Addendum I

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

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

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

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

The following example illustrates the changes :-

September 2002

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   NEIC 01 18:45:41.7±1.7,21°.70S×179°.55W,h600km,mb4.6/6,
           Error ellipse: s-maj=75.5km s-min=25.7km az=151.0
    IDC 01 18:45:46.3±2.6,21°.76S×179°.70W,h627km±37km,mb3.5/4,
           mb1 3.7/4,mb1mx3.2/14,Error ellipse: s-maj=83.2km
           s-min=20.6km az=159.0
    ISC 01 18:45:43.1±2.7,22°.3S±0°.2×179°.6W±0°.3,h613km±42km,
           n22,σ1s.15/21,mb4.4/9,1C,South of Fiji Islands
Code   Station Name       Δ°    AZ°   Phase ID          Time      Res
                                     Op      ISC      h  m  s     ISC
HBZ    Hicks Bay          15.41 186  eP      P        18 48 53.1 -1.7
URZ    Urewera            16.21 189   P      P        18 49 01.5 -0.9
MRZ    Mangatainoka R     18.81 192  eP      P        18 49 26.7  0.0
DIW    D'Urville Isla     19.30 195  eP      P        18 49 27.3 -3.9
CAW    Cannon Point       19.34 192  eP      P        18 49 31.7 +0.1
OTW    Orongorongo Tu     19.52 192  eP      P        18 49 33.0 -0.2
MOW    Moikau             19.61 192  eP      P        18 49 35.5 +1.5
THZ    Tophouse           20.46 196  eP      P        18 49 42.0 +0.2
KHZ    Kahutara           20.93 194   P      P        18 49 46.2 +0.2
ARMA   Armidale           27.03 246  eP      P        18 50 42.4 +2.3
       4.9nm,0.5s,mb4.4
CTA    Charters Tower     31.93 267⇑iP      P        18 51 22.3 +0.4
       13nm,0.5s,mb4.8
STKA   Stephens Creek     35.75 246  eP      P        18 51 55.3 +1.8
       3.1nm,0.4s,mb4.2
ASAR   Alice Springs      42.74 259   P      P        18 52 50.1 +0.3
       9.8nm,0.5s,mb4.6,baz=92,slow=8.2,SNR=47
ASAR                                  S      S        18 58 31.3 -0.1
       1.0nm,0.8s,baz=95,slow=15,SNR=5.7
ASPA   Alice Springs      42.74 259  eP      P        18 52 50.1 +0.2
WRA    Warramunga Arr     42.96 264   P      P        18 52 51.0 -0.7
       1.8nm,0.3s,mb4.0,baz=96,slow=7.8,SNR=93
WRA                                   S      S        18 58 33.0 -1.5
       0.3nm,0.9s,baz=99,slow=14,SNR=3.0
KAKA   Kakadu             46.64 273  eP      P        18 53 18.2 -1.8
       14nm,0.4s,mb4.8
FITZ   Fitzroy Crossi     51.39 264  eP      P        18 53 54.3 -0.7
       12nm,0.3s,mb4.8
MBWA   Marble Bar         56.08 259  eP      P        18 54 27.1 -0.7
       11nm,0.6s,mb4.2
CMAR   Chiang Mai Arr     89.35 290   P      P        18 57 38.1 +1.0
       1.3nm,0.8s,mb3.8,baz=135,slow=3.1,SNR=8.1
ARCES  ARCESS Array B    130.36 349  PKP     PKP      19 03 43.7 -0.5
       0.7nm,0.6s,baz=282,slow=4.2,SNR=3.5
FINES  FINESS Array B    137.02 342  PKP     PKP      19 03 57.3 +0.5
       3.7nm,1.1s,baz=158,slow=3.2,SNR=3.4
MLR    Muntele Rosu      148.85 324  PKPbc   PKP      19 04 22.7 +5.2
       0.2nm,0.7s,baz=1.2,slow=23,SNR=2.3
```

Epicentral Estimates

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

Observational Data

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

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

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

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

Addendum II

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

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

Addendum III

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

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

*TUL **01** 00:04:31.9±1.0, 36°.28N±0°.02×97°.51W±0°.02, h5^{km}±7^{km}, ML2.8, mb_Lg2.6/11(NEIC), Error ellipse: s-maj=2.4km s-min=2.2km az=85.0*

NEIC 01 00:04:32.0±0.7**, 36°.28N**±0°.02×**97°.53W**±0°.02**, h3**^{km}±7^{km}**, Error ellipse: s-maj=2.5km s-min=2.3km az=80.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKCFA	Oklahoma City	0.87	176	Pg	Pg	00 04 48.5	-0.1
OKCSW	OKLAHOMA CITY	0.88	175	Pg	Pg	00 04 48.6	-0.2
FNO	Franklin	1.03	174	Pg	Pg	00 04 51.3	-0.4
T35A	Sooner Cattle	1.04	52		Pg	00 04 51.5	-0.4
U32A	Winter Ranch,	1.19	275		Pg	00 04 54.3	-0.5
TUL1	Leonard	1.46	104		Pn	00 04 58.1	-1.1
X34A	Smith Ranch, M	1.70	188		Pb	00 05 03.2	-0.6
WMOK	Wichita Mounta	1.85	214		Pn	00 05 04.7	+0.2
R32A	Long Quarter,	2.33	337	IAmb_Lg		00 05 46.4	
	comp=Z,28nm,1.2s						
X37A	Clayton	2.44	133	Pn	Pn	00 05 13.2	+0.5
X37A				IAmb_Lg		00 05 55.5	
	comp=Z,22nm,0.8s						
U38A	Gravette	2.54	86		Pn	00 05 14.1	-0.1
HHAR	Hobbs	2.90	89	Pn	Pn	00 05 19.6	+0.5
KSU1	Kansas State U	2.91	14		Pn	00 05 19.7	+0.6
Z35A	Perchaven, San	2.95	175	Pn	Pn	00 05 19.6	-0.2
CBKS	Cedar Bluff	3.08	326	Pn	Pn	00 05 20.9	-0.6
CBKS				IAmb_Lg		00 06 09.2	
	comp=Z,6.7nm,0.8s						
W39A	Magazine	3.24	108		Pn	00 05 24.0	+0.4
S39A	Bolivar	3.65	66	Pn	Pn	00 05 29.8	+0.4
AMTX	Amarillo	3.66	249	IAmb_Lg		00 06 32.2	
	comp=Z,8.4nm,0.7s						
MIAR	Mount Ida	3.67	117	Pn	Pn	00 05 29.9	+0.3
MIAR				IAmb_Lg		00 06 36.7	
	comp=Z,11nm,1.0s						
U40A	Yellville	3.78	88		Pn	00 05 31.7	+0.6
ABTX	Abilene, Hawle	4.04	206	Pn	Pn	00 05 34.8	0.0
WHTX	Lake Whitney,	4.28	179	Pn	Pn	00 05 38.1	+0.1
WHAR	Wooly Hollow	4.38	102		Pn	00 05 38.7	-0.6
P38A	Dawn	4.60	42	Pn	Pn	00 05 43.8	+1.5
R40A	Maddies Statio	4.65	63	Pn	Pn	00 05 43.6	+0.5
N38A	Joes South For	5.62	35	IAmb_Lg		00 07 46.1	
	comp=Z,13nm,0.9s						

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*SNET **01** 00:35:35.3±4.0, 12°.37N×86°.16W, h33^{km}±999^{km}, ML4.3*
*INET **01** 00:35:37.0, 12°.94N×86°.58W, h19^{km}, MW4.2*
*UCR **01** 00:35:37.0±2.2, 12°.61N×86°.26W, h20^{km}±999^{km}, ML3.9, mb4.4(NEIC)*
*NEIC **01** 00:35:42.1±1.9, 12°.85N±0°.05×86°.66W±0°.05, h21^{km}±7^{km}, mb4.4/5, Error ellipse: s-maj=10.1km s-min=3.5km az=222.0*
*IDC **01** 00:35:46.3±2.4, 12°.77N×86°.54W, h60^{km}±28^{km}, mb3.5/8, mb1 3.9/11, mb1mx3.7/34, mbtmp3.9/11, ML3.1/3, MS3.3/4, Ms1 3.3/4, ms1mx2.9/38, Error ellipse: s-maj=44.4km s-min=18.2km az=37.0*

ISC 01 00:35:40.9±1.6**, 12°.91N**±0°.06×**86°.54W**±0°.05**, h13**^{km}±11^{km}**, n60,** σ**1^{s}.47**/71**, mb4.2**/11**, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNGN	Cerro Negro	0.44	200		Pg	00 35 50.0	+0.4
CNGN				Sg	Sg	00 35 56.6	+1.2
CRIN	San Cristobal	0.54	247		Pg	00 35 49.9	-1.5
CRIN					Sg	00 35 57.7	-0.9
TGUH	Tegucigalpa,Un	1.34	328	Pn	Pn	00 36 04.3	-1.2
TGUH				Sn	Sn	00 36 22.3	-1.0
LCND	La Caada	1.37	287	*e*P	Pn	00 36 04.0	-1.7
LCND				IAML		00 36 25.4	
	comp=Z,5μm,0.3s						
LCND	La Caada	1.37	287	*e*P	Pn	00 36 04.0	-1.7
LCND				IAML		00 36 25.4	
	comp=Z,5μm,0.3s						
ACON	Acoyapa	1.64	125	Pn	Pn	00 36 08.5	-0.8
ACON				Sn	Sb	00 36 30.8	-0.6
SCLA	Alcaldia de Sa	2.27	291	*e*P	Pn	00 36 19.1	+1.0
SCLA				*e*S	Sb	00 36 51.8	+2.0
SCLA	Alcaldia de Sa	2.27	291	*e*P	Pn	00 36 19.1	+1.0
SCLA				*e*S	Sb	00 36 51.8	+2.0
HZTE	Horizontes, Gu	2.37	157	Pn	Pn	00 36 18.9	-0.7
COEG	Centro de Oper	2.38	287	*e*P	Pn	00 36 21.6	+1.8
COEG				*e*S	Sb	00 36 52.0	-1.1
COEG				IAML		00 36 58.3	
	comp=Z,548nm,0.5s						
COEG	Centro de Oper	2.38	287	*e*P	Pn	00 36 21.6	+1.8
COEG				*e*S	Sb	00 36 52.0	-1.1
COEG				IAML		00 36 58.3	
	comp=Z,548nm,0.5s						
SJTE	Alcalda de S	2.50	287	*e*P	Pn	00 36 21.0	-0.4
SJTE	Alcalda de S	2.50	287	*e*P	Pn	00 36 21.0	-0.4
SNET	Serv Nac Est T	2.73	287	Pn	Pn	00 36 21.6	-2.9
ORTG	Ortega, Santa	2.75	157		Pn	00 36 24.9	+0.1
JAYA	Jayaque - finc	2.92	285	*e*P	Pn	00 36 27.2	0.0
JAYA				*e*S	Sb	00 37 06.4	-2.4
JAYA				IAML		00 37 10.0	
	comp=Z,320nm,0.3s						
JAYA	Jayaque - finc	2.92	285	*e*P	Pn	00 36 27.2	0.0
JAYA				*e*S	Sb	00 37 06.4	-2.4
JAYA				IAML		00 37 10.0	
	comp=Z,320nm,0.3s						
TACO	Tacachico	2.93	291	*e*P	Pn	00 36 28.9	+1.6
TACO	Tacachico	2.93	291	*e*P	Pn	00 36 28.9	+1.6
TACO				*e*S	Sb	00 37 10.7	+1.9
DUNO	Dulce Nombre,	3.00	160	Pn	Pn	00 36 28.4	+0.3
COVE	Coope Vega, Sa	3.02	136	Pn	Pn	00 36 29.1	+0.6
JTS	Las Juntas de	3.04	149	P	Pn	00 36 30.6	+1.9
	comp=Z,4.2nm,0.3s,baz=336,slow=8.4,SNR=11						
JTS				S	Sn	00 37 06.8	+1.8
	comp=Z,7.3nm,0.3s,baz=0.0,slow=20,SNR=4.0						
JTS	Las Juntas de	3.04	149		Pn	00 36 29.8	+1.1
MTO3	Montecristo	3.11	299	Pn	Pn	00 36 28.8	-1.1
CEVE	Cerro Verde	3.13	287	*e*P	Pn	00 36 31.1	+0.9
CEVE				*e*S	Sb	00 37 16.9	+2.1
CEVE				IAML		00 37 24.7	
	comp=Z,532nm,0.4s						
CEVE	Cerro Verde	3.13	287	*e*P	Pn	00 36 31.1	+0.9
CEVE				*e*S	Sb	00 37 16.9	+2.1
CEVE				IAML		00 37 24.7	
	comp=Z,532nm,0.4s						
ESQI	Esquipulas	3.17	301	Pn	Pn	00 36 29.6	-1.1
CAO2	Cobano, Puntar	3.50	156	Pn	Pn	00 36 34.6	-0.5
HDC	Heredia	3.75	140	Pn	Pn	00 36 39.5	+0.9
RIMA	Rio Macho	4.08	140		Pn	00 36 44.5	+1.2
BATAN	Batan	4.18	132	Pn	Pn	00 36 46.4	+2.0
SRBA	San Rafael, Bu	4.81	139		Pn	00 36 54.3	+1.1
PRVC	Isla de Provid	5.07	84	Pn	Pn	00 36 57.4	+0.7
BCIP	Isla Barro Col	7.56	119	Pn	Pn	00 37 30.1	-0.8
CMIG	Matias Romero	9.06	298	P	Pn	00 37 55.5	+3.9
	comp=Z,0.1nm,0.3s,baz=117,slow=11,SNR=4.8						
MOTC	Monteria, Cord	11.45	110	Pn	Pn	00 38 24.9	+0.7
SJCC	San Jacinto, C	11.54	104	Pn	Pn	00 38 28.5	+3.0
ROSC	El Rosal	14.49	123	LR	LR	00 46 15.4	
	comp=Z,104nm,18.9s,baz=66,slow=44						
OTAV	Otavalo	14.93	147	Pn	Pn	00 39 10.7	-1.6
SDV	Santo Domingo	16.13	103	P	P	00 39 28.5	-2.4
	comp=Z,0.7nm,0.3s,baz=315,slow=11,SNR=1.6						
SDV				LR	LR	00 45 32.5	
	comp=Z,100nm,19.9s,baz=10.0,slow=36						
SJG	San Juan	20.31	73	LR	LR	00 47 54.6	
	comp=Z,57nm,19.4s,baz=279,slow=36						
TKL	Tuckaleechee C	22.79	6	P	P	00 40 46.3	+3.0
	comp=Z,4.0nm,0.9s,baz=221,slow=11,SNR=3.2						
TXAR	Lajitas Array	22.80	318	P	P	00 40 43.6	0.0
	comp=Z,1.9nm,0.9s,baz=137,slow=10.0,SNR=18						
TXAR	Lajitas Array	22.80	318	P	P	00 40 43.0	-0.7
TX31	Lajitas Ar. Si	22.80	318	P	P	00 40 42.5	-1.1
TX31				IAmb	IAmb	00 40 46.2	
	comp=Z,18nm,1.3s						
WMOK	Wichita Mounta	24.40	335	P	P	00 40 59.4	+0.3
LPIG	La Paz	25.09	300	LR	LR	00 51 14.4	
	comp=Z,92nm,18.7s,baz=152,slow=37						
AMTX	Amarillo	25.82	330	P	P	00 41 12.6	+0.5
PDAR	Pinedale Array	35.80	331	P	P	00 42 41.4	+1.1
	comp=Z,0.3nm,0.7s,baz=134,slow=7.8,SNR=1.9						
NVAR	Mina Array Bea	37.95	318	P	P	00 43 00.2	+1.6
	comp=Z,0.8nm,0.7s,baz=126,slow=7.2,SNR=6.8						
NVAR	Mina Array Bea	37.95	318	P	P	00 42 58.9	+0.3
YKA	Yellowknife Ar	53.41	344	P	P	00 45 00.4	+0.3
	comp=Z,2.1nm,0.7s,baz=136,slow=8.2,SNR=7.5						
ILAR	Eielson Array	65.96	336	P	P	00 46 26.6	0.0
	comp=Z,1.9nm,0.9s,baz=121,slow=4.7,SNR=9.8						
BMAR	Burnt Mountain	66.17	339	P	P	00 46 27.9	0.0
H24K	Noodor Dome	66.74	337	P	P	00 46 32.0	+0.3
H24K				IAmb	IAmb	00 46 53.4	
	comp=Z,4.4nm,1.4s						
ESDC	Sonseca Array	76.21	52	P	P	00 47 29.1	-0.2
	comp=Z,2.0nm,1.0s,baz=276,slow=6.2,SNR=6.6						
TORD	Torodi Ar. Bea	85.45	78	P	P	00 48 17.4	-1.7
	comp=Z,0.7nm,1.0s,baz=301,slow=5.1,SNR=2.3						
PETK	Petropavlovsk-	94.49	327	P	P	00 49 00.3	-0.7
	comp=Z,4.6nm,1.0s,baz=42,slow=6.6,SNR=1.5						
WRA	Warramunga Arr	140.25	254	PKP	PKPdf	00 55 09.8	-0.6
	comp=Z,0.6nm,0.6s,baz=92,slow=2.3,SNR=9.0						
ASAR	Alice Springs	140.26	249	PKP	PKPdf	00 55 09.6	-0.9
	comp=Z,0.4nm,0.6s,baz=98,slow=2.1,SNR=7.4						

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*MRB **01** 00:39:46.5±0.2, 42°.18N×3°.16E, ML2.0/18, Error ellipse: s-maj=1.2km s-min=0.6km az=283.0*
*STR **01** 00:39:47.0±1.1, 42°N±7°×°±°, h12^{km}±8^{km}, MLv2.1/6, preliminary*
*LDG **01** 00:39:46.1±0.1, 42°.18N×3°.18E, h5^{km}, Md2.4/2, Ml2.4/17, Error ellipse: s-maj=1.6km s-min=1.0km az=149.0*

MDD 01 00:39:46.5±0.4**, 42°.19N×3°.19E, h4**^{km}±4^{km}**, mbLg2.2**/28**, 1C-3D, Error ellipse: s-maj=3.6km s-min=2.2km az=118.0, PRXIMO, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CPAL	Palau Saverder	0.13	351	P	Pg	00 39 49.1	+0.1
CPAL				S	Sg	00 39 51.2	+0.5
	861nm,0.1s						
CPAL	Palau Saverder	0.13	351	Pg	Pg	00 39 49.1	0.0
CPAL				Lg	Lg	00 39 51.2	
	861nm,0.1s						
EJON	La Jonquera	0.34	320	⇓Pg	Pg	00 39 53.0	-0.2
EJON	La Jonquera	0.34	320	⇓Pg	Pg	00 39 53.0	-0.2
	20nm,0.0s,SNR=18						
EJON				Lg	Lg	00 39 57.7	
	28nm,0.1s,SNR=19						
CCAS	Cassa de la Se	0.37	215	P	Pg	00 39 53.2	-0.4
CCAS				S	Sg	00 39 58.1	-0.4
	71nm,0.3s						
CCAS	Cassa de la Se	0.37	215	Pg	Pg	00 39 53.2	-0.4
CCAS				Lg	Lg	00 39 58.0	
	71nm,0.3s						
SJAF	Saint Jean de	0.38	323	Pg	Pg	00 39 53.6	-0.2
SJAF				Sg	Sg	00 39 59.0	+0.3
SJAF	Saint Jean de	0.38	323	P	Pg	00 39 53.6	-0.2
SJAF				S	Sg	00 39 59.0	+0.3
	33nm,0.1s						
SJAF	Saint Jean de	0.38	323	⇓Pg	Pg	00 39 53.6	-0.2
	9.6nm,0.2s,SNR=18						
SJAF				Lg	Lg	00 39 59.0	
	60nm,0.0s,SNR=7.9						
CBEU	Beuda	0.39	281	P	Pg	00 39 53.5	-0.5
CBEU				S	Sg	00 39 58.7	-0.4
	156nm,0.3s						
CBEU	Beuda	0.39	281	Pg	Pg	00 39 53.5	-0.5
CBEU				Lg	Lg	00 39 58.6	
	156nm,0.3s						
FILF	Fillols	0.60	309	P	Pb	00 39 58.9	-0.6
FILF				S	Sb	00 40 08.3	-0.1
	30nm,0.1s						
FILF	Fillols	0.60	309	Pg	Pb	00 39 58.9	-0.7
FILF				Lg	Lg	00 40 08.3	
	30nm,0.1s						
CFON	Fontmartina	0.70	233	P	Pg	00 39 59.2	-0.9
CFON				S	Sg	00 40 08.8	-0.4
	88nm,0.2s						
CFON	Fontmartina	0.70	233	⇑Pg	Pg	00 39 59.5	-0.6
	0.5nm,0.1s,SNR=18						
CFON				Lg	Lg	00 40 09.5	
	74nm,0.1s,SNR=20						
CBRU	Bruguera	0.76	278	P	Pg	00 40 00.3	-0.7
CBRU				S	Sg	00 40 10.6	-0.2
	15nm,0.1s						
CBRU	Bruguera	0.76	278	Pg	Pg	00 40 00.3	-0.7
CBRU				Lg	Lg	00 40 10.6	
	7.7nm,0.1s						
CORI	Orista	0.88	256	P	Pg	00 40 02.3	-1.0
CORI				S	Sg	00 40 14.1	-0.5
	61nm,0.2s						
CORI	Orista	0.88	256	Pg	Pg	00 40 02.3	-1.0
CORI				Lg	Lg	00 40 14.1	
	61nm,0.2s						
CLLI	Llivia	0.95	288	P	Pg	00 40 03.6	-1.1
CLLI				S	Sg	00 40 16.6	-0.4
	13nm,0.1s						
CLLI	Llivia	0.95	288	Pg	Pg	00 40 04.1	-0.6
	0.4nm,0.1s,SNR=72						
CLLI				Lg	Lg	00 40 17.1	
	11nm,0.1s,SNR=28						
FNEB	Nbias	1.07	312	Pg	Pg	00 40 06.2	-0.9
FNEB				Sg	Sg	00 40 21.0	0.0
FNEB	Nbias	1.07	312	P	Pg	00 40 06.1	-1.1
FNEB				S	Sg	00 40 20.5	-0.6
FNEB	Nbias	1.07	312	Pg	Pg	00 40 06.0	-1.1
FNEB				Lg	Lg	00 40 20.4	
ARBS	La Rabassa	1.25	283	P	Pg	00 40 09.1	-1.3
ARBS				S	Sg	00 40 25.9	-0.6
	44nm,0.4s						
PAND	Andorre	1.26	286	Pg	Pg	00 40 10.0	-0.7
EMIR	Miracle	1.27	258	Pg	Pg	00 40 09.9	-0.9
EMIR	Miracle	1.27	258	Pg	Pg	00 40 09.9	-0.9
	8.8nm,0.1s,SNR=7.9						
EMIR				Lg	Lg	00 40 26.9	
	12nm,0.1s,SNR=7.9						
MTLF	Montolieu	1.36	328	*e*Pn	Pn	00 40 10.1	-2.1
MTLF	Montolieu	1.36	328	*e*Pg	Pn	00 40 11.2	-1.0
MTLF				*e*Sg	Sg	00 40 28.6	-1.6
	12nm,0.3s						
MTLF	Montolieu	1.36	328	Pg	Pn	00 40 10.1	-2.1
MTLF	Montolieu	1.36	328	Pn	Pn	00 40 10.1	-2.1
MTLF				Pg	Pb	00 40 11.2	-1.3
MTLF				Lg	Lg	00 40 28.6	
	5.8nm,0.3s						
CORG	Organya	1.39	272	P	Pn	00 40 11.4	-1.4
CORG				S	Sb	00 40 29.9	-1.3
	8.9nm,0.2s						
CORG	Organya	1.39	272	Pg	Pn	00 40 11.3	-1.4
CORG				Lg	Lg	00 40 29.8	
	4.4nm,0.2s						
CEST	Esterri de Car	1.49	287	P	Pn	00 40 13.0	-1.2
CEST				S	Sn	00 40 33.1	-1.1
	22nm,0.3s						
CEST	Esterri de Car	1.49	287	Pg	Pn	00 40 13.0	-1.2
CEST				Lg	Lg	00 40 33.0	
	22nm,0.3s						
CSOR	Sort	1.54	278	P	Pn	00 40 13.8	-1.1
CSOR				S	Sn	00 40 34.4	-0.8
	25nm,0.4s						
CSOR	Sort	1.54	278	Pg	Pn	00 40 14.9	+0.1
	1.7nm,0.2s,SNR=42						
CSOR				Lg	Lg	00 40 35.7	
	13nm,0.2s,SNR=13						
CGAR	Garraf	1.78	241	P	Pn	00 40 09.8	-8.2
CGAR				S	Sn	00 40 27.3	-14
	20nm,0.3s						
CGAR	Garraf	1.78	241	Pg	Pn	00 40 09.8	-8.2
CGAR				Lg	Lg	00 40 27.2	
	9.9nm,0.3s						
EPOB	Poblet	1.79	243	P	Pn	00 40 17.2	-1.0
EPOB				S	Sn	00 40 40.6	-0.8
	5.6nm,0.2s						
EPOB	Poblet	1.79	243	Pn	Pn	00 40 17.9	-0.3
	0.1nm,0.1s,SNR=7.9						
EPOB				Pg	Pb	00 40 18.7	-1.1
	2.7nm,0.2s,SNR=19						
EPOB				Lg	Lg	00 40 41.6	
	3.3nm,0.1s,SNR=10						
CTRE	Tremp	1.80	275	P	Pn	00 40 17.6	-0.8
CTRE				S	Sn	00 40 40.5	-1.3
	7.8nm,0.2s						
CTRE	Tremp	1.80	275	Pn	Pn	00 40 17.5	-0.9
CARA	Val d'Aran	1.83	287	P	Pn	00 40 18.0	-0.9
CARA				S	Sn	00 40 41.9	-0.7
	20nm,0.2s						
CAVN	Les Avellanes	1.84	261	P	Pn	00 40 18.0	-0.9
CAVN				S	Sn	00 40 41.3	-1.4
	24nm,0.2s						
CAVN	Les Avellanes	1.84	261	Pn	Pn	00 40 17.9	-1.0
LASF	Ste Croix	1.95	14	*e*Pn	Pn	00 40 18.2	-2.2
LASF	Ste Croix	1.95	14	*e*Pg	Pb	00 40 22.1	-0.5
LASF				*e*Sg	Sb	00 40 47.4	+0.1
	3.4nm,0.2s						
LASF	Ste Croix	1.95	14	Pn	Pn	00 40 18.2	-2.2
LASF				Pg	Pb	00 40 22.1	-0.5
LASF				Lg	Lg	00 40 47.4	
	1.7nm,0.2s						
TRBF	Trabuc cave	2.00	16	Pn	Pn	00 40 18.9	-2.1
TRBF				Pg	Pb	00 40 21.0	-2.4
EPF	Esparros	2.27	293	*e*Pg	Pb	00 40 27.5	-0.5
EPF				*e*Sg	Sb	00 40 57.5	+1.1
	6.3nm,0.3s						
EPF	Esparros	2.27	293	Pg	Pb	00 40 27.5	-0.5
EPF				Lg	Lg	00 40 57.5	
	3.2nm,0.3s						
RUSF	Rustrel	2.43	43	Pn	Pn	00 40 25.9	-1.1
RUSF				Pg	Pg	00 40 33.7	+0.7
ETOS	Mallorca	2.43	187	Pn	Pn	00 40 25.2	-1.8
	0.2nm,0.1s,SNR=7.9						
ETOS				Sn	Sn	00 40 50.7	-6.6
	0.8nm,0.2s,SNR=7.9						
VIEF	Viey	2.44	288	Sg	Sg	00 41 04.3	-0.7
VIEF	Viey	2.44	288	Pg	Pg	00 40 32.2	-1.1
ERTA	Horta de San J	2.47	241	P	Pn	00 40 26.6	-1.0
ERTA				S	Sn	00 40 56.7	-1.5
ERTA	Horta de San J	2.47	241	Pn	Pn	00 40 27.4	-0.1
	1.3nm,0.3s,SNR=7.9						
ERTA				Pg	Pb	00 40 32.2	+0.8
	0.3nm,0.1s,SNR=7.9						
ERTA				Sn	Sn	00 40 57.0	-1.2
	1.0nm,0.2s,SNR=7.9						
ERTA				Lg	Lg	00 41 04.1	
	4.7nm,0.2s,SNR=7.9						
SMRF	Simiane la Rot	2.50	44	*e*Pn	Pn	00 40 26.4	-1.6
SMRF				*e*Sg	Sb	00 41 04.9	+1.8
	4.1nm,0.3s						
SMRF	Simiane la Rot	2.50	44	Pn	Pn	00 40 26.4	-1.6
SMRF				Lg	Lg	00 41 04.9	
	4.1nm,0.3s						
CMAS	Mas de Barbera	2.61	237	P	Pn	00 40 28.4	-1.0
CMAS				S	Sn	00 41 00.5	-1.0
CMAS	Mas de Barbera	2.61	237	Pn	Pn	00 40 28.4	-1.0
CMAS				Sn	Sn	00 41 00.5	-1.0
MONQ	Montcuq	2.62	327	Pn	Pn	00 40 27.7	-1.9
MONQ				Pg	Pb	00 40 34.8	+0.8
LMR	La Mourre	2.70	64	*e*Pn	Pn	00 40 28.8	-1.9
LMR	La Mourre	2.70	64	Pn	Pn	00 40 28.8	-1.9
LMR				Pg	Pb	00 40 36.2	+0.9
LMR				Sn	Sn	00 41 00.0	-3.8
	0.4nm,0.2s						
BLAF	les Blancs	2.74	49	Pn	Pn	00 40 29.6	-1.6
CAF	Calviac	2.86	344	*e*Pg	Pb	00 40 38.8	+0.7
CAF				*e*Sn	Sn	00 41 03.5	-4.2
CAF				*e*Sg	Sb	00 41 15.5	+2.1
	3.8nm,0.2s						
CAF	Calviac	2.86	344	Pg	Pb	00 40 38.8	+0.7
CAF				Sn	Sn	00 41 03.5	-4.2
ETSF	Etsaut	2.86	286	*e*Pg	Pb	00 40 39.0	+0.9
ETSF				*e*Sg	Sg	00 41 16.1	-2.3
	6.3nm,0.3s						
ETSF	Etsaut	2.86	286	Pg	Pb	00 40 39.0	+0.9
ETSF				Lg	Lg	00 41 16.1	
	3.2nm,0.3s						
VIVF	Saint-Julien-l	2.88	22	*e*Pn	Pn	00 40 31.4	-1.8
VIVF	Saint-Julien-l	2.88	22	*e*Pg	Pb	00 40 39.6	+1.2
VIVF				*e*Sn	Sn	00 41 03.7	-4.5
VIVF				*e*Sg	Sb	00 41 16.0	+2.0
	2.8nm,0.2s						
VIVF	Saint-Julien-l	2.88	22	Pn	Pn	00 40 31.4	-1.8
VIVF				Pg	Pb	00 40 39.6	+1.2
FRF	La Foret Royal	2.89	60	*e*Pn	Pn	00 40 30.9	-2.4
FRF	La Foret Royal	2.89	60	*e*Pg	Pb	00 40 39.7	+1.1
FRF				*e*Sn	Sn	00 41 04.6	-3.8
FRF				*e*Sg	Sb	00 41 16.7	+2.5
	1.1nm,0.2s						
ATE	Arette	3.01	289	Sg	Sg	00 41 20.7	-2.4
ATE	Arette	3.01	289	P	Pn	00 40 34.0	-0.9
ATE				S	Sn	00 41 09.7	-1.7
ATE	Arette	3.01	289	Pg	Pb	00 40 42.0	+1.3
	0.2nm,0.2s,SNR=7.9						
ATE				Lg	Lg	00 41 21.4	
	6.8nm,0.4s,SNR=7.9						
ATE	Arette	3.01	289	Pn	Pn	00 40 35.4	+0.5
ATE	Arette	3.01	289	Pg	Pg	00 40 44.0	-0.1
LFF	La Frestale	3.28	328	*e*Pn	Pn	00 40 36.9	-1.7
LFF	La Frestale	3.28	328	*e*Sg	Sg	00 41 28.6	-3.2
	7.3nm,0.4s						
EMOS	Mosqueruela	3.31	238	Pn	Pn	00 40 39.2	+0.1
	0.1nm,0.1s,SNR=7.9						
EMOS				Pg	Pb	00 40 47.1	+1.3
	0.6nm,0.2s,SNR=7.9						
EMOS				Sn	Sn	00 41 17.9	-1.1
	0.6nm,0.2s,SNR=7.9						
EMOS				Lg	Lg	00 41 32.8	
	1.4nm,0.4s,SNR=7.9						
RJF	Les Rejaudoux	3.34	339	*e*Pn	Pn	00 40 38.1	-1.4
RJF	Les Rejaudoux	3.34	339	*e*Sn	Sn	00 41 15.1	-4.6
RJF				*e*Sg	Sg	00 41 31.2	-2.7
	4.9nm,0.2s						
RJF	Les Rejaudoux	3.34	339	Pn	Pn	00 40 38.1	-1.4
RJF				Sn	Sn	00 41 15.1	-4.6
SJPF	Ste Jean	3.39	287	*e*Pg	Pb	00 40 49.2	+2.1
SJPF				*e*Sg	Sg	00 41 32.8	-2.4
	2.8nm,0.3s						
SJPF	Ste Jean	3.39	287	Pg	Pb	00 40 49.2	+2.1
SJPF				Lg	Lg	00 41 32.8	
	1.4nm,0.3s						
EORO	Oroz-Betelu	3.40	283	Pg	Pb	00 40 47.8	+0.5
	0.3nm,0.2s,SNR=7.9						
EORO				Lg	Lg	00 41 34.4	
	4.3nm,0.3s,SNR=7.9						
SBF	Sospel	3.54	60	*e*Pn	Pn	00 40 40.3	-1.9
SBF				*e*Sn	Sn	00 41 19.9	-4.6
	0.5nm,0.2s						
SBF				*e*Sg	Sg	00 41 37.4	-2.6
	0.8nm,0.2s						
SBF	Sospel	3.54	60	Pn	Pn	00 40 40.3	-1.9
SBF				Sn	Sn	00 41 19.9	-4.6
	0.2nm,0.2s						
SBF				Lg	Lg	00 41 37.4	
	0.4nm,0.2s						
MBDF	Montbardon	3.64	45	*e*Pn	Pn	00 40 42.7	-1.0
MBDF	Montbardon	3.64	45	Pn	Pn	00 40 42.7	-1.0
MBDF				Pg	Pb	00 40 53.7	+2.2
ETOR	Torete	4.17	253	Pn	Pn	00 40 51.9	+1.0
	0.6nm,0.3s,SNR=7.9						
ETOR				Pg	Pb	00 41 01.9	+1.5
	0.3nm,0.1s,SNR=7.9						
ETOR				Sn	Sn	00 41 40.1	0.0
	2.2nm,0.4s,SNR=7.9						
ETOR				Lg	Lg	00 41 56.5	
	3.2nm,0.3s,SNR=7.9						
PGF	Pioggiola	4.32	83	*e*Pn	Pn	00 40 49.3	-3.7
PGF				*e*Sn	Sn	00 41 34.7	-9.2
	0.7nm,0.2s						

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*LDG **01** 00:40:03.6±0.1, 46°.70N×2°.05W, h2^{km}, Md2.4/2, Ml2.5/19, Error ellipse: s-maj=1.4km s-min=0.6km az=43.0*
*STR **01** 00:40:04.4±0.8, 47°N±7°×°±°, h10^{km}, MLv2.5/5, preliminary*

ISC 01 00:40:03.0±1.1**, 46°.73N**±0°.03×**1°.96W**±0°.03**, h16**^{km}±9^{km}**, n36,** σ**0^{s}.97**/66**, France**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHIF	Chize	1.23	119	Pg	Pg	00 40 27.3	+0.8
CHIF				Sg	Sg	00 40 44.3	+1.8
MFF	Saint Martin d	1.25	95	*e*Pg	Pg	00 40 28.4	+1.3
MFF				*e*Sg	Sg	00 40 44.9	+1.5
	10nm,0.2s						
MFF	Saint Martin d	1.25	95	Pg	Pg	00 40 27.9	+0.8
QUIF	Quistinic	1.45	326	*e*Pg	Pb	00 40 29.8	+0.3
QUIF				*e*Sg	Sg	00 40 49.1	-0.5
	11nm,0.2s						
SGMF	Saint Gilles	1.58	345	*e*Pg	Pg	00 40 33.3	0.0
SGMF				*e*Sn	Sb	00 40 51.0	-0.5
SGMF				*e*Sg	Sg	00 40 54.0	+0.1
	22nm,0.5s						
GRR	Gorron	1.82	24	*e*Pg	Pg	00 40 38.0	+0.1
GRR				*e*Sn	Sb	00 40 57.6	-0.8
GRR				*e*Sg	Sg	00 41 01.5	0.0
	5.1nm,0.2s						
ROSF	Rostrenen	1.84	331	*e*Pg	Pg	00 40 37.5	-0.8
ROSF				*e*Sn	Sn	00 40 56.9	+0.1
ROSF				*e*Sg	Sg	00 41 01.7	-0.5
	3.5nm,0.2s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ROSF	Rostrenen	1.84	331	Pg	Pg	00 40 37.5	-0.8
ROSF	Rostrenen	1.84	331	Sg	Sg	00 41 02.2	+0.1
LDF	La Druitiere	2.24	33	ePn	Pn	00 40 40.6	+1.2
LDF	La Druitiere	2.24	33	ePg	Pg	00 40 46.2	+0.3
LDF				eSn	Sn	00 41 08.5	+1.8
LDF				eSg	Sg	00 41 15.3	+0.3
	3.9nm,0.2s						
FLN	La Foliniere	2.27	26	ePg	Pg	00 40 46.6	+0.2
	baz=206						
FLN				eSn	Sn	00 41 08.5	+1.2
FLN				eSg	Sg	00 41 16.5	+0.7
	2.6nm,0.2s						
LFF	La Frestale	2.60	133	eP	Pb	00 40 47.1	-2.0
LFF	La Frestale	2.60	133	ePg	Pg	00 40 52.0	-0.8
LFF				eSn	Sn	00 41 16.2	+0.7
LFF				eSg	Sg	00 41 26.8	+0.4
	8.5nm,0.4s						
LFF	La Frestale	2.60	133	ePg	Pn	00 40 46.8	+2.5
RJF	Les Rejaudoux	2.81	119	ePn	Pn	00 40 48.0	+0.9
RJF	Les Rejaudoux	2.81	119	ePg	Pg	00 40 56.4	-0.3
RJF				eSn	Sn	00 41 21.3	+0.6
RJF				eSg	Sg	00 41 33.1	0.0
	4.5nm,0.2s						
RJF	Les Rejaudoux	2.81	119	ePg	Pn	00 40 48.1	+0.9
RJF	Les Rejaudoux	2.81	119	Pg	Pn	00 40 48.1	+0.9
TCF	Toulx Ste Croi	2.91	97	ePn	Pn	00 40 50.2	+1.6
TCF	Toulx Ste Croi	2.91	97	ePg	Pg	00 40 58.7	0.0
TCF				eSn	Sn	00 41 23.9	+0.6
TCF				eSg	Sg	00 41 36.3	-0.1
	2.9nm,0.3s						
HYF	Humbligny	3.19	79	eP	Pb	00 40 56.8	-2.4
BGF	Bois d'Agland	3.31	91	ePn	Pn	00 40 55.4	+1.3
BGF	Bois d'Agland	3.31	91	ePg	Pg	00 41 05.9	-0.5
BGF				eSn	Sn	00 41 33.7	+0.6
BGF				eSg	Sg	00 41 49.4	+0.1
	15nm,0.4s						
CAF	Calviac	3.34	121	eSg	Sg	00 41 49.4	-0.8
	2.8nm,0.3s						
PYM	Petit Puy Mans	3.58	104	Pn	Pn	00 40 53.1	-4.8
PYM	Petit Puy Mans	3.58	104	Sn	Sn	00 41 38.0	-1.9
PYM				Sg	Sg	00 41 58.7	+0.8
AVF	Avril sur Loir	3.65	87	ePn	Pn	00 40 59.8	+1.1
AVF	Avril sur Loir	3.65	87	ePg	Pg	00 41 12.2	-0.6
AVF				eSn	Sn	00 41 41.7	+0.3
AVF				eSg	Sg	00 42 00.0	-0.1
	0.6nm,0.3s						
SSF	Saint Saulge	3.76	83	ePn	Pn	00 41 01.5	+1.2
SSF	Saint Saulge	3.76	83	ePg	Pg	00 41 14.6	-0.3
SSF				eSn	Sn	00 41 44.3	+0.1
SSF				eSg	Sg	00 42 03.5	-0.1
	0.9nm,0.2s						
SMF	Signal de Mont	3.99	89	ePn	Pn	00 41 04.7	+1.3
SMF	Signal de Mont	3.99	89	ePg	Pg	00 41 18.5	-0.9
SMF				eSn	Sn	00 41 50.2	+0.3
SMF				eSg	Sg	00 42 10.7	-0.3
	0.6nm,0.2s						
LOR	Lormes	4.02	80	ePn	Pn	00 41 04.9	+1.1
LOR	Lormes	4.02	80	ePg	Pg	00 41 18.9	-0.9
	baz=260						
LOR				eSn	Sn	00 41 50.5	0.0
LOR				eSg	Sg	00 42 10.9	-0.9
SFTF	Sexfontaines	4.97	70	ePn	Pn	00 41 17.9	+1.0
SFTF				eSn	Sn	00 42 13.3	-0.6
	1.2nm,0.3s						

HEL 01 00:43:46.3±0.0, 67°.83N×20°.21E, h0km, ML1.6, ML1.1(UPP), Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RATU	Laukkuluspa	0.23	268	i P	Pg	00 43 50.4	-0.4
RATU				i S	Sg	00 43 53.7	-0.1
KOVU	Salmi	0.39	357	i P	Pg	00 43 53.3	-0.6
KOVU				i S	Sg	00 43 58.5	-0.4
NIKU	Nikkaluokta	0.45	275	i P	Pg	00 43 54.3	-0.5
LANU	Lannavaara	0.71	71	eP	Pg	00 43 59.0	-0.8
LANU				eS	Sg	00 44 08.7	-0.2
DUNU	Dundret	0.73	169	i P	Pg	00 43 59.4	-0.8
DUNU				i S	Sg	00 44 09.8	+0.3
MASU	Masugnsbyn	0.78	118	i P	Pg	00 44 00.7	-0.6
SALU	Saltoluokta	0.79	236	i P	Pg	00 44 00.6	-0.8
KIF	Kilpisjarvi	1.20	10	eP	Pg	00 44 09.1	-0.1
KIF	Kilpisjarvi	1.20	10	eP	Pg	00 44 08.6	-0.7
KIF				MSG		00 44 24.2	
	comp=Z,5.4nm,0.2s						
KIF				eS	Sg	00 44 24.5	-0.3
PAJU	Pajala	1.38	125	eP	Pg	00 44 11.0	-1.8
PAJU				eS	Sg	00 44 28.8	-1.8
HEF	Hetta	1.42	64	eP	Pn	00 44 11.4	-1.9
HEF	Hetta	1.42	64	ePG	Pn	00 44 11.7	-1.6
	baz=243						
HEF				MSG		00 44 29.4	
	comp=Z,3.3nm,0.2s						
HEF				eSN	Sn	00 44 34.9	+2.2
ERTU	Ertsjaerv	1.50	148	eP	Pn	00 44 13.0	-1.3
HARU	Harads	1.70	169	eP	Pn	00 44 16.8	-0.4
KALU	Kalix	2.34	146	ePB	Pn	00 44 26.6	+0.7
	baz=324						
KALU				eSB	Sb	00 44 57.2	-1.4
TOF	Tornio	2.39	135	ePB	Pn	00 44 27.6	+1.0
	baz=315						
TOF				MSG		00 44 55.3	
	comp=Z,2.6nm,0.2s						
TOF				eSB	Sb	00 44 58.5	-1.6
SGF	Sodankyl	2.45	96	ePB	Pn	00 44 29.0	+1.5
SGF				eSG	Sg	00 45 03.4	-1.5
RNF	Rovaniemi	2.57	116	ePB	Pn	00 44 30.5	+1.3
RNF				eSB	Sb	00 45 04.2	-1.1
ARA0	ARCESS Array S	2.58	46	eP	Pn	00 44 29.8	+0.5
	baz=227						
ARA0				eSB	Sn	00 45 03.4	+2.0

UPP 01 00:44:37.4±0.4, 67°.85N×20°.36E, h0km, ML1.9, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOVU	Salmi	0.38	349	P	Pg	00 44 44.8	+0.1
KOVU				S	Sg	00 44 50.0	+0.4
PAJU	Pajala	1.35	127	P	Pg	00 45 02.4	-0.8
PAJU				S	Sg	00 45 20.6	-0.1
ERTU	Ertsjaerv	1.48	150	P	Pn	00 45 04.8	-0.5

IDC ***01*** *01:05:02.5±0.5, 29°.54S×111°.70W, h0km, mb4.4/15, mb1 4.5/16, mb1mx4.4/26, mbtmp4.3/16, ML3.2/1, MS4.4/16, Ms1 4.4/16, ms1mx4.3/22, Error ellipse: s-maj=18.0km s-min=17.7km az=96.0*

NEIC ***01*** *01:05:05.5±1.6, 29°.67S±0°.08×111°.5W±0°.1, h10km±1km, mb4.9/109, Error ellipse: s-maj=21.6km s-min=6.3km az=306.0*

GCMT ***01*** *01:05:08.5±0.2, 29°.84S±0°.01×111°.97W±0°.02, h20km±1km, MW5.0/98, Moment Tensor Solution. s51,c60; s98,c142; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.39±.15; $M_{\theta\theta}$-4.09±.13; $M_{\phi\phi}$4.47±.15; $M_{r\theta}$-0.69±.27; $M_{\theta\phi}$-1.30±.12; $M_{\phi r}$1.65±.31; Best double couple: $M_0$4.76900×10^{16} NP1:ϕ_s38.00000°, δ73.00000°, λ8.00000°. NP2: ϕ_s306.00000°, δ83.00000°, λ163.00000°. Principal axes: T 5.2020, Plg17.0000°, Azm261.0000°; N -0.8730, Plg71.0000°, Azm104.0000°; P -4.3360, Plg7.0000°, Azm353.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 01:05:04.1±0.4, 29°.65S±0°.07×111°.65W±0°.08, h10km, n190, $\sigma 1^{s}26$/144, mb4.8/63, MS4.4/16, Easter Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VA02	Isla de Pascua	3.16	39	Pn	Pn	01 05 55.1	+1.2
RPN	Rapa Nui	3.24	40	Pn	Pn	01 05 54.8	-0.2
	2.9nm,0.3s,baz=253,slow=19,SNR=2.1						
RPN				Sn	Sb	01 06 39.9	-1.3
	2.5nm,0.3s,baz=41,slow=6.9,SNR=1.9						
H03N2	Juan Fernandez	28.07	106	T	T	01 40 35.1	
	baz=272,slow=74,SNR=321						
H03S2	Juan Fernandez	28.07	107	T	T	01 40 38.4	
	baz=255						
H03N3	Juan Fernandez	28.08	106	T	T	01 40 31.9	
	baz=272,slow=74,SNR=437						
H03S3	Juan Fernandez	28.09	107	T	T	01 40 42.6	
	baz=255						
H03N1	Juan Fernandez	28.09	106	T	T	01 40 31.7	
	baz=272,slow=74,SNR=368						
H03S1	Juan Fernandez	28.09	107	T	T	01 40 39.4	
	baz=255						
COYC	Coyhaique	34.75	128	P	P	01 11 55.5	+1.1
COYC				IAmb	IAmb	01 11 56.1	
	comp=Z,19nm,1.0s						
PLCA	Paso Flores	35.07	120	P	P	01 11 57.7	+0.4
	comp=Z,5.3nm,0.9s,baz=272,slow=8.7,SNR=7.5						
PLCA	Paso Flores	35.07	120	P	P	01 11 58.1	+0.7
PLCA	Paso Flores	35.07	120	eP	P	01 11 59.0	+1.6
PPT	Papeete	36.62	281	LR	LR	01 22 31.5	
	comp=Z,615nm,20.8s,baz=93,slow=29						
ZON	Zonda	36.86	104	P	P	01 12 13.7	+0.9
ZON				IAmb	IAmb	01 12 15.7	
	comp=Z,25nm,1.1s						
LVC	Limon Verde	38.84	90	P	P	01 12 30.4	+0.5
	comp=Z,3.0nm,0.8s,baz=205,slow=13,SNR=3.5						
LVC	Limon Verde	38.84	90	IAmb	IAmb	01 12 36.6	
	comp=Z,6.2nm,1.0s						
LVC	Limon Verde	38.84	90	eP	P	01 12 31.1	+1.1
PB08	IPOC Station P	39.51	86	P	P	01 12 36.9	+1.3
TRQA	Tornquist	41.68	115	P	P	01 12 53.1	+0.2
TRQA	Tornquist	41.68	115	eP	P	01 12 53.7	+0.8
LPAZ	La Paz	41.98	81	P	P	01 12 57.6	+1.3
	comp=Z,5.9nm,1.1s,baz=258,slow=6.9,SNR=12						
LPAZ				LR	LR	01 26 27.9	
	comp=Z,548nm,19.1s,baz=260,slow=31						
LPAZ	La Paz	41.98	81	P	P	01 12 57.2	+1.0
LPAZ	La Paz	41.98	81	eP	P	01 12 57.5	+1.3
CZSB	Cruzeiro do Su	42.55	67	eP	P	01 13 01.2	+1.0
OTAV	Otavalo	43.42	53	P	P	01 13 08.6	+0.8
ETMB	Extrema	46.73	75	eP	P	01 13 32.8	-0.9
TBTG	Tabatinga, AM	46.88	65	eP	P	01 13 34.4	-0.5
ITQB	Itaqui	47.41	104	eP	P	01 13 39.7	+0.9
CPUP	Villa Florida	47.72	100	P	P	01 13 40.3	-0.9
	comp=Z,3.5nm,1.0s,baz=337,slow=7.7,SNR=3.4						
CPUP	Villa Florida	47.72	100	IAmb	IAmb	01 13 41.5	
	comp=Z,25nm,1.5s						
CPUP	Villa Florida	47.72	100	eP	P	01 13 41.4	+0.2
SIV	San Ignacio	48.21	85	LR	LR	01 30 35.6	
	comp=Z,618nm,19.2s,baz=254,slow=32						
TLIG	Tlapa	48.61	17	P	P	01 13 48.3	+0.1
TLIG				IAmb	IAmb	01 13 59.5	
	comp=Z,26nm,1.3s						
MTO3	Montecristo	48.79	29	P	P	01 13 50.2	+0.5
MTO3				IAmb	IAmb	01 14 01.3	
	comp=Z,13nm,1.2s						
PLTB	Pedras Altas	49.44	108	eP	P	01 13 55.0	+0.5
ROSC	El Rosal	49.57	53	P	P	01 13 57.0	+1.0
	comp=Z,5.7nm,0.3s,baz=212,slow=19,SNR=9.4						
ROSC				LR	LR	01 31 33.1	
	comp=Z,617nm,19.4s,baz=227,slow=32						
ROSC	El Rosal	49.57	53	P	P	01 13 57.6	+1.5
SAML	Samuel	49.74	76	P	P	01 13 56.8	-0.1
SAML	Samuel	49.74	76	eP	P	01 13 57.1	+0.3
CPSB	Cacapava Do Su	49.90	106	eP	P	01 13 58.4	+0.4
MOIG	Morelia	50.07	13	P	P	01 13 59.1	-0.3
PTLB	Pontes e Lacer	50.12	86	eP	P	01 14 00.4	+0.6
VILB	Vilhena	50.32	82	eP	P	01 14 01.5	+0.1
MOTC	Monteria, Cord	51.57	48	P	P	01 14 11.6	+1.0
SJCC	San Jacinto, C	52.72	47	P	P	01 14 19.4	+0.1
TRCB	Terra Rica	52.90	97	eP	P	01 14 21.2	+0.6
SALV	Santo Antonio	52.92	88	eP	P	01 14 20.9	+0.2
PDRB	Porto dos Gac	53.94	83	eP	P	01 14 28.3	0.0
PCMB	Pacaembu	54.52	97	eP	P	01 14 32.8	+0.4
MACA	Manacapuru-AM	54.95	71	eP	P	01 14 36.1	+0.5
SDV	Santo Domingo	55.01	52	P	P	01 14 36.2	0.0
SDV				IAmb	IAmb	01 14 36.4	
	comp=Z,11nm,1.1s						
SDV	Santo Domingo	55.01	52	eP	P	01 14 35.7	-0.5
CLDB	Colider	55.09	82	eP	P	01 14 36.2	-0.5
URIC	Uribia, Colomb	56.14	49	IAmb	IAmb	01 14 44.2	
	comp=Z,18nm,1.0s						
ARAG	Araguaiana, MT	56.38	90	eP	P	01 14 46.3	+0.4
HPIG		56.56	6	P	P	01 14 47.4	+0.4
HPIG				IAmb	IAmb	01 14 56.6	
	comp=Z,18nm,1.4s						
NPGB	Novo Progresso	57.35	79	eP	P	01 14 52.2	-0.6
BOAV	Boa Vista	58.30	66	eP	P	01 14 58.8	-0.6
ITTB	Itaituba	58.42	76	eP	P	01 14 59.6	-0.7
SNDB	Serra Nova Dou	58.48	86	eP	P	01 15 00.8	0.0
TXAR	Lajitas Array	59.15	8	P	P	01 15 05.0	-0.1
	comp=Z,1.0nm,0.8s,baz=194,slow=8.0,SNR=8.1						
TXAR				LR	LR	01 35 39.0	
	comp=Z,143nm,18.8s,baz=0.0,slow=31						
TXAR	Lajitas Array	59.15	8	P	P	01 15 05.5	+0.4
SBA	Scott Base	59.47	194	P	P	01 15 06.1	-0.6
SBA				IAmb	IAmb	01 15 16.0	
	comp=Z,14nm,1.4s						
BDFB	Brasilia	59.71	92	P	P	01 15 09.5	0.0
	comp=Z,3.9nm,1.0s,baz=298,slow=9.9,SNR=2.9						
VNDA	Vanda	60.53	194	P	P	01 15 16.2	+2.3
	comp=Z,2.4nm,1.1s,baz=99,slow=7.7,SNR=6.6						
VNDA				LR	LR	01 35 25.5	
	comp=Z,282nm,21.9s,baz=93,slow=30						
VNDA	Vanda	60.53	194	P	P	01 15 15.4	+1.5
QSPA	South Pole Qui	60.53	180	P	P	01 15 12.6	-1.7
QSPA				IAmb	IAmb	01 15 18.7	
	comp=Z,22nm,1.5s						
319A	Douglas	60.73	2	IAmb	IAmb	01 15 28.3	
	comp=Z,9.2nm,1.0s						
MALB	Monte Alegre	61.00	74	eP	P	01 15 17.7	-0.4
435B	Jarrell	61.58	14	P	P	01 15 22.2	+0.7
435B				IAmb	IAmb	01 15 31.5	
	comp=Z,12nm,0.7s						
OUZ	Omahuta	61.97	244	P	P	01 15 25.8	+1.5
DIAM	Diamantina, MG	62.37	96	eP	P	01 15 28.2	+0.7
PRPB	Parauapebas	62.54	81	eP	P	01 15 27.7	-0.8
WHTX	Lake Whitney,	62.77	14	P	P	01 15 31.2	+1.7
SMTB	Santa Maria do	63.15	85	eP	P	01 15 33.6	+1.0
JANB	Januaria	63.19	93	eP	P	01 15 32.5	-0.3
MCPB	Macapa, AP	63.66	74	eP	P	01 15 35.0	-1.0
MSTX	Muleshoe	63.83	8	P	P	01 15 35.7	-1.0
SDBA	SAO DESIDERIO	63.84	90	eP	P	01 15 37.2	0.0
X18A	Snowflake	63.86	2	IAmb	IAmb	01 15 42.3	
	comp=Z,6.2nm,1.0s						
Z35A	Perchaven, San	64.11	13	P	P	01 15 39.2	+0.9
Z35A				IAmb	IAmb	01 15 48.0	
	comp=Z,16nm,1.1s						
BSFB	Barra de Sao F	64.59	98	eP	P	01 15 41.4	-0.6
GSC	Goldstone, Bar	64.79	355	P	P	01 15 43.8	+0.9
QSM	Queen of Sheba	65.45	355	IAmb	IAmb	01 15 55.7	
	comp=Z,7.0nm,1.2s						
U15A	North Rim	65.73	359	IAmb	IAmb	01 15 54.5	
	comp=Z,5.8nm,1.1s						
VNA3	Neumayer Olymp	65.96	160	P	P	01 15 47.5	-2.6
MVCO	Mesa Verde	66.58	3	P	P	01 15 54.9	+0.3
MVCO				IAmb	IAmb	01 16 00.5	
	comp=Z,12nm,1.2s						
VNA1	Neumayer--Stat	66.61	159	P	P	01 15 48.8	-5.4
PKCU	Pink Cliffs	66.75	359	IAmb	IAmb	01 16 01.9	
	comp=Z,10nm,1.1s						
VNA2	Neumayer--Watz	66.77	160	P	P	01 15 53.3	-1.9
	baz=259,slow=4.3						
CCUT	Cedar City	66.87	359	P	P	01 15 57.4	+0.9
CCUT				IAmb	IAmb	01 16 03.2	
	comp=Z,9.7nm,1.3s						
HHAR	Hobbs	67.67	15	IAmb	IAmb	01 16 10.2	
	comp=Z,17nm,1.2s						
PV12	Saucer Basin,	67.67	2	IAmb	IAmb	01 16 06.1	
	comp=Z,7.1nm,0.9s						
SNAA	Sanae	67.78	161	P	P	01 15 59.1	-2.6
SNAA	Sanae	67.78	161	LR	LR	01 39 50.2	
	comp=Z,118nm,19.5s,baz=188,slow=31						
SNAA	Sanae	67.78	161	P	P	01 16 00.7	-1.0
SNAA				IAmb	IAmb	01 16 05.3	
	comp=Z,5.7nm,1.0s						
LHV	Little Huntoon	67.86	354	IAmb	IAmb	01 16 07.7	
	comp=Z,6.8nm,1.0s						
U40A	Yellville	68.00	16	IAmb	IAmb	01 16 14.1	
	comp=Z,9.5nm,1.2s						
NV11	Mina Array Sit	68.00	354	P	P	01 16 03.8	+0.3
NV11				IAmb	IAmb	01 16 08.8	
	comp=Z,6.7nm,1.0s						
NVAR	Mina Array Bea	68.02	354	P	P	01 16 03.3	-0.4
	comp=Z,5.4nm,1.1s,baz=184,slow=7.7,SNR=12						
NVAR				LR	LR	01 40 22.5	
	comp=Z,450nm,18.0s,baz=159,slow=31						
Q16A	Castle Valley	68.22	0	IAmb	IAmb	01 16 09.7	
	comp=Z,8.7nm,1.1s						
RYN	Ryan	68.23	354	P	P	01 16 06.5	+1.5
RYN				IAmb	IAmb	01 16 19.8	
	comp=Z,7.6nm,1.3s						
SRU	San Rafael Swe	68.42	1	IAmb	IAmb	01 16 11.0	
	comp=Z,12nm,1.0s						
TMUT	Trail Mountain	68.60	0	IAmb	IAmb	01 16 12.2	
	comp=Z,5.6nm,1.0s						
KVN	Kaiserville	68.61	355	P	P	01 16 08.0	+0.6
KVN				IAmb	IAmb	01 16 12.6	
	comp=Z,7.2nm,1.0s						
NBPN	Ponto Novo - B	68.65	91	eP	P	01 16 07.8	-0.2
P17A	Butcher Ranch,	68.78	1	IAmb	IAmb	01 16 13.4	
	comp=Z,11nm,1.2s						
R32A	Long Quarter,	68.79	11	IAmb	IAmb	01 16 13.6	
	comp=Z,13nm,0.9s						
MGMO	Mountain Grove	68.90	17	IAmb	IAmb	01 16 14.6	
	comp=Z,14nm,1.1s						
SWET	Sewanee	68.93	22	P	P	01 16 10.2	+0.9
SWET				IAmb	IAmb	01 16 13.8	
	comp=Z,16nm,1.1s						
ROSB	Rosrio	69.08	81	eP	P	01 16 10.3	-0.3
T42A	Van Buren	69.08	18	P	P	01 16 09.7	-0.4
V48A	Smith Brothers	69.12	21	IAmb	IAmb	01 16 14.7	
	comp=Z,7.4nm,0.9s						
HICK	Hickman	69.13	19	P	P	01 16 11.6	+1.2
ISCO	Idaho Springs	69.33	5	P	P	01 16 13.3	+1.4
ISCO				IAmb	IAmb	01 16 17.7	
	comp=Z,7.0nm,1.1s						
JLU	Jordanelle	69.90	0	IAmb	IAmb	01 16 20.1	
	comp=Z,6.2nm,0.9s						
BMN	Battle Mountai	69.92	355	IAmb	IAmb	01 16 20.4	
	comp=Z,7.6nm,1.1s						
CTU	Camp Tracy	69.99	360	P	P	01 16 17.2	+1.4
CTU				IAmb	IAmb	01 16 20.4	
	comp=Z,5.7nm,0.7s						
T47A	Sharon Grove	70.18	21	IAmb	IAmb	01 16 21.9	
	comp=Z,15nm,1.1s						
NBLA	Lagarto - SE	70.68	92	eP	P	01 16 19.9	-0.7
P38A	Dawn	70.96	15	IAmb	IAmb	01 16 30.3	
	comp=Z,24nm,1.5s						
NBPB	Pedra_Branca-C	71.70	86	eP	P	01 16 27.3	+0.5
BGNE	Belgrade	71.80	11	P	P	01 16 28.6	+1.9
PDAR	Pinedale Array	72.09	2	P	P	01 16 26.5	-2.1
	comp=Z,0.3nm,0.5s,baz=189,slow=5.4,SNR=5.6						
PDAR				LR	LR	01 42 17.8	
	comp=Z,203nm,20.4s,baz=194,slow=31						
PDAR	Pinedale Array	72.09	2	P	P	01 16 29.0	+0.4
NBMO	Morrinhos-CE	72.40	84	eP	P	01 16 30.5	-0.4
TPAW	Teton Pass	72.79	1	IAmb	IAmb	01 16 37.0	
	comp=Z,8.1nm,0.8s						
HLID	Hailey	72.90	358	P	P	01 16 34.0	+0.7
HLID				IAmb	IAmb	01 16 38.4	
	comp=Z,9.0nm,1.0s						
FXWY	Fox Creek	72.94	0	IAmb	IAmb	01 16 38.5	
	comp=Z,11nm,1.4s						
FLWY	Flagg Ranch	73.38	1	IAmb	IAmb	01 16 40.6	
	comp=Z,11nm,0.8s						
RSSD	Black Hills	73.75	6	P	P	01 16 38.0	-0.3
L40A	Anamosa	73.81	16	IAmb	IAmb	01 16 43.5	
	comp=Z,18nm,1.0s						
NBRF	Rio Formoso -	74.07	91	eP	P	01 16 40.6	-0.2
QLMT	Earthquake Lak	74.13	0	P	P	01 16 40.0	-0.6
LAO	LASA Array	76.14	4	P	P	01 16 53.2	+1.2
LAO				IAmb	IAmb	01 16 57.0	
	comp=Z,9.3nm,0.9s						
F36A	Milaca	76.94	13	IAmb	IAmb	01 17 01.3	
	comp=Z,16nm,0.9s						
NEW	Newport	77.72	356	IAmb	IAmb	01 17 15.7	
	comp=Z,10nm,1.4s						
CASY	Casey	79.09	196	P	P	01 17 09.8	+1.5
CASY				IAmb	IAmb	01 17 11.7	
	comp=Z,9.1nm,1.1s						
ULM	Lac du Bonnet	80.77	10	P	P	01 17 15.1	-2.3
	comp=Z,2.2nm,0.8s,baz=180,slow=2.0,SNR=1.9						
ULM				LR	LR	01 48 14.2	
	comp=Z,124nm,19.9s,baz=196,slow=32						
MAW	Mawson	82.96	178	P	P	01 17 28.9	+0.1
	comp=Z,2.6nm,0.8s,baz=233,slow=6.1,SNR=4.9						
MAW				LR	LR	01 51 52.7	
	comp=Z,219nm,18.1s,baz=231,slow=34						
STKA	Stephens Creek	87.41	235	P	P	01 17 53.2	+1.3
	comp=Z,3.5nm,1.1s,baz=149,slow=2.8,SNR=3.2						
STKA				LR	LR	01 54 14.3	
	comp=Z,95nm,18.4s,baz=58,slow=34						
STKA	Stephens Creek	87.41	235	P	P	01 17 53.4	+1.5
CTAO	Charters Tower	90.19	247	P	P	01 18 06.0	+0.8
YKA	Yellowknife Ar	91.85	359	LR	LR	01 54 58.0	
	comp=Z,356nm,18.7s,baz=0.0,slow=33						
H11S2	WAKE ISLAND Hy	92.01	290	T	T	03 00 02.3	
	baz=129						
H11S1	WAKE ISLAND Hy	92.03	290	T	T	03 00 03.8	
	baz=129						
H11S3	WAKE ISLAND Hy	92.03	290	T	T	03 00 01.6	
	baz=129						
H11N3	WAKE ISLAND Hy	92.47	291	T	T	03 00 32.2	
	baz=122						
H11N1	WAKE ISLAND Hy	92.48	291	T	T	03 00 36.0	
	baz=122						
H11N2	WAKE ISLAND Hy	92.48	291	T	T	03 00 35.2	
	baz=122						
AS31	Alice Springs	97.69	237	P	Pdif	01 18 40.6	+0.9
ASAR	Alice Springs	97.69	237	P	P	01 18 39.6	-0.1
	comp=Z,1.1nm,1.1s,baz=100,slow=4.1,SNR=3.7						
ASAR				LR	LR	01 56 18.2	
	comp=Z,151nm,20.9s,baz=182,slow=32						
ASAR	Alice Springs	97.69	237	P	Pdif	01 18 40.3	+0.6
ILAR	Eielson Array	98.05	346	LR	LR	01 53 48.6	
	comp=Z,105nm,19.9s,baz=150,slow=30						
WRA	Warramunga Arr	99.58	241	P	Pdif	01 18 49.5	+1.4
	comp=Z,0.3nm,0.7s,baz=116,slow=1.8,SNR=3.4						
WRA				LR	LR	01 58 08.1	
	comp=Z,341nm,20.4s,baz=140,slow=32						
H01W1	Cape Leeuwin H	102.62	217	T	T	03 13 23.7	
	baz=138,slow=75,SNR=8.4						
H01W2	Cape Leeuwin H	102.63	217	T	T	03 13 24.5	
	baz=138,slow=75,SNR=7.9						
H01W3	Cape Leeuwin H	102.64	217	T	T	03 13 29.6	
	baz=138,slow=75,SNR=7.5						
FINES	FINESS Array B	137.83	29	PKP	PKPdf	01 24 28.4	+0.4
	comp=Z,2.8nm,1.0s,baz=232,slow=2.2,SNR=1.3						
NRIK	Noril'sk	138.76	350	PKP	PKPdf	01 24 29.8	+0.3
	comp=Z,1.2nm,0.7s,baz=61,slow=13,SNR=2.1						
MLR	Muntele Rosu	143.32	53	PKhKP	PKPpre	01 24 34.1	
	comp=Z,16nm,1.1s,baz=225,slow=2.9,SNR=4.1						
MLR	Muntele Rosu	143.32	53	PKPdf	PKPdf	01 24 39.5	+0.9
AKASG	Malin Array Be	144.03	43	PKhKP	PKPpre	01 24 32.5	
	comp=Z,0.4nm,0.3s,baz=277,slow=4.0,SNR=9.6						
AKASG	Malin Array Be	144.03	43	PKPdf	PKPdf	01 24 40.1	+0.6
KARP	Karpathos	144.99	69	PKPdf	PKPbc	01 24 40.5	-0.6
SONM	Songino Array	145.65	313	PKPbc	PKPdf	01 24 40.5	-2.2
	comp=Z,8.5nm,1.0s,baz=85,slow=2.6,SNR=12						
SONM	Songino Array	145.65	313	PKPdf	PKPdf	01 24 40.2	-2.4
SONM					pPKPdf	01 24 44.7	-0.4
TLY	Talaya	145.85	320		PKPdf	01 24 42.7	0.0
OBN	Obninsk	145.89	33	PKPbc	PKPdf	01 24 42.3	-0.2
	comp=Z,2.4nm,0.4s,baz=45,slow=4.3,SNR=4.8						
ELL	Elmali	147.23	67	PKPbc	PKPdf	01 24 46.6	+1.0
KIRV	Kirov	148.27	19	PKPbc	PKPdf	01 24 47.3	+0.8
	comp=Z,6.3nm,0.7s,baz=322,slow=12,SNR=2.5						
BR231	Keskin MP Arra	149.23	61	PKPbc	PKPbc	01 24 51.9	-1.2
LZH	Lanzhou	149.62	292	ePKPbc	PKPdf	01 24 43.6	-6.0
LZH				pPKP	sPKPdf	01 24 52.7	-0.2
LZH				sPKP		01 24 57.2	
BR131	Keskin Array S	149.90	61	PKPbc	PKPbc	01 24 53.8	-1.0
BRTR	Keskin Array B	149.90	61	PKPbc	PKPbc	01 24 53.2	-1.5
	comp=Z,2.3nm,0.9s,baz=220,slow=1.1,SNR=5.9						
BRTR	Keskin Array B	149.90	61	PKPbc	PKPbc	01 24 53.0	-1.8
CMAR	Chiang Mai Arr	150.01	255	PKPbc	PKPbc	01 24 53.7	-1.8
	comp=Z,0.7nm,0.3s,baz=169,slow=1.8,SNR=5.3						
EIL	Elat	151.03	82	PKPbc	PKPbc	01 24 56.6	-1.0
	comp=Z,7.6nm,1.1s,baz=254,slow=1.4,SNR=3.0						
ARU	Arti	152.35	12	PKP	PKPdf	01 24 51.8	-1.1
	comp=Z,0.3nm,0.3s,baz=249,slow=8.6,SNR=1.6						
GTA	Gaotai	152.43	299	PKPbc	PKPdf	01 24 57.1	+3.3
ZALV	Zalesovo Beam	152.93	338	PKP	PKPdf	01 24 51.5	-2.3
	comp=Z,0.5nm,0.6s,baz=84,slow=5.1,SNR=4.0						
ZALV				PKPab	PKPab	01 25 13.0	+0.8
	comp=Z,5.3nm,1.0s,baz=23,slow=4.8,SNR=8.4						
ZALV	Zalesovo Beam	152.93	338	PKPdf	PKPdf	01 24 51.0	-2.9
ZALV					pPKPab	01 25 15.0	+0.3
ASF	Jabal al Asfar	152.94	77	PKPbc	PKPbc	01 24 59.2	-2.8
	comp=Z,2.3nm,0.9s,baz=207,slow=2.3,SNR=2.4						
KBZ	Khabaz	155.34	48	PKP	PKPdf	01 24 56.4	-1.2
	comp=Z,2.7nm,0.9s,baz=337,slow=8.6,SNR=2.2						
BVAR	Borovoye Array	156.60	357	PKP	PKPdf	01 24 58.5	-0.5
	comp=Z,0.5nm,0.8s,baz=236,slow=48,SNR=2.3						
BVAR				PKPab	PKPab	01 25 26.4	-1.5

	comp=Z,1.0nm,0.7s,baz=286,slow=16,SNR=2.8						
KURK	Kurchatov	157.59	343		PKPdf	01 24 57.5	-2.8
KURK					PKPab	01 25 32.3	+0.1
KURBB	Kurchatov Arra	157.70	343	PKP	PKPdf	01 24 57.5	-2.9
	comp=Z,2.2nm,1.1s,baz=18,slow=0.8,SNR=5.3						
KURBB				PKPab	PKPab	01 25 32.3	-0.4
	comp=Z,1.6nm,0.9s,baz=22,slow=3.5,SNR=6.0						
AKTO	Aktyubinsk	157.83	18	PKPab	PKPab	01 25 34.1	+0.8
	comp=Z,1.7nm,0.9s,baz=276,slow=3.6,SNR=3.8						
MKAR	Makanchi Array	159.74	331	PKP	PKPdf	01 25 03.2	+0.1
	comp=Z,1.0nm,0.9s,baz=5.7,slow=1.4,SNR=3.4						
MKAR				PKPab	PKPab	01 25 42.5	+0.7
	comp=Z,2.4nm,1.0s,baz=57,slow=4.5,SNR=5.3						
AAK	Ala-Archa	166.13	341	PKPab	PKPab	01 26 09.9	-0.1
	comp=Z,0.5nm,0.3s,baz=19,slow=4.9,SNR=4.0						

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*ISK **01** 01:10:52.9, 35°.97N×32°.10E, h91^{km}±1^{km}, ML2.5/15*
*DDA **01** 01:10:52.6, 35°.89N×31°.97E, h79^{km}, ML2.4*
*NIC **01** 01:10:53.6±0.0, 36°.16N×32°.29E, h27^{km}±2^{km}, Ml2.6/6*
*GII **01** 01:10:56.0±0.4, 35°.93N×32°.42E, h80^{km}, Mm2.5/2*
ISC 01 01:10:52.6±1.3**, 35°.98N**±0°.03×**32°.10E**±0°.03**, h100**^{km}±7^{km}**,**
n50, σ1^{s}11/80**, 3C-1D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAZI	Gazipasa	0.31	34	iP	Pn	01 11 06.7	-0.6
GAZI				iS	Sn	01 11 16.6	-1.6
GAZI				IAML		01 11 17.0	
	comp=N,359nm,0.5s						
GAZI				IAML		01 11 17.0	
	comp=E,335nm,0.4s						
GAZI	Gazipasa	0.31	34	PG	Pn	01 11 07.2	-0.1
GAZI				SG	Sn	01 11 17.5	-0.7
ALFC	Alefka	0.92	153	⇑eP	Pn	01 11 12.0	-0.2
ALFC				S	Sn	01 11 26.5	-0.3
ALFC				AML	AML	01 11 27.3	
	comp=E,1.1nm,0.2s						
ALFC				AML	AML	01 11 27.3	
	comp=E,1.1nm,0.2s						
ALFC				AML	AML	01 11 28.1	
	comp=E,0.7nm,0.1s						
ALFC				AML	AML	01 11 28.1	
	comp=E,0.7nm,0.1s						
ERMK	Ermenek	0.94	45	iP	Pn	01 11 13.1	+0.5
ERMK				iS	Sn	01 11 29.0	+1.4
ERMK				IAML		01 11 29.0	
	comp=E,86nm,0.3s						
ERMK				IAML		01 11 30.0	
	comp=N,128nm,0.3s						
AKMS	Akamas	0.97	168	⇑eP	Pn	01 11 13.6	+0.8
AKMS				S	Sn	01 11 29.1	+1.2
AKMS				AML	AML	01 11 29.1	
	comp=N,0.5nm,0.2s						
AKMS				AML	AML	01 11 29.1	
	comp=N,0.5nm,0.2s						
AKMS				AML	AML	01 11 29.5	
	comp=N,0.5nm,0.2s						
AKMS				AML	AML	01 11 29.5	
	comp=N,0.5nm,0.2s						
KEPZ	Antalya-Kepez	1.01	337	iP	Pn	01 11 13.4	+0.2
KEPZ				iS	Sn	01 11 28.4	-0.1
KEPZ				IAML		01 11 34.0	
	comp=N,52nm,0.5s						
KEPZ				IAML		01 11 37.0	
	comp=E,54nm,1.0s						
LEF	Lefka	1.07	143	iP	Pn	01 11 13.0	-0.8
LEF				iS	Sn	01 11 26.5	-3.2
LEF				IAML		01 11 34.0	
	comp=N,50nm,0.6s						
LEF				IAML		01 11 36.0	
	comp=E,61nm,0.5s						
LEF	Lefka	1.07	143	PG	Pn	01 11 13.8	0.0
TEVE	Tevekalti-Mers	1.18	67	PN	Pn	01 11 15.7	+0.6
TEVE				SN	Sn	01 11 32.3	+0.2
GULN	MERSIN_Gulnar	1.19	80	iP	Pn	01 11 16.3	+1.1
GULN				iS	Sn	01 11 31.6	-0.6
GULN				IAML		01 11 33.0	
	comp=N,62nm,0.5s						
GULN				IAML		01 11 34.0	
	comp=E,46nm,0.8s						
AKKU	Akkuyu-Mersin	1.19	81	PN	Pn	01 11 16.1	+1.0
NATA	Nata	1.25	162	⇑iP	Pn	01 11 17.1	+1.1
NATA				S	Sn	01 11 35.7	+2.2
NATA				AML	AML	01 11 36.2	
	comp=E,0.5nm,0.2s						
NATA				AML	AML	01 11 36.2	
	comp=E,0.5nm,0.2s						
NATA				AML	AML	01 11 36.9	
	comp=E,0.5nm,0.3s						
NATA				AML	AML	01 11 36.9	
	comp=E,0.5nm,0.3s						
IKL	Isikli	1.31	78	PN	Pn	01 11 17.3	+0.7
ATHAL	Athalassa	1.35	128	P	Pn	01 11 17.2	+0.2
ATHAL				S	Sn	01 11 35.4	0.0
KEBE	Keben-Mersin	1.39	70	PN	Pn	01 11 18.5	+0.9
KEBE				SN	Sn	01 11 36.9	+0.4
KKBE	Karaman, Kazim	1.42	28	iP	Pn	01 11 18.9	+1.0
KKBE				iS	Sn	01 11 35.0	-2.1
CSS	Mathiatis	1.43	135	PN	Pn	01 11 18.6	+0.6
CSS	Mathiatis	1.43	135	⇓P	Pn	01 11 18.2	+0.2
CSS				AML	AML	01 11 41.1	
	comp=E,0.1nm,0.4s						
SEYD	Seydisehir-KON	1.44	352	PN	Pn	01 11 19.6	+1.3
SEYD				SN	Sn	01 11 38.1	+0.4
SEDI	Konya, Seydise	1.50	350	iP	Pn	01 11 20.1	+1.2
SEDI				iS	Sn	01 11 39.3	+0.4
SEDI				IAML		01 11 40.0	
	comp=E,37nm,0.5s						
ASGA	Asgata	1.52	141	P	Pn	01 11 20.2	+1.1
ASGA				S	Sn	01 11 39.8	+0.7
ASGA				AML	AML	01 11 46.0	
	comp=E,0.2nm,0.3s						
ASGA				AML	AML	01 11 46.0	
	comp=E,0.2nm,0.3s						
ASGA				AML	AML	01 11 50.0	
	comp=E,0.3nm,0.4s						
ASGA				AML	AML	01 11 50.0	
	comp=E,0.3nm,0.4s						
KRMN	Karaman	1.52	38	PN	Pn	01 11 20.2	+1.0
MVOU	Mavrovouni	1.58	127	P	Pn	01 11 19.5	-0.3
MVOU				S	Sn	01 11 39.4	-1.0
MVOU				AML	AML	01 11 44.1	
	comp=E,0.3nm,0.4s						
MVOU				AML	AML	01 11 44.1	
	comp=E,0.3nm,0.4s						
MVOU				AML	AML	01 11 45.5	
	comp=E,0.2nm,0.3s						
MVOU				AML	AML	01 11 45.5	
	comp=E,0.2nm,0.3s						
KIZK	Mersin	1.73	72	iP	Pn	01 11 22.9	+1.1
KIZK				IAML		01 11 41.0	
	comp=E,24nm,2.1s						
KIZK				iS	Sn	01 11 43.3	-0.5
KIZK				IAML		01 11 51.0	
	comp=N,39nm,1.1s						
KIZK	Mersin	1.73	72	PN	Pn	01 11 22.8	+1.1
KIZK				SN	Sn	01 11 44.5	+0.6
KORT	Korkueli	1.74	307	iP	Pn	01 11 19.9	-2.1
KMER	Konya-Meram	1.80	7	iP	Pn	01 11 23.0	+0.2
BUCA	Burdur, Bucak-	1.83	318	iP	Pn	01 11 22.3	-0.7
BUCA				iS	Sn	01 11 45.2	-1.0
PARAL	Paralimni	1.86	121	S	Sn	01 11 46.6	-0.3
ELL	Elmali	1.93	294	PN	Pn	01 11 25.5	+1.2
ELL	Elmali	1.93	294	P	Pn	01 11 25.2	+0.9
ELL				S	Sn	01 11 51.0	+2.4
KONT	Konya--Tatoy	1.98	6	iP	Pn	01 11 25.9	+1.0
KONT	Konya--Tatoy	1.98	6	PN	Pn	01 11 25.9	+1.0
MERS	Mersin	2.15	65	PN	Pn	01 11 28.7	+1.5
DOGA	KONYA_Doganhis	2.15	351	iP	Pn	01 11 27.2	-0.1
KERG	Konya-Eregli	2.17	48	iP	Pn	01 11 27.2	-0.3
KERG				IAML		01 11 47.0	
	comp=N,25nm,0.5s						
KERG				iS	Sn	01 11 52.9	-1.4
YVAC	Isparta, Yalva	2.39	344	iP	Pn	01 11 30.8	+0.4
YVAC				iS	Sn	01 11 58.2	-1.1
ALIN	Konya, Altinte	2.40	15	iP	Pn	01 11 25.0	-5.5
KDHN	Kadinhani	2.54	0	iP	Pn	01 11 31.7	-0.6
KDHN				iS	Sn	01 12 01.2	-1.6
CHBY	Cihanbeyli	2.68	13	PN	Pn	01 11 35.2	+1.1
CMRD	Camardi-Nigde	2.87	53	PN	Pn	01 11 37.6	+0.9
TAVA	DENIZLI_Tavas	2.96	301	iP	Pn	01 11 37.9	0.0
TAVA				iS	Sn	01 12 10.4	-2.4
TAVA				IAML		01 12 18.0	
	comp=N,12nm,0.6s						
HNTI	Hanita	3.84	138	Pn	Pn	01 11 50.2	+0.5
HNTI				Sn	Sn	01 12 32.5	-1.4
MMA0B	Mount Meron ar	4.02	136	Pn	Pn	01 11 52.6	+0.4
MMA0B				Sn	Sn	01 12 35.9	-2.4
GEM	Giv'at Ha'Em	4.03	132	Pn	Pn	01 11 52.9	+0.7
NATI	Neve Ativ	4.04	131	Pn	Pn	01 11 53.2	+0.9
NATI				Sn	Sn	01 12 36.8	-1.8
OFRI	`Ofer	4.11	144	Pn	Pn	01 11 53.6	+0.2
OFRI				Sn	Sn	01 12 39.1	-1.4
MMLI	Mount Malkishu	4.48	141	Pn	Pn	01 11 58.9	+0.6
MMLI				Sn	Sn	01 12 48.2	-1.1
HMDT	Nahal Hemdat	4.68	142	Pn	Pn	01 12 01.8	+0.8
HMDT				Sn	Sn	01 12 53.3	-0.8
YTIR	Yattir	5.24	150	Pn	Pn	01 12 09.9	+1.2
YTIR				Sn	Sn	01 13 07.6	-0.4

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*IDC **01** 01:19:56.8±1.3, 28°.02N×142°.89E, h0^{km}, mb3.9/11, mb1 4.0/13, mb1mx3.8/36, mbtmp3.9/13, ML3.2/1, Error ellipse: s-maj=38.5km s-min=14.1km az=95.0*
*NEIC **01** 01:19:59.5±1.3, 28°.07N±0°.07×142°.9E±0°.2, h18^{km}±7^{km}, mb4.3/8, Error ellipse: s-maj=27.0km s-min=9.0km az=101.0*
*NIED **01** 01:19:59.9, 28°.23N×142°.27E, h14^{km}, MW3.8, Moment Tensor Solution. s1 Moment tensor: Scale 10^{14}Nm; M_{rr}4.93; $M_{\theta\theta}$-1.30; $M_{\phi\phi}$-3.63; $M_{r\theta}$-0.66; $M_{\theta\phi}$2.26; $M_{\phi r}$0.01; Fault plane solution: $M_0$5.01000×10^{14} NP1: ϕ_s322.00000°, δ47.00000°, λ81.00000°. NP2: ϕ_s155.00000°, δ43.00000°, λ99.00000°.*
*JMA **01** 01:19:59.8, 28°.23N×142°.27E, h14^{km}±1^{km}, M4.3*
ISC 01 01:19:58.9±1.1**, 28°.15N**±0°.05×**142°.7E**±0°.2**, h10**^{km}**, n37,**
σ1^{s}39/34**, mb4.2**/15**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.14	203	P	Pb	01 20 20.7	-0.1
CBIJ				S	Sb	01 20 35.7	0.0
JCJ	Chichijima	1.14	203	Pn	Pb	01 20 20.7	-0.1
	41nm,0.3s,baz=0.7,slow=19,SNR=56						
JCJ				Sn	Sb	01 20 35.2	-0.5
	133nm,0.3s,baz=90,slow=20,SNR=14						
JCJ	Chichijima	1.14	203		Pb	01 20 20.8	0.0
JHH2	Haha-jima-NKT2	1.58	197	S	Sn	01 20 48.4	+0.9
BSO1	Boso 1	6.64	348	P	Pn	01 21 36.8	+0.7
JHU	Hanno	8.20	340	P	Pn	01 21 58.4	+0.4
JHU				S	Sn	01 23 27.2	-3.5
JRY	Ryogami san	8.47	339	P	Pn	01 22 02.6	+0.9
JRY				eS	Sn	01 23 36.2	-1.2
MJAR	Matsushiro Arr	9.18	337	Pn	Pn	01 22 11.7	+0.3
	0.2nm,0.3s,baz=159,slow=14,SNR=11						
MJAR				Sn	Sn	01 23 53.8	-1.1
	0.1nm,0.3s,baz=123,slow=48,SNR=1.9						
MJAR	Matsushiro Arr	9.18	337		Pn	01 22 13.5	+2.1
JMM	Marumori	9.81	351		Pn	01 22 19.2	-0.9
KSRS	Korea Array	15.48	311	Pn	P	01 23 38.7	-3.1
	baz=115,slow=13,SNR=1.6						
KLR	Kul'dur	22.66	341	P	P	01 25 02.4	+2.1
	1.8nm,0.7s,baz=148,slow=13,SNR=2.9						
H11N2	WAKE ISLAND Hy	23.63	105	T	T	01 49 49.2	
	baz=297,slow=75,SNR=7.7						
H11N1	WAKE ISLAND Hy	23.63	106	T	T	01 49 33.7	
	baz=297,slow=75,SNR=4.8						
H11N3	WAKE ISLAND Hy	23.65	105	T	T	01 49 39.8	
	baz=297,slow=75,SNR=4.0						
H11S3	WAKE ISLAND Hy	24.01	108	T	T	01 50 36.0	
	baz=296						
H11S1	WAKE ISLAND Hy	24.01	108	T	T	01 50 27.6	
	baz=296						
H11S2	WAKE ISLAND Hy	24.02	108	T	T	01 50 24.9	
	baz=296						
SONM	Songino Array	34.27	315	P	P	01 26 45.8	+0.5
	1.0nm,0.5s,baz=114,slow=7.9,SNR=4.0						
SONM	Songino Array	34.27	315	IAmb	IAmb	01 26 52.5	
	comp=Z,1.9nm,1.0s						
SEY	Seymchan	35.36	8	P	P	01 26 53.8	-0.5
	comp=Z,1.3nm,0.5s,baz=171,slow=13,SNR=2.4						
WB2	Warramunga Arr	48.49	190	P	P	01 28 40.1	-1.9
WRA	Warramunga Arr	48.49	191	P	P	01 28 40.5	-1.5
	comp=Z,2.7nm,0.6s,baz=12,slow=8.3,SNR=30						
WRA	Warramunga Arr	48.49	191	IAmb	IAmb	01 28 42.8	
	comp=Z,0.2nm,0.8s						
ZAA0	Zalesovo Array	48.99	318	P	P	01 28 45.5	0.0
ZAA0				IAmb	IAmb	01 29 07.0	
	comp=Z,2.3nm,0.9s						
ZALV	Zalesovo Beam	48.99	318	P	P	01 28 46.5	+1.0
	comp=Z,0.6nm,0.4s,baz=111,slow=8.1,SNR=4.0						
MK31	Makanchi Array	50.15	309	P	P	01 28 54.7	+0.1
MK31				IAmb	IAmb	01 29 08.4	
	comp=Z,3.7nm,1.2s						
MKAR	Makanchi Array	50.15	309	P	P	01 28 55.0	+0.4
	comp=Z,0.3nm,0.4s,baz=82,slow=8.9,SNR=2.7						
ASAR	Alice Springs	52.21	190	P	P	01 29 07.4	-2.7
	comp=Z,0.2nm,0.7s,baz=12,slow=4.7,SNR=1.7						
KURK	Kurchatov	52.57	314	P	P	01 29 12.5	-0.1
KURBB	Kurchatov Arra	52.62	314	P	P	01 29 13.5	+0.5
	comp=Z,3.1nm,0.8s,baz=90,slow=7.4,SNR=32						
KK31	Karatay Array	58.83	305	P	P	01 29 57.6	-0.1
KK31				IAmb	IAmb	01 30 10.6	
	comp=Z,2.8nm,1.1s						
KKAR	Karatay Array	58.83	305	P	P	01 29 58.4	+0.7
KKAR				IAmb	IAmb	01 30 10.6	
	comp=Z,2.8nm,1.1s						
ABKAR	Akbulak array	64.68	314	P	P	01 30 37.2	+0.2
FINES	FINESS Array B	77.20	334	P	P	01 31 54.1	+1.3
	comp=Z,2.8nm,1.0s,baz=48,slow=2.1,SNR=4.9						
KBZ	Khabaz	77.61	313	P	P	01 31 57.0	+1.6
	comp=Z,3.2nm,0.9s,baz=67,slow=3.6,SNR=4.0						
BRTR	Keskin Array B	85.61	313	P	P	01 32 39.9	+1.8
	comp=Z,0.9nm,0.7s,baz=84,slow=5.1,SNR=2.1						

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*VAO **01** 01:28:38.8±0.5, 38°.60S×72°.96W, h10^{km}, mb4.9*
*NEIC **01** 01:28:38.4±1.2, 38°.78S±0°.04×73°.37W±0°.08, h22^{km}±4^{km}, mb4.9/94, ML5.1(GUC), Error ellipse: s-maj=9.5km s-min=5.6km az=75.0*
*GUC **01** 01:28:39.6±0.5, 38°.82S×73°.43W, h50^{km}±20^{km}, ML5.1, MW5.1*
*IDC **01** 01:28:42.8±2.9, 38°.77S×73°.08W, h56^{km}±24^{km}, mb4.2/14, mb1 4.4/17, mb1mx4.3/22, mbtmp4.6/17, ML4.3/3, MS4.1/12, Ms1 4.1/12, ms1mx4.0/19, Error ellipse: s-maj=23.5km s-min=11.8km az=93.0*
ISC 01 01:28:38.0±1.9**, 38°.78S**±0°.03×**73°.39W**±0°.06**, h22**^{km}±13^{km}**,**
n240, σ1^{s}05/224**, mb4.9**/54**, MS4.2**/10**, 6C-5D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LR02	Universidad Au	1.03	174	⇑iP	Pn	01 28 57.1	+0.1
LR02				eS	Sn	01 29 10.0	-0.7
LR04	Corral	1.10	182	⇑iP	Pn	01 28 57.8	-0.1
LR04				iS	Sn	01 29 10.9	-1.5
LR04				IAML		01 29 13.3	
	comp=E,85μm,0.3s						
LR03	Panguipulli	1.17	137		Pn	01 28 59.5	+0.6
LR03	Panguipulli	1.17	137	⇓iP	Pn	01 28 59.6	+0.6
LR03				eS	Sn	01 29 14.2	-0.1
LR03				IAML		01 29 19.2	
	comp=N,110μm,0.5s						
LC01	Cunco	1.18	96	Pn	Pn	01 28 59.9	+0.8
LC01	Cunco	1.18	96	⇓iP	Pn	01 28 59.9	+0.8
LC01				eS	Sb	01 29 15.7	+1.0
BI05	Punta Hualpn	2.04	4	⇓eP	Pn	01 29 11.9	+1.0
BI05				eS	Sn	01 29 34.7	-0.9
LL04	Puerto Octay	2.25	161		Pn	01 29 14.1	+0.2
LL04	Puerto Octay	2.25	161	⇑iP	Pn	01 29 14.0	+0.2
LL04				eS	Sn	01 29 39.4	-1.5
LL03	Petrohue	2.47	163		Pn	01 29 17.5	+0.6
LL03	Petrohue	2.47	163	eP	Pn	01 29 17.1	+0.3
LL03				eS	Sn	01 29 45.5	-0.8
LL03				IAML		01 30 03.1	
	comp=E,11μm,0.4s						
LL05	Los Muermos	2.62	181	Pn	Pn	01 29 19.1	+0.2
LL05	Los Muermos	2.62	181	⇑iP	Pn	01 29 19.2	+0.2
LL05				eS	Sn	01 29 48.4	-1.6
LL05				IAML		01 30 16.4	
	comp=E,8μm,0.7s						
PLCA	Paso Flores	2.93	133	P	Pn	01 29 24.9	+1.6
	comp=E,10nm,0.3s,baz=307,slow=8.7,SNR=297						
PLCA				S	Sb	01 30 05.4	+0.5
	comp=E,58nm,0.3s,baz=235,slow=18,SNR=3.4						
PLCA				LR	LR	01 30 46.0	
	comp=E,4μm,18.6s,baz=314,slow=45						
PLCA	Paso Flores	2.93	133	Pn	Pn	01 29 24.1	+0.8
PLCA	Paso Flores	2.93	133	eP	Pn	01 29 24.6	+1.4
PLCA				eS	Sn	01 30 02.0	+4.3
PLCA	Paso Flores	2.93	133	eP	Pn	01 29 24.9	+1.7
ML02	Panimavida	3.40	28	Pn	Pn	01 29 30.7	+1.0
ML02	Panimavida	3.40	28	⇑eP	Pn	01 29 30.6	+1.0
ML02				eS	Sn	01 30 08.2	-1.0
LL01	San Ignacio de	3.67	169		Pn	01 29 33.6	+0.3
LL01	San Ignacio de	3.67	169	⇑iP	Pn	01 29 34.4	+1.1
GO05	Huala	3.94	18	Pn	Pn	01 29 37.4	+0.2
GO05	Huala	3.94	18	eP	Pn	01 29 37.8	+0.6
LL07	Hotel Espejo d	4.04	181		Pn	01 29 38.2	-0.3
LL07	Hotel Espejo d	4.04	181	eP	Pn	01 29 38.1	-0.3
GO07	Milladeo Hill,	4.33	183		Pn	01 29 42.5	0.0
GO07	Milladeo Hill,	4.33	183	eP	Pn	01 29 42.2	-0.2
BO02	Sierra Bellavi	4.50	28		Pn	01 29 45.8	+1.0
BO02	Sierra Bellavi	4.50	28	⇓eP	Pn	01 29 45.9	+1.1
BO01	Tunca	4.76	24		Pn	01 29 48.3	0.0
BO01	Tunca	4.76	24	⇓eP	Pn	01 29 48.4	+0.1
MT01	Popeta	5.20	20		Pn	01 29 54.5	+0.1
VA05	Santo Domingo	5.31	16		Pn	01 29 56.2	+0.3
MT09	Talagante	5.36	22		Pn	01 29 56.3	-0.4
LMEL	Las Melosas	5.55	29	eP	Pn	01 30 00.7	+1.3
MT05	Renca	5.79	23	Pn	Pn	01 30 02.3	-0.2
MT02	Curacav	5.81	19		Pn	01 30 02.5	-0.2
VA01	Torpederas	5.92	14	Pn	Pn	01 30 04.5	+0.2
H03S1	Juan Fernandez	6.64	316	P	Pn	01 30 15.1	+1.1
	baz=107,slow=9.6,SNR=26						
H03S1				T	T	01 36 30.4	
	baz=134,slow=76,SNR=334						
H03S2	Juan Fernandez	6.66	316	P	Pn	01 30 14.8	+0.6
	baz=107,slow=9.6,SNR=40						
H03S2				T	T	01 36 35.9	
	baz=134,slow=76,SNR=231						
H03S3	Juan Fernandez	6.66	316	P	Pn	01 30 15.4	+1.2
	baz=107,slow=9.6,SNR=51						
H03S3				T	T	01 36 45.3	
	baz=134,slow=76,SNR=222						
VA04	Juan Fernndez	6.76	318	Pn	Pn	01 30 16.4	+0.6
H03N3	Juan Fernandez	6.95	318	P	Pn	01 30 19.9	+1.7
	SNR=55						
H03N1	Juan Fernandez	6.96	318	P	Pn	01 30 19.1	+0.8
H03N2	Juan Fernandez	6.97	318	P	Pn	01 30 20.0	+1.6
	SNR=49						
CO06	Fray Jorge	8.22	11		Pn	01 30 36.0	+0.2
TRQA	Tornquist	8.98	89	Pn	Pn	01 30 47.1	+0.8
AC02	Maricunga	12.44	18	Pn	Pn	01 31 33.4	-0.7
PB10	IPOC Station P	15.41	10	Pn	Pn	01 32 13.7	-0.3
PB06	IPOC Station P	16.36	13	Pn	Pn	01 32 25.7	-0.6
AF01	San Pedro de A	16.40	17	Pn	Pn	01 32 26.2	-0.8
AF01				IAmb	IAmb	01 32 55.4	
	comp=Z,93nm,0.8s						
USHA	Ushuaia	16.40	170	P	P	01 32 29.2	0.0
	comp=Z,1.3nm,0.3s,baz=330,slow=6.9,SNR=7.1						
ITQB	Itaqui	16.56	62	eP	Pn	01 32 25.6	-3.1
LVC	Limon Verde	16.57	15	P	Pn	01 32 25.0	-4.2
	comp=Z,0.5nm,0.3s,baz=230,slow=24,SNR=5.9						
LVC	Limon Verde	16.57	15	Pn	Pn	01 32 26.8	-2.4
MG01	Puerto William	16.62	168	Pn	Pn	01 32 28.7	-0.6
MG01				IAmb	IAmb	01 32 35.1	
	comp=Z,162nm,1.1s						
PLTB	Pedras Altas	17.59	73	Pn	Pn	01 32 40.9	-0.7
PLTB	Pedras Altas	17.59	73	eP	Pn	01 32 40.0	-1.6
CPUP	Villa Florida	18.33	52	P	P	01 32 50.0	-0.7
	comp=Z,0.2nm,0.3s,baz=234,slow=9.3,SNR=14						
CPUP				LR	LR	01 40 35.6	
	comp=Z,1μm,18.7s,baz=227,slow=39						
CPUP	Villa Florida	18.33	52		P	01 32 50.1	-0.6
CPUP	Villa Florida	18.33	52	eP	P	01 32 49.0	-1.7
CPSB	Cacapava Do Su	18.40	69	eP	P	01 32 49.3	-2.1
PB11	IPOC Station P	19.23	11		P	01 33 01.4	+0.6
TER01	Tubaro-SC	22.57	70	eP	P	01 33 35.4	-1.4
PTGB	Pitanga	22.85	58	eP	P	01 33 38.4	-1.4
LPAZ	La Paz	22.88	13	P	P	01 33 42.3	+1.7
	comp=Z,14nm,0.8s,baz=141,slow=5.4,SNR=29						
LPAZ				LR	LR	01 44 40.6	
	comp=Z,177nm,19.2s,baz=191,slow=42						
LPAZ	La Paz	22.88	13	P	P	01 33 39.8	-0.8
LPAZ	La Paz	22.88	13	eP	P	01 33 40.9	+0.2
AQDB	Aquidauana	23.78	45	P	P	01 33 47.5	-1.4
AQDB				IAmb	IAmb	01 33 48.6	
	comp=Z,31nm,1.1s						
AQDB	Aquidauana	23.78	45	eP	P	01 33 47.0	-1.9
TRCB	Terra Rica	23.83	54	P	P	01 33 48.4	-1.1
TRCB	Terra Rica	23.83	54	eP	P	01 33 48.0	-1.4
SIV	San Ignacio	25.15	29	P	P	01 34 01.3	-0.2
	comp=Z,18nm,1.0s,baz=214,slow=9.3,SNR=34						
FRTB	Fartura	25.45	60	eP	P	01 34 03.4	-0.9
PCMB	Pacaembu	25.56	54	eP	P	01 34 03.6	-1.7
PTLB	Pontes e Lacer	26.41	32	eP	P	01 34 12.8	-0.1
PET01	Itanhaem-SP	26.42	65	eP	P	01 34 11.8	-1.1
PP1B	Ponte de Pedra	26.57	43	eP	P	01 34 14.0	-0.4
PMSA	Palmer Station	26.60	171	P	P	01 34 14.0	-0.2
	comp=Z,5.9nm,0.8s,baz=294,slow=8.7,SNR=2.0						
SPB	Sao Paulo	26.75	63	eP	P	01 34 15.0	-1.0
RCLB	Rio Claro- Sao	27.46	61	eP	P	01 34 21.8	-0.7
ITRB	Iturama	27.53	53	eP	P	01 34 21.6	-1.5
SALV	Santo Antonio	27.59	39	eP	P	01 34 23.3	-0.2
BB19B	Bebedouro	27.72	58	eP	P	01 34 22.9	-1.8
PARB	Paraibuna	28.19	65	eP	P	01 34 29.2	+0.2
VILB	Vilhena	28.26	28	eP	P	01 34 29.8	+0.1
ETMB	Extrema	29.55	14	eP	P	01 34 41.6	+0.6
ARAG	Araguaiana, MT	29.79	45	eP	P	01 34 41.8	-1.3
IPMB	Ipameri, GO	30.16	54	eP	P	01 34 45.1	-1.4
BSCB	Bom Sucesso	30.31	62	eP	P	01 34 46.5	-1.3
VAS01	Vassouras-RJ	30.41	66	eP	P	01 34 49.0	+0.4
PDRB	Porto dos Gac	30.86	33	eP	P	01 34 52.3	-0.3
CZSB	Cruzeiro do Su	30.92	1	eP	P	01 34 54.3	+1.1
SAML	Samuel	31.09	20	P	P	01 34 54.5	-0.1
SAML	Samuel	31.09	20	eP	P	01 34 55.0	+0.5
DUB01	Friburgo-RJ	31.30	67	eP	P	01 34 55.8	-0.7
CLDB	Colider	31.93	34	eP	P	01 35 01.7	-0.3
CAM01	Campos-RJ	31.98	67	eP	P	01 35 02.2	-0.2
BDFB	Brasilia	32.06	51	P	P	01 35 01.7	-1.6
	comp=Z,9.9nm,0.9s,baz=214,slow=6.5,SNR=12						
BDFB				LR	LR	01 49 20.5	
	comp=Z,555nm,18.7s,baz=217,slow=39						
BDFB	Brasilia	32.06	51	P	P	01 35 02.0	-1.3
BDFB				IAmb	IAmb	01 35 02.3	
	comp=Z,17nm,1.1s						
DIAM	Diamantina, MG	32.91	60	eP	P	01 35 09.6	-1.2
SNDB	Serra Nova Dou	33.15	42	eP	P	01 35 11.7	-1.0
MC01	Montes Claros	33.85	58	eP	P	01 35 17.4	-1.5
SJMB	Sao Joao De Ma	34.34	64	eP	P	01 35 22.1	-1.0
BSFB	Barra de Sao F	34.49	64	eP	P	01 35 23.3	-1.1
RIB01	Linhares ES	34.49	65	eP	P	01 35 23.7	-0.7
TBTG	Tabatinga, AM	34.58	6	eP	P	01 35 26.8	+1.6
PEXB	Peixe	34.68	47	eP	P	01 35 25.6	-0.5
JANB	Januaria	34.82	55	eP	P	01 35 26.0	-1.3
NPGB	Novo Progresso	35.54	32	eP	P	01 35 32.8	-0.7
NAN01	Guarapari, ES	35.66	64	eP	P	01 35 33.3	-1.2
SDBA	SAO DESIDERIO	36.46	52	eP	P	01 35 40.3	-1.0
GUA01	Guaratinga, BA	36.74	62	eP	P	01 35 42.9	-0.8
MACA	Manacapuru-AM	37.30	21	eP	P	01 35 48.3	-0.1
SMTB	Santa Maria do	37.73	45	eP	P	01 35 51.8	-0.4
CMC01	Camacan, BA	37.79	61	eP	P	01 35 51.6	-1.0
ITTB	Itaituba	37.83	30	eP	P	01 35 52.3	-0.7
NBIT	Itapeh - BA	38.15	61	eP	P	01 35 55.2	-0.4
GDU01	Guandu, BA	38.91	59	eP	P	01 36 00.7	-1.4
OTAV	Otavalo	39.11	352	eP	P	01 36 06.9	+2.7
NBPN	Ponto Novo - B	40.61	56	eP	P	01 36 15.2	-1.0
MALB	Monte Alegre	40.70	30	eP	P	01 36 16.2	-0.7
NBLA	Lagarto - SE	42.08	59	eP	P	01 36 27.2	-1.1
BOAV	Boa Vista	42.66	19	eP	P	01 36 32.8	-0.2
MCPB	Macapa, AP	42.95	32	eP	P	01 36 35.3	0.0
TMAB	Tom-Au,PA,Br	42.97	39	eP	P	01 36 36.1	+0.6
ROSC	El Rosal	43.41	359	P	P	01 36 41.5	+2.0
	comp=Z,9.6nm,0.6s,baz=165,slow=18,SNR=5.1						
ROSC				LR	LR	01 53 08.9	
	comp=Z,142nm,18.1s,baz=216,slow=34						
NBAN	Anadia - AL	44.06	59	eP	P	01 36 43.7	-0.7
NBMA	Muriti-CE	44.16	54	eP	P	01 36 45.0	-0.1
ROSB	Rosrio	44.58	44	eP	P	01 36 48.3	-0.1
NBPS	Pedro II - PI	44.86	48	eP	P	01 36 50.5	-0.3
NBPB	Pedra_Branca-C	45.06	51	eP	P	01 36 52.3	0.0
VNA3	Neumayer Olymp	45.39	156	P	P	01 36 54.8	+0.5
VNA1	Neumayer--Stat	45.75	155	P	P	01 36 58.0	+0.9
ZARC	Zaragoza, Cauc	46.06	358	P	P	01 37 00.5	+0.4
VNA2	Neumayer--Watz	46.08	155	P	P	01 37 00.4	+0.7
NBPA	Parau_RN	46.44	54	eP	P	01 37 03.8	+0.6

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NBPV  Pedro Velho       47.11  57 eP       P        01 37 09.3 +0.9
MOTC  Monteria, Cord    47.36 357  P       P        01 37 10.1 -0.3
MOTC                               IAmb    IAmb     01 37 21.8
      comp=Z,9.7nm,1.0s
SDV   Santo Domingo     47.49   4  P       P        01 37 11.2 -0.4
SDV                                IAmb    IAmb     01 37 24.1
      comp=Z,11nm,0.9s
SDV   Santo Domingo     47.49   4 eP       P        01 37 11.7 +0.2
SNAA  Sanae             47.61 156  P       P        01 37 12.4 +0.6
SNAA  Sanae             47.61 156  P       P        01 37 12.1 +0.4
      comp=Z,23nm,0.8s,baz=283,slow=7.2,SNR=93
SNAA  Sanae             47.61 156  P       P        01 37 12.3 +0.6
QSPA  South Pole Qui    51.46 180  P       P        01 37 42.5 +1.3
      baz=155,slow=12
QSPA  South Pole Qui    51.46 180  P       P        01 37 41.8 +0.6
QSPA                               IAmb    IAmb     01 37 43.6
      comp=Z,22nm,0.9s
CCIG  Comitan           57.52 339  P       P        01 38 26.4 +0.6
SBA   Scott Base        58.18 192  P       P        01 38 30.9 +1.3
SBA                                IAmb    IAmb     01 38 55.6
      comp=Z,11nm,1.4s
VNDA  Vanda             59.21 192  P       P        01 38 38.7 +2.0
      comp=Z,2.0nm,0.9s,baz=146,slow=3.5,SNR=12
VNDA                               LR      LR       02 01 10.5
      comp=Z,84nm,18.5s,baz=234,slow=33
VNDA  Vanda             59.21 192  P       P        01 38 38.1 +1.4
MAW   Mawson            68.91 164  P       P        01 39 40.7 +0.2
      comp=Z,2.4nm,0.7s,baz=220,slow=6.9,SNR=6.8
MAW                                LR      LR       02 09 37.5
      comp=Z,232nm,18.9s,baz=248,slow=36
MAW   Mawson            68.91 164  P       P        01 39 40.7 +0.2
152A  Waverly Hall      71.87 350  IAmb    IAmb     01 39 59.9
      comp=Z,6.0nm,0.8s
GOGA  Godfrey           72.44 351  IAmb    IAmb     01 40 03.3
      comp=Z,8.1nm,0.7s
Z51A  Franklin          72.57 350  IAmb    IAmb     01 40 18.0
      comp=Z,14nm,1.2s
Y52A  Lilburn           72.96 351  P       P        01 40 05.8 +0.4
Y52A                               IAmb    IAmb     01 40 06.7
      comp=Z,8.6nm,0.8s
HODGE Hodges            73.11 352  IAmb    IAmb     01 40 07.5
      comp=Z,6.4nm,0.8s
TXAR  Lajitas Array     73.42 333  P       P        01 40 09.5 +1.1
      comp=Z,0.7nm,0.7s,baz=151,slow=7.2,SNR=7.9
TXAR                               LR      LR       02 07 15.3
      comp=Z,129nm,19.5s,baz=0.0,slow=32
TXAR  Lajitas Array     73.42 333  P       P        01 40 09.8 +1.4
PAULI Pauline           73.65 353  IAmb    IAmb     01 40 10.7
      comp=Z,11nm,0.8s
FPAL  Fort Paine        73.83 350  IAmb    IAmb     01 40 11.9
      comp=Z,13nm,0.7s
KMSC  Kings Mountain    73.92 353  IAmb    IAmb     01 40 12.0
      comp=Z,11nm,0.7s
BG3   Lake Jocassee     73.94 352  IAmb    IAmb     01 40 12.4
      comp=Z,11nm,0.6s
X48A  Hartselle         73.96 348  IAmb    IAmb     01 40 13.0
      comp=Z,10.0nm,0.7s
W50A  Signal Mountai    74.44 350  P       P        01 40 14.1  0.0
CPCT  Cooper Cave       74.58 351  IAmb    IAmb     01 40 16.0
      comp=Z,13nm,0.6s
V53A  Saluda            74.59 352  IAmb    IAmb     01 40 15.6
      comp=Z,6.8nm,0.7s
TKL   Tuckaleechee C    74.69 351  IAmb    IAmb     01 40 16.3
      comp=Z,5.9nm,0.7s
CASY  Casey             75.22 182  P       P        01 40 19.3 +1.0
CASY                               IAmb    IAmb     01 40 20.1
      comp=Z,11nm,0.8s
TZTN  Tazewell          75.54 352  IAmb    IAmb     01 40 21.0
      comp=Z,7.5nm,0.7s
WVT   Waverly           75.73 348  P       P        01 40 21.9 +0.4
WVT                                IAmb    IAmb     01 40 22.5
      comp=Z,16nm,1.2s
LCAR  Lake Charles      76.27 345  P       P        01 40 24.7 +0.1
LCAR                               IAmb    IAmb     01 40 41.2
      comp=Z,6.3nm,0.8s
T47A  Sharon Grove      76.45 349  IAmb    IAmb     01 40 27.5
      comp=Z,7.7nm,0.9s
S51A  Beattyville       76.63 352  IAmb    IAmb     01 40 27.5
      comp=Z,8.7nm,0.7s
TUL1  Leonard           77.16 341  IAmb    IAmb     01 40 50.8
      comp=Z,7.8nm,0.9s
LIC   Lamto             77.33  71 eP       P        01 40 30.7 -0.4
      comp=Z,75nm,1.0s
TIC   Toumodi           77.61  71 eP       P        01 40 32.6 -0.1
KIC   Kosan Boka        77.63  71 eP       P        01 40 32.8  0.0
      comp=Z,37nm,0.8s
DBIC  Dimbokro          77.75  71  P       P        01 40 33.6 +0.2
      comp=Z,16nm,0.7s,baz=218,slow=5.6,SNR=18
DBIC  Dimbokro          77.75  71  P       P        01 40 33.1 -0.3
FVM   French Village    77.99 346  P       P        01 40 34.6 +0.5
FVM                                IAmb    IAmb     01 40 45.0
      comp=Z,6.6nm,0.8s
P51A  Williamsport      78.39 352  IAmb    IAmb     01 40 37.3
      comp=Z,14nm,0.8s
R40A  Maddies Statio    78.64 345  IAmb    IAmb     01 41 00.9
      comp=Z,16nm,1.4s
P48A  Milroy            78.65 351  IAmb    IAmb     01 40 37.8
      comp=Z,11nm,0.8s
BOSA  Boshof            78.82 118  P       P        01 40 39.2 -0.2
      comp=Z,11nm,0.8s,baz=229,slow=4.5,SNR=14
BOSA                               LR      LR       02 10 36.2
      comp=Z,101nm,19.1s,baz=186,slow=32
O52A  Adamsville        78.90 353  P       P        01 40 39.5 +0.3
O52A                               IAmb    IAmb     01 40 39.7
      comp=Z,12nm,0.8s
P43A  Skaggs, Pawnee    79.44 347  IAmb    IAmb     01 40 43.1
      comp=Z,16nm,0.9s
P40A  Paris             79.79 345  IAmb    IAmb     01 40 46.0
      comp=Z,14nm,0.8s
LBTB  Lobatse           81.28 115  P       P        01 40 52.6 -0.1
LBTB                               IAmb    IAmb     01 41 09.3
      comp=Z,14nm,1.1s
J57A  Williamstown      81.85 358  IAmb    IAmb     01 40 56.4
      comp=Z,17nm,0.9s
KOWA  Kowa              83.59  66  P       P        01 41 04.8 +0.1
F62A  Pittston Farm,    84.36   2  P       P        01 41 09.0 +1.1
Q16A  Castle Valley     84.75 331  IAmb    IAmb     01 41 23.4
      comp=Z,10nm,1.4s
ECSD  EROS Data Cent    84.79 343  IAmb    IAmb     01 41 12.3
      comp=Z,5.7nm,0.7s
P18A  Preston Nutter    85.03 332  IAmb    IAmb     01 41 23.1
      comp=Z,5.2nm,1.0s
PSUT  Pine Spring       85.45 329  P       P        01 41 14.3 +0.4
F36A  Milaca            86.19 346  IAmb    IAmb     01 41 19.0
      comp=Z,6.4nm,0.8s
TORD  Torodi Ar. Bea    86.85  71  P       P        01 41 20.4 -0.6
      comp=Z,6.0nm,0.7s,baz=228,slow=4.6,SNR=48
TORD  Torodi Ar. Bea    86.85  71  P       P        01 41 20.3 -0.6
TORD                               IAmb    IAmb     01 41 21.3
      comp=Z,6.3nm,0.8s
NVAR  Mina Array Bea    87.22 326  P       P        01 41 24.0 +1.5
      comp=Z,0.5nm,0.8s,baz=182,slow=5.3,SNR=4.4
NVAR                               LR      LR       02 14 47.3
      comp=Z,74nm,18.9s,baz=211,slow=32
PDAR  Pinedale Array    87.56 334  P       P        01 41 23.9 -0.1
      comp=Z,0.5nm,0.7s,baz=156,slow=7.8,SNR=5.0
PDAR                               LR      LR       02 15 52.9
      comp=Z,112nm,20.1s,baz=180,slow=32
PDAR  Pinedale Array    87.56 334  P       P        01 41 24.6 +0.5
ELK   Elko              87.90 330  LR      LR       02 18 07.1
      comp=Z,103nm,19.2s,baz=230,slow=34
ELK   Elko              87.90 330  P       P        01 41 26.0 +0.3
WRA   Warramunga Arr   116.06 209  PKP     PKiKP    01 47 18.4 -1.2
      comp=Z,0.7nm,0.8s,baz=167,slow=1.6,SNR=9.5
GERES GERESS Array B   116.24  47  PKP     PKPdf    01 47 18.9 -0.1
      comp=Z,1.1nm,0.7s,baz=174,slow=1.3,SNR=13
ILAR  Eielson Array    117.94 332  PKP     PKiKP    01 47 21.7  0.0
      comp=Z,0.6nm,0.7s,baz=168,slow=4.0,SNR=5.3
NOA   NORSAR Array B   120.61  34  PKP     PKiKP    01 47 28.7 +1.6
      comp=Z,1.6nm,1.0s,baz=249,slow=2.2,SNR=3.5
BRTR  Keskin Array B   125.00  64  PKP     PKiKP    01 47 36.4 -0.2
      comp=Z,1.0nm,0.9s,baz=197,slow=3.9,SNR=4.7
AKASG Malin Array Be   126.15  50  PKP     PKPdf    01 47 36.8 -1.1
      comp=Z,0.3nm,0.3s,baz=280,slow=1.9,SNR=6.1
FINES FINESS Array B   127.50  37  PKP     PKiKP    01 47 40.5 -0.2
      comp=Z,3.8nm,0.9s,baz=234,slow=8.3,SNR=2.3
GEYT  Alibeck          142.32  76  PKhKP   PKPpre   01 48 04.3
      comp=Z,3.6nm,0.6s,baz=264,slow=9.7,SNR=4.8
ARU   Arti             143.99  45  PKPdf   PKPbc    01 48 09.0 +0.3
HRA   Herat            144.37  83  PKPdf   PKPbc    01 48 10.9  0.0
TIXI  Tiksi            145.17 348  PKPbc   PKPbc    01 48 11.8 -0.2
ABKAR Akbulak array    145.35  57  PKPbc   PKPab    01 48 13.8 +0.3
HYB   Hyderabad        147.57 123 i PKP    PKPbc    01 48 20.0 -0.8
HYB                               esPKP             01 48 32.5
NRIK  Noril'sk         147.71  13  PKPbc   PKPbc    01 48 19.6  0.0
      comp=Z,3.4nm,0.8s,baz=12,slow=2.9,SNR=7.2
NRIK  Noril'sk         147.71  13  PKPbc   PKPbc    01 48 19.8 +0.2
KBL   Kabul            149.71  86  PKPbc   PKPbc    01 48 25.3 -0.8
PYUN  Piuthan          157.65 111 eP       PKPab    01 49 04.4 -0.8
      comp=Z,18nm,0.6s
KOLN  Koldanda         157.90 113 eP       PKPab    01 49 05.0 -1.3
      comp=Z,17nm,0.7s
DANN  Dangsing         158.35 112 eP       PKPab    01 49 07.4 -0.9
      comp=Z,38nm,0.7s
CMAR  Chiang Mai Arr   158.68 160  PKP     PKPdf    01 48 34.5 +0.3
      comp=Z,0.6nm,0.3s,baz=226,slow=9.9,SNR=1.8
ZALV  Zalesovo Beam    158.77  37  PKP     PKPdf    01 48 32.4 -0.7
      comp=Z,0.5nm,0.5s,baz=210,slow=1.2,SNR=4.0
ZALV                               PKPab   PKPab    01 49 07.8 -1.2
      comp=Z,2.3nm,0.7s,baz=295,slow=4.5,SNR=7.3
GKN   Gorkha           158.78 114 eP       PKPab    01 49 09.0 -1.0
DMN   Daman            158.88 115 eP       PKPab    01 49 09.7 -0.9
PKIN  Phulchoki        159.07 116 eP       PKPab    01 49 10.4 -1.0
      comp=Z,15nm,0.7s
PKI   Pulchoki         159.07 116 eP       PKPab    01 49 10.4 -1.1
KKN   Kakani           159.12 115 eP       PKPab    01 49 10.8 -0.7
RAMN  Ramite           159.51 119 eP       PKPab    01 49 12.7 -0.6
      comp=Z,12nm,0.5s
GUN   Gumba            159.61 116 eP       PKPab    01 49 12.3 -1.5
JIRN  Jiri             159.67 117 eP       PKPab    01 49 13.5 -0.7
      comp=Z,18nm,0.8s
ODAN  Odare            159.99 121 eP       PKPab    01 49 14.7 -0.6
      comp=Z,16nm,0.7s
MKAR  Makanchi Array   160.49  58  PKP     PKPdf    01 48 35.2 -0.2
      comp=Z,0.3nm,0.6s,baz=236,slow=0.5,SNR=2.1
MKAR                               PKPab   PKPab    01 49 16.2 -0.6
      comp=Z,4.6nm,0.8s,baz=291,slow=3.8,SNR=17
TAPN  Taplejung        160.52 120 eP       PKPab    01 49 14.8 -3.0
KSRS  Korea Array      163.18 272  PKP     PKPdf    01 48 37.4 -1.0
      comp=Z,0.3nm,0.3s,baz=96,slow=15,SNR=1.7
NJ2   Nanjing          167.97 240 eP       PKPdf    01 48 42.8 +0.3
NJ2                                pmax    pmax
      comp=Z,15nm,0.6s
SONM  Songino Array    170.95   1  PKP     PKPdf    01 48 43.4 -0.6
      comp=Z,1.7nm,1.1s,baz=336,slow=3.3,SNR=5.3
SONM                               PKPab   PKPab    01 50 03.6 +0.8
      comp=Z,1.3nm,0.7s,baz=344,slow=6.8,SNR=7.3
HHC   Hu-ho-hao-te     175.67 300 eP       PKPdf    01 48 44.3 -1.7
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NNC ***01*** *01:46:29.0±1.1, 40°.68N×78°.05E, h0^{km}, mb3.6, mpv3.3,*
Error ellipse: s-maj=7.7km s-min=5.0km az=171.0
KRNET ***01*** *01:46:28.1±0.1, 40°.60N×78°.11E, mb3.0*
SOME ***01*** *01:46:28.3, 40°.65N×78°.12E, h15^{km}*
ISC 01 01:46:32.2±1.8**, 40°.74N**±0°.08×**78°.07E**±0°.04**, h10**^{km}**, n63,**
σ**1^{s}.64**/95**, 19C-10D, Southern Xinjiang**

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Code  Station Name       Δ°   AZ°   Phase ID          Time      Res
                                   Op      ISC      h  m  s    ISC
TARG  Taragay, Kyrgy     1.01 349⇑iP       Pg       01 46 50.0 -1.8
      baz=49
TARG                             ⇑iS       Sb       01 47 06.1 +0.5
      baz=49
PRZ   Przheval'sk        1.76   8⇓iP       Pb       01 47 03.3 -1.5
      baz=7.0
PRZ                              ⇓iS       Sg       01 47 30.3 +1.4
      baz=7.0
ULHL  Ulahol             2.04 318⇑iP       Pn       01 47 07.4 +0.6
      baz=20
ULHL                             ⇑iS       Sb       01 47 36.0 +0.9
      baz=20
ANVS  Anan'yevo          2.07 352⇓iP       Pn       01 47 07.9 +0.7
      baz=52
ANVS                             ⇓iS       Sg       01 47 37.0 -1.7
      baz=52
SATY  Saty               2.33   6 eP       Pb       01 47 14.0 -0.4
      3.9nm,0.4s
SATY                              eS       Sg       01 47 46.6 -0.6
      21nm,0.3s
SATY  Saty               2.33   6  Pg      Pb       01 47 14.0 -0.4
      3.9nm,0.4s
SATY                               Lg      Lg       01 47 46.6
      21nm,0.3s
BOOM  Boomskoye usch     2.37 318⇓iP       Pn       01 47 12.3 +0.9
      baz=20
BOOM                             ⇓iS       Sb       01 47 44.0 -0.6
      baz=20
TNSS  Tian-Shan          2.45 340 eP       Pb       01 47 15.4 -1.2
      26nm,0.5s
TNSS                              eS       Sg       01 47 49.4 -1.5
      11nm,0.4s
TNSS  Tian-Shan          2.45 340  Pg      Pb       01 47 15.4 -1.2
      26nm,0.5s
TNSS                               Lg      Lg       01 47 49.4
      11nm,0.4s
UZB   Uzynbulak          2.51  16 eP       Pb       01 47 16.5 -1.0
      2.9nm,0.2s
UZB                               eS       Sg       01 47 51.1 -1.8
      10nm,0.5s
UZB   Uzynbulak          2.51  16  Pg      Pb       01 47 16.5 -1.0
      2.9nm,0.2s
UZB                                Lg      Lg       01 47 51.1
      10nm,0.5s
IZV   Izvestkoviy        2.54 335 eP       Pb       01 47 17.1 -1.0
      22nm,0.5s
IZV                               eS       Sg       01 47 51.8 -2.2
      28nm,0.6s
IZV   Izvestkoviy        2.54 335  Pg      Pb       01 47 17.1 -1.0
      22nm,0.5s
IZV                                Lg      Lg       01 47 51.8
      28nm,0.6s
MDOK  Medeo              2.54 343 eP       Pb       01 47 16.9 -1.2
      8.8nm,0.6s
MDOK                              eS       Sb       01 47 51.3 +1.9
      37nm,0.5s
MDOK  Medeo              2.54 343 ⇑Pg      Pb       01 47 16.1 -1.9
      6.0nm,0.5s
MDOK                               Lg      Lg       01 47 53.1
      29nm,0.6s
MDOK  Medeo              2.54 343  Pg      Pb       01 47 16.9 -1.2
      8.8nm,0.6s
MDOK                               Lg      Lg       01 47 51.3
      37nm,0.5s
KOTS  Kotyrbulak         2.60 344 eP       Pb       01 47 18.4 -0.5
      8.1nm,0.2s
KOTS                              eS       Sg       01 47 54.4 -1.3
      55nm,0.3s
KOTS  Kotyrbulak         2.60 344  Pg      Pb       01 47 18.4 -0.5
      8.1nm,0.2s
KOTS                               Lg      Lg       01 47 54.4
      55nm,0.3s
SHLS  Shalkode           2.63  23 eP       Pb       01 47 18.9 -0.6
      7.6nm,0.5s
SHLS                              eS       Sg       01 47 55.3 -1.5
      15nm,0.6s
SHLS  Shalkode           2.63  23  Pg      Pb       01 47 18.9 -0.6
      7.6nm,0.5s
SHLS                               Lg      Lg       01 47 55.3
      15nm,0.6s
MTBS  Maitube            2.69 333 eP       Pb       01 47 19.0 -1.4
      14nm,0.4s
MTBS                              eS       Sb       01 47 55.3 +1.8
      12nm,0.3s
MTBS  Maitube            2.69 333  Pg      Pb       01 47 19.0 -1.4
      14nm,0.4s
MTBS                               Lg      Lg       01 47 55.3
      12nm,0.3s
KURS  Kuram              2.75   1 eP       Pb       01 47 21.7 +0.2
      7.1nm,0.5s
KURS                              eS       Sg       01 47 59.5 -1.1
      10nm,0.4s
KURS  Kuram              2.75   1  Pg      Pb       01 47 21.7 +0.2
      7.1nm,0.5s
KURS                               Lg      Lg       01 47 59.5
      10nm,0.4s
KST   Kastek             2.79 326 eP       Pb       01 47 20.9 -1.4
      12nm,0.3s
KST                               eS       Sb       01 47 58.1 +1.6
      22nm,0.8s
KST   Kastek             2.79 326  Pg      Pb       01 47 20.8 -1.4
      12nm,0.3s
KST                                Lg      Lg       01 47 58.1
      22nm,0.8s
PDGK  Podgornoye         2.80  22  Pg      Pb       01 47 21.1 -1.2
      1.5nm,0.5s
PDGK                               Lg      Lg       01 47 59.2
      7.5nm,0.6s
PDGK  Podgornoye         2.80  22 ⇓Pg      Pb       01 47 20.6 -1.8
      4.3nm,0.6s
PDGK                              ⇓Lg      Lg       01 47 59.0
      13nm,0.6s
TKM2  Tokmak 2           2.86 321  P       Pb       01 47 22.4 -1.1
      SNR=8.5
TKM2  Tokmak 2           2.86 321 ⇑Pg      Pb       01 47 21.0 -2.5
      2.5nm,0.5s
TKM2                              ⇑Lg      Lg       01 48 00.8
      2.5nm,0.3s
TKM2  Tokmak 2           2.86 321⇑eP       Pn       01 47 18.9 +0.8
      baz=22
TKM2                             ⇑iS       Sb       01 47 55.8 -2.9
      baz=22
KBK   Karagaybulak       3.03 310  P       Pb       01 47 25.3 -1.0
      SNR=11
KBK   Karagaybulak       3.03 310⇑iP       Pn       01 47 21.0 +0.7
      baz=12
KBK                              ⇑iS       Sb       01 47 59.5 -3.9
      baz=12
DGS   Degeres            3.04 326 eP       Pb       01 47 25.0 -1.4
      6.9nm,0.3s
DGS                               eS       Sb       01 48 05.7 +2.1
      14nm,0.5s
DGS   Degeres            3.04 326  Pg      Pb       01 47 25.0 -1.4
      6.9nm,0.3s
DGS                                Lg      Lg       01 48 05.7
      14nm,0.5s
KTBS  Karatobe           3.15 341 eP       Pb       01 47 27.4 -0.8
      5.4nm,0.3s
KTBS                              eS       Sb       01 48 09.4 +2.7
      26nm,0.3s
KTBS  Karatobe           3.15 341  Pg      Pb       01 47 27.4 -0.8
      5.4nm,0.3s
KTBS                               Lg      Lg       01 48 09.4
      26nm,0.3s
KTMS  Ketmen             3.19  31 eP       Pb       01 47 27.8 -1.3
      2.4nm,0.4s
KTMS                              eS       Sb       01 48 10.1 +1.9
      6.9nm,0.5s
KTMS  Ketmen             3.19  31  Pg      Pb       01 47 27.8 -1.3
      2.4nm,0.4s
KTMS                               Lg      Lg       01 48 10.1
      6.9nm,0.5s
CHKK  Chushkaly          3.22 346 eP       Pb       01 47 29.7 +0.2
      7.9nm,0.3s
CHKK                              eS       Sg       01 48 13.3 -2.2
      31nm,0.3s
CHKK  Chushkaly          3.22 346  Pg      Pb       01 47 29.7 +0.2
      7.9nm,0.3s
CHKK                               Lg      Lg       01 48 13.3
      31nm,0.3s
AAK   Ala-Archa          3.29 307  P       Pb       01 47 29.8 -0.9
      SNR=5.8
AAK   Ala-Archa          3.29 307  Pg      Pb       01 47 28.7 -2.0
      5.9nm,0.7s
AAK                                Lg      Lg       01 48 11.8
      5.0nm,0.6s
AAK   Ala-Archa          3.29 307⇑iP       Pn       01 47 24.4 +0.5
      baz=8.0
AAK                              ⇑iS       Sn       01 48 06.0 +2.9
      baz=8.0
CHMS  Chumysh            3.36 313⇑eP       Pn       01 47 25.4 +0.7
      baz=15
CHMS                             ⇑iS       Sn       01 48 07.3 +2.6
      baz=15
KUU   Kurty              3.41 338 eP       Pb       01 47 31.9 -0.8
      3.2nm,0.5s
KUU                               eS       Sb       01 48 17.0 +2.9
      12nm,0.7s
KUU   Kurty              3.41 338  Pg      Pb       01 47 31.9 -0.8
      3.2nm,0.5s
KUU                                Lg      Lg       01 48 17.0
      12nm,0.7s
KRBS  Karabastau         3.45 330 eP       Pb       01 47 32.0 -1.5
      7.1nm,0.4s
KRBS                              eS       Sb       01 48 17.6 +2.1
      6.3nm,0.6s
KRBS  Karabastau         3.45 330  Pg      Pb       01 47 32.0 -1.5
      7.1nm,0.4s
KRBS                               Lg      Lg       01 48 17.6
      6.3nm,0.6s
ARXS  Arharly            3.48 357 eP       Pb       01 47 34.5 +0.6
      1.8nm,0.5s
ARXS                              eS       Sg       01 48 21.7 -2.3
      16nm,0.4s
ARXS  Arharly            3.48 357  Pg      Pb       01 47 34.5 +0.6
      1.8nm,0.5s
ARXS                               Lg      Lg       01 48 21.7
      16nm,0.4s
AML   Almayashu          3.58 294⇑iP       Pn       01 47 28.5 +0.4
      baz=96
AML                              ⇑iS       Sn       01 48 12.4 +1.8
      baz=96
USP   Ospenovka          3.67 315  P       Pb       01 47 35.9 -1.3
      SNR=12
USP   Ospenovka          3.67 315⇑iP       Pn       01 47 30.0 +0.9
      baz=16
USP                              ⇑iS       Sn       01 48 15.1 +2.6
      baz=16
SGDS  Sogindy            3.73 318  Pg      Pb       01 47 37.1 -1.1
      2.1nm,0.4s
SGDS                               Lg      Lg       01 48 26.5
      4.2nm,0.6s
EKS2  Erkin-Say          3.75 302  P       Pb       01 47 38.4 -0.2
      SNR=11
EKS2  Erkin-Say          3.75 302⇓iP       Pn       01 47 30.8 +0.6
      baz=4.0
EKS2                             ⇓iS       Sn       01 48 16.4 +1.9
      baz=4.0
DJR   Jarkent            3.81  19 eP       Pb       01 47 39.4 -0.2
      2.0nm,0.4s
DJR                               eS       Sg       01 48 29.9 -4.6
      11nm,0.4s
DJR   Jarkent            3.81  19  Pg      Pb       01 47 39.4 -0.2
      2.0nm,0.4s
DJR                                Lg      Lg       01 48 30.0
      11nm,0.4s
MRKS  Merke              4.15 301 eP       Pb       01 47 44.9 -0.4
      2.7nm,0.3s
MRKS                              eS       Sb       01 48 39.7 +4.3
      5.0nm,0.4s
MRKS  Merke              4.15 301  Pg      Pb       01 47 44.9 -0.4
      2.7nm,0.3s
MRKS                               Lg      Lg       01 48 39.7
      5.0nm,0.4s
KAPS  Kapalarasan        4.64  11 eP       Pb       01 47 55.1 +1.3
      1.2nm,0.5s
KAPS                              eS       Sg       01 48 57.2 -4.0
      4.2nm,0.6s
KAPS  Kapalarasan        4.64  11  Pg      Pb       01 47 55.1 +1.3
      1.2nm,0.5s
KAPS                               Lg      Lg       01 48 57.2
      4.2nm,0.6s
```

NEIC 01 02:22:13.1±1.1**, 37°.12N**±0°.03×**97°.62W**±0°.06**, h8**^{km}±6^{km}**,**
Error ellipse: s-maj=7.2km s-min=3.5km az=78.0,
Kansas

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Code  Station Name       Δ°   AZ°   Phase ID          Time      Res
                                   Op      ISC      h  m  s    ISC
T35A  Sooner Cattle      0.91 102          Pg       02 22 29.8 -0.8
R32A  Long Quarter,      1.56 327          Pn       02 22 41.4 +0.3
OKCFA Oklahoma City      1.70 175  Pn      Pb       02 22 44.0 -0.6
OKCSW OKLAHOMA CITY      1.71 175          Pn       02 22 43.9 +0.7
FNO   Franklin           1.86 174  Pn      Pb       02 22 47.3 -0.1
TUL1  Leonard            1.90 129  Pn      Pb       02 22 47.0 -1.0
KSU1  Kansas State U     2.14  22  Pn      Pn       02 22 50.1 +1.1
KSU1                               IAmb_Lg          02 23 23.4
      comp=Z,14nm,0.7s
CBKS  Cedar Bluff        2.38 316  Pn      Pn       02 22 53.0 +0.5
X34A  Smith Ranch, M     2.52 184  Pn      Pn       02 22 54.1 -0.1
WMOK  Wichita Mounta     2.55 202  Pn      Pn       02 22 54.4 -0.4
U38A  Gravette           2.68 104          Pn       02 22 57.1 +0.6
HHAR  Hobbs              3.07 105  Pn      Pn       02 23 02.8 +0.9
X37A  Clayton            3.11 143  Pn      Pn       02 23 02.0 -0.4
X37A                                       LR       02 23 51.9
S39A  Bolivar            3.47  79  Pn      Pn       02 23 06.9 -0.5
W39A  Magazine           3.65 121  Pn      Pn       02 23 11.5 +1.7
W39A                               IAmb_Lg          02 24 13.1
      comp=Z,12nm,0.8s
U40A  Yellville          3.90 100  Pn      Pn       02 23 13.4 +0.1
AMTX  Amarillo           3.98 237  Pn      Pn       02 23 15.0 +0.6
P38A  Dawn               4.07  51  Pn      Pn       02 23 15.4 -0.2
MIAR  Mount Ida          4.17 127  Pn      Pn       02 23 17.6 +0.6
R40A  Maddies Statio     4.40  73  Pn      Pn       02 23 20.2  0.0
FCAR  Ozark Folk Cen     4.59 104  Pn      Pn       02 23 22.3 -0.5
WHAR  Wooly Hollow       4.68 111  Pn      Pn       02 23 25.4 +1.4
L34A  Svendsen Farm,     4.94  11  IAmb_Lg          02 25 01.2
      comp=Z,7.2nm,0.7s
WLAR  White Oak Lake     5.03 132  IAmb_Lg          02 24 59.6
      comp=Z,11nm,1.2s
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T42A	Van Buren	5.22	89	Pn	Pn	02 23 30.4	-1.0

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*DJA **01** 02:27:43.1±0.3,6˚S±3˚×10˚5E±˚,h10^{km},M3.5/14, MLv3.5/14*

*IDC **01** 02:27:53.3±3.9,4˚.84S×106˚.62E,h81^{km}±48^{km},mb3.5/5, mb1 3.6/6,mb1mx3.3/34,mbtmp3.8/6,ML3.4/1,MS3.4/1, Ms1 3.4/1,ms1mx2.6/50,Error ellipse: s-maj=137.5km s-min=25.7km az=52.0*

ISC 01 02:27:43.1±1.2,**6˚.08S**±0˚.05×**105˚.36E**±0˚.04,**h15**^{km}±9^{km}, **n24**,σ**1ˢ.50**/30,**mb3.8**/5,**Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CGJI	Cibinong	0.62	148	P	Pg	02 27 54.2	-1.1
BLSI	Bandar Lampung	0.72	351	P	Pg	02 27 57.0	-0.2
BLSI				S	Sg	02 28 07.1	+0.4
SBJI	Serang	0.77	93	P	Pg	02 27 56.6	-1.4
SBJI				S	Sg	02 28 06.8	-1.3
KASI	Kota Agung	1.02	303	P	Pg	02 28 02.3	-0.6
KASI				S	Sg	02 28 16.3	0.0
TNG	Tangerang	1.28	94	P	Pn	02 28 06.3	-0.2
TNG				P	Pn	02 28 07.4	+0.9
KLI	Kotabumi	1.31	338	P	Pn	02 28 07.7	+0.7
KLI				S	Sg	02 28 26.2	+0.7
DBJI	Dramaga	1.46	109	P	Pn	02 28 08.8	-0.2
CBJI	Citeko	1.52	103	P	Pb	02 28 11.5	+0.5
KLSI		1.52	336	P	Pb	02 28 11.1	0.0
KLSI				S	Sg	02 28 32.4	+0.2
LWLI	Liwa	1.67	309	P	Pb	02 28 14.0	+0.3
MDSI	Maura Dua	1.98	323	P	Pn	02 28 17.6	+1.5
CNJI	Cibinong	2.14	125	P	Pn	02 28 18.6	+0.3
LEM	Lembang	2.36	108	P	Pg	02 28 28.2	-0.2
	12nm,0.3s,baz=354,slow=18,SNR=8.1						
LEM				S	Sg	02 29 04.3	+5.2
	3.7nm,0.3s,baz=298,slow=21,SNR=3.8						
CISI	Cisompet, Garu	2.84	121	P	Pn	02 28 28.0	-0.1
LHSI	Lahat	2.89	321	P	Pn	02 28 30.4	+1.7
CMJI	Cimerak	3.50	119	P	Pn	02 28 36.9	-0.2
KPJI	Karang Pucung	3.76	109	P	Pn	02 28 40.8	+0.2
FITZ	Fitzroy Crossi	23.11	123	P	P	02 32 49.8	+0.9
	2.7nm,1.2s,baz=284,slow=12,SNR=1.7						
WRA	Warramunga Arr	31.34	119	P	P	02 34 02.7	-0.7
	0.7nm,0.5s,baz=298,slow=9.5,SNR=8.6						
ASAR	Alice Springs	32.54	125	P	P	02 34 14.3	+0.3
	0.4nm,0.5s,baz=301,slow=7.9,SNR=9.4						
STKA	Stephens Creek	42.46	132	P	P	02 35 39.3	+1.5
	1.1nm,0.4s,baz=315,slow=11,SNR=5.0						
GUMO	Guam	43.82	63	LR	LR	02 54 35.5	
	comp=Z,50nm,19.4s,baz=122,slow=38						
ZALV	Zalesovo Beam	62.26	346	P	P	02 38 00.5	-3.8
	0.5nm,0.4s,baz=151,slow=3.3,SNR=4.4						
TXAR	Lajitas Array	144.15	46	PKP	PKPab	02 47 17.3	+0.4
	0.3nm,0.8s,baz=247,slow=0.9,SNR=3.7						

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*IDC **01** 02:53:38.9±0.9,35˚.95N×26˚.88E,h81^{km}±14^{km},mb3.7/4, mb1 3.6/10,mb1mx3.2/54,mbtmp3.8/10,Error ellipse: s-maj=19.8km s-min=8.9km az=163.0*

*ATH **01** 02:53:39.9,36˚.17N×26˚.73E,h53^{km}±6^{km},ML2.9/1,Error ellipse: s-maj=6.4km s-min=1.4km az=96.0*

*ISK **01** 02:53:40.5,36˚.08N×26˚.83E,h20^{km},ML3.1/8*

*THE **01** 02:53:41.5,36˚.05N×26˚.79E,h87^{km}±5^{km},ML3.3/13,Error ellipse: s-maj=5.3km s-min=0.8km az=138.0*

*NIC **01** 02:53:41.4±0.0,35˚.39N×27˚.41E,h2^{km}±1^{km},Ml3.5/4*

*DDA **01** 02:53:42.0,36˚.26N×27˚.13E,h90^{km}±10^{km},ML3.0*

ISC 01 02:53:39.5±0.7,**36˚.01N**±0˚.03×**26˚.88E**±0˚.03,**h94**^{km}±6^{km}, **n91**,σ**1ˢ.53**/137,**mb3.9**/4,**1D**,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	Karpathos	0.52	154	P	Pn	02 53 55.5	+0.6
KARP				S	Sn	02 54 06.2	-0.1
	6μm,0.1s						
KARP	Karpathos	0.52	154	P	Pn	02 53 55.5	+0.6
KARP				S	Sn	02 54 06.4	+0.1
NIS1	Nisyros Isl.	0.63	22	P	Pn	02 53 56.1	+0.3
NIS1	Nisyros Isl.	0.63	22	P	Pn	02 53 53.4	-2.4
NIS1				S	Sn	02 54 01.7	-6.3
KOSK	Kos Island	0.74	6	P	Pn	02 53 56.9	+0.2
DAT	Datca	0.91	38	P	Pn	02 53 59.2	+0.6
DAT	Datca	0.91	38	*i* P	Pn	02 53 58.5	-0.1
ARG	Arkhangelos	1.03	78	P	Pn	02 54 01.1	+1.3
ARG				S	Sn	02 54 15.4	+0.4
	442nm,0.2s						
ARG	Arkhangelos	1.03	78	P	Pn	02 54 01.0	+1.3
ARG				S	Sn	02 54 16.2	+1.3
ARG				AML	AML	02 54 16.9	
	comp=E,977μm,0.2s						
ARG				AML	AML	02 54 17.2	
	comp=N,783μm,0.2s						
ARG	Arkhangelos	1.03	78	PG	Pn	02 54 01.1	+1.3
ARG				SG	Sn	02 54 15.5	+0.4
ARG	Arkhangelos	1.03	78	P	Pn	02 54 01.1	+1.3
ARG				S	Sn	02 54 16.3	+1.3
STIA	Sitia Lasithi	1.04	219	P	Pn	02 54 00.7	+0.8
STIA				S	Sn	02 54 15.1	-0.1
ZKR	Zakros	1.05	211	P	Pn	02 54 01.1	+1.0
ZKR				S	Sn	02 54 16.3	+0.8
	comp=N,690nm,0.3s						
ZKR	Zakros	1.05	211	P	Pn	02 54 01.1	+1.0
ZKR				S	Sn	02 54 16.8	+1.4
ZKR	Zakros	1.05	211	PN	Pn	02 54 01.2	+1.1
ZKR				SN	Sn	02 54 16.3	+0.8
ZKR	Zakros	1.05	211	P	Pn	02 54 01.1	+1.0
ZKR				S	Sn	02 54 16.9	+1.4
BODT	Bodrum	1.10	18	P	Pn	02 54 00.9	+0.3
BODT	Bodrum	1.10	18	PG	Pn	02 54 01.0	+0.3
BODT				SG	Sn	02 54 15.5	-1.1
BDRM	Kayabasi	1.14	23	*i* P	Pn	02 54 00.7	-0.5
BDRM				*i* P	Pn	02 54 01.0	-0.2
BDRM				*i* S	Sn	02 54 16.1	-1.3
BDRM				*i* S	Sn	02 54 16.5	-0.9
BDRM				IAML		02 54 18.0	
	comp=N,311nm,0.7s						
THR8	Santorini-Mono	1.20	289	P	Pn	02 54 01.3	-0.5
SANT	Santorini	1.21	288	PN	Pn	02 54 01.9	0.0
SFIR	Foira Santorin	1.24	290	P	Pn	02 54 02.3	0.0
THR7	Fira-Santorini	1.24	290	P	Pn	02 54 02.3	0.0
THR2	Thira island,	1.25	291	P	Pn	02 54 02.3	-0.1
THR6	Thira Island,	1.25	286	P	Pn	02 54 02.3	-0.1
THT2	Imerovigli	1.25	290	P	Pn	02 54 02.5	+0.1
THT2	Imerovigli	1.25	290	PN	Pn	02 54 02.5	+0.1
STAX	Taxiarchis Har	1.26	288	P	Pn	02 54 01.5	-0.9
THR3	Thira Island,	1.26	289	P	Pn	02 54 02.4	-0.1
SNT5	Nea Kammeni, S	1.26	288	P	Pn	02 54 02.5	0.0
MRSB	Marmaris-Mugla	1.27	56	PN	Pn	02 54 03.5	+0.8
NPS	Neapolis	1.28	234	P	Pn	02 54 02.8	+0.1
NPS				S	Sn	02 54 18.9	-1.4
	comp=N,5μm,0.4s						
NPS	Neapolis	1.28	234	P	Pn	02 54 02.9	+0.1
THR5	Thira Island,	1.30	288	P	Pn	02 54 03.1	+0.1
TURN	Turunc	1.34	55	PN	Pn	02 54 04.4	+1.0
TURN				SN	Sn	02 54 22.3	+0.9
FRMA	Ierapetra Chan	1.37	224	P	Pn	02 54 04.3	+0.5
FRMA				S	Sn	02 54 19.7	-2.5
	comp=N,310nm,0.3s						
MLSB	Milas	1.47	29	PN	Pn	02 54 06.2	+1.1
MLSB				SN	Sn	02 54 24.7	+0.3
DDIM	Aydin, Didim	1.47	11	*i* P	Pn	02 54 06.9	+1.8
DDIM				*i* S	Sn	02 54 23.2	-1.2
YER	Yerkesik	1.59	45	PN	Pn	02 54 08.1	+1.5
YER				SN	Sn	02 54 28.0	+0.8
HRKL	Herakleio	1.61	245	P	Pn	02 54 07.0	+0.2
HRKL				S	Sn	02 54 26.5	-1.1
	comp=N,872nm,0.2s						
KSTL	Kastelli Herak	1.64	245	P	Pn	02 54 05.7	-1.5
KSTL				S	Sn	02 54 23.7	-4.4
	comp=N,540nm,0.3s						
DALY	Dalyan (Mula)	1.64	60	*i* P	Pn	02 54 08.4	+1.2
DALY				*i* S	Sn	02 54 28.9	+0.7
DALY				IAML		02 54 30.0	
	comp=N,147nm,0.2s						
DALY	Dalyan (Mula)	1.64	60	PN	Pn	02 54 08.8	+1.6
SMG	Samos	1.69	359	P	Pn	02 54 08.0	+0.1
MULA	Mugla, Merkez-	1.70	43	*i* P	Pn	02 54 09.2	+1.2
MULA				*i* S	Sn	02 54 29.5	-0.2
GCAM	G?zelcaml?	1.71	9	*i* P	Pn	02 54 07.8	-0.3
GCAM				*i* S	Sn	02 54 29.1	-0.6
GCAM				IAML		02 54 30.0	
	comp=N,138nm,0.5s						
GCAM	G?zelcaml?	1.71	9	PN	Pn	02 54 09.0	+0.9
IDI	Anoyia	1.78	247	P	Pn	02 54 08.9	-0.1
	comp=N,10nm,0.3s,baz=74,slow=6.8,SNR=104						
IDI				S	Sn	02 54 29.2	-2.3
	comp=N,63nm,0.3s,baz=326,slow=18,SNR=21						
IDI	Anoyia	1.78	247	P	Pn	02 54 09.0	-0.1
IDI				S	Sn	02 54 29.6	-1.9
	comp=N,698nm,0.2s						
IDI	Anoyia	1.78	247	P	Pn	02 54 10.8	+1.7
AYDN	Tasoluk	1.83	26	*i* P	Pn	02 54 10.6	+0.9
AYDN				*i* S	Sn	02 54 31.5	-1.1
FETY	Fethiye	1.88	70	P	Pn	02 54 11.5	+1.1
FETY	Fethiye	1.88	70	*i* P	Pn	02 54 10.6	+0.2
DGB	zmir	2.03	0	*i* P	Pn	02 54 11.6	-0.7
PRNS	Prines Rethymn	2.04	252	P	Pn	02 54 13.3	+0.9
PRNS				S	Sn	02 54 37.3	-0.2
	comp=N,120nm,0.3s						
TAVA	DENIZLI_Tavas	2.18	48	*i* P	Pn	02 54 15.9	+1.6
TAVA				*i* S	Sn	02 54 38.5	-2.4
KSL	Kastellorizon	2.19	86	P	Pn	02 54 15.7	+1.4
KSL	Kastellorizon	2.19	86	⇓P	Pn	02 54 15.8	+1.4
KSL				AML	AML	02 54 17.7	
	comp=N,0.1nm,0.2s						
KSL				AML	AML	02 54 17.7	
	comp=N,0.1nm,0.2s						
KSL				AML	AML	02 54 18.0	
	comp=N,0.2nm,0.2s						
KSL				AML	AML	02 54 18.0	
	comp=N,0.2nm,0.2s						
KSL				S	Sn	02 54 41.5	+0.5
AKAS	Kas	2.21	84	*i* P	Pn	02 54 14.7	-0.1
CAEL	Denizli, Camel	2.25	60	*i* P	Pn	02 54 15.9	+0.6
CAEL				*i* S	Sn	02 54 41.3	-1.3
CAEL				IAML		02 54 53.0	
	comp=N,120nm,0.6s						
CAEL				IAML		02 54 57.0	
	comp=E,109nm,0.8s						
VAM	Vamos	2.27	255	P	Pn	02 54 15.2	-0.2
VAM				S	Sn	02 54 41.2	-1.6
	comp=E,325nm,0.2s						
VAM	Vamos	2.27	255	P	Pn	02 54 18.7	+3.3
IMMV	Iera Moni Meta	2.42	258	P	Pn	02 54 17.6	+0.2
IMMV				S	Sn	02 54 44.4	-2.1
	comp=E,332nm,0.6s						
ELL	Elmali	2.55	72	P	Pn	02 54 21.0	+1.8
GVDS	Gavdos	2.56	244	P	Pn	02 54 21.0	+1.7
GVDS				S	Sn	02 54 49.8	0.0
	comp=E,355nm,0.2s						
GVD	Gavdhos	2.57	244	P	Pn	02 54 20.6	+1.3
GVD				S	Sn	02 54 50.1	+0.2
	comp=E,430nm,0.3s						
MANT	Manisa	2.81	28	*i* P	Pn	02 54 23.0	+0.2
AKUM	Antalya-Kumluc	2.82	83	*i* P	Pn	02 54 24.3	+1.7
AKUM				*i* S	Sn	02 54 56.3	+0.5
BRDR	BURDUR-Merkez	3.05	56	*i* P	Pn	02 54 27.0	+1.1
PASA	Karahalli, USA	3.12	41	*i* P	Pn	02 54 27.3	+0.5
PASA				*i* S	Sn	02 55 01.4	-1.9
USAK	Uak-Merkez	3.19	32	*i* P	Pn	02 54 27.9	+0.2
BUCA	Burdur, Bucak-	3.23	65	*i* P	Pn	02 54 28.9	+0.5
BUCA				*i* S	Sn	02 55 05.2	-0.8
DEMI	Demirci	3.36	25	*i* P	Pn	02 54 30.5	+0.5
KZIL	AFYON_Kizioren	3.43	48	*i* P	Pn	02 54 31.2	+0.1
KZIL				*i* S	Sn	02 55 08.7	-2.2
OSC1	CSNet OBS 1	4.40	123	P	Pn	02 54 41.8	-2.2
AKMS	Akamas	4.56	101	P	Pn	02 54 45.1	-1.1
AKMS				AML	AML	02 55 36.7	
	comp=E,0.1nm,0.2s						
AKMS				AML	AML	02 55 36.9	
	comp=E,0.3nm,0.5s						
ALFC	Alefka	4.74	99	P	Pn	02 54 47.7	-0.9
ALFC				AML	AML	02 55 39.2	
	comp=E,0.2nm,0.2s						
ALFC				AML	AML	02 55 40.5	
	comp=E,0.2nm,0.3s						
ASGA	Asgata	5.34	101	P	Pn	02 54 55.9	-0.9
ASGA				AML	AML	02 56 00.5	
	comp=E,0.2nm,0.2s						
ASGA				AML	AML	02 56 00.9	
	comp=E,0.1nm,0.4s						
CSS	Mathiatis	5.37	99	P	Pn	02 54 55.9	-1.2
MVOU	Mavrovouni	5.59	98	P	Pn	02 54 59.6	-0.7
BRTR	Keskin Array B	6.50	53	P	Pn	02 55 14.5	+1.8
	comp=E,0.1nm,0.3s,baz=244,slow=13,SNR=1.7						
BRTR				S	Sn	02 56 25.0	-0.5
	comp=E,0.1nm,0.3s,baz=217,slow=25,SNR=5.1						
MMAI	Mount Meron Ar	7.64	111	P	Pn	02 55 26.7	-1.5
	comp=E,1.5nm,0.3s,baz=314,slow=11,SNR=17						
MMAI				S	Sn	02 56 48.0	-5.2
	comp=E,2.6nm,0.3s,baz=312,slow=24,SNR=6.8						
ASF	Jabal al Asfar	9.14	112	P	Pn	02 55 48.9	+0.2
	comp=E,0.2nm,0.3s,baz=319,slow=18,SNR=1.9						
ASF				S	Sn	02 57 28.8	-1.1
	comp=E,0.4nm,0.3s,baz=256,slow=4.2,SNR=1.9						
EIL	Elat	9.28	131	P	Pn	02 55 49.1	-1.3
	comp=E,0.2nm,0.3s,baz=315,slow=2.9,SNR=7.7						
EIL				S	Sn	02 57 24.9	-8.1
	comp=E,2.8nm,0.3s,baz=300,slow=5.8,SNR=11						
KVAR	Kislovodsk Arr	14.47	52	P	Pn	02 57 01.4	+1.6
	baz=279,slow=21,SNR=1.6						
AKASG	Malin Array Be	14.78	6	P	P	02 57 06.2	-0.9
	comp=E,2.3nm,0.3s,baz=194,slow=11,SNR=12						
GERES	GERESS Array B	16.07	327	P	P	02 57 21.7	+0.2
	comp=E,0.1nm,0.3s,baz=130,slow=12,SNR=2.4						
FINES	FINESS Array B	25.46	359	P	P	02 58 58.6	+0.2
	comp=E,1.4nm,0.8s,baz=186,slow=9.8,SNR=1.1						
TORD	Torodi Ar. Bea	32.12	231	P	P	02 59 58.6	+0.6
	comp=E,0.6nm,0.4s,baz=33,slow=8.8,SNR=16						
MKAR	Makanchi Array	42.13	57	P	P	03 01 23.5	+1.0
	comp=E,1.5nm,0.4s,baz=268,slow=8.5,SNR=25						
ZALV	Zalesovo Beam	43.40	47	P	P	03 01 32.6	+0.1
	comp=E,1.0nm,0.3s,baz=271,slow=7.8,SNR=5.8						

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*IDC **01** 03:18:29.4±1.0,30˚.49N×112˚.44E,h0^{km},mb3.8/6, mb1 3.8/8,mb1mx3.5/57,mbtmp3.7/8,ML3.2/1,Error ellipse: s-maj=54.2km s-min=18.4km az=61.0*

ISC 01 03:18:34.5±1.2,**30˚.6N**±0˚.2×**112˚.5E**±0˚.2,**h35**^{km},**n8**, σ**0ˢ.30**/8,**mb3.7**/6,**Southeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSRS	Korea Array	14.51	58	Pn	Pn	03 21 57.4	+0.1
	0.1nm,0.3s,baz=236,slow=11,SNR=2.1						
SONM	Songino Array	17.89	346	P	Pn	03 22 40.3	-0.3
	baz=178,slow=14,SNR=1.5						
MKAR	Makanchi Array	28.40	313	P	P	03 24 25.6	+0.1
	0.3nm,0.6s,baz=123,slow=9.2,SNR=1.8						
ZALV	Zalesovo Beam	30.75	327	P	P	03 24 46.1	-0.1
	0.5nm,0.4s,baz=123,slow=10,SNR=3.6						
KURBB	Kurchatov Arra	32.27	318	P	P	03 25 00.2	+0.6
	0.4nm,0.4s,baz=114,slow=9.2,SNR=3.3						
WRA	Warramunga Arr	54.41	155	P	P	03 27 58.2	-0.1
	0.6nm,0.7s,baz=345,slow=8.2,SNR=8.2						
ASAR	Alice Springs	57.68	157	P	P	03 28 21.5	-0.1
	0.7nm,0.6s,baz=341,slow=6.7,SNR=16						
ARCES	ARCESS Array B	60.71	336	P	P	03 28 41.9	-0.1
	3.1nm,0.9s,baz=89,slow=8.3,SNR=1.8						

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*NNC **01** 03:26:06.6±2.8,36˚.87N×70˚.28E,h0^{km},mb4.8,mpv4.7, Error ellipse: s-maj=22.9km s-min=17.2km az=177.0*

*IDC **01** 03:26:08.2±2.7,36˚.31N×70˚.56E,h185^{km}±24^{km},mb3.6/14, mb1 3.7/20,mb1mx3.4/63,mbtmp4.2/20,MS4.5/1, Ms1 4.5/1,ms1mx2.7/56,Error ellipse: s-maj=16.8km s-min=14.3km az=176.0*

*MOS **01** 03:26:09.6±0.9,36˚.52N×70˚.63E,h202^{km},mb4.2/7,Error ellipse: s-maj=10.5km s-min=4.3km az=77.0*

*NEIC **01** 03:26:10.4±1.3,36˚.50N±0˚.06×70˚.49E±0˚.09,h203^{km}±6^{km}, mb4.0/9,Error ellipse: s-maj=10.3km s-min=8.7km az=120.0*

*BJI **01** 03:26:11.0±0.0,36˚.69N×70˚.51E,h206^{km},mB4.6/6, mb4.4/14*

ISC 01 03:26:10.2±0.4,**36˚.50N**±0˚.04×**70˚.52E**±0˚.05,**h204**^{km},**n140**, σ**1ˢ.82**/149,**mb3.9**/19,**17C-18D**,**Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	2.30	212	PN	Pn	03 26 52.7	+0.3
KBL						03 27 23.5	
KBL	Kabul	2.30	212	Pn	Pn	03 26 52.7	+0.3
KBL				Sn	S	03 27 23.5	-1.2
CHGR	Chuyangaron	2.41	334		Pn	03 26 53.3	-0.1
GAR	Garm	2.50	356	Pn	Pn	03 26 54.4	0.0
CEP	Cherat	2.90	157	P	Pn	03 26 59.7	+0.6
CEP				S	S	03 27 36.0	-0.7
DRK	Karamyk	3.14	18		Pn	03 27 02.2	+0.3
BTK	Batken	3.56	4	PN	Pn	03 27 07.8	+1.1
BTK	Batken	3.56	4	Pn	Pn	03 27 07.8	+1.1
CHCP	Chirah Chowk	3.62	141	P	Pn	03 27 08.6	+1.1
NIL	Nilore	3.62	141	PN	Pn	03 27 07.9	+0.4
NIL	Nilore	3.62	141	Pn	Pn	03 27 07.9	+0.4
THW	Thamme Wali	3.83	164	P	Pn	03 27 10.4	+0.3
SARP	Sargodha	4.90	158	P	Pn	03 27 23.1	-0.4
TAS	Tashkent	4.91	349	PN	Pn	03 27 24.1	+0.6
TAS	Tashkent	4.91	349	Pn	Pn	03 27 24.1	+0.6
KSH	Kashi	5.25	53	P	Pn	03 27 23.1	-4.9
KSH				sP		03 28 04.8	
KSH				S	S	03 28 17.6	-11
KSH				pmax	pmax		
	comp=Z,60nm,0.7s						
KSH				smax	smax		
	comp=N,380nm,0.6s						
KSH				smax	smax		
	comp=E,200nm,0.7s						
AML	Almayashu	6.14	23	P	Pn	03 27 39.4	-0.2
	SNR=197						
DZA	Taraz	6.41	5	*e*P	Pn	03 27 43.6	+0.8
	baz=3.8						
DZA				*e*S	S	03 28 52.5	-3.6
	baz=3.8						
DZA	Taraz	6.41	5	*e*PN	Pn	03 27 43.6	+0.8
UCH	Uchtor	6.50	27	P	Pn	03 27 44.4	+0.1
	SNR=20						
BRLS	Borolday	6.54	356	*e*P	Pn	03 27 41.2	-3.2
	baz=352						
BRLS				*e*S	S	03 28 50.0	-9.1
	baz=352						
BRLS	Borolday	6.54	356	*e*PN	Pn	03 27 41.2	-3.2
KK31	Karatay Array	6.59	360	PN	Pn	03 27 45.0	-0.1
KK31	Karatay Array	6.59	360	Pn	Pn	03 27 45.0	-0.1
KK31	Karatay Array	6.59	360	⇓P	Pn	03 27 41.3	-3.8
	12nm,0.2s,baz=189,slow=13,SNR=996						
KK31				⇑S	S	03 28 55.5	-4.8
	31nm,0.3s,baz=190,slow=24,SNR=15						
KKAR	Karatay Array	6.59	360	PN	Pn	03 27 45.0	-0.1
KKAR	Karatay Array	6.59	360		Pn	03 27 45.0	-0.1
KKAR	Karatay Array	6.59	360	Pn	Pn	03 27 44.9	-0.3
EKS2	Erkin-Say	6.65	21	P	Pn	03 27 46.0	+0.1
	SNR=60						
AAK	Ala-Archa	6.85	25	P	Pn	03 27 48.7	+0.1
	12nm,0.3s,baz=218,slow=5.6,SNR=84						
AAK				S	S	03 29 02.6	-4.0
	5.0nm,0.3s,baz=325,slow=21,SNR=21						
AAK	Ala-Archa	6.85	25	P	Pn	03 27 48.8	+0.2
	SNR=59						
AAK	Ala-Archa	6.85	25	*d* *i*PN	Pn	03 27 48.5	-0.1
AAK				pmax	pmax		
	comp=Z,85nm,0.6s						
AAK	Ala-Archa	6.85	25	Pn	Pn	03 27 48.5	-0.1
AAK	Ala-Archa	6.85	25	⇑P	Pn	03 27 46.4	-2.2
	comp=Z,21nm,0.4s						
AAK				⇓S	S	03 29 02.0	-4.6
	comp=Z,77nm,0.6s						
KBK	Karagaybulak	7.03	28	P	Pn	03 27 39.9	-11
	SNR=9.2						
FRU1	Bishkek	7.05	25	PN	Pn	03 27 51.5	+0.4
FRU1	Bishkek	7.05	25		Pn	03 27 51.5	+0.4
HRA	Herat	7.08	255	Pn	Pn	03 27 51.1	-0.6
CHMS	Chumysh	7.26	25	P	Pn	03 27 54.0	+0.3
	SNR=10						
USP	Ospenovka	7.42	23	P	Pn	03 27 55.2	-0.6
	SNR=25						
TKM2	Tokmak 2	7.51	30	P	Pn	03 27 57.1	-0.1
	SNR=16						
TKM2	Tokmak 2	7.51	30	⇑P	Pn	03 27 55.2	-1.9
	comp=Z,58nm,0.5s						
TKM2				⇑S	S	03 29 17.5	-4.7
	comp=Z,15nm,0.7s						
SGDS	Sogindy	7.62	23	⇓*i*P	Pn	03 27 57.5	-1.0
	baz=23						
SGDS				*e*S	S	03 29 20.7	-4.0
	baz=23						
TARG	Taragay, Kyrgy	7.70	45		Pn	03 27 57.4	-2.5
MTBS	Maitube	8.03	33	⇓*i*P	Pn	03 28 03.8	0.0
	baz=33						
TNSS	Tian-Shan	8.19	35	*e*P	Pn	03 28 04.9	-1.3
	baz=36						
AAA	Alma-Ata	8.31	34	*e*P	Pn	03 28 06.6	-0.8
	baz=35						
AAA	Alma-Ata	8.31	34	*e*PN	Pn	03 28 06.6	-0.8
MDOK	Medeo	8.33	35	*e*P	Pn	03 28 07.0	-0.8
	baz=35						
MDOK	Medeo	8.33	35	*e*PN	Pn	03 28 07.0	-0.8
MDOK	Medeo	8.33	35	P	Pn	03 28 08.1	+0.2
	comp=Z,30nm,1.0s						
MDOK				S	S	03 29 39.8	-1.9
	comp=Z,11nm,1.0s						
PRZ	Przheval'sk	8.53	43	PN	Pn	03 28 10.5	+0.1
PRZ	Przheval'sk	8.53	43	Pn	Pn	03 28 10.5	+0.1
KUU	Kurty	8.62	29	⇓*i*P	Pn	03 28 09.9	-1.5
	comp=Z,9.6nm,0.7s,baz=29						
KUU	Kurty	8.62	29	*d* *i*PN	Pn	03 28 09.9	-1.5
KUU				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CHKK	Chushkaly	8.85	32	*e*P	Pn	03 28 13.3	-1.2
	baz=32						
SATY	Saty	8.93	40	*e*P	Pn	03 28 13.6	-1.9
	baz=41						
SATY	Saty	8.93	40	*e*PN	Pn	03 28 13.6	-1.9
BTLS	Baital	8.94	16	*e*P	Pn	03 28 14.8	-0.7
	baz=16						
BTLS	Baital	8.94	16	*e*PN	Pn	03 28 14.8	-0.7
UZB	Uzynbulak	9.31	42	*e*P	Pn	03 28 19.3	-1.3
	baz=43						
UZB	Uzynbulak	9.31	42	*e*P	Pn	03 28 19.2	-1.3
KPKS	Kokpek	9.36	39	*e*P	Pn	03 28 19.2	-1.8
	baz=40						
KPKS	Kokpek	9.36	39	*e*P	Pn	03 28 19.2	-1.8
SHLS	Shalkode	9.56	43	*e*P	Pn	03 28 25.2	+1.5
	baz=45						
SHLS	Shalkode	9.56	43	*e*P	Pn	03 28 25.2	+1.5
PDGK	Podgornoye	9.69	43	⇑P	Pn	03 28 25.3	0.0
	comp=Z,6.3nm,0.7s						
PDGK				⇓S	S	03 30 14.2	+0.2
	comp=Z,5.4nm,0.9s						
KUDL	Kundal	9.74	147	*e*P	Pn	03 28 25.3	-0.8
KUDL				*e*S	S	03 30 06.6	-8.6
SONA	Sohna	9.92	144	*e*P	P	03 28 38.1	+2.0
SONA				*e*S	S	03 30 09.8	-10
GEYT	Alibeck	10.00	282	P	Pn	03 28 29.0	-0.4
	comp=Z,0.6nm,0.3s,baz=208,slow=20,SNR=2.1						
GEYT				S	S	03 30 17.0	-4.3
	comp=Z,0.8nm,0.3s,baz=65,slow=32,SNR=1.8						
TDK	Taldyqorghan	10.38	33	*e*P	Pn	03 28 34.1	-0.1
	baz=33						
TDK	Taldyqorghan	10.38	33	*e*P	Pn	03 28 34.0	-0.1
AJM	Ajmer	10.59	159	*e*P	Pn	03 28 36.4	-0.7
AJM				*e*S	S	03 30 28.5	-7.3
OTUK	Ortayu	11.81	6	⇓P	Pn	03 28 51.8	-0.7
	comp=Z,15nm,0.8s						
OTUK				⇑S	S	03 31 00.2	-3.4
	comp=Z,18nm,0.9s						
MAKZ	Makanchi	13.38	36	P	Pn	03 29 11.3	-0.9
MAKZ	Makanchi	13.38	36		Pn	03 29 11.3	-0.9
MAKZ	Makanchi	13.38	36	⇓P	P	03 29 15.5	+0.8
	comp=Z,9.2nm,0.6s						
MK31	Makanchi Array	13.52	37	*d* *i*P	Pn	03 29 14.0	+0.1
MK31	Makanchi Array	13.52	37		Pn	03 29 13.0	-0.9
MK31	Makanchi Array	13.52	37	⇓P	P	03 29 16.5	+0.2
	comp=Z,7.6nm,0.6s,baz=217,slow=12,SNR=31						
MKAR	Makanchi Array	13.52	37	P	Pn	03 29 14.2	+0.2
	comp=Z,1.1nm,0.3s,baz=216,slow=12,SNR=32						
MKAR	Makanchi Array	13.52	37	*i* P	Pn	03 29 14.1	+0.2
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
MKAR	Makanchi Array	13.52	37	Pn	Pn	03 29 13.5	-0.4
BRZS	Berezniki	13.57	6	*e*P	Pn	03 29 13.9	-0.6
	baz=5.4						
BRZS	Berezniki	13.57	6	*e*P	Pn	03 29 13.8	-0.6
AB31	Akbulak array	14.90	332	⇓P	Pn	03 29 30.3	-0.5
	comp=Z,8.6nm,0.8s,baz=144,slow=12,SNR=79						
AB31				⇓S	S	03 32 14.5	-1.5
	comp=Z,5.9nm,0.8s,baz=151,slow=24,SNR=5.4						
ABKAR	Akbulak array	14.90	332		Pn	03 29 30.0	-0.9
WMQ	Urumqi	15.01	56	*e*P	P	03 29 34.6	+1.7
WMQ				pmax	pmax		
	comp=Z,19nm,0.7s						
WMQ				pmax	pmax		

	comp=Z,87nm,3.9s						
KURBB	Kurchatov Arra	15.25	20	P	Pn	03 29 34.2	-0.8
	comp=Z,0.3nm,0.3s,baz=210,slow=11,SNR=19						
KURBB	Kurchatov Arra	15.25	20	⇓P	P	03 29 37.4	+2.1
	comp=Z,7.0nm,0.8s						
ZSN	Zaisan	15.25	40	eP	P	03 29 35.1	-0.5
	baz=40						
ZSN	Zaisan	15.25	40	eP	P	03 29 35.0	-0.5
KURK	Kurchatov	15.36	20	c iP	Pn	03 29 35.4	-1.0
KURK				pmax	pmax		
	comp=Z,10.0nm,1.7s						
KURK	Kurchatov	15.36	20		Pn	03 29 35.9	-0.5
KURK				IAmb	IAmb	03 29 39.4	
	comp=Z,5.5nm,1.0s						
SEM	Semipalatinsk	15.57	24	eP	P	03 29 38.3	-0.9
	baz=24						
SEM	Semipalatinsk	15.57	24	eP	P	03 29 38.3	-0.9
BVAR	Borovoye Array	16.52	360	P	Pn	03 29 51.2	+0.8
	comp=Z,2.8nm,0.3s,baz=191,slow=15,SNR=28						
BRVK	Borovoye	16.56	359	ceP	Pn	03 29 51.1	+0.3
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BRVK	Borovoye	16.56	359	P	Pn	03 29 50.1	-0.6
BRVK				IAmb	IAmb	03 29 54.2	
	comp=Z,9.6nm,1.1s						
BRVK	Borovoye	16.56	359	⇓P	Pn	03 29 54.5	+3.8
	comp=Z,4.1nm,0.5s						
AKTO	Aktyubinsk	16.59	331	P	Pn	03 29 51.5	+0.3
	comp=Z,2.3nm,0.3s,baz=140,slow=11,SNR=59						
AKTO	Aktyubinsk	16.59	331	⇑P	Pn	03 29 52.1	+0.9
	comp=Z,26nm,0.8s						
AKTO				⇓S	S	03 32 55.9	+2.8
	comp=Z,8.0nm,1.1s						
DGZ	Jazzator, Alta	18.01	38	ceP	Pn	03 30 08.2	+0.1
DGZ				pmax	pmax		
	comp=Z,7.0nm,0.7s						
ZAA0	Zalesovo Array	20.08	25	P	P	03 30 28.6	+0.8
ZALV	Zalesovo Beam	20.08	25	P	P	03 30 28.8	+1.0
	comp=Z,6.0nm,0.4s,baz=221,slow=11,SNR=38						
ZALV	Zalesovo Beam	20.08	25	i P	P	03 30 28.7	+0.9
ZALV				pmax	pmax		
	comp=Z,6.0nm,0.4s						
ZALV	Zalesovo Beam	20.08	25	P	P	03 30 28.2	+0.3
GNI	Garni	20.53	288	⇑eP	P	03 30 33.6	+0.6
GNI				pmax	pmax		
	comp=Z,21nm,2.5s						
SHL	Shillong	21.26	115	P	P	03 30 40.6	-0.2
SHL				pmax	pmax		
	comp=Z,21nm,0.6s						
SHL	Shillong	21.26	115	P	P	03 30 40.6	-0.2
SVE	Sverdlovsk	21.39	345	eP	P	03 30 44.2	+2.5
SVE				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ARU	Arti	21.51	342	P	P	03 30 44.3	+1.4
	comp=Z,1.0nm,0.4s,baz=128,slow=5.7,SNR=9.3						
ARU	Arti	21.51	342	d iP	P	03 30 45.2	+2.3
ARU				S	S	03 34 31.2	+3.6
ARU				pmax	pmax		
	comp=Z,11nm,1.1s						
ARU	Arti	21.51	342	P	P	03 30 43.6	+0.7
ARU				IAmb	IAmb	03 30 47.1	
	comp=Z,9.1nm,1.0s						
KIRV	Kirov	26.07	335	P	P	03 31 26.8	+2.1
	comp=Z,7.8nm,0.5s,baz=185,slow=6.2,SNR=3.8						
KIRV	Kirov	26.07	335	⇑eP	P	03 31 27.0	+2.4
KMI	Kunming	29.77	103	⇑P	P	03 32 04.5	+6.4
KMI				pmax	pmax		
	comp=Z,9.0nm,0.5s						
CMAR	Chiang Mai Arr	30.79	118	ceP	P	03 32 09.1	+2.2
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
HHC	Hu-ho-hao-te	32.12	70	eP	P	03 32 19.0	+0.5
HHC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,120nm,5.2s						
AKASG	Malin Array Be	32.65	309	P	P	03 32 23.5	+0.8
	comp=Z,0.6nm,0.5s,baz=82,slow=6.7,SNR=4.1						
AKASG	Malin Array Be	32.65	309	ceP	P	03 32 25.6	+2.9
AKASG	Malin Array Be	32.65	309	IAmb	IAmb	03 32 26.5	
	comp=Z,0.8nm,0.7s						
FINES	FINESS Array B	37.27	326	P	P	03 33 03.5	+1.4
	comp=Z,1.9nm,0.6s,baz=117,slow=8.7,SNR=13						
FINES	FINESS Array B	37.27	326	i P	P	03 33 04.0	+2.0
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NJ2	Nanjing	39.86	82	eP	P	03 33 29.7	+5.8
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
CLL	Collm	42.89	309	eP	P	03 33 56.0	+7.7
NB2	NORSAR Subarra	44.15	323	P	P	03 33 59.7	+1.4
	comp=Z,1.1nm,0.4s,baz=98,slow=7.9						
NOA	NORSAR Array B	44.15	323	P	P	03 33 59.1	+0.8
	comp=Z,0.4nm,0.5s,baz=106,slow=7.2,SNR=8.3						
TIXI	Tiksi	45.92	22	P	P	03 34 12.9	+0.9
	comp=Z,1.0nm,0.3s,baz=287,slow=7.7,SNR=3.4						
TIXI	Tiksi	45.92	22	⇑eP	P	03 34 12.1	+0.1
SEY	Seymchan	54.63	34	P	P	03 35 18.4	+1.1
	comp=Z,1.3nm,0.7s,baz=18,slow=20,SNR=2.2						
SEY				LR	LR	03 58 42.0	
	comp=Z,448nm,19.9s,baz=165,slow=36						
TORD	Torodi Ar. Bea	65.33	268	P	P	03 36 30.0	-0.8
	comp=Z,0.5nm,0.5s,baz=47,slow=5.9,SNR=15						
TORD	Torodi Ar. Bea	65.33	268	IAmb	IAmb	03 36 42.6	
	comp=Z,4.2nm,1.4s						
INK	Inuvik	73.97	9	P	P	03 37 24.3	+1.6
	comp=Z,0.9nm,0.5s,baz=330,slow=3.8,SNR=11						
ILAR	Eielson Array	74.88	16	P	P	03 37 28.8	+0.7
	comp=Z,0.3nm,0.4s,baz=303,slow=5.0,SNR=7.0						
BOSA	Boshof	77.50	220	P	P	03 37 44.1	+0.8
	comp=Z,3.9nm,1.0s,baz=3.1,slow=3.4,SNR=6.0						
WRA	Warramunga Arr	82.32	122	P	P	03 38 08.2	-1.0
	comp=Z,2.0nm,0.7s,baz=316,slow=5.5,SNR=12						
WRA	Warramunga Arr	82.32	122	IAmb	IAmb	03 38 10.0	
	comp=Z,0.2nm,1.1s						
WRAB	Tennant Creek	82.32	122	ceP	P	03 38 09.7	+0.5
WRAB				pmax	pmax		
	comp=Z,14nm,2.5s						
ASAR	Alice Springs	84.57	125	P	P	03 38 20.2	-0.4
	comp=Z,1.4nm,0.6s,baz=312,slow=5.0,SNR=16						

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*IDC **01** 03:32:16.1±2.2, 6°.96S×128°.96E, h0^{km}, mb3.6/1, mb1 3.9/4, mb1mx3.5/36, mbtmp3.7/4, ML3.8/3, Error ellipse: s-maj=79.0km s-min=29.7km az=75.0*

ISC 01 03:32:17.9±1.6**, 7°.2S**±0°.1×**128°.9E**±0°.1**, h10**^{km}**, n9,** σ**2^{s}96**/7**,**
Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRS	Darwin Rock St	5.51	160	P	Pb	03 33 52.4	-1.8
MTN	Manton Dam	5.97	159	P	Pb	03 33 57.7	-4.5
BATI	Baumata	6.00	240	Sn	Sn	03 34 55.8	+0.2
	3.9nm,0.3s,baz=291,slow=20,SNR=1.9						
KDU	Kakadu	6.43	148	P	Pb	03 34 04.7	-5.3
KNRA	Kununurra	8.39	181	P	Pn	03 34 27.1	+7.5
	24nm,0.5s						
FITZ	Fitzroy Crossi	11.27	196	Pn	Pn	03 35 00.5	+1.4
	0.5nm,0.3s,baz=24,slow=11,SNR=20						
FITZ				Sn	Sn	03 36 58.1	-7.1
	0.5nm,0.3s,baz=136,slow=20,SNR=5.9						
WRA	Warramunga Arr	13.67	158	Pn	Pn	03 35 35.6	+3.6
	0.5nm,0.3s,baz=339,slow=12,SNR=23						
WRA				Sn	Sn	03 38 00.9	-3.2
	0.6nm,0.3s,baz=330,slow=21,SNR=8.7						
ASAR	Alice Springs	17.02	164	P	P	03 36 20.0	+2.0
	0.3nm,0.3s,baz=338,slow=11,SNR=42						
ASAR				S	Sn	03 39 16.2	-9.3
	0.0nm,0.3s,baz=348,slow=28,SNR=2.0						
MKAR	Makanchi Array	67.85	327	P	P	03 43 15.0	-1.5
	0.2nm,0.3s,baz=139,slow=5.6,SNR=2.3						

IDC 01 03:47:58.9±4.9**, 15°.71S**×**71°.65W, h70**^{km}±44^{km}**, mb3.3**/3**, mb1 3.4**/4**, mb1mx3.3**/23**, mbtmp3.4**/4**, ML2.3**/1**, MS3.5**/2**, Ms1 3.5**/2**, ms1mx3.0**/8**, Error ellipse: s-maj=45.8km s-min=34.6km az=83.0, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	3.43	100	P	Pn	03 48 51.0	+0.5
	0.2nm,0.3s,baz=311,slow=9.0,SNR=8.4						
ROSC	El Rosal	20.58	352	LR	LR	04 02 01.3	
	comp=Z,151nm,20.9s,baz=358,slow=41						
BDFB	Brasilia	22.75	93	LR	LR	04 02 23.9	
	comp=Z,134nm,19.6s,baz=137,slow=38						
PLCA	Paso Flores	24.96	178	P	P	03 53 15.7	-0.2
	1.8nm,0.9s,baz=334,slow=11,SNR=3.3						
TXAR	Lajitas Array	54.41	325	P	P	03 57 18.4	-0.9
	0.1nm,0.3s,baz=136,slow=7.2,SNR=2.7						
TORD	Torodi Ar. Bea	77.98	73	P	P	03 59 49.4	-1.0
	0.8nm,0.9s,baz=241,slow=5.5,SNR=3.8						
SONM	Songino Array	147.92	2	PKPbc	PKPbc	04 07 37.4	+0.9
	1.3nm,0.7s,baz=343,slow=1.5,SNR=6.6						

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*BJI **01** 03:48:43.8±0.0, 41°.54N×142°.31E, h63^{km}, mB5.1/55, mb5.2/77, Ms4.7/82, Ms7 4.6/75*

*MOS **01** 03:48:46.4±0.9, 41°.61N×141°.98E, h59^{km}, mb5.6/82, MS4.8/14, Error ellipse: s-maj=5.1km s-min=3.7km az=111.0*

*IDC **01** 03:48:47.9±1.1, 41°.60N×142°.09E, h62^{km}±8^{km}, mb5.0/43, mb1 5.0/53, mb1mx5.0/57, mbtmp5.2/53, MS4.6/40, Ms1 4.6/40, ms1mx4.4/52, Error ellipse: s-maj=10.1km s-min=7.4km az=112.0*

*NIED **01** 03:48:47.6, 41°.57N×142°.07E, h65^{km}, MW5.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{17}Nm; M_{rr}0.85; $M_{\theta\theta}$-0.13; $M_{\phi\phi}$-0.71; $M_{r\theta}$0.57; $M_{\theta\phi}$-0.31; $M_{\phi r}$1.07; Fault plane solution: $M_0$1.48000×10^{17} NP1:ϕ_s27.00000°, δ73.00000°, λ92.00000°. NP2:ϕ_s200.00000°, δ18.00000°, λ83.00000°.*

*JMA **01** 03:48:47.6±0.1, 41°.57N×142°.07E, h65^{km}±3^{km}, M5.2 Broadband fault plane solution: P waves. NP1: ϕ_s200.00000°, δ14.00000°, λ86.00000°. NP2:ϕ_s24.00000°, δ76.00000°, λ91.00000°. Principal axes: T Plg59.0000°, Azm295.0000°; N Plg1.0000°, Azm204.0000°; P Plg31.0000°, Azm113.0000°;*

JMA Felt III J1.

*NEIC **01** 03:48:47.5±1.5, 41°.58N±0°.04×141°.99E±0°.07, h47^{km}±1^{km}, mb5.4/438, Mwb5.4/41, Mwr5.3/29 Error ellipse: s-maj=8.9km s-min=7.0km az=110.0*

*NEIC **01** 03:48:48.8, 41°.62N×141°.96E, h49^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.29; $M_{\theta\theta}$-0.36; $M_{\phi\phi}$-0.93; $M_{r\theta}$0.40; $M_{\theta\phi}$-0.50; $M_{\phi r}$0.90; Fault plane solution: $M_0$1.60000×10^{17} NP1:ϕ_s213.26000°, δ26.01000°, λ96.17000°. NP2:ϕ_s26.40000°, δ64.15000°, λ87.00000°. Principal axes: T 1.6359, Plg71.0000°, Azm290.0000°; N -0.0746, Plg3.0000°, Azm28.0000°; P -1.5613, Plg19.0000°, Azm119.0000°;*

*NEIC **01** 03:48:48.8, 41°.62N×141°.96E, h52^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.60; $M_{\theta\theta}$-0.11; $M_{\phi\phi}$-0.49; $M_{r\theta}$0.49; $M_{\theta\phi}$-0.23; $M_{\phi r}$1.06; Fault plane solution: $M_0$1.31000×10^{17} NP1:ϕ_s205.04000°, δ13.51000°, λ90.18000°. NP2:ϕ_s24.85000°, δ76.49000°, λ89.96000°. Principal axes: T 1.3119, Plg59.0000°, Azm295.0000°; N -0.0039, Plg0.0000°, Azm25.0000°; P -1.3080, Plg31.0000°, Azm115.0000°;*

*GCMT **01** 03:48:49.5±0.1, 41°.63N±0°.01×142°.19E±0°.01, h58^{km}, MW5.4/139, Moment Tensor Solution. s123,c222; s139,c250; Duration: 1^{s}2 Moment tensor: Scale 10^{17} Nm; M_{rr}1.18±.02; $M_{\theta\theta}$-0.05±.02; $M_{\phi\phi}$-1.14±.02; $M_{r\theta}$0.42±.01; $M_{\theta\phi}$-0.38±.01; $M_{\phi r}$0.77±.02; Best double couple: $M_0$1.50600×10^{17} NP1:ϕ_s190.00000°, δ28.00000°, λ77.00000°. NP2:ϕ_s24.00000°, δ63.00000°, λ97.00000°. Principal axes: T 1.4750, Plg71.0000°, Azm309.0000°; N 0.0560, Plg6.0000°, Azm201.0000°; P -1.5370, Plg18.0000°, Azm109.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **01** 03:48:55.7±0.0, 42°.44N×141°.85E, h33^{km}, mb5.1*

ISC 01 03:48:47.6±0.3**, 41°.59N**±0°.03×**142°.07E**±0°.03**, h59**^{km}±2^{km}**, h59**^{km}**:pP-P, n1300,** σ**1^{s}50**/1216**, mb5.3**/429**, MS4.7**/69**, 268C-145D, Fault plane solution: NP1:**ϕ_s175.96126°, δ37.78141°, λ58.03853°. **NP2:**ϕ_s34.25015°, δ58.68281°, λ112.30982°. **Principal axes:** T Plg67.8806°, Azm349.7203°**;** N Plg18.9235°**,** Azm202.2105°**;** P Plg11.0303°**,** Azm108.3787°**; Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAHD	Aomorihigashid	0.64	240	P	Pn	03 49 01.6	+0.5
JAHD				eS	Sn	03 49 12.0	+1.1
JARK	Aomorirokkasho	0.79	222	⇓P	Pn	03 49 02.9	0.0
JARK				S	Sn	03 49 14.1	0.0
JOT	Ohata	0.80	255	⇓P	Pn	03 49 03.2	+0.2
JOT				eS	Sn	03 49 15.1	+0.8
JKB	Kayabe	0.83	291	⇓P	Pn	03 49 03.5	+0.1
JNBK	Urakawa-nobuka	0.85	36	⇑P	Pn	03 49 03.8	+0.1
JNBK				eS	Sn	03 49 15.5	-0.1
JSHD	Hidakashinhida	0.87	20	⇑P	Pn	03 49 05.3	+1.4
ERM	Erimo	0.92	62	c iP	Pn	03 49 04.9	+0.5
ERM	Erimo	0.92	62		Pn	03 49 05.0	+0.5
JEM	Erimo	0.92	62	⇑P	Pn	03 49 04.9	+0.4
JEM				eS	Sn	03 49 17.7	+0.8
JIAM	Iburiatsuma	1.03	354	P	Pn	03 49 07.7	+1.7
JTM	Tenmabayashi	1.10	224	⇓P	Pn	03 49 07.3	+0.3
JTM				eS	Sn	03 49 21.4	0.0
JTM	Tenmabayashi	1.10	224	Pn	Pn	03 49 07.3	+0.3
JTHR	Tokachihiroo	1.15	52	⇑P	Pn	03 49 08.3	+0.7
JNB	Noboribetsu	1.17	319	⇓P	Pn	03 49 07.9	+0.1
JNB				S	Sn	03 49 23.0	+0.2
JBT2	Biratori 2	1.20	10	⇓P	Pn	03 49 09.3	+1.0
JSR	Shiriuchi	1.24	268	⇓P	Pn	03 49 09.2	+0.4
JANG	Nango	1.29	199	⇓P	Pn	03 49 09.2	-0.2
JANG				S	Sn	03 49 25.4	-0.4
JEW	Eniwo	1.33	340	⇓P	Pn	03 49 11.0	+1.0
JEW				eS	Sn	03 49 28.0	+1.3
JEW	Eniwo	1.33	340		Pn	03 49 10.5	+0.5
JSI2	Shiura 2	1.36	247	⇓P	Pn	03 49 11.3	+0.9
JYM2	Yakumo 2	1.38	293	⇓P	Pn	03 49 11.5	+0.9
JCH	Churui	1.40	43	⇑P	Pn	03 49 12.0	+1.1
JKEN	Kujiedanarisaw	1.41	191	⇑P	Pn	03 49 10.7	-0.4
JOMM	Oshimamatsumae	1.55	268	⇓P	Pn	03 49 13.3	+0.4
JHHS	Hirosakihyakuz	1.60	235	⇓P	Pn	03 49 14.7	+1.1
JFR	Furan	1.62	14	⇓P	Pn	03 49 14.6	+0.7
JTH	Tanohata	1.66	186	⇑P	Pn	03 49 13.2	-1.2
JKZ	Kuzumaki	1.70	200	⇓P	Pn	03 49 15.3	+0.2
JISS	Ishikarishitsu	1.75	344	⇓P	Pn	03 49 16.5	+0.9
JAH	Hinai	1.78	218	⇓P	Pn	03 49 16.6	+0.6
JHST	Hiyamasetana	1.83	298	⇓P	Pn	03 49 17.1	+0.3
JSH	Shimam	1.84	306	⇓P	Pn	03 49 17.2	+0.4
JOB	Onbets	1.85	44	⇓P	Pn	03 49 18.2	+1.2
JIW	Iwasaki	1.85	238	⇓P	Pn	03 49 17.6	+0.5
JAB	Ashibetsu	1.91	3	⇓P	Pn	03 49 19.7	+1.8
JOSM	Okushiri--Mats	2.00	285	⇓P	Pn	03 49 19.1	+0.1
MIYJ	Miyakonagasawa	2.02	186	⇑P	Pn	03 49 19.0	-0.4
JSZI	Iwateshizukuis	2.04	205	⇓P	Pn	03 49 20.4	+0.9
JAR	Ashorobuto	2.12	36	⇓P	Pn	03 49 21.3	+0.7
JSK	Shakotan	2.12	327	⇓P	Pn	03 49 21.6	+1.0
JHR	Hokuryu	2.16	353	⇓P	Pn	03 49 22.8	+1.5
JOM	Ohasama	2.20	196	P	Pn	03 49 22.5	+0.7
JKK2	Kamakawa 2	2.33	12	⇓P	Pn	03 49 24.8	+1.2
JAK	Akkeshi	2.40	53	⇓P	Pn	03 49 24.0	-0.5
OFUJ	Ofunato	2.53	187	P	Pn	03 49 26.2	-0.1
JKA	Kamikawa-asahi	2.55	9	Pn	Pn	03 49 27.6	+1.1
ASAJ	Asahikawa	2.55	9	P	Pn	03 49 28.1	+1.6
	216nm,0.3s,baz=217,slow=12,SNR=399						
ASAJ				S	Sn	03 49 57.0	+0.5
	297nm,0.3s,baz=236,slow=21,SNR=6.8						
ASAJ	Asahikawa	2.55	9	⇓P	Pn	03 49 28.1	+1.6
JKHN	Kushirohamanak	2.73	56	⇓P	Pn	03 49 28.6	-0.4
JNK	Nakash	2.79	44	⇓P	Pn	03 49 29.5	-0.3
JNSB	Nemuroshibetsu	3.07	44	⇓P	Pn	03 49 33.9	+0.3
NMR	Nemuro--Hokkai	3.23	55	⇓iP	Pn	03 49 34.4	-1.5
NMR				eS	Sn	03 50 08.8	-4.3
NEM2	Nemuro 2	3.24	56	⇓P	Pn	03 49 34.5	-1.5
JRA	Rausu	3.25	43	P	Pn	03 49 36.5	+0.5
GLVR	Golovnino	3.33	49	c iP	Pn	03 49 36.7	-0.4
GLVR				i S	Sn	03 50 13.6	-1.8
GLVR				pmax	pmax		
	comp=Z,4µm,1.3s						
GLVR				pmax	pmax		
	comp=N,1µm,0.3s						
GLVR				smax	smax		
	comp=E,10µm,0.4s						
GLVR				smax	smax		
	comp=N,24µm,0.3s						
RUSJ	Misakicho	3.43	42	⇓iP	Pn	03 49 39.4	+0.9
RUSJ				eS	Sn	03 50 19.7	+1.8
GRPR	Tuman	3.63	47	c iP	Pn	03 49 40.8	-0.5
GRPR				i S	Sn	03 50 21.5	-1.3
GRPR				pmax	pmax		
	comp=Z,3µm,1.0s						
GRPR				pmax	pmax		
	comp=E,970nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,2µm,0.3s						
GRPR				pmax	pmax		
	comp=N,207nm,0.4s						
GRPR				smax	smax		
	comp=N,14nm,0.3s						
GRPR				smax	smax		
	comp=E,11nm,0.4s						
YUK	Yuzh-Kuril'sk	3.71	48	d iP	Pn	03 49 42.7	+0.4
YUK				eS	Sn	03 50 22.8	-1.9
YUK				pmax	pmax		
	comp=E,774nm,0.4s						
YUK				pmax	pmax		
	comp=Z,4µm,0.4s						
YUK				pmax	pmax		
	comp=N,797nm,0.3s						
YUK				pmax	pmax		
	comp=Z,5µm,1.3s						
YUK				smax	smax		
	comp=N,8µm,0.4s						
YUK				smax	smax		
	comp=E,26µm,0.5s						
YUK				MLR	MLR		
	comp=Z,8µm,19.0s						
YUK				MLR	MLR		
	comp=N,7µm,13.0s						
YUK				MLR	MLR		
	comp=E,6µm,9.0s						
JMM	Marumori	3.85	195		Pn	03 49 44.5	+0.2
JSD	Sado	4.61	221	P	Pn	03 49 56.3	+1.6
JSD	Sado	4.61	221	Pn	Pn	03 49 55.5	+0.8
JIZZ	Izumozaki	4.82	214	P	Pn	03 50 00.7	+3.1
JHO	Hitachi	5.11	194	P	Pn	03 50 01.0	-0.6
TEY	Ternei	5.27	313	⇓eP	Pn	03 50 04.4	+0.7
TEY				e		03 51 06.3	
TEY				pmax	pmax		
	comp=N,150nm,0.6s						
TEY				pmax	pmax		
	comp=E,150nm,0.6s						
TEY				pmax	pmax		
	comp=Z,170nm,0.6s						
YSS	Yuzh-Sakhalins	5.38	5	αeP	Pn	03 50 07.3	+2.0
YSS				eS	Sn	03 51 08.8	+3.0
YSS				pmax	pmax		
	comp=Z,1µm,4.3s						
YSS				pmax	pmax		
	comp=Z,410nm,1.1s						
YSS				smax	smax		
	comp=N,2µm,3.7s						
YSS				smax	smax		
	comp=N,200nm,0.9s						
YSS				smax	smax		
	comp=E,280nm,0.7s						
YSS				MLR	MLR		
	comp=Z,6µm,12.0s						
YSS				MLR	MLR		
	comp=N,4µm,13.0s						
YSS	Yuzh-Sakhalins	5.38	5	Pn	Pn	03 50 07.0	+1.8
JAG	Ashikaga	5.55	202	P	Pn	03 50 08.2	+0.6
JYT	Yasato	5.55	196	Pn	Pn	03 50 06.7	-1.0
KUR	Kuril'sk	5.57	47	eP	Pn	03 50 08.9	+1.1
KUR				eS	Sn	03 51 09.8	-0.7
KUR				pmax	pmax		
	comp=E,256nm,0.8s						
KUR				pmax	pmax		
	comp=N,379nm,0.7s						
KUR				pmax	pmax		
	comp=Z,986nm,0.7s						
KUR				smax	smax		
	comp=N,2µm,0.9s						
KUR				smax	smax		
	comp=E,1µm,0.5s						
KUR				smax	smax		
	comp=N,8µm,3.0s						
KUR				smax	smax		
	comp=E,4µm,2.7s						
MAJO	Matsushiro	5.87	212	d iP	Pn	03 50 14.6	+2.6
MAJO	Matsushiro	5.87	212	Pn	Pn	03 50 13.7	+1.6
MAT	Matsushiro	5.87	212	P	Pn	03 50 13.8	+1.8
MAT				S	Sn	03 51 20.9	+2.9
MAT	Matsushiro	5.87	212	P	Pn	03 50 14.4	+2.4
MJAR	Matsushiro Arr	5.87	212	P	Pn	03 50 13.5	+1.5
	comp=E,1.3nm,0.3s,baz=326,slow=16,SNR=68						
MJAR				LR	LR	03 52 52.8	
	comp=E,4µm,21.5s,baz=10.0,slow=42						
MJAR	Matsushiro Arr	5.87	212	Pn	Pn	03 50 13.2	+1.2
JNG	Nsakai	6.03	212	P	Pn	03 50 16.4	+2.1
JRY	Ryogami san	6.09	205	P	Pn	03 50 16.3	+1.2
JTT	Ttatey	6.20	218	P	Pn	03 50 19.6	+3.1
JNT	Takato	6.48	210	P	Pn	03 50 23.3	+2.8
JGF	Kuroka	7.03	213		Pn	03 50 29.1	+1.1
INU	Inuyama	7.39	214		Pn	03 50 33.4	+0.6
UGL	Uglegorsk	7.49	360	eP	Pn	03 50 37.6	+3.6
UGL				pmax	pmax		
	comp=Z,1µm,2.4s						
UGL				pmax	pmax		
	comp=Z,266nm,0.8s						
UGL				MLR	MLR		
	comp=Z,4µm,18.0s						
UGL				MLR	MLR		
	comp=E,5µm,14.0s						
UGL				MLR	MLR		
	comp=N,5µm,18.0s						
JSG	Sagara	7.55	205		Pn	03 50 35.8	+0.7
VLA	Vladivostok	7.70	285	deP	Pn	03 50 37.9	+0.9
USA0B	Ussuriysk Arra	7.85	293	deP	Pn	03 50 40.0	+1.0
USA0B	Ussuriysk Arra	7.85	293		Pn	03 50 39.6	+0.6
USRK	Ussuriysk Ar.	7.85	293	P	Pn	03 50 40.0	+1.0
	baz=96,slow=18,SNR=112						
USRK				LR	LR	03 53 45.8	
	comp=N,4µm,18.9s,baz=116,slow=38						
USRK	Ussuriysk Ar.	7.85	293	Pn	Pn	03 50 39.7	+0.6
MSHR	Mys Shultsa	8.18	281	deP	Pn	03 50 44.1	+0.6
MSHR				pmax	pmax		
	comp=Z,67nm,0.8s						
JHJ	Hachijo jima 2	8.65	193	P	Pn	03 50 49.1	-1.0
	comp=Z,61nm,0.3s,baz=304,slow=18,SNR=7.3						
JHJ				S	Sn	03 52 17.4	-8.8
	baz=59,slow=23,SNR=2.2						
JHJ2	Mitsune	8.65	193	Pn	Pn	03 50 49.4	-0.7
TYV	Tymovskoe	9.28	2	eP	Pn	03 51 01.4	+2.8
TYV				eS	Sn	03 52 42.3	+0.9
TYV				pmax	pmax		
	comp=Z,36nm,0.6s						
TYV				pmax	pmax		
	comp=Z,300nm,4.1s						
TYV				smax	smax		
	comp=N,18nm,1.4s						
TYV				smax	smax		
	comp=E,36nm,1.4s						
TYV				smax	smax		
	comp=N,700nm,7.3s						
TYV				smax	smax		
	comp=E,2µm,7.3s						
TYV				MLR	MLR		
	comp=N,4µm,15.0s						
TYV				MLR	MLR		
	comp=Z,5µm,15.0s						
ULDB	Ullung-do Bore	9.56	248	P	Pn	03 51 09.5	+7.1
	SNR=5.1						
ULDB	Ullung-do Bore	9.56	248	P	Pn	03 51 06.0	+3.6
	SNR=9.2						
MDJ	Mudanjiang	9.62	292	P	Pn	03 51 03.2	0.0
MDJ				sP		03 51 20.7	
MDJ				S	Sn	03 52 48.1	-1.5
MDJ				pmax	pmax		
	comp=Z,5.0nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,630nm,4.7s						
MDJ				LR	LR		
	comp=Z,2µm,12.7s						
MDJ				LR	LR		
	comp=Z,4µm,19.4s						
MDJ				LR	LR		
	comp=Z,7µm,22.1s						
MDJ	Mudanjiang	9.62	292		Pn	03 51 04.8	+1.6
GRNR	Gornyy	9.97	339	⇓iP	Pn	03 51 12.0	+3.9
GRNR				eS	Sn	03 53 07.3	+8.9
GRNR				pmax	pmax		
	comp=E,40nm,0.7s						
GRNR				pmax	pmax		

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       comp=N,60nm,0.9s
GRNR                               pmax   pmax
       comp=Z,50nm,0.9s
GRNR                               smax   smax
       comp=N,8.0nm,0.7s
GRNR                               MLR    MLR
       comp=N,2µm,18.0s
GRNR                               MLR    MLR
       comp=Z,2µm,18.0s
JMN    Monobe           10.18 222         Pn     03 51 12.4 +1.4
KLR    Kul'dur          10.53 320  P      Pn     03 51 17.3 +1.7
       comp=Z,2.1nm,0.3s,baz=125,slow=14,SNR=135
KLR                                LR     LR     03 55 25.0
       comp=Z,5µm,20.1s,baz=134,slow=38
KLR    Kul'dur          10.53 320deP      Pn     03 51 18.3 +2.7
IMWB   Imwonan-gil      10.76 250  P      Pn     03 51 25.0 +6.1
       SNR=11
UJN    ULJIN            10.83 249  P      Pn     03 51 24.9 +5.1
       SNR=46
OKEB   Okgye-meyeon     10.85 253  P      Pn     03 51 25.0 +4.9
       SNR=18
KSJMJ  Jumunjin         10.90 254  P      Pn     03 51 28.0 +7.2
       SNR=8.7
KSJMJ  Jumunjin         10.90 254  P      Pn     03 51 25.9 +5.1
       SNR=14
KSSKC  Sokcho           10.91 257  P      Pn     03 51 24.7 +3.8
       SNR=16
KSULJ  Uljin            10.98 248  P      Pn     03 51 27.0 +5.2
       SNR=24
KSDGY  Daegwallycong    11.04 254  P      Pn     03 51 30.0 +7.2
       SNR=6.1
KSDGY  Daegwallycong    11.04 254  P      Pn     03 51 28.0 +5.2
       SNR=28
KSTBA  Taebaek          11.09 251  P      Pn     03 51 28.0 +4.5
       SNR=18
SEHB   SEOHWA           11.12 257  P      Pn     03 51 29.7 +6.0
       SNR=12
SEHB   SEOHWA           11.12 257  P      Pn     03 51 27.5 +3.7
       SNR=39
KSGWL  Sabuk            11.14 251  P      Pn     03 51 32.2 +8.1
       SNR=6.9
KSGWL  Sabuk            11.14 251  P      Pn     03 51 29.8 +5.7
       SNR=11
KSPHA  Pohang           11.27 246  P      Pn     03 51 34.0 +8.2
       SNR=6.2
KSPHA  Pohang           11.27 246  P      Pn     03 51 31.0 +5.2
       SNR=14
KSIJA  INJE             11.33 256  P      Pn     03 51 33.5 +6.9
       SNR=15
KSIJA  INJE             11.33 256  P      Pn     03 51 31.4 +4.8
       SNR=42
KSYOW  Yeongwol         11.42 252  P      Pn     03 51 34.4 +6.5
       SNR=11
KSYOW  Yeongwol         11.42 252  P      Pn     03 51 33.8 +5.9
       SNR=81
KSADO  Andong           11.44 247  P      Pn     03 51 35.0 +6.8
       SNR=18
KSADO  Andong           11.44 247  P      Pn     03 51 33.0 +4.8
       SNR=53
HWCB   Hwacheon         11.56 258  P      Pn     03 51 37.0 +7.2
       SNR=7.0
HWCB   Hwacheon         11.56 258  P      Pn     03 51 34.0 +4.2
       SNR=61
NKL    Nikolayevsk      11.60 356 eP      Pn     03 51 30.8 +0.6
NKL                               eS      Sn     03 53 40.2 +2.2
NKL                                pmax   pmax
       comp=E,9.0nm,1.0s
NKL                                pmax   pmax
       comp=N,491nm,0.9s
NKL                                pmax   pmax
       comp=Z,73nm,0.9s
NKL                                MLR    MLR
       comp=N,11µm,13.0s
NKL                                MLR    MLR
       comp=Z,1µm,12.0s
KSWJU  Wonju            11.61 253  P      Pn     03 51 35.0 +4.5
       SNR=68
KSCHC  Chuncheon        11.63 256  P      Pn     03 51 37.0 +6.3
       SNR=10
KSCHC  Chuncheon        11.63 256  P      Pn     03 51 35.0 +4.3
       SNR=30
KSEUS  ULSEONG          11.65 248  P      Pn     03 51 39.2 +8.2
       SNR=7.8
KSEUS  ULSEONG          11.65 248  P      Pn     03 51 36.3 +5.2
       SNR=10
KSYOC  YEONGCHEON       11.67 246  P      Pn     03 51 37.8 +6.5
       SNR=20
KSRS   Korea Array      11.68 254  P      Pn     03 51 33.5 +2.1
       comp=Z,11nm,0.3s,baz=67,slow=13,SNR=89
KSRS                               S      Sn     03 53 49.0 +8.8
       comp=Z,3.8nm,0.3s,baz=68,slow=24,SNR=12
KSRS                               LR     LR     03 55 38.2
       comp=Z,3µm,21.7s,baz=70,slow=35
KS19   Wonju Array Si   11.70 254         Pn     03 51 32.9 +1.1
KSUSN  Ulsan            11.70 244  P      Pn     03 51 36.6 +4.9
       SNR=21
KSAR   Wonju Array Be   11.71 254  P      Pn     03 51 33.5 +1.6
KSAR   Wonju Array Be   11.71 254         Pn     03 51 33.5 +1.6
KSCWO  Cheorwon         11.72 257  P      Pn     03 51 35.5 +3.5
       SNR=34
KSCWO  Cheorwon         11.72 257  P      Pn     03 51 36.3 +4.3
       SNR=14
KSDAG  Daegu            11.82 245  P      Pn     03 51 41.0 +7.6
       SNR=6.6
KSDAG  Daegu            11.82 245  P      Pn     03 51 40.0 +6.6
       SNR=12
KSCHJ  Chungju          11.90 251  P      Pn     03 51 41.0 +6.5
       SNR=21
KSMGY  Mungyeong        11.94 250  P      Pn     03 51 39.3 +4.3
       SNR=30
OKH    Okha             11.98   2deP      Pn     03 51 26.8 -8.6
OKH                                pmax   pmax
       comp=Z,100nm,14.8s
OKH                                MLR    MLR
       comp=Z,3µm,21.0s
OKH                                MLR    MLR
       comp=E,4µm,20.0s
OKH                                MLR    MLR
       comp=N,3µm,17.0s
KSSAJ  Sangju           11.99 249  P      Pn     03 51 41.0 +5.3
       SNR=19
KSSAJ  Sangju           11.99 249  P      Pn     03 51 40.9 +5.2
       SNR=7.4
KSICN  Icheon           12.12 254  P      P      03 51 44.1 -4.0
       SNR=7.2
KSICN  Icheon           12.12 254  P      Pn     03 51 42.1 +4.7
       SNR=17
YNCB   YEONCHEON        12.17 258  P      Pn     03 51 41.5 +3.4
       SNR=20
KSGIC  Gimchen          12.20 248  P      P      03 51 45.7 -3.4
       SNR=7.0
KSBON  Boeun            12.20 250  P      Pn     03 51 42.9 +4.3
       SNR=33
KSCPR  CHUPUNGNYEONG12.22 249      P      P      03 51 44.4 -5.0
       SNR=27
JNU    Nakatsue         12.27 230  P      Pn     03 51 40.5 +0.9
       comp=N,2.5nm,0.3s,baz=69,slow=6.9,SNR=15
JNU                                LR     LR     03 56 24.2
       comp=N,2µm,19.2s,baz=42,slow=37
JNU    Nakatsue         12.27 230         Pn     03 51 40.1 +0.5
OKCB   Cheongsan-myeo   12.28 249  P      P      03 51 45.0 -5.0
       SNR=29
KSMUS  Musan            12.35 258  P      Pn     03 51 44.7 +4.1
       SNR=7.3
KSMAS  Masan            12.38 243  P      P      03 51 47.0 -4.1
       SNR=16
KSSEO  Seoul            12.39 256  P      P      03 51 48.9 -2.4
       SNR=6.6
KSSEO  Seoul            12.39 256  P      P      03 51 49.0 -2.3
       SNR=6.5
CN2    Changchun        12.43 286 eP      Pn     03 51 44.0 +2.4
CN2                               eS      Sn     03 53 58.0 -0.4
CN2                                pmax   pmax
       comp=N,20nm,0.9s
CN2                                pmax   pmax
       comp=N,700nm,8.0s
CN2                                LR     LR
       comp=N,1µm,16.0s
CN2                                LR     LR
       comp=N,4µm,16.0s
CN2                                LR     LR
       comp=N,4µm,17.0s
KSCEA  Cheonan          12.44 252  P      P      03 51 49.1 -2.6
       SNR=12
KSCEA  Cheonan          12.44 252  P      Pn     03 51 46.4 +4.7
       SNR=48
KSSWO  Suwon            12.45 255  P      P      03 51 48.7 -3.2
       SNR=13
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KUJA   Jangpyeong       12.52 242  P      P      03 51 51.0 -1.7
       SNR=6.6
TJN    Taejon           12.57 250c iP     Pn     03 51 47.7 +4.2
KSKCH  Geochang         12.57 246  P      P      03 51 48.8 -4.5
       SNR=6.9
INCN   Inchon           12.60 256  P      Pn     03 51 42.8 -1.2
INCN   Inchon           12.60 256         Pn     03 51 42.8 -1.2
KSGAH  Ganghwa          12.65 257  P      P      03 51 51.3 -2.8
       SNR=6.6
KSGAH  Ganghwa          12.65 257  P      P      03 51 49.7 -4.4
       SNR=5.8
HAWB   Hwaseong-si      12.67 254  P      P      03 51 52.0 -2.3
       SNR=11
KOJ2   Gongju-si        12.68 251  P      P      03 51 52.1 -2.3
       SNR=11
HAMB   Hamyang          12.74 246  P      P      03 51 54.0 -1.2
       SNR=7.9
KSSES  Seosan           13.03 253  P      P      03 51 57.0 -1.3
       SNR=16
KSDEI  Deokjeokdo       13.08 256  P      P      03 51 55.4 -3.4
       SNR=7.3
SKR    Severo-Kuril's   13.30  42 eP      Pn     03 51 57.1 +3.7
SKR                                pmax   pmax
       comp=Z,400nm,4.1s
SKR                                MLR    MLR
       comp=Z,1µm,14.0s
KSJEU  Jeongeup         13.32 248  P      P      03 51 58.9 -2.7
       SNR=10
SMKB   Mukjeong-gil     13.48 249  P      P      03 52 02.0 -1.3
       SNR=13
JSU    Suzuyama         13.72 226  Pn     Pn     03 51 59.6 +0.4
SNY    Shenyang         13.82 277 ⇓P      P      03 52 04.2 -2.9
SNY                                pmax   pmax
       comp=Z,20nm,0.9s
SNY                                LR     LR
       comp=Z,360nm,11.1s
SNY                                LR     LR
       comp=Z,690nm,12.3s
SNY                                LR     LR
       comp=Z,1µm,13.0s
KSJDO  Jindo            14.30 245  P      P      03 52 12.2 -0.2
       SNR=6.6
JCJ    Chichijima       14.46 180  P      Pn     03 52 09.1  0.0
       comp=Z,6.2nm,0.3s,baz=301,slow=19,SNR=9.1
JCJ                                S      Sn     03 54 32.8  -15
       comp=Z,7.0nm,0.3s,baz=315,slow=21,SNR=2.4
JCJ                                LR     LR     03 59 50.2
       comp=Z,167nm,19.8s,baz=354,slow=46
JCJ    Chichijima       14.46 180  Pn     Pn     03 52 09.6 +0.5
PEA0B  Petropavlovsk-   15.61  37⇑eP      Pn     03 52 24.9 +1.2
PETK   Petropavlovsk-   15.61  37  P      Pn     03 52 22.2 -1.5
       comp=Z,0.9nm,0.3s,baz=212,slow=7.0,SNR=18
PETK                               LR     LR     03 58 25.8
       comp=Z,2µm,21.7s,baz=216,slow=37
ZEA    Zeya             15.68 326 eP      Pn     03 52 23.3 -1.4
ZEA                               eS      Sn     03 55 06.3  -11
ZEA                                pmax   pmax
       comp=N,130nm,0.8s
ZEA                                pmax   pmax
       comp=E,100nm,0.8s
ZEA                                pmax   pmax
       comp=Z,210nm,0.7s
ZEA                                pmax   pmax
       comp=E,200nm,4.9s
ZEA                                pmax   pmax
       comp=N,300nm,7.4s
ZEA                                pmax   pmax
       comp=Z,400nm,5.6s
ZEA                                smax   smax
       comp=N,200nm,15.0s
ZEA                                smax   smax
       comp=E,500nm,14.7s
ZEA                                MLR    MLR
       comp=E,2µm,14.0s
ZEA                                MLR    MLR
       comp=N,2µm,17.0s
ZEA                                MLR    MLR
       comp=Z,2µm,18.0s
DL2    Dalian           15.84 267  P      P      03 52 28.3 -1.2
DL2                                sP     sP     03 52 48.3 -1.2
DL2                                S      S      03 55 27.1 -5.6
DL2                                pmax   pmax
       comp=Z,220nm,0.9s
DL2                                pmax   pmax
       comp=Z,470nm,5.1s
DL2                                LR     LR
       comp=Z,1µm,18.6s
DL2                                LR     LR
       comp=Z,960nm,21.0s
DL2                                LR     LR
       comp=Z,3µm,29.8s
PET    Petropavlovsk    15.99  39 eP      P      03 52 31.4 +0.3
PET                               eS      Sn     03 55 26.2 +1.4
PET                                pmax   pmax
       comp=Z,77nm,1.2s
PET                                MLR    MLR
       comp=Z,2µm,17.0s
PET                                MLR    MLR
       comp=Z,2µm,14.0s
HIA    Hailar           17.41 304ceP      Pn     03 52 45.7 -0.6
HIA                                pmax   pmax
       comp=Z,37nm,0.9s
HIA    Hailar           17.41 304  Pn     Pn     03 52 44.3 -2.0
JOW    Kunigami         18.59 222  P      Pn     03 53 00.5 -0.3
       comp=Z,4.3nm,0.3s,baz=67,slow=10,SNR=8.3
JOW                                LR     LR     04 00 34.7
       comp=Z,2µm,21.5s,baz=60,slow=38
JOW    Kunigami         18.59 222  P      Pn     03 53 00.8  0.0
MA2    Magadan          18.80  14  P      P      03 52 59.9 -2.1
       comp=Z,1.8nm,0.3s,baz=192,slow=9.7,SNR=11
MA2    Magadan          18.80  14ceP      P      03 53 00.5 -1.5
MA2                                pmax   pmax
       comp=Z,35nm,0.7s
MA2    Magadan          18.80  14  P      P      03 53 02.5 +0.4
MA2                                IAmb   IAmb   03 53 21.2
       comp=Z,334nm,1.5s
BJI    Beijing          19.64 274  P      P      03 53 09.8 -1.5
BJI                                S      S      03 56 45.2 -4.5
BJI                                SS     SnSn   03 57 17.5  +10
BJI                                pmax   pmax
       comp=Z,220nm,0.8s
BJI                                pmax   pmax
       comp=Z,450nm,3.7s
BJI                                LR     LR
       comp=Z,930nm,15.1s
BJI                                LR     LR
       comp=Z,2µm,18.8s
BJI                                LR     LR
       comp=Z,3µm,16.0s
BJT    Baijiatuau       19.65 274  P      P      03 53 10.6 -0.9
BJT                                pmax   pmax
       comp=Z,137nm,0.8s
BJT    Baijiatuau       19.65 274  P      P      03 53 10.6 -0.9
BJT                                IAmb   IAmb   03 53 13.2
       comp=Z,137nm,0.8s
SSE    Sheshan          19.77 245  P      Pn     03 53 14.5 -0.3
SSE                                S      Sn     03 56 54.5 -1.8
SSE                                pmax   pmax
       comp=Z,31nm,0.7s
SSE                                pmax   pmax
       comp=Z,71nm,3.5s
SSE                                LR     LR
       comp=Z,700nm,17.9s
SSE                                LR     LR
       comp=Z,650nm,17.8s
TIA    Tai'an           20.11 263 ⇑P      P      03 53 15.2 -1.4
TIA                                S      S      03 56 54.7 -4.5
TIA                                pmax   pmax
       comp=Z,140nm,0.8s
TIA                                pmax   pmax
       comp=Z,320nm,3.5s
TIA                                LR     LR
       comp=Z,500nm,16.7s
TIA                                LR     LR
       comp=Z,730nm,19.6s
TIA                                LR     LR
       comp=Z,2µm,21.4s
NJ2    Nanjing          20.83 250 ⇓P      P      03 53 22.0 -2.3
NJ2                                pP     pP     03 53 39.8 +2.6
NJ2                                sP     sP     03 53 46.4 +1.9
NJ2                                S      S      03 57 15.2 +1.9
NJ2                                pmax   pmax
       comp=Z,79nm,0.8s
NJ2                                pmax   pmax
       comp=Z,600nm,9.2s
NJ2                                LR     LR
       comp=Z,2µm,17.1s
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NJ2                                LR     LR
       comp=Z,2µm,18.5s
NJ2                                LR     LR
       comp=Z,2µm,17.2s
YAK    Yakutsk          21.78 344  P      P      03 53 31.2 -2.9
       comp=Z,125nm,0.6s,baz=343,slow=2.6,SNR=41
YAK    Yakutsk          21.78 344 eP      P      03 53 30.4 -3.7
YAK                               e*PP    sP     03 53 52.6 -1.6
YAK                               eS      S      03 57 24.5 -7.0
YAK                               e              03 57 30.9
YAK                                pmax   pmax
       comp=Z,219nm,0.9s
YAK                                pmax   pmax
       comp=N,40nm,0.9s
YAK                                pmax   pmax
       comp=E,17nm,0.7s
YAK                                smax   smax
       comp=N,145nm,1.6s
YAK                                smax   smax
       comp=E,54nm,0.9s
SEY    Seymchan         22.23  12  P      P      03 53 36.4 -2.6
       comp=E,13nm,0.3s,baz=198,slow=7.1,SNR=75
HHC    Hu-ho-hao-te     22.91 278 i P     P      03 53 44.5 -2.0
HHC                                pP     pP     03 53 58.7 -0.9
HHC                                sP     sP     03 54 06.2 -0.7
HHC                                S      S      03 57 44.9 -7.0
HHC                                sS     Sn     03 58 08.7 -2.7
HHC                                pmax   pmax
       comp=E,36nm,1.1s
HHC                                pmax   pmax
       comp=E,130nm,5.3s
HHC                                LR     LR
       comp=E,810nm,14.1s
HHC                                LR     LR
       comp=E,2µm,22.2s
HHC                                LR     LR
       comp=E,3µm,20.2s
TIY    Taiyuan          23.09 270 eP      P      03 53 47.2 -1.1
TIY                                S      S      03 57 52.2 -2.7
TIY                                pmax   pmax
       comp=E,47nm,0.5s
TIY                                pmax   pmax
       comp=E,190nm,4.1s
TIY                                LR     LR
       comp=E,800nm,17.3s
TIY                                LR     LR
       comp=E,630nm,15.2s
TIY                                LR     LR
       comp=E,1µm,18.7s
TATO   Taipei           23.80 232  P      P      03 53 55.5 +0.6
TATO                               IAmb   IAmb   03 53 58.8
       comp=Z,136nm,1.0s
BOD    Bodaibo          24.09 322 eP      P      03 53 55.4 -2.0
BOD                                pmax   pmax
       comp=Z,42nm,1.1s
BTO    Baotou           24.10 278 eP      P      03 53 56.4 -1.4
BTO                                S      S      03 58 12.4 +1.1
BTO                                LR     LR
       comp=Z,3µm,19.9s
BTO                                LR     LR
       comp=Z,6µm,24.0s
WHN    Wuhan            24.87 253 ⇓P      P      03 54 03.4 -1.3
WHN                                S      S      03 58 15.7 -7.8
WHN                                pmax   pmax
       comp=Z,140nm,0.6s
WHN                                LR     LR
       comp=Z,3µm,15.2s
WHN                                LR     LR
       comp=Z,2µm,16.2s
WHN                                LR     LR
       comp=Z,5µm,31.6s
SSLB   Suanglung        25.01 231  P      P      03 54 06.5 +0.5
YULB   Yu-li            25.12 230  P      P      03 54 08.9 +2.0
ULN    Ulaanbaatar      25.50 296ceP      P      03 54 10.2 -0.3
ULN                                pmax   pmax
       comp=Z,69nm,1.0s
ULN    Ulaanbaatar      25.50 296  P      P      03 54 10.9 +0.4
ULN    Ulaanbaatar      25.50 296  P      P      03 54 09.6 -0.9
ULN                                S      S      03 58 30.9 -2.7
QZH    Quanzhou         25.59 237 eP      P      03 54 13.7 +2.5
QZH                                sP     sP     03 54 34.7 +2.3
QZH                                S      S      03 58 40.7 +5.7
QZH                                pmax   pmax
       comp=Z,370nm,5.4s
QZH                                LR     LR
       comp=Z,620nm,17.4s
QZH                                LR     LR
       comp=Z,470nm,17.5s
QZH                                LR     LR
       comp=Z,740nm,19.3s
SONM   Songino Array    25.94 296  P      P      03 54 14.6 +0.2
       comp=Z,81nm,0.9s,baz=74,slow=7.0,SNR=150
SONM                               PcP    PcP    03 57 40.7 -0.8
       comp=Z,2.0nm,0.5s,baz=114,slow=1.6,SNR=2.3
SONM                               ScP    ScP    04 01 15.8 -0.2
       comp=Z,1.1nm,0.8s,baz=108,slow=4.7,SNR=3.2
SONM                               LR     LR     04 05 13.9
       comp=Z,2µm,18.7s,baz=82,slow=38
SONM   Songino Array    25.94 296  P      P      03 54 14.4 -0.1
SONM                               IAmb   IAmb   03 54 17.3
       comp=Z,84nm,1.0s
KNMB   Chin-men Tao     26.06 236  IAmb   IAmb   03 54 21.4
       comp=Z,136nm,0.8s
XAN    Xi'an            27.13 265  P      P      03 54 23.3 -1.9
XAN                                S      S      03 58 58.5 -0.9
XAN                                pmax   pmax
       comp=Z,19nm,0.6s
XAN                                pmax   pmax
       comp=Z,140nm,6.4s
XAN                                LR     LR
       comp=Z,570nm,13.1s
XAN                                LR     LR
       comp=Z,730nm,12.4s
XAN                                LR     LR
       comp=Z,760nm,12.4s
IRK    Irkutsk          27.63 306 eP      P      03 54 28.6 -0.8
IRK                                pmax   pmax
       comp=Z,113nm,2.7s
TLY    Talaya           27.95 304  P      P      03 54 32.5 +0.2
       comp=Z,22nm,0.7s,baz=118,slow=6.4,SNR=12
TLY                                LR     LR     04 06 17.2
       comp=Z,2µm,18.5s,baz=94,slow=38
TLY    Talaya           27.95 304 eP      P      03 54 32.3  0.0
TLY                               eS      S      03 59 12.8 +0.9
TLY                                pmax   pmax
       comp=Z,109nm,1.0s
TLY                                MLR    MLR
       comp=Z,3µm,13.0s
TLY    Talaya           27.95 304  P      P      03 54 32.5 +0.2
TLY    Talaya           27.95 304  P      P      03 54 32.0 -0.3
TLY                                S      S      03 59 11.8 -0.1
GUMO   Guam             28.01 174  LR     LR     04 04 21.7
       comp=Z,548nm,21.0s,baz=11,slow=33
ZAK    Zakamensk        28.07 302 eP      P      03 54 33.5  0.0
ZAK                                pmax   pmax
       comp=Z,29nm,0.9s
ENH    Enshi            28.54 257  P      P      03 54 36.2 -1.6
ENH                                IAmb   IAmb   03 54 39.0
       comp=Z,58nm,0.6s
LZH    Lanzhou          30.11 272 eP      P      03 54 51.8 +0.1
LZH                                PP     PnPn   03 55 47.5 -3.3
LZH                               eS      S      03 59 38.9 -7.4
LZH                                SS     ScP    04 01 29.0 -0.1
LZH                                pmax   pmax
       comp=Z,38nm,1.1s
LZH                                pmax   pmax
       comp=Z,190nm,4.6s
LZH                                LR     LR
       comp=Z,900nm,14.6s
LZH                                LR     LR
       comp=Z,1µm,13.8s
LZH                                LR     LR
       comp=Z,990nm,15.2s
H11N2  WAKE ISLAND Hy   30.32 128  T      T      04 26 21.5
       baz=322,slow=75,SNR=1107
H11N1  WAKE ISLAND Hy   30.33 128  T      T      04 26 32.7
       baz=322,slow=75,SNR=1081
H11N3  WAKE ISLAND Hy   30.34 128  T      T      04 26 23.9
       baz=322,slow=75,SNR=1046
TIXI   Tiksi            30.84 352  P      P      03 54 55.1 -2.5
       comp=Z,7.2nm,0.6s,baz=134,slow=5.8,SNR=20
TIXI                               PcP    PcP    03 57 53.2 +0.1
       comp=Z,2.4nm,0.4s,baz=153,slow=14,SNR=1.8
TIXI                               LR     LR     04 08 33.4
       comp=Z,633nm,18.5s,baz=155,slow=38
TIXI   Tiksi            30.84 352⇓eP      P      03 54 54.9 -2.7
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TIXI  Tiksi             30.84 352   P     P      03 54 56.1 -1.5
H11S1 WAKE ISLAND Hy    31.16 130   T     T      04 27 30.7
      baz=324,slow=76,SNR=818
H11S3 WAKE ISLAND Hy    31.17 130   T     T      04 27 34.7
      baz=324,slow=76,SNR=457
H11S2 WAKE ISLAND Hy    31.18 130   T     T      04 27 40.1
      baz=324,slow=76,SNR=663
GTA   Gaotai            31.98 280 ⇑P     P      03 55 08.4 +0.3
GTA                                 pP    pP     03 55 22.8 +0.2
GTA                                 sP    sP     03 55 29.9 +0.4
GTA                                 PcP   PcP    03 57 58.0 +1.1
GTA                                 S     S      04 00 10.6 -4.9
GTA                                 PcS   PcS    04 01 42.8 +1.0
GTA                                 pmax  pmax
      comp=Z,26nm,0.9s
GTA                                 pmax  pmax
      comp=Z,190nm,9.6s
GTA                                 LR    LR
      comp=Z,710nm,19.1s
GTA                                 LR    LR
      comp=Z,2µm,17.9s
GTA                                 LR    LR
      comp=Z,2µm,19.1s
CD2   Chengdu           32.45 263⇓iP     P      03 55 10.9 -1.3
CD2                                 pP    pP     03 55 25.8 -0.9
CD2                                 sP    sP     03 55 33.1 -0.5
CD2                                 S     S      04 00 21.0 -1.8
CD2                                 sS    sS     04 00 48.1 +1.0
CD2                                 pmax  pmax
      comp=Z,100nm,0.8s
CD2                                 pmax  pmax
      comp=Z,210nm,7.7s
CD2                                 LR    LR
      comp=Z,1µm,29.6s
CD2                                 LR    LR
      comp=Z,1µm,25.9s
CD2                                 LR    LR
      comp=Z,1µm,28.8s
GYA   Guiyang           32.74 254 ⇑P     P      03 55 15.1 +0.2
GYA                                 pP    sP     03 55 32.9 -3.3
GYA                                 S     S      04 00 27.6 +0.1
GYA                                 pmax  pmax
      comp=Z,27nm,0.6s
GYA                                 LR    LR
      comp=Z,640nm,17.1s
GYA                                 LR    LR
      comp=Z,880nm,19.8s
GYA                                 LR    LR
      comp=Z,1µm,16.6s
QIZ   Qiongzhong        35.45 240   P     P      03 55 39.9 +1.6
QIZ                                 S     S      04 01 12.3 +3.1
QIZ                                 LR    LR
      comp=Z,730nm,23.7s
QIZ                                 LR    LR
      comp=Z,730nm,19.3s
QIZ                                 LR    LR
      comp=Z,780nm,21.9s
KMI   Kunming           36.37 256 ⇑P     P      03 55 45.7 -0.7
KMI                                 sP    sP     03 56 07.6 -0.4
KMI                                 PP    PnPn   03 57 11.0 +0.9
KMI                                 S     S      04 01 24.4 +0.7
KMI                                 sS    sS     04 01 48.1 -0.2
KMI                                 SS    SnSn   04 03 55.7 -0.3
KMI                                 pmax  pmax
      comp=Z,28nm,0.9s
KMI                                 pmax  pmax
      comp=Z,310nm,4.8s
KMI                                 LR    LR
      comp=Z,590nm,23.7s
KMI                                 LR    LR
      comp=Z,680nm,22.8s
KMI                                 LR    LR
      comp=Z,1µm,25.4s
DAV   Davao City (W)    37.37 208   LR    LR     04 10 28.7
      comp=Z,274nm,21.4s,baz=36,slow=35
SLVN  Son La            37.91 250   P     P      03 55 59.2  0.0
SLVN                                IAmb  IAmb   03 56 01.9
      comp=Z,38nm,1.0s
DGZ   Jazzator, Alta    38.30 301c iP    P      03 56 03.3 +0.9
DGZ                                 pmax  pmax
      comp=Z,90nm,0.9s
RDOG  Red Dog Mine      39.24  29   P     P      03 56 11.6 +1.8
RDOG  Red Dog Mine      39.24  29   P     P      03 56 14.5 +4.7
      baz=256
ZAA0  Zalesovo Array    39.35 308   P     P      03 56 10.8 -0.1
ZALV  Zalesovo Beam     39.35 308   P     P      03 56 10.8 -0.1
      comp=Z,116nm,0.7s,baz=88,slow=7.7,SNR=298
ZALV                                PcP   PcP    03 58 18.8 +0.6
      comp=Z,34nm,0.7s,baz=98,slow=2.5,SNR=8.3
ZALV                                ScP   ScP    04 02 00.3 -1.4
      comp=Z,2.6nm,0.8s,baz=91,slow=4.2,SNR=3.7
ZALV                                LR    LR     04 13 27.3
      comp=Z,1µm,19.2s,baz=78,slow=38
NRIK  Noril'sk          39.39 333   P     P      03 56 10.7 -0.4
      comp=Z,38nm,0.7s,baz=107,slow=8.9,SNR=46
NRIK                                LR    LR     04 13 22.6
      comp=Z,3µm,20.7s,baz=106,slow=37
NRIK  Noril'sk          39.39 333c iP    P      03 56 10.5 -0.6
NRIK                                pmax  pmax
      comp=Z,46nm,0.9s
NRIK  Noril'sk          39.39 333   P     P      03 56 10.3 -0.7
NRIK                                IAmb  IAmb   03 56 14.1
      comp=Z,46nm,0.8s
WMQ   Urumqi            39.42 292   P     P      03 56 12.5 +0.8
WMQ                                 pP    pP     03 56 22.6 -3.9
WMQ                                 PP    PP     03 57 49.4 +6.5
WMQ                                 S     S      04 02 11.5 +2.4
WMQ                                 ScS   ScS    04 06 10.1 -4.3
WMQ                                 pmax  pmax
      comp=Z,150nm,1.1s
WMQ                                 pmax  pmax
      comp=Z,240nm,4.3s
WMQ                                 LR    LR
      comp=Z,700nm,15.5s
WMQ                                 LR    LR
      comp=Z,2µm,16.3s
WMQ                                 LR    LR
      comp=Z,2µm,18.9s
ZSN   Zaisan            40.41 298  eP     P      03 56 20.2 +0.4
      comp=Z,24nm,0.9s,baz=298
ZSN                                eS     S      04 02 22.2 -1.6
      baz=298
ZSN   Zaisan            40.41 298  eP     P      03 56 20.2 +0.4
ZSN                                eS     S      04 02 22.2 -1.6
ZSN                                 pmax  pmax
      comp=Z,24nm,0.9s
UBPT  Khong Chiam       41.03 241   P     P      03 56 25.7 +0.5
GCSA  Galena City Sc    41.14  35   P     P      03 56 25.8 +0.3
      baz=266
TTA   Tatalina          41.44  38   P     P      03 56 29.7 +1.5
TTA                                 pmax  pmax
      comp=Z,20nm,0.9s
TTA   Tatalina          41.44  38   P     P      03 56 29.6 +1.5
TTA   Tatalina          41.44  38   P     P      03 56 29.6 +1.5
      baz=269,SNR=9.2
SVW2  Sparrevohn        41.65  40   P     P      03 56 31.2 +1.3
L19K  White Mountain    41.98  39   P     P      03 56 33.8 +1.3
L19K  White Mountain    41.98  39   P     P      03 56 33.9 +1.4
      baz=271,SNR=5.8
A21K  Barrow            42.09  25   P     P      03 56 33.0 -0.3
      baz=259,SNR=5.7
N19K  Bonanza Creek     42.20  41   P     P      03 56 36.6 +2.2
      baz=273
M19K  Big River Lodg    42.20  39   P     P      03 56 36.2 +1.8
      baz=272,SNR=9.4
MK31  Makanchi Array    42.28 298 i P     P      03 56 34.9 -0.3
MK31  Makanchi Array    42.28 298   IAmb  IAmb   03 56 40.7
      comp=Z,70nm,1.1s
MKAR  Makanchi Array    42.28 298   P     P      03 56 35.2 +0.1
      comp=Z,56nm,0.9s,baz=76,slow=10,SNR=147
MKAR                                PcP   PcP    03 58 28.1 +0.2
      comp=Z,11nm,0.6s,baz=67,slow=5.5,SNR=6.2
MKAR                                ScP   ScP    04 02 12.6 -0.8
      comp=Z,3.1nm,1.0s,baz=46,slow=6.2,SNR=3.2
MKAR                                LR    LR     04 15 39.2
      comp=Z,965nm,18.5s,baz=92,slow=38
J20K  Nowinta River     42.30  36   IAmb  IAmb   03 56 38.0
      comp=Z,72nm,0.8s
J20K  Nowinta River     42.30  36   P     P      03 56 36.6 +1.6
      baz=269,SNR=52
K20K  Telida            42.33  37   IAmb  IAmb   03 56 38.4
      comp=Z,42nm,0.8s
K20K  Telida            42.33  37   P     P      03 56 36.8 +1.5
      baz=270,SNR=24
L20K  Farewell, AK      42.43  38   P     P      03 56 38.0 +1.9
      baz=272,SNR=12
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MAKZ  Makanchi          42.48 298   P     P      03 56 37.0 +0.2
MAKZ                                pmax  pmax
      comp=Z,78nm,0.9s
MAKZ  Makanchi          42.48 298   P     P      03 56 37.0 +0.2
MAKZ                                IAmb  IAmb   03 56 42.4
      comp=Z,78nm,0.9s
LSA   Lhasa             42.49 271   P     P      03 56 38.7 +1.1
LSA   Lhasa             42.49 271   P     P      03 56 37.9 +0.3
LSA   Lhasa             42.49 271   P     P      03 56 38.0 +0.4
LSA                                 pmax  pmax
      comp=Z,39nm,1.1s
LSA   Lhasa             42.49 271   P     P      03 56 38.0 +0.4
LSA   Lhasa             42.49 271   P     P      03 56 38.5 +0.9
SEM   Semipalatinsk     42.70 304  eP     P      03 56 37.3 -1.5
      comp=Z,27nm,0.7s,baz=304
SEM   Semipalatinsk     42.70 304  eP     P      03 56 37.3 -1.5
SEM                                 pmax  pmax
      comp=Z,27nm,0.7s
Q19K  Cape Douglas,     42.76  43   P     P      03 56 39.4 +0.5
      baz=276
H21K  Melozitna Rive    42.89  34   P     P      03 56 40.6 +0.8
      baz=269,SNR=9.0
CHTO  Chiang Mai        43.07 251   P     P      03 56 42.3 +0.5
CHTO                                pmax  pmax
      comp=Z,51nm,0.7s
CHTO  Chiang Mai        43.07 251   P     P      03 56 42.3 +0.5
CHTO                                IAmb  IAmb   03 56 45.9
      comp=Z,51nm,0.7s
CHTO  Chiang Mai        43.07 251   P     P      03 56 42.6 +0.8
CHTO                                S     S      04 03 11.4 +7.8
RSO   Redoubt South     43.07  41   P     P      03 56 43.2 +1.5
CHUM  Lake Minchumin    43.10  36   P     P      03 56 43.6 +2.0
      baz=271,SNR=21
PPLA  Purkeypile        43.19  38   IAmb  IAmb   03 56 46.0
      comp=Z,94nm,1.3s
PPLA  Purkeypile        43.19  38   P     P      03 56 44.5 +2.0
      baz=272,SNR=9.2
CAST  Castle Rocks      43.22  37   IAmb  IAmb   03 56 45.8
      comp=Z,58nm,0.8s
CAST  Castle Rocks      43.22  37   P     P      03 56 44.4 +1.8
      baz=272,SNR=40
I21K  Tanana            43.23  34   P     P      03 56 43.9 +1.3
      baz=270,SNR=8.4
CM31  Chiang Mai Arr    43.30 251   P     P      03 56 44.5 +0.8
CM31  Chiang Mai Arr    43.30 251   P     P      03 56 45.1 +1.4
      SNR=8.8
CMAR  Chiang Mai Arr    43.30 251   P     P      03 56 43.9 +0.2
      comp=Z,19nm,0.8s,baz=40,slow=7.9,SNR=31
CMAR                                PcP   PcP    03 58 31.4 -0.4
      comp=Z,11nm,0.7s,baz=9.6,slow=1.4,SNR=10.0
CMAR                                ScP   ScP    04 02 18.2 +0.3
      comp=Z,0.7nm,0.3s,baz=39,slow=2.3,SNR=5.1
CMAR                                LR    LR     04 15 34.4
      comp=Z,523nm,20.4s,baz=92,slow=37
CMAR  Chiang Mai Arr    43.30 251   P     P      03 56 44.4 +0.7
SWI   Sorong            43.38 196   P     P      03 56 44.4 +0.1
      comp=Z,52nm,0.8s
SIJI  Sorong            43.39 196   P     P      03 56 44.0 -0.4
      comp=Z,36nm,0.6s,baz=74,slow=9.4,SNR=6.1
SIJI                                ScP   ScP    04 02 17.8 -0.3
      baz=225,slow=20
KDAK  Kodiak Island     43.44  45   P     P      03 56 44.2 -0.2
      comp=Z,22nm,0.7s,baz=82,slow=1.3,SNR=20
KDAK  Kodiak Island     43.44  45⇑eP     P      03 56 45.5 +1.1
KDAK                                pmax  pmax
      comp=Z,29nm,0.9s
KDAK  Kodiak Island     43.44  45   IAmb  IAmb   03 57 04.7
      comp=Z,48nm,0.9s
KDAK  Kodiak Island     43.44  45   P     P      03 56 45.2 +0.8
      baz=278
SKT   Skwentna          43.55  39   P     P      03 56 46.8 +1.5
      baz=274
KURK  Kurchatov         43.65 305   P     P      03 56 46.8 +0.7
KURK                                             03 58 32.4
KURK  Kurchatov         43.65 305   P     P      03 56 46.2 +0.1
KURK  Kurchatov         43.65 305   P     P      03 56 45.9 -0.2
KURK                                S     S      04 03 04.2 -7.1
BPAW  Bear Paw Mtn.     43.68  36   IAmb  IAmb   03 56 49.1
      comp=Z,38nm,0.8s
BPAW  Bear Paw Mtn.     43.68  36   P     P      03 56 47.7 +1.5
      baz=272,SNR=28
KURBB Kurchatov Arra    43.72 304   P     P      03 56 46.8 +0.1
      comp=Z,138nm,0.8s,baz=78,slow=8.8,SNR=291
KURBB                               PcP   PcP    03 58 32.4 -0.3
      comp=Z,12nm,0.6s,baz=84,slow=3.5,SNR=4.2
KURBB Kurchatov Arra    43.72 304   P     P      03 56 46.3 -0.4
MLY   Manley            43.76  34   P     P      03 56 48.3 +1.4
      baz=272,SNR=27
COLD  Coldfoot          43.96  31   P     P      03 56 49.0 +0.5
      baz=270,SNR=12
TRF   Thorofare Moun    44.02  37   P     P      03 56 51.1 +1.9
      baz=274,SNR=20
BRLK  Bradley Lake      44.07  42   P     P      03 56 50.8 +1.4
BRLK                                IAmb  IAmb   03 57 16.8
      comp=Z,79nm,1.4s
CUT   Chulitna          44.11  38   IAmb  IAmb   03 56 51.8
      comp=Z,39nm,0.8s
CUT   Chulitna          44.11  38   P     P      03 56 50.4 +0.8
      baz=275,SNR=8.5
SHL   Shillong          44.14 265   P     P      03 56 50.4 -0.2
SHL                                 pmax  pmax
      comp=Z,74nm,1.0s
SHL   Shillong          44.14 265   P     P      03 56 50.4 -0.2
SHL                                 IAmb  IAmb   03 56 52.5
      comp=Z,74nm,1.0s
SHL   Shillong          44.14 265   P     P      03 56 51.1 +0.5
      SNR=8.9
BRSE  Bradley Lake S    44.15  42   P     P      03 56 51.5 +1.4
      baz=277
TOLK  Toolik Lake Re    44.22  29   P     P      03 56 50.7 +0.2
      baz=269,SNR=15
H23K  Yukon River       44.24  33   P     P      03 56 52.2 +1.5
      baz=272,SNR=21
GTOI  Gorontalo         44.26 208   P     P      03 56 49.6 -1.7
      comp=Z,15nm,0.9s
I23K  Minto, Yukon-K    44.34  34   P     P      03 56 52.9 +1.5
      baz=273,SNR=14
RC01  Rabbit Creek A    44.49  40   P     P      03 56 53.3 +0.6
      baz=276
NEA2  Nenana            44.49  35   P     P      03 56 54.0 +1.3
      baz=273,SNR=126
MCK   McKinley          44.61  36   P     P      03 56 54.7 +1.1
      baz=274,SNR=17
TOLI2 Tolitoli          44.64 211   P     P      03 56 53.8 -0.6
PMR   Palmer            44.72  39   P     P      03 56 55.2 +0.7
      baz=276,SNR=7.0
MRSI  Marisa            44.79 209   P     P      03 56 56.1 +0.5
GHO   Glory Hole Cre    44.80  39   IAmb  IAmb   03 57 16.6
      comp=Z,56nm,0.7s
MDM   Murphy Dome       44.83  34   IAmb  IAmb   03 56 58.1
      comp=Z,62nm,0.8s
H24K  Noodor Dome       44.92  33   P     P      03 56 57.7 +1.5
      baz=273,SNR=34
TCOL  CIGO, UAF Yank    44.99  35   P     P      03 56 58.1 +1.5
      baz=274,SNR=34
COLA  College           45.00  35c iP    P      03 56 57.7 +1.0
COLA                                pmax  pmax
      comp=Z,62nm,0.8s
COLA  College           45.00  35   P     P      03 56 57.5 +0.9
KNK   Knik Glacier      45.06  40   IAmb  IAmb   03 57 19.6
      comp=Z,45nm,0.8s
KNK   Knik Glacier      45.06  40   P     P      03 56 58.1 +0.8
      baz=277,SNR=6.5
SML   Sawmill           45.07  39   IAmb  IAmb   03 57 00.6
      comp=Z,49nm,0.8s
SML   Sawmill           45.07  39   P     P      03 56 58.3 +0.9
      baz=277,SNR=13
POKR  Poker Plat Res    45.16  34   IAmb  IAmb   03 57 01.6
      comp=Z,58nm,0.8s
POKR  Poker Plat Res    45.16  34   P     P      03 56 59.9 +2.0
      baz=274,SNR=16
FAKI  Fak Fak           45.20 194   P     P      03 56 58.9 +0.1
FAKI                                IAmb  IAmb   03 57 00.8
      comp=Z,53nm,0.8s
FAKI  Fak Fak           45.20 194   P     P      03 56 59.1 +0.3
      comp=Z,2µmcomp=Z,70nm,1.0s
PDGK  Podgornoye        45.23 294   P     P      03 56 58.6 -0.5
SHLS  Shalkode          45.31 294  eP     P      03 56 55.3 -4.4
      baz=294
SHLS  Shalkode          45.31 294  eP     P      03 56 55.2 -4.4
TDK   Taldyqorghan      45.40 297  eP     P      03 57 00.1 -0.1
      baz=297
TDK                                eS     S      04 03 35.2 -1.9
      baz=297
TDK   Taldyqorghan      45.40 297  eP     P      03 57 00.1 -0.1
TDK                                eS     S      04 03 35.1 -1.9
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IL31                    45.41  35   IAmb  IAmb   03 57 02.7
      comp=Z,60nm,1.2s
ILAR  Eielson Array     45.41  35   P     P      03 56 59.5 -0.5
      comp=Z,21nm,0.6s,baz=264,slow=5.1,SNR=250
ILAR                                LR    LR     04 18 27.8
      comp=Z,360nm,18.2s,baz=278,slow=39
ILAR  Eielson Array     45.41  35   P     P      03 57 00.3 +0.2
ILAR  Eielson Array     45.41  35   P     P      03 57 00.3 +0.2
HDA   Harding Lake      45.42  35   IAmb  IAmb   03 57 02.0
      comp=Z,35nm,0.7s
HDA   Harding Lake      45.42  35   P     P      03 57 00.6 +0.5
      baz=276,SNR=33
SCM   Sheep Creek Mo    45.54  39   IAmb  IAmb   03 57 22.8
      comp=Z,34nm,0.8s
SCM   Sheep Creek Mo    45.54  39   P     P      03 57 02.1 +1.0
      baz=278,SNR=7.0
UZB   Uzynbulak         45.62 294  eP     P      03 57 01.3 -0.8
      comp=Z,11nm,0.7s,baz=294
UZB   Uzynbulak         45.62 294  eP     P      03 57 01.3 -0.8
UZB                                 pmax  pmax
      comp=Z,11nm,0.7s
MPSI  Mapaga            45.70 212   P     P      03 57 02.6 -0.2
      comp=Z,17nm,1.1s
KPKS  Kokpek            45.73 295  eP     P      03 57 02.5 -0.5
      comp=Z,30nm,1.0s,baz=294
KPKS  Kokpek            45.73 295  eP     P      03 57 02.5 -0.5
KPKS                                pmax  pmax
      comp=Z,30nm,1.0s
SANI  Sanana            45.83 203   P     P      03 57 03.1 -0.7
      comp=Z,712nmcomp=Z,36nm,1.4s
PRP   Porcupine Dome    45.92  34   P     P      03 57 05.7 +1.5
      baz=276,SNR=94
FYU   Fort Yukon        45.94  32   IAmb  IAmb   03 57 06.8
      comp=Z,30nm,0.6s
M24K  Tolsona, Glenn    46.05  38   IAmb  IAmb   03 57 30.5
      comp=Z,46nm,0.8s
M24K  Tolsona, Glenn    46.05  38   P     P      03 57 06.9 +1.7
      baz=278,SNR=6.3
SATY  Saty              46.07 294  eP     P      03 57 05.7  0.0
      comp=Z,14nm,0.6s,baz=294
SATY  Saty              46.07 294  eP     P      03 57 05.6  0.0
SATY                                pmax  pmax
      comp=Z,14nm,0.6s
J25K  Salcha River,     46.08  35   P     P      03 57 05.1 -0.3
      baz=277,SNR=20
PAX   Paxson            46.25  37   P     P      03 57 08.5 +1.7
      baz=278
KLU   Klutina           46.26  39   IAmb  IAmb   03 57 28.5
      comp=Z,38nm,1.0s
KLU   Klutina           46.26  39   P     P      03 57 08.0 +1.2
      baz=279,SNR=9.7
PRZ   Przheval'sk       46.28 293   P     P      03 57 07.1 -0.3
PRZ                                 pmax  pmax
      comp=Z,64nm,1.0s
PRZ   Przheval'sk       46.28 293   P     P      03 57 07.1 -0.3
PRZ                                 IAmb  IAmb   03 57 10.2
      comp=Z,64nm,0.9s
TAPN  Taplejung         46.29 270  eP     P      03 57 08.3 +0.5
      comp=Z,298nm,0.9s
DIV   Divide            46.39  40   IAmb  IAmb   03 57 10.5
      comp=Z,48nm,1.0s
RIDG  Independent Ri    46.42  36   P     P      03 57 08.4 +0.4
      baz=278,SNR=21
HARP  HAARP             46.47  38   P     P      03 57 10.2 +1.8
      baz=279,SNR=14
EYAK  Cordova Ski Ar    46.50  40   P     P      03 57 09.2 +0.6
EYAK                                IAmb  IAmb   03 57 27.8
      comp=Z,56nm,1.2s
EYAK  Cordova Ski Ar    46.50  40   P     P      03 57 10.0 +1.5
      baz=280
CHKK  Chushkaly         46.75 296  eP     P      03 57 09.9 -1.0
      baz=296
SCRK  Sand Creek        46.76  36   P     P      03 57 11.3 +0.5
      baz=278,SNR=87
ODAN  Odare             46.80 270  eP     P      03 57 11.9 +0.2
      comp=Z,201nm,0.8s
N25K  Chitina, Valde    46.86  39   P     P      03 57 13.0 +1.4
      baz=280,SNR=5.9
J26L  Joseph Creek      46.87  35   P     P      03 57 11.3 -0.3
      baz=278,SNR=18
MDOK  Medeo             46.96 295  eP     P      03 57 12.2 -0.4
      baz=295
MDOK  Medeo             46.96 295   P     P      03 57 12.5 -0.1
BMRM  Bremner River     46.98  40   IAmb  IAmb   03 57 15.3
      comp=Z,50nm,1.2s
BMRM  Bremner River     46.98  40   P     P      03 57 13.9 +1.5
      baz=281
AAA   Alma-Ata          47.03 295  eP     P      03 57 11.9 -1.2
      baz=295
AAA   Alma-Ata          47.03 295  eP     P      03 57 11.9 -1.2
MENT  Mentasta          47.04  37   IAmb  IAmb   03 57 16.1
      comp=Z,25nm,0.8s
TNSS  Tian-Shan         47.07 295  eP     P      03 57 13.4 -0.4
      baz=295
KUU   Kurty             47.17 296  eP     P      03 57 13.3 -0.9
      baz=296
KUU   Kurty             47.17 296  eP     P      03 57 13.2 -0.9
L26K  Log Cabin Wild    47.19  37   IAmb  IAmb   03 57 17.2
      comp=Z,31nm,0.8s
L26K  Log Cabin Wild    47.19  37   P     P      03 57 15.8 +1.8
      baz=280,SNR=14
JIRN  Jiri              47.27 271  eP     P      03 57 15.8 +0.3
      comp=Z,66nm,0.4s
SBUM  Sibu              47.31 223   P     P      03 57 16.0 +0.6
RAMN  Ramite            47.34 270  eP     P      03 57 16.0 +0.1
      comp=Z,120nm,0.4s
GUN   Gumba             47.37 272  eP     P      03 57 16.5 +0.3
      comp=Z,523nm,0.7s
MTBS  Maitube           47.39 295  eP     P      03 57 14.9 -1.1
      baz=295
VRDI  Verde Repeater    47.48  39   P     P      03 57 17.8 +1.4
VRDI                                IAmb  IAmb   03 57 19.3
      comp=Z,56nm,1.3s
BRZS  Berezniki         47.51 305  eP     P      03 57 15.9 -0.7
      comp=Z,22nm,0.6s,baz=305
BRZS  Berezniki         47.51 305  eP     P      03 57 15.9 -0.7
BRZS                                pmax  pmax
      comp=Z,22nm,0.6s
MCARA McCarthy VSAT     47.65  39   P     P      03 57 19.6 +2.0
      baz=282,SNR=10
CRQE  Cirque            47.74  40   P     P      03 57 20.2 +1.7
      baz=282
EGAK  Eagle             47.85  34   IAmb  IAmb   03 57 21.9
      comp=Z,46nm,1.1s
EGAK  Eagle             47.85  34   P     P      03 57 19.5 +0.5
      baz=280,SNR=25
ULHL  Ulahol            47.85 294   P     P      03 57 20.4 +0.7
      SNR=5.2
L27K  Beaver Creek,     47.87  37   IAmb  IAmb   03 57 22.6
      comp=Z,33nm,0.7s
L27K  Beaver Creek,     47.87  37   P     P      03 57 21.1 +1.9
      baz=281,SNR=33
TGL   Tana Glacier      47.87  40   IAmb  IAmb   03 57 41.5
      comp=Z,55nm,1.2s
KKN   Kakani            47.88 272  eP     P      03 57 20.3 +0.2
      comp=Z,239nm,0.8s
PKI   Pulchoki          47.90 272  eP     P      03 57 20.4  0.0
      comp=Z,113nm,0.6s
PKIN  Phulchoki         47.91 272  eP     P      03 57 20.3  0.0
      comp=Z,104nm,0.6s
BVAR  Borovoye Array    47.98 309   P     P      03 57 20.5 +0.3
      comp=Z,41nm,0.4s,baz=128,slow=4.3,SNR=200
BVAR                                PcP   PcP    03 58 47.1 -0.4
      comp=Z,15nm,0.6s,baz=189,slow=8.8,SNR=3.5
M27K  Edge Creek, AK    47.98  38   IAmb  IAmb   03 57 42.6
      comp=Z,28nm,0.9s
M27K  Edge Creek, AK    47.98  38   P     P      03 57 22.1 +1.8
      baz=282,SNR=17
BRVK  Borovoye          48.03 310c iP    P      03 57 20.8 +0.2
BRVK                                pmax  pmax
      comp=Z,45nm,0.9s
BRVK  Borovoye          48.03 310   P     P      03 57 21.0 +0.4
BRVK  Borovoye          48.03 310   P     P      03 57 21.0 +0.4
TKM2  Tokmak 2          48.04 295   P     P      03 57 21.9 +0.8
      SNR=218
TKM2  Tokmak 2          48.04 295   P     P      03 57 21.3 +0.2
DMN   Daman             48.11 272  eP     P      03 57 22.1 +0.2
      comp=Z,149nm,0.8s
ISLE  Juniper Island    48.14  40   IAmb  IAmb   03 57 44.4
      comp=Z,42nm,1.0s
GKN   Gorkha            48.25 273  eP     P      03 57 22.8  0.0
      comp=Z,139nm,0.6s
OTUK  Ortayu            48.27 303   P     P      03 57 22.4 -0.2
BTLS  Baital            48.29 298  eP     P      03 57 22.1 -0.7
      comp=Z,19nm,1.0s,baz=298
BTLS  Baital            48.29 298  eP     P      03 57 22.0 -0.7
BTLS                                pmax  pmax
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	comp=Z,19nm,1.0s						
BARN	**Barnard Glacie**	**48.36**	**39**	IAmb	IAmb	03 57 27.3	
	comp=Z,24nm,0.6s						
GRNC	**Granite Creek**	**48.39**	**40**	IAmb	IAmb	03 57 45.6	
	comp=Z,32nm,0.8s						
MESA	**MESA**	**48.42**	**40**	IAmb	IAmb	03 57 46.6	
	comp=Z,47nm,0.9s						
MESA	**MESA**	**48.42**	**40**	P	**P**	**03 57 25.5**	**+1.7**
	baz=284						
BVCY	**Beaver Creek**	**48.44**	**37**	P	**P**	**03 57 25.3**	**+1.6**
	baz=282,SNR=9.5						
YAH	**Yahtse**	**48.48**	**40**	IAmb	IAmb	03 57 46.4	
	comp=Z,38nm,1.0s						
SGDS	**Sogindy**	**48.49**	**296**	*e*P	**P**	**03 57 23.5**	**-0.9**
	comp=Z,17nm,0.8s,baz=296						
CTG	**Chitna Glacier**	**48.53**	**39**	P	**P**	**03 57 26.0**	**+1.4**
	baz=283,SNR=15						
CTGM	**Chitina Glacie**	**48.54**	**39**	IAmb	IAmb	03 57 46.7	
	comp=Z,40nm,1.1s						
KBK	**Karagaybulak**	**48.58**	**295**	P	**P**	**03 57 25.9**	**+0.7**
	SNR=81						
CHMS	**Chumysh**	**48.58**	**295**	P	**P**	**03 57 25.4**	**+0.3**
	SNR=11						
USP	**Ospenovka**	**48.65**	**296**	P	**P**	**03 57 25.9**	**+0.4**
	SNR=44						
DANN	**Dangsing**	**48.72**	**274**	*e*P	**P**	**03 57 27.2**	**+0.6**
	comp=Z,878nm,0.6s						
LOGN	**Logan Glacier**	**48.73**	**39**	IAmb	IAmb	03 57 48.0	
	comp=Z,40nm,1.3s						
FRU1	**Bishkek**	**48.73**	**295**	P	**P**	**03 57 26.8**	**+0.5**
FRU1				pmax	pmax		
	comp=Z,89nm,1.2s						
FRU1	**Bishkek**	**48.73**	**295**	P	**P**	**03 57 26.8**	**+0.5**
DAWY	**Dawson**	**48.74**	**35**	P	**P**	**03 57 26.9**	**+0.9**
	baz=282						
YUK3	**Moose Creek**	**48.76**	**38**	P	**P**	**03 57 27.5**	**+1.1**
	baz=283,SNR=12						
AAK	**Ala-Archa**	**48.89**	**295**	P	**P**	**03 57 27.9**	**+0.3**
	comp=Z,18nm,0.4s,baz=116,slow=5.3,SNR=84						
AAK	**Ala-Archa**	**48.89**	**295**	P	**P**	**03 57 27.9**	**+0.3**
	SNR=42						
AAK	**Ala-Archa**	**48.89**	**295**	*i* P	**P**	**03 57 27.8**	**+0.3**
	SNR=18						
AAK	**Ala-Archa**	**48.89**	**295**	*c i*P	**P**	**03 57 27.5**	**-0.1**
AAK				pmax	pmax		
	comp=Z,49nm,0.9s						
AAK	**Ala-Archa**	**48.89**	**295**	P	**P**	**03 57 27.7**	**+0.1**
AAK				IAmb	IAmb	03 57 29.6	
	comp=Z,42nm,1.1s						
AAK	**Ala-Archa**	**48.89**	**295**	P	**P**	**03 57 27.8**	**+0.3**
I29M	**Ogilvie Camp,**	**48.92**	**33**	P	**P**	**03 57 28.3**	**+0.9**
	baz=282,SNR=28						
KSM	**Kuching**	**49.12**	**224**	P	**P**	**03 57 30.0**	**+0.6**
KSH	**Kashi**	**49.14**	**291**	P	**P**	**03 57 33.1**	**+3.6**
KSH				pP	sP	03 57 49.2	-2.1
KSH				S	**S**	**04 04 33.6**	**+3.1**
KSH				pmax	pmax		
	comp=Z,45nm,0.8s						
KSH				pmax	pmax		
	comp=Z,290nm,6.9s						
KSH				LR	LR		
	comp=Z,880nm,16.0s						
KSH				LR	LR		
	comp=Z,810nm,17.9s						
KSH				LR	LR		
	comp=Z,1µm,23.0s						
KOLN	**Koldanda**	**49.15**	**273**	*e*P	**P**	**03 57 30.2**	**+0.4**
	comp=Z,230nm,0.9s						
EKS2	**Erkin-Say**	**49.37**	**295**	P	**P**	**03 57 31.5**	**+0.3**
	SNR=30						
PYUN	**Piuthan**	**49.43**	**274**	*e*P	**P**	**03 57 32.4**	**+0.4**
	comp=Z,302nm,0.8s						
AML	**Almayashu**	**49.64**	**295**	P	**P**	**03 57 34.4**	**+0.8**
	SNR=14						
AML	**Almayashu**	**49.64**	**295**	*i* P	**P**	**03 57 34.4**	**+0.8**
	SNR=15						
AML	**Almayashu**	**49.64**	**295**	P	**P**	**03 57 34.4**	**+0.8**
YUK4	**Talbot Arm**	**49.71**	**38**	P	**P**	**03 57 35.3**	**+1.7**
	baz=285						
STKI	**Sintang**	**49.73**	**222**	P	**P**	**03 57 35.3**	**+1.3**
YUK6	**Outpost Mounta**	**49.95**	**39**	P	**P**	**03 57 37.6**	**+2.1**
	baz=286						
INK	**Inuvik**	**50.12**	**29**	P	**P**	**03 57 36.8**	**+0.5**
	comp=Z,53nm,0.6s,baz=297,slow=6.9,SNR=409						
INK				LR	LR	04 21 56.1	
	comp=Z,315nm,18.9s,baz=260,slow=40						
INK	**Inuvik**	**50.12**	**29**	P	**P**	**03 57 37.4**	**+1.0**
	baz=284,SNR=83						
M30M	**Minto, Yukon**	**50.23**	**37**	P	**P**	**03 57 39.4**	**+2.1**
	baz=285,SNR=14						
HYT	**Haines Junctio**	**50.38**	**39**	P	**P**	**03 57 41.0**	**+2.4**
	baz=286,SNR=39						
KBKI	**Kotabaru**	**50.52**	**214**	P	**P**	**03 57 38.6**	**-1.4**
	comp=Z,33nm,0.9s						
KAPI	**Kappang**	**50.66**	**209**	P	**P**	**03 57 41.6**	**+0.5**
KAPI				pmax	pmax		
	comp=Z,58nm,1.5s						
KAPI	**Kappang**	**50.66**	**209**	P	**P**	**03 57 41.6**	**+0.5**
KAPI				IAmb	IAmb	03 57 43.7	
	comp=Z,58nm,1.4s						
KAPI	**Kappang**	**50.66**	**209**	S	**S**	**04 04 51.9**	**+0.1**
BKSI	**Bulukumba**	**50.81**	**209**	P	**P**	**03 57 41.6**	**-0.6**
	comp=Z,22nm,1.0s						
DZA	**Taraz**	**50.93**	**297**	*e*P	**P**	**03 57 42.1**	**-0.8**
	baz=297						
DZA	**Taraz**	**50.93**	**297**	*e*P	**P**	**03 57 42.1**	**-0.8**
N31M	**Braeburn, Yuko**	**50.99**	**38**	P	**P**	**03 57 45.5**	**+2.4**
	baz=287,SNR=9.6						
BBKI	**Banjar Baru**	**51.24**	**216**	P	**P**	**03 57 45.1**	**-0.3**
	comp=Z,57nm,0.6s						
KK31	**Karatay Array**	**51.39**	**297**	*i* P	**P**	**03 57 45.6**	**-0.7**
KK31	**Karatay Array**	**51.39**	**297**	IAmb	IAmb	03 57 47.9	
	comp=Z,37nm,0.7s						
KKAR	**Karatay Array**	**51.39**	**297**	P	**P**	**03 57 45.9**	**-0.4**
KKAR	**Karatay Array**	**51.39**	**297**	P	**P**	**03 57 45.9**	**-0.4**
M31M	**Drury Creek, Y**	**51.41**	**37**	P	**P**	**03 57 47.7**	**+1.5**
	baz=288,SNR=8.2						
JRMM	**Jerantut**	**51.59**	**234**	P	**P**	**03 57 49.0**	**+0.9**
KULM	**Kulim**	**51.63**	**237**	P	**P**	**03 57 50.0**	**+1.6**
WHY	**Whitehorse**	**51.66**	**39**	IAmb	IAmb	03 58 11.0	
	comp=Z,63nm,1.4s						
WHY	**Whitehorse**	**51.66**	**39**	P	**P**	**03 57 50.3**	**+2.1**
	baz=288,SNR=7.5						
SKAG	**Skagway**	**51.83**	**40**	IAmb	IAmb	03 58 12.4	
	comp=Z,27nm,1.0s						
A36M	**Sachs Harbour**	**51.86**	**23**	P	**P**	**03 57 50.7**	**+1.4**
	baz=288,SNR=73						
BRLS	**Borolday**	**51.87**	**297**	*e*P	**P**	**03 57 50.3**	**+0.4**
	baz=297						
BRLS	**Borolday**	**51.87**	**297**	*e*P	**P**	**03 57 50.3**	**+0.4**
IPM	**Ipoh**	**52.03**	**236**	P	**P**	**03 57 52.0**	**+0.7**
DRK	**Karamyk**	**52.06**	**293**	IAmb	IAmb	03 57 53.9	
	comp=Z,44nm,1.0s						
SVE	**Sverdlovsk**	**52.13**	**316**	*d i*P	**P**	**03 57 52.2**	**+0.6**
SVE				*e*S	**S**	**04 05 10.5**	**-0.7**
SVE				pmax	pmax		
	comp=Z,133nm,0.9s						
SVE				MLR	MLR		
	comp=Z,2µm,18.0s						
BESE	**Bessie Mountai**	**52.36**	**41**	P	**P**	**03 57 55.1**	**+1.8**
BESE				IAmb	IAmb	03 58 16.9	
	comp=Z,31nm,1.0s						
BTK	**Batken**	**52.49**	**294**	IAmb	IAmb	03 58 04.5	
	comp=Z,29nm,0.8s						
MMPY	**Sheldon Lake,**	**52.66**	**35**	P	**P**	**03 57 57.4**	**+1.9**
	baz=290,SNR=12						
P33M	**Teslin, Yukon**	**52.78**	**39**	P	**P**	**03 57 58.3**	**+1.9**
	baz=290,SNR=7.8						
TAS	**Tashkent**	**52.96**	**296**	P	**P**	**03 57 58.9**	**+0.9**
TAS				pmax	pmax		
	comp=Z,42nm,0.7s						
TAS	**Tashkent**	**52.96**	**296**	P	**P**	**03 57 58.9**	**+0.9**
MMRI	**Maumere**	**53.20**	**205**	P	**P**	**03 58 00.4**	**+0.5**
MMRI				IAmb	IAmb	03 58 01.2	
	comp=Z,50nm,1.1s						
ARU	**Arti**	**53.34**	**317**	P	**P**	**03 58 00.1**	**-0.5**
	comp=Z,26nm,0.8s,baz=51,slow=2.7,SNR=77						
ARU				PcP	**PcP**	**03 59 06.9**	**-0.3**
	comp=Z,11nm,0.7s,baz=142,slow=20,SNR=2.1						
ARU				LR	LR	04 23 25.5	
	comp=Z,2µm,18.1s,baz=64,slow=39						
ARU	**Arti**	**53.34**	**317**	*d i*P	**P**	**03 58 00.4**	**-0.1**
ARU				*PP	**pP**	**03 58 14.5**	**-1.3**
ARU						03 59 04.1	
ARU				S	**S**	**04 05 30.2**	**+2.5**
ARU				SS	**SS**	**04 09 03.0**	**-4.6**
ARU				pmax	pmax		
	comp=Z,80nm,0.9s						
ARU				MLR	MLR		
	comp=Z,2µm,18.0s						
ARU	**Arti**	**53.34**	**317**	P	**P**	**03 58 00.7**	**+0.2**
NDI	**New Delhi**	**53.43**	**278**	*e*P	**P**	**03 58 01.0**	**-0.6**
EDFI	**Ende, Flores**	**53.48**	**205**	P	**P**	**03 58 00.3**	**-1.8**
SOEI	**Soe**	**53.66**	**202**	P	**P**	**03 58 03.9**	**+0.5**
SOEI	**Soe**	**53.66**	**202**	P	**P**	**03 58 00.4**	**-3.0**
	comp=Z,95nm,0.8s						
NIL	**Nilore**	**53.78**	**285**	P	**P**	**03 58 04.8**	**+0.7**
NIL				PcP	**PcP**	**03 59 09.5**	**+0.1**
NIL	**Nilore**	**53.78**	**285**	P	**P**	**03 58 05.1**	**+0.9**
TGTN	**Hyland Airport**	**54.37**	**36**	P	**P**	**03 58 09.8**	**+1.8**
	baz=293,SNR=6.0						
PPBI	**Pangkal Pinang**	**54.40**	**226**	P	**P**	**03 58 09.7**	**+1.0**
RPSI	**Rantau Prapat**	**54.72**	**237**	IAmb	IAmb	03 58 12.7	
	comp=Z,20nm,0.8s						
DLBC	**Dease Lake**	**54.77**	**40**	IAmb	IAmb	03 58 36.4	
	comp=Z,42nm,1.5s						
MTN	**Manton Dam**	**55.10**	**193**	P	**P**	**03 58 13.2**	**-0.4**
MTN				IAmb	IAmb	03 58 15.6	
	comp=Z,34nm,0.8s						
COEN	**Coen**	**55.28**	**179**	P	**P**	**03 58 15.7**	**+0.7**
BKNI	**Bangkinang**	**55.28**	**233**	P	**P**	**03 58 15.8**	**+0.7**
	comp=Z,196nm,1.0s						
AB31	**Akbulak array**	**55.46**	**308**	P	**P**	**03 58 16.1**	**+0.1**
ABKAR	**Akbulak array**	**55.46**	**308**	P	**P**	**03 58 16.2**	**+0.1**
HOPEN	**Hopen**	**55.75**	**345**	*e*P	**P**	**03 58 17.8**	**+0.1**
MNSI	**Mandailing Nat**	**55.80**	**235**	P	**P**	**03 58 16.6**	**-2.2**
AKTO	**Aktyubinsk**	**56.08**	**310**	P	**P**	**03 58 20.4**	**0.0**
	comp=Z,37nm,0.7s,baz=71,slow=7.7,SNR=66						
AKTO				LR	LR	04 23 52.5	
	comp=Z,1µm,20.5s,baz=64,slow=38						
SPA0	**Spitsbergen Ar**	**56.16**	**348**	*e*P	**P**	**03 58 20.9**	**+0.3**
SPITS	**Spitsbergen Ar**	**56.16**	**348**	P	**P**	**03 58 20.4**	**-0.3**
	comp=Z,27nm,0.7s,baz=67,slow=6.4,SNR=33						
SPITS				LR	LR	04 25 03.4	
	comp=Z,447nm,19.4s,baz=10.0,slow=39						
KBS	**Kingsbay**	**56.26**	**350**	*ce*P	**P**	**03 58 22.0**	**+0.7**
KBS				pmax	pmax		
	comp=Z,43nm,0.8s						
KBS	**Kingsbay**	**56.26**	**350**	*i* P	**P**	**03 58 22.1**	**+0.7**
KBS				IAmb	IAmb	03 58 23.5	
	comp=Z,123nm,0.8s						
KBS	**Kingsbay**	**56.26**	**350**	P	**P**	**03 58 22.4**	**+1.1**
KBS	**Kingsbay**	**56.26**	**350**	*e*P	**P**	**03 58 21.9**	**+0.7**
KBL	**Kabul**	**56.36**	**288**	P	**P**	**03 58 22.3**	**-0.6**
KBL				pmax	pmax		
	comp=Z,64nm,0.9s						
KBL	**Kabul**	**56.36**	**288**	P	**P**	**03 58 22.3**	**-0.6**
KBL	**Kabul**	**56.36**	**288**	P	**P**	**03 58 22.2**	**-0.6**
	SNR=20						
SMRI	**Semarang**	**56.41**	**219**	P	**P**	**03 58 23.2**	**+0.1**
NOR	**Nord**	**56.54**	**356**	*i* P	**P**	**03 58 23.0**	**-0.3**
NOR				IAmb	IAmb	03 58 24.5	
	comp=Z,27nm,0.9s						
PWJI	**Pagerwojo**	**56.64**	**217**	P	**P**	**03 58 23.6**	**-1.1**
	comp=Z,44nm,0.7s						
GSI	**Gunungsitoli**	**56.64**	**237**	IAmb	IAmb	03 58 28.2	
	comp=Z,72nm,1.3s						
GSI	**Gunungsitoli**	**56.64**	**237**	P	**P**	**03 58 24.7**	**-0.2**
	comp=Z,55nm,2.0s						
KIRV	**Kirov**	**56.97**	**321**	P	**P**	**03 58 26.5**	**0.0**
	comp=Z,221nm,0.8s,baz=58,slow=2.9,SNR=75						
KIRV				LR	LR	04 25 19.6	
	comp=Z,780nm,19.7s,baz=64,slow=38						
HSPB	**Hornsund (broa**	**57.11**	**347**	*e*P	**P**	**03 58 26.9**	**-0.4**
HSPB				*e*L	L	04 21 24.2	
	comp=Z,686nm,25.7s						
HSPB	**Hornsund (broa**	**57.11**	**347**	*e*P	**P**	**03 58 28.0**	**+0.7**
LHSI	**Lahat**	**57.21**	**228**	P	**P**	**03 58 29.1**	**+0.3**
	comp=Z,118nm,1.0s						
PRGR	**Permogore**	**57.26**	**326**	*e*P	**P**	**03 58 28.0**	**-0.6**
PRGR				*e**PP	**pP**	**03 58 45.0**	**+1.1**
PRGR				pmax	pmax		
	comp=Z,22nm,0.6s						
KLSI		**57.27**	**226**	P	**P**	**03 58 29.2**	**-0.1**
	comp=Z,517nmcomp=Z,35nm,0.9s						
KLI	**Kotabumi**	**57.35**	**226**	P	**P**	**03 58 29.8**	**0.0**
	comp=Z,161nm,0.5s						
KPJI	**Karang Pucung**	**57.37**	**220**	P	**P**	**03 58 29.3**	**-0.6**
	comp=Z,45nm,1.0s						
MASI	**Maura Aman, Be**	**57.37**	**229**	P	**P**	**03 58 30.3**	**+0.3**
	comp=Z,2µmcomp=Z,138nm,1.0s						
MDSI	**Maura Dua**	**57.40**	**227**	P	**P**	**03 58 29.9**	**-0.3**
	comp=Z,497nmcomp=Z,30nm,1.0s						
RES	**Resolute Bay**	**58.07**	**15**	P	**P**	**03 58 34.1**	**+0.1**
	comp=Z,133nm,0.7s,baz=304,slow=6.1,SNR=360						
LVZ	**Lovozero**	**58.19**	**335**	⇑*i*P	**P**	**03 58 36.0**	**+0.9**
LVZ				pmax	pmax		
	comp=Z,30nm,0.8s						
LVZ	**Lovozero**	**58.19**	**335**	P	**P**	**03 58 35.3**	**+0.2**
BJO1	**Bjornoya**	**58.20**	**345**	*e*P	**P**	**03 58 35.7**	**+0.7**
KNRA	**Kununurra**	**58.30**	**195**	P	**P**	**03 58 36.5**	**+0.2**
APA	**Apatity**	**58.76**	**335**	⇓*i*P	**P**	**03 58 38.3**	**-0.7**
APA				pmax	pmax		
	comp=Z,33nm,0.8s						
APA				MLR	MLR		
	comp=Z,1µm,16.0s						
HYB	**Hyderabad**	**58.93**	**266**	*i* P	**P**	**03 58 40.0**	**-1.0**
HYB				*e*sP	**sP**	**03 59 02.0**	**-1.1**
KEV	**Kevo**	**59.38**	**339**	P	**P**	**03 58 43.4**	**+0.2**
KEV				pmax	pmax		
	comp=Z,49nm,0.8s						
KEV	**Kevo**	**59.38**	**339**	P	**P**	**03 58 43.4**	**+0.2**
YKA	**Yellowknife Ar**	**59.64**	**32**	P	**P**	**03 58 44.6**	**-0.5**
	comp=Z,3.9nm,0.7s,baz=38,slow=2.1,SNR=24						
YKA				LR	LR	04 26 31.8	
	comp=Z,300nm,21.8s,baz=0.0,slow=38						
YKA	**Yellowknife Ar**	**59.64**	**32**	*ce*P	**P**	**03 58 45.2**	**+0.1**
YKA	**Yellowknife Ar**	**59.64**	**32**	P	**P**	**03 58 45.9**	**+0.8**
HAMF	**Hammerfest**	**59.70**	**340**	*e*P	**P**	**03 58 45.5**	**+0.1**
ARCES	**ARCESS Array B**	**59.93**	**339**	P	**P**	**03 58 46.9**	**-0.2**
	comp=Z,14nm,0.7s,baz=39,slow=5.2,SNR=29						
TULEG	**Thule**	**60.52**	**8**	⇑*i*P	**P**	**03 58 50.7**	**-0.3**
TULEG				IAmb	IAmb	03 58 52.0	
	comp=Z,150nm,0.7s						
KTK1	**Kautokeino**	**60.88**	**339**	*e*P	**P**	**03 58 53.8**	**+0.2**
NEEM	**North Greenlan**	**60.95**	**3**	⇑*i*P	**P**	**03 58 54.4**	**+0.1**
NEEM				IAmb	IAmb	03 58 57.1	
	comp=Z,133nm,0.8s						
HRA	**Herat**	**61.23**	**292**	P	**P**	**03 58 57.0**	**+0.2**
JETT	**Jettan, Norway**	**61.26**	**340**	*e*P	**P**	**03 58 57.1**	**+0.9**
DAG	**Danmarks Havn**	**61.28**	**355**	⇑*i*P	**P**	**03 58 56.0**	**-0.1**
DAG				IAmb	IAmb	03 58 57.5	
	comp=Z,85nm,0.8s						
FITZ	**Fitzroy Crossi**	**61.31**	**198**	P	**P**	**03 58 57.0**	**+0.1**
TRO	**Tromso**	**61.58**	**341**	*e*P	**P**	**03 58 58.2**	**0.0**
WRAB	**Tennant Creek**	**61.63**	**188**	*ce*P	**P**	**03 58 58.1**	**-1.0**
WRAB				pmax	pmax		
	comp=Z,22nm,0.8s						
WRAB	**Tennant Creek**	**61.63**	**188**	P	**P**	**03 58 58.3**	**-0.8**
WRAB				IAmb	IAmb	03 58 60.0	
	comp=Z,27nm,0.8s						
WR0	**Warramunga Arr**	**61.63**	**188**	P	**P**	**03 58 58.4**	**-0.8**
WR0				IAmb	IAmb	03 59 00.0	
	comp=Z,38nm,1.1s						
WB2	**Warramunga Arr**	**61.64**	**188**	IAmb	IAmb	03 59 00.1	
	comp=Z,28nm,0.8s						
WRA	**Warramunga Arr**	**61.64**	**188**	P	**P**	**03 58 58.3**	**-0.9**
	comp=Z,25nm,0.8s,baz=3.4,slow=6.9,SNR=160						
WRA				LR	LR	04 25 51.4	
	comp=Z,151nm,22.0s,baz=0.0,slow=36						
WRA				PKPPKP	**P'P'df**	**04 28 08.7**	**+3.2**
	comp=Z,0.4nm,0.8s,baz=191,slow=2.4,SNR=1.8						
WRA				PKP2bc		04 28 16.9	
	comp=Z,1.2nm,0.8s,baz=187,slow=1.5,SNR=8.3						
GEYT	**Alibeck**	**62.14**	**297**	P	**P**	**03 59 02.7**	**+0.1**
	comp=Z,42nm,0.7s,baz=55,slow=3.1,SNR=38						
GEYT				LR	LR	04 28 23.2	
	comp=Z,998nm,18.4s,baz=250,slow=38						
GYA0B	**ALIBECK ARRAY**	**62.14**	**297**	P	**P**	**03 59 02.8**	**+0.2**
STEI	**Steigen**	**63.74**	**340**	*e*P	**P**	**03 59 12.9**	**+0.3**
DBG	**Daneborg**	**63.77**	**355**	*i* P	**P**	**03 59 13.5**	**+0.7**
PALK	**Pallekele**	**63.91**	**256**	⇑*e*P	**P**	**03 59 15.3**	**+0.7**
PALK				pmax	pmax		
	comp=Z,21nm,0.9s						
PALK	**Pallekele**	**63.91**	**256**	P	**P**	**03 59 14.9**	**+0.3**
MOS	**Moscow**	**63.92**	**322**	*e*P	**P**	**03 59 13.4**	**-0.6**
MOS				*e*		03 59 48.8	
MOS				*e*S	**S**	**04 07 46.5**	**+1.5**
MOS				pmax	pmax		
	comp=Z,42nm,0.8s						
B06A	**Marblemount**	**64.02**	**47**	P	**P**	**03 59 16.9**	**+2.1**
B06A				IAmb	IAmb	03 59 31.9	
	comp=Z,21nm,0.7s						
FAUS	**Fauske**	**64.14**	**340**	*e*P	**P**	**03 59 15.6**	**+0.4**
PUL	**Pulkovo**	**64.54**	**329**	⇓*e*P	**P**	**03 59 18.4**	**+0.4**
VRH	**Novokhopyorsk**	**64.58**	**317**	*e*P	**P**	**03 59 17.8**	**-0.6**
VRH				pmax	pmax		
	comp=Z,70nm,0.7s						
OBN	**Obninsk**	**64.78**	**322**	P	**P**	**03 59 19.0**	**-0.6**
	comp=Z,13nm,0.7s,baz=51,slow=4.5,SNR=14						
OBN	**Obninsk**	**64.78**	**322**	*c i*P	**P**	**03 59 19.2**	**-0.4**
OBN				*i* *PP	**pP**	**03 59 35.8**	**+0.5**
OBN				*i*		03 59 53.3	
OBN				pmax	pmax		
	comp=Z,76nm,1.0s						
OBN				MLR	MLR		
	comp=Z,816nm,17.0s						
OBN	**Obninsk**	**64.78**	**322**	P	**P**	**03 59 19.8**	**+0.2**
NBB30	**Finnes**	**64.85**	**340**	*e*P	**P**	**03 59 19.8**	**-0.1**
FINES	**FINESS Array B**	**65.04**	**332**	P	**P**	**03 59 21.0**	**-0.2**
	comp=Z,79nm,0.7s,baz=39,slow=9.8,SNR=178						
FINES				PP	**PP**	**04 01 45.1**	**+0.8**
	comp=Z,6.5nm,0.8s,baz=51,slow=11,SNR=2.4						
FINES				LR	LR	04 30 01.6	
	comp=Z,2µm,20.3s,baz=45,slow=38						
LPSR	**Galich'ya Gora**	**65.16**	**319**	*e*P	**P**	**03 59 21.9**	**-0.3**
LPSR				pmax	pmax		
	comp=Z,70nm,0.7s						
UPNV	**Upernavik**	**65.22**	**6**	*i* P	**P**	**03 59 22.3**	**+0.1**
B08A	**Colville Reser**	**65.29**	**47**	IAmb	IAmb	03 59 43.7	
	comp=Z,31nm,1.3s						
ASAR	**Alice Springs**	**65.37**	**188**	P	**P**	**03 59 23.6**	**-0.2**
	comp=Z,16nm,0.9s,baz=10,slow=6.6,SNR=134						
ASAR				LR	LR	04 27 42.6	
	comp=Z,252nm,21.7s,baz=3.0,slow=36						
ASAR				PKP2bc		04 28 07.5	
	comp=Z,0.4nm,0.7s,baz=171,slow=1.9,SNR=5.0						
KONS	**Konsvik**	**65.37**	**340**	*e*P	**P**	**03 59 24.3**	**+1.0**
EDM	**Edmonton**	**65.49**	**40**	IAmb	IAmb	03 59 47.1	
	comp=Z,52nm,1.1s						
VSR	**Storozhevoye**	**65.87**	**318**	*e*P	**P**	**03 59 26.5**	**-0.3**
VSR				pmax	pmax		
	comp=Z,90nm,0.6s						
VORD	**Divnogorie**	**65.96**	**318**	*e*P	**P**	**03 59 26.9**	**-0.4**
VORD				pmax	pmax		
	comp=Z,90nm,1.0s						
E07A	**Sunnyside**	**66.05**	**48**	P	**P**	**03 59 29.9**	**+1.8**
MAK	**Makhachkala**	**66.09**	**307**	*e*P	**P**	**03 59 26.6**	**-1.7**
MAK				*e**PP	**pP**	**03 59 42.0**	**-2.1**
MAK				*e**SP	**sP**	**03 59 49.4**	**-1.2**
MAK				*e*		04 01 54.4	
MAK				*e*PPP	PPP	04 03 29.1	
MAK				*e*S	**S**	**04 08 10.7**	**-1.3**
MAK				*e**SS	**sS**	**04 08 38.4**	**-0.5**
MAK				*e*SS	**SS**	**04 12 27.6**	**-0.2**
MAK				pmax	pmax		
	comp=Z,160nm,1.0s						
MAK				MLR	MLR		
	comp=Z,394nm,12.0s						
SUMG	**Summit**	**66.13**	**0**	P	**P**	**03 59 28.9**	**+0.3**
SUMG				pmax	pmax		
	comp=Z,79nm,0.7s						
SUMG	**Summit**	**66.13**	**0**	⇑*i*P	**P**	**03 59 29.4**	**+0.8**
SUMG				IAmb	IAmb	03 59 31.1	
	comp=Z,86nm,0.8s						
SUMG	**Summit**	**66.13**	**0**	P	**P**	**03 59 28.9**	**+0.3**
PSA00	**Pilbara Seismi**	**66.14**	**203**	P	**P**	**03 59 28.6**	**-0.1**
D08A	**Wollman Farm,**	**66.28**	**48**	P	**P**	**03 59 30.5**	**+1.0**
NEW	**Newport**	**66.54**	**46**	IAmb	IAmb	03 59 53.7	
	comp=Z,48nm,1.4s						
NEW	**Newport**	**66.54**	**46**	P	**P**	**03 59 32.1**	**+0.8**
	baz=307						
VSU	**Vasula**	**66.80**	**329**	*e*P	**P**	**03 59 32.8**	**+0.2**
VSU	**Vasula**	**66.80**	**329**	*c i*P	**P**	**03 59 32.6**	**0.0**
VSU				pmax	pmax		
	comp=Z,120nm,0.8s						
AKT	**Akhty**	**66.81**	**305**	*d i*P	**P**	**03 59 33.6**	**+0.5**
AKT				pmax	pmax		
	comp=Z,67nm,0.9s						
GROC	**Groznyy**	**66.97**	**308**	*e*P	**P**	**03 59 34.3**	**+0.3**
GROC				*e*		04 00 00.8	
E09A	**Wood Farm, Sta**	**67.03**	**48**	IAmb	IAmb	03 59 57.7	
	comp=Z,46nm,1.2s						
PINE	**Pine Mountain**	**67.05**	**51**	P	**P**	**03 59 35.8**	**+1.1**
PINE				IAmb	IAmb	03 59 56.8	
	comp=Z,33nm,1.0s						
EIDS	**Eidsvold**	**67.14**	**171**	P	**P**	**03 59 35.6**	**+0.6**
L04D	**Klamath Falls**	**67.16**	**53**	P	**P**	**03 59 36.6**	**+1.2**
	baz=306						
NSS	**Namsos**	**67.21**	**339**	*e*P	**P**	**03 59 35.5**	**+0.4**
DZM	**Mont Dzumac**	**67.25**	**155**	*e*LR	LR	04 20 00.2	
	comp=Z,932nm,23.1s						
DZM	**Mont Dzumac**	**67.25**	**155**	LR	LR	04 24 34.7	
	comp=Z,511nm,21.8s,baz=84,slow=32						
GOF	**Gofitskoye**	**67.47**	**311**	⇑*e*P	**P**	**03 59 37.6**	**+0.5**
GOF				pmax	pmax		
	comp=Z,124nm,0.6s						
SCO	**Scoresbysund**	**67.63**	**354**	*e*P	**P**	**03 59 38.4**	**+0.8**
SCO	**Scoresbysund**	**67.63**	**354**	IAmb	IAmb	03 59 40.0	
	comp=Z,43nm,1.3s						
N02D	**Trinity Center**	**67.65**	**55**	P	**P**	**03 59 40.0**	**+1.6**
	baz=306						
M04C	**Macdoel**	**67.70**	**53**	P	**P**	**03 59 40.2**	**+1.5**
	baz=306						
MTSE	**Matsula**	**67.74**	**330**	*e*P	**P**	**03 59 38.9**	**+0.4**
WDC	**Whiskeytown Da**	**67.98**	**55**	P	**P**	**03 59 41.5**	**+1.1**
WDC				pmax	pmax		
	comp=Z,22nm,1.2s						
WDC	**Whiskeytown Da**	**67.98**	**55**	P	**P**	**03 59 41.5**	**+1.1**
AAL	**Aland**	**68.06**	**333**	*e*P	**P**	**03 59 39.6**	**-0.8**
O02D	**Mt. Diablo Mer**	**68.07**	**55**	P	**P**	**03 59 42.7**	**+1.6**
	baz=306						
NCK	**Nalchik**	**68.09**	**309**	*de*P	**P**	**03 59 42.7**	**+1.6**
NCK				pmax	pmax		
	comp=Z,33nm,0.8s						
ZEI	**Tsey**	**68.34**	**308**	*e*P	**P**	**03 59 42.1**	**-0.7**
ZEI				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KIV	**Kislovodsk**	**68.34**	**310**	⇑P	**P**	**03 59 43.8**	**+1.1**
KIV	**Kislovodsk**	**68.34**	**310**	*i* P	**P**	**03 59 43.5**	**+0.9**
	SNR=12						
KIV	**Kislovodsk**	**68.34**	**310**	*e*P	**P**	**03 59 43.3**	**+0.6**
KIV				*e*S	**S**	**04 08 40.0**	**+0.7**
KIV				*e*SS	**SS**	**04 13 02.1**	**-0.6**
KIV				pmax	pmax		
	comp=Z,142nm,1.0s						
KIV				pmax	pmax		
	comp=Z,71nm,3.3s						
KIV				MLR	MLR		
	comp=Z,642nm,17.0s						
KIV	**Kislovodsk**	**68.34**	**310**	P	**P**	**03 59 43.4**	**+0.7**
KIV	**Kislovodsk**	**68.34**	**310**	P	**P**	**03 59 43.6**	**+0.9**
KBZ	**Khabaz**	**68.36**	**310**	P	**P**	**03 59 43.4**	**+0.8**
	comp=Z,55nm,0.8s,baz=35,slow=2.6,SNR=64						
KBZ				LR	LR	04 34 37.4	
	comp=Z,400nm,18.0s,baz=38,slow=40						
KBZ	**Khabaz**	**68.36**	**310**	*c i*P	**P**	**03 59 43.2**	**+0.6**
KBZ				pmax	pmax		
	comp=Z,65nm,0.9s						
JTMT	**Jette**	**68.37**	**45**	P	**P**	**03 59 44.4**	**+1.5**
JTMT				IAmb	IAmb	04 00 05.8	
	comp=Z,46nm,1.1s						
O03E	**Paynes Creek**	**68.61**	**55**	P	**P**	**03 59 45.2**	**+0.8**
	baz=307						
TBLU	**Trondheim**	**68.69**	**339**	*e*P	**P**	**03 59 43.4**	**-1.0**
ONI	**Oni**	**68.72**	**308**	P	**P**	**03 59 45.9**	**+0.9**
ONI				pmax	pmax		
	comp=Z,43nm,1.2s						
ONI	**Oni**	**68.72**	**308**	P	**P**	**03 59 45.9**	**+0.9**
ONI				IAmb	IAmb	03 59 48.0	
	comp=Z,43nm,1.2s						
J08A	**Circle Bar Ran**	**68.74**	**51**	IAmb	IAmb	04 00 08.4	
	comp=Z,48nm,1.4s						
NEY	**Neytrino**	**68.75**	**309**	*de*P	**P**	**03 59 46.9**	**+1.5**
NEY				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GDXM	**Geysers**	**68.88**	**57**	P	**P**	**03 59 47.1**	**+1.0**
GDXM				IAmb	IAmb	04 00 12.6	
	comp=Z,46nm,1.4s						
MNK	**Minsk**	**69.03**	**325**	*i* P	**P**	**03 59 44.7**	**-1.9**
MNK				*i* *PP	**pP**	**04 00 01.1**	**-1.3**
MNK				*i*		04 00 10.4	
MNK				*i* S	**S**	**04 08 45.3**	**-1.5**
MNK				*i* *SS	**sS**	**04 09 13.5**	**-0.2**
MNK				pmax	pmax		
	comp=N,24nm,0.9s						
MNK				pmax	pmax		

	comp=E,4.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,85nm,0.9s						
MNK				MLR	MLR		
	comp=N,514nm,18.0s						
MNK				MLR	MLR		
	comp=Z,908nm,18.0s						
MNK				MLR	MLR		
	comp=E,97nm,18.0s						
MNK	**Minsk**	**69.03**	**325**	*i* P	**P**	**03 59 44.8**	**-1.8**
	comp=E,4.0nm,0.9s						
MNK				*i* P	**P**	**03 59 44.8**	**-1.8**
	comp=N,24nm,0.9s						
MNK				*i* P	**P**	**03 59 44.8**	**-1.8**
	comp=Z,85nm,0.9s,baz=47						
MNK				*i* pP	**pP**	**04 00 01.1**	**-1.3**
MNK				*i* sP	**PcP**	**04 00 15.3**	**+4.9**
MNK				*i* PPP	PPP	04 04 18.2	
MNK				*i* S	**S**	**04 08 45.3**	**-1.5**
MNK				*i* sS	**sS**	**04 09 13.6**	**-0.1**
MNK				*i* SSS	SSS	04 17 43.2	
MNK				*i* LQ	LQ	04 23 49.9	
MNK				*i* LR	LR	04 26 51.7	
MNK				*i* LRM	MLR	04 32 15.1	
	comp=N,514nm,17.9s						
MNK				*i* LRM	MLR	04 32 19.5	
	comp=Z,908nm,17.9s						
MNK				*i* LRM	MLR	04 32 22.4	
	comp=E,97nm,17.9s						
ISAL	**Salakas**	**69.03**	**327**	*e*P	**P**	**03 59 47.6**	**+1.0**
SLIT	**Slitere, Latvi**	**69.08**	**330**	*e*P	**P**	**03 59 46.8**	**-0.1**
ILULI	**Ilulissat**	**69.08**	**5**	*i* P	**P**	**03 59 47.0**	**+0.3**
ILULI				IAmb	IAmb	03 59 48.2	
	comp=Z,46nm,1.0s						
UPP	**Uppsala**	**69.09**	**334**	*e*P	**P**	**03 59 46.4**	**-0.5**
NACGM	**Naroch**	**69.22**	**326**	*i* P	**P**	**03 59 48.2**	**+0.4**
ORV	**Oroville**	**69.23**	**55**	IAmb	IAmb	04 00 09.3	
	comp=Z,42nm,1.4s						
GNI	**Garni**	**69.43**	**306**	P	**P**	**03 59 50.9**	**+1.3**
GNI	**Garni**	**69.43**	**306**	*c i*P	**P**	**03 59 50.8**	**+1.2**
GNI				pmax	pmax		
	comp=Z,12nm,1.1s						
GNI	**Garni**	**69.43**	**306**	P	**P**	**03 59 50.6**	**+1.0**
GNI				IAmb	IAmb	04 00 16.9	
	comp=Z,24nm,0.8s						
FFC	**Flin Flon**	**69.62**	**34**	P	**P**	**03 59 50.7**	**+0.4**
FFC				pmax	pmax		
	comp=Z,133nm,1.5s						
FFC	**Flin Flon**	**69.62**	**34**	P	**P**	**03 59 50.7**	**+0.4**
ICESG	**Greenland Ices**	**69.63**	**1**	*i* P	**P**	**03 59 51.5**	**+0.9**
ICESG				IAmb	IAmb	03 59 52.6	
	comp=Z,157nm,1.2s						
BEKR	**Beckworth**	**69.75**	**54**	IAmb	IAmb	04 00 12.2	
	comp=Z,53nm,1.4s						
PABE	**Paberze**	**69.95**	**328**	*e*P	**P**	**03 59 52.5**	**+0.3**
DOMB	**Dombas**	**69.99**	**338**	*e*P	**P**	**03 59 52.3**	**-0.2**
KARS	**Kars**	**70.14**	**307**	P	**P**	**03 59 55.0**	**+1.1**
KARS				pmax	pmax		
	comp=Z,76nm,0.7s						
KARS	**Kars**	**70.14**	**307**	P	**P**	**03 59 55.0**	**+1.1**
HFS	**Hagfors**	**70.16**	**335**	P	**P**	**03 59 53.2**	**-0.3**
	comp=Z,26nm,0.5s,baz=42,slow=7.0,SNR=184						
NB2	**NORSAR Subarra**	**70.19**	**337**	P	**P**	**03 59 53.6**	**-0.2**
	comp=Z,20nm,0.6s,baz=36,slow=6.5						
NB2	**NORSAR Subarra**	**70.19**	**337**	P	**P**	**03 59 53.6**	**-0.2**
	baz=36,slow=6.5						
NOA	**NORSAR Array B**	**70.19**	**337**	P	**P**	**03 59 52.9**	**-0.8**
	comp=Z,22nm,0.7s,baz=37,slow=6.1,SNR=116						
NOA				LR	LR	04 33 54.7	
	comp=Z,592nm,21.7s,baz=35,slow=39						
WSAR	**Wadi Sarin**	**70.23**	**284**	P	**P**	**03 59 54.5**	**0.0**
	comp=Z,12nm,0.8s,baz=79,slow=4.6,SNR=8.2						
SOC	**Sochi**	**70.26**	**311**	*e*P	**P**	**03 59 54.3**	**-0.1**
SOC				*e**PP	**pP**	**04 00 08.8**	**-1.5**
SOC				*e**SP	**PcP**	**04 00 14.7**	**-1.2**
SOC				*e*S	**S**	**04 09 03.5**	**+1.8**
SOC				pmax	pmax		
	comp=Z,63nm,0.9s						
SOC				MLR	MLR		
	comp=Z,428nm,21.0s						
BANOM	**Banah**	**70.28**	**287**	*i* P	**P**	**03 59 55.4**	**+0.5**
	SNR=12						
BANOM	**Banah**	**70.28**	**287**	P	**P**	**03 59 55.3**	**+0.4**
SHME	**Shamm**	**70.32**	**288**	*i* P	**P**	**03 59 55.3**	**+0.2**
	SNR=56						
SHME	**Shamm**	**70.32**	**288**	P	**P**	**03 59 55.3**	**+0.2**
	SNR=18						
NC602	**NORSAR Array S**	**70.34**	**337**	IAmb	IAmb	04 00 14.1	
	comp=Z,60nm,1.3s						
NC602	**NORSAR Array S**	**70.34**	**337**	*e*P	**P**	**03 59 54.2**	**-0.3**
WBK	**Wadi Bani Khal**	**70.36**	**283**	P	**P**	**03 59 53.9**	**-1.6**
PBUR	**Paburge**	**70.38**	**329**	*e*P	**P**	**03 59 54.9**	**0.0**
BIDO	**Bidbid**	**70.42**	**284**	P	**P**	**03 59 56.6**	**+0.8**
PAHR	**Pah Rah Range**	**70.44**	**54**	IAmb	IAmb	04 00 16.6	
	comp=Z,51nm,1.3s						
NAO01	**NORSAR Array S**	**70.44**	**337**	IAmb	IAmb	03 59 57.8	
	comp=Z,38nm,0.8s						
VCNR	**Virginia City**	**70.53**	**55**	IAmb	IAmb	04 00 18.3	
	comp=Z,59nm,1.4s						
EGMT	**Eagleton**	**70.54**	**43**	P	**P**	**03 59 56.9**	**+0.7**
	baz=311						
MDH	**Madha**	**70.66**	**287**	P	**P**	**03 59 57.8**	**+0.6**
PNTR	**Pine Nut**	**70.69**	**55**	IAmb	IAmb	04 00 19.4	
	comp=Z,55nm,1.2s						
MASF	**Masafi**	**70.72**	**287**	P	**P**	**03 59 58.2**	**+0.6**
	SNR=7.8						
MSFE	**Esma-Masafi**	**70.73**	**287**	*i* P	**P**	**03 59 58.0**	**+0.4**
	SNR=16						
SMDO	**Samad**	**70.76**	**284**	P	**P**	**03 59 58.4**	**+0.5**
ANN	**Anapa**	**70.76**	**313**	*e*P	**P**	**03 59 56.7**	**-0.7**
ANN				pmax	pmax		
	comp=Z,72nm,0.7s						
ANN				MLR	MLR		
	comp=Z,607nm,15.0s						
DLMT	**Dillon**	**70.78**	**46**	IAmb	IAmb	04 00 19.3	
	comp=Z,81nm,1.4s						
CMB	**Columbia Colle**	**70.85**	**56**	IAmb	IAmb	04 00 19.8	
	comp=Z,36nm,1.1s						
HLID	**Hailey**	**70.93**	**48**	P	**P**	**03 59 59.8**	**+1.0**
	baz=310						
UOSS	**Minazif**	**70.95**	**287**	*i* P	**P**	**03 59 59.0**	**+0.1**
	SNR=22						
UOSS	**Minazif**	**70.95**	**287**	P	**P**	**03 59 59.1**	**+0.1**
UOSS	**Minazif**	**70.95**	**287**	P	**P**	**03 59 58.7**	**-0.2**
YERR	**Yerington**	**70.97**	**55**	P	**P**	**04 00 00.2**	**+1.2**
YERR				IAmb	IAmb	04 00 20.1	
	comp=Z,61nm,1.1s						
UMQ	**Umm Al-Quwin**	**70.98**	**287**	P	**P**	**04 00 00.1**	**+1.0**
AKASG	**Malin Array Be**	**71.02**	**322**	P	**P**	**03 59 58.7**	**-0.1**
	comp=Z,56nm,0.7s,baz=45,slow=6.0,SNR=191						
AKASG				PP	**PP**	**04 02 36.4**	**0.0**
	comp=Z,3.5nm,0.7s,baz=40,slow=9.9,SNR=3.4						
AKASG				LR	LR	04 33 57.6	
	comp=Z,762nm,18.2s,baz=25,slow=38						
AKASG	**Malin Array Be**	**71.02**	**322**	P	**P**	**03 59 58.8**	**-0.1**
AKASG				pmax	pmax		
	comp=Z,60nm,1.0s						
AKASG	**Malin Array Be**	**71.02**	**322**	P	**P**	**03 59 58.8**	**-0.1**
AKASG				IAmb	IAmb	04 00 00.4	
	comp=Z,60nm,1.0s						
AKBB	**Malin Array Si**	**71.02**	**322**	*c i*P	**P**	**03 59 58.6**	**-0.3**
HATD	**Hatta, Dubai**	**71.07**	**287**	*i* P	**P**	**04 00 00.1**	**+0.5**
	SNR=33						
HATD	**Hatta, Dubai**	**71.07**	**287**	P	**P**	**04 00 00.2**	**+0.5**
	SNR=8.9						
BOZ	**Bozeman (W)**	**71.15**	**45**	IAmb	IAmb	04 00 22.8	
	comp=Z,34nm,1.1s						
BOZ	**Bozeman (W)**	**71.15**	**45**	P	**P**	**04 00 01.0**	**+1.0**
	baz=311						
SOHO	**SOHO**	**71.20**	**286**	*i* P	**P**	**04 00 00.5**	**0.0**
	SNR=17						
SOHO	**SOHO**	**71.20**	**286**	P	**P**	**04 00 00.4**	**-0.1**
SOHO				P	**P**	**04 00 00.5**	**0.0**
ASHO	**Ashiyiah**	**71.21**	**287**	*i* P	**P**	**04 00 00.8**	**+0.2**
	SNR=16						
ASHO	**Ashiyiah**	**71.21**	**287**	P	**P**	**04 00 00.8**	**+0.2**
ASHO				P	**P**	**04 00 03.0**	**+2.4**
	SNR=8.8						
OSL	**Oslo**	**71.22**	**336**	*e*P	**P**	**04 00 00.8**	**+0.8**
SFJD	**Kangerlussuaq**	**71.31**	**5**	P	**P**	**04 00 00.5**	**+0.2**
SFJD				pmax	pmax		
	comp=Z,27nm,0.8s						
SFJD	**Kangerlussuaq**	**71.31**	**5**	*i* P	**P**	**04 00 00.3**	**0.0**
SFJD	**Kangerlussuaq**	**71.31**	**5**	P	**P**	**04 00 00.5**	**+0.2**
SFJD				IAmb	IAmb	04 00 02.5	
	comp=Z,27nm,0.8s						
NAZ	**Nazwa, Dubai**	**71.31**	**287**	*i* P	**P**	**04 00 01.4**	**+0.3**
	SNR=10.0						
SKAR	**Skarslia**	**71.32**	**338**	*e*P	**P**	**04 00 01.1**	**+0.5**
SUW	**Suwalki**	**71.34**	**327**	*e*P	**P**	**04 00 00.5**	**-0.3**
SUW	**Suwalki**	**71.34**	**327**	*e*P	**P**	**04 00 00.2**	**-0.6**
SUW	**Suwalki**	**71.34**	**327**	IAmb	IAmb	04 00 23.1	
	comp=Z,44nm,1.0s						
HYA	**Hoyanger**	**71.50**	**339**	*e*P	**P**	**04 00 02.0**	**+0.5**
FAQ	**Al Faqa, Dubai**	**71.51**	**287**	*i* P	**P**	**04 00 02.3**	**0.0**
	SNR=16						
FAQ	**Al Faqa, Dubai**	**71.51**	**287**	P	**P**	**04 00 02.2**	**-0.1**
	SNR=6.6						
RYN	**Ryan**	**71.63**	**55**	IAmb	IAmb	04 00 24.9	
	comp=Z,44nm,1.2s						
ARQ	**Araqi**	**71.70**	**285**	P	**P**	**04 00 06.0**	**+2.5**
	SNR=5.2						
ASUD	**Al Ashush, Dub**	**71.77**	**287**	*i* P	**P**	**04 00 04.5**	**+0.6**
	SNR=21						
ASUD	**Al Ashush, Dub**	**71.77**	**287**	P	**P**	**04 00 06.0**	**+2.1**
	SNR=5.8						
KONO	**Kongsberg**	**71.79**	**337**	⇑*e*P	**P**	**04 00 02.6**	**-0.8**
KONO				pmax	pmax		
	comp=Z,45nm,1.7s						
KONO	**Kongsberg**	**71.79**	**337**	P	**P**	**04 00 03.5**	**+0.1**
KONO	**Kongsberg**	**71.79**	**337**	*e*P	**P**	**04 00 03.4**	**+0.1**
ALNE	**Al Ain**	**71.82**	**286**	*i* P	**P**	**04 00 04.5**	**+0.4**
	SNR=13						
ALNE	**Al Ain**	**71.82**	**286**	P	**P**	**04 00 05.3**	**+1.1**
	SNR=10.0						
NVAR	**Mina Array Bea**	**71.89**	**55**	P	**P**	**04 00 05.8**	**+1.1**
	comp=Z,6.1nm,0.7s,baz=294,slow=5.8,SNR=52						
NVAR				LR	LR	04 27 20.0	
	comp=Z,97nm,21.2s,baz=292,slow=32						
SUE	**Sulen**	**71.96**	**340**	*e*P	**P**	**04 00 05.4**	**+1.0**
NV11	**Mina Array Sit**	**71.98**	**54**	IAmb	IAmb	04 00 27.0	
	comp=Z,48nm,1.2s						
AJN	**Ajban**	**72.05**	**287**	P	**P**	**04 00 05.6**	**0.0**
GURO	**Guroymak-BITLI**	**72.06**	**306**	IAmb	IAmb	04 00 08.7	
	comp=Z,47nm,1.0s						
DY2G	**Dye2**	**72.07**	**4**	⇑*i*P	**P**	**04 00 05.8**	**+0.6**
DY2G				IAmb	IAmb	04 00 07.1	
	comp=Z,143nm,0.7s						
KLNR	**Kaliningrad**	**72.09**	**329**	*ce*P	**P**	**04 00 05.7**	**+0.5**
KLNR				pmax	pmax		
	comp=Z,141nm,1.2s						
MHTO	**MHTO**	**72.09**	**282**	P	**P**	**04 00 06.3**	**+0.4**
	SNR=8.9						
ELK	**Elko**	**72.25**	**51**	P	**P**	**04 00 08.0**	**+1.2**
ELK				pmax	pmax		
	comp=Z,18nm,1.2s						
ELK	**Elko**	**72.25**	**51**	P	**P**	**04 00 08.0**	**+1.2**
ASK	**Askoy**	**72.33**	**339**	*e*P	**P**	**04 00 07.2**	**+0.6**
BER	**Bergen**	**72.38**	**339**	*e*P	**P**	**04 00 07.5**	**+0.6**
ODD1	**Odda**	**72.42**	**338**	*e*P	**P**	**04 00 07.9**	**+0.6**
SIM	**Simferopol'**	**72.46**	**315**	*c i*P	**P**	**04 00 07.0**	**-0.7**
SIM				*e*		04 00 25.0	
SIM				pmax	pmax		
	comp=Z,85nm,0.8s						
SIRT	**Sirnak**	**72.48**	**305**	P	**P**	**04 00 08.8**	**+0.7**
H17A	**Grant Village**	**72.50**	**46**	IAmb	IAmb	04 00 31.6	
	comp=Z,58nm,1.2s						
H17A	**Grant Village**	**72.50**	**46**	P	**P**	**04 00 10.5**	**+2.2**
	baz=312						
FLWY	**Flagg Ranch**	**72.64**	**46**	IAmb	IAmb	04 00 31.0	
	comp=Z,38nm,1.2s						
FXWY	**Fox Creek**	**72.75**	**47**	IAmb	IAmb	04 00 32.0	
	comp=Z,45nm,1.2s						
BLS5	**Blasjo**	**72.88**	**338**	*e*P	**P**	**04 00 10.3**	**+0.4**
ONAU	**Onsala**	**72.89**	**334**	*i* P	**P**	**04 00 09.3**	**-0.6**
TPAW	**Teton Pass**	**72.89**	**47**	IAmb	IAmb	04 00 33.0	
	comp=Z,74nm,1.4s						
DGMT	**Dagmar**	**72.98**	**40**	P	**P**	**04 00 11.2**	**+0.4**
	baz=314						
REDW	**Red Top Meadow**	**73.03**	**47**	IAmb	IAmb	04 00 33.5	
	comp=Z,52nm,1.2s						
LCH	**Last Change Ra**	**73.05**	**55**	IAmb	IAmb	04 00 33.4	
	comp=Z,70nm,1.5s						
STKA	**Stephens Creek**	**73.11**	**180**	P	**P**	**04 00 11.4**	**0.0**
	comp=Z,6.6nm,0.8s,baz=334,slow=7.6,SNR=19						
STKA				LR	LR	04 35 34.5	
	comp=Z,39nm,20.0s,baz=18,slow=38						
STKA	**Stephens Creek**	**73.11**	**180**	⇓*e*P	**P**	**04 00 12.4**	**+1.0**
STKA	**Stephens Creek**	**73.11**	**180**	P	**P**	**04 00 12.0**	**+0.6**
FORT	**Forrest**	**73.17**	**193**	P	**P**	**04 00 12.4**	**+0.6**
SORM	**Soroca**	**73.21**	**320**	⇑P	**P**	**04 00 11.8**	**-0.2**
LAO	**LASA Array**	**73.22**	**42**	P	**P**	**04 00 13.3**	**+1.0**
	baz=313						
HOMB	**Homborsund**	**73.25**	**336**	*e*P	**P**	**04 00 13.0**	**+0.9**
CWC	**Cottonwood Cre**	**73.28**	**56**	P	**P**	**04 00 13.6**	**+0.7**
	baz=310						
AHID	**Auburn Hatcher**	**73.29**	**47**	IAmb	IAmb	04 00 35.8	
	comp=Z,44nm,1.4s						
GRAC	**Grapevine Rang**	**73.37**	**55**	P	**P**	**04 00 14.6**	**+1.3**
	baz=310,SNR=9.5						
KMY	**Karmoy**	**73.40**	**338**	*e*P	**P**	**04 00 13.7**	**+0.8**
SNART	**Snartemo**	**73.57**	**337**	*e*P	**P**	**04 00 14.2**	**+0.3**
R11A	**Troy Canyon, C**	**73.59**	**53**	IAmb	IAmb	04 00 36.5	
	comp=Z,57nm,1.4s						
R11A	**Troy Canyon, C**	**73.59**	**53**	P	**P**	**04 00 15.6**	**+0.9**
	baz=310,SNR=6.7						
BSD	**Bornholm Skovb**	**73.68**	**332**	*i* P	**P**	**04 00 14.1**	**-0.5**
BSD				IAmb	IAmb	04 00 16.0	
	comp=Z,51nm,1.0s						
KIS	**Kishinev**	**73.77**	**319**	*e*P	**P**	**04 00 16.0**	**+0.6**
KIS				LRM	MLR	04 35 53.0	
	comp=Z,300nm,20.0s						
KIS	**Kishinev**	**73.77**	**319**	*e*P	**P**	**04 00 16.0**	**+0.6**
KIS				MLR	MLR		
	comp=Z,300nm,20.0s						
MILM	**Milestii Mici**	**73.83**	**319**	⇓P	**P**	**04 00 15.7**	**0.0**
MILM	**Milestii Mici**	**73.83**	**319**	*c i*P	**P**	**04 00 15.0**	**-0.7**
MILM				*e*		04 00 35.0	
MILM				pmax	pmax		
	comp=Z,220nm,2.5s						
MILM				MLR	MLR		
	comp=Z,900nm,19.0s						
BEL	**Belsk**	**73.92**	**327**	*e*P	**P**	**04 00 17.0**	**+0.9**
NUUK	**Nuuk**	**74.00**	**6**	*i* P	**P**	**04 00 17.0**	**+0.7**
NUUK				IAmb	IAmb	04 00 18.5	
	comp=Z,102nm,0.8s						
LVV	**L'vov**	**74.01**	**324**	*e*P	**P**	**04 00 18.3**	**+1.6**
LVV				*e*		04 00 37.1	
LVV				*e*S	**S**	**04 09 43.5**	**-0.9**
LVV				*e*		04 10 27.5	
LVV				MLR	MLR		
	comp=E,600nm,16.0s						
LVV				MLR	MLR		
	comp=N,400nm,16.0s						
LVV				MLR	MLR		
	comp=Z,800nm,17.0s						
DUG	**Dugway, Tooele**	**74.02**	**50**	IAmb	IAmb	04 00 39.1	
	comp=Z,38nm,1.1s						
DUG	**Dugway, Tooele**	**74.02**	**50**	P	**P**	**04 00 18.4**	**+1.2**
	baz=311						
FURC	**Furnace Creek,**	**74.02**	**55**	P	**P**	**04 00 18.4**	**+1.5**
	baz=310,SNR=7.5						
DIKM	**Dikmen**	**74.02**	**312**	⇓P	**P**	**04 00 18.1**	**+1.1**
GOET	**G??ttrup**	**74.04**	**335**	*i* P	**P**	**04 00 17.3**	**+0.6**
GOET				IAmb	IAmb	04 00 18.9	
	comp=Z,70nm,0.9s						
UMR	**Umm Al-Rimmam**	**74.05**	**295**	*e*P	**P**	**04 00 16.3**	**-0.9**
COP	**Copenhagen**	**74.09**	**333**	*i* P	**P**	**04 00 17.3**	**+0.3**
COP				IAmb	IAmb	04 00 18.8	
	comp=Z,533nm,1.0s						
SHMA	**Al-Shehemyia**	**74.11**	**291**	P	**P**	**04 00 16.9**	**-0.7**
KAAM	**Kaadhehdhoo**	**74.13**	**256**	P	**P**	**04 00 18.2**	**+0.3**
KAAM				IAmb	IAmb	04 00 20.5	
	comp=Z,60nm,0.9s						
BW06	**Boulder Array**	**74.14**	**47**	IAmb	IAmb	04 00 39.1	
	comp=Z,31nm,1.1s						
BW06	**Boulder Array**	**74.14**	**47**	P	**P**	**04 00 18.4**	**+0.5**
	baz=312						
PDAR	**Pinedale Array**	**74.14**	**47**	P	**P**	**04 00 18.3**	**+0.4**
	comp=Z,7.5nm,0.6s,baz=265,slow=2.3,SNR=87						
PDAR				LR	LR	04 33 46.0	
	comp=Z,170nm,21.1s,baz=333,slow=36						
TCUT	**Toone Canyon**	**74.21**	**49**	IAmb	IAmb	04 00 40.2	
	comp=Z,55nm,1.1s						
IAS	**Iasi**	**74.25**	**320**	⇓P	**P**	**04 00 18.7**	**+0.5**
GKP	**Gorka Klasztor**	**74.25**	**329**	*e*P	**P**	**04 00 18.4**	**+0.4**
GKP	**Gorka Klasztor**	**74.25**	**329**	*e*P	**P**	**04 00 18.8**	**+0.7**
MORW	**Morawa**	**74.31**	**204**	P	**P**	**04 00 18.9**	**+0.3**
GWY	**Greenwater Val**	**74.32**	**55**	IAmb	IAmb	04 00 40.7	
	comp=Z,79nm,1.2s						
EDW2	**Edwards Air Fo**	**74.33**	**57**	P	**P**	**04 00 19.7**	**+0.7**
	baz=310,SNR=8.2						
QRN	**Al-Qurain**	**74.41**	**295**	*e*P	**P**	**04 00 18.8**	**-0.7**
PSUT	**Pine Spring**	**74.50**	**52**	IAmb	IAmb	04 00 41.9	
	comp=Z,48nm,1.3s						
PRN	**Pahroc Range**	**74.52**	**54**	IAmb	IAmb	04 00 42.2	
	comp=Z,49nm,1.3s						
VASR	**Vaslui**	**74.53**	**319**	⇑P	**P**	**04 00 20.3**	**+0.6**
MUD	**Monsted U'grnd**	**74.54**	**335**	*i* P	**P**	**04 00 20.0**	**+0.3**
MUD				IAmb	IAmb	04 00 21.4	
	comp=Z,25nm,0.7s						
RDF	**Al-Radifah**	**74.55**	**295**	*e*P	**P**	**04 00 18.8**	**-1.5**
NLU	**North Lily Min**	**74.60**	**50**	IAmb	IAmb	04 00 43.8	
	comp=Z,41nm,1.3s						
TRNA	**Turayna**	**74.64**	**289**	P	**P**	**04 00 20.0**	**-0.7**
KWP	**Kalwaria Pacla**	**74.73**	**324**	*e*P	**P**	**04 00 21.9**	**+0.9**
GSC	**Goldstone, Bar**	**74.81**	**56**	IAmb	IAmb	04 00 43.4	
	comp=Z,61nm,1.4s						
GSC	**Goldstone, Bar**	**74.81**	**56**	P	**P**	**04 00 22.4**	**+0.6**
	baz=310,SNR=7.8						
MPU	**Maple Canyon**	**74.82**	**50**	IAmb	IAmb	04 00 43.6	
	comp=Z,30nm,0.9s						
VLDR	**Vladesti**	**74.94**	**319**	⇑P	**P**	**04 00 22.1**	**-0.1**
BFSC	**Mount Baldy Ra**	**74.95**	**58**	P	**P**	**04 00 23.8**	**+1.2**
	baz=310						
VARL	**Varlezi**	**75.02**	**319**	⇓P	**P**	**04 00 23.7**	**+1.1**
TLCR		**75.04**	**318**	⇑P	**P**	**04 00 23.1**	**+0.3**
BUR08	**Bucovina Ar. S**	**75.05**	**321**	P	**P**	**04 00 23.2**	**+0.2**
BUR08				IAmb	IAmb	04 00 25.1	
	comp=Z,30nm,0.7s						
BURAR	**Bucovina Array**	**75.06**	**321**	⇓P	**P**	**04 00 23.4**	**+0.4**
BURAR	**Bucovina Array**	**75.06**	**321**	IAmb	IAmb	04 00 25.1	
	comp=Z,46nm,0.7s						
SCTR	**Scanteiesti**	**75.11**	**319**	⇑P	**P**	**04 00 23.9**	**+0.8**
TESR	**Tescani**	**75.17**	**320**	⇑P	**P**	**04 00 23.8**	**+0.2**
TUQ	**Turquoise Moun**	**75.27**	**56**	P	**P**	**04 00 25.4**	**+1.0**
	baz=311,SNR=8.7						
IZVR	**Izvoarele**	**75.31**	**319**	⇑P	**P**	**04 00 25.4**	**+1.1**
CFR	**Carcaliu**	**75.39**	**318**	⇑P	**P**	**04 00 24.9**	**+0.2**
HEC	**Hector,Ludlow**	**75.40**	**56**	P	**P**	**04 00 26.3**	**+1.2**
	baz=311,SNR=6.8						
ULM	**Lac du Bonnet**	**75.43**	**34**	P	**P**	**04 00 24.2**	**-0.7**
	comp=Z,4.5nm,0.6s,baz=324,slow=7.6,SNR=7.2						
ULM				LR	LR	04 37 01.5	
	comp=Z,246nm,18.1s,baz=324,slow=38						
ULM	**Lac du Bonnet**	**75.43**	**34**	⇓*e*P	**P**	**04 00 25.3**	**+0.4**
ULM	**Lac du Bonnet**	**75.43**	**34**	P	**P**	**04 00 25.2**	**+0.2**
ULM				IAmb	IAmb	04 00 44.7	
	comp=Z,42nm,1.2s						
CCUT	**Cedar City**	**75.44**	**53**	IAmb	IAmb	04 00 46.9	
	comp=Z,45nm,1.5s						
KOLS	**Kolonicke sedl**	**75.44**	**324**	*e*P	**P**	**04 00 25.6**	**+0.6**
KOLS				pmax	pmax		
	comp=Z,30nm,1.1s						
KOLS	**Kolonicke sedl**	**75.44**	**324**	*e*P	**P**	**04 00 25.6**	**+0.6**
MVU	**Marysvale**	**75.49**	**51**	IAmb	IAmb	04 00 51.9	
	comp=Z,47nm,1.0s						
ODBI	**Odobesti**	**75.51**	**319**	⇓P	**P**	**04 00 26.4**	**+1.0**
STHS	**Stebnicka Huta**	**75.53**	**325**	*e*P	**P**	**04 00 25.8**	**+0.2**
STHS	**Stebnicka Huta**	**75.53**	**325**	*e*P	**P**	**04 00 25.8**	**+0.2**
OJC	**Ojcow**	**75.55**	**326**	*e*P	**P**	**04 00 26.3**	**+0.7**
OJC				*e*PcP	**PcP**	**04 00 37.1**	**-1.3**
OJC				*e*L	L	04 36 13.2	
	comp=Z,1µm,21.4s						
BNN	**Bunyan**	**75.55**	**309**	P	**P**	**04 00 26.8**	**+0.8**
MDND	**Maddock**	**75.58**	**38**	P	**P**	**04 00 27.0**	**+1.2**
VRI	**Vrincioaia**	**75.60**	**319**	⇑P	**P**	**04 00 26.8**	**+0.8**
PLOR	**Plostina**	**75.64**	**319**	⇓P	**P**	**04 00 26.4**	**+0.1**
UZH	**Uzhgorod**	**75.66**	**324**	*e*P	**P**	**04 00 26.0**	**-0.2**
UZH				*e**PP	**PcP**	**04 00 38.6**	**-0.2**
UZH				*e*		04 00 50.2	
UZH				*e*S	**S**	**04 10 01.4**	**-1.4**
UZH				MLR	MLR		
	comp=N,120nm,18.0s						
UZH				MLR	MLR		
	comp=E,180nm,18.0s						
UZH				MLR	MLR		
	comp=Z,100nm,18.0s						
MURC	**Murrieta**	**75.66**	**58**	P	**P**	**04 00 27.1**	**+0.5**
	baz=311						
P17A	**Butcher Ranch,**	**75.69**	**50**	IAmb	IAmb	04 00 48.7	
	comp=Z,55nm,1.0s						
MTPU	**Mount Pierson**	**75.81**	**52**	IAmb	IAmb	04 00 49.6	
	comp=Z,57nm,1.5s						
Q16A	**Castle Valley**	**75.81**	**50**	IAmb	IAmb	04 00 49.7	
	comp=Z,75nm,1.5s						
BMR	**Baia Mare**	**75.82**	**322**	⇑P	**P**	**04 00 28.0**	**+0.8**
CRVS	**Cervenica-Dubn**	**75.82**	**324**	*e*P	**P**	**04 00 27.9**	**+0.7**
CRVS				pmax	pmax		
	comp=Z,30nm,0.9s						
CRVS	**Cervenica-Dubn**	**75.82**	**324**	*e*P	**P**	**04 00 27.9**	**+0.7**
BISRR	**Bisoca**	**75.83**	**319**	⇓P	**P**	**04 00 28.7**	**+1.3**
HARR	**Harsova**	**75.84**	**318**	⇑P	**P**	**04 00 27.8**	**+0.5**
K22A	**Casper**	**75.85**	**45**	IAmb	IAmb	04 00 49.0	
	comp=Z,86nm,1.4s						
K22A	**Casper**	**75.85**	**45**	P	**P**	**04 00 28.2**	**+0.5**
	baz=314						
GMRC	**Granite Mounta**	**75.85**	**56**	P	**P**	**04 00 28.6**	**+0.8**
	baz=311,SNR=11						
GAZ	**Gaziantep**	**75.86**	**307**	IAmb	IAmb	04 00 29.4	
	comp=Z,51nm,1.0s						
LCMT	**Little Creek M**	**75.86**	**53**	IAmb	IAmb	04 00 50.1	
	comp=Z,44nm,1.3s						
COVR	**Voineasa-Covas**	**75.87**	**320**	⇑P	**P**	**04 00 28.3**	**+0.7**
P18A	**Preston Nutter**	**75.87**	**49**	P	**P**	**04 00 29.3**	**+1.3**
P18A				IAmb	IAmb	04 00 50.0	
	comp=Z,62nm,1.2s						
OZUR		**75.89**	**320**	⇑P	**P**	**04 00 29.1**	**+1.4**
TRPA	**Tarpa**	**75.92**	**323**	⇑P	**P**	**04 00 28.8**	**+1.1**
TRPA	**Tarpa**	**75.92**	**323**	*e*P	**P**	**04 00 28.5**	**+0.8**
NIE	**Niedzica**	**75.94**	**325**	*e*P	**P**	**04 00 29.8**	**+1.8**
SRU	**San Rafael Swe**	**76.06**	**50**	IAmb	IAmb	04 00 50.5	
	comp=Z,42nm,0.9s						
RSSD	**Black Hills**	**76.11**	**43**	P	**P**	**04 00 30.2**	**+1.0**
RSSD				pmax	pmax		
	comp=Z,14nm,0.9s						
RSSD	**Black Hills**	**76.11**	**43**	P	**P**	**04 00 30.2**	**+1.0**
RSSD	**Black Hills**	**76.11**	**43**	P	**P**	**04 00 30.3**	**+1.1**
	baz=315						
KNB	**Kanab**	**76.11**	**53**	IAmb	IAmb	04 00 51.0	
	comp=Z,48nm,1.4s						
PFO	**Pinyon Flats O**	**76.12**	**57**	⇓*e*P	**P**	**04 00 30.5**	**+1.2**
PFO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
PFO	**Pinyon Flats O**	**76.12**	**57**	P	**P**	**04 00 30.1**	**+0.8**
PFO	**Pinyon Flats O**	**76.12**	**57**	P	**P**	**04 00 30.7**	**+1.4**
	baz=311,SNR=5.2						
NEHR	**Nehoiu**	**76.12**	**319**	⇓P	**P**	**04 00 29.8**	**+0.8**
PKCU	**Pink Cliffs**	**76.13**	**52**	IAmb	IAmb	04 00 51.5	
	comp=Z,40nm,1.2s						
PGOR	**Pogoanele**	**76.15**	**318**	⇓P	**P**	**04 00 30.0**	**+0.9**
BELC	**Belle Mtn. Jos**	**76.16**	**57**	P	**P**	**04 00 30.4**	**+0.9**
	baz=311						
DOPR	**Dopca**	**76.17**	**320**	⇑P	**P**	**04 00 30.6**	**+1.3**
RUE	**Ruedersdorf**	**76.18**	**330**	*e*P	**P**	**04 00 29.8**	**+0.7**
RUE	**Ruedersdorf**	**76.18**	**330**	*e*P	**P**	**04 00 29.7**	**+0.7**
	comp=Z,26nm,0.8s,baz=35,slow=5.5						
ISR	**Istrita**	**76.22**	**319**	⇑P	**P**	**04 00 30.6**	**+1.0**
BR131	**Keskin Array S**	**76.23**	**311**	*c i*P	**P**	**04 00 30.1**	**+0.2**
BR131	**Keskin Array S**	**76.23**	**311**	IAmb	IAmb	04 00 31.6	
	comp=Z,27nm,0.7s						
BR131	**Keskin Array S**	**76.23**	**311**	P	**P**	**04 00 30.6**	**+0.7**
	SNR=5.1						
BRTR	**Keskin Array B**	**76.23**	**311**	P	**P**	**04 00 30.4**	**+0.5**
	comp=Z,18nm,0.8s,baz=65,slow=4.0,SNR=58						
BRTR				LR	LR	04 39 04.5	
	comp=Z,379nm,19.7s,baz=58,slow=40						
BRTR	**Keskin Array B**	**76.23**	**311**	*ce*P	**P**	**04 00 30.3**	**+0.5**
BRTR				pmax	pmax		
	comp=Z,19nm,0.8s						
BSEG	**Bad Segeberg**	**76.23**	**333**	*e*P	**P**	**04 00 29.7**	**+0.3**
	comp=Z,42nm,0.8s,baz=35,slow=5.5						
MLR	**Muntele Rosu**	**76.25**	**319**	⇓P	**P**	**04 00 30.0**	**+0.2**
MESR	**Meseseni**	**76.46**	**322**	⇑P	**P**	**04 00 31.2**	**+0.4**
CBBR	**Cluj-Babes-Bol**	**76.46**	**322**	⇓P	**P**	**04 00 31.9**	**+1.1**
CJR	**Cluj-Napoca**	**76.48**	**322**	⇑P	**P**	**04 00 32.0**	**+1.0**
LANS	**Liptovska Anna**	**76.50**	**325**	*e*P	**P**	**04 00 32.5**	**+1.4**
LANS				pmax	pmax		
	comp=Z,17nm,0.8s						
LANS	**Liptovska Anna**	**76.50**	**325**	*e*P	**P**	**04 00 32.5**	**+1.4**
KSP	**Ksiaz**	**76.50**	**328**	*e*P	**P**	**04 00 31.7**	**+0.7**
KSP				*e*PcP	**PcP**	**04 00 43.2**	**+0.8**
OKC	**Ostrava-Krasne**	**76.53**	**326**	*e*P	**P**	**04 00 31.9**	**+0.7**
OKC	**Ostrava-Krasne**	**76.53**	**326**	*e*P	**P**	**04 00 31.9**	**+0.7**
IRM	**Iron Mountain**	**76.59**	**56**	P	**P**	**04 00 33.0**	**+1.1**
	baz=311,SNR=6.7						
ANTO	**Ankara**	**76.61**	**312**	P	**P**	**04 00 33.2**	**+1.3**

ANTO				pmax	pmax		
	comp=Z,67nm,0.8s						
ANTO	Ankara	76.61	312	P	P	04 00 33.2	+1.3
MONP2	Monument Peak	76.61	58	P	P	04 00 33.2	+1.0
	baz=311						
O20A	White River Ci	76.65	48	IAmb	IAmb	04 00 53.6	
	comp=Z,40nm,1.1s						
O20A	White River Ci	76.65	48	P	P	04 00 33.1	+0.8
	baz=314						
VOIR		76.72	320	⇑P	P	04 00 32.7	+0.2
BC3	Big Chuckawall	76.72	57	P	P	04 00 34.0	+1.3
	baz=311,SNR=6.9						
OSTC	Ostas	76.76	328	eP	P	04 00 32.7	+0.2
CHVC	Chvalec	76.80	328	eP	P	04 00 33.4	+0.7
U15A	North Rim	76.82	53	IAmb	IAmb	04 00 55.8	
	comp=Z,55nm,1.1s						
MORC	Moravsky Berou	76.83	327	⇑P	P	04 00 33.8	+0.9
MORC	Moravsky Berou	76.83	327	IAmb	IAmb	04 00 35.4	
	comp=Z,36nm,0.9s						
MORC	Moravsky Berou	76.83	327	eP	P	04 00 33.6	+0.7
DRGR		76.83	322	⇑P	P	04 00 33.5	+0.5
DPC	Dobruska-Polom	76.88	328	eP	P	04 00 33.9	+0.7
DPC	Dobruska-Polom	76.88	328	eP	P	04 00 33.9	+0.7
UPC	Upice	76.88	328	eP	P	04 00 33.3	+0.2
UPC	Upice	76.88	328	eP	P	04 00 33.3	+0.2
KRLC	Kraliky	76.91	327	eP	P	04 00 33.8	+0.4
KRLC	Kraliky	76.91	327	eP	P	04 00 33.8	+0.4
ARR	Arges	76.97	320	⇑P	P	04 00 34.8	+0.9
PDMCI	Parker Dam,Lak	77.11	56	P	P	04 00 35.8	+1.1
	baz=312						
CCX	Cicese	77.13	59	P	P	04 00 35.8	+1.0
CCX				IAmb	IAmb	04 00 56.3	
	comp=Z,44nm,1.5s						
FLTG	Flechtingen	77.22	332	eP	P	04 00 35.3	+0.3
	comp=Z,41nm,0.8s,baz=35,slow=5.5						
PSZ	Piszkesteto	77.25	324	⇑P	P	04 00 36.1	+0.7
PSZ	Piszkesteto	77.25	324	eP	P	04 00 36.1	+0.7
PSZ	Piszkesteto	77.25	324	IAmb	IAmb	04 00 38.1	
	comp=Z,29nm,0.9s						
VYHS	Vyhne	77.27	325	eP	P	04 00 36.0	+0.6
VYHS				pmax	pmax		
	comp=Z,17nm,0.9s						
VYHS	Vyhne	77.27	325	eP	P	04 00 36.0	+0.6
PV21	Cone Mtn., Par	77.32	49	IAmb	IAmb	04 00 57.9	
	comp=Z,37nm,0.9s						
LOT	Lotru	77.33	321	⇓P	P	04 00 36.1	+0.1
N23A	Red Feather La	77.38	46	P	P	04 00 37.4	+0.9
	baz=315						
BRG	Berggiesshubel	77.39	329	eP	P	04 00 36.5	+0.5
	comp=Z,8.7nm,0.8s,baz=35,slow=5.5						
BRG	Berggiesshubel	77.39	329	i P	P	04 00 36.5	+0.4
BRG				Amp		04 00 38.1	
	comp=Z,18nm,1.0s						
BRG	Berggiesshubel	77.39	329	P	P	04 00 48.3	+12
BRG				Amp		04 00 49.0	
	comp=Z,8.2nm,0.8s						
CLL	Collm	77.40	330	i P	P	04 00 35.9	-0.2
CLL				e*PP	pP	04 00 52.0	-0.1
CLL				pmax	pmax		
	comp=Z,36nm,0.8s						
CLL				MLR	MLR		
	comp=Z,800nm,21.9s						
CLL	Collm	77.40	330	i P	P	04 00 35.9	-0.2
	comp=Z,36nm,0.8s						
CLL				ePcP	PcP	04 00 48.0	+1.7
CLL				epP	pP	04 00 52.0	-0.1
CLL				esP	sP	04 00 59.0	+0.5
CLL				ePP	PP	04 03 30.0	-0.4
CLL				epPP		04 03 43.0	
CLL				e(SS)		04 16 00.0	
CLL				Lm	MLR	04 37 00.0	
	comp=Z,800nm,21.9s						
CLL	Collm	77.40	330	IAmb	IAmb	04 00 37.8	
	comp=Z,34nm,0.8s						
CLL	Collm	77.40	330	eP	P	04 00 36.3	+0.2
	comp=Z,28nm,0.8s,baz=35,slow=5.5						
HUMR	Humele	77.42	319	⇑P	P	04 00 36.2	-0.1
PVCC	Panska Ves	77.43	329	eP	P	04 00 37.0	+0.8
PVCC	Panska Ves	77.43	329	eP	P	04 00 37.0	+0.8
JAVC	Velka Javorina	77.48	326	eP	P	04 00 38.3	+1.7
NRDL	Niedersach Rie	77.49	332	eP	P	04 00 36.8	+0.4
	comp=Z,16nm,0.8s,baz=35,slow=5.5						
GLA	Glamis	77.52	57	P	P	04 00 38.3	+1.3
	baz=312						
PV17	East Wray Mesa	77.52	50	P	P	04 00 38.5	+1.2
KAC	Achnashellach	77.55	343	eP	P	04 00 37.0	+0.2
BSZH	Besenyszg	77.56	324	eP	P	04 00 38.0	+1.0
VRAC	Vranov	77.58	327	⇑P	P	04 00 37.6	+0.5
VRAC	Vranov	77.58	327	P	P	04 00 37.0	-0.1
	comp=Z,26nm,0.9s,baz=37,slow=5.1,SNR=44						
VRAC	Vranov	77.58	327	P	P	04 00 37.0	-0.1
VRAC	Vranov	77.58	327	eP	P	04 00 38.0	+0.9
FBE	Freiberg	77.58	330	eP	P	04 00 37.7	+0.6
	comp=Z,16nm,0.8s,baz=35,slow=5.5						
ASSE	Asse, Remlinge	77.59	332	eP	P	04 00 37.2	+0.2
	comp=Z,9.7nm,0.9s,baz=35,slow=5.5						
COPA	Copaceanca	77.59	319	⇓P	P	04 00 37.5	+0.3
SIRR	Siria	77.71	322	⇑P	P	04 00 38.6	+0.7
KPL	Plockton	77.77	343	⇑eP	P	04 00 38.3	+0.4
KPL				IAmb	IAmb	04 00 40.3	
	comp=Z,67nm,0.9s						
B35A	Bob, Littlefor	77.79	34	IAmb	IAmb	04 01 01.1	
	comp=Z,22nm,0.9s						
GZR	Gura Zlata	77.84	321	⇑P	P	04 00 39.0	+0.3
PRA	Prague	77.84	329	eP	P	04 00 38.8	+0.3
PRA	Prague	77.84	329	eP	P	04 00 38.8	+0.3
SMOL	Smolenice	77.85	326	eP	P	04 00 39.8	+1.2
SMOL				pmax	pmax		
	comp=Z,17nm,1.2s						
SMOL	Smolenice	77.85	326	eP	P	04 00 39.8	+1.2
KRUC	Moravsky	77.85	327	eP	P	04 00 39.4	+0.8
PRU	Pruhonice	77.87	328	eP	P	04 00 38.9	+0.2
PRU				e		04 00 58.6	
PRU	Pruhonice	77.87	328	eP	P	04 00 38.9	+0.2
PRU				esP	sP	04 00 58.6	-2.5
CLZ	Clausthal	77.93	332	eP	P	04 00 39.3	+0.3
	comp=Z,27nm,0.8s,baz=35,slow=5.5						
NEUB	Neuenburg	77.94	331	eP	P	04 00 39.7	+0.7
	comp=Z,34nm,0.8s,baz=35,slow=5.5						
BUD	Budapest	77.96	324	eP	P	04 00 40.0	+0.7
WUAZ	Wupatki	77.99	53	IAmb	IAmb	04 01 02.1	
	comp=Z,43nm,1.1s						
WUAZ	Wupatki	77.99	53	P	P	04 00 41.4	+1.5
	baz=313						
SMCO	Snowmass	78.02	48	P	P	04 00 41.0	+0.8
SMCO				IAmb	IAmb	04 01 02.0	
	comp=Z,28nm,1.1s						
SRO	Srobarova	78.02	325	eP	P	04 00 41.0	+1.5
SRO				pmax	pmax		
	comp=Z,35nm,0.9s						
SRO	Srobarova	78.02	325	eP	P	04 00 41.0	+1.5
SRO2	Moca	78.02	325	eP	P	04 00 39.7	+0.1
SRO2				pmax	pmax		
	comp=Z,17nm,0.6s						
SRO2	Moca	78.02	325	eP	P	04 00 39.6	0.0
MODS	Modra-Piesok	78.03	326	eP	P	04 00 39.5	-0.1
MODS				pmax	pmax		
	comp=Z,26nm,1.1s						
MODS	Modra-Piesok	78.03	326	eP	P	04 00 39.5	-0.1
TREC	Trest	78.04	327	eP	P	04 00 40.1	+0.4
TREC	Trest	78.04	327	eP	P	04 00 40.1	+0.4
BZS	Buzias	78.21	322	⇑P	P	04 00 40.9	+0.2
INVG	Invergeldie, C	78.23	342	eP	P	04 00 40.6	0.0
INVG				IAmb	IAmb	04 00 41.6	
	comp=Z,27nm,0.9s						
ZST	Bratislava	78.24	326	eP	P	04 00 42.0	+1.3
ZST	Bratislava	78.24	326	eP	P	04 00 42.0	+1.3
GTTG	Gottingen	78.32	332	eP	P	04 00 41.7	+0.5
	comp=Z,22nm,0.8s,baz=35,slow=5.5						
TANN	Tannenbergstha	78.33	330	eP	P	04 00 41.6	+0.3
	comp=Z,3.3nm,0.8s,baz=35,slow=5.5						
ISCO	Idaho Springs	78.33	47	P	P	04 00 42.8	+1.0
	baz=315						
WERD	Werda	78.36	330	eP	P	04 00 42.2	+0.8
	comp=Z,8.1nm,0.9s,baz=35,slow=5.5						
113A	Mohawk Valley,	78.37	57	IAmb	IAmb	04 01 03.5	
	comp=Z,36nm,1.2s						
CSKK	Cskako	78.39	325	eP	P	04 00 42.5	+0.8
HERR	Herculane	78.39	321	⇓P	P	04 00 41.5	-0.1
SUSD	Miller	78.39	40	P	P	04 00 43.6	+1.9
	baz=318						
GUNZ	Gunzen	78.42	330	eP	P	04 00 42.3	+0.5
	comp=Z,11nm,1.0s,baz=35,slow=5.5						
IBBN	Ibbenburen	78.45	333	eP	P	04 00 42.4	+0.6
	comp=Z,38nm,0.8s,baz=35,slow=5.5						
MOX	Moxa	78.46	330	eP	P	04 00 42.1	+0.1
	comp=Z,9.5nm,0.9s,baz=35,slow=5.5						
WERN	Wernitzgruen	78.46	330	eP	P	04 00 42.9	+0.8
	comp=Z,13nm,0.9s,baz=35,slow=5.5						
NKC	Novy Kostel	78.48	330	eP	P	04 00 42.1	0.0
NKC	Novy Kostel	78.48	330	eP	P	04 00 42.1	0.0
MVCO	Mesa Verde	78.52	50	IAmb	IAmb	04 01 04.7	
	comp=Z,72nm,1.4s						
MVCO	Mesa Verde	78.52	50	P	P	04 00 44.5	+1.7
	baz=314						
F33A	5 Mile Ranch,	78.59	37	IAmb	IAmb	04 01 03.7	
	comp=Z,46nm,1.1s						
X16A	Lo Mia Camp, P	78.69	54	IAmb	IAmb	04 01 06.1	
	comp=Z,30nm,1.0s						
MANZ	Manzenberg	78.81	330	eP	P	04 00 44.3	+0.4
	comp=Z,3.5nm,1.0s,baz=35,slow=5.5						
MPLH	Magyarpolny	78.85	325	eP	P	04 00 44.4	+0.2
SOP	Sopron	78.87	326	eP	P	04 00 44.8	+0.6
CKRC	Cesky Krumlov	78.89	328	eP	P	04 00 44.6	+0.2
CKRC				ex	x	04 00 53.3	
PGBU	Glenifferbraes	78.90	342	eP	P	04 00 44.7	+0.5
PGBU				IAmb	IAmb	04 00 47.1	
	comp=Z,56nm,1.0s						
UBBA	Unterbreizbach	78.90	331	eP	P	04 00 44.2	0.0
	comp=Z,3.8nm,0.7s,baz=35,slow=5.5						
KHC	Kasperske Hory	78.93	328	eP	P	04 00 44.9	+0.3
KHC				e		04 00 56.9	
KHC				e		04 01 04.5	
KHC	Kasperske Hory	78.93	328	eP	P	04 00 44.9	+0.3
KHC				epP	pP	04 00 56.9	-3.8
KHC				esP	sP	04 01 04.5	-2.6
ROTZ	Rotzenmuhle	78.95	330	eP	P	04 00 45.2	+0.6
	comp=Z,2.0nm,0.8s,baz=35,slow=5.5						
CONA	Conrad Observa	78.96	326	i P	P	04 00 46.0	+1.1
	comp=Z,6.1nm,0.6s,SNR=7.9						
EKA	Eskdalemuir Ar	79.01	341	P	P	04 00 45.0	+0.2
	comp=Z,7.2nm,0.5s,baz=29,slow=4.8,SNR=89						
EKA				PP	PP	04 03 44.4	+0.8
	comp=Z,5.7nm,0.8s,baz=32,slow=9.0,SNR=7.5						
ESK	Eskdalemuir	79.03	341	eP	P	04 00 45.2	+0.2
ESK	Eskdalemuir	79.03	341	P	P	04 00 45.0	0.0
ESK				pmax	pmax		
	comp=Z,39nm,1.0s						
ESK	Eskdalemuir	79.03	341	P	P	04 00 45.0	0.0
ESK				IAmb	IAmb	04 00 46.9	
	comp=Z,39nm,0.9s						
EYMN	Ely	79.04	33	IAmb	IAmb	04 01 07.5	
	comp=Z,36nm,1.1s						
EYMN	Ely	79.04	33	P	P	04 00 45.2	0.0
	baz=322						
S22A	4UR Ranch, Cre	79.10	49	P	P	04 00 48.0	+1.9
	baz=315,SNR=5.6						
MORH	Mrgy, Hungar	79.11	324	⇑iP	P	04 00 45.3	-0.2
GEC2	GERESS Array S	79.11	328	eP	P	04 00 45.8	+0.2
	comp=Z,12nm,1.0s,baz=35,slow=5.5						
GERES	GERESS Array B	79.11	328	P	P	04 00 45.9	+0.2
	comp=Z,7.4nm,0.7s,baz=38,slow=5.5,SNR=76						
GERES				PP	PP	04 03 45.2	+0.4
	comp=Z,2.2nm,0.8s,baz=52,slow=8.6,SNR=3.8						
GERES	GERESS Array B	79.11	328	P	P	04 00 45.6	-0.1
Q24A	Divide	79.18	47	P	P	04 00 47.2	+0.7
	baz=315						
WET	Wettzell	79.19	329	eP	P	04 00 46.7	+0.6
	comp=Z,12nm,0.9s,baz=35,slow=5.5						
BUG	Bochum--Univer	79.34	333	eP	P	04 00 47.0	+0.3
	comp=Z,19nm,0.9s,baz=35,slow=5.5						
GRA1	Grafenberg Arr	79.38	330	IAmb	IAmb	04 00 49.6	
	comp=Z,50nm,0.9s						
GRF	Grafenberg Arr	79.38	330	eP	P	04 00 47.7	+0.6
	comp=Z,34nm,0.8s,baz=35,slow=5.5						
GRFO	Grafenberg	79.38	330	P	P	04 00 47.7	+0.7
GRFO				pmax	pmax		
	comp=Z,49nm,0.9s						
GRFO	Grafenberg	79.38	330	P	P	04 00 47.7	+0.7
GRFO				IAmb	IAmb	04 00 49.5	
	comp=Z,49nm,0.9s						
FRGS	Fruska Gora	79.39	323	⇑P	P	04 00 47.6	+0.4
FRGS	Fruska Gora	79.39	323	⇑iP	P	04 00 47.3	+0.1
OGNE	Ogallala	79.42	44	P	P	04 00 48.1	+0.6
KOVH	Kovagotottos	79.44	324	eP	P	04 00 47.5	0.0
BALB	Balikesir	79.46	314	IAmb	IAmb	04 00 50.6	
	comp=Z,35nm,1.0s						
ARSA	Arzberg	79.64	326	eP	P	04 00 49.1	+0.6
	comp=Z,4.1nm,0.6s						
BOVS	Bovan	79.66	320	⇓P	P	04 00 48.3	-0.3
KESW	Keswick, Cumbr	79.67	340	⇑eP	P	04 00 48.9	+0.4
KESW				IAmb	IAmb	04 00 50.4	
	comp=Z,60nm,1.1s						
CSS	Mathiatis	79.67	308	IAmb	IAmb	04 00 51.0	
	comp=Z,46nm,0.7s						
MOA	Molln	79.68	327	eP	P	04 00 49.6	+0.9
	comp=Z,6.0nm,0.7s						
VTS	Vitosha	79.68	319	⇑P	P	04 00 49.9	+0.9
VTS	Vitosha	79.68	319	IAmb	IAmb	04 00 51.6	
	comp=Z,46nm,0.7s						
GAL1	Galloway	79.81	341	⇑eP	P	04 00 49.2	0.0
GAL1				IAmb	IAmb	04 00 50.8	
	comp=Z,45nm,0.9s						
SDCO	Great Sand Dun	79.85	48	P	P	04 00 51.1	+1.0
	baz=315						
HPK	Haverah Park	79.85	339	⇑eP	P	04 00 49.9	+0.4
CLGH	Cloghs, Cushen	79.94	342	eP	P	04 00 50.1	+0.2
TNS	Taunus Mts	79.95	332	eP	P	04 00 50.5	+0.4
	comp=Z,8.0nm,0.9s,baz=35,slow=5.5						
ECSD	EROS Data Cent	80.04	39	P	P	04 00 50.8	+0.1
	baz=320						
DIVS	Divibare	80.12	322	⇑iP	P	04 00 51.0	-0.2
AHRW	Bad Neuenahr-A	80.17	333	eP	P	04 00 51.8	+0.5
	comp=Z,12nm,0.9s,baz=35,slow=5.5						
GROS	Grobnik	80.27	326	i P	P	04 00 52.2	+0.2
PERS	Pernice	80.30	326	i P	P	04 00 52.4	+0.3
SOKA	Soboth	80.30	326	eP	P	04 00 52.5	+0.4
	comp=Z,18nm,0.6s,SNR=13						
IOMK	Kirk Michael	80.33	341	⇑eP	P	04 00 51.8	-0.2
RJOB	Jochberg	80.36	328	eP	P	04 00 53.2	+0.7
	comp=Z,26nm,0.8s,baz=35,slow=5.5						
LBWR	Ladybower, Pea	80.37	339	⇑eP	P	04 00 52.7	+0.4
LBWR				IAmb	IAmb	04 00 54.2	
	comp=Z,67nm,1.0s						
BEBN	Eben Emael	80.42	334	dP	P	04 00 52.5	0.0
	comp=Z,31nm,0.7s						
BTNL	Ternell	80.45	333	dP	P	04 00 52.9	+0.1
	comp=Z,12nm,1.0s						
WIM	Isle of Man	80.46	341	eP	P	04 00 52.8	0.0
MEM	Membach	80.47	333	κP	P	04 00 52.9	+0.1
	comp=Z,18nm,0.9s						
MEM				dpP	pP	04 01 09.8	+0.8
TUC	Tucson	80.53	55	P	P	04 00 54.8	+1.2
TUC				pmax	pmax		
	comp=Z,28nm,1.3s						
TUC	Tucson	80.53	55	P	P	04 00 54.8	+1.2
TUC	Tucson	80.53	55	P	P	04 00 55.1	+1.5
	baz=314						
BBLS	Lazići	80.57	322	⇑iP	P	04 00 54.1	+0.5
SOCY	Socotra	80.61	278	P	P	04 00 53.2	-1.1
SOCY				IAmb	IAmb	04 00 54.2	
	comp=Z,38nm,0.9s						
FUR	Furstenfeldbru	80.61	329	eP	P	04 00 54.3	+0.6
	comp=Z,35nm,0.7s,baz=35,slow=5.5						
HAPS	Han Pijesak,Bl	80.61	322	⇑iP	P	04 00 54.2	+0.3
OBKA	Obir	80.64	326	eP	P	04 00 54.5	+0.5
	comp=Z,22nm,0.7s,SNR=5.1						
KBA	Koelnbreinsper	80.67	327	eP	P	04 00 55.2	+1.0
	comp=Z,15nm,0.6s,SNR=9.4						
GMM	Mts of Mourne	80.68	342	eP	P	04 00 53.9	0.0
BHOU	Houvegnez	80.69	333	dP	P	04 00 54.5	+0.4
ELMS	Elmsett, Ipswi	80.77	337	⇑eP	P	04 00 54.5	+0.1
ELMS				IAmb	IAmb	04 00 56.0	
	comp=Z,82nm,0.7s						
RUDO	Rudo	80.78	322	⇑iP	P	04 00 54.5	-0.2
CRES	Cresnjev	80.80	325	⇑iP	P	04 00 54.6	-0.1
MRAK	Mrakovica	80.81	324	⇑iP	P	04 00 54.7	-0.2
SCHQ	Schefferville	80.82	16	P	P	04 00 54.7	0.0
	comp=Z,19nm,0.6s,baz=4.6,slow=6.2,SNR=39						
SCHQ				LR	LR	04 41 36.7	
	comp=Z,187nm,18.4s,baz=320,slow=39						
SCHQ	Schefferville	80.82	16	IAmb	IAmb	04 01 15.6	
	comp=Z,80nm,1.5s						
CWF	Charnwood Fore	80.85	338	eP	P	04 00 54.8	-0.1
BCLA	Clavier	80.87	334	dP	P	04 00 54.9	-0.1
	comp=Z,9.9nm,0.9s						
T25A	Trinidad	80.89	48	IAmb	IAmb	04 01 17.3	
	comp=Z,73nm,1.4s						
T25A	Trinidad	80.89	48	P	P	04 00 56.5	+0.8
	baz=316						
STIP	Stip	80.89	319	i P	P	04 00 55.1	-0.1
BLY	Banja Luka	80.89	324	⇑iP	P	04 00 55.7	+0.5
STU	Stuttgart	80.89	331	IAmb	IAmb	04 00 57.2	
	comp=Z,32nm,0.8s						
STU	Stuttgart	80.89	331	eP	P	04 00 55.8	+0.7
	comp=Z,58nm,0.8s,baz=35,slow=5.5						
MYKA	Terra Mystica	80.91	327	i P	P	04 00 55.3	-0.1
	comp=Z,7.4nm,0.6s						
BGES	Gesves	80.97	334	dP	P	04 00 55.4	-0.1
	comp=Z,11nm,1.0s						
BGES				dpP	pP	04 01 12.6	+0.9
VAY	Valandovo	80.98	318	i P	P	04 00 56.8	+1.0
LJU	Ljubljana	81.02	326	⇑iP	P	04 00 55.0	-0.9
SKO	Skopje	81.05	319	i P	P	04 00 57.4	+1.2
WME	Myndd Eilian	81.05	340	eP	P	04 00 56.0	+0.1
CRNS	Crni Vrh	81.10	326	i P	P	04 00 55.8	-0.6
SNF	Seneffe	81.13	334	dP	P	04 00 56.2	-0.1
	comp=Z,24nm,0.9s						
BMRD	Maredsous	81.14	334	bP	P	04 00 56.4	0.0
	comp=Z,22nm,0.9s						
BMRD				dpP	pP	04 01 13.6	+1.0
WATA	Walderalm	81.17	328	i P	P	04 00 57.2	+0.4
	comp=Z,7.9nm,0.6s,SNR=10						
MGRS	Mrkonjic Grad	81.20	324	⇑iP	P	04 00 57.8	+0.9
WTTA	Wattenberg	81.20	328	eP	P	04 00 57.6	+0.5
	comp=Z,17nm,0.7s,SNR=11						
FOEL	Foel Wylfa	81.22	340	⇑eP	P	04 00 56.7	-0.2
FOEL				IAmb	IAmb	04 00 58.1	
	comp=Z,44nm,0.8s						
WLF	Walferdange	81.22	333	dP	P	04 00 57.3	+0.4
	comp=Z,13nm,0.8s						
WLF	Walferdange	81.22	333	eP	P	04 00 57.9	+1.0
	comp=Z,8.8nm,0.8s,baz=35,slow=5.5						
YLL	Llanberis	81.25	340	eP	P	04 00 57.1	+0.2
ABTA	Abfaltersbach	81.28	328	eP	P	04 00 57.4	0.0
	comp=Z,7.7nm,1.0s						
ANMO	Albuquerque	81.28	51	⇑eP	P	04 00 58.4	+0.6
ANMO				pmax	pmax		
	comp=Z,12nm,1.7s						
ANMO	Albuquerque	81.28	51	P	P	04 00 59.0	+1.2
ANMO	Albuquerque	81.28	51	P	P	04 00 59.0	+1.2
	baz=315						
CEY	Cerknica	81.30	326	⇑iP	P	04 00 56.7	-0.7
UPM	Unac-Piva	81.31	322	⇑iP	P	04 00 57.9	+0.2
MOTA	Moosalm	81.35	329	eP	P	04 00 58.0	+0.2
	comp=Z,24nm,0.7s,SNR=15						
RETA	Reutte	81.36	329	eP	P	04 00 58.3	+0.5
	comp=Z,10nm,0.8s,SNR=8.8						
DOU	Dourbes	81.38	334	dP	P	04 00 57.6	-0.1
	comp=Z,7.6nm,1.0s						
DOU				dpP	pP	04 01 14.6	+0.7
SQTA	Sankt Quirin	81.41	329	eP	P	04 00 58.5	+0.4
	comp=Z,12nm,0.6s,SNR=8.2						
UBR	Ueberruh	81.45	329	eP	P	04 00 58.6	+0.3
	baz=35,slow=5.5						
PLIT	Plitvice	81.47	325	i P	P	04 00 58.1	-0.2
BFO	Black Forest	81.58	331	P	P	04 00 59.0	+0.1
BFO				pmax	pmax		
	comp=Z,16nm,0.9s						
BFO	Black Forest	81.58	331	P	P	04 00 59.0	+0.1
BFO	Black Forest	81.58	331	eP	P	04 00 59.2	+0.4
	comp=Z,12nm,0.8s,baz=35,slow=5.5						
STAL	STALIGIAL	81.59	327	IAmb	IAmb	04 00 58.9	
	comp=Z,22nm,0.7s						
UDBI	Udbina	81.69	324	i P	P	04 00 59.0	-0.6
BRY	Bratogost	81.72	322	⇑iP	P	04 00 59.3	-0.5
PDG	Podgorica	81.74	321	⇓P	P	04 00 59.0	-0.7
PDG	Podgorica	81.74	321	⇑iP	P	04 00 59.8	0.0
FETA	Feichten	81.76	329	eP	P	04 01 00.4	+0.4
	comp=Z,12nm,0.8s,SNR=8.9						
KIJV	Kijevo	81.82	324	i P	P	04 01 00.1	-0.1
DAVA	Damuels	81.87	329	eP	P	04 01 00.7	+0.1
	comp=Z,21nm,0.8s,SNR=12						
RICI	Ricice	81.90	323	i P	P	04 00 59.9	-0.7
RABC	Rab	81.94	325	i P	P	04 00 59.7	-1.1
TREB	Trebinje	81.94	322	⇑iP	P	04 00 59.8	-1.1
STRD	Stroud	81.95	338	eP	P	04 01 00.5	-0.1
STRD				IAmb	IAmb	04 01 02.5	
	comp=Z,60nm,0.7s						
DRME	Dracevica, Mon	81.97	321	⇑iP	P	04 01 00.7	-0.3
MCH1	Michaelchurch	81.98	339	⇑eP	P	04 01 00.9	+0.1
MCH1				IAmb	IAmb	04 01 03.4	
	comp=Z,29nm,0.7s						
OHR	Ohrid	82.01	319	i P	P	04 01 01.4	0.0
DBRK	Dubrovnik	82.08	322	i P	P	04 01 01.3	-0.2
SWN1	Swindon	82.08	338	eP	P	04 01 01.8	+0.5
SWN1				IAmb	IAmb	04 01 03.3	
	comp=Z,51nm,0.9s						
HCY	Herceg Novi	82.09	321	⇑iP	P	04 00 59.7	-1.9
319A	Douglas	82.10	55	IAmb	IAmb	04 01 24.1	
	comp=Z,41nm,1.1s						
MAKA	Makarska	82.11	323	i P	P	04 01 01.2	-0.5
STON	Ston	82.12	322	i P	P	04 00 59.9	-1.9
CBKS	Cedar Bluff	82.18	44	P	P	04 01 03.5	+1.2
CBKS				pmax	pmax		
	comp=Z,60nm,1.4s						
CBKS	Cedar Bluff	82.18	44	P	P	04 01 03.5	+1.2
CBKS				IAmb	IAmb	04 01 22.8	
	comp=Z,60nm,1.4s						
CBKS	Cedar Bluff	82.18	44	P	P	04 01 03.4	+1.2
	baz=318						
CTI	Castel Tesino	82.19	328	IAmb	IAmb	04 01 03.0	
	comp=Z,37nm,1.2s						
121A	Cookes Peak, D	82.20	53	IAmb	IAmb	04 01 25.0	
	comp=Z,33nm,1.1s						
MORI	Morici	82.24	324	i P	P	04 01 01.8	-0.6
DAVOX	Davos/Dischmat	82.29	329	P	P	04 01 02.1	-0.7
	comp=Z,18nm,0.8s,baz=12,slow=6.6,SNR=30						
DUGI	Dugi Otok	82.42	324	i P	P	04 01 02.7	-0.6
ZIRJ	Zirje	82.44	324	i P	P	04 01 02.6	-0.8
RAR	Rarotonga	82.45	127	LR	LR	04 29 24.8	
	comp=Z,96nm,21.2s,baz=264,slow=30						
I40A	Norwalk	82.64	35	IAmb	IAmb	04 01 18.4	
	comp=Z,18nm,0.3s						
HSIG		82.69	58	P	P	04 01 06.0	+1.1
N35A	Tabor	82.70	40	IAmb	IAmb	04 01 25.3	
	comp=Z,28nm,0.9s						
TEOL	Teolo	82.75	327	IAmb	IAmb	04 01 07.4	
	comp=Z,31nm,0.8s						
TUE	Stuetta	82.75	329	IAmb	IAmb	04 01 06.8	
	comp=Z,24nm,0.8s						
SALO	Salr	83.00	328	IAmb	IAmb	04 01 07.6	
	comp=Z,46nm,0.9s						
SANT	Santorini	83.15	313	P	P	04 01 07.5	+0.2
SENIN	Lac Senin/Sane	83.61	330	P	P	04 01 09.8	0.0
ZCCA	Zocca	83.86	327	IAmb	IAmb	04 01 20.3	
	comp=Z,35nm,0.9s						
MSTX	Muleshoe	84.10	49	P	P	04 01 13.2	+1.0
	baz=317						
MNTX	Cornudas Mount	84.22	52	IAmb	IAmb	04 01 34.7	
	comp=Z,35nm,1.4s						
MNTX	Cornudas Mount	84.22	52	P	P	04 01 13.6	+0.7
	baz=316						
JSA	Saint Aubin	84.28	337	eP	P	04 01 12.5	-0.2
JSA				IAmb	IAmb	04 01 14.7	
	comp=Z,37nm,0.9s						
GLMI	Grayling	84.35	31	P	P	04 01 13.8	+0.6
AQU	L'Aquila	84.46	324	P	P	04 01 14.5	+0.6
AQU				pmax	pmax		
	comp=Z,26nm,0.9s						
AQU	L'Aquila	84.46	324	P	P	04 01 14.5	+0.6
AQU				IAmb	IAmb	04 01 16.2	
	comp=Z,26nm,0.9s						
AQU	L'Aquila	84.46	324	⇑iP	P	04 01 13.9	0.0
BNI	Bardonecchia	84.95	330	IAmb	IAmb	04 01 18.1	
	comp=Z,16nm,0.8s						
P40A	Paris	85.45	39	IAmb	IAmb	04 01 43.4	
	comp=Z,36nm,1.3s						
SSB	Saint Sauveur	85.54	331	P	P	04 01 19.6	+0.4
SSB				pmax	pmax		
	comp=Z,18nm,0.8s						
SSB	Saint Sauveur	85.54	331	P	P	04 01 19.6	+0.4
SSB				IAmb	IAmb	04 01 21.2	
	comp=Z,18nm,0.8s						
PMOR	Pomariorio Ree	85.56	114	eT	T	05 34 58.9	
	comp=Z,28nm,0.2s						
J47A	Sunmer	85.59	32	IAmb	IAmb	04 01 22.0	
	comp=Z,33nm,0.8s						
WMOK	Wichita Mounta	85.74	46	IAmb	IAmb	04 01 44.1	
	comp=Z,26nm,1.4s						
WMOK	Wichita Mounta	85.74	46	P	P	04 01 20.8	+0.4
	baz=319						
HDIL	Hopedale	85.90	37	IAmb	IAmb	04 01 43.8	
	comp=Z,28nm,0.9s						
HDIL	Hopedale	85.90	37	P	P	04 01 21.3	+0.2

	baz=324						
PPT	Papeete	86.24	117	LR	LR	04 34 05.2	
	comp=Z,646nm,19.7s,baz=286,slow=32						
PPT2	Papeete2	86.26	117	*e*S	S	04 11 50.8	-3.0
	comp=Z,231nm,25.0s						
PPT2	Papeete2	86.26	117	*e*LR	LR	04 28 31.8	
	comp=Z,1µm,23.8s,baz=316						
PPT2	Papeete2	86.26	117	*e*T	T	05 35 50.3	
	comp=Z,5.4nm,0.3s						
TUL1	Leonard	86.43	44	P	P	04 01 24.0	+0.3
	baz=321						
TAOE	Nuku Hiva Isla	86.80	105	*e*LR	LR	04 27 55.3	
	comp=Z,4µm,32.3s						
PLVO	Plevna	86.91	27	IAmb	IAmb	04 01 27.1	
	comp=Z,21nm,0.8s						
TX32	Lajitas Array	86.95	53	IAmb	IAmb	04 01 48.2	
	comp=Z,20nm,1.1s						
TXAR	Lajitas Array	86.95	53	P	P	04 01 27.1	+0.6
	comp=Z,2.1nm,0.7s,baz=296,slow=3.3,SNR=26						
TXAR				PKKPbc	PKKPbc	04 19 18.4	+1.0
	comp=Z,0.3nm,0.7s,baz=142,slow=3.4,SNR=5.1						
TXAR	Lajitas Array	86.95	53	P	P	04 01 28.1	+1.6
TXAR	Lajitas Array	86.95	53	P	P	04 01 28.1	+1.6
HHAR	Hobbs	87.09	42	IAmb	IAmb	04 01 49.2	
	comp=Z,18nm,1.2s						
MEH	Mehetia	87.47	116	*e*T	T	05 37 21.0	
	comp=Z,33nm,0.2s						
D62A	Allapoint, All	87.48	21	IAmb	IAmb	04 01 29.9	
	comp=Z,21nm,0.7s						
BFZ	Birch Farm	87.56	155	P	P	04 01 30.1	+1.3
BFZ				IAmb	IAmb	04 01 56.4	
	comp=Z,34nm,1.0s						
U40A	Yellville	87.57	41	IAmb	IAmb	04 01 30.6	
	comp=Z,14nm,0.9s						
U40A	Yellville	87.57	41	P	P	04 01 29.2	-0.1
	baz=322,SNR=9.3						
P46A	Rosedale	87.59	36	IAmb	IAmb	04 01 49.7	
	comp=Z,24nm,0.9s						
MNTQ	Montreal, Queb	87.61	24	IAmb	IAmb	04 01 31.2	
	comp=Z,19nm,0.9s						
E62A	Clayton Lake	87.78	21	IAmb	IAmb	04 01 59.2	
	comp=Z,33nm,1.4s						
T42A	Van Buren	87.90	40	IAmb	IAmb	04 01 51.9	
	comp=Z,19nm,1.2s						
OLIL	Olney	87.92	37	IAmb	IAmb	04 01 55.9	
	comp=Z,14nm,0.8s						
BATG	Bathurst New B	88.06	19	P	P	04 01 32.3	+0.9
BATG				IAmb	IAmb	04 01 33.6	
	comp=Z,23nm,0.8s						
LONY	Lake Ozonia	88.10	25	P	P	04 01 32.2	+0.6
	baz=334						
PQI	Presque Isle	88.13	20	IAmb	IAmb	04 01 54.9	
	comp=Z,18nm,1.0s						
S44A	Carbondale	88.23	38	IAmb	IAmb	04 01 54.7	
	comp=Z,22nm,0.8s						
SIUC	Southern Illin	88.23	38	IAmb	IAmb	04 01 57.4	
	comp=Z,30nm,0.9s						
F62A	Pittston Farm,	88.32	22	IAmb	IAmb	04 01 34.6	
	comp=Z,24nm,1.1s						
M52A	Chesterland	88.40	31	P	P	04 01 33.8	+0.7
PBMO	Poplar Bluff	88.42	40	IAmb	IAmb	04 01 58.3	
	comp=Z,13nm,0.8s						
MIAR	Mount Ida	88.63	43	P	P	04 01 34.8	+0.5
	baz=322						
LCAR	Lake Charles	88.63	40	P	P	04 01 35.3	+1.0
P49A	Miami Univ. Ec	88.73	34	IAmb	IAmb	04 01 55.1	
	comp=Z,26nm,1.1s						
P49A	Miami Univ. Ec	88.73	34	P	P	04 01 34.8	+0.1
	baz=327,SNR=6.4						
NCB	Newcomb	88.79	25	IAmb	IAmb	04 01 36.6	
	comp=Z,12nm,0.8s						
ACSO	Alum Creek Sta	88.86	33	P	P	04 01 35.9	+0.6
	baz=328,SNR=6.3						
J58A	Remsen	88.99	26	IAmb	IAmb	04 01 56.0	
	comp=Z,27nm,1.2s						
M54A	Oil Creek Stat	89.07	30	P	P	04 01 36.7	+0.4
	baz=330,SNR=7.1						
WCI	Wyandotte Cave	89.14	36	P	P	04 01 37.0	+0.4
WCI				pmax	pmax		
	comp=Z,17nm,1.1s						
WCI	Wyandotte Cave	89.14	36	P	P	04 01 37.0	+0.4
WCI				IAmb	IAmb	04 02 01.1	
	comp=Z,17nm,1.1s						
WCI	Wyandotte Cave	89.14	36	P	P	04 01 36.9	+0.3
	baz=326						
J59A	Piesco	89.16	26	IAmb	IAmb	04 01 38.2	
	comp=Z,14nm,0.8s						
N54A	Moraine State	89.42	30	IAmb	IAmb	04 02 00.1	
	comp=Z,24nm,0.8s						
N54A	Moraine State	89.42	30	P	P	04 01 38.5	+0.6
	baz=330,SNR=7.5						
O52A	Adamsville	89.43	32	IAmb	IAmb	04 01 60.0	
	comp=Z,25nm,1.0s						
ACCN	Adirondack Com	89.50	25	IAmb	IAmb	04 01 59.5	
	comp=Z,32nm,1.4s						
O53A	New Philadelph	89.56	32	P	P	04 01 39.2	+0.7
	baz=329,SNR=7.0						
WVL	Waterville	89.63	22	IAmb	IAmb	04 01 40.8	
	comp=Z,20nm,0.9s						
LMN	Caledonia Moun	89.69	18	P	P	04 01 39.2	+0.1
P52A	Corning	89.72	33	P	P	04 01 39.5	+0.1
	baz=329						
BINY	Binghamton	89.79	27	P	P	04 01 40.2	+0.5
	baz=333						
J61A	Chester	89.88	24	IAmb	IAmb	04 01 42.3	
	comp=Z,19nm,0.8s						
O54A	Avella	89.94	31	IAmb	IAmb	04 01 42.6	
	comp=Z,21nm,0.8s						
FFD	Franklin Falls	90.05	24	IAmb	IAmb	04 01 43.3	
	comp=Z,19nm,0.8s						
KSPA	Keystone Colle	90.43	27	IAmb	IAmb	04 01 44.4	
	comp=Z,14nm,0.8s						
TBI	Tubuai	90.44	121	*e*S	S	04 12 29.9	-3.0
	comp=Z,227nm,28.8s						
TBI	Tubuai	90.44	121	*e*LR	LR	04 30 08.7	
	comp=Z,906nm,33.8s,baz=337						
TBI	Tubuai	90.44	121	*e*T	T	05 41 01.1	
	comp=Z,31nm,0.3s						
SSPA	Standing Stone	90.49	29	P	P	04 01 43.8	+0.9
SSPA				IAmb	IAmb	04 01 45.6	
	comp=Z,18nm,0.8s						
SSPA	Standing Stone	90.49	29	P	P	04 01 43.2	+0.3
	baz=331						
O56A	Blue Knob Stat	90.56	30	P	P	04 01 43.9	+0.6
	baz=331,SNR=6.0						
MCWV	Mont Chateau	90.60	31	P	P	04 01 43.3	-0.1
	baz=330						
N58A	Sunbury	90.73	28	IAmb	IAmb	04 01 48.2	
	comp=Z,17nm,0.8s						
T50A	Nancy	90.78	36	IAmb	IAmb	04 02 06.4	
	comp=Z,8.5nm,0.7s						
Q54A	Coxs Mills	90.79	32	IAmb	IAmb	04 02 05.2	
	comp=Z,20nm,1.1s						
HRV	Adam Dziewonsk	90.95	24	P	P	04 01 46.1	+1.1
HRV				pmax	pmax		
	comp=Z,24nm,1.0s						
HRV	Adam Dziewonsk	90.95	24	P	P	04 01 46.1	+1.1
HRV	Adam Dziewonsk	90.95	24	P	P	04 01 46.0	+1.1
	baz=336						
N59A	State Game Lan	91.00	28	P	P	04 01 45.8	+0.5
	baz=333,SNR=8.3						
ODNJ	Ogdensburg	91.25	27	IAmb	IAmb	04 01 50.3	
	comp=Z,11nm,0.8s						
LUPA	Lehigh Univers	91.42	28	IAmb	IAmb	04 01 49.1	
	comp=Z,12nm,1.0s						
PAL	Palisades	91.55	26	IAmb	IAmb	04 01 49.7	
	comp=Z,16nm,0.8s						
PAL	Palisades	91.55	26	P	P	04 01 48.4	+0.6
	baz=334						
BRNJ	Basking Ridge	91.62	27	P	P	04 01 49.8	+1.7
BRNJ				IAmb	IAmb	04 02 15.3	
	comp=Z,16nm,1.1s						
KEST	Kesra	91.69	323	P	P	04 01 48.1	-0.6
	comp=Z,10nm,0.8s,baz=146,slow=0.5,SNR=14						
KEST				LR	LR	04 47 48.3	
	comp=Z,786nm,19.8s,baz=342,slow=39						
KEST	Kesra	91.69	323	P	P	04 01 49.1	+0.4
KEST				IAmb	IAmb	04 01 50.2	
	comp=Z,17nm,1.0s						
PBRG	Braganca	92.32	337	*e*P	P	04 01 51.0	-0.4
	comp=Z,41nm,2.0s						
MVO	Moncorvo	93.00	337	*e*P	P	04 01 55.3	+0.7
POLO	Lamas de Olo	93.02	338	*e*P	P	04 01 54.6	-0.1
PVRL	Vila Real	93.09	338	*e*P	P	04 01 54.2	-0.8
	comp=Z,51nm,1.3s						
ESBB	Sonseca Array	93.42	334	IAmb	IAmb	04 01 57.7	
	comp=Z,7.9nm,0.8s						
ESDC	Sonseca Array	93.42	334	P	P	04 01 56.8	+0.2
	comp=Z,5.0nm,0.7s,baz=20,slow=4.1,SNR=33						
ESDC				PP	PP	04 05 41.8	+1.5
	comp=Z,2.7nm,1.1s,baz=36,slow=6.9,SNR=4.5						
ESDC				LR	LR	04 49 41.4	
	comp=Z,371nm,19.3s,baz=330,slow=39						
ESDC	Sonseca Array	93.42	334	P	P	04 01 56.8	+0.2
PVIS	Viseu	93.66	338	*e*P	P	04 01 57.2	-0.4
MTE	Manteigas	93.85	337	*e*P	P	04 01 58.4	-0.1
COI	Coimbra	94.28	338	*e*P	P	04 02 00.2	-0.2
PSBE	So Bento	95.03	338	*e*P	P	04 02 03.3	-0.6
PESTR	Estremoz	95.28	337	*e*P	P	04 02 05.5	+0.5
KMBO	Kilima Mbogo	101.81	279	P	Pdif	04 02 35.2	+0.2
	comp=Z,3.8nm,0.8s,baz=43,slow=7.6,SNR=14						
TORD	Torodi Ar. Bea	114.42	317	PKP	PKiKP	04 07 19.8	-1.4
	comp=Z,1.3nm,0.8s,baz=10,slow=3.1,SNR=5.6						
TORD				PP	PP	04 08 14.7	-2.5
	comp=Z,4.7nm,0.9s,baz=6.0,slow=8.2,SNR=6.8						
KOWA	Kowa	116.00	323	PP	PP	04 08 26.1	-2.1
	baz=16,slow=13						
VNDA	Vanda	119.47	175	PKP	PKPdf	04 07 28.9	-0.1
	comp=Z,0.5nm,1.1s,baz=282,slow=5.3,SNR=3.7						
SDV	Santo Domingo	121.48	39	PKPdf	PKPdf	04 07 35.0	0.0
DBIC	Dimbokro	123.23	320	PKP	PKPdf	04 07 37.4	-0.8
	comp=Z,4.6nm,0.7s,baz=76,slow=4.1,SNR=6.4						
DBIC				PP	PP	04 09 14.0	-4.0
	comp=Z,7.2nm,0.8s,baz=19,slow=8.6,SNR=4.9						
MAW	Mawson	123.85	207	PKP	PKPdf	04 07 37.3	-0.3
	comp=Z,1.5nm,0.7s,baz=319,slow=5.7,SNR=3.7						
BOSA	Boshof	127.78	263	PKP	PKPdf	04 07 46.2	-0.4
	comp=Z,3.0nm,0.9s,baz=343,slow=22,SNR=1.9						
ETMB	Extrema	139.73	46	*e*P	PKiKP	04 08 12.2	+0.6
SAML	Samuel	140.57	42	PKHKP	PKPpre	04 08 04.9	
SAML	Samuel	140.57	42		PKPpre	04 08 04.9	
LPAZ	La Paz	143.79	55	PKP	PKPbc	04 08 15.4	+0.5
	comp=Z,2.9nm,0.9s,baz=24,slow=11,SNR=2.7						
LPAZ	La Paz	143.79	55	PKIKP	PKPdf	04 08 17.0	-0.2
LPAZ	La Paz	143.79	55	PKPdf	PKPdf	04 08 17.0	-0.2
SNAA	Sanae	145.24	199	PKPdf	PKPbc	04 08 16.8	-0.4
SNAA	Sanae	145.24	199	PKIKP	PKPab	04 08 17.5	+0.2
SNAA	Sanae	145.24	199		PKPab	04 08 17.5	+0.2
PB11	IPOC Station P	145.40	61		PKPab	04 08 19.8	+0.2
VILB	Vilhena	145.49	41	*e*P	PKiKP	04 08 22.9	-0.5
CLDB	Colider	145.61	32	*e*P	PKiKP	04 08 22.9	-0.7
PDRB	Porto dos Gac	145.89	34	*e*P	PKiKP	04 08 22.9	-1.3
PB08	IPOC Station P	146.00	61	PKPbc	PKPab	04 08 23.4	+1.3
SMTB	Santa Maria do	146.30	17	*e*P	PKiKP	04 08 24.1	-1.0
PB07	IPOC Station P	146.63	63	PKPbc	PKPab	04 08 24.7	+0.5
H03N2	Juan Fernandez	146.73	89	T	T	06 53 17.7	
	baz=300,slow=77,SNR=16						
H03N3	Juan Fernandez	146.74	89	T	T	06 53 17.9	
	baz=300,slow=77,SNR=14						
H03N1	Juan Fernandez	146.74	89	T	T	06 53 18.7	
	baz=300,slow=77,SNR=17						
VNA2	Neumayer--Watz	146.82	198	PKPdf	PKPbc	04 08 21.7	-0.2
VNA3	Neumayer Olymp	147.09	196	PKPdf	PKPbc	04 08 22.1	-0.6
NBRF	Rio Formoso -	147.13	355	*e*P	PKPab	04 08 25.6	-0.4
VNA1	Neumayer--Stat	147.22	198	PKPdf	PKPbc	04 08 23.1	+0.2
PB06	IPOC Station P	147.51	64	PKPbc	PKPbc	04 08 26.2	+0.8
LVC	Limon Verde	147.89	63	PKP2	PKiKP	04 08 28.3	-0.3
LVC	Limon Verde	147.89	63	PKPbc	PKiKP	04 08 28.3	-0.3
LVC	Limon Verde	147.89	63	*e*P	PKPbc	04 08 26.8	+0.1
NBAN	Anadia - AL	148.17	357	*e*P	PKiKP	04 08 28.6	-0.3
SNDB	Serra Nova Dou	148.26	25	*e*P	PKiKP	04 08 28.6	-0.5
GDU01	Guandu, BA	152.19	3	*e*P	PKPbc	04 08 34.6	-2.3
BDFB	Brasilia	152.71	22	PKP	PKPdf	04 08 29.5	-1.6
	comp=Z,1.7nm,0.6s,baz=195,slow=4.0,SNR=3.8						
BDFB				PKPbc	PKiKP	04 08 38.3	0.0
	comp=Z,10nm,0.7s,baz=206,slow=3.3,SNR=18						
BDFB				PKPab	PKPab	04 08 48.7	-0.3
	comp=Z,13nm,0.7s,baz=255,slow=7.2,SNR=12						
BDFB	Brasilia	152.71	22		PKPbc	04 08 38.1	0.0
JANB	Januaria	152.99	14	*e*P	PKPbc	04 08 36.4	-2.3
AQDB	Aquidauana	154.12	41	PKPdf	PKPdf	04 08 32.8	0.0
AQDB				PKPbc	PKPbc	04 08 40.8	-0.2
RIB01	Linhares ES	157.69	6	*e*P	PKPdf	04 08 42.4	+4.8
CPUP	Villa Florida	157.92	52	*e*P	PKPdf	04 08 42.4	+4.7
CPSB	Cacapava Do Su	163.23	53	*e*P	PKPdf	04 08 49.6	+6.2

NEIC ***01*** *04:09:23.3±0.9, 22°.4S±0°.2×179°.6W±0°.2, h590^{km}±5^{km}, mb4.4/19 Error ellipse: s-maj=25.3km s-min=20.0km az=145.0*

IDC ***01*** *04:09:23.2±1.2, 22°.33S×179°.68W, h590^{km}±12^{km}, mb3.5/9, mb1 3.7/11, mb1mx3.4/32, mbtmp4.4/11, Error ellipse: s-maj=17.6km s-min=13.9km az=152.0*

ISC 01 04:09:22.0±0.7**, 22°.4S**±0°.1×**179°.6W**±0°.1**, h579**^{km}**, n47, σ0^{s}.89**/48**, mb4.3**/20**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.15	334	P	P	04 10 56.3	+1.3
	26nm,0.3s,baz=191,slow=6.6,SNR=70						
MSVF	Nonsavu	5.15	334	P	P	04 10 56.9	+1.8
RAO	Raoul Island	6.98	168	P	P	04 11 11.4	+0.6
	156nm,0.3s,baz=317,slow=23,SNR=9.2						
MARNC	Mare, Loyalty	11.51	272	P	P	04 11 56.5	+0.8
DZM	Mont Dzumac	12.92	269	P	P	04 12 11.8	+1.6
	0.8nm,0.3s,baz=238,slow=3.5,SNR=8.6						
URZ	Urewera	16.04	189	P	P	04 12 39.0	-1.5
	0.8nm,0.3s,baz=300,slow=24,SNR=2.1						
ARMA	Armidale	26.91	247	P	P	04 14 19.1	+0.9
ARMA				IAmb	IAmb	04 14 21.1	
	comp=Z,4.8nm,0.8s						
EIDS	Eidsvold	26.93	258	P	P	04 14 19.2	+0.8
EIDS				IAmb	IAmb	04 14 20.3	
	comp=Z,5.1nm,0.7s						
CAN	Canberra	30.21	238	P	P	04 14 47.2	+0.5
CTAO	Charters Tower	31.86	268	P	P	04 15 01.2	+0.3
CTAO				IAmb	IAmb	04 15 02.6	
	comp=Z,9.7nm,0.7s						
TOO	Toolangi	33.57	235	P	P	04 15 15.9	+0.8
TOO				IAmb	IAmb	04 15 33.1	
	comp=Z,20nm,1.4s						
STKA	Stephens Creek	35.62	246	P	P	04 15 33.6	+1.3
	comp=Z,4.7nm,0.4s,baz=96,slow=10,SNR=18						
STKA	Stephens Creek	35.62	246	P	P	04 15 32.7	+0.4
COEN	Coen	36.26	277	P	P	04 15 38.1	+0.4
COEN				IAmb	IAmb	04 15 43.2	
	comp=Z,8.8nm,1.0s						
BBOO	Buckleboo	40.37	245	P	P	04 16 10.5	-0.3
BBOO				IAmb	IAmb	04 16 11.4	
	comp=Z,5.3nm,0.5s						
AS31	Alice Springs	42.65	259	P	P	04 16 28.8	-0.1
AS31				IAmb	IAmb	04 16 30.3	
	comp=Z,4.9nm,0.4s						
ASAR	Alice Springs	42.65	259	P	P	04 16 29.4	+0.5
	comp=Z,8.8nm,0.5s,baz=94,slow=7.2,SNR=173						
ASAR				PcP	PcP	04 18 06.7	-0.8
	comp=Z,0.9nm,0.6s,baz=106,slow=4.2,SNR=4.4						
ASAR				ScP	ScP	04 21 03.6	-0.1
	comp=Z,0.5nm,0.9s,baz=112,slow=4.3,SNR=3.4						
ASAR				S	S	04 22 09.3	-1.8
	comp=Z,1.1nm,0.9s,baz=96,slow=16,SNR=6.2						
ASAR	Alice Springs	42.65	259	P	P	04 16 29.1	+0.3
WR0	Warramunga Arr	42.69	264	P	P	04 16 28.9	-0.4
WR0				IAmb	IAmb	04 16 29.6	
	comp=Z,8.0nm,1.1s						
WB0	Warramunga Arr	42.87	265	P	P	04 16 30.4	-0.2
WB2	Warramunga Arr	42.87	264	P	P	04 16 30.4	-0.3
WB2				IAmb	IAmb	04 16 31.3	
	comp=Z,12nm,0.8s						
WRA	Warramunga Arr	42.88	264	P	P	04 16 30.5	-0.2
	comp=Z,8.9nm,0.5s,baz=102,slow=8.9,SNR=219						
WRA				ScP	ScP	04 21 05.5	+0.8
	comp=Z,1.3nm,0.9s,baz=93,slow=3.7,SNR=6.2						
WRA				S	S	04 22 11.9	-2.6
	comp=Z,0.2nm,0.6s,baz=101,slow=14,SNR=1.5						
FORT	Forrest	47.17	248	P	P	04 17 03.4	+0.1
MTN	Manton Dam	47.72	273	P	P	04 17 07.1	-0.4
MTN				IAmb	IAmb	04 17 08.1	
	comp=Z,13nm,0.7s						
KNRA	Kununurra	49.07	268	P	P	04 17 17.3	-0.3
FITZ	Fitzroy Crossi	51.31	264	P	P	04 17 33.9	0.0
MORW	Morawa	57.73	249	P	P	04 18 18.8	+0.2
TOLI2	Tolitoli	62.56	284	P	P	04 18 50.4	-0.4
TOLI2				IAmb	IAmb	04 18 52.6	
	comp=Z,7.1nm,0.5s						
QSPA	South Pole Qui	67.66	180	P	P	04 19 22.9	+0.9
	comp=Z,1.8nm,0.6s,baz=232,slow=0.2,SNR=10						
QSPA	South Pole Qui	67.66	180	IAmb	IAmb	04 19 24.1	
	comp=Z,2.4nm,0.8s						
MJAR	Matsushiro Arr	70.88	325	P	P	04 19 40.8	-0.7
	comp=Z,1.9nm,0.6s,baz=150,slow=6.4,SNR=7.6						
KSRS	Korea Array	77.34	320	P	P	04 20 17.6	-0.2
	comp=Z,0.8nm,0.6s,baz=129,slow=5.3,SNR=2.3						
PETK	Petropavlovsk-	77.75	346	P	P	04 20 19.5	-0.1
	comp=Z,2.1nm,0.5s,baz=95,slow=11,SNR=6.6						
TXAR	Lajitas Array	89.35	58	P	P	04 21 18.0	+0.1
	comp=Z,0.5nm,0.9s,baz=213,slow=8.3,SNR=4.4						
CMAR	Chiang Mai Arr	89.35	290	P	P	04 21 18.1	+0.1
	comp=Z,1.8nm,0.7s,baz=135,slow=3.7,SNR=9.8						
ARCES	ARCESS Array B	130.51	349	PKP	PKPdf	04 27 25.9	-0.9
	comp=Z,2.0nm,0.8s,baz=43,slow=1.7,SNR=1.3						
FINES	FINESS Array B	137.15	342	PKP	PKPdf	04 27 38.5	-1.0
	comp=Z,2.7nm,1.0s,baz=93,slow=2.9,SNR=3.4						
HFS	Hagfors	141.16	349	PKhKP	PKPpre	04 27 40.2	
	comp=Z,1.5nm,0.3s,baz=52,slow=2.9,SNR=20						
AKASG	Malin Array Be	143.91	329	PKP	PKPbc	04 27 50.1	-1.2
	comp=Z,2.0nm,0.4s,baz=44,slow=4.4,SNR=21						
AKASG	Malin Array Be	143.91	329		PKPbc	04 27 49.7	-1.5
BRTR	Keskin Array B	146.94	309	PKPbc	PKPbc	04 27 59.6	-1.0
	comp=Z,1.1nm,0.6s,baz=146,slow=4.8,SNR=5.4						
BURAR	Bucovina Array	147.93	328	PKPbc	PKPbc	04 28 02.1	-0.7
OSTC	Ostas	149.30	340	*e*PKP	PKiKP	04 28 06.4	-0.4
DPC	Dobruska-Polom	149.44	340	*e*PKP	PKPbc	04 28 06.5	+0.1
CLL	Collm	149.54	344	PKPbc	PKPbc	04 28 05.2	-1.3
PRU	Pruhonice	150.31	341	*e*PKP	PKPbc	04 28 08.0	-0.3
GERES	GERESS Array B	151.58	341	PKPbc	PKPbc	04 28 10.2	-1.2
	comp=Z,0.6nm,0.8s,baz=101,slow=1.4,SNR=4.6						

UPA 01 04:33:03.4±1.1**, 4°.94N**×**82°.56W, h42**^{km}±95^{km}**, MW4.9, 1D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CACAO	El Cacao, Vera	2.92	35	*e*P	Pn	04 33 47.8	+0.4
CACAO				*e*S	Sn	04 34 20.2	-1.1
CACAO				*e*S	Sn	04 34 21.3	-0.1
PTPM	Petroterminale	3.26	354	*i* P	Pn	04 33 51.4	-0.6
PTPM				*e*S	Sn	04 34 27.9	-1.7
BCO2	Palmira	3.76	0	*e*P	Pn	04 33 59.7	+0.6
BCO2				*e*S	Sn	04 34 42.2	+0.1
BRU2	Volcan	3.83	358	⇓*i*P	Pn	04 33 59.9	-0.2
	baz=181,slow=10						
BRU2				*e*S	Sn	04 34 43.9	-0.1
MLIR3	Monte Lirio, C	3.84	356	*e*P	Pn	04 34 00.5	+0.3
MLIR3				*e*S	Sn	04 34 46.2	+2.2
JTS	Las Juntas de	5.83	336	*e*P	Pn	04 34 27.2	-0.2
JTS				*e*S	Sn	04 35 31.3	-1.6

IDC ***01*** *04:46:23.9±2.2, 20°.67S×169°.30E, h0^{km}, mb3.9/7, mb1 4.2/8, mb1mx3.9/26, mbtmp3.9/8, ML2.9/1, MS3.6/3, Ms1 3.7/3, ms1mx3.1/36, Error ellipse: s-maj=71.0km s-min=25.7km az=143.0*

NOU ***01*** *04:46:28.9, 21°.02S×169°.09E, h0^{km}, mb5.0/11, Southeast of Loyalty Islands*

NEIC ***01*** *04:46:29.7±2.7, 21°.14S±0°.08×169°.3E±0°.1, h46^{km}±8^{km}, mb4.4/5, Error ellipse: s-maj=16.7km s-min=11.4km az=110.0*

ISC 01 04:46:27.4±0.8**, 21°.18S**±0°.07×**169°.39E**±0°.09**, h30**^{km}**, n35, σ1^{s}.53**/33**, mb4.2**/9**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	1.31	256		Pn	04 46 50.0	+0.4
MARNC	Mare, Loyalty	1.31	256	P	Pn	04 46 50.2	+0.5
LIFNC	LIFOU	2.05	281		Pn	04 46 59.3	-0.6
LIFNC	LIFOU	2.05	281	P	Pn	04 46 58.6	-1.3
PINNC	Pines Island,	2.31	231		Pn	04 47 04.0	+0.6
YATNC	Mamie plateau,	2.49	249	P	Pn	04 47 07.3	+1.3
OUENC	Ouen Island, N	2.67	242		Pn	04 47 09.4	+0.9
OUENC	Ouen Island, N	2.67	242	P	Pn	04 47 10.0	+1.5
DZM	Mont Dzumac	2.88	251	*e*Pn	Pn	04 47 13.2	+1.7
	19nm,0.2s						
DZM				*e*Sn	Sn	04 47 46.5	+1.2
	59nm,0.2s						
DZM	Mont Dzumac	2.88	251	Pn	Pn	04 47 13.0	+1.6
	1.6nm,0.3s,baz=127,slow=13,SNR=74						
DZM				Sn	Sn	04 47 47.6	+2.3
	14nm,0.3s,baz=279,slow=23,SNR=11						
DZM	Mont Dzumac	2.88	251		Pn	04 47 12.0	+0.5
DZM	Mont Dzumac	2.88	251	P	Pn	04 47 13.1	+1.6
ONTNC	Ouen Toro	2.96	247		Pn	04 47 13.8	+1.5
ONTNC	Ouen Toro	2.96	247	P	Pn	04 47 14.9	+2.5
RTV	Rentapao	3.49	345	P	Pn	04 47 21.8	+2.1
DVP	Devils Point	3.62	341	P	Pn	04 47 24.1	+2.7
KOUNC	Koumac, New Ca	4.82	276	P	Pn	04 47 40.0	+2.0
SANVU	Saraoutou	6.07	340	Pn	Pn	04 47 57.1	+2.0
URZ	Urewera	18.28	160	LR	LR	04 56 21.3	
	comp=Z,162nm,18.2s,baz=31,slow=32						
WB2	Warramunga Arr	32.80	266	P	P	04 52 56.0	-2.3
WB2				IAmb	IAmb	04 52 56.6	
	comp=Z,8.5nm,1.4s						
WRA	Warramunga Arr	32.81	266	P	P	04 52 57.8	-0.6
	comp=Z,0.6nm,0.6s,baz=91,slow=8.0,SNR=8.2						
ASAR	Alice Springs	32.85	259	P	P	04 53 00.1	+1.2
	comp=Z,0.8nm,0.8s,baz=88,slow=9.1,SNR=10						
ASAR	Alice Springs	32.85	259	P	P	04 52 58.9	+0.1
FITZ	Fitzroy Crossi	41.23	266	LR	LR	05 11 01.7	
	comp=Z,73nm,18.5s,baz=136,slow=36						
FITZ	Fitzroy Crossi	41.23	266	P	P	04 54 10.3	+0.3
VNDA	Vanda	56.51	182	LR	LR	05 18 17.0	
	comp=Z,70nm,18.8s,baz=274,slow=34						
SBA	Scott Base	56.74	181	P	P	04 56 09.1	+1.1
SBA				IAmb	IAmb	04 56 11.2	
	comp=Z,4.0nm,0.9s						
MJAR	Matsushiro Arr	64.53	332	P	P	04 56 59.3	-2.3
	comp=Z,0.8nm,0.5s,baz=159,slow=8.9,SNR=4.4						
MJAR	Matsushiro Arr	64.53	332	IAmb	IAmb	04 57 04.1	
	comp=Z,3.5nm,1.2s						
QSPA	South Pole Qui	68.89	180	P	P	04 57 29.7	+0.5
KLR	Kul'dur	77.69	336	P	P	04 58 19.0	-2.0
	comp=Z,1.6nm,0.6s,baz=90,slow=4.0						
CMAR	Chiang Mai Arr	79.43	295	P	P	04 58 31.0	-0.3
	comp=Z,1.1nm,0.2s,baz=142,slow=3.1,SNR=1.1						
SONM	Songino Array	88.85	323	P	P	04 59 19.4	+0.6
	comp=Z,0.7nm,1.0s,baz=132,slow=2.1,SNR=2.0						
NVAR	Mina Array Bea	89.97	48	P	P	04 59 23.7	-0.7
	comp=Z,0.4nm,0.7s,baz=226,slow=6.2,SNR=3.9						
GERES	GERESS Array B	146.25	331	PKPbc	PKPbc	05 06 04.9	-0.1
	comp=Z,0.7nm,0.6s,baz=46,slow=2.7,SNR=7.8						

UPA ***01*** *04:47:46.6±2.0, 8°.56N×77°.86W, h12^{km}±5^{km}, MD3.6, MW4.5*

RSNC ***01*** *04:47:46.9±0.7, 8°.51N×77°.87W, h12^{km}±8^{km}, ML2.3, Mw3.2*

ISC 01 04:47:46.6±1.0**, 8°.59N**±0°.05×**77°.85W**±0°.02**, h16**^{km}±7^{km}**, n21, σ1^{s}.28**/40**, 1D, Panama-Colombia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UPD2	Meteti	0.17	256	⇓*i*P	Pg	04 47 50.8	-0.1
UPD2				*i* S	Sg	04 47 53.2	-0.5
CHPO	Chepo, Panama	1.38	295	*i* P	Pn	04 48 09.4	-1.8
CHPO				*i* S	Sn	04 48 27.8	-1.3
PTAC	Punta Ardita,	1.43	178	*e*P	Pn	04 48 10.4	-1.6
PTAC				*e*S	Sn	04 48 28.5	-1.9
PTAC	Punta Ardita,	1.43	178	*e*P	Pn	04 48 10.7	-1.2
PTAC				*i* S	Sn	04 48 28.8	-1.7
LCBC	Los crdobas,	1.49	80	*e*P	Pb	04 48 14.5	+0.6
LCBC				*e*S	Sg	04 48 35.9	+1.2
LCBC				*i*		04 48 40.5	
	comp=Z,84nm,0.3s						
TABO3	Taboga, Panama	1.70	277	*i* P	Pn	04 48 15.1	-0.5
TABO3				*i* S	Sn	04 48 35.6	-1.4
UPA	Univ. de Panam	1.71	283	*i* P	Pb	04 48 17.5	-0.1
UPA				*i* S	Sn	04 48 37.8	+0.5
ARRA3	Arraijan, Pana	1.83	282	*e*P	Pn	04 48 16.7	-0.7
ARRA3				*i* S	Sn	04 48 40.0	-0.2
ZANG	Zanguenga, Cho	2.03	281	*i* P	Pn	04 48 20.1	-0.1
ZANG				*i* S	Sn	04 48 46.2	+1.1
BCIP	Isla Barro Col	2.05	286	*e*P	Pn	04 48 19.8	-0.6
BCIP				*e*S	Sn	04 48 46.0	+0.3
BCIP				*i*		04 49 00.7	
	comp=Z,73nm,0.5s						
BCIP	Isla Barro Col	2.05	286	*i* P	Pn	04 48 20.6	+0.2
BCIP				*i* S	Sn	04 48 47.1	+1.5
MLIR	Monte Lirio	2.08	288	*e*P	Pn	04 48 21.1	+0.2
MLIR				*i* S	Sn	04 48 46.3	-0.2
MOTC	Monteria, Cord	2.17	85	*e*P	Pn	04 48 22.3	+0.2
MOTC				*e*S	Sn	04 48 49.5	+0.9
MOTC				*i*		04 48 53.0	
	comp=Z,9.5nm,0.2s						
MONA	Monteria	2.17	85	*e*P	Pn	04 48 22.4	+0.2

VTON	El Valle, Cocl	2.24	271	*i* P	Pn	04 48 23.7	+0.6
VTON				*i* S	Sn	04 48 52.6	+2.2
UREC	San Jos de Ur	2.44	110	*e*P	Pn	04 48 25.9	+0.1
UREC				*e*S	Sn	04 48 55.1	-0.2
UREC				*i*		04 48 58.1	
	comp=Z,13nm,0.3s						
TOSI3	Tonosi	2.82	246	*e*P	Pn	04 48 32.3	+1.2
SJCC	San Jacinto, C	2.94	64	*e*P	Pn	04 48 32.7	0.0
SJCC				*e*S	Sn	04 49 06.7	-1.0
SJCC				*i*		04 49 10.3	
	comp=Z,4.3nm,0.4s						
CBOC	Ciudad Bolivar	3.26	146	*e*P	Pn	04 48 39.2	+1.9
CBOC				*e*S	Sn	04 49 17.9	+1.9
CBOC				*i*		04 49 22.8	
	comp=Z,4.2nm,0.5s						
SMLC	San Martn de	3.74	86	*e*P	Pn	04 48 42.7	-1.1
SMLC				*e*S	Sn	04 49 23.3	-4.2
SMLC				*i*		04 49 30.7	
	comp=Z,6.8nm,0.3s						
OCAC	Ocana	4.50	94	*e*P	Pn	04 48 54.3	0.0
OCAC				*e*S	Sn	04 49 46.4	+0.1

IDC 01 04:57:02.7±1.8**, 7°.50S×124°.20E, h0**km**, mb3.6**/1**, mb1 3.7**/3**, mb1mx3.4**/38**, mbtmp3.5**/3**, ML3.6**/2**, Error ellipse: s-maj=195.3km s-min=30.3km az=59.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	15.80	143	Pn	Pn	05 00 47.8	+1.1
	0.3nm,0.3s,baz=316,slow=13,SNR=12						
WRA				Sn	Sn	05 03 29.5	-13
	0.2nm,0.3s,baz=307,slow=21,SNR=4.3						
ASAR	Alice Springs	18.58	151	P	P	05 01 20.8	-0.6
	0.2nm,0.3s,baz=331,slow=12,SNR=6.3						
ASAR				S	Sn	05 04 35.6	-14
	0.1nm,0.3s,baz=335,slow=39,SNR=1.7						
MKAR	Makanchi Array	65.62	330	P	P	05 07 48.6	0.0
	0.3nm,0.5s,baz=139,slow=7.3,SNR=6.0						

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*INET **01** 05:02:11.1, 9°.11N×84°.56W, h20km, MW3.6*

UCR 01 05:02:11.0±1.4**, 9°.13N×84°.61W, h10**km**, MW3.8, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAFE	Finca La Fe, P	0.74	336	*e*P	Pg	05 02 25.3	+0.1
LCR2	La Lucha 2	0.85	44	*e*P	Pg	05 02 26.3	-1.3
SRA1	San Ramn	0.96	8	*e*P	Pg	05 02 28.2	-1.3
RIMA	Rio Macho	0.97	49	*e*P	Pg	05 02 28.4	-1.4
HDC3	Heredia 3	1.00	30	*e*P	Pg	05 02 29.4	-0.9
CRPO	Crater poas	1.13	20	*e*P	Pg	05 02 31.1	-1.7
RAFA	San Farael, Vo	1.14	44	*e*P	Pg	05 02 32.6	-0.4
INDI	Punta indio, G	1.14	310	*e*P	Pb	05 02 31.5	-1.4
EDPN	Palmar Norte	1.15	98	*e*P	Pb	05 02 32.5	-0.5
JTS	Las Juntas de	1.20	344	*e*P	Pb	05 02 32.1	-1.8
EDBA	Buenos Aires	1.32	88	*e*P	Pn	05 02 33.2	-2.4
ARE1	Arenal 1	1.33	355	*e*P	Pn	05 02 34.5	-1.2
CEDE	Laguna Cedeo	1.35	356	*e*P	Pn	05 02 35.3	-0.7
COVE	Coope Vega, Sa	1.59	7	*e*P	Pn	05 02 38.6	-0.7
CUI	Cuipilapa	1.61	340	*i* P	Pn	05 02 38.9	-0.7
VMAR	Armenia, Volca	1.75	343	*e*P	Pn	05 02 41.3	-0.1

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*NIC **01** 05:10:20.5±0.0, 34°.94N×33°.54E, h45km, Ml2.6/6*

*DDA **01** 05:10:20.0, 35°.05N×33°.56E, h28km±1km, ML2.4*

*GII **01** 05:10:21.3±0.0, 34°.84N×34°.11E, h8km, MD1.8/2*

*ISK **01** 05:10:22.5, 35°.19N×33°.43E, h0km, ML2.4/9, Suspected Mining explosion.*

ISC 01 05:10:20.4±1.2**, 34°.87N**±0°.03×**33°.60E**±0°.03**, h45**km±6km**, n37,** σ1§**14**/61**, 4C-1D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MVOU	Mavrovouni	0.14	9	⇑*i*P	Pn	05 10 27.7	-0.1
MVOU				AML	AML	05 10 33.3	
	2.3nm,0.3s						
MVOU				AML	AML	05 10 33.3	
	2.3nm,0.3s						
MVOU				S	Sn	05 10 33.5	+0.5
MVOU				AML	AML	05 10 34.2	
	1.9nm,0.2s						
MVOU				AML	AML	05 10 34.2	
	1.9nm,0.2s						
AKIN	Akıncılar- Kıb	0.18	321	PG	Pn	05 10 27.3	-0.8
CSS	Mathiatis	0.24	292	PG	Pn	05 10 27.9	-0.6
CSS	Mathiatis	0.24	292	⇑*i*P	Pn	05 10 28.1	-0.5
CSS				S	Sn	05 10 34.1	-0.2
ASGA	Asgata	0.31	254	⇓*i*P	Pn	05 10 28.9	-0.2
ASGA				AML	AML	05 10 35.8	
	3.3nm,0.2s						
ASGA				AML	AML	05 10 35.8	
	3.3nm,0.2s						
ASGA				S	Sn	05 10 36.1	+0.9
ASGA				AML	AML	05 10 37.1	
	3.6nm,0.4s						
ASGA				AML	AML	05 10 37.1	
	3.6nm,0.4s						
ATHAL	Athalassa	0.32	327	*e*P	Pn	05 10 29.1	-0.1
ATHAL				S	Sn	05 10 34.8	-0.7
PARAL	Paralimni	0.38	71	*e*P	Pn	05 10 30.4	+0.5
PARAL				S	Sn	05 10 38.5	+1.9
PARAL				AML	AML	05 10 40.8	
	2.1nm,0.5s						
PARAL				AML	AML	05 10 40.8	
	2.1nm,0.5s						
PARAL				AML	AML	05 10 41.1	
	1.5nm,0.4s						
PARAL				AML	AML	05 10 41.1	
	1.5nm,0.4s						
LEF	Lefka	0.64	293	*i* P	Pn	05 10 32.3	-0.8
LEF				*i* S	Sn	05 10 41.8	-0.4
LEF	Lefka	0.64	293	PG	Pn	05 10 32.7	-0.4
LEF				SG	Sn	05 10 40.0	-2.2
NATA	Nata	0.86	264	⇑*e*P	Pn	05 10 36.0	-0.1
NATA				AML	AML	05 10 39.9	
	0.9nm,0.1s						
ALFC	Alefka	0.87	289	⇑*e*P	Pn	05 10 35.4	-0.8
ALFC				S	Sn	05 10 46.9	-1.0
ALFC				AML	AML	05 10 47.4	
	1.0nm,0.3s						
ALFC				AML	AML	05 10 47.4	
	1.0nm,0.3s						
ALFC				AML	AML	05 10 48.0	
	0.7nm,0.5s						
ALFC				AML	AML	05 10 48.0	
	0.7nm,0.5s						
AKMS	Akamas	1.05	278	P	Pn	05 10 38.3	-0.4
AKMS				S	Sn	05 10 52.3	0.0
AKMS				AML	AML	05 10 53.2	
	0.3nm,0.4s						
AKMS				AML	AML	05 10 53.2	
	0.3nm,0.4s						
AKMS				AML	AML	05 10 56.2	
	0.4nm,0.2s						
AKMS				AML	AML	05 10 56.2	
	0.4nm,0.2s						
AKKU	Akkuyu-Mersin	1.28	358	PG	Pn	05 10 41.8	-0.1
GULN	MERSIN_Gulnar	1.31	358	*i* P	Pn	05 10 41.5	-0.7
GULN				*i* S	Sn	05 10 57.3	-1.1
IKL	Isikli	1.36	3	PG	Pn	05 10 42.9	0.0
IKL				SG	Sn	05 10 58.7	-1.1
TEVE	Tevekalti-Mers	1.56	355	PN	Pn	05 10 46.1	+0.3
KEBE	Keben-Mersin	1.57	3	PN	Pn	05 10 46.5	+0.6
KIZK	Mersin	1.66	15	*i* P	Pn	05 10 47.6	+0.6
KIZK	Mersin	1.66	15	PN	Pn	05 10 47.5	+0.5
GAZI	Gazipasa	1.72	323	*i* P	Pn	05 10 46.3	-1.5
GAZI				*i* S	Sn	05 11 07.1	-1.5
ERMK	Ermenek	1.85	343	*i* P	Pn	05 10 48.9	-0.9
ERMK				*i* S	Sn	05 11 11.3	-0.8
OSC2	CSNet OBS 4	2.11	212	P	Pn	05 10 53.8	+0.6
MERS	Mersin	2.13	20	PN	Pn	05 10 54.9	+1.4
HDMB	Hadim	2.28	337	PN	Pn	05 10 56.2	+0.5
YAYL	Yayladag	2.35	60	*i* P	Pn	05 10 55.5	-1.0
YAYL				*i* S	Sn	05 11 21.9	-2.4
YAYL				IAML		05 11 24.0	
	comp=E,26nm,2.1s						
OSC1	CSNet OBS 1	2.37	235	P	Pn	05 10 58.1	+1.4
GEM	Giv'at Ha'Em	2.38	134	Pn	Pn	05 10 56.6	-0.3
GEM				Sn	Sn	05 11 21.8	-3.1
MMA0B	Mount Meron ar	2.38	141	Pn	Pn	05 10 57.0	0.0
MMA0B				Sn	Sn	05 11 23.6	-1.4
NATI	Neve Ativ	2.39	132	Pn	Pn	05 10 56.5	-0.5
NATI				Sn	Sn	05 11 22.4	-2.6
KKBE	Karaman, Kazim	2.40	347	*i* P	Pn	05 10 57.7	+0.4
KKBE				*i* S	Sn	05 11 26.9	+1.3
OFRI	`Ofer	2.52	152	Pn	Pn	05 10 59.9	+1.0
OFRI				Sn	Sn	05 11 28.0	-0.4
KERG	Konya-Eregli	2.57	9	*i* P	Pn	05 11 01.3	+1.7
KERG				*i* S	Sn	05 11 30.4	+0.7
MMLI	Mount Malkishu	2.86	148	Pn	Pn	05 11 03.8	+0.2
MMLI				Sn	Sn	05 11 36.4	-0.4
SEDI	Konya, Seydise	2.98	330	*i* P	Pn	05 11 07.3	+2.1
SEDI				*i* S	Sn	05 11 41.7	+2.0
HMDT	Nahal Hemdat	3.07	148	Pn	Pn	05 11 06.7	+0.4
HMDT				Sn	Sn	05 11 41.6	-0.1
DSI	Dead Sea	3.61	155	Pn	Pn	05 11 14.1	+0.3
YTIR	Yattir	3.72	160	Pn	Pn	05 11 16.7	+1.3
YTIR				Sn	Sn	05 11 59.6	+1.5

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*NOU **01** 05:15:01.0, 30°.47S×138°.38E, h0km, MLv2.9/6, South Australia*

*IDC **01** 05:15:03.1±2.5, 29°.85S×139°.05E, h0km, mb1 2.6/3, mb1mx2.6/22, mbtmp2.3/3, ML2.2/3, Error ellipse: s-maj=95.7km s-min=15.6km az=49.0*

ISC 01 05:15:01.0±1.0**, 30°.45S**±0°.08×**138°.41E**±0°.07**, h10**km**, n9,** σ1§**21**/11**, South Australia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCRK	Leigh Creek	0.17	271	P	Pg	05 15 03.4	-1.2
HTT	Hallett	3.00	172	P	Pn	05 15 49.4	+0.7
STKA	Stephens Creek	3.08	118	Pn	Pn	05 15 50.6	+0.9
	0.1nm,0.3s,baz=311,slow=18,SNR=6.6						
STKA				Pg	Pg	05 15 58.9	-1.1
	0.3nm,0.3s,baz=307,slow=17,SNR=10						
STKA				Sn	Sn	05 16 28.4	+1.8
	0.3nm,0.3s,baz=318,slow=16,SNR=5.0						
STKA				Lg	Lg	05 16 37.7	
	0.6nm,0.3s,baz=311,slow=20,SNR=4.0						
STKA	Stephens Creek	3.08	118	P	Pn	05 15 50.8	+1.1
BBOO	Buckleboo	3.09	220	P	Pn	05 15 50.7	+0.9
OOD	Oodnadatta	3.56	317	P	Pn	05 15 57.6	+1.3
MULG	Mulgathing	3.76	271	P	Pn	05 15 59.9	+0.8
ASAR	Alice Springs	7.86	328	Pn	Pn	05 16 56.2	+0.8
	0.0nm,0.3s,baz=144,slow=13,SNR=1.3						
ASAR				Sn	Sn	05 18 23.8	-0.7
	0.1nm,0.3s,baz=145,slow=22,SNR=6.4						
WRA	Warramunga Arr	11.09	340	Pn	Pn	05 17 39.1	-0.6
	0.1nm,0.3s,baz=153,slow=13,SNR=5.9						

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*MOS **01** 05:21:10.0±0.8, 62°.29N×152°.11W, h111km, mb4.8/41, Error ellipse: s-maj=11.0km s-min=6.8km az=98.7*

*NEIC **01** 05:21:11.4±1.5, 62°.21N±0°.03×152°.03W±0°.07, h107km±3km, Error ellipse: s-maj=4.8km s-min=4.6km az=51.0*

*AEIC **01** 05:21:12±1.4, 62°.21N±0°.03×152°.00W±0°.07, h106km±4km, ML4.4, mb4.8/166(NEIC), ML4.6/160(NEIC), Mwr4.4/64(NEIC), Error ellipse: s-maj=4.8km s-min=4.6km az=46.0*

*IDC **01** 05:21:12.1±1.4, 62°.34N×152°.11W, h109km±11km, mb4.1/30, mb1 4.3/34, mb1mx4.2/55, mbtmp4.5/34, MS3.3/6, Ms1 3.3/6, ms1mx2.9/49, Error ellipse: s-maj=13.7km s-min=7.9km az=23.0*

*NEIC **01** 05:21:12, 62°.22N×152°.01W, h106km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.73; $M_{\theta\theta}$0.68; $M_{\phi\phi}$0.05; $M_{r\theta}$0.97; $M_{\theta\phi}$0.89; $M_{\phi r}$4.89; Fault plane solution: $M_0$5.11000×10^{15} NP1:ϕ_s192.71000°, δ86.55000°, λ-100.69000°. NP2:ϕ_s85.01000°, δ11.22000°, λ-18.03000°. Principal axes: T 4.9647, Plg41.0000°, Azm293.0000°; N 0.2795, Plg11.0000°, Azm193.0000°; P -5.2442, Plg47.0000°, Azm92.0000°;*

ISC 01 05:21:10.5±0.4**, 62°.22N**±0°.03×**152°.01W**±0°.03**, h101**km±3km**, h100**km**:pP-P, n643,** σ1§**12**/687**, mb4.8**/143**, 12C-9D, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKT	Skwentna	0.33	136	Pn	Pn	05 21 26.7	+1.4
SKT				Sn	Sn	05 21 38.4	+1.9
SKT	Skwentna	0.33	136	P	Pn	05 21 26.7	+1.4
	baz=317,SNR=1000						
PPLA	Purkeypile	0.69	353		Pn	05 21 29.7	+1.6
PPLA	Purkeypile	0.69	353		Sn	05 21 43.3	+2.1
PPLA	Purkeypile	0.69	353	P	Pn	05 21 29.7	+1.6
	baz=173,SNR=957						
STLK	Strandline Lak	0.73	173		Pn	05 21 29.2	+0.9
CUT	Chulitna	0.84	76		Pn	05 21 31.0	+1.8
CUT					Sn	05 21 45.5	+2.2
CUT				IAML		05 21 47.6	
	comp=E,45μm,0.5s						
CUT	Chulitna	0.84	76	P	Pn	05 21 30.7	+1.5
	baz=258,SNR=410						
L20K	Farewell, AK	0.91	288		Pn	05 21 31.3	+1.3
L20K					Sn	05 21 45.7	+0.9
L20K	Farewell, AK	0.91	288	P	Pn	05 21 31.1	+1.0
	baz=106,SNR=1000						
SPCG	Spurr Capps Gl	0.93	180		Pn	05 21 31.1	+0.7
SPCG					Sn	05 21 46.4	+1.2
CRP	Crater Peak	0.96	184		Pn	05 21 31.9	+1.3
SPCP	Crater Peak Br	0.96	184		Pn	05 21 31.7	+1.1
SPCP					Sn	05 21 47.5	+1.6
SUA	Susitna One	0.97	141	Pn	Pn	05 21 32.1	+1.4
SUA					Sn	05 21 47.4	+1.4
SUA				IAML		05 21 48.5	
	comp=N,7μm,0.9s						
SUA				IAML		05 21 50.9	
	comp=E,9μm,0.6s						
SUA	Susitna One	0.97	141	P	Pn	05 21 31.9	+1.2
	baz=322,SNR=237						
SPBG	Spurr Blockage	0.98	190		Pn	05 21 32.2	+1.4
SPCN	Chakachatna No	1.00	185		Pn	05 21 32.3	+1.3
M22K	Willow	1.01	117		Pn	05 21 32.4	+1.4
M22K					Sn	05 21 48.7	+2.2
M22K	Willow	1.01	117	P	Pn	05 21 32.2	+1.3
	baz=298,SNR=1000						
SPCR	Spurr Chakacha	1.02	185		Pn	05 21 32.3	+1.0
SPCR					Sn	05 21 48.2	+1.3
SPCR	Spurr Chakacha	1.02	185	P	Pn	05 21 32.4	+1.0
	baz=5.3,SNR=253						
SPU	Mount Spurr	1.04	181		Pn	05 21 32.5	+1.0
M19K	Big River Lodg	1.16	255		Pn	05 21 34.0	+1.3
M19K	Big River Lodg	1.16	255	P	Pn	05 21 33.7	+0.9
	baz=73						
CAST	Castle Rocks	1.21	358		Pn	05 21 34.6	+1.3
CAST					Sn	05 21 51.3	+0.8
CAST	Castle Rocks	1.21	358	P	Pn	05 21 34.4	+1.1
	baz=178						
L19K	White Mountain	1.33	270	Pn	Pn	05 21 36.3	+1.5
L19K	White Mountain	1.33	270	P	Pn	05 21 35.8	+1.0
	baz=87,SNR=1000						
FIS	Fire Island	1.38	141		Pn	05 21 37.6	+2.4
FIS				IAML		05 22 02.3	
	comp=N,15μm,0.7s						
KTH	Kantishna Hill	1.43	20	Pn	Pn	05 21 37.4	+1.4
KTH					Sn	05 21 56.6	+1.3
TRF	Thorofare Moun	1.47	32	Pn	Pn	05 21 38.6	+2.1
TRF				IAML		05 22 01.8	
	comp=N,7μm,0.4s						
TRF				IAML		05 22 02.3	
	comp=E,8μm,0.6s						
TRF	Thorofare Moun	1.47	32	P	Pn	05 21 38.0	+1.5
	baz=213,SNR=412						
K20K	Telida	1.48	321		Pn	05 21 38.0	+1.4
K20K				IAML		05 21 57.7	
	comp=E,4μm,1.2s						
K20K	Telida	1.48	321	P	Pn	05 21 37.7	+1.1
	baz=140,SNR=1000						
PMR	Palmer	1.50	113	P	Pn	05 21 37.3	+0.6
PMR						05 21 57.5	
PMR	Palmer	1.50	113	Pn	Pn	05 21 37.3	+0.6
PMR					Sn	05 21 57.5	+0.9
PMR				IAML		05 21 59.7	
	comp=E,6μm,0.6s						
PMR				IAML		05 22 01.8	
	comp=N,7μm,0.4s						
PMR	Palmer	1.50	113	P	Pn	05 21 37.0	+0.3
	baz=296,SNR=550						
CAPN	Captain Cook N	1.51	164		Pn	05 21 39.3	+2.5
CAPN				IAML		05 22 04.9	
	comp=E,10μm,1.0s						
CAPN				IAML		05 22 06.6	
	comp=N,8μm,0.7s						
CAPN	Captain Cook N	1.51	164	P	Pn	05 21 39.4	+2.5
	baz=345,SNR=5.6						
GHO	Glory Hole Cre	1.52	106		Pn	05 21 38.4	+1.2
GHO				IAML		05 22 04.1	
	comp=N,12μm,0.4s						
RC01	Rabbit Creek A	1.57	135		Pn	05 21 38.6	+1.0
RC01					Sn	05 21 58.9	+0.7
RC01				IAML		05 22 03.0	
	comp=N,6μm,0.6s						
RC01				IAML		05 22 03.1	
	comp=E,8μm,0.6s						
RC01	Rabbit Creek A	1.57	135	P	Pn	05 21 38.3	+0.7
	baz=317,SNR=305						
DFR	Drift River	1.66	192		Pn	05 21 39.8	+0.9
CHUM	Lake Minchumin	1.68	355		Pn	05 21 40.2	+1.3
CHUM	Lake Minchumin	1.68	355	P	Pn	05 21 40.2	+1.3
	baz=175,SNR=617						
RDWB	Redoubt West	1.78	193		Pn	05 21 41.6	+1.2
SML	Sawmill	1.79	102		Pn	05 21 41.2	+0.9
SML					Sn	05 22 04.2	+1.1
SML				IAML		05 22 11.3	
	comp=N,10μm,0.6s						
SML	Sawmill	1.79	102	P	Pn	05 21 40.8	+0.5
	baz=285,SNR=817						
RSO	Redoubt South	1.80	192		Pn	05 21 41.8	+1.1
N19K	Bonanza Creek	1.84	221	Pn	Pn	05 21 42.2	+1.1
N19K	Bonanza Creek	1.84	221	P	Pn	05 21 42.1	+0.9
	baz=39,SNR=247						
RED	Redoubt Volcan	1.84	192		Pn	05 21 42.3	+1.1
RED					Sn	05 22 06.7	+2.2
KNK	Knik Glacier	1.87	114		Pn	05 21 41.8	+0.4
KNK	Knik Glacier	1.87	114	P	Pn	05 21 41.6	+0.2
	baz=297,SNR=215						
RND	Reindeer	1.88	49	P	Pn	05 21 42.7	+1.1
RND	Reindeer	1.88	49		Pn	05 21 42.7	+1.1
RND				IAML		05 22 07.6	
	comp=N,4μm,0.5s						
RND				IAML		05 22 07.6	
	comp=E,4μm,1.1s						
SLKM	Skilak Lake	1.92	152		Pn	05 21 42.6	+0.6
SLKM					Sn	05 22 07.0	+0.8
BPAW	Bear Paw Mtn.	1.95	13		Pn	05 21 43.3	+0.9
BPAW	Bear Paw Mtn.	1.95	13	P	Pn	05 21 43.3	+0.9
	baz=194,SNR=427						
TTA	Tatalina	1.98	293	P	Pn	05 21 44.0	+1.1
TTA	Tatalina	1.98	293	Pn	Pn	05 21 44.0	+1.1
TTA	Tatalina	1.98	293	P	Pn	05 21 43.9	+1.0
	baz=109,SNR=859						
SVW2	Sparrevohn	2.04	238		Pn	05 21 44.5	+1.0
SVW2					Sn	05 22 09.8	+1.0
O22K	Cooper Landing	2.06	147		Pn	05 21 44.9	+1.1
O22K	Cooper Landing	2.06	147	P	Pn	05 21 44.5	+0.7
	baz=329,SNR=52						
MCK	McKinley	2.07	41	P	Pn	05 21 45.4	+1.4
MCK	McKinley	2.07	41		Pn	05 21 45.4	+1.4
MCK				IAML		05 22 13.5	
	comp=N,3μm,0.5s						
MCK				IAML		05 22 17.1	
	comp=E,2μm,0.4s						
MCK	McKinley	2.07	41	P	Pn	05 21 45.1	+1.1
	baz=224,SNR=372						
O20K	Slope Mountain	2.16	188		Pn	05 21 46.8	+1.5
O20K					Sn	05 22 12.0	+0.2
O20K	Slope Mountain	2.16	188	P	Pn	05 21 46.7	+1.5
	baz=7.7,SNR=22						
J20K	Nowinta River	2.19	335		Pn	05 21 46.7	+1.2
J20K				IAML		05 22 13.5	
	comp=E,3μm,0.6s						
J20K				IAML		05 22 14.5	
	comp=N,2μm,0.8s						
J20K	Nowinta River	2.19	335	P	Pn	05 21 46.3	+0.8
	baz=153,SNR=669						
PWL	Port Wells	2.23	126		Pn	05 21 45.9	-0.1
PWL				IAML		05 22 14.5	
	comp=E,7μm,0.8s						
PWL	Port Wells	2.23	126	P	Pn	05 21 45.6	-0.4
	baz=309,SNR=221						
SCM	Sheep Creek Mo	2.24	98	P	Pn	05 21 46.7	+0.4
SCM	Sheep Creek Mo	2.24	98		Pn	05 21 46.7	+0.4
SCM				IAML		05 22 24.2	
	comp=N,8μm,0.6s						
SCM	Sheep Creek Mo	2.24	98	P	Pn	05 21 46.3	+0.1
	baz=282,SNR=510						
IVE	Iliamna Volcan	2.26	193		Pn	05 21 47.6	+1.1
BWN	Browne	2.28	29		Pn	05 21 48.1	+1.5
BWN					Sn	05 22 15.7	+1.3
BWN				IAML		05 22 25.8	
	comp=N,2μm,0.7s						
BWN				IAML		05 22 43.4	
	comp=E,3μm,1.0s						
O19K	Port Alsworth	2.32	210		Pn	05 21 47.9	+0.8
O19K				IAML		05 22 16.4	
	comp=N,1μm,0.5s						
O19K				IAML		05 22 22.1	
	comp=E,1μm,0.5s						
O19K	Port Alsworth	2.32	210	P	Pn	05 21 48.1	+0.9
	baz=28						
ILS	Iliamna Low So	2.33	193		Pn	05 21 48.9	+1.5
SEW	Seward	2.46	149		Pn	05 21 49.5	+0.5
SEW	Seward	2.46	149		Sn	05 22 17.9	-0.6
SEW	Seward	2.46	149	P	Pn	05 21 49.4	+0.4
	baz=331,SNR=54						
BRLK	Bradley Lake	2.52	167		Pn	05 21 50.9	+1.0
BRLK				IAML		05 22 23.6	
	comp=E,1μm,1.1s						
BRLK				IAML		05 22 27.3	
	comp=N,1μm,0.6s						
BRSE	Bradley Lake S	2.56	165		Pn	05 21 51.5	+1.1
BRSE	Bradley Lake S	2.56	165	P	Pn	05 21 50.7	+0.3
	baz=347,SNR=22						
HOM	Homer	2.57	176		Pn	05 21 51.9	+1.3
HOM				IAML		05 22 27.2	
	comp=N,3μm,0.8s						
HOM				IAML		05 22 27.7	
	comp=E,3μm,1.0s						
HOM	Homer	2.57	176	P	Pn	05 21 51.7	+1.1
	baz=356						
OPT	Oil Point	2.64	194		Pn	05 21 53.2	+1.8
P19K	Oil Pt	2.64	194		Pn	05 21 53.6	+2.1
P19K				IAML		05 22 28.2	
	comp=N,3μm,0.5s						
P19K				IAML		05 22 29.7	
	comp=E,3μm,0.5s						
P19K	Oil Pt	2.64	194	P	Pn	05 21 53.2	+1.7
	baz=12,SNR=14						
GLI	Glacier Island	2.71	118		Pn	05 21 51.7	-0.6
GLI				IAML		05 22 26.9	
	comp=N,5μm,0.5s						
GLI	Glacier Island	2.71	118	P	Pn	05 21 51.5	-0.8
	baz=302,SNR=42						
CNPM	China Poot	2.73	172		Pn	05 21 52.7	+0.1
CNPM				IAML		05 22 28.9	
	comp=E,2μm,1.0s						
CNPM				IAML		05 22 31.6	
	comp=N,1μm,0.4s						
NEA2	Nenana	2.73	28		Pn	05 21 53.4	+0.8
NEA2	Nenana	2.73	28	P	Pn	05 21 52.9	+0.3
	baz=210,SNR=436						
M24K	Tolsona, Glenn	2.74	90		Pn	05 21 53.7	+0.9
M24K	Tolsona, Glenn	2.74	90	P	Pn	05 21 53.5	+0.7
	baz=275,SNR=291						
JPK	Jack Peak	2.84	112		Pn	05 21 53.9	-0.2
WRH	Wood River Hil	2.87	36		Pn	05 21 55.1	+0.6
MLY	Manley	2.88	11		Pn	05 21 55.8	+1.2
MLY				IAML		05 22 31.7	
	comp=N,929nm,0.9s						
MLY	Manley	2.88	11	P	Pn	05 21 55.6	+1.0
	baz=192,SNR=1000						
VMT	TAPS Tl Valdez	2.92	110		Pn	05 21 55.0	-0.2
AUQ	Augustine Qik’	2.95	194		Pn	05 21 57.3	+1.7
I21K	Tanana	2.98	0		Pn	05 21 57.0	+1.2
I21K				IAML		05 22 33.0	
	comp=E,1μm,0.9s						
I21K	Tanana	2.98	0	P	Pn	05 21 57.0	+1.2
	baz=180,SNR=380						
KLU	Klutina	2.98	101		Pn	05 21 55.9	-0.1
KLU				IAML		05 22 30.6	
	comp=N,3μm,0.5s						
KLU				IAML		05 22 46.9	
	comp=E,3μm,0.7s						
KLU	Klutina	2.98	101	P	Pn	05 21 55.6	-0.3

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      baz=287,SNR=119
FID   Port Fidalgo       3.04 117          Pn       05 21 55.8 -0.9
FID                                IAML             05 22 35.7
      comp=N,4µm,0.4s
PS11  TAPS Pump St11     3.07  90          Pn       05 21 57.2  0.0
CCB   Clear Creek Bu     3.09  36          Pn       05 21 58.0 +0.7
CCB                                IAML             05 22 52.5
      comp=E,701nm,0.7s
PAX   Paxson             3.12  73  P       Pn       05 21 58.9 +1.0
PAX   Paxson             3.12  73          Pn       05 21 58.9 +1.0
PAX   Paxson             3.12  73  P       Pn       05 21 58.3 +0.5
      baz=259,SNR=281
DIV   Divide             3.17 107          Pn       05 21 58.2 -0.3
I23K  Minto, Yukon-K     3.17  21          Pn       05 21 59.7 +1.3
I23K  Minto, Yukon-K     3.17  21  P       Pn       05 21 59.4 +1.0
      baz=203,SNR=268
HDA   Harding Lake       3.17  44          Pn       05 21 59.0 +0.5
HDA                                IAML             05 22 38.4
      comp=N,2µm,0.5s
HDA                                IAML             05 22 38.5
      comp=E,2µm,0.4s
HDA   Harding Lake       3.17  44  P       Pn       05 21 58.9 +0.5
      baz=228,SNR=260
HARP  HAARP              3.21  84          Pn       05 21 59.8 +0.8
HARP  HAARP              3.21  84  P       Pn       05 21 59.8 +0.8
      baz=270,SNR=204
MDM   Murphy Dome        3.23  30          Pn       05 21 59.9 +0.7
P18K  Big Mountain,      3.24 210          Pn       05 22 00.5 +1.0
P18K  Big Mountain,      3.24 210  P       Pn       05 22 00.5 +1.0
      baz=28,SNR=16
TCOL  CIGO, UAF Yank     3.25  33          Pn       05 22 00.6 +1.1
TCOL                               IAML             05 22 45.7
      comp=E,2µm,0.5s
TCOL                               IAML             05 22 58.7
      comp=N,3µm,0.5s
TCOL  CIGO, UAF Yank     3.25  33  P       Pn       05 22 00.3 +0.8
      baz=217,SNR=200
COLA  College            3.25  33d iP      Pn       05 22 00.0 +0.5
COLA                               pmax    pmax
      comp=Z,291nm,1.0s
COLA  College            3.25  33          Pn       05 22 00.1 +0.5
COLA  College            3.25  33  IAML             05 22 45.7
      comp=Z,3µm,0.5s
COLA                               IAML             05 22 58.6
      comp=Z,3µm,0.5s
PS08  TAPS Pump Stn8     3.30  43          Pn       05 22 00.6 +0.4
GCSA  Galena City Sc     3.35 321          Pn       05 22 01.2 +0.4
GCSA  Galena City Sc     3.35 321  P       Pn       05 22 02.0 +1.2
      baz=137,SNR=30
Q19K  Cape Douglas,      3.40 194          Pn       05 22 02.5 +0.9
Q19K                               IAML             05 23 32.5
      comp=E,1µm,1.2s
Q19K                               IAML             05 23 32.7
      comp=N,1µm,1.0s
Q19K  Cape Douglas,      3.40 194  P       Pn       05 22 02.5 +0.9
      baz=13
IL31                     3.44  40          Pn       05 22 02.9 +0.9
ILAR  Eielson Array      3.44  40  P       Pn       05 22 02.5 +0.4
      comp=N,36nm,0.3s,baz=223,slow=14,SNR=685
ILAR                               S       Sn       05 22 42.0  0.0
      comp=N,80nm,0.3s,baz=287,slow=31,SNR=7.3
EYAK  Cordova Ski Ar     3.45 116  Pn      Pn       05 22 01.4 -0.7
EYAK  Cordova Ski Ar     3.45 116  P       Pn       05 22 01.2 -0.9
      baz=302,SNR=11
H21K  Melozitna Rive     3.47 355          Pn       05 22 03.8 +1.3
H21K                               IAML             05 22 44.4
      comp=N,513nm,0.5s
H21K  Melozitna Rive     3.47 355  P       Pn       05 22 03.6 +1.1
      baz=174
PS07  TAPS Pump Stn7     3.52  26          Pn       05 22 04.0 +0.9
POKR  Poker Plat Res     3.56  33          Pn       05 22 04.4 +0.9
POKR  Poker Plat Res     3.56  33  P       Pn       05 22 04.5 +0.9
      baz=217,SNR=52
N25K  Chitina, Valde     3.56  97          Pn       05 22 04.1 +0.3
N25K                               IAML             05 22 46.9
      comp=E,2µm,0.6s
N25K  Chitina, Valde     3.56  97  P       Pn       05 22 03.5 -0.3
      baz=283,SNR=113
RIDG  Independent Ri     3.61  62          Pn       05 22 05.8 +1.3
RIDG                               IAML             05 22 57.6
      comp=N,2µm,0.8s
RIDG  Independent Ri     3.61  62  P       Pn       05 22 05.7 +1.3
      baz=248,SNR=335
BMRM  Bremner River      3.76 106          Pn       05 22 05.8 -0.5
BMRM                               IAML             05 23 10.9
      comp=E,2µm,0.4s
BMRM  Bremner River      3.76 106  P       Pn       05 22 05.5 -0.9
      baz=293,SNR=32
H23K  Yukon River        3.78  16          Pn       05 22 08.0 +1.4
H23K                               IAML             05 22 52.5
      comp=E,684nm,1.1s
H23K                               IAML             05 22 52.9
      comp=N,453nm,0.8s
H23K  Yukon River        3.78  16  P       Pn       05 22 07.9 +1.2
      baz=198,SNR=398
PS06  TAPS Pump Stn6     3.79  14          Pn       05 22 08.2 +1.5
J25K  Salcha River,      3.83  48          Pn       05 22 07.7 +0.3
J25K  Salcha River,      3.83  48  P       Pn       05 22 07.7 +0.3
      baz=234,SNR=589
IMAR  Indian Mountai     3.86 349  Pn      Pn       05 22 08.8 +1.2
MENT  Mentasta           3.91  76          Pn       05 22 08.9 +0.5
DOT   Dot Lake           3.91  65          Pn       05 22 08.9 +0.5
Q23K  Middleton Isla     3.94 133  P       Pn       05 22 09.4 +0.7
      baz=318
GLB   Gilahina Butte     3.97  98          Pn       05 22 09.1 -0.1
GLB                                IAML             05 23 13.3
      comp=E,1µm,0.5s
GLB                                IAML             05 23 14.6
      comp=N,2µm,0.6s
SCRK  Sand Creek         4.05  61          Pn       05 22 10.9 +0.5
SCRK                               IAML             05 22 57.0
      comp=N,859nm,0.7s
SCRK                               IAML             05 22 57.2
      comp=E,891nm,0.6s
SCRK  Sand Creek         4.05  61  P       Pn       05 22 10.6 +0.2
      baz=248,SNR=238
H24K  Noodor Dome        4.06  25          Pn       05 22 11.5 +1.1
H24K  Noodor Dome        4.06  25  P       Pn       05 22 11.0 +0.6
      baz=208,SNR=148
L26K  Log Cabin Wild     4.08  75          Pn       05 22 12.0 +1.2
L26K  Log Cabin Wild     4.08  75  P       Pn       05 22 11.5 +0.7
      baz=262
VRDI  Verde Repeater     4.19 100          Pn       05 22 12.1 -0.2
VRDI                               IAML             05 23 20.3
      comp=N,801nm,1.2s
VRDI                               IAML             05 23 21.2
      comp=E,683nm,0.6s
KAKN  Katmai Knife C     4.22 202          Pn       05 22 13.6 +1.0
KABU  Katmai Buttres     4.28 204          Pn       05 22 14.2 +0.7
KAIM  Kayak Island       4.35 119          Pn       05 22 13.6 -0.6
KAIM                               IAML             05 23 06.9
      comp=E,606nm,0.6s
KAIM                               IAML             05 23 31.9
      comp=N,626nm,0.7s
KAIM  Kayak Island       4.35 119  P       Pn       05 22 14.0 -0.3
      baz=305
MCARA McCarthy VSAT      4.35  97          Pn       05 22 14.4 +0.1
MCARA McCarthy VSAT      4.35  97  P       Pn       05 22 14.3 +0.1
      baz=285,SNR=59
NICHA Nichawak Mount     4.37 113          Pn       05 22 13.6 -1.0
PRP   Porcupine Dome     4.38  38          Pn       05 22 16.3 +1.5
PRP                                IAML             05 23 15.9
      comp=N,318nm,0.6s
PRP                                IAML             05 23 16.8
      comp=E,311nm,0.6s
PRP   Porcupine Dome     4.38  38  P       Pn       05 22 14.9 +0.1
      baz=224,SNR=309
BERG  Berg Lake          4.41 111          Pn       05 22 14.6 -0.5
J26L  Joseph Creek       4.44  55  P       Pn       05 22 16.3 +0.7
      baz=243,SNR=603
KDAK  Kodiak Island      4.46 184  P       Pn       05 22 15.7 -0.1
      comp=E,5.2nm,0.3s,baz=60,slow=8.3,SNR=86
KDAK                               S       Sn       05 23 04.5 -2.0
      comp=E,23nm,0.3s,baz=317,slow=20,SNR=6.6
KDAK                               LR      LR       05 23 38.7
      comp=E,96nm,21.0s,baz=31,slow=32
KDAK  Kodiak Island      4.46 184⇓eP       Pn       05 22 15.2 -0.6
KDAK                               pmax    pmax
      comp=Z,34nm,0.3s
KDAK  Kodiak Island      4.46 184          Pn       05 22 14.8 -1.0
KDAK                               IAML             05 23 16.6
      comp=Z,273nm,0.6s
KDAK  Kodiak Island      4.46 184  P       Pn       05 22 14.6 -1.2
      baz=3.5
CRQM  Cirque             4.50 105          Pn       05 22 17.1 +0.6
CRQE  Cirque             4.52 105  P       Pn       05 22 17.2 +0.5
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      baz=293,SNR=31
SUCK  Suckling Hills     4.53 115          Pn       05 22 16.2 -0.6
SUCK                               IAML             05 23 31.9
      comp=E,613nm,0.7s
KHIT  Khitrov Hills      4.58 109          Pn       05 22 17.4 -0.2
GRIN  Grindle Hills      4.63 111          Pn       05 22 18.1  0.0
TGL   Tana Glacier       4.64 104          Pn       05 22 18.4 +0.1
PS05  TAPS Pump Stn5     4.65   7          Pn       05 22 20.6 +2.3
PTPK  Patty Peak         4.66  99          Pn       05 22 18.7  0.0
BGLC  Bering Glacier     4.72 113  P       Pn       05 22 20.2 +0.9
      baz=300
M27K  Edge Creek, AK     4.74  84          Pn       05 22 20.3 +0.7
M27K                               IAML             05 23 37.8
      comp=E,472nm,0.8s
M27K                               IAML             05 23 48.7
      comp=N,556nm,0.9s
M27K  Edge Creek, AK     4.74  84  P       Pn       05 22 20.4 +0.7
      baz=273,SNR=84
WAX   Waxell Ridge       4.75 108          Pn       05 22 20.3 +0.4
L27K  Beaver Creek,      4.78  75          Pn       05 22 20.1  0.0
L27K                               IAML             05 23 40.3
      comp=N,241nm,0.9s
L27K                               IAML             05 23 42.3
      comp=E,240nm,1.0s
L27K  Beaver Creek,      4.78  75  P       Pn       05 22 19.9 -0.2
      baz=264,SNR=60
BCAR  Beaver Creek A     4.80  75          Pn       05 22 20.2 -0.2
SNH   Sunshine Point     4.89 111          Pn       05 22 22.6 +1.0
SNH                                IAML             05 23 20.8
      comp=E,809nm,0.5s
SNH                                IAML             05 23 51.9
      comp=N,470nm,0.8s
ISLE  Juniper Island     4.92 105          Pn       05 22 22.1 -0.1
OHAK  Old Harbor         5.05 188          Pn       05 22 22.2 -1.6
OHAK  Old Harbor         5.05 188  P       Pn       05 22 22.6 -1.2
      baz=6.8
BARN  Barnard Glacie     5.07  99          Pn       05 22 24.3  0.0
COLD  Coldfoot           5.09   8          Pn       05 22 25.7 +1.4
COLD  Coldfoot           5.09   8  P       Pn       05 22 25.5 +1.2
      baz=190,SNR=58
GRNC  Granite Creek      5.14 102          Pn       05 22 25.7 +0.5
GRNC                               IAML             05 23 54.6
      comp=E,446nm,0.7s
BVCY  Beaver Creek       5.21  83  P       Pn       05 22 26.3 +0.3
      baz=273,SNR=14
CTG   Chitna Glacier     5.25  99  P       Pn       05 22 26.8 +0.1
      baz=288,SNR=84
CTGM  Chitina Glacie     5.25  99          Pn       05 22 27.4 +0.7
CTGM                               IAML             05 23 50.5
      comp=N,492nm,0.8s
CTGM                               IAML             05 23 52.5
      comp=E,314nm,0.7s
FYU   Fort Yukon         5.26  31          Pn       05 22 27.5 +0.9
FYU                                IAML             05 23 42.1
      comp=E,186nm,1.7s
FYU                                IAML             05 24 20.2
      comp=N,196nm,0.9s
MESA  MESA               5.28 108          Pn       05 22 26.9 -0.1
MESA  MESA               5.28 108  P       Pn       05 22 27.0  0.0
      baz=297,SNR=21
YAH   Yahtse             5.29 106          Pn       05 22 27.5 +0.3
YAH                                IAML             05 23 53.3
      comp=E,549nm,0.7s
LOGN  Logan Glacier      5.45 100          Pn       05 22 29.2 -0.2
YUK3  Moose Creek        5.46  90  P       Pn       05 22 29.4 -0.1
      baz=280,SNR=171
EGAK  Eagle              5.50  57          Pn       05 22 29.8 +0.1
EGAK  Eagle              5.50  57  P       Pn       05 22 29.9 +0.1
      baz=247,SNR=113
TABL  Table Mountain     5.53 104          Pn       05 22 30.5  0.0
DAWY  Dawson             6.01  67          Pn       05 22 36.9  0.0
DAWY  Dawson             6.01  67  P       Pn       05 22 36.8  0.0
      baz=258,SNR=101
PCA   Pinnacle           6.08 105          Pn       05 22 37.8  0.0
PINM  Pinnacle           6.08 105  P       Pn       05 22 37.7  0.0
      baz=296,SNR=28
BMAR  Burnt Mountain     6.12  28  Pn      Pn       05 22 38.5 +0.2
YUK4  Talbot Arm         6.40  92  P       Pn       05 22 42.8 +0.5
      baz=283,SNR=22
BCPM  Bancas Point       6.42 105          Pn       05 22 42.4 +0.1
TOLK  Toolik Lake Re     6.53   8  Pn      Pn       05 22 47.0 +3.2
TOLK  Toolik Lake Re     6.53   8  P       Pn       05 22 46.3 +2.5
      baz=190,SNR=40
J29M  Klondike Camp      6.60  64  P       Pn       05 22 45.5 +0.6
      baz=256,SNR=14
YUK6  Outpost Mounta     6.64  95  P       Pn       05 22 45.7 +0.1
      baz=287,SNR=12
PNL   Peninsula          6.66 107  P       Pn       05 22 46.2 +0.6
      baz=298,SNR=7.3
CHGN  Chignik            6.78 212          Pn       05 22 48.3 +1.1
CHGN  Chignik            6.78 212  P       Pn       05 22 47.9 +0.7
      baz=26
I29M  Ogilvie Camp,      6.84  57  P       Pn       05 22 48.3 +0.3
      baz=249,SNR=40
HYT   Haines Junctio     7.08  95          Pn       05 22 51.1 -0.3
HYT   Haines Junctio     7.08  95  P       Pn       05 22 51.3 -0.1
      baz=288,SNR=28
M30M  Minto, Yukon       7.08  80  P       Pn       05 22 51.4  0.0
      baz=274,SNR=8.2
RDOG  Red Dog Mine       7.43 327  P       Pn       05 22 59.9 +3.8
      baz=137
N31M  Braeburn, Yuko     7.71  88  P       Pn       05 23 00.4 +0.4
      baz=283,SNR=11
SDPT  Sand Point         8.16 216  P       Pn       05 23 09.0 +3.0
      baz=29
M31M  Drury Creek, Y     8.23  82  P       Pn       05 23 07.4 +0.4
      baz=278,SNR=7.4
WHY   Whitehorse         8.36  93          Pn       05 23 08.4 -0.3
WHY   Whitehorse         8.36  93  P       Pn       05 23 08.7  0.0
      baz=288,SNR=13
SKAG  Skagway            8.60 101  Pn      Pn       05 23 12.0 +0.1
SKAG  Skagway            8.60 101  P       Pn       05 23 11.7 -0.2
      baz=296,SNR=12
A21K  Barrow             9.32 351  P       Pn       05 23 21.3 -0.3
      baz=167
P33M  Teslin, Yukon      9.47  94  P       Pn       05 23 23.3 -0.5
      baz=291
JIS   Juneau Island      9.60 106          Pn       05 23 25.4 -0.1
MMPY  Sheldon Lake,      9.63  78  P       Pn       05 23 26.5 +0.6
      baz=277,SNR=42
INK   Inuvik             9.83  44  P       Pn       05 23 28.2 -0.4
      comp=E,3.5nm,0.3s,baz=234,slow=19,SNR=159
INK                                S       Sn       05 25 17.4 +0.6
      comp=E,1.1nm,0.3s,baz=284,slow=17,SNR=3.6
INK                                LR      LR       05 26 59.9
      comp=E,107nm,19.2s,baz=78,slow=36
INK   Inuvik             9.83  44  P       Pn       05 23 28.7 +0.1
INK   Inuvik             9.83  44  Pn      Pn       05 23 28.6 +0.1
INK   Inuvik             9.83  44  P       Pn       05 23 29.3 +0.7
      baz=240,SNR=33
TGTN  Hyland Airport    11.21  83  P       Pn       05 23 48.5 +1.1
      baz=284,SNR=9.8
DLBC  Dease Lake        11.51  99  P       Pn       05 23 51.3 -0.1
      comp=E,0.9nm,0.3s,baz=303,slow=13,SNR=9.8
DLBC                               S       Sn       05 25 54.8 -3.1
      comp=E,0.4nm,0.3s,baz=319,slow=20,SNR=1.3
DLBC                               LR      LR       05 28 28.9
      comp=E,193nm,20.3s,baz=349,slow=38
WRAK  Wrangell Islan    11.57 111          Pn       05 23 53.4 +1.2
WRAK  Wrangell Islan    11.57 111  P       Pn       05 23 53.5 +1.2
      baz=308
A36M  Sachs Harbour     14.13  35  P       Pn       05 24 23.5 -2.1
      baz=240,SNR=32
BBB   Bella Bella       16.28 117  P       P        05 24 55.9 +1.8
      comp=E,1.1nm,0.3s,baz=323,slow=14,SNR=4.4
BBB   Bella Bella       16.28 117  P       P        05 24 53.6 -0.4
BBB                                IAmb    IAmb     05 24 58.9
      comp=Z,112nm,1.2s
ADK   Adak              16.83 243  P       P        05 25 00.9 +0.8
ADK                                pmax    pmax
      comp=Z,88nm,0.7s
ADK   Adak              16.83 243  P       P        05 25 00.9 +0.8
YKA   Yellowknife Ar    17.21  72  P       Pn       05 25 03.3 -0.9
      comp=Z,6.0nm,0.3s,baz=321,slow=5.9,SNR=159
YKA                                ScP     ScP      05 33 05.3 -1.4
      comp=Z,0.1nm,0.3s,baz=300,slow=2.7,SNR=4.2
YKA   Yellowknife Ar    17.21  72ceP       Pn       05 25 03.5 -0.6
YKA                                pmax    pmax
      comp=Z,5.0nm,0.4s
YKA   Yellowknife Ar    17.21  72  P       Pn       05 25 02.6 -1.5
LLLB  Lillooet          20.10 111  P       Pn       05 25 37.9 -0.7
CLRS  Cowichan Lake     20.49 118  P       Pn       05 25 42.6 -0.5
CLRS                               IAmb    IAmb     05 26 10.2
      comp=Z,67nm,1.5s
PGC   Sidney            20.91 117  P       Pn       05 25 46.5 -1.5
PGC                                IAmb    IAmb     05 25 50.8
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      comp=Z,37nm,1.1s
EDM   Edmonton          22.20  96  P       P        05 25 59.2 +0.9
EDM                                pmax    pmax
      comp=Z,89nm,1.1s
EDM   Edmonton          22.20  96  P       P        05 25 59.2 +0.9
EDM                                IAmb    IAmb     05 26 00.1
      comp=Z,89nm,1.1s
B08A  Colville Reser    22.89 112  P       P        05 26 06.6 +1.3
LTY   Liberty           23.16 116  P       P        05 26 09.1 +1.1
RES   Resolute Bay      23.18  35  P       P        05 26 07.4 -0.3
      comp=Z,3.5nm,0.5s,baz=263,slow=9.6,SNR=20
RES                                S       S        05 30 12.0 +0.9
      comp=Z,2.7nm,1.0s,baz=338,slow=19,SNR=2.0
RES   Resolute Bay      23.18  35  P       P        05 26 07.5 -0.3
RES                                pmax    pmax
      comp=Z,18nm,1.5s
RES   Resolute Bay      23.18  35  P       P        05 26 07.5 -0.3
F04A  Amboy             23.50 120  P       P        05 26 13.0 +2.0
F04A                               IAmb    IAmb     05 26 13.6
      comp=Z,33nm,0.7s
NEW   Newport           23.93 110  P       P        05 26 16.2 +1.3
      comp=Z,6.3nm,0.5s,baz=323,slow=8.7,SNR=18
NEW   Newport           23.93 110  P       P        05 26 16.2 +1.3
NEW                                pmax    pmax
      comp=Z,13nm,1.2s
NEW   Newport           23.93 110  P       P        05 26 16.2 +1.3
NEW   Newport           23.93 110  P       P        05 26 16.2 +1.3
      baz=319,SNR=5.8
F05D  White Salmon      23.93 119  P       P        05 26 17.0 +2.1
      baz=324
E07A  Sunnyside         24.06 116  P       P        05 26 18.1 +2.0
D08A  Wollman Farm,     24.07 114  P       P        05 26 17.1 +1.0
E08A  Dider Farm, El    24.45 115  P       P        05 26 20.4 +0.8
G05D  Wamic, OR         24.51 120  P       P        05 26 22.2 +2.0
      baz=325
WALA  Waterton Lakes    24.78 104  P       P        05 26 23.6 +0.9
SEY   Seymchan          24.95 297  P       P        05 26 23.9 -0.1
      comp=Z,4.3nm,0.9s,baz=103,slow=14,SNR=5.2
I05D  Terrebonne, OR    25.25 121  P       P        05 26 28.8 +1.9
      baz=326
G08A  Pilot Rock        25.45 116  P       P        05 26 29.9 +1.1
F10A  Beach Ranch, E    25.64 113  P       P        05 26 31.2 +0.7
K02D  Willamette Mer    25.72 126  P       P        05 26 33.9 +2.6
      baz=329
J04D  Umpqua Nationa    25.86 123  P       P        05 26 35.7 +3.1
      baz=328
J05D  Fort Rock, OR     26.17 122  P       P        05 26 38.0 +2.7
      baz=327
MSO   Missoula          26.42 108  P       P        05 26 38.5 +0.9
MSO   Missoula          26.42 108  P       P        05 26 38.4 +0.9
      baz=320
BMO   Blue Mountains    26.50 115  P       P        05 26 39.5 +1.3
BMO                                pmax    pmax
      comp=Z,4.0nm,0.9s
BMO   Blue Mountains    26.50 115  P       P        05 26 39.5 +1.3
L04D  Klamath Falls     26.65 125  P       P        05 26 41.9 +2.3
      baz=329
PLID  Pearl Lake        26.87 113  P       P        05 26 42.4 +0.7
YBH   Yreka Blue Hor    26.91 126  P       P        05 26 44.8 +2.8
      comp=Z,9.5nm,0.8s,baz=2.0,slow=4.4,SNR=18
M02C  Callahan          27.15 127  P       P        05 26 47.3 +3.2
      baz=330
J08A  Circle Bar Ran    27.22 118  P       P        05 26 46.0 +1.2
EGMT  Eagleton          27.43 101  P       P        05 26 47.3 +0.8
EGMT                               IAmb    IAmb     05 26 48.2
      comp=Z,25nm,1.0s
EGMT  Eagleton          27.43 101  P       P        05 26 47.5 +1.0
      baz=317,SNR=7.2
N02D  Trinity Center    27.57 127  P       P        05 26 50.8 +3.0
      baz=330,SNR=13
PEA0B Petropavlovsk-    27.71 274 i P      P        05 26 46.9 -2.0
PETK  Petropavlovsk-    27.71 274  P       P        05 26 48.5 -0.4
      comp=Z,2.5nm,0.7s,baz=65,slow=9.8,SNR=7.6
PETK                               LR      LR       05 37 03.0
      comp=Z,34nm,20.1s,baz=15,slow=34
PETK  Petropavlovsk-    27.71 274  P       P        05 26 48.8  0.0
PETK  Petropavlovsk-    27.71 274  P       P        05 26 48.8  0.0
MFID  Camas Ranch       28.29 115  P       P        05 26 56.1 +1.9
O03E  Paynes Creek      28.50 126  P       P        05 26 57.7 +1.6
      baz=330,SNR=6.8
BCYI  Bear Canyon       28.61 111  P       P        05 26 57.6 +0.3
HLID  Hailey            28.77 113  P       P        05 26 59.2 +0.6
HLID  Hailey            28.77 113  P       P        05 26 59.8 +1.2
      baz=324,SNR=6.3
GCMT  Greycliff         29.13 105  P       P        05 27 03.0 +1.2
BEKR  Beckworth         29.42 125  P       P        05 27 05.4 +1.0
PAHR  Pah Rah Range     29.94 124  P       P        05 27 09.6 +0.7
TIXI  Tiksi             30.01 322  P       P        05 27 08.9 -0.1
      comp=Z,1.0nm,0.3s,baz=36,slow=3.4,SNR=0.6
TIXI                               PcP     PcP      05 30 07.2 -1.1
      comp=Z,1.3nm,0.3s,baz=79,slow=5.3,SNR=4.4
TIXI                               ScP     ScP      05 33 37.6 -3.2
      comp=Z,1.3nm,0.3s,baz=49,slow=4.7,SNR=3.3
TIXI  Tiksi             30.01 322⇓eP       P        05 27 08.5 -0.5
LAO   LASA Array        30.04 100  P       P        05 27 11.4 +1.8
      baz=318,SNR=6.6
VCNR  Virginia City     30.19 124  P       P        05 27 11.9 +0.7
VCNR                               IAmb    IAmb     05 27 14.1
      comp=Z,14nm,1.0s
FXWY  Fox Creek         30.20 109  P       P        05 27 11.9 +0.7
TPAW  Teton Pass        30.35 109  P       P        05 27 12.9 +0.2
PNTR  Pine Nut          30.39 124  P       P        05 27 13.3 +0.4
PNTR                               IAmb    IAmb     05 27 30.8
      comp=Z,13nm,1.1s
LOHW  Long Hollow       30.41 108  P       P        05 27 13.5 +0.4
SNOW  Snow King Moun    30.46 109  P       P        05 27 14.2 +0.6
NVAR  Mina Array Bea    31.46 123  P       P        05 27 24.5 +2.1
      comp=Z,8.5nm,0.8s,baz=309,slow=8.7,SNR=49
NVAR                               PcP     PcP      05 30 13.6 +0.5
      comp=Z,0.2nm,0.5s,baz=292,slow=2.8,SNR=1.9
NVAR                               ScP     ScP      05 33 45.9 -0.7
      comp=Z,0.8nm,0.7s,baz=327,slow=2.8,SNR=7.2
BW06  Boulder Array     31.54 108  P       P        05 27 24.6 +1.5
      baz=323,SNR=7.7
PDAR  Pinedale Array    31.54 108  P       P        05 27 24.5 +1.4
      comp=Z,2.8nm,0.5s,baz=324,slow=3.9,SNR=55
PDAR                               ScP     ScP      05 33 44.9 -1.9
      comp=Z,0.8nm,0.5s,baz=69,slow=0.5,SNR=14
PDAR                               LR      LR       05 41 10.7
      comp=Z,103nm,18.5s,baz=357,slow=38
DUG   Dugway, Tooele    32.21 115  P       P        05 27 30.6 +1.7
      baz=326,SNR=6.2
MDND  Maddock           32.28  92  P       P        05 27 30.6 +1.4
      baz=316
ULM   Lac du Bonnet     32.33  85  P       P        05 27 30.3 +0.7
      comp=Z,19nm,0.5s,baz=306,slow=8.7,SNR=52
ULM   Lac du Bonnet     32.33  85deP       P        05 27 30.2 +0.5
ULM   Lac du Bonnet     32.33  85  P       P        05 27 28.8 -0.8
JLU   Jordanelle        32.46 113  P       P        05 27 31.6 +0.4
R11A  Troy Canyon, C    32.62 120  P       P        05 27 34.2 +1.8
      baz=329,SNR=15
TIN   Tinemaha, Big     32.69 125  P       P        05 27 36.2 +3.2
      baz=331
RSSD  Black Hills       32.99 101  P       P        05 27 37.3 +1.6
      baz=320
K22A  Casper            33.00 105  P       P        05 27 37.0 +1.3
      baz=322
GRAC  Grapevine Rang    33.08 123  P       P        05 27 39.1 +2.8
      baz=331
CWC   Cottonwood Cre    33.28 125  P       P        05 27 40.8 +2.5
      baz=332
RDMU  Red Mountain      33.31 111  P       P        05 27 38.8 +0.3
RDMU                               IAmb    IAmb     05 27 41.8
      comp=Z,12nm,0.9s
VES   Vestal, Richgr    33.43 127  P       P        05 27 41.1 +1.8
      baz=333
SMMC  Simmler           33.56 128  P       P        05 27 43.1 +2.6
      baz=333,SNR=5.7
AGMN  Agassiz Nation    33.71  88  P       P        05 27 42.0 +0.4
AGMN                               IAmb    IAmb     05 27 43.1
      comp=Z,17nm,1.1s
AGMN  Agassiz Nation    33.71  88  P       P        05 27 42.6 +1.0
      baz=316,SNR=5.1
FURC  Furnace Creek,    33.73 123  P       P        05 27 44.4 +2.5
      baz=331,SNR=6.6
ISA   Isabella, Lake    33.82 126  P       P        05 27 43.5 +0.7
ISA                                pmax    pmax
      comp=Z,7.0nm,0.8s
ISA   Isabella, Lake    33.82 126  P       P        05 27 43.5 +0.7
ISA                                IAmb    IAmb     05 27 45.2
      comp=Z,7.5nm,0.8s
ISA   Isabella, Lake    33.82 126  P       P        05 27 44.7 +1.8
      baz=332,SNR=9.3
MVU   Marysvale         33.88 116  P       P        05 27 45.0 +1.5
PKM   Mcpherson Peak    34.01 128  P       P        05 27 47.3 +2.7
      baz=334,SNR=7.3
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O20A   White River Ci   34.25 110   P      P      05 27 46.3 -0.4
O20A                                IAmb   IAmb   05 27 51.1
       comp=Z,7.3nm,0.8s
O20A   White River Ci   34.25 110   P      P      05 27 47.9 +1.2
       baz=325,SNR=5.1
LRMC   Laurel Mtn Rad   34.28 125   P      P      05 27 48.8 +1.9
       baz=332,SNR=13
YAK    Yakutsk          34.53 305deP      P      05 27 48.1 -0.4
YAK                                 pmax   pmax
       comp=Z,8.0nm,0.7s
B35A   Bob, Littlefor   34.66  86   P      P      05 27 50.3 +0.4
B35A                                IAmb   IAmb   05 27 51.1
       comp=Z,12nm,0.7s
EDW2   Edwards Air Fo   34.69 126   P      P      05 27 51.7 +1.4
       baz=333
GSC    Goldstone, Bar   34.78 124   P      P      05 27 53.3 +2.2
       baz=332,SNR=10
TUQ    Turquoise Moun   35.00 123   P      P      05 27 55.6 +2.5
       baz=331,SNR=11
PASC   Pasadena Art C   35.25 127   P      P      05 27 55.7 +0.6
PASC                                IAmb   IAmb   05 27 57.6
       comp=Z,6.5nm,0.6s
PV23   Carpenter Ridg   35.30 112   P      P      05 27 56.4 +0.6
PV23                                IAmb   IAmb   05 27 58.2
       comp=Z,25nm,1.3s
HEC    Hector,Ludlow    35.37 124   P      P      05 27 58.2 +1.9
       baz=332
BFSC   Mount Baldy Ra   35.39 126   P      P      05 27 58.2 +1.8
       baz=333
PV19   Morning Glory    35.43 112   P      P      05 27 56.4 -0.4
PV19                                IAmb   IAmb   05 27 59.1
       comp=Z,8.4nm,0.8s
PV12   Saucer Basin,    35.50 112   P      P      05 27 58.8 +1.4
PV18   Skein Mesa, Pa   35.51 112   P      P      05 27 58.4 +0.8
PV18                                IAmb   IAmb   05 27 59.8
       comp=Z,14nm,1.1s
PV03   Paradox Valley   35.53 112   P      P      05 27 58.5 +0.8
PV03                                IAmb   IAmb   05 27 60.0
       comp=Z,10nm,1.1s
PV05   Paradox Valley   35.57 113   P      P      05 27 58.9 +0.8
PV05                                IAmb   IAmb   05 28 00.4
       comp=Z,16nm,0.8s
PV13   Radium Mtn., P   35.62 112   P      P      05 27 59.5 +0.9
PV13                                IAmb   IAmb   05 28 01.0
       comp=Z,19nm,1.0s
GMRC   Granite Mounta   35.68 123   P      P      05 28 01.1 +2.2
       baz=332,SNR=7.7
PV01   Paradox Valley   35.75 112   P      P      05 28 00.2 +0.5
PV01                                IAmb   IAmb   05 28 02.0
       comp=Z,18nm,0.8s
EYMN   Ely              36.00  85   P      P      05 28 01.6 +0.2
EYMN   Ely              36.00  85   P      P      05 28 02.1 +0.8
       baz=316,SNR=8.7
W13A   Hualapai Mount   36.11 121   P      P      05 28 04.0 +1.3
BELC   Belle Mtn. Jos   36.23 124   P      P      05 28 05.4 +1.8
       baz=332,SNR=8.7
PFO    Pinyon Flats O   36.40 125d iP      P      05 28 06.1 +1.1
PFO                                 pmax   pmax
       comp=Z,9.0nm,0.8s
PFO    Pinyon Flats O   36.40 125   P      P      05 28 06.5 +1.4
       baz=333,SNR=5.4
IRM    Iron Mountain    36.43 123   P      P      05 28 07.4 +2.2
       baz=332,SNR=8.5
MVCO   Mesa Verde       36.56 113   P      P      05 28 07.0 +0.5
MVCO                                IAmb   IAmb   05 28 08.5
       comp=Z,8.4nm,0.7s
MVCO   Mesa Verde       36.56 113   P      P      05 28 07.8 +1.3
       baz=327,SNR=8.3
F36A   Milaca           36.58  89   P      P      05 28 06.8 +0.5
F36A                                IAmb   IAmb   05 28 08.0
       comp=Z,19nm,1.1s
PDMCI  Parker Dam,Lak   36.70 122   P      P      05 28 09.2 +1.8
       baz=331
ECSD   EROS Data Cent   36.73  94   P      P      05 28 07.9 +0.3
ECSD                                IAmb   IAmb   05 28 08.4
       comp=Z,11nm,1.1s
ECSD   EROS Data Cent   36.73  94   P      P      05 28 08.0 +0.3
       baz=320,SNR=8.7
BC3    Big Chuckawall   36.75 124   P      P      05 28 09.8 +1.8
       baz=332
WUAZ   Wupatki          36.77 117   P      P      05 28 10.5 +2.2
WUAZ   Wupatki          36.77 117   P      P      05 28 10.5 +2.2
       baz=330,SNR=23
S22A   4UR Ranch, Cre   36.84 110   P      P      05 28 11.0 +2.1
       baz=326,SNR=7.7
E38A   The Farm, Brul   36.95  86   P      P      05 28 09.9 +0.5
MONP2  Monument Peak    37.05 126   P      P      05 28 12.7 +2.0
       baz=333,SNR=9.8
SWSC   Sam W. Stewart   37.24 125   P      P      05 28 13.6 +1.6
       baz=333
IKP    In-Ko-Pah, Jac   37.39 125   P      P      05 28 15.2 +1.8
       baz=333
SPMN   Marine on St.    37.39  89   P      P      05 28 14.1 +1.0
       baz=319,SNR=7.1
SDCO   Great Sand Dun   37.42 109   P      P      05 28 14.1 +0.2
SDCO                                IAmb   IAmb   05 28 16.7
       comp=Z,17nm,1.4s
SDCO   Great Sand Dun   37.42 109   P      P      05 28 15.7 +1.9
       baz=326,SNR=8.4
GLA    Glamis           37.53 124   P      P      05 28 16.1 +1.6
       baz=332
KSCO   Kaye Shedlock’   37.68 105   P      P      05 28 16.9 +1.1
KSCO                                IAmb   IAmb   05 28 19.1
       comp=Z,31nm,1.4s
KSCO   Kaye Shedlock’   37.68 105   P      P      05 28 17.6 +1.8
       baz=324
X16A   Lo Mia Camp, P   37.69 118   P      P      05 28 18.1 +2.1
X16A                                IAmb   IAmb   05 28 19.2
       comp=Z,8.7nm,0.8s
BGNE   Belgrade         37.82  98   P      P      05 28 17.8 +0.9
       baz=322
I37A   Lemond, Waseca   38.02  91   P      P      05 28 19.1 +0.6
SUMG   Summit           38.19  27 eP      P      05 28 19.6 -0.5
113A   Mohawk Valley,   38.19 122   P      P      05 28 20.9 +0.9
L34A   Svendsen Farm,   38.21  96   P      P      05 28 20.0 -0.1
L34A                                IAmb   IAmb   05 28 20.9
       comp=Z,17nm,0.9s
DAG    Danmarks Havn    38.23  16 i P      P      05 28 19.2 -0.6
DAG                                 IAmb   IAmb   05 28 19.7
       comp=Z,6.0nm,0.4s
G40A   Rib Lake         38.57  87   P      P      05 28 23.3 +0.2
G40A                                IAmb   IAmb   05 28 24.5
       comp=Z,16nm,0.7s
GRNR   Gornyy           39.05 287⇑iP      P      05 28 27.0  0.0
GRNR                                pmax   pmax
       comp=Z,20nm,0.7s
GRNR                                MLR    MLR
       comp=N,210nm,14.0s
GRNR                                MLR    MLR
       comp=Z,60nm,15.0s
CBKS   Cedar Bluff      39.16 102   P      P      05 28 28.7 +0.6
CBKS                                pmax   pmax
       comp=Z,13nm,0.8s
CBKS   Cedar Bluff      39.16 102   P      P      05 28 28.7 +0.6
CBKS                                IAmb   IAmb   05 28 29.7
       comp=Z,12nm,0.8s
CBKS   Cedar Bluff      39.16 102   P      P      05 28 29.3 +1.2
       baz=324
E43A   Lone Tree Farm   39.24  83   P      P      05 28 29.3 +0.7
214A   Organ Pipe Nat   39.29 122   P      P      05 28 29.7 +0.4
214A   Organ Pipe Nat   39.29 122   P      P      05 28 31.3 +2.0
       baz=332,SNR=5.7
ANMO   Albuquerque      39.35 112deP      P      05 28 31.7 +1.8
ANMO                                pmax   pmax
       comp=Z,9.0nm,1.3s
ANMO   Albuquerque      39.35 112   P      P      05 28 30.5 +0.5
ANMO   Albuquerque      39.35 112   P      P      05 28 31.7 +1.8
       baz=328
N35A   Tabor            39.41  96   P      P      05 28 30.5 +0.3
SPITS  Spitsbergen Ar   39.66   4   P      P      05 28 31.6 -0.2
SPITS                               pmax   pmax
       comp=Z,42nm,1.3s
SPB2   Spitsbergen Ar   39.67   4   P      P      05 28 31.3 -0.5
SPB2                                IAmb   IAmb   05 28 54.2
       comp=Z,27nm,1.1s
TUC    Tucson           39.80 119   P      P      05 28 34.7 +1.2
TUC                                 pmax   pmax
       comp=Z,5.0nm,0.9s
TUC    Tucson           39.80 119   P      P      05 28 34.7 +1.2
TUC    Tucson           39.80 119   P      P      05 28 35.6 +2.1
       baz=331
R32A   Long Quarter,    39.94 101   P      P      05 28 35.0 +0.4
R32A                                IAmb   IAmb   05 28 35.9
       comp=Z,14nm,0.7s
BNM    Barren Site      39.95 113   P      P      05 28 36.3 +1.3
DBG    Daneborg         40.09  18 i P      P      05 28 34.0 -1.2
I42A   Draeger Farm,    40.22  87   P      P      05 28 37.2 +0.5
I42A                                IAmb   IAmb   05 28 42.0
       comp=Z,21nm,1.2s
JFWS   Jewell Farm      40.34  89   P      P      05 28 37.9 +0.1
JFWS                                pmax   pmax
       comp=Z,15nm,0.7s
JFWS   Jewell Farm      40.34  89   P      P      05 28 37.9 +0.1
JFWS                                IAmb   IAmb   05 28 38.3
       comp=Z,14nm,0.7s
JFWS   Jewell Farm      40.34  89   P      P      05 28 37.9 +0.1
       baz=320
KSU1   Kansas State U   40.37  99   P      P      05 28 38.5 +0.4
KSU1   Kansas State U   40.37  99   P      P      05 28 38.5 +0.4
       baz=324,SNR=5.8
L40A   Anamosa          40.54  91   P      P      05 28 39.5 +0.1
L40A                                IAmb   IAmb   05 28 40.4
       comp=Z,21nm,0.8s
121A   Cookes Peak, D   40.85 116   P      P      05 28 44.6 +2.3
       baz=330,SNR=10
ZEA    Zeya             40.94 297 eP      P      05 28 41.9 -0.6
ZEA                                 pmax   pmax
       comp=Z,10.0nm,0.8s
AMTX   Amarillo         41.51 107   P      P      05 28 48.8 +1.3
       baz=327
GLMI   Grayling         41.51  82   P      P      05 28 48.2 +0.8
       baz=319
MSTX   Muleshoe         41.79 109   P      P      05 28 51.0 +1.1
MSTX   Muleshoe         41.79 109   P      P      05 28 51.5 +1.6
       baz=328,SNR=18
SCHQ   Schefferville    41.98  60   P      P      05 28 51.5 +0.4
       comp=Z,9.6nm,0.8s,baz=306,slow=5.8,SNR=16
SCHQ   Schefferville    41.98  60   P      P      05 28 51.5 +0.4
SCHQ                                IAmb   IAmb   05 28 57.9
       comp=Z,34nm,1.4s
NRIK   Noril'sk         42.12 333   P      P      05 28 52.1 +0.1
       comp=Z,12nm,0.6s,baz=48,slow=6.3,SNR=22
NRIK   Noril'sk         42.12 333c iP      P      05 28 51.8 -0.2
NRIK                                pmax   pmax
       comp=Z,12nm,0.6s
NRIK   Noril'sk         42.12 333   P      P      05 28 52.5 +0.4
NRIK                                IAmb   IAmb   05 28 52.8
       comp=Z,13nm,0.7s
T35A   Sooner Cattle    42.18 100   P      P      05 28 52.9  0.0
T35A                                IAmb   IAmb   05 28 53.6
       comp=Z,8.4nm,0.8s
KLR    Kul'dur          42.25 289   P      P      05 28 53.0 -0.4
       comp=Z,7.6nm,0.8s,baz=50,slow=7.7,SNR=18
KLR    Kul'dur          42.25 289c iP      P      05 28 52.7 -0.6
KLR                                 pmax   pmax
       comp=Z,9.0nm,0.9s
MNTX   Cornudas Mount   42.59 114   P      P      05 28 58.4 +2.1
MNTX                                IAmb   IAmb   05 28 59.2
       comp=Z,19nm,1.2s
MNTX   Cornudas Mount   42.59 114   P      P      05 28 58.4 +2.1
       baz=330,SNR=15
HDIL   Hopedale         42.62  90   P      P      05 28 56.6 +0.2
HDIL   Hopedale         42.62  90   P      P      05 28 56.6 +0.2
       baz=322
WMOK   Wichita Mounta   42.94 104   P      P      05 28 59.8 +0.8
WMOK                                pmax   pmax
       comp=Z,13nm,1.1s
WMOK   Wichita Mounta   42.94 104   P      P      05 28 59.8 +0.8
WMOK                                IAmb   IAmb   05 29 00.9
       comp=Z,13nm,1.1s
WMOK   Wichita Mounta   42.94 104   P      P      05 28 59.9 +0.8
       baz=327,SNR=7.4
R40A   Maddies Statio   43.04  95   P      P      05 28 59.7 -0.1
R40A                                IAmb   IAmb   05 29 00.3
       comp=Z,7.6nm,0.6s
BOD    Bodaibo          43.21 309 eP      P      05 29 00.1 -0.8
BOD                                 pmax   pmax
       comp=Z,12nm,1.6s
O44A   Mansfield        43.33  90   P      P      05 29 02.1 -0.1
O44A                                IAmb   IAmb   05 29 02.3
       comp=Z,12nm,0.5s
TUL1   Leonard          43.34 101   P      P      05 29 02.3 +0.1
       baz=326
U38A   Gravette         43.55  99   P      P      05 29 03.5 -0.4
U38A                                IAmb   IAmb   05 29 05.4
       comp=Z,16nm,1.2s
SFIN   Lafayette        43.79  89   P      P      05 29 06.0 +0.1
       baz=322
L48A   N Adams          43.81  85   P      P      05 29 06.8 +0.8
HHAR   Hobbs            43.89  98   P      P      05 29 05.7 -1.0
AAM    Ann Arbor        43.90  84   P      P      05 29 07.6 +0.9
       baz=321
N47A   Urbana           44.06  87   P      P      05 29 07.9 -0.1
ABTX   Abilene, Hawle   44.32 107   P      P      05 29 10.9 +0.7
ABTX                                IAmb   IAmb   05 29 12.0
       comp=Z,14nm,1.0s
ABTX   Abilene, Hawle   44.32 107   P      P      05 29 10.9 +0.7
       baz=328,SNR=8.0
U40A   Yellville        44.33  97   P      P      05 29 09.5 -0.7
       baz=325
P46A   Rosedale         44.34  89   P      P      05 29 10.4 +0.2
P46A                                IAmb   IAmb   05 29 11.3
       comp=Z,22nm,0.9s
T42A   Van Buren        44.60  95   P      P      05 29 11.9 -0.4
OLIL   Olney            44.63  91   P      P      05 29 12.8 +0.3
TRQ    Mont Tremblant   45.05  73   P      P      05 29 15.6 -0.3
TRQ                                 IAmb   IAmb   05 29 16.1
       comp=Z,7.3nm,0.7s
PBMO   Poplar Bluff     45.12  95   P      P      05 29 16.3 -0.1
TX31   Lajitas Ar. Si   45.37 114   P      P      05 29 20.3 +1.7
TX32   Lajitas Array    45.37 114   P      P      05 29 20.3 +1.7
TXAR   Lajitas Array    45.37 114   P      P      05 29 20.3 +1.7
       comp=Z,12nm,0.6s,baz=314,slow=6.1,SNR=221
TXAR                                ScP    ScP    05 34 39.9 +0.6
       comp=Z,0.3nm,0.7s,baz=328,slow=3.2,SNR=2.6
TXAR                                LR     LR     05 48 10.9
       comp=Z,72nm,18.1s,baz=0.0,slow=36
TXAR   Lajitas Array    45.37 114   P      P      05 29 20.1 +1.5
TXAR   Lajitas Array    45.37 114   P      P      05 29 20.1 +1.5
USIN   University of    45.45  91   P      P      05 29 18.9 -0.1
MIAR   Mount Ida        45.48  99   P      P      05 29 19.6 +0.3
MIAR                                pmax   pmax
       comp=Z,5.0nm,0.7s
MIAR   Mount Ida        45.48  99   P      P      05 29 19.6 +0.3
MIAR   Mount Ida        45.48  99   P      P      05 29 19.6 +0.3
       baz=326
ACSO   Alum Creek Sta   45.84  85   P      P      05 29 21.9 -0.1
       baz=322
WCI    Wyandotte Cave   45.88  90   P      P      05 29 22.7 +0.3
WCI                                 pmax   pmax
       comp=Z,9.0nm,0.7s
WCI    Wyandotte Cave   45.88  90   P      P      05 29 22.7 +0.3
WCI                                 IAmb   IAmb   05 29 23.0
       comp=Z,9.1nm,0.7s
WCI    Wyandotte Cave   45.88  90   P      P      05 29 22.3 -0.1
       baz=324
USRK   Ussuriysk Ar.    45.95 284   P      P      05 29 22.1 -0.7
       comp=Z,2.1nm,0.7s,baz=67,slow=4.4,SNR=4.1
M53A   WI Miller and    45.96  82   P      P      05 29 23.6 +0.6
M53A   WI Miller and    45.96  82   P      P      05 29 23.6 +0.6
       baz=322
ALLY   Alegheny Colle   46.04  82   P      P      05 29 24.4 +0.8
JCT    Junction City    46.07 109   P      P      05 29 24.6 +0.6
JCT                                 pmax   pmax
       comp=Z,37nm,0.9s
JCT    Junction City    46.07 109   P      P      05 29 24.6 +0.6
JCT    Junction City    46.07 109   P      P      05 29 25.2 +1.2
       baz=329,SNR=22
WVNY   West Valley, N   46.16  80   P      P      05 29 25.1 +0.5
WVNY                                IAmb   IAmb   05 29 25.5
       comp=Z,13nm,0.8s
MMNY   Mt. Morris Dam   46.23  79   P      P      05 29 24.8 -0.3
MMNY                                IAmb   IAmb   05 29 49.7
       comp=Z,15nm,1.1s
M54A   Oil Creek Stat   46.37  81   P      P      05 29 26.7 +0.4
       baz=322
N53A   Lisbon           46.38  83   P      P      05 29 26.5 +0.2
Q51A   Peebles          46.62  87   P      P      05 29 28.4 +0.2
N54A   Moraine State    46.65  82   P      P      05 29 28.8 +0.3
N54A                                IAmb   IAmb   05 29 29.5
       comp=Z,25nm,1.4s
N54A   Moraine State    46.65  82   P      P      05 29 28.7 +0.3
       baz=322
P52A   Corning          46.71  85   P      P      05 29 28.4 -0.5
       baz=323
MOQ    Mont Orford      46.78  72   P      P      05 29 29.4 -0.1
435B   Jarrell          46.81 106   P      P      05 29 30.9 +1.2
       baz=329
M55A   Ridgway          46.82  81   P      P      05 29 30.4 +0.6
M55A                                IAmb   IAmb   05 29 30.5
       comp=Z,14nm,0.6s
D62A   Allapoint, All   46.83  68   P      P      05 29 30.0 +0.3
WVT    Waverly          46.86  93   P      P      05 29 30.3 +0.2
       baz=325
E62A   Clayton Lake     46.98  69   P      P      05 29 30.8 -0.1
E62A                                IAmb   IAmb   05 29 31.5
       comp=Z,17nm,1.2s
O54A   Avella           47.09  83   P      P      05 29 32.0 +0.2
P53A   Whipple          47.17  85   P      P      05 29 32.4 -0.1
P53A                                IAmb   IAmb   05 29 32.9
       comp=Z,14nm,0.7s
Q52A   Bidwell          47.18  86   P      P      05 29 32.3 -0.2
HIA    Hailar           47.40 297   P      P      05 29 33.6 -0.6
HIA                                 pmax   pmax
       comp=Z,15nm,0.8s
HIA    Hailar           47.40 297   P      P      05 29 33.6 -0.6
HIA                                 IAmb   IAmb   05 29 34.8
       comp=Z,15nm,0.8s
U49A   Red Boiling Sp   47.51  91   P      P      05 29 35.4 +0.3
U49A                                IAmb   IAmb   05 29 36.0
       comp=Z,12nm,0.9s
BINY   Binghamton       47.52  78   P      P      05 29 35.4 +0.2
BINY   Binghamton       47.52  78   P      P      05 29 35.2  0.0
       baz=322
S51A   Beattyville      47.62  88   P      P      05 29 35.9 -0.1
S51A                                IAmb   IAmb   05 29 36.2
       comp=Z,9.8nm,0.7s
V48A   Smith Brothers   47.65  92   P      P      05 29 36.4 +0.1
V48A                                IAmb   IAmb   05 29 39.6
       comp=Z,17nm,1.4s
PLAL   Pickwick Lake    47.68  94   P      P      05 29 36.2 -0.3
PLAL                                IAmb   IAmb   05 29 36.9
       comp=Z,9.3nm,0.9s
MCWV   Mont Chateau     47.75  83   P      P      05 29 37.2 +0.2
       baz=323
O56A   Blue Knob Stat   47.86  82   P      P      05 29 38.0 +0.2
O56A   Blue Knob Stat   47.86  82   P      P      05 29 37.9  0.0
       baz=323,SNR=6.3
SSPA   Standing Stone   47.88  81   P      P      05 29 38.2 +0.2
SSPA                                IAmb   IAmb   05 29 38.7
       comp=Z,10nm,0.5s
SSPA   Standing Stone   47.88  81   P      P      05 29 38.1 +0.1
       baz=323
Y45A   Yeager Farm, C   47.92  96   P      P      05 29 39.5 +1.2
Y45A                                IAmb   IAmb   05 29 40.9
       comp=Z,17nm,0.7s
BATG   Bathurst New B   47.97  66   P      P      05 29 38.6 +0.1
BATG                                IAmb   IAmb   05 29 50.0
       comp=Z,20nm,1.4s
F64A   Sherman          48.08  69   P      P      05 29 39.2 -0.2
F64A                                IAmb   IAmb   05 29 40.0
       comp=Z,11nm,0.8s
833A   Chaparral WMA,   48.11 110   P      P      05 29 41.2 +1.4
       baz=330
N58A   Sunbury          48.26  80   P      P      05 29 40.8  0.0
N58A                                IAmb   IAmb   05 29 41.6
       comp=Z,10nm,0.7s
HKT    Hockley          48.30 105⇓eP      P      05 29 41.9 +0.7
HKT                                 pmax   pmax
       comp=Z,33nm,1.7s
ARCES  ARCESS Array B   48.52   1   P      P      05 29 42.4 -0.1
       comp=Z,1.8nm,0.5s,baz=2.3,slow=7.7,SNR=14
Q56A   Snyder Ridge,    48.55  83   P      P      05 29 43.5 +0.3
Q56A                                IAmb   IAmb   05 29 44.0
       comp=Z,11nm,0.6s
P57A   Homestead Farm   48.74  82   P      P      05 29 45.1 +0.5
LUPA   Lehigh Univers   49.07  79   P      P      05 29 47.3 +0.2
TKL    Tuckaleechee C   49.14  90   P      P      05 29 48.2 +0.5
TKL                                 pmax   pmax
       comp=Z,15nm,1.4s
TKL    Tuckaleechee C   49.14  90   P      P      05 29 48.2 +0.5
TKL                                 IAmb   IAmb   05 29 59.9
       comp=Z,15nm,1.4s
MAT    Matsushiro       49.14 272   P      P      05 29 47.5 -0.2
MJAR   Matsushiro Arr   49.14 272   P      P      05 29 48.2 +0.5
       comp=Z,2.5nm,0.8s,baz=9.0,slow=8.1,SNR=7.8
Z47A   Carrollton       49.16  95   P      P      05 29 47.8  0.0
146A   Union            49.16  97   P      P      05 29 47.4 -0.4
FPAL   Fort Paine       49.20  92   P      P      05 29 47.4 -0.7
CN2    Changchun        49.20 288 eP      P      05 29 47.6 -0.4
CN2                                 pmax   pmax
       comp=Z,50nm,0.7s
U54A   Nelsons Funny    49.36  87   P      P      05 29 49.9 +0.5
BLA    Blacksburg       49.45  86   P      P      05 29 50.4 +0.4
BLA                                 pmax   pmax
       comp=Z,9.0nm,0.7s
BLA    Blacksburg       49.45  86   P      P      05 29 50.4 +0.4
BLA                                 IAmb   IAmb   05 29 50.8
       comp=Z,8.7nm,0.7s
BLA    Blacksburg       49.45  86   P      P      05 29 50.2 +0.1
       baz=324
LMN    Caledonia Moun   49.63  66   P      P      05 29 51.1 -0.1
LMN                                 IAmb   IAmb   05 29 53.9
       comp=Z,16nm,1.1s
DRLN   Deer Lake        49.97  59   P      P      05 29 53.8 +0.1
R58B   Mineral          50.03  83   P      P      05 29 55.0 +0.6
R58B                                IAmb   IAmb   05 29 55.8
       comp=Z,7.6nm,1.1s
Y52A   Lilburn          50.48  91   P      P      05 29 58.4 +0.5
GBN    Guysborough      51.38  64   P      P      05 30 04.7 +0.4
JSC    Jenkinsville     51.45  88   P      P      05 30 05.1  0.0
JSC                                 pmax   pmax
       comp=Z,8.0nm,0.7s
JSC    Jenkinsville     51.45  88   P      P      05 30 05.1  0.0
JSC                                 IAmb   IAmb   05 30 06.2
       comp=Z,8.3nm,0.7s
BIRD   Birdtown, Kers   51.52  87   P      P      05 30 05.6  0.0
BIRD                                IAmb   IAmb   05 30 06.4
       comp=Z,5.9nm,0.7s
TLY    Talaya           51.75 310   P      P      05 30 08.1 +0.9
       comp=Z,1.6nm,0.5s,baz=337,slow=3.0,SNR=4.8
TLY    Talaya           51.75 310 eP      P      05 30 07.8 +0.7
TLY                                 pmax   pmax
       comp=Z,10.0nm,0.9s
TLY    Talaya           51.75 310   P      P      05 30 08.0 +0.9
JHS    Saijyo           52.78 276   P      P      05 30 15.6 +0.6
ZAK    Zakamensk        52.95 309 eP      P      05 30 14.8 -1.3
ZAK                                 pmax   pmax
       comp=Z,4.0nm,1.0s
KS19   Wonju Array Si   53.17 282   P      P      05 30 18.4 +0.7
KS19                                IAmb   IAmb   05 30 19.3
       comp=Z,9.7nm,0.7s
KSRS   Korea Array      53.18 282   P      P      05 30 18.4 +0.7
       comp=Z,9.5nm,0.7s,baz=28,slow=7.0,SNR=36
KSAR   Wonju Array Be   53.21 282   P      P      05 30 18.0  0.0
KSAR   Wonju Array Be   53.21 282   P      P      05 30 18.0  0.0
ULN    Ulaanbaatar      53.61 305   P      P      05 30 21.4 +0.4
ULN                                 pmax   pmax
       comp=Z,11nm,0.8s
ULN    Ulaanbaatar      53.61 305   P      P      05 30 21.4 +0.4
ULN                                 IAmb   IAmb   05 30 22.4
       comp=Z,11nm,0.8s
SONM   Songino Array    53.89 305   P      P      05 30 24.3 +1.3
       comp=Z,14nm,0.7s,baz=34,slow=7.4,SNR=76
SONM                                PcP    PcP    05 31 28.3 +1.1
       comp=Z,0.6nm,0.4s,baz=31,slow=3.4,SNR=1.5
SONM   Songino Array    53.89 305   P      P      05 30 24.0 +1.0
SONM                                pmax   pmax
       comp=Z,15nm,0.8s
SONM   Songino Array    53.89 305   P      P      05 30 24.0 +1.0
TJN    Taejon           54.32 281deP      P      05 30 26.6 +0.5
ZAA0   Zalesovo Array   55.87 323   P      P      05 30 36.4 -0.7
ZALV   Zalesovo Beam    55.87 323   P      P      05 30 36.5 -0.5
       comp=Z,14nm,0.5s,baz=30,slow=7.0,SNR=62
ZALV                                ScP    ScP    05 35 23.8 -0.1
       comp=Z,0.5nm,0.3s,baz=353,slow=4.5,SNR=1.9
ZALV   Zalesovo Beam    55.87 323   P      P      05 30 36.4 -0.7
BJT    Baijiatuau       56.33 293   P      P      05 30 40.4 -0.1
BJT                                 pmax   pmax
       comp=Z,7.0nm,0.7s
BJT    Baijiatuau       56.33 293   P      P      05 30 40.4 -0.1
BJT                                 IAmb   IAmb   05 30 41.3
       comp=Z,7.1nm,0.7s
NB2    NORSAR Subarra   56.40  10   P      P      05 30 39.8 -0.9
       comp=Z,0.7nm,0.5s,baz=353,slow=7.4
NOA    NORSAR Array B   56.40  10   P      P      05 30 40.5 -0.2
       comp=Z,0.3nm,0.4s,baz=359,slow=7.4,SNR=8.2
FINES  FINESS Array B   56.65   1   P      P      05 30 42.1 -0.3
       comp=Z,2.8nm,0.7s,baz=12,slow=10,SNR=29
FINES  FINESS Array B   56.65   1 i P      P      05 30 40.9 -1.5
FINES                               pmax   pmax
       comp=Z,3.0nm,0.7s
HHC    Hu-ho-hao-te     57.60 297 eP      P      05 30 50.2 +0.6
HHC                                 pmax   pmax
       comp=Z,30nm,1.1s
HHC                                 pmax   pmax
       comp=Z,66nm,5.2s
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SVE	Sverdlovsk	58.60	340	eP	P	05 30 55.8	-0.3
SVE				pmax	pmax		
	comp=Z,16nm,0.9s						
DGZ	Jazzator, Alta	58.85	319	c iP	P	05 30 58.7	+0.4
DGZ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ARU	Arti	59.31	341	c iP	P	05 31 00.4	-0.6
ARU						05 33 12.6	
ARU				S	S	05 39 02.0	+1.0
ARU				SS	SS	05 42 56.2	+0.1
ARU				pmax	pmax		
	comp=Z,13nm,0.8s						
ARU	Arti	59.31	341	P	P	05 31 00.6	-0.5
BRVK	Borovoye	60.32	332	ceP	P	05 31 07.1	-0.9
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BRVK	Borovoye	60.32	332	P	P	05 31 07.6	-0.4
BRVK				IAmb	IAmb	05 31 08.2	
	comp=Z,9.1nm,0.9s						
KURK	Kurchatov	60.46	326	c iP	P	05 31 08.3	-0.7
KURK				pmax	pmax		
	comp=Z,17nm,2.5s						
KURK	Kurchatov	60.46	326	P	P	05 31 08.7	-0.3
KURK				IAmb	IAmb	05 31 09.2	
	comp=Z,7.9nm,0.8s						
KURBB	Kurchatov Arra	60.57	326	P	P	05 31 09.2	-0.6
	baz=28,slow=6.9						
KURBB				PcP	PcP	05 31 54.1	+0.9
	comp=Z,2.7nm,0.5s,baz=26,slow=4.2,SNR=8.4						
NJ2	Nanjing	61.80	286	eP	P	05 31 18.4	+0.1
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
OBN	Obninsk	62.81	354	i P	P	05 31 23.1	-1.6
OBN				i		05 31 57.5	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MK31	Makanchi Array	63.00	321	c iP	P	05 31 25.0	-1.1
MK31	Makanchi Array	63.00	321	P	P	05 31 25.4	-0.7
MKAR	Makanchi Array	63.00	321	P	P	05 31 25.2	-1.0
	comp=Z,5.8nm,0.6s,baz=37,slow=6.7,SNR=42						
MKAR	Makanchi Array	63.00	321	P	P	05 31 25.3	-0.8
MAKZ	Makanchi	63.08	321	P	P	05 31 26.1	-0.6
MAKZ				pmax	pmax		
	comp=Z,9.0nm,0.6s						
MAKZ	Makanchi	63.08	321	P	P	05 31 26.1	-0.6
MAKZ				IAmb	IAmb	05 31 26.6	
	comp=Z,8.7nm,0.6s						
GTA	Gaotai	63.55	305	⇑P	P	05 31 30.3	+0.3
GTA				pmax	pmax		
	comp=Z,31nm,0.9s						
MNK	Minsk	63.62	0	i P	P	05 31 28.2	-1.9
MNK				i *PP	pP	05 31 53.1	-2.5
MNK				i S	S	05 39 54.9	-0.7
MNK				i SS	SS	05 44 05.3	+1.8
MNK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,20nm,0.9s						
MNK				pmax	pmax		
	comp=E,1.0nm,0.9s						
MNK				MLR	MLR		
	comp=E,21nm,20.0s						
MNK				MLR	MLR		
	comp=N,134nm,19.0s						
MNK				MLR	MLR		
	comp=Z,128nm,20.0s						
MNK	Minsk	63.62	0	i P	P	05 31 28.3	-1.8
	comp=E,1.0nm,0.9s						
MNK				i P	P	05 31 28.3	-1.8
	comp=N,20nm,0.9s						
MNK				i P	P	05 31 28.3	-1.8
	comp=Z,5.0nm,0.9s,baz=180						
MNK				i pP	pP	05 31 53.2	-2.4
MNK				i PPP	PPP	05 35 10.7	
MNK				i S	S	05 39 55.0	-0.6
MNK				i sS	sS	05 40 38.2	-0.3
MNK				i SS	SS	05 44 05.3	+1.8
MNK				i SSS	SSS	05 48 28.0	
MNK				i LQ	LQ	05 53 54.5	
MNK				i LR	LR	05 57 38.1	
MNK				i LRM	MLR	06 00 41.3	
	comp=E,21nm,19.5s						
MNK				i LRM	MLR	06 01 34.5	
	comp=N,134nm,19.2s						
MNK				i LRM	MLR	06 01 54.3	
	comp=Z,128nm,19.5s						
WMQ	Urumqi	63.99	316	eP	P	05 31 36.8	+4.0
LZH	Lanzhou	64.83	300	eP	P	05 31 38.6	+0.1
LZH				pmax	pmax		
	comp=Z,28nm,1.1s						
ABKAR	Akbulak array	65.99	338	P	P	05 31 45.1	-0.5
ABKAR				IAmb	IAmb	05 31 45.7	
	comp=Z,5.1nm,0.7s						
ABKAR	Akbulak array	65.99	338	P	P	05 31 44.6	-0.9
CLL	Collm	66.20	10	eP	P	05 31 47.0	+0.2
CLL	Collm	66.20	10	eP	P	05 31 47.0	+0.2
AKASG	Malin Array Be	67.42	359	P	P	05 31 53.7	-0.9
	comp=Z,4.1nm,0.4s,baz=4.9,slow=6.3,SNR=31						
AKASG	Malin Array Be	67.42	359	i P	P	05 31 54.0	-0.6
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.4s						
AKBB	Malin Array Si	67.42	359	⇑eP	P	05 31 53.2	-1.4
GERES	GERESS Array B	68.70	10	P	P	05 32 03.7	+0.9
	comp=Z,0.7nm,0.4s,baz=7.3,slow=6.6,SNR=12						
AAK	Ala-Archa	69.01	325	P	P	05 32 05.2	+0.4
	comp=Z,2.9nm,0.4s,baz=315,slow=1.4						
AAK	Ala-Archa	69.01	325	ceP	P	05 32 04.5	-0.4
AAK				pmax	pmax		
	comp=Z,11nm,0.7s						
AAK	Ala-Archa	69.01	325	P	P	05 32 04.9	0.0
CD2	Chengdu	69.36	297	P	P	05 32 04.9	-2.1
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KK31	Karatay Array	69.60	328	P	P	05 32 07.6	-0.7
KK31				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KK31	Karatay Array	69.60	328	P	P	05 32 07.6	-0.7
KKAR	Karatay Array	69.60	328	P	P	05 32 08.0	-0.3
KKAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KKAR	Karatay Array	69.60	328	P	P	05 32 08.0	-0.3
KKAR	Karatay Array	69.60	328	P	P	05 32 07.6	-0.7
KKAR				IAmb	IAmb	05 32 08.5	
	comp=Z,3.5nm,0.9s						
KSH	Kashi	71.50	323	P	P	05 32 21.9	+1.9
KSH				pmax	pmax		
	comp=Z,3.0nm,0.5s						
MAK	Makhachkala	74.00	345	eP	P	05 32 32.7	-1.8
MAK				e*PP	pP	05 32 58.4	-2.2
MAK				e*SP	sP	05 33 08.2	-3.5
MAK				e		05 35 18.4	
MAK				eS	S	05 41 56.6	-1.8
MAK				e*SS	sS	05 42 42.7	+0.2
MAK				eSS	SS	05 46 43.3	-0.2
MAK				pmax	pmax		
	comp=Z,325nm,1.6s						
ESDC	Sonseca Array	75.23	25	P	P	05 32 43.4	+1.6
	comp=Z,0.5nm,0.7s,baz=340,slow=6.1,SNR=1.9						
BRTR	Keskin Array B	78.30	356	P	P	05 32 59.8	+0.6
	comp=Z,0.4nm,0.4s,baz=344,slow=3.2,SNR=4.2						
BRTR	Keskin Array B	78.30	356	i P	P	05 33 00.2	+1.0
TAPN	Taplejung	78.84	308	eP	P	05 33 02.9	+0.4
	comp=Z,52nm,0.5s						
GUN	Gumba	78.99	310	eP	P	05 33 03.6	+0.2
	comp=Z,18nm,0.5s						
JIRN	Jiri	79.11	310	eP	P	05 33 04.5	+0.4
	comp=Z,30nm,0.5s						
KKN	Kakani	79.31	311	eP	P	05 33 05.6	+0.6
	comp=Z,24nm,0.5s						
BAUV	El Baul	79.34	91	P	P	05 33 04.6	-0.3
BAUV				IAmb	IAmb	05 33 05.5	
	comp=Z,23nm,1.0s						
DANN	Dangsing	79.34	312	eP	P	05 33 05.9	+0.7
	comp=Z,72nm,0.7s						
GKN	Gorkha	79.35	311	eP	P	05 33 05.1	0.0
	comp=Z,25nm,0.5s						
ODAN	Odare	79.40	309	eP	P	05 33 05.1	-0.4
PKIN	Phulchoki	79.47	310	eP	P	05 33 06.2	+0.3
	comp=Z,12nm,0.5s						
PKI	Pulchoki	79.47	310	eP	P	05 33 06.5	+0.5
	comp=Z,13nm,0.5s						
DMN	Daman	79.54	311	eP	P	05 33 07.1	+0.8
	comp=Z,30nm,0.6s						
RAMN	Ramite	79.61	309	eP	P	05 33 06.9	+0.3
	comp=Z,21nm,0.5s						
PYUN	Piuthan	79.83	313	eP	P	05 33 08.1	+0.3
	comp=Z,27nm,0.6s						
KOLN	Koldanda	79.92	312	eP	P	05 33 08.8	+0.5
	comp=Z,19nm,0.7s						
KEST	Kesra	81.23	15	P	P	05 33 17.0	+2.0
	comp=Z,3.0nm,0.8s,baz=284,slow=4.2,SNR=1.2						
CMAR	Chiang Mai Arr	82.36	295	P	P	05 33 20.6	-0.5
	comp=Z,2.8nm,0.7s,baz=7.5,slow=6.0,SNR=15						
CMAR	Chiang Mai Arr	82.36	295	i P	P	05 33 20.7	-0.4
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
PMG	Port Moresby	85.30	240	LR	LR	06 05 29.1	
	comp=Z,217nm,20.4s,baz=163,slow=31						
BOSA	Boshof	146.35	4	PKPbc	PKPbc	05 40 38.8	-0.3
	comp=Z,5.0nm,1.0s,baz=12,slow=1.9,SNR=2.4						
BOSA	Boshof	146.35	4	PKP2	PKPbc	05 40 38.5	-0.6
BOSA	Boshof	146.35	4		PKPbc	05 40 38.5	-0.6
SUR	Sutherland	149.79	12	PKPbc	PKPbc	05 40 48.2	+0.1
	comp=Z,15nm,0.9s,baz=32,slow=5.8,SNR=3.0						
SNAA	Sanae	164.87	142	PKPab	PKPab	05 41 56.4	-1.2
	comp=Z,1.1nm,1.0s,baz=230,slow=7.9,SNR=3.3						

IDC ***01*** *05:35:31.7±1.8, 3°.62N×63°.69E, h0^{km}, mb4.0/5, mb1 4.2/6, mb1mx3.7/58, mbtmp4.0/6, ML3.8/1, MS3.7/14, Ms1 3.7/14, ms1mx3.5/51, Error ellipse: s-maj=49.0km s-min=31.5km az=66.0*

NEIC ***01*** *05:35:32.4±1.0, 3°.57N±0°.09×63°.5E±0°.1, h10^{km}±1^{km}, mb4.6/25, Error ellipse: s-maj=19.2km s-min=12.9km az=128.0*

GCMT ***01*** *05:35:33.4±0.5, 3°.35N±0°.03×63°.78E±0°.04, h24^{km}±1^{km}, MW4.9/62, Moment Tensor Solution. s25,c28; s62,c82; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.79±.30; $M_{\theta\theta}$2.59±.19; $M_{\phi\phi}$0.19±.17; $M_{r\theta}$-1.01±.19; $M_{\theta\phi}$-0.39±.11; $M_{\phi r}$1.14±.26; Best double couple: $M_0$3.10300×10^{16} NP1:ϕ_s265.00000°, δ35.00000°, λ-115.00000°. NP2: ϕ_s115.00000°, δ59.00000°, λ-73.00000°. Principal axes: T 2.9110, Plg12.0000°, Azm193.0000°; N 0.3830, Plg14.0000°, Azm287.0000°; P -3.2950, Plg71.0000°, Azm64.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 05:35:31.7±0.6, **3°.6N**±0°.1×**63°.53E**±0°.09, **h10^{km}, n46, σ0^{s}.79**/35, **mb4.5**/18, **MS3.7**/14, **Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	Pallekele	17.49	77	P	Pn	05 39 37.0	+1.0
	0.4nm,0.3s,baz=280,slow=12,SNR=3.0						
PALK	Pallekele	17.49	77		Pn	05 39 35.6	-0.4
WSAR	Wadi Sarin	20.12	347	LR	LR	05 46 27.7	
	comp=Z,318nm,19.5s,baz=190,slow=33						
ATD	Arta Tunnel	21.96	292	LR	LR	05 47 49.3	
	comp=Z,82nm,18.7s,baz=138,slow=33						
UOSS	Minazif	22.39	342	P	P	05 40 30.5	+0.1
UOSS				IAmb	IAmb	05 40 41.1	
	comp=Z,18nm,1.4s						
RER	Riviere de l'E	25.73	197	P	P	05 41 01.0	-1.6
KMBO	Kilima Mbogo	26.67	260	LR	LR	05 51 28.5	
	comp=Z,113nm,19.5s,baz=95,slow=36						
KMBO	Kilima Mbogo	26.67	260	P	P	05 41 11.1	-0.4
OPO	Ambohidratompo	27.26	216	LR	LR	05 49 32.5	
	comp=Z,205nm,20.6s,baz=188,slow=31						
LODK	Lodwar	28.11	271	P	P	05 41 23.4	-0.8
VOI	Vohitsoka	30.15	212	P	P	05 41 43.6	+1.4
VOI				IAmb	IAmb	05 41 52.1	
	comp=Z,21nm,1.4s						
GEYT	Alibeck	34.56	352	LR	LR	05 56 33.0	
	comp=Z,103nm,18.2s,baz=195,slow=36						
SHL	Shillong	34.93	49	P	P	05 42 23.9	-0.3
GAR	Garm	35.80	9	P	P	05 42 31.2	-0.3
GAR				IAmb	IAmb	05 42 35.0	
	comp=Z,6.8nm,1.1s						
BTK	Batken	36.92	9	P	P	05 42 40.4	-0.5
BTK				IAmb	IAmb	05 42 47.8	
	comp=Z,8.9nm,1.4s						
CMAR	Chiang Mai Arr	37.67	64	P	P	05 42 48.0	+0.5
	comp=Z,0.4nm,0.2s,baz=259,slow=9.1,SNR=7.6						
CMAR				LR	LR	05 57 06.1	
	comp=Z,82nm,18.4s,baz=262,slow=34						
CMAR	Chiang Mai Arr	37.67	64	P	P	05 42 48.2	+0.7
CHTO	Chiang Mai	37.79	64	P	P	05 42 48.5	0.0
CHTO				IAmb	IAmb	05 42 57.9	
	comp=Z,14nm,1.6s						
CSS	Mathiatis	41.95	322	P	P	05 43 22.8	-0.1
CSS				IAmb	IAmb	05 43 34.7	
	comp=Z,38nm,1.5s						
KBZ	Khabaz	43.97	338	LR	LR	06 02 20.8	
	comp=Z,87nm,18.3s,baz=148,slow=37						
BRTR	Keskin Array B	45.03	327	LR	LR	06 01 30.2	
	comp=Z,79nm,19.0s,baz=153,slow=35						
MAKZ	Makanchi	45.95	18	P	P	05 43 54.3	-0.6
MAKZ				IAmb	IAmb	05 44 08.8	
	comp=Z,4.6nm,1.1s						
MKAR	Makanchi Array	46.03	18	LR	LR	06 03 38.9	
	comp=Z,76nm,19.7s,baz=208,slow=37						
QIZ	Qiongzhong	47.76	68	P	P	05 44 09.3	-0.2
BOSA	Boshof	48.74	226	LR	LR	06 02 27.0	
	comp=Z,61nm,21.5s,baz=32,slow=33						
BRVK	Borovoye	49.64	5	P	P	05 44 24.3	+0.9
MLR	Muntele Rosu	53.11	328	P	P	05 44 49.9	+0.2
MLR				IAmb	IAmb	05 45 11.4	
	comp=Z,18nm,1.5s						
ZALV	Zalesovo Beam	53.16	16	P	P	05 44 49.6	-0.1
	comp=Z,0.4nm,0.4s,baz=188,slow=5.4,SNR=4.4						
ZALV				LR	LR	06 07 11.2	
	comp=Z,73nm,21.0s,baz=216,slow=36						
SONM	Songino Array	57.41	33	P	P	05 45 20.9	+0.1
	comp=Z,1.0nm,1.0s,baz=219,slow=6.9,SNR=5.4						
SONM				LR	LR	06 10 00.7	
	comp=Z,206nm,19.8s,baz=254,slow=36						
SONM	Songino Array	57.41	33	P	P	05 45 20.8	0.0
PSA00	Pilbara Seismi	60.49	117	P	P	05 45 42.4	0.0
PSA00				IAmb	IAmb	05 45 43.3	
	comp=Z,11nm,1.5s						
NRIK	Noril'sk	67.58	9	LR	LR	06 19 20.3	
	comp=Z,66nm,18.4s,baz=224,slow=39						
KS19	Wonju Array Si	67.59	51	P	P	05 46 28.3	-0.6
PAB	San Pablo	70.74	311	P	P	05 46 49.4	+0.9
USA0B	Ussuriysk Arra	72.15	45	P	P	05 46 56.7	0.0
USA0B				IAmb	IAmb	05 47 14.1	
	comp=Z,6.3nm,1.1s						
WRA	Warramunga Arr	73.28	112	P	P	05 47 04.7	+0.7
	comp=Z,2.9nm,0.8s,baz=290,slow=5.3,SNR=19						
WRA	Warramunga Arr	73.28	112	P	P	05 47 03.7	-0.3
WRAB	Tennant Creek	73.29	112	P	P	05 47 03.6	-0.4
WRAB				IAmb	IAmb	05 47 12.9	
	comp=Z,5.1nm,0.8s						
WB2	Warramunga Arr	73.29	112	P	P	05 47 03.5	-0.6
WB2				IAmb	IAmb	05 47 12.9	
	comp=Z,5.4nm,0.8s						
WB0	Warramunga Arr	73.30	112	P	P	05 47 03.8	-0.3
WB0				IAmb	IAmb	05 47 13.8	
	comp=Z,18nm,1.6s						
ASAR	Alice Springs	73.58	116	P	P	05 47 06.4	+0.7
	comp=Z,1.2nm,0.6s,baz=290,slow=5.7,SNR=23						
ASAR	Alice Springs	73.58	116	P	P	05 47 04.9	-0.8
MJB9	Matsu-Tunnel	75.58	53	P	P	05 47 17.5	+0.4
VNDA	Vanda	95.27	168	LR	LR	06 25 44.7	
	comp=Z,116nm,18.3s,baz=268,slow=32						
TXAR	Lajitas Array	145.06	340	PKPbc	PKPdf	05 55 11.7	+1.4
	comp=Z,1.7nm,1.1s,baz=90,slow=2.5,SNR=7.8						
TXAR	Lajitas Array	145.06	340		PKPbc	05 55 07.3	-2.3

WEL ***01*** *05:42:00, 39°.41S×175°.95E, h60^{km}, ML5.4, Mw5.3, Moment Tensor Solution. s9 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.40; $M_{\theta\theta}$0.56; $M_{\phi\phi}$-0.16; $M_{r\theta}$0.87; $M_{\theta\phi}$0.01; $M_{\phi r}$0.61; Fault plane solution: $M_0$1.18000×10^{17} NP1: ϕ_s117.00000°, δ19.00000°, λ-33.00000°. NP2: ϕ_s239.00000°, δ80.00000°, λ-106.00000°. Principal axes: T -11888.9300, Plg33.0000°, Azm342.0000°; N 11614.8300, Plg16.0000°, Azm241.0000°; P 274.1000, Plg53.0000°, Azm130.0000°;*

MOS ***01*** *05:42:08.9±0.9, 39°.36S×175°.93E, h48^{km}, mb5.3/18 Error ellipse: s-maj=13.9km s-min=10.1km az=128.1*

BJI ***01*** *05:42:10.7±0.0, 38°.95S×175°.51E, h37^{km}, mB5.5/8, mb5.4/16, Ms4.9/9, Ms7 4.8/10*

NOU ***01*** *05:42:10.0, 39°.57S×175°.72E, h14^{km}, mb5.1/36, North Island, New Zealand*

NEIC ***01*** *05:42:11.5±1.5, 39°.40S±0°.05×175°.95E±0°.08, h55^{km}±4^{km}, mb5.3/64, Mwr5.3/28, ML5.7(WEL), Error ellipse: s-maj=8.5km s-min=6.6km az=78.0*

WEL ***01*** *05:42:11.7, 39°S±2°×17°6E±°, h55^{km}±3^{km}, M5.4/78, ML5.7/78, MLv5.4/78, Error ellipse: s-maj=0.0km s-min=0.0km az=54.8*

NEIC ***01*** *05:42:11.9, 39°.42S×175°.94E, h60^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.36; $M_{\theta\theta}$0.47; $M_{\phi\phi}$-0.11; $M_{r\theta}$0.95; $M_{\theta\phi}$-0.27; $M_{\phi r}$0.53; Fault plane solution: $M_0$1.20000×10^{17} NP1:ϕ_s248.36000°, δ82.16000°, λ-110.04000°. NP2:ϕ_s137.86000°, δ21.46000°, λ-21.89000°. Principal axes: T 1.0988, Plg34.0000°, Azm355.0000°; N 0.1853, Plg20.0000°, Azm251.0000°; P -1.2841, Plg49.0000°, Azm137.0000°;*

IDC ***01*** *05:42:13.5±1.1, 39°.26S×176°.00E, h80^{km}±10^{km}, mb4.7/27, mb1 4.7/27, mb1mx4.6/38, mbtmp4.9/27, MS4.3/17, Ms1 4.3/17, ms1mx4.1/28 Error ellipse: s-maj=11.9km s-min=11.6km az=6.0*

GCMT ***01*** *05:42:14.5±0.1, 39°.60S±0°.01×175°.96E±0°.01, h30^{km}, MW5.4/118, Moment Tensor Solution. s93,c143; s118,c182; Duration: 1^{s}.3 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.24±.02; $M_{\theta\theta}$0.35±.02; $M_{\phi\phi}$-0.10±.02; $M_{r\theta}$1.35±.05; $M_{\theta\phi}$-0.12±.01; $M_{\phi r}$1.14±.04; Best double couple: $M_0$1.79000×10^{17} NP1:ϕ_s124.00000°, δ8.00000°, λ-17.00000°. NP2:ϕ_s231.00000°, δ87.00000°, λ-98.00000°. Principal axes: T 1.6950, Plg42.0000°, Azm329.0000°; N 0.1900, Plg8.0000°, Azm232.0000°; P -1.8850, Plg47.0000°, Azm133.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 05:42:11.7±0.5, **39°.42S**±0°.03×**175°.93E**±0°.03, **h61^{km}**±3^{km}, **h61^{km}:pP-P, n550, σ1^{s}.36**/566, **mb5.2**/86, **13C-25D, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOVZ	Moawhango	0.14	277	P	Pn	05 42 20.1	-1.0
MOVZ				S	Sn	05 42 26.5	-1.3
TUVZ	Tukino	0.27	306	P	Pn	05 42 21.3	-0.6
TUVZ				S	Sn	05 42 29.1	-0.1
WNVZ	Wahianoa	0.28	290	P	Pn	05 42 21.2	-0.7
WNVZ				S	Sn	05 42 29.1	-0.2
WHVZ	Whangaehu Hut	0.30	298	P	Pn	05 42 21.5	-0.7
WHVZ				S	Sn	05 42 29.3	-0.4
TRVZ	Turoa	0.32	293	P	Pn	05 42 21.7	-0.6
TRVZ				S	Sn	05 42 29.4	-0.6
SNVZ	South Ngauruho	0.33	316	P	Pn	05 42 21.7	-0.6
OTVZ	Oturere	0.33	321	P	Pn	05 42 21.8	-0.6
OTVZ				S	Sn	05 42 29.9	-0.1
ETVZ	East Tongariro	0.34	329	P	Pn	05 42 21.7	-0.6
ETVZ				S	Sn	05 42 29.7	-0.3
FWVZ	Far West T-bar	0.34	300	P	Pn	05 42 21.9	-0.6
FWVZ				S	Sn	05 42 29.8	-0.5
TMVZ	Te Maari	0.35	330	P	Pn	05 42 21.9	-0.6
TMVZ				S	Sn	05 42 29.9	-0.4
NGZ	Ngauruhoe	0.36	314	P	Pn	05 42 22.1	-0.5
MTVZ	Mangateitei	0.36	276	P	Pn	05 42 22.0	-0.5
MTVZ				S	Sn	05 42 30.2	-0.1
KWHZ	Kaweka Forest	0.38	90	P	Pn	05 42 22.3	-0.3
KWHZ				S	Sn	05 42 31.6	+1.0
NTVZ	North Tongarir	0.38	328	P	Pn	05 42 22.1	-0.6
NTVZ				S	Sn	05 42 30.2	-0.4
NNVZ	North Ngauruho	0.38	320	P	Pn	05 42 22.3	-0.5
KRVZ	Karewarewa	0.40	325	P	Pn	05 42 22.4	-0.5
KRHZ	Kereru	0.40	123	P	Pn	05 42 22.6	-0.2
WTVZ	West Tongariro	0.41	319	P	Pn	05 42 22.4	-0.6
RITZ	Rihia Road	0.45	353	P	Pn	05 42 22.9	-0.4
PKVZ	Pokaka	0.47	286	P	Pn	05 42 23.2	-0.3
KATZ	Kakaramea	0.48	338	P	Pn	05 42 23.2	-0.5
BKZ	Black Stump Fm	0.51	59		Pn	05 42 23.4	-0.4
BKZ	Black Stump Fm	0.51	59	P	Pn	05 42 23.1	-0.7
BKZ	Black Stump Fm	0.51	59	P	Pn	05 42 23.5	-0.4
TWVZ	Taurewa	0.52	312	P	Pn	05 42 23.3	-0.8
PNHZ	Pukenui	0.53	157	P	Pn	05 42 24.0	-0.2
PNHZ				S	Sn	05 42 34.7	+1.6
HATZ	Hinemaiaia	0.55	13	P	Pn	05 42 23.4	-0.9
RATZ	Rangitukua	0.57	347	P	Pn	05 42 23.9	-0.6
MCHZ	McNeill Hill	0.59	92	P	Pn	05 42 25.5	+0.7
TSZ	Takapari Road	0.63	178	P	Pn	05 42 25.5	+0.3
MRHZ	Matea Rd	0.70	33	P	Pn	05 42 25.1	-0.9
WATZ	Wairara	0.73	348	P	Pn	05 42 25.7	-0.7
WPHZ	Waipukurau	0.75	149	P	Pn	05 42 26.6	0.0
NMHZ	Naumai	0.75	65	P	Pn	05 42 27.5	+0.8
WHTZ	Whakaora	0.76	1	P	Pn	05 42 26.5	-0.3
WAZ	Wanganui	0.80	245	P	Pn	05 42 27.8	+0.5
KAHZ	Kahuranaki	0.82	117	P	Pn	05 42 27.4	0.0
ARHZ	Aropaoanui	0.84	79	P	Pn	05 42 28.1	+0.4
DVHZ	Dannevirke	0.89	168	P	Pn	05 42 28.2	-0.2
MTHZ	Maungataniwha	0.91	51	P	Pn	05 42 28.3	-0.3
OHWZ	Ohakea	0.91	211	P	Pn	05 42 29.7	+1.1
CKHZ	Cape Kidnapper	0.92	105	P	Pn	05 42 28.7	0.0
ALRZ	Allen Road	0.92	21	P	Pn	05 42 28.0	-0.8
WPRZ	Whakapapatarin	0.92	11	P	Pn	05 42 28.1	-0.7
KUTZ	Kaahu Road	0.94	355	P	Pn	05 42 28.3	-0.7
PXZ	Pawanui	0.94	130	P	Pn	05 42 28.7	-0.3
VRZ	Vera Road	0.96	288	P	Pn	05 42 28.9	-0.3
POWZ	Post Office Ro	0.97	187	P	Pn	05 42 29.7	+0.2
PRRZ	Plateau Road	0.99	21	P	Pn	05 42 28.9	-0.8
PRHZ	Porangahau	1.00	147	P	Pn	05 42 29.6	-0.2
RAHZ	Arahi	1.03	61	P	Pn	05 42 30.5	+0.3
HRRZ	Handcock Road	1.07	15	P	Pn	05 42 30.3	-0.4
WHHZ	Waihua	1.07	71	P	Pn	05 42 31.0	+0.3
GRRZ	Galatos Road	1.08	7	P	Pn	05 42 30.5	-0.3
ANWZ	Angora Road	1.11	158	P	Pn	05 42 31.3	0.0
PRWZ	Pori Road	1.13	179	P	Pn	05 42 31.6	+0.1
TLZ	Tolley Road	1.14	344	P	Pn	05 42 30.7	-0.9
HSRZ	Hossack Road	1.14	12	P	Pn	05 42 31.2	-0.3
RTZ	Ruatahuna	1.15	46	P	Pn	05 42 31.1	-0.7
MUGZ	Murupara	1.15	35	P	Pn	05 42 30.8	-0.9
RRRZ	Republican Roa	1.18	23	P	Pn	05 42 31.4	-0.7
LREZ	Lake Rotokare	1.19	268	P	Pn	05 42 32.7	+0.5
HLRZ	Highlands Stat	1.22	16	P	Pn	05 42 32.7	+0.1
HIZ	Hauiti	1.24	317		Pn	05 42 32.3	-0.6
HIZ	Hauiti	1.24	317	P	Pn	05 42 32.6	-0.3
HIZ	Hauiti	1.24	317	P	Pn	05 42 32.8	-0.1
UTU	Utuhina	1.26	9	P	Pn	05 42 33.1	-0.2
MRZ	Mangatainoka R	1.27	192	P	Pn	05 42 33.0	-0.3
TARZ	Mount Tarawera	1.27	21	P	Pn	05 42 33.1	-0.3
SNGZ	Shannon Statio	1.27	60	P	Pn	05 42 33.5	+0.1
BFZ	Birch Farm	1.28	169		Pn	05 42 32.9	-0.6
BFZ	Birch Farm	1.28	169	P	Pn	05 42 32.8	-0.6
BFZ	Birch Farm	1.28	169	P	Pn	05 42 33.0	-0.5
MHEZ	Mangahewa	1.30	285	P	Pn	05 42 34.3	+0.6
NGRZ	Ngongotaha	1.33	9	P	Pn	05 42 33.9	-0.3
MKRZ	Makatiti	1.35	18	P	Pn	05 42 34.5	0.0
TIWZ	Tintock	1.35	182	P	Pn	05 42 34.0	-0.4
OMRZ	Omania	1.36	15	P	Pn	05 42 34.2	-0.3
DREZ	Durham Road	1.36	279	P	Pn	05 42 35.3	+0.7
PREZ	Palmer Road	1.38	273	P	Pn	05 42 35.8	+1.0
KNZ	Kokohu	1.41	74	P	Pn	05 42 34.7	-0.5
KARZ	Kaharoa	1.42	10	P	Pn	05 42 35.4	0.0
NEZ	North Egmont	1.43	276	P	Pn	05 42 36.2	+0.7
EDRZ	Edgecumbe	1.46	26	P	Pn	05 42 35.3	-0.6
LIRZ	Lichensteins R	1.46	14	P	Pn	05 42 37.7	+1.8
RAGZ	Rawiri	1.48	52	P	Pn	05 42 36.5	+0.3
URZ	Urewera	1.48	39	P	Pn	05 42 35.9	-0.3
	3µm,0.3s,baz=226,slow=8.9,SNR=6794						
URZ				S	Sn	05 42 53.5	-1.0
	7µm,0.3s,baz=285,slow=20,SNR=16						
URZ				LR	LR	05 43 14.8	
	comp=Z,9µm,18.4s,baz=211,slow=46						
URZ	Urewera	1.48	39	Pn	Pn	05 42 35.4	-0.7
URZ	Urewera	1.48	39	P	Pn	05 42 35.3	-0.9
KHEZ	Kahui Hut	1.49	274	P	Pn	05 42 37.1	+0.7
CPWZ	Castlepoint	1.50	172	P	Pn	05 42 36.3	-0.1
HOWZ	Holdsworth Sta	1.51	192	P	Pn	05 42 35.7	-0.8
OGWZ	Otaki Gorge	1.51	203	P	Pn	05 42 36.3	-0.2
PKE	Pukeiti	1.53	278	P	Pn	05 42 37.5	+0.8
MARZ	Manawahe	1.55	22	P	Pn	05 42 36.7	-0.4
MHGZ	Mahia Peninsul	1.56	81	P	Pn	05 42 36.8	-0.4
KMRZ	Kaimai	1.58	0	P	Pn	05 42 37.2	-0.3
NMEZ	Namu Road	1.59	270	P	Pn	05 42 38.6	+1.0
RIGZ	Rimuhau	1.59	64	P	Pn	05 42 37.3	-0.4
PRGZ	Paritu Road	1.60	72	P	Pn	05 42 37.1	-0.6
NBEZ	Newall Road No	1.61	275	P	Pn	05 42 38.7	+0.8
KIW	Kapiti Island	1.64	208	P	Pn	05 42 37.9	-0.3
OPRZ	Ohinepanea	1.65	17	P	Pn	05 42 37.8	-0.6

MWZ	Matawai	1.65	49	P	Pn	05 42 38.0	-0.5
TMWZ	Te Maipa	1.68	181	P	Pn	05 42 37.9	-0.9
TGRZ	Tauranga	1.71	9	P	Pn	05 42 38.9	-0.3
TOZ	Tahuroa Road	1.72	349	P	Pn	05 42 38.9	-0.5
MTW	Mount Morrison	1.76	191	P	Pn	05 42 38.7	-1.2
WHRZ	Whale Island	1.77	28	P	Pn	05 42 40.1	+0.1
TKGZ	Te Karaka	1.79	57	P	Pn	05 42 40.0	-0.2
CAW	Cannon Point	1.81	201	P	Pn	05 42 39.6	-0.9
TRWZ	Traveller	1.98	185	P	Pn	05 42 41.5	-1.4
PAWZ	Paruwai Farm	1.99	191	P	Pn	05 42 41.5	-1.6
RUGZ	Raukumara Rang	2.00	44	P	Pn	05 42 42.4	-0.9
CNGZ	Carnagh Statio	2.01	63	P	Pn	05 42 43.1	-0.1
TWGZ	Tauwhareparae	2.03	53	P	Pn	05 42 43.8	+0.2
MSWZ	Moikau Station	2.06	194	P	Pn	05 42 42.3	-1.7
WEL	Wellington	2.06	205	P	Pn	05 42 42.8	-1.2
DUWZ	D'Urville Isla	2.07	228	P	Pn	05 42 43.5	-0.6
SNZO	South Karori	2.10	206	Pn	Pn	05 42 43.2	-1.4
WIZ	White Island	2.14	28	P	Pn	05 42 45.3	+0.3
WSRZ	White Island S	2.14	28	P	Pn	05 42 46.5	+1.4
BHW	Baring Head	2.14	202		Pn	05 42 43.6	-1.5
BHW	Baring Head	2.14	202	P	Pn	05 42 43.5	-1.5
MYRZ	Mayor Island	2.15	7	P	Pn	05 42 45.9	+0.6
TCW	Tory Channel	2.19	215	P	Pn	05 42 44.6	-1.1
PLWZ	Palliser	2.20	193		Pn	05 42 43.9	-2.1
PLWZ	Palliser	2.20	193	P	Pn	05 42 44.0	-2.0
HAZ	Te Kaha	2.21	42	P	Pn	05 42 44.6	-1.3
PUZ	Puketiti	2.27	54	P	Pn	05 42 46.0	-0.8
PKGZ	Pakihiroa	2.27	48	P	Pn	05 42 46.7	-0.2
TUWZ	Tuamarina	2.51	217		Pn	05 42 48.5	-1.6
TUWZ	Tuamarina	2.51	217	P	Pn	05 42 48.9	-1.3
WMGZ	Waiomatatini S	2.52	51	P	Pn	05 42 49.4	-0.8
AWAZ	Awhitu Peninsu	2.57	336	P	Pn	05 42 51.0	+0.2
ETAZ	East Tamaki Re	2.59	342	P	Pn	05 42 50.9	-0.3
MXZ	Matakaoa Point	2.63	46	Pn	Pn	05 42 51.7	0.0
MXZ	Matakaoa Point	2.63	46	P	Pn	05 42 51.4	-0.4
NNZ	Nelson	2.65	227	Pn	Pn	05 42 51.1	-0.9
NNZ	Nelson	2.65	227	P	Pn	05 42 50.7	-1.3
CMWZ	Cape Campbell	2.67	209		Pn	05 42 52.7	+0.5
CMWZ	Cape Campbell	2.67	209	P	Pn	05 42 51.2	-1.0
KUZ	Kuaotunu	2.68	356	P	Pn	05 42 51.8	-0.6
WIAZ	Waiheke Island	2.70	346	P	Pn	05 42 52.2	-0.5
WTAZ	Waiatarua	2.71	336	P	Pn	05 42 53.1	+0.3
EPAZ	Eden Park BICE	2.71	339	P	Pn	05 42 53.0	+0.1
HBAZ	Herne Bay Bore	2.74	339	P	Pn	05 42 53.3	+0.1
BSWZ	Blackbirch Sta	2.77	214		Pn	05 42 51.9	-1.8
BSWZ	Blackbirch Sta	2.77	214	P	Pn	05 42 51.9	-1.8
MBAZ	Motutapu North	2.77	343	P	Pn	05 42 53.4	-0.3
RVAZ	Riverhead Bore	2.86	338	P	Pn	05 42 54.9	0.0
ABAZ	Army Bay	2.95	343	P	Pn	05 42 56.0	-0.1
QRZ	Quartz Range	2.96	241		Pn	05 42 55.2	-1.0
QRZ	Quartz Range	2.96	241	P	Pn	05 42 55.0	-1.2
QRZ	Quartz Range	2.96	241	P	Pn	05 42 55.4	-0.8
GRZ	Great Barrier	3.19	353	P	Pn	05 42 58.7	-0.7
THZ	Tophouse	3.28	224		Pn	05 42 58.9	-1.8
THZ	Tophouse	3.28	224	P	Pn	05 42 59.0	-1.7
KHZ	Kahutara	3.50	210	Pn	Pn	05 43 01.3	-2.3
KHZ	Kahutara	3.50	210	P	Pn	05 43 01.0	-2.5
KHZ	Kahutara	3.50	210	P	Pn	05 43 01.2	-2.3
WCZ	Waipu Caves	3.70	340	P	Pn	05 43 06.7	+0.3
DSZ	Denniston Nort	3.91	232	P	Pn	05 43 06.9	-2.3
GVZ	Greta Valley S	4.16	211	P	Pn	05 43 09.7	-2.9
LTZ	Lake Taylor	4.35	218	Pn	Pn	05 43 12.7	-2.6
LTZ	Lake Taylor	4.35	218	P	Pn	05 43 12.4	-2.9
OUZ	Omahuta	4.59	335	Pn	Pn	05 43 18.5	-0.1
OUZ	Omahuta	4.59	335	P	Pn	05 43 18.9	+0.3
OUZ	Omahuta	4.59	335	P	Pn	05 43 19.0	+0.4
INZ	Inchbonnie	4.73	224	P	Pn	05 43 17.5	-2.9
MQZ	McQueen's Vall	4.93	209	Pn	Pn	05 43 20.0	-3.2
WVZ	Waitaha Valley	5.35	225	P	Pn	05 43 25.9	-3.0
RPZ	Rata Peaks	5.63	219	Pn	Pn	05 43 31.0	-1.9
RPZ	Rata Peaks	5.63	219	P	Pn	05 43 30.1	-2.8
GCSZ	Gaunt Creek Bo	5.74	226	P	Pn	05 43 31.6	-2.6
FOZ	Fox Glacier	6.16	226	Pn	Pn	05 43 40.9	+0.9
LBZ	Lake Benmore	6.55	219		Pn	05 43 42.9	-2.5
ODZ	Otahua Downs	6.85	213		Pn	05 43 47.5	-2.0
ODZ	Otahua Downs	6.85	213	P	Pn	05 43 45.2	-4.2
CTZ	Chatham Island	7.05	130	P	Pn	05 43 50.4	-1.8
WKZ	Wanaka	7.45	221	Pn	Pn	05 44 01.2	+3.5
HHSZ	Highcliff Hill	7.56	210	P	Pn	05 43 56.7	-2.4
MSZ	Milford Sound	7.94	226	P	Pn	05 44 06.3	+2.1
MLZ	Mavora Lakes	8.29	222	Pn	Pn	05 44 14.0	+4.9
MLZ	Mavora Lakes	8.29	222	P	Pn	05 44 06.9	-2.2
WHZ	Wether Hill Ro	8.74	220		Pn	05 44 19.7	+4.4
DCZ	Deep Cove	8.86	224	Pn	Pn	05 44 20.1	+3.2
DCZ	Deep Cove	8.86	224	P	Pn	05 44 19.3	+2.4
PYZ	Puysegur Point	9.57	222	Pn	Pn	05 44 29.6	+3.0
PYZ	Puysegur Point	9.57	222	P	Pn	05 44 27.9	+1.3
RAO	Raoul Island	11.34	28	LR	LR	05 49 23.3	
	comp=Z,987nm,18.3s,baz=202,slow=38						
PINNC	Pines Island,	18.25	334	P	P	05 46 17.9	-2.3
OUENC	Ouen Island, N	18.64	333	P	P	05 46 24.1	-0.4
OUENC				IAmb	IAmb	05 46 29.0	
	comp=Z,155nm,1.2s						
OUENC	Ouen Island, N	18.64	333	P	Pn	05 46 28.7	+3.3
ONTNC	Ouen Toro	18.88	332	P	Pn	05 46 30.1	+1.8
YATNC	Mamie plateau,	18.95	333	P	Pn	05 46 31.5	+2.3
DZM	Mont Dzumac	19.10	332	eP	Pn	05 46 33.2	+2.2
	comp=Z,192nm,1.2s						
DZM				eLR	LR	05 50 46.9	
	comp=Z,8µm,26.6s						
DZM	Mont Dzumac	19.10	332	P	Pn	05 46 32.4	+1.4
	comp=Z,2.4nm,0.3s,baz=183,slow=11,SNR=22						
DZM				LR	LR	05 52 55.5	
	comp=Z,3µm,21.3s,baz=194,slow=34						
DZM	Mont Dzumac	19.10	332	P	P	05 46 28.6	-1.1
DZM				IAmb	IAmb	05 46 35.3	
	comp=Z,130nm,1.3s						
DZM	Mont Dzumac	19.10	332	P	Pn	05 46 33.3	+2.2
LIFNC	LIFOU	20.03	336	P	P	05 46 38.1	-1.5
LIFNC	LIFOU	20.03	336	P	Pn	05 46 43.3	+1.5
MGCD	Mangrove Creek	20.91	280	P	Pn	05 46 54.9	+2.8
	baz=21,SNR=5.5						
KOUNC	Koumac, New Ca	21.31	329	P	P	05 46 56.8	+3.4
CNB	Canberra Magne	21.48	273	P	P	05 46 57.9	+2.7
	baz=21,SNR=4.5						
MSVF	Nonsavu	21.69	5	P	P	05 46 56.9	-0.7
	comp=Z,5.5nm,0.4s,baz=171,slow=13,SNR=13						
MSVF				LR	LR	05 53 46.2	
	comp=Z,2µm,19.0s,baz=197,slow=32						
MSVF	Nonsavu	21.69	5	⇑eP	P	05 46 55.5	-2.1
MSVF				pmax	pmax		
	comp=Z,45nm,1.9s						
MSVF	Nonsavu	21.69	5	P	P	05 46 56.3	-1.3
MSVF				IAmb	IAmb	05 47 17.1	
	comp=Z,81nm,1.1s						
MSVF	Nonsavu	21.69	5	P	P	05 47 02.1	+4.5
CAN	Canberra	21.76	272	P	P	05 46 58.1	-0.1
CAN				pmax	pmax		
	comp=Z,51nm,1.3s						
CAN	Canberra	21.76	272	P	P	05 46 58.1	-0.1
ARMA	Armidale	21.81	287	P	P	05 47 01.8	+3.0
	baz=22,SNR=4.6						
ARMA	Armidale	21.81	287	P	P	05 46 58.3	-0.5
MOO	Moorlands	21.88	253	P	P	05 47 01.3	+1.9
	baz=22,SNR=4.6						
TOO	Toolangi	23.84	265	P	P	05 47 20.1	+0.8
	baz=24,SNR=10						
TOO	Toolangi	23.84	265	P	P	05 47 19.0	-0.3
TOO				pmax	pmax		
	comp=Z,92nm,1.5s						
TOO	Toolangi	23.84	265	P	P	05 47 19.0	-0.3
TOO				IAmb	IAmb	05 47 38.0	
	comp=Z,92nm,1.5s						
TOO	Toolangi	23.84	265	P	P	05 47 22.0	+2.7
	comp=Z,42nm,1.5s						
BRAT	Ballarat	25.05	264	P	P	05 47 32.7	+2.5
	comp=Z,50nm,1.1s						
SANVU	Saraoutou	25.08	340	P	P	05 47 29.6	-0.9
EIDS	Eidsvold	25.13	296	P	P	05 47 32.8	+1.8
	baz=25,SNR=6.5						
EIDS	Eidsvold	25.13	296	P	P	05 47 31.4	+0.4
EIDS	Eidsvold	25.13	296	P	P	05 47 34.9	+3.9
	comp=Z,69nm,1.6s						
CMSA	Cobar Meteorol	25.77	278	P	P	05 47 38.0	+1.3
	baz=26,SNR=4.6						
CMSA	Cobar Meteorol	25.77	278	P	P	05 47 40.8	+4.1
	comp=Z,26nm,1.5s						
ARPS	Mount Arapiles	26.87	265	P	P	05 47 47.5	+0.9
	baz=27						
ARPS	Mount Arapiles	26.87	265	P	P	05 47 49.8	+3.1
	comp=Z,17nm,0.9s						
STKA	Stephens Creek	28.77	274	P	P	05 48 04.9	+1.2
	comp=Z,3.9nm,0.5s,baz=108,slow=11,SNR=11						
STKA				LR	LR	05 58 13.8	
	comp=Z,739nm,21.7s,baz=107,slow=33						
STKA	Stephens Creek	28.77	274	P	P	05 48 05.0	+1.4
	baz=29,SNR=12						
STKA	Stephens Creek	28.77	274	⇑eP	P	05 48 03.8	+0.1
STKA	Stephens Creek	28.77	274	P	P	05 48 01.6	-2.1
STKA	Stephens Creek	28.77	274	P	P	05 48 07.2	+3.5
	comp=Z,3.1nm,1.5s						
QLP	Quilpie	29.35	286	P	P	05 48 10.9	+2.1
	comp=Z,50nm,0.7s						
HTT	Hallett	30.23	270	P	P	05 48 17.6	+1.0
	baz=30,SNR=9.4						
HTT	Hallett	30.23	270	P	P	05 48 18.6	+2.0
	comp=Z,16nm,1.0s						
WHYH	Whyalla	31.42	270	P	P	05 48 28.9	+1.9
	comp=Z,23nm,0.9s						
CTA	Charters Tower	31.95	298	P	P	05 48 32.9	+1.0
	comp=Z,2.9nm,0.4s,baz=127,slow=10,SNR=13						
CTAO	Charters Tower	31.95	298	P	P	05 48 32.3	+0.4
CTAO				pmax	pmax		
	comp=Z,38nm,1.3s						
CTAO	Charters Tower	31.95	298	P	P	05 48 32.3	+0.4
CTAO				IAmb	IAmb	05 48 49.9	
	comp=Z,38nm,1.2s						
LCRK	Leigh Creek	32.00	274	P	P	05 48 32.8	+0.6
	comp=Z,89nm,0.8s						
BBOO	Buckleboo	32.68	269	P	P	05 48 38.2	+0.1
	baz=33,SNR=25						
BBOO	Buckleboo	32.68	269	P	P	05 48 38.5	+0.4
BBOO	Buckleboo	32.68	269	P	P	05 48 39.0	+0.9
	comp=Z,23nm,1.0s						
HNR	Honiara	33.11	330	LR	LR	06 00 10.9	
	comp=Z,1µm,21.2s,baz=162,slow=33						
TBI	Tubuai	33.37	72	eLR	LR	05 57 05.8	
	comp=Z,1µm,32.2s						
MTSU	Mount Surprise	34.62	299	P	P	05 48 56.7	+1.6
	baz=35,SNR=6.3						
OOD	Oodnadatta	35.20	277	P	P	05 49 02.2	+2.2
	comp=Z,17nm,1.0s						
MULG	Mulgathing	35.29	272	P	P	05 49 01.8	+1.0
	comp=Z,27nm,1.0s						
QIS	Mount Isa	36.34	290	P	P	05 49 10.5	+0.6
	baz=36,SNR=6.0						
QIS	Mount Isa	36.34	290	P	P	05 49 11.6	+1.8
	comp=Z,21nm,1.5s						
PAE	Paea	36.92	64	eP	P	05 49 16.1	+1.3
	comp=Z,14nm,0.9s						
PPT2	Papeete2	36.98	64	eP	P	05 49 16.6	+1.3
	comp=Z,59nm,1.1s						
PPT2				eLR	LR	05 58 41.9	
	comp=Z,1µm,29.8s						
PPT	Papeete	36.99	64	P	P	05 49 15.0	-0.4
	comp=Z,40nm,0.7s,baz=198,slow=13,SNR=3.4						
PPT	Papeete	36.99	64	P	P	05 49 15.0	-0.4
COEN	Coen	38.37	302	P	P	05 49 27.6	+0.5
COEN	Coen	38.37	302	P	P	05 49 29.2	+2.1
	comp=Z,70nm,1.4s						
VNDA	Vanda	38.67	185	P	P	05 49 30.4	+1.6
	comp=Z,4.8nm,0.9s,baz=5.0,slow=8.9,SNR=18						
VNDA				S	S	05 55 21.6	+0.8
	comp=Z,5.7nm,1.1s,baz=293,slow=16,SNR=7.2						
VNDA				LR	LR	06 03 08.9	
	comp=Z,338nm,20.8s,baz=26,slow=32						
VNDA	Vanda	38.67	185	P	P	05 49 30.4	+1.6
SBA	Scott Base	38.73	183	P	P	05 49 30.5	+1.2
SBA				pmax	pmax		
	comp=Z,31nm,1.1s						
SBA	Scott Base	38.73	183	P	P	05 49 30.5	+1.2
SBA				IAmb	IAmb	05 49 49.7	
	comp=Z,31nm,1.1s						
AS31	Alice Springs	38.74	281		P	05 49 30.4	+0.2
ASAR	Alice Springs	38.74	281	P	P	05 49 29.9	-0.2
	comp=Z,22nm,0.8s,baz=135,slow=9.4,SNR=161						
ASAR				PcP	PcP	05 51 40.5	-0.3
	comp=Z,3.1nm,0.6s,baz=133,slow=3.4,SNR=2.5						
ASAR				ScP	S	05 55 21.7	-1.4
	comp=Z,0.9nm,0.8s,baz=122,slow=4.5,SNR=4.4						
ASAR				LR	LR	06 04 54.9	
	comp=Z,544nm,21.1s,baz=146,slow=35						
ASAR	Alice Springs	38.74	281	P	P	05 49 30.4	+0.2
PMG	Port Moresby	39.41	312	P	P	05 49 36.1	+0.4
	comp=Z,15nm,0.5s,baz=101,slow=8.4,SNR=4.1						
PMG	Port Moresby	39.41	312	P	P	05 49 39.2	+3.5
PMG	Port Moresby	39.41	312	P	P	05 49 39.1	+3.4
FORT	Forrest	39.72	267	P	P	05 49 37.7	-0.4
	baz=40,SNR=57						
FORT	Forrest	39.72	267	P	P	05 49 37.9	-0.3
FORT				IAmb	IAmb	05 49 57.7	
	comp=Z,60nm,1.1s						
FORT	Forrest	39.72	267	P	P	05 49 39.4	+1.2
	comp=Z,45nm,0.6s						
WR0	Warramunga Arr	40.43	286	P	P	05 49 44.1	-0.1
WC3	Warramunga Arr	40.55	286	P	P	05 49 44.8	-0.4
	baz=40						
WB2	Warramunga Arr	40.58	286	P	P	05 49 45.5	+0.1
WB2				IAmb	IAmb	05 49 47.7	
	comp=Z,29nm,0.6s						
WRAB	Tennant Creek	40.59	286	deP	P	05 49 45.3	-0.2
WRAB	Tennant Creek	40.59	286	P	P	05 49 45.7	+0.2
WRAB				IAmb	IAmb	05 49 47.8	
	comp=Z,24nm,0.5s						
WRAB	Tennant Creek	40.59	286	P	P	05 49 45.7	+0.2
WRA	Warramunga Arr	40.59	286	P	P	05 49 45.1	-0.4
	comp=Z,15nm,0.4s,baz=125,slow=8.2,SNR=157						
WRA				ScP	ScP	05 55 25.7	-5.1
	comp=Z,1.1nm,0.7s,baz=130,slow=3.6,SNR=4.1						
WRA				S	S	05 55 50.4	-0.4
	comp=Z,1.0nm,0.9s,baz=120,slow=14,SNR=3.7						
WRA				LR	LR	06 06 46.4	
	comp=Z,1µm,20.0s,baz=125,slow=36						
WRA	Warramunga Arr	40.59	286	P	P	05 49 45.1	-0.4
WB0	Warramunga Arr	40.65	287	P	P	05 49 45.9	-0.1
WRKA	Warakurna	42.30	275	P	P	05 49 58.0	-1.5
	baz=42,SNR=92						
CASY	Casey	44.85	211	P	P	05 50 19.2	-0.2
KDU	Kakadu	46.63	293	P	P	05 50 33.5	-0.6
	baz=47						
NWAO	Narrogin (SRO)	47.11	259	P	P	05 50 37.0	-0.7
	comp=Z,14nm,0.6s,baz=139,slow=7.9,SNR=18						
NWAO	Narrogin (SRO)	47.11	259	P	P	05 50 36.7	-1.0
	baz=47,SNR=15						
NWAO				P	P	05 50 36.7	-1.0
	baz=47,SNR=15						
NWAO	Narrogin (SRO)	47.11	259	P	P	05 50 37.0	-0.7
NWAO	Narrogin (SRO)	47.11	259	P	P	05 50 36.7	-1.0
KNRA	Kununurra	47.38	286	P	P	05 50 40.2	+0.3
	baz=47,SNR=41						
KNRA	Kununurra	47.38	286	P	P	05 50 40.7	+0.8
KNRA				IAmb	IAmb	05 50 43.3	
	comp=Z,28nm,0.5s						
MTN	Manton Dam	47.49	291	P	P	05 50 40.4	-0.3
	baz=48,SNR=22						
MTN	Manton Dam	47.49	291	P	P	05 50 40.6	-0.2
MTN				IAmb	IAmb	05 50 43.1	
	comp=Z,46nm,1.2s						
FITZ	Fitzroy Crossi	48.24	281	P	P	05 50 46.2	-0.4
	comp=Z,19nm,0.5s,baz=137,slow=5.2,SNR=134						
FITZ	Fitzroy Crossi	48.24	281	P	P	05 50 46.2	-0.4
	baz=48,SNR=44						
FITZ	Fitzroy Crossi	48.24	281	P	P	05 50 46.2	-0.4
FITZ				IAmb	IAmb	05 50 49.2	
	comp=Z,55nm,1.3s						
MUN	Mundaring	48.30	259	P	P	05 50 46.0	-0.9
	baz=48,SNR=18						
BLDU	Ballidu	48.53	261	P	P	05 50 47.7	-1.0
	baz=48,SNR=30						
PATS	Pohnpei	48.83	336	P	P	05 50 52.3	+1.3
	baz=49,SNR=3.6						
MEEK	Meekatharra	48.97	267	P	P	05 50 50.8	-1.4
	baz=49,SNR=44						
MORW	Morawa	49.77	263	P	P	05 50 57.3	-0.9
	baz=50,SNR=8.6						
MORW	Morawa	49.77	263	P	P	05 50 57.3	-0.9
MORW				IAmb	IAmb	05 50 58.2	
	comp=Z,18nm,0.7s						
PSA00	Pilbara Seismi	50.69	273	P	P	05 51 04.1	-1.2
PSA00				IAmb	IAmb	05 51 24.7	
	comp=Z,37nm,1.5s						
QSPA	South Pole Qui	50.70	180	P	P	05 51 06.4	+1.5
	comp=Z,36nm,1.1s,baz=26,slow=3.3,SNR=45						
QSPA	South Pole Qui	50.70	180	P	P	05 51 06.0	+1.1
GIRL	Giralia	54.45	269	P	P	05 51 33.1	+0.1
	baz=54,SNR=6.3						
GIRL	Giralia	54.45	269	P	P	05 51 32.8	-0.2
SOEI	Soe	54.55	288	P	P	05 51 33.8	-0.1
EDFI	Ende, Flores	57.11	287	P	P	05 51 52.3	+0.1
SANI	Sanana	58.63	296	P	P	05 52 01.4	-1.3
	comp=Z,653nmcomp=Z,37nm,1.1s						
PLAI	Plampang	59.98	284	P	P	05 52 13.7	+1.6
	comp=Z,35nm,1.1s						
KAPI	Kappang	61.03	289	P	P	05 52 19.4	+0.2
	comp=Z,9.1nm,0.7s,baz=138,slow=9.8,SNR=3.0						
KAPI	Kappang	61.03	289	P	P	05 52 19.7	+0.5
KAPI				pmax	pmax		
	comp=Z,58nm,1.5s						
KAPI	Kappang	61.03	289	P	P	05 52 19.7	+0.5
KAPI				IAmb	IAmb	05 52 46.2	
	comp=Z,58nm,1.5s						
MAW	Mawson	62.10	204	P	P	05 52 26.6	+1.0
	comp=Z,29nm,1.2s,baz=109,slow=9.0,SNR=25						
MAW				LR	LR	06 18 20.1	
	comp=Z,455nm,19.0s,baz=103,slow=35						
MAW	Mawson	62.10	204	P	P	05 52 26.6	+1.0
	baz=62,SNR=14						
MAW	Mawson	62.10	204	P	P	05 52 26.1	+0.5
GMJI	Gumukmas	63.61	281	P	P	05 52 35.8	-0.6
	comp=Z,28nm,0.7s						
KMMI	Kalianget	63.99	283	P	P	05 52 38.6	-0.4
	comp=Z,2µmcomp=Z,24nm,1.6s						
TOLI2	Tolitoli	64.51	295	P	P	05 52 42.9	+0.5
MPSI	Mapaga	64.59	293	P	P	05 52 41.1	-1.8
	comp=Z,17nm,0.7s						
PWJI	Pagerwojo	65.01	281	P	P	05 52 45.2	-0.5
	comp=Z,50nm,0.7s						
DAV	Davao City (W)	65.60	303	P	P	05 52 49.2	-0.2
	comp=Z,47nm,0.4s,baz=124,slow=7.3,SNR=1.0						
UGM	Wanagama	66.06	280	P	P	05 52 52.5	+0.1
PMSA	Palmer Station	66.08	156	P	P	05 52 53.4	+1.6
PMSA				IAmb	IAmb	05 52 54.1	
	comp=Z,39nm,1.0s						
SYO	Syowa Base	67.16	196	⇑eP	P	05 52 58.8	+0.2
SYO	Syowa Base	67.16	196	⇓epP	pP	05 53 15.4	+0.1
KPJI	Karang Pucung	67.64	279	P	P	05 53 02.6	+0.1
	comp=Z,54nm,0.7s						
CMJI	Cimerak	67.73	278	P	P	05 53 01.9	-1.1
	comp=Z,37nm,0.9s						
CISI	Cisompet, Garu	68.36	278	P	P	05 53 06.4	-0.6
CISI	Cisompet, Garu	68.36	278	P	P	05 53 06.4	-0.6
	comp=Z,56nm,1.1s						
CNJI	Cibinong	69.04	278	P	P	05 53 10.6	-0.6
	comp=Z,4µmcomp=Z,92nm,0.9s						
SNAA	Sanae	69.21	180	P	P	05 53 11.6	+0.1
SNAA	Sanae	69.21	180	d iP	P	05 53 11.3	-0.2
SNAA				i *PP	pP	05 53 28.6	+0.4
SNAA				pmax	pmax		
	comp=Z,39nm,1.1s						
SNAA	Sanae	69.21	180	P	P	05 53 11.9	+0.4
SNAA				IAmb	IAmb	05 53 13.2	
	comp=Z,61nm,1.2s						
VNA3	Neumayer Olymp	69.57	178	P	P	05 53 13.9	+0.3
VNA2	Neumayer--Watz	69.93	179	P	P	05 53 16.1	+0.2
	baz=172,slow=5.8						
SPMM	Sapulut	70.09	294	P	P	05 53 18.0	+0.3
VNA1	Neumayer--Stat	70.19	179	P	P	05 53 18.1	+0.6
CGJI	Cibinong	70.58	278	P	P	05 53 19.6	-1.1
	comp=Z,1µmcomp=Z,34nm,1.0s						
KSM	Kuching	72.34	287	P	P	05 53 30.0	-1.3
KLSI		72.53	278	P	P	05 53 31.1	-1.4
	comp=Z,12nm,1.1s						
PPBI	Pangkal Pinang	73.08	281	P	P	05 53 35.1	-0.6
MDSI	Maura Dua	73.09	278	P	P	05 53 34.0	-1.7
	comp=Z,14nm,1.1s						
JCJ	Chichijima	73.29	329	P	P	05 53 35.2	-1.3
	comp=Z,31nm,0.7s,baz=209,slow=13,SNR=1.8						
COYC	Coyhaique	75.73	138	P	P	05 53 51.1	+0.5
COYC				IAmb	IAmb	05 53 53.6	
	comp=Z,29nm,0.9s						
EFI	East Falkland	77.80	149	⇑eP	P	05 54 01.9	-0.2
EFI				pmax	pmax		
	comp=Z,49nm,1.0s						
PLCA	Paso Flores	79.85	135	P	P	05 54 14.9	+1.2
	comp=Z,11nm,0.8s,baz=224,slow=6.2,SNR=26						
PLCA				LR	LR	06 23 07.0	
	comp=Z,122nm,18.7s,baz=216,slow=31						
PLCA	Paso Flores	79.85	135	P	P	05 54 14.5	+0.8
PLCA				pmax	pmax		
	comp=Z,20nm,1.0s						
PLCA	Paso Flores	79.85	135	P	P	05 54 14.5	+0.8
PLCA				IAmb	IAmb	05 54 16.7	
	comp=Z,20nm,1.0s						
LC01	Cunco	80.37	133	P	P	05 54 17.8	+1.3
LC01				IAmb	IAmb	05 54 19.0	
	comp=Z,46nm,0.8s						
RPSI	Rantau Prapat	81.70	280	P	P	05 54 22.1	-1.8
RPSI				IAmb	IAmb	05 54 41.5	
	comp=Z,26nm,1.1s						
PSI	Prapat	81.77	280	P	P	05 54 22.4	-2.0
	comp=Z,5.0nm,0.7s,baz=130,slow=12,SNR=5.7						
GSI	Gunungsitoli	81.84	278	P	P	05 54 24.9	+0.3
KULM	Kulim	82.07	283	P	P	05 54 25.0	-0.8
TSI	Tuntungan	82.49	281	P	P	05 54 25.5	-2.5
	comp=Z,6µmcomp=Z,162nm,0.5s						
INU	Inuyama	82.62	329	P	P	05 54 28.4	+0.3
INU				IAmb	IAmb	05 54 44.8	
	comp=Z,42nm,1.2s						
GO05	Huala	83.01	130	P	P	05 54 31.3	+0.8
GO05				IAmb	IAmb	05 54 33.0	
	comp=Z,53nm,1.1s						
MJAR	Matsushiro Arr	83.20	330	P	P	05 54 30.1	-1.0
	comp=Z,10.0nm,0.8s,baz=162,slow=6.0,SNR=18						
MJAR				LR	LR	06 29 25.8	
	comp=Z,77nm,20.7s,baz=140,slow=34						
MJAR	Matsushiro Arr	83.20	330	P	P	05 54 31.1	0.0
MJAR				pmax	pmax		
	comp=Z,20nm,1.3s						
MJAR	Matsushiro Arr	83.20	330	P	P	05 54 31.1	0.0
MAJO	Matsushiro	83.20	330	deP	P	05 54 31.0	-0.1
MAJO				pmax	pmax		
	comp=Z,17nm,1.0s						
MAJO	Matsushiro	83.20	330	P	P	05 54 31.4	+0.3
MAJO				IAmb	IAmb	05 54 47.5	
	comp=Z,59nm,1.4s						
JWT	Wachi	83.23	328	P	P	05 54 31.5	+0.3
JWT				IAmb	IAmb	05 54 58.3	
	comp=Z,41nm,1.3s						
JNU	Nakatsue	83.39	323	P	P	05 54 31.6	-0.5
	comp=Z,11nm,0.7s,baz=122,slow=3.4,SNR=6.1						
TPTI		83.39	280	P	P	05 54 30.5	-2.1
BO02	Sierra Bellavi	83.84	131	P	P	05 54 36.2	+1.4
BO02				IAmb	IAmb	05 54 37.4	
	comp=Z,40nm,0.9s						
JHS	Saijyo	83.95	326	P	P	05 54 36.4	+1.4
JHS				IAmb	IAmb	05 54 53.1	
	comp=Z,33nm,1.0s						
MT01	Popeta	84.21	130	P	P	05 54 37.2	+0.6
MT05	Renca	84.84	130	P	P	05 54 41.6	+1.7
TRQA	Tornquist	86.36	138	P	P	05 54 47.3	0.0
TRQA				pmax	pmax		
	comp=Z,25nm,1.2s						
TRQA	Tornquist	86.36	138	P	P	05 54 47.3	0.0
TRQA				IAmb	IAmb	05 54 49.5	
	comp=Z,25nm,1.1s						
TJN	Taejon	87.70	323	⇑eP	P	05 54 54.0	+0.6
KSRS	Korea Array	88.32	324	P	P	05 54 56.8	+0.4
	comp=Z,10nm,0.8s,baz=142,slow=5.4,SNR=20						
KSRS				LR	LR	06 33 19.7	
	comp=Z,94nm,19.0s,baz=150,slow=35						
KSAR	Wonju Array Be	88.33	324	P	P	05 54 56.3	-0.1
KSAR	Wonju Array Be	88.33	324	P	P	05 54 56.3	-0.1
KS19	Wonju Array Si	88.38	324	P	P	05 54 57.2	+0.5
KS19				IAmb	IAmb	05 55 14.3	
	comp=Z,23nm,1.1s						
JKA	Kamikawa-asahi	88.43	337	P	P	05 54 56.9	+0.2
ASAJ	Asahikawa	88.44	337	P	P	05 54 56.9	+0.2
	comp=Z,11nm,0.9s,baz=172,slow=14,SNR=4.3						
NJ2	Nanjing	88.66	315	eP	P	05 55 01.4	+3.3
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
YSS	Yuzh-Sakhalins	90.96	338	eP	P	05 55 10.0	+1.6
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
CMAR	Chiang Mai Arr	91.92	292	P	P	05 55 13.8	+0.1
	comp=Z,2.9nm,0.7s,baz=146,slow=3.4,SNR=14						
CMAR				LR	LR	06 38 48.9	
	comp=Z,112nm,21.5s,baz=182,slow=37						
CMAR	Chiang Mai Arr	91.92	292	i P	P	05 55 13.6	0.0
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CMAR	Chiang Mai Arr	91.92	292	P	P	05 55 13.6	0.0
USA0B	Ussuriysk Arra	92.20	330	⇑eP	P	05 55 15.1	+0.8
USRK	Ussuriysk Ar.	92.20	330	P	P	05 55 14.4	+0.1
	comp=Z,5.6nm,0.8s,baz=134,slow=4.2,SNR=8.2						

USRK				LR	LR	06 34 07.0	
	comp=Z,84nm,19.9s,baz=140,slow=34						
USRK	Ussuriysk Ar.	92.20	330	P	P	05 55 14.9	+0.7
PB15	IPOC Station P	92.80	123	P	P	05 55 18.0	0.0
PETK	Petropavlovsk-	93.50	349	P	P	05 55 18.7	-1.4
	comp=Z,1.6nm,0.7s,baz=102,slow=6.2,SNR=1.1						
PB07	IPOC Station P	93.57	122	P	P	05 55 19.0	-2.6
LVC	Limon Verde	93.58	123	P	P	05 55 20.4	-1.5
LVC				pmax	pmax		
	comp=Z,27nm,1.5s						
LVC	Limon Verde	93.58	123	P	P	05 55 20.4	-1.5
LVC				IAmb	IAmb	05 55 26.2	
	comp=Z,27nm,1.4s						
MONP2	Monument Peak	95.39	51	P	P	05 55 31.5	+2.0
	baz=226						
IKP	In-Ko-Pah, Jac	95.42	52	P	P	05 55 31.4	+1.9
	baz=226						
BFSC	Mount Baldy Ra	95.59	50	P	P	05 55 33.4	+3.0
	baz=225						
PFO	Pinyon Flats O	95.87	51	⇑eP	P	05 55 31.1	-0.5
PFO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GLA	Glamis	96.47	52	P	P	05 55 34.1	-0.2
GLA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
GLA	Glamis	96.47	52	P	P	05 55 34.1	-0.2
GLA				IAmb	IAmb	05 55 54.6	
	comp=Z,9.1nm,0.9s						
GLA	Glamis	96.47	52	P	P	05 55 36.7	+2.4
	baz=227						
KLR	Kul'dur	96.52	333	⇓eP	P	05 55 33.4	-0.6
KLR				pmax	pmax		
	comp=Z,3.0nm,1.4s						
CD2	Chengdu	96.86	304	P	P	05 55 36.9	+0.8
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
214A	Organ Pipe Nat	96.98	54	P	P	05 55 39.5	+2.9
	baz=228						
IRM	Iron Mountain	97.04	51	P	Pdif	05 55 39.2	+2.4
	baz=227						
CPUP	Villa Florida	97.86	133	P	Pdif	05 55 41.5	+0.6
	comp=Z,3.4nm,0.8s,baz=210,slow=8.1,SNR=5.6						
CPUP				LR	LR	06 32 59.4	
	comp=Z,125nm,20.4s,baz=218,slow=31						
CPUP	Villa Florida	97.86	133	P	P	05 55 39.9	-0.9
CPUP				IAmb	IAmb	05 56 06.2	
	comp=Z,10nm,1.5s						
NVAR	Mina Array Bea	98.15	46	P	Pdif	05 55 42.2	+0.3
	comp=Z,0.3nm,0.7s,baz=214,slow=6.3,SNR=3.0						
NVAR				LR	LR	06 37 37.1	
	comp=Z,72nm,18.3s,baz=221,slow=34						
LPAZ	La Paz	98.57	119	P	Pdif	05 55 46.0	+1.1
	comp=Z,0.9nm,0.8s,baz=207,slow=6.8,SNR=2.5						
LPAZ				LR	LR	06 31 40.7	
	comp=Z,141nm,21.9s,baz=188,slow=30						
LPAZ	La Paz	98.57	119	P	P	05 55 44.7	-0.2
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						
LPAZ	La Paz	98.57	119	P	P	05 55 44.7	-0.2
HHC	Hu-ho-hao-te	99.09	316	eP	Pdif	05 55 48.1	+2.2
HHC				pmax	pmax		
	comp=Z,13nm,1.1s						
HHC				pmax	pmax		
	comp=Z,48nm,5.4s						
HHC				LR	LR		
	comp=Z,200nm,22.5s						
HHC				LR	LR		
	comp=Z,190nm,20.6s						
HHC				LR	LR		
	comp=Z,500nm,20.0s						
LZH	Lanzhou	100.25	308	eP	Pdif	05 55 53.2	+1.9
LZH				pP	pPdif	05 56 07.4	-1.5
LZH				sP	sPdif	05 56 12.9	-2.8
LZH				pmax	pmax		
	comp=Z,18nm,1.2s						
PDAR	Pinedale Array	106.00	48	PKKPbc	PKKPbc	06 11 50.2	-1.1
	comp=Z,0.2nm,0.5s,baz=108,slow=2.0,SNR=4.2						
PDAR				PKKP	PKKPdf	06 12 01.5	-1.7
	comp=Z,0.3nm,0.6s,baz=96,slow=4.5,SNR=1.8						
SONM	Songino Array	106.56	319	PKKPbc	PKKPbc	06 11 49.5	-0.1
	comp=Z,0.8nm,0.5s,baz=259,slow=2.3,SNR=4.6						
ILAR	Eielson Array	107.88	16	PKKP	PKKPab	06 11 57.9	+2.8
	comp=Z,0.5nm,0.9s,baz=5.3,slow=5.7,SNR=4.2						
INK	Inuvik	113.84	18	PKiKP	PKiKP	06 00 42.2	-0.1
	comp=Z,0.7nm,0.6s,baz=185,slow=2.1,SNR=3.8						
WMQ	Urumqi	114.78	307	ePKP	PKiKP	06 00 46.5	+1.5
WMQ				LR	LR		
	comp=Z,250nm,21.3s						
PLAL	Pickwick Lake	115.30	65		PKPdf	06 00 44.0	-2.2
YKA	Yellowknife Ar	115.72	29	PKP	PKPdf	06 00 45.5	-0.6
	comp=Z,0.7nm,0.7s,baz=265,slow=2.6,SNR=2.4						
WVT	Waverly	116.07	64	P	PKPdf	06 00 46.1	-1.4
	baz=239						
F36A	Milaca	117.23	52		PKPdf	06 00 48.9	-0.6
GOGA	Godfrey	117.77	68	P	PKPdf	06 00 50.4	-0.5
	baz=239						
JFWS	Jewell Farm	117.84	56	P	PKPdf	06 00 49.5	-1.3
	baz=241						
ULM	Lac du Bonnet	117.99	47	PKP	PKPdf	06 00 48.0	-2.8
	comp=Z,2.3nm,0.7s,baz=247,slow=6.9,SNR=2.0						
WCI	Wyandotte Cave	118.18	62	PKIKP	PKPdf	06 00 50.7	-0.9
WCI	Wyandotte Cave	118.18	62	PKPdf	PKPdf	06 00 50.7	-0.9
WCI	Wyandotte Cave	118.18	62	P	PKPdf	06 00 50.9	-0.7
	baz=240						
EYMN	Ely	119.45	50	P	PKPdf	06 00 53.1	-0.7
	baz=243						
MKAR	Makanchi Array	119.56	308	PKP	PKPdf	06 00 51.8	-2.2
	comp=Z,1.1nm,0.7s,baz=175,slow=1.5,SNR=9.8						
MKAR				PKKPab	PKKPbc	06 11 07.7	+2.3
	comp=Z,1.0nm,0.7s,baz=274,slow=3.2,SNR=4.6						
P49A	Miami Univ. Ec	119.89	62	P	PKPdf	06 00 53.8	-1.0
	baz=242						
KMSC	Kings Mountain	120.16	68	P	PKPdf	06 00 55.3	-0.2
	baz=241						
Q51A	Peebles	120.59	63		PKPdf	06 00 55.0	-1.3
W57A	Gilead	121.12	68		PKPdf	06 00 56.4	-0.9
ZALV	Zalesovo Beam	121.27	316	PKP	PKPdf	06 00 54.9	-2.1
	comp=Z,0.8nm,0.5s,baz=199,slow=3.1,SNR=5.3						
ACSO	Alum Creek Sta	121.39	62	P	PKPdf	06 00 56.9	-0.9
	baz=243						
P52A	Corning	121.70	63	P	PKPdf	06 00 57.5	-0.8
	baz=243						
BLA	Blacksburg	121.79	66	PKIKP	PKPdf	06 00 58.1	-0.5
BLA	Blacksburg	121.79	66	PKPdf	PKPdf	06 00 58.1	-0.5
BLA	Blacksburg	121.79	66	P	PKPdf	06 00 58.4	-0.2
	baz=242						
T57A	Hurt	122.52	67		PKPdf	06 00 59.1	-0.9
O53A	New Philadelph	122.61	62	P	PKPdf	06 00 59.6	-0.4
	baz=244						
N54A	Moraine State	123.76	62	P	PKPdf	06 01 01.6	-0.6
	baz=245						
O56A	Blue Knob Stat	124.45	63		PKPdf	06 01 03.2	-0.5
O56A	Blue Knob Stat	124.45	63	P	PKPdf	06 01 03.7	0.0
	baz=245						
KMBO	Kilima Mbogo	124.70	233	PKP	PKPdf	06 01 04.8	-0.5
	comp=Z,2.9nm,0.9s,baz=95,slow=1.8,SNR=7.4						
KMBO	Kilima Mbogo	124.70	233	⇑iPKIKP	PKPdf	06 01 04.9	-0.3
M55A	Ridgway	124.81	62	PKPdf	PKPdf	06 01 03.2	-1.1
SSPA	Standing Stone	125.07	63		PKPdf	06 01 03.8	-0.9
SSPA	Standing Stone	125.07	63	P	PKPdf	06 01 04.4	-0.3
	baz=245						
SDMD	Soldier's Deli	125.29	65		PKPdf	06 01 04.5	-0.7
KK31	Karatay Array	125.56	300	PKIKP	PKPdf	06 01 03.9	-1.7
KK31	Karatay Array	125.56	300	PKPdf	PKPdf	06 01 03.9	-1.7
KKAR	Karatay Array	125.56	300	PKIKP	PKPdf	06 01 04.1	-1.6
KKAR	Karatay Array	125.56	300	PKPdf	PKPdf	06 01 04.1	-1.6
KKAR	Karatay Array	125.56	300		PKPdf	06 01 03.9	-1.7
NRIK	Noril'sk	125.70	334	PKP	PKPdf	06 01 03.3	-1.7
	comp=Z,3.3nm,0.8s,baz=84,slow=5.1,SNR=5.0						
NRIK	Noril'sk	125.70	334	⇑iPKIKP	PKiKP	06 01 07.0	+1.5
MVL	Millersville	125.88	65		PKPdf	06 01 05.0	-1.3
M57A	Sunshine Farm,	125.88	63		PKPdf	06 01 05.4	-0.9
L56A	Greenwood	125.91	62	PKPdf	PKPdf	06 01 05.6	-0.8
N58A	Sunbury	125.97	63		PKPdf	06 01 04.8	-1.6
N59A	State Game Lan	126.65	64	P	PKPdf	06 01 07.6	-0.2
	baz=246						
LUPA	Lehigh Univers	126.80	64		PKPdf	06 01 07.1	-0.9
K57A	Scipio Center	126.85	61		PKPdf	06 01 07.4	-0.8
KSPA	Keystone Colle	126.91	63		PKPdf	06 01 07.5	-0.8
BINY	Binghamton	127.01	62		PKPdf	06 01 07.7	-0.8
BINY	Binghamton	127.01	62	P	PKPdf	06 01 08.1	-0.3
	baz=247						
J57A	Williamstown	127.46	61		PKPdf	06 01 08.5	-0.7
J58A	Remsen	127.92	61		PKPdf	06 01 09.6	-0.6
PAL	Palisades	127.98	64	PKIKP	PKPdf	06 01 10.1	-0.2
PAL	Palisades	127.98	64		PKPdf	06 01 10.1	-0.2
PAL	Palisades	127.98	64	P	PKiKP	06 01 10.8	-0.1
	baz=247						
ARU	Arti	136.37	314	⇑iPKIKP	PKiKP	06 01 29.5	+2.2
SPA0	Spitsbergen Ar	140.23	354	e	PKPdf	06 01 22.6	-10
SPA0				ePKPdf	PKiKP	06 01 33.3	-1.4
KIRV	Kirov	141.28	318	⇑iPKIKP	PKiKP	06 01 39.4	+2.1
BJO1	Bjornoya	143.21	350	ePKPdf	PKPdf	06 01 38.5	+1.0
ZEI	Tsey	144.08	291	i PKHKP	PKPpre	06 01 36.1	
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ONI	Oni	144.37	291	PKIKP	PKPab	06 01 38.3	-0.6
ONI	Oni	144.37	291		PKPab	06 01 38.3	-0.6
NCK	Nalchik	144.43	292	⇑ePKIKP	PKPdf	06 01 41.3	+0.6
LVZ	Lovozero	144.50	336	⇓ePKIKP	PKiKP	06 01 42.2	-1.5
KBZ	Khabaz	144.97	293	PKP	PKPbc	06 01 39.7	-1.2
	comp=Z,27nm,0.9s,baz=112,slow=2.9,SNR=16						
GOF	Gofitskoye	145.07	295	⇑ePKIKP	PKiKP	06 01 55.4	+10
GOF				pmax	pmax		
	comp=Z,88nm,0.7s						
KIV	Kislovodsk	145.16	293	i PKIKP	PKiKP	06 01 44.7	-1.2
KIV				pmax	pmax		
	comp=Z,11nm,1.0s						
KIV				MLR	MLR		
	comp=Z,96nm,25.0s						
HAMF	Hammerfest	145.58	344	ePKPdf	PKPdf	06 01 41.0	-0.7
ARCES	ARCESS Array B	146.00	342	PKPbc	PKPdf	06 01 41.6	-0.9
	comp=Z,21nm,0.6s,baz=49,slow=3.1,SNR=71						
VRH	Novokhopyorsk	146.25	306	ePKIKP	PKPdf	06 01 42.7	-0.7
VRH				pmax	pmax		
	comp=Z,70nm,0.6s						
KTK1	Kautokeino	146.93	342	ePKPdf	PKPdf	06 01 43.9	-0.2
LIC	Lamto	146.94	178	eP	PKPbc	06 01 47.5	-0.3
	comp=Z,88nm,0.7s						
KIC	Kosan Boka	147.08	179	eP	PKPbc	06 01 47.9	-0.3
	comp=Z,118nm,0.9s						
JETT	Jettan, Norway	147.13	344	ePKPab	PKiKP	06 01 49.1	0.0
TIC	Toumodi	147.35	178	eP	PKPbc	06 01 49.5	+0.5
TRO	Tromso	147.36	345	ePKPdf	PKPdf	06 01 45.2	+0.5
DBIC	Dimbokro	147.38	179	PKPbc	PKPdf	06 01 46.4	-0.2
	comp=Z,15nm,0.6s,baz=194,slow=3.2,SNR=25						
DBIC	Dimbokro	147.38	179	PKP2	PKPbc	06 01 49.0	0.0
DBIC	Dimbokro	147.38	179	PKPdf	PKPdf	06 01 46.6	0.0
DBIC					PKPbc	06 01 49.0	0.0
GAZ	Gaziantep	147.72	279		PKPdf	06 01 46.4	-0.1
VORD	Divnogorie	147.79	305	ePKIKP	PKPdf	06 01 46.6	+0.6
VORD				pmax	pmax		
	comp=Z,20nm,1.0s						
VSR	Storozhevoye	147.85	306	ePKP2	PKPdf	06 01 47.5	+1.4
VSR				pmax	pmax		
	comp=Z,40nm,1.1s						
LPSR	Galich'ya Gora	147.86	309	ePKIKP	PKPdf	06 01 47.0	+0.9
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MOS	Moscow	148.07	315	i PKP2	PKPab	06 02 02.4	+10
MOS				pmax	pmax		
	comp=Z,51nm,0.6s						
OBN	Obninsk	148.80	314	i PKHKP	PKPpre	06 01 45.5	
OBN				i		06 01 52.9	
OBN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BNN	Bunyan	149.21	282		PKPdf	06 01 50.0	+1.0
FAUS	Fauske	149.99	345	ePKPbc	PKiKP	06 01 55.2	+0.3
BR131	Keskin Array S	151.07	283	PKIKP	PKPbc	06 01 56.0	-1.7
BR131	Keskin Array S	151.07	283		PKPbc	06 01 56.0	-1.7
BRTR	Keskin Array B	151.07	283	PKPbc	PKPbc	06 01 56.0	-1.7
	comp=Z,6.7nm,0.8s,baz=147,slow=5.3,SNR=26						
BRTR	Keskin Array B	151.07	283		PKPbc	06 01 56.3	-1.5
KONS	Konsvik	151.18	346	ePKPbc	PKiKP	06 01 58.2	+0.8
FINES	FINESS Array B	151.23	330	PKPbc	PKPbc	06 01 54.8	-2.4
	comp=Z,5.1nm,0.5s,baz=57,slow=2.4,SNR=33						
NSS	Namsos	153.15	345	ePKPdf	PKPdf	06 01 53.6	-0.3
TORD	Torodi Ar. Bea	153.34	193	PKP	PKPdf	06 01 55.2	-0.6
	comp=Z,1.6nm,0.7s,baz=251,slow=0.6,SNR=12						
TORD				PKPbc	PKPbc	06 02 02.5	-0.8
	comp=Z,22nm,0.9s,baz=158,slow=3.6,SNR=53						
TORD	Torodi Ar. Bea	153.34	193		PKPdf	06 01 54.5	-1.3
TORD				PKPbc	PKPbc	06 02 03.0	-0.4
AKASG	Malin Array Be	154.14	307	PKPbc	PKPbc	06 02 01.5	-2.5
	comp=Z,0.9nm,0.4s,baz=60,slow=2.6,SNR=5.8						
AKASG	Malin Array Be	154.14	307		PKPbc	06 02 02.3	-1.7
AKBB	Malin Array Si	154.14	307	PKP2	PKPab	06 02 17.2	-0.8
AKBB	Malin Array Si	154.14	307	PKPab	PKPab	06 02 17.2	-0.8
AKN	Aaknes	156.24	347	ePKPdf	PKPdf	06 01 58.5	+0.2
NB2	NORSAR Subarra	156.37	341	PKP	PKPdf	06 02 10.1	+12
	comp=Z,0.8nm,0.7s,baz=41,slow=3.8						
NOA	NORSAR Array B	156.37	341	PKPab	PKPab	06 02 25.2	-2.0
	comp=Z,2.7nm,0.9s,baz=34,slow=4.7,SNR=5.0						
SUW	Suwalki	156.49	317	PKP2	PKPab	06 02 27.4	-0.5
SUW						07 01 58.4	
SUW	Suwalki	156.49	317	PKPdf	PKPdf	06 01 58.4	-0.5
SUW					PKPab	06 02 27.4	-0.5
NC602	NORSAR Array S	156.55	341	ePKPdf	PKPdf	06 01 58.4	-0.3
BURAR	Bucovina Array	157.34	301	PKPab	PKPab	06 02 31.6	-0.4
BUR08	Bucovina Ar. S	157.35	301	PKPab	PKPab	06 02 32.0	0.0
KONO	Kongsberg	157.98	341	ePKPdf	PKPdf	06 02 00.8	+0.3
UZH	Uzhgorod	159.02	305	ePKIKP	PKPdf	06 02 04.8	+2.6
UZH				e		06 02 24.7	
UZH				e		06 02 37.1	
BRG	Berggiesshubel	162.95	318	ePKP	PKPdf	06 02 21.0	+15
BRG				Amp		06 02 28.2	
	comp=Z,4.0nm,1.3s						
CLL	Collm	163.17	320	ePKIKP	PKPdf	06 02 14.0	+7.5
CLL				e		06 02 57.0	
CLL	Collm	163.17	320	ePKPab	PKPab	06 02 57.0	-0.1
CLL				i pPKPab	pPKPab	06 03 11.6	-3.1
CONA	Conrad Observa	163.30	307	eP	PKPab	06 03 01.9	+4.0
	comp=Z,4.7nm,1.2s						
ARSA	Arzberg	163.77	305	eP	PKPab	06 03 01.1	+1.1
	comp=Z,6.0nm,1.6s						
GERES	GERESS Array B	164.18	312	PKPab	PKPab	06 03 00.6	-1.2
	comp=Z,0.8nm,0.7s,baz=54,slow=5.0,SNR=5.4						
GERES	GERESS Array B	164.18	312		PKPab	06 03 00.9	-0.9
MOA	Molln	164.31	308	eP	PKPab	06 03 02.4	+0.1
	comp=Z,2.9nm,0.8s						
OBKA	Obir	164.66	304	eP	PKPab	06 03 05.0	+1.0
	comp=Z,7.4nm,1.3s						
KBA	Koelnbreinsper	165.20	307	eP	PKPab	06 03 07.8	+1.4
	comp=Z,3.7nm,1.0s						
ABTA	Abfaltersbach	165.86	307	eP	PKPab	06 03 08.9	-0.3
	comp=Z,8.5nm,1.4s						
WTTA	Wattenberg	166.16	310	eP	PKPab	06 03 09.6	-1.1
	comp=Z,5.4nm,1.0s						
MOTA	Moosalm	166.44	311	eP	PKPab	06 03 13.3	+1.5
	comp=Z,3.8nm,1.1s						
SQTA	Sankt Quirin	166.44	310	eP	PKPab	06 03 11.6	-0.2
	comp=Z,2.6nm,0.6s						
BEBN	Eben Emael	166.72	332	dPKP	PKPab	06 03 12.2	-0.5
BEBN				dpPKP	pPKPab	06 03 27.9	-2.4
BTNL	Ternell	166.73	331	dPKP	PKPab	06 03 12.3	-0.5
BTNL				dpPKP	pPKPab	06 03 27.5	-2.9
MEM	Membach	166.75	331	dPKP	PKPab	06 03 12.2	-0.6
MEM				dpPKP	pPKPab	06 03 28.1	-2.3
FETA	Feichten	166.82	310	eP	PKPab	06 03 14.6	+1.0
	comp=Z,3.0nm,1.0s						
BHOU	Houvegnez	166.96	330	dPKP	PKPab	06 03 13.1	-0.7
BHOU				dpPKP	pPKPab	06 03 29.5	-1.9
BCLA	Clavier	167.17	332	dPKP	PKPab	06 03 13.4	-1.3
BCLA				dpPKP	pPKPab	06 03 29.6	-2.7
DAVA	Damuels	167.18	312	eP	PKPab	06 03 13.4	-1.7
	comp=Z,2.9nm,1.0s						
BGES	Gesves	167.28	332	dPKP	PKPab	06 03 14.6	-0.6
BGES				dpPKP	pPKPab	06 03 29.9	-2.9
WLF	Walferdange	167.44	328	dpPKP	pPKPab	06 03 31.6	-2.0
WLF	Walferdange	167.44	328	PKP2	PKPab	06 03 15.8	-0.1
WLF	Walferdange	167.44	328		PKPab	06 03 15.8	-0.1
SNF	Seneffe	167.45	335	dPKP	PKPab	06 03 14.7	-1.2
SNF				dpPKP	pPKPab	06 03 31.1	-2.4
BMRD	Maredsous	167.46	333	dPKP	PKPab	06 03 14.9	-1.0
BMRD				dpPKP	pPKPab	06 03 30.5	-3.1
DOU	Dourbes	167.69	333	dPKP	PKPab	06 03 16.2	-0.8
DOU				dpPKP	pPKPab	06 03 32.1	-2.6

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*TUL **01** 06:08:04.5±0.7, 36°.94N±0°.02×97°.85W±0°.03, h3^{km}±7^{km}, ML2.5, mb_Lg2.3/8(NEIC), Error ellipse: s-maj=4.1km s-min=2.5km az=49.0*

NEIC 01 06:08:04.8±0.8**, 36°.93N**±0°.02×**97°.83W**±0°.03**, h4**^{km}±7^{km}**, Error ellipse: s-maj=4.3km s-min=1.9km az=71.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T35A	Sooner Cattle	1.05	90		Pg	06 08 24.9	-0.2
OKCFA	Oklahoma City	1.54	168		Pn	06 08 33.1	+0.1
OKCFA				IAmb_Lg		06 08 57.3	
	comp=Z,23nm,0.8s						
OKCSW	OKLAHOMA CITY	1.55	168		Pn	06 08 33.3	+0.1
R32A	Long Quarter,	1.65	335		Pn	06 08 34.7	+0.1
FNO	Franklin	1.70	168		Pn	06 08 35.6	+0.3
TUL1	Leonard	1.93	121	Pn	Pn	06 08 39.3	+0.9
WMOK	Wichita Mounta	2.31	200		Pn	06 08 44.4	+0.6
X34A	Smith Ranch, M	2.32	180		Pb	06 08 45.7	-1.5
KSU1	Kansas State U	2.38	24		Pn	06 08 44.4	-0.2
KSU1				IAmb_Lg		06 09 22.8	
	comp=Z,22nm,0.9s						
CBKS	Cedar Bluff	2.42	322	IAmb_Lg		06 09 18.7	
	comp=Z,7.3nm,0.8s						
X37A	Clayton	3.07	139		Pn	06 08 54.9	+0.8
HHAR	Hobbs	3.19	100	Pn	Pn	06 08 55.8	0.0
U40A	Yellville	4.04	97	Pn	Pn	06 09 07.0	-0.5
U40A				IAmb_Lg		06 10 15.4	
	comp=Z,7.3nm,0.8s						

ROM 01 06:19:21.9±0.1**, 42°.539N**±0°.008×**13°.243E**±0°.005**, h13**^{km}**, ML1.4**/2**, 1C, Error ellipse: s-maj=1.0km s-min=0.0km az=164.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMA1	SAN MARTINO	0.11	37	P	Pg	06 19 25.6	+0.5
SMA1				S	Sg	06 19 27.9	+0.4
SMA1				AML	AML		
	comp=N,224µm,0.5s						
SMA1				AML	AML		
	comp=N,224µm,0.5s						
SMA1				AML	AML		
	comp=E,390µm,0.6s						
LNSS	Leonessa	0.16	293	P	Pg	06 19 26.2	+0.3
LNSS				S	Sg	06 19 29.1	+0.5
LNSS				AML	AML		
	comp=E,160µm,0.1s						
LNSS				AML	AML		
	comp=E,160µm,0.1s						
LNSS				AML	AML		
	comp=N,158µm,0.3s						
GIGS	Gran Sasso	0.26	110	P	Pg	06 19 27.9	+0.5
GIGS				S	Sg	06 19 31.9	+0.9
TERO	Teramo	0.28	72	⇑P	Pg	06 19 28.1	+0.4
TERO				S	Sg	06 19 32.5	+0.8
ARRO	Arrone	0.35	277	P	Pg	06 19 29.4	+0.3
ARRO				S	Sb	06 19 35.0	-0.7

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*PRU **01** 06:20:22.4±0.0, 41°.14N×20°.58E, h0^{km}*

*IDC **01** 06:20:23.4±2.8, 41°.17N×20°.09E, h0^{km}, mb3.5/4, mb1 3.6/6, mb1mx3.4/50, mbtmp3.5/6, ML3.5/2, MS3.6/1, Ms1 3.6/1, ms1mx2.5/50, Error ellipse: s-maj=37.2km s-min=17.4km az=1.0*

*SKO **01** 06:20:24.0, 41°.37N×20°.21E, h15^{km}*

*ATH **01** 06:20:25.5, 41°.51N×20°.21E, h24^{km}±7^{km}, ML3.4/3, Error ellipse: s-maj=7.5km s-min=1.4km az=278.0*

*BEO **01** 06:20:26.1±0.6, 41°.14N×20°.08E, h12^{km}±2^{km}, ML3.2/12*

*TIR **01** 06:20:26.2, 41°.36N×20°.24E, h6^{km}±1^{km}, Md3.4, Ml3.3*

*PDG **01** 06:20:26.7±0.4, 41°.38N×20°.20E, h11^{km}, MD3.6/4, ML3.3/13, Error ellipse: s-maj=0.5km s-min=0.7km az=0.0*

*THE **01** 06:20:26.9, 41°.44N×20°.28E, h5^{km}±1^{km}, ML3.0/12, Error ellipse: s-maj=1.7km s-min=1.0km az=161.0*

ISC 01 06:20:27.3±0.9**, 41°.36N**±0°.01×**20°.19E**±0°.02**, h14**^{km}±6^{km}**, n146, σ1°33**/222**, 24C-22D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.24	268	⇑P	Pg	06 20 32.3	-0.2
TIR				S	Sb	06 20 37.2	-0.4
TIR	Tirane	0.24	268	ePg	Pg	06 20 32.4	-0.1
TIR				eSg	Sb	06 20 37.4	-0.1
TIR	Tirane	0.24	268	P	Pg	06 20 32.4	-0.1
TIR				S	Sb	06 20 37.1	-0.4
TIR				AML	AML	06 20 38.2	
	comp=E,16976µm,0.2s						
TIR				AML	AML	06 20 38.6	
	comp=N,37280µm,0.4s						
TIR	Tirane	0.24	268	i Pg	Pg	06 20 32.5	-0.1
TIR	Tirane	0.24	268	P	Pg	06 20 32.5	-0.1
	baz=268						
TIR				S	Sg	06 20 36.7	+0.6
	baz=268						
TIR				AMP			
	comp=E,21nm,0.3s,baz=268						
PHP	Peshkopia	0.38	30	P	Pg	06 20 34.0	-1.0
	baz=24						
PHP				S	Sg	06 20 39.0	-1.2
	baz=24						
PHP				AMP			
	comp=N,25nm,0.3s,baz=24						
OHR	Ohrid	0.52	118	i Pg	Pg	06 20 36.3	-1.3
OHR				i Sg	Sg	06 20 44.6	0.0
OHR				eLg	Lg	06 20 45.0	
	comp=N,1µm,0.6s						
PUK	Puka	0.72	342	⇑P	Pg	06 20 40.1	-1.3
PUK	Puka	0.72	342	P	Pg	06 20 40.3	-1.0
	baz=339						
PUK				S	Sb	06 20 51.5	+0.1
	baz=339						
KBN	Korca	0.86	148	P	Pg	06 20 43.6	-0.4
KBN				S	Sn	06 20 57.8	+0.4
	comp=N,1µm,0.7s						
KBN	Korca	0.86	148	P	Pg	06 20 43.1	-0.9
	baz=150						
KBN				S	Sg	06 20 55.2	-0.1
	baz=150						
KBN				AMP			
	comp=E,4.3nm,0.5s,baz=150						
ULC	Ulcinj	0.93	311	i Pg	Pb	06 20 43.6	-1.6
ULC	Ulcinj	0.93	311	⇑iPg	Pb	06 20 43.6	-1.6
ULC				eSg	Sn	06 20 58.4	-0.7
VLO	Vlora	1.03	211	P	Pn	06 20 48.4	+1.2
VLO				S	Sn	06 21 05.2	+3.8
FNA	Florina	1.07	122	P	Pb	06 20 46.1	-1.4
FNA				S	Sg	06 21 01.7	-0.1
	comp=E,2µm,0.5s						
FNA	Florina	1.07	122	P	Pb	06 20 45.7	-1.8
FNA				S	Sb	06 21 01.0	-0.3
FNA				AML	AML	06 21 02.3	
	comp=E,2670µm,0.5s						
FNA				AML	AML	06 21 02.9	
	comp=N,5431µm,0.5s						
FNA	Florina	1.07	122	i Pg	Pb	06 20 45.7	-1.8
FNA				i Sg	Sb	06 21 01.5	+0.2
FNA	Florina	1.07	122	P	Pb	06 20 46.0	-1.4
	baz=123						
DRME	Dracevica, Mon	1.12	318	ePg	Pb	06 20 47.1	-1.3
DRME				eSg	Sn	06 21 04.6	+1.0
SKO	Skopje	1.12	56	i Pg	Pb	06 20 47.4	-1.0
SKO				i Sg	Sb	06 21 02.3	-0.5
SKO				eLg	Lg	06 21 02.6	
	comp=N,173nm,0.4s						
NEST	Nestorio	1.15	145	P	Pb	06 20 47.9	-1.0
NEST				S	Sn	06 21 06.9	+2.5
	comp=N,612nm,0.5s						
NEST	Nestorio	1.15	145	P	Pb	06 20 47.9	-1.0
NEST				S	Sn	06 21 05.1	+0.7
NEST				AML	AML	06 21 09.3	
	comp=E,1476µm,0.6s						
NEST				AML	AML	06 21 12.6	
	comp=N,1662µm,0.6s						
LSK	Leskovik	1.25	165	P	Pn	06 20 50.3	0.0
LSK				S	Sg	06 21 09.5	+2.0
	comp=N,852nm,0.7s						
LSK	Leskovik	1.25	165	P	Pb	06 20 50.5	0.0
	baz=167						
PVY	Plav	1.25	352	⇓iPg	Pn	06 20 49.5	-0.9
PVY				i Sg	Sg	06 21 08.8	+1.2
PDG	Podgorica	1.28	327	⇓P	Pn	06 20 49.9	-0.7
PDG				⇓S	Sg	06 21 09.1	+0.5
PDG	Podgorica	1.28	327	ePg	Pn	06 20 50.2	-0.5
PDG				eSg	Sg	06 21 11.5	+3.0
PDG	Podgorica	1.28	327	i Pg	Pn	06 20 49.8	-0.9
PDG				i Sg	Sg	06 21 11.3	+2.7
TTG	Podgorica	1.28	327	⇑iPg	Pn	06 20 50.1	-0.6
TTG				i Sg	Sg	06 21 09.9	+1.4
BUM	Brajici-Budva	1.35	315	⇓iPg	Pn	06 20 51.1	-0.6
BUM				i Sg	Sg	06 21 12.6	+1.8
SRN	Sarande	1.48	186	P	Pg	06 20 55.2	-0.5

SRN				S	Sg	06 21 16.5	+1.5
	comp=N,242nm,0.7s						
SRN	Sarande	1.48	186	P	Pg	06 20 55.3	-0.4
	baz=188						
SRN				S	Sg	06 21 16.7	+1.7
	baz=188						
SRN				AMP			
	comp=N,0.9nm,0.5s,baz=188						
CEME	Cevo	1.52	322	⇓*i*Pg	Pn	06 20 54.0	-0.1
CEME				*i* Sg	Sg	06 21 17.3	+1.1
BEY	Berane	1.53	352	*i* Pn	Pn	06 20 54.9	+0.7
IVA	Berane	1.53	352	⇓*i*Pg	Pn	06 20 54.7	+0.5
IVA				*e*Sg	Sg	06 21 17.3	+0.7
STIP	Stip	1.54	77	*i* Pn	Pb	06 20 56.0	+0.5
STIP				*i* Sn	Sg	06 21 21.0	+4.2
STIP				*e*Lg	Lg	06 21 23.7	
	comp=N,176nm,0.4s						
KOME	Kolasin	1.57	342	⇑*i*Pg	Pn	06 20 55.5	+0.7
KOME				*i* Sg	Sg	06 21 18.4	+0.4
KZN	Kozani	1.59	131	P	Pn	06 20 55.9	+0.8
KZN				S	Sg	06 21 17.7	-0.9
	comp=N,455nm,0.5s						
KZN	Kozani	1.59	131	P	Pn	06 20 55.5	+0.4
KASA	Kassiopi	1.62	187	P	Pb	06 20 57.4	+0.5
KPRO	Kipourio	1.66	147	P	Pb	06 20 57.5	-0.1
KPRO				S	Sb	06 21 18.8	+0.3
	comp=N,372nm,0.6s						
KPRO	Kipourio	1.66	147	P	Pb	06 20 57.6	-0.1
KEK	Kerkira	1.67	190	P	Pb	06 20 57.2	-0.5
KEK				S	Sg	06 21 20.2	-0.8
	comp=N,252nm,0.5s						
KEK	Kerkira	1.67	190	P	Pn	06 20 56.8	+0.8
KEK	Kerkira	1.67	190	⇑P	Pb	06 20 57.8	+0.1
HCY	Herceg Novi	1.67	311	⇓*i*Pn	Pn	06 20 56.8	+0.8
HCY				*i* Sn	Sg	06 21 20.8	-0.2
NKME	Niksic	1.68	327	⇓*i*Pn	Pn	06 20 56.9	+0.6
NKME				*i* Sn	Sg	06 21 21.0	-0.4
NKY	Niksic	1.71	329	⇓*i*Pn	Pn	06 20 57.3	+0.7
NKY				*i* Sn	Sg	06 21 21.5	-0.7
GRG	Griva	1.72	103	P	Pn	06 20 56.2	-0.6
GRG				S	Sn	06 21 18.8	+0.3
	comp=N,312nm,0.5s						
GRG	Griva	1.72	103	*i* Pn	Pn	06 20 56.2	-0.6
JAN	Janina	1.77	163	P	Pb	06 20 59.5	0.0
JAN				S	Sg	06 21 23.4	-0.9
	comp=N,332nm,0.5s						
JAN	Janina	1.77	163	P	Pb	06 20 59.8	+0.3
VAY	Valandovo	1.79	90	*i* Pn	Pn	06 20 57.5	-0.3
VAY				*i* Sn	Sb	06 21 23.4	+1.1
VAY				*e*Lg	Lg	06 21 24.7	
	comp=N,253nm,0.5s						
PRVS	Prvonek	1.82	50	*e*Pn	Pb	06 21 00.3	0.0
PRVS				*e*Sn	Sg	06 21 26.1	+0.3
IGT	Igoumenitsa	1.82	176	P	Pb	06 20 59.5	-0.9
IGT				S	Sb	06 21 23.9	+0.8
	comp=N,222nm,0.5s						
IGT	Igoumenitsa	1.82	176	P	Pb	06 20 59.4	-0.9
IGT	Igoumenitsa	1.82	176	*i* Pn	Pb	06 20 59.5	-0.9
IGT				*i* Sn	Sg	06 21 25.6	-0.4
BARS	Barje	1.90	39	*e*Pn	Pb	06 21 01.7	+0.1
BARS	Barje	1.90	39	*i* Pn	Pb	06 21 00.7	-0.9
BARS				*i* Sn	Sg	06 21 27.4	-0.9
SJES	Sjenica	1.91	355	*e*Pn	Pb	06 21 02.3	+0.4
SJES				*e*Sn	Sg	06 21 29.4	+0.7
TREB	Trebinje	1.93	315	*e*Pn	Pn	06 21 00.6	+1.0
BRY	Bratogost	1.97	322	*e*Pn	Pn	06 21 01.1	+0.8
BRY				*i* Sn	Sb	06 21 28.0	+0.6
SELS	Selova	1.99	20	*e*Pn	Pn	06 21 01.9	+1.5
DBRK	Dubrovnik	2.01	311	*e*Pn	Pn	06 21 01.0	+0.3
DBRK				Sn	Sn	06 21 26.8	+1.3
KNT	Kendrikon	2.05	95	P	Pn	06 21 01.1	-0.2
KNT				S	Sn	06 21 27.2	+0.5
	comp=N,152nm,0.5s						
KNT	Kendrikon	2.05	95	P	Pn	06 21 02.1	+0.8
KNT	Kendrikon	2.05	95	*i* Pn	Pn	06 21 00.3	-1.1
KNT				*i* Sn	Sb	06 21 31.0	+1.3
BOSS	Bosilegrad	2.06	56	*e*Pn	Pn	06 21 02.9	+1.5
PLE	Pljevlja	2.06	344	*e*Pn	Pn	06 21 02.5	+1.0
PLE				*e*Sn	Sb	06 21 29.8	-0.1
UPM	Unac-Piva	2.08	333	⇑*i*Pn	Pn	06 21 02.5	+0.7
UPM				*i* Sn	Sb	06 21 30.4	-0.1
THE	Thessaloniki	2.22	108	P	Pn	06 21 03.0	-0.6
STON	Ston	2.39	310	*e*Pn	Pn	06 21 06.9	+1.0
STON	Ston	2.39	310	*e*Pn	Pn	06 21 06.1	+0.1
STON				Sn	Sn	06 21 35.6	+0.6
STON	Ston	2.39	310	S	Pn	06 21 07.0	+1.0
BOVS	Bovan	2.54	26	⇓P	Pn	06 21 09.1	+1.1
BOVS				⇑S	Sn	06 21 40.4	+1.7
BOVS	Bovan	2.54	26	*e*Pn	Pn	06 21 09.1	+1.1
BOVS				*e*Sn	Sb	06 21 42.4	-1.2
TSLK	Tsoukalades, L	2.55	172	P	Pn	06 21 09.5	+1.3
GRUS	Gruza	2.56	9	*e*Pn	Pn	06 21 08.9	+0.6
BBLS	Lazići	2.57	347	*e*Pn	Pn	06 21 10.4	+1.9
VTS	Vitosha	2.60	60	⇓P	Pn	06 21 08.4	-0.5
VTS				⇓S	Sn	06 21 42.8	+2.4
VTS	Vitosha	2.60	60	*e*Pn	Pn	06 21 09.9	+0.9
ZAPS	Zavoj	2.64	43	*e*Pn	Pb	06 21 12.3	-2.0
PLG	Polygyros	2.66	111	P	Pn	06 21 09.7	0.0
NYDR	Nydri-Lefkada	2.67	171	P	Pn	06 21 10.6	+0.8
DRAG	Dragano-Lefkad	2.69	174	P	Pn	06 21 10.8	+0.8
MATE	Matera	2.73	256	⇑P	Pn	06 21 10.3	-0.2
DIVS	Divibare	2.74	357	*e*Pn	Pn	06 21 12.4	+1.5
EVGI	Lefkada island	2.76	172	P	Pn	06 21 11.7	+0.7
TRUS	Trudelj	2.87	3	*e*Pn	Pn	06 21 14.8	+2.2
FSK	Fiskardo	2.91	174	P	Pn	06 21 14.1	+1.0
BLKB	Belogradchik	2.92	38	⇑S	Sn	06 21 49.6	+1.5
MAKA	Makarska	3.04	310	*e*Pn	Pn	06 21 15.0	+0.1
MAKA				Sn	Sn	06 21 51.3	+0.3
RICI	Ricice	3.11	314	*e*Pn	Pn	06 21 16.7	+0.9
RICI				Sn	Sn	06 21 53.1	+0.3
HVAR	Hvar	3.32	305	*e*Pn	Pn	06 21 18.2	-0.5
HVAR				Sn	Sn	06 21 59.7	+1.9
DJES	Djerdap	3.72	27	⇓S	Sn	06 22 10.1	+2.2
DJES	Djerdap	3.72	27	⇑P	Pn	06 21 25.6	+1.3
FRGS	Fruska Gora	3.81	356	⇑P	Pn	06 21 26.7	+1.3
FRGS				⇑S	Sn	06 22 12.3	+2.3
FRGS	Fruska Gora	3.81	356	*e*Pn	Pn	06 21 26.5	+1.0
KIJV	Kijevo	3.84	315	*e*Pn	Pn	06 21 26.8	+0.9
KIJV				Sn	Sn	06 22 11.4	+0.5
HERR	Herculane	3.88	24	⇑P	Pn	06 21 26.7	+0.3
ZIRJ	Zirje	4.07	306	*e*Pn	Pn	06 21 29.4	+0.4
ZIRJ				Sn	Sn	06 22 16.4	+0.1
MORI	Morici	4.15	309	*e*Pn	Pn	06 21 30.9	+0.8
BZS	Buzias	4.38	13	⇓P	Pn	06 21 33.4	+0.1
BZS				⇓S	Sn	06 22 27.2	+3.0
GZR	Gura Zlata	4.46	24	⇑P	Pn	06 21 34.4	0.0
GZR				⇓S	Sn	06 22 27.4	+1.4
UDBI	Udbina	4.54	316	*e*Pn	Pn	06 21 36.8	+1.3
UDBI				Sn	Sn	06 22 30.3	+2.3
DUGI	Dugi Otok	4.61	307	*e*Pn	Pn	06 21 36.8	+0.3
DUGI				Sn	Sn	06 22 30.6	+1.0
LOT	Lotru	4.85	31	⇓P	Pn	06 21 40.3	+0.4
PLIT	Plitvice	4.85	318	*e*Pn	Pn	06 21 41.0	+1.2
PLIT				Sn	Sn	06 22 35.9	+0.2
MOSL	Moslavina	4.93	331	*e*Pn	Pn	06 21 41.5	+0.6
SIRR	Siria	5.02	12	⇓P	Pn	06 21 42.1	-0.1
SIRR				⇑S	Sn	06 22 40.4	+0.5
ARR	Arges	5.16	37	⇑P	Pn	06 21 44.5	+0.5
ARR				⇑S	Sn	06 22 44.9	+1.6
RABC	Rab	5.21	312	*e*Pn	Pn	06 21 46.6	+1.9
RABC				Sn	Sn	06 22 43.9	-0.7
VOIR		5.40	39	⇑P	Pn	06 21 49.4	+2.0
VOIR				⇓S	Sn	06 22 52.2	+2.8
OZLJ	Ozalj	5.47	323	*e*Pn	Pn	06 21 49.3	+1.1
PTJ	Puntijarka	5.48	327	*e*Pn	Pn	06 21 48.8	+0.3
LOBO	Lobor	5.65	330	*e*Pn	Pn	06 21 51.1	+0.4
DRGR		5.73	18	⇑S	Sn	06 22 57.7	+0.2
DRGR		5.73	18	⇑P	Pn	06 21 53.3	+1.4
RIY	Rijeka	5.75	316	*e*Pn	Pn	06 21 52.4	+0.4
MLR	Muntele Rosu	5.89	43	⇓P	Pn	06 21 54.9	+0.7
MLR				⇑S	Sn	06 23 02.4	+1.0
MLR	Muntele Rosu	5.89	43	Pn	Pn	06 21 55.7	+1.6
	baz=229,slow=9.3						
MLR				Sn	Sn	06 23 05.5	+4.2
	comp=N,0.3nm,0.3s,baz=134,slow=21,SNR=1.7						
DOPR	Dopca	5.96	38	⇑P	Pn	06 21 56.3	+1.3
DOPR				⇓S	Sn	06 23 04.4	+1.5
SOKA	Soboth	6.49	327	*e*Pn	Pn	06 22 02.5	+0.2
	comp=N,2.2nm,0.4s,SNR=4.8						
SRO2	Moca	6.53	349	*e*SN	Sn	06 23 21.9	+4.9
OBKA	Obir	6.56	324	*e*Pn	Pn	06 22 04.4	+1.0
	comp=N,2.4nm,0.4s						
PSZ	Piszkesteto	6.56	358	⇓P	Pn	06 22 05.0	+1.7
ARSA	Arzberg	6.78	332	*e*Pn	Pn	06 22 07.1	+0.9
	comp=N,1.3nm,0.4s						
IDI	Anoyia	7.10	147	Sn	Sn	06 23 25.8	-5.4
	comp=N,0.4nm,0.3s,baz=78,slow=21,SNR=1.0						
VYHS	Vyhne	7.20	353	*e*SN	Sn	06 23 34.0	+0.4
BURAR	Bucovina Array	7.22	28	⇑P	Pn	06 22 13.1	+0.8
KBA	Koelnbreinsper	7.54	322	*e*Pn	Pn	06 22 17.8	+1.0
	comp=N,1.7nm,0.4s						
CRVS	Cervenica-Dubn	7.60	6	*e*PN	Pn	06 22 21.1	+3.6
ABTA	Abfaltersbach	7.72	317	*e*Pn	Pn	06 22 20.4	+1.2
	comp=N,1.2nm,0.3s						
MOA	Molln	7.74	329	*e*Pn	Pn	06 22 21.2	+1.8
	comp=N,0.6nm,0.3s						
WTTA	Wattenberg	8.51	317	*e*Pn	Pn	06 22 31.4	+1.3
	comp=N,1.4nm,0.3s						
WATA	Walderalm	8.59	317	Pn	Pn	06 22 32.2	+1.1
	comp=N,2.3nm,0.3s,SNR=6.5						
SQTA	Sankt Quirin	8.70	315	*e*Pn	Pn	06 22 34.0	+1.3
	comp=N,1.8nm,0.3s,SNR=6.1						
GERES	GERESS Array B	8.78	331	Pn	Pn	06 22 34.6	+0.8
	comp=N,0.2nm,0.3s,baz=159,slow=14,SNR=9.7						
GERES				Sn	Sn	06 24 11.1	-1.4
	comp=N,0.1nm,0.3s,baz=146,slow=21,SNR=2.3						
MOTA	Moosalm	8.84	316	*e*Pn	Pn	06 22 35.8	+1.2
	comp=N,1.7nm,0.5s						
MOTA				*e*Sn	Sn	06 24 13.6	-0.4
	comp=N,1.9nm,0.6s						
KHC	Kasperske Hory	9.06	331	*e*PN	Pn	06 22 37.5	-0.1
RETA	Reutte	9.11	315	*e*Pn	Pn	06 22 39.7	+1.4
	comp=N,0.4nm,0.2s						
DAVOX	Davos/Dischmat	9.19	310	Pn	Pn	06 22 39.8	+0.4
	comp=N,0.3nm,0.3s,baz=149,slow=15,SNR=5.8						
DAVOX				Sn	Sn	06 24 16.9	-5.7
	comp=N,0.1nm,0.3s,baz=311,slow=16,SNR=1.7						
FINES	FINESS Array B	20.43	8	P	P	06 25 03.0	-0.8
	comp=N,3.7nm,0.9s,baz=177,slow=11,SNR=3.8						
NOA	NORSAR Array B	20.46	347	P	P	06 25 03.7	-0.5
	comp=N,0.8nm,1.0s,baz=167,slow=10.0,SNR=1.8						
ZALV	Zalesovo Beam	43.81	50	P	P	06 28 33.5	+1.1
	comp=N,0.5nm,0.6s,baz=289,slow=9.0,SNR=2.4						
ZALV				LR	LR	06 49 23.8	
	comp=N,80nm,21.7s,baz=92,slow=40						
MKAR	Makanchi Array	43.92	61	P	P	06 28 32.4	-1.0
	comp=N,1.1nm,1.0s,baz=284,slow=8.6,SNR=2.1						

IDC 01 06:20:30.4±25.0**,0°.96S**×**68°.51E,h0^{km},mb3.6**/3**, mb1 3.8**/3**,mb1mx3.4**/78**,mbtmp3.6**/3**,MS3.1**/1**,Ms1 3.1**/1**, ms1mx2.7**/61**,Error ellipse: s-maj=844.4km s-min=42.2km az=67.0,Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATD	Arta Tunnel	28.36	297	LR	LR	06 34 22.6	
	comp=Z,42nm,21.6s,baz=124,slow=29						
MKAR	Makanchi Array	49.07	13	P	P	06 29 19.3	-0.1
	1.1nm,0.9s,baz=198,slow=9.1,SNR=2.5						
WRA	Warramunga Arr	67.00	111	P	P	06 31 25.9	+0.1
	0.4nm,0.7s,baz=286,slow=5.3,SNR=5.1						
ASAR	Alice Springs	67.15	115	P	P	06 31 26.6	-0.1
	0.3nm,0.6s,baz=289,slow=6.1,SNR=7.0						

TIR 01 06:24:54.5,41°.35N×**20°.24E,h6^{km}**±**4^{km},Md2.5,Ml2.6, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	Tirane	0.28	270	P	Pg	06 25 00.8	+0.7
	baz=270						
TIR				S	Sg	06 25 05.0	+1.2
	baz=270						
TIR				AMP			
	comp=N,4.6nm,0.4s,baz=270						
PHP	Peshkopia	0.37	24	P	Pg	06 25 02.5	+0.8
	baz=23						
PHP				S	Sb	06 25 08.1	-1.5
	baz=23						
PHP				AMP			
	comp=N,3.3nm,0.5s,baz=23						
PUK	Puka	0.74	339	P	Pg	06 25 09.0	+0.2
	baz=340						
PUK				S	Sb	06 25 20.3	-0.1
	baz=340						
PUK				AMP			
	comp=N,2.5nm,0.2s,baz=340						
KBN	Korca	0.83	150	P	Pb	06 25 11.3	-0.1
	baz=150						
KBN				S	Sb	06 25 23.6	+0.7
	baz=150						
KBN				AMP			
	comp=E,0.6nm,0.7s,baz=150						
FNA	Florina	1.02	123	P	Pb	06 25 14.5	-0.2
	baz=122						
FNA				S	Sn	06 25 29.8	-0.4
	baz=122						

THE 01 06:26:14.7,41°.74N×20°.07E,h0^{km}±5^{km},ML4.3/22,Error ellipse: s-maj=8.2km s-min=1.5km az=322.0

IDC 01 06:26:16.4±0.5,41°.35N×20°.30E,h0^{km},mb4.3/29, mb1 4.4/39,mb1mx4.3/59,mbtmp4.3/39,ML4.3/9,MS4.0/7, Ms1 4.0/7,ms1mx3.6/41,Error ellipse: s-maj=10.9km s-min=10.2km az=165.0

PRU 01 06:26:17.0±0.0,41°.08N×20°.26E,h0^{km},M4.7

TIR 01 06:26:17.7,41°.36N×20°.25E,h2^{km}±2^{km},Md5.0,Ml4.8

PDG 01 06:26:18.6±0.6,41°.38N×20°.16E,h13^{km},MD4.9/14, ML4.8/14,Error ellipse: s-maj=0.5km s-min=0.6km az=0.0

LDG 01 06:26:18.8±0.2,41°.40N×20°.27E,h10^{km},Md4.6/4, Ml4.6/43,Error ellipse: s-maj=4.3km s-min=2.8km az=7.0

RHSSO 01 06:26:18.0±0.5,41°.31N×20°.29E,h3^{km}±2^{km},ML5.4/14

NEIC 01 06:26:18.9,41°.36N×20°.26E,h11^{km},Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.27; M$_{\theta\theta}$-1.00; M$_{\phi\phi}$1.27; M$_{r\theta}$1.09; M$_{\theta\phi}$0.66; M$_{\phi r}$0.40; Fault plane solution: M$_0$1.76000×10^{16} NP1:ϕ_s333.97000°, δ49.27000°,λ-170.14000°. NP2:ϕ_s237.50000°, δ82.54000°,λ-41.15000°. Principal axes: T 1.7138, Plg22.0000°, Azm293.0000°; N 0.0975, Plg48.0000°, Azm49.0000°; P -1.8114, Plg34.0000°, Azm187.0000°;

BGR 01 06:26:19.6±0.0,41°.24N×20°.30E,h5^{km},ML5.3

BEO 01 06:26:19.5±0.3,41°.37N×20°.20E,h11^{km}±2^{km},ML4.8/13

MED_RC 01 06:26:19.0±0.2,41°.38N×20°.21E,h25^{km}±1^{km},MW4.9/25, Moment Tensor Solution. Body waves: s1,c1;Mantle waves: s25,c42; Duration: 1^s.1 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.79±.22; M$_{\theta\theta}$-1.60±.12; M$_{\phi\phi}$2.39±.14; M$_{r\theta}$-1.30±.15; M$_{\theta\phi}$1.54±.09; M$_{\phi r}$-0.23±.11; Best double couple: M$_0$2.92000×10^{16} NP1:ϕ_s157.00000°,δ61.00000°, λ-164.00000°. NP2:ϕ_s60.00000°,δ76.00000°, λ-30.00000°. Principal axes: T 3.0300, Plg10.0000°, Azm111.0000°; N -0.2200, Plg57.0000°, Azm217.0000°; P -2.8100, Plg31.0000°, Azm15.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=35s.

SKO 01 06:26:19.2,41°.38N×20°.22E,h13^{km}

ROM 01 06:26:19.7±0.0,41°.35N×20°.15E,h13^{km},ML4.8

MOS 01 06:26:19.1±1.0,41°.31N×20°.11E,h34^{km},mb4.7/16, MS4.2/16,Error ellipse: s-maj=4.9km s-min=2.7km az=83.8

NEIC 01 06:26:19.8±1.8,41°.34N±0°.04×20°.19E±0°.05,h18^{km}±4^{km}, mb4.7/52,Mwr4.8/40,ML4.5(SKO),ML5.0(TIR), ML5.3/2(BUC),Error ellipse: s-maj=6.0km s-min=5.6km az=167.0

GCMT 01 06:26:21.8±0.4,41°.38N±0°.02×20°.25E±0°.02,h32^{km}±1^{km}, MW4.9/80,Moment Tensor Solution. s14,c15; s80,c108; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.88±.26; M$_{\theta\theta}$-1.76±.16; M$_{\phi\phi}$2.64±.17; M$_{r\theta}$-1.52±.21; M$_{\theta\phi}$1.42±.11; M$_{\phi r}$-0.46±.18; Best double couple: M$_0$3.15000×10^{16} NP1:ϕ_s155.00000°,δ57.00000°,λ-164.00000°. NP2: ϕ_s57.00000°,δ77.00000°,λ-34.00000°. Principal axes: T 3.2590, Plg13.0000°, Azm110.0000°; N -0.2140, Plg54.0000°, Azm218.0000°; P -3.0420, Plg33.0000°, Azm11.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 01 06:26:19.6±0.3**,41°.39N**±0°.01×**20°.17E**±0°.02**,h20^{km}**±2^{km}**, n716,**σ**2^s.47**/911**,mb4.7**/67**,MS4.4**/8**,166C-140D,Fault plane solution: NP1:**ϕ_s46.30268°,δ78.61266°, λ18.35921°. **NP2:**ϕ_s312.55380°,δ72.01469°,λ168.01918°. **Principal axes:** T Plg20.9742°, Azm270.3523°; N Plg68.5000°, Azm77.0529°; P Plg4.5152°, Azm178.6176°; **Fault plane solution: NP1:**ϕ_s69.77322°,δ56.04355°, λ-25.88812°. **NP2:**ϕ_s174.94048°,δ68.76734°, λ-143.18448°. **Principal axes:** T Plg7.9831°, Azm299.8043°; N Plg48.2644°, Azm200.7596°; P Plg40.6205°, Azm36.7129°; **Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	Tirane	0.23	260	⇑P	Pb	06 26 24.6	-0.9
TIR	Tirane	0.23	260	*e*Pg	Pb	06 26 24.7	-0.9
TIR				*e*Sg	Sb	06 26 29.5	-0.1
TIR	Tirane	0.23	260	P	Pb	06 26 24.6	-0.9
TIR	Tirane	0.23	260		Pb	06 26 24.6	-0.9
TIR				Sg	Sb	06 26 29.2	-0.3
TIR	Tirane	0.23	260	*i* Pg	Pb	06 26 24.6	-0.9
TIR	Tirane	0.23	260	P	Pb	06 26 24.6	-0.9
	baz=269						
TIR				S	Sb	06 26 28.7	-0.9
	baz=269						
TIR				AMP			
	comp=N,372nm,0.5s,baz=269						
PHP	Peshkopia	0.36	34	P	Pb	06 26 26.1	-1.1
	baz=23						
PHP				S	Sb	06 26 32.0	-0.5
	baz=23						
PHP				AMP			
	comp=N,840nm,0.6s,baz=23						
LACI	Lac	0.43	306	P	Pb	06 26 27.5	-0.9
	baz=306						
LACI				S	Sb	06 26 35.3	+0.9
	baz=306						
OHR	Ohrid	0.55	120	*i* Pg	Pb	06 26 28.5	-2.1
OHR				*i* Sg	Sb	06 26 37.4	-0.7
OHR				*e*Lg	Lg	06 26 37.5	
	comp=N,18μm,0.7s						
PUK	Puka	0.69	342	P	Pb	06 26 32.3	-0.7
	baz=339						
PUK				S	Sn	06 26 43.3	-1.1
	baz=339						
KKS	Kukesi	0.71	14	P	Pb	06 26 32.2	-1.1
	baz=9.0						
KKS				S	Sn	06 26 44.1	-0.8
	baz=9.0						
KBN	Korca	0.89	148	P	Pb	06 26 35.3	-1.2
KBN	Korca	0.89	148		Pb	06 26 35.3	-1.2
KBN	Korca	0.89	148	P	Pb	06 26 34.2	-2.2
	baz=150						
KBN				S	Sb	06 26 47.6	-0.4
	baz=150						
ULC	Ulcinj	0.90	310	*i* Pg	Pb	06 26 35.9	-0.7
ULC	Ulcinj	0.90	310	⇓*i*Pg	Pb	06 26 35.4	-1.2
ULC				*i* Sg	Sn	06 26 49.6	0.0
VLO	Vlora	1.05	209	P	Pb	06 26 41.3	+2.2
VLO	Vlora	1.05	209	P	Pn	06 26 37.7	-1.5
VLO	Vlora	1.05	209		Pn	06 26 37.7	-1.5
VLO	Vlora	1.05	209	P	Pb	06 26 39.6	+0.5
	baz=213						
VLO				AMP			
	comp=N,80nm,0.5s,baz=213						
DRME	Dracevica, Mon	1.09	318	⇑*i*Pg	Pn	06 26 39.5	-0.2
DRME				*e*Sg	Sn	06 26 56.7	+2.5
DRME	Dracevica, Mon	1.09	318	⇑*i*Pg	Pn	06 26 38.9	-0.8
DRME				*i* Sg	Sn	06 26 56.0	+1.8
FNA	Florina	1.09	123	P	Pn	06 26 38.4	-1.4
FNA	Florina	1.09	123		Pn	06 26 38.4	-1.4
FNA	Florina	1.09	123	*i* Pg	Pn	06 26 37.9	-1.9
FNA				*i* Sg	Sb	06 26 53.3	-0.4
FNA	Florina	1.09	123	P	Pn	06 26 37.9	-1.9
	baz=123						
FNA				S	Sb	06 26 53.1	-0.5
	baz=123						
SKO	Skopje	1.11	58	*i* Pg	Pn	06 26 38.8	-1.3
SKO				*i* Sg	Sn	06 26 55.0	+0.2
SKO				*e*Lg	Lg	06 26 55.2	
	comp=N,5μm,0.5s						
NEST	Nestorio	1.18	145	P	Pn	06 26 40.4	-0.6
NEST				S	Sn	06 27 04.0	+7.5
	comp=N,7μm,0.7s						
PVY	Plav	1.22	353	*e*Pg	Pn	06 26 41.4	-0.2
PVY				*i* Sg	Sn	06 27 00.5	+3.0
PDG	Podgorica	1.25	327	⇓P	Pn	06 26 42.0	+0.1
PDG				⇓S	Sb	06 26 58.8	+0.8
PDG	Podgorica	1.25	327	*e*Pg	Pb	06 26 42.8	+0.4
PDG				*e*Sg	Sb	06 26 59.1	+1.1
PDG	Podgorica	1.25	327		Pn	06 26 42.2	+0.3
PDG	Podgorica	1.25	327	⇑*i*Pg	Pn	06 26 41.5	-0.4
PDG				*e*Sg	Sb	06 27 01.4	+3.4
PDG	Podgorica	1.25	327	*i* Pg	Pn	06 26 41.7	-0.2
PDG				*i* Sg	Sb	06 27 01.9	+3.9
TTG	Podgorica	1.25	327	*e*Pg	Pn	06 26 41.7	-0.2
TTG				*i* Sg	Sb	06 27 01.4	+3.4
LSK	Leskovik	1.28	165	P	Pn	06 26 42.9	+0.5
LSK				S	Sb	06 27 08.3	+9.2
LSK	Leskovik	1.28	165	P	Pn	06 26 41.9	-0.5
	baz=167						
LSK				S	Sb	06 27 01.5	+2.4
	baz=167						
LSK				AMP			
	comp=N,48nm,0.8s,baz=167						
BUM	Brajici-Budva	1.32	314	⇑*i*Pg	Pn	06 26 43.1	+0.1
BUM				*i* Sg	Sb	06 27 03.9	+3.6
PENT	Pentalofos	1.40	148	P	Pb	06 26 45.3	+0.2
PENT				S	Sb	06 27 09.3	+6.8
	comp=N,7μm,0.9s						
CEME	Cevo	1.49	321	⇑*i*Pg	Pn	06 26 46.0	+0.7
CEME				*i* Sg	Sb	06 27 08.1	+3.0
BEY	Berane	1.50	352	*i* Pn	Pb	06 26 46.5	-0.2
IVA	Berane	1.50	352	*e*Pg	Pb	06 26 46.6	-0.2
IVA				*i* Sg	Sb	06 27 08.6	+3.2
SRN	Sarande	1.51	185	P	Pb	06 26 47.6	+0.6
SRN				S	Sb	06 27 13.7	+8.0
	comp=N,6μm,0.9s						
SRN	Sarande	1.51	185	P	Pb	06 26 47.2	+0.3
	baz=188						
SRN				S	Sb	06 27 08.8	+3.1
	baz=188						
SRN				AMP			
	comp=N,13nm,0.6s,baz=188						
KOME	Kolasin	1.54	342	*e*Pg	Pb	06 26 47.0	-0.5
KOME				*i* Sg	Sb	06 27 09.4	+2.7
STIP	Stip	1.54	78	*i* Pn	Pb	06 26 48.2	+0.7
STIP				*i* Sn	Sb	06 27 13.2	+6.7
STIP				*e*Lg	Lg	06 27 16.0	
	comp=N,1μm,0.4s						
KZN	Kozani	1.62	131	P	Pn	06 26 47.6	+0.5
KZN				S	Sb	06 27 14.2	+5.2
	comp=N,6μm,0.6s						
HCY	Herceg Novi	1.64	311	*e*Pn	Pb	06 26 48.5	-0.7
HCY				*e*Sn	Sb	06 27 12.8	+3.4
HCY	Herceg Novi	1.64	311	*e*Pn	Pb	06 26 48.4	-0.7
HCY				*i* Sn	Sb	06 27 11.6	+2.2
NKME	Niksic	1.65	327	*e*Pn	Pb	06 26 48.8	-0.6
NKME				*i* Sn	Sb	06 27 12.0	+2.3
NKY	Niksic	1.67	329	⇓*i*Pn	Pb	06 26 48.9	-0.9
NKY				*i* Sn	Sb	06 27 12.7	+2.2
KPRO	Kipourio	1.69	147	P	Pb	06 26 49.7	-0.4
KPRO				S	Sb	06 27 17.9	+6.9
	comp=N,7μm,0.7s						
KEK	Kerkira	1.70	190	P	Pn	06 26 49.5	+1.4
KEK				S	Sb	06 27 16.6	+5.6
	comp=N,6μm,0.8s						
GRG	Griva	1.74	104	P	Pn	06 26 48.3	-0.4
GRG	Griva	1.74	104	*i* Pn	Pn	06 26 48.1	-0.5
KTI	Kastanea	1.78	123	P	Pb	06 26 51.0	-0.6
JAN	Janina	1.81	163	P	Pb	06 26 52.2	+0.2
JAN				S	Sb	06 27 21.6	+7.4
	comp=N,7μm,0.7s						
VAY	Valandovo	1.81	91	*i* Pn	Pn	06 26 49.0	-0.5
VAY				*i* Sn	Sb	06 27 15.1	+1.0
VAY				*e*Lg	Lg	06 27 21.6	
	comp=N,6μm,0.9s						
PRVS	Prvonek	1.81	51	*e*Pg	Pb	06 26 52.7	+0.7
PRVS				*e*Sg	Sb	06 27 16.5	+2.2
SCTE	Santa Cesarea	1.85	225		Pn	06 26 51.1	+1.0
IGT	Igoumenitsa	1.86	176	P	Pb	06 26 52.0	-0.9
IGT	Igoumenitsa	1.86	176	*i* Pn	Pn	06 26 51.9	+1.6
IGT	Igoumenitsa	1.86	176	P	Pb	06 26 52.2	-0.7
	baz=178						
IGT				S	Sb	06 27 19.1	+3.4

	baz=178						
SJES	Sjenica	1.88	356	ePg	Pb	06 26 54.2	+0.9
SJES				eSg	Sb	06 27 19.8	+3.4
BARS	Barje	1.88	40	ePg	Pb	06 26 54.0	+0.8
BARS	Barje	1.88	40	ePn	Pb	06 27 06.9	+14
BARS	Barje	1.88	40	i Pn	Pn	06 26 50.7	+0.1
BARS				i Sn	Sb	06 27 20.1	+3.8
TREB	Trebinje	1.90	315	ePg	Pb	06 26 53.6	0.0
TREB				eSg	Sb	06 27 21.6	+4.7
TREB	Trebinje	1.90	315	ePn	Pb	06 26 52.6	-1.0
TREB				eSn	Sb	06 27 18.6	+1.7
BRY	Bratogost	1.94	322	⇑iPn	Pb	06 26 53.6	-0.8
BRY				eSn	Sb	06 27 19.0	+0.8
BRY	Bratogost	1.94	322	⇑iPn	Pn	06 26 52.5	+0.9
BRY				i Sn	Sb	06 27 19.0	+0.8
SELS	Selova	1.96	21	ePg	Pb	06 26 54.6	0.0
DBRK	Dubrovnik	1.98	311	i Pn	Pn	06 26 53.4	+1.4
DBRK				Sn	Sb	06 27 21.0	+1.8
PLE	Pljevlja	2.03	344	⇓iPn	Pn	06 26 54.0	+1.3
PLE				i Sn	Sb	06 27 21.1	+0.5
UPM	Unac-Piva	2.04	333	⇓iPn	Pn	06 26 54.0	+1.0
UPM				i Sn	Sb	06 27 21.5	+0.3
BOSS	Bosilegrad	2.05	56	ePn	Pn	06 26 53.5	+0.6
KNT	Kendrikon	2.07	95	P	Pn	06 26 53.5	+0.3
KNT	Kendrikon	2.07	95	i Pn	Pn	06 26 52.9	-0.3
KNT				i Sn	Sb	06 27 23.1	+1.4
THE	Thessaloniki	2.24	109	P	Pn	06 26 54.9	-0.7
THE				S	Sb	06 27 27.6	+0.9
THL	Klokotos Trika	2.30	142	P	Pn	06 26 57.4	+1.0
THL				S	Sb	06 27 30.9	+2.5
	comp=N,2µm,0.7s						
RUDO	Rudo	2.31	345	⇑iPn	Pb	06 26 58.5	-2.0
RUDO				eSn	Sb	06 27 28.0	-0.6
HORT	Hortiatis	2.35	109	P	Pn	06 26 56.5	-0.7
HORT				S	Sb	06 27 29.2	-0.8
	comp=N,1µm,1.0s						
STON	Ston	2.36	310	ePn	Pn	06 26 58.8	+1.6
STON				eSn	Sb	06 27 29.8	-0.3
STON	Ston	2.36	310	ePn	Pn	06 26 58.5	+1.3
STON				Sn	Sn	06 27 27.3	+1.7
SOH	Sokhos	2.47	102	P	Pn	06 26 58.7	0.0
SOH				S	Sn	06 27 30.6	+2.3
	comp=N,3µm,0.8s						
BOVS	Bovan	2.52	26	⇑P	Pn	06 26 59.7	+0.3
BOVS				⇑S	Sb	06 27 31.9	-2.6
BOVS	Bovan	2.52	26		Pn	06 26 59.7	+0.3
GRUS	Gruza	2.53	9	ePn	Pn	06 27 00.2	+0.7
BBLS	Lazići	2.54	347	ePn	Pn	06 27 01.9	+2.1
BBLS	Lazići	2.54	347	⇑iPn	Pn	06 27 01.8	+2.0
BBLS				eSn	Sb	06 27 33.9	-1.5
TSLK	Tsoukalades, L	2.59	172	P	Pn	06 27 01.6	+1.3
SRS	Serrai	2.59	95	P	Pn	06 27 00.3	-0.1
VTS	Vitosha	2.59	61	⇑P	Pn	06 27 00.8	+0.2
VTS	Vitosha	2.59	61	P	Pn	06 27 00.4	-0.1
VTS	Vitosha	2.59	61	Pn	Pn	06 27 00.4	-0.1
ZAPS	Zavoj	2.62	43	ePn	Pn	06 27 01.8	+0.9
PLG	Polygyros	2.68	111	P	Pn	06 27 02.0	+0.4
PLG				S	Sb	06 27 37.6	-1.8
	comp=N,1µm,0.6s						
NYDR	Nydri-Lefkada	2.70	171	P	Pn	06 27 02.7	+0.8
DIVS	Divibare	2.71	357	ePn	Pn	06 27 03.9	+1.8
DIVS	Divibare	2.71	357	Pn	Pn	06 27 03.6	+1.5
DIVS	Divibare	2.71	357	ePn	Pn	06 27 03.4	+1.3
DIVS				eSn	Sb	06 27 37.3	-3.0
DRAG	Dragano-Lefkad	2.72	173	P	Pn	06 27 02.9	+0.8
MATE	Matera	2.73	255	⇑P	Pn	06 27 02.5	+0.3
MATE	Matera	2.73	255		Pn	06 27 02.5	+0.3
EVR	Evrytania	2.77	153	P	Pn	06 27 05.8	+2.9
EVR				S	Sb	06 27 42.2	+0.2
	comp=N,3µm,0.9s						
NVR	Nevrokopi	2.78	90	P	Pn	06 27 03.2	+0.2
NVR				S	Sn	06 27 38.1	+2.2
	comp=N,2µm,1.5s						
EVGI	Lefkada island	2.79	172	P	Pn	06 27 03.7	+0.6
MAKR	Makrakomi, Fth	2.81	147	P	Pn	06 27 04.9	+1.5
MAKR				S	Sb	06 27 43.9	+0.9
TRUS	Trudelj	2.84	3	ePn	Pn	06 27 05.6	+1.8
ZAGS	Zajecar	2.86	31	ePn	Pn	06 27 04.3	+0.2
FSK	Fiskardo	2.94	174	P	Pn	06 27 05.7	+0.5
PVO	Paravola	2.96	159	P	Pn	06 27 07.8	+2.4
SVIS	Svilajnac	2.98	15	ePn	Pn	06 27 07.4	+1.8
MAKA	Makarska	3.01	310	ePn	Pn	06 27 08.2	+2.1
MAKA				Sn	Sn	06 27 44.8	+3.2
PAIG	Paliouri	3.04	118	P	Pn	06 27 06.6	+0.1
PAIG				S	Sb	06 27 47.2	-2.5
	comp=N,1µm,1.3s						
OUR	Ouranopolis	3.07	109	P	Pn	06 27 07.1	+0.1
OUR				S	Sb	06 27 47.5	-3.1
	comp=N,2µm,1.0s						
RICI	Ricice	3.08	314	ePn	Pn	06 27 09.9	+2.8
RICI				Sn	Sn	06 27 44.0	+0.6
ANX	Ano Chora	3.10	154	P	Pn	06 27 10.4	+3.0
ANX				S	Sb	06 27 52.9	+1.5
	comp=N,2µm,0.6s						
NEO	Neokhori	3.12	131	P	Pn	06 27 08.3	+0.6
NEO				S	Sb	06 27 50.2	-1.9
	comp=N,2µm,1.0s						
DMLN	Damoulianata-K	3.15	177	P	Pn	06 27 08.2	+0.1
KEF3	Kipouria, Keph	3.18	178	P	Pn	06 27 08.5	0.0
KEF3				S	Sb	06 27 55.9	+2.1
KUBS	Kucevo	3.22	20	ePn	Pn	06 27 09.0	0.0
VLS	Valsamata	3.22	174	P	Pn	06 27 09.0	-0.1
VLS				S	Sb	06 27 56.4	+1.4
EFP	Efpalio	3.24	155	P	Pn	06 27 11.8	+2.5
EFP				S	Sb	06 27 56.0	+0.5
	comp=N,2µm,1.0s						
HVAR	Hvar	3.29	304	ePn	Pn	06 27 10.6	+0.6
HVAR				Sn	Sn	06 27 48.2	-0.3
KAVA	Kavala	3.30	95	P	Pn	06 27 10.0	-0.1
KAVA				S	Sn	06 27 51.5	+2.8
	comp=N,1µm,0.9s						
SERG	Sergoula	3.31	153	P	Pn	06 27 13.3	+3.1
SGRT	San Giovanni R	3.34	278	Pn	Pn	06 27 10.8	0.0
TRIZ	Trizonia	3.35	154	P	Pn	06 27 13.3	+2.5
TIP	Timpagrande	3.42	231	⇓P	Pn	06 27 12.5	+0.7
TIP	Timpagrande	3.42	231	Pn	Pn	06 27 12.8	+1.0
LAKA	Lakka	3.44	156	P	Pn	06 27 14.1	+2.1
LAKA				S	Sb	06 28 01.0	-0.2
BLJ	Bijeljina	3.46	349	ePn	Pn	06 27 13.3	+1.0
BLJ				eSn	Sn	06 27 55.6	+3.0
LKR	Lokris	3.49	141	P	Pn	06 27 13.2	+0.5
LKR				S	Sb	06 28 01.0	-1.6
	comp=N,588nm,1.3s						
BAIL	Bailesti	3.52	41	⇑P	Pn	06 27 15.2	+2.1
BAIL				⇑S	Sn	06 27 55.3	+1.2
BAIL	Bailesti	3.52	41		Pn	06 27 15.2	+2.1
PUNG	Punghina	3.53	34	⇑P	Pn	06 27 14.0	+0.7
PUNG	Punghina	3.53	34		Pn	06 27 14.0	+0.7
DOB	Doboj	3.67	336	ePn	Pn	06 27 16.4	+1.2
DOB				eSn	Sn	06 28 01.7	+3.8
DJES	Djerdap	3.70	27	⇑P	Pn	06 27 16.9	+1.3
DJES	Djerdap	3.70	27	ePn	Pn	06 27 17.8	+2.2
DJES	Djerdap	3.70	27		Pn	06 27 16.9	+1.3
RMGR	Halanga-Turnu	3.76	29	⇑P	Pn	06 27 18.1	+1.8
RMGR	Halanga-Turnu	3.76	29		Pn	06 27 18.1	+1.8
FRGS	Fruska Gora	3.78	356	⇓P	Pn	06 27 18.1	+1.4
FRGS				⇑S	Sn	06 28 03.2	+2.7
FRGS	Fruska Gora	3.78	356		Pn	06 27 18.1	+1.4
FRGS	Fruska Gora	3.78	356	ePn	Pn	06 27 17.8	+1.1
FRGS				eSn	Sn	06 28 03.1	+2.6
MGRS	Mrkonjic Grad	3.78	324	⇑iPn	Pn	06 27 19.3	+2.5
MGRS				eSn	Sn	06 28 04.1	+3.4
KIJV	Kijevo	3.81	315	ePn	Pn	06 27 19.1	+1.9
HERR	Herculane	3.86	24	⇑P	Pn	06 27 18.2	+0.4
HERR				⇑S	Sn	06 28 04.1	+1.6
HERR	Herculane	3.86	24		Pn	06 27 18.2	+0.4
BLY	Banja Luka	4.01	328	⇑iPn	Pn	06 27 22.2	+2.3
BLY				eSn	Sn	06 28 09.0	+2.8
ZIRJ	Zirje	4.04	306	ePn	Pn	06 27 21.7	+1.4
RDO	Rodhopi	4.05	92	P	Pn	06 27 20.4	0.0
RDO				S	Sn	06 28 08.4	+1.2
	comp=N,815nm,1.3s						
BANR	Banloc	4.05	10	⇑P	Pn	06 27 19.8	-0.6
BANR	Banloc	4.05	10		Pn	06 27 19.8	-0.6
MORI	Morici	4.12	308	ePn	Pn	06 27 23.0	+1.6
PAOL	Paolisi	4.24	267		Pn	06 27 23.9	+0.8
MRAK	Mrakovica	4.34	328	⇑iPn	Pn	06 27 26.6	+2.1
MRAK				eSn	Sn	06 28 17.1	+2.6
BZS	Buzias	4.36	13	⇓P	Pn	06 27 24.9	+0.3
BZS				⇑S	Sn	06 28 17.9	+3.1
BZS	Buzias	4.36	13	P	Pn	06 27 24.9	+0.3
BZS	Buzias	4.36	13		Pn	06 27 24.9	+0.3
PRIJ	Prijedor	4.39	326	⇑iPn	Pn	06 27 27.3	+2.3
PRIJ				eSn	Sn	06 28 18.6	+3.1
ITM	Ithomi	4.42	161		Pn	06 27 26.5	+1.0
GZR	Gura Zlata	4.43	24	⇓P	Pn	06 27 26.3	+0.6
GZR	Gura Zlata	4.43	24	P	Pn	06 27 26.3	+0.6
GZR	Gura Zlata	4.43	24		Pn	06 27 26.3	+0.6
ALN	Alexandroupoli	4.46	94	P	Pn	06 27 26.1	0.0
ALN				S	Sn	06 28 19.9	+2.5
	comp=N,565nm,1.1s						
ALN	Alexandroupoli	4.46	94	P	Pn	06 27 26.3	+0.2
ALN	Alexandroupoli	4.46	94	Pn	Pn	06 27 26.3	+0.2
UDBI	Udbina	4.51	316	ePn	Pn	06 27 29.2	+2.5
CEL	Celeste	4.54	228	Pn	Pn	06 27 27.0	-0.3
DUGI	Dugi Otok	4.58	306	ePn	Pn	06 27 28.5	+0.8
COPA	Copaceanca	4.62	52	⇑P	Pn	06 27 30.7	+2.5
COPA	Copaceanca	4.62	52		Pn	06 27 30.7	+2.5
PLIT	Plitvice	4.82	318	ePn	Pn	06 27 33.1	+2.1
LOT	Lotru	4.83	32	⇑P	Pn	06 27 32.2	+1.0
LOT				⇑S	Sn	06 28 29.1	+2.5
LOT	Lotru	4.83	32		Pn	06 27 32.2	+1.0
MOSL	Moslavina	4.90	331	i Pn	Pn	06 27 34.0	+1.9
DEV	Deva	4.91	23	⇓P	Pn	06 27 33.6	+1.3
DEV	Deva	4.91	23	P	Pn	06 27 33.6	+1.3
DEV	Deva	4.91	23		Pn	06 27 33.6	+1.3
KOVH	Kovagotottos	4.93	343	eP	Pn	06 27 35.2	+2.7
KOVH				eS	Sn	06 28 29.1	+0.1
STFAR	Stefanesti-Arg	4.93	44	⇓P	Pn	06 27 34.4	+1.8
STFAR	Stefanesti-Arg	4.93	44		Pn	06 27 34.4	+1.8
MORH	Mrgy, Hungar	4.95	348	eP	Pn	06 27 34.6	+1.8
MORH				eS	Sn	06 28 28.5	-0.8
MORH	Mrgy, Hungar	4.95	348	⇓iPn	Pn	06 27 34.1	+1.3
AMBH	Ambrzfalva	4.98	4	⇑P	Pn	06 27 34.7	+1.6
AMBH				⇑S	Sn	06 28 32.3	+2.3
AMBH	Ambrzfalva	4.98	4	eP	Pn	06 27 34.2	+1.1
AMBH				eS	Sn	06 28 30.7	+0.7
AMBH	Ambrzfalva	4.98	4		Pn	06 27 34.7	+1.6
SIRR	Siria	5.00	12	⇑P	Pn	06 27 33.8	+0.4
SIRR	Siria	5.00	12		Pn	06 27 33.8	+0.4
SGRR	Singureni	5.12	54	⇑P	Pn	06 27 37.4	+2.3
SGRR	Singureni	5.12	54		Pn	06 27 37.4	+2.3
ARR	Arges	5.14	38	⇓P	Pn	06 27 36.3	+0.9
ARR				⇑S	Sn	06 28 36.5	+2.4
ARR	Arges	5.14	38		Pn	06 27 36.3	+0.9
AQU	L'Aquila	5.15	283	P	Pn	06 27 36.8	+1.2
AQU	L'Aquila	5.15	283	Pn	Pn	06 27 36.8	+1.2
AQU	L'Aquila	5.15	283	⇑iPn	Pn	06 27 36.4	+0.9
RAZG	Razgrad	5.17	63	⇑P	Pn	06 27 37.3	+1.5
RAZG	Razgrad	5.17	63		Pn	06 27 37.3	+1.5
RABC	Rab	5.18	312	ePn	Pn	06 27 36.9	+0.9
MTUR	Matau	5.24	41	⇑P	Pn	06 27 38.1	+1.2
MTUR	Matau	5.24	41	P	Pn	06 27 38.1	+1.2
MTUR	Matau	5.24	41		Pn	06 27 38.0	+1.2
ZAG	Zagreb	5.38	327	⇓iPn	Pn	06 27 40.7	+2.1
ZAG				eSn	Sn	06 28 41.7	+1.8
ZAG	Zagreb	5.38	327	ePn	Pn	06 27 40.6	+2.0
VOIR		5.38	40	⇓P	Pn	06 27 40.3	+1.5
VOIR		5.38	40	P	Pn	06 27 40.3	+1.5
VOIR		5.38	40		Pn	06 27 40.3	+1.5
OZLJ	Ozalj	5.44	323	ePn	Pn	06 27 40.9	+1.5
NRCA	Norcia	5.45	288		Pn	06 27 40.8	+1.1
PTJ	Puntijarka	5.45	327	ePn	Pn	06 27 40.9	+1.2
KALN	Kalnik	5.45	332	ePn	Pn	06 27 41.2	+1.5
BOJS	Bojanci	5.45	321	i Pn	Pn	06 27 41.3	+1.6
BOJS				eSn	Sn	06 28 44.9	+3.1
BOJS				IAML		06 29 30.7	
	comp=Z,2µm,1.1s						
SULR		5.54	52	⇑P	Pn	06 27 42.4	+1.6
SULR		5.54	52		Pn	06 27 42.4	+1.6
CRES	Cresnjev	5.60	324	⇑iPn	Pn	06 27 43.2	+1.4
CRES				eSn	Sn	06 28 46.6	+1.1
LOBO	Lobor	5.62	329	ePn	Pn	06 27 43.3	+1.3
BEHE	Becsehely	5.64	335	eP	Pn	06 27 44.9	+2.6
BEHE	Becsehely	5.64	335	ePn	Pn	06 27 44.1	+1.8
BEHE				eSn	Sn	06 28 47.9	+1.5
SECR		5.64	48	⇑P	Pn	06 27 44.7	+2.4
SECR		5.64	48		Pn	06 27 44.7	+2.4
MDB	Medias	5.64	31	⇑P	Pn	06 27 44.7	+2.4
MDB	Medias	5.64	31	P	Pn	06 27 44.7	+2.4
MDB	Medias	5.64	31		Pn	06 27 44.7	+2.4
DRGR		5.70	18	⇑P	Pn	06 27 43.7	+0.5
DRGR		5.70	18	P	Pn	06 27 43.7	+0.5
DRGR		5.70	18		Pn	06 27 43.7	+0.5
SMRN	Sveta Marina	5.71	312	ePn	Pn	06 27 43.5	+0.3
RIY	Rijeka	5.72	315	⇑iPn	Pn	06 27 44.5	+1.2
RIY				eSn	Sn	06 28 49.6	+1.3
RIY	Rijeka	5.72	315	ePn	Pn	06 27 44.8	+1.5
TIH	Tihany	5.75	344	eP	Pn	06 27 47.1	+3.4
TIH				eS	Sn	06 28 52.9	+3.9
CJR	Cluj-Napoca	5.87	24	⇓P	Pn	06 27 47.3	+1.8
CJR	Cluj-Napoca	5.87	24	P	Pn	06 27 47.3	+1.8
CJR	Cluj-Napoca	5.87	24		Pn	06 27 47.3	+1.8
MLR	Muntele Rosu	5.87	44	⇓P	Pn	06 27 47.4	+1.9
MLR	Muntele Rosu	5.87	44	Pn	Pn	06 27 46.7	+1.2
	comp=Z,9.1nm,0.3s,baz=151,slow=2.9,SNR=35						
MLR				Lg	Lg	06 29 18.0	
	comp=Z,7.7nm,0.3s,baz=268,slow=23,SNR=3.3						
MLR	Muntele Rosu	5.87	44	Pn	Pn	06 27 47.0	+1.5
BSZH	Besenyszg	5.91	1	eP	Pn	06 27 47.9	+2.0
VAE	Valguarnera	5.93	231	Pn	Pn	06 27 47.3	+1.0
	comp=Z,0.4nm,0.3s,baz=75,slow=12,SNR=2.1						
DOPR	Dopca	5.94	38	⇑P	Pn	06 27 47.5	+1.2
DOPR	Dopca	5.94	38		Pn	06 27 47.5	+1.2
ISR	Istrita	5.96	49	⇑P	Pn	06 27 48.4	+1.7
ISR	Istrita	5.96	49	P	Pn	06 27 48.4	+1.7
ISR	Istrita	5.96	49		Pn	06 27 48.4	+1.7
MURB	Monte Urbino	5.97	291		Pn	06 27 48.4	+1.5
NEHR	Nehoiu	6.01	46	⇑P	Pn	06 27 49.8	+2.4
NEHR	Nehoiu	6.01	46		Pn	06 27 49.8	+2.4
CEY	Cerknica	6.03	318	⇑iPn	Pn	06 27 49.1	+1.5
CEY				eSn	Sn	06 28 57.7	+1.7
MPLH	Magyarpolny	6.08	343	eP	Pn	06 27 52.2	+3.9
MPLH				eS	Sn	06 29 00.4	+3.1
CSKK	Cskako	6.13	348	eP	Pn	06 27 52.4	+3.4
CSKK				eS	Sn	06 29 03.9	+5.5
RAFF	Raffo Rosso	6.13	229	Pn	Pn	06 27 48.3	-0.7
BUD	Budapest	6.15	353	eP	Pn	06 27 51.5	+2.3
BUD				eS	Sn	06 28 59.1	+0.2
AMRR	Amara	6.16	56	⇑P	Pn	06 27 50.3	+0.9
AMRR	Amara	6.16	56	P	Pn	06 27 50.3	+0.9
AMRR	Amara	6.16	56		Pn	06 27 50.3	+0.9
LJU	Ljubljana	6.20	321	⇑iPn	Pn	06 27 51.1	+1.2
LJU				eSn	Sn	06 29 01.4	+1.3
OZUR		6.22	39	⇑P	Pn	06 27 51.5	+1.3
OZUR		6.22	39		Pn	06 27 51.5	+1.3
COVR	Voineasa-Covas	6.25	42	⇓P	Pn	06 27 52.3	+1.7
COVR	Voineasa-Covas	6.25	42		Pn	06 27 52.3	+1.7
BISRR	Bisoca	6.32	47	⇑P	Pn	06 27 54.8	+3.2
BISRR	Bisoca	6.32	47		Pn	06 27 54.8	+3.2
CORL	Corleone	6.35	239		Pn	06 27 52.7	+0.7
TRI	Trieste	6.35	315	P	Pn	06 27 52.4	+0.4
TRI	Trieste	6.35	315		Pn	06 27 52.4	+0.4
SOKA	Soboth	6.46	327	ePn	Pn	06 27 54.8	+1.3
	comp=Z,113nm,0.5s,SNR=82						
SOKA				Sn	Sn	06 29 12.0	+5.4
	comp=Z,62nm,0.4s						
PLOR	Plostina	6.48	44	⇑P	Pn	06 27 56.0	+2.2
PLOR	Plostina	6.48	44	P	Pn	06 27 56.0	+2.2
PLOR	Plostina	6.48	44		Pn	06 27 56.0	+2.2
SANT	Santorini	6.49	139	Pn	Pn	06 27 53.6	-0.3
SRO2	Moca	6.50	349	eP	Pn	06 27 56.2	+2.2
SRO2				e		06 29 10.7	
SRO2	Moca	6.50	349	ePN	Pn	06 27 56.2	+2.2
SRO2				eSN	Sn	06 29 10.7	+3.2
VRI	Vrincioaia	6.53	45	⇑P	Pn	06 27 56.6	+2.1
VRI	Vrincioaia	6.53	45	P	Pn	06 27 56.6	+2.1
VRI	Vrincioaia	6.53	45		Pn	06 27 56.6	+2.1
OBKA	Obir	6.53	323	i Pn	Pn	06 27 55.8	+1.3
	comp=Z,16nm,0.2s,SNR=16						
OBKA				eSn	Sn	06 29 12.4	+3.9
	comp=Z,194nm,0.5s						
OBKA	Obir	6.53	323	ePn	Pn	06 27 56.4	+1.8
PSZ	Piszkesteto	6.53	358	⇑P	Pn	06 27 56.2	+1.6
PSZ				⇑S	Sn	06 29 09.3	+0.8
PSZ	Piszkesteto	6.53	358	eP	Pn	06 27 56.5	+1.9
PSZ				eS	Sn	06 29 09.9	+1.4
PSZ	Piszkesteto	6.53	358	P	Pn	06 27 56.2	+1.6
PSZ	Piszkesteto	6.53	358		Pn	06 27 56.2	+1.6
PSZ	Piszkesteto	6.53	358	Pn	Pn	06 27 55.9	+1.4
SRO	Srobarova	6.56	349	eP	Pn	06 27 58.7	+3.8
SRO				e		06 29 13.0	
SRO	Srobarova	6.56	349	ePN	Pn	06 27 58.6	+3.7
SRO				eSN	Sn	06 29 12.9	+3.9
JOSR	Joseni	6.56	34	⇓P	Pn	06 27 57.3	+2.4
JOSR	Joseni	6.56	34		Pn	06 27 57.3	+2.4
HARR	Harsova	6.57	57	⇓P	Pn	06 27 57.2	+2.1
HARR	Harsova	6.57	57	P	Pn	06 27 57.2	+2.1
HARR	Harsova	6.57	57		Pn	06 27 57.2	+2.1
CLTB	Caltabellotta	6.59	237	Pn	Pn	06 27 56.2	+0.8
ODBI	Odobesti	6.64	47	⇑P	Pn	06 27 57.5	+1.5
ODBI	Odobesti	6.64	47		Pn	06 27 57.5	+1.5
BMR	Baia Mare	6.72	20	⇓P	Pn	06 27 58.3	+1.2
BMR	Baia Mare	6.72	20	P	Pn	06 27 58.3	+1.2
BMR	Baia Mare	6.72	20		Pn	06 27 58.3	+1.2
ARSA	Arzberg	6.74	332	i Pn	Pn	06 27 59.5	+2.1
	comp=Z,25nm,0.3s,SNR=28						
ARSA				eSn	Sn	06 29 18.2	+4.7
	comp=Z,77nm,0.4s						
ARSA	Arzberg	6.74	332	ePn	Pn	06 27 59.5	+2.1
TIRR	Tirgusor	6.78	60	P	Pn	06 27 57.8	-0.1
TIRR	Tirgusor	6.78	60	Pn	Pn	06 27 57.8	-0.1
SOP	Sopron	6.80	339	eP	Pn	06 28 01.8	+3.6
TESR	Tescani	6.93	40	⇑P	Pn	06 28 01.7	+1.7
TESR	Tescani	6.93	40		Pn	06 28 01.7	+1.7
CFR	Carcaliu	6.94	54	⇑P	Pn	06 28 01.7	+1.7
CFR	Carcaliu	6.94	54	P	Pn	06 28 01.7	+1.7
CFR	Carcaliu	6.94	54		Pn	06 28 01.7	+1.7
OSSC	Osservatorio P	6.94	291		Pn	06 28 01.3	+1.2
TRPA	Tarpa	6.95	13	⇑P	Pn	06 28 00.9	+0.7
TRPA	Tarpa	6.95	13	eP	Pn	06 28 00.9	+0.7
TRPA	Tarpa	6.95	13		Pn	06 28 00.9	+0.7
MYKA	Terra Mystica	7.04	320	ePn	Pn	06 28 02.5	+0.9
	comp=Z,25nm,0.5s,SNR=15						
MYKA				Sn	Sn	06 29 24.3	+3.3
	comp=Z,50nm,0.5s						
KECS	Kecovo	7.10	2	eP	Pn	06 28 04.6	+2.3
KECS				e		06 29 24.2	
KECS	Kecovo	7.10	2	ePN	Pn	06 28 04.6	+2.3
KECS				eSN	Sn	06 29 24.2	+1.9
IDI	Anoyia	7.13	147	Pn	Pn	06 28 02.7	-0.1
	comp=Z,1.9nm,0.3s,baz=330,slow=11,SNR=11						
IDI				Sn	Sn	06 29 20.4	-2.8
	comp=Z,2.7nm,0.3s,baz=156,slow=23,SNR=1.3						
ZST	Bratislava	7.15	343	eP	Pn	06 28 07.4	+4.5
ZST				e		06 29 24.7	
ZST	Bratislava	7.15	343	ePN	Pn	06 28 07.4	+4.5
ZST				eSN	Sn	06 29 24.7	+1.2
VYHS	Vyhne	7.17	353	eP	Pn	06 28 05.8	+2.6
VYHS				e		06 29 25.3	
VYHS	Vyhne	7.17	353	ePN	Pn	06 28 05.8	+2.6
VYHS				eSN	Sn	06 29 25.3	+1.3
BURAR	Bucovina Array	7.19	28	⇓P	Pn	06 28 06.7	+3.0
BURAR	Bucovina Array	7.19	28	Pn	Pn	06 28 05.3	+1.6
BURAR	Bucovina Array	7.19	28		Pn	06 28 06.7	+3.0
BUR08	Bucovina Ar. S	7.21	28	Pn	Pn	06 28 05.7	+1.8
CONA	Conrad Observa	7.22	336	ePn	Pn	06 28 06.2	+2.1
	comp=Z,11nm,0.4s,SNR=15						
CONA				eSn	Sn	06 29 29.1	+3.6
	comp=Z,90nm,0.5s						
STAL	STALIGIAL	7.27	315		Pn	06 28 05.0	+0.4
MODS	Modra-Piesok	7.28	345	eP	Pn	06 28 07.6	+2.8
MODS				e		06 29 25.6	
MODS	Modra-Piesok	7.28	345	ePN	Pn	06 28 07.6	+2.8
MODS				eSN	Sn	06 29 25.6	-1.2
ZOU	Zoufplan	7.32	317		Pn	06 28 05.8	+0.2
TEOL	Teolo	7.36	305	Pn	Pn	06 28 06.0	+0.1
TLCR		7.36	56	⇓P	Pn	06 28 08.1	+2.3
TLCR		7.36	56	P	Pn	06 28 08.2	+2.3
TLCR		7.36	56		Pn	06 28 08.2	+2.3
ZCCA	Zocca	7.38	297		Pn	06 28 07.8	+1.6
SMOL	Smolenice	7.39	346	eP	Pn	06 28 10.1	+3.9
SMOL	Smolenice	7.39	346	ePN	Pn	06 28 10.1	+3.9
UZH	Uzhgorod	7.40	11	eP	Pn	06 28 06.8	+0.5
UZH				eS	Sn	06 29 30.9	+1.3
UZH				MLR	MLR		
	comp=N,400nm,14.0s						
UZH				MLR	MLR		
	comp=E,320nm,14.0s						
UZH				MLR	MLR		
	comp=Z,320nm,14.0s						
KBA	Koelnbreinsper	7.51	322	i Pn	Pn	06 28 09.0	+1.0
	comp=Z,37nm,0.5s,SNR=51						
KBA	Koelnbreinsper	7.51	322	ePn	Pn	06 28 09.3	+1.3
CRVS	Cervenica-Dubn	7.57	6	eP	Pn	06 28 10.5	+1.7
CRVS				e		06 29 39.4	
CRVS	Cervenica-Dubn	7.57	6	ePN	Pn	06 28 10.4	+1.7
CRVS				eSN	Sn	06 29 39.4	+5.5
JAVC	Velka Javorina	7.68	348	ePN	Pn	06 28 13.8	+3.5
JAVC				eSN	Sn	06 29 43.8	+7.2
ABTA	Abfaltersbach	7.69	317	ePn	Pn	06 28 10.6	+0.2
	comp=Z,20nm,0.3s,SNR=29						
ABTA				Sn	Sn	06 29 37.9	+1.0
	comp=Z,213nm,0.7s						
KOLS	Kolonicke sedl	7.69	10	eP	Pn	06 28 12.8	+2.4
KOLS				e		06 29 41.2	
KOLS	Kolonicke sedl	7.69	10	ePN	Pn	06 28 12.8	+2.4
KOLS				eSN	Sn	06 29 41.2	+4.4
MOA	Molln	7.71	329	ePn	Pn	06 28 12.7	+2.0
	comp=Z,42nm,0.7s,SNR=36						
MOA				eSn	Sn	06 29 39.1	+1.7
	comp=Z,80nm,0.4s						
MOA	Molln	7.71	329	ePn	Pn	06 28 12.7	+2.0
VLC	Villacollemand	7.71	294		Pn	06 28 10.9	+0.1
CTI	Castel Tesino	7.73	310	P	Pn	06 28 11.4	+0.3
CTI	Castel Tesino	7.73	310	Pn	Pn	06 28 11.4	+0.3
LANS	Liptovska Anna	7.78	357	eP	Pn	06 28 16.3	+4.7
LANS				e		06 29 43.3	
LANS	Liptovska Anna	7.78	357	ePN	Pn	06 28 16.3	+4.7
LANS				eSN	Sn	06 29 43.3	+4.2
PRMA	PARMA	7.97	298		Pn	06 28 15.6	+1.4
NIE	Niedzica	8.03	1	eP	Pn	06 28 19.2	+4.1
NIE				S	Sn	06 29 48.8	+3.5
STHS	Stebnicka Huta	8.06	5	eP	Pn	06 28 17.6	+2.1
STHS				e		06 29 51.5	
STHS	Stebnicka Huta	8.06	5	ePN	Pn	06 28 17.6	+2.1
STHS				eSN	Sn	06 29 51.5	+5.4
KRUC	Moravsky	8.12	342	ePN	Pn	06 28 18.7	+2.4
KRUC				eSN	Sn	06 29 50.7	+3.2
SALO	Salr	8.19	304	Pn	Pn	06 28 17.0	-0.3
RJOB	Jochberg	8.24	323	ePn	Pn	06 28 20.2	+2.1
VRAC	Vranov	8.31	344	Pn	Pn	06 28 21.3	+2.4
	comp=Z,1.6nm,0.3s,baz=165,slow=14,SNR=24						
VRAC				Sn	Sn	06 29 52.7	+0.6
	comp=Z,0.8nm,0.3s,baz=97,slow=18,SNR=1.8						
VRAC	Vranov	8.31	344	ePN	Pn	06 28 21.3	+2.4
VRAC				eSN	Sn	06 29 56.0	+3.9
MILM	Milestii Mici	8.31	45	⇑P	Pn	06 28 20.2	+1.3
MILM	Milestii Mici	8.31	45	d iP	Pn	06 28 23.4	+4.5
MILM				eS	Sn	06 30 00.0	+7.9
MILM				pmax	pmax		
	comp=Z,200nm,1.2s						
MILM				MLR	MLR		
	comp=Z,2µm,9.5s						
MILM	Milestii Mici	8.31	45		Pn	06 28 20.2	+1.3
KIS	Kishinev	8.37	45	⇓iP	Pn	06 28 24.5	+4.9
KIS				eS	Sn	06 29 59.0	+5.6
KIS				eLq	LQ	06 30 55.0	
	comp=Z,1µm,16.0s						
KIS				LRM	MLR	06 32 32.0	
	comp=Z,900nm,11.0s						
KIS	Kishinev	8.37	45	d iP	Pn	06 28 24.5	+4.9
KIS				eS	Sn	06 29 59.0	+5.6
KIS				pmax	pmax		
	comp=E,1µm,16.0s						
KIS				pmax	pmax		
	comp=N,1µm,17.5s						
KIS				MLR	MLR		
	comp=Z,900nm,11.0s						
KIS				MLR	MLR		
	comp=E,1µm,12.0s						
PGF	Pioggiola	8.41	282	ePn	Pn	06 28 19.5	-0.8
PGF				eSn	Sn	06 29 48.9	-5.7
	comp=E,89nm,0.9s						
VSL	Villasalto	8.45	261	Pn	Pn	06 28 21.2	+0.4
WTTA	Wattenberg	8.48	317	i Pn	Pn	06 28 22.1	+0.7
	comp=E,10nm,0.2s,SNR=44						
WTTA				eSn	Sn	06 29 55.6	-0.9
	comp=E,385nm,0.8s						
WTTA	Wattenberg	8.48	317	ePn	Pn	06 28 22.9	+1.6
CKRC	Cesky Krumlov	8.51	333	ePN	Pn	06 28 24.4	+2.8
CKRC				eSN	Sn	06 30 00.6	+3.6
WATA	Walderalm	8.56	317	ePn	Pn	06 28 23.8	+1.4

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       comp=E,73nm,0.4s,SNR=62
WATA                              Sn     Sn     06 29 59.7 +1.3
       comp=E,64nm,0.5s
TREC   Trest             8.57 339 eP     Pn     06 28 24.4 +2.0
TREC                              e             06 30 00.8
TREC                              MLR    MLR
       comp=Z,3µm,10.3s
TREC   Trest             8.57 339 ePN    Pn     06 28 24.4 +2.0
TREC                              eSN    Sn     06 30 00.8 +2.4
TREC                              AMS    AMS    06 32 00.0
       comp=Z,3µm,10.3s
OKC    Ostrava-Krasne    8.57 351 eP     Pn     06 28 25.8 +3.4
OKC                               e             06 30 02.4
OKC                               MLR    MLR
       comp=Z,2µm,13.7s
OKC    Ostrava-Krasne    8.57 351 ePN    Pn     06 28 25.8 +3.4
OKC                               eSN    Sn     06 30 02.4 +4.0
OKC                               AMS    AMS    06 32 10.0
       comp=Z,2µm,13.7s
MORC   Moravsky Berou    8.59 349 ePN    Pn     06 28 25.4 +2.6
MORC                              eSN    Sn     06 30 01.0 +2.0
SQTA   Sankt Quirin      8.68 315 i Pn   Pn     06 28 25.4 +1.4
       comp=Z,59nm,0.6s,SNR=29
SQTA                              eSn    Sn     06 30 00.6  -0.6
       comp=Z,181nm,0.5s
GEC2   GERESS Array S    8.74 331 Pn     Pn     06 28 26.7 +1.7
GEC2   GERESS Array S    8.74 331 ePn    Pn     06 28 26.1 +1.2
GERES  GERESS Array B    8.74 331 Pn     Pn     06 28 26.7 +1.7
       comp=Z,4.0nm,0.3s,baz=151,slow=14,SNR=137
GERES                             Sn     Sn     06 30 03.5 +0.6
       comp=Z,5.2nm,0.3s,baz=148,slow=23,SNR=1.4
GERES                             LR     LR     06 32 28.3
       comp=Z,1µm,19.3s,baz=144,slow=42
GERES  GERESS Array B    8.74 331        Pn     06 28 25.9 +0.9
MOTA   Moosalm           8.81 316 i Pn   Pn     06 28 27.0 +1.2
       comp=Z,102nm,0.8s,SNR=42
MOTA                              eSn    Sn     06 30 05.1 +0.5
       comp=Z,97nm,0.5s
FETA   Feichten          8.81 313 ePn    Pn     06 28 26.4 +0.4
       comp=Z,16nm,0.7s,SNR=18
FETA                              eSn    Sn     06 30 02.5  -2.1
       comp=Z,36nm,0.6s
OJC    Ojcow             8.84 358 eP     Pn     06 28 29.1 +3.0
OJC                               S      Sn     06 30 07.0 +1.9
OJC    Ojcow             8.84 358 P      Pn     06 28 27.0 +0.9
OJC    Ojcow             8.84 358        Pn     06 28 27.0 +0.9
LVV    L'vov             8.85  16 eP     Pn     06 28 28.0 +1.7
LVV                               eS     Sn     06 30 07.6 +2.2
LVV                               pmax   pmax
       comp=Z,220nm,1.5s
LVV                               MLR    MLR
       comp=E,1µm,7.0s
LVV                               MLR    MLR
       comp=N,2µm,9.0s
LVV                               MLR    MLR
       comp=Z,2µm,8.0s
SORM   Soroca            8.90  38 ⇑P     Pn     06 28 28.5 +1.5
SORM   Soroca            8.90  38 P      Pn     06 28 28.5 +1.5
SORM   Soroca            8.90  38        Pn     06 28 28.5 +1.5
KRLC   Kraliky           9.01 346 eP     Pn     06 28 31.7 +3.2
KRLC                              e             06 30 13.1
KRLC                              MLR    MLR
       comp=Z,3µm,12.1s
KRLC   Kraliky           9.01 346 ePN    Pn     06 28 31.7 +3.2
KRLC                              eSN    Sn     06 30 13.1 +3.9
KRLC                              AMS    AMS    06 32 40.0
       comp=Z,3µm,12.1s
KHC    Kasperske Hory    9.03 331 eP     Pn     06 28 30.6 +1.8
KHC                               e             06 30 12.9
KHC                               MLR    MLR
       comp=Z,3µm,5.9s
KHC    Kasperske Hory    9.03 331 ePN    Pn     06 28 30.6 +1.8
KHC                               eSN    Sn     06 30 12.9 +3.1
KHC                               AMS    AMS    06 31 30.0
       comp=Z,3µm,5.9s
RETA   Reutte            9.08 315 i Pn   Pn     06 28 30.3 +0.8
       comp=Z,4.4nm,0.3s,SNR=7.8
RETA                              eSn    Sn     06 30 10.7  -0.4
       comp=Z,122nm,0.7s
DAVOX  Davos/Dischmat    9.16 310 Pn     Pn     06 28 32.1 +1.4
       comp=Z,9.3nm,0.3s,baz=137,slow=15,SNR=72
DAVOX                             Sn     Sn     06 30 14.9 +1.8
       comp=Z,8.4nm,0.3s,baz=148,slow=22,SNR=3.8
DAVOX                             LR     LR     06 32 47.5
       comp=Z,788nm,19.9s,baz=118,slow=42
FUR    Furstenfeldbru    9.27 320 ePn    Pn     06 28 32.5 +0.5
WET    Wettzell          9.30 329 ePn    Pn     06 28 33.1 +0.6
TUE    Stuetta           9.31 307        Pn     06 28 33.8 +0.9
DPC    Dobruska-Polom    9.36 345 eP     Pn     06 28 36.2 +2.9
DPC                               e             06 30 20.5
DPC                               MLR    MLR
       comp=Z,3µm,17.2s
DPC    Dobruska-Polom    9.36 345 ePN    Pn     06 28 36.2 +2.9
DPC                               eSN    Sn     06 30 20.5 +2.7
DPC                               AMS    AMS    06 32 40.0
       comp=Z,3µm,17.2s
DAVA   Damuels           9.44 312 ePn    Pn     06 28 35.2 +0.7
       comp=Z,31nm,0.5s,SNR=16
DAVA                              eSn    Sn     06 30 21.2 +1.2
       comp=Z,56nm,0.5s
DAVA   Damuels           9.44 312 ePn    Pn     06 28 36.2 +1.7
PRU    Pruhonice         9.46 337 eP     Pn     06 28 36.5 +1.9
PRU                               e             06 30 23.1
PRU                               MLR    MLR
       comp=Z,3µm,8.2s
PRU    Pruhonice         9.46 337 ePN    Pn     06 28 36.5 +1.9
PRU                               eSN    Sn     06 30 23.1 +2.9
PRU                               AMS    AMS    06 32 30.0
       comp=Z,3µm,8.2s
UBR    Ueberruh          9.55 315 ePn    Pn     06 28 36.5 +0.6
PRA    Prague            9.56 337 AMS    AMS    06 32 30.0
       comp=Z,3µm,8.3s
UPC    Upice             9.57 344 eP     Pn     06 28 38.2 +2.1
UPC                               e             06 30 26.1
UPC                               MLR    MLR
       comp=Z,4µm,9.0s
UPC    Upice             9.57 344 ePN    Pn     06 28 38.2 +2.1
UPC                               eSN    Sn     06 30 26.1 +3.1
UPC                               AMS    AMS    06 32 50.0
       comp=Z,4µm,9.0s
OSTC   Ostas             9.57 345 ePN    Pn     06 28 39.0 +2.8
OSTC                              eSN    Sn     06 30 26.1 +3.0
OSTC                              AMS    AMS    06 33 00.0
       comp=Z,3µm,9.7s
PLONS  Plons/SG          9.59 310 ePn    Pn     06 28 38.1 +1.6
CHVC   Chvalec           9.64 344 ePN    Pn     06 28 39.9 +2.8
CHVC                              eSN    Sn     06 30 26.4 +1.7
CHVC                              AMS    AMS    06 33 00.0
       comp=Z,3µm,11.1s
SBF    Sospel            9.71 289 ePn    Pn     06 28 38.7 +0.5
SBF                               eSn    Sn     06 30 19.0  -7.6
       comp=Z,162nm,0.8s
KSP    Ksiaz             9.83 345 eP     Pn     06 28 45.9 +6.2
KSP                               S      Sn     06 30 32.1 +2.7
PVCC   Panska Ves        9.94 339 eP     Pn     06 28 44.0 +2.9
PVCC                              MLR    MLR
       comp=Z,2µm,11.0s
PVCC   Panska Ves        9.94 339 ePN    Pn     06 28 44.0 +2.9
PVCC                              AMS    AMS    06 32 10.0
       comp=Z,2µm,11.0s
WILA   Wila             10.06 311 ePn    Pn     06 28 44.1 +1.1
ROTZ   Rotzenmuhle      10.06 329 ePn    Pn     06 28 44.5 +1.6
KEST   Kesra            10.18 240 Pn     Pn     06 28 47.8 +3.1
       comp=Z,0.2nm,0.3s,baz=83,slow=18,SNR=4.1
KEST   Kesra            10.18 240        Pn     06 28 44.1  -0.5
FRF    La Foret Royal   10.23 287 ePn    Pn     06 28 46.2 +1.0
FRF    La Foret Royal   10.23 287 ePg    Pn     06 29 30.1  +45
FRF                               eSn    Sn     06 30 32.6  -6.6
       comp=Z,68nm,0.9s
MANZ   Manzenberg       10.28 329 ePn    Pn     06 28 46.5 +0.6
LMR    La Mourre        10.30 285 ePn    Pn     06 28 46.0  -0.2
LMR                               eSn    Sn     06 30 34.3  -6.6
       comp=Z,18nm,0.6s
NKC    Novy Kostel      10.35 331 eP     Pn     06 28 49.9 +3.0
NKC                               MLR    MLR
       comp=Z,2µm,8.6s
NKC    Novy Kostel      10.35 331 ePN    Pn     06 28 49.9 +3.0
NKC                               AMS    AMS    06 33 10.0
       comp=Z,2µm,8.6s
MBDF   Montbardon       10.36 293 ePn    Pn     06 28 46.1  -1.0
MBDF                              eSn    Sn     06 30 35.7  -6.9
       comp=Z,102nm,0.7s
BR131  Keskin Array S   10.38  95⇑eP     Pn     06 28 46.7  -0.8
BR131  Keskin Array S   10.38  95 Pn     Pn     06 28 46.5  -1.0
BRTR   Keskin Array B   10.38  95 Pn     Pn     06 28 51.0 +3.5
       comp=Z,0.2nm,0.3s,baz=272,slow=14,SNR=6.0
BRTR   Keskin Array B   10.38  95 P      Pn     06 28 47.0  -0.4
BRTR   Keskin Array B   10.38  95        Pn     06 28 47.0  -0.4
GRA1   Grafenberg Arr   10.40 326        Pn     06 28 48.3 +0.7
GRF    Grafenberg Arr   10.40 326 P      Pn     06 28 48.3 +0.7
GRF    Grafenberg Arr   10.40 326 ePn    Pn     06 28 49.0 +1.4
GRFO   Grafenberg       10.40 326 P      Pn     06 28 48.2 +0.6
GRFO   Grafenberg       10.40 326 Pn     Pn     06 28 48.2 +0.6
BRG    Berggiesshubel   10.42 338 eP     Pn     06 28 49.2 +1.4
BRG                               Amp           06 28 54.5
       comp=Z,16nm,1.1s
BRG    Berggiesshubel   10.42 338 P      Pn     06 28 58.8  +11
BRG                               Amp           06 29 00.7
       comp=Z,17nm,1.1s
BRG                               Amp           06 32 43.0
       comp=E,4.9nm,12.3s
BRG                               Amp           06 32 43.0
       comp=N,2.2nm,10.4s
BRG                               Amp           06 32 45.0
       comp=Z,2.1nm,13.9s
BEL    Belsk            10.46   2 eP     Pn     06 28 53.1 +4.8
BEL                               S      Sn     06 30 46.9 +2.2
SLE    Schleitheim      10.48 311 ePn    Pn     06 28 48.2  -0.5
BNI    Bardonecchia     10.51 295 P      Pn     06 28 49.0  -0.1
BNI    Bardonecchia     10.51 295 Pn     Pn     06 28 49.0  -0.1
SENIN  Lac Senin/Sane   10.54 302 Pn     Pn     06 28 49.8 +0.2
SULZ   Cheisacher       10.58 310 ePn    Pn     06 28 49.9  -0.1
LPG    La Plagne        10.59 297 ePn    Pn     06 28 49.4  -1.0
LPG                               eSn    Sn     06 30 41.7  -6.7
       comp=Z,188nm,0.7s
LPL    La Plagne        10.61 297 ePn    Pn     06 28 49.2  -1.4
LPL                               eSn    Sn     06 30 41.9  -6.9
       comp=Z,311nm,1.0s
STU    Stuttgart        10.70 317 P      Pn     06 28 52.0 +0.3
STU    Stuttgart        10.70 317        Pn     06 28 52.0 +0.3
STU    Stuttgart        10.70 317 ePn    Pn     06 28 51.7 +0.1
BALST  Balsthal         10.72 308 ePn    Pn     06 28 51.9  -0.2
BFO    Black Forest     10.89 314 P      Pn     06 28 53.7  -0.6
BFO    Black Forest     10.89 314        Pn     06 28 53.7  -0.6
BFO    Black Forest     10.89 314 ePn    Pn     06 28 53.6  -0.7
MOX    Moxa             11.00 330 ePn    Pn     06 28 56.6 +1.0
ORIF   Oris-en-Rattie   11.02 293 ePn    Pn     06 28 54.9  -1.2
ORIF                              eSn    Sn     06 30 51.7  -7.1
       comp=Z,87nm,0.6s
SMRF   Simiane la Rot   11.05 288 ePn    Pn     06 28 55.8  -0.7
SMRF                              eSn    Sn     06 30 52.1  -7.4
       comp=Z,38nm,0.9s
CLL    Collm            11.08 336 P      Pn     06 28 57.6 +0.7
CLL    Collm            11.08 336 i Pn   Pn     06 28 58.8 +2.0
CLL                               e             06 29 07.0
CLL                               eSn    Sn     06 30 46.0   -14
CLL                               e             06 31 00.0
CLL                               eSb           06 31 30.0
CLL                               eSg           06 32 17.0
       comp=Z,152nm,1.2s
CLL                               Lmax          06 33 00.0
CLL    Collm            11.08 336 Pn     Pn     06 28 57.6 +0.7
AKASG  Malin Array Be   11.23  31 Pn     Pn     06 28 59.8 +1.0
       comp=Z,1.1nm,0.3s,baz=219,slow=13,SNR=62
AKASG                             Lg     Lg     06 32 13.8
       comp=Z,0.4nm,0.3s,baz=222,slow=27,SNR=1.1
AKASG                             LR     LR     06 33 51.5
       comp=Z,991nm,21.3s,baz=200,slow=41
AKASG  Malin Array Be   11.23  31 P      Pn     06 28 59.0 +0.2
AKASG  Malin Array Be   11.23  31 Pn     Pn     06 28 59.0 +0.2
AKBB   Malin Array Si   11.23  31⇑eP     Pn     06 28 59.8 +1.0
AKBB   Malin Array Si   11.23  31 Pn     Pn     06 29 00.5 +1.6
CABF   La Chapelle      11.40 302 ePn    Pn     06 29 00.0  -1.4
CABF                              eSn    Sn     06 31 00.9  -7.2
       comp=Z,662nm,1.6s
HINF   Hinteralfeld     11.46 309 ePn    Pn     06 29 01.9  -0.1
HINF   Hinteralfeld     11.46 309 ePg    Pn     06 29 50.4   +48
HINF                              eSn    Sn     06 31 03.2  -6.2
       comp=Z,85nm,0.7s
ECH    Echery           11.48 311 P      Pn     06 29 01.7  -0.7
ECH    Echery           11.48 311        Pn     06 29 01.7  -0.7
CDF    Champ du Feu     11.52 312 ePn    Pn     06 29 01.7  -1.3
CDF    Champ du Feu     11.52 312 ePg    Pn     06 29 50.9   +48
CDF                               eSn    Sn     06 31 03.6  -7.4
       comp=Z,74nm,1.0s
VIVF   Saint-Julien-l   11.85 292 ePn    Pn     06 29 06.0  -1.3
VIVF                              eSn    Sn     06 31 11.7  -7.2
       comp=Z,31nm,0.8s
HAU    Haudompre        11.85 309 ePn    Pn     06 29 06.1  -1.2
HAU    Haudompre        11.85 309 ePg    Pn     06 29 58.3   +51
HAU                               eSn    Sn     06 31 11.2  -7.7
       comp=Z,111nm,0.6s
SSB    Saint Sauveur    12.03 294 P      Pn     06 29 09.1  -0.7
SSB    Saint Sauveur    12.03 294        Pn     06 29 09.1  -0.7
TNS    Taunus Mts       12.03 321 ePn    Pn     06 29 10.3 +0.5
LASF   Ste Croix        12.30 288 ePn    Pn     06 29 11.9  -1.6
LASF                              eSn    Sn     06 31 21.0  -8.9
       comp=Z,13nm,0.8s
PAGF   Fort de Pagny    12.48 310 ePn    Pn     06 29 15.4  -0.5
PAGF                              eSn    Sn     06 31 27.0  -7.3
PAGF                              eSg           06 32 50.9
       comp=Z,983nm,1.9s
SFTF   Sexfontaines     12.72 307 ePn    Pn     06 29 17.8  -1.4
       baz=127
SFTF                              eSn    Sn     06 31 32.0  -8.1
SFTF                              eSg           06 32 58.2
       comp=Z,285nm,1.5s
SUW    Suwalki          12.79   8 eP     Pn     06 29 23.6 +3.4
SUW    Suwalki          12.79   8 P      Pn     06 29 21.4 +1.3
SUW    Suwalki          12.79   8 Pn     Pn     06 29 21.4 +1.3
WLF    Walferdange      12.83 315 dP     Pn     06 29 21.6 +0.9
WLF    Walferdange      12.83 315 P      Pn     06 29 21.4 +0.6
WLF    Walferdange      12.83 315 Pn     Pn     06 29 21.4 +0.6
MEZF   Maizieres J’vi   12.85 309 ePn    Pn     06 29 20.4  -0.5
       baz=129
MEZF                              eSn    Sn     06 31 35.5  -7.7
MEZF                              eSg           06 33 01.6
       comp=Z,244nm,1.4s
SAVF   Savonnieres en   12.86 309 ePn    Pn     06 29 20.0  -1.1
       baz=130
SAVF                              eSn    Sn     06 31 35.5  -8.0
SAVF                              eSg           06 33 02.5
       comp=Z,39nm,1.0s
SMF    Signal de Mont   12.87 300 ePn    Pn     06 29 19.9  -1.4
SMF                               eSn    Sn     06 31 35.4  -8.5
       comp=Z,92nm,0.7s
ANN    Anapa            13.07  69 eP     Pn     06 29 21.7  -2.3
ANN                               pmax   pmax
       comp=Z,49nm,0.8s
ANN                               MLR    MLR
       comp=Z,611nm,11.0s
ANN                               MLR    MLR
       comp=N,484nm,12.0s
LOR    Lormes           13.07 302 ePn    Pn     06 29 22.5  -1.5
       baz=122
LOR                               eSn    Sn     06 31 40.5  -8.2
       comp=N,53nm,0.6s
SSF    Saint Saulge     13.22 301 ePn    Pn     06 29 24.9  -1.2
SSF                               eSn    Sn     06 31 44.1  -8.3
       comp=N,33nm,0.5s
AVF    Avril sur Loir   13.23 300 ePn    Pn     06 29 24.9  -1.4
AVF                               eSn    Sn     06 31 44.5  -8.2
       comp=N,38nm,0.8s
BHOU   Houvegnez        13.32 317 dP     Pn     06 29 28.7 +1.4
BTNL   Ternell          13.39 318 dP     Pn     06 29 30.1 +1.7
BTNL                              dPP    PbPb   06 30 13.2 +0.6
MTLF   Montolieu        13.42 284 ePn    Pn     06 29 27.7  -1.2
MTLF                              eSn    Sn     06 31 48.7  -8.7
       comp=N,6.4nm,0.6s
MEM    Membach          13.47 318 dx     Pn     06 29 33.6 +4.2
MEM                               dx     x      06 29 49.3
MEM                               dPP    PbPb   06 30 12.8  -1.1
BGF    Bois d'Agland    13.50 298 ePn    Pn     06 29 28.5  -1.4
BGF                               eSn    Sn     06 31 50.6  -8.6
       comp=N,53nm,0.5s
RCHB   Rochefort        13.61 315 dP     Pn     06 29 32.7 +1.4
CAF    Calviac          13.68 291 ePn    Pn     06 29 31.0  -1.4
CAF                               eSn    Sn     06 31 55.0  -8.8
       comp=N,7.2nm,0.6s
BCLA   Clavier          13.72 316 dP     Pn     06 29 30.3  -2.5
BEBN   Eben Emael       13.75 318 dP     Pn     06 29 35.7 +2.5
BEBN                              dPP    PbPb   06 30 22.6 +4.0
GIVF   Givet            13.79 314 ePn    Pn     06 29 32.8  -1.0
GIVF                              eSn    Sn     06 31 58.0  -8.3
       comp=N,9.1nm,0.5s
BGES   Gesves           13.81 316 dP     Pn     06 29 35.6 +1.5
BGES                              dPP    P      06 29 43.5 +1.1
HYF    Humbligny        13.85 301 ePn    Pn     06 29 33.4  -1.2
HYF                               eSn    Sn     06 31 59.6  -8.1
GAZ    Gaziantep        13.85 102 Pn     Pn     06 29 31.4  -3.4
TCF    Toulx Ste Croi   13.85 297 ePn    Pn     06 29 33.4  -1.3
TCF                               eSn    Sn     06 31 59.0  -8.9
       comp=N,43nm,1.0s
DOU    Dourbes          13.91 314 dP     Pn     06 29 36.3 +0.8
DOU                               dPP    PbPb   06 30 20.9  -0.4
BMRD   Maredsous        13.93 315 dP     Pn     06 29 36.6 +0.9
BMRD                              dx     x      06 29 49.8
MNK    Minsk            14.09  19 i P    Pn     06 29 35.6  -2.3
MNK                               i S    Sn     06 32 13.3  -0.2
MNK                               pmax   pmax
       comp=N,43nm,0.9s
MNK                               pmax   pmax
       comp=E,3.0nm,0.9s
MNK                               pmax   pmax
       comp=Z,49nm,0.9s
MNK                               MLR    MLR
       comp=N,399nm,16.0s
MNK                               MLR    MLR
       comp=Z,746nm,16.0s
MNK                               MLR    MLR
       comp=E,36nm,16.0s
MNK    Minsk            14.09  19 i P    Pn     06 29 35.7  -2.2
       comp=E,3.0nm,0.9s
MNK                               i P    Pn     06 29 35.7  -2.2
       comp=N,43nm,0.9s
MNK                               i P    Pn     06 29 35.7  -2.2
       comp=Z,49nm,0.9s,baz=204
MNK                               i PP   P      06 29 43.6  -1.8
MNK                               i S    Sn     06 32 13.3  -0.2
MNK                               i SS   SnSn   06 32 25.3  -0.6
MNK                               i LQ   LQ     06 33 35.9
MNK                               i LR   LR     06 34 48.2
MNK                               i LRM  MLR    06 35 10.6
       comp=N,399nm,16.3s
MNK                               i LRM  MLR    06 35 15.3
       comp=Z,746nm,16.3s
MNK                               i LRM  MLR    06 35 18.8
       comp=E,36nm,16.3s
BAIF   Baives           14.10 313 ePn    Pn     06 29 37.1  -1.0
BAIF                              eSn    Sn     06 32 05.5  -8.3
       comp=E,21nm,0.8s
RJF    Les Rejaudoux    14.12 292 ePn    Pn     06 29 37.1  -1.4
RJF                               eSn    Sn     06 32 05.5  -9.0
       comp=E,4.9nm,0.6s
NACGM  Naroch           14.22  16 i P    Pn     06 29 39.3  -0.3
SNF    Seneffe          14.30 315 dPn    Pn     06 29 43.4 +2.5
CLF    Chambon-Foret    14.35 304        Pn     06 29 41.0  -0.4
PABE   Paberze          14.35   9 eP     Pn     06 29 44.6 +3.3
PABE   Paberze          14.35   9 Pn     Pn     06 29 41.8 +0.5
SOC    Sochi            14.59  75 i P    Pn     06 29 41.5  -3.3
SOC                               e             06 32 23.7
SOC                               MLR    MLR
       comp=Z,298nm,15.0s
MMAI   Mount Meron Ar   14.72 120 Pn     Pn     06 29 45.6  -1.1
       comp=Z,1.1nm,0.3s,baz=322,slow=12,SNR=5.0
MMAI                              LR     LR     06 36 28.7
       comp=Z,650nm,19.6s,baz=300,slow=42
ISAL   Salakas          14.72  13 eP     P      06 29 53.5 +1.0
ETSF   Etsaut           15.45 283 ePn    Pn     06 29 55.3  -1.1
ETSF                              eSn    Sn     06 32 37.3   -10
       comp=Z,0.3nm,0.4s
MFF    Saint Martin d   15.51 296 ePn    Pn     06 29 56.8  -0.2
MFF                               eSn    Sn     06 32 39.1  -9.1
       comp=Z,1.2nm,0.4s
SJPF   Ste Jean         15.94 283 ePn    Pn     06 30 02.1  -0.5
LDF    La Druitiere     16.04 304 ePn    Pn     06 30 03.5  -0.3
LDF    La Druitiere     16.04 304 ePg           06 31 16.0
LDF                               eSn    Sn     06 32 51.0   -10
       comp=Z,11nm,0.6s
VORD   Divnogorie       16.30  48 eP     P      06 30 10.1 +0.1
VORD                              pmax   pmax
       comp=Z,40nm,1.0s
FLN    La Foliniere     16.32 304 ePn    Pn     06 30 06.8  -0.6
       baz=124
FLN                               eSn    Sn     06 32 58.3  -9.4
       comp=Z,29nm,0.9s
VSR    Storozhevoye     16.35  47 eP     P      06 30 10.7 +0.1
VSR                               pmax   pmax
       comp=Z,20nm,0.7s
GRR    Gorron           16.44 302 ePn    Pn     06 30 08.3  -0.6
GRR                               eSn    Sn     06 33 00.8   -10
       comp=Z,25nm,0.8s
SHA1   Shidzhatmaz      16.72  74⇑eP     Pn     06 30 10.1  -2.7
KIV    Kislovodsk       16.75  74 eP     Pn     06 30 09.8  -3.2
KIV                               eS     Sn     06 33 15.5  -2.9
KIV                               pmax   pmax
       comp=Z,7.0nm,1.0s
KIV                               MLR    MLR
       comp=Z,174nm,13.0s
KVAR   Kislovodsk Arr   16.75  74 LR     LR     06 37 39.4
       comp=Z,564nm,18.2s,baz=100,slow=41
NEY    Neytrino         16.78  76⇑eP     Pn     06 30 10.8  -2.6
NEY                               pmax   pmax
       comp=Z,1.0nm,1.2s
KBZ    Khabaz           16.90  74 Pn     P      06 30 19.1 +2.5
       comp=Z,0.1nm,0.3s,baz=281,slow=8.9,SNR=6.3
KBZ                               LR     LR     06 38 36.7
       comp=Z,294nm,18.8s,baz=280,slow=44
KBZ    Khabaz           16.90  74⇑eP     Pn     06 30 11.4  -3.4
LPSR   Galich'ya Gora   16.96  42 eP     P      06 30 17.0  -0.3
LPSR                              pmax   pmax
       comp=Z,50nm,0.9s
OBN    Obninsk          17.48  33 P      Pn     06 30 22.3 +0.3
       comp=Z,1.5nm,0.3s,baz=282,slow=19,SNR=21
OBN    Obninsk          17.48  33 i P    P      06 30 22.4  -0.6
OBN                               pmax   pmax
       comp=Z,112nm,1.0s
OBN                               MLR    MLR
       comp=Z,323nm,16.0s
OBN    Obninsk          17.48  33        Pn     06 30 22.2 +0.3
SGMF   Saint Gilles     17.49 301 ePn    Pn     06 30 22.8 +0.7
SGMF                              eSn    Sn     06 33 26.1   -10
       comp=Z,6.0nm,0.7s
MTSE   Matsula          17.50   6 eP     P      06 30 24.4 +1.2
VSU    Vasula           17.59  11 eP     P      06 30 24.3 +0.1
VSU    Vasula           17.59  11⇓eP     Pn     06 30 23.5 +0.2
VSU                               pmax   pmax
       comp=Z,65nm,0.7s
SIRT   Sirnak           17.62  95 P      Pn     06 30 24.4 +0.5
SIRT                              IAmb   IAmb   06 30 48.4
       comp=Z,112nm,1.4s
ZEI    Tsey             17.66  78 eP     P      06 30 29.9 +4.5
ZEI                               pmax   pmax
       comp=Z,4.0nm,0.9s
VRH    Novokhopyorsk    17.77  49 eP     P      06 30 26.5 +0.2
VRH                               pmax   pmax
       comp=Z,50nm,1.2s
QUIF   Quistinic        17.80 299 ePn    P      06 30 27.2 +0.5
QUIF                              eSn    Sn     06 33 33.5   -10
       comp=Z,1.9nm,0.4s
ROSF   Rostrenen        17.97 301 ePn    P      06 30 29.4 +0.9
ROSF                              eSn    Sn     06 33 37.3   -11
       comp=Z,8.5nm,0.6s
MOS    Moscow           18.35  33 eP     Pn     06 30 32.9 +0.3
MOS                               eS     S      06 33 59.2  -2.0
MOS                               pmax   pmax
       comp=Z,204nm,1.0s
MOS                               pmax   pmax
       comp=N,60nm,0.9s
MOS                               pmax   pmax
       comp=E,107nm,1.0s
ESDC   Sonseca Array    18.42 273 P      Pn     06 30 34.2 +0.5
       comp=E,0.1nm,0.3s,baz=76,slow=11,SNR=2.4
HOMB   Homborsund       18.45 340 eP     Pn     06 30 35.4 +1.6
UPP    Uppsala          18.56 356 eP     Pn     06 30 36.0 +0.9
GNI    Garni            18.64  86 P      Pn     06 30 38.4 +1.9
       comp=E,0.6nm,0.3s,baz=71,slow=3.7,SNR=4.9
GNI    Garni            18.64  86⇑eP     P      06 30 36.3 +0.2
GNI                               pmax   pmax
       comp=Z,15nm,1.1s
AAL    Aland            18.82 360 eP     Pn     06 30 38.5 +0.3
HFS    Hagfors          19.19 350 P      P      06 30 41.4  -0.4
       comp=Z,2.9nm,0.3s,baz=163,slow=12,SNR=53
KONO   Kongsberg        19.43 344 eP     P      06 30 44.7 +0.3
PUL    Pulkovo          19.46  16⇓eP     Pn     06 30 46.6 +0.6
PUL                               pmax   pmax
       comp=Z,81nm,0.6s
OSL    Oslo             19.48 346 eP     P      06 30 45.4 +0.5
NC602  NORSAR Array S   20.08 348 P      P      06 30 51.5   0.0
NC602                             IAmb   IAmb   06 30 55.2
       comp=Z,61nm,1.1s
NC602  NORSAR Array S   20.08 348 eP     P      06 30 51.4  -0.2
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MAK   Makhachkala      20.29  76 eP    P      06 30 48.1 -5.8
MAK                              e            06 31 02.0
MAK                              eS    S      06 34 33.9 -6.5
MAK                               pmax pmax
      comp=Z,228nm,1.3s
MAK                               MLR  MLR
      comp=Z,412nm,11.0s
NAO01 NORSAR Array S   20.30 347  P    P      06 30 54.5 +0.6
FINES FINESS Array B   20.40   8  P    P      06 30 54.3 -0.7
      comp=Z,5.8nm,0.4s,baz=177,slow=10.0,SNR=49
FINES FINESS Array B   20.40   8 i P   P      06 30 54.5 -0.5
FINES                             pmax pmax
      comp=Z,6.0nm,0.4s
FINES FINESS Array B   20.40   8  P    P      06 30 54.7 -0.3
FIA1  FINESS Array S   20.40   8  P    P      06 30 54.8 -0.2
FIA1                              IAmb IAmb   06 30 55.5
      comp=Z,45nm,1.2s
NC405 NORSAR Array S   20.41 348  P    P      06 30 54.3 -0.9
NB2   NORSAR Subarra   20.43 347  P    P      06 30 54.8 -0.5
      comp=Z,17nm,1.1s,baz=159,slow=9.3
NB2   NORSAR Subarra   20.43 347  P    P      06 30 54.8 -0.5
      baz=159,slow=9.3
NOA   NORSAR Array B   20.43 347  P    P      06 30 55.0 -0.3
      comp=Z,14nm,0.9s,baz=153,slow=9.9,SNR=28
AKT   Akhty            20.63  81⇑eP    Pn     06 30 59.1 -1.1
AKT                               pmax pmax
      comp=Z,14nm,0.9s
SKAR  Skarslia         20.65 343 eP    P      06 30 58.1 +0.4
EKA   Eskdalemuir Ar   20.72 320  P    P      06 30 58.8 +0.3
      comp=Z,13nm,0.8s,baz=115,slow=10,SNR=44
ESK   Eskdalemuir      20.73 320  P    P      06 30 59.8 +1.2
ESK                               pmax pmax
      comp=Z,42nm,1.1s
ESK   Eskdalemuir      20.73 320  P    P      06 30 59.8 +1.2
ESK                               IAmb IAmb   06 31 13.2
      comp=Z,42nm,1.1s
MDT   Midelt           21.48 255  P    P      06 31 08.8 +1.8
      comp=Z,4.9nm,1.1s,baz=90,slow=10,SNR=3.7
DOMB  Dombas           21.74 346 eP    P      06 31 10.9 +1.5
MOL   Molde            22.51 345 eP    P      06 31 18.5 +0.9
TBLU  Trondheim        22.67 348 eP    P      06 31 21.6 +2.2
NSS   Namsos           23.66 351 eP    P      06 31 30.0 +0.7
KIRV  Kirov            25.18  37  P    P      06 31 42.7 -0.6
      comp=Z,7.7nm,0.4s,baz=216,slow=10.0,SNR=6.3
PRGR  Permogore        25.43  29 eP    P      06 31 44.2 -1.3
PRGR                              pmax pmax
      comp=Z,192nm,1.5s
FAUS  Fauske           26.18 356 eP    P      06 31 53.7 +1.3
AKTO  Aktyubinsk       27.58  58  P    P      06 32 04.5 -0.7
      comp=Z,1.5nm,0.4s,baz=258,slow=6.2,SNR=9.4
KTK1  Kautokeino       27.73   2 eP    P      06 32 06.2 -0.1
ARCES ARCESS Array B   28.35   4  P    P      06 32 10.8 -1.1
      comp=Z,3.7nm,0.5s,baz=186,slow=11,SNR=21
KEV   Kevo             28.66   5  P    P      06 32 13.9 -0.6
KEV                               pmax pmax
      comp=Z,44nm,1.4s
KEV   Kevo             28.66   5  P    P      06 32 13.9 -0.6
ABKAR Akbulak array    28.77  61  P    P      06 32 16.1 +0.3
ARU   Arti             28.92  46  P    P      06 32 17.9 +0.9
      comp=Z,0.8nm,0.3s,baz=251,slow=6.8,SNR=9.6
ARU   Arti             28.92  46c iP   P      06 32 17.2 +0.2
ARU                               S    S      06 37 08.7 +2.4
ARU                               pmax pmax
      comp=Z,19nm,1.3s
ARU   Arti             28.92  46  P    P      06 32 17.0  0.0
ARU                               IAmb IAmb   06 32 33.0
      comp=Z,11nm,0.9s
HAMF  Hammerfest       29.38   2 eP    P      06 32 20.4 -0.6
SVE   Sverdlovsk       30.13  45 eP    P      06 32 28.0 +0.3
SVE                               pmax pmax
      comp=Z,16nm,0.9s
SVE                               MLR  MLR
      comp=Z,507nm,11.0s
TORD  Torodi Ar. Bea   32.43 215  P    P      06 32 48.6 +0.2
      comp=Z,2.1nm,0.9s,baz=23,slow=8.4,SNR=7.4
KOWA  Kowa             34.04 225  P    P      06 33 04.1 +1.7
      comp=Z,1.8nm,0.8s,baz=356,slow=8.0,SNR=2.2
BRVK  Borovoye         35.27  53deP    P      06 33 12.8 +0.1
BRVK                              pmax pmax
      comp=Z,9.0nm,1.0s
BRVK  Borovoye         35.27  53  P    P      06 33 12.9 +0.2
BRVK                              IAmb IAmb   06 33 29.3
      comp=Z,12nm,0.8s
KK31  Karatay Array    36.85  70  P    P      06 33 26.7 +0.3
KK31                              pmax pmax
      comp=Z,2.0nm,0.7s
KK31  Karatay Array    36.85  70  P    P      06 33 26.7 +0.3
KKAR  Karatay Array    36.85  70  P    P      06 33 26.9 +0.5
KKAR                              pmax pmax
      comp=Z,2.0nm,0.7s
KKAR  Karatay Array    36.85  70  P    P      06 33 26.9 +0.5
SPA0  Spitsbergen Ar   36.94 359 eP    P      06 33 27.0 +0.3
SPITS Spitsbergen Ar   36.94 359  P    P      06 33 26.7 +0.1
      comp=Z,11nm,1.1s,baz=160,slow=10,SNR=7.1
CHGR  Chuyangaron      37.22  78  P    P      06 33 29.0 -0.7
CHGR                              IAmb IAmb   06 33 41.3
      comp=Z,14nm,1.1s
AAK   Ala-Archa        39.79  69  P    P      06 33 51.3  0.0
      comp=Z,0.7nm,0.4s,baz=243,slow=6.8,SNR=2.1
KURK  Kurchatov        40.65  56⇑eP    P      06 33 58.0 -0.1
KURK                              pmax pmax
      comp=Z,8.0nm,1.3s
DBIC  Dimbokro         41.13 220  P    P      06 34 03.0 +0.7
      comp=Z,2.6nm,0.5s,baz=29,slow=8.1,SNR=5.3
DBIC  Dimbokro         41.13 220  P    P      06 34 03.0 +0.7
DBIC  Dimbokro         41.13 220  P    P      06 34 03.1 +0.7
DBIC                              IAmb IAmb   06 34 30.5
      comp=Z,18nm,1.2s
SUMG  Summit           41.75 337  P    P      06 34 06.6 -0.7
SUMG                              pmax pmax
      comp=Z,6.0nm,0.9s
SUMG  Summit           41.75 337  P    P      06 34 06.6 -0.7
KSH   Kashi            41.88  73  P    P      06 34 06.7 -1.8
NIL   Nilore           42.24  83  P    P      06 34 11.6 +0.2
NIL                               pmax pmax
      comp=Z,7.0nm,0.8s
NIL   Nilore           42.24  83  P    P      06 34 11.6 +0.2
TARG  Taragay, Kyrgy   42.41  70  P    P      06 34 13.3 +0.1
ZAA0  Zalesovo Array   43.80  51  P    P      06 34 23.5 -0.3
ZAA0                              IAmb IAmb   06 34 47.9
      comp=Z,8.9nm,0.8s
ZALV  Zalesovo Beam    43.80  51  P    P      06 34 23.6 -0.2
      comp=Z,2.9nm,0.3s,baz=283,slow=8.4,SNR=17
ZALV  Zalesovo Beam    43.80  51  P    P      06 34 23.7  0.0
MK31  Makanchi Array   43.92  61c iP   P      06 34 24.3 -0.5
MK31  Makanchi Array   43.92  61  P    P      06 34 25.0 +0.2
MKAR  Makanchi Array   43.92  61  P    P      06 34 24.6 -0.3
      comp=Z,2.7nm,0.4s,baz=286,slow=7.6,SNR=18
MKAR  Makanchi Array   43.92  61  P    P      06 34 25.1 +0.3
NRIK  Noril'sk         44.07  28  P    P      06 34 25.6 -0.1
      comp=Z,4.5nm,0.5s,baz=256,slow=4.9,SNR=9.8
NRIK  Noril'sk         44.07  28d iP   P      06 34 25.7  0.0
NRIK  Noril'sk         44.07  28  P    P      06 34 26.2 +0.5
NRIK                              IAmb IAmb   06 34 27.1
      comp=Z,14nm,1.2s
DGZ   Jazzator, Alta   46.39  56deP    P      06 34 44.6 +0.1
DGZ                               pmax pmax
      comp=Z,5.0nm,0.8s
WMQ   Urumqi           48.49  63 eP    P      06 35 03.5 +2.6
WMQ                               LR   LR
      comp=N,410nm,17.7s
WMQ                               LR   LR
      comp=E,210nm,13.3s
WMQ                               LR   LR
      comp=Z,130nm,18.5s
PYUN  Piuthan          52.24  84 eP    P      06 35 28.4 -1.3
      comp=Z,24nm,0.5s
DANN  Dangsing         52.69  83 eP    P      06 35 31.7 -1.3
      comp=Z,32nm,0.5s
KOLN  Koldanda         52.88  84 eP    P      06 35 32.7 -1.6
      comp=Z,12nm,0.5s
GKN   Gorkha           53.53  83 eP    P      06 35 37.1 -2.0
      comp=Z,19nm,0.5s
DMN   Daman            54.09  83 eP    P      06 35 42.4 -0.9
      comp=Z,20nm,0.7s
KKN   Kakani           54.12  83 eP    P      06 35 41.9 -1.6
      comp=Z,16nm,0.6s
PKIN  Phulchoki        54.32  83 eP    P      06 35 43.9 -1.1
      comp=Z,10nm,0.5s
PKI   Pulchoki         54.34  83 eP    P      06 35 43.9 -1.3
GUN   Gumba            54.50  82 eP    P      06 35 45.1 -1.3
JIRN  Jiri             54.87  82 eP    P      06 35 48.5 -0.6
      comp=Z,18nm,0.4s
TLY   Talaya           55.34  49 eP    P      06 35 53.2 +1.4
TLY                               pmax pmax
      comp=Z,8.0nm,0.6s
TLY                               MLR  MLR
      comp=Z,439nm,13.0s
RAMN  Ramite           55.56  83 eP    P      06 35 52.1 -1.9
      comp=Z,25nm,0.5s
ZAK   Zakamensk        55.68  50 eP    P      06 35 54.9 +0.6
ZAK                               pmax pmax
      comp=Z,5.0nm,1.7s
SCHQ  Schefferville    55.95 316  P    P      06 35 56.5 +0.5
      comp=Z,6.9nm,0.7s,baz=129,slow=3.1,SNR=5.7
SCHQ  Schefferville    55.95 316  P    P      06 35 57.0 +1.0
TAPN  Taplejung        56.17  82 eP    P      06 35 57.4 -1.0
ODAN  Odare            56.20  82 eP    P      06 35 57.3 -1.2
      comp=Z,13nm,0.4s
TIXI  Tiksi            56.75  21⇓eP    P      06 36 00.7 -0.7
SONM  Songino Array    58.66  52  P    P      06 36 15.4  0.0
      comp=Z,5.0nm,0.9s,baz=289,slow=9.2,SNR=25
SONM  Songino Array    58.66  52  P    P      06 36 15.0 -0.5
SONM                              pmax pmax
      comp=Z,7.0nm,1.0s
SONM  Songino Array    58.66  52  P    P      06 36 15.0 -0.5
SONM                              IAmb IAmb   06 36 16.6
      comp=Z,7.3nm,1.0s
LMN   Caledonia Moun   58.86 306  P    P      06 36 16.5 -0.2
BATG  Bathurst New B   58.93 308  P    P      06 36 17.9 +0.7
ULN   Ulaanbaatar      59.03  52⇑eP    P      06 36 18.4 +0.3
ULN                               pmax pmax
      comp=Z,5.0nm,1.3s
PQI   Presque Isle     60.40 308  P    P      06 36 27.8 +0.5
D62A  Allapoint, All   60.80 308  P    P      06 36 31.9 +1.9
D62A                              IAmb IAmb   06 36 45.4
      comp=Z,9.3nm,1.1s
LZH   Lanzhou          63.04  65 eP    P      06 36 45.0 -0.4
LZH                               pP   pP     06 36 47.6 -4.8
LZH                               sP   sP     06 36 50.0 -5.0
A36M  Sachs Harbour    64.33 349  P    P      06 36 53.9 +0.7
HHC   Hu-ho-hao-te     65.46  56 eP    P      06 37 00.9 -0.3
HHC                               pmax pmax
      comp=Z,16nm,1.0s
HHC                               pmax pmax
      comp=Z,100nm,5.3s
HHC                               LR   LR
      comp=N,320nm,20.2s
HHC                               LR   LR
      comp=E,260nm,16.3s
HHC                               LR   LR
      comp=Z,130nm,16.7s
CD2   Chengdu          65.86  69  P    P      06 37 03.5 -0.4
INK   Inuvik           68.86 350  P    P      06 37 22.2 +0.1
      comp=Z,1.2nm,0.7s,baz=48,slow=2.6,SNR=5.5
INK   Inuvik           68.86 350  P    P      06 37 22.7 +0.6
SEY   Seymchan         69.24  21  LR   LR     07 10 04.4
      comp=Z,198nm,21.7s,baz=314,slow=38
CHTO  Chiang Mai       69.52  83  P    P      06 37 25.1 -1.9
CHTO                              pmax pmax
      comp=Z,7.0nm,1.1s
CHTO  Chiang Mai       69.52  83  P    P      06 37 25.1 -1.9
CHTO                              IAmb IAmb   06 37 41.0
      comp=Z,7.0nm,1.1s
CMAR  Chiang Mai Arr   69.73  83  P    P      06 37 26.8 -1.6
      comp=Z,0.8nm,0.3s,baz=304,slow=7.4,SNR=8.7
YKA   Yellowknife Ar   70.29 340  P    P      06 37 31.3 +0.3
      comp=Z,1.2nm,0.8s,baz=38,slow=7.7,SNR=4.1
BMAR  Burnt Mountain   70.89 354  P    P      06 37 35.8 +1.0
EPYK  Eagle Plains     71.11 350  P    P      06 37 36.2 +0.2
EPYK                              IAmb IAmb   06 37 42.4
      comp=Z,5.4nm,1.0s
KLR   Kul'dur          71.58  40  P    P      06 37 38.9 -0.3
      comp=Z,4.8nm,0.8s,baz=322,slow=6.9,SNR=14
KLR   Kul'dur          71.58  40⇑eP    P      06 37 39.3 +0.2
KLR                               pmax pmax
      comp=Z,22nm,2.3s
CN2   Changchun        71.89  47 eP    P      06 37 40.5 -0.6
CN2                               pmax pmax
      comp=Z,20nm,0.8s
CN2                               LR   LR
      comp=N,300nm,14.0s
CN2                               LR   LR
      comp=E,300nm,14.0s
CN2                               LR   LR
      comp=Z,200nm,14.0s
H23K  Yukon River      72.82 356  P    P      06 37 47.5 +1.2
IMAR  Indian Mountai   72.86 357  P    P      06 37 47.7 +1.2
ULM   Lac du Bonnet    72.97 323  P    P      06 37 47.8 +0.4
      comp=Z,5.5nm,1.0s,baz=66,slow=9.0,SNR=3.4
ULM   Lac du Bonnet    72.97 323⇑eP    P      06 37 47.2 -0.2
ULM   Lac du Bonnet    72.97 323  P    P      06 37 48.5 +1.0
ULM                               IAmb IAmb   06 37 59.5
      comp=Z,6.9nm,0.9s
H21K  Melozitna Rive   73.15 357  P    P      06 37 49.7 +1.4
H21K                              IAmb IAmb   06 38 15.0
      comp=Z,7.7nm,0.9s
MDM   Murphy Dome      73.60 355  P    P      06 37 51.5 +0.6
MDM                               IAmb IAmb   06 38 06.3
      comp=Z,11nm,1.2s
DAWY  Dawson           73.65 351  P    P      06 37 52.0 +0.7
DAWY                              IAmb IAmb   06 38 06.1
      comp=Z,15nm,1.4s
COLA  College          73.66 355⇓eP    P      06 37 52.1 +0.9
COLA                              pmax pmax
      comp=Z,6.0nm,1.2s
MLY   Manley           73.68 356  P    P      06 37 53.4 +1.9
MLY                               IAmb IAmb   06 38 06.0
      comp=Z,11nm,1.4s
ILAR  Eielson Array    73.69 354  P    P      06 37 51.8 +0.3
      comp=Z,0.5nm,0.6s,baz=351,slow=4.8,SNR=6.1
ILAR  Eielson Array    73.69 354  P    P      06 37 52.3 +0.9
WRH   Wood River Hil   74.08 355  P    P      06 37 53.9 +0.2
SCRK  Sand Creek       74.23 353  P    P      06 37 55.6 +0.9
SCRK                              IAmb IAmb   06 38 19.4
      comp=Z,7.9nm,1.3s
J20K  Nowinta River    74.68 357  P    P      06 37 58.0 +0.8
USRK  Ussuriysk Ar.    75.14  44  P    P      06 37 60.0 -0.2
      comp=Z,1.7nm,0.5s,baz=321,slow=3.9,SNR=5.8
USRK  Ussuriysk Ar.    75.14  44  P    P      06 37 59.8 -0.4
USRK  Ussuriysk Ar.    75.14  44  P    P      06 37 59.8 -0.4
NJ2   Nanjing          75.44  60 eP    P      06 38 02.7 +0.6
PPLA  Purkeypile       75.88 356  P    P      06 38 04.5 +0.1
PPLA                              IAmb IAmb   06 38 17.5
      comp=Z,6.3nm,0.7s
KS19  Wonju Array Si   77.44  51  P    P      06 38 13.6 +0.1
KSAR  Wonju Array Be   77.49  51  P    P      06 38 13.2 -0.5
KSAR  Wonju Array Be   77.49  51  P    P      06 38 13.2 -0.5
KSRS  Korea Array      77.51  51  P    P      06 38 13.6 -0.2
      comp=Z,5.0nm,0.8s,baz=320,slow=4.8,SNR=19
TJN   Taejon           77.91  52ceP    P      06 38 15.8 -0.2
YSS   Yuzh-Sakhalins   78.33  36 eP    P      06 38 18.0 -0.1
YSS                               pmax pmax
      comp=Z,20nm,0.8s
YSS                               MLR  MLR
      comp=Z,500nm,21.0s
S39A  Bolivar          80.62 312  P    P      06 38 31.6 +0.8
T35A  Sooner Cattle    82.93 314  P    P      06 38 44.8 +1.7
T35A                              IAmb IAmb   06 38 58.1
      comp=Z,7.8nm,0.8s
MAT   Matsushiro       83.93  46  P    P      06 38 46.8 -1.4
MJAR  Matsushiro Arr   83.94  46  P    P      06 38 47.5 -0.7
      comp=Z,3.5nm,0.8s,baz=308,slow=4.8,SNR=11
MJAR  Matsushiro Arr   83.94  46  P    P      06 38 48.2  0.0
MCMT  McKenzie Canyo   84.41 328  P    P      06 38 52.0 +1.3
KSCO  Kaye Shedlock'   84.53 319  P    P      06 38 52.1 +0.8
RWWY  Rawlins          84.59 323  P    P      06 38 51.2 -0.6
RWWY                              IAmb IAmb   06 39 04.4
      comp=Z,6.3nm,0.8s
PDAR  Pinedale Array   84.75 325  P    P      06 38 52.2 -0.3
      comp=Z,0.6nm,0.6s,baz=101,slow=8.0,SNR=5.4
PDAR  Pinedale Array   84.75 325  P    P      06 38 52.0 -0.5
MFID  Camas Ranch      86.75 330  P    P      06 39 03.0 +0.7
MFID                              IAmb IAmb   06 39 21.4
      comp=Z,4.5nm,0.8s
NV11  Mina Array Sit   91.93 329  P    P      06 39 27.4 +0.6
TX31  Lajitas Ar. Si   92.57 313  P    P      06 39 30.1 +0.2
TX32  Lajitas Array    92.57 313  P    P      06 39 30.0 +0.1
TX32                              IAmb IAmb   06 39 44.7
      comp=Z,4.9nm,1.2s
TXAR  Lajitas Array    92.57 313  P    P      06 39 30.7 +0.8
      comp=Z,1.8nm,0.9s,baz=72,slow=4.2,SNR=16
WRA   Warramunga Arr  120.87  90  PKP  PKPdf  06 45 08.8 -1.8
      comp=Z,0.4nm,0.9s,baz=314,slow=1.9,SNR=2.0
ASAR  Alice Springs   122.72  94  PKP  PKPdf  06 45 12.9 -1.2
      comp=Z,0.5nm,0.8s,baz=308,slow=2.3,SNR=7.7
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DDA 01 06:26:53.1, 37°.20N×28°.75E, h7^{km}±1^{km}, ML1.3, Turkey

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Code  Station Name       Δ°  AZ°    Phase ID         Time      Res
                                   Op    ISC       h  m  s     ISC
TAVA  DENIZLI_Tavas     0.29  26 i P    Pg        06 26 58.7 -0.3
TAVA                             i S    Sg        06 27 03.3 +0.4
TAVA                               IAML           06 27 04.0
      comp=E,34nm,0.1s
TAVA                               IAML           06 27 04.0
      comp=N,40nm,0.2s
MULA  Mugla, Merkez-    0.35 279 i P    Pg        06 27 00.2 +0.3
DALY  Dalyan (Mula)     0.39 192 i P    Pb        06 27 01.5 -0.8
DALY                             i S    Sb        06 27 07.4 -1.1
CAEL  Denizli, Camel    0.46  99 i P    Pb        06 27 03.9 +0.2
CAEL                               IAML           06 27 13.0
      comp=E,53nm,1.2s
AYDN  Tasoluk           0.83 304 i P    Pg        06 27 09.2 +0.1
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*IDC **01** 06:27:03.3±0.8, 41°.24N×20°.34E, h0^{km}, mb4.5/19, mb1 4.6/22, mb1mx4.4/52, mbtmp4.5/22, ML4.1/3, MS3.9/5, Ms1 3.9/5, ms1mx3.5/40, Error ellipse: s-maj=20.8km s-min=18.2km az=153.0*

*NEIC **01** 06:27:05.5±1.0, 41°.37N±0°.09×20°.32E±0°.06, h7^{km}±5^{km}, Error ellipse: s-maj=12.5km s-min=6.4km az=181.0*

*TIR **01** 06:27:05.5, 41°.35N×20°.23E, h18^{km}±3^{km}, Md4.8, Ml4.8*

*BEO **01** 06:27:08.2±0.5, 41°.28N×20°.18E, h4^{km}±2^{km}, ML4.4/11*

ISC 01 06:27:05.6±1.1**, 41°.30N**±0°.04×**20°.28E**±0°.03**, h13**^{km}±6^{km}**, n97, σ0^{s}.92**/98**, mb4.7**/33**, MS4.1**/4**, 1C, Albania**

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Code  Station Name       Δ°  AZ°    Phase ID         Time      Res
                                   Op    ISC       h  m  s     ISC
TIR   Tirane            0.32 279 ePg    Pg        06 27 12.2 +0.1
TIR                              eSg    Sg        06 27 17.1 +0.6
TIR   Tirane            0.32 279        Pg        06 27 12.1  0.0
TIR                               Sg    Sg        06 27 16.8 +0.4
TIR   Tirane            0.32 279  P     Pg        06 27 12.2 +0.1
      baz=270
TIR                               S     Sg        06 27 16.2 -0.3
      baz=270
TIR                               AMP
      comp=E,239nm,0.3s,baz=270
PHP   Peshkopia         0.40  17  P     Pg        06 27 13.9 +0.2
      baz=25
PHP                               S     Sg        06 27 19.2 +0.1
      baz=25
PHP                               AMP
      comp=N,405nm,0.5s,baz=25
LACI  Lac               0.55 308  P     Pg        06 27 15.4 -0.9
      baz=307
LACI                              S     Sg        06 27 22.9 -0.7
      baz=307
KKS   Kukesi            0.78   7  P     Pg        06 27 20.0 -0.8
      baz=10.0
KKS                               S     Sb        06 27 31.8 +0.1
      baz=10.0
PUK   Puka              0.80 339  P     Pg        06 27 20.6 -0.5
      baz=341
PUK                               S     Sg        06 27 30.8 -0.9
      baz=341
PUK                               AMP
      comp=E,174nm,0.4s,baz=341
FNA   Florina           0.97 121        Pn        06 27 24.8 -0.3
FNA   Florina           0.97 121  P     Pn        06 27 26.1 +1.0
      baz=122
FNA                               S     Sn        06 27 40.4 +1.6
      baz=122
VLO   Vlora             1.02 216  AMP
      comp=E,91nm,0.5s,baz=213
LSK   Leskovik          1.17 168  AMP
      comp=E,82nm,0.7s,baz=166
PDG   Podgorica         1.37 326 eSg    Sg        06 27 51.1 +1.4
SRN   Sarande           1.43 189  AMP
      comp=N,20nm,1.5s,baz=187
PRVS  Prvonek           1.80  47 eSn    Sg        06 28 06.0 +2.4
SJES  Sjenica           1.98 353 eSg    Sg        06 28 10.7 +1.6
SELS  Selova            2.02  18 eSn    Sg        06 28 09.4 -1.1
TREB  Trebinje          2.02 315 eSn    Sb        06 28 08.1 +0.8
BOSS  Bosilegrad        2.03  53 eSn    Sg        06 28 11.3 +0.4
VTS   Vitosha           2.57  58 eSn    Sb        06 28 23.4 +0.3
ZAPS  Zavoj             2.63  41 eSn    Sb        06 28 25.7 +0.8
ZAPS                             eSn    Sb        06 28 25.8 +0.8
KUBS  Kucevo            3.28  18 eSn    Sb        06 28 39.8 -3.6
DJES  Djerdap           3.75  25 eSn    Sn        06 28 50.5 +3.4
NRCA  Norcia            5.55 288  Pn    Pn        06 28 27.9 -0.1
IDI   Anoyia            7.01 147  Sn    Sn        06 30 06.3 -1.4
      comp=N,3.6nm,0.3s,baz=74,slow=16,SNR=2.0
OSSC  Osservatorio P    7.05 291  Pn    Pn        06 28 49.2 +0.7
TEOL  Teolo             7.48 306  Pn    Pn        06 28 54.0 -0.3
VRAC  Vranov            8.42 343  LR    LR        06 32 47.7
      comp=N,1μm,20.9s,baz=166,slow=41
DAVOX Davos/Dischmat    9.28 310  Pn    Pn        06 29 20.1 +0.8
      comp=N,8.6nm,0.3s,baz=151,slow=23,SNR=1.8
SENIN Lac Senin/Sane   10.65 303  Pn    Pn        06 29 39.0 +0.9
OBN   Obninsk          17.51  32  P     Pn        06 31 09.4 +0.2
      comp=N,1.1nm,0.3s,baz=243,slow=9.0,SNR=4.6
ESDC  Sonseca Array    18.50 273  LR    LR        06 39 17.4
      comp=N,255nm,18.7s,baz=10.0,slow=40
GNI   Garni            18.56  85  LR    LR        06 37 57.7
      comp=N,467nm,20.6s,baz=278,slow=35
GNI   Garni            18.56  85  P     P         06 31 20.7 -1.6
HFS   Hagfors          19.30 350  P     P         06 31 29.1 -0.9
      comp=N,1.2nm,0.3s,baz=159,slow=9.5,SNR=4.3
NC602 NORSAR Array S   20.19 348  P     P         06 31 39.6 -0.2
NC602                             IAmb  IAmb      06 31 47.5
      comp=Z,33nm,0.8s
FINES FINESS Array B   20.48   8  P     P         06 31 42.5 -0.4
      comp=Z,12nm,0.7s,baz=180,slow=8.7,SNR=3.4
NC405 NORSAR Array S   20.52 348  P     P         06 31 42.8 -0.5
NOA   NORSAR Array B   20.53 347  P     P         06 31 43.1 -0.5
      comp=Z,5.2nm,0.6s,baz=154,slow=10,SNR=4.6
NC303 NORSAR Array S   20.68 348  P     P         06 31 44.7 -0.4
EKA   Eskdalemuir Ar   20.84 320  P     P         06 31 46.8 -0.1
      comp=Z,13nm,0.9s,baz=112,slow=9.5,SNR=1.7
MTE   Manteigas        21.04 277  P     P         06 31 49.4 +0.1
AKTO  Aktyubinsk       27.56  58  P     P         06 32 52.2 +0.1
      comp=Z,5.1nm,0.6s,baz=265,slow=15,SNR=6.2
ARCES ARCESS Array B   28.43   4  P     P         06 32 59.9 +0.2
      comp=Z,4.5nm,0.6s,baz=189,slow=11,SNR=4.1
ABKAR Akbulak array    28.75  60  P     P         06 33 03.3 +0.6
ABKAR Akbulak array    28.75  60  P     P         06 33 02.9 +0.2
KOWA  Kowa             34.04 225  P     P         06 33 49.7 +0.2
BRVK  Borovoye         35.26  53  P     P         06 34 01.0 +1.2
BRVK                              IAmb  IAmb      06 34 21.6
      comp=Z,8.7nm,0.8s
SPITS Spitsbergen Ar   37.03 359  P     P         06 34 15.0 +0.4
      comp=Z,20nm,1.1s,baz=158,slow=12,SNR=2.7
DBIC  Dimbokro         41.11 220  P     P         06 34 49.0 -0.4
      comp=Z,3.1nm,0.5s,baz=26,slow=13,SNR=5.6
DBIC  Dimbokro         41.11 220  P     P         06 34 49.8 +0.4
KSH   Kashi            41.82  73  P     P         06 34 54.7 -0.5
KSH                               pmax  pmax
      comp=Z,7.0nm,0.5s
KSH                               LR    LR
      comp=N,290nm,15.6s
KSH                               LR    LR
      comp=E,270nm,15.6s
KSH                               LR    LR
      comp=Z,290nm,20.3s
ZAA0  Zalesovo Array   43.80  50  P     P         06 35 11.4 +0.6
ZAA0                              IAmb  IAmb      06 35 25.9
      comp=Z,7.4nm,0.8s
ZALV  Zalesovo Beam    43.80  50  P     P         06 35 10.9  0.0
      comp=Z,7.9nm,0.5s,baz=282,slow=7.9,SNR=8.4
ZALV  Zalesovo Beam    43.80  50  P     P         06 35 11.1 +0.3
MKAR  Makanchi Array   43.89  61  P     P         06 35 11.6 -0.2
      comp=Z,1.6nm,0.4s,baz=284,slow=7.6,SNR=5.5
MKAR  Makanchi Array   43.89  61  P     P         06 35 12.1 +0.4
NRIK  Noril'sk         44.11  28  P     P         06 35 13.3 +0.1
      comp=Z,5.2nm,0.5s,baz=239,slow=3.4,SNR=6.8
NRIK  Noril'sk         44.11  28  P     P         06 35 13.7 +0.5
NRIK                              IAmb  IAmb      06 35 14.0
      comp=Z,14nm,1.3s
WMQ   Urumqi           48.46  63 eP     P         06 35 48.4 +0.6
WMQ                               pP    sP        06 35 53.0 -0.7
WMQ                               sP    pP        06 35 56.2 +4.0
WMQ                               pmax  pmax
      comp=Z,25nm,0.7s
WMQ                               pmax  pmax
      comp=Z,220nm,4.3s
WMQ                               LR    LR
      comp=N,820nm,20.1s
WMQ                               LR    LR
      comp=E,200nm,13.7s
WMQ                               LR    LR
      comp=Z,140nm,20.1s
```

SCHQ	**Schefferville**	**56.07**	**316**	P	**P**	**06 36 44.2**	**0.0**
SCHQ				IAmb	IAmb	06 37 02.8	
	comp=Z,7.4nm,0.9s						
SONM	**Songino Array**	**58.65**	**52**	P	**P**	**06 37 02.3**	**-0.3**
	comp=Z,5.8nm,0.9s,baz=289,slow=9.2,SNR=7.3						
SONM	**Songino Array**	**58.65**	**52**	IAmb	IAmb	06 37 04.0	
	comp=Z,9.9nm,1.1s						
LMN	**Caledonia Moun**	**58.98**	**306**	P	**P**	**06 37 04.4**	**-0.4**
LZH	**Lanzhou**	**63.00**	**65**	*e*P	**P**	**06 37 31.1**	**-1.3**
LZH				pP	pP	06 37 33.8	-2.9
LZH				sP	sP	06 37 35.2	-3.2
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
A36M	**Sachs Harbour**	**64.43**	**349**	P	**P**	**06 37 40.8**	**-0.2**
A36M				IAmb	IAmb	06 37 50.2	
	comp=Z,9.3nm,0.9s						
OPO	**Ambohidratompo**	**64.58**	**152**	LR	LR	07 09 18.5	
	comp=Z,67nm,18.2s,baz=186,slow=39						
HHC	**Hu-ho-hao-te**	**65.44**	**56**	*e*P	**P**	**06 37 48.1**	**-0.2**
HHC				pmax	pmax		
	comp=Z,12nm,1.1s						
HHC				pmax	pmax		
	comp=Z,110nm,5.4s						
CD2	**Chengdu**	**65.82**	**69**	P	**P**	**06 37 48.7**	**-2.1**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LBTB	**Lobatse**	**66.16**	**175**	P	**P**	**06 37 54.6**	**+1.7**
XAN	**Xi'an**	**67.59**	**64**	P	**P**	**06 38 02.0**	**-0.1**
XAN				pP	sP	06 38 09.2	+1.1
XAN				sP	pP	06 38 13.8	+7.4
XAN				pmax	pmax		
	comp=Z,14nm,0.9s						
KMI	**Kunming**	**68.45**	**75**	⇑P	**P**	**06 38 06.8**	**-1.0**
KMI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**69.66**	**83**	P	**P**	**06 38 13.9**	**-1.2**
	comp=Z,3.7nm,0.7s,baz=304,slow=7.1,SNR=6.2						
KLR	**Kul'dur**	**71.59**	**40**	P	**P**	**06 38 26.4**	**0.0**
	comp=Z,7.7nm,0.8s,baz=311,slow=7.7,SNR=9.5						
H23K	**Yukon River**	**72.92**	**356**	P	**P**	**06 38 34.5**	**+0.3**
H23K				IAmb	IAmb	06 38 44.4	
	comp=Z,6.7nm,0.9s						
IMAR	**Indian Mountai**	**72.95**	**357**	P	**P**	**06 38 34.8**	**+0.5**
R53A	**Hurricane**	**73.71**	**307**	P	**P**	**06 38 40.3**	**+1.1**
DAWY	**Dawson**	**73.75**	**351**	P	**P**	**06 38 39.4**	**+0.3**
DAWY				IAmb	IAmb	06 38 53.9	
	comp=Z,5.3nm,0.9s						
ILAR	**Eielson Array**	**73.79**	**354**	P	**P**	**06 38 40.5**	**+1.3**
	comp=Z,0.8nm,0.6s,baz=359,slow=4.5,SNR=4.1						
ILAR				LR	LR	07 12 15.2	
	comp=Z,45nm,20.5s,baz=334,slow=37						
SCRK	**Sand Creek**	**74.33**	**353**	P	**P**	**06 38 42.9**	**+0.4**
SCRK				IAmb	IAmb	06 38 58.0	
	comp=Z,8.5nm,1.4s						
BCAR	**Beaver Creek A**	**75.00**	**352**	P	**P**	**06 38 47.2**	**+0.8**
L27K	**Beaver Creek,**	**75.00**	**352**	P	**P**	**06 38 47.2**	**+0.9**
USRK	**Ussuriysk Ar.**	**75.15**	**44**	P	**P**	**06 38 47.2**	**-0.3**
	comp=Z,4.1nm,0.7s,baz=281,slow=5.9,SNR=5.3						
USRK	**Ussuriysk Ar.**	**75.15**	**44**	P	**P**	**06 38 47.6**	**+0.2**
NJ2	**Nanjing**	**75.41**	**60**	*e*P	**P**	**06 38 48.5**	**-0.7**
NJ2				pmax	pmax		
	comp=Z,21nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
K20K	**Telida**	**75.59**	**357**	P	**P**	**06 38 50.1**	**+0.3**
PPLA	**Purkeypile**	**75.98**	**356**	P	**P**	**06 38 52.4**	**+0.3**
PPLA				IAmb	IAmb	06 39 01.7	
	comp=Z,10nm,1.0s						
SKT	**Skwentna**	**76.86**	**356**	P	**P**	**06 38 56.3**	**-0.6**
SKT				IAmb	IAmb	06 39 04.0	
	comp=Z,5.3nm,0.9s						
KSAR	**Wonju Array Be**	**77.49**	**51**	P	**P**	**06 39 01.0**	**+0.1**
KSRS	**Korea Array**	**77.50**	**51**	P	**P**	**06 39 00.9**	**0.0**
	comp=Z,6.1nm,0.8s,baz=317,slow=4.6,SNR=8.8						
RC01	**Rabbit Creek A**	**77.64**	**355**	P	**P**	**06 39 01.5**	**+0.2**
MAT	**Matsushiro**	**83.94**	**46**	P	**P**	**06 39 35.0**	**-0.5**
MJAR	**Matsushiro Arr**	**83.94**	**46**	P	**P**	**06 39 34.7**	**-0.8**
	comp=Z,3.8nm,0.7s,baz=344,slow=3.4,SNR=8.0						
MJAR	**Matsushiro Arr**	**83.94**	**46**	P	**P**	**06 39 34.9**	**-0.6**
MJAR				IAmb	IAmb	06 39 36.2	
	comp=Z,4.3nm,0.8s						
BDFB	**Brasilia**	**84.70**	**244**	P	**P**	**06 39 40.2**	**+0.5**
	comp=Z,3.3nm,0.8s,baz=47,slow=6.7,SNR=3.6						
BDFB	**Brasilia**	**84.70**	**244**	P	**P**	**06 39 40.1**	**+0.5**
BDFB				IAmb	IAmb	06 39 42.3	
	comp=Z,9.6nm,1.2s						
PDAR	**Pinedale Array**	**84.87**	**325**	P	**P**	**06 39 39.9**	**-0.5**
	comp=Z,1.5nm,0.8s,baz=35,slow=5.4,SNR=4.2						
ASAR	**Alice Springs**	**122.63**	**94**	PKP	**PKPdf**	**06 45 60.0**	**-1.3**
	comp=Z,0.5nm,0.5s,baz=307,slow=1.6,SNR=4.0						

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*MAN **01** 06:28:59.6, 12°.43N×125°.91E, h37^{km}, mb4.4, ML3.3, MS3.1*

*IDC **01** 06:29:02.1±1.2, 11°.89N×125°.77E, h0^{km}, mb3.6/4, mb1 3.7/4, mb1mx3.4/64, mbtmp3.6/4, Error ellipse: s-maj=91.2km s-min=23.3km az=77.0*

ISC 01 06:29:05.5±1.1**, 11°.88N**±0°.10×**126°.0E**±0°.1**, h28**^{km}**, n14, σ2^{s}.07**/12**, mb3.5**/4**, 1C-2D, Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSLP	**Maasin**	**2.04**	**212**	⇓*e*P	**Pb**	**06 29 40.0**	**-2.0**
MSLP				*e*S	**Sb**	**06 30 09.4**	**+2.4**
SCPH	**Surigao**	**2.13**	**193**	⇑*e*P	**Pb**	**06 29 41.2**	**-2.4**
LLP	**Lapu-Lapu**	**2.50**	**232**	⇓*e*P	**Pn**	**06 29 43.5**	**-0.8**
LLP				*e*S	**Sn**	**06 30 12.0**	**-2.0**
TBP	**Tagbilaran**	**3.00**	**224**	*e*P	**Pn**	**06 29 51.3**	**+0.1**
TBP				*i* S	**Sb**	**06 30 38.0**	**+3.6**
KSRS	**Korea Array**	**25.53**	**4**	P	**P**	**06 34 32.5**	**+0.7**
	0.6nm,0.5s,baz=184,slow=8.8,SNR=4.2						
WRA	**Warramunga Arr**	**32.68**	**165**	P	**P**	**06 35 35.6**	**0.0**
	0.2nm,0.8s,baz=348,slow=9.4,SNR=2.3						
ASAR	**Alice Springs**	**36.17**	**168**	P	**P**	**06 36 08.2**	**+2.4**
	0.4nm,0.6s,baz=343,slow=7.3,SNR=6.8						
ASAR				PcP	**PcP**	**06 38 31.2**	**0.0**
	0.3nm,0.5s,baz=340,slow=2.6,SNR=2.1						
H11S3	**WAKE ISLAND Hy**	**39.78**	**75**	T	T	07 19 51.1	
	baz=271,slow=80						
H11S1	**WAKE ISLAND Hy**	**39.80**	**75**	T	T	07 19 42.0	
	baz=271,slow=80						
H11S2	**WAKE ISLAND Hy**	**39.80**	**75**	T	T	07 19 30.5	
	baz=271,slow=80						
H11N1	**WAKE ISLAND Hy**	**40.07**	**74**	T	T	07 19 49.5	
	baz=266,slow=75,SNR=42						
H11N2	**WAKE ISLAND Hy**	**40.07**	**73**	T	T	07 19 49.0	
	baz=266,slow=75,SNR=36						
H11N3	**WAKE ISLAND Hy**	**40.08**	**74**	T	T	07 19 46.6	
	baz=266,slow=75,SNR=35						
MKAR	**Makanchi Array**	**50.58**	**322**	P	**P**	**06 38 01.6**	**-0.2**
	1.2nm,0.7s,baz=103,slow=9.3,SNR=3.3						

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*IDC **01** 06:30:22.6±5.0, 8°.18S×119°.63E, h181^{km}±45^{km}, mb3.3/4, mb1 3.3/7, mb1mx3.1/52, mbtmp3.8/7, Error ellipse: s-maj=110.0km s-min=22.3km az=61.0*

ISC 01 06:30:22.4±1.1**, 8°.4S**±0°.2×**119°.7E**±0°.1**, h172**^{km}**, n9, σ2^{s}.76**/11**, mb3.7**/3**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	**Plampang**	**1.91**	**257**	P	**Pn**	**06 31 01.2**	**+3.3**
BATI	**Baumata**	**4.33**	**115**	P	**Pn**	**06 31 29.9**	**+2.4**
	11nm,0.3s,baz=297,slow=2.3,SNR=5.7						
BATI				S	**Sn**	**06 32 17.0**	**-1.6**
	6.1nm,0.3s,baz=296,slow=17,SNR=1.6						
SOEI	**Soe**	**4.74**	**107**	P	**Pn**	**06 31 35.5**	**+2.6**
FITZ	**Fitzroy Crossi**	**11.25**	**149**	P	**Pn**	**06 33 01.0**	**+2.6**
	0.1nm,0.3s,baz=323,slow=10,SNR=2.2						
FITZ				S	**Sn**	**06 34 59.7**	**-3.5**
	0.4nm,0.3s,baz=201,slow=17,SNR=3.5						
WRA	**Warramunga Arr**	**18.25**	**130**	P	**Pn**	**06 34 23.8**	**-1.2**
	0.5nm,0.3s,baz=302,slow=12,SNR=28						
WRA				S	**S**	**06 37 41.6**	**-1.3**
	0.1nm,0.3s,baz=306,slow=24,SNR=3.9						
ASAR	**Alice Springs**	**20.40**	**140**	P	Pn	06 34 47.5	-3.0
	0.9nm,0.6s,baz=316,slow=9.8,SNR=27						
STKA	**Stephens Creek**	**31.00**	**142**	P	**P**	**06 36 25.5**	**+1.8**
	1.7nm,0.5s,baz=328,slow=11,SNR=5.0						
MKAR	**Makanchi Array**	**64.24**	**332**	P	**P**	**06 40 37.2**	**-1.8**
	0.4nm,0.7s,baz=136,slow=5.7,SNR=1.5						
ZALV	**Zalesovo Beam**	**68.73**	**339**	P	**P**	**06 41 04.6**	**-2.7**
	0.6nm,0.4s,baz=131,slow=5.9,SNR=2.3						

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*NCEDC **01** 06:38:35.9±1.3, 37°.78N±0°.01×121°.97W±0°.01, h7^{km}±2^{km}, ML3.0/60, ML2.8/32(NEIC), Error ellipse: s-maj=1.7km s-min=1.3km az=48.0*

NEIC 01 06:38:36.4±0.9**, 37°.77N**±0°.01×**121°.98W**±0°.02**, h17**^{km}±1^{km}**, Error ellipse: s-maj=3.1km s-min=1.2km az=63.0, Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMCB	**Saint Mary's C**	**0.13**	**302**		Pg	06 38 39.4	-0.9
CMCM	**Mills College**	**0.16**	**273**		Pg	06 38 40.1	-0.5
BDM	**Black Diamond**	**0.20**	**26**		Pg	06 38 40.8	-0.5
BKS	**Berkeley--Byer**	**0.23**	**297**		Pg	06 38 41.6	-0.1
WENL	**Wente Vineyard**	**0.23**	**131**		Pb	06 38 42.0	-0.2
VAK	**Adit at Lawren**	**0.24**	**296**		Pg	06 38 41.8	-0.1
BL67	**Building 67, L**	**0.24**	**295**		Pg	06 38 41.7	-0.2
BL88	**Building 88, L**	**0.24**	**296**		Pg	06 38 41.9	-0.1
BRK	**Berkeley--Havi**	**0.25**	**294**		Pg	06 38 41.8	-0.1
RFSB	**Richmond Field**	**0.32**	**297**		Pg	06 38 43.1	0.0
HERB	**Hercules**	**0.33**	**317**		Pg	06 38 43.4	+0.1
JRSC	**Jasper Ridge**	**0.42**	**210**		Pg	06 38 45.1	+0.1
MHC	**Mount Hamilton**	**0.51**	**148**		Pb	06 38 47.0	+0.1
COSM	**Mount Oso**	**0.55**	**119**		Pg	06 38 47.3	0.0
CMPM	**Mikes Peak**	**0.67**	**128**		Pb	06 38 49.8	+0.1
CVS	**Carmenet Viney**	**0.69**	**327**		Pg	06 38 49.8	-0.1
GHS	**Gilroy Hot Spr**	**0.80**	**148**		Pg	06 38 52.0	0.0
MCCM	**Marconi Confer**	**0.81**	**298**	Pg	Pb	06 38 51.8	-0.2
MCCM				IAML		06 39 04.1	
	comp=E,589nm,0.6s						
MCCM				IAML		06 39 05.5	
	comp=N,556nm,0.7s						
FARB	**Farallon Islan**	**0.81**	**265**		Pb	06 38 52.2	0.0
HCOM	**Corn Cob Canyo**	**0.91**	**166**		Pg	06 38 54.2	+0.1
HFEM	**San Felipe**	**0.91**	**150**		Pb	06 38 53.7	-0.1
PACP	**Pacheco Peak**	**0.94**	**144**		Pb	06 38 54.4	+0.1
HSFM	**Saint Francis**	**1.03**	**158**		Pb	06 38 55.8	-0.1
SAO	**San Andreas Ge**	**1.09**	**157**		Pb	06 38 56.7	-0.2
SAO	**San Andreas Ge**	**1.09**	**157**		Pn	06 38 57.0	0.0
MNRC	**McLaughlin Min**	**1.16**	**342**		Pn	06 38 57.9	-0.2
FTR	**Fort Ross**	**1.20**	**309**		Pn	06 38 57.7	-0.8
GDXM	**Geysers**	**1.22**	**328**		Pn	06 38 57.5	-1.3
GSGM	**Seigler Mounta**	**1.24**	**332**		Pn	06 38 58.8	-0.1
BLRM	**Lewis Ranch**	**1.24**	**153**		Pn	06 38 58.9	-0.1
SCZ	**Santa Cruz**	**1.26**	**158**		Pn	06 38 58.3	-1.0
CMB	**Columbia Colle**	**1.28**	**78**		Pn	06 38 58.9	-0.8
CMB	**Columbia Colle**	**1.28**	**78**		Pn	06 38 59.3	-0.4
CMB				Sn	Sn	06 39 17.2	+0.6
CMB				IAML		06 39 17.9	
	comp=E,79nm,0.6s						
CMB				IAML		06 39 18.4	
	comp=N,158nm,0.5s						
BJCM	**Johnson Can.**	**1.31**	**159**		Pn	06 38 59.2	-0.8
HAST	**Hastings Reser**	**1.42**	**166**		Pn	06 39 01.2	-0.4
BSMM	**Soledad Missio**	**1.45**	**162**		Pn	06 39 02.0	0.0
SUTB	**Sutter Butte**	**1.46**	**6**		Pn	06 39 00.7	-1.4
HOPS	**Hopland Field**	**1.49**	**325**		Pn	06 39 01.9	-0.7
PMPB	**Monarch Peak**	**1.82**	**148**		Pn	06 39 07.5	+0.5
PMPB				IAML		06 39 56.6	
	comp=N,172nm,1.6s						
ORV	**Oroville**	**1.82**	**12**		Pn	06 39 06.3	-0.8
ORV	**Oroville**	**1.82**	**12**		Pb	06 39 08.3	-1.0
ORV				IAML		06 39 31.2	
	comp=N,28nm,0.5s						
ORV				IAML		06 39 49.7	
	comp=E,40nm,0.7s						
EMB	**Emerald Bay**	**1.90**	**50**		Pn	06 39 08.6	+0.2
RUBR	**Rubicon Trail**	**1.92**	**48**		Pb	06 39 10.0	-1.1
PAPM	**Alder Peak**	**1.92**	**165**		Pn	06 39 08.6	+0.1
PKD	**Bear Valley Ra**	**2.16**	**147**		Pn	06 39 11.5	-0.2
KCC	**Kaiser Creek**	**2.16**	**101**		Pn	06 39 12.5	+0.7
MDPB	**Devils Postpil**	**2.30**	**93**		Pn	06 39 15.1	+1.2
MDPB				IAML		06 39 47.3	
	comp=E,78nm,0.6s						
MDPB				IAML		06 39 57.0	
	comp=N,109nm,0.8s						
RAMR	**Ramage Ranch**	**2.31**	**157**		Pn	06 39 14.2	+0.5
MDCM	**Deadman Creek**	**2.33**	**91**		Pn	06 39 15.6	+1.3
BEKR	**Beckworth**	**2.44**	**31**	Pn	Pn	06 39 17.5	+1.8
BEKR				IAML		06 39 53.7	
	comp=E,64nm,0.7s						
BEKR				IAML		06 39 59.7	
	comp=N,33nm,0.8s						
PAGB	**Antelope Grade**	**2.46**	**145**	Pn	Pn	06 39 16.7	+0.8
HELL	**Mitchell Peak,**	**2.60**	**114**		Pn	06 39 18.3	+0.5
PAHR	**Pah Rah Range**	**2.80**	**46**		Pn	06 39 21.6	+1.0
PAHR				IAML		06 40 10.3	
	comp=E,31nm,1.3s						
PAHR				IAML		06 40 11.4	
	comp=N,28nm,1.3s						
RYN	**Ryan**	**2.85**	**72**		Pn	06 39 22.8	+1.4
RYN				IAML		06 40 11.4	
	comp=E,24nm,0.8s						
RYN				IAML		06 40 12.7	
	comp=N,29nm,0.6s						
KVN	**Kaiserville**	**3.30**	**66**		Pn	06 39 28.1	+0.5
KVN				IAML		06 40 32.3	
	comp=N,16nm,0.9s						
ISA	**Isabella, Lake**	**3.51**	**126**	Pn	Pn	06 39 30.0	-0.4
ISA				IAML		06 40 34.8	
	comp=N,18nm,0.8s						
ISA				IAML		06 40 37.7	
	comp=E,18nm,0.8s						
LHEM	**Herd Peak**	**3.86**	**357**		Pn	06 39 35.4	+0.1
GSC	**Goldstone, Bar**	**4.84**	**119**	Pn	Pn	06 39 49.1	+0.5
GSC				IAML		06 41 34.0	
	comp=N,11nm,3.0s						

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*IDC **01** 06:49:28.8±1.6, 42°.56N×142°.18E, h128^{km}±18^{km}, mb3.5/5, mb1 3.5/6, mb1mx3.1/66, mbtmp3.8/6, Error ellipse: s-maj=49.0km s-min=19.2km az=91.0*

*JMA **01** 06:49:28.5±0.2, 42°.58N×141°.98E, h129^{km}±2^{km}, M3.1*

*NEIC **01** 06:49:29.2±0.8, 42°.63N±0°.06×142°.01E±0°.07, h122^{km}±6^{km}, mb4.3/4, Error ellipse: s-maj=10.5km s-min=5.0km az=215.0*

ISC 01 06:49:28.6±0.7**, 42°.55N**±0°.04×**142°.03E**±0°.04**, h127**^{km}±5^{km}**, n43, σ0^{s}.79**/55**, mb4.0**/7**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIAM	**Iburiatsuma**	**0.11**	**311**	P	**Pn**	**06 49 46.3**	**+0.4**
JIAM				*e*S	**Sn**	**06 49 59.4**	**+0.5**
JBT2	**Biratori 2**	**0.34**	**47**	P	**Pn**	**06 49 46.7**	**+0.2**
JBT2				S	**Sn**	**06 50 00.2**	**+0.2**
JSHD	**Hidakashinhida**	**0.35**	**114**	P	**Pn**	**06 49 47.1**	**+0.5**
JEW	**Eniwo**	**0.52**	**304**	P	**Pn**	**06 49 47.2**	**-0.2**
JEW				*e*S	**Sn**	**06 50 00.7**	**-0.9**
JEW	**Eniwo**	**0.52**	**304**		**Pn**	**06 49 47.1**	**-0.3**
JEW				Sn	**Sn**	**06 50 00.9**	**-0.7**
JNBK	**Urakawa-nobuka**	**0.60**	**117**	P	**Pn**	**06 49 48.4**	**+0.4**
JNBK				*e*S	**Sn**	**06 50 03.2**	**+0.7**
JNB	**Noboribetsu**	**0.74**	**264**	P	**Pn**	**06 49 48.3**	**-0.6**
JNB				*e*S	**Sn**	**06 50 03.2**	**-1.1**
JFR	**Furan**	**0.74**	**34**	P	**Pn**	**06 49 48.7**	**-0.3**
JISS	**Ishikarishitsu**	**0.85**	**328**	P	**Pn**	**06 49 49.7**	**-0.2**
JISS				*e*S	**Sn**	**06 50 05.5**	**-0.5**
JCH	**Churui**	**0.99**	**86**	P	**Pn**	**06 49 51.1**	**0.0**
JCH				S	**Sn**	**06 50 07.3**	**-0.8**
JEM	**Erimo**	**0.99**	**122**		**Pn**	**06 49 51.3**	**+0.1**
JKB	**Kayabe**	**0.99**	**228**	P	**Pn**	**06 49 50.6**	**-0.6**
JKB				S	**Sn**	**06 50 06.5**	**-1.7**
ERM	**Erimo**	**0.99**	**122**		**Pn**	**06 49 51.7**	**+0.5**
ERM				Sn	**Sn**	**06 50 09.2**	**+0.9**
JHR	**Hokuryu**	**1.21**	**350**	P	**Pn**	**06 49 53.8**	**+0.5**
JHR				*e*S	**Sn**	**06 50 12.8**	**+0.7**
JOT	**Ohata**	**1.38**	**212**	P	**Pn**	**06 49 54.8**	**-0.3**
JOT				*e*S	**Sn**	**06 50 14.0**	**-1.3**
JKK2	**Kamakawa 2**	**1.42**	**21**	P	**Pn**	**06 49 55.9**	**+0.3**
JKK2				*e*S	**Sn**	**06 50 16.1**	**-0.1**
JAR	**Ashorobuto**	**1.48**	**59**	P	**Pn**	**06 49 56.0**	**-0.2**
JAR				*e*S	**Sn**	**06 50 15.8**	**-1.5**
ASAJ	**Asahikawa**	**1.62**	**15**	P	**Pn**	**06 49 57.9**	**+0.1**
	16nm,0.3s,baz=200,slow=12,SNR=125						
ASAJ				S	**Sn**	**06 50 19.9**	**-0.2**
	5.5nm,0.3s,baz=60,slow=20,SNR=7.5						
JKA	**Kamikawa-asahi**	**1.62**	**15**		**Pn**	**06 49 57.4**	**-0.4**
JTM	**Tenmabayashi**	**1.91**	**203**		**Pn**	**06 50 01.1**	**-0.2**
JTM				Sn	**Sn**	**06 50 24.7**	**-1.5**
JTKR	**Abashiri--Toko**	**1.97**	**43**	P	**Pn**	**06 50 02.6**	**+0.6**
JTKR				*e*S	**Sn**	**06 50 28.0**	**+0.3**
JAK	**Akkeshi**	**2.01**	**76**	P	**Pn**	**06 50 02.1**	**-0.4**
JAK				*e*S	**Sn**	**06 50 26.5**	**-2.0**
JMM	**Marumori**	**4.78**	**192**	Pn	**Pn**	**06 50 38.2**	**-0.5**
MJAR	**Matsushiro Arr**	**6.69**	**207**	P	**Pn**	**06 51 05.0**	**+0.6**
	0.1nm,0.3s,baz=24,slow=15,SNR=2.3						
INU	**Inuyama**	**8.18**	**210**	Pn	**Pn**	**06 51 26.2**	**+1.7**
JWT	**Wachi**	**8.90**	**218**	Pn	**Pn**	**06 51 35.6**	**+1.3**
JCJ	**Chichijima**	**15.42**	**179**	Pn	**Pn**	**06 53 00.3**	**+1.0**
ENH	**Enshi**	**28.74**	**255**	P	**P**	**06 55 14.6**	**+0.5**
ENH				IAmb	IAmb	06 55 22.7	
	comp=Z,12nm,1.2s						
KIWB	**Kanaga Island**	**28.91**	**57**	P	**P**	**06 55 14.0**	**-1.4**
H11N2	**WAKE ISLAND Hy**	**30.95**	**130**	T	T	07 27 21.0	
	baz=322						
H11N1	**WAKE ISLAND Hy**	**30.96**	**130**	T	T	07 27 26.9	
	baz=322						
H11N3	**WAKE ISLAND Hy**	**30.96**	**130**	T	T	07 27 17.0	
	baz=322						
H11S1	**WAKE ISLAND Hy**	**31.81**	**131**	T	T	07 28 34.8	
	baz=325						
H11S3	**WAKE ISLAND Hy**	**31.82**	**131**	T	T	07 28 36.5	
	baz=325						
H11S2	**WAKE ISLAND Hy**	**31.83**	**131**	T	T	07 28 39.7	
	baz=325						
ZAA0	**Zalesovo Array**	**38.74**	**307**	P	**P**	**06 56 40.4**	**+0.2**
ZALV	**Zalesovo Beam**	**38.74**	**307**	P	**P**	**06 56 40.4**	**+0.2**
	comp=Z,0.6nm,0.3s,baz=90,slow=7.2,SNR=3.8						
ZALV	**Zalesovo Beam**	**38.74**	**307**	P	**P**	**06 56 40.2**	**+0.1**
KURK	**Kurchatov**	**43.08**	**304**	P	**P**	**06 57 16.0**	**+0.2**
KURK				IAmb	IAmb	06 57 45.3	
	comp=Z,7.0nm,1.7s						
KURBB	**Kurchatov Arra**	**43.16**	**304**	P	**P**	**06 57 17.3**	**+0.9**
	comp=Z,0.9nm,0.3s,baz=74,slow=9.0,SNR=4.4						
BVAR	**Borovoye Array**	**47.35**	**309**	P	**P**	**06 57 50.3**	**+0.9**
	comp=Z,1.1nm,0.3s,baz=58,slow=3.6,SNR=5.5						
WRA	**Warramunga Arr**	**62.58**	**188**	P	**P**	**06 59 39.2**	**0.0**
	comp=Z,0.2nm,0.6s,baz=4.8,slow=7.2,SNR=1.3						
FINES	**FINESS Array B**	**64.18**	**331**	P	**P**	**06 59 49.1**	**-0.2**
	comp=Z,2.5nm,0.9s,baz=37,slow=7.1,SNR=3.8						

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*PDG **01** 06:54:12.9±0.3, 43°.52N×17°.01E, h6^{km}, ML2.9/12, Error ellipse: s-maj=0.5km s-min=0.8km az=0.0*

*KRSZO **01** 06:54:13.4±0.8, 43°.53N×17°.06E, h9^{km}±4^{km}, ML3.5/9, Error ellipse: s-maj=2.9km s-min=2.3km az=50.0*

*IASPEI **01** 06:54:13.6±1.0, 43°.52N±0°.03×17°.03E±0°.03, h8^{km}±7^{km}, Error ellipse: s-maj=5.0km s-min=3.0km az=52.7, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*BEO **01** 06:54:14.1±0.6, 43°.51N×16°.97E, h0^{km}, ML3.0/10*

*PRU **01** 06:54:14.9±0.0, 43°.47N×16°.81E, h0^{km}*

*RHSSO **01** 06:54:14.4±0.3, 43°.52N×17°.07E, h2^{km}±1^{km}, ML3.2/18*

*LDG **01** 06:54:15.6±0.1, 43°.54N×17°.18E, h10^{km}, Ml3.3/6, Error ellipse: s-maj=5.0km s-min=2.9km az=26.0*

ISC 01 06:54:13.9±0.9**, 43°.52N**±0°.02×**17°.03E**±0°.02**, h5**^{km}±7^{km}**, n140, σ1^{s}.40**/227**, 27C-12D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RICI	**Ricice**	**0.08**	**110**	*i* Pg	**Pg**	**06 54 15.6**	**-0.1**
RICI				Sg	**Sg**	**06 54 17.0**	**0.0**
MAKA	**Makarska**	**0.23**	**182**	*e*Pg	**Pg**	**06 54 18.6**	**+0.1**
HVAR	**Hvar**	**0.55**	**231**	*i* Pg	**Pg**	**06 54 23.9**	**-0.5**
HVAR				Sg	**Sg**	**06 54 33.1**	**+1.6**
KIJV	**Kijevo**	**0.66**	**317**	*e*Pg	**Pg**	**06 54 25.2**	**-1.4**
KIJV				Sg	**Sg**	**06 54 36.6**	**+1.3**
STON	**Ston**	**0.81**	**143**	*e*Pg	**Pg**	**06 54 28.5**	**-1.0**
STON				*e*Sg	**Sb**	**06 54 41.3**	**-0.4**
STON	**Ston**	**0.81**	**143**	⇑*i*Pg	**Pg**	**06 54 28.2**	**-1.3**
STON				*e*Sg	**Sg**	**06 54 40.3**	**+0.2**
STON	**Ston**	**0.81**	**143**	*e*Pg	**Pg**	**06 54 28.2**	**-1.3**
STON				Sg	**Sg**	**06 54 41.0**	**+0.9**
MGRS	**Mrkonjic Grad**	**0.90**	**2**	*e*Pg	**Pg**	**06 54 30.5**	**-0.6**
MGRS				*e*Sg	**Sg**	**06 54 43.3**	**+0.6**
ZIRJ	**Zirje**	**1.02**	**278**	*e*Pg	**Pg**	**06 54 31.6**	**-1.7**
ZIRJ				Sg	**Sb**	**06 54 48.3**	**+0.8**
MORI	**Morici**	**1.02**	**290**	*e*Pg	**Pg**	**06 54 32.2**	**-1.2**
MORI				Sg	**Sb**	**06 54 49.1**	**+1.4**
DBRK	**Dubrovnik**	**1.18**	**136**	*e*Pg	**Pg**	**06 54 34.9**	**-1.7**
DBRK				Sg	**Sn**	**06 54 53.0**	**-0.5**
BLY	**Banja Luka**	**1.23**	**5**	*e*Pg	**Pg**	**06 54 36.7**	**-0.8**
BLY				*e*Sg	**Sn**	**06 54 54.9**	**+0.2**
BLY	**Banja Luka**	**1.23**	**5**	⇓*i*Pg	**Pg**	**06 54 36.4**	**-1.1**
BLY				*e*Sg	**Sg**	**06 54 53.2**	**-0.3**
BLY	**Banja Luka**	**1.23**	**5**	Pb	**Pg**	**06 54 37.0**	**-0.5**
	comp=Z,1.0nm,SNR=17						
TREB	**Trebinje**	**1.26**	**129**	*e*Pg	**Pg**	**06 54 36.5**	**-1.5**
TREB				*e*Sg	**Sb**	**06 54 54.4**	**-0.1**
TREB	**Trebinje**	**1.26**	**129**	*e*Pg	**Pg**	**06 54 36.1**	**-1.9**
TREB				*e*Sn	**Sn**	**06 54 55.9**	**+0.5**
BRY	**Bratogost**	**1.27**	**119**	*e*Pg	**Pg**	**06 54 36.2**	**-2.0**
BRY				*e*Sg	**Sg**	**06 54 54.4**	**-0.2**
BRY	**Bratogost**	**1.27**	**119**	⇑*i*Pg	**Pg**	**06 54 36.4**	**-1.8**
BRY				*e*Sg	**Sn**	**06 54 56.6**	**+0.8**
UDBI	**Udbina**	**1.36**	**318**	*e*Pn	**Pn**	**06 54 38.4**	**-1.1**
UPM	**Unac-Piva**	**1.40**	**102**	*e*Pg	**Pn**	**06 54 39.1**	**-1.2**
UPM				*e*Sg	**Sb**	**06 54 58.4**	**-0.6**
UPM	**Unac-Piva**	**1.40**	**102**	⇑*i*Pg	**Pn**	**06 54 38.9**	**-1.4**
UPM				*i* Sg	**Sn**	**06 55 01.2**	**+1.9**
DOB	**Doboj**	**1.44**	**32**	*e*Pg	**Pn**	**06 54 39.5**	**-1.0**
DOB				*e*Sg	**Sb**	**06 54 59.5**	**-0.1**
PRIJ	**Prijedor**	**1.47**	**351**	*e*Pg	**Pn**	**06 54 41.5**	**+0.5**
PRIJ				*e*Sg	**Sb**	**06 55 01.2**	**+0.5**
MRAK	**Mrakovica**	**1.49**	**356**	⇑*i*Pg	**Pn**	**06 54 41.3**	**-0.1**
MRAK				*e*Sg	**Sn**	**06 55 01.7**	**+0.4**
DUGI	**Dugi Otok**	**1.50**	**289**	*e*Pn	**Pn**	**06 54 41.0**	**-0.5**
HCY	**Herceg Novi**	**1.52**	**135**	*e*Pg	**Pn**	**06 54 40.3**	**-1.4**
HCY				*e*Sg	**Sb**	**06 55 02.1**	**0.0**
HCY	**Herceg Novi**	**1.52**	**135**	⇑*i*Pg	**Pn**	**06 54 40.9**	**-0.8**
NKME	**Niksic**	**1.60**	**118**	*e*Pn	**Pn**	**06 54 42.3**	**-0.5**
NKME				*i* Sn	**Sg**	**06 55 06.5**	**+1.3**
NKY	**Niksic**	**1.60**	**116**	⇓*i*Pn	**Pn**	**06 54 42.7**	**-0.2**
NKY				*i* Sn	**Sg**	**06 55 06.7**	**+1.3**
PLIT	**Plitvice**	**1.69**	**324**	*e*Pn	**Pn**	**06 54 44.2**	**+0.1**
CEME	**Cevo**	**1.69**	**125**	⇑*i*Pn	**Pn**	**06 54 44.3**	**+0.2**
CEME				*i* Sn	**Sg**	**06 55 08.9**	**+0.6**
RUDO	**Rudo**	**1.70**	**86**	*e*Pn	**Pn**	**06 54 43.9**	**-0.3**
RUDO				*e*Sn	**Sb**	**06 55 07.0**	**-0.4**
PLE	**Pljevlja**	**1.73**	**96**	⇓*i*Pn	**Pn**	**06 54 44.9**	**+0.2**
PLE				*i* Sn	**Sg**	**06 55 09.8**	**+0.3**
BBLS	**Lazići**	**1.76**	**78**	*e*Pn	**Pb**	**06 54 46.4**	**-0.2**
BBLS				*e*Sn	**Sg**	**06 55 10.5**	**+0.2**
BBLS	**Lazići**	**1.76**	**78**	*e*Pn	**Pn**	**06 54 45.4**	**+0.4**
BBLS				*e*Sn	**Sb**	**06 55 08.5**	**-0.5**
BBLS	**Lazići**	**1.76**	**78**	Pb	**Pn**	**06 54 45.9**	**+0.8**
	comp=Z,2.4nm,SNR=8.5						
BUM	**Brajici-Budva**	**1.83**	**131**	⇑*i*Pn	**Pn**	**06 54 46.2**	**+0.1**
BUM				*i* Sn	**Sg**	**06 55 12.2**	**-0.6**
KOME	**Kolasin**	**1.94**	**109**	⇑*i*Pn	**Pn**	**06 54 47.7**	**+0.2**
KOME				*i* Sn	**Sb**	**06 55 15.0**	**+0.8**
PDG	**Podgorica**	**1.96**	**123**	⇑P	**Pn**	**06 54 48.8**	**+1.0**
PDG				⇑S	**Sn**	**06 55 13.5**	**+0.7**
PDG	**Podgorica**	**1.96**	**123**	*e*Pg	**Pb**	**06 54 50.0**	**-0.1**
PDG				*e*Sg	**Sg**	**06 55 17.5**	**+0.5**
PDG	**Podgorica**	**1.96**	**123**	*e*Pn	**Pn**	**06 54 48.3**	**+0.5**
PDG				*e*Sn	**Sn**	**06 55 13.0**	**+0.2**
TTG	**Podgorica**	**1.96**	**123**	⇓*i*Pn	**Pn**	**06 54 48.1**	**+0.3**
TTG				*i* Sn	**Sb**	**06 55 15.5**	**+0.6**
RABC	**Rab**	**2.03**	**308**	*e*Pn	**Pn**	**06 54 49.8**	**+1.0**
BLJ	**Bijeljina**	**2.04**	**51**	*e*Pn	**Pn**	**06 54 49.0**	**+0.1**
BLJ				*e*Sn	**Sn**	**06 55 13.7**	**-1.1**
DRME	**Dracevica, Mon**	**2.07**	**129**	*e*Pn	**Pn**	**06 54 50.2**	**+0.9**
DRME				*e*Sn	**Sn**	**06 55 15.5**	**0.0**
DRME	**Dracevica, Mon**	**2.07**	**129**	⇓*i*Pn	**Pn**	**06 54 49.6**	**+0.3**
DRME				*i* Sn	**Sb**	**06 55 18.0**	**0.0**
MOSL	**Moslavina**	**2.10**	**355**	*e*Pn	**Pn**	**06 54 49.7**	**0.0**
SJES	**Sjenica**	**2.16**	**96**	*e*Pn	**Pb**	**06 54 53.0**	**-0.5**
SJES				*e*Sn	**Sn**	**06 55 18.7**	**+0.9**
IVA	**Berane**	**2.19**	**106**	⇓*i*Pn	**Pn**	**06 54 51.3**	**+0.3**
IVA				*i* Sn	**Sb**	**06 55 21.0**	**-0.5**
DIVS	**Divibare**	**2.22**	**74**	*e*Pn	**Pn**	**06 54 52.2**	**+0.8**
DIVS				*e*Sn	**Sb**	**06 55 21.4**	**-0.9**
DIVS	**Divibare**	**2.22**	**74**	*e*Pn	**Pn**	**06 54 51.6**	**+0.2**

DIVS				eSn	Sn	06 55 18.9	-0.4
DIVS	Divibare	2.22	74	Pn	Pn	06 54 52.4	+1.0
	comp=Z,0.4nm,SNR=5.5						
ULC	Ulcinj	2.26	133	⇑iPn	Pn	06 54 52.1	+0.3
ULC				i Sn	Sb	06 55 22.4	-0.9
OZLJ	Ozalj	2.37	332	ePn	Pn	06 54 54.7	+1.3
PTJ	Puntijarka	2.50	343	ePn	Pn	06 54 55.7	+0.4
TRUS	Trudelj	2.54	73	ePn	Pn	06 54 56.4	+0.7
SMRN	Sveta Marina	2.56	307	ePn	Pn	06 54 57.1	+1.2
CRES	Cresnjev	2.56	335	ePn	Pn	06 54 56.8	+0.7
CRES				eSn	Sn	06 55 28.4	+0.8
CRES	Cresnjev	2.56	335	Pn	Pn	06 54 57.2	+1.1
	comp=Z,1.1nm,SNR=5.9						
RIY	Rijeka	2.56	316	ePn	Pn	06 54 57.1	+1.0
RIY				eSn	Sn	06 55 29.4	+1.8
RIY	Rijeka	2.56	316	ePn	Pn	06 54 57.7	+1.7
FRGS	Fruska Gora	2.58	50	⇓P	Pn	06 54 56.0	-0.3
FRGS				⇑S	Sn	06 55 28.9	+0.9
FRGS	Fruska Gora	2.58	50	ePn	Pn	06 54 56.8	+0.5
FRGS				eSn	Sn	06 55 28.9	+0.9
KOVH	Kovagotottos	2.68	16	ePN	Pn	06 54 58.1	+0.5
KOVH				ePG	Pb	06 55 03.0	+0.8
KOVH	Kovagotottos	2.68	16	eS	Sn	06 55 29.8	-0.5
KOVH	Kovagotottos	2.68	16	Pn	Pn	06 54 58.1	+0.5
	comp=Z,0.1nm,SNR=2.6						
KOVH				Pg	Pb	06 55 03.0	+0.8
KOVH				Sn	Sn	06 55 29.8	-0.5
GRUS	Gruza	2.70	81	ePn	Pn	06 54 59.5	+1.6
GRUS				eSn	Sn	06 55 32.7	+1.8
LOBO	Lobor	2.72	346	ePn	Pn	06 54 58.6	+0.4
MATE	Matera	2.88	185	⇓P	Pn	06 54 58.9	-1.4
MATE				⇑S	Sn	06 55 35.4	0.0
CEY	Cerknica	2.89	321	ePn	Pn	06 55 01.6	+1.0
CEY				eSn	Sn	06 55 37.4	+1.6
AQU	L'Aquila	2.91	248	ePn	Pn	06 55 02.2	+1.3
AQU				eSn	Sn	06 55 37.6	+1.4
AQU	L'Aquila	2.91	248	Pg	Pb	06 55 04.5	-1.7
	comp=Z,0.2nm,SNR=2.6						
MORH	Mrgy, Hungar	2.93	23	ePN	Pn	06 55 00.5	-0.5
MORH				ePG	Pb	06 55 08.3	+1.8
MORH	Mrgy, Hungar	2.93	23	eS	Sn	06 55 34.6	-1.9
MORH	Mrgy, Hungar	2.93	23	ePn	Pn	06 55 02.5	+1.5
MORH				eSn	Sn	06 55 37.2	+0.7
MORH	Mrgy, Hungar	2.93	23	Pg	Pn	06 55 00.5	-0.5
	comp=Z,0.1nm,SNR=2.3						
MORH				Pb	Pb	06 55 08.3	+1.8
MORH				Lg	Lg	06 55 34.6	
BEHE	Becsehely	2.95	357	ePn	Pn	06 55 02.7	+1.3
BEHE				eSn	Sn	06 55 37.8	+0.6
KOGS	Kog	2.98	350	Pn	Pn	06 55 02.5	+0.7
	comp=Z,0.6nm,SNR=2.9						
SELS	Selova	3.00	94	ePn	Pn	06 55 03.6	+1.6
SELS				eSn	Sn	06 55 40.4	+2.1
LJU	Ljubljana	3.09	326	ePn	Pn	06 55 04.5	+1.2
LJU				eSn	Sn	06 55 41.9	+1.4
TRI	Trieste	3.20	314	Pn	Pn	06 55 06.0	+1.3
	comp=Z,0.3nm,SNR=2.6						
BOVS	Bovan	3.40	86	⇑P	Pn	06 55 07.5	-0.1
BOVS				⇓S	Sn	06 55 49.9	+1.7
SOKA	Soboth	3.46	337	i Pn	Pn	06 55 09.4	+0.9
	comp=Z,2.4nm,0.2s,SNR=12						
SOKA				eSn	Sn	06 55 50.0	+0.2
	comp=Z,7.3nm,0.3s						
OBKA	Obir	3.47	330	i Pn	Pn	06 55 10.3	+1.7
	comp=Z,2.6nm,0.2s,SNR=4.7						
BARS	Barje	3.57	100	ePn	Pn	06 55 12.1	+2.2
MDVR	Moldovita	3.60	68	⇑S	Sn	06 55 53.0	-0.2
ZAGS	Zajecar	3.79	84	ePn	Pn	06 55 13.8	+1.0
ZAGS				eSn	Sn	06 55 59.6	+1.9
PRVS	Prvonek	3.84	104	ePn	Pn	06 55 15.5	+1.9
ARSA	Arzberg	3.88	345	i Pn	Pn	06 55 14.8	+0.7
	comp=Z,8.3nm,0.3s,SNR=11						
ARSA				eSn	Sn	06 55 59.7	-0.3
	comp=Z,1.5nm,0.2s						
BZS	Buzias	3.89	56	⇑P	Pn	06 55 14.7	+0.4
BZS				⇓S	Sn	06 56 00.0	-0.2
MYKA	Terra Mystica	3.93	323	ePn	Pn	06 55 16.6	+1.7
	comp=Z,1.6nm,0.3s						
ZAPS	Zavoj	4.09	92	ePn	Pn	06 55 18.6	+1.5
BLKB	Belogradchik	4.10	87	⇑S	Sn	06 56 06.5	+0.8
HERR	Herculane	4.10	69	⇑P	Pn	06 55 17.2	0.0
HERR				⇑S	Sn	06 56 05.9	+0.3
STIP	Stip	4.22	114	i Pn	Pn	06 55 23.2	+4.3
SRO	Srobarova	4.38	11	ePN	Pn	06 55 23.3	+2.2
SRO				eSN	Sn	06 56 13.3	+0.8
KBA	Koelnbreinsper	4.41	325	i Pn	Pn	06 55 23.2	+1.6
	comp=Z,1.8nm,0.4s						
KBA				eSn	Sn	06 56 14.9	+1.6
	comp=Z,3.1nm,0.3s						
CONA	Conrad Observa	4.48	350	ePn	Pn	06 55 22.9	+0.4
	comp=Z,1.3nm,0.3s,SNR=6.4						
CONA				eSn	Sn	06 56 13.6	-1.5
	comp=Z,2.7nm,0.4s						
GZR	Gura Zlata	4.52	64	⇑P	Pn	06 55 22.9	-0.1
GZR				⇑S	Sn	06 56 15.9	0.0
ABTA	Abfaltersbach	4.54	317	i Pn	Pn	06 55 24.0	+0.7
	comp=Z,0.6nm,0.2s,SNR=4.9						
ABTA				eSn	Sn	06 56 17.7	+1.3
	comp=Z,2.6nm,0.2s						
VTS	Vitosha	4.63	99	⇑P	Pn	06 55 24.9	+0.2
VTS				⇑S	Sn	06 56 20.7	+1.8
ZST	Bratislava	4.67	1	ePN	Pn	06 55 25.5	+0.4
MOA	Molln	4.74	337	ePn	Pn	06 55 28.1	+2.1
	comp=Z,1.8nm,0.1s,SNR=12						
MOA				eSn	Sn	06 56 23.1	+1.8
	comp=Z,7.6nm,0.4s						
PSZ	Piszkesteto	4.83	24	⇓P	Pn	06 55 26.7	-0.6
PSZ				⇓S	Sn	06 56 22.2	-1.5
MODS	Modra-Piesok	4.86	2	ePN	Pn	06 55 27.9	+0.3
MODS				eSN	Sn	06 56 21.9	-2.2
VYHS	Vyhne	5.13	14	ePN	Pn	06 55 32.3	+1.0
VYHS				eSN	Sn	06 56 30.2	-0.7
DRGR		5.18	49	⇑P	Pn	06 55 33.3	+1.3
DRGR				⇑S	Sn	06 56 31.0	-1.2
WTTA	Wattenberg	5.33	316	i Pn	Pn	06 55 35.9	+1.6
	comp=Z,4.2nm,0.2s,SNR=15						
WTTA				eSn	Sn	06 56 38.9	+2.9
	comp=Z,3.8nm,0.3s						
WATA	Walderalm	5.41	317	i Pn	Pn	06 55 37.1	+1.8
	comp=Z,2.4nm,0.2s,SNR=10						
WATA				eSn	Sn	06 56 40.2	+2.3
	comp=Z,3.0nm,0.4s						
SQTA	Sankt Quirin	5.52	314	i Pn	Pn	06 55 39.1	+2.3
	comp=Z,2.8nm,0.2s,SNR=10.0						
KRUC	Moravsky	5.56	356	ePN	Pn	06 55 38.0	+0.8
KRUC				eSN	Sn	06 56 41.9	+0.5
MOTA	Moosalm	5.66	315	i Pn	Pn	06 55 40.2	+1.5
	comp=Z,2.0nm,0.2s,SNR=9.9						
MOTA				eSn	Sn	06 56 47.5	+3.4
	comp=Z,13nm,0.7s						
FETA	Feichten	5.66	310	ePn	Pn	06 55 39.3	+0.5
	comp=Z,0.9nm,0.3s						
FETA				eSn	Sn	06 56 50.2	+6.1
	comp=Z,1.0nm,0.4s						
RETA	Reutte	5.92	314	ePn	Pn	06 55 43.9	+1.6
	comp=Z,1.2nm,0.2s,SNR=4.4						
RETA				eSn	Sn	06 56 52.6	+2.1
	comp=Z,4.3nm,0.4s						
PGF	Pioggiola	5.97	263	eP	Pn	06 55 48.3	+5.4
KHC	Kasperske Hory	6.10	338	ePN	Pn	06 55 45.9	+1.3
KHC				eSN	Sn	06 56 53.4	-1.3
CRVS	Cervenica-Dubn	6.20	28	ePN	Pn	06 55 49.9	+3.9
MORC	Moravsky Berou	6.27	3	⇑P	Pn	06 55 46.5	-0.4
MORC				⇑S	Sn	06 56 57.5	-1.4
DAVA	Damuels	6.28	309	ePn	Pn	06 55 47.9	+0.5
	comp=Z,1.3nm,0.2s						
OKC	Ostrava-Krasne	6.36	7	eSN	Sn	06 57 02.3	+1.1
SBF	Sospel	6.96	276	ePn	Pn	06 55 56.4	-0.2
SBF				eSn	Sn	06 57 12.6	-3.6
	comp=Z,4.3nm,0.3s						
MBDF	Montbardon	7.48	283	ePn	Pn	06 56 03.3	-0.4
MBDF	Montbardon	7.48	283	eP	Pn	06 56 09.1	+5.4
MBDF				eSn	Sn	06 57 25.1	-3.9
	comp=Z,1.0nm,0.3s						
FRF	La Foret Royal	7.55	274	ePn	Pn	06 56 04.5	0.0
LPG	La Plagne	7.61	289	ePn	Pn	06 56 05.7	+0.1
LPG				eSn	Sn	06 57 27.9	-4.4
	comp=Z,7.9nm,0.6s						
LPL	La Plagne	7.63	289	ePn	Pn	06 56 06.0	+0.2
LMR	La Mourre	7.66	272	ePn	Pn	06 56 06.2	+0.1
ORIF	Oris-en-Rattie	8.13	284	ePn	Pn	06 56 12.4	-0.2
ORIF	Oris-en-Rattie	8.13	284	eP	Pn	06 56 18.2	+5.6
CLL	Collm	8.25	342	ePn	Pn	06 56 12.0	-2.1
CLL				eSb	Sb	06 58 11.0	-4.6
CLL				eSg	Sg	06 58 37.0	-1.6
SMRF	Simiane la Rot	8.31	277	ePn	Pn	06 56 15.1	+0.1
HINF	Hinteralfeld	8.32	305	ePn	Pn	06 56 15.0	-0.1
CABF	La Chapelle	8.34	296	ePn	Pn	06 56 15.4	0.0
CDF	Champ du Feu	8.37	309	ePn	Pn	06 56 15.4	-0.4
HAU	Haudompre	8.71	305	ePn	Pn	06 56 20.2	-0.2
VIVF	Saint-Julien-l	8.98	283	ePn	Pn	06 56 23.4	-0.8
PAGF	Fort de Pagny	9.33	307	eSn	Sn	06 58 08.8	-5.4
	comp=Z,2.1nm,0.3s						
LOR	Lormes	9.99	297	ePn	Pn	06 56 37.5	-0.5
	baz=116						
LOR				eSn	Sn	06 58 25.2	-5.3
	comp=Z,2.7nm,0.3s						
SSF	Saint Saulge	10.16	295	ePn	Pn	06 56 40.1	-0.3
AVF	Avril sur Loir	10.20	293	ePn	Pn	06 56 40.2	-0.6

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*IDC **01** 06:55:49.6±0.7, 1°.96N×128°.41E, h126^{km}±7^{km}, mb4.0/23, mb1 4.0/25, mb1mx3.8/54, mbtmp4.4/25, MS3.3/3, Ms1 3.3/3, ms1mx2.7/60, Error ellipse: s-maj=18.8km s-min=8.3km az=68.0*

*NEIC **01** 06:55:50.0±1.6, 1°.91N±0°.09×128°.31E±0°.10, h122^{km}±7^{km}, mb4.5/40, Error ellipse: s-maj=14.7km s-min=12.9km az=65.0*

*DJA **01** 06:55:50.5±0.4, 2°N±3°×12°8E±°, h107^{km}±5^{km}, M4.2/12, mb4.4/6, mB4.7/5, MLv4.2/12, Mw(mB)4.0/5, MwMwp5.7/1, Mwp5.8/1*

ISC 01 06:55:50.6±0.5**, 1°.88N**±0°.05×**128°.29E**±0°.07**, h135**^{km}±4^{km}**, h136**^{km}**:pP-P, n115, σ1^{s}.20**/123**, mb4.5**/49**, 1D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.43	220	Pn	Pn	06 56 16.9	-1.4
TNTI	Ternate	1.43	220	P	Pn	06 56 17.2	-1.2
TNTI				S	Sn	06 56 37.6	-1.9
LBMI	Labuha	2.62	197	P	Pn	06 56 32.6	0.0
SGSI	Sangihe	3.29	303	P	Pn	06 56 39.1	-2.1
SWI	Sorong	4.03	132	P	Pn	06 56 51.2	+0.3
SIJI	Sorong	4.04	132	P	Pn	06 56 50.8	-0.2
	7.4nm,0.3s,baz=348,slow=20,SNR=6.3						
SIJI				S	Sn	06 57 35.7	-2.2
	7.2nm,0.3s,baz=211,slow=19,SNR=8.1						
KMSI	Cibinong	4.50	253	P	Pn	06 56 56.8	-0.3
SANI	Sanana	4.53	211	P	Pn	06 56 56.3	-1.2
MSAI	Masohi	5.23	173	P	Pn	06 57 07.4	+0.5
	0.1nm8.4nm,0.7s						
GTOI	Gorontalo	5.42	257	P	Pn	06 57 09.9	+0.5
	0.4nm984nm89nm,0.6s						
FAKI	Fak Fak	6.20	140	Pn	Pn	06 57 18.0	-1.9
FAKI	Fak Fak	6.20	140	P	Pn	06 57 21.2	+1.3
	0.1nm27nm,0.7s						
LUWI	Luwuk	6.23	242	Pn	Pn	06 57 22.0	+1.7
APSI	Ampana	7.19	247	P	Pn	06 57 32.1	-1.1
	0.3nm811nm72nm,0.6s						
TOLI2	Tolitoli	7.54	264	Pn	Pn	06 57 36.1	-1.8
KDI	Kendari	8.10	224	P	Pn	06 57 45.1	-0.4
MPSI	Mapaga	8.53	260	P	Pn	06 57 51.1	-0.1
	600nm9.1nm,0.8s						
TTSI	Tana Toraja	9.78	240	P	Pn	06 58 07.6	-0.3
KAPI	Kappang	10.93	231	P	Pn	06 58 25.5	+2.1
	1.5nm,0.3s,baz=54,slow=9.8,SNR=4.7						
KAPI	Kappang	10.93	231		Pn	06 58 23.0	-0.4
MTN	Manton Dam	14.89	169		P	06 59 16.1	-0.7
KNRA	Kununurra	17.45	178	P	Pn	06 59 46.0	+0.2
FITZ	Fitzroy Crossi	20.02	187	LR	LR	07 09 20.0	
	comp=Z,50nm,18.4s,baz=189,slow=40						
WB0	Warramunga Arr	22.33	165	P	P	07 00 38.0	+0.6
WRAB	Tennant Creek	22.48	165	P	P	07 00 39.7	+0.9
WRA	Warramunga Arr	22.48	165	P	P	07 00 39.4	+0.4
	2.5nm,0.5s,baz=345,slow=10,SNR=46						
WRA				pP	pP	07 01 02.2	-2.0
	3.9nm,0.8s,baz=344,slow=11,SNR=7.1						
WRA				PcP	PcP	07 04 28.8	+0.4
	0.1nm,0.3s,baz=337,slow=1.7,SNR=1.4						
WRA	Warramunga Arr	22.48	165	P	P	07 00 38.9	0.0
WB2	Warramunga Arr	22.48	165	P	P	07 00 39.6	+0.6
WR0	Warramunga Arr	22.55	165	P	P	07 00 40.6	+1.1
WR0				IAmb	IAmb	07 00 41.4	
	comp=Z,13nm,1.4s						
TPUB	Ta-pu	22.55	341	P	P	07 00 38.4	-1.2
TPUB				IAmb	IAmb	07 00 46.0	
	comp=Z,32nm,1.0s						
YHNB	Yeheng	23.62	344	P	P	07 00 49.5	-0.1
YHNB				IAmb	IAmb	07 01 08.3	
	comp=Z,48nm,1.3s						
ASAR	Alice Springs	25.97	168	P	P	07 01 11.5	+0.7
	comp=Z,0.5nm,0.4s,baz=357,slow=7.8,SNR=10						
ASAR				pP	pP	07 01 38.4	-1.1
	comp=Z,2.4nm,0.7s,baz=349,slow=12,SNR=10						
ASAR				PcP	PcP	07 04 36.2	+0.3
	comp=Z,1.2nm,0.5s,baz=354,slow=2.4,SNR=19						
ASAR				ScP	ScP	07 08 03.2	0.0
	comp=Z,0.6nm,0.8s,baz=334,slow=2.3,SNR=6.0						
GSI	Gunungsitoli	30.70	269	P	P	07 01 51.8	-1.2
NJ2	Nanjing	31.30	344	eP	P	07 02 01.0	+3.0
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
KMI	Kunming	33.78	315	⇓P	P	07 02 22.4	+2.4
KMI				pP	pP	07 02 48.9	+0.5
JWT	Wachi	33.89	10	P	P	07 02 20.1	-0.4
JWT				IAmb	IAmb	07 02 21.6	
	comp=Z,24nm,1.4s						
INU	Inuyama	34.28	13	P	P	07 02 23.4	-0.4
INU				IAmb	IAmb	07 02 28.2	
	comp=Z,14nm,1.4s						
BBOO	Buckleboo	35.27	169	P	P	07 02 32.7	+0.3
BBOO				IAmb	IAmb	07 02 53.2	
	comp=Z,13nm,1.4s						
KSRS	Korea Array	35.41	360	P	P	07 02 33.4	-0.2
	comp=Z,1.6nm,0.5s,baz=175,slow=9.7,SNR=8.6						
MAT	Matsushiro	35.69	14	P	P	07 02 34.0	-2.0
MJAR	Matsushiro Arr	35.69	14	P	P	07 02 34.0	-2.0
	comp=Z,1.7nm,0.5s,baz=179,slow=10.0,SNR=8.1						
MJAR				LR	LR	07 15 09.8	
	comp=Z,32nm,20.9s,baz=270,slow=33						
MJAR	Matsushiro Arr	35.69	14	P	P	07 02 34.6	-1.4
MJAR				IAmb	IAmb	07 02 35.9	
	comp=Z,6.3nm,1.5s						
STKA	Stephens Creek	35.87	160	P	P	07 02 38.9	+1.3
	comp=Z,3.3nm,0.4s,baz=345,slow=7.7,SNR=30						
STKA	Stephens Creek	35.87	160	P	P	07 02 39.0	+1.5
LZH	Lanzhou	40.88	329	eP	P	07 03 21.4	+1.8
LZH				pP	pP	07 03 47.0	-2.0
LZH				sP	sP	07 03 58.1	-5.9
LZH				pmax	pmax		
	comp=Z,25nm,1.1s						
H11S3	WAKE ISLAND Hy	41.10	64	T	T	07 47 11.5	
	baz=252						
H11S2	WAKE ISLAND Hy	41.11	64	T	T	07 47 13.3	
	baz=252						
H11S1	WAKE ISLAND Hy	41.12	64	T	T	07 47 15.8	
	baz=252						
HHC	Hu-ho-hao-te	41.64	341	eP	P	07 03 28.5	+2.8
HHC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,41nm,5.1s						
H11N1	WAKE ISLAND Hy	41.69	62	T	T	07 47 53.8	
	baz=250						
H11N2	WAKE ISLAND Hy	41.70	62	T	T	07 47 54.8	
	baz=250						
H11N3	WAKE ISLAND Hy	41.71	62	T	T	07 47 55.4	
	baz=250						
SHL	Shillong	42.22	307	P	P	07 03 31.1	+0.3
USRK	Ussuriysk Ar.	42.27	4	P	P	07 03 30.6	-0.1
MDJ	Mudanjiang	42.58	1	P	P	07 03 33.0	-0.1
MDJ				IAmb	IAmb	07 03 34.6	
	comp=Z,6.4nm,0.9s						
ASAJ	Asahikawa	43.94	15	P	P	07 03 44.1	+0.1
	comp=Z,11nm,1.1s,baz=240,slow=16,SNR=2.2						
LSA	Lhasa	44.83	312	P	P	07 03 52.9	+0.9
LSA				IAmb	IAmb	07 03 54.7	
	comp=Z,8.0nm,0.7s						
TAPN	Taplejung	46.36	307	eP	P	07 04 05.0	+1.1
	comp=Z,12nm,0.4s						
ODAN	Odare	46.41	306	eP	P	07 04 05.1	+1.0
	comp=Z,40nm,0.6s						
RAMN	Ramite	47.09	306	eP	P	07 04 10.8	+1.4
	comp=Z,39nm,0.5s						
KLR	Kul'dur	47.27	3	P	P	07 04 09.6	-0.6
	comp=Z,1.8nm,0.9s,baz=159,slow=2.6,SNR=4.1						
JIRN	Jiri	47.71	307	eP	P	07 04 15.5	+1.1
	comp=Z,44nm,0.7s						
GUN	Gumba	48.07	307	eP	P	07 04 18.1	+1.0
	comp=Z,48nm,0.6s						
PKI	Pulchoki	48.31	306	eP	P	07 04 19.5	+0.6
PKIN	Phulchoki	48.32	306	eP	P	07 04 19.3	+0.3
KKN	Kakani	48.50	306	eP	P	07 04 20.8	+0.5
DMN	Daman	48.57	306	eP	P	07 04 21.7	+0.8
GKN	Gorkha	49.11	306	eP	P	07 04 25.6	+0.8
ULN	Ulaanbaatar	49.36	341	P	P	07 04 27.2	+0.8
SONM	Songino Array	49.54	341	P	P	07 04 28.2	+0.4
	comp=Z,6.5nm,0.7s,baz=153,slow=8.6,SNR=27						
SONM				PcP	PcP	07 05 47.9	+0.3
	comp=Z,0.3nm,0.4s,baz=159,slow=4.8,SNR=4.3						
SONM	Songino Array	49.54	341	P	P	07 04 28.1	+0.3
SONM				IAmb	IAmb	07 04 29.1	
	comp=Z,5.3nm,0.7s						
KOLN	Koldanda	49.85	305	eP	P	07 04 31.6	+1.0
	comp=Z,67nm,0.7s						
DANN	Dangsing	49.95	306	eP	P	07 04 32.1	+0.7
	comp=Z,53nm,0.6s						
PYUN	Piuthan	50.48	306	eP	P	07 04 36.4	+1.1
	comp=Z,42nm,0.6s						
WMQ	Urumqi	55.12	325	eP	P	07 05 11.4	+2.4
MK31	Makanchi Array	59.95	325	P	P	07 05 43.2	+0.5
MKAR	Makanchi Array	59.95	325	P	P	07 05 43.1	+0.4
	comp=Z,14nm,0.5s,baz=112,slow=7.8,SNR=214						
MKAR				sP	PcP	07 06 26.8	-0.7
	comp=Z,1.7nm,0.7s,baz=108,slow=6.5,SNR=2.2						
RAO	Raoul Island	59.99	125	LR	LR	07 30 13.2	
	comp=Z,57nm,20.6s,baz=162,slow=34						
YAK	Yakutsk	60.02	1	P	P	07 05 42.4	-0.4
	comp=Z,6.9nm,0.4s,baz=238,slow=0.9,SNR=5.5						
YAK	Yakutsk	60.02	1	P	P	07 05 42.3	-0.4
MAKZ	Makanchi	60.14	325	P	P	07 05 44.6	+0.7
KSH	Kashi	60.45	315	P	P	07 05 46.0	-0.3
KSH				pmax	pmax		
	comp=Z,4.0nm,0.4s						
AAK	Ala-Archa	62.77	318	P	P	07 06 02.4	+0.6
	comp=Z,0.7nm,0.4s,baz=123,slow=4.9,SNR=4.1						
AAK	Ala-Archa	62.77	318	P	P	07 06 02.1	+0.2
AAK				IAmb	IAmb	07 06 25.6	
	comp=Z,2.3nm,0.9s						
ZAA0	Zalesovo Array	62.94	333	P	P	07 06 01.4	-1.1
ZAA0				IAmb	IAmb	07 06 02.6	
	comp=Z,2.4nm,0.7s						
ZALV	Zalesovo Beam	62.94	333	P	P	07 06 01.6	-0.9
	comp=Z,2.0nm,0.6s,baz=112,slow=6.6,SNR=9.4						
ZALV	Zalesovo Beam	62.94	333	P	P	07 06 01.4	-1.1
KURBB	Kurchatov Arra	64.13	327	P	P	07 06 10.4	0.0
	comp=Z,16nm,0.8s,baz=126,slow=6.0,SNR=101						
KURK	Kurchatov	64.13	327	P	P	07 06 10.5	+0.1
GAR	Garm	64.31	313	P	P	07 06 11.9	-0.2
BTK	Batken	64.32	314	P	P	07 06 12.2	+0.2
BTK				IAmb	IAmb	07 06 14.1	
	comp=Z,6.6nm,1.1s						
KK31	Karatay Array	65.64	317	P	P	07 06 20.7	+0.3
KK31				IAmb	IAmb	07 06 21.3	
	comp=Z,4.5nm,0.8s						
KKAR	Karatay Array	65.64	317	P	P	07 06 20.3	-0.1
KKAR				IAmb	IAmb	07 06 21.3	
	comp=Z,4.5nm,0.8s						
TIXI	Tiksi	69.67	0	P	P	07 06 44.4	-0.7
	comp=Z,2.5nm,0.4s,baz=233,slow=1.9,SNR=7.2						
TIXI	Tiksi	69.67	0	P	P	07 06 44.3	-0.8
TIXI				IAmb	IAmb	07 06 45.8	
	comp=Z,8.3nm,1.4s						
BVAR	Borovoye Array	69.71	327	P	P	07 06 45.5	-0.2
	comp=Z,2.8nm,0.6s,baz=185,slow=12,SNR=16						
BRVK	Borovoye	69.78	327	P	P	07 06 46.2	0.0
BRVK				IAmb	IAmb	07 06 46.9	
	comp=Z,7.6nm,0.9s						
NRIK	Noril'sk	72.59	346	P	P	07 07 02.7	0.0
	comp=Z,3.9nm,0.8s,baz=137,slow=9.8,SNR=5.2						
NRIK	Noril'sk	72.59	346	P	P	07 07 02.2	-0.5
NRIK				IAmb	IAmb	07 07 03.4	
	comp=Z,3.4nm,0.7s						
GEYT	Alibeck	73.26	309	P	P	07 07 07.6	+0.2
	comp=Z,3.4nm,0.6s,baz=79,slow=7.9,SNR=4.4						
ABKAR	Akbulak array	74.56	321	P	P	07 07 14.3	-0.3
AKTO	Aktyubinsk	76.07	322	P	P	07 07 22.8	-0.5
	comp=Z,1.0nm,0.6s,baz=103,slow=5.3,SNR=4.8						
VNDA	Vanda	81.41	173	P	P	07 07 52.2	+0.3
	comp=Z,0.1nm,0.5s,baz=319,slow=7.5,SNR=5.5						
VNDA	Vanda	81.41	173	P	P	07 07 52.5	+0.6
MAW	Mawson	82.57	201	P	P	07 07 57.4	-0.7
	comp=Z,1.2nm,0.8s,baz=90,slow=5.1,SNR=2.5						
MAW	Mawson	82.57	201	P	P	07 07 59.0	+0.9
IMAR	Indian Mountai	83.40	24	P	P	07 08 03.6	+1.1
PPLA	Purkeypile	83.56	27	P	P	07 08 04.6	+1.1
MLY	Manley	84.49	25	P	P	07 08 08.9	+0.8
ILAR	Eielson Array	86.10	25	P	P	07 08 14.8	-1.3
	comp=Z,0.2nm,0.4s,baz=244,slow=5.0,SNR=5.8						
BMAR	Burnt Mountain	87.17	23	P	P	07 08 22.5	+1.2
ARCES	ARCESS Array B	92.71	340	P	P	07 08 46.0	-1.1
	comp=Z,4.2nm,0.8s,baz=81,slow=5.6,SNR=10						
FINES	FINESS Array B	94.19	332	P	P	07 08 52.6	-1.4
	comp=Z,3.0nm,0.9s,baz=66,slow=3.4,SNR=6.4						
MNK	Minsk	94.52	325	i P	P	07 08 53.8	-1.8
	comp=E,2.0nm,1.0s						
MNK				i P	P	07 08 53.8	-1.8
	comp=N,13nm,1.0s						
MNK				i P	P	07 08 53.8	-1.8
	comp=Z,10.0nm,1.0s,baz=80						
MNK				i pP	pP	07 09 31.9	+1.6
MNK				i sP	sP	07 09 47.9	+3.3
MNK				i PP	PP	07 12 43.1	-1.8
MNK				i PPP	PPP	07 16 25.1	
MNK				i S	SKSac	07 19 14.3	-3.9
MNK				i sS	sS	07 20 52.9	-2.1
MNK				i SSS	SSS	07 31 02.8	
MNK				i LRM	MLR	07 49 50.5	
	comp=E,55nm,19.7s						
MNK				i LRM	MLR	07 50 37.6	
	comp=N,262nm,19.7s						
MNK				i LRM	MLR	07 53 00.2	
	comp=Z,126nm,19.6s						
TORD	Torodi Ar. Bea	124.96	287	PKP	PKPdf	07 14 35.8	0.0
	comp=Z,0.4nm,0.4s,baz=102,slow=2.4,SNR=4.2						

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*IDC **01** 06:56:20.4±1.5, 52°.64N×159°.61E, h0^{km}, mb3.3/3, mb1 3.7/3, mb1mx3.3/63, mbtmp3.4/3, Error ellipse: s-maj=27.7km s-min=22.7km az=10.0*

*KRSC **01** 06:56:24.5±0.5, 52°.48N×159°.44E, h40^{km}±8^{km}, ML3.9*

ISC 01 06:56:24.1±1.4**, 52°.47N**±0°.04×**159°.40E**±0°.04**, h14**^{km}±9^{km}**, n34, σ1^{s}.16**/45**, mb3.3**/3**, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUS	Russkaya	0.54	267	i P	Pn	06 56 37.0	-0.4
RUS				eS	Sb	06 56 45.1	+2.1
DALK	Dalny	0.69	326	eP	Pb	06 56 38.7	+0.9
DALK				eS	Sb	06 56 47.9	+0.7
NLC	Nalytchevo	0.71	358	eP	Pb	06 56 38.6	+0.4
NLC				eS	Sb	06 56 48.0	+0.3
PET	Petropavlovsk	0.72	321	i P	Pb	06 56 39.2	+0.8
PET				eS	Sb	06 56 48.8	+0.7
SPN	Mys Shipunski	0.74	31	eP	Pb	06 56 39.6	+0.9
SPN				eS	Sb	06 56 49.5	+0.8
MTVR	Mutnovka	0.74	272	eP	Pb	06 56 39.9	+1.0
MTVR				eS	Sb	06 56 50.4	+1.5
GRL	Gorelyy	0.81	277	eP	Pn	06 56 41.5	+0.3
GRL				eS	Sn	06 56 53.0	-0.1
UGLR	Uglovaya	0.82	335	eP	Pb	06 56 40.8	+0.6
UGLR				eS	Sb	06 56 51.6	+0.5
SDLR	Sedlovina	0.87	339	eP	Pb	06 56 41.3	+0.2
SDLR				eS	Sg	06 56 52.4	0.0
SMAR	Somma	0.88	336	eP	Pb	06 56 41.6	+0.4
AVH	Avacha	0.89	334	eP	Pb	06 56 42.0	+0.6
ASAK	Asacha	0.92	265	eP	Pn	06 56 42.9	+0.2
ASAK				eS	Sn	06 56 55.7	0.0
KRER	Koryakskii	0.93	335	eP	Pb	06 56 42.4	+0.3
KRER				eS	Sb	06 56 54.8	+0.5
KOK	Koryaka	0.95	331	eP	Pb	06 56 42.7	+0.4
KOK				eS	Sb	06 56 55.2	+0.4
KDTR	Khodutka, Kamc	1.05	231	eP	Pg	06 56 43.8	-0.5
KDTR				eS	Sg	06 56 57.4	-0.5
PETK	Petropavlovsk-	1.21	303	Pn	Pb	06 56 45.8	-1.1
	14nm,0.3s,baz=110,slow=17,SNR=347						
PETK				Sn	Sg	06 57 01.7	-1.6
	67nm,0.3s,baz=110,slow=31,SNR=9.9						
PETK				LR	LR	06 57 23.2	
	comp=Z,70nm,21.4s,baz=75,slow=50						
APC	Apacha	1.44	290	eP	Pn	06 56 49.9	+0.2

APC				eS	Sn	06 57 08.2	-0.1
GNL	Ganaly	1.51	325	eP	Pn	06 56 51.2	+0.4
GNL				eS	Sn	06 57 10.1	-0.2
PAU	Pauzhetka	1.89	239	eP	Pn	06 56 56.9	+1.0
MKZ	Mys Kozlova	2.52	33	eP	Pn	06 57 04.5	0.0
MKZ				eS	Sn	06 57 33.9	-1.0
SKR	Severo-Kuril's	2.72	230	eP	Pn	06 57 09.6	+2.4
TUMD	Tumrok D	2.81	12	eP	Pn	06 57 10.1	+1.6
TUMR	Tumrok	2.86	9	eP	Pn	06 57 11.3	+2.0
ESO	Esso	3.49	354	eP	Pn	06 57 21.0	+3.1
KBTR	Krutoberegovo	4.25	27	eP	Pn	06 57 29.7	+1.4
MJAR	Matsushiro Arr	21.82	232	P	P	07 01 17.8	+2.0
	0.9nm,0.7s,baz=37,slow=12,SNR=1.9						
H11N2	WAKE ISLAND Hy	33.19	167	T	T	07 38 51.3	
	baz=352,slow=76,SNR=18						
H11N3	WAKE ISLAND Hy	33.21	167	T	T	07 38 54.7	
	baz=352,slow=76,SNR=17						
H11N1	WAKE ISLAND Hy	33.21	167	T	T	07 38 52.6	
	baz=352,slow=76,SNR=19						
H11S1	WAKE ISLAND Hy	34.37	168	T	T	07 40 07.8	
	baz=354						
H11S3	WAKE ISLAND Hy	34.38	168	T	T	07 40 16.0	
	baz=354						
H11S2	WAKE ISLAND Hy	34.39	168	T	T	07 40 20.6	
	baz=354						
TXAR	Lajitas Array	71.28	66	P	P	07 07 40.9	-2.1
	0.2nm,0.8s,baz=288,slow=3.7,SNR=2.6						
ASAR	Alice Springs	79.01	204	P	P	07 08 25.7	-1.6
	0.2nm,0.6s,baz=15,slow=4.5,SNR=2.2						

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*IDC **01** 07:13:17.6±1.4, 33°.94S×72°.15W, h0km, mb3.5/3, mb1 3.6/5, mb1mx3.5/22, mbtmp3.4/5, ML3.4/2, Error ellipse: s-maj=69.9km s-min=27.2km az=79.0*

*GUC **01** 07:13:21.7±0.7, 33°.97S×72°.11W, h30km±14km, ML3.4*

ISC 01 07:13:21.2±0.9**, 33°.94S**±0°.04×**72°.07W**±0°.07**, h21**km±4km**, n21, σ0s88**/29**, mb3.8**/3**, 1C-5D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA05	Santo Domingo	0.48	53	⇓iP	Pn	07 13 32.1	-0.7
VA05				i S	Sn	07 13 39.5	-0.9
MT01	Popeta	0.69	84	⇓iP	Pn	07 13 35.2	-0.5
MT01				eS	Sb	07 13 42.5	-1.2
MT01				IAML		07 13 49.0	
	comp=E,2μm,0.3s						
MT09	Talagante	0.92	80	⇓eP	Pn	07 13 38.7	-0.2
MT09				eS	Sb	07 13 48.9	-1.4
MT09				IAML		07 13 55.5	
	comp=N,3μm,0.3s						
BO01	Tunca	0.93	119	⇓eP	Pb	07 13 38.4	-0.2
VA01	Torpederas	0.99	21	eP	Pn	07 13 39.9	+0.1
VA01				i S	Sn	07 13 53.8	+0.8
VA01				IAML		07 13 54.8	
	comp=E,1μm,0.1s						
MT02	Curacav	1.04	49	⇓iP	Pn	07 13 40.5	0.0
MT02				i S	Sn	07 13 54.5	+0.2
MT02				IAML		07 14 00.5	
	comp=E,847nm,0.3s						
GO05	Huala	1.07	174	⇑iP	Pb	07 13 40.5	-0.5
GO05				eS	Sb	07 13 54.4	-0.1
GO05				IAML		07 13 58.1	
	comp=E,1μm,0.3s						
BO04	La Punta	1.22	93	eP	Pb	07 13 43.8	+0.2
BO04				i S	Sn	07 14 00.9	+2.0
MT05	Renca	1.24	64	eP	Pb	07 13 44.0	+0.1
MT05				i S	Sn	07 14 01.1	+1.6
BO02	Sierra Bellavi	1.36	129	eP	Pb	07 13 45.4	-0.6
BO02				eS	Sb	07 14 03.9	+0.8
LMEL	Las Melosas	1.56	87	eP	Pb	07 13 49.1	-0.3
LMEL				eS	Sb	07 14 09.5	+0.7
LMEL				IAML		07 14 17.1	
	comp=E,1μm,0.3s						
VA03	San Esteban	1.73	48	eP	Pb	07 13 52.5	+0.1
VA03				i S	Sb	07 14 15.1	+1.3
H03S1	Juan Fernandez	5.68	269	T	T	07 20 41.0	
	baz=91,slow=75,SNR=56						
H03S3	Juan Fernandez	5.69	269	T	T	07 20 40.8	
	baz=91,slow=75,SNR=42						
H03S2	Juan Fernandez	5.70	269	T	T	07 20 33.7	
	baz=91,slow=75,SNR=63						
PLCA	Paso Flores	6.88	170	Pn	Pn	07 15 02.1	+1.2
	comp=E,0.2nm,0.3s,baz=342,slow=14,SNR=1.7						
PLCA				Lg	Lg	07 16 52.6	
	comp=E,0.1nm,0.3s,baz=267,slow=22,SNR=1.9						
LPAZ	La Paz	17.94	12	P	P	07 17 31.1	+0.7
	comp=E,0.0nm,0.3s,baz=188,slow=7.1,SNR=3.1						
SNAA	Sanae	51.65	158	P	P	07 22 25.6	-0.3
	comp=E,1.1nm,0.9s,baz=273,slow=5.9,SNR=4.1						
TXAR	Lajitas Array	69.67	331	P	P	07 24 29.1	-0.2
	comp=E,0.1nm,0.5s,baz=152,slow=7.9,SNR=1.5						
TORD	Torodi Ar. Bea	84.22	70	P	P	07 25 51.4	0.0
	comp=E,0.7nm,0.8s,baz=242,slow=3.8,SNR=2.9						
ZALV	Zalesovo Beam	154.19	32	PKPbc	PKPbc	07 33 17.9	-1.0
	comp=E,0.6nm,0.5s,baz=316,slow=3.4,SNR=2.2						

JMA 01 07:13:50.0, 36°.01N×137°.34E, h5km, M2.7, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JGN	Niukaw	0.21	355	P	Pg	07 13 54.5	+0.3
JGN				S	Sg	07 13 57.7	+0.6
JTT	Ttatey	0.59	359	P	Pg	07 14 01.8	+0.4
JTT				S	Sg	07 14 10.2	+1.0
JYTA	Yamagatataniai	0.64	230	P	Pg	07 14 02.2	-0.2
JYTA				S	Sg	07 14 10.4	-0.3
JKG	Kaga	0.86	288	P	Pg	07 14 06.7	+0.2
MAT	Matsushiro	0.88	53	P	Pg	07 14 07.1	+0.2
MAT				S	Sg	07 14 18.7	+0.4

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*IDC **01** 07:14:13.4±0.8, 15°.29N×122°.69E, h0km, mb4.1/14, mb1 4.2/14, mb1mx3.9/64, mbtmp4.1/14, MS3.0/1, Ms1 3.2/1, ms1mx2.6/55, Error ellipse: s-maj=40.1km s-min=15.0km az=69.0*

*MAN **01** 07:14:18.1, 15°.39N×122°.43E, h29km, mb4.5, ML3.4, MS3.2*

*NEIC **01** 07:14:18.4±1.6, 15°.31N±0°.08×122°.5E±0°.1, h35km±2km, mb4.4/32, Error ellipse: s-maj=17.6km s-min=14.0km az=78.0*

ISC 01 07:14:17.9±1.6**, 15°.39N**±0°.04×**122°.61E**±0°.08**, h34**km±6km**, n63, σ1s28**/65**, mb4.3**/27**, 3C-2D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCNP	Jose Panganiba	1.09	176	⇑iP	Pn	07 14 37.3	+0.5
JCNP				i S	Sb	07 14 52.1	-0.3
GQP	Guinayangan	1.48	186	⇑eP	Pn	07 14 43.1	+1.0
GQP				eS	Sb	07 15 02.6	-0.8
LQP	Lukban	1.64	219	⇑eP	Pn	07 14 45.5	+1.0
LQP				eS	Sn	07 15 05.8	+1.3
CVP	Callao Caves	2.42	342	⇓eP	Pn	07 14 56.1	+1.0
CVP				i S	Sn	07 15 20.0	-3.5
APYP	Conner	2.79	332	⇓eP	Pn	07 15 00.4	+0.3
APYP				i S	Sn	07 15 32.2	-0.3
QIZ	Qiongzhong	12.73	288	Pn	Pn	07 17 14.3	-2.2
LUWI	Luwuk	16.32	179	Pn	Pn	07 18 03.7	-0.9
LUWI				IAmb	IAmb	07 18 05.1	
	comp=Z,52nm,1.0s						
JSU	Suzuyama	17.57	23	Pn	P	07 18 20.8	-0.1
GUMO	Guam	21.62	92	P	P	07 19 03.9	-1.4
JHS	Saijyo	21.69	24	P	P	07 19 06.8	+0.9
JHS				IAmb	IAmb	07 19 11.8	
	comp=Z,17nm,1.0s						
INCN	Inchon	22.30	8	P	P	07 19 14.1	+1.8
INCN				IAmb	IAmb	07 19 16.3	
	comp=Z,14nm,1.1s						
KSAR	Wonju Array Be	22.46	11	P	P	07 19 15.2	+1.2
KSRS	Korea Array	22.48	11	P	P	07 19 16.1	+1.9
	comp=Z,1.0nm,0.5s,baz=194,slow=10,SNR=5.6						
KSRS	Korea Array	22.48	11	P	P	07 19 16.1	+1.9
KS19	Wonju Array Si	22.51	11	P	P	07 19 16.3	+1.7
CMAR	Chiang Mai Arr	22.84	281	P	P	07 19 19.9	+1.6
	comp=Z,1.3nm,0.4s,baz=104,slow=7.5,SNR=4.9						
CMAR				LR	LR	07 28 40.4	
	comp=Z,40nm,19.2s,baz=325,slow=38						
FITZ	Fitzroy Crossi	33.41	175	P	P	07 20 52.6	-0.8
FITZ				IAmb	IAmb	07 20 53.1	
	comp=Z,7.0nm,1.2s						
SONM	Songino Array	35.02	341	P	P	07 21 08.8	+1.4
	comp=Z,0.5nm,0.4s,baz=161,slow=10,SNR=2.8						
SONM	Songino Array	35.02	341	P	P	07 21 05.7	-1.6
WB0	Warramunga Arr	36.80	161	P	P	07 21 21.8	-0.9
WRAB	Tennant Creek	36.95	161	P	P	07 21 23.4	-0.6
WRAB				IAmb	IAmb	07 21 28.1	
	comp=Z,5.9nm,1.2s						
WRA	Warramunga Arr	36.95	161	P	P	07 21 23.1	-0.9
	comp=Z,1.7nm,0.6s,baz=343,slow=9.3,SNR=15						
WRA	Warramunga Arr	36.95	161	P	P	07 21 23.5	-0.5
WB2	Warramunga Arr	36.96	161	P	P	07 21 23.3	-0.7
WB2				IAmb	IAmb	07 21 23.6	
	comp=Z,3.9nm,0.8s						
WR0	Warramunga Arr	37.03	161	P	P	07 21 23.9	-0.7
WR0				IAmb	IAmb	07 21 24.6	
	comp=Z,5.3nm,1.1s						
AS31	Alice Springs	40.35	164	P	P	07 21 51.3	-1.2
ASAR	Alice Springs	40.35	164	P	P	07 21 52.4	-0.1
	comp=Z,0.8nm,0.8s,baz=339,slow=7.2,SNR=12						
ASAR	Alice Springs	40.35	164	P	P	07 21 51.8	-0.8
H11S3	WAKE ISLAND Hy	42.20	79	T	T	08 08 39.2	
	baz=274,slow=74						
H11S1	WAKE ISLAND Hy	42.21	79	T	T	08 08 46.7	
	baz=274						
H11S2	WAKE ISLAND Hy	42.22	79	T	T	08 08 42.8	
	baz=274,slow=74						
MORW	Morawa	44.65	188	P	P	07 22 26.1	-1.2
MKAR	Makanchi Array	45.82	322	P	P	07 22 38.6	+2.1
	comp=Z,1.9nm,0.6s,baz=118,slow=7.2,SNR=1.5						
NIL	Nilore	47.97	302	P	P	07 22 53.1	-0.4
NIL				IAmb	IAmb	07 22 55.1	
	comp=Z,4.1nm,0.8s						
ZAA0	Zalesovo Array	48.45	331	P	P	07 22 55.1	-1.7
ZAA0				IAmb	IAmb	07 22 59.5	
	comp=Z,5.4nm,1.1s						
ZALV	Zalesovo Beam	48.45	331	P	P	07 22 58.1	+1.2
	comp=Z,2.2nm,0.6s,baz=133,slow=6.1,SNR=3.7						
ZALV	Zalesovo Beam	48.45	331	P	P	07 22 55.0	-1.9
MA2	Magadan	48.71	19	P	P	07 22 59.7	+0.9
BBOO	Buckleboo	49.62	165	P	P	07 23 05.0	-1.1
KURK	Kurchatov	49.85	325	P	P	07 23 06.2	-1.4
KURBB	Kurchatov Arra	49.86	325	P	P	07 23 09.6	+1.9
	comp=Z,8.1nm,0.8s,baz=122,slow=8.0,SNR=9.9						
STKA	Stephens Creek	50.40	159	P	P	07 23 12.2	+0.3
	comp=Z,0.6nm,0.4s,baz=355,slow=7.9,SNR=1.7						
STKA	Stephens Creek	50.40	159	P	P	07 23 11.1	-0.8
KAAM	Kaadhehdhoo	51.16	258	P	P	07 23 14.8	-3.2
BTK	Batken	51.18	309	P	P	07 23 18.2	+0.2
BTK				IAmb	IAmb	07 23 43.0	
	comp=Z,2.8nm,0.7s						
KK31	Karatay Array	52.16	313	P	P	07 23 25.4	+0.3
KKAR	Karatay Array	52.16	313	P	P	07 23 24.8	-0.4
SANVU	Saraoutou	53.66	123	P	P	07 23 36.0	-0.5
BRVK	Borovoye	55.52	325	P	P	07 23 49.7	+0.2
BRVK				IAmb	IAmb	07 24 02.4	
	comp=Z,3.1nm,0.8s						
TIXI	Tiksi	56.37	2	P	P	07 23 56.0	+0.7
TIXI				IAmb	IAmb	07 23 57.9	
	comp=Z,3.7nm,0.8s						
NRIK	Noril'sk	58.21	346	P	P	07 24 09.9	+1.6
	comp=Z,1.5nm,0.4s,baz=144,slow=9.4,SNR=4.6						
NRIK	Noril'sk	58.21	346	P	P	07 24 09.9	+1.6
NRIK				IAmb	IAmb	07 24 11.0	
	comp=Z,3.0nm,0.8s						
ABKAR	Akbulak array	60.70	318	P	P	07 24 26.8	+1.0
ABKAR				IAmb	IAmb	07 24 27.8	
	comp=Z,2.2nm,0.8s						
ONI	Oni	71.83	310	P	P	07 25 37.3	-0.1
SKT	Skwentna	74.61	29	P	P	07 25 53.1	-0.3
SKT				IAmb	IAmb	07 25 53.2	
	comp=Z,10nm,1.4s						
ARCES	ARCESS Array B	78.18	339	P	P	07 26 14.5	+1.1
	comp=Z,3.6nm,0.9s,baz=58,slow=6.9,SNR=3.9						
ARCES	ARCESS Array B	78.18	339	P	P	07 26 14.5	+1.1
FINES	FINESS Array B	79.72	331	P	P	07 26 22.9	+0.9
	comp=Z,0.5nm,0.4s,baz=51,slow=7.3,SNR=5.0						
HFS	Hagfors	85.89	332	P	P	07 26 54.9	+0.9
	comp=Z,2.2nm,0.6s,baz=64,slow=6.6,SNR=2.7						
HFS	Hagfors	85.89	332	P	P	07 26 54.9	+0.9
NB2	NORSAR Subarra	86.61	333	P	P	07 26 58.2	+0.5
	comp=Z,0.8nm,0.7s,baz=61,slow=5.1						
NOA	NORSAR Array B	86.61	333	P	P	07 26 58.3	+0.7
	comp=Z,1.8nm,0.9s,baz=63,slow=5.0,SNR=4.6						
NOA	NORSAR Array B	86.61	333	P	P	07 26 58.3	+0.7

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*NEIC **01** 07:16:27.5±1.2, 55°.6S±0°.1×124°.5W±0°.2, h10km±1km, mb4.5/18, Error ellipse: s-maj=24.0km s-min=20.2km az=294.0*

*IDC **01** 07:16:28.3±1.0, 55°.60S×123°.50W, h0km, mb3.9/8, mb1 4.1/8, mb1mx3.9/29, mbtmp3.9/8, MS3.8/11, Ms1 3.8/11, ms1mx3.6/22, Error ellipse: s-maj=33.1km s-min=25.4km az=124.0*

*GCMT **01** 07:16:34.5±0.3, 55°.94S±0°.03×123°.53W±0°.03, h24km±2km, MW4.9/70, Moment Tensor Solution. s16,c19; s70,c85; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.34±.23; $M_{\theta\theta}$0.85±.16; $M_{\phi\phi}$-1.20±.16; $M_{r\theta}$-0.68±.39; $M_{\theta\phi}$2.60±.10; $M_{\phi r}$-1.04±.35; Best double couple: $M_0$3.07200×10^{16} NP1:ϕ_s283.00000°, δ68.00000°, λ10.00000°. NP2: ϕ_s189.00000°, δ80.00000°, λ157.00000°. Principal axes: T 3.1020, Plg23.0000°, Azm144.0000°; N -0.0620, Plg65.0000°, Azm347.0000°; P -3.0420, Plg9.0000°, Azm238.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 07:16:29.0±0.6**, 55°.6S**±0°.1×**124°.0W**±0°.1**, h10**km**, n54, σ1s56**/30**, mb4.2**/10**, MS4.0**/14**, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMSA	Palmer Station	30.09	132	P	P	07 22 36.0	-2.0
VA02	Isla de Pascua	30.28	26	P	P	07 22 38.9	-1.2
RPN	Rapa Nui	30.34	27	LR	LR	07 30 46.9	
	comp=Z,96nm,21.8s,baz=18,slow=28						
RPN	Rapa Nui	30.34	27	P	P	07 22 40.1	-0.5
GO10	Punta Arenas	30.36	108	P	P	07 22 41.3	+0.7
USHA	Ushuaia	31.04	112	LR	LR	07 31 31.2	
	comp=Z,391nm,21.0s,baz=227,slow=29						
MG01	Puerto William	31.41	113	P	P	07 22 50.0	+0.2
MG02	Cerro Sombrero	31.51	108	P	P	07 22 52.1	+1.4
VNDA	Vanda	33.17	202	P	P	07 23 08.1	+3.0
	0.5nm,0.9s,baz=91,slow=7.9,SNR=2.5						
VNDA				PcP	PcP	07 25 49.1	+1.7
	0.4nm,0.6s,baz=116,slow=1.6,SNR=2.8						
VNDA	Vanda	33.17	202	P	P	07 23 03.2	-1.9
VNDA				IAmb	IAmb	07 23 24.0	
	comp=Z,8.3nm,1.6s						
QSPA	South Pole Qui	34.63	180	P	P	07 23 18.9	+0.9
	comp=Z,3.2nm,0.9s,baz=107,slow=5.6,SNR=7.3						
QSPA				LR	LR	07 35 42.7	
	comp=Z,82nm,19.5s,baz=85,slow=33						
QSPA	South Pole Qui	34.63	180	P	P	07 23 16.1	-1.9
TBI	Tubuai	37.25	319	eLR	LR	07 34 00.1	
	comp=Z,357nm,27.2s						
TBI	Tubuai	37.25	319	eT	T	08 03 32.8	
	comp=Z,29nm,0.3s						
PLCA	Paso Flores	37.65	90	P	P	07 23 43.9	-0.1
PLCA				IAmb	IAmb	07 23 46.5	
	comp=Z,16nm,1.6s						
H03S2	Juan Fernandez	37.83	74	T	T	08 03 39.4	
	baz=219,slow=74,SNR=84						
H03S1	Juan Fernandez	37.84	74	T	T	08 03 37.6	
	baz=219,slow=74,SNR=98						
H03S3	Juan Fernandez	37.85	74	T	T	08 03 32.5	
	baz=219,slow=74,SNR=82						
VA04	Juan Fernndez	38.03	74	P	P	07 23 48.8	+1.6
H03N3	Juan Fernandez	38.12	74	T	T	08 03 59.1	
	baz=221,slow=72,SNR=155						
H03N2	Juan Fernandez	38.12	74	T	T	08 03 60.0	
	baz=221,slow=72,SNR=359						
H03N1	Juan Fernandez	38.14	74	T	T	08 03 50.8	
	baz=221,slow=72,SNR=171						
PPT2	Papeete2	42.59	323	eLR	LR	07 36 29.0	
	comp=Z,396nm,25.0s						
VNA3	Neumayer Olymp	45.35	156	P	P	07 24 45.2	-1.5
VNA1	Neumayer--Stat	46.10	155	P	P	07 24 51.8	-0.7
VNA2	Neumayer--Watz	46.11	156	P	P	07 24 51.7	-0.9
	baz=237,slow=6.0						
SNAA	Sanae	46.57	158	P	P	07 24 54.8	-1.5
SNAA	Sanae	46.57	158	P	P	07 24 54.6	-1.8
	comp=Z,3.2nm,1.2s,baz=245,slow=6.5,SNR=4.9						
SNAA	Sanae	46.57	158	P	P	07 24 55.0	-1.3
SNAA				IAmb	IAmb	07 24 58.6	
	comp=Z,8.4nm,1.5s						
GO03	Copiap	47.39	77	P	P	07 25 03.9	+0.6
TAOE	Nuku Hiva Isla	48.29	338	eLR	LR	07 39 05.2	
	comp=Z,246nm,25.2s						
PB14	IPOC Station P	49.64	74	P	P	07 25 20.6	-0.3
CPUP	Villa Florida	55.62	87	LR	LR	07 45 18.7	
	comp=Z,72nm,19.4s,baz=196,slow=31						
MAW	Mawson	57.05	183	P	P	07 26 15.2	+0.8
	comp=Z,2.3nm,1.0s,baz=170,slow=6.1,SNR=3.1						
MAW				LR	LR	07 48 50.8	
	comp=Z,256nm,19.4s,baz=168,slow=34						
LPAZ	La Paz	57.64	70	P	P	07 26 19.1	-0.8
	comp=Z,2.7nm,1.2s,baz=191,slow=5.2,SNR=4.0						
LPAZ				LR	LR	07 45 58.2	
	comp=Z,20nm,21.7s,baz=159,slow=31						
LPAZ	La Paz	57.64	70	P	P	07 26 20.4	+0.4
LPAZ				IAmb	IAmb	07 26 35.3	
	comp=Z,4.5nm,1.1s						
KNTN	Kanton	65.06	305	P	P	07 27 06.0	-3.4
STKA	Stephens Creek	66.69	247	LR	LR	07 51 58.9	
	comp=Z,58nm,18.1s,baz=200,slow=32						
OTAV	Otavalo	66.78	51	P	P	07 27 21.0	-0.1
OTAV				IAmb	IAmb	07 27 26.1	
	comp=Z,5.6nm,1.2s						
H01W1	Cape Leeuwin H	77.15	226	T	T	08 54 01.1	
	baz=151,slow=76,SNR=13						
H01W2	Cape Leeuwin H	77.15	226	T	T	08 53 56.8	
	baz=151,slow=76,SNR=11						
H01W3	Cape Leeuwin H	77.17	226	T	T	08 54 01.9	
	baz=151,slow=76,SNR=9.9						
ASAR	Alice Springs	77.31	247	P	P	07 28 25.6	+1.9
	comp=Z,1.1nm,0.8s,baz=147,slow=5.9,SNR=8.4						
ASAR				LR	LR	07 58 55.0	
	comp=Z,83nm,19.0s,baz=181,slow=33						
WRA	Warramunga Arr	80.14	249	P	P	07 28 41.4	+2.1
	comp=Z,2.1nm,0.8s,baz=147,slow=5.0,SNR=12						
WRA				LR	LR	07 59 58.2	
	comp=Z,53nm,19.8s,baz=225,slow=32						
TXAR	Lajitas Array	86.33	18	P	P	07 29 12.5	+1.7
	comp=Z,0.2nm,0.8s,baz=184,slow=7.2,SNR=2.3						
BOSA	Boshof	92.15	153	LR	LR	08 07 33.1	
	comp=Z,52nm,18.4s,baz=196,slow=33						
H11S2	WAKE ISLAND Hy	93.92	297	T	T	09 14 31.9	
	baz=148,slow=75,SNR=13						
H11S3	WAKE ISLAND Hy	93.93	297	T	T	09 14 31.7	
	baz=148,slow=75,SNR=18						
H11S1	WAKE ISLAND Hy	93.94	297	T	T	09 14 33.8	
	baz=148,slow=75,SNR=12						
H11N3	WAKE ISLAND Hy	94.85	298	T	T	09 15 45.6	
	baz=147,slow=76,SNR=4.9						
H11N1	WAKE ISLAND Hy	94.86	298	T	T	09 15 41.1	
	baz=147,slow=76,SNR=4.4						
H11N2	WAKE ISLAND Hy	94.87	298	T	T	09 15 42.2	
	baz=147,slow=76,SNR=3.8						
TKL	Tuckaleechee C	97.15	32	LR	LR	08 08 34.7	
	comp=Z,32nm,18.9s,baz=145,slow=32						
GERES	GERESS Array B	153.58	87	PKPbc	PKPbc	07 36 26.4	-0.5
	comp=Z,0.4nm,0.7s,baz=270,slow=1.0,SNR=2.1						

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*NNC **01** 07:19:56.8±0.4, 50°.01N×78°.76E, h0km, mb3.3, mpv2.9, Error ellipse: s-maj=7.3km s-min=2.2km az=76.0, Suspected Mining explosion.*

*IDC **01** 07:19:57.6±1.0, 50°.08N×78°.72E, h0km, mb1 2.9/2, mb1mx2.9/66, mbtmp2.9/2, ML2.5/2, Error ellipse: s-maj=13.2km s-min=6.3km az=66.0*

ISC 01 07:19:58.3±0.8**, 50°.09N**±0°.04×**78°.81E**±0°.05**, h0**km**, n30, σ1s22**/48**, 18C-12D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR07	Kurchatov Arra	0.52	339	⇓P	Pg	07 20 08.2	-0.1
KUR07				⇑S	Sb	07 20 17.2	-1.3
KUR14	Kurchatov Arra	0.54	345	⇓P	Pg	07 20 08.5	-0.1
KUR14				⇓S	Sb	07 20 17.6	-1.4
KUR06	Kurchatov Arra	0.54	341	⇑P	Pg	07 20 08.6	0.0
KUR06				⇑S	Sb	07 20 17.8	-1.2
KUR15	Kurchatov Arra	0.55	344	⇑P	Pg	07 20 08.7	-0.1
KUR15				⇓S	Sb	07 20 18.3	-0.9
KURBB	Kurchatov Arra	0.56	342	Pg	Pg	07 20 08.3	-0.7
	2.9nm,0.3s,baz=166,slow=19,SNR=115						
KURBB				Lg	Lg	07 20 16.9	
	2.7nm,0.3s,baz=168,slow=32,SNR=12						
KURBB	Kurchatov Arra	0.56	342	⇑P	Pg	07 20 08.9	-0.1
	19nm,0.3s						
KURBB				⇑S	Sb	07 20 17.9	-1.6
	40nm,0.7s						
KUR16	Kurchatov Arra	0.57	340	⇑P	Pg	07 20 09.3	+0.1
KUR16				⇑S	Sb	07 20 19.2	-0.6
KUR05	Kurchatov Arra	0.58	343	⇓P	Pg	07 20 09.1	-0.2
KUR05				⇓S	Sb	07 20 18.6	-1.4
KUR17	Kurchatov Arra	0.58	338	⇓P	Pg	07 20 09.3	-0.1
KUR17				⇑S	Sb	07 20 19.2	-0.9
KUR04	Kurchatov Arra	0.59	344	⇓P	Pg	07 20 09.5	-0.1
KUR04				⇓S	Sb	07 20 19.4	-1.1
KURK	Kurchatov	0.63	349	P	Pg	07 20 10.2	-0.3
KURK				S	Sg	07 20 18.5	-0.2
KURK	Kurchatov	0.63	349	⇑P	Pg	07 20 10.1	-0.3
	8.8nm,0.4s						
KURK				⇑S	Sb	07 20 20.6	-1.1
	43nm,0.9s						
UKR	Ust'-Kan	3.90	75	P	Pn	07 21 01.0	+1.5
UKR				S	Sn	07 21 46.4	+0.4
MAKZ	Makanchi	3.91	146	⇑Pg	Pb	07 21 08.7	+0.7
	5.4nm,1.1s						
MAKZ				⇑Lg	Lg	07 21 59.5	
	7.0nm,0.7s						
BRZS	Berezniki	3.95	271	Pg	Pb	07 21 10.5	+1.7
	2.9nm,0.4s						
BRZS				Lg	Lg	07 22 00.4	
	2.9nm,0.3s						
MK31	Makanchi Array	4.04	144	⇓Pn	Pn	07 21 01.1	-0.2
	0.1nm,0.2s,baz=326,slow=10.0,SNR=34						
MK31				⇓Pg	Pb	07 21 07.8	-2.4
	0.4nm,0.3s,baz=332,slow=15,SNR=8.1						
MK31				⇓Sn	Sn	07 21 48.6	-0.6
	0.4nm,0.2s						
MK31				⇑Lg	Lg	07 22 02.0	
	5.1nm,0.5s,baz=333,slow=26,SNR=14						
MKAR	Makanchi Array	4.04	144	Pn	Pn	07 21 01.2	-0.1
	0.4nm,0.3s,baz=320,slow=10,SNR=23						
MKAR				Pg	Pb	07 21 08.1	-2.1
	0.6nm,0.3s,baz=325,slow=14,SNR=11						
MKAR				Sn	Sn	07 21 49.4	+0.2
	0.7nm,0.3s,baz=329,slow=25,SNR=2.4						
MKAR				Lg	Lg	07 22 02.0	
	1.9nm,0.3s,baz=335,slow=28,SNR=12						
MKAR	Makanchi Array	4.04	144	P	Pn	07 21 01.3	0.0
MKAR				S	Sn	07 21 49.4	+0.2
OTUK	Ortayu	4.63	249	⇑Pn	Pn	07 21 08.3	-1.1
	0.9nm,0.4s						
OTUK				⇑Lg	Lg	07 22 20.9	
	2.6nm,0.5s						
ZALV	Zalesovo Beam	5.36	42	Pn	Pn	07 21 21.1	+1.7
	0.7nm,0.3s,baz=229,slow=14,SNR=7.3						
ZALV				Lg	Lg	07 22 48.4	
	0.3nm,0.3s,baz=224,slow=30,SNR=2.5						
I46RU	ZALESOVO INFRA	5.36	42	i		07 50 20.0	
	baz=224,slow=317,SNR=1.5						
DGZ	Jazzator, Alta	5.59	91	S	Sn	07 22 29.5	+1.7
AKAR	Aktash	5.67	84	P	Pn	07 21 25.3	+1.5
AKAR				S	Sn	07 22 31.0	+1.5
DJR	Jarkent	5.80	173	Pg	Pb	07 21 42.4	+2.0
	0.9nm,0.4s						
DJR				Lg	Lg	07 22 56.6	
	2.2nm,0.8s						
ULGR	Ulagan, Altay	5.88	81	P	Pn	07 21 28.3	+1.5
ULGR				S	Sn	07 22 36.2	+1.2
BTLS	Baital	5.99	214	Pg	Pb	07 21 45.8	+2.2
	0.7nm,0.2s						
BTLS				Lg	Lg	07 23 01.4	
	2.1nm,0.6s						
BVAR	Borovoye Array	6.01	302	Sn	Sn	07 22 35.7	-2.2
	0.4nm,0.3s,baz=124,slow=23,SNR=2.6						
BVAR				Lg	Lg	07 23 09.5	
	0.2nm,0.3s,baz=122,slow=24,SNR=2.3						
BRVK	Borovoye	6.09	302	⇑Sn	Sn	07 22 37.7	-2.0
	1.0nm,0.5s						
BRVK				⇑Lg	Lg	07 23 07.7	
	2.5nm,1.1s						
CUR	Chagan-Uzun	6.14	86	P	Pn	07 21 31.6	+1.3
CUR				S	Sn	07 22 42.3	+0.9
AAK	Ala-Archa	8.03	203	Lg	Lg	07 24 08.2	
	0.1nm,0.3s,baz=246,slow=22,SNR=2.4						

*MAN **01** 07:24:24.6, 13.°09N×119.°34E, h35^{km}, mb4.5, ML3.4, MS3.3*
*IDC **01** 07:24:25.0±1.0, 13.°16N×120.°74E, h0^{km}, mb3.9/6, mb1 4.1/6, mb1mx3.6/64, mbtmp3.9/6, MS3.4/3, Ms1 3.4/3, ms1mx2.8/55, Error ellipse: s-maj=54.9km s-min=18.3km az=74.0*
ISC 01 07:24:28.6±1.1**, 13.°0N**±0.°1×**119.°8E**±0.°1**, h31**^{km}**, n12, σ2.ˢ78**/13**, mb4.0**/6**, 3C-1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	**0.85**	**28⇑**	*e*P	**Pn**	**07 24 43.0**	**-1.5**
LUBP				*e*S	**Sn**	**07 24 55.9**	**+0.1**
PGP	**Puerto Galera**	**1.21**	**65⇑**	*e*P	**Pb**	**07 24 51.8**	**+0.9**
PGP				*i* S	**Sb**	**07 25 10.7**	**+4.5**
TGY	**Tagaytay City**	**1.55**	**44⇓**	*e*P	Pn	07 24 47.5	-6.6
TGY				*i* S	**Sb**	**07 25 18.6**	**+2.6**
LQP	**Lukban**	**2.00**	**56⇑**	*e*P	**Pb**	**07 25 02.5**	**-2.0**
LQP				*e*S	**Sb**	**07 25 28.2**	**-1.0**
JOW	**Kunigami**	**15.89**	**29**	LR	LR	07 34 20.7	
	comp=Z,86nm,19.3s,baz=143,slow=39						
KSRS	**Korea Array**	**25.42**	**15**	P	**P**	**07 29 50.9**	**-2.7**
	0.8nm,0.7s,baz=193,slow=10.0,SNR=4.2						
KSRS				LR	LR	07 39 22.8	
	comp=Z,52nm,18.7s,baz=303,slow=36						
WRA	**Warramunga Arr**	**35.70**	**156**	P	**P**	**07 31 23.6**	**-0.9**
	1.7nm,0.7s,baz=334,slow=9.9,SNR=18						
KLR	**Kul'dur**	**37.46**	**13**	P	**P**	**07 31 36.8**	**-2.4**
	1.5nm,0.7s,baz=226,slow=7.1,SNR=4.9						
ASAR	**Alice Springs**	**38.94**	**159**	P	**P**	**07 31 51.7**	**-0.2**
	1.6nm,0.6s,baz=341,slow=7.1,SNR=40						
MKAR	**Makanchi Array**	**46.12**	**324**	P	**P**	**07 32 53.8**	**+3.7**
	0.8nm,0.6s,baz=120,slow=8.2,SNR=5.1						
KURBB	**Kurchatov Arra**	**50.32**	**327**	P	**P**	**07 33 26.2**	**+3.8**
	1.5nm,0.4s,baz=116,slow=9.1,SNR=4.2						
BBB	**Bella Bella**	**92.83**	**35**	LR	LR	08 16 07.0	
	comp=Z,48nm,19.4s,baz=284,slow=34						

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*GCG **01** 07:27:46.5±0.6, 14.°22N×92.°58W, h35^{km}±999^{km}, MD3.8*
*MEX **01** 07:27:50.3±1.0, 14.°20N×92.°19W, h57^{km}±14^{km}, MD4.3*
ISC 01 07:27:48.9±2.7**, 14.°2N**±0.°1×**92.°40W**±0.°08**, h20**^{km}±11^{km}**, n8, σ2.ˢ12**/13**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		**0.69**	**11**	*e*P	**Pg**	**07 28 03.2**	**+0.6**
THIG				*e*S	**Sn**	**07 28 12.9**	**-0.8**
STG3	**Santiaguito 3,**	**0.94**	**59**	*e*P	**Pg**	**07 28 05.9**	**-1.4**
FUG	**Fuego 3**	**1.53**	**81**	*e*P	Pn	07 28 14.0	-1.2
PCIG		**1.67**	**332**	*e*P	**Pn**	**07 28 17.3**	**+0.3**
PCIG				*e*S	**Sn**	**07 28 33.1**	**-4.8**
NBG	**Las Nubes**	**2.02**	**79**	*e*P	**Pn**	**07 28 21.8**	**-0.3**
NBG				*e*S	**Sn**	**07 28 48.8**	**+1.9**
CCIG	**Comitan**	**2.06**	**7**	*e*P	**Pn**	**07 28 24.7**	**+2.1**
CCIG				*e*S	**Sn**	**07 28 46.1**	**-1.7**
TGIG		**2.63**	**345**	*e*P	**Pn**	**07 28 31.8**	**+1.5**
TGIG				*e*S	**Sn**	**07 29 02.2**	**+0.5**
CMIG	**Matias Romero**	**3.72**	**320**	*e*P	**Pn**	**07 28 46.3**	**+1.0**
CMIG				*e*S	**Sn**	**07 29 29.2**	**+0.7**

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*TUL **01** 07:32:29±0.5, 36.°53N±0.°04×98.°99W±0.°04, h5^{km}±6^{km}, ML2.7, mb_Lg2.5/17(NEIC), Error ellipse: s-maj=5.3km s-min=4.3km az=189.0*
NEIC 01 07:32:29.0±0.7**, 36.°55N**±0.°03×**99.°00W**±0.°04**, h8**^{km}±6^{km}**, Error ellipse: s-maj=5.4km s-min=3.5km az=48.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
U32A	**Winter Ranch,**	**0.17**	**180**		Pg	07 32 32.4	-0.1
OKCFA	**Oklahoma City**	**1.69**	**132**	Pn	Pn	07 32 59.1	+0.2
WMOK	**Wichita Mounta**	**1.82**	**174**	Pn	Pn	07 33 00.7	+0.1
WMOK				IAmb_Lg		07 33 27.4	
	comp=Z,26nm,0.8s						
FNO	**Franklin**	**1.83**	**134**	Pn	Pn	07 33 01.6	+0.8
FNO				IAmb_Lg		07 33 29.6	
	comp=Z,37nm,0.8s						
T35A	**Sooner Cattle**	**2.03**	**79**	IAmb_Lg		07 33 36.6	
	comp=Z,21nm,0.9s						
X34A	**Smith Ranch, M**	**2.16**	**154**	IAmb_Lg		07 33 41.2	
	comp=Z,30nm,0.9s						
CBKS	**Cedar Bluff**	**2.33**	**346**	IAmb_Lg		07 33 47.8	
	comp=Z,16nm,0.8s						
TUL1	**Leonard**	**2.67**	**103**	Pn	Pn	07 33 12.9	+0.5
AMTX	**Amarillo**	**2.74**	**233**	IAmb_Lg		07 33 57.2	
	comp=Z,21nm,0.7s						
X37A	**Clayton**	**3.55**	**122**	Pn	Pn	07 33 24.8	+0.4
KSCO	**Kaye Shedlock'**	**3.78**	**312**	IAmb_Lg		07 34 37.4	
	comp=Z,15nm,0.9s						
N33A	**J Bar K, Exete**	**4.36**	**16**	Pn	Pn	07 33 35.6	+0.1
T25A	**Trinidad**	**4.38**	**279**	Pn	Pn	07 33 36.3	+0.3
S39A	**Bolivar**	**4.68**	**74**	Pn	Pn	07 33 40.2	+0.2
WHTX	**Lake Whitney,**	**4.72**	**164**	Pn	Pn	07 33 40.2	-0.3
MIAR	**Mount Ida**	**4.85**	**113**	Pn	Pn	07 33 42.2	-0.1
BGNE	**Belgrade**	**4.90**	**8**	Pn	Pn	07 33 43.3	+0.4
U40A	**Yellville**	**4.96**	**90**	IAmb_Lg		07 35 13.0	
	comp=Z,9.6nm,1.1s						
R40A	**Maddies Statio**	**5.63**	**70**	Pn	Pn	07 33 53.2	+0.1
LCAR	**Lake Charles**	**6.35**	**92**	Pn	Pn	07 34 03.2	+0.3
PBMO	**Poplar Bluff**	**6.89**	**86**	IAmb_Lg		07 36 04.8	
	comp=Z,3.6nm,1.1s						

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*JMA **01** 07:40:21.5±0.1, 30.°34N×140.°49E, h1^{km}, M4.3*
*NEIC **01** 07:40:25.4±1.8, 30.°22N±0.°08×140.°1E±0.°2, h108^{km}±8^{km}, mb4.3/10, Error ellipse: s-maj=22.1km s-min=3.0km az=58.0*
*IDC **01** 07:40:25.3±1.3, 30.°22N×140.°06E, h115^{km}±13^{km}, mb3.5/9, mb1 3.6/12, mb1mx3.4/49, mbtmp3.8/12, Error ellipse: s-maj=35.0km s-min=8.4km az=74.0*
ISC 01 07:40:24.4±0.6**, 30.°26N**±0.°07×**140.°2E**±0.°1**, h100**^{km}**, n40, σ1.ˢ57**/43**, mb4.2**/14**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ	**Hachijo jima 2**	**2.88**	**353**	P	**Pn**	**07 41 09.6**	**+1.1**
	11nm,0.3s,baz=240,slow=16,SNR=1.6						
JHJ				S	**Sn**	**07 41 44.8**	**+2.4**
	13nm,0.3s,baz=62,slow=16,SNR=1.5						
CBIJ	**Chichi jima**	**3.59**	**151**	P	**Pn**	**07 41 19.5**	**+1.5**
JCJ	**Chichijima**	**3.59**	**151**	P	**Pn**	**07 41 19.7**	**+1.7**
	13nm,0.3s,baz=270,slow=18,SNR=29						
JCJ				S	**Sn**	**07 42 02.3**	**+2.7**
	13nm,0.3s,baz=336,slow=22,SNR=8.3						
JCJ	**Chichijima**	**3.59**	**151**		**Pn**	**07 41 19.4**	**+1.3**
JCJ				Sn	**Sn**	**07 42 00.7**	**+1.2**
BSO1	**Boso 1**	**4.43**	**8**	P	**Pn**	**07 41 29.2**	**+0.4**
BSO3	**Boso 3**	**4.54**	**3**	P	**Pn**	**07 41 31.2**	**+0.6**
BSO4	**Boso 4**	**4.72**	**1**	P	**Pn**	**07 41 36.4**	**+3.2**
JOD2	**Odawara 2**	**5.08**	**349**	P	**Pn**	**07 41 41.8**	**+3.6**
JHU	**Hanno**	**5.64**	**352**	P	**Pn**	**07 41 48.0**	**+2.3**
INU	**Inuyama**	**5.75**	**333**	Pn	**Pn**	**07 41 49.0**	**+1.8**
JRY	**Ryogami san**	**5.85**	**349**	P	**Pn**	**07 41 51.1**	**+2.5**
JWT	**Wachi**	**6.45**	**322**	Pn	**Pn**	**07 41 58.9**	**+2.1**
MJAR	**Matsushiro Arr**	**6.49**	**346**	P	**Pn**	**07 41 59.1**	**+1.8**
	0.1nm,0.3s,baz=158,slow=10,SNR=7.4						
MJAR	**Matsushiro Arr**	**6.49**	**346**		**Pn**	**07 41 58.1**	**+0.8**
MAJO	**Matsushiro**	**6.49**	**346**	Pn	**Pn**	**07 41 59.9**	**+2.6**
JSD	**Sado**	**7.93**	**349**	Pn	**Pn**	**07 42 17.0**	**+0.1**
JTM	**Tenmabayashi**	**10.53**	**4**	Pn	**Pn**	**07 42 51.0**	**-1.2**
KLR	**Kul'dur**	**20.01**	**344**	P	**P**	**07 44 50.5**	**+1.5**
	0.9nm,0.4s,baz=148,slow=8.8,SNR=4.1						
WB0	**Warramunga Arr**	**50.05**	**187**	P	**P**	**07 49 08.3**	**-0.7**
WB0				IAmb	IAmb	07 49 08.6	
	comp=Z,8.6nm,1.4s						
WR0	**Warramunga Arr**	**50.22**	**187**	P	**P**	**07 49 09.2**	**-1.1**
WR0				IAmb	IAmb	07 49 32.5	
	comp=Z,6.0nm,1.3s						
WRA	**Warramunga Arr**	**50.23**	**187**	P	**P**	**07 49 09.7**	**-0.6**
	comp=Z,0.4nm,0.2s,baz=6.3,slow=7.7,SNR=15						
WRA	**Warramunga Arr**	**50.23**	**187**	P	**P**	**07 49 09.4**	**-0.9**
K20K	**Telida**	**52.56**	**31**	P	**P**	**07 49 28.2**	**+0.9**
K20K				IAmb	IAmb	07 49 40.4	
	comp=Z,3.8nm,1.2s						
PPLA	**Purkeypile**	**53.36**	**32**	P	**P**	**07 49 34.2**	**+0.9**
ASAR	**Alice Springs**	**53.96**	**187**	P	**P**	**07 49 37.0**	**-0.9**
	comp=Z,0.2nm,0.5s,baz=11,slow=3.5,SNR=8.0						
ASAR	**Alice Springs**	**53.96**	**187**	P	**P**	**07 49 38.1**	**+0.2**
MDM	**Murphy Dome**	**55.23**	**29**	P	**P**	**07 49 47.1**	**+0.3**
MDM				IAmb	IAmb	07 49 59.8	
	comp=Z,3.0nm,1.1s						
H24K	**Noodor Dome**	**55.42**	**28**	P	**P**	**07 49 48.8**	**+0.7**
H24K				IAmb	IAmb	07 50 17.1	
	comp=Z,7.0nm,1.5s						
RIDG	**Independent Ri**	**56.70**	**31**	P	**P**	**07 49 57.8**	**+0.6**
SCRK	**Sand Creek**	**57.07**	**31**	P	**P**	**07 49 59.8**	**-0.1**
SCRK				IAmb	IAmb	07 50 25.3	
	comp=Z,4.3nm,1.4s						
ABKAR	**Akbulak array**	**61.67**	**313**	P	**P**	**07 50 30.0**	**-1.7**
EUNU	**Eureka**	**67.02**	**8**	P	**P**	**07 51 05.4**	**-0.7**
ARCES	**ARCESS Array B**	**70.00**	**340**	P	**P**	**07 51 23.9**	**-0.8**
	comp=Z,3.4nm,0.9s,baz=67,slow=7.0,SNR=1.4						
FINES	**FINESS Array B**	**74.36**	**333**	P	**P**	**07 51 49.5**	**-1.3**
	comp=Z,4.4nm,1.0s,baz=66,slow=6.5,SNR=9.8						
FINES	**FINESS Array B**	**74.36**	**333**	P	**P**	**07 51 49.6**	**-1.2**
AKASG	**Malin Array Be**	**79.06**	**323**	P	**P**	**07 52 15.3**	**-2.2**
	comp=Z,0.3nm,0.3s,baz=54,slow=5.0,SNR=3.1						
HFS	**Hagfors**	**79.85**	**336**	P	**P**	**07 52 20.6**	**-1.0**
	comp=Z,0.8nm,0.6s,baz=35,slow=5.3,SNR=1.3						
NVAR	**Mina Array Bea**	**79.91**	**51**	P	**P**	**07 52 22.9**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=297,slow=6.0,SNR=4.9						
NVAR	**Mina Array Bea**	**79.91**	**51**	P	**P**	**07 52 23.2**	**+0.5**
TXAR	**Lajitas Array**	**95.06**	**52**	P	**P**	**07 53 36.2**	**-0.2**
	comp=Z,0.1nm,0.6s,baz=293,slow=4.6,SNR=1.5						

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*TAP **01** 07:42:24.2, 24.°65N×122.°23E, h74^{km}, ML3.1, B*
*JMA **01** 07:42:24.3±0.2, 24.°60N×122.°20E, h76^{km}±3^{km}, M1.9*
ISC 01 07:42:25.0±1.3**, 24.°65N**±0.°03×**122.°23E**±0.°02**, h72**^{km}±7^{km}**, n79, σ0.ˢ51**/146**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWC	**Suao**	**0.35**	**264**	P	**Pn**	**07 42 36.5**	**-0.2**
	baz=263						
TWC				*e*S	**Sn**	**07 42 45.1**	**-0.2**
	baz=263						
NTC	**Toucheng**	**0.42**	**299**	P	**Pn**	**07 42 37.0**	**-0.2**
	baz=299						
NTC				*e*S	**Sn**	**07 42 45.9**	**-0.4**
	baz=299						
TWB1	**Santiao Chiao**	**0.42**	**328**	P	**Pn**	**07 42 37.0**	**-0.3**
	baz=329						
TWB1				S	**Sn**	**07 42 46.8**	**+0.5**
	baz=329						
ILA	**Ilan**	**0.46**	**285**	*e*P	**Pn**	**07 42 37.6**	**+0.1**
	baz=284						
ILA				*e*S	**Sn**	**07 42 47.1**	**+0.3**
	baz=284						
EWUT	**Wuta**	**0.46**	**244**	P	**Pn**	**07 42 37.3**	**-0.3**
	baz=243						
EWUT				*e*S	**Sn**	**07 42 47.1**	**+0.2**
	baz=243						
NDS	**Dongshan**	**0.47**	**268**	P	**Pn**	**07 42 37.8**	**+0.1**
	baz=268						
NDS				*e*S	**Sn**	**07 42 47.3**	**+0.2**
	baz=268						
TIPB	**Shuangxi**	**0.49**	**311**	P	**Pn**	**07 42 37.9**	**0.0**
	baz=311						
TIPB				S	**Sn**	**07 42 47.7**	**+0.2**
	baz=311						
ENA	**Nanau**	**0.50**	**244**	P	**Pn**	**07 42 38.0**	**0.0**
	baz=243						
ENA				S	**Sn**	**07 42 47.9**	**+0.4**
	baz=243						
TWE	**Neicheng**	**0.52**	**278**	P	**Pn**	**07 42 38.2**	**0.0**
	baz=277						
TWE				*e*S	**Sn**	**07 42 47.9**	**+0.1**
	baz=277						
NWF	**Wu-fen Shan**	**0.59**	**316**	P	**Pn**	**07 42 39.0**	**0.0**
	baz=315						
NWF				S	**Sn**	**07 42 49.3**	**+0.1**
	baz=315						
ENTT	**Nioudou**	**0.61**	**269**	P	**Pn**	**07 42 39.5**	**+0.4**
	baz=269						
ENTT				*e*S	**Sn**	**07 42 50.3**	**+0.9**
	baz=269						
NDT	**Datong Townshi**	**0.66**	**266**	P	**Pn**	**07 42 40.0**	**+0.4**
	baz=266						
NDT				S	**Sn**	**07 42 51.3**	**+1.0**
	baz=266						
JYNG	**Yonagunijimaku**	**0.68**	**107**	P	**Pn**	**07 42 39.9**	**+0.2**
JYNG				*e*S	**Sn**	**07 42 50.9**	**+0.2**
NWLT	**Wulai**	**0.68**	**281**	P	**Pn**	**07 42 39.7**	**-0.1**
	baz=280						
NWLT				S	**Sn**	**07 42 51.1**	**+0.3**
	baz=280						
TWA	**Mucha**	**0.68**	**299**	*e*P	**Pn**	**07 42 39.5**	**-0.3**
	baz=299						
TWA				*e*S	**Sn**	**07 42 50.3**	**-0.5**
	baz=299						
NHDH	**Xindian Distri**	**0.72**	**296**	*e*P	**Pn**	**07 42 40.0**	**-0.2**
	baz=296						
NHDH				*e*S	**Sn**	**07 42 50.9**	**-0.5**
	baz=296						
YOJ	**Yonaguni jima**	**0.73**	**105**	P	**Pn**	**07 42 40.2**	**-0.1**
	baz=104						
YOJ				S	**Sn**	**07 42 52.0**	**+0.2**
	baz=104						
YOJ	**Yonaguni jima**	**0.73**	**105**	P	**Pn**	**07 42 40.5**	**+0.2**
YOJ				*e*S	**Sn**	**07 42 51.9**	**+0.2**
ETL	**Fush Village**	**0.74**	**229**	*e*P	**Pn**	**07 42 40.4**	**-0.1**
	baz=228						
ETL				*e*S	**Sn**	**07 42 52.3**	**+0.3**
	baz=228						
NACB	**Ninganchiao**	**0.75**	**231**	P	**Pn**	**07 42 39.7**	**-0.9**
	baz=230						
NACB				S	**Sn**	**07 42 51.2**	**-0.9**
	baz=230						
YM01	**YM01**	**0.78**	**310**	P	**Pn**	**07 42 40.6**	**-0.4**
	baz=309						
YM01				S	**Sn**	**07 42 52.3**	**-0.5**
	baz=309						
YHNB	**Yeheng**	**0.78**	**272**	P	**Pn**	**07 42 40.8**	**-0.2**
	baz=271						
YHNB				S	**Sn**	**07 42 53.1**	**+0.2**
	baz=271						
NSK	**Sanguang**	**0.80**	**272**	P	**Pn**	**07 42 41.2**	**0.0**
	baz=271						
NSK				S	**Sn**	**07 42 53.3**	**+0.1**
	baz=271						
NNSB	**Datong**	**0.81**	**254**	P	**Pn**	**07 42 41.2**	**-0.1**
	baz=254						
NNSB				S	**Sn**	**07 42 53.9**	**+0.4**
	baz=254						
NNS	**Nan Shan**	**0.81**	**255**	P	**Pn**	**07 42 41.1**	**-0.3**
	baz=254						
NNS				S	**Sn**	**07 42 53.6**	**0.0**
	baz=254						
TWD	**Chiawan**	**0.81**	**226**	P	**Pn**	**07 42 40.6**	**-0.7**
	baz=225						
TWD				S	**Sn**	**07 42 52.7**	**-0.7**
	baz=225						
ETLH	**Xiulin Townshi**	**0.81**	**237**	P	**Pn**	**07 42 40.7**	**-0.7**
	baz=237						
ETLH				S	**Sn**	**07 42 52.6**	**-1.0**
	baz=237						
TWS1	**Kuangyinshan**	**0.87**	**301**	P	**Pn**	**07 42 41.8**	**-0.2**
	baz=301						
TWS1				S	**Sn**	**07 42 54.5**	**0.0**
	baz=301						
NTST	**Danshui**	**0.88**	**306**	S	**Sn**	**07 42 54.9**	**+0.1**
	baz=305						
HWA	**Hwalien**	**0.88**	**221**	*e*P	**Pn**	**07 42 42.0**	**-0.1**
	baz=220						
HWA				*e*S	**Sn**	**07 42 55.2**	**+0.4**
	baz=220						
FUSS	**Fushou**	**0.99**	**246**	*e*P	**Pn**	**07 42 43.4**	**-0.2**
	baz=246						
FUSS				*e*S	**Sn**	**07 42 57.5**	**0.0**
	baz=246						
NCU	**National Centr**	**1.00**	**289**	*e*S	**Sn**	**07 42 58.1**	**+0.6**
	baz=288						
NCUH	**Zhongli**	**1.00**	**289**	*e*P	**Pn**	**07 42 43.6**	**0.0**
	baz=288						
NCUH				*e*S	**Sn**	**07 42 57.6**	**+0.1**
	baz=288						
WHF	**Hehuan Shan**	**1.02**	**241**	P	**Pn**	**07 42 43.7**	**-0.5**
	baz=240						
WHF				*e*S	**Sn**	**07 42 58.1**	**-0.3**
	baz=240						
TWT	**Tachien**	**1.04**	**248**	*e*P	**Pn**	**07 42 44.6**	**+0.3**
	baz=247						
TWT				*e*S	**Sn**	**07 42 59.0**	**+0.4**
	baz=247						
TDCB	**Techi**	**1.06**	**248**	*e*P	**Pn**	**07 42 44.3**	**-0.1**
	baz=248						
TDCB				*e*S	**Sn**	**07 42 58.6**	**-0.3**
	baz=248						
ESL	**Shilin**	**1.11**	**222**	*e*P	**Pn**	**07 42 43.6**	**-1.3**
	baz=220						
ESL				*e*S	**Sn**	**07 43 00.1**	**+0.3**
	baz=220						
LIOB	**Emei**	**1.11**	**270**	*e*P	**Pn**	**07 42 44.8**	**-0.1**
	baz=269						
LIOB				S	**Sn**	**07 43 00.1**	**+0.2**
	baz=269						
NSTT	**Nanjuang**	**1.12**	**269**	*e*P	**Pn**	**07 42 44.9**	**-0.2**
	baz=269						
NSTT				S	**Sn**	**07 43 00.3**	**+0.2**
	baz=269						
CHGB	**Renai**	**1.13**	**239**	P	**Pn**	**07 42 45.3**	**-0.2**
	baz=238						
CHGB				S	**Sn**	**07 43 00.6**	**0.0**
	baz=238						
SBCB	**Hsinchu**	**1.14**	**277**	*e*P	**Pn**	**07 42 45.6**	**+0.2**
	baz=277						
SBCB				*e*S	**Sn**	**07 43 01.0**	**+0.3**
	baz=277						
HSN	**Hsinchu**	**1.16**	**278**	*e*P	**Pn**	**07 42 45.2**	**-0.4**
	baz=279						
HSN				*e*S	**Sn**	**07 43 00.2**	**-0.8**
	baz=279						
OWD	**Renai**	**1.19**	**235**	*e*P	**Pn**	**07 42 46.0**	**-0.1**
	baz=234						
OWD				*e*S	**Sn**	**07 43 00.9**	**-0.9**
	baz=234						
EGFH	**Guangfu**	**1.22**	**217**	*e*P	**Pn**	**07 42 46.8**	**+0.4**
	baz=217						
EGFH				*e*S	**Sn**	**07 43 02.0**	**-0.4**
	baz=217						
WHP	**Taichung City**	**1.23**	**253**	*e*P	**Pn**	**07 42 47.1**	**+0.5**
	baz=252						
WHP				*e*S	**Sn**	**07 43 03.1**	**+0.4**
	baz=252						
NMLH	**Miaoli**	**1.32**	**265**	*e*P	**Pn**	**07 42 48.2**	**+0.6**
	baz=265						
NMLH				*e*S	**Sn**	**07 43 04.7**	**+0.1**
	baz=265						
WCS	**Beigang Elemen**	**1.34**	**244**	*e*P	**Pn**	**07 42 48.2**	**+0.2**
	baz=243						
WCS				*e*S	**Sn**	**07 43 06.0**	**+0.8**
	baz=243						
HGSD	**Ruisui**	**1.37**	**213**	*e*P	**Pn**	**07 42 48.4**	**+0.1**
	baz=212						
HGSD				*e*S	**Sn**	**07 43 06.8**	**+1.0**
	baz=212						
IRIF	**Iriomote-Funau**	**1.40**	**103**	P	**Pn**	**07 42 48.4**	**-0.2**
IRIF				S	**Sn**	**07 43 06.3**	**-0.2**
EHY	**Hungye**	**1.41**	**216**	*e*P	**Pn**	**07 42 49.1**	**+0.3**
	baz=215						
EHY				*e*S	**Sn**	**07 43 06.3**	**-0.5**
	baz=215						
SMLT	**Sun Moon Lake**	**1.44**	**238**	*e*P	**Pn**	**07 42 49.1**	**-0.1**
	baz=237						
SMLT				*e*S	**Sn**	**07 43 08.0**	**+0.4**
	baz=237						
SSLB	**Suanglung**	**1.45**	**234**	*e*P	**Pn**	**07 42 49.5**	**+0.1**
	baz=233						
SSLB				*e*S	**Sn**	**07 43 08.8**	**+1.1**
	baz=233						
TYC	**Yuchr**	**1.46**	**240**	*e*P	**Pn**	**07 42 49.6**	**+0.1**
	baz=239						
TYC				*e*S	**Sn**	**07 43 08.2**	**+0.3**
	baz=239						
WDJ	**Dajia District**	**1.48**	**259**	*e*S	**Sn**	**07 43 08.2**	**-0.3**
	baz=258						
YULB	**Yu-li**	**1.52**	**215**	*e*P	**Pn**	**07 42 49.9**	**-0.4**
	baz=214						
YULB				*e*S	**Sn**	**07 43 08.2**	**-1.1**
	baz=214						
EYUL	**Yuli**	**1.54**	**213**	*e*S	**Sn**	**07 43 10.2**	**+0.3**
	baz=212						
HATJ	**Hateruma jima**	**1.55**	**112**	*e*S	**Sn**	**07 43 10.2**	**+0.2**
WJS	**Zhushan**	**1.60**	**239**	*e*P	**Pn**	**07 42 51.5**	**+0.1**
	baz=239						
WJS				*e*S	**Sn**	**07 43 11.7**	**+0.4**
	baz=239						
WNT	**Mingjian**	**1.61**	**242**	*e*P	**Pn**	**07 42 52.1**	**+0.7**
	baz=241						
WNT				*e*S	**Sn**	**07 43 12.0**	**+0.6**
	baz=241						
YUS	**Yu-Shan**	**1.65**	**226**	*e*P	**Pn**	**07 42 52.1**	**-0.2**
	baz=225						
YUS				*e*S	**Sn**	**07 43 12.7**	**-0.4**
	baz=225						
JKRS	**Kuro-shima**	**1.67**	**104**	S	**Sn**	**07 43 13.2**	**+0.3**
FULB	**Fuli**	**1.68**	**211**	*e*P	**Pn**	**07 42 52.6**	**+0.1**
	baz=210						
FULB				*e*S	**Sn**	**07 43 13.3**	**+0.1**
	baz=210						
ALS	**Alishan**	**1.73**	**229**	*e*P	**Pn**	**07 42 52.9**	**-0.4**
	baz=228						
ALS				*e*S	**Sn**	**07 43 14.4**	**-0.4**
	baz=228						
JIJ	**Ishigaki jima**	**1.76**	**99**	P	**Pn**	**07 42 53.4**	**-0.1**
JIJ				S	**Sn**	**07 43 14.5**	**-0.6**
CHN5	**Tsauling**	**1.77**	**234**	*e*P	**Pn**	**07 42 54.1**	**+0.5**
	baz=233						
CHN5				*e*S	**Sn**	**07 43 17.0**	**+1.7**
	baz=233						
WDLH	**Douliu**	**1.82**	**239**	*e*S	**Sn**	**07 43 17.1**	**+0.6**
	baz=238						
ELDTW	**Lidau**	**1.83**	**218**	*e*P	**Pn**	**07 42 53.4**	**-1.1**
	baz=217						
ELDTW				*e*S	**Sn**	**07 43 15.2**	**-1.7**
	baz=217						
WRL	**Guolierlin Hig**	**1.85**	**247**	*e*S	**Sn**	**07 43 16.6**	**-0.7**
	baz=246						
EDH	**Donghe**	**1.87**	**207**	*e*P	**Pn**	**07 42 55.2**	**+0.2**
	baz=207						
EDH				*e*S	**Sn**	**07 43 17.9**	**+0.1**
	baz=207						
JISG	**Ishigakijimahi**	**1.89**	**91**	*e*S	**Sn**	**07 43 18.8**	**+0.6**
CHN4	**Tsaushan**	**1.98**	**230**	*e*P	**Pn**	**07 42 57.0**	**+0.6**
	baz=229						
CHN4				*e*S	**Sn**	**07 43 20.3**	**0.0**
	baz=229						
STYH	**Taoyuan**	**1.99**	**222**	*e*P	**Pn**	**07 42 56.9**	**+0.4**
	baz=222						
STYH				*e*S	**Sn**	**07 43 21.1**	**+0.6**
	baz=222						
TPUB	**Ta-pu**	**1.99**	**228**	*e*P	**Pn**	**07 42 56.7**	**+0.1**
	baz=227						
TPUB				*e*S	**Sn**	**07 43 20.5**	**-0.1**
	baz=227						
LONT	**Longtian**	**2.01**	**210**	*e*S	**Sn**	**07 43 19.0**	**-2.0**
	baz=210						
WTP	**Ta-pu**	**2.04**	**227**	*e*S	**Sn**	**07 43 22.2**	**+0.5**
	baz=226						
CHN1	**Nanshi**	**2.14**	**227**	*e*S	**Sn**	**07 43 24.1**	**0.0**
	baz=226						
SLGT	**Liugui**	**2.20**	**222**	*e*P	**Pn**	**07 43 00.1**	**+0.7**
	baz=221						
SLGT				*e*S	**Sn**	**07 43 25.7**	**+0.1**
	baz=221						
MASBT	**Mashibuluo**	**2.50**	**216**	*e*P	**Pn**	**07 43 04.0**	**+0.5**
	baz=215						
MASBT				*e*S	**Sn**	**07 43 33.1**	**+0.1**
	baz=215						
MATB	**Ma-tsu**	**2.55**	**306**	*e*P	**Pn**	**07 43 03.9**	**-0.3**
	baz=305						
MATB				*e*S	**Sn**	**07 43 33.2**	**-1.0**
	baz=305						

PRU 01 07:51:52.0±0.0**, 49.°79N**×**18.°71E, h0**^{km}**, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.37**	**278**	*e*PG	Pg	07 51 58.9	-0.1
OKC				*e*SG	Sg	07 52 04.4	+0.6
	comp=Z,5.1nm,0.6s						
DPC	**Dobruska-Polom**	**1.64**	**291**	*e*PG	Pn	07 52 22.5	+0.4
DPC				*e*SG	Sn	07 52 43.7	-0.2

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*SKO **01** 07:52:02.4, 41.°39N×20.°22E, h12^{km}*
TIR 01 07:52:01.3, 41.°33N×**20.°25E, h10**^{km}±6^{km}**, Md2.3, Ml2.1, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.29**	**274**	*i* Pg	Pg	07 52 07.7	+0.5
TIR	**Tirane**	**0.29**	**274**	P	Pg	07 52 07.6	+0.4

	baz=274						
TIR				S	Sg	07 52 12.0	+0.9
	baz=274						
TIR				AMP			
	comp=E,0.8nm,0.1s,baz=274						
PHP	**Peshkopia**	0.38	22	P	Pg	07 52 09.5	+0.5
	baz=22						
PHP				S	Sg	07 52 15.1	+1.0
	baz=22						
PHP				AMP			
	comp=N,1.7nm,0.4s,baz=22						
OHR	**Ohrid**	0.47	117	*i* Pg	Pb	07 52 12.2	+0.5
OHR				*i* Sg	Sb	07 52 20.6	+2.0
OHR				*e*Lg	Lg	07 52 20.8	
	comp=E,134nm,0.6s						
ULC	**Ulcinj**	0.98	310	*i* Pg	Pg	07 52 18.9	-1.3
FNA	**Florina**	1.01	122	*i* Pg	Pn	07 52 21.5	-0.1
FNA				*i* Sg	Sn	07 52 36.4	+0.5
FNA	**Florina**	1.01	122	P	Pn	07 52 21.4	-0.2
	baz=122						
FNA				S	Sn	07 52 36.3	+0.5
	baz=122						
SKO	**Skopje**	1.10	54	*i* Pg	Pn	07 52 23.4	+0.6
SKO				*i* Sg	Sn	07 52 38.2	+0.2
SKO				*e*Lg	Lg	07 52 40.8	
	comp=N,3.1nm,0.3s						
STIP	**Stip**	1.50	75	*i* Pn	Pg	07 52 32.0	+1.9
STIP				*i* Sn	Sg	07 52 56.1	+6.5
STIP				*e*Lg	Lg	07 52 58.9	
	comp=N,3.2nm,0.3s						
BEY	**Berane**	1.56	350	*i* Pn	Pg	07 52 32.4	+1.1

LDG ***01*** *07:52:31.1±0.1, 45°.86N×15°.54E, h6^{km}, Md4.3/4, Ml4.4/45*

KRSZO ***01*** *07:52:32.8±0.3, 45°.86N×15°.55E, h5^{km}±1^{km}, ML4.7/32, Error ellipse: s-maj=1.9km s-min=1.7km az=161.0*

BGR ***01*** *07:52:32.7±0.5, 45°.79N×15°.61E, h5^{km}, ML4.8/13, Error ellipse: s-maj=8.9km s-min=6.7km az=52.0*

PRU ***01*** *07:52:32.5±0.0, 45°.85N×15°.51E, h0^{km}, M4.5*

IDC ***01*** *07:52:32.8±0.5, 45°.90N×15°.56E, h0^{km}, mb4.2/23, mb1 4.2/34, mb1mx4.1/68, mbtmp4.2/34, ML4.4/9, MS3.6/27, Ms1 3.6/27, ms1mx3.5/52, Error ellipse: s-maj=9.4km s-min=7.5km az=65.0*

MOS ***01*** *07:52:32.8±1.0, 45°.92N×15°.53E, h11^{km}, mb4.5/11, Error ellipse: s-maj=5.4km s-min=3.4km az=77.2*

MED_RC ***01*** *07:52:32.0±0.2, 45°.84N×15°.61E, h10^{km}±1^{km}, MW4.5/17, Moment Tensor Solution. Mantle waves: s17,c35; Duration: $1^{s}0$ Moment tensor: Scale 10^{15}Nm; M_{rr}4.39±.49; $M_{\theta\theta}$-5.09±.34; $M_{\phi\phi}$0.70±.24; $M_{r\theta}$-2.99±.76; $M_{\theta\phi}$1.08±.17; $M_{\phi r}$1.54±.86; Best double couple: $M_0$5.91000×10^{15} NP1:ϕ_s87.00000°, δ29.00000°, λ69.00000°. NP2:ϕ_s291.00000°, δ63.00000°, λ102.00000°. Principal axes: T 5.5500, Plg70.0000°, Azm226.0000°; N 0.7100, Plg10.0000°, Azm106.0000°; P -6.2700, Plg17.0000°, Azm13.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

IASPEI ***01*** *07:52:33.1±0.9, 45°.86N±0°.02×15°.53E±0°.01, h5^{km}±5^{km}, mb4.3/41, MS3.7/18 Error ellipse: s-maj=2.4km s-min=2.0km az=173.3, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

NEIC ***01*** *07:52:33.2±1.7, 45°.86N±0°.04×15°.55E±0°.05, h2^{km}±2^{km}, mb4.5/20, Mwr4.3/34, ML4.2(LJU), ML4.4(ZAG), ML4.8(VIE), Error ellipse: s-maj=5.6km s-min=4.9km az=66.0*

LJU ***01*** *07:52:33.0, 45°.85N×15°.54E, h6^{km}, ML4.2*

PDG ***01*** *07:52:33.0±0.5, 45°.90N×15°.55E, h16^{km}, ML4.0/13, Error ellipse: s-maj=0.3km s-min=0.5km az=0.0*

RHSSO ***01*** *07:52:33.9±0.2, 45°.85N×15°.51E, h5^{km}±1^{km}, ML4.5/17*

NEIC ***01*** *07:52:33.8, 45°.90N×15°.54E, h5^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}3.08; $M_{\theta\theta}$-3.22; $M_{\phi\phi}$0.14; $M_{r\theta}$0.35; $M_{\theta\phi}$0.73; $M_{\phi r}$-0.67; Fault plane solution: $M_0$3.32000×10^{15} NP1:ϕ_s270.57000°, δ41.84000°, λ73.08000°. NP2:ϕ_s112.78000°, δ50.34000°, λ104.61000°. Principal axes: T 3.2286, Plg78.0000°, Azm82.0000°; N 0.1781, Plg11.0000°, Azm283.0000°; P -3.4068, Plg4.0000°, Azm192.0000°;*

ROM ***01*** *07:52:34.3, 45°.88N×15°.57E, h10^{km}, mb4.8/14 Error ellipse: s-maj=1.2km s-min=0.0km az=255.0*

BEO ***01*** *07:52:34.6±0.7, 45°.96N×15°.82E, h0^{km}, ML4.3/15*

BNS ***01*** *07:52:41.9±0.3, 46°.27N×15°.21E, h10^{km}, ML4.4*

ISC 01 07:52:33.5±0.7, **45°.87N**±0°.01×**15°.53E**±0°.01, **h6**^{km}±4^{km}, **n614**, σ**$1^{s}74$**/821, **mb4.3**/41, **MS3.7**/18, **71C-62D,**
Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GCIS	**Gornji Cirnik**	0.07	91	⇑*i*Pg	Pg	07 52 34.5	-0.7
GCIS				*i* Sg	Sg	07 52 35.7	-0.7
GCIS				IAML		07 52 36.2	
	comp=Z,35μm,0.1s						
CRES	**Cresnjev**	0.07	231	⇓*i*Pg	Pg	07 52 34.8	-0.4
CRES				*e*Sg	Sg	07 52 36.1	-0.3
CRES	**Cresnjev**	0.07	231	⇓*i*Pg	Pg	07 52 34.8	-0.4
CRES				*i* Sg	Sg	07 52 36.2	-0.3
CRES				IAML		07 52 36.9	
	comp=Z,111μm,0.2s						
CRES	**Cresnjev**	0.07	231	Pg	Pg	07 52 33.8	-1.4
	comp=Z,4μm,SNR=1000						
CESS	**Cesta pri Krsk**	0.12	335	⇓*i*Pg	Pg	07 52 35.6	-0.4
CESS				*e*Sg	Sg	07 52 37.6	-0.1
CESS				IAML		07 52 38.7	
	comp=Z,117μm,0.4s						
GOLS	**Golise**	0.16	24	⇓*e*Pg	Pg	07 52 36.2	-0.5
GOLS				*i* Sg	Sg	07 52 38.8	0.0
GOLS				IAML		07 52 42.5	
	comp=Z,39μm,0.3s						
LEGS	**Legarje**	0.17	298	⇓*i*Pg	Pg	07 52 36.7	-0.2
LEGS				*i* Sg	Sg	07 52 39.9	+0.7
OZLJ	**Ozalj**	0.26	190	*i* Pg	Pg	07 52 37.8	-0.7
OZLJ				Sg	Sg	07 52 42.2	+0.3
DOBS	**Dobrina**	0.28	351	⇓*i*Pg	Pg	07 52 39.0	0.0
DOBS				*i* Sg	Sg	07 52 43.5	+0.6
DOBS				IAML		07 52 46.0	
	comp=Z,29μm,0.4s						
PTJ	**Puntijarka**	0.31	83	*i* Pg	Pg	07 52 39.4	-0.1
PTJ				Sg	Sg	07 52 43.8	+0.2
PTJ	**Puntijarka**	0.31	83	Pg	Pg	07 52 39.4	-0.1
	comp=Z,123nm,SNR=1000						
ZAG	**Zagreb**	0.32	97	⇑*i*Pg	Pg	07 52 40.0	+0.3
ZAG				*e*Sg	Sg	07 52 45.4	+1.4
ZAG	**Zagreb**	0.32	97	*i* Pg	Pg	07 52 40.0	+0.3
ZAG				Sg	Sg	07 52 44.6	+0.6
ZAG	**Zagreb**	0.32	97	Pg	Pg	07 52 40.0	+0.3
	comp=Z,201nm,SNR=952						
BOJS	**Bojanci**	0.41	208	⇓*i*Pg	Pg	07 52 40.6	-0.9
BOJS				*e*Sg	Sg	07 52 47.2	+0.2
BOJS				IAML		07 52 49.9	
	comp=Z,10μm,0.3s						
PDKS	**Podkum**	0.42	297	⇓*i*Pg	Pg	07 52 41.6	0.0
PDKS				*i* Sg	Sg	07 52 47.7	+0.6
PDKS				IAML		07 52 48.2	
	comp=Z,39μm,0.4s						
LOBO	**Lobor**	0.47	52	*i* Pg	Pg	07 52 42.2	-0.4
LOBO				Sg	Sg	07 52 49.2	+0.5
VISS	**Visnje**	0.49	263	*i* Pg	Pg	07 52 42.3	-0.6
VISS				*i* Sg	Sg	07 52 49.6	+0.3
VISS				IAML		07 52 54.2	
	comp=Z,8μm,0.3s						
GROS	**Grobnik**	0.59	358	⇓*i*Pg	Pg	07 52 44.9	-0.1
GROS				*e*Sg	Sg	07 52 52.3	-0.3
GROS				IAML		07 52 57.6	
	comp=Z,6μm,0.3s						
GBRS	**Gornja Briga**	0.61	237	⇓*i*Pg	Pg	07 52 45.0	-0.2
GBRS				*i* Sg	Sg	07 52 53.3	+0.2
GBRS				IAML		07 53 01.5	
	comp=Z,16μm,0.6s						
VNDS	**Vrh nad Dolski**	0.62	292	⇑*i*Pg	Pg	07 52 45.5	-0.1
VNDS				*e*Sg	Sg	07 52 53.4	-0.3
VNDS				IAML		07 52 54.5	
	comp=Z,21μm,0.4s						
KALN	**Kalnik**	0.69	67	*i* Pg	Pg	07 52 46.6	-0.3
KALN				Sg	Sg	07 52 56.2	+0.3
LJU	**Ljubljana**	0.72	284	*e*Pg	Pg	07 52 46.6	-0.8
LJU				*e*Sg	Sg	07 52 56.6	-0.2
LJU	**Ljubljana**	0.72	284	⇑*i*Pg	Pg	07 52 47.3	-0.1
LJU				*e*Sg	Sg	07 52 56.3	-0.4
LJU				IAML		07 52 59.0	
	comp=Z,5μm,0.2s						
GBAS	**Gorenja Brezov**	0.76	275	⇑*i*Pg	Pg	07 52 47.8	-0.3
GBAS				*e*Sg	Sg	07 52 57.3	-0.8
GBAS				IAML		07 53 00.7	
	comp=Z,10μm,0.5s						
KOGS	**Kog**	0.77	40	⇓*i*Pg	Pg	07 52 48.0	-0.2
KOGS				*e*Sg	Sb	07 52 59.1	-0.7
KOGS				IAML		07 53 02.7	
	comp=Z,11μm,0.4s						
KOGS	**Kog**	0.77	40	Pg	Pg	07 52 48.0	-0.2
	comp=Z,278nm,SNR=1000						
CEY	**Cerknica**	0.78	261	⇓*i*Pg	Pg	07 52 48.1	-0.5
CEY				*e*Sg	Sg	07 52 59.3	+0.5
CEY	**Cerknica**	0.78	261	⇓*i*Pg	Pg	07 52 48.2	-0.3
CEY				*e*Sg	Sg	07 52 59.3	+0.5
CEY				IAML		07 53 03.9	
	comp=Z,7μm,0.3s						
PERS	**Pernice**	0.82	340	⇓*i*Pg	Pg	07 52 49.0	-0.3
PERS				*i* Sg	Sg	07 52 59.7	-0.2
PERS				IAML		07 53 01.6	
	comp=Z,7μm,0.2s						
KNDS	**Knezji Dol**	0.88	248	*i* Pg	Pg	07 52 49.8	-0.5
KNDS				*e*Sg	Sb	07 53 02.5	-0.7
KNDS				IAML		07 53 06.0	
	comp=Z,9μm,0.5s						
SOKA	**Soboth**	0.88	337	*e*Pg	Pg	07 52 50.0	-0.4
	comp=Z,522nm,0.3s,SNR=1257						
SOKA				*e*Sg	Sg	07 53 02.0	+0.1
	comp=Z,3μm,0.3s						
SOKA	**Soboth**	0.88	337		Pg	07 52 50.0	-0.4
SOKA					Sg	07 53 02.0	+0.1
MOSL	**Moslavina**	0.89	106	*i* Pg	Pg	07 52 49.9	-0.7
MOSL				Sg	Sg	07 53 02.5	+0.3
CRNS	**Crni Vrh**	0.91	284	⇑*i*Pg	Pg	07 52 50.6	-0.4
CRNS				*e*Sg	Sg	07 53 02.9	0.0
CRNS				IAML		07 53 07.2	
	comp=Z,15μm,0.4s						
RIY	**Rijeka**	0.92	234	⇓*i*Pg	Pg	07 52 50.2	-0.9
RIY				*e*Sg	Sg	07 53 02.8	-0.1
RIY	**Rijeka**	0.92	234	*e*Pg	Pg	07 52 50.1	-0.9
RIY				Sg	Sg	07 53 02.8	-0.1
OBKA	**Obir**	0.94	313	*e*Pg	Pg	07 52 51.2	-0.3
	comp=Z,360nm,0.2s,SNR=954						
OBKA				Sg	Sg	07 53 03.5	-0.1
	comp=Z,10μm,0.6s						
OBKA	**Obir**	0.94	313		Pg	07 52 51.2	-0.3
OBKA					Sg	07 53 03.5	-0.1
OBKA	**Obir**	0.94	313	*e*P	Pg	07 52 51.2	-0.3
OBKA				*e*Sg	Sg	07 53 04.3	+0.7
OBKA	**Obir**	0.94	313	*e*Pn	Pg	07 52 51.2	-0.3
OBKA				*e*Sg	Sg	07 53 04.3	+0.7
OBKA	**Obir**	0.94	313	Pg	Pg	07 52 51.2	-0.3
	comp=Z,61nm,SNR=1000						
PLIT	**Plitvice**	0.99	176	*e*Pg	Pg	07 52 51.4	-1.2
PLIT				Sg	Sg	07 53 05.0	-0.3
JAVS	**Javornik**	1.03	272	*i* Pg	Pg	07 52 52.3	-0.9
JAVS				*e*Sg	Sb	07 53 07.7	+0.2
JAVS				IAML		07 53 11.1	
	comp=Z,16μm,0.5s						
BEHE	**Becsehely**	1.05	55	*e*PG	Pg	07 52 53.6	-0.1
BEHE	**Becsehely**	1.05	55	⇓*i*Pg	Pg	07 52 53.6	-0.1
BEHE				*e*Sg	Sb	07 53 08.7	+0.5
BEHE	**Becsehely**	1.05	55	Pg	Pg	07 52 53.6	-0.1
	comp=Z,86nm,SNR=847						
SKDS	**Skadanscina**	1.11	254	*i* Pg	Pg	07 52 53.8	-1.0
SKDS				*e*Sg	Sg	07 53 09.2	0.0
SKDS				IAML		07 53 13.4	
	comp=Z,4μm,0.2s						
GORS	**Gorjuse**	1.16	293	⇓*i*Pg	Pg	07 52 55.0	-0.8
GORS				*e*Sg	Sg	07 53 11.0	+0.2
GORS				IAML		07 53 14.1	
	comp=Z,6μm,0.3s						
VOJS	**Vojsko**	1.16	279	*i* Pg	Pg	07 52 54.8	-1.0
VOJS				*e*Sg	Sg	07 53 10.7	-0.2
VOJS				IAML		07 53 13.5	
	comp=Z,4μm,0.3s						
PRIJ	**Prijedor**	1.22	137	⇑*i*Pg	Pg	07 52 56.0	-0.9
PRIJ				*e*Sg	Sn	07 53 13.3	-0.6
TRI	**Trieste**	1.25	263	*e*Pg	Pg	07 52 56.5	-0.9
TRI				*e*Sg	Sn	07 53 14.4	-0.2
TRI	**Trieste**	1.25	263	P	Pg	07 52 56.7	-0.7
TRI						07 53 14.2	
TRI	**Trieste**	1.25	263		Pg	07 52 56.7	-0.7
TRI				Sn	Sb	07 53 14.2	+0.4
TRI	**Trieste**	1.25	263	⇑P	Pg	07 52 56.2	-1.2
TRI	**Trieste**	1.25	263	Pg	Pg	07 52 56.5	-0.9
	comp=Z,39nm,SNR=369						
SMRN	**Sveta Marina**	1.28	230	*e*Pg	Pn	07 52 57.5	-0.4
SMRN				Sg	Sg	07 53 14.5	-0.1
MRAK	**Mrakovica**	1.29	131	⇑*i*Pg	Pn	07 52 56.7	-1.4
MRAK				*e*Sg	Sn	07 53 15.4	-0.3
CADS	**Cadrg**	1.30	287	*i* Pg	Pn	07 52 57.3	-1.0
CADS				*e*Sg	Sb	07 53 15.6	+0.2
CADS				IAML		07 53 18.6	
	comp=Z,17μm,0.3s						
DRE	**Drenchia**	1.35	284	*e*Pg	Pn	07 52 58.3	-0.7
UDBI	**Udbina**	1.35	173	*e*Pn	Pn	07 52 57.5	-1.4
UDBI				Sn	Sn	07 53 17.1	-0.1
SABO	**M.te Sabotino**	1.35	275	*e*Pg	Pn	07 52 57.9	-1.1
SABO				*e*Sg	Sb	07 53 16.8	0.0
ARSA	**Arzberg**	1.38	360	*e*Pn	Pn	07 52 58.3	-1.1
	comp=Z,578nm,0.4s,SNR=543						
ARSA				Sg	Sg	07 53 21.2	+3.3
	comp=Z,2μm,0.5s						
ARSA	**Arzberg**	1.38	360		Pn	07 52 58.3	-1.1
ARSA					Sg	07 53 21.2	+3.3
ARSA	**Arzberg**	1.38	360	*e*P	Pn	07 52 58.4	-1.1
ARSA	**Arzberg**	1.38	360	*e*Pn	Pn	07 52 58.4	-1.0
ARSA	**Arzberg**	1.38	360	Pn	Pn	07 52 58.3	-1.0
	comp=Z,11nm,SNR=232						
ROBS	**Robic**	1.46	286	*i* Pg	Pn	07 52 60.0	-0.4
ROBS				*e*Sg	Sg	07 53 20.3	-0.1
ROBS				IAML		07 53 22.2	
	comp=Z,5μm,0.3s						
MYKA	**Terra Mystica**	1.52	301	*e*Pn	Pn	07 53 01.2	-0.1
	comp=Z,372nm,0.3s,SNR=333						
MYKA				Sn	Sb	07 53 21.6	0.0
	comp=Z,2μm,0.4s						
MYKA	**Terra Mystica**	1.52	301		Pn	07 53 01.2	-0.1
MYKA					Sb	07 53 21.6	0.0
PTCC	**Patocco-Chiusa**	1.61	290	⇑P	Pn	07 53 01.9	-0.6
BLY	**Banja Luka**	1.62	133	*e*Pg	Pn	07 53 02.0	-0.5
BLY				*e*Sg	Sn	07 53 21.9	-1.8
BLY	**Banja Luka**	1.62	133	⇑*i*Pn	Pn	07 53 01.7	-0.8
BLY				*e*Sn	Sg	07 53 25.0	-0.4
BLY	**Banja Luka**	1.62	133	⇑P	Pn	07 53 01.6	-1.0
BLY	**Banja Luka**	1.62	133	Pn	Pn	07 53 01.6	-1.0
	comp=Z,10.0nm,SNR=178						
KOVH	**Kovagotottos**	1.80	82	*e*PN	Pn	07 53 03.2	-1.9
KOVH	**Kovagotottos**	1.80	82	Pn	Pn	07 53 03.2	-1.9
	comp=Z,9.1nm,SNR=230						
MGRS	**Mrkonjic Grad**	1.82	142	⇑*i*Pn	Pn	07 53 05.3	-0.1
MGRS				*e*Sn	Sb	07 53 29.4	-0.9
MPLH	**Magyarpolny**	1.90	46	*e*PN	Pn	07 53 05.0	-1.5
MPLH	**Magyarpolny**	1.90	46	Pn	Pn	07 53 05.0	-1.5
	comp=Z,9.4nm,SNR=280						
ZOU	**Zoufplan**	1.91	292		Pn	07 53 07.1	+0.4
DUGI	**Dugi Otok**	1.91	190	*e*Pn	Pn	07 53 07.3	+0.7
TIH	**Tihany**	1.93	57	*e*PN	Pn	07 53 04.8	-2.1
TIH				*e*PG	Pb	07 53 09.3	+0.2
TIH	**Tihany**	1.93	57	Pn	Pn	07 53 04.8	-2.1
	comp=Z,26nm,SNR=418						
TIH				Pg	Pb	07 53 09.3	+0.2
KBA	**Koelnbreinsper**	1.94	309	Pn	Pn	07 53 07.0	-0.1
	comp=Z,268nm,0.3s,SNR=367						
KBA				Sg	Sb	07 53 34.1	+0.3
	comp=Z,2μm,0.3s						
KBA	**Koelnbreinsper**	1.94	309	P	Pn	07 53 07.0	-0.1
KBA						07 53 34.1	
KBA	**Koelnbreinsper**	1.94	309		Pn	07 53 07.0	-0.1
KBA					Sb	07 53 34.1	+0.3
KBA	**Koelnbreinsper**	1.94	309	*e*P	Pn	07 53 07.0	-0.1
KBA	**Koelnbreinsper**	1.94	309	*e*Pn	Pn	07 53 07.0	-0.1
SOP	**Sopron**	1.95	21	*e*PN	Pn	07 53 06.2	-0.9
SOP				*e*PG	Pb	07 53 09.5	+0.1
SOP	**Sopron**	1.95	21	Pn	Pn	07 53 06.2	-0.9
	comp=Z,5.5nm,SNR=182						
SOP				Pg	Pb	07 53 09.5	+0.1
KIJV	**Kijevo**	1.96	161	*i* Pn	Pn	07 53 08.0	+0.6
STAL	**STALIGIAL**	2.00	282		Pn	07 53 08.3	+0.4
MORI	**Morici**	2.01	176	*e*Pn	Pn	07 53 09.0	+1.1
CONA	**Conrad Observa**	2.07	6	*e*Pn	Pn	07 53 08.4	-0.5
	comp=Z,57nm,0.3s,SNR=254						
CONA				Sg	Sg	07 53 42.9	+2.9
	comp=Z,655nm,0.6s						
CONA	**Conrad Observa**	2.07	6		Pn	07 53 08.4	-0.5
CONA					Sg	07 53 42.9	+2.9
DOB	**Doboj**	2.14	121	*e*Pn	Pn	07 53 10.2	+0.5
DOB				*e*Sn	Sn	07 53 36.5	0.0
MOA	**Molln**	2.16	337	*e*Pn	Pn	07 53 10.1	0.0
	comp=Z,67nm,0.2s,SNR=130						
MOA				Pg	Pg	07 53 16.4	+1.5
	comp=Z,407nm,0.6s						
MOA				Sn	Sb	07 53 38.9	-1.3
	comp=Z,480nm,0.3s						
MOA	**Molln**	2.16	337		Pn	07 53 10.1	0.0
MOA					Pg	07 53 16.4	+1.5
MOA					Sb	07 53 38.9	-1.3
MOA	**Molln**	2.16	337	*e*P	Pn	07 53 10.2	+0.1
MOA	**Molln**	2.16	337	*e*Pn	Pn	07 53 10.2	+0.1
MORH	**Mrgy, Hungar**	2.19	80	*e*Pn	Pn	07 53 11.7	+1.2
MORH				*e*Sn	Sn	07 53 38.6	+0.7
ZIRJ	**Zirje**	2.22	178	*e*Pn	Pn	07 53 11.9	+1.1
ABTA	**Abfaltersbach**	2.27	294	*e*Pn	Pn	07 53 12.0	+0.4
	comp=Z,30nm,0.2s,SNR=188						
ABTA				Sn	Sn	07 53 41.3	+1.4
	comp=Z,700nm,0.5s						
ABTA	**Abfaltersbach**	2.27	294		Pn	07 53 12.0	+0.4
ABTA					Sn	07 53 41.3	+1.4
CSKK	**Cskako**	2.40	51	*e*PN	Pn	07 53 12.9	-0.4
CSKK	**Cskako**	2.40	51	Pn	Pn	07 53 12.9	-0.4
	comp=Z,3.1nm,SNR=169						
CSKK				Pg	Pb	07 53 14.0	-3.1
	comp=Z,3.1nm,SNR=165						
ZST	**Bratislava**	2.56	24	*e*P	Pn	07 53 14.5	-1.1
ZST				pmax	pmax		
	comp=N,3μm,0.9s						
ZST	**Bratislava**	2.56	24	*e*PN	Pn	07 53 14.5	-1.1
ZST				*e*PG	Pg	07 53 22.3	-0.3
ZST				*e*SG	Sg	07 53 56.3	+0.5
ZST				*e*LG	Lg	07 54 00.9	
RICI	**Ricice**	2.63	154	*e*Pn	Pn	07 53 17.6	+1.0
RJOB	**Jochberg**	2.65	316	*e*P	Pn	07 53 17.8	+1.0
RJOB	**Jochberg**	2.65	316	*e*Pn	Pn	07 53 17.8	+1.0
CTI	**Castel Tesino**	2.71	275	P	Pn	07 53 17.6	-0.2
CTI	**Castel Tesino**	2.71	275	Pn	Pn	07 53 17.6	-0.2
SRO	**Srobarova**	2.73	43	*e*P	Pn	07 53 16.8	-1.0
SRO				*e*		07 53 50.2	
SRO	**Srobarova**	2.73	43	Pn	Pn	07 53 16.8	-1.0
	comp=Z,19nm,SNR=145						
SRO	**Srobarova**	2.73	43	*e*PN	Pn	07 53 16.8	-1.0
SRO				*e*PG	Pg	07 53 25.5	-0.2
SRO				*e*SN	Sn	07 53 50.2	-0.8
SRO2	**Moca**	2.73	45	*e*P	Pn	07 53 15.8	-2.0
SRO2				*e*		07 53 49.0	
SRO2				pmax	pmax		
	comp=N,2μm,0.6s						
SRO2	**Moca**	2.73	45	*e*PN	Pn	07 53 15.8	-2.0
SRO2				*e*PG	Pg	07 53 24.6	-1.2
SRO2				*e*SN	Sn	07 53 49.0	-2.1
SRO2				*e*LG	Lg	07 54 11.4	
TEOL	**Teolo**	2.76	261	Pn	Pn	07 53 17.6	-0.6
MODS	**Modra-Piesok**	2.77	25	*e*P	Pn	07 53 16.4	-2.1
MODS				pmax	pmax		
	comp=N,2μm,1.2s						
MODS	**Modra-Piesok**	2.77	25	*e*PN	Pn	07 53 16.4	-2.1
MODS				*e*PG	Pg	07 53 25.5	-1.1
MODS				*e*SG	Sg	07 54 01.6	-1.0
MODS				*e*LG	Lg	07 54 03.6	
MAKA	**Makarska**	2.79	157	*e*Pn	Pn	07 53 20.0	+1.4
BLJ	**Bijeljina**	2.85	111	*e*Pn	Pn	07 53 18.7	-0.8
BLJ				*e*Sn	Sn	07 53 53.6	-0.5
BUD	**Budapest**	2.90	55	*e*PN	Pn	07 53 18.9	-1.2
BUD				*e*PG	Pg	07 53 27.4	-1.6
BUD	**Budapest**	2.90	55	Pn	Pn	07 53 18.9	-1.2
	comp=Z,2.7nm,SNR=55						
BUD				Pg	Pg	07 53 27.4	-1.6
SMOL	**Smolenice**	2.94	25	*e*P	Pn	07 53 20.0	-0.8
SMOL	**Smolenice**	2.94	25	*e*PN	Pn	07 53 20.0	-0.8
SMOL				*e*PG	Pg	07 53 28.8	-1.1
SMOL				*e*SG	Sg	07 54 08.6	+0.5
KW1	**Garching a.d.**	3.02	319	*e*P	Pn	07 53 22.2	+0.4
KW1				*e*Pg	Pg	07 53 31.6	+0.2
KW1	**Garching a.d.**	3.02	319	*e*Pn	Pn	07 53 22.2	+0.4
KW1				*e*Pg	Pg	07 53 31.6	+0.2
WTTA	**Wattenberg**	3.03	299	*i* Pn	Pn	07 53 22.8	+0.6
	comp=Z,7.5nm,0.2s,SNR=56						
WTTA	**Wattenberg**	3.03	299	P	Pn	07 53 22.8	+0.6
WTTA	**Wattenberg**	3.03	299		Pn	07 53 22.8	+0.6
WTTA	**Wattenberg**	3.03	299	*e*P	Pn	07 53 23.0	+0.9
WTTA	**Wattenberg**	3.03	299	*e*Pn	Pn	07 53 23.0	+0.9
CKRC	**Cesky Krumlov**	3.07	345	*e*PN	Pn	07 53 22.7	+0.2
CKRC				*e*PG	Pb	07 53 30.3	+1.8
CKRC				*e*SN	Sn	07 53 57.1	-2.4
CKRC				*e*SG	Sg	07 54 10.5	-1.5
FRGS	**Fruska Gora**	3.09	102	⇑S	Sn	07 53 59.3	-0.8
FRGS	**Fruska Gora**	3.09	102	*e*Pn	Pn	07 53 21.3	-1.5
FRGS	**Fruska Gora**	3.09	102	*e*Pn	Pn	07 53 23.3	+0.5
FRGS				*e*Sn	Sn	07 54 01.0	+0.9
FRGS	**Fruska Gora**	3.09	102	⇑P	Pn	07 53 21.6	-1.2
WATA	**Walderalm**	3.10	300	*i* Pn	Pn	07 53 24.2	+1.1
	comp=Z,19nm,0.2s,SNR=68						
WATA	**Walderalm**	3.10	300	P	Pn	07 53 24.2	+1.1
WATA	**Walderalm**	3.10	300		Pn	07 53 24.1	+1.1
GEC2	**GERESS Array S**	3.23	338		Pn	07 53 24.2	-0.6
GEC2	**GERESS Array S**	3.23	338	*e*P	Pn	07 53 24.8	0.0
GEC2	**GERESS Array S**	3.23	338	*e*Pn	Pn	07 53 24.8	0.0
GERES	**GERESS Array B**	3.23	338	Pn	Pn	07 53 24.6	-0.2
	comp=Z,98nm,0.3s,baz=157,slow=14,SNR=3164						
GERES				Sn	Sn	07 54 03.2	-0.4
	comp=Z,72nm,0.3s,baz=148,slow=26,SNR=6.9						
GERES				Lg	Lg	07 54 14.8	
	comp=Z,112nm,0.3s,baz=148,slow=30,SNR=12						
KRUC	**Moravsky**	3.25	10	*e*PN	Pn	07 53 24.2	-0.8
KRUC				*e*SN	Sn	07 54 01.6	-2.3
SQTA	**Sankt Quirin**	3.28	296	*i* Pn	Pn	07 53 27.0	+1.5
	comp=Z,6.9nm,0.2s,SNR=31						
SQTA				*e*Pg	Pg	07 53 35.3	-1.0
	comp=Z,106nm,0.3s						
SQTA				*e*Sn	Sn	07 54 06.6	+1.8
	comp=Z,389nm,0.5s						
SQTA	**Sankt Quirin**	3.28	296		Pn	07 53 27.0	+1.5
SQTA					Pg	07 53 35.3	-1.0
SQTA					Sn	07 54 06.6	+1.8
JAVC	**Velka Javorina**	3.33	25	*e*PN	Pn	07 53 25.7	-0.4
STON	**Ston**	3.38	152	*e*Pn	Pn	07 53 28.1	+1.4
STON	**Ston**	3.38	152	*e*Pn	Pn	07 53 26.5	-0.2
STON				*e*Sn	Sn	07 54 06.5	-0.5
STON	**Ston**	3.38	152	*e*Pn	Pn	07 53 27.8	+1.1
MOTA	**Moosalm**	3.39	297	*i* Pn	Pn	07 53 28.1	+1.0
	comp=Z,6.4nm,0.2s,SNR=23						
MOTA				Pg	Pg	07 53 39.0	+0.6
	comp=Z,54nm,0.4s						
MOTA	**Moosalm**	3.39	297		Pn	07 53 28.1	+1.0
MOTA					Pg	07 53 39.0	+0.6
BBLS	**Lazići**	3.40	125	*e*Pn	Pn	07 53 26.9	-0.3
BBLS	**Lazići**	3.40	125	⇑*i*Pn	Pn	07 53 26.8	-0.4
BBLS				*e*Sn	Sn	07 54 07.9	0.0
BBLS	**Lazići**	3.40	125	Pg	Pn	07 53 26.9	-0.3
	comp=Z,15nm,SNR=46						
TREC	**Trest**	3.43	360	*e*P	Pn	07 53 27.8	+0.3
TREC	**Trest**	3.43	360	*e*PN	Pn	07 53 27.8	+0.3
TREC				*e*PG	Pb	07 53 36.4	+1.8
TREC				*e*SG	Sg	07 54 22.5	-1.1
	comp=Z,488nm,0.6s						
VYHS	**Vyhne**	3.46	39	*e*P	Pn	07 53 26.8	-1.1
VYHS				*e*		07 54 06.5	
VYHS	**Vyhne**	3.46	39	*e*PN	Pn	07 53 26.8	-1.1
VYHS				*e*PG	Pg	07 53 38.3	-1.5
VYHS				*e*SN	Sn	07 54 06.5	-2.7
NRCA	**Norcia**	3.50	211		Pn	07 53 28.9	+0.4
FETA	**Feichten**	3.52	291	*e*Pn	Pn	07 53 30.6	+1.9
	comp=Z,19nm,0.3s,SNR=35						
FETA				Pg	Pg	07 53 39.8	-1.0
	comp=Z,67nm,0.4s						
FETA	**Feichten**	3.52	291		Pn	07 53 30.6	+1.9
FETA					Pg	07 53 39.8	-1.0
SALO	**Salr**	3.52	268	Pn	Pn	07 53 29.8	+1.1
SALO	**Salr**	3.52	268	⇑P	Pn	07 53 28.9	+0.2
VRAC	**Vranov**	3.52	11	⇓P	Pn	07 53 28.0	-0.6
VRAC				⇑S	Sn	07 54 10.8	+0.2
VRAC	**Vranov**	3.52	11	Pn	Pn	07 53 27.9	-0.8
	comp=Z,28nm,0.3s,baz=210,slow=13,SNR=155						

VRAC				Sn	Sn	07 54 07.2	-3.3
	comp=Z,22nm,0.3s,baz=108,slow=20,SNR=3.7						
VRAC				Lg	Lg	07 54 22.2	
	comp=Z,29nm,0.3s,baz=315,slow=20,SNR=5.4						
VRAC	Vranov	3.52	11	*e*PN	Pn	07 53 27.9	-0.8
VRAC				*e*SN	Sn	07 54 07.6	-3.0
KHC	Kasperske Hory	3.52	339	*e*P	Pn	07 53 28.6	-0.2
KHC				*e*		07 54 08.1	
KHC				smax	smax		
	comp=N,628nm,0.6s						
KHC	Kasperske Hory	3.52	339	*e*PN	Pn	07 53 28.6	-0.2
KHC				*e*PG	Pb	07 53 38.5	+2.3
KHC				*e*SN	Sn	07 54 08.1	-2.7
KHC				*e*SG	Sg	07 54 24.1	-2.5
	comp=N,628nm,0.6s						
KHC	Kasperske Hory	3.52	339	⇑P	Pn	07 53 28.5	-0.2
RUDO	Rudo	3.54	128	⇑*i*Pn	Pn	07 53 28.5	-0.5
RUDO				*e*Sn	Sn	07 54 10.9	-0.3
ZCCA	Zocca	3.56	246		Pn	07 53 29.4	0.0
BE1	Monatshausen	3.59	306	*e*P	Pn	07 53 30.4	+0.6
BE1	Monatshausen	3.59	306	*e*Pn	Pn	07 53 30.4	+0.6
UPM	Unac-Piva	3.59	137	*e*Pn	Pn	07 53 30.6	+0.7
UPM	Unac-Piva	3.59	137	⇓*i*Pn	Pn	07 53 29.5	-0.4
UPM				*i* Sn	Sn	07 54 12.5	-0.2
DIVS	Divibare	3.62	118	*e*Pn	Pn	07 53 30.0	-0.2
DIVS	Divibare	3.62	118		Pn	07 53 29.7	-0.5
DIVS	Divibare	3.62	118	⇓*i*Pn	Pn	07 53 30.0	-0.2
DIVS				*e*Sn	Sn	07 54 13.6	+0.2
DIVS	Divibare	3.62	118	⇑P	Pn	07 53 29.2	-1.0
DIVS	Divibare	3.62	118	Pg	Pn	07 53 29.2	-1.0
	comp=Z,2.4nm,SNR=45						
PSZ	Piszkesteto	3.63	54	⇓P	Pn	07 53 28.3	-2.0
PSZ	Piszkesteto	3.63	54	*e*PN	Pn	07 53 28.2	-2.0
PSZ	Piszkesteto	3.63	54	P	Pn	07 53 28.9	-1.3
PSZ	Piszkesteto	3.63	54	Pn	Pn	07 53 28.9	-1.3
PSZ	Piszkesteto	3.63	54	⇑P	Pn	07 53 28.1	-2.1
PSZ	Piszkesteto	3.63	54	Pn	Pn	07 53 28.2	-2.1
	comp=Z,2.3nm,SNR=56						
BEO	Beograd	3.64	105	Pg	Pg	07 53 41.7	-1.5
RETA	Reutte	3.66	298	*i* Pn	Pn	07 53 31.4	+0.6
	comp=Z,4.9nm,0.3s,SNR=17						
RETA				Pg	Pg	07 53 44.5	+0.9
	comp=Z,95nm,0.4s						
RETA				Sg	Sg	07 54 32.9	+1.9
	comp=Z,712nm,0.7s						
RETA	Reutte	3.66	298		Pn	07 53 31.4	+0.6
RETA					Pg	07 53 44.5	+0.9
RETA					Sg	07 54 33.0	+1.9
BRY	Bratogost	3.67	143	*e*Pn	Pn	07 53 31.4	+0.5
BRY	Bratogost	3.67	143	⇓*i*Pn	Pn	07 53 30.8	-0.1
BRY				*i* Sn	Sn	07 54 14.3	-0.2
DBRK	Dubrovnik	3.71	149	*e*Pn	Pn	07 53 32.6	+1.3
FUR	Furstenfeldbru	3.71	310	*e*P	Pn	07 53 31.7	+0.4
FUR				*e*Pg	Pg	07 53 42.8	-1.8
FUR				*e*Sg	Sg	07 54 31.3	-1.2
FUR	Furstenfeldbru	3.71	310	*e*Pn	Pn	07 53 31.7	+0.4
FUR				*e*Pg	Pg	07 53 42.8	-1.8
FUR				*e*Sg	Sg	07 54 31.3	-1.2
WET	Wettzell	3.74	332	*e*P	Pn	07 53 31.5	-0.2
WET				*e*Pg	Pg	07 53 44.8	-0.3
WET	Wettzell	3.74	332	*e*Pn	Pn	07 53 31.5	-0.2
WET				*e*Pg	Pg	07 53 44.8	-0.3
TREB	Trebinje	3.74	146	*e*Pn	Pn	07 53 33.4	+1.6
TREB				*e*Sn	Sn	07 54 17.2	+1.0
TREB	Trebinje	3.74	146	*e*Pn	Pn	07 53 32.7	+0.9
TREB				*e*Sn	Sn	07 54 16.3	+0.1
PLE	Pljevlja	3.75	131	⇓*i*Pn	Pn	07 53 31.6	-0.3
PLE				*i* Sn	Sn	07 54 16.1	-0.3
TRUS	Trudelj	3.83	114	*e*Pn	Pn	07 53 32.7	-0.2
AQU	L'Aquila	3.83	204	P	Pn	07 53 33.1	0.0
AQU	L'Aquila	3.83	204	Pn	Pn	07 53 33.1	0.0
AQU	L'Aquila	3.83	204	*e*Pn	Pn	07 53 32.4	-0.7
AQU	L'Aquila	3.83	204	⇑P	Pn	07 53 34.6	+1.5
AQU	L'Aquila	3.83	204	Pg	Pn	07 53 33.1	0.0
	comp=Z,3.2nm,SNR=29						
MGAB	Montegabbione	3.84	221	⇑P	Pn	07 53 33.8	+0.7
PRMA	PARMA	3.84	255		Pn	07 53 34.2	+1.0
OSSC	Osservatorio P	3.85	234		Pn	07 53 33.5	+0.2
NKY	Niksic	3.94	140	*e*Pn	Pn	07 53 34.9	+0.4
NKME	Niksic	3.96	140	⇑*i*Pn	Pn	07 53 34.6	-0.1
NKME				*i* Sn	Sn	07 54 21.3	-0.1
BANR	Banloc	3.96	95	⇑P	Pn	07 53 33.2	-1.5
BANR	Banloc	3.96	95	Pg	Pb	07 53 45.3	+1.6
TIM	Timisoara	3.98	90	⇑P	Pn	07 53 34.1	-1.0
TIM				⇑S	Sn	07 54 21.7	-0.2
DAVOX	Davos/Dischmat	4.02	285	Pn	Pn	07 53 37.3	+1.5
	comp=Z,17nm,0.3s,baz=53,slow=14,SNR=127						
DAVOX				Sn	Sn	07 54 24.9	+1.7
	comp=Z,50nm,0.3s,baz=147,slow=21,SNR=7.6						
DAVOX				Lg	Lg	07 54 41.0	
	comp=Z,47nm,0.3s,baz=112,slow=23,SNR=3.5						
DAVOX				LR	LR	07 55 33.2	
	comp=Z,320nm,19.2s,baz=114,slow=45						
HCY	Herceg Novi	4.03	147	*e*Pn	Pn	07 53 36.3	+0.6
HCY	Herceg Novi	4.03	147	*e*Pn	Pn	07 53 36.4	+0.7
HCY				*e*Sn	Sn	07 54 23.2	0.0
VLC	Villacollemand	4.03	247		Pn	07 53 35.9	+0.2
VLC	Villacollemand	4.03	247	⇑P	Pn	07 53 35.9	+0.2
SJES	Sjenica	4.11	128	*e*Pn	Pn	07 53 37.2	+0.3
SGRT	San Giovanni R	4.12	178	Pn	Pn	07 53 36.3	-0.7
CEME	Cevo	4.12	143	⇑*i*Pn	Pn	07 53 36.9	-0.1
CEME				*i* Sn	Sn	07 54 25.3	-0.2
MORC	Moravsky Berou	4.14	18	⇓P	Pn	07 53 37.1	-0.2
MORC	Moravsky Berou	4.14	18	P	Pn	07 53 36.9	-0.4
MORC	Moravsky Berou	4.14	18	Pn	Pn	07 53 36.9	-0.4
MORC	Moravsky Berou	4.14	18	*e*PN	Pn	07 53 36.8	-0.5
MORC				*e*SN	Sn	07 54 22.6	-3.3
MORC	Moravsky Berou	4.14	18	⇓P	Pn	07 53 36.8	-0.5
UBR	Ueberruh	4.14	298	*e*P	Pn	07 53 37.7	+0.3
UBR	Ueberruh	4.14	298	*e*Pn	Pn	07 53 37.7	+0.3
DAVA	Damuels	4.15	292	*i* Pn	Pn	07 53 38.3	+0.8
	comp=Z,14nm,0.2s,SNR=30						
DAVA	Damuels	4.15	292		Pn	07 53 38.3	+0.8
DAVA	Damuels	4.15	292	*e*P	Pn	07 53 38.4	+0.9
DAVA	Damuels	4.15	292	*e*Pn	Pn	07 53 38.4	+0.9
KOME	Kolasin	4.16	135	⇑*i*Pn	Pn	07 53 37.3	-0.2
KOME				*i* Sn	Sn	07 54 26.1	-0.3
PRU	Pruhonice	4.18	351	*e*P	Pn	07 53 37.2	-0.5
PRU				*e*		07 54 23.2	
PRU				smax	smax		
	comp=N,1µm,1.3s						
PRU	Pruhonice	4.18	351	*e*PN	Pn	07 53 37.2	-0.5
PRU				*e*PG	Pb	07 53 49.8	+2.5
PRU				*e*SN	Sn	07 54 23.2	-3.6
PRU				*e*SG	Sg	07 54 46.1	-1.4
	comp=N,1µm,1.3s						
GRUS	Gruza	4.18	116	*e*Pn	Pn	07 53 37.5	-0.3
LANS	Liptovska Anna	4.23	38	*e*P	Pn	07 53 38.2	-0.3
LANS				*e*		07 54 26.5	
LANS	Liptovska Anna	4.23	38	*e*PN	Pn	07 53 38.2	-0.3
LANS				*e*SN	Sn	07 54 26.5	-1.7
BZS	Buzias	4.27	91	⇑P	Pn	07 53 37.5	-1.5
BZS				⇑S	Sn	07 54 27.5	-1.6
BZS	Buzias	4.27	91	Pn	Pn	07 53 37.4	-1.5
	comp=Z,1.1nm,SNR=31						
PRA	Prague	4.27	350	*e*P	Pn	07 53 38.9	-0.1
PRA	Prague	4.27	350	*e*PN	Pn	07 53 38.9	-0.1
PRA				*e*PG	Pg	07 53 52.6	-2.6
PRA				*e*SG	Sg	07 54 49.0	-1.5
	comp=Z,890nm,0.6s						
KECS	Kecovo	4.27	50	*e*P	Pn	07 53 39.6	+0.6
KECS	Kecovo	4.27	50	*e*PN	Pn	07 53 39.6	+0.6
SIRR	Siria	4.28	82	⇑P	Pn	07 53 37.6	-1.6
SIRR	Siria	4.28	82	Pg	Pn	07 53 37.2	-2.0
	comp=Z,0.8nm,SNR=31						
KRLC	Kraliky	4.29	11	*e*P	Pn	07 53 39.0	-0.4
KRLC	Kraliky	4.29	11	*e*PN	Pn	07 53 39.0	-0.4
KRLC				*e*SG	Sg	07 54 51.4	+0.1
	comp=Z,269nm,0.7s						
BUM	Brajici-Budva	4.31	145	⇓*i*Pn	Pn	07 53 39.5	-0.1
BUM				*i* Sn	Sn	07 54 30.0	-0.3
IVA	Berane	4.33	132	*e*Pn	Pn	07 53 40.3	+0.4
IVA				*i* Sn	Sn	07 54 30.4	-0.4
TUE	Stuetta	4.34	280	Pn	Pn	07 53 40.4	+0.2
TUE	Stuetta	4.34	280	⇑P	Pn	07 53 42.4	+2.2
OKC	Ostrava-Krasne	4.34	23	*e*P	Pn	07 53 39.8	-0.2
OKC				*e*		07 54 27.9	
OKC	Ostrava-Krasne	4.34	23	*e*PN	Pn	07 53 39.8	-0.2
OKC				*e*SN	Sn	07 54 27.9	-3.0
PDG	Podgorica	4.36	141	⇓P	Pn	07 53 42.2	+2.0
PDG	Podgorica	4.36	141	*e*Pn	Pn	07 53 41.7	+1.5
PDG	Podgorica	4.36	141	Pn	Pn	07 53 41.9	+1.7
PDG	Podgorica	4.36	141	*e*Pn	Pn	07 53 41.0	+0.8
PDG				*e*Sn	Sn	07 54 30.7	-0.6
PDG	Podgorica	4.36	141	⇓P	Pn	07 53 42.1	+1.9
TTG	Podgorica	4.36	141	*e*Pn	Pn	07 53 40.4	+0.2
TTG				*i* Sn	Sn	07 54 31.2	-0.1
PLONS	Plons/SG	4.41	288	*e*P	Pn	07 53 42.3	+1.3
PLONS	Plons/SG	4.41	288	*e*Pn	Pn	07 53 42.3	+1.3
BOB	Bobbio (Coli)	4.43	258	⇑P	Pn	07 53 42.5	+1.2
MDVR	Moldovita	4.49	102	⇓P	Pn	07 53 41.5	-0.6
ROTZ	Rotzenmuhle	4.50	331	*e*P	Pn	07 53 41.4	-0.7
ROTZ	Rotzenmuhle	4.50	331	*e*Pn	Pn	07 53 41.4	-0.7
DPC	Dobruska-Polom	4.52	6	*e*P	Pn	07 53 41.9	-0.5
DPC	Dobruska-Polom	4.52	6	*e*PN	Pn	07 53 41.9	-0.5
DPC				*e*SG	Sg	07 54 58.6	+0.2
	comp=Z,384nm,0.8s						
DRME	Dracevica, Mon	4.53	143	*e*Pn	Pn	07 53 42.6	+0.1
DRME				*e*Sn	Sn	07 54 34.0	-1.4
DRME	Dracevica, Mon	4.53	143	⇓*i*Pn	Pn	07 53 42.6	+0.1
DRME				*i* Sn	Sn	07 54 35.2	-0.2
PVY	Plav	4.56	134	⇑*i*Pn	Pn	07 53 43.1	-0.1
PVY				*i* Sn	Sn	07 54 36.1	-0.5
KUBS	Kucevo	4.58	106	*e*Pn	Pn	07 53 41.9	-1.4
UPC	Upice	4.65	4	*e*P	Pn	07 53 44.1	-0.2
UPC	Upice	4.65	4	*e*PN	Pn	07 53 44.1	-0.2
UPC				*e*PG	Pg	07 53 59.8	-2.8
UPC				*e*SG	Sg	07 55 02.0	-0.8
	comp=Z,765nm,0.9s						
PVCC	Panska Ves	4.71	352	*e*P	Pn	07 53 44.8	-0.2
PVCC	Panska Ves	4.71	352	*e*PN	Pn	07 53 44.8	-0.2
PVCC				*e*SG	Sg	07 55 02.4	-2.2
	comp=Z,1µm,0.8s						
OSTC	Ostas	4.71	5	*e*PN	Pn	07 53 44.6	-0.5
OSTC				*e*PG	Pg	07 54 00.6	-3.1
OSTC				*e*SG	Sg	07 55 04.0	-0.8
	comp=Z,403nm,0.8s						
MANZ	Manzenberg	4.72	332	*e*P	Pn	07 53 44.5	-0.7
MANZ	Manzenberg	4.72	332	*e*Pn	Pn	07 53 44.5	-0.7
CHVC	Chvalec	4.74	4	*e*PN	Pn	07 53 45.3	-0.1
CHVC				*e*SG	Sg	07 55 04.2	-1.3
	comp=Z,2µm,2.0s						
ULC	Ulcinj	4.74	144	⇓*i*Pn	Pn	07 53 45.5	+0.1
ULC				*i* Sn	Sn	07 54 40.3	-0.4
SELS	Selova	4.79	122	*e*Pn	Pn	07 53 45.6	-0.6
SELS				*e*Sn	Sn	07 54 39.3	-2.7
NIE	Niedzica	4.79	40	*e*Pn	Pn	07 53 47.1	+0.8
NIE				*e*Sn	Sn	07 54 41.2	-0.9
NIE	Niedzica	4.79	40	Pn	Pn	07 53 47.1	+0.8
	comp=Z,0.3nm,SNR=18						
GRA1	Grafenberg Arr	4.80	324		Pn	07 53 45.3	-1.1
GRF	Grafenberg Arr	4.80	324	P	Pn	07 53 45.3	-1.1
GRF	Grafenberg Arr	4.80	324	*e*P	Pn	07 53 45.7	-0.6
GRF	Grafenberg Arr	4.80	324	*e*Pn	Pn	07 53 45.7	-0.6
GRFO	Grafenberg	4.80	324	P	Pn	07 53 45.4	-0.9
GRFO	Grafenberg	4.80	324		Pn	07 53 45.4	-0.9
WILA	Wila	4.82	291	*e*P	Pn	07 53 47.0	+0.4
WILA	Wila	4.82	291	*e*Pn	Pn	07 53 47.0	+0.4
MRVN	Minervino Murg	4.83	174	⇑P	Pn	07 53 46.0	-0.8
NKC	Novy Kostel	4.83	336	*e*P	Pn	07 53 45.7	-1.1
NKC	Novy Kostel	4.83	336	*e*PN	Pn	07 53 45.7	-1.1
NKC				*e*SG	Sg	07 55 06.8	-1.8
	comp=Z,665nm,0.7s						
PAOL	Paolisi	4.89	189		Pn	07 53 47.0	-0.5
BOVS	Bovan	4.93	115	⇓P	Pn	07 53 47.2	-0.9
BOVS	Bovan	4.93	115	*e*Pn	Pn	07 53 46.7	-1.4
HERR	Herculane	4.95	99	⇓P	Pn	07 53 47.4	-0.9
KSP	Ksiaz	5.00	6	*e*Pn	Pn	07 53 49.0	-0.1
KSP				*e*Pg	Pg	07 54 05.9	-3.4
KSP				*e*Sn	Sn	07 54 46.7	-0.5
KSP	Ksiaz	5.00	6	⇑P	Pn	07 53 48.9	-0.3
KSP	Ksiaz	5.00	6	Pn	Pn	07 53 48.8	-0.3
	comp=Z,1.3nm,SNR=36						
CRVS	Cervenica-Dubn	5.04	51	*e*P	Pn	07 53 51.5	+1.9
CRVS	Cervenica-Dubn	5.04	51	*e*PG	Pg	07 54 10.2	+0.2
CRVS	Cervenica-Dubn	5.04	51	*e*PN	Pn	07 53 51.5	+1.9
DRGR		5.06	77	⇓P	Pn	07 53 48.2	-1.7
DRGR		5.06	77	*e*Pn	Pn	07 53 48.1	-1.8
DRGR				*e*Sn	Sn	07 54 43.8	-4.8
DRGR				*e*Sn	Sb	07 54 44.1	-19
DRGR		5.06	77	Pg	Pn	07 53 48.2	-1.7
	comp=Z,52nm,0.9s,SNR=14						
DJES	Djerdap	5.08	101	⇑P	Pn	07 53 50.3	+0.2
DJES	Djerdap	5.08	101	Pg	Pn	07 53 54.9	+4.8
GZR	Gura Zlata	5.10	93	⇓P	Pn	07 53 49.6	-1.0
GZR	Gura Zlata	5.10	93	Pn	Pn	07 53 49.3	-1.2
	comp=Z,42nm,0.5s,SNR=4.8						
BRG	Berggiesshubel	5.12	349	Pn	Pn	07 53 49.7	-1.0
BRG				Amp		07 53 52.7	
	comp=Z,33nm,0.5s						
BRG	Berggiesshubel	5.12	349	Pg	Pg	07 54 08.7	-2.8
BRG				Sn	Sn	07 54 44.5	-5.5
BRG				Sg	Sg	07 55 12.0	-5.7
BRG				Amp		07 55 27.1	
	comp=Z,319nm,0.8s						
BRG				Amp		07 55 54.0	
	comp=N,4.9nm,5.8s						
BRG				Amp		07 55 57.0	
	comp=Z,9.5nm,5.8s						
BRG				Amp		07 56 02.0	
	comp=E,2.0nm,4.6s						
ZAGS	Zajecar	5.19	111	*e*Pn	Pn	07 53 50.6	-1.0
SLE	Schleitheim	5.19	294	*e*P	Pn	07 53 51.3	-0.4
SLE	Schleitheim	5.19	294	*e*Pn	Pn	07 53 51.3	-0.4
STU	Stuttgart	5.20	306	*e*P	Pn	07 53 52.2	+0.5
STU				*e*Sg	Sg	07 55 20.7	+0.4
STU	Stuttgart	5.20	306	⇓P	Pn	07 53 51.0	-0.7
STU	Stuttgart	5.20	306	*e*Pn	Pn	07 53 52.2	+0.5
STU				*e*Sg	Sg	07 55 20.7	+0.4
STU	Stuttgart	5.20	306	Pn	Pn	07 53 51.8	+0.1
	comp=Z,5.2nm,SNR=36						
	comp=Z,1µm,0.9s						
OJC	Ojcow	5.21	32	*e*Pn	Pn	07 53 51.0	-0.9
OJC				*e*Sn	Sn	07 54 47.5	-4.8
OJC	Ojcow	5.21	32	P	Pn	07 53 51.0	-0.9
OJC	Ojcow	5.21	32		Pn	07 53 51.0	-0.9
OJC	Ojcow	5.21	32	⇑P	Pn	07 53 51.4	-0.5
OJC	Ojcow	5.21	32	Pn	Pn	07 53 51.0	-0.9
	comp=Z,48nm,0.7s,SNR=8.8						
STHS	Stebnicka Huta	5.24	45	*e*P	Pn	07 53 53.6	+1.2
STHS				*e*		07 54 52.0	
STHS	Stebnicka Huta	5.24	45	*e*PN	Pn	07 53 53.6	+1.2
STHS				*e*SN	Sn	07 54 52.0	-1.1
MATE	Matera	5.29	170	⇑P	Pn	07 53 53.0	+0.1
MATE	Matera	5.29	170	⇑P	Pn	07 53 52.5	-0.4
MATE	Matera	5.29	170	Pg	Pn	07 53 52.3	-0.7
	comp=Z,133nm,0.9s,SNR=4.6						
TRPA	Tarpa	5.30	62	⇑P	Pn	07 53 51.9	-1.2
TRPA	Tarpa	5.30	62	Pg	Pb	07 54 07.6	+1.1
SULZ	Cheisacher	5.37	291	*e*P	Pn	07 53 53.9	-0.2
SULZ	Cheisacher	5.37	291	*e*Pn	Pn	07 53 53.9	-0.2
UZH	Uzhgorod	5.37	57	*e*P	Pn	07 53 55.2	+1.1
UZH				*e*S	Sn	07 54 58.2	+2.0
UZH				MLR	MLR		
	comp=N,30nm,1.0s						
UZH				MLR	MLR		
	comp=E,20nm,1.0s						
UZH				MLR	MLR		
	comp=Z,20nm,1.0s						
MONC	Moncucco Torin	5.41	264	⇑P	Pn	07 53 55.7	+1.0
BARS	Barje	5.44	122	*e*Pn	Pn	07 53 46.0	-9.1
BARS	Barje	5.44	122	*e*Pn	Pn	07 53 54.5	-0.6
MOX	Moxa	5.45	333	*e*P	Pn	07 53 54.4	-0.8
MOX				*e*Sg	Sg	07 55 31.3	+3.0
MOX	Moxa	5.45	333	*e*Pn	Pn	07 53 54.4	-0.8
MOX				*e*Sg	Sg	07 55 31.3	+3.0
BFO	Black Forest	5.50	299	P	Pn	07 53 55.4	-0.6
BFO	Black Forest	5.50	299		Pn	07 53 55.4	-0.6
BFO	Black Forest	5.50	299	*e*P	Pn	07 53 55.1	-0.8
BFO	Black Forest	5.50	299	P	Pn	07 53 55.2	-0.8
BFO	Black Forest	5.50	299	*e*Pn	Pn	07 53 55.1	-0.8
TIR	Tirane	5.50	144	P	Pn	07 53 55.5	-0.5
TIR	Tirane	5.50	144		Pn	07 53 55.5	-0.5
TIR	Tirane	5.50	144	Pn	Pn	07 53 56.0	0.0
	comp=Z,140nm,1.0s,SNR=3.5						
KOLS	Kolonicke sedl	5.51	54	*e*P	Pn	07 53 58.4	+2.4
KOLS	Kolonicke sedl	5.51	54	*e*PN	Pn	07 53 58.4	+2.4
BALST	Balsthal	5.60	288	*e*P	Pn	07 53 57.2	-0.1
BALST	Balsthal	5.60	288	*e*Pn	Pn	07 53 57.2	-0.1
CJR	Cluj-Napoca	5.65	79	⇑P	Pn	07 53 57.6	-0.5
CLL	Collm	5.70	344	*e*P	Pn	07 53 58.0	-0.6
CLL	Collm	5.70	344	*e*Pn	Pn	07 53 58.0	-0.6
CLL				*e*Pg	Pg	07 54 20.0	-2.5
CLL				*e*(Sn)	Sn	07 54 43.0	-21
CLL				Lmax		07 55 00.0	
CLL				*e*		07 55 01.0	
CLL				*e*		07 55 29.0	
CLL				*e*Sg	Sg	07 55 31.0	-5.3
	comp=Z,3µm,1.8s						
CLL	Collm	5.70	344		Pn	07 53 57.9	-0.7
SENIN	Lac Senin/Sane	5.75	278		Pn	07 54 00.9	+1.4
PGF	Pioggiola	5.75	237	*e*P	Pn	07 54 00.0	+0.6
PGF				*e*Sn	Sn	07 54 58.6	-7.2
	comp=Z,43nm,0.4s						
SKO	Skopje	5.78	130	*i* Pn	Pn	07 54 00.0	+0.3
PRVS	Prvonek	5.78	123	*e*Pn	Pn	07 53 59.8	0.0
PRVS				*e*Sn	Sn	07 55 03.3	-3.1
BOSS	Bosilegrad	6.03	122	*e*Pn	Pn	07 54 02.3	-0.9
SBF	Sospel	6.09	254	*e*P	Pn	07 54 03.4	-0.7
SBF				*e*Sn	Sn	07 55 06.0	-8.2
	comp=Z,506nm,0.9s						
OHR	Ohrid	6.11	139	*i* Pn	Pn	07 54 06.1	+1.8
KWP	Kalwaria Pacla	6.13	50	⇑P	Pn	07 54 06.0	+1.5
KWP	Kalwaria Pacla	6.13	50	Pn	Pn	07 54 06.9	+2.3
	comp=Z,4.4nm,SNR=5.1						
	comp=Z,607nm,0.7s						
LPG	La Plagne	6.16	270	*e*P	Pn	07 54 05.7	+0.4
LPG				*e*Sn	Sn	07 55 07.7	-8.5
	comp=Z,348nm,0.9s						
LPL	La Plagne	6.17	270	*e*P	Pn	07 54 05.9	+0.5
LPL				*e*Sn	Sn	07 55 08.0	-8.4
	comp=Z,262nm,0.8s						
CDF	Champ du Feu	6.18	297	*e*P	Pn	07 54 04.0	-1.3
CDF				*e*Sn	Sn	07 55 09.4	-6.9
	comp=Z,287nm,0.8s						
ECH	Echery	6.19	295	P	Pn	07 54 04.4	-1.0
ECH	Echery	6.19	295		Pn	07 54 04.4	-1.0
ECH	Echery	6.19	295	⇑P	Pn	07 54 04.2	-1.1
ARCR	ARCALIA	6.21	76	Pn	Pb	07 54 18.2	-3.9
HINF	Hinteralfeld	6.26	291	*e*P	Pn	07 54 05.7	-0.7
HINF				*e*Sn	Sn	07 55 09.8	-8.5
	comp=Z,176nm,0.5s						
BNI	Bardonecchia	6.28	266	P	Pn	07 54 06.8	0.0
BNI	Bardonecchia	6.28	266		Pn	07 54 06.8	0.0
BNI	Bardonecchia	6.28	266	⇑P	Pn	07 54 05.9	-0.9
MBDF	Montbardon	6.29	263	*e*Pn	Pn	07 54 04.6	-2.2
MBDF				*e*Sn	Sn	07 55 10.7	-8.3
	comp=Z,190nm,0.7s						
STIP	Stip	6.37	129	*i* Pn	Pn	07 54 08.7	+0.8
ARR	Arges	6.40	91	⇑P	Pn	07 54 08.4	0.0
VTS	Vitosha	6.42	118	⇑P	Pn	07 54 08.4	-0.2
VTS	Vitosha	6.42	118	P	Pn	07 54 08.2	-0.4
VTS	Vitosha	6.42	118		Pn	07 54 08.2	-0.4
VTS	Vitosha	6.42	118	⇑P	Pn	07 54 09.0	+0.3
VTS	Vitosha	6.42	118	Pn	Pn	07 54 07.2	-1.4
	comp=Z,23nm,1.3s,SNR=3.9						
TNS	Taunus Mts	6.44	315	*e*P	Pn	07 54 09.4	+0.5
TNS	Taunus Mts	6.44	315	*e*Pn	Pn	07 54 09.4	+0.5
KBN	Korca	6.50	142	P	Pn	07 54 09.2	-0.5
CABF	La Chapelle	6.59	280	*e*P	Pn	07 54 11.2	+0.2
CABF				*e*Sn	Sn	07 55 17.8	-8.7
	comp=Z,134nm,0.8s						
FNA	Florina	6.63	138	P	Pn	07 54 12.4	+0.9
FNA	Florina	6.63	138		Pn	07 54 12.4	+0.9
FNA	Florina	6.63	138	⇑P	Pn	07 54 12.8	+1.3
HAU	Haudompre	6.64	292	*e*P	Pn	07 54 10.6	-1.0
HAU				*e*Sn	Sn	07 55 19.2	-8.4
	comp=Z,191nm,0.4s						
VOIR		6.69	90	⇑P	Pn	07 54 12.1	-0.1
NAST	IGS Nastaetten	6.72	313	*e*Pn	Pn	07 54 13.6	+0.9
FRF	La Foret Royal	6.74	253	*e*P	Pn	07 54 11.9	-1.0
FRF				*e*Sn	Sn	07 55 24.5	-5.4
	comp=Z,80nm,0.5s						
TIP	Timpagrande	6.75	172	⇑P	Pn	07 54 13.8	+0.6
TIP	Timpagrande	6.75	172		Pn	07 54 13.7	+0.6
TIP	Timpagrande	6.75	172	⇑P	Pn	07 54 13.7	+0.6
NEST	Nestorio	6.78	142	P	Pn	07 54 14.4	+0.8
LSK	Leskovik	6.81	145	P	Pn	07 54 14.7	+0.6
VAY	Valandovo	6.84	129	*i* Pn	Pn	07 54 14.3	0.0
ORIF	Oris-en-Rattie	6.86	265	*e*P	Pn	07 54 15.8	+1.1
ORIF				*e*Sn	Sn	07 55 24.0	-9.2
	comp=Z,184nm,0.7s						
BUR08	Bucovina Ar. S	6.88	72		Pn	07 54 16.0	+1.1
DOPR	Dopca	6.88	86	⇓P	Pn	07 54 14.8	0.0
BURAR	Bucovina Array	6.88	72	⇑P	Pn	07 54 14.5	-0.5
BURAR	Bucovina Array	6.88	72		Pn	07 54 16.2	+1.3
KEK	Kerkira	6.91	151	P	Pn	07 54 14.3	-0.9
KEK	Kerkira	6.91	151	⇑P	Pn	07 54 14.7	-0.6
LMR	La Mourre	6.92	252	*e*Pn	Pn	07 54 13.8	-1.6
LMR				*e*Sn	Sn	07 55 27.3	-7.1
	comp=Z,48nm,0.4s						
KOE	Koeppel	6.93	314	*e*Pn	Pn	07 54 16.6	+1.1
KOE				*e*Sn	Sn	07 55 28.3	-6.3
	comp=Z,142nm,0.4s						
LVV	L'vov	6.95	52	*e*P	Pn	07 54 16.8	+1.0
LVV				*e*S	Sn	07 55 33.6	-1.5
LVV				MLR	MLR		
	comp=N,2µm,6.0s						
LVV				MLR	MLR		
	comp=E,900nm,6.0s						
LVV				MLR	MLR		
	comp=Z,1µm,6.0s						
BGG	Burgeitz	7.00	311	*e*Pn	Pn	07 54 17.7	+1.2
GRG	Griva	7.01	132	P	Pn	07 54 17.1	+0.5
FLTG	Flechtingen	7.05	338	P	Pn	07 54 19.0	+1.8
KNT	Kendrikon	7.13	129	P	Pn	07 54 18.7	+0.5
KZN	Kozani	7.19	138	P	Pn	07 54 19.4	+0.2
PAGF	Fort de Pagny	7.20	295	*e*P	Pn	07 54 20.5	+1.3
	baz=116						
PAGF	Fort de Pagny	7.20	295	*e*Pg	Pg	07 54 47.8	-3.5
PAGF				*e*Sn	Sn	07 55 32.5	-8.8
	comp=Z,628nm,1.3s						
IGT	Igoumenitsa	7.25	149	P	Pn	07 54 19.0	-1.0
KPRO	Kipourio	7.29	142	P	Pn	07 54 21.5	+0.9
MLR	Muntele Rosu	7.30	89	⇑P	Pn	07 54 20.4	-0.4
MLR	Muntele Rosu	7.30	89	Pn	Pn	07 54 21.2	+0.4
	comp=Z,1.9nm,0.3s,baz=328,slow=8.4,SNR=18						
MLR				LR	LR	07 57 16.6	
	comp=Z,249nm,18.5s,baz=276,slow=39						
MLR	Muntele Rosu	7.30	89		Pn	07 54 21.4	+0.6
SMRF	Simiane la Rot	7.32	259	*e*P	Pn	07 54 20.8	-0.1
SMRF				*e*Sn	Sn	07 55 36.5	-7.8
	comp=Z,122nm,1.1s						
WLF	Walferdange	7.37	304	*d*P	Pn	07 54 21.8	+0.2
WLF	Walferdange	7.37	304	P	Pn	07 54 22.9	+1.3
WLF	Walferdange	7.37	304		Pn	07 54 22.9	+1.3
WLF	Walferdange	7.37	304	*e*P	Pn	07 54 22.8	+1.3
WLF	Walferdange	7.37	304	⇑P	Pn	07 54 22.8	+1.2
WLF	Walferdange	7.37	304	*e*Pn	Pn	07 54 22.8	+1.2
HILG	Hillesheim	7.40	310	*e*Pn	Pn	07 54 23.0	+1.0
HOBG	Hohbusch	7.48	316	*e*Pn	Pn	07 54 24.1	+1.1
STB	Steinbach	7.48	312	*e*Pn	Pn	07 54 24.0	+0.9
SRS	Serrai	7.54	126	P	Pn	07 54 25.3	+1.4
SFTF	Sexfontaines	7.54	292	*e*P	Pn	07 54 23.5	-0.4
	baz=112						
SFTF				*e*Sn	Sn	07 55 40.6	-9.1
	comp=Z,542nm,1.5s						
SAVF	Savonnieres en	7.60	295	*e*P	Pn	07 54 26.0	+1.3
	baz=115						
SAVF				*e*Sn	Sn	07 55 42.0	-9.1
	comp=Z,37nm,0.6s						
MEZF	Maizieres J'vi	7.61	294	*e*P	Pn	07 54 25.4	+0.5
	baz=114						
MEZF				*e*Sn	Sn	07 55 42.5	-8.9
	comp=Z,155nm,0.9s						
VIVF	Saint-Julien-l	7.72	266	*e*P	Pn	07 54 25.6	-0.8
VIVF				*e*Sn	Sn	07 55 44.7	-9.4
	comp=Z,65nm,0.8s						
SSB	Saint Sauveur	7.74	270	P	Pn	07 54 26.3	-0.3
SSB	Saint Sauveur	7.74	270		Pn	07 54 26.3	-0.3
KLL	Kalltalsperre	7.79	311	*e*Pn	Pn	07 54 27.8	+0.5
BHOU	Houvegnez	7.79	309	*d*P	Pn	07 54 27.3	-0.1
BHOU				*d*S	Sn	07 55 50.5	-5.5
VSL	Villasalto	7.81	218	Pn	Pn	07 54 29.0	+1.3
DREG	Dreilaegerbach	7.84	311	*e*Pn	Pn	07 54 28.8	+0.8
BTNL	Ternell	7.85	310	*d*P	Pn	07 54 26.9	-1.3
BTNL				*d*S	Sn	07 55 52.3	-5.1
LAUG	Laupendahl	7.90	317	*e*Pn	Pn	07 54 29.3	+0.5
MEM	Membach	7.93	310	*d*P	Pn	07 54 29.2	0.0
MEM				*d*S	Sn	07 55 53.8	-5.4
DRAG	Dragano-Lefkad	8.09	151	P	Pn	07 54 29.9	-1.6
NYDR	Nydri-Lefkada	8.11	150	P	Pn	07 54 30.2	-1.5
RCHB	Rochefort	8.13	306	*d*P	Pn	07 54 32.8	+0.8
RCHB				*d*S	Sn	07 55 58.0	-6.1
SMF	Signal de Mont	8.14	280	*e*P	Pn	07 54 32.1	-0.1
SMF				*e*Sn	Sn	07 55 54.6	-10

	comp=Z,142nm,0.9s						
LOR	Lormes	8.17	284	eP	Pn	07 54 31.8	-0.7
	baz=105						
LOR				eSn	Sn	07 55 55.5	-10
	comp=Z,42nm,0.5s						
BEBN	Eben Emael	8.21	310	dP	Pn	07 54 24.1	-8.9
BEBN				dS	Sn	07 56 00.2	-5.8
BCLA	Clavier	8.21	307	dP	Pb	07 54 54.1	-2.0
BCLA				dx	x	07 55 05.8	
BCLA				dx	x	07 55 18.0	
BCLA				dS	Sn	07 56 00.1	-6.1
IBBN	Ibbenburen	8.22	324	⇑P	Pn	07 54 34.6	+1.5
BGES	Gesves	8.32	307	dP	Pn	07 54 35.9	+1.3
BGES				dS	Sn	07 56 03.6	-5.2
GIVF	Givet	8.34	304	eP	Pn	07 54 35.9	+1.1
GIVF				eSn	Sn	07 55 59.5	-10
	comp=Z,58nm,0.5s						
SSF	Saint Saulge	8.39	282	eP	Pn	07 54 35.5	-0.1
SSF				eSn	Sn	07 56 00.5	-10
	comp=Z,48nm,0.7s						
VAE	Valguarnera	8.43	186	LR	LR	07 58 18.6	
	comp=Z,416nm,19.0s,baz=50,slow=41						
DMLN	Damoulianata-K	8.43	153	P	Pn	07 54 34.7	-1.5
BMRD	Maredsous	8.46	305	dP	Pn	07 54 37.9	+1.4
BMRD				dS	Sn	07 56 06.0	-6.2
DOU	Dourbes	8.47	304	dP	Pn	07 54 36.7	+0.1
DOU				dPP	PnPn	07 54 42.9	-1.1
DOU				dx	x	07 55 24.8	
DOU				dS	Sn	07 56 07.1	-5.3
LASF	Ste Croix	8.47	262	ePn	Pn	07 54 35.0	-1.7
LASF				eSn	Sn	07 56 02.3	-10
	comp=Z,39nm,0.6s						
AVF	Avril sur Loir	8.48	281	eP	Pn	07 54 36.7	-0.1
AVF				eSn	Sn	07 56 03.1	-10
	comp=Z,17nm,0.7s						
BAIF	Baives	8.68	303	eP	Pn	07 54 41.3	+1.8
BAIF				eSn	Sn	07 56 07.8	-10
	comp=Z,36nm,0.7s						
BGF	Bois d'Agland	8.83	279	eP	Pn	07 54 42.6	+1.0
BGF				eSn	Sn	07 56 10.8	-10
	comp=Z,70nm,0.5s						
SNF	Seneffe	8.83	306	dP	Pn	07 54 42.8	+1.3
HYF	Humbligny	8.99	284	eP	Pn	07 54 44.8	+0.9
HYF				eSn	Sn	07 56 14.9	-11
MILM	Milestii Mici	9.24	79	eP	Pn	07 54 44.0	-3.2
MILM				MLR	MLR		
	comp=Z,600nm,11.0s						
MILM				MLR	MLR		
	comp=N,500nm,9.0s						
MILM				MLR	MLR		
	comp=E,400nm,9.0s						
TCF	Toulx Ste Croi	9.27	277	eP	Pn	07 54 47.4	-0.3
TCF				eSn	Sn	07 56 22.2	-10
	comp=E,45nm,0.7s						
CLF	Chambon-Foret	9.33	288		Pn	07 54 48.1	-0.4
SUW	Suwalki	9.52	28	P	Pn	07 54 49.7	-1.3
SUW	Suwalki	9.52	28	Pn	Pn	07 54 49.7	-1.3
CAF	Calviac	9.53	269	eP	Pn	07 54 51.4	+0.2
CAF				eSn	Sn	07 56 28.5	-10
	comp=E,23nm,0.6s						
MTLF	Montolieu	9.83	260	eP	Pn	07 54 54.9	-0.4
MTLF				eSn	Sn	07 56 34.9	-11
	comp=E,13nm,0.6s						
RJF	Les Rejaudoux	9.85	272	eP	Pn	07 54 56.9	+1.4
RJF				eSn	Sn	07 56 37.0	-9.3
	comp=E,9.0nm,0.5s						
AKASG	Malin Array Be	10.32	57	Pn	Pn	07 55 02.8	+0.8
	comp=E,0.8nm,0.3s,baz=243,slow=13,SNR=4.3						
AKASG				Sn	Sn	07 56 50.5	-7.4
	comp=E,0.7nm,0.3s,baz=244,slow=23,SNR=2.1						
AKASG	Malin Array Be	10.32	57	P	Pn	07 55 01.4	-0.6
AKASG	Malin Array Be	10.32	57		Pn	07 55 01.4	-0.6
AKBB	Malin Array Si	10.32	57	i P	Pn	07 55 03.7	+1.7
LFF	La Frestale	10.45	270	eP	Pn	07 55 05.6	+1.9
LFF				eSn	Sn	07 56 50.1	-11
	comp=E,21nm,0.7s						
MFF	Saint Martin d	10.89	279	eP	Pn	07 55 10.3	+0.5
MFF				eSn	Sn	07 57 00.3	-12
	comp=E,12nm,0.6s						
LDF	La Druitiere	10.99	290	eP	Pn	07 55 13.0	+1.8
LDF				eSn	Sn	07 57 02.7	-12
	comp=E,26nm,0.8s						
KEST	Kesra	11.15	207	LR	LR	08 00 12.3	
	comp=E,497nm,19.3s,baz=346,slow=41						
EPF	Esparros	11.23	261	eP	Pn	07 55 15.8	+1.3
EPF				eSn	Sn	07 57 08.9	-11
	comp=E,4.8nm,0.6s						
FLN	La Foliniere	11.25	291	eP	Pn	07 55 16.4	+1.7
	baz=110						
FLN				eSn	Sn	07 57 09.9	-11
	comp=E,32nm,0.9s						
GRR	Gorron	11.45	289	eP	Pn	07 55 17.6	+0.2
GRR				eSn	Sn	07 57 14.0	-12
	comp=E,12nm,0.5s						
NACGM	Naroch	11.53	34	i P	Pn	07 55 10.2	-8.4
MNK	Minsk	11.70	38	i P	Pn	07 55 20.2	-0.7
MNK				i S	Sn	07 57 32.3	+0.6
MNK				pmax	pmax		
	comp=E,1.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,12nm,0.8s						
MNK				pmax	pmax		
	comp=N,14nm,0.8s						
MNK				MLR	MLR		
	comp=N,144nm,16.0s						
MNK				MLR	MLR		
	comp=Z,202nm,15.0s						
MNK				MLR	MLR		
	comp=E,17nm,15.0s						
MNK	Minsk	11.70	38	i P	Pn	07 55 20.3	-0.6
	comp=E,1.0nm,0.8s						
MNK				i P	Pn	07 55 20.3	-0.6
	comp=N,14nm,0.8s						
MNK				i P	Pn	07 55 20.3	-0.6
	comp=Z,12nm,0.8s,baz=227						
MNK				i PP	PnPn	07 55 31.2	+2.7
MNK				i S	Sn	07 57 32.4	+0.7
MNK				i SS	SnSn	07 57 45.4	+2.0
MNK				i LR	LR	07 59 07.7	
MNK				i LRM	MLR	07 59 48.9	
	comp=N,144nm,15.6s						
MNK				i LRM	MLR	08 00 17.2	
	comp=Z,202nm,15.3s						
MNK				i LRM	MLR	08 00 20.4	
	comp=E,17nm,15.3s						
ETSF	Etsaut	11.89	261	eP	Pn	07 55 25.4	+1.8
SJPF	Ste Jean	12.28	263	eP	Pn	07 55 29.1	+0.2
SGMF	Saint Gilles	12.56	287	eP	Pn	07 55 33.5	+0.8
SGMF				eSn	Sn	07 57 40.0	-13
	comp=E,5.6nm,0.5s						
IDI	Anoyia	12.73	143	Pn	Pn	07 55 33.2	-1.8
	comp=E,1.0nm,0.3s,baz=274,slow=1.2,SNR=1.4						
QUIF	Quistinic	12.95	286	eP	Pn	07 55 39.1	+1.1
QUIF				eSn	Sn	07 57 49.8	-13
	comp=E,7.8nm,0.6s						
ROSF	Rostrenen	13.05	288	eP	Pn	07 55 40.3	+1.0
ROSF				eSn	Sn	07 57 51.9	-13
	comp=E,8.0nm,0.5s						
KONO	Kongsberg	14.25	348	i P	Pn	07 55 59.0	+3.3
HFS	Hagfors	14.33	356	Pn	Pn	07 55 56.2	-0.6
	comp=E,0.1nm,0.3s,baz=179,slow=31,SNR=2.1						
HFS				LR	LR	08 02 13.6	
	comp=E,513nm,19.3s,baz=179,slow=41						
EKA	Eskdalemuir Ar	15.14	315	Pn	Pn	07 56 07.7	0.0
	baz=130,slow=14,SNR=9.8						
EKA				Sn	Sn	07 58 46.9	-8.6
	baz=122,slow=25,SNR=5.4						
NB2	NORSAR Subarra	15.41	352	P	P	07 56 15.5	-0.5
	comp=Z,8.3nm,0.7s,baz=168,slow=11						
NOA	NORSAR Array B	15.41	352	Pn	Pn	07 56 09.3	-2.0
	comp=Z,0.0nm,0.3s,baz=168,slow=12,SNR=6.4						
NOA				LR	LR	08 02 46.5	
	comp=Z,426nm,18.8s,baz=170,slow=40						
ESDC	Sonseca Array	15.58	254	Pn	Pn	07 56 15.7	+2.0
	comp=Z,0.2nm,0.3s,baz=61,slow=11,SNR=24						
ESDC				LR	LR	08 03 34.9	
	comp=Z,99nm,18.1s,baz=200,slow=42						
ESDC	Sonseca Array	15.58	254	P	P	07 56 17.7	-0.4
ESDC				IAmb	IAmb	07 56 19.4	
	comp=Z,23nm,1.8s						
OBN	Obninsk	16.21	48	LR	LR	08 02 29.4	
	comp=Z,65nm,19.0s,baz=192,slow=37						
OBN	Obninsk	16.21	48	i P	Pn	07 56 19.9	-1.8
OBN				pmax	pmax		
	comp=Z,18nm,1.2s						
OBN				MLR	MLR		
	comp=Z,260nm,14.0s						
PUL	Pulkovo	16.49	27	i P	P	07 56 27.9	0.0
PUL				pmax	pmax		
	comp=Z,124nm,0.4s						
FINES	FINESS Array B	16.77	18	Pn	Pn	07 56 27.4	-1.3
	comp=Z,0.5nm,0.3s,baz=197,slow=6.0,SNR=19						
FINES				Sn	Sn	07 59 21.9	-13
	comp=Z,0.1nm,0.3s,baz=193,slow=18,SNR=1.3						
FINES	FINESS Array B	16.77	18	P	P	07 56 30.0	-1.0
FIA1	FINESS Array S	16.77	18	P	P	07 56 30.6	-0.4
FIA1				IAmb	IAmb	07 56 33.7	
	comp=Z,80nm,1.1s						
MOS	Moscow	17.03	47	eP	Pn	07 56 31.7	-0.3
KIV	Kislovodsk	19.30	86	eP	P	07 56 58.7	-0.4
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,56nm,14.0s						
SHA1	Shidzhatmaz	19.33	87	i P	Pn	07 57 00.9	+0.2
KBZ	Khabaz	19.50	86	LR	LR	08 05 37.6	
	comp=Z,59nm,19.9s,baz=246,slow=40						
KBZ	Khabaz	19.50	86	ceP	Pn	07 57 03.4	+1.0
KBZ				pmax	pmax		
	comp=Z,8.0nm,1.4s						
MMAI	Mount Meron Ar	19.94	123	P	P	07 57 06.6	+0.5
	comp=Z,0.9nm,0.3s,baz=331,slow=9.6,SNR=12						
NCK	Nalchik	20.05	87	i P	Pn	07 57 10.8	+1.8
NCK				pmax	pmax		
	comp=Z,16nm,1.0s						
MDT	Midelt	20.24	237	P	P	07 57 10.0	+0.6
	comp=Z,4.2nm,0.7s,baz=42,slow=8.1,SNR=5.7						
MDT				LR	LR	08 03 52.3	
	comp=Z,153nm,18.8s,baz=83,slow=34						
ASF	Jabal al Asfar	21.42	122	P	P	07 57 23.6	+1.4
	comp=Z,12nm,0.9s,baz=310,slow=4.8,SNR=8.9						
GNI	Garni	22.04	95	LR	LR	08 07 42.3	
	comp=Z,27nm,18.3s,baz=350,slow=41						
GNI	Garni	22.04	95	i P	P	07 57 30.0	+1.1
GNI				pmax	pmax		
	comp=Z,25nm,1.6s						
EIL	Elat	22.20	130	P	P	07 57 30.9	+0.4
	comp=Z,6.3nm,0.9s,baz=23,slow=15,SNR=3.1						
PRGR	Permogore	23.47	37	eP	P	07 57 42.1	-1.4
PRGR				pmax	pmax		
	comp=Z,237nm,1.5s						
AKT	Akhty	23.60	89	i P	P	07 57 46.5	+1.4
KIRV	Kirov	24.04	46	P	P	07 57 49.0	0.0
	comp=Z,13nm,0.7s,baz=233,slow=1.5,SNR=7.8						
KIRV				LR	LR	08 07 14.4	
	comp=Z,229nm,18.5s,baz=249,slow=37						
KIRV	Kirov	24.04	46	ceP	P	07 57 48.7	-0.3
LVZ	Lovozero	24.21	18	i P	P	07 57 51.9	+1.3
ARCES	ARCESS Array B	24.25	9	P	P	07 57 51.2	+0.3
	comp=Z,4.9nm,1.0s,baz=186,slow=9.6,SNR=6.7						
ARCES				LR	LR	08 07 50.1	
	comp=Z,410nm,19.1s,baz=235,slow=38						
BORG	Borgarnes	27.62	326	LR	LR	08 10 07.7	
	comp=Z,117nm,18.7s,baz=125,slow=38						
JMIC	Jan Mayen	27.74	343	LR	LR	08 07 37.1	
	comp=Z,68nm,21.6s,baz=262,slow=33						
AKTO	Aktyubinsk	28.42	65	P	P	07 58 29.4	+0.7
	comp=Z,0.6nm,0.5s,baz=238,slow=3.2,SNR=4.0						
AKTO				LR	LR	08 12 12.8	
	comp=Z,40nm,18.8s,baz=293,slow=42						
ARU	Arti	28.53	53	P	P	07 58 28.5	-1.0
	comp=Z,2.5nm,0.6s,baz=254,slow=5.0,SNR=10						
ARU				LR	LR	08 10 14.2	
	comp=Z,104nm,19.6s,baz=249,slow=37						
ARU	Arti	28.53	53	d iP	P	07 58 29.1	-0.4
ARU						07 59 15.0	
ARU				S	S	08 03 17.8	+0.3
ARU				SS	SnSn	08 04 35.4	-0.5
ARU				pmax	pmax		
	comp=Z,21nm,1.2s						
ARU	Arti	28.53	53	P	P	07 58 30.2	+0.7
SVE	Sverdlovsk	29.69	52	eP	P	07 58 40.1	+0.3
SVE				pmax	pmax		
	comp=Z,20nm,1.2s						
ABKAR	Akbulak array	29.83	67	P	P	07 58 41.2	0.0
TORD	Torodi Ar. Bea	34.66	204	P	P	07 59 22.8	-0.9
	comp=Z,10nm,1.3s,baz=7.1,slow=8.7,SNR=13						
TORD				PP	PP	08 00 40.8	-1.5
	comp=Z,3.9nm,1.0s,baz=25,slow=11,SNR=6.1						
TORD				PcP	PcP	08 01 59.4	+1.4
	comp=Z,1.2nm,1.0s,baz=24,slow=2.6,SNR=3.2						
TORD				LR	LR	08 15 38.1	
	comp=Z,206nm,18.9s,baz=340,slow=40						
TORD	Torodi Ar. Bea	34.66	204	P	P	07 59 22.9	-0.9
TORD				IAmb	IAmb	07 59 25.9	
	comp=Z,5.5nm,1.2s						
KOWA	Kowa	35.34	214	P	P	07 59 29.4	-0.2
	comp=Z,2.4nm,0.8s,baz=357,slow=6.0,SNR=4.1						
BRVK	Borovoye	35.53	58	ceP	P	07 59 31.7	+0.7
BRVK				pmax	pmax		
	comp=Z,14nm,1.7s						
BRVK	Borovoye	35.53	58	P	P	07 59 30.8	-0.1
BRVK				IAmb	IAmb	07 59 33.9	
	comp=Z,12nm,1.2s						
KK31	Karatay Array	38.67	74	P	P	07 59 57.2	-0.6
KK31				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KK31	Karatay Array	38.67	74	P	P	07 59 57.1	-0.6
KKAR	Karatay Array	38.67	74	P	P	07 59 57.2	-0.6
KKAR	Karatay Array	38.67	74	P	P	07 59 57.1	-0.6
KKAR	Karatay Array	38.67	74	P	P	07 59 57.6	-0.2
KKAR				IAmb	IAmb	08 00 01.7	
	comp=Z,2.5nm,0.8s						
CHGR	Chuyangaron	39.69	81	P	P	08 00 05.7	-0.7
CHGR				IAmb	IAmb	08 00 27.2	
	comp=Z,26nm,1.5s						
SFJD	Kangerlussuaq	39.75	326	LR	LR	08 17 26.7	
	comp=Z,146nm,18.6s,baz=88,slow=38						
DRK	Karamyk	41.12	78	P	P	08 00 18.2	-0.3
KURK	Kurchatov	41.12	60	ceP	P	08 00 17.5	-0.5
KURK				pmax	pmax		
	comp=Z,7.0nm,1.7s						
KURK	Kurchatov	41.12	60	P	P	08 00 17.1	-1.0
AAK	Ala-Archa	41.52	72	ceP	P	08 00 22.4	+0.7
AAK				pmax	pmax		
	comp=Z,14nm,1.0s						
NRIK	Noril'sk	41.81	30	P	P	08 00 23.4	0.0
	comp=Z,5.9nm,1.0s,baz=268,slow=7.2,SNR=5.5						
NRIK				LR	LR	08 18 16.8	
	comp=Z,129nm,19.8s,baz=290,slow=37						
NRIK	Noril'sk	41.81	30	ceP	P	08 00 25.6	+2.2
NRIK	Noril'sk	41.81	30	P	P	08 00 23.4	0.0
NRIK				IAmb	IAmb	08 00 27.2	
	comp=Z,8.9nm,1.1s						
DBIC	Dimbokro	42.85	211	LR	LR	08 18 03.7	
	comp=Z,117nm,18.7s,baz=352,slow=36						
ZAA0	Zalesovo Array	43.69	53	P	P	08 00 38.1	-0.8
ZALV	Zalesovo Beam	43.69	53	P	P	08 00 38.4	-0.5
	comp=Z,0.6nm,0.4s,baz=282,slow=7.1,SNR=4.4						
ZALV				PP	PP	08 02 22.5	+2.3
	comp=Z,0.7nm,0.5s,baz=291,slow=9.1,SNR=4.2						
ZALV				LR	LR	08 19 28.9	
	comp=Z,91nm,20.8s,baz=286,slow=37						
ZALV	Zalesovo Beam	43.69	53	i P	P	08 00 39.7	+0.9
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV	Zalesovo Beam	43.69	53	P	P	08 00 37.4	-1.5
KSH	Kashi	43.94	76	P	P	08 00 37.1	-4.2
KSH				pmax	pmax		
	comp=Z,5.0nm,0.4s						
MK31	Makanchi Array	44.83	64	P	P	08 00 47.8	-0.3
MK31				pmax	pmax		
	comp=Z,3.0nm,1.1s						
MK31	Makanchi Array	44.83	64	P	P	08 00 47.8	-0.3
MKAR	Makanchi Array	44.83	64	P	P	08 00 47.8	-0.3
	comp=Z,3.0nm,0.9s,baz=281,slow=7.2,SNR=9.6						
MKAR				PcP	PcP	08 02 29.2	-0.7
	comp=Z,1.1nm,0.9s,baz=272,slow=3.9,SNR=3.7						
MKAR	Makanchi Array	44.83	64	i P	P	08 00 47.7	-0.5
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MKAR	Makanchi Array	44.83	64	P	P	08 00 47.6	-0.5
LODK	Lodwar	45.69	152	P	P	08 00 55.8	+0.5
LODK				IAmb	IAmb	08 00 59.5	
	comp=Z,5.1nm,0.9s						
DGZ	Jazzator, Alta	46.76	58	i P	P	08 01 05.7	+2.2
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.4s						
WMQ	Urumqi	49.57	65	eP	P	08 01 27.6	+2.4
KMBO	Kilima Mbogo	50.58	151	P	P	08 01 34.1	+0.9
	comp=Z,0.8nm,0.5s,baz=28,slow=7.7,SNR=2.6						
KMBO	Kilima Mbogo	50.58	151	i P	P	08 01 34.0	+0.7
KMBO	Kilima Mbogo	50.58	151	P	P	08 01 32.1	-1.2
KMBO				IAmb	IAmb	08 01 50.3	
	comp=Z,13nm,1.9s						
TIXI	Tiksi	53.78	21	ceP	P	08 01 58.6	+2.5
SONM	Songino Array	58.56	52	P	P	08 02 30.4	-0.4
	comp=Z,2.4nm,0.9s,baz=298,slow=9.1,SNR=9.1						
SONM				LR	LR	08 30 46.6	
	comp=Z,60nm,19.5s,baz=314,slow=39						
SONM	Songino Array	58.56	52	P	P	08 02 30.6	-0.2
SONM				IAmb	IAmb	08 02 33.1	
	comp=Z,3.6nm,1.1s						
ULN	Ulaanbaatar	58.91	52	ceP	P	08 02 33.3	0.0
ULN				pmax	pmax		
	comp=Z,4.0nm,1.7s						
A36M	Sachs Harbour	59.24	347	P	P	08 02 36.0	+1.0
A36M				IAmb	IAmb	08 02 37.1	
	comp=Z,11nm,1.4s						
YAK	Yakutsk	60.25	30	i P	P	08 02 44.0	+1.9
YAK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
LSZ	Lusaka	61.92	166	P	P	08 02 55.1	+1.1
	comp=Z,2.3nm,0.3s,baz=8.1,slow=13,SNR=4.0						
LSZ	Lusaka	61.92	166	P	P	08 02 54.1	0.0
LSZ	Lusaka	61.92	166	P	P	08 02 54.1	0.0
INK	Inuvik	63.81	348	P	P	08 03 08.7	+2.7
	comp=Z,3.0nm,1.3s,baz=32,slow=5.8,SNR=4.0						
LZH	Lanzhou	64.14	64	eP	P	08 03 09.3	+0.5
LZH				pP	sP	08 03 12.7	+1.1
LZH				sP	pP	08 03 14.8	+3.9
LZH				pmax	pmax		
	comp=Z,24nm,1.1s						
YKA	Yellowknife Ar	64.88	337	LR	LR	08 31 52.6	
	comp=Z,87nm,18.1s,baz=0.0,slow=36						
HHC	Hu-ho-hao-te	65.77	56	eP	P	08 03 18.5	-0.8
HHC				pmax	pmax		
	comp=Z,17nm,1.1s						
HHC				pmax	pmax		
	comp=Z,93nm,5.5s						
Q56A	Snyder Ridge,	66.17	302	P	P	08 03 21.2	-0.6
IMAR	Indian Mountai	68.18	355	P	P	08 03 36.6	+2.6
KMI	Kunming	70.55	74	⇑P	P	08 03 49.1	-0.6
KMI				sP	sP	08 03 55.7	+3.2
KMI				pmax	pmax		
	comp=Z,7.0nm,1.8s						
CMAR	Chiang Mai Arr	72.47	81	P	P	08 04 01.0	0.0
	comp=Z,2.8nm,0.9s,baz=303,slow=7.3,SNR=12						
CMAR	Chiang Mai Arr	72.47	81	P	P	08 04 01.1	+0.1
BOSA	Boshof	74.65	171	P	P	08 04 13.8	+0.2
	comp=Z,5.9nm,0.9s,baz=348,slow=5.8,SNR=4.6						
BOSA	Boshof	74.65	171	P	P	08 04 13.8	+0.2
BOSA				pmax	pmax		
	comp=Z,58nm,1.8s						
BOSA	Boshof	74.65	171	P	P	08 04 13.8	+0.2
NJ2	Nanjing	76.05	58	eP	P	08 04 22.2	+0.5
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
PETK	Petropavlovsk-	76.23	22	LR	LR	08 42 33.9	
	comp=Z,94nm,19.1s,baz=330,slow=39						
YSS	Yuzh-Sakhalins	76.61	34	eP	P	08 04 24.0	-0.6
KSRS	Korea Array	77.21	49	P	P	08 04 27.8	-0.4
	comp=Z,1.0nm,0.6s,baz=349,slow=5.2,SNR=5.8						
TJN	Taejon	77.72	50	ceP	P	08 04 33.2	+2.1
PDAR	Pinedale Array	79.15	322	P	P	08 04 41.4	+2.2
	comp=Z,0.4nm,0.7s,baz=42,slow=6.8,SNR=3.4						
PDAR				LR	LR	08 44 09.0	
	comp=Z,48nm,18.1s,baz=22,slow=39						
RDMU	Red Mountain	80.94	321	P	P	08 04 47.2	-1.7
MJAR	Matsushiro Arr	83.09	43	P	P	08 04 59.4	-0.6
	comp=Z,1.8nm,0.8s,baz=314,slow=4.7,SNR=5.2						
MJAR				LR	LR	08 44 12.8	
	comp=Z,36nm,19.3s,baz=280,slow=37						
BDFB	Brasilia	83.79	240	P	P	08 05 04.6	+0.8
	comp=Z,1.5nm,0.6s,baz=45,slow=4.3,SNR=3.5						
ANMO	Albuquerque	84.04	316	P	P	08 05 06.0	+0.9
	comp=Z,0.7nm,0.5s,baz=77,slow=4.5,SNR=5.3						
TXAR	Lajitas Array	87.07	310	P	P	08 05 19.7	-0.5
	comp=Z,0.9nm,1.0s,baz=38,slow=1.6,SNR=6.7						
TXAR	Lajitas Array	87.07	310	P	P	08 05 20.2	-0.1
ASAR	Alice Springs	126.16	88	PKP	PKPdf	08 11 35.9	-1.0
	comp=Z,0.2nm,0.6s,baz=333,slow=1.9,SNR=2.4						
VNDA	Vanda	145.56	168	PKPbc	PKPdf	08 12 10.8	-0.2
	comp=Z,1.7nm,1.0s,baz=249,slow=7.3,SNR=7.1						
VNDA	Vanda	145.56	168	PKIKP	PKPdf	08 12 10.6	-0.4
VNDA	Vanda	145.56	168		PKPdf	08 12 10.6	-0.4

TIR ***01*** *08:05:23.7, 41°.37N×20°.22E, h21^{km}±7^{km}, Md2.5, Ml2.5*
SKO ***01*** *08:05:25.0, 41°.32N×20°.19E, h13^{km}*
PDG ***01*** *08:05:24.0±0.1, 41°.33N×20°.15E, h9^{km}, ML2.4/9, Error ellipse: s-maj=0.2km s-min=0.2km az=0.0*
BEO ***01*** *08:05:25.7±0.4, 41°.33N×20°.19E, h4^{km}±3^{km}, ML2.2/6*
ISC 01 08:05:24.6±0.9, **41°.32N**±0°.03×**20°.19E**±0°.02, **h15**^{km}±8^{km}, **n36,** σ1^{s}.05/60, **5C-2D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.24	277	ePg	Pg	08 05 29.8	-0.1
TIR				eSg	Sg	08 05 34.5	+0.9
TIR	Tirane	0.24	277	i Pg	Pg	08 05 29.9	-0.1
TIR	Tirane	0.24	277	P	Pg	08 05 29.9	-0.1
	baz=267						
TIR				S	Sb	08 05 34.6	-0.2
	baz=267						
TIR				AMP			
	comp=N,2.1nm,0.2s,baz=267						
PHP	Peshkopia	0.41	27	P	Pg	08 05 31.7	-1.3
	baz=27						
PHP				S	Sg	08 05 37.4	-1.4
	baz=27						
PHP				AMP			
	comp=N,3.8nm,0.4s,baz=27						
OHR	Ohrid	0.51	114	i Pg	Pg	08 05 34.0	-0.6
OHR				i Sg	Sb	08 05 43.1	+0.7
OHR				eLg	Lg	08 05 43.2	
	comp=E,350nm,0.6s						
PUK	Puka	0.76	343	P	Pg	08 05 38.2	-1.3
	baz=341						
KBN	Korca	0.83	146	P	Pg	08 05 40.6	-0.1
	baz=149						
KBN				S	Sb	08 05 53.1	+1.4
	baz=149						
ULC	Ulcinj	0.96	313	i Pg	Pb	08 05 41.2	-1.7
ULC	Ulcinj	0.96	313	ePg	Pb	08 05 41.1	-1.8
FNA	Florina	1.04	120	i Pg	Pb	08 05 43.9	-0.5
FNA				i Sg	Sg	08 05 58.9	+0.4
FNA	Florina	1.04	120	P	Pb	08 05 43.9	-0.5
	baz=123						
FNA				S	Sg	08 05 59.0	+0.4
	baz=123						
SKO	Skopje	1.15	55	i Pg	Pb	08 05 45.7	-0.4
SKO				i Sg	Sb	08 06 00.8	0.0
SKO				eLg	Lg	08 06 01.5	
	comp=N,6.3nm,0.4s						
DRME	Dracevica, Mon	1.15	320	⇑iPg	Pb	08 05 44.8	-1.3
DRME				eSg	Sg	08 06 02.1	+0.3
LSK	Leskovik	1.21	165	P	Pn	08 05 46.9	-0.1
	baz=166						
PVY	Plav	1.29	352	⇑iPg	Pn	08 05 47.5	-0.7
PVY				i Sg	Sg	08 06 07.2	+0.9
PDG	Podgorica	1.31	328	ePg	Pn	08 05 48.3	-0.1
PDG				eSg	Sg	08 06 07.3	+0.3
PDG	Podgorica	1.31	328	i Pg	Pn	08 05 48.0	-0.3
PDG				i Sg	Sg	08 06 08.0	+0.9
TTG	Podgorica	1.31	328	ePg	Pn	08 05 47.8	-0.6
TTG				eSg	Sg	08 06 07.9	+0.9
BUM	Brajici-Budva	1.38	316	⇑iPg	Pn	08 05 48.9	-0.5
BUM				eSg	Sg	08 06 10.2	+1.1
STIP	Stip	1.55	75	i Pn	Pb	08 05 53.1	+0.2
STIP				i Sn	Sg	08 06 17.9	+3.3
STIP				eLg	Lg	08 06 21.2	
	comp=N,6.3nm,0.3s						
CEME	Cevo	1.55	323	⇑iPg	Pn	08 05 52.1	+0.4
CEME				i Sg	Sg	08 06 15.1	+0.5
IVA	Berane	1.57	352	⇓iPg	Pn	08 05 52.6	+0.6
IVA				i Sg	Sg	08 06 15.6	+0.4
HCY	Herceg Novi	1.69	312	⇑iPn	Pn	08 05 54.5	+0.9
HCY				i Sn	Sg	08 06 18.6	-0.6
GRG	Griva	1.71	101	i Pn	Pn	08 05 50.3	-3.6
VAY	Valandovo	1.79	89	i Pn	Pb	08 05 57.0	-0.2
VAY				i Sn	Sb	08 06 19.8	+0.3
VAY				eLg	Lg	08 06 20.9	
	comp=E,21nm,0.9s						
PRVS	Prvonek	1.84	49	ePg	Pb	08 05 58.2	+0.1

PRVS				eSg	Sg	08 06 24.7	+0.7
BARS	Barje	1.93	38	ePg	Pb	08 06 00.6	+1.2
BARS				eSg	Sg	08 06 26.3	-0.3
BARS	Barje	1.93	38	i Pn	Pb	08 05 58.9	-0.5
BARS				i Sn	Sg	08 06 26.8	+0.2
SJES	Sjenica	1.95	355	ePn	Pb	08 06 00.0	+0.1
TREB	Trebinje	1.96	316	ePn	Pb	08 06 00.5	+0.6
BRY	Bratogost	2.00	323	⇓iPn	Pn	08 05 58.8	+0.8
BRY				eSn	Sb	08 06 26.0	+0.4
SELS	Selova	2.02	20	ePn	Pn	08 05 59.6	+1.4
BOSS	Bosilegrad	2.08	55	ePn	Pb	08 06 01.7	-0.3
UPM	Unac-Piva	2.11	334	ePn	Pn	08 06 00.3	+0.8
UPM				i Sn	Sb	08 06 28.6	-0.2
BBLS	Lazići	2.61	347	ePn	Pn	08 06 08.4	+2.1
DIVS	Divibare	2.78	357	ePn	Pn	08 06 10.1	+1.4

SKO ***01*** *08:16:26.7, 41°.32N×20°.24E, h15^{km}*

TIR 01 08:16:25.9, 41°.33N×20°.26E, h6^{km}±2^{km}, Md2.1, Ml1.9, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.29	274	i Pg	Pb	08 16 32.8	-0.8
TIR	Tirane	0.29	274	P	Pg	08 16 31.9	+0.2
	baz=274						
TIR				S	Sg	08 16 37.0	+1.4
	baz=274						
TIR				AMP			
	comp=E,0.5nm,0.2s,baz=274						
PHP	Peshkopia	0.38	21	P	Pg	08 16 34.2	+0.8
	baz=21						
PHP				S	Sg	08 16 39.6	+1.1
	baz=21						
PHP				AMP			
	comp=N,0.8nm,0.2s,baz=21						
OHR	Ohrid	0.46	118	i Pg	Pb	08 16 36.7	+0.2
OHR				i Sg	Sb	08 16 44.9	+1.3
OHR				eLg	Lg	08 16 45.5	
	comp=N,36nm,0.6s						
FNA	Florina	1.01	122	i Pg	Pn	08 16 46.4	-0.2
FNA				i Sg	Sn	08 17 01.5	+0.4
FNA	Florina	1.01	122	P	Pn	08 16 46.2	-0.4
	baz=122						
FNA				S	Sn	08 17 00.6	-0.5
	baz=122						
PDG	Podgorica	1.33	326	i Pg	Pg	08 16 51.9	+0.4
STIP	Stip	1.50	75	i Pn	Pg	08 16 57.9	+3.4
STIP				i Sn	Sg	08 17 21.6	+7.6
STIP				eLg	Lg	08 17 22.5	
	comp=E,2.1nm,0.4s						
BEY	Berane	1.57	350	i Pn	Pg	08 16 57.5	+1.5

LJU 01 08:18:04.1, 45°.86N×15°.54E, h2^{km}, ML0.2, 1C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRES	Cresnjev	0.06	239	i Pg	Pg	08 18 05.5	+0.1
CRES				i Sg	Sg	08 18 06.6	+0.3
CRES				IAML		08 18 06.8	
	comp=Z,5.3nm,0.0s						
GCIS	Gornji Cirnik	0.07	83	⇑iPg	Pg	08 18 05.3	-0.2
GCIS				i Sg	Sg	08 18 06.3	0.0
GCIS				IAML		08 18 06.5	
	comp=Z,7.4nm,0.1s						
OZLJ	Ozalj	0.25	191	ePg	Pg	08 18 09.1	+0.2
OZLJ				Sg	Sg	08 18 13.0	+0.9
PTJ	Puntijarka	0.31	81	ePg	Pb	08 18 11.2	-1.1
PTJ				Sg	Sg	08 18 15.5	+1.5
MOSL	Moslavina	0.89	106	Sg	Sg	08 18 32.6	0.0

NNC 01 09:10:18.2±14.0, 36°.99N×71°.25E, h0^{km}, mb4.3, mpv3.9, 4C, Error ellipse: s-maj=116.2km s-min=106.4km az=22.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.13	355	⇑Pn	Pn	09 11 47.4	-2.6
	1.4nm,0.3s,baz=172,slow=12,SNR=89						
KK31				Sn	Sn	09 13 00.7	-0.2
	1.9nm,0.5s,baz=167,slow=24,SNR=7.5						
AAK	Ala-Archa	6.17	23	⇑Pn	Pn	09 11 51.8	+1.1
	5.6nm,0.4s						
AAK				⇑Sn	Sn	09 13 05.4	+3.4
	6.3nm,0.5s						
TKM2	Tokmak 2	6.80	28	⇑Pn	Pn	09 12 00.0	+0.6
	11nm,0.5s						

IDC ***01*** *09:14:26.3±1.0, 19°.77S×70°.84W, h0^{km}, mb3.8/4, mb1 4.0/7, mb1mx3.8/35, mbtmp3.9/7, ML3.9/3, MS3.2/7, Ms1 3.3/7, ms1mx3.1/29, Error ellipse: s-maj=29.7km s-min=16.8km az=60.0*

VAO ***01*** *09:14:28.6±0.6, 19°.84S×71°.03W, h10^{km}, mb4.1*

NEIC ***01*** *09:14:31.9±2.1, 19°.94S±0°.04×70°.9W±0°.1, h30^{km}±4^{km}, mb4.1/6, ML4.1(GUC), Error ellipse: s-maj=18.4km s-min=6.0km az=89.0*

GUC ***01*** *09:14:31.0±0.8, 19°.97S×70°.99W, h40^{km}±3^{km}, ML4.1*

ISC 01 09:14:28.5±1.8, 19°.95S±0°.04×71°.05W±0°.06, h17^{km}±11^{km}, n76, σ1^s.08/81, mb4.0/4, MS3.9/3, 6C-1D, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TA02	Huaiquique	0.92	111		Pg	09 14 46.2	-0.1
TA02	Huaiquique	0.92	111	eP	Pb	09 14 46.0	0.0
TA02				eS	Sb	09 14 57.4	-0.5
TA02				IAML		09 15 02.2	
	comp=N,7µm,0.2s						
PSGC	Pisagua	0.94	68	⇓eP	Pb	09 14 45.4	-0.9
PSGC				eS	Sb	09 14 57.6	-0.9
PSGCX	Pisagua	0.94	68		Pb	09 14 45.4	-0.9
TA01	Diego Aracena	1.02	127		Pg	09 14 48.1	-0.1
TA01	Diego Aracena	1.02	127	⇑eP	Pb	09 14 47.6	0.0
TA01				eS	Sb	09 15 00.3	-0.5
TA01				IAML		09 15 06.4	
	comp=E,5µm,0.3s						
PB11	IPOC Station P	1.32	82	Pn	Pn	09 14 52.3	-0.1
PB11	IPOC Station P	1.32	82	⇑eP	Pn	09 14 52.2	-0.1
PB11				eS	Sb	09 15 08.5	-1.2
PB11				IAML		09 15 10.5	
	comp=N,7µm,0.3s						
AP01	Chacalluta	1.71	23		Pn	09 14 58.3	+0.9
AP01	Chacalluta	1.71	23	⇑eP	Pn	09 14 58.3	+0.9
AP01				eS	Sn	09 15 19.6	+0.7
AP01				IAML		09 15 32.9	
	comp=E,5µm,0.6s						
PB02	IPOC Station P	1.74	142	eP	Pn	09 14 58.3	+0.3
PB02				eS	Sn	09 15 19.4	-0.5
PB02				IAML		09 15 31.8	
	comp=E,10µm,0.5s						
PB08	IPOC Station P	1.79	96	eP	Pn	09 14 59.0	+0.1
PB08				eS	Sn	09 15 21.5	0.0
PB08				IAML		09 15 25.5	
	comp=N,2µm,0.6s						
PB01	IPOC Station P	1.82	127	⇑eP	Pn	09 14 59.4	+0.3
PB01				eS	Sn	09 15 21.4	-0.5
PB01				IAML		09 15 29.6	
	comp=N,4µm,0.8s						
PB07	IPOC Station P	2.07	149	eP	Pn	09 15 02.8	+0.1
PB07				eS	Sn	09 15 27.6	-0.6
PB07				IAML		09 15 46.0	
	comp=E,2µm,0.1s						
PB03	IPOC Station P	2.41	150	⇑eP	Pn	09 15 07.6	+0.3
PB03				eS	Sn	09 15 35.8	-0.8
PB03				IAML		09 15 56.1	
	comp=E,1µm,0.4s						
PB04	IPOC Station P	2.52	161	eP	Pn	09 15 08.9	+0.1
PB04				eS	Sn	09 15 36.9	-2.2
PB04				IAML		09 15 59.6	
	comp=E,2µm,0.6s						
PB05	IPOC Station P	2.99	165	eP	Pn	09 15 15.1	-0.3
PB05				eS	Sn	09 15 47.9	-3.0
PB05				IAML		09 16 15.0	
	comp=E,459nm,0.3s						
PB06	IPOC Station P	3.07	154	⇑eP	Pn	09 15 16.5	+0.2
PB06				eS	Sn	09 15 52.0	-0.8
PB06				IAML		09 16 12.2	
	comp=N,1µm,0.8s						
LVC	Limon Verde	3.31	143	Pn	Pn	09 15 21.8	+1.9
	comp=N,13nm,0.3s,baz=348,slow=8.1,SNR=82						
LVC				Sn	Sn	09 16 00.4	+1.3
	comp=N,43nm,0.3s,baz=99,slow=22,SNR=4.5						
LVC				LR	LR	09 16 05.2	
	comp=N,73nm,21.6s,baz=316,slow=30						
LVC				Lg	Lg	09 16 12.6	
	comp=N,37nm,0.3s,baz=213,slow=12,SNR=5.1						
LVC	Limon Verde	3.31	143	Pn	Pn	09 15 21.4	+1.5
LVC	Limon Verde	3.31	143	eP	Pn	09 15 20.8	+0.8
AF01	San Pedro de A	4.01	139		Pn	09 15 32.1	+2.7
LPAZ	La Paz	4.58	38	Pn	Pn	09 15 38.4	+0.9
	comp=N,1.0nm,0.3s,baz=214,slow=5.5,SNR=29						
LPAZ				LR	LR	09 17 31.8	
	comp=N,287nm,18.6s,baz=244,slow=43						
LPAZ	La Paz	4.58	38	Pn	Pn	09 15 39.2	+1.6
AC02	Maricunga	7.08	166		Pn	09 16 12.4	+0.7
GO03	Copiap	7.64	175		Pn	09 16 20.4	+1.3
SIV	San Ignacio	10.27	69	Pn	Pn	09 16 52.9	-2.3
	comp=N,2.1nm,0.3s,baz=254,slow=8.7,SNR=34						
SIV				LR	LR	09 20 03.6	
	comp=N,46nm,21.8s,baz=277,slow=34						
ETMB	Extrema	11.10	26	eP	Pn	09 17 05.7	-0.9
PTLB	Pontes e Lacer	12.20	70	eP	Pn	09 17 21.9	+0.4
CZSB	Cruzeiro do Su	12.25	352	eP	Pn	09 17 22.1	-0.2
SAML	Samuel	13.32	36	Pn	Pn	09 17 37.2	+0.3
CPUP	Villa Florida	14.12	119	Pn	Pn	09 17 48.3	+0.5
	comp=N,0.1nm,0.3s,baz=318,slow=16,SNR=1.7						
CPUP				LR	LR	09 24 31.3	
	comp=N,106nm,19.9s,baz=308,slow=43						
CPUP	Villa Florida	14.12	119		Pn	09 17 46.4	-1.4
CPUP	Villa Florida	14.12	119	eP	Pn	09 17 48.6	+0.8
AQDB	Aquidauana	14.42	95	eP	Pn	09 17 52.5	+0.6
SALV	Santo Antonio	15.15	77	eP	Pn	09 18 01.8	-0.1
H03N1	Juan Fernandez	15.15	206	T	T	09 33 55.9	
	baz=33,slow=72						
H03N2	Juan Fernandez	15.16	206	T	T	09 34 04.9	
	baz=33,slow=72						
H03N3	Juan Fernandez	15.17	206	T	T	09 33 45.4	
	baz=33,slow=72						
PP1B	Ponte de Pedra	15.49	84	eP	Pn	09 18 05.2	-1.1
PDRB	Porto dos Gac	16.07	61	eP	Pn	09 18 13.6	-0.2
CLDB	Colider	17.24	61	eP	Pn	09 18 28.1	-0.6
ARAG	Araguaiana, MT	18.79	80	eP	Pn	09 18 49.5	+1.8
CPSB	Cacapava Do Su	19.01	127	eP	Pn	09 18 51.4	+1.1
MACA	Manacapuru-AM	19.51	33	eP	P	09 18 54.0	-1.1
TRQA	Tornquist	19.69	158		Pn	09 18 58.8	+0.4
TRQA	Tornquist	19.69	158	eP	Pn	09 18 58.7	+0.4
NPGB	Novo Progresso	19.91	52	eP	P	09 18 58.7	-0.7
FRTB	Fartura	20.25	103	eP	P	09 19 04.3	+1.2
PLCA	Paso Flores	20.72	179	P	Pn	09 19 10.2	-0.3
	comp=N,3.2nm,0.9s,baz=342,slow=6.3,SNR=2.8						
PLCA	Paso Flores	20.72	179	P	Pn	09 19 10.5	-0.1
PLCA				IAmb	IAmb	09 19 30.4	
	comp=Z,10nm,1.3s						
BDFB	Brasilia	22.34	83	P	P	09 19 24.4	-1.4
	comp=Z,1.4nm,0.5s,baz=233,slow=5.1,SNR=2.2						
BDFB	Brasilia	22.34	83	P	P	09 19 25.7	-0.1
BDFB				IAmb	IAmb	09 19 38.7	
	comp=Z,6.1nm,1.0s						
PEXB	Peixe	23.19	74	eP	P	09 19 35.9	+1.2
BOAV	Boa Vista	24.49	26	eP	P	09 19 47.3	+0.3
SMTB	Santa Maria do	25.21	67	eP	P	09 19 53.7	+0.1
ZARC	Zaragoza, Cauc	27.53	352	P	P	09 20 14.3	-0.1
ZARC				IAmb	IAmb	09 20 33.2	
	comp=Z,3.1nm,0.7s						
GUA01	Guaratinga, BA	29.83	89	eP	P	09 20 35.8	+0.7
CMC01	Camacan, BA	30.36	86	eP	P	09 20 41.6	+1.9
NBIT	Itapeh - BA	30.54	86	eP	P	09 20 43.4	+2.1
RPN	Rapa Nui	35.72	251	LR	LR	09 31 44.6	
	comp=Z,47nm,21.5s,baz=14,slow=29						
TXAR	Lajitas Array	58.23	326	P	P	09 24 23.6	+1.4
	comp=Z,0.3nm,0.8s,baz=148,slow=10,SNR=2.7						
TORD	Torodi Ar. Bea	78.74	72	P	P	09 26 29.5	-1.1
	comp=Z,3.0nm,0.6s,baz=251,slow=5.1,SNR=17						
TORD				LR	LR	09 59 59.0	
	comp=Z,60nm,19.2s,baz=290,slow=35						
YKA	Yellowknife Ar	89.08	341	LR	LR	10 13 03.3	
	comp=Z,41nm,18.0s,baz=0.0,slow=40						
H11S2	WAKE ISLAND Hy	125.68	279	T	T	11 52 24.9	
	baz=102,slow=74						
H11S1	WAKE ISLAND Hy	125.69	279	T	T	11 52 57.7	
	baz=102,slow=74						
H11S3	WAKE ISLAND Hy	125.70	279	T	T	11 52 39.8	
	baz=102,slow=74						
ASAR	Alice Springs	130.29	210	PKP	PKPdf	09 33 39.8	+1.0
	comp=Z,0.2nm,0.7s,baz=111,slow=1.5,SNR=4.5						
ASAR	Alice Springs	130.29	210		PKPdf	09 33 37.4	-1.3
WRA	Warramunga Arr	133.20	214	PKP	PKPdf	09 33 45.7	+1.4
	comp=Z,0.6nm,1.0s,baz=156,slow=1.6,SNR=3.0						
ZALV	Zalesovo Beam	141.35	23	PKP	PKPdf	09 33 57.5	-0.7
	comp=Z,1.3nm,0.7s,baz=277,slow=3.8,SNR=4.3						
ZALV	Zalesovo Beam	141.35	23		PKPdf	09 33 58.8	+0.7
MKAR	Makanchi Array	145.49	33	PKPbc	PKPdf	09 34 03.9	-1.9
	comp=Z,1.0nm,0.8s,baz=301,slow=4.5,SNR=5.2						
KSH	Kashi	145.63	48	PKPbc	PKPab	09 34 07.7	+0.8
KSH				pPKP	sPKPab	09 34 17.0	+4.2
SONM	Songino Array	152.11	4	PKPbc	PKPbc	09 34 22.6	-0.5
	comp=Z,1.0nm,0.6s,baz=332,slow=4.7,SNR=5.5						
SONM				PKPab	PKPab	09 34 32.2	-0.5
	comp=Z,0.3nm,0.3s,baz=292,slow=2.2,SNR=3.9						
SONM	Songino Array	152.11	4		PKPdf	09 34 15.6	-1.0

IDC 01 09:18:58.4±2.9, 31°.39S×177°.82W, h0^{km}, mb3.8/2, mb1 4.0/4, mb1mx3.7/28, mbtmp3.8/4, ML3.6/2, Error ellipse: s-maj=69.4km s-min=30.4km az=116.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.13	358	Pn	Pn	09 19 36.0	+0.7
	48nm,0.3s,baz=73,slow=19,SNR=2.0						
RAO				Sn	Sn	09 19 59.0	-3.4
	90nm,0.3s,baz=75,slow=20,SNR=2.7						
URZ	Urewera	8.02	210	Pn	Pn	09 20 55.4	-0.7
	0.3nm,0.3s,baz=308,slow=19,SNR=1.7						
URZ				Sn	Sn	09 22 22.5	-5.1
	0.3nm,0.3s,baz=108,slow=20,SNR=1.5						
ASAR	Alice Springs	43.22	268	P	P	09 27 01.7	+0.2
	0.7nm,0.7s,baz=103,slow=7.3,SNR=11						
WRA	Warramunga Arr	44.30	273	P	P	09 27 10.1	-0.2
	1.6nm,0.8s,baz=112,slow=8.0,SNR=17						
FINES	FINESS Array B	146.12	340	PKPbc	PKPdf	09 38 38.5	-0.2
	3.5nm,0.9s,baz=70,slow=4.8,SNR=11						

ANF ***01*** *09:22:53.9±0.3, 36°.88N×97°.66W, h1^{km}, ML3.1/8, Error ellipse: s-maj=3.4km s-min=3.1km az=34.0*

TUL ***01*** *09:22:53.8±1.2, 36°.89N±0°.01×97°.68W±0°.02, h1^{km}±7^{km}, ML2.9, mb_Lg2.6/17(NEIC), Error ellipse: s-maj=2.0km s-min=1.4km az=58.0*

NEIC ***01*** *09:22:54.1±1.1, 36°.879N±0°.010×97°.69W±0°.02, h3^{km}±7^{km}, Error ellipse: s-maj=2.3km s-min=0.6km az=52.0*

ISC 01 09:22:54.0±0.8, 36°.89N±0°.03×97°.68W±0°.03, h10^{km}, n50, σ1^s.12/55, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T35A	Sooner Cattle	0.94	88		Pg	09 23 11.8	-0.2
T35A				Sg	Sg	09 23 23.8	-0.4
T35B	Sooner Cattle	0.94	88	P	Pg	09 23 11.8	-0.3
	baz=269,SNR=56						
T35B				S	Sg	09 23 24.0	-0.3
	baz=269						
U32A	Winter Ranch,	1.18	245		Pb	09 23 15.9	-0.6
U32A				Sg	Sb	09 23 31.4	-0.5
U32A	Winter Ranch,	1.18	245	P	Pb	09 23 15.8	-0.6
	baz=64						
OKCFA	Oklahoma City	1.49	173		Pb	09 23 21.5	-0.2
OKCFA	Oklahoma City	1.49	173	P	Pb	09 23 21.4	-0.4
	baz=353,SNR=9.2						
OKCFA				S	Sg	09 23 41.7	-0.1
	baz=353						
OKCSW	OKLAHOMA CITY	1.50	172		Pb	09 23 21.5	-0.4
FNO	Franklin	1.65	172		Pb	09 23 23.4	-1.1
R32A	Long Quarter,	1.73	332		Pb	09 23 25.8	-0.1
R32A	Long Quarter,	1.73	332	P	Pb	09 23 25.8	-0.1
	baz=152,SNR=46						
R32A				S	Sb	09 23 48.4	+0.6
	baz=152						
TUL1	Leonard	1.81	122		Pb	09 23 27.0	-0.2
TUL1				IAmb_Lg		09 23 52.9	
	comp=Z,57nm,0.9s						
TUL1	Leonard	1.81	122	P	Pb	09 23 26.4	-0.8
	baz=304,SNR=30						
TUL1				S	Sb	09 23 50.8	+0.7
	baz=304						
X34A	Smith Ranch, M	2.29	183		Pb	09 23 34.1	-1.3
WMOK	Wichita Mounta	2.33	203		Pb	09 23 34.2	-1.9
WMOK	Wichita Mounta	2.33	203	P	Pb	09 23 34.1	-2.0
	baz=22,SNR=8.7						
KSU1	Kansas State U	2.36	21		Pn	09 23 34.0	+1.2
KSU1				IAmb_Lg		09 24 07.3	
	comp=Z,18nm,0.7s						
KSU1	Kansas State U	2.36	21	P	Pn	09 23 34.0	+1.2
	baz=201						
KSU1				S	Sb	09 24 04.0	-1.8
	baz=201						
CBKS	Cedar Bluff	2.51	320		Pn	09 23 36.5	+1.5
CBKS				IAmb_Lg		09 24 18.8	
	comp=Z,18nm,0.7s						
CBKS	Cedar Bluff	2.51	320	S	Sb	09 24 11.7	+1.4
	baz=139						
U38A	Gravette	2.69	99		Pn	09 23 38.5	+1.2
X37A	Clayton	2.97	140	Pn	Pn	09 23 42.3	+1.1
HHAR	Hobbs	3.07	100		Pn	09 23 44.1	+1.5
HHAR				IAmb_Lg		09 24 37.5	
	comp=Z,14nm,0.8s						
S39A	Bolivar	3.57	76		Pn	09 23 50.2	+0.8
S39A	Bolivar	3.57	76	P	Pn	09 23 50.4	+1.0
	baz=258,SNR=13						
Z35A	Perchaven, San	3.57	174	Pn	Pn	09 23 48.8	-0.7
W39A	Magazine	3.58	117	IAmb_Lg		09 24 55.0	
	comp=Z,19nm,0.9s						
AMTX	Amarillo	3.82	239		Pn	09 23 54.7	+1.8
U40A	Yellville	3.92	96		Pn	09 23 55.6	+1.3
U40A	Yellville	3.92	96	P	Pn	09 23 55.6	+1.3
	baz=279,SNR=6.0						
U40A				P	Pn	09 23 55.6	+1.3
	baz=279,SNR=6.0						
MIAR	Mount Ida	4.08	124		Pn	09 23 58.1	+1.7
Z38A	Mt. Pleasant	4.25	148	Pn	Pn	09 23 59.9	+1.2
P38A	Dawn	4.25	49		Pn	09 23 59.0	+0.2
MGMO	Mountain Grove	4.34	85	Pn	Pn	09 24 01.3	+1.3
MGMO				IAmb_Lg		09 25 10.2	
	comp=Z,11nm,0.8s						
R40A	Maddies Statio	4.52	70	Pn	Pn	09 24 02.7	+0.2
R40A	Maddies Statio	4.52	70	P	Pn	09 24 03.0	+0.6
	baz=254,SNR=8.0						
BGNE	Belgrade	4.52	356	Pn	Pn	09 24 01.7	-0.9
FCAR	Ozark Folk Cen	4.59	101	Pn	Pn	09 24 04.7	+1.2
FCAR				IAmb_Lg		09 25 19.3	
	comp=Z,14nm,0.8s						
WHAR	Wooly Hollow	4.65	109	Pn	Pn	09 24 05.3	+1.0
WLAR	White Oak Lake	4.92	129	Pn	Pn	09 24 10.3	+2.3
MSTX	Muleshoe	5.08	236	Pn	Pn	09 24 11.9	+1.6
L34A	Svendsen Farm,	5.17	11	IAmb_Lg		09 25 48.6	
	comp=Z,11nm,0.7s						
CCM	Cathedral Cave	5.25	75	Pn	Pn	09 24 14.2	+1.7
T42A	Van Buren	5.28	87	Pn	Pn	09 24 12.6	-0.3
LCAR	Lake Charles	5.32	97	Pn	Pn	09 24 13.2	-0.3
435B	Jarrell	6.10	179	IAmb_Lg		09 26 19.3	
	comp=Z,11nm,0.9s						
SDCO	Great Sand Dun	6.29	280	Pn	Pn	09 24 27.5	+0.4
ISCO	Idaho Springs	6.88	297	Pn	Pn	09 24 33.4	-1.7
OXF	Oxford	7.14	107	Pn	Pn	09 24 39.0	+0.6
L40A	Anamosa	7.18	42	Pn	Pn	09 24 39.2	+0.2
MNTX	Cornudas Mount	8.21	233	Pn	Pn	09 24 54.3	+1.1

IDC 01 09:28:02.7±11.0, 31°.63S×179°.89W, h216^{km}±114^{km}, mb2.7/2, mb1 3.0/3, mb1mx2.9/20, mbtmp3.4/3, Error ellipse: s-maj=106.5km s-min=42.5km az=4.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	7.06	200	P	Pn	09 29 44.7	+1.0
	0.3nm,0.3s,baz=128,slow=20,SNR=1.9						
URZ				S	S	09 31 03.2	-0.9
	1.0nm,0.3s,baz=307,slow=20,SNR=2.5						
ASAR	Alice Springs	41.44	269	P	P	09 35 28.2	-0.2
	0.2nm,0.6s,baz=94,slow=7.9,SNR=5.4						
WRA	Warramunga Arr	42.55	275	P	P	09 35 37.4	0.0
	0.3nm,0.4s,baz=113,slow=7.6,SNR=8.9						
FINES	FINESS Array B	145.71	338	PKPbc	PKPdf	09 47 14.3	-0.1
	2.7nm,0.6s,baz=51,slow=4.4,SNR=12						

IDC ***01*** *09:48:04.8±1.1, 38°.96N×105°.99E, h0^{km}, mb3.7/4, mb1 3.7/7, mb1mx3.4/71, mbtmp3.5/7, ML3.3/3, Error ellipse: s-maj=47.3km s-min=20.2km az=51.0*

ISC 01 09:48:09.6±1.2, 39°.1N±0°.2×106°.1E±0°.2, h35^{km}, n7, σ0^s.46/7, mb3.9/3, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	8.78	2	Pn	Pn	09 50 14.0	-0.1
	0.3nm,0.3s,baz=186,slow=14,SNR=2.9						
KSRS	Korea Array	17.25	88	P	Pn	09 52 07.8	+0.1
	0.2nm,0.3s,baz=288,slow=11,SNR=4.1						
MKAR	Makanchi Array	18.99	302	P	P	09 52 27.7	-0.4
	0.1nm,0.3s,baz=98,slow=15,SNR=1.6						
ZALV	Zalesovo Beam	20.75	323	P	P	09 52 47.3	+0.2
	0.5nm,0.3s,baz=129,slow=11,SNR=2.9						
KURBB	Kurchatov Arra	22.55	310	P	P	09 53 07.0	+0.6
	2.6nm,0.2s,baz=107,slow=13,SNR=3.0						
WRA	Warramunga Arr	64.39	150	P	P	09 58 41.7	-0.4
	0.4nm,0.7s,baz=337,slow=6.9,SNR=2.5						
ASAR	Alice Springs	67.62	152	P	P	09 59 03.2	+0.3
	0.5nm,0.5s,baz=338,slow=6.5,SNR=17						

TUL ***01*** *10:11:44.5±1.0, 36°.90N±0°.01×97°.70W±0°.01, h7^{km}±5^{km}, ML2.9, mb_Lg2.3/14(NEIC), Error ellipse: s-maj=1.6km s-min=1.5km az=177.0*

NEIC 01 10:11:44.6±0.8, 36°.88N±0°.01×97°.684W±0°.009, h6^{km}±5^{km}, Error ellipse: s-maj=1.7km s-min=1.0km az=197.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T35A	Sooner Cattle	0.94	87		Pg	10 12 02.3	-0.3
T35A				Sg	Sg	10 12 14.3	-0.5
U32A	Winter Ranch,	1.17	245		Pg	10 12 06.2	-0.9
U32A				Sg	Sg	10 12 21.4	-0.8
OKCFA	Oklahoma City	1.47	173		Pb	10 12 12.0	-0.3
OKCFA				IAmb_Lg		10 12 34.4	
	comp=Z,23nm,0.8s						
OKCSW	OKLAHOMA CITY	1.48	172		Pb	10 12 12.4	-0.1
FNO	Franklin	1.63	172		Pn	10 12 13.8	0.0
R32A	Long Quarter,	1.75	332		Pn	10 12 16.2	+0.8
TUL1	Leonard	1.81	122		Pn	10 12 16.7	+0.5
X34A	Smith Ranch, M	2.27	183		Pn	10 12 23.4	+0.8
WMOK	Wichita Mounta	2.31	203		Pn	10 12 24.5	+1.3
WMOK				IAmb_Lg		10 13 01.6	
	comp=Z,5.4nm,0.7s						
KSU1	Kansas State U	2.38	21		Pn	10 12 23.8	-0.3
CBKS	Cedar Bluff	2.53	321	Pn	Pn	10 12 25.1	-1.1
CBKS				IAmb_Lg		10 13 10.7	
	comp=Z,12nm,0.8s						
U38A	Gravette	2.69	98	Pn	Pn	10 12 28.1	-0.3
X37A	Clayton	2.96	140		Pn	10 12 32.4	+0.4
HHAR	Hobbs	3.07	100		Pn	10 12 34.2	+0.6
S39A	Bolivar	3.57	76		Pn	10 12 40.1	-0.4
AMTX	Amarillo	3.81	240	Pn	Pn	10 12 45.5	+1.7
U40A	Yellville	3.92	96	Pn	Pn	10 12 45.5	+0.2
U40A				IAmb_Lg		10 13 52.3	
	comp=Z,12nm,0.8s						
MIAR	Mount Ida	4.07	124	Pn	Pn	10 12 47.7	+0.3
Z38A	Mt. Pleasant	4.23	148	IAmb_Lg		10 14 04.2	
	comp=Z,11nm,0.8s						
P38A	Dawn	4.27	49	Pn	Pn	10 12 49.5	-0.6
N35A	Tabor	4.29	21		Pn	10 12 49.2	-1.2
MGMO	Mountain Grove	4.34	85	Pn	Pn	10 12 51.0	-0.1
R40A	Maddies Statio	4.53	70	Pn	Pn	10 12 52.4	-1.3
FCAR	Ozark Folk Cen	4.59	101	Pn	Pn	10 12 55.4	+0.8
WHAR	Wooly Hollow	4.65	108	Pn	Pn	10 12 55.5	+0.2
WHAR				IAmb_Lg		10 14 09.2	
	comp=Z,5.9nm,0.8s						
CCM	Cathedral Cave	5.26	75	Pn	Pn	10 13 03.2	-0.4
CCM	Cathedral Cave	5.26	75	IAmb_Lg		10 14 36.2	
	comp=Z,3.7nm,0.7s						
LCAR	Lake Charles	5.32	97	IAmb_Lg		10 14 41.6	
	comp=Z,5.7nm,1.1s						
NATX	Nacogdoches	5.68	153	Pn	Pn	10 13 09.0	-0.5

NEIC ***01*** *10:28:04.7±0.7, 36°.89N±0°.01×97°.67W±0°.01, h5^{km}±6^{km},*

Error ellipse: s-maj=1.6km s-min=1.5km az=122.0

*ANF **01** 10:28:04.3±0.2, 36°.89N×97°.69W, h5^{km}, ML2.9/9, Error ellipse: s-maj=2.4km s-min=1.9km az=1.0*

*TUL **01** 10:28:04.4±0.8, 36°.90N±0°.01×97°.69W±0°.01, h5^{km}±6^{km}, ML2.6, mb_Lg2.4/12(NEIC), Error ellipse: s-maj=1.6km s-min=1.4km az=130.0*

ISC 01 10:28:04.5±1.3, **36°.88N**±0°.04×**97°.68W**±0°.03, **h2**^{km}±13^{km}, **n37**, σ**0^s.53**/45, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T35A	**Sooner Cattle**	0.94	88		Pg	10 28 22.3	-0.1
T35A				Sg	Sg	10 28 34.2	-0.4
T35B	**Sooner Cattle**	0.94	88	P	Pg	10 28 22.3	-0.1
	baz=269						
T35B				S	Sg	10 28 34.7	0.0
	baz=269						
U32A	**Winter Ranch,**	1.17	245	Pg	Pg	10 28 27.0	0.0
U32A				Sg	Sg	10 28 42.6	+0.5
U32A	**Winter Ranch,**	1.17	245	P	Pg	10 28 26.5	-0.4
	baz=64						
U32A				S	Sg	10 28 42.7	+0.5
	baz=64						
OKCFA	**Oklahoma City**	1.48	173		Pn	10 28 31.6	-0.5
OKCFA	**Oklahoma City**	1.48	173	P	Pn	10 28 32.0	-0.1
	baz=353						
OKCFA				S	Sg	10 28 52.4	+0.6
	baz=353						
OKCSW	**OKLAHOMA CITY**	1.49	172		Pn	10 28 32.0	-0.3
FNO	**Franklin**	1.64	172		Pn	10 28 34.2	-0.1
R32A	**Long Quarter,**	1.74	332		Pn	10 28 35.7	-0.1
R32A	**Long Quarter,**	1.74	332	P	Pn	10 28 35.8	-0.1
	baz=152						
R32A				S	Sb	10 28 59.1	-0.5
	baz=152						
TUL1	**Leonard**	1.81	122		Pn	10 28 37.2	+0.5
TUL1				IAmb_Lg		10 29 03.3	
	comp=Z,32nm,0.9s						
TUL1	**Leonard**	1.81	122	P	Pn	10 28 36.9	+0.2
	baz=304						
TUL1				S	Sb	10 29 01.1	-0.3
	baz=304						
X34A	**Smith Ranch, M**	2.28	183	Pn	Pn	10 28 42.6	-0.5
WMOK	**Wichita Mounta**	2.32	203		Pn	10 28 43.8	+0.1
WMOK				IAmb_Lg		10 29 17.8	
	comp=Z,7.5nm,0.7s						
WMOK	**Wichita Mounta**	2.32	203	P	Pn	10 28 43.8	+0.1
	baz=22						
KSU1	**Kansas State U**	2.37	21	Pn	Pn	10 28 44.2	-0.3
KSU1				IAmb_Lg		10 29 19.4	
	comp=Z,10nm,0.8s						
KSU1	**Kansas State U**	2.37	21	S	Sn	10 29 14.4	+0.2
	baz=201						
CBKS	**Cedar Bluff**	2.52	320	Pn	Pn	10 28 46.5	-0.1
CBKS	**Cedar Bluff**	2.52	320	Sb	Sb	10 29 22.1	-0.1
	baz=139						
U38A	**Gravette**	2.69	98	Pn	Pn	10 28 49.0	+0.2
X37A	**Clayton**	2.96	140		Pn	10 28 51.6	-1.0
HHAR	**Hobbs**	3.07	100	Pn	Pn	10 28 54.5	+0.4
S39A	**Bolivar**	3.57	76	Pn	Pn	10 29 00.2	-0.7
S39A	**Bolivar**	3.57	76	P	Pn	10 29 00.4	-0.5
	baz=258						
U40A	**Yellville**	3.92	96	Pn	Pn	10 29 05.9	+0.2
U40A				IAmb_Lg		10 30 07.8	
	comp=Z,14nm,0.8s						
U40A	**Yellville**	3.92	96	P	Pn	10 29 05.7	0.0
	baz=279						
U40A				P	Pn	10 29 05.7	0.0
	baz=279						
MIAR	**Mount Ida**	4.07	124	Pn	Pn	10 29 09.2	+1.4
P38A	**Dawn**	4.26	49	Pn	Pn	10 29 11.5	+1.1
P38A				IAmb_Lg		10 30 18.3	
	comp=Z,6.3nm,1.2s						
N35A	**Tabor**	4.28	21	Pn	Pn	10 29 10.4	-0.3
MGMO	**Mountain Grove**	4.34	85	Pn	Pn	10 29 11.7	+0.1
R40A	**Maddies Statio**	4.52	70	P	Pn	10 29 13.4	-0.6
	baz=254						
ABTX	**Abilene, Hawle**	4.54	201	Pn	Pn	10 29 15.3	+0.9
L34A	**Svendsen Farm,**	5.18	11	Pn	Pn	10 29 23.8	+0.8
CCM	**Cathedral Cave**	5.25	75	Pn	Pn	10 29 24.2	+0.1
ISCO	**Idaho Springs**	6.88	297	Pn	Pn	10 29 46.2	-0.5
ECSD	**EROS Data Cent**	6.89	6	Pn	Pn	10 29 48.0	+1.4
OXF	**Oxford**	7.13	107	Pn	Pn	10 29 49.7	-0.2

*IDC **01** 11:03:49.5±12.0, 36°.08N×70°.55E, h169^{km}±117^{km}, mb3.2/5, mb1 3.3/6, mb1mx3.0/36, mbtmp3.7/6, Error ellipse: s-maj=63.3km s-min=29.4km az=22.0*

*NNC **01** 11:04:01.1±9.8, 37°.23N×70°.66E, h0^{km}, mb3.9, mpv3.5, Error ellipse: s-maj=72.3km s-min=67.1km az=4.0*

ISC 01 11:03:53.6±1.2, **36°.5N**±0°.1×**70°.7E**±0°.1, **h204**^{km}, **n9**, σ**2^s.62**/12, **mb3.0**/4, **3C-4D**, **Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	6.56	359	⇓Pn	Pn	11 05 30.0	+1.9
	1.1nm,0.3s,baz=195,slow=14,SNR=16						
KK31				⇓Sn	S	11 06 40.6	-2.3
	3.6nm,0.3s,baz=187,slow=22,SNR=7.3						
KK31				⇑Lg	Lg	11 07 04.8	
	7.5nm,0.7s,baz=152,slow=22,SNR=4.4						
AAK	**Ala-Archa**	6.75	24	⇓Pn	Pn	11 05 33.8	+3.1
	2.6nm,0.5s						
AAK				⇓Sn	S	11 06 42.8	-4.8
	18nm,0.6s						
TKM2	**Tokmak 2**	7.40	29	⇑Pn	Pn	11 05 41.9	+2.7
	2.9nm,0.5s						
TKM2				⇑Sn	S	11 07 02.4	-0.6
	4.6nm,0.6s						
MKAR	**Makanchi Array**	13.39	37	P	P	11 06 58.8	+0.5
	0.2nm,0.3s,baz=219,slow=11,SNR=6.3						
ZALV	**Zalesovo Beam**	19.97	25	P	Pn	11 08 13.1	-1.5
	1.6nm,0.4s,baz=220,slow=11,SNR=7.5						
ARCES	**ARCESS Array B**	41.02	338	P	P	11 11 18.7	+2.2
	7.6nm,1.2s,baz=116,slow=6.3,SNR=1.8						
TORD	**Torodi Ar. Bea**	65.50	268	P	P	11 14 13.7	-1.6
	0.3nm,0.7s,baz=45,slow=5.2,SNR=2.2						
WRA	**Warramunga Arr**	82.20	122	P	P	11 15 50.7	-1.3
	0.2nm,0.8s,baz=318,slow=4.6,SNR=1.8						
ASAR	**Alice Springs**	84.46	125	P	P	11 16 03.0	-0.6
	0.1nm,0.5s,baz=317,slow=5.3,SNR=4.3						

*IDC **01** 11:16:56.9±1.5, 21°.22S×68°.48W, h112^{km}±17^{km}, mb3.3/2, mb1 3.3/4, mb1mx3.1/26, mbtmp3.7/4, Error ellipse: s-maj=44.8km s-min=18.8km az=112.0*

*GUC **01** 11:16:56.4±0.6, 21°.15S×68°.93W, h110^{km}±4^{km}, ML3.6*

ISC 01 11:16:54.6±0.9, **21°.13S**±0°.04×**68°.96W**±0°.08, **h121**^{km}±9^{km}, **n20**, σ**0^s.98**/35, **2C-1D**, **Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	0.50	280	*e*P	Pn	11 17 13.1	+0.3
PB01				*e*S	Sn	11 17 25.5	-1.0
PB01				IAML		11 17 27.1	
	comp=E,4μm,0.5s						
PB02	**IPOC Station P**	0.89	257	*e*P	Pn	11 17 16.5	+0.7
PB02				*e*S	Sn	11 17 31.6	-0.3
PB02				IAML		11 17 33.8	
	comp=E,5μm,0.3s						
PB08	**IPOC Station P**	1.00	350	⇓*e*P	Pn	11 17 18.2	+1.0
PB08				*e*S	Sn	11 17 34.9	+0.7
PB07	**IPOC Station P**	1.05	235	⇑*e*P	Pn	11 17 18.2	+0.8
PB07				*e*S	Sn	11 17 34.8	+0.1
PB07				IAML		11 17 37.0	
	comp=N,1μm,0.1s						
PB03	**IPOC Station P**	1.18	219	*e*P	Pn	11 17 19.4	+0.7
PB03				*e*S	Sn	11 17 36.9	-0.1
PB03				IAML		11 17 38.3	
	comp=E,2μm,0.1s						
TA01	**Diego Aracena**	1.27	296	*e*P	Pn	11 17 20.3	+0.8
TA01				*e*S	Sn	11 17 38.6	+0.2
TA01				IAML		11 17 40.4	
	comp=N,2μm,0.4s						
TA02	**Huaiquique**	1.39	308	*e*P	Pn	11 17 21.2	+0.3
TA02				*e*S	Sn	11 17 40.7	-0.1
TA02				IAML		11 17 45.9	
	comp=E,1μm,0.1s						
LVC	**Limon Verde**	1.48	178	P	Pn	11 17 23.3	+1.1
	comp=E,9.1nm,0.3s,baz=9.8,slow=9.4,SNR=223						
LVC				S	Sn	11 17 43.6	+0.4
	comp=E,47nm,0.3s,baz=264,slow=22,SNR=58						
LVC	**Limon Verde**	1.48	178	*e*P	Pn	11 17 23.0	+0.7
LVC				*e*S	Sn	11 17 42.7	-0.5
PB11	**IPOC Station P**	1.51	334	⇑*e*P	Pn	11 17 23.3	+0.8
PB11				*e*S	Sn	11 17 43.8	+0.3
PB11				IAML		11 17 45.6	
	comp=N,684nm,0.4s						
PB04	**IPOC Station P**	1.63	222	*e*P	Pn	11 17 24.4	+0.5
PB04				*e*S	Sn	11 17 46.1	+0.1
PB04				IAML		11 17 50.7	
	comp=E,653nm,0.2s						
PB06	**IPOC Station P**	1.67	200	*e*P	Pn	11 17 25.0	+0.7
PB06				*e*S	Sn	11 17 46.9	0.0
PB06				IAML		11 17 48.8	
	comp=E,933nm,0.3s						
PSGC	**Pisagua**	1.87	324	*e*P	Pn	11 17 27.0	+0.3
PSGC				*e*S	Sn	11 17 51.2	0.0
PB05	**IPOC Station P**	2.07	214	*e*P	Pn	11 17 29.9	+0.8
PB05				*e*S	Sn	11 17 54.8	-0.7
PB05				IAML		11 18 00.3	
	comp=E,263nm,0.2s						
PB15	**IPOC Station P**	2.12	193	*e*P	Pn	11 17 30.9	+1.0
PB15				*e*S	Sn	11 17 57.5	+0.6
LPAZ	**La Paz**	4.88	9	P	Pn	11 18 09.6	+3.0
	comp=E,0.4nm,0.3s,baz=201,slow=4.8,SNR=2.3						
SIV	**San Ignacio**	9.06	57	P	Pn	11 18 59.8	-2.7
	comp=E,1.9nm,0.3s,baz=241,slow=12,SNR=35						
BDFB	**Brasilia**	20.61	78	P	P	11 21 23.9	-0.6
	comp=E,1.9nm,0.4s,baz=261,slow=9.9,SNR=4.2						
TORD	**Torodi Ar. Bea**	77.28	70	P	P	11 28 36.4	+0.2
	comp=E,0.2nm,0.4s,baz=262,slow=4.2,SNR=1.6						
MKAR	**Makanchi Array**	145.36	36	PKPbc	PKiKP	11 36 20.9	-1.3
	comp=E,0.6nm,0.8s,baz=327,slow=2.4,SNR=4.4						

IDC 01 11:53:29.7±1.8, **34°.00N**×**25°.79E**, **h0**^{km}, **mb3.5**/2, **mb1 3.3**/5, **mb1mx3.2**/33, **mbtmp3.2**/5, **ML3.8**/2, **Error ellipse: s-maj=51.1km s-min=26.3km az=135.0**, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRTR	**Keskin Array B**	8.50	45	Pn	Pn	11 55 37.7	+3.6
	0.1nm,0.3s,baz=233,slow=13,SNR=1.8						
AKASG	**Malin Array Be**	16.88	8	Pn	Pn	11 57 26.1	-1.1
	0.3nm,0.3s,baz=197,slow=10,SNR=2.2						
GERES	**GERESS Array B**	17.35	332	P	Pn	11 57 33.9	+0.7
	0.1nm,0.3s,baz=153,slow=11,SNR=4.4						
TORD	**Torodi Ar. Bea**	30.16	232	P	P	11 59 41.8	+0.1
	0.8nm,0.9s,baz=34,slow=9.4,SNR=4.1						
MKAR	**Makanchi Array**	43.99	56	P	P	12 01 38.0	-0.7
	0.4nm,0.6s,baz=280,slow=7.0,SNR=4.4						

*MOS **01** 12:12:05.2±1.0, 39°.09N×142°.47E, h26^{km}, mb4.6/19, Error ellipse: s-maj=9.0km s-min=5.0km az=90.8*

*JMA **01** 12:12:06.9±0.1, 39°.11N×142°.42E, h33^{km}±1^{km}, M4.4*

JMA Felt II J1.

*NIED **01** 12:12:07.0, 39°.11N×142°.42E, h33^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-2.16; $M_{\theta\theta}$1.37; $M_{\phi\phi}$0.79; $M_{r\theta}$0.09; $M_{\theta\phi}$1.14; $M_{\phi r}$1.02; Fault plane solution: $M_0$2.43000×10^{15} NP1: ϕ_s215.00000°, δ56.00000°, λ-110.00000°. NP2: ϕ_s68.00000°, δ39.00000°, λ-63.00000°.*

*NEIC **01** 12:12:09.0±1.4, 39°.09N±0°.06×142°.4E±0°.1, h36^{km}±4^{km}, mb4.7/39 Error ellipse: s-maj=13.0km s-min=7.7km az=112.0*

*IDC **01** 12:12:09.6±1.9, 39°.06N×142°.33E, h47^{km}±18^{km}, mb4.0/25, mb1 4.1/30, mb1mx4.0/64, mbtmp4.2/30, ML3.9/4, MS3.3/14, Ms1 3.4/14, ms1mx3.2/51, Error ellipse: s-maj=15.0km s-min=12.0km az=113.0*

ISC 01 12:12:07.6±1.1, **39°.07N**±0°.04×**142°.50E**±0°.05, **h30**^{km}±7^{km}, **n214**, σ**1^s.67**/228, **mb4.5**/53, **MS3.4**/7, **13C-4D**, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	0.65	271	⇓P	Pn	12 12 18.7	-2.0
OFUJ				*e*S	Sn	12 12 26.8	-3.1
MIYJ	**Miyakonagasawa**	0.73	314	⇑P	Pn	12 12 19.6	-2.3
MIYJ				S	Sn	12 12 28.1	-3.9
JKMT	**Kesennumamotoy**	0.84	252	⇓P	Pn	12 12 21.6	-1.8
JKMT				S	Sn	12 12 31.8	-2.9
JTH	**Tanohata**	1.00	331	P	Pn	12 12 23.4	-2.2
JMK	**Ichinoseki**	1.00	264	⇑P	Pn	12 12 24.1	-1.5
JMK				S	Sn	12 12 36.4	-2.3
JOM	**Ohasama**	1.02	294	⇑P	Pn	12 12 24.3	-1.6
JOM				S	Sn	12 12 36.8	-2.4
JIO	**Ouri**	1.09	236	⇓P	Pn	12 12 25.1	-1.7
JIO				S	Sn	12 12 37.8	-3.0
JKZ	**Kuzumaki**	1.28	316	⇑P	Pn	12 12 28.4	-1.2
JKZ				*e*S	Sn	12 12 43.9	-1.9
JRG	**Rokugo**	1.48	283	⇑P	Pn	12 12 31.3	-1.0
JRG				S	Sn	12 12 50.6	0.0
JANG	**Nango**	1.51	330	⇑P	Pn	12 12 31.2	-1.4
JANG				S	Sn	12 12 49.6	-1.6
JOU	**Okura**	1.60	244	P	Pn	12 12 33.3	-0.5
JMM	**Marumori**	1.80	229	Pn	Pn	12 12 36.2	-0.4
JTM	**Tenmabayashi**	2.04	328	Pn	Pn	12 12 40.1	+0.2
ERM	**Erimo**	2.98	9	*ce*P	Pn	12 12 52.8	0.0
ERM				pmax	pmax		
	comp=Z,139nm,0.6s						
ERM	**Erimo**	2.98	9	Pn	Pn	12 12 53.7	+0.9
JYT	**Yasato**	3.38	214	Pn	Pn	12 12 59.3	+1.1
JSD	**Sado**	3.48	254	Pn	Pn	12 12 58.6	-1.1
JEW	**Eniwo**	3.85	348	Pn	Pn	12 13 06.6	+1.9
MJAR	**Matsushiro Arr**	4.23	235	P	Pn	12 13 11.0	+1.0
	comp=Z,0.8nm,0.3s,baz=28,slow=12,SNR=59						
MJAR				LR	LR	12 14 51.6	
	comp=Z,226nm,20.8s,baz=60,slow=40						
MJAR	**Matsushiro Arr**	4.23	235	P	Pn	12 13 11.4	+1.3
MJAR	**Matsushiro Arr**	4.23	235	Pn	Pn	12 13 11.4	+1.3
MAJO	**Matsushiro**	4.23	235	P	Pn	12 13 11.6	+1.5
MAJO	**Matsushiro**	4.23	235	Pn	Pn	12 13 11.6	+1.5
MAT	**Matsushiro**	4.23	235	P	Pn	12 13 11.5	+1.4
MAT				S	Sn	12 14 01.1	+2.6
NMR	**Nemuro--Hokkai**	4.94	29	⇑*i*P	Pn	12 13 18.0	-1.7
NMR				*i* S	Sn	12 14 09.9	-5.8
JKA	**Kamikawa-asahi**	5.04	1	Pn	Pn	12 13 23.3	+2.2
ASAJ	**Asahikawa**	5.04	1	P	Pn	12 13 23.1	+2.0
	comp=Z,21nm,0.3s,baz=222,slow=8.7,SNR=142						
ASAJ				S	Sn	12 14 23.2	+4.8
	comp=Z,5.2nm,0.3s,baz=346,slow=27,SNR=1.8						
ASAJ				LR	LR	12 15 45.1	
	comp=Z,373nm,21.3s,baz=174,slow=43						
ASAJ	**Asahikawa**	5.04	1	P	Pn	12 13 23.3	+2.2
GLVR	**Golovnino**	5.19	25	*c i*P	Pn	12 13 22.0	-1.1
GLVR				*i* S	Sn	12 14 17.3	-4.6
GLVR				pmax	pmax		
	comp=N,36nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,84nm,0.1s						
GLVR				smax	smax		
	comp=N,763nm,0.3s						
GLVR				smax	smax		
	comp=E,613nm,0.2s						
GLVR				MLR	MLR		
	comp=Z,7μm,14.0s						
JGF	**Kuroka**	5.36	231	Pn	Pn	12 13 26.2	+0.5
RUSJ	**Misakicho**	5.43	21	⇑*i*P	Pn	12 13 25.7	-0.8
RUSJ				*e*S	Sn	12 14 24.1	-3.9
GRPR	**Tuman**	5.50	25	*e*P	Pn	12 13 26.1	-1.3
GRPR				*i* S	Sn	12 14 24.5	-5.0
GRPR				pmax	pmax		
	comp=Z,171nm,0.4s						
GRPR				pmax	pmax		
	comp=N,75nm,0.3s						
GRPR				pmax	pmax		
	comp=E,97nm,0.4s						
GRPR				smax	smax		
	comp=N,325nm,0.3s						
GRPR				smax	smax		
	comp=E,763nm,0.5s						
GRPR				MLR	MLR		
	comp=Z,3μm,15.0s						
GRPR				MLR	MLR		
	comp=E,2μm,11.0s						
YUK	**Yuzh-Kuril'sk**	5.56	26	*e*P	Pn	12 13 27.2	-1.1
YUK				*e*S	Sn	12 14 25.8	-5.4
YUK				pmax	pmax		
	comp=Z,225nm,0.5s						
YUK				pmax	pmax		
	comp=N,71nm,0.6s						
YUK				pmax	pmax		
	comp=E,77nm,0.4s						
YUK				smax	smax		
	comp=N,252nm,0.5s						
YUK				smax	smax		
	comp=E,497nm,0.5s						
YUK				MLR	MLR		
	comp=Z,230nm,14.0s						
INU	**Inuyama**	5.74	231		Pn	12 13 31.6	+0.9
JHJ	**Hachijo jima 2**	6.33	201	P	Pn	12 13 38.0	-0.9
	comp=Z,8.5nm,0.3s,baz=250,slow=23,SNR=2.4						
JHJ				S	Sn	12 14 47.0	-3.2
	comp=Z,12nm,0.3s,baz=72,slow=22,SNR=1.7						
JHJ				LR	LR	12 16 02.0	
	comp=Z,170nm,19.3s,baz=332,slow=37						
JWT	**Wachi**	6.81	238	Pn	Pn	12 13 44.9	-0.5
KUR	**Kuril'sk**	7.33	31	*e*P	Pn	12 13 51.7	-0.9
KUR				*e*S	Sn	12 15 10.5	-4.3
KUR				pmax	pmax		
	comp=Z,88nm,0.5s						
KUR				pmax	pmax		
	comp=E,54nm,0.4s						
KUR				smax	smax		
	comp=N,115nm,0.7s						
KUR				smax	smax		
	comp=E,47nm,0.6s						
TEY	**Ternei**	7.40	326	*e*P	Pn	12 13 56.3	+2.8
YSS	**Yuzh-Sakhalins**	7.88	1	*e*P	Pn	12 14 02.7	+2.6
YSS				pmax	pmax		
	comp=Z,40nm,1.3s						
YSS				MLR	MLR		
	comp=Z,300nm,17.0s						
YSS	**Yuzh-Sakhalins**	7.88	1	Pn	Pn	12 14 01.5	+1.5
JHS	**Saijyo**	8.53	244	Pn	Pn	12 14 10.1	+1.0
USA0B	**Ussuriysk Arra**	9.39	306	P	Pn	12 14 20.9	+0.2
USA0B	**Ussuriysk Arra**	9.39	306		Pn	12 14 20.9	+0.2
USRK	**Ussuriysk Ar.**	9.39	306	P	Pn	12 14 22.0	+1.3
	baz=114,slow=16,SNR=14						
USRK				LR	LR	12 17 51.1	
	comp=Z,304nm,18.4s,baz=119,slow=37						
USRK	**Ussuriysk Ar.**	9.39	306		Pn	12 14 20.5	-0.3
MDJ	**Mudanjiang**	11.10	304	P	Pn	12 14 46.5	+2.2
MDJ				pP		12 14 52.3	
MDJ				sP		12 14 56.9	
MDJ				S	Sn	12 16 46.9	-0.4
MDJ				sS		12 16 55.1	
MDJ				ScP	ScP	12 24 16.7	+6.4
MDJ				PcS	PcS	12 24 18.0	+4.3
MDJ	**Mudanjiang**	11.10	304	ScS	ScS	12 27 51.4	+5.9
MDJ				pmax	pmax		
	comp=Z,13nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,160nm,5.1s						
MDJ				LR	LR		
	comp=N,220nm,10.5s						
MDJ				LR	LR		
	comp=E,280nm,14.4s						
MDJ				LR	LR		
	comp=Z,270nm,16.8s						
KSRS	**Korea Array**	11.57	267	P	Pn	12 14 56.9	+6.2
	comp=Z,0.3nm,0.3s,baz=78,slow=13,SNR=4.9						
KSRS				S	Sn	12 17 12.3	+13
	comp=Z,0.2nm,0.3s,baz=72,slow=24,SNR=4.1						
KSRS				LR	LR	12 18 56.7	
	comp=Z,107nm,19.4s,baz=74,slow=36						
KS19	**Wonju Array Si**	11.61	267	Pn	Pn	12 14 50.0	-1.2
TYV	**Tymovskoe**	11.79	0	*e*P	Pn	12 14 55.6	+2.0
TYV				pmax	pmax		
	comp=Z,13nm,1.5s						
TYV				pmax	pmax		
	comp=Z,200nm,3.9s						
JCJ	**Chichijima**	11.95	181	P	Pn	12 14 53.5	-2.4
	comp=Z,4.1nm,0.3s,baz=83,slow=20,SNR=5.9						
KLR	**Kul'dur**	12.74	326	P	Pn	12 15 06.3	-0.3
	comp=Z,0.1nm,0.3s,baz=124,slow=15,SNR=4.1						
KLR				LR	LR	12 20 02.0	
	comp=Z,203nm,18.6s,baz=150,slow=37						
KLR	**Kul'dur**	12.74	326	*i* P	Pn	12 15 05.9	-0.7
PETK	**Petropavlovsk-**	17.50	32	LR	LR	12 23 13.2	
	comp=Z,60nm,19.7s,baz=222,slow=38						
ZEA	**Zeya**	17.99	330	*e*P	Pn	12 16 14.9	-0.3
ZEA				pmax	pmax		
	comp=E,10.0nm,0.5s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ZEA				MLR	MLR		
	comp=Z,100nm,15.0s						
NJ2	**Nanjing**	20.44	257	*e*P	P	12 16 41.7	-0.8
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
MA2	**Magadan**	21.19	12	P	P	12 16 50.3	-0.1
	comp=Z,16nm,0.7s,baz=204,slow=9.8,SNR=7.7						
MA2				LR	LR	12 26 44.3	
	comp=Z,57nm,18.9s,baz=182,slow=41						
MA2	**Magadan**	21.19	12	P	P	12 16 50.7	+0.4
MA2				pmax	pmax		
	comp=Z,54nm,1.3s						
MA2	**Magadan**	21.19	12	P	P	12 16 50.7	+0.4
MA2				IAmb	IAmb	12 16 58.7	
	comp=Z,54nm,1.3s						
HHC	**Hu-ho-hao-te**	23.72	284	*e*P	P	12 17 16.6	-0.5
HHC				pmax	pmax		
	comp=Z,15nm,1.1s						
HHC				pmax	pmax		
	comp=Z,68nm,5.3s						
YAK	**Yakutsk**	24.30	345	P	P	12 17 20.7	-1.3
	comp=Z,9.6nm,0.5s,baz=33,slow=1.5,SNR=7.8						
YAK	**Yakutsk**	24.30	345	*e*P	P	12 17 20.5	-1.5
YAK				*e**PP	pP	12 17 29.9	-0.5
YAK				*e*S	S	12 21 35.4	-3.5
YAK				*e**SS	pS	12 21 50.7	+3.4
YAK				*e*SSS	SSS	12 22 24.4	
YAK				pmax	pmax		
	comp=Z,19nm,0.9s						
YAK				pmax	pmax		
	comp=N,8.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,19nm,0.6s						
YAK				smax	smax		
	comp=N,26nm,1.9s						
YAK				smax	smax		
	comp=E,92nm,3.0s						
YAK	**Yakutsk**	24.30	345	P	P	12 17 21.1	-0.9
YAK				IAmb	IAmb	12 17 23.7	
	comp=Z,23nm,0.7s						
SEY	**Seymchan**	24.63	11	P	P	12 17 25.5	+0.4
	comp=Z,9.1nm,0.6s,baz=193,slow=8.3,SNR=42						
SEY				LR	LR	12 26 30.7	
	comp=Z,53nm,20.7s,baz=150,slow=35						
BOD	**Bodaibo**	26.31	325	*e*P	P	12 17 40.0	-0.4
BOD				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SONM	**Songino Array**	27.43	300	P	P	12 17 50.0	-0.7
	comp=Z,1.0nm,0.6s,baz=100,slow=8.4,SNR=4.4						
SONM				LR	LR	12 29 23.4	
	comp=Z,81nm,18.5s,baz=94,slow=38						
SONM	**Songino Array**	27.43	300	P	P	12 17 50.0	-0.7
SONM	**Songino Array**	27.43	300	P	P	12 17 49.3	-1.4
H11N2	**WAKE ISLAND Hy**	28.54	125	T	T	12 48 26.8	
	baz=318,slow=76,SNR=1647						
H11N1	**WAKE ISLAND Hy**	28.55	126	T	T	12 48 34.5	
	baz=318,slow=76,SNR=1731						
H11N3	**WAKE ISLAND Hy**	28.56	125	T	T	12 48 35.1	
	baz=318,slow=76,SNR=1377						
H11S1	**WAKE ISLAND Hy**	29.33	127	T	T	12 49 22.7	
	baz=319,slow=76,SNR=145						
H11S3	**WAKE ISLAND Hy**	29.33	127	T	T	12 49 28.2	
	baz=319,slow=76,SNR=53						
H11S2	**WAKE ISLAND Hy**	29.35	127	T	T	12 49 28.3	
	baz=319,slow=76,SNR=55						
ZAK	**Zakamensk**	29.74	305	*e*P	P	12 18 08.6	-2.6
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
TIXI	**Tiksi**	33.38	352	P	P	12 18 42.9	+0.1
	comp=Z,2.0nm,0.4s,baz=329,slow=0.9,SNR=5.8						
TIXI	**Tiksi**	33.38	352	P	P	12 18 42.5	-0.3
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TIXI	**Tiksi**	33.38	352	P	P	12 18 42.5	-0.3
DGZ	**Jazzator, Alta**	39.93	304	*i* P	P	12 19 38.6	-0.5
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.7s						
WMQ	**Urumqi**	40.72	295	*e*P	P	12 19 44.6	-1.0
WMQ				pmax	pmax		
	comp=Z,14nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,280nm,4.9s						
ZAA0	**Zalesovo Array**	41.21	311	P	P	12 19 49.1	-0.3
ZALV	**Zalesovo Beam**	41.21	311	P	P	12 19 48.8	-0.5

	comp=Z,1.9nm,0.4s,baz=88,slow=8.3,SNR=10						
ZALV	Zalesovo Beam	41.21	311	P	P	12 19 48.7	-0.7
CMAR	Chiang Mai Arr	42.86	254	P	P	12 20 02.5	-0.8
	comp=Z,0.3nm,0.3s,baz=49,slow=6.5,SNR=4.2						
CMAR				LR	LR	12 39 22.1	
	comp=Z,52nm,18.6s,baz=277,slow=38						
CMAR	Chiang Mai Arr	42.86	254	*i* P	P	12 20 03.9	+0.6
MK31	Makanchi Array	43.80	301	*i* P	P	12 20 09.4	-1.1
MK31	Makanchi Array	43.80	301	P	P	12 20 10.2	-0.4
MKAR	Makanchi Array	43.80	301	P	P	12 20 09.9	-0.6
	comp=Z,2.5nm,0.7s,baz=76,slow=10,SNR=25						
MKAR	Makanchi Array	43.80	301	P	P	12 20 09.7	-0.8
MAKZ	Makanchi	44.00	301	P	P	12 20 11.9	-0.3
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MAKZ	Makanchi	44.00	301	P	P	12 20 11.9	-0.3
K20K	Telida	44.17	35	P	P	12 20 14.4	+1.1
K20K				IAmb	IAmb	12 20 15.9	
	comp=Z,7.3nm,1.0s						
K20K	Telida	44.17	35	P	P	12 20 15.0	+1.8
	baz=268						
J20K	Nowinta River	44.17	34	P	P	12 20 14.4	+1.1
J20K				IAmb	IAmb	12 20 16.0	
	comp=Z,7.8nm,1.0s						
J20K	Nowinta River	44.17	34	P	P	12 20 15.0	+1.7
	baz=267						
L20K	Farewell, AK	44.23	37	P	P	12 20 15.4	+1.7
	baz=269						
IMAR	Indian Mountai	44.47	32	P	P	12 20 16.7	+1.1
H21K	Melozitna Rive	44.83	32	P	P	12 20 20.2	+1.7
	baz=267						
CHUM	Lake Minchumin	44.97	35	P	P	12 20 21.8	+2.2
	baz=269						
KDAK	Kodiak Island	45.02	43	P	P	12 20 20.6	+0.5
	comp=Z,7.8nm,0.9s,baz=258,slow=14,SNR=1.9						
KDAK	Kodiak Island	45.02	43	P	P	12 20 20.9	+0.8
KDAK				pmax	pmax		
	comp=Z,31nm,1.2s						
KDAK	Kodiak Island	45.02	43	P	P	12 20 20.9	+0.8
KURK	Kurchatov	45.38	307	*ce*P	P	12 20 22.5	-0.5
KURK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KURK	Kurchatov	45.38	307	P	P	12 20 22.2	-0.8
KURK				IAmb	IAmb	12 20 23.3	
	comp=Z,11nm,1.1s						
MLY	Manley	45.67	33	P	P	12 20 26.9	+1.7
MLY				IAmb	IAmb	12 20 27.4	
	comp=Z,4.5nm,0.9s						
MLY	Manley	45.67	33	P	P	12 20 27.1	+1.8
	baz=269						
H23K	Yukon River	46.19	32	P	P	12 20 30.7	+1.5
H23K	Yukon River	46.19	32	P	P	12 20 31.5	+2.2
	baz=270,SNR=6.8						
TOLK	Toolik Lake Re	46.27	28	P	P	12 20 30.1	+0.1
TOLK				IAmb	IAmb	12 20 37.9	
	comp=Z,9.4nm,1.3s						
TOLK	Toolik Lake Re	46.27	28	P	P	12 20 31.3	+1.4
	baz=267						
NEA2	Nenana	46.39	34	P	P	12 20 32.2	+1.4
	baz=271						
MCK	McKinley	46.47	35	P	P	12 20 32.6	+1.1
	baz=272						
PMR	Palmer	46.49	38	P	P	12 20 32.2	+0.6
	baz=274						
MDM	Murphy Dome	46.74	33	P	P	12 20 34.7	+1.1
MDM				IAmb	IAmb	12 20 36.1	
	comp=Z,11nm,1.1s						
H24K	Noodor Dome	46.87	32	P	P	12 20 36.5	+1.9
	baz=271						
COLA	College	46.91	33	⇑*e*P	P	12 20 36.2	+1.4
COLA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
POKR	Poker Plat Res	47.07	33	P	P	12 20 37.9	+1.8
POKR	Poker Plat Res	47.07	33	P	P	12 20 38.0	+1.8
	baz=272,SNR=9.4						
HDA	Harding Lake	47.31	34	P	P	12 20 38.7	+0.7
	baz=273						
IL31		47.32	33	P	P	12 20 38.8	+0.7
IL31				IAmb	IAmb	12 20 39.5	
	comp=Z,7.1nm,0.7s						
ILAR	Eielson Array	47.32	33	P	P	12 20 38.9	+0.7
	comp=Z,6.1nm,0.7s,baz=265,slow=6.1,SNR=73						
JIRN	Jiri	47.71	274	*e*P	P	12 20 42.8	+0.7
GUN	Gumba	47.83	274	*e*P	P	12 20 43.1	+0.1
PRP	Porcupine Dome	47.86	32	P	P	12 20 43.8	+1.4
PRP				IAmb	IAmb	12 20 44.6	
	comp=Z,9.2nm,0.8s						
PRP	Porcupine Dome	47.86	32	P	P	12 20 43.9	+1.5
	baz=274,SNR=7.8						
BMAR	Burnt Mountain	48.14	30	P	P	12 20 46.1	+1.7
RIDG	Independent Ri	48.28	35	P	P	12 20 46.1	+0.5
	baz=276						
KKN	Kakani	48.35	275	*e*P	P	12 20 46.9	0.0
SCRK	Sand Creek	48.64	34	P	P	12 20 49.4	+0.9
SCRK	Sand Creek	48.64	34	P	P	12 20 49.3	+0.9
	baz=276,SNR=7.1						
GKN	Gorkha	48.75	275	*e*P	P	12 20 50.3	+0.4
J26L	Joseph Creek	48.77	34	P	P	12 20 50.4	+1.0
	baz=276						
L26K	Log Cabin Wild	49.04	36	P	P	12 20 53.0	+1.6
L26K	Log Cabin Wild	49.04	36	P	P	12 20 53.3	+1.9
	baz=278,SNR=8.4						
GLB	Gilahina Butte	49.04	38	P	P	12 20 51.9	+0.4
GLB				IAmb	IAmb	12 21 15.3	
	comp=Z,6.6nm,1.0s						
DANN	Dangsing	49.26	276	*e*P	P	12 20 53.5	-0.5
	comp=Z,64nm,0.7s						
L27K	Beaver Creek,	49.72	35	P	P	12 20 58.4	+1.7
	baz=279,SNR=6.6						
EGAK	Eagle	49.76	33	P	P	12 20 57.2	+0.3
M27K	Edge Creek, AK	49.80	36	P	P	12 20 59.2	+1.8
	baz=279						
BVAR	Borovoye Array	49.86	311	P	P	12 20 57.3	-0.5
	comp=Z,1.7nm,0.4s,baz=155,slow=4.2,SNR=5.9						
BRVK	Borovoye	49.91	311	*ce*P	P	12 20 57.8	-0.4
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
PYUN	Piuthan	49.98	276	*e*P	P	12 20 59.3	0.0
	comp=Z,41nm,1.0s						
BVCY	Beaver Creek	50.26	36	P	P	12 21 02.1	+1.3
	baz=280						
AAK	Ala-Archa	50.30	297	*i* P	P	12 20 59.9	-1.6
AAK				pmax	pmax		
	comp=Z,20nm,2.3s						
YUK3	Moose Creek	50.56	37	P	P	12 21 04.3	+1.1
	baz=281						
I29M	Ogilvie Camp,	50.87	32	P	P	12 21 06.8	+1.5
	baz=280,SNR=8.3						
EPYK	Eagle Plains	51.34	31	P	P	12 21 10.5	+1.7
EPYK	Eagle Plains	51.34	31	P	P	12 21 10.3	+1.5
	baz=280,SNR=8.2						
M30M	Minto, Yukon	52.08	35	P	P	12 21 16.5	+2.1
	baz=283						
HYT	Haines Junctio	52.16	38	P	P	12 21 18.0	+2.8
	baz=284,SNR=7.4						
INK	Inuvik	52.19	28	P	P	12 21 15.8	+0.8
	comp=Z,5.9nm,0.8s,baz=297,slow=6.6,SNR=26						
INK	Inuvik	52.19	28	P	P	12 21 16.2	+1.2
INK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
INK	Inuvik	52.19	28	P	P	12 21 16.2	+1.2
INK				IAmb	IAmb	12 21 16.9	
	comp=Z,6.6nm,0.9s						
INK	Inuvik	52.19	28	P	P	12 21 16.1	+1.2
	baz=282,SNR=5.1						
N31M	Braeburn, Yuko	52.81	37	P	P	12 21 22.2	+2.4
	baz=285						
KKAR	Karatay Array	52.87	299	P	P	12 21 20.2	-0.3
KKAR	Karatay Array	52.87	299	P	P	12 21 20.2	-0.3
A36M	Sachs Harbour	54.05	23	P	P	12 21 29.4	+0.7
A36M				IAmb	IAmb	12 21 31.5	
	comp=Z,6.3nm,0.8s						
A36M	Sachs Harbour	54.05	23	P	P	12 21 30.8	+2.1
	baz=286						
ARU	Arti	55.42	318	P	P	12 21 38.2	-0.7
	comp=Z,0.9nm,0.4s,baz=120,slow=8.7,SNR=5.1						
ARU	Arti	55.42	318	*d i*P	P	12 21 38.1	-0.7
ARU						12 23 37.3	
ARU				S	S	12 29 20.9	-0.4
ARU				pmax	pmax		
	comp=Z,6.0nm,1.3s						
ARU	Arti	55.42	318	P	P	12 21 37.8	-1.1
ARU				IAmb	IAmb	12 21 56.2	
	comp=Z,15nm,1.4s						
ABKAR	Akbulak array	57.30	309	P	P	12 21 51.8	-0.6
ABKAR				IAmb	IAmb	12 22 00.6	
	comp=Z,3.5nm,0.7s						
ABKAR	Akbulak array	57.30	309	P	P	12 21 51.6	-0.6
AKTO	Aktyubinsk	57.97	311	P	P	12 21 56.5	-0.5
	comp=Z,1.0nm,0.5s,baz=70,slow=11,SNR=5.4						
EUNU	Eureka	58.05	9	P	P	12 21 58.1	+0.8
EUNU				IAmb	IAmb	12 22 26.6	
	comp=Z,6.5nm,1.4s						
WB0	Warramunga Arr	59.02	189	P	P	12 22 04.0	-0.6
WRAB	Tennant Creek	59.19	189	P	P	12 22 05.3	-0.5
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.8s						
WRAB	Tennant Creek	59.19	189	P	P	12 22 05.3	-0.5
WRAB				IAmb	IAmb	12 22 15.9	
	comp=Z,6.2nm,0.8s						
WR0	Warramunga Arr	59.19	189	P	P	12 22 05.2	-0.6
WB2	Warramunga Arr	59.20	189	P	P	12 22 05.4	-0.4
WB2				IAmb	IAmb	12 22 16.0	
	comp=Z,5.0nm,0.7s						
WRA	Warramunga Arr	59.20	189	P	P	12 22 05.0	-0.9
	comp=Z,3.0nm,0.6s,baz=5.8,slow=7.0,SNR=18						
WRA	Warramunga Arr	59.20	189	P	P	12 22 05.2	-0.6
WRA	Warramunga Arr	59.20	189	P	P	12 22 05.2	-0.6
RES	Resolute Bay	60.42	15	P	P	12 22 13.4	-0.2
	comp=Z,2.9nm,0.8s,baz=302,slow=8.9,SNR=6.7						
RES	Resolute Bay	60.42	15	P	P	12 22 13.7	+0.1
RES				pmax	pmax		
	comp=Z,8.0nm,1.5s						
RES	Resolute Bay	60.42	15	P	P	12 22 13.7	+0.1
RES				IAmb	IAmb	12 22 24.6	
	comp=Z,7.8nm,1.4s						
ASAR	Alice Springs	62.92	189	P	P	12 22 30.9	-0.2
	comp=Z,1.6nm,0.7s,baz=7.4,slow=6.2,SNR=11						
ASAR	Alice Springs	62.92	189	P	P	12 22 30.7	-0.4
FIA1	FINESS Array S	67.41	332	P	P	12 22 59.3	-0.5
FINES	FINESS Array B	67.42	332	P	P	12 22 59.2	-0.5
	comp=Z,3.6nm,0.9s,baz=23,slow=12,SNR=8.5						
FINES	FINESS Array B	67.42	332	P	P	12 22 59.7	-0.1
FINES	FINESS Array B	67.42	332	P	P	12 22 59.7	-0.1
YBH	Yreka Blue Hor	68.43	53	P	P	12 23 08.1	+1.4
	comp=Z,3.0nm,1.0s,baz=204,slow=18,SNR=2.6						
KIV	Kislovodsk	70.22	311	*e*P	P	12 23 17.5	-0.2
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
GNI	Garni	71.18	307	LR	LR	12 57 32.8	
	comp=Z,33nm,18.3s,baz=66,slow=38						
FFC	Flin Flon	71.53	33	P	P	12 23 25.6	+0.2
FFC				pmax	pmax		
	comp=Z,12nm,1.1s						
FFC	Flin Flon	71.53	33	P	P	12 23 25.6	+0.2
FFC				IAmb	IAmb	12 23 27.1	
	comp=Z,12nm,1.1s						
NB2	NORSAR Subarra	72.64	337	P	P	12 23 31.2	-0.7
	comp=Z,0.5nm,0.5s,baz=40,slow=6.2						
NOA	NORSAR Array B	72.64	337	P	P	12 23 31.5	-0.4
	comp=Z,0.8nm,0.6s,baz=38,slow=5.9,SNR=5.1						
BOZ	Bozeman (W)	72.69	45	P	P	12 23 33.6	+0.9
	baz=309						
NVAR	Mina Array Bea	73.09	54	P	P	12 23 36.6	+1.3
	comp=Z,2.5nm,0.9s,baz=286,slow=6.9,SNR=14						
NVAR				LR	LR	12 50 44.5	
	comp=Z,19nm,21.2s,baz=282,slow=32						
AKASG	Malin Array Be	73.21	322	P	P	12 23 34.7	-0.8
	comp=Z,1.0nm,0.3s,baz=44,slow=6.5,SNR=15						
R11A	Troy Canyon, C	74.84	53	P	P	12 23 46.4	+1.0
	baz=308						
FURC	Furnace Creek,	75.19	55	P	P	12 23 48.6	+1.4
	baz=308						
PDAR	Pinedale Array	75.64	46	P	P	12 23 50.2	+0.2
	comp=Z,1.0nm,0.6s,baz=268,slow=2.6,SNR=8.3						
PDAR	Pinedale Array	75.64	46	P	P	12 23 50.0	0.0
BURAR	Bucovina Array	77.24	322	P	P	12 23 58.4	-0.4
U15A	North Rim	78.09	53	P	P	12 24 03.6	-0.4
PV21	Cone Mtn., Par	78.71	49	P	P	12 24 08.2	+0.8
PV21				IAmb	IAmb	12 24 09.2	
	comp=Z,5.5nm,0.8s						
CLL	Collm	79.75	331	*e*P	P	12 24 17.0	+4.5
CLL	Collm	79.75	331	*e*(P)	P	12 24 12.0	-0.5
CLL				*e*PP	PP	12 27 15.0	+2.0
MVCO	Mesa Verde	79.88	50	P	P	12 24 15.0	+1.2
	baz=312						
S22A	4UR Ranch, Cre	80.51	49	P	P	12 24 18.7	+1.5
	baz=313						
KHC	Kasperske Hory	81.25	329	*e*P	P	12 24 20.0	-0.6
KHC	Kasperske Hory	81.25	329	*e*P	P	12 24 20.0	-0.6
GERES	GERESS Array B	81.43	329	P	P	12 24 21.0	-0.6
	comp=Z,0.3nm,0.6s,baz=35,slow=4.9,SNR=3.9						
GERES	GERESS Array B	81.43	329	P	P	12 24 21.5	-0.2
GERES	GERESS Array B	81.43	329	P	P	12 24 21.4	-0.2
ECSD	EROS Data Cent	81.79	39	P	P	12 24 23.6	+0.1
	baz=318						
TXAR	Lajitas Array	88.21	53	P	P	12 24 56.2	+0.1
	comp=Z,0.6nm,0.8s,baz=296,slow=2.6,SNR=6.5						
U40A	Yellville	89.24	42	P	P	12 25 00.7	-0.1
	baz=320						
ESDC	Sonseca Array	95.83	335	LR	LR	13 15 15.7	
	comp=Z,51nm,18.4s,baz=280,slow=40						
LPAZ	La Paz	144.91	58	PKPbc	PKPbc	12 31 42.6	+0.6
	comp=Z,0.5nm,0.6s,baz=39,slow=7.0,SNR=3.5						

IDC ***01*** *12:36:31.3±1.1, 1°.42S×119°.93E, h0^{km}, mb3.8/6, mb1 3.9/7, mb1mx3.7/35, mbtmp3.8/7, ML3.7/1, MS3.0/2, Ms1 3.0/2, ms1mx2.6/35, Error ellipse: s-maj=62.9km s-min=17.9km az=69.0*

DJA ***01*** *12:36:32.7±0.2, 1°S±2°×12°0E±°, h10^{km}, M4.4/19, mb4.5/4, mB4.7/1, MLv4.3/19, Mw(mB)3.9/1*

NEIC ***01*** *12:36:35.1±1.4, 1°.51S±0°.06×119°.78E±0°.03, h24^{km}±8^{km}, mb4.2/9, Error ellipse: s-maj=9.8km s-min=3.6km az=199.0*

ISC 01 12:36:33.0±0.7**, 1°.42S**±0°.04×**119°.81E**±0°.06**, h10**^{km}**, n41, σ1^{s}.45**/38**, mb4.0**/10**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCI	Palu	0.52	3	P	Pg	12 36 42.7	-0.4
TTSI	Tana Toraja	1.61	180	P	Pn	12 36 59.8	-1.8
TTSI				S	Sn	12 37 21.7	-0.7
MPSI	Mapaga	1.75	3	P	Pn	12 37 03.3	-0.2
APSI	Ampana	1.90	74	P	Pn	12 37 05.9	+0.3
TOLI2	Tolitoli	2.70	21		Pn	12 37 17.1	+0.6
MRSI	Marisa	2.84	48	P	Pn	12 37 16.6	-1.9
BKB	Balikpapan	2.92	273		Pn	12 37 19.8	+0.2
BKB	Balikpapan	2.92	273	P	Pn	12 37 20.2	+0.6
LUWI	Luwuk	2.98	83		Pn	12 37 21.8	+1.4
LUWI	Luwuk	2.98	83	P	Pn	12 37 20.3	-0.1
KAPI	Kappang	3.57	181	Pn	Pn	12 37 28.8	+0.3
	6.3nm,0.3s,baz=344,slow=7.6,SNR=17						
KAPI				Sn	Sn	12 38 16.9	+6.2
	2.5nm,0.3s,baz=281,slow=21,SNR=2.5						
KAPI	Kappang	3.57	181		Pn	12 37 27.5	-1.0
GTOI	Gorontalo	3.79	57	P	Pn	12 37 32.9	+1.3
BKSI	Bulukumba	3.88	175	P	Pn	12 37 33.1	+0.3
KBKI	Kotabaru	4.09	243	P	Pn	12 37 34.1	-1.6
KMSI	Cibinong	4.62	65	P	Pn	12 37 43.6	+0.7
BSSI	Bau Bau, Buton	4.74	172	P	Pn	12 37 44.5	-0.1
MTKI	Muara Teweh, K	4.94	276	P	Pn	12 37 47.7	+0.3
BBKI	Banjar Baru	5.37	248	P	Pn	12 37 53.2	0.0
	0.2nm18nm,0.5s						
SANI	Sanana	6.20	96	P	Pn	12 38 03.7	-1.0
	0.1nm20nm,0.7s						
LBMI	Labuha	7.73	84	P	Pn	12 38 25.5	-0.2
	0.3nm44nm,0.6s						
DAV	Davao City (W)	10.21	34	LR	LR	12 43 15.9	
	comp=Z,99nm,20.4s,baz=204,slow=40						
SIJI	Sorong	11.46	87	LR	LR	12 43 17.4	
	comp=Z,53nm,19.5s,baz=6.5,slow=36						
WB0	Warramunga Arr	23.15	143	P	P	12 41 38.1	-1.7
WB0				IAmb	IAmb	12 41 41.3	
	comp=Z,5.0nm,0.8s						
WRAB	Tennant Creek	23.25	143	P	P	12 41 39.3	-1.6
WRAB				IAmb	IAmb	12 41 43.4	
	comp=Z,17nm,1.4s						
WRA	Warramunga Arr	23.25	143	P	P	12 41 38.3	-2.5
	comp=Z,6.3nm,0.8s,baz=322,slow=11,SNR=22						
WRA	Warramunga Arr	23.25	143	P	P	12 41 39.2	-1.6
WB2	Warramunga Arr	23.26	143	P	P	12 41 39.3	-1.6
WB2				IAmb	IAmb	12 41 42.8	
	comp=Z,7.3nm,0.8s						
WR0	Warramunga Arr	23.39	143	P	P	12 41 40.2	-2.0
AS31	Alice Springs	25.99	149	P	P	12 42 06.0	-0.2
ASAR	Alice Springs	25.99	149	P	P	12 42 05.8	-0.5
	comp=Z,0.7nm,0.6s,baz=320,slow=7.8,SNR=13						
ASAR	Alice Springs	25.99	149	P	P	12 42 05.0	-1.3
MORW	Morawa	27.73	187	P	P	12 42 21.6	-0.2
BBOO	Buckleboo	34.76	156	P	P	12 43 22.2	-1.5
BBOO				IAmb	IAmb	12 43 24.6	
	comp=Z,6.1nm,1.0s						
STKA	Stephens Creek	36.61	148	P	P	12 43 39.9	+0.3
	comp=Z,2.3nm,0.9s,baz=326,slow=7.9,SNR=4.8						
STKA	Stephens Creek	36.61	148	P	P	12 43 39.2	-0.4
STKA				IAmb	IAmb	12 43 52.0	
	comp=Z,1.9nm,1.3s						
KSRS	Korea Array	39.41	10	P	P	12 44 03.3	+0.2
	comp=Z,0.4nm,0.6s,baz=190,slow=9.7,SNR=1.8						
MKAR	Makanchi Array	58.21	331	P	P	12 46 27.8	+0.3
	comp=Z,0.5nm,0.6s,baz=118,slow=8.3,SNR=3.5						
MKAR	Makanchi Array	58.21	331	P	P	12 46 28.6	+1.1
ZALV	Zalesovo Beam	62.34	337	P	P	12 46 54.7	-0.9
	comp=Z,0.6nm,0.5s,baz=125,slow=7.2,SNR=2.8						
ABKAR	Akbulak array	71.93	323	P	P	12 47 56.6	0.0

MDD ***01*** *12:42:15.7±0.3, 43°.14N×3°.78W, h2^{km}±4^{km}, mbLg3.4/29, Error ellipse: s-maj=4.8km s-min=2.5km az=169.0, PRXIMO*

MDD EMS: III INTENSIDAD MAXIMA.

LDG ***01*** *12:42:16.4±0.1, 43°.24N×3°.77W, h11^{km}, Ml3.6/38, Error ellipse: s-maj=1.9km s-min=1.3km az=140.0*

INMG ***01*** *12:42:16.6±1.9, 43°.17N×3°.79W, h15^{km}±4^{km}, ML3.4, Error ellipse: s-maj=3.4km s-min=2.5km az=172.0*

STR ***01*** *12:42:18.3±0.9, 43°N±5°×°±°, h0^{km}, mb3.4/2, MLv3.4/9, preliminary*

ISC 01 12:42:13.7±0.6**, 43°.22N**±0°.03×**3°.81W**±0°.02**, h13**^{km}**, n131, σ2^{s}.68**/245**, 1C, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELAN	Lanestosa	0.27	87	⇑Pg	Pg	12 42 20.6	+1.2
	886nm,0.2s,SNR=18						
ELAN				Lg	Lg	12 42 24.5	
	3µm,0.2s,SNR=5.0						
EARI	Arriondas	1.03	275	Pg	Pb	12 42 35.2	+1.9
	51nm,0.2s,SNR=426						
EARI				Lg	Lg	12 42 50.1	
	235nm,0.1s,SNR=136						
EARA	Aranguren	1.69	104	Sn	Sb	12 43 08.0	+2.1
EARA				Sg	Sg	12 43 09.3	+1.1
EARA	Aranguren	1.69	104	Pn	Pn	12 42 45.4	+2.4
EARA				Pg	Pb	12 42 46.6	+1.9
EARA	Aranguren	1.69	104	Pn	Pn	12 42 45.3	+2.4
	0.9nm,0.1s,SNR=7.9						
EARA				Pg	Pb	12 42 46.4	+1.7
	8.0nm,0.2s,SNR=9.7						
EARA				Lg	Lg	12 43 07.2	
	346nm,0.4s,SNR=7.1						
EORO	Oroz-Betelu	1.86	99	Pg	Pn	12 42 48.4	+3.1
	0.2nm,0.2s,SNR=36						
EORO				Lg	Lg	12 43 12.0	
	208nm,0.4s,SNR=7.8						
SJPF	Ste Jean	1.89	92	*e*P	Pn	12 42 47.4	+1.7
SJPF	Ste Jean	1.89	92	*e*Pg	Pn	12 42 49.6	+3.9
SJPF				*e*Sg	Sb	12 43 13.3	+1.7
	104nm,0.4s						
SJPF	Ste Jean	1.89	92	Pg	Pn	12 42 49.6	+3.9
SJPF				Lg	Lg	12 43 13.3	
	52nm,0.4s						
TERF	Tercis-les-Bai	2.02	76	Pg	Pn	12 42 49.2	+1.9
ATE	Arette	2.28	92	Pn	Pn	12 42 54.1	+3.1
ATE				Sg	Sn	12 43 22.7	+3.7
ATE	Arette	2.28	92	Pn	Pn	12 42 54.1	+3.1
	4.2nm,0.2s,SNR=7.9						
ATE				Sn	Sn	12 43 22.2	+3.2
	1.4nm,0.3s,SNR=7.9						
ETSF	Etsaut	2.40	96	*e*P	Pn	12 42 54.9	+2.1
ETSF	Etsaut	2.40	96	*e*Pg	Pb	12 42 59.2	+2.4
ETSF				*e*Sn	Sn	12 43 18.3	-3.8
	28nm,0.2s						
ETSF				*e*Sg	Sb	12 43 29.7	+3.4
	45nm,0.3s						
EPON	Pontenova	2.44	274	Pn	Pn	12 42 55.8	+2.6
	5.1nm,0.1s,SNR=40						
EPON				Pg	Pb	12 43 01.3	+3.9
	14nm,0.1s,SNR=7.9						
EPON				Sn	Sn	12 43 24.0	+1.0
	60nm,0.3s,SNR=7.9						
EPON				Lg	Lg	12 43 33.3	
	125nm,0.2s,SNR=7.3						
ECAL	Calabor	2.51	241	Pn	Pn	12 42 55.9	+1.6
	3.5nm,0.3s,SNR=20						
ECAL				Pg	Pb	12 43 02.1	+3.5
	28nm,0.2s,SNR=7.9						
ECAL				Sn	Sn	12 43 25.0	+0.2
	8.4nm,0.4s,SNR=5.3						
ECAL				Lg	Lg	12 43 32.3	
	458nm,0.4s,SNR=5.0						
PBRG	Braganca	2.59	238	*e*Pn	Pn	12 42 57.3	+2.0
PBRG	Braganca	2.59	238	*e*Pg	Pb	12 43 03.6	+3.7
PBRG				*e*Sn	Sn	12 43 27.2	+0.6
PBRG				*e*Sg	Sb	12 43 34.7	+3.1
PBRG				A	A	12 43 41.0	
	165nm,0.4s						
ETOR	Torete	2.73	151	Pn	Pn	12 42 58.5	+1.2
	3.2nm,0.3s,SNR=12						
ETOR				Pg	Pb	12 43 04.6	+2.2
	6.0nm,0.5s,SNR=7.9						
ETOR				Sn	Sn	12 43 30.9	+0.7
	51nm,0.2s,SNR=7.9						
ETOR				Lg	Lg	12 43 41.6	
	313nm,0.4s,SNR=7.9						
VIEF	Viey	2.83	95	Pn	Pn	12 43 01.8	+3.2
UCM	Universidad Co	2.94	172	P	Pb	12 43 08.6	+2.7
UCM				S	Sg	12 43 46.2	-1.8
ECHI	Chisagues Biel	2.99	99	Pn	Pn	12 43 03.9	+3.0
ECHI	Chisagues Biel	2.99	99	Pn	Pn	12 43 02.2	+1.3
	0.3nm,0.1s,SNR=7.9						
ECHI				Sn	Sn	12 43 36.8	+0.1
	6.0nm,0.1s,SNR=7.9						
EPF	Esparros	3.04	92	*e*P	Pn	12 43 04.6	+3.1
EPF	Esparros	3.04	92	*e*Pg	Pb	12 43 11.6	+3.9
EPF				*e*Sn	Sn	12 43 34.8	-3.0
	29nm,0.3s						
EPF				*e*Sg	Sb	12 43 49.8	+5.1
	31nm,0.4s						
LRVF	chteau la Riv	3.06	54	Pn	Pn	12 43 05.4	+3.8
MVO	Moncorvo	3.15	231	*e*Pn	Pn	12 43 04.1	+1.1
MVO	Moncorvo	3.15	231	*e*Pg	Pb	12 43 13.7	+4.1
MVO				*e*Sn	Sn	12 43 40.8	+0.2
MVO				*e*Sg	Sb	12 43 52.6	+4.7
MVO				A	A	12 44 00.9	
	161nm,0.5s						
MVO	Moncorvo	3.15	231	Pn	Pn	12 43 04.1	+1.1
	3.6nm,0.2s,SNR=41						
MVO				Pg	Pb	12 43 13.6	+4.0
	39nm,0.5s,SNR=7.9						
MVO				Sn	Sn	12 43 40.2	-0.3
	34nm,0.1s,SNR=7.8						
MVO				Lg	Lg	12 43 52.0	
	350nm,0.3s,SNR=5.0						
ELOB	Lobios	3.42	248	Pn	Pn	12 43 08.4	+1.7
	0.1nm,0.2s,SNR=8.0						
ELOB				Pg	Pb	12 43 18.0	+3.8
	12nm,0.4s,SNR=7.9						
ELOB				Sn	Sn	12 43 45.5	-1.7
	1.1nm,0.3s,SNR=7.9						
ELOB				Lg	Lg	12 44 02.9	
	95nm,0.4s,SNR=5.0						
PCAB	Cabril	3.46	246	*e*Sn	Sn	12 43 47.8	-0.5
PCAB				*e*Sg	Sb	12 44 03.0	+6.1
PCAB				A	A	12 44 08.7	
	92nm,0.4s						
POLO	Lamas de Olo	3.48	239	*e*Pn	Pn	12 43 09.1	+1.5
POLO				*e*Sn	Sn	12 43 48.7	-0.1
POLO				*e*Sg	Sb	12 44 03.3	+5.8
POLO				A	A	12 44 06.0	
	58nm,0.4s						
PVRL	Vila Real	3.49	238	*e*Pn	Pn	12 43 09.1	+1.4
PVRL				*e*Sn	Sn	12 43 48.6	-0.3
PVRL				*e*Sg	Sg	12 44 04.3	-1.4
PVRL				A	A	12 44 08.1	
	91nm,0.5s						
ESDC	Sonseca Array	3.54	182	Pn	Pn	12 43 09.7	+1.3
	0.1nm,0.1s,baz=359,slow=12,SNR=17						
ESDC				Pg	Pb	12 43 19.6	+3.4
	1.7nm,0.1s,baz=2.4,slow=17,SNR=7.9						
ESDC				Sn	Sn	12 43 49.6	-0.6
	4.6nm,0.2s,baz=4.8,slow=22,SNR=7.9						
ESDC				Lg	Lg	12 44 05.4	
	14nm,0.2s,baz=9.4,slow=29,SNR=7.9						
EPLA	Plasencia	3.58	209	Lg	Lg	12 44 08.3	

	111nm,0.4s,SNR=7.9						
PAB	**San Pablo**	3.69	187	Pn	Pn	12 43 11.6	+1.2
	1.1nm,0.1s,SNR=7.9						
PAB				Pg	Pb	12 43 22.9	+4.1
	5.4nm,0.2s,SNR=7.9						
PAB				Sn	Sn	12 43 53.2	-0.6
	1.7nm,0.3s,SNR=7.9						
PAB				Lg	Lg	12 44 08.8	
	34nm,0.3s,SNR=7.9						
LFF	**La Frestale**	3.70	61	*e*Pn	Pn	12 43 12.5	+2.0
LFF				*e*Sn	Sn	12 43 49.5	-4.5
	38nm,0.4s						
LFF				*e*Sg	Sb	12 44 10.2	+6.5
	78nm,0.5s						
CSOR	**Sort**	3.73	101	Pn	Pn	12 43 14.0	+2.9
	0.9nm,0.1s,SNR=10						
CSOR				Pg	Pb	12 43 23.1	+3.6
	11nm,0.4s,SNR=7.9						
CSOR				Sn	Sn	12 43 54.4	-0.6
	6.2nm,0.2s,SNR=7.9						
CSOR				Lg	Lg	12 44 09.2	
	31nm,0.3s,SNR=7.9						
EZAM	**Zamans**	3.76	255	Pn	Pn	12 43 13.5	+2.2
	3.1nm,0.2s,SNR=7.9						
EZAM				Sn	Sn	12 43 55.8	+0.4
	3.5nm,0.2s,SNR=7.9						
EZAM				Lg	Lg	12 44 12.2	
	44nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	3.79	138	Pn	Pn	12 43 14.2	+2.3
	0.4nm,0.2s,SNR=16						
EMOS				Pg	Pb	12 43 24.8	+4.3
	0.9nm,0.1s,SNR=7.9						
EMOS				Sn	Sn	12 43 57.1	+0.7
	3.1nm,0.3s,SNR=7.9						
EMOS				Lg	Lg	12 44 14.8	
	38nm,0.4s,SNR=7.9						
EMAZ	**Mazaricos**	3.80	268	Pn	Pn	12 43 14.1	+2.3
	5.2nm,0.2s,SNR=7.9						
EMAZ				Sn	Sn	12 43 56.9	+0.5
	8.3nm,0.1s,SNR=7.9						
EMAZ				Lg	Lg	12 44 15.0	
	34nm,0.2s,SNR=7.9						
MONQ	**Montcuq**	3.80	71	Pn	Pn	12 43 13.7	+1.7
MONQ				Sn	Sn	12 43 56.7	+0.2
ERTA	**Horta de San J**	3.82	125	Pn	Pn	12 43 13.5	+1.2
	1.6nm,0.2s,SNR=17						
ERTA				Pg	Pb	12 43 24.3	+3.4
	0.0nm,0.1s,SNR=7.9						
ERTA				Sn	Sn	12 43 56.3	-0.7
	20nm,0.2s,SNR=7.9						
ERTA				Lg	Lg	12 44 12.4	
	64nm,0.3s,SNR=7.9						
PVIS	**Viseu**	3.94	232	*e*Pn	Pn	12 43 15.8	+1.9
PVIS				*e*Sn	Sn	12 43 59.2	-0.8
PVIS				*e*Sg	Sb	12 44 17.2	+6.6
PVIS				A	A	12 44 26.1	
	72nm,0.5s						
MTE	**Manteigas**	3.96	226	*e*Pg	Pb	12 43 28.5	+5.1
MTE				*e*Sn	Sn	12 43 59.3	-1.3
MTE				*e*Sg	Sb	12 44 17.4	+6.1
MTE				A	A	12 44 22.3	
	120nm,0.4s						
PAND	**Andorre**	4.00	98	Pn	Pn	12 43 18.9	+4.1
PAND				Sg	Sn	12 44 04.6	+3.0
EPOB	**Poblet**	4.08	116	Pn	Pn	12 43 16.9	+1.1
	0.7nm,0.2s,SNR=26						
EPOB				Pg	Pb	12 43 28.8	+3.5
	0.6nm,0.1s,SNR=7.9						
EPOB				Sn	Sn	12 44 01.2	-2.2
	3.6nm,0.1s,SNR=7.9						
EPOB				Lg	Lg	12 44 24.3	
	25nm,0.3s,SNR=7.9						
EMIR	**Miracle**	4.15	106	Pn	Pn	12 43 20.6	+3.9
	2.3nm,0.2s,SNR=7.9						
EMIR				Sn	Sn	12 44 04.3	-0.9
	11nm,0.2s,SNR=7.9						
EMIR				Lg	Lg	12 44 27.7	
	62nm,0.5s,SNR=7.9						
MFF	**Saint Martin d**	4.27	36	*e*Pn	Pn	12 43 18.8	+0.5
MFF				*e*Sn	Sn	12 44 04.2	-3.8
	26nm,0.3s						
CLLI	**Llivia**	4.31	98	Pn	Pn	12 43 22.9	+3.8
	1.0nm,0.2s,SNR=14						
CLLI				Sn	Sn	12 44 11.7	+2.4
	1.1nm,0.2s,SNR=7.9						
PCBR	**Castelo Branco**	4.35	220	*e*Pn	Pn	12 43 20.8	+1.3
PCBR	**Castelo Branco**	4.35	220	*e*Pg	Pg	12 43 36.1	-1.0
PCBR				*e*Sn	Sn	12 44 08.4	-1.7
PCBR				*e*Sg	Sb	12 44 29.2	+6.8
PCBR				A	A	12 44 39.2	
	58nm,0.5s						
RJF	**Les Rejaudoux**	4.36	60	*e*Pn	Pn	12 43 20.4	+0.8
RJF				*e*Sn	Sn	12 44 05.8	-4.4
	34nm,0.3s						
MTLF	**Montolieu**	4.40	86	*e*Pn	Pn	12 43 22.5	+2.3
MTLF				*e*Sn	Sn	12 44 10.2	-1.1
	17nm,0.4s						
MTLF	**Montolieu**	4.40	86	Pn	Pn	12 43 22.6	+2.5
MTLF	**Montolieu**	4.40	86	Sn	Sn	12 44 09.7	-1.6
CAF	**Calviac**	4.56	66	*e*Pn	Pn	12 43 23.7	+1.3
CAF				*e*Sn	Sn	12 44 11.7	-3.6
	26nm,0.3s						
COI	**Coimbra**	4.57	230	*e*Sn	Sn	12 44 13.9	-1.6
COI				*e*Sg	Sg	12 44 38.9	-1.5
COI				A	A	12 44 43.2	
	117nm,0.6s						
PMRV	**Marv??o**	4.65	217	*e*Pn	Pn	12 43 23.8	+0.2
PMRV	**Marv??o**	4.65	217	*e*Pg	Pg	12 43 41.3	-1.4
PMRV				*e*Sn	Sn	12 44 15.5	-1.9
PMRV				*e*Sg	Sg	12 44 42.3	-0.5
PMRV				A	A	12 44 53.6	
	49nm,1.0s						
QUIF	**Quistinic**	4.72	5	*e*Pn	Pn	12 43 25.5	+0.9
QUIF				*e*Sn	Sn	12 44 16.0	-3.1
	34nm,0.3s						
PCAS	**Casmilo, Conde**	4.73	230	*e*Pn	Pn	12 43 26.8	+2.2
PCAS				*e*Sn	Sn	12 44 18.0	-1.3
PCAS				*e*Sg	Sg	12 44 44.0	-1.4
PCAS				A	A	12 44 46.2	
	54nm,0.6s						
CFON	**Fontmartina**	4.84	105	Pn	Pn	12 43 27.7	+1.5
	13nm,0.2s,SNR=19						
CFON				Sn	Sn	12 44 21.4	-0.8
	11nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	4.88	159	Pn	Pn	12 43 28.3	+1.5
	6.7nm,0.3s,SNR=37						
ETOB				Sn	Sn	12 44 22.2	-0.9
	1.9nm,0.1s,SNR=7.9						
ETOB				Lg	Lg	12 44 47.6	
	26nm,0.4s,SNR=7.9						
SJAF	**Saint Jean de**	4.97	96	Pn	Pn	12 43 30.3	+2.3
SJAF	**Saint Jean de**	4.97	96	Pn	Pn	12 43 30.3	+2.3
	0.0nm,0.2s,SNR=7.9						
SJAF				Sn	Sn	12 44 22.4	-2.9
	0.6nm,0.2s,SNR=7.9						
SJAF				Lg	Lg	12 44 50.4	
	11nm,0.4s,SNR=7.9						
EJON	**La Jonquera**	4.98	97	Pn	Pn	12 43 30.5	+2.3
	0.6nm,0.4s,SNR=12						
EJON				Sn	Sn	12 44 23.1	-2.6
	2.0nm,0.3s,SNR=7.9						
EJON				Lg	Lg	12 44 53.0	
	13nm,0.4s,SNR=7.9						
EBAD	**Badajoz**	5.07	210	Pn	Pn	12 43 29.6	+0.2
	1.2nm,0.2s,SNR=10						
EBAD				Sn	Sn	12 44 25.4	-2.4
	4.8nm,0.1s,SNR=7.9						
EBAD				Lg	Lg	12 44 55.3	
	30nm,0.2s,SNR=7.9						
EADA	**Adamuz**	5.08	187	Pn	Pn	12 43 30.6	+1.1
	0.3nm,0.2s,SNR=7.9						
EADA				Sn	Sn	12 44 23.6	-4.4
	0.6nm,0.2s,SNR=7.9						
EADA				Lg	Lg	12 44 53.8	
	28nm,0.4s,SNR=7.9						
SGMF	**Saint Gilles**	5.12	9	*e*Pn	Pn	12 43 30.2	+0.3
SGMF				*e*Sn	Sn	12 44 26.0	-2.8
	11nm,0.3s						
ROSF	**Rostrenen**	5.13	4	*e*Pn	Pn	12 43 31.4	+1.2
ROSF				*e*Sn	Sn	12 44 25.2	-4.1
	51nm,0.2s						
SESP	**Santiago Espad**	5.18	169	Lg	Lg	12 44 57.4	
	29nm,0.4s,SNR=7.9						
PESTR	**Estremoz**	5.20	215	*e*Pn	Pn	12 43 32.0	+0.8
PESTR				*e*Sn	Sn	12 44 28.8	-2.2
PESTR				*e*Sg	Sg	12 44 59.6	-1.0
PESTR				A	A	12 45 12.2	
	32nm,0.5s						
PESTR	**Estremoz**	5.20	215	P	Pn	12 43 31.7	+0.6
PESTR				S	Sn	12 44 29.5	-1.5
PSBE	**So Bento**	5.27	227	*e*Pn	Pn	12 43 34.3	+2.2
PSBE				*e*Sn	Sn	12 44 31.3	-1.4
PSBE				*e*Sg	Sg	12 45 00.6	-2.2
PSBE				A	A	12 45 08.6	
	58nm,0.6s						
TCF	**Toulx Ste Croi**	5.27	52	*e*Pn	Pn	12 43 32.1	-0.1
TCF				*e*Sn	Sn	12 44 28.8	-4.0
	35nm,0.3s						
ECAB	**El Cabril**	5.28	194	Pn	Pn	12 43 32.9	+0.6
	1.2nm,0.2s,SNR=12						
ECAB				Sn	Sn	12 44 28.2	-4.8
	3.5nm,0.2s,SNR=7.9						
ECAB				Lg	Lg	12 44 59.3	
	25nm,0.4s,SNR=7.9						
EBEN2	**Beniarda presa**	5.30	148	Pn	Pn	12 43 33.6	+1.1
	6.7nm,0.2s,SNR=7.9						
EBEN2				Sn	Sn	12 44 30.6	-2.8
	6.5nm,0.2s,SNR=7.9						
PMTG	**Montargil**	5.32	220	*e*Pn	Pn	12 43 33.4	+0.6
PMTG				*e*Sn	Sn	12 44 30.8	-3.1
PMTG				*e*Sg	Sg	12 45 02.4	-1.9
PMTG				A	A	12 45 10.3	
	16nm,0.5s						
EQES	**Quesada**	5.44	174	Pn	Pn	12 43 35.8	+1.3
	0.9nm,0.3s,SNR=7.9						
EQES				Sn	Sn	12 44 35.0	-2.0
	1.8nm,0.2s,SNR=7.9						
EQES				Lg	Lg	12 45 05.6	
	19nm,0.4s,SNR=7.9						
GRR	**Gorron**	5.57	21	*e*Pn	Pn	12 43 36.1	-0.1
GRR				*e*Sn	Sn	12 44 35.5	-4.5
	18nm,0.3s						
PBAR	**Barrancos**	5.60	207	*e*Pn	Pn	12 43 37.0	+0.3
PBAR				*e*Sn	Sn	12 44 38.4	-2.5
PBAR				A	A	12 45 30.7	
	33nm,0.6s						
LASF	**Ste Croix**	5.63	79	*e*Pn	Pn	12 43 38.5	+1.5
LASF				*e*Sn	Sn	12 44 38.6	-2.9
	63nm,0.5s						
TRBF	**Trabuc cave**	5.70	78	Pn	Pn	12 43 39.1	+1.1
TRBF				Sg	Sn	12 44 39.4	-4.0
AGO	**Saint Agoulin**	5.71	58	Pn	Pn	12 43 38.8	+0.7
AGO	**Saint Agoulin**	5.71	58	Sn	Sn	12 44 40.9	-2.5
EIBI	**Ibiza**	5.71	135	Pn	Pn	12 43 39.1	+0.9
	0.2nm,0.2s,SNR=7.9						
EIBI				Sn	Sn	12 44 40.2	-3.4
	3.4nm,0.3s,SNR=7.9						
EMUR	**La Murta**	5.71	159	Pn	Pn	12 43 39.6	+1.3
	0.8nm,0.2s,SNR=7.9						
EMUR				Lg	Lg	12 45 11.0	
	29nm,0.7s,SNR=7.9						
BGF	**Bois d'Agland**	5.79	52	*e*Pn	Pn	12 43 40.1	+0.9
BGF				*e*Sn	Sn	12 44 41.1	-4.3
	39nm,0.3s						
EMIN	**Mina Concepcio**	5.86	203	Pn	Pn	12 43 40.5	+0.3
	0.0nm,0.2s,SNR=6.7						
EMIN				Sn	Sn	12 44 42.5	-4.8
	2.1nm,0.2s,SNR=7.9						
EMIN				Lg	Lg	12 45 19.4	
	13nm,0.4s,SNR=7.9						
PMAFR	**Mafra**	5.93	226	*e*Pn	Pn	12 43 42.3	+1.1
PMAFR				*e*Sn	Sn	12 44 47.0	-2.1
PMAFR				*e*Sg	Sg	12 45 23.6	-0.5
PMAFR				A	A	12 45 43.3	
	33nm,0.5s						
PMAFR	**Mafra**	5.93	226	Pn	Pn	12 43 42.1	+0.9
	2.3nm,0.2s,SNR=7.9						
PMAFR				Sn	Sn	12 44 46.8	-2.3
	2.4nm,0.1s,SNR=7.9						
PMAFR				Lg	Lg	12 45 22.8	
	85nm,0.5s,SNR=7.9						
LDF	**La Druitiere**	5.96	24	*e*Pn	Pn	12 43 41.4	-0.2
LDF				*e*Sn	Sn	12 44 46.1	-3.6
	11nm,0.3s						
EQUE	**Quentar**	6.01	177	Pn	Pn	12 43 44.3	+1.9
	3.4nm,0.3s,SNR=7.9						
EQUE				Lg	Lg	12 45 24.1	
	22nm,0.5s,SNR=7.9						
FLN	**La Foliniere**	6.01	22	*e*Pn	Pn	12 43 41.9	-0.4
	baz=202						
FLN				*e*Sn	Sn	12 44 45.3	-5.6
	7.0nm,0.2s						
PBEJ	**Beja**	6.03	212	*e*Sn	Sn	12 44 48.4	-3.1
PBEJ				*e*Sg	Sg	12 45 24.3	-3.0
PBEJ				A	A	12 45 31.9	
	16nm,0.5s						
ETOS	**Mallorca**	6.05	122	Pn	Pn	12 43 43.8	+0.9
	0.4nm,0.2s,SNR=7.9						
ETOS				Sn	Sn	12 44 48.6	-3.3
	1.1nm,0.3s,SNR=7.9						
HYF	**Humbligny**	6.09	46	*e*Pn	Pn	12 43 42.7	-0.7
HYF				*e*Sn	Sn	12 44 48.4	-4.6
EGOR	**Sierra Gorda,**	6.10	182	Pn	Pn	12 43 45.0	+1.4
	0.6nm,0.3s,SNR=7.9						
EGOR				Lg	Lg	12 45 27.8	
	6.1nm,0.4s,SNR=7.9						
AVF	**Avril sur Loir**	6.21	52	*e*Pn	Pn	12 43 45.6	+0.7
AVF				*e*Sn	Sn	12 44 51.0	-4.7
	11nm,0.4s						
PNCL	**Nicolau / Gran**	6.23	217	*e*Pn	Pn	12 43 46.0	+0.7
PNCL				*e*Sn	Sn	12 44 52.5	-3.9
PNCL				*e*Sg	Sg	12 45 31.4	-2.3
PNCL				A	A	12 45 35.3	
	16nm,0.6s						
VIVF	**Saint-Julien-l**	6.33	72	*e*Pn	Pn	12 43 47.8	+1.1
VIVF				*e*Sn	Sn	12 44 54.4	-4.4
	11nm,0.3s						
EGRO	**El Granado**	6.33	208	Pn	Pn	12 43 47.0	+0.4
	1.3nm,0.2s,SNR=7.9						
EGRO				Sn	Sn	12 44 56.1	-2.7
	1.4nm,0.1s,SNR=7.9						
EGRO				Lg	Lg	12 45 35.8	
	19nm,0.4s,SNR=7.9						
MESJ	**Messejana**	6.33	214	*e*Sn	Sn	12 44 55.8	-3.1
MESJ				*e*Sg	Sg	12 45 35.3	-1.6
MESJ				A	A	12 45 41.4	
	21nm,0.7s						
SMF	**Signal de Mont**	6.42	55	*e*Pn	Pn	12 43 47.6	-0.3
SMF				*e*Sn	Sn	12 44 54.7	-6.3
	24nm,0.8s						
PCVE	**Castro Verde**	6.44	211	*e*Pn	Pn	12 43 48.5	+0.3
PCVE				*e*Sn	Sn	12 44 59.5	-2.1
PCVE				*e*Sg	Sg	12 45 37.0	-3.4
PCVE				A	A	12 45 40.5	
	18nm,0.6s						
SSF	**Saint Saulge**	6.44	51	*e*Pn	Pn	12 43 48.6	+0.4
SSF				*e*Sn	Sn	12 44 57.4	-4.2
	8.2nm,0.3s						
PVAQ	**Vaqueiros**	6.53	209	*e*Pn	Pn	12 43 49.7	+0.3
PVAQ				*e*Sn	Sn	12 45 00.1	-3.6
PVAQ				A	A	12 45 51.9	
	19nm,0.5s						
PVAQ	**Vaqueiros**	6.53	209	P	Pn	12 43 49.8	+0.4
PVAQ				S	Sn	12 44 59.9	-3.8
PBDV	**Barranco-do-Ve**	6.75	209	*e*Pn	Pn	12 43 53.2	+0.8
PBDV				*e*Sn	Sn	12 45 06.1	-3.0
PBDV				A	A	12 46 00.4	
	19nm,0.6s						
LOR	**Lormes**	6.76	51	*e*Pn	Pn	12 43 52.4	-0.2
	baz=230						
LOR				*e*Sn	Sn	12 45 04.3	-5.1
	8.3nm,0.3s						
PTEO	**Sao Teotonio**	6.79	215	*e*Sg	Sg	12 45 51.1	-0.5
PTEO				A	A	12 46 00.4	
	22nm,0.5s						
MORF	**Marmelete**	6.97	214	*e*Sn	Sn	12 45 10.5	-4.1
MORF				*e*Sg	Sg	12 45 54.8	-2.4
MORF				A	A	12 46 15.5	
	9.5nm,0.7s						
ORIF	**Oris-en-Rattie**	7.18	73	*e*Pn	Pn	12 44 00.5	+2.1
ORIF				*e*Sn	Sn	12 45 14.7	-5.2
	8.4nm,0.6s						
FRF	**La Foret Royal**	7.62	84	*e*Pn	Pn	12 44 05.8	+1.4
MBDF	**Montbardon**	7.78	75	*e*Pn	Pn	12 44 08.2	+1.5
MBDF				*e*Sn	Sn	12 45 30.1	-4.6
	6.2nm,0.4s						
CABF	**La Chapelle**	7.80	61	*e*P	Pn	12 44 10.7	+3.8
LPG	**La Plagne**	7.90	70	*e*P	Pn	12 44 12.2	+3.7
LPG				*e*Sn	Sn	12 45 33.2	-4.7
SFTF	**Sexfontaines**	7.95	48	*e*Pn	Pn	12 44 09.9	+1.0
	baz=229						
SFTF				*e*Sn	Sn	12 45 32.9	-5.7
	4.2nm,0.2s						
MEZF	**Maizieres J’vi**	8.13	46	*e*Pn	Pn	12 44 11.5	+0.1
MEZF				*e*Sn	Sn	12 45 37.3	-5.8
	6.2nm,0.3s						
SAVF	**Savonnieres en**	8.24	46	*e*Pn	Pn	12 44 13.5	+0.7
	baz=224						
SAVF				*e*Sn	Sn	12 45 40.0	-5.7
	3.8nm,0.3s						
PAGF	**Fort de Pagny**	8.53	48	*e*Pn	Pn	12 44 17.1	+0.4
	baz=225						
HAU	**Haudompre**	8.58	53	*e*Pn	Pn	12 44 17.8	+0.3
HAU				*e*Sn	Sn	12 45 48.7	-5.4
	7.9nm,0.6s						
HINF	**Hinteralfeld**	8.78	55	*e*Pn	Pn	12 44 21.1	+0.8
BAIF	**Baives**	8.79	36	*e*Pn	Pn	12 44 19.7	-0.6
BAIF				*e*Sn	Sn	12 45 52.0	-7.1
	6.5nm,0.4s						
GIVF	**Givet**	9.09	38	*e*Pn	Pn	12 44 23.3	-1.1
GIVF				*e*Sn	Sn	12 46 00.4	-6.1
	14nm,0.6s						
CDF	**Champ du Feu**	9.32	52	*e*Pn	Pn	12 44 30.0	+2.3
ZHG	**ZHG**	10.00	194	P	Pn	12 44 37.9	+0.8
ZHG				S	Sn	12 46 23.5	-5.7
MD31	**MD31**	10.36	184	P	Pn	12 44 44.1	+2.1
MD31				S	Sn	12 46 33.2	-4.8
OUK	**Oukaimeden**	12.41	196	P	Pn	12 45 10.9	+0.5
OUK				S	Sn	12 47 22.0	-6.7
OUZM	**OUZ**	12.51	192	P	Pn	12 45 12.8	+1.4
OUZM				S	Sn	12 47 25.2	-5.4

*NOU **01** 12:44:18.5, 32°.45S×178°.03W, h340^{km}, mb4.0/6, South of Kermadec Islands*

WEL 01 12:45:09.1±1.1, 36°S±12°×17°9E±1°2, h254^{km}±8^{km}, M3.8/38, mB4.7/6, ML3.9/54, MLv3.7/38, Mw(mB)3.9/6, Error ellipse: s-maj=0.0km s-min=0.0km az=147.9, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	1.89	199	P	Pn	12 45 50.4	-0.4
MXZ				S	S	12 46 22.3	-1.5
WMGZ	**Waiomatatini S**	2.10	194	P	Pn	12 45 53.4	+0.6
HAZ	**Te Kaha**	2.23	207	P	Pn	12 45 53.1	-0.8
HAZ				S	S	12 46 28.3	-1.1
PKGZ	**Pakihiroa**	2.25	201	P	Pn	12 45 54.4	+0.1
PKGZ				S	S	12 46 30.6	+0.6
PUZ	**Puketiti**	2.38	196	P	Pn	12 45 55.8	+0.4
PUZ				S	S	12 46 32.7	+0.6
RUGZ	**Raukumara Rang**	2.45	207	P	Pn	12 45 55.5	-0.7
TWGZ	**Tauwhareparae**	2.55	200	P	Pn	12 45 58.1	+1.0
TWGZ				S	S	12 46 36.9	+1.8
CNGZ	**Carnagh Statio**	2.79	194	P	Pn	12 45 59.7	+0.2
TKGZ	**Te Karaka**	2.83	200	P	Pn	12 46 00.4	+0.5
TKGZ				S	S	12 46 41.6	+1.4
MWZ	**Matawai**	2.84	205	P	Pn	12 46 00.1	+0.1
MWZ				S	S	12 46 40.8	+0.3
OPRZ	**Ohinepanea**	2.89	224	P	Pn	12 46 00.1	-0.4
URZ	**Urewera**	2.93	212	P	Pn	12 46 00.3	-0.7
URZ				S	S	12 46 42.7	+0.5
URZ	**Urewera**	2.93	212	P	Pn	12 46 00.3	-0.7
RAGZ	**Rawiri**	3.02	206	P	Pn	12 46 02.7	+0.7
RIGZ	**Rimuhau**	3.10	199	P	Pn	12 46 03.2	+0.3
TARZ	**Mount Tarawera**	3.20	219	P	Pn	12 46 05.1	+1.1
MUGZ	**Murupara**	3.26	214	P	Pn	12 46 04.3	-0.3
PRGZ	**Paritu Road**	3.28	197	P	Pn	12 46 04.5	-0.3
RTZ	**Ruatahuna**	3.29	210	P	Pn	12 46 04.5	-0.5
SNGZ	**Shannon Statio**	3.30	204	P	Pn	12 46 05.6	+0.5
PRRZ	**Plateau Road**	3.46	218	P	Pn	12 46 07.0	+0.2
MHGZ	**Mahia Peninsul**	3.49	195	P	Pn	12 46 08.4	+1.3
RAHZ	**Arahi**	3.51	206	P	Pn	12 46 07.9	+0.5
ALRZ	**Allen Road**	3.53	217	P	Pn	12 46 07.9	+0.3
MTHZ	**Maungataniwha**	3.55	209	P	Pn	12 46 07.8	-0.1
WPRZ	**Whakapapatarin**	3.59	220	P	Pn	12 46 07.2	-1.1
MRHZ	**Matea Rd**	3.71	214	P	Pn	12 46 09.6	-0.1
KUTZ	**Kaahu Road**	3.75	223	P	Pn	12 46 10.7	+0.6
NMHZ	**Naumai**	3.77	208	P	Pn	12 46 11.3	+0.9
ARHZ	**Aropaoanui**	3.85	205	P	Pn	12 46 11.9	+0.6
BKZ	**Black Stump Fm**	3.96	211	P	Pn	12 46 12.8	+0.3
BKZ	**Black Stump Fm**	3.96	211	P	Pn	12 46 12.5	0.0
MCHZ	**McNeill Hill**	4.12	207	P	Pn	12 46 14.8	+0.5
KATZ	**Kakaramea**	4.18	219	P	Pn	12 46 16.1	+0.9
CKHZ	**Cape Kidnapper**	4.18	202	P	Pn	12 46 15.8	+0.6
KWHZ	**Kaweka Forest**	4.21	209	P	Pn	12 46 15.5	0.0
TMVZ	**Te Maari**	4.28	218	P	Pn	12 46 16.5	+0.1
NTVZ	**North Tongarir**	4.28	218	P	Pn	12 46 16.6	+0.3
ETVZ	**East Tongariro**	4.29	218	P	Pn	12 46 16.1	-0.5
KRVZ	**Karewarewa**	4.29	219	P	Pn	12 46 16.9	+0.3
OTVZ	**Oturere**	4.33	218	P	Pn	12 46 16.6	-0.5
NNVZ	**North Ngauruho**	4.33	218	P	Pn	12 46 17.4	+0.4
WTVZ	**West Tongariro**	4.33	219	P	Pn	12 46 17.3	+0.2
HIZ	**Hauiti**	4.34	230	P	Pn	12 46 18.0	+1.0
HIZ	**Hauiti**	4.34	230	P	Pn	12 46 17.9	+0.9
SNVZ	**South Ngauruho**	4.36	218	P	Pn	12 46 17.0	-0.4
KAHZ	**Kahuranaki**	4.37	203	P	Pn	12 46 17.8	+0.4
NGZ	**Ngauruhoe**	4.38	218	P	Pn	12 46 17.7	+0.2
TWVZ	**Taurewa**	4.38	220	P	Pn	12 46 17.4	-0.2
KRHZ	**Kereru**	4.42	208	P	Pn	12 46 17.6	-0.3
FWVZ	**Far West T-bar**	4.46	218	P	Pn	12 46 18.4	-0.2
WHVZ	**Whangaehu Hut**	4.46	217	P	Pn	12 46 18.4	-0.3
MOVZ	**Moawhango**	4.48	215	P	Pn	12 46 17.6	-1.1
WNVZ	**Wahianoa**	4.49	217	P	Pn	12 46 18.4	-0.5
TRVZ	**Turoa**	4.50	218	P	Pn	12 46 18.8	-0.3
PXZ	**Pawanui**	4.59	202	P	Pn	12 46 20.2	+0.3
MTVZ	**Mangateitei**	4.60	217	P	Pn	12 46 20.3	+0.2
PNHZ	**Pukenui**	4.71	208	P	Pn	12 46 20.8	-0.7
WPHZ	**Waipukurau**	4.76	205	P	Pn	12 46 22.2	+0.2
VRZ	**Vera Road**	4.79	225	P	Pn	12 46 22.4	0.0
PRHZ	**Porangahau**	4.88	203	P	Pn	12 46 23.6	+0.2
TSZ	**Takapari Road**	4.93	209	P	Pn	12 46 23.2	-0.9
DVHZ	**Dannevirke**	5.06	206	P	Pn	12 46 25.1	-0.6
WAZ	**Wanganui**	5.12	218	P	Pn	12 46 26.4	0.0
NEZ	**North Egmont**	5.28	227	P	Pn	12 46 29.5	+1.2
PKE	**Pukeiti**	5.29	228	P	Pn	12 46 29.7	+1.2
PRWZ	**Pori Road**	5.36	206	P	Pn	12 46 29.5	+0.2
BFZ	**Birch Farm**	5.38	204	P	Pn	12 46 29.2	-0.3
BFZ	**Birch Farm**	5.38	204	P	Pn	12 46 29.9	+0.4
TIWZ	**Tintock**	5.58	206	P	Pn	12 46 32.0	-0.1
MRZ	**Mangatainoka R**	5.60	208	P	Pn	12 46 31.2	-1.0
HOWZ	**Holdsworth Sta**	5.83	208	P	Pn	12 46 33.8	-1.3
TMWZ	**Te Maipa**	5.88	204	P	Pn	12 46 35.0	-0.7
OGWZ	**Otaki Gorge**	5.89	210	P	Pn	12 46 34.6	-1.2
MTW	**Mount Morrison**	6.06	206	P	Pn	12 46 36.9	-1.0
QRZ	**Quartz Range**	7.20	224	P	Pn	12 46 50.6	-1.6
KHZ	**Kahutara**	7.90	211	P	Pn	12 46 59.7	-1.3

*LDG **01** 12:50:06.2±0.3, 36°.18N×1°.52W, h5^{km}, Ml2.7/5, Error ellipse: s-maj=6.8km s-min=3.0km az=157.0*

*MDD **01** 12:50:06.0±1.0, 36°.21N×1°.52W, h8^{km}±9^{km}, mbLg3.0/26, Error ellipse: s-maj=7.2km s-min=5.2km az=168.0, PRXIMO SENTIDO LEVEMENTE EN ZONA EPICENTRAL.*

*INMG **01** 12:50:07.4±1.5, 36°.26N×1°.62W, h17^{km}±5^{km}, ML2.8, Error ellipse: s-maj=4.1km s-min=3.9km az=135.0*

*CNRM **01** 12:50:07.5, 36°.35N×1°.54W, h32^{km}, ml3.3*

*CRAAG **01** 12:50:09.5, 35°.93N×1°.33W, Ml3.4*

ISC 01 12:50:05.0±1.3, 36°.26N±0°.03×1°.51W±0°.03, h14^{km}±10^{km}, n68, σ2^s.11/117, 3D, Western Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENIJ	**Nijar**	0.91	322	⇓P	Pg	12 50 22.8	+0.2
	79nm,0.2s,SNR=18						
ENIJ				S	Sg	12 50 34.1	-0.4
	2µm,0.3s,SNR=7.9						
USTO	**Oran**	0.94	123	P	Pb	12 50 24.1	+1.1
USTO	**Oran**	0.94	123	P	Pb	12 50 24.1	+1.1
OLHC	**Oulhaca**	1.01	176	P	Pb	12 50 24.6	+0.4
EBER	**Berja**	1.28	300	P	Pn	12 50 28.3	-0.3
	8.1nm,0.1s,SNR=38						
EBER				S	Sg	12 50 46.5	0.0
	834nm,0.3s,SNR=7.9						
CHAS	**Isla Isabel II**	1.30	215	P	Pb	12 50 30.1	+0.8
CHAS				S	Sg	12 50 43.0	-4.1
CART	**Cartagena**	1.39	17	P	Pn	12 50 29.3	-0.6
CART				S	Sn	12 50 44.4	-3.7
CART	**Cartagena**	1.39	17	P	Pn	12 50 29.9	0.0
CART				S	Sn	12 50 46.0	-2.1

TLOR	**Lorca, Murcia**	1.41	354	P	Pn	12 50 30.7	+0.5
	71nm,0.2s,SNR=7.9						
TLOR				S	Sn	12 50 50.3	+1.8
	217nm,0.2s,SNR=7.9						
ODJA	**Bouhanifia**	1.44	129	P	Pg	12 50 40.8	+8.1
EMEL	**Melilla**	1.51	231	S	Sn	12 50 49.2	-1.9
	254nm,0.1s,SNR=7.9						
EMUR	**La Murta**	1.60	8	⇓P	Pn	12 50 33.0	+0.1
	11nm,0.2s,SNR=18						
EMUR				S	Sn	12 50 53.3	-0.1
	104nm,0.4s,SNR=5.3						
TAF	**Taforalt**	1.61	207	P	Pn	12 50 33.5	+0.4
TAF				S	Sb	12 50 55.4	+0.5
GORA	**Gorafe**	1.73	315	P	Pn	12 50 36.4	+1.7
	SNR=7.9						
GORA				S	Sn	12 50 59.4	+2.7
	178nm,0.2s,SNR=7.9						
ELGU	**Los Guajares,**	1.81	290	P	Pn	12 50 34.9	-0.9
	6.8nm,0.1s,SNR=7.9						
ELGU				S	Sn	12 50 56.2	-2.4
	147nm,0.3s,SNR=7.9						
EQUE	**Quentar**	1.82	302	P	Pn	12 50 37.5	+1.6
	1.8nm,0.3s,SNR=12						
EQUE				S	Sn	12 51 01.7	+2.9
	162nm,0.4s,SNR=7.4						
ETRV	**Los Montesinos**	1.86	19	S	Sn	12 50 58.6	-1.1
	143nm,0.2s,SNR=7.9						
EQES	**Quesada**	1.99	322	P	Pn	12 50 40.3	+2.1
	3.8nm,0.2s,SNR=29						
EQES				S	Sn	12 51 04.8	+1.8
	23nm,0.2s,SNR=5.6						
SESP	**Santiago Espad**	2.04	336	P	Pn	12 50 40.9	+2.0
	45nm,0.2s,SNR=7.9						
SESP				S	Sn	12 51 06.1	+1.8
	55nm,0.2s,SNR=7.9						
JBK	**JBK**	2.10	205	P	Pb	12 50 43.2	+0.3
JBK				S	Sn	12 51 08.1	+2.2
PALE	**Palemas**	2.23	243	P	Pn	12 50 41.7	+0.2
PALE				S	Sn	12 51 09.9	+1.1
EGOR	**Sierra Gorda,**	2.26	293	P	Pn	12 50 43.9	+2.0
	1.0nm,0.2s,SNR=7.9						
EGOR				S	Sn	12 51 10.8	+1.2
	20nm,0.3s,SNR=7.9						
ETOB	**Tobarra**	2.39	359	⇓P	Pn	12 50 45.3	+1.5
	11nm,0.2s,SNR=18						
ETOB				S	Sn	12 51 12.7	0.0
	22nm,0.3s,SNR=7.9						
EMAL	**Malaga-Limoner**	2.40	283	P	Pn	12 50 43.5	-0.3
EMAL				S	Sn	12 51 09.3	-3.8
AFON	**Font Roja**	2.53	18	P	Pn	12 50 47.1	+1.4
	7.2nm,0.3s,SNR=14						
AFON				S	Sn	12 51 17.2	+0.9
	49nm,0.3s,SNR=8.2						
EBEN2	**Beniarda presa**	2.64	23	P	Pn	12 50 47.8	+0.7
	4.2nm,0.2s,SNR=7.9						
EBEN2				S	Sn	12 51 16.3	-2.5
	33nm,0.2s,SNR=7.9						
EMIJ	**Mijas**	2.65	278	P	Pn	12 50 45.9	-1.4
	0.2nm,0.2s,SNR=9.1						
EMIJ				S	Sn	12 51 16.3	-2.9
	15nm,0.3s,SNR=7.9						
EADA	**Adamuz**	3.10	309	P	Pn	12 50 54.9	+1.4
	0.4nm,0.2s,SNR=7.9						
EADA				S	Sn	12 51 34.9	+4.5
	23nm,0.3s,SNR=7.9						
TDRA	**Tendrara**	3.24	188	P	Pn	12 50 59.6	+4.1
TDRA				S	Sb	12 51 40.5	-1.1
CHEFC	**Chefchaouen**	3.32	251	P	Pn	12 50 58.1	+1.5
CHEFC				S	Sn	12 51 36.0	+0.2
ECHE	**Chera**	3.36	7	P	Pn	12 50 58.4	+1.3
	SNR=7.9						
EIBI	**Ibiza**	3.58	38	P	Pn	12 51 00.8	+0.8
	4.5nm,0.3s,SNR=36						
EIBI				S	Sn	12 51 39.1	-3.0
	31nm,0.3s,SNR=7.9						
ECAB	**El Cabril**	3.61	301	P	Pn	12 51 00.5	-0.1
	2.6nm,0.3s,SNR=12						
ECAB				S	Sn	12 51 40.7	-2.2
	18nm,0.4s,SNR=5.7						
ESDC	**Sonseca Array**	3.92	331	P	Pn	12 51 07.0	+2.2
	0.8nm,0.3s,baz=145,slow=13,SNR=7.5						
PAB	**San Pablo**	3.98	327	P	Pn	12 51 07.6	+2.0
	SNR=7.9						
PAB				S	Sn	12 51 47.7	-4.4
	2.6nm,0.3s,SNR=7.9						
FIGM	**Figuig**	4.12	177	P	Pn	12 51 09.3	+1.7
FIGM				S	Sn	12 51 59.6	+4.1
EMOS	**Mosqueruela**	4.18	11	P	Pn	12 51 11.2	+2.7
	13nm,0.6s,SNR=19						
EMOS				S	Sn	12 51 57.2	0.0
	4.3nm,0.4s,SNR=7.9						
UCM	**Universidad Co**	4.27	342	P	Pn	12 51 11.7	+2.1
UCM				S	Sn	12 51 59.2	0.0
MDT	**Midelt**	4.28	218	P	Pn	12 51 11.1	+1.4
MDT				S	Sn	12 52 01.5	+2.0
MD31	**MD31**	4.31	219	P	Pn	12 51 11.7	+1.5
MD31				S	Sn	12 52 00.6	+0.2
CZD	**Col de Zad**	4.34	223	P	Pn	12 51 13.6	+2.8
CZD				S	Sn	12 52 04.2	+3.0
EMIN	**Mina Concepcio**	4.40	292	P	Pn	12 51 11.7	+0.4
	SNR=7.9						
EMIN				S	Sn	12 51 59.5	-2.8
	2.8nm,0.3s,SNR=7.9						
ETOR	**Torete**	4.58	355	P	Pn	12 51 15.4	+1.5
	SNR=7.9						
PBAR	**Barrancos**	4.81	295	*e*Pn	Pn	12 51 17.6	+0.7
PBAR				A	A	12 52 50.0	
	7.2nm,0.6s						
ETOS	**Mallorca**	4.89	43	P	Pn	12 51 19.2	+1.1
	6.4nm,0.4s,SNR=10.0						
ETOS				S	Sn	12 52 11.7	-2.9
	3.5nm,0.3s,SNR=7.9						
ERTA	**Horta de San J**	4.91	17	P	Pn	12 51 19.4	+1.0
	SNR=7.9						
ERTA				S	Sn	12 52 14.4	-0.6
	1.5nm,0.2s,SNR=7.9						
EGRO	**El Granado**	4.95	287	P	Pn	12 51 19.7	+0.8
	SNR=7.9						
EBAD	**Badajoz**	5.04	301	P	Pn	12 51 19.8	-0.3
	1.6nm,0.4s,SNR=7.1						
EBAD				S	Sn	12 52 15.4	-2.6
	7.0nm,0.2s,SNR=7.9						
ZHG	**ZHG**	5.06	238	P	Pn	12 51 22.4	+1.8
ZHG				S	Sn	12 52 26.3	+7.5
PVAQ	**Vaqueiros**	5.11	285	*e*Pn	Pn	12 51 21.1	+0.1
PVAQ				*e*Sn	Sn	12 52 16.7	-3.1
PVAQ				A	A	12 52 23.1	
	6.0nm,0.4s						
PVAQ	**Vaqueiros**	5.11	285	P	Pn	12 51 21.1	+0.1
PVAQ				S	Sn	12 52 18.8	-1.0
PBDV	**Barranco-do-Ve**	5.25	283	*e*Pn	Pn	12 51 24.5	+1.5
PBDV				*e*Sn	Sn	12 52 21.4	-1.9
PBEJ	**Beja**	5.38	291	*e*Pn	Pn	12 51 25.3	+0.6
PCVE	**Castro Verde**	5.41	287	*e*Pn	Pn	12 51 25.4	+0.3
EPOB	**Poblet**	5.48	21	P	Pn	12 51 27.3	+1.1
	4.7nm,0.8s,SNR=7.0						
EPOB				S	Sn	12 52 27.3	-1.7
	0.7nm,0.2s,SNR=7.9						
PESTR	**Estremoz**	5.49	300	*e*Pn	Pn	12 51 27.0	+0.7
PESTR				*e*Sn	Sn	12 52 26.7	-2.5
PESTR				A	A	12 53 13.6	
	9.1nm,0.6s						
MESJ	**Messejana**	5.59	288	*e*Pn	Pn	12 51 28.0	+0.3
MESJ				*e*Sn	Sn	12 52 28.8	-3.0
PMRV	**Marv??o**	5.63	306	*e*Sn	Sn	12 52 28.9	-3.8
PMRV				A	A	12 53 11.3	
	8.8nm,0.6s						
PNCL	**Nicolau / Gran**	5.90	290	*e*Pn	Pn	12 51 32.2	+0.3
PCBR	**Castelo Branco**	5.91	309	*e*Pn	Pn	12 51 34.1	+2.0
PMTG	**Montargil**	6.02	300	*e*Pn	Pn	12 51 34.3	+0.7
PMTG				*e*Sn	Sn	12 52 38.8	-3.5
PMTG				A	A	12 53 25.6	
	8.4nm,0.6s						
MVO	**Moncorvo**	6.53	320	*e*Pn	Pn	12 51 43.1	+2.5
MVO				*e*Sn	Sn	12 52 51.4	-3.5
MVO				A	A	12 53 40.4	
	9.9nm,0.6s						
PSBE	**So Bento**	6.62	302	*e*Pn	Pn	12 51 42.7	+0.9
ETSF	**Etsaut**	6.68	6	*e*Pn	Pn	12 51 44.5	+1.9
ETSF				*e*Sn	Sn	12 52 56.7	-1.8
	1.3nm,0.4s						
SJPF	**Ste Jean**	6.85	2	*e*Pn	Pn	12 51 46.9	+1.9
SJPF				*e*Sn	Sn	12 53 01.3	-1.5
	0.2nm,0.2s						
EPF	**Esparros**	6.92	11	*e*Pn	Pn	12 51 48.9	+3.0
EPF				*e*Sn	Sn	12 53 02.1	-2.3
	2.1nm,0.4s						
LMR	**La Mourre**	9.38	39	*e*Pn	Pn	12 52 21.3	+1.6
LMR				*e*Sn	Sn	12 54 00.9	-4.0
	0.3nm,0.2s						
FRF	**La Foret Royal**	9.61	38	*e*Pn	Pn	12 52 23.7	+0.8
FRF				*e*Sn	Sn	12 54 05.9	-4.7
	0.5nm,0.3s						

NNC ***01*** *12:50:03.0±2.0, 36°.69N×70°.29E, h0^{km}, mb5.5, mpv5.3, Error ellipse: s-maj=20.2km s-min=10.5km az=159.0*

BJI ***01*** *12:50:08.5±0.0, 36°.53N×70°.47E, h208^{km}, mB4.6/26, mb4.6/45*

MOS ***01*** *12:50:08.7±0.7, 36°.49N×70°.53E, h211^{km}, mb4.8/26, Error ellipse: s-maj=7.5km s-min=4.0km az=78.8*

IDC ***01*** *12:50:08.3±1.7, 36°.31N×70°.48E, h200^{km}±16^{km}, mb4.0/33, mb1 4.1/39, mb1mx4.0/50, mbtmp4.6/39, Error ellipse: s-maj=9.9km s-min=7.2km az=6.0*

NEIC ***01*** *12:50:10.2±1.8, 36°.49N±0°.06×70°.47E±0°.08, h211^{km}±5^{km}, mb4.6/89, Error ellipse: s-maj=9.3km s-min=8.6km az=95.0*

ISC 01 12:50:09.0±0.3, **36°.42N**±0°.03×**70°.54E**±0°.03, **h204**^{km}, **n453,** σ1^{s}**44**/487, **mb4.6**/98, **32C-17D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	2.24	213	PN	Pn	12 50 51.8	+1.2
KBL	**Kabul**	2.24	213	Pn	Pn	12 50 51.8	+1.2
KBL	**Kabul**	2.24	213	P	Pn	12 50 51.8	+1.2
	SNR=361						
KBL				S	S	12 51 23.3	+1.0
CHGR	**Chuyangaron**	2.48	334		Pn	12 50 53.0	0.0
GAR	**Garm**	2.58	356	Pn	Pn	12 50 54.5	+0.3
CEP	**Cherat**	2.83	156	P	Pn	12 50 58.6	+1.6
CEP				S	S	12 51 35.0	+1.1
DRK	**Karamyk**	3.21	18		Pn	12 51 02.2	+0.6
CHCP	**Chirah Chowk**	3.55	140	P	Pn	12 51 07.7	+2.2
NIL	**Nilore**	3.55	140	PN	Pn	12 51 07.8	+2.3
NIL	**Nilore**	3.55	140	Pn	Pn	12 51 07.8	+2.3
BTK	**Batken**	3.64	3	PN	Pn	12 51 07.6	+1.1
BTK	**Batken**	3.64	3	Pn	Pn	12 51 07.6	+1.1
THW	**Thamme Wali**	3.75	164	P	Pn	12 51 09.3	+1.3
SARP	**Sargodha**	4.83	158	P	Pn	12 51 22.1	+0.8
JMU	**Jammu**	5.16	134	*e*P	Pn	12 51 35.0	+9.5
JMU				*e*S	S	12 52 50.0	+24
KSH	**Kashi**	5.29	53	P	Pn	12 51 22.5	-4.8
KSH				S	S	12 52 18.0	-11
KSH				pmax	pmax		
	comp=Z,250nm,0.5s						
KSH				smax	smax		
	comp=N,1µm,0.8s						
KSH				smax	smax		
	comp=E,1µm,0.7s						
CHM	**Chimkent**	5.93	353	*e*P	Pn	12 51 35.4	0.0
	baz=352						
CHM				*e*S	S	12 52 40.2	-3.4
	baz=352						
AML	**Almayashu**	6.21	22	P	Pn	12 51 38.9	-0.4
	SNR=494						
AML	**Almayashu**	6.21	22	*i* P	Pn	12 51 38.9	-0.4
	SNR=528						
DHRM	**DHARAMSHALA**	6.33	129	*e*P	Pn	12 51 41.5	+0.7
DHRM				*e*S	S	12 52 50.9	-2.4
DZA	**Taraz**	6.49	5	*e*P	Pn	12 51 41.6	-1.0
	baz=4.8						
DZA				*e*S	S	12 52 52.3	-4.4
	baz=4.8						
UCH	**Uchtor**	6.57	27	P	Pn	12 51 43.9	-0.1
	SNR=81						
BRLS	**Borolday**	6.62	356	*e*PN	Pn	12 51 50.4	+6.1
KK31	**Karatay Array**	6.67	360	PN	Pn	12 51 44.3	-0.7
KK31	**Karatay Array**	6.67	360	Pn	Pn	12 51 44.2	-0.7
KK31	**Karatay Array**	6.67	360	⇓P	Pn	12 51 39.5	-5.5
	89nm,0.5s,baz=194,slow=14,SNR=1358						
KK31				⇑S	S	12 52 55.3	-5.7
	102nm,0.4s,baz=183,slow=20,SNR=9.0						
KKAR	**Karatay Array**	6.67	360	PN	Pn	12 51 44.3	-0.7
KKAR	**Karatay Array**	6.67	360		Pn	12 51 44.2	-0.7
KKAR	**Karatay Array**	6.67	360	Pn	Pn	12 51 44.0	-0.9
EKS2	**Erkin-Say**	6.72	21	P	Pn	12 51 45.4	-0.2
	SNR=140						
AAK	**Ala-Archa**	6.92	25	P	Pn	12 51 48.1	-0.1
	58nm,0.3s,baz=189,slow=5.7,SNR=402						
AAK				S	S	12 53 03.3	-3.7
	38nm,0.3s,baz=320,slow=21,SNR=28						
AAK	**Ala-Archa**	6.92	25	P	Pn	12 51 48.2	-0.1
	SNR=230						
AAK	**Ala-Archa**	6.92	25	*i* P	Pn	12 51 48.1	-0.1
	SNR=254						
AAK	**Ala-Archa**	6.92	25	*ce*PN	Pn	12 51 47.9	-0.4
AAK				pmax	pmax		
	comp=Z,190nm,0.4s						
AAK	**Ala-Archa**	6.92	25	⇓P	Pn	12 51 44.6	-3.7
	comp=Z,83nm,0.5s						
AAK				⇓S	S	12 53 03.7	-3.3
	comp=Z,502nm,0.6s						
BHK	**Bhakra**	6.99	134	*e*P	Pn	12 51 46.0	-3.1
BHK				*e*S	S	12 53 02.2	-6.3
HRA	**Herat**	7.07	256	Pn	Pn	12 51 50.0	-0.3
KBK	**Karagaybulak**	7.10	27	P	Pn	12 51 50.8	+0.2
	SNR=102						
FRU1	**Bishkek**	7.12	25	PN	Pn	12 51 50.9	+0.1
FRU1	**Bishkek**	7.12	25	Pn	Pn	12 51 50.9	+0.1
ULHL	**Ulahol**	7.30	36	P	Pn	12 51 53.3	0.0
	SNR=7.5						
CHMS	**Chumysh**	7.33	25	P	Pn	12 51 52.9	-0.6
	SNR=58						
USP	**Ospenovka**	7.49	23	P	Pn	12 51 54.4	-1.1
	SNR=60						
TKM2	**Tokmak 2**	7.57	29	P	Pn	12 51 56.4	-0.4
	SNR=102						
TKM2	**Tokmak 2**	7.57	29	⇓P	Pn	12 51 54.2	-2.6
	comp=Z,186nm,0.5s						
TKM2				⇑S	S	12 53 17.2	-5.3
	comp=Z,211nm,0.8s						
SMLA	**Simla**	7.64	132	*e*P	Pn	12 51 57.7	+0.1
SMLA				*e*S	S	12 53 19.8	-4.1
SMLA				IAML		12 53 22.3	
	comp=N,1µm,0.8s						
SMLA				IAML		12 53 23.4	
	comp=E,822nm,0.8s						
SGDS	**Sogindy**	7.69	23	⇓*i*P	Pn	12 51 57.0	-1.2
	comp=E,7.0nm,0.2s,baz=23						
SGDS	**Sogindy**	7.69	23	*e*PN	Pn	12 51 57.0	-1.2
MTBS	**Maitube**	8.09	32	⇓*i*P	Pn	12 52 03.3	-0.1
	baz=33						
MTBS				*e*S	S	12 53 31.6	-3.0
	baz=33						
TNSS	**Tian-Shan**	8.25	35	*e*P	Pn	12 52 04.4	-1.4
	baz=36						
TNSS				*e*S	S	12 53 35.2	-3.7
	baz=36						
AAA	**Alma-Ata**	8.37	34	*e*P	Pn	12 52 05.7	-1.3
	baz=35						
MDOK	**Medeo**	8.39	35	*e*P	Pn	12 52 07.0	-0.3
	baz=36						
MDOK				*e*S	S	12 53 39.9	-2.0
	baz=36						
MDOK	**Medeo**	8.39	35	PN	Pn	12 52 06.0	-1.4
MDOK	**Medeo**	8.39	35	⇓P	Pn	12 52 07.1	-0.3
	comp=E,46nm,0.5s						
MDOK				⇓S	S	12 53 39.9	-2.0
	comp=E,59nm,1.0s						
KNDC	**Almaty**	8.40	34	PN	Pn	12 52 07.0	-0.4
KNDC	**Almaty**	8.40	34	⇑P	Pn	12 52 06.0	-1.4
	comp=E,194nm,0.7s						
KNDC				⇓S	S	12 53 38.0	-3.9
	comp=E,145nm,0.8s						
PRZ	**Przheval'sk**	8.58	43	PN	Pn	12 52 09.5	-0.4
PRZ	**Przheval'sk**	8.58	43		Pn	12 52 09.5	-0.4
KUU	**Kurty**	8.68	29	⇓*i*P	Pn	12 52 09.4	-1.6
	comp=E,13nm,0.4s,baz=30						
DDI	**Dehra Dun**	8.75	132	*e*P	Pn	12 52 12.4	+0.4
DDI				*e*S	S	12 53 45.5	-4.9
DDI				IAML		12 53 51.8	
	comp=E,548nm,0.6s						
CHKK	**Chushkaly**	8.91	32	*e*P	Pn	12 52 12.4	-1.6
	baz=32						
SATY	**Saty**	8.98	40	*e*P	Pn	12 52 13.4	-1.6
	baz=41						
BTLS	**Baital**	9.01	16	⇓*e*P	Pn	12 52 14.2	-1.1
	baz=16						
BTLS				*e*S	S	12 53 50.5	-5.9
	baz=16						
BTLS	**Baital**	9.01	16	*e*PN	Pn	12 52 14.3	-1.0
UZB	**Uzynbulak**	9.37	42	*e*P	Pn	12 52 18.1	-1.9
	baz=43						
UZB	**Uzynbulak**	9.37	42	*e*P	Pn	12 52 19.6	-0.4
KPKS	**Kokpek**	9.41	39	⇓*e*P	Pn	12 52 19.3	-1.3
	comp=E,26nm,1.0s,baz=40						
KPKS	**Kokpek**	9.41	39	*e*P	Pn	12 52 19.9	-0.7
NDI	**New Delhi**	9.55	142	*e*P	Pn	12 52 22.0	-0.5
NDI				*e*S	S	12 54 02.0	-7.6
ARXS	**Arharly**	9.56	33	*e*P	Pn	12 52 21.4	-1.1
SHLS	**Shalkode**	9.61	43	*e*P	Pn	12 52 25.2	+2.0
	baz=45						
KUDL	**Kundal**	9.67	147	*e*P	Pn	12 52 22.8	-1.1
PDGK	**Podgornoye**	9.74	42	⇓P	Pn	12 52 24.0	-0.8
	comp=E,32nm,1.2s						
PDGK				⇑S	S	12 54 13.4	-0.6
	comp=E,83nm,1.1s						
SONA	**Sohna**	9.85	144	*e*P	Pn	12 52 26.8	+0.5
GEYT	**Alibeck**	10.02	282	P	Pn	12 52 27.1	-1.4
	comp=E,5.2nm,0.3s,baz=116,slow=13,SNR=31						
GEYT				S	S	12 54 17.2	-3.7
	comp=E,5.5nm,0.3s,baz=70,slow=26,SNR=2.5						
GYA0B	**ALIBECK ARRAY**	10.02	282		Pn	12 52 26.5	-2.0
GYA0B	**ALIBECK ARRAY**	10.02	282	⇑P	Pn	12 52 26.2	-2.3
GYA0B				⇓S	S	12 54 14.3	-6.7
TDK	**Taldyqorghan**	10.44	32	*e*P	Pn	12 52 32.2	-1.6
	baz=33						
AJM	**Ajmer**	10.51	159	⇓*i*P	Pn	12 52 34.0	-0.9
AJM				*i* S	S	12 54 27.0	-5.7
PYUN	**Piuthan**	13.40	125	*e*P	Pn	12 53 10.2	-1.4
	comp=E,275nm,0.5s						
MAKZ	**Makanchi**	13.44	36	P	Pn	12 53 11.3	-0.4
MAKZ	**Makanchi**	13.44	36		Pn	12 53 11.3	-0.4
MAKZ	**Makanchi**	13.44	36	⇑P	Pn	12 53 10.8	-0.8
	comp=E,163nm,1.2s						
MK31	**Makanchi Array**	13.57	37	*i* P	Pn	12 53 12.9	-0.5
MK31	**Makanchi Array**	13.57	37	P	Pn	12 53 12.0	-1.4
MK31	**Makanchi Array**	13.57	37	⇑P	Pn	12 53 13.7	+0.3
	comp=E,84nm,0.9s,baz=233,slow=8.7,SNR=319						
MKAR	**Makanchi Array**	13.57	37	P	Pn	12 53 12.5	-0.9
	comp=E,2.4nm,0.3s,baz=228,slow=14,SNR=87						
MKAR	**Makanchi Array**	13.57	37		Pn	12 53 11.8	-1.6
BRZS	**Berezniki**	13.64	6	*e*P	Pn	12 53 13.0	-1.2
	baz=5.8						
BRZS	**Berezniki**	13.64	6	*e*P	Pn	12 53 13.5	-0.7
DANN	**Dangsing**	13.76	122	*e*P	Pn	12 53 15.0	-1.2
	comp=E,238nm,0.5s						
KOLN	**Koldanda**	14.03	124	*e*P	Pn	12 53 18.4	-1.0
	comp=E,75nm,0.3s						
BHPL	**Bhopal**	14.43	154	*e*P	P	12 53 24.9	-0.5
BHPL				*i* x	x	12 53 28.0	
BHPL				*e*S	S	12 55 53.4	-11
BHPL				IAML		12 56 20.8	
	comp=N,66nm,0.6s						
GKN	**Gorkha**	14.58	121	*e*P	Pn	12 53 25.6	-0.5
	comp=N,343nm,0.5s						
AB31	**Akbulak array**	14.97	332	P	Pn	12 53 29.2	-1.3
	comp=N,18nm,0.3s,baz=147,slow=12,SNR=790						
AB31				⇑S	S	12 56 15.8	-0.7
	comp=N,6.9nm,0.5s,baz=153,slow=24,SNR=2.7						
ABKAR	**Akbulak array**	14.97	332	P	Pn	12 53 29.3	-1.3
ABKAR	**Akbulak array**	14.97	332		Pn	12 53 28.2	-2.4
WMQ	**Urumqi**	15.05	55	P	Pn	12 53 31.5	-0.1
WMQ				sP	sP	12 54 27.6	-5.0
WMQ				S	S	12 56 15.6	-2.9
WMQ				pmax	pmax		
	comp=N,52nm,0.9s						
WMQ				pmax	pmax		
	comp=N,170nm,4.1s						
DMN	**Daman**	15.15	121	*e*P	Pn	12 53 33.3	+0.1
	comp=N,132nm,0.3s						
KKN	**Kakani**	15.16	120	*e*P	Pn	12 53 33.0	-0.2
	comp=N,375nm,0.4s						
KURBB	**Kurchatov Arra**	15.32	20	P	Pn	12 53 33.7	-1.0
	comp=N,1.6nm,0.3s,baz=210,slow=10,SNR=95						
KURBB	**Kurchatov Arra**	15.32	20	⇑P	P	12 53 35.0	+0.1
	comp=N,28nm,0.6s						
PKIN	**Phulchoki**	15.37	121	*e*P	Pn	12 53 35.4	-0.5
	comp=N,179nm,0.4s						
PKI	**Pulchoki**	15.38	121	*e*P	Pn	12 53 35.6	-0.5
	comp=N,221nm,0.5s						
KURK	**Kurchatov**	15.43	20	*ce*P	Pn	12 53 34.8	-1.2
KURK				pmax	pmax		
	comp=Z,21nm,0.8s						
KURK	**Kurchatov**	15.43	20	P	Pn	12 53 34.1	-1.9
KURK				IAmb	IAmb	12 53 36.9	
	comp=Z,19nm,0.8s						
GUN	**Gumba**	15.51	119	*e*P	Pn	12 53 37.0	-0.6
	comp=Z,131nm,0.3s						
JIRN	**Jiri**	15.88	119	*e*P	Pn	12 53 42.3	+0.2
	comp=Z,410nm,0.5s						
BANOM	**Banah**	16.04	233	*i* P	Pn	12 53 43.8	0.0
	SNR=16						
BANOM	**Banah**	16.04	233	P	Pn	12 53 44.1	+0.4
SHME	**Shamm**	16.06	234	P	Pn	12 53 45.0	+1.2
SHME	**Shamm**	16.06	234	P	Pn	12 53 45.0	+1.2
MDH	**Madha**	16.48	232	*i* P	P	12 53 48.4	+0.4
	SNR=5.8						
MASF	**Masafi**	16.52	232	P	Pn	12 53 50.5	+1.1
	SNR=6.1						
MSFE	**Esma-Masafi**	16.53	232	P	Pn	12 53 50.2	+0.7
RAMN	**Ramite**	16.60	120	*e*P	Pn	12 53 50.6	0.0
	comp=Z,245nm,0.4s						
BVAR	**Borovoye Array**	16.60	360	P	Pn	12 53 50.0	-0.1
	comp=Z,8.7nm,0.3s,baz=183,slow=15,SNR=68						
BVAR				S	S	12 56 49.0	-3.1
	comp=Z,1.6nm,0.3s,baz=176,slow=26,SNR=4.1						
BVAR	**Borovoye Array**	16.60	360	P	Pn	12 53 50.0	-0.1
BRVK	**Borovoye**	16.64	359	*ce*P	P	12 53 49.9	+0.5
BRVK				pmax	pmax		
	comp=Z,35nm,0.6s						
BRVK	**Borovoye**	16.64	359	P	P	12 53 49.6	+0.2
BRVK	**Borovoye**	16.64	359	P	Pn	12 53 50.6	0.0
BRVK	**Borovoye**	16.64	359	⇑P	Pn	12 53 52.6	+2.0
	comp=Z,32nm,0.5s						
BRVK				⇓S	S	12 56 59.4	+6.7
	comp=Z,32nm,1.2s						
AKTO	**Aktyubinsk**	16.66	331	P	Pn	12 53 50.7	-0.2
	comp=Z,9.2nm,0.3s,baz=142,slow=10,SNR=230						
AKTO	**Aktyubinsk**	16.66	331	⇑P	Pn	12 53 52.9	+2.0
	comp=Z,94nm,0.7s						
AKTO				⇑S	S	12 56 54.9	+1.6
	comp=Z,41nm,1.1s						
WSAR	**Wadi Sarin**	16.69	221	P	Pn	12 53 52.0	+0.6
	comp=Z,2.4nm,0.3s,baz=56,slow=5.7,SNR=19						
UOSS	**Minazif**	16.79	231	*i* P	Pn	12 53 52.5	-0.2
	SNR=10						
UOSS	**Minazif**	16.79	231	P	P	12 53 49.9	-1.5
UOSS	**Minazif**	16.79	231	P	Pn	12 53 52.7	0.0
HATD	**Hatta, Dubai**	16.93	231	P	Pn	12 53 54.1	-0.2
HATD	**Hatta, Dubai**	16.93	231	P	Pn	12 53 55.0	+0.8
	SNR=5.2						
WBK	**Wadi Bani Khal**	17.03	219	P	Pn	12 53 56.4	+0.9
	SNR=5.8						
ASHO	**Ashiyiah**	17.07	231	*i* P	Pn	12 53 56.1	+0.1
	SNR=35						
ASHO	**Ashiyiah**	17.07	231	P	Pn	12 53 56.2	+0.1
	SNR=17						
NAZ	**Nazwa, Dubai**	17.11	232	P	Pn	12 53 56.5	+0.1
NAZ	**Nazwa, Dubai**	17.11	232	P	Pn	12 53 56.6	+0.2
	SNR=5.8						
TAPN	**Taplejung**	17.14	117	*e*P	Pn	12 53 57.8	+0.7
	comp=Z,119nm,0.5s						
SOHO	**SOHO**	17.19	228	P	P	12 53 55.0	-0.8
JLN	**Jalan Bani Buh**	17.20	217	P	Pn	12 53 58.1	+0.7
	SNR=5.6						
ODAN	**Odare**	17.21	119	*e*P	Pn	12 53 58.2	+0.4
	comp=Z,181nm,0.5s						
FAQ	**Al Faqa, Dubai**	17.32	232	P	Pn	12 53 58.1	-0.8
FAQ	**Al Faqa, Dubai**	17.32	232	P	Pn	12 53 58.5	-0.4
ASUD	**Al Ashush, Dub**	17.57	232	*i* P	Pn	12 54 01.6	-0.3
	SNR=11						
ALNE	**Al Ain**	17.72	230	*i* P	Pn	12 54 02.7	-0.9
	SNR=13						
ALNE	**Al Ain**	17.72	230	P	Pn	12 54 03.0	-0.6
	SNR=8.2						
AJN	**Ajban**	17.84	233	P	Pn	12 54 04.2	-0.8
	SNR=5.9						
POO	**Poona**	18.06	170	*e*P	Pn	12 54 07.0	-0.7
	comp=Z,120nm,1.0s						
POO				*i* S	S	12 57 46.0	+24
DGZ	**Jazzator, Alta**	18.07	37	*c i*P	P	12 54 06.5	+1.2
DGZ				pmax	pmax		
	comp=Z,79nm,0.5s						
LSA	**Lhasa**	18.52	105	P	Pn	12 54 14.3	+0.9
LSA				pmax	pmax		

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      comp=Z,110nm,0.8s
LSA   Lhasa             18.52 105   P      Pn     12 54 12.9 -0.5
LSA                                 pmax   pmax
      comp=Z,24nm,0.6s
LSA   Lhasa             18.52 105   P      Pn     12 54 12.9 -0.5
LSA                                 IAmb   IAmb   12 54 17.9
      comp=Z,24nm,0.6s
MZWR  Madinat Zayed     19.12 233   P      P      12 54 16.3 -0.3
GHWR  Ruwais            19.64 236   P      P      12 54 21.6 -0.7
SHMA  Al-Shehemyia      19.75 243   P      P      12 54 23.8 +0.3
ZAA0  Zalesovo Array    20.14  25   P      P      12 54 27.2 -0.1
ZALV  Zalesovo Beam     20.14  25   P      P      12 54 27.3 -0.1
      comp=Z,47nm,0.5s,baz=218,slow=11,SNR=195
ZALV                                S      S      12 57 59.4 -2.6
      comp=Z,5.7nm,0.8s,baz=206,slow=13,SNR=2.7
ZALV  Zalesovo Beam     20.14  25   P      P      12 54 27.2 -0.2
HYB   Hyderabad         20.22 157 i P      P      12 54 29.0 +0.4
      comp=Z,80nm,1.0s
HYB                                eS      S      12 58 16.5 +12
UMR   Umm Al-Rimmam     20.30 257  eP      P      12 54 30.2 +0.8
KBD   Kabd              20.49 256  eP      P      12 54 31.6 +0.3
MIB   Mutribah          20.50 258  eP      P      12 54 31.5 +0.1
QRN   Al-Qurain         20.51 255  eP      P      12 54 31.5  0.0
GNI   Garni             20.56 288   P      P      12 54 33.5 +1.3
      comp=Z,5.2nm,0.3s,baz=219,slow=7.0,SNR=3.9
GNI   Garni             20.56 288ceP      Pn     12 54 35.3 -2.3
GNI                                 pmax   pmax
      comp=Z,33nm,1.3s
SHL   Shillong          21.21 115   P      P      12 54 39.5 +0.3
SHL                                 pmax   pmax
      comp=Z,33nm,0.8s
SHL   Shillong          21.21 115   P      P      12 54 39.5 +0.3
ZEI   Tsey              21.43 295  eP      P      12 54 44.2 +2.9
ZEI                                 pmax   pmax
      comp=Z,5.0nm,1.3s
SVE   Sverdlovsk        21.47 345  eP      P      12 54 41.6 +0.3
SVE                                eS      S      12 58 28.9 +3.1
SVE                                 pmax   pmax
      comp=Z,47nm,1.0s
ARU   Arti              21.59 342   P      P      12 54 43.1 +0.6
      comp=Z,15nm,0.6s,baz=167,slow=7.4,SNR=49
ARU   Arti              21.59 342c iP      P      12 54 42.9 +0.4
ARU                                 *PP    pP     12 55 15.9 -1.7
ARU                                 S      S      12 58 28.6 +1.0
ARU                                 pmax   pmax
      comp=Z,79nm,0.9s
ARU   Arti              21.59 342   P      P      12 54 42.5  0.0
NCK   Nalchik           21.77 297 i P      P      12 54 46.6 +2.1
KBZ   Khabaz            22.30 298   P      P      12 54 50.0 +0.4
      comp=Z,1.7nm,0.6s,baz=230,slow=23,SNR=1.5
KBZ   Khabaz            22.30 298   P      P      12 54 50.0 +0.4
SHA1  Shidzhatmaz       22.48 298 i P      P      12 54 53.0 +1.6
KIV   Kislovodsk        22.49 298  eP      P      12 54 53.9 +2.5
KIV                                eS      S      12 58 45.8 +3.1
KIV                                 pmax   pmax
      comp=Z,7.0nm,1.0s
KOHI  KOHIMA            22.78 111   IAmb   IAmb   12 55 12.8
      comp=Z,22nm,0.9s
GTA   Gaotai            23.25  74  ⇑P      P      12 54 59.9 +1.6
GTA                                 pP     pP     12 55 38.0 +1.3
GTA                                 sP     sP     12 56 03.4 +0.5
GTA                                 pmax   pmax
      comp=Z,23nm,1.0s
KIRV  Kirov             26.15 335   P      P      12 55 25.1 +1.0
      comp=Z,79nm,0.5s,baz=140,slow=2.9,SNR=36
ANN   Anapa             26.34 299  eP      P      12 55 27.7 +1.7
ANN                                 pmax   pmax
      comp=Z,91nm,1.1s
MOY   Mondy             26.43  45  eP      P      12 55 28.4 +1.5
MOY                                 pmax   pmax
      comp=Z,23nm,1.7s
LZH   Lanzhou           26.79  81  eP      P      12 55 37.0 +6.6
LZH                                 pP     pP     12 56 16.5 +4.1
LZH                                 sP     sP     12 56 42.4 +5.9
LZH                                 pmax   pmax
      comp=Z,19nm,1.0s
ZAK   Zakamensk         27.32  49  eP      P      12 55 34.7 -0.2
ZAK                                e              12 56 16.5
ZAK                                e              12 56 44.8
ZAK                                 pmax   pmax
      comp=Z,16nm,1.2s
ZAK                                 pmax   pmax
      comp=Z,13nm,1.4s
ZAK                                 pmax   pmax
      comp=Z,10.0nm,1.4s
TLY   Talaya            27.97  46   P      P      12 55 42.5 +2.0
      comp=Z,7.0nm,0.5s,baz=236,slow=9.4,SNR=11
TLY   Talaya            27.97  46c iP      P      12 55 42.4 +2.0
TLY                                 pmax   pmax
      comp=Z,20nm,0.6s
TLY   Talaya            27.97  46   P      P      12 55 41.2 +0.7
TLY                                 IAmb   IAmb   12 55 43.0
      comp=Z,9.7nm,0.6s
CD2   Chengdu           28.11  92   P      P      12 55 43.8 +1.9
CD2                                 pmax   pmax
      comp=Z,30nm,0.9s
SONM  Songino Array     28.69  55   P      P      12 55 48.4 +1.4
      comp=Z,10nm,0.8s,baz=256,slow=9.8,SNR=53
SONM  Songino Array     28.69  55   P      P      12 55 48.0 +0.9
SONM                                IAmb   IAmb   12 55 49.5
      comp=Z,9.2nm,0.9s
BRTR  Keskin Array B    29.10 288   P      P      12 55 50.2 -0.6
      comp=Z,0.9nm,0.7s,baz=89,slow=6.7,SNR=4.2
BRTR  Keskin Array B    29.10 288 i P      P      12 55 51.9 +1.1
BRTR                                pmax   pmax
      comp=Z,1.0nm,0.7s
BRTR  Keskin Array B    29.10 288   P      P      12 55 49.7 -1.1
ULN   Ulaanbaatar       29.13  55ceP      P      12 55 51.9 +0.9
ULN                                 pmax   pmax
      comp=Z,10.0nm,0.8s
ULN   Ulaanbaatar       29.13  55   P      P      12 55 51.5 +0.5
ULN                                 IAmb   IAmb   12 55 53.1
      comp=Z,9.4nm,0.8s
MOS   Moscow            29.49 321  eP      P      12 55 53.7 -0.1
MOS                                e*PP    pP     12 56 37.4 +2.0
MOS                                e              12 57 02.9
MOS                                 pmax   pmax
      comp=Z,34nm,0.9s
PRGR  Permogore         29.69 336  eP      P      12 55 55.2 -0.3
PRGR                                pmax   pmax
      comp=Z,76nm,0.6s
OBN   Obninsk           29.75 320ceP      P      12 55 56.8 +0.7
OBN                                 pmax   pmax
      comp=Z,20nm,1.0s
PALK  Pallekele         30.46 160   P      P      12 56 01.9 -1.0
      comp=Z,7.9nm,1.0s,baz=44,slow=2.1,SNR=2.6
PALK  Pallekele         30.46 160   P      P      12 56 03.9 +1.0
PALK                                pmax   pmax
      comp=Z,19nm,1.2s
PALK  Pallekele         30.46 160   P      P      12 56 03.9 +1.0
PALK                                IAmb   IAmb   12 56 04.8
      comp=Z,19nm,1.1s
CM31  Chiang Mai Arr    30.75 118   P      P      12 56 07.2 +1.9
CMAR  Chiang Mai Arr    30.75 118   P      P      12 56 05.8 +0.5
      comp=Z,2.1nm,0.7s,baz=301,slow=8.1,SNR=16
CMAR                                ScP    ScP    13 02 19.5 -1.4
      comp=Z,1.5nm,0.8s,baz=294,slow=4.7,SNR=6.1
CMAR  Chiang Mai Arr    30.75 118   P      P      12 56 07.0 +1.7
CMAR  Chiang Mai Arr    30.75 118   P      P      12 56 07.0 +1.7
XAN   Xi'an             31.31  83   P      P      12 56 10.4 +0.2
XAN                                 pmax   pmax
      comp=Z,12nm,0.7s
HHC   Hu-ho-hao-te      32.14  69  eP      P      12 56 20.7 +3.3
HHC                                 pmax   pmax
      comp=Z,10.0nm,1.2s
HHC                                 pmax   pmax
      comp=Z,47nm,5.3s
GYA   Guiyang           32.23  98  ⇑P      P      12 56 19.2 +0.9
GYA                                 pP     pP     12 57 02.3 +1.1
GYA                                 pmax   pmax
      comp=Z,14nm,1.1s
AKASG Malin Array Be    32.70 309   P      P      12 56 21.9 -0.1
      comp=Z,0.6nm,0.3s,baz=84,slow=6.8,SNR=7.4
AKASG Malin Array Be    32.70 309 i P      P      12 56 21.8 -0.2
AKASG                               pmax   pmax
      comp=Z,1.0nm,0.3s
AKASG Malin Array Be    32.70 309   P      P      12 56 20.9 -1.1
NRIK  Noril'sk          34.27  11   P      P      12 56 36.6 +1.3
      comp=Z,40nm,0.5s,baz=201,slow=5.9,SNR=76
NRIK  Noril'sk          34.27  11ceP      P      12 56 35.9 +0.6
NRIK                                pmax   pmax
      comp=Z,38nm,0.5s
NRIK  Noril'sk          34.27  11   P      P      12 56 36.1 +0.8
NACGM Naroch            35.01 316 i P      P      12 56 43.1 +1.3
BURAR Bucovina Array    35.01 303   P      P      12 56 42.5 +0.4
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BOD   Bodaibo           35.65  39  eP      P      12 56 47.5 +0.3
BOD                                 pmax   pmax
      comp=Z,34nm,1.0s
IDI   Anoyia            36.75 282   P      P      12 56 56.7 -0.2
      comp=Z,9.6nm,0.8s,baz=337,slow=13,SNR=1.5
FIA1  FINESS Array S    37.34 326   P      P      12 57 01.4  0.0
FIA1                                IAmb   IAmb   12 57 03.3
      comp=Z,22nm,0.8s
FINES FINESS Array B    37.34 326   P      P      12 57 01.9 +0.5
      comp=Z,15nm,0.7s,baz=117,slow=9.4,SNR=31
FINES FINESS Array B    37.34 326   P      P      12 57 02.0 +0.5
FINES FINESS Array B    37.34 326   P      P      12 57 01.4  0.0
LVZ   Lovozero          37.39 339   P      P      12 57 02.0 +0.1
LVZ                                 pmax   pmax
      comp=Z,28nm,0.6s
LVZ   Lovozero          37.39 339   P      P      12 57 02.0 +0.1
APA   Apatity           37.56 338⇓iP      P      12 57 02.4 -0.9
APA                               i *PP    pP     12 57 49.0 +2.7
APA                                 pmax   pmax
      comp=Z,14nm,0.7s
APA                                 MLR    MLR
      comp=Z,2μm,17.0s
BSI   Banda Aceh        38.25 138   P      P      12 57 09.6  0.0
PSZ   Piszkesteto       38.60 304   P      P      12 57 11.7 -0.6
PSZ                                 pmax   pmax
      comp=Z,6.0nm,1.2s
PSZ   Piszkesteto       38.60 304   P      P      12 57 11.7 -0.6
NJ2   Nanjing           39.86  82  eP      P      12 57 22.5 -0.3
NJ2                                 pmax   pmax
      comp=Z,10.0nm,0.5s
KEV   Kevo              40.74 338   P      P      12 57 29.7 +0.3
KEV                                 pmax   pmax
      comp=Z,26nm,0.9s
KEV   Kevo              40.74 338   P      P      12 57 29.7 +0.3
KEV                                 IAmb   IAmb   12 57 30.9
      comp=Z,26nm,0.9s
ARA0  ARCESS Array S    41.07 338  eP      P      12 57 33.2 +1.0
ARCES ARCESS Array B    41.07 338   P      P      12 57 33.1 +0.8
      comp=Z,34nm,0.7s,baz=110,slow=8.1,SNR=130
ARCES ARCESS Array B    41.07 338   P      P      12 57 33.1 +0.8
ARCES                               IAmb   IAmb   12 57 33.9
      comp=Z,28nm,0.8s
KTK1  Kautokeino        41.54 336  eP      P      12 57 36.5 +0.5
CN2   Changchun         41.98  62  eP      P      12 57 44.6 +4.7
CN2                                 pmax   pmax
      comp=Z,10.0nm,0.6s
HAMF  Hammerfest        42.16 339  eP      P      12 57 41.9 +0.9
ZEA   Zeya              42.40  47  eP      P      12 57 44.6 +1.4
ZEA                                 pmax   pmax
      comp=E,10.0nm,0.7s
ZEA                                 pmax   pmax
      comp=Z,20nm,0.8s
PSI   Prapat            42.49 135   P      P      12 57 44.4 -0.1
      comp=Z,4.3nm,0.5s,baz=300,slow=5.6,SNR=5.9
PSI   Prapat            42.49 135   P      P      12 57 45.2 +0.7
PSI                                 pmax   pmax
      comp=Z,5.0nm,0.6s
RPSI  Rantau Prapat     42.57 135   P      P      12 57 45.2 +0.2
GERES GERESS Array B    42.67 305   P      P      12 57 46.1 +0.6
      comp=Z,0.1nm,0.3s,baz=141,slow=34,SNR=1.2
JETT  Jettan, Norway    42.68 337  eP      P      12 57 45.4 +0.2
CLL   Collm             42.95 309  eP      P      12 57 48.0 +0.4
CLL                                e*PP    pP     12 58 30.0 -1.4
GSI   Gunungsitoli      42.98 138   P      P      12 57 47.8 -0.5
GSI                                 IAmb   IAmb   12 57 50.5
      comp=Z,12nm,0.7s
TRO   Tromso            43.19 336  eP      P      12 57 49.9 +0.6
FAUS  Fauske            43.70 333  eP      P      12 57 54.0 +0.7
NC602 NORSAR Array S    44.03 323  eP      P      12 57 55.8 -0.3
NC303 NORSAR Array S    44.16 323   P      P      12 57 57.5 +0.4
NC303                               IAmb   IAmb   12 57 58.8
      comp=Z,37nm,1.1s
NB2   NORSAR Subarra    44.22 323   P      P      12 57 57.1 -0.5
      comp=Z,24nm,1.1s,baz=98,slow=7.9
NB2   NORSAR Subarra    44.22 323   P      P      12 57 57.1 -0.5
      baz=98,slow=7.9
NOA   NORSAR Array B    44.22 323   P      P      12 57 57.4 -0.2
      comp=Z,5.3nm,0.7s,baz=98,slow=7.7,SNR=22
YAK   Yakutsk           44.25  35   P      P      12 57 57.9 +0.2
      comp=Z,22nm,0.3s,baz=192,slow=0.6,SNR=42
YAK   Yakutsk           44.25  35ceP      P      12 57 57.8  0.0
YAK                                e*PP    pP     12 58 39.8 -3.0
YAK                                e              12 59 50.3
YAK                                eS      S      13 04 15.7 +0.3
YAK                                 pmax   pmax
      comp=E,8.0nm,0.8s
YAK                                 pmax   pmax
      comp=Z,68nm,0.8s
YAK                                 pmax   pmax
      comp=Z,9.0nm,0.6s
YAK                                 smax   smax
      comp=E,32nm,1.7s
YAK                                 smax   smax
      comp=N,52nm,2.3s
YAK   Yakutsk           44.25  35   P      P      12 57 58.2 +0.4
KONS  Konsvik           44.30 331  eP      P      12 57 58.0 -0.1
NSS   Namsos            44.37 328  eP      P      12 57 57.9 -0.7
NC204 NORSAR Array S    44.46 323   P      P      12 57 59.2 -0.4
NC204                               IAmb   IAmb   12 58 02.0
      comp=Z,16nm,0.8s
MNSI  Mandailing Nat    44.50 136   P      P      12 58 00.8 +0.4
KONO  Kongsberg         44.91 321   P      P      12 58 03.3 +0.2
KONO                                pmax   pmax
      comp=Z,31nm,1.3s
KONO  Kongsberg         44.91 321   P      P      12 58 03.3 +0.2
KONO                                IAmb   IAmb   12 58 06.0
      comp=Z,31nm,1.3s
KONO  Kongsberg         44.91 321  eP      P      12 58 02.9 -0.2
HOPEN Hopen             44.99 346  eP      P      12 58 04.9 +1.4
KS19  Wonju Array Si    45.20  71   P      P      12 58 07.3 +1.6
BJO1  Bjornoya          45.23 343  eP      P      12 58 06.0 +0.6
KSAR  Wonju Array Be    45.23  71   P      P      12 58 05.8 -0.1
KSAR  Wonju Array Be    45.23  71   P      P      12 58 05.8 -0.1
KSRS  Korea Array       45.26  71   P      P      12 58 06.3 +0.2
      comp=Z,1.1nm,0.4s,baz=287,slow=6.7,SNR=11
KLR   Kul'dur           45.49  54   P      P      12 58 08.4 +0.6
      comp=Z,4.5nm,0.6s,baz=275,slow=8.0,SNR=13
KLR   Kul'dur           45.49  54ceP      P      12 58 08.2 +0.4
KLR                                 pmax   pmax
      comp=Z,15nm,1.5s
SKAR  Skarslia          45.61 322  eP      P      12 58 08.3 -0.3
TIXI  Tiksi             45.99  22ceP      P      12 58 11.4 +0.1
TIXI  Tiksi             45.99  22   P      P      12 58 11.7 +0.4
LODK  Lodwar            46.12 233   P      P      12 58 15.7 +2.6
AKN   Aaknes            46.32 324  eP      P      12 58 15.5 +1.4
USRK  Ussuriysk Ar.     46.53  61   P      P      12 58 16.8 +0.8
      comp=Z,0.8nm,0.5s,baz=259,slow=7.8,SNR=4.3
SENIN Lac Senin/Sane    47.31 303   P      P      12 58 22.0 -0.3
SPB2  Spitsbergen Ar    47.48 347   P      P      12 58 23.5 +0.7
SPB2                                IAmb   IAmb   12 58 41.8
      comp=Z,31nm,1.1s
SPA0  Spitsbergen Ar    47.48 347  eP      P      12 58 24.0 +1.2
SPITS Spitsbergen Ar    47.48 347   P      P      12 58 23.8 +0.9
SPITS                               pmax   pmax
      comp=Z,29nm,0.9s
GRNR  Gornyy            48.25  51⇑iP      P      12 58 30.0 +0.9
GRNR                                pmax   pmax
      comp=Z,7.0nm,1.1s
GRNR                                MLR    MLR
      comp=E,110nm,11.0s
GRNR                                MLR    MLR
      comp=N,60nm,16.0s
GRNR                                MLR    MLR
      comp=Z,80nm,14.0s
KMBO  Kilima Mbogo      48.50 227   P      P      12 58 32.5 +0.7
KMBO                                pmax   pmax
      comp=Z,6.0nm,0.7s
KMBO  Kilima Mbogo      48.50 227   P      P      12 58 32.5 +0.7
KBS   Kingsbay          48.60 347ceP      P      12 58 33.2 +1.8
KBS                                 pmax   pmax
      comp=Z,60nm,2.5s
KBS   Kingsbay          48.60 347 i P      P      12 58 32.5 +1.1
KBS                                 IAmb   IAmb   12 58 32.9
      comp=Z,57nm,0.8s
KBS   Kingsbay          48.60 347   P      P      12 58 32.3 +0.9
KBS                                 IAmb   IAmb   12 58 33.1
      comp=Z,25nm,0.8s
KBS   Kingsbay          48.60 347  eP      P      12 58 32.7 +1.3
JNU   Nakatsue          48.97  75   P      P      12 58 35.6 +0.6
      comp=Z,13nm,1.0s,baz=264,slow=4.8,SNR=4.7
KIBK  Kibwezi           49.02 225   P      P      12 58 36.4 +0.9
MBAR  Mbarara           52.16 234ceP      P      12 59 00.1 +1.1
YSS   Yuzh-Sakhalins    53.17  55  eP      P      12 59 06.9 +1.0
MAT   Matsushiro        53.33  68   P      P      12 59 06.2 -1.0
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MJAR  Matsushiro Arr    53.33  68   P      P      12 59 07.3  0.0
      comp=Z,7.7nm,1.0s,baz=292,slow=8.1,SNR=15
NOR   Nord              53.81 350 i P      P      12 59 10.1 +0.1
DAG   Danmarks Havn     54.70 344⇑iP      P      12 59 17.0 +0.6
DAG                                 IAmb   IAmb   12 59 17.3
      comp=Z,14nm,0.8s
DAG                               i               13 00 05.2
DBG   Daneborg          55.53 341 i        P      12 59 23.5 +1.1
ESDC  Sonseca Array     57.16 298   P      P      12 59 33.7 -0.9
      comp=Z,1.0nm,0.8s,baz=51,slow=7.1,SNR=4.8
TOLI2 Tolitoli          58.19 115   P      P      12 59 42.1 +0.1
PETK  Petropavlovsk-    60.28  44   P      P      12 59 55.7 -0.1
      comp=Z,1.7nm,0.7s,baz=69,slow=29,SNR=4.0
PETK  Petropavlovsk-    60.28  44   P      P      12 59 55.3 -0.5
SUMG  Summit            61.01 341   P      P      13 00 01.0 +0.1
SUMG                                pmax   pmax
      comp=Z,14nm,1.0s
SUMG  Summit            61.01 341 i P      P      13 00 01.9 +1.0
SUMG  Summit            61.01 341          P      13 00 00.9 +0.1
SUMG                                IAmb   IAmb   13 00 02.9
      comp=Z,14nm,1.0s
NEEM  North Greenlan    61.03 348 i P      P      13 00 01.2 +0.4
NEEM                                IAmb   IAmb   13 00 02.4
      comp=Z,10.0nm,0.8s
EUNU  Eureka            63.06 356   P      P      13 00 15.0 +1.1
ICESG Greenland Ices    63.14 338 i        P      13 00 13.2 -1.8
TORD  Torodi Ar. Bea    65.34 268   P      P      13 00 28.2 -1.5
      comp=Z,7.2nm,0.7s,baz=48,slow=5.9,SNR=61
TORD  Torodi Ar. Bea    65.34 268   P      P      13 00 28.4 -1.3
RES   Resolute Bay      68.75 356   P      P      13 00 49.8 -0.4
RES                                 pmax   pmax
      comp=Z,14nm,1.4s
RES   Resolute Bay      68.75 356   P      P      13 00 49.8 -0.4
RES                                 IAmb   IAmb   13 01 19.3
      comp=Z,14nm,1.4s
KOWA  Kowa              69.20 273   P      P      13 00 53.2 -0.7
KOWA                                IAmb   IAmb   13 00 54.9
      comp=Z,12nm,0.6s
TOLK  Toolik Lake Re    71.09  14   P      P      13 01 05.3 +0.6
TOLK  Toolik Lake Re    71.09  14   P      P      13 01 05.2 +0.6
      baz=327
A36M  Sachs Harbour     71.32   5   P      P      13 01 06.4 +0.6
A36M  Sachs Harbour     71.32   5   P      P      13 01 06.6 +0.8
      baz=347
GIRL  Giralia           71.79 138   P      P      13 01 10.0 +0.6
COLD  Coldfoot          72.15  15   P      P      13 01 11.8 +1.0
COLD                                IAmb   IAmb   13 01 12.4
      comp=Z,22nm,1.1s
COLD  Coldfoot          72.15  15   P      P      13 01 11.4 +0.5
      baz=326
IMAR  Indian Mountai    72.36  17   P      P      13 01 12.1  0.0
GCSA  Galena City Sc    72.55  19   P      P      13 01 13.7 +0.4
      baz=322
H21K  Melozitna Rive    72.85  17   P      P      13 01 15.6 +0.5
      baz=325,SNR=9.7
BMAR  Burnt Mountain    73.11  13   P      P      13 01 17.4 +0.9
I21K  Tanana            73.44  17   P      P      13 01 19.2 +0.7
      baz=326,SNR=6.5
H23K  Yukon River       73.47  16   P      P      13 01 20.0 +1.3
H23K                                IAmb   IAmb   13 01 20.7
      comp=Z,11nm,0.8s
H23K  Yukon River       73.47  16   P      P      13 01 19.7 +1.1
      baz=327,SNR=7.3
J20K  Nowinta River     73.72  19   P      P      13 01 21.1 +1.0
J20K                                IAmb   IAmb   13 01 21.8
      comp=Z,14nm,0.8s
J20K  Nowinta River     73.72  19   P      P      13 01 20.9 +0.7
      baz=324,SNR=7.2
H24K  Noodor Dome       73.82  15   P      P      13 01 21.6 +0.8
      baz=329,SNR=6.6
MLY   Manley            73.86  17   P      P      13 01 21.3 +0.3
      baz=326,SNR=8.7
INK   Inuvik            74.04   9   P      P      13 01 22.4 +0.5
      comp=Z,12nm,0.6s,baz=352,slow=7.1,SNR=73
INK   Inuvik            74.04   9   P      P      13 01 22.9 +1.0
INK                                 pmax   pmax
      comp=Z,18nm,1.0s
INK   Inuvik            74.04   9   P      P      13 01 22.9 +1.0
INK                                 IAmb   IAmb   13 01 23.5
      comp=Z,18nm,0.9s
INK   Inuvik            74.04   9   P      P      13 01 22.6 +0.8
      baz=340
I23K  Minto, Yukon-K    74.08  16   P      P      13 01 22.8 +0.6
      baz=328,SNR=8.0
DBIC  Dimbokro          74.32 267   P      P      13 01 23.9 -0.4
      comp=Z,4.7nm,0.5s,baz=37,slow=5.2,SNR=12
DBIC  Dimbokro          74.32 267   P      P      13 01 24.0 -0.4
DBIC  Dimbokro          74.32 267   P      P      13 01 23.6 -0.9
DBIC                                IAmb   IAmb   13 01 25.0
      comp=Z,6.6nm,0.7s
LBTB  Lobatse           74.37 222   P      P      13 01 25.2 +0.7
LBTB                                pmax   pmax
      comp=Z,8.0nm,1.3s
LBTB  Lobatse           74.37 222   P      P      13 01 25.1 +0.7
KIC   Kosan Boka        74.41 266  eP      P      13 01 25.3 +0.4
      comp=Z,15nm,0.4s
K20K  Telida            74.41  19   P      P      13 01 24.5 +0.4
K20K  Telida            74.41  19   P      P      13 01 24.8 +0.6
      baz=324,SNR=8.6
CHUM  Lake Minchumin    74.43  18   P      P      13 01 24.9 +0.7
      baz=325,SNR=5.7
TIC   Toumodi           74.47 267  eP      P      13 01 25.3  0.0
MDM   Murphy Dome       74.50  16   P      P      13 01 25.3 +0.7
MDM                                 IAmb   IAmb   13 01 26.1
      comp=Z,22nm,1.0s
POKR  Poker Plat Res    74.54  16   P      P      13 01 25.6 +0.8
      baz=329
BPAW  Bear Paw Mtn.     74.58  18   P      P      13 01 24.8 -0.4
BPAW                                IAmb   IAmb   13 01 26.1
      comp=Z,10.0nm,1.0s
BPAW  Bear Paw Mtn.     74.58  18   P      P      13 01 25.1 -0.1
      baz=326,SNR=5.8
PRP   Porcupine Dome    74.59  15   P      P      13 01 25.9 +0.6
      baz=331
NEA2  Nenana            74.62  17   P      P      13 01 25.7 +0.3
      baz=328,SNR=15
TCOL  CIGO, UAF Yank    74.65  16   P      P      13 01 25.4 -0.1
TCOL  CIGO, UAF Yank    74.65  16   P      P      13 01 26.1 +0.6
      baz=329,SNR=11
COLA  College           74.66  16   P      P      13 01 26.0 +0.5
COLA                                pmax   pmax
      comp=Z,27nm,0.9s
COLA  College           74.66  16   P      P      13 01 26.0 +0.5
LIC   Lamto             74.72 266  eP      P      13 01 27.0 +0.3
      comp=Z,18nm,0.6s
CCB   Clear Creek Bu    74.86  16   P      P      13 01 26.6 -0.1
CAST  Castle Rocks      74.88  18   P      P      13 01 27.4 +0.6
      baz=326,SNR=10.0
IL31                    74.96  16   P      P      13 01 26.6 -0.6
IL31                                IAmb   IAmb   13 01 27.8
      comp=Z,15nm,1.1s
ILAR  Eielson Array     74.96  16   P      P      13 01 26.8 -0.5
      comp=Z,6.1nm,0.9s,baz=318,slow=4.6,SNR=44
ILAR                                PP     PP     13 04 20.1 +3.0
      comp=Z,1.1nm,0.8s,baz=324,slow=8.7,SNR=4.8
ILAR  Eielson Array     74.96  16   P      P      13 01 27.5 +0.3
ILAR  Eielson Array     74.96  16   P      P      13 01 27.5 +0.3
FITZ  Fitzroy Crossi    75.15 126   P      P      13 01 29.2 +0.2
L19K  White Mountain    75.15  20   P      P      13 01 29.0 +0.6
      baz=324
L20K  Farewell, AK      75.17  20   P      P      13 01 29.1 +0.5
      baz=324
HDA   Harding Lake      75.26  16   P      P      13 01 28.2 -0.8
      baz=330
PPLA  Purkeypile        75.28  19   P      P      13 01 28.7 -0.7
PPLA                                IAmb   IAmb   13 01 52.2
      comp=Z,17nm,1.4s
PPLA  Purkeypile        75.28  19   P      P      13 01 29.2 -0.1
      baz=326
TRF   Thorofare Moun    75.30  18   P      P      13 01 30.9 +1.5
MCK   McKinley          75.38  17   P      P      13 01 29.6 -0.2
      baz=328
EPYK  Eagle Plains      75.41  11   P      P      13 01 29.5 -0.3
      baz=338
J25K  Salcha River,     75.42  15   P      P      13 01 29.7 -0.3
      baz=331,SNR=9.1
KNRA  Kununurra         75.50 122   P      P      13 01 31.4 +0.4
KNRA                                IAmb   IAmb   13 01 50.6
      comp=Z,20nm,1.1s
RND   Reindeer          75.68  17   P      P      13 01 31.4 -0.1
RND                                 pmax   pmax
      comp=Z,10.0nm,0.8s
RND   Reindeer          75.68  17   P      P      13 01 31.4 -0.1
RND                                 IAmb   IAmb   13 01 31.8
      comp=Z,10nm,0.8s
J26L  Joseph Creek      75.89  14   P      P      13 01 32.9 +0.2
```

	baz=332,SNR=13						
I29M	Ogilvie Camp,	76.08	12	P	P	13 01 34.0	+0.3
	baz=336,SNR=8.3						
EGAK	Eagle	76.11	13	P	P	13 01 34.3	+0.5
EGAK				IAmb	IAmb	13 01 35.1	
	comp=Z,12nm,1.1s						
EGAK	Eagle	76.11	13	P	P	13 01 34.2	+0.4
	baz=334,SNR=6.3						
CUT	Chulitna	76.18	18	P	P	13 01 34.1	-0.2
	baz=327						
SKT	Skwentna	76.21	19	P	P	13 01 34.1	-0.4
	baz=326,SNR=8.7						
SCRK	Sand Creek	76.27	15	P	P	13 01 34.6	-0.2
SCRK				IAmb	IAmb	13 01 36.1	
	comp=Z,12nm,0.8s						
SCRK	Sand Creek	76.27	15	P	P	13 01 35.3	+0.4
	baz=332,SNR=9.6						
RIDG	Independent Ri	76.30	15	P	P	13 01 34.8	-0.1
RIDG				IAmb	IAmb	13 01 35.5	
	comp=Z,23nm,1.3s						
RIDG	Independent Ri	76.30	15	P	P	13 01 34.5	-0.5
	baz=331,SNR=6.0						
M22K	Willow	76.77	19	P	P	13 01 37.5	0.0
	baz=327						
PAX	Paxson	76.84	16	P	P	13 01 38.2	+0.2
	baz=331,SNR=11						
SUA	Susitna One	76.85	19	P	P	13 01 38.0	-0.2
	baz=327						
O18K	Koktuh Hills	76.93	22	P	P	13 01 38.9	+0.5
O18K	Koktuh Hills	76.93	22	P	P	13 01 39.8	+1.3
	baz=324						
DAWY	Dawson	77.08	13	P	P	13 01 39.7	+0.4
DAWY				IAmb	IAmb	13 01 40.5	
	comp=Z,15nm,1.1s						
DAWY	Dawson	77.08	13	P	P	13 01 39.5	+0.1
	baz=336,SNR=8.8						
PMR	Palmer	77.16	18	P	P	13 01 38.8	-0.9
PMR				pmax	pmax		
	comp=Z,11nm,0.9s						
PMR	Palmer	77.16	18	P	P	13 01 38.8	-0.9
PMR				IAmb	IAmb	13 01 40.4	
	comp=Z,11nm,0.9s						
PMR	Palmer	77.16	18	P	P	13 01 39.3	-0.4
	baz=328						
SML	Sawmill	77.17	18	P	P	13 01 40.2	+0.3
SML	Sawmill	77.17	18	P	P	13 01 40.0	+0.2
	baz=329,SNR=8.1						
L26K	Log Cabin Wild	77.25	15	P	P	13 01 40.8	+0.6
	baz=333						
P18K	Big Mountain,	77.29	22	P	P	13 01 41.3	+0.8
	baz=324						
SCM	Sheep Creek Mo	77.40	17	P	P	13 01 41.4	+0.3
SCM				pmax	pmax		
	comp=Z,13nm,0.7s						
SCM	Sheep Creek Mo	77.40	17	P	P	13 01 41.4	+0.3
SCM				IAmb	IAmb	13 01 42.0	
	comp=Z,13nm,0.7s						
SCM	Sheep Creek Mo	77.40	17	P	P	13 01 41.4	+0.3
	baz=330						
HARP	HAARP	77.41	16	P	P	13 01 42.4	+1.3
	baz=331,SNR=9.1						
M24K	Tolsona, Glenn	77.43	17	P	P	13 01 42.2	+0.9
M24K	Tolsona, Glenn	77.43	17	P	P	13 01 42.6	+1.2
	baz=330,SNR=7.9						
RC01	Rabbit Creek A	77.43	19	P	P	13 01 41.1	-0.1
	baz=328						
BOSA	Boshof	77.45	220	P	P	13 01 42.0	+0.1
	comp=Z,3.8nm,0.7s,baz=18,slow=5.5,SNR=10						
BOSA	Boshof	77.45	220	P	P	13 01 42.0	+0.1
BOSA	Boshof	77.45	220	P	P	13 01 41.7	-0.2
BOSA				IAmb	IAmb	13 01 49.4	
	comp=Z,15nm,1.3s						
KNK	Knik Glacier	77.48	18	P	P	13 01 42.0	+0.5
	baz=329						
L27K	Beaver Creek,	77.53	14	P	P	13 01 42.8	+1.0
	baz=334,SNR=7.8						
BCAR	Beaver Creek A	77.53	14	P	P	13 01 42.8	+0.9
KLU	Klutina	78.03	17	P	P	13 01 45.4	+0.8
	baz=331,SNR=5.1						
M27K	Edge Creek, AK	78.15	15	P	P	13 01 46.4	+1.0
M27K				IAmb	IAmb	13 01 47.3	
	comp=Z,22nm,0.9s						
M27K	Edge Creek, AK	78.15	15	P	P	13 01 46.5	+1.2
	baz=334,SNR=11						
N25K	Chitina, Valde	78.23	16	P	P	13 01 44.7	-1.0
N25K				IAmb	IAmb	13 01 48.1	
	comp=Z,6.2nm,0.8s						
BRLK	Bradley Lake	78.24	20	P	P	13 01 45.1	-0.7
BRLK				IAmb	IAmb	13 01 46.7	
	comp=Z,27nm,1.2s						
BVCY	Beaver Creek	78.31	14	P	P	13 01 47.4	+1.3
	baz=335,SNR=7.3						
FID	Port Fidalgo	78.54	18	P	P	13 01 47.9	+0.5
M30M	Minto, Yukon	78.92	13	P	P	13 01 49.4	0.0
	baz=338						
YUK3	Moose Creek	78.97	14	P	P	13 01 50.3	+0.3
	baz=335,SNR=5.3						
KDAK	Kodiak Island	79.41	22	P	P	13 01 52.8	+0.7
KDAK				pmax	pmax		
	comp=Z,33nm,0.9s						
KDAK	Kodiak Island	79.41	22	P	P	13 01 52.8	+0.7
KDAK	Kodiak Island	79.41	22	P	P	13 01 52.0	-0.1
	baz=326						
BERG	Berg Lake	79.51	17	P	P	13 01 53.3	+0.7
CTG	Chitna Glacier	79.52	15	P	P	13 01 53.8	+1.0
	baz=334						
OHAK	Old Harbor	79.66	23	P	P	13 01 53.7	+0.3
OHAK	Old Harbor	79.66	23	P	P	13 01 54.0	+0.5
	baz=326						
M31M	Drury Creek, Y	79.67	12	P	P	13 01 53.8	+0.3
	baz=340						
MMPY	Sheldon Lake,	79.75	10	P	P	13 01 54.8	+0.9
	baz=342						
N31M	Braeburn, Yuko	80.11	12	P	P	13 01 56.4	+0.5
	baz=339						
HYT	Haines Junctio	80.42	14	P	P	13 01 58.8	+1.2
HYT				IAmb	IAmb	13 01 59.4	
	comp=Z,8.3nm,0.8s						
HYT	Haines Junctio	80.42	14	P	P	13 01 58.4	+0.8
	baz=338						
WHY	Whitehorse	81.04	12	P	P	13 02 00.9	0.0
	baz=340						
YKA	Yellowknife Ar	81.34	2	P	P	13 02 02.5	+0.2
	comp=Z,5.3nm,0.9s,baz=4.4,slow=4.7,SNR=10						
YKA	Yellowknife Ar	81.34	2	P	P	13 02 01.6	-0.6
P33M	Teslin, Yukon	81.81	12	P	P	13 02 05.0	+0.1
	baz=341						
WB0	Warramunga Arr	82.19	121	P	P	13 02 06.6	-0.7
WRA	Warramunga Arr	82.27	122	P	P	13 02 06.3	-1.4
	comp=Z,3.8nm,0.8s,baz=322,slow=4.9,SNR=29						
WRA	Warramunga Arr	82.27	122	P	P	13 02 06.8	-1.0
WRA	Warramunga Arr	82.27	122	P	P	13 02 06.8	-1.0
WRAB	Tennant Creek	82.27	122	*ce*P	P	13 02 07.7	-0.1
WRAB				pmax	pmax		
	comp=Z,9.0nm,2.5s						
WRAB	Tennant Creek	82.27	122	P	P	13 02 06.6	-1.2
WRAB				IAmb	IAmb	13 02 07.5	
	comp=Z,8.5nm,1.1s						
WB2	Warramunga Arr	82.28	122	P	P	13 02 06.9	-0.9
WB2				IAmb	IAmb	13 02 07.6	
	comp=Z,9.8nm,1.1s						
WR0	Warramunga Arr	82.42	121	P	P	13 02 07.2	-1.4
DLBC	Dease Lake	83.94	11	P	P	13 02 16.8	+0.9
AS31	Alice Springs	84.52	125	P	P	13 02 18.3	-0.9
ASAR	Alice Springs	84.52	125	P	P	13 02 18.3	-0.9
	comp=Z,2.0nm,0.6s,baz=313,slow=4.7,SNR=67						
ASAR	Alice Springs	84.52	125	P	P	13 02 18.5	-0.7
ASAR	Alice Springs	84.52	125	P	P	13 02 18.5	-0.7
FORT	Forrest	85.89	133	P	P	13 02 25.3	-0.4
FORT				IAmb	IAmb	13 02 46.7	
	comp=Z,14nm,0.9s						
VNDA	Vanda	125.52	165	PKP	PKiKP	13 08 45.1	+0.2
	comp=Z,0.5nm,0.9s,baz=326,slow=4.4,SNR=6.9						
VNDA	Vanda	125.52	165		PKiKP	13 08 45.3	+0.4
CPUP	Villa Florida	134.84	268	PKP	PKPdf	13 09 01.9	-1.7
	comp=Z,1.8nm,0.8s,baz=262,slow=3.4,SNR=4.0						
PLCA	Paso Flores	149.45	250	PKPbc	PKPbc	13 09 33.1	-0.7
	comp=Z,3.2nm,0.7s,baz=9.0,slow=2.3,SNR=9.0						
PLCA	Paso Flores	149.45	250		PKiKP	13 09 34.6	-0.2

KRSC 01 13:25:07.7±2.1, 48°.95N×156°.74E, h40^{km}±26^{km}, ML3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.78	347	*e*P	Pn	13 25 36.8	+0.8
SKR				*e*S	Sn	13 25 58.1	+0.7
PAU	Pauzhetka	2.52	1	*e*S	Sn	13 26 19.1	+3.5
KDTR	Khodutka, Kamc	2.99	16	*e*P	Pn	13 25 56.7	+4.2
KDTR				*e*S	Sn	13 26 32.1	+5.0
MTVR	Mutnovka	3.66	14	*e*P	Pn	13 26 06.3	+4.4
MTVR				*e*S	Sn	13 26 50.1	+6.3
RUS	Russkaya	3.67	17	*e*P	Pn	13 26 05.7	+3.9
RUS				*e*S	Sn	13 26 48.5	+4.7
GRL	Gorelyy	3.71	13	*e*P	Pn	13 26 07.5	+5.0
DALK	Dalny	4.28	16	*e*P	Pn	13 26 14.1	+3.8
AVH	Avacha	4.50	15	*e*P	Pn	13 26 19.4	+6.0
SMAR	Somma	4.51	16	*e*P	Pn	13 26 19.1	+5.4
SDLR	Sedlovina	4.54	16	*e*P	Pn	13 26 17.4	+3.4
SPN	Mys Shipunski	4.64	25	*e*P	Pn	13 26 20.4	+5.2
SPN				*e*S	Sn	13 27 14.1	+6.3
MKZ	Mys Kozlova	6.41	27	P	Pn	13 26 42.8	+3.3

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*IDC **01** 13:34:50.8±2.3, 3°.47S×101°.35E, h0^{km}, mb4.0/9, mb1 4.0/9, mb1mx3.8/48, mbtmp4.0/9, MS2.7/1, Ms1 2.9/1, ms1mx2.4/43, Error ellipse: s-maj=91.5km s-min=15.9km az=58.0*

*NEIC **01** 13:34:57.0±2.1, 3°.6S±0°.1×101°.25E±0°.08, h48^{km}±8^{km}, mb4.4/16, Error ellipse: s-maj=20.6km s-min=6.3km az=207.0*

*DJA **01** 13:34:58.1±0.8, 3°S±3°×10°2E±°, h19^{km}±7^{km}, M4.3/20, mb4.8/6, MLv4.0/20*

ISC 01 13:34:57.2±0.6, 3°.44S±0°.08×101°.43E±0°.07, h50^{km}, n59, σ1^{s}.49/58, mb4.3/16, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASI	Maura Aman, Be	0.87	70	P	Pn	13 35 13.2	0.0
MASI				S	Sn	13 35 23.7	-1.2
KSI	Kapahiang	1.18	100	P	Pn	13 35 18.1	+0.6
PPSI	Pulau Pagai	1.57	296	P	Pn	13 35 26.4	+3.8
MNAI	Manna	1.78	121		Pn	13 35 26.2	+0.7
MNAI	Manna	1.78	121	P	Pn	13 35 26.7	+1.2
LHSI	Lahat	2.13	100	P	Pn	13 35 31.9	+1.6
PDSI	Padang	2.69	339	P	Pn	13 35 39.7	+1.6
JMBI	JAMBI	2.85	51	P	Pn	13 35 41.0	+0.8
MDSI	Maura Dua	2.93	111	P	Pn	13 35 43.3	+1.9
LWLI	Liwa	3.06	121	P	Pn	13 35 46.8	+3.7
PPI	Padang Panjang	3.14	341	P	Pn	13 35 46.1	+1.9
SISI	Saibi	3.14	312	P	Pn	13 35 47.4	+3.2
KLSI		3.52	111	P	Pn	13 35 51.5	+2.1
KASI	Kota Agung	3.69	124	P	Pn	13 35 53.7	+1.9
DSRI	Dabo	4.31	47	P	Pn	13 36 01.4	+1.1
MNSI	Mandailing Nat	4.60	336	P	Pn	13 36 06.8	+2.6
CGJI	Cibinong	5.29	127	P	Pn	13 36 15.0	+1.3
TNG	Tangerang	5.87	118	P	Pn	13 36 22.3	+0.7
	3.2nm546nm,0.5s						
TNG				P	Pn	13 36 23.5	+1.9
	2.1nm376nm,0.5s						
GSI	Gunungsitoli	6.09	321		Pn	13 36 26.4	+1.7
GSI	Gunungsitoli	6.09	321	P	Pn	13 36 27.5	+2.8
CISI	Cisompet, Garu	7.56	123	Pn	Pn	13 36 45.1	+0.2
CISI	Cisompet, Garu	7.56	123	P	Pn	13 36 45.3	+0.4
	0.1nm15nm,1.4s						
TPTI		7.90	327	P	Pn	13 36 51.7	+2.2
	0.0nm5.7nm,1.3s						
LHMI	Lhok Sumawe	9.71	333	Pn	Pn	13 37 14.2	-0.1
UGM	Wanagama	10.08	117	Pn	Pn	13 37 21.1	+1.6
UGM	Wanagama	10.08	117	P	Pn	13 37 21.1	+1.6
JAGI	Jajag, Banyuwa	13.60	112	Pn	Pn	13 38 07.0	-0.6
CMAR	Chiang Mai Arr	21.90	354	P	P	13 39 46.6	+0.4
	0.3nm,0.4s,baz=187,slow=8.7,SNR=5.1						
CMAR				LR	LR	13 47 42.1	
	comp=Z,20nm,21.5s,baz=270,slow=35						
FITZ	Fitzroy Crossi	27.83	123	P	P	13 40 42.9	+0.8
	1.0nm,0.8s,baz=59,slow=18,SNR=1.4						
H08S2	Diego Garcia H	29.09	261	T	T	14 10 52.6	
	baz=84,slow=74						
H08S3	Diego Garcia H	29.10	261	T	T	14 10 46.2	
	baz=84,slow=74						
DGAR	Diego Garcia	29.11	261	P	P	13 40 50.0	-3.6
H08S1	Diego Carcia H	29.11	261	T	T	14 10 45.0	
	baz=84						
KNRA	Kununurra	29.52	116	P	P	13 40 55.7	-1.5
WB0	Warramunga Arr	36.02	119	P	P	13 41 53.7	-0.2
WB0				IAmb	IAmb	13 42 09.9	
	comp=Z,5.5nm,1.2s						
WRA	Warramunga Arr	36.04	120	P	P	13 41 54.4	+0.3
	comp=Z,0.7nm,0.4s,baz=321,slow=10,SNR=19						
WRAB	Tennant Creek	36.05	120	P	P	13 41 53.9	-0.2
WRAB				IAmb	IAmb	13 42 14.8	
	comp=Z,5.9nm,1.2s						
WB2	Warramunga Arr	36.05	120	P	P	13 41 54.1	-0.1
WB2				IAmb	IAmb	13 41 58.8	
	comp=Z,9.0nm,1.5s						
WR0	Warramunga Arr	36.22	120	P	P	13 41 55.4	-0.3
WR0				IAmb	IAmb	13 42 15.0	
	comp=Z,10nm,1.5s						
ASAR	Alice Springs	37.26	126	P	P	13 42 04.8	+0.4
	comp=Z,0.5nm,0.4s,baz=300,slow=7.9,SNR=20						
AS31	Alice Springs	37.26	126	P	P	13 42 04.3	-0.1
STKA	Stephens Creek	47.13	132	P	P	13 43 25.4	+0.7
	comp=Z,1.2nm,0.7s,baz=301,slow=9.1,SNR=4.4						
SONM	Songino Array	51.25	4	P	P	13 43 57.3	+1.2
	comp=Z,1.5nm,0.7s,baz=182,slow=7.7,SNR=8.3						
SONM	Songino Array	51.25	4	P	P	13 43 57.3	+1.2
SONM				IAmb	IAmb	13 43 57.9	
	comp=Z,2.0nm,0.9s						
EIDS	Eidsvold	52.41	120	P	P	13 44 05.5	+0.6
HRA	Herat	52.67	319	P	P	13 44 05.3	-1.7
HRA				IAmb	IAmb	13 44 23.7	
	comp=Z,2.2nm,0.5s						
MK31	Makanchi Array	52.80	344	P	P	13 44 07.4	-0.1
MK31				IAmb	IAmb	13 44 09.2	
	comp=Z,3.0nm,0.9s						
MKAR	Makanchi Array	52.80	344	P	P	13 44 07.8	+0.4
	comp=Z,3.0nm,0.7s,baz=138,slow=7.4,SNR=33						
MKAR	Makanchi Array	52.80	344	P	P	13 44 07.5	+0.1
MAKZ	Makanchi	52.90	343	P	P	13 44 08.5	+0.3
MAKZ				IAmb	IAmb	13 44 10.1	
	comp=Z,3.9nm,1.1s						
USRK	Ussuriysk Ar.	54.78	27	P	P	13 44 21.7	-0.2
	comp=Z,1.2nm,0.5s,baz=218,slow=6.5,SNR=2.8						
USRK	Ussuriysk Ar.	54.78	27	P	P	13 44 21.6	-0.3
ZAA0	Zalesovo Array	58.85	349	P	P	13 44 49.6	-1.0
ZALV	Zalesovo Beam	58.85	349	P	P	13 44 50.6	0.0
	comp=Z,4.6nm,0.4s,baz=173,slow=4.9,SNR=22						
ZALV	Zalesovo Beam	58.85	349	P	P	13 44 49.9	-0.7
BRVK	Borovoye	62.09	339	P	P	13 45 11.9	-0.8
ABKAR	Akbulak array	63.58	331	P	P	13 45 22.4	-0.3
TXAR	Lajitas Array	144.93	40	PKPbc	PKPdf	13 54 29.6	-0.2
	comp=Z,0.9nm,0.7s,baz=289,slow=1.2,SNR=14						
TXAR	Lajitas Array	144.93	40		PKPab	13 54 28.9	0.0

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*NNC **01** 13:57:50.4±1.4, 54°.11N×86°.59E, h0^{km}, mb3.7, mpv3.5, Error ellipse: s-maj=12.9km s-min=6.1km az=15.0, Suspected Mining explosion.*

ISC 01 13:57:51.8±0.8, 54°.10N±0°.02×86°.45E±0°.03, h0^{km}, n25, σ1^{s}.22/43, 5C-8D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BJR1	Bachatsky 1, K	0.28	300	Pg	Pb	13 57 58.9	-0.8
BJR1				Sg	Sb	13 58 03.4	-1.6
POMOR	Pomortsevo, Ku	0.31	8	Pg	Pb	13 57 60.0	-0.3
POMOR				Sg	Sb	13 58 05.1	-0.7
SALR	Pechorkino, Sa	0.54	306	Pg	Pg	13 58 03.0	+0.8
SALR				Sg	Sb	13 58 12.5	0.0
ELT	Eltsovka	0.85	189	Pg	Pg	13 58 08.1	0.0
ELT				Sg	Sg	13 58 19.7	+0.7
ZAA0	Zalesovo Array	0.97	262	⇓P	Pg	13 58 10.3	-0.2
	1.7nm,0.4s						
ZAA0				⇑S	Sb	13 58 25.4	+0.5
	46nm,1.2s						
KEM	Kemerovo	1.26	351	Sg	Sn	13 58 34.2	-0.2
LUZB	Luzhba, Kemero	1.52	106	Pg	Pn	13 58 19.0	-1.2
LUZB				Sg	Sn	13 58 42.4	+1.8
TASR	Tashtagol	1.59	147	Pg	Pn	13 58 19.8	-1.4
TASR				Sg	Sn	13 58 41.8	-0.7
BRCR	Berchikul'	1.88	34	Pg	Pn	13 58 24.6	-0.7
BRCR				Sg	Sg	13 58 51.3	-1.0
NVSII	Novosibirsk	2.02	293	Pg	Pb	13 58 28.7	-0.6
NVSII				Sg	Sg	13 58 57.9	+1.3
NVS	Novosibirsk	2.02	293	Pg	Pb	13 58 29.3	0.0
NVS				Sg	Sg	13 58 57.4	+0.8
NHES	Novosibirsk, N	2.16	292	Pg	Pb	13 58 32.2	+0.5
NHES				Sg	Sg	13 59 00.4	-0.7
BSTK	Bystrovka, Nov	2.27	283	Pg	Pb	13 58 33.8	+0.1
BSTK				Sg	Sg	13 59 04.8	+0.1
ARTR	Artybash	2.36	167	Pg	Pb	13 58 34.2	-1.0
ARTR				Sg	Sb	13 59 05.7	+0.8
ALXA	Alekseevka, NS	2.41	292	Pg	Pb	13 58 35.8	-0.1
ALXA				Sg	Sg	13 59 08.9	-0.1
UKR	Ust'-Kan	3.33	199	Pg	Pb	13 58 53.0	+1.2
UKR				Sg	Sg	13 59 37.8	-0.9
ULGR	Ulagan, Altay	3.60	165	Sg	Sg	13 59 48.6	+1.1
AKAR	Aktash	3.85	169	Sg	Sg	13 59 56.0	+0.5
DGZ	Jazzator, Alta	4.45	172	Sg	Sg	14 00 12.2	-2.4
GZLN	Zheleznogorsk	4.77	58	Sg	Sg	14 00 30.0	+5.1
KURK	Kurchatov	5.87	238	Sg	Sg	14 00 59.5	-0.7
KURK	Kurchatov	5.87	238	⇑Pn	Pn	13 59 20.5	+0.6
	3.0nm,0.3s						
KURK				⇑Lg	Lg	14 00 59.3	
	13nm,0.7s						
KURBB	Kurchatov Arra	5.97	238	⇑Pn	Pn	13 59 22.5	+1.1
	14nm,0.5s						
KURBB				⇓Sn	Sn	14 00 29.9	-0.4
	9.4nm,0.6s						
KURBB				⇓Lg	Lg	14 01 01.1	
	28nm,0.7s						
MK31	Makanchi Array	7.78	202	⇓Pn	Pn	13 59 45.0	-1.2
	1.4nm,0.5s,baz=25,slow=13,SNR=92						
MK31				⇑Sn	Sn	14 01 15.6	+0.7
	1.5nm,0.6s,baz=25,slow=28,SNR=4.8						
MK31				⇓Lg	Lg	14 01 58.1	
	20nm,1.1s,baz=25,slow=31,SNR=9.8						
MAKZ	Makanchi	7.84	203	⇓Pn	Pn	13 59 47.2	+0.2
	1.8nm,0.6s						
MAKZ				⇓Sn	Sn	14 01 17.3	+0.9
	6.5nm,0.9s						
MAKZ				⇓Lg	Lg	14 02 00.8	
	16nm,1.2s						

IDC 01 14:09:01.2±2.1, 5°.32S×152°.71E, h0^{km}, mb3.5/4, mb1 3.8/4, mb1mx3.5/28, mbtmp3.5/4, Error ellipse: s-maj=125.0km s-min=27.3km az=130.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.84	233	Sn	Sn	14 11 58.7	-2.8
	1.4nm,0.3s,baz=51,slow=20,SNR=2.5						
WRA	Warramunga Arr	23.04	229	P	P	14 14 07.6	-0.7
	0.5nm,0.8s,baz=53,slow=9.7,SNR=2.7						
ASAR	Alice Springs	25.71	223	P	P	14 14 33.2	-0.2
	0.3nm,0.7s,baz=56,slow=9.8,SNR=9.5						
FITZ	Fitzroy Crossi	29.34	242	P	P	14 15 07.1	+1.1
	1.1nm,0.5s,baz=49,slow=6.3,SNR=8.0						
ILAR	Eielson Array	82.67	22	P	P	14 21 27.2	+0.8
	0.4nm,0.7s,baz=239,slow=5.1,SNR=5.8						
TORD	Torodi Ar. Bea	150.38	287	PKPbc	PKPbc	14 28 53.7	-2.1
	0.5nm,0.8s,baz=82,slow=3.2,SNR=2.3						

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*NEIC **01** 14:14:42.7±0.6, 36°.89N±0°.01×97°.67W±0°.01, h5^{km}±7^{km}, Error ellipse: s-maj=2.0km s-min=1.6km az=199.0*

*ANF **01** 14:14:42.3±0.4, 36°.89N×97°.67W, h1^{km}±2^{km}, ML2.7/6, Error ellipse: s-maj=2.2km s-min=2.1km az=53.0*

*TUL **01** 14:14:42.5±0.6, 36°.89N±0°.01×97°.69W±0°.01, h3^{km}±7^{km}, ML2.6, mb_Lg2.2/10(NEIC), Error ellipse: s-maj=1.7km s-min=1.6km az=195.0*

ISC 01 14:14:42.7±0.9, 36°.90N±0°.03×97°.66W±0°.04, h10^{km}, n22, σ0^{s}.85/25, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T35A	Sooner Cattle	0.92	89		Pg	14 15 00.2	-0.2
T35A				Sg	Sg	14 15 12.5	0.0
T35B	Sooner Cattle	0.92	89	P	Pg	14 15 00.3	-0.1
	baz=269						
T35B				S	Sg	14 15 12.5	+0.1
	baz=269						
U32A	Winter Ranch,	1.20	245	Pg	Pb	14 15 04.8	-0.7
U32A	Winter Ranch,	1.20	245	P	Pb	14 15 04.8	-0.7
	baz=64						
OKCFA	Oklahoma City	1.50	173	Pn	Pb	14 15 09.8	-0.8
OKCFA	Oklahoma City	1.50	173	P	Pb	14 15 10.1	-0.5
	baz=353						
OKCFA				S	Sg	14 15 30.5	-0.3
	baz=353						
OKCSW	OKLAHOMA CITY	1.51	173		Pb	14 15 10.1	-0.7
FNO	Franklin	1.66	173		Pb	14 15 12.3	-1.0
R32A	Long Quarter,	1.73	332	P	Pb	14 15 14.2	-0.4
	baz=152						
R32A				S	Sb	14 15 37.0	+0.6
	baz=152						
TUL1	Leonard	1.81	123		Pb	14 15 14.6	-1.2
TUL1	Leonard	1.81	123	P	Pb	14 15 15.1	-0.8
	baz=303						
TUL1				S	Sb	14 15 39.3	+0.8
	baz=303						
WMOK	Wichita Mounta	2.34	203		Pn	14 15 22.0	+0.7
WMOK				IAmb_Lg		14 15 55.8	
	comp=Z,7.9nm,0.8s						
WMOK	Wichita Mounta	2.34	203	P	Pn	14 15 22.2	+0.8
	baz=22						
KSU1	Kansas State U	2.35	20	Pn	Pn	14 15 21.4	+0.1
KSU1				IAmb_Lg		14 16 02.5	
	comp=Z,11nm,0.8s						
KSU1	Kansas State U	2.35	20	P	Pn	14 15 22.5	+1.2
	baz=201						
KSU1				S	Sb	14 15 52.6	-1.5
	baz=201						
CBKS	Cedar Bluff	2.52	320	IAmb_Lg		14 16 08.2	
	comp=Z,9.3nm,0.8s						
X37A	Clayton	2.97	140	Pn	Pn	14 15 30.8	+0.9
HHAR	Hobbs	3.06	101	Pn	Pn	14 15 32.2	+1.1
S39A	Bolivar	3.55	76	Pn	Pn	14 15 39.1	+1.2
S39A	Bolivar	3.55	76	P	Pn	14 15 39.0	+1.1
	baz=258						
W39A	Magazine	3.57	117	IAmb_Lg		14 16 41.6	
	comp=Z,9.2nm,0.8s						
I37A	Lemond, Waseca	7.81	23	IAmb_Lg		14 18 44.6	
	comp=Z,3.2nm,1.0s						

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*ISN **01** 14:19:08.3±0.3, 36°.07N×44°.66E, h0^{km}, ML3.0*

*DDA **01** 14:19:10.1, 36°.15N×44°.15E, h2^{km}±2^{km}, ML3.0*

ISC 01 14:19:10.2±1.2, 36°.14N±0°.04×44°.27E±0°.07, h15^{km}±13^{km}, n12, σ1^{s}.14/18, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IKRK	Kirkuk	0.74	176	*e*Pg	Pg	14 19 24.0	-0.6
	baz=21						
IKRK				*e*Sg	Sg	14 19 35.0	+0.6
IKRK				AML	AML	14 19 38.1	
	comp=E,657nm,0.4s						
IKRK				AML	AML	14 19 42.0	
	comp=N,728nm,0.6s						
CUKT	Cukurca	1.23	334	*i* P	Pn	14 19 32.3	-0.7
CUKT				*i* S	Sn	14 19 48.9	-0.5
CUKT				IAML		14 19 53.0	
	comp=E,373nm,0.7s						
CUKT				IAML		14 20 02.0	
	comp=N,306nm,0.9s						
YOVA	Hakkari_Yksek	1.45	0	*i* P	Pg	14 19 37.5	-0.5
YOVA				*i* S	Sg	14 19 59.0	+2.1
YOVA				IAML		14 20 00.0	
	comp=E,210nm,0.6s						
YOVA				IAML		14 20 00.0	
	comp=N,249nm,0.7s						
HAKT	HAKKARI	1.49	342	*i* P	Pb	14 19 37.4	-0.3
HAKT				*i* S	Sg	14 19 58.6	+0.4
PERV	Siirt/Pervari-	2.27	323	*i* P	Pb	14 19 51.7	+0.7
PERV				IAML		14 20 32.0	
	comp=N,88nm,0.5s						
TVAN	Van	2.48	344	*i* P	Pb	14 19 54.1	-0.5
MIDY	Mardin/Midyat-	2.63	300	*i* P	Pb	14 19 56.4	-0.7
SRTM	Siirt_Merkez	2.64	315	*i* P	Pg	14 20 00.2	-0.5
SRTM				*i* S	Sg	14 20 33.6	-1.4
BTMN	Batman	2.97	307	*i* P	Pg	14 20 06.8	-0.4
BTMN				*i* S	Sb	14 20 41.0	+1.9
BTMN				IAML		14 20 55.0	
	comp=E,52nm,0.8s						
BTMN				IAML		14 20 55.0	
	comp=N,47nm,0.7s						
MARD	Mardin	3.04	294	*i* P	Pb	14 20 05.7	+1.5
SVAN	Silvan-Diyarba	3.17	310	*i* P	Pg	14 20 09.8	-1.2

MUSM	Mu-Merkez	3.39	320	*i* P	Pb	14 20 11.1	+1.0

VAO **01** 15:16:15.7±0.2,23.°19S×68.°24W,h99^{km},mb5.8

GUC **01** 15:16:16.5±0.7,23.°23S×68.°54W,h114^{km}±4^{km},ML5.9, MW5.9

BJI **01** 15:16:16.0±0.0,23.°30S×68.°30W,h106^{km},mB5.6/52

NEIC **01** 15:16:16.9,23.°26S×68.°32W,h114^{km},Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-7.92; M$_{\theta\theta}$2.19; M$_{\phi\phi}$5.72; M$_{r\theta}$2.77; M$_{\theta\phi}$-2.98; M$_{\phi r}$-3.65; Fault plane solution: M$_0$8.95000×10^{17} NP1:φ$_s$326.62000°, δ60.42000°,λ-93.45000°. NP2:φ$_s$153.59000°,δ29.76000°, λ-83.94000°. Principal axes: T 8.6725, Plg15.0000°, Azm59.0000°; N 0.5248, Plg3.0000°, Azm328.0000°; P -9.1973, Plg74.0000°, Azm228.0000°;

NEIC **01** 15:16:16,23.°26S×68.°28W,h118^{km},Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-7.02; M$_{\theta\theta}$0.15; M$_{\phi\phi}$6.87; M$_{r\theta}$0.99; M$_{\theta\phi}$-2.43; M$_{\phi r}$-1.40; Fault plane solution: M$_0$7.56000×10^{17} NP1:φ$_s$166.65000°, δ38.90000°,λ-83.04000°. NP2:φ$_s$337.74000°,δ51.44000°, λ-95.59000°. Principal axes: T 7.8394, Plg6.0000°, Azm72.0000°; N -0.5991, Plg4.0000°, Azm341.0000°; P -7.2404, Plg82.0000°, Azm217.0000°;

MOS **01** 15:16:16.6±1.1,22.°95S×68.°34W,h106^{km},mb5.7/45 Error ellipse: s-maj=11.1km s-min=5.1km az=105.5

SJA **01** 15:16:17.0±1.6,23.°35S×68.°47W,h75^{km},ML5.9,MW5.6

NEIC **01** 15:16:17.5±2.0,23.°25S±0.°05×68.°42W±0.°06,h111^{km}±1^{km}, mb5.7/635,Mwb5.9/37,Mwr5.9/51,Mww5.8, Mwc5.9(GCMT),Mwr5.9(GUC),Error ellipse: s-maj=10.1km s-min=8.0km az=285.0

IDC **01** 15:16:17.4±0.3,23.°18S×68.°41W,h109^{km}±2^{km},mb5.4/26, mb1 5.5/27,mb1mx5.5/30,mbtmp5.8/27,MS4.8/18, Ms1 4.8/18,ms1mx4.7/23,Error ellipse: s-maj=10.3km s-min=6.7km az=56.0

GCMT **01** 15:16:20.5±0.1,23.°19S±0.°01×68.°63W±0.°01,h128^{km}, MW5.9/152,Moment Tensor Solution. s146,c277; s152,c370; Duration: 2^{s}1 Moment tensor: Scale 10^{18} Nm; M$_{rr}$-0.74±.01; M$_{\theta\theta}$0.05±.01; M$_{\phi\phi}$0.69±.01; M$_{r\theta}$0.09±.01; M$_{\theta\phi}$-0.38±.01; M$_{\phi r}$-0.04±.01; Best double couple: M$_0$0.80800×10^{18} NP1:φ$_s$161.00000°,δ43.00000°, λ-81.00000°. NP2:φ$_s$330.00000°,δ48.00000°, λ-98.00000°. Principal axes: T 0.8680, Plg3.0000°, Azm65.0000°; N -0.1200, Plg6.0000°, Azm335.0000°; P -0.7480, Plg84.0000°, Azm179.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function

NEIC **01** 15:16:20,23.°14S×68.°29W,h130^{km},Moment Tensor Solution. Duration: 6^{s}6 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-6.69; M$_{\theta\theta}$-0.22; M$_{\phi\phi}$6.91; M$_{r\theta}$0.45; M$_{\theta\phi}$-1.30; M$_{\phi r}$1.21; Fault plane solution: M$_0$7.05000×10^{17} NP1: φ$_s$344.00000°,δ41.00000°,λ-98.00000°. NP2: φ$_s$176.00000°,δ50.00000°,λ-82.00000°. Principal axes: T 7.2301, Plg5.0000°, Azm260.0000°; N -0.3832, Plg6.0000°, Azm351.0000°; P -6.8469, Plg83.0000°, Azm132.0000°;

NEIC **01** 15:16:21,23.°26S×68.°64W,h126^{km},Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-7.49; M$_{\theta\theta}$0.25; M$_{\phi\phi}$7.24; M$_{r\theta}$1.25; M$_{\theta\phi}$-3.50; M$_{\phi r}$-0.59; Fault plane solution: M$_0$8.27000×10^{17} NP1:φ$_s$166.00000°, δ42.00000°,λ-78.00000°. NP2:φ$_s$330.00000°,δ49.00000°, λ-101.00000°. Principal axes: T 8.7561, Plg4.0000°, Azm67.0000°; N -1.0691, Plg8.0000°, Azm337.0000°; P -7.6870, Plg81.0000°, Azm181.0000°;

ISC 01 15:16:16.5±0.2**,23.°26S**±0.°02×**68.°36W**±0.°03**,h108**^{km}±1^{km}**, h108**^{km}**:pP-P,n1682,**σ1^{s}**31**/1818**,mb5.7**/385**,76C-503D, Fault plane solution: NP1:**φ$_s$342.82275°**,**δ46.26564°**,** λ-76.42422°. **NP2:**φ$_s$143.56834°**,**δ45.38296°**,** λ-103.78455°. **Principal axes:** T Plg0.4476°**,** Azm63.2683°**;** N Plg9.7649°**,** Azm153.3453°**;** P Plg80.2247°**,** Azm330.6691°**; Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AF01	San Pedro de A	0.35	29		Pn	15 16 33.5	+0.9
LVC	Limon Verde	0.82	322	P	Pn	15 16 36.3	+0.1
	13µm,0.3s,baz=149,slow=6.8						
LVC				S	Sn	15 16 50.9	+0.1
	42µm,0.3s,baz=177,slow=1.3,SNR=22						
LVC				LR	LR	15 16 53.3	
	comp=Z,43µm,18.8s,baz=84,slow=49						
LVC	Limon Verde	0.82	322		Pn	15 16 36.3	+0.1
LVC				Sn	Sn	15 16 50.6	-0.3
LVC	Limon Verde	0.82	322	*e*P	Pn	15 16 35.8	-0.3
LVC				*e*S	Sn	15 16 51.0	+0.1
LVC	Limon Verde	0.82	322	*e*P	Pn	15 16 35.9	-0.3
PB15	IPOC Station P	1.02	272		Pn	15 16 37.5	-0.4
PB15				Sn	Sn	15 16 53.0	-1.2
PB15	IPOC Station P	1.02	272	⇓*i*P	Pn	15 16 37.6	-0.3
PB15				*i* S	Sn	15 16 53.3	-0.9
PB15	IPOC Station P	1.02	272	*e*P	Pn	15 16 37.8	-0.2
PB15				*e*S	Sn	15 16 53.8	-0.3
PB15				IAML		15 16 56.2	
	comp=Z,803µm,0.7s						
PB06	IPOC Station P	1.24	296		Pn	15 16 40.0	-0.3
PB06	IPOC Station P	1.24	296	⇓*i*P	Pn	15 16 40.2	-0.1
PB06				*i* S	Sn	15 16 57.6	-0.8
PB06				IAML		15 17 01.2	
	comp=N,370µm,0.4s						
PB06	IPOC Station P	1.24	296	*e*P	Pn	15 16 40.2	-0.1
PB06				*e*S	Sn	15 16 47.2	-11
PB06				*e*S		15 16 58.2	
PB06				IAML		15 16 59.7	
	comp=Z,543µm,1.2s						
PB05	IPOC Station P	1.74	283	⇑*i*P	Pn	15 16 45.2	-1.0
PB05				*e*S	Sn	15 17 07.0	-1.9
PB05				IAML		15 17 19.0	
	comp=N,68µm,0.4s						
PB05	IPOC Station P	1.74	283	*e*P	Pn	15 16 45.3	-0.9
PB05				*e*S	Sn	15 17 07.9	-1.0
PB05				IAML		15 17 18.5	
	comp=Z,81µm,0.9s						
PB03	IPOC Station P	1.76	313	⇑*i*P	Pn	15 16 46.4	-0.1
PB03				*i* S	Sn	15 17 08.6	-0.8
PB03				IAML		15 17 12.7	
	comp=N,108µm,0.7s						
PB03	IPOC Station P	1.76	313	*e*P	Pn	15 16 46.4	-0.1
PB03				*e*S	Sn	15 17 09.3	-0.1
PB03				IAML		15 17 11.6	
	comp=Z,87µm,0.7s						
PB04	IPOC Station P	1.89	299		Pn	15 16 47.7	-0.5
PB04	IPOC Station P	1.89	299	⇓*i*P	Pn	15 16 47.4	-0.7
PB04				*i* S	Sn	15 17 10.9	-1.3
PB04				IAML		15 17 16.1	
	comp=E,138µm,0.6s						
PB04	IPOC Station P	1.89	299	*e*P	Pn	15 16 47.5	-0.7
PB04				*e*S	Sn	15 17 11.7	-0.6
PB04				IAML		15 17 16.3	
	comp=Z,141µm,1.2s						
PB10	IPOC Station P	2.03	262	Pn	Pn	15 16 48.5	-1.3
PB10	IPOC Station P	2.03	262	⇑*i*P	Pn	15 16 48.5	-1.3
PB10				*i* S	Sn	15 17 12.2	-2.9
PB10				IAML		15 17 22.2	
	comp=N,43µm,0.3s						
PB10	IPOC Station P	2.03	262	*e*P	Pn	15 16 48.6	-1.2
PB10				*e*S	Sn	15 17 12.7	-2.5
PB10				IAML		15 17 22.6	
	comp=Z,49µm,1.0s						
PB07	IPOC Station P	2.07	317		Pn	15 16 50.5	0.0
PB07	IPOC Station P	2.07	317	⇑*i*P	Pn	15 16 50.4	-0.1
PB07				*i* S	Sn	15 17 16.0	-0.5
PB07				IAML		15 17 21.0	
	comp=E,190µm,0.5s						
PB14	IPOC Station P	2.31	233		Pn	15 16 52.2	-1.5
PB14	IPOC Station P	2.31	233	⇑*i*P	Pn	15 16 52.4	-1.3
PB14				*e*S	Sn	15 17 18.7	-3.5
PB14				IAML		15 17 28.1	
	comp=E,33µm,0.6s						
PB14	IPOC Station P	2.31	233	*e*P	Pn	15 16 47.2	-6.5
PB14				*e*P		15 16 52.9	
PB14				*e*S	Sn	15 17 20.4	-1.8
PB14				IAML		15 17 26.8	
	comp=Z,43µm,0.5s						
PB02	IPOC Station P	2.39	323	⇑*i*P	Pn	15 16 54.4	-0.2
PB02				*e*S	Sn	15 17 22.8	-1.0
PB02				IAML		15 17 29.0	
	comp=E,208µm,0.3s						
PB01	IPOC Station P	2.44	334		Pn	15 16 55.2	0.0
PB01	IPOC Station P	2.44	334	⇑*i*P	Pn	15 16 55.1	0.0
PB01				*i* S	Sn	15 17 24.8	+0.1
PB01				IAML		15 17 29.9	
	comp=E,127µm,0.5s						
HJA	Humahuaca	2.72	90	*e*P	Pn	15 17 03.1	+4.1
HJA				*e*S	Sn	15 17 19.6	-12
YJA	Yavi	2.84	68	*e*P	Pn	15 17 04.7	+3.9
SLA	San Lorenzo	3.00	120	⇑*i*P	Pn	15 17 06.4	+3.9
SLA	San Lorenzo	3.00	120	*e*P	Pn	15 17 06.5	+4.0
TA01	Diego Aracena	3.16	327	Pn	Pn	15 17 03.0	-1.6
TA01	Diego Aracena	3.16	327	⇑*i*P	Pn	15 17 03.0	-1.6
TA01				*e*S	Sn	15 17 34.0	-7.8
TA01				IAML		15 18 01.4	
	comp=N,40µm,0.6s						
TA01	Diego Aracena	3.16	327	*e*P	Pn	15 17 03.5	-1.1
TA01				IAML		15 17 59.3	
	comp=Z,44µm,0.7s						
PB08	IPOC Station P	3.19	347		Pn	15 17 05.8	+0.5
PB08	IPOC Station P	3.19	347	⇑*i*P	Pn	15 17 05.9	+0.5
PB08				*e*S	Sn	15 17 36.0	-6.9
PB08				IAML		15 17 51.7	
	comp=E,18µm,0.6s						
TA02	Huaiquique	3.39	331		Pn	15 17 05.5	-2.2
TA02	Huaiquique	3.39	331	*e*P	Pn	15 17 05.9	-1.8
TA02				IAML		15 18 10.3	
	comp=E,68µm,0.6s						
FSA	Cafayete	3.58	143	*e*P	Pn	15 17 12.9	+2.7
FSA				*e*S	Sn	15 17 49.6	-2.3
AC02	Maricunga	3.63	191		Pn	15 17 11.5	+0.1
AC02	Maricunga	3.63	191	⇑*e*P	Pn	15 17 11.6	+0.3
AC02	Maricunga	3.63	191	*e*P	Pn	15 17 11.6	+0.3
AC02				*e*P		15 17 11.7	
AC02				*e*S	Sn	15 17 47.2	-6.5
AC02				IAML		15 18 23.7	
	comp=Z,10µm,0.8s						
ASTB	Santa Barbara	3.65	102	*e*P	Pn	15 17 14.2	+2.9
PB11	IPOC Station P	3.68	341	Pn	Pn	15 17 10.2	-1.5
PSGC	Pisagua	3.99	335	*e*P	Pn	15 17 17.6	+1.7
PSGCX	Pisagua	3.99	335	Pn	Pn	15 17 13.1	-2.7
ALOL	LOMAS DE OLMED	4.06	99	*e*P	Pn	15 17 19.6	+2.9
GO03	Copiap	4.64	201		Pn	15 17 21.6	-2.8
AP01	Chacalluta	5.20	339		Pn	15 17 30.6	-1.4
AC04	Llanos de Chal	5.50	206	Pn	Pn	15 17 31.6	-4.4
LPAZ	La Paz	6.94	2	P	Pn	15 17 56.4	+0.3
	comp=Z,194nm,0.3s,baz=174,slow=7.8,SNR=1227						
LPAZ	La Paz	6.94	2	P	Pn	15 17 56.6	+0.5
LPAZ	La Paz	6.94	2		Pn	15 17 56.6	+0.5
CO05	La Serena	7.12	201		Pn	15 17 52.2	-5.7
GO04	Tololo Observa	7.22	197		Pn	15 17 54.9	-4.8
CO03	El Pedregal	7.83	195		Pn	15 18 03.1	-4.7
CO06	Fray Jorge	7.94	201		Pn	15 18 02.7	-6.4
ZON	Zonda	8.26	182	P	Pn	15 18 10.4	-3.2
ZON	Zonda	8.26	182		Pn	15 18 10.4	-3.2
VA03	San Esteban	9.67	191		Pn	15 18 27.5	-5.2
SIV	San Ignacio	9.97	45	P	Pn	15 18 33.9	-2.9
	comp=Z,237nm,0.3s,baz=237,slow=11,SNR=683						
SIV				S	Sn	15 20 20.0	-6.8
	comp=Z,27nm,0.3s,baz=151,slow=21,SNR=2.1						
VA01	Torpederas	10.15	196		Pn	15 18 33.5	-5.6
MT02	Curacav	10.26	193		Pn	15 18 33.2	-7.4
MT05	Renca	10.31	191	Pn	Pn	15 18 34.2	-7.2
CPUP	Villa Florida	10.48	109	P	Pn	15 18 42.1	-1.5
	comp=Z,1.5nm,0.3s,baz=297,slow=11,SNR=75						
CPUP				LR	LR	15 23 30.4	
	comp=Z,9µm,18.6s,baz=282,slow=41						
CPUP	Villa Florida	10.48	109	P	Pn	15 18 42.2	-1.4
CPUP	Villa Florida	10.48	109		Pn	15 18 42.2	-1.4
CPUP	Villa Florida	10.48	109	*e*P	Pn	15 18 41.1	-2.5
MT09	Talagante	10.73	192		Pn	15 18 40.2	-6.9
VA05	Santo Domingo	10.75	195	Pn	Pn	15 18 38.7	-8.5
MT01	Popeta	10.87	193	Pn	Pn	15 18 41.2	-7.7
BO01	Tunca	11.35	192	Pn	Pn	15 18 47.4	-7.9
PTLB	Pontes e Lacer	11.66	50	*e*P	Pn	15 18 56.5	-3.1
BO02	Sierra Bellavi	11.69	190	Pn	Pn	15 18 52.5	-7.4
AQDB	Aquidauana	12.08	79		Pn	15 19 03.0	-2.1
AQDB	Aquidauana	12.08	79	*e*P	Pn	15 19 03.3	-1.8
GO05	Huala	12.12	194	Pn	Pn	15 18 56.2	-9.4
ITQB	Itaqui	12.30	124		Pn	15 19 05.7	-2.2
ITQB	Itaqui	12.30	124	*e*P	Pn	15 19 06.9	-1.0
ML02	Panimavida	12.74	191	Pn	Pn	15 19 05.6	-8.1
VILB	Vilhena	12.85	39	*e*P	Pn	15 19 13.2	-2.0
H03N1	Juan Fernandez	13.74	220	P	Pn	15 19 23.8	-2.7
	baz=108,slow=16,SNR=103						
H03N1				T	T	15 31 47.7	
H03N2	Juan Fernandez	13.76	220	P	Pn	15 19 24.0	-2.7
	baz=108,slow=16,SNR=65						
H03N2				T	T	15 31 49.0	
	baz=41,slow=74,SNR=69						
H03N3	Juan Fernandez	13.76	220	P	Pn	15 19 23.7	-3.1
	baz=108,slow=16,SNR=87						
H03N3				T	T	15 31 38.5	
	baz=106,slow=74,SNR=72						
PP1B	Ponte de Pedra	13.83	68	*e*P	Pn	15 19 25.1	-2.9
VA04	Juan Fernndez	13.84	219		Pn	15 19 23.8	-4.2
SALV	Santo Antonio	14.00	61	*e*P	Pn	15 19 26.9	-3.2
H03S3	Juan Fernandez	14.02	219	P	Pn	15 19 25.8	-4.2
	baz=32,slow=20,SNR=103						
H03S3				T	T	15 31 59.0	
	baz=68,slow=76,SNR=4.5						
H03S1	Juan Fernandez	14.03	219	P	Pn	15 19 25.7	-4.5
	baz=32,slow=20,SNR=58						
H03S1				T	T	15 32 02.1	
	baz=68,slow=76,SNR=3.8						
H03S2	Juan Fernandez	14.04	219	P	Pn	15 19 26.0	-4.2
	baz=32,slow=20,SNR=67						
H03S2				T	T	15 32 02.1	
	baz=68,slow=76,SNR=2.9						
TRCB	Terra Rica	14.49	91	P	Pn	15 19 35.0	-1.5
TRCB	Terra Rica	14.49	91	*e*P	Pn	15 19 35.0	-1.5
LPA	La Plata	14.75	144	*e*P	Pn	15 19 37.0	-2.6
LPA				S	Sn	15 22 22.6	+0.2
LPA				PCP	PcP	15 24 36.8	-7.1
LPA				SCS	ScS	15 31 38.7	-7.1
LPA				PKIKP	PKiKP	15 32 39.2	0.0
LPA				SKIKP		15 36 12.3	
LPA				PKIKS		15 36 17.4	
LPA				SKIKS		15 39 31.2	
PTGB	Pitanga	14.97	99	*e*P	Pn	15 19 42.4	-0.2
SAML	Samuel	15.07	20	P	Pn	15 19 40.5	-3.3
SAML				pmax	pmax		
	comp=Z,226nm,0.8s						
SAML	Samuel	15.07	20		Pn	15 19 40.5	-3.3
SAML	Samuel	15.07	20	⇑*e*P	Pn	15 19 40.6	-3.1
SAML	Samuel	15.07	20	*e*P	Pn	15 19 40.9	-2.9
CPSB	Cacapava Do Su	15.10	121	*e*P	Pn	15 19 43.0	-1.1
PLTB	Pedras Altas	15.59	126		Pn	15 19 47.9	-2.3
PLTB				IAmb	IAmb	15 19 52.5	
	comp=Z,336nm,1.0s						
PLTB	Pedras Altas	15.59	126	*e*P	Pn	15 19 48.1	-2.1
TRQA	Tornquist	15.73	161	P	Pn	15 19 49.2	-2.8
TRQA				pmax	pmax		
	comp=Z,2µm,1.4s						
TRQA	Tornquist	15.73	161		Pn	15 19 49.2	-2.8
LC01	Cunco	15.88	190		Pn	15 19 49.6	-4.1
PCMB	Pacaembu	15.90	87	*e*P	Pn	15 19 52.8	-1.4
PDRB	Porto dos Gac	16.03	46	*e*P	Pn	15 19 54.0	-1.8
LR03	Panguipulli	16.67	191	Pn	Pn	15 20 00.0	-3.5
ITRB	Iturama	17.12	81	*e*P	Pn	15 20 08.4	-0.9
CLDB	Colider	17.19	46	*e*P	P	15 20 08.6	-1.3
FRTB	Fartura	17.27	94	*e*P	P	15 20 10.3	-0.5
ARAG	Araguaiana, MT	17.31	67	*e*P	P	15 20 10.0	-1.3
PLCA	Paso Flores	17.52	186	P	P	15 20 12.0	-1.5
	comp=Z,1.2nm,0.3s,baz=11,slow=13,SNR=65						
PLCA				PcP	PcP	15 24 49.5	+1.4
	comp=Z,1.7nm,0.3s,baz=308,slow=3.4,SNR=7.7						
PLCA	Paso Flores	17.52	186	P	P	15 20 10.9	-2.6
PLCA				pmax	pmax		
	comp=Z,179nm,1.1s						
PLCA	Paso Flores	17.52	186	P	P	15 20 10.8	-2.6
PLCA	Paso Flores	17.52	186	*e*P	P	15 20 12.8	-0.7
TIJ01	Guaruva-PR	17.77	101	*e*P	P	15 20 15.3	-1.1
LL04	Puerto Octay	17.93	190	P	P	15 20 14.4	-3.4
LL04				IAmb	IAmb	15 20 36.8	
	comp=Z,389nm,1.0s						
TER01	Tubaro-SC	18.08	111	*e*P	P	15 20 19.4	-0.3
LL03	Petrohue	18.15	190	P	P	15 20 18.9	-1.4
LL05	Los Muermos	18.60	192	P	P	15 20 23.8	-1.4
ATAH	Atahualpa	18.71	327	P	Pn	15 20 29.5	+0.9
	comp=Z,1.2nm,0.3s,baz=166,slow=6.8,SNR=17						
TBTG	Tabatinga, AM	19.02	355	⇑*e*P	P	15 20 30.1	+0.2
TBTG	Tabatinga, AM	19.02	355	*e*P	P	15 20 30.6	+0.7
SPB	Sao Paulo	19.21	95	*e*P	P	15 20 31.4	-0.7
RCLB	Rio Claro- Sao	19.22	92	*e*P	P	15 20 31.9	-0.3
PET01	Itanhaem-SP	19.33	97	*e*P	P	15 20 33.2	-0.1
LL01	San Ignacio de	19.37	189	P	P	15 20 32.9	-0.6
IPMB	Ipameri, GO	19.57	78	*e*P	P	15 20 35.2	-0.8
SNDB	Serra Nova Dou	19.74	58	*e*P	P	15 20 37.0	-0.8
LL07	Hotel Espejo d	19.98	191	P	P	15 20 39.8	-0.4
LL02	Futaleuf	20.09	187	P	P	15 20 40.8	-0.7
GO07	Milladeo Hill,	20.29	191	P	P	15 20 42.7	-0.8
NPGB	Novo Progresso	20.40	40	*e*P	P	15 20 43.4	-1.6
BDFB	Brasilia	20.61	72	P	P	15 20 46.9	-0.5
	comp=Z,441nm,0.8s,baz=246,slow=11,SNR=303						
BDFB				LR	LR	15 30 06.5	
	comp=Z,5µm,22.0s,baz=242,slow=40						
BDFB	Brasilia	20.61	72	P	P	15 20 45.8	-1.6
BDFB				IAmb	IAmb	15 20 49.7	
	comp=Z,647nm,1.0s						
PARB	Paraibuna	20.89	95	*e*P	P	15 20 49.3	-1.0
MACA	Manacapuru-AM	21.32	22	*e*P	P	15 20 52.4	-2.4
PEXB	Peixe	22.07	63	*e*P	P	15 21 00.8	-2.0
ITTB	Itaituba	22.39	35	*e*P	P	15 21 04.4	-1.8
DIAM	Diamantina, MG	23.59	83	*e*P	P	15 21 16.4	-1.5
MC01	Montes Claros	23.84	79	*e*P	P	15 21 17.4	-2.6
DUB01	Friburgo-RJ	24.00	92	*e*P	P	15 21 20.4	-0.9
PTLC	Puerto Leguiza	24.11	344	*e*P	P	15 21 19.7	-2.6
JANB	Januaria	24.11	75	*e*P	P	15 21 21.0	-1.5
SMTB	Santa Maria do	24.51	58	*e*P	P	15 21 25.3	-0.7
PRPB	Parauapebas	24.65	49	*e*P	P	15 21 25.8	-1.4
CAM01	Campos-RJ	24.70	92	*e*P	P	15 21 26.8	-0.8
SDBA	SAO DESIDERIO	24.76	68	*e*P	P	15 21 26.6	-1.8
MALB	Monte Alegre	25.29	35	*e*P	P	15 21 31.9	-1.1
OTAV	Otavalo	25.33	336	P	P	15 21 34.7	+0.8
OTAV				pmax	pmax		
	comp=Z,234nm,1.2s						
OTAV	Otavalo	25.33	336	P	P	15 21 34.7	+0.8
OTAV				IAmb	IAmb	15 21 59.8	
	comp=Z,234nm,1.2s						
OTAV	Otavalo	25.33	336	*e*P	P	15 21 35.9	+2.0
OTAV	Otavalo	25.33	336	*e*P	P	15 21 34.0	+0.2
PAC1	Pacto, Paraso	25.48	335	*e*P	P	15 21 36.7	+1.7
TULM	Tulcn-Chalpat	25.53	338	*e*P	P	15 21 35.7	0.0
ALF01	Guarapari-ES	25.76	89	*e*P	P	15 21 36.3	-0.9
SJMB	Sao Joao De Ma	25.76	85	*e*P	P	15 21 35.8	-1.5
MACC	Macarena, Meta	25.81	347	*e*P	P	15 21 35.7	-2.0
GCUF	Volcan Galeras	25.86	339	*e*P	P	15 21 41.0	+2.3
BSFB	Barra de Sao F	26.04	85	*e*P	P	15 21 38.3	-1.5
GARC	Garzon, Huila	26.23	344	*e*P	P	15 21 43.2	+1.4
RIB01	Linhares ES	26.34	87	*e*P	P	15 21 41.8	-0.7
SOTA	Rioblanco	26.48	341	⇓*e*P	P	15 21 46.6	+2.2
PCON	Cinco Dias	26.61	342	⇓*e*P	P	15 21 48.1	+2.6
BOAV	Boa Vista	26.62	18	*e*P	P	15 21 45.7	+0.8
BETC	Betania	26.69	344	*e*P	P	15 21 48.0	+2.4
TUMC	Tumaco	26.89	337	P	P	15 21 47.8	+0.4
TUMC				IAmb	IAmb	15 21 51.2	
	comp=Z,232nm,0.8s						
TUMC	Tumaco	26.89	337	*e*P	P	15 21 47.1	-0.3
NAN01	Guarapari, ES	26.96	84	*e*P	P	15 21 46.5	-1.6
MARP	Paez Belalcaza	26.98	343	⇓*e*P	P	15 21 49.7	+1.2
PTGC	Puerto Gaitan,	27.53	352	*e*P	P	15 21 53.2	0.0
GUA01	Guaratinga, BA	27.63	81	*e*P	P	15 21 53.1	-0.9
VILC	Villavicencio,	27.69	349	⇓*e*P	P	15 21 55.7	+0.9
MCPB	Macapa, AP	27.73	37	*e*P	P	15 21 54.5	-0.4
ORTC	Ortega, Tolima	27.82	345	⇓*e*P	P	15 21 56.7	+0.9
YOTC	Yotoco, Valle	28.17	343	⇓*e*P	P	15 21 58.9	-0.1
CHIC	Chingaza	28.21	349	⇓*e*P	P	15 22 00.1	+0.5
CMC01	Camacan, BA	28.29	79	*e*P	P	15 21 58.5	-1.5
ANIL	Santa Ana	28.42	345	*e*P	P	15 22 01.8	+0.4
NBIT	Itapeh - BA	28.52	78	*e*P	P	15 22 01.2	-0.9
ROSC	El Rosal	28.52	347	P	P	15 22 03.8	+1.4
	comp=Z,33nm,0.6s,baz=99,slow=2.3,SNR=14						
ROSC				LR	LR	15 35 57.1	
	comp=Z,4µm,20.3s,baz=180,slow=42						
ROSC	El Rosal	28.52	347	P	P	15 22 02.2	-0.2
ROSC	El Rosal	28.52	347	*e*P	P	15 22 03.6	+1.2
TMAB	Tom-Au,PA,Br	28.58	46	*e*P	P	15 22 02.3	-0.2
GDU01	Guandu, BA	28.85	76	*e*P	P	15 22 02.8	-2.1
PLMC	San Jos del P	29.04	344	⇓*e*P	P	15 22 07.4	+0.8
GUY2C	Guyana, Caldas	29.12	346	*e*P	P	15 22 09.3	+1.5
SPBC	San Pablo de B	29.27	348	⇓*e*P	P	15 22 08.2	-0.5
RUSC	La Rusia	29.34	350	⇓*e*P	P	15 22 10.4	+0.7
NORC	Norcasia	29.34	347	⇓*e*P	P	15 22 08.9	-0.3
PIZC	Pizarro, Choco	29.39	341	*e*P	P	15 22 13.2	+3.5
EFI	East Falkland	29.46	167	*ce*P	P	15 22 09.6	-0.3
EFI				pmax	pmax		
	comp=Z,188nm,0.8s						
EFI				MLR	MLR		
	comp=Z,2µm,17.0s						
EFI	East Falkland	29.46	167	P	P	15 22 08.9	-1.0
EFI				IAmb	IAmb	15 22 10.9	
	comp=Z,231nm,1.0s						
MG02	Cerro Sombrero	29.49	181	P	P	15 22 10.2	+0.1
NBPN	Ponto Novo - B	29.55	70	*e*P	P	15 22 09.5	-1.7
TAMC	Tame, Arauca	29.70	353	*e*P	P	15 22 12.1	-0.3
CBOC	Ciudad Bolivar	29.89	345	*e*P	P	15 22 14.4	+0.2
GO10	Punta Arenas	29.92	183	P	P	15 22 14.5	+0.4
BARC	Barichara	30.04	350	*e*P	P	15 22 14.2	-1.4
ELOV	Elorza	30.09	358	⇓*e*P	P	15 22 15.3	-0.5
HELC	Santa Helena	30.09	346	*e*P	P	15 22 15.7	-0.6
BRRC	Barranca, Sant	30.63	350	*e*P	P	15 22 18.2	-2.4
PAMC	Pamplona, Colo	30.70	352	*e*P	P	15 22 21.0	-0.8
PAYG	Puerto Ayora	30.94	313	P	P	15 22 24.5	+1.2
ROSB	Rosrio	30.99	53	*e*P	P	15 22 23.3	-0.6
ZARC	Zaragoza, Cauc	31.21	348	P	P	15 22 23.8	-1.9
ZARC				IAmb	IAmb	15 22 26.5	
	comp=Z,144nm,1.3s						
ZARC	Zaragoza, Cauc	31.21	348	*e*P	P	15 22 24.3	-1.5
SOCV	Socops	31.44	355	*e*P	P	15 22 26.0	-1.7
USHA	Ushuaia	31.53	180	P	P	15 22 28.5	+0.4
	comp=Z,45nm,0.7s,baz=11,slow=7.4,SNR=12						
NBLA	Lagarto - SE	31.58	72	*e*P	P	15 22 27.1	-2.0
PTAC	Punta Ardita,	31.60	342	*e*P	P	15 22 31.0	+1.9
UREC	San Jos de Ur	31.61	346	⇓*e*P	P	15 22 27.8	-1.4
MG01	Puerto William	31.64	179	P	P	15 22 27.1	-2.0
MG01				IAmb	IAmb	15 22 29.5	
	comp=Z,206nm,1.4s						
OCAC	Ocana	31.67	351	P	P	15 22 26.9	-3.1
OCAC	Ocana	31.67	351	⇓*e*P	P	15 22 27.2	-2.7
SDV	Santo Domingo	32.02	356	P	P	15 22 31.5	-1.5
SDV	Santo Domingo	32.02	356	⇓*e*P	P	15 22 32.2	-0.8
SDV	Santo Domingo	32.02	356	*e*P	P	15 22 32.1	-1.0
NBPS	Pedro II - PI	32.05	58	*e*P	P	15 22 31.9	-1.3
MDP	Montagnes des	32.10	31	P	P	15 22 33.1	-0.4
	comp=Z,181nm,0.8s,baz=208,slow=8.7,SNR=76						
MDP				S	S	15 27 31.2	-6.8
	comp=Z,15nm,0.8s,baz=299,slow=17,SNR=1.4						
MDP				LR	LR	15 37 14.5	
	comp=Z,3µm,19.8s,baz=210,slow=39						
SMLC	San Martn de	32.34	349	*e*P	P	15 22 33.2	-2.5
NBMA	Muriti-CE	32.52	66	*e*P	P	15 22 36.2	-1.2
MOTC	Monteria, Cord	32.63	347	P	P	15 22 37.4	-0.7
MOTC	Monteria, Cord	32.63	347	*e*P	P	15 22 37.6	-0.5
NBPB	Pedra_Branca-C	32.85	62	*e*P	P	15 22 39.2	-1.0
LL6C	La Loma 6 Bece	33.14	351	*e*P	P	15 22 39.5	-3.1
ARGC	Ariguani, Magd	33.41	349	⇓*e*P	P	15 22 44.0	-0.9
PLCV	Puerto La Cruz	33.42	7	P	P	15 22 45.3	+0.3
PCRV	Puerto La Cruz	33.43	7	P	P	15 22 45.3	+0.2
	comp=Z,141nm,0.7s,baz=174,slow=3.1,SNR=43						
PCRV				S	S	15 27 53.8	-4.8
	comp=Z,14nm,1.1s,baz=178,slow=12,SNR=1.3						
NBAN	Anadia - AL	33.51	72	*e*P	P	15 22 44.1	-1.9
SJCC	San Jacinto, C	33.62	348	P	P	15 22 45.6	-1.2
SJCC				IAmb	IAmb	15 22 50.6	
	comp=Z,111nm,0.6s						
SJCC	San Jacinto, C	33.62	348	⇓*e*P	P	15 22 46.1	-0.7
NBMO	Morrinhos-CE	33.82	58	*e*P	P	15 22 47.1	-1.4
BCIP	Isla Barro Col	34.12	340	P	P	15 22 49.7	-1.4
BCIP				pmax	pmax		
	comp=Z,196nm,1.5s						
BCIP	Isla Barro Col	34.12	340	P	P	15 22 49.7	-1.4
BCIP				IAmb	IAmb	15 22 54.9	
	comp=Z,196nm,1.5s						
BCIP	Isla Barro Col	34.12	340	*e*P	P	15 22 52.8	+1.6
NBCL	Cascavel-CE	34.66	61	*e*P	P	15 22 55.2	-0.7
SMRC	Santa Marta, M	34.69	350	*e*P	P	15 22 52.9	-3.0
NBPA	Parau_RN	34.77	65	*e*P	P	15 22 56.0	-0.9
BRU2	Volcan	34.80	335	P	P	15 22 57.8	+0.7
BRU2				IAmb	IAmb	15 23 04.7	
	comp=Z,96nm,1.2s						
BRU2	Volcan	34.80	335	⇓*e*P	P	15 22 58.9	+1.8
URIC	Uribia, Colomb	34.92	354	*e*P	P	15 22 52.9	-5.0
NBRF	Rio Formoso -	34.97	71	*e*P	P	15 22 57.6	-0.9

TOSP	Speyside	35.19	13	P	P	15 23 00.6	+0.4
TOSP	Speyside	35.19	13	eP	P	15 23 00.6	+0.4
SRBA	San Rafael, Bu	35.47	334	P	P	15 23 04.2	+1.4
SRBA				IAmb	IAmb	15 23 33.2	
	comp=Z,191nm,1.3s						
GRGR	Grenville	35.78	11	P	P	15 23 04.1	-1.2
GRGR	Grenville	35.78	11	eP	P	15 23 04.2	-1.1
NBPV	Pedro Velho	35.95	67	eP	P	15 23 06.4	-0.5
RIMA	Rio Macho	36.16	333	P	P	15 23 09.9	+1.1
BATAN	Batan	36.26	334	P	P	15 23 09.6	+0.1
BATAN				IAmb	IAmb	15 23 14.7	
	comp=Z,259nm,1.3s						
CVTR	Volcan Turrial	36.34	334	P	P	15 23 10.7	+0.1
CVTR				IAmb	IAmb	15 23 15.2	
	comp=Z,114nm,1.1s						
SVB	Belmont	36.96	12	P	P	15 23 14.0	-1.5
SVB	Belmont	36.96	12	eP	P	15 23 13.9	-1.5
JTS	Las Juntas de	37.08	332	P	P	15 23 18.4	+1.9
	comp=Z,57nm,1.2s,baz=227,slow=3.1,SNR=18						
JTS	Las Juntas de	37.08	332	i P	P	15 23 17.8	+1.3
JTS				pmax	pmax		
	comp=Z,119nm,1.4s						
JTS	Las Juntas de	37.08	332	P	P	15 23 16.1	-0.4
JTS				IAmb	IAmb	15 23 21.7	
	comp=Z,145nm,1.4s						
COVE	Coope Vega, Sa	37.24	333	P	P	15 23 18.8	+1.0
MCLT	Moule a Chique	37.45	12	P	P	15 23 17.4	-2.1
MCLT	Moule a Chique	37.45	12	eP	P	15 23 17.6	-1.9
HZTE	Horizontes, Gu	37.74	332	P	P	15 23 20.6	-1.4
SLBI	Saint Lucia, B	37.75	12	eP	P	15 23 20.2	-1.8
MPOM	Morne Pois Mar	38.18	12	P	P	15 23 24.6	-1.0
MPOM	Morne Pois Mar	38.18	12	eP	P	15 23 24.2	-1.4
BIM	Bigot	38.21	11	P	P	15 23 24.2	-1.8
BIM	Bigot	38.21	11	eP	P	15 23 24.5	-1.5
FDF	Fort de France	38.41	11	eP	P	15 23 26.9	-0.7
ILAM	Ilet Lapin Mar	38.50	12	P	P	15 23 26.5	-1.8
SVN	Savane Anatole	38.51	11	P	P	15 23 27.4	-1.0
PRVC	Isla de Provid	38.57	339	P	P	15 23 27.6	-1.3
ACON	Acoyapa	38.68	333	P	P	15 23 30.3	+0.5
ACON				IAmb	IAmb	15 23 59.6	
	comp=Z,88nm,1.0s						
DSLB	Salisbury	39.05	11	e	P	15 23 34.6	+1.7
HOPE	Hope Point	39.11	151	P	P	15 23 33.8	+0.8
HOPE				pmax	pmax		
	comp=Z,2µm,1.0s						
HOPE	Hope Point	39.11	151	P	P	15 23 33.8	+0.8
H05N1	Guadeloupe/Mar	39.97	11	P	P	15 23 37.2	-3.4
	SNR=19						
SKI	Saint Kitts	40.71	8	e	P	15 23 54.0	+7.4
CDVI	St. Croix	40.91	5	P	P	15 23 46.4	-1.8
CDVI				IAmb	IAmb	15 23 53.0	
	comp=Z,130nm,0.6s						
MLPR	Magueyes Islan	40.99	2	P	P	15 23 46.8	-2.1
MLPR				IAmb	IAmb	15 23 57.2	
	comp=Z,178nm,1.0s						
CRPR	Cabo Rojo, PR	41.03	2	P	P	15 23 47.4	-1.8
CRPR				IAmb	IAmb	15 23 52.7	
	comp=Z,188nm,0.9s						
OBIP	Obispado Ponce	41.08	3	P	P	15 23 47.5	-2.1
OBIP				IAmb	IAmb	15 23 51.2	
	comp=Z,229nm,0.9s						
PDPR	Patillas Dam,	41.09	3	P	P	15 23 47.6	-2.1
SJG	San Juan	41.17	3	P	P	15 23 48.1	-2.3
SJG				pmax	pmax		
	comp=Z,166nm,0.8s						
SJG	San Juan	41.17	3	P	P	15 23 48.1	-2.3
SJG				IAmb	IAmb	15 23 55.7	
	comp=Z,166nm,0.8s						
SJG	San Juan	41.17	3	eP	P	15 23 48.4	-2.0
ANWB	Willy Bob	41.18	10	P	P	15 23 47.0	-3.4
MTP	Monte Pirata	41.19	4	P	P	15 23 47.9	-2.7
HUMP	Col San Antoni	41.22	4	P	P	15 23 48.0	-2.7
HUMP				IAmb	IAmb	15 24 00.6	
	comp=Z,146nm,1.4s						
CBYP	Canovanas	41.35	4	P	P	15 23 49.2	-2.7
CBYP				IAmb	IAmb	15 23 52.2	
	comp=Z,204nm,1.1s						
GCPR	Guaynabo City	41.37	3	P	P	15 23 49.3	-2.7
AOPR	Arecibo Observ	41.38	2	P	P	15 23 49.5	-2.6
CUPR	Culebra, Puert	41.42	4	P	P	15 23 49.7	-2.7
BANI	BANI	41.44	357	P	P	15 23 52.0	-0.7
TGUH	Tegucigalpa,Un	41.44	332	P	P	15 23 53.0	+0.2
TGUH	Tegucigalpa,Un	41.44	332	⇓eP	P	15 23 53.6	+0.8
AGPR	Aguadilla, PR	41.49	2	P	P	15 23 51.0	-2.0
AGPR				IAmb	IAmb	15 24 02.7	
	comp=Z,215nm,1.1s						
SDD	Santo Domingo	41.49	358	P	P	15 23 51.8	-1.1
SDD				IAmb	IAmb	15 24 04.9	
	comp=Z,108nm,0.5s						
EMPR	Esperanza - Ma	41.52	3	P	P	15 23 50.9	-2.3
EMPR				IAmb	IAmb	15 23 58.3	
	comp=Z,192nm,1.1s						
PMSA	Palmer Station	41.60	177	P	P	15 23 54.0	+0.6
	comp=Z,68nm,0.9s,baz=13,slow=5.6,SNR=23						
PMSA	Palmer Station	41.60	177	P	P	15 23 53.9	+0.6
PMSA				IAmb	IAmb	15 23 55.3	
	comp=Z,132nm,1.1s						
PMSA	Palmer Station	41.60	177	eP	P	15 23 54.6	+1.2
DR12	Loma Pena Alta	41.80	359	P	P	15 23 53.4	-2.2
SDDR	Presa de Saban	42.08	356	P	P	15 23 56.8	-1.1
MTDJ	Mount Denham	42.19	347	P	P	15 23 58.9	+0.1
MTDJ				IAmb	IAmb	15 24 02.5	
	comp=Z,147nm,1.4s						
MTDJ	Mount Denham	42.19	347	eP	P	15 23 56.8	-2.0
SC01	Santiago de lo	42.49	357	P	P	15 24 00.4	-0.7
SC01				IAmb	IAmb	15 24 19.5	
	comp=Z,154nm,1.1s						
MTO3	Montecristo	42.69	329	P	P	15 24 03.7	+0.6
ESQI	Esquipulas	42.82	329	P	P	15 24 04.8	+0.8
ESQI				IAmb	IAmb	15 24 06.2	
	comp=Z,96nm,1.0s						
GTBY	Guantanamo Bay	43.42	351	P	P	15 24 07.3	-1.4
FSCY	Frank Sound, G	44.12	342	P	P	15 24 13.9	-0.3
FSCY				IAmb	IAmb	15 24 21.2	
	comp=Z,226nm,1.0s						
LCCY	Blossom Villag	44.17	344	P	P	15 24 15.3	+0.7
HUEH	Huehuetenango	44.52	327	P	P	15 24 17.9	+0.1
HUEH				IAmb	IAmb	15 24 47.2	
	comp=Z,142nm,1.0s						
GRTK	Grand Turk	44.58	356	P	P	15 24 16.8	-1.0
GRTK				IAmb	IAmb	15 24 19.4	
	comp=Z,178nm,0.9s						
CCIG	Comitan	45.66	327	P	P	15 24 26.5	-0.1
SOR	Soroa	47.94	342	P	P	15 24 44.0	-0.1
SOR				pmax	pmax		
	comp=Z,56nm,1.0s						
SOR	Soroa	47.94	342	P	P	15 24 44.0	-0.1
TLIG	Tlapa	50.17	321	P	P	15 25 01.8	+0.4
TLIG				IAmb	IAmb	15 25 03.8	
	comp=Z,60nm,0.8s						
061Z	Ochoppi	50.32	345	P	P	15 25 03.3	+1.1
DWPF	Disney Wildern	52.60	345	P	P	15 25 19.1	-0.1
DWPF				IAmb	IAmb	15 25 22.2	
	comp=Z,108nm,1.1s						
DWPF	Disney Wildern	52.60	345	P	P	15 25 19.7	+0.5
	baz=165						
MOIG	Morelia	53.35	320	P	P	15 25 26.2	+1.0
MOIG				IAmb	IAmb	15 25 27.6	
	comp=Z,106nm,0.8s						
656A	Willston	54.07	345	P	P	15 25 30.2	+0.3
656A				IAmb	IAmb	15 25 58.3	
	comp=Z,161nm,1.2s						
456A	Hilliard	55.25	346	P	P	15 25 39.0	+0.6
456A				IAmb	IAmb	15 25 41.7	
	comp=Z,169nm,1.1s						
553A	Crawfordville	55.34	343	P	P	15 25 38.7	-0.3
BBSR	BB Station	55.42	4	P	P	15 25 39.3	-0.3
BBSR				IAmb	IAmb	15 25 41.7	
	comp=Z,54nm,0.8s						
TIGA	Tifton	56.31	344	P	P	15 25 45.8	-0.2
	baz=163						
ZAIG	Zacatecas	56.56	322	P	P	15 25 49.3	+1.0
ZAIG				IAmb	IAmb	15 26 18.2	
	comp=Z,119nm,0.9s						
352A	Blakely	56.69	343	P	P	15 25 48.2	-0.4
352A				IAmb	IAmb	15 26 16.8	
	comp=Z,145nm,0.9s						
BRAL	Brewton	57.00	341	P	P	15 25 50.9	0.0
BRAL	Brewton	57.00	341	P	P	15 25 51.0	+0.1
	baz=159						
BRAL				S	S	15 33 36.3	-0.7
	baz=159						
NHSC	New Hope	57.17	348	P	P	15 25 52.2	+0.1
NHSC	New Hope	57.17	348	P	P	15 25 53.0	+0.9
	baz=167,SNR=8.9						
NHSC				S	S	15 33 41.2	+2.2
	baz=167						
154A	Montrose	57.31	345	P	P	15 25 52.7	-0.4
250A	Grady	57.53	342	P	P	15 25 53.8	-0.8
Y60A	Bolivia	57.71	350	P	P	15 25 55.5	-0.3
152A	Waverly Hall	57.76	344	P	P	15 25 55.7	-0.5
152A				IAmb	IAmb	15 26 24.5	
	comp=Z,118nm,1.2s						
Y59A	Loris	57.80	350	P	P	15 25 55.9	-0.6
Y59A				IAmb	IAmb	15 26 25.0	
	comp=Z,78nm,0.9s						
Y58A	Scranton	57.85	349	P	P	15 25 56.7	-0.1
SACV	Santiago Islan	57.97	53	P	P	15 25 56.7	-1.3
SACV				IAmb	IAmb	15 26 00.6	
	comp=Z,96nm,1.1s						
346A	Big Creek Wild	57.97	339	P	P	15 25 56.9	-0.8
KVTX	Kingsville	58.00	329	P	P	15 25 57.6	-0.4
KVTX				IAmb	IAmb	15 25 59.9	
	comp=Z,227nm,1.5s						
Y57A	Sumter	58.09	348	P	P	15 25 58.4	-0.1
Y57A				IAmb	IAmb	15 26 27.3	
	comp=Z,131nm,1.1s						
GOGA	Godfrey	58.16	345	P	P	15 25 58.1	-0.9
GOGA				pmax	pmax		
	comp=Z,61nm,1.3s						
GOGA	Godfrey	58.16	345	P	P	15 25 58.1	-0.9
GOGA	Godfrey	58.16	345	P	P	15 25 58.6	-0.4
	baz=164,SNR=14						
VNA3	Neumayer Olymp	58.26	161	P	P	15 26 00.2	+0.9
X58A	Rowland	58.43	349	P	P	15 26 00.8	0.0
X58A				IAmb	IAmb	15 26 29.6	
	comp=Z,105nm,0.8s						
344A	Westbrook Farm	58.47	338	P	P	15 26 00.7	-0.5
VNA1	Neumayer--Stat	58.47	160	P	P	15 26 02.0	+1.3
Z51A	Franklin	58.50	343	P	P	15 26 00.5	-0.8
Z51A				IAmb	IAmb	15 26 29.2	
	comp=Z,70nm,1.2s						
JSC	Jenkinsville	58.52	347	P	P	15 26 01.2	-0.3
JSC				pmax	pmax		
	comp=Z,76nm,1.1s						
JSC	Jenkinsville	58.52	347	P	P	15 26 01.1	-0.3
JSC				IAmb	IAmb	15 26 30.1	
	comp=Z,76nm,1.1s						
HODGE	Hodges	58.68	347	P	P	15 26 02.1	-0.5
BIRD	Birdtown, Kers	58.72	348	P	P	15 26 02.5	-0.3
BIRD				IAmb	IAmb	15 26 31.7	
	comp=Z,116nm,1.0s						
Y52A	Lilburn	58.74	345	P	P	15 26 02.1	-0.9
Y52A				IAmb	IAmb	15 26 30.9	
	comp=Z,58nm,1.1s						
441A	DeRidder	58.74	335	P	P	15 26 02.4	-0.7
441A				IAmb	IAmb	15 26 07.1	
	comp=Z,97nm,0.9s						
VNA2	Neumayer--Watz	58.84	160	P	P	15 26 04.1	+0.8
	baz=291,slow=8.3						
VNA2				S	S	15 34 14.5	+14
CNNC	Cliffs of the	58.87	351	S	S	15 34 02.1	+0.9
	baz=170						
342A	Flagon Creek P	58.97	336	P	P	15 26 04.5	-0.1
146A	Union	58.99	340	P	P	15 26 04.2	-0.6
SHEL	Horse Pasture	59.06	95	P	P	15 26 06.8	+1.1
SHEL				pmax	pmax		
	comp=Z,151nm,0.8s						
SHEL	Horse Pasture	59.06	95	P	P	15 26 06.8	+1.1
735A	Kenedy	59.06	330	P	P	15 26 05.7	+0.3
735A				IAmb	IAmb	15 26 34.5	
	comp=Z,93nm,0.9s						
VBMS	Vicksburg	59.09	338	P	P	15 26 05.5	+0.1
VBMS	Vicksburg	59.09	338	P	P	15 26 05.5	+0.1
	baz=156						
HKT	Hockley	59.12	332	i P	P	15 26 05.9	+0.3
HKT				pmax	pmax		
	comp=Z,138nm,2.6s						
HKT	Hockley	59.12	332	P	P	15 26 05.4	-0.2
HKT				IAmb	IAmb	15 26 34.1	
	comp=Z,63nm,1.1s						
W57A	Gilead	59.13	349	P	P	15 26 05.7	0.0
W57A				IAmb	IAmb	15 26 08.0	
	comp=Z,165nm,1.3s						
Z47A	Carrollton	59.20	341	P	P	15 26 05.1	-1.1
V61A	Roper	59.24	352	P	P	15 26 05.5	-0.8
Y49A	Blount Mountai	59.34	343	P	P	15 26 06.1	-1.0
Y49A				IAmb	IAmb	15 26 08.5	
	comp=Z,107nm,1.3s						
KMSC	Kings Mountain	59.37	348	P	P	15 26 07.2	-0.2
KMSC				IAmb	IAmb	15 26 36.1	
	comp=Z,105nm,1.1s						
KMSC	Kings Mountain	59.37	348	P	P	15 26 07.8	+0.5
	baz=166,SNR=29						
833A	Chaparral WMA,	59.37	328	P	P	15 26 08.1	+0.6
	baz=147,SNR=36						
BG3	Lake Jocassee	59.56	346	P	P	15 26 08.5	-0.2
BG3				IAmb	IAmb	15 26 37.2	
	comp=Z,73nm,1.0s						
X51A	Calhoun	59.60	344	P	P	15 26 08.5	-0.5
V58A	Windy Hill, Pi	59.60	350	P	P	15 26 08.6	-0.3
FPAL	Fort Paine	59.77	344	P	P	15 26 09.5	-0.6
FPAL				IAmb	IAmb	15 26 37.9	
	comp=Z,85nm,1.0s						
143A	Socs Landing,	59.84	338	P	P	15 26 09.8	-0.8
W52A	Murphy	59.88	345	P	P	15 26 10.1	-0.8
W52A				IAmb	IAmb	15 26 39.3	
	comp=Z,104nm,1.1s						
U59A	Littleton	59.95	351	P	P	15 26 10.8	-0.4
V55A	Taylorsville	60.03	348	P	P	15 26 12.0	+0.1
X48A	Hartselle	60.07	342	P	P	15 26 11.4	-0.8
V53A	Saluda	60.18	346	P	P	15 26 12.1	-0.9
V53A				IAmb	IAmb	15 26 15.6	
	comp=Z,86nm,1.1s						
NATX	Nacogdoches	60.22	334	P	P	15 26 13.2	0.0
NATX	Nacogdoches	60.22	334	P	P	15 26 14.2	+1.0
	baz=152,SNR=15						
Y45A	Yeager Farm, C	60.28	340	P	P	15 26 13.0	-0.5
W50A	Signal Mountai	60.32	344	P	P	15 26 13.0	-0.9
U56A	King	60.36	349	P	P	15 26 14.2	+0.1
CPCT	Cooper Cave	60.36	345	P	P	15 26 13.3	-0.8
CPCT				IAmb	IAmb	15 26 42.4	
	comp=Z,151nm,1.1s						
TKL	Tuckaleechee C	60.38	346	P	P	15 26 13.5	-0.8
TKL				pmax	pmax		
	comp=Z,127nm,1.0s						
TKL	Tuckaleechee C	60.38	346	P	P	15 26 13.5	-0.8
TKL				IAmb	IAmb	15 26 42.4	
	comp=Z,127nm,1.0s						
SNAA	Sanae	60.46	161	P	P	15 26 15.2	+0.7
SNAA				S	S	15 34 35.3	+14
SNAA	Sanae	60.46	161	P	P	15 26 15.2	+0.7
	comp=Z,282nm,1.0s,baz=281,slow=7.6,SNR=821						
SNAA	Sanae	60.46	161	d iP	P	15 26 15.1	+0.6
SNAA				pmax	pmax		
	comp=Z,313nm,1.1s						
SNAA	Sanae	60.46	161	P	P	15 26 14.8	+0.3
SWET	Sewanee	60.49	344	P	P	15 26 14.4	-0.7
V52A	Sevierville	60.52	346	P	P	15 26 14.2	-1.0
T59A	Double "B" Far	60.53	352	P	P	15 26 14.8	-0.4
T59A				IAmb	IAmb	15 26 17.6	
	comp=Z,138nm,1.1s						
T60A	Surry	60.59	352	P	P	15 26 14.9	-0.7
435B	Jarrell	60.60	331	P	P	15 26 14.8	-1.1
435B	Jarrell	60.60	331	P	P	15 26 16.0	+0.2
	baz=149,SNR=9.2						
V51A	Loudon	60.66	345	P	P	15 26 14.9	-1.2
V51A				IAmb	IAmb	15 26 44.2	
	comp=Z,91nm,1.1s						
U54A	Nelsons Funny	60.80	348	P	P	15 26 16.4	-0.7
T57A	Hurt	60.80	350	P	P	15 26 17.0	-0.1
T57A				IAmb	IAmb	15 26 46.1	
	comp=Z,78nm,0.9s						
OXF	Oxford	60.83	340	P	P	15 26 15.9	-1.4
OXF				pmax	pmax		
	comp=Z,418nm,1.0s						
OXF	Oxford	60.83	340	P	P	15 26 15.9	-1.4
OXF	Oxford	60.83	340	P	P	15 26 16.2	-1.1
	baz=158,SNR=38						
Z41A	Richland Creek	60.84	337	P	P	15 26 18.0	+0.6
	baz=154,SNR=13						
PLAL	Pickwick Lake	60.86	342	P	P	15 26 16.2	-1.4
237A	Washetta, Mont	60.90	333	P	P	15 26 17.8	0.0
CCAR	Cane Creek	61.07	338	P	P	15 26 18.8	-0.1
TZTN	Tazewell	61.18	346	P	P	15 26 18.4	-1.2
TZTN				IAmb	IAmb	15 26 47.3	
	comp=Z,54nm,0.9s						
TZTN	Tazewell	61.18	346	P	P	15 26 19.3	-0.4
	baz=164,SNR=15						
BLA	Blacksburg	61.21	349	P	P	15 26 20.0	+0.1
BLA				pmax	pmax		
	comp=Z,147nm,1.4s						
BLA	Blacksburg	61.21	349	P	P	15 26 20.0	+0.1
BLA				IAmb	IAmb	15 26 48.5	
	comp=Z,147nm,1.4s						
BLA	Blacksburg	61.21	349	P	P	15 26 20.6	+0.7
	baz=167,SNR=15						
BLA				S	S	15 34 33.2	+2.0
	baz=167						
V48A	Smith Brothers	61.22	343	P	P	15 26 19.3	-0.7
WLAR	White Oak Lake	61.34	337	P	P	15 26 21.1	+0.4
W45A	Hickory Valley	61.36	341	P	P	15 26 19.8	-1.1
JCT	Junction City	61.36	329	P	P	15 26 20.5	-0.5
JCT				pmax	pmax		
	comp=Z,125nm,0.9s						
JCT	Junction City	61.36	329	P	P	15 26 20.5	-0.5
JCT				IAmb	IAmb	15 26 49.6	
	comp=Z,125nm,0.9s						
JCT	Junction City	61.36	329	P	P	15 26 21.2	+0.1
	baz=147,SNR=45						
CLTN	Cedars of Leba	61.42	343	P	P	15 26 20.4	-0.9
CLTN				IAmb	IAmb	15 26 49.4	
	comp=Z,150nm,1.0s						
S57A	Dark Hollow, R	61.50	350	P	P	15 26 21.8	0.0
R58B	Mineral	61.55	351	P	P	15 26 22.1	0.0
R58B				IAmb	IAmb	15 26 24.9	
	comp=Z,112nm,1.0s						
MET	Memphis--Engin	61.56	340	P	P	15 26 21.7	-0.5
HPIG		61.56	322	P	P	15 26 23.0	+0.4
HPIG				IAmb	IAmb	15 26 52.1	
	comp=Z,141nm,1.3s						
WHTX	Lake Whitney,	61.58	332	P	P	15 26 22.2	-0.2
WHTX	Lake Whitney,	61.58	332	P	P	15 26 22.7	+0.2
	baz=150,SNR=18						
Z38A	Mt. Pleasant	61.67	335	P	P	15 26 22.8	-0.1
U49A	Red Boiling Sp	61.68	344	P	P	15 26 21.5	-1.5
U49A				IAmb	IAmb	15 26 50.4	
	comp=Z,56nm,0.9s						
SLBS	Sierra La Lagu	61.71	316	P	P	15 26 25.0	+1.4
SLBS				IAmb	IAmb	15 26 54.1	
	comp=Z,206nm,1.4s						
CBN	Corbin Frederi	61.72	352	P	P	15 26 23.6	+0.4
CBN				IAmb	IAmb	15 26 26.6	
	comp=Z,223nm,1.5s						
CBN	Corbin Frederi	61.72	352	P	P	15 26 23.8	+0.6
	baz=170						
WVT	Waverly	61.87	342	P	P	15 26 22.0	-2.2
WVT				pmax	pmax		
	comp=Z,209nm,1.3s						
WVT	Waverly	61.87	342	P	P	15 26 22.0	-2.2
WVT	Waverly	61.87	342	P	P	15 26 23.5	-0.8
	baz=160						
T50A	Nancy	61.93	345	P	P	15 26 23.4	-1.3
T50A				IAmb	IAmb	15 26 52.6	
	comp=Z,78nm,0.9s						
S54A	Dingess, Beckl	61.94	348	P	P	15 26 24.2	-0.6
S54A				IAmb	IAmb	15 26 53.5	
	comp=Z,118nm,0.8s						
HALT	Halls	62.10	341	P	P	15 26 24.1	-1.7
LPAR	Lepanto	62.12	340	P	P	15 26 23.7	-2.2
LPAR				IAmb	IAmb	15 26 28.3	
	comp=Z,109nm,0.7s						
HBAR	Harrisburg	62.19	340	P	P	15 26 24.2	-2.2
HBAR				IAmb	IAmb	15 26 31.4	
	comp=Z,100nm,1.3s						
R55A	Marlinton	62.20	350	P	P	15 26 26.7	+0.2
R55A				IAmb	IAmb	15 26 30.5	
	comp=Z,116nm,1.1s						
S51A	Beattyville	62.24	346	P	P	15 26 25.6	-1.2
S51A				IAmb	IAmb	15 26 54.9	
	comp=Z,69nm,1.1s						
MIAR	Mount Ida	62.27	337	P	P	15 26 26.5	-0.5
MIAR				pmax	pmax		
	comp=Z,244nm,1.1s						
MIAR	Mount Ida	62.27	337	P	P	15 26 26.5	-0.5
MIAR	Mount Ida	62.27	337	P	P	15 26 27.1	+0.1
	baz=154,SNR=50						
LNXT	Lenox	62.33	341	P	P	15 26 26.3	-1.0
TX32	Lajitas Array	62.35	325	P	P	15 26 27.8	0.0
TXAR	Lajitas Array	62.35	325	P	P	15 26 28.2	+0.4
	comp=Z,8.2nm,0.6s,baz=149,slow=9.0,SNR=123						
TXAR	Lajitas Array	62.35	325	P	P	15 26 27.8	0.0
TX31	Lajitas Ar. Si	62.35	325	P	P	15 26 27.8	0.0
TX31				IAmb	IAmb	15 26 56.8	
	comp=Z,136nm,1.2s						
GNAR	Gosnell	62.36	340	P	P	15 26 27.4	-0.1
UTMT	University of	62.36	341	P	P	15 26 26.3	-1.3
UTMT					pP	15 26 51.4	-3.8
W41B	Gary Mavity, V	62.37	338	P	P	15 26 27.4	-0.2
	baz=155,SNR=23						
PEBM	Pemiscott Bayo	62.45	340	P	P	15 26 27.7	-0.5
T47A	Sharon Grove	62.47	343	P	P	15 26 27.3	-1.0
WHAR	Wooly Hollow	62.49	338	P	P	15 26 27.4	-1.0
WHAR				IAmb	IAmb	15 26 56.6	
	comp=Z,160nm,1.0s						
R53A	Hurricane	62.58	348	P	P	15 26 28.3	-0.7
R53A				IAmb	IAmb	15 26 57.5	
	comp=Z,72nm,1.1s						
Z35A	Perchaven, San	62.65	333	P	P	15 26 29.4	-0.1
HICK	Hickman	62.65	341	P	P	15 26 28.8	-0.7
HICK				pP	pP	15 26 56.0	-1.1
PENMO	Penman	62.69	341	P	P	15 26 29.3	-0.4
Q56A	Snyder Ridge,	62.79	351	P	P	15 26 30.9	+0.5
Q56A				IAmb	IAmb	15 27 00.2	
	comp=Z,157nm,1.1s						
LCAR	Lake Charles	62.82	339	P	P	15 26 29.7	-0.9
SDMD	Soldier’s Deli	62.84	353	P	P	15 26 30.7	0.0
HENM	Henderson Moun	62.89	341	P	P	15 26 30.6	-0.4
P61A	Hammonton	62.89	354	P	P	15 26 30.5	-0.4
PARMO	Parma	62.92	341	P	P	15 26 30.8	-0.5
W39A	Magazine	62.93	337	P	P	15 26 30.9	-0.5
W39A				IAmb	IAmb	15 26 59.9	
	comp=Z,154nm,1.0s						
W39A	Magazine	62.93	337	P	P	15 26 32.0	+0.6
	baz=154,SNR=53						
FCAR	Ozark Folk Cen	62.98	338	P	P	15 26 30.1	-1.5
FCAR				IAmb	IAmb	15 26 59.6	
	comp=Z,156nm,1.1s						
X37A	Clayton	62.99	335	P	P	15 26 31.4	-0.3
Q54A	Coxs Mills	63.01	349	P	P	15 26 31.1	-0.7
R50A	Paris	63.02	346	P	P	15 26 30.9	-1.0
P57A	Homestead Farm	63.06	352	P	P	15 26 32.1	0.0
P57A				IAmb	IAmb	15 26 35.4	
	comp=Z,88nm,0.9s						
ABTX	Abilene, Hawle	63.09	331	P	P	15 26 32.0	-0.5
ABTX				IAmb	IAmb	15 27 01.2	
	comp=Z,139nm,1.1s						
ABTX	Abilene, Hawle	63.09	331	P	P	15 26 32.7	+0.1
	baz=148,SNR=45						
P60A	Greenville	63.10	354	P	P	15 26 32.0	-0.4
P60A	Greenville	63.10	354	P	P	15 26 32.9	+0.5
	baz=172,SNR=8.5						
WUPA	West Chester U	63.22	354	P	P	15 26 33.2	0.0
R49A	Shelbyville	63.22	345	P	P	15 26 32.0	-1.2
R49A				IAmb	IAmb	15 27 01.1	
	comp=Z,65nm,0.9s						
PBMO	Poplar Bluff	63.24	340	P	P	15 26 32.1	-1.2
Q52A	Bidwell	63.25	348	P	P	15 26 32.4	-1.0
MVL	Millersville	63.37	353	P	P	15 26 34.2	+0.1
MVL				IAmb	IAmb	15 27 03.4	
	comp=Z,74nm,1.0s						
WCI	Wyandotte Cave	63.44	344	P	P	15 26 33.3	-1.3
WCI				pmax	pmax		
	comp=Z,125nm,0.9s						
WCI	Wyandotte Cave	63.44	344	P	P	15 26 33.3	-1.3
WCI				IAmb	IAmb	15 27 02.3	
	comp=Z,125nm,0.8s						
WCI	Wyandotte Cave	63.44	344	P	P	15 26 33.8	-0.9
	baz=162						
MCWV	Mont Chateau	63.50	350	P	P	15 26 35.2	+0.2
MCWV				IAmb	IAmb	15 26 37.8	
	comp=Z,96nm,0.8s						
MCWV	Mont Chateau	63.50	350	P	P	15 26 35.8	+0.8
	baz=168,SNR=29						
MCWV				S	S	15 35 02.1	+2.3
	baz=168						
Q51A	Peebles	63.52	347	P	P	15 26 34.6	-0.6
Q51A				IAmb	IAmb	15 27 03.9	
	comp=Z,83nm,1.1s						
USIN	University of	63.54	343	P	P	15 26 34.1	-1.2
P53A	Whipple	63.59	349	P	P	15 26 34.8	-0.8
P53A				IAmb	IAmb	15 26 38.6	
	comp=Z,189nm,1.3s						

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PAGS  Pennsylvania G    63.63 353  P       P       15 26 35.9  0.0
U40A  Yellville         63.65 338  P       P       15 26 35.2 -0.9
U40A  Yellville         63.65 338  P       P       15 26 35.9 -0.2
      baz=155,SNR=62
T42A  Van Buren         63.68 340  P       P       15 26 35.0 -1.2
S44A  Carbondale        63.73 342  P       P       15 26 35.4 -1.2
S44A                               IAmb    IAmb    15 27 04.7
      comp=Z,150nm,1.0s
LUPA  Lehigh Univers    63.86 354  P       P       15 26 37.3  0.0
BRNJ  Basking Ridge     63.87 355  P       P       15 26 37.7 +0.3
BRNJ                               IAmb    IAmb    15 27 06.8
      comp=Z,90nm,1.1s
P52A  Corning           63.87 348  P       P       15 26 36.7 -0.8
P52A                               IAmb    IAmb    15 27 05.8
      comp=Z,113nm,1.1s
P52A  Corning           63.87 348  P       P       15 26 37.2 -0.3
      baz=166,SNR=17
P51A  Williamsport      63.91 347  P       P       15 26 36.5 -1.2
P51A                               IAmb    IAmb    15 27 05.8
      comp=Z,98nm,1.1s
O56A  Blue Knob Stat    63.91 351  P       P       15 26 38.0 +0.2
O56A                               IAmb    IAmb    15 27 07.3
      comp=Z,103nm,1.1s
O56A  Blue Knob Stat    63.91 351  P       P       15 26 38.8 +1.0
      baz=170,SNR=21
O56A                               S       S       15 35 06.7 +1.8
      baz=170
CPNY  Central Park      63.93 355  P       P       15 26 38.0 +0.2
HHAR  Hobbs             63.96 337  P       P       15 26 37.6 -0.5
X34A  Smith Ranch, M    63.99 333  P       P       15 26 38.0 -0.4
N62A  Caumsett State    64.03 356  P       P       15 26 39.1 +0.6
O54A  Avella            64.10 350  P       P       15 26 38.7 -0.2
PAL   Palisades         64.14 355  P       P       15 26 39.6 +0.4
PAL                                pmax    pmax
      comp=Z,65nm,1.1s
PAL   Palisades         64.14 355  P       P       15 26 39.5 +0.4
PAL   Palisades         64.14 355  P       P       15 26 40.9 +1.8
      baz=174,SNR=5.1
PAL                                S       S       15 35 08.2 +0.7
      baz=174
MGMO  Mountain Grove    64.17 339  P       P       15 26 38.7 -0.9
MGMO                               IAmb    IAmb    15 27 07.9
      comp=Z,195nm,1.1s
SSPA  Standing Stone    64.18 352  P       P       15 26 39.0 -0.4
SSPA                               IAmb    IAmb    15 26 42.2
      comp=Z,82nm,1.1s
SSPA  Standing Stone    64.18 352  P       P       15 26 40.2 +0.8
      baz=170
SSPA                               S       S       15 35 09.7 +1.6
      baz=170
N59A  State Game Lan    64.21 354  P       P       15 26 39.5 -0.2
N59A  State Game Lan    64.21 354  P       P       15 26 40.7 +0.9
      baz=172,SNR=12
N59A                               S       S       15 35 10.0 +1.4
      baz=172
N58A  Sunbury           64.24 353  P       P       15 26 40.0 +0.1
N58A                               IAmb    IAmb    15 26 42.7
      comp=Z,111nm,1.1s
U38A  Gravette          64.26 337  P       P       15 26 39.6 -0.6
U38A                               IAmb    IAmb    15 27 08.5
      comp=Z,93nm,0.9s
WSPT  Westport, CT      64.26 356  P       P       15 26 39.7 -0.2
WSPT                               IAmb    IAmb    15 26 43.5
      comp=Z,216nm,1.4s
ODNJ  Ogdensburg        64.27 355  P       P       15 26 39.9 -0.2
O52A  Adamsville        64.28 349  P       P       15 26 39.7 -0.5
O52A                               IAmb    IAmb    15 26 41.9
      comp=Z,64nm,0.8s
O53A  New Philadelph    64.30 349  P       P       15 26 40.0 -0.3
O53A                               IAmb    IAmb    15 27 09.1
      comp=Z,78nm,1.0s
O53A  New Philadelph    64.30 349  P       P       15 26 40.3  0.0
      baz=167,SNR=12
O53A                               S       S       15 35 08.3 -1.4
      baz=167
TRNY  Table Rock, Ra    64.30 355  P       P       15 26 40.1 -0.1
P49A  Miami Univ. Ec    64.31 346  P       P       15 26 39.0 -1.3
P49A                               IAmb    IAmb    15 27 08.0
      comp=Z,100nm,0.9s
P49A  Miami Univ. Ec    64.31 346  P       P       15 26 39.4 -0.9
      baz=163,SNR=12
TUL1  Leonard           64.31 335  P       P       15 26 40.0 -0.5
TUL1  Leonard           64.31 335  P       P       15 26 40.4 -0.1
      baz=152,SNR=30
FVM   French Village    64.35 341  P       P       15 26 39.9 -0.8
FVM                                pmax    pmax
      comp=Z,291nm,0.9s
FVM   French Village    64.35 341  P       P       15 26 39.9 -0.8
FNO   Franklin          64.38 334  P       P       15 26 40.0 -0.9
FNO                                IAmb    IAmb    15 27 09.1
      comp=Z,139nm,1.1s
OLIL  Olney             64.38 343  P       P       15 26 39.2 -1.6
OLIL                               IAmb    IAmb    15 27 08.3
      comp=Z,97nm,1.1s
BLO   Bloomington       64.39 344  P       P       15 26 39.4 -1.5
BLO                                pmax    pmax
      comp=Z,233nm,1.5s
BLO   Bloomington       64.39 344  P       P       15 26 39.4 -1.5
BLO                                IAmb    IAmb    15 27 08.6
      comp=Z,233nm,1.5s
P48A  Milroy            64.40 345  P       P       15 26 39.5 -1.5
P48A                               IAmb    IAmb    15 26 41.7
      comp=Z,85nm,1.2s
M63A  Gales Ferry       64.42 357  P       P       15 26 41.3 +0.3
WMOK  Wichita Mounta    64.50 332  P       P       15 26 40.6 -1.1
WMOK                               pmax    pmax
      comp=Z,39nm,1.2s
WMOK  Wichita Mounta    64.50 332  P       P       15 26 40.6 -1.1
WMOK  Wichita Mounta    64.50 332  P       P       15 26 41.1 -0.7
      baz=149,SNR=20
OKCFA Oklahoma City     64.53 334  P       P       15 26 41.0 -0.9
OKCFA                              IAmb    IAmb    15 27 10.0
      comp=Z,117nm,1.1s
ACSO  Alum Creek Sta    64.61 348  P       P       15 26 41.6 -0.7
ACSO                               IAmb    IAmb    15 27 10.6
      comp=Z,132nm,0.9s
ACSO  Alum Creek Sta    64.61 348  P       P       15 26 42.0 -0.3
      baz=165,SNR=22
M57A  Sunshine Farm,    64.78 353  P       P       15 26 44.3 +0.9
M57A                               IAmb    IAmb    15 27 12.9
      comp=Z,64nm,0.9s
N53A  Lisbon            64.78 350  P       P       15 26 44.0 +0.6
N53A                               IAmb    IAmb    15 26 45.6
      comp=Z,137nm,1.3s
Q44A  Meyer Farm, Va    64.79 342  P       P       15 26 42.7 -0.8
N54A  Moraine State     64.80 350  P       P       15 26 43.9 +0.4
N54A                               IAmb    IAmb    15 27 12.9
      comp=Z,129nm,1.0s
N54A  Moraine State     64.80 350  P       P       15 26 44.2 +0.7
      baz=168,SNR=22
N54A                               S       S       15 35 16.2 +0.5
      baz=168
UCCT  U. Connecticut    64.82 357  P       P       15 26 43.8 +0.2
KSCT  Kent School, K    64.83 356  P       P       15 26 44.1 +0.5
KSCT                               IAmb    IAmb    15 26 47.3
      comp=Z,139nm,1.4s
KSPA  Keystone Colle    64.85 354  P       P       15 26 44.0 +0.2
KSPA                               IAmb    IAmb    15 27 13.2
      comp=Z,69nm,0.9s
O49A  Covington         64.85 347  P       P       15 26 43.2 -0.6
O49A                               IAmb    IAmb    15 27 12.3
      comp=Z,127nm,1.0s
SLM   Saint Louis       64.89 341  P       P       15 26 43.1 -1.0
SLM                                pmax    pmax
      comp=Z,60nm,0.8s
SLM   Saint Louis       64.89 341  P       P       15 26 43.1 -1.0
SLM                                IAmb    IAmb    15 26 45.4
      comp=Z,60nm,0.8s
L64A  Middleborough     64.90 358  P       P       15 26 44.5 +0.4
L64A                               IAmb    IAmb    15 26 47.6
      comp=Z,148nm,1.3s
BRYW  Bryant College    64.91 357  P       P       15 26 44.9 +0.6
P46A  Rosedale          64.98 344  P       P       15 26 43.3 -1.3
P46A                               IAmb    IAmb    15 27 12.2
      comp=Z,106nm,1.1s
S39A  Bolivar           65.01 338  P       P       15 26 44.5 -0.4
NVL   N'lazarevskaya    65.02 159 eP       P       15 26 51.1 +6.5
NVL                                pmax    pmax
      comp=Z,21nm,1.1s
M55A  Ridgway           65.11 351  P       P       15 26 45.7 +0.2
M55A                               IAmb    IAmb    15 26 48.1
      comp=Z,119nm,0.9s
MNTX  Cornudas Mount    65.12 326  P       P       15 26 45.3 -0.6
MNTX                               IAmb    IAmb    15 27 14.4
      comp=Z,116nm,1.4s
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MNTX  Cornudas Mount    65.12 326  P       P       15 26 45.7 -0.2
      baz=142,SNR=66
N51A  Ashland           65.16 348  P       P       15 26 45.2 -0.6
N51A                               IAmb    IAmb    15 27 14.1
      comp=Z,86nm,1.1s
R40A  Maddies Statio    65.20 339  P       P       15 26 45.4 -0.8
R40A                               IAmb    IAmb    15 27 14.4
      comp=Z,171nm,1.0s
M54A  Oil Creek Stat    65.28 351  P       P       15 26 46.3 -0.4
M54A                               IAmb    IAmb    15 27 15.7
      comp=Z,153nm,0.9s
M54A  Oil Creek Stat    65.28 351  P       P       15 26 47.1 +0.4
      baz=168,SNR=25
M54A                               S       S       15 35 22.1 +0.4
      baz=168
QUA2  Belchertown       65.31 357  P       P       15 26 46.4 -0.3
WES   Weston            65.37 358  P       P       15 26 46.3 -0.8
WES                                pmax    pmax
      comp=Z,58nm,1.1s
WES   Weston            65.37 358  P       P       15 26 46.2 -0.8
M53A  WI Miller and     65.37 350  P       P       15 26 46.9 -0.3
M53A                               IAmb    IAmb    15 26 49.3
      comp=Z,130nm,1.1s
M53A  WI Miller and     65.37 350  P       P       15 26 47.5 +0.3
      baz=168,SNR=10
L59A  Walton            65.41 355  P       P       15 26 47.8 +0.4
T35A  Sooner Cattle     65.47 335  P       P       15 26 47.6 -0.4
ALLY  Alegheny Colle    65.49 350  P       P       15 26 47.8 -0.1
ALLY                               IAmb    IAmb    15 26 50.8
      comp=Z,147nm,0.9s
L61B  Northampton       65.50 356  P       P       15 26 48.7 +0.7
      baz=176,SNR=17
HRV   Adam Dziewonsk    65.50 357  P       P       15 26 48.1 +0.1
HRV                                pmax    pmax
      comp=Z,179nm,1.2s
HRV   Adam Dziewonsk    65.50 357  P       P       15 26 48.1 +0.1
HRV                                IAmb    IAmb    15 26 51.6
      comp=Z,179nm,1.2s
HRV   Adam Dziewonsk    65.50 357  P       P       15 26 49.1 +1.1
      baz=177
BINY  Binghamton        65.50 354  P       P       15 26 47.7 -0.4
BINY                               IAmb    IAmb    15 26 51.1
      comp=Z,156nm,1.1s
BINY  Binghamton        65.50 354  P       P       15 26 48.9 +0.8
      baz=172,SNR=28
N49A  Columbus Grove    65.52 347  P       P       15 26 47.3 -0.9
N49A                               IAmb    IAmb    15 27 16.4
      comp=Z,174nm,0.9s
M52A  Chesterland       65.58 349  P       P       15 26 48.2 -0.4
M52A                               IAmb    IAmb    15 27 17.3
      comp=Z,92nm,0.9s
L56A  Greenwood         65.62 353  P       P       15 26 48.7 -0.1
L56A                               IAmb    IAmb    15 26 51.4
      comp=Z,90nm,0.8s
P43A  Skaggs, Pawnee    65.62 342  P       P       15 26 47.6 -1.2
P43A                               IAmb    IAmb    15 27 16.6
      comp=Z,170nm,1.0s
MSTX  Muleshoe          65.65 329  P       P       15 26 48.9 -0.5
MSTX                               IAmb    IAmb    15 26 51.5
      comp=Z,146nm,0.8s
MSTX  Muleshoe          65.65 329  P       P       15 26 49.5 +0.1
      baz=145,SNR=74
SFIN  Lafayette         65.67 344  P       P       15 26 47.2 -1.9
SFIN                               IAmb    IAmb    15 27 16.5
      comp=Z,62nm,0.8s
SFIN  Lafayette         65.67 344  P       P       15 26 48.1 -1.0
      baz=161,SNR=8.7
K62A  Royalston         65.69 357  P       P       15 26 49.7 +0.5
K62A                               IAmb    IAmb    15 26 53.0
      comp=Z,107nm,1.4s
M50A  Fremont           65.76 348  P       P       15 26 49.0 -0.7
SRIG  Santa Rosalia     65.76 317  P       P       15 26 51.1 +1.2
SRIG                               IAmb    IAmb    15 27 20.3
      comp=Z,193nm,1.5s
O44A  Mansfield         65.81 343  P       P       15 26 48.4 -1.6
O44A                               IAmb    IAmb    15 26 50.7
      comp=Z,48nm,0.7s
N47A  Urbana            65.81 346  P       P       15 26 47.8 -2.3
N47A                               IAmb    IAmb    15 26 51.8
      comp=Z,254nm,1.4s
TRY   Troy              65.84 356  P       P       15 26 50.8 +0.7
AMTX  Amarillo          65.90 330  P       P       15 26 50.2 -0.7
AMTX                               IAmb    IAmb    15 26 52.8
      comp=Z,94nm,1.1s
AMTX  Amarillo          65.90 330  P       P       15 26 50.9  0.0
      baz=146
ERPA  Erie              65.93 351  P       P       15 26 50.1 -0.7
ERPA  Erie              65.93 351  P       P       15 26 51.2 +0.5
      baz=168,SNR=9.3
U32A  Winter Ranch,     66.00 333  P       P       15 26 50.8 -0.6
U32A                               IAmb    IAmb    15 27 20.1
      comp=Z,104nm,1.1s
WVNY  West Valley, N    66.01 352  P       P       15 26 51.3  0.0
WVNY                               IAmb    IAmb    15 26 54.1
      comp=Z,143nm,0.9s
K57A  Scipio Center     66.09 353  P       P       15 26 51.6 -0.1
K57A                               IAmb    IAmb    15 26 54.2
      comp=Z,100nm,0.9s
HSIG                    66.20 320  P       P       15 26 52.7 -0.1
HSIG                               IAmb    IAmb    15 26 54.9
      comp=Z,147nm,1.3s
MMNY  Mt. Morris Dam    66.25 352  P       P       15 26 53.0 +0.2
MMNY                               IAmb    IAmb    15 26 55.1
      comp=Z,113nm,1.1s
P40A  Paris             66.27 340  P       P       15 26 51.9 -1.1
P40A                               IAmb    IAmb    15 27 20.8
      comp=Z,119nm,0.9s
J61A  Chester           66.38 357  P       P       15 26 54.1 +0.5
J61A                               IAmb    IAmb    15 26 57.9
      comp=Z,219nm,1.4s
HDIL  Hopedale          66.41 343  P       P       15 26 52.7 -1.2
HDIL                               IAmb    IAmb    15 26 54.9
      comp=Z,71nm,0.8s
HDIL  Hopedale          66.41 343  P       P       15 26 53.0 -0.8
      baz=159,SNR=19
FFD   Franklin Falls    66.46 357  P       P       15 26 54.5 +0.4
FFD                                IAmb    IAmb    15 26 58.2
      comp=Z,160nm,1.2s
ACCN  Adirondack Com    66.49 356  P       P       15 26 54.9 +0.5
ACCN                               IAmb    IAmb    15 26 57.5
      comp=Z,69nm,0.9s
L48A  N Adams           66.55 347  P       P       15 26 54.1 -0.7
L48A                               IAmb    IAmb    15 26 54.7
      comp=Z,72nm,0.7s
J58A  Remsen            66.59 355  P       P       15 26 55.3 +0.3
J58A                               IAmb    IAmb    15 27 24.7
      comp=Z,147nm,1.4s
J59A  Piesco            66.63 355  P       P       15 26 55.9 +0.6
J56A  Wolcott           66.66 353  P       P       15 26 55.8 +0.4
J56A                               IAmb    IAmb    15 26 57.6
      comp=Z,119nm,0.8s
J57A  Williamstown      66.70 354  P       P       15 26 56.2 +0.5
J57A                               IAmb    IAmb    15 26 58.9
      comp=Z,153nm,1.2s
MEDO  Medina            66.74 352  P       P       15 26 54.9 -1.0
AAM   Ann Arbor         66.74 348  P       P       15 26 55.2 -0.7
AAM                                pmax    pmax
      comp=Z,42nm,0.7s
AAM   Ann Arbor         66.74 348  P       P       15 26 55.2 -0.7
AAM   Ann Arbor         66.74 348  P       P       15 26 55.8 -0.2
      baz=165
J55A  Hilton            66.76 352  P       P       15 26 55.9 -0.1
J55A                               IAmb    IAmb    15 26 58.3
      comp=Z,98nm,1.1s
P38A  Dawn              66.83 339  P       P       15 26 55.9 -0.7
P38A                               IAmb    IAmb    15 27 25.0
      comp=Z,160nm,0.8s
I62A  Tamworth          66.85 358  P       P       15 26 57.1 +0.5
I62A                               IAmb    IAmb    15 26 59.9
      comp=Z,104nm,1.1s
M44A  Midewin, Midew    66.86 344  P       P       15 26 55.4 -1.3
J54A  Appleton          66.87 352  P       P       15 26 57.1 +0.4
J54A                               IAmb    IAmb    15 27 25.7
      comp=Z,65nm,0.9s
QSPA  South Pole Qui    66.94 180  P       P       15 26 58.4 +1.1
319A  Douglas           66.98 323  P       P       15 26 59.1 +1.2
319A                               IAmb    IAmb    15 27 28.1
      comp=Z,170nm,1.0s
N41A  Harden Midland    66.99 342  P       P       15 26 56.6 -0.9
N41A                               IAmb    IAmb    15 27 25.5
      comp=Z,150nm,1.1s
K50A  Casco             67.00 349  P       P       15 26 56.6 -1.0
I63A  Otisfield         67.01 358  P       P       15 26 58.2 +0.7
I63A                               IAmb    IAmb    15 27 01.7
      comp=Z,119nm,1.1s
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L46A  Eue Claire        67.03 346  P       P       15 26 56.3 -1.5
L46A                               IAmb    IAmb    15 26 59.2
      comp=Z,138nm,1.1s
121A  Cookes Peak, D    67.04 324  P       P       15 26 59.0 +0.6
121A  Cookes Peak, D    67.04 324  P       P       15 27 00.1 +1.8
      baz=141,SNR=7.1
NCB   Newcomb           67.11 355  P       P       15 26 58.6 +0.3
NCB                                IAmb    IAmb    15 27 01.2
      comp=Z,103nm,1.0s
LBNH  Lisbon            67.24 357  P       P       15 26 59.8 +0.7
LBNH                               pmax    pmax
      comp=Z,121nm,1.0s
LBNH  Lisbon            67.24 357  P       P       15 26 59.8 +0.7
LBNH                               IAmb    IAmb    15 27 03.1
      comp=Z,120nm,1.0s
LBNH  Lisbon            67.24 357  P       P       15 27 00.6 +1.5
      baz=176,SNR=21
PECO  Prince Edward     67.33 353  P       P       15 27 00.0 +0.4
PECO                               IAmb    IAmb    15 27 02.7
      comp=Z,198nm,1.2s
VT1   Waterbury         67.38 357  P       P       15 27 00.5 +0.5
KSU1  Kansas State U    67.43 336  P       P       15 27 00.0 -0.4
KSU1  Kansas State U    67.43 336  P       P       15 27 00.3 -0.1
      baz=152,SNR=20
WVL   Waterville        67.50 359  P       P       15 27 01.4 +0.7
WVL                                IAmb    IAmb    15 27 04.5
      comp=Z,148nm,1.1s
H62A  Milan             67.55 358  P       P       15 27 01.8 +0.8
L44A  Lake County Fo    67.57 344  P       P       15 27 01.1 -0.1
      baz=160
EMMW  East Machias      67.64   1  P       P       15 27 02.4 +0.8
EMMW                               IAmb    IAmb    15 27 05.2
      comp=Z,166nm,1.1s
R32A  Long Quarter,     67.64 335  P       P       15 27 02.1 +0.3
BNM   Barren Site       67.70 326  P       P       15 27 03.7 +1.2
LONY  Lake Ozonia       67.78 355  P       P       15 27 03.4 +0.9
LONY  Lake Ozonia       67.78 355  P       P       15 27 03.6 +1.1
      baz=174,SNR=33
N38A  Joes South For    67.79 340  P       P       15 27 02.4 -0.2
L42A  Oliver, Polo      67.86 343  P       P       15 27 02.3 -0.7
L42A                               IAmb    IAmb    15 27 31.1
      comp=Z,115nm,1.1s
J47A  Sunmer            67.88 347  P       P       15 27 02.6 -0.5
LENM  Lemitar           67.89 326  P       P       15 27 02.6 -1.0
FRNY  Flat Rock         67.93 356  P       P       15 27 04.2 +0.8
FRNY                               IAmb    IAmb    15 27 07.0
      comp=Z,215nm,1.2s
DELO  Deloro Mine       67.97 353  P       P       15 27 03.7 +0.1
GGN   Saint George      68.06   1  P       P       15 27 05.2 +1.1
GGN                                IAmb    IAmb    15 27 34.5
      comp=Z,144nm,1.0s
G65A  Princeton         68.13   1  P       P       15 27 05.5 +0.9
G65A                               IAmb    IAmb    15 27 34.4
      comp=Z,147nm,1.0s
K43A  Burlington        68.17 344  P       P       15 27 04.5 -0.4
K43A                               IAmb    IAmb    15 27 05.1
      comp=Z,125nm,0.7s
I49A  Point Hope        68.17 349  P       P       15 27 04.5 -0.4
I49A                               IAmb    IAmb    15 27 04.9
      comp=Z,102nm,0.8s
G62A  West of Eustis    68.17 358  P       P       15 27 06.3 +1.4
PKME  Peaks-Kenny Pk    68.19 359  P       P       15 27 06.1 +1.2
PKME                               IAmb    IAmb    15 27 34.8
      comp=Z,133nm,0.9s
PKME  Peaks-Kenny Pk    68.19 359  P       P       15 27 06.2 +1.2
      baz=179,SNR=28
ANMO  Albuquerque       68.24 327ceP       P       15 27 07.2 +1.4
ANMO                               pmax    pmax
      comp=Z,70nm,0.8s
ANMO  Albuquerque       68.24 327  P       P       15 27 07.0 +1.2
ANMO                               IAmb    IAmb    15 27 07.8
      comp=Z,87nm,0.8s
ANMO  Albuquerque       68.24 327  P       P       15 27 07.3 +1.4
      baz=142
MOQ   Mont Orford       68.33 357  P       P       15 27 06.7 +0.7
L40A  Anamosa           68.34 342  P       P       15 27 05.5 -0.6
CBKS  Cedar Bluff       68.38 334  P       P       15 27 06.8 +0.4
CBKS                               pmax    pmax
      comp=Z,384nm,1.0s
CBKS  Cedar Bluff       68.38 334  P       P       15 27 06.8 +0.4
CBKS  Cedar Bluff       68.38 334  P       P       15 27 07.3 +0.9
      baz=149,SNR=70
LIC   Lamto             68.41  73 eP       P       15 27 06.6 -0.5
      comp=Z,207nm,0.8s
SADO  Sadowa            68.41 352  P       P       15 27 06.4 +0.1
SADO                               IAmb    IAmb    15 27 35.2
      comp=Z,90nm,0.9s
PLVO  Plevna            68.43 353  P       P       15 27 07.0 +0.5
PLVO                               IAmb    IAmb    15 27 09.8
      comp=Z,212nm,1.4s
TUC   Tucson            68.53 322  P       P       15 27 08.2 +0.7
TUC                                pmax    pmax
      comp=Z,76nm,1.1s
TUC   Tucson            68.53 322  P       P       15 27 08.2 +0.7
TUC   Tucson            68.53 322  P       P       15 27 09.0 +1.4
      baz=138
MNTQ  Montreal, Queb    68.59 356  P       P       15 27 08.7 +1.2
TIC   Toumodi           68.61  72 eP       P       15 27 08.0 -0.3
GBN   Guysborough       68.62   5  P       P       15 27 08.1 +0.5
GBN                                IAmb    IAmb    15 27 10.0
      comp=Z,125nm,1.3s
F63A  Nahmakanta, Br    68.63 359  P       P       15 27 08.6 +0.9
F63A                               IAmb    IAmb    15 27 11.6
      comp=Z,201nm,1.4s
N35A  Tabor             68.65 338  P       P       15 27 07.8 -0.2
KIC   Kosan Boka        68.72  73 eP       P       15 27 09.2 +0.2
      comp=Z,237nm,0.6s
DBIC  Dimbokro          68.76  73  P       P       15 27 09.7 +0.4
      comp=Z,167nm,0.9s,baz=242,slow=5.6,SNR=116
DBIC                               pP      pP      15 27 36.9 -0.7
      comp=Z,57nm,0.8s,baz=245,slow=5.4,SNR=2.7
DBIC                               LR      LR      15 56 06.3
      comp=Z,929nm,21.7s,baz=222,slow=35
DBIC  Dimbokro          68.76  73  P       P       15 27 09.6 +0.3
F64A  Sherman           68.79   0  P       P       15 27 09.8 +1.1
F64A                               IAmb    IAmb    15 27 38.5
      comp=Z,157nm,0.9s
SCIA  State Center      68.80 340  P       P       15 27 08.9  0.0
SCIA  State Center      68.80 340  P       P       15 27 08.8  0.0
      baz=156,SNR=17
F62A  Pittston Farm,    68.84 359  P       P       15 27 09.9 +0.9
F62A                               IAmb    IAmb    15 27 38.9
      comp=Z,88nm,1.0s
LMN   Caledonia Moun    68.85   3  P       P       15 27 09.4 +0.3
LMN                                IAmb    IAmb    15 27 11.6
      comp=Z,108nm,0.8s
JFWS  Jewell Farm       68.86 343  P       P       15 27 09.2  0.0
JFWS                               pmax    pmax
      comp=Z,154nm,0.6s
JFWS  Jewell Farm       68.86 343  P       P       15 27 09.2  0.0
JFWS  Jewell Farm       68.86 343  P       P       15 27 09.2  0.0
      baz=158,SNR=41
T25A  Trinidad          69.01 330  P       P       15 27 11.8 +1.2
T25A  Trinidad          69.01 330  P       P       15 27 11.9 +1.4
      baz=145,SNR=37
K38A  Parkersburg       69.33 341  P       P       15 27 11.8 -0.4
K38A                               IAmb    IAmb    15 27 41.1
      comp=Z,237nm,1.2s
GLMI  Grayling          69.36 348  P       P       15 27 11.9 -0.3
GLMI                               IAmb    IAmb    15 27 41.2
      comp=Z,157nm,0.9s
GLMI  Grayling          69.36 348  P       P       15 27 12.2 -0.1
      baz=164
TRQ   Mont Tremblant    69.38 355  P       P       15 27 12.3 -0.1
TRQ                                IAmb    IAmb    15 27 41.8
      comp=Z,171nm,0.9s
I42A  Draeger Farm,     69.43 344  P       P       15 27 12.2 -0.5
I42A                               IAmb    IAmb    15 27 13.2
      comp=Z,130nm,0.7s
214A  Organ Pipe Nat    69.43 321  P       P       15 27 14.6 +1.5
214A                               IAmb    IAmb    15 27 43.9
      comp=Z,196nm,1.2s
214A  Organ Pipe Nat    69.43 321  P       P       15 27 15.1 +2.0
      baz=137,SNR=37
E62A  Clayton Lake      69.55 359  P       P       15 27 14.0 +0.5
E62A                               IAmb    IAmb    15 27 43.0
      comp=Z,109nm,0.9s
PQI   Presque Isle      69.60   0  P       P       15 27 14.2 +0.6
PQI                                IAmb    IAmb    15 27 43.5
      comp=Z,144nm,1.1s
H43A  Windswept, Lux    69.70 345  P       P       15 27 13.8 -0.6
H43A                               IAmb    IAmb    15 27 14.7
      comp=Z,125nm,0.8s
X18A  Snowflake         69.73 324  P       P       15 27 15.9 +0.9
KSCO  Kaye Shedlock’    69.75 332  P       P       15 27 16.2 +1.2
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KSCO  Kaye Shedlock'   69.75 332  P       P        15 27 16.2 +1.2
      baz=146,SNR=23
I40A  Norwalk          69.87 343  P       P        15 27 15.1 -0.4
I40A                              IAmb    IAmb     15 27 15.7
      comp=Z,68nm,0.6s
L34A  Svendsen Farm,   69.88 338  P       P        15 27 15.4 -0.2
SFX   San Felipe       69.99 319  P       P        15 27 17.8 +1.3
SFX                               IAmb    IAmb     15 27 46.9
      comp=Z,100nm,1.1s
SDCO  Great Sand Dun   70.01 329  P       P        15 27 17.9 +1.1
SDCO                              IAmb    IAmb     15 27 47.0
      comp=Z,197nm,1.3s
SDCO  Great Sand Dun   70.01 329  P       P        15 27 18.2 +1.4
      baz=144,SNR=175
D62A  Allapoint, All   70.01 360  P       P        15 27 17.2 +1.0
BGNE  Belgrade         70.02 337  P       P        15 27 17.0 +0.6
BGNE  Belgrade         70.02 337  P       P        15 27 17.1 +0.6
      baz=151,SNR=68
W18A  Petrified Fore   70.06 325  P       P        15 27 18.1 +1.0
W18A                              IAmb    IAmb     15 27 19.3
      comp=Z,83nm,0.9s
W18A  Petrified Fore   70.06 325  P       P        15 27 18.8 +1.7
      baz=140,SNR=20
BATG  Bathurst New B   70.23   2  P       P        15 27 18.5 +0.9
BATG                              IAmb    IAmb     15 27 47.3
      comp=Z,141nm,1.1s
X16A  Lo Mia Camp, P   70.46 323  P       P        15 27 21.1 +1.6
X16A                              IAmb    IAmb     15 27 50.3
      comp=Z,135nm,1.2s
LMQ   La Malbaie       70.50 359  P       P        15 27 19.7 +0.6
LMQ                               IAmb    IAmb     15 27 48.7
      comp=Z,98nm,1.0s
113A  Mohawk Valley,   70.58 320  P       P        15 27 21.2 +1.3
S22A  4UR Ranch, Cre   70.64 328  P       P        15 27 22.0 +1.3
      baz=143,SNR=52
I37A  Lemond, Waseca   70.77 341  P       P        15 27 20.8 -0.1
E46A  Sault Ste Mari   70.78 348  P       P        15 27 20.6 -0.3
E46A                              IAmb    IAmb     15 27 23.2
      comp=Z,166nm,1.2s
Q24A  Divide           70.83 330  P       P        15 27 23.2 +1.4
      baz=144,SNR=62
Y14A  Wickenburg       70.98 322  P       P        15 27 23.8 +1.3
F42A  Maple Grove Fa   71.00 345  P       P        15 27 21.9 -0.4
MVCO  Mesa Verde       71.04 327  P       P        15 27 24.0 +1.0
MVCO                              IAmb    IAmb     15 27 53.4
      comp=Z,278nm,1.4s
MVCO  Mesa Verde       71.04 327  P       P        15 27 24.5 +1.5
      baz=141,SNR=75
MVCO                              S       S        15 36 34.4 +3.6
      baz=141
G40A  Rib Lake         71.04 344  P       P        15 27 22.0 -0.6
OGNE  Ogallala         71.12 334  P       P        15 27 23.8 +0.6
OGNE                              IAmb    IAmb     15 27 53.0
      comp=Z,127nm,0.9s
OGNE  Ogallala         71.12 334  P       P        15 27 24.4 +1.1
      baz=147,SNR=22
WUAZ  Wupatki          71.24 324  P       P        15 27 25.4 +1.2
WUAZ                              IAmb    IAmb     15 27 26.8
      comp=Z,87nm,0.8s
WUAZ  Wupatki          71.24 324  P       P        15 27 26.2 +2.0
      baz=139,SNR=92
K31A  O'Neill          71.30 337  P       P        15 27 24.5 +0.4
E43A  Lone Tree Farm   71.33 346  P       P        15 27 23.7 -0.5
E43A                              IAmb    IAmb     15 27 52.9
      comp=Z,87nm,0.9s
GLA   Glamis           71.40 320  P       P        15 27 25.9 +0.9
GLA                               pmax    pmax
      comp=Z,43nm,0.9s
GLA   Glamis           71.40 320  P       P        15 27 25.9 +0.9
GLA   Glamis           71.40 320  P       P        15 27 26.7 +1.6
      baz=135,SNR=7.7
ECSD  EROS Data Cent   71.53 339  P       P        15 27 25.1 -0.4
ECSD                              IAmb    IAmb     15 27 54.5
      comp=Z,167nm,1.2s
ECSD  EROS Data Cent   71.53 339  P       P        15 27 25.6 +0.1
      baz=153,SNR=55
ECSD                              S       S        15 36 34.3 -1.4
      baz=153
COWI  Conover          71.56 345  P       P        15 27 25.3 -0.4
COWI                              IAmb    IAmb     15 27 54.6
      comp=Z,92nm,1.0s
SPMN  Marine on St.    71.70 342  P       P        15 27 25.9 -0.6
SPMN                              IAmb    IAmb     15 27 28.1
      comp=Z,114nm,0.8s
SPMN  Marine on St.    71.70 342  P       P        15 27 26.2 -0.2
      baz=156,SNR=52
ISCO  Idaho Springs    71.72 331  P       P        15 27 27.7 +0.6
ISCO                              pmax    pmax
      comp=Z,62nm,0.9s
ISCO  Idaho Springs    71.72 331  P       P        15 27 27.7 +0.6
ISCO  Idaho Springs    71.72 331  P       P        15 27 28.4 +1.3
      baz=144,SNR=87
PV01  Paradox Valley   71.79 328  P       P        15 27 28.5 +0.9
RMX   La Rumorosa      71.83 319  P       P        15 27 28.4 +0.6
SMCO  Snowmass         71.84 329  P       P        15 27 29.1 +1.1
SMCO                              IAmb    IAmb     15 27 30.4
      comp=Z,82nm,0.8s
IKP   In-Ko-Pah, Jac   71.89 319  P       P        15 27 29.8 +1.8
      baz=134,SNR=22
PDMCI Parker Dam,Lak   71.89 321  P       P        15 27 29.5 +1.6
      baz=136,SNR=9.8
SWSC  Sam W. Stewart   71.91 319  P       P        15 27 29.6 +1.6
      baz=135,SNR=11
PV15  Paradox Valley   71.91 328  P       P        15 27 29.4 +1.2
PV15                              IAmb    IAmb     15 27 32.8
      comp=Z,113nm,1.0s
PV02  Paradox Valley   71.93 328  P       P        15 27 29.1 +0.8
PV13  Radium Mtn., P   71.93 327  P       P        15 27 29.1 +0.7
CBX   Cerro Bola       71.99 318  P       P        15 27 29.2 +0.6
PV05  Paradox Valley   72.01 327  P       P        15 27 29.1 +0.3
PV03  Paradox Valley   72.02 327  P       P        15 27 29.4 +0.6
PV18  Skein Mesa, Pa   72.05 327  P       P        15 27 29.7 +0.7
PV12  Saucer Basin,    72.05 328  P       P        15 27 29.7 +0.6
PV07  Paradox Valley   72.07 328  P       P        15 27 29.9 +0.7
PV11  David Mesa, Pa   72.07 328  P       P        15 27 29.6 +0.5
PV17  East Wray Mesa   72.10 327  P       P        15 27 30.1 +0.8
PV16  Nyswonger Mesa   72.10 327  P       P        15 27 29.7 +0.4
TKX   Tecate           72.13 319  P       P        15 27 29.9 +0.5
PV19  Morning Glory    72.13 327  P       P        15 27 30.2 +0.7
PV04  Paradox Valley   72.16 328  P       P        15 27 30.1 +0.5
BC3   Big Chuckawall   72.20 320  P       P        15 27 31.6 +1.7
      baz=135,SNR=60
PV14  Lion Creek, Pa   72.20 327  P       P        15 27 30.3 +0.4
PV22  Blue Mesa, Par   72.21 328  P       P        15 27 30.8 +0.8
PV22                              IAmb    IAmb     15 27 34.1
      comp=Z,114nm,1.2s
MONP2 Monument Peak    72.24 319  P       P        15 27 32.0 +1.7
      baz=134,SNR=22
BAR   Barrett          72.25 319  P       P        15 27 30.8 +0.7
PV23  Carpenter Ridg   72.26 328  P       P        15 27 30.8 +0.5
PV21  Cone Mtn., Par   72.32 328  P       P        15 27 31.2 +0.6
W13A  Hualapai Mount   72.32 322  P       P        15 27 31.9 +1.2
D41A  Chassel          72.33 346  P       P        15 27 30.1  0.0
IRM   Iron Mountain    72.37 321  P       P        15 27 32.6 +1.8
      baz=135,SNR=45
U15A  North Rim        72.42 324  P       P        15 27 33.1 +1.8
U15A                              IAmb    IAmb     15 28 02.5
      comp=Z,150nm,1.2s
F36A  Milaca           72.49 342  P       P        15 27 30.5 -0.7
F36A                              IAmb    IAmb     15 27 59.9
      comp=Z,133nm,1.0s
E38A  The Farm, Brul   72.63 343  P       P        15 27 31.4 -0.6
E38A                              IAmb    IAmb     15 27 34.5
      comp=Z,149nm,1.2s
109C  Camp Elliot, M   72.65 318  P       P        15 27 33.8 +1.4
      baz=134
N23A  Red Feather La   72.75 331  P       P        15 27 34.6 +1.4
      baz=144,SNR=51
BELC  Belle Mtn. Jos   72.76 320  P       P        15 27 35.0 +1.7
      baz=135,SNR=31
BELC                              S       SKiKP    15 36 54.7 -1.8
      baz=135
PFO   Pinyon Flats O   72.76 319d iP      P        15 27 35.1 +1.8
PFO                               pmax    pmax
      comp=Z,86nm,1.1s
PFO   Pinyon Flats O   72.76 319  P       P        15 27 34.0 +0.7
PFO   Pinyon Flats O   72.76 319  P       P        15 27 35.1 +1.8
      baz=134,SNR=32
DRLN  Deer Lake        72.83   7  P       P        15 27 33.4 +0.3
DRLN                              IAmb    IAmb     15 27 36.0
      comp=Z,131nm,1.0s
PHWY  Pilot Hill       72.87 332  P       P        15 27 34.7 +0.8
SUSD  Miller           72.95 338  P       P        15 27 33.7 -0.3
SUSD                              IAmb    IAmb     15 28 03.1
      comp=Z,206nm,1.0s
SUSD  Miller           72.95 338  P       P        15 27 34.1 +0.1
      baz=151,SNR=5.4
SUSD                              S       S        15 36 51.6 -0.3
      baz=151
GMRC  Granite Mounta   73.11 321  P       P        15 27 37.1 +1.8
      baz=135,SNR=77
KNB   Kanab            73.14 324  P       P        15 27 37.1 +1.7
KNB                               pmax    pmax
      comp=Z,114nm,1.0s
KNB   Kanab            73.14 324  P       P        15 27 37.1 +1.7
KNB                               IAmb    IAmb     15 27 38.4
      comp=Z,114nm,1.0s
PKCU  Pink Cliffs      73.18 325  P       P        15 27 36.7 +0.8
PKCU                              IAmb    IAmb     15 27 39.7
      comp=Z,148nm,1.5s
MURC  Murrieta         73.20 319  P       P        15 27 37.4 +1.7
      baz=134,SNR=15
MURC                              S       SKiKP    15 36 59.2 +2.2
      baz=134
O20A  White River Ci   73.20 329  P       P        15 27 36.7 +0.9
O20A                              IAmb    IAmb     15 27 39.8
      comp=Z,162nm,0.8s
O20A  White River Ci   73.20 329  P       P        15 27 37.4 +1.6
      baz=142,SNR=122
KOWA  Kowa             73.26  66  P       P        15 27 36.9 +0.5
      comp=Z,88nm,0.6s,baz=246,slow=5.9,SNR=210
KOWA                              pP      pP       15 28 04.5 -0.3
      comp=Z,78nm,1.0s,baz=240,slow=2.8,SNR=3.3
KOWA  Kowa             73.26  66  P       P        15 27 36.7 +0.3
KOWA                              IAmb    IAmb     15 27 38.6
      comp=Z,87nm,0.7s
KOWA  Kowa             73.26  66  P       P        15 27 36.9 +0.5
F33A  5 Mile Ranch,    73.30 340  P       P        15 27 35.5 -0.5
F33A                              IAmb    IAmb     15 27 36.3
      comp=Z,75nm,0.7s
LCMT  Little Creek M   73.36 324  P       P        15 27 36.4 -0.4
TBI   Tubuai           73.41 251 eS       S        15 36 59.9 +1.8
      comp=Z,1μm,27.5s
TBI   Tubuai           73.41 251 eLR      LR       15 50 27.2
      comp=Z,1μm,31.2s
BBRC  Big Bear Solar   73.49 320  P       P        15 27 39.7 +2.0
      baz=134,SNR=8.6
SRU   San Rafael Swe   73.52 327  P       P        15 27 38.4 +0.7
SRU                               pmax    pmax
      comp=Z,97nm,0.7s
SRU   San Rafael Swe   73.52 327  P       P        15 27 38.4 +0.7
SRU                               IAmb    IAmb     15 27 39.6
      comp=Z,97nm,0.7s
HEC   Hector,Ludlow    73.54 320  P       P        15 27 39.7 +2.0
      baz=135,SNR=33
MTPU  Mount Pierson    73.56 325  P       P        15 27 39.1 +1.0
SCI2  San Clemente I   73.60 318  P       P        15 27 39.6 +1.5
      baz=133
Q16A  Castle Valley    73.70 326  P       P        15 27 39.7 +1.0
SZCU  Shurtz Canyon    73.71 324  P       P        15 27 40.0 +1.1
TUQ   Turquoise Moun   73.73 321  P       P        15 27 40.6 +1.7
      baz=135,SNR=32
P18A  Preston Nutter   73.77 328  P       P        15 27 40.5 +1.2
P18A                              IAmb    IAmb     15 27 41.6
      comp=Z,99nm,0.8s
CIS   Catalina Islan   73.81 318  P       P        15 27 40.8 +1.6
      baz=133,SNR=9.7
CCUT  Cedar City       73.82 324  P       P        15 27 41.0 +1.5
CCUT                              IAmb    IAmb     15 27 42.6
      comp=Z,89nm,0.8s
EYMN  Ely              73.86 344  P       P        15 27 38.7 -0.4
EYMN                              IAmb    IAmb     15 28 08.0
      comp=Z,107nm,1.1s
EYMN  Ely              73.86 344  P       P        15 27 38.8 -0.4
      baz=158,SNR=20
P17A  Butcher Ranch,   73.90 327  P       P        15 27 40.9 +1.0
P17A                              IAmb    IAmb     15 27 41.9
      comp=Z,94nm,0.9s
MSU   Marysvale        73.91 326  P       P        15 27 41.5 +1.5
MSU   Marysvale        73.91 326  P       P        15 27 41.5 +1.5
BFSC  Mount Baldy Ra   73.92 319  P       P        15 27 41.5 +1.5
      baz=134,SNR=38
MVU   Marysvale        73.92 326  P       P        15 27 41.4 +1.3
FMP   Fort Macarthur   73.94 318  P       P        15 27 41.7 +1.7
      baz=133
RWWY  Rawlins          73.96 331  P       P        15 27 40.4 +0.1
RWWY                              IAmb    IAmb     15 27 42.6
      comp=Z,146nm,0.9s
RRX   Edison Barstow   73.96 320  P       P        15 27 42.2 +2.1
      baz=134
TMUT  Trail Mountain   74.00 327  P       P        15 27 41.3 +0.7
TCRU  Three Creeks R   74.12 325  P       P        15 27 42.4 +1.1
GSC   Goldstone, Bar   74.15 320  P       P        15 27 42.5 +1.2
GSC                               pmax    pmax
      comp=Z,47nm,0.8s
GSC   Goldstone, Bar   74.15 320  P       P        15 27 42.5 +1.2
GSC   Goldstone, Bar   74.15 320  P       P        15 27 43.2 +1.9
      baz=134,SNR=54
MWC   Mount Wilson     74.15 319  P       P        15 27 42.4 +0.9
MWC                               pmax    pmax
      comp=Z,62nm,0.9s
MWC   Mount Wilson     74.15 319  P       P        15 27 42.4 +0.9
RDMU  Red Mountain     74.17 329  P       P        15 27 42.2 +0.7
RDMU                              IAmb    IAmb     15 27 43.3
      comp=Z,95nm,0.7s
PASC  Pasadena Art C   74.19 319  P       P        15 27 42.2 +0.8
SBA   Scott Base       74.20 190  P       P        15 27 42.4 +1.5
SBA                               pmax    pmax
      comp=Z,136nm,1.3s
SBA   Scott Base       74.20 190  P       P        15 27 42.4 +1.5
SBA                               IAmb    IAmb     15 27 44.6
      comp=Z,136nm,1.2s
SHOC  Shoshone, Teco   74.26 321  P       P        15 27 43.4 +1.5
      baz=135,SNR=8.1
DECC  Green Verdugo    74.33 319  P       P        15 27 44.1 +1.7
      baz=133,SNR=19
SNCC  San Nicolas Is   74.39 317  P       P        15 27 42.4 -0.2
SNCC  San Nicolas Is   74.39 317  P       P        15 27 44.1 +1.4
      baz=132
K22A  Casper           74.43 332  P       P        15 27 43.1 +0.3
K22A                              IAmb    IAmb     15 27 46.7
      comp=Z,109nm,1.0s
K22A  Casper           74.43 332  P       P        15 27 44.2 +1.4
      baz=144,SNR=34
VAH   Vaihoa           74.46 260 eP       P        15 27 45.7 +2.3
      comp=Z,150nm,1.1s
VAH                              epP      pP       15 28 13.7 +1.9
      comp=Z,148nm,1.0s
EDW2  Edwards Air Fo   74.56 319  P       P        15 27 44.9 +1.3
      baz=133,SNR=37
RSSD  Black Hills      74.59 334  P       P        15 27 44.3 +0.5
RSSD                              pmax    pmax
      comp=Z,125nm,0.7s
RSSD  Black Hills      74.59 334  P       P        15 27 44.3 +0.5
RSSD                              IAmb    IAmb     15 27 47.4
      comp=Z,125nm,0.7s
RSSD  Black Hills      74.59 334  P       P        15 27 45.0 +1.1
      baz=146
PRN   Pahroc Range     74.64 323  P       P        15 27 45.2 +1.1
QSM   Queen of Sheba   74.64 321  P       P        15 27 45.0 +0.9
D32A  Dogwood Acres,   74.68 340  P       P        15 27 44.0  0.0
GWY   Greenwater Val   74.69 321  P       P        15 27 45.3 +0.8
SYO   Syowa Base       74.69 159⇓iP       P        15 27 45.0 +1.2
SYO   Syowa Base       74.69 159⇓iPcP     PcP      15 27 54.0 -3.5
MPU   Maple Canyon     74.76 327  P       P        15 27 45.2 +0.3
PMOR  Pomariorio Ree   74.78 260 eP       P        15 27 47.5 +2.2
      comp=Z,208nm,1.2s
PMOR                             epP      pP       15 28 15.6 +1.9
      comp=Z,179nm,1.0s
LRMC  Laurel Mtn Rad   74.78 320  P       P        15 27 46.6 +1.6
      baz=134,SNR=32
PSUT  Pine Spring      74.81 325  P       P        15 27 46.5 +1.3
PSUT                              IAmb    IAmb     15 27 49.0
      comp=Z,71nm,0.7s
OSI   Osito Audit: C   74.81 319  P       P        15 27 46.1 +1.0
OSI   Osito Audit: C   74.81 319  P       P        15 27 46.6 +1.5
      baz=133,SNR=7.7
B35A  Bob, Littlefor   74.83 343  P       P        15 27 44.2 -0.6
B35A                              IAmb    IAmb     15 27 46.6
      comp=Z,84nm,0.8s
NLU   North Lily Min   74.94 327  P       P        15 27 46.2 +0.3
SCZ2  Santa Cruz Isl   74.96 318  P       P        15 27 47.4 +1.5
      baz=132,SNR=7.6
FURC  Furnace Creek,   74.99 321  P       P        15 27 48.0 +2.1
      baz=135,SNR=67
JLU   Jordanelle       75.11 327  P       P        15 27 47.5 +0.5
JLU                               IAmb    IAmb     15 27 49.1
      comp=Z,74nm,0.7s
VNDA  Vanda            75.22 190  P       P        15 27 48.2 +1.5
      comp=Z,36nm,0.9s,baz=135,slow=5.3,SNR=150
VNDA                              PKPPKP  P'P'df   15 55 12.2 +1.1
      comp=Z,2.2nm,1.1s,baz=289,slow=4.4,SNR=4.0
VNDA                              LR      LR       15 59 53.4
      comp=Z,354nm,20.4s,baz=146,slow=35
VNDA  Vanda            75.22 190  P       P        15 27 47.5 +0.7
ARVC  Arvin            75.23 319  P       P        15 27 49.1 +1.6
      baz=133,SNR=7.8
SBC   Santa Barbara    75.30 318  P       P        15 27 49.4 +1.6
      baz=132
CTU   Camp Tracy       75.33 327  P       P        15 27 48.1  0.0
AGMN  Agassiz Nation   75.37 341  P       P        15 27 47.4 -0.5
AGMN  Agassiz Nation   75.37 341  P       P        15 27 48.1 +0.1
      baz=154,SNR=38
ISA   Isabella, Lake   75.38 320  P       P        15 27 49.0 +0.6
ISA                               pmax    pmax
      comp=Z,76nm,0.9s
ISA   Isabella, Lake   75.38 320  P       P        15 27 49.0 +0.6
ISA   Isabella, Lake   75.38 320  P       P        15 27 50.2 +1.8
      baz=133,SNR=99
PAE   Paea             75.39 257 eP       P        15 27 51.0 +2.2
      comp=Z,21nm,1.0s
PAE                              epP      pP       15 28 17.3 +0.1
      comp=Z,24nm,1.0s
PPT2  Papeete2         75.41 257 eP       P        15 27 51.3 +2.3
      comp=Z,60nm,1.2s
PPT2                             epP      pP       15 28 17.4  0.0
      comp=Z,73nm,1.2s
PPT2                             eS       S        15 37 21.7 +1.0
      comp=Z,2μm,26.5s
PPT2  Papeete2         75.41 257 eLR      LR       15 51 21.6
      comp=Z,6μm,33.0s
E28A  Huff             75.41 338  P       P        15 27 48.7 +0.4
PPT   Papeete          75.41 257  P       P        15 27 50.7 +1.7
      comp=Z,34nm,0.7s,baz=266,slow=15,SNR=4.0
PPT                               LR      LR       15 54 29.7
      comp=Z,593nm,18.6s,baz=82,slow=30
TCUT  Toone Canyon     75.48 328  P       P        15 27 49.6 +0.5
TCUT                              IAmb    IAmb     15 27 53.3
      comp=Z,72nm,0.7s
DUG   Dugway, Tooele   75.49 326  P       P        15 27 50.3 +1.3
DUG                               pmax    pmax
      comp=Z,61nm,0.8s
DUG   Dugway, Tooele   75.49 326  P       P        15 27 50.3 +1.3
DUG   Dugway, Tooele   75.49 326  P       P        15 27 50.6 +1.6
      baz=138,SNR=95
R11A  Troy Canyon, C   75.61 323  P       P        15 27 51.1 +1.3
R11A  Troy Canyon, C   75.61 323  P       P        15 27 51.8 +2.0
      baz=136,SNR=91
GRAC  Grapevine Rang   75.65 321  P       P        15 27 51.9 +2.0
      baz=134,SNR=6.7
PKM   Mcpherson Peak   75.66 318  P       P        15 27 52.0 +1.8
      baz=132,SNR=35
CWC   Cottonwood Cre   75.68 321  P       P        15 27 52.0 +1.8
      baz=134
VES   Vestal, Richgr   75.86 320  P       P        15 27 52.7 +1.7
      baz=133,SNR=53
BW06  Boulder Array    75.88 330  P       P        15 27 51.5 +0.3
BW06  Boulder Array    75.88 330  P       P        15 27 52.0 +0.7
      baz=141,SNR=60
PD31  Pinedale Array   75.88 330  P       P        15 27 51.5 +0.3
PDAR  Pinedale Array   75.88 330  P       P        15 27 51.9 +0.7
      comp=Z,22nm,0.5s,baz=133,slow=7.3,SNR=175
PDAR                              pP      pP       15 28 18.8 -0.9
      comp=Z,17nm,0.9s,baz=144,slow=8.4,SNR=2.6
PDAR                              LR      LR       16 04 31.4
      comp=Z,240nm,19.8s,baz=146,slow=38
PDAR  Pinedale Array   75.88 330  P       P        15 27 51.6 +0.3
LCH   Last Change Ra   75.98 321  P       P        15 27 52.5 +0.6
SMMC  Simmler          76.06 319  P       P        15 27 54.3 +2.1
      baz=132,SNR=45
SPUT  South Promonto   76.14 327  P       P        15 27 53.4 +0.7
SPUT                              IAmb    IAmb     15 27 54.6
      comp=Z,94nm,0.7s
MDND  Maddock          76.14 339  P       P        15 27 52.9 +0.5
MDND  Maddock          76.14 339  P       P        15 27 53.4 +1.0
      baz=151,SNR=47
BGU   Big Grassy Mou   76.15 327  P       P        15 27 53.1 +0.4
TIN   Tinemaha, Big    76.19 321  P       P        15 27 55.0 +2.0
      baz=134,SNR=21
TPH   Tonopah          76.32 322  P       P        15 27 54.9 +1.1
TPH                               pmax    pmax
      comp=Z,225nm,0.9s
TPH   Tonopah          76.32 322  P       P        15 27 54.9 +1.1
VOG   Valley Oaks Go   76.37 320  P       P        15 27 54.4 +0.6
      baz=133
PAGB  Antelope Grade   76.49 319  P       P        15 27 55.6 +1.0
PAGB                              IAmb    IAmb     15 27 59.2
      comp=Z,102nm,1.0s
AHID  Auburn Hatcher   76.59 329  P       P        15 27 56.1 +0.8
HVU   Hansel Valley    76.66 327  P       P        15 27 56.2 +0.6
HVU                               pmax    pmax
      comp=Z,125nm,1.2s
HVU   Hansel Valley    76.66 327  P       P        15 27 56.2 +0.6
HVU                               IAmb    IAmb     15 27 58.6
      comp=Z,125nm,1.2s
MLAC  Mammoth, Mammo76.94 321     P       P        15 27 59.2 +1.9
      baz=133,SNR=12
REDW  Red Top Meadow   76.94 330  P       P        15 27 57.8 +0.6
REDW                              IAmb    IAmb     15 27 59.2
      comp=Z,92nm,0.8s
SNOW  Snow King Moun   76.97 330  P       P        15 27 58.3 +0.8
LOHW  Long Hollow      77.02 330  P       P        15 27 58.3 +0.7
LOHW                              IAmb    IAmb     15 28 01.0
      comp=Z,94nm,0.6s
MDPB  Devils Postpil   77.08 321  P       P        15 27 58.9 +0.7
TPAW  Teton Pass       77.08 330  P       P        15 27 58.9 +0.8
TPAW                              IAmb    IAmb     15 28 00.7
      comp=Z,86nm,0.8s
NV11  Mina Array Sit   77.10 322  P       P        15 27 58.8 +0.7
ULM   Lac du Bonnet    77.14 342  P       P        15 27 57.8  0.0
      comp=Z,125nm,0.5s,baz=156,slow=5.9,SNR=345
ULM                               pP      pP       15 28 25.6 -0.8
      comp=Z,55nm,0.9s,baz=159,slow=6.1,SNR=3.2
ULM                               LR      LR       16 04 55.6
      comp=Z,590nm,20.3s,baz=138,slow=38
ULM   Lac du Bonnet    77.14 342  P       P        15 27 57.6 -0.3
ULM                               IAmb    IAmb     15 27 59.8
      comp=Z,130nm,0.6s
PMPB  Monarch Peak     77.15 319  P       P        15 27 59.2 +0.9
PMPB                              IAmb    IAmb     15 28 02.9
      comp=Z,104nm,1.0s
ELK   Elko             77.15 325  P       P        15 27 59.2 +0.7
ELK                               pmax    pmax
      comp=Z,49nm,0.9s
ELK   Elko             77.15 325  P       P        15 27 59.2 +0.7
LHV   Little Huntoon   77.17 322  P       P        15 27 59.6 +1.3
NVAR  Mina Array Bea   77.18 322  P       P        15 28 00.1 +1.4
      comp=Z,27nm,0.9s,baz=151,slow=6.4,SNR=116
NVAR                              pP      pP       15 28 27.6 +0.3
      comp=Z,38nm,1.1s,baz=93,slow=14,SNR=6.3
NVAR                              PKPPKP  P'P'df   15 55 12.8 +6.3
      comp=Z,1.0nm,0.8s,baz=200,slow=2.0,SNR=6.1
NVAR                              LR      LR       16 01 35.7
      comp=Z,253nm,19.7s,baz=126,slow=35
NVAR  Mina Array Bea   77.18 322  P       P        15 27 59.5 +0.8
MOOW  Moose Ponds      77.19 330  P       P        15 27 59.3 +0.7
FXWY  Fox Creek        77.23 330  P       P        15 27 59.5 +0.7
SUR   Sutherland       77.27 120  P       P        15 28 01.0 +1.6
      comp=Z,126nm,0.9s,baz=238,slow=5.7,SNR=53
SUR   Sutherland       77.27 120  P       P        15 28 00.1 +0.6
SUR                               IAmb    IAmb     15 28 02.1
      comp=Z,128nm,0.8s
SUR   Sutherland       77.27 120  P       P        15 28 01.6 +2.1
FLWY  Flagg Ranch      77.42 330  P       P        15 28 01.1 +1.2
FLWY                              IAmb    IAmb     15 28 02.4
      comp=Z,151nm,0.8s
RYN   Ryan             77.44 322  P       P        15 28 00.9 +0.9
TORD  Torodi Ar. Bea   77.48  70  P       P        15 28 01.0 +0.4
      comp=Z,238nm,0.5s,baz=258,slow=5.2,SNR=2392
TORD                              pP      pP       15 28 28.7 -0.5
      comp=Z,225nm,1.2s,baz=256,slow=5.5,SNR=3.7
TORD                              S       S        15 37 36.8 -6.4
      comp=Z,2.4nm,1.0s,baz=223,slow=3.3,SNR=3.5
TORD                              LR      LR       16 02 28.9
      comp=Z,1μm,18.7s,baz=245,slow=36
TORD  Torodi Ar. Bea   77.48  70  P       P        15 28 00.8 +0.2
KVN   Kaiserville      77.50 323  P       P        15 28 01.2 +0.8
KVN                               pmax    pmax
      comp=Z,78nm,1.0s
KVN   Kaiserville      77.50 323  P       P        15 28 01.2 +0.8
LAO   LASA Array       77.58 334  P       P        15 28 01.2 +0.7
LAO                               IAmb    IAmb     15 28 03.6
      comp=Z,115nm,0.8s
LAO   LASA Array       77.58 334  P       P        15 28 01.6 +1.1
      baz=145,SNR=45
RLMT  Red Lodge        77.59 332  P       P        15 28 01.5 +0.7
RLMT                              IAmb    IAmb     15 28 02.9
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      comp=Z,99nm,0.7s
RLMT  Red Lodge         77.59 332 P       P       15 28 02.3 +1.5
      baz=142,SNR=52
H17A  Grant Village     77.61 330 P       P       15 28 01.9 +0.9
H17A  Grant Village     77.61 330 P       P       15 28 03.3 +2.3
      baz=141,SNR=13
LKWY  Lake              77.66 331 P       P       15 28 03.2 +1.9
LKWY                              pmax    pmax
      comp=Z,88nm,0.9s
LKWY  Lake              77.66 331 P       P       15 28 03.2 +1.9
LKWY                              IAmb    IAmb    15 28 32.5
      comp=Z,88nm,0.9s
YMP   Mirror Lake Pl    77.69 331 P       P       15 28 02.9 +1.4
YMP                               IAmb    IAmb    15 28 13.4
      comp=Z,84nm,0.8s
SCHQ  Schefferville     77.78   1 P       P       15 28 01.9 +0.5
      comp=Z,46nm,0.6s,baz=193,slow=4.6,SNR=72
SCHQ                              pP      pP      15 28 29.4  -0.5
      comp=Z,47nm,0.9s,baz=78,slow=2.1,SNR=4.6
SCHQ                              LR      LR      16 04 53.2
      comp=Z,266nm,19.5s,baz=186,slow=38
SCHQ  Schefferville     77.78   1 P       P       15 28 01.6 +0.3
YUF   Upper Falls       77.82 331 P       P       15 28 01.7  -0.5
SAO   San Andreas Ge    77.90 319 P       P       15 28 02.6 +0.1
SAO                               pmax    pmax
      comp=Z,36nm,0.9s
SAO   San Andreas Ge    77.90 319 P       P       15 28 02.5 +0.1
YNR   Norris Junctio    77.90 331 P       P       15 28 03.1 +0.5
BMN   Battle Mountai    77.98 324 P       P       15 28 03.0   0.0
BMN                               pmax    pmax
      comp=Z,24nm,0.8s
BMN   Battle Mountai    77.98 324 P       P       15 28 03.0   0.0
YMR   Madison River     78.00 330 P       P       15 28 04.3 +1.2
YMR                               IAmb    IAmb    15 28 05.9
      comp=Z,143nm,1.0s
YHH   Holmes Hill       78.04 331 P       P       15 28 04.8 +1.4
YHH                               IAmb    IAmb    15 28 06.7
      comp=Z,249nm,1.3s
YERR  Yerington         78.09 322 P       P       15 28 04.1 +0.4
CMB   Columbia Colle    78.11 320 P       P       15 28 04.1 +0.5
CMB                               pmax    pmax
      comp=Z,25nm,1.2s
CMB   Columbia Colle    78.11 320 P       P       15 28 04.1 +0.5
YHB   Horse Butte       78.16 330 P       P       15 28 04.9 +0.9
YHB                               IAmb    IAmb    15 28 07.9
      comp=Z,113nm,0.8s
DGMT  Dagmar            78.28 337 P       P       15 28 05.4 +1.1
DGMT  Dagmar            78.28 337 P       P       15 28 05.7 +1.4
      baz=147,SNR=65
GCMT  Greycliff         78.29 332 P       P       15 28 05.3 +0.7
QLMT  Earthquake Lak    78.33 330 P       P       15 28 06.0 +1.1
PNTR  Pine Nut          78.37 322 P       P       15 28 06.6 +1.3
PNTR                              IAmb    IAmb    15 28 08.3
      comp=Z,97nm,0.8s
TTIG  Tnine Tigouga,    78.52  50 P       P       15 28 09.0 +2.8
VCNR  Virginia City     78.54 322 P       P       15 28 06.8 +0.6
PAHR  Pah Rah Range     78.67 322 P       P       15 28 08.2 +1.4
PAHR                              IAmb    IAmb    15 28 09.3
      comp=Z,138nm,0.8s
MPK   Martis Peak       78.75 322 P       P       15 28 09.0 +1.5
HLID  Hailey            78.79 328 P       P       15 28 08.9 +1.5
HLID                              IAmb    IAmb    15 28 10.5
      comp=Z,115nm,0.8s
HLID  Hailey            78.79 328 P       P       15 28 09.4 +2.0
      baz=138,SNR=210
BCYI  Bear Canyon       78.86 329 P       P       15 28 09.1 +1.3
MCMT  McKenzie Canyo    78.98 329 P       P       15 28 10.1 +1.5
BOZ   Bozeman (W)       79.01 331 P       P       15 28 08.9 +0.4
BOZ                               pmax    pmax
      comp=Z,38nm,1.0s
BOZ   Bozeman (W)       79.01 331 P       P       15 28 08.9 +0.4
BOZ   Bozeman (W)       79.01 331 P       P       15 28 09.7 +1.2
      baz=140,SNR=24
TSUM  Tsumeb            79.06 106 P       P       15 28 10.8 +1.3
      comp=Z,199nm,0.8s,baz=229,slow=5.2,SNR=158
TSUM                              pP      pP      15 28 38.6 +0.5
      comp=Z,48nm,1.1s,baz=226,slow=7.0,SNR=2.0
TSUM  Tsumeb            79.06 106 P       P       15 28 10.0 +0.5
DLMT  Dillon            79.27 330 P       P       15 28 10.9 +1.0
DLMT                              IAmb    IAmb    15 28 12.9
      comp=Z,153nm,1.4s
BEKR  Beckworth         79.33 322 P       P       15 28 11.1 +0.6
MFID  Camas Ranch       79.39 327 P       P       15 28 11.5 +0.9
MFID                              IAmb    IAmb    15 28 15.1
      comp=Z,150nm,1.4s
LRM   Limekiln Ridge    79.55 330 P       P       15 28 12.4 +0.8
MCCM  Marconi Confer    79.66 319 P       P       15 28 12.7 +0.7
MCCM                              IAmb    IAmb    15 28 14.6
      comp=Z,112nm,1.1s
ORV   Oroville          79.77 321 P       P       15 28 13.5 +0.9
ORV                               pmax    pmax
      comp=Z,116nm,1.1s
ORV   Oroville          79.77 321 P       P       15 28 13.5 +0.9
ORV                               IAmb    IAmb    15 28 14.9
      comp=Z,116nm,1.1s
OUZM  OUZ               79.91  50 P       P       15 28 15.0 +1.3
HRY   Holter Researc    79.95 331 P       P       15 28 14.6 +1.0
EGMT  Eagleton          80.08 333 P       P       15 28 14.5 +0.3
EGMT                              IAmb    IAmb    15 28 17.6
      comp=Z,185nm,1.4s
EGMT  Eagleton          80.08 333 P       P       15 28 14.9 +0.7
      baz=142,SNR=38
WVOR  Wild Horse Val    80.14 325 P       P       15 28 14.6  -0.1
WVOR                              pmax    pmax
      comp=Z,21nm,0.9s
WVOR  Wild Horse Val    80.14 325 P       P       15 28 14.6  -0.1
ZGR   Zagora            80.28  51 P       P       15 28 17.0 +1.3
HOPS  Hopland Field     80.33 320 P       P       15 28 16.1 +0.5
O03E  Paynes Creek      80.44 321 P       P       15 28 16.4 +0.1
      baz=132,SNR=26
MOD   Modoc Plateau     80.67 323 P       P       15 28 18.0 +0.4
PLID  Pearl Lake        80.68 328 P       P       15 28 18.4 +0.7
PLID                              IAmb    IAmb    15 28 19.6
      comp=Z,122nm,0.8s
TZRR  Tazzarine         80.68  51 P       P       15 28 20.0 +2.1
J08A  Circle Bar Ran    80.70 325 P       P       15 28 18.4 +0.7
J08A                              IAmb    IAmb    15 28 21.9
      comp=Z,238nm,1.5s
O02D  Mt. Diablo Mer    80.93 321 P       P       15 28 19.5 +0.6
      baz=131,SNR=11
MSO   Missoula          80.99 330 P       P       15 28 20.0 +0.8
MSO   Missoula          80.99 330 P       P       15 28 20.6 +1.5
      baz=138,SNR=38
WDC   Whiskeytown Da    81.05 321 P       P       15 28 19.1  -0.4
WDC                               pmax    pmax
      comp=Z,45nm,0.8s
WDC   Whiskeytown Da    81.05 321 P       P       15 28 19.1  -0.4
KCPM  Cahto Peak        81.08 320 P       P       15 28 19.7  -0.1
BMO   Blue Mountains    81.16 327 P       P       15 28 20.7 +0.6
BMO                               pmax    pmax
      comp=Z,129nm,1.3s
BMO   Blue Mountains    81.16 327 P       P       15 28 20.6 +0.6
BMO                               IAmb    IAmb    15 28 22.6
      comp=Z,129nm,1.3s
N02D  Trinity Center    81.40 322 P       P       15 28 21.6 +0.2
      baz=131,SNR=26
M04C  Macdoel           81.44 323 P       P       15 28 22.8 +1.1
      baz=132,SNR=24
KMRM  Mail Ridge        81.49 320 P       P       15 28 22.6 +0.7
KMRM                              IAmb    IAmb    15 28 24.3
      comp=Z,91nm,0.9s
K05A  Summer Lake       81.55 324 P       P       15 28 23.3 +1.0
K05A                              IAmb    IAmb    15 28 24.7
      comp=Z,135nm,1.0s
I07A  Izee              81.74 325 P       P       15 28 24.0 +0.9
M02C  Callahan          81.76 322 P       P       15 28 23.9 +0.6
      baz=131,SNR=7.4
JTMT  Jette             81.83 331 P       P       15 28 24.6 +1.1
JTMT                              IAmb    IAmb    15 28 25.5
      comp=Z,85nm,0.7s
YBH   Yreka Blue Hor    81.90 322 P       P       15 28 23.7  -0.3
YBH                               pmax    pmax
      comp=Z,21nm,0.9s
YBH   Yreka Blue Hor    81.90 322 P       P       15 28 23.7  -0.3
F10A  Beach Ranch, E    81.92 328 P       P       15 28 24.6 +0.5
F10A                              IAmb    IAmb    15 28 27.2
      comp=Z,109nm,0.9s
KHMM  Horse Mountain    81.93 321 P       P       15 28 24.5 +0.3
K04D  Chiloquin, OR     81.96 323 P       P       15 28 25.6 +1.2
      baz=132
L04D  Klamath Falls     81.99 323 P       P       15 28 25.1 +0.5
      baz=131,SNR=7.9
J05D  Fort Rock, OR     82.11 324 P       P       15 28 26.6 +1.4
      baz=132,SNR=18
PFVI  Vila Bisbo        82.15  44 eP      P       15 28 27.1 +1.8
      comp=Z,238nm,1.7s
BOSA  Boshof            82.18 118 P       P       15 28 26.7 +0.7
      comp=Z,102nm,1.0s,baz=257,slow=4.6,SNR=62
BOSA                              PKKPbc  PKKPbc  15 46 53.0  -0.2
      comp=Z,4.5nm,1.1s,baz=200,slow=16,SNR=3.2
BOSA                              LR      LR      16 01 30.5
      comp=Z,704nm,20.6s,baz=236,slow=33
BOSA  Boshof            82.18 118 P       P       15 28 25.9  -0.1
BOSA                              IAmb    IAmb    15 28 27.9
      comp=Z,172nm,1.1s
G08A  Pilot Rock        82.30 327 P       P       15 28 26.8 +0.8
PINE  Pine Mountain     82.30 325 P       P       15 28 27.2 +1.0
PINE                              IAmb    IAmb    15 28 28.6
      comp=Z,121nm,0.8s
CZD   Col de Zad        82.31  49 P       P       15 28 28.6 +2.0
MORF  Marmelete         82.36  44 eP      P       15 28 26.8 +0.3
MORF                              IAmb    IAmb    15 28 32.6
      comp=Z,430nm,2.0s
MORF  Marmelete         82.36  44 eP      P       15 28 26.8 +0.3
MORF  Marmelete         82.36  44 eP      P       15 28 28.0 +1.5
      comp=Z,177nm,1.6s
KRMB  Red Mountain      82.45 321 P       P       15 28 27.9 +1.0
PTEO  Sao Teotonio      82.46  44 eP      P       15 28 29.1 +2.2
      comp=Z,174nm,1.1s
MDT   Midelt            82.49  50 P       P       15 28 28.9 +1.6
MAW   Mawson            82.51 163 P       P       15 28 27.9 +1.2
      comp=Z,271nm,0.8s,baz=215,slow=6.2,SNR=745
MAW                               PKKPbc  PKKPbc  15 46 51.7  -1.7
      comp=Z,4.7nm,0.7s,baz=64,slow=3.7,SNR=10.0
MAW                               LR      LR      16 06 53.9
      comp=Z,301nm,19.5s,baz=216,slow=37
MAW   Mawson            82.51 163 P       P       15 28 27.9 +1.2
MAW                               IAmb    IAmb    15 28 29.0
      comp=Z,83nm,1.0s
J04D  Umpqua Nationa    82.56 324 P       P       15 28 28.7 +1.1
      baz=132,SNR=10
HUMO  Hull Mountain     82.61 323 P       P       15 28 27.7 +0.1
WALA  Waterton Lakes    82.65 332 P       P       15 28 28.6 +0.9
WALA                              IAmb    IAmb    15 28 30.8
      comp=Z,100nm,0.8s
L02E  Cave Junction     82.68 322 P       P       15 28 29.3 +1.3
      baz=130,SNR=5.4
PBDV  Barranco-do-Ve    82.79  44 eP      P       15 28 30.5 +1.9
FFC   Flin Flon         82.85 341 P       P       15 28 29.0 +0.5
FFC                               pmax    pmax
      comp=Z,41nm,1.0s
FFC   Flin Flon         82.85 341 P       P       15 28 29.0 +0.5
I05D  Terrebonne, OR    82.88 325 P       P       15 28 30.6 +1.6
      baz=132,SNR=42
PNCL  Nicolau / Gran    82.92  43 eP      P       15 28 30.7 +1.4
      comp=Z,78nm,2.6s
PNCL                              epP     pP      15 28 59.3 +1.3
PCVE  Castro Verde      82.95  44 eP      P       15 28 30.6 +1.2
      comp=Z,145nm,1.5s
MESJ  Messejana         82.95  44 eP      P       15 28 29.8 +0.3
MESJ                              IAmb    IAmb    15 28 33.7
      comp=Z,114nm,1.1s
MESJ                              eS      S       15 38 40.6 +1.1
MESJ  Messejana         82.95  44 eP      P       15 28 29.7 +0.3
MESJ                              eS      S       15 38 40.6 +1.1
MESJ  Messejana         82.95  44 eP      P       15 28 30.9 +1.4
      comp=Z,165nm,1.5s
MESJ                              epP     pP      15 29 00.5 +2.3
PMAFR Mafra             82.96  42 eP      P       15 28 30.8 +1.3
PVAQ  Vaqueiros         83.02  44 eP      P       15 28 31.2 +1.4
      comp=Z,152nm,1.6s
K02D  Willamette Mer    83.07 322 P       P       15 28 31.5 +1.4
      baz=130,SNR=8.9
I04A  Tendick Farm,     83.09 324 P       P       15 28 30.6 +0.5
      baz=131,SNR=6.1
DBO   Dodson Butte      83.11 323 P       P       15 28 31.2 +1.0
DBO                               IAmb    IAmb    15 28 32.2
      comp=Z,82nm,1.1s
E08A  Dider Farm, El    83.18 327 P       P       15 28 31.3 +0.9
F07A  Phinny Hill Vi    83.21 327 P       P       15 28 31.3 +0.8
PBEJ  Beja              83.29  44 eP      P       15 28 32.6 +1.4
PBEJ                              epP     pP      15 29 02.3 +2.4
HAWA  Hanford           83.35 327 P       P       15 28 32.0 +0.7
HAWA                              IAmb    IAmb    15 28 33.2
      comp=Z,70nm,0.8s
G05D  Wamic, OR         83.48 325 P       P       15 28 33.7 +1.7
      baz=132,SNR=8.0
NEW   Newport           83.51 330 P       P       15 28 31.7  -0.4
NEW                               pmax    pmax
      comp=Z,34nm,1.1s
NEW   Newport           83.51 330 P       P       15 28 31.7  -0.4
NEW   Newport           83.51 330 P       P       15 28 32.4 +0.2
      baz=136,SNR=15
D08A  Wollman Farm,     83.51 328 P       P       15 28 32.9 +0.7
J01E  Myrtle Point      83.52 323 P       P       15 28 33.9 +1.7
      baz=130
I03D  Drain, OR         83.54 323 P       P       15 28 33.4 +1.1
      baz=131
KEBM  Edson Butte       83.56 322 P       P       15 28 33.0 +0.5
KEBM                              IAmb    IAmb    15 28 36.8
      comp=Z,208nm,1.2s
H04A  Detroit Lake      83.56 325 P       P       15 28 32.7 +0.3
PSBE  So Bento          83.59  42 eP      P       15 28 34.2 +1.4
      comp=Z,149nm,1.5s
PSBE                              epP     pP      15 29 02.8 +1.3
BUCK  Buck Mountain     83.67 324 P       P       15 28 33.1   0.0
BUCK                              IAmb    IAmb    15 28 34.7
      comp=Z,125nm,0.8s
PMTG  Montargil         83.68  43 eP      P       15 28 34.6 +1.4
      comp=Z,95nm,1.5s
C09A  Chrisman Ranch    83.72 329 P       P       15 28 33.6 +0.5
H04D  Lebanon           83.75 324 P       P       15 28 34.2 +0.8
      baz=131
LBTB  Lobatse           83.83 114 PKKPbc  PKKPbc  15 46 50.1 +0.8
      comp=Z,2.9nm,0.7s,baz=180,slow=1.0,SNR=4.2
LBTB  Lobatse           83.83 114 P       P       15 28 34.3  -0.2
LBTB                              pmax    pmax
      comp=Z,154nm,1.0s
LBTB  Lobatse           83.83 114 P       P       15 28 34.3  -0.2
LBTB                              IAmb    IAmb    15 28 36.5
      comp=Z,154nm,0.9s
PBAR  Barrancos         83.91  44 eP      P       15 28 35.7 +1.4
      comp=Z,59nm,2.0s
PBAR                              epP     pP      15 29 05.0 +1.9
PESTR Estremoz          83.96  43 eP      P       15 28 36.2 +1.6
      comp=Z,71nm,1.6s
PESTR Estremoz          83.96  43 P       P       15 28 35.5 +0.9
F05D  White Salmon      83.98 326 P       P       15 28 35.8 +1.2
      baz=132
PCAS  Casmilo, Conde    84.10  42 eP      P       15 28 36.6 +1.3
      comp=Z,93nm,1.4s
PCAS                              epP     pP      15 29 05.9 +1.8
COI   Coimbra           84.25  42 P       P       15 28 36.6 +0.6
COI                               pmax    pmax
      comp=Z,159nm,1.5s
COI   Coimbra           84.25  42 eP      P       15 28 37.4 +1.4
      comp=Z,130nm,1.8s
COI   Coimbra           84.25  42 P       P       15 28 36.6 +0.6
COI                               IAmb    IAmb    15 28 41.8
      comp=Z,159nm,1.4s
PMRV  Marv??o           84.42  43 eP      P       15 28 37.8 +0.9
      comp=Z,67nm,1.4s
FCC   Fort Churchill    84.45 347 P       P       15 28 37.0 +0.5
FCC                               pmax    pmax
      comp=Z,82nm,0.6s
FCC   Fort Churchill    84.45 347 P       P       15 28 37.0 +0.5
FCC                               IAmb    IAmb    15 28 37.8
      comp=Z,82nm,0.6s
FIGM  Figuig            84.50  52 P       P       15 28 39.2 +1.5
F04A  Amboy             84.51 325 P       P       15 28 37.3 +0.1
F04A                              IAmb    IAmb    15 28 39.2
      comp=Z,124nm,1.2s
LTY   Liberty           84.51 327 P       P       15 28 37.3   0.0
LTY                               IAmb    IAmb    15 28 40.1
      comp=Z,51nm,0.7s
PCBR  Castelo Branco    84.61  43 eP      P       15 28 39.1 +1.3
      comp=Z,54nm,1.6s
PCBR                              epP     pP      15 29 08.2 +1.5
B08A  Colville Reser    84.62 329 P       P       15 28 37.5  -0.3
PVIS  Viseu             84.87  42 eP      P       15 28 40.3 +1.1
      comp=Z,96nm,1.7s
MTE   Manteigas         84.89  42 eP      P       15 28 40.5 +1.1
      comp=Z,104nm,1.2s
MTE                               epP     pP      15 29 09.3 +1.1
MTE   Manteigas         84.89  42 P       P       15 28 39.1  -0.3
MTE                               IAmb    IAmb    15 28 42.8
      comp=Z,85nm,1.0s
E04D  Cinebar           85.00 326 P       P       15 28 40.5 +0.8
      baz=132
D05A  Enumclaw          85.13 327 P       P       15 28 40.7 +0.4
D05A                              IAmb    IAmb    15 28 42.0
      comp=Z,94nm,0.9s
PVRL  Vila Real         85.31  41 eP      P       15 28 42.1 +0.7
      comp=Z,83nm,1.4s
PVRL                              epP     pP      15 29 11.7 +1.4
POLO  Lamas de Olo      85.32  41 eP      P       15 28 42.3 +0.8
      comp=Z,31nm,1.5s
POLO                              epP     pP      15 29 11.3 +0.9
PCAB  Cabril            85.38  41 eP      P       15 28 42.6 +0.9
      comp=Z,116nm,1.6s
PCAB                              epP     pP      15 29 11.9 +1.3
E03A  Lebam             85.52 325 P       P       15 28 42.5 +0.4
E03A                              IAmb    IAmb    15 28 45.9
      comp=Z,176nm,1.2s
D04E  Lakebay           85.52 326 P       P       15 28 43.8 +1.6
      baz=131
EDM   Edmonton          85.56 335 P       P       15 28 41.3  -1.0
EDM                               pmax    pmax
      comp=Z,109nm,0.8s
EDM   Edmonton          85.56 335 P       P       15 28 41.3  -1.0
EDM                               IAmb    IAmb    15 28 43.2
      comp=Z,109nm,0.8s
MVO   Moncorvo          85.66  42 eP      P       15 28 44.3 +1.1
      comp=Z,96nm,1.4s
MVO                               epP     pP      15 29 13.7 +1.6
B06A  Marblemount       85.77 328 P       P       15 28 42.9  -0.5
B06A                              IAmb    IAmb    15 28 44.1
      comp=Z,69nm,0.7s
B05A  Bryant            85.90 327 P       P       15 28 44.3 +0.2
      baz=132,SNR=13
D03D  Eldon             85.92 326 P       P       15 28 45.4 +1.2
      baz=131,SNR=9.2
NRS   Narsarsuaq        86.14  11 P       P       15 28 45.6 +0.7
NRS                               pmax    pmax
      comp=Z,96nm,1.2s
NRS   Narsarsuaq        86.14  11 P       P       15 28 45.5 +0.7
NRS                               IAmb    IAmb    15 28 48.0
      comp=Z,96nm,1.2s
PBRG  Braganca          86.21  41 eP      P       15 28 46.5 +0.7
      comp=Z,75nm,1.4s
PBRG                              epP     pP      15 29 16.0 +1.2
PAB   San Pablo         86.41  44 P       P       15 28 47.5 +0.6
PAB                               pmax    pmax
      comp=Z,194nm,1.4s
PAB   San Pablo         86.41  44 P       P       15 28 47.5 +0.6
PAB                               IAmb    IAmb    15 28 51.8
      comp=Z,194nm,1.4s
PAB   San Pablo         86.41  44 P       P       15 28 48.1 +1.2
ESDC  Sonseca Array     86.73  44 P       P       15 28 49.4 +0.9
      comp=Z,56nm,1.1s,baz=234,slow=4.8,SNR=36
ESDC                              pP      pP      15 29 17.7 +0.3
      comp=Z,22nm,1.0s,baz=239,slow=4.0,SNR=4.6
ESDC                              PKKPbc  PKKPbc  15 46 44.0   0.0
      comp=Z,0.8nm,0.9s,baz=38,slow=1.0,SNR=4.3
ESDC                              LR      LR      16 06 19.7
      comp=Z,522nm,19.3s,baz=250,slow=35
ESDC  Sonseca Array     86.73  44 P       P       15 28 49.0 +0.5
ESDC                              IAmb    IAmb    15 28 54.2
      comp=Z,98nm,1.4s
ESBB  Sonseca Array     86.73  44 P       P       15 28 48.9 +0.5
ESBB                              IAmb    IAmb    15 28 53.5
      comp=Z,101nm,1.2s
PGC   Sidney            86.83 327 P       P       15 28 49.2 +0.6
PGC                               IAmb    IAmb    15 28 50.7
      comp=Z,129nm,1.1s
CLRS  Cowichan Lake     87.29 327 P       P       15 28 51.5 +0.7
LLLB  Lillooet          87.37 329 P       P       15 28 51.3   0.0
LLLB                              IAmb    IAmb    15 28 52.8
      comp=Z,135nm,1.5s
MATP  Matopo            88.10 111 eP      P       15 28 57.2 +1.6
MATP  Matopo            88.10 111 eP      P       15 28 57.2 +1.6
NUUK  Nuuk              88.11   7 i P     P       15 28 54.9 +0.6
NUUK                              IAmb    IAmb    15 28 57.8
      comp=Z,47nm,0.7s
BLWY  Bulawayo          88.31 111 eP      P       15 28 59.0 +2.3
BLWY  Bulawayo          88.31 111 eP      P       15 28 59.0 +2.3
CBB   Campbell River    88.68 327 P       P       15 28 58.0 +0.6
CBB                               IAmb    IAmb    15 28 59.4
      comp=Z,80nm,1.1s
LSZ   Lusaka            89.91 107 PKKPbc  PKKPbc  15 46 36.1 +1.4
      comp=Z,3.2nm,0.6s,baz=35,slow=2.9,SNR=11
CASY  Casey             90.74 180 P       P       15 29 07.9 +1.0
DY2G  Dye2              91.00   9 i P     P       15 29 08.8 +0.7
DY2G                              IAmb    IAmb    15 29 10.9
      comp=Z,175nm,0.6s
YKA   Yellowknife Ar    93.00 340 P       P       15 29 17.6 +0.4
      comp=Z,67nm,1.0s,baz=128,slow=5.8,SNR=89
YKA                               pP      pP      15 29 46.0  -0.4
      comp=Z,38nm,0.8s,baz=123,slow=5.7,SNR=8.3
YKA                               LR      LR      16 15 40.1
      comp=Z,344nm,19.4s,baz=0.0,slow=38
YKA   Yellowknife Ar    93.00 340 P       P       15 29 17.3 +0.2
GRNB  Grenville Isla    93.27 329 P       P       15 29 19.4 +0.7
GRNB                              IAmb    IAmb    15 29 22.7
      comp=Z,37nm,1.1s
URZ   Urewera           93.35 226 P       P       15 29 21.4 +1.9
      comp=Z,15nm,0.9s,baz=122,slow=23,SNR=5.7
URZ   Urewera           93.35 226 P       P       15 29 21.2 +1.6
URZ                               IAmb    IAmb    15 29 22.4
      comp=Z,62nm,1.4s
RUBB  Prince Rupert     93.69 329 P       P       15 29 21.2 +0.7
RUBB                              IAmb    IAmb    15 29 21.9
      comp=Z,33nm,1.0s
KEST  Kesra             93.96  53 P       P       15 29 23.6 +1.2
      comp=Z,21nm,1.0s,baz=124,slow=1.9,SNR=10
KEST                              LR      LR      16 13 33.7
      comp=Z,714nm,18.7s,baz=188,slow=37
KEST  Kesra             93.96  53 P       P       15 29 22.7 +0.3
KEST                              IAmb    IAmb    15 29 29.7
      comp=Z,26nm,0.9s
KEST  Kesra             93.96  53 P       P       15 29 23.7 +1.3
THZ   Tophouse          94.03 221 P       P       15 29 24.2 +1.5
THZ                               IAmb    IAmb    15 29 28.6
      comp=Z,28nm,0.9s
NNZ   Nelson            94.06 222 P       P       15 29 23.8 +1.0
NNZ                               IAmb    IAmb    15 29 25.6
      comp=Z,43nm,1.0s
ICESG Greenland Ices    94.41  10 i P     P       15 29 23.8  -0.1
ICESG                             IAmb    IAmb    15 29 26.8
      comp=Z,62nm,0.7s
EKA   Eskdalemuir Ar    95.84  31 LR      LR      16 10 49.9
      comp=Z,227nm,18.1s,baz=240,slow=34
WRAK  Wrangell Islan    95.87 330 P       P       15 29 30.9 +0.5
WRAK                              IAmb    IAmb    15 29 31.6
      comp=Z,24nm,0.9s
WRAK  Wrangell Islan    95.87 330 P       P       15 29 31.3 +0.9
      baz=124,SNR=5.8
DLBC  Dease Lake        95.99 332 PKKPbc  PKKPbc  15 46 19.9  -1.3
      comp=Z,4.9nm,1.0s,baz=277,slow=13,SNR=3.8
DLBC  Dease Lake        95.99 332 P       P       15 29 31.6 +0.6
DLBC                              IAmb    IAmb    15 29 34.6
      comp=Z,38nm,0.9s
TGTN  Hyland Airport    97.10 335 P       Pdif    15 29 37.4 +1.4
      baz=127,SNR=7.1
SENIN Lac Senin/Sane    97.21  43 P       Pdif    15 29 37.4 +0.3
DOU   Dourbes           97.28  38 dP      P       15 29 36.5  -0.5
      comp=Z,6.6nm,1.2s
SNF   Seneffe           97.30  38 dP      Pdif    15 29 37.0  -0.1
      comp=Z,7.6nm,0.9s
SNF                               dx      x       15 30 06.7
BMRD  Maredsous         97.48  38 dP      P       15 29 37.8  -0.1
BMRD                              dx      x       15 30 07.7
BGES  Gesves            97.70  38 dP      P       15 29 38.5  -0.4
      comp=Z,6.4nm,0.8s
BGES                              dx      x       15 30 08.3
SUMG  Summit            97.71   9 P       Pdif    15 29 39.8 +0.8
SUMG                              pmax    pmax
      comp=Z,18nm,0.8s
SUMG  Summit            97.71   9 i P     Pdif    15 29 39.0   0.0
SUMG                              IAmb    IAmb    15 29 44.1
      comp=Z,14nm,0.7s
SUMG  Summit            97.71   9 P       Pdif    15 29 39.8 +0.8
SUMG                              IAmb    IAmb    15 29 44.2
      comp=Z,18nm,0.8s
BCLA  Clavier           97.83  38 dP      P       15 29 39.4  -0.1
WLF   Walferdange       97.98  39 dP      Pdif    15 29 40.9 +0.7
WLF                               dpP     pP      15 30 05.7  -3.7
WLF                               dx      x       15 30 10.3
WLF   Walferdange       97.98  39 P       Pdif    15 29 40.4 +0.2
WLF                               pmax    pmax
      comp=Z,38nm,1.4s
WLF   Walferdange       97.98  39 P       Pdif    15 29 40.4 +0.1
WLF                               IAmb    IAmb    15 29 43.5
      comp=Z,38nm,1.4s
MBAR  Mbarara           98.13  94⇑eP      Pdif    15 29 42.9 +0.9
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P33M	**Teslin, Yukon**	**98.17**	**333**	Pdiff	Pdif	15 29 41.8	+0.9
	baz=123,SNR=8.7						
MEM	**Membach**	**98.32**	**38**	*d*P	**P**	**15 29 41.4**	**-0.3**
BTNL	**Ternell**	**98.38**	**38**	*d*P	Pdif	15 29 42.2	+0.2
TUE	**Stuetta**	**98.54**	**43**		Pdif	15 29 43.1	+0.1
TUE				IAmb	IAmb	15 29 50.0	
	comp=Z,18nm,0.9s						
ZCCA	**Zocca**	**98.71**	**46**	P	Pdif	15 29 43.9	+0.2
ZCCA				IAmb	IAmb	15 29 52.9	
	comp=Z,32nm,1.0s						
MMPY	**Sheldon Lake,**	**98.88**	**335**	Pdiff	Pdif	15 29 44.9	+0.9
	baz=124						
SALO	**Salr**	**98.93**	**44**		**P**	**15 29 43.9**	**-0.7**
SALO				IAmb	IAmb	15 29 46.0	
	comp=Z,19nm,0.7s						
RES	**Resolute Bay**	**99.20**	**353**	PKKPbc	PKKPbc	15 46 09.8	-2.8
	comp=Z,8.2nm,1.0s,baz=223,slow=1.6,SNR=8.3						
RES	**Resolute Bay**	**99.20**	**353**	P	**Pdif**	**15 29 45.3**	**+0.3**
RES				pmax	pmax		
	comp=Z,13nm,1.4s						
RES	**Resolute Bay**	**99.20**	**353**	P	**Pdif**	**15 29 45.3**	**+0.3**
DAVA	**Damuels**	**99.21**	**42**	*e*P	**Pdif**	**15 29 46.9**	**+1.0**
	comp=Z,7.5nm,1.1s						
DAVA				*e*P	**pP**	**15 30 16.4**	**+1.2**
	comp=Z,7.9nm,0.9s						
FETA	**Feichten**	**99.63**	**43**	*e*P	**Pdif**	**15 29 48.7**	**+0.8**
	comp=Z,13nm,1.1s						
FETA				*e*P	**pP**	**15 30 18.4**	**+1.4**
	comp=Z,17nm,1.1s						
RETA	**Reutte**	**99.84**	**43**	*e*P	**Pdif**	**15 29 49.3**	**+0.7**
	comp=Z,13nm,1.0s,SNR=7.0						
RETA				*e*P	**pP**	**15 30 18.9**	**+1.0**
	comp=Z,6.1nm,0.8s,SNR=5.0						
M31M	**Drury Creek, Y**	**99.88**	**334**	Pdiff	**Pdif**	**15 29 49.1**	**+0.7**
	baz=121						
MOTA	**Moosalm**	**99.99**	**43**	*e*P	**Pdif**	**15 29 50.2**	**+0.8**
	comp=Z,12nm,0.9s,SNR=11						
MOTA				*e*P	**pP**	**15 30 19.7**	**+1.0**
	comp=Z,24nm,1.1s,SNR=5.3						
MOTA				*e*P	**PKKPbc**	**15 46 08.9**	**-0.7**
	comp=Z,6.7nm,0.9s						
SQTA	**Sankt Quirin**	**100.01**	**43**	*e*P	**Pdif**	**15 29 50.4**	**+0.9**
	comp=Z,25nm,0.7s,SNR=13						
SQTA				*e*P	**pP**	**15 30 19.6**	**+0.9**
	comp=Z,15nm,0.8s,SNR=7.8						
SQTA				*e*P	**PKKPbc**	**15 46 09.0**	**-0.5**
	comp=Z,4.4nm,1.0s						
N31M	**Braeburn, Yuko**	**100.08**	**333**	Pdiff	**Pdif**	**15 29 50.1**	**+0.8**
	baz=120,SNR=5.2						
WATA	**Walderalm**	**100.28**	**43**	*e*P	**Pdif**	**15 29 51.6**	**+0.9**
	comp=Z,13nm,1.1s						
WATA				*e*P	pP	15 30 21.1	+1.1
	comp=Z,7.7nm,0.7s,SNR=5.4						
WTTA	**Wattenberg**	**100.29**	**43**	*e*P	**Pdif**	**15 29 51.7**	**+0.9**
	comp=Z,18nm,0.8s						
WTTA				*e*P	pP	15 30 21.4	+1.3
	comp=Z,32nm,0.9s,SNR=7.0						
ABTA	**Abfaltersbach**	**100.65**	**44**	*e*P	**Pdif**	**15 29 53.1**	**+0.8**
	comp=Z,9.3nm,0.9s,SNR=7.0						
ABTA				*e*P	pP	15 30 22.7	+1.2
	comp=Z,13nm,1.0s,SNR=4.4						
GRF	**Grafenberg Arr**	**100.99**	**41**	*e*P	**Pdif**	**15 29 54.6**	**+1.0**
	comp=Z,2.4nm,0.8s,baz=242,slow=5.2						
NEEM	**North Greenlan**	**101.01**	**4**	*i* P	**Pdif**	**15 29 53.7**	**+0.2**
NEEM				IAmb	IAmb	15 29 57.4	
	comp=Z,10nm,0.7s						
M30M	**Minto, Yukon**	**101.04**	**334**	Pdiff	**Pdif**	**15 29 54.0**	**+0.5**
	baz=119,SNR=5.5						
YUK4	**Talbot Arm**	**101.21**	**332**	Pdiff	**Pdif**	**15 29 55.5**	**+0.9**
	baz=118						
KBA	**Koelnbreinsper**	**101.30**	**44**	*e*P	**Pdif**	**15 29 55.8**	**+0.5**
	comp=Z,5.2nm,0.7s,SNR=5.9						
KBA				*e*P	**PKKPdf**	**15 46 09.6**	**-2.4**
	comp=Z,3.5nm,0.9s						
MYKA	**Terra Mystica**	**101.32**	**44**	*e*P	**Pdif**	**15 29 56.3**	**+1.1**
	comp=Z,8.4nm,0.7s,SNR=5.3						
MYKA				*e*P	pP	15 30 26.0	+1.4
	comp=Z,11nm,0.8s						
MYKA				*e*P	**PKKPbc**	**15 46 03.6**	**-2.0**
	comp=Z,9.9nm,1.7s						
OBKA	**Obir**	**101.86**	**44**	*e*P	**Pdif**	**15 29 58.1**	**+0.4**
	comp=Z,2.7nm,0.8s						
MOA	**Molln**	**102.17**	**43**	*e*P	**Pdif**	**15 29 59.3**	**+0.4**
	comp=Z,4.4nm,0.7s						
MOA				*e*P	**pPdif**	**15 30 29.2**	**+1.1**
	comp=Z,6.1nm,0.9s						
GERES	**GERESS Array B**	**102.17**	**42**	P	**Pdif**	**15 29 59.4**	**+0.4**
	comp=Z,1.2nm,0.9s,baz=223,slow=3.1,SNR=7.0						
GERES				pP	**pPdif**	**15 30 28.6**	**+0.4**
	comp=Z,1.1nm,0.7s,baz=194,slow=5.0,SNR=4.5						
GERES				PP	PP	15 34 01.7	-11
	comp=Z,0.9nm,0.8s,baz=244,slow=5.8,SNR=3.4						
GERES				PKKPbc	**PKKPbc**	**15 46 02.3**	**-0.9**
	comp=Z,1.9nm,0.8s,baz=96,slow=2.7,SNR=10						
GERES				PKPPKP	**P'P'df**	**15 54 19.2**	**-0.8**
	comp=Z,0.3nm,0.5s,baz=129,slow=1.9,SNR=4.7						
YUK3	**Moose Creek**	**102.18**	**332**	Pdiff	**Pdif**	**15 29 59.5**	**+0.6**
	baz=116						
CTG	**Chitna Glacier**	**102.20**	**331**	Pdiff	**Pdif**	**15 30 00.1**	**+1.2**
	baz=116						
KHC	**Kasperske Hory**	**102.20**	**42**	*e*P	**Pdif**	**15 29 58.7**	**-0.4**
KHC	**Kasperske Hory**	**102.20**	**42**	*e*PDIFF	**Pdif**	**15 29 58.7**	**-0.4**
KHC				*e*pP	**pPdif**	**15 30 28.6**	**+0.4**
A36M	**Sachs Harbour**	**102.52**	**345**	Pdif	**Pdif**	**15 30 00.2**	**+0.3**
A36M	**Sachs Harbour**	**102.52**	**345**	Pdiff	**Pdif**	**15 30 00.2**	**+0.3**
	baz=128,SNR=21						
CKRC	**Cesky Krumlov**	**102.54**	**42**	*e*PDIFF	**Pdif**	**15 30 01.0**	**+0.5**
CKRC				*e*x	x	15 30 29.8	
BVCY	**Beaver Creek**	**102.63**	**333**	Pdiff	**Pdif**	**15 30 01.5**	**+0.9**
	baz=116						
CLL	**Collm**	**102.65**	**39**	*e*P	**Pdif**	**15 30 04.0**	**+3.1**
CLL				*e*		15 34 12.0	
CLL				*e*		15 40 30.0	
CLL	**Collm**	**102.65**	**39**	*e*Pdif	**Pdif**	**15 30 04.0**	**+3.1**
CLL				*e*PP	**PP**	**15 34 12.0**	**-3.9**
CLL				*e*pPP		15 34 39.0	
CLL				*e*sPP		15 34 53.0	
CLL				*e*SKSac	**SKSac**	**15 40 30.0**	**-0.3**
CLL				*e*SKKSac	**SKKSac**	**15 41 12.0**	**+1.7**
CLL				*e*Sdif	Sdif	15 41 36.0	-0.4
CLL				*e*SP	**SP**	**15 43 08.0**	**-3.5**
CLL				*e*PPS	PPS	15 44 12.0	
CLL				*e*SS	**SS**	**15 48 42.0**	**-5.2**
CLL				*e*		15 54 24.0	
ARSA	**Arzberg**	**102.75**	**44**	*e*P	**Pdif**	**15 30 01.2**	**-0.3**
	comp=Z,5.6nm,1.6s						
ARSA				*e*P	**pPdif**	**15 30 30.4**	**-0.3**
	comp=Z,7.5nm,1.6s						
ARSA				*e*P	**PKKPbc**	**15 46 00.4**	**-0.9**
	comp=Z,6.9nm,1.6s						
INK	**Inuvik**	**102.76**	**340**	P	**Pdif**	**15 30 01.2**	**+0.3**
	comp=Z,13nm,1.0s,baz=108,slow=5.9,SNR=24						
INK				pP	**pPdif**	**15 30 30.4**	**+0.1**
	comp=Z,15nm,1.1s,baz=111,slow=4.6,SNR=5.9						
INK				PKKPbc	**PKKPbc**	**15 45 59.4**	**-2.7**
	comp=Z,6.9nm,1.0s,baz=322,slow=4.3,SNR=9.0						
INK	**Inuvik**	**102.76**	**340**	Pdif	**Pdif**	**15 30 01.5**	**+0.5**
INK	**Inuvik**	**102.76**	**340**	Pdiff	**Pdif**	**15 30 01.6**	**+0.7**
	baz=121,SNR=10						
DAWY	**Dawson**	**102.78**	**335**	Pdiff	**Pdif**	**15 30 01.3**	**+0.1**
	baz=117,SNR=8.3						
EPYK	**Eagle Plains**	**102.86**	**337**	Pdiff	**Pdif**	**15 30 02.1**	**+0.5**
	baz=119						
CRQE	**Cirque**	**102.89**	**331**	Pdiff	**Pdif**	**15 30 02.4**	**+0.4**
	baz=114						
I29M	**Ogilvie Camp,**	**102.96**	**336**	Pdiff	**Pdif**	**15 30 02.4**	**+0.4**
	baz=118,SNR=5.5						
M27K	**Edge Creek, AK**	**103.04**	**333**	Pdiff	**Pdif**	**15 30 03.0**	**+0.4**
	baz=115,SNR=5.1						
PRU	**Pruhonice**	**103.09**	**41**	*e*P	**Pdif**	**15 30 03.8**	**+0.9**
PRU	**Pruhonice**	**103.09**	**41**	*e*PDIFF	**Pdif**	**15 30 03.8**	**+0.9**
PRU				*e*pP	**pPdif**	**15 30 33.6**	**+1.5**
MCARA	**McCarthy VSAT**	**103.12**	**332**	Pdiff	**Pdif**	**15 30 03.2**	**+0.4**
	baz=114						
CONA	**Conrad Observa**	**103.20**	**43**	*e*P	**Pdif**	**15 30 05.9**	**+2.3**
	comp=Z,2.3nm,1.0s						
CONA				*e*P	**pPdif**	**15 30 32.5**	**-0.3**
	comp=Z,5.3nm,1.3s						
CONA				*e*P	**PKKPbc**	**15 46 01.4**	**+1.3**
	comp=Z,4.1nm,0.9s						
BCAR	**Beaver Creek A**	**103.30**	**333**	Pdif	**Pdif**	**15 30 03.7**	**0.0**
L27K	**Beaver Creek,**	**103.31**	**333**	Pdiff	**Pdif**	**15 30 04.1**	**+0.4**
	baz=115,SNR=6.7						
EGAK	**Eagle**	**103.78**	**335**	Pdiff	**Pdif**	**15 30 06.0**	**+0.3**
	baz=115						
L26K	**Log Cabin Wild**	**103.93**	**333**	Pdiff	**Pdif**	**15 30 06.8**	**+0.4**
	baz=114						
CHVC	**Chvalec**	**104.21**	**41**	*e*PDIFF	**Pdif**	**15 30 11.2**	**+3.3**
DPC	**Dobruska-Polom**	**104.29**	**41**	*e*P	**Pdif**	**15 30 08.8**	**+0.5**
DPC	**Dobruska-Polom**	**104.29**	**41**	*e*PDIFF	**Pdif**	**15 30 08.8**	**+0.5**
DPC				*e*pP	**pPdif**	**15 30 37.5**	**0.0**
OSTC	**Ostas**	**104.30**	**41**	*e*PDIFF	**Pdif**	**15 30 09.6**	**+1.3**
KLU	**Klutina**	**104.44**	**331**	Pdiff	**Pdif**	**15 30 09.0**	**+0.2**
	baz=112,SNR=8.7						
HARP	**HAARP**	**104.45**	**332**	Pdiff	**Pdif**	**15 30 08.9**	**+0.2**
	baz=112						
SCRK	**Sand Creek**	**104.57**	**334**	Pdif	**Pdif**	**15 30 09.4**	**0.0**
SCRK	**Sand Creek**	**104.57**	**334**	Pdiff	**Pdif**	**15 30 09.4**	**0.0**
	baz=113						
J26L	**Joseph Creek**	**104.61**	**334**	Pdiff	**Pdif**	**15 30 09.9**	**+0.4**
	baz=113,SNR=9.2						
M24K	**Tolsona, Glenn**	**104.78**	**332**	Pdiff	**Pdif**	**15 30 10.7**	**+0.4**
	baz=112						
PAX	**Paxson**	**104.80**	**333**	Pdiff	**Pdif**	**15 30 10.3**	**0.0**
	baz=112,SNR=5.9						
J25K	**Salcha River,**	**105.37**	**334**	Pdiff	**Pdif**	**15 30 13.2**	**+0.4**
	baz=112,SNR=5.5						
SML	**Sawmill**	**105.63**	**331**	Pdiff	**Pdif**	**15 30 14.3**	**+0.3**
	baz=110						
ILAR	**Eielson Array**	**106.04**	**334**	Pdiff	**Pdif**	**15 30 15.7**	**-0.1**
	comp=Z,1.4nm,0.7s,baz=150,slow=3.1,SNR=16						
ILAR				PP	**PKiKP**	**15 34 27.9**	**+0.7**
	comp=Z,2.7nm,0.9s,baz=110,slow=3.4,SNR=6.3						
ILAR				PKKPbc	**PKKPbc**	**15 45 49.5**	**-2.5**
	comp=Z,1.8nm,0.8s,baz=294,slow=3.4,SNR=8.8						
TCOL	**CIGO, UAF Yank**	**106.47**	**334**	Pdiff	**Pdif**	**15 30 18.2**	**+0.6**
	baz=109						
VTS	**Vitosha**	**106.49**	**50**	⇑P	**PKiKP**	**15 34 29.9**	**+1.1**
H24K	**Noodor Dome**	**106.79**	**335**	Pdiff	**Pdif**	**15 30 19.6**	**+0.5**
	baz=109						
NEA2	**Nenana**	**106.86**	**334**	Pdiff	**Pdif**	**15 30 18.3**	**-1.1**
	baz=108						
TRF	**Thorofare Moun**	**107.02**	**332**	Pdiff	**Pdif**	**15 30 20.5**	**+0.1**
	baz=108						
SKT	**Skwentna**	**107.12**	**331**	Pdiff	**Pdif**	**15 30 20.4**	**-0.2**
	baz=107						
I23K	**Minto, Yukon-K**	**107.16**	**334**	Pdiff	**Pdif**	**15 30 20.9**	**+0.2**
	baz=108						
DRGR		**107.28**	**46**	⇑P	**PKiKP**	**15 34 30.9**	**+0.8**
BPAW	**Bear Paw Mtn.**	**107.51**	**333**	Pdiff	**Pdif**	**15 30 22.5**	**+0.2**
	baz=107						
TRPA	**Tarpa**	**107.53**	**45**	⇑P	**PKiKP**	**15 34 30.8**	**+0.4**
MLY	**Manley**	**107.68**	**334**	Pdiff	**Pdif**	**15 30 22.2**	**-0.9**
	baz=107						
CAST	**Castle Rocks**	**107.78**	**332**	Pdiff	**Pdif**	**15 30 23.6**	**+0.1**
	baz=106						
ARR	**Arges**	**108.20**	**48**	⇑P	**PKiKP**	**15 34 32.7**	**+0.9**
MLR	**Muntele Rosu**	**109.13**	**48**	⇑P	**PKiKP**	**15 34 35.1**	**+1.5**
BURAR	**Bucovina Array**	**109.14**	**46**	⇑P	**PKiKP**	**15 34 35.5**	**+1.9**
NEHR	**Nehoiu**	**109.35**	**48**	⇑P	**PKiKP**	**15 34 34.5**	**+0.5**
PLOR	**Plostina**	**109.69**	**48**	⇑P	**PKiKP**	**15 34 34.8**	**+0.2**
VRI	**Vrincioaia**	**109.75**	**48**	⇑P	**PKiKP**	**15 34 35.0**	**+0.3**
TESR	**Tescani**	**109.84**	**47**	⇑P	**PKiKP**	**15 34 35.3**	**+0.5**
DZM	**Mont Dzumac**	**110.18**	**234**	*e*LR	LR	16 07 21.8	
	comp=Z,2µm,34.0s						
DZM	**Mont Dzumac**	**110.18**	**234**	Pdiff	**Pdif**	**15 30 33.4**	**-2.0**
	comp=Z,8.2nm,0.9s,baz=259,slow=14,SNR=3.0						
HARR	**Harsova**	**110.31**	**49**	⇑P	**PKiKP**	**15 34 36.6**	**+0.9**
HARR	**Harsova**	**110.31**	**49**	⇑PKIKP	**PKiKP**	**15 34 36.6**	**+0.9**
CFR	**Carcaliu**	**110.56**	**49**	⇑P	**PKiKP**	**15 34 36.3**	**+0.2**
CFR	**Carcaliu**	**110.56**	**49**	⇑PKIKP	**PKiKP**	**15 34 36.3**	**+0.2**
SCTR	**Scanteiesti**	**110.57**	**48**	⇑P	**PKiKP**	**15 34 37.0**	**+0.8**
TLCR		**111.03**	**49**	⇑P	**PKiKP**	**15 34 37.9**	**+0.8**
TLCR		**111.03**	**49**	⇑PKIKP	**PKiKP**	**15 34 37.9**	**+0.8**
MNK	**Minsk**	**112.17**	**39**	*i* PP	**PP**	**15 35 25.1**	**-0.2**
MNK				*i* PP	**PP**	**15 35 25.1**	**-0.2**
MNK				*i* PP	**PP**	**15 35 25.1**	**-0.2**
	baz=261						
MNK				*i* PPP	PPP	15 37 47.2	
MNK				*i* SKP		15 38 26.7	
MNK				*i* PS	**PKKPdf**	**15 45 45.9**	**-5.6**
MNK				*i* SS	SS	15 50 59.0	+3.3
MNK				*i* SSS	SSS	15 56 02.7	
MNK				*i* LQ	LQ	16 14 21.6	
MNK				*i* LR	LR	16 21 00.2	
MNK				*i* LRM	MLR	16 23 39.6	
	comp=N,356nm,19.8s						
MNK				*i* LRM	MLR	16 23 43.5	
	comp=E,81nm,19.8s						
MNK				*i* LRM	MLR	16 25 55.4	
	comp=Z,552nm,19.2s						
FINES	**FINESS Array B**	**112.24**	**31**	PKiKP	**PKiKP**	**15 34 38.9**	**0.0**
	comp=Z,2.8nm,0.7s,baz=158,slow=2.1,SNR=6.4						
FINES				PKKPbc	**PKKPbc**	**15 45 30.3**	**-1.6**
	comp=Z,1.7nm,0.6s,baz=81,slow=3.8,SNR=8.8						
AKASG	**Malin Array Be**	**112.35**	**43**	PKiKP	**PKiKP**	**15 34 39.1**	**-0.3**
	comp=Z,4.5nm,0.4s,baz=266,slow=2.5,SNR=27						
AKASG				PKKPbc	**PKKPbc**	**15 45 30.2**	**-0.9**
	comp=Z,5.5nm,0.8s,baz=66,slow=3.9,SNR=12						
AKASG	**Malin Array Be**	**112.35**	**43**	PKiKP	**PKiKP**	**15 34 38.3**	**-1.1**
AKBB	**Malin Array Si**	**112.35**	**43***c*	*i*PKIKP	**PKiKP**	**15 34 38.5**	**-0.9**
ARCES	**ARCESS Array B**	**112.91**	**22**	PKiKP	**PKiKP**	**15 34 40.4**	**+0.4**
	comp=Z,1.3nm,0.6s,baz=329,slow=1.4,SNR=4.8						
ARCES				PKKPbc	**PKKPbc**	**15 45 27.8**	**-2.1**
	comp=Z,3.4nm,0.5s,baz=82,slow=3.7,SNR=14						
BR131	**Keskin Array S**	**113.42**	**55**	*i* PKIKP	**PKiKP**	**15 34 41.8**	**-0.2**
BR131	**Keskin Array S**	**113.42**	**55**	P	**PKiKP**	**15 34 42.6**	**+0.6**
BRTR	**Keskin Array B**	**113.42**	**55**	PKiKP	**PKiKP**	**15 34 42.4**	**+0.3**
	comp=Z,8.9nm,0.8s,baz=192,slow=2.3,SNR=35						
BRTR				PKKPbc	**PKKPab**	**15 45 34.8**	**+1.7**
	comp=Z,2.0nm,0.7s,baz=119,slow=4.8,SNR=8.8						
BRTR	**Keskin Array B**	**113.42**	**55**	PKiKP	**PKiKP**	**15 34 41.6**	**-0.4**
GAZ	**Gaziantep**	**115.69**	**59**		**PKPdf**	**15 34 45.9**	**-0.4**
APA	**Apatity**	**115.76**	**25**	⇓*i*PKIKP	**PKiKP**	**15 34 50.2**	**+4.8**
APA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ANN	**Anapa**	**117.00**	**50**	*i* PKIKP	**PKPdf**	**15 34 48.4**	**-0.1**
ANN				*e*		15 35 16.6	
ANN				*e*PPP	PPP	15 38 30.8	
ANN				*e*		15 41 54.0	
ANN				*e*SP	SP	15 45 35.1	+3.7
ANN				pmax	pmax		
	comp=Z,106nm,1.5s						
ANN				MLR	MLR		
	comp=N,2µm,22.0s						
ANN				MLR	MLR		
	comp=Z,1µm,21.0s						
OBN	**Obninsk**	**117.23**	**39**	⇑	**PKiKP**	**15 34 49.3**	**+0.7**
OBN	**Obninsk**	**117.23**	**39**	*i* PKIKP	**PKiKP**	**15 34 48.9**	**+0.3**
OBN				*i*		15 35 15.0	
OBN				pmax	pmax		
	comp=Z,81nm,1.5s						
OBN				MLR	MLR		
	comp=Z,598nm,18.0s						
OBN	**Obninsk**	**117.23**	**39**		**PKPdf**	**15 34 48.5**	**-0.1**
MOS	**Moscow**	**117.84**	**38**	*i* PKIKP	**PKPdf**	**15 34 49.2**	**-0.6**
MOS				*e*		15 35 17.8	
MOS				*e*		15 36 05.1	
MOS				pmax	pmax		
	comp=Z,36nm,1.0s						
STKA	**Stephens Creek**	**118.14**	**209**	PKP	**PKiKP**	**15 34 51.5**	**+0.1**
	comp=Z,8.7nm,0.7s,baz=40,slow=1.6,SNR=20						
STKA				PKKPbc	**PKKPbc**	**15 45 10.7**	**-0.1**
	comp=Z,6.8nm,0.6s,baz=322,slow=5.1,SNR=14						
STKA	**Stephens Creek**	**118.14**	**209**	PKIKP	**PKPdf**	**15 34 51.2**	**-0.1**
STKA	**Stephens Creek**	**118.14**	**209**	PKPdf	**PKPdf**	**15 34 51.2**	**-0.1**
STKA					**PKKPbc**	**15 45 10.2**	**-0.7**
SOC	**Sochi**	**118.50**	**52**	*i* PKIKP	**PKPdf**	**15 34 50.9**	**-0.5**
SOC				*e*		15 35 18.4	
SOC				*e*		15 36 10.7	
SOC				*e*PPP	PPP	15 38 41.2	
SOC				*e*PS	**PS**	**15 45 54.3**	**-3.8**
SOC				*e*SSS	SSS	15 56 36.5	
SOC				pmax	pmax		
	comp=Z,38nm,0.6s						
LPSR	**Galich'ya Gora**	**118.55**	**42**	*e*PKIKP	**PKPdf**	**15 34 51.1**	**-0.1**
LPSR				pmax	pmax		
	comp=Z,60nm,0.8s						
VSR	**Storozhevoye**	**118.65**	**43**	*e*PKIKP	**PKPdf**	**15 34 50.4**	**-1.1**
VSR				pmax	pmax		
	comp=Z,70nm,1.5s						
VORD	**Divnogorie**	**118.72**	**43**	*e*PKIKP	**PKPdf**	**15 34 51.3**	**-0.3**
VORD				pmax	pmax		
	comp=Z,20nm,0.7s						
BCA	**Borcka**	**119.68**	**54**	⇑P	**PKiKP**	**15 34 54.7**	**+0.8**
SIRT	**Sirnak**	**119.85**	**59**		**PKiKP**	**15 34 54.9**	**+0.4**
VRH	**Novokhopyorsk**	**120.26**	**43**	*e*PKIKP	**PKPdf**	**15 34 54.3**	**-0.3**
VRH				pmax	pmax		
	comp=Z,30nm,0.7s						
SHA1	**Shidzhatmaz**	**120.64**	**52**	*i* PKIKP	**PKPdf**	**15 34 55.9**	**0.0**
NEY	**Neytrino**	**120.65**	**52**	*i* PKIKP	**PKiKP**	**15 34 56.9**	**+0.9**
KIV	**Kislovodsk**	**120.67**	**52**	⇑P	**PKiKP**	**15 34 56.8**	**+0.9**
KIV	**Kislovodsk**	**120.67**	**52**	*i* PKiKP	**PKiKP**	**15 34 56.5**	**+0.6**
	SNR=12						
KIV	**Kislovodsk**	**120.67**	**52**	*i* PKIKP	**PKiKP**	**15 34 55.9**	**0.0**
KIV				*e*PS	**PS**	**15 46 17.5**	**-0.3**
KIV				*e*SS	SS	15 52 47.5	+0.1
KIV				pmax	pmax		
	comp=Z,53nm,1.1s						
KIV	**Kislovodsk**	**120.67**	**52**		**PKPdf**	**15 34 55.8**	**0.0**
KIV	**Kislovodsk**	**120.67**	**52**	P	**PKiKP**	**15 34 56.5**	**+0.6**
KBZ	**Khabaz**	**120.81**	**52**	PKP	**PKiKP**	**15 34 56.8**	**+0.8**
	comp=Z,41nm,0.8s,baz=211,slow=2.9,SNR=61						
KBZ				PKKPbc	**PKKPbc**	**15 45 01.5**	**+0.5**
	comp=Z,2.7nm,0.9s,baz=86,slow=7.3,SNR=4.0						
AKH	**Akhalkalaki**	**121.08**	**55**	⇑P	**PKiKP**	**15 34 58.0**	**+1.1**
ONI	**Oni**	**121.14**	**53**	PKIKP	**PKiKP**	**15 34 57.0**	**+0.2**
ONI	**Oni**	**121.14**	**53**		**PKiKP**	**15 34 57.0**	**+0.2**
ZEI	**Tsey**	**121.48**	**53**	*i* PKIKP	**PKPdf**	**15 34 57.3**	**-0.2**
ZEI				pmax	pmax		
	comp=Z,14nm,1.1s						
PRGR	**Permogore**	**121.57**	**31**	*e*PKIKP	**PKPdf**	**15 34 54.5**	**-2.3**
PRGR				*e*		15 35 26.5	
PRGR				pmax	pmax		
	comp=Z,91nm,0.9s						
GNI	**Garni**	**121.92**	**56**	PKiKP	**PKiKP**	**15 34 59.6**	**+1.1**
GNI	**Garni**	**121.92**	**56***c*	*i*PKIKP	**PKiKP**	**15 34 59.4**	**+0.8**
GNI				pmax	pmax		
	comp=Z,59nm,1.3s						
GNI	**Garni**	**121.92**	**56**		**PKiKP**	**15 34 58.6**	**+0.1**
GNI	**Garni**	**121.92**	**56**	P	**PKiKP**	**15 34 59.6**	**+1.1**
NWAO	**Narrogin (SRO)**	**123.88**	**186**	PKP	**PKPdf**	**15 35 02.3**	**0.0**
	comp=Z,27nm,0.7s,baz=181,slow=2.7,SNR=15						
NWAO	**Narrogin (SRO)**	**123.88**	**186**	P	**PKiKP**	**15 35 02.9**	**+0.3**
KIRV	**Kirov**	**123.98**	**34**	PKP	**PKiKP**	**15 35 01.9**	**+0.1**
	comp=Z,32nm,0.5s,baz=270,slow=1.0,SNR=7.0						
KIRV	**Kirov**	**123.98**	**34***c*	*i*PKIKP	**PKiKP**	**15 35 02.1**	**+0.4**
FORT	**Forrest**	**124.01**	**197**		**PKPdf**	**15 35 02.5**	**-0.1**
MAK	**Makhachkala**	**124.14**	**53**	*e*P	**Pdif**	**15 31 40.6**	**+3.9**
MAK				*i*		15 35 01.9	
MAK				*e*		15 36 47.8	
MAK				*e*		15 41 50.9	
MAK				pmax	pmax		
	comp=Z,47nm,0.8s						
AKT	**Akhty**	**124.27**	**55**	*i* PKIKP	**PKiKP**	**15 35 03.0**	**-0.1**
SAKB	**Bahrain**	**124.83**	**74**	P	**PKiKP**	**15 35 04.6**	**+0.1**
TRNA	**Turayna**	**125.18**	**75**	P	**PKiKP**	**15 35 05.4**	**+0.2**
CTAO	**Charters Tower**	**125.26**	**221**	PKIKP	**PKPdf**	**15 35 05.2**	**-0.1**
CTAO	**Charters Tower**	**125.26**	**221**		**PKPdf**	**15 35 05.2**	**-0.1**
ABTO	**Aybut**	**125.27**	**85**	P	**PKiKP**	**15 35 06.3**	**+0.7**
WHFO	**Wadi Hawf**	**125.86**	**84**	P	**PKiKP**	**15 35 06.8**	**0.0**
RBK	**Rabkut**	**126.14**	**85**	P	**PKiKP**	**15 35 07.3**	**0.0**
DOK	**Doka**	**126.38**	**83**	P	**PKiKP**	**15 35 07.6**	**-0.1**
JRN	**Qarnain Island**	**126.68**	**75**	P	**PKiKP**	**15 35 08.3**	**+0.2**
DMTO	**DMTO**	**126.88**	**85**	P	**PKiKP**	**15 35 08.9**	**+0.1**
SHAO	**Shalim**	**127.59**	**85**	PKiKP	**PKPdf**	**15 35 09.6**	**0.0**
SHAO	**Shalim**	**127.59**	**85**	P	**PKiKP**	**15 35 10.1**	**-0.1**
MORW	**Morawa**	**127.81**	**185**		**PKPdf**	**15 35 09.7**	**-0.2**
AJN	**Ajban**	**128.51**	**76**	P	**PKiKP**	**15 35 12.5**	**+0.6**
H11S2	**WAKE ISLAND Hy**	**128.57**	**276**	T	T	17 55 38.2	
	baz=103,slow=74,SNR=298						
H11S1	**WAKE ISLAND Hy**	**128.58**	**276**	T	T	17 55 46.5	
	baz=103,slow=74,SNR=243						
ASAR	**Alice Springs**	**128.58**	**206**	PKP	**PKPdf**	**15 35 11.8**	**+0.2**
	comp=Z,57nm,0.8s,baz=129,slow=1.7,SNR=158						
ASAR				pPKP	**pPKPdf**	**15 35 41.8**	**-0.1**
	comp=Z,23nm,0.7s,baz=144,slow=2.2,SNR=5.8						
ASAR				PKKP	**PKKPdf**	**15 45 19.1**	**+0.4**
	comp=Z,0.8nm,0.5s,baz=355,slow=1.7,SNR=11						
AS31	**Alice Springs**	**128.59**	**206**	PKPdf	**PKPdf**	**15 35 11.3**	**-0.3**
H11S3	**WAKE ISLAND Hy**	**128.59**	**276**	T	T	17 55 39.6	
	baz=103,slow=74,SNR=241						
H11N3	**WAKE ISLAND Hy**	**128.70**	**277**	T	T	17 55 52.2	
	baz=104,slow=74,SNR=475						
H11N2	**WAKE ISLAND Hy**	**128.72**	**277**	T	T	17 55 57.0	
	baz=104,slow=74,SNR=393						
H11N1	**WAKE ISLAND Hy**	**128.72**	**277**	T	T	17 55 51.3	
	baz=104,slow=74,SNR=271						
ASUD	**Al Ashush, Dub**	**128.83**	**76**	*i* PKiKP	**PKiKP**	**15 35 12.8**	**+0.3**
	SNR=10						
ASUD	**Al Ashush, Dub**	**128.83**	**76**	P	**PKPdf**	**15 35 11.4**	**-0.5**
FAQ	**Al Faqa, Dubai**	**129.09**	**76**	*i* PKiKP	**PKiKP**	**15 35 13.1**	**0.0**
	SNR=11						
FAQ	**Al Faqa, Dubai**	**129.09**	**76**	P	**PKiKP**	**15 35 13.0**	**-0.1**
	SNR=6.0						
ALNE	**Al Ain**	**129.10**	**77**	*i* PKiKP	**PKiKP**	**15 35 13.5**	**+0.4**
	SNR=9.1						
ALNE	**Al Ain**	**129.10**	**77**	P	**PKiKP**	**15 35 13.4**	**+0.3**
	SNR=7.6						
NAZ	**Nazwa, Dubai**	**129.19**	**76**	*i* PKiKP	**PKiKP**	**15 35 13.4**	**+0.1**
	SNR=7.6						
NAZ	**Nazwa, Dubai**	**129.19**	**76**	P	**PKiKP**	**15 35 13.0**	**-0.2**
ARU	**Arti**	**129.30**	**35**	PKP	**PKiKP**	**15 35 12.9**	**+0.4**
	comp=Z,15nm,0.4s,baz=304,slow=2.3,SNR=69						
ARU				pPKP	**pPKPdf**	**15 35 42.8**	**+0.7**
	comp=Z,3.5nm,0.4s,baz=226,slow=3.5,SNR=3.5						
ARU				SKPbc	SKPbc	15 38 25.6	+2.0
	comp=Z,2.5nm,0.8s,baz=304,slow=2.2,SNR=4.9						
ARU	**Arti**	**129.30**	**35**	*i* PKIKP	**PKiKP**	**15 35 12.9**	**+0.4**
ARU						15 37 23.6	
ARU				SS	SS	15 54 33.7	-0.8
ARU	**Arti**	**129.30**	**35**		**PKiKP**	**15 35 12.5**	**0.0**
ASHO	**Ashiyiah**	**129.49**	**77**	*i* PKIKP	**PKiKP**	**15 35 13.6**	**-0.3**
	SNR=5.5						
ASHO	**Ashiyiah**	**129.49**	**77**	P	**PKiKP**	**15 35 13.6**	**-0.3**
HATD	**Hatta, Dubai**	**129.59**	**76**	*i* PKIKP	**PKPdf**	**15 35 13.6**	**+0.3**
	SNR=11						
HATD	**Hatta, Dubai**	**129.59**	**76**	P	**PKPdf**	**15 35 13.6**	**+0.3**
	SNR=6.0						
UOSS	**Minazif**	**129.67**	**76**	*i* PKiKP	**PKPdf**	**15 35 13.3**	**-0.2**
	SNR=9.2						
UOSS	**Minazif**	**129.67**	**76**		**PKPdf**	**15 35 12.9**	**-0.5**
UOSS	**Minazif**	**129.67**	**76**	P	**PKPdf**	**15 35 13.7**	**+0.2**
MSFE	**Esma-Masafi**	**129.70**	**76**	*i* PKIKP	**PKPdf**	**15 35 13.9**	**+0.4**
	SNR=8.4						
MASF	**Masafi**	**129.71**	**76**	P	**PKiKP**	**15 35 14.0**	**-0.3**
SHME	**Shamm**	**129.80**	**75**	*i* PKIKP	**PKiKP**	**15 35 14.2**	**-0.3**
	SNR=24						
SHME	**Shamm**	**129.80**	**75**	P	**PKiKP**	**15 35 14.4**	**0.0**
	SNR=7.5						
MDH	**Madha**	**129.82**	**76**	PKiKP	**PKPdf**	**15 35 13.6**	**-0.1**
SOHO	**SOHO**	**129.82**	**77**	*i* PKiKP	**PKPdf**	**15 35 14.0**	**+0.3**
	SNR=32						
SOHO	**SOHO**	**129.82**	**77**	P	**PKPdf**	**15 35 13.7**	**0.0**
BANOM	**Banah**	**129.92**	**75**	*i* PKiKP	**PKiKP**	**15 35 14.4**	**-0.3**
	SNR=6.2						
BSY	**Bisya**	**130.15**	**79**	P	**PKPdf**	**15 35 14.7**	**+0.3**
	SNR=7.2						
SVE	**Sverdlovsk**	**130.25**	**34**	*i* PKIKP	**PKiKP**	**15 35 14.8**	**+0.4**
SVE				pmax	pmax		
	comp=Z,45nm,1.4s						
MHTO	**MHTO**	**130.46**	**82**	P	**PKiKP**	**15 35 15.5**	**-0.4**
	SNR=7.2						
TIXI	**Tiksi**	**130.59**	**353**	SKPbc	**SKPab**	**15 38 28.5**	**+0.8**
	comp=Z,22nm,1.1s,baz=20,slow=4.0,SNR=17						
TIXI	**Tiksi**	**130.59**	**353***c*	*i*PKIKP	**PKPdf**	**15 35 14.1**	**+0.3**
TIXI	**Tiksi**	**130.59**	**353**	PKPdf	**PKPdf**	**15 35 13.7**	**-0.1**
TIXI					**SKPab**	**15 38 27.9**	**+0.2**
AKTO	**Aktyubinsk**	**130.59**	**43**	PKP	**PKiKP**	**15 35 15.5**	**+0.2**
	comp=Z,21nm,0.8s,baz=295,slow=1.8,SNR=48						
AKTO				pPKP	**pPKPdf**	**15 35 45.9**	**+1.1**
	comp=Z,33nm,1.2s,baz=309,slow=2.5,SNR=4.8						
AKTO				SKPbc	**SKPab**	**15 38 30.2**	**+1.8**
	comp=Z,35nm,1.2s,baz=301,slow=1.8,SNR=12						
JMDO	**Jabal Madar**	**130.89**	**80**	P	**PKPdf**	**15 35 15.6**	**-0.2**
SMDO	**Samad**	**130.98**	**79**	P	**PKiKP**	**15 35 17.0**	**0.0**
	SNR=16						
BIDO	**Bidbid**	**131.13**	**78**	P	**PKiKP**	**15 35 16.8**	**-0.4**
WSAR	**Wadi Sarin**	**131.54**	**79**	pPKP	**pPKPdf**	**15 35 47.6**	**+0.3**
	comp=Z,30nm,1.1s,baz=266,slow=4.5,SNR=3.5						
WSAR				SKPbc	**SKPab**	**15 38 33.9**	**+0.5**
	comp=Z,8.0nm,0.8s,baz=279,slow=2.9,SNR=5.1						
WSAR	**Wadi Sarin**	**131.54**	**79**	P	**PKiKP**	**15 35 17.8**	**-0.3**
	SNR=9.6						
WR0	**Warramunga Arr**	**131.58**	**209**	PKPdf	**PKPdf**	**15 35 17.3**	**0.0**
WB2	**Warramunga Arr**	**131.68**	**209**	PKPdf	**PKPdf**	**15 35 17.4**	**-0.1**
NRIK	**Noril'sk**	**131.69**	**11**	PKP	**PKiKP**	**15 35 17.0**	**+0.1**
	comp=Z,26nm,1.1s,baz=42,slow=1.6,SNR=23						
NRIK				SKPbc	**SKPab**	**15 38 33.7**	**+1.2**
	comp=Z,8.1nm,0.9s,baz=355,slow=1.4,SNR=7.2						
NRIK	**Noril'sk**	**131.69**	**11***c*	*i*PKIKP	**PKiKP**	**15 35 16.9**	**0.0**
NRIK	**Noril'sk**	**131.69**	**11**	PKPdf	**PKiKP**	**15 35 16.8**	**-0.2**
WRA	**Warramunga Arr**	**131.69**	**209**	PKP	**PKPdf**	**15 35 17.6**	**+0.1**
	comp=Z,49nm,0.8s,baz=151,slow=1.7,SNR=71						
WRA				pPKP	**pPKPdf**	**15 35 48.2**	**+0.4**
	comp=Z,50nm,1.0s,baz=162,slow=1.5,SNR=8.3						

WRA				SKKPbc	SKKPbc	15 48 00.2	-0.2
	comp=Z,5.3nm,1.2s,baz=337,slow=5.2,SNR=5.7						
WRA	**Warramunga Arr**	**131.69**	**209**	PKPdf	**PKPdf**	**15 35 17.3**	**-0.2**
WRAB	**Tennant Creek**	**131.69**	**209**	*c i*PKIKP	**PKPdf**	**15 35 18.0**	**+0.5**
WRAB				pmax	pmax		
	comp=Z,114nm,1.3s						
WRAB	**Tennant Creek**	**131.69**	**209**	PKPdf	**PKPdf**	**15 35 17.2**	**-0.3**
WBK	**Wadi Bani Khal**	**131.72**	**80**	P	**PKiKP**	**15 35 18.4**	**0.0**
	SNR=9.7						
WB0	**Warramunga Arr**	**131.82**	**209**	PKPdf	**PKPdf**	**15 35 17.3**	**-0.5**
SEY	**Seymchan**	**131.90**	**336**	PKP	**PKiKP**	**15 35 18.1**	**+0.5**
	comp=Z,49nm,0.9s,baz=90,slow=2.2,SNR=38						
SEY				pPKP	**pPKPdf**	**15 35 47.2**	**+0.3**
	comp=Z,34nm,1.0s,baz=96,slow=1.6,SNR=5.4						
JLN	**Jalan Bani Buh**	**132.03**	**81**	P	**PKiKP**	**15 35 18.6**	**-0.4**
	SNR=10.0						
AB31	**Akbulak array**	**132.08**	**44**	*i* PKIKP	**PKPdf**	**15 35 17.4**	**+0.2**
ABKAR	**Akbulak array**	**132.08**	**44**	PKPdf	**PKiKP**	**15 35 18.1**	**-0.2**
ABKAR	**Akbulak array**	**132.08**	**44**	PKPdf	**PKiKP**	**15 35 18.2**	**-0.1**
GEYT	**Alibeck**	**132.28**	**59**	PKP	**PKiKP**	**15 35 18.7**	**-0.4**
	comp=Z,14nm,0.7s,baz=242,slow=8.1,SNR=21						
GEYT				SKPbc	**SKPbc**	**15 38 34.3**	**-0.6**
	comp=Z,4.1nm,0.8s,baz=77,slow=9.0,SNR=3.6						
GYA0B	**ALIBECK ARRAY**	**132.28**	**59**	PKPdf	**PKPdf**	**15 35 17.9**	**-0.2**
PMG	**Port Moresby**	**132.44**	**231**	PKP	**PKiKP**	**15 35 20.2**	**+0.1**
	comp=Z,33nm,1.2s,baz=11,slow=5.8,SNR=5.8						
PMG				pPKP	**pPKPdf**	**15 35 50.1**	**+0.8**
	comp=Z,56nm,1.2s,baz=66,slow=3.8,SNR=4.6						
PMG	**Port Moresby**	**132.44**	**231**		**PKPdf**	**15 35 19.1**	**+0.1**
PET	**Petropavlovsk**	**133.76**	**322**	*i* PKIKP	**PKPdf**	**15 35 20.4**	**+0.1**
PET				*e*		15 37 51.4	
PET				*e*		15 42 23.3	
PET				*e*SP	SP	15 47 57.4	-0.4
PET				*e*SPP	SPP	15 49 47.8	
PET				*e*SS	**SS**	**15 55 24.7**	**-4.2**
PET				pmax	pmax		
	comp=Z,100nm,10.6s						
PET				pmax	pmax		
	comp=Z,300nm,14.8s						
PET				MLR	MLR		
	comp=Z,200nm,20.0s						
PEA0B	**Petropavlovsk-**	**134.26**	**323**	*c i*PKIKP	**PKPdf**	**15 35 21.9**	**+0.7**
PETK	**Petropavlovsk-**	**134.26**	**323**	PKhKP	PKPpre	15 35 11.0	
	comp=Z,12nm,0.9s,baz=64,slow=4.8,SNR=11						
PETK				PKP	**PKiKP**	**15 35 22.7**	**+0.1**
	comp=Z,32nm,0.9s,baz=55,slow=3.0,SNR=17						
PETK	**Petropavlovsk-**	**134.26**	**323**		PKPpre	15 35 11.3	
PETK				PKPdf	**PKPdf**	**15 35 21.9**	**+0.7**
MA2	**Magadan**	**134.51**	**333**	PKP	**PKiKP**	**15 35 22.4**	**-0.5**
	comp=Z,5.5nm,0.6s,baz=354,slow=6.7,SNR=5.2						
HRA	**Herat**	**135.71**	**64**	PKPdf	**PKPdf**	**15 35 24.7**	**-0.1**
FITZ	**Fitzroy Crossi**	**136.68**	**200**	PKhKP	PKPpre	15 35 15.1	
	comp=Z,7.0nm,0.6s,baz=185,slow=6.2,SNR=18						
FITZ				PKP	**PKPdf**	**15 35 27.8**	**+0.9**
	comp=Z,43nm,0.8s,baz=190,slow=5.1,SNR=29						
FITZ				pPKP	pPKPdf	15 35 57.0	-0.2
	comp=Z,19nm,1.0s,baz=170,slow=0.7,SNR=2.9						
FITZ	**Fitzroy Crossi**	**136.68**	**200**	PKPdf	**PKPdf**	**15 35 27.0**	**+0.1**
BRVK	**Borovoye**	**136.86**	**36**	*c i*PKIKP	**PKiKP**	**15 35 27.4**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,21nm,0.6s						
BRVK	**Borovoye**	**136.86**	**36**	PKPdf	**PKiKP**	**15 35 27.0**	**-0.9**
BVAR	**Borovoye Array**	**136.94**	**36**	PKhKP	PKPpre	15 35 16.9	
	comp=Z,1.2nm,0.5s,baz=252,slow=7.6,SNR=4.9						
BVAR				PKP	**PKiKP**	**15 35 27.6**	**-0.5**
	comp=Z,12nm,0.5s,baz=238,slow=8.5,SNR=39						
BVAR				pPKP	pPKPdf	15 35 56.6	+0.1
	comp=Z,6.2nm,0.6s,baz=224,slow=8.3,SNR=2.1						
BVAR				SKP		15 38 48.9	
	comp=Z,4.7nm,0.9s,baz=224,slow=12,SNR=3.8						
KNRA	**Kununurra**	**137.84**	**205**		PKPpre	15 35 18.4	
KNRA				PKPdf	**PKPdf**	**15 35 29.1**	**+0.1**
YAK	**Yakutsk**	**139.33**	**347**	PKhKP	PKPpre	15 35 22.2	
	comp=Z,22nm,0.6s,baz=156,slow=0.4,SNR=30						
YAK				PKP	**PKPdf**	**15 35 29.8**	**-0.5**
	comp=Z,22nm,0.6s,baz=202,slow=2.6,SNR=14						
YAK				SKP		15 38 52.3	
	comp=Z,6.0nm,0.8s,baz=235,slow=2.7,SNR=4.1						
YAK	**Yakutsk**	**139.33**	**347**	*e*PKHKP	PKPpre	15 35 21.9	
YAK				pmax	pmax		
	comp=Z,35nm,0.9s						
YAK				pmax	pmax		
	comp=Z,81nm,1.9s						
YAK				pmax	pmax		
	comp=N,66nm,2.0s						
YAK				pmax	pmax		
	comp=E,11nm,1.3s						
YAK	**Yakutsk**	**139.33**	**347**		PKPpre	15 35 19.9	
YAK				PKPdf	**PKPdf**	**15 35 30.7**	**+0.4**
MTN	**Manton Dam**	**139.36**	**210**		PKPpre	15 35 22.3	
BRZS	**Berezniki**	**139.60**	**39**	*e*PKP	**PKPdf**	**15 35 28.8**	**-2.4**
	baz=39						
BRZS	**Berezniki**	**139.60**	**39**	*e*PKIKP	**PKPdf**	**15 35 28.8**	**-2.4**
KK31	**Karatay Array**	**140.78**	**50**	*i* PKHKP	PKPpre	15 35 27.6	
KK31	**Karatay Array**	**140.78**	**50**		PKPpre	15 35 26.6	
KKAR	**Karatay Array**	**140.78**	**50**	PKHKP	PKPpre	15 35 26.4	
KKAR	**Karatay Array**	**140.78**	**50**		PKPpre	15 35 26.4	
CHGR	**Chuyangaron**	**140.83**	**57**		PKPpre	15 35 26.4	
CHGR				PKPdf	**PKPdf**	**15 35 34.6**	**+0.7**
KBL	**Kabul**	**141.31**	**63**	P	**PKPdf**	**15 35 34.9**	**-0.2**
	SNR=5.3						
DZA	**Taraz**	**141.42**	**50**	*e*PKP	**PKPdf**	**15 35 33.8**	**-1.0**
	baz=50						
DZA	**Taraz**	**141.42**	**50**	*e*PKIKP	**PKPdf**	**15 35 33.8**	**-1.0**
GAR	**Garm**	**141.66**	**56**		PKPpre	15 35 29.2	
BTK	**Batken**	**141.80**	**54**	PKHKP	PKPpre	15 35 29.8	
BTK	**Batken**	**141.80**	**54**		PKPpre	15 35 29.8	
JAY	**Jayapura**	**141.81**	**232**	PKP	**PKPdf**	**15 35 36.0**	**-0.3**
	comp=E,20nm,1.0s,baz=283,slow=1.7,SNR=11						
KURK	**Kurchatov**	**142.50**	**35**	*i* PKIKP	**PKPdf**	**15 35 33.7**	**-2.7**
KURBB	**Kurchatov Arra**	**142.50**	**35**	PKhKP	PKPpre	15 35 33.6	
	comp=E,8.4nm,0.5s,baz=304,slow=3.5,SNR=35						
KURBB	**Kurchatov Arra**	**142.50**	**35**	PKHKP	PKPpre	15 35 32.9	
BTLS	**Baital**	**142.52**	**45**	*e*PKP	**PKPdf**	**15 35 32.8**	**-3.8**
	baz=45						
BTLS	**Baital**	**142.52**	**45**	*e*PKHKP	PKPpre	15 35 32.8	
EKS2	**Erkin-Say**	**143.20**	**49**	P	PKPbc	15 35 36.4	+1.0
	SNR=33						
ZAA0	**Zalesovo Array**	**143.31**	**27**	PKPpre	PKPpre	15 35 34.8	
ZALV	**Zalesovo Beam**	**143.31**	**27**	PKP	PKPbc	15 35 35.6	+0.5
	comp=E,55nm,0.6s,baz=292,slow=4.2,SNR=178						
ZALV				pPKP	pPKPdf	15 36 07.3	-0.7
	comp=E,47nm,0.8s,baz=312,slow=3.9,SNR=3.4						
ZALV				SKPbc	**SKPbc**	**15 39 06.3**	**0.0**
	comp=E,19nm,0.9s,baz=308,slow=4.9,SNR=3.8						
ZALV	**Zalesovo Beam**	**143.31**	**27**		PKPpre	15 35 34.9	
AML	**Almayashu**	**143.31**	**50**	P	**PKPdf**	**15 35 37.7**	**-0.9**
	SNR=16						
AML	**Almayashu**	**143.31**	**50**	*i* PKPdf	PKPbc	15 35 37.3	+1.3
	SNR=17						
AML	**Almayashu**	**143.31**	**50**	P	PKPbc	15 35 36.8	+0.7
USP	**Ospenovka**	**143.49**	**48**	P	PKPbc	15 35 36.9	+0.9
	SNR=18						
SGDS	**Sogindy**	**143.51**	**47**	*e*PKP	PKPbc	15 35 37.1	+1.0
	baz=47						
SGDS	**Sogindy**	**143.51**	**47**	*e*PKIKP	PKPbc	15 35 37.1	+1.0
SEM	**Semipalatinsk**	**143.52**	**34**	*e*PKP	PKPab	15 35 35.2	+0.1
	baz=34						
SEM	**Semipalatinsk**	**143.52**	**34**	*e*PKIKP	PKPab	15 35 35.2	+0.1
SMPI	**Sarmi**	**143.60**	**230**	PKP	PKPbc	15 35 38.2	+1.1
AAK	**Ala-Archa**	**143.70**	**49**	PKP	**PKPdf**	**15 35 38.2**	**-0.9**
	comp=E,41nm,0.9s,baz=239,slow=2.7,SNR=119						
AAK	**Ala-Archa**	**143.70**	**49**	*i* PKPdf	**PKPdf**	**15 35 38.2**	**-0.9**
	SNR=65						
AAK	**Ala-Archa**	**143.70**	**49**	*e*PKIKP	PKPbc	15 35 37.5	+0.7
AAK	**Ala-Archa**	**143.70**	**49**		**PKPdf**	**15 35 38.4**	**-0.7**
FRU1	**Bishkek**	**143.74**	**48**	PKIKP	**PKPdf**	**15 35 38.4**	**-0.5**
FRU1	**Bishkek**	**143.74**	**48**		**PKPdf**	**15 35 38.4**	**-0.5**
CHMS	**Chumysh**	**143.75**	**48**	P	**PKPdf**	**15 35 38.1**	**-0.8**
	SNR=26						
UCH	**Uchtor**	**143.86**	**49**	P	**PKPdf**	**15 35 39.8**	**+0.1**
	SNR=8.0						
KBK	**Karagaybulak**	**144.01**	**49**	P	**PKPdf**	**15 35 39.2**	**-0.4**
	SNR=46						
TKM2	**Tokmak 2**	**144.36**	**48**	P	**PKPdf**	**15 35 40.1**	**-0.1**
	SNR=82						
TKM2	**Tokmak 2**	**144.36**	**48**	PKIKP	PKPbc	15 35 39.5	+0.6
POO	**Poona**	**144.45**	**90**	⇓*i*P	**PKPab**	**15 35 38.0**	**-1.4**
	comp=E,340nm,1.0s						
KUU	**Kurty**	**144.48**	**46**	⇓*i*PKP	**PKPdf**	**15 35 39.7**	**-0.4**
	baz=46						
KUU	**Kurty**	**144.48**	**46**	*d i*PKIKP	**PKPdf**	**15 35 39.7**	**-0.4**
BATI	**Baumata**	**144.72**	**201**	PKP	**PKPdf**	**15 35 41.9**	**+0.4**
	comp=E,264nm,0.7s,baz=253,slow=0.8,SNR=45						
BATI	**Baumata**	**144.72**	**201**	PKP	**PKPdf**	**15 35 41.8**	**+0.4**
UGL	**Uglegorsk**	**144.81**	**325**	⇓*i*PKIKP	**PKPdf**	**15 35 40.7**	**+0.2**
UGL				pmax	pmax		
	comp=Z,220nm,1.2s						
MTBS	**Maitube**	**144.84**	**47**	⇓*i*PKP	**PKPdf**	**15 35 41.0**	**+0.1**
	baz=47						
CHKK	**Chushkaly**	**144.93**	**46**	⇓*i*PKP	**PKPdf**	**15 35 40.9**	**-0.1**
	baz=46						
SOEI	**Soe**	**144.94**	**202**	PKP	**PKPdf**	**15 35 42.9**	**+0.9**
ULHL	**Ulahol**	**145.05**	**49**	P	**PKPdf**	**15 35 43.2**	**+1.7**
	SNR=20						
YUK	**Yuzh-Kuril'sk**	**145.13**	**315**	*d i*PKIKP	**PKPdf**	**15 35 41.9**	**+0.7**
YUK				*i*		15 36 12.0	
YUK				pmax	pmax		
	comp=Z,663nm,1.3s						
AAA	**Alma-Ata**	**145.14**	**47**	⇓*i*PKP	**PKPdf**	**15 35 42.0**	**+0.6**
	baz=47						
AAA	**Alma-Ata**	**145.14**	**47**	*d i*PKIKP	**PKPdf**	**15 35 42.0**	**+0.6**
KNDC	**Almaty**	**145.17**	**47**	PKIKP	**PKPdf**	**15 35 42.2**	**+0.8**
TNSS	**Tian-Shan**	**145.23**	**47**	*e*PKP	**PKPbc**	**15 35 41.8**	**-0.1**
	baz=47						
MDOK	**Medeo**	**145.25**	**47**	*i* PKP	**PKPab**	**15 35 42.7**	**+0.9**
	baz=47						
MDOK	**Medeo**	**145.25**	**47**	PKIKP	**PKPab**	**15 35 42.8**	**+0.9**
ARXS	**Arharly**	**145.32**	**45**	*e*PKIKP	**PKPab**	**15 35 42.7**	**+0.8**
TDK	**Taldyqorghan**	**145.33**	**43**	*i* PKP	**PKPab**	**15 35 42.7**	**+0.8**
	baz=43						
TDK	**Taldyqorghan**	**145.33**	**43**	*i* PKIKP	**PKPab**	**15 35 42.7**	**+0.8**
SRPI	**Serui, Papua**	**145.39**	**227**	PKP	**PKPab**	**15 35 44.4**	**+1.5**
BOD	**Bodaibo**	**145.43**	**358**	*e*PKP2	**PKPdf**	**15 35 41.0**	**-0.3**
BOD				pmax	pmax		
	comp=Z,555nm,1.1s						
BASI	**Baing, Sumba**	**145.60**	**196**	PKP	**PKPab**	**15 35 44.3**	**+0.7**
YSS	**Yuzh-Sakhalins**	**145.63**	**321**	κ *i*PKP2	**PKPab**	**15 35 43.4**	**+0.6**
YSS				*e*		15 39 06.2	
YSS				*e*SS	SS	15 57 46.5	-1.4
YSS				pmax	pmax		
	comp=Z,300nm,0.9s						
YSS				MLR	MLR		
	comp=Z,300nm,16.0s						
YSS	**Yuzh-Sakhalins**	**145.63**	**321**		**PKPab**	**15 35 42.7**	**-0.1**
KSH	**Kashi**	**145.77**	**53**	PKPbc	**PKPab**	**15 35 43.6**	**-0.3**
KSH				pPKP	pPKPdf	15 36 08.9	-4.1
KSH				sPKP		15 36 18.2	
KSH				SKKS		15 45 45.5	
KSH				LR	LR		
	comp=Z,410nm,20.3s						
KSH				LR	LR		
	comp=Z,380nm,20.4s						
KSH				LR	LR		
	comp=Z,860nm,22.7s						
BAKI	**Biak**	**145.98**	**228**	PKP	**PKPab**	**15 35 45.9**	**+0.8**
SATY	**Saty**	**146.20**	**46**	*e*PKP	**PKPbc**	**15 35 44.1**	**-0.4**
	baz=46						
SATY	**Saty**	**146.20**	**46**	*e*PKP2	**PKPbc**	**15 35 44.0**	**-0.4**
WSI	**Waingapu**	**146.20**	**195**	PKP	**PKPab**	**15 35 46.0**	**+0.1**
KPKS	**Kokpek**	**146.20**	**45**	⇓*i*PKP	**PKPbc**	**15 35 44.5**	**+0.1**
	baz=45						
KPKS	**Kokpek**	**146.20**	**45**	*d i*PKP2	**PKPbc**	**15 35 44.5**	**+0.1**
PALK	**Pallekele**	**146.31**	**113**	PKPbc	**PKPbc**	**15 35 45.4**	**-0.2**
PALK	**Pallekele**	**146.31**	**113**	PKPbc	**PKPbc**	**15 35 44.9**	**-0.6**
PALK	**Pallekele**	**146.31**	**113**	P	**PKPbc**	**15 35 45.3**	**-0.2**
PRZ	**Przheval'sk**	**146.43**	**47**	PKP2	**PKPbc**	**15 35 45.3**	**0.0**
PRZ	**Przheval'sk**	**146.43**	**47**	PKPbc	**PKPbc**	**15 35 45.3**	**0.0**
GRNR	**Gornyy**	**146.46**	**331**	⇓*i*PKP2	**PKPab**	**15 35 46.3**	**+0.4**
GRNR				pmax	pmax		
	comp=E,30nm,0.7s						
GRNR				pmax	pmax		
	comp=Z,130nm,1.0s						
MAKZ	**Makanchi**	**146.54**	**38**	PKP2	**PKPbc**	**15 35 44.8**	**-0.4**
MAKZ	**Makanchi**	**146.54**	**38**	PKPdf	**PKPbc**	**15 35 44.5**	**-0.8**
UZB	**Uzynbulak**	**146.57**	**46**	⇓*i*PKP	**PKPbc**	**15 35 44.9**	**-0.7**
	baz=46						
UZB	**Uzynbulak**	**146.57**	**46**	*d i*PKP2	**PKPbc**	**15 35 44.9**	**-0.7**
MMRI	**Maumere**	**146.65**	**199**	PKPdf	**PKPdf**	**15 35 44.4**	**-0.3**
MMRI	**Maumere**	**146.65**	**199**	PKP	**PKPbc**	**15 35 45.7**	**-0.7**
EDFI	**Ende, Flores**	**146.71**	**198**	PKP	**PKPdf**	**15 35 45.5**	**+0.5**
MK31	**Makanchi Array**	**146.73**	**38**	*i* PKIKP	**PKPdf**	**15 35 44.7**	**+0.8**
MK31				*i*		15 35 48.7	
MK31	**Makanchi Array**	**146.73**	**38**	PKPdf	**PKPdf**	**15 35 44.8**	**+0.8**
MKAR	**Makanchi Array**	**146.73**	**38**	PKPbc	**PKPbc**	**15 35 45.0**	**-0.8**
	comp=Z,170nm,0.7s,baz=338,slow=1.6,SNR=396						
MKAR				pPKP	**pPKPdf**	**15 36 14.8**	**+0.6**
	comp=Z,73nm,0.7s,baz=318,slow=3.3,SNR=4.9						
MKAR	**Makanchi Array**	**146.73**	**38**	PKP2	**PKPbc**	**15 35 45.0**	**-0.8**
MKAR	**Makanchi Array**	**146.73**	**38**	PKPdf	**PKPdf**	**15 35 44.7**	**+0.8**
PDGK	**Podgornoye**	**146.79**	**45**	PKP2	**PKPbc**	**15 35 45.8**	**-0.4**
SHLS	**Shalkode**	**146.85**	**45**	⇓*i*PKP	**PKPbc**	**15 35 46.4**	**0.0**
	baz=45						
SHLS	**Shalkode**	**146.85**	**45**	*d i*PKIKP	**PKPbc**	**15 35 46.4**	**0.0**
JWK2	**Keihoku**	**147.00**	**319**	P	**PKPab**	**15 35 47.5**	**-0.7**
GUMO	**Guam**	**147.11**	**259**	PKPbc	**PKPdf**	**15 35 45.9**	**+0.5**
	comp=Z,906nm,1.0s,baz=185,slow=6.8,SNR=21						
GUMO				pPKPbc	**pPKPbc**	**15 36 17.3**	**-0.4**
	comp=Z,560nm,1.1s,baz=211,slow=2.9,SNR=4.7						
GUMO	**Guam**	**147.11**	**259**	PKIKP	**PKPdf**	**15 35 45.5**	**+0.1**
GUMO	**Guam**	**147.11**	**259**		**PKPdf**	**15 35 45.5**	**+0.1**
FAKI	**Fak Fak**	**147.13**	**220**		**PKPdf**	**15 35 46.7**	**+1.1**
FAKI	**Fak Fak**	**147.13**	**220**	PKP	**PKPbc**	**15 35 47.0**	**-0.8**
BNDI	**Bandanaira**	**147.13**	**215**	PKP	**PKPdf**	**15 35 46.0**	**+0.5**
BNDI				PKP	**PKPbc**	**15 35 47.9**	**+0.1**
JKA	**Kamikawa-asahi**	**147.18**	**317**		**PKPdf**	**15 35 45.5**	**+0.8**
ASAJ	**Asahikawa**	**147.18**	**317**	PKPbc	**PKPbc**	**15 35 46.6**	**-0.5**
	comp=Z,157nm,0.8s,baz=231,slow=4.9,SNR=39						
ASAJ				pPKPbc	**pPKPab**	**15 36 18.2**	**-0.4**
	comp=Z,109nm,0.9s,baz=282,slow=7.7,SNR=4.3						
ASAJ	**Asahikawa**	**147.18**	**317**	P	**PKPbc**	**15 35 46.1**	**-1.0**
ZEA	**Zeya**	**147.35**	**343**	*i* PKIKP	**PKPdf**	**15 35 45.4**	**+0.7**
ZEA				*e*		15 36 18.2	
ZEA				pmax	pmax		
	comp=E,200nm,4.6s						
ZEA				pmax	pmax		
	comp=Z,1µm,4.8s						
ZEA				pmax	pmax		
	comp=N,40nm,0.6s						
ZEA				pmax	pmax		
	comp=Z,110nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,160nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,1µm,5.5s						
ZEA				pmax	pmax		
	comp=Z,100nm,11.9s						
DGZ	**Jazzator, Alta**	**147.49**	**30**	*i* PKIKP	**PKPdf**	**15 35 46.5**	**+1.3**
PLAI	**Plampang**	**147.55**	**191**	PKP	**PKPdf**	**15 35 47.0**	**+0.8**
PLAI				PKP	**PKPbc**	**15 35 47.6**	**-1.3**
ZSN	**Zaisan**	**147.74**	**35**	⇓*i*PKP	**PKPdf**	**15 35 46.6**	**+1.1**
	baz=35						
ZSN	**Zaisan**	**147.74**	**35**	*d i*PKIKP	**PKPdf**	**15 35 46.6**	**+1.1**
JEM	**Erimo**	**147.78**	**313**	P	**PKiKP**	**15 35 50.2**	**-0.4**
ERM	**Erimo**	**147.78**	**313**	*c i*PKP2	**PKiKP**	**15 35 50.7**	**+0.1**
ERM				pmax	pmax		
	comp=Z,468nm,1.3s						
TWSI	**Taliwang, Sumb**	**147.79**	**190**	PKP	**PKPdf**	**15 35 46.7**	**+0.1**
TWSI				PKP	**PKPbc**	**15 35 47.3**	**-2.3**
IGBI	**Denpasar**	**147.94**	**187**	PKP	**PKPdf**	**15 35 47.9**	**+1.0**
IGBI				PKP	**PKPbc**	**15 35 50.1**	**+0.1**
DNP	**Denpasar**	**148.07**	**187**	PKP	**PKPdf**	**15 35 47.1**	**0.0**
DNP				PKP	**PKiKP**	**15 35 51.6**	**-0.5**
JAGI	**Jajag, Banyuwa**	**148.37**	**185**	PKPdf	**PKPdf**	**15 35 47.4**	**-0.2**
JAGI				PKPbc	**PKPbc**	**15 35 51.0**	**-0.1**
JAGI	**Jajag, Banyuwa**	**148.37**	**185**	PKP	**PKPdf**	**15 35 48.3**	**+0.7**
HYB	**Hyderabad**	**148.49**	**94**	*i* PKP	**PKPdf**	**15 35 48.0**	**+0.3**
HYB				*e*pPKP	**pPKPdf**	**15 36 18.0**	**0.0**
JEW	**Eniwo**	**148.53**	**316**	P	**PKPbc**	**15 35 49.9**	**-0.8**
JEW	**Eniwo**	**148.53**	**316**		**PKPbc**	**15 35 50.4**	**-0.3**
GMJI	**Gumukmas**	**148.62**	**183**	PKP	**PKPdf**	**15 35 48.6**	**+0.6**
GMJI				PKP	**PKPbc**	**15 35 49.0**	**-2.7**
MSAI	**Masohi**	**148.64**	**215**	PKP	**PKPdf**	**15 35 48.1**	**+0.1**
SRBI	**Singaraja**	**148.66**	**187**	PKP	**PKPdf**	**15 35 47.5**	**-0.5**
NDI	**New Delhi**	**148.66**	**73**	*e*P	**PKPdf**	**15 35 49.0**	**+1.4**
PCJI	**Pacitan**	**148.74**	**179**	PKP	**PKPdf**	**15 35 49.2**	**+1.0**
PWJI	**Pagerwojo**	**148.91**	**180**	PKP	**PKPdf**	**15 35 49.2**	**+0.7**
CMJI	**Cimerak**	**148.99**	**174**	PKP	**PKPdf**	**15 35 49.2**	**+0.6**
UGM	**Wanagama**	**149.00**	**178**	PKPbc	**PKPbc**	**15 35 53.3**	**+0.5**
UGM	**Wanagama**	**149.00**	**178**	PKP	**PKPdf**	**15 35 49.9**	**+1.2**
ABJI	**Asem Bagus**	**149.03**	**185**	PKP	**PKPdf**	**15 35 49.2**	**+0.6**
YOGI	**Yogyakarta**	**149.09**	**177**	PKP	**PKPdf**	**15 35 48.3**	**-0.5**
BLJI	**Banyuglugur**	**149.13**	**184**	PKP	**PKPdf**	**15 35 48.5**	**-0.3**
CISI	**Cisompet, Garu**	**149.15**	**173**	PKPdf	**PKPdf**	**15 35 48.6**	**-0.3**
CISI				PKPbc	**PKPbc**	**15 35 53.0**	**-0.1**
CISI	**Cisompet, Garu**	**149.15**	**173**	PKP	**PKPdf**	**15 35 48.6**	**-0.3**
CNJI	**Cibinong**	**149.31**	**171**	PKP	**PKPdf**	**15 35 48.7**	**-0.4**
SIJI	**Sorong**	**149.34**	**221**	PKP	**PKPdf**	**15 35 48.6**	**-0.6**
	comp=Z,100nm,1.0s,baz=124,slow=5.0,SNR=11						
SIJI				PKPbc	**PKPbc**	**15 35 53.0**	**-0.6**
	comp=Z,167nm,0.8s,baz=60,slow=1.7,SNR=96						
SIJI				pPKPbc	**pPKPbc**	**15 36 23.8**	**0.0**
	comp=Z,114nm,0.9s,baz=172,slow=4.2,SNR=4.8						
SWI	**Sorong**	**149.35**	**221**	PKP	**PKPdf**	**15 35 48.5**	**-0.7**
JOT	**Ohata**	**149.48**	**313**	P	**PKPbc**	**15 35 51.1**	**-2.0**
KPJI	**Karang Pucung**	**149.48**	**175**	PKP	**PKPdf**	**15 35 48.4**	**-1.0**
SKJI	**Sukabumi**	**149.52**	**170**	PKP	**PKPdf**	**15 35 49.5**	**+0.1**
BSSI	**Bau Bau, Buton**	**149.53**	**198**	PKP	**PKPdf**	**15 35 50.9**	**+1.4**
JSH	**Shimam**	**149.53**	**316**	P	**PKPbc**	**15 35 52.4**	**-0.8**
NGJI	**Ngawi**	**149.56**	**180**	PKP	**PKPdf**	**15 35 51.0**	**+1.5**
KLR	**Kul'dur**	**149.61**	**334**	PKP	**PKPdf**	**15 35 48.8**	**+0.3**
	comp=Z,51nm,0.7s,baz=20,slow=2.9,SNR=19						
KLR				PKPbc	**PKPbc**	**15 35 53.6**	**+0.4**
	comp=Z,51nm,0.7s,baz=42,slow=2.7,SNR=39						
KLR				pPKPbc	**pPKPbc**	**15 36 24.3**	**+0.9**
	comp=Z,26nm,0.9s,baz=54,slow=3.8,SNR=3.3						
KLR	**Kul'dur**	**149.61**	**334**	*d i*PKHKP	PKPpre	15 35 49.3	
JTM	**Tenmabayashi**	**149.73**	**312**	P	**PKPdf**	**15 35 50.5**	**+1.6**
CGJI	**Cibinong**	**149.75**	**168**	PKP	**PKPdf**	**15 35 50.1**	**+0.3**
KMMI	**Kalianget**	**149.79**	**185**	PKP	**PKPdf**	**15 35 50.9**	**+1.0**
LEM	**Lembang**	**149.84**	**172**	PKP	**PKPdf**	**15 35 51.6**	**+1.4**
SMRI	**Semarang**	**149.86**	**178**	PKP	**PKPdf**	**15 35 51.6**	**+1.6**
DBJI	**Dramaga**	**149.99**	**170**	PKP	**PKPdf**	**15 35 50.9**	**+0.7**
GRJI	**Gresik**	**150.00**	**182**	PKP	**PKPdf**	**15 35 51.1**	**+0.9**
TBJI	**Tambak Boyo**	**150.11**	**180**	PKP	**PKPdf**	**15 35 50.0**	**-0.4**
JOM	**Ohasama**	**150.13**	**310**	P	**PKPbc**	**15 35 54.6**	**-0.2**
TEY	**Ternei**	**150.23**	**323**	⇑*e*PKIKP	PKPdf	15 35 40.2	-9.4
TEY				*e*		15 35 51.1	
TEY				pmax	pmax		
	comp=N,10.0nm,1.0s						
TEY				pmax	pmax		
	comp=E,10.0nm,1.0s						
TEY				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TEY				pmax	pmax		
	comp=N,10.0nm,1.7s						
TEY				pmax	pmax		
	comp=E,10.0nm,1.7s						
TEY				pmax	pmax		
	comp=Z,50nm,1.7s						
SBJI	**Serang**	**150.31**	**169**	PKP	**PKPdf**	**15 35 50.6**	**-0.1**
BKSI	**Bulukumba**	**150.41**	**197**	PKP	**PKPdf**	**15 35 51.7**	**+0.9**
IRK	**Irkutsk**	**150.51**	**9**	*e*PKIKP	**PKPdf**	**15 35 50.3**	**+0.5**
IRK				pmax	pmax		
	comp=Z,335nm,2.5s						
KASI	**Kota Agung**	**150.56**	**165**	PKP	**PKPdf**	**15 35 51.5**	**+0.4**
KAPI	**Kappang**	**150.81**	**197**	PKP	**PKPdf**	**15 35 52.3**	**+0.8**
	comp=Z,19nm,0.8s,baz=212,slow=2.7,SNR=15						
KAPI				PKPbc	**PKiKP**	**15 35 57.7**	**0.0**
	comp=Z,165nm,0.8s,baz=237,slow=2.0,SNR=88						
KAPI				pPKPbc	**pPKPbc**	**15 36 28.8**	**+1.6**
	comp=Z,159nm,1.0s,baz=182,slow=2.4,SNR=5.2						
KAPI	**Kappang**	**150.81**	**197**	PKPbc	**PKPbc**	**15 35 57.1**	**0.0**
KAPI	**Kappang**	**150.81**	**197**	P	**PKPdf**	**15 35 52.9**	**+1.5**
BLSI	**Bandar Lampung**	**150.88**	**167**	PKP	**PKPdf**	**15 35 52.1**	**+0.5**
LWLI	**Liwa**	**150.94**	**164**	PKP	**PKPdf**	**15 35 53.0**	**+1.2**
TLY	**Talaya**	**150.96**	**10**	PKP	**PKPdf**	**15 35 52.5**	**+1.9**
	comp=Z,10nm,0.7s,baz=317,slow=2.3,SNR=8.6						
TLY				PKPbc	**PKiKP**	**15 35 57.9**	**+1.0**
	comp=Z,62nm,0.6s,baz=223,slow=2.0,SNR=30						
TLY	**Talaya**	**150.96**	**10**	*i* PKIKP	**PKPdf**	**15 35 52.5**	**+1.9**
TLY				pmax	pmax		
	comp=Z,57nm,1.1s						
TLY				pmax	pmax		
	comp=Z,155nm,0.7s						
TLY	**Talaya**	**150.96**	**10**	P	**PKPdf**	**15 35 52.3**	**+1.8**
JMM	**Marumori**	**151.12**	**307**	P	**PKPbc**	**15 35 54.8**	**-2.3**
JMM	**Marumori**	**151.12**	**307**		**PKPbc**	**15 35 57.2**	**+0.1**
SANI	**Sanana**	**151.22**	**211**	PKP	**PKPdf**	**15 35 53.0**	**+0.9**
CIT	**Chita**	**151.24**	**358**	*e*PKIKP	**PKPdf**	**15 35 52.5**	**+1.5**
CIT				*e*		15 36 28.7	
KLSI		**151.42**	**165**	PKP	**PKPdf**	**15 35 52.6**	**+0.2**
MDSI	**Maura Dua**	**151.48**	**164**	PKP	**PKPdf**	**15 35 52.0**	**-0.5**
WMQ	**Urumqi**	**151.56**	**38**	*e*PKPbc	**PKPdf**	**15 35 52.7**	**+0.9**
WMQ				LR	LR		
	comp=Z,510nm,21.1s						
WMQ				LR	LR		
	comp=Z,580nm,21.1s						
WMQ				LR	LR		
	comp=Z,820nm,21.5s						
JYA	**Atsumi**	**151.62**	**309**	P	**PKPdf**	**15 35 54.5**	**+2.6**
KSI	**Kapahiang**	**151.84**	**161**	PKP	**PKPdf**	**15 35 52.2**	**-0.9**
LHSI	**Lahat**	**151.94**	**163**	PKP	**PKPdf**	**15 35 52.3**	**-0.9**
JCJ	**Chichijima**	**152.12**	**284**	PKPbc	**PKPbc**	**15 35 59.5**	**-0.2**
	comp=Z,119nm,0.8s,baz=90,slow=22,SNR=7.9						
ZAK	**Zakamensk**	**152.15**	**11**	*e*PKIKP	**PKPdf**	**15 35 53.3**	**+0.8**
ZAK				*e*		15 39 41.7	
ZAK				pmax	pmax		
	comp=Z,42nm,1.3s						
ZAK				pmax	pmax		
	comp=Z,24nm,1.5s						
JYT	**Yasato**	**152.15**	**304**	P	**PKPdf**	**15 35 53.4**	**+0.6**
JYT	**Yasato**	**152.15**	**304**	PKPbc	**PKiKP**	**15 35 59.8**	**-0.1**
MASI	**Maura Aman, Be**	**152.21**	**160**	PKP	**PKPdf**	**15 35 53.9**	**+0.2**
TTSI	**Tana Toraja**	**152.67**	**198**	PKP	**PKPdf**	**15 35 55.6**	**+1.3**
SISI	**Saibi**	**152.68**	**152**	PKP	**PKPdf**	**15 35 56.3**	**+2.0**
JSD	**Sado**	**152.89**	**309**	P	**PKPdf**	**15 35 52.8**	**-1.0**
JSD	**Sado**	**152.89**	**309**	PKPbc	**PKiKP**	**15 36 01.4**	**+0.1**
JSD				PKPab	**PKPab**	**15 36 13.2**	**+0.5**
TNTI	**Ternate**	**152.93**	**217**	PKP	**PKPdf**	**15 35 53.9**	**-0.7**
PMBI	**Palembang**	**153.13**	**165**	PKP	**PKPdf**	**15 35 55.3**	**+0.4**
JRY	**Ryogami san**	**153.20**	**305**	P	**PKPdf**	**15 35 54.7**	**+0.3**
KBKI	**Kotabaru**	**153.24**	**190**	PKP	**PKPdf**	**15 35 53.7**	**-1.4**
USA0B	**Ussuriysk Arra**	**153.25**	**326**	PKIKP	**PKiKP**	**15 36 02.7**	**+0.9**
USA0B	**Ussuriysk Arra**	**153.25**	**326**	PKPbc	**PKiKP**	**15 36 02.7**	**+0.9**
USRK	**Ussuriysk Ar.**	**153.25**	**326**	PKP	**PKPdf**	**15 35 54.6**	**+0.5**
	comp=Z,38nm,1.1s,baz=273,slow=1.4,SNR=36						
USRK				PKPbc	**PKiKP**	**15 36 02.5**	**+0.6**
	comp=Z,28nm,0.8s,baz=40,slow=1.7,SNR=19						
USRK				PKPab	**PKPab**	**15 36 14.8**	**+0.8**
	comp=Z,11nm,0.6s,baz=34,slow=2.9,SNR=9.4						
USRK	**Ussuriysk Ar.**	**153.25**	**326**	PKPdf	**PKPdf**	**15 35 54.2**	**0.0**
USRK				PKPbc	**PKiKP**	**15 36 02.8**	**+0.9**
BBKI	**Banjar Baru**	**153.26**	**187**	PKP	**PKPdf**	**15 35 54.7**	**-0.4**
HIA	**Hailar**	**153.26**	**348**	PKIKP	**PKPdf**	**15 35 54.3**	**+0.2**
HIA						15 36 14.5	
HIA	**Hailar**	**153.26**	**348**		**PKPdf**	**15 35 54.3**	**+0.2**
HIA				PKPbc	**PKPbc**	**15 36 01.6**	**-0.1**
HIA				PKPab	**PKPab**	**15 36 14.5**	**+0.6**
JOD2	**Odawara 2**	**153.32**	**303**	P	**PKPdf**	**15 35 55.0**	**+0.4**
LUWI	**Luwuk**	**153.53**	**206**	PKP	**PKPdf**	**15 35 56.5**	**+1.0**
MJAR	**Matsushiro Arr**	**153.53**	**306**	PKP	**PKPdf**	**15 35 55.3**	**+0.4**
	comp=Z,18nm,1.2s,baz=140,slow=1.2,SNR=32						
MJAR				PKPbc	**PKPbc**	**15 36 02.6**	**0.0**
	comp=Z,32nm,0.8s,baz=85,slow=2.1,SNR=32						
MJAR				PKPab	**PKPab**	**15 36 15.5**	**0.0**
	comp=Z,71nm,1.1s,baz=82,slow=5.2,SNR=11						
MJAR	**Matsushiro Arr**	**153.53**	**306**	PKPdf	**PKPdf**	**15 35 54.9**	**+0.1**
MAT	**Matsushiro**	**153.53**	**306**	PKP	**PKPdf**	**15 35 54.9**	**0.0**
MAT	**Matsushiro**	**153.53**	**306**	P	**PKPdf**	**15 35 54.6**	**-0.3**
PDSI	**Padang**	**153.63**	**154**	PKP	**PKPdf**	**15 35 56.3**	**+0.6**
PYUN	**Piuthan**	**153.77**	**73**	*e*P	**PKPdf**	**15 35 56.2**	**+0.5**
PPI	**Padang Panjang**	**154.02**	**154**	PKP	**PKPdf**	**15 35 56.6**	**+0.4**
JMBI	**JAMBI**	**154.06**	**161**	PKP	**PKPdf**	**15 35 57.3**	**+1.0**
APSI	**Ampana**	**154.08**	**203**	PKP	**PKPdf**	**15 35 58.0**	**+1.7**
MDJ	**Mudanjiang**	**154.11**	**330**	PKPbc	**PKPdf**	**15 35 55.5**	**+0.1**
MDJ				pPKP	PKPab	15 36 18.9	+1.3
MDJ				PP	**PP**	**15 39 52.4**	**+0.1**
MDJ				SKS	**SKSdf**	**15 42 50.5**	**-1.8**
MDJ				SS	**SS**	**15 59 22.4**	**+0.6**
MDJ				AMB	AMB		
	comp=Z,460nm,10.7s						
MDJ	**Mudanjiang**	**154.11**	**330**		**PKPdf**	**15 35 55.1**	**-0.3**
PPBI	**Pangkal Pinang**	**154.17**	**167**	PKP	**PKPdf**	**15 35 56.8**	**+0.4**
PBKI	**Pangkalan Bun**	**154.20**	**180**	PKP	**PKPdf**	**15 35 58.4**	**+1.9**
GSI	**Gunungsitoli**	**154.26**	**146**	PKP	**PKPdf**	**15 35 58.2**	**+1.6**
GSI				PKP	**PKPbc**	**15 35 58.6**	**-6.3**
JGN	**Niukaw**	**154.32**	**306**	P	**PKPdf**	**15 35 54.5**	**-1.5**
KOLN	**Koldanda**	**154.33**	**74**	*e*P	**PKPdf**	**15 35 56.6**	**+0.1**
DANN	**Dangsing**	**154.43**	**73**	*e*P	**PKPdf**	**15 35 57.6**	**+0.9**
JGF	**Kuroka**	**154.53**	**305**	PKPdf	**PKPdf**	**15 35 56.2**	**-0.1**
JGF				PKPbc	**PKPbc**	**15 36 04.9**	**+0.1**
MNSI	**Mandailing Nat**	**154.79**	**151**	PKP	**PKPdf**	**15 35 56.6**	**-0.7**
RGRI	**Rengat**	**154.85**	**158**	PKP	**PKPdf**	**15 35 57.1**	**-0.3**
BKNI	**Bangkinang**	**154.99**	**154**	PKP	**PKPdf**	**15 35 57.1**	**-0.5**
BKB	**Balikpapan**	**155.10**	**193**	PKP	**PKPdf**	**15 35 59.8**	**+2.1**
SONM	**Songino Array**	**155.12**	**8**	PKP	**PKPdf**	**15 35 58.2**	**+1.3**
	comp=Z,22nm,0.8s,baz=307,slow=0.8,SNR=92						
SONM				PKPbc	PKPbc	15 36 06.6	
	comp=Z,18nm,0.7s,baz=318,slow=1.3,SNR=16						
SONM				PKPab	**PKPab**	**15 36 23.1**	**+1.2**

	comp=Z,24nm,0.8s,baz=330,slow=4.2,SNR=11						
SONM				PP	PP	15 40 00.3	+2.7
	comp=Z,7.1nm,1.2s,baz=317,slow=3.5,SNR=4.3						
SONM	Songino Array	155.12	8	PKPdf	PKPdf	15 35 57.1	+0.2
SONM				PKPbc	PKPbc	15 36 06.1	
SBSI	Sibolga	155.13	148	PKP	PKPdf	15 35 57.8	0.0
ULN	Ulaanbaatar	155.17	7	P	PKPdf	15 35 58.3	+1.3
GKN	Gorkha	155.23	73	*e*P	PKPdf	15 35 58.0	+0.3
MRSI	Marisa	155.24	205	PKP	PKPdf	15 35 56.5	-1.4
DSRI	Dabo	155.43	163	PKP	PKPdf	15 35 59.5	+1.3
DMN	Daman	155.67	74	*e*P	PKPdf	15 35 58.9	+0.5
TPTI		155.69	143	PKP	PKPdf	15 35 58.1	-0.4
MTKI	Muara Teweh, K	155.74	188	PKP	PKPdf	15 35 59.9	+1.3
KKN	Kakani	155.81	74	*e*P	PKPdf	15 35 58.8	+0.3
SMKI	Samarinda	155.82	194	PKP	PKPdf	15 36 00.8	+2.1
MPSI	Mapaga	155.84	201	PKP	PKPdf	15 35 59.1	+0.4
PKIN	Phulchoki	155.93	74	*e*P	PKPdf	15 35 58.8	0.0
PKI	Pulchoki	155.94	74	*e*P	PKPdf	15 35 58.9	0.0
JWT	Wachi	156.12	305	P	PKPdf	15 35 59.0	+0.6
JWT	Wachi	156.12	305	PKPdf	PKPdf	15 35 58.2	-0.2
GUN	Gumba	156.33	73	*e*P	PKPdf	15 35 59.7	+0.3
SGSI	Sangihe	156.36	217	PKP	PKPdf	15 35 59.6	+0.2
CN2	Changchun	156.56	334	*e*PKP	PKPdf	15 35 58.6	-0.1
CN2				PP	PP	15 40 03.6	-2.2
CN2				AMB	AMB		
	comp=Z,400nm,4.0s						
CN2				LR	LR		
	comp=Z,200nm,18.0s						
CN2				LR	LR		
	comp=Z,200nm,18.0s						
CN2				LR	LR		
	comp=Z,200nm,19.0s						
JIRN	Jiri	156.63	74	*e*P	PKPdf	15 35 59.9	+0.1
TSI	Tuntungan	156.64	145	PKP	PKPdf	15 36 00.3	+0.6
STKI	Sintang	156.95	180	PKP	PKPdf	15 36 01.5	+1.3
RAMN	Ramite	157.04	76	*e*P	PKPdf	15 36 00.9	+0.7
	comp=Z,56nm,0.6s						
LHMI	Lhok Sumawe	157.15	139	PKP	PKPdf	15 36 01.1	+0.7
JAD	Aida	157.18	306	P	PKPdf	15 36 00.0	+0.2
ODAN	Odare	157.75	76	*e*P	PKPdf	15 36 01.5	+0.4
	comp=Z,91nm,0.9s						
JMN	Monobe	157.88	303	P	PKPdf	15 35 59.5	-1.3
JHS	Saijyo	157.94	307	P	PKPdf	15 36 00.5	-0.3
JHS	Saijyo	157.94	307	PKPdf	PKPdf	15 36 00.9	+0.1
TAPN	Taplejung	158.00	74	*e*P	PKPdf	15 36 01.9	+0.5
	comp=Z,68nm,1.0s						
SNY	Shenyang	158.96	334	⇓PKP	PKPdf	15 36 02.6	+0.9
SNY				pPKP	pPKPdf	15 36 30.1	-2.1
SNY				PP	PP	15 40 20.3	+1.4
SNY				SS	SS	16 00 15.2	+1.8
SNY				LR	LR		
	comp=Z,130nm,16.6s						
SNY				LR	LR		
	comp=Z,280nm,18.5s						
SNY				LR	LR		
	comp=Z,330nm,18.5s						
KSRS	Korea Array	160.10	319	PKP	PKPdf	15 36 04.2	+1.0
	comp=Z,48nm,1.0s,baz=70,slow=0.9,SNR=124						
KSRS				pPKP	pPKPdf	15 36 34.2	+0.6
	comp=Z,44nm,1.1s,baz=72,slow=0.3,SNR=6.9						
KSRS				PKPab	PKPab	15 36 44.0	+0.4
	comp=Z,24nm,0.9s,baz=54,slow=4.5,SNR=15						
KSRS				PP	PP	15 40 31.9	+6.3
	comp=Z,4.0nm,1.1s,baz=53,slow=3.6,SNR=5.0						
KSAR	Wonju Array Be	160.13	319	PKIKP	PKPdf	15 36 04.0	+0.8
KSAR	Wonju Array Be	160.13	319	PKPdf	PKPdf	15 36 04.0	+0.8
JNU	Nakatsue	160.43	304	PKP	PKPdf	15 36 03.8	0.0
	comp=Z,11nm,1.0s,baz=102,slow=5.4,SNR=3.7						
LSA	Lhasa	160.58	66	PKP	PKPdf	15 36 05.8	+1.2
LSA	Lhasa	160.58	66	PKPdf	PKPdf	15 36 06.3	+1.7
GTA	Gaotai	161.02	29	⇓PKP	PKPdf	15 36 05.5	+1.2
GTA				pPKP	pPKPdf	15 36 35.4	+0.6
GTA				sPKP		15 36 47.8	
GTA				PP	PP	15 40 35.6	+5.2
GTA				SKKS		15 47 07.3	
GTA				AMB	AMB		
	comp=Z,180nm,8.8s						
GTA				LR	LR		
	comp=Z,180nm,21.5s						
GTA				LR	LR		
	comp=Z,310nm,20.3s						
GTA				LR	LR		
	comp=Z,450nm,24.7s						
JSU	Suzuyama	161.39	300	PKPab	PKPab	15 36 48.8	-0.8
SHL	Shillong	161.86	79	P	PKPdf	15 36 05.6	0.0
	SNR=14						
DL2	Dalian	162.23	334	PKP	PKPdf	15 36 06.2	+0.8
DL2				pPKP	pPKPdf	15 36 35.8	-0.1
DL2				PP	PP	15 40 35.5	-1.0
DL2				SS	SS	16 00 50.0	+2.3
DL2				AMB	AMB		
	comp=Z,240nm,9.5s						
HHC	Hu-ho-hao-te	162.46	0	*e*PKP	PKPdf	15 36 07.5	+1.8
HHC				sPKP		15 36 41.3	
HHC				PP	PP	15 40 40.1	+2.7
HHC				SKS	SKSdf	15 43 00.9	+0.1
HHC				SS	SS	16 00 53.9	+4.3
HHC				LR	LR		
	comp=Z,250nm,19.6s						
HHC				LR	LR		
	comp=Z,310nm,20.8s						
HHC				LR	LR		
	comp=Z,640nm,23.7s						
LZH	Lanzhou	165.54	26	*e*PKP	PKPdf	15 36 10.5	+1.7
LZH				pPKP	pPKPdf	15 36 39.6	+0.3
LZH				sPKP		15 36 49.6	
LZH				PKPab	PKPab	15 37 07.4	-0.3
LZH				PP	PP	15 40 53.9	-0.2
LZH				SKKS		15 47 33.8	
LZH				SS	SS	16 01 19.4	-2.8
LZH				AMB	AMB		
	comp=Z,370nm,8.3s						
LZH				LR	LR		
	comp=Z,350nm,17.5s						
LZH				LR	LR		
	comp=Z,370nm,17.9s						
LZH				LR	LR		
	comp=Z,280nm,19.7s						
TIY	Taiyuan	165.57	357	PKP	PKPdf	15 36 09.5	+0.9
TIY				PKPab	PKPab	15 37 08.6	+1.0
TIY				PP	PP	15 40 53.7	0.0
TIY				SS	SS	16 01 20.5	-1.0
TIY				AMB	AMB		
	comp=Z,450nm,4.5s						
TIY				LR	LR		
	comp=Z,100nm,9.1s						
TIY				LR	LR		
	comp=Z,240nm,15.5s						
TIY				LR	LR		
	comp=Z,410nm,16.4s						
TIA	Tai'an	166.24	341	PKP	PKPdf	15 36 09.8	+0.7
TIA				pPKP	pPKPdf	15 36 40.0	+0.4
TIA				PP	PP	15 40 56.4	-0.9
TIA				AMB	AMB		
	comp=Z,340nm,5.5s						
TIA				LR	LR		
	comp=Z,260nm,19.0s						
TIA				LR	LR		
	comp=Z,190nm,15.7s						
TIA				LR	LR		
	comp=Z,290nm,19.1s						
CM31	Chiang Mai Arr	167.21	110	P	PKPdf	15 36 10.8	+0.4
	SNR=10						
CMAR	Chiang Mai Arr	167.21	110	PKP	PKPdf	15 36 11.1	+0.7
	comp=Z,8.7nm,0.9s,baz=258,slow=1.9,SNR=62						
CMAR				pPKP	pPKPdf	15 36 41.3	+0.5
	comp=Z,9.6nm,1.1s,baz=246,slow=1.9,SNR=3.7						
CMAR				PKPab	PKPab	15 37 16.0	+0.5
	comp=Z,16nm,0.8s,baz=253,slow=4.9,SNR=24						
CMAR				PP	PP	15 41 04.9	+0.8
	comp=Z,2.8nm,0.9s,baz=258,slow=5.8,SNR=5.3						
CMAR	Chiang Mai Arr	167.21	110		PKPdf	15 36 10.2	-0.1
CHTO	Chiang Mai	167.35	108	P	PKPdf	15 36 10.9	+0.5
XAN	Xi'an	169.00	12	PKP	PKPdf	15 36 12.1	+0.9
XAN				pPKP	pPKPdf	15 36 42.9	+1.2
XAN				PKPab	PKPab	15 37 21.0	-1.7
XAN				PP	PP	15 41 11.7	+0.4
XAN				SKS	SKSdf	15 43 03.1	-2.0
XAN				SKKS	SKKSac	15 47 50.3	+1.0
XAN				AMB	AMB		
	comp=Z,520nm,8.8s						
XAN				LR	LR		
	comp=Z,330nm,18.6s						
XAN				LR	LR		
	comp=Z,180nm,12.4s						
XAN				LR	LR		
	comp=Z,380nm,20.6s						
NJ2	Nanjing	169.16	325	⇓PKP	PKPdf	15 36 12.1	+0.9
CD2	Chengdu	169.64	41	⇓*i*PKP	PKPdf	15 36 12.9	+1.2
CD2				pPKP	pPKPdf	15 36 42.3	+0.1
CD2				sPKP		15 36 52.3	
CD2				PKS		15 39 45.5	
CD2				PP	PP	15 41 19.3	+3.9
CD2				SKS	SKSdf	15 43 04.7	-0.9
CD2				SKKS	SKKSac	15 47 54.3	+1.4
CD2				SS	SS	16 02 06.2	+2.1
CD2				AMB	AMB		
	comp=Z,370nm,14.4s						
KMI	Kunming	171.67	75	⇓PKP	PKPdf	15 36 13.8	+0.7
KMI				pPKP	pPKPdf	15 36 44.7	+1.0
KMI				sPKP		15 36 56.6	
WHN	Wuhan	172.35	342	⇓PKP	PKPdf	15 36 14.0	+1.0
WHN				pPKP	pPKPdf	15 36 44.4	+0.9
WHN				PKPab	PKPab	15 37 37.5	-0.1
WHN				pPKP2		15 38 06.0	
WHN				AMB	AMB		
	comp=Z,2µm,4.7s						
WHN				LR	LR		
	comp=Z,2µm,32.1s						
ENH	Enshi	172.75	15		PKPdf	15 36 13.0	-0.3
QZH	Quanzhou	173.43	286	*i* PKP	PKPdf	15 36 16.1	+2.5
QZH				pPKP	pPKPdf	15 36 45.8	+1.7
QZH				PP	PP	15 41 36.1	+0.9
QZH				AMB	AMB		
	comp=Z,580nm,7.3s						
QZH				LR	LR		
	comp=Z,390nm,22.0s						
QZH				LR	LR		
	comp=Z,400nm,19.1s						
QZH				LR	LR		
	comp=Z,480nm,20.0s						
GYA	Guiyang	174.47	54	⇓PKP	PKPdf	15 36 14.6	+0.5
GYA				pPKP	pPKPdf	15 36 44.7	0.0
GYA				PKPab	PKPab	15 37 47.4	-0.2
GYA				PP	PP	15 41 44.6	+4.7
GYA				SKKS		15 48 15.9	
GYA				AMB	AMB		
	comp=Z,420nm,12.6s						
GYA				LR	LR		
	comp=Z,330nm,18.7s						
GYA				LR	LR		
	comp=Z,240nm,22.3s						
GYA				LR	LR		
	comp=Z,530nm,23.4s						
QIZ	Qiongzhong	175.47	158	PKP	PKPdf	15 36 15.0	+0.6
QIZ				PP	PP	15 41 49.1	+5.8
QIZ				LR	LR		
	comp=Z,520nm,20.6s						

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*IDC **01** 15:21:36.2±1.2, 12°.57N×143°.26E, h0km, mb3.6/6, mb1 3.8/6, mb1mx3.6/45, mbtmp3.6/6 Error ellipse: s-maj=33.0km s-min=20.3km az=95.0*

ISC 01 15:21:40.0±1.0**, 12°.6N**±0°.2×**143°.3E**±0°.2**, h27km, n13, σ0ˢ.60**/7**, mb3.6**/6**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	1.83	57	Pn	Pn	15 22 10.0	+0.2
	2.4nm,0.3s,baz=192,slow=19,SNR=1.5						
H11S3	WAKE ISLAND Hy	23.28	72	T	T	15 51 00.5	
	baz=259,slow=76,SNR=7.5						
H11S1	WAKE ISLAND Hy	23.30	72	T	T	15 50 58.6	
	baz=259,slow=76,SNR=6.9						
H11S2	WAKE ISLAND Hy	23.30	72	T	T	15 50 59.1	
	baz=259,slow=76,SNR=7.6						
H11N1	WAKE ISLAND Hy	23.73	70	T	T	15 51 32.2	
	baz=255,slow=75,SNR=12						
H11N2	WAKE ISLAND Hy	23.74	70	T	T	15 51 32.8	
	baz=255,slow=75,SNR=5.1						
H11N3	WAKE ISLAND Hy	23.75	70	T	T	15 51 33.4	
	baz=255,slow=75,SNR=7.6						
MJAR	Matsushiro Arr	24.29	350	P	P	15 26 54.9	-0.3
	1.4nm,0.9s,baz=184,slow=9.5,SNR=4.1						
WRA	Warramunga Arr	33.50	195	P	P	15 28 17.1	-0.3
	1.3nm,0.7s,baz=18,slow=9.5,SNR=11						
ASAR	Alice Springs	37.18	194	P	P	15 28 49.0	-0.1
	0.4nm,0.5s,baz=21,slow=13,SNR=13						
CMAR	Chiang Mai Arr	43.05	284	P	P	15 29 38.6	+0.7
	0.6nm,0.4s,baz=80,slow=5.5,SNR=4.1						
SONM	Songino Array	46.69	326	P	P	15 30 05.9	-0.7
	0.3nm,0.5s,baz=126,slow=7.3,SNR=1.8						
MKAR	Makanchi Array	61.15	317	P	P	15 31 52.5	+0.3
	0.6nm,0.9s,baz=99,slow=7.9,SNR=3.9						

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*IDC **01** 15:49:40.4±5.5, 36°.25N×70°.49E, h173km±49km, mb3.4/8, mb1 3.4/13, mb1mx3.1/57, mbtmp3.9/13, Error ellipse: s-maj=39.4km s-min=18.7km az=31.0*
*BJI **01** 15:49:41.2±0.0, 36°.16N×70°.31E, h208km, mb4.1/2*
*NNC **01** 15:49:43.4±6.8, 37°.00N×69°.74E, h0km, mb4.5, mpv4.1, Error ellipse: s-maj=54.1km s-min=46.5km az=43.0*
*NEIC **01** 15:49:44.6±1.8, 36°.51N±0°.07×70°.35E±0°.09, h208km±6km, mb4.0/10, Error ellipse: s-maj=10.8km s-min=9.9km az=108.0*

ISC 01 15:49:44.5±0.6**, 36°.54N**±0°.05×**70°.50E**±0°.07**, h204km, n70, σ1ˢ.60**/75**, mb3.9**/10**, 3C-3D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
				Op	ISC	h m s	ISC
KBL	Kabul	2.32	211	Pn	Pn	15 50 26.3	-0.6
CHGR	Chuyangaron	2.37	334		Pn	15 50 27.0	-0.2
GAR	Garm	2.46	357	Pn	Pn	15 50 28.8	+0.5
CEP	Cherat	2.94	157	P	Pn	15 50 34.7	+0.9
CEP				S	S	15 51 12.0	+0.3
DRK	Karamyk	3.11	19		Pn	15 50 37.1	+1.3
BTK	Batken	3.53	4	Pn	Pn	15 50 42.1	+1.5
CHCP	Chirah Chowk	3.66	141	P	Pn	15 50 44.0	+1.8
NIL	Nilore	3.66	141		Pn	15 50 43.3	+1.1
THW	Thamme Wali	3.87	164	P	Pn	15 50 45.2	+0.3
KSH	Kashi	5.25	54	P	Pn	15 50 58.3	-3.8
KSH				S	S	15 51 55.9	-7.2
KSH				smax	smax		
	comp=N,110nm,0.6s						
KSH				smax	smax		
	comp=E,75nm,0.8s						
AML	Almayashu	6.11	23	P	Pn	15 51 14.3	+0.8
	SNR=19						
DHRM	DHARAMSHALA	6.42	130	*e*P	Pn	15 51 17.7	+0.3
DHRM				*e*P	S	15 52 28.9	-1.9
DHRM				IAML		15 52 30.1	
	comp=E,246nm,0.7s						
DHRM				IAML		15 52 30.7	
	comp=N,172nm,0.2s						
UCH	Uchtor	6.48	27	P	Pn	15 51 19.5	+1.2
	SNR=8.5						
KK31	Karatay Array	6.56	0	Pn	Pn	15 51 18.8	-0.1
KK31	Karatay Array	6.56	0	⇓Pn	Pn	15 51 17.4	-1.5
	comp=N,2.1nm,0.3s,baz=164,slow=7.2,SNR=109						
KK31				Pg		15 51 33.1	
	comp=N,4.1nm,0.5s,baz=188,slow=15,SNR=4.6						
KK31				⇓Sn	S	15 52 28.1	-5.6
	comp=N,4.3nm,0.4s,baz=189,slow=26,SNR=5.3						
KK31				⇑Lg	Lg	15 52 56.2	
	comp=N,5.7nm,0.6s						
KKAR	Karatay Array	6.56	0	Pn	Pn	15 51 18.7	-0.2
KKAR	Karatay Array	6.56	0		Pn	15 51 18.7	-0.2
EKS2	Erkin-Say	6.62	21	P	Pn	15 51 20.8	+1.0
	SNR=22						
AAK	Ala-Archa	6.83	26	P	Pn	15 51 23.7	+1.2
	comp=N,3.1nm,0.3s,baz=199,slow=5.2,SNR=62						
AAK				S	S	15 52 39.6	-0.7
	comp=N,1.3nm,0.3s,baz=24,slow=18,SNR=11						
AAK	Ala-Archa	6.83	26	P	Pn	15 51 23.3	+0.7
	SNR=18						
AAK	Ala-Archa	6.83	26	Pn	Pn	15 51 23.1	+0.5
AAK	Ala-Archa	6.83	26	⇑Pn	Pn	15 51 23.2	+0.7
	comp=N,13nm,0.6s						
KBK	Karagaybulak	7.01	28	P	Pn	15 51 26.2	+1.3
	SNR=10						
FRU1	Bishkek	7.03	26		Pn	15 51 26.1	+1.1
CHMS	Chumysh	7.24	26	P	Pn	15 51 28.6	+0.9
	SNR=11						
USP	Ospenovka	7.39	23	P	Pn	15 51 30.5	+0.8
	SNR=8.0						
TKM2	Tokmak 2	7.49	30	P	Pn	15 51 32.3	+1.2
	SNR=9.9						
TKM2	Tokmak 2	7.49	30	⇓Pn	Pn	15 51 31.7	+0.6
	comp=N,26nm,0.6s						
TKM2				⇑Sn	S	15 52 58.3	+2.3
	comp=N,4.3nm,0.6s						
SMLA	Simla	7.73	132	*e*P	Pn	15 51 33.9	-0.3
SMLA				*e*P	S	15 52 57.6	-4.0
SMLA				IAML		15 53 00.3	
	comp=N,60nm,0.4s						
SMLA				IAML		15 53 00.7	
	comp=E,82nm,0.4s						
KUDL	Kundal	9.78	147	*e*x	Pn	15 51 59.2	-1.6
KUDL				*e*x	x	15 53 37.6	
MAKZ	Makanchi	13.36	36	Pn	Pn	15 52 46.5	+0.3
PYUN	Piuthan	13.49	125	*e*P	Pn	15 52 47.4	-0.8
MK31	Makanchi Array	13.50	37		Pn	15 52 48.8	+0.9
MKAR	Makanchi Array	13.50	37	P	Pn	15 52 48.5	+0.6
	comp=E,0.2nm,0.3s,baz=219,slow=13,SNR=7.0						
MKAR	Makanchi Array	13.50	37	Pn	Pn	15 52 47.5	-0.4
DANN	Dangsing	13.84	122	*e*P	Pn	15 52 52.4	-0.2
KOLN	Koldanda	14.11	125	*e*P	Pn	15 52 55.6	-0.3
GKN	Gorkha	14.66	121	*e*P	Pn	15 53 02.7	+0.1
	comp=E,12nm,0.4s						
ABKAR	Akbulak array	14.86	332		Pn	15 53 03.4	-1.2
WMQ	Urumqi	15.01	56	*e*P	P	15 53 09.5	+2.4
KURBB	Kurchatov Arra	15.22	20	P	Pn	15 53 08.5	-0.5
	comp=E,0.1nm,0.3s,baz=209,slow=11,SNR=4.3						
KKN	Kakani	15.24	121	*e*P	P	15 53 09.9	-0.1
	comp=E,11nm,0.4s						
KURK	Kurchatov	15.33	20	P	Pn	15 53 08.5	-1.8
KURK	Kurchatov	15.33	20	IAmb	IAmb	15 53 25.9	
	comp=Z,1.9nm,0.9s						
PKIN	Phulchoki	15.45	121	*e*P	Pn	15 53 12.0	-0.3
	comp=Z,13nm,0.5s						
PKI	Pulchoki	15.46	121	*e*P	P	15 53 13.2	+0.6
GUN	Gumba	15.58	119	*e*P	Pn	15 53 14.7	+0.7
JIRN	Jiri	15.95	119	*e*P	Pn	15 53 18.9	+0.5
	comp=Z,19nm,0.6s						
BVAR	Borovoye Array	16.49	360	P	Pn	15 53 25.3	+1.1
	comp=Z,0.5nm,0.3s,baz=181,slow=15,SNR=6.8						
BRVK	Borovoye	16.52	360	P	P	15 53 24.0	+0.4
BRVK				IAmb	IAmb	15 53 27.8	
	comp=Z,3.4nm,0.6s						
AKTO	Aktyubinsk	16.55	331	P	Pn	15 53 25.7	+0.7
	comp=Z,0.5nm,0.3s,baz=144,slow=8.4,SNR=5.4						
RAMN	Ramite	16.68	120	*e*P	Pn	15 53 27.2	+0.2
	comp=Z,14nm,0.5s						
TAPN	Taplejung	17.22	117	*e*P	Pn	15 53 33.4	0.0
ODAN	Odare	17.29	119	*e*P	P	15 53 33.3	+0.8
ZAA0	Zalesovo Array	20.05	25	P	P	15 54 02.9	+1.0
ZAA0				IAmb	IAmb	15 54 10.5	
	comp=Z,1.6nm,0.7s						
ZALV	Zalesovo Beam	20.05	25	P	P	15 54 02.5	+0.7
	comp=Z,1.8nm,0.3s,baz=217,slow=11,SNR=13						
ZALV	Zalesovo Beam	20.05	25	P	P	15 54 02.3	+0.5
HHC	Hu-ho-hao-te	32.13	70	*e*P	P	15 55 54.7	+2.0
HHC				pmax	pmax		
	comp=Z,8.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,160nm,5.5s						
FIA1	FINESS Array S	37.23	326	P	P	15 56 36.5	+0.5
FIA1				IAmb	IAmb	15 57 03.8	
	comp=Z,19nm,1.2s						
FINES	FINESS Array B	37.23	326	P	P	15 56 36.6	+0.6
	comp=Z,3.0nm,0.9s,baz=117,slow=11,SNR=4.6						
FINES	FINESS Array B	37.23	326	P	P	15 56 36.5	+0.5
ARCES	ARCESS Array B	40.96	338	P	P	15 57 08.0	+1.2
	comp=Z,3.1nm,1.0s,baz=114,slow=5.4,SNR=5.1						
HFS	Hagfors	42.79	322	P	P	15 57 22.5	+0.9
	comp=Z,4.1nm,1.0s,baz=137,slow=11,SNR=1.6						
NOA	NORSAR Array B	44.11	323	P	P	15 57 33.1	+0.9
	comp=Z,0.7nm,0.7s,baz=42,slow=17,SNR=1.9						
TORD	Torodi Ar. Bea	65.32	268	P	P	16 00 03.2	-1.8
	comp=Z,0.4nm,0.5s,baz=52,slow=5.5,SNR=4.5						
TORD	Torodi Ar. Bea	65.32	268	IAmb	IAmb	16 00 10.0	
	comp=Z,0.4nm,0.9s						
J20K	Nowinta River	73.63	19	P	P	16 00 55.0	-0.1
J20K				IAmb	IAmb	16 01 16.5	
	comp=Z,7.7nm,1.4s						
SML	Sawmill	77.08	18	P	P	16 01 15.5	+0.7
WRA	Warramunga Arr	82.35	122	P	P	16 01 42.3	-1.3
	comp=Z,0.5nm,0.8s,baz=319,slow=4.9,SNR=4.5						
ASAR	Alice Springs	84.60	125	P	P	16 01 54.0	-1.1
	comp=Z,0.4nm,0.6s,baz=307,slow=5.1,SNR=10.0						

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*ISK **01** 15:55:49.7, 40°.73N×32°.86E, h2km, ML3.4/31*
*DDA **01** 15:55:49.8, 40°.73N×32°.86E, h17km±1km, MW3.5*
*IDC **01** 15:55:50.2±1.3, 40°.70N×32°.88E, h0km, mb3.4/2, mb1 3.4/3, mb1mx3.1/35, mbtmp3.4/3, ML3.6/1, MS2.9/1, Ms1 2.9/1, ms1mx2.8/25, Error ellipse: s-maj=23.1km s-min=10.6km az=66.0*

ISC 01 15:55:50.2±1.1**, 40°.72N**±0°.02×**32°.88E**±0°.02**, h2km**±9km**, n74, σ0ˢ.78**/91**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
				Op	ISC	h m s	ISC
CMDR	Camlidere-ANKA	0.38	234	*i* P	Pg	15 55 57.7	+0.2
CMDR				*i* S	Sg	15 56 03.9	+1.3
ELDT	Eldivan	0.48	119	*i* P	Pg	15 55 59.8	+0.5
ELDT				*i* S	Sb	15 56 07.1	-1.8
GRDE	Gerede-Bolu	0.51	279	PG	Pg	15 56 00.8	+0.8
SAFT	Safranbolu	0.54	344	PG	Pg	15 56 00.6	+0.1
KBUK	KARABUK-Merkez	0.55	340	*i* P	Pg	15 56 00.8	+0.1
KBUK				*i* S	Sg	15 56 08.8	+0.9
CANT	Cankiri	0.57	101	PG	Pg	15 56 01.8	+0.6
CANT				SG	Sb	15 56 10.8	-0.8
BCAM	Yenicaga	0.63	279	*i* P	Pg	15 56 02.5	+0.3
BCAM				*i* S	Sg	15 56 11.0	+0.7
PELI	Kastamonı-Ara	0.66	29	*i* P	Pg	15 56 03.2	+0.3
PELI				*i* S	Sg	15 56 10.8	-0.7
ILGA	Ilgaz	0.71	62	*i* P	Pg	15 56 03.5	-0.4
ILGA				*i* S	Sb	15 56 15.7	-0.2
DEVR	Zonguldak/Devr	0.81	302	*i* P	Pg	15 56 05.5	-0.1
DEVR				*i* S	Sg	15 56 16.0	-0.1
LOD	Lodumlu	0.84	186	PG	Pg	15 56 06.4	+0.2
LOD				SG	Sn	15 56 19.6	-2.4
TOS	Tosya	0.92	70	PG	Pb	15 56 08.8	-0.1
KMON	Kastamonu	0.94	46	PG	Pg	15 56 08.9	+0.6
YUVA	Yuva-Kibriscik	0.97	250	PG	Pg	15 56 08.6	-0.1
DELI	KIRIKKALE	1.07	132	*i* P	Pg	15 56 10.7	-0.1
KAST	KASTAMONU	1.10	46	*i* P	Pg	15 56 10.3	-1.1
YIGI	Dzce	1.11	283	*i* P	Pg	15 56 11.1	-0.5
KURC	Kurucasile-Bar	1.13	355	PN	Pg	15 56 10.6	-1.2
BRTR	Keskin Array B	1.15	150	Pg	Pg	15 56 12.3	0.0
	165nm,0.3s,baz=332,slow=13,SNR=1654						
BRTR				Lg	Lg	15 56 28.5	
	134nm,0.3s,baz=326,slow=24,SNR=18						
CIDE	Kastamonu/Cide	1.16	2	*i* P	Pn	15 56 14.0	+0.6
KDZE	Karadeniz Ereo	1.24	299	PN	Pg	15 56 14.0	+0.1
KAGI	orum-Kargı	1.28	71	*i* P	Pn	15 56 13.9	-1.2
KAGI				*i* S	Sn	15 56 33.9	+1.0
MDUB	Mudurnu	1.31	259	PN	Pn	15 56 15.1	-0.4
BTAS	Taskesti	1.44	265	*i* P	Pn	15 56 17.2	-0.1
BTAS				*i* S	Sg	15 56 36.7	+0.3
CORM	Corum	1.44	112	PN	Pg	15 56 17.9	+0.1
KAMT	Kaman	1.50	154	PN	Pg	15 56 18.6	-0.2
BZK	Bozkurt	1.50	34	PN	Pn	15 56 18.7	+0.6
SAHE	Sakarya_HENDEK	1.54	275	*i* P	Pn	15 56 18.5	-0.2
SAHE				*i* S	Sb	15 56 39.4	-0.2
BOYA	Sinop/Boyabat-	1.58	59	*i* P	Pn	15 56 18.7	-0.6
BOYA				*i* S	Sg	15 56 42.2	+1.2
CDAG	Cicekdag	1.58	133	*i* P	Pb	15 56 19.5	-0.8
CDAG				*i* S	Sg	15 56 41.7	+0.6
AUSIV	SIVRIHISAR	1.64	219	*i* P	Pn	15 56 19.7	-0.5
AUSIV	SIVRIHISAR	1.64	219	PN	Pn	15 56 20.3	+0.1
SVRH	Sivrihisar-ESK	1.65	220	PN	Pn	15 56 20.2	0.0
COAL	Corum-Alaca	1.67	106	*i* P	Pb	15 56 21.1	-0.7
COAL				*i* S	Sb	15 56 42.9	-0.4
KIRS	Kırehir-Merke	1.78	153	*i* P	Pb	15 56 22.4	-1.1
KIRS				*i* S	Sg	15 56 46.4	-0.9
GULT	Gulveren	1.82	262	PN	Pn	15 56 22.9	+0.2
YAYX	Yaylak	1.92	158	PN	Pn	15 56 24.3	+0.3
KAYN	Sakarya, Kayna	1.94	278	*i* P	Pn	15 56 24.4	+0.2
CIFT	Cifteler, Eski	1.95	226	PN	Pn	15 56 24.6	+0.3
SGAZ	Eskisehir, Sey	1.97	233	*i* P	Pn	15 56 25.1	+0.5
GEYV	SAKARYA_Geyve	1.98	264	*i* P	Pb	15 56 26.9	0.0
KIZT	Kizilcal	2.00	203	PN	Pn	15 56 25.1	+0.1
DIKM	Dikmen	2.02	62	PN	Pn	15 56 26.1	+0.8
BORA	Eskisehir	2.04	246	*i* P	Pn	15 56 25.4	-0.2
BORA	Eskisehir	2.04	246	PN	Pn	15 56 25.9	+0.3
CKRK	Yozgat, Cekere	2.10	107	*i* P	Pn	15 56 27.2	+0.8
CKRK				*i* S	Sb	15 56 56.2	+0.5
KOZK	Kozakli-Nevseh	2.15	134	PN	Pn	15 56 28.1	+1.0

YOZ	**Yozgat**	**2.16**	**119**	PN	**Pn**	**15 56 28.2**	**+0.9**
AKSY	**AKSARAY - Alti**	**2.18**	**162**	*i*P	**Pb**	**15 56 29.6**	**-0.8**
HAVZ	**Havza**	**2.18**	**80**	*i*P	**Pn**	**15 56 27.3**	**-0.2**
AMSY	**Amasya-Merkez**	**2.25**	**91**	*i*P	**Pn**	**15 56 29.3**	**+0.8**
KDHN	**Kadinhani**	**2.28**	**195**	*i*P	**Pn**	**15 56 28.8**	**0.0**
AUKIR	**Kırka- Seyitga**	**2.31**	**232**	*i*P	**Pn**	**15 56 30.0**	**+0.7**
AUBOZ	**BOZOYUK**	**2.32**	**250**	*i*P	**Pb**	**15 56 32.8**	**0.0**
AUBOZ	**BOZOYUK**	**2.32**	**250**	PN	**Pn**	**15 56 30.0**	**+0.5**
BILE	**Bilecik/Merkez**	**2.36**	**257**	*i*P	**Pn**	**15 56 30.1**	**+0.1**
CAVI	**Cavuskoy**	**2.38**	**258**	PN	**Pn**	**15 56 30.7**	**+0.5**
HACI	**Hacifakili, Ak**	**2.41**	**114**	*i*P	**Pn**	**15 56 31.3**	**+0.6**
HACI				*i*S	**Sb**	**15 57 05.0**	**+0.5**
ADVT	**Abdulvahap**	**2.41**	**264**	PN	**Pn**	**15 56 31.2**	**+0.6**
AVNS	**Nevsehir-Avano**	**2.44**	**141**	*i*P	**Pn**	**15 56 32.0**	**+0.8**
HRT	**Hereke**	**2.44**	**273**	PN	**Pn**	**15 56 31.5**	**+0.4**
SILT	**Sile**	**2.49**	**281**	PN	**Pn**	**15 56 32.6**	**+0.9**
LADK	**Ladik-KONYA**	**2.55**	**189**	PN	**Pn**	**15 56 33.5**	**+0.8**
SAMS	**Samsun-Alacam**	**2.58**	**75**	*i*P	**Pb**	**15 56 37.5**	**+0.3**
ANDZ	**Kutahya, Merke**	**2.59**	**243**	*i*P	**Pn**	**15 56 32.0**	**-1.2**
YLV	**Yalova**	**2.67**	**268**	PN	**Pn**	**15 56 34.2**	**-0.1**
SHUT	**Suhut-Afyon**	**2.82**	**220**	PN	**Pn**	**15 56 37.2**	**+0.9**
GEMT	**Gemlik**	**2.83**	**265**	PN	**Pn**	**15 56 36.4**	**+0.1**
IGD	**Bursa**	**2.84**	**262**	*i*P	**Pn**	**15 56 36.4**	**-0.2**
TVSB	**Tavsanli**	**2.91**	**245**	PN	**Pn**	**15 56 38.1**	**+0.4**
AKASG	**Malin Array Be**	**10.30**	**347**	Pn	**Pn**	**15 58 16.1**	**-2.8**
	0.5nm,0.3s,baz=168,slow=13,SNR=2.5						
OBN	**Obninsk**	**14.61**	**8**	LR	LR	16 05 09.0	
	comp=Z,49nm,20.7s,baz=270,slow=38						
MKAR	**Makanchi Array**	**35.71**	**63**	P	**P**	**16 02 51.7**	**+1.7**
	0.5nm,0.7s,baz=291,slow=7.7,SNR=4.4						
TORD	**Torodi Ar. Bea**	**38.72**	**234**	P	**P**	**16 03 17.4**	**+1.7**
	0.3nm,0.6s,baz=37,slow=9.7,SNR=2.1						

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*NEIC **01** 16:10:58.5±1.7, 31°.90S±0°.07×66°.56W±0°.09, h142^{km}±9^{km}, mb4.5/14, Error ellipse: s-maj=11.9km s-min=9.7km az=113.0*

ISC 01 16:10:58.0±0.7,**31°.89S**±0°.07×**66°.52W**±0°.09,**h150**^{km},**n41**, σ**1^s.34**/41,**mb4.3**/3,**La Rioja Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZON	**Zonda**	**1.87**	**280**	Pn	**Pn**	**16 11 31.7**	**0.0**
VA03	**San Esteban**	**3.52**	**255**		**Pn**	**16 11 52.8**	**+0.7**
CO03	**El Pedregal**	**3.72**	**285**		**Pn**	**16 11 55.6**	**+1.0**
MT05	**Renca**	**3.86**	**246**	Pn	**Pn**	**16 11 57.0**	**+0.5**
GO04	**Tololo Observa**	**4.05**	**294**		**Pn**	**16 11 59.7**	**+0.5**
MT02	**Curacav**	**4.13**	**250**		**Pn**	**16 11 59.1**	**-0.8**
MT09	**Talagante**	**4.21**	**242**		**Pn**	**16 12 00.7**	**-0.3**
MT01	**Popeta**	**4.44**	**242**		**Pn**	**16 12 02.8**	**-1.2**
VA01	**Torpederas**	**4.48**	**254**	Pn	**Pn**	**16 12 02.8**	**-1.7**
CO05	**La Serena**	**4.51**	**295**		**Pn**	**16 12 04.5**	**-0.4**
CO06	**Fray Jorge**	**4.54**	**284**		**Pn**	**16 12 04.0**	**-1.4**
BO01	**Tunca**	**4.57**	**236**		**Pn**	**16 12 04.9**	**-0.8**
BO02	**Sierra Bellavi**	**4.59**	**230**		**Pn**	**16 12 06.6**	**+0.5**
VA05	**Santo Domingo**	**4.64**	**246**		**Pn**	**16 12 05.2**	**-1.4**
GO03	**Copiap**	**5.37**	**322**	Pn	**Pn**	**16 12 16.6**	**+0.3**
AC04	**Llanos de Chal**	**5.39**	**312**		**Pn**	**16 12 16.4**	**-0.2**
GO05	**Huala**	**5.49**	**234**	Pn	**Pn**	**16 12 15.2**	**-2.6**
AC02	**Maricunga**	**5.53**	**335**	Pn	**Pn**	**16 12 19.2**	**+0.3**
ML02	**Panimavida**	**5.61**	**225**	Pn	**Pn**	**16 12 18.9**	**-0.6**
TRQA	**Tornquist**	**7.19**	**150**	Pn	**Pn**	**16 12 40.9**	**+0.4**
LC01	**Cunco**	**8.24**	**211**	Pn	**Pn**	**16 12 52.6**	**-2.0**
ITQB	**Itaqui**	**8.80**	**78**	Pn	**Pn**	**16 13 01.2**	**-0.7**
LVC	**Limon Verde**	**9.49**	**346**	Pn	**Pn**	**16 13 11.2**	**-0.4**
PB06	**IPOC Station P**	**9.54**	**343**	Pn	**Pn**	**16 13 10.5**	**-1.7**
CPUP	**Villa Florida**	**9.76**	**58**		**Pn**	**16 13 12.7**	**-2.2**
PB04	**IPOC Station P**	**10.05**	**340**	Pn	**Pn**	**16 13 16.5**	**-2.5**
PLTB	**Pedras Altas**	**10.99**	**93**	Pn	**Pn**	**16 13 29.3**	**-1.8**
PB01	**IPOC Station P**	**11.13**	**345**	Pn	**Pn**	**16 13 31.1**	**-1.9**
PB11	**IPOC Station P**	**12.41**	**346**	Pn	**Pn**	**16 13 47.5**	**-2.2**
LPAZ	**La Paz**	**15.61**	**354**		**P**	**16 14 31.7**	**+0.1**
LPAZ				IAmb	IAmb	16 14 35.3	
	comp=Z,13nm,0.6s						
EFI	**East Falkland**	**20.72**	**165**	P	**P**	**16 15 27.4**	**+1.0**
SAML	**Samuel**	**23.04**	**8**	P	**P**	**16 15 51.0**	**+0.8**
MLPR	**Magueyes Islan**	**49.58**	**359**	P	**P**	**16 19 35.2**	**+1.4**
SNAA	**Sanae**	**51.82**	**159**	P	**P**	**16 19 52.2**	**+2.1**
WVT	**Waverly**	**70.56**	**342**	P	**P**	**16 21 56.7**	**+0.2**
R55A	**Marlinton**	**70.96**	**349**	P	**P**	**16 22 00.8**	**+1.8**
R55A				IAmb	IAmb	16 22 02.4	
	comp=Z,24nm,1.4s						
PBMO	**Poplar Bluff**	**71.89**	**340**	P	**P**	**16 22 05.0**	**+0.5**
PBMO				IAmb	IAmb	16 22 05.9	
	comp=Z,3.2nm,0.6s						
P40A	**Paris**	**74.91**	**340**	P	**P**	**16 22 22.7**	**+0.6**
P40A				IAmb	IAmb	16 22 23.7	
	comp=Z,4.0nm,0.6s						
WMQ	**Urumqi**	**156.52**	**52**	*e*P	**PKPdf**	**16 30 36.5**	**+1.6**
HHC	**Hu-ho-hao-te**	**170.93**	**9**	*e*P	**PKPdf**	**16 30 46.5**	**-1.8**
HHC				pmax	pmax		
	comp=Z,17nm,1.1s						
HHC				pmax	pmax		
	comp=Z,48nm,5.3s						
NJ2	**Nanjing**	**175.43**	**273**	*e*P	**PKPdf**	**16 30 51.4**	**+1.3**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						

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*IDC **01** 16:32:34.7±1.3, 8°.14S×125°.42E, h0^{km}, mb3.7/4, mb1 3.9/8, mb1mx3.7/38, mbtmp3.7/8, ML3.6/4, Error ellipse: s-maj=46.2km s-min=20.7km az=77.0*

*DJA **01** 16:32:39.6±0.5, 8°S±3°×12°5E±°, h10^{km}, M3.7/6, mb3.9/2, mB5.2/1, MLv3.5/6, Mw(mB)4.6/1*

ISC 01 16:32:39.3±0.8,**8°.40S**±0°.06×**125°.34E**±0°.08,**h35**^{km},**n21**, σ**2^s.30**/22,**mb3.8**/4,**Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**1.72**	**218**	P	**Pn**	**16 33 08.9**	**+2.1**
SOEI				S	**Sn**	**16 33 31.5**	**+3.9**
SOEI	**Soe**	**1.72**	**218**	P	**Pn**	**16 33 10.3**	**+3.5**
BATI	**Baumata**	**2.44**	**223**	Pn	**Pn**	**16 33 19.1**	**+2.3**
	8.3nm,0.3s,baz=67,slow=5.0,SNR=12						
BATI	**Baumata**	**2.44**	**223**	P	**Pn**	**16 33 17.9**	**+1.1**
MMRI	**Maumere**	**3.08**	**265**	P	**Pn**	**16 33 23.9**	**-1.6**
MMRI	**Maumere**	**3.08**	**265**	P	**Pn**	**16 33 24.9**	**-0.6**
EDFI	**Ende, Flores**	**3.63**	**264**	P	**Pn**	**16 33 30.4**	**-2.7**
SANI	**Sanana**	**6.34**	**6**	P	**Pn**	**16 34 11.4**	**+1.1**
	0.0nm4.8nm,0.8s						
SANI	**Sanana**	**6.34**	**6**	P	**Pn**	**16 34 11.3**	**+1.0**
MTN	**Manton Dam**	**7.20**	**128**	P	Pn	16 34 28.8	+6.6
	16nm,0.5s						
LUWI	**Luwuk**	**7.74**	**341**	P	**Pn**	**16 34 28.5**	**-1.1**
KNRA	**Kununurra**	**7.97**	**156**	P	Pn	16 34 38.3	+5.6
	13nm,1.0s						
KDU	**Kakadu**	**8.20**	**122**	P	Pn	16 34 42.8	+6.9
	7.9nm,1.4s						
FITZ	**Fitzroy Crossi**	**9.65**	**178**	Pn	**Pn**	**16 34 57.8**	**+2.1**
	0.3nm,0.3s,baz=358,slow=9.3,SNR=11						
FITZ				Sn	**Sn**	**16 36 40.3**	**-2.6**
	0.3nm,0.3s,baz=128,slow=2.5,SNR=3.3						
FITZ	**Fitzroy Crossi**	**9.65**	**178**	P	**Pn**	**16 34 58.2**	**+2.5**
	6.3nm,1.2s						
WRA	**Warramunga Arr**	**14.40**	**144**	Pn	**Pn**	**16 36 01.3**	**+0.5**
	0.3nm,0.3s,baz=319,slow=13,SNR=22						
WRA				Sn	**Sn**	**16 38 37.3**	**-2.1**
	0.1nm,0.3s,baz=314,slow=27,SNR=2.7						
ASAR	**Alice Springs**	**17.25**	**153**	P	**P**	**16 36 41.7**	**+2.8**
	0.1nm,0.3s,baz=322,slow=11,SNR=29						
ASAR				S	**Sn**	**16 39 44.6**	**-4.1**
	0.0nm,0.3s,baz=318,slow=25,SNR=1.9						
CMAR	**Chiang Mai Arr**	**37.29**	**316**	P	**P**	**16 39 48.4**	**0.0**
	0.6nm,0.6s,baz=136,slow=7.5,SNR=6.3						
SONM	**Songino Array**	**58.45**	**345**	P	**P**	**16 42 30.7**	**-1.1**
	0.2nm,0.3s,baz=144,slow=5.4,SNR=2.1						
MKAR	**Makanchi Array**	**66.96**	**329**	P	**P**	**16 43 28.1**	**-0.4**
	1.0nm,0.6s,baz=126,slow=7.2,SNR=12						
ZALV	**Zalesovo Beam**	**70.88**	**336**	P	**P**	**16 43 51.6**	**-1.0**
	0.8nm,0.7s,baz=141,slow=5.2,SNR=4.9						

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*NEIC **01** 16:50:59.5±2.8, 8°.39S±0°.04×124°.92E±0°.05, h10^{km}±1^{km}, mb4.6/22, Error ellipse: s-maj=10.3km s-min=4.7km az=49.0*

*DJA **01** 16:50:59.6±0.2, 8°S±3°×12°5E±°, h10^{km}, M4.3/16, mB4.9/7, mb4.5/16, MLv4.4/13, Mw(mB)4.2/7*

*IDC **01** 16:51:04.7±2.2, 8°.26S×124°.92E, h53^{km}±22^{km}, mb3.9/9, mb1 4.0/12, mb1mx3.8/31, mbtmp4.1/12, ML3.5/3, MS3.1/2, Ms1 3.1/2, ms1mx2.8/30, Error ellipse: s-maj=21.0km s-min=12.1km az=85.0*

ISC 01 16:51:00.8±0.4,**8°.41S**±0°.04×**125°.07E**±0°.05,**h24**^{km},**n93**, σ**2^s.32**/97,**mb4.5**/23,**2C**,**Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**1.55**	**211**	Pn	**Pn**	**16 51 27.1**	**+0.1**
SOEI	**Soe**	**1.55**	**211**	P	**Pb**	**16 51 30.1**	**+1.1**
SOEI	**Soe**	**1.55**	**211**	P	**Pb**	**16 51 30.1**	**+1.1**
BATI	**Baumata**	**2.26**	**218**	P	**Pb**	**16 51 40.1**	**-0.9**
	29nm,0.3s,baz=66,slow=1.1,SNR=31						
BATI				S	**Sb**	**16 52 07.7**	**-0.8**
	29nm,0.3s,baz=240,slow=22,SNR=6.1						
BATI				LR	LR	16 52 20.3	
	comp=Z,376nm,20.3s,baz=48,slow=33						
BATI	**Baumata**	**2.26**	**218**	P	**Pb**	**16 51 39.9**	**-1.1**
MMRI	**Maumere**	**2.81**	**265**	Pn	**Pn**	**16 51 43.9**	**-0.3**
MMRI	**Maumere**	**2.81**	**265**	P	**Pn**	**16 51 46.0**	**+1.8**
MMRI	**Maumere**	**2.81**	**265**	P	**Pn**	**16 51 46.6**	**+2.4**
EDFI	**Ende, Flores**	**3.36**	**264**	P	**Pn**	**16 51 53.0**	**+1.1**
BASI	**Baing, Sumba**	**4.78**	**248**	P	**Pn**	**16 52 14.6**	**+3.2**
WSI	**Waingapu**	**4.87**	**255**	P	**Pn**	**16 52 15.4**	**+2.8**
BSSI	**Bau Bau, Buton**	**5.07**	**296**	P	**Pn**	**16 52 15.1**	**-0.2**
	0.1nm441nm39nm,0.7s						
WBSI	**Waikabubak, Su**	**5.74**	**257**	P	**Pn**	**16 52 25.9**	**+1.3**
	0.6nm3μm99nm,0.6s						
BKSI	**Bulukumba**	**5.79**	**302**	P	**Pn**	**16 52 25.0**	**-0.2**
	0.1nm26nm,0.8s						
KAPI	**Kappang**	**6.26**	**302**	P	**Pn**	**16 52 32.2**	**+0.5**
	0.6nm,0.3s,baz=174,slow=9.8,SNR=3.7						
KAPI				S	**Sn**	**16 53 40.6**	**-2.1**
	0.1nm,0.3s,baz=305,slow=21,SNR=1.5						
KAPI	**Kappang**	**6.26**	**302**	Pn	**Pn**	**16 52 32.0**	**+0.2**
SANI	**Sanana**	**6.38**	**8**	P	**Pn**	**16 52 31.5**	**-1.9**
	0.1nm717nm20nm,0.5s						
SANI	**Sanana**	**6.38**	**8**	P	**Pn**	**16 52 32.7**	**-0.7**
MTN	**Manton Dam**	**7.41**	**127**	Pn	**Pn**	**16 52 49.4**	**+1.8**
MTN	**Manton Dam**	**7.41**	**127**	P	Pn	16 52 53.6	+6.0
	51nm,0.4s						
LUWI	**Luwuk**	**7.67**	**343**		**Pn**	**16 52 49.4**	**-1.6**
LUWI	**Luwuk**	**7.67**	**343**	P	**Pn**	**16 52 48.0**	**-3.1**
	0.3nm569nm53nm,0.8s						
LUWI	**Luwuk**	**7.67**	**343**	P	**Pn**	**16 52 49.5**	**-1.6**
KNRA	**Kununurra**	**8.07**	**154**	Pn	**Pn**	**16 52 58.6**	**+2.0**
KNRA	**Kununurra**	**8.07**	**154**	P	Pn	16 53 03.7	+7.0
	47nm,0.6s						
FITZ	**Fitzroy Crossi**	**9.65**	**177**	P	**Pn**	**16 53 19.1**	**+0.9**
	1.4nm,0.3s,baz=6.7,slow=11,SNR=33						
FITZ				S	**Sn**	**16 55 00.9**	**-5.0**
	1.4nm,0.3s,baz=125,slow=5.1,SNR=3.5						
FITZ				LR	LR	16 58 02.2	
	comp=Z,125nm,19.5s,baz=110,slow=43						
FITZ	**Fitzroy Crossi**	**9.65**	**177**	Pn	**Pn**	**16 53 18.1**	**-0.1**
FITZ	**Fitzroy Crossi**	**9.65**	**177**	P	**Pn**	**16 53 20.9**	**+2.7**
	16nm,0.8s						
SIJI	**Sorong**	**9.71**	**40**	P	**Pn**	**16 53 21.7**	**+2.6**
	0.3nm,0.3s,baz=225,slow=7.4,SNR=4.1						
MPSI	**Mapaga**	**10.10**	**329**	P	**Pn**	**16 53 23.2**	**-1.3**
	7.2nm,0.9s						
TOLI2	**Tolitoli**	**10.38**	**336**	Pn	**Pn**	**16 53 27.3**	**-1.0**
TOLI2	**Tolitoli**	**10.38**	**336**	P	**Pn**	**16 53 29.0**	**+0.7**
PSA00	**Pilbara Seismi**	**14.02**	**200**	Pn	**Pn**	**16 54 18.1**	**+0.1**
PSA00	**Pilbara Seismi**	**14.02**	**200**	Pn	**Pn**	**16 54 19.3**	**+1.2**
UGM	**Wanagama**	**14.41**	**271**	P	**P**	**16 54 29.6**	**-0.5**
WB0	**Warramunga Arr**	**14.46**	**142**	Pn	**Pn**	**16 54 21.4**	**-2.7**
WRAB	**Tennant Creek**	**14.56**	**143**	Pn	**Pn**	**16 54 22.3**	**-3.1**
WRA	**Warramunga Arr**	**14.56**	**143**	P	**Pn**	**16 54 21.4**	**-4.1**
	1.0nm,0.3s,baz=320,slow=13,SNR=57						
WRA				S	**Sn**	**16 56 58.0**	**-8.2**
	0.3nm,0.3s,baz=264,slow=17,SNR=3.1						
WRA	**Warramunga Arr**	**14.56**	**143**	Pn	**Pn**	**16 54 22.3**	**-3.2**
WB2	**Warramunga Arr**	**14.57**	**143**	Pn	**Pn**	**16 54 22.5**	**-3.0**
WR0	**Warramunga Arr**	**14.69**	**142**	Pn	**Pn**	**16 54 23.7**	**-3.6**
WRKA	**Warakurna**	**16.82**	**170**	P	**P**	**16 55 01.5**	**+4.6**
	12nm,0.7s						
LEM	**Lembang**	**17.37**	**274**	P	**P**	**16 55 03.3**	**+0.2**
	10nm,0.8s						
AS31	**Alice Springs**	**17.37**	**152**	Pn	**Pn**	**16 54 59.3**	**-2.5**
ASAR	**Alice Springs**	**17.37**	**152**	P	**Pn**	**16 55 01.6**	**-0.3**
	0.8nm,0.3s,baz=323,slow=11,SNR=63						
ASAR				S	**Sn**	**16 58 08.8**	**-5.8**
	0.3nm,0.3s,baz=324,slow=20,SNR=6.1						
ASAR	**Alice Springs**	**17.37**	**152**	Pn	**Pn**	**16 54 59.6**	**-2.2**
CNJI	**Cibinong**	**17.80**	**272**	P	**Pn**	**16 55 07.1**	**0.0**
	89nm,1.2s						
QIS	**Mount Isa**	**18.53**	**132**	P	**Pn**	**16 55 19.2**	**+3.2**
COEN	**Coen**	**18.59**	**109**	P	**Pn**	**16 55 17.8**	**+1.0**
XMIS	**Christmas Isla**	**19.26**	**262**	P	**P**	**16 55 23.4**	**-0.4**
XMIS				IAmb	IAmb	16 55 47.1	
	comp=Z,62nm,1.1s						
MTSU	**Mount Surprise**	**21.06**	**119**	P	P	16 55 50.7	+7.3
	comp=Z,5.0nm,0.7s						
OOD	**Oodnadatta**	**21.74**	**154**	P	**P**	**16 55 56.2**	**+5.7**
	comp=Z,22nm,0.8s						
PMG	**Port Moresby**	**21.85**	**94**	P	**P**	**16 55 53.2**	**+1.3**
PMG				IAmb	IAmb	16 55 58.7	
	comp=Z,21nm,1.0s						
LUBP	**Lubang**	**22.52**	**348**	⇑*i*P	Sn	17 00 22.2	+3.8
INKA	**Innaminka**	**24.27**	**144**	P	**P**	**16 56 21.7**	**+5.4**
NWAO	**Narrogin (SRO)**	**25.45**	**195**	P	**P**	**16 56 28.2**	**+1.3**
NWAO				IAmb	IAmb	16 56 34.3	
	comp=Z,14nm,1.1s						
STKA	**Stephens Creek**	**27.95**	**149**	P	**P**	**16 56 52.6**	**+3.1**
	comp=Z,1.2nm,0.6s,baz=317,slow=7.6,SNR=3.4						
STKA	**Stephens Creek**	**27.95**	**149**	P	**P**	**16 56 51.2**	**+1.7**
TPUB	**Ta-pu**	**31.81**	**352**	P	**P**	**16 57 22.7**	**-1.1**
CMAR	**Chiang Mai Arr**	**37.11**	**316**	P	**P**	**16 58 09.8**	**0.0**
	comp=Z,2.7nm,0.8s,baz=143,slow=6.8,SNR=22						
CMAR	**Chiang Mai Arr**	**37.11**	**316**	P	**P**	**16 58 08.8**	**-0.9**
JCJ	**Chichijima**	**39.00**	**25**	P	**P**	**16 58 25.8**	**+0.3**
KMI	**Kunming**	**39.80**	**327**	⇑P	**P**	**16 58 33.5**	**+1.0**
KMI				pmax	pmax		
	comp=Z,6.0nm,1.1s						
NJ2	**Nanjing**	**40.67**	**352**	*e*P	**P**	**16 58 41.5**	**+2.2**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
MARNC	**Mare, Loyalty**	**43.34**	**112**	P	**P**	**16 59 01.3**	**-0.1**
JWT	**Wachi**	**44.54**	**12**	P	**P**	**16 59 11.5**	**+0.8**
MAT	**Matsushiro**	**46.39**	**15**	P	**P**	**16 59 23.6**	**-1.8**
MJAR	**Matsushiro Arr**	**46.39**	**15**	P	**P**	**16 59 24.2**	**-1.2**
	comp=Z,4.8nm,1.0s,baz=181,slow=8.6,SNR=15						
MJAR	**Matsushiro Arr**	**46.39**	**15**	P	**P**	**16 59 24.2**	**-1.2**
MJAR				IAmb	IAmb	16 59 27.7	
	comp=Z,9.0nm,1.5s						
HHC	**Hu-ho-hao-te**	**50.57**	**347**	*e*P	**P**	**17 00 01.2**	**+3.5**
HHC				pmax	pmax		
	comp=Z,26nm,1.1s						
HHC				pmax	pmax		
	comp=Z,160nm,5.4s						
JTM	**Tenmabayashi**	**51.13**	**16**	P	**P**	**17 00 01.4**	**-0.3**
USA0B	**Ussuriysk Arra**	**52.74**	**6**	P	**P**	**17 00 14.4**	**+0.7**
USA0B				IAmb	IAmb	17 00 29.7	
	comp=Z,9.5nm,1.3s						
USRK	**Ussuriysk Ar.**	**52.74**	**6**	P	**P**	**17 00 13.4**	**-0.2**
	comp=Z,2.2nm,0.8s,baz=188,slow=10,SNR=6.1						
USRK	**Ussuriysk Ar.**	**52.74**	**6**	P	**P**	**17 00 14.1**	**+0.5**
MDJ	**Mudanjiang**	**52.94**	**4**	P	**P**	**17 00 15.2**	**+0.1**
MDJ				pP	pwP	17 00 26.5	+3.7
MDJ				sP	sP	17 00 31.9	+7.6
MDJ				ScP	**ScP**	**17 05 16.7**	**-3.3**
MDJ				PcS	**PcS**	**17 05 19.4**	**-3.0**
MDJ				S	**S**	**17 07 46.3**	**+3.3**
MDJ				sS	sS	17 08 03.5	+7.9
MDJ				pmax	pmax		
	comp=Z,12nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,160nm,5.8s						
MDJ				LR	LR		
	comp=N,210nm,15.5s						
MDJ				LR	LR		
	comp=E,200nm,14.2s						
MDJ				LR	LR		
	comp=Z,320nm,16.7s						
GTA	**Gaotai**	**53.03**	**336**	*e*P	**P**	**17 00 15.6**	**-0.5**
GTA				pP	pP	17 00 20.2	-3.6
GTA				sP	pwP	17 00 23.4	-0.4
GTA				pmax	pmax		
	comp=Z,3.0nm,1.4s						
ULN	**Ulaanbaatar**	**58.26**	**346**	P	**P**	**17 00 52.5**	**-1.0**
SONM	**Songino Array**	**58.39**	**345**	P	**P**	**17 00 53.5**	**-0.9**
	comp=Z,0.8nm,0.5s,baz=165,slow=6.2,SNR=8.1						
SONM	**Songino Array**	**58.39**	**345**	P	**P**	**17 00 53.2**	**-1.2**
SONM				IAmb	IAmb	17 00 55.2	
	comp=Z,6.8nm,1.5s						
WMQ	**Urumqi**	**62.04**	**330**	*e*P	**P**	**17 01 21.8**	**+2.4**
MK31	**Makanchi Array**	**66.83**	**330**	P	**P**	**17 01 48.9**	**-1.8**
MK31				IAmb	IAmb	17 01 50.7	
	comp=Z,4.8nm,0.8s						
MKAR	**Makanchi Array**	**66.83**	**330**	P	**P**	**17 01 49.8**	**-0.9**
	comp=Z,5.1nm,0.8s,baz=126,slow=7.6,SNR=32						
MKAR	**Makanchi Array**	**66.83**	**330**	P	**P**	**17 01 48.9**	**-1.8**
MAKZ	**Makanchi**	**67.00**	**329**	P	**P**	**17 01 50.0**	**-1.8**
MAKZ				IAmb	IAmb	17 01 51.5	
	comp=Z,3.8nm,0.8s						
PETK	**Petropavlovsk-**	**67.27**	**21**	P	**P**	**17 01 53.4**	**+0.2**
	comp=Z,2.1nm,0.7s,baz=194,slow=10,SNR=1.7						
ZAA0	**Zalesovo Array**	**70.78**	**336**	P	**P**	**17 02 12.7**	**-2.4**
ZAA0				IAmb	IAmb	17 02 13.9	
	comp=Z,6.9nm,0.9s						
ZALV	**Zalesovo Beam**	**70.78**	**336**	P	**P**	**17 02 13.0**	**-2.1**
	comp=Z,5.5nm,0.9s,baz=119,slow=5.2,SNR=18						
ZALV	**Zalesovo Beam**	**70.78**	**336**	P	**P**	**17 02 12.6**	**-2.4**
KURK	**Kurchatov**	**71.26**	**331**	P	**P**	**17 02 16.0**	**-2.1**
VNDA	**Vanda**	**71.69**	**172**	P	**P**	**17 02 21.8**	**+1.6**
	comp=Z,0.6nm,0.6s,baz=333,slow=7.3,SNR=6.0						
VNDA	**Vanda**	**71.69**	**172**	P	**P**	**17 02 21.4**	**+1.2**
VNDA				IAmb	IAmb	17 02 25.5	
	comp=Z,4.6nm,1.4s						
TIXI	**Tiksi**	**79.93**	**1**	P	**P**	**17 03 05.4**	**-1.8**
QSPA	**South Pole Qui**	**81.58**	**180**	P	**P**	**17 03 17.6**	**+1.0**
QSPA				IAmb	IAmb	17 03 23.3	
	comp=Z,6.7nm,1.2s						

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*TUL **01** 17:17:35.1±1.0, 36°.40N±0°.03×98°.65W±0°.02, h1^{km}±7^{km}, ML2.7, mb_Lg2.4/16(NEIC), Error ellipse: s-maj=4.6km s-min=1.4km az=158.0*

NEIC 01 17:17:34.8±0.9,**36°.40N**±0°.01×**98°.68W**±0°.02,**h12**^{km}±6^{km}, **Error ellipse: s-maj=2.6km s-min=2.0km az=79.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
U32A	**Winter Ranch,**	**0.26**	**267**	Pg	Pg	17 17 40.9	+0.6
U32A				Sg	Sg	17 17 43.6	-0.4
WMOK	**Wichita Mounta**	**1.66**	**183**		Pn	17 18 04.5	+0.7
WMOK				IAmb_Lg		17 18 29.4	
	comp=Z,23nm,0.8s						
T35A	**Sooner Cattle**	**1.82**	**73**	IAmb_Lg		17 18 36.9	
	comp=Z,20nm,0.8s						
X34A	**Smith Ranch, M**	**1.92**	**159**	IAmb_Lg		17 18 35.9	
	comp=Z,26nm,0.7s						
R32A	**Long Quarter,**	**2.02**	**359**		Pb	17 18 11.1	-0.5
TUL1	**Leonard**	**2.38**	**101**	IAmb_Lg		17 18 55.4	
	comp=Z,12nm,0.9s						
U38A	**Gravette**	**3.46**	**88**	IAmb_Lg		17 19 29.0	
	comp=Z,14nm,0.9s						
KSCO	**Kaye Shedlock'**	**4.08**	**311**	IAmb_Lg		17 19 52.8	
	comp=Z,10nm,0.7s						
S39A	**Bolivar**	**4.47**	**72**	IAmb_Lg		17 19 55.2	
	comp=Z,7.8nm,0.8s						
R40A	**Maddies Statio**	**5.45**	**68**	IAmb_Lg		17 20 31.9	
	comp=Z,7.0nm,1.0s						

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*NEIC **01** 17:39:23.8±1.3, 62°.7S±0°.1×158°.1W±0°.3, h10^{km}±1^{km}, mb4.6/12, Error ellipse: s-maj=25.4km s-min=18.1km az=308.0*

*IDC **01** 17:39:24.2±0.8, 62°.87S×157°.68W, h0^{km}, mb4.4/7, mb1 4.5/8, mb1mx4.3/20, mbtmp4.3/8, ML4.0/1, MS4.7/15, Ms1 4.7/15, ms1mx4.7/17, Error ellipse: s-maj=27.8km s-min=20.7km az=2.0*

*GCMT **01** 17:39:29.8±0.1, 63°.01S±0°.01×158°.05W±0°.02, h16^{km}, MW5.4/128, Moment Tensor Solution. s101,c167; s128,c225; Duration: 1^s.3 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.27±.03; $M_{\theta\theta}$1.81±.03; $M_{\phi\phi}$-1.54±.02; $M_{r\theta}$0.00±.07; $M_{\theta\phi}$0.49±.02; $M_{\phi r}$0.37±.07; Best double couple: $M_0$1.79200×10^{17} NP1:ϕ_s126.00000°,δ79.00000°, λ-9.00000°. NP2:ϕ_s218.00000°,δ81.00000°, λ-169.00000°. Principal axes: T 1.8820, Plg2.0000°, Azm352.0000°; N -0.1770, Plg76.0000°, Azm256.0000°; P -1.7030, Plg14.0000°, Azm82.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 01 17:39:23.3±0.6,**62°.59S**±0°.09×**158°.3W**±0°.1,**h10**^{km},**n56**, σ**1^s.65**/32,**mb4.6**/10,**MS4.8**/18,**Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SBA	**Scott Base**	**18.80**	**202**		**Pn**	**17 43 41.4**	**-1.4**
VNDA	**Vanda**	**19.53**	**205**	P	**Pn**	**17 43 51.8**	**+0.1**
	0.4nm,0.3s,baz=76,slow=19,SNR=30						
VNDA				LR	LR	17 49 19.0	
	comp=Z,3μm,20.6s,baz=66,slow=31						
VNDA	**Vanda**	**19.53**	**205**	P	**Pn**	**17 43 49.8**	**-1.8**
VNDA				IAmb	IAmb	17 44 02.5	
	comp=Z,24nm,1.1s						
QSPA	**South Pole Qui**	**27.52**	**180**	P	**P**	**17 45 09.0**	**-0.8**
	comp=Z,15nm,0.9s,baz=58,slow=4.4,SNR=26						
QSPA				LR	LR	17 53 50.8	
	comp=Z,2μm,22.0s,baz=54,slow=32						
QSPA	**South Pole Qui**	**27.52**	**180**	P	**P**	**17 45 09.0**	**-0.8**
URZ	**Urewera**	**28.62**	**317**	LR	LR	17 53 47.2	
	comp=Z,2μm,21.8s,baz=211,slow=30						
TBI	**Tubuai**	**39.68**	**13**	*e*S	**S**	**17 52 56.9**	**-1.5**
	comp=Z,746nm,34.4s						
TBI				*e*LR	LR	17 57 49.7	
	comp=Z,5μm,26.0s						
VNA3	**Neumayer Olymp**	**44.68**	**166**	P	**P**	**17 47 34.0**	**-1.6**
SNAA	**Sanae**	**44.94**	**169**	P	**P**	**17 47 36.1**	**-1.7**
SNAA	**Sanae**	**44.94**	**169**	P	**P**	**17 47 35.8**	**-2.0**
SNAA				IAmb	IAmb	17 47 49.2	
	comp=Z,12nm,1.1s						
VNA2	**Neumayer--Watz**	**45.23**	**167**	P	**P**	**17 47 38.2**	**-1.7**
	baz=204,slow=7.5						
MEH	**Mehetia**	**45.23**	**14**	*e*T	T	18 36 14.3	
	comp=Z,60nm,0.2s						
PAE	**Paea**	**45.29**	**12**	*e*T	T	18 36 17.6	
	comp=Z,5.2nm,0.3s						
PPT2	**Papeete2**	**45.36**	**12**	*e*S	**S**	**17 54 21.5**	**-0.9**
	comp=Z,836nm,26.5s						
PPT2				*e*LR	LR	18 00 27.3	
	comp=Z,4μm,25.2s						
PPT2	**Papeete2**	**45.36**	**12**	*e*T	T	18 36 21.3	
	comp=Z,8.7nm,0.3s						
PPT	**Papeete**	**45.38**	**12**	LR	LR	18 01 49.1	
	comp=Z,1μm,21.3s,baz=215,slow=30						
VNA1	**Neumayer--Stat**	**45.39**	**166**	P	**P**	**17 47 38.8**	**-2.5**
MAW	**Mawson**	**46.75**	**200**	P	**P**	**17 47 54.0**	**+2.1**
	comp=Z,6.0nm,1.0s,baz=150,slow=5.7,SNR=8.4						
MAW				LR	LR	18 06 24.0	
	comp=Z,877nm,18.5s,baz=152,slow=35						
MAW	**Mawson**	**46.75**	**200**	P	P	17 47 55.8	+3.9
DZM	**Mont Dzumac**	**47.04**	**313**	*e*S	**S**	**17 54 42.9**	**-3.6**
	comp=Z,836nm,25.3s						
DZM				*e*LQ	LQ	17 59 09.7	
	comp=Z,3μm,36.9s						
DZM				*e*LR	LR	18 01 10.0	
	comp=Z,2μm,22.6s						
MSVF	**Nonsavu**	**47.76**	**329**	LR	LR	18 03 50.3	
	comp=Z,326nm,20.9s,baz=162,slow=30						
VAH	**Vaihoa**	**47.89**	**14**	*e*T	T	18 39 28.9	
	comp=Z,132nm,0.2s						
STKA	**Stephens Creek**	**48.56**	**280**	P	P	17 48 12.8	+6.3
	comp=Z,2.5nm,1.0s,baz=181,slow=10,SNR=3.5						
STKA				LR	LR	18 04 27.8	
	comp=Z,616nm,21.7s,baz=146,slow=31						
PLCA	**Paso Flores**	**53.82**	**110**	P	**P**	**17 48 46.6**	**+0.7**
	comp=Z,4.4nm,0.8s,baz=221,slow=8.1,SNR=13						
PLCA				LR	LR	18 06 08.9	
	comp=Z,624nm,21.4s,baz=214,slow=30						
PLCA	**Paso Flores**	**53.82**	**110**	P	**P**	**17 48 46.6**	**+0.7**
PLCA				IAmb	IAmb	17 48 54.7	
	comp=Z,6.2nm,0.9s						
TAOE	**Nuku Hiva Isla**	**55.23**	**22**	*e*LR	LR	18 04 50.9	
	comp=Z,2μm,26.8s						
H03S2	**Juan Fernandez**	**55.76**	**98**	T	T	18 49 22.9	
	baz=211,slow=74,SNR=276						
H03S1	**Juan Fernandez**	**55.76**	**98**	T	T	18 49 26.2	
	baz=211,slow=74,SNR=290						
H03S3	**Juan Fernandez**	**55.77**	**98**	T	T	18 49 25.5	
	baz=211,slow=74,SNR=300						
H03N3	**Juan Fernandez**	**56.08**	**98**	T	T	18 49 47.5	
	baz=168,slow=75,SNR=119						
H03N2	**Juan Fernandez**	**56.09**	**98**	T	T	18 49 49.1	
	baz=168,slow=75,SNR=173						
H03N1	**Juan Fernandez**	**56.09**	**98**	T	T	18 49 43.8	
	baz=168,slow=75,SNR=112						
H01W1	**Cape Leeuwin H**	**58.62**	**254**	T	T	18 53 35.5	
	baz=147,slow=76,SNR=47						

H01W2	Cape Leeuwin H	58.62	254	T	T	18 53 34.3	
	baz=147,slow=76,SNR=48						
H01W3	Cape Leeuwin H	58.63	254	T	T	18 53 36.3	
	baz=147,slow=76,SNR=48						
AS31	Alice Springs	59.08	278	P	P	17 49 24.4	+0.8
ASAR	Alice Springs	59.08	278	LR	LR	18 10 45.6	
	comp=Z,1µm,21.8s,baz=154,slow=32						
ASAR	Alice Springs	59.08	278	P	P	17 49 24.9	+1.3
TRQA	Tornquist	59.72	115	P	P	17 49 26.8	-0.9
WB2	Warramunga Arr	62.10	281	P	P	17 49 45.1	+0.9
WB2				IAmb	IAmb	17 50 02.8	
	comp=Z,2.6nm,0.8s						
WRA	Warramunga Arr	62.11	281	P	P	17 49 48.1	+3.9
	comp=Z,1.3nm,0.9s,baz=336,slow=14,SNR=4.3						
WRA				LR	LR	18 13 45.0	
	comp=Z,608nm,18.6s,baz=160,slow=33						
WB0	Warramunga Arr	62.24	281	P	P	17 49 45.5	+0.4
WB0				IAmb	IAmb	17 50 04.1	
	comp=Z,5.2nm,1.1s						
CPUP	Villa Florida	71.80	112	P	P	17 50 45.3	-0.5
	comp=Z,3.7nm,0.9s,baz=216,slow=4.4,SNR=7.2						
CPUP				LR	LR	18 17 57.7	
	comp=Z,568nm,20.0s,baz=212,slow=32						
CPUP	Villa Florida	71.80	112	P	P	17 50 45.4	-0.4
CPUP				IAmb	IAmb	17 50 46.5	
	comp=Z,6.5nm,1.0s						
LPAZ	La Paz	75.75	98	P	P	17 51 11.1	+1.3
	comp=Z,3.3nm,0.9s,baz=148,slow=3.0,SNR=12						
LPAZ				LR	LR	18 16 48.2	
	comp=Z,226nm,21.1s,baz=178,slow=30						
LPAZ	La Paz	75.75	98	P	P	17 51 10.0	+0.2
BDFB	Brasilia	85.22	115	LR	LR	18 27 07.9	
	comp=Z,945nm,19.6s,baz=195,slow=34						
BOSA	Boshof	89.07	183	LR	LR	18 27 36.5	
	comp=Z,736nm,21.5s,baz=178,slow=33						
ROSC	El Rosal	91.46	82	LR	LR	18 25 39.0	
	comp=Z,342nm,21.4s,baz=232,slow=30						
ILAR	Eielson Array	127.34	6	PKP	PKiKP	17 58 29.2	+2.4
	comp=Z,0.3nm,0.6s,baz=221,slow=1.6,SNR=3.1						
TORD	Torodi Ar. Bea	128.59	155	PKP	PKiKP	17 58 32.9	+1.9
	comp=Z,0.7nm,0.9s,baz=253,slow=1.5,SNR=2.6						
MKAR	Makanchi Array	143.18	274	PKhKP	PKPpre	17 58 56.2	
	comp=Z,0.8nm,0.8s,baz=129,slow=4.8,SNR=5.6						
AAK	Ala-Archa	143.61	262	PKP	PKiKP	17 59 00.6	-0.3
	comp=Z,2.4nm,0.8s,baz=275,slow=8.9,SNR=5.2						
GEYT	Alibeck	146.86	239	PKPbc	PKPab	17 59 06.2	-0.1
	comp=Z,1.2nm,0.5s,baz=88,slow=3.6,SNR=1.6						
ZALV	Zalesovo Beam	147.03	284	PKPbc	PKPbc	17 59 06.2	+1.3
	comp=Z,0.9nm,0.7s,baz=123,slow=5.5,SNR=4.2						
BRTR	Keskin Array B	156.00	203	PKPbc	PKPdf	17 59 25.2	+8.2
	comp=Z,0.3nm,0.5s,baz=164,slow=5.7,SNR=2.0						
BRTR				PKPab	PKPab	17 59 44.0	-0.2
	comp=Z,0.8nm,0.9s,baz=175,slow=5.4,SNR=3.8						

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*IDC **01** 17:45:19.3±1.9, 7°.03S×128°.38E, h0^{km}, mb3.6/1, mb1 3.8/4, mb1mx3.5/27, mbtmp3.7/4, ML3.5/3, Error ellipse: s-maj=60.2km s-min=29.7km az=80.0*

*DJA **01** 17:45:33.7±0.4, 7°S±3°×13°0E±°, h180^{km}±15^{km}, M4.1/9, mb4.0/9, mB4.6/2, MLv4.2/8, Mw(mB)3.8/2*

ISC 01 17:45:31.5±0.8**, 6°.94S**±0°.06×**130°.0E**±0°.1**, h150^{km}, n17,** σ**3^s.05**/20**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	Bandanaira	2.40	357	P	Pn	17 46 15.3	+3.9
FAKI	Fak Fak	4.57	29	P	Pn	17 46 41.6	+2.4
FAKI	Fak Fak	4.57	29	P	Pn	17 46 42.0	+2.8
DRS	Darwin Rock St	5.53	171	P	Pn	17 46 55.9	+4.0
	29nm,0.5s						
MTN	Manton Dam	5.97	169	P	Pn	17 47 01.2	+3.4
	17nm,0.4s						
SIJI	Sorong	6.15	12	Pn	Pn	17 47 00.7	+0.4
	0.7nm,0.3s,baz=220,slow=20,SNR=15						
SIJI				Sn	Sn	17 48 04.4	-5.5
	1.6nm,0.3s,baz=338,slow=22,SNR=5.2						
SWI	Sorong	6.16	12	P	Pn	17 47 01.2	+0.9
	0.1nm6.7nm,1.2s						
KDU	Kakadu	6.21	157	P	Pn	17 47 04.8	+3.9
SOEI	Soe	6.34	243	P	Pn	17 47 03.7	+0.8
	0.1nm34nm,0.7s						
SOEI	Soe	6.34	243	P	Pn	17 47 04.9	+2.0
BATI	Baumata	7.07	242	P	Pn	17 47 13.8	+1.2
	0.1nm16nm,0.8s						
EDFI	Ende, Flores	8.44	257	P	Pn	17 47 32.0	+1.0
	2.6nm,0.8s						
KNRA	Kununurra	8.77	188	P	Pn	17 47 36.5	+1.3
	15nm,1.7s						
WBSI	Waikabubak, Su	10.85	255	P	Pn	17 48 01.2	-1.7
	19nm,1.1s						
WRA	Warramunga Arr	13.59	162	Pn	Pn	17 48 39.1	+0.8
	0.2nm,0.3s,baz=336,slow=13,SNR=14						
WRA				Sn	Sn	17 51 05.7	-3.3
	0.3nm,0.3s,baz=333,slow=21,SNR=2.7						
ASAR	Alice Springs	17.05	168	P	Pn	17 49 24.2	+3.2
	0.3nm,0.3s,baz=342,slow=8.9,SNR=72						
ASAR				S	S	17 52 25.8	-4.8
	0.0nm,0.3s,baz=348,slow=26,SNR=2.6						
MKAR	Makanchi Array	68.18	327	P	P	17 56 16.2	+0.5
	0.3nm,0.4s,baz=111,slow=6.3,SNR=3.0						

JMA 01 18:02:00.7±0.1**, 37°.30N**×**141°.19E, h37^{km}**±1^{km}**, M3.6, 1C-6D Broadband fault plane solution: P waves. NP1:**ϕ_s68.00000°, δ3.00000°, λ-64.00000°. **NP2:** ϕ_s222.00000°, δ87.00000°, λ-91.00000°. **Principal axes:** T Plg42.0000°, Azm313.0000°; N Plg1.0000°, Azm222.0000°; P Plg48.0000°, Azm130.0000°; **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	Kawauchi	0.26	285	⇓P	Pn	18 02 08.1	-1.0
JFK				S	Sn	18 02 13.0	-3.7
ONAJ	Iwakimizuishiy	0.37	238	⇓P	Pn	18 02 09.4	0.0
ONAJ				S	Sn	18 02 15.3	-0.9
JMST	Minamisoumatoc	0.49	331	⇓P	Pn	18 02 10.7	-0.4
JMST				S	Sn	18 02 17.9	-0.5
JFFD	Fukushimafurud	0.54	248	⇓P	Pn	18 02 11.8	-0.2
JFFD				S	Sn	18 02 19.4	-0.5
JMM	Marumori	0.65	331	⇓P	Pn	18 02 13.1	-0.4
JMM				eS	Sn	18 02 22.4	0.0
JFT	Otama	0.71	288	⇓P	Pn	18 02 14.9	+0.6
JFT				S	Sn	18 02 24.6	+0.6
JHO	Hitachi	0.85	216	P	Pn	18 02 15.6	-0.5
JHO				eS	Sn	18 02 26.1	-1.3
JSB	Shiboa	1.07	252	P	Pn	18 02 20.3	+1.2
JSB				S	Sn	18 02 34.9	+2.2
JOU	Okura	1.14	339	P	Pn	18 02 20.8	+0.7
JOU				eS	Sn	18 02 36.2	+1.6
JIO	Ouri	1.16	6	P	Pn	18 02 20.3	0.0
JIO				eS	Sn	18 02 34.6	-0.3
JFY	Yanaizu	1.19	276	P	Pn	18 02 21.6	+0.8
JFY				S	Sn	18 02 37.7	+2.0
JYS	Shirataka	1.28	316	⇑P	Pn	18 02 23.1	+1.1
JYS				S	Sn	18 02 40.6	+2.7
MAT	Matsushiro	2.51	253	P	Pn	18 02 40.4	+1.5
MAT				S	Sn	18 03 11.6	+3.4

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*MAN **01** 18:32:42.5, 11°.93N×125°.71E, h21^{km}, mb4.2, ML3.0, MS2.7*

*IDC **01** 18:32:58.7±2.6, 11°.38N×125°.00E, h160^{km}±26^{km}, mb3.6/15, mb1 3.7/16, mb1mx3.5/53, mbtmp4.1/16, MS3.7/2, Ms1 3.7/2, ms1mx2.9/42, Error ellipse: s-maj=30.5km s-min=10.6km az=73.0*

ISC 01 18:32:43.8±0.8**, 11°.92N**±0°.06×**125°.80E**±0°.09**, h35^{km}, n33,** σ**1^s.39**/30**, mb3.9**/15**, 6C-2D, Samar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSLP	Maasin	2.00	208	⇑iP	Pn	18 33 16.6	+1.5
MMPH	Masbate	2.17	282	eP	Pn	18 33 16.2	-1.3
MMPH				i S	Sn	18 33 42.5	-0.7
LLP	Lapu-Lapu	2.41	229	⇓eP	Pn	18 33 20.1	-0.5
LLP				eS	Sn	18 33 52.5	+3.5
TBP	Tagbilaran	2.92	221	eP	Pn	18 33 28.6	+0.8
TBP				i S	Sn	18 34 02.6	+0.9
RCP	Roxas	3.02	263	⇑eP	Pn	18 33 28.5	-0.6
RCP				eS	Sn	18 34 04.5	+0.4
SNPH	Sibulan	3.60	225	⇓eP	Pn	18 33 38.2	+1.0
SNPH				eS	Sn	18 34 16.0	-2.4
CNOP	Candoni, Negro	3.74	236	⇑eP	Pn	18 33 38.8	-0.2
CNOP				eS	Sn	18 34 22.1	+0.3
GQP	Guinayangan	3.82	301	⇑eP	Pn	18 33 42.6	+2.5
JAP	San Jose, Anti	3.96	253	⇑eP	Pn	18 33 44.0	+2.0
LQP	Lukban	4.69	298	⇑eP	Pn	18 33 53.3	+1.0
DAV	Davao City (W)	4.83	183	P	Pn	18 34 02.7	+8.7
	18nm,0.3s,baz=215,slow=2.3,SNR=4.8						
DAV				S	Sn	18 35 00.2	+11
	8.8nm,0.3s,baz=27,slow=9.8,SNR=3.6						
DAV				LR	LR	18 36 18.9	
	comp=Z,954nm,18.3s,baz=359,slow=46						
BATI	Baumata	22.09	186	P	P	18 37 36.9	+0.9
	13nm,0.4s,baz=98,slow=0.9,SNR=8.1						
KSRS	Korea Array	25.50	4	P	P	18 38 17.5	+8.7
	1.2nm,0.9s,baz=184,slow=10,SNR=5.5						
CMAR	Chiang Mai Arr	26.70	287	P	P	18 38 19.4	-0.6
	0.8nm,0.7s,baz=96,slow=7.7,SNR=6.2						
PSI	Prapat	28.13	253	LR	LR	18 49 56.0	
	comp=Z,126nm,18.0s,baz=108,slow=37						
FITZ	Fitzroy Crossi	29.83	180	P	P	18 38 46.3	-1.5
	5.5nm,0.8s,baz=3.1,slow=7.4,SNR=16						
WRA	Warramunga Arr	32.76	165	P	P	18 39 12.6	-1.1
	1.3nm,1.0s,baz=345,slow=9.0,SNR=10						
WRA				PcP	PcP	18 41 58.2	-0.4
	0.8nm,0.8s,baz=338,slow=2.8,SNR=5.0						
ASAR	Alice Springs	36.25	167	P	P	18 39 43.4	-0.4
	1.9nm,0.6s,baz=353,slow=7.5,SNR=47						
ASAR				PcP	PcP	18 42 08.4	-0.2
	0.6nm,0.5s,baz=338,slow=2.4,SNR=7.0						
KLR	Kul'dur	37.52	6	P	P	18 40 04.2	+10
	1.6nm,0.8s,baz=189,slow=9.0,SNR=3.7						
SONM	Songino Array	39.32	339	P	P	18 40 14.6	+5.0
	0.6nm,0.5s,baz=157,slow=4.7,SNR=2.2						
H11S3	WAKE ISLAND Hy	39.92	75	T	T	19 23 23.1	
	baz=144,slow=71,SNR=24						
H11S1	WAKE ISLAND Hy	39.94	75	T	T	19 23 07.8	
	baz=144,slow=71,SNR=19						
H11S2	WAKE ISLAND Hy	39.94	75	T	T	19 23 23.7	
	baz=144,slow=71,SNR=22						
H11N1	WAKE ISLAND Hy	40.20	74	T	T	19 23 26.3	
	baz=266,slow=75,SNR=80						
H11N2	WAKE ISLAND Hy	40.21	74	T	T	19 23 25.9	
	baz=266,slow=75,SNR=64						
H11N3	WAKE ISLAND Hy	40.22	74	T	T	19 23 25.7	
	baz=266,slow=75,SNR=70						
STKA	Stephens Creek	46.10	161	P	P	18 41 04.3	-0.3
	1.7nm,0.6s,baz=354,slow=9.1,SNR=5.8						
MKAR	Makanchi Array	50.45	322	P	P	18 41 38.7	+0.6
	0.9nm,0.6s,baz=112,slow=8.3,SNR=8.7						
ZALV	Zalesovo Beam	52.97	331	P	P	18 41 58.0	+1.3
	0.5nm,0.3s,baz=109,slow=7.8,SNR=2.5						
ARCES	ARCESS Array B	82.50	340	P	P	18 45 04.5	+2.1
	8.8nm,1.2s,baz=62,slow=6.4,SNR=1.8						
BRTR	Keskin Array B	84.14	309	P	P	18 45 10.0	-1.8
	1.2nm,1.1s,baz=103,slow=4.6,SNR=2.4						
FINES	FINESS Array B	84.23	332	P	P	18 45 11.8	+0.3
	3.2nm,0.9s,baz=44,slow=8.5,SNR=3.6						
AKASG	Malin Array Be	85.00	321	P	P	18 45 14.7	-0.9
	0.1nm,0.2s,baz=62,slow=38,SNR=2.5						

IDC 01 18:40:04.3±34.0**, 21°.86S**×**178°.80W, h0^{km}, mb4.1**/4**, mb1 4.3**/4**, mb1mx3.8**/29**, mbtmp4.1**/4**, Error ellipse: s-maj=644.2km s-min=155.3km az=89.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	36.54	246	P	P	18 47 10.6	-1.3
	1.6nm,0.5s,baz=98,slow=12,SNR=3.5						
ASAR	Alice Springs	43.50	258	P	P	18 48 09.3	-0.5
	1.2nm,0.6s,baz=93,slow=7.1,SNR=31						
WRA	Warramunga Arr	43.69	264	P	P	18 48 12.1	+0.6
	1.0nm,0.4s,baz=95,slow=8.3,SNR=48						
FITZ	Fitzroy Crossi	52.12	264	P	P	18 49 17.1	+0.4
	1.9nm,0.7s,baz=112,slow=5.4,SNR=2.6						

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*IDC **01** 19:21:08.7±3.1, 14°.70S×167°.39E, h121^{km}±25^{km}, mb3.8/8, mb1 3.9/9, mb1mx3.5/42, mbtmp4.2/9, Error ellipse: s-maj=24.9km s-min=21.5km az=63.0*

*NOU **01** 19:21:09.1, 14°.56S×167°.54E, h136^{km}, mb4.3/25, Vanuatu Islands*

*NEIC **01** 19:21:10.4±1.4, 14°.7S±0°.1×167°.4E±0°.1, h138^{km}±9^{km}, mb4.1/17, Error ellipse: s-maj=22.3km s-min=9.3km az=124.0*

ISC 01 19:21:09.6±0.9**, 14°.80S**±0°.08×**167°.5E**±0°.1**, h129^{km}, n59,** σ**1^s.80**/62**, mb4.1**/20**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	0.70	204		Pn	19 21 30.8	+0.9
SANVU	Saraoutou	0.70	204	P	Pn	19 21 32.0	+2.1
DVP	Devils Point	2.98	167	P	Pn	19 21 58.7	+2.8
LIFNC	LIFOU	5.95	182	Pn	Pn	19 22 34.1	-1.3
KOUNC	Koumac, New Ca	6.48	208	P	Pn	19 22 45.0	+2.4
MARNC	Mare, Loyalty	6.66	176	Pn	Pn	19 22 44.8	-0.2
YATNC	Mamie plateau,	7.24	184	P	Pn	19 22 54.4	+1.6
DZM	Mont Dzumac	7.30	188	ePn	Pn	19 22 55.9	+2.2
	30nm,0.3s						
DZM				eSn	Sn	19 24 09.3	-5.9
	22nm,0.3s						
DZM	Mont Dzumac	7.30	188	P	Pn	19 22 54.3	+0.6
	6.4nm,0.3s,baz=28,slow=8.3,SNR=61						
DZM				S	Sn	19 24 17.2	+2.1
	5.1nm,0.3s,baz=147,slow=23,SNR=7.4						
DZM	Mont Dzumac	7.30	188		Pn	19 22 55.6	+1.9
DZM	Mont Dzumac	7.30	188	P	Pn	19 22 55.9	+2.2
NOUC	Port Laguerre	7.35	189	P	Pn	19 22 56.9	+2.6
ONTNC	Ouen Toro	7.53	187		Pn	19 23 00.1	+3.4
ONTNC	Ouen Toro	7.53	187	P	Pn	19 22 59.6	+2.9
OUENC	Ouen Island, N	7.60	185	Pn	Pn	19 23 00.1	+2.4
OUENC	Ouen Island, N	7.60	185	P	Pn	19 23 02.0	+4.3
PINNC	Pines Island,	7.77	180	Pn	Pn	19 23 02.1	+2.2
HNR	Honiara	9.11	305	S	Sn	19 25 01.9	+3.0
	10nm,0.3s,baz=206,slow=21,SNR=5.8						
EIDS	Eidsvold	18.64	233	P	P	19 25 17.8	+0.4
EIDS	Eidsvold	18.64	233	P	Pn	19 25 19.2	-0.1
	21nm,0.6s						
PMG	Port Moresby	20.59	283	P	P	19 25 37.5	-1.1
	13nm,0.8s,baz=37,slow=5.1,SNR=3.3						
CTA	Charters Tower	20.93	252	P	P	19 25 42.1	-0.1
	5.8nm,0.8s,baz=76,slow=13,SNR=7.4						
CTAO	Charters Tower	20.93	252	P	P	19 25 41.2	-1.0
CTAO				IAmb	IAmb	19 25 44.0	
	comp=Z,6.6nm,0.8s						
OUZ	Omahuta	21.06	166	P	P	19 25 45.5	+2.1
OUZ				IAmb	IAmb	19 25 47.2	
	comp=Z,16nm,1.0s						
MTSU	Mount Surprise	22.47	258	P	P	19 25 58.7	+0.3
	comp=Z,3.3nm,0.7s						
COEN	Coen	23.57	269	P	P	19 26 07.2	-1.5
COEN				IAmb	IAmb	19 26 20.5	
	comp=Z,8.7nm,1.1s						
BKZ	Black Stump Fm	25.53	164	P	P	19 26 26.8	+0.5
BKZ				IAmb	IAmb	19 26 28.5	
	comp=Z,6.8nm,0.6s						
BKZ	Black Stump Fm	25.53	164	P	P	19 26 27.2	+0.9
CMSA	Cobar Meteorol	25.98	226	P	P	19 26 32.0	+1.6
	comp=Z,12nm,2.7s						
INKA	Innaminka	27.98	238	P	P	19 26 48.8	+0.5
	comp=Z,11nm,2.8s						
STKA	Stephens Creek	29.11	230	P	P	19 26 58.9	+0.5
	comp=Z,4.2nm,0.4s,baz=51,slow=9.0,SNR=35						
STKA	Stephens Creek	29.11	230	P	P	19 26 56.7	-1.7
STKA				IAmb	IAmb	19 26 59.9	
	comp=Z,1.3nm,0.5s						
STKA	Stephens Creek	29.11	230	P	P	19 26 58.8	+0.5
	comp=Z,2.0nm,2.4s						
WR0	Warramunga Arr	31.83	256	P	P	19 27 21.2	-1.2
WR0				IAmb	IAmb	19 27 40.3	
	comp=Z,2.5nm,0.9s						
WB0	Warramunga Arr	31.96	256	P	P	19 27 22.1	-1.4
WB2	Warramunga Arr	32.01	256	P	P	19 27 22.5	-1.5
WB2				IAmb	IAmb	19 27 36.7	
	comp=Z,2.9nm,1.1s						
WRAB	Tennant Creek	32.01	256	P	P	19 27 22.6	-1.4
WRA	Warramunga Arr	32.02	256	P	P	19 27 21.9	-2.2
	comp=Z,0.7nm,0.5s,baz=84,slow=8.7,SNR=11						
WRA	Warramunga Arr	32.02	256	P	P	19 27 22.3	-1.8
OOD	Oodnadatta	32.22	241	P	P	19 27 27.2	+1.4
AS31	Alice Springs	32.85	249	P	P	19 27 30.3	-1.0
AS31				IAmb	IAmb	19 27 31.3	
	comp=Z,1.3nm,0.5s						
ASAR	Alice Springs	32.85	249	P	P	19 27 30.1	-1.2
	comp=Z,2.1nm,0.4s,baz=78,slow=9.1,SNR=67						
ASAR				ScP	ScP	19 33 46.5	+0.8
	comp=Z,0.3nm,0.7s,baz=89,slow=3.9,SNR=5.3						
ASAR	Alice Springs	32.85	249	P	P	19 27 29.3	-2.1
BBOO	Buckleboo	33.71	232	P	P	19 27 37.3	-1.3
BBOO	Buckleboo	33.71	232	P	P	19 27 38.7	+0.1
	comp=Z,12nm,1.6s						
MULG	Mulgathing	34.35	238	P	P	19 27 43.5	-0.7
	comp=Z,12nm,2.6s						
KNRA	Kununurra	37.35	263	P	P	19 28 08.8	-1.1
KNRA	Kununurra	37.35	263	P	P	19 28 08.6	-1.3
	comp=Z,9.7nm,0.9s						
WRKA	Warakurna	38.11	248	P	P	19 28 15.1	-1.3
	comp=Z,6.3nm,1.2s						
FORT	Forrest	39.45	239	P	P	19 28 26.6	-0.7
FITZ	Fitzroy Crossi	40.22	259	P	P	19 28 33.1	-0.7
FITZ				IAmb	IAmb	19 28 34.3	
	comp=Z,4.6nm,0.6s						
FITZ	Fitzroy Crossi	40.22	259	P	P	19 28 33.1	-0.7
	comp=Z,9.5nm,2.1s						
MEEK	Meekatharra	46.96	247	P	P	19 29 27.1	-0.7
VNDA	Vanda	62.79	181	P	P	19 31 21.1	+0.2
	comp=Z,0.6nm,0.4s,baz=356,slow=8.4,SNR=12						
VNDA	Vanda	62.79	181	P	P	19 31 21.0	+0.2
ILAR	Eielson Array	86.53	18	P	P	19 33 37.2	-0.4
	comp=Z,0.2nm,0.4s,baz=239,slow=5.1,SNR=5.1						
MKAR	Makanchi Array	97.41	316	P	P	19 34 28.5	-0.1
	comp=Z,0.4nm,0.6s,baz=91,slow=6.1,SNR=3.1						
ARCES	ARCESS Array B	120.38	345	PKP	PKPdf	19 39 44.1	-0.9
	comp=Z,5.8nm,1.1s,baz=56,slow=2.1,SNR=5.9						
FINES	FINESS Array B	125.87	338	PKP	PKiKP	19 39 56.3	+0.1
	comp=Z,1.8nm,1.0s,baz=64,slow=3.2,SNR=3.5						

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*UPA **01** 19:26:45.4±2.0, 7°.95N×77°.78W, h0^{km}±11^{km}, MW4.3*

*RSNC **01** 19:26:47.2±1.0, 7°.90N×77°.83W, h0^{km}±7^{km}, ML2.1*

ISC 01 19:26:44.5±0.8**, 8°.02N**±0°.04×**77°.76W**±0°.03**, h10^{km}, n21,** σ**1^s.37**/30**, 2D, Panama-Colombia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UPD2	Meteti	0.58	334	⇓iP	Pn	19 26 59.5	+0.7
UPD2				i S	Sn	19 27 09.2	+0.8
PTAC	Punta Ardita,	0.87	183	eP	Pg	19 27 00.7	-0.6
PTAC				eS	Sg	19 27 12.0	-0.7
PTAC	Punta Ardita,	0.87	183	eP	Pg	19 27 00.7	-0.6
CHPO	Chepo, Panama	1.76	310	i P	Pb	19 27 16.7	-0.3
CHPO				i S	Sg	19 27 40.1	-1.1
DBBC	Dabeiba	1.83	123	eP	Pb	19 27 18.3	+0.1
TABO3	Taboga, Panama	1.94	293	eP	Pb	19 27 19.8	-0.1
UPA	Univ. de Panam	2.00	299	i P	Pb	19 27 20.8	-0.2
MOTC	Monteria, Cord	2.20	70	eP	Pg	19 27 25.6	-1.1
MOTC				eS	Sg	19 27 54.3	-0.9
MOTC				i		19 28 05.7	
	comp=Z,4.1nm,0.5s						
UREC	San Jos de Ur	2.22	97	eP	Pb	19 27 24.9	+0.2
UREC				eS	Sg	19 27 54.8	-1.1
UREC	San Jos de Ur	2.22	97	i P	Pb	19 27 25.1	+0.3
ZANG	Zanguenga, Cho	2.29	294	eP	Pb	19 27 24.0	-1.9
ZANG				eS	Sg	19 27 55.9	-2.1
BCIP	Isla Barro Col	2.35	299	eP	Pb	19 27 25.3	-1.7
BCIP				eS	Sb	19 27 56.7	+0.7
BCIP				i		19 28 08.4	
	comp=Z,14nm,0.5s						
BCIP	Isla Barro Col	2.35	299	⇓eP	Pn	19 27 24.5	+1.3
MLIR	Monte Lirio	2.40	300	eP	Pn	19 27 24.8	+0.9
VTON	El Valle, Cocl	2.41	284	eP	Pb	19 27 26.8	-1.1
AZU	Azuero	2.51	265	eP	Pn	19 27 26.1	+0.7
AZU				i S	Sn	19 27 58.0	+2.0
TOSI3	Tonosi	2.73	257	eP	Pn	19 27 30.2	+1.8
CBOC	Ciudad Bolivar	2.76	141	eP	Pb	19 27 32.1	-1.9
HELC	Santa Helena	2.86	129	eP	Pb	19 27 32.9	-3.0
ZARC	Zaragoza, Cauc	2.92	100	eP	Pb	19 27 36.9	+0.2
ZARC				eS	Sb	19 28 13.9	+1.4
ZARC				i		19 28 16.2	
	comp=Z,15nm,0.9s						
CACAO	El Cacao, Vera	3.15	258	eP	Pn	19 27 36.7	+2.5

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*IDC **01** 19:37:20.1±1.0, 52°.52N×170°.26W, h0^{km}, mb3.9/6, mb1 4.1/7, mb1mx3.6/58, mbtmp3.8/7, ML3.5/1, MS3.8/2, Ms1 3.8/2, ms1mx2.9/38, Error ellipse: s-maj=37.6km s-min=23.7km az=159.0*

*NEIC **01** 19:37:30.3±2.5, 52°.7N±0°.1×169°.9W±0°.1, h97^{km}±18^{km}, mb3.6/11, Error ellipse: s-maj=18.6km s-min=9.2km az=161.0*

ISC 01 19:37:31.5±0.9**, 52°.7N**±0°.1×**169°.91W**±0°.09**, h100^{km}, n59,** σ**1^s.75**/51**, mb3.7**/7**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UNV	Unalaska Valle	2.35	59		Pn	19 38 08.0	-0.6
AKUT	Akutan	2.87	58		Pn	19 38 15.6	+0.2
GSTR	Great Sitkin T	3.81	263	Pn	Pn	19 38 26.3	-1.8
ADK	Adak	4.24	262		Pn	19 38 32.3	-1.5
FALS	False Pass	4.42	58		Pn	19 38 35.2	-1.0
SPIA	Saint Paul Isl	4.50	358	Pn	Pn	19 38 36.1	-1.3
KIWB	Kanaga Island	4.52	262		Pn	19 38 36.5	-1.2
SDPT	Sand Point	6.17	61	Pn	Pn	19 38 59.9	0.0
CNBA	Chernabura Isl	6.49	67	Pn	Pn	19 39 01.7	-2.6
CHGN	Chignik	7.61	57	Pn	Pn	19 39 19.1	-0.4
OHAK	Old Harbor	10.57	58	Pn	Pn	19 39 56.9	-2.9
Q19K	Cape Douglas,	11.07	49	Pn	Pn	19 40 05.9	-0.6
KDAK	Kodiak Island	11.12	56	Pn	Pn	19 40 02.9	-4.3
	0.8nm,0.3s,baz=264,slow=8.1,SNR=21						
KDAK	Kodiak Island	11.12	56		Pn	19 40 04.0	-3.1
P19K	Oil Pt	11.60	46	Pn	Pn	19 40 15.2	+1.6
N19K	Bonanza Creek	11.72	40	Pn	Pn	19 40 16.7	+1.5
CNPM	China Poot	12.44	49	Pn	Pn	19 40 22.8	-2.0
M19K	Big River Lodg	12.44	36	Pn	Pn	19 40 26.8	+2.0
SEW	Seward	13.50	49	Pn	Pn	19 40 37.0	-1.7
O22K	Cooper Landing	13.54	47	Pn	Pn	19 40 36.9	-2.3
K20K	Telida	13.54	32	Pn	Pn	19 40 39.1	-0.1
PPLA	Purkeypile	13.87	36	Pn	Pn	19 40 43.3	-0.2
J20K	Nowinta River	14.11	29		P	19 40 48.4	-2.7
CAST	Castle Rocks	14.24	34	Pn	Pn	19 40 47.8	-0.5
PWL	Port Wells	14.32	47	Pn	Pn	19 40 47.6	-1.8
GHO	Glory Hole Cre	14.49	43	Pn	Pn	19 40 50.0	-1.5
KNK	Knik Glacier	14.52	45		Pn	19 40 50.0	-1.8
KTH	Kantishna Hill	14.73	35	Pn	Pn	19 40 54.9	+0.3
SML	Sawmill	14.75	43	Pn	Pn	19 40 53.5	-1.4
TRF	Thorofare Moun	14.89	36	Pn	Pn	19 40 56.7	0.0
HIN	Hinchinbrook I	14.98	50	Pn	Pn	19 40 54.9	-2.8
BPAW	Bear Paw Mtn.	15.06	33	Pn	Pn	19 40 58.3	-0.4
BPAW				IAmb	IAmb	19 41 02.4	
	comp=Z,5.8nm,1.0s						
KLU	Klutina	15.65	46		Pn	19 41 04.5	-1.7
I23K	Minto, Yukon-K	16.27	32	P	P	19 41 14.2	-0.8
I23K				IAmb	IAmb	19 41 20.1	
	comp=Z,3.1nm,0.8s						
IL31		16.88	35		Pn	19 41 19.4	-1.8
IL31				IAmb	IAmb	19 41 31.8	
	comp=Z,2.5nm,0.8s						
ILAR	Eielson Array	16.88	35	P	Pn	19 41 19.2	-2.0
	comp=Z,0.2nm,0.3s,baz=212,slow=10,SNR=11						
ILAR	Eielson Array	16.88	35		Pn	19 41 18.9	-2.3
MCARA	McCarthy VSAT	16.91	48	P	P	19 41 21.6	-0.5
H24K	Noodor Dome	17.19	31	P	Pn	19 41 23.0	-2.1
H24K				IAmb	IAmb	19 41 29.9	
	comp=Z,3.8nm,0.8s						
L26K	Log Cabin Wild	17.38	43	P	P	19 41 25.4	-1.8
L26K				IAmb	IAmb	19 41 33.3	
	comp=Z,2.2nm,0.7s						
SCRK	Sand Creek	17.54	40	P	P	19 41 28.0	-1.0
PRP	Porcupine Dome	17.78	34	P	P	19 41 29.6	-2.1
EGAK	Eagle	19.00	39	P	Pn	19 41 45.4	-1.3
EGAK				IAmb	IAmb	19 41 49.2	
	comp=Z,4.1nm,0.7s						
BMAR	Burnt Mountain	19.22	30	P	P	19 41 46.2	-1.1
DLBC	Dease Lake	23.01	60	P	P	19 42 28.7	+1.1
	comp=Z,6.9nm,1.1s,baz=306,slow=11,SNR=4.8						
INK	Inuvik	23.26	34	P	P	19 42 28.4	-1.3
INK				IAmb	IAmb	19 42 31.9	
	comp=Z,2.1nm,0.6s						
H11N2	WAKE ISLAND Hy	37.50	218	T	T	20 24 25.7	
	baz=24,slow=76,SNR=5.3						
H11N3	WAKE ISLAND Hy	37.51	218	T	T	20 24 26.4	
	baz=24,slow=76,SNR=7.3						
H11N1	WAKE ISLAND Hy	37.52	218	T	T	20 24 22.6	
	baz=24,slow=76,SNR=6.0						
NVAR	Mina Array Bea	38.00	91	P	P	19 44 42.1	+2.3
	comp=Z,0.4nm,0.6s,baz=298,slow=10,SNR=3.7						
H11S1	WAKE ISLAND Hy	38.69	217	T	T	20 25 45.0	
	baz=23,slow=76,SNR=57						

H11S2	**WAKE ISLAND Hy**	**38.71**	**217**	T	T	20 25 54.8	
	baz=23,slow=76,SNR=46						
H11S3	**WAKE ISLAND Hy**	**38.71**	**217**	T	T	20 26 03.2	
	baz=23,slow=76,SNR=42						
NRIK	**Noril'sk**	**45.98**	**331**	P	**P**	**19 45 45.2**	**+1.2**
	comp=Z,3.2nm,0.5s,baz=140,slow=3.8,SNR=4.4						
TXAR	**Lajitas Array**	**53.07**	**89**	P	**P**	**19 46 40.7**	**+2.2**
	comp=Z,0.2nm,0.4s,baz=299,slow=6.2,SNR=4.0						
SADO	**Sadowa**	**56.56**	**59**	LR	LR	20 10 34.8	
	comp=Z,26nm,19.0s,baz=200,slow=35						
RAO	**Raoul Island**	**81.89**	**187**	LR	LR	20 22 13.4	
	comp=Z,136nm,18.5s,baz=79,slow=33						
WRA	**Warramunga Arr**	**86.94**	**231**	P	**P**	**19 50 04.8**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=32,slow=5.7,SNR=6.2						
ASAR	**Alice Springs**	**90.35**	**230**	P	**P**	**19 50 21.7**	**+0.5**
	comp=Z,1.0nm,0.7s,baz=32,slow=4.6,SNR=20						

*IDC **01** 19:45:54.0±4.8,19°.05S×176°.83W,h340^{km}±37^{km},mb3.3/6, mb1 3.6/7,mb1mx3.3/22,mbtmp4.0/7,Error ellipse: s-maj=91.4km s-min=19.2km az=147.0*

ISC 01 19:45:54.3±1.3,**19°.0S**±0°.3×**176°.9W**±0°.2,**h344**^{km}**,n8,** σ**0^{s}.24**/8,**mb3.5**/6,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.00**	**284**	P	**Pn**	**19 47 13.9**	**+0.2**
	1.0nm,0.3s,baz=134,slow=18,SNR=5.4						
STKA	**Stephens Creek**	**39.43**	**243**	P	**P**	**19 52 52.5**	**+0.1**
	0.7nm,0.5s,baz=98,slow=14,SNR=4.2						
WRA	**Warramunga Arr**	**45.90**	**260**	P	**P**	**19 53 43.8**	**-0.2**
	1.3nm,0.4s,baz=98,slow=5.8,SNR=75						
ASAR	**Alice Springs**	**45.94**	**255**	P	**P**	**19 53 44.0**	**-0.2**
	7.6nm,0.5s,baz=89,slow=8.5,SNR=155						
NVAR	**Mina Array Bea**	**79.19**	**43**	P	**P**	**19 57 22.4**	**+0.3**
	0.7nm,0.7s,baz=231,slow=8.7,SNR=5.5						
TXAR	**Lajitas Array**	**85.33**	**57**	P	**P**	**19 57 53.7**	**0.0**
	0.6nm,0.9s,baz=194,slow=4.8,SNR=3.8						
ILAR	**Eielson Array**	**86.61**	**12**	P	**P**	**19 57 58.6**	**-0.3**
	0.3nm,0.7s,baz=222,slow=6.1,SNR=4.4						
GERES	**GERESS Array B**	**149.02**	**346**	PKPbc	**PKiKP**	**20 05 03.2**	**0.0**
	0.4nm,0.6s,baz=48,slow=2.0,SNR=4.7						

IDC 01 19:51:31.7±1.6,**2°.03N×127°.84E,h0**^{km}**,mb3.5**/3, **mb1 3.7**/3,**mb1mx3.4**/28,**mbtmp3.5**/3,**Error ellipse: s-maj=154.5km s-min=8.8km az=67.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.75**	**164**	P	P	19 56 35.4	-0.4
	0.7nm,0.5s,baz=343,slow=11,SNR=7.0						
ASAR	**Alice Springs**	**26.22**	**167**	P	P	19 57 09.7	+1.1
	0.1nm,0.3s,baz=345,slow=11,SNR=3.2						
MKAR	**Makanchi Array**	**59.57**	**325**	P	P	20 01 37.2	-0.1
	0.5nm,0.4s,baz=116,slow=8.2,SNR=12						

IDC 01 20:14:05.4±9.1,**19°.90S×175°.27W,h0**^{km}**,mb3.5**/3, **mb1 3.8**/3,**mb1mx3.5**/35,**mbtmp3.5**/3,**Error ellipse: s-maj=394.3km s-min=43.9km az=144.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**47.15**	**256**	P	P	20 22 39.6	-0.3
	0.4nm,0.8s,baz=102,slow=7.0,SNR=4.4						
WRA	**Warramunga Arr**	**47.23**	**261**	P	P	20 22 40.6	+0.1
	0.2nm,0.3s,baz=96,slow=8.3,SNR=5.8						
ILAR	**Eielson Array**	**87.19**	**12**	P	P	20 26 53.0	0.0
	0.6nm,1.1s,baz=208,slow=5.1,SNR=2.7						

*IDC **01** 20:14:40.0±2.6,38°.15N×67°.63E,h0^{km},mb3.5/1, mb1 3.4/3,mb1mx3.2/43,mbtmp3.4/3,ML3.1/2,MS3.3/1, Ms1 3.3/1,ms1mx2.6/27,Error ellipse: s-maj=104.7km s-min=12.7km az=149.0*

ISC 01 20:14:40.7±1.9,**38°.1N**±0°.2×**67°.7E**±0°.3,**h10**^{km}**,n6,** σ**2^{s}.52**/5, **4C,Southeastern Uzbekistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**5.42**	**23**	⇑Pn	**Pg**	**20 16 22.2**	**-2.2**
	1.1nm,0.2s,baz=192,slow=16,SNR=26						
KK31				⇑Sn	**Sg**	**20 17 37.1**	**+2.5**
	3.0nm,0.4s,baz=192,slow=26						
TKM2	**Tokmak 2**	**7.71**	**49**	⇑Pn	Pn	20 16 39.8	+6.6
	7.4nm,0.5s						
TKM2				⇑Sn	Sn	20 18 11.2	+11
	6.7nm,1.0s						
MKAR	**Makanchi Array**	**13.82**	**47**	Pn	**Pn**	**20 17 57.3**	**+0.7**
	0.1nm,0.3s,baz=232,slow=11,SNR=7.9						
ZALV	**Zalesovo Beam**	**19.72**	**31**	P	**Pn**	**20 19 10.8**	**-0.7**
	0.2nm,0.3s,baz=216,slow=11,SNR=4.8						
USRK	**Ussuriysk Ar.**	**47.71**	**61**	LR	LR	20 45 46.2	
	comp=Z,32nm,20.0s,baz=266,slow=39						
TORD	**Torodi Ar. Bea**	**63.14**	**266**	P	**P**	**20 25 09.7**	**+0.7**
	0.2nm,0.4s,baz=48,slow=6.7,SNR=4.4						

*IDC **01** 20:31:57.1±1.9,30°.95S×71°.33W,h0^{km},mb3.9/4, mb1 3.8/7,mb1mx3.7/26,mbtmp3.7/7,ML3.2/3,Error ellipse: s-maj=45.4km s-min=40.6km az=28.0*

*GUC **01** 20:32:05.1±0.5,30°.67S×71°.32W,h54^{km}±1^{km},ML3.9*

ISC 01 20:32:05.5±0.8,**30°.65S**±0°.04×**71°.33W**±0°.06,**h49**^{km}±8^{km}, **n33,** σ**0^{s}.77**/30,**mb3.8**/4,**1C-4D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	**0.27**	**264**	⇑*i*P	**Pn**	**20 32 13.9**	**-0.3**
CO06				*i* S	**Sn**	**20 32 20.8**	**+0.4**
CO06				IAML		20 32 23.2	
	comp=N,16µm,0.2s						
CO03	**El Pedregal**	**0.58**	**109**	⇓*i*P	**Pn**	**20 32 17.4**	**-0.3**
CO03				*i* S	**Sn**	**20 32 26.6**	**0.0**
CO03				IAML		20 32 27.5	
	comp=N,12µm,0.1s						
GO04	**Tololo Observa**	**0.66**	**44**	⇓*i*P	**Pn**	**20 32 19.0**	**+0.2**
GO04				*i* S	**Sn**	**20 32 29.3**	**+0.8**
GO04				IAML		20 32 31.4	
	comp=E,10µm,0.5s						
CO05	**La Serena**	**0.73**	**6**	⇓*i*P	**Pn**	**20 32 19.8**	**+0.3**
CO05				*e*S	**Sn**	**20 32 30.7**	**+0.9**
LCO	**Las Campanas**	**1.72**	**19**	⇓*e*P	**Pn**	**20 32 33.8**	**+0.6**
VA06	**Catapilco**	**1.91**	**179**	*e*P	**Pn**	**20 32 35.5**	**0.0**
VA06				IAML		20 33 04.2	
	comp=E,1µm,0.4s						
VA03	**San Esteban**	**2.21**	**163**	*e*P	**Pn**	**20 32 40.2**	**+0.4**
VA03				*e*S	**Sn**	**20 33 06.8**	**+0.8**
VA03				IAML		20 33 11.1	
	comp=N,1µm,0.2s						
ROCH	**El Roble**	**2.33**	**173**	*e*P	**Pn**	**20 32 41.8**	**+0.2**
ROCH				*e*S	**Sn**	**20 33 10.2**	**+1.0**
ROCH				IAML		20 33 18.6	
	comp=E,541nm,0.5s						
AC04	**Llanos de Chal**	**2.44**	**5**	*e*P	**Pn**	**20 32 43.7**	**+0.8**
PEL	**Peldehue**	**2.55**	**168**	*e*P	**Pn**	**20 32 44.8**	**+0.4**
PEL				*e*S	**Sn**	**20 33 15.0**	**+0.8**
PEL				IAML		20 33 23.6	
	comp=N,347nm,0.3s						
MT02	**Curacav**	**2.61**	**177**	*e*P	**Pn**	**20 32 44.9**	**-0.3**
MT02				*e*S	**Sn**	**20 33 16.0**	**+0.3**
MT05	**Renca**	**2.78**	**170**	IAML		20 33 29.7	
	comp=E,824nm,0.2s						
VA05	**Santo Domingo**	**3.01**	**185**	IAML		20 33 42.9	
	comp=E,470nm,0.4s						
MT09	**Talagante**	**3.13**	**175**	*e*P	**Pn**	**20 32 52.8**	**+0.3**
MT09				IAML		20 33 45.4	
	comp=N,339nm,0.2s						
MT01	**Popeta**	**3.21**	**179**	*e*P	**Pn**	**20 32 53.2**	**-0.2**
MT01				IAML		20 33 42.6	
	comp=N,235nm,0.3s						
LMEL	**Las Melosas**	**3.33**	**164**	*e*P	**Pn**	**20 32 56.9**	**+1.7**
LMEL				IAML		20 33 42.9	
	comp=E,255nm,0.3s						
H03N1	**Juan Fernandez**	**7.02**	**245**	T	T	20 40 34.5	
	baz=73,slow=72,SNR=1115						
H03N3	**Juan Fernandez**	**7.03**	**245**	T	T	20 40 38.8	
	baz=73,slow=72,SNR=841						
H03N2	**Juan Fernandez**	**7.03**	**245**	T	T	20 40 34.8	
	baz=73,slow=72,SNR=990						
LVC	**Limon Verde**	**8.29**	**16**	Pn	**Pn**	**20 34 02.0**	**-1.5**
	comp=E,0.4nm,0.3s,baz=207,slow=4.5,SNR=1.5						
LPAZ	**La Paz**	**14.59**	**12**	Pn	**Pn**	**20 35 30.5**	**+0.9**
	comp=E,0.0nm,0.3s,baz=194,slow=7.0,SNR=1.8						
SIV	**San Ignacio**	**17.35**	**35**	P	**P**	**20 36 05.0**	**-0.1**
	comp=E,0.1nm,0.3s,baz=218,slow=11,SNR=5.1						
BDFB	**Brasilia**	**26.05**	**60**	P	**P**	**20 37 33.1**	**-1.3**
	comp=E,1.6nm,0.5s,baz=225,slow=16,SNR=3.6						
TXAR	**Lajitas Array**	**67.13**	**330**	P	**P**	**20 42 54.7**	**+0.5**
	comp=E,0.3nm,0.7s,baz=153,slow=6.6,SNR=2.6						
DBIC	**Dimbokro**	**73.55**	**72**	P	**P**	**20 43 33.2**	**-0.5**
	comp=E,4.5nm,1.1s,baz=212,slow=10.0,SNR=4.0						
TORD	**Torodi Ar. Bea**	**82.50**	**70**	P	**P**	**20 44 23.1**	**-0.2**
	comp=E,0.4nm,0.5s,baz=258,slow=6.0,SNR=9.2						
H11S2	**WAKE ISLAND Hy**	**126.36**	**271**	T	T	23 09 51.3	
	baz=115,slow=75,SNR=57						
H11S1	**WAKE ISLAND Hy**	**126.38**	**271**	T	T	23 09 51.3	
	baz=115,slow=75,SNR=72						
H11S3	**WAKE ISLAND Hy**	**126.38**	**271**	T	T	23 09 51.4	
	baz=115,slow=75,SNR=63						
H11N3	**WAKE ISLAND Hy**	**126.69**	**273**	T	T	23 10 17.3	
	baz=154,slow=74,SNR=7.3						
H11N1	**WAKE ISLAND Hy**	**126.71**	**273**	T	T	23 10 18.4	
H11N2	**WAKE ISLAND Hy**	**126.71**	**273**	T	T	23 10 18.6	
	baz=120,slow=74,SNR=7.5						
ZALV	**Zalesovo Beam**	**151.05**	**30**	PKPbc	**PKPbc**	**20 51 51.4**	**-1.1**
	comp=E,1.1nm,0.4s,baz=313,slow=3.9,SNR=5.9						

*TIR **01** 20:33:12.6,41°.34N×20°.27E,h9^{km}±3^{km},Md2.4,Ml2.3*

*SKO **01** 20:33:12.3,41°.36N×20°.26E,h22^{km}*

*ATH **01** 20:33:12.1,41°.51N×20°.26E,h22^{km}±11^{km},ML2.5/3,Error ellipse: s-maj=11.7km s-min=1.2km az=269.0*

*PDG **01** 20:33:13.0±0.2,41°.35N×20°.20E,h8^{km},ML2.4/13,Error ellipse: s-maj=0.3km s-min=0.4km az=0.0*

*BEO **01** 20:33:14.2±0.3,41°.36N×20°.24E,h0^{km},ML2.1/8*

*THE **01** 20:33:14.1,41°.41N×20°.42E,h3^{km}±4^{km},ML2.1/3,Error ellipse: s-maj=4.8km s-min=2.2km az=192.0*

ISC 01 20:33:13.5±0.9,**41°.34N**±0°.02×**20°.25E**±0°.02,**h10**^{km}±8^{km}, **n62,** σ**1^{s}.09**/100,**3C-4D,Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.29**	**271**	*e*Pg	**Pg**	**20 33 19.2**	**-0.2**
TIR				*e*Sg	**Sg**	**20 33 23.9**	**+0.6**
TIR	**Tirane**	**0.29**	**271**	P	**Pg**	**20 33 19.3**	**0.0**
TIR				S	**Sg**	**20 33 24.5**	**+1.2**
TIR				AML	AML	20 33 25.6	
	comp=E,2628µm,0.3s						
TIR				AML	AML	20 33 25.7	
	comp=N,2325µm,0.3s						
TIR	**Tirane**	**0.29**	**271**	*i* Pg	**Pg**	**20 33 19.3**	**0.0**
TIR	**Tirane**	**0.29**	**271**	P	**Pg**	**20 33 19.3**	**0.0**
	baz=272						
TIR				S	**Sg**	**20 33 23.9**	**+0.6**
	baz=272						
TIR				AMP			
	comp=N,1.9nm,0.3s,baz=272						
PHP	**Peshkopia**	**0.37**	**22**	P	**Pg**	**20 33 20.3**	**-0.6**
	baz=19						
PHP				S	**Sg**	**20 33 26.0**	**+0.2**
	baz=19						
PHP				AMP			
	comp=N,1.8nm,0.2s,baz=19						
OHR	**Ohrid**	**0.47**	**119**	*i* Pg	**Pg**	**20 33 22.6**	**-0.1**
OHR				*i* Sg	**Sb**	**20 33 30.6**	**-0.5**
OHR				*e*Lg	Lg	20 33 30.7	
	comp=N,149nm,0.4s						
PUK	**Puka**	**0.75**	**339**	P	**Pg**	**20 33 27.4**	**-0.6**
	baz=339						
PUK				S	**Sb**	**20 33 39.1**	**0.0**
	baz=339						
KBN	**Korca**	**0.82**	**150**	S	**Sb**	**20 33 41.4**	**+0.2**
	baz=151						
ULC	**Ulcinj**	**0.98**	**310**	*i* Pg	**Pg**	**20 33 30.4**	**-1.9**
ULC	**Ulcinj**	**0.98**	**310**	*e*Pg	**Pg**	**20 33 30.4**	**-1.9**
ULC				*i* Sg	**Sg**	**20 33 45.2**	**+0.1**
FNA	**Florina**	**1.02**	**123**	P	**Pg**	**20 33 32.2**	**-0.8**
FNA				S	**Sb**	**20 33 46.8**	**+0.1**
	comp=N,330nm,0.5s						
FNA	**Florina**	**1.02**	**123**	P	**Pg**	**20 33 32.2**	**-0.8**
FNA				S	**Sb**	**20 33 46.4**	**-0.3**
FNA				AML	AML	20 33 48.3	
	comp=N,713µm,0.6s						
FNA				AML	AML	20 33 49.4	
	comp=E,599µm,0.3s						
FNA	**Florina**	**1.02**	**123**	*i* Pg	**Pg**	**20 33 32.3**	**-0.8**
FNA				*i* Sg	**Sb**	**20 33 46.9**	**+0.1**
FNA	**Florina**	**1.02**	**123**	P	**Pg**	**20 33 32.3**	**-0.8**
	baz=123						
FNA				S	**Sn**	**20 33 47.4**	**-0.9**
	baz=123						
SKO	**Skopje**	**1.09**	**54**	*i* Pg	**Pg**	**20 33 33.6**	**-0.8**
SKO				*i* Sg	**Sb**	**20 33 48.2**	**-0.6**
SKO				*e*Lg	Lg	20 33 48.9	
	comp=E,7.2nm,0.7s						
NEST	**Nestorio**	**1.11**	**147**	P	**Pg**	**20 33 34.3**	**-0.5**
NEST				S	**Sb**	**20 33 49.5**	**+0.2**
	comp=E,48nm,0.4s						
NEST	**Nestorio**	**1.11**	**147**	P	**Pg**	**20 33 34.2**	**-0.6**
NEST				S	**Sn**	**20 33 50.8**	**+0.2**
NEST				AML	AML	20 33 56.5	
	comp=N,127µm,0.5s						
NEST				AML	AML	20 33 57.1	
	comp=E,138µm,0.6s						
DRME	**Dracevica, Mon**	**1.16**	**317**	⇓*i*Pg	**Pg**	**20 33 33.9**	**-1.9**
DRME				*i* Sg	**Sb**	**20 33 51.7**	**+0.8**
LSK	**Leskovik**	**1.22**	**167**	P	**Pn**	**20 33 37.9**	**+1.2**
LSK				S	**Sn**	**20 33 57.3**	**+4.0**
	comp=E,52nm,0.6s						
LSK	**Leskovik**	**1.22**	**167**	P	**Pg**	**20 33 36.4**	**-0.6**
	baz=168						
PVY	**Plav**	**1.27**	**350**	*e*Pg	**Pn**	**20 33 35.9**	**-1.6**
PVY				*i* Sg	**Sn**	**20 33 55.9**	**+1.2**
PDG	**Podgorica**	**1.32**	**326**	*e*Pg	**Pn**	**20 33 36.7**	**-1.2**
PDG				*e*Sg	**Sb**	**20 33 55.3**	**0.0**
PDG	**Podgorica**	**1.32**	**326**	*i* Pn	**Pn**	**20 33 36.8**	**-1.2**
PDG				*i* Sn	**Sn**	**20 33 58.5**	**+2.8**
TTG	**Podgorica**	**1.32**	**326**	⇓*i*Pg	**Pn**	**20 33 36.8**	**-1.2**
TTG				*e*Sg	**Sn**	**20 33 56.9**	**+1.2**
BUM	**Brajici-Budva**	**1.40**	**314**	*e*Pg	**Pn**	**20 33 37.6**	**-1.6**
BUM				*i* Sg	**Sg**	**20 33 59.5**	**+1.1**
STIP	**Stip**	**1.50**	**76**	*i* Pn	**Pg**	**20 33 42.0**	**-0.2**
STIP				*i* Sn	**Sg**	**20 34 07.3**	**+5.7**
STIP				*e*Lg	Lg	20 34 09.5	
	comp=N,13nm,0.4s						
KZN	**Kozani**	**1.55**	**131**	P	**Pb**	**20 33 42.1**	**-0.2**
BEY	**Berane**	**1.55**	**350**	*i* Pn	**Pb**	**20 33 42.1**	**-0.4**
IVA	**Berane**	**1.55**	**350**	⇓*i*Pg	**Pn**	**20 33 41.5**	**+0.2**
IVA				*i* Sg	**Sg**	**20 34 04.5**	**+1.0**
CEME	**Cevo**	**1.56**	**321**	⇓*i*Pg	**Pn**	**20 33 41.3**	**-0.1**
CEME				*e*Sg	**Sg**	**20 34 04.3**	**+0.5**
KOME	**Kolasin**	**1.60**	**340**	*e*Pn	**Pn**	**20 33 42.3**	**+0.2**
KOME				*i* Sn	**Sg**	**20 34 05.7**	**+0.6**
KPRO	**Kipourio**	**1.62**	**148**	P	**Pn**	**20 33 42.4**	**+0.1**
KPRO				S	**Sg**	**20 34 05.4**	**-0.3**
KPRO	**Kipourio**	**1.62**	**148**	P	**Pg**	**20 33 44.2**	**-0.4**
KEK	**Kerkira**	**1.66**	**192**	P	**Pb**	**20 33 43.9**	**-0.4**
GRG	**Griva**	**1.67**	**103**	P	**Pn**	**20 33 41.7**	**-1.2**
GRG				S	**Sn**	**20 34 03.9**	**-0.5**
GRG	**Griva**	**1.67**	**103**	*i* Pn	**Pn**	**20 33 42.3**	**-0.6**
GRG				*i* Pn	**Pb**	**20 33 42.4**	**-1.9**
HCY	**Herceg Novi**	**1.72**	**311**	*e*Pn	**Pn**	**20 33 43.7**	**+0.2**
HCY				*i* Sn	**Sb**	**20 34 08.0**	**+1.2**
NKME	**Niksic**	**1.72**	**326**	⇑*i*Pn	**Pn**	**20 33 43.9**	**+0.3**
NKME				*i* Sn	**Sg**	**20 34 08.3**	**-0.6**
JAN	**Janina**	**1.74**	**165**	P	**Pb**	**20 33 45.1**	**-0.5**
VAY	**Valandovo**	**1.75**	**90**	*i* Sn	**Sg**	**20 34 09.1**	**-0.5**
VAY				*e*Lg	Lg	20 34 10.9	
	comp=N,18nm,0.6s						
PRVS	**Prvonek**	**1.79**	**49**	*e*Pn	**Pb**	**20 33 46.0**	**-0.5**
IGT	**Igoumenitsa**	**1.81**	**178**	P	**Pb**	**20 33 46.1**	**-0.6**
IGT				S	**Sg**	**20 34 11.2**	**-0.4**
IGT	**Igoumenitsa**	**1.81**	**178**	P	**Pb**	**20 33 46.2**	**-0.6**
BARS	**Barje**	**1.88**	**38**	*e*Pn	**Pb**	**20 33 48.1**	**+0.2**
SJES	**Sjenica**	**1.93**	**354**	*e*Pg	**Pb**	**20 33 48.9**	**0.0**
SJES				*e*Sg	**Sb**	**20 34 13.5**	**+0.4**
TREB	**Trebinje**	**1.97**	**315**	*e*Pn	**Pn**	**20 33 47.0**	**0.0**
SELS	**Selova**	**1.98**	**19**	*e*Pg	**Pb**	**20 33 49.4**	**-0.4**
KNT	**Kendrikon**	**2.00**	**94**	P	**Pn**	**20 33 46.9**	**-0.5**
BRY	**Bratogost**	**2.01**	**321**	⇑*i*Pn	**Pn**	**20 33 47.9**	**+0.2**
BRY				*i* Sn	**Sb**	**20 34 15.3**	**-0.2**
BOSS	**Bosilegrad**	**2.02**	**55**	*e*Pn	**Pb**	**20 33 50.2**	**-0.2**
BOSS				*e*Sg	**Sg**	**20 34 18.3**	**-0.3**
DBRK	**Dubrovnik**	**2.05**	**311**	*e*Pn	**Pn**	**20 33 47.8**	**-0.4**
DBRK				Sn	**Sn**	**20 34 14.1**	**+0.3**
PLE	**Pljevlja**	**2.09**	**342**	*e*Pn	**Pn**	**20 33 49.3**	**+0.6**
PLE				*i* Sn	**Sb**	**20 34 17.4**	**-0.2**
UPM	**Unac-Piva**	**2.11**	**332**	⇑*i*Pn	**Pn**	**20 33 49.3**	**+0.2**
UPM				*i* Sn	**Sb**	**20 34 17.8**	**-0.6**
THL	**Klokotos Trika**	**2.23**	**142**	P	**Pb**	**20 33 52.7**	**-1.2**
STON	**Ston**	**2.44**	**310**	*e*Pn	**Pn**	**20 33 53.5**	**+0.1**
STON				Sn	**Sn**	**20 34 23.2**	**-0.1**
BBLS	**Lazići**	**2.60**	**346**	*e*Pn	**Pn**	**20 33 57.6**	**+1.9**
ZAGS	**Zajecar**	**2.87**	**30**	*e*Pn	**Pn**	**20 34 00.8**	**+1.4**
MAKA	**Makarska**	**3.09**	**310**	*e*Pn	**Pn**	**20 34 01.8**	**-0.5**
RICI	**Ricice**	**3.16**	**314**	*e*Pn	**Pn**	**20 34 03.4**	**+0.1**
HVAR	**Hvar**	**3.37**	**304**	*e*Pn	**Pn**	**20 34 05.1**	**-1.0**
UDBI	**Udbina**	**4.58**	**316**	*e*Pn	**Pn**	**20 34 23.1**	**+0.2**
DUGI	**Dugi Otok**	**4.66**	**306**	*e*Pn	**Pn**	**20 34 23.2**	**-0.7**

IDC 01 20:36:14.0±6.9,**15°.88S×175°.56W,h0**^{km}**,mb3.7**/2, **mb1 3.9**/2,**mb1mx3.5**/20,**mbtmp3.7**/2,**Error ellipse: s-maj=302.5km s-min=31.3km az=138.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**47.71**	**257**	P	P	20 44 53.1	+0.2
	0.3nm,0.8s,baz=89,slow=8.4,SNR=1.9						
ASAR	**Alice Springs**	**47.98**	**252**	P	P	20 44 54.9	-0.1
	1.6nm,0.6s,baz=86,slow=7.9,SNR=22						
BRTR	**Keskin Array B**	**145.18**	**319**	PKPbc	PKPbc	20 55 53.0	-0.7
	0.6nm,0.8s,baz=55,slow=4.7,SNR=3.9						

TAP 01 20:52:02.9,24°.31N×121°.76E,h21^{km}±1^{km}**,ML1.3,D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENA	**Nanau**	**0.12**	**353**	*e*P	Pb	20 52 07.5	-2.0
	baz=356						
ENA				*e*S	Sb	20 52 11.0	-3.2
	baz=356						
EWUT	**Wuta**	**0.13**	**8**	*e*P	Pb	20 52 07.5	-1.7
	baz=8.0						
EWUT				S	Sb	20 52 11.1	-2.5
	baz=8.0						
ETL	**Fush Village**	**0.20**	**219**	*e*P	Pb	20 52 08.6	-0.3
	baz=218						
ETL				*e*S	Sb	20 52 12.8	-0.2
	baz=218						
NACB	**Ninganchiao**	**0.20**	**227**	P	Pb	20 52 08.7	-0.2
	baz=226						
ETLH	**Xiulin Townshi**	**0.27**	**247**	*e*P	Pb	20 52 09.7	+0.3
	baz=247						
ETLH				*e*S	Sb	20 52 15.1	+1.2
	baz=247						
TWD	**Chiawan**	**0.28**	**212**	*e*P	Pb	20 52 09.4	+0.1
	baz=210						
NDS	**Dongshan**	**0.32**	**353**	*e*P	Pn	20 52 11.5	-0.9
	baz=353						
NDS				*e*S	Sb	20 52 16.2	+1.5
	baz=353						
WHF	**Hehuan Shan**	**0.48**	**250**	*e*S	Sb	20 52 20.6	+1.0
	baz=249						
YHNB	**Yeheng**	**0.50**	**316**	*e*P	Pb	20 52 13.2	+0.2
	baz=315						
YHNB				*e*S	Sn	20 52 21.4	-1.5
	baz=315						
NWLT	**Wulai**	**0.52**	**333**	*e*P	Pb	20 52 13.5	+0.2
	baz=333						
NWLT				*e*S	Sb	20 52 21.5	+1.0
	baz=333						
CHGB	**Renai**	**0.59**	**245**	*e*P	Pb	20 52 14.8	+0.1
	baz=244						
CHGB				*e*S	Sb	20 52 23.4	+0.6
	baz=244						

TAP 01 20:52:07.6,24°.40N×121°.46E,h5^{km}**,ML1.2,B,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNSB	**Datong**	**0.07**	**291**	P	Pg	20 52 10.0	+0.6
	baz=291						
NNSB				S	Sg	20 52 10.9	+0.3
	baz=291						
NNS	**Nan Shan**	**0.09**	**296**	P	Pg	20 52 10.1	+0.5
	baz=297						
NNS				S	Sg	20 52 11.0	+0.1
	baz=297						
ETLH	**Xiulin Townshi**	**0.19**	**174**	*e*P	Pg	20 52 12.0	+0.5
	baz=180						
NDT	**Datong Townshi**	**0.21**	**13**	*e*P	Pg	20 52 11.9	+0.2
	baz=13						
NDT				*e*S	Sg	20 52 15.5	+1.0
	baz=13						
FUSS	**Fushou**	**0.25**	**232**	P	Pg	20 52 13.4	+0.9
	baz=232						
FUSS				S	Sg	20 52 16.8	+1.0
	baz=232						
ENTT	**Nioudou**	**0.26**	**22**	P	Pg	20 52 12.7	+0.1
	baz=14						
ENTT				S	Sg	20 52 17.3	+1.3
	baz=14						
NACB	**Ninganchiao**	**0.26**	**151**	*e*P	Pg	20 52 12.8	+0.2
	baz=151						
NACB				*e*S	Sg	20 52 17.7	+1.6
	baz=151						
YHNB	**Yeheng**	**0.28**	**344**	*e*S	Sg	20 52 17.6	+0.9
	baz=345						
NSK	**Sanguang**	**0.29**	**341**	*e*P	Pg	20 52 13.3	0.0
	baz=343						
NSK				*e*S	Sg	20 52 18.0	+0.9
	baz=343						
EWUT	**Wuta**	**0.29**	**81**	*e*P	Pg	20 52 13.5	+0.2
	baz=81						
EWUT				*e*S	Sb	20 52 19.0	-1.6
	baz=81						
TWT	**Tachien**	**0.30**	**240**	*e*P	Pg	20 52 14.3	+0.9
	baz=241						
TWT				*e*S	Sb	20 52 19.2	-1.7
	baz=241						
WHF	**Hehuan Shan**	**0.31**	**215**	P	Pg	20 52 14.8	+1.1
	baz=214						
WHF				*e*S	Sb	20 52 19.7	-1.8
	baz=214						
TDCB	**Techi**	**0.31**	**242**	P	Pg	20 52 14.4	+0.7
	baz=242						
TDCB				*e*S	Sb	20 52 20.0	-1.3
	baz=242						
NDS	**Dongshan**	**0.33**	**45**	*e*P	Pg	20 52 14.3	+0.3
	baz=60						
NDS				*e*S	Sg	20 52 19.9	+1.6
	baz=60						
TWD	**Chiawan**	**0.34**	**159**	*e*P	Pg	20 52 14.8	+0.6
	baz=157						
TWD				*e*S	Sg	20 52 20.1	+1.3
	baz=157						
TWE	**Neicheng**	**0.37**	**31**	*e*P	Pg	20 52 15.1	+0.3
	baz=48						
TWE				*e*S	Sb	20 52 21.6	-1.2
	baz=48						
NWLT	**Wulai**	**0.38**	**6**	*e*S	Sg	20 52 20.9	+1.0
	baz=6.0						
CHGB	**Renai**	**0.43**	**218**	*e*P	Pg	20 52 16.6	+0.6
	baz=218						
LIOB	**Emei**	**0.47**	**301**	*e*S	Sb	20 52 25.1	-0.7
	baz=303						
WHP	**Taichung City**	**0.48**	**255**	*e*P	Pg	20 52 17.4	+0.4
	baz=257						
OWD	**Renai**	**0.52**	**210**	*e*P	Pg	20 52 18.2	+0.6
	baz=211						
OWD				*e*S	Sb	20 52 26.3	-0.8
	baz=211						

*IDC **01** 21:00:13.5±0.9,12°.00N×144°.02E,h0^{km},mb3.9/8, mb1 4.1/8,mb1mx3.8/38,mbtmp3.9/8,MS4.3/2,Ms1 4.3/2, ms1mx3.1/41,Error ellipse: s-maj=39.1km s-min=16.8km az=109.0*

*NEIC **01** 21:00:19.2±1.8,12°.04N±0°.06×144°.2E±0°.2,h43^{km}±9^{km}, mb4.2/7,Error ellipse: s-maj=25.4km s-min=6.4km az=101.0*

ISC 01 21:00:17.0±0.7,**12°.02N**±0°.08×**144°.1E**±0°.1,**h26**^{km}**,n27,** σ**1^{s}.00**/24,**mb4.1**/11,**South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.75**	**27**	Pn	**Pb**	**21 00 47.2**	**-1.4**
	95nm,0.3s,baz=33,slow=4.2,SNR=32						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GUMO				Sn	Sb	21 01 11.8	+1.6
	193nm,0.3s,baz=1.8,slow=22,SNR=22						
GUMO	Guam	1.75	27	Pn	Pn	21 00 45.6	-0.2
GUMO					Sn	21 01 06.8	-0.5
PATS	Pohnpei	14.98	109	Pn	Pn	21 03 47.3	+0.1
H11N1	WAKE ISLAND Hy	23.25	68	T	T	21 29 57.4	
	baz=255,slow=75,SNR=5.1						
H11N2	WAKE ISLAND Hy	23.26	68	T	T	21 29 58.6	
	baz=255,slow=75,SNR=5.2						
H11N3	WAKE ISLAND Hy	23.27	68	T	T	21 29 59.6	
	baz=255,slow=75,SNR=5.4						
MMRI	Maumere	29.85	228	P	P	21 06 22.6	+0.1
WB0	Warramunga Arr	32.98	197	P	P	21 06 48.8	-1.2
WB0				IAmb	IAmb	21 06 50.2	
	comp=Z,7.0nm,1.2s						
WR0	Warramunga Arr	33.13	197	P	P	21 06 51.1	-0.1
WR0				IAmb	IAmb	21 06 51.7	
	comp=Z,2.5nm,0.9s						
WB2	Warramunga Arr	33.16	197	P	P	21 06 51.3	-0.3
WB2				IAmb	IAmb	21 07 09.6	
	comp=Z,3.4nm,0.9s						
WRA	Warramunga Arr	33.17	197	P	P	21 06 51.3	-0.3
	comp=Z,0.9nm,0.6s,baz=21,slow=9.9,SNR=12						
WRA	Warramunga Arr	33.17	197	P	P	21 06 50.4	-1.2
ASAR	Alice Springs	36.83	196	P	P	21 07 24.2	+1.1
	comp=Z,0.4nm,0.5s,baz=17,slow=12,SNR=8.8						
ASAR	Alice Springs	36.83	196	P	P	21 07 22.3	-0.9
SONM	Songino Array	47.56	326	P	P	21 08 51.6	+1.1
	comp=Z,0.4nm,0.6s,baz=134,slow=6.2,SNR=1.8						
SONM	Songino Array	47.56	326	P	P	21 08 51.4	+0.8
SONM				IAmb	IAmb	21 09 07.0	
	comp=Z,0.6nm,1.1s						
AFI	Afiamalu	50.80	119	LR	LR	21 27 21.5	
	comp=Z,166nm,19.1s,baz=79,slow=32						
MKAR	Makanchi Array	62.07	317	P	P	21 10 36.7	+1.1
	comp=Z,0.4nm,0.5s,baz=83,slow=9.9,SNR=4.8						
ZALV	Zalesovo Beam	62.44	325	P	P	21 10 36.6	-1.2
ILAR	Eielson Array	70.32	25	P	P	21 11 27.6	-0.5
	comp=Z,0.8nm,0.9s,baz=249,slow=5.5,SNR=7.7						
ILAR	Eielson Array	70.32	25	P	P	21 11 27.0	-1.1
INK	Inuvik	76.11	22	P	P	21 12 02.3	+0.1
	comp=Z,3.2nm,1.0s,baz=220,slow=9.0,SNR=5.2						
INK	Inuvik	76.11	22	P	P	21 12 02.0	-0.1
INK				IAmb	IAmb	21 12 07.8	
	comp=Z,4.0nm,1.1s						
NVAR	Mina Array Bea	88.52	51	P	P	21 13 09.8	+1.9
	comp=Z,0.6nm,0.6s,baz=261,slow=6.4,SNR=3.2						
FINES	FINESS Array B	92.24	335	P	P	21 13 23.9	-0.6
	comp=Z,2.6nm,0.8s,baz=59,slow=4.9,SNR=6.5						
FINES	FINESS Array B	92.24	335	P	P	21 13 23.3	-1.1
BRTR	Keskin Array B	97.55	313	LR	LR	22 02 33.1	
	comp=Z,229nm,18.9s,baz=80,slow=38						

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*NEIC **01** 21:05:45.5±1.6, 43.°91N±0.°04×105.°53W±0.°04, h0^{km}±2^{km}, ML3.2/40, Error ellipse: s-maj=8.4km s-min=3.0km az=323.0*

*IDC **01** 21:05:49.4±0.5, 44.°64N×106.°11W, h0^{km}, mb1 3.6/3, mb1mx3.4/50, mbtmp3.3/3, ML2.4/2, Error ellipse: s-maj=61.4km s-min=3.3km az=141.0*

ISC 01 21:05:44.9±0.9**, 43.°94N**±0.°05×**105.°56W**±0.°05**, h0**^{km}**, n34,** σ**1**^{s}**00**/35**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	1.12	80	Pg	Pg	21 06 06.0	-0.3
RSSD				Sg	Sg	21 06 21.3	+0.6
K22A	Casper	1.46	209		Pg	21 06 13.1	+0.2
K22A				Sn	Sb	21 06 32.3	0.0
K22A				IAML		21 06 39.7	
	comp=E,380nm,0.3s						
RWWY	Rawlins	2.55	209		Pn	21 06 27.6	-0.2
RWWY				IAML		21 07 06.6	
	comp=E,158nm,0.7s						
RWWY				IAML		21 07 08.9	
	comp=E,142nm,0.9s						
PHWY	Pilot Hill	2.63	178		Pn	21 06 28.6	-0.3
LAO	LASA Array	2.79	351	Pn	Pn	21 06 32.2	+1.3
LAO				IAML		21 07 31.2	
	comp=E,152nm,0.8s						
RLMT	Red Lodge	2.90	295	Pn	Pn	21 06 32.6	+0.1
RLMT				IAML		21 07 34.4	
	comp=E,68nm,0.3s						
BW06	Boulder Array	3.14	249		Pn	21 06 37.5	+1.7
PD31	Pinedale Array	3.14	249	Pn	Pn	21 06 37.1	+1.3
PDAR	Pinedale Array	3.14	249	Pn	Pb	21 06 40.1	-1.5
	comp=E,4.1nm,0.3s,baz=61,slow=17,SNR=40						
PDAR				Lg	Lg	21 07 27.0	
	comp=E,10nm,0.3s,baz=60,slow=38,SNR=4.1						
PDAR	Pinedale Array	3.14	249		Pn	21 06 37.8	+2.0
GCMT	Greycliff	3.46	304		Pn	21 06 40.6	+0.6
LOHW	Long Hollow	3.67	267	Pn	Pn	21 06 44.4	+1.4
FLWY	Flagg Ranch	3.71	274		Pn	21 06 45.3	+1.7
FLWY				IAML		21 07 57.4	
	comp=E,29nm,1.1s						
FLWY				IAML		21 07 58.0	
	comp=E,31nm,2.3s						
SNOW	Snow King Moun	3.79	265	Pn	Pn	21 06 45.6	+0.8
SNOW				IAML		21 07 12.2	
	comp=E,30nm,0.4s						
SNOW				IAML		21 07 57.1	
	comp=E,31nm,2.7s						
REDW	Red Top Meadow	3.88	263	Pn	Pn	21 06 47.6	+1.6
REDW				IAML		21 08 02.9	
	comp=E,37nm,1.0s						
REDW				IAML		21 08 08.9	
	comp=E,30nm,1.2s						
TPAW	Teton Pass	3.93	265		Pn	21 06 47.8	+1.1
TPAW				IAML		21 08 08.5	
	comp=E,31nm,1.0s						
OGNE	Ogallala	3.97	138	Pn	Pn	21 06 47.2	+0.1
ISCO	Idaho Springs	4.13	181	Pn	Pn	21 06 49.6	0.0
AHID	Auburn Hatcher	4.20	256	Pn	Pn	21 06 50.3	-0.1
AHID				IAML		21 08 06.7	
	comp=E,19nm,0.3s						
AHID				IAML		21 08 13.4	
	comp=E,23nm,1.1s						
O20A	White River Ci	4.29	209	Pn	Pn	21 06 53.8	+2.3
O20A				IAML		21 08 01.8	
	comp=E,34nm,0.3s						
O20A				IAML		21 08 05.3	
	comp=N,30nm,0.9s						
E28A	Huff	4.33	51		Pn	21 06 51.8	-0.2
BOZ	Bozeman (W)	4.63	293	Pn	Pn	21 06 56.0	-0.2
BOZ				IAML		21 08 24.7	
	comp=N,13nm,0.9s						
BOZ				IAML		21 08 24.8	
	comp=N,18nm,0.9s						
DGMT	Dagmar	4.63	11	Pn	Pn	21 06 56.8	+0.7
SMCO	Snowmass	4.87	193	Pn	Pn	21 06 59.9	+0.1
SMCO				IAML		21 08 21.1	
	comp=N,18nm,0.4s						
SMCO				IAML		21 08 30.4	
	comp=N,18nm,1.2s						
LRM	Limekiln Ridge	5.24	293	Pn	Pn	21 07 04.9	+0.2
KSCO	Kaye Shedlock’	5.39	155	Pn	Pn	21 07 07.0	+0.4
P18A	Preston Nutter	5.55	221		Pn	21 07 07.6	-1.4
HVU	Hansel Valley	5.72	250	Pn	Pn	21 07 11.2	0.0
P17A	Butcher Ranch,	5.91	223		Pn	21 07 13.1	-0.6
PV20	West Nyswonger	6.15	206		Pn	21 07 17.7	+0.6
ECSD	EROS Data Cent	6.48	89	Pn	Pn	21 07 21.6	+0.1
DUG	Dugway, Tooele	6.56	238	Pn	Pn	21 07 23.0	+0.3
ULM	Lac du Bonnet	9.13	43	Pn	Pn	21 07 58.4	+0.6
	comp=N,0.5nm,0.3s,baz=231,slow=13,SNR=6.7						
ULM				Pg		21 08 33.9	
	comp=N,0.8nm,0.3s,baz=226,slow=17,SNR=4.6						
ULM				Lg	Lg	21 10 31.0	
	comp=N,0.2nm,0.3s,baz=127,slow=21,SNR=1.4						
NVAR	Mina Array Bea	11.06	245	Pn	Pn	21 08 29.9	+5.4
	comp=N,0.1nm,0.3s,baz=50,slow=11,SNR=3.0						

IDC 01 21:06:04.4±1.8**, 4.°45S**×**151.°62E, h0**^{km}**, mb3.3**/3**, mb1 3.6**/3**, mb1mx3.4**/45**, mbtmp3.3**/3**, Error ellipse: s-maj=173.4km s-min=18.1km az=126.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.81	226	P	P	21 11 08.9	-0.2
	0.3nm,0.6s,baz=50,slow=9.7,SNR=1.9						
ASAR	Alice Springs	25.63	220	P	P	21 11 36.1	+0.2
	0.5nm,0.8s,baz=59,slow=9.1,SNR=3.3						
ILAR	Eielson Array	82.29	22	P	P	21 18 27.6	0.0
	0.3nm,0.6s,baz=251,slow=5.3,SNR=4.5						

IDC 01 21:06:41.1±1.8**, 0.°67N**×**127.°30E, h0**^{km}**, mb3.4**/3**, mb1 3.7**/3**, mb1mx3.4**/45**, mbtmp3.5**/3**, Error ellipse: s-maj=186.4km s-min=11.6km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.62	162	P	P	21 11 32.8	-0.2
	0.8nm,0.6s,baz=340,slow=10,SNR=8.3						
ASAR	Alice Springs	25.03	166	P	P	21 12 07.5	+0.3
	1.2nm,0.9s,baz=337,slow=11,SNR=7.4						
MKAR	Makanchi Array	60.38	326	P	P	21 16 52.2	-0.1
	0.3nm,0.5s,baz=115,slow=7.3,SNR=5.8						

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*JMA **01** 21:09:39.1±0.3, 22.°66N×121.°72E, h3^{km}±4^{km}, M5.4*

*NIED **01** 21:09:39.1, 22.°66N×121.°72E, h3^{km}, MW5.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.07; $M_{\theta\theta}$1.12; $M_{\phi\phi}$-1.06; $M_{r\theta}$1.60; $M_{\theta\phi}$-0.13; $M_{\phi r}$1.10; Fault plane solution: $M_0$2.23000×10^{17} NP1: ϕ_s233.00000°, δ89.00000°, λ-119.00000°. NP2: ϕ_s140.00000°, δ29.00000°, λ-3.00000°.*

*BJI **01** 21:09:39.8±0.0, 22.°75N×121.°70E, h10^{km}, mB5.5/66, mb5.1/79, ML5.5/8, Ms5.6/95, Ms7 5.4/89*

*NEIC **01** 21:09:40.8±2.0, 22.°76N±0.°05×121.°66E±0.°05, h7^{km}±1^{km}, mb5.5/274, Ms_20 4.9/86, Mwb5.3/39, Mwr5.3/22, Mww5.5, Mwc5.5(GCMT), Error ellipse: s-maj=10.5km s-min=6.5km az=218.0*

*NEIC **01** 21:09:42, 22.°78N×121.°62E, h16^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.77; $M_{\theta\theta}$0.34; $M_{\phi\phi}$-1.11; $M_{r\theta}$0.11; $M_{\theta\phi}$-0.23; $M_{\phi r}$0.22; Fault plane solution: $M_0$1.04000×10^{17} NP1:ϕ_s17.64000°, δ52.68000°, λ102.02000°. NP2:ϕ_s178.29000°, δ38.94000°, λ74.72000°. Principal axes: T 0.8080, Plg78.0000°, Azm333.0000°; N 0.3674, Plg10.0000°, Azm190.0000°; P -1.1754, Plg7.0000°, Azm99.0000°;*

*NEIC **01** 21:09:42, 22.°78N×121.°62E, h9^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.82; $M_{\theta\theta}$0.24; $M_{\phi\phi}$-1.07; $M_{r\theta}$0.25; $M_{\theta\phi}$-0.00; $M_{\phi r}$0.34; Fault plane solution: $M_0$1.06000×10^{17} NP1:ϕ_s160.69000°, δ38.34000°, λ59.64000°. NP2:ϕ_s17.44000°, δ57.64000°, λ111.79000°. Principal axes: T 0.9653, Plg69.0000°, Azm334.0000°; N 0.1612, Plg18.0000°, Azm185.0000°; P -1.1264, Plg10.0000°, Azm92.0000°;*

*BGR **01** 21:09:42.9±0.0, 22.°66N×121.°95E, h33^{km}, mb5.2*

*TAP **01** 21:09:42.8, 22.°73N×121.°58E, h19^{km}, ML5.9, C*

*ASIES **01** 21:09:42.0, 22.°71N×121.°60E, h16^{km}, MW5.2*

*MOS **01** 21:09:42.2±1.0, 22.°74N×121.°57E, h28^{km}, mb5.9/55, MS5.1/39, Error ellipse: s-maj=5.5km s-min=3.6km az=109.3*

*GCMT **01** 21:09:42.7±0.1, 22.°73N±0.°01×121.°57E±0.°01, h19^{km}, MW5.4/130, Moment Tensor Solution. s116,c197; s130,c254; Duration: 1^{s}3 Moment tensor: Scale 10^{17} Nm; M_{rr}1.57±.03; $M_{\theta\theta}$0.21±.02; $M_{\phi\phi}$-1.79±.03; $M_{r\theta}$0.18±.05; $M_{\theta\phi}$-0.56±.02; $M_{\phi r}$-0.14±.05; Best double couple: $M_0$1.77300×10^{17} NP1:ϕ_s24.00000°, δ44.00000°, λ104.00000°. NP2:ϕ_s185.00000°, δ47.00000°, λ77.00000°. Principal axes: T 1.6100, Plg80.0000°, Azm23.0000°; N 0.3200, Plg10.0000°, Azm194.0000°; P -1.9360, Plg2.0000°, Azm284.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **01** 21:09:44.5±3.4, 22.°76N×121.°60E, h33^{km}±26^{km}, mb4.8/40, mb1 4.9/46, mb1mx4.9/52, mbtmp5.1/46, ML4.5/6, MS4.7/29, Ms1 4.7/29, ms1mx4.6/40 Error ellipse: s-maj=11.1km s-min=8.6km az=87.0*

*NEIC **01** 21:09:44, 22.°72N×121.°62E, h18^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.61; $M_{\theta\theta}$0.19; $M_{\phi\phi}$-1.80; $M_{r\theta}$0.71; $M_{\theta\phi}$-0.60; $M_{\phi r}$0.32; Fault plane solution: $M_0$1.98000×10^{17} NP1:ϕ_s175.00000°, δ41.00000°, λ58.00000°. NP2:ϕ_s35.00000°, δ56.00000°, λ115.00000°. Principal axes: T 1.9093, Plg68.0000°, Azm357.0000°; N 0.1264, Plg21.0000°, Azm201.0000°; P -2.0356, Plg8.0000°, Azm108.0000°;*

*NEIC **01** 21:09:48, 22.°80N×121.°59E, h26^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.90; $M_{\theta\theta}$0.19; $M_{\phi\phi}$-2.09; $M_{r\theta}$0.88; $M_{\theta\phi}$-0.87; $M_{\phi r}$0.49; Fault plane solution: $M_0$2.40000×10^{17} NP1:ϕ_s178.00000°, δ39.00000°, λ58.00000°. NP2:ϕ_s37.00000°, δ58.00000°, λ113.00000°. Principal axes: T 2.2748, Plg68.0000°, Azm356.0000°; N 0.2416, Plg20.0000°, Azm205.0000°; P -2.5164, Plg10.0000°, Azm111.0000°;*

ISC 01 21:09:41.8±0.5**, 22.°72N**±0.°01×**121.°66E**±0.°02**, h13**^{km}±2^{km}**, h13**^{km}**:pP-P, n1302,** σ**1**^{s}**74**/1439**, mb5.4**/369**, MS5.0**/113**, 203C-210D, Fault plane solution: NP1:**ϕ_s66.43362°, δ15.35327°, λ-82.74852°. **NP2:**ϕ_s238.91678°, δ74.77251°, λ-91.98492°. **Principal axes:** T Plg29.7455°, Azm330.5332°; N Plg1.9152°, Azm239.4383°; P Plg60.1803°, Azm146.0937°; **Fault plane solution: NP1:**ϕ_s133.73021°, δ56.61178°, λ-19.81508°. **NP2:** ϕ_s234.94574°, δ73.55829°, λ-144.98634°. **Principal axes:** T Plg10.8937°, Azm1.0857°; N Plg51.7692°, Azm256.9453°; P Plg36.1050°, Azm99.1547°; **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LDUT	Ludao	0.19	255	⇑*i*P	Pb	21 09 47.0	-0.1
	baz=241						
LDUT				*i* S	Sb	21 09 50.1	-0.6
	baz=241						
EDH	Donghe	0.41	307	⇓*i*P	Pg	21 09 50.1	+0.1
	baz=313						
EDH				*e*S	Sg	21 09 55.3	-0.3
	baz=313						
CHKT	Chengkung	0.47	324	⇓*i*P	Pg	21 09 51.1	+0.1
	baz=339						
CHKT				*i* S	Sg	21 09 56.9	-0.3
	baz=339						
TTN	Taitung	0.48	274	⇓*i*P	Pg	21 09 51.2	0.0
	baz=273						
TTN				*e*S	Sg	21 09 56.9	-0.7
	baz=273						
LONT	Longtian	0.53	290	⇓*i*P	Pg	21 09 51.5	-0.6
	baz=293						
LONT				S	Sg	21 09 57.8	-1.4
	baz=293						
TWGBT	Beinan	0.55	280	⇓*i*P	Pg	21 09 51.9	-0.7
	baz=281						
TWGBT				*e*S	Sg	21 09 59.8	0.0
	baz=281						
ECS	Chishang	0.55	312	⇓*i*P	Pg	21 09 52.7	+0.1
	baz=317						
ECS				*e*S	Sg	21 10 00.1	+0.1
	baz=317						
TWG	Pinlang	0.56	280	⇓*i*P	Pg	21 09 51.8	-0.9
	baz=281						
TWG				*e*S	Sg	21 09 59.7	-0.3
	baz=281						
TWG	Pinlang	0.56	280		Pg	21 09 51.6	-1.1
FULB	Fuli	0.58	324	⇓*i*P	Pg	21 09 52.8	-0.5
	baz=330						
FULB				S	Sg	21 10 00.1	-0.9
	baz=330						
ECBN	Changbin	0.62	342	⇑*i*P	Pg	21 09 54.0	0.0
	baz=358						
ECBN				*i* S	Sg	21 10 01.9	-0.4
	baz=358						
ECL	Taimali	0.67	259	⇓*i*P	Pg	21 09 54.0	-0.8
	baz=257						
ECL				*e*S	Sg	21 10 02.1	-1.5
	baz=257						
LAY	Lan-yu	0.69	189	⇓*i*P	Pg	21 09 55.0	-0.2
	baz=182						
LAY				*e*S	Sg	21 10 03.9	-0.4
	baz=182						
EYUL	Yuli	0.70	333	*e*P	Pg	21 09 55.2	-0.1
	baz=349						
EYUL				*e*S	Sg	21 10 04.4	-0.2
	baz=349						
TWF1	Yuli	0.71	332	⇓*i*P	Pg	21 09 55.2	-0.5
	baz=346						
YULB	Yu-li	0.75	333	⇓*i*P	Pg	21 09 55.8	-0.6
	baz=348						
YULB				S	Sg	21 10 05.1	-1.1
	baz=348						
YULB	Yu-li	0.75	333		Pg	21 09 55.6	-0.7
YULB				Sg	Sg	21 10 03.9	-2.3
ELDTW	Lidau	0.76	308	⇓*i*P	Pg	21 09 55.1	-1.3
	baz=311						
ELDTW				*e*S	Sg	21 10 03.3	-3.2
	baz=311						
HGSD	Ruisui	0.80	344	⇑*i*P	Pg	21 09 56.4	-0.9
	baz=349						
HGSD				*e*S	Sg	21 10 06.9	-0.8
	baz=349						
TAW	Tawu	0.80	243	⇓*i*P	Pg	21 09 56.2	-1.0
	baz=254						
TAW				*e*S	Sg	21 10 05.7	-2.0
	baz=254						
EAST	Anshuo	0.83	246	⇓*i*P	Pg	21 09 56.7	-1.1
	baz=243						
EAST				*e*S	Sg	21 10 06.7	-1.9
	baz=243						
EHY	Hungye	0.84	338	P	Pg	21 09 57.4	-0.7
	baz=326						
EHY				*e*S	Sg	21 10 07.4	-1.7
	baz=326						
STYH	Taoyuan	0.93	299	P	Pg	21 09 58.6	-1.2
	baz=307						
STYH				*e*S	Sg	21 10 10.4	-1.6
	baz=307						
SLIU	Shizi	0.95	238	⇓*i*P	Pg	21 09 58.5	-1.6
	baz=248						
SLIU				*e*S	Sg	21 10 10.1	-2.4
	baz=248						
SSD	Sandimen	0.95	272	⇓*i*P	Pg	21 09 58.4	-1.8
	baz=264						
SSD				*e*S	Sg	21 10 09.4	-3.2
	baz=264						
MASBT	Mashibuluo	0.96	264	⇓*i*P	Pb	21 09 58.7	-1.6
	baz=256						
MASBT				*e*S	Sg	21 10 09.7	-3.1
	baz=256						
EGFH	Guangfu	0.97	347	*e*P	Pb	21 09 59.5	-1.0
	baz=333						
EGFH				*e*S	Sg	21 10 12.0	-1.1
	baz=333						
SLGT	Liugui	0.98	286	⇓P	Pb	21 09 59.3	-1.3
	baz=287						
SCZT	Fangliau	1.03	250	⇓*i*P	Pb	21 09 59.9	-1.6
	baz=255						
SCZT				*e*S	Sb	21 10 11.5	-3.3
	baz=255						
SSPT	Xinbi	1.04	257	⇓*i*P	Pb	21 10 00.8	-0.9
	baz=256						
SSPT				*e*S	Sb	21 10 13.8	-1.4
	baz=256						
SGST	Jiashian	1.06	290	⇓*i*P	Pb	21 10 00.3	-1.7
	baz=291						
SGST				*e*S	Sb	21 10 13.3	-2.5
	baz=291						
TSEB	Hengchuen, Pin	1.08	221	⇓*i*P	Pb	21 10 01.5	-0.9
	baz=219						
SGLT	Jiouru	1.08	270	⇓*i*P	Pb	21 10 01.9	-0.6
	baz=268						
SGLT				*e*S	Sb	21 10 15.0	-1.5
	baz=268						
SCST	Cishan	1.09	279	⇓*i*P	Pb	21 10 02.1	-0.5
	baz=282						
SCST				*e*S	Sn	21 10 18.8	+1.0
	baz=282						
WTP	Ta-pu	1.10	298	⇓*i*P	Pb	21 10 01.8	-0.9
	baz=306						
WTP				*e*S	Sb	21 10 16.2	-0.8
	baz=306						
ESL	Shilin	1.11	349	⇑*i*P	Pb	21 10 01.3	-1.5
	baz=1.0						
ESL				*e*S	Sb	21 10 14.3	-2.9
	baz=1.0						
TWKBT	Hengchun	1.11	226	⇓*i*P	Pb	21 10 01.4	-1.5
	baz=223						
TWKBT				*e*S	Sb	21 10 15.1	-2.2
	baz=223						
TWK1	Hengchun	1.11	226	⇓*i*P	Pb	21 10 01.4	-1.5
	baz=222						
TWK1				*e*S	Sb	21 10 15.1	-2.2
	baz=222						
TPUB	Ta-pu	1.11	301	⇓*i*P	Pb	21 10 02.0	-1.0
	baz=303						
TPUB				*e*S	Sb	21 10 15.4	-2.0
	baz=303						
TPUB	Ta-pu	1.11	301		Pb	21 10 01.9	-1.1
TPUB				Sg	Sb	21 10 15.0	-2.5
TPUB	Ta-pu	1.11	301	P	Pb	21 10 02.3	-0.7
ALS	Alishan	1.11	315	⇓*i*P	Pb	21 10 02.0	-1.1
	baz=317						
ALS				*e*S	Sb	21 10 15.4	-2.2
	baz=317						
HEN	Hengchun	1.12	230	P	Pb	21 10 01.7	-1.3
	baz=227						
CHN1	Nanshi	1.14	294	⇓*i*P	Pb	21 10 02.9	-0.6
	baz=302						
CHN1				*e*S	Sb	21 10 17.8	-0.5
	baz=302						
TWM1	Shoushan	1.15	275	⇓*i*P	Pb	21 10 03.6	0.0
	baz=275						
TWM1				*e*S	Sg	21 10 18.9	0.0
	baz=275						
SNST	Tainan City	1.18	295	⇓*i*P	Pn	21 10 03.6	-0.5
	baz=303						
SNST				*e*S	Sb	21 10 19.0	-0.4
	baz=303						
TWK	Hsinying	1.21	297	⇓*i*P	Pn	21 10 03.9	-0.6
	baz=298						
TWK				*e*S	Sb	21 10 20.6	+0.3
	baz=298						
SNJT	Kaohsiung City	1.23	272	*e*P	Pg	21 10 06.2	+0.8
	baz=271						
SNJT				*e*S	Sg	21 10 23.9	+2.5
	baz=271						
SSLB	Suanglung	1.25	328	⇓*i*P	Pn	21 10 03.8	-1.2
	baz=341						
SSLB				*e*S	Sb	21 10 18.5	-2.8
	baz=341						
SSLB	Suanglung	1.25	328		Pn	21 10 03.8	-1.2
SSLB	Suanglung	1.25	328	P	Pn	21 10 04.5	-0.5
WLCH	Liuqiu	1.25	253	⇓*i*P	Pg	21 10 07.0	+1.2
	baz=252						
WLCH				*e*S	Sb	21 10 20.1	-1.0
	baz=252						
CHN3	Shinhua	1.25	287	⇓*i*P	Pg	21 10 06.0	+0.2
	baz=287						
CHN3				*e*S	Sg	21 10 24.4	+2.3
	baz=287						
HWA	Hwalien	1.25	358	*i* P	Pn	21 10 03.9	-1.1
	baz=13						
HWA				*e*S	Sb	21 10 20.9	-0.4
	baz=13						
CHN5	Tsauling	1.26	314	⇓*i*P	Pn	21 10 04.8	-0.4
	baz=322						
CHN5				*e*S	Sb	21 10 21.1	-0.5
	baz=322						
KAU	Kaohsiung	1.26	263	*e*P	Pg	21 10 06.8	+0.7
	baz=262						
KAU				*e*S	Sg	21 10 25.2	+2.7
	baz=262						
OWD	Renai	1.30	340	⇑*i*P	Pn	21 10 04.6	-1.3
	baz=343						
OWD				*e*S	Sb	21 10 20.6	-2.4
	baz=343						
SSHA	Shanhua	1.33	288	⇓P	Pg	21 10 07.6	+0.1
	baz=289						
SSHA				*e*S	Sg	21 10 25.9	+1.1
	baz=289						
SMLT	Sun Moon Lake	1.35	329	*e*P	Pn	21 10 06.3	-0.3
	baz=341						
SMLT				*e*S	Sb	21 10 21.6	-2.7
	baz=341						
TWD	Chiawan	1.35	357	⇑*i*P	Pn	21 10 04.9	-1.5
	baz=12						
TWD				*e*S	Sn	21 10 21.1	-3.2
	baz=12						
CHN2	Minshiung	1.36	307	⇓*i*P	Pb	21 10 06.9	-0.2
	baz=309						
CHN2				*e*S	Sg	21 10 25.3	-0.3
	baz=309						
TAI1	Yung-k'ang	1.36	284	*e*P	Pb	21 10 07.2	+0.1
	baz=285						
TAI1				*e*S	Sg	21 10 26.2	+0.5
	baz=285						
CHY	Chiayi	1.38	304	⇓*i*P	Pb	21 10 07.2	-0.3
	baz=306						

CHY				*e*S	Sn	21 10 25.0	+0.1
	baz=306						
TYC	Yuchr	1.39	328	P	Pn	21 10 06.9	0.0
	baz=340						
TYC				S	Sn	21 10 24.8	-0.4
	baz=340						
WJS	Zhushan	1.39	322	⇓*i*P	Pb	21 10 07.7	0.0
	baz=339						
WJS				*e*S	Sn	21 10 25.2	0.0
	baz=339						
CHGB	Renai	1.41	341	⇑P	Pn	21 10 06.7	-0.7
	baz=356						
CHGB				*e*S	Sn	21 10 23.9	-2.0
	baz=356						
WDLH	Douliu	1.41	313	⇓*i*P	Pb	21 10 08.0	0.0
	baz=315						
WDLH				*e*S	Sb	21 10 26.7	+0.7
	baz=315						
ICHU	Yijhu	1.43	297	⇓*i*P	Pb	21 10 07.9	-0.4
	baz=298						
ICHU				*e*S	Sb	21 10 26.8	+0.4
	baz=298						
SCLT	Jiali	1.43	289	⇓*i*P	Pn	21 10 07.7	+0.2
	baz=290						
SCLT				*e*S	Sb	21 10 26.5	+0.1
	baz=290						
ETL	Fush Village	1.43	358	*e*P	Pn	21 10 06.1	-1.4
	baz=12						
ETL				*e*S	Sn	21 10 24.9	-1.3
	baz=12						
NACB	Ninganchiao	1.45	357	⇑*i*P	Pn	21 10 06.1	-1.6
	baz=10.0						
NACB				*e*S	Sn	21 10 24.1	-2.5
	baz=10.0						
NACB	Ninganchiao	1.45	357		Pn	21 10 06.2	-1.6
WNT	Mingjian	1.46	322	⇓*i*P	Pb	21 10 08.7	-0.1
	baz=325						
WNT				*e*S	Sn	21 10 27.2	+0.2
	baz=325						
WHF	Hehuan Shan	1.46	346	*e*P	Pn	21 10 07.3	-1.0
	baz=348						
CHN8	Yiju	1.48	295	⇓*i*P	Pn	21 10 08.3	+0.2
	baz=297						
CHN8				*e*S	Sn	21 10 27.3	0.0
	baz=297						
ETLH	Xiulin Townshi	1.49	354	⇑*e*P	Pn	21 10 07.1	-1.3
	baz=356						
WCS	Beigang Elemen	1.50	333	⇑P	Pn	21 10 08.9	+0.5
	baz=343						
WCS				*e*S	Sn	21 10 27.4	-0.5
	baz=343						
WTK	Tuku	1.52	310	⇓*i*P	Pn	21 10 09.2	+0.5
	baz=311						
WTK				*e*S	Sn	21 10 27.3	-1.0
	baz=311						
FUSS	Fushou	1.57	346	P	Pn	21 10 08.9	-0.7
	baz=348						
FUSS				*e*S	Sn	21 10 27.2	-2.8
	baz=348						
EHP	Heping Village	1.58	3	*e*P	Pn	21 10 09.2	-0.4
	baz=16						
EHP				*e*S	Sn	21 10 27.8	-2.1
	baz=16						
TWT	Tachien	1.59	344	*e*P	Pn	21 10 09.8	0.0
	baz=346						
TWT				*e*S	Sn	21 10 28.1	-2.2
	baz=346						
TDCB	Techi	1.59	343	⇑*i*P	Pn	21 10 09.6	-0.3
	baz=345						
TDCB				*e*S	Sn	21 10 27.6	-2.8
	baz=345						
WSF	Szhu	1.61	305	⇓*i*P	Pn	21 10 10.0	+0.1
	baz=307						
WSF				*e*S	Sn	21 10 31.1	+0.5
	baz=307						
WRL	Guolierlin Hig	1.67	315	*e*P	Pn	21 10 10.9	+0.1
	baz=317						
WRL				*e*S	Sn	21 10 32.4	+0.4
	baz=317						
WHP	Taichung City	1.68	337	*e*P	Pb	21 10 12.0	-0.7
	baz=346						
WHP				*e*S	Sn	21 10 31.8	-0.7
	baz=346						
TCU	Taichung	1.68	328	⇑*e*P	Pb	21 10 12.5	-0.1
	baz=330						
TCU				*e*S	Sb	21 10 33.4	-0.4
	baz=330						
WCHH	Zhanghua	1.69	323	*e*P	Pb	21 10 12.1	-0.7
	baz=339						
WCHH				*e*S	Sn	21 10 33.0	+0.4
	baz=339						
ENA	Nanau	1.70	2	P	Pn	21 10 10.2	-1.1
	baz=15						
ENA				*e*S	Sn	21 10 30.6	-2.2
	baz=15						
NNSB	Datong	1.72	351	⇑*i*P	Pn	21 10 10.6	-0.9
	baz=6.0						
EWUT	Wuta	1.72	3	⇑P	Pn	21 10 10.8	-0.6
	baz=17						
EWUT				*e*S	Sn	21 10 30.6	-2.6
	baz=17						
NNS	Nan Shan	1.73	351	⇑*i*P	Pn	21 10 11.0	-0.8
	baz=6.0						
TWQ1	Liyutan	1.81	333	⇑*i*P	Pb	21 10 14.2	-0.7
	baz=336						
TWQ1				*e*S	Sb	21 10 37.1	-0.5
	baz=336						
WDJ	Dajia District	1.87	330	⇑*i*P	Pb	21 10 14.8	-1.0
	baz=332						
WDJ				*e*S	Sb	21 10 39.0	-0.1
	baz=332						
NDT	Datong Townshi	1.88	356	*e*P	Pn	21 10 13.2	-0.5
	baz=358						
NSY	Sanyi	1.88	334	⇑*i*P	Pb	21 10 15.1	-0.9
	baz=336						
NSY				S	Sb	21 10 39.8	+0.4
	baz=336						
TWC	Suao	1.89	5	P	Pn	21 10 13.5	-0.3
	baz=18						
TWC				*e*S	Sn	21 10 35.7	-1.7
	baz=18						
NDS	Dongshan	1.90	1	⇑*i*P	Pn	21 10 13.9	-0.1
	baz=14						
NDS				*e*S	Sn	21 10 37.3	-0.6
	baz=14						
ENTT	Nioudou	1.91	357	⇑*i*P	Pn	21 10 13.6	-0.6
	baz=360						
YHNB	Yeheng	1.96	352	⇑*i*P	Pn	21 10 14.6	-0.3
	baz=5.0						
YHNB				*e*S	Sn	21 10 36.2	-3.1
	baz=5.0						
YHNB	Yeheng	1.96	352		Pn	21 10 14.5	-0.3
YHNB	Yeheng	1.96	352	P	Pn	21 10 15.3	+0.5
NSK	Sanguang	1.96	352	*i* P	Pn	21 10 14.8	-0.1
	baz=5.0						
NSK				*e*S	Sn	21 10 36.7	-2.8
	baz=5.0						
NMLH	Miaoli	1.98	336	⇑*i*P	Pn	21 10 16.2	+1.2
	baz=338						
NMLH				*e*S	Sb	21 10 41.2	-1.1
	baz=338						
TWE	Neicheng	1.99	0	⇑P	Pn	21 10 14.8	-0.4
	baz=3.0						
NSTT	Nanjuang	1.99	342	⇑*i*P	Pn	21 10 16.3	+1.0
	baz=344						
LIOB	Emei	2.00	343	⇑P	Pn	21 10 16.6	+1.2
	baz=345						
LIOB				*e*S	Sn	21 10 41.5	+1.1
	baz=345						
ILA	Ilan	2.04	2	*e*P	Pn	21 10 16.4	+0.5
	baz=16						
ILA				*e*S	Sn	21 10 41.1	0.0
	baz=16						
NWLT	Wulai	2.05	356	⇑P	Pn	21 10 15.5	-0.6
	baz=358						
PHUB	P'eng-hu	2.08	293	⇓*i*P	Pn	21 10 15.6	-0.8
	baz=294						
PHUB				*e*S	Sn	21 10 39.1	-3.1
	baz=294						
JYNG	Yonagunijimaku	2.08	34	P	Pn	21 10 16.8	+0.3
JYNG				S	Sn	21 10 41.8	-0.5
PNG	Penghu	2.12	294	⇓*i*P	Pn	21 10 16.4	-0.6
	baz=295						
PNG				*e*S	Sn	21 10 40.5	-2.6
	baz=295						
VCHM	Qimei	2.12	284	⇓*i*P	Pn	21 10 16.2	-0.7
	baz=285						
VCHM				*e*S	Sn	21 10 39.9	-3.2
	baz=285						
NTC	Toucheng	2.13	4	⇑*i*P	Pn	21 10 17.3	+0.2
	baz=18						
NTC				*e*S	Sn	21 10 43.1	-0.3
	baz=18						
YOJ	Yonaguni jima	2.13	35	⇓*i*P	Pn	21 10 17.4	+0.3
	baz=48						
YOJ				S	Sn	21 10 42.1	-1.3
	baz=48						
YOJ	Yonaguni jima	2.13	35	P	Pn	21 10 17.4	+0.3
YOJ				S	Sn	21 10 43.3	-0.1
YOJ	Yonaguni jima	2.13	35	P	Pn	21 10 17.2	+0.1
YOJ	Yonaguni jima	2.13	35		Pn	21 10 17.2	+0.1
YOJ	Yonaguni jima	2.13	35	P	Pn	21 10 18.1	+1.0
SBCB	Hsinchu	2.15	343	*e*P	Pn	21 10 18.8	+1.4
	baz=345						
SBCB				*e*S	Sn	21 10 44.9	+0.9
	baz=345						
HSN	Hsinchu	2.17	343	*e*P	Pb	21 10 19.2	-1.7
	baz=330						
HSN				*e*S	Sn	21 10 46.1	+1.7
	baz=330						
NHDH	Xindian Distri	2.23	357	⇑P	Pn	21 10 19.1	+0.5
	baz=358						
NHDH				*e*S	Sn	21 10 45.3	-0.8
	baz=358						
TIPB	Shuangxi	2.24	4	P	Pn	21 10 19.1	+0.4
	baz=353						
TIPB				*e*S	Sn	21 10 46.2	-0.1
	baz=353						
TATO	Taipei	2.25	356		Pn	21 10 19.0	+0.2
TATO	Taipei	2.25	356	P	Pn	21 10 19.4	+0.6
TWA	Mucha	2.25	358	⇑P	Pn	21 10 19.2	+0.4
TWA				*e*S	Sn	21 10 45.7	-0.7
NCUH	Zhongli	2.28	349	*e*P	Pn	21 10 20.3	+1.1
	baz=351						
NCUH				*e*S	Sn	21 10 49.0	+1.9
	baz=351						
NCU	National Centr	2.28	349	*e*P	Pn	21 10 20.3	+1.1
	baz=351						
NCU				*e*S	Sn	21 10 48.1	+0.9
	baz=351						
BBP	Basco	2.29	173	⇑*e*P	Pn	21 10 18.3	-1.0
TWB1	Santiao Chiao	2.29	7	*e*P	Pn	21 10 20.0	+0.6
	baz=21						
TWB1				*e*S	Sn	21 10 46.8	-0.7
	baz=21						
TAP	Taipei	2.31	356	*e*P	Pn	21 10 20.4	+0.8
	baz=358						
TAP				*e*S	Sn	21 10 47.8	-0.2
	baz=358						
NWF	Wu-fen Shan	2.34	3	P	Pn	21 10 21.1	+1.0
	baz=354						
NWF				*e*S	Sn	21 10 49.0	+0.2
	baz=354						
HATJ	Hateruma jima	2.37	56	P	Pn	21 10 20.9	+0.4
HATJ				S	Sn	21 10 48.4	-1.1
YM01	YM01	2.41	358	*e*P	Pn	21 10 21.3	+0.2
	baz=360						
YM01				*e*S	Sn	21 10 49.9	-0.6
	baz=360						
NTST	Danshui	2.44	355	*e*P	Pn	21 10 22.4	+1.0
	baz=9.0						
NTST				*e*S	Sb	21 10 53.8	-1.7
	baz=9.0						
ANP	Anpu	2.46	357	*e*P	Pn	21 10 23.6	+1.8
	baz=359						
ANP				*e*S	Sn	21 10 50.6	-1.1
	baz=359						
IRIF	Iriomote-Funau	2.48	49	P	Pn	21 10 22.5	+0.5
IRIF				S	Sn	21 10 52.5	+0.3
JKRS	Kuro-shima	2.63	55	P	Pn	21 10 24.7	+0.7
JKRS				S	Sn	21 10 55.8	0.0
JIJ	Ishigaki jima	2.80	54	P	Pn	21 10 26.4	+0.1
JIJ				S	Sn	21 10 59.2	-0.8
PCYT	Pengchaiyu	2.92	7	*e*P	Pn	21 10 28.3	+0.3
	baz=9.0						
JISG	Ishigakijimahi	3.06	52	P	Pn	21 10 29.6	-0.2
JISG				*e*S	Sn	21 11 03.7	-2.6
PTMZ	Houxiangcun	3.28	315	*e*P	Pn	21 10 32.5	-0.4
	baz=315						
JTJ	Tarama	3.38	55	P	Pn	21 10 35.0	+0.7
JTJ				S	Sn	21 11 13.4	-0.8
KNMB	Chin-men Tao	3.47	301		Pn	21 10 34.5	-1.1
QZH	Quanzhou	3.58	309	⇓*i*Pn	Pn	21 10 37.8	+0.8
QZH				Sn	Sn	21 11 17.4	-1.8
QZH				smax	smax		
	comp=N,6µm,1.0s						
QZH				smax	smax		
	comp=E,5µm,1.2s						
QZH				LR	LR		
	comp=N,42µm,10.9s						
QZH				LR	LR		
	comp=E,22µm,9.4s						
QZH				LR	LR		
	comp=Z,26µm,9.8s						
MATB	Ma-tsu	3.76	336	⇑*i*P	Pn	21 10 38.8	-0.7
	baz=336						
ZPLA	Ao Xicun	3.79	289	⇓*e*P	Pn	21 10 39.5	-0.5
	baz=288						
JIRB	Irabujima	3.84	56	P	Pn	21 10 40.7	+0.1
JIRB				S	Sn	21 11 24.2	-1.4
JMJ2	Miyako jima3	3.91	58	P	Pn	21 10 42.2	+0.6
JMJ2				S	Sn	21 11 27.1	-0.4
JMJ	Miyako jima 2	3.92	57	P	Pn	21 10 42.6	+0.8
JIKM	Ikemajima	3.95	56	P	Pn	21 10 42.4	+0.3
JIKM				S	Sn	21 11 28.4	+0.1
JOGS	Gusukube	3.98	59	P	Pn	21 10 43.3	+0.7
JOGS				S	Sn	21 11 29.8	+0.6
MHZQ	Yeshan	4.13	325	*e*P	Pn	21 10 44.0	-0.6
	baz=324						
LYJJ	Jianjiangzhen	4.19	336	*e*P	Pn	21 10 44.4	-1.0
	baz=336						
XPSS	Dashiqiu	4.40	343	*e*P	Pn	21 10 47.4	-0.9
	baz=344						
SGCP	Mt. Cagua	4.47	175	⇓*e*P	Pn	21 10 49.0	-0.3
SIPP	Brgy, Tapao	4.91	194	*i* S	Sb	21 12 02.6	-4.0
SIPP	Brgy, Tapao	4.91	194	⇓*e*P	Pn	21 10 59.5	+4.1
JKE	Kume jima 2	5.88	51	P	Pn	21 11 07.9	-0.8
JIH	Iheya	7.15	52	P	Pn	21 11 25.1	-1.1
JOW	Kunigami	7.27	54	Pn	Pn	21 11 26.6	-1.2
	20nm,0.3s,baz=110,slow=25,SNR=45						
JOW				Sn	Sn	21 12 46.1	-4.1
	8.3nm,0.3s,baz=139,slow=29,SNR=6.5						
JOW	Kunigami	7.27	54	P	Pn	21 11 26.4	-1.4
JOW	Kunigami	7.27	54	Pn	Pn	21 11 25.9	-1.9
JOW	Kunigami	7.27	54	P	Pn	21 11 26.4	-1.4
MCO	Taipa Grande	7.52	267	P	Pn	21 11 32.0	+0.7
GZH	Guangzhou	7.68	274	Pn	Pn	21 11 30.1	-3.3
GZH				Sn	Sn	21 12 47.7	-13
GZH				smax	smax		
	comp=N,3µm,1.3s						
GZH				smax	smax		
	comp=E,2µm,1.1s						
SSE	Sheshan	8.35	357	P	Pn	21 11 45.5	+2.9
SSE				S	Sn	21 13 17.2	+0.4
SSE				pmax	pmax		
	comp=Z,46nm,0.7s						
SSE				LR	LR		
	comp=N,8µm,11.2s						
SSE				LR	LR		
	comp=E,7µm,14.2s						
LQP	Lukban	8.57	181	⇓*e*P	Pn	21 11 48.6	+2.8
PGP	Puerto Galera	9.20	184	⇑*e*P	Pn	21 11 52.3	-2.0
JMZ	Minamidaito 2	9.25	69	P	Pn	21 11 52.2	-2.7
JMZ	Minamidaito 2	9.25	69	Pn	Pn	21 11 51.6	-3.3
JKDJ	Kitadaitoujima	9.35	68	P	Pn	21 11 52.7	-3.7
NJ2	Nanjing	9.62	346	*e*P	Pn	21 11 58.2	-1.8
NJ2				S	Sn	21 13 43.3	-4.7
NJ2				pmax	pmax		
	comp=Z,180nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,520nm,3.8s						
NJ2				smax	smax		
	comp=N,860nm,1.0s						
NJ2				smax	smax		
	comp=E,950nm,1.3s						
NJ2				LR	LR		
	comp=N,25µm,10.9s						
NJ2				LR	LR		
	comp=E,19µm,13.5s						
NJ2				LR	LR		
	comp=Z,28µm,12.8s						
WHN	Wuhan	10.17	322	P	Pn	21 12 07.5	0.0
WHN				LR	LR		
	comp=N,60µm,7.5s						
WHN				LR	LR		
	comp=E,54µm,8.2s						
WHN				LR	LR		
	comp=Z,51µm,9.7s						
GOS1	Gosan-ri	11.28	20	P	Pn	21 12 26.6	+3.9
	SNR=8.1						
HALB	Hallimjungang-	11.39	20	P	Pn	21 12 28.2	+4.0
	SNR=9.1						
KSJJU	Jeju	11.50	21	P	Pn	21 12 30.1	+4.2
	SNR=17						
QIZ	Qiongzhong	11.64	254	P	Pn	21 12 27.7	-0.1
QIZ				S	Sn	21 14 42.3	+4.5
QIZ				LR	LR		
	comp=N,14µm,19.1s						
QIZ				LR	LR		
	comp=E,13µm,13.2s						
QIZ				LR	LR		
	comp=Z,18µm,13.7s						
HUK2	Heuksan-myeon	12.37	15	P	Pn	21 12 42.0	+4.3
	SNR=12						
KSJDO	Jindo	12.39	18	P	Pn	21 12 41.8	+3.7
	SNR=10.0						
KOHB	KOHEUNG	12.83	21	P	Pn	21 12 48.3	+4.4
	SNR=8.8						
BOSB	Boseong-gun	12.94	21	P	P	21 12 51.0	-5.1
	SNR=11						
TBP	Tagbilaran	13.13	170	⇑*i*P	Pn	21 12 50.6	+2.5
JNU	Nakatsue	13.17	36	Pn	Pn	21 12 48.7	0.0
	1.2nm,0.3s,baz=191,slow=7.1,SNR=13						
JNU	Nakatsue	13.17	36		Pn	21 12 48.3	-0.4
JNU	Nakatsue	13.17	36	P	Pn	21 12 49.9	+1.3
KSSCH	SUNCHEON	13.23	20	P	Pn	21 12 54.0	+4.6
	SNR=10						
ENH	Enshi	13.24	307	Pn	Pn	21 12 50.8	+1.2
KSKWJ	Gwangju	13.24	19	P	Pn	21 12 54.0	+4.5
	SNR=17						
GWYB	Gwangyang	13.27	22	P	P	21 12 55.0	-4.7
	SNR=8.3						
GOCB	Gochang-gun	13.30	18	P	Pn	21 12 55.0	+4.7
	SNR=17						
KSJEU	Jeongeup	13.53	19	P	P	21 12 58.1	-4.6
	SNR=14						
JTU	Tsushima	13.57	28	Pn	Pn	21 12 54.2	+0.1
NAWB	Namwon	13.61	20	P	P	21 12 59.0	-4.5
	SNR=17						
SMKB	Mukjeong-gil	13.61	17	P	P	21 12 59.0	-4.5
	SNR=15						
HAMB	Hamyang	13.80	21	P	P	21 13 02.0	-3.7
	SNR=13						
EURB	Uiryeong-eup	13.82	23	P	P	21 13 02.0	-3.9
	SNR=7.5						
KSKCH	Geochang	13.95	22	P	P	21 13 04.4	-3.0
	SNR=12						
KSGUS	GUNSAN	13.99	17	P	Pn	21 13 03.5	+3.7
	SNR=17						
TIA	Tai'an	14.01	345	P	Pn	21 13 00.4	+0.4
TIA				S	Sn	21 15 38.0	+2.5
TIA				pmax	pmax		
	comp=Z,28nm,1.7s						
TIA				pmax	pmax		
	comp=Z,1µm,5.1s						
TIA				LR	LR		
	comp=N,10µm,9.9s						
TIA				LR	LR		
	comp=E,10µm,7.8s						
TIA				LR	LR		
	comp=Z,16µm,15.2s						
KSJEO	Jeonju	14.05	19	P	Pn	21 13 04.0	+3.4
	SNR=27						
MIYA	Miryang-si	14.14	24	P	P	21 13 06.1	-3.4
	SNR=8.9						
GYA	Guiyang	14.14	288	⇑*i*P	Pn	21 13 02.6	+0.5
GYA				sP	P	21 13 08.5	-1.2
GYA				S	Sn	21 15 38.5	-0.5
GYA				pmax	pmax		
	comp=Z,61nm,1.2s						
GYA				pmax	pmax		
	comp=Z,370nm,3.5s						
GYA				LR	LR		
	comp=N,13µm,9.3s						
GYA				LR	LR		
	comp=E,13µm,11.3s						
GYA				LR	LR		
	comp=Z,17µm,11.0s						
PORA	Boryeong	14.21	16	P	P	21 13 07.0	-3.2
	SNR=13						
KSGBI	Gyogryolbido	14.26	13	P	P	21 13 07.9	-2.8
	SNR=17						
KSGIC	Gimchen	14.44	21	P	P	21 13 09.6	-3.1
	SNR=8.1						
KSGIC	Gimchen	14.44	21	P	P	21 13 09.4	-3.3
	SNR=13						
KSDAG	Daegu	14.44	24	P	Pn	21 13 09.0	+3.0
	SNR=14						
KSDAG	Daegu	14.44	24	P	P	21 13 10.0	-2.9
	SNR=7.3						
KSUSN	Ulsan	14.47	25	P	Pn	21 13 09.1	+2.7
	SNR=13						
KSUSN	Ulsan	14.47	25	P	P	21 13 11.7	-1.4
	SNR=15						
TJN	Taejon	14.48	19	*ce*P	Pn	21 13 08.4	+1.9
TJN	Taejon	14.48	19	P	Pn	21 13 09.0	+2.5
KOJ2	Gongju-si	14.50	18	P	P	21 13 11.0	-2.5
	SNR=13						
KOJ2	Gongju-si	14.50	18	P	Pn	21 13 10.0	+3.2
	SNR=22						
KSCPR	CHUPUNGNYEONG	14.52	21	P	P	21 13 10.7	-3.1
	SNR=28						
OKCB	Cheongsan-myeo	14.58	20	P	Pn	21 13 11.0	+3.1
	SNR=37						
KSSES	Seosan	14.62	15	P	P	21 13 12.0	-2.8
	SNR=43						
KSYOC	YEONGCHEON	14.64	24	P	Pn	21 13 11.6	+2.8
	SNR=8.5						
KSBON	Boeun	14.72	20	P	P	21 13 13.2	-2.7
	SNR=44						
KSBON	Boeun	14.72	20	P	P	21 13 13.2	-2.7
	SNR=16						
KSSAJ	Sangju	14.76	21	P	Pn	21 13 13.2	+2.9
	SNR=16						
KSCEA	Cheonan	14.86	18	P	Pn	21 13 14.0	+2.3
	SNR=29						
KSEUS	ULSEONG	14.88	23	P	P	21 13 15.1	-2.6
	SNR=18						
KSMGY	Mungyeong	14.95	20	P	P	21 13 18.5	0.0
	SNR=9.5						
KSMGY	Mungyeong	14.95	20	P	Pn	21 13 15.6	+2.7
	SNR=51						
KSMGY	Mungyeong	14.95	20	P	Pn	21 13 15.5	+2.7
	SNR=28						
PYTK	Pyeongtaek	14.97	17	P	Pn	21 13 15.6	+2.4
	SNR=18						
HAWB	Hwaseong-si	14.98	16	P	P	21 13 16.0	-2.8
	SNR=23						
KSDEI	Deokjeokdo	14.98	14	P	P	21 13 16.5	-2.3
	SNR=14						
KSPHA	Pohang	15.00	25	P	P	21 13 17.0	-2.0
	SNR=9.6						
KSADO	Andong	15.03	23	P	P	21 13 17.0	-2.4
	SNR=24						
KSADO	Andong	15.03	23	P	P	21 13 20.1	+0.7
	SNR=14						
KSCHJ	Chungju	15.12	20	P	P	21 13 18.0	-2.4
	SNR=28						
KSSWO	Suwon	15.20	16	P	P	21 13 18.9	-2.3
	SNR=19						
KSSWO	Suwon	15.20	16	P	P	21 13 18.7	-2.5
	SNR=20						
SHHB	Siheung-si	15.21	15	P	P	21 13 19.0	-2.4
	SNR=14						
INCN	Inchon	15.32	15	P	Pn	21 13 18.5	+0.6
INCN				pmax	pmax		
	comp=Z,138nm,1.1s						
INCN	Inchon	15.32	15		Pn	21 13 18.5	+0.6
INCN	Inchon	15.32	15	P	Pn	21 13 19.5	+1.6
INCN	Inchon	15.32	15	P	Pn	21 13 19.8	+1.9
KSICN	Icheon	15.34	18	P	Pn	21 13 20.4	+2.3
	SNR=20						
KSSEO	Seoul	15.40	16	P	P	21 13 21.1	-2.3
	SNR=23						
KSSEO	Seoul	15.40	16	P	Pn	21 13 20.7	+1.9
	SNR=22						
KSSEO	Seoul	15.40	16	P	P	21 13 22.0	-1.4
	SNR=23						
KSULJ	Uljin	15.46	24	P	P	21 13 25.0	+0.9
	SNR=11						

KSSOD	**Songwoldong**	**15.49**	**16**	P	**P**	**21 13 22.7**	**-1.7**
	SNR=19						
KSGAH	**Ganghwa**	**15.49**	**14**	P	**Pn**	**21 13 21.9**	**+1.8**
	SNR=31						
KSAR	**Wonju Array Be**	**15.62**	**19**	P	**P**	**21 13 24.1**	**-1.8**
KSAR	**Wonju Array Be**	**15.62**	**19**	P	**P**	**21 13 24.1**	**-1.8**
KSWJU	**Wonju**	**15.63**	**19**	P	**P**	**21 13 24.0**	**-2.1**
	SNR=99						
KSRS	**Korea Array**	**15.64**	**19**	Pn	**Pn**	**21 13 22.6**	**+0.6**
	comp=Z,3.3nm,0.3s,baz=200,slow=12,SNR=340						
KSRS				Sn	**S**	**21 16 26.5**	**-3.9**
	baz=196,slow=21,SNR=9.5						
KSRS				LR	LR	21 20 19.3	
	comp=Z,2µm,20.9s,baz=194,slow=41						
KS19	**Wonju Array Si**	**15.67**	**19**	P	**P**	**21 13 24.5**	**-2.0**
KS19				IAmb	IAmb	21 13 25.6	
	comp=Z,494nm,1.2s						
KS19					**S**	**21 16 28.6**	**-2.4**
KSTBA	**Taebaek**	**15.67**	**22**	P	**P**	**21 13 25.8**	**-0.7**
	SNR=20						
KSGWL	**Sabuk**	**15.70**	**22**	P	**P**	**21 13 26.7**	**-0.1**
	SNR=5.8						
UJN	**ULJIN**	**15.72**	**23**	P	**P**	**21 13 28.0**	**+1.1**
	SNR=9.6						
KSMUS	**Musan**	**15.74**	**15**	P	**P**	**21 13 25.3**	**-1.9**
	SNR=26						
KSDDC	**Dongducheon**	**15.82**	**16**	P	**P**	**21 13 26.6**	**-1.5**
	SNR=8.4						
XAN	**Xi'an**	**15.88**	**318**	P	**Pn**	**21 13 25.1**	**-0.1**
XAN				pP	pP	21 13 32.0	+0.5
XAN				sP	pwP	21 13 35.7	-0.2
XAN				S	**Sn**	**21 16 19.4**	**-1.9**
XAN				pmax	pmax		
	comp=Z,64nm,1.0s						
XAN				pmax	pmax		
	comp=Z,1µm,4.0s						
XAN				LR	LR		
	comp=Z,11µm,7.6s						
XAN				LR	LR		
	comp=Z,10µm,9.6s						
XAN				LR	LR		
	comp=Z,13µm,10.7s						
KSCHC	**Chuncheon**	**15.91**	**18**	P	**P**	**21 13 28.0**	**-1.1**
	SNR=21						
YNCB	**YEONCHEON**	**15.92**	**15**	P	**P**	**21 13 27.4**	**-1.8**
	SNR=32						
DAV	**Davao City (W)**	**16.01**	**166**	LR	LR	21 19 17.9	
	comp=Z,2µm,18.1s,baz=351,slow=36						
KSCWO	**Cheorwon**	**16.11**	**17**	P	**P**	**21 13 30.4**	**-1.0**
	SNR=44						
DL2	**Dalian**	**16.13**	**360**	P	**Pn**	**21 13 29.4**	**+1.1**
DL2				S	**Sn**	**21 16 32.6**	**+5.5**
DL2				pmax	pmax		
	comp=Z,120nm,1.7s						
DL2				pmax	pmax		
	comp=Z,1µm,9.8s						
DL2				LR	LR		
	comp=Z,11µm,10.2s						
DL2				LR	LR		
	comp=Z,3µm,8.9s						
DL2				LR	LR		
	comp=Z,12µm,11.1s						
KSIJA	**INJE**	**16.19**	**19**	P	**P**	**21 13 31.3**	**-0.9**
	SNR=35						
HWCB	**Hwacheon**	**16.29**	**17**	P	**P**	**21 13 33.0**	**-0.3**
	SNR=43						
SEHB	**SEOHWA**	**16.49**	**19**	P	**P**	**21 13 35.6**	**0.0**
	SNR=7.9						
SLVN	**Son La**	**16.53**	**269**	P	**P**	**21 13 36.5**	**+0.4**
TIY	**Taiyuan**	**16.92**	**334**	⇓P	**P**	**21 13 41.6**	**+1.2**
TIY				S	**Sn**	**21 16 44.0**	**-2.4**
TIY				sS	**S**	**21 16 56.3**	**-0.4**
TIY				SS		21 17 08.0	
TIY				pmax	pmax		
	comp=Z,200nm,0.9s						
TIY				pmax	pmax		
	comp=Z,4µm,6.0s						
TIY				LR	LR		
	comp=Z,38µm,10.5s						
TIY				LR	LR		
	comp=Z,22µm,10.5s						
TIY				LR	LR		
	comp=Z,36µm,12.0s						
UBPT	**Khong Chiam**	**17.00**	**247**	P	**P**	**21 13 42.1**	**+0.8**
JWT	**Wachi**	**17.32**	**41**	Pn	**Pn**	**21 13 42.1**	**-1.3**
KMI	**Kunming**	**17.47**	**282**	⇑P	**P**	**21 13 46.8**	**+0.1**
KMI				pP	sP	21 13 50.0	-0.7
KMI				sP	pwP	21 13 52.2	+2.0
KMI				PP	pP	21 14 00.5	+10
KMI				S	**Sn**	**21 16 51.7**	**-8.3**
KMI				sS	S	21 17 06.3	-2.0
KMI				SS	**SnSn**	**21 17 21.7**	**+8.2**
KMI				pmax	pmax		
	comp=Z,23nm,1.2s						
KMI				pmax	pmax		
	comp=Z,1µm,6.2s						
KMI				LR	LR		
	comp=Z,8µm,8.6s						
KMI				LR	LR		
	comp=Z,3µm,7.4s						
KMI				LR	LR		
	comp=Z,6µm,12.5s						
BJT	**Baijiatuau**	**17.86**	**346**	P	**Pn**	**21 13 49.7**	**-0.4**
BJT				pmax	pmax		
	comp=Z,182nm,1.1s						
BJT	**Baijiatuau**	**17.86**	**346**		**Pn**	**21 13 49.6**	**-0.4**
BJI	**Beijing**	**17.88**	**346**	P	**P**	**21 13 51.5**	**+0.6**
BJI				S	**Sn**	**21 17 12.3**	**+2.8**
BJI				pmax	pmax		
	comp=Z,78nm,1.5s						
BJI				pmax	pmax		
	comp=Z,3µm,9.5s						
BJI				LR	LR		
	comp=Z,3µm,17.1s						
BJI				LR	LR		
	comp=Z,8µm,16.8s						
BJI				LR	LR		
	comp=Z,10µm,13.3s						
CD2	**Chengdu**	**17.93**	**301**	⇑*i*P	**P**	**21 13 52.0**	**+0.4**
CD2				PP	**PnPn**	**21 14 07.1**	**+5.2**
CD2				S	**Sn**	**21 17 08.4**	**-2.5**
CD2				SS	**SnSn**	**21 17 30.1**	**+5.6**
CD2				PcP	**PcP**	**21 18 28.7**	**+1.9**
CD2				PcS	**PcS**	**21 22 04.5**	**+1.1**
CD2				pmax	pmax		
	comp=Z,120nm,1.4s						
CD2				pmax	pmax		
	comp=Z,2µm,7.9s						
CD2				LR	LR		
	comp=Z,14µm,11.5s						
CD2				LR	LR		
	comp=Z,17µm,11.5s						
CD2				LR	LR		
	comp=Z,22µm,10.9s						
INU	**Inuyama**	**18.37**	**43**		**P**	**21 13 56.3**	**0.0**
INU				IAmb	IAmb	21 14 07.2	
	comp=Z,264nm,0.9s						
SPMM	**Sapulut**	**18.60**	**196**	P	**Pn**	**21 14 03.0**	**+3.7**
JGF	**Kuroka**	**18.74**	**43**	P	**Pn**	**21 14 00.6**	**-0.3**
JHJ	**Hachijo jima 2**	**19.04**	**53**	P	**Pn**	**21 14 05.3**	**+0.8**
	comp=Z,11nm,0.3s,baz=251,slow=21,SNR=3.1						
JHJ				LR	LR	21 21 22.1	
	comp=Z,1µm,19.1s,baz=256,slow=37						
JHJ2	**Mitsune**	**19.06**	**53**	P	**P**	**21 14 04.0**	**0.0**
JCJ	**Chichijima**	**19.11**	**73**	P	**Pn**	**21 14 06.5**	**+1.1**
	comp=Z,3.0nm,0.3s,baz=262,slow=2.2,SNR=12						
JCJ				LR	LR	21 21 20.6	
	comp=Z,375nm,19.0s,baz=256,slow=36						
JCJ	**Chichijima**	**19.11**	**73**	P	**P**	**21 14 04.4**	**-0.2**
JCJ	**Chichijima**	**19.11**	**73**	P	**Pn**	**21 14 08.1**	**+2.7**
SNY	**Shenyang**	**19.12**	**4**	⇑P	**P**	**21 14 04.2**	**-0.3**
SNY				S	**S**	**21 17 40.4**	**-0.6**
SNY				pmax	pmax		
	comp=Z,48nm,1.5s						
SNY				LR	LR		
	comp=Z,9µm,12.3s						
SNY				LR	LR		
	comp=Z,4µm,9.7s						
SNY				LR	LR		
	comp=Z,13µm,12.6s						
SGSI	**Sangihe**	**19.29**	**168**	P	**Pn**	**21 14 07.8**	**+0.2**
MAJO	**Matsushiro**	**19.87**	**42**	*i* P	**Pn**	**21 14 14.4**	**0.0**
MAJO	**Matsushiro**	**19.87**	**42**	P	**P**	**21 14 12.6**	**-0.2**
MAJO				IAmb	IAmb	21 14 20.0	
	comp=Z,302nm,1.1s						
MAJO	**Matsushiro**	**19.87**	**42**	P	**Pn**	**21 14 15.2**	**+0.8**
MAT	**Matsushiro**	**19.87**	**42**	P	**P**	**21 14 12.5**	**-0.3**
MAT				S	**Sn**	**21 17 57.2**	**-0.5**
MJAR	**Matsushiro Arr**	**19.87**	**42**	P	**Pn**	**21 14 14.2**	**-0.3**
	comp=Z,0.6nm,0.3s,baz=223,slow=8.2,SNR=78						
MJAR				S	**Sn**	**21 18 05.3**	**+7.6**
	baz=242,slow=20,SNR=4.6						
MJAR				LR	LR	21 22 45.4	
	comp=Z,2µm,19.3s,baz=245,slow=39						
MJAR	**Matsushiro Arr**	**19.87**	**42**	P	**P**	**21 14 12.0**	**-0.8**
MJAR				IAmb	IAmb	21 14 20.6	
	comp=Z,215nm,1.0s						
HHC	**Hu-ho-hao-te**	**19.98**	**337**	⇑*i*P	**Pn**	**21 14 15.8**	**0.0**
HHC				pP	pwP	21 14 19.9	-0.9
HHC				S	**S**	**21 17 55.0**	**-3.6**
HHC				sS	sS	21 18 02.7	-0.3
HHC				SS	**SnSn**	**21 18 23.0**	**+8.0**
HHC				pmax	pmax		
	comp=Z,380nm,1.3s						
HHC				pmax	pmax		
	comp=Z,2µm,6.0s						
HHC				LR	LR		
	comp=Z,7µm,16.0s						
HHC				LR	LR		
	comp=Z,16µm,18.0s						
HHC				LR	LR		
	comp=Z,13µm,15.1s						
BTO	**Baotou**	**20.36**	**334**	*i* P	Pn	21 14 20.5	+0.2
BTO				LR	LR		
	comp=Z,44µm,13.1s						
BTO				LR	LR		
	comp=Z,20µm,13.1s						
LZH	**Lanzhou**	**20.41**	**315**	⇑P	Pn	21 14 20.9	0.0
LZH				pP	sP	21 14 24.2	+1.3
LZH				sP	pwP	21 14 26.3	+0.4
LZH				*e*S	**S**	**21 18 08.5**	**+1.2**
LZH				sS	pS	21 18 16.6	-0.9
LZH				SS	**SnSn**	**21 18 37.0**	**+11**
LZH				pmax	pmax		
	comp=Z,220nm,1.3s						
LZH				pmax	pmax		
	comp=Z,1µm,4.6s						
LZH				LR	LR		
	comp=Z,11µm,10.9s						
LZH				LR	LR		
	comp=Z,9µm,11.7s						
LZH				LR	LR		
	comp=Z,8µm,13.2s						
PBKT	**Sadao Pong**	**20.42**	**256**	P	**P**	**21 14 19.0**	**+0.2**
JSD	**Sado**	**20.88**	**39**	P	**P**	**21 14 23.2**	**-0.5**
JYT	**Yasato**	**20.96**	**46**	P	**P**	**21 14 24.0**	**-0.6**
CN2	**Changchun**	**21.25**	**8**	*e*P	**P**	**21 14 27.0**	**-0.7**
CN2				*e*S	**S**	**21 18 17.9**	**-5.8**
CN2				pmax	pmax		
	comp=Z,60nm,1.0s						
CN2				pmax	pmax		
	comp=Z,700nm,4.0s						
CN2				LR	LR		
	comp=Z,8µm,15.0s						
CN2				LR	LR		
	comp=Z,4µm,15.0s						
CN2				LR	LR		
	comp=Z,9µm,15.0s						
MSHR	**Mys Shultsa**	**21.33**	**20**	*ce*P	**P**	**21 14 29.7**	**+1.2**
MSHR				pmax	pmax		
	comp=Z,177nm,1.3s						
TOLI2	**Tolitoli**	**21.50**	**182**	P	**P**	**21 14 29.6**	**-1.0**
TOLI2	**Tolitoli**	**21.50**	**182**	P	**P**	**21 14 31.9**	**+1.4**
CHTO	**Chiang Mai**	**21.59**	**264**	P	**P**	**21 14 31.4**	**-0.2**
CHTO				pmax	pmax		
	comp=Z,122nm,1.3s						
CHTO				MLR	MLR		
	comp=Z,8µm,19.0s						
CHTO	**Chiang Mai**	**21.59**	**264**	P	**P**	**21 14 31.4**	**-0.2**
CHTO	**Chiang Mai**	**21.59**	**264**	IAMs_20	IAMs_20	21 23 29.8	
	comp=Z,8µm,19.0s						
CHTO	**Chiang Mai**	**21.59**	**264**	P	**P**	**21 14 35.0**	**+3.4**
CHTO				P	**P**	**21 14 35.0**	**+3.4**
CHTO	**Chiang Mai**	**21.59**	**264**	P	**P**	**21 14 33.4**	**+1.8**
CM31	**Chiang Mai Arr**	**21.68**	**263**	P	**P**	**21 14 32.0**	**-0.5**
CM31	**Chiang Mai Arr**	**21.68**	**263**	P	**P**	**21 14 34.7**	**+2.1**
	SNR=24						
CM31				P	**P**	**21 14 34.7**	**+2.1**
	SNR=24						
CMAR	**Chiang Mai Arr**	**21.68**	**263**	P	**P**	**21 14 33.5**	**+0.9**
	comp=Z,12nm,0.9s,baz=68,slow=8.9,SNR=75						
CMAR				PcP	**PcP**	**21 18 34.2**	**+0.4**
	comp=Z,3.6nm,0.8s,baz=47,slow=0.9,SNR=13						
CMAR				LR	LR	21 23 43.8	
	comp=Z,6µm,18.9s,baz=110,slow=39						
CMAR	**Chiang Mai Arr**	**21.68**	**263**	P	**P**	**21 14 32.6**	**+0.1**
GTOI	**Gorontalo**	**21.99**	**176**	P	**P**	**21 14 35.3**	**-0.5**
	comp=Z,842nmcomp=Z,60nm,1.0s						
MRSI	**Marisa**	**22.11**	**179**	P	**P**	**21 14 39.5**	**+2.4**
	comp=Z,2µmcomp=Z,2µmcomp=Z,162nm,1.1s						
KMSI	**Cibinong**	**22.13**	**174**	P	**P**	**21 14 38.8**	**+1.5**
	comp=Z,127nm,1.3s						
SBUM	**Sibu**	**22.14**	**206**	P	**P**	**21 14 39.0**	**+1.6**
JMM	**Marumori**	**22.31**	**43**	P	**P**	**21 14 36.2**	**-2.9**
JMM				IAmb	IAmb	21 14 40.5	
	comp=Z,136nm,0.8s						
MPSI	**Mapaga**	**22.32**	**185**	P	**P**	**21 14 38.3**	**-1.0**
	comp=Z,970nmcomp=Z,80nm,1.2s						
TNTI	**Ternate**	**22.51**	**165**	P	**P**	**21 14 39.2**	**-2.2**
TNTI	**Ternate**	**22.51**	**165**	P	**P**	**21 14 42.0**	**+0.6**
	comp=Z,1µmcomp=Z,1µmcomp=Z,77nm,1.2s						
TNTI	**Ternate**	**22.51**	**165**	P	**P**	**21 14 42.8**	**+1.4**
	comp=Z,77nm,1.2s						
MDJ	**Mudanjiang**	**22.79**	**15**	P	**P**	**21 14 43.3**	**-0.8**
MDJ				pP	sP	21 14 47.6	-0.2
MDJ				sP	pwP	21 14 49.8	-2.1
MDJ				S	**S**	**21 18 52.6**	**-0.3**
MDJ				sS	sS	21 19 01.0	+3.8
MDJ				ScS	**ScS**	**21 25 54.8**	**-3.8**
MDJ				pmax	pmax		
	comp=Z,240nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,1µm,4.1s						
MDJ				LR	LR		
	comp=Z,6µm,15.2s						
MDJ				LR	LR		
	comp=Z,4µm,12.2s						
MDJ				LR	LR		
	comp=Z,7µm,14.5s						
MDJ	**Mudanjiang**	**22.79**	**15**	P	**P**	**21 14 42.7**	**-1.5**
MDJ				IAmb	IAmb	21 14 46.6	
	comp=Z,292nm,1.2s						
MDJ				IAMs_20	IAMs_20	21 24 42.2	
	comp=Z,4µm,19.0s						
MDJ	**Mudanjiang**	**22.79**	**15**	P	**P**	**21 14 44.3**	**+0.2**
USA0B	**Ussuriysk Arra**	**23.05**	**19**	⇑*e*P	**P**	**21 14 46.4**	**-0.4**
USA0B	**Ussuriysk Arra**	**23.05**	**19**	P	**P**	**21 14 45.9**	**-0.9**
USA0B				IAmb	IAmb	21 14 49.6	
	comp=Z,96nm,1.0s						
USRK	**Ussuriysk Ar.**	**23.05**	**19**	P	**P**	**21 14 46.4**	**-0.5**
	comp=Z,68nm,0.9s,baz=201,slow=8.5,SNR=42						
USRK	**Ussuriysk Ar.**	**23.05**	**19**	P	**P**	**21 14 45.7**	**-1.1**
SMKI	**Samarinda**	**23.43**	**191**	P	**P**	**21 14 54.1**	**+3.1**
	comp=Z,4µmcomp=Z,7µmcomp=Z,377nm,1.3s						
APSI	**Ampana**	**23.49**	**180**	P	**P**	**21 14 52.0**	**+0.5**
	comp=Z,2µmcomp=Z,158nm,1.2s						
LUWI	**Luwuk**	**23.65**	**177**	P	**P**	**21 14 52.3**	**-0.7**
LUWI	**Luwuk**	**23.65**	**177**	P	**P**	**21 14 54.3**	**+1.3**
	comp=Z,3µmcomp=Z,177nm,1.2s						
LUWI	**Luwuk**	**23.65**	**177**	P	**P**	**21 14 54.8**	**+1.8**
GUMO	**Guam**	**23.82**	**108**	P	**P**	**21 14 55.7**	**+0.9**
	comp=Z,116nm,0.7s,baz=178,slow=8.0,SNR=5.4						
GUMO				LR	LR	21 21 48.2	
	comp=Z,1µm,21.7s,baz=334,slow=30						
GUMO	**Guam**	**23.82**	**108**	P	**P**	**21 14 53.2**	**-1.6**
LKP	**Lekhapani**	**23.82**	**286**	*e*P	**P**	**21 14 55.0**	**+0.3**
LKP				IAmb	IAmb	21 15 03.8	
	comp=Z,710nm,1.7s						
KSM	**Kuching**	**23.83**	**209**	P	**P**	**21 14 56.0**	**+1.2**
LBMI	**Labuha**	**23.91**	**165**	P	**P**	**21 14 56.3**	**+0.8**
	comp=Z,1µmcomp=Z,2µmcomp=Z,97nm,0.9s						
BKB	**Balikpapan**	**24.29**	**192**	P	**P**	**21 14 56.7**	**-2.4**
BKB	**Balikpapan**	**24.29**	**192**	P	**P**	**21 14 59.8**	**+0.7**
	comp=Z,7µmcomp=Z,7µmcomp=Z,610nm,1.2s						
BKB	**Balikpapan**	**24.29**	**192**	P	**P**	**21 15 00.9**	**+1.8**
JTM	**Tenmabayashi**	**24.33**	**38**	P	**P**	**21 14 56.4**	**-2.9**
MTKI	**Muara Teweh, K**	**24.43**	**197**	P	**P**	**21 15 00.4**	**0.0**
	comp=Z,2µmcomp=Z,190nm,1.1s						
STKI	**Sintang**	**24.61**	**205**	P	**P**	**21 15 02.9**	**+0.9**
	comp=Z,44nm,2.0s						
GTA	**Gaotai**	**24.94**	**317**	⇑P	**P**	**21 15 05.1**	**+0.1**
GTA				pP	sP	21 15 09.3	0.0
GTA				sP	pwP	21 15 12.9	+0.8
GTA				S	**S**	**21 19 27.1**	**-1.3**
GTA				sS	sS	21 19 36.2	+3.1
GTA				SS	**SnSn**	**21 20 28.4**	**+12**
GTA				pmax	pmax		
	comp=Z,51nm,1.0s						
GTA				pmax	pmax		
	comp=Z,1µm,9.6s						
GTA				LR	LR		
	comp=Z,3µm,14.3s						
GTA				LR	LR		
	comp=Z,6µm,11.6s						
GTA				LR	LR		
	comp=Z,5µm,12.4s						
MOKO	**MOKOCHONG**	**24.94**	**284**	*e*P	**P**	**21 15 06.6**	**+1.4**
SANI	**Sanana**	**24.98**	**170**	P	**P**	**21 15 03.7**	**-1.7**
	comp=Z,947nmcomp=Z,73nm,1.1s						
SANI	**Sanana**	**24.98**	**170**	P	**P**	**21 15 05.7**	**+0.3**
SWI	**Sorong**	**25.24**	**157**	P	**P**	**21 15 07.9**	**+0.2**
	comp=Z,1µmcomp=Z,31nm,1.0s						
SIJI	**Sorong**	**25.25**	**157**	P	**P**	**21 15 09.3**	**+1.5**
	comp=Z,24nm,1.0s,baz=12,slow=5.8,SNR=13						
KOHI	**KOHIMA**	**25.29**	**282**	*e*P	**P**	**21 15 07.3**	**-1.0**
TEY	**Ternei**	**25.40**	**25**	⇑*e*P	**P**	**21 15 09.2**	**+0.3**
TEY				*e*S	**S**	**21 19 34.1**	**-1.1**
TEY				pmax	pmax		
	comp=Z,500nm,5.0s						
TEY				pmax	pmax		
	comp=N,300nm,4.8s						
TEY				pmax	pmax		
	comp=E,200nm,4.8s						
TEY				pmax	pmax		
	comp=E,20nm,1.0s						
TEY				pmax	pmax		
	comp=N,30nm,0.9s						
TEY				pmax	pmax		
	comp=Z,60nm,1.0s						
TEY				smax	smax		
	comp=E,200nm,13.9s						
TEY				smax	smax		
	comp=N,500nm,14.7s						
TEY				MLR	MLR		
	comp=E,700nm,15.0s						
TEY				MLR	MLR		
	comp=N,1µm,12.0s						
TEY				MLR	MLR		
	comp=Z,2µm,12.0s						
TTSI	**Tana Toraja**	**25.67**	**184**	P	**P**	**21 15 13.4**	**+1.8**
	comp=Z,1µmcomp=Z,68nm,1.3s						
ITAN	**ITANAGAR**	**25.69**	**286**	*e*P	**P**	**21 15 13.8**	**+2.0**
ITAN				IAmb	IAmb	21 15 21.6	
	comp=Z,418nm,1.3s						
JEW	**Eniwo**	**25.94**	**35**	P	**P**	**21 15 12.6**	**-1.3**
ERM	**Erimo**	**26.32**	**38**	*ce*P	**P**	**21 15 18.0**	**+0.7**
ERM				pmax	pmax		
	comp=Z,660nm,1.3s						
ERM	**Erimo**	**26.32**	**38**	P	**P**	**21 15 17.3**	**0.0**
ERM	**Erimo**	**26.32**	**38**	P	**P**	**21 15 18.4**	**+1.1**
KBKI	**Kotabaru**	**26.41**	**192**	P	**P**	**21 15 18.7**	**+0.3**
	comp=Z,46nm,0.9s						
HIA	**Hailar**	**26.53**	**357**	P	**P**	**21 15 16.3**	**-2.9**
HIA				pmax	pmax		
	comp=Z,59nm,1.2s						
HIA				MLR	MLR		
	comp=Z,4µm,20.0s						
HIA	**Hailar**	**26.53**	**357**	P	**P**	**21 15 16.3**	**-2.9**
HIA	**Hailar**	**26.53**	**357**	IAMs_20	IAMs_20	21 27 06.3	
	comp=Z,4µm,20.0s						
MSAI	**Masohi**	**26.86**	**164**	P	**P**	**21 15 24.5**	**+2.1**
	comp=Z,10nm,0.5s						
BBKI	**Banjar Baru**	**26.86**	**195**	P	**P**	**21 15 23.3**	**+0.8**
	comp=Z,2µmcomp=Z,100nm,0.9s						
IPM	**Ipoh**	**26.97**	**231**	P	**P**	**21 15 25.0**	**+1.5**
SHL	**Shillong**	**27.30**	**282**	P	**P**	**21 15 25.6**	**-1.0**
SHL				pmax	pmax		
	comp=Z,140nm,1.0s						
SHL	**Shillong**	**27.30**	**282**	P	**P**	**21 15 25.6**	**-1.0**
SHL				IAmb	IAmb	21 15 37.8	
	comp=Z,140nm,1.0s						
SHL	**Shillong**	**27.30**	**282**	*e*P	**P**	**21 15 27.2**	**+0.7**
SHL				IAmb	IAmb	21 15 33.8	
	comp=Z,101nm,1.3s						
SHL	**Shillong**	**27.30**	**282**	P	**P**	**21 15 28.1**	**+1.6**
	SNR=40						
SHL				S	**S**	**21 20 16.3**	**+10**
ASAJ	**Asahikawa**	**27.43**	**34**	P	**P**	**21 15 28.1**	**+0.8**
	comp=Z,35nm,0.5s,baz=242,slow=9.2,SNR=27						
ASAJ				LR	LR	21 25 59.5	
	comp=Z,2µm,20.9s,baz=242,slow=36						
JKA	**Kamikawa-asahi**	**27.43**	**34**	P	**P**	**21 15 25.3**	**-2.0**
KAPI	**Kappang**	**27.63**	**184**	P	**P**	**21 15 30.2**	**+0.9**
	comp=Z,13nm,1.0s,baz=47,slow=2.4,SNR=3.8						
KAPI				LR	LR	21 27 50.5	
	comp=Z,1µm,20.8s,baz=30,slow=39						
KAPI	**Kappang**	**27.63**	**184**	P	**P**	**21 15 31.5**	**+2.2**
KAPI				P	**P**	**21 15 31.5**	**+2.2**
KAPI	**Kappang**	**27.63**	**184**	P	**P**	**21 15 33.4**	**+4.1**
KLR	**Kul'dur**	**27.63**	**14**	P	**P**	**21 15 29.8**	**+0.7**
	comp=Z,45nm,0.9s,baz=231,slow=8.1,SNR=82						
KLR	**Kul'dur**	**27.63**	**14**	*ce*P	**P**	**21 15 29.5**	**+0.4**
KLR				pmax	pmax		
	comp=Z,296nm,1.9s						
ULN	**Ulaanbaatar**	**27.68**	**339**	*ce*P	**P**	**21 15 27.4**	**-2.3**
ULN				pmax	pmax		
	comp=Z,130nm,1.7s						
ULN	**Ulaanbaatar**	**27.68**	**339**	P	**P**	**21 15 28.6**	**-1.1**
ULN				IAmb	IAmb	21 15 30.3	
	comp=Z,129nm,1.4s						
ULN	**Ulaanbaatar**	**27.68**	**339**	P	**P**	**21 15 28.7**	**-1.1**
SONM	**Songino Array**	**27.88**	**338**	P	**P**	**21 15 30.3**	**-1.2**
	comp=Z,42nm,1.0s,baz=161,slow=8.3,SNR=109						
SONM				LR	LR	21 28 04.7	
	comp=Z,8µm,18.1s,baz=148,slow=40						
SONM	**Songino Array**	**27.88**	**338**	P	**P**	**21 15 30.3**	**-1.2**
SONM				IAmb	IAmb	21 15 35.9	
	comp=Z,60nm,1.0s						
BKSI	**Bulukumba**	**27.91**	**183**	P	**P**	**21 15 35.8**	**+4.0**
	comp=Z,18nm,1.2s						
AGT	**Agartala**	**27.93**	**278**	*e*P	**P**	**21 15 35.5**	**+3.5**
AGT				IAmb	IAmb	21 15 42.2	
	comp=Z,102nm,0.9s						
LSA	**Lhasa**	**28.19**	**291**	P	**P**	**21 15 35.4**	**+0.6**
LSA				S	**S**	**21 20 22.6**	**+2.0**
LSA				pmax	pmax		
	comp=Z,150nm,1.4s						
LSA				LR	LR		
	comp=Z,3µm,14.9s						
LSA				LR	LR		
	comp=Z,2µm,10.7s						
LSA				LR	LR		
	comp=Z,4µm,7.8s						
LSA	**Lhasa**	**28.19**	**291**	*i* P	**P**	**21 15 36.2**	**+1.4**
	SNR=30						
LSA	**Lhasa**	**28.19**	**291**	P	**P**	**21 15 32.6**	**-2.2**
LSA				pmax	pmax		
	comp=Z,98nm,1.0s						
LSA				MLR	MLR		
	comp=Z,4µm,19.0s						
LSA	**Lhasa**	**28.19**	**291**	P	**P**	**21 15 32.6**	**-2.2**
LSA				IAmb	IAmb	21 15 45.7	
	comp=Z,98nm,1.0s						
LSA				IAMs_20	IAMs_20	21 27 37.4	
	comp=Z,5µm,19.0s						
LSA	**Lhasa**	**28.19**	**291**	P	**P**	**21 15 36.4**	**+1.6**
SRPI	**Serui, Papua**	**28.28**	**148**	P	**P**	**21 15 37.2**	**+2.1**
	comp=Z,1µmcomp=Z,54nm,0.4s						
PPBI	**Pangkal Pinang**	**29.00**	**213**	P	**P**	**21 15 44.2**	**+2.6**
	comp=Z,4µmcomp=Z,37nm,1.9s						
YUK	**Yuzh-Kuril'sk**	**29.14**	**37**	*c i*P	**P**	**21 15 44.6**	**+2.1**
YUK				*e*		21 18 48.0	
YUK				*e*S	**S**	**21 20 28.6**	**-5.6**
YUK				*e*SS	**SnSn**	**21 22 07.7**	**+9.1**
YUK				pmax	pmax		
	comp=Z,517nm,1.3s						
YUK				pmax	pmax		
	comp=E,191nm,0.9s						
YUK				pmax	pmax		
	comp=N,236nm,1.1s						
YUK				pmax	pmax		
	comp=Z,656nm,1.7s						
YUK				MLR	MLR		
	comp=N,806nm,15.0s						
YUK				MLR	MLR		
	comp=Z,917nm,15.0s						
TSI	**Tuntungan**	**29.42**	**233**	P	**P**	**21 15 47.1**	**+1.8**

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      comp=Z,98nm,1.0s
LHMI  Lhok Sumawe      29.54 238    P        P         21 15 48.4 +2.1
      comp=Z,73nm,1.2s
YSS   Yuzh-Sakhalins   29.55  30⇑eP        P         21 15 48.0 +1.9
YSS                                e*SP      pwP       21 15 55.9 +2.0
YSS                                e                   21 16 53.8
YSS                                eS        S         21 20 43.0 +2.3
YSS                                 pmax     pmax
      comp=Z,370nm,1.3s
YSS                                 MLR      MLR
      comp=Z,2µm,17.0s
YSS   Yuzh-Sakhalins   29.55  30    P        P         21 15 45.8 -0.4
YSS   Yuzh-Sakhalins   29.55  30    P        P         21 15 47.3 +1.2
PSI   Prapat           29.64 231    P        P         21 15 47.3 -0.1
      comp=Z,18nm,1.0s,baz=23,slow=6.1,SNR=13
PSI                                 PcP      PcP       21 18 50.8 -1.2
      comp=Z,3.5nm,0.6s,baz=352,slow=4.2,SNR=4.3
PSI                                 LR       LR        21 27 10.0
      comp=Z,1µm,20.4s,baz=40,slow=35
SMPI  Sarmi            29.66 144    P        P         21 15 50.2 +2.8
      comp=Z,635nmcomp=Z,29nm,1.3s
RPSI  Rantau Prapat    29.71 231    P        P         21 15 47.3 -0.6
RPSI                                         PcP       21 18 50.8 -1.2
CIT   Chita            29.91 350   eP        P         21 15 47.2 -2.2
CIT                                e                   21 16 50.7
CIT                                e                   21 18 50.1
CIT                                 pmax     pmax
      comp=Z,62nm,1.6s
JMBI  JAMBI            29.91 218    P        P         21 15 52.4 +2.7
      comp=Z,55nm,0.4s
GTK   Tadong           30.25 286   eP        P         21 15 52.9 +0.1
GTK                                 IAmb     IAmb      21 16 06.7
GRNR  Gornyy           30.27  19⇑iP        P         21 15 53.3 +0.8
GRNR                               eS        S         21 20 56.6 +4.6
GRNR                                pmax     pmax
      comp=Z,30nm,0.8s
GRNR                                smax     smax
      comp=N,5.0nm,0.9s
GRNR                                MLR      MLR
      comp=E,700nm,12.0s
GRNR                                MLR      MLR
      comp=N,940nm,13.0s
GRNR                                MLR      MLR
      comp=Z,2µm,12.0s
MNSI  Mandailing Nat   30.60 228    P        P         21 15 56.2 +0.5
      comp=Z,1µmcomp=Z,60nm,1.1s
UGL   Uglegorsk        30.86  27   eP        P         21 16 00.6 +2.9
UGL                                 pmax     pmax
      comp=Z,280nm,1.2s
UGL                                 MLR      MLR
      comp=E,2µm,15.0s
UGL                                 MLR      MLR
      comp=N,1µm,11.0s
UGL                                 MLR      MLR
      comp=Z,3µm,14.0s
PPI   Padang Panjang   30.98 225    P        P         21 16 00.1 +1.0
KUR   Kuril'sk         31.00  37   eP        P         21 16 00.1 +1.1
KUR                                eS        S         21 21 05.2 +1.7
KUR                                 pmax     pmax
      comp=Z,1µm,3.4s
KUR                                 MLR      MLR
      comp=Z,2µm,17.0s
KUR                                 MLR      MLR
      comp=N,1µm,16.0s
KUR                                 MLR      MLR
      comp=E,3µm,19.0s
TAPN  Taplejung        31.05 286   eP        P         21 16 00.0  0.0
      comp=E,252nm,1.2s
ZAK   Zakamensk        31.13 337   eP        P         21 15 58.2 -2.0
ZAK                                 pmax     pmax
      comp=Z,21nm,1.3s
MMRI  Maumere          31.17 179    P        P         21 15 58.7 -2.0
MMRI  Maumere          31.17 179    P        P         21 16 00.2 -0.5
      comp=Z,2µmcomp=Z,83nm,1.6s
MMRI  Maumere          31.17 179    P        P         21 16 00.0 -0.7
ZEA   Zeya             31.26   6   eP        P         21 16 01.7 +0.5
ZEA                                e                   21 17 13.3
ZEA                                eS        S         21 21 03.9 -3.4
ZEA                                 pmax     pmax
      comp=Z,400nm,6.8s
ZEA                                 pmax     pmax
      comp=N,200nm,6.9s
ZEA                                 pmax     pmax
      comp=E,10.0nm,1.2s
ZEA                                 pmax     pmax
      comp=N,40nm,1.1s
ZEA                                 pmax     pmax
      comp=Z,70nm,1.0s
ZEA                                 smax     smax
      comp=N,400nm,14.2s
ZEA                                 MLR      MLR
      comp=N,2µm,13.0s
ZEA                                 MLR      MLR
      comp=E,2µm,13.0s
ZEA                                 MLR      MLR
      comp=Z,4µm,13.0s
EDFI  Ende, Flores     31.28 180    P        P         21 16 00.3 -1.5
      comp=Z,564nmcomp=Z,45nm,1.4s
PDSI  Padang           31.28 224    P        P         21 16 03.3 +1.5
      comp=Z,440nmcomp=Z,20nm,1.3s
BLJI  Banyuglugur      31.29 196    P        P         21 16 02.3 +0.5
      comp=Z,39nm,0.9s
ODAN  Odare            31.33 285   eP        P         21 16 03.0 +0.6
      comp=Z,263nm,1.5s
NGJI  Ngawi            31.53 200    P        P         21 16 06.2 +2.3
      comp=Z,31nm,0.9s
PLAI  Plampang         31.59 187    P        P         21 16 04.1 -0.3
      comp=Z,61nm,1.0s
PLAI  Plampang         31.59 187    P        P         21 16 05.0 +0.6
TWSI  Taliwang, Sumb   31.62 189    P        P         21 16 04.4 -0.2
      comp=Z,27nm,1.7s
GSI   Gunungsitoli     31.64 231    IAMs_20  IAMs_20   21 30 29.8
      comp=Z,2µm,18.0s
LHSI  Lahat            31.79 216    P        P         21 16 09.9 +3.7
      comp=Z,1µmcomp=Z,44nm,1.0s
DNP   Denpasar         31.84 192    P        P         21 16 10.1 +3.5
      comp=Z,26µmcomp=Z,210nm,1.1s
KLSI                   31.88 213    P        P         21 16 08.1 +1.1
      comp=Z,663nmcomp=Z,39nm,1.8s
MASI  Maura Aman, Be   31.95 219    P        P         21 16 09.2 +1.6
      comp=Z,3µmcomp=Z,231nm,1.3s
KLI   Kotabumi         31.96 213    P        P         21 16 08.4 +0.7
      comp=Z,74nm,0.4s
IGBI  Denpasar         31.99 192    P        P         21 16 12.3 +4.4
      comp=Z,2µmcomp=Z,46nm,0.8s
MDSI  Maura Dua        31.99 214    P        P         21 16 07.1 -0.9
      comp=Z,651nmcomp=Z,29nm,1.2s
RAMN  Ramite           32.03 285   eP        P         21 16 09.1 +0.5
      comp=Z,46nm,0.6s
PWJI  Pagerwojo        32.05 199    P        P         21 16 08.3 -0.1
      comp=Z,1µmcomp=Z,115nm,1.1s
TLY   Talaya           32.09 339c iP        P         21 16 06.9 -1.7
TLY                                e                   21 17 24.5
TLY                                eS        S         21 21 26.1 +5.6
TLY                                 pmax     pmax
      comp=Z,95nm,1.5s
TLY                                 MLR      MLR
      comp=Z,25µm,12.0s
TLY   Talaya           32.09 339    P        P         21 16 06.8 -1.8
TLY   Talaya           32.09 339    P        P         21 16 07.1 -1.5
KSI   Kapahiang        32.16 218    P        P         21 16 10.5 +1.0
      comp=Z,97nm,1.4s
BLSI  Bandar Lampung   32.21 212    P        P         21 16 09.3 -0.6
      comp=Z,85nm,0.4s
WBSI  Waikabubak, Su   32.24 184    P        P         21 16 10.5 +0.3
      comp=Z,29nm,0.7s
TNG   Tangerang        32.26 209    P        P         21 16 13.3 +3.0
      comp=Z,509nm,0.4s
IRK   Irkutsk          32.37 340   eP        P         21 16 07.5 -3.5
IRK                                 pmax     pmax
      comp=Z,88nm,1.6s
KPJI  Karang Pucung    32.37 204    P        P         21 16 12.4 +1.1
      comp=Z,51nm,1.3s
SOEI  Soe              32.38 175    P        P         21 16 09.9 -1.6
SOEI                                IAmb     IAmb      21 16 35.9
      comp=Z,40nm,0.7s
SOEI  Soe              32.38 175    P        P         21 16 12.8 +1.3
      comp=Z,971nmcomp=Z,73nm,1.0s
SOEI  Soe              32.38 175    P        P         21 16 15.6 +4.1
CBJI  Citeko           32.39 208    P        P         21 16 14.0 +2.5
      comp=Z,54nm,0.9s
JIRN  Jiri             32.40 286   eP        P         21 16 12.9 +0.9
      comp=Z,237nm,1.1s
LEM   Lembang          32.43 207    P        P         21 16 12.9 +0.9
      comp=Z,1µmcomp=Z,36nm,1.1s
TYV   Tymovskoe        32.50  25   eP        P         21 16 14.4 +2.3
TYV                                eS        S         21 21 33.7 +7.0
TYV                                 pmax     pmax
      comp=Z,1µm,2.2s
TYV                                 pmax     pmax
      comp=Z,142nm,1.3s
TYV                                 smax     smax
      comp=N,13nm,1.3s
TYV                                 smax     smax
      comp=E,17nm,1.3s
TYV                                 smax     smax
      comp=N,500nm,9.1s
TYV                                 smax     smax
      comp=E,800nm,9.1s
TYV                                 MLR      MLR
      comp=N,2µm,13.0s
TYV                                 MLR      MLR
      comp=Z,2µm,13.0s
LWLI  Liwa             32.50 214    P        P         21 16 13.3 +0.7
      comp=Z,2µmcomp=Z,123nm,0.8s
DBJI  Dramaga          32.55 208    P        P         21 16 14.3 +1.4
      comp=Z,12µmcomp=Z,63nm,1.6s
GUN   Gumba            32.68 287   eP        P         21 16 14.5 +0.1
      comp=Z,253nm,1.0s
KASI  Kota Agung       32.71 213    P        P         21 16 17.2 +2.9
      comp=Z,71nm,1.5s
BATI  Baumata          32.78 176    P        P         21 16 14.3 -0.6
      comp=Z,84nm,1.0s,baz=176,slow=14,SNR=4.9
BATI  Baumata          32.78 176    P        P         21 16 12.6 -2.3
      comp=Z,44nm,1.0s
BOK   Bokaro           32.84 279   eP        P         21 16 16.1 +0.6
CISI  Cisompet, Garu   33.01 206    P        P         21 16 17.1 +0.2
      comp=Z,622nmcomp=Z,50nm,1.3s
MOY   Mondy            33.02 336   eP        P         21 16 15.6 -1.2
MOY                                 pmax     pmax
      comp=Z,94nm,1.9s
PKI   Pulchoki         33.09 286   eP        P         21 16 17.7 -0.3
      comp=Z,322nm,1.5s
PKIN  Phulchoki        33.11 286   eP        P         21 16 18.1  0.0
      comp=Z,199nm,1.4s
KKN   Kakani           33.21 286   eP        P         21 16 19.0 +0.1
      comp=Z,224nm,1.3s
DMN   Daman            33.36 286   eP        P         21 16 20.7 +0.4
      comp=Z,365nm,1.5s
NKL   Nikolayevsk      33.66  21   eP        P         21 16 21.4 -0.8
NKL                                eS        S         21 21 40.8 -3.9
NKL                                 pmax     pmax
      comp=E,3.0nm,0.6s
NKL                                 pmax     pmax
      comp=N,465nm,1.0s
NKL                                 pmax     pmax
      comp=Z,281nm,1.3s
NKL                                 MLR      MLR
      comp=N,21µm,17.0s
NKL                                 MLR      MLR
      comp=E,21nm,17.0s
NKL                                 MLR      MLR
      comp=Z,2µm,17.0s
GKN   Gorkha           33.78 287   eP        P         21 16 23.7 -0.1
      comp=Z,180nm,1.3s
DANN  Dangsing         34.56 287   eP        P         21 16 30.9 +0.2
      comp=Z,340nm,1.3s
KOLN  Koldanda         34.70 286   eP        P         21 16 32.3 +0.5
      comp=Z,132nm,1.0s
WMQ   Urumqi           34.99 315    P        P         21 16 34.5 +0.5
WMQ                                 PcP      PcP       21 19 02.9 -3.2
WMQ                                 S        S         21 22 06.3 +0.6
WMQ                                 PcS      PcS       21 22 54.8 +1.9
WMQ                                 pmax     pmax
      comp=Z,85nm,1.5s
WMQ                                 pmax     pmax
      comp=Z,840nm,4.7s
WMQ                                 LR       LR
      comp=Z,4µm,15.1s
WMQ                                 LR       LR
      comp=Z,2µm,20.1s
WMQ                                 LR       LR
      comp=Z,1µm,17.7s
PYUN  Piuthan          35.24 287   eP        P         21 16 36.9 +0.4
      comp=Z,141nm,1.0s
BOD   Bodaibo          35.50 353   eP        P         21 16 35.1 -2.9
BOD                                 pmax     pmax
      comp=Z,17nm,1.7s
MTN   Manton Dam       36.54 164    P        P         21 16 45.3 -2.1
KDU   Kakadu           36.75 162    P        P         21 16 53.2 +4.0
      comp=Z,19nm,1.2s
ZSN   Zaisan           38.38 319   eP        P         21 17 01.6 -1.3
      comp=Z,43nm,1.4s,baz=319
ZSN   Zaisan           38.38 319   eP        P         21 17 01.5 -1.3
ZSN                                 pmax     pmax
      comp=Z,43nm,1.4s
PATS  Pohnpei          38.65 108    P        P         21 17 07.8 +2.4
SKR   Severo-Kuril's   38.68  35   eP        P         21 17 03.6 -1.6
SKR                                eS        S         21 22 59.1 -2.4
SKR                                 pmax     pmax
      comp=Z,2µm,2.9s
SKR                                 pmax     pmax
      comp=Z,500nm,2.9s
SKR                                 pmax     pmax
      comp=Z,270nm,1.4s
SKR                                 MLR      MLR
      comp=Z,600nm,16.0s
KNRA  Kununurra        38.79 169    P        P         21 17 05.6 -0.8
KRAR  Krasnoyarsk      39.45 335   eP        P         21 17 13.4 +1.9
DDI   Dehra Dun        39.56 291   eP        P         21 17 13.9 +1.0
YAK   Yakutsk          39.67   6    P        P         21 17 12.5 -0.8
      comp=Z,38nm,0.8s,baz=183,slow=3.1,SNR=49
YAK                                 LR       LR        21 35 32.1
      comp=Z,2µm,18.8s,baz=179,slow=39
YAK   Yakutsk          39.67   6c iP        P         21 17 12.8 -0.5
YAK                                e*PP      sP        21 17 16.7 -1.0
YAK                                e                   21 18 47.3
YAK                                e                   21 19 25.6
YAK                                eS        S         21 23 15.6 -0.5
YAK                                 pmax     pmax
      comp=Z,107nm,0.9s
YAK                                 pmax     pmax
      comp=N,67nm,1.2s
YAK                                 pmax     pmax
      comp=E,23nm,1.3s
YAK                                 pmax     pmax
      comp=Z,40nm,1.4s
YAK                                 pmax     pmax
      comp=N,28nm,1.1s
YAK                                 pmax     pmax
      comp=E,15nm,1.1s
YAK                                 smax     smax
      comp=E,65nm,2.5s
YAK                                 smax     smax
      comp=N,65nm,2.0s
YAK                                 MLR      MLR
      comp=E,3µm,14.0s
YAK                                 MLR      MLR
      comp=Z,6µm,14.0s
YAK                                 MLR      MLR
      comp=E,2µm,12.0s
YAK   Yakutsk          39.67   6    P        P         21 17 11.7 -1.6
YAK                                 IAmb     IAmb      21 17 14.8
      comp=Z,112nm,0.9s
MK31  Makanchi Array   39.70 317  i P        P         21 17 14.0 +0.2
MK31                                pmax     pmax
      comp=Z,245nm,0.9s
MK31  Makanchi Array   39.70 317    P        P         21 17 13.1 -0.7
MKAR  Makanchi Array   39.70 317    P        P         21 17 13.6 -0.2
      comp=Z,161nm,0.8s,baz=108,slow=7.7,SNR=304
MKAR                                PcP      PcP       21 19 19.6 -0.8
      comp=Z,6.0nm,0.9s,baz=79,slow=2.6,SNR=4.4
MKAR  Makanchi Array   39.70 317    P        P         21 17 13.4 -0.4
MAKZ  Makanchi         39.90 317    P        P         21 17 15.0 -0.5
MAKZ                                pmax     pmax
      comp=Z,296nm,1.0s
MAKZ                                MLR      MLR
      comp=Z,2µm,19.0s
MAKZ  Makanchi         39.90 317    P        P         21 17 15.0 -0.5
MAKZ                                IAMs_20  IAMs_20   21 32 13.2
      comp=Z,2µm,19.0s
RABL  Rabaul           40.04 128    P        P         21 17 17.4 +0.4
RABL                                IAmb     IAmb      21 17 24.8
      comp=Z,115nm,0.7s
RABL  Rabaul           40.04 128    P        P         21 17 20.1 +3.1
SMLA  Simla            40.33 292   eP        P         21 17 20.1 +0.9
SHLS  Shalkode         40.34 311   eP        P         21 17 16.2 -3.1
      comp=Z,69nm,1.0s,baz=311
SHLS  Shalkode         40.34 311   eP        P         21 17 16.2 -3.1
SHLS                                pmax     pmax
      comp=Z,69nm,1.0s
MDRS  Chennai          40.45 264   eP        P         21 17 21.9 +1.5
PMG   Port Moresby     40.54 139    P        P         21 17 19.6 -1.4
PMG                                 pmax     pmax
      comp=Z,65nm,1.2s
PMG   Port Moresby     40.54 139    P        P         21 17 19.6 -1.4
PMG   Port Moresby     40.54 139    P        P         21 17 24.3 +3.3
PMG   Port Moresby     40.54 139    P        P         21 17 24.5 +3.5
BHPL  Bhopal           40.61 280   eP        P         21 17 21.2 -0.5
UZB   Uzynbulak        40.64 310⇑iP        P         21 17 22.2 +0.3
      comp=Z,112nm,1.6s,baz=310
UZB   Uzynbulak        40.64 310c iP        P         21 17 22.1 +0.3
UZB                                 pmax     pmax
      comp=Z,112nm,1.6s
HYB   Hyderabad        40.73 271  i P        P         21 17 23.0 +0.2
HYB   Hyderabad        40.73 271   eP        P         21 17 22.6 -0.1
FITZ  Fitzroy Crossi   40.76 174    P        P         21 17 20.1 -2.6
FITZ  Fitzroy Crossi   40.76 174    P        P         21 17 21.1 -1.6
      comp=Z,35nm,1.2s
PEA0B Petropavlovsk-   40.84  33ceP        P         21 17 23.5 +0.4
PEA0B Petropavlovsk-   40.84  33    P        P         21 17 20.6 -2.6
PEA0B                               IAmb     IAmb      21 17 26.5
      comp=Z,173nm,1.5s
PETK  Petropavlovsk-   40.84  33    P        P         21 17 23.2  0.0
      comp=Z,2.9nm,0.5s,baz=80,slow=29,SNR=18
PETK                                LR       LR        21 35 12.3
      comp=Z,912nm,19.5s,baz=233,slow=37
PRZ   Przheval'sk      40.91 309    P        P         21 17 22.2 -1.9
PRZ                                 pmax     pmax
      comp=Z,218nm,1.3s
PRZ   Przheval'sk      40.91 309    P        P         21 17 22.2 -1.9
KPKS  Kokpek           40.97 311   eP        P         21 17 23.9 -0.6
      comp=Z,100nm,1.6s,baz=311
KPKS                               eS        S         21 23 34.8 -1.5
      baz=311
KPKS  Kokpek           40.97 311   eP        P         21 17 23.9 -0.6
KPKS                               eS        S         21 23 34.8 -1.5
KPKS                                pmax     pmax
      comp=Z,100nm,1.6s
SATY  Saty             41.05 310⇑iP        P         21 17 25.4 +0.2
      comp=Z,99nm,1.9s,baz=310
SATY  Saty             41.05 310c iP        P         21 17 25.4 +0.2
SATY                                pmax     pmax
      comp=Z,99nm,1.9s
DHRM  DHARAMSHALA      41.09 293   eP        P         21 17 24.8 -1.0
TARG  Taragay, Kyrgy   41.15 308    P        P         21 17 23.1 -3.2
TARG                                IAmb     IAmb      21 17 29.4
      comp=Z,126nm,1.3s
PET   Petropavlovsk    41.27  33   eP        P         21 17 27.1 +0.4
PET                                eS        S         21 23 39.0 -1.3
PET                                 pmax     pmax
      comp=Z,274nm,1.2s
PET                                 pmax     pmax
      comp=Z,2µm,2.6s
PET                                 pmax     pmax
      comp=Z,700nm,11.9s
PET                                 MLR      MLR
      comp=Z,1µm,16.0s
PET                                 MLR      MLR
      comp=Z,1µm,17.0s
PET   Petropavlovsk    41.27  33    P        P         21 17 25.4 -1.3
PET   Petropavlovsk    41.27  33    P        P         21 17 27.6 +0.9
TDK   Taldyqorghan     41.61 313   eP        P         21 17 29.5 -0.1
      comp=Z,307nm,1.3s,baz=313
TDK                                eS        S         21 23 46.0 +0.3
      baz=313
TDK   Taldyqorghan     41.61 313   eP        P         21 17 29.5 -0.1
TDK                                eS        S         21 23 45.9 +0.3
TDK                                 pmax     pmax
      comp=Z,307nm,1.3s
ZAA0  Zalesovo Array   41.71 328    P        P         21 17 29.3 -1.0
ZALV  Zalesovo Beam    41.71 328    P        P         21 17 29.3 -0.9
      comp=Z,264nm,0.8s,baz=116,slow=7.5,SNR=537
ZALV                                LR       LR        21 36 56.9
      comp=Z,1µm,20.3s,baz=125,slow=39
ARXS  Arharly          41.77 312   eP        P         21 17 31.2 +0.1
MDOK  Medeo            42.04 310   eP        P         21 17 32.0 -1.3
      baz=310
MDOK                               eS        S         21 23 52.7 +0.3
      baz=310
MDOK  Medeo            42.04 310   eP        P         21 17 32.0 -1.3
MDOK                               eS        S         21 23 52.6 +0.3
KSH   Kashi            42.07 304    P        P         21 17 36.4 +2.8
KSH                                 pP       pwP       21 17 40.7 -0.1
KSH                                 sP       sP        21 17 44.6 +6.6
KSH                                 S        S         21 23 57.7 +4.8
KSH                                 pmax     pmax
      comp=Z,68nm,1.4s
KSH                                 pmax     pmax
      comp=Z,590nm,3.1s
KSH                                 LR       LR
      comp=Z,3µm,17.2s
KSH                                 LR       LR
      comp=Z,2µm,13.9s
KSH                                 LR       LR
      comp=Z,2µm,15.8s
COEN  Coen             42.11 148    P        P         21 17 33.4 -0.5
COEN                                IAmb     IAmb      21 17 41.3
      comp=Z,62nm,0.9s
COEN  Coen             42.11 148    P        P         21 17 34.7 +0.8
      comp=Z,81nm,1.2s
AAA   Alma-Ata         42.15 310   eP        P         21 17 32.6 -1.6
      baz=310
AAA   Alma-Ata         42.15 310   eP        P         21 17 32.5 -1.6
H11N1 WAKE ISLAND Hy   42.15  85    T        T         22 02 47.0
      baz=283,slow=75,SNR=2891
H11N2 WAKE ISLAND Hy   42.15  85    T        T         22 02 48.3
      baz=283,slow=75,SNR=3475
H11N3 WAKE ISLAND Hy   42.16  85    T        T         22 02 49.4
      baz=283,slow=75,SNR=3500
MA2   Magadan          42.17  22    P        P         21 17 33.1 -0.8
      comp=Z,54nm,0.9s,baz=214,slow=10,SNR=13
MA2   Magadan          42.17  22ceP        P         21 17 35.0 +1.1
MA2                                 pmax     pmax
      comp=Z,73nm,1.0s
MA2   Magadan          42.17  22    P        P         21 17 34.7 +0.8
MA2                                 IAmb     IAmb      21 17 35.8
      comp=Z,118nm,1.1s
MA2                                 IAMs_20  IAMs_20   21 35 06.9
      comp=Z,2µm,20.0s
MA2   Magadan          42.17  22    P        P         21 17 34.7 +0.8
H11S3 WAKE ISLAND Hy   42.23  87    T        T         22 02 56.7
      baz=284,slow=75,SNR=2055
H11S1 WAKE ISLAND Hy   42.24  87    T        T         22 02 54.6
      baz=284,slow=75,SNR=1865
H11S2 WAKE ISLAND Hy   42.25  87    T        T         22 02 55.2
      baz=284,slow=75,SNR=1928
CHKK  Chushkaly        42.26 311   eP        P         21 17 33.4 -1.6
      baz=311
PALK  Pallekele        42.27 255    P        P         21 17 34.8 -0.6
PALK                                pmax     pmax
      comp=Z,53nm,1.4s
PALK                                MLR      MLR
      comp=Z,2µm,22.0s
PALK  Pallekele        42.27 255    P        P         21 17 34.8 -0.6
PALK  Pallekele        42.27 255    IAMs_20  IAMs_20   21 34 20.9
      comp=Z,3µm,22.0s
PALK  Pallekele        42.27 255    P        P         21 17 36.9 +1.5
PALK                                P        P         21 17 36.9 +1.5
ULHL  Ulahol           42.40 308    P        P         21 17 38.2 +1.8
      SNR=8.2
SEM   Semipalatinsk    42.42 321⇑iP        P         21 17 35.2 -1.2
      comp=Z,138nm,1.1s,baz=321
SEM   Semipalatinsk    42.42 321c iP        P         21 17 35.2 -1.2
SEM                                 pmax     pmax
      comp=Z,138nm,1.1s
MTBS  Maitube          42.47 310   eP        P         21 17 35.0 -1.7
      baz=310
KUU   Kurty            42.72 311⇑iP        P         21 17 38.5 -0.2
      comp=Z,299nm,1.8s,baz=311
KUU   Kurty            42.72 311c iP        P         21 17 38.5 -0.2
KUU                                 pmax     pmax
      comp=Z,299nm,1.8s
TKM2  Tokmak 2         43.02 309    P        P         21 17 42.4 +1.0
      SNR=70
TKM2  Tokmak 2         43.02 309  i P        P         21 17 41.8 +0.4
TKM2                                pmax     pmax
      comp=Z,143nm,1.1s
KBK   Karagaybulak     43.42 309    P        P         21 17 46.1 +1.4
      SNR=36
KURK  Kurchatov        43.49 321ceP        P         21 17 44.5 -0.3
KURK                                pmax     pmax
      comp=Z,304nm,1.7s
KURK  Kurchatov        43.49 321    P        P         21 17 44.5 -0.3
KURK  Kurchatov        43.49 321    IAMs_20  IAMs_20   21 33 44.2
      comp=Z,1µm,18.0s
KURK  Kurchatov        43.49 321    P        P         21 17 44.7 -0.1
CHMS  Chumysh          43.64 309    P        P         21 17 47.0 +0.8
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	SNR=59						
FRU1	Bishkek	43.69	309	P	P	21 17 46.5	-0.1
FRU1				pmax	pmax		
	comp=Z,87nm,1.0s						
FRU1	Bishkek	43.69	309	P	P	21 17 46.5	-0.1
FRU1				IAmb	IAmb	21 17 49.0	
	comp=Z,87nm,1.0s						
NIL	Nilore	43.69	295	P	P	21 17 46.5	-0.3
NIL				pmax	pmax		
	comp=Z,70nm,1.0s						
NIL	Nilore	43.69	295	P	P	21 17 46.5	-0.3
NIL				IAmb	IAmb	21 17 48.6	
	comp=Z,70nm,1.0s						
NIL	Nilore	43.69	295	P	P	21 17 47.0	+0.3
AAK	Ala-Archa	43.75	308	i P	P	21 17 48.1	+0.8
	SNR=29						
AAK	Ala-Archa	43.75	308	ceP	P	21 17 48.2	+1.0
AAK				pmax	pmax		
	comp=Z,157nm,1.3s						
AAK	Ala-Archa	43.75	308	P	P	21 17 46.5	-0.7
AAK	Ala-Archa	43.75	308	IAMs_20	IAMs_20	21 35 53.3	
	comp=Z,2µm,22.0s						
AAK	Ala-Archa	43.75	308	P	P	21 17 47.9	+0.7
SGDS	Sogindy	43.82	310	⇑iP	P	21 17 46.9	-0.8
	baz=310						
SGDS	Sogindy	43.82	310	eP	P	21 17 47.9	+0.2
USP	Ospenovka	43.88	309	P	P	21 17 48.6	+0.5
	SNR=22						
WB0	Warramunga Arr	44.02	163	P	P	21 17 47.2	-2.1
PSA00	Pilbara Seismi	44.06	182	P	P	21 17 47.5	-2.1
WRAB	Tennant Creek	44.17	163	P	P	21 17 47.9	-2.7
WRAB				pmax	pmax		
	comp=Z,22nm,0.9s						
WRAB	Tennant Creek	44.17	163	P	P	21 17 47.9	-2.7
WRAB	Tennant Creek	44.17	163	P	P	21 17 49.3	-1.2
WRA	Warramunga Arr	44.17	163	P	P	21 17 48.9	-1.8
	comp=Z,3.7nm,0.6s,baz=345,slow=8.9,SNR=30						
WRA	Warramunga Arr	44.17	163	P	P	21 17 47.0	-3.6
WB2	Warramunga Arr	44.18	163	P	P	21 17 47.8	-2.8
AML	Almayashu	44.23	308	P	P	21 17 52.8	+1.4
	SNR=29						
AML	Almayashu	44.23	308	i P	P	21 17 52.5	+1.1
	SNR=29						
WR0	Warramunga Arr	44.25	163	P	P	21 17 49.0	-2.1
EKS2	Erkin-Say	44.27	308	P	P	21 17 52.4	+1.0
	SNR=23						
BTLS	Baital	44.59	312	⇑iP	P	21 17 53.5	-0.3
	comp=Z,58nm,1.2s,baz=312						
BTLS	Baital	44.59	312	c iP	P	21 17 53.4	-0.3
BTLS				pmax	pmax		
	comp=Z,58nm,1.2s						
POO	Poona	44.80	274	eP	P	21 17 55.9	+0.1
SEY	Seymchan	45.20	19	P	P	21 17 58.3	0.0
	comp=Z,26nm,0.8s,baz=226,slow=6.2,SNR=50						
SEY				LR	LR	21 39 22.1	
	comp=Z,1µm,18.2s,baz=228,slow=39						
DRK	Karamyk	45.26	304	P	P	21 17 58.3	-1.3
DRK				IAmb	IAmb	21 18 01.7	
	comp=Z,91nm,1.1s						
GOA	Goa	45.62	270	eP	P	21 18 03.9	+1.6
GIRL	Giralia	45.67	190	P	P	21 18 02.5	+0.1
BTK	Batken	46.08	304	P	P	21 18 04.0	-1.8
BTK				pmax	pmax		
	comp=Z,86nm,1.3s						
BTK	Batken	46.08	304	P	P	21 18 04.0	-1.8
BTK				IAmb	IAmb	21 18 09.1	
	comp=Z,86nm,1.3s						
DZA	Taraz	46.09	308	eP	P	21 18 04.7	-1.0
	baz=308						
DZA	Taraz	46.09	308	eP	P	21 18 04.6	-1.0
MTSU	Mount Surprise	46.25	150	P	P	21 18 08.7	+1.5
	comp=Z,44nm,0.9s						
GAR	Garm	46.36	303	P	P	21 18 06.7	-1.3
QIS	Mount Isa	46.44	157	P	P	21 18 08.2	-0.4
	comp=Z,25nm,0.7s						
KK31	Karatay Array	46.71	308	P	P	21 18 09.2	-1.4
KK31				pmax	pmax		
	comp=Z,66nm,0.9s						
KK31	Karatay Array	46.71	308	P	P	21 18 09.2	-1.4
KKAR	Karatay Array	46.71	308	P	P	21 18 09.3	-1.3
KKAR				pmax	pmax		
	comp=Z,66nm,0.9s						
KKAR	Karatay Array	46.71	308	P	P	21 18 09.3	-1.3
KKAR	Karatay Array	46.71	308	P	P	21 18 10.1	-0.5
BRZS	Berezniki	46.81	318	⇑iP	P	21 18 10.9	-0.4
	comp=Z,63nm,1.2s,baz=318						
BRZS	Berezniki	46.81	318	c iP	P	21 18 10.8	-0.4
BRZS				pmax	pmax		
	comp=Z,63nm,1.2s						
KBL	Kabul	47.20	297	P	P	21 18 14.4	-0.3
KBL				pmax	pmax		
	comp=Z,122nm,1.2s						
KBL	Kabul	47.20	297	P	P	21 18 14.4	-0.3
KBL	Kabul	47.20	297	P	P	21 18 15.7	+1.0
	SNR=64						
CHGR	Chuyangaron	47.24	302	P	P	21 18 11.8	-3.0
AS31	Alice Springs	47.62	165	P	P	21 18 16.9	-0.9
ASAR	Alice Springs	47.62	165	P	P	21 18 16.6	-1.2
	comp=Z,2.8nm,0.6s,baz=343,slow=6.9,SNR=27						
ASAR				LR	LR	21 40 14.6	
	comp=Z,381nm,19.2s,baz=5.5,slow=38						
ASAR	Alice Springs	47.62	165	P	P	21 18 16.9	-0.9
ASAR	Alice Springs	47.62	165	P	P	21 18 16.9	-0.9
BHUJ	Bhuj	47.66	281	eP	P	21 18 19.8	+1.6
WRKA	Warakurna	47.91	172	P	P	21 18 19.2	-0.8
	comp=Z,36nm,0.8s						
CTAO	Charters Tower	48.85	149	P	P	21 18 28.2	+0.8
CTAO				pmax	pmax		
	comp=Z,27nm,0.9s						
CTAO	Charters Tower	48.85	149	P	P	21 18 28.2	+0.8
CTAO				IAmb	IAmb	21 18 35.4	
	comp=Z,27nm,0.9s						
CTAO	Charters Tower	48.85	149	P	P	21 18 28.2	+0.8
TIXI	Tiksi	49.12	3	P	P	21 18 27.0	-1.8
	comp=Z,18nm,0.9s,baz=151,slow=5.5,SNR=32						
TIXI	Tiksi	49.12	3	ceP	P	21 18 26.8	-2.0
BRVK	Borovoye	49.15	321	P	P	21 18 29.2	-0.1
BRVK				pmax	pmax		
	comp=Z,154nm,1.1s						
BRVK				MLR	MLR		
	comp=Z,2µm,19.0s						
BRVK	Borovoye	49.15	321	P	P	21 18 29.2	-0.1
BRVK	Borovoye	49.15	321	IAMs_20	IAMs_20	21 37 36.8	
	comp=Z,2µm,19.0s						
BRVK	Borovoye	49.15	321	P	P	21 18 29.2	-0.1
MEEK	Meekatharra	49.16	184	P	P	21 18 28.4	-1.2
NRIK	Noril'sk	50.92	345	P	P	21 18 41.0	-1.5
	comp=Z,25nm,0.9s,baz=129,slow=7.7,SNR=28						
NRIK				LR	LR	21 41 49.2	
	comp=Z,2µm,19.1s,baz=148,slow=38						
NRIK	Noril'sk	50.92	345	ceP	P	21 18 40.4	-2.1
NRIK	Noril'sk	50.92	345	P	P	21 18 39.6	-2.8
NRIK				IAmb	IAmb	21 18 48.7	
	comp=Z,36nm,0.9s						
MORW	Morawa	51.77	186	P	P	21 18 47.5	-1.8
MORW				IAmb	IAmb	21 19 11.6	
	comp=Z,60nm,1.4s						
OOD	Oodnadatta	52.02	164	P	P	21 18 50.9	-0.2
	comp=Z,40nm,0.9s						
HRA	Herat	52.82	297	P	P	21 18 55.0	-2.4
INKA	Innaminka	53.45	159	P	P	21 19 03.1	+1.4
	comp=Z,36nm,0.9s						
FORT	Forrest	53.55	173	P	P	21 19 00.3	-2.1
FORT				IAmb	IAmb	21 19 08.7	
	comp=Z,50nm,0.7s						
QLP	Quilpie	53.66	155	P	P	21 19 03.6	+0.3
	comp=Z,46nm,0.8s						
MULG	Mulgathing	54.03	167	P	P	21 19 06.3	+0.4
	comp=Z,45nm,1.1s						
ABKAR	Akbulak array	54.78	315	P	P	21 19 11.0	-0.3
ABKAR	Akbulak array	54.78	315	P	P	21 19 10.8	-0.5
LCRK	Leigh Creek	55.20	163	P	P	21 19 14.7	+0.2
	comp=Z,44nm,1.0s						
SVE	Sverdlovsk	55.48	324	d iP	P	21 19 15.9	-0.3
SVE				eS	S	21 27 03.5	+2.6
SVE				pmax	pmax		
	comp=Z,222nm,1.2s						
SVE				MLR	MLR		
	comp=Z,2µm,14.0s						
NWAO	Narrogin (SRO)	55.50	185	IAmb	IAmb	21 19 16.3	
	comp=Z,42nm,1.2s						
RMQ	Roma	55.51	150	P	P	21 19 18.0	+1.2
	comp=Z,17nm,0.9s						
GEYT	Alibeck	55.92	301	P	P	21 19 19.8	0.0
	comp=Z,35nm,0.9s,baz=107,slow=5.0,SNR=46						
GYA0B	ALIBECK ARRAY	55.92	301	P	P	21 19 17.1	-2.7
GYA0B				IAmb	IAmb	21 19 22.3	
	comp=Z,61nm,0.9s						
ARU	Arti	56.54	324	c iP	P	21 19 22.1	-1.7
ARU						21 21 26.6	
ARU				S	S	21 27 14.6	-0.4
ARU				pmax	pmax		
	comp=Z,125nm,0.8s						
ARU				MLR	MLR		
	comp=Z,939nm,13.0s						
ARU	Arti	56.54	324	P	P	21 19 21.6	-2.2
ARU				IAMs_20	IAMs_20	21 43 04.0	
	comp=Z,2µm,21.0s						
BBOO	Buckleboo	56.91	166	P	P	21 19 25.1	-1.6
BBOO				IAmb	IAmb	21 19 33.2	
	comp=Z,34nm,0.8s						
BBOO	Buckleboo	56.91	166	P	P	21 19 26.5	-0.1
	comp=Z,46nm,1.2s						
JLN	Jalan Bani Buh	57.15	282	P	P	21 19 31.0	+2.3
	SNR=5.5						
JLN				P	P	21 19 31.0	+2.3
	SNR=5.5						
WBK	Wadi Bani Khal	57.44	283	P	P	21 19 33.0	+2.2
	SNR=5.4						
WBK				P	P	21 19 33.0	+2.2
	SNR=5.4						
STKA	Stephens Creek	57.55	160	P	P	21 19 31.4	+0.2
	comp=Z,2.8nm,0.6s,baz=343,slow=7.1,SNR=6.2						
STKA	Stephens Creek	57.55	160	P	P	21 19 31.8	+0.6
STKA				pmax	pmax		
	comp=Z,5.0nm,1.4s						
STKA	Stephens Creek	57.55	160	P	P	21 19 31.8	+0.6
STKA	Stephens Creek	57.55	160	P	P	21 19 32.2	+1.0
	comp=Z,2.3nm,1.2s						
WSAR	Wadi Sarin	57.60	284	P	P	21 19 33.8	+1.9
	SNR=8.0						
BIDO	Bidbid	57.99	284	P	P	21 19 37.0	+2.4
	SNR=12						
BIDO				P	P	21 19 37.0	+2.4
	SNR=12						
SMDO	Samad	58.16	284	P	P	21 19 38.0	+2.0
	SNR=8.3						
SMDO				P	P	21 19 38.0	+2.0
	SNR=8.3						
JMDO	Jabal Madar	58.27	283	P	P	21 19 38.0	+1.3
	SNR=6.9						
JMDO				P	P	21 19 38.0	+1.3
	SNR=6.9						
CMSA	Cobar Meteorol	58.66	156	P	P	21 19 39.6	+0.6
	comp=Z,32nm,1.6s						
HOQ	Hoqain	58.71	285	P	P	21 19 41.0	+1.4
	SNR=12						
HOQ				P	P	21 19 41.0	+1.4
	SNR=12						
MHTO	MHTO	58.73	281	P	P	21 19 42.0	+2.2
	SNR=5.3						
MHTO				P	P	21 19 42.0	+2.2
	SNR=5.3						
BSY	Bisya	59.00	284	P	P	21 19 43.0	+1.3
	SNR=5.8						
BSY				P	P	21 19 43.0	+1.3
	SNR=5.8						
BANOM	Banah	59.10	287	P	P	21 19 43.0	+0.7
SHME	Shamm	59.21	288	P	P	21 19 43.6	+0.6
SOHO	SOHO	59.27	285	i P	P	21 19 43.1	-0.5
	SNR=6.7						
MSFE	Esma-Masafi	59.34	287	P	P	21 19 45.6	+1.6
UOSS	Minazif	59.39	286	IAMs_20	IAMs_20	21 49 05.4	
	comp=Z,875nm,22.0s						
ARQ	Araqi	59.47	284	P	P	21 19 47.1	+2.2
	SNR=7.6						
ARQ				P	P	21 19 47.1	+2.2
	SNR=7.6						
HATD	Hatta, Dubai	59.48	286	i P	P	21 19 45.2	+0.2
	SNR=6.6						
HATD	Hatta, Dubai	59.48	286	P	P	21 19 47.0	+2.0
	SNR=6.1						
ASHO	Ashiyiah	59.58	286	i P	P	21 19 46.0	+0.3
	SNR=12						
ASHO	Ashiyiah	59.58	286	P	P	21 19 48.0	+2.3
	SNR=7.7						
NAZ	Nazwa, Dubai	59.86	287	P	P	21 19 48.4	+0.8
NAZ	Nazwa, Dubai	59.86	287	P	P	21 19 49.0	+1.4
	SNR=5.5						
NAZ				P	P	21 19 49.0	+1.4
	SNR=5.5						
NIKH	Nikolski High	59.89	41	P	P	21 19 47.9	+0.6
	baz=268						
ALNE	Al Ain	59.99	285	i P	P	21 19 49.4	+0.9
	SNR=14						
ALNE	Al Ain	59.99	285	P	P	21 19 49.5	+0.9
	SNR=11						
ALNE				P	P	21 19 49.5	+0.9
	SNR=11						
ASUD	Al Ashush, Dub	60.23	286	i P	P	21 19 51.2	+1.1
	SNR=7.4						
ASUD	Al Ashush, Dub	60.23	286	P	P	21 19 52.0	+1.8
	SNR=5.3						
ASUD				P	P	21 19 52.0	+1.8
	SNR=5.3						
KIRV	Kirov	61.66	325	ceP	P	21 19 58.8	-0.5
DZM	Mont Dzumac	62.33	132	eS	S	21 28 33.6	+2.8
	comp=Z,890nm,27.4s						
DZM	Mont Dzumac	62.33	132	eLR	LR	21 38 39.2	
	comp=Z,1µm,29.1s						
MAK	Makhachkala	63.52	308	eP	P	21 20 04.2	-7.8
MAK				eS	S	21 28 31.6	-14
MAK				pmax	pmax		
	comp=Z,133nm,1.5s						
PRGR	Permogore	63.65	329	eP	P	21 20 10.5	-2.0
PRGR				pmax	pmax		
	comp=Z,238nm,1.5s						
RDOG	Red Dog Mine	63.69	24	IAMs_20	IAMs_20	21 46 46.8	
	comp=Z,924nm,22.0s						
TOO	Toolangi	64.03	159	P	P	21 20 15.1	-0.2
TOO				pmax	pmax		
	comp=Z,22nm,1.0s						
TOO	Toolangi	64.03	159	P	P	21 20 15.1	-0.2
TOO				IAmb	IAmb	21 20 16.6	
	comp=Z,22nm,0.9s						
GROC	Groznyy	64.73	308	eP	P	21 20 19.7	-0.2
GROC				e		21 20 53.0	
GROC				e		21 22 41.8	
GROC				pmax	pmax		
	comp=Z,16nm,0.6s						
UMR	Umm Al-Rimmam	65.74	293	eP	P	21 20 26.1	-0.6
KBD	Kabd	65.84	293	eP	P	21 20 26.8	-0.6
GNI	Garni	66.00	305	P	P	21 20 29.5	+1.1
GNI	Garni	66.00	305	eP	P	21 20 29.8	+1.4
GNI				pmax	pmax		
	comp=Z,103nm,1.5s						
GNI	Garni	66.00	305	IAMs_20	IAMs_20	21 54 17.2	
	comp=Z,616nm,18.0s						
MIB	Mutribah	66.00	294	eP	P	21 20 27.7	-0.6
GCSA	Galena City Sc	66.06	28	P	P	21 20 28.9	+0.8
	baz=273						
ZEI	Tsey	66.17	308	eP	P	21 20 28.3	-1.2
ZEI				pmax	pmax		
	comp=Z,22nm,0.9s						
GOF	Gofitskoye	66.42	311	⇑eP	P	21 20 30.5	-0.3
GOF				pmax	pmax		
	comp=Z,81nm,1.1s						
VRH	Novokhopyorsk	66.42	317	eP	P	21 20 29.4	-1.3
VRH				pmax	pmax		
	comp=Z,70nm,0.6s						
ONI	Oni	66.53	308	P	P	21 20 31.1	-0.5
ONI				pmax	pmax		
	comp=Z,75nm,1.1s						
ONI	Oni	66.53	308	P	P	21 20 31.1	-0.5
TTA	Tatalina	66.55	30	P	P	21 20 30.7	-0.8
TTA				pmax	pmax		
	comp=Z,24nm,0.8s						
TTA	Tatalina	66.55	30	P	P	21 20 30.7	-0.8
TTA				IAmb	IAmb	21 20 33.7	
	comp=Z,24nm,0.8s						
TTA	Tatalina	66.55	30	P	P	21 20 30.6	-0.8
	baz=274,SNR=5.5						
AKH	Akhalkalaki	66.71	307	⇓P	P	21 20 34.0	+1.1
KBZ	Khabaz	66.74	309	P	P	21 20 32.8	0.0
	comp=Z,32nm,0.9s,baz=85,slow=5.0,SNR=55						
KIV	Kislovodsk	66.85	310	⇓P	P	21 20 34.4	+0.7
KIV	Kislovodsk	66.85	310	i P	P	21 20 33.8	+0.1
	SNR=28						
KIV	Kislovodsk	66.85	310	eP	P	21 20 32.5	-1.2
KIV				eS	S	21 29 25.4	-0.9
KIV				pmax	pmax		
	comp=Z,90nm,1.1s						
KIV				pmax	pmax		
	comp=Z,115nm,4.9s						
KIV				MLR	MLR		
	comp=Z,414nm,17.0s						
KIV	Kislovodsk	66.85	310	P	P	21 20 33.6	-0.1
SVW2	Sparrevohn	66.90	32	P	P	21 20 33.9	+0.2
SVW2				IAmb	IAmb	21 20 36.3	
	comp=Z,23nm,0.8s						
SHA1	Shidzhatmaz	66.91	309	⇑eP	P	21 20 33.4	-0.9
NEY	Neytrino	66.94	309	i P	P	21 20 35.4	+1.0
NEY				pmax	pmax		
	comp=Z,9.0nm,0.7s						
L19K	White Mountain	67.15	30	P	P	21 20 33.5	-1.7
L19K				IAmb	IAmb	21 20 46.8	
	comp=Z,50nm,1.3s						
L19K				IAMs_20	IAMs_20	21 50 02.5	
	comp=Z,611nm,20.0s						
L19K	White Mountain	67.15	30	P	P	21 20 36.5	+1.3
	baz=276,SNR=11						
KARS	Kars	67.16	306	P	P	21 20 34.2	-1.6
KARS				pmax	pmax		
	comp=Z,224nm,1.4s						
KARS	Kars	67.16	306	P	P	21 20 34.2	-1.6
P18K	Big Mountain,	67.25	33	P	P	21 20 34.3	-1.6
P18K				IAmb	IAmb	21 20 39.6	
	comp=Z,43nm,1.1s						
P18K	Big Mountain,	67.25	33	P	P	21 20 36.5	+0.6
	baz=276,SNR=5.0						
J20K	Nowinta River	67.28	28	P	P	21 20 35.3	-0.6
J20K				IAmb	IAmb	21 20 39.6	
	comp=Z,63nm,1.4s						
J20K	Nowinta River	67.28	28	P	P	21 20 37.0	+1.0
	baz=275,SNR=11						
IMAR	Indian Mountai	67.29	26	P	P	21 20 35.0	-1.0
K20K	Telida	67.39	29	P	P	21 20 35.6	-1.1
K20K				IAmb	IAmb	21 20 39.6	
	comp=Z,41nm,1.0s						
K20K				IAMs_20	IAMs_20	21 53 50.9	
	comp=Z,549nm,18.0s						
K20K	Telida	67.39	29	P	P	21 20 37.7	+1.0
	baz=276,SNR=19						
M19K	Big River Lodg	67.39	31	P	P	21 20 35.4	-1.4
M19K				IAmb	IAmb	21 20 52.0	
	comp=Z,32nm,1.1s						
M19K	Big River Lodg	67.39	31	P	P	21 20 37.8	+1.1
	baz=276						
N19K	Bonanza Creek	67.47	32	P	P	21 20 37.0	-0.3
N19K				IAmb	IAmb	21 20 39.9	
	comp=Z,47nm,1.1s						
N19K	Bonanza Creek	67.47	32	P	P	21 20 38.3	+1.0
	baz=276,SNR=9.0						
L20K	Farewell, AK	67.57	30	P	P	21 20 39.0	+1.1
	baz=276,SNR=9.7						
O19K	Port Alsworth	67.62	33	P	P	21 20 37.5	-0.6
O19K	Port Alsworth	67.62	33	P	P	21 20 39.0	+0.9
	baz=277,SNR=9.2						
H21K	Melozitna Rive	67.71	27	P	P	21 20 38.1	-0.6
H21K				IAmb	IAmb	21 20 42.1	
	comp=Z,32nm,0.9s						
H21K	Melozitna Rive	67.71	27	P	P	21 20 39.5	+0.9
	baz=276,SNR=19						
VORR	Voronezh	67.91	318	eP	P	21 20 39.0	-1.2
VORR				pmax	pmax		
	comp=Z,250nm,1.4s						
LPSR	Galich'ya Gora	67.94	319	eP	P	21 20 39.2	-1.1
LPSR				pmax	pmax		
	comp=Z,150nm,1.2s						
VORD	Divnogorie	67.97	317	eP	P	21 20 39.9	-0.6
VORD				pmax	pmax		
	comp=Z,50nm,1.0s						
VSR	Storozhevoye	68.01	318	eP	P	21 20 39.7	-1.1
VSR				pmax	pmax		
	comp=Z,130nm,1.1s						
I21K	Tanana	68.10	27	P	P	21 20 40.0	-1.1
I21K				IAmb	IAmb	21 20 44.7	
	comp=Z,35nm,1.1s						
I21K				IAMs_20	IAMs_20	21 48 49.5	
	comp=Z,667nm,22.0s						
I21K	Tanana	68.10	27	P	P	21 20 41.9	+0.8
	baz=277,SNR=11						
CHUM	Lake Minchumin	68.11	28	P	P	21 20 42.0	+0.8
	baz=277,SNR=8.4						
MOS	Moscow	68.22	323	eP	P	21 20 40.2	-1.8
MOS				e		21 21 06.0	
MOS				e		21 23 10.3	
MOS				eS	S	21 29 37.6	-4.5
MOS				pmax	pmax		
	comp=Z,163nm,1.1s						
MOS				MLR	MLR		
	comp=Z,700nm,13.0s						
MSVF	Nonsavu	68.23	121	P	P	21 20 43.8	+1.1
	comp=Z,16nm,0.9s,baz=305,slow=11,SNR=5.5						
P19K	Oil Pt	68.23	33	P	P	21 20 40.2	-1.9
P19K	Oil Pt	68.23	33	P	P	21 20 42.3	+0.3
	baz=278						
CAST	Castle Rocks	68.27	29	P	P	21 20 41.4	-0.9
CAST				IAmb	IAmb	21 20 53.6	
	comp=Z,21nm,0.8s						
CAST				IAMs_20	IAMs_20	21 49 31.2	
	comp=Z,560nm,19.0s						
CAST	Castle Rocks	68.27	29	P	P	21 20 43.1	+0.8
	baz=278,SNR=17						
SIRT	Sirnak	68.28	303	P	P	21 20 41.6	-1.3
PPLA	Purkeypile	68.30	29	P	P	21 20 41.7	-0.9
PPLA				IAmb	IAmb	21 20 45.7	
	comp=Z,65nm,1.3s						
PPLA	Purkeypile	68.30	29	P	P	21 20 42.7	+0.2
	baz=278,SNR=8.9						
GURO	Guroymak-BITLI	68.37	304	P	P	21 20 42.5	-0.9
GURO				IAmb	IAmb	21 20 44.9	
	comp=Z,30nm,1.2s						
SPCR	Spurr Chakacha	68.52	31	P	P	21 20 44.6	+0.7
	baz=278,SNR=9.2						
OHAK	Old Harbor	68.55	36	P	P	21 20 44.1	0.0
	baz=279						
COLD	Coldfoot	68.56	25	P	P	21 20 42.9	-1.1
COLD				IAmb	IAmb	21 20 49.6	
	comp=Z,33nm,1.3s						
COLD	Coldfoot	68.56	25	P	P	21 20 45.2	+1.2
	baz=278						
APA	Apatity	68.57	336	⇓iP	P	21 20 41.6	-2.4
APA				i		21 20 55.5	
APA				i		21 23 13.1	
APA				pmax	pmax		
	comp=Z,25nm,1.0s						
APA				MLR	MLR		
	comp=Z,2µm,15.0s						
SPU	Mount Spurr	68.59	31	P	P	21 20 42.9	-1.5
TOLK	Toolik Lake Re	68.61	23	P	P	21 20 43.4	-1.0
TOLK				IAmb	IAmb	21 20 49.8	
	comp=Z,39nm,1.1s						
TOLK	Toolik Lake Re	68.61	23	P	P	21 20 45.0	+0.7
	baz=278,SNR=11						
MLY	Manley	68.64	27	P	P	21 20 43.1	-1.4
MLY				IAmb	IAmb	21 20 47.9	
	comp=Z,34nm,1.1s						
MLY	Manley	68.64	27	P	P	21 20 45.5	+0.9
	baz=278,SNR=17						
BPAW	Bear Paw Mtn.	68.67	28	P	P	21 20 43.6	-1.1
BPAW				IAmb	IAmb	21 20 49.8	
	comp=Z,32nm,1.2s						
BPAW	Bear Paw Mtn.	68.67	28	P	P	21 20 45.1	+0.4
	baz=278,SNR=15						
SKT	Skwentna	68.72	30	P	P	21 20 43.4	-1.7
SKT				IAmb	IAmb	21 20 45.3	
	comp=Z,28nm,1.2s						
SKT				IAMs_20	IAMs_20	21 48 56.2	
	comp=Z,711nm,22.0s						
SKT	Skwentna	68.72	30	P	P	21 20 44.9	-0.3
	baz=278,SNR=9.1						
KTH	Kantishna Hill	68.77	29	IAmb	IAmb	21 20 47.5	
	comp=Z,24nm,1.0s						
KDAK	Kodiak Island	68.84	35	P	P	21 20 46.0	+0.2
	comp=Z,25nm,0.5s,baz=278,slow=5.5,SNR=48						
KDAK	Kodiak Island	68.84	35	P	P	21 20 46.0	+0.2
KDAK	Kodiak Island	68.84	35	P	P	21 20 46.1	+0.2
	baz=279						
OBN	Obninsk	68.92	322	⇑P	P	21 20 45.3	-1.0
OBN	Obninsk	68.92	322	c iP	P	21 20 45.0	-1.3
OBN				i		21 21 08.6	
OBN				i S	S	21 29 53.9	+3.6
OBN				pmax	pmax		
	comp=Z,81nm,1.0s						
OBN				MLR	MLR		
	comp=Z,594nm,15.0s						

OBN	Obninsk	68.92	322	P	P	21 20 45.5	-0.8
H23K	Yukon River	69.02	26	P	P	21 20 47.5	+0.6
H23K				IAmb	IAmb	21 21 12.0	
	comp=Z,35nm,0.9s						
H23K	Yukon River	69.02	26	P	P	21 20 48.2	+1.3
	baz=279,SNR=17						
SOC	Sochi	69.03	310	*e*P	P	21 20 46.4	-0.9
SOC				*e*		21 23 16.6	
SOC				*e*PPP	PPP	21 24 54.6	
SOC				*e*S	S	21 29 53.3	+1.1
SOC				*e*SS	SS	21 34 16.4	-1.2
SOC				pmax	pmax		
	comp=Z,42nm,0.7s						
TRF	Thorofare Moun	69.07	29	IAmb	IAmb	21 20 59.1	
	comp=Z,23nm,1.0s						
TRF	Thorofare Moun	69.07	29	P	P	21 20 47.9	+0.5
	baz=279,SNR=6.5						
SUA	Susitna One	69.17	31	IAMs_20	IAMs_20	21 51 38.1	
	comp=Z,541nm,18.0s						
SUA	Susitna One	69.17	31	P	P	21 20 48.1	0.0
	baz=279,SNR=16						
I23K	Minto, Yukon-K	69.20	27	IAmb	IAmb	21 20 51.1	
	comp=Z,34nm,1.4s						
I23K	Minto, Yukon-K	69.20	27	P	P	21 20 48.6	+0.7
	baz=279,SNR=9.7						
CUT	Chulitna	69.24	30	IAMs_20	IAMs_20	21 49 35.9	
	comp=Z,773nm,22.0s						
CUT	Chulitna	69.24	30	P	P	21 20 48.4	+0.1
	baz=279,SNR=8.6						
CNPM	China Poot	69.25	33	IAmb	IAmb	21 21 15.9	
	comp=Z,71nm,1.5s						
BWN	Browne	69.31	28	IAmb	IAmb	21 21 07.7	
	comp=Z,45nm,1.2s						
BRLK	Bradley Lake	69.39	33	IAmb	IAmb	21 20 59.5	
	comp=Z,42nm,0.8s						
NEA2	Nenana	69.42	27	IAmb	IAmb	21 20 52.1	
	comp=Z,49nm,1.1s						
NEA2	Nenana	69.42	27	P	P	21 20 49.5	+0.1
	baz=280,SNR=14						
M22K	Willow	69.42	31	P	P	21 20 49.0	-0.4
	baz=280,SNR=15						
BRSE	Bradley Lake S	69.46	33	P	P	21 20 49.5	-0.3
	baz=280						
MCK	McKinley	69.62	28	P	P	21 20 50.8	+0.1
	baz=280,SNR=15						
H24K	Noodor Dome	69.70	26	IAmb	IAmb	21 21 15.4	
	comp=Z,56nm,1.4s						
H24K	Noodor Dome	69.70	26	P	P	21 20 52.1	+1.0
	baz=280,SNR=8.4						
RND	Reindeer	69.71	29	IAMs_20	IAMs_20	21 50 02.1	
	comp=Z,647nm,18.0s						
RC01	Rabbit Creek A	69.72	31	IAmb	IAmb	21 20 52.4	
	comp=Z,56nm,1.4s						
RC01	Rabbit Creek A	69.72	31	P	P	21 20 51.4	+0.2
	baz=280						
O22K	Cooper Landing	69.83	32	P	P	21 20 52.4	+0.5
	baz=281						
TCOL	CIGO, UAF Yank	69.88	27	P	P	21 20 52.8	+0.7
	baz=281						
COLA	College	69.88	27	P	P	21 20 51.8	-0.4
COLA				pmax	pmax		
	comp=Z,18nm,1.0s						
COLA	College	69.88	27	P	P	21 20 51.8	-0.4
PMR	Palmer	69.91	31	IAmb	IAmb	21 20 54.3	
	comp=Z,49nm,1.2s						
PMR	Palmer	69.91	31	P	P	21 20 52.3	-0.1
	baz=281,SNR=8.2						
GHO	Glory Hole Cre	69.98	30	IAmb	IAmb	21 21 04.6	
	comp=Z,35nm,1.0s						
POKR	Poker Plat Res	70.01	27	IAmb	IAmb	21 21 17.6	
	comp=Z,30nm,0.9s						
POKR	Poker Plat Res	70.01	27	P	P	21 20 53.8	+0.8
	baz=281,SNR=6.3						
SEW	Seward	70.04	32	IAmb	IAmb	21 21 03.9	
	comp=Z,48nm,1.0s						
SEW	Seward	70.04	32	P	P	21 20 53.0	-0.1
	baz=281						
MSEY	Mahe Island	70.09	256	P	P	21 20 55.5	+1.1
MSEY	Mahe Island	70.09	256	P	P	21 20 54.1	-0.3
MSEY				pmax	pmax		
	comp=Z,68nm,1.2s						
MSEY	Mahe Island	70.09	256	P	P	21 20 54.1	-0.3
MSEY				IAmb	IAmb	21 20 56.4	
	comp=Z,68nm,1.1s						
SML	Sawmill	70.25	30	IAMs_20	IAMs_20	21 50 44.4	
	comp=Z,572nm,18.0s						
SML	Sawmill	70.25	30	P	P	21 20 54.5	-0.1
	baz=281,SNR=10						
KNK	Knik Glacier	70.26	31	IAMs_20	IAMs_20	21 49 56.9	
	comp=Z,762nm,22.0s						
KNK	Knik Glacier	70.26	31	P	P	21 20 54.9	+0.3
	baz=281,SNR=10						
ILAR	Eielson Array	70.31	27	P	P	21 20 54.1	-0.7
	comp=Z,2.2nm,0.7s,baz=273,slow=4.4,SNR=19						
ILAR				PP	PP	21 23 35.1	+5.1
	comp=Z,6.9nm,1.1s,baz=277,slow=7.7,SNR=8.5						
ILAR				LR	LR	21 56 00.7	
	comp=Z,321nm,18.3s,baz=298,slow=40						
HDA	Harding Lake	70.35	27	P	P	21 20 54.1	-1.0
	baz=282,SNR=8.7						
ANN	Anapa	70.38	311	*e*P	P	21 20 54.4	-1.2
ANN				*e**PP	pP	21 20 58.2	-0.6
ANN				*e*		21 23 27.1	
ANN				*e*S	S	21 30 04.7	-3.2
ANN				*e*SS	SS	21 34 42.6	+4.4
ANN				pmax	pmax		
	comp=Z,157nm,1.0s						
ANN				MLR	MLR		
	comp=N,863nm,17.0s						
ANN				MLR	MLR		
	comp=Z,914nm,17.0s						
PWL	Port Wells	70.43	31	IAmb	IAmb	21 21 04.7	
	comp=Z,52nm,0.8s						
PWL				IAMs_20	IAMs_20	21 49 50.4	
	comp=Z,636nm,20.0s						
PWL	Port Wells	70.43	31	P	P	21 20 55.7	+0.1
	baz=282,SNR=10.0						
FYU	Fort Yukon	70.61	25	IAmb	IAmb	21 21 21.0	
	comp=Z,40nm,1.2s						
SCM	Sheep Creek Mo	70.71	30	IAmb	IAmb	21 21 05.7	
	comp=Z,49nm,0.8s						
SCM	Sheep Creek Mo	70.71	30	P	P	21 20 57.5	+0.1
	baz=282,SNR=11						
PRP	Porcupine Dome	70.72	26	P	P	21 20 57.1	-0.4
	baz=282,SNR=6.5						
J25K	Salcha River,	70.98	27	P	P	21 20 58.0	-1.0
	baz=283						
SPA0	Spitsbergen Ar	71.00	348	*e*P	P	21 20 59.6	+0.8
GLI	Glacier Island	71.02	31	IAmb	IAmb	21 21 04.6	
	comp=Z,55nm,0.9s						
GLI				IAMs_20	IAMs_20	21 49 57.9	
	comp=Z,633nm,22.0s						
GLI	Glacier Island	71.02	31	P	P	21 20 59.2	0.0
	baz=283						
ARA0	ARCESS Array S	71.05	338	*e*P	P	21 20 59.2	0.0
ARCES	ARCESS Array B	71.05	338	P	P	21 20 58.8	-0.5
	comp=Z,5.1nm,0.6s,baz=74,slow=8.9,SNR=10						
ARCES				LR	LR	21 55 19.8	
	comp=Z,944nm,18.8s,baz=90,slow=38						
ARCES	ARCESS Array B	71.05	338	P	P	21 20 59.4	+0.1
ARCES				pmax	pmax		
	comp=Z,71nm,1.5s						
ARCES	ARCESS Array B	71.05	338	P	P	21 20 59.4	+0.1
ARCES				IAmb	IAmb	21 21 05.3	
	comp=Z,71nm,1.4s						
M24K	Tolsona, Glenn	71.18	30	P	P	21 21 01.0	+0.8
	baz=283,SNR=8.5						
PAX	Paxson	71.30	29	IAmb	IAmb	21 21 03.7	
	comp=Z,28nm,1.2s						
PAX	Paxson	71.30	29	P	P	21 21 01.1	+0.1
	baz=283,SNR=7.8						
PUL	Pulkovo	71.32	328*c*	*e*P	P	21 21 01.5	+0.5
PUL				pmax	pmax		
	comp=Z,73nm,0.6s						
FID	Port Fidalgo	71.34	31	IAmb	IAmb	21 21 03.5	
	comp=Z,64nm,1.1s						
FID				IAMs_20	IAMs_20	21 52 26.1	
	comp=Z,596nm,20.0s						
KLU	Klutina	71.44	30	IAmb	IAmb	21 21 04.4	
	comp=Z,29nm,0.9s						
KLU				IAMs_20	IAMs_20	21 50 45.9	
	comp=Z,706nm,22.0s						
KLU	Klutina	71.44	30	P	P	21 21 02.3	+0.4
	baz=283,SNR=9.4						
HARP	HAARP	71.58	29	P	P	21 21 03.5	+0.9
	baz=284						
DIV	Divide	71.59	31	IAmb	IAmb	21 21 05.4	
	comp=Z,80nm,1.3s						
SCRK	Sand Creek	71.71	28	P	P	21 21 02.8	-0.7
	baz=284,SNR=15						
EYAK	Cordova Ski Ar	71.74	31	IAmb	IAmb	21 21 06.6	
	comp=Z,90nm,1.4s						
EYAK	Cordova Ski Ar	71.74	31	P	P	21 21 03.5	0.0
	baz=284						
J26L	Joseph Creek	71.76	27	P	P	21 21 03.0	-0.7
	baz=284,SNR=20						
KTK1	Kautokeino	71.97	338	*e*P	P	21 21 04.7	-0.1
N25K	Chitina, Valde	72.03	30	IAmb	IAmb	21 21 08.4	
	comp=Z,30nm,1.1s						
N25K				IAMs_20	IAMs_20	21 53 21.4	
	comp=Z,588nm,21.0s						
N25K	Chitina, Valde	72.03	30	P	P	21 21 06.0	+0.6
	baz=284,SNR=8.2						
MENT	Mentasta	72.09	29	IAmb	IAmb	21 21 08.6	
	comp=Z,35nm,1.0s						
BMRM	Bremner River	72.18	31	IAmb	IAmb	21 21 08.8	
	comp=Z,50nm,1.1s						
BMRM	Bremner River	72.18	31	P	P	21 21 06.7	+0.4
	baz=285,SNR=6.1						
L26K	Log Cabin Wild	72.23	28	IAmb	IAmb	21 21 09.5	
	comp=Z,33nm,1.2s						
L26K				IAMs_20	IAMs_20	21 53 26.7	
	comp=Z,734nm,21.0s						
L26K	Log Cabin Wild	72.23	28	P	P	21 21 06.6	+0.1
	baz=285,SNR=11						
GAZ	Gaziantep	72.40	303	IAmb	IAmb	21 21 12.4	
	comp=Z,78nm,1.4s						
GLB	Gilahina Butte	72.43	30	IAmb	IAmb	21 21 10.6	
	comp=Z,60nm,1.2s						
KAIM	Kayak Island	72.54	32	P	P	21 21 08.9	+0.5
	baz=285						
SIM	Simferopol'	72.63	312*c*	*i*P	P	21 21 07.6	-1.6
SIM				*e*		21 21 25.6	
SIM				*e*PPP	PPP	21 25 27.8	
SIM				pmax	pmax		
	comp=Z,58nm,1.0s						
SIM				pmax	pmax		
	comp=Z,27nm,0.8s						
SIM				pmax	pmax		
	comp=Z,2µm,24.0s						
VRDI	Verde Repeater	72.66	30	IAmb	IAmb	21 21 11.8	
	comp=Z,51nm,1.2s						
EGAK	Eagle	72.69	26	P	P	21 21 09.0	-0.1
	baz=286,SNR=11						
MCARA	McCarthy VSAT	72.81	30	P	P	21 21 10.6	+0.7
	baz=286,SNR=8.8						
L27K	Beaver Creek,	72.89	28	IAmb	IAmb	21 21 13.8	
	comp=Z,44nm,1.1s						
L27K	Beaver Creek,	72.89	28	P	P	21 21 10.9	+0.5
	baz=286,SNR=21						
FIA1	FINESS Array S	72.92	330	P	P	21 21 09.1	-1.5
FIA1				IAmb	IAmb	21 21 18.5	
	comp=Z,45nm,0.8s						
FINES	FINESS Array B	72.92	330	P	P	21 21 09.7	-0.9
	comp=Z,16nm,0.7s,baz=62,slow=5.6,SNR=30						
FINES				LR	LR	21 56 08.0	
	comp=Z,893nm,18.0s,baz=77,slow=38						
CRQM	Cirque	72.93	31	IAmb	IAmb	21 21 14.0	
	comp=Z,59nm,1.0s						
CRQM				IAMs_20	IAMs_20	21 52 08.0	
	comp=Z,917nm,22.0s						
CRQE	Cirque	72.95	31	P	P	21 21 11.1	+0.1
	baz=286,SNR=10						
M27K	Edge Creek, AK	73.06	29	P	P	21 21 11.6	0.0
	baz=287,SNR=10.0						
TGL	Tana Glacier	73.08	31	IAmb	IAmb	21 21 14.1	
	comp=Z,63nm,1.2s						
TGL				IAMs_20	IAMs_20	21 54 27.3	
	comp=Z,821nm,21.0s						
WAX	Waxell Ridge	73.15	31	IAmb	IAmb	21 21 15.4	
	comp=Z,30nm,0.9s						
TRO	Tromso	73.23	339	*e*P	P	21 21 11.5	-0.7
VSU	Vasula	73.44	327	*e*P	P	21 21 13.5	-0.2
VSU	Vasula	73.44	327	*e*P	P	21 21 13.2	-0.5
KIP	Kipapa	73.50	73*c*	*e*P	P	21 21 17.7	+3.0
KIP				pmax	pmax		
	comp=Z,117nm,1.7s						
BARN	Barnard Glacie	73.54	30	IAmb	IAmb	21 21 27.4	
	comp=Z,33nm,1.0s						
BARN				IAMs_20	IAMs_20	21 51 53.4	
	comp=Z,834nm,21.0s						
GRNC	Granite Creek	73.59	31	IAmb	IAmb	21 21 17.7	
	comp=Z,32nm,1.1s						
GRNC				IAMs_20	IAMs_20	21 51 52.8	
	comp=Z,856nm,22.0s						
DAWY	Dawson	73.63	27	P	P	21 21 14.7	-0.1
	baz=288,SNR=14						
MESA	MESA	73.66	31	P	P	21 21 15.5	+0.2
	baz=287						
I29M	Ogilvie Camp,	73.66	25	P	P	21 21 14.9	-0.1
	baz=289						
CTG	Chitna Glacier	73.72	30	P	P	21 21 16.0	+0.5
	baz=287,SNR=10						
CTGM	Chitina Glacie	73.72	30	IAmb	IAmb	21 21 18.5	
	comp=Z,53nm,1.0s						
CTGM				IAMs_20	IAMs_20	21 54 37.1	
	comp=Z,725nm,21.0s						
NOR	Nord	73.83	354	*i* P	P	21 21 14.4	-1.2
NOR				IAmb	IAmb	21 21 16.2	
	comp=Z,36nm,1.5s						
YUK3	Moose Creek	73.87	29	P	P	21 21 16.8	+0.3
	baz=288,SNR=6.8						
LOGN	Logan Glacier	73.92	30	IAmb	IAmb	21 21 19.8	
	comp=Z,58nm,1.2s						
EPYK	Eagle Plains	73.95	24	IAmb	IAmb	21 21 21.6	
	comp=Z,22nm,0.7s						
EPYK	Eagle Plains	73.95	24	P	P	21 21 16.2	-0.4
	baz=290,SNR=16						
MNK	Minsk	73.95	323	*i* P	P	21 21 16.4	-0.4
MNK				*i*		21 21 31.5	
MNK				*i*		21 24 01.0	
MNK				*i* PPP	PPP	21 25 46.0	
MNK				*i* S	S	21 30 49.1	+0.5
MNK				*i*		21 31 26.2	
MNK				pmax	pmax		
	comp=N,12nm,1.0s						
MNK				pmax	pmax		
	comp=E,10.0nm,1.0s						
MNK				pmax	pmax		
	comp=Z,80nm,1.0s						
MNK				MLR	MLR		
	comp=Z,683nm,19.0s						
MNK				MLR	MLR		
	comp=N,841nm,19.0s						
MNK				MLR	MLR		
	comp=E,73nm,19.0s						
MNK	Minsk	73.95	323	*i* P	P	21 21 16.4	-0.4
	comp=E,10.0nm,1.0s						
MNK				*i* P	P	21 21 16.4	-0.4
	comp=N,12nm,1.0s						
MNK				*i* P	P	21 21 16.4	-0.4
	comp=Z,80nm,1.0s,baz=73						
MNK				*i* PP	PP	21 24 01.1	-0.4
MNK				*i* PPP	PPP	21 25 46.1	
MNK				*i* S	S	21 30 49.2	+0.6
MNK				*i* SS	SS	21 34 25.8	-67
MNK				*i* SSS	SSS	21 38 33.4	
MNK				*i* LQ	LQ	21 48 06.0	
MNK				*i* LR	LR	21 50 46.8	
MNK				*i* LRM	MLR	21 56 10.1	
	comp=E,73nm,19.0s						
MNK				*i* LRM	MLR	21 56 10.1	
	comp=N,841nm,19.0s						
MNK				*i* LRM	MLR	21 56 10.1	
	comp=Z,683nm,19.0s						
AKASG	Malin Array Be	74.25	319	P	P	21 21 17.0	-1.6
	comp=Z,9.5nm,0.6s,baz=60,slow=5.8,SNR=60						
AKASG	Malin Array Be	74.25	319	IAmb	IAmb	21 21 18.9	
	comp=Z,48nm,1.4s						
AKBB	Malin Array Si	74.25	319*c*	*e*P	P	21 21 17.4	-1.2
AKBB	Malin Array Si	74.25	319	IAmb	IAmb	21 21 18.6	
	comp=Z,55nm,1.2s						
BR131	Keskin Array S	74.39	307	IAmb	IAmb	21 21 22.1	
	comp=Z,115nm,1.4s						
BR131	Keskin Array S	74.39	307	P	P	21 21 19.6	-0.3
	SNR=13						
BRTR	Keskin Array B	74.39	307	P	P	21 21 19.4	-0.5
	comp=Z,5.4nm,0.5s,baz=133,slow=3.0,SNR=55						
INK	Inuvik	74.41	22	P	P	21 21 18.3	-0.9
	comp=Z,19nm,0.8s,baz=296,slow=6.0,SNR=26						
INK	Inuvik	74.41	22	P	P	21 21 18.7	-0.5
	baz=292,SNR=21						
NACGM	Naroch	74.44	323	*i* P	P	21 21 19.0	-0.7
PCA	Pinnacle	74.49	31	IAmb	IAmb	21 21 30.7	
	comp=Z,57nm,0.9s						
PINM	Pinnacle	74.50	31	P	P	21 21 20.0	+0.1
	baz=289						
ISAL	Salakas	74.60	324	*e*P	P	21 21 21.1	+0.6
MTSE	Matsula	74.82	328	*e*P	P	21 21 22.1	+0.4
YUK4	Talbot Arm	74.83	29	P	P	21 21 21.3	-0.8
	baz=290						
ANTO	Ankara	74.97	307	P	P	21 21 22.9	-0.2
ANTO				pmax	pmax		
	comp=Z,61nm,1.3s						
ANTO	Ankara	74.97	307	P	P	21 21 22.9	-0.2
ANTO				IAmb	IAmb	21 21 28.1	
	comp=Z,61nm,1.2s						
PNL	Peninsula	75.04	31	P	P	21 21 24.1	+1.1
	baz=289						
YUK6	Outpost Mounta	75.10	30	P	P	21 21 24.5	+0.9
	baz=290						
STEI	Steigen	75.11	338	*e*P	P	21 21 24.0	+0.7
M30M	Minto, Yukon	75.23	28	P	P	21 21 24.8	+0.6
	baz=291,SNR=20						
FAUS	Fauske	75.32	337	*e*P	P	21 21 25.3	+0.9
A36M	Sachs Harbour	75.38	17	P	P	21 21 23.7	-1.0
	baz=299,SNR=11						
ATD	Arta Tunnel	75.42	277	P	P	21 21 27.4	+1.4
	SNR=11						
HYT	Haines Junctio	75.53	30	IAmb	IAmb	21 21 29.4	
	comp=Z,39nm,1.2s						
HYT	Haines Junctio	75.53	30	P	P	21 21 26.9	+0.9
	baz=291,SNR=11						
SORM	Soroca	75.56	316	⇓P	P	21 21 24.9	-1.3
KIS	Kishinev	75.60	315	*e*P	P	21 21 25.0	-1.5
	comp=Z,170nm,3.7s						
KIS				LRM	MLR	21 57 26.0	
	comp=Z,300nm,14.0s						
KIS	Kishinev	75.60	315	*e*P	P	21 21 25.0	-1.5
KIS				pmax	pmax		
	comp=Z,170nm,3.7s						
KIS				MLR	MLR		
	comp=Z,300nm,14.0s						
LOF	Lofoten	75.61	338	*e*P	P	21 21 27.9	+1.8
MILM	Milestii Mici	75.63	315	*e*P	P	21 21 24.0	-2.7
MILM				*e*		21 21 36.0	
MILM				pmax	pmax		
	comp=Z,130nm,2.0s						
MILM				MLR	MLR		
	comp=Z,700nm,14.0s						
MILM				MLR	MLR		
	comp=E,800nm,16.0s						
PABE	Paberze	75.79	324	*e*P	P	21 21 27.3	-0.1
CSS	Mathiatis	76.05	302	IAmb	IAmb	21 21 31.3	
	comp=Z,72nm,1.2s						
N31M	Braeburn, Yuko	76.08	29	P	P	21 21 29.8	+0.8
	baz=292,SNR=8.3						
AAL	Aland	76.16	330	*e*P	P	21 21 29.2	-0.2
TLCR		76.17	313	⇑P	P	21 21 29.4	-0.4
JURR	Jurilovca	76.26	313	⇓P	P	21 21 30.0	-0.3
M31M	Drury Creek, Y	76.41	28	P	P	21 21 31.0	+0.2
	baz=293,SNR=10						
VLDR	Vladesti	76.45	314	⇑P	P	21 21 30.2	-1.1
KONS	Konsvik	76.46	337	*e*P	P	21 21 31.8	+0.8
SCTR	Scanteiesti	76.56	314	⇓P	P	21 21 32.6	+0.6
STOK	Stokkvaagen	76.57	337	*e*P	P	21 21 30.7	-0.9
VARL	Varlezi	76.58	314	⇓P	P	21 21 32.7	+0.6
CFR	Carcaliu	76.62	313	⇓P	P	21 21 31.8	-0.6
TIRR	Tirgusor	76.67	313	⇓P	P	21 21 32.4	-0.2
PBUR	Paburge	76.69	325	*e*P	P	21 21 33.3	+0.8
SUW	Suwalki	76.72	323	*e*P	P	21 21 32.1	-0.7
SUW	Suwalki	76.72	323	*e*P	P	21 21 32.2	-0.5
SLCR	Slobozia Conac	76.74	314	⇓P	P	21 21 31.2	-1.8
WHY	Whitehorse	76.79	29	IAmb	IAmb	21 21 36.5	
	comp=Z,58nm,1.4s						
WHY	Whitehorse	76.79	29	P	P	21 21 33.5	+0.4
	baz=293,SNR=11						
TLBR	Topalu	76.89	313	⇓P	P	21 21 34.6	+0.8
HARR	Harsova	76.92	313	⇓P	P	21 21 33.7	-0.3
SKAG	Skagway	77.05	31	IAmb	IAmb	21 21 41.6	
	comp=Z,29nm,0.8s						
SKAG	Skagway	77.05	31	P	P	21 21 35.4	+0.9
	baz=293						
ODBI	Odobesti	77.15	314	⇓P	P	21 21 36.1	+0.8
PRAR	RASCA	77.16	316	⇓P	P	21 21 35.6	+0.2
TESR	Tescani	77.17	315	⇑P	P	21 21 34.4	-1.0
ISP	Isparta	77.29	306	IAmb	IAmb	21 21 37.7	
	comp=Z,79nm,1.4s						
VRI	Vrincioaia	77.34	314	⇓P	P	21 21 36.3	-0.1
VRI				⇓P	P	21 21 37.0	+0.6
UPP	Uppsala	77.38	330	*e*P	P	21 21 36.3	+0.1
PLOR	Plostina	77.39	314	⇓P	P	21 21 36.9	+0.2
BISRR	Bisoca	77.45	314	⇓P	P	21 21 38.0	+0.9
MMPY	Sheldon Lake,	77.57	27	P	P	21 21 37.1	-0.3
	baz=296						
COVR	Voineasa-Covas	77.69	315	⇓P	P	21 21 37.9	-0.5
LVV	L'vov	77.69	319	*e*P	P	21 21 37.3	-1.0
LVV				*e*		21 21 48.0	
LVV				*e*S	S	21 31 26.2	-3.9
LVV				*e*		21 32 10.5	
LVV				*e*		21 39 41.3	
LVV				MLR	MLR		
	comp=N,400nm,17.0s						
LVV				MLR	MLR		
	comp=E,400nm,17.0s						
LVV				MLR	MLR		
	comp=Z,500nm,17.0s						
BUR08	Bucovina Ar. S	77.72	317	IAmb	IAmb	21 21 39.5	
	comp=Z,39nm,1.3s						
BURAR	Bucovina Array	77.72	317	⇓P	P	21 21 38.4	-0.3
NEHR	Nehoiu	77.77	314	⇓P	P	21 21 38.7	-0.1
NSS	Namsos	77.78	335	*e*P	P	21 21 38.7	+0.3
DAG	Danmarks Havn	77.87	351	*i* P	P	21 21 37.3	-1.5
DAG				IAmb	IAmb	21 21 38.3	
	comp=Z,69nm,1.6s						
OZUR		77.88	315	⇓P	P	21 21 39.8	+0.3
P33M	Teslin, Yukon	77.91	29	P	P	21 21 39.8	+0.4
	baz=295						
JIS	Juneau Island	77.97	32	IAmb	IAmb	21 21 43.2	
	comp=Z,37nm,1.2s						
MLR	Muntele Rosu	77.98	314	⇓P	P	21 21 40.2	0.0
MLR	Muntele Rosu	77.98	314	P	P	21 21 38.9	-1.3
MLR				pmax	pmax		
	comp=Z,18nm,0.8s						
MLR	Muntele Rosu	77.98	314	P	P	21 21 38.9	-1.3
SULR		78.05	313	⇓P	P	21 21 40.0	-0.3
SECR		78.05	314	⇑P	P	21 21 40.9	+0.5
DOPR	Dopca	78.18	315	⇓P	P	21 21 40.6	-0.5
RAZG	Razgrad	78.26	312	⇓P	P	21 21 41.2	-0.3
ARCR	ARCALIA	78.46	316	⇓P	P	21 21 42.1	-0.5
KWP	Kalwaria Pacla	78.56	319	*e*P	P	21 21 43.3	+0.1
KWP				*e*PP	PP	21 24 41.2	+0.8
KWP				*e*S	S	21 31 44.8	+5.3
VOIR		78.59	314	⇓P	P	21 21 43.7	+0.3
BALB	Balikesir	78.64	308	IAmb	IAmb	21 21 50.0	
	comp=Z,45nm,1.1s						
BMR	Baia Mare	78.79	317	⇑P	P	21 21 43.3	-1.1
BEL	Belsk	78.87	322	*e*P	P	21 21 43.8	-0.9
ARR	Arges	78.89	315	⇓P	P	21 21 44.2	-0.9
QRZ	Quartz Range	78.92	143	IAMs_20	IAMs_20	21 51 55.8	
	comp=Z,718nm,21.0s						
COPA	Copaceanca	78.94	313	⇓P	P	21 21 44.8	-0.5
HUMR	Humele	78.96	314	⇓P	P	21 21 44.8	-0.6
ZIMR		79.01	313	⇑P	P	21 21 45.0	-0.7
TBLU	Trondheim	79.05	335	*e*P	P	21 21 44.2	-1.2
CJR	Cluj-Napoca	79.07	316	⇓P	P	21 21 46.4	+0.3
CBBR	Cluj-Babes-Bol	79.08	316	⇓P	P	21 21 46.1	+0.1
KOLS	Kolonicke sedl	79.08	319	*e*P	P	21 21 46.3	+0.3
KOLS	Kolonicke sedl	79.08	319	*e*P	P	21 21 46.3	+0.3
UZH	Uzhgorod	79.18	318	*e*P	P	21 21 44.4	-2.1
UZH				*e*		21 21 51.7	
TRPA	Tarpa	79.22	318	⇑P	P	21 21 45.9	-0.8
TRPA	Tarpa	79.22	318	*e*P	P	21 21 46.4	-0.3
TGTN	Hyland Airport	79.32	27	P	P	21 21 47.3	+0.2
	baz=298						
LOT	Lotru	79.42	315	⇓P	P	21 21 47.1	-1.0
NC303	NORSAR Array S	79.56	333	IAmb	IAmb	21 21 54.8	
	comp=Z,57nm,1.4s						
CRVS	Cervenica-Dubn	79.59	319	*e*P	P	21 21 48.6	-0.2
CRVS				pmax	pmax		
	comp=Z,209nm,1.9s						
CRVS	Cervenica-Dubn	79.59	319	*e*P	P	21 21 48.5	-0.2
DRGR		79.61	316	⇓P	P	21 21 48.5	-0.5
NB201	NORSAR Array S	79.68	332	IAmb	IAmb	21 21 56.7	
	comp=Z,40nm,0.8s						
NB2	NORSAR Subarra	79.72	332	P	P	21 21 47.3	-1.9
	comp=Z,74nm,1.4s,baz=59,slow=5.6						
NB2	NORSAR Subarra	79.72	332	P	P	21 21 47.3	-1.9

	baz=59,slow=5.6						
NOA	NORSAR Array B	79.72	332	P	P	21 21 47.4	-1.9
	comp=Z,1.8nm,0.5s,baz=83,slow=6.3,SNR=26						
NOA				PP	PP	21 24 49.8	0.0
	comp=Z,4.8nm,0.9s,baz=65,slow=8.1,SNR=6.6						
NOA				LR	LR	21 58 05.6	
	comp=Z,405nm,19.9s,baz=70,slow=36						
NC602	NORSAR Array S	79.72	332	eP	P	21 21 47.5	-1.7
WRAK	Wrangell Islan	79.75	33	P	P	21 21 49.7	+0.3
	baz=296						
NC204	NORSAR Array S	79.80	333	IAmb	IAmb	21 21 49.8	
	comp=Z,106nm,1.4s						
NEEM	North Greenlan	79.96	358	⇑iP	P	21 21 49.9	-0.7
NEEM				IAmb	IAmb	21 21 51.0	
	comp=Z,67nm,1.4s						
DLBC	Dease Lake	79.97	30	P	P	21 21 50.2	-0.5
	comp=Z,11nm,1.1s,baz=314,slow=3.9,SNR=6.6						
RES	Resolute Bay	80.03	9	P	P	21 21 49.2	-1.4
	comp=Z,7.9nm,1.0s,baz=329,slow=6.2,SNR=8.8						
OJC	Ojcow	80.07	320	eP	P	21 21 51.4	0.0
OJC				ePP	PP	21 24 50.7	-2.3
OJC				eSS	SS	21 37 27.7	+23
OJC	Ojcow	80.07	320	IAmb	IAmb	21 21 52.3	
	comp=Z,110nm,1.3s						
NIE	Niedzica	80.09	319	eP	P	21 21 52.6	+1.1
NIE				eS	S	21 31 55.4	-0.4
GZR	Gura Zlata	80.09	315	⇓P	P	21 21 50.4	-1.3
DBG	Daneborg	80.10	350	i P	P	21 21 49.7	-1.4
DBG				IAmb	IAmb	21 21 50.9	
	comp=Z,72nm,1.4s						
DOMB	Dombas	80.12	334	eP	P	21 21 49.9	-1.5
RPZ	Rata Peaks	80.14	146	P	P	21 21 51.4	-0.2
RPZ				IAmb	IAmb	21 21 52.7	
	comp=Z,42nm,1.0s						
LBZ	Lake Benmore	80.17	147	P	P	21 21 51.9	+0.1
LBZ				IAmb	IAmb	21 21 54.2	
	comp=Z,44nm,1.0s						
GKP	Gorka Klasztor	80.28	324	eP	P	21 21 51.9	-0.4
GKP				ePP	PP	21 24 53.1	-1.5
GKP	Gorka Klasztor	80.28	324	eP	P	21 21 51.9	-0.4
KECS	Kecovo	80.35	319	eP	P	21 21 52.9	0.0
KECS				pmax	pmax		
	comp=Z,22nm,1.4s						
KECS	Kecovo	80.35	319	eP	P	21 21 52.9	0.0
PUNG	Punghina	80.41	314	⇑P	P	21 21 52.7	-0.6
WRGLY	Wrigley	80.41	25	P	P	21 21 52.8	-0.1
	baz=302						
OSL	Oslo	80.46	332	eP	P	21 21 51.7	-1.5
SIRR	Siria	80.48	316	⇑P	P	21 21 53.3	-0.4
HERR	Herculane	80.53	315	⇓P	P	21 21 53.0	-0.9
LANS	Liptovska Anna	80.70	319	eP	P	21 21 55.8	+1.0
LANS				pmax	pmax		
	comp=Z,11nm,1.3s						
LANS	Liptovska Anna	80.70	319	eP	P	21 21 55.8	+1.0
BSD	Bornholm Skovb	80.71	326	eP	P	21 21 53.8	-0.9
BSD	Bornholm Skovb	80.71	326	i P	P	21 21 54.6	0.0
BZS	Buzias	80.76	316	⇓P	P	21 21 54.6	-0.6
IZAB	Izabela	80.79	319	eP	P	21 21 55.3	+0.1
VTS	Vitosha	80.84	312	⇑P	P	21 21 55.1	-0.8
VTS	Vitosha	80.84	312	P	P	21 21 55.3	-0.5
VTS				pmax	pmax		
	comp=Z,59nm,1.2s						
VTS	Vitosha	80.84	312	P	P	21 21 55.3	-0.5
VTS				IAmb	IAmb	21 21 58.3	
	comp=Z,59nm,1.2s						
AKN	Aaknes	80.89	334	eP	P	21 21 56.0	+0.5
PSZ	Piszkesteto	80.94	318	IAmb	IAmb	21 22 00.8	
	comp=Z,38nm,1.2s						
PSZ				IAMs_20	IAMs_20	21 57 45.7	
	comp=Z,860nm,21.0s						
BSZH	Besenyszg	80.95	317	⇓P	P	21 21 55.5	-0.6
BSZH	Besenyszg	80.95	317	eP	P	21 21 55.1	-1.0
KONO	Kongsberg	81.10	332	eP	P	21 21 55.9	-0.8
SKAR	Skarslia	81.13	333	eP	P	21 21 56.7	-0.2
OKC	Ostrava-Krasne	81.20	320	eP	P	21 21 57.0	-0.4
OKC				MLR	MLR		
	comp=Z,1µm,16.7s						
OKC	Ostrava-Krasne	81.20	320	eP	P	21 21 57.0	-0.4
OKC				AMS	AMS	22 04 10.0	
	comp=Z,1µm,16.7s						
VYHS	Vyhne	81.35	319	eP	P	21 21 57.9	-0.3
VYHS				pmax	pmax		
	comp=Z,60nm,1.3s						
VYHS	Vyhne	81.35	319	eP	P	21 21 57.9	-0.3
BOVS	Bovan	81.48	314	⇓P	P	21 21 57.5	-1.5
KOLL	Kolacno	81.58	319	eP	P	21 21 59.9	+0.5
MORC	Moravsky Berou	81.58	321	⇓P	P	21 21 59.4	-0.1
MORC	Moravsky Berou	81.58	321	eP	P	21 21 58.6	-0.9
VAY	Valandovo	81.80	311	i P	P	21 21 59.5	-1.3
KSP	Ksiaz	81.84	322	eP	P	21 22 00.9	+0.1
KSP				ePP	PP	21 25 09.1	+1.4
KSP				eS	S	21 32 14.6	+0.6
JAVC	Velka Javorina	81.90	320	eP	P	21 22 01.9	+0.7
KRLC	Kraliky	81.90	321	eP	P	21 22 00.3	-0.9
KRLC				e		21 22 08.8	
KRLC				MLR	MLR		
	comp=Z,1µm,13.2s						
KRLC	Kraliky	81.90	321	eP	P	21 22 00.3	-0.9
KRLC				ex	x	21 22 08.8	
KRLC				AMS	AMS	22 03 20.0	
	comp=Z,1µm,13.2s						
STIP	Stip	81.92	312	i P	P	21 21 59.5	-1.8
SRO	Srobarova	81.95	319	eP	P	21 22 01.4	0.0
SRO	Srobarova	81.95	319	eP	P	21 22 01.4	0.0
OSTC	Ostas	82.02	322	eP	P	21 22 01.0	-0.7
OSTC				ex	x	21 22 06.7	
OSTC				AMS	AMS	22 03 20.0	
	comp=Z,2µm,16.3s						
DPC	Dobruska-Polom	82.04	321	eP	P	21 22 01.2	-0.7
DPC				MLR	MLR		
	comp=Z,1µm,17.5s						
DPC	Dobruska-Polom	82.04	321	eP	P	21 22 01.2	-0.7
DPC				AMS	AMS	22 02 30.0	
	comp=Z,1µm,17.5s						
FRGS	Fruska Gora	82.11	316	⇓P	P	21 22 01.3	-1.1
UPC	Upice	82.15	322	eP	P	21 22 01.9	-0.5
UPC				MLR	MLR		
	comp=Z,2µm,14.2s						
UPC	Upice	82.15	322	eP	P	21 22 01.9	-0.5
UPC				AMS	AMS	22 03 20.0	
	comp=Z,2µm,14.2s						
SMOL	Smolenice	82.19	319	eP	P	21 22 02.4	-0.3
SMOL				pmax	pmax		
	comp=Z,35nm,1.7s						
SMOL	Smolenice	82.19	319	eP	P	21 22 02.4	-0.3
HOMB	Homborsund	82.29	331	eP	P	21 22 01.4	-1.5
SKO	Skopje	82.32	312	i P	P	21 22 02.8	-0.7
MODS	Modra-Piesok	82.34	319	eP	P	21 22 02.2	-1.3
MODS				pmax	pmax		
	comp=Z,135nm,2.2s						
MODS	Modra-Piesok	82.34	319	eP	P	21 22 02.2	-1.3
VRAC	Vranov	82.34	320	⇑P	P	21 22 02.8	-0.6
VRAC	Vranov	82.34	320	eP	P	21 22 03.1	-0.4
MORH	Mrgy, Hungar	82.42	317	⇓P	P	21 22 03.6	-0.3
MORH	Mrgy, Hungar	82.42	317	eP	P	21 22 02.6	-1.3
RUE	Ruedersdorf	82.50	324	eP	P	21 22 04.1	-0.1
KRUC	Moravsky	82.57	320	eP	P	21 22 04.1	-0.5
FNA	Florina	82.84	311	IAmb	IAmb	21 22 05.1	
	comp=Z,45nm,1.4s						
MUD	Monsted U'grnd	82.91	329	eP	P	21 22 04.8	-1.5
PVCC	Panska Ves	82.97	322	eP	P	21 22 07.0	+0.3
PVCC				MLR	MLR		
	comp=Z,2µm,16.0s						
PVCC	Panska Ves	82.97	322	eP	P	21 22 07.0	+0.3
PVCC				AMS	AMS	22 03 50.0	
	comp=Z,2µm,16.0s						
TREC	Trest	83.00	321	eP	P	21 22 06.3	-0.6
TREC				MLR	MLR		
	comp=Z,1µm,13.4s						
TREC	Trest	83.00	321	eP	P	21 22 06.3	-0.6
TREC				AMS	AMS	22 03 50.0	
	comp=Z,1µm,13.4s						
BRG	Berggiesshubel	83.16	323	eP	P	21 22 07.1	-0.6
	baz=60,slow=5.0						
BRG	Berggiesshubel	83.16	323	eP	P	21 22 06.9	-0.8
BRG				Amp		21 22 10.3	
	comp=Z,56nm,1.6s						
PRU	Pruhonice	83.23	322	eP	P	21 22 07.5	-0.5
PRU				MLR	MLR		
	comp=Z,1µm,15.4s						
PRU	Pruhonice	83.23	322	eP	P	21 22 07.5	-0.5
PRU				AMS	AMS	22 04 10.0	
	comp=Z,1µm,15.4s						
PRA	Prague	83.25	322	eP	P	21 22 08.5	+0.4
PRA				MLR	MLR		
	comp=Z,2µm,11.6s						
PRA	Prague	83.25	322	eP	P	21 22 08.5	+0.4
PRA				AMS	AMS	22 04 00.0	
	comp=Z,2µm,11.6s						
KBN	Korca	83.31	311	IAmb	IAmb	21 22 10.1	
	comp=Z,32nm,1.0s						
CONA	Conrad Observa	83.39	319	eP	P	21 22 08.6	-0.4
	comp=Z,60nm,1.7s,SNR=18						
CONA				eP	PP	21 25 22.9	+2.4
	comp=Z,21nm,1.3s						
FBE	Freiberg	83.47	323	eP	P	21 22 08.9	-0.4
	comp=Z,27nm,1.1s,baz=60,slow=5.0						
CLL	Collm	83.48	323	⇑iP	P	21 22 08.0	-1.3
CLL				e		21 25 20.0	
CLL				pmax	pmax		
	comp=Z,65nm,1.5s						
CLL	Collm	83.48	323	⇑iP	P	21 22 08.0	-1.3
	comp=Z,65nm,1.5s						
CLL				i PcP	pP	21 22 13.0	+0.4
CLL				i		21 22 16.6	
CLL				e		21 25 15.0	
CLL				ePP	PP	21 25 20.0	-1.0
CLL				ePPP	PPP	21 27 16.0	
CLL				eS	S	21 32 30.0	-0.6
CLL				ePPS	PPS	21 33 36.0	
CLL				eSS	SS	21 37 48.0	-7.5
CLL				e		21 38 42.0	
CLL				e(SSS)		21 42 00.0	
CLL				eSSSS		21 44 00.0	
CLL	Collm	83.48	323	IAmb	IAmb	21 22 09.8	
	comp=Z,63nm,1.4s						
CLL	Collm	83.48	323	eP	P	21 22 08.6	-0.7
	baz=60,slow=5.0						
PDG	Podgorica	83.61	313	IAmb	IAmb	21 22 21.4	
	comp=Z,25nm,1.1s						
BSEG	Bad Segeberg	83.63	326	eP	P	21 22 09.7	-0.3
	baz=60,slow=5.0						
TIR	Tirane	83.65	312	⇓P	P	21 22 09.5	-0.8
KOGS	Kog	83.81	318	eP	P	21 22 09.9	-1.2
	comp=Z,345nm,2.1s						
ARSA	Arzberg	83.90	319	eP	P	21 22 10.7	-0.9
	comp=Z,31nm,1.8s,SNR=7.2						
ARSA				eP	PP	21 25 25.4	+0.8
	comp=Z,10.0nm,1.6s						
CKRC	Cesky Krumlov	83.90	321	eP	P	21 22 10.8	-0.8
CKRC				ex	x	21 22 15.6	
FLTG	Flechtingen	83.94	325	eP	P	21 22 11.0	-0.6
	baz=60,slow=5.0						
SUMG	Summit	83.99	354	i P	P	21 22 11.0	-1.0
SUMG				IAmb	IAmb	21 22 12.8	
	comp=Z,48nm,1.2s						
YKA	Yellowknife Ar	84.14	23	P	P	21 22 11.8	-0.7
	comp=Z,8.8nm,0.8s,baz=325,slow=3.9,SNR=19						
YKA				LR	LR	22 03 25.5	
	comp=Z,217nm,18.6s,baz=0.0,slow=38						
KHC	Kasperske Hory	84.18	321	eP	P	21 22 12.2	-0.8
KHC				e		21 22 17.0	
KHC				MLR	MLR		
	comp=Z,1µm,13.8s						
KHC	Kasperske Hory	84.18	321	eP	P	21 22 12.2	-0.8
KHC				epP	PcP	21 22 17.0	+0.2
KHC				AMS	AMS	22 04 50.0	
	comp=Z,1µm,13.8s						
NEUB	Neuenburg	84.20	324	eP	P	21 22 12.8	-0.2
	baz=60,slow=5.0						
TANN	Tannenbergstha	84.21	323	eP	P	21 22 12.4	-0.7
	comp=Z,12nm,1.1s,baz=60,slow=5.0						
GEC2	GERESS Array S	84.25	321	IAmb	IAmb	21 22 22.4	
	comp=Z,24nm,1.1s						
GEC2	GERESS Array S	84.25	321	eP	P	21 22 12.8	-0.6
	baz=60,slow=5.0						
GERES	GERESS Array B	84.25	321	P	P	21 22 12.6	-0.9
	comp=Z,6.2nm,0.8s,baz=57,slow=4.9,SNR=49						
GERES				LR	LR	22 03 13.2	
	comp=Z,492nm,18.8s,baz=64,slow=38						
WERD	Werda	84.28	323	eP	P	21 22 13.1	-0.4
	comp=Z,13nm,1.0s,baz=60,slow=5.0						
NKC	Novy Kostel	84.30	322	eP	P	21 22 12.6	-1.0
NKC				e		21 22 18.3	
NKC				MLR	MLR		
	comp=Z,2µm,13.7s						
NKC	Novy Kostel	84.30	322	eP	P	21 22 12.6	-1.0
NKC				epP	sP	21 22 18.3	+0.2
NKC				AMS	AMS	22 04 40.0	
	comp=Z,2µm,13.7s						
GUNZ	Gunzen	84.31	323	eP	P	21 22 13.2	-0.4
	comp=Z,13nm,1.0s,baz=60,slow=5.0						
WERN	Wernitzgruen	84.32	323	eP	P	21 22 13.3	-0.3
	comp=Z,11nm,1.0s,baz=60,slow=5.0						
ASSE	Asse, Remlinge	84.34	325	eP	P	21 22 13.4	-0.2
	baz=60,slow=5.0						
MOA	Molln	84.38	320	eP	P	21 22 13.5	-0.5
	comp=Z,57nm,1.8s,SNR=23						
MOA				P	PP	21 25 29.7	+1.2
	comp=Z,11nm,1.5s						
SOKA	Soboth	84.46	318	eP	P	21 22 13.6	-0.9
	comp=Z,38nm,1.3s,SNR=11						
SOKA				P	PP	21 25 30.6	+1.3
	comp=Z,7.7nm,1.1s						
NRDL	Niedersach Rie	84.46	325	eP	P	21 22 14.0	-0.2
	baz=60,slow=5.0						
MOX	Moxa	84.57	323	eP	P	21 22 14.4	-0.5
	baz=60,slow=5.0						
WET	Wettzell	84.58	321	eP	P	21 22 14.7	-0.3
	comp=Z,22nm,1.3s,baz=60,slow=5.0						
MANZ	Manzenberg	84.61	322	eP	P	21 22 14.8	-0.3
	comp=Z,5.9nm,1.3s,baz=60,slow=5.0						
CLZ	Clausthal	84.65	325	eP	P	21 22 15.1	-0.2
	baz=60,slow=5.0						
ROTZ	Rotzenmuhle	84.67	322	eP	P	21 22 15.3	0.0
	comp=Z,5.9nm,1.2s,baz=60,slow=5.0						
OBKA	Obir	84.83	318	eP	P	21 22 15.1	-1.3
	comp=Z,24nm,1.5s						
BOJS	Bojanci	84.86	317	i P	P	21 22 15.6	-0.8
	comp=Z,272nm,2.6s						
KIBK	Kibwezi	85.01	265	P	P	21 22 16.3	-1.6
KIBK	Kibwezi	85.01	265	P	P	21 22 19.2	+1.4
	SNR=20						
GTTG	Gottingen	85.02	324	eP	P	21 22 17.1	0.0
	baz=60,slow=5.0						
LJU	Ljubljana	85.06	318	eP	P	21 22 16.6	-0.9
	comp=Z,218nm,1.9s						
GRA1	Grafenberg Arr	85.26	322	P	P	21 22 15.6	-2.8
GRF	Grafenberg Arr	85.26	322	P	P	21 22 15.6	-2.8
GRF				pmax	pmax		
	comp=Z,79nm,1.4s						
GRF				MLR	MLR		
	comp=Z,1µm,19.0s						
GRF	Grafenberg Arr	85.26	322	eP	P	21 22 18.1	-0.3
	comp=Z,18nm,1.0s,baz=60,slow=5.0						
GRFO	Grafenberg	85.26	322	P	P	21 22 18.4	0.0
GRFO				pmax	pmax		
	comp=Z,78nm,1.4s						
GRFO				MLR	MLR		
	comp=Z,1µm,18.0s						
GRFO	Grafenberg	85.26	322	P	P	21 22 18.4	0.0
KMBO	Kilima Mbogo	85.27	267	P	P	21 22 19.2	-0.1
	comp=Z,56nm,1.0s,baz=45,slow=6.4,SNR=102						
KMBO				LR	LR	21 58 49.7	
	comp=Z,306nm,20.8s,baz=89,slow=35						
KMBO	Kilima Mbogo	85.27	267	P	P	21 22 20.1	+0.7
KMBO	Kilima Mbogo	85.27	267	P	P	21 22 18.8	-0.6
LODK	Lodwar	85.28	272	P	P	21 22 18.5	-0.7
LODK				IAmb	IAmb	21 22 21.9	
	comp=Z,56nm,1.1s						
LODK				IAMs_20	IAMs_20	22 00 29.4	
	comp=Z,557nm,19.0s						
LODK	Lodwar	85.28	272	P	P	21 22 20.4	+1.2
	SNR=28						
KBA	Koelnbreinsper	85.30	319	eP	P	21 22 17.5	-1.3
	comp=Z,15nm,1.1s						
KBA				P	PP	21 25 31.5	-4.6
	comp=Z,7.6nm,1.1s						
RJOB	Jochberg	85.31	320	eP	P	21 22 18.2	-0.5
	baz=60,slow=5.0						
MYKA	Terra Mystica	85.33	319	eP	P	21 22 16.9	-1.9
	comp=Z,21nm,2.1s						
VOI	Vohitsoka	85.34	244	P	P	21 22 19.5	+0.2
VOI				IAmb	IAmb	21 22 19.7	
	comp=Z,34nm,1.2s						
VOI	Vohitsoka	85.34	244	P	P	21 22 19.8	+0.5
	SNR=6.5						
VOI	Vohitsoka	85.34	244	P	P	21 22 20.4	+1.1
UBBA	Unterbreizbach	85.37	324	eP	P	21 22 18.2	-0.5
	baz=60,slow=5.0						
ZOU	Zoufplan	85.77	319	IAmb	IAmb	21 22 20.9	
	comp=Z,34nm,1.4s						
IBBN	Ibbenburen	85.79	326	eP	P	21 22 20.8	-0.1
	comp=Z,18nm,0.8s,baz=60,slow=5.0						
ABTA	Abfaltersbach	85.95	319	eP	P	21 22 20.0	-2.0
	comp=Z,14nm,1.3s,SNR=5.9						
FUR	Furstenfeldbru	85.99	321	eP	P	21 22 21.8	-0.3
	comp=Z,61nm,1.3s,baz=60,slow=5.0						
STAL	STALIGIAL	86.07	319	IAmb	IAmb	21 22 33.7	
	comp=Z,39nm,1.2s						
WATA	Walderalm	86.22	320	eP	P	21 22 21.7	-1.7
	comp=Z,20nm,1.6s,SNR=6.8						
WATA				eP	PP	21 25 45.5	+1.9
	comp=Z,14nm,1.2s						
WTTA	Wattenberg	86.22	320	eP	P	21 22 21.8	-1.7
	comp=Z,24nm,1.5s,SNR=12						
WTTA				eP	PP	21 25 45.7	+2.1
	comp=Z,18nm,1.2s						
MOTA	Moosalm	86.50	320	eP	P	21 22 23.1	-1.7
	comp=Z,13nm,1.4s						
MOTA				eP	PP	21 25 47.4	+1.6
	comp=Z,12nm,1.7s						
SQTA	Sankt Quirin	86.50	320	eP	P	21 22 23.4	-1.4
	comp=Z,20nm,1.4s,SNR=6.6						
SQTA				eP	PP	21 25 47.9	+2.1
	comp=Z,13nm,1.2s						
BUG	Bochum--Univer	86.51	325	eP	P	21 22 24.0	-0.5
	comp=Z,47nm,1.3s,baz=60,slow=5.0						
TNS	Taunus Mts	86.53	324	eP	P	21 22 24.3	-0.4
	comp=Z,29nm,1.3s,baz=60,slow=5.0						
RETA	Reutte	86.63	321	eP	P	21 22 28.5	+3.2
	comp=Z,12nm,1.7s						
RETA				eP	PP	21 25 45.4	-1.4
	comp=Z,9.9nm,1.3s						
TIP	Timpagrande	86.73	311	IAmb	IAmb	21 22 38.2	
	comp=Z,66nm,1.4s						
CTI	Castel Tesino	86.82	319	IAmb	IAmb	21 22 26.1	
	comp=Z,29nm,1.4s						
FETA	Feichten	86.88	320	eP	P	21 22 25.3	-1.3
	comp=Z,13nm,1.3s,SNR=5.8						
UBR	Ueberruh	86.91	321	eP	P	21 22 25.7	-0.9
	comp=Z,9.9nm,1.1s,baz=60,slow=5.0						
AHRW	Bad Neuenahr-A	87.10	324	eP	P	21 22 27.1	-0.3
	baz=60,slow=5.0						
DAVA	Damuels	87.25	321	eP	P	21 22 27.3	-1.1
	comp=Z,9.7nm,1.2s						
DAVA				eP	PP	21 25 49.7	-2.2
	comp=Z,8.4nm,1.4s						
ICESG	Greenland Ices	87.45	353	i P	P	21 22 27.7	-1.5
ICESG				IAmb	IAmb	21 22 28.4	
	comp=Z,82nm,1.3s						
BTNL	Ternell	87.58	325	dP	P	21 22 29.1	-0.7
BFO	Black Forest	87.59	322	P	P	21 22 29.0	-0.9
BFO				pmax	pmax		
	comp=Z,25nm,1.5s						
BFO				MLR	MLR		
	comp=Z,2µm,21.0s						
BFO	Black Forest	87.59	322	P	P	21 22 29.0	-0.9
BFO	Black Forest	87.59	322	eP	P	21 22 29.2	-0.7
	baz=60,slow=5.0						
MEM	Membach	87.63	325	dP	P	21 22 29.3	-0.7
BEBN	Eben Emael	87.70	325	dP	P	21 22 29.1	-1.2
SALO	Salr	87.71	319	IAmb	IAmb	21 22 30.9	
	comp=Z,49nm,1.5s						
BHOU	Houvegnez	87.78	325	dP	P	21 22 29.8	-0.9
TUE	Stuetta	87.98	320	IAmb	IAmb	21 22 32.6	
	comp=Z,50nm,1.4s						
LLLB	Lillooet	88.06	35	IAmb	IAmb	21 22 35.1	
	comp=Z,30nm,1.1s						
WLF	Walferdange	88.08	324	dP	P	21 22 31.3	-0.9
	comp=Z,16nm,1.5s						
WLF	Walferdange	88.08	324	eP	P	21 22 31.8	-0.4
	comp=Z,32nm,1.2s,baz=60,slow=5.0						
BCLA	Clavier	88.11	325	dP	P	21 22 31.1	-1.2
BGES	Gesves	88.25	325	dP	P	21 22 31.4	-1.5
ECH	Echery	88.32	322	IAMs_20	IAMs_20	22 03 23.5	
	comp=Z,648nm,19.0s						
OSSC	Osservatorio P	88.32	317	IAmb	IAmb	21 22 33.7	
	comp=Z,29nm,1.3s						
BMRD	Maredsous	88.46	325	dP	P	21 22 33.1	-0.8
SNF	Seneffe	88.60	325	dP	P	21 22 33.6	-0.9
DOU	Dourbes	88.67	325	dP	P	21 22 33.4	-1.5
	comp=Z,6.9nm,1.4s						
D03D	Eldon	89.11	38	P	P	21 22 38.4	+1.3
	baz=304						
B06A	Marblemount	89.45	36	IAmb	IAmb	21 22 40.1	
	comp=Z,35nm,1.1s						
DY2G	Dye2	90.61	355	i P	P	21 22 42.6	-1.4
DY2G				IAmb	IAmb	21 22 44.5	
	comp=Z,166nm,1.6s						
EDM	Edmonton	90.66	30	IAmb	IAmb	21 22 45.4	
	comp=Z,28nm,0.9s						
B08A	Colville Reser	90.71	36	IAmb	IAmb	21 22 46.1	
	comp=Z,28nm,1.1s						
MBAR	Mbarara	91.08	270	ceP	P	21 22 47.8	+0.7
MBAR	Mbarara	91.08	270	P	P	21 22 46.5	-0.6
MBAR				IAmb	IAmb	21 22 48.7	
	comp=Z,34nm,1.4s						
MBAR	Mbarara	91.08	270	IAMs_20	IAMs_20	22 02 40.2	
	comp=Z,596nm,21.0s						
CLF	Chambon-Foret	91.12	324	IAmb	IAmb	21 22 46.3	
	comp=Z,42nm,1.5s						
E07A	Sunnyside	91.48	37	IAmb	IAmb	21 22 50.1	
	comp=Z,36nm,1.3s						
HAWA	Hanford	91.76	37	IAmb	IAmb	21 22 50.4	
	comp=Z,32nm,1.3s						
NEW	Newport	91.95	35	P	P	21 22 49.6	-0.7
	comp=Z,10nm,1.0s,baz=298,slow=3.3,SNR=13						
NEW				PP	PP	21 26 31.2	+2.2
	comp=Z,4.1nm,0.9s,baz=283,slow=4.1,SNR=3.2						
NEW	Newport	91.95	35	P	P	21 22 50.7	+0.3
	baz=308						
L04D	Klamath Falls	92.52	42	P	P	21 22 53.5	+0.3
	baz=304						
YBH	Yreka Blue Hor	92.53	42	P	P	21 22 53.1	-0.1
	comp=Z,3.4nm,0.8s,baz=272,slow=5.8,SNR=4.3						
YBH				PP	PP	21 26 40.1	+6.2
	comp=Z,5.7nm,1.1s,baz=297,slow=4.1,SNR=3.8						
M02C	Callahan	92.63	43	P	P	21 22 53.2	-0.5
	baz=304						
M04C	Macdoel	93.05	42	P	P	21 22 56.0	+0.3
	baz=304						
O02D	Mt. Diablo Mer	93.34	44	P	P	21 22 57.6	+0.7
	baz=304						
KEST	Kesra	93.55	311	P	P	21 22 57.3	-0.7
	comp=Z,16nm,1.1s,baz=11,slow=6.6,SNR=6.0						
KEST				LR	LR	22 15 19.7	
	comp=Z,352nm,18.1s,baz=324,slow=42						
KEST	Kesra	93.55	311	IAmb	IAmb	21 22 59.0	
	comp=Z,35nm,1.2s						
FFC	Flin Flon	94.29	24	P	P	21 22 59.7	-1.2
FFC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
FFC	Flin Flon	94.29	24	P	P	21 22 59.7	-1.2
MSO	Missoula	94.53	35	IAmb	IAmb	21 23 03.0	
	comp=Z,20nm,1.4s						
MSO				IAMs_20	IAMs_20	22 04 40.8	
	comp=Z,633nm,18.0s						
MSO	Missoula	94.53	35	P	P	21 23 02.5	+0.2
	baz=310						
BEKR	Beckworth	95.06	43	P	P	21 23 04.5	-0.5
PPT	Papeete	95.52	107	LR	LR	21 57 19.9	
	comp=Z,155nm,21.4s,baz=245,slow=30						
PPT2	Papeete2	95.53	107	eS	S	21 34 26.7	+2.4
	comp=Z,511nm,29.0s						
PPT2	Papeete2	95.53	107	eLR	LR	21 53 55.0	
	comp=Z,702nm,30.2s						
CMB	Columbia Colle	96.09	45	P	P	21 23 07.7	-1.8
CMB				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CMB	Columbia Colle	96.09	45	P	P	21 23 07.7	-1.8
HLID	Hailey	96.36	37	P	P	21 23 11.5	+0.6
	baz=310						
KVN	Kaiserville	96.95	43	P	P	21 23 14.1	+0.5
KVN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KVN	Kaiserville	96.95	43	P	P	21 23 14.1	+0.5
NVAR	Mina Array Bea	97.19	43	P	P	21 23 14.7	-0.1
	comp=Z,0.3nm,0.4s,baz=289,slow=4.4,SNR=6.3						
LSZ	Lusaka	98.89	257	P	P	21 23 21.8	-0.8
LSZ				pmax	pmax		
	comp=Z,29nm,1.2s						
LSZ	Lusaka	98.89	257	P	P	21 23 21.8	-0.8
PDAR	Pinedale Array	99.56	36	PP	PP	21 27 34.0	+5.7
	comp=Z,2.6nm,0.9s,baz=316,slow=4.1,SNR=6.1						
PDAR				LR	LR	22 09 31.7	
	comp=Z,147nm,21.1s,baz=348,slow=36						

ESDC	Sonseca Array	99.84	320	PP	PP	21 27 27.1	-3.3
	comp=Z,4.4nm,1.0s,baz=54,slow=6.3,SNR=5.2						
ESDC				LR	LR	22 13 38.9	
	comp=Z,342nm,18.7s,baz=340,slow=38						
MAW	Mawson	99.87	199	LR	LR	22 04 33.0	
	comp=Z,108nm,20.7s,baz=55,slow=33						
ULM	Lac du Bonnet	100.11	23	PP	PP	21 27 35.0	+3.2
	comp=Z,2.6nm,0.8s,baz=332,slow=3.9,SNR=3.3						
PFO	Pinyon Flats O	101.26	46	PP	PP	21 27 45.7	+4.2
	comp=Z,1.2nm,0.7s,baz=299,slow=4.7,SNR=3.6						
VNDA	Vanda	102.79	172	P	Pdif	21 23 38.2	-0.2
	comp=Z,0.8nm,0.8s,baz=311,slow=6.1,SNR=4.7						
U32A	Winter Ranch,	109.78	34	IAMs_20	IAMs_20	22 13 07.4	
	comp=Z,444nm,22.0s						
TORD	Torodi Ar. Bea	111.25	295	PKiKP	PKiKP	21 28 15.6	-0.8
	comp=Z,2.2nm,1.1s,baz=37,slow=1.4,SNR=6.1						
TORD				PP	PP	21 28 52.7	-2.9
	comp=Z,2.6nm,0.9s,baz=52,slow=4.6,SNR=6.6						
TORD				PKKPbc	PKKPbc	21 39 12.2	+0.8
	comp=Z,0.8nm,0.9s,baz=288,slow=3.0,SNR=4.7						
TXAR	Lajitas Array	112.31	42	PKiKP	PKiKP	21 28 17.4	-0.8
	comp=Z,0.6nm,0.6s,baz=215,slow=1.0,SNR=6.0						
TXAR				PP	PP	21 29 01.4	-1.1
	comp=Z,1.6nm,1.0s,baz=305,slow=4.4,SNR=5.4						
DBIC	Dimbokro	120.10	293	PKP	PKPdf	21 28 32.5	-0.9
	comp=Z,5.4nm,0.9s,baz=16,slow=2.4,SNR=5.9						
SNAA	Sanae	121.99	198	PKPdf	PKPdf	21 28 33.0	-2.3
VNA2	Neumayer--Watz	123.64	198	PKPdf	PKPdf	21 28 36.8	-1.6
VNA1	Neumayer--Stat	124.03	198	PKPdf	PKPdf	21 28 38.2	-0.9
VNA3	Neumayer Olymp	124.10	197	PKPdf	PKPdf	21 28 37.2	-2.1
HATO	Hato, Curacao	143.78	18	IAMs_20	IAMs_20	22 36 57.6	
	comp=Z,336nm,22.0s						
MOTC	Monteria, Cord	144.39	30	*e*P	PKPab	21 29 13.6	-3.3
LL6C	La Loma 6 Bece	144.58	26	*e*P	PKPab	21 29 15.5	-2.0
SMLC	San Martn de	145.08	28	*e*P	PKPbc	21 29 17.4	-1.9
UREC	San Jos de Ur	145.35	31	*e*P	PKPbc	21 29 17.4	-2.8
DBBC	Dabeiba	145.65	33	*e*P	PKPdf	21 29 19.3	-1.8
ZARC	Zaragoza, Cauc	145.89	30	*e*P	PKPdf	21 29 19.3	-2.1
OCAC	Ocana	145.91	27	*e*P	PKPdf	21 29 19.3	-2.3
SDV	Santo Domingo	146.36	22	PKPbc	PKPdf	21 29 22.1	-0.3
	comp=Z,60nm,0.8s,baz=317,slow=2.5,SNR=34						
SDV	Santo Domingo	146.36	22		PKPdf	21 29 20.7	-1.7
SDV	Santo Domingo	146.36	22	*e*P	PKPdf	21 29 21.2	-1.2
SDV	Santo Domingo	146.36	22	*e*P	PKPdf	21 29 20.8	-1.6
HELC	Santa Helena	146.70	32	*e*P	PKPdf	21 29 21.2	-2.0
PCRV	Puerto La Cruz	146.73	11	PKPbc	PKPdf	21 29 22.0	-0.8
	comp=Z,11nm,0.5s,baz=321,slow=6.6,SNR=6.2						
CBOC	Ciudad Bolivar	146.74	33	*e*P	PKPdf	21 29 21.2	-1.8
BRRC	Barranca, Sant	146.75	29	*e*P	PKPdf	21 29 23.1	+0.3
PAMC	Pamplona, Colo	146.98	27	*e*P	PKPdf	21 29 23.1	-0.7
USHA	Ushuaia	147.05	169	PKPbc	PKPdf	21 29 22.5	+0.4
	comp=Z,14nm,0.8s,baz=224,slow=6.8,SNR=5.8						
PLMC	San Jos del P	147.41	35	*e*P	PKPdf	21 29 22.2	-1.9
BARC	Barichara	147.44	28	*e*P	PKPdf	21 29 24.1	-0.2
NORC	Norcasia	147.57	32	*e*P	PKPdf	21 29 21.2	-3.1
GUY2C	Guyana, Caldas	147.62	33	*e*P	PKPdf	21 29 23.1	-1.8
SPBC	San Pablo de B	147.87	30	*e*P	PKPdf	21 29 24.1	-0.8
RUSC	La Rusia	148.11	29	*e*P	PKPdf	21 29 23.1	-2.6
YOTC	Yotoco, Valle	148.15	36	*e*P	PKPdf	21 29 23.1	-2.2
ANIL	Santa Ana	148.22	34	*e*P	PKPdf	21 29 26.9	+1.3
ROSC	El Rosal	148.46	32	PKPbc	PKPbc	21 29 28.1	-1.6
	comp=Z,9.1nm,0.4s,baz=104,slow=3.6,SNR=11						
ROSC	El Rosal	148.46	32	*e*P	PKPdf	21 29 25.0	-1.2
ORTC	Ortega, Tolima	148.80	34	*e*P	PKPdf	21 29 26.0	-0.3
CHIC	Chingaza	148.93	31	*e*P	PKPdf	21 29 25.0	-1.9
MARP	Paez Belalcaza	149.32	36	*e*P	PKPdf	21 29 25.0	-2.4
VILC	Villavicencio,	149.40	31	*e*P	PKPbc	21 29 29.8	-1.9
PCON	Cinco Dias	149.50	38	*e*P	PKPdf	21 29 28.9	+0.8
SOTA	Rioblanco	149.53	38	*e*P	PKPdf	21 29 28.9	+0.8
PAC1	Pacto, Paraso	149.69	44	*e*P	PKPdf	21 29 26.0	-1.9
GCUF	Volcan Galeras	149.84	40	*e*P	PKPdf	21 29 28.9	+0.3
OTAV	Otavalo	149.93	43	*e*P	PKPdf	21 29 28.9	+0.2
OTAV	Otavalo	149.93	43	*e*P	PKPdf	21 29 28.1	-0.6
TULM	Tulcn-Chalpat	149.97	42	*e*P	PKPbc	21 29 31.7	-1.9
PTGC	Puerto Gaitan,	150.04	28	*e*P	PKPdf	21 29 23.1	-5.1
MDP	Montagnes des	151.79	348	PKPbc	PKPbc	21 29 34.7	-2.6
	comp=Z,11nm,0.7s,baz=343,slow=4.0,SNR=8.1						
NBPV	Pedro Velho	152.50	303	*e*P	PKPdf	21 29 33.8	+1.9
TMAB	Tom-Au,PA,Br	157.46	332	*e*P	PKPdf	21 29 38.9	+0.2
PTGA	Pitinga	158.08	4	PKP	PKPdf	21 29 38.9	-0.6
	comp=Z,1.2nm,0.4s,baz=296,slow=0.4,SNR=4.9						
PTGA				PKPab	PKPab	21 30 11.0	-1.7
	comp=Z,8.7nm,0.8s,baz=17,slow=4.1,SNR=8.3						
PTGA	Pitinga	158.08	4		PKPab	21 30 11.2	-1.5
TBTG	Tabatinga, AM	158.44	33	*e*P	PKPdf	21 29 38.9	-1.0
PLCA	Paso Flores	159.29	153	PKPab	PKPab	21 30 16.2	-1.3
	comp=Z,2.2nm,0.7s,baz=258,slow=2.4,SNR=8.8						
CZSB	Cruzeiro do Su	159.67	45	*e*P	PKPdf	21 29 40.5	-0.9
GDU01	Guandu, BA	160.07	293	*e*P	PKPdf	21 29 41.0	-0.7
ITTB	Itaituba	161.58	352	*e*P	PKPdf	21 29 42.6	-0.9
SMTB	Santa Maria do	162.78	321	*e*P	PKPdf	21 29 43.8	-0.9
NPGB	Novo Progresso	164.15	349	*e*P	PKPdf	21 29 45.0	-1.0
TRQA	Tornquist	164.40	169	PKP2	PKPab	21 30 39.0	-0.8
TRQA	Tornquist	164.40	169	PKPab	PKPab	21 30 39.0	-0.8
ETMB	Extrema	165.11	32	*e*P	PKPdf	21 29 46.2	-0.6
SAML	Samuel	165.53	20	*e*P	PKPdf	21 29 46.8	-0.4
PEXB	Peixe	165.75	316	*e*P	PKPdf	21 29 46.9	-0.4
MAN01	Angra dos Reis	166.74	267	*e*P	PKPdf	21 29 49.5	+1.6
CLDB	Colider	167.97	348	*e*P	PKPdf	21 29 48.4	-0.6
BDFB	Brasilia	167.97	304	PKP	PKPdf	21 29 47.6	-1.4
	comp=Z,2.2nm,0.8s,baz=189,slow=5.4,SNR=3.6						
BDFB				PKPab	PKPab	21 30 55.3	-1.0
	comp=Z,7.4nm,0.8s,baz=88,slow=4.5,SNR=9.7						
BDFB	Brasilia	167.97	304	PKPab	PKPab	21 30 52.8	-3.6
PARB	Paraibuna	168.28	265	*e*P	PKPdf	21 29 50.4	+1.4
LPAZ	La Paz	168.77	57	PKP	PKPdf	21 29 50.5	+0.2
	comp=Z,8.5nm,1.2s,baz=22,slow=3.3,SNR=15						
LPAZ				PP	PP	21 34 49.5	0.0
	comp=Z,1.3nm,0.8s,baz=290,slow=2.2,SNR=3.9						
LPAZ	La Paz	168.77	57	PKIKP	PKPdf	21 29 47.7	-2.5
LPAZ	La Paz	168.77	57		PKPdf	21 29 47.7	-2.5
LPAZ	La Paz	168.77	57	*e*P	PKPdf	21 29 50.9	+0.6
IPMB	Ipameri, GO	169.40	295	*e*P	PKPdf	21 29 50.3	+0.4
VAO	Valinhos	169.51	266	*e*P	PKPdf	21 29 52.2	+2.4
VILB	Vilhena	170.12	11	*e*P	PKPdf	21 29 50.0	-0.4
LVC	Limon Verde	170.23	91	PKP	PKPdf	21 29 50.5	-0.1
	comp=Z,3.5nm,0.8s,baz=350,slow=12,SNR=3.3						
LVC	Limon Verde	170.23	91	PKIKP	PKPdf	21 29 48.6	-2.1
LVC	Limon Verde	170.23	91		PKPdf	21 29 48.6	-2.1
ARAG	Araguaiana, MT	170.69	317	*e*P	PKPdf	21 29 50.7	+0.1
BB19B	Bebedouro	170.75	278	*e*P	PKPdf	21 29 53.0	+2.4
CPSB	Cacapava Do Su	171.18	209	*e*P	PKPdf	21 29 52.8	+2.3
FRTB	Fartura	171.90	264	*e*P	PKPdf	21 29 53.4	+2.3
PTLB	Pontes e Lacer	172.72	6	*e*P	PKPdf	21 29 51.3	-0.2
SIV	San Ignacio	172.82	22	PKP	PKPdf	21 29 51.3	-0.3
	comp=Z,0.8nm,0.3s,baz=0.1,slow=1.7,SNR=11						
ITQB	Itaqui	172.91	192	*e*P	PKPdf	21 29 52.1	+0.8
PTGB	Pitanga	173.92	250	*e*P	PKPdf	21 29 54.0	+2.1
AQDB	Aquidauana	176.68	312		PKPdf	21 29 49.8	-2.9

TAP 01 21:37:35.2, 22°.77N×121°.58E, h15^{km}, ML2.2, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LDUT	Ludao	0.14	228	*i* P	Pb	21 37 39.3	-0.2
	baz=228						
LDUT				*i* S	Sb	21 37 42.2	-0.2
	baz=228						
EDH	Donghe	0.33	309	P	Pg	21 37 42.0	0.0
	baz=308						
EDH				*e*S	Sg	21 37 46.7	+0.1
	baz=308						
CHKT	Chengkung	0.39	329	P	Pg	21 37 43.1	+0.1
	baz=329						
LONT	Longtian	0.44	288	*e*P	Pb	21 37 44.5	-0.2
	baz=288						
LONT				*e*S	Sg	21 37 50.5	+0.5
	baz=288						
TWGBT	Beinan	0.47	276	*e*P	Pg	21 37 44.6	+0.1
	baz=276						
TWGBT				S	Sg	21 37 51.2	+0.4
	baz=276						
ECS	Chishang	0.47	314	*e*P	Pg	21 37 44.7	+0.2
	baz=314						
ECS				*e*S	Sg	21 37 51.4	+0.6
	baz=314						
TWG	Pinlang	0.47	277	*e*P	Pg	21 37 44.6	0.0
	baz=276						
TWG				S	Sg	21 37 51.2	+0.2
	baz=276						
FULB	Fuli	0.51	328	P	Pg	21 37 45.1	-0.1
	baz=328						
FULB				*e*S	Sg	21 37 52.2	+0.2
	baz=328						
ECBN	Changbin	0.56	348	*e*P	Pg	21 37 46.3	0.0
	baz=359						
ECL	Taimali	0.60	254	*e*P	Pg	21 37 46.1	-1.0
	baz=253						
EYUL	Yuli	0.63	337	*e*P	Pb	21 37 47.9	+0.1
	baz=348						
TWF1	Yuli	0.64	336	*e*P	Pb	21 37 48.0	-0.1
	baz=347						
ELDTW	Lidau	0.67	309	*e*P	Pg	21 37 47.1	-1.2
	baz=309						
YULB	Yu-li	0.68	337	*e*P	Pg	21 37 48.1	-0.3
	baz=347						
HGSD	Ruisui	0.74	349	*e*P	Pb	21 37 50.4	+0.7
	baz=348						
EAST	Anshuo	0.78	241	*e*P	Pg	21 37 49.0	-1.4
	baz=240						
STYH	Taoyuan	0.84	299	*e*P	Pg	21 37 50.6	-1.0
	baz=298						
STYT	Tauyuan	0.86	298	*e*P	Pg	21 37 50.8	-1.0
	baz=297						
SSD	Sandimen	0.88	269	*e*P	Pg	21 37 52.4	+0.2
	baz=258						
MASBT	Mashibuluo	0.89	260	*e*P	Pb	21 37 50.8	-1.5
	baz=251						
SLGT	Liugui	0.89	285	*e*P	Pb	21 37 52.0	-0.5
	baz=284						
SLIU	Shizi	0.91	233	*e*P	Pg	21 37 52.8	0.0
	baz=233						
EGFH	Guangfu	0.91	351	*e*P	Pb	21 37 52.6	-0.1
YUS	Yu-Shan	0.92	321	*e*P	Pn	21 37 53.9	-0.2
	baz=311						
SGST	Jiashian	0.97	289	*e*P	Pb	21 37 52.8	-1.0
	baz=295						
WTP	Ta-pu	1.01	298	*e*P	Pn	21 37 55.4	+0.4
	baz=298						
TPUB	Ta-pu	1.03	301	*e*P	Pb	21 37 54.5	-0.2
	baz=301						
ALS	Alishan	1.03	316	*e*P	Pn	21 37 56.1	+0.7
	baz=316						
CHN1	Nanshi	1.06	293	*e*P	Pb	21 37 55.4	+0.2
	baz=301						
CHN4	Tsaushan	1.08	303	*e*P	Pb	21 37 55.0	-0.6
	baz=302						
TWK	Hsinying	1.12	296	*e*P	Pb	21 37 56.4	0.0
	baz=296						
SSLB	Suanglung	1.17	331	*e*P	Pn	21 37 57.1	0.0
	baz=343						
CHN5	Tsauling	1.17	315	*e*P	Pg	21 37 57.7	-0.1
	baz=304						
TYC	Yuchr	1.31	330	*e*P	Pb	21 37 59.8	+0.2
	baz=339						
CHGB	Renai	1.34	344	*e*P	Pn	21 37 59.7	+0.1
	baz=356						
NACB	Ninganchiao	1.40	0	*e*P	Pb	21 38 00.8	-0.3
	baz=12						

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*JMA **01** 21:43:47.8±0.1, 22°.73N×121°.54E, h38^{km}, M3.3*
*TAP **01** 21:43:48.9, 22°.77N×121°.58E, h14^{km}, ML3.5, C*
ISC 01 21:43:48.2±1.0, 22°.75N±0°.02×121°.61E±0°.03, h19^{km}±3^{km}, n113, σ0^s.73/159, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LDUT	Ludao	0.15	239	*i* P	Pg	21 43 53.0	+0.5
	baz=229						
LDUT				*i* S	Sg	21 43 55.8	+0.3
	baz=229						
EDH	Donghe	0.36	308	*e*P	Pg	21 43 55.6	-0.2
	baz=309						
EDH				*e*S	Sg	21 44 00.5	-0.5
	baz=309						
CHKT	Chengkung	0.41	327	*i* P	Pg	21 43 56.7	0.0
	baz=329						
CHKT				S	Sg	21 44 02.3	-0.2
	baz=329						
TTN	Taitung	0.42	271	*e*P	Pg	21 43 56.8	-0.2
	baz=268						
TTN				*e*S	Sg	21 44 02.9	0.0
	baz=268						
LONT	Longtian	0.47	289	*e*P	Pb	21 43 57.9	+0.1
	baz=288						
LONT				*e*S	Sb	21 44 05.3	+0.9
	baz=288						
TWGBT	Beinan	0.49	278	*e*P	Pg	21 43 58.1	-0.1
	baz=276						
TWGBT				*i* S	Sb	21 44 04.9	-0.1
	baz=276						
ECS	Chishang	0.49	314	*e*P	Pb	21 43 58.5	+0.2
	baz=314						
ECS				*e*S	Sb	21 44 06.3	+1.2
	baz=314						
TWG	Pinlang	0.50	278	P	Pg	21 43 58.1	-0.2
	baz=276						
TWG				*i* S	Sg	21 44 04.9	-0.2
	baz=276						
FULB	Fuli	0.53	327	*e*P	Pb	21 43 58.6	-0.2
	baz=328						
FULB				*e*S	Sb	21 44 05.4	-0.7
	baz=328						
ECBN	Changbin	0.58	346	*e*P	Pg	21 43 59.8	0.0
	baz=358						
ECBN				*e*S	Sg	21 44 07.5	-0.1
	baz=358						
ECL	Taimali	0.62	256	*e*P	Pb	21 43 59.5	-0.9
	baz=254						
ECL				*e*S	Sb	21 44 07.3	-1.4
	baz=254						
EYUL	Yuli	0.65	336	*e*P	Pb	21 44 00.9	0.0
	baz=337						
EYUL				*e*S	Sg	21 44 10.3	+0.5
	baz=337						
TWF1	Yuli	0.66	335	*i* P	Pb	21 44 01.0	-0.1
	baz=336						
TWF1				*e*S	Sg	21 44 10.3	+0.1
	baz=336						
ELDTW	Lidau	0.70	309	*e*P	Pb	21 44 00.6	-1.1
	baz=309						
YULB	Yu-li	0.70	336	*e*P	Pb	21 44 01.5	-0.2
	baz=349						
YULB				*e*S	Sb	21 44 10.8	-0.1
	baz=349						
LAY	Lan-yu	0.71	184	*e*P	Pb	21 44 01.3	-0.6
	baz=182						
HGSD	Ruisui	0.76	347	*e*P	Pn	21 44 03.9	+0.1
	baz=348						
TAW	Tawu	0.77	239	*e*P	Pb	21 44 03.0	+0.2
	baz=237						
EAST	Anshuo	0.79	243	*e*P	Pb	21 44 02.3	-1.0
	baz=241						
EHY	Hungye	0.80	341	*e*P	Pb	21 44 03.3	-0.1
	baz=351						
EHY				S	Sb	21 44 13.9	+0.1
	baz=351						
STYH	Taoyuan	0.87	299	P	Pb	21 44 04.2	-0.4
	baz=298						
STYT	Tauyuan	0.88	298	*e*P	Pb	21 44 04.3	-0.6
	baz=297						
SSD	Sandimen	0.90	270	*e*P	Pb	21 44 03.9	-1.2
	baz=258						
MASBT	Mashibuluo	0.91	261	*e*P	Pb	21 44 04.2	-1.1
	baz=250						
SLIU	Shizi	0.92	235	*e*P	Pb	21 44 04.2	-1.3
	baz=233						
SLGT	Liugui	0.92	285	*e*P	Pb	21 44 05.0	-0.5
	baz=285						
EGFH	Guangfu	0.93	350	*e*P	Pg	21 44 06.3	0.0
TEGC	Jichi Village	0.96	356	*e*P	Pg	21 44 07.0	+0.1
	baz=8.0						
SCZT	Fangliau	0.99	248	*e*P	Pb	21 44 05.6	-1.0
	baz=246						
SSPT	Xinbi	1.00	255	*e*P	Pb	21 44 06.4	-0.4
	baz=246						
SGST	Jiashian	1.00	289	*e*P	Pb	21 44 06.3	-0.6
	baz=295						
WTP	Ta-pu	1.04	299	P	Pn	21 44 07.7	0.0
	baz=305						
WTP				*e*S	Sg	21 44 23.6	+1.5
	baz=305						
TPUB	Ta-pu	1.05	301	*e*P	Pn	21 44 08.0	+0.1
	baz=308						
TPUB				*e*S	Sg	21 44 22.2	-0.3
	baz=308						
ALS	Alishan	1.06	316	*e*P	Pb	21 44 07.7	-0.3
	baz=316						
ESL	Shilin	1.07	351	*e*P	Pb	21 44 07.6	-0.5
	baz=337						
TSEB	Hengchuen, Pin	1.07	218	*e*P	Pg	21 44 10.0	+1.0
	baz=219						
CHN1	Nanshi	1.08	294	*e*P	Pn	21 44 08.7	+0.3
	baz=301						
TWKBT	Hengchun	1.09	223	*e*P	Pg	21 44 09.6	+0.2
	baz=222						
HEN	Hengchun	1.09	227	*e*P	Pg	21 44 09.4	0.0
	baz=226						
TWK1	Hengchun	1.09	223	*e*P	Pg	21 44 09.6	+0.2
	baz=221						
TWM1	Shoushan	1.09	274	*e*P	Pg	21 44 09.5	+0.1
	baz=273						
CHN4	Tsaushan	1.11	303	*e*P	Pn	21 44 07.7	-1.0
	baz=309						
CHN4				*e*S	Sg	21 44 23.7	-0.6
	baz=309						
SNST	Tainan City	1.12	295	*e*P	Pb	21 44 09.3	+0.3
	baz=294						
SNST				*e*S	Sg	21 44 25.3	+0.6
	baz=294						
TWK	Hsinying	1.15	297	*e*P	Pb	21 44 09.5	0.0
	baz=296						
TWK				*e*S	Sg	21 44 25.1	-0.6
	baz=296						
SSLB	Suanglung	1.19	330	*e*P	Pn	21 44 09.7	-0.2
	baz=342						
CHN5	Tsauling	1.20	315	*e*P	Pg	21 44 11.0	-0.5
	baz=314						
CHN5				*e*S	Sg	21 44 27.2	0.0
	baz=314						
WLCH	Liuqiu	1.20	251	*e*P	Pg	21 44 12.6	+1.2
	baz=232						
ETM	Tongmen	1.21	355	*e*P	Pn	21 44 09.4	-0.7
	baz=340						
TWP	Hsiaoliuchiu	1.22	251	*e*P	Pg	21 44 11.7	-0.1
	baz=232						
OWD	Renai	1.26	342	*e*P	Pn	21 44 10.5	-0.4
	baz=356						
CHN2	Minshiung	1.30	307	*e*P	Pb	21 44 12.0	0.0
	baz=306						
SMLT	Sun Moon Lake	1.30	330	*e*P	Pb	21 44 12.3	+0.2
	baz=342						
SMLT				*e*S	Sg	21 44 29.7	-0.8
	baz=342						
CHY	Chiayi	1.32	305	*e*P	Pb	21 44 12.7	+0.4
	baz=303						
CHY				*e*S	Sg	21 44 30.1	-0.8
	baz=303						
TWD	Chiawan	1.32	360	*e*P	Pn	21 44 10.8	-0.8
	baz=11						
WGK	Gukeng	1.34	314	*e*P	Pg	21 44 13.5	-0.6
	baz=314						
WJS	Zhushan	1.34	323	*e*P	Pb	21 44 13.3	+0.7
	baz=339						
WJS				*e*S	Sg	21 44 30.7	-0.8
	baz=339						
TYC	Yuchr	1.34	329	*e*P	Pb	21 44 13.1	+0.5
	baz=341						
TYC				*e*S	Sg	21 44 30.4	-1.1
	baz=341						
WDLH	Douliu	1.36	314	*e*P	Pg	21 44 13.9	-0.5
	baz=312						
WDLH				*e*S	Sg	21 44 31.6	-0.5
	baz=312						
CHGB	Renai	1.36	343	*e*P	Pn	21 44 12.6	+0.2
	baz=355						
ICHU	Yijhu	1.36	297	*e*P	Pb	21 44 13.2	+0.1
	baz=295						
ICHU				*e*S	Sb	21 44 30.8	+0.7
	baz=295						
WPL	Puli Township	1.39	335	*e*P	Pb	21 44 13.7	+0.1
	baz=349						
ETL	Fush Village	1.40	1	*e*P	Pb	21 44 13.9	+0.2
	baz=14						
WNT	Mingjian	1.41	323	*e*P	Pb	21 44 14.3	+0.5
	baz=322						
WNT				*e*S	Sb	21 44 32.3	+1.0
	baz=322						
CHN8	Yiju	1.42	295	*e*P	Pb	21 44 14.1	+0.2
	baz=294						
CHN8				*e*S	Sb	21 44 32.5	+0.9
	baz=294						
NACB	Ninganchiao	1.42	360	*e*P	Pn	21 44 12.2	-0.7
	baz=13						
DPDB	Guoxing	1.42	334	*e*P	Pb	21 44 14.2	+0.1
	baz=345						
DPDB				*e*S	Sb	21 44 32.5	+0.6
	baz=345						
WHF	Hehuan Shan	1.42	347	*e*P	Pn	21 44 13.9	+0.5
	baz=348						
WNT1	Nantou City	1.43	324	*e*P	Pb	21 44 14.6	+0.4
	baz=323						
WNT1				*e*S	Sb	21 44 33.0	+1.0
	baz=323						
WCS	Beigang Elemen	1.45	334	*e*P	Pb	21 44 14.7	+0.1
	baz=347						
ETLH	Xiulin Townshi	1.45	355	*e*P	Pb	21 44 14.7	0.0
	baz=356						
WTK	Tuku	1.46	310	*e*P	Pb	21 44 14.8	+0.1
	baz=309						
WTK				*e*S	Sb	21 44 33.6	+0.7
	baz=309						
FUSS	Fushou	1.53	347	*e*P	Pb	21 44 16.0	0.0
	baz=347						
FUSS				*e*S	Sn	21 44 33.2	-0.9
	baz=347						
WWF	Wufeng	1.53	327	*e*P	Pb	21 44 16.0	+0.1
	baz=327						
TWT	Tachien	1.55	345	*e*P	Pb	21 44 16.0	-0.3
	baz=345						
WSF	Szhu	1.55	305	*e*P	Pb	21 44 16.1	-0.2
	baz=304						
TDCB	Techi	1.55	345	*e*P	Pb	21 44 16.2	-0.1
	baz=344						
WRL	Guolierlin Hig	1.61	316	*e*P	Pb	21 44 16.7	-0.5
	baz=314						
WRL				*e*S	Sb	21 44 37.4	+0.3
	baz=314						
TCU	Taichung	1.63	329	*e*P	Pb	21 44 18.2	+0.6
	baz=328						
WHP	Taichung City	1.64	338	*e*P	Pb	21 44 18.3	+0.5
	baz=345						
ENA	Nanau	1.67	4	*e*P	Pb	21 44 18.2	-0.2
	baz=16						
NNSB	Datong	1.68	353	*e*P	Pb	21 44 18.2	-0.4
	baz=7.0						
EWUT	Wuta	1.69	5	*e*P	Pb	21 44 18.1	-0.6
	baz=16						
TWQ1	Liyutan	1.77	334	*e*P	Pb	21 44 19.6	-0.3
	baz=334						
WDJ	Dajia District	1.82	331	*e*P	Pb	21 44 20.7	-0.2
	baz=330						
NSY	Sanyi	1.83	335	*e*P	Pb	21 44 20.4	-0.7
	baz=335						
TWC	Suao	1.86	7	*e*P	Pb	21 44 21.0	-0.6
	baz=7.0						
NDS	Dongshan	1.88	3	*e*P	Pb	21 44 20.9	-0.9
	baz=15						
ENTT	Nioudou	1.88	359	*e*P	Pb	21 44 20.9	-1.0
	baz=359						
YHNB	Yeheng	1.92	354	*e*P	Pn	21 44 21.3	+1.4
	baz=7.0						
NMLH	Miaoli	1.93	337	*e*P	Pb	21 44 21.7	-1.0
	baz=337						
NSK	Sanguang	1.93	353	*e*P	Pn	21 44 21.4	+1.3
	baz=6.0						
NSTT	Nanjuang	1.95	344	*e*P	Pb	21 44 22.0	-1.1
	baz=343						
NSTT				*e*S	Sb	21 44 46.3	-0.8
	baz=343						
TWE	Neicheng	1.96	2	*e*P	Pb	21 44 22.3	-1.0
	baz=2.0						
LIOB	Emei	1.96	344	*e*P	Pb	21 44 22.3	-1.0
	baz=344						
NWLT	Wulai	2.02	357	*e*P	Pn	21 44 22.7	+1.5
	baz=357						
PHUB	P'eng-hu	2.02	292	*e*P	Pn	21 44 22.0	+0.9
	baz=291						
PNG	Penghu	2.06	294	*e*P	Pn	21 44 21.9	+0.3
	baz=292						
JYNG	Yonagunijimaku	2.09	36	P	Pn	21 44 21.6	-0.5
JYNG				S	Sn	21 44 47.5	-0.1
YOJ	Yonaguni jima	2.13	37	*e*P	Pn	21 44 24.1	+1.3
	baz=50						
YOJ				*e*S	Sn	21 44 50.1	+1.3
	baz=50						
YOJ	Yonaguni jima	2.13	37	P	Pn	21 44 23.7	+0.9

YOJ				S	**Sn**	**21 44 49.5**	**+0.8**
TIPB	**Shuangxi**	**2.22**	**5**	*e*P	**Pb**	**21 44 25.9**	**-1.7**
	baz=353						
TIPB				*e*S	**Sn**	**21 44 52.6**	**+1.7**
	baz=353						
NWF	**Wu-fen Shan**	**2.31**	**4**	*e*P	**Pb**	**21 44 27.4**	**-1.9**
	baz=353						
WFSB	**Wu-fen Shan**	**2.31**	**4**	*e*P	**Pn**	**21 44 27.3**	**+2.0**
	baz=4.0						
HATJ	**Hateruma jima**	**2.40**	**57**	S	**Sn**	**21 44 54.9**	**-0.4**
IRIF	**Iriomote-Funau**	**2.51**	**51**	P	**Pn**	**21 44 28.1**	**+0.2**
IRIF				S	**Sn**	**21 44 58.3**	**+0.4**
JKRS	**Kuro-shima**	**2.66**	**56**	P	**Pn**	**21 44 30.8**	**+0.9**
JKRS				S	**Sn**	**21 45 01.6**	**0.0**
JIJ	**Ishigaki jima**	**2.83**	**55**	P	**Pn**	**21 44 33.1**	**+0.8**
JIJ				S	**Sn**	**21 45 05.1**	**-0.7**
JISG	**Ishigakijimahi**	**3.08**	**53**	P	**Pn**	**21 44 36.1**	**+0.3**
JISG				S	**Sn**	**21 45 10.4**	**-1.7**
JTJ	**Tarama**	**3.40**	**56**	P	**Pn**	**21 44 41.1**	**+0.9**
JTJ				*e*S	**Sn**	**21 45 19.6**	**-0.5**
JIRB	**Irabujima**	**3.87**	**57**	P	**Pn**	**21 44 47.5**	**+0.9**
JIRB				S	**Sn**	**21 45 30.6**	**-0.8**
JMJ2	**Miyako jima3**	**3.94**	**59**	P	**Pn**	**21 44 48.3**	**+0.7**
JMJ2				S	**Sn**	**21 45 32.8**	**-0.6**
JIKM	**Ikemajima**	**3.97**	**56**	P	**Pn**	**21 44 49.2**	**+1.2**
JOGS	**Gusukube**	**4.01**	**59**	P	**Pn**	**21 44 49.8**	**+1.2**

IDC 01 22:03:24.8±58.0**, 17°.96S**×**176°.95W, h0**^{km}**, mb3.9**/3**, mb1 4.0**/3**, mb1mx3.7**/29**, mbtmp3.9**/3**, Error ellipse: s-maj=1079.0km s-min=172.7km az=80.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**39.82**	**242**	P	P	22 11 00.6	+0.5
	0.8nm,0.4s,baz=94,slow=14,SNR=1.5						
WRA	**Warramunga Arr**	**45.99**	**259**	P	P	22 11 49.8	-0.4
	0.4nm,0.4s,baz=98,slow=7.5,SNR=12						
ASAR	**Alice Springs**	**46.11**	**254**	P	P	22 11 51.0	-0.2
	0.8nm,0.4s,baz=89,slow=7.9,SNR=17						

JMA 01 22:16:53.8±0.2**, 38°.32N**×**144°.51E, h38**^{km}**, M3.5, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**2.35**	**290**	P	Pn	22 17 31.2	+1.4
OFUJ				*e*S	Sn	22 17 59.9	+2.5
JIKH	**Ishinomakikobu**	**2.40**	**271**	P	Pn	22 17 32.0	+1.6
JIKH				*e*S	Sn	22 18 00.6	+2.1
JKMT	**Kesennumamotoy**	**2.43**	**283**	P	Pn	22 17 32.6	+1.7
JKMT				*e*S	Sn	22 18 01.9	+2.5
MIYJ	**Miyakonagasawa**	**2.44**	**302**	P	Pn	22 17 32.1	+1.0
MIYJ				*e*S	Sn	22 18 00.2	+0.5
JIO	**Ouri**	**2.49**	**274**	P	Pn	22 17 33.3	+1.6
JIO				S	Sn	22 18 02.3	+1.5
JMK	**Ichinoseki**	**2.65**	**285**	P	Pn	22 17 35.9	+1.9
JMK				*e*S	Sn	22 18 07.7	+2.8
JOM	**Ohasama**	**2.76**	**296**	P	Pn	22 17 37.4	+1.9
JOM				S	Sn	22 18 09.7	+2.1
JANG	**Nango**	**3.10**	**312**	P	Pn	22 17 42.1	+2.0
JANG				*e*S	Sn	22 18 18.1	+2.2
JYK	**Kaneyama**	**3.31**	**282**	P	Pn	22 17 45.4	+2.4
JYK				*e*S	Sn	22 18 24.0	+3.0
JFT	**Otama**	**3.40**	**258**	P	Pn	22 17 46.9	+2.7
JFT				S	Sn	22 18 26.5	+3.2
JOT	**Ohata**	**4.06**	**320**	P	Pn	22 17 56.0	+2.8
JCH	**Churui**	**4.38**	**349**	P	Pn	22 17 57.6	-0.1
JCH				*e*S	Sn	22 18 45.3	-2.1
JKB	**Kayabe**	**4.45**	**324**	P	Pn	22 18 01.2	+2.5
JKB				*e*S	Sn	22 18 50.6	+1.4
JRY	**Ryogami san**	**5.03**	**245**	P	Pn	22 18 08.3	+1.5
JRY				*e*S	Sn	22 19 04.2	+0.5
NEM2	**Nemuro 2**	**5.13**	**10**	P	Pn	22 18 04.6	-3.3
NEM2				*e*S	Sn	22 18 59.3	-6.5
JTKR	**Abashiri--Toko**	**5.66**	**356**	P	Pn	22 18 14.1	-1.2
JTKR				*e*S	Sn	22 19 14.3	-4.7

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*NEIC **01** 22:20:30.7±0.8, 44°.24N±0°.04×67°.93W±0°.07, h5^{km}±2^{km}, mb_Lg2.4/5, Error ellipse: s-maj=8.9km s-min=5.8km az=126.0*

*OTT **01** 22:20:32.3±0.1, 44°.27N×67°.96W, h5^{km}, MN2.9/11, Maine, U.S. 114km southwest from St. Stephen, Nb Northern Appalachians Seismic Zone.*

ISC 01 22:20:30.5±1.5**, 44°.25N**±0°.05×**67°.98W**±0°.03**, h3**^{km}±11^{km}**, n45, σ0**^{s}**.76**/61**, Maine**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EMMW	**East Machias**	**0.59**	**39**		**Pg**	**22 20 42.1**	**+0.3**
EMMW				Sg	**Sg**	**22 20 50.0**	**+0.5**
G65A	**Princeton**	**0.99**	**17**		**Pg**	**22 20 49.5**	**0.0**
G65A				Sg	**Sg**	**22 21 02.5**	**+0.1**
GGN	**Saint George**	**1.19**	**43**		**Pb**	**22 20 52.8**	**-0.8**
GGN				Sg	**Sg**	**22 21 08.6**	**-0.1**
GGN	**Saint George**	**1.19**	**43**	PG	**Pb**	**22 20 52.8**	**-0.8**
GGN				SG	**Sg**	**22 21 08.3**	**-0.3**
GGN				SG	**Sb**	**22 21 08.7**	**-0.7**
GGN				Trac		22 21 11.4	
	comp=Z,123nm,0.2s						
WVL	**Waterville**	**1.24**	**285**		**Pn**	**22 20 54.5**	**-0.2**
PKME	**Peaks-Kenny Pk**	**1.38**	**318**		**Pn**	**22 20 56.8**	**+0.2**
PKME	**Peaks-Kenny Pk**	**1.38**	**318**	PG	**Pn**	**22 20 57.0**	**+0.4**
PKME				SG	**Sb**	**22 21 15.2**	**+0.3**
PKME				Trac		22 21 15.9	
	comp=Z,45nm,0.1s						
F64A	**Sherman**	**1.63**	**351**	Pn	**Pn**	**22 20 59.8**	**-0.3**
F63A	**Nahmakanta, Br**	**1.65**	**332**	Pn	**Pn**	**22 21 00.8**	**+0.4**
F63A				IAmb_Lg		22 21 26.2	
	comp=Z,9.7nm,0.9s						
HANN	**Hanwell**	**1.84**	**27**	PN	**Pb**	**22 21 05.2**	**+0.4**
HANN				SN	**Sb**	**22 21 27.8**	**-0.4**
HANN				Trac		22 21 33.2	
	comp=Z,6.1nm,0.0s						
I63A	**Otisfield**	**1.88**	**265**	Pn	**Pn**	**22 21 03.9**	**+0.4**
I63A				IAmb_Lg		22 21 33.4	
	comp=Z,26nm,0.7s						
G62A	**West of Eustis**	**2.06**	**299**	Pn	**Pn**	**22 21 06.4**	**+0.4**
F62A	**Pittston Farm,**	**2.16**	**320**	Pn	**Pn**	**22 21 07.6**	**+0.2**
WCNB	**Wards Creek**	**2.24**	**51**	PN	**Pn**	**22 21 09.4**	**+0.9**
WCNB				SN	**Sn**	**22 21 37.3**	**+0.7**
WCNB				Trac		22 21 41.5	
	comp=Z,32nm,0.2s						
WCNB				LG	Lg	22 21 42.0	
SRNB	**Snider Mountai**	**2.29**	**46**	PN	**Pn**	**22 21 09.7**	**+0.5**
SRNB				SN	**Sn**	**22 21 38.4**	**+0.5**
SRNB				Trac		22 21 44.5	
	comp=Z,7.0nm,0.1s						
H62A	**Milan**	**2.30**	**279**	Pn	**Pn**	**22 21 09.8**	**+0.5**
H62A				IAmb_Lg		22 21 45.4	
	comp=Z,17nm,0.8s						
PQI	**Presque Isle**	**2.42**	**359**	Pn	**Pn**	**22 21 11.2**	**+0.3**
I62A	**Tamworth**	**2.45**	**262**	Pn	**Pn**	**22 21 11.9**	**+0.6**
HKNB	**Havelock Quarr**	**2.52**	**46**	PN	**Pn**	**22 21 13.3**	**+1.0**
HKNB				SN	**Sn**	**22 21 44.1**	**+0.5**
HKNB				LG	Lg	22 21 50.0	
HKNB				Trac		22 21 52.2	
	comp=Z,34nm,0.2s						
ELNB	**Elgin, New Bru**	**2.56**	**50**	PN	**Pn**	**22 21 12.8**	**-0.1**
ELNB				SN	**Sn**	**22 21 44.8**	**+0.2**
ELNB				LG	Lg	22 21 52.2	
ELNB				Trac		22 21 56.9	
	comp=Z,12nm,0.3s						
E62A	**Clayton Lake**	**2.60**	**336**	Pn	**Pn**	**22 21 13.8**	**+0.3**
LMN	**Caledonia Moun**	**2.76**	**53**	Pn	**Pn**	**22 21 15.9**	**+0.2**
LMN	**Caledonia Moun**	**2.76**	**53**	PN	**Pn**	**22 21 16.2**	**+0.6**
LMN				SN	**Sn**	**22 21 49.5**	**+0.1**
LMN				LG	Lg	22 21 58.4	
LMN				Trac		22 22 01.9	
	comp=Z,12nm,0.3s						
FFD	**Franklin Falls**	**2.77**	**255**	Pn	**Pn**	**22 21 16.8**	**+1.0**
LBNH	**Lisbon**	**2.84**	**271**	Pn	**Pn**	**22 21 17.2**	**+0.5**
LBNH	**Lisbon**	**2.84**	**271**	PN	**Pn**	**22 21 17.2**	**+0.5**
LBNH				SN	**Sn**	**22 21 52.1**	**+0.7**
LBNH				LG	Lg	22 22 01.1	
LBNH				Trac		22 22 05.8	
	comp=Z,23nm,0.3s						
SVNB	**Stilesville Qu**	**2.91**	**48**	PN	**Pn**	**22 21 18.5**	**+0.8**
SVNB				SN	**Sn**	**22 21 53.4**	**+0.3**
SVNB				LG	Lg	22 22 03.0	
SVNB				Trac		22 22 14.5	
	comp=Z,14nm,0.2s						
WES	**Weston**	**3.07**	**234**	Pn	**Pn**	**22 21 20.2**	**+0.3**
HRV	**Adam Dziewonsk**	**3.14**	**237**	Pn	**Pn**	**22 21 20.4**	**-0.5**
MOQ	**Mont Orford**	**3.22**	**291**	Pn	**Pn**	**22 21 22.3**	**+0.2**
MOQ	**Mont Orford**	**3.22**	**291**	PN	**Pn**	**22 21 22.9**	**+0.9**
MOQ				SN	**Sn**	**22 22 00.6**	**-0.4**
MOQ				Trac		22 22 13.5	
	comp=Z,10nm,0.2s						
BATG	**Bathurst New B**	**3.31**	**23**	Pn	**Pn**	**22 21 19.7**	**-3.4**
BATG	**Bathurst New B**	**3.31**	**23**	PN	**Pn**	**22 21 23.8**	**+0.6**
BATG				SN	**Sn**	**22 22 02.6**	**-0.4**
BATG				Trac		22 22 21.4	
	comp=Z,8.4nm,0.1s						
J61A	**Chester**	**3.43**	**256**	Pn	**Pn**	**22 21 24.9**	**+0.1**
K62A	**Royalston**	**3.48**	**244**	Pn	**Pn**	**22 21 25.6**	**+0.1**
LMQ	**La Malbaie**	**3.68**	**334**	Pn	**Pn**	**22 21 28.8**	**+0.5**
QUA2	**Belchertown**	**3.75**	**240**	Pn	**Pn**	**22 21 27.6**	**-1.7**
UCCT	**U. Connecticut**	**3.97**	**233**	Pn	**Pn**	**22 21 32.3**	**+0.1**
FRNY	**Flat Rock**	**4.05**	**280**	Pn	**Pn**	**22 21 34.1**	**+0.7**
M63A	**Gales Ferry**	**4.13**	**228**	Pn	**Pn**	**22 21 34.3**	**-0.1**
ACCN	**Adirondack Com**	**4.21**	**260**	Pn	**Pn**	**22 21 36.0**	**+0.5**
NCB	**Newcomb**	**4.50**	**269**	Pn	**Pn**	**22 21 39.5**	**-0.2**
GBN	**Guysborough**	**4.74**	**74**	Pn	**Pn**	**22 21 43.1**	**+0.3**
N62A	**Caumsett State**	**5.24**	**233**	Pn	**Pn**	**22 21 49.7**	**+0.1**
J57A	**Williamstown**	**5.86**	**265**	Pn	**Pn**	**22 21 56.1**	**-2.2**

TAP 01 22:28:47.0, 22°.77N×**121°.44E, h16**^{km}**, ML1.7, C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LDUT	**Ludao**	**0.10**	**161**	P	Pg	22 28 50.8	+0.4
	baz=161						
LDUT				S	Sg	22 28 53.7	+1.0
	baz=161						
EDH	**Donghe**	**0.24**	**329**	P	Pb	22 28 53.1	+0.2
	baz=329						
EDH				S	Sb	22 28 57.4	+0.4
	baz=329						
TTN	**Taitung**	**0.27**	**267**	*e*S	Sb	22 28 57.9	+0.2
	baz=266						
LONT	**Longtian**	**0.31**	**296**	*e*P	Pb	22 28 54.3	0.0
	baz=296						
LONT				*e*S	Sb	22 28 59.4	+0.3
	baz=296						
CHKT	**Chengkung**	**0.34**	**349**	*e*P	Pb	22 28 54.5	-0.1
	baz=350						
CHKT				*e*S	Sb	22 28 59.9	+0.1
	baz=350						
FULB	**Fuli**	**0.45**	**343**	*e*P	Pb	22 28 56.8	+0.2
	baz=343						
FULB				*e*S	Sb	22 29 03.5	+0.4
	baz=343						
YULB	**Yu-li**	**0.64**	**349**	*e*P	Pg	22 28 59.6	+0.1
	baz=348						
YULB				*e*S	Sb	22 29 09.0	+0.6
	baz=348						

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*IDC **01** 22:41:35.5±3.7, 16°.48S×174°.10W, h0^{km}, mb4.3/3, mb1 4.5/4, mb1mx3.9/25, mbtmp4.3/4, ML4.1/1, Error ellipse: s-maj=186.1km s-min=27.9km az=141.0*

*NEIC **01** 22:41:41.7±1.0, 16°.78S±0°.08×173°.2W±0°.1, h96^{km}±8^{km}, mb4.4/9, Error ellipse: s-maj=16.8km s-min=10.9km az=73.0*

ISC 01 22:41:41.3±0.8**, 16°.75S**±0°.07×**173°.10W**±0°.10**, h100**^{km}**, n15, σ1**^{s}**.43**/17**, mb4.3**/8**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.10**	**24**	Pn	**Pn**	**22 42 29.7**	**+1.2**
	19nm,0.3s,baz=335,slow=1.3,SNR=19						
AFI				Sn	**Sn**	**22 43 02.9**	**-1.8**
	83nm,0.3s,baz=56,slow=20,SNR=4.2						
NIUE	**Niue**	**3.80**	**128**	Pn	**Pn**	**22 42 38.6**	**+0.7**
NIUE				Sn	**Sn**	**22 43 19.6**	**-2.1**
STKA	**Stephens Creek**	**43.63**	**241**	P	**P**	**22 49 36.8**	**+0.7**
	2.1nm,0.6s,baz=65,slow=9.9,SNR=6.5						
STKA	**Stephens Creek**	**43.63**	**241**	P	**P**	**22 49 35.2**	**-0.9**
BBOO	**Buckleboo**	**48.40**	**241**	P	**P**	**22 50 12.5**	**-1.0**
BBOO				IAmb	IAmb	22 50 17.5	
	comp=Z,27nm,1.4s						
WR0	**Warramunga Arr**	**49.64**	**258**	P	**P**	**22 50 22.6**	**-0.6**
WR0				IAmb	IAmb	22 50 24.9	
	comp=Z,4.8nm,1.2s						
WB0	**Warramunga Arr**	**49.80**	**258**	P	**P**	**22 50 23.8**	**-0.6**
WB0				IAmb	IAmb	22 50 42.4	
	comp=Z,4.6nm,1.1s						
WB2	**Warramunga Arr**	**49.82**	**258**	P	**P**	**22 50 23.8**	**-0.7**
WB2				IAmb	IAmb	22 50 43.5	
	comp=Z,4.5nm,1.2s						
WRA	**Warramunga Arr**	**49.83**	**258**	P	**P**	**22 50 23.3**	**-1.3**
	comp=Z,0.8nm,0.5s,baz=98,slow=7.2,SNR=18						
WRA	**Warramunga Arr**	**49.83**	**258**	P	**P**	**22 50 23.8**	**-0.9**
ASAR	**Alice Springs**	**49.98**	**253**	P	**P**	**22 50 25.4**	**-0.4**
	comp=Z,12nm,0.6s,baz=87,slow=8.6,SNR=186						
FAKI	**Fak Fak**	**55.38**	**278**	P	**P**	**22 51 04.4**	**-1.2**
QSPA	**South Pole Qui**	**73.30**	**180**	P	**P**	**22 53 04.0**	**+2.1**
QSPA				IAmb	IAmb	22 53 18.4	
	comp=Z,2.5nm,1.3s						
YMP	**Mirror Lake Pl**	**83.70**	**40**	P	**P**	**22 53 59.0**	**-0.4**
BRTR	**Keskin Array B**	**147.38**	**320**	PKPbc	**PKiKP**	**23 01 18.6**	**+2.5**
	comp=Z,0.7nm,0.9s,baz=45,slow=2.2,SNR=3.6						

IDC 01 22:58:34.8±2.4**, 6°.54S**×**129°.59E, h0**^{km}**, mb3.4**/1**, mb1 3.6**/4**, mb1mx3.4**/28**, mbtmp3.4**/4**, ML3.2**/3**, Error ellipse: s-maj=92.4km s-min=30.5km az=76.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**12.12**	**198**	Pn	Pn	23 01 29.8	+0.9
	0.1nm,0.3s,baz=17,slow=11,SNR=2.4						
FITZ				Sn	Sn	23 03 31.6	-13
	0.2nm,0.3s,baz=168,slow=22,SNR=1.4						
WRA	**Warramunga Arr**	**14.10**	**161**	Pn	Pn	23 01 55.7	-0.3
	0.1nm,0.3s,baz=342,slow=14,SNR=2.3						
WRA				Sn	Sn	23 04 19.9	-14
	0.2nm,0.3s,baz=335,slow=26,SNR=2.4						
ASAR	**Alice Springs**	**17.53**	**167**	P	Pn	23 02 40.2	-0.5
	0.1nm,0.3s,baz=348,slow=11,SNR=8.1						
MKAR	**Makanchi Array**	**67.61**	**327**	P	P	23 09 33.5	0.0
	0.2nm,0.5s,baz=112,slow=7.9,SNR=1.6						
SNAA	**Sanae**	**96.02**	**194**	P	P	23 11 51.4	-12

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*NOU **01** 23:33:21.3, 30°.93S×117°.85E, h0^{km}, MLv3.5/6, Western Australia*

*AUST **01** 23:33:22.4±3.0, 30°.87S×117°.85E, h12^{km}±20^{km}, Error ellipse: s-maj=14.1km s-min=9.6km az=130.0*

*CUPWA **01** 23:33:23.0±0.6, 30°.93S×117°.86E, h4^{km}±11^{km}, ML2.8, Region: WESTERN AUSTRALIA*

ISC 01 23:33:21.8±1.0**, 30°.92S**±0°.04×**117°.91E**±0°.05**, h13**^{km}±6^{km}**, n21, σ1**^{s}**.16**/31**, Western Australia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BENC	**Bencubbin**	**0.12**	**339**	P	**Pg**	**23 33 25.2**	**+0.2**
BENC				S	**Sg**	**23 33 26.9**	**-0.4**
KOO6	**Koorda**	**0.38**	**284**	P	**Pg**	**23 33 29.3**	**-0.1**
BLDU	**Ballidu**	**1.08**	**286**	P	**Pb**	**23 33 41.9**	**-0.4**
	baz=1.0						
BLDU				S	**Sb**	**23 33 55.5**	**-0.8**
	baz=1.0						
BLDU	**Ballidu**	**1.08**	**286**	P	**Pb**	**23 33 41.9**	**-0.4**
BLDU				S	**Sb**	**23 33 55.5**	**-0.8**
BLDU	**Ballidu**	**1.08**	**286**	P	**Pb**	**23 33 41.0**	**-1.3**
QUAI	**Quairading**	**1.17**	**202**	P	**Pb**	**23 33 43.9**	**-0.1**
MUN	**Mundaring**	**1.80**	**234**	P	**Pn**	**23 33 53.5**	**+1.0**
	baz=1.8						
MUN				S	**Sn**	**23 34 16.2**	**+1.1**
	baz=1.8						
MUN	**Mundaring**	**1.80**	**234**	P	**Pn**	**23 33 53.5**	**+1.0**
MUN				S	**Sn**	**23 34 16.2**	**+1.1**
MUN	**Mundaring**	**1.80**	**234**	P	**Pn**	**23 33 52.8**	**+0.3**
AUMAZ	**Mazenod Senior**	**1.93**	**235**	P	**Pn**	**23 33 55.7**	**+1.3**
	baz=1.9						
AUMAZ				S	**Sb**	**23 34 20.4**	**-0.5**
	baz=1.9						
NWAO	**Narrogin (SRO)**	**2.08**	**196**	P	**Pn**	**23 33 57.0**	**+0.6**
	baz=2.1						
NWAO				P	**Pn**	**23 33 57.0**	**+0.6**
	baz=2.1						
NWAO	**Narrogin (SRO)**	**2.08**	**196**	P	**Pn**	**23 33 57.0**	**+0.6**
NWAO	**Narrogin (SRO)**	**2.08**	**196**	P	**Pn**	**23 33 57.2**	**+0.8**
NWAO	**Narrogin (SRO)**	**2.08**	**196**	P	**Pn**	**23 33 56.5**	**+0.1**
MORW	**Morawa**	**2.46**	**318**	P	**Pn**	**23 34 02.1**	**+0.5**
	baz=2.4						
MORW	**Morawa**	**2.46**	**318**	P	**Pn**	**23 34 02.1**	**+0.5**
MORW	**Morawa**	**2.46**	**318**	P	**Pn**	**23 34 01.7**	**+0.1**
MEEK	**Meekatharra**	**4.31**	**8**	P	**Pn**	**23 34 28.5**	**+1.4**
	baz=4.3						
MEEK				S	**Sn**	**23 35 18.0**	**+0.7**
	baz=4.3						
MEEK	**Meekatharra**	**4.31**	**8**	P	**Pn**	**23 34 28.5**	**+1.4**
MEEK				S	**Sn**	**23 35 18.0**	**+0.7**
MEEK	**Meekatharra**	**4.31**	**8**	P	**Pn**	**23 34 28.7**	**+1.6**
FORT	**Forrest**	**8.73**	**92**	P	**Pn**	**23 35 28.8**	**+1.1**
	baz=8.8						
FORT				S	**Sn**	**23 37 02.0**	**-4.0**
	baz=8.8						

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*ATH **01** 23:38:17.3, 34°.97N×28°.66E, h87^{km}±27^{km}, ML2.8/2, Error ellipse: s-maj=29.1km s-min=2.9km az=359.0*

*THE **01** 23:38:20.5, 34°.98N×28°.57E, h0^{km}±3^{km}, ML2.9/3, Error ellipse: s-maj=8.2km s-min=1.9km az=147.0*

*ISK **01** 23:38:21.6, 35°.24N×28°.30E, h5^{km}, ML2.8/11*

*DDA **01** 23:38:22.1, 35°.27N×28°.49E, h19^{km}±4^{km}, ML2.4*

*NIC **01** 23:38:25.7±0.0, 35°.40N×28°.64E, h20^{km}±6^{km}, Ml3.1/4*

ISC 01 23:38:24.3±1.4**, 35°.28N**±0°.04×**28°.52E**±0°.03**, h15**^{km}±11^{km}**, n51, σ1**^{s}**.73**/62**, 3C-1D, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**0.99**	**341**	P	**Pg**	**23 38 43.2**	**-0.3**
ARG				S	**Sn**	**23 39 02.9**	**+5.6**
	355nm,0.9s						
ARG	**Arkhangelos**	**0.99**	**341**	P	**Pg**	**23 38 43.2**	**-0.3**
ARG				AML	AML	23 39 05.5	
	comp=N,568µm,0.8s						
ARG				AML	AML	23 39 12.3	
	comp=E,838µm,1.1s						
ARG	**Arkhangelos**	**0.99**	**341**	P	**Pg**	**23 38 43.1**	**-0.3**
KSL	**Kastellorizon**	**1.23**	**45**	P	**Pg**	**23 38 46.9**	**-1.1**
KSL	**Kastellorizon**	**1.23**	**45**	P	**Pg**	**23 38 47.1**	**-0.9**
KSL	**Kastellorizon**	**1.23**	**45**	P	**Pn**	**23 38 45.9**	**-1.0**
KSL				AML	AML	23 39 22.8	
	comp=N,264µm,0.7s						
KSL				AML	AML	23 39 30.8	
	comp=E,303µm,1.3s						
KSL	**Kastellorizon**	**1.23**	**45**	P	**Pn**	**23 38 46.2**	**-0.8**
KSL				AML	AML	23 39 22.4	
	comp=E,0.3nm,0.7s						
KSL				AML	AML	23 39 30.8	
	comp=E,0.3nm,1.3s						
AKAS	**Kas**	**1.30**	**43**	*i* P	**Pg**	**23 38 48.4**	**-1.0**
AKAS				*i* S	**Sn**	**23 39 04.2**	**-1.0**
AKAS	**Kas**	**1.30**	**43**	PN	**Pg**	**23 38 49.3**	**-0.1**
TURN	**Turunc**	**1.51**	**352**	*i* P	**Pn**	**23 38 51.0**	**+0.2**
TURN				IAML		23 39 19.0	
	comp=E,34nm,0.7s						
TURN				IAML		23 39 26.0	
	comp=N,41nm,0.5s						
TURN	**Turunc**	**1.51**	**352**	PN	**Pn**	**23 38 50.4**	**-0.4**
TURN				SN	**Sg**	**23 39 11.4**	**-1.6**
DALY	**Dalyan (Mula)**	**1.54**	**4**	*i* P	**Pb**	**23 38 51.4**	**-1.1**
DALY				*i* S	Sg	23 39 24.2	+10
DALY	**Dalyan (Mula)**	**1.54**	**4**	PN	**Pn**	**23 38 51.3**	**+0.1**
DAT	**Datca**	**1.64**	**333**	P	**Pn**	**23 38 52.5**	**-0.1**
DAT	**Datca**	**1.64**	**333**	*i* P	**Pn**	**23 38 52.0**	**-0.7**
DAT				*i* S	**Sg**	**23 39 23.9**	**+6.8**
DAT	**Datca**	**1.64**	**333**	PN	**Pn**	**23 38 51.3**	**-1.3**
NIS1	**Nisyros Isl.**	**1.71**	**321**	P	**Pn**	**23 38 54.0**	**+0.4**
NIS1				S	**Sg**	**23 39 18.6**	**-0.8**
	comp=N,348nm,0.6s						
NIS1	**Nisyros Isl.**	**1.71**	**321**	P	**Pb**	**23 38 55.1**	**-0.4**
NIS1	**Nisyros Isl.**	**1.71**	**321**	PN	**Pn**	**23 38 51.9**	**-1.7**
ELL	**Elmali**	**1.85**	**37**	PN	**Pb**	**23 38 56.8**	**-1.1**
YER	**Yerkesik**	**1.86**	**354**	P	**Pn**	**23 38 56.4**	**+0.7**
ZKR	**Zakros**	**1.89**	**266**	P	Pn	23 38 51.2	-4.8
ZKR				S	**Sn**	**23 39 21.0**	**+1.4**
	comp=N,98nm,0.9s						
ZKR	**Zakros**	**1.89**	**266**	P	**Pn**	**23 38 54.3**	**-1.7**
ZKR	**Zakros**	**1.89**	**266**	PN	**Pn**	**23 38 52.9**	**-3.1**
CAEL	**Denizli, Camel**	**1.95**	**19**	*i* P	**Pn**	**23 38 56.9**	**-0.1**
CAEL				*i* S	**Sg**	**23 39 27.8**	**+0.6**
CAEL				IAML		23 39 31.0	
	comp=E,52nm,0.6s						
CAEL				IAML		23 39 31.0	
	comp=N,47nm,1.0s						
MULA	**Mugla, Merkez-**	**1.98**	**355**	*i* P	**Pn**	**23 38 56.8**	**-0.5**
MULA				IAML		23 39 30.0	
	comp=E,18nm,0.8s						
BDRM	**Kayabasi**	**1.98**	**334**	*i* P	**Pn**	**23 38 57.1**	**-0.3**
BDRM				IAML		23 39 36.0	
	comp=E,31nm,0.9s						
BDRM				IAML		23 39 40.0	
	comp=N,41nm,0.7s						
BODT	**Bodrum**	**2.03**	**332**	PN	**Pn**	**23 38 57.1**	**-0.9**
MLSB	**Milas**	**2.10**	**344**	PN	**Pn**	**23 38 58.3**	**-0.7**
TAVA	**DENIZLI_Tavas**	**2.21**	**8**	*i* P	**Pn**	**23 39 00.1**	**-0.4**
NPS	**Neapolis**	**2.38**	**270**	P	**Pn**	**23 39 04.9**	**+2.2**
NPS				S	**Sn**	**23 39 30.3**	**-1.3**
NPS	**Neapolis**	**2.38**	**270**	P	**Pn**	**23 39 04.4**	**+1.7**
AYDN	**Tasoluk**	**2.43**	**348**	*i* P	**Pn**	**23 39 04.0**	**+0.4**
AYDB	**Zeytinkoy-Aydi**	**2.71**	**349**	PN	**Pn**	**23 39 07.5**	**+0.1**
KSTL	**Kastelli Herak**	**2.82**	**272**	P	**Pn**	**23 39 08.0**	**-0.8**
KSTL				S	**Sn**	**23 39 37.5**	**-4.9**
OSC1	**CSNet OBS 1**	**2.89**	**127**⇓	*e*P	**Pn**	**23 39 10.3**	**+0.6**
OSC1				S	**Sn**	**23 39 46.3**	**+2.1**
IDI	**Anoyia**	**2.97**	**271**	P	**Pn**	**23 39 11.9**	**+1.1**
IDI				S	**Sn**	**23 39 45.1**	**-1.1**
IDI	**Anoyia**	**2.97**	**271**	P	**Pn**	**23 39 12.0**	**+1.1**
SIVA	**Sivas**	**3.05**	**266**	P	**Pn**	**23 39 12.9**	**+1.0**
AKMS	**Akamas**	**3.14**	**94**⇑	*e*P	**Pn**	**23 39 13.3**	**+0.1**
AKMS				S	**Sn**	**23 39 49.7**	**-0.7**
AKMS				AML	AML	23 39 50.5	
	comp=N,0.2nm,0.6s						
AKMS				AML	AML	23 39 50.5	
	comp=N,0.2nm,0.6s						
AKMS				AML	AML	23 39 51.2	
	comp=N,0.2nm,0.3s						
AKMS				AML	AML	23 39 51.2	
	comp=N,0.2nm,0.3s						
ALFC	**Alefka**	**3.34**	**91**⇑	*e*P	**Pn**	**23 39 16.1**	**0.0**
ALFC				S	**Sn**	**23 39 55.0**	**-0.6**
ALFC				AML	AML	23 39 55.4	
	comp=N,0.1nm,0.3s						
ALFC				AML	AML	23 39 55.4	
	comp=N,0.1nm,0.3s						
ALFC				AML	AML	23 39 55.6	
	comp=N,0.1nm,0.4s						
ALFC				AML	AML	23 39 55.6	
	comp=N,0.1nm,0.4s						
NATA	**Nata**	**3.36**	**97**⇑	*e*P	**Pn**	**23 39 16.6**	**+0.3**
SEYD	**Seydisehir-KON**	**3.42**	**51**	PN	**Pn**	**23 39 19.6**	**+2.4**
VAM	**Vamos**	**3.53**	**273**	P	**Pn**	**23 39 21.3**	**+2.7**
GVDS	**Gavdos**	**3.66**	**264**	P	Pn	23 39 08.8	-11
GVD	**Gavdhos**	**3.66**	**264**	P	Pn	23 39 09.0	-11
OSC2	**CSNet OBS 4**	**3.81**	**124**	P	**Pn**	**23 39 23.5**	**+1.1**
OSC2				S	**Sn**	**23 40 08.6**	**+1.8**
ASGA	**Asgata**	**3.91**	**96**	P	**Pn**	**23 39 23.5**	**-0.3**
ASGA				AML	AML	23 40 12.6	
	comp=N,0.1nm,0.7s						
ASGA				AML	AML	23 40 14.6	
	comp=N,0.1nm,0.3s						
CSS	**Mathiatis**	**3.96**	**93**	P	**Pn**	**23 39 23.8**	**-0.7**
CSS	**Mathiatis**	**3.96**	**93**	P	**Pn**	**23 39 24.8**	**+0.3**
MVOU	**Mavrovouni**	**4.20**	**92**	P	**Pn**	**23 39 27.7**	**-0.1**

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*IDC **01** 23:55:28.3±1.1, 19°.61S×173°.87W, h0^{km}, mb3.8/8, mb1 4.1/9, mb1mx3.9/41, mbtmp3.9/9, ML4.1/1, MS3.5/4, Ms1 3.5/4, ms1mx3.1/33, Error ellipse: s-maj=49.1km s-min=20.5km az=142.0*

*NEIC **01** 23:55:31.0±1.1, 19°.5S±0°.3×173°.42W±0°.06, h36^{km}±20^{km}, mb4.4/10, Error ellipse: s-maj=39.6km s-min=7.5km az=185.0*

ISC 01 23:55:31.3±0.8**, 19°.8S**±0°.1×**173°.7W**±0°.1**, h25**^{km}**, n30, σ1**^{s}**.43**/27**, mb4.0**/9**, MS3.6**/4**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	3.59	80	Pn	Pn	23 56 20.0	-5.4
AFI	Afiamalu	6.10	18	Pn	Pn	23 56 57.7	-2.2
	5.0nm,0.3s,baz=235,slow=8.4,SNR=1.8						
AFI				Sn	Sn	23 57 55.0	-14
	6.6nm,0.3s,baz=267,slow=17,SNR=1.8						
MSVF	Nonsavu	8.11	283	Pn	Pn	23 57 35.3	+7.7
	0.6nm,0.3s,baz=80,slow=9.1,SNR=4.1						
MSVF	Nonsavu	8.11	283		Pn	23 57 28.2	+0.6
MARNC	Mare, Loyalty	17.22	261		P	23 59 31.6	-0.1
PINNC	Pines Island,	17.84	258	P	P	23 59 38.8	+0.2
PINNC				IAmb	IAmb	23 59 47.4	
	comp=Z,40nm,1.1s						
LIFNC	LIFOU	17.95	263	P	P	23 59 40.6	+0.9
DZM	Mont Dzumac	18.72	259	P	Pn	23 59 49.8	+0.9
	comp=Z,0.2nm,0.3s,baz=139,slow=21,SNR=1.4						
DZM	Mont Dzumac	18.72	259	P	Pn	23 59 50.0	+1.1
DZM				IAmb	IAmb	00 00 05.6	
	comp=Z,9.9nm,0.9s						
SANVU	Saraoutou	18.73	280	P	P	23 59 48.1	-0.3
SANVU				IAmb	IAmb	23 59 59.9	
	comp=Z,36nm,0.9s						
URZ	Urewera	20.09	202	P	P	00 00 03.9	+0.8
	comp=Z,4.9nm,0.7s,baz=121,slow=24,SNR=3.7						
URZ				S	S	00 03 43.0	-4.7
	comp=Z,1.7nm,0.5s,baz=121,slow=24,SNR=1.5						
URZ	Urewera	20.09	202	P	P	00 00 04.4	+1.3
BKZ	Black Stump Fm	21.12	202	P	P	00 00 16.2	+1.9
PPT	Papeete	22.92	88	LR	LR	00 08 20.1	
	comp=Z,128nm,18.2s,baz=229,slow=33						
SNZO	South Karori	23.65	202	P	P	00 00 40.8	+0.1
KHZ	Kahutara	25.04	203	P	P	00 00 55.1	+1.6
FOZ	Fox Glacier	27.45	207	P	P	00 01 15.8	+0.5
FOZ				IAmb	IAmb	00 01 31.0	
	comp=Z,9.3nm,0.8s						
ARMA	Armidale	33.05	244	P	P	00 02 05.0	-0.2
ARMA				IAmb	IAmb	00 02 24.9	
	comp=Z,3.5nm,0.8s						
CTA	Charters Tower	37.62	262	P	P	00 02 44.5	+0.1
	comp=Z,2.0nm,0.4s,baz=89,slow=11,SNR=5.2						
CTAO	Charters Tower	37.62	262	P	P	00 02 44.2	-0.2
CTAO				IAmb	IAmb	00 02 48.5	
	comp=Z,5.8nm,0.9s						
ASAR	Alice Springs	48.65	255	P	P	00 04 12.8	-0.9
	comp=Z,1.1nm,0.5s,baz=94,slow=7.7,SNR=14						
ASAR				PcP	PcP	00 05 39.4	+0.5
	comp=Z,0.6nm,0.5s,baz=115,slow=4.2,SNR=2.7						
WRA	Warramunga Arr	48.74	260	P	P	00 04 12.2	-2.2
	comp=Z,1.2nm,0.7s,baz=95,slow=6.7,SNR=5.5						
WRA				PcP	PcP	00 05 40.3	+1.0
	comp=Z,0.7nm,0.8s,baz=96,slow=3.7,SNR=2.8						
FITZ	Fitzroy Crossi	57.16	261	P	P	00 05 16.6	0.0
	comp=Z,0.8nm,0.5s,baz=124,slow=7.3,SNR=1.6						
NVAR	Mina Array Bea	77.74	41	P	P	00 07 27.3	+0.8
	comp=Z,0.2nm,0.3s,baz=218,slow=4.2,SNR=2.4						
TXAR	Lajitas Array	83.25	56	P	P	00 07 57.7	+1.5
	comp=Z,0.2nm,0.7s,baz=206,slow=6.0,SNR=2.4						
KLR	Kul'dur	84.03	328	LR	LR	00 39 39.2	
	comp=Z,19nm,20.2s,baz=129,slow=32						
ILAR	Eielson Array	86.75	11	P	P	00 08 12.7	-0.1
	comp=Z,0.3nm,0.7s,baz=219,slow=7.0,SNR=1.9						
YKA	Yellowknife Ar	94.18	24	LR	LR	00 45 36.3	
	comp=Z,25nm,19.6s,baz=0.0,slow=32						
SONM	Songino Array	97.91	318	LR	LR	00 47 42.2	
	comp=Z,25nm,21.1s,baz=49,slow=32						
BRTR	Keskin Array B	149.25	316	PKPbc	PKiKP	00 15 19.8	+0.3
	comp=Z,0.9nm,0.8s,baz=90,slow=2.9,SNR=5.4						

IDC ***01*** *23:56:21.5±25.0, 28˚.43N×139˚.42E, h314^{km}±114^{km}, mb3.4/4, mb1 3.4/6, mb1mx3.0/48, mbtmp4.0/6, Error ellipse: s-maj=330.3km s-min=54.0km az=157.0*

NEIC ***01*** *23:56:40.2±0.9, 30˚.0N±0˚.1×139˚.2E±0˚.2, h421^{km}±11^{km}, mb4.2/7, Error ellipse: s-maj=24.9km s-min=15.5km az=78.0*

JMA ***01*** *23:56:41.5±0.2, 30˚.38N×140˚.00E, h423^{km}, M3.5*

ISC 01 23:56:39.4±0.9, **30˚.0N**±0˚.1×**139˚.1E**±0˚.1, **h400**^{km}**, n31, σ1^{s}70**/30, **mb4.0**/9, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	Mitsune	3.15	10	P	Pn	23 57 46.0	+2.3
CBIJ	Chichi jima	3.95	136	P	Pn	23 57 53.4	+2.3
CBIJ				S	S	23 58 50.3	+1.1
JCJ	Chichijima	3.95	136		Pn	23 57 53.5	+2.4
JCJ				S	S	23 58 51.4	+2.2
TTO1	TONANKAI O.B.S	4.12	332	S	S	23 58 57.4	+6.0
JOD2	Odawara 2	5.24	360	P	Pn	23 58 04.6	+0.8
JHU	Hanno	5.83	1	P	Pn	23 58 09.7	-0.4
JRY	Ryogami san	6.00	358	P	Pn	23 58 12.3	+0.4
JWT	Wachi	6.13	330	P	Pn	23 58 15.0	+1.7
JAG	Ashikaga	6.41	2	P	Pn	23 58 15.6	-0.7
MJAR	Matsushiro Arr	6.56	353	P	Pn	23 58 17.0	-1.1
	0.2nm,0.3s,baz=169,slow=11,SNR=3.4						
MAJO	Matsushiro	6.56	353	P	Pn	23 58 18.9	+0.8
JHO	Hitachi	6.70	10	P	P	23 58 19.5	-0.6
JNU	Nakatsue	7.70	296	P	Pn	23 58 23.4	-7.5
	0.9nm,0.3s,baz=132,slow=1.4,SNR=3.8						
JMM	Marumori	7.96	10	P	P	23 58 34.3	+0.2
JSD	Sado	8.04	355	P	Pn	23 58 34.1	-0.6
ERM	Erimo	12.42	14	P	Pn	23 59 26.1	+0.9
MKAR	Makanchi Array	46.57	308	P	P	00 04 28.1	-1.0
	0.3nm,0.5s,baz=72,slow=9.4,SNR=2.6						
MAKZ	Makanchi	46.78	308	P	P	00 04 30.1	-0.6
MAKZ				IAmb	IAmb	00 04 37.6	
	comp=Z,2.5nm,0.7s						
KURK	Kurchatov	49.04	313	P	P	00 04 46.5	-1.1
KURBB	Kurchatov Arra	49.10	313	P	P	00 04 46.7	-1.3
	comp=Z,0.9nm,0.5s,baz=92,slow=7.4,SNR=6.9						
KKAR	Karatay Array	55.22	304	P	P	00 05 32.0	-0.8
RIDG	Independent Ri	57.40	31	P	P	00 05 46.4	-1.1
RIDG				IAmb	IAmb	00 05 52.5	
	comp=Z,13nm,0.7s						
GIRL	Giralia	57.56	207	P	P	00 05 47.2	-1.8
ABKAR	Akbulak array	61.15	313	P	P	00 06 12.1	-0.9
ABKAR	Akbulak array	61.15	313	P	P	00 06 12.2	-0.9
ABKAR				IAmb	IAmb	00 06 28.9	
	comp=Z,1.4nm,1.1s						
FORT	Forrest	61.36	191	P	P	00 06 11.4	-3.2
FORT				IAmb	IAmb	00 06 15.6	
	comp=Z,32nm,0.9s						
SKAG	Skagway	62.47	35	P	P	00 06 20.9	-0.6
SKAG				IAmb	IAmb	00 06 37.8	
	comp=Z,11nm,1.1s						
ARCES	ARCESS Array B	69.91	340	P	P	00 07 07.8	-0.3
	comp=Z,5.3nm,1.0s,baz=71,slow=8.7,SNR=1.6						
ARCES	ARCESS Array B	69.91	340	P	P	00 07 06.5	-1.5
FINES	FINESS Array B	74.15	333	P	P	00 07 32.4	-0.6
	comp=Z,3.4nm,1.0s,baz=70,slow=5.7,SNR=8.8						
FINES	FINESS Array B	74.15	333	P	P	00 07 32.2	-0.8

NEIC ***01*** *23:58:39.2±1.1, 2˚.9N±0˚.1×125˚.0E±0˚.2, h246^{km}±9^{km}, mb4.1/26, Error ellipse: s-maj=24.9km s-min=13.7km az=69.0*

IDC ***01*** *23:58:39.7±6.8, 2˚.85N×124˚.79E, h254^{km}±73^{km}, mb3.5/13, mb1 3.6/13, mb1mx3.3/45, mbtmp4.1/13, MS3.2/1, Ms1 3.2/1, ms1mx2.4/31, Error ellipse: s-maj=36.9km s-min=13.1km az=78.0*

DJA ***01*** *23:58:39.8±0.4, 3˚N±3˚×12˚5E±˚, h239^{km}±4^{km}, M4.1/12, mb4.1/2, MLv4.1/12*

ISC 01 23:58:39.0±0.5, **2˚.82N**±0˚.05×**124˚.99E**±0˚.07, **h250**^{km}**, n50, σ1^{s}26**/51, **mb4.0**/24, **Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	1.02	32	P	Pn	23 59 13.8	-0.3
SGSI				S	S	23 59 40.8	-1.0
KMSI	Cibinong	2.44	204	P	Pn	23 59 25.7	0.0
GTOI	Gorontalo	2.93	222	P	Pn	23 59 30.4	-0.4
TNTI	Ternate	3.13	130		Pn	23 59 33.2	+0.3
TNTI	Ternate	3.13	130	P	Pn	23 59 32.9	0.0
MRSI	Marisa	3.83	233	P	Pn	23 59 42.0	+1.2
LBMI	Labuha	4.25	144	P	Pn	23 59 45.1	-0.7
LBMI				S	S	00 00 35.7	-3.2
LUWI	Luwuk	4.43	210	P	Pn	23 59 48.9	+1.0
LUWI				S	S	00 00 39.0	-3.7
SANI	Sanana	4.94	168	P	Pn	23 59 51.8	-2.2
MSAI	Masohi	7.28	147	P	Pn	00 00 25.1	+1.9
KNRA	Kununurra	18.75	169	P	Pn	00 02 41.6	-1.9
YULB	Yu-li	20.77	350	P	P	00 03 00.4	-0.8
FITZ	Fitzroy Crossi	20.79	178	P	P	00 03 02.9	+1.4
	7.4nm,0.4s,baz=4.1,slow=7.6,SNR=58						
FITZ	Fitzroy Crossi	20.79	178	P	P	00 03 03.0	+1.5
FITZ				IAmb	IAmb	00 03 03.6	
	comp=Z,7.8nm,0.6s						
GUMO	Guam	22.37	60	LR	LR	00 11 58.6	
	comp=Z,58nm,20.9s,baz=89,slow=36						
WB0	Warramunga Arr	24.27	158	P	P	00 03 34.3	+0.5
WB0				IAmb	IAmb	00 03 34.9	
	comp=Z,4.0nm,0.7s						
WRA	Warramunga Arr	24.41	158	P	P	00 03 35.5	+0.5
	comp=Z,4.5nm,0.5s,baz=338,slow=10.0,SNR=48						
WRA	Warramunga Arr	24.41	158	P	P	00 03 35.0	0.0
WB2	Warramunga Arr	24.41	158	P	P	00 03 35.5	+0.5
WB2				IAmb	IAmb	00 03 36.3	
	comp=Z,5.3nm,0.6s						
WR0	Warramunga Arr	24.50	158	P	P	00 03 36.5	+0.7
WR0				IAmb	IAmb	00 03 39.0	
	comp=Z,4.5nm,1.1s						
COEN	Coen	24.56	133	P	P	00 03 37.9	+1.5
COEN				IAmb	IAmb	00 03 42.9	
	comp=Z,4.0nm,0.9s						
PSA00	Pilbara Seismi	24.76	191	P	P	00 03 38.4	+0.3
PSA00				IAmb	IAmb	00 03 49.6	
	comp=Z,8.8nm,1.0s						
PSA00	Pilbara Seismi	24.76	191	P	P	00 03 38.5	+0.3
PSA00				IAmb	IAmb	00 03 40.6	
	comp=Z,3.9nm,1.0s						
AS31	Alice Springs	27.72	162	P	P	00 04 05.6	+1.0
ASAR	Alice Springs	27.72	162	P	P	00 04 05.5	+0.8
	comp=Z,1.0nm,0.6s,baz=343,slow=7.5,SNR=18						
FORT	Forrest	33.53	175	P	P	00 04 56.2	+0.8
JWT	Wachi	33.72	15	P	P	00 04 56.9	-0.1
JWT				IAmb	IAmb	00 05 00.1	
	comp=Z,5.3nm,1.1s						
NWAO	Narrogin (SRO)	36.30	191	P	P	00 05 19.3	+0.3
	comp=Z,6.0nm,0.9s,baz=11,slow=5.0,SNR=6.0						
NWAO	Narrogin (SRO)	36.30	191	P	P	00 05 19.5	+0.5
NWAO				IAmb	IAmb	00 05 22.4	
	comp=Z,12nm,1.1s						
BBOO	Buckleboo	36.95	164	P	P	00 05 25.4	+0.9
BBOO				IAmb	IAmb	00 05 43.9	
	comp=Z,6.8nm,1.1s						
STKA	Stephens Creek	37.94	157	P	P	00 05 34.5	+1.8
	comp=Z,2.0nm,0.4s,baz=295,slow=9.9,SNR=7.0						
STKA	Stephens Creek	37.94	157	P	P	00 05 34.4	+1.6
USRK	Ussuriysk Ar.	41.67	8	P	P	00 06 02.9	-0.3
	comp=Z,1.2nm,0.5s,baz=171,slow=6.6,SNR=1.9						
ARMA	Armidale	41.70	144	P	P	00 06 03.8	0.0
ARMA				IAmb	IAmb	00 06 04.1	
	comp=Z,5.1nm,1.1s						
CAN	Canberra	44.11	151	P	P	00 06 24.3	+1.4
CAN				IAmb	IAmb	00 06 40.0	
	comp=Z,12nm,1.1s						
TOO	Toolangi	44.46	157	P	P	00 06 28.0	+2.4
TOO				IAmb	IAmb	00 06 29.1	
	comp=Z,15nm,1.1s						
KLR	Kul'dur	46.60	6	P	P	00 06 42.7	+0.6
	comp=Z,1.6nm,0.4s,baz=182,slow=8.8,SNR=6.6						
SONM	Songino Array	47.63	343	P	P	00 06 49.8	-0.5
	comp=Z,0.4nm,0.4s,baz=152,slow=6.4,SNR=2.4						
MK31	Makanchi Array	57.33	326	P	P	00 08 00.7	-0.4
MKAR	Makanchi Array	57.33	326	P	P	00 08 00.4	-0.7
	comp=Z,1.8nm,0.4s,baz=119,slow=7.8,SNR=36						
ZALV	Zalesovo Beam	60.63	334	P	P	00 08 22.6	-0.9
	comp=Z,0.4nm,0.3s,baz=115,slow=6.8,SNR=2.4						
GAR	Garm	61.27	314	P	P	00 08 27.9	-0.5
GAR				IAmb	IAmb	00 08 44.5	
	comp=Z,3.2nm,1.0s						
QRZ	Quartz Range	61.32	140	P	P	00 08 27.0	-1.4
KURBB	Kurchatov Arra	61.58	328	P	P	00 08 28.7	-1.3
	comp=Z,0.8nm,0.5s,baz=127,slow=6.6,SNR=5.0						
KURK	Kurchatov	61.59	328	P	P	00 08 28.7	-1.3
KURK	Kurchatov	61.59	328	IAmb	IAmb	00 08 30.5	
	comp=Z,2.1nm,0.6s						
LBZ	Lake Benmore	61.92	145	P	P	00 08 33.2	+0.8
SMY	Shemya	64.13	31	P	P	00 08 45.8	-0.8
NRIK	Noril'sk	70.91	347	P	P	00 09 30.0	+1.3
	comp=Z,1.1nm,0.6s,baz=141,slow=7.0,SNR=3.7						
VNDA	Vanda	82.75	172	P	P	00 10 34.9	+0.5
	comp=Z,0.3nm,0.6s,baz=297,slow=2.3,SNR=2.0						

IDC ***02*** *00:26:23.2±0.7, 45˚.92N×154˚.34E, h0^{km}, mb4.0/20, mb1 4.2/23, mb1mx4.0/50, mbtmp4.0/23, ML3.2/3, MS3.0/6, Ms1 3.0/6, ms1mx2.7/53, Error ellipse: s-maj=18.1km s-min=15.2km az=143.0*

MOS ***02*** *00:26:26.4±1.0, 46˚.02N×154˚.26E, h32^{km}, mb4.6/13, Error ellipse: s-maj=9.7km s-min=7.6km az=83.7*

SKHL ***02*** *00:26:26.0±0.5, 46˚.00N×154˚.40E, h36^{km}±4^{km}, mb4.8/5*

NEIC ***02*** *00:26:27.2±1.3, 46˚.0N±0˚.1×154˚.4E±0˚.2, h26^{km}±5^{km}, mb4.4/20, Error ellipse: s-maj=20.8km s-min=13.2km az=132.0*

ISC 02 00:26:26.4±0.7, **45˚.99N**±0˚.08×**154˚.29E**±0˚.07, **h19**^{km}**, n102, σ1^{s}69**/94, **mb4.2**/33, **MS2.9**/4, **10C, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	Kuril'sk	4.57	263	*e*PN	Pn	00 27 34.3	-0.2
KUR				pmax	pmax		
	comp=Z,163nm,0.3s						
KUR	Kuril'sk	4.57	263	*e*P	Pn	00 27 34.0	-0.5
KUR				AMB	AMB	00 27 34.0	
	comp=Z,140nm,0.4s						
KUR				*i* S	Sn	00 28 26.1	-1.0
KUR				A	A	00 28 31.9	
	comp=Z,130nm,0.7s						
KUR				A	A	00 28 31.9	
	comp=Z,170nm,0.7s						
SKR	Severo-Kuril's	4.85	14	*e*PN	Pn	00 27 35.8	-2.5
SKR				pmax	pmax		
	comp=Z,29nm,0.3s						
SKR	Severo-Kuril's	4.85	14	*e*P	Pn	00 27 37.2	-1.1
SKR				AMB	AMB	00 27 41.2	
	comp=Z,40nm,0.3s						
SKR				*e*S	Sn	00 28 30.2	-3.7
SKR				A	A	00 28 35.0	
	comp=Z,134nm,0.3s						
SKR				A	A	00 28 35.0	
	comp=Z,60nm,0.3s						
PAU	Pauzhetka	5.73	16	*e*P	Pn	00 27 49.6	-0.8
PAU				AMB	AMB	00 27 51.6	
	comp=Z,30nm,0.4s						
PAU				*e*S	Sn	00 28 52.3	-3.3
PAU				A	A	00 28 56.3	
	comp=Z,70nm,0.3s						
PAU				A	A	00 28 56.3	
	comp=Z,70nm,0.3s						
YUK	Yuzh-Kuril'sk	6.29	255	*e*P	Pn	00 27 58.0	-0.1
YUK				AMB	AMB	00 28 00.2	
	comp=Z,60nm,0.2s						
YUK				*e*S	Sn	00 29 07.4	-1.9
YUK				A	A	00 29 11.2	
	comp=Z,110nm,0.6s						
YUK				A	A	00 29 11.2	
	comp=Z,190nm,0.6s						
PEA0B	Petropavlovsk-	7.46	16	PN	Pn	00 28 14.1	-0.1
PEA0B	Petropavlovsk-	7.46	16	Pn	Pn	00 28 14.1	-0.1
PETK	Petropavlovsk-	7.46	16	Pn	Pn	00 28 13.8	-0.4
	comp=Z,2.7nm,0.3s,baz=191,slow=13,SNR=23						
PETK				Sn	Sn	00 29 46.4	+8.1
	baz=207,slow=45,SNR=0.9						
PETK				LR	LR	00 32 22.4	
	comp=Z,49nm,18.2s,baz=196,slow=48						
PET	Petropavlovsk	7.59	20	*ce*PN	Pn	00 28 15.9	0.0
PET				pmax	pmax		
	comp=Z,72nm,1.3s						
PET	Petropavlovsk	7.59	20	*e*P	Pn	00 28 15.9	0.0
YSS	Yuzh-Sakhalins	8.02	281	*ce*PN	Pn	00 28 24.1	+2.2
YSS				pmax	pmax		
	comp=Z,66nm,1.7s						
YSS	Yuzh-Sakhalins	8.02	281	*e*P	Pn	00 28 24.2	+2.3
YSS				AMB	AMB	00 28 27.5	
	comp=Z,10.0nm,0.5s						
ERM	Erimo	8.95	248	*i* PN	Pn	00 28 34.7	+0.1
MJA0	Matsu Arr-Jizo	15.29	238	*e*P	Pn	00 30 00.4	-0.8
MAJO	Matsushiro	15.32	238	P	Pn	00 30 00.1	-1.4
MAJO				pmax	pmax		
	comp=Z,14nm,1.1s						
MAJO	Matsushiro	15.32	238	Pn	Pn	00 30 00.1	-1.4
MAJO				IAmb	IAmb	00 30 18.9	
	comp=Z,14nm,1.1s						
MJAR	Matsushiro Arr	15.32	238	Pn	Pn	00 29 58.2	-3.3
	comp=Z,0.1nm,0.3s,baz=30,slow=13,SNR=4.1						
MJAR	Matsushiro Arr	15.32	238	P	Pn	00 29 58.2	-3.3
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MJAR	Matsushiro Arr	15.32	238	IAmb	IAmb	00 30 07.4	
	comp=Z,1.7nm,0.8s						
MJB9	Matsu-Tunnel	15.32	238	Pn	Pn	00 30 00.7	-0.9
MJB9				IAmb	IAmb	00 30 18.8	
	comp=Z,13nm,1.0s						
KLR	Kul'dur	15.53	290	Pn	Pn	00 30 04.0	-0.2
	comp=Z,0.1nm,0.3s,baz=108,slow=20,SNR=2.3						
KLR	Kul'dur	15.53	290	*ce*P	P	00 30 07.0	-1.5
KLR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KLR	Kul'dur	15.53	290	*e*P	Pn	00 30 00.7	-3.5
USA0B	Ussuriysk Arra	15.85	272	P	Pn	00 30 06.6	-1.7
USA0B				pmax	pmax		
	comp=Z,10.0nm,0.9s						
USA0B	Ussuriysk Arra	15.85	272		Pn	00 30 06.6	-1.7
USRK	Ussuriysk Ar.	15.85	272	Pn	Pn	00 30 06.9	-1.5
	baz=72,slow=13,SNR=9.6						
USRK	Ussuriysk Ar.	15.85	272	P	Pn	00 30 07.3	-1.0
USRK	Ussuriysk Ar.	15.85	272	Pn	Pn	00 30 07.3	-1.0
SEY	Seymchan	17.01	357	LR	LR	00 36 52.6	
	comp=Z,65nm,18.1s,baz=156,slow=37						
KSRS	Korea Array	21.38	256	P	P	00 31 13.7	+1.0
	comp=Z,1.6nm,0.6s,baz=65,slow=10,SNR=7.0						
KSRS				LR	LR	00 41 30.0	
	comp=Z,19nm,18.4s,baz=210,slow=42						
YAK	Yakutsk	21.40	327	LR	LR	00 39 17.6	
	comp=Z,28nm,20.8s,baz=92,slow=36						
YAK	Yakutsk	21.40	327	*ce*P	P	00 31 13.2	+0.5
YAK				pmax	pmax		
	comp=Z,16nm,0.7s						
YAK	Yakutsk	21.40	327	*e*P	P	00 31 13.2	+0.5
H11N2	WAKE ISLAND Hy	28.17	154	T	T	01 01 37.0	
	baz=342,slow=76,SNR=4.9						
H11N1	WAKE ISLAND Hy	28.19	154	T	T	01 01 38.0	
	baz=342,slow=76,SNR=6.1						
H11N3	WAKE ISLAND Hy	28.19	154	T	T	01 01 38.6	
	baz=342,slow=76,SNR=6.4						
TIK	Tiksi	28.42	343	*e*P	P	00 32 19.7	+0.4
TIXI	Tiksi	28.43	343	P	P	00 32 19.7	+0.3
	comp=Z,1.3nm,0.3s,baz=112,slow=9.7,SNR=0.6						
H11S1	WAKE ISLAND Hy	29.27	155	T	T	01 02 58.5	
	baz=342,slow=76,SNR=4.1						
H11S3	WAKE ISLAND Hy	29.28	155	T	T	01 02 59.9	
	baz=342,slow=76,SNR=4.9						
H11S2	WAKE ISLAND Hy	29.29	155	T	T	01 03 06.3	
	baz=342,slow=76,SNR=4.1						
ULN	Ulaanbaatar	31.93	291	⇑*e*P	P	00 32 51.9	+1.1
ULN				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ULN	Ulaanbaatar	31.93	291	P	P	00 32 51.0	+0.2
ULN				IAmb	IAmb	00 32 58.2	
	comp=Z,5.1nm,1.2s						
ULN	Ulaanbaatar	31.93	291	*e*P	P	00 32 51.9	+1.1
SONM	Songino Array	32.36	291	P	P	00 32 54.2	-0.4
	comp=Z,0.4nm,0.5s,baz=68,slow=7.4,SNR=3.7						
SONM	Songino Array	32.36	291	IAmb	IAmb	00 33 03.0	
	comp=Z,2.6nm,1.4s						
TLY	Talaya	33.26	299	LR	LR	00 46 59.2	
	comp=Z,48nm,20.9s,baz=138,slow=37						
ILAR	Eielson Array	36.64	38	P	P	00 33 31.2	0.0
	comp=Z,0.3nm,0.6s,baz=248,slow=7.0,SNR=8.8						
NRIK	Noril'sk	39.83	329	P	P	00 33 58.2	+0.2
	comp=Z,1.4nm,0.3s,baz=63,slow=3.4,SNR=1.9						
GTA	Gaotai	39.90	281	⇑P	P	00 34 01.2	+2.0
GTA				pP	sP	00 34 05.4	+0.5
GTA				sP	pwP	00 34 08.4	-3.7
GTA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
INK	Inuvik	41.86	32	P	P	00 34 15.7	+1.0
	comp=Z,0.7nm,0.6s,baz=308,slow=7.3,SNR=4.8						
INK	Inuvik	41.86	32	IAmb	IAmb	00 34 20.8	
	comp=Z,1.2nm,0.8s						
ZALV	Zalesovo Beam	43.72	307	P	P	00 34 29.4	-0.7
	comp=Z,1.3nm,0.5s,baz=69,slow=7.6,SNR=6.9						
ZALV				LR	LR	00 52 41.3	
	comp=Z,42nm,20.1s,baz=48,slow=36						
ZALV	Zalesovo Beam	43.72	307	*e*P	P	00 34 29.6	-0.4
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	Makanchi Array	48.02	298	P	P	00 35 04.0	-0.1
	comp=Z,1.3nm,0.5s,baz=63,slow=7.6,SNR=18						
MKAR	Makanchi Array	48.02	298	P	P	00 35 04.0	-0.1
MKAR	Makanchi Array	48.02	298	*e*P	P	00 35 04.0	-0.1
KURK	Kurchatov	48.47	305	*ce*P	P	00 35 06.7	-0.7
KURK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
KURK	Kurchatov	48.47	305	P	P	00 35 07.6	+0.2
KURK				IAmb	IAmb	00 35 09.3	
	comp=Z,3.3nm,0.6s						
KURK	Kurchatov	48.47	305	*e*P	P	00 35 06.7	-0.7
BRVK	Borovoye	52.01	310	*ce*P	P	00 35 35.2	+0.9
BRVK				pmax	pmax		
	comp=Z,12nm,2.5s						
BRVK	Borovoye	52.01	310	P	P	00 35 34.6	+0.3
BRVK				IAmb	IAmb	00 35 38.2	
	comp=Z,10nm,1.5s						
BRVK	Borovoye	52.01	310	*e*P	P	00 35 35.2	+0.9
CMAR	Chiang Mai Arr	53.00	258	P	P	00 35 42.5	+0.5
	comp=Z,0.8nm,0.3s,baz=45,slow=6.1,SNR=4.9						
AAK	Ala-Archa	54.91	297	*i* P	P	00 35 56.3	+0.4
AAK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
AAK	Ala-Archa	54.91	297	*e*P	P	00 35 56.3	+0.4
ARU	Arti	56.12	318	*c i*P	P	00 36 04.5	+0.3
ARU						00 36 57.5	
ARU				S	S	00 43 53.7	+1.8
ARU				SS	SS	00 47 30.3	-7.3
ARU				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ARU	Arti	56.12	318	P	P	00 36 04.3	+0.1
ARU	Arti	56.12	318	*e*P	P	00 36 04.5	+0.3
BTK	Batken	58.64	297	P	P	00 36 23.4	+1.0
BTK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BTK	Batken	58.64	297	P	P	00 36 23.4	+1.0
BTK				IAmb	IAmb	00 36 25.8	
	comp=Z,5.0nm,0.8s						
ABKAR	Akbulak array	59.54	311	P	P	00 36 28.7	+0.4
ABKAR				IAmb	IAmb	00 36 31.7	
	comp=Z,2.3nm,0.8s						
GAR	Garm	59.58	296	P	P	00 36 29.9	+1.0
CHGR	Chuyangaron	60.51	296	P	P	00 36 35.5	+0.2
NIL	Nilore	60.92	289	P	P	00 36 39.2	+1.1
NIL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
NIL	Nilore	60.92	289	P	P	00 36 39.2	+1.1
LRM	Limekiln Ridge	61.00	53	P	P	00 36 38.0	-0.7
PDAR	Pinedale Array	64.53	54	P	P	00 37 02.6	+0.4
	comp=Z,0.4nm,0.6s,baz=298,slow=4.0,SNR=2.1						
FINES	FINESS Array B	65.07	335	P	P	00 37 05.1	0.0
	comp=Z,1.8nm,0.5s,baz=39,slow=7.1,SNR=10						
RDMU	Red Mountain	65.94	56	P	P	00 37 10.2	-1.2
RDMU				IAmb	IAmb	00 37 14.9	
	comp=Z,3.9nm,0.7s						
GEYT	Alibeck	67.70	302	P	P	00 37 22.7	+0.3
	comp=Z,1.7nm,0.7s,baz=237,slow=31,SNR=2.7						
WRA	Warramunga Arr	68.07	200	P	P	00 37 23.6	-1.1
	comp=Z,1.2nm,0.7s,baz=20,slow=6.7,SNR=9.0						
WRA	Warramunga Arr	68.07	200	*e*P	P	00 37 25.1	+0.4
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRA	Warramunga Arr	68.07	200	IAmb	IAmb	00 37 24.0	
	comp=Z,0.1nm,1.0s						
NOA	NORSAR Array B	69.21	342	P	P	00 37 31.5	+0.1
	comp=Z,0.7nm,0.8s,baz=26,slow=6.4,SNR=3.2						
GOF	Gofitskoye	70.94	316	⇑*e*P	P	00 37 44.1	+1.8
ASAR	Alice Springs	71.76	200	P	P	00 37 47.3	0.0
	comp=Z,1.2nm,0.7s,baz=14,slow=6.3,SNR=13						
KIV	Kislovodsk	71.91	315	*e*P	P	00 37 39.9	-8.4
KIV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KBZ	Khabaz	71.98	315	P	P	00 37 50.0	+1.5
	comp=Z,5.6nm,0.9s,baz=219,slow=2.2,SNR=9.7						
AKASG	Malin Array Be	72.63	327	P	P	00 37 52.6	+0.3
	comp=Z,3.1nm,0.6s,baz=34,slow=6.2,SNR=9.1						
AKASG	Malin Array Be	72.63	327	IAmb	IAmb	00 37 59.2	
	comp=Z,3.3nm,1.4s						
TXAR	Lajitas Array	77.15	61	P	P	00 38 18.6	-0.3
	comp=Z,1.2nm,0.8s,baz=304,slow=4.2,SNR=13						
CLL	Collm	77.49	336	*i* P	P	00 38 20.6	+0.2
CLL				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CLL	Collm	77.49	336	*i* P	P	00 38 20.6	+0.2
	comp=Z,6.0nm,1.0s						

GERES	GERESS Array B	79.49	335	P	P	00 38 31.9	+0.4
	comp=Z,0.7nm,0.8s,baz=28,slow=4.4,SNR=6.4						
GERES	GERESS Array B	79.49	335	P	P	00 38 32.0	+0.4
BRTR	Keskin Array B	79.50	318	P	P	00 38 32.8	+0.9
	comp=Z,1.1nm,1.0s,baz=81,slow=4.7,SNR=3.6						
BRTR	Keskin Array B	79.50	318	eP	P	00 38 32.3	+0.4
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BDFB	Brasilia	144.44	39	PKP	PKPab	00 45 59.2	-0.8
	comp=Z,2.0nm,0.6s,baz=174,slow=13,SNR=3.7						
PLCA	Paso Flores	147.31	97	PKPbc	PKPbc	00 46 07.0	-1.3
	comp=Z,3.4nm,0.9s,baz=257,slow=7.5,SNR=5.7						
PLCA	Paso Flores	147.31	97	PKP2	PKPbc	00 46 07.0	-1.3

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*NEIC **02** 00:57:33.5±1.4, 12°.25S±0°.09×167°.0E±0°.1, h214^{km}±6^{km}, mb4.5/62, Error ellipse: s-maj=19.0km s-min=13.3km az=91.0*

*NOU **02** 00:57:34.0, 12°.25S×167°.05E, h218^{km}, mb4.6/14, Santa Cruz Islands*

*IDC **02** 00:57:35.9±2.5, 12°.33S×166°.92E, h240^{km}±22^{km}, mb3.9/17, mb1 4.1/19, mb1mx3.9/34, mbtmp4.5/19, Error ellipse: s-maj=16.5km s-min=14.2km az=116.0*

ISC 02 00:57:33.3±0.4, **12°.31S**±0°.06×**167°.06E**±0°.09, **h220**^{km}, **n123**, σ**0^{s}91**/118, **mb4.5**/57, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	3.13	177	Pn	Pn	00 58 26.1	+0.7
SANVU				Sn	S	00 59 08.7	+2.3
SANVU	Saraoutou	3.13	177	P	Pn	00 58 26.9	+1.4
LIFNC	LIFOU	8.43	179	Pn	Pn	00 59 33.2	+1.2
KOUNC	Koumac, New Ca	8.62	198	P	Pn	00 59 36.0	+1.5
MARNC	Mare, Loyalty	9.17	174	Pn	Pn	00 59 41.6	0.0
DZM	Mont Dzumac	9.73	183	P	P	00 59 52.7	-3.7
	1.2nm,0.3s,baz=342,slow=20,SNR=12						
DZM	Mont Dzumac	9.73	183		Pn	00 59 51.4	+2.5
OUENC	Ouen Island, N	10.06	181	Pn	Pn	00 59 53.7	+0.6
PINNC	Pines Island,	10.26	178	Pn	Pn	00 59 55.5	-0.1
RK1H	Rockhampton Ha	19.22	233	P	P	01 01 42.3	+1.3
	21nm,1.1s						
PMG	Port Moresby	19.75	276	P	P	01 01 47.0	+0.1
	1.9nm,0.3s,baz=68,slow=5.4,SNR=6.3						
PMG	Port Moresby	19.75	276	P	P	01 01 46.0	-0.8
PMG	Port Moresby	19.75	276	P	P	01 01 47.6	+0.7
PMG	Port Moresby	19.75	276	P	P	01 01 47.6	+0.7
EIDS	Eidsvold	19.91	227	P	P	01 01 49.1	+0.7
EIDS	Eidsvold	19.91	227	P	P	01 01 49.3	+0.9
	89nm,1.4s						
PATS	Pohnpei	20.91	335	P	P	01 01 58.1	-1.0
CTA	Charters Tower	21.41	246	P	P	01 02 04.2	0.0
	23nm,0.7s,baz=80,slow=12,SNR=34						
CTA	Charters Tower	21.41	246	P	P	01 02 04.4	+0.1
	45nm,1.0s						
CTAO	Charters Tower	21.41	246	P	P	01 02 04.4	+0.1
CTAO	Charters Tower	21.41	246	P	P	01 02 04.6	+0.3
MANU	Manus Island	22.02	296	P	P	01 02 09.0	-1.2
MANU				IAmb	IAmb	01 02 10.9	
	comp=Z,18nm,0.9s						
RMQ	Roma	22.25	228	P	P	01 02 12.9	+0.6
	comp=Z,51nm,0.9s						
MTSU	Mount Surprise	22.69	252	P	P	01 02 17.4	+1.1
	comp=Z,21nm,0.9s						
ARMA	Armidale	23.00	216	P	P	01 02 20.2	+1.1
ARMA	Armidale	23.00	216	P	P	01 02 20.6	+1.5
	comp=Z,30nm,0.8s						
COEN	Coen	23.32	263	P	P	01 02 22.5	+0.5
COEN	Coen	23.32	263	P	P	01 02 23.0	+1.0
	comp=Z,44nm,0.9s						
BKZ	Black Stump Fm	28.03	164	P	P	01 03 04.7	+0.6
BKZ				IAmb	IAmb	01 03 06.8	
	comp=Z,11nm,1.1s						
TUWZ	Tuamarina	29.63	169		PcP	01 06 14.7	-2.4
STKA	Stephens Creek	30.46	226	P	P	01 03 25.6	0.0
	comp=Z,3.7nm,0.6s,baz=56,slow=8.8,SNR=8.8						
STKA	Stephens Creek	30.46	226	P	P	01 03 26.2	+0.6
FOZ	Fox Glacier	31.21	176	P	P	01 03 32.0	+0.1
FOZ				IAmb	IAmb	01 03 46.8	
	comp=Z,16nm,1.1s						
LBZ	Lake Benmore	32.08	176	P	P	01 03 40.5	+0.8
LBZ				IAmb	IAmb	01 03 46.8	
	comp=Z,12nm,1.1s						
WR0	Warramunga Arr	32.11	252	P	P	01 03 39.0	-1.2
WR0				IAmb	IAmb	01 03 39.9	
	comp=Z,8.2nm,1.0s						
WB0	Warramunga Arr	32.22	252	P	P	01 03 40.1	-1.1
WB0				IAmb	IAmb	01 03 40.9	
	comp=Z,16nm,0.8s						
WB2	Warramunga Arr	32.28	252	P	P	01 03 40.7	-1.1
WB2				IAmb	IAmb	01 03 41.5	
	comp=Z,8.2nm,0.8s						
WRA	Warramunga Arr	32.29	252	P	P	01 03 40.6	-1.3
	comp=Z,8.5nm,0.8s,baz=85,slow=8.7,SNR=52						
WRA				ScP	ScP	01 09 45.4	-2.1
	comp=Z,1.0nm,1.0s,baz=69,slow=3.4,SNR=4.2						
WRA	Warramunga Arr	32.29	252	P	P	01 03 40.5	-1.4
AS31	Alice Springs	33.41	246	P	P	01 03 50.6	-0.9
ASAR	Alice Springs	33.41	246	P	P	01 03 50.5	-1.1
	comp=Z,14nm,0.5s,baz=71,slow=9.6,SNR=108						
BBOO	Buckleboo	34.95	229	P	P	01 04 04.3	-0.3
BBOO				IAmb	IAmb	01 04 05.7	
	comp=Z,15nm,0.9s						
SIJI	Sorong	37.27	285	P	P	01 04 23.5	-1.0
	comp=Z,8.8nm,0.3s,baz=94,slow=15,SNR=6.7						
KNRA	Kununurra	37.28	260	P	P	01 04 24.0	-0.4
MSAI	Masohi	38.76	280	P	P	01 04 37.2	+0.3
	comp=Z,5.5nm,0.4s						
FITZ	Fitzroy Crossi	40.32	257	P	P	01 04 49.6	-0.1
FITZ				IAmb	IAmb	01 04 50.4	
	comp=Z,14nm,1.1s						
FORT	Forrest	40.40	237	P	P	01 04 50.2	-0.1
SANI	Sanana	41.94	281	P	P	01 05 02.5	-0.4
	comp=Z,12nm,0.8s						
BATI	Baumata	42.58	268	P	P	01 05 09.2	+1.1
	comp=Z,17nm,0.7s						
EDFI	Ende, Flores	44.71	270	P	P	01 05 24.0	-1.2
PSA00	Pilbara Seismi	45.95	252	P	P	01 05 34.5	-0.2
KAPI	Kappang	47.27	275	P	P	01 05 45.2	+0.2
KAPI				IAmb	IAmb	01 05 45.9	
	comp=Z,9.5nm,0.7s						
TOLI2	Tolitoli	47.83	283	P	P	01 05 48.2	-1.2
TOLI2				IAmb	IAmb	01 05 50.2	
	comp=Z,6.4nm,0.5s						
MJAR	Matsushiro Arr	55.68	332	P	P	01 06 46.3	-0.6
	comp=Z,1.8nm,0.5s,baz=166,slow=8.1,SNR=6.1						
MAT	Matsushiro	55.68	332	P	P	01 06 46.6	-0.3
KSRS	Korea Array	61.64	325	P	P	01 07 28.6	+0.7
	comp=Z,1.3nm,0.9s,baz=122,slow=4.6,SNR=2.0						
NJ2	Nanjing	63.81	315	eP	P	01 07 43.4	+1.0
NJ2				pmax	pmax		
	comp=Z,11nm,0.7s						
USRK	Ussuriysk Ar.	64.65	333	P	P	01 07 49.0	+1.5
	comp=Z,4.7nm,0.9s,baz=132,slow=8.0,SNR=5.5						
VNDA	Vanda	65.27	181	P	P	01 07 51.5	+0.5
	comp=Z,0.7nm,0.7s,baz=0.2,slow=8.0,SNR=8.8						
VNDA	Vanda	65.27	181	P	P	01 07 51.6	+0.5
HHC	Hu-ho-hao-te	73.62	319	eP	P	01 08 43.3	+0.5
HHC				pmax	pmax		
	comp=Z,12nm,0.7s						
HHC				pmax	pmax		
	comp=Z,62nm,6.9s						
CMAR	Chiang Mai Arr	73.79	293	P	P	01 08 45.2	+1.1
	comp=Z,1.1nm,0.4s,baz=126,slow=4.9,SNR=7.1						
KDAK	Kodiak Island	77.28	21	P	P	01 09 03.0	-0.1
	comp=Z,6.3nm,0.9s,baz=236,slow=7.3,SNR=2.0						
KDAK	Kodiak Island	77.28	21	P	P	01 09 03.2	+0.2
KDAK				IAmb	IAmb	01 09 10.6	
	comp=Z,5.9nm,0.9s						
SONM	Songino Array	80.44	323	P	P	01 09 21.5	+0.9
	comp=Z,0.8nm,0.7s,baz=116,slow=5.3,SNR=4.2						
SONM	Songino Array	80.44	323	P	P	01 09 21.3	+0.6
PWL	Port Wells	81.03	20	P	P	01 09 23.9	+0.5
PWL				IAmb	IAmb	01 09 24.5	
	comp=Z,13nm,0.8s						
PMR	Palmer	81.30	20	P	P	01 09 25.2	+0.5
PMR				IAmb	IAmb	01 09 25.7	
	comp=Z,12nm,1.1s						
KNK	Knik Glacier	81.39	20	IAmb	IAmb	01 09 26.2	
	comp=Z,8.6nm,0.7s						
CAST	Castle Rocks	81.75	17	IAmb	IAmb	01 09 28.9	
	comp=Z,9.1nm,0.7s						
TRF	Thorofare Moun	82.31	18	IAmb	IAmb	01 09 31.7	
	comp=Z,8.3nm,0.8s						
N25K	Chitina, Valde	82.85	21	P	P	01 09 33.8	+0.9
N25K				IAmb	IAmb	01 09 34.4	
	comp=Z,11nm,0.9s						
MCK	McKinley	82.93	18	IAmb	IAmb	01 09 35.5	
	comp=Z,6.8nm,0.8s						
GLB	Gilahina Butte	83.02	21	IAmb	IAmb	01 09 36.1	
	comp=Z,9.2nm,1.0s						
I21K	Tanana	83.13	16	IAmb	IAmb	01 09 35.9	
	comp=Z,8.7nm,0.8s						
COLA	College	84.08	18	P	P	01 09 38.0	-0.9
CMB	Columbia Colle	84.18	49	P	P	01 09 40.6	+0.4
L26K	Log Cabin Wild	84.23	20	P	P	01 09 40.0	+0.2
H23K	Yukon River	84.29	17	P	P	01 09 39.7	-0.4
H23K				IAmb	IAmb	01 09 41.5	
	comp=Z,7.6nm,0.9s						
ILAR	Eielson Array	84.30	18	P	P	01 09 39.8	-0.3
	comp=Z,12nm,0.6s,baz=230,slow=5.2,SNR=177						
ILAR	Eielson Array	84.30	18	P	P	01 09 39.6	-0.5
DOT	Dot Lake	84.41	20	P	P	01 09 40.9	+0.2
DOT				IAmb	IAmb	01 09 42.0	
	comp=Z,6.2nm,0.7s						
SCRK	Sand Creek	84.66	20	P	P	01 09 42.6	+0.6
SCRK				IAmb	IAmb	01 09 43.5	
	comp=Z,7.6nm,0.7s						
NVAR	Mina Array Bea	85.86	49	P	P	01 09 49.4	+0.7
	comp=Z,1.7nm,0.8s,baz=233,slow=8.9,SNR=9.6						
EGAK	Eagle	86.12	20	P	P	01 09 49.0	0.0
EGAK				IAmb	IAmb	01 09 50.8	
	comp=Z,9.2nm,0.8s						
GLA	Glamis	86.90	55	IAmb	IAmb	01 09 56.1	
	comp=Z,8.5nm,0.7s						
J08A	Circle Bar Ran	87.36	45	P	P	01 09 56.3	+0.6
J08A				IAmb	IAmb	01 09 57.9	
	comp=Z,8.4nm,1.1s						
MFID	Camas Ranch	89.21	45	P	P	01 10 05.0	+0.6
MFID				IAmb	IAmb	01 10 06.1	
	comp=Z,6.6nm,0.9s						
LCMT	Little Creek M	89.25	52	P	P	01 10 05.3	+0.5
LCMT				IAmb	IAmb	01 10 06.9	
	comp=Z,4.7nm,1.2s						
CCUT	Cedar City	89.31	51	P	P	01 10 05.8	+0.7
PLID	Pearl Lake	89.60	44	IAmb	IAmb	01 10 07.9	
	comp=Z,3.1nm,0.8s						
U15A	North Rim	89.83	53	P	P	01 10 07.7	-0.1
U15A				IAmb	IAmb	01 10 10.0	
	comp=Z,7.1nm,1.1s						
TUC	Tucson	89.98	57	P	P	01 10 08.5	+0.2
HLID	Hailey	90.23	45	P	P	01 10 09.8	+0.5
MTPU	Mount Pierson	90.34	51	P	P	01 10 11.3	+1.2
MTPU				IAmb	IAmb	01 10 12.9	
	comp=Z,4.1nm,1.0s						
WMQ	Urumqi	90.89	315	eP	P	01 10 13.3	+1.1
TXAR	Lajitas Array	95.30	61	P	P	01 10 33.2	+0.4
	comp=Z,0.5nm,0.8s,baz=221,slow=5.7,SNR=5.9						
MKAR	Makanchi Array	95.31	317	P	P	01 10 32.4	0.0
	comp=Z,2.6nm,0.8s,baz=96,slow=5.8,SNR=11						
ZALV	Zalesovo Beam	95.32	324	P	P	01 10 31.8	-0.4
	comp=Z,0.4nm,0.4s,baz=126,slow=7.3,SNR=3.7						
SNAA	Sanae	95.94	183	P	P	01 10 34.0	-0.9
VNA3	Neumayer Olymp	96.62	181	P	P	01 10 36.9	-1.0
VNA2	Neumayer--Watz	96.88	182	P	P	01 10 38.4	-0.6
	baz=179,slow=3.7						
VNA1	Neumayer--Stat	97.18	182	P	P	01 10 39.0	-1.3
ARCES	ARCESS Array B	117.87	346	PKP	PKPdf	01 15 52.9	-0.1
	comp=Z,3.1nm,0.4s,baz=77,slow=1.8,SNR=28						
FINES	FINESS Array B	123.41	339	PKP	PKPdf	01 16 03.4	-0.4
	comp=Z,3.0nm,0.8s,baz=36,slow=3.5,SNR=13						
FINES	FINESS Array B	123.41	339		PKPdf	01 16 03.8	-0.1
NOA	NORSAR Array B	128.24	345	PKP	PKiKP	01 16 13.6	-0.3
	comp=Z,1.3nm,0.7s,baz=30,slow=2.0,SNR=5.0						
BRTR	Keskin Array B	130.76	312	PKP	PKPdf	01 16 19.2	+0.4
	comp=Z,0.4nm,0.8s,baz=88,slow=4.6,SNR=1.5						
CLL	Collm	135.76	337	ePKPdf	PKiKP	01 16 29.0	-0.2
GERES	GERESS Array B	137.40	334	PKP	PKiKP	01 16 31.9	-0.9
	comp=Z,1.0nm,0.7s,baz=38,slow=1.7,SNR=8.7						
GERES	GERESS Array B	137.40	334		PKiKP	01 16 32.6	-0.2
KEST	Kesra	149.19	323	PKPbc	PKPbc	01 16 56.1	-0.2
	comp=Z,5.2nm,0.7s,baz=218,slow=1.6,SNR=11						
POLO	Lamas de Olo	150.69	352	ePKPbc	PKiKP	01 17 00.3	-0.1
PVRL	Vila Real	150.78	352	ePKPbc	PKiKP	01 17 00.6	+0.1
MVO	Moncorvo	150.79	351	ePKPbc	PKPbc	01 16 59.9	-0.1
PVIS	Viseu	151.35	352	ePKPbc	PKiKP	01 17 01.6	-0.1
ESDC	Sonseca Array	151.60	345	PKPbc	PKPbc	01 17 01.8	-0.1
	comp=Z,2.9nm,0.8s,baz=11,slow=2.3,SNR=12						
ESDC				PKPab	PKPab	01 17 12.2	+1.0
	comp=Z,2.6nm,0.7s,baz=12,slow=3.8,SNR=10						
ESDC	Sonseca Array	151.60	345		PKiKP	01 17 02.2	0.0
MTE	Manteigas	151.61	351	ePKPbc	PKiKP	01 17 02.7	+0.5
PCAS	Casmilo, Conde	152.08	353	ePKPbc	PKPbc	01 17 02.9	0.0
PCBR	Castelo Branco	152.15	351	ePKPbc	PKiKP	01 17 03.5	+0.2
PMRV	Marv??o	152.54	351	ePKPbc	PKPbc	01 17 03.5	-0.4
PMTG	Montargil	153.02	352	ePKPbc	PKPbc	01 17 03.9	-1.0

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*NEIC **02** 01:52:31.9±2.5, 31°.72N±0°.06×140°.61E±0°.09, h41^{km}±5^{km}, mb4.7/49, Error ellipse: s-maj=11.2km s-min=8.1km az=76.0*

*MOS **02** 01:52:32.8±1.2, 31°.58N×140°.55E, h71^{km}, mb4.7/16, Error ellipse: s-maj=16.5km s-min=6.9km az=113.9*

*IDC **02** 01:52:33.5±1.7, 31°.63N×140°.55E, h63^{km}±15^{km}, mb3.9/21, mb1 4.1/25, mb1mx4.0/36, mbtmp4.2/25, MS3.2/12, Ms1 3.2/12, ms1mx3.0/40, Error ellipse: s-maj=16.7km s-min=11.8km az=80.0*

*JMA **02** 01:52:33.5±0.1, 32°.05N×140°.83E, h6^{km}, M4.5*

*NIED **02** 01:52:33.6, 32°.05N×140°.83E, h6^{km}, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-3.18; M$_{\theta\theta}$-0.81; M$_{\phi\phi}$3.99; M$_{r\theta}$1.99; M$_{\theta\phi}$-1.31; M$_{\phi r}$-3.60; Fault plane solution: M$_0$5.59000×10^{15} NP1: φ$_s$333.00000°, δ69.00000°, λ-102.00000°. NP2: φ$_s$184.00000°, δ24.00000°, λ-61.00000°.*

ISC 02 01:52:32.1±0.8, **31°.71N**±0°.04×**140°.80E**±0°.06, **h51**^{km}±7^{km}, **n205**, σ**1^{s}32**/209, **mb4.6**/50, **MS3.0**/7, **24C**, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAOM	Aogashimamukai	1.16	311	P	Pn	01 52 52.4	+0.4
JHCJ	Hachijojimakas	1.60	328	P	Pn	01 52 58.3	+0.2
JHCJ				eS	Sn	01 53 15.5	-2.2
JHJ2	Mitsune	1.63	330	P	Pn	01 52 58.8	+0.4
JHJ2	Mitsune	1.63	330	Pn	Pn	01 52 58.6	+0.2
JHJ	Hachijo jima 2	1.65	329	P	Pn	01 52 58.9	+0.2
	116nm,0.3s,baz=62,slow=22,SNR=26						
JHJ				S	Sn	01 53 14.7	-4.1
	1μm,0.3s,baz=86,slow=22,SNR=20						
JMKN	Mikurajimanish	2.41	335	P	Pn	01 53 09.8	+0.7
JMKN				S	Sn	01 53 35.5	-1.8
JKO	Kozu shima	2.84	331	P	Pn	01 53 16.8	+1.8
JKO				eS	Sn	01 53 49.2	+1.2
BSO1	Boso 1	2.94	3	P	Pn	01 53 16.2	+0.3
BSO1				S	Sn	01 53 48.1	-1.7
TK02	Tokai 2	3.40	312	P	Pn	01 53 24.8	+2.4
JOD2	Odawara 2	3.83	339	P	Pn	01 53 30.0	+1.5
JOD2				eS	Sn	01 54 10.1	-2.1
JFNN	Fujinakano	3.90	334	P	Pn	01 53 32.7	+3.1
JYN	Shimob	4.22	334	P	Pn	01 53 36.8	+2.8
JIE	Ise	4.36	309	P	Pn	01 53 37.4	+1.6
JYT	Yasato	4.54	354	Pn	Pn	01 53 39.3	+1.0
JRY	Ryogami san	4.58	340	P	Pn	01 53 41.0	+2.1
JRY				eS	Sn	01 54 30.9	+0.1
JCJ	Chichijima	4.75	165	P	Pn	01 53 42.2	+1.0
	22nm,0.3s,baz=270,slow=20,SNR=22						
JCJ				S	Sn	01 54 33.8	-1.2
	24nm,0.3s,baz=283,slow=23,SNR=6.8						
JCJ				LR	LR	01 55 22.6	
	comp=Z,134nm,21.0s,baz=110,slow=36						
JCJ	Chichijima	4.75	165	Pn	Pn	01 53 42.4	+1.1
INU	Inuyama	4.81	320		Pn	01 53 42.6	+0.6
JGF	Kuroka	4.83	324	Pn	Pn	01 53 44.4	+2.1
JAG	Ashikaga	4.84	347	P	Pn	01 53 43.3	+0.9
JTNC	Tanabenakahech	4.85	297	P	Pn	01 53 43.8	+1.2
JTNC				eS	Sn	01 54 41.4	+3.9
JWY	Kouya	5.04	301	P	Pn	01 53 47.4	+2.1
MJAR	Matsushiro Arr	5.28	337	P	Pn	01 53 51.1	+2.6
	1.8nm,0.3s,baz=150,slow=12,SNR=71						
MJAR				S	Sn	01 54 49.7	+1.7
	1.9nm,0.3s,baz=193,slow=21,SNR=6.4						
MJAR	Matsushiro Arr	5.28	337	P	Pn	01 53 52.0	+3.5
MJAR	Matsushiro Arr	5.28	337	Pn	Pn	01 53 52.0	+3.5
MAJO	Matsushiro	5.28	337	i P	Pn	01 53 52.0	+3.5
MAJO	Matsushiro	5.28	337	Pn	Pn	01 53 51.3	+2.8
MAT	Matsushiro	5.28	337	P	Pn	01 53 51.9	+3.4
MAT				S	Sn	01 54 49.4	+1.3
JWT	Wachi	5.75	310	Pn	Pn	01 53 55.6	+0.7
JMM	Marumori	6.15	360	Pn	Pn	01 54 00.6	+0.3
JMN	Monobe	6.17	291	Pn	Pn	01 54 00.3	-0.4
JSD	Sado	6.65	342	Pn	Pn	01 54 09.0	+1.8
JHS	Saijyo	7.22	299	Pn	Pn	01 54 15.3	+0.3
JNU	Nakatsue	8.51	282	P	Pn	01 54 32.8	+0.1
	1.3nm,0.3s,baz=74,slow=12,SNR=6.8						
JNU	Nakatsue	8.51	282	Pn	Pn	01 54 31.1	-1.7
JTM	Tenmabayashi	9.07	1	Pn	Pn	01 54 39.8	-0.5
JMZ	Minamidaito 2	10.24	237	Pn	Pn	01 54 57.2	+0.7
ERM	Erimo	10.46	10	P	Pn	01 54 58.9	-0.5
ERM	Erimo	10.46	10	Pn	Pn	01 54 58.9	-0.5
JOW	Kunigami	11.96	249	P	Pn	01 55 21.9	+1.9
	0.6nm,0.3s,baz=42,slow=15,SNR=2.8						
JOW				LR	LR	01 59 37.1	
	comp=Z,102nm,19.4s,baz=216,slow=36						
KSRS	Korea Array	12.06	302	P	Pn	01 55 26.4	+5.2
	0.3nm,0.3s,baz=116,slow=14,SNR=16						
KSRS				LR	LR	01 59 44.7	
	comp=Z,83nm,19.0s,baz=122,slow=36						
ASAJ	Asahikawa	12.47	6	LR	LR	02 00 37.2	
	comp=Z,101nm,21.5s,baz=186,slow=38						
YSS	Yuzh-Sakhalins	15.30	5	eP	Pn	01 56 03.1	-1.6
YSS				eS	Sn	01 58 51.8	-1.2
YSS				MLR	MLR		
	comp=Z,400nm,11.0s						
GUMO	Guam	18.41	167	LR	LR	02 02 31.3	
	comp=Z,72nm,20.7s,baz=99,slow=32						
YHNB	Yeheng	18.49	253		Pn	01 56 43.8	-0.9
YHNB				IAmb	IAmb	01 56 52.0	
	comp=Z,117nm,1.5s						
NACB	Ninganchiao	18.54	251		Pn	01 56 44.1	-1.1
NJ2	Nanjing	18.64	277	eP	Pn	01 56 46.5	+0.1
NJ2				pmax	pmax		
	comp=Z,14nm,0.9s						
KLR	Kul'dur	18.79	341	P	Pn	01 56 47.4	-0.6
	comp=Z,0.4nm,0.3s,baz=168,slow=10.0,SNR=5.2						
SSLB	Suanglung	19.23	251		P	01 56 50.8	-1.5
SSLB				IAmb	IAmb	01 56 55.5	
	comp=Z,70nm,1.2s						
WHN	Wuhan	22.66	274	P	P	01 57 18.7	-10
ZEA	Zeya	24.08	340	eP	P	01 57 45.2	+2.5
ZEA				pmax	pmax		
	comp=E,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=N,10.0nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,20nm,0.7s						
PETK	Petropavlovsk-	24.64	25	LR	LR	02 07 01.3	
	comp=Z,44nm,21.4s,baz=173,slow=35						
HHC	Hu-ho-hao-te	25.18	299	eP	P	01 57 52.7	-0.2
HHC				pmax	pmax		
	comp=Z,13nm,0.7s						
HHC				pmax	pmax		
	comp=Z,74nm,6.6s						
H11N2	WAKE ISLAND Hy	26.29	111	T	T	02 27 07.7	
	baz=305,slow=75,SNR=99						
H11N1	WAKE ISLAND Hy	26.30	111	T	T	02 27 26.0	
	baz=305,slow=75,SNR=135						
H11N3	WAKE ISLAND Hy	26.31	111	T	T	02 27 29.1	
	baz=305,slow=75,SNR=80						
H11S3	WAKE ISLAND Hy	26.80	113	T	T	02 26 50.5	
	baz=304,slow=75,SNR=474						
H11S1	WAKE ISLAND Hy	26.80	113	T	T	02 26 45.8	
	baz=304,slow=75,SNR=362						
H11S2	WAKE ISLAND Hy	26.82	113	T	T	02 26 45.9	
	baz=304,slow=75,SNR=157						
XAN	Xi'an	26.82	284	P	P	01 58 06.3	-1.5
XAN				pP	pP	01 58 12.2	-7.8
XAN				sP	pwP	01 58 18.9	-4.1
XAN				pmax	pmax		
	comp=Z,9.0nm,0.5s						
DAV	Davao City (W)	28.33	213	LR	LR	02 08 34.0	
	comp=Z,41nm,19.8s,baz=43,slow=34						
MA2	Magadan	28.67	11	LR	LR	02 10 30.0	
	comp=Z,28nm,18.0s,baz=140,slow=37						
SONM	Songino Array	30.65	312	P	P	01 58 41.1	-0.7
	comp=Z,1.0nm,0.5s,baz=108,slow=9.3,SNR=5.3						
SONM				LR	LR	02 11 14.3	
	comp=Z,40nm,19.3s,baz=112,slow=37						
SONM	Songino Array	30.65	312		P	01 58 40.1	-1.7
TLY	Talaya	33.67	317	i P	P	01 59 02.6	-5.5
TLY				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CMAR	Chiang Mai Arr	39.90	261	P	P	02 00 00.1	-1.3
	comp=Z,1.8nm,0.6s,baz=60,slow=6.9,SNR=5.5						
CMAR				LR	LR	02 15 25.6	
	comp=Z,21nm,21.6s,baz=80,slow=35						
CMAR	Chiang Mai Arr	39.90	261	ceP	P	02 00 00.6	-0.8
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
TIXI	Tiksi	40.52	354	i P	P	02 00 05.5	-0.3
WMQ	Urumqi	43.01	302	eP	P	02 00 28.7	+2.1
ZALV	Zalesovo Beam	45.27	316	P	P	02 00 43.2	-1.3
	comp=Z,1.3nm,0.5s,baz=98,slow=8.6,SNR=7.2						
ZALV				PcP	PcP	02 02 22.7	-0.9
	comp=Z,2.1nm,0.6s,baz=95,slow=3.3,SNR=6.8						
ZALV	Zalesovo Beam	45.27	316	i P	P	02 00 44.0	-0.5
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV	Zalesovo Beam	45.27	316		P	02 00 42.7	-1.8
ZALV				PcP	PcP	02 02 23.2	-0.4
COEN	Coen	45.46	177	P	P	02 00 47.0	+0.6
COEN				IAmb	IAmb	02 00 56.6	
	comp=Z,14nm,1.3s						
MK31	Makanchi Array	46.69	306	P	P	02 00 54.2	-1.6
MK31				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MK31	Makanchi Array	46.69	306	P	P	02 00 54.2	-1.6
MKAR	Makanchi Array	46.69	306	P	P	02 00 54.4	-1.4
	comp=Z,1.4nm,0.7s,baz=87,slow=10,SNR=6.3						
MKAR	Makanchi Array	46.69	306	P	P	02 00 54.5	-1.3
MAKZ	Makanchi	46.91	306	P	P	02 00 56.7	-0.8
MAKZ				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MAKZ	Makanchi	46.91	306	P	P	02 00 56.7	-0.8
MAKZ				IAmb	IAmb	02 01 11.8	
	comp=Z,5.8nm,0.6s						
NRIK	Noril'sk	47.94	337	P	P	02 01 04.8	-0.3
	comp=Z,1.3nm,0.4s,baz=114,slow=13,SNR=4.5						
NRIK	Noril'sk	47.94	337	i P	P	02 01 05.3	+0.2
NRIK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NRIK	Noril'sk	47.94	337	P	P	02 01 06.0	+0.9
PMBI	Palembang	48.55	232	P	P	02 01 10.8	+0.2
KURK	Kurchatov	48.96	312	P	P	02 01 12.4	-0.9
KURK				pmax	pmax		
	comp=Z,10.0nm,1.4s						
KURK	Kurchatov	48.96	312	P	P	02 01 12.4	-0.9
KURK				IAmb	IAmb	02 01 33.4	
	comp=Z,10nm,1.4s						
K20K	Telida	51.07	32	P	P	02 01 31.8	+2.7
K20K				IAmb	IAmb	02 01 50.3	
	comp=Z,6.7nm,0.8s						
J20K	Nowinta River	51.13	31	P	P	02 01 30.0	+0.5
J20K				IAmb	IAmb	02 01 47.5	
	comp=Z,12nm,1.1s						
KDAK	Kodiak Island	51.48	39	P	P	02 01 33.2	+1.0
	comp=Z,6.1nm,0.7s,baz=301,slow=5.9,SNR=6.0						
KDAK	Kodiak Island	51.48	39	P	P	02 01 32.6	+0.4
WB0	Warramunga Arr	51.55	188	P	P	02 01 31.4	-1.6
WB0				IAmb	IAmb	02 01 33.1	
	comp=Z,5.3nm,0.8s						
FITZ	Fitzroy Crossi	51.61	198	P	P	02 01 32.4	-1.2
WR0	Warramunga Arr	51.72	188	P	P	02 01 32.3	-2.0
WB2	Warramunga Arr	51.72	188	P	P	02 01 32.2	-2.2
WB2				PcP	PcP	02 02 48.2	+0.9
WRA	Warramunga Arr	51.73	188	P	P	02 01 32.9	-1.6
	comp=Z,2.4nm,0.6s,baz=2.9,slow=7.6,SNR=45						
WRA				PcP	PcP	02 02 47.9	+0.7
	comp=Z,1.5nm,0.5s,baz=2.1,slow=4.2,SNR=7.4						
WRA	Warramunga Arr	51.73	188	P	P	02 01 32.5	-1.9
WRA				PcP	PcP	02 02 48.1	+0.9
CTAO	Charters Tower	51.76	173	P	P	02 01 34.4	-0.3
CTAO				pmax	pmax		
	comp=Z,9.0nm,1.4s						
CTAO	Charters Tower	51.76	173	P	P	02 01 34.4	-0.3
CTAO				IAmb	IAmb	02 01 38.6	
	comp=Z,8.8nm,1.4s						
H21K	Melozitna Rive	51.87	29	P	P	02 01 34.9	-0.2
H21K				IAmb	IAmb	02 01 55.9	
	comp=Z,6.5nm,0.8s						
PPLA	Purkeypile	51.88	32	P	P	02 01 37.9	+2.6
PPLA				IAmb	IAmb	02 01 56.5	
	comp=Z,7.8nm,0.8s						

SUA	Susitna One	52.48	34	P	P	02 01 41.1	+1.3
SUA				IAmb	IAmb	02 01 59.9	
	comp=Z,6.3nm,0.9s						
AAK	Ala-Archa	52.72	302	P	P	02 01 41.3	-0.6
AAK				pmax	pmax		
	comp=Z,10.0nm,1.5s						
AAK	Ala-Archa	52.72	302	P	P	02 01 41.3	-0.6
AAK				IAmb	IAmb	02 02 10.7	
	comp=Z,10nm,1.5s						
TOLK	Toolik Lake Re	53.46	25	P	P	02 01 49.1	+2.2
TOLK				IAmb	IAmb	02 02 08.3	
	comp=Z,19nm,1.4s						
MDM	Murphy Dome	53.73	30	P	P	02 01 49.7	+0.9
BRVK	Borovoye	53.94	315	i P	P	02 01 49.8	-0.7
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
SCM	Sheep Creek Mo	54.11	34	P	P	02 01 53.5	+1.8
SCM				pmax	pmax		
	comp=Z,30nm,1.3s						
SCM	Sheep Creek Mo	54.11	34	P	P	02 01 53.5	+1.8
ILAR	Eielson Array	54.30	30	P	P	02 01 53.5	+0.5
	comp=Z,0.6nm,0.7s,baz=261,slow=6.0,SNR=7.0						
ILAR	Eielson Array	54.30	30	P	P	02 01 52.9	-0.1
BMAR	Burnt Mountain	55.27	27	P	P	02 02 02.9	+2.9
AS31	Alice Springs	55.45	188	P	P	02 02 01.4	-0.3
ASAR	Alice Springs	55.45	188	P	P	02 02 00.4	-1.3
	comp=Z,1.8nm,0.6s,baz=16,slow=12,SNR=24						
ASAR	Alice Springs	55.45	188	P	P	02 01 59.9	-1.8
KK31	Karatay Array	55.48	303	P	P	02 02 00.6	-1.2
KK31				pmax	pmax		
	comp=Z,13nm,1.5s						
KK31	Karatay Array	55.48	303	P	P	02 02 00.6	-1.2
KK31				IAmb	IAmb	02 02 06.5	
	comp=Z,12nm,1.5s						
KKAR	Karatay Array	55.48	303	P	P	02 02 00.5	-1.3
KKAR	Karatay Array	55.48	303	P	P	02 02 00.5	-1.3
SCRK	Sand Creek	55.58	31	P	P	02 02 03.1	+0.8
SCRK				IAmb	IAmb	02 02 22.3	
	comp=Z,6.6nm,0.8s						
GAR	Garm	56.65	298	P	P	02 02 10.2	-0.2
GAR				IAmb	IAmb	02 02 10.8	
	comp=Z,4.0nm,0.7s						
MESA	MESA	56.84	36	P	P	02 02 10.9	-0.5
GRNC	Granite Creek	56.87	35	P	P	02 02 12.1	+0.3
GRNC				IAmb	IAmb	02 02 32.1	
	comp=Z,8.5nm,0.8s						
EIDS	Eidsvold	57.60	169	P	P	02 02 18.0	+1.1
EIDS				IAmb	IAmb	02 02 40.9	
	comp=Z,5.4nm,0.9s						
CHGR	Chuyangaron	57.62	298	P	P	02 02 15.6	-1.6
SVE	Sverdlovsk	58.87	321	eP	P	02 02 25.6	+0.1
INK	Inuvik	59.38	26	P	P	02 02 30.0	+1.2
	comp=Z,0.4nm,0.3s,baz=257,slow=6.6,SNR=5.0						
INK	Inuvik	59.38	26	P	P	02 02 29.8	+1.0
INK				IAmb	IAmb	02 02 52.9	
	comp=Z,4.1nm,1.0s						
ARU	Arti	60.08	321	c iP	P	02 02 33.5	-0.3
ARU						02 04 43.1	
ARU				S	S	02 10 43.7	+0.8
ARU				pmax	pmax		
	comp=Z,11nm,1.4s						
ABKAR	Akbulak array	61.06	312	P	P	02 02 39.6	-1.0
STKA	Stephens Creek	63.24	179	P	P	02 02 55.2	0.0
	comp=Z,1.0nm,0.6s,baz=3.2,slow=15,SNR=2.1						
FORT	Forrest	63.31	192	P	P	02 02 55.0	-0.7
KIRV	Kirov	64.23	324	ceP	P	02 03 01.1	-0.4
GEYT	Alibeck	66.05	301	LR	LR	02 33 30.8	
	comp=Z,43nm,18.5s,baz=245,slow=37						
RES	Resolute Bay	67.88	14	P	P	02 03 25.8	+1.1
RES				pmax	pmax		
	comp=Z,5.0nm,1.0s						
RES	Resolute Bay	67.88	14	P	P	02 03 25.8	+1.1
ARCES	ARCESS Array B	68.81	340	P	P	02 03 31.2	+0.5
	comp=Z,4.9nm,0.9s,baz=66,slow=9.0,SNR=6.3						
ARCES	ARCESS Array B	68.81	340	P	P	02 03 32.1	+1.5
ARCES				pmax	pmax		
	comp=Z,19nm,1.3s						
ARCES	ARCESS Array B	68.81	340	P	P	02 03 32.1	+1.5
ARCES				IAmb	IAmb	02 03 55.9	
	comp=Z,19nm,1.3s						
FIA1	FINESS Array S	73.30	333	P	P	02 03 57.6	-0.3
FIA1				IAmb	IAmb	02 04 18.1	
	comp=Z,17nm,1.1s						
FINES	FINESS Array B	73.30	333	P	P	02 03 57.6	-0.3
	comp=Z,3.4nm,0.4s,baz=58,slow=5.9,SNR=57						
FINES	FINESS Array B	73.30	333	P	P	02 03 57.9	0.0
FINES	FINESS Array B	73.30	333	P	P	02 03 57.9	0.0
KBZ	Khabaz	74.02	312	P	P	02 04 02.3	-0.1
	comp=Z,6.3nm,0.8s,baz=95,slow=4.7,SNR=16						
KBZ	Khabaz	74.02	312	ceP	P	02 04 03.0	+0.5
KIV	Kislovodsk	74.05	312	⇑P	P	02 04 03.7	+0.9
KIV	Kislovodsk	74.05	312	eP	P	02 04 02.9	+0.1
KIV				pmax	pmax		
	comp=Z,16nm,1.1s						
KIV	Kislovodsk	74.05	312	P	P	02 04 02.4	-0.4
KIV				IAmb	IAmb	02 04 05.5	
	comp=Z,10nm,0.7s						
AKH	Akhalkalaki	74.75	309	⇑P	P	02 04 07.4	+0.4
PABE	Paberze	77.80	329	P	P	02 04 23.9	+0.1
AKASG	Malin Array Be	78.21	323	P	P	02 04 25.4	-0.7
	comp=Z,2.3nm,0.4s,baz=51,slow=5.1,SNR=22						
AKASG	Malin Array Be	78.21	323	P	P	02 04 25.0	-1.1
AKBB	Malin Array Si	78.21	323	ceP	P	02 04 27.9	+1.7
NVAR	Mina Array Bea	78.63	52	P	P	02 04 30.9	+1.9
	comp=Z,0.6nm,0.6s,baz=302,slow=5.2,SNR=6.3						
NVAR	Mina Array Bea	78.63	52	P	P	02 04 30.6	+1.5
NC204	NORSAR Array S	78.87	338	P	P	02 04 29.6	-0.1
NB2	NORSAR Subarra	78.90	338	P	P	02 04 29.2	-0.6
	comp=Z,2.1nm,0.7s,baz=43,slow=5.3						
NOA	NORSAR Array B	78.90	338	P	P	02 04 29.3	-0.5
	comp=Z,0.7nm,0.5s,baz=46,slow=5.1,SNR=7.3						
SORM	Soroca	80.19	321	⇑P	P	02 04 36.3	-0.7
SORM	Soroca	80.19	321	⇑P	P	02 04 36.3	-0.7
BNN	Bunyan	81.08	310	P	P	02 04 41.0	-1.2
PDAR	Pinedale Array	81.79	44	P	P	02 04 46.9	+0.9
	comp=Z,0.5nm,0.7s,baz=346,slow=1.9,SNR=4.5						
BR131	Keskin Array S	82.01	312	P	P	02 04 46.6	-0.5
BR131				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BR131	Keskin Array S	82.01	312	P	P	02 04 46.6	-0.5
BR131				IAmb	IAmb	02 04 49.4	
	comp=Z,10.0nm,0.8s						
BRTR	Keskin Array B	82.01	312	P	P	02 04 47.0	-0.1
	comp=Z,4.5nm,0.7s,baz=115,slow=4.0,SNR=31						
BRTR	Keskin Array B	82.01	312	P	P	02 04 47.0	-0.1
BRTR	Keskin Array B	82.01	312	P	P	02 04 46.2	-0.9
BUR08	Bucovina Ar. S	82.17	322	P	P	02 04 47.1	-0.6
BUR08				IAmb	IAmb	02 04 51.2	
	comp=Z,10nm,1.5s						
BURAR	Bucovina Array	82.18	322	⇑P	P	02 04 48.0	+0.2
BURAR	Bucovina Array	82.18	322	⇑P	P	02 04 48.0	+0.2
BURAR	Bucovina Array	82.18	322	P	P	02 04 47.0	-0.8
VRI	Vrincioaia	82.46	320	⇑P	P	02 04 50.2	+1.0
VRI	Vrincioaia	82.46	320	⇑P	P	02 04 50.2	+1.0
MLR	Muntele Rosu	83.12	320	⇑P	P	02 04 53.1	+0.4
MLR	Muntele Rosu	83.12	320	⇑P	P	02 04 53.1	+0.4
DOPR	Dopca	83.12	321	⇑P	P	02 04 52.9	+0.3
CEI	Carei	83.56	323	⇑P	P	02 04 54.6	-0.1
CEI	Carei	83.56	323	⇑P	P	02 04 54.6	-0.1
CBBR	Cluj-Babes-Bol	83.59	322	⇑P	P	02 04 55.0	0.0
VOIR		83.64	320	⇑P	P	02 04 54.9	-0.5
VOIR		83.64	320	⇑P	P	02 04 54.9	-0.5
ARR	Arges	83.92	320	⇑P	P	02 04 57.1	+0.4
DRGR		84.02	322	⇑P	P	02 04 57.1	-0.1
DRGR		84.02	322	⇑P	P	02 04 57.1	-0.1
CLL	Collm	85.45	330	eP	P	02 05 04.0	-0.3
CLL				i *PP	pwP	02 05 22.3	+0.7
CLL	Collm	85.45	330	eP	P	02 05 04.0	-0.3
CLL				i sP	pwP	02 05 22.3	+0.7
GERES	GERESS Array B	86.96	328	P	P	02 05 11.6	-0.3
	comp=Z,0.4nm,0.5s,baz=44,slow=5.8,SNR=5.0						
GERES	GERESS Array B	86.96	328	P	P	02 05 11.8	-0.1
GERES	GERESS Array B	86.96	328	P	P	02 05 11.8	-0.1
ANMO	Albuquerque	88.42	49	LR	LR	02 37 57.4	
	comp=Z,38nm,20.8s,baz=293,slow=31						
TX31	Lajitas Ar. Si	93.78	52	P	P	02 05 44.7	+0.5
TX32	Lajitas Array	93.78	52	P	P	02 05 45.9	+1.8
TXAR	Lajitas Array	93.78	52	P	P	02 05 45.8	+1.6
	comp=Z,0.9nm,0.7s,baz=322,slow=2.6,SNR=12						
TXAR	Lajitas Array	93.78	52	P	P	02 05 44.8	+0.7
TORD	Torodi Ar. Bea	120.62	312	PKP	PKPdf	02 11 17.6	-1.4
	comp=Z,0.4nm,0.5s,baz=26,slow=1.7,SNR=8.3						
KOWA	Kowa	123.00	318	PKPdf	PKPdf	02 11 23.0	-0.6
TSUM	Tsumeb	127.75	269	PKPdf	PKPdf	02 11 30.4	-2.2
SNAA	Sanae	135.50	196	PKPdf	PKiKP	02 11 46.5	-0.7
VNA2	Neumayer--Watz	137.06	195	PKPdf	PKPdf	02 11 48.8	+0.4
VNA3	Neumayer Olymp	137.29	194	PKPdf	PKPdf	02 11 49.1	+0.2
VNA1	Neumayer--Stat	137.46	195	PKPdf	PKPdf	02 11 49.1	-0.1
SAML	Samuel	148.24	50	PKP2	PKPbc	02 12 13.4	+0.1
SAML	Samuel	148.24	50	PKPbc	PKPbc	02 12 13.3	+0.1
LPAZ	La Paz	149.56	66	PKPbc	PKPbc	02 12 17.6	+0.3
	comp=Z,1.5nm,0.7s,baz=340,slow=8.0,SNR=5.0						
LPAZ	La Paz	149.56	66	PKPbc	PKiKP	02 12 18.6	+0.2
PB11	IPOC Station P	150.20	74	PKPbc	PKiKP	02 12 18.9	-0.1
LC01	Cunco	152.49	114	PKPbc	PKiKP	02 12 24.1	+1.1

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*IDC **02** 02:10:54.5±4.1, 7°.98S×74°.27W, h132km±61km, mb3.2/3, mb1 3.4/5, mb1mx3.2/26, mbtmp3.8/5, MS3.2/1, Ms1 3.2/1, ms1mx2.6/13, Error ellipse: s-maj=125.7km s-min=25.4km az=27.0*

ISC 02 02:10:56.1±1.0**, 8°.1S**±0°.3×**74°.4W**±0°.1**, h151**km**, n7, **σ1s.45/7**, mb3.3**/3**, Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAH	Atahualpa	4.09	284	P	Pn	02 11 57.8	-0.2
	25nm,0.3s,baz=24,slow=3.3,SNR=257						
ATAH				S	Sn	02 12 45.5	-0.5
	5.2nm,0.3s,baz=301,slow=20,SNR=6.1						
SIV	San Ignacio	15.18	122	P	Pn	02 14 22.4	-0.4
	0.2nm,0.3s,baz=297,slow=13,SNR=4.5						
MDP	Montagnes des	25.36	60	LR	LR	02 27 15.9	
	comp=Z,54nm,18.3s,baz=148,slow=39						
TXAR	Lajitas Array	46.71	324	P	P	02 19 10.6	+0.5
	0.1nm,0.5s,baz=151,slow=8.3,SNR=1.7						
DBIC	Dimbokro	70.87	80	P	P	02 21 58.5	+1.3
	3.6nm,0.9s,baz=230,slow=7.9,SNR=1.9						
TORD	Torodi Ar. Bea	78.44	75	P	P	02 22 39.0	-1.9
	0.3nm,0.5s,baz=272,slow=5.2,SNR=4.6						
WRA	Warramunga Arr	140.29	225	PKP	PKPdf	02 30 09.6	+1.6
	0.2nm,0.5s,baz=121,slow=2.5,SNR=5.5						

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*IDC **02** 02:33:30.4±0.9, 12°.99N×145°.63E, h0km, mb3.8/7, mb1 4.0/7, mb1mx3.7/52, mbtmp3.8/7, Error ellipse: s-maj=26.6km s-min=19.5km az=82.0*

*NEIC **02** 02:33:36.9±0.7, 13°.0N±0°.1×145°.4E±0°.1, h39km±8km, mb4.4/12, Error ellipse: s-maj=24.9km s-min=9.3km az=223.0*

ISC 02 02:33:36.7±0.8**, 13°.0N**±0°.1×**145°.4E**±0°.2**, h43**km**, n32, σ0s.83**/31**, mb4.3**/13**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	0.76	321	Pn	Pn	02 33 51.9	+0.8
	103nm,0.3s,baz=86,slow=7.6,SNR=50						
GUMO	Guam	0.76	321		Pn	02 33 51.4	+0.4
PATS	Pohnpei	14.15	114	Pn	Pn	02 36 46.1	-8.5
JOW	Kunigami	21.12	313	P	P	02 38 15.2	-2.7
WB0	Warramunga Arr	34.30	199	P	P	02 40 18.6	-0.6
WB0				IAmb	IAmb	02 40 22.1	
	comp=Z,6.2nm,1.3s						
WR0	Warramunga Arr	34.43	198	P	P	02 40 20.0	-0.3
WR0				IAmb	IAmb	02 40 20.9	
	comp=Z,5.1nm,1.2s						
WB2	Warramunga Arr	34.47	199	P	P	02 40 20.7	0.0
WB2				IAmb	IAmb	02 40 34.0	
	comp=Z,8.5nm,1.4s						
WRA	Warramunga Arr	34.48	199	P	P	02 40 20.8	0.0
	comp=Z,0.9nm,0.6s,baz=20,slow=9.6,SNR=14						
WRA	Warramunga Arr	34.48	199	P	P	02 40 19.6	-1.1
ASAR	Alice Springs	38.12	197	P	P	02 40 52.0	+0.2
	comp=Z,0.4nm,0.5s,baz=21,slow=8.6,SNR=7.2						
ASAR	Alice Springs	38.12	197	P	P	02 40 52.2	+0.4
MK31	Makanchi Array	62.25	316	P	P	02 43 55.3	+1.0
MK31				IAmb	IAmb	02 44 23.2	
	comp=Z,3.5nm,1.1s						
MKAR	Makanchi Array	62.25	316	P	P	02 43 55.0	+0.7
	comp=Z,0.3nm,0.4s,baz=93,slow=8.1,SNR=4.1						
MKAR	Makanchi Array	62.25	316	P	P	02 43 54.8	+0.5
IMAR	Indian Mountai	66.56	23	P	P	02 44 21.1	-0.9
ILAR	Eielson Array	68.90	25	P	P	02 44 35.3	-1.6
	comp=Z,0.3nm,0.4s,baz=251,slow=5.5,SNR=6.3						
ILAR	Eielson Array	68.90	25	P	P	02 44 36.7	-0.1
TOLK	Toolik Lake Re	69.00	21	P	P	02 44 37.6	+0.1
TOLK				IAmb	IAmb	02 44 45.3	
	comp=Z,7.2nm,1.5s						
CRQM	Cirque	69.73	30	P	P	02 44 42.2	0.0
BMAR	Burnt Mountain	70.47	23	P	P	02 44 46.5	0.0
TABL	Table Mountain	70.66	30	P	P	02 44 46.7	-1.3
BVAR	Borovoye Array	70.69	322	P	P	02 44 48.5	+0.4
	comp=Z,1.6nm,0.5s,baz=166,slow=7.4,SNR=9.7						
L27K	Beaver Creek,	70.73	27	P	P	02 44 47.1	-1.1
BCAR	Beaver Creek A	70.75	27		P	02 44 48.2	-0.1
BRVK	Borovoye	70.75	322	P	P	02 44 48.7	+0.2
BRVK				IAmb	IAmb	02 44 49.4	
	comp=Z,2.3nm,0.7s						
INK	Inuvik	74.73	22	P	P	02 45 11.7	-0.1
	comp=Z,1.7nm,1.1s,baz=279,slow=9.4,SNR=2.8						
INK	Inuvik	74.73	22	P	P	02 45 12.0	+0.2
ABKAR	Akbulak array	77.30	318	P	P	02 45 27.2	+0.4
NVAR	Mina Array Bea	86.92	51	P	P	02 46 18.1	+0.4
	comp=Z,0.1nm,0.3s,baz=270,slow=5.4,SNR=2.6						
TORD	Torodi Ar. Bea	135.59	304	PKP	PKiKP	02 52 55.3	+0.3
	comp=Z,0.5nm,1.0s,baz=64,slow=3.4,SNR=2.5						
DBIC	Dimbokro	144.54	302	PKP	PKPdf	02 53 09.3	-0.3
	comp=Z,3.2nm,0.6s,baz=34,slow=4.2,SNR=7.8						
DBIC	Dimbokro	144.54	302		PKPab	02 53 08.6	+0.5

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*NEIC **02** 02:33:59.3, 40°.42N×125°.47W, h14km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.16; $M_{\theta\theta}$-0.93; $M_{\phi\phi}$0.77; $M_{r\theta}$0.60; $M_{\theta\phi}$-3.64; $M_{\phi r}$-0.64; Fault plane solution: $M_0$3.84000×10^{15} NP1:ϕ_s187.36000°, δ79.81000°, λ8.68000°. NP2:ϕ_s95.81000°, δ81.45000°, λ169.70000°. Principal axes: T 3.8605, Plg13.0000°, Azm51.0000°; N -0.0420, Plg77.0000°, Azm237.0000°; P -3.8184, Plg1.0000°, Azm142.0000°;*

*ANF **02** 02:34:01.1±1.0, 40°.53N×125°.11W, h0km, ML4.0/16 Error ellipse: s-maj=11.9km s-min=4.8km az=74.0*

*NCEDC **02** 02:34:01.2±3.3, 40°.37N±0°.05×125°.40W±0°.10, h14km±6km, Mwr4.3/13, mb4.4/37(NEIC), ML3.8/68(NEIC), Error ellipse: s-maj=0.0km s-min=0.0km az=159.0*

*NEIC **02** 02:34:02.4±3.3, 40°.49N±0°.05×125°.20W±0°.08, h4km±7km, Error ellipse: s-maj=8.6km s-min=7.2km az=82.0*

*IDC **02** 02:34:02.3±3.2, 40°.59N×125°.02W, h0km, mb3.9/2, mb1 3.9/10, mb1mx3.7/56, mbtmp3.7/10, ML3.6/8, MS3.4/13, Ms1 3.4/13, ms1mx3.2/61, Error ellipse: s-maj=39.7km s-min=15.2km az=77.0*

ISC 02 02:34:01.6±2.0**, 40°.52N**±0°.05×**125°.16W**±0°.07**, h3**km±11km**, n174, σ1s.70**/173**, mb4.4**/11**, MS3.3**/9**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSMM	Slide Mountain	0.83	114		Pg	02 34 18.1	+0.7
JCC	Jacoby Creek,	0.91	71		Pg	02 34 20.6	+1.5
JCC				IAML		02 34 35.1	
	comp=N,2μm,0.5s						
KCRM	Chalk Rock	1.03	95		Pg	02 34 22.4	+1.1
KHMM	Horse Mountain	1.14	72	Pn	Pb	02 34 24.1	0.0
KMRM	Mail Ridge	1.15	105		Pb	02 34 23.9	-0.2
KRMB	Red Mountain	1.38	43		Pn	02 34 26.6	-1.3
KCPM	Cahto Peak	1.47	124		Pn	02 34 27.0	-2.1
KOMM	Orleans Mounta	1.50	59		Pn	02 34 29.0	-0.5
GNAM	Navarro Ridge	1.77	138		Pn	02 34 29.5	-3.7
KBO	Bosley Butte	1.83	22	Pn	Pn	02 34 33.0	-1.0
KBO				IAML		02 34 56.4	
	comp=E,987nm,0.4s						
O02D	Mt. Diablo Mer	1.85	100	P	Pn	02 34 33.7	-0.5
	baz=278,SNR=1000						
O02D				S	Sb	02 34 57.5	-2.1
	baz=278						
N02D	Trinity Center	1.92	76	P	Pn	02 34 34.9	-0.3
	baz=256,SNR=1000						
N02D				S	Sg	02 35 00.8	-2.5
	baz=256						
M02C	Callahan	1.95	63	P	Pn	02 34 35.0	-0.6
	baz=245,SNR=81						
M02C				S	Sb	02 35 00.9	-1.7
	baz=245						
WDC	Whiskeytown Da	2.00	88	Pn	Pn	02 34 35.7	-0.5
WDC				IAML		02 35 03.5	
	comp=E,664nm,0.6s						
WDC				IAML		02 35 06.2	
	comp=N,680nm,0.7s						
L02E	Cave Junction	2.01	35	P	Pn	02 34 35.7	-0.7
	baz=220,SNR=138						
L02E				S	Sn	02 35 01.3	-0.8
	baz=220						
GASB	Alder Springs	2.07	114		Pn	02 34 36.4	-0.9
YBH	Yreka Blue Hor	2.21	56	Pn	Pn	02 34 39.2	-0.1
	comp=N,22nm,0.3s,baz=261,slow=11,SNR=418						
YBH				Sn	Sb	02 35 09.1	-0.9
	comp=N,72nm,0.3s,baz=113,slow=7.1,SNR=17						
YBH	Yreka Blue Hor	2.21	56	Pn	Pn	02 34 39.2	-0.1
HOPS	Hopland Field	2.22	133	Pn	Pn	02 34 36.1	-3.1
HOPS				IAML		02 35 32.9	
	comp=N,313nm,1.5s						
LTCM	Tuscan Springs	2.34	97		Pn	02 34 41.1	+0.2
GPMM	Pine Mountain	2.39	134		Pn	02 34 38.8	-2.9
KEBM	Edson Butte	2.43	15	Pn	Pn	02 34 40.5	-1.7
KEBM				IAML		02 35 12.4	
	comp=E,467nm,0.5s						
KEBM				IAML		02 35 14.5	
	comp=N,334nm,0.6s						
K02D	Willamette Mer	2.44	27	P	Pn	02 34 41.9	-0.6
	baz=211,SNR=576						
K02D				S	Sn	02 35 11.1	-1.7
	baz=211						
LHEM	Herd Peak	2.48	63		Pn	02 34 44.1	+1.0
GDXM	Geysers	2.51	132	Pn	Pn	02 34 41.9	-1.4
FTR	Fort Ross	2.53	142		Pn	02 34 39.3	-4.2
GCRM	Castle Rock Sp	2.58	132		Pn	02 34 42.7	-1.5
O03E	Paynes Creek	2.58	94	P	Pn	02 34 43.6	-0.6
	baz=274,SNR=174						
O03E				S	Sn	02 35 14.7	-1.4
	baz=274						
HUMO	Hull Mountain	2.66	38	Pn	Pn	02 34 44.8	-0.6
L04D	Klamath Falls	2.74	51	P	Pn	02 34 47.1	+0.6
	baz=234,SNR=474						
J01E	Myrtle Point	2.79	19	P	Pn	02 34 46.5	-0.6
	baz=203,SNR=39						
J01E				S	Sn	02 35 19.1	-2.2
	baz=203						
M04C	Macdoel	2.81	62	P	Pn	02 34 48.0	+0.5
	baz=245,SNR=40						
HATC	Hat Creek Radi	2.83	83		Pn	02 34 48.5	+0.8
SUTB	Sutter Butte	2.90	115		Pn	02 34 47.0	-1.7
MCCM	Marconi Confer	2.96	143	Pn	Pn	02 34 45.3	-4.2
DBO	Dodson Butte	2.96	28		Pn	02 34 49.4	-0.2
DBO				IAML		02 35 30.3	
	comp=E,157nm,0.9s						
DBO				IAML		02 35 31.7	
	comp=N,131nm,1.2s						
ORV	Oroville	2.97	108		Pn	02 34 48.1	-1.6
CVS	Carmenet Viney	3.02	135		Pn	02 34 48.3	-2.0
K04D	Chiloquin, OR	3.31	50	P	Pn	02 34 55.1	+0.7
	baz=233,SNR=49						
I03D	Drain, OR	3.45	22	P	Pn	02 34 56.2	+0.1
	baz=206,SNR=309						
I03D				S	Sn	02 35 36.7	-0.7
	baz=206						
BKS	Berkeley--Byer	3.49	138		Pn	02 34 54.0	-2.7
J04D	Umpqua Nationa	3.54	39	P	Pn	02 34 58.8	+1.1
	baz=223,SNR=64						
I02E	Swisshome, OR	3.71	15	S	Sn	02 35 41.7	-2.3
	baz=199						
BEKR	Beckworth	3.74	99	Pn	Pn	02 35 00.8	+0.5
BEKR				IAML		02 35 51.8	
	comp=N,224nm,0.8s						
BEKR				IAML		02 35 52.0	
	comp=E,200nm,0.6s						
I04A	Tendick Farm,	3.85	31	P	Pn	02 35 03.4	+1.6
	baz=215,SNR=51						
I04A				S	Sn	02 35 48.4	+0.7
	baz=215						
JRSC	Jasper Ridge	3.86	143		Pn	02 34 58.9	-2.9
K05A	Summer Lake	3.88	54	Pn	Pn	02 35 04.7	+2.4
K05A				IAML		02 36 12.6	
	comp=E,60nm,2.7s						
K05A				IAML		02 36 17.7	
	comp=N,80nm,3.9s						
MOD	Modoc Plateau	3.92	68	Pn	Pn	02 35 03.0	+0.2
MOD				IAML		02 36 10.9	
	comp=E,64nm,1.4s						
BUCK	Buck Mountain	4.01	23		Pn	02 35 05.3	+1.3
BUCK				IAML		02 35 53.3	
	comp=E,150nm,1.3s						
BUCK				IAML		02 35 53.3	
	comp=N,173nm,0.9s						
J05D	Fort Rock, OR	4.03	45	P	Pn	02 35 05.1	+0.8
	baz=229,SNR=77						
RUBR	Rubicon Trail	4.13	109	Pn	Pn	02 35 07.0	+1.3
MPK	Martis Peak	4.13	106		Pn	02 35 07.1	+1.3
EMB	Emerald Bay	4.20	110	Pn	Pn	02 35 07.2	+0.5
COR	Corvallis	4.29	18	Pn	Pn	02 35 08.2	+0.6
COR				IAML		02 36 01.8	
	comp=N,130nm,1.2s						
COR				IAML		02 37 53.5	
	comp=N,103nm,3.7s						
H04D	Lebanon	4.38	23	P	Pn	02 35 10.1	+1.1
	baz=207,SNR=32						
H04D				S	Sn	02 36 00.7	+0.2
	baz=207						
VCNR	Virginia City	4.41	104		Pn	02 35 10.3	+0.7
VCNR				IAML		02 36 07.9	
	comp=N,71nm,1.2s						
VCNR				IAML		02 36 19.3	
	comp=E,79nm,0.7s						
CMB	Columbia Colle	4.46	122	Pn	Pn	02 35 09.3	-0.9
GHS	Gilroy Hot Spr	4.49	139		Pn	02 35 07.8	-2.7
PAHR	Pah Rah Range	4.50	99		Pn	02 35 10.9	+0.1
PAHR				IAML		02 36 12.2	
	comp=E,55nm,0.7s						
PAHR				IAML		02 36 20.1	
	comp=N,72nm,1.8s						
PNTR	Pine Nut	4.52	107	Pn	Pn	02 35 12.6	+1.5
PNTR				IAML		02 36 18.7	
	comp=E,139nm,1.1s						
PNTR				IAML		02 36 24.0	
	comp=N,92nm,1.2s						
PINE	Pine Mountain	4.53	42	Pn	Pn	02 35 13.8	+2.6
PINE				IAML		02 36 34.0	
	comp=N,58nm,3.9s						
PINE				IAML		02 36 49.3	
	comp=E,52nm,4.4s						
H04A	Detroit Lake	4.70	27		Pn	02 35 14.9	+1.5
H04A				IAML		02 36 11.8	
	comp=N,116nm,0.6s						
I05D	Terrebonne, OR	4.75	35	P	Pn	02 35 15.9	+1.9
	baz=219,SNR=21						
SAO	San Andreas Ge	4.75	141	Pn	Pn	02 35 10.3	-3.7
YERR	Yerington	4.82	107	Pn	Pn	02 35 16.3	+1.1
YERR				IAML		02 36 27.4	
	comp=E,83nm,0.8s						
YERR				IAML		02 36 29.2	
	comp=N,55nm,0.9s						
G03D	McMinnville, O	4.89	16	P	Pn	02 35 17.2	+1.3
	baz=199,SNR=5.8						
G03D				S	Sn	02 36 12.4	-0.6
	baz=199						
HAST	Hastings Reser	5.01	144		Pn	02 35 13.1	-4.5
WVOR	Wild Horse Val	5.26	67		Pn	02 35 21.1	-0.1
HOOD	Mount Hood Mea	5.44	27	Pn	Pn	02 35 25.8	+2.1
RYN	Ryan	5.47	108	Pn	Pn	02 35 25.4	+1.3
G05D	Wamic, OR	5.50	30	P	Pn	02 35 26.3	+2.0
	baz=214,SNR=5.7						
I07A	Izee	5.50	48		Pn	02 35 27.3	+2.9
MDPB	Devils Postpil	5.54	119	Pn	Pn	02 35 26.2	+0.9
KVN	Kaiserville	5.64	103		Pn	02 35 26.8	+0.4
LHV	Little Huntoon	5.64	112	Pn	Pn	02 35 27.8	+1.6
NVAR	Mina Array Bea	5.70	109	Pn	Pn	02 35 28.2	+0.8
	comp=N,1.3nm,0.3s,baz=283,slow=15,SNR=26						
NVAR				Sn	Sn	02 36 38.8	+5.4
	comp=N,1.2nm,0.3s,baz=298,slow=22,SNR=4.2						
NVAR	Mina Array Bea	5.70	109	Pn	Pn	02 35 28.4	+1.0
J08A	Circle Bar Ran	5.74	58	Pn	Pn	02 35 29.0	+1.3
F04A	Amboy	5.76	19	Pn	Pn	02 35 29.1	+1.2
F04D	Rainier, OR	5.77	15	S	Sn	02 36 35.1	+0.2
	baz=198						
NV11	Mina Array Sit	5.81	109	Pn	Pn	02 35 29.7	+0.9
F05D	White Salmon	6.00	26	P	Pn	02 35 32.7	+1.4
	baz=210,SNR=5.5						
PAGB	Antelope Grade	6.16	139	Pn	Pn	02 35 30.4	-3.0
G08A	Pilot Rock	6.59	42		Pn	02 35 42.0	+2.6
F07A	Phinny Hill Vi	6.59	34	Pn	Pn	02 35 41.4	+2.1
SMMC	Simmler	6.61	140	P	Pn	02 35 37.8	-1.9
	baz=321						

WISH	Wishkah	6.67	8	Pn	Pn	02 35 41.4	+1.1
LCH	Last Change Ra	6.72	117	Pn	Pn	02 35 42.7	+1.4
HAWA	Hanford	7.15	33		Pn	02 35 49.4	+2.4
E07A	Sunnyside	7.16	31	Pn	Pn	02 35 49.5	+2.4
ISA	Isabella, Lake	7.17	131	Pn	Pn	02 35 47.6	+0.3
BMO	Blue Mountains	7.22	51	Pn	Pn	02 35 51.3	+3.2
E08A	Dider Farm, El	7.43	35		Pn	02 35 53.1	+2.2
LTY	Liberty	7.47	24	Pn	Pn	02 35 53.9	+2.5
MFID	Camas Ranch	7.53	64	Pn	Pn	02 35 54.9	+2.5
ELK	Elko	7.55	85	Pn	Pn	02 35 54.5	+1.7
	comp=N,0.2nm,0.3s,baz=283,slow=13,SNR=16						
ELK				LR	LR	02 39 06.8	
	comp=N,100nm,21.1s,baz=266,slow=41						
D08A	Wollman Farm,	7.94	33	Pn	Pn	02 35 58.9	+1.1
F10A	Beach Ranch, E	7.95	44	Pn	Pn	02 36 00.9	+2.8
QSM	Queen of Sheba	7.96	122	Pn	Pn	02 35 59.2	+1.1
PLID	Pearl Lake	8.13	53		Pn	02 36 04.5	+3.8
B08A	Colville Reser	8.87	26	Pn	Pn	02 36 12.6	+2.0
NEW	Newport	9.64	34	Pn	Pn	02 36 22.7	+1.6
	comp=N,0.4nm,0.3s,baz=218,slow=14,SNR=6.1						
NEW				LR	LR	02 39 52.1	
	comp=N,203nm,21.0s,baz=244,slow=37						
NEW	Newport	9.64	34		Pn	02 36 23.1	+1.9
PFO	Pinyon Flats O	9.79	132	Pn	Pn	02 36 24.0	+0.6
	comp=N,0.2nm,0.3s,baz=306,slow=14,SNR=2.6						
MCMT	McKenzie Canyo	10.03	61		Pn	02 36 29.1	+2.3
MSU	Marysvale	10.23	97	Pn	Pn	02 36 32.0	+2.5
MSO	Missoula	10.28	48	Pn	Pn	02 36 32.5	+2.5
LLLB	Lillooet	10.34	12	Pn	Pn	02 36 32.6	+1.8
DLMT	Dillon	10.40	58		Pn	02 36 33.9	+2.2
JTMT	Jette	10.64	44	Pn	Pn	02 36 37.4	+2.5
LRM	Limekiln Ridge	10.68	56	Pn	Pn	02 36 37.6	+1.9
TPAW	Teton Pass	10.98	70	Pn	Pn	02 36 42.7	+2.9
QLMT	Earthquake Lak	10.99	62	Pn	Pn	02 36 41.6	+1.8
REDW	Red Top Meadow	11.03	70	Pn	Pn	02 36 42.4	+2.0
BOZ	Bozeman (W)	11.12	58	Pn	Pn	02 36 42.6	+1.0
YHL	Hebgen Lake	11.16	63	Pn	Pn	02 36 45.7	+3.5
MOOW	Moose Ponds	11.18	69	Pn	Pn	02 36 44.7	+2.2
LOHW	Long Hollow	11.25	69	Pn	Pn	02 36 46.2	+2.7
YHH	Holmes Hill	11.37	63	Pn	Pn	02 36 47.7	+2.6
HRY	Holter Researc	11.47	53		Pn	02 36 48.2	+2.0
WALA	Waterton Lakes	11.68	39	Pn	Pn	02 36 52.2	+3.0
BBB	Bella Bella	11.84	351	LR	LR	02 41 05.4	
	comp=N,65nm,19.7s,baz=80,slow=36						
BW06	Boulder Array	11.89	74	Pn	Pn	02 36 54.0	+1.8
PD31	Pinedale Array	11.89	74	Pn	Pn	02 36 54.8	+2.6
PDAR	Pinedale Array	11.89	74	Pn	Pn	02 36 54.1	+1.9
	comp=N,0.1nm,0.3s,baz=258,slow=12,SNR=7.2						
PDAR				LR	LR	02 41 05.5	
	comp=N,105nm,21.3s,baz=254,slow=36						
PDAR	Pinedale Array	11.89	74	Pn	Pn	02 36 54.0	+1.8
GCMT	Greycliff	12.47	60	Pn	Pn	02 37 01.4	+1.3
EGMT	Eagleton	13.33	51	Pn	Pn	02 37 12.7	+1.0
RWWY	Rawlins	13.59	79	Pn	Pn	02 37 13.9	-1.5
SMCO	Snowmass	14.04	90	Pn	Pn	02 37 23.2	+1.5
K22A	Casper	14.11	75	Pn	Pn	02 37 23.6	+1.1
ISCO	Idaho Springs	14.97	86	Pn	Pn	02 37 36.1	+1.8
EDM	Edmonton	15.02	28	Pn	Pn	02 37 33.8	-0.9
EDM				IAmb	IAmb	02 37 44.1	
	comp=Z,13nm,0.9s						
SDCO	Great Sand Dun	15.51	94	P	P	02 37 44.3	-1.7
319A	Douglas	15.75	120	P	P	02 37 47.8	-0.8
ANMO	Albuquerque	15.80	105	Pn	Pn	02 37 46.4	+1.2
	comp=Z,0.1nm,0.3s,baz=309,slow=13,SNR=4.6						
ANMO	Albuquerque	15.80	105	P	P	02 37 47.6	-1.6
T25A	Trinidad	16.52	95	P	P	02 37 56.8	-0.3
KSCO	Kaye Shedlock’	17.39	88	P	Pn	02 38 05.5	+0.2
KSCO				IAmb	IAmb	02 38 10.0	
	comp=Z,26nm,1.1s						
OGNE	Ogallala	17.53	81	P	Pn	02 38 07.1	+0.1
OGNE				IAmb	IAmb	02 38 08.8	
	comp=Z,29nm,1.1s						
DLBC	Dease Lake	18.20	352	P	Pn	02 38 17.3	+2.2
	comp=Z,0.1nm,0.3s,baz=117,slow=4.5,SNR=2.7						
CBKS	Cedar Bluff	19.63	87	P	P	02 38 31.3	0.0
R32A	Long Quarter,	20.50	87	P	Pn	02 38 42.3	-0.6
LPIG	La Paz	20.59	138	LR	LR	02 45 52.1	
	comp=Z,93nm,19.5s,baz=314,slow=34						
TX31	Lajitas Ar. Si	20.81	116	P	P	02 38 44.3	+0.1
TXAR	Lajitas Array	20.81	116	P	Pn	02 38 46.4	-0.1
	comp=Z,1.1nm,0.7s,baz=298,slow=8.9,SNR=16						
TXAR				LR	LR	02 47 57.5	
	comp=Z,89nm,19.4s,baz=0.0,slow=40						
TXAR	Lajitas Array	20.81	116	P	P	02 38 42.9	-1.2
FFC	Flin Flon	20.98	40	P	P	02 38 45.4	-0.3
FFC				IAmb	IAmb	02 38 48.4	
	comp=Z,19nm,1.1s						
ECSD	EROS Data Cent	21.37	72	P	P	02 38 50.7	+0.7
WMOK	Wichita Mounta	21.64	97	P	P	02 38 54.1	+1.2
F33A	5 Mile Ranch,	21.65	66	P	P	02 38 52.5	-0.5
F33A				IAmb	IAmb	02 38 57.2	
	comp=Z,17nm,1.2s						
ABTX	Abilene, Hawle	21.91	103	P	P	02 38 54.8	-1.1
ABTX				IAmb	IAmb	02 38 58.3	
	comp=Z,21nm,1.4s						
KSU1	Kansas State U	21.94	84	P	P	02 38 57.0	+0.8
AGMN	Agassiz Nation	22.23	60	P	P	02 38 57.4	-1.8
AGMN				IAmb	IAmb	02 39 01.6	
	comp=Z,11nm,0.8s						
N35A	Tabor	22.34	79	P	P	02 38 59.6	-0.9
ULM	Lac du Bonnet	22.62	55	P	P	02 39 03.8	+0.4
	comp=Z,15nm,0.9s,baz=259,slow=9.6,SNR=20						
ULM				LR	LR	02 47 13.3	
	comp=Z,80nm,20.3s,baz=272,slow=35						
ULM	Lac du Bonnet	22.62	55	P	P	02 39 02.9	-0.5
B35A	Bob, Littlefor	23.65	60	P	P	02 39 13.8	-0.1
B35A				IAmb	IAmb	02 39 15.3	
	comp=Z,11nm,1.1s						
SPMN	Marine on St.	24.08	68	P	P	02 39 19.2	+1.1
KDAK	Kodiak Island	24.63	324	LR	LR	02 46 31.5	
	comp=Z,73nm,18.9s,baz=136,slow=30						
P40A	Paris	25.30	81	P	P	02 39 29.4	+0.2
P40A				IAmb	IAmb	02 39 33.1	
	comp=Z,12nm,1.4s						
U40A	Yellville	25.57	89	P	P	02 39 32.2	+0.6
U40A				IAmb	IAmb	02 39 35.3	
	comp=Z,13nm,1.2s						
I40A	Norwalk	25.70	71	P	P	02 39 33.9	+1.1
I40A				IAmb	IAmb	02 39 38.5	
	comp=Z,10.0nm,1.0s						
WHAR	Wooly Hollow	26.36	91	P	P	02 39 39.9	+0.9
WHAR				IAmb	IAmb	02 39 43.6	
	comp=Z,13nm,1.3s						
I42A	Draeger Farm,	26.92	71	P	P	02 39 45.1	+1.2
E43A	Lone Tree Farm	28.12	65	P	P	02 39 55.7	+1.1
J20K	Nowinta River	29.08	334	P	P	02 40 03.1	+0.1
J20K				IAmb	IAmb	02 40 17.7	
	comp=Z,7.8nm,1.3s						
TKL	Tuckaleechee C	32.72	85	LR	LR	02 53 14.7	
	comp=Z,91nm,18.6s,baz=292,slow=35						
SADO	Sadowa	33.77	67	LR	LR	02 53 55.9	
	comp=Z,64nm,19.9s,baz=313,slow=36						
WSPT	Westport, CT	38.73	72	P	P	02 41 27.7	+0.8
FRB	Frobisher Bay	39.98	35	LR	LR	02 58 53.6	
	comp=Z,104nm,19.5s,baz=2.5,slow=37						
SCHQ	Schefferville	40.58	49	LR	LR	02 58 49.4	
	comp=Z,76nm,18.6s,baz=281,slow=37						
HHC	Hu-ho-hao-te	84.00	320	*e*P	P	02 46 27.8	-5.6
HHC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,100nm,6.7s						
JAY	Jayapura	94.77	271	LR	LR	03 21 24.2	
	comp=Z,159nm,20.8s,baz=358,slow=30						

IDC 02 02:37:56.6±2.1**, 2°.70N**×**125°.22E, h0**km**, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.4**/36**, mbtmp3.4**/3**, Error ellipse: s-maj=196.2km s-min=29.0km az=64.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.22	159	P	P	02 43 14.7	-0.6
	0.6nm,0.5s,baz=337,slow=10,SNR=8.5						
ASAR	Alice Springs	27.54	163	P	P	02 43 46.5	+1.1
	0.3nm,0.6s,baz=339,slow=7.4,SNR=2.5						
MKAR	Makanchi Array	57.55	326	P	P	02 47 47.8	-0.4
	0.2nm,0.4s,baz=133,slow=6.3,SNR=1.8						

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*ROM **02** 02:48:03.2±0.3, 37°.15N±0°.01×11°.90E±0°.03, h10km±2km, ML3.2/10, Error ellipse: s-maj=2.2km s-min=1.6km az=266.0*

*LDG **02** 02:48:05.3±0.4, 37°.32N×12°.00E, h7km, Ml3.0/7, Error ellipse: s-maj=13.2km s-min=3.2km az=28.0*

ISC 02 02:48:08.1±1.7**, 37°.3N**±0°.1×**11°.96E**±0°.07**, h35**km**, n32, σ1s.88**/41**, 1C, Sicily**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMGO	Monte Magaggia	0.90	63	P	Pn	02 48 22.2	-2.2
MMGO				S	Sn	02 48 36.6	+0.3
ERC	Erice	0.93	32	P	Pn	02 48 22.9	-1.9
ERC				S	Sn	02 48 36.7	-0.2
ERC				AML	AML		
	comp=E,780μm,0.8s						
ERC				AML	AML		
	comp=N,570μm,0.5s						
MFNL	Monte Finestre	0.93	55	P	Pn	02 48 23.3	-1.5
CLTB	Caltabellotta	1.05	72	P	Pn	02 48 24.1	-2.3
CLTB				S	Sn	02 48 39.4	-0.5
CLTB				AML	AML		
	comp=E,2420μm,0.5s						
CLTB				AML	AML		
	comp=N,2480μm,0.5s						
CLTB				AML	AML		
	comp=E,2415μm,0.5s						
CORL	Corleone	1.24	59	P	Pn	02 48 27.8	-1.3
CORL				S	Sn	02 48 45.1	+0.5
CORL				AML	AML		
	comp=N,368μm,0.7s						
CORL				AML	AML		
	comp=E,454μm,1.2s						
CORL				AML	AML		
	comp=N,382μm,1.6s						
FAVR	Favara	1.36	89	P	Pn	02 48 30.2	-0.4
CMDO	Montedoro	1.50	81	P	Pn	02 48 30.7	-1.9
ALJA	Alia	1.51	70	P	Pn	02 48 32.5	-0.2
CLTA	Licata	1.60	93	P	Pn	02 48 32.7	-1.2
CLTA				S	Sn	02 48 55.0	+1.7
RESU	Resuttano	1.71	76	P	Pn	02 48 34.1	-1.4
CSLB	Castelbuono	1.80	67	P	Pn	02 48 36.4	-0.3
CSLB				S	Sn	02 49 00.1	+1.8
RAFF	Raffo Rosso	1.92	90	P	Pn	02 48 36.9	-1.3
RAFF				S	Sn	02 49 02.5	+1.3
GALF	Gagliano Caste	2.12	77	P	Pn	02 48 39.7	-1.4
GALF				AML	AML		
	comp=N,231μm,0.6s						
GALF				AML	AML		
	comp=E,247μm,0.6s						
HMDC	Modica	2.27	97	P	Pn	02 48 41.3	-1.9
HMDC				AML	AML		
	comp=E,298μm,1.3s						
HMDC				AML	AML		
	comp=N,304μm,1.6s						
HLNI	Lentini	2.32	87	P	Pn	02 48 42.1	-1.7
HLNI				AML	AML		
	comp=N,346μm,0.3s						
HLNI				AML	AML		
	comp=E,280μm,0.9s						
MEU	Monte Lauro	2.37	93	P	Pn	02 48 42.2	-2.4
MEU				S	Sn	02 49 11.1	-1.5
MEU				AML	AML		
	comp=E,628μm,1.6s						
MEU				AML	AML		
	comp=N,528μm,1.6s						
MUCR	Ucria	2.44	70	P	Pn	02 48 45.8	+0.2
MUCR				AML	AML		
	comp=E,161μm,1.1s						
MUCR				AML	AML		
	comp=N,182μm,1.3s						
SSY	Sortino	2.48	91	P	Pn	02 48 44.6	-1.5
SSY				AML	AML		
	comp=E,482μm,1.4s						
SSY				AML	AML		
	comp=N,855μm,0.8s						
HAVL	Avola	2.54	96	⇑P	Pn	02 48 44.8	-2.1
HAVL				AML	AML		
	comp=N,490μm,1.4s						
HAVL				AML	AML		
	comp=E,460μm,1.6s						
HAGA	Augusta	2.55	88	P	Pn	02 48 45.4	-1.5
MCSR	Castroreale	2.73	72	P	Pn	02 48 49.6	+0.1
VSL	Villasalto	3.02	319	P	Pn	02 48 52.8	-0.7
PGF	Pioggiola	5.76	338	*e*P	Pn	02 49 33.4	+2.2
PGF				*e*Sn	Sn	02 50 31.2	-4.9
	comp=E,4.8nm,0.5s						
LMR	La Mourre	7.37	327	*e*P	Pn	02 49 53.7	+0.6
LMR				*e*Sn	Sn	02 51 08.3	-7.1
	comp=E,6.1nm,0.7s						
SBF	Sospel	7.45	334	*e*P	Pn	02 49 55.9	+1.6
SBF				*e*Sn	Sn	02 51 09.2	-8.4
	comp=E,2.9nm,0.2s						
FRF	La Foret Royal	7.49	329	*e*P	Pn	02 49 56.1	+1.2
FRF				*e*Sn	Sn	02 51 11.9	-6.7
	comp=E,0.3nm,0.2s						
SMRF	Simiane la Rot	8.29	326	*e*P	Pn	02 50 07.4	+1.6
MBDF	Montbardon	8.43	334	*e*P	Pn	02 50 11.6	+3.7
MBDF				*e*Sn	Sn	02 51 34.8	-7.1
	comp=E,0.2nm,0.2s						
ORIF	Oris-en-Rattie	8.93	331	*e*P	Pn	02 50 17.1	+2.5
LPG	La Plagne	9.12	336	*e*P	Pn	02 50 20.2	+2.8
LPL	La Plagne	9.14	336	*e*P	Pn	02 50 20.5	+2.8
LASF	Ste Croix	9.18	320	*e*P	Pn	02 50 19.5	+1.4
LASF				*e*Sn	Sn	02 51 52.2	-7.9
	comp=E,1.0nm,0.6s						

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*BJI **02** 03:04:06.0±0.0, 17°.86S×177°.52W, h604km, mB5.2/46, mb5.4/68*

*MOS **02** 03:04:06.9±1.0, 18°.09S×177°.88W, h606km, mb5.4/34, Error ellipse: s-maj=8.4km s-min=7.4km az=128.9*

*IDC **02** 03:04:07.4±0.5, 18°.22S×177°.86W, h603km±4km, mb4.9/45, mb1 4.9/48, mb1mx4.9/51, mbtmp5.9/48, Error ellipse: s-maj=7.2km s-min=5.5km az=173.0*

*NOU **02** 03:04:07.9, 18°.26S×177°.79W, h613km, ML5.5/136, Fiji Islands Region*

*BGR **02** 03:04:08.5±0.0, 18°.20S×177°.90W, h600km*

*NEIC **02** 03:04:08.3±2.0, 18°.17S±0°.09×177°.84W±0°.09, h608km±5km, mb5.2/431, Error ellipse: s-maj=12.8km s-min=11.8km az=146.0*

*GCMT **02** 03:04:10.3±0.2, 18°.27S±0°.02×177°.96W±0°.02, h631km±2km, MW5.6/107, Moment Tensor Solution. s107,c180; Duration: 1s.6 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.74±.05; $M_{\theta\theta}$0.41±.07; $M_{\phi\phi}$0.32±.07; $M_{r\theta}$-1.02±.07; $M_{\theta\phi}$2.03±.07; $M_{\phi r}$-2.73±.07; Best double couple: $M_0$3.52700×10^{17} NP1:ϕ_s270.00000°, δ31.00000°, λ-16.00000°. NP2:ϕ_s14.00000°, δ82.00000°, λ-120.00000°. Principal axes: T 3.9690, Plg31.0000°, Azm128.0000°; N -0.8830, Plg29.0000°, Azm19.0000°; P -3.0850, Plg45.0000°, Azm255.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 02 03:04:07.8±0.3**, 18°.27S**±0°.03×**177°.77W**±0°.03**, h614**km±2km**, h616**km**:pP-P, n1521, σ1s.26**/1541**, mb5.4**/402**, 155C-315D, Fault plane solution: NP1:**ϕ_s294.95966°, δ45.39596°, λ-8.62523°. **NP2:**ϕ_s31.03957°**,** δ83.87052°, λ-135.07013°. **Principal axes:** T Plg24.8997°, Azm154.5380°**;** N Plg44.7427°, Azm37.1491°**;** P Plg34.8922°, Azm263.4261°; **Fault plane solution: NP1:**ϕ_s34.66737°**,** δ85.88190°**,** λ-95.89948°. **NP2:** ϕ_s269.86890°**,** δ7.19045°**,** λ-35.01077°. **Principal axes:** T Plg40.5994°**,** Azm130.1602°**;** N Plg5.8842°, Azm35.0925°**;** P Plg48.7922°, Azm298.3335°; **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.02	277	P	P	03 05 35.8	+1.2
	371nm,0.3s,baz=130,slow=12,SNR=1953						
MSVF				S	S	03 06 48.8	+3.5
	17nm,0.3s,baz=21,slow=22,SNR=8.1						
MSVF	Nonsavu	4.02	277	*c i*P	P	03 05 35.9	+1.3
MSVF	Nonsavu	4.02	277	P	P	03 05 35.4	+0.8
MSVF	Nonsavu	4.02	277	P	P	03 05 35.6	+1.0
AFI	Afiamalu	7.21	54	P	P	03 05 59.6	-0.9
	163nm,0.3s,baz=21,slow=1.7,SNR=129						
AFI				S	S	03 07 30.9	-1.7
	8.3nm,0.3s,baz=18,slow=19,SNR=2.4						
NIUE	Niue	7.47	97	P	P	03 06 03.3	+0.5
	baz=7.5						
NIUE				S	S	03 07 49.9	+13
	baz=7.5						
NIUE	Niue	7.47	97	P	P	03 06 03.1	+0.3
NIUE	Niue	7.47	97	P	P	03 06 03.6	+0.9
FUNA	Funafuti	10.13	343	P	P	03 06 25.9	-2.4
RAO	Raoul Island	10.93	181	S	S	03 08 35.9	-1.6
	72nm,0.3s,baz=90,slow=20,SNR=3.5						
GLKZ	Green Lake	10.94	181	P	P	03 06 34.0	-1.9
GLKZ				S	S	03 08 38.3	+0.7
RTV	Rentapao	13.14	270	P	P	03 06 59.2	+1.4
	163μm,1.4s						
DVP	Devils Point	13.38	270	P	P	03 07 01.5	+1.4
	942μm,0.8s						
MARNC	Mare, Loyalty	13.74	254	P	P	03 07 01.4	-2.3
MARNC	Mare, Loyalty	13.74	254	P	P	03 07 03.3	-0.4
LIFNC	LIFOU	14.35	258	P	P	03 07 06.4	-3.1
LIFNC	LIFOU	14.35	258	P	P	03 07 07.5	-2.0
PINNC	Pines Island,	14.52	250	P	P	03 07 09.8	-1.2
PINNC	Pines Island,	14.52	250	P	P	03 07 11.2	+0.2
SANVU	Saraoutou	14.66	279	P	P	03 07 10.8	-1.5
SANVU	Saraoutou	14.66	279	P	P	03 07 13.0	+0.6
OUENC	Ouen Island, N	15.01	251	P	P	03 07 14.3	-1.2
DZM	Mont Dzumac	15.30	253	P	P	03 07 18.0	-0.2
	14nm,0.3s,baz=78,slow=17,SNR=97						
DZM				S	S	03 09 55.2	+1.7
	baz=146,slow=19,SNR=4.8						
DZM				ScP	ScP	03 14 20.2	+3.1
	0.3nm,0.3s,baz=72,slow=8.4,SNR=5.3						
DZM	Mont Dzumac	15.30	253	P	P	03 07 18.0	-0.2
ONTNC	Ouen Toro	15.34	252	P	P	03 07 17.8	-0.7
KNTN	Kanton	16.50	22	P	P	03 07 27.8	-1.5
KNTN	Kanton	16.50	22	P	P	03 07 28.8	-0.4
NFK	Norfolk Island	16.91	228	P	P	03 07 34.7	+2.0
	baz=17						
NFK	Norfolk Island	16.91	228	P	P	03 07 33.6	+0.9
RAR	Rarotonga	17.19	103	P	P	03 07 36.5	+1.1
	4.9nm,0.3s,baz=247,slow=6.9,SNR=38						
RAR	Rarotonga	17.19	103	P	P	03 07 36.3	+0.9
RAR	Rarotonga	17.19	103	P	P	03 07 36.6	+1.2
OUZ	Omahuta	18.54	203	P	P	03 07 49.8	+2.3
OUZ	Omahuta	18.54	203	P	P	03 07 50.8	+3.3
GRZ	Great Barrier	18.88	197	P	P	03 07 52.0	+1.5
WCZ	Waipu Caves	18.93	200	P	P	03 07 53.8	+2.7
KUZ	Kuaotunu	19.28	196	P	P	03 07 56.3	+2.2
WIAZ	Waiheke Island	19.48	197	P	P	03 07 58.5	+2.5
MXZ	Matakaoa Point	19.52	189	P	P	03 07 56.1	-0.3
MXZ				IAmb	IAmb	03 08 00.2	
	comp=Z,184nm,1.6s						
MXZ	Matakaoa Point	19.52	189	P	P	03 07 56.7	+0.4
MYRZ	Mayor Island	19.65	194	P	P	03 08 00.5	+2.9
WMGZ	Waiomatatini S	19.76	189	P	P	03 07 59.1	+0.6
PKGZ	Pakihiroa	19.88	190	P	P	03 07 58.5	-1.1
RUGZ	Raukumara Rang	20.02	191	P	P	03 07 59.6	-1.4
RUGZ				S	S	03 11 05.1	-4.1
PUZ	Puketiti	20.03	189	P	P	03 08 01.1	+0.1
PUZ				S	S	03 11 05.0	-4.2
TWGZ	Tauwhareparae	20.18	190	P	P	03 08 02.5	+0.2
TWGZ				S	S	03 11 07.7	-3.9
KMRZ	Kaimai	20.26	195	P	P	03 08 05.3	+2.2
TOZ	Tahuroa Road	20.26	196	P	P	03 08 04.9	+1.9
MWZ	Matawai	20.41	191	P	P	03 08 03.3	-1.1
MWZ				S	S	03 11 10.6	-4.6
URZ	Urewera	20.41	192	P	P	03 08 03.0	-1.4
	comp=Z,51nm,0.4s,baz=301,slow=24,SNR=70						
URZ				S	S	03 11 07.9	-7.2
	comp=Z,22nm,0.8s,baz=308,slow=20,SNR=3.9						
URZ				ScP	ScP	03 14 29.4	+1.7
	comp=Z,21nm,0.8s,baz=301,slow=20,SNR=3.7						
URZ	Urewera	20.41	192	P	P	03 08 02.7	-1.6
URZ				IAmb	IAmb	03 08 04.3	
	comp=Z,105nm,1.0s						
URZ	Urewera	20.41	192	P	P	03 08 03.0	-1.4
URZ				S	S	03 11 06.0	-9.1
URZ	Urewera	20.41	192	P	P	03 08 03.0	-1.4
OMRZ	Omania	20.41	193	P	P	03 08 06.9	+2.4
CNGZ	Carnagh Statio	20.44	189	P	P	03 08 06.0	+1.4
TARZ	Mount Tarawera	20.51	193	P	P	03 08 06.0	+0.6
RIGZ	Rimuhau	20.73	190	P	P	03 08 07.4	+0.1
RIGZ				S	S	03 11 18.1	-2.1
SNGZ	Shannon Statio	20.88	191	P	P	03 08 08.4	-0.1
SNGZ				S	S	03 11 20.8	-1.7
MTHZ	Maungataniwha	21.04	192	P	P	03 08 10.2	+0.2
MTHZ				S	S	03 11 23.5	-1.6
RAHZ	Arahi	21.05	191	P	P	03 08 10.0	-0.1
HIZ	Hauiti	21.17	196	P	P	03 08 12.5	+1.3
RATZ	Rangitukua	21.28	194	P	P	03 08 12.7	+0.6
NMHZ	Naumai	21.28	192	P	P	03 08 11.6	-0.7
RITZ	Rihia Road	21.36	194	P	P	03 08 10.1	-2.8
ARHZ	Aropaoanui	21.41	191	P	P	03 08 09.1	-4.1
ARHZ				S	S	03 11 28.0	-2.8
BKZ	Black Stump Fm	21.41	192	P	P	03 08 13.4	+0.1
TMVZ	Te Maari	21.53	194	P	P	03 08 13.7	-0.8
ETVZ	East Tongariro	21.55	194	P	P	03 08 13.7	-1.0
TARA	Tarawa	21.55	334	P	P	03 08 13.6	-1.3
TARA	Tarawa	21.55	334	P	P	03 08 14.9	0.0
	comp=Z,129nm,0.6s						
WTVZ	West Tongariro	21.56	194	P	P	03 08 14.6	-0.2
NNVZ	North Ngauruho	21.57	194	P	P	03 08 14.7	-0.2
OTVZ	Oturere	21.58	194	P	P	03 08 13.9	-1.1
NGZ	Ngauruhoe	21.61	194	P	P	03 08 15.4	+0.1
SNVZ	South Ngauruho	21.61	194	P	P	03 08 14.8	-0.6
MCHZ	McNeill Hill	21.64	192	P	P	03 08 14.3	-1.1
MCHZ				S	S	03 11 31.4	-3.1
KWHZ	Kaweka Forest	21.67	192	P	P	03 08 14.3	-1.4
KWHZ				S	S	03 11 32.4	-2.8
TUVZ	Tukino	21.69	194	P	P	03 08 15.5	-0.4
FWVZ	Far West T-bar	21.70	194	P	P	03 08 15.7	-0.5
WHVZ	Whangaehu Hut	21.72	194	P	P	03 08 15.9	-0.4
TRVZ	Turoa	21.74	194	P	P	03 08 16.2	-0.3
WNVZ	Wahianoa	21.76	194	P	P	03 08 15.8	-0.8
MOVZ	Moawhango	21.80	194	P	P	03 08 16.5	-0.3
BHHZ	Black Hill Sta	21.81	193	P	P	03 08 14.7	-2.2
KRHZ	Kereru	21.89	192	P	P	03 08 17.3	-0.4
KAHZ	Kahuranaki	21.94	191	P	P	03 08 17.2	-0.8
KAHZ				S	S	03 11 33.5	-5.8
DREZ	Durham Road	21.98	197	P	P	03 08 25.6	+7.3
PKE	Pukeiti	22.04	197	P	P	03 08 23.2	+4.2
NEZ	North Egmont	22.08	197	P	P	03 08 23.2	+3.8
KHEZ	Kahui Hut	22.13	197	P	P	03 08 23.7	+3.9
PXZ	Pawanui	22.17	191	P	P	03 08 17.4	-2.6
PNHZ	Pukenui	22.19	192	P	P	03 08 19.5	-0.8
TSZ	Takapari Road	22.38	193	P	P	03 08 22.5	+0.6
DVHZ	Dannevirke	22.57	192	P	P	03 08 23.3	-0.3
BFZ	Birch Farm	22.92	192	P	P	03 08 26.1	-0.6
BFZ				IAmb	IAmb	03 08 31.4	
	comp=Z,62nm,0.7s						
BFZ	Birch Farm	22.92	192	P	P	03 08 26.9	+0.2
BFZ	Birch Farm	22.92	192	P	P	03 08 27.6	+0.9
MRZ	Mangatainoka R	23.04	193	P	P	03 08 26.5	-1.3
OGWZ	Otaki Gorge	23.27	194	P	P	03 08 29.7	-0.1
HOWZ	Holdsworth Sta	23.28	193	P	P	03 08 29.3	-0.5
KIW	Kapiti Island	23.38	194	P	P	03 08 30.6	-0.1
MTW	Mount Morrison	23.53	193	P	P	03 08 31.9	-0.2
MSWZ	Moikau Station	23.83	193	P	P	03 08 34.2	-0.5
SNZO	South Karori	23.85	194	P	P	03 08 33.9	-1.0
BHW	Baring Head	23.91	194	P	P	03 08 34.5	-0.9
BHW	Baring Head	23.91	194	P	P	03 08 34.5	-0.9
QRZ	Quartz Range	23.98	198	P	P	03 08 36.5	+0.4
QRZ	Quartz Range	23.98	198	P	P	03 08 36.3	+0.3
NNZ	Nelson	24.10	197	P	P	03 08 36.3	-0.8
NNZ				IAmb	IAmb	03 08 41.0	
	comp=Z,74nm,0.9s						
THZ	Tophouse	24.73	197	IAmb	IAmb	03 08 44.9	
	comp=Z,86nm,0.7s						
LHI	Lord Howe Isla	24.75	233	P	P	03 08 44.0	+1.0
	baz=25,SNR=6.0						
LHI	Lord Howe Isla	24.75	233	P	P	03 08 44.2	+1.3
LHI				PcP	PcP	03 12 01.6	+3.9
LHI	Lord Howe Isla	24.75	233	P	P	03 08 44.9	+1.9
KHZ	Kahutara	25.18	195	IAmb	IAmb	03 08 46.3	
	comp=Z,108nm,0.8s						
KHZ	Kahutara	25.18	195	P	P	03 08 46.0	-0.6
MQZ	McQueen’s Vall	26.61	196	IAmb	IAmb	03 09 08.7	
	comp=Z,76nm,1.1s						
PAE	Paea	26.81	93	*e*P	P	03 09 02.0	+0.7
	comp=Z,135nm,1.2s						
PAE				*e*ScP	ScP	03 14 43.0	-2.8
	comp=Z,21nm,1.0s						
PPT2	Papeete2	26.82	93	*e*P	P	03 09 02.4	+0.9
	comp=Z,508nm,1.3s						
PPT2				*e*ScP	ScP	03 14 43.2	-2.7
	comp=Z,153nm,1.3s						
PPT	Papeete	26.82	93	P	P	03 09 02.5	+1.0
	comp=Z,267nm,0.8s,baz=88,slow=4.9,SNR=18						
PPT				ScP	ScP	03 14 48.7	+2.8

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      comp=Z,94nm,1.0s,baz=89,slow=2.3,SNR=5.7
PPTF  Pamatai, Papee     26.83  93  P       P       03 09 02.8 +1.2
PPTF  Pamatai, Papee     26.83  93  P       P       03 09 03.1 +1.5
TBI   Tubuai             26.91 106  eP      P       03 09 03.5 +1.4
      comp=Z,553nm,0.8s
TIAR  Tiarei             27.04  93  eP      P       03 09 04.2 +0.8
      comp=Z,44nm,0.9s
TIAR                                eScP    ScP     03 14 43.8 -2.8
      comp=Z,13nm,0.8s
RPZ   Rata Peaks         27.06 198  IAmb    IAmb    03 09 09.8
      comp=Z,82nm,0.7s
RPZ   Rata Peaks         27.06 198  P       P       03 09 03.6 +0.5
FOZ   Fox Glacier        27.28 200  P       P       03 09 04.2 -0.8
FOZ                                         PcP     03 12 03.1 -0.3
MEH   Mehetia            28.23  94  eP      P       03 09 14.3 +0.7
      comp=Z,77nm,1.2s
ODZ   Otahua Downs       28.39 197  IAmb    IAmb    03 09 15.4
      comp=Z,222nm,1.8s
ODZ   Otahua Downs       28.39 197  P       P       03 09 13.9 -0.8
XMAS  Kiritimati         28.42  47  P       P       03 09 15.9 +0.6
XMAS                                IAmb    IAmb    03 09 16.8
      comp=Z,117nm,0.8s
XMAS  Kiritimati         28.42  47  P       P       03 09 16.4 +1.0
      comp=Z,166nm,0.8s
PMOR  Pomariorio Ree     28.79  88  eP      P       03 09 19.2 +0.7
      comp=Z,1µm,1.2s
PMOR                                eScP    ScP     03 14 49.1 -2.9
      comp=Z,149nm,1.0s
VAH   Vaihoa             29.00  89  eP      P       03 09 20.7 +0.4
      comp=Z,410nm,0.9s
MLZ   Mavora Lakes       29.46 200  P       P       03 09 24.1 +0.2
EIDS  Eidsvold           29.72 251  P       P       03 09 26.0 -0.4
      baz=30,SNR=159
EIDS  Eidsvold           29.72 251  P       P       03 09 26.2 -0.2
EIDS  Eidsvold           29.72 251  P       P       03 09 25.6 -0.8
      comp=Z,491nm,1.2s
DCZ   Deep Cove          29.88 202  P       P       03 09 27.6 +0.2
DCZ                                 IAmb    IAmb    03 09 28.6
      comp=Z,138nm,1.0s
RK1H  Rockhampton Ha     30.06 255  P       P       03 09 28.7 -0.7
      comp=Z,336nm,0.8s
ARMA  Armidale           30.29 241  P       P       03 09 32.2 +0.9
      baz=30,SNR=103
ARMA  Armidale           30.29 241  P       P       03 09 32.3 +0.9
ARMA  Armidale           30.29 241  P       P       03 09 31.9 +0.5
      comp=Z,400nm,1.0s
NTLH  Newcastle Hard     31.02 236  P       P       03 09 38.6 +1.2
      comp=Z,530nm,0.9s
MGCD  Mangrove Creek     31.59 236  P       P       03 09 43.2 +1.0
      baz=32,SNR=51
MGCD  Mangrove Creek     31.59 236  P       P       03 09 43.1 +0.8
      comp=Z,505nm,0.8s
RIV   Riverview          31.77 235  P       P       03 09 44.6 +0.8
      baz=32,SNR=15
RMQ   Roma               31.94 249  P       P       03 09 46.0 +0.7
      baz=32,SNR=140
RMQ   Roma               31.94 249  P       P       03 09 45.5 +0.1
      comp=Z,517nm,0.7s
SYDH  Sydney Hard Ro     32.07 235  P       P       03 09 46.9 +0.6
      comp=Z,727nm,0.9s
WOLH  Wollongong Har     32.20 234  P       P       03 09 47.9 +0.5
      comp=Z,624nm,0.9s
RABL  Rabaul             32.57 292  P       P       03 09 49.5 -1.3
CNB   Canberra Magne     33.69 233  P       P       03 10 01.1 +1.1
      baz=34,SNR=344
CNB   Canberra Magne     33.69 233  P       P       03 10 00.6 +0.6
      comp=Z,2µm,0.9s
CAN   Canberra           33.97 233  P       P       03 10 03.1 +0.8
CTA   Charters Tower     33.99 261  P       P       03 10 02.5 -0.1
      comp=Z,345nm,0.7s,baz=88,slow=10,SNR=536
CTA                                 PcP     PcP     03 12 22.4 +0.2
      comp=Z,42nm,1.0s,baz=63,slow=4.2,SNR=4.5
CTA                                 S       S       03 14 43.7 -2.4
      comp=Z,4.4nm,0.5s,baz=225,slow=19,SNR=4.1
CTA                                 ScP     ScP     03 15 13.2 +3.4
      comp=Z,65nm,1.0s,baz=76,slow=3.4,SNR=16
CTA   Charters Tower     33.99 261  P       P       03 10 02.1 -0.5
      comp=Z,761nm,1.1s
CTAO  Charters Tower     33.99 261  P       P       03 10 02.7  0.0
CTAO                                        PcP     03 12 22.5 +0.2
CTAO  Charters Tower     33.99 261  P       P       03 10 02.5 -0.1
YNG   Young              34.08 235  P       P       03 10 03.9 +0.7
      baz=34,SNR=45
YNG   Young              34.08 235  P       P       03 10 03.8 +0.6
      comp=Z,280nm,1.2s
MILA  Mila               34.52 230  P       P       03 10 07.4 +0.6
      baz=35,SNR=18
PMG   Port Moresby       35.12 280  P       P       03 10 13.0 +0.9
      comp=Z,765nm,0.8s,baz=90,slow=5.2,SNR=3.1
PMG                                 PcP     PcP     03 12 26.3 +0.6
      comp=Z,43nm,0.8s,baz=161,slow=3.7,SNR=3.3
PMG                                 S       S       03 15 03.0 -0.1
      comp=Z,7.9nm,0.5s,baz=245,slow=21,SNR=9.6
PMG                                 ScP     ScP     03 15 16.3 +2.4
      comp=Z,35nm,0.9s,baz=280,slow=5.9,SNR=7.1
PMG   Port Moresby       35.12 280  P       P       03 10 12.9 +0.8
PMG                                         PcP     03 12 25.4 -0.3
PMG   Port Moresby       35.12 280  P       P       03 10 12.6 +0.5
PMG   Port Moresby       35.12 280  P       P       03 10 12.7 +0.6
CMSA  Cobar Meteorol     35.51 241  P       P       03 10 15.6 +0.6
      baz=36,SNR=355
CMSA  Cobar Meteorol     35.51 241  P       P       03 10 15.0  0.0
      comp=Z,1µm,0.9s
MTSU  Mount Surprise     35.98 264  P       P       03 10 18.9 -0.2
      baz=36,SNR=222
MTSU  Mount Surprise     35.98 264  P       P       03 10 18.4 -0.7
      comp=Z,228nm,0.8s
QLP   Quilpie            35.98 250  P       P       03 10 19.1 +0.1
      baz=36,SNR=449
QLP   Quilpie            35.98 250  P       P       03 10 18.5 -0.5
      comp=Z,2µm,0.9s
GLAD  Gladstone          37.02 225  P       P       03 10 27.9 +0.7
      comp=Z,529nm,0.8s
TOO   Toolangi           37.42 231  P       P       03 10 31.3 +0.7
      baz=38,SNR=142
TOO   Toolangi           37.42 231  P       P       03 10 30.9 +0.3
      comp=Z,846nm,1.0s
TAOE  Nuku Hiva Isla     37.68  81  eP      P       03 10 32.9 -0.2
      comp=Z,1µm,0.9s
TAOE  Nuku Hiva Isla     37.68  81  P       P       03 10 33.9 +0.8
TAOE  Nuku Hiva Isla     37.68  81  P       P       03 10 34.9 +1.8
COEN  Coen               37.72 271  P       P       03 10 33.4 +0.1
      comp=Z,2µm,0.9s
MANU  Manus Island       37.80 291  P       P       03 10 34.6 +0.6
CORO  Coronation Par     37.81 225  P       P       03 10 34.8 +1.1
      comp=Z,617nm,0.9s
MLBS  Spotswood, Mel     37.95 231  P       P       03 10 35.6 +0.8
      comp=Z,509nm,0.8s
MOO   Moorlands          38.24 223  P       P       03 10 37.9 +0.7
      baz=38,SNR=12
MOO   Moorlands          38.24 223  P       P       03 10 38.3 +1.2
TAU   Tasmania Unive     38.38 223  P       P       03 10 38.8 +0.6
TAU                                 pmax    pmax
      comp=Z,233nm,1.1s
TAU   Tasmania Unive     38.38 223  P       P       03 10 38.8 +0.6
TAU   Tasmania Unive     38.38 223  P       P       03 10 39.1 +0.9
GEXS  Deakin Univers     38.53 231  P       P       03 10 40.4 +0.9
      comp=Z,709nm,1.0s
BRAT  Ballarat           38.58 232  P       P       03 10 40.8 +0.9
      comp=Z,495nm,0.9s
STKA  Stephens Creek     38.99 242  P       P       03 10 44.1 +0.8
      comp=Z,559nm,0.8s,baz=84,slow=9.0,SNR=758
STKA                                ScP     ScP     03 15 31.9 +3.6
      comp=Z,44nm,0.9s,baz=92,slow=1.3,SNR=8.5
STKA                                S       S       03 15 59.5 -0.3
      comp=Z,9.0nm,0.9s,baz=167,slow=19,SNR=1.5
STKA  Stephens Creek     38.99 242  P       P       03 10 44.1 +0.8
      baz=39,SNR=622
STKA  Stephens Creek     38.99 242  P       P       03 10 43.9 +0.5
STKA                                IAmb    IAmb    03 10 45.2
      comp=Z,150nm,0.9s
STKA  Stephens Creek     38.99 242  P       P       03 10 43.6 +0.3
      comp=Z,181nm,1.1s
INKA  Innaminka          39.18 248  P       P       03 10 45.5 +0.6
      comp=Z,2µm,1.1s
ARPS  Mount Arapiles     39.93 234  P       P       03 10 50.9 +0.2
      baz=40,SNR=14
ARPS  Mount Arapiles     39.93 234  P       P       03 10 50.7  0.0
      comp=Z,423nm,1.0s
QIS   Mount Isa          40.19 260  P       P       03 10 52.3 -0.7
      baz=40,SNR=94
QIS   Mount Isa          40.19 260  P       P       03 10 52.0 -1.1
      comp=Z,141nm,1.2s
HTT   Hallett            41.49 240  P       P       03 11 03.7 +0.5
      baz=42,SNR=174
HTT   Hallett            41.49 240  P       P       03 11 03.2  0.0
      comp=Z,721nm,1.0s
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LCRK  Leigh Creek        41.65 245  P       P       03 11 04.3 -0.1
      comp=Z,1µm,0.9s
MMPI  Merauke            41.77 278  P       P       03 11 05.7 +0.1
      comp=Z,1µm,0.7s
GHSS  Government Hou     42.03 238  P       P       03 11 07.8 +0.5
      comp=Z,561nm,0.9s
PTPS  Port Pirie         42.21 241  P       P       03 11 09.4 +0.7
      comp=Z,912nm,0.8s
WHYH  Whyalla            42.54 241  P       P       03 11 11.3  0.0
      comp=Z,605nm,0.8s
KHLU  Kahalu`u           43.32  31  P       P       03 11 18.0 +0.3
HMH   Humu‘ula Sheep     43.53  31  P       P       03 11 20.2 +0.7
JAY   Jayapura           43.59 286  P       P       03 11 20.0 +0.2
      comp=Z,668nm,0.7s,baz=137,slow=3.4,SNR=223
JAY                                 S       S       03 17 06.5 +0.2
      comp=Z,42nm,0.9s,baz=69,slow=23,SNR=24
POHA  Pohakuloa          43.64  31  P       P       03 11 20.4 +0.2
OOD   Oodnadatta         43.65 249  P       P       03 11 20.3 +0.3
      comp=Z,805nm,1.1s
BBOO  Buckleboo          43.77 241  P       P       03 11 20.9  0.0
      baz=44,SNR=310
BBOO  Buckleboo          43.77 241  P       P       03 11 20.5 -0.3
      comp=Z,945nm,0.9s
KIP   Kipapa             43.94  27  P       P       03 11 22.6 +0.4
KIP                                 pmax    pmax
      comp=Z,140nm,1.0s
KIP   Kipapa             43.94  27  P       P       03 11 22.6 +0.4
KIP                                 IAmb    IAmb    03 11 24.4
      comp=Z,140nm,1.0s
KIP   Kipapa             43.94  27  P       P       03 11 22.2  0.0
KIP   Kipapa             43.94  27  P       P       03 11 22.5 +0.4
HLK   Haleakala          44.15  30  P       P       03 11 24.5 +0.3
KHLH  Kahului Airpor     44.19  29  IAmb    IAmb    03 11 25.9
      comp=Z,130nm,0.8s
WR0   Warramunga Arr     44.98 260  P       P       03 11 29.8 -0.5
WR0                                 PcP     PcP     03 12 58.5 +0.5
WB2   Warramunga Arr     45.16 260  P       P       03 11 31.0 -0.7
      baz=45
WRAB  Tennant Creek      45.16 260d iP      P       03 11 30.7 -1.0
WRAB                                pmax    pmax
      comp=Z,499nm,1.0s
WRAB  Tennant Creek      45.16 260  P       P       03 11 31.3 -0.4
WRAB  Tennant Creek      45.16 260  P       P       03 11 30.7 -1.0
WRA   Warramunga Arr     45.17 260  P       P       03 11 31.2 -0.5
      comp=Z,402nm,0.8s,baz=96,slow=7.4,SNR=851
WRA                                 PcP     PcP     03 12 58.1 -0.5
      comp=Z,59nm,0.8s,baz=94,slow=3.8,SNR=6.7
WRA                                 ScP     ScP     03 15 55.9 +2.3
      comp=Z,27nm,0.8s,baz=89,slow=4.3,SNR=10
WRA                                 S       S       03 17 24.2 -4.1
      comp=Z,16nm,0.9s,baz=97,slow=13,SNR=8.2
WRA                                 PKP2bc          03 43 10.8
      comp=Z,2.4nm,1.2s,baz=278,slow=3.5,SNR=5.4
WRA   Warramunga Arr     45.17 260  P       P       03 11 31.2 -0.5
WRA                                 IAmb    IAmb    03 11 32.1
      comp=Z,87nm,1.1s
WRA                                 PcP     PcP     03 12 59.0 +0.4
MULG  Mulgathing         45.21 245  P       P       03 11 31.3 -0.6
      comp=Z,1µm,1.0s
ASAR  Alice Springs      45.28 255  P       P       03 11 32.5 -0.2
      comp=Z,722nm,0.7s,baz=88,slow=8.0,SNR=4344
ASAR                                PcP     PcP     03 12 59.1 +0.1
      comp=Z,68nm,0.7s,baz=102,slow=3.8,SNR=8.7
ASAR                                ScP     ScP     03 15 56.0 +1.9
      comp=Z,24nm,0.9s,baz=98,slow=4.1,SNR=8.5
ASAR                                S       S       03 17 27.4 -2.4
      comp=Z,31nm,0.7s,baz=91,slow=15,SNR=24
ASAR                                ScS     ScS     03 20 23.2 +1.0
      comp=Z,7.0nm,0.9s,baz=92,slow=6.9,SNR=9.2
ASAR                                PKP2bc          03 43 12.3
      comp=Z,2.7nm,0.9s,baz=278,slow=4.2,SNR=13
SMPI  Sarmi              45.63 286  P       P       03 11 34.9 -0.4
      comp=Z,9µmcomp=Z,308nm,0.9s
SRPI  Serui, Papua       47.94 284  P       P       03 11 52.9 +0.3
      comp=Z,11µmcomp=Z,208nm,0.4s
KDU   Kakadu             48.16 269  P       P       03 11 53.5 -0.7
      baz=48,SNR=261
KDU   Kakadu             48.16 269  P       P       03 11 53.1 -1.1
      comp=Z,690nm,0.8s
BAKI  Biak               48.33 285  P       P       03 11 55.7 +0.2
GUMO  Guam               48.58 308  P       P       03 11 57.5 +0.2
      comp=Z,523nm,0.8s,baz=152,slow=7.1,SNR=19
GUMO  Guam               48.58 308  P       P       03 11 57.7 +0.4
GUMO                                pmax    pmax
      comp=Z,595nm,0.9s
GUMO  Guam               48.58 308  P       P       03 11 57.7 +0.4
GUMO  Guam               48.58 308  P       P       03 11 57.6 +0.3
MTN   Manton Dam         49.40 269  P       P       03 12 02.3 -1.0
      baz=49,SNR=115
MTN   Manton Dam         49.40 269  P       P       03 12 01.9 -1.5
      comp=Z,674nm,0.9s
DRS   Darwin Rock St     49.72 269  P       P       03 12 04.5 -1.2
      comp=Z,218nm,0.8s
WRKA  Warakurna          50.31 252  P       P       03 12 09.5 -0.5
      baz=50,SNR=729
WRKA  Warakurna          50.31 252  P       P       03 12 09.2 -0.8
      comp=Z,1µm,1.0s
FORT  Forrest            50.41 245  P       P       03 12 09.8 -0.7
      baz=50,SNR=165
FORT  Forrest            50.41 245  P       P       03 12 09.6 -0.9
      comp=Z,985nm,0.8s
SAUI  Saumlaki           50.50 275  P       P       03 12 11.4  0.0
KNRA  Kununurra          51.06 264  P       P       03 12 14.8 -0.6
      baz=51,SNR=76
KNRA  Kununurra          51.06 264  P       P       03 12 14.4 -1.0
      comp=Z,791nm,0.8s
FAKI  Fak Fak            51.25 281  P       P       03 12 16.4 -0.4
FAKI  Fak Fak            51.25 281  P       P       03 12 16.0 -0.8
      comp=Z,4µmcomp=Z,251nm,1.3s
FAKI  Fak Fak            51.25 281  P       P       03 12 16.3 -0.5
BNDI  Bandanaira         52.89 278  P       P       03 12 28.1 -0.4
      comp=Z,9µmcomp=Z,874nm,1.1s
BNDI  Bandanaira         52.89 278  P       P       03 12 29.0 +0.5
SIJI  Sorong             52.91 283  P       P       03 12 27.6 -1.1
      comp=Z,1µm,0.8s,baz=87,slow=5.9,SNR=225
SIJI                                ScP     ScP     03 16 27.6 +0.8
      comp=Z,21nm,0.7s,baz=101,slow=6.2,SNR=5.4
SWI   Sorong             52.92 283  P       P       03 12 28.7  0.0
      comp=Z,14µmcomp=Z,2µm,0.9s
FITZ  Fitzroy Crossi     53.57 261  P       P       03 12 33.0 -0.3
      comp=Z,91nm,0.8s,baz=114,slow=4.1,SNR=328
FITZ  Fitzroy Crossi     53.57 261  P       P       03 12 33.0 -0.3
      baz=54,SNR=127
FITZ  Fitzroy Crossi     53.57 261  P       P       03 12 33.2 -0.1
FITZ                                IAmb    IAmb    03 12 33.7
      comp=Z,98nm,0.7s
FITZ  Fitzroy Crossi     53.57 261  P       P       03 12 32.6 -0.7
      comp=Z,174nm,1.4s
MSAI  Masohi             54.20 279  P       P       03 12 36.7 -1.1
      comp=Z,58nm,0.7s
LBMI  Labuha             56.49 282  P       P       03 12 53.8 +0.2
      comp=Z,4µmcomp=Z,446nm,1.0s
SOEI  Soe                56.68 270  P       P       03 12 56.0 +1.0
      comp=Z,13µmcomp=Z,2µm,0.9s
SOEI  Soe                56.68 270  P       P       03 12 56.1 +1.0
BATI  Baumata            57.14 270  P       P       03 12 59.1 +1.1
      comp=Z,523nm,0.8s,baz=156,slow=1.6,SNR=76
BATI  Baumata            57.14 270  P       P       03 12 58.9 +0.9
      comp=Z,3µmcomp=Z,377nm,0.8s
TNTI  Ternate            57.14 283  P       P       03 12 57.9 -0.1
TNTI  Ternate            57.14 283  P       P       03 12 57.5 -0.5
      comp=Z,6µmcomp=Z,672nm,0.9s
TNTI  Ternate            57.14 283  P       P       03 12 58.3 +0.3
SANI  Sanana             57.41 280  P       P       03 12 58.9 -0.9
      comp=Z,5µmcomp=Z,617nm,1.0s
SANI  Sanana             57.41 280  P       P       03 12 59.4 -0.4
PSA00 Pilbara Seismi     58.41 256  P       P       03 13 05.6 -0.9
MBWA  Marble Bar         58.58 256  P       P       03 13 06.9 -0.7
MBWA  Marble Bar         58.58 256  P       P       03 13 07.1 -0.5
MEEK  Meekatharra        58.88 250  P       P       03 13 08.7 -0.8
      baz=59,SNR=111
MEEK  Meekatharra        58.88 250  P       P       03 13 08.6 -1.0
MMRI  Maumere            58.91 271  P       P       03 13 09.1 -0.8
      comp=Z,9µmcomp=Z,896nm,0.8s
MMRI  Maumere            58.91 271  P       P       03 13 09.7 -0.2
EDFI  Ende, Flores       59.40 271  P       P       03 13 12.0 -1.3
      comp=Z,3µmcomp=Z,415nm,1.0s
JCJ   Chichijima         59.52 318  P       P       03 13 13.0 -0.6
      comp=Z,77nm,0.6s,baz=295,slow=18,SNR=4.2
NWAO  Narrogin (SRO)     59.58 242  P       P       03 13 13.8 -0.3
      comp=Z,148nm,0.9s,baz=107,slow=5.5,SNR=44
NWAO  Narrogin (SRO)     59.58 242  P       P       03 13 13.8 -0.3
      baz=60,SNR=31
NWAO                                P       P       03 13 13.8 -0.3
      baz=60,SNR=31
NWAO  Narrogin (SRO)     59.58 242  IAmb    IAmb    03 13 15.0
      comp=Z,204nm,1.1s
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NWAO  Narrogin (SRO)     59.58 242  P       P       03 13 13.3 -0.8
NWAO  Narrogin (SRO)     59.58 242  P       P       03 13 14.1  0.0
NWAO  Narrogin (SRO)     59.58 242  P       P       03 13 13.7 -0.3
KDI   Kendari            59.94 276  P       P       03 13 16.2 -0.6
SGSI  Sangihe            59.96 286  P       P       03 13 16.3 -0.6
      comp=Z,5µmcomp=Z,398nm,0.8s
BASI  Baing, Sumba       60.07 269  P       P       03 13 17.5 -0.1
SBA   Scott Base         60.10 184  P       P       03 13 19.3 +2.7
SBA                                 pmax    pmax
      comp=Z,33nm,0.8s
SBA   Scott Base         60.10 184  P       P       03 13 19.3 +2.7
VNDA  Vanda              60.14 185  P       P       03 13 18.8 +1.9
      comp=Z,7.9nm,0.6s,baz=358,slow=7.4,SNR=66
VNDA                                PcP     PcP     03 13 56.7 +2.0
      comp=Z,6.4nm,0.8s,baz=322,slow=4.2,SNR=4.5
VNDA                                ScP     ScP     03 17 00.1 +2.6
      comp=Z,5.8nm,0.8s,baz=6.9,slow=5.8,SNR=4.7
VNDA  Vanda              60.14 185  P       P       03 13 19.0 +2.1
BLDU  Ballidu            60.18 245  P       P       03 13 17.5 -0.6
      baz=60,SNR=138
BLDU  Ballidu            60.18 245  P       P       03 13 17.3 -0.8
KMSI  Cibinong           60.21 282  P       P       03 13 18.1 -0.4
WSI   Waingapu           60.48 269  P       P       03 13 19.8 -0.5
      comp=Z,1µm,0.6s
MUN   Mundaring          60.50 243  P       P       03 13 19.8 -0.3
      baz=60,SNR=83
MUN   Mundaring          60.50 243  P       P       03 13 19.9 -0.3
      comp=Z,495nm,1.2s
LUWI  Luwuk              60.77 279  P       P       03 13 22.5 +0.3
LUWI  Luwuk              60.77 279  P       P       03 13 21.8 -0.4
      comp=Z,8µmcomp=Z,707nm,1.2s
LUWI  Luwuk              60.77 279  P       P       03 13 23.0 +0.8
MTKN  Mount Kenneth      60.88 243  P       P       03 13 24.2 +1.6
      comp=Z,1µm,0.8s
MORW  Morawa             60.90 246  P       P       03 13 22.2 -0.6
      baz=61,SNR=33
MORW  Morawa             60.90 246  P       P       03 13 22.4 -0.4
MORW                                IAmb    IAmb    03 13 23.4
      comp=Z,140nm,0.9s
MORW  Morawa             60.90 246  P       P       03 13 22.1 -0.7
GTOI  Gorontalo          61.13 281  P       P       03 13 24.9 +0.3
      comp=Z,1µmcomp=Z,124nm,0.7s
BSSI  Bau Bau, Buton     61.29 273  P       P       03 13 24.5 -1.1
      comp=Z,2µmcomp=Z,218nm,1.0s
DAV   Davao City (W)     61.30 289  P       P       03 13 25.2 -0.4
      comp=Z,361nm,0.7s,baz=65,slow=2.8,SNR=17
DAV   Davao City (W)     61.30 289  P       P       03 13 25.4 -0.2
DAV   Davao City (W)     61.30 289  P       P       03 13 26.1 +0.5
      comp=Z,594nm,0.8s
WBSI  Waikabubak, Su     61.35 269  P       P       03 13 25.3 -0.7
APSI  Ampana             61.87 279  P       P       03 13 30.0 +0.7
      comp=Z,4µmcomp=Z,474nm,1.1s
BKSI  Bulukumba          61.88 274  P       P       03 13 28.3 -1.1
      comp=Z,2µmcomp=Z,103nm,0.7s
H01W1 Cape Leeuwin H     62.03 240  P       P       03 13 31.3 +1.5
      baz=104,slow=7.9,SNR=27
H01W3 Cape Leeuwin H     62.04 240  P       P       03 13 31.4 +1.5
      baz=104,slow=7.9,SNR=18
H01W2 Cape Leeuwin H     62.04 240  P       P       03 13 31.4 +1.6
      baz=104,slow=7.9,SNR=14
MRSI  Marisa             62.08 281  P       P       03 13 29.5 -1.2
      comp=Z,2µmcomp=Z,202nm,1.1s
KAPI  Kappang            62.33 274  P       P       03 13 31.7 -0.6
KAPI                                pmax    pmax
      comp=Z,331nm,1.5s
KAPI  Kappang            62.33 274  P       P       03 13 31.7 -0.6
KAPI                                IAmb    IAmb    03 13 33.2
      comp=Z,331nm,1.4s
KAPI  Kappang            62.33 274  P       P       03 13 32.5 +0.2
TTSI  Tana Toraja        62.88 276  P       P       03 13 35.3 -0.6
      comp=Z,106nm,0.9s
RPN   Rapa Nui           63.09 112  P       P       03 13 39.2 +2.2
      comp=Z,114nm,0.7s,baz=304,slow=5.9,SNR=6.8
RPN   Rapa Nui           63.09 112  P       P       03 13 38.9 +1.9
RPN                                 pmax    pmax
      comp=Z,171nm,0.9s
RPN   Rapa Nui           63.09 112  P       P       03 13 38.9 +1.9
RPN                                 IAmb    IAmb    03 13 40.2
      comp=Z,171nm,0.9s
PLAI  Plampang           63.10 269  P       P       03 13 36.5 -0.8
      comp=Z,7µmcomp=Z,811nm,1.0s
PLAI  Plampang           63.10 269  P       P       03 13 36.5 -0.8
GIRL  Giralia            63.38 253  P       P       03 13 39.6 +0.8
      baz=63,SNR=33
GIRL  Giralia            63.38 253  P       P       03 13 39.3 +0.4
GIRL  Giralia            63.38 253  P       P       03 13 40.0 +1.1
      comp=Z,992nm,1.0s
TOLI2 Tolitoli           63.38 281  P       P       03 13 38.3 -0.8
TOLI2 Tolitoli           63.38 281  P       P       03 13 38.5 -0.6
PCI   Palu               63.57 278  P       P       03 13 39.8 -0.5
      comp=Z,27µmcomp=Z,986nm,1.0s
MPSI  Mapaga             63.94 280  P       P       03 13 42.0 -0.6
      comp=Z,4µmcomp=Z,401nm,1.0s
TWSI  Taliwang, Sumb     63.97 269  P       P       03 13 41.9 -0.9
      comp=Z,4µmcomp=Z,554nm,1.0s
JHJ2  Mitsune            65.21 321  P       P       03 13 51.2 +1.1
JHJ   Hachijo jima 2     65.23 321  P       P       03 13 50.2 -0.1
      comp=Z,866nm,0.9s,baz=192,slow=8.5,SNR=10.0
DNP   Denpasar           65.58 269  P       P       03 13 52.6 -0.3
      comp=Z,1µm,0.8s
IGBI  Denpasar           65.60 268  P       P       03 13 51.6 -1.4
      comp=Z,7µmcomp=Z,938nm,0.9s
SRBI  Singaraja          65.74 269  P       P       03 13 53.1 -0.8
      comp=Z,6µmcomp=Z,507nm,1.1s
CASY  Casey              66.06 205  P       P       03 13 55.1 +0.2
CASY                                IAmb    IAmb    03 13 56.5
      comp=Z,143nm,1.1s
JMZ   Minamidaito 2      66.18 310  IAmb    IAmb    03 13 59.2
      comp=Z,295nm,1.4s
SMKI  Samarinda          66.20 278  P       P       03 13 58.9 +2.2
      comp=Z,10µmcomp=Z,506nm,1.0s
BKB   Balikpapan         66.22 277  P       P       03 13 58.7 +1.9
      comp=Z,294nm,0.9s
BKB   Balikpapan         66.22 277  P       P       03 13 58.8 +1.9
KBKI  Kotabaru           66.26 275  P       P       03 13 57.4 +0.3
      comp=Z,2µmcomp=Z,200nm,1.1s
JAGI  Jajag, Banyuwa     66.64 269  P       P       03 13 57.6 -1.9
      comp=Z,6µmcomp=Z,798nm,0.9s
JAGI  Jajag, Banyuwa     66.64 269  P       P       03 13 58.2 -1.3
ABJI  Asem Bagus         66.75 269  P       P       03 13 59.4 -0.7
      comp=Z,4µmcomp=Z,476nm,1.1s
KMMI  Kalianget          67.22 270  P       P       03 14 01.2 -1.8
      comp=Z,4µmcomp=Z,373nm,1.0s
GMJI  Gumukmas           67.37 268  P       P       03 14 02.6 -1.3
      comp=Z,3µmcomp=Z,348nm,0.8s
BLJI  Banyuglugur        67.37 269  P       P       03 14 03.3 -0.6
      comp=Z,4µmcomp=Z,424nm,0.8s
BBKI  Banjar Baru        67.46 274  P       P       03 14 04.9 +0.4
      comp=Z,4µmcomp=Z,350nm,0.9s
JMM   Marumori           68.08 326  IAmb    IAmb    03 14 08.3
      comp=Z,123nm,0.9s
MTKI  Muara Teweh, K     68.21 276  P       P       03 14 08.8 -0.2
      comp=Z,143nm,0.9s
INU   Inuyama            68.43 321  IAmb    IAmb    03 14 10.7
      comp=Z,96nm,1.3s
INU   Inuyama            68.43 321  P       P       03 14 10.9 +1.1
MJAR  Matsushiro Arr     68.56 323  P       P       03 14 10.3 -0.3
      comp=Z,85nm,0.8s,baz=156,slow=6.2,SNR=175
MJAR  Matsushiro Arr     68.56 323  IAmb    IAmb    03 14 11.1
      comp=Z,85nm,0.9s
MAJO  Matsushiro         68.56 323 i P      P       03 14 09.8 -0.9
MAJO                                pmax    pmax
      comp=Z,63nm,0.5s
MAJO  Matsushiro         68.56 323  P       P       03 14 10.2 -0.4
MAJO                                IAmb    IAmb    03 14 11.2
      comp=Z,112nm,0.8s
MAJO  Matsushiro         68.56 323  P       P       03 14 10.7  0.0
MAT   Matsushiro         68.56 323  P       P       03 14 10.0 -0.7
MAT                                 S       S       03 22 25.2 -0.6
GRJI  Gresik             68.67 270  P       P       03 14 11.9 +0.1
      comp=Z,3µmcomp=Z,232nm,0.7s
SPMM  Sapulut            68.70 283  P       P       03 14 12.0  0.0
JOW   Kunigami           68.92 309  P       P       03 14 13.0  0.0
      comp=Z,142nm,1.0s,baz=166,slow=6.7,SNR=15
JOW   Kunigami           68.92 309  P       P       03 14 14.2 +1.2
PWJI  Pagerwojo          69.00 268  P       P       03 14 13.2 -0.5
      comp=Z,5µmcomp=Z,475nm,0.9s
JMN   Monobe             69.27 318  IAmb    IAmb    03 14 16.6
      comp=Z,160nm,0.9s
TBJI  Tambak Boyo        69.30 270  P       P       03 14 15.2 -0.3
      comp=Z,5µmcomp=Z,503nm,1.1s
JWT   Wachi              69.35 320  IAmb    IAmb    03 14 16.3
      comp=Z,101nm,1.0s
NGJI  Ngawi              69.51 269  P       P       03 14 17.7 +0.9
      comp=Z,1µmcomp=Z,207nm,0.8s
PCJI  Pacitan            69.54 268  P       P       03 14 17.0  0.0
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	comp=Z,18µmcomp=Z,2µm,1.0s						
ADK	Adak	69.86	1	P	P	03 14 16.8	-1.2
ADK				pmax	pmax		
	comp=Z,123nm,0.7s						
ADK	Adak	69.86	1	P	P	03 14 16.8	-1.2
ADK				IAmb	IAmb	03 14 18.1	
	comp=Z,123nm,0.7s						
ADK	Adak	69.86	1	P	P	03 14 18.0	0.0
ERM	Erimo	70.01	330ce	P	P	03 14 20.8	+1.7
ERM				pmax	pmax		
	comp=Z,132nm,1.3s						
ERM	Erimo	70.01	330	P	P	03 14 20.2	+1.2
ERM				IAmb	IAmb	03 14 24.2	
	comp=Z,64nm,1.0s						
ERM	Erimo	70.01	330	P	P	03 14 19.0	-0.1
JTM	Tenmabayashi	70.10	328	IAmb	IAmb	03 14 20.6	
	comp=Z,125nm,0.9s						
UGM	Wanagama	70.24	268	P	P	03 14 20.4	-0.8
	comp=Z,7µmcomp=Z,870nm,0.8s						
UGM	Wanagama	70.24	268	P	P	03 14 21.1	-0.1
YOGI	Yogyakarta	70.49	268	P	P	03 14 21.7	-0.9
	comp=Z,4µmcomp=Z,533nm,1.0s						
SMRI	Semarang	70.57	269	P	P	03 14 23.1	0.0
	comp=Z,6µmcomp=Z,649nm,0.8s						
SMRI	Semarang	70.57	269	P	P	03 14 23.7	+0.6
PBKI	Pangkalan Bun	70.70	274	P	P	03 14 24.6	+0.8
	comp=Z,28µmcomp=Z,838nm,1.1s						
JNU	Nakatsue	70.82	316	P	P	03 14 23.8	-0.4
	comp=Z,54nm,0.8s,baz=92,slow=4.7,SNR=21						
JNU	Nakatsue	70.82	316	IAmb	IAmb	03 14 24.9	
	comp=Z,91nm,1.0s						
JNU	Nakatsue	70.82	316	P	P	03 14 24.0	-0.2
NIKH	Nikolski High	71.37	6	P	P	03 14 25.3	-1.5
	baz=189,SNR=5.1						
JEW	Eniwo	71.45	330	P	P	03 14 28.2	+0.7
YOJ	Yonaguni jima	71.65	304	P	P	03 14 29.6	+0.5
STKI	Sintang	71.77	276	P	P	03 14 30.8	+0.7
	comp=Z,306nm,1.0s						
SBUM	Sibu	71.87	279	P	P	03 14 31.0	+0.4
ASAJ	Asahikawa	71.89	331	P	P	03 14 31.1	+1.1
	comp=Z,73nm,0.9s,baz=191,slow=7.6,SNR=19						
KPJI	Karang Pucung	71.92	268	P	P	03 14 30.2	-0.7
	comp=Z,4µmcomp=Z,311nm,1.1s						
CMJI	Cimerak	72.25	267	P	P	03 14 31.6	-1.2
	comp=Z,2µmcomp=Z,222nm,1.1s						
UNV	Unalaska Valle	72.47	7	IAmb	IAmb	03 14 32.8	
	comp=Z,68nm,0.7s						
UNV	Unalaska Valle	72.47	7	P	P	03 14 31.7	-1.4
	baz=191,SNR=6.5						
YULB	Yu-li	72.48	303	IAmb	IAmb	03 14 33.6	
	comp=Z,75nm,0.7s						
JCJI	Jatiwangi	72.79	269	P	P	03 14 35.2	-0.7
	comp=Z,10µmcomp=Z,792nm,1.3s						
CISI	Cisompet, Garu	72.92	268	P	P	03 14 35.3	-1.4
	comp=Z,3µmcomp=Z,243nm,1.1s						
CISI	Cisompet, Garu	72.92	268	P	P	03 14 36.8	+0.1
SSLB	Suanglung	72.95	303	P	P	03 14 34.2	-2.4
SSLB	Suanglung	72.95	303	P	P	03 14 35.9	-0.7
TPUB	Ta-pu	72.97	302	P	P	03 14 36.1	-0.6
YHNB	Yeheng	73.05	304	IAmb	IAmb	03 14 37.8	
	comp=Z,157nm,0.9s						
YHNB	Yeheng	73.05	304	P	P	03 14 37.8	+0.6
TATO	Taipei	73.11	304	P	P	03 14 35.7	-1.8
LEM	Lembang	73.31	268	P	P	03 14 39.6	+0.5
	comp=Z,641nm,0.8s,baz=96,slow=4.9,SNR=76						
LEM	Lembang	73.31	268	P	P	03 14 39.1	0.0
	comp=Z,4µmcomp=Z,514nm,1.0s						
KSM	Kuching	73.34	277	P	P	03 14 39.0	0.0
CNJI	Cibinong	73.64	268	P	P	03 14 39.3	-1.4
	comp=Z,4µmcomp=Z,529nm,1.2s						
FALS	False Pass	73.86	9	P	P	03 14 39.7	-1.3
	baz=194						
PET	Petropavlovsk	73.88	345b	iP	P	03 14 40.6	-0.5
PET				e*PP	pP	03 16 45.3	-0.6
PET				e*SP	sP	03 17 48.4	-0.1
PET				eS	S	03 23 24.8	+0.4
PET				eSS	SS	03 28 28.7	+1.6
PET				eSSS	SSS	03 31 53.9	
PET				pmax	pmax		
	comp=Z,111nm,0.8s						
PET				pmax	pmax		
	comp=Z,200nm,14.6s						
PET				MLR	MLR		
	comp=Z,100nm,18.0s						
YSS	Yuzh-Sakhalins	74.02	333κ	iP	P	03 14 42.7	+0.6
YSS				e*SP	sP	03 17 49.3	+0.1
YSS				eS	S	03 23 28.9	+2.8
YSS				pmax	pmax		
	comp=Z,700nm,3.1s						
YSS				pmax	pmax		
	comp=Z,190nm,0.9s						
YSS				smax	smax		
	comp=E,700nm,19.6s						
YSS				smax	smax		
	comp=E,1.0nm,20.9s						
YSS	Yuzh-Sakhalins	74.02	333	P	P	03 14 42.3	+0.2
YSS	Yuzh-Sakhalins	74.02	333	P	P	03 14 43.0	+0.9
XMI	Christmas Isla	74.12	264	P	P	03 14 44.0	+0.6
	comp=E,371nm,1.5s						
XMIS	Christmas Isla	74.15	264	P	P	03 14 43.8	+0.2
	comp=E,291nm,1.4s						
PEA0B	Petropavlovsk-	74.19	345ce	P	P	03 14 42.5	-0.4
PETK	Petropavlovsk-	74.19	345	P	P	03 14 42.5	-0.4
	comp=E,90nm,0.7s,baz=143,slow=8.2,SNR=90						
DBJI	Dramaga	74.22	268	P	P	03 14 43.5	-0.5
	comp=E,718nm,1.1s						
TNG	Tangerang	74.43	269	P	P	03 14 46.1	+0.9
TNG				P	P	03 14 44.5	-0.7
CHNA	Chernabura Isl	74.45	11	P	P	03 14 43.4	-0.9
	baz=198						
SDPT	Sand Point	74.79	10	P	P	03 14 45.2	-1.0
	baz=197						
SBJI	Serang	74.93	268	P	P	03 14 47.3	-0.7
	comp=E,10µmcomp=E,816nm,1.1s						
TJN	Taejon	75.09	317c	iP	P	03 14 49.4	+1.1
TJN	Taejon	75.09	317	P	P	03 14 49.8	+1.5
	comp=E,174nm,1.0s						
CGJI	Cibinong	75.20	268	P	P	03 14 48.3	-1.2
	comp=E,7µmcomp=E,894nm,0.8s						
H06E1	SOCORRO T-PHAS	75.27	64	P	P	03 14 51.3	+1.6
	SNR=23						
KNMB	Chin-men Tao	75.33	302	IAmb	IAmb	03 14 51.1	
	comp=Z,161nm,1.0s						
KSRS	Korea Array	75.38	318	P	P	03 14 50.5	+0.6
	comp=Z,35nm,1.1s,baz=138,slow=6.4,SNR=66						
SPIA	Saint Paul Isl	75.42	4	P	P	03 14 50.9	+1.2
	baz=187						
KS19	Wonju Array Si	75.44	318	IAmb	IAmb	03 14 51.9	
	comp=Z,188nm,1.6s						
SNCC	San Nicolas Is	75.58	47	P	P	03 14 51.6	+0.5
	baz=236						
SCZ2	Santa Cruz Isl	75.92	47	P	P	03 14 54.3	+1.3
	baz=236						
UGL	Uglegorsk	75.96	334	eP	P	03 14 53.1	+0.3
UGL				pmax	pmax		
	comp=Z,150nm,1.0s						
BLSI	Bandar Lampung	76.00	269	P	P	03 14 52.4	-1.5
	comp=Z,5µmcomp=Z,451nm,0.8s						
CHGN	Chignik	76.06	11	IAmb	IAmb	03 14 53.9	
	comp=Z,91nm,1.0s						
CHGN	Chignik	76.06	11	P	P	03 14 52.6	-0.5
	baz=199						
SBC	Santa Barbara	76.11	46	P	P	03 14 53.7	-0.3
	baz=236						
SCI2	San Clemente I	76.12	48	P	P	03 14 54.0	-0.2
	baz=237						
PPBI	Pangkal Pinang	76.12	272	P	P	03 14 54.7	+0.1
	comp=Z,44µmcomp=Z,310nm,1.0s						
CHIR	Chirikof Islan	76.15	13	P	P	03 14 55.1	+1.4
	baz=202						
INCN	Inchon	76.22	317	P	P	03 14 55.3	+0.7
INCN				pmax	pmax		
	comp=Z,110nm,1.0s						
INCN	Inchon	76.22	317	P	P	03 14 55.2	+0.7
INCN				IAmb	IAmb	03 14 57.0	
	comp=Z,110nm,1.0s						
INCN	Inchon	76.22	317	P	P	03 14 55.4	+0.8
SAO	San Andreas Ge	76.27	43	IAmb	IAmb	03 14 57.0	
	comp=Z,40nm,0.8s						
PKM	Mcpherson Peak	76.29	46	P	P	03 14 56.5	+1.3
	baz=236,SNR=7.9						
PMPB	Monarch Peak	76.38	44	IAmb	IAmb	03 14 57.8	
	comp=Z,38nm,0.6s						
SMMC	Simmler	76.40	45	P	P	03 14 56.9	+1.2
	baz=236,SNR=6.8						
CIS	Catalina Islan	76.44	48	P	P	03 14 57.0	+1.1
	baz=237						
PAGB	Antelope Grade	76.47	45	IAmb	IAmb	03 14 59.8	
	comp=Z,108nm,1.7s						
KLI	Kotabumi	76.52	269	P	P	03 14 54.9	-1.8
	comp=Z,205nm,0.5s						
VLA	Vladivostok	76.60	325	iP	P	03 14 56.5	0.0
VLA				pmax	pmax		
	comp=Z,36nm,0.8s						
MSHR	Mys Shultsa	76.65	324d	iP	P	03 14 57.6	+0.8
MSHR				pmax	pmax		
	comp=Z,87nm,0.9s						
KASI	Kota Agung	76.66	269	P	P	03 14 56.0	-1.5
	comp=Z,5µmcomp=Z,700nm,0.9s						
KMRM	Mail Ridge	76.90	40	IAmb	IAmb	03 15 01.3	
	comp=Z,82nm,0.9s						
DECC	Green Verdugo	76.96	47	P	P	03 14 59.7	+1.0
	baz=237						
PASC	Pasadena Art C	77.02	47	IAmb	IAmb	03 15 00.7	
	comp=Z,41nm,0.6s						
ARVC	Arvin	77.09	46	P	P	03 15 00.5	+1.1
	baz=237,SNR=11						
109C	Camp Elliot, M	77.10	49	P	P	03 15 00.3	+0.9
	baz=238,SNR=7.6						
TYV	Tymovskoe	77.11	336	eP	P	03 14 59.2	+0.1
TYV				pmax	pmax		
	comp=Z,122nm,0.8s						
TYV				pmax	pmax		
	comp=Z,400nm,2.1s						
MWC	Mount Wilson	77.14	47	IAmb	IAmb	03 15 01.6	
	comp=Z,58nm,0.6s						
SII	Sitkinak Islan	77.14	13	IAmb	IAmb	03 15 00.1	
	comp=Z,157nm,0.8s						
SII	Sitkinak Islan	77.14	13	P	P	03 14 59.0	-0.1
	baz=203,SNR=6.3						
SII	Sitkinak Islan	77.14	13	P	P	03 14 59.8	+0.7
	comp=Z,213nm,0.9s						
PMBI	Palembang	77.18	271	P	P	03 15 00.7	+0.4
	comp=Z,48µmcomp=Z,324nm,0.4s						
LWLI	Liwa	77.23	269	P	P	03 14 59.7	-1.0
	comp=Z,414nm,0.7s						
USA0B	Ussuriysk Arra	77.26	325	P	P	03 15 00.7	+0.7
USA0B				pmax	pmax		
	comp=Z,97nm,1.2s						
USA0B	Ussuriysk Arra	77.26	325	P	P	03 15 00.7	+0.7
USA0B				IAmb	IAmb	03 15 02.0	
	comp=Z,97nm,1.2s						
USRK	Ussuriysk Ar.	77.26	325	P	P	03 15 00.7	+0.7
	comp=Z,21nm,0.7s,baz=144,slow=3.5,SNR=47						
USRK				pP	pP	03 17 06.8	+0.7
	comp=Z,3.0nm,0.8s,baz=82,slow=11,SNR=2.5						
USRK	Ussuriysk Ar.	77.26	325	P	P	03 15 00.3	+0.3
MDSI	Maura Dua	77.28	269	P	P	03 14 59.2	-1.6
	comp=Z,2µmcomp=Z,150nm,1.0s						
TKX	Tecate	77.29	49	IAmb	IAmb	03 17 51.9	
	comp=Z,25nm,0.5s						
KHMM	Horse Mountain	77.29	39	IAmb	IAmb	03 16 05.5	
	comp=Z,206nm,1.9s						
VES	Vestal, Richgr	77.31	45	P	P	03 15 01.2	+0.7
	baz=236,SNR=26						
VOG	Valley Oaks Go	77.38	45	P	P	03 15 01.7	+0.9
	baz=236						
MURC	Murrieta	77.41	48	P	P	03 15 01.9	+0.8
	baz=238,SNR=18						
BFSC	Mount Baldy Ra	77.42	47	P	P	03 15 02.2	+0.9
	baz=238,SNR=25						
O02D	Mt. Diablo Mer	77.44	40	P	P	03 15 02.8	+1.6
	baz=233,SNR=11						
EDW2	Edwards Air Fo	77.53	47	P	P	03 15 02.9	+1.0
	baz=237,SNR=30						
MONP2	Monument Peak	77.59	49	P	P	03 15 03.6	+1.3
	baz=239,SNR=72						
ISA	Isabella, Lake	77.63	46	P	P	03 15 03.6	+1.3
	baz=237,SNR=31						
IKP	In-Ko-Pah, Jac	77.69	49	P	P	03 15 04.3	+1.5
	baz=239,SNR=38						
SFX	San Felipe	77.79	51	P	P	03 15 03.9	+0.7
PFO	Pinyon Flats O	77.94	48	P	P	03 15 05.2	+1.0
	comp=Z,9.7nm,0.6s,baz=251,slow=3.1,SNR=28						
PFO				pP	pwP	03 17 12.6	-0.8
	comp=Z,4.1nm,0.9s,baz=237,slow=6.1,SNR=4.2						
PFO	Pinyon Flats O	77.94	48	P	P	03 15 05.4	+1.3
PFO				pmax	pmax		
	comp=Z,15nm,1.0s						
PFO	Pinyon Flats O	77.94	48	P	P	03 15 05.3	+1.3
PFO	Pinyon Flats O	77.94	48	P	P	03 15 05.1	+1.0
	baz=238,SNR=14						
TPFO	Pinon Flats	77.94	48	P	P	03 15 05.0	+0.9
	baz=238,SNR=15						
OHAK	Old Harbor	77.94	13	IAmb	IAmb	03 15 04.4	
	comp=Z,101nm,0.9s						
OHAK	Old Harbor	77.94	13	P	P	03 15 03.3	-0.1
	baz=204,SNR=9.1						
BBRC	Big Bear Solar	77.95	48	P	P	03 15 05.2	+0.9
	baz=238						
N02D	Trinity Center	77.97	39	P	P	03 15 05.6	+1.6
	baz=233,SNR=8.9						
SWSC	Sam W. Stewart	78.06	49	P	P	03 15 05.8	+1.1
	baz=239,SNR=23						
LRMC	Laurel Mtn Rad	78.07	46	P	P	03 15 06.1	+1.3
	baz=237						
LHSI	Lahat	78.10	270	P	P	03 15 04.2	-1.0
	comp=Z,3µmcomp=Z,121nm,1.4s						
O03E	Paynes Creek	78.11	40	P	P	03 15 05.5	+0.7
	baz=234,SNR=6.6						
DSRI	Dabo	78.13	273	P	P	03 15 05.8	+0.4
	comp=Z,4µmcomp=Z,158nm,1.1s						
M02C	Callahan	78.13	39	P	P	03 15 06.4	+1.5
	baz=233,SNR=7.8						
L02E	Cave Junction	78.16	38	P	P	03 15 06.5	+1.5
	baz=232						
SLBS	Sierra La Lagu	78.21	60	P	P	03 15 06.7	+0.9
SLBS				IAmb	IAmb	03 15 08.7	
	comp=Z,95nm,1.1s						
MDPB	Devils Postpil	78.31	44	IAmb	IAmb	03 15 08.2	
	comp=Z,42nm,0.8s						
CWC	Cottonwood Cre	78.32	45	P	P	03 15 07.2	+1.0
	baz=237						
K02D	Willamette Mer	78.45	38	P	P	03 15 08.5	+1.9
	baz=232						
BELC	Belle Mtn. Jos	78.47	48	P	P	03 15 08.0	+1.1
	baz=239,SNR=32						
MLAC	Mammoth, Mammo	78.47	44	P	P	03 15 08.2	+1.2
	baz=236,SNR=5.2						
MNAI	Manna	78.47	269	P	P	03 15 06.0	-1.3
	comp=Z,639nm,0.8s						
MNAI	Manna	78.47	269	P	P	03 15 07.3	0.0
TIN	Tinemaha, Big	78.56	45	P	P	03 15 08.7	+1.4
	baz=237,SNR=15						
GSC	Goldstone, Bar	78.58	47	P	P	03 15 08.2	+0.7
	baz=238,SNR=7.1						
J01E	Myrtle Point	78.59	37	P	P	03 15 08.4	+1.3
	baz=232						
KDAK	Kodiak Island	78.61	13	P	P	03 15 07.3	+0.5
	comp=Z,45nm,0.8s,baz=266,slow=3.4,SNR=24						
KDAK	Kodiak Island	78.61	13	P	P	03 15 07.2	+0.3
KDAK				IAmb	IAmb	03 15 08.9	
	comp=Z,88nm,1.0s						
KDAK	Kodiak Island	78.61	13	P	P	03 15 07.4	+0.5
	baz=204						
MPK	Martis Peak	78.64	42	IAmb	IAmb	03 15 09.9	
	comp=Z,60nm,0.7s						
NJ2	Nanjing	78.64	309⇓	iP	P	03 15 08.4	+0.7
NJ2				PcP	PcP	03 15 15.3	+1.3
NJ2				pP	pP	03 17 17.5	+2.1
NJ2				sP	PP	03 18 19.1	+1.4
NJ2				S	S	03 24 18.7	+2.9
NJ2				pmax	pmax		
	comp=Z,120nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,150nm,6.6s						
JMBI	JAMBI	78.66	272	P	P	03 15 09.6	+1.4
	comp=Z,4µmcomp=Z,408nm,1.3s						
HEC	Hector,Ludlow	78.66	47	P	P	03 15 08.7	+0.9
	baz=238,SNR=6.2						
BC3	Big Chuckawall	78.68	49	P	P	03 15 09.5	+1.4
	baz=239,SNR=14						
PNTR	Pine Nut	78.80	42	IAmb	IAmb	03 15 11.3	
	comp=Z,80nm,0.8s						
GLA	Glamis	78.82	50	P	P	03 15 10.4	+1.7
	baz=240,SNR=6.1						
MDJ	Mudanjiang	78.83	325	P	P	03 15 09.1	+0.7
MDJ				S	S	03 24 22.4	+5.1
MDJ				pmax	pmax		
	comp=Z,170nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,690nm,3.5s						
MDJ	Mudanjiang	78.83	325	P	P	03 15 09.3	+0.9
L04D	Klamath Falls	78.96	39	P	P	03 15 10.5	+1.1
	baz=233,SNR=6.9						
YERR	Yerington	78.97	43	IAmb	IAmb	03 15 11.5	
	comp=Z,59nm,0.7s						
M04C	Macdoel	78.97	39	P	P	03 15 10.9	+1.5
	baz=233,SNR=7.4						
KSI	Kapahiang	79.03	270	P	P	03 15 09.4	-0.9
	comp=Z,17µmcomp=Z,399nm,0.8s						
GRAC	Grapevine Rang	79.10	45	P	P	03 15 11.3	+1.1
	baz=237,SNR=37						
GMRC	Granite Mounta	79.11	48	P	P	03 15 11.3	+1.0
	baz=239,SNR=20						
IRM	Iron Mountain	79.15	49	P	P	03 15 12.0	+1.5
	baz=239,SNR=15						
FURC	Furnace Creek,	79.16	46	P	P	03 15 11.3	+1.0
	baz=238,SNR=14						
I03D	Drain, OR	79.25	37	P	P	03 15 12.1	+1.4
	baz=232						
SHOC	Shoshone, Teco	79.26	47	P	P	03 15 11.8	+0.9
	baz=238,SNR=6.4						
NVAR	Mina Array Bea	79.27	44	P	P	03 15 12.2	+1.1
	comp=Z,27nm,0.7s,baz=224,slow=9.0,SNR=286						
NVAR				pP	pP	03 17 18.3	-0.1
	comp=Z,12nm,1.1s,baz=224,slow=7.6,SNR=6.1						
NVAR				ScS	ScS	03 24 37.5	-1.6
	comp=Z,0.7nm,1.0s,baz=240,slow=4.8,SNR=3.7						
NVAR				PKKPbc	PKKPbc	03 33 55.6	-1.6
	comp=Z,0.7nm,0.8s,baz=35,slow=3.3,SNR=5.4						
NVAR				PKPPKP	P'P'df	03 41 59.4	+0.8
	comp=Z,1.8nm,1.0s,baz=85,slow=4.8,SNR=6.7						
TUQ	Turquoise Moun	79.27	47	P	P	03 15 12.1	+1.0
	baz=238						
Q19K	Cape Douglas,	79.44	12	IAmb	IAmb	03 15 12.1	
	comp=Z,130nm,1.0s						
Q19K	Cape Douglas,	79.44	12	P	P	03 15 10.6	-0.7
	baz=203,SNR=8.0						
MASI	Maura Aman, Be	79.52	270	P	P	03 15 12.3	-0.6
	comp=Z,4µmcomp=Z,381nm,1.3s						
P18K	Big Mountain,	79.55	12	IAmb	IAmb	03 15 12.3	
	comp=Z,108nm,0.8s						
P18K	Big Mountain,	79.55	12	P	P	03 15 11.4	-0.6
	baz=202,SNR=10.0						
GRNR	Gornyy	79.64	332⇓	iP	P	03 15 13.1	+0.5
GRNR				eS	S	03 24 21.4	-4.0
GRNR				pmax	pmax		
	comp=Z,50nm,1.1s						
GRNR				smax	smax		
	comp=N,4.0nm,0.8s						
GRNR				MLR	MLR		
	comp=E,400nm,18.0s						
GRNR				MLR	MLR		
	comp=N,330nm,16.0s						
GRNR				MLR	MLR		
	comp=Z,90nm,12.0s						
J04D	Umpqua Nationa	79.69	38	P	P	03 15 14.6	+1.4
	baz=233,SNR=19						
214A	Organ Pipe Nat	79.76	51	P	P	03 15 14.9	+1.3
	baz=241,SNR=20						
BUCK	Buck Mountain	79.77	37	P	P	03 15 14.7	+1.3
BUCK				IAmb	IAmb	03 15 28.6	
	comp=Z,286nm,1.7s						
TPH	Tonopah	79.78	44	IAmb	IAmb	03 15 15.8	
	comp=Z,109nm,0.9s						
NEE2	Needles Airpor	79.84	48	P	P	03 15 15.3	+1.4
	baz=240						
I04A	Tendick Farm,	79.85	37	P	P	03 15 14.7	+0.9
	baz=233						
PDMCI	Parker Dam,Lak	79.94	49	P	P	03 15 15.5	+1.0
	baz=240,SNR=22						
MOD	Modoc Plateau	79.97	40	IAmb	IAmb	03 15 16.6	
	comp=Z,39nm,0.7s						
K05A	Summer Lake	80.10	39	IAmb	IAmb	03 15 18.1	
	comp=Z,54nm,0.8s						
H04D	Lebanon	80.11	37	P	P	03 15 15.9	+0.7
	baz=232						
P19K	Oil Pt	80.19	12	IAmb	IAmb	03 15 15.9	
	comp=Z,48nm,0.7s						
P19K	Oil Pt	80.19	12	P	P	03 15 14.6	-0.6
	baz=204,SNR=11						
J05D	Fort Rock, OR	80.23	38	P	P	03 15 17.4	+1.4
	baz=234,SNR=31						
DL2	Dalian	80.27	316	P	P	03 15 16.5	+0.4
DL2				S	S	03 24 35.3	+3.1
DL2				pmax	pmax		
	comp=Z,84nm,1.1s						
DL2				pmax	pmax		
	comp=Z,200nm,4.5s						
RGRI	Rengat	80.30	273	P	P	03 15 17.7	+0.9
SLV	Seldovia	80.37	13	P	P	03 15 47.2	+31
O19K	Port Alsworth	80.47	12	IAmb	IAmb	03 15 17.2	
	comp=Z,149nm,0.8s						
O19K	Port Alsworth	80.47	12	P	P	03 15 16.0	-0.6
	baz=203,SNR=32						
CNPM	China Poot	80.49	13	IAmb	IAmb	03 15 17.7	
	comp=Z,71nm,1.0s						
H04A	Detroit Lake	80.52	37	P	P	03 15 17.6	+0.4
H04A				IAmb	IAmb	03 15 18.7	
	comp=Z,37nm,0.6s						
HOM	Homer	80.53	13	P	P	03 15 16.6	-0.3
	baz=205						
SNY	Shenyang	80.66	320	⇓P	P	03 15 18.0	0.0
SNY				pP	pP	03 17 27.1	+0.9
SNY				sP	sP	03 18 26.2	-1.6
SNY				S	S	03 24 33.9	-2.1
SNY				pmax	pmax		
	comp=Z,30nm,0.9s						
CN2	Changchun	80.68	322	eP	P	03 15 17.8	-0.3
CN2				epP	pP	03 17 25.7	-0.4
CN2				eS	S	03 24 33.3	-2.9
CN2				pmax	pmax		
	comp=Z,100nm,1.5s						
CN2				pmax	pmax		
	comp=Z,100nm,5.0s						
PINE	Pine Mountain	80.70	38	P	P	03 15 19.6	+1.1
PINE				IAmb	IAmb	03 15 21.2	
	comp=Z,81nm,0.9s						
O20K	Slope Mountain	80.70	12	P	P	03 15 17.1	-0.9
	baz=204,SNR=6.9						
KLR	Kul'dur	80.73	329	P	P	03 15 18.6	+0.4
	comp=Z,26nm,1.0s,baz=112,slow=3.8,SNR=39						
KLR	Kul'dur	80.73	329d	iP	P	03 15 18.4	+0.2
KLR				pmax	pmax		
	comp=Z,64nm,1.5s						
BRLK	Bradley Lake	80.79	13	IAmb	IAmb	03 15 19.1	
	comp=Z,75nm,0.9s						
I05D	Terrebonne, OR	80.79	37	P	P	03 15 20.0	+1.3
	baz=233,SNR=6.6						
BRSE	Bradley Lake S	80.80	13	P	P	03 15 18.1	-0.2
	baz=206,SNR=16						
PRN	Pahroc Range	80.89	46	IAmb	IAmb	03 15 22.0	
	comp=Z,45nm,0.8s						
F04D	Rainier, OR	80.92	35	P	P	03 15 20.5	+1.3
	baz=232						
N19K	Bonanza Creek	81.02	11	IAmb	IAmb	03 15 19.9	
	comp=Z,60nm,1.0s						
N19K	Bonanza Creek	81.02	11	P	P	03 15 18.6	-0.9
	baz=202,SNR=12						
R11A	Troy Canyon, C	81.02	45	P	P	03 15 20.9	+0.6
	baz=238,SNR=26						
F04A	Amboy	81.15	36	IAmb	IAmb	03 15 21.9	
	comp=Z,35nm,0.7s						
WHN	Wuhan	81.31	306⇓	iP	P	03 15 22.1	+0.5
WHN				pP	pP	03 17 32.5	+2.0
WHN				pmax	pmax		
	comp=Z,190nm,1.0s						
G05D	Wamic, OR	81.35	37	P	P	03 15 22.6	+1.1
	baz=233						
SEW	Seward	81.41	14	IAmb	IAmb	03 15 22.0	
	comp=Z,51nm,0.9s						
SEW	Seward	81.41	14	P	P	03 15 20.9	-0.5
	baz=207,SNR=9.8						
TUC	Tucson	81.44	52	P	P	03 15 23.8	+1.4
TUC				pmax	pmax		
	comp=Z,46nm,0.9s						
TUC	Tucson	81.44	52	P	P	03 15 23.8	+1.4
TUC				IAmb	IAmb	03 15 25.4	
	comp=Z,46nm,0.9s						
TUC	Tucson	81.44	52	P	P	03 15 24.2	+1.8
	baz=242						
E04D	Cinebar	81.45	35	P	P	03 15 23.4	+1.4
	baz=232						
JRMM	Jerantut	81.51	277	P	P	03 15 24.0	+0.9
F05D	White Salmon	81.65	36	P	P	03 15 24.3	+1.2
	baz=233						
O22K	Cooper Landing	81.69	14	IAmb	IAmb	03 15 23.4	
	comp=Z,223nm,1.5s						
O22K	Cooper Landing	81.69	14	P	P	03 15 22.0	-0.8

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         baz=207,SNR=8.2
MA2   Magadan          81.71 344   P       P        03 15 22.4 -0.6
         comp=Z,59nm,0.8s,baz=140,slow=5.7,SNR=20
MA2   Magadan          81.71 344ceP       P        03 15 21.3 -1.7
MA2                                pmax    pmax
         comp=Z,43nm,0.7s
MA2   Magadan          81.71 344   P       P        03 15 22.2 -0.7
MA2                                IAmb    IAmb     03 15 23.1
         comp=Z,79nm,0.9s
MA2   Magadan          81.71 344   P       P        03 15 22.3 -0.7
         comp=Z,132nm,1.2s
I07A  Izee             81.71  38   IAmb    IAmb     03 15 25.6
         comp=Z,39nm,0.8s
D04E  Lakebay          81.72  34   P       P        03 15 24.7 +1.4
         baz=232
BKNI  Bangkinang       81.74 273   P       P        03 15 24.7 +0.5
         comp=Z,4µmcomp=Z,341nm,1.4s
BKNI  Bangkinang       81.74 273   P       P        03 15 25.0 +0.8
PPSI  Pulau Pagai      81.76 270   P       P        03 15 21.9 -2.4
         comp=Z,5µmcomp=Z,392nm,1.1s
D03D  Eldon            81.77  34   P       P        03 15 24.9 +1.3
         baz=232
SPCR  Spurr Chakacha   81.81  12   P       P        03 15 22.3 -1.3
         baz=204,SNR=16
PDSI  Padang           81.90 272   P       P        03 15 23.8 -1.3
         comp=Z,90nm,1.3s
J08A  Circle Bar Ran   81.91  39   IAmb    IAmb     03 15 26.4
         comp=Z,30nm,0.7s
GAMB  Gambell          81.92   3   P       P        03 15 24.7 +0.8
         baz=186
TIA   Tai'an           81.94 312 ⇓P       P        03 15 24.7  0.0
TIA                                pmax    pmax
         comp=Z,44nm,1.2s
PPI   Padang Panjang   82.10 272   P       P        03 15 25.5 -0.6
         comp=Z,40nm,0.8s
CCUT  Cedar City       82.12  46   P       P        03 15 27.1 +1.2
319A  Douglas          82.15  53   IAmb    IAmb     03 15 29.2
         comp=Z,90nm,1.0s
D05A  Enumclaw         82.15  35   IAmb    IAmb     03 15 28.2
         comp=Z,122nm,1.4s
L19K  White Mountain   82.22  11   IAmb    IAmb     03 15 27.6
         comp=Z,86nm,1.1s
L19K  White Mountain   82.22  11   P       P        03 15 25.6  0.0
         baz=202,SNR=19
RC01  Rabbit Creek A   82.23  13   IAmb    IAmb     03 15 26.4
         comp=Z,83nm,1.0s
RC01  Rabbit Creek A   82.23  13   P       P        03 15 25.2 -0.4
         baz=207,SNR=21
PSUT  Pine Spring      82.28  45   P       P        03 15 26.9 +0.3
U15A  North Rim        82.31  48   IAmb    IAmb     03 15 29.5
         comp=Z,68nm,0.7s
PWL   Port Wells       82.34  14   IAmb    IAmb     03 15 26.7
         comp=Z,97nm,0.9s
PWL   Port Wells       82.34  14   P       P        03 15 25.6 -0.6
         baz=208,SNR=36
SUA   Susitna One      82.35  13   IAmb    IAmb     03 15 26.7
         comp=Z,77nm,0.7s
SUA   Susitna One      82.35  13   P       P        03 15 25.5 -0.8
         baz=206,SNR=29
HIN   Hinchinbrook I   82.37  15   IAmb    IAmb     03 15 27.0
         comp=Z,80nm,1.0s
KAIM  Kayak Island     82.50  16   IAmb    IAmb     03 15 28.4
         comp=Z,128nm,0.8s
KAIM  Kayak Island     82.50  16   P       P        03 15 27.1 +0.2
         baz=212,SNR=6.6
ELK   Elko             82.51  43   PKKPbc  PKKPbc   03 33 48.8 -1.2
         comp=Z,0.2nm,0.3s,baz=207,slow=2.3,SNR=3.8
ELK   Elko             82.51  43   P       P        03 15 28.3 +0.5
ELK                                pmax    pmax
         comp=Z,21nm,0.8s
ELK   Elko             82.51  43   P       P        03 15 28.3 +0.5
F07A  Phinny Hill Vi   82.52  37   P       P        03 15 28.1 +0.7
WUAZ  Wupatki          82.52  49   P       P        03 15 29.6 +1.7
         baz=241
CRAG  Craig            82.60  24   P       P        03 15 28.7 +1.2
         baz=222
GLI   Glacier Island   82.65  15   IAmb    IAmb     03 15 28.2
         comp=Z,122nm,0.8s
GLI   Glacier Island   82.65  15   P       P        03 15 27.1 -0.6
         baz=209,SNR=18
SKT   Skwentna         82.66  12   P       P        03 15 26.0 -1.7
         baz=205,SNR=12
L20K  Farewell, AK     82.67  11   P       P        03 15 27.2 -0.6
         baz=203,SNR=19
FID   Port Fidalgo     82.69  15   IAmb    IAmb     03 15 28.4
         comp=Z,93nm,1.2s
EYAK  Cordova Ski Ar   82.69  15   IAmb    IAmb     03 15 28.7
         comp=Z,39nm,0.8s
EYAK  Cordova Ski Ar   82.69  15   P       P        03 15 27.6 -0.3
         baz=211,SNR=8.1
A04D  Lummi Island     82.71  33   P       P        03 15 27.8 -0.4
         baz=232
TTA   Tatalina         82.72  10   P       P        03 15 28.2 +0.1
TTA                                pmax    pmax
         comp=Z,80nm,1.0s
TTA   Tatalina         82.72  10   P       P        03 15 28.2 +0.1
TTA                                IAmb    IAmb     03 15 29.5
         comp=Z,80nm,1.0s
TTA   Tatalina         82.72  10   P       P        03 15 28.2 +0.1
         baz=201,SNR=25
M22K  Willow           82.74  13   P       P        03 15 27.5 -0.6
         baz=206,SNR=10
B05A  Bryant           82.75  34   P       P        03 15 29.4 +1.0
         baz=232,SNR=7.1
PKCU  Pink Cliffs      82.79  47   IAmb    IAmb     03 15 32.5
         comp=Z,44nm,0.9s
KNK   Knik Glacier     82.80  14   IAmb    IAmb     03 15 29.2
         comp=Z,68nm,0.8s
KNK   Knik Glacier     82.80  14   P       P        03 15 27.9 -0.6
         baz=208,SNR=19
PMR   Palmer           82.81  13   IAmb    IAmb     03 15 29.1
         comp=Z,114nm,1.3s
PMR   Palmer           82.81  13   P       P        03 15 28.0 -0.5
         baz=207,SNR=22
RAGM  Ragged Mountai   82.83  16   IAmb    IAmb     03 15 29.8
         comp=Z,100nm,1.2s
HMT   Hamilton         82.89  16   IAmb    IAmb     03 15 29.9
         comp=Z,50nm,0.8s
E07A  Sunnyside        82.95  36   IAmb    IAmb     03 15 31.4
         comp=Z,36nm,0.7s
BGLC  Bering Glacier   82.97  17   P       P        03 15 29.6 +0.4
         baz=213
HAWA  Hanford          83.03  36   P       P        03 15 30.9 +1.0
HAWA                               IAmb    IAmb     03 15 31.7
         comp=Z,31nm,0.7s
SISI  Saibi            83.08 271   P       P        03 15 30.9  0.0
         comp=Z,96nm,1.3s
BERG  Berg Lake        83.09  16   IAmb    IAmb     03 15 31.1
         comp=Z,189nm,1.4s
HPIG                   83.09  59   IAmb    IAmb     03 15 33.4
         comp=Z,31nm,0.7s
ANM   Nome             83.13   5   P       P        03 15 30.7 +0.7
         baz=192
SML   Sawmill          83.18  14   P       P        03 15 29.7 -0.7
         baz=208,SNR=9.6
DIV   Divide           83.19  15   IAmb    IAmb     03 15 31.2
         comp=Z,99nm,0.8s
PMSA  Palmer Station   83.23 157   P       P        03 15 32.1 +1.5
         comp=Z,52nm,0.9s,baz=237,slow=4.1,SNR=17
PMSA  Palmer Station   83.23 157   P       P        03 15 31.7 +1.0
PMSA                               IAmb    IAmb     03 15 33.3
         comp=Z,81nm,1.1s
PMSA  Palmer Station   83.23 157  eP       P        03 15 31.8 +1.1
MNSI  Mandailing Nat   83.27 273   P       P        03 15 29.6 -2.3
         comp=Z,5µmcomp=Z,118nm,1.0s
CUT   Chulitna         83.30  13   P       P        03 15 29.6 -1.2
CUT   Chulitna         83.30  13   P       P        03 15 30.2 -0.7
         baz=206,SNR=33
BMRM  Bremner River    83.34  16   IAmb    IAmb     03 15 32.1
         comp=Z,86nm,0.8s
BMRM  Bremner River    83.34  16   P       P        03 15 30.9 -0.3
         baz=212,SNR=32
PPLA  Purkeypile       83.37  11   P       P        03 15 29.5 -1.9
         baz=204,SNR=5.6
MVU   Marysvale        83.38  46   IAmb    IAmb     03 15 34.8
         comp=Z,86nm,1.2s
MESA  MESA             83.39  17   P       P        03 15 32.0 +0.3
         baz=214,SNR=17
MSU   Marysvale        83.41  46   P       P        03 15 33.2 +0.9
MSU   Marysvale        83.41  46   P       P        03 15 33.2 +0.9
SCM   Sheep Creek Mo   83.43  14   P       P        03 15 31.3 -0.3
         baz=209,SNR=37
K20K  Telida           83.45  11   IAmb    IAmb     03 15 32.6
         comp=Z,90nm,0.8s
K20K  Telida           83.45  11   P       P        03 15 31.3 -0.3
         baz=203,SNR=42
KLU   Klutina          83.47  15   IAmb    IAmb     03 15 32.7
         comp=Z,48nm,1.0s
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KLU   Klutina          83.47  15   P       P        03 15 31.5 -0.4
         baz=210,SNR=17
W18A  Petrified Fore   83.52  50   P       P        03 15 33.8 +1.0
         baz=242
CRQM  Cirque           83.55  16   IAmb    IAmb     03 15 33.5
         comp=Z,112nm,1.0s
CRQE  Cirque           83.55  16   P       P        03 15 32.3 -0.1
         baz=213,SNR=17
WRAK  Wrangell Islan   83.60  23   IAmb    IAmb     03 15 34.4
         comp=Z,53nm,1.1s
WRAK  Wrangell Islan   83.60  23   P       P        03 15 33.0 +0.6
         baz=223
YAH   Yahtse           83.60  17   IAmb    IAmb     03 15 34.1
         comp=Z,111nm,0.8s
TGL   Tana Glacier     83.63  16   IAmb    IAmb     03 15 33.8
         comp=Z,120nm,1.1s
ISLE  Juniper Island   83.63  17   IAmb    IAmb     03 15 33.8
         comp=Z,96nm,0.9s
PNL   Peninsula        83.71  18   P       P        03 15 33.0  0.0
         baz=216,SNR=5.2
MAW   Mawson           83.72 200   P       P        03 15 33.7 +0.7
         comp=Z,31nm,0.8s,baz=126,slow=6.2,SNR=84
MAW   Mawson           83.72 200   P       P        03 15 33.5 +0.5
         baz=84,SNR=58
D08A  Wollman Farm,    83.76  36   P       P        03 15 34.4 +0.9
121A  Cookes Peak, D   83.80  53   P       P        03 15 35.8 +1.5
         baz=244
PCA   Pinnacle         83.80  18   IAmb    IAmb     03 15 34.6
         comp=Z,42nm,1.0s
PINM  Pinnacle         83.80  18   P       P        03 15 33.6 +0.1
         baz=216,SNR=6.7
DUG   Dugway, Tooele   83.81  44   P       P        03 15 34.9 +0.8
         baz=240
TABL  Table Mountain   83.83  17   IAmb    IAmb     03 15 35.0
         comp=Z,99nm,0.7s
VRDI  Verde Repeater   83.86  16   IAmb    IAmb     03 15 34.9
         comp=Z,49nm,0.8s
CAST  Castle Rocks     83.86  11   IAmb    IAmb     03 15 33.2
         comp=Z,106nm,0.9s
CAST  Castle Rocks     83.86  11   P       P        03 15 32.0 -1.7
         baz=204,SNR=79
N25K  Chitina, Valde   83.89  15   P       P        03 15 33.9 -0.1
         baz=212,SNR=56
GRNC  Granite Creek    83.90  17   P       P        03 15 34.3 +0.1
GRNC                               IAmb    IAmb     03 15 35.3
         comp=Z,74nm,1.0s
TNA   Tin City         83.91   4   P       P        03 15 34.2 +0.4
         baz=190
M24K  Tolsona, Glenn   83.94  14   P       P        03 15 34.3 +0.2
         baz=210,SNR=22
GLB   Gilahina Butte   83.95  16   IAmb    IAmb     03 15 35.1
         comp=Z,76nm,0.7s
ZAIG  Zacatecas        84.02  64   IAmb    IAmb     03 15 38.9
         comp=Z,41nm,1.1s
MOIG  Morelia          84.06  67   IAmb    IAmb     03 15 38.1
         comp=Z,63nm,0.9s
MCARA McCarthy VSAT    84.10  16   IAmb    IAmb     03 15 36.1
         comp=Z,73nm,1.0s
MCARA McCarthy VSAT    84.10  16   P       P        03 15 34.7 -0.1
         baz=213,SNR=14
F10A  Beach Ranch, E   84.11  38   IAmb    IAmb     03 15 37.2
         comp=Z,36nm,0.8s
LOGN  Logan Glacier    84.19  17   IAmb    IAmb     03 15 36.6
         comp=Z,75nm,1.0s
J20K  Nowinta River    84.20  10   IAmb    IAmb     03 15 36.3
         comp=Z,46nm,0.8s
J20K  Nowinta River    84.20  10   P       P        03 15 35.1 -0.1
         baz=203,SNR=27
BARN  Barnard Glacie   84.20  17   P       P        03 15 35.5 -0.1
BARN                               IAmb    IAmb     03 15 36.8
         comp=Z,92nm,0.9s
KTH   Kantishna Hill   84.21  12   IAmb    IAmb     03 15 35.2
         comp=Z,69nm,0.9s
CTG   Chitna Glacier   84.21  17   P       P        03 15 35.5 -0.1
         baz=215,SNR=26
CTGM  Chitina Glacie   84.21  17   IAmb    IAmb     03 15 36.7
         comp=Z,77nm,0.9s
TRF   Thorofare Moun   84.24  12   P       P        03 15 34.8 -0.9
         baz=206,SNR=92
CHUM  Lake Minchumin   84.25  11   P       P        03 15 34.4 -1.1
         baz=204,SNR=20
SEY   Seymchan         84.27 347   P       P        03 15 35.3 -0.3
         comp=Z,117nm,0.9s,baz=146,slow=5.5,SNR=167
B08A  Colville Reser   84.29  35   IAmb    IAmb     03 15 37.0
         comp=Z,24nm,0.7s
GCSA  Galena City Sc   84.30   9   P       P        03 15 35.5 -0.2
         baz=200,SNR=7.5
HARP  HAARP            84.43  15   P       P        03 15 36.4  0.0
         baz=211,SNR=20
BJI   Beijing          84.47 315   P       P        03 15 37.5 +0.3
BJI                                PP      PP       03 19 05.7 +1.1
BJI                                SKS     S        03 25 04.4 -9.3
BJI                                S       SKKSac   03 25 13.7 +2.7
BJI                                sS      sS       03 29 02.0 -2.5
BJI                                SS      SS       03 31 09.3 +5.3
BJI                                pmax    pmax
         comp=Z,110nm,1.3s
BJI                                pmax    pmax
         comp=Z,570nm,4.1s
RND   Reindeer         84.49  13   P       P        03 15 35.6 -1.2
RND                                pmax    pmax
         comp=Z,162nm,0.9s
RND   Reindeer         84.49  13   P       P        03 15 35.6 -1.2
HLID  Hailey           84.50  41   P       P        03 15 39.0 +1.5
         baz=239,SNR=37
PSI   Prapat           84.52 275   P       P        03 15 37.7 -0.5
         comp=Z,157nm,0.8s,baz=140,slow=4.1,SNR=199
BPAW  Bear Paw Mtn.    84.69  11   P       P        03 15 36.1 -1.6
         baz=206,SNR=11
MCK   McKinley         84.76  12   P       P        03 15 37.5 -0.6
MCK                                pmax    pmax
         comp=Z,125nm,1.1s
MCK   McKinley         84.76  12   P       P        03 15 37.5 -0.6
MCK                                IAmb    IAmb     03 15 38.6
         comp=Z,126nm,1.1s
MCK   McKinley         84.76  12   P       P        03 15 37.3 -0.8
         baz=207,SNR=70
SKAG  Skagway          84.83  20   IAmb    IAmb     03 15 40.7
         comp=Z,66nm,1.3s
SKAG  Skagway          84.83  20   P       P        03 15 39.6 +1.2
         baz=220,SNR=7.8
PAX   Paxson           84.85  14   IAmb    IAmb     03 15 39.0
         comp=Z,33nm,0.9s
PAX   Paxson           84.85  14   P       P        03 15 37.8 -0.8
         baz=211,SNR=23
M26K  Nabesna, AK      84.97  15   IAmb    IAmb     03 15 41.0
         comp=Z,74nm,1.0s
M26K  Nabesna, AK      84.97  15   P       P        03 15 39.1  0.0
         baz=213,SNR=50
YUK6  Outpost Mounta   85.04  18   P       P        03 15 39.8 +0.1
         baz=217,SNR=8.4
TSI   Tuntungan        85.08 275   P       P        03 15 41.1 +0.3
         comp=Z,20µmcomp=Z,467nm,0.9s
YUK3  Moose Creek      85.12  17   P       P        03 15 40.2 +0.1
         baz=215,SNR=50
HYT   Haines Junctio   85.20  19   IAmb    IAmb     03 15 42.0
         comp=Z,41nm,1.0s
HYT   Haines Junctio   85.20  19   P       P        03 15 40.8 +0.4
         baz=218,SNR=20
M27K  Edge Creek, AK   85.22  16   IAmb    IAmb     03 15 42.0
         comp=Z,97nm,1.1s
M27K  Edge Creek, AK   85.22  16   P       P        03 15 40.7 +0.3
         baz=214,SNR=46
MENT  Mentasta         85.24  15   IAmb    IAmb     03 15 41.6
         comp=Z,92nm,1.5s
YUK4  Talbot Arm       85.28  18   P       P        03 15 41.2 +0.3
         baz=217,SNR=10
MNTX  Cornudas Mount   85.29  55   P       P        03 15 41.9 +0.6
         baz=245
GSI   Gunungsitoli     85.33 273   P       P        03 15 42.4 +0.4
GSI   Gunungsitoli     85.33 273   P       P        03 15 42.7 +0.7
         comp=Z,6µmcomp=Z,467nm,1.1s
GSI   Gunungsitoli     85.33 273   P       P        03 15 43.3 +1.3
MVCO  Mesa Verde       85.36  49   P       P        03 15 42.1 +0.2
         baz=243,SNR=5.5
L26K  Log Cabin Wild   85.41  15   IAmb    IAmb     03 15 42.5
         comp=Z,61nm,1.4s
L26K  Log Cabin Wild   85.41  15   P       P        03 15 41.0 -0.2
         baz=213,SNR=11
NEW   Newport          85.45  36   P       P        03 15 42.2 +0.4
         baz=236,SNR=7.6
I21K  Tanana           85.49  11   IAmb    IAmb     03 15 42.3
         comp=Z,99nm,1.3s
I21K  Tanana           85.49  11   P       P        03 15 41.0 -0.5
         baz=205,SNR=26
NEA2  Nenana           85.50  12   P       P        03 15 40.3 -1.3
         baz=207,SNR=8.9
BVCY  Beaver Creek     85.53  16   P       P        03 15 42.1 +0.3
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         baz=215,SNR=20
MLY   Manley           85.58  11   P       P        03 15 40.9 -1.1
MLY                                IAmb    IAmb     03 15 42.7
         comp=Z,44nm,1.2s
MLY   Manley           85.58  11   P       P        03 15 40.7 -1.3
         baz=206,SNR=34
WRH   Wood River Hil   85.59  12   IAmb    IAmb     03 15 42.5
         comp=Z,139nm,1.2s
TLIG  Tlapa            85.62  70   IAmb    IAmb     03 15 46.3
         comp=Z,37nm,0.9s
RIDG  Independent Ri   85.66  14   IAmb    IAmb     03 15 43.3
         comp=Z,87nm,1.3s
RIDG  Independent Ri   85.66  14   P       P        03 15 41.8 -0.6
         baz=211,SNR=5.6
TX31  Lajitas Ar. Si   85.67  57   P       P        03 15 44.6 +1.3
TX32  Lajitas Array    85.67  57   IAmb    IAmb     03 15 46.5
         comp=Z,82nm,0.9s
TXAR  Lajitas Array    85.67  57   P       P        03 15 45.3 +2.0
         comp=Z,56nm,0.7s,baz=219,slow=6.1,SNR=735
TXAR                               pP      pP       03 17 54.5 +1.2
         comp=Z,8.8nm,1.1s,baz=235,slow=4.4,SNR=10
TXAR                               PKKPbc  PKKPbc   03 33 42.1 +0.3
         comp=Z,0.4nm,0.6s,baz=142,slow=3.2,SNR=8.9
GYA   Guiyang          85.75 299⇑iP       P        03 15 44.7 +0.9
GYA                                pP      pP       03 17 56.9 +2.6
GYA                                sP      sP       03 18 57.2 +2.0
GYA                                SKS     SKSac    03 25 11.7 -0.2
GYA                                S       S        03 25 29.2 +2.4
GYA                                pmax    pmax
         comp=Z,86nm,1.2s
GYA                                pmax    pmax
         comp=Z,490nm,4.8s
DOT   Dot Lake         85.76  14   IAmb    IAmb     03 15 43.8
         comp=Z,55nm,1.0s
HDA   Harding Lake     85.78  13   P       P        03 15 41.8 -1.1
HDA                                IAmb    IAmb     03 15 43.3
         comp=Z,45nm,0.8s
HDA   Harding Lake     85.78  13   P       P        03 15 42.1 -0.8
         baz=209,SNR=25
H21K  Melozitna Rive   85.79  10   IAmb    IAmb     03 15 45.1
         comp=Z,91nm,1.6s
H21K  Melozitna Rive   85.79  10   P       P        03 15 42.7 -0.2
         baz=204,SNR=15
ZEA   Zeya             85.80 331  eP       P        03 15 43.7 +0.5
ZEA                                pmax    pmax
         comp=N,60nm,1.1s
ZEA                                pmax    pmax
         comp=Z,90nm,1.1s
CCB   Clear Creek Bu   85.81  12   IAmb    IAmb     03 15 43.2
         comp=Z,112nm,1.2s
L27K  Beaver Creek,    85.82  16   IAmb    IAmb     03 15 44.4
         comp=Z,116nm,1.9s
L27K  Beaver Creek,    85.82  16   P       P        03 15 43.0 -0.1
         baz=214,SNR=18
ANMO  Albuquerque      85.85  51   P       P        03 15 44.7 +0.5
ANMO                               pmax    pmax
         comp=Z,26nm,1.1s
ANMO  Albuquerque      85.85  51   P       P        03 15 44.7 +0.5
ANMO  Albuquerque      85.85  51   P       P        03 15 45.0 +0.9
         baz=244
USHA  Ushuaia          85.86 147   P       P        03 15 44.8 +1.1
         comp=Z,50nm,1.0s,baz=272,slow=5.1,SNR=7.7
WHY   Whitehorse       85.89  20   IAmb    IAmb     03 15 45.4
         comp=Z,34nm,1.1s
WHY   Whitehorse       85.89  20   P       P        03 15 44.1 +0.4
         baz=220,SNR=13
DLBC  Dease Lake       85.92  23   IAmb    IAmb     03 15 45.7
         comp=Z,87nm,1.8s
I23K  Minto, Yukon-K   85.94  12   IAmb    IAmb     03 15 43.9
         comp=Z,32nm,1.1s
I23K  Minto, Yukon-K   85.94  12   P       P        03 15 42.4 -1.2
         baz=207,SNR=16
TIY   Taiyuan          85.97 312 ⇓P       P        03 15 45.0 +0.5
TIY                                SKS     SKSac    03 25 14.7 +2.0
TIY                                S       S        03 25 29.7 +1.4
TIY                                pmax    pmax
         comp=Z,100nm,0.7s
TIY                                pmax    pmax
         comp=Z,140nm,4.0s
TCOL  CIGO, UAF Yank   85.99  12   IAmb    IAmb     03 15 44.1
         comp=Z,83nm,0.8s
TCOL  CIGO, UAF Yank   85.99  12   P       P        03 15 42.8 -1.1
         baz=208,SNR=19
MDM   Murphy Dome      86.00  12   IAmb    IAmb     03 15 44.1
         comp=Z,78nm,1.0s
COLA  College          86.00  12diP       P        03 15 43.0 -0.8
COLA                               pmax    pmax
         comp=Z,78nm,0.8s
COLA  College          86.00  12   P       P        03 15 42.6 -1.2
COLA                               IAmb    IAmb     03 15 44.1
         comp=Z,84nm,0.8s
COLA  College          86.00  12   P       P        03 15 42.9 -1.0
         baz=208
SCRK  Sand Creek       86.06  14   P       P        03 15 44.2 -0.2
         baz=212,SNR=22
IL31                   86.11  13   P       P        03 15 43.4 -1.0
IL31                               IAmb    IAmb     03 15 44.8
         comp=Z,52nm,0.9s
ILAR  Eielson Array    86.11  13   P       P        03 15 43.2 -1.2
         comp=Z,22nm,0.7s,baz=217,slow=4.9,SNR=227
ILAR                               pP      pP       03 17 55.1 +0.5
         comp=Z,5.6nm,1.1s,baz=221,slow=5.6,SNR=4.7
ILAR                               PP      PP       03 19 18.1 +1.0
         comp=Z,3.3nm,0.9s,baz=223,slow=7.9,SNR=4.2
ILAR                               PKiKP   PKiKP    03 20 46.1 -1.4
         comp=Z,0.5nm,0.6s,baz=352,slow=2.2,SNR=5.0
ILAR                               ScS     S        03 25 26.2 -2.1
         comp=Z,0.9nm,1.0s,baz=214,slow=10.0,SNR=5.5
ILAR                               PKKP    PKKPdf   03 33 37.3 +2.1
         comp=Z,0.5nm,0.5s,baz=344,slow=2.3,SNR=6.4
ILAR  Eielson Array    86.11  13   P       P        03 15 43.6 -0.8
SLVN  Son La           86.19 294   IAmb    IAmb     03 15 49.5
         comp=Z,85nm,1.6s
P33M  Teslin, Yukon    86.23  21   P       P        03 15 45.4 +0.2
         baz=222,SNR=9.1
N31M  Braeburn, Yuko   86.25  19   P       P        03 15 45.4 +0.2
         baz=220,SNR=14
J25K  Salcha River,    86.29  13   P       P        03 15 45.1 -0.3
         baz=211,SNR=35
POKR  Poker Plat Res   86.30  12   IAmb    IAmb     03 15 45.4
         comp=Z,47nm,0.8s
POKR  Poker Plat Res   86.30  12   P       P        03 15 44.4 -0.9
         baz=209,SNR=11
TPTI                   86.32 275   P       P        03 15 46.8 +0.2
         comp=Z,735nmcomp=Z,86nm,0.9s
MSO   Missoula         86.49  38   P       P        03 15 47.2 +0.4
         baz=239,SNR=12
H23K  Yukon River      86.52  11   P       P        03 15 45.2 -1.2
         baz=207,SNR=8.8
DLMT  Dillon           86.54  40   IAmb    IAmb     03 15 49.1
         comp=Z,22nm,0.8s
J26L  Joseph Creek     86.61  14   P       P        03 15 47.2 +0.3
         baz=212,SNR=66
TPAW  Teton Pass       86.64  42   P       P        03 15 48.3 +0.4
REDW  Red Top Meadow   86.65  42   IAmb    IAmb     03 15 50.3
         comp=Z,33nm,1.1s
SNOW  Snow King Moun   86.76  42   IAmb    IAmb     03 15 50.4
         comp=Z,25nm,0.8s
S22A  4UR Ranch, Cre   86.79  49   P       P        03 15 50.0 +1.3
         baz=244,SNR=31
M30M  Minto, Yukon     86.79  18   P       P        03 15 48.0 +0.2
         baz=219,SNR=51
H24K  Noodor Dome      86.84  12   P       P        03 15 46.2 -1.7
         baz=208,SNR=7.4
O20A  White River Ci   86.86  46   P       P        03 15 49.5 +0.6
         baz=243
LOHW  Long Hollow      86.92  42   P       P        03 15 49.2 +0.1
PRP   Porcupine Dome   87.04  13   IAmb    IAmb     03 15 49.5
         comp=Z,33nm,1.2s
PRP   Porcupine Dome   87.04  13   P       P        03 15 48.1 -0.9
         baz=211,SNR=19
FLWY  Flagg Ranch      87.09  42   IAmb    IAmb     03 15 52.2
         comp=Z,27nm,0.8s
YHB   Horse Butte      87.10  41   IAmb    IAmb     03 15 52.9
         comp=Z,34nm,1.0s
LHMI  Lhok Sumawe      87.16 276   P       P        03 15 52.1 +1.5
         comp=Z,3µmcomp=Z,256nm,1.1s
LHMI  Lhok Sumawe      87.16 276   P       P        03 15 51.3 +0.7
BW06  Boulder Array    87.20  43   P       P        03 15 50.0 -0.4
BW06                               IAmb    IAmb     03 15 51.7
         comp=Z,18nm,0.7s
BW06  Boulder Array    87.20  43   P       P        03 15 51.0 +0.6
         baz=242
PDAR  Pinedale Array   87.20  43   P       P        03 15 50.6 +0.3
         comp=Z,15nm,0.7s,baz=217,slow=3.1,SNR=136
PDAR                               pP      pP       03 18 00.0 -1.0
         comp=Z,2.4nm,1.0s,baz=251,slow=2.8,SNR=4.9
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PDAR				PKKPbc	PKKPbc	03 33 37.7	-1.3
	comp=Z,1.2nm,0.8s,baz=83,slow=4.8,SNR=7.3						
PDAR				PKPPKP		03 41 45.1	
	comp=Z,0.7nm,0.7s,baz=81,slow=2.0,SNR=5.5						
YMR	Madison River	87.21	41	IAmb	IAmb	03 15 53.0	
	comp=Z,33nm,0.7s						
M31M	Drury Creek, Y	87.22	19	P	P	03 15 49.5	-0.2
	baz=221,SNR=12						
BOZ	Bozeman (W)	87.25	40	P	P	03 15 51.6	+1.1
	baz=240,SNR=17						
DAWY	Dawson	87.27	16	IAmb	IAmb	03 15 51.3	
	comp=Z,69nm,1.3s						
DAWY	Dawson	87.27	16	P	P	03 15 50.0	0.0
	baz=216,SNR=37						
H17A	Grant Village	87.32	41	IAmb	IAmb	03 15 54.5	
	comp=Z,30nm,1.0s						
H17A	Grant Village	87.32	41	P	P	03 15 53.5	+2.6
	baz=241,SNR=9.3						
EGAK	Eagle	87.41	15	IAmb	IAmb	03 15 51.7	
	comp=Z,46nm,0.9s						
EGAK	Eagle	87.41	15	P	P	03 15 50.4	-0.1
	baz=215,SNR=34						
YNR	Norris Junctio	87.41	41	IAmb	IAmb	03 18 07.1	
	comp=Z,63nm,2.0s						
COLD	Coldfoot	87.66	10	IAmb	IAmb	03 15 53.0	
	comp=Z,53nm,0.9s						
COLD	Coldfoot	87.66	10	P	P	03 15 51.9	+0.3
	baz=206,SNR=44						
SDCO	Great Sand Dun	87.74	49	P	P	03 15 54.2	+1.1
	baz=245,SNR=16						
J29M	Klondike Camp	87.89	16	P	P	03 15 53.7	+0.8
	baz=217						
HHC	Hu-ho-hao-te	87.96	314	eP	P	03 15 54.3	+0.5
HHC				pP	pP	03 18 02.8	-2.7
HHC				sP	sP	03 19 01.5	-5.2
HHC				S	S	03 25 47.2	+0.4
HHC				sS	sS	03 29 35.1	-4.7
HHC				SS	SS	03 31 57.6	+3.0
HHC				pmax	pmax		
	comp=Z,100nm,1.0s						
HHC				pmax	pmax		
	comp=Z,410nm,5.9s						
FYU	Fort Yukon	88.01	12	IAmb	IAmb	03 15 54.1	
	comp=Z,22nm,0.6s						
MSTX	Muleshoe	88.22	53	P	P	03 15 55.2	0.0
MSTX				IAmb	IAmb	03 15 56.8	
	comp=Z,47nm,0.9s						
MSTX	Muleshoe	88.22	53	P	P	03 15 55.9	+0.7
	baz=247						
RWWY	Rawlins	88.26	45	IAmb	IAmb	03 15 56.5	
	comp=Z,30nm,1.2s						
T25A	Trinidad	88.27	50	P	P	03 15 56.3	+0.8
	baz=246						
RLMT	Red Lodge	88.48	41	IAmb	IAmb	03 15 59.0	
	comp=Z,18nm,0.9s						
RLMT	Red Lodge	88.48	41	P	P	03 15 57.9	+1.6
	baz=242,SNR=13						
Q24A	Divide	88.50	48	P	P	03 15 57.8	+1.1
	baz=245						
MMPY	Sheldon Lake,	88.51	20	P	P	03 15 56.5	+0.7
	baz=224,SNR=34						
ISCO	Idaho Springs	88.53	47	P	P	03 15 57.5	+0.7
	baz=245						
KMI	Kunming	88.54	297	⇓P	P	03 15 58.1	+1.1
KMI				pP	pwP	03 18 12.2	+1.5
KMI				PP	PP	03 19 40.9	+3.5
KMI				S	S	03 25 54.0	+1.0
KMI				sS	sS	03 29 46.2	-0.1
KMI				pmax	pmax		
	comp=Z,88nm,1.3s						
KMI				pmax	pmax		
	comp=Z,340nm,3.5s						
I29M	Ogilvie Camp,	88.59	15	P	P	03 15 55.8	-0.2
	baz=217,SNR=14						
TGTN	Hyland Airport	88.73	21	P	P	03 15 57.7	+0.9
	baz=226,SNR=13						
833A	Chaparral WMA,	88.75	60	P	P	03 15 58.9	+1.2
	baz=249						
N23A	Red Feather La	88.77	46	P	P	03 15 58.7	+0.9
	baz=245						
BMAR	Burnt Mountain	88.88	12	P	P	03 15 57.3	-0.1
TOLK	Toolik Lake Re	89.04	10	IAmb	IAmb	03 15 59.2	
	comp=Z,31nm,0.9s						
TOLK	Toolik Lake Re	89.04	10	P	P	03 15 57.7	-0.4
	baz=207,SNR=11						
K22A	Casper	89.14	44	IAmb	IAmb	03 16 00.9	
	comp=Z,21nm,1.1s						
K22A	Casper	89.14	44	P	P	03 15 59.9	+0.5
	baz=244						
JCT	Junction City	89.21	58	IAmb	IAmb	03 16 01.5	
	comp=Z,24nm,0.8s						
JCT	Junction City	89.21	58	P	P	03 16 00.3	+0.5
	baz=248						
LL04	Puerto Octay	89.28	133	IAmb	IAmb	03 16 02.3	
	comp=Z,60nm,0.8s						
AMTX	Amarillo	89.40	53	IAmb	IAmb	03 16 02.1	
	comp=Z,22nm,0.7s						
AMTX	Amarillo	89.40	53	P	P	03 16 01.3	+0.6
	baz=247						
EGMT	Eagleton	89.55	38	P	P	03 16 02.0	+1.0
	baz=242						
CM31	Chiang Mai Arr	89.58	289	P	P	03 16 03.0	+1.3
	SNR=27						
CMAR	Chiang Mai Arr	89.58	289	P	P	03 16 02.8	+1.1
	comp=Z,73nm,0.9s,baz=111,slow=2.9,SNR=175						
CMAR				PKKPbc	PKKPbc	03 33 31.9	0.0
	comp=Z,1.9nm,0.5s,baz=294,slow=6.1,SNR=7.0						
CHTO	Chiang Mai	89.70	290	P	P	03 16 02.4	+0.1
CHTO				pmax	pmax		
	comp=Z,84nm,0.8s						
CHTO	Chiang Mai	89.70	290	P	P	03 16 02.4	+0.1
CHTO	Chiang Mai	89.70	290	P	P	03 16 03.1	+0.8
CD2	Chengdu	89.78	303	⇑iP	P	03 16 03.4	+1.0
CD2				pP	pP	03 18 15.5	+0.8
CD2				S	S	03 26 03.6	0.0
CD2				SS	SS	03 32 25.5	+4.7
CD2				pmax	pmax		
	comp=Z,60nm,1.1s						
CD2				pmax	pmax		
	comp=Z,180nm,4.3s						
EPYK	Eagle Plains	89.79	15	IAmb	IAmb	03 16 02.6	
	comp=Z,60nm,0.9s						
EPYK	Eagle Plains	89.79	15	P	P	03 16 01.4	-0.3
	baz=219,SNR=33						
ABTX	Abilene, Hawle	90.13	56	IAmb	IAmb	03 16 05.8	
	comp=Z,46nm,0.8s						
ABTX	Abilene, Hawle	90.13	56	P	P	03 16 04.9	+0.9
	baz=248						
EDM	Edmonton	90.13	33	IAmb	IAmb	03 16 04.1	
	comp=Z,30nm,0.5s						
YAK	Yakutsk	90.14	338	P	P	03 16 00.6	-2.6
	comp=Z,24nm,0.6s,baz=69,slow=0.4,SNR=10						
YAK	Yakutsk	90.14	338	eP	P	03 16 01.9	-1.3
YAK				eS	SKSac	03 25 36.0	+0.2
YAK				e		03 26 06.1	
YAK				pmax	pmax		
	comp=Z,42nm,0.7s						
YAK				pmax	pmax		
	comp=N,4.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,11nm,1.0s						
YAK				smax	smax		
	comp=E,32nm,2.2s						
SNAA	Sanae	90.22	178	P	P	03 16 03.9	+0.1
SNAA	Sanae	90.22	178	PKKPdf	PKKPdf	03 33 28.7	+3.2
SNAA	Sanae	90.22	178	PKKPbc	PKKPbc	03 33 28.8	-3.5
	comp=E,1.4nm,0.9s,baz=343,slow=4.5,SNR=5.5						
SNAA	Sanae	90.22	178	⇓eP	P	03 16 02.4	-1.3
SNAA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
SNAA	Sanae	90.22	178	P	P	03 16 03.5	-0.2
KSCO	Kaye Shedlock’	90.32	49	IAmb	IAmb	03 16 07.6	
	comp=Z,15nm,0.8s						
KSCO	Kaye Shedlock’	90.32	49	P	P	03 16 05.9	+1.1
	baz=247						
VNA3	Neumayer Olymp	90.34	176	P	P	03 16 04.5	+0.3
VNA3	Neumayer Olymp	90.34	176	PKKPdf	PKKPdf	03 33 28.2	+3.0
LC01	Cunco	90.47	131	P	P	03 16 06.2	+0.7
LC01				IAmb	IAmb	03 16 07.7	
	comp=Z,58nm,0.9s						
PLCA	Paso Flores	90.64	133	P	P	03 16 08.0	+1.6
	comp=Z,28nm,1.0s,baz=234,slow=4.7,SNR=37						
PLCA				PP	PP	03 19 51.9	-0.7
	comp=Z,1.8nm,0.6s,baz=190,slow=6.4,SNR=3.2						
PLCA				PKPPKP	P'P'df	03 41 40.2	+0.8
	comp=Z,2.1nm,0.9s,baz=242,slow=6.9,SNR=3.3						
PLCA	Paso Flores	90.64	133	P	P	03 16 07.7	+1.3
PLCA				IAmb	IAmb	03 16 09.1	
	comp=Z,48nm,1.1s						
PLCA	Paso Flores	90.64	133	eP	P	03 16 07.9	+1.6
VNA2	Neumayer--Watz	90.78	177	P	P	03 16 06.8	+0.5
	baz=185,slow=3.8						
VNA2	Neumayer--Watz	90.78	177	PKKPdf	PKKPdf	03 33 26.9	+2.5
CCIG	Comitan	90.99	73	IAmb	IAmb	03 16 11.0	
	comp=Z,19nm,0.7s						
VNA1	Neumayer--Stat	91.01	177	P	P	03 16 08.3	+1.0
VNA1	Neumayer--Stat	91.01	177	PKKPdf	PKKPdf	03 33 27.5	+3.5
LAO	LASA Array	91.09	41	IAmb	IAmb	03 16 11.0	
	comp=Z,32nm,0.9s						
LAO	LASA Array	91.09	41	P	P	03 16 09.7	+1.6
	baz=244						
435B	Jarrell	91.10	58	IAmb	IAmb	03 16 10.4	
	comp=Z,23nm,0.7s						
435B	Jarrell	91.10	58	P	P	03 16 09.6	+1.1
	baz=250						
RSSD	Black Hills	91.40	44	P	P	03 16 09.5	-0.4
RSSD				pmax	pmax		
	comp=Z,16nm,0.7s						
RSSD	Black Hills	91.40	44	P	P	03 16 09.4	-0.4
RSSD				IAmb	IAmb	03 16 11.0	
	comp=Z,16nm,0.7s						
RSSD	Black Hills	91.40	44	P	P	03 16 10.2	+0.4
	baz=246						
WMOK	Wichita Mounta	91.56	54	P	P	03 16 10.8	+0.2
	baz=249						
LZH	Lanzhou	91.60	307	eP	P	03 16 11.9	+1.0
LZH				pP	pP	03 18 26.3	+3.2
LZH				sP	sP	03 19 21.4	-2.6
LZH				SKS	SKSac	03 25 44.8	-0.8
LZH				eS	S	03 26 18.7	-1.0
LZH				pmax	pmax		
	comp=Z,220nm,1.1s						
LZH				pmax	pmax		
	comp=Z,400nm,4.1s						
WHTX	Lake Whitney,	91.63	57	IAmb	IAmb	03 16 12.4	
	comp=Z,15nm,0.8s						
WHTX	Lake Whitney,	91.63	57	P	P	03 16 11.1	+0.2
	baz=250						
U32A	Winter Ranch,	91.98	52	IAmb	IAmb	03 16 14.3	
	comp=Z,27nm,0.8s						
GO05	Huala	92.00	128	IAmb	IAmb	03 16 14.8	
	comp=Z,68nm,1.6s						
INK	Inuvik	92.08	15	P	P	03 16 11.4	-0.6
	comp=Z,32nm,0.9s,baz=215,slow=4.1,SNR=79						
INK				PP	PP	03 20 00.6	-2.9
	comp=Z,3.7nm,1.0s,baz=210,slow=7.0,SNR=3.5						
INK	Inuvik	92.08	15	IAmb	IAmb	03 16 12.6	
	comp=Z,45nm,1.0s						
INK	Inuvik	92.08	15	P	P	03 16 11.6	-0.4
	baz=222						
HKT	Hockley	92.24	59	P	P	03 16 14.7	+1.1
HKT				pmax	pmax		
	comp=Z,33nm,1.6s						
HKT	Hockley	92.24	59	P	P	03 16 14.7	+1.1
HKT				IAmb	IAmb	03 16 16.4	
	comp=Z,33nm,1.6s						
X34A	Smith Ranch, M	92.25	54	IAmb	IAmb	03 16 15.8	
	comp=Z,26nm,1.1s						
Z35A	Perchaven, San	92.25	56	IAmb	IAmb	03 16 15.3	
	comp=Z,25nm,0.8s						
CBKS	Cedar Bluff	92.33	50	IAmb	IAmb	03 16 15.6	
	comp=Z,29nm,0.8s						
CBKS	Cedar Bluff	92.33	50	P	P	03 16 14.4	+0.4
	baz=248						
FNO	Franklin	92.81	54	IAmb	IAmb	03 16 18.0	
	comp=Z,27nm,0.7s						
MTO3	Montecristo	92.95	76	IAmb	IAmb	03 16 19.5	
	comp=Z,28nm,1.3s						
237A	Washetta, Mont	92.95	57	IAmb	IAmb	03 16 19.2	
	comp=Z,22nm,0.9s						
DGMT	Dagmar	93.08	40	P	P	03 16 18.0	+0.8
DGMT				IAmb	IAmb	03 16 19.4	
	comp=Z,41nm,0.8s						
DGMT	Dagmar	93.08	40	P	P	03 16 18.2	+1.0
	baz=246						
ULN	Ulaanbaatar	93.83	319	d iP	P	03 16 20.3	-0.5
ULN				pmax	pmax		
	comp=Z,46nm,1.0s						
ULN	Ulaanbaatar	93.83	319	P	P	03 16 20.0	-0.8
ULN				IAmb	IAmb	03 16 21.6	
	comp=Z,35nm,0.9s						
T35A	Sooner Cattle	94.05	53	IAmb	IAmb	03 16 25.3	
	comp=Z,9.6nm,0.8s						
SONM	Songino Array	94.22	319	P	P	03 16 21.9	-0.7
	comp=Z,10nm,1.0s,baz=126,slow=3.7,SNR=42						
SONM				pP	pP	03 18 36.0	+0.9
	comp=Z,3.0nm,1.1s,baz=104,slow=3.1,SNR=4.2						
SONM				PP	PP	03 20 22.9	+2.2
	comp=Z,3.5nm,0.9s,baz=127,slow=6.4,SNR=6.2						
SONM				PKKP	PKKPdf	03 33 20.3	-0.1
	comp=Z,0.6nm,0.8s,baz=14,slow=3.1,SNR=3.8						
SONM	Songino Array	94.22	319	IAmb	IAmb	03 16 23.2	
	comp=Z,24nm,1.2s						
TUL1	Leonard	94.26	54	P	P	03 16 23.4	+0.6
	baz=251						
BOD	Bodaibo	94.28	330	eP	P	03 16 21.2	-1.1
BOD				pmax	pmax		
	comp=Z,18nm,1.8s						
BGNE	Belgrade	94.39	48	P	P	03 16 24.3	+1.0
	baz=250,SNR=5.2						
YKA	Yellowknife Ar	94.41	25	P	P	03 16 22.8	0.0
	comp=Z,8.3nm,0.9s,baz=226,slow=3.1,SNR=13						
CO03	El Pedregal	94.65	124	IAmb	IAmb	03 16 32.0	
	comp=Z,46nm,1.6s						
KSU1	Kansas State U	94.71	50	P	P	03 16 25.9	+1.1
	baz=250						
SUSD	Miller	94.90	45	P	P	03 16 25.5	-0.1
	baz=249						
GTA	Gaotai	95.74	309	eP	P	03 16 29.3	-0.3
GTA				sP	sP	03 19 39.7	-3.4
GTA				pmax	pmax		
	comp=Z,24nm,1.0s						
JTS	Las Juntas de	95.81	81	P	P	03 16 32.2	+1.9
JTS				pmax	pmax		
	comp=Z,13nm,1.0s						
JTS	Las Juntas de	95.81	81	P	P	03 16 32.1	+1.9
JTS				IAmb	IAmb	03 16 38.4	
	comp=Z,13nm,1.0s						
N35A	Tabor	95.99	49	IAmb	IAmb	03 16 33.2	
	comp=Z,21nm,0.7s						
ECSD	EROS Data Cent	96.24	46	P	P	03 16 32.0	+0.4
	baz=251						
U40A	Yellville	96.66	54	P	P	03 16 34.7	+1.0
	baz=252						
TIXI	Tiksi	96.66	345	ceP	P	03 16 31.0	-1.8
TIXI	Tiksi	96.66	345	P	P	03 16 31.8	-1.0
TIXI				IAmb	IAmb	03 16 32.6	
	comp=Z,13nm,0.8s						
A36M	Sachs Harbour	96.68	14	IAmb	IAmb	03 16 34.9	
	comp=Z,16nm,0.8s						
A36M	Sachs Harbour	96.68	14	P	P	03 16 32.6	-0.2
	baz=230						
S39A	Bolivar	96.70	53	IAmb	IAmb	03 16 36.4	
	comp=Z,6.6nm,0.7s						
W41B	Gary Mavity, V	96.77	55	P	P	03 16 34.4	+0.3
	baz=253						
ZAK	Zakamensk	97.06	321	eP	Pdif	03 16 33.2	-2.0
ZAK				pmax	pmax		
	comp=Z,11nm,1.3s						
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.5s						
P38A	Dawn	97.14	51	IAmb	IAmb	03 16 37.5	
	comp=Z,7.8nm,0.8s						
F33A	5 Mile Ranch,	97.14	44	IAmb	IAmb	03 16 38.0	
	comp=Z,10nm,1.3s						
TLY	Talaya	97.29	322	P	Pdif	03 16 35.8	-0.3
	comp=Z,2.4nm,0.4s,baz=92,slow=3.2,SNR=4.3						
TLY	Talaya	97.29	322	i P	Pdif	03 16 35.7	-0.4
TLY				pmax	pmax		
	comp=Z,14nm,1.4s						
TRQA	Tornquist	97.76	134	eP	P	03 16 41.0	+2.4
ULM	Lac du Bonnet	98.80	40	P	P	03 16 43.0	+0.2
	comp=Z,2.4nm,0.8s,baz=281,slow=5.2,SNR=3.9						
ULM	Lac du Bonnet	98.80	40	P	P	03 16 43.0	+0.2
ULM	Lac du Bonnet	98.80	40		Pdif	03 16 42.5	-0.3
ULM				IAmb	IAmb	03 19 00.2	
	comp=Z,22nm,1.6s						
LVC	Limon Verde	99.48	118	PP	PP	03 20 58.9	-1.8
	comp=Z,2.7nm,0.7s,baz=250,slow=8.1,SNR=3.8						
LVC				PKKPbc	PKKPbc	03 33 06.7	-0.2
	comp=Z,5.1nm,0.7s,baz=218,slow=5.1,SNR=5.3						
JFWS	Jewell Farm	100.44	48	P	Pdif	03 16 51.5	+1.2
	baz=255						
LPAZ	La Paz	102.70	112	P	Pdif	03 17 04.2	+2.5
	comp=Z,4.5nm,0.8s,baz=249,slow=3.9,SNR=14						
LPAZ				PP	PP	03 21 26.1	+1.1
	comp=Z,4.9nm,1.1s,baz=271,slow=5.7,SNR=6.7						
LPAZ				PKKPbc	PKKPbc	03 32 57.5	-0.4
	comp=Z,3.1nm,0.8s,baz=208,slow=2.3,SNR=9.4						
LPAZ	La Paz	102.70	112		Pdif	03 17 02.5	+0.8
PALK	Pallekele	103.16	273	PP	PP	03 21 27.0	-1.1
	comp=Z,10nm,1.0s,baz=246,slow=6.2,SNR=5.5						
CPUP	Villa Florida	107.13	126	PKKPab	PKKPab	03 33 01.4	-1.4
	comp=Z,4.9nm,1.1s,baz=66,slow=3.8,SNR=5.4						
NRIK	Noril'sk	108.59	338	PKiKP	PKiKP	03 21 26.1	-1.1
	comp=Z,4.4nm,0.6s,baz=90,slow=4.1,SNR=7.9						
NRIK	Noril'sk	108.59	338	PKiKP	PKiKP	03 21 25.7	-1.5
ZALV	Zalesovo Beam	108.90	322	PKiKP	PKiKP	03 21 27.1	-1.1
	comp=Z,6.6nm,0.7s,baz=166,slow=1.0,SNR=21						
ZALV				PP	PP	03 22 03.9	-4.6
	comp=Z,0.9nm,0.4s,baz=85,slow=3.2,SNR=1.9						
ZALV	Zalesovo Beam	108.90	322	PKiKP	PKiKP	03 21 25.8	-2.4
SIV	San Ignacio	108.98	115	PP	PP	03 22 09.5	-0.1
	comp=Z,12nm,1.1s,baz=246,slow=12,SNR=14						
SIV				PKKPbc	PKKPbc	03 32 38.1	-0.3
	comp=Z,6.7nm,0.7s,baz=90,slow=5.1,SNR=30						
MKAR	Makanchi Array	109.83	314	Pdiff	Pdif	03 17 32.6	+0.7
	comp=Z,1.9nm,0.8s,baz=89,slow=5.4,SNR=3.7						
MKAR				PKiKP	PKiKP	03 21 29.2	-1.0
	comp=Z,4.8nm,0.6s,baz=302,slow=1.3,SNR=24						
MKAR				PKKPbc	PKKPbc	03 32 35.3	-0.9
	comp=Z,3.1nm,0.7s,baz=266,slow=3.8,SNR=12						
MKAR				SKKPbc	SKKPbc	03 35 20.4	-2.7
	comp=Z,2.1nm,0.8s,baz=273,slow=3.2,SNR=5.2						
MKAR	Makanchi Array	109.83	314	P	Pdif	03 17 32.1	+0.1
MKAR	Makanchi Array	109.83	314		Pdif	03 17 32.0	+0.1
KURK	Kurchatov	112.50	318	i PKIKP	PKiKP	03 21 34.1	-1.0
KURK	Kurchatov	112.50	318		PKiKP	03 21 33.5	-1.7
KURBB	Kurchatov Arra	112.56	318	PKiKP	PKiKP	03 21 34.1	-1.1
	comp=Z,11nm,0.7s,baz=94,slow=1.9,SNR=69						
KURBB				PP	PP	03 22 24.6	-10
	comp=Z,3.6nm,1.0s,baz=92,slow=5.0,SNR=4.8						
KURBB				PKKPbc	PKKPbc	03 32 26.6	-0.8
	comp=Z,2.2nm,0.7s,baz=273,slow=3.9,SNR=11						
KURBB				SKKPbc	SKKPbc	03 35 13.4	-1.9
	comp=Z,2.1nm,0.7s,baz=270,slow=3.8,SNR=9.7						
KSH	Kashi	113.79	306	PKP	PKiKP	03 21 38.3	+0.1
AAK	Ala-Archa	115.08	309	PKP	PKPdf	03 21 40.0	-0.6
	comp=Z,8.1nm,0.8s,baz=189,slow=2.5,SNR=16						
AAK				PKKPbc	PKKPbc	03 32 19.6	+0.6
	comp=Z,1.5nm,0.6s,baz=265,slow=3.2,SNR=4.8						
AAK				PKKPab	PKKPab	03 32 27.3	+2.0
	comp=Z,7.1nm,0.7s,baz=224,slow=4.0,SNR=12						
AAK				SKKPbc	SKKPbc	03 35 06.2	-1.2
	comp=Z,6.3nm,0.9s,baz=113,slow=3.2,SNR=6.5						
AAK	Ala-Archa	115.08	309	c iPKIKP	PKPdf	03 21 40.5	-0.1
AAK				pmax	pmax		
	comp=Z,74nm,2.5s						
AAK	Ala-Archa	115.08	309	PKPdf	PKPdf	03 21 39.7	-1.0
NEEM	North Greenlan	115.36	11	i P	PKPdf	03 21 39.1	-1.2
PTGA	Pitinga	116.05	100	PKP	PKPdf	03 21 41.9	-1.2
	comp=Z,0.9nm,0.3s,baz=184,slow=4.5,SNR=4.5						
PTGA				PKKPbc	PKKPbc	03 32 15.2	+0.2
	comp=Z,8.5nm,0.6s,baz=54,slow=3.7,SNR=17						
PTGA				PKKPab	PKKPab	03 32 22.3	0.0
	comp=Z,11nm,0.8s,baz=70,slow=5.6,SNR=10						
SCHQ	Schefferville	116.78	37	PKP	PKPdf	03 21 42.5	-0.8
	comp=Z,5.8nm,1.0s,baz=284,slow=4.2,SNR=2.8						
BVAR	Borovoye Array	117.51	321	PKP	PKPdf	03 21 44.0	-0.7
	comp=Z,16nm,0.8s,baz=205,slow=6.6,SNR=54						
BVAR				PP	PP	03 23 10.2	+1.7
	comp=Z,3.4nm,0.8s,baz=162,slow=5.9,SNR=3.8						
BVAR				SKP		03 24 24.1	
	comp=Z,5.0nm,0.9s,baz=222,slow=1.9,SNR=3.8						
BVAR				PKKPab	PKKPab	03 32 14.7	+0.5
	comp=Z,1.6nm,0.7s,baz=227,slow=9.6,SNR=6.3						
BVAR	Borovoye Array	117.51	321	PKIKP	PKPdf	03 21 44.0	-0.7
BRVK	Borovoye	117.57	321	c iPKIKP	PKPdf	03 21 44.1	-0.7
BRVK				pmax	pmax		
	comp=Z,26nm,1.0s						
BRVK	Borovoye	117.57	321		PKPdf	03 21 43.6	-1.2
KK31	Karatay Array	118.02	310	PKIKP	PKPdf	03 21 44.6	-1.5
KK31	Karatay Array	118.02	310	PKPdf	PKPdf	03 21 44.6	-1.5
GAR	Garm	118.14	305		PKPdf	03 21 46.0	-0.6
KBL	Kabul	119.00	300	PKIKP	PKPdf	03 21 47.8	-0.7
KBL	Kabul	119.00	300	PKPdf	PKPdf	03 21 47.8	-0.7
KBL	Kabul	119.00	300	P	PKiKP	03 21 48.5	0.0
	SNR=11						
SPA0	Spitsbergen Ar	119.67	357	ePKPdf	PKPdf	03 21 48.0	-0.3
BDFB	Brasilia	120.13	121	PKP	PKPdf	03 21 51.0	0.0
	comp=Z,4.1nm,0.9s,baz=135,slow=2.9,SNR=4.0						
BDFB				SKP		03 24 29.8	
	comp=Z,4.3nm,0.9s,baz=149,slow=5.9,SNR=3.8						
BDFB				PKKPbc	PKKPbc	03 32 01.6	+0.3
	comp=Z,6.2nm,0.7s,baz=73,slow=4.0,SNR=9.5						
BDFB	Brasilia	120.13	121	PKPdf	PKPdf	03 21 50.2	-0.8
DAG	Danmarks Havn	120.51	5	i P	PKPdf	03 21 47.4	-2.4
VOI	Vohitsoka	120.87	229	PKPdf	PKPdf	03 21 52.4	0.0
VOI	Vohitsoka	120.87	229	PKP	PKiKP	03 21 53.8	+1.3
SUMG	Summit	120.95	13	PKIKP	PKPdf	03 21 50.3	-1.0
SUMG	Summit	120.95	13	i P	PKPdf	03 21 50.0	-1.3
SUMG	Summit	120.95	13	PKPdf	PKPdf	03 21 50.2	-1.0
SVE	Sverdlovsk	122.28	326	ePKIKP	PKPdf	03 21 53.3	-0.5
SVE				pmax	pmax		
	comp=Z,50nm,0.9s						
DY2G	Dye2	122.56	21	i P	PKPdf	03 21 53.3	-1.0
DBG	Daneborg	122.61	7	i P	PKPdf	03 21 52.5	-1.5
MSEY	Mahe Island	122.78	252	PKIKP	PKPdf	03 21 54.0	-2.1
MSEY	Mahe Island	122.78	252	PKPdf	PKPdf	03 21 54.0	-2.1
ARU	Arti	123.49	326	i PKIKP	PKPdf	03 21 55.4	-0.7
ARU						03 28 10.4	
ARU	Arti	123.49	326	PKPdf	PKPdf	03 21 55.1	-1.0
ABKAR	Akbulak array	124.61	318	PKPdf	PKPdf	03 21 57.3	-1.2
MDP	Montagnes des	124.90	97	PKP	PKPdf	03 22 00.1	0.0
	comp=Z,6.8nm,0.7s,baz=210,slow=5.4,SNR=4.4						
HAMF	Hammerfest	126.07	351	ePKPdf	PKPdf	03 22 00.1	-0.5
LVZ	Lovozero	126.30	345	PKIKP	PKPdf	03 22 00.9	-0.3
LVZ	Lovozero	126.30	345	PKPdf	PKPdf	03 22 00.9	-0.3
JLN	Jalan Bani Buh	126.46	284	P	PKPdf	03 22 02.5	-0.4
SUR	Sutherland	126.58	200	PKP	PKiKP	03 22 04.1	+0.4
	comp=Z,17nm,0.8s,baz=121,slow=2.2,SNR=11						
SUR	Sutherland	126.58	200		PKPdf	03 22 03.1	-0.1
ARA0	ARCESS Array S	126.78	350	ePKPdf	PKPdf	03 22 02.1	0.0
ARCES	ARCESS Array B	126.78	350	PKP	PKPdf	03 22 01.7	-0.3
	comp=Z,27nm,0.8s,baz=13,slow=1.5,SNR=23						
ARCES				PKKPab	PKKPbc	03 31 35.0	-1.3
	comp=Z,4.5nm,0.9s,baz=220,slow=4.5,SNR=5.7						
PRGR	Permogore	127.12	336	ePKIKP	PKPdf	03 22 00.2	-2.7
PRGR				pmax	pmax		
	comp=Z,37nm,1.4s						
KIRV	Kirov	127.14	331	PKP	PKPdf	03 22 02.5	-0.4
	comp=Z,41nm,0.8s,baz=135,slow=1.1,SNR=13						
KIRV	Kirov	127.14	331	c iPKIKP	PKPdf	03 22 02.8	-0.2
WSAR	Wadi Sarin	127.30	286	PKP	PKPdf	03 22 04.2	-0.2
	comp=Z,14nm,1.1s,baz=165,slow=4.3,SNR=5.5						
KTK1	Kautokeino	127.61	351	ePKPdf	PKPdf	03 22 03.0	-0.6
TRO	Tromso	127.63	353	ePKPdf	PKPdf	03 22 03.6	0.0
MHTO	MHTO	127.65	283	P	PKPdf	03 22 04.6	-0.5
	SNR=5.9						
GEYT	Alibeck	127.75	304	PKP	PKPdf	03 22 05.0	+0.1
	comp=Z,26nm,0.9s,baz=247,slow=14,SNR=31						
GEYT				SKPab	SKPab	03 24 28.6	
	comp=Z,9.1nm,0.8s,baz=232,slow=9.2,SNR=6.2						
SMDO	Samad	127.81	285	P	PKiKP	03 22 06.2	0.0
	SNR=6.6						
BOSA	Boshof	128.35	206	PKP	PKiKP	03 22 07.4	+0.2
	comp=Z,8.8nm,0.8s,baz=144,slow=2.2,SNR=11						
BOSA				SKPab	SKPab	03 24 29.6	
	comp=Z,4.1nm,0.7s,baz=181,slow=3.8,SNR=5.1						
SOHO	SOHO	129.29	287	i PKPdf	PKPdf	03 22 07.4	-0.7
	SNR=20						
SHAO	Shalim	129.42	279	PKPdf	PKPdf	03 22 07.5	-1.0
MDH	Madha	129.59	288	i PKPdf	PKPdf	03 22 07.7	-1.0
	SNR=7.7						
BANOM	Banah	129.62	289	i PKPdf	PKPdf	03 22 06.7	-2.1
	SNR=5.4						
UOSS	Minazif	129.65	288	i PKPdf	PKPdf	03 22 08.0	-0.8
	SNR=6.5						
UOSS	Minazif	129.65	288	PKPdf	PKPdf	03 22 08.1	-0.8
STEI	Steigen	129.67	354	ePKPdf	PKPdf	03 22 07.4	-0.1
HATD	Hatta, Dubai	129.71	287	i PKPdf	PKPdf	03 22 08.4	-0.5
	SNR=14						
HATD	Hatta, Dubai	129.71	287	P	PKPdf	03 22 08.5	-0.5
	SNR=5.2						
MSFE	Esma-Masafi	129.71	288	i PKPdf	PKPdf	03 22 08.1	-0.9
	SNR=18						
MASF	Masafi	129.72	288	P	PKPdf	03 22 08.2	-0.8
ASHO	Ashiyiah	129.76	287	i PKPdf	PKPdf	03 22 08.1	-1.0
	SNR=8.4						
SHME	Shamm	129.77	289	i PKPdf	PKPdf	03 22 07.5	-1.5

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      SNR=11
SHME  Shamm             129.77 289   P       PKPdf    03 22 08.2 -0.8
ALNE  Al Ain            130.00 286 i PKPdf   PKPdf    03 22 09.2 -0.4
      SNR=6.7
NAZ   Nazwa, Dubai      130.14 288 i PKPdf   PKPdf    03 22 10.0 +0.3
      SNR=6.8
NAZ   Nazwa, Dubai      130.14 288   P       PKPdf    03 22 09.2 -0.5
FAQ   Al Faqa, Dubai    130.19 287 i PKPdf   PKPdf    03 22 09.9 +0.1
      SNR=10.0
FAUS  Fauske            130.20 353 ePKPdf    PKiKP    03 22 09.0 -0.4
ASUD  Al Ashush, Dub    130.42 287 i PKPdf   PKPdf    03 22 09.3 -0.9
      SNR=13
AJN   Ajban             130.73 287   PKPdf   PKPdf    03 22 10.5 -0.4
KONS  Konsvik           131.28 354 ePKPdf    PKPdf    03 22 10.3 -0.3
LBTB  Lobatse           131.33 209   PKhKP   PKPpre   03 22 08.1
      comp=Z,7.9nm,0.7s,baz=68,slow=2.7,SNR=4.6
LBTB                                 PKP     PKiKP    03 22 13.0 -0.3
      comp=Z,7.9nm,0.7s,baz=173,slow=3.7,SNR=9.1
LBTB                                 SKPab   SKPab    03 24 42.0 -0.1
      comp=Z,13nm,0.9s,baz=131,slow=4.9,SNR=6.9
STOK  Stokkvaagen       131.45 354 ePKPdf    PKPdf    03 22 10.6 -0.3
NBPB  Pedra_Branca-C    132.45 116 eP        PKiKP    03 22 17.8 +2.1
NSS   Namsos            133.31 354 ePKPdf    PKiKP    03 22 15.3 -0.6
FINES FINESS Array B    133.70 344   PKhKP   PKPpre   03 22 01.5
      comp=Z,3.4nm,0.9s,baz=350,slow=5.8,SNR=5.8
FINES                                PKP     PKPdf    03 22 14.9 -0.5
      comp=Z,18nm,0.7s,baz=50,slow=2.2,SNR=25
FINES                                SKPab   SKPab    03 24 49.9 -1.2
      comp=Z,16nm,0.8s,baz=46,slow=5.5,SNR=14
FINES                                SKKPbc  SKKPbc   03 34 00.9 -5.0
      comp=Z,2.5nm,0.9s,baz=176,slow=3.1,SNR=5.2
MATP  Matopo            133.71 215   PKP     PKPdf    03 22 16.7 -0.1
      comp=Z,7.0nm,0.9s,baz=155,slow=6.7,SNR=5.9
MATP                                 SKPbc   SKPbc    03 24 49.5 +0.3
      comp=Z,6.9nm,0.8s,baz=113,slow=7.4,SNR=6.0
MOS   Moscow            134.04 333 ePKIKP    PKPdf    03 22 16.6 +0.5
MOS                                e                  03 24 53.0
NBCL  Cascavel-CE       134.23 115 eP        PKiKP    03 22 20.1 +0.8
VRH   Novokhopyorsk     134.72 326 ePKIKP    PKPdf    03 22 16.6 -0.9
VRH                                  pmax    pmax
      comp=Z,20nm,0.7s
TBLU  Trondheim         134.72 355 ePKPdf    PKPdf    03 22 17.1 -0.1
OBN   Obninsk           134.90 333 ⇓P        PKPdf    03 22 18.5 +0.8
OBN   Obninsk           134.90 333⇓iPKIKP    PKPdf    03 22 17.9 +0.2
OBN                                e                  03 24 30.4
OBN                                  pmax    pmax
      comp=Z,25nm,0.5s
OBN   Obninsk           134.90 333   PKPdf   PKiKP    03 22 19.3  0.0
LPSR  Galich'ya Gora    135.37 329 ePKIKP    PKPdf    03 22 18.2 -0.5
LPSR                                 pmax    pmax
      comp=Z,30nm,1.0s
GROC  Groznyy           135.73 314 ePKIKP    PKPdf    03 22 19.4 -0.3
GROC                               e                  03 24 38.1
GROC                               e                  03 25 06.4
GROC                                 pmax    pmax
      comp=Z,17nm,0.6s
AKN   Aaknes            136.01 357 ePKPdf    PKPdf    03 22 20.1 +0.4
VSU   Vasula            136.02 342 eP        PKPdf    03 22 15.4 -4.3
VSR   Storozhevoye      136.05 327 ePKIKP    PKPdf    03 22 19.0 -1.0
VSR                                  pmax    pmax
      comp=Z,20nm,0.8s
VORD  Divnogorie        136.13 327 ePKIKP    PKPdf    03 22 18.7 -1.5
VORD                                 pmax    pmax
      comp=Z,20nm,0.7s
MTSE  Matsula           136.63 344 eP        PKPdf    03 22 18.6 -2.2
NB2   NORSAR Subarra136.81 354       PKP     PKPpre   03 22 08.2
      comp=Z,13nm,1.1s,baz=17,slow=2.6
NB2   NORSAR Subarra136.81 354       PKP     PKPpre   03 22 08.2
      baz=17,slow=2.6
NOA   NORSAR Array B 136.81 354      PKhKP   PKPpre   03 22 10.9
      comp=Z,5.6nm,0.8s,baz=20,slow=2.4,SNR=13
NOA                                  PKP     PKPdf    03 22 21.3 +0.1
      comp=Z,4.6nm,0.8s,baz=14,slow=4.0,SNR=13
NOA                                  SKPbc   SKiKP    03 24 59.7 -2.1
      comp=Z,6.9nm,0.9s,baz=15,slow=4.5,SNR=11
HYA   Hoyanger          137.06 357 ePKPdf    PKPdf    03 22 22.1 +0.5
ZEI   Tsey              137.18 314 i PKIKP   PKPdf    03 22 20.5 -2.2
ZEI                                  pmax    pmax
      comp=Z,5.0nm,0.9s
GNI   Garni             137.48 310   PKPdf   PKPdf    03 22 22.7 -0.6
GNI   Garni             137.48 310c iPKIKP   PKiKP    03 22 24.8 -0.6
GNI                                  pmax    pmax
      comp=Z,63nm,1.7s
GNI   Garni             137.48 310           PKPdf    03 22 23.1 -0.2
KBZ   Khabaz            137.49 316   PKhKP   PKPpre   03 22 12.1
      comp=Z,2.4nm,0.8s,baz=142,slow=4.7,SNR=4.4
KBZ                                  PKP     PKPdf    03 22 22.1 -0.8
      comp=Z,8.1nm,0.8s,baz=41,slow=3.9,SNR=9.1
KBZ                                  SKPab   SKPab    03 25 06.4 -2.0
      comp=Z,6.0nm,1.0s,baz=116,slow=5.8,SNR=3.8
KBZ   Khabaz            137.49 316c iPKIKP   PKPdf    03 22 23.8 +0.9
KIV   Kislovodsk        137.54 316   PKPdf   PKPdf    03 22 18.7 -4.4
KIV   Kislovodsk        137.54 316 i PKIKP   PKPdf    03 22 23.1 -0.1
KIV                                e                  03 25 14.7
KIV                                ePPP      PPP      03 28 21.8
KIV                                eSS       SS       03 42 35.2 -4.1
KIV                                  pmax    pmax
      comp=Z,15nm,1.1s
KIV   Kislovodsk        137.54 316   PKPdf   PKPdf    03 22 20.0 -3.1
AKH   Akhalkalaki       137.96 312 ⇑P        PKPdf    03 22 15.8 -8.3
LSZ   Lusaka            137.98 219   PKhKP   PKPpre   03 22 16.2
      baz=135,slow=1.4
LSZ                                  PKP     PKPdf    03 22 25.3 +0.5
      comp=Z,10nm,0.6s,baz=114,slow=1.3
LSZ                                  SKPbc   SKiKP    03 25 04.2 -1.6
      comp=Z,7.7nm,0.8s,baz=152,slow=5.8,SNR=6.7
ISAL  Salakas           138.59 340 eP        PKPdf    03 22 24.8 +0.2
MNK   Minsk             138.83 337 i PKHKP   PKPpre   03 22 19.1
MNK                                i SS      SS       03 42 48.2 -4.5
MNK                                  pmax    pmax
      comp=N,9.0nm,0.8s
MNK                                  pmax    pmax
      comp=Z,38nm,0.8s
MNK                                  pmax    pmax
      comp=E,3.0nm,1.2s
MNK                                  MLR     MLR
      comp=N,240nm,23.0s
MNK                                  MLR     MLR
      comp=Z,99nm,16.0s
MNK                                  MLR     MLR
      comp=E,19nm,19.0s
MNK   Minsk             138.83 337 i PKP     PKPdf    03 22 19.1 -5.9
      comp=E,3.0nm,1.2s
MNK                                i PKP     PKPdf    03 22 19.1 -5.9
      comp=N,9.0nm,0.8s
MNK                                i PKP     PKPdf    03 22 19.1 -5.9
      comp=Z,38nm,0.8s,baz=218
MNK                                i pPKP    pPKPdf   03 24 36.4 -9.4
MNK                                i PP      PP       03 25 16.3 -8.8
MNK                                i SKS     SKSdf    03 28 26.9  -11
MNK                                i PKKP    PKKPdf   03 31 42.1  -14
MNK                                i SS      SS       03 42 48.2 -4.5
MNK                                i SSS     SSS      03 48 06.2
MNK                                i LR      LR       04 11 40.5
MNK                                i LRM     MLR      04 23 06.8
      comp=N,240nm,22.9s
MNK                                i LRM     MLR      04 24 01.9
      comp=Z,99nm,16.4s
MNK                                i LRM     MLR      04 24 22.9
      comp=E,19nm,19.0s
NACGM Naroch            138.90 339 i PKP     PKPpre   03 22 15.3
PABE  Paberze           139.33 341 eP        PKPpre   03 22 19.9
PBUR  Paburge           139.48 343 eP        PKPdf    03 22 20.5 -5.7
TSUM  Tsumeb            139.82 203   PKhKP   PKPpre   03 22 20.7
      comp=E,3.8nm,0.7s,baz=121,slow=5.9,SNR=4.1
TSUM                                 PKP     PKiKP    03 22 30.4 -0.3
      comp=E,8.3nm,0.8s,baz=95,slow=3.0,SNR=5.9
TSUM                                 SKPbc   SKPbc    03 25 08.0 +0.9
      comp=E,10.0nm,0.9s,baz=12,slow=0.5,SNR=4.9
ANN   Anapa             140.50 320 i PKHKP   PKPpre   03 22 22.5
ANN                                  pmax    pmax
      comp=Z,27nm,0.7s
KMBO  Kilima Mbogo      140.53 244   PKhKP   PKPpre   03 22 24.6
      comp=Z,8.9nm,0.9s,baz=213,slow=1.5,SNR=3.5
KMBO                                 SKPbc   SKPbc    03 25 10.1 +0.9
      comp=Z,28nm,1.1s,baz=38,slow=1.4,SNR=14
KMBO  Kilima Mbogo      140.53 244 i PKPdf   PKPdf    03 22 25.3 -4.4
      SNR=19
KMBO  Kilima Mbogo      140.53 244c iPKIKP   PKiKP    03 22 32.7 +0.2
KMBO                                 pmax    pmax
      comp=Z,6.0nm,0.6s
SUW   Suwalki           140.83 340 ePKPdf    PKPdf    03 22 23.9 -4.7
SUW   Suwalki           140.83 340 eP        PKPdf    03 22 23.4 -5.3
DEL   Delary            140.87 350 i P       PKPpre   03 22 21.0
AKASG Malin Array Be    141.16 333   PKhKP   PKPpre   03 22 23.5
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      comp=Z,32nm,0.7s,baz=42,slow=4.4,SNR=156
AKASG                                SKPbc   SKiKP    03 25 10.8 -0.3
      comp=Z,3.7nm,0.8s,baz=39,slow=2.3,SNR=5.4
AKASG                                SKKPab  SKKPbc   03 33 34.1 -3.0
      comp=Z,3.2nm,0.8s,baz=232,slow=3.3,SNR=11
MUD   Monsted U'grnd    141.52 354 i P       PKPdf    03 22 24.0 -5.8
INVG  Invergeldie, C    141.62   6 eP        PKPdf    03 22 25.7 -4.3
BSD   Bornholm Skovb    141.97 348 eP        PKPdf    03 22 26.8 -3.9
BSD   Bornholm Skovb    141.97 348 i P       PKPdf    03 22 25.7 -5.0
PGBU  Glenifferbraes    142.18   6 eP        PKPdf    03 22 27.4 -3.6
EBL   Broad Law         142.35   5 eP        PKPdf    03 22 28.1 -3.2
SIM   Simferopol'       142.41 322d iPKHKP   PKPpre   03 22 28.5
SIM                                i                  03 22 34.7
SIM                                  pmax    pmax
      comp=Z,181nm,0.8s
CLGH  Cloghs, Cushen    142.71   8 eP        PKPdf    03 22 29.1 -2.9
ESK   Eskdalemuir       142.79   5 eP        PKPdf    03 22 28.8 -3.3
NEWG  New Galloway      142.89   6 eP        PKPdf    03 22 29.1 -3.1
GAL1  Galloway          143.09   7 eP        PKPab    03 22 30.3 -0.3
GKP   Gorka Klasztor    143.17 345 ePKPbc    PKPab    03 22 30.8 -0.2
GKP   Gorka Klasztor    143.17 345 eP        PKPbc    03 22 31.2 -0.2
EDMD  Edmundbyers       143.37   4 eP        PKPab    03 22 31.2 -0.5
SORM  Soroca            143.41 330 ⇓P        PKPab    03 22 27.3 -4.8
SORM  Soroca            143.41 330 ⇓PKHKP    PKPpre   03 22 27.3
FURI  Furi              143.43 260           PKPdf    03 22 35.6 +0.7
BEL   Belsk             143.45 341 ePKPbc    PKPbc    03 22 32.4 +0.2
DIKM  Dikmen            143.46 317 ⇓P        PKPbc    03 22 33.0 +0.4
KESW  Keswick, Cumbr    143.52   5 eP        PKPab    03 22 32.1 -0.2
IOMK  Kirk Michael      143.70   7 eP        PKPbc    03 22 32.5 -0.4
WIM   Isle of Man       143.80   7 eP        PKPbc    03 22 32.7 -0.6
GDLE  Glaisdale, N Y    143.84   3 eP        PKPbc    03 22 32.8 -0.6
BSEG  Bad Segeberg      143.86 352 ePKPbc    PKPab    03 22 33.5 -0.1
      baz=15,slow=2.7
HLG   Helgoland         143.89 354 ePKPbc    PKPdf    03 22 34.2 +0.1
      baz=15,slow=2.7
KIS   Kishinev          143.98 329⇓iPKP      PKPbc    03 22 33.0 -1.0
      comp=Z,330nm,1.3s
KIS   Kishinev          143.98 329 ⇓P        PKPbc    03 22 33.7 -0.3
KIS   Kishinev          143.98 329 ⇓PKIKP    PKPbc    03 22 33.7 -0.3
LVV   L'vov             143.99 336 ePKIKP    PKPbc    03 22 33.5 -0.5
LVV                                  pmax    pmax
      comp=Z,730nm,1.2s
MILM  Milestii Mici     144.04 329d iPKIKP   PKPbc    03 22 33.4 -0.8
MILM                               e                  03 24 49.0
MILM                                 pmax    pmax
      comp=Z,700nm,1.0s
MILM                                 pmax    pmax
      comp=N,600nm,1.1s
MILM                                 pmax    pmax
      comp=E,90nm,1.1s
HPK   Haverah Park      144.26   4 eP        PKPbc    03 22 34.0 -0.6
LODK  Lodwar            144.37 249   P       PKPab    03 22 36.9 -0.1
      SNR=25
IAS   Iasi              144.46 330 ⇓P        PKPdf    03 22 35.1 -0.2
IAS   Iasi              144.46 330 ⇓PKIKP    PKPdf    03 22 35.1 -0.2
DSB   Dublin            144.46   9   PKPdf   PKPdf    03 22 34.6 -0.4
WPS   Cemaes, Angles    144.55   7 eP        PKPdf    03 22 34.8 -0.3
WME   Myndd Eilian      144.58   7 eP        PKPdf    03 22 34.9 -0.4
KWP   Kalwaria Pacla    144.65 337 ePKPbc    PKPbc    03 22 36.2 +0.2
WLF1  Llynfaes          144.67   7 eP        PKPdf    03 22 35.1 -0.3
RUE   Ruedersdorf       144.68 348 eP        PKPab    03 22 36.4 -0.4
RUE   Ruedersdorf       144.68 348 ePKPbc    PKPbc    03 22 36.3 +0.3
      baz=15,slow=2.7
YRC   Rhoscolyn         144.69   7 eP        PKPdf    03 22 35.2 -0.2
VASR  Vaslui            144.74 329 ⇑P        PKPbc    03 22 36.6 +0.3
LBWR  Ladybower, Pea    144.81   4 eP        PKPdf    03 22 35.7  0.0
LMK   Market Rasen      144.83   3 eP        PKPbc    03 22 36.0 -0.3
YLL   Llanberis         144.85   7 eP        PKPdf    03 22 35.6 -0.1
BIR   Birlad            145.08 329 ⇓P        PKPbc    03 22 37.7 +0.3
BIR   Birlad            145.08 329 ⇓PKIKP    PKPbc    03 22 37.7 +0.3
STNC  Stoke             145.08   5 eP        PKPbc    03 22 37.3 +0.1
VLDR  Vladesti          145.15 328 ⇓P        PKPbc    03 22 37.5 -0.1
OJC   Ojcow             145.16 340 ePKPbc    PKPbc    03 22 37.5  0.0
FOEL  Foel Wylfa        145.19   6 eP        PKPdf    03 22 36.6 +0.2
TLCR                    145.21 326 ⇓P        PKPdf    03 22 36.6  0.0
TLCR                    145.21 326 ⇓PKIKP    PKPdf    03 22 36.6  0.0
BURAR Bucovina Array    145.22 332 ⇓P        PKPbc    03 22 37.5 -0.4
BURAR Bucovina Array    145.22 332 ⇓PKIKP    PKPbc    03 22 37.5 -0.4
BURAR Bucovina Array    145.22 332   PKPdf   PKPdf    03 22 37.1 +0.4
VARL  Varlezi           145.23 328 ⇓P        PKPab    03 22 38.5 -0.6
FLTG  Flechtingen       145.28 350 ePKPbc    PKPbc    03 22 37.6 -0.2
      baz=15,slow=2.7
NRDL  Niedersach Rie    145.29 352 ePKPbc    PKPbc    03 22 37.8 +0.1
      baz=15,slow=2.7
SCTR  Scanteiesti       145.31 328 ⇑P        PKPbc    03 22 38.7 +0.6
TATR  Tatarca           145.33 327 ⇓P        PKPdf    03 22 36.9 +0.1
STHS  Stebnicka Huta    145.36 338 ePKIKP    PKPbc    03 22 37.9 -0.2
STHS  Stebnicka Huta    145.36 338 ePKP      PKPbc    03 22 37.8 -0.3
TESR  Tescani           145.38 330 ⇓P        PKPdf    03 22 36.9  0.0
KOLS  Kolonicke sedl    145.38 337 ePKP2     PKPbc    03 22 38.3 +0.1
KOLS  Kolonicke sedl    145.38 337 ePKP      PKPbc    03 22 38.3 +0.1
JURR  Jurilovca         145.46 326 ⇑P        PKPbc    03 22 38.1 -0.4
BR131 Keskin Array S    145.47 315   P       PKPdf    03 22 37.1 -0.3
      SNR=69
BRTR  Keskin Array B    145.47 315   PKP     PKPdf    03 22 36.9 -0.6
      comp=E,100nm,0.9s,baz=146,slow=2.5,SNR=238
BRTR                                 PKPbc   PKPbc    03 22 38.8 -0.2
      comp=E,100nm,0.9s,baz=137,slow=3.1,SNR=164
BRTR                                 SKPbc   SKiKP    03 25 21.2 +0.7
      comp=E,5.4nm,0.8s,baz=133,slow=4.8,SNR=4.2
BRTR                                 SKKPbc  SKKPbc   03 33 19.8 +0.5
      comp=E,8.1nm,1.0s,baz=221,slow=3.4,SNR=24
BRTR  Keskin Array B    145.47 315           PKPdf    03 22 36.5 -0.9
SLCR  Slobozia Conac    145.48 328 ⇓P        PKPdf    03 22 37.5 +0.4
CWF   Charnwood Fore    145.49   4 eP        PKPbc    03 22 37.7 -0.7
IZVR  Izvoarele         145.51 328 ⇓P        PKPbc    03 22 39.2 +0.5
ASSE  Asse, Remlinge    145.57 351 ePKPbc    PKPbc    03 22 38.7 +0.2
      baz=15,slow=2.7
CFR   Carcaliu          145.57 327 ⇓P        PKPdf    03 22 37.4 +0.2
CFR   Carcaliu          145.57 327 ⇓PKIKP    PKPdf    03 22 37.4 +0.2
HLM1  Long Mynd         145.59   6 eP        PKPdf    03 22 37.4 +0.4
WACR  West Acre         145.60   2 eP        PKPbc    03 22 38.1 -0.5
UZH   Uzhgorod          145.62 336ce PKIKP   PKPdf    03 22 36.8 -0.4
UZH                                i                  03 22 38.8
UZH                                e                  03 24 51.1
KSP   Ksiaz             145.63 344 ePKPdf    PKPdf    03 22 37.4 +0.3
KSP                                ePKPbc    PKPbc    03 22 39.3 +0.5
NIE   Niedzica          145.69 339 ePKPbc    PKPab    03 22 40.3 -0.6
CRVS  Cervenica-Dubn    145.71 337 ePKIKP    PKPbc    03 22 38.6 -0.6
CRVS  Cervenica-Dubn    145.71 337 ePKP      PKPbc    03 22 38.6 -0.6
ODBI  Odobesti          145.72 329 ⇓P        PKPbc    03 22 39.9 +0.7
IBBN  Ibbenburen        145.76 354 ePKPbc    PKPbc    03 22 39.4 +0.3
      baz=15,slow=2.7
VRI   Vrincioaia        145.81 329 ⇑P        PKPbc    03 22 39.2 -0.3
VRI   Vrincioaia        145.81 329 ⇑PKIKP    PKPbc    03 22 39.2 -0.3
PLOR  Plostina          145.85 329 ⇑P        PKPbc    03 22 39.2 -0.5
PLOR  Plostina          145.85 329 ⇑PKIKP    PKPbc    03 22 39.2 -0.5
CLZ   Clausthal         145.89 351 ePKPbc    PKPbc    03 22 39.4 -0.2
      baz=15,slow=2.7
BMR   Baia Mare         145.91 334 ⇓P        PKPbc    03 22 39.3 -0.4
BMR   Baia Mare         145.91 334 ⇓PKIKP    PKPbc    03 22 39.3 -0.4
OSTC  Ostas             145.91 344⇑ePKP      PKPbc    03 22 40.4 +0.7
TIRR  Tirgusor          145.91 326 ⇓P        PKPbc    03 22 39.6 -0.2
TIRR  Tirgusor          145.91 326 ⇓PKIKP    PKPbc    03 22 39.6 -0.2
CHVC  Chvalec           145.92 344⇑ePKP      PKPbc    03 22 40.1 +0.4
TRPA  Tarpa             145.93 335 ⇓P        PKPdf    03 22 38.1 +0.4
TRPA  Tarpa             145.93 335 eP        PKPdf    03 22 37.5 -0.2
TRPA                               ePKPDF    PKPdf    03 22 37.5 -0.2
RSBS  Rosebush, Pemb    145.94   8 eP        PKPbc    03 22 39.3 -0.4
CLL   Collm             145.95 348⇓ePKIKP    PKPdf    03 22 38.0 +0.3
CLL                                i                  03 22 39.8
CLL                                  pmax    pmax
      comp=Z,303nm,0.8s
CLL   Collm             145.95 348 ePKPdf    PKPdf    03 22 38.0 +0.3
CLL                               ⇓iPKPbc    PKPbc    03 22 39.8 +0.1
      comp=Z,303nm,0.8s
CLL                                i PKPab   PKPab    03 22 41.6 -0.2
CLL                                e                  03 23 55.0
CLL                                eSKPdf    SKPdf    03 25 14.0 -0.5
CLL                                ePP       PP       03 26 06.0 -1.1
CLL                                ePPP      PPP      03 29 36.0
CLL                                eSKKSac   SKKSac   03 31 58.0 -0.2
CLL                                esSS               03 47 54.0
CLL                                eSSS      SSS      03 49 42.0
CLL                                e                  03 51 00.0
CLL                                eSSSS              03 53 30.0
ARCR  ARCALIA           146.00 333 ⇓P        PKPdf    03 22 38.5 +0.6
UPC   Upice             146.01 344 ePKP2     PKPbc    03 22 40.3 +0.4
UPC   Upice             146.01 344⇑ePKP      PKPbc    03 22 40.3 +0.4
HARR  Harsova           146.01 326 ⇓P        PKPbc    03 22 39.9 -0.2
HARR  Harsova           146.01 326 ⇓PKIKP    PKPbc    03 22 39.9 -0.2
OKC   Ostrava-Krasne    146.01 341 ePKP2     PKPbc    03 22 40.3 +0.4
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OKC   Ostrava-Krasne    146.01 341⇑ePKP      PKPbc    03 22 40.3 +0.4
BISRR Bisoca            146.04 329 ⇓P        PKPbc    03 22 40.5 +0.2
TLBR  Topalu            146.05 326 ⇓P        PKPbc    03 22 40.3 +0.1
DPC   Dobruska-Polom    146.07 344 ePKIKP    PKPdf    03 22 38.4 +0.4
DPC                                e                  03 22 40.6
DPC   Dobruska-Polom    146.07 344 ePKPDF    PKPdf    03 22 38.4 +0.4
DPC                               ⇑ePKP      PKPbc    03 22 40.6 +0.4
COVR  Voineasa-Covas    146.07 329 ⇓P        PKPbc    03 22 40.0 -0.3
MFTR  Murfatlar         146.09 325 ⇑P        PKPbc    03 22 40.3  0.0
OZUR                    146.09 330 ⇓P        PKPdf    03 22 38.6 +0.5
MCH1  Michaelchurch     146.10   6 eP        PKPbc    03 22 39.5 -0.6
BRG   Berggiesshubel    146.16 347 ePKPbc    PKPbc    03 22 40.6 +0.3
      baz=15,slow=2.7
BRG   Berggiesshubel    146.16 347   Amp              03 22 39.4
      comp=Z,26nm,1.2s
BRG                               ⇓ePKPf     PKPdf    03 22 38.5 +0.5
BRG                               ⇑iPKPb              03 22 40.9
BRG                                  Amp              03 22 41.7
      comp=Z,128nm,0.9s
BRG                                ePKPab    PKPab    03 22 42.8 +0.1
BRG                                  Amp              03 22 44.7
      comp=Z,76nm,0.9s
BRG                                  pPKP    pPKPdf   03 25 02.8 +3.8
BRG                                  Amp              03 25 04.9
      comp=Z,14nm,1.2s
CVDA  Cernavoda         146.19 326 ⇓P        PKPbc    03 22 41.1 +0.5
KRLC  Kraliky           146.19 343 ePKIKP    PKPdf    03 22 38.8 +0.6
KRLC                               e                  03 22 41.1
KRLC  Kraliky           146.19 343 ePKPDF    PKPdf    03 22 38.8 +0.6
KRLC                              ⇑ePKP      PKPbc    03 22 41.1 +0.6
LANS  Liptovska Anna    146.19 340 ePKP2     PKiKP    03 22 41.8 -1.0
LANS  Liptovska Anna    146.19 340 ePKP      PKiKP    03 22 41.8 -1.0
ELMS  Elmsett, Ipswi    146.24   1 eP        PKPbc    03 22 40.3 -0.2
MANR  Mangalia          146.24 325 ⇓P        PKPbc    03 22 41.3 +0.6
GTTG  Gottingen         146.24 351 ePKPbc    PKPbc    03 22 40.5  0.0
      baz=15,slow=2.7
FBE   Freiberg          146.24 347 ePKPbc    PKPbc    03 22 40.9 +0.4
      baz=15,slow=2.7
MORC  Moravsky Berou    146.25 342 ⇑P        PKPdf    03 22 38.0 -0.3
MORC  Moravsky Berou    146.25 342 ⇑PKIKP    PKPdf    03 22 38.0 -0.3
MORC  Moravsky Berou    146.25 342 ePKP      PKPdf    03 22 38.5 +0.2
MBAR  Mbarara           146.28 239c iPKP2    PKPbc    03 22 42.8 +0.8
NEUB  Neuenburg         146.28 349 ePKPbc    PKPbc    03 22 40.8 +0.2
      baz=15,slow=2.7
NEHR  Nehoiu            146.33 329 ⇑P        PKPbc    03 22 40.6 -0.5
PVCC  Panska Ves        146.34 346 ePKP2     PKPbc    03 22 41.2 +0.4
PVCC  Panska Ves        146.34 346⇑ePKP      PKPbc    03 22 41.2 +0.4
PGOR  Pogoanele         146.35 328 ⇓P        PKPbc    03 22 40.2 -0.8
RCY   Rachaya           146.36 303 eP        PKPbc    03 22 41.9 +0.3
BHL   Bhannes           146.37 304 eP        PKPbc    03 22 41.6  0.0
DOPR  Dopca             146.38 330 ⇓         PKPbc    03 22 41.8 +0.7
AMRR  Amara             146.38 327 ⇓P        PKPbc    03 22 40.8 -0.3
AMRR  Amara             146.38 327 ⇓PKIKP    PKPbc    03 22 40.8 -0.3
STRD  Stroud            146.39   5 eP        PKPbc    03 22 40.2 -0.7
KECS  Kecovo            146.41 338 ePKP2     PKPbc    03 22 41.4 +0.3
KECS  Kecovo            146.41 338 ePKP      PKPbc    03 22 41.4 +0.3
ISR   Istrita           146.43 328 ⇓P        PKPbc    03 22 40.8 -0.5
ISR   Istrita           146.43 328 ⇓PKIKP    PKPbc    03 22 40.8 -0.5
DQRL  Deir Qamar        146.50 304 eP        PKPbc    03 22 42.3 +0.3
MESR  Meseseni          146.55 334 ⇓P        PKPbc    03 22 41.5  0.0
CBBR  Cluj-Babes-Bol    146.60 333 ⇓P        PKPbc    03 22 41.7  0.0
IZAB  Izabela           146.61 339 ePKP2     PKPbc    03 22 42.1 +0.5
CJR   Cluj-Napoca       146.62 333 ⇓P        PKPbc    03 22 41.7 -0.1
CJR   Cluj-Napoca       146.62 333 ⇓PKP2     PKPbc    03 22 41.7 -0.1
BUG   Bochum--Univer    146.67 354 ePKPbc    PKPbc    03 22 42.0 +0.4
      baz=15,slow=2.7
MDB   Medias            146.71 331 ⇓P        PKPbc    03 22 42.8 +0.8
SECR                    146.72 329 ⇓P        PKPbc    03 22 41.4 -0.6
LEHL  Lehliu            146.74 327 ⇓P        PKPbc    03 22 42.1  0.0
RASA  Rasa              146.75 326 ⇓P        PKPbc    03 22 42.5 +0.4
PRA   Prague            146.80 346 ePKP2     PKPbc    03 22 42.3 +0.2
PRA   Prague            146.80 346⇑ePKP      PKPbc    03 22 42.3 +0.2
MOX   Moxa              146.84 349 ePKPbc    PKPbc    03 22 42.3 +0.1
      baz=15,slow=2.7
PRU   Pruhonice         146.85 345 ePKIKP    PKPdf    03 22 39.6 +0.4
PRU                                e                  03 22 46.0
PRU   Pruhonice         146.85 345 ePKPDF    PKPdf    03 22 39.6 +0.4
PRU                               ⇑ePKP      PKPbc    03 22 42.4 +0.2
PRU                                ePKPAB    PKPab    03 22 46.0 +0.5
MMAI  Mount Meron Ar    146.85 303   PKPbc   PKPbc    03 22 43.1 +0.3
      comp=Z,127nm,0.7s,baz=66,slow=4.9,SNR=139
MMAI                                 SKPbc   SKiKP    03 25 25.7 +2.2
      comp=Z,4.6nm,0.6s,baz=89,slow=6.1,SNR=4.1
SULR                    146.88 328 ⇓P        PKPbc    03 22 42.5 +0.1
WERD  Werda             146.90 348 ePKPbc    PKPbc    03 22 42.6 +0.2
      baz=15,slow=2.7
TANN  Tannenbergstha    146.91 348 ePKPbc    PKPbc    03 22 42.5 +0.1
      baz=15,slow=2.7
WOL   Wolverton         146.92   4 eP        PKPbc    03 22 41.9 -0.4
VOIR                    146.93 330 ⇑P        PKPdf    03 22 40.1 +0.5
VOIR                    146.93 330 ⇑PKIKP    PKPdf    03 22 40.1 +0.5
DRGR                    146.94 334 ⇑P        PKPdf    03 22 39.6  0.0
DRGR                    146.94 334 ⇑PKIKP    PKPdf    03 22 39.6  0.0
VRAC  Vranov            146.94 343 ⇓P        PKPbc    03 22 42.8 +0.3
VRAC  Vranov            146.94 343 ⇓PKP2     PKPbc    03 22 42.8 +0.3
VRAC  Vranov            146.94 343 ePKP      PKPdf    03 22 39.6 +0.2
UBBA  Unterbreizbach    146.94 351 ePKPbc    PKPbc    03 22 42.7 +0.4
      baz=15,slow=2.7
VYHS  Vyhne             146.97 340 ePKP2     PKPbc    03 22 42.8 +0.2
VYHS  Vyhne             146.97 340 ePKP      PKPbc    03 22 42.8 +0.2
GUNZ  Gunzen            146.98 348 ePKPbc    PKPbc    03 22 43.0 +0.4
      baz=15,slow=2.7
JAVC  Velka Javorina    147.03 341 ePKP      PKPdf    03 22 40.8 +1.2
WERN  Wernitzgruen      147.04 348 ePKPbc    PKPbc    03 22 43.0 +0.2
      baz=15,slow=2.7
MTUR  Matau             147.08 330 ⇓P        PKPbc    03 22 43.1  0.0
MTUR  Matau             147.08 330 ⇓PKP2     PKPbc    03 22 43.1  0.0
NKC   Novy Kostel       147.08 348 ePKIKP    PKPdf    03 22 40.5 +0.9
NKC   Novy Kostel       147.08 348 ePKPDF    PKPdf    03 22 40.5 +0.9
NKC                               ⇑ePKP      PKPbc    03 22 43.1 +0.3
PSZ   Piszkesteto       147.10 338 ⇓P        PKPdf    03 22 39.5 -0.3
PSZ   Piszkesteto       147.10 338 ePKPDF    PKPdf    03 22 39.3 -0.5
PSZ   Piszkesteto       147.10 338 eP        PKPdf    03 22 40.7 +0.9
PSZ   Piszkesteto       147.10 338 ⇓PKIKP    PKPdf    03 22 39.5 -0.3
ARR   Arges             147.18 330 ⇓P        PKPdf    03 22 41.1 +1.1
GHAJ  Ghor Haditha      147.21 300           PKPbc    03 22 43.1 -0.6
KRUC  Moravsky          147.22 343 ePKP      PKPdf    03 22 39.9  0.0
TREC  Trest             147.25 344 ePKP2     PKPbc    03 22 43.4 +0.1
TREC  Trest             147.25 344⇑ePKP      PKPbc    03 22 43.4 +0.1
MANZ  Manzenberg        147.38 348 ePKPbc    PKPbc    03 22 44.0 +0.3
      baz=15,slow=2.7
SMOL  Smolenice         147.41 341 ePKIKP    PKPdf    03 22 40.6 +0.4
SMOL                               e                  03 22 44.6
SMOL  Smolenice         147.41 341 ePKP      PKPdf    03 22 40.6 +0.4
SMOL                               e                  03 22 44.6
BEBN  Eben Emael        147.44 356 dPKPdf    PKPdf    03 22 40.2 +0.1
BEBN                               dPKPbc    PKPbc    03 22 43.5 -0.1
BEBN                               dPKiKP    PKiKP    03 22 45.0 -0.2
BEBN                               dPKPab    PKPab    03 22 47.6 -0.2
BSZH  Besenyszg         147.49 337 ⇓P        PKiKP    03 22 45.0 -0.4
BSZH  Besenyszg         147.49 337 ePKPDF    PKPdf    03 22 40.8 +0.4
UCC   Uccle             147.50 357 dPKPdf    PKPdf    03 22 40.4 +0.2
UCC                                dPKPbc    PKPbc    03 22 43.8 -0.1
UCC                                dPKPab    PKPab    03 22 47.6 -0.5
LOT   Lotru             147.52 331 ⇓P        PKPbc    03 22 43.5 -0.8
RAZG  Razgrad           147.53 326 ⇓P        PKPdf    03 22 42.2 +1.7
DYA   Yadsworthy        147.54   7 eP        PKPbc    03 22 43.3 -0.7
DEV   Deva              147.57 333 ⇓P        PKPbc    03 22 44.3 +0.1
DEV   Deva              147.57 333 ⇓PKP2     PKPbc    03 22 44.3 +0.1
ROTZ  Rotzenmuhle       147.57 348 ePKPbc    PKPbc    03 22 44.4 +0.3
      baz=15,slow=2.7
AHRW  Bad Neuenahr-A    147.57 354 ePKPbc    PKPbc    03 22 44.6 +0.6
      baz=15,slow=2.7
MODS  Modra-Piesok      147.58 341 ePKIKP    PKPdf    03 22 40.0 -0.5
MODS  Modra-Piesok      147.58 341 ePKP      PKPdf    03 22 40.0 -0.5
MODS                               e                  03 22 43.8
MEM   Membach           147.60 356 dPKPdf    PKPdf    03 22 40.6 +0.2
MEM                                dPKPbc    PKPbc    03 22 43.9 -0.2
BTNL  Ternell           147.61 355 dPKPdf    PKPdf    03 22 40.6 +0.1
BTNL                               dPKPbc    PKPbc    03 22 44.1 -0.1
HUMR  Humele            147.63 329 ⇓P        PKPdf    03 22 40.8 +0.1
SRO   Srobarova         147.74 340 ePKP2     PKPbc    03 22 45.1 +0.6
SRO   Srobarova         147.74 340 ePKP      PKPbc    03 22 45.1 +0.6
SRO                                e                  03 22 49.8
TNS   Taunus Mts        147.74 353 ePKPbc    PKPbc    03 22 44.8 +0.2
      baz=15,slow=2.7
SRO2  Moca              147.75 339 ePKIKP    PKPbc    03 22 43.9 -0.7
SRO2  Moca              147.75 339 ePKP      PKPbc    03 22 43.9 -0.7
BUD   Budapest          147.78 338 ePKPDF    PKPdf    03 22 40.4 -0.5
BUD   Budapest          147.78 338 eP        PKPbc    03 22 44.7  0.0
ZST   Bratislava        147.79 341 ePKP2     PKPbc    03 22 44.9 +0.2
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ZST	Bratislava	147.79	341	ePKP	PKPbc	03 22 44.9	+0.2
SIRR	Siria	147.79	334	⇑P	PKPdf	03 22 40.8	-0.1
COPA	Copaceanca	147.79	328	⇓P	PKPbc	03 22 44.5	-0.3
SNF	Seneffe	147.80	358	dPKPbc	PKPbc	03 22 44.5	-0.1
SNF				dPKPab	PKPab	03 22 48.7	-0.6
GRF	Grafenberg Arr	147.83	349	ePKPbc	PKPbc	03 22 45.1	+0.4
	baz=15,slow=2.7						
GRFO	Grafenberg	147.83	349	PKIKP	PKPdf	03 22 41.3	+0.4
GRFO	Grafenberg	147.83	349		PKPdf	03 22 41.3	+0.4
GRFO				PKPbc	PKPbc	03 22 44.9	+0.2
BCLA	Clavier	147.83	356	dPKPbc	PKPbc	03 22 44.3	-0.4
BCLA				dPKPab	PKPab	03 22 49.1	-0.4
BHOU	Houvegnez	147.85	355	dPKPdf	PKPdf	03 22 41.1	+0.2
BHOU				dPKPbc	PKPbc	03 22 44.5	-0.3
BHOU				dPKPab	PKPab	03 22 48.7	-0.9
KHC	Kasperske Hory	147.88	346	ePKIKP	PKPdf	03 22 41.0	0.0
KHC				e		03 22 50.4	
KHC	Kasperske Hory	147.88	346	ePKPDF	PKPdf	03 22 41.0	0.0
KHC				⇑ePKP	PKPbc	03 22 45.2	+0.3
KHC				ePKPAB	PKPab	03 22 50.4	+0.6
KHC				epPKP	pPKPab	03 25 06.5	+2.0
BGES	Gesves	147.88	357	dPKPbc	PKPbc	03 22 44.5	-0.4
BMRD	Maredsous	147.98	357	dPKPdf	PKPdf	03 22 41.1	+0.1
BMRD				dPKPbc	PKPbc	03 22 44.9	-0.2
CKRC	Cesky Krumlov	147.99	345	ePKPDF	PKPdf	03 22 41.5	+0.3
CKRC				⇑ePKP	PKPbc	03 22 45.6	+0.4
CKRC				ePKPAB	PKPab	03 22 50.7	+0.4
GZR	Gura Zlata	148.00	332	⇓P	PKPdf	03 22 41.3	-0.1
GZR	Gura Zlata	148.00	332	⇓PKIKP	PKPdf	03 22 41.3	-0.1
WET	Wettzell	148.02	347	ePKPbc	PKPbc	03 22 45.6	+0.3
	baz=15,slow=2.7						
LEF	Lefka	148.06	308	⇓P	PKPbc	03 22 45.5	-0.2
ZIMR		148.06	327	⇓P	PKPbc	03 22 45.5	0.0
ZIMR		148.06	327	⇓PKP2	PKPbc	03 22 45.5	0.0
AMBH	Ambrzfalva	148.10	335	⇓P	PKPbc	03 22 45.0	-0.4
AMBH	Ambrzfalva	148.10	335	ePKPDF	PKPdf	03 22 41.2	-0.1
RCHB	Rochefort	148.10	356	dPKPbc	PKPbc	03 22 45.2	-0.2
GEC2	GERESS Array S	148.12	346	ePKPbc	PKPbc	03 22 45.9	+0.3
	baz=15,slow=2.7						
GERES	GERESS Array B	148.12	346	PKP	PKPdf	03 22 41.4	-0.1
	comp=Z,51nm,0.8s,baz=48,slow=2.0,SNR=36						
GERES				PKPbc	PKPbc	03 22 45.9	+0.3
	comp=Z,51nm,0.8s,baz=42,slow=3.1,SNR=237						
EIL	Elat	148.13	297	PKP	PKPdf	03 22 41.9	-0.1
	comp=Z,84nm,0.9s,baz=25,slow=5.8,SNR=45						
EIL				PKPbc	PKPbc	03 22 46.4	+0.3
	comp=Z,74nm,0.9s,baz=136,slow=3.2,SNR=45						
CSKK	Cskako	148.15	339	ePKPDF	PKPdf	03 22 39.9	-1.5
CSKK	Cskako	148.15	339	eP	PKPbc	03 22 45.6	0.0
DOU	Dourbes	148.20	357	dPKPdf	PKPdf	03 22 41.5	+0.1
DOU				dPKPbc	PKPbc	03 22 45.6	-0.1
DOU				dPKPab	PKPab	03 22 50.5	-0.5
BZS	Buzias	148.33	334	⇑P	PKPdf	03 22 41.6	-0.2
BZS	Buzias	148.33	334	⇑PKHKP	PKPpre	03 22 41.6	
CONA	Conrad Observa	148.40	342	eP	PKPdf	03 22 41.7	-0.2
	comp=Z,16nm,1.8s						
CONA				i P	PKPbc	03 22 46.7	+0.4
	comp=Z,59nm,0.9s,SNR=37						
CONA				eP	pPKPab	03 25 08.4	+1.8
	comp=Z,19nm,1.4s						
SOP	Sopron	148.41	341	ePKPDF	PKPdf	03 22 41.7	-0.2
SOP	Sopron	148.41	341	eP	PKPbc	03 22 46.5	+0.3
WLF	Walferdange	148.53	355	dPKPdf	PKPdf	03 22 42.7	+0.8
WLF				dPKPbc	PKPbc	03 22 46.9	+0.5
WLF				dPKPab	PKPab	03 22 52.2	-0.2
WLF	Walferdange	148.53	355	ePKPbc	PKiKP	03 22 47.2	-0.3
	baz=15,slow=2.7						
ISP	Isparta	148.53	314	PKHKP	PKPpre	03 22 45.2	
ISP	Isparta	148.53	314		PKPbc	03 22 45.2	-1.8
EDRB	Edirne	148.55	324	P	PKPbc	03 22 46.4	-0.4
MPLH	Magyarpolny	148.56	340	ePKPDF	PKPdf	03 22 42.2	+0.1
MPLH	Magyarpolny	148.56	340	eP	PKPdf	03 22 42.6	+0.5
HERR	Herculane	148.56	332	⇓P	PKPdf	03 22 42.2	+0.1
RMGR	Halanga-Turnu	148.61	331	⇑P	PKPbc	03 22 45.0	-1.8
TIH	Tihany	148.67	339	⇑ePKP	PKPbc	03 22 46.5	-0.4
TIH	Tihany	148.67	339	eP	PKPbc	03 22 47.1	+0.2
DJES	Djerdap	148.68	332	⇓	PKPbc	03 22 47.2	+0.2
BANR	Banloc	148.72	334	⇓P	PKPbc	03 22 47.5	+0.5
PUNG	Punghina	148.79	331	⇑P	PKPbc	03 22 46.9	-0.3
BAIL	Bailesti	148.79	330	⇑P	PKPbc	03 22 46.8	-0.5
MOA	Molln	148.90	344	eP	PKPdf	03 22 42.5	-0.2
	comp=Z,7.7nm,1.1s						
MOA				i P	PKPbc	03 22 47.4	-0.1
	comp=Z,26nm,0.9s,SNR=15						
MOA				eP	pPKPab	03 25 09.5	+1.0
	comp=Z,19nm,1.3s						
JVM	Valle D.L. Mar	148.92	6	eP	PKPbc	03 22 47.3	-0.1
MDVR	Moldovita	148.95	333	⇑P	PKPbc	03 22 47.2	-0.6
JSA	Saint Aubin	148.96	6	eP	PKPbc	03 22 46.9	-0.5
MORH	Mrgy, Hungar	149.00	338	⇓iP	PKPbc	03 22 46.6	-1.1
STU	Stuttgart	149.06	351	ePKPbc	PKPbc	03 22 48.1	+0.3
	baz=15,slow=2.7						
ARSA	Arzberg	149.11	342	i P	PKPbc	03 22 47.7	-0.3
	comp=Z,18nm,0.8s,SNR=12						
ARSA				eS	SKPdf	03 25 18.3	-1.2
	comp=Z,12nm,1.3s						
BALB	Balikesir	149.26	319		PKPdf	03 22 42.0	-1.5
BALB				PKPbc	PKPbc	03 22 48.0	-0.5
BALB				PKPab	PKPab	03 22 56.2	+0.5
FUR	Furstenfeldbru	149.29	348	ePKPbc	PKPbc	03 22 48.7	+0.3
	baz=15,slow=2.7						
KOVH	Kovagotottos	149.31	338	ePKPDF	PKPdf	03 22 42.8	-0.5
KOVH	Kovagotottos	149.31	338	eP	PKPdf	03 22 43.3	0.0
KOVH	Kovagotottos	149.31	338	⇑ePKP	PKPbc	03 22 47.8	-0.7
RJOB	Jochberg	149.37	346	ePKPbc	PKPbc	03 22 48.9	+0.3
	baz=15,slow=2.7						
KULA	Kula-Manisa	149.41	317	P	PKPbc	03 22 48.6	-0.5
BEHE	Becsehely	149.42	340	⇑ePKP	PKPbc	03 22 47.8	-0.9
BEHE	Becsehely	149.42	340	eP	PKPbc	03 22 49.0	+0.3
BEHE	Becsehely	149.42	340	⇓iP	PKPbc	03 22 48.6	-0.1
FRGS	Fruska Gora	149.45	335	⇑P	PKPdf	03 22 44.1	+0.5
FRGS	Fruska Gora	149.45	335	⇓iP	PKPbc	03 22 48.5	-0.4
ALN	Alexandroupoli	149.57	323	P	PKPbc	03 22 48.3	-0.9
BFO	Black Forest	149.61	352	PKIKP	PKPdf	03 22 43.3	-0.5
BFO	Black Forest	149.61	352		PKPdf	03 22 43.3	-0.5
BFO				PKPbc	PKPbc	03 22 48.7	-0.4
BFO	Black Forest	149.61	352	ePKPbc	PKiKP	03 22 49.7	-0.2
	baz=15,slow=2.7						
ENEZ	Enez	149.61	322	P	PKPbc	03 22 48.8	-0.5
RDO	Rodhopi	149.69	324	P	PKPbc	03 22 48.7	-0.8
SOKA	Soboth	149.77	342	eP	PKPdf	03 22 43.6	-0.5
	comp=Z,8.8nm,1.1s						
SOKA				i P	PKPbc	03 22 49.2	-0.5
	comp=Z,45nm,0.8s,SNR=23						
SOKA				eS	SKPdf	03 25 18.6	-1.9
	comp=Z,22nm,1.3s						
KALN	Kalnik	149.82	340	i P	PKPbc	03 22 49.0	-0.7
BOVS	Bovan	149.85	331	⇓P	PKPbc	03 22 48.2	-1.6
KBA	Koelnbreinsper	149.85	345	eP	PKPdf	03 22 42.5	-1.9
	comp=Z,13nm,1.3s						
KBA				i P	PKPbc	03 22 49.5	-0.5
	comp=Z,35nm,0.6s,SNR=16						
KBA				eS	SKPdf	03 25 18.3	-2.4
	comp=Z,16nm,1.2s						
VTS	Vitosha	149.89	328	⇓P	PKPbc	03 22 50.3	+0.2
VTS	Vitosha	149.89	328	⇓PKHKP	PKPpre	03 22 50.3	
LOBO	Lobor	149.93	341	i P	PKPbc	03 22 49.0	-1.0
UBR	Ueberruh	149.97	349	ePKPbc	PKiKP	03 22 50.5	-0.2
	baz=15,slow=2.7						
BLJ	Bijeljina	149.97	335	eP	PKPbc	03 22 49.1	-0.9
KSL	Kastellorizon	150.01	312	P	PKPbc	03 22 49.2	-1.2
WATA	Walderalm	150.02	347	eP	PKPdf	03 22 44.4	-0.2
	comp=Z,0.9nm,0.3s						
WATA				i P	PKPbc	03 22 50.0	-0.3
	comp=Z,37nm,0.6s,SNR=20						
WATA				eP	pPKPbc	03 25 10.9	+1.0
	comp=Z,16nm,1.5s						
RETA	Reutte	150.04	348	eP	PKPdf	03 22 44.5	-0.1
	comp=Z,0.6nm,0.3s						
RETA				i P	PKPbc	03 22 50.0	-0.3
	comp=Z,29nm,0.9s,SNR=18						
RETA				eP	pPKPab	03 25 12.0	-0.9
	comp=Z,19nm,1.4s						
OBKA	Obir	150.06	343	i P	PKPbc	03 22 49.4	-1.0
	comp=Z,21nm,0.7s,SNR=9.9						
OBKA				eP	pPKPbc	03 25 09.3	-0.7
	comp=Z,9.7nm,1.3s						
WTTA	Wattenberg	150.07	347	eP	PKPdf	03 22 44.5	-0.2
	comp=Z,3.4nm,0.6s						
WTTA				i P	PKPbc	03 22 50.4	-0.1
	comp=Z,112nm,0.7s,SNR=43						
WTTA				eP	pPKPbc	03 25 10.0	-0.1
	comp=Z,25nm,1.9s						
EZN	Ezine	150.09	321	P	PKPbc	03 22 49.9	-0.6
MOTA	Moosalm	150.10	348	eP	PKPdf	03 22 44.3	-0.5
	comp=Z,9.2nm,0.9s						
MOTA				i P	PKPbc	03 22 50.3	-0.2
	comp=Z,58nm,0.8s,SNR=29						
MOTA				eP	pPKPab	03 25 11.8	-1.5
	comp=Z,18nm,1.1s						
DOBS	Dobrina	150.12	341	ePKPdf	PKPdf	03 22 44.0	-0.6
DOBS				i PKPbc	PKPbc	03 22 49.9	-0.5
FETY	Fethiye	150.12	313	P	PKPbc	03 22 50.2	-0.5
SMTH	Samothraki Isl	150.14	323	P	PKPbc	03 22 49.8	-0.8
PTJ	Puntijarka	150.18	341	P	PKPbc	03 22 50.2	-0.5
MOSL	Moslavina	150.18	339	i P	PKPbc	03 22 50.3	-0.2
MYKA	Terra Mystica	150.19	344	eP	PKPdf	03 22 43.8	-1.0
	comp=Z,7.2nm,1.0s						
MYKA				i P	PKPbc	03 22 49.7	-1.0
	comp=Z,60nm,0.7s,SNR=19						
MYKA				eS	SKPdf	03 25 19.8	-1.2
	comp=Z,20nm,1.2s						
SQTA	Sankt Quirin	150.20	348	i P	PKPbc	03 22 50.6	-0.1
	comp=Z,72nm,0.7s,SNR=38						
SQTA				eS	SKPdf	03 25 18.7	-2.4
	comp=Z,14nm,1.3s						
DIVS	Divibare	150.24	334	PKPdf	PKPdf	03 22 44.5	-0.5
DIVS				PKPbc	PKPbc	03 22 50.3	-0.6
DIVS	Divibare	150.24	334	⇓iP	PKPbc	03 22 50.6	-0.2
ZAG	Zagreb	150.25	340	⇓iP	PKPbc	03 22 50.7	0.0
ZAG	Zagreb	150.25	340	P	PKPbc	03 22 50.6	-0.1
CLF	Chambon-Foret	150.32	360		PKPdf	03 22 45.2	+0.4
CLF				PKPbc	PKiKP	03 22 51.3	0.0
CLF				PKPab	PKPab	03 22 59.5	-0.4
ABTA	Abfaltersbach	150.37	346	eP	PKPdf	03 22 44.3	-0.8
	comp=Z,13nm,1.0s						
ABTA				i P	PKPbc	03 22 50.3	-0.8
	comp=Z,111nm,0.7s,SNR=26						
ABTA				eP	pPKPbc	03 25 10.3	-0.5
	comp=Z,12nm,1.2s						
KAVA	Kavala	150.37	325	P	PKPbc	03 22 50.4	-0.7
DAVA	Damuels	150.39	349	eP	PKPdf	03 22 44.4	-0.8
	comp=Z,3.6nm,0.6s						
DAVA				i P	PKPbc	03 22 51.1	-0.1
	comp=Z,60nm,0.9s,SNR=26						
DAVA				eP	pPKPbc	03 25 11.5	+0.6
	comp=Z,18nm,1.3s						
YER	Yerkesik	150.41	315	P	PKPbc	03 22 50.1	-1.3
CRES	Cresnjev	150.41	341	⇓iP	PKPbc	03 22 50.7	-0.4
CRES	Cresnjev	150.41	341	i PKPbc	PKPbc	03 22 50.7	-0.4
NVR	Nevrokopi	150.47	326	P	PKPbc	03 22 50.8	-0.6
FETA	Feichten	150.49	348	eP	PKPdf	03 22 45.1	-0.2
	comp=Z,14nm,0.8s						
FETA				i P	PKPbc	03 22 51.5	+0.1
	comp=Z,54nm,0.8s,SNR=14						
FETA				eP	pPKPab	03 25 13.2	-1.7
	comp=Z,16nm,1.2s						
LJU	Ljubljana	150.49	342	⇓iP	PKPbc	03 22 50.8	-0.5
LJU	Ljubljana	150.49	342	i PKPbc	PKPbc	03 22 51.0	-0.2
OZLJ	Ozalj	150.60	341	i P	PKPbc	03 22 50.9	-0.5
MRAK	Mrakovica	150.66	338	⇓iP	PKPbc	03 22 51.3	-0.5
BBLS	Lazići	150.67	334	⇓iP	PKPbc	03 22 51.7	-0.1
HAPS	Han Pijesak,BI	150.68	335	⇓iP	PKPbc	03 22 51.7	-0.2
LIA	Limnos Island	150.72	322	P	PKPbc	03 22 51.3	-0.6
PRIJ	Prijedor	150.75	339	eP	PKPbc	03 22 49.9	-2.0
JAVS	Javornik	150.76	343	ePKPdf	PKPdf	03 22 44.8	-0.9
JAVS				i PKPbc	PKPbc	03 22 51.4	-0.6
JAVS				ePKPab	PKPab	03 23 00.9	-1.1
SRS	Serrai	150.78	326	P	PKPbc	03 22 49.8	-2.3
BLY	Banja Luka	150.79	338	⇓iP	PKPbc	03 22 51.8	-0.2
CEY	Cerknica	150.80	342	⇓iP	PKPbc	03 22 51.6	-0.4
DAVOX	Davos/Dischmat	150.88	349	PKP	PKPdf	03 22 46.2	+0.2
	comp=Z,16nm,0.9s,baz=338,slow=3.1						
DAVOX				PKPbc	PKiKP	03 22 52.8	0.0
	baz=297,slow=4.5						
RUDO	Rudo	150.89	334	eP	PKPbc	03 22 51.5	-0.8
ARG	Arkhangelos	151.00	313	P	PKPbc	03 22 52.3	-0.4
STIP	Stip	151.09	328	i P	PKPbc	03 22 51.7	-1.0
BODT	Bodrum	151.10	315	P	PKPbc	03 22 52.0	-0.9
DAT	Datca	151.10	315	P	PKPbc	03 22 51.8	-1.3
MGRS	Mrkonjic Grad	151.11	338	eP	PKPbc	03 22 51.7	-1.0
PLE	Pljevlja	151.12	334	⇓iPKP	PKPbc	03 22 52.7	-0.2
KNT	Kendrikon	151.12	327	P	PKPbc	03 22 50.6	-2.2
RIY	Rijeka	151.16	342	⇓iP	PKPbc	03 22 52.2	-0.6
RIY	Rijeka	151.16	342	P	PKPbc	03 22 52.0	-0.8
VAY	Valandovo	151.17	327	i P	PKPbc	03 22 52.0	-0.9
PLIT	Plitvice	151.21	340	i P	PKPbc	03 22 52.0	-0.9
CTI	Castel Tesino	151.22	346		PKPdf	03 22 44.9	-1.5
CTI				PKPbc	PKPbc	03 22 52.2	-0.8
CTI				PKPab	PKPab	03 23 02.6	-1.3
SKO	Skopje	151.25	329	i P	PKPbc	03 22 52.9	-0.2
IVA	Berane	151.27	332	⇓iPKP	PKPbc	03 22 52.9	-0.3
UPM	Unac-Piva	151.43	334	eP	PKPbc	03 22 52.6	-1.1
KOME	Kolasin	151.45	333	⇓iPKP	PKPbc	03 22 53.2	-0.5
UDBI	Udbina	151.47	339	i P	PKPbc	03 22 53.1	-0.5
SMRN	Sveta Marina	151.52	342	i P	PKPbc	03 22 52.8	-0.8
RABC	Rab	151.59	341	i P	PKPbc	03 22 53.2	-0.5
KIJV	Kijevo	151.71	338	i P	PKPbc	03 22 53.4	-0.7
NKME	Niksic	151.76	333	⇓iPKP	PKPbc	03 22 53.6	-0.7
BRY	Bratogost	151.82	334	⇓iP	PKPbc	03 22 53.5	-1.0
BRY	Bratogost	151.82	334	⇓iPKP	PKPbc	03 22 53.7	-0.8
RICI	Ricice	151.88	337	i P	PKPbc	03 22 53.5	-1.0
PDG	Podgorica	151.90	333	⇑P	PKPbc	03 22 53.6	-0.9
PDG	Podgorica	151.90	333		PKPbc	03 22 53.6	-0.9
PDG	Podgorica	151.90	333	⇓iP	PKPbc	03 22 53.7	-0.8
TTG	Podgorica	151.90	333	⇓iPKP	PKPbc	03 22 53.9	-0.6
PHP	Peshkopia	151.95	330	P	PKPbc	03 22 53.8	-1.0
CEME	Cevo	151.96	333	⇓iPKP	PKPbc	03 22 53.9	-0.8
TREB	Trebinje	152.06	334	eP	PKPbc	03 22 53.7	-1.2
MORI	Morici	152.07	339	i P	PKPbc	03 22 54.1	-0.8
MAKA	Makarska	152.10	337	i P	PKPbc	03 22 53.7	-1.2
DRME	Dracevica, Mon	152.13	332	⇓iP	PKPbc	03 22 53.3	-1.8
DRME	Dracevica, Mon	152.13	332	⇓iPKP	PKPbc	03 22 54.6	-0.5
DBRK	Dubrovnik	152.18	334	i P	PKPbc	03 22 54.1	-1.1
DUGI	Dugi Otok	152.18	340	i P	PKPbc	03 22 54.1	-1.0
FNA	Florina	152.18	328	P	PKPbc	03 22 54.3	-1.0
FNA	Florina	152.18	328	PKIKP	PKPdf	03 22 47.0	-0.9
FNA						03 22 54.3	
FNA						03 23 07.5	
FNA	Florina	152.18	328		PKPdf	03 22 47.0	-0.9
FNA				PKPbc	PKPbc	03 22 54.3	-1.0
FNA				PKPab	PKPab	03 23 07.5	-0.7
STON	Ston	152.19	335	⇓iP	PKPbc	03 22 53.8	-1.3
STON	Ston	152.19	335	i P	PKPbc	03 22 53.8	-1.3
HCY	Herceg Novi	152.22	334	eP	PKPbc	03 22 53.4	-1.8
OHR	Ohrid	152.22	329	i P	PKPbc	03 22 55.1	-0.3
ZIRJ	Zirje	152.28	339	i P	PKPbc	03 22 54.3	-1.0
HVAR	Hvar	152.41	337	i P	PKPbc	03 22 54.5	-1.1
TIR	Tirane	152.49	330	⇓P	PKPbc	03 22 52.6	-3.2
TIR	Tirane	152.49	330	⇓PKIKP	PKPbc	03 22 52.6	-3.2
LKR	Lokris	152.81	323	P	PKPbc	03 22 55.0	-1.6
LSK	Leskovik	153.05	328	P	PKPbc	03 22 56.6	-0.6
MAKR	Makrakomi, Fth	153.06	324	P	PKPbc	03 22 56.4	-0.8
JAN	Janina	153.28	327	P	PKPbc	03 22 57.6	-0.1
ANX	Ano Chora	153.47	324	P	PKiKP	03 22 58.6	+0.4
SERG	Sergoula	153.52	323	P	PKPbc	03 22 57.3	-0.9
LAKA	Lakka	153.68	323	P	PKPbc	03 22 58.0	-0.6
SGRT	San Giovanni R	153.90	337		PKPdf	03 22 49.5	-0.9
SGRT				PKPbc	PKPbc	03 22 58.5	-0.5
SGRT					PKPab	03 23 12.9	-2.5
RLS	Riolos of Patr	154.10	323	P	PKPab	03 23 16.2	-0.1
IMMV	Iera Moni Meta	154.22	316	P	PKPab	03 23 16.9	-0.1
ITM	Ithomi	154.43	321		PKPab	03 23 17.1	-0.7
PYL	PYLOS	154.73	321	P	PKPab	03 23 18.0	-1.1
PBRG	Braganca	155.32	16	ePKPab	PKPab	03 23 21.6	+0.1
POLO	Lamas de Olo	155.43	18	ePKPdf	PKPdf	03 22 53.3	+0.8
MVO	Moncorvo	155.84	17	ePKPdf	PKPdf	03 22 54.0	+1.0
MVO	Moncorvo	155.84	17	ePKPab	PKPab	03 23 24.1	+0.3
MTE	Manteigas	156.39	19	ePKPdf	PKPdf	03 22 54.5	+0.8
MTE	Manteigas	156.39	19	ePKPab	PKPab	03 23 25.4	-0.8
PCAS	Casmilo, Conde	156.40	21	ePKPab	PKPab	03 23 26.3	+0.2
PSBE	So Bento	156.77	22	ePKPab	PKPab	03 23 27.9	+0.1
PMRV	Marv??o	157.33	20	ePKPab	PKPab	03 23 30.5	+0.3
PMTG	Montargil	157.37	22	ePKPab	PKPab	03 23 30.5	+0.1
PESTR	Estremoz	157.77	21	ePKPab	PKPab	03 23 32.0	-0.1
ESBB	Sonseca Array	158.01	13		PKPab	03 23 33.0	-0.2
ESDC	Sonseca Array	158.01	13	PKP	PKPdf	03 22 55.2	-0.6
	comp=Z,2.8nm,1.1s,baz=324,slow=5.2,SNR=5.4						
ESDC				PKPab	PKPab	03 23 32.7	-0.5
	comp=Z,11nm,1.0s,baz=344,slow=4.4,SNR=21						
PNCL	Nicolau / Gran	158.11	23	ePKPab	PKPab	03 23 33.6	0.0
PBAR	Barrancos	158.58	20	ePKPdf	PKPdf	03 22 57.7	+1.3
KEST	Kesra	161.50	341	PKPab	PKPab	03 23 48.5	-0.1
	comp=Z,33nm,0.9s,baz=279,slow=1.3,SNR=18						
MDT	Midelt	164.27	22	PKP	PKPdf	03 23 03.5	+1.0
	comp=Z,16nm,1.0s,baz=95,slow=1.7,SNR=12						
MDT				PKPab	PKPab	03 24 00.9	0.0
	comp=Z,8.9nm,0.9s,baz=40,slow=3.1,SNR=7.7						
DBIC	Dimbokro	166.56	148	PKP	PKPdf	03 23 04.0	-0.8
	comp=Z,6.2nm,0.8s,baz=168,slow=3.2,SNR=5.4						
DBIC				PKPab	PKPab	03 24 12.2	+0.9
	comp=Z,11nm,0.8s,baz=185,slow=4.9,SNR=9.0						
DBIC	Dimbokro	166.56	148		PKPab	03 24 11.8	+0.5
KOWA	Kowa	172.92	121	PKP	PKPdf	03 23 07.7	-0.6
	comp=Z,5.6nm,0.8s,baz=114,slow=0.9,SNR=14						
KOWA				PKPab	PKPab	03 24 39.9	+0.2
	comp=Z,21nm,0.9s,baz=241,slow=4.2,SNR=24						
KOWA	Kowa	172.92	121		PKPdf	03 23 07.0	-1.4
KOWA					PKPab	03 24 39.6	-0.1
TORD	Torodi Ar. Bea	174.88	174	PKP	PKPdf	03 23 08.0	-1.0
	comp=Z,8.8nm,1.1s,baz=338,slow=1.2,SNR=30						
TORD				PKPab	PKPab	03 24 46.2	-1.8
	comp=Z,2.8nm,0.7s,baz=92,slow=0.8,SNR=7.4						
TORD				PP	PP	03 28 41.2	+1.7
	comp=Z,2.8nm,0.9s,baz=165,slow=2.8,SNR=5.7						
TORD	Torodi Ar. Bea	174.88	174		PKPdf	03 23 07.3	-1.7
TORD					PKPab	03 24 46.1	-1.9

ATH 02 03:21:40.8, 38°.53N×20°.55E, h8^{km}±3^{km}, ML1.5/1 Error ellipse: s-maj=3.6km s-min=0.7km az=105.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FSK	Fiskardo	0.07	174	P	Pg	03 21 42.5	-0.3
FSK				S	Sg	03 21 43.9	-0.2
FSK				AML	AML	03 21 44.2	
	comp=N,758µm,0.2s						
FSK				AML	AML	03 21 44.4	
	comp=E,1155µm,0.2s						
EVGI	Lefkada island	0.12	42	P	Pg	03 21 43.4	-0.1
EVGI				S	Sg	03 21 45.7	+0.3
DRAG	Dragano-Lefkad	0.15	6	P	Pg	03 21 43.9	-0.2
DRAG				S	Sg	03 21 46.8	+0.5
NYDR	Nydri-Lefkada	0.21	32	P	Pg	03 21 44.9	-0.2
NYDR				S	Sg	03 21 48.3	+0.2
KEF4	Livadi, Kephal	0.29	200	P	Pg	03 21 46.4	-0.1
KEF4				S	Sg	03 21 51.0	+0.7
TSLK	Tsoukalades, L	0.30	15	P	Pg	03 21 46.7	-0.1
DMLN	Damoulianata-K	0.32	206	P	Pg	03 21 46.7	-0.4
DMLN				S	Sg	03 21 51.9	+0.4
VLS	Valsamata	0.35	175	P	Pg	03 21 47.8	0.0
VLS				S	Sg	03 21 52.9	+0.5
KEF3	Kipouria, Keph	0.36	206	P	Pg	03 21 46.9	-1.0
KEF3				S	Sg	03 21 52.4	-0.3
PSDA	Pessada-Kefalo	0.42	177	P	Pg	03 21 48.8	-0.1

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*BJI **02** 03:34:09.9±0.0, 40°.64N×142°.21E, h88^{km}, mB4.7/9, mb4.5/14*

*IDC **02** 03:34:11.2±2.2, 40°.49N×141°.84E, h67^{km}±19^{km}, mb3.7/13, mb1 3.8/15, mb1mx3.7/49, mbtmp4.0/15, Error ellipse: s-maj=20.2km s-min=13.5km az=120.0*

*JMA **02** 03:34:11.4±0.1, 40°.45N×141°.97E, h66^{km}±1^{km}, M3.9*

JMA Felt III J1.

*NIED **02** 03:34:11.4, 40°.45N×141°.97E, h66^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-2.36; $M_{\theta\theta}$4.94; $M_{\phi\phi}$-2.58; $M_{r\theta}$1.18; $M_{\theta\phi}$-5.44; $M_{\phi r}$-7.11; Fault plane solution: $M_0$9.98000×10^{14} NP1: ϕ_s338.00000°, δ80.00000°, λ-48.00000°. NP2: ϕ_s79.00000°, δ43.00000°, λ-166.00000°.*

*NEIC **02** 03:34:12.8±2.8, 40°.34N±0°.04×142°.0E±0°.1, h81^{km}±7^{km}, mb4.5/19 Error ellipse: s-maj=11.9km s-min=5.4km az=86.0*

ISC 02 03:34:11.1±0.7, 40°.47N±0°.03×142°.01E±0°.06, h67^{km}±6^{km}, n101, σ1^{s}.33/110, mb4.3/30, 8C-4D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKEN	Kujiedanarisaw	0.35	221	⇑P	Pn	03 34 22.4	+0.2
JKEN				S	Sn	03 34 30.2	-0.2
JANG	Nango	0.39	256	⇑P	Pn	03 34 22.5	-0.1
JANG				S	Sn	03 34 30.4	-0.6
JTH	Tanohata	0.54	192	⇑P	Pn	03 34 24.1	+0.1
JTH				i S	Sn	03 34 33.0	-0.5
JKZ	Kuzumaki	0.71	227	⇑P	Pn	03 34 26.0	+0.1
JKZ				S	Sn	03 34 36.4	-0.5
JARK	Aomorirokkasho	0.73	318	⇓P	Pn	03 34 26.0	0.0
JARK				S	Sn	03 34 36.9	-0.1
JTM	Tenmabayashi	0.78	294	⇓P	Pn	03 34 26.4	-0.3
JTM				S	Sn	03 34 37.6	-0.6
JAH	Hinai	1.09	255	⇑P	Pn	03 34 30.4	-0.1
JAH				S	Sn	03 34 44.7	-0.3
JOM	Ohasama	1.14	209	⇑P	Pn	03 34 31.2	0.0
JOM				S	Sn	03 34 45.6	-0.6
JOT	Ohata	1.17	322	⇓P	Pn	03 34 31.4	-0.1
JOT				S	Sn	03 34 46.0	-0.8
JRG	Rokugo	1.51	225	⇑P	Pn	03 34 36.3	+0.3
JIW	Iwasaki	1.53	275	⇓P	Pn	03 34 36.5	+0.1
JIW				eS	Sn	03 34 55.3	-0.1
JKB	Kayabe	1.60	333	P	Pn	03 34 37.4	+0.2
JKB				S	Sn	03 34 56.7	-0.2
JSR	Shiriuchi	1.60	312	P	Pn	03 34 37.4	+0.1
JSR				S	Sn	03 34 57.3	+0.2
JMK	Ichinoseki	1.64	202	⇑P	Pn	03 34 37.7	0.0
JMK				eS	Sn	03 34 57.5	-0.4
ERM	Erimo	1.77	29		Pn	03 34 41.0	+1.5
JEW	Eniwo	2.40	350	Pn	Pn	03 34 51.3	+3.2
JMM	Marumori	2.77	200		Pn	03 34 53.0	-0.1
ASAJ	Asahikawa	3.67	7	P	Pn	03 35 06.3	+1.0
	8.7nm,0.3s,baz=213,slow=11,SNR=65						
ASAJ				S	Sn	03 35 47.2	-0.1
	5.9nm,0.3s,baz=200,slow=33,SNR=6.5						
JKA	Kamikawa-asahi	3.67	7	Pn	Pn	03 35 06.1	+0.8
JSD	Sado	3.79	231	Pn	Pn	03 35 07.7	+0.7
JYT	Yasato	4.47	199	Pn	Pn	03 35 15.2	-1.2
MAJO	Matsushiro	4.93	218	Pn	Pn	03 35 24.2	+1.6
MAT	Matsushiro	4.93	218	P	Pn	03 35 24.0	+1.4
MAT				eS	Sn	03 36 18.6	+0.3
MJAR	Matsushiro Arr	4.93	218	P	Pn	03 35 23.5	+0.9
	0.6nm,0.3s,baz=26,slow=13,SNR=43						
JGF	Kuroka	6.09	219		Pn	03 35 39.9	+1.3
INU	Inuyama	6.46	219	Pn	Pn	03 35 46.4	+2.9
JWT	Wachi	7.36	227	Pn	Pn	03 35 58.5	+2.7
USA0B	Ussuriysk Arra	8.30	300	Pn	Pn	03 36 10.6	+1.9
USRK	Ussuriysk Ar.	8.30	300	P	Pn	03 36 10.0	+1.3
	baz=103,slow=15,SNR=9.3						
USRK	Ussuriysk Ar.	8.30	300	Pn	Pn	03 36 10.6	+1.9
JHS	Saijyo	8.91	235	Pn	Pn	03 36 20.4	+3.3
MDJ	Mudanjiang	10.06	298	P	Pn	03 36 34.9	+2.3
MDJ				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,140nm,5.8s						
MDJ	Mudanjiang	10.06	298	Pn	Pn	03 36 34.6	+2.0
KSRS	Korea Array	11.38	259	P	Pn	03 36 53.7	+3.1
	0.3nm,0.3s,baz=64,slow=15,SNR=2.4						
JSU	Suzuyama	12.94	230	Pn	Pn	03 37 09.3	-2.7
PETK	Petropavlovsk-	16.54	35	P	Pn	03 37 57.1	-1.4
	0.3nm,0.3s,baz=221,slow=12,SNR=4.8						
PETK	Petropavlovsk-	16.54	35		Pn	03 37 56.6	-1.9
NJ2	Nanjing	20.43	253	eP	P	03 38 43.0	+0.1
NJ2				pmax	pmax		
	comp=Z,11nm,0.8s						
HHC	Hu-ho-hao-te	23.05	281	eP	P	03 39 10.3	-0.5
HHC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,95nm,5.7s						
SEY	Seymchan	23.33	12	P	P	03 39 12.2	-1.0
	1.1nm,0.3s,baz=151,slow=10,SNR=4.8						
SONM	Songino Array	26.41	298	P	P	03 39 40.7	-0.8
	1.0nm,0.4s,baz=86,slow=8.6,SNR=6.5						
H11N2	WAKE ISLAND Hy	29.67	127	T	T	04 11 17.8	
	baz=319,slow=75,SNR=259						
H11N1	WAKE ISLAND Hy	29.68	127	T	T	04 11 15.0	
	baz=319,slow=75,SNR=295						
H11N3	WAKE ISLAND Hy	29.69	127	T	T	04 11 17.4	
	baz=319,slow=75,SNR=207						
H11S1	WAKE ISLAND Hy	30.49	129	T	T	04 12 15.6	
	baz=321,slow=76,SNR=110						
H11S3	WAKE ISLAND Hy	30.49	129	T	T	04 12 18.4	
	baz=321,slow=76,SNR=49						
H11S2	WAKE ISLAND Hy	30.50	129	T	T	04 12 18.1	
	baz=321,slow=76,SNR=79						
WMQ	Urumqi	39.81	293	eP	P	03 41 38.4	+0.7

WMQ				pmax	pmax		
	comp=Z,22nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,120nm,6.1s						
ZAA0	Zalesovo Array	40.02	309	P	P	03 41 38.9	-0.3
ZAA0				IAmb	IAmb	03 41 39.5	
	comp=Z,5.3nm,0.7s						
ZALV	Zalesovo Beam	40.02	309	P	P	03 41 38.8	-0.4
	comp=Z,5.7nm,0.4s,baz=93,slow=8.4,SNR=28						
ZALV	Zalesovo Beam	40.02	309	P	P	03 41 38.9	-0.3
NRIK	Noril'sk	40.37	334	P	P	03 41 43.8	+1.9
	comp=Z,1.6nm,0.6s,baz=45,slow=5.7,SNR=3.8						
MK31	Makanchi Array	42.77	299	P	P	03 42 01.2	-0.6
MKAR	Makanchi Array	42.77	299	P	P	03 42 01.4	-0.5
	comp=Z,3.0nm,0.6s,baz=76,slow=12,SNR=15						
MKAR	Makanchi Array	42.77	299	P	P	03 42 01.1	-0.8
IMAR	Indian Mountai	43.48	32	P	P	03 42 08.8	+1.5
KURK	Kurchatov	44.25	305	P	P	03 42 12.9	-0.8
KDAK	Kodiak Island	44.27	44	P	P	03 42 14.7	+0.9
	comp=Z,2.2nm,0.5s,baz=316,slow=3.8,SNR=12						
KDAK	Kodiak Island	44.27	44	P	P	03 42 14.6	+0.9
KDAK				IAmb	IAmb	03 42 38.3	
	comp=Z,13nm,1.1s						
SUA	Susitna One	44.86	39	P	P	03 42 21.3	+2.8
TOLK	Toolik Lake Re	45.22	29	P	P	03 42 23.4	+2.2
GHO	Glory Hole Cre	45.70	38	P	P	03 42 26.6	+1.4
GHO				IAmb	IAmb	03 42 47.0	
	comp=Z,13nm,1.2s						
TAPN	Taplejung	46.26	271	*e*P	P	03 42 30.9	+0.7
IL31		46.37	34	P	P	03 42 30.7	+0.6
IL31				IAmb	IAmb	03 42 39.5	
	comp=Z,3.7nm,0.8s						
ILAR	Eielson Array	46.37	34	P	P	03 42 31.4	+1.2
	comp=Z,0.8nm,0.7s,baz=256,slow=5.9,SNR=9.0						
ILAR	Eielson Array	46.37	34	P	P	03 42 31.8	+1.5
BMAR	Burnt Mountain	47.12	30	P	P	03 42 38.4	+2.3
RAMN	Ramite	47.31	271	*e*P	P	03 42 38.6	+0.2
	comp=Z,8.4nm,0.4s						
GUN	Gumba	47.37	273	*e*P	P	03 42 39.5	+0.6
	comp=Z,30nm,0.6s						
SCRK	Sand Creek	47.70	35	P	P	03 42 41.7	+0.9
SCRK				IAmb	IAmb	03 42 49.8	
	comp=Z,3.7nm,0.7s						
KKN	Kakani	47.88	273	*e*P	P	03 42 43.5	+0.7
	comp=Z,19nm,0.6s						
PKIN	Phulchoki	47.91	273	*e*P	P	03 42 43.4	+0.4
VRDI	Verde Repeater	48.38	39	P	P	03 42 47.5	+1.5
DANN	Dangsing	48.76	275	*e*P	P	03 42 49.2	-0.4
	comp=Z,45nm,0.7s						
BCAR	Beaver Creek A	48.82	36	P	P	03 42 51.3	+2.0
M27K	Edge Creek, AK	48.90	37	P	P	03 42 52.3	+2.2
M27K				IAmb	IAmb	03 42 53.2	
	comp=Z,5.1nm,1.1s						
KOLN	Koldanda	49.17	274	*e*P	P	03 42 52.7	0.0
PYUN	Piuthan	49.47	275	*e*P	P	03 42 55.2	+0.3
EPYK	Eagle Plains	50.33	31	P	P	03 43 03.0	+2.3
EPYK				IAmb	IAmb	03 43 27.5	
	comp=Z,6.6nm,1.1s						
INK	Inuvik	51.13	28	P	P	03 43 08.2	+1.6
	comp=Z,1.5nm,0.5s,baz=290,slow=6.6,SNR=13						
INK	Inuvik	51.13	28	P	P	03 43 08.4	+1.8
INK				IAmb	IAmb	03 43 08.9	
	comp=Z,2.9nm,0.8s						
HYT	Haines Junctio	51.29	38	P	P	03 43 10.6	+2.5
KKAR	Karatay Array	51.87	298	P	P	03 43 11.5	-1.1
WHY	Whitehorse	52.57	38	P	P	03 43 20.1	+2.5
WHY				IAmb	IAmb	03 43 41.8	
	comp=Z,8.2nm,1.4s						
ABKAR	Akbulak array	56.12	309	P	P	03 43 42.9	-0.5
WR0	Warramunga Arr	60.52	188	P	P	03 44 13.2	-1.1
WR0				IAmb	IAmb	03 44 14.4	
	comp=Z,9.2nm,1.5s						
WRA	Warramunga Arr	60.52	188	P	P	03 44 13.1	-1.2
	comp=Z,0.2nm,0.3s,baz=7.8,slow=7.7,SNR=11						
WRA	Warramunga Arr	60.52	188	P	P	03 44 12.9	-1.4
FINES	FINESS Array B	66.00	332	P	P	03 44 49.6	-0.4
	comp=Z,2.2nm,0.8s,baz=24,slow=10,SNR=7.1						
NOA	NORSAR Array B	71.20	337	P	P	03 45 21.3	-1.2
	comp=Z,1.4nm,0.8s,baz=39,slow=6.2,SNR=3.8						
AKASG	Malin Array Be	71.88	322	P	P	03 45 23.5	-3.2
	comp=Z,1.0nm,0.5s,baz=51,slow=5.9,SNR=5.8						
PDAR	Pinedale Array	74.94	46	P	P	03 45 45.9	+0.7
	comp=Z,0.3nm,0.5s,baz=278,slow=2.6,SNR=1.6						
BUR08	Bucovina Ar. S	75.90	322	P	P	03 45 51.2	+0.8
BUR08				IAmb	IAmb	03 45 51.8	
	comp=Z,6.7nm,1.5s						
BURAR	Bucovina Array	75.91	321	P	P	03 45 50.7	+0.2
BRTR	Keskin Array B	76.93	311	P	P	03 45 55.5	-1.0
	comp=Z,0.6nm,0.7s,baz=54,slow=2.5,SNR=2.1						
BRTR	Keskin Array B	76.93	311	P	P	03 45 56.3	-0.2
GERES	GERESS Array B	80.04	328	P	P	03 46 12.5	-0.8
	comp=Z,0.3nm,0.5s,baz=45,slow=7.1,SNR=1.7						
SNAA	Sanae	144.16	198	PKPdf	PKPab	03 53 35.6	-0.3
VNA2	Neumayer--Watz	145.74	197	PKPdf	PKPdf	03 53 40.5	-0.2
VNA3	Neumayer Olymp	146.00	196	PKPdf	PKPdf	03 53 41.3	+0.1
VNA1	Neumayer--Stat	146.14	197	PKPdf	PKPbc	03 53 42.6	+0.1

INET ***02*** *03:34:50.7, 11°.68N×89°.24W, h14^{km}, MW4.8*

IDC ***02*** *03:34:57.7±0.5, 11°.93N×89°.00W, h0^{km}, mb4.5/24, mb1 4.7/26, mb1mx4.6/42, mbtmp4.6/26, ML4.0/2, MS3.9/26, Ms1 3.9/26, ms1mx3.8/37, Error ellipse: s-maj=19.3km s-min=9.9km az=53.0*

GCG ***02*** *03:34:58.7±0.7, 11°.68N×89°.11W, h6^{km}±154^{km}, MD4.5*

GCMT ***02*** *03:35:00.5±0.2, 11°.78N±0°.01×89°.37W±0°.02, h12^{km}, MW5.0/115, Moment Tensor Solution. s51,c61; s115,c186; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.29±.18; $M_{\theta\theta}$2.82±.12; $M_{\phi\phi}$1.47±.11; $M_{r\theta}$-0.09±.27; $M_{\theta\phi}$-2.18±.07; $M_{\phi r}$1.83±.35; Best double couple: $M_0$4.72300×10^{16} NP1:ϕ_s291.00000°,δ40.00000°, λ-116.00000°. NP2:ϕ_s143.00000°,δ55.00000°, λ-70.00000°. Principal axes: T 4.5860, Plg8.0000°, Azm219.0000°; N 0.2750, Plg16.0000°, Azm311.0000°; P -4.8610, Plg72.0000°, Azm104.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

SNET ***02*** *03:35:01.9±0.8, 11°.96N×89°.00W, h26^{km}±44^{km}, ML4.8*

MOS ***02*** *03:35:01.6±1.1, 11°.89N×88°.91W, h37^{km}, mb5.1/17, Error ellipse: s-maj=12.8km s-min=7.4km az=114.2*

UCR ***02*** *03:35:02.1±1.4, 11°.93N×89°.02W, h31^{km}±13^{km}, ML4.6, MW5.2*

NEIC ***02*** *03:35:03.5±2.1, 11°.91N±0°.07×88°.90W±0°.07, h28^{km}±4^{km}, mb5.1/490, Md4.8(SNET), Error ellipse: s-maj=11.2km s-min=7.4km az=224.0*

UPA ***02*** *03:35:06.6±2.5, 11°.89N×88°.66W, h10^{km}±215^{km}, MW5.0*

ISC 02 03:35:01.8±0.7**, 11°.90N**±0°.04×**88°.97W**±0°.04**, h26**^{km}±5^{km}**, n860,** σ1^{s}**05**/723**, mb5.1**/258**, MS4.1**/29**, 7C-1D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COEB	Comit de Eme	1.65	15	*e*P	Pn	03 35 28.8	-0.4
COEB				*e*S	Sn	03 35 49.8	+0.2
COEB				IAML		03 36 00.6	
	comp=Z,5µm,0.4s						
COEB	Comit de Eme	1.65	15	*e*P	Pn	03 35 28.8	-0.4
COEB				*e*S	Sn	03 35 49.8	+0.2
COEB				IAML		03 36 00.6	
	comp=Z,5µm,0.4s						
TECA	Tecapa	1.65	16	*e*P	Pn	03 35 29.0	-0.2
TECA	Tecapa	1.65	16	*e*P	Pn	03 35 29.0	-0.2
LCY	Lacayo	1.66	23	*e*P	Pn	03 35 29.0	-0.2
LCY	Lacayo	1.66	23	*e*P	Pn	03 35 29.0	-0.2
VSM	San Miguel	1.67	24	*e*P	Pn	03 35 29.7	+0.2
VSM	San Miguel	1.67	24	*e*P	Pn	03 35 29.7	+0.2
PACA	Pacayal	1.69	22	*e*P	Pn	03 35 30.2	+0.6
PACA				*e*S	Sn	03 35 51.1	+0.6
PACA	Pacayal	1.69	22	*e*P	Pn	03 35 30.2	+0.6
PACA				*e*S	Sn	03 35 51.1	+0.6
SJTE	Alcalda de S	1.71	359	*e*P	Pn	03 35 29.2	-0.8
SJTE				*e*S	Sn	03 35 50.9	-0.1
SJTE				IAML		03 35 54.3	
	comp=Z,3µm,0.3s						
SJTE	Alcalda de S	1.71	359	*e*P	Pn	03 35 29.2	-0.8
SJTE				*e*S	Sn	03 35 50.9	-0.1
SJTE				IAML		03 35 54.3	
	comp=Z,3µm,0.3s						
COEG	Centro de Oper	1.72	3	*e*P	Pn	03 35 29.2	-0.8
COEG				IAML		03 35 58.1	
	comp=Z,6µm,0.2s						
COEG	Centro de Oper	1.72	3	*e*P	Pn	03 35 29.2	-0.8
COEG				IAML		03 35 58.1	
	comp=Z,6µm,0.2s						
LFRS	El Faro	1.72	357	*e*P	Pn	03 35 29.3	-0.8
LFRS	El Faro	1.72	357	*e*P	Pn	03 35 29.3	-0.8
LCND	La Caada	1.76	37	*e*P	Pn	03 35 30.0	-0.5
LCND				IAML		03 36 02.6	
	comp=Z,6µm,0.6s						
LCND	La Caada	1.76	37	*e*P	Pn	03 35 30.0	-0.5
LCND				IAML		03 36 02.6	
	comp=Z,6µm,0.6s						
CNCH	Conchagua	1.77	39	*e*P	Pn	03 35 30.6	-0.1
CNCH	Conchagua	1.77	39	*e*P	Pn	03 35 30.6	-0.1
SNET	Serv Nac Est T	1.80	352	*e*P	Pn	03 35 30.0	-1.2
SNET				*e*P	Pn	03 35 30.5	-0.7
SNET				*e*S	Sn	03 35 52.9	-0.3
SNET				IAML		03 35 57.5	
	comp=Z,9µm,0.4s						
SNET	Serv Nac Est T	1.80	352	*e*P	Pn	03 35 30.0	-1.2
SNET				*e*P	Pn	03 35 30.5	-0.7
SNET				*e*S	Sn	03 35 52.9	-0.3
SNET				IAML		03 35 57.5	
	comp=Z,9µm,0.4s						
SNET	Serv Nac Est T	1.80	352		Pn	03 35 30.4	-0.7
PAVA	Las Pavas	1.81	1	*e*P	Pn	03 35 30.8	-0.5
PAVA				IAML		03 35 51.1	
	comp=Z,7µm,0.4s						
PAVA				*e*S	Sn	03 35 53.3	-0.1
PAVA	Las Pavas	1.81	1	*e*P	Pn	03 35 30.8	-0.5
PAVA				IAML		03 35 51.1	
	comp=Z,7µm,0.4s						
PAVA				*e*S	Sn	03 35 53.3	-0.1
JAYA	Jayaque - finc	1.81	345	*e*P	Pn	03 35 30.6	-0.8
JAYA				*e*S	Sn	03 35 53.0	-0.6
JAYA				IAML		03 35 54.5	
	comp=Z,27µm,0.3s						
JAYA	Jayaque - finc	1.81	345	*e*P	Pn	03 35 30.6	-0.8
JAYA				*e*S	Sn	03 35 53.0	-0.6
JAYA				IAML		03 35 54.5	
	comp=Z,27µm,0.3s						
OPAM	Oficina de Pla	1.82	353	*e*P	Pn	03 35 30.9	-0.5
OPAM				*e*S	Sn	03 35 53.4	-0.2
OPAM				IAML		03 35 58.4	
	comp=Z,8µm,0.3s						
OPAM	Oficina de Pla	1.82	353	*e*P	Pn	03 35 30.9	-0.5
OPAM				*e*S	Sn	03 35 53.4	-0.2
OPAM				IAML		03 35 58.4	
	comp=Z,8µm,0.3s						
UEES	Universidad Ev	1.83	352	*e*P	Pn	03 35 31.2	-0.4
UEES				IAML		03 35 55.7	
	comp=Z,12µm,0.4s						
UEES	Universidad Ev	1.83	352	*e*P	Pn	03 35 31.2	-0.4
UEES				IAML		03 35 55.7	
	comp=Z,12µm,0.4s						
LBRS	Las Brisas	1.83	358	*e*P	Pn	03 35 31.7	+0.1
LBRS	Las Brisas	1.83	358	*e*P	Pn	03 35 31.7	+0.1
LFU	La Fuente	1.85	356	*e*P	Pn	03 35 31.7	-0.2
LFU	La Fuente	1.85	356	*e*P	Pn	03 35 31.7	-0.2
BOQS	Boqueron	1.85	351	*e*P	Pn	03 35 31.6	-0.5
BOQS	Boqueron	1.85	351	*e*P	Pn	03 35 31.6	-0.5
CEDA	San Andres	1.94	348	*e*P	Pn	03 35 32.7	-0.4
CEDA				*e*S	Sn	03 35 56.0	-0.6
CEDA	San Andres	1.94	348	*e*P	Pn	03 35 32.7	-0.4
CEDA				*e*S	Sn	03 35 56.0	-0.6
CEVE	Cerro Verde	2.02	342	*e*P	Pn	03 35 34.2	-0.2
CEVE				IAML		03 36 04.5	
	comp=Z,42µm,0.3s						
CEVE	Cerro Verde	2.02	342	*e*P	Pn	03 35 34.2	-0.2
CEVE				IAML		03 36 04.5	
	comp=Z,42µm,0.3s						
SBLS	San Blas	2.03	342	*e*P	Pn	03 35 34.3	-0.3
SBLS	San Blas	2.03	342	*e*P	Pn	03 35 34.3	-0.3
CRIN	San Cristobal	2.04	67		Pn	03 35 34.3	-0.2
TACO	Tacachico	2.10	350	*e*P	Pn	03 35 35.0	-0.2
TACO				IAML		03 36 02.3	
	comp=Z,7µm,0.4s						
TACO	Tacachico	2.10	350	*e*P	Pn	03 35 35.0	-0.2
TACO				IAML		03 36 02.3	
	comp=Z,7µm,0.4s						
CNGN	Cerro Negro	2.30	75		Pn	03 35 37.9	-0.2
MTO3	Montecristo	2.52	351	*e*P	Pn	03 35 41.4	+0.2
MTO3	Montecristo	2.52	351	*e*P	Pn	03 35 41.4	+0.2
MTO3	Montecristo	2.52	351		Pn	03 35 41.4	+0.2
ESQI	Esquipulas	2.67	352		Pn	03 35 43.5	+0.3
TGUH	Tegucigalpa,Un	2.71	37		Pn	03 35 44.1	+0.4
TGUH	Tegucigalpa,Un	2.71	37	⇑*i*P	Pn	03 35 44.5	+0.7
PCG	Pacaya	2.95	327	*e*	Pn	03 35 05.2	-42
PCG				*e*P	Pb	03 35 48.0	-5.8
NBG	Las Nubes	2.99	334	⇓*e*P	Pn	03 35 49.6	+1.8
FUG	Fuego 3	3.12	325	*e*P	Pn	03 35 49.5	0.0
MRL	Marmol	3.24	348	*e*P	Pn	03 35 53.0	+1.9
MRL				*e*S	Sb	03 36 35.6	-2.3
CONN	Concepcion	3.29	95	*e*P	Pn	03 35 51.1	-0.6
HZTE	Horizontes, Gu	3.51	109	*e*P	Pn	03 35 55.5	+0.8
HZTE	Horizontes, Gu	3.51	109		Pn	03 35 55.8	+1.1
GBS3	Finca Las Img	3.62	107	*i* P	Pn	03 35 57.3	+1.1
LAPC	Finca la Perla	3.65	108	*i* P	Pn	03 35 57.4	+0.9
BUEV	Buena Vista	3.66	107	*i* P	Pn	03 35 58.1	+1.3
GB1A	Borinquen Arri	3.66	107	*i* P	Pn	03 35 58.1	+1.2
VRLE	La Escondida,	3.70	107	*e*P	Pn	03 35 58.5	+1.1
BUAI	Buenos Aires	3.71	105	*i* P	Pn	03 35 59.1	+1.7
ACON	Acoyapa	3.72	89	*e*P	Pn	03 35 56.9	-0.6
ACON	Acoyapa	3.72	89		Pn	03 35 56.4	-1.1
GPS2	Hotel Rincn d	3.73	107	*i* P	Pn	03 35 59.1	+1.4
GUAI	GUAI	3.76	115	*i* P	Pn	03 35 58.4	+0.3
ORTG	Ortega, Santa	3.77	114	*e*P	Pn	03 35 58.5	+0.2
ORTG	Ortega, Santa	3.77	114	Pn	Pn	03 35 58.7	+0.4
STG3	Santiaguito 3,	3.77	318	*e*P	Pn	03 35 59.0	+0.6
GRZA	Playa Garza	3.82	121	*e*P	Pn	03 35 58.7	-0.2
LIM1	Limonal	3.84	108	⇑*i*P	Pn	03 36 00.3	+1.1
GUAB	Guayabo de Bag	3.85	107	*i* P	Pn	03 36 01.0	+1.5
DUNO	Dulce Nombre,	3.86	118		Pn	03 35 59.8	+0.3
PLVR	Palo Verde	3.87	113	*e*P	Pn	03 35 60.0	+0.2
COLC	Colonia	3.89	108	*i* P	Pn	03 36 00.9	+1.0
HORNC	Hornillas	3.90	107	*i* P	Pn	03 36 01.4	+1.3
VMAR	Armenia, Volca	3.93	106	*e*P	Pn	03 36 01.6	+1.2
CUI	Cuipilapa	3.93	108	*i* P	Pn	03 36 02.0	+1.5
INDI	Punta indio, G	3.96	120	*e*P	Pn	03 36 00.5	-0.3
PTEN	Parque Tenorio	4.08	106	*i* P	Pn	03 36 03.1	+0.5
HUEH	Huehuetenango	4.20	324	Pn	Pn	03 36 06.6	+2.3
JTS	Las Juntas de	4.25	112	Pn	Pn	03 36 06.3	+1.4
	comp=Z,41nm,0.3s,baz=167,slow=21,SNR=113						
JTS				Sn	Sn	03 36 51.5	-2.3
	comp=Z,27nm,0.3s,baz=338,slow=15,SNR=4.3						
JTS				LR	LR	03 37 07.2	
	comp=Z,462nm,18.6s,baz=5.5,slow=30						
JTS	Las Juntas de	4.25	112	*e*P	Pn	03 36 05.8	+0.9
JTS	Las Juntas de	4.25	112	Pn	Pn	03 36 05.8	+0.9
CAO2	Cobano, Puntar	4.38	120		Pn	03 36 07.2	+0.5
ARE1	Arenal 1	4.41	108	*e*P	Pn	03 36 08.4	+1.4
CEDE	Laguna Cedeo	4.42	108	*e*P	Pn	03 36 08.2	+1.0
LAFE	Finca La Fe, P	4.50	117	*e*P	Pn	03 36 08.0	-0.3
COVE	Coope Vega, Sa	4.63	104	*e*P	Pn	03 36 11.2	+1.1
COVE	Coope Vega, Sa	4.63	104	Pn	Pn	03 36 10.4	+0.3
SRA1	San Ramn	4.76	112	*e*P	Pn	03 36 14.2	+2.2
HDC	Heredia	5.13	111		Pn	03 36 18.4	+1.4
HDC	Heredia	5.13	111	*e*P	Pn	03 36 18.7	+1.7
HDC				*e*S	Sn	03 37 16.4	+0.9
LCR2	La Lucha 2	5.33	113	*e*P	Pn	03 36 21.6	+1.8
RIMA	Rio Macho	5.45	112	*e*P	Pn	03 36 22.6	+1.2
RIMA	Rio Macho	5.45	112		Pn	03 36 23.2	+1.7
CDM	Cerro de Muert	5.62	114	*e*P	Pn	03 36 25.9	+1.7
BATAN	Batan	5.78	107	*e*P	Pn	03 36 27.6	+1.8
SRBA	San Rafael, Bu	6.12	115	Pn	Pn	03 36 32.4	+1.8
EDPN	Palmar Norte	6.16	118	*e*P	Pn	03 36 33.6	+2.6
EDBA	Buenos Aires	6.22	115	*e*P	Pn	03 36 33.8	+1.8
PTJ1	Puerto Jimnez	6.50	120	*e*P	Pn	03 36 37.3	+1.5
EDSV	San Vito	6.65	117	*e*P	Pn	03 36 39.8	+1.9
MLIR3	Monte Lirio, C	6.79	116	*e*P	Pn	03 36 37.3	-2.5
CNI2	El Empalme, Bo	6.84	110	*e*P	Pn	03 36 42.8	+2.3
CDITO	Canoas	6.85	118	*i* P	Pn	03 36 43.6	+3.1
CDITO				*i* S	Sn	03 37 55.6	-2.2
BRU2	Volcan	6.91	116	*e*P	Pn	03 36 43.7	+2.3
BRU2	Volcan	6.91	116	*i* P	Pn	03 36 44.2	+2.7
BRU2				*e*S	Sn	03 37 54.4	-5.0
BC3P	Paso Ancho	6.97	115	*e*P	Pn	03 36 44.0	+1.7
PTPM	Petroterminale	7.03	121	*i* P	Pn	03 36 44.8	+1.7
BCO2	Palmira	7.08	116	*i* P	Pn	03 36 46.4	+2.5
LNBQ3	Los Naranjos,	7.13	115	*e*P	Pn	03 36 47.6	+3.1
BAGA3	Bagala, Chiriq	7.20	118	*e*P	Pn	03 36 37.6	-7.8
DVD	David	7.28	118	*e*P	Pn	03 36 49.8	+3.3
CHIR3	Chiriqui UPA,	7.41	117	*e*P	Pn	03 36 50.0	+1.8
PRVC	Isla de Provid	7.57	78	Pn	Pn	03 36 51.3	+0.8
CACAO	El Cacao, Vera	9.19	119	*i* P	Pn	03 37 16.2	+3.5
BCIP	Isla Barro Col	9.38	106	*e*P	Pn	03 37 15.9	+0.5
UPA	Univ. de Panam	9.72	106	*e*P	Pn	03 37 20.2	+0.2
FSCY	Frank Sound, G	10.52	45	Pn	Pn	03 37 33.5	+2.6
TLIG	Tlapa	10.86	302		Pn	03 37 36.3	+0.6
UPD2	Meteti	11.28	106	*e*P	Pn	03 37 41.8	+0.4
SOR	Soroa	12.24	27	P	Pn	03 37 57.2	+2.8
SOR	Soroa	12.24	27	Pn	Pn	03 37 57.2	+2.8
MTDJ	Mount Denham	12.71	59	Pn	Pn	03 38 03.1	+2.1
MTDJ	Mount Denham	12.71	59	*e*P	Pn	03 38 01.2	+0.3
MOTC	Monteria, Cord	13.45	102	Pn	Pn	03 38 13.7	+2.6
MOTC	Monteria, Cord	13.45	102	*e*P	P	03 38 16.8	-3.4
SJCC	San Jacinto, C	13.69	97	Pn	Pn	03 38 14.9	+0.6
UREC	San Jos de Ur	13.87	106	*e*P	P	03 38 26.4	+1.7
MOIG	Morelia	14.07	305	Pn	Pn	03 38 21.9	+2.2
CBOC	Ciudad Bolivar	14.13	114	*e*P	P	03 38 32.3	+4.4
HELC	Santa Helena	14.43	112	*e*P	Pn	03 38 25.5	+0.7
YOTC	Yotoco, Valle	14.76	121	*e*P	P	03 38 33.2	-1.6
GUY2C	Guyana, Caldas	14.99	115	*e*P	Pn	03 38 32.3	-0.2
NORC	Norcasia	15.29	113	*e*P	P	03 38 45.2	+4.6
GTBY	Guantanamo Bay	15.53	57	P	P	03 38 42.2	-1.0
GTBY	Guantanamo Bay	15.53	57	*e*P	Pn	03 38 41.0	+1.9
LL6C	La Loma 6 Bece	15.57	96	*e*P	Pn	03 38 41.0	+1.3
OTAV	Otavalo	15.60	137	P	P	03 38 44.2	-0.2
OTAV				pmax	pmax		
	comp=Z,24nm,1.4s						
OTAV	Otavalo	15.60	137	P	P	03 38 44.2	-0.2
OTAV	Otavalo	15.60	137	*e*P	P	03 38 44.9	+0.4
OTAV	Otavalo	15.60	137	*e*P	Pn	03 38 39.5	-0.9
SOTA	Rioblanco	15.63	127	*e*P	Pn	03 38 42.9	+2.0
GCUF	Volcan Galeras	15.66	132	*e*P	P	03 38 45.8	+0.5
PCON	Cinco Dias	15.68	126	*e*P	P	03 38 45.8	+0.4
MARP	Paez Belalcaza	15.72	124	*e*P	P	03 38 46.8	+1.1
ORTC	Ortega, Tolima	15.73	119	*e*P	P	03 38 44.9	-0.7
OCAC	Ocana	15.83	102	*e*P	Pn	03 38 43.9	+0.7
SPBC	San Pablo de B	15.97	112	*e*P	Pn	03 38 43.9	-1.0
ROSC	El Rosal	16.09	115	Pn	P	03 38 50.7	+0.8
	comp=Z,0.3nm,0.3s,baz=107,slow=1.1,SNR=17						
ROSC	El Rosal	16.09	115	IAmb	IAmb	03 38 59.3	
	comp=Z,177nm,1.6s						
ROSC	El Rosal	16.09	115	*e*P	P	03 38 49.7	-0.2
BARC	Barichara	16.45	107	*e*P	P	03 38 57.5	+3.8
URIC	Uribia, Colomb	16.62	89	*e*P	P	03 38 54.5	-0.8
PAMC	Pamplona, Colo	16.67	104	*e*P	P	03 38 56.5	+0.1
CHIC	Chingaza	16.71	114	*e*P	P	03 38 58.4	+1.6
RUSC	La Rusia	16.79	109	*e*P	Pn	03 38 56.5	+0.8
ZAIG	Zacatecas	16.88	312	P	P	03 38 58.0	-0.5
VILC	Villavicencio,	16.98	116	*e*P	P	03 39 01.3	+1.8
060A	Indiantown	17.10	27	IAmb	IAmb	03 39 04.3	
	comp=Z,222nm,1.1s						
DWPF	Disney Wildern	17.61	23	P	P	03 39 05.9	-0.3
DWPF	Disney Wildern	17.61	23	P	Pn	03 39 03.6	-1.7
	baz=205						
KVTX	Kingsville	17.68	333	IAmb	IAmb	03 39 12.7	
	comp=Z,149nm,1.1s						
MACC	Macarena, Meta	17.85	122	*e*P	Pn	03 39 07.1	-1.3
PTLC	Puerto Leguiza	18.27	129	*e*P	P	03 39 14.9	+1.3
SDV	Santo Domingo	18.28	98	P	Pn	03 39 14.6	+0.7
	comp=Z,1.0nm,0.3s,baz=276,slow=6.4,SNR=12						
SDV				LR	LR	03 47 40.7	
	comp=Z,241nm,18.7s,baz=322,slow=42						
SDV	Santo Domingo	18.28	98	P	P	03 39 13.9	-0.1
SDV	Santo Domingo	18.28	98	*e*P	P	03 39 12.0	-2.0
SDV	Santo Domingo	18.28	98	*e*P	Pn	03 39 14.4	+0.5
PTGC	Puerto Gaitan,	18.33	113	*e*P	Pn	03 39 16.7	+2.4
656A	Willston	18.39	18	IAmb	IAmb	03 39 24.7	
	comp=Z,148nm,1.1s						
SDDR	Presa de Saban	18.43	65	*e*P	P	03 39 12.3	-3.1
553A	Crawfordville	18.68	12	P	Pn	03 39 21.5	+3.0
553A				IAmb	IAmb	03 39 23.2	
	comp=Z,170nm,0.9s						
735A	Kenedy	18.78	335	IAmb	IAmb	03 39 25.0	
	comp=Z,73nm,0.8s						
833A	Chaparral WMA,	19.03	331	P	Pn	03 39 22.5	-0.3
	baz=147,SNR=22						
HKT	Hockley	19.06	341	⇑*e*P	Pn	03 39 22.8	-0.2
HKT				pmax	pmax		
	comp=Z,107nm,1.5s						
HKT	Hockley	19.06	341	P	Pn	03 39 22.6	-0.4
HKT				IAmb	IAmb	03 39 27.8	
	comp=Z,113nm,1.4s						
441A	DeRidder	19.16	349	IAmb	IAmb	03 39 35.7	
	comp=Z,145nm,0.8s						
BRAL	Brewton	19.26	5	P	P	03 39 23.7	-0.7
	baz=186						
346A	Big Creek Wild	19.40	359	P	Pn	03 39 27.3	+0.1
346A				IAmb	IAmb	03 39 40.9	
	comp=Z,220nm,1.3s						
344A	Westbrook Farm	19.53	355	P	Pn	03 39 29.8	+1.1
344A				IAmb	IAmb	03 39 38.6	
	comp=Z,194nm,1.2s						
342A	Flagon Creek P	19.63	351	P	Pn	03 39 29.3	-0.6
456A	Hilliard	19.81	18	P	P	03 39 30.5	+0.2
456A				IAmb	IAmb	03 39 32.6	
	comp=Z,99nm,0.8s						
TIGA	Tifton	20.07	14	P	P	03 39 32.7	-0.5
	baz=195,SNR=27						
250A	Grady	20.14	7	IAmb	IAmb	03 39 42.1	
	comp=Z,213nm,1.6s						
VBMS	Vicksburg	20.28	356	P	P	03 39 36.4	+1.0
	baz=176,SNR=10						
435B	Jarrell	20.42	338	P	P	03 39 36.4	-0.6
	baz=155,SNR=39						
NATX	Nacogdoches	20.45	346	P	P	03 39 37.8	+0.4
	baz=164,SNR=18						
255A	Hazlehurst	20.81	16	IAmb	IAmb	03 39 50.5	
	comp=Z,95nm,0.9s						
143A	Socs Landing,	20.83	354	P	Pn	03 39 43.4	-0.6
143A				IAmb	IAmb	03 39 57.2	
	comp=Z,87nm,0.8s						
237A	Washetta, Mont	20.98	344	IAmb	IAmb	03 39 55.4	
	comp=Z,70nm,0.8s						
152A	Waverly Hall	21.04	10	IAmb	IAmb	03 39 57.4	
	comp=Z,77nm,1.1s						
JCT	Junction City	21.04	333	IAmb	IAmb	03 39 52.6	
	comp=Z,74nm,1.1s						
JCT	Junction City	21.04	333	P	P	03 39 43.2	-0.6
	baz=149,SNR=25						
Z47A	Carrollton	21.22	2	P	P	03 39 46.4	+0.8
Z47A				IAmb	IAmb	03 39 55.9	
	comp=Z,91nm,0.8s						
WHTX	Lake Whitney,	21.47	340	P	P	03 39 47.4	-0.9
	baz=157,SNR=56						
Z41A	Richland Creek	21.55	351	P	P	03 39 49.5	+0.4
	baz=170,SNR=9.8						
ATAH	Atahualpa	21.64	150	P	P	03 39 52.2	+1.5
	comp=Z,24nm,0.9s,baz=323,slow=13,SNR=12						
ATAH				LR	LR	03 46 44.8	
	comp=Z,312nm,20.5s,baz=319,slow=33						
Y45A	Yeager Farm, C	21.88	359	P	P	03 39 54.7	+2.0
Y49A	Blount Mountai	21.99	6	IAmb	IAmb	03 40 04.1	
	comp=Z,53nm,0.8s						
GOGA	Godfrey	22.00	12	IAmb	IAmb	03 39 59.3	
	comp=Z,56nm,0.7s						
GOGA	Godfrey	22.00	12	P	P	03 39 53.6	-0.3
	baz=194,SNR=39						
WLAR	White Oak Lake	22.02	351	IAmb	IAmb	03 40 11.9	
	comp=Z,101nm,0.9s						
CCAR	Cane Creek	22.07	354	P	P	03 39 56.7	+2.0
TXAR	Lajitas Array	22.10	324	P	P	03 39 55.7	+0.5
	comp=Z,7.4nm,0.5s,baz=145,slow=10,SNR=122						
TXAR				PcP	PcP	03 43 53.2	+0.9
	comp=Z,3.1nm,1.0s,baz=145,slow=4.6,SNR=4.2						
TXAR	Lajitas Array	22.10	324	P	P	03 39 55.3	+0.1
TXAR	Lajitas Array	22.10	324	P	P	03 39 55.3	+0.1
Y52A	Lilburn	22.32	11	IAmb	IAmb	03 40 02.7	
	comp=Z,143nm,1.2s						
OBIP	Obispado Ponce	22.44	72	P	P	03 39 58.9	0.0
OXF	Oxford	22.52	359	P	P	03 39 59.0	-0.5
	baz=179,SNR=39						
NHSC	New Hope	22.60	20	P	P	03 39 59.1	-1.3
NHSC	New Hope	22.60	20	P	P	03 39 58.7	-1.7
	baz=203,SNR=28						
Z35A	Perchaven, San	22.64	342	IAmb	IAmb	03 40 03.8	
	comp=Z,119nm,1.2s						
ABTX	Abilene, Hawle	22.84	336	P	P	03 40 01.2	-1.8
	baz=152,SNR=17						
SJG	San Juan	22.88	72	P	P	03 40 03.1	-0.4
	comp=Z,24nm,0.9s,baz=290,slow=1.5,SNR=6.6						
SJG				LR	LR	03 49 49.7	
	comp=Z,142nm,18.7s,baz=263,slow=39						
SJG	San Juan	22.88	72	P	P	03 40 02.9	-0.6

SJG				pmax	pmax		
	comp=Z,34nm,1.0s						
SJG	**San Juan**	**22.88**	**72**	P	**P**	**03 40 02.9**	**-0.6**
SJG	**San Juan**	**22.88**	**72**	*e*P	**P**	**03 39 59.5**	**-4.1**
MIAR	**Mount Ida**	**22.93**	**350**	P	**P**	**03 40 02.8**	**-1.1**
	baz=168,SNR=95						
HODGE	**Hodges**	**23.06**	**14**	P	**P**	**03 40 04.6**	**-0.6**
HODGE				IAmb	IAmb	03 40 17.7	
	comp=Z,52nm,0.9s						
SLBS	**Sierra La Lagu**	**23.12**	**303**	P	**P**	**03 40 07.0**	**+0.9**
W45A	**Hickory Valley**	**23.16**	**360**	P	**P**	**03 40 06.2**	**0.0**
HUMP	**Col San Antoni**	**23.17**	**72**	P	**P**	**03 40 06.7**	**+0.2**
HUMP				PcP	**PcP**	**03 43 55.1**	**+0.5**
W41B	**Gary Mavity, V**	**23.36**	**353**	P	**P**	**03 40 07.8**	**-0.4**
	baz=172,SNR=30						
JSC	**Jenkinsville**	**23.37**	**16**	IAmb	IAmb	03 40 12.9	
	comp=Z,128nm,1.2s						
Y57A	**Sumter**	**23.37**	**18**	P	**P**	**03 40 08.3**	**0.0**
SWET	**Sewanee**	**23.38**	**6**	IAmb	IAmb	03 40 11.8	
	comp=Z,96nm,1.4s						
W50A	**Signal Mountai**	**23.44**	**8**	IAmb	IAmb	03 40 18.4	
	comp=Z,42nm,0.9s						
WHAR	**Wooly Hollow**	**23.48**	**353**	P	**P**	**03 40 10.8**	**+1.4**
Y58A	**Scranton**	**23.50**	**20**	IAmb	IAmb	03 40 14.5	
	comp=Z,97nm,1.0s						
W52A	**Murphy**	**23.54**	**10**	IAmb	IAmb	03 40 14.2	
	comp=Z,59nm,1.2s						
W39A	**Magazine**	**23.60**	**350**	P	**P**	**03 40 10.4**	**-0.2**
	baz=168,SNR=44						
CUPR	**Culebra, Puert**	**23.73**	**72**	P	**P**	**03 40 11.6**	**-0.4**
PCRV	**Puerto La Cruz**	**23.94**	**92**	P	**P**	**03 40 15.0**	**+0.9**
	comp=Z,23nm,0.8s,baz=259,slow=2.9,SNR=8.6						
GNAR	**Gosnell**	**23.98**	**358**	P	**P**	**03 40 14.8**	**+0.6**
STVI	**Saint Thomas**	**24.04**	**72**	P	**P**	**03 40 13.9**	**-1.0**
Y60A	**Bolivia**	**24.10**	**22**	IAmb	IAmb	03 40 26.6	
	comp=Z,70nm,0.9s						
TKL	**Tuckaleechee C**	**24.12**	**10**	P	**P**	**03 40 16.0**	**+0.5**
	comp=Z,197nm,1.2s,baz=183,slow=11,SNR=33						
LCAR	**Lake Charles**	**24.15**	**356**	IAmb	IAmb	03 40 20.5	
	comp=Z,71nm,0.8s						
WVT	**Waverly**	**24.15**	**2**	P	**P**	**03 40 14.6**	**-1.1**
WVT				pmax	pmax		
	comp=Z,18nm,0.8s						
WVT	**Waverly**	**24.15**	**2**	P	**P**	**03 40 14.6**	**-1.1**
WVT	**Waverly**	**24.15**	**2**	P	**P**	**03 40 14.7**	**-1.1**
	baz=183						
KMSC	**Kings Mountain**	**24.16**	**15**	IAmb	IAmb	03 40 20.8	
	comp=Z,59nm,0.9s						
KMSC	**Kings Mountain**	**24.16**	**15**	P	**P**	**03 40 15.0**	**-0.8**
	baz=198,SNR=23						
X58A	**Rowland**	**24.20**	**20**	IAmb	IAmb	03 40 20.9	
	comp=Z,62nm,0.7s						
CLTN	**Cedars of Leba**	**24.21**	**5**	IAmb	IAmb	03 40 22.0	
	comp=Z,33nm,0.8s						
GLAT	**Glass**	**24.27**	**359**	P	**P**	**03 40 18.9**	**+2.1**
V53A	**Saluda**	**24.32**	**12**	IAmb	IAmb	03 40 43.0	
	comp=Z,81nm,1.0s						
V52A	**Sevierville**	**24.33**	**11**	IAmb	IAmb	03 40 22.1	
	comp=Z,61nm,1.0s						
UTMT	**University of**	**24.34**	**0**	P	**P**	**03 40 19.0**	**+1.6**
WMOK	**Wichita Mounta**	**24.43**	**340**	IAmb	IAmb	03 40 23.9	
	comp=Z,60nm,1.2s						
WMOK	**Wichita Mounta**	**24.43**	**340**	P	**P**	**03 40 16.6**	**-1.7**
	baz=156,SNR=36						
W57A	**Gilead**	**24.55**	**18**	IAmb	IAmb	03 40 24.9	
	comp=Z,82nm,1.1s						
U40A	**Yellville**	**24.61**	**352**	P	**P**	**03 40 19.0**	**-0.9**
	baz=171,SNR=54						
OKCFA	**Oklahoma City**	**24.64**	**343**	IAmb	IAmb	03 40 28.6	
	comp=Z,73nm,0.9s						
PARMO	**Parma**	**24.67**	**358**	P	**P**	**03 40 20.9**	**+0.4**
U49A	**Red Boiling Sp**	**24.68**	**6**	P	**P**	**03 40 19.8**	**-0.8**
U49A				IAmb	IAmb	03 40 24.2	
	comp=Z,59nm,1.0s						
HHAR	**Hobbs**	**24.69**	**350**	IAmb	IAmb	03 40 25.7	
	comp=Z,37nm,0.9s						
TUL1	**Leonard**	**24.69**	**347**	IAmb	IAmb	03 40 51.0	
	comp=Z,53nm,0.8s						
TUL1	**Leonard**	**24.69**	**347**	P	**P**	**03 40 19.3**	**-1.4**
	baz=164,SNR=21						
TBTG	**Tabatinga, AM**	**24.79**	**129**	*e*P	**P**	**03 40 22.7**	**+0.9**
TBTG	**Tabatinga, AM**	**24.79**	**129**	*e*P	**P**	**03 40 22.3**	**+0.5**
PBMO	**Poplar Bluff**	**24.81**	**357**	IAmb	IAmb	03 40 28.5	
	comp=Z,81nm,1.0s						
MNTX	**Cornudas Mount**	**24.85**	**325**	P	**P**	**03 40 22.0**	**-0.2**
MNTX					**PcP**	**03 43 59.1**	**+1.1**
MNTX	**Cornudas Mount**	**24.85**	**325**	P	**P**	**03 40 21.7**	**-0.4**
	baz=139,SNR=45						
V55A	**Taylorsville**	**24.86**	**15**	IAmb	IAmb	03 40 28.4	
	comp=Z,93nm,1.1s						
U38A	**Gravette**	**24.92**	**350**	IAmb	IAmb	03 40 27.9	
	comp=Z,39nm,0.9s						
TZTN	**Tazewell**	**25.02**	**10**	IAmb	IAmb	03 40 35.2	
	comp=Z,51nm,1.1s						
TZTN	**Tazewell**	**25.02**	**10**	P	**P**	**03 40 23.6**	**-0.1**
	baz=192,SNR=8.2						
T42A	**Van Buren**	**25.10**	**356**	P	**P**	**03 40 23.1**	**-1.2**
T42A				IAmb	IAmb	03 40 31.0	
	comp=Z,55nm,1.1s						
CNNC	**Cliffs of the**	**25.32**	**22**	IAmb	IAmb	03 40 31.0	
	comp=Z,75nm,1.2s						
CNNC	**Cliffs of the**	**25.32**	**22**	P	**P**	**03 40 25.8**	**-0.6**
	baz=206						
MGMO	**Mountain Grove**	**25.32**	**354**	P	**P**	**03 40 26.8**	**+0.4**
MGMO				PcP	**PcP**	**03 43 59.5**	**+0.6**
MSTX	**Muleshoe**	**25.33**	**332**	IAmb	IAmb	03 40 30.2	
	comp=Z,60nm,1.1s						
MSTX	**Muleshoe**	**25.33**	**332**	P	**P**	**03 40 25.3**	**-1.3**
	baz=147,SNR=15						
U54A	**Nelsons Funny**	**25.35**	**14**	IAmb	IAmb	03 40 30.0	
	comp=Z,75nm,0.9s						
V58A	**Windy Hill, Pi**	**25.41**	**19**	IAmb	IAmb	03 40 39.0	
	comp=Z,75nm,1.1s						
U56A	**King**	**25.55**	**16**	IAmb	IAmb	03 40 35.7	
	comp=Z,59nm,0.9s						
AMTX	**Amarillo**	**25.63**	**335**	P	**P**	**03 40 28.6**	**-0.8**
	baz=150						
S44A	**Carbondale**	**25.69**	**359**	P	**P**	**03 40 31.8**	**+2.1**
S44A				IAmb	IAmb	03 40 43.5	
	comp=Z,70nm,0.9s						
T35A	**Sooner Cattle**	**25.82**	**346**	IAmb	IAmb	03 41 28.8	
	comp=Z,41nm,1.1s						
USIN	**University of**	**25.99**	**2**	P	**P**	**03 40 33.1**	**+0.7**
USIN				IAmb	IAmb	03 40 37.4	
	comp=Z,137nm,1.7s						
U32A	**Winter Ranch,**	**26.00**	**341**	IAmb	IAmb	03 40 40.9	
	comp=Z,43nm,1.1s						
FVM	**French Village**	**26.01**	**357**	IAmb	IAmb	03 40 47.3	
	comp=Z,55nm,1.4s						
WCI	**Wyandotte Cave**	**26.33**	**5**	P	**P**	**03 40 34.4**	**-1.1**
WCI				pmax	pmax		
	comp=Z,58nm,0.8s						
WCI	**Wyandotte Cave**	**26.33**	**5**	P	**P**	**03 40 34.4**	**-1.1**
WCI				IAmb	IAmb	03 40 38.4	
	comp=Z,58nm,0.8s						
WCI	**Wyandotte Cave**	**26.33**	**5**	P	**P**	**03 40 35.2**	**-0.4**
	baz=186						
BLA	**Blacksburg**	**26.35**	**16**	IAmb	IAmb	03 40 39.7	
	comp=Z,60nm,1.2s						
BLA	**Blacksburg**	**26.35**	**16**	P	**P**	**03 40 35.5**	**-0.3**
	baz=199,SNR=15						
R40A	**Maddies Statio**	**26.45**	**354**	IAmb	IAmb	03 40 44.2	
	comp=Z,32nm,0.8s						
R49A	**Shelbyville**	**26.50**	**7**	P	**P**	**03 40 37.6**	**+0.5**
HSIG		**26.64**	**313**	P	**P**	**03 40 39.1**	**+0.7**
SLM	**Saint Louis**	**26.65**	**358**	P	**P**	**03 40 39.3**	**+0.9**
SLM				pmax	pmax		
	comp=Z,29nm,0.8s						
SLM	**Saint Louis**	**26.65**	**358**	P	**P**	**03 40 39.3**	**+0.9**
SLM				IAmb	IAmb	03 40 46.3	
	comp=Z,29nm,0.8s						
S54A	**Dingess, Beckl**	**26.69**	**14**	IAmb	IAmb	03 40 42.5	
	comp=Z,100nm,1.8s						
OLIL	**Olney**	**26.74**	**2**	IAmb	IAmb	03 40 53.4	
	comp=Z,46nm,1.1s						
121A	**Cookes Peak, D**	**26.84**	**323**	P	**P**	**03 40 40.3**	**-0.1**
	baz=136,SNR=9.4						
Q44A	**Meyer Farm, Va**	**26.90**	**360**	IAmb	IAmb	03 40 43.8	
	comp=Z,53nm,1.0s						
319A	**Douglas**	**26.97**	**319**	P	**P**	**03 40 43.0**	**+1.4**
319A				IAmb	IAmb	03 40 44.3	
	comp=Z,47nm,1.0s						
T59A	**Double "B" Far**	**27.00**	**20**	IAmb	IAmb	03 40 45.5	
	comp=Z,100nm,1.7s						
R53A	**Hurricane**	**27.06**	**12**	IAmb	IAmb	03 40 45.5	
	comp=Z,38nm,1.1s						
T60A	**Surry**	**27.43**	**22**	IAmb	IAmb	03 40 51.7	
	comp=Z,44nm,0.9s						
Q51A	**Peebles**	**27.48**	**10**	IAmb	IAmb	03 40 48.8	
	comp=Z,40nm,0.7s						
Y22D	**IRIS PASSCAL I**	**27.48**	**326**	P	**P**	**03 40 47.9**	**+1.8**
Y22D				IAmb	IAmb	03 40 52.4	
	comp=Z,48nm,0.9s						
Y22D	**IRIS PASSCAL I**	**27.48**	**326**	P	**P**	**03 40 46.7**	**+0.5**
	baz=139						
Q52A	**Bidwell**	**27.61**	**11**	IAmb	IAmb	03 40 50.4	
	comp=Z,37nm,0.9s						
P48A	**Milroy**	**27.63**	**6**	P	**P**	**03 40 47.6**	**+0.4**
P48A				IAmb	IAmb	03 40 49.0	
	comp=Z,24nm,0.8s						
P43A	**Skaggs, Pawnee**	**27.64**	**359**	IAmb	IAmb	03 40 50.6	
	comp=Z,36nm,1.1s						
P49A	**Miami Univ. Ec**	**27.78**	**7**	P	**P**	**03 40 49.3**	**+0.8**
	baz=189						
R32A	**Long Quarter,**	**27.81**	**343**	IAmb	IAmb	03 40 52.4	
	comp=Z,66nm,1.1s						
ANMO	**Albuquerque**	**27.91**	**328**	P	**P**	**03 40 50.3**	**+0.4**
	comp=Z,2.4nm,0.8s,baz=141,slow=12,SNR=4.1						
ANMO	**Albuquerque**	**27.91**	**328**	P	**P**	**03 40 50.6**	**+0.6**
ANMO	**Albuquerque**	**27.91**	**328**	P	**P**	**03 40 49.8**	**-0.2**
	baz=141						
Q54A	**Coxs Mills**	**27.93**	**14**	IAmb	IAmb	03 40 53.0	
	comp=Z,28nm,0.7s						
KSU1	**Kansas State U**	**27.93**	**347**	IAmb	IAmb	03 40 55.6	
	comp=Z,42nm,0.9s						
KSU1	**Kansas State U**	**27.93**	**347**	P	**P**	**03 40 48.8**	**-1.2**
	baz=164,SNR=8.2						
P51A	**Williamsport**	**27.97**	**10**	IAmb	IAmb	03 40 53.2	
	comp=Z,22nm,0.7s						
O44A	**Mansfield**	**28.15**	**1**	IAmb	IAmb	03 40 54.6	
	comp=Z,98nm,1.8s						
CBN	**Corbin Frederi**	**28.17**	**20**	IAmb	IAmb	03 41 03.8	
	comp=Z,38nm,0.7s						
CBN	**Corbin Frederi**	**28.17**	**20**	P	**P**	**03 40 50.8**	**-1.2**
	baz=204						
P52A	**Corning**	**28.28**	**11**	IAmb	IAmb	03 40 56.1	
	comp=Z,34nm,1.1s						
P52A	**Corning**	**28.28**	**11**	P	**P**	**03 40 52.7**	**-0.4**
	baz=194,SNR=9.2						
P53A	**Whipple**	**28.29**	**12**	P	**P**	**03 40 54.4**	**+1.3**
P53A				IAmb	IAmb	03 40 56.9	
	comp=Z,69nm,1.1s						
SFIN	**Lafayette**	**28.42**	**3**	IAmb	IAmb	03 41 04.6	
	comp=Z,48nm,1.5s						
SFIN	**Lafayette**	**28.42**	**3**	P	**P**	**03 40 53.7**	**-0.5**
	baz=184						
CBKS	**Cedar Bluff**	**28.47**	**342**	IAmb	IAmb	03 41 03.2	
	comp=Z,34nm,0.8s						
CBKS	**Cedar Bluff**	**28.47**	**342**	P	**P**	**03 40 53.9**	**-0.8**
	baz=157						
TUC	**Tucson**	**28.55**	**319**	P	**P**	**03 40 56.0**	**+0.4**
TUC				pmax	pmax		
	comp=Z,15nm,1.0s						
TUC	**Tucson**	**28.55**	**319**	P	**P**	**03 40 56.0**	**+0.4**
TUC	**Tucson**	**28.55**	**319**	P	**P**	**03 40 55.0**	**-0.5**
	baz=130						
HDIL	**Hopedale**	**28.55**	**359**	P	**P**	**03 40 57.5**	**+2.2**
HDIL				IAmb	IAmb	03 41 03.4	
	comp=Z,36nm,1.1s						
HDIL				PcP	**PcP**	**03 44 07.8**	**+1.4**
HDIL	**Hopedale**	**28.55**	**359**	P	**P**	**03 40 55.1**	**-0.3**
	baz=179						
T25A	**Trinidad**	**28.71**	**334**	P	**P**	**03 40 57.5**	**+0.4**
	baz=147,SNR=12						
ACSO	**Alum Creek Sta**	**28.71**	**10**	IAmb	IAmb	03 40 60.0	
	comp=Z,35nm,0.8s						
ACSO	**Alum Creek Sta**	**28.71**	**10**	P	**P**	**03 40 56.4**	**-0.5**
	baz=192,SNR=7.2						
N41A	**Harden Midland**	**28.75**	**357**	IAmb	IAmb	03 41 00.0	
	comp=Z,59nm,0.9s						
O52A	**Adamsville**	**28.81**	**11**	P	**P**	**03 40 58.8**	**+1.1**
O52A				IAmb	IAmb	03 41 00.9	
	comp=Z,50nm,1.0s						
MCWV	**Mont Chateau**	**28.81**	**15**	IAmb	IAmb	03 41 01.2	
	comp=Z,54nm,1.6s						
MCWV	**Mont Chateau**	**28.81**	**15**	P	**P**	**03 40 57.2**	**-0.5**
	baz=199						
N38A	**Joes South For**	**29.03**	**353**	IAmb	IAmb	03 41 11.1	
	comp=Z,63nm,1.4s						
O53A	**New Philadelph**	**29.06**	**12**	IAmb	IAmb	03 41 03.2	
	comp=Z,45nm,1.0s						
O53A	**New Philadelph**	**29.06**	**12**	P	**P**	**03 40 59.3**	**-0.6**
	baz=196,SNR=11						
P57A	**Homestead Farm**	**29.14**	**18**	IAmb	IAmb	03 41 04.4	
	comp=Z,33nm,0.9s						
O54A	**Avella**	**29.18**	**14**	P	**P**	**03 41 02.1**	**+1.1**
O54A				IAmb	IAmb	03 41 04.2	
	comp=Z,26nm,0.8s						
N49A	**Columbus Grove**	**29.22**	**7**	IAmb	IAmb	03 41 04.0	
	comp=Z,22nm,0.8s						
N35A	**Tabor**	**29.44**	**350**	IAmb	IAmb	03 41 14.8	
	comp=Z,41nm,1.0s						
N51A	**Ashland**	**29.49**	**10**	IAmb	IAmb	03 41 06.5	
	comp=Z,38nm,1.1s						
KSCO	**Kaye Shedlock'**	**29.61**	**338**	P	**P**	**03 41 04.2**	**-0.8**
	baz=152,SNR=5.8						
214A	**Organ Pipe Nat**	**29.67**	**316**	P	**P**	**03 41 06.5**	**+1.0**
	baz=127,SNR=10						
N53A	**Lisbon**	**29.67**	**13**	IAmb	IAmb	03 41 08.0	
	comp=Z,22nm,0.8s						
SDCO	**Great Sand Dun**	**29.69**	**333**	P	**P**	**03 41 06.2**	**+0.3**
	baz=146						
O56A	**Blue Knob Stat**	**29.72**	**16**	IAmb	IAmb	03 41 18.3	
	comp=Z,41nm,1.6s						
O56A	**Blue Knob Stat**	**29.72**	**16**	P	**P**	**03 41 06.2**	**+0.4**
	baz=201						
BOAV	**Boa Vista**	**29.73**	**106**	*e*P	**P**	**03 41 06.8**	**+0.7**
W18A	**Petrified Fore**	**29.82**	**324**	P	**P**	**03 41 09.2**	**+2.2**
W18A				IAmb	IAmb	03 41 11.0	
	comp=Z,28nm,1.2s						
W18A	**Petrified Fore**	**29.82**	**324**	P	**P**	**03 41 07.6**	**+0.6**
	baz=136,SNR=8.2						
L42A	**Oliver, Polo**	**30.00**	**359**	IAmb	IAmb	03 41 11.1	
	comp=Z,65nm,1.4s						
N54A	**Moraine State**	**30.01**	**14**	IAmb	IAmb	03 41 11.6	
	comp=Z,63nm,1.4s						
N54A	**Moraine State**	**30.01**	**14**	P	**P**	**03 41 07.4**	**-0.9**
	baz=198,SNR=6.7						
MVL	**Millersville**	**30.13**	**20**	IAmb	IAmb	03 41 13.7	
	comp=Z,40nm,1.4s						
L44A	**Lake County Fo**	**30.18**	**2**	P	**P**	**03 41 09.8**	**0.0**
	baz=182						
P60A	**Greenville**	**30.21**	**21**	IAmb	IAmb	03 41 15.0	
	comp=Z,45nm,1.4s						
P60A	**Greenville**	**30.21**	**21**	P	**P**	**03 41 08.7**	**-1.3**
	baz=206						
BBSR	**BB Station**	**30.21**	**44**	P	**P**	**03 41 10.5**	**+0.3**
BBSR				IAmb	IAmb	03 41 11.5	
	comp=Z,35nm,0.8s						
PAGS	**Pennsylvania G**	**30.22**	**19**	IAmb	IAmb	03 41 13.3	
	comp=Z,24nm,1.0s						
SSPA	**Standing Stone**	**30.25**	**17**	P	**P**	**03 41 11.5**	**+1.1**
SSPA	**Standing Stone**	**30.25**	**17**	P	**P**	**03 41 09.6**	**-0.8**
	baz=202						
S22A	**4UR Ranch, Cre**	**30.30**	**331**	P	**P**	**03 41 11.8**	**+0.5**
	baz=144						
M53A	**WI Miller and**	**30.32**	**12**	IAmb	IAmb	03 41 22.7	
	comp=Z,35nm,1.1s						
M53A	**WI Miller and**	**30.32**	**12**	P	**P**	**03 41 10.7**	**-0.4**
	baz=196						
BGNE	**Belgrade**	**30.48**	**346**	IAmb	IAmb	03 41 15.7	
	comp=Z,36nm,0.8s						
BGNE	**Belgrade**	**30.48**	**346**	P	**P**	**03 41 12.8**	**+0.2**
	baz=162						
Q24A	**Divide**	**30.56**	**335**	P	**P**	**03 41 14.2**	**+0.6**
	baz=148						
M54A	**Oil Creek Stat**	**30.61**	**14**	IAmb	IAmb	03 41 25.5	
	comp=Z,20nm,0.8s						
M54A	**Oil Creek Stat**	**30.61**	**14**	P	**P**	**03 41 13.6**	**-0.1**
	baz=198						
AAM	**Ann Arbor**	**30.64**	**8**	IAmb	IAmb	03 41 16.7	
	comp=Z,90nm,1.7s						
AAM	**Ann Arbor**	**30.64**	**8**	P	**P**	**03 41 14.1**	**+0.2**
	baz=190						
L34A	**Svendsen Farm,**	**30.65**	**349**	IAmb	IAmb	03 41 25.6	
	comp=Z,21nm,0.7s						
K43A	**Burlington**	**30.70**	**1**	IAmb	IAmb	03 41 20.6	
	comp=Z,41nm,1.3s						
MVCO	**Mesa Verde**	**30.70**	**328**	P	**P**	**03 41 15.1**	**+0.3**
MVCO				PcP	**PcP**	**03 44 13.5**	**+1.0**
MVCO	**Mesa Verde**	**30.70**	**328**	P	**P**	**03 41 14.8**	**0.0**
	baz=140						
M55A	**Ridgway**	**30.79**	**15**	IAmb	IAmb	03 41 18.6	
	comp=Z,57nm,1.4s						
K38A	**Parkersburg**	**30.82**	**355**	IAmb	IAmb	03 41 18.7	
	comp=Z,40nm,0.8s						
JFWS	**Jewell Farm**	**30.92**	**358**	P	**P**	**03 41 15.9**	**-0.5**
	baz=177,SNR=12						
LUPA	**Lehigh Univers**	**31.00**	**20**	IAmb	IAmb	03 41 21.3	
	comp=Z,60nm,1.6s						
WUAZ	**Wupatki**	**31.05**	**323**	P	**P**	**03 41 19.2**	**+1.4**
WUAZ	**Wupatki**	**31.05**	**323**	P	**P**	**03 41 18.2**	**+0.3**
	baz=134						
ERPA	**Erie**	**31.11**	**13**	P	**P**	**03 41 16.4**	**-1.6**
	baz=197						
OGNE	**Ogallala**	**31.13**	**341**	P	**P**	**03 41 18.1**	**-0.3**
	baz=155						
N59A	**State Game Lan**	**31.15**	**20**	P	**P**	**03 41 16.9**	**-1.6**
	baz=205						
ETMB	**Extrema**	**31.25**	**133**	*e*P	**P**	**03 41 19.5**	**-0.1**
J47A	**Sunmer**	**31.43**	**6**	IAmb	IAmb	03 41 23.4	
	comp=Z,22nm,0.5s						
ISCO	**Idaho Springs**	**31.45**	**335**	P	**P**	**03 41 21.9**	**+0.4**
	baz=148						
GLA	**Glamis**	**31.69**	**316**	IAmb	IAmb	03 41 26.0	
	comp=Z,33nm,1.2s						
GLA	**Glamis**	**31.69**	**316**	P	**P**	**03 41 23.7**	**+0.3**
	baz=126						
ODNJ	**Ogdensburg**	**31.70**	**21**	IAmb	IAmb	03 41 27.5	
	comp=Z,33nm,1.3s						
KSPA	**Keystone Colle**	**31.73**	**19**	IAmb	IAmb	03 41 27.8	
	comp=Z,45nm,1.5s						
L56A	**Greenwood**	**31.73**	**16**	IAmb	IAmb	03 41 26.9	
	comp=Z,24nm,1.1s						
MACA	**Manacapuru-AM**	**31.85**	**116**	*e*P	**P**	**03 41 25.4**	**+0.5**
PAL	**Palisades**	**31.88**	**22**	IAmb	IAmb	03 41 29.0	
	comp=Z,27nm,1.1s						
PAL	**Palisades**	**31.88**	**22**	P	**P**	**03 41 24.5**	**-0.2**
	baz=209						
I40A	**Norwalk**	**31.91**	**358**	P	**P**	**03 41 24.6**	**-0.5**
I40A				IAmb	IAmb	03 41 27.9	
	comp=Z,32nm,1.1s						
PDMCI	**Parker Dam,Lak**	**31.98**	**318**	P	**P**	**03 41 27.3**	**+1.5**
	baz=128						
MMNY	**Mt. Morris Dam**	**32.19**	**15**	IAmb	IAmb	03 41 30.8	
	comp=Z,23nm,1.0s						
U15A	**North Rim**	**32.22**	**323**	P	**P**	**03 41 29.6**	**+1.4**
U15A				IAmb	IAmb	03 41 31.4	
	comp=Z,17nm,1.0s						
BINY	**Binghamton**	**32.24**	**18**	IAmb	IAmb	03 41 32.3	
	comp=Z,45nm,1.2s						
BINY	**Binghamton**	**32.24**	**18**	P	**P**	**03 41 27.6**	**-0.4**
	baz=204						
SWSC	**Sam W. Stewart**	**32.30**	**315**	P	**P**	**03 41 29.3**	**+0.7**
	baz=124,SNR=6.1						
W13A	**Hualapai Mount**	**32.31**	**320**	IAmb	IAmb	03 41 32.0	
	comp=Z,34nm,1.2s						
IKP	**In-Ko-Pah, Jac**	**32.35**	**314**	P	**P**	**03 41 30.5**	**+1.3**
	baz=124,SNR=6.3						
ECSD	**EROS Data Cent**	**32.40**	**350**	IAmb	IAmb	03 42 33.9	
	comp=Z,29nm,1.1s						
ECSD	**EROS Data Cent**	**32.40**	**350**	P	**P**	**03 41 28.7**	**-0.7**
	baz=166,SNR=17						
BC3	**Big Chuckawall**	**32.46**	**316**	P	**P**	**03 41 31.4**	**+1.2**
	baz=126,SNR=14						
H43A	**Windswept, Lux**	**32.48**	**2**	IAmb	IAmb	03 41 32.5	
	comp=Z,24nm,1.1s						
N23A	**Red Feather La**	**32.51**	**336**	P	**P**	**03 41 31.3**	**+0.6**
	baz=148						
IRM	**Iron Mountain**	**32.55**	**317**	P	**P**	**03 41 32.2**	**+1.3**
	baz=127,SNR=14						
MONP2	**Monument Peak**	**32.70**	**314**	P	**P**	**03 41 33.4**	**+1.0**
	baz=123,SNR=6.0						
O20A	**White River Ci**	**32.87**	**332**	P	**P**	**03 41 35.6**	**+1.8**
O20A				IAmb	IAmb	03 41 43.1	
	comp=Z,17nm,0.8s						
O20A				PcP	**PcP**	**03 44 19.0**	**+0.8**
O20A	**White River Ci**	**32.87**	**332**	P	**P**	**03 41 35.0**	**+1.2**
	baz=144,SNR=7.9						
KNB	**Kanab**	**32.93**	**323**	IAmb	IAmb	03 41 37.6	
	comp=Z,21nm,1.0s						
PKCU	**Pink Cliffs**	**32.94**	**325**	P	**P**	**03 41 36.1**	**+1.6**
PKCU				IAmb	IAmb	03 41 38.3	
	comp=Z,34nm,1.1s						
SAML	**Samuel**	**32.96**	**128**	P	**P**	**03 41 33.4**	**-1.2**
SAML				pmax	pmax		
	comp=Z,30nm,1.3s						
SAML	**Samuel**	**32.96**	**128**	P	**P**	**03 41 33.4**	**-1.2**
SAML				IAmb	IAmb	03 41 34.8	
	comp=Z,30nm,1.2s						
SAML	**Samuel**	**32.96**	**128**	*e*P	**P**	**03 41 33.8**	**-0.7**
GLMI	**Grayling**	**33.02**	**6**	P	**P**	**03 41 34.8**	**0.0**
	baz=188						
BELC	**Belle Mtn. Jos**	**33.03**	**316**	P	**P**	**03 41 35.8**	**+0.5**
	baz=125,SNR=8.7						
TPFO	**Pinon Flats**	**33.12**	**315**	P	**P**	**03 41 36.4**	**+0.4**
	baz=124						
PFO	**Pinyon Flats O**	**33.13**	**315**	*e*P	**P**	**03 41 36.0**	**0.0**
PFO	**Pinyon Flats O**	**33.13**	**315**	P	**P**	**03 41 37.0**	**+0.9**
PFO	**Pinyon Flats O**	**33.13**	**315**	P	**P**	**03 41 36.9**	**+0.9**
	baz=124						
109C	**Camp Elliot, M**	**33.18**	**314**	P	**P**	**03 41 36.8**	**+0.4**
	baz=122						
GMRC	**Granite Mounta**	**33.27**	**318**	P	**P**	**03 41 38.7**	**+1.5**
	baz=127,SNR=16						
G40A	**Rib Lake**	**33.27**	**358**	P	**P**	**03 41 38.5**	**+1.5**
J57A	**Williamstown**	**33.35**	**17**	IAmb	IAmb	03 41 41.2	
	comp=Z,42nm,1.1s						
SPMN	**Marine on St.**	**33.38**	**355**	P	**P**	**03 41 37.2**	**-0.7**
	baz=173,SNR=38						
P18A	**Preston Nutter**	**33.43**	**329**	P	**P**	**03 41 40.0**	**+1.1**
P18A				PcP	**PcP**	**03 44 21.1**	**+1.2**
SZCU	**Shurtz Canyon**	**33.48**	**324**	IAmb	IAmb	03 41 42.5	
	comp=Z,19nm,0.9s						
SUSD	**Miller**	**33.55**	**347**	P	**P**	**03 41 37.9**	**-1.5**
	baz=162,SNR=9.5						
QUA2	**Belchertown**	**33.56**	**23**	IAmb	IAmb	03 41 44.2	
	comp=Z,42nm,1.2s						
L61B	**Northampton**	**33.58**	**22**	P	**P**	**03 41 37.7**	**-2.0**
	baz=210						
CCUT	**Cedar City**	**33.61**	**324**	P	**P**	**03 41 42.5**	**+2.2**
CCUT				IAmb	IAmb	03 41 43.9	
	comp=Z,20nm,1.0s						
MVU	**Marysvale**	**33.63**	**326**	P	**P**	**03 41 41.1**	**+0.6**
MVU				IAmb	IAmb	03 41 52.1	
	comp=Z,33nm,1.0s						
MURC	**Murrieta**	**33.63**	**315**	P	**P**	**03 41 40.9**	**+0.6**
	baz=123						
TMUT	**Trail Mountain**	**33.67**	**328**	P	**P**	**03 41 42.3**	**+1.3**
TMUT				PcP	**PcP**	**03 44 21.5**	**+0.9**
RWWY	**Rawlins**	**33.70**	**335**	IAmb	IAmb	03 41 47.9	
	comp=Z,27nm,0.9s						
HEC	**Hector,Ludlow**	**33.74**	**317**	P	**P**	**03 41 41.8**	**+0.5**
	baz=126						
F42A	**Maple Grove Fa**	**33.76**	**1**	IAmb	IAmb	03 41 43.5	
	comp=Z,45nm,1.6s						
BBRC	**Big Bear Solar**	**33.81**	**316**	P	**P**	**03 41 42.3**	**+0.2**
	baz=124						
SADO	**Sadowa**	**33.83**	**13**	IAmb	IAmb	03 41 43.8	
	comp=Z,30nm,0.9s						
TUQ	**Turquoise Moun**	**33.83**	**318**	P	**P**	**03 41 42.6**	**+0.4**
	baz=127						
TCRU	**Three Creeks R**	**33.83**	**326**	P	**P**	**03 41 42.1**	**-0.2**
TCRU				PcP	**PcP**	**03 44 21.1**	**+0.2**
DELO	**Deloro Mine**	**33.94**	**15**	IAmb	IAmb	03 41 45.5	
	comp=Z,48nm,1.3s						
HRV	**Adam Dziewonsk**	**34.05**	**23**	P	**P**	**03 41 43.7**	**-0.1**
	baz=211						
F36A	**Milaca**	**34.07**	**354**	IAmb	IAmb	03 41 54.9	
	comp=Z,41nm,1.4s						
COWI	**Conover**	**34.09**	**360**	IAmb	IAmb	03 41 46.6	
	comp=Z,38nm,0.9s						
RRX	**Edison Barstow**	**34.21**	**317**	P	**P**	**03 41 45.6**	**+0.3**
	baz=125						
K22A	**Casper**	**34.23**	**337**	IAmb	IAmb	03 41 53.0	
	comp=Z,36nm,1.2s						
K22A	**Casper**	**34.23**	**337**	P	**P**	**03 41 45.2**	**-0.4**
	baz=148,SNR=5.3						
BFSC	**Mount Baldy Ra**	**34.30**	**315**	P	**P**	**03 41 46.9**	**+0.6**
	baz=124						
GSC	**Goldstone, Bar**	**34.33**	**317**	P	**P**	**03 41 47.0**	**+0.6**
	baz=126						
SHOC	**Shoshone, Teco**	**34.34**	**319**	P	**P**	**03 41 47.0**	**+0.6**
	baz=127						
CIS	**Catalina Islan**	**34.39**	**313**	P	**P**	**03 41 46.4**	**-0.4**
	baz=122						
F33A	**5 Mile Ranch,**	**34.40**	**351**	P	**P**	**03 41 47.1**	**+0.4**
F33A				IAmb	IAmb	03 41 48.5	
	comp=Z,18nm,0.8s						
E43A	**Lone Tree Farm**	**34.41**	**2**	IAmb	IAmb	03 41 48.6	
	comp=Z,34nm,0.9s						

PRN	Pahroc Range	34.52	322	P	P	03 41 50.0	+1.9
PRN				PcP	PcP	03 44 23.1	+0.3
PLVO	Plevna	34.56	15	IAmb	IAmb	03 41 52.1	
	comp=Z,38nm,1.3s						
PSUT	Pine Spring	34.57	324	P	P	03 41 50.0	+1.4
PASC	Pasadena Art C	34.63	315	IAmb	IAmb	03 41 54.1	
	comp=Z,47nm,1.8s						
RSSD	Black Hills	34.63	341	P	P	03 41 48.5	-0.6
RSSD				pmax	pmax		
	comp=Z,21nm,0.9s						
RSSD	Black Hills	34.63	341	P	P	03 41 48.5	-0.6
RSSD				IAmb	IAmb	03 41 57.8	
	comp=Z,21nm,0.8s						
RSSD	Black Hills	34.63	341	P	P	03 41 48.9	-0.2
	baz=153						
QSM	Queen of Sheba	34.76	318	P	P	03 41 51.2	+1.1
QSM				IAmb	IAmb	03 41 52.8	
	comp=Z,26nm,1.1s						
GWY	Greenwater Val	34.77	319	P	P	03 41 51.1	+0.8
GWY				PcP	PcP	03 44 24.5	+0.9
LPAZ	La Paz	34.77	143	P	P	03 41 50.8	-0.3
	comp=Z,1.4nm,1.0s,baz=336,slow=12,SNR=2.4						
LPAZ	La Paz	34.77	143	*e*P	P	03 41 50.6	-0.4
LONY	Lake Ozonia	34.87	18	IAmb	IAmb	03 42 02.5	
	comp=Z,35nm,1.2s						
LONY	Lake Ozonia	34.87	18	P	P	03 41 49.6	-1.3
	baz=205						
EDW2	Edwards Air Fo	34.89	316	P	P	03 41 50.8	-0.5
	baz=124						
LRMC	Laurel Mtn Rad	35.02	317	P	P	03 41 52.2	-0.2
	baz=125						
FURC	Furnace Creek,	35.06	319	P	P	03 41 53.7	+1.1
	baz=127,SNR=11						
TCUT	Toone Canyon	35.14	330	IAmb	IAmb	03 42 02.6	
	comp=Z,23nm,1.1s						
DUG	Dugway, Tooele	35.17	327	P	P	03 41 53.8	+0.1
	baz=137,SNR=6.6						
FRNY	Flat Rock	35.37	19	IAmb	IAmb	03 41 58.3	
	comp=Z,40nm,1.2s						
LBNH	Lisbon	35.41	21	IAmb	IAmb	03 41 58.4	
	comp=Z,38nm,1.3s						
LBNH	Lisbon	35.41	21	P	P	03 41 55.3	-0.2
	baz=210						
R11A	Troy Canyon, C	35.45	323	P	P	03 41 56.3	+0.1
	baz=131,SNR=13						
BW06	Boulder Array	35.58	334	P	P	03 41 57.4	+0.2
	baz=144						
PD31	Pinedale Array	35.58	334	P	P	03 41 58.3	+1.0
PD31				PcP	PcP	03 44 25.5	-0.5
PDAR	Pinedale Array	35.58	334	P	P	03 41 56.2	-1.1
	comp=Z,1.6nm,0.9s,baz=130,slow=9.8,SNR=8.2						
PDAR				PcP	PcP	03 44 25.8	-0.1
	comp=Z,4.7nm,1.0s,baz=131,slow=4.1,SNR=7.3						
ARVC	Arvin	35.60	315	P	P	03 41 57.5	+0.2
	baz=123,SNR=7.6						
ISA	Isabella, Lake	35.65	317	P	P	03 41 58.9	+1.1
ISA						03 44 26.7	
ISA				pmax	pmax		
	comp=Z,26nm,1.6s						
ISA	Isabella, Lake	35.65	317	P	P	03 41 58.9	+1.1
ISA				IAmb	IAmb	03 42 12.9	
	comp=Z,26nm,1.6s						
ISA				PcP	PcP	03 44 26.7	+0.6
ISA	Isabella, Lake	35.65	317	P	P	03 41 57.1	-0.7
	baz=124						
GRAC	Grapevine Rang	35.70	319	P	P	03 41 59.6	+1.4
	baz=127,SNR=12						
CWC	Cottonwood Cre	35.83	318	P	P	03 41 58.8	-0.7
	baz=126						
E28A	Huff	35.96	346	IAmb	IAmb	03 42 06.6	
	comp=Z,20nm,0.8s						
EYMN	Ely	36.00	357	P	P	03 42 00.6	0.0
EYMN	Ely	36.00	357	P	P	03 42 00.9	+0.4
	baz=176,SNR=13						
LCH	Last Change Ra	36.02	319	IAmb	IAmb	03 42 06.9	
	comp=Z,22nm,1.3s						
VES	Vestal, Richgr	36.16	316	P	P	03 42 03.2	+1.1
	baz=124,SNR=16						
AHID	Auburn Hatcher	36.27	332	P	P	03 42 03.2	0.0
AHID				IAmb	IAmb	03 42 10.9	
	comp=Z,15nm,0.8s						
AHID				PcP	PcP	03 44 27.9	0.0
TPH	Tonopah	36.27	321	P	P	03 42 05.2	+2.0
TPH				pmax	pmax		
	comp=Z,119nm,1.4s						
TPH	Tonopah	36.27	321	P	P	03 42 05.2	+2.0
TRQ	Mont Tremblant	36.33	17	IAmb	IAmb	03 42 07.6	
	comp=Z,24nm,1.3s						
SMMC	Simmler	36.50	315	P	P	03 42 03.8	-1.3
	baz=122						
B35A	Bob, Littlefor	36.57	355	IAmb	IAmb	03 42 08.6	
	comp=Z,25nm,0.9s						
REDW	Red Top Meadow	36.62	333	IAmb	IAmb	03 42 14.3	
	comp=Z,42nm,0.9s						
VOG	Valley Oaks Go	36.63	317	P	P	03 42 05.7	-0.4
	baz=124						
SNOW	Snow King Moun	36.66	333	IAmb	IAmb	03 42 15.2	
	comp=Z,42nm,0.9s						
AGMN	Agassiz Nation	36.74	352	IAmb	IAmb	03 42 09.1	
	comp=Z,30nm,0.8s						
AGMN	Agassiz Nation	36.74	352	P	P	03 42 06.2	-0.7
	baz=169,SNR=12						
G62A	West of Eustis	36.76	22	IAmb	IAmb	03 42 10.8	
	comp=Z,40nm,1.1s						
TPAW	Teton Pass	36.77	333	P	P	03 42 07.4	-0.1
TPAW				IAmb	IAmb	03 42 16.3	
	comp=Z,40nm,1.1s						
ITTB	Itaituba	36.79	114	*e*P	P	03 42 07.4	-0.3
ELK	Elko	36.87	326	P	P	03 42 09.1	+0.8
ELK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ELK	Elko	36.87	326	P	P	03 42 09.1	+0.8
PAGB	Antelope Grade	36.90	315	IAmb	IAmb	03 42 31.6	
	comp=Z,32nm,1.1s						
FXWY	Fox Creek	36.92	333	P	P	03 42 09.9	+1.2
FXWY				PcP	PcP	03 44 30.5	+0.5
MDND	Maddock	36.93	348	P	P	03 42 07.3	-1.2
	baz=162,SNR=22						
NV11	Mina Array Sit	37.07	321	P	P	03 42 11.6	+1.6
NV11				IAmb	IAmb	03 42 13.3	
	comp=Z,39nm,1.0s						
MALB	Monte Alegre	37.09	109	*e*P	P	03 42 11.0	+0.7
NVAR	Mina Array Bea	37.16	320	P	P	03 42 12.9	+2.1
	comp=Z,24nm,0.9s,baz=138,slow=8.2,SNR=121						
NVAR				PcP	PcP	03 44 31.8	+1.1
	comp=Z,7.4nm,0.8s,baz=138,slow=4.0,SNR=15						
NVAR				LR	LR	03 57 30.0	
	comp=Z,174nm,18.6s,baz=135,slow=36						
NVAR	Mina Array Bea	37.16	320	P	P	03 42 12.5	+1.7
NVAR				PcP	PcP	03 44 31.2	+0.5
LHV	Little Huntoon	37.18	320	P	P	03 42 12.8	+2.1
LHV				IAmb	IAmb	03 42 14.4	
	comp=Z,39nm,1.0s						
LHV					PcP	03 44 31.5	+1.0
MDPB	Devils Postpil	37.18	319	IAmb	IAmb	03 42 14.1	
	comp=Z,22nm,1.0s						
PKME	Peaks-Kenny Pk	37.26	23	P	P	03 42 12.7	+1.4
PKME				IAmb	IAmb	03 42 15.0	
	comp=Z,37nm,1.1s						
PKME	Peaks-Kenny Pk	37.26	23	P	P	03 42 11.1	-0.2
	baz=213						
H17A	Grant Village	37.33	334	P	P	03 42 11.2	-1.0
	baz=144						
RLMT	Red Lodge	37.38	336	P	P	03 42 11.9	-0.8
	baz=146,SNR=11						
KVN	Kaiserville	37.41	321	P	P	03 42 14.4	+1.4
KVN				pmax	pmax		
	comp=Z,27nm,1.1s						
KVN	Kaiserville	37.41	321	P	P	03 42 14.4	+1.4
KVN				IAmb	IAmb	03 42 15.8	
	comp=Z,27nm,1.1s						
LAO	LASA Array	37.62	340	P	P	03 42 13.8	-0.6
	baz=152,SNR=8.3						
YMR	Madison River	37.71	334	IAmb	IAmb	03 42 24.5	
	comp=Z,25nm,0.9s						
VILB	Vilhena	37.74	130	*e*P	P	03 42 15.8	+0.1
YERR	Yerington	38.08	320	IAmb	IAmb	03 42 21.6	
	comp=Z,34nm,1.1s						
NPGB	Novo Progresso	38.36	118	*e*P	P	03 42 20.2	-0.8
PNTR	Pine Nut	38.36	320	IAmb	IAmb	03 42 24.1	
	comp=Z,29nm,1.0s						
HLID	Hailey	38.45	330	P	P	03 42 20.9	-0.7
	baz=137,SNR=7.4						
BCYI	Bear Canyon	38.53	332	P	P	03 42 22.9	+0.6
BCYI				PcP	PcP	03 44 36.4	+1.5
DGMT	Dagmar	38.61	344	P	P	03 42 22.1	-0.6
	baz=156,SNR=5.7						
MCPB	Macapa, AP	38.62	106	*e*P	P	03 42 23.2	-0.1
ULM	Lac du Bonnet	38.66	353	P	P	03 42 21.2	-1.9
	comp=Z,26nm,0.9s,baz=174,slow=8.8,SNR=22						
ULM				LR	LR	03 59 45.7	
	comp=Z,195nm,21.9s,baz=166,slow=38						
ULM	Lac du Bonnet	38.66	353	P	P	03 42 22.3	-0.8
ULM				pmax	pmax		
	comp=Z,27nm,0.9s						
ULM	Lac du Bonnet	38.66	353		P	03 42 22.3	-0.8
ULM				IAmb	IAmb	03 42 24.7	
	comp=Z,27nm,0.8s						
BOZ	Bozeman (W)	38.74	334	P	P	03 42 23.5	-0.5
	baz=143						
D62A	Allapoint, All	38.88	22	IAmb	IAmb	03 42 28.4	
	comp=Z,38nm,1.1s						
PQI	Presque Isle	38.92	23	IAmb	IAmb	03 42 52.0	
	comp=Z,70nm,1.6s						
SIV	San Ignacio	39.11	134	P	P	03 42 27.4	+0.1
	comp=Z,16nm,0.9s,baz=310,slow=10,SNR=48						
SIV				PcP	PcP	03 44 36.8	-0.1
	comp=Z,3.2nm,0.8s,baz=339,slow=8.6,SNR=3.4						
LRM	Limekiln Ridge	39.27	334	P	P	03 42 28.3	-0.2
LRM				PcP	PcP	03 44 38.0	+0.8
BEKR	Beckworth	39.30	321	IAmb	IAmb	03 42 31.6	
	comp=Z,25nm,0.9s						
LVC	Limon Verde	39.53	150	*e*P	P	03 42 31.8	+0.8
LMN	Caledonia Moun	39.59	27	IAmb	IAmb	03 42 34.4	
	comp=Z,56nm,1.2s						
PDRB	Porto dos Gac	39.63	125	*e*P	P	03 42 30.2	-1.4
CLDB	Colider	39.97	123	*e*P	P	03 42 33.2	-1.3
EGMT	Eagleton	39.99	338	IAmb	IAmb	03 42 42.0	
	comp=Z,32nm,0.8s						
EGMT	Eagleton	39.99	338	P	P	03 42 33.6	-0.7
	baz=147,SNR=9.6						
PTLB	Pontes e Lacer	40.13	132	*e*P	P	03 42 35.4	-0.3
BATG	Bathurst New B	40.19	24	P	P	03 42 38.3	+2.4
BATG				IAmb	IAmb	03 42 47.5	
	comp=Z,68nm,1.5s						
O03E	Paynes Creek	40.45	320	P	P	03 42 38.5	+0.3
	baz=125,SNR=10.0						
MSO	Missoula	40.70	334	P	P	03 42 40.6	+0.4
MSO	Missoula	40.70	334	P	P	03 42 39.9	-0.3
	baz=141						
O02D	Mt. Diablo Mer	41.00	319	P	P	03 42 41.5	-1.3
	baz=124						
KCPM	Cahto Peak	41.24	318	P	P	03 42 47.3	+2.5
KCPM				IAmb	IAmb	03 42 48.0	
	comp=Z,40nm,1.1s						
M04C	Macdoel	41.34	322	P	P	03 42 46.4	+0.8
	baz=126,SNR=7.1						
I07A	Izee	41.45	326	P	P	03 42 46.9	+0.5
KMRM	Mail Ridge	41.62	319	P	P	03 42 49.6	+1.8
M02C	Callahan	41.73	321	P	P	03 42 48.7	-0.1
	baz=125						
K04D	Chiloquin, OR	41.79	323	P	P	03 42 49.3	0.0
	baz=127						
YBH	Yreka Blue Hor	41.84	321	P	P	03 42 49.3	-0.4
	comp=Z,5.8nm,0.8s,baz=110,slow=5.4,SNR=7.7						
YBH				PcP	PcP	03 44 45.5	+0.2
	comp=Z,2.2nm,0.8s,baz=132,slow=14,SNR=4.0						
L04D	Klamath Falls	41.88	322	P	P	03 42 50.2	+0.2
	baz=126,SNR=6.0						
J05D	Fort Rock, OR	41.90	324	P	P	03 42 50.8	+0.6
	baz=128						
J04D	Umpqua Nationa	42.37	324	P	P	03 42 54.7	+0.6
	baz=128						
I05D	Terrebonne, OR	42.62	325	P	P	03 42 56.7	+0.8
	baz=129						
PRPB	Parauapebas	42.88	113	*e*P	P	03 42 57.8	-0.6
I04A	Tendick Farm,	42.89	324	P	P	03 42 58.0	-0.1
	baz=128						
SALV	Santo Antonio	42.98	129	*e*P	P	03 42 58.7	-0.4
TMAB	Tom-Au,PA,Br	43.02	107	*e*P	P	03 43 00.5	+1.0
G05D	Wamic, OR	43.18	326	P	P	03 43 01.2	+0.7
	baz=130						
NEW	Newport	43.20	333	P	P	03 43 00.3	-0.2
	comp=Z,1.9nm,1.0s,baz=121,slow=12,SNR=2.2						
NEW				PcP	PcP	03 44 49.0	-0.6
	comp=Z,5.5nm,1.0s,baz=175,slow=2.6,SNR=5.2						
NEW	Newport	43.20	333	P	P	03 43 01.6	+1.0
	baz=138						
J01E	Myrtle Point	43.40	322	P	P	03 43 03.5	+1.3
	baz=125						
F05D	White Salmon	43.67	327	P	P	03 43 05.0	+0.6
	baz=130						
I02E	Swisshome, OR	43.90	324	P	P	03 43 07.2	+1.0
	baz=126						
G03D	McMinnville, O	44.23	325	P	P	03 43 10.2	+1.3
	baz=128						
SNDB	Serra Nova Dou	44.29	121	*e*P	P	03 43 09.7	0.0
F04D	Rainier, OR	44.63	326	P	P	03 43 13.7	+1.7
	baz=129						
B06A	Marblemount	45.43	330	IAmb	IAmb	03 43 28.2	
	comp=Z,24nm,0.8s						
B05A	Bryant	45.56	329	P	P	03 43 19.9	+0.5
	baz=132						
D03D	Eldon	45.60	328	P	P	03 43 20.3	+0.7
	baz=130						
ARAG	Araguaiana, MT	45.88	126	*e*P	P	03 43 21.4	-0.8
AQDB	Aquidauana	45.89	134	P	P	03 43 20.3	-2.0
AQDB	Aquidauana	45.89	134	*e*P	P	03 43 21.9	-0.5
CO03	El Pedregal	45.98	158	IAmb	IAmb	03 43 23.8	
	comp=Z,21nm,1.1s						
SMTB	Santa Maria do	46.02	115	*e*P	P	03 43 23.4	-0.1
SCHQ	Schefferville	46.24	18	P	P	03 43 23.1	-1.6
	comp=Z,38nm,1.0s,baz=213,slow=6.7,SNR=14						
SCHQ				LR	LR	04 03 45.1	
	comp=Z,177nm,18.4s,baz=258,slow=37						
SCHQ	Schefferville	46.24	18	P	P	03 43 25.3	+0.7
PEXB	Peixe	46.89	119	*e*P	P	03 43 30.0	-0.3
ROSB	Rosrio	46.94	105	*e*P	P	03 43 31.5	+0.8
LLLB	Lillooet	47.05	332	IAmb	IAmb	03 43 42.1	
	comp=Z,15nm,1.0s						
ZON	Zonda	47.38	156	IAmb	IAmb	03 43 35.2	
	comp=Z,29nm,1.3s						
VA03	San Esteban	47.77	159	IAmb	IAmb	03 43 37.8	
	comp=Z,37nm,1.1s						
CPUP	Villa Florida	48.89	141	P	P	03 43 44.4	-1.2
	comp=Z,5.7nm,1.1s,baz=329,slow=7.3,SNR=5.8						
CPUP				LR	LR	04 03 52.2	
	comp=Z,106nm,19.6s,baz=350,slow=35						
CPUP	Villa Florida	48.89	141	P	P	03 43 44.0	-1.6
CPUP				pmax	pmax		
	comp=Z,20nm,1.4s						
CPUP	Villa Florida	48.89	141	P	P	03 43 44.0	-1.6
CPUP				IAmb	IAmb	03 43 45.4	
	comp=Z,20nm,1.4s						
CPUP	Villa Florida	48.89	141	*e*P	P	03 43 44.6	-1.0
BDFB	Brasilia	48.91	123	P	P	03 43 46.4	+0.4
	comp=Z,4.3nm,1.0s,baz=283,slow=6.9,SNR=4.8						
BDFB				PcP	PcP	03 45 10.3	0.0
	comp=Z,5.1nm,1.1s,baz=163,slow=3.3,SNR=3.6						
ITRB	Iturama	49.31	129	*e*P	P	03 43 48.5	-0.4
TRCB	Terra Rica	49.55	134	*e*P	P	03 43 50.8	-0.1
IPMB	Ipameri, GO	50.00	126	*e*P	P	03 43 53.2	-1.1
BBB	Bella Bella	51.04	330	LR	LR	04 08 40.6	
	comp=Z,64nm,18.9s,baz=127,slow=40						
BB19B	Bebedouro	51.50	129	*e*P	P	03 44 04.7	-0.9
ITQB	Itaqui	51.77	144	*e*P	P	03 44 06.8	-0.5
YKA	Yellowknife Ar	53.76	346	P	P	03 44 20.7	-0.9
	comp=Z,14nm,1.1s,baz=136,slow=8.5,SNR=13						
YKA				PcP	PcP	03 45 27.4	+0.1
	comp=Z,4.3nm,0.9s,baz=134,slow=4.7,SNR=3.3						
YKA				LR	LR	04 09 33.9	
	comp=Z,149nm,19.7s,baz=0.0,slow=39						
DIAM	Diamantina, MG	53.83	123	*e*P	P	03 44 22.3	-0.7
CPSB	Cacapava Do Su	54.20	142	*e*P	P	03 44 24.2	-1.0
BSCB	Bom Sucesso	54.36	127	*e*P	P	03 44 26.3	-0.4
NBPA	Parau_RN	54.47	106	*e*P	P	03 44 28.2	+0.6
TAOE	Nuku Hiva Isla	54.90	250	*e*LR	LR	03 59 58.4	
	comp=Z,396nm,26.4s						
PLTB	Pedras Altas	55.07	143	*e*P	P	03 44 30.7	-0.9
PLCA	Paso Flores	55.07	163	P	P	03 44 31.1	-0.4
	comp=Z,8.5nm,0.9s,baz=354,slow=9.5,SNR=12						
PLCA				LR	LR	04 02 51.5	
	comp=Z,91nm,20.3s,baz=338,slow=30						
PLCA	Paso Flores	55.07	163	*e*P	P	03 44 30.8	-0.7
PLCA	Paso Flores	55.07	163	P	P	03 44 30.8	-0.7
PLCA				IAmb	IAmb	03 44 31.9	
	comp=Z,19nm,1.1s						
PLCA	Paso Flores	55.07	163	*e*P	P	03 44 31.2	-0.3
NBLV	Livramento - P	55.18	108	*e*P	P	03 44 32.6	-0.2
CRAG	Craig	55.37	331	P	P	03 44 34.7	+1.4
	baz=124						
TRQA	Tornquist	55.75	154	*ce*P	P	03 44 35.6	-0.8
TRQA				pmax	pmax		
	comp=Z,21nm,1.7s						
TRQA	Tornquist	55.75	154	P	P	03 44 34.4	-1.9
TRQA	Tornquist	55.75	154	*e*P	P	03 44 35.8	-0.6
DLBC	Dease Lake	55.78	335	LR	LR	04 10 17.3	
	comp=Z,169nm,19.2s,baz=120,slow=38						
DLBC	Dease Lake	55.78	335	IAmb	IAmb	03 44 47.7	
	comp=Z,22nm,0.9s						
NBIT	Itapeh - BA	55.83	117	*e*P	P	03 44 36.9	-0.5
BSFB	Barra de Sao F	56.42	122	*e*P	P	03 44 40.8	-0.6
RIB01	Linhares ES	57.03	122	*e*P	P	03 44 45.1	-0.7
TGTN	Hyland Airport	57.13	339	P	P	03 44 46.8	+0.8
	baz=132						
CAM01	Campos-RJ	57.26	126	*e*P	P	03 44 47.2	-0.1
NBRF	Rio Formoso -	57.30	108	*e*P	P	03 44 47.7	-0.1
P33M	Teslin, Yukon	58.00	336	P	P	03 44 52.7	+0.5
	baz=127						
SKAG	Skagway	58.60	334	P	P	03 44 56.7	+0.5
	baz=124						
MMPY	Sheldon Lake,	58.91	339	P	P	03 44 58.2	-0.3
	baz=130,SNR=10						
WHY	Whitehorse	59.09	336	P	P	03 45 00.0	+0.2
	baz=125						
M31M	Drury Creek, Y	59.80	337	P	P	03 45 05.3	+0.8
	baz=126						
N31M	Braeburn, Yuko	59.92	336	P	P	03 45 05.2	-0.2
	baz=124,SNR=7.6						
HYT	Haines Junctio	60.26	335	P	P	03 45 08.1	+0.3
	baz=122,SNR=5.1						
PNL	Peninsula	60.47	333	P	P	03 45 09.9	+0.8
	baz=120						
SFJD	Kangerlussuaq	60.66	16	LR	LR	04 10 49.3	
	comp=Z,85nm,19.6s,baz=218,slow=36						
YUK6	Outpost Mounta	60.67	335	P	P	03 45 10.8	+0.1
	baz=122						
M30M	Minto, Yukon	60.93	337	P	P	03 45 12.5	+0.2
	baz=124						
YUK4	Talbot Arm	61.00	335	P	P	03 45 13.1	+0.1
	baz=122						
MESA	MESA	61.84	333	P	P	03 45 18.2	-0.4
	baz=118						
CTGM	Chitina Glacie	61.94	334	IAmb	IAmb	03 45 23.7	
	comp=Z,12nm,1.1s						
CTG	Chitna Glacier	61.94	334	P	P	03 45 19.7	+0.5
	baz=118						
YUK3	Moose Creek	61.97	335	P	P	03 45 19.8	+0.3
	baz=120,SNR=6.4						
GRNC	Granite Creek	62.01	334	IAmb	IAmb	03 45 22.1	
	comp=Z,18nm,1.0s						
BVCY	Beaver Creek	62.45	336	P	P	03 45 22.1	-0.4
	baz=120						
CRQE	Cirque	62.60	333	P	P	03 45 23.8	+0.1
	baz=117						
DAWY	Dawson	62.73	338	P	P	03 45 24.1	-0.3
	baz=122,SNR=5.5						
KAIM	Kayak Island	62.84	332	P	P	03 45 26.0	+1.0
	baz=115						
M27K	Edge Creek, AK	62.84	335	P	P	03 45 25.1	-0.1
	baz=119						
RES	Resolute Bay	62.86	358	P	P	03 45 23.5	-1.4
RES				pmax	pmax		
	comp=Z,55nm,1.8s						
RES	Resolute Bay	62.86	358	P	P	03 45 23.5	-1.4
MCARA	McCarthy VSAT	62.86	334	P	P	03 45 25.5	+0.3
	baz=117						
I29M	Ogilvie Camp,	63.04	339	P	P	03 45 26.2	-0.1
	baz=124						
EPYK	Eagle Plains	63.08	340	P	P	03 45 26.8	+0.2
	baz=126						
L27K	Beaver Creek,	63.16	336	IAmb	IAmb	03 45 29.1	
	comp=Z,11nm,0.8s						
L27K	Beaver Creek,	63.16	336	P	P	03 45 27.4	+0.2
	baz=119,SNR=9.5						
GLB	Gilahina Butte	63.23	334	IAmb	IAmb	03 45 29.9	
	comp=Z,16nm,1.0s						
INK	Inuvik	63.29	343	P	P	03 45 27.7	-0.2
	comp=Z,8.4nm,0.9s,baz=120,slow=7.3,SNR=22						
INK				PcP	PcP	03 46 04.5	-0.4
	comp=Z,6.6nm,0.9s,baz=100,slow=9.0,SNR=4.0						
INK	Inuvik	63.29	343	IAmb	IAmb	03 45 38.2	
	comp=Z,19nm,1.1s						
INK	Inuvik	63.29	343	P	P	03 45 27.9	0.0
	baz=130,SNR=13						
M26K	Nabesna, AK	63.32	335	IAmb	IAmb	03 45 42.4	
	comp=Z,17nm,1.4s						
M26K	Nabesna, AK	63.32	335	P	P	03 45 28.8	+0.5
	baz=118						
BMRM	Bremner River	63.37	333	P	P	03 45 29.3	+0.7
	baz=115						
Q23K	Middleton Isla	63.53	331	P	P	03 45 30.5	+0.8
	baz=113						
N25K	Chitina, Valde	63.64	334	IAmb	IAmb	03 45 32.7	
	comp=Z,16nm,0.9s						
N25K	Chitina, Valde	63.64	334	P	P	03 45 30.5	+0.1
	baz=116,SNR=6.8						
EYAK	Cordova Ski Ar	63.70	333	P	P	03 45 31.4	+0.6
	baz=114						
L26K	Log Cabin Wild	63.75	336	P	P	03 45 31.4	+0.3
	baz=118						
EGAK	Eagle	63.76	338	IAmb	IAmb	03 45 32.1	
	comp=Z,9.8nm,0.9s						
EGAK	Eagle	63.76	338	P	P	03 45 31.0	-0.1
	baz=120,SNR=7.5						
A36M	Sachs Harbour	63.89	348	IAmb	IAmb	03 45 39.9	
	comp=Z,11nm,0.8s						
A36M	Sachs Harbour	63.89	348	P	P	03 45 31.0	-0.8
	baz=140						
DIV	Divide	63.95	333	IAmb	IAmb	03 45 34.3	
	comp=Z,15nm,1.0s						
KLU	Klutina	64.16	333	IAmb	IAmb	03 45 35.9	
	comp=Z,18nm,0.9s						
KLU	Klutina	64.16	333	P	P	03 45 34.6	+0.7
	baz=114,SNR=6.7						
HARP	HAARP	64.22	335	P	P	03 45 34.0	-0.2
	baz=115						
DOT	Dot Lake	64.33	336	IAmb	IAmb	03 45 36.7	
	comp=Z,12nm,0.8s						
GLI	Glacier Island	64.44	333	P	P	03 45 35.8	+0.1
	baz=113						
SCRK	Sand Creek	64.44	336	IAmb	IAmb	03 45 52.9	
	comp=Z,18nm,1.5s						
SCRK	Sand Creek	64.44	336	P	P	03 45 36.2	+0.4
	baz=117,SNR=6.3						
J26L	Joseph Creek	64.53	337	P	P	03 45 36.6	+0.4
	baz=118,SNR=14						
M24K	Tolsona, Glenn	64.53	334	P	P	03 45 35.9	-0.4
	baz=114						
PAX	Paxson	64.59	335	P	P	03 45 36.8	0.0
	baz=115						
RIDG	Independent Ri	64.68	336	P	P	03 45 37.3	+0.1
	baz=116						
SCM	Sheep Creek Mo	64.92	334	P	P	03 45 39.3	+0.5
	baz=113						
PWL	Port Wells	64.99	332	P	P	03 45 38.6	-0.7
	baz=112						
ICESG	Greenland Ices	65.15	17	*i* P	P	03 45 39.5	-1.1
ICESG				IAmb	IAmb	03 45 50.2	
	comp=Z,14nm,0.8s						
SEW	Seward	65.24	331	P	P	03 45 40.7	-0.1
	baz=110						
KNK	Knik Glacier	65.25	333	P	P	03 45 41.4	+0.5
	baz=112,SNR=7.7						
J25K	Salcha River,	65.27	337	P	P	03 45 41.3	+0.2
	baz=116,SNR=15						
SML	Sawmill	65.35	333	P	P	03 45 41.9	+0.3
	baz=112,SNR=5.6						
TULEG	Thule	65.52	5	*i* P	P	03 45 43.7	+1.4
TULEG				IAmb	IAmb	03 45 45.6	
	comp=Z,25nm,1.2s						
TULEG	Thule	65.52	5	P	P	03 45 43.5	+1.2
TULEG				IAmb	IAmb	03 45 46.0	
	comp=Z,24nm,1.2s						
PMR	Palmer	65.62	333	IAmb	IAmb	03 45 48.4	
	comp=Z,29nm,1.5s						
PMR	Palmer	65.62	333	P	P	03 45 43.0	-0.3
	baz=111						
RC01	Rabbit Creek A	65.71	332	P	P	03 45 43.8	-0.1
	baz=110,SNR=6.9						
BRSE	Bradley Lake S	65.73	331	P	P	03 45 43.8	-0.3
	baz=109						
PRP	Porcupine Dome	65.73	338	IAmb	IAmb	03 45 45.5	
	comp=Z,11nm,0.8s						
PRP	Porcupine Dome	65.73	338	P	P	03 45 44.4	+0.2
	baz=116,SNR=5.7						
HDA	Harding Lake	65.80	336	IAmb	IAmb	03 45 45.6	
	comp=Z,22nm,0.9s						
HDA	Harding Lake	65.80	336	P	P	03 45 43.7	-0.7
	baz=114,SNR=13						

ILAR	**Eielson Array**	**65.93**	**337**	P	**P**	**03 45 44.9**	**-0.4**
	comp=Z,20nm,0.9s,baz=123,slow=4.0,SNR=92						
ILAR				PP	**PP**	**03 48 09.3**	**-1.1**
	comp=Z,0.5nm,0.7s,baz=106,slow=5.7,SNR=2.6						
ILAR				LR	LR	04 19 27.5	
	comp=Z,104nm,18.3s,baz=124,slow=40						
KDAK	**Kodiak Island**	**66.05**	**328**	P	**P**	**03 45 46.0**	**0.0**
	comp=Z,16nm,1.0s,baz=132,slow=8.1,SNR=4.9						
KDAK	**Kodiak Island**	**66.05**	**328**	P	**P**	**03 45 45.9**	**-0.2**
KDAK				pmax	pmax		
	comp=Z,89nm,1.7s						
KDAK	**Kodiak Island**	**66.05**	**328**	P	**P**	**03 45 45.9**	**-0.2**
M22K	**Willow**	**66.12**	**333**	P	**P**	**03 45 46.8**	**+0.4**
	baz=110						
HOM	**Homer**	**66.14**	**330**	P	**P**	**03 45 47.2**	**+0.6**
	baz=108						
CCB	**Clear Creek Bu**	**66.24**	**336**	IAmb	IAmb	03 45 47.8	
	comp=Z,7.7nm,0.7s						
WRH	**Wood River Hil**	**66.28**	**336**	IAmb	IAmb	03 45 48.6	
	comp=Z,16nm,1.0s						
POKR	**Poker Plat Res**	**66.28**	**337**	IAmb	IAmb	03 45 48.8	
	comp=Z,14nm,0.8s						
POKR	**Poker Plat Res**	**66.28**	**337**	P	**P**	**03 45 47.4**	**-0.1**
	baz=114						
SUA	**Susitna One**	**66.30**	**332**	IAmb	IAmb	03 45 49.4	
	comp=Z,14nm,0.8s						
SUA	**Susitna One**	**66.30**	**332**	P	**P**	**03 45 47.9**	**+0.1**
	baz=110						
MCK	**McKinley**	**66.33**	**335**	IAmb	IAmb	03 45 49.3	
	comp=Z,23nm,1.0s						
MCK	**McKinley**	**66.33**	**335**	P	**P**	**03 45 47.4**	**-0.5**
	baz=112,SNR=10						
COLA	**College**	**66.35**	**336**	*i* P	**P**	**03 45 47.9**	**0.0**
COLA				pmax	pmax		
	comp=Z,15nm,0.8s						
COLA	**College**	**66.35**	**336**	P	**P**	**03 45 47.7**	**-0.1**
	baz=114						
TCOL	**CIGO, UAF Yank**	**66.35**	**336**	P	**P**	**03 45 47.6**	**-0.3**
	baz=114						
KIP	**Kipapa**	**66.39**	**288**	*i* P	**P**	**03 45 51.1**	**+2.2**
CUT	**Chulitna**	**66.41**	**334**	P	**P**	**03 45 47.7**	**-0.6**
	baz=110,SNR=5.6						
SII	**Sitkinak Islan**	**66.56**	**327**	P	**P**	**03 45 49.4**	**0.0**
	baz=104						
PPT	**Papeete**	**66.62**	**245**	LR	LR	04 07 31.7	
	comp=Z,276nm,20.3s,baz=258,slow=29						
PPT2	**Papeete2**	**66.63**	**245**	*e*LR	LR	04 05 35.9	
	comp=Z,371nm,24.2s						
NEA2	**Nenana**	**66.72**	**336**	IAmb	IAmb	03 45 51.8	
	comp=Z,16nm,0.8s						
NEA2	**Nenana**	**66.72**	**336**	P	**P**	**03 45 50.2**	**-0.1**
	baz=112,SNR=10.0						
O20K	**Slope Mountain**	**66.73**	**331**	P	**P**	**03 45 50.9**	**+0.3**
	baz=107						
H24K	**Noodor Dome**	**66.75**	**337**	IAmb	IAmb	03 45 52.2	
	comp=Z,16nm,1.0s						
H24K	**Noodor Dome**	**66.75**	**337**	P	**P**	**03 45 50.7**	**+0.2**
	baz=114,SNR=11						
TRF	**Thorofare Moun**	**66.79**	**335**	P	**P**	**03 45 50.7**	**-0.3**
TRF				IAmb	IAmb	03 45 52.4	
	comp=Z,22nm,0.9s						
TRF	**Thorofare Moun**	**66.79**	**335**	P	**P**	**03 45 51.0**	**0.0**
	baz=111,SNR=15						
SKT	**Skwentna**	**66.83**	**333**	P	**P**	**03 45 51.3**	**+0.2**
	baz=109,SNR=9.0						
SPCR	**Spurr Chakacha**	**66.88**	**332**	P	**P**	**03 45 51.5**	**0.0**
	baz=108						
P19K	**Oil Pt**	**66.90**	**330**	P	**P**	**03 45 51.8**	**+0.2**
	baz=106						
I23K	**Minto, Yukon-K**	**67.05**	**336**	P	**P**	**03 45 52.4**	**0.0**
	baz=112,SNR=13						
KTH	**Kantishna Hill**	**67.09**	**335**	IAmb	IAmb	03 45 53.8	
	comp=Z,20nm,0.8s						
BPAW	**Bear Paw Mtn.**	**67.31**	**335**	P	**P**	**03 45 53.9**	**-0.2**
	baz=110,SNR=17						
H23K	**Yukon River**	**67.38**	**337**	IAmb	IAmb	03 45 56.1	
	comp=Z,21nm,1.6s						
H23K	**Yukon River**	**67.38**	**337**	P	**P**	**03 45 54.7**	**+0.2**
	baz=112						
PPLA	**Purkeypile**	**67.41**	**334**	P	**P**	**03 45 54.8**	**-0.1**
	baz=109						
SUMG	**Summit**	**67.49**	**15**	*i* P	**P**	**03 45 56.6**	**+1.0**
SUMG				IAmb	IAmb	03 46 00.4	
	comp=Z,14nm,1.1s						
SUMG	**Summit**	**67.49**	**15**	IAmb	IAmb	03 45 59.3	
	comp=Z,14nm,1.0s						
CAST	**Castle Rocks**	**67.54**	**334**	IAmb	IAmb	03 45 56.2	
	comp=Z,12nm,0.8s						
CAST	**Castle Rocks**	**67.54**	**334**	P	**P**	**03 45 55.2**	**-0.4**
	baz=109,SNR=6.7						
MLY	**Manley**	**67.54**	**336**	P	**P**	**03 45 54.9**	**-0.7**
	baz=111,SNR=24						
O19K	**Port Alsworth**	**67.58**	**331**	IAmb	IAmb	03 46 05.2	
	comp=Z,20nm,0.8s						
O19K	**Port Alsworth**	**67.58**	**331**	P	**P**	**03 45 55.4**	**-0.4**
	baz=106						
CHUM	**Lake Minchumin**	**67.79**	**335**	P	**P**	**03 45 57.0**	**-0.1**
	baz=109						
N19K	**Bonanza Creek**	**67.83**	**331**	P	**P**	**03 45 57.3**	**-0.2**
N19K	**Bonanza Creek**	**67.83**	**331**	P	**P**	**03 45 57.2**	**-0.3**
	baz=106,SNR=9.0						
L20K	**Farewell, AK**	**68.03**	**333**	P	**P**	**03 45 58.4**	**-0.3**
	baz=107,SNR=16						
I21K	**Tanana**	**68.09**	**336**	IAmb	IAmb	03 46 00.1	
	comp=Z,10nm,0.9s						
I21K	**Tanana**	**68.09**	**336**	P	**P**	**03 45 59.2**	**+0.3**
	baz=110,SNR=6.8						
M19K	**Big River Lodg**	**68.09**	**332**	IAmb	IAmb	03 46 00.4	
	comp=Z,33nm,1.4s						
M19K	**Big River Lodg**	**68.09**	**332**	P	**P**	**03 45 58.7**	**-0.3**
	baz=106						
COLD	**Coldfoot**	**68.16**	**338**	IAmb	IAmb	03 46 02.0	
	comp=Z,21nm,1.1s						
COLD	**Coldfoot**	**68.16**	**338**	P	**P**	**03 46 00.4**	**+1.0**
	baz=112,SNR=6.7						
EUNU	**Eureka**	**68.18**	**0**	P	**P**	**03 45 58.4**	**-1.0**
EUNU				IAmb	IAmb	03 46 08.1	
	comp=Z,9.2nm,0.8s						
NEEM	**North Greenlan**	**68.36**	**8**	*i* P	**P**	**03 46 01.3**	**+0.5**
NEEM				IAmb	IAmb	03 46 09.1	
	comp=Z,15nm,1.0s						
K20K	**Telida**	**68.37**	**334**	IAmb	IAmb	03 46 01.7	
	comp=Z,23nm,0.9s						
K20K	**Telida**	**68.37**	**334**	P	**P**	**03 46 00.2**	**-0.5**
	baz=107,SNR=7.7						
L19K	**White Mountain**	**68.38**	**333**	P	**P**	**03 46 00.5**	**-0.3**
	baz=106						
TOLK	**Toolik Lake Re**	**68.49**	**340**	P	**P**	**03 46 02.0**	**+0.5**
	baz=114						
H21K	**Melozitna Rive**	**68.57**	**336**	IAmb	IAmb	03 46 20.4	
	comp=Z,19nm,1.6s						
H21K	**Melozitna Rive**	**68.57**	**336**	P	**P**	**03 46 01.4**	**-0.6**
	baz=109						
J20K	**Nowinta River**	**68.65**	**335**	P	**P**	**03 46 01.8**	**-0.6**
	baz=107,SNR=5.1						
EFI	**East Falkland**	**68.74**	**160**	*i* P	**P**	**03 46 02.9**	**-0.2**
TBI	**Tubuai**	**68.75**	**239**	*e*LR	LR	04 06 38.7	
	comp=Z,291nm,30.5s						
TTA	**Tatalina**	**69.10**	**333**	IAmb	IAmb	03 46 06.0	
	comp=Z,15nm,0.9s						
TTA	**Tatalina**	**69.10**	**333**	P	**P**	**03 46 05.0**	**-0.3**
	baz=105,SNR=7.3						
BORG	**Borgarnes**	**69.84**	**25**	LR	LR	04 19 24.9	
	comp=Z,68nm,18.9s,baz=290,slow=38						
UNV	**Unalaska Valle**	**73.13**	**323**	P	**P**	**03 46 30.3**	**+0.4**
	baz=93						
DAG	**Danmarks Havn**	**74.02**	**13**	*e*P	**P**	**03 46 35.0**	**+0.3**
ESDC	**Sonseca Array**	**78.70**	**52**	P	**P**	**03 47 02.4**	**+0.4**
	comp=Z,5.4nm,1.0s,baz=296,slow=5.2,SNR=12						
ESDC				LR	LR	04 19 33.3	
	comp=Z,85nm,18.4s,baz=290,slow=34						
KOWA	**Kowa**	**82.28**	**77**	P	**P**	**03 47 21.4**	**-0.3**
KOWA				IAmb	IAmb	03 47 32.2	
	comp=Z,14nm,0.9s						
DBIC	**Dimbokro**	**82.92**	**85**	P	**P**	**03 47 25.8**	**+0.8**
	comp=Z,6.3nm,1.0s,baz=316,slow=4.8,SNR=3.9						
DBIC				LR	LR	04 18 27.0	
	comp=Z,88nm,21.6s,baz=303,slow=32						
NOA	**NORSAR Array B**	**84.57**	**29**	LR	LR	04 23 58.9	
	comp=Z,50nm,19.1s,baz=280,slow=35						
TUE	**Stuetta**	**87.12**	**43**	P	**P**	**03 47 45.3**	**-0.5**
TUE				IAmb	IAmb	03 47 49.6	
	comp=Z,10.0nm,1.0s						
DAVA	**Damuels**	**87.28**	**42**	*e*P	**P**	**03 47 46.7**	**+0.3**
	comp=Z,12nm,1.1s						
DAVOX	**Davos/Dischmat**	**87.40**	**43**	LR	LR	04 22 25.5	
	comp=Z,77nm,18.6s,baz=343,slow=33						
GRF	**Grafenberg Arr**	**87.52**	**40**	*e*P	**P**	**03 47 50.6**	**+3.2**
	comp=Z,6.0nm,0.9s,baz=275,slow=5.7						
RETA	**Reutte**	**87.81**	**42**	*e*P	**P**	**03 47 49.0**	**+0.1**
	comp=Z,6.3nm,1.2s						
FETA	**Feichten**	**87.91**	**42**	*e*P	**P**	**03 47 49.6**	**+0.1**
	comp=Z,6.4nm,0.9s						
TORD	**Torodi Ar. Bea**	**87.98**	**77**	P	**P**	**03 47 50.0**	**-0.2**
	comp=Z,4.1nm,1.2s,baz=298,slow=5.3,SNR=8.8						
TORD				LR	LR	04 26 10.0	
	comp=Z,66nm,18.9s,baz=350,slow=35						
TORD	**Torodi Ar. Bea**	**87.98**	**77**	IAmb	IAmb	03 47 53.8	
	comp=Z,11nm,1.4s						
MOTA	**Moosalm**	**88.07**	**42**	*e*P	**P**	**03 47 50.2**	**-0.1**
	comp=Z,6.0nm,1.4s						
NKC	**Novy Kostel**	**88.14**	**39**	*e*P	**P**	**03 47 50.8**	**+0.5**
NKC				*e*		03 47 59.4	
NKC	**Novy Kostel**	**88.14**	**39**	*e*P	**P**	**03 47 50.8**	**+0.5**
NKC				*e*pP	**sP**	**03 47 59.4**	**-0.2**
CLL	**Collm**	**88.17**	**38**	*e*P	**P**	**03 47 50.0**	**-0.4**
CLL	**Collm**	**88.17**	**38**	*e*P	**P**	**03 47 50.0**	**-0.4**
CLL				*e*PP	**PP**	**03 51 17.0**	**-0.2**
SQTA	**Sankt Quirin**	**88.17**	**42**	*e*P	**P**	**03 47 49.1**	**-1.6**
	comp=Z,3.4nm,1.1s						
WATA	**Walderalm**	**88.38**	**42**	*e*P	**P**	**03 47 52.3**	**+0.6**
	comp=Z,4.3nm,1.1s						
WTTA	**Wattenberg**	**88.44**	**42**	*e*P	**P**	**03 47 51.8**	**-0.2**
	comp=Z,7.2nm,1.6s						
KHC	**Kasperske Hory**	**89.16**	**40**	*e*P	**P**	**03 47 55.9**	**+0.7**
KHC				*e*		03 48 04.1	
KHC	**Kasperske Hory**	**89.16**	**40**	*e*P	**P**	**03 47 55.9**	**+0.7**
KHC				*e*pP	**sP**	**03 48 04.1**	**-0.3**
ABTA	**Abfaltersbach**	**89.16**	**42**	*e*P	**P**	**03 47 55.4**	**+0.1**
	comp=Z,3.4nm,1.1s						
GERES	**GERESS Array B**	**89.32**	**40**	P	**P**	**03 47 56.1**	**+0.1**
	comp=Z,0.7nm,0.8s,baz=259,slow=1.4,SNR=7.7						
GERES				LR	LR	04 23 42.9	
	comp=Z,115nm,18.9s,baz=308,slow=33						
PRU	**Pruhonice**	**89.50**	**39**	*e*P	**P**	**03 47 56.9**	**+0.2**
PRU	**Pruhonice**	**89.50**	**39**	*e*P	**P**	**03 47 56.9**	**+0.2**
KBA	**Koelnbreinsper**	**89.61**	**42**	*e*P	**P**	**03 47 57.3**	**-0.2**
	comp=Z,4.4nm,1.2s						
KEST	**Kesra**	**89.78**	**54**	LR	LR	04 19 43.5	
	comp=Z,63nm,21.4s,baz=244,slow=30						
MOA	**Molln**	**89.97**	**41**	*e*P	**P**	**03 47 58.7**	**-0.4**
	comp=Z,4.1nm,1.6s						
DPC	**Dobruska-Polom**	**90.47**	**38**	*e*P	**P**	**03 48 02.2**	**+0.9**
DPC				*e*		03 48 10.5	
DPC	**Dobruska-Polom**	**90.47**	**38**	*e*P	**P**	**03 48 02.2**	**+0.9**
DPC				*e*pP	**sP**	**03 48 10.5**	**0.0**
SOKA	**Soboth**	**90.83**	**42**	*e*P	**P**	**03 48 03.6**	**+0.5**
	comp=Z,4.7nm,1.2s						
ARSA	**Arzberg**	**90.97**	**41**	*e*P	**P**	**03 48 05.4**	**+1.8**
	comp=Z,3.1nm,0.8s						
CONA	**Conrad Observa**	**90.97**	**41**	*e*P	**P**	**03 48 02.1**	**-1.6**
	comp=Z,3.3nm,1.5s						
FINES	**FINESS Array B**	**91.12**	**26**	LR	LR	04 29 47.8	
	comp=Z,74nm,18.9s,baz=270,slow=36						
SEY	**Seymchan**	**91.86**	**336**	P	**P**	**03 48 08.2**	**+0.8**
	comp=Z,4.5nm,0.7s,baz=104,slow=5.3,SNR=11						
TIXI	**Tiksi**	**92.90**	**349**	*ce*P	**P**	**03 48 12.4**	**+0.4**
MSVF	**Nonsavu**	**96.34**	**253**	P	**P**	**03 48 30.0**	**+1.0**
MSVF				pmax	pmax		
	comp=Z,182nm,0.2s						
MSVF	**Nonsavu**	**96.34**	**253**	P	**P**	**03 48 30.0**	**+1.0**
AKASG	**Malin Array Be**	**97.82**	**34**	LR	LR	04 32 15.1	
	comp=Z,72nm,19.0s,baz=320,slow=35						
NRIK	**Noril'sk**	**98.93**	**1**	LR	LR	04 35 01.8	
	comp=Z,86nm,21.6s,baz=359,slow=36						
NRIK	**Noril'sk**	**98.93**	**1**	*i* P	**P**	**03 48 38.8**	**-0.7**
NRIK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
DZM	**Mont Dzumac**	**107.77**	**251**	*e*LR	LR	04 24 39.5	
	comp=Z,109nm,29.1s						
SONM	**Songino Array**	**118.98**	**348**	PKP	**PKPdf**	**03 53 48.1**	**-0.3**
	comp=Z,3.6nm,1.3s,baz=205,slow=3.1,SNR=5.0						
SONM	**Songino Array**	**118.98**	**348**	PKIKP	**PKPdf**	**03 53 47.5**	**-0.9**
SONM	**Songino Array**	**118.98**	**348**		**PKPdf**	**03 53 47.5**	**-0.9**
KSRS	**Korea Array**	**119.93**	**327**	PKP	**PKPdf**	**03 53 49.9**	**-0.5**
	comp=Z,2.4nm,0.8s,baz=36,slow=1.0,SNR=6.7						
MAW	**Mawson**	**121.32**	**168**	PKP	**PKPdf**	**03 53 51.3**	**-0.7**
	comp=Z,2.7nm,0.9s,baz=124,slow=1.3,SNR=5.6						
HHC	**Hu-ho-hao-te**	**124.19**	**341**	*e*PKP	**PKiKP**	**03 53 58.8**	**-0.1**
HHC				AMB	AMB		
	comp=Z,130nm,8.5s						
WMQ	**Urumqi**	**124.47**	**3**	*e*PKP	**PKiKP**	**03 54 00.4**	**+1.1**
WMQ				AMB	AMB		
	comp=Z,130nm,8.1s						
WMQ				LR	LR		
	comp=Z,280nm,22.1s						
WMQ				LR	LR		
	comp=Z,230nm,20.1s						
GTA	**Gaotai**	**128.31**	**351**	*e*PKP	**PKiKP**	**03 54 07.2**	**0.0**
GTA				sPKP		03 54 14.6	
NJ2	**Nanjing**	**128.82**	**329**	*e*PKP	**PKiKP**	**03 54 08.0**	**-0.2**
STKA	**Stephens Creek**	**129.54**	**238**	PKP	**PKPdf**	**03 54 08.7**	**-0.1**
	comp=Z,7.6nm,1.0s,baz=81,slow=5.5,SNR=9.1						
STKA	**Stephens Creek**	**129.54**	**238**	PKIKP	**PKPdf**	**03 54 08.4**	**-0.4**
STKA	**Stephens Creek**	**129.54**	**238**		**PKPdf**	**03 54 08.4**	**-0.4**
WB2	**Warramunga Arr**	**137.68**	**253**	PKPdf	**PKPdf**	**03 54 23.3**	**-1.2**
WRAB	**Tennant Creek**	**137.68**	**253***c*	*i*PKIKP	**PKPdf**	**03 54 24.9**	**+0.4**
WRAB				pmax	pmax		
	comp=Z,8.0nm,1.7s						
ASAR	**Alice Springs**	**137.68**	**248**	PKhKP	PKPpre	03 54 11.5	
	comp=Z,0.6nm,0.8s,baz=102,slow=4.3,SNR=4.9						
ASAR				PKP	**PKPdf**	**03 54 24.2**	**-0.2**
	comp=Z,2.5nm,1.0s,baz=96,slow=1.9,SNR=12						
WRA	**Warramunga Arr**	**137.69**	**253**	PKhKP	PKPpre	03 54 13.1	
	comp=Z,0.8nm,0.8s,baz=93,slow=2.7,SNR=5.8						
WRA				PKP	**PKPdf**	**03 54 24.2**	**-0.3**
	comp=Z,4.7nm,0.9s,baz=89,slow=1.0,SNR=5.3						
WRA	**Warramunga Arr**	**137.69**	**253**	PKIKP	**PKPdf**	**03 54 23.7**	**-0.8**
WRA	**Warramunga Arr**	**137.69**	**253**	PKPdf	**PKPdf**	**03 54 23.7**	**-0.8**
KMI	**Kunming**	**141.47**	**343**	⇑PKP	**PKiKP**	**03 54 34.0**	**-0.4**
KMI				sPKP		03 54 45.7	
FITZ	**Fitzroy Crossi**	**146.04**	**255**	PKPbc	**PKPbc**	**03 54 39.9**	**-0.3**
	comp=Z,37nm,0.9s,baz=124,slow=2.1,SNR=59						
FITZ	**Fitzroy Crossi**	**146.04**	**255**	PKPdf	**PKPdf**	**03 54 39.2**	**-0.2**
TOLI2	**Tolitoli**	**147.74**	**292**		**PKPdf**	**03 54 43.8**	**+1.4**
CHTO	**Chiang Mai**	**148.50**	**346**	PKP2	**PKPbc**	**03 54 46.5**	**-0.6**
CHTO	**Chiang Mai**	**148.50**	**346**		**PKPbc**	**03 54 46.5**	**-0.6**
CMAR	**Chiang Mai Arr**	**148.84**	**345**	PKP	**PKPdf**	**03 54 45.1**	**+1.0**
	comp=Z,15nm,0.8s,baz=329,slow=1.7,SNR=45						
CMAR				PKPbc	**PKPbc**	**03 54 48.4**	**+0.4**
	comp=Z,18nm,0.9s,baz=346,slow=3.4,SNR=11						
CMAR	**Chiang Mai Arr**	**148.84**	**345**	PKIKP	**PKPdf**	**03 54 44.0**	**-0.1**
CMAR						03 54 48.3	
CMAR	**Chiang Mai Arr**	**148.84**	**345**	PKPdf	**PKPdf**	**03 54 44.0**	**-0.1**
CMAR				PKPbc	**PKPbc**	**03 54 48.3**	**+0.3**
KAPI	**Kappang**	**150.80**	**281**	PKPbc	**PKPbc**	**03 54 53.0**	**+0.1**
	comp=Z,6.3nm,0.7s,baz=346,slow=3.3,SNR=5.7						
KAPI	**Kappang**	**150.80**	**281**	PKIKP	**PKPbc**	**03 54 52.4**	**-0.5**
KAPI	**Kappang**	**150.80**	**281**	PKPbc	**PKPbc**	**03 54 52.4**	**-0.5**
PSI	**Prapat**	**163.42**	**331**	PKP	**PKPdf**	**03 55 02.9**	**-0.6**
	comp=Z,2.6nm,0.7s,baz=259,slow=1.2,SNR=5.9						
PSI				PKPab	**PKPab**	**03 55 53.5**	**-0.7**
	comp=Z,3.4nm,0.3s,baz=350,slow=6.1,SNR=4.1						

IDC 02 03:50:52.6±1.9**,1°.79N**×**126°.81E,h0**^{km}**,mb3.7**/3**, mb1 3.9**/4**,mb1mx3.5**/55**,mbtmp3.7**/4**,ML3.4**/1**,Error ellipse: s-maj=113.7km s-min=23.6km az=69.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.80**	**183**	P	Pn	03 55 26.1	-0.2
	0.1nm,0.3s,baz=0.6,slow=12,SNR=0.7						
WRA	**Warramunga Arr**	**22.83**	**161**	P	P	03 55 56.9	-0.6
	1.4nm,0.4s,baz=340,slow=11,SNR=18						
ASAR	**Alice Springs**	**26.23**	**165**	P	P	03 56 29.5	-0.1
	0.5nm,0.4s,baz=350,slow=14,SNR=5.9						
MKAR	**Makanchi Array**	**59.19**	**326**	P	P	04 00 55.5	-0.1
	0.5nm,0.5s,baz=128,slow=8.3,SNR=3.8						

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*IDC **02** 03:59:34.4±0.9, 34°.07N×112°.21W, h0^{km}, mb1 3.6/4, mb1mx3.4/63, mbtmp3.2/4, ML4.3/2, Error ellipse: s-maj=16.2km s-min=7.9km az=17.0*

*NEIC **02** 03:59:35.1±1.3, 34°.15N±0°.04×112°.16W±0°.05, h5^{km}±7^{km}, ML3.2/30, Error ellipse: s-maj=6.8km s-min=3.4km az=50.0*

*ANF **02** 03:59:36.9±0.6, 34°.16N×112°.12W, h30^{km}±5^{km}, ML3.5/16, Error ellipse: s-maj=2.5km s-min=2.4km az=33.0*

ISC 02 03:59:34.8±1.2**,34°.16N**±0°.04×**112°.15W**±0°.03**,h5**^{km}±10^{km}**, n54,**σ1^{s}.**13**/68**,Western Arizona**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
X16A	**Lo Mia Camp, P**	**0.64**	**66**	Pg	**Pg**	**03 59 46.4**	**-0.8**
X16A				Sg	**Sg**	**03 59 53.9**	**-1.7**
X16A				IAML		03 59 56.6	
	comp=N,636nm,0.3s						
Y14A	**Wickenburg**	**0.74**	**253**	Pg	**Pg**	**03 59 49.6**	**+0.5**
Y14A				Sg	**Sg**	**03 59 58.5**	**-0.2**
Y14A				IAML		04 00 00.2	
	comp=N,1µm,0.2s						
Y14A				IAML		04 00 05.1	
	comp=E,1µm,0.4s						
WUAZ	**Wupatki**	**1.50**	**25**	Pn	**Pn**	**04 00 01.7**	**-0.8**
WUAZ	**Wupatki**	**1.50**	**25**	P	**Pn**	**04 00 01.6**	**-0.9**
	baz=205,SNR=193						
WUAZ				S	**Sn**	**04 00 20.7**	**-1.8**
	baz=205						
PDMCI	**Parker Dam,Lak**	**1.66**	**275**	P	**Pn**	**04 00 04.1**	**-0.4**
	baz=93,SNR=97						
PDMCI				Sb	**Sg**	**04 00 28.5**	**+0.5**
	baz=93						
W13A	**Hualapai Mount**	**1.71**	**304**		**Pn**	**04 00 05.6**	**+0.1**
W13A				IAML		04 00 32.8	
	comp=N,265nm,0.7s						
W13A				IAML		04 00 33.3	
	comp=E,146nm,0.4s						
X18A	**Snowflake**	**1.86**	**78**		**Pn**	**04 00 07.5**	**0.0**
NEE2	**Needles Airpor**	**2.13**	**287**	P	**Pn**	**04 00 10.2**	**-0.8**
	baz=104,SNR=17						
NEE2				Sb	**Sg**	**04 00 42.9**	**-0.2**
	baz=104						
TUC	**Tucson**	**2.17**	**148**	Pn	**Pn**	**04 00 11.4**	**-0.3**
TUC				IAML		04 00 38.8	
	comp=E,107nm,0.3s						
TUC				IAML		04 00 39.0	
	comp=E,98nm,0.2s						
TUC	**Tucson**	**2.17**	**148**	P	**Pn**	**04 00 11.2**	**-0.6**
	baz=330						
TUC				S	**Sn**	**04 00 37.2**	**-1.9**
	baz=330						
W18A	**Petrified Fore**	**2.21**	**64**		**Pn**	**04 00 12.7**	**+0.3**
W18A				IAML		04 00 47.8	
	comp=E,165nm,0.7s						
W18A	**Petrified Fore**	**2.21**	**64**	P	**Pn**	**04 00 12.0**	**-0.3**
	baz=246						
U15A	**North Rim**	**2.26**	**357**	Pn	**Pn**	**04 00 13.4**	**+0.2**
U15A				IAML		04 00 46.9	
	comp=N,128nm,0.5s						
U15A				IAML		04 00 47.4	
	comp=E,146nm,0.6s						
214A	**Organ Pipe Nat**	**2.27**	**194**	Pn	**Pn**	**04 00 12.3**	**-0.8**
214A				IAML		04 00 49.6	
	comp=N,129nm,0.3s						
214A				IAML		04 00 51.6	
	comp=E,138nm,0.6s						
214A	**Organ Pipe Nat**	**2.27**	**194**	P	**Pn**	**04 00 12.2**	**-0.8**
	baz=14,SNR=34						
214A				Sb	**Sb**	**04 00 45.5**	**+0.7**
	baz=14						
IRM	**Iron Mountain**	**2.48**	**271**	P	**Pn**	**04 00 15.7**	**-0.3**
	baz=88,SNR=18						
IRM				Sb	**Sg**	**04 00 54.0**	**-0.6**
	baz=88						
GLA	**Glamis**	**2.49**	**244**	Pn	**Pn**	**04 00 16.6**	**+0.5**
GLA				IAML		04 00 58.9	
	comp=E,168nm,0.4s						
GLA				IAML		04 01 03.0	
	comp=N,139nm,0.5s						
GLA	**Glamis**	**2.49**	**244**	Sb	**Sg**	**04 00 54.1**	**-0.8**
	baz=62						
BC3	**Big Chuckawall**	**2.79**	**260**	Sb	**Sg**	**04 01 02.9**	**-1.7**
	baz=78						
KNB	**Kanab**	**2.90**	**349**	Pn	**Pn**	**04 00 22.0**	**+0.1**
GMRC	**Granite Mounta**	**2.96**	**283**	P	**Pn**	**04 00 22.3**	**-0.4**
	baz=100,SNR=10						
GMRC				Sb	**Sg**	**04 01 08.0**	**-2.0**
	baz=100						
LCMT	**Little Creek M**	**2.98**	**343**	Pn	**Pn**	**04 00 23.3**	**+0.4**
BELC	**Belle Mtn. Jos**	**3.20**	**268**	P	**Pn**	**04 00 25.5**	**-0.3**
	baz=85,SNR=12						
BELC				S	**Sn**	**04 01 03.8**	**-0.7**
	baz=85						
SWSC	**Sam W. Stewart**	**3.28**	**249**	P	**Pn**	**04 00 26.7**	**-0.2**
	baz=67						
TUQ	**Turquoise Moun**	**3.35**	**293**	P	**Pn**	**04 00 27.7**	**-0.4**
	baz=110,SNR=6.5						
SZCU	**Shurtz Canyon**	**3.51**	**348**	Pn	**Pn**	**04 00 30.5**	**+0.3**
PFO	**Pinyon Flats O**	**3.62**	**262**	Pn	**Pn**	**04 00 31.6**	**-0.2**
	comp=N,13nm,0.3s,baz=74,slow=14,SNR=114						
PFO				Sn	**Sn**	**04 01 13.5**	**-1.5**
	comp=N,1.1nm,0.3s,baz=186,slow=5.7,SNR=4.6						
PFO				Lg	Lg	04 01 28.7	
	comp=N,3.3nm,0.3s,baz=194,slow=7.0,SNR=11						
PFO	**Pinyon Flats O**	**3.62**	**262**	Pn	**Pn**	**04 00 31.6**	**-0.2**
PFO	**Pinyon Flats O**	**3.62**	**262**	P	**Pn**	**04 00 31.4**	**-0.4**
	baz=79,SNR=29						
PFO				Sb	**Sg**	**04 01 28.4**	**-3.0**
	baz=79						
319A	**Douglas**	**3.68**	**138**	Pn	**Pn**	**04 00 32.8**	**+0.2**
GSC	**Goldstone, Bar**	**4.00**	**288**	Pn	**Pn**	**04 00 36.7**	**-0.2**
GSC				IAML		04 01 54.7	
	comp=N,30nm,0.9s						
121A	**Cookes Peak, D**	**4.00**	**113**	Pn	**Pn**	**04 00 37.4**	**+0.4**
121A				IAML		04 01 45.7	
	comp=E,50nm,0.7s						
121A	**Cookes Peak, D**	**4.00**	**113**	P	**Pn**	**04 00 37.3**	**+0.4**
	baz=296						
121A				S	**Sn**	**04 01 21.7**	**-2.6**
	baz=296						
PRN	**Pahroc Range**	**4.00**	**325**	Pn	**Pn**	**04 00 37.9**	**+0.9**
BAR	**Barrett**	**4.06**	**250**	Pn	**Pn**	**04 00 38.7**	**+1.0**
RRX	**Edison Barstow**	**4.06**	**281**	S	**Sn**	**04 01 26.3**	**+0.7**
	baz=98						
GWY	**Greenwater Val**	**4.21**	**300**	Pn	**Pn**	**04 00 40.7**	**+0.8**
QSM	**Queen of Sheba**	**4.27**	**296**	Pn	**Pn**	**04 00 40.8**	**+0.3**
LENM	**Lemitar**	**4.29**	**89**	Pn	**Pn**	**04 00 39.9**	**-1.1**
BNM	**Barren Site**	**4.58**	**89**	Pn	**Pn**	**04 00 44.1**	**-0.9**
ANMO	**Albuquerque**	**4.76**	**79**	Pn	**Pn**	**04 00 50.3**	**+2.9**
	comp=E,0.3nm,0.3s,baz=267,slow=11,SNR=4.0						
ANMO				Pg	**Pb**	**04 01 01.6**	**+2.7**
	comp=E,0.7nm,0.3s,baz=268,slow=9.1,SNR=8.3						
ANMO				Lg	Lg	04 02 00.1	
	comp=E,0.9nm,0.3s,baz=82,slow=11,SNR=6.2						
ANMO	**Albuquerque**	**4.76**	**79**	Pn	**Pn**	**04 00 48.7**	**+1.2**
R11A	**Troy Canyon, C**	**5.01**	**327**	Pn	**Pn**	**04 00 51.5**	**+0.6**
R11A	**Troy Canyon, C**	**5.01**	**327**	P	**Pn**	**04 00 51.5**	**+0.6**
	baz=145						
ISA	**Isabella, Lake**	**5.41**	**288**	Pn	**Pn**	**04 00 56.4**	**+0.1**
MNTX	**Cornudas Mount**	**6.20**	**111**	Pn	**Pn**	**04 01 07.5**	**+0.4**
NVAR	**Mina Array Bea**	**6.54**	**312**	Pn	**Pn**	**04 01 13.6**	**+1.7**
	comp=E,0.1nm,0.3s,baz=134,slow=14,SNR=4.1						
NVAR				Lg	Lg	04 03 00.2	
	comp=E,0.1nm,0.3s,baz=128,slow=26,SNR=1.5						
NVAR	**Mina Array Bea**	**6.54**	**312**	Pn	**Pn**	**04 01 10.8**	**-1.1**
T25A	**Trinidad**	**6.96**	**63**	Pn	**Pn**	**04 01 15.9**	**-1.8**
TX31	**Lajitas Ar. Si**	**8.68**	**121**	Pn	**Pn**	**04 01 42.0**	**+0.8**
TX32	**Lajitas Array**	**8.68**	**121**	Pn	**Pn**	**04 01 42.8**	**+1.6**
TXAR	**Lajitas Array**	**8.68**	**121**	Pn	**Pn**	**04 01 42.8**	**+1.6**
	comp=E,0.4nm,0.3s,baz=292,slow=12,SNR=30						
TXAR				Sn	**Sn**	**04 03 18.7**	**-0.8**
	comp=E,0.1nm,0.3s,baz=267,slow=33,SNR=2.7						
TXAR				Lg	Lg	04 04 08.2	
	comp=E,0.2nm,0.3s,baz=289,slow=31,SNR=3.6						
TXAR	**Lajitas Array**	**8.68**	**121**	Pn	**Pn**	**04 01 42.5**	**+1.3**
PDAR	**Pinedale Array**	**8.83**	**13**	Pg	Pg	04 02 09.4	-14
	comp=E,0.1nm,0.3s,baz=174,slow=19,SNR=2.1						
PDAR				Lg	Lg	04 04 17.2	
	comp=E,0.1nm,0.3s,baz=187,slow=30,SNR=5.6						

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*ISK **02** 04:28:31.9, 38°.16N×43°.07E, h9^{km}, ML2.5/7*

*DDA **02** 04:28:32.4, 38°.17N×43°.13E, h7^{km}±4^{km}, ML2.2*

ISC 02 04:28:32.5±1.1**,38°.17N**±0°.03×**43°.13E**±0°.03**,h9**^{km}±11^{km}**, n21,**σ0^{s}.**79**/33**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TVAN	**Van**	**0.42**	**31**	*i* P	**Pg**	**04 28 41.0**	**+0.2**
TVAN				IAML		04 28 52.0	
	comp=E,228nm,0.3s						
TVAN				IAML		04 28 53.0	
	comp=N,302nm,0.8s						
VANB	**Van**	**0.47**	**26**	PG	**Pg**	**04 28 41.0**	**-0.7**
VANB				SG	**Sg**	**04 28 47.6**	**-0.3**
PERV	**Siirt/Pervari-**	**0.52**	**245**	*i* P	**Pg**	**04 28 42.5**	**0.0**
PERV				*i* S	**Sb**	**04 28 51.4**	**-0.1**

ADCV	BITLIS_Adilcev	0.71	334	*i* P	Pg	04 28 46.6	+0.3
ADCV				IAML		04 28 59.0	
	comp=N,93nm,0.7s						
ADCV				IAML		04 29 00.0	
	comp=E,79nm,0.6s						
HAKT	HAKKARI	0.76	143	*i* P	Pg	04 28 47.0	-0.2
BLIS	Bitlis-Merkez	0.83	287	*i* P	Pg	04 28 48.1	-0.5
BLIS				*i* S	Sg	04 29 00.0	+0.5
BLIS				IAML		04 29 03.0	
	comp=N,127nm,0.3s						
BLIS				IAML		04 29 04.0	
	comp=E,77nm,0.3s						
SIRT	Sirnak	0.86	220	PG	Pg	04 28 48.1	-1.0
SIRT				SG	Sg	04 29 00.2	-0.1
GURO	Guroymak-BITLI	0.94	294	PG	Pg	04 28 49.7	-1.0
GURO				SG	Sg	04 29 02.6	-0.3
SRTM	Siirt_Merkez	0.97	260	*i* P	Pb	04 28 51.9	+0.3
SRTM				*i* S	Sn	04 29 07.0	+0.6
SRTM				IAML		04 29 11.0	
	comp=E,75nm,0.6s						
SRTM				IAML		04 29 11.0	
	comp=N,51nm,0.5s						
CUKT	Cukurca	0.99	157	PG	Pg	04 28 51.6	0.0
CUKT				SG	Sb	04 29 06.1	+0.8
MLAZ	Malazgirt-MUS	1.07	335	PG	Pg	04 28 52.6	-0.5
MLAZ				SG	Sb	04 29 07.9	+0.3
YOVA	Hakkari_Yksek	1.09	122	*i* P	Pg	04 28 52.9	-0.5
CLDR	Caldiran	1.15	32	PN	Pn	04 28 55.0	-0.1
MUSM	Mu-Merkez	1.39	294	*i* P	Pn	04 28 57.3	-1.0
MUSM				*i* S	Sg	04 29 18.4	+1.3
AGRB	Hanur-Agry	1.41	356	PN	Pn	04 28 58.6	0.0
BTMN	Batman	1.50	260	*i* P	Pb	04 29 00.5	0.0
BTMN				*i* S	Sg	04 29 22.1	+1.5
BTMN				IAML		04 29 25.0	
	comp=N,52nm,0.6s						
BTMN				IAML		04 29 26.0	
	comp=E,53nm,0.5s						
SVAN	Silvan-Diyarba	1.52	270	*i* P	Pb	04 29 01.1	+0.1
SVAN				*i* S	Sg	04 29 23.2	+1.8
SVAN				IAML		04 29 28.0	
	comp=N,33nm,0.5s						
SVAN	Silvan-Diyarba	1.52	270	PN	Pn	04 28 59.1	-0.9
MIDY	Mardin/Midyat-	1.57	241	*i* P	Pb	04 29 01.3	-0.5
MIDY				*i* S	Sg	04 29 24.5	+1.5
MIDY				IAML		04 29 26.0	
	comp=E,28nm,0.2s						
MIDY				IAML		04 29 26.0	
	comp=N,50nm,0.4s						
BNGB	Bingl	2.09	294	PN	Pn	04 29 06.8	-1.1
MAZI	Mazidag	2.24	252	PN	Pn	04 29 09.4	-0.6

IDC 02 05:10:26.9±5.5**, 10°.71S**×**152°.61E, h0^{km}, mb2.8**/1**, mb1 3.4**/2**, mb1mx3.3**/36**, mbtmp3.2**/2**, ML3.3**/1**, Error ellipse: s-maj=339.0km s-min=57.0km az=136.0, D'Entrecasteaux Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.85	240	P	P	05 15 00.3	+0.6
	0.1nm,0.3s,baz=62,slow=10,SNR=8.5						
ASAR	Alice Springs	22.00	232	P	P	05 15 22.3	-0.6
	0.3nm,0.6s,baz=54,slow=11,SNR=2.4						
TORD	Torodi Ar. Bea	151.45	278	PKPbc	PKPbc	05 30 23.7	-0.2
	0.4nm,0.7s,baz=93,slow=2.9,SNR=2.5						

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*TUL **02** 05:12:51.6±0.6, 36°.44N±0°.02×97°.72W±0°.02, h4^{km}±7^{km}, ML2.5, mb_Lg2.5/29(NEIC), Error ellipse: s-maj=2.5km s-min=2.2km az=88.0*

NEIC 02 05:12:51.8±0.5**, 36°.435N**±0°.009×**97°.72W**±0°.02**, h2^{km}**±8^{km}**, Error ellipse: s-maj=2.6km s-min=0.7km az=62.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	Winter Ranch,	1.03	267		Pg	05 13 11.2	-0.4
OKCFA	Oklahoma City	1.04	168		Pg	05 13 11.4	-0.2
T35A	Sooner Cattle	1.08	63		Pg	05 13 12.3	-0.2
FNO	Franklin	1.20	167		Pg	05 13 14.4	-0.4
TUL1	Leonard	1.65	108		Pn	05 13 21.4	-0.2
X34A	Smith Ranch, M	1.83	183		Pn	05 13 24.8	+0.5
X34A				IAmb_Lg		05 13 51.6	
	comp=Z,30nm,1.1s						
WMOK	Wichita Mounta	1.90	207		Pn	05 13 25.4	+0.2
X37A	Clayton	2.66	133	IAmb_Lg		05 14 21.3	
	comp=Z,20nm,0.8s						
U38A	Gravette	2.69	89	IAmb_Lg		05 14 18.6	
	comp=Z,11nm,0.7s						
CBKS	Cedar Bluff	2.86	327	IAmb_Lg		05 14 20.7	
	comp=Z,12nm,0.9s						
AMTX	Amarillo	3.58	246	IAmb_Lg		05 14 48.5	
	comp=Z,12nm,0.8s						
S39A	Bolivar	3.73	69	IAmb_Lg		05 14 52.8	
	comp=Z,9.9nm,0.8s						
MIAR	Mount Ida	3.87	118	IAmb_Lg		05 14 59.9	
	comp=Z,6.8nm,0.7s						
MGMO	Mountain Grove	4.43	79	IAmb_Lg		05 15 11.2	
	comp=Z,10nm,1.0s						
WHAR	Wooly Hollow	4.56	103	IAmb_Lg		05 15 25.4	
	comp=Z,12nm,0.9s						
P38A	Dawn	4.59	45	IAmb_Lg		05 15 20.1	
	comp=Z,12nm,0.7s						
KSCO	Kaye Shedlock'	4.66	305	IAmb_Lg		05 15 30.8	
	comp=Z,10nm,0.8s						
P40A	Paris	5.44	54	IAmb_Lg		05 15 47.0	
	comp=Z,11nm,0.7s						
N38A	Joes South For	5.59	38	IAmb_Lg		05 15 56.7	
	comp=Z,14nm,0.8s						
ISCO	Idaho Springs	7.07	301	IAmb_Lg		05 16 40.5	
	comp=Z,4.0nm,1.1s						

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*IDC **02** 05:14:27.7±1.0, 58°.23N×152°.22W, h0^{km}, mb3.6/5, mb1 3.8/7, mb1mx3.6/48, mbtmp3.6/7, ML3.7/2, MS2.9/2, Ms1 3.0/2, ms1mx2.5/40, Error ellipse: s-maj=25.6km s-min=13.2km az=129.0*

*NEIC **02** 05:14:32.4±1.1, 58°.05N±0°.04×152°.04W±0°.09, h37^{km}±19^{km}, Error ellipse: s-maj=7.5km s-min=4.9km az=116.0*

*AEIC **02** 05:14:32±1.1, 58°.04N±0°.04×152°.04W±0°.09, h46^{km}±8^{km}, ML3.5, ML3.7/88(NEIC), Error ellipse: s-maj=7.9km s-min=4.4km az=120.0*

*ANF **02** 05:14:32.2±0.3, 58°.08N×152°.01W, h50^{km}, ML3.8/35, Error ellipse: s-maj=3.7km s-min=2.5km az=132.0*

ISC 02 05:14:31.8±0.9**, 58°.09N**±0°.03×**151°.93W**±0°.03**, h31^{km}**±8^{km}**, n239,** σ1^{s}.08/243**, mb3.8**/5**, Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDAK	Kodiak Island	0.47	229	Pn	Pb	05 14 41.9	+0.1
	273nm,0.3s,baz=50,slow=13,SNR=5807						
KDAK				Sn	Sb	05 14 48.6	+0.1
	806nm,0.3s,baz=307,slow=20,SNR=96						
KDAK	Kodiak Island	0.47	229		Pb	05 14 41.7	0.0
KDAK					Sb	05 14 48.7	+0.2
KDAK	Kodiak Island	0.47	229	IAML		05 14 49.6	
	3μm,0.3s						
KDAK				IAML		05 14 49.9	
	6μm,0.3s						
KDAK	Kodiak Island	0.47	229	P	Pb	05 14 41.7	0.0
	baz=48						
KDAK				S	Sb	05 14 48.4	-0.1
	baz=48						
OHAK	Old Harbor	1.14	221		Pn	05 14 50.8	-0.7
OHAK					Sn	05 15 04.4	-1.6
OHAK	Old Harbor	1.14	221	P	Pn	05 14 50.6	-0.9
	baz=39,SNR=34						
OHAK				S	Sn	05 15 04.2	-1.8
	baz=39						
Q19K	Cape Douglas,	1.23	314		Pn	05 14 52.8	-0.1
Q19K					Sn	05 15 08.8	+0.3
Q19K	Cape Douglas,	1.23	314	IAML		05 15 15.6	
	comp=N,2μm,0.7s						
Q19K	Cape Douglas,	1.23	314	P	Pn	05 14 52.8	-0.1
	baz=136,SNR=92						
Q19K				S	Sn	05 15 08.8	+0.3
	baz=136						
KAPH	Katmai Pasha	1.38	293		Pn	05 14 54.8	-0.1
KAPH					Sn	05 15 11.6	-0.5
CNPM	China Poot	1.48	14		Pn	05 14 57.5	+1.2
AU22	Augustine Moun	1.49	330		Pn	05 14 57.0	+0.7
AUQ	Augustine Qik'	1.49	329		Pn	05 14 57.2	+0.7
AGU	Augustine-Summ	1.50	329		Pn	05 14 57.4	+0.7
AUL	Augustine Lava	1.52	329		Pn	05 14 58.1	+1.3
AUW	Augustine West	1.52	329		Pn	05 14 57.5	+0.8
HOM	Homer	1.58	5		Pn	05 14 59.0	+1.4
HOM					Sb	05 15 19.5	-0.5
HOM	Homer	1.58	5	IAML		05 15 26.8	
	comp=E,998nm,0.7s						
HOM				IAML		05 15 29.1	
	comp=N,1μm,0.7s						
HOM	Homer	1.58	5	P	Pn	05 14 59.0	+1.4
	baz=187,SNR=22						
HOM				S	Sb	05 15 19.0	-0.9
	baz=187						
KAKN	Katmai Knife C	1.67	278		Pn	05 14 58.7	-0.3
KAKN					Sn	05 15 18.7	-0.7
OPT	Oil Point	1.71	337		Pn	05 15 00.2	+0.8
P19K	Oil Pt	1.71	337		Pn	05 15 00.2	+0.7
P19K					Sn	05 15 22.4	+2.1
P19K	Oil Pt	1.71	337	IAML		05 15 24.6	
	comp=E,1μm,0.7s						
P19K	Oil Pt	1.71	337	P	Pn	05 15 00.2	+0.7
	baz=159,SNR=62						
P19K				S	Sn	05 15 21.2	+1.0
	baz=159						
BRLK	Bradley Lake	1.77	17		Pn	05 15 00.8	+0.5
BRLK					Sn	05 15 21.8	+0.2
BRSE	Bradley Lake S	1.77	20		Pn	05 15 01.0	+0.8
BRSE	Bradley Lake S	1.77	20	P	Pn	05 15 01.0	+0.8
	baz=202,SNR=30						
BRSE				S	Sn	05 15 22.0	+0.3
	baz=202						
KABU	Katmai Buttres	1.79	277		Pn	05 15 00.5	-0.1
SII	Sitkinak Islan	1.96	220		Pn	05 15 01.7	-1.2
SII	Sitkinak Islan	1.96	220	P	Pn	05 15 01.9	-1.1
	baz=37						
ILS	Iliamna Low So	1.96	343		Pn	05 15 03.6	+0.6
IVE	Iliamna Volcan	2.01	344		Pn	05 15 04.0	+0.2
O20K	Slope Mountain	2.03	350		Pn	05 15 05.0	+1.1
O20K	Slope Mountain	2.03	350	P	Pn	05 15 05.0	+1.1
	baz=171,SNR=56						
O20K				S	Sn	05 15 29.2	+1.0
	baz=171						
P18K	Big Mountain,	2.16	309		Pn	05 15 05.1	-0.6
P18K					Sn	05 15 29.5	-1.9
P18K	Big Mountain,	2.16	309	P	Pn	05 15 05.1	-0.6
	baz=128,SNR=16						
P18K				S	Sn	05 15 29.5	-1.9
	baz=128						
PLK3	Peulik 3	2.35	262		Pn	05 15 08.6	+0.3
RED	Redoubt Volcan	2.38	350		Pn	05 15 09.2	+0.5
RED					Sn	05 15 37.0	+0.2
SEW	Seward	2.39	31		Pn	05 15 09.0	+0.2
SEW	Seward	2.39	31	P	Pn	05 15 09.0	+0.2
	baz=214,SNR=5.6						
SEW				S	Sn	05 15 35.2	-1.7
	baz=214						
RSO	Redoubt South	2.42	350		Pn	05 15 10.2	+0.8
O19K	Port Alsworth	2.45	331		Pn	05 15 09.6	+0.1
O19K					Sn	05 15 37.7	-0.6
O19K	Port Alsworth	2.45	331	P	Pn	05 15 09.6	+0.1
	baz=151,SNR=54						
O19K				S	Sn	05 15 37.3	-1.0
	baz=151						
RDWB	Redoubt West	2.45	349		Pn	05 15 10.1	+0.4
O18K	Koktuh Hills	2.45	318		Pn	05 15 09.3	-0.4
O18K	Koktuh Hills	2.45	318	IAML		05 15 52.2	
	comp=E,300nm,0.7s						
O18K				IAML		05 15 53.8	
	comp=N,402nm,0.7s						
O18K	Koktuh Hills	2.45	318	P	Pn	05 15 09.3	-0.4
	baz=137						
PLK1	Peulik 1	2.51	265		Pn	05 15 10.3	-0.1
SLKM	Skilak Lake	2.58	19		Pn	05 15 11.8	+0.4
O22K	Cooper Landing	2.65	24		Pn	05 15 12.8	+0.5
O22K	Cooper Landing	2.65	24	P	Pn	05 15 12.6	+0.2
	baz=207,SNR=10						
CAPN	Captain Cook N	2.72	8		Pn	05 15 14.9	+1.7
N19K	Bonanza Creek	3.03	336		Pn	05 15 17.7	+0.1
N19K	Bonanza Creek	3.03	336	IAML		05 16 11.1	
	comp=E,171nm,1.0s						
N19K	Bonanza Creek	3.03	336	P	Pn	05 15 17.7	+0.1
	baz=155,SNR=11						
SPU	Mount Spurr	3.10	359		Pn	05 15 19.5	+0.9
SPCR	Spurr Chakacha	3.12	357		Pn	05 15 19.9	+1.0
SPCR	Spurr Chakacha	3.12	357	P	Pn	05 15 19.1	+0.2
	baz=178,SNR=10						
SPCR				S	Sn	05 15 55.3	+0.1
	baz=178						
SPCN	Chakachatna No	3.15	358		Pn	05 15 20.2	+1.0
FIS	Fire Island	3.19	15		Pn	05 15 20.8	+1.2
FIS	Fire Island	3.19	15	IAML		05 16 28.8	
	comp=N,280nm,0.9s						
FIS				IAML		05 16 47.2	
	comp=E,240nm,0.8s						
SPBG	Spurr Blockage	3.19	356		Pn	05 15 20.5	+0.7
Q23K	Middleton Isla	3.20	63		Pn	05 15 20.9	+1.0
MID	Middleton Isla	3.21	63		Pn	05 15 20.9	+0.9
RC01	Rabbit Creek A	3.21	19		Pn	05 15 20.5	+0.5
RC01	Rabbit Creek A	3.21	19	IAML		05 15 57.1	
	comp=E,165nm,0.4s						
RC01				IAML		05 15 57.7	
	comp=N,155nm,0.3s						
RC01	Rabbit Creek A	3.21	19	P	Pn	05 15 20.5	+0.5
	baz=202,SNR=5.9						
RC01				S	Sn	05 15 55.9	-1.3
	baz=202						
SPCG	Spurr Capps Gl	3.21	359		Pn	05 15 21.1	+0.9
PWL	Port Wells	3.33	32		Pn	05 15 22.3	+0.6
PWL	Port Wells	3.33	32	IAML		05 15 59.6	
	comp=E,235nm,0.6s						
PWL	Port Wells	3.33	32	P	Pn	05 15 22.2	+0.6
	baz=215,SNR=15						
PWL				S	Sn	05 15 57.8	-2.3
	baz=215						
STLK	Strandline Lak	3.42	1		Pn	05 15 24.0	+1.0
SUA	Susitna One	3.44	9		Pn	05 15 23.7	+0.5
SUA	Susitna One	3.44	9	P	Pn	05 15 23.5	+0.2
	baz=191,SNR=6.4						
SUA				S	Sn	05 16 02.2	-0.8
	baz=191						
SVW2	Sparrevohn	3.54	330		Pn	05 15 24.4	-0.3
SVW2	Sparrevohn	3.54	330	IAML		05 16 26.1	
	comp=N,103nm,0.6s						
SVW2				IAML		05 16 28.6	
	comp=E,141nm,0.6s						
HIN	Hinchinbrook I	3.62	48		Pn	05 15 26.7	+1.0
HIN	Hinchinbrook I	3.62	48	IAML		05 16 06.6	
	comp=N,192nm,0.6s						
HIN				IAML		05 16 08.9	
	comp=E,148nm,0.6s						
GLI	Glacier Island	3.73	39		Pn	05 15 27.4	+0.2
GLI	Glacier Island	3.73	39	IAML		05 16 09.3	
	comp=N,112nm,0.4s						
GLI				IAML		05 16 09.8	
	comp=E,156nm,0.3s						
GLI	Glacier Island	3.73	39	P	Pn	05 15 27.2	+0.1
	baz=224						
GLI				S	Sn	05 16 06.9	-3.0
	baz=224						
KNK	Knik Glacier	3.77	26		Pn	05 15 27.9	+0.2
KNK	Knik Glacier	3.77	26	IAML		05 16 24.6	
	comp=N,81nm,0.5s						
KNK				IAML		05 16 43.2	
	comp=E,82nm,0.8s						
KNK	Knik Glacier	3.77	26	P	Pn	05 15 27.9	+0.2
	baz=210						
KNK				S	Sn	05 16 08.6	-2.3
	baz=210						
M22K	Willow	3.79	13		Pn	05 15 28.9	+1.0
PMR	Palmer	3.79	21		Pn	05 15 28.0	+0.1
PMR	Palmer	3.79	21	P	Pn	05 15 27.8	-0.1
	baz=204						
PMR				S	Sn	05 16 09.1	-2.2
	baz=204						
FID	Port Fidalgo	3.85	44		Pn	05 15 28.6	-0.2
FID	Port Fidalgo	3.85	44	IAML		05 16 11.2	
	comp=N,124nm,0.3s						
FID				IAML		05 16 12.1	
	comp=E,126nm,0.4s						
SKT	Skwentna	3.91	3		Pn	05 15 30.3	+0.6
SKT	Skwentna	3.91	3	IAML		05 16 16.3	
	comp=E,69nm,0.3s						
GHO	Glory Hole Cre	3.99	21		Pn	05 15 31.5	+0.7
GHO	Glory Hole Cre	3.99	21	IAML		05 16 16.0	
	comp=N,112nm,0.5s						
GHO				IAML		05 16 26.1	
	comp=E,80nm,0.4s						
EYAK	Cordova Ski Ar	4.01	49		Pn	05 15 31.8	+0.7
EYAK	Cordova Ski Ar	4.01	49	P	Pn	05 15 31.7	+0.7
	baz=235						
EYAK				S	Sn	05 16 14.2	-2.7
	baz=235						
M19K	Big River Lodg	4.02	343		Pn	05 15 31.4	+0.2
M19K	Big River Lodg	4.02	343	P	Pn	05 15 31.4	+0.2
	baz=162						
JPK	Jack Peak	4.02	40		Pn	05 15 32.0	+0.7
SML	Sawmill	4.14	24		Pn	05 15 33.5	+0.5
SML	Sawmill	4.14	24	IAML		05 16 54.0	
	comp=N,74nm,1.0s						
SML				IAML		05 17 04.7	
	comp=E,57nm,1.0s						
SML	Sawmill	4.14	24	P	Pn	05 15 33.4	+0.5
	baz=208						
KAIM	Kayak Island	4.30	61		Pn	05 15 36.1	+1.2
KAIM	Kayak Island	4.30	61	IAML		05 16 40.8	
	comp=N,128nm,2.5s						
L19K	White Mountain	4.36	342		Pn	05 15 36.0	+0.2
L19K	White Mountain	4.36	342	P	Pn	05 15 36.1	+0.2
	baz=160,SNR=56						
DIV	Divide	4.37	43		Pn	05 15 36.7	+0.8
RAGM	Ragged Mountai	4.38	55		Pn	05 15 36.9	+0.8
RAGM	Ragged Mountai	4.38	55	IAML		05 16 27.3	
	comp=E,95nm,0.6s						
CUT	Chulitna	4.41	10	P	Pn	05 15 37.6	+1.2
	baz=192						
SCM	Sheep Creek Mo	4.41	30		Pn	05 15 37.5	+0.9
SCM	Sheep Creek Mo	4.41	30	IAML		05 16 27.8	
	comp=N,77nm,0.3s						
SCM	Sheep Creek Mo	4.41	30	P	Pn	05 15 37.4	+0.9
	baz=214,SNR=8.0						
GOAT	Goat Mountain	4.45	53		Pn	05 15 38.5	+1.3
L20K	Farewell, AK	4.51	348		Pn	05 15 39.0	+1.1
L20K	Farewell, AK	4.51	348	P	Pn	05 15 38.9	+0.9
	baz=168						
KLU	Klutina	4.56	39		Pn	05 15 39.5	+0.8
KLU	Klutina	4.56	39	IAML		05 16 31.8	
	comp=E,86nm,0.4s						
KLU				IAML		05 16 32.2	
	comp=N,90nm,0.4s						
KLU	Klutina	4.56	39	P	Pn	05 15 39.5	+0.8
	baz=224,SNR=13						
NICHA	Nichawak Mount	4.63	59		Pn	05 15 40.5	+1.0
BMRM	Bremner River	4.71	49		Pn	05 15 41.5	+0.8
BMRM	Bremner River	4.71	49	P	Pn	05 15 41.3	+0.6
	baz=235						
BERG	Berg Lake	4.81	58		Pn	05 15 43.1	+1.1
PS12	TAPS Pump St12	4.82	42		Pn	05 15 43.3	+1.1
PPLA	Purkeypile	4.83	359		Pn	05 15 43.2	+0.9
GRIN	Grindle Hills	4.94	60		Pn	05 15 45.2	+1.4
M24K	Tolsona, Glenn	4.95	33		Pn	05 15 45.6	+1.6
M24K	Tolsona, Glenn	4.95	33	IAML		05 17 17.6	
	comp=E,63nm,2.3s						
M24K				IAML		05 17 25.4	
	comp=N,51nm,2.0s						
M24K	Tolsona, Glenn	4.95	33	P	Pn	05 15 45.2	+1.2
	baz=218						
KHIT	Khitrov Hills	5.04	58		Pn	05 15 46.2	+1.0
N25K	Chitina, Valde	5.11	43		Pn	05 15 47.5	+1.3
N25K	Chitina, Valde	5.11	43	IAML		05 16 43.6	
	comp=N,51nm,0.5s						
N25K				IAML		05 16 44.3	
	comp=E,49nm,0.4s						
N25K	Chitina, Valde	5.11	43	P	Pn	05 15 47.0	+0.8
	baz=230						
SNH	Sunshine Point	5.13	62		Pn	05 15 47.7	+1.3
SNH	Sunshine Point	5.13	62	IAML		05 16 44.6	
	comp=N,51nm,2.2s						
SNH				IAML		05 16 46.9	
	comp=E,69nm,0.4s						
PS11	TAPS Pump St11	5.14	36		Pn	05 15 47.6	+1.1
WAX	Waxell Ridge	5.22	59		Pn	05 15 48.9	+1.2
CRQM	Cirque	5.22	55		Pn	05 15 49.5	+1.7
CRQM	Cirque	5.22	55	IAML		05 16 46.7	
	comp=E,39nm,0.3s						
CRQM				IAML		05 16 58.5	
	comp=N,34nm,1.6s						
TT01	Tatalina	5.24	339		Pn	05 15 47.8	-0.1
CRQE	Cirque	5.24	56	P	Pn	05 15 48.3	+0.2
	baz=243						
TTA	Tatalina	5.26	339		Pn	05 15 48.0	-0.2
TTA	Tatalina	5.26	339	IAML		05 17 29.1	
	comp=N,40nm,1.2s						
TTA	Tatalina	5.26	339	P	Pn	05 15 47.7	-0.5
	baz=156						
GLB	Gilahina Butte	5.30	47		Pn	05 15 49.6	+0.8
GLB	Gilahina Butte	5.30	47	IAML		05 16 48.5	
	comp=E,26nm,0.4s						
GLB				IAML		05 16 48.7	
	comp=N,29nm,0.3s						
VRDI	Verde Repeater	5.32	50		Pn	05 15 49.8	+0.6
TGL	Tana Glacier	5.36	56		Pn	05 15 50.4	+0.8
K20K	Telida	5.39	350		Pn	05 15 50.2	+0.2
K20K	Telida	5.39	350	P	Pn	05 15 50.2	+0.2
	baz=168						
TRF	Thorofare Moun	5.44	8		Pn	05 15 51.2	+0.4
TRF	Thorofare Moun	5.44	8	P	Pn	05 15 51.1	+0.4
	baz=190						
HARP	HAARP	5.48	35		Pn	05 15 52.4	+1.2
HARP	HAARP	5.48	35	P	Pn	05 15 52.1	+0.9
	baz=221						
KTH	Kantishna Hill	5.50	5		Pn	05 15 52.3	+0.7
ISLE	Juniper Island	5.51	59		Pn	05 15 52.9	+1.1
RND	Reindeer	5.54	14		Pn	05 15 52.6	+0.5
MESA	MESA	5.55	64		Pn	05 15 53.6	+1.3
MESA	MESA	5.55	64	P	Pn	05 15 53.0	+0.7
	baz=252						
MCARA	McCarthy VSAT	5.58	50		Pn	05 15 53.5	+0.9
MCARA	McCarthy VSAT	5.58	50	P	Pn	05 15 53.1	+0.5
	baz=238						
BAGL	Bagley Icefiel	5.59	60		Pn	05 15 53.7	+1.1
KIAG	Kiagna River	5.64	56		Pn	05 15 54.6	+1.1
BALM	Baldy	5.70	55		Pn	05 15 55.5	+1.2
YAH	Yahtse	5.70	62		Pn	05 15 55.6	+1.1
PTPK	Patty Peak	5.71	53		Pn	05 15 55.4	+0.8
CHUM	Lake Minchumin	5.82	358		Pn	05 15 55.4	-0.4
CHUM	Lake Minchumin	5.82	358	P	Pn	05 15 56.1	+0.3
	baz=179						
GRNC	Granite Creek	5.83	59		Pn	05 15 57.5	+1.3
PAX	Paxson	5.84	30		Pn	05 15 57.5	+1.3
PAX	Paxson	5.84	30	P	Pn	05 15 56.5	+0.2
	baz=216						
MCK	McKinley	5.85	13		Pn	05 15 57.7	+1.5
MCK	McKinley	5.85	13	P	Pn	05 15 56.5	+0.2
	baz=196						
RKAV	Rock Avalanche	5.87	63		Pn	05 15 58.3	+1.6
CHX	Chaix Hills	5.91	66		Pn	05 15 59.0	+1.7
BARN	Barnard Glacie	6.00	56		Pn	05 16 00.1	+1.5
TABL	Table Mountain	6.01	62		Pn	05 16 00.1	+1.4
BPAW	Bear Paw Mtn.	6.05	4		Pn	05 15 59.5	+0.5
BPAW	Bear Paw Mtn.	6.05	4	P	Pn	05 15 59.2	+0.1
	baz=185						
SAMH	Samovar Hills	6.09	66		Pn	05 16 01.6	+1.9
CTG	Chitna Glacier	6.11	57	P	Pn	05 16 01.2	+1.3
	baz=246						
CTGM	Chitina Glacie	6.11	57		Pn	05 16 01.7	+1.7
M26K	Nabesna, AK	6.20	42		Pn	05 16 02.8	+1.7
M26K	Nabesna, AK	6.20	42	P	Pn	05 16 02.5	+1.4
	baz=230						
J20K	Nowinta River	6.20	351		Pn	05 16 01.9	+0.8
J20K	Nowinta River	6.20	351	P	Pn	05 16 00.8	-0.2
	baz=170,SNR=11						
LOGN	Logan Glacier	6.21	59		Pn	05 16 02.8	+1.5
PCA	Pinnacle	6.34	67		Pn	05 16 04.5	+1.4
PINM	Pinnacle	6.34	67	P	Pn	05 16 04.1	+1.0
	baz=256						
M27K	Edge Creek, AK	6.58	45		Pn	05 16 07.6	+1.1
M27K	Edge Creek, AK	6.58	45	P	Pn	05 16 07.9	+1.4
	baz=234						
BCPM	Bancas Point	6.62	68		Pn	05 16 07.9	+1.1
WRH	Wood River Hil	6.67	14		Pn	05 16 07.5	+0.1
PNL	Peninsula	6.69	71		Pn	05 16 08.8	+1.1
PNL	Peninsula	6.69	71	P	Pn	05 16 08.7	+0.9
	baz=262						
YUK2	White River	6.69	52		Pn	05 16 09.3	+1.5
HDA	Harding Lake	6.78	19		Pn	05 16 09.3	+0.3
YUK3	Moose Creek	6.84	52		Pn	05 16 11.9	+1.8
YUK3	Moose Creek	6.84	52	P	Pn	05 16 12.2	+2.1
	baz=242						
CCB	Clear Creek Bu	6.87	15		Pn	05 16 10.5	+0.3
MLY	Manley	6.99	4		Pn	05 16 12.3	+0.4

MLY	Manley	6.99	4	P	Pn	05 16 12.4	+0.4
	baz=186						
BC03		7.06	41		Pn	05 16 14.3	+1.5
TCOL	CIGO, UAF Yank	7.08	14	P	Pn	05 16 13.4	+0.3
	baz=198						
COLA	College	7.08	14		Pn	05 16 13.2	+0.1
COLA	College	7.08	14	P	Pn	05 16 13.2	+0.1
	baz=198						
GCSA	Galena City Sc	7.09	343	P	Pn	05 16 13.5	+0.3
	baz=159						
MDM	Murphy Dome	7.12	13		Pn	05 16 13.6	0.0
I21K	Tanana	7.12	360		Pn	05 16 13.3	-0.3
IL31		7.12	18		Pn	05 16 13.7	0.0
ILAR	Eielson Array	7.12	18	Pn	Pn	05 16 13.9	+0.2
	comp=N,0.5nm,0.3s,baz=202,slow=14,SNR=13						
ILAR				Sn	Sn	05 17 29.2	-4.3
	comp=N,2.2nm,0.3s,baz=200,slow=26,SNR=7.0						
ILAR				LR	LR	05 19 14.2	
	comp=N,91nm,20.8s,baz=209,slow=41						
I23K	Minto, Yukon-K	7.19	9		Pn	05 16 14.5	0.0
J25K	Salcha River,	7.26	23		Pn	05 16 16.0	+0.3
J25K	Salcha River,	7.26	23	P	Pn	05 16 16.2	+0.5
	baz=209						
POKR	Poker Plat Res	7.37	15		Pn	05 16 17.1	0.0
POKR	Poker Plat Res	7.37	15	P	Pn	05 16 17.2	+0.1
	baz=199						
YUK4	Talbot Arm	7.46	58	P	Pn	05 16 21.2	+2.7
	baz=249						
YUK7	Dusty Glacier	7.47	65		Pn	05 16 20.5	+1.9
J26L	Joseph Creek	7.58	28	P	Pn	05 16 20.5	+0.4
	baz=216						
H21K	Melozitna Rive	7.61	357	P	Pn	05 16 20.5	+0.2
	baz=177						
YUK5	Granite Creek	7.75	61		Pn	05 16 24.4	+1.9
H23K	Yukon River	7.84	7		Pn	05 16 24.1	+0.5
H23K	Yukon River	7.84	7	P	Pn	05 16 23.4	-0.2
	baz=190						
IM03		7.97	355		Pn	05 16 25.4	+0.1
PRP	Porcupine Dome	8.04	19		Pn	05 16 26.8	+0.3
PRP	Porcupine Dome	8.04	19	P	Pn	05 16 27.2	+0.8
	baz=205						
DAWY	Dawson	8.52	40		Pn	05 16 33.6	+0.7
M30M	Minto, Yukon	8.74	53		Pn	05 16 35.6	-0.3
WHY	Whitehorse	9.07	66		Pn	05 16 41.1	+0.6
WHY	Whitehorse	9.07	66	P	Pn	05 16 41.8	+1.3
	baz=261						
UNV	Unalaska Valle	9.21	249		Pn	05 16 39.6	-2.7
BM03	Burnt Mountain	9.94	17		Pn	05 16 51.2	-1.1
DLBC	Dease Lake	11.53	79	Pn	Pn	05 17 15.9	+1.8
	comp=N,0.2nm,0.3s,baz=282,slow=11,SNR=6.1						
DLBC				Sn	Sn	05 19 17.8	-3.9
	comp=N,0.2nm,0.3s,baz=139,slow=20,SNR=3.1						
YKA	Yellowknife Ar	18.82	61	P	Pn	05 18 49.8	+0.6
	comp=N,0.2nm,0.3s,baz=269,slow=8.5,SNR=6.0						
PDAR	Pinedale Array	30.43	102	P	P	05 20 43.9	+2.4
	comp=N,0.4nm,0.5s,baz=303,slow=4.6,SNR=5.0						
TXAR	Lajitas Array	43.80	110	P	P	05 22 36.6	+1.9
	comp=N,0.1nm,0.7s,baz=331,slow=9.2,SNR=1.6						
SCHQ	Schefferville	44.16	56	P	P	05 22 37.7	+0.5
	comp=N,3.4nm,0.9s,baz=315,slow=7.1,SNR=1.5						
KSRS	Korea Array	54.17	285	LR	LR	05 47 50.2	
	comp=N,12nm,19.0s,baz=310,slow=37						
SONM	Songino Array	56.38	308	P	P	05 24 09.4	-0.5
	comp=N,0.5nm,0.5s,baz=37,slow=10,SNR=3.6						
AKASG	Malin Array Be	71.57	359	P	P	05 25 48.9	-0.5
	comp=N,0.3nm,0.3s,baz=4.0,slow=7.3,SNR=2.0						

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*MAN **02** 05:32:33.1, 7°.00N×126°.81E, h109^{km}, mb4.9, ML3.8, MS3.8*

*IDC **02** 05:32:34.5±1.1, 7°.05N×126°.65E, h132^{km}±8^{km}, mb3.9/15, mb1 4.0/16, mb1mx3.7/46, mbtmp4.3/16, MS3.1/1, Ms1 3.1/1, ms1mx2.4/38, Error ellipse: s-maj=23.2km s-min=12.1km az=70.0*

*NEIC **02** 05:32:36.1±1.5, 7°.0N±0°.1×126°.6E±0°.1, h137^{km}±8^{km}, mb4.5/14, Error ellipse: s-maj=20.9km s-min=15.7km az=47.0*

ISC 02 05:32:35.0±0.9, **6°.98N**±0°.06×**126°.52E**±0°.09, **h135**^{km}±7^{km}, **n51**, σ**1^{s}.43**/56, **mb4.4**/29, **2C-5D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	0.94	276	P	Pn	05 32 59.0	+1.2
	278nm,0.3s,baz=65,slow=1.3,SNR=40						
DAV				S	Sn	05 33 16.3	+1.3
	270nm,0.3s,baz=294,slow=23,SNR=37						
DAV	Davao City (W)	0.94	276		Pn	05 32 59.1	+1.3
DMPH	Davao City--Mi	1.01	276	⇑eP	Pn	05 32 58.2	-0.3
DMPH				i S	Sn	05 33 17.3	+1.1
BIPH	Bislig	1.21	353	⇓iP	Pn	05 33 01.7	+1.4
BUKP	Musuan	1.70	302	⇓iP	Pn	05 33 06.0	+0.2
BUKP				i S	Sn	05 33 21.5	-7.7
GSPH	General Santos	1.79	240	⇓iP	Pn	05 33 06.3	-0.6
GSPH				eS	Sn	05 33 30.4	-0.9
SCPH	Surigao	2.97	340	⇑eP	Pn	05 33 20.7	-0.7
SCPH				eS	Sn	05 33 57.0	-0.2
PAGZ	Pagadian	3.23	286	⇓eP	Pn	05 33 25.8	+1.0
TBP	Tagbilaran	3.76	316	⇓iP	Pn	05 33 32.1	+0.3
TBP				eS	Sn	05 34 19.2	+3.4
TOLI2	Tolitoli	8.16	225	Pn	Pn	05 34 30.7	0.0
JAY	Jayapura	17.01	123	P	Pn	05 36 25.5	+0.4
	2.0nm,0.3s,baz=228,slow=12,SNR=2.9						
KNRA	Kununurra	22.62	174	P	P	05 37 25.6	+1.0
KNRA				IAmb	IAmb	05 37 26.5	
	comp=Z,9.9nm,0.8s						
FITZ	Fitzroy Crossi	24.93	182	P	P	05 37 46.4	+0.5
	comp=Z,1.8nm,0.5s,baz=8.0,slow=8.0,SNR=10						
JCJ	Chichijima	24.94	35	P	P	05 37 43.8	-2.1
	comp=Z,47nm,0.4s,baz=290,slow=22,SNR=12						
PMG	Port Moresby	26.23	128	LR	LR	05 49 06.0	
	comp=Z,38nm,20.3s,baz=118,slow=38						
WB0	Warramunga Arr	27.68	164	P	P	05 38 10.1	-0.5
WRA	Warramunga Arr	27.84	164	P	P	05 38 11.8	-0.1
	comp=Z,0.2nm,0.4s,baz=346,slow=10,SNR=2.5						
GSI	Gunungsitoli	29.40	260	P	P	05 38 26.2	+0.3
GSI				IAmb	IAmb	05 38 27.9	
	comp=Z,11nm,0.8s						
ASAR	Alice Springs	31.30	167	P	P	05 38 42.7	+0.1
	comp=Z,0.5nm,0.4s,baz=339,slow=7.1,SNR=10						
USRK	Ussuriysk Ar.	37.38	6	P	P	05 39 33.7	-1.0
	comp=Z,1.4nm,0.4s,baz=175,slow=7.5,SNR=5.9						
TAPN	Taplejung	41.99	304	eP	P	05 40 14.1	+0.6
	comp=Z,5.0nm,0.4s						
ODAN	Odare	42.08	303	eP	P	05 40 15.6	+1.4
	comp=Z,3.7nm,0.3s						
RAMN	Ramite	42.78	302	eP	P	05 40 20.6	+0.8
	comp=Z,8.0nm,0.4s						
JIRN	Jiri	43.37	303	eP	P	05 40 25.2	+0.5
GUN	Gumba	43.71	303	eP	P	05 40 28.2	+0.8
	comp=Z,12nm,0.5s						
ULN	Ulaanbaatar	43.99	341	P	P	05 40 31.2	+2.1
ULN				IAmb	IAmb	05 41 00.5	
	comp=Z,2.7nm,0.3s						
PKIN	Phulchoki	44.00	303	eP	P	05 40 30.4	+0.8
	comp=Z,4.7nm,0.4s						
SONM	Songino Array	44.18	341	P	P	05 40 30.6	0.0
	comp=Z,0.4nm,0.5s,baz=159,slow=6.4,SNR=4.2						
SONM	Songino Array	44.18	341	P	P	05 40 31.2	+0.6
KOLN	Koldanda	45.56	302	eP	P	05 40 42.5	+0.5
	comp=Z,20nm,0.8s						
DANN	Dangsing	45.62	303	eP	P	05 40 42.8	+0.3
	comp=Z,18nm,0.6s						
MK31	Makanchi Array	54.80	324	P	P	05 41 51.9	+0.9
MK31				IAmb	IAmb	05 41 52.4	
	comp=Z,4.4nm,0.8s						
MKAR	Makanchi Array	54.80	324	P	P	05 41 51.6	+0.6
	comp=Z,6.3nm,0.4s,baz=118,slow=7.5,SNR=111						
MKAR				PcP	PcP	05 42 52.0	+0.2
	comp=Z,0.5nm,0.5s,baz=121,slow=5.1,SNR=3.6						
ZAA0	Zalesovo Array	57.62	332	P	P	05 42 10.3	-0.5
ZAA0				IAmb	IAmb	05 42 10.6	
	comp=Z,2.8nm,0.3s						
ZALV	Zalesovo Beam	57.62	332	P	P	05 42 10.2	-0.6
	comp=Z,2.2nm,0.3s,baz=124,slow=6.7,SNR=6.9						
KURK	Kurchatov	58.92	327	P	P	05 42 20.3	+0.4
KURBB	Kurchatov Arra	58.92	326	P	P	05 42 20.2	+0.3
	comp=Z,5.1nm,0.7s,baz=125,slow=6.4,SNR=49						
GAR	Garm	59.61	311	P	P	05 42 25.8	+0.7
KKAR	Karatay Array	60.75	316	P	P	05 42 33.2	+0.6
BVAR	Borovoye Array	64.51	326	P	P	05 42 57.8	+0.4
	comp=Z,3.5nm,0.4s,baz=178,slow=10,SNR=22						
BRVK	Borovoye	64.58	326	P	P	05 42 58.0	+0.1
ABKAR	Akbulak array	69.53	320	P	P	05 43 29.4	+0.2
ABKAR	Akbulak array	69.53	320	P	P	05 43 29.5	+0.4
ABKAR				IAmb	IAmb	05 43 30.0	
	comp=Z,4.0nm,0.8s						
AKTO	Aktyubinsk	71.01	321	P	P	05 43 38.1	-0.1
	comp=Z,3.3nm,0.6s,baz=93,slow=9.5,SNR=14						
ARU	Arti	72.10	327	P	P	05 43 44.5	-0.1
	comp=Z,2.5nm,0.2s,baz=104,slow=6.2,SNR=8.9						
ARU	Arti	72.10	327	IAmb	IAmb	05 43 44.9	
	comp=Z,9.0nm,0.6s						
ARCES	ARCESS Array B	87.35	340	P	P	05 45 05.5	-1.0
	comp=Z,3.4nm,0.8s,baz=22,slow=3.9,SNR=4.4						
BRTR	Keskin Array B	87.80	310	P	P	05 45 09.4	-0.1
	comp=Z,1.0nm,0.9s,baz=96,slow=2.9,SNR=3.3						
FINES	FINESS Array B	88.89	332	P	P	05 45 13.1	-0.8
	comp=Z,2.5nm,0.9s,baz=85,slow=4.8,SNR=9.7						
AKASG	Malin Array Be	89.25	321	P	P	05 45 14.1	-1.7
	comp=Z,0.5nm,0.4s,baz=63,slow=5.0,SNR=2.7						
TORD	Torodi Ar. Bea	121.66	290	PKP	PKPdf	05 51 13.6	-0.4
	comp=Z,0.4nm,0.7s,baz=30,slow=3.2,SNR=3.1						

INET 02 05:36:06.9, 11°.14N×87°.37W, h15^{km}, MW3.9, Near coast of Nicaragua

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*MOS **02** 05:42:46.9±0.9, 37°.87N×72°.67E, h116^{km}, mb4.0/7, Error ellipse: s-maj=16.5km s-min=8.5km az=93.5*

*IDC **02** 05:42:46.7±3.2, 37°.73N×72°.58E, h105^{km}±26^{km}, mb3.5/11, mb1 3.7/17, mb1mx3.5/49, mbtmp4.0/17, Error ellipse: s-maj=26.6km s-min=18.0km az=175.0*

*NNC **02** 05:42:53.8±2.3, 38°.35N×72°.34E, h194^{km}±26^{km}, mb3.1, mpv4.0, Error ellipse: s-maj=24.3km s-min=12.4km az=20.0*

*SOME **02** 05:42:56.3, 38°.60N×72°.68E, h10^{km}*

ISC 02 05:42:46.2±0.6, **37°.85N**±0°.06×**72°.55E**±0°.05, **h100**^{km}, **n62**, σ**2^{s}.26**/78, **mb3.8**/12, **9C-7D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	Kashi	3.16	57	Pn	Pn	05 43 33.6	-0.5
KSH				Sn	Sn	05 44 06.3	-4.7
KSH				pmax	pmax		
	comp=Z,190nm,0.4s						
KSH				smax	smax		
	comp=N,2µm,0.5s						
KSH				smax	smax		
	comp=E,890nm,0.5s						
AML	Almayashu	4.37	11	P	Pn	05 43 53.0	+2.4
	SNR=10						
EKS2	Erkin-Say	4.90	11	P	Pn	05 44 01.0	+3.4
	SNR=55						
MRKS	Merke	4.92	6	eP	Pn	05 44 00.8	+2.9
	comp=E,34nm,0.2s						
MRKS				eS	Sn	05 44 53.2	-0.4
	comp=E,119nm,0.4s						
AAK	Ala-Archa	5.01	17	P	Pn	05 44 02.7	+3.5
	comp=E,9.1nm,0.3s,baz=180,slow=6.2,SNR=63						
AAK				S	Sn	05 44 56.7	+0.8
	comp=E,8.0nm,0.3s,baz=326,slow=20,SNR=20						
AAK	Ala-Archa	5.01	17	c iPN	Pn	05 44 02.6	+3.5
AAK				i S	Sn	05 44 57.9	+2.0
AAK				pmax	pmax		
	comp=Z,32nm,0.8s						
AAK	Ala-Archa	5.01	17	⇓P	Pn	05 44 00.4	+1.3
	comp=Z,11nm,0.5s						
DZA	Taraz	5.13	350	eP	Pn	05 44 03.5	+2.9
	comp=Z,114nm,0.1s						
DZA				eS	Sn	05 44 58.1	-0.3
	comp=Z,402nm,0.2s						
ULHL	Ulahol	5.23	32	P	Pn	05 44 05.7	+3.6
	SNR=11						
CHMS	Chumysh	5.41	17	P	Pn	05 44 07.9	+3.4
	SNR=6.8						
KK31	Karatay Array	5.48	344	⇑P	Pn	05 44 07.7	+2.4
	comp=Z,8.8nm,0.2s,baz=150,slow=11,SNR=221						
KK31				⇑S	Sn	05 45 07.0	0.0
	comp=Z,76nm,0.5s,baz=156,slow=13,SNR=28						
BRLS	Borolday	5.58	339	eP	Pn	05 44 08.2	+1.6
	comp=Z,25nm,0.2s						
BRLS				eS	Sn	05 45 06.2	-3.2
	comp=Z,116nm,0.2s						
TKM2	Tokmak 2	5.58	24	⇓P	Pn	05 44 11.9	+5.1
	comp=Z,20nm,1.2s						
TKM2				⇑S	Sn	05 45 12.1	+2.4
	comp=Z,22nm,0.7s						
USP	Ospenovka	5.62	15	P	Pn	05 44 09.8	+2.6
	SNR=9.6						
DGS	Degeres	5.92	23	eP	Pn	05 44 13.4	+2.0
	comp=Z,14nm,1.1s						
DGS				eS	Sn	05 45 15.1	-2.8
	comp=Z,13nm,0.5s						
KRBS	Karabastau	6.31	21	eP	Pn	05 44 18.6	+2.0
	comp=Z,2.5nm,0.5s						
KRBS				eS	Sn	05 45 23.9	-3.3
	comp=Z,7.0nm,0.4s						
KTBS	Karatobe	6.64	27	eP	Pn	05 44 23.1	+1.9
	comp=Z,7.7nm,1.2s						
KTBS				eS	Sn	05 45 31.6	-3.9
	comp=Z,23nm,0.4s						
KUU	Kurty	6.69	24	eP	Pn	05 44 23.6	+1.9
	comp=Z,14nm,1.4s						
KUU				eS	Sn	05 45 32.5	-3.9
	comp=Z,22nm,1.2s						
BTLS	Baital	7.28	8	eP	Pn	05 44 32.9	+3.2
	comp=Z,3.1nm,0.5s						
BTLS				eS	Sn	05 45 48.5	-2.2
	comp=Z,25nm,0.5s						
GEYT	Alibeck	11.41	275	P	Pn	05 45 25.0	-0.9
	comp=Z,1.1nm,0.3s,baz=125,slow=12,SNR=3.1						
GEYT				S	Sn	05 47 25.5	-5.8
	comp=Z,0.9nm,0.3s,baz=137,slow=22,SNR=2.3						
MKAR	Makanchi Array	11.48	36	P	Pn	05 45 29.0	+2.2
	comp=Z,0.2nm,0.3s,baz=228,slow=16,SNR=2.1						
MKAR	Makanchi Array	11.48	36	P	Pn	05 45 29.0	+2.2
PYUN	Piuthan	13.08	135	eP	Pn	05 45 46.8	-1.4
	comp=Z,38nm,0.3s						
DANN	Dangsing	13.33	132	eP	Pn	05 45 50.5	-1.1
	comp=Z,20nm,0.3s						
KURBB	Kurchatov Arra	13.47	17	P	Pn	05 45 51.2	-1.7
	comp=Z,0.1nm,0.3s,baz=205,slow=12,SNR=6.1						
KURK	Kurchatov	13.57	17	eP	Pn	05 45 55.9	+1.6
KURK				pmax	pmax		
	comp=Z,11nm,2.5s						
KOLN	Koldanda	13.67	134	eP	Pn	05 45 55.6	-0.5
	comp=Z,12nm,0.3s						
GKN	Gorkha	14.11	131	eP	Pn	05 46 01.8	+0.2
AB31	Akbulak array	14.59	325	⇑P	Pn	05 46 05.0	-2.5
	comp=Z,4.2nm,0.6s,baz=130,slow=14,SNR=70						
AB31				S	Sn	05 48 38.0	-10
	comp=Z,4.6nm,0.6s,baz=143,slow=23,SNR=13						
KKN	Kakani	14.65	129	eP	Pn	05 46 08.7	0.0
PKIN	Phulchoki	14.88	130	eP	Pn	05 46 11.8	+0.2
	comp=Z,11nm,0.4s						
GUN	Gumba	14.94	128	eP	Pn	05 46 12.5	+0.1
	comp=Z,7.5nm,0.2s						
BVAR	Borovoye Array	15.25	355	P	Pn	05 46 15.8	-0.1
	comp=Z,1.1nm,0.3s,baz=182,slow=18,SNR=10						
BVAR				S	Sn	05 48 59.4	-4.8
	comp=Z,0.5nm,0.3s,baz=174,slow=33,SNR=5.1						
BRVK	Borovoye	15.29	355	⇑iP	Pn	05 46 16.7	+0.3
JIRN	Jiri	15.31	128	eP	Pn	05 46 16.5	-0.6
	comp=Z,13nm,0.3s						
RAMN	Ramite	16.07	128	eP	Pn	05 46 25.7	-0.8
	comp=Z,12nm,0.4s						
AKTO	Aktyubinsk	16.31	325	P	P	05 46 30.9	+0.7
	comp=Z,1.7nm,0.3s,baz=130,slow=10,SNR=26						
AKTO				S	Sn	05 49 23.1	-6.5
	comp=Z,0.9nm,0.3s,baz=125,slow=23,SNR=9.0						
AKTO	Aktyubinsk	16.31	325	⇓P	Pn	05 46 27.0	-2.0
	comp=Z,9.6nm,0.8s						
AKTO				⇓S	Sn	05 49 19.0	-11
	comp=Z,5.1nm,0.5s						
TAPN	Taplejung	16.49	125	eP	Pn	05 46 31.6	-0.2
	comp=Z,10nm,0.4s						
ODAN	Odare	16.63	127	eP	Pn	05 46 33.2	-0.2
ZALV	Zalesovo Beam	18.18	24	P	P	05 46 51.0	+0.3
	comp=Z,0.5nm,0.3s,baz=217,slow=10,SNR=14						
ARU	Arti	20.81	338	P	P	05 47 20.6	+1.3
	comp=Z,3.1nm,0.2s,baz=158,slow=3.6,SNR=5.7						
ARU	Arti	20.81	338	d iP	P	05 47 20.5	+1.3
ARU						05 47 53.8	
ARU				S	S	05 51 06.1	+0.5
ARU				pmax	pmax		
	comp=Z,14nm,1.7s						
GNI	Garni	21.70	285	⇑iP	P	05 47 32.1	+2.9
GNI				pmax	pmax		
	comp=Z,22nm,1.8s						
KIV	Kislovodsk	23.30	295	eP	P	05 47 45.0	-0.3
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KIRV	Kirov	25.61	332	i P	P	05 48 07.3	+1.5
SONM	Songino Array	26.56	57	P	P	05 48 15.2	+0.4
	comp=Z,0.3nm,0.4s,baz=278,slow=9.9,SNR=2.2						
ULN	Ulaanbaatar	27.00	57	⇓iP	P	05 48 18.3	-0.4
ULN				pmax	pmax		
	comp=Z,4.0nm,1.7s						
AKASG	Malin Array Be	33.10	307	P	P	05 49 13.6	+1.3
	comp=Z,0.7nm,0.3s,baz=89,slow=7.3,SNR=4.6						
AKASG	Malin Array Be	33.10	307	ceP	P	05 49 14.0	+1.7
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
HIA	Hailar	35.51	56	i P	P	05 49 32.7	-0.5
HIA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
FINES	FINESS Array B	37.08	325	P	P	05 49 47.6	+1.3
	comp=Z,1.7nm,0.6s,baz=111,slow=8.4,SNR=6.4						
ARCES	ARCESS Array B	40.39	337	P	P	05 50 15.1	+1.2
	comp=Z,4.8nm,1.1s,baz=115,slow=8.3,SNR=6.6						
TIXI	Tiksi	44.06	22	⇓iP	P	05 50 44.2	+0.6
NB2	NORSAR Subarra	44.06	322	P	P	05 50 44.5	+0.7
	comp=Z,0.8nm,0.5s,baz=92,slow=7.9						
NOA	NORSAR Array B	44.06	322	P	P	05 50 44.3	+0.5
	comp=Z,1.5nm,0.7s,baz=91,slow=7.6,SNR=4.4						
TORD	Torodi Ar. Bea	66.98	269	P	P	05 53 28.8	+0.3
	comp=Z,0.3nm,0.4s,baz=47,slow=5.8,SNR=8.2						
INK	Inuvik	72.37	10	P	P	05 54 01.9	+1.1
	comp=Z,1.4nm,0.6s,baz=329,slow=5.4,SNR=9.6						
ILAR	Eielson Array	73.14	17	P	P	05 54 04.5	-0.8
	comp=Z,0.7nm,1.0s,baz=284,slow=3.6,SNR=3.7						
YKA	Yellowknife Ar	79.84	3	P	P	05 54 43.9	+0.8
	comp=Z,1.2nm,0.7s,baz=347,slow=5.7,SNR=4.8						
WRA	Warramunga Arr	81.67	123	P	P	05 54 53.3	-0.2
	comp=Z,0.5nm,0.7s,baz=350,slow=9.3,SNR=5.3						
WRA	Warramunga Arr	81.67	123	ceP	P	05 54 54.2	+0.7
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						

INET 02 05:46:18.2, 11°.06N×87°.35W, h20^{km}, MW3.7, Near coast of Nicaragua

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JMA 02 06:20:09.5±0.2, **38°.36N**×**144°.48E, h39**^{km}**, M3.6, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	2.31	289	P	Pn	06 20 46.4	+1.3
OFUJ				eS	Sn	06 21 13.4	+1.1
JIKH	Ishinomakikobu	2.37	270	P	Pn	06 20 47.0	+1.2
JIKH				eS	Sn	06 21 15.3	+1.6
JKMT	Kesennumamotoy	2.40	282	P	Pn	06 20 47.9	+1.7
JKMT				S	Sn	06 21 15.7	+1.4
MIYJ	Miyakonagasawa	2.40	301	P	Pn	06 20 47.3	+1.0
MIYJ				S	Sn	06 21 15.3	+0.8
JMK	Ichinoseki	2.62	284	P	Pn	06 20 51.6	+2.4
JOM	Ohasama	2.72	295	P	Pn	06 20 52.4	+1.7
JOM				eS	Sn	06 21 24.5	+2.1
JANG	Nango	3.05	312	P	Pn	06 20 57.2	+2.0
JYK	Kaneyama	3.27	281	P	Pn	06 21 00.9	+2.6
JYK				eS	Sn	06 21 39.1	+3.1
JFT	Otama	3.38	257	P	Pn	06 21 02.2	+2.4
JFT				eS	Sn	06 21 41.5	+2.9
JCH	Churui	4.33	349	P	Pn	06 21 12.5	-0.3
JCH				eS	Sn	06 22 00.1	-1.9
JKB	Kayabe	4.40	324	P	Pn	06 21 15.3	+1.6
JKB				S	Sn	06 22 04.3	+0.6
NEM2	Nemuro 2	5.09	10	P	Pn	06 21 19.6	-3.6
NEM2				eS	Sn	06 22 12.6	-8.1
JTKR	Abashiri--Toko	5.62	356	P	Pn	06 21 29.1	-1.4
JTKR				S	Sn	06 22 29.1	-4.6

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*IDC **02** 06:20:43.0±0.9, 53°.55N×35°.27W, h0^{km}, mb3.8/7, mb1 4.0/7, mb1mx3.6/57, mbtmp3.8/7, MS3.5/12, Ms1 3.5/12, ms1mx3.2/44, Error ellipse: s-maj=34.1km s-min=22.4km az=32.0*

ISC 02 06:20:44.3±0.9, **53°.5N**±0°.2×**35°.3W**±0°.2, **h10**^{km}, **n19**, σ**0^{s}.85**/8, **mb3.8**/7, **MS3.4**/11, **Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCHQ	Schefferville	18.45	287	LR	LR	06 31 22.7	
	comp=Z,60nm,19.6s,baz=4.5,slow=35						
ESDC	Sonseca Array	25.33	110	P	P	06 26 12.3	+1.2
	0.6nm,0.4s,baz=316,slow=8.9,SNR=2.8						
ESDC				LR	LR	06 34 09.5	
	comp=Z,100nm,18.7s,baz=290,slow=32						
NOA	NORSAR Array B	25.71	54	LR	LR	06 34 14.4	
	comp=Z,55nm,19.8s,baz=275,slow=32						
DAVOX	Davos/Dischmat	29.28	85	LR	LR	06 38 02.3	
	comp=Z,54nm,18.7s,baz=265,slow=36						
SADO	Sadowa	29.59	271	LR	LR	06 37 48.6	
	comp=Z,89nm,18.9s,baz=128,slow=35						
GERES	GERESS Array B	30.54	79	LR	LR	06 37 17.3	
	comp=Z,53nm,18.8s,baz=300,slow=32						
FINES	FINESS Array B	32.73	51	LR	LR	06 39 18.4	
	comp=Z,57nm,18.1s,baz=263,slow=34						
INK	Inuvik	44.52	328	P	P	06 28 56.2	+0.7
	1.2nm,0.9s,baz=27,slow=11,SNR=3.8						
PDAR	Pinedale Array	48.57	289	P	P	06 29 27.6	-0.3
	0.7nm,0.8s,baz=67,slow=8.8,SNR=3.7						
NEW	Newport	49.20	299	LR	LR	06 48 39.7	
	comp=Z,127nm,18.5s,baz=118,slow=34						
TORD	Torodi Ar. Bea	49.76	130	P	P	06 29 36.0	-0.9
	1.0nm,0.7s,baz=342,slow=6.0,SNR=3.3						
ILAR	Eielson Array	50.90	329	P	P	06 29 44.2	-0.8
	0.7nm,0.8s,baz=68,slow=5.6,SNR=5.7						
ANMO	Albuquerque	52.01	279	LR	LR	06 51 28.5	
	comp=Z,114nm,19.2s,baz=74,slow=36						
AKTO	Aktyubinsk	53.48	53	LR	LR	06 51 17.1	
	comp=Z,40nm,19.3s,baz=326,slow=34						
TXAR	Lajitas Array	54.35	272	P	P	06 30 11.4	+0.2
	0.6nm,1.0s,baz=57,slow=4.6,SNR=4.2						
ROSC	El Rosal	58.06	228	P	P	06 30 38.4	+0.3
	6.6nm,0.6s,baz=32,slow=5.4,SNR=8.2						
PFO	Pinyon Flats O	58.78	285	LR	LR	06 53 01.7	
	comp=Z,31nm,18.2s,baz=312,slow=33						
LPIG	La Paz	62.19	273	LR	LR	06 57 59.2	
	comp=Z,48nm,18.4s,baz=22,slow=36						
ASAR	Alice Springs	149.06	20	PKPbc	PKPbc	06 40 32.5	0.0
	1.6nm,0.5s,baz=352,slow=2.4,SNR=29						

IDC 02 06:21:37.1±3.9, **6°.61S**×**154°.12E, h0**^{km}**, mb3.5**/2, **mb1 3.8**/2, **mb1mx3.5**/41, **mbtmp3.6**/2, **MS3.3**/4, **Ms1 3.3**/4, **ms1mx2.8**/28, **Error ellipse: s-maj=190.3km s-min=53.0km az=128.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	7.43	248	LR	LR	06 26 07.2	
	comp=Z,41nm,18.5s,baz=238,slow=36						
DZM	Mont Dzumac	19.44	143	LR	LR	06 31 53.7	
	comp=Z,121nm,19.3s,baz=30,slow=32						
WRA	Warramunga Arr	23.33	233	P	P	06 26 47.9	+0.7
	2.1nm,0.7s,baz=58,slow=9.6,SNR=9.1						
ASAR	Alice Springs	25.79	227	P	P	06 27 08.9	-1.1
	0.3nm,0.5s,baz=56,slow=9.5,SNR=6.1						
JOW	Kunigami	41.62	324	LR	LR	06 46 01.3	
	comp=Z,31nm,18.1s,baz=336,slow=35						
GEYT	Alibeck	98.75	307	LR	LR	07 23 06.9	
	comp=Z,33nm,18.6s,baz=250,slow=37						
TORD	Torodi Ar. Bea	152.08	286	PKPbc	PKiKP	06 41 35.9	-0.1
	0.6nm,0.8s,baz=52,slow=2.7,SNR=3.1						

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*IDC **02** 06:29:05.2±0.7, 34°.15N×112°.12W, h0^{km}, mb3.7/2, mb1 3.9/7, mb1mx3.7/59, mbtmp3.6/7, ML3.3/4, MS3.2/8, Ms1 3.2/8, ms1mx3.0/45, Error ellipse: s-maj=11.3km s-min=7.3km az=20.0*

*NEIC **02** 06:29:06.8, 34°.14N×112°.13W, h9^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$-1.07; M$_{\theta\theta}$0.65; M$_{\phi\phi}$0.42; M$_{r\theta}$0.77; M$_{\theta\phi}$0.54; M$_{\phi r}$0.39; Fault plane solution: M$_{0}$1.38000×10^{15} NP1:ϕ$_{s}$238.72000°, δ64.43000°, λ-83.11000°. NP2:ϕ$_{s}$43.08000°, δ26.42000°, λ-104.08000°. Principal axes: T 1.3838, Plg19.0000°, Azm324.0000°; N 0.0014, Plg6.0000°, Azm56.0000°; P -1.3852, Plg70.0000°, Azm163.0000°;*

*NEIC **02** 06:29:07.1±2.5, 34°.14N±0°.03×112°.13W±0°.04, h6^{km}±3^{km}, mb4.1/15, ML4.3/105, Mwr4.0/42 Error ellipse: s-maj=4.9km s-min=4.8km az=114.0*

*ANF **02** 06:29:08.9±0.7, 34°.13N×112°.16W, h29^{km}±7^{km}, ML4.5/31, Error ellipse: s-maj=3.1km s-min=2.0km az=6.0*

ISC 02 06:29:07.0±1.2**, 34°.14N**±0°.03×**112°.11W**±0°.02**, h5**^{km}±9^{km}**, n148, σ1**^{s}.**21**/169**, Western Arizona**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
X16A	**Lo Mia Camp, P**	**0.62**	**63**		**Pg**	**06 29 17.8**	**-1.1**
X16A				Sg	**Sg**	**06 29 25.7**	**-1.3**
Y14A	**Wickenburg**	**0.77**	**255**		**Pg**	**06 29 21.3**	**-0.5**
Y14A				Sg	**Sg**	**06 29 31.4**	**-0.5**
Y14A				IAML		06 29 36.1	
	comp=N,15μm,0.8s						
Y14A				IAML		06 29 36.5	
	comp=E,17μm,0.3s						
WUAZ	**Wupatki**	**1.50**	**23**	Pn	**Pn**	**06 29 33.1**	**-1.7**
WUAZ				Sn	**Sn**	**06 29 53.1**	**-1.7**
WUAZ				IAML		06 29 57.9	
	comp=E,6μm,1.0s						
WUAZ	**Wupatki**	**1.50**	**23**	P	**Pn**	**06 29 33.1**	**-1.7**
	baz=204,SNR=1000						
WUAZ				S	**Sn**	**06 29 52.3**	**-2.5**
	baz=204						
PDMCI	**Parker Dam,Lak**	**1.69**	**276**	P	**Pn**	**06 29 35.6**	**-1.6**
	baz=94,SNR=567						
PDMCI				S	**Sn**	**06 29 56.3**	**-2.9**
	baz=94						
W13A	**Hualapai Mount**	**1.75**	**304**		**Pn**	**06 29 36.9**	**-1.4**
W13A				Sn	**Sn**	**06 30 00.4**	**-0.7**
W13A				IAML		06 30 04.1	
	comp=N,1μm,0.9s						
X18A	**Snowflake**	**1.83**	**77**		**Pn**	**06 29 39.1**	**-0.1**
113A	**Mohawk Valley,**	**1.95**	**226**		**Pn**	**06 29 38.9**	**-1.8**
113A				IAML		06 30 08.8	
	comp=N,1μm,0.6s						
113A				IAML		06 30 13.4	
	comp=E,1μm,0.9s						
TUC	**Tucson**	**2.13**	**148**		**Pn**	**06 29 42.7**	**-0.6**
TUC				Sn	**Sn**	**06 30 08.6**	**-1.7**
TUC				IAML		06 30 10.4	
	comp=E,2μm,0.3s						
TUC				IAML		06 30 18.7	
	comp=E,2μm,0.3s						
TUC	**Tucson**	**2.13**	**148**	P	**Pn**	**06 29 42.7**	**-0.6**
	baz=330						
TUC				S	**Sn**	**06 30 09.0**	**-1.2**
	baz=330						
NEE2	**Needles Airpor**	**2.17**	**288**	P	**Pn**	**06 29 41.7**	**-2.1**
	baz=105,SNR=96						
NEE2				Sb	**Sb**	**06 30 14.2**	**+0.2**
	baz=105						
W18A	**Petrified Fore**	**2.19**	**63**		**Pn**	**06 29 44.2**	**0.0**
W18A				Sn	**Sn**	**06 30 10.8**	**-0.9**
W18A				IAML		06 30 18.2	
	comp=N,3μm,1.0s						
W18A				IAML		06 30 27.6	
	comp=E,2μm,1.2s						
W18A	**Petrified Fore**	**2.19**	**63**	P	**Pn**	**06 29 44.1**	**-0.1**
	baz=245,SNR=825						
W18A				Sb	**Sb**	**06 30 14.3**	**-0.3**
	baz=245						
214A	**Organ Pipe Nat**	**2.25**	**195**	Pn	**Pn**	**06 29 43.8**	**-1.2**
214A				Sn	**Sn**	**06 30 14.1**	**+0.9**
214A				IAML		06 30 21.2	
	comp=N,2μm,0.3s						
214A				IAML		06 30 24.7	
	comp=E,3μm,0.7s						
214A	**Organ Pipe Nat**	**2.25**	**195**	P	**Pn**	**06 29 43.6**	**-1.4**
	baz=15,SNR=169						
214A				Sb	**Sb**	**06 30 17.0**	**+0.6**
	baz=15						
U15A	**North Rim**	**2.29**	**356**		**Pn**	**06 29 45.0**	**-0.7**
U15A				Sn	**Sn**	**06 30 14.1**	**-0.4**
U15A				IAML		06 30 19.6	
	comp=N,709nm,0.7s						
U15A				IAML		06 30 20.0	
	comp=E,961nm,0.9s						
GLA	**Glamis**	**2.52**	**245**		**Pn**	**06 29 47.0**	**-1.6**
GLA				IAML		06 30 30.4	
	comp=N,1μm,0.8s						
GLA				IAML		06 30 34.7	
	comp=E,2μm,0.8s						
GLA	**Glamis**	**2.52**	**245**	P	**Pn**	**06 29 46.6**	**-2.0**
	baz=63,SNR=58						
GLA				Sb	**Sg**	**06 30 25.9**	**-1.9**
	baz=63						
IRM	**Iron Mountain**	**2.52**	**271**	P	**Pn**	**06 29 47.0**	**-1.6**
	baz=89,SNR=191						
IRM				Sb	**Sb**	**06 30 24.9**	**+0.8**
	baz=89						
BC3	**Big Chuckawall**	**2.83**	**261**	P	**Pn**	**06 29 51.0**	**-1.9**
	baz=79,SNR=43						
BC3				Sb	**Sb**	**06 30 34.3**	**+1.3**
	baz=79						
KNB	**Kanab**	**2.93**	**349**	Pn	**Pn**	**06 29 54.0**	**-0.5**
KNB				IAML		06 30 38.4	
	comp=E,932nm,1.3s						
KNB				IAML		06 30 40.7	
	comp=N,776nm,1.4s						
GMRC	**Granite Mounta**	**3.01**	**283**	P	**Pn**	**06 29 53.8**	**-1.6**
	baz=101,SNR=129						
GMRC				S	**Sn**	**06 30 30.1**	**-1.8**
	baz=101						
LCMT	**Little Creek M**	**3.01**	**342**		**Pn**	**06 29 54.8**	**-0.7**
GUVIX	**Guadalupe Vict**	**3.09**	**234**	Pn	**Pn**	**06 29 56.3**	**-0.1**
UABX	**UABC, Campus M**	**3.17**	**243**	Pn	**Pn**	**06 29 56.3**	**-1.2**
UABX				IAML		06 31 20.9	
	comp=E,2μm,1.3s						
CPBX	**Cerro Prieto**	**3.18**	**238**		**Pn**	**06 29 57.2**	**-0.4**
CPBX				IAML		06 31 17.7	
	comp=E,1μm,1.4s						
CPBX				IAML		06 31 23.0	
	comp=N,1μm,1.0s						
BELC	**Belle Mtn. Jos**	**3.23**	**269**	P	**Pn**	**06 29 56.9**	**-1.6**
	baz=86,SNR=98						
BELC				Sb	**Sb**	**06 30 46.5**	**+1.7**
	baz=86						
PKCU	**Pink Cliffs**	**3.30**	**357**	Pn	**Pn**	**06 29 59.5**	**-0.2**
PKCU				IAML		06 30 56.6	
	comp=N,1μm,1.2s						
SWSC	**Sam W. Stewart**	**3.31**	**250**	P	**Pn**	**06 29 58.2**	**-1.2**
	baz=67,SNR=24						
TUQ	**Turquoise Moun**	**3.40**	**293**	P	**Pn**	**06 29 59.5**	**-1.3**
	baz=111,SNR=45						
TUQ				Sb	**Sb**	**06 30 51.5**	**+2.0**
	baz=111						
SZCU	**Shurtz Canyon**	**3.54**	**347**		**Pn**	**06 30 02.3**	**-0.5**
SZCU				IAML		06 30 57.4	
	comp=E,563nm,0.9s						
SZCU				IAML		06 30 59.6	
	comp=N,427nm,0.8s						
CCUT	**Cedar City**	**3.56**	**344**		**Pn**	**06 30 01.9**	**-1.2**
CCUT				IAML		06 31 01.8	
	comp=E,237nm,1.0s						
HEC	**Hector,Ludlow**	**3.56**	**282**	P	**Pn**	**06 30 01.3**	**-1.7**
	baz=100,SNR=9.4						
319A	**Douglas**	**3.64**	**138**	Pn	**Pn**	**06 30 04.4**	**+0.3**
TPFO	**Pinon Flats**	**3.66**	**263**	P	**Pn**	**06 30 02.9**	**-1.5**
	baz=80,SNR=226						
TPFO				Sb	**Sb**	**06 30 59.5**	**+2.6**
	baz=80						
PFO	**Pinyon Flats O**	**3.66**	**263**	Pn	**Pn**	**06 30 03.0**	**-1.3**
	comp=E,61nm,0.3s,baz=63,slow=15,SNR=608						
PFO				Sn	**Sn**	**06 30 45.2**	**-2.7**
	comp=E,6.2nm,0.3s,baz=304,slow=19,SNR=4.5						
PFO				Lg	Lg	06 31 02.1	
	comp=E,22nm,0.3s,baz=54,slow=23,SNR=12						
PFO	**Pinyon Flats O**	**3.66**	**263**	Pn	**Pn**	**06 30 03.0**	**-1.3**
PFO	**Pinyon Flats O**	**3.66**	**263**	P	**Pn**	**06 30 03.1**	**-1.3**
	baz=80,SNR=174						
RMX	**La Rumorosa**	**3.66**	**246**	Pn	**Pn**	**06 30 02.4**	**-2.0**
IKP	**In-Ko-Pah, Jac**	**3.66**	**247**	P	**Pn**	**06 30 03.5**	**-0.9**
	baz=64,SNR=13						
MONP2	**Monument Peak**	**3.81**	**252**	P	**Pn**	**06 30 05.4**	**-1.2**
	baz=69,SNR=14						
SFX	**San Felipe**	**3.86**	**218**	Pn	**Pn**	**06 30 06.3**	**-0.7**
121A	**Cookes Peak, D**	**3.96**	**113**	Pn	**Pn**	**06 30 08.9**	**+0.4**
121A	**Cookes Peak, D**	**3.96**	**113**	P	**Pn**	**06 30 08.7**	**+0.1**
	baz=296,SNR=106						
BBRC	**Big Bear Solar**	**3.99**	**273**	P	**Pn**	**06 30 07.6**	**-1.4**
	baz=90,SNR=16						
BBRC				Sb	**Sb**	**06 31 06.9**	**+0.3**
	baz=90						
GSC	**Goldstone, Bar**	**4.04**	**288**	Pn	**Pn**	**06 30 08.2**	**-1.3**
GSC				IAML		06 31 22.3	
	comp=E,446nm,1.1s						
GSC				IAML		06 31 27.0	
	comp=N,277nm,1.0s						
GSC	**Goldstone, Bar**	**4.04**	**288**	P	**Pn**	**06 30 07.9**	**-1.7**
	baz=105,SNR=30						
PRN	**Pahroc Range**	**4.05**	**325**		**Pn**	**06 30 09.7**	**-0.1**
PRN				IAML		06 31 26.5	
	comp=E,446nm,1.1s						
PRN				IAML		06 31 27.2	
	comp=N,330nm,1.4s						
TKX	**Tecate**	**4.08**	**249**	Pn	**Pn**	**06 30 09.1**	**-1.0**
TKX				IAML		06 31 03.8	
	comp=E,183nm,0.1s						
BAR	**Barrett**	**4.09**	**250**	Pn	**Pn**	**06 30 10.0**	**-0.2**
CBX	**Cerro Bola**	**4.23**	**246**		**Pn**	**06 30 11.6**	**-0.7**
MVCO	**Mesa Verde**	**4.25**	**43**	Pn	**Pn**	**06 30 13.2**	**+0.7**
MVCO	**Mesa Verde**	**4.25**	**43**	P	**Pn**	**06 30 13.2**	**+0.7**
	baz=225						
LENM	**Lemitar**	**4.26**	**88**		**Pn**	**06 30 11.2**	**-1.4**
GWY	**Greenwater Val**	**4.26**	**300**	Pn	**Pn**	**06 30 11.8**	**-0.9**
GWY				IAML		06 31 32.7	
	comp=N,240nm,1.5s						
GWY				IAML		06 31 37.6	
	comp=E,326nm,1.2s						
MURC	**Murrieta**	**4.27**	**264**	P	**Pn**	**06 30 11.5**	**-1.2**
	baz=81,SNR=69						
Y22D	**IRIS PASSCAL I**	**4.30**	**89**		**Pn**	**06 30 12.5**	**-0.7**
Y22D	**IRIS PASSCAL I**	**4.30**	**89**	P	**Pn**	**06 30 13.8**	**+0.5**
	baz=273						
QSM	**Queen of Sheba**	**4.31**	**296**		**Pn**	**06 30 12.6**	**-0.7**
QSM				IAML		06 31 26.1	
	comp=E,255nm,1.3s						
QSM				IAML		06 31 45.7	
	comp=N,244nm,1.3s						
109C	**Camp Elliot, M**	**4.36**	**255**		**Pn**	**06 30 13.6**	**-0.3**
109C	**Camp Elliot, M**	**4.36**	**255**	P	**Pn**	**06 30 13.2**	**-0.7**
	baz=72,SNR=19						
MVU	**Marysvale**	**4.36**	**359**	Pn	**Pn**	**06 30 14.3**	**+0.2**
MSU	**Marysvale**	**4.37**	**359**	Pn	**Pn**	**06 30 14.2**	**0.0**
CCX	**Cicese**	**4.45**	**241**		**Pn**	**06 30 15.6**	**+0.5**
TJX	**Tijuana**	**4.45**	**250**	Pn	**Pn**	**06 30 16.0**	**+0.9**
TJX				IAML		06 31 41.2	
	comp=E,385nm,1.1s						
TJX				IAML		06 31 45.0	
	comp=N,279nm,1.1s						
TCRU	**Three Creeks R**	**4.47**	**357**		**Pn**	**06 30 17.2**	**+1.5**
TCRU				IAML		06 31 31.2	
	comp=E,401nm,1.1s						
TCRU				IAML		06 31 37.4	
	comp=N,411nm,1.1s						
BNM	**Barren Site**	**4.54**	**88**	Pn	**Pn**	**06 30 17.3**	**+0.6**
BFSC	**Mount Baldy Ra**	**4.60**	**273**	P	**Pn**	**06 30 16.2**	**-1.1**
	baz=89,SNR=15						
PSUT	**Pine Spring**	**4.61**	**343**		**Pn**	**06 30 18.5**	**+1.0**
PSUT				IAML		06 31 46.5	
	comp=E,177nm,1.2s						
PSUT				IAML		06 31 47.2	
	comp=N,144nm,1.1s						
ANMO	**Albuquerque**	**4.73**	**79**	Pn	**Pn**	**06 30 20.2**	**+1.0**
	comp=N,2.8nm,0.3s,baz=270,slow=11,SNR=33						
ANMO				Pg	**Pb**	**06 30 33.3**	**+2.7**
	comp=N,2.5nm,0.3s,baz=266,slow=15,SNR=32						
ANMO				Lg	Lg	06 31 31.7	
	comp=N,9.3nm,0.3s,baz=80,slow=12,SNR=6.4						
ANMO				LR	LR	06 32 02.9	
	comp=N,76nm,18.9s,baz=245,slow=38						
ANMO	**Albuquerque**	**4.73**	**79**	Pn	**Pn**	**06 30 19.9**	**+0.6**
ANMO				IAML		06 31 45.4	
	comp=N,127nm,1.3s						
ANMO				IAML		06 31 48.1	
	comp=N,116nm,1.4s						
ANMO	**Albuquerque**	**4.73**	**79**	P	**Pn**	**06 30 19.8**	**+0.6**
	baz=262						
Q16A	**Castle Valley**	**4.83**	**9**		**Pn**	**06 30 21.6**	**+1.1**
Q16A				IAML		06 31 39.6	
	comp=E,356nm,1.3s						
Q16A				IAML		06 31 46.7	
	comp=N,266nm,0.8s						
PV01	**Paradox Valley**	**4.91**	**35**		**Pn**	**06 30 22.5**	**+0.8**
EDW2	**Edwards Air Fo**	**4.92**	**280**	P	**Pn**	**06 30 21.1**	**-0.5**
	baz=97						
MWC	**Mount Wilson**	**4.93**	**273**		**Pn**	**06 30 21.5**	**-0.5**
MWC				IAML		06 31 55.7	
	comp=N,153nm,1.7s						
MWC				IAML		06 32 00.8	
	comp=E,139nm,1.4s						
PASC	**Pasadena Art C**	**5.04**	**272**		**Pn**	**06 30 24.0**	**+0.8**
PASC				IAML		06 31 55.2	
	comp=E,107nm,1.4s						
PASC				IAML		06 31 57.3	
	comp=N,97nm,1.1s						
R11A	**Troy Canyon, C**	**5.06**	**327**	Pn	**Pn**	**06 30 23.4**	**-0.2**
R11A	**Troy Canyon, C**	**5.06**	**327**	P	**Pn**	**06 30 23.2**	**-0.4**
	baz=145,SNR=15						
PV07	**Paradox Valley**	**5.12**	**32**	Pn	**Pn**	**06 30 25.2**	**+0.6**
SRU	**San Rafael Swe**	**5.12**	**14**	Pn	**Pn**	**06 30 25.4**	**+0.8**
SRU				IAML		06 31 59.5	
	comp=N,256nm,0.9s						
PV22	**Blue Mesa, Par**	**5.14**	**30**		**Pn**	**06 30 26.0**	**+1.2**
HSIG		**5.20**	**169**	Pn	**Pn**	**06 30 25.1**	**-0.3**
HSIG				IAML		06 32 03.3	
	comp=N,229nm,0.8s						
TMUT	**Trail Mountain**	**5.20**	**8**		**Pn**	**06 30 25.6**	**-0.1**
TMUT				IAML		06 32 03.0	
	comp=N,307nm,0.7s						
CIS	**Catalina Islan**	**5.30**	**264**	P	**Pn**	**06 30 26.1**	**-0.8**
	baz=80						
ISA	**Isabella, Lake**	**5.45**	**288**	Pn	**Pn**	**06 30 27.7**	**-1.3**
ISA	**Isabella, Lake**	**5.45**	**288**	P	**Pn**	**06 30 27.2**	**-1.7**
	baz=104,SNR=10						
LCH	**Last Change Ra**	**5.46**	**306**	Pn	**Pn**	**06 30 30.1**	**+0.9**
S22A	**4UR Ranch, Cre**	**5.59**	**48**	P	**Pn**	**06 30 31.4**	**+0.3**
	baz=232						
P18A	**Preston Nutter**	**5.68**	**15**	Pn	**Pn**	**06 30 32.1**	**-0.2**
TPH	**Tonopah**	**5.71**	**315**		**Pn**	**06 30 32.5**	**-0.1**
MNTX	**Cornudas Mount**	**6.16**	**111**	Pn	**Pn**	**06 30 38.8**	**+0.1**
MNTX	**Cornudas Mount**	**6.16**	**111**	P	**Pn**	**06 30 38.7**	**+0.1**
	baz=295,SNR=48						
SDCO	**Great Sand Dun**	**6.45**	**54**		**Pn**	**06 30 42.8**	**-0.2**
JLU	**Jordanelle**	**6.47**	**4**	Pn	**Pn**	**06 30 42.2**	**-1.0**
NV11	**Mina Array Sit**	**6.50**	**313**		**Pn**	**06 30 43.7**	**+0.3**
SMCO	**Snowmass**	**6.50**	**38**		**Pn**	**06 30 43.6**	**-0.2**
NVAR	**Mina Array Bea**	**6.59**	**312**	Pn	**Pn**	**06 30 44.8**	**+0.1**
	comp=N,0.8nm,0.3s,baz=131,slow=14,SNR=21						
NVAR				Lg	Lg	06 32 30.9	
	baz=128,slow=18,SNR=2.0						
NVAR				LR	LR	06 33 32.7	
	comp=N,341nm,18.6s,baz=128,slow=41						
NVAR	**Mina Array Bea**	**6.59**	**312**	Pn	**Pn**	**06 30 44.6**	**-0.1**
LHV	**Little Huntoon**	**6.60**	**310**		**Pn**	**06 30 46.0**	**+1.4**
MDPB	**Devils Postpil**	**6.65**	**304**	Pn	**Pn**	**06 30 44.6**	**-1.0**
RDMU	**Red Mountain**	**6.73**	**17**	Pn	**Pn**	**06 30 48.2**	**+1.5**
O20A	**White River Ci**	**6.73**	**26**	Pn	**Pn**	**06 30 45.7**	**-1.0**
RYN	**Ryan**	**6.84**	**313**		**Pn**	**06 30 48.5**	**+0.3**
KVN	**Kaiserville**	**6.88**	**317**		**Pn**	**06 30 49.7**	**+1.1**
T25A	**Trinidad**	**6.94**	**62**		**Pn**	**06 30 50.9**	**+1.3**
ELK	**Elko**	**7.05**	**340**	Pn	**Pn**	**06 30 52.8**	**+1.8**
	comp=N,0.1nm,0.3s,baz=164,slow=13,SNR=2.6						
ELK				Lg	Lg	06 32 44.6	
	baz=38,slow=18,SNR=2.3						
ELK				LR	LR	06 33 49.7	
	comp=N,329nm,19.1s,baz=144,slow=40						
SPUT	**South Promonto**	**7.16**	**358**	Pn	**Pn**	**06 30 53.4**	**+0.8**
PMPB	**Monarch Peak**	**7.42**	**289**	Pn	**Pn**	**06 30 57.3**	**+1.4**
YERR	**Yerington**	**7.50**	**312**		**Pn**	**06 30 55.2**	**-2.0**
HVU	**Hansel Valley**	**7.65**	**356**	Pn	**Pn**	**06 30 58.4**	**-0.8**
ISCO	**Idaho Springs**	**7.67**	**41**	Pn	**Pn**	**06 31 00.4**	**+0.7**
MSTX	**Muleshoe**	**7.75**	**89**	Pn	**Pn**	**06 31 02.0**	**+1.4**
PNTR	**Pine Nut**	**7.79**	**312**	Pn	**Pn**	**06 30 59.2**	**-2.0**
VCNR	**Virginia City**	**7.95**	**313**	Pn	**Pn**	**06 31 02.0**	**-1.3**
TX31	**Lajitas Ar. Si**	**8.63**	**121**		**Pn**	**06 31 13.8**	**+1.1**
TX32	**Lajitas Array**	**8.63**	**121**		**Pn**	**06 31 13.8**	**+1.1**
TXAR	**Lajitas Array**	**8.63**	**121**	Pn	**Pn**	**06 31 13.8**	**+1.1**
	comp=N,4.3nm,0.3s,baz=293,slow=13,SNR=152						
TXAR				Sn	**Sn**	**06 32 47.4**	**-3.2**
	comp=N,1.4nm,0.3s,baz=280,slow=16,SNR=4.9						
TXAR				Lg	Lg	06 33 42.0	
	comp=N,3.8nm,0.3s,baz=295,slow=30,SNR=6.1						
TXAR				LR	LR	06 34 32.2	
	comp=N,121nm,20.2s,baz=0.0,slow=38						
TXAR	**Lajitas Array**	**8.63**	**121**	Pn	**Pn**	**06 31 13.7**	**+0.9**
PD31	**Pinedale Array**	**8.84**	**12**	Pn	**Pn**	**06 31 16.6**	**+0.9**
PDAR	**Pinedale Array**	**8.84**	**12**	Pn	**Pn**	**06 31 17.9**	**+2.3**
	comp=N,0.1nm,0.3s,baz=184,slow=13,SNR=2.0						
PDAR				Pg	Pg	06 31 37.7	-19
	comp=N,0.3nm,0.3s,baz=173,slow=13,SNR=12						
PDAR				Lg	Lg	06 33 42.5	
	comp=N,0.6nm,0.3s,baz=164,slow=20,SNR=3.3						
PDAR				LR	LR	06 34 52.3	
	comp=N,179nm,19.9s,baz=194,slow=39						
PDAR	**Pinedale Array**	**8.84**	**12**	Pn	**Pn**	**06 31 14.3**	**-1.3**
HPIG		**9.07**	**141**	Pn	**Pn**	**06 31 19.6**	**+0.8**
REDW	**Red Top Meadow**	**9.26**	**6**	Pn	**Pn**	**06 31 22.4**	**+1.0**
ORV	**Oroville**	**9.27**	**308**	Pn	**Pn**	**06 31 22.6**	**+1.4**
MFID	**Camas Ranch**	**9.71**	**344**	Pn	**Pn**	**06 31 28.6**	**+1.3**
LPIG	**La Paz**	**10.12**	**171**	LR	LR	06 34 58.0	
	comp=N,115nm,20.0s,baz=334,slow=35						
WMOK	**Wichita Mounta**	**11.02**	**83**	Pn	**Pn**	**06 31 47.2**	**+1.9**
YBH	**Yreka Blue Hor**	**11.29**	**315**	LR	LR	06 37 00.5	
	comp=N,156nm,19.2s,baz=126,slow=42						
NEW	**Newport**	**14.60**	**347**	LR	LR	06 38 22.5	
	comp=N,137nm,18.1s,baz=164,slow=38						
MIAR	**Mount Ida**	**15.32**	**83**		**Pn**	**06 32 43.9**	**+0.1**
MIAR				IAmb	IAmb	06 32 56.5	
	comp=Z,6.6nm,0.9s						
ECSD	**EROS Data Cent**	**15.38**	**47**		**Pn**	**06 32 43.6**	**-1.0**
U40A	**Yellville**	**15.89**	**77**		**Pn**	**06 32 50.9**	**-0.4**
U40A				IAmb	IAmb	06 33 00.3	
	comp=Z,14nm,1.2s						
WHAR	**Wooly Hollow**	**16.34**	**80**	P	**P**	**06 32 59.1**	**-1.0**
WHAR				IAmb	IAmb	06 33 02.0	
	comp=Z,15nm,0.9s						
FCAR	**Ozark Folk Cen**	**16.47**	**78**	P	**P**	**06 33 00.6**	**-0.9**
PLAL	**Pickwick Lake**	**19.80**	**81**	P	**P**	**06 33 38.6**	**+0.3**
PLAL				IAmb	IAmb	06 33 44.7	
	comp=Z,9.7nm,1.4s						
WVT	**Waverly**	**19.95**	**77**	P	**P**	**06 33 38.5**	**-1.3**
WVT				IAmb	IAmb	06 33 42.1	
	comp=Z,13nm,1.4s						
I42A	**Draeger Farm,**	**20.43**	**55**	P	**P**	**06 33 45.6**	**+0.6**
I42A				IAmb	IAmb	06 33 48.9	
	comp=Z,9.6nm,0.8s						
T47A	**Sharon Grove**	**20.52**	**75**	P	**P**	**06 33 46.7**	**+0.6**
T47A				IAmb	IAmb	06 33 48.8	
	comp=Z,9.3nm,1.1s						
X48A	**Hartselle**	**20.70**	**82**	P	**P**	**06 33 48.7**	**+0.7**
V48A	**Smith Brothers**	**20.78**	**78**	P	**P**	**06 33 48.7**	**-0.1**
V48A				IAmb	IAmb	06 33 51.1	
	comp=Z,7.9nm,0.9s						
FPAL	**Fort Paine**	**21.86**	**81**	P	**P**	**06 33 59.6**	**-1.0**
R49A	**Shelbyville**	**22.09**	**71**	P	**P**	**06 34 04.3**	**+1.3**
X51A	**Calhoun**	**22.48**	**81**	P	**P**	**06 34 05.7**	**-1.5**
TKL	**Tuckaleechee C**	**23.26**	**78**	P	**P**	**06 34 13.5**	**-1.8**
	comp=Z,2.0nm,0.9s,baz=245,slow=4.3,SNR=6.1						
TKL	**Tuckaleechee C**	**23.26**	**78**	IAmb	IAmb	06 34 16.9	
	comp=Z,6.1nm,0.9s						
ILAR	**Eielson Array**	**37.19**	**336**	P	**P**	**06 36 18.8**	**+0.1**
	comp=Z,0.7nm,1.0s,baz=130,slow=3.6,SNR=3.7						
MAW	**Mawson**	**146.37**	**177**	PKPbc	**PKPab**	**06 48 48.1**	**-0.7**
	comp=Z,4.1nm,0.8s,baz=183,slow=4.9,SNR=11						

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*IDC **02** 06:41:12.3±0.8, 53°.53N×35°.20W, h0^{km}, mb3.7/6, mb1 4.0/6, mb1mx3.6/71, mbtmp3.7/6, MS3.4/20, Ms1 3.4/20, ms1mx3.2/52, Error ellipse: s-maj=33.6km s-min=20.9km az=21.0*

ISC 02 06:41:13.7±0.9**, 53°.5N**±0°.2×**35°.2W**±0°.2**, h10**^{km}**, n26, σ0**^{s}.**87**/9**, mb3.8**/7**, MS3.4**/18**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**13.26**	**27**	LR	LR	06 47 54.4	
	comp=Z,55nm,19.9s,baz=221,slow=30						
FRB	**Frobisher Bay**	**19.90**	**314**	LR	LR	06 52 31.8	
	comp=Z,49nm,18.3s,baz=88,slow=34						
ESDC	**Sonseca Array**	**25.29**	**111**	P	**P**	**06 46 41.4**	**+1.2**
	1.6nm,0.8s,baz=310,slow=9.9,SNR=3.3						
ESDC				LR	LR	06 53 56.3	
	comp=Z,92nm,20.8s,baz=275,slow=30						
NOA	**NORSAR Array B**	**25.68**	**54**	LR	LR	06 54 54.5	
	comp=Z,41nm,20.2s,baz=270,slow=32						
HFS	**Hagfors**	**26.99**	**56**	LR	LR	06 55 35.2	
	comp=Z,74nm,20.4s,baz=284,slow=32						
DAVOX	**Davos/Dischmat**	**29.24**	**85**	LR	LR	06 57 25.6	
	comp=Z,101nm,19.1s,baz=266,slow=33						
SADO	**Sadowa**	**29.64**	**271**	LR	LR	06 58 06.1	
	comp=Z,108nm,19.4s,baz=28,slow=34						
GERES	**GERESS Array B**	**30.50**	**79**	LR	LR	06 59 26.5	
	comp=Z,56nm,18.1s,baz=301,slow=36						
ARCES	**ARCESS Array B**	**31.37**	**36**	LR	LR	06 56 40.1	
	comp=Z,25nm,21.8s,baz=330,slow=30						
VRAC	**Vranov**	**31.97**	**76**	LR	LR	07 00 00.8	
	comp=Z,56nm,18.9s,baz=319,slow=35						
ULM	**Lac du Bonnet**	**36.61**	**290**	LR	LR	07 01 44.9	
	comp=Z,61nm,18.4s,baz=28,slow=34						
TKL	**Tuckaleechee C**	**38.08**	**262**	LR	LR	07 03 06.9	
	comp=Z,93nm,18.4s,baz=46,slow=34						
SJG	**San Juan**	**42.72**	**226**	LR	LR	07 03 51.2	
	comp=Z,19nm,20.0s,baz=56,slow=32						
BRTR	**Keskin Array B**	**47.38**	**78**	LR	LR	07 11 36.3	
	comp=Z,34nm,18.2s,baz=320,slow=38						
PDAR	**Pinedale Array**	**48.61**	**289**	P	**P**	**06 49 57.0**	**-0.6**
	0.5nm,0.7s,baz=69,slow=8.1,SNR=4.8						
PDAR				LR	LR	07 09 23.4	
	comp=Z,60nm,18.1s,baz=50,slow=35						
TORD	**Torodi Ar. Bea**	**49.72**	**130**	P	**P**	**06 50 05.2**	**-0.8**
	1.2nm,0.7s,baz=332,slow=8.3,SNR=6.3						
ILAR	**Eielson Array**	**50.93**	**329**	P	**P**	**06 50 15.0**	**+0.4**
	1.9nm,1.1s,baz=49,slow=5.3,SNR=8.7						
ANMO	**Albuquerque**	**52.06**	**279**	P	**P**	**06 50 24.4**	**+0.7**
	0.3nm,0.3s,baz=26,slow=8.7,SNR=4.0						
DBIC	**Dimbokro**	**52.81**	**141**	LR	LR	07 09 14.0	
	comp=Z,43nm,21.9s,baz=16,slow=32						
ELK	**Elko**	**53.14**	**291**	LR	LR	07 12 01.6	
	comp=Z,94nm,20.8s,baz=12,slow=35						
TXAR	**Lajitas Array**	**54.40**	**272**	P	**P**	**06 50 40.2**	**-0.7**
	0.5nm,0.8s,baz=64,slow=5.7,SNR=5.9						
TXAR				LR	LR	07 12 56.0	
	comp=Z,39nm,18.2s,baz=0.0,slow=35						
NVAR	**Mina Array Bea**	**56.45**	**291**	LR	LR	07 14 13.9	
	comp=Z,51nm,19.3s,baz=186,slow=35						
ROSC	**El Rosal**	**58.09**	**228**	P	**P**	**06 51 08.1**	**+0.4**
	18nm,0.9s,baz=64,slow=2.6,SNR=10						
SONM	**Songino Array**	**73.87**	**26**	LR	LR	07 27 58.0	
	comp=Z,24nm,18.4s,baz=41,slow=38						
WRA	**Warramunga Arr**	**145.51**	**18**	PKPbc	**PKPdf**	**07 00 51.9**	**-0.1**
	1.0nm,0.8s,baz=273,slow=1.6,SNR=5.6						
ASAR	**Alice Springs**	**149.05**	**20**	PKPbc	**PKPbc**	**07 01 01.0**	**-0.9**
	0.9nm,0.6s,baz=340,slow=2.4,SNR=13						

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*IDC **02** 06:49:31.3±0.8, 34°.13N×112°.17W, h0^{km}, mb1 3.6/5, mb1mx3.5/46, mbtmp3.3/5, ML3.2/4, Error ellipse: s-maj=11.7km s-min=7.5km az=25.0*

*NEIC **02** 06:49:32.8±2.1, 34°.11N±0°.04×112°.14W±0°.04, h7^{km}±6^{km}, ML4.0/113, Mwr3.6/14(SLM), Error ellipse: s-maj=5.5km s-min=4.9km az=58.0*

*NEIC **02** 06:49:32.8, 34°.11N×112°.12W, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-2.24; $M_{\theta\theta}$1.25; $M_{\phi\phi}$0.99; $M_{r\theta}$1.04; $M_{\theta\phi}$1.58; $M_{\phi r}$-0.46; Fault plane solution: $M_0$2.75000×10^{14} NP1:ϕ_s25.00000°, δ45.00000°, λ-126.00000°. NP2:ϕ_s250.00000°, δ55.00000°, λ-60.00000°. Principal axes: T 2.7489, Plg6.0000°, Azm319.0000°; N 0.0048, Plg24.0000°, Azm52.0000°; P -2.7537, Plg65.0000°, Azm217.0000°;*

*ANF **02** 06:49:34.0±1.6, 34°.13N×112°.14W, h19^{km}±14^{km}, ML4.1/28 Error ellipse: s-maj=3.3km s-min=2.0km az=6.0*

ISC 02 06:49:32.7±1.3**, 34°.15N**±0°.04×**112°.16W**±0°.03**, h6**^{km}±10^{km}**, n122, σ1**^{s}.**10**/139**, Western Arizona**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
X16A	**Lo Mia Camp, P**	**0.65**	**66**		**Pg**	**06 49 43.5**	**-1.8**
Y14A	**Wickenburg**	**0.73**	**254**		**Pg**	**06 49 47.0**	**+0.2**
Y14A				IAML		06 50 01.5	
	comp=E,8μm,0.3s						
Y14A				IAML		06 50 02.8	
	comp=N,6μm,0.2s						
WUAZ	**Wupatki**	**1.51**	**25**	Pn	**Pn**	**06 49 59.0**	**-1.4**
WUAZ				Sn	**Sn**	**06 50 18.7**	**-1.9**
WUAZ				IAML		06 50 22.3	
	comp=N,4μm,0.7s						
WUAZ				IAML		06 50 26.2	
	comp=N,3μm,0.4s						
WUAZ	**Wupatki**	**1.51**	**25**	P	**Pn**	**06 49 59.0**	**-1.4**
	baz=204,SNR=1000						
WUAZ				S	**Sn**	**06 50 18.1**	**-2.4**

	baz=204						
PDMCI	Parker Dam,Lak	1.65	276	P	Pn	06 50 01.5	-0.7
	baz=96,SNR=390						
PDMCI				Sb	Sg	06 50 25.4	-0.3
	baz=96						
W13A	Hualapai Mount	1.71	304		Pn	06 50 02.7	-0.5
W13A				Sn	Sg	06 50 27.6	-0.1
W13A				IAML		06 50 30.4	
	comp=N,1µm,0.7s						
W13A				IAML		06 50 30.9	
	comp=E,737nm,0.5s						
X18A	Snowflake	1.87	78		Pn	06 50 04.8	-0.6
X18A				IAML		06 50 31.9	
	comp=N,3µm,0.7s						
113A	Mohawk Valley,	1.92	225		Pn	06 50 04.8	-1.1
NEE2	Needles Airpor	2.12	288	P	Pn	06 50 08.0	-0.7
	baz=107,SNR=29						
NEE2				Sb	Sg	06 50 40.1	-0.8
	baz=107						
TUC	Tucson	2.17	147	Pn	Pn	06 50 08.5	-0.9
TUC				Sn	Sn	06 50 34.4	-2.2
TUC				IAML		06 50 35.9	
	comp=N,439nm,0.3s						
TUC				IAML		06 50 36.1	
	comp=N,466nm,0.2s						
TUC	Tucson	2.17	147	P	Pn	06 50 08.5	-0.9
	baz=328						
TUC				S	Sn	06 50 34.6	-2.0
	baz=328						
W18A	Petrified Fore	2.22	64		Pn	06 50 09.9	-0.4
W18A				IAML		06 50 42.3	
	comp=N,860nm,0.5s						
W18A				IAML		06 50 43.7	
	comp=E,1µm,0.3s						
W18A	Petrified Fore	2.22	64	P	Pn	06 50 09.9	-0.4
	baz=244,SNR=290						
W18A				Sb	Sb	06 50 40.6	-0.6
	baz=244						
214A	Organ Pipe Nat	2.25	194	Pn	Pn	06 50 09.6	-1.0
214A				IAML		06 50 44.4	
	comp=N,646nm,0.3s						
214A				IAML		06 50 48.4	
	comp=E,651nm,0.6s						
214A	Organ Pipe Nat	2.25	194	P	Pn	06 50 09.5	-1.0
	baz=15,SNR=88						
214A				S	Sn	06 50 38.9	+0.2
	baz=15						
U15A	North Rim	2.28	357		Pn	06 50 10.9	-0.2
U15A				IAML		06 50 45.0	
	comp=E,728nm,0.6s						
U15A				IAML		06 50 45.9	
	comp=N,627nm,0.7s						
IRM	Iron Mountain	2.47	271	P	Pn	06 50 13.0	-0.6
	baz=90,SNR=161						
IRM				Sb	Sg	06 50 50.9	-1.3
	baz=90						
GLA	Glamis	2.48	245		Pn	06 50 13.4	-0.3
GLA				IAML		06 50 59.2	
	comp=E,789nm,0.8s						
GLA				IAML		06 51 01.3	
	comp=N,788nm,0.4s						
GLA	Glamis	2.48	245	P	Pn	06 50 13.1	-0.6
	baz=64,SNR=65						
GLA				Sb	Sg	06 50 50.8	-1.6
	baz=64						
BC3	Big Chuckawall	2.78	261	P	Pn	06 50 17.1	-0.8
	baz=80,SNR=74						
KNB	Kanab	2.91	350	Pn	Pn	06 50 19.8	0.0
KNB				IAML		06 51 04.8	
	comp=E,414nm,1.0s						
KNB				IAML		06 51 05.4	
	comp=N,275nm,0.7s						
GMRC	Granite Mounta	2.96	283	P	Pn	06 50 19.6	-0.7
	baz=102,SNR=81						
GMRC				S	Sn	06 50 56.1	-0.1
	baz=102						
LCMT	Little Creek M	2.99	343		Pn	06 50 20.6	-0.2
GUVIX	Guadalupe Vict	3.06	234	Pn	Pn	06 50 20.9	-0.6
GUVIX				IAML		06 51 16.8	
	comp=N,598nm,0.6s						
GUVIX				IAML		06 51 40.5	
	comp=E,839nm,0.6s						
CPBX	Cerro Prieto	3.15	238	Pn	Pn	06 50 21.7	-1.1
CPBX				IAML		06 51 22.1	
	comp=N,464nm,0.5s						
CPBX				IAML		06 51 46.6	
	comp=E,567nm,0.7s						
BELC	Belle Mtn. Jos	3.19	268	P	Pn	06 50 22.8	-0.7
	baz=87,SNR=84						
SWSC	Sam W. Stewart	3.27	249	P	Pn	06 50 24.0	-0.4
	baz=68,SNR=7.1						
PKCU	Pink Cliffs	3.29	358	Pn	Pn	06 50 24.3	-0.8
TUQ	Turquoise Moun	3.35	294	P	Pn	06 50 25.5	-0.2
	baz=112,SNR=20						
HEC	Hector,Ludlow	3.51	282	P	Pn	06 50 27.1	-0.8
	baz=100,SNR=7.0						
SZCU	Shurtz Canyon	3.52	348		Pn	06 50 27.1	-1.0
SZCU				IAML		06 51 22.3	
	comp=E,375nm,0.4s						
SZCU				IAML		06 51 25.5	
	comp=N,284nm,0.4s						
CCUT	Cedar City	3.53	344		Pn	06 50 29.6	+1.3
TPFO	Pinon Flats	3.61	263	P	Pn	06 50 28.9	-0.5
	baz=81,SNR=108						
PFO	Pinyon Flats O	3.62	263	Pn	Pn	06 50 28.9	-0.4
	comp=N,41nm,0.3s,baz=68,slow=14,SNR=302						
PFO				Sn	Sn	06 51 11.1	-1.3
	comp=N,4.7nm,0.3s,baz=62,slow=8.2,SNR=4.4						
PFO				Lg	Lg	06 51 26.4	
	comp=N,24nm,0.3s,baz=232,slow=2.3,SNR=14						
PFO	Pinyon Flats O	3.62	263	Pn	Pn	06 50 28.9	-0.4
PFO	Pinyon Flats O	3.62	263	P	Pn	06 50 29.0	-0.4
	baz=81,SNR=101						
IKP	In-Ko-Pah, Jac	3.62	247	P	Pn	06 50 29.2	-0.2
	baz=65						
319A	Douglas	3.68	138		Pn	06 50 29.9	-0.3
MONP2	Monument Peak	3.77	252	P	Pn	06 50 31.3	-0.3
	baz=70,SNR=6.4						
SFX	San Felipe	3.84	217	Pn	Pn	06 50 32.7	+0.3
MTPU	Mount Pierson	3.88	360		Pn	06 50 32.6	-0.7
MTPU				IAML		06 51 40.1	
	comp=E,125nm,1.1s						
MTPU				IAML		06 51 41.1	
	comp=N,143nm,0.7s						
GSC	Goldstone, Bar	3.99	288	Pn	Pn	06 50 33.9	-0.6
GSC				IAML		06 51 52.2	
	comp=N,152nm,0.9s						
GSC				IAML		06 51 54.8	
	comp=E,231nm,0.8s						
GSC	Goldstone, Bar	3.99	288	P	Pn	06 50 33.8	-0.7
	baz=106,SNR=26						
121A	Cookes Peak, D	4.00	113	Pn	Pn	06 50 34.6	-0.2
121A				IAML		06 51 41.2	
	comp=N,353nm,0.5s						
121A				IAML		06 51 46.7	
	comp=E,285nm,0.7s						
121A	Cookes Peak, D	4.00	113	P	Pn	06 50 34.3	-0.4
	baz=295,SNR=115						
PRN	Pahroc Range	4.01	325		Pn	06 50 35.3	+0.5
PRN				IAML		06 51 52.4	
	comp=E,174nm,1.1s						
PRN				IAML		06 51 56.1	
	comp=N,207nm,0.7s						
TKX	Tecate	4.04	248	Pn	Pn	06 50 33.9	-1.2
BAR	Barrett	4.05	250	Pn	Pn	06 50 36.4	+1.2
CBX	Cerro Bola	4.19	245		Pn	06 50 38.8	+1.5
GWY	Greenwater Val	4.21	300	Pn	Pn	06 50 38.0	+0.4
GWY				IAML		06 52 00.7	
	comp=N,134nm,0.8s						
GWY				IAML		06 52 04.0	
	comp=E,183nm,0.7s						
MURC	Murrieta	4.22	264	P	Pn	06 50 37.8	+0.1
	baz=82,SNR=46						
MURC				S	Sn	06 51 27.4	+0.2
	baz=82						
QSM	Queen of Sheba	4.26	296		Pn	06 50 38.4	+0.2
QSM				IAML		06 51 57.2	
	comp=E,118nm,1.1s						
QSM				IAML		06 52 11.4	
	comp=N,128nm,1.0s						
MVCO	Mesa Verde	4.27	43	Pn	Pn	06 50 38.9	+0.5
MVCO				IAML		06 51 53.6	
	comp=N,300nm,0.7s						
MVCO				IAML		06 52 01.9	
	comp=N,227nm,0.8s						
MVCO	Mesa Verde	4.27	43	P	Pn	06 50 38.2	-0.2
	baz=225,SNR=11						
LENM	Lemitar	4.30	88		Pn	06 50 37.2	-1.6
109C	Camp Elliot, M	4.32	254	Pn	Pn	06 50 39.4	+0.6
109C	Camp Elliot, M	4.32	254	P	Pn	06 50 39.1	+0.2
	baz=72,SNR=7.2						
MVU	Marysvale	4.35	359	Pn	Pn	06 50 40.0	+0.5
Y22D	IRIS PASSCAL I	4.35	90	Pn	Pn	06 50 39.2	-0.3
Y22D				IAML		06 52 04.1	
	comp=N,202nm,1.7s						
Y22D				IAML		06 52 05.9	
	comp=E,194nm,0.8s						
Y22D	IRIS PASSCAL I	4.35	90	P	Pn	06 50 39.4	-0.1
	baz=272						
TJX	Tijuana	4.41	250	Pn	Pn	06 50 40.2	+0.1
TJX				IAML		06 52 06.9	
	comp=E,191nm,1.1s						
TJX				IAML		06 52 07.8	
	comp=N,130nm,0.8s						
CCX	Cicese	4.41	240	Pn	Pn	06 50 40.0	-0.2
BFSC	Mount Baldy Ra	4.56	273	P	Pn	06 50 42.3	0.0
	baz=90,SNR=9.3						
BNM	Barren Site	4.59	88	Pn	Pn	06 50 41.9	-1.0
PV05	Paradox Valley	4.64	31	Pn	Pn	06 50 44.4	+0.9
ANMO	Albuquerque	4.78	79	Pn	Pn	06 50 45.7	+0.3
	comp=N,2.2nm,0.3s,baz=268,slow=14,SNR=31						
ANMO				Pg	Pb	06 51 00.3	+3.4
	comp=N,4.4nm,0.3s,baz=256,slow=13,SNR=22						
ANMO				Lg	Lg	06 51 57.1	
	comp=N,4.1nm,0.3s,baz=79,slow=12,SNR=6.5						
ANMO	Albuquerque	4.78	79	Pn	Pn	06 50 43.9	-1.5
ANMO	Albuquerque	4.78	79	P	Pn	06 50 45.5	+0.1
	baz=261						
ANMO				Sb	Sb	06 51 56.9	+2.2
	baz=261						
Q16A	Castle Valley	4.83	9	Pn	Pn	06 50 46.3	+0.3
Q16A				IAML		06 52 10.1	
	comp=N,116nm,1.2s						
Q16A				IAML		06 52 10.1	
	comp=E,141nm,1.0s						
PV13	Radium Mtn., P	4.83	33		Pn	06 50 47.5	+1.3
PV17	East Wray Mesa	4.87	31	Pn	Pn	06 50 48.7	+2.1
EDW2	Edwards Air Fo	4.87	280	P	Pn	06 50 47.6	+1.1
	baz=97						
PV19	Morning Glory	4.88	31	Pn	Pn	06 50 47.5	+0.6
MWC	Mount Wilson	4.89	273		Pn	06 50 45.8	-1.1
MWC				IAML		06 52 12.3	
	comp=E,59nm,0.8s						
MWC				IAML		06 52 17.9	
	comp=N,70nm,1.4s						
PV02	Paradox Valley	4.91	33		Pn	06 50 45.7	-1.5
PV10	Paradox Valley	4.92	30	Pn	Pn	06 50 45.5	-1.8
PV20	West Nyswonger	4.92	31	Pn	Pn	06 50 48.9	+1.5
PV14	Lion Creek, Pa	4.92	30		Pn	06 50 49.0	+1.6
PV11	David Mesa, Pa	4.92	32		Pn	06 50 46.1	-1.3
PV01	Paradox Valley	4.93	35		Pn	06 50 47.6	+0.1
PV01				IAML		06 52 11.5	
	comp=N,162nm,1.2s						
PV01				IAML		06 52 13.7	
	comp=E,171nm,0.6s						
PV12	Saucer Basin,	4.97	32	Pn	Pn	06 50 49.2	+1.2
PASC	Pasadena Art C	4.99	272	Pn	Pn	06 50 47.2	-1.0
PASC				IAML		06 52 21.1	
	comp=E,42nm,1.3s						
PASC				IAML		06 52 24.5	
	comp=N,46nm,1.6s						
R11A	Troy Canyon, C	5.02	328	Pn	Pn	06 50 49.4	+0.7
R11A	Troy Canyon, C	5.02	328	P	Pn	06 50 49.2	+0.4
	baz=146						
SRU	San Rafael Swe	5.12	14	Pn	Pn	06 50 51.3	+1.2
SRU				IAML		06 52 13.6	
	comp=N,105nm,0.8s						
TMUT	Trail Mountain	5.20	8	Pn	Pn	06 50 53.1	+1.9
HSIG		5.22	168	Pn	Pn	06 50 50.8	-0.4
HSIG				IAML		06 52 28.0	
	comp=E,84nm,1.1s						
HSIG				IAML		06 52 28.9	
	comp=N,58nm,0.8s						
ISA	Isabella, Lake	5.40	288		Pn	06 50 53.7	-0.2
ISA	Isabella, Lake	5.40	288	P	Pn	06 50 52.8	-1.1
	baz=105						
LCH	Last Change Ra	5.42	306		Pn	06 50 55.4	+1.2
P17A	Butcher Ranch,	5.43	12	Pn	Pn	06 50 55.2	+0.8
TPH	Tonopah	5.67	315		Pn	06 50 58.4	+0.8
P18A	Preston Nutter	5.68	15	Pn	Pn	06 50 58.7	+0.8
MPU	Maple Canyon	5.87	4	Pn	Pn	06 51 01.9	+1.5
DUG	Dugway, Tooele	6.06	355	Pn	Pn	06 51 03.7	+0.8
MNTX	Cornudas Mount	6.20	111		Pn	06 51 04.5	-0.3
MNTX	Cornudas Mount	6.20	111	P	Pn	06 51 04.4	-0.3
	baz=295,SNR=26						
NV11	Mina Array Sit	6.46	313	Pn	Pn	06 51 09.4	+1.0
JLU	Jordanelle	6.47	5	Pn	Pn	06 51 07.0	-1.7
SDCO	Great Sand Dun	6.49	54	Pn	Pn	06 51 08.9	0.0
SMCO	Snowmass	6.52	38	Pn	Pn	06 51 09.3	-0.2
CTU	Camp Tracy	6.54	3	Pn	Pn	06 51 07.7	-1.9
NVAR	Mina Array Bea	6.54	313	Pn	Pn	06 51 10.8	+1.1
	comp=N,0.5nm,0.3s,baz=132,slow=23,SNR=20						
NVAR				Lg	Lg	06 52 56.1	
	baz=172,slow=15,SNR=1.1						
NVAR	Mina Array Bea	6.54	313	Pn	Pn	06 51 08.3	-1.4
LHV	Little Huntoon	6.56	310		Pn	06 51 10.8	+1.1
RDMU	Red Mountain	6.73	17	Pn	Pn	06 51 12.9	+0.6
BGU	Big Grassy Mou	6.80	354	Pn	Pn	06 51 14.6	+1.4
RYN	Ryan	6.80	313	Pn	Pn	06 51 14.8	+1.6
KVN	Kaiserville	6.84	317		Pn	06 51 12.8	-0.9
T25A	Trinidad	6.98	62	Pn	Pn	06 51 16.3	+0.6
TCUT	Toone Canyon	6.98	5	Pn	Pn	06 51 16.9	+1.2
ELK	Elko	7.02	341	Pn	Pn	06 51 19.0	+2.8
	comp=N,0.2nm,0.3s,baz=139,slow=9.3,SNR=3.2						
ELK				Lg	Lg	06 53 09.3	
	comp=N,0.2nm,0.3s,baz=114,slow=14,SNR=2.2						
YERR	Yerington	7.46	312		Pn	06 51 23.0	+0.7
ISCO	Idaho Springs	7.70	41	Pn	Pn	06 51 25.8	+0.2
RWWY	Rawlins	8.48	26	Pn	Pn	06 51 35.0	-1.4
TX31	Lajitas Ar. Si	8.68	121	Pn	Pn	06 51 38.7	-0.2
TX32	Lajitas Array	8.68	121	Pn	Pn	06 51 39.8	+0.9
TXAR	Lajitas Array	8.68	121	Pn	Pn	06 51 39.7	+0.8
	comp=N,2.1nm,0.3s,baz=293,slow=12,SNR=94						
TXAR				Sn	Sn	06 53 15.2	-1.9
	comp=N,0.5nm,0.3s,baz=309,slow=22,SNR=2.0						
TXAR				Lg	Lg	06 54 03.9	
	comp=N,0.5nm,0.3s,baz=287,slow=31,SNR=2.6						
TXAR	Lajitas Array	8.68	121	Pn	Pn	06 51 39.5	+0.6
AMTX	Amarillo	8.68	82	Pn	Pn	06 51 39.1	+0.2
PDAR	Pinedale Array	8.84	13	Pn	Pn	06 51 44.0	+2.7
	comp=N,0.0nm,0.3s,baz=172,slow=14,SNR=1.9						
PDAR				Lg	Lg	06 54 08.7	
	comp=N,0.3nm,0.3s,baz=182,slow=23,SNR=2.6						
ABTX	Abilene, Hawle	10.58	95	Pn	Pn	06 52 03.1	-1.8

NNC 02 07:11:52.6±1.7,53°.70N×88°.09E,h0^{km},mb3.5,mpv3.1, 2C-5D,Error ellipse: s-maj=13.8km s-min=7.8km az=52.0,Suspected Mining explosion.,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	1.96	279	⇑P	Pn	07 12 26.6	-0.5
	2.4nm,0.6s						
ZAA0				⇑S	Sb	07 12 53.4	-0.6
	11nm,0.8s						
KURBB	Kurchatov Arra	6.64	246	⇓Pn	Pn	07 13 32.2	+0.8
	2.1nm,0.3s						
KURBB				⇓Sn	Sn	07 14 48.3	+0.6
	6.0nm,0.7s						
KURBB				⇓Lg	Lg	07 15 22.6	
	9.9nm,0.8s						
MK31	Makanchi Array	7.84	211	Pn	Pn	07 13 48.8	+0.9
	0.9nm,0.7s,baz=29,slow=14,SNR=8.3						
MK31				⇓Sn	Sn	07 15 18.4	+1.0
	4.4nm,1.1s,baz=36,slow=27,SNR=4.7						
MK31				⇓Lg	Lg	07 16 01.1	
	8.4nm,1.1s,baz=36,slow=12,SNR=4.1						

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*SNET **02** 07:22:02.2±1.2,13°.96N×91°.04W,h15^{km}±7^{km},ML3.2*
*GCG **02** 07:22:04.8±0.7,13°.90N×91°.12W,h49^{km}±34^{km},MD3.5*
ISC 02 07:22:00.5±3.1,**13°.7N**±0°.1×**91°.11W**±0°.08,**h12^{km}**±17^{km},**n14,σ0^s.74**/21,**Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUG	Fuego 3	0.78	19	*e*P	Pn	07 22 18.2	+0.7
PCG	Pacaya	0.83	36	*e*P	Pn	07 22 19.1	+0.8
STG3	Santiaguito 3,	1.09	336	*e*P	Pn	07 22 22.4	+0.6
STG3				*e*S	Sn	07 22 35.3	-1.6
NBG	Las Nubes	1.14	40	*e*P	Pn	07 22 23.4	+0.9
NBG				*e*S	Sn	07 22 38.6	+0.3
CEVE	Cerro Verde	1.45	85	*e*P	Pb	07 22 27.7	+0.2
CEVE				IAML		07 22 28.1	
	comp=Z,1µm,0.3s						
CEVE				*e*S	Sg	07 22 46.4	-0.7
JAYA	Jayaque - finc	1.61	92	*e*P	Pn	07 22 29.3	+0.3
JAYA				*e*S	Sn	07 22 49.6	-0.2
JAYA				IAML		07 22 58.6	
	comp=Z,662nm,0.3s						
CEDA	San Andres	1.67	87	*e*P	Pn	07 22 29.9	+0.3
CEDA				*e*S	Sb	07 22 52.3	+0.1
TACO	Tacachico	1.72	81	*e*P	Pn	07 22 30.3	-0.1
TACO				*e*S	Sn	07 22 51.4	-0.9
TACO				IAML		07 22 57.5	
	comp=Z,53nm,0.5s						
OPAM	Oficina de Pla	1.85	90	*e*P	Pn	07 22 32.5	+0.2
OPAM				*e*S	Sb	07 22 57.2	-0.4
OPAM				IAML		07 23 03.8	
	comp=Z,351nm,0.2s						
SJTE	Alcalda de S	2.04	92	*e*P	Pn	07 22 35.4	+0.5
SJTE				IAML		07 23 08.6	
	comp=Z,94nm,0.3s						
PAVA	Las Pavas	2.11	90	*e*P	Pn	07 22 36.3	+0.6
PAVA				IAML		07 23 09.8	
	comp=Z,114nm,0.4s						
COEG	Centro de Oper	2.17	92	*e*P	Pn	07 22 37.1	+0.6
COEG				IAML		07 23 14.5	
	comp=Z,282nm,0.4s						
COEB	Comit de Eme	2.51	95	*e*P	Pn	07 22 41.7	+0.3
COEB				IAML		07 23 20.9	
	comp=Z,152nm,0.4s						
LCND	La Caada	3.15	97	*e*P	Pn	07 22 51.2	+1.2

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*NNC **02** 07:22:19.2±0.3,50°.02N×78°.66E,h0^{km},mb3.6,mpv3.3, Error ellipse: s-maj=5.3km s-min=1.5km az=83.0, Suspected Mining explosion.*
*IDC **02** 07:22:20.5±0.8,50°.06N×78°.73E,h0^{km},mb1 2.8/3, mb1mx2.8/50,mbtmp2.8/3,ML2.6/3,Error ellipse: s-maj=8.7km s-min=6.0km az=51.0*
ISC 02 07:22:19.5±0.9,**49°.99N**±0°.04×**78°.63E**±0°.08,**h0^{km},n23, σ0^s.75**/30,**17C-7D,Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR07	Kurchatov Arra	0.60	353	⇑P	Pg	07 22 30.5	-0.6
KUR07				⇑S	Sg	07 22 39.2	+0.3
KUR06	Kurchatov Arra	0.62	354	⇑P	Pg	07 22 30.9	-0.5
KUR06				⇓S	Sg	07 22 39.4	-0.1
KUR14	Kurchatov Arra	0.63	358	⇑P	Pg	07 22 30.7	-0.9
KUR14				⇑S	Sg	07 22 39.2	-0.5
KUR15	Kurchatov Arra	0.63	356	⇑P	Pg	07 22 30.8	-0.8
KUR15				⇑S	Sg	07 22 39.1	-0.8
KURBB	Kurchatov Arra	0.64	354	Pg	Pg	07 22 31.3	-0.5
	3.1nm,0.3s,baz=166,slow=18,SNR=63						
KURBB				Lg	Lg	07 22 40.2	
	3.1nm,0.3s,baz=169,slow=32,SNR=12						
KURBB	Kurchatov Arra	0.64	354	⇑P	Pg	07 22 31.1	-0.7
KURBB				⇑S	Sg	07 22 39.7	-0.4
KUR16	Kurchatov Arra	0.65	352	⇓P	Pg	07 22 31.2	-0.7
KUR16				⇑S	Sg	07 22 39.7	-0.6
KUR17	Kurchatov Arra	0.65	351	⇓P	Pg	07 22 31.4	-0.7
KUR17				⇓S	Sg	07 22 39.9	-0.6
KUR05	Kurchatov Arra	0.66	355	⇑P	Pg	07 22 31.4	-0.8
KUR05				⇑S	Sg	07 22 40.5	-0.2
KUR04	Kurchatov Arra	0.68	355	⇑P	Pg	07 22 31.8	-0.8
KUR04				⇓S	Sg	07 22 41.1	-0.2
KURK	Kurchatov	0.73	359	⇑P	Pg	07 22 32.6	-0.9
KURK				⇑S	Sg	07 22 42.8	-0.2
	37nm,0.7s						
MAKZ	Makanchi	3.88	144	⇑Lg	Lg	07 24 22.9	
	12nm,0.9s						
MK31	Makanchi Array	4.02	141	⇑Pn	Pn	07 23 23.1	+0.8
	1.1nm,0.5s,baz=321,slow=9.9,SNR=17						
MK31				Pg	Pb	07 23 32.1	+0.9
	2.5nm,0.5s,baz=322,slow=15,SNR=18						
MK31				Lg	Lg	07 24 26.5	
	5.0nm,0.5s,baz=330,slow=28,SNR=12						
MKAR	Makanchi Array	4.02	141	Pn	Pn	07 23 23.6	+1.2
	0.4nm,0.3s,baz=326,slow=11,SNR=18						
MKAR				Pg	Pb	07 23 31.5	+0.3
	0.8nm,0.3s,baz=320,slow=15,SNR=16						
MKAR				Lg	Lg	07 24 27.8	
	2.2nm,0.3s,baz=330,slow=28,SNR=12						
OTUK	Ortayu	4.49	250	⇓Pn	Pn	07 23 29.2	+0.4
	2.0nm,0.5s						
OTUK				⇓Lg	Lg	07 24 42.2	
	5.2nm,0.6s						
KAPS	Kapalarasan	4.73	174	P	Pg	07 24 30.4	+40
	0.9nm,0.2s						
KAPS				S	Sg	07 24 49.6	-1.9
	5.0nm,0.1s						
I46RU	ZALESOVO INFRA	5.51	42	*i*		07 53 50.0	
	baz=222,slow=322,SNR=0.9						
ZALV	Zalesovo Beam	5.51	42	Pn	Pn	07 23 42.5	-0.2
	0.8nm,0.3s,baz=233,slow=14,SNR=6.4						
ZALV				Lg	Lg	07 25 14.5	
	0.4nm,0.3s,baz=208,slow=30,SNR=2.7						
DJR	Jarkent	5.71	172	Pg	Pg	07 24 47.9	+39
	5.0nm,1.2s						
DJR				Lg	Lg	07 25 19.9	
	10nm,0.8s						
BVAR	Borovoye Array	5.98	304	Pn	Pn	07 23 50.1	+0.8
	0.2nm,0.3s,baz=189,slow=18,SNR=1.7						
BVAR				Sn	Sn	07 24 58.2	-0.1
	0.4nm,0.3s,baz=128,slow=26,SNR=5.0						
BVAR				Lg	Lg	07 25 31.9	
	0.4nm,0.3s,baz=120,slow=22,SNR=2.4						
CHKK	Chushkaly	6.24	191	Pg	Pg	07 24 59.6	+41
	1.3nm,0.2s						
CHKK				Lg	Lg	07 25 39.9	
	6.1nm,0.3s						
KUU	Kurty	6.30	195	Pg	Pg	07 25 03.3	+43
	0.5nm,0.1s						
KUU				Lg	Lg	07 25 46.1	
	6.3nm,0.6s						
KTBS	Karatobe	6.42	193	Pg	Pg	07 25 04.0	+42
	2.2nm,1.0s						
KTBS				Lg	Lg	07 25 47.4	
	9.9nm,0.7s						

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*IDC **02** 07:22:34.9±5.0,2°.59N×128°.68E,h131^{km}±47^{km},mb4.3/6, mb1 4.4/7,mb1mx3.6/50,mbtmp4.7/7,Error ellipse: s-maj=36.9km s-min=16.1km az=72.0*
*NEIC **02** 07:22:40.5±1.6,2°.46N±0°.08×128°.44E±0°.07, h175^{km}±10^{km},mb4.3/12,Error ellipse: s-maj=14.5km s-min=6.0km az=141.0*
*DJA **02** 07:22:40.5±0.4,2°N±4°×12°8E±°,h173^{km}±3^{km},M4.5/12, mB5.0/6,mb4.6/12,MLv4.7/10,Mw(mB)4.3/6*
ISC 02 07:22:41.8±0.8,**2°.35N**±0°.08×**128°.29E**±0°.09,**h200^{km},n38, σ1^s.43**/40,**mb4.4**/9,**Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.82	211	Pn	Pn	07 23 18.6	+0.1
TNTI	Ternate	1.82	211	P	Pn	07 23 16.5	-2.0
TNTI				S	Sn	07 23 45.7	-1.4
SGSI	Sangihe	3.06	296	P	Pn	07 23 30.6	-1.5
SGSI				S	Sn	07 24 08.2	-3.3
SIJI	Sorong	4.37	137	S	Sn	07 24 36.0	-4.4
	5.8nm,0.3s,baz=253,slow=17,SNR=6.0						
KMSI	Cibinong	4.66	248	P	Pn	07 23 50.2	-1.6
SANI	Sanana	4.94	208	P	Pn	07 23 54.0	-1.4
	0.7nm6µm169nm,0.9s						
GTOI	Gorontalo	5.55	252	P	Pn	07 24 03.7	+0.5
	0.2nm586nm54nm,0.6s						
LUWI	Luwuk	6.47	239	Pn	Pn	07 24 16.0	+0.9
LUWI	Luwuk	6.47	239	P	Pn	07 24 15.3	+0.2
	1.1nm19µm231nm,0.9s						
FAKI	Fak Fak	6.56	143	Pn	Pn	07 24 17.7	+1.4
MRSI	Marisa	6.62	254	P	Pn	07 24 18.1	+1.1
	0.5nm129nm,0.6s						
APSI	Ampana	7.39	244	P	Pn	07 24 26.3	-0.8
	0.3nm1µm79nm,0.8s						
TOLI2	Tolitoli	7.61	261	Pn	Pn	07 24 28.8	-1.2
MPSI	Mapaga	8.63	257	P	Pn	07 24 43.9	+0.7
	1µm50nm,0.9s						
TTSI	Tana Toraja	10.02	238	P	Pn	07 24 59.3	-2.1
	43nm,0.7s						
BKSI	Bulukumba	11.16	227	P	Pn	07 25 15.5	-0.6
	427nm15nm,0.7s						
KAPI	Kappang	11.24	229	P	Pn	07 25 18.2	+1.2

	2.7nm,0.3s,baz=91,slow=0.5,SNR=9.0						
MTN	Manton Dam	15.36	169		Pn	07 26 07.9	-0.5
MTN				IAmb	IAmb	07 26 11.5	
	comp=Z,11nm,0.7s						
KNRA	Kununurra	17.92	179	P	P	07 26 38.0	+1.2
KNRA				IAmb	IAmb	07 26 40.2	
	comp=Z,14nm,0.8s						
FITZ	Fitzroy Crossi	20.49	187	P	P	07 27 04.0	-0.4
	comp=Z,0.9nm,0.4s,baz=8.9,slow=9.5,SNR=12						
FITZ	Fitzroy Crossi	20.49	187	P	P	07 27 04.1	-0.4
COEN	Coen	21.91	138	P	P	07 27 17.6	-1.7
COEN				IAmb	IAmb	07 27 31.8	
	comp=Z,11nm,1.3s						
WRAB	Tennant Creek	22.93	165	P	P	07 27 29.1	+0.5
WRA	Warramunga Arr	22.93	165	P	P	07 27 29.7	+1.0
	comp=Z,14nm,0.5s,baz=347,slow=11,SNR=121						
WRA	Warramunga Arr	22.93	165	P	P	07 27 28.9	+0.2
WR0	Warramunga Arr	23.00	165	P	P	07 27 30.1	+0.8
AS31	Alice Springs	26.43	168	P	P	07 28 00.6	+0.4
ASAR	Alice Springs	26.43	168	P	P	07 28 01.1	+0.8
	comp=Z,2.0nm,0.6s,baz=353,slow=8.0,SNR=36						
ASAR				pP	pP	07 28 22.9	-17
	comp=Z,1.1nm,0.4s,baz=335,slow=9.7,SNR=5.3						
ASAR				PcP	PcP	07 31 21.4	+1.1
	comp=Z,0.9nm,0.4s,baz=351,slow=2.0,SNR=9.1						
JCJ	Chichijima	27.98	27	P	P	07 28 09.3	-4.6
	comp=Z,40nm,0.6s,baz=285,slow=22,SNR=1.8						
BBOO	Buckleboo	35.73	169	P	P	07 29 22.6	+1.1
STKA	Stephens Creek	36.31	161	P	P	07 29 27.4	+1.0
	comp=Z,9.8nm,0.4s,baz=337,slow=9.2,SNR=30						
STKA	Stephens Creek	36.31	161	P	P	07 29 27.5	+1.1
STKA				IAmb	IAmb	07 29 27.7	
	comp=Z,2.3nm,0.6s						
ARMA	Armidale	39.47	147	P	P	07 29 54.6	+1.6
ARMA				IAmb	IAmb	07 30 16.4	
	comp=Z,14nm,1.3s						
MK31	Makanchi Array	59.57	325	P	P	07 32 25.6	+1.2
MK31				IAmb	IAmb	07 32 34.2	
	comp=Z,7.2nm,1.3s						
MKAR	Makanchi Array	59.57	325	P	P	07 32 25.4	+1.0
	comp=Z,1.0nm,0.4s,baz=115,slow=8.0,SNR=16						
MKAR	Makanchi Array	59.57	325	P	P	07 32 25.6	+1.2
ARCES	ARCESS Array B	92.27	340	P	P	07 35 28.9	+0.2
	comp=Z,4.4nm,0.8s,baz=64,slow=5.5,SNR=4.2						
TORD	Torodi Ar. Bea	124.83	288	PKP	PKiKP	07 41 20.1	+0.9
	comp=Z,0.2nm,0.3s,baz=135,slow=1.5,SNR=1.7						

NOU 02 07:24:59.8, 19°.35S × 169°.05E, h18^{km}, MLv4.1/9, **Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTV	Rentapao	1.66	339	P	Pn	07 25 28.2	+0.2
DVP	Devils Point	1.81	333	P	Pn	07 25 30.2	+0.1
LIFNC	LIFOU	2.22	230	P	Pn	07 25 34.8	-0.9
MARNC	Mare, Loyalty	2.33	204	P	Pn	07 25 37.4	+0.2
YATNC	Mamie plateau,	3.37	216	P	Pn	07 25 50.6	-1.0
DZM	Mont Dzumac	3.64	222	P	Pn	07 25 55.6	+0.2
NOUC	Port Laguerre	3.75	223	P	Pn	07 25 58.0	+1.1
KOUNC	Koumac, New Ca	4.64	254	P	Pn	07 26 09.3	+0.3

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*DDA **02** 07:58:46.5, 35°.80N × 31°.59E, h7^{km} ± 6^{km}, ML2.3*

*NIC **02** 07:58:51.5 ± 0.0, 35°.78N × 31°.97E, h21^{km}, Ml2.6/4*

ISC 02 07:58:48.9 ± 1.5, **35°.80N** ± 0°.03 × **31°.83E** ± 0°.07, **h4**^{km} ± 12^{km}, **n12**, σ**1**^{s}.**33**/20, **Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAZI	Gazipasa	0.58	42	*i* P	Pn	07 59 03.1	-0.9
GAZI				*i* S	Sb	07 59 11.2	+0.9
AKMS	Akamas	0.88	152	P	Pb	07 59 07.4	+0.7
AKMS				S	Sb	07 59 19.5	+0.8
AKMS				AML	AML	07 59 25.0	
	0.7nm,0.2s						
AKMS				AML	AML	07 59 25.0	
	0.7nm,0.2s						
AKMS				AML	AML	07 59 25.4	
	0.8nm,0.2s						
AKMS				AML	AML	07 59 25.4	
	0.8nm,0.2s						
ALFC	Alefka	0.90	136	P	Pb	07 59 07.2	+0.2
ALFC				S	Sb	07 59 19.0	-0.2
ALFC				AML	AML	07 59 22.3	
	0.8nm,0.2s						
ALFC				AML	AML	07 59 22.3	
	0.8nm,0.2s						
ALFC				AML	AML	07 59 23.1	
	1.5nm,0.2s						
ALFC				AML	AML	07 59 23.1	
	1.5nm,0.2s						
LEF	Lefka	1.10	128	*i* P	Pb	07 59 09.2	-1.2
LEF				*i* S	Sg	07 59 22.4	-1.7
LEF				IAML		07 59 31.0	
	comp=E,57nm,0.4s						
LEF				IAML		07 59 36.0	
	comp=N,60nm,0.6s						
KEPZ	Antalya-Kepez	1.12	350	*i* P	Pb	07 59 02.8	-7.9
KEPZ				*i* S	Sg	07 59 22.1	-2.7
NATA	Nata	1.18	149	P	Pg	07 59 12.6	+1.1
NATA				S	Sn	07 59 28.7	0.0
NATA				AML	AML	07 59 41.0	
	comp=N,1.4nm,0.6s						
NATA				AML	AML	07 59 41.0	
	comp=N,1.4nm,0.6s						
NATA				AML	AML	07 59 42.5	
	comp=N,1.8nm,0.6s						
NATA				AML	AML	07 59 42.5	
	comp=N,1.8nm,0.6s						
ERMK	Ermenek	1.21	46	*i* P	Pg	07 59 13.5	+1.4
ERMK				*i* S	Sn	07 59 30.5	+0.8
ERMK				IAML		07 59 34.0	
	comp=N,52nm,0.7s						
ERMK				IAML		07 59 36.0	
	comp=E,50nm,0.4s						
ASGA	Asgata	1.54	131	S	Sn	07 59 35.8	-1.6
ASGA				AML	AML	07 59 46.1	
	comp=E,0.2nm,0.5s						
ASGA				AML	AML	07 59 48.3	
	comp=E,0.2nm,0.6s						
SEDI	Konya, Seydise	1.65	358	*i* P	Pn	07 59 18.3	-0.4
SEDI				*i* S	Sb	07 59 41.7	+0.5
SEDI				IAML		07 59 46.0	
	comp=E,38nm,0.4s						
SEDI				IAML		07 59 48.0	
	comp=N,31nm,0.4s						
MVOU	Mavrovouni	1.66	117	S	Sn	07 59 38.6	-1.9
KERG	Konya-Eregli	2.45	48	*i* P	Pn	07 59 31.5	+1.8
OSC2	CSNet OBS 4	2.74	172	P	Pn	07 59 33.8	+0.2
OSC2				S	Sn	08 00 07.2	+0.1

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*GCMT **02** 08:06:27.2 ± 0.3, 53°.61N ± 0°.05 × 35°.34W ± 0°.03, h14^{km} ± 1^{km}, MW4.9/63, Moment Tensor Solution. s17,c18; s63,c92; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.29±.21; $M_{\theta\theta}$-0.47±.15; $M_{\phi\phi}$2.76±.16; $M_{r\theta}$0.85±.43; $M_{\theta\phi}$-0.12±.10; $M_{\phi r}$0.09±.32; Best double couple: $M_0$2.69800×10^{16} NP1:ϕ_s338.00000°, δ48.00000°, λ-120.00000°. NP2: ϕ_s198.00000°, δ50.00000°, λ-61.00000°. Principal axes: T 2.7650, Plg1.0000°, Azm268.0000°; N -0.1380, Plg22.0000°, Azm358.0000°; P -2.6300, Plg68.0000°, Azm176.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **02** 08:06:27.9 ± 0.5, 53°.32N × 35°.53W, h0^{km}, mb4.2/24, mb1 4.3/27, mb1mx4.2/61, mbtmp4.2/27, ML3.7/3, MS4.2/13, Ms1 4.2/13, ms1mx3.9/63 Error ellipse: s-maj=14.8km s-min=11.3km az=171.0*

*NEIC **02** 08:06:30.2 ± 1.3, 53°.36N ± 0°.10 × 35°.3W ± 0°.2, h10^{km} ± 1^{km}, mb4.7/126, Error ellipse: s-maj=17.1km s-min=15.0km az=200.0*

ISC 02 08:06:29.6 ± 0.4, **53°.36N** ± 0°.07 × **35°.36W** ± 0°.05, **h10**^{km}, **n324**, σ**0**^{s}.**78**/316, **mb4.6**/84, **MS4.1**/10, **Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IVI	Ivigtut	10.47	324	Pn	Pn	08 08 58.3	-1.2
BORG	Borgarnes	13.47	27	LR	LR	08 13 21.9	
	comp=Z,499nm,21.7s,baz=227,slow=31						
SFJD	Kangerlussuaq	15.57	337	Pn	Pn	08 10 10.4	+1.5
	0.5nm,0.3s,baz=153,slow=8.1,SNR=4.4						
SFJD				LR	LR	08 14 57.4	
	comp=Z,744nm,19.4s,baz=155,slow=33						
SFJD	Kangerlussuaq	15.57	337	IAmb	IAmb	08 10 24.6	
	comp=Z,36nm,1.1s						
SCHQ	Schefferville	18.44	287	P	P	08 10 44.3	-0.7
	comp=Z,0.5nm,0.3s,baz=91,slow=6.1,SNR=6.9						
SCHQ				LR	LR	08 16 39.8	
	comp=Z,641nm,21.5s,baz=92,slow=33						
SCHQ	Schefferville	18.44	287	P	P	08 10 43.4	-1.6
EKA	Eskdalemuir Ar	18.79	71	P	Pn	08 10 49.4	+0.1
	baz=279,slow=11,SNR=6.6						
SUMG	Summit	19.34	357	*i* P	Pn	08 10 56.3	+0.1
SUMG				IAmb	IAmb	08 10 58.3	
	comp=Z,5.5nm,0.8s						
FRB	Frobisher Bay	19.94	314	LR	LR	08 17 09.2	
	comp=Z,811nm,18.1s,baz=110,slow=32						
BATG	Bathurst New B	20.42	265	P	P	08 11 06.7	0.0
BATG				IAmb	IAmb	08 11 16.6	
	comp=Z,39nm,1.5s						
JMIC	Jan Mayen	21.33	24	LR	LR	08 17 13.5	
	comp=Z,625nm,20.4s,baz=248,slow=30						
DBG	Daneborg	21.92	11	*i* P	P	08 11 24.9	+2.3
D62A	Allapoint, All	22.30	267	P	P	08 11 27.1	+0.2
D62A				IAmb	IAmb	08 11 43.1	
	comp=Z,37nm,1.3s						
G65A	Princeton	22.38	262	P	P	08 11 27.6	-0.1
G65A				IAmb	IAmb	08 11 52.7	
	comp=Z,54nm,1.4s						
E62A	Clayton Lake	22.81	267	P	P	08 11 31.1	-1.3
E62A				IAmb	IAmb	08 11 43.2	
	comp=Z,31nm,1.3s						
DAG	Danmarks Havn	24.34	9	*i* P	P	08 11 47.1	+0.1
DAG				IAmb	IAmb	08 11 48.6	
	comp=Z,7.1nm,1.2s						
NEEM	North Greenlan	24.87	352	*i* P	P	08 11 53.9	+1.7
NEEM				IAmb	IAmb	08 11 54.9	
	comp=Z,20nm,1.1s						
ESDC	Sonseca Array	25.33	110	P	P	08 11 56.7	+0.3
	comp=Z,3.1nm,0.9s,baz=310,slow=7.8,SNR=6.7						
ESDC				LR	LR	08 19 55.4	
	comp=Z,731nm,18.7s,baz=290,slow=32						
NOA	NORSAR Array B	25.87	54	P	P	08 12 03.1	+1.9
	comp=Z,0.7nm,0.6s,baz=275,slow=8.9,SNR=3.0						
NOA				LR	LR	08 20 43.8	
	comp=Z,338nm,19.4s,baz=275,slow=33						
TULEG	Thule	26.45	343	*i* P	P	08 12 06.5	+0.4
TULEG				IAmb	IAmb	08 12 07.8	
	comp=Z,13nm,1.0s						
TULEG	Thule	26.45	343	P	P	08 12 06.3	+0.1
TULEG				IAmb	IAmb	08 12 08.1	
	comp=Z,14nm,1.0s						
HFS	Hagfors	27.18	56	LR	LR	08 21 43.2	
	comp=Z,484nm,18.8s,baz=266,slow=34						
CLL	Collm	29.18	74	*e*P	P	08 12 31.0	+0.2
CLL				*e*sP	pwP	08 12 36.0	-0.3
CLL				*e*S	S	08 17 22.0	-0.9
CLL				*e*SS	SnSn	08 18 42.0	-5.1
DAVOX	Davos/Dischmat	29.36	84	LR	LR	08 23 07.0	
	comp=Z,498nm,21.0s,baz=284,slow=34						
SADO	Sadowa	29.53	271	LR	LR	08 23 31.8	
	comp=Z,851nm,18.5s,baz=44,slow=35						
GERES	GERESS Array B	30.64	78	P	P	08 12 45.6	+1.7
	comp=Z,1.4nm,0.9s,baz=286,slow=6.8,SNR=5.5						
GERES				LR	LR	08 24 26.1	
	comp=Z,398nm,18.3s,baz=298,slow=35						
SSPA	Standing Stone	31.19	263	P	P	08 12 48.9	+0.2
	baz=51						
EUNU	Eureka	31.38	345	P	P	08 12 51.1	+1.1
EUNU				IAmb	IAmb	08 12 52.4	
	comp=Z,9.5nm,1.2s						
ERPA	Erie	31.55	267	P	P	08 12 51.1	-0.7
	baz=53						
ARCES	ARCESS Array B	31.58	36	P	P	08 12 51.5	-0.3
	comp=Z,4.6nm,1.0s,baz=316,slow=6.3,SNR=1.8						
N54A	Moraine State	32.24	266	P	P	08 12 57.9	0.0
	baz=52						
M53A	WI Miller and	32.36	267	P	P	08 12 58.8	-0.2
	baz=53						
GLMI	Grayling	32.78	275	P	P	08 13 03.2	+0.6
	baz=57						
FINES	FINESS Array B	32.89	51	LR	LR	08 24 54.1	
	comp=Z,442nm,20.2s,baz=278,slow=34						
MCWV	Mont Chateau	32.97	264	P	P	08 13 04.8	+0.5
	baz=50						
O53A	New Philadelph	33.41	266	P	P	08 13 09.1	+0.9
O53A	New Philadelph	33.41	266	P	P	08 13 08.5	+0.3
	baz=51						
M50A	Fremont	33.80	269	P	P	08 13 11.4	-0.2
M50A				IAmb	IAmb	08 13 18.8	
	comp=Z,11nm,0.8s						
P52A	Corning	34.35	266	P	P	08 13 17.0	+0.6
P52A	Corning	34.35	266	P	P	08 13 16.5	+0.2
	baz=50						
ACSO	Alum Creek Sta	34.48	267	P	P	08 13 18.5	+1.0
ACSO	Alum Creek Sta	34.48	267	P	P	08 13 17.8	+0.3
	baz=51						
COWI	Conover	34.78	280	P	P	08 13 20.9	+0.9
COWI				IAmb	IAmb	08 13 21.7	
	comp=Z,12nm,1.2s						
N49A	Columbus Grove	34.78	269	P	P	08 13 20.8	+0.8
N49A				IAmb	IAmb	08 13 21.8	
	comp=Z,8.9nm,0.8s						
Q52A	Bidwell	34.86	265	P	P	08 13 21.0	+0.2
Q52A				IAmb	IAmb	08 13 23.3	
	comp=Z,14nm,0.9s						
BLA	Blacksburg	34.91	261	P	P	08 13 20.7	-0.6
	baz=48						
P51A	Williamsport	35.00	266	P	P	08 13 22.8	+0.8
EYMN	Ely	35.20	284	P	P	08 13 24.0	+0.3
EYMN				IAmb	IAmb	08 13 25.3	
	comp=Z,13nm,1.1s						
EYMN	Ely	35.20	284	P	P	08 13 23.2	-0.4
	baz=60						
O49A	Covington	35.32	268	P	P	08 13 25.9	+1.2
Q51A	Peebles	35.46	266	P	P	08 13 25.9	-0.1
KEST	Kesra	35.71	101	P	P	08 13 29.2	+1.0
	comp=Z,4.9nm,0.8s,baz=310,slow=1.2,SNR=3.7						
KEST	Kesra	35.71	101	P	P	08 13 26.9	-1.3
P49A	Miami Univ. Ec	35.96	268	P	P	08 13 29.8	-0.4
	baz=51						
B35A	Bob, Littlefor	36.28	286	P	P	08 13 33.0	+0.1
B35A				IAmb	IAmb	08 13 34.4	
	comp=Z,12nm,1.2s						
R50A	Paris	36.53	266	P	P	08 13 34.9	-0.2
R50A				IAmb	IAmb	08 13 37.5	
	comp=Z,15nm,1.0s						
ULM	Lac du Bonnet	36.57	290	P	P	08 13 34.2	-1.1
	comp=Z,4.8nm,0.9s,baz=47,slow=3.4,SNR=6.5						
ULM	Lac du Bonnet	36.57	290	IAmb	IAmb	08 13 36.3	
	comp=Z,14nm,1.1s						
TZTN	Tazewell	37.22	263	P	P	08 13 41.1	+0.1
	baz=47						
JFWS	Jewell Farm	37.22	276	P	P	08 13 40.0	-0.9
	baz=54						
SPMN	Marine on St.	37.41	281	P	P	08 13 42.5	-0.1
SPMN				IAmb	IAmb	08 13 44.5	
	comp=Z,12nm,1.1s						
SPMN	Marine on St.	37.41	281	P	P	08 13 42.2	-0.3
	baz=56						
F36A	Milaca	37.48	283	P	P	08 13 43.4	+0.2
AGMN	Agassiz Nation	37.54	287	P	P	08 13 43.3	-0.3
	baz=59						
NHSC	New Hope	37.62	256	P	P	08 13 45.1	+0.7
	baz=44						
T50A	Nancy	37.66	265	P	P	08 13 45.9	+1.1
T50A				IAmb	IAmb	08 13 47.2	
	comp=Z,11nm,1.0s						
WCI	Wyandotte Cave	37.74	267	P	P	08 13 46.0	+0.6
WCI				IAmb	IAmb	08 13 47.6	
	comp=Z,8.6nm,0.8s						
WCI	Wyandotte Cave	37.74	267	P	P	08 13 45.4	+0.1
	baz=49						
CPCT	Cooper Cave	38.54	263	P	P	08 13 52.7	+0.6
U49A	Red Boiling Sp	38.56	265	P	P	08 13 52.5	+0.2
AKASG	Malin Array Be	38.62	67	P	P	08 13 52.1	-0.5
	comp=Z,0.7nm,0.4s,baz=297,slow=8.2,SNR=1.6						
P43A	Skaggs, Pawnee	38.77	272	P	P	08 13 54.6	+0.6
P43A				IAmb	IAmb	08 14 01.1	
	comp=Z,12nm,0.9s						
Q44A	Meyer Farm, Va	38.94	270	P	P	08 13 56.3	+0.8
Q44A				IAmb	IAmb	08 13 57.5	
	comp=Z,19nm,0.9s						
SWET	Sewanee	39.53	263	P	P	08 14 01.7	+1.2
V48A	Smith Brothers	39.71	265	P	P	08 14 03.3	+1.4
FPAL	Fort Paine	39.81	262	P	P	08 14 04.1	+1.3
SIUC	Southern Illin	39.83	269	P	P	08 14 03.4	+0.5
S44A	Carbondale	39.86	269	P	P	08 14 03.5	+0.4
WVT	Waverly	40.05	266	P	P	08 14 05.0	+0.3
WVT	Waverly	40.05	266	P	P	08 14 04.6	-0.1
	baz=48						
P40A	Paris	40.36	274	P	P	08 14 07.9	+0.7
FVM	French Village	40.38	270	P	P	08 14 07.7	+0.2
Z51A	Franklin	40.41	261	P	P	08 14 08.9	+1.2
A36M	Sachs Harbour	40.44	331	P	P	08 14 08.0	+0.4
A36M	Sachs Harbour	40.44	331	P	P	08 14 06.8	-0.8
	baz=68,SNR=7.2						
ECSD	EROS Data Cent	40.50	282	P	P	08 14 09.2	+0.7
ECSD	EROS Data Cent	40.50	282	P	P	08 14 08.1	-0.3
	baz=54,SNR=7.4						
X48A	Hartselle	40.72	264	P	P	08 14 11.4	+1.1
PLAL	Pickwick Lake	40.97	265	P	P	08 14 12.6	+0.2
PBMO	Poplar Bluff	41.17	269	P	P	08 14 14.3	+0.4
PBMO				IAmb	IAmb	08 14 16.0	
	comp=Z,14nm,1.0s						
P38A	Dawn	41.18	275	P	P	08 14 14.5	+0.4
P38A				IAmb	IAmb	08 14 15.9	
	comp=Z,12nm,1.1s						
E28A	Huff	41.23	288	P	P	08 14 15.7	+1.3
E28A				IAmb	IAmb	08 14 17.4	
	comp=Z,23nm,1.1s						
R40A	Maddies Statio	41.28	272	P	P	08 14 15.0	+0.1
T42A	Van Buren	41.40	270	P	P	08 14 16.4	+0.5
T42A				IAmb	IAmb	08 14 17.8	
	comp=Z,13nm,1.1s						
SUSD	Miller	41.45	284	P	P	08 14 15.7	-0.5
	baz=54						
MGMO	Mountain Grove	42.02	271	P	P	08 14 21.5	+0.5
LCAR	Lake Charles	42.08	269	P	P	08 14 21.5	+0.1
LCAR				IAmb	IAmb	08 14 22.9	
	comp=Z,15nm,1.1s						
OXF	Oxford	42.09	266	P	P	08 14 21.2	-0.4
OXF	Oxford	42.09	266	P	P	08 14 21.5	0.0
	baz=46						
Z47A	Carrollton	42.21	263	P	P	08 14 23.1	+0.6
Z47A				IAmb	IAmb	08 14 24.4	
	comp=Z,21nm,0.9s						
S39A	Bolivar	42.30	272	P	P	08 14 23.6	+0.4
Y45A	Yeager Farm, C	42.62	265	P	P	08 14 25.9	+0.1
U40A	Yellville	42.91	271	P	P	08 14 28.0	-0.2
	baz=48,SNR=5.4						
146A	Union	43.19	263	P	P	08 14 30.5	0.0
WHAR	Wooly Hollow	43.28	269	P	P	08 14 31.4	+0.2
WHAR				IAmb	IAmb	08 14 32.9	
	comp=Z,14nm,1.0s						
W41B	Gary Mavity, V	43.34	269	P	P	08 14 31.5	-0.2
	baz=47,SNR=7.3						
KSU1	Kansas State U	43.35	276	P	P	08 14 31.2	-0.6
KSU1				IAmb	IAmb	08 14 33.2	
	comp=Z,19nm,0.9s						
KSU1	Kansas State U	43.35	276	P	P	08 14 30.7	-1.0
	baz=50,SNR=5.9						
U38A	Gravette	43.77	272	P	P	08 14 35.6	+0.5
W39A	Magazine	44.24	270	P	P	08 14 39.4	+0.4
W39A				IAmb	IAmb	08 14 41.1	
	comp=Z,15nm,1.0s						
W39A	Magazine	44.24	270	P	P	08 14 38.9	0.0
	baz=47						
LAO	LASA Array	44.28	291	P	P	08 14 40.7	+1.4
LAO				IAmb	IAmb	08 14 42.3	
	comp=Z,18nm,1.1s						
LAO	LASA Array	44.28	291	P	P	08 14 38.9	-0.3
	baz=54,SNR=5.5						
VBMS	Vicksburg	44.36	264	P	P	08 14 39.4	-0.5
143A	Socs Landing,	44.54	266	P	P	08 14 40.7	-0.6
MIAR	Mount Ida	44.56	269	P	P	08 14 42.1	+0.6
MIAR	Mount Ida	44.56	269	P	P	08 14 41.5	0.0
	baz=46,SNR=8.0						
INK	Inuvik	44.65	328	P	P	08 14 41.4	-0.4
	comp=Z,5.9nm,1.0s,baz=52,slow=8.9,SNR=11						
INK	Inuvik	44.65	328	P	P	08 14 41.5	-0.3
INK				IAmb	IAmb	08 14 43.0	
	comp=Z,8.8nm,1.1s						
INK	Inuvik	44.65	328	P	P	08 14 41.1	-0.6
	baz=58,SNR=5.8						
WLAR	White Oak Lake	44.88	268	P	P	08 14 43.8	-0.2
TUL1	Leonard	44.97	272	P	P	08 14 44.8	+0.1
TUL1				IAmb	IAmb	08 14 45.9	
	comp=Z,14nm,1.0s						
TUL1	Leonard	44.97	272	P	P	08 14 44.8	+0.1
	baz=47						
Z41A	Richland Creek	44.99	267	P	P	08 14 45.4	+0.5
	baz=45						
R32A	Long Quarter,	45.04	277	P	P	08 14 44.9	-0.5
R32A				IAmb	IAmb	08 14 46.8	
	comp=Z,7.4nm,0.9s						
EGMT	Eagleton	45.45	295	P	P	08 14 47.9	-0.6
	baz=54						
TGTN	Hyland Airport	46.53	319	P	P	08 14 56.6	-0.2
	baz=56						
GCMT	Greycliff	46.74	292	P	P	08 14 59.5	+0.8
EPYK	Eagle Plains	46.77	327	P	P	08 14 58.9	+0.3
EPYK	Eagle Plains	46.77	327	P	P	08 14 57.9	-0.7
	baz=54,SNR=10.0						
K22A	Casper	46.91	287	P	P	08 15 00.6	+0.4
K22A				IAmb	IAmb	08 15 06.8	
	comp=Z,10nm,1.0s						
K22A	Casper	46.91	287	P	P	08 14 59.4	-0.8
	baz=51						
RLMT	Red Lodge	46.92	291	P	P	08 14 59.6	-0.8
	baz=52						
KSCO	Kaye Shedlock’	46.98	281	P	P	08 15 00.7	0.0
	baz=49						
MMPY	Sheldon Lake,	47.06	321	P	P	08 15 00.7	-0.2
	baz=54						
NATX	Nacogdoches	47.16	267	P	P	08 15 01.9	-0.2
	baz=44						
HRY	Holter Researc	47.37	295	P	P	08 15 04.3	+0.6
BRTR	Keskin Array B	47.53	77	P	P	08 15 07.0	+2.0
	comp=Z,3.4nm,0.8s,baz=275,slow=6.8,SNR=4.3						
BRTR	Keskin Array B	47.53	77	P	P	08 15 06.0	+0.9
WMOK	Wichita Mounta	47.55	273	P	P	08 15 04.5	-0.6
	baz=46						
N23A	Red Feather La	47.69	285	P	P	08 15 06.3	-0.1
	baz=50,SNR=6.0						
I29M	Ogilvie Camp,	47.90	327	P	P	08 15 06.5	-0.9
	baz=52,SNR=9.3						
BOZ	Bozeman (W)	47.94	293	P	P	08 15 08.1	0.0
	baz=52,SNR=5.7						
ISCO	Idaho Springs	48.21	283	P	P	08 15 11.8	+1.3
ISCO				IAmb	IAmb	08 15 12.6	
	comp=Z,4.6nm,0.9s						
ISCO	Idaho Springs	48.21	283	P	P	08 15 10.9	+0.4
	baz=49,SNR=5.1						
LRM	Limekiln Ridge	48.25	294	P	P	08 15 11.1	+0.4
FLWY	Flagg Ranch	48.37	291	P	P	08 15 11.8	+0.3
FLWY				IAmb	IAmb	08 15 18.2	
	comp=Z,5.3nm,1.0s						
J29M	Klondike Camp	48.44	326	P	P	08 15 11.5	-0.2
	baz=51						
MSO	Missoula	48.44	296	P	P	08 15 11.9	0.0
	baz=52						
Q24A	Divide	48.49	282	P	P	08 15 13.0	+0.3
	baz=48						
BW06	Boulder Array	48.57	289	P	P	08 15 12.2	-0.9
	baz=50						
PDAR	Pinedale Array	48.57	289	P	P	08 15 11.8	-1.3
	comp=Z,1.6nm,0.7s,baz=60,slow=7.1,SNR=13						
LOHW	Long Hollow	48.62	291	P	P	08 15 13.9	+0.4
WHTX	Lake Whitney,	48.67	270	P	P	08 15 13.9	+0.1
WHTX	Lake Whitney,	48.67	270	P	P	08 15 13.8	+0.1
	baz=45						
SNOW	Snow King Moun	48.80	291	P	P	08 15 15.1	+0.2
SNOW				IAmb	IAmb	08 15 17.1	
	comp=Z,6.3nm,1.1s						
FXWY	Fox Creek	48.84	291	P	P	08 15 15.4	+0.2
TPAW	Teton Pass	48.89	291	P	P	08 15 15.7	+0.1
DAWY	Dawson	49.08	326	P	P	08 15 17.3	+0.8
DAWY				IAmb	IAmb	08 15 19.7	
	comp=Z,11nm,1.1s						
DAWY	Dawson	49.08	326	P	P	08 15 16.4	-0.2
	baz=50,SNR=6.2						
TOLK	Toolik Lake Re	49.10	334	P	P	08 15 17.4	+0.8
TOLK				IAmb	IAmb	08 15 18.1	
	comp=Z,9.0nm,1.0s						
TOLK	Toolik Lake Re	49.10	334	P	P	08 15 16.2	-0.4
	baz=46						
M30M	Minto, Yukon	49.12	323	P	P	08 15 16.3	-0.6
	baz=51,SNR=5.2						
AMTX	Amarillo	49.18	276	P	P	08 15 19.0	+1.2
AMTX	Amarillo	49.18	276	P	P	08 15 17.9	+0.2
	baz=46						
EGAK	Eagle	49.21	327	P	P	08 15 16.9	-0.5
	baz=50						

NEW	Newport	49.24	299	P	P	08 15 17.7	-0.2
	baz=51						
T25A	Trinidad	49.27	280	P	P	08 15 18.8	+0.3
	baz=48						
N31M	Braeburn, Yuko	49.44	322	P	P	08 15 19.3	0.0
	baz=51						
SDCO	Great Sand Dun	49.51	281	P	P	08 15 20.8	+0.4
	baz=48						
O20A	White River Ci	49.52	286	P	P	08 15 21.0	+0.6
	baz=49						
ABTX	Abilene, Hawle	49.53	272	P	P	08 15 20.4	-0.1
ABTX				IAmb	IAmb	08 15 22.1	
	comp=Z,11nm,1.1s						
ABTX	Abilene, Hawle	49.53	272	P	P	08 15 20.3	-0.1
	baz=45						
WHY	Whitehorse	49.62	320	P	P	08 15 20.0	-0.8
	baz=51						
TORD	Torodi Ar. Bea	49.69	130	P	P	08 15 21.4	-0.3
	comp=Z,3.3nm,0.8s,baz=333,slow=7.4,SNR=12						
TORD	Torodi Ar. Bea	49.69	130	P	P	08 15 21.2	-0.5
BCYI	Bear Canyon	49.73	293	P	P	08 15 22.7	+0.7
RDMU	Red Mountain	49.99	287	P	P	08 15 24.6	+0.5
RDMU				IAmb	IAmb	08 15 26.4	
	comp=Z,8.2nm,1.1s						
ARU	Arti	50.00	46	P	P	08 15 24.8	+1.2
	comp=Z,0.6nm,0.3s,baz=333,slow=12,SNR=3.3						
ARU	Arti	50.00	46	IAmb	IAmb	08 15 25.6	
	comp=Z,5.3nm,1.0s						
PRP	Porcupine Dome	50.09	329	P	P	08 15 24.2	-0.2
	baz=47						
J26L	Joseph Creek	50.17	328	P	P	08 15 24.3	-0.6
	baz=48,SNR=6.7						
COLD	Coldfoot	50.26	333	P	P	08 15 25.1	-0.4
	baz=45						
B08A	Colville Reser	50.33	300	P	P	08 15 26.3	+0.1
B08A				IAmb	IAmb	08 15 27.8	
	comp=Z,8.4nm,1.1s						
MSTX	Muleshoe	50.47	276	P	P	08 15 27.4	-0.2
MSTX	Muleshoe	50.47	276	P	P	08 15 27.8	+0.3
	baz=46						
HYT	Haines Junctio	50.51	322	P	P	08 15 27.7	+0.2
	baz=49						
BCAR	Beaver Creek A	50.55	326	P	P	08 15 28.8	+1.1
L27K	Beaver Creek,	50.56	326	P	P	08 15 27.7	-0.2
	baz=48						
H24K	Noodor Dome	50.58	331	P	P	08 15 27.3	-0.7
	baz=46						
YUK4	Talbot Arm	50.59	323	P	P	08 15 27.8	-0.4
	baz=49						
SCRK	Sand Creek	50.66	327	P	P	08 15 28.8	+0.2
SCRK	Sand Creek	50.66	327	P	P	08 15 28.0	-0.6
	baz=47,SNR=11						
BVCY	Beaver Creek	50.66	325	P	P	08 15 28.4	-0.2
	baz=48						
J25K	Salcha River,	50.67	328	P	P	08 15 28.4	-0.2
	baz=47,SNR=7.1						
TCUT	Toone Canyon	50.69	289	P	P	08 15 29.4	+0.1
TCUT				IAmb	IAmb	08 15 31.0	
	comp=Z,6.5nm,0.8s						
HLID	Hailey	50.77	293	P	P	08 15 31.0	+1.2
HLID	Hailey	50.77	293	P	P	08 15 30.0	+0.1
	baz=49						
YUK3	Moose Creek	50.95	324	P	P	08 15 31.1	+0.1
	baz=48						
POKR	Poker Plat Res	50.95	330	P	P	08 15 32.1	+1.4
POKR				IAmb	IAmb	08 15 34.0	
	comp=Z,11nm,1.0s						
POKR	Poker Plat Res	50.95	330	P	P	08 15 30.5	-0.2
	baz=46						
IL31		51.03	329	P	P	08 15 32.3	+1.1
IL31				IAmb	IAmb	08 15 33.5	
	comp=Z,8.3nm,1.1s						
ILAR	Eielson Array	51.03	329	P	P	08 15 30.8	-0.5
	comp=Z,1.0nm,1.1s,baz=50,slow=8.9,SNR=4.5						
ILAR	Eielson Array	51.03	329	P	P	08 15 31.6	+0.4
PV12	Saucer Basin,	51.05	284	P	P	08 15 32.3	+0.2
PV12				IAmb	IAmb	08 15 34.7	
	comp=Z,14nm,1.2s						
M27K	Edge Creek, AK	51.05	325	P	P	08 15 31.5	-0.2
	baz=48						
H23K	Yukon River	51.08	331	P	P	08 15 31.6	-0.1
	baz=45						
L26K	Log Cabin Wild	51.10	326	P	P	08 15 31.9	+0.1
	baz=47						
JCT	Junction City	51.15	270	P	P	08 15 32.3	-0.4
	baz=44,SNR=6.1						
TCOL	CIGO, UAF Yank	51.25	330	P	P	08 15 32.2	-0.7
	baz=45						
MENT	Mentasta	51.28	326	P	P	08 15 34.4	+1.1
MENT				IAmb	IAmb	08 15 36.3	
	comp=Z,8.9nm,1.1s						
HDA	Harding Lake	51.30	329	P	P	08 15 33.9	+0.6
HDA				IAmb	IAmb	08 15 35.4	
	comp=Z,9.8nm,0.9s						
HDA	Harding Lake	51.30	329	P	P	08 15 33.0	-0.3
	baz=46						
PV05	Paradox Valley	51.38	284	P	P	08 15 34.5	-0.1
PV05				IAmb	IAmb	08 15 36.1	
	comp=Z,16nm,1.2s						
M26K	Nabesna, AK	51.41	325	P	P	08 15 34.2	0.0
	baz=47						
I23K	Minto, Yukon-K	51.51	330	P	P	08 15 34.8	0.0
	baz=44						
MVCO	Mesa Verde	51.62	283	P	P	08 15 36.6	+0.2
	baz=47						
CTG	Chitna Glacier	51.81	323	P	P	08 15 37.4	+0.1
	baz=47						
NEA2	Nenana	51.82	330	P	P	08 15 37.2	+0.1
	baz=44						
PAX	Paxson	51.84	327	P	P	08 15 37.8	+0.3
	baz=46						
ANMO	Albuquerque	51.98	279	P	P	08 15 39.4	+0.4
	baz=46						
MLY	Manley	52.00	331	P	P	08 15 38.9	+0.4
	baz=43						
PINM	Pinnacle	52.01	322	P	P	08 15 39.0	+0.3
	baz=47						
DUG	Dugway, Tooele	52.10	289	P	P	08 15 39.4	-0.3
	baz=48						
MCARA	McCarthy VSAT	52.12	324	P	P	08 15 40.0	+0.6
	baz=46						
H21K	Melozitna Rive	52.12	332	P	P	08 15 39.5	0.0
	baz=42						
HARP	HAARP	52.14	326	P	P	08 15 39.7	+0.1
	baz=46						
I21K	Tanana	52.24	331	P	P	08 15 40.2	-0.1
	baz=43						
MCK	McKinley	52.40	329	P	P	08 15 40.9	-0.6
	baz=44,SNR=8.0						
N25K	Chitina, Valde	52.51	325	P	P	08 15 43.8	+1.4
N25K				IAmb	IAmb	08 15 45.3	
	comp=Z,12nm,1.1s						
N25K	Chitina, Valde	52.51	325	P	P	08 15 42.4	0.0
	baz=45						
CRQE	Cirque	52.58	324	P	P	08 15 41.5	-1.5
	baz=46,SNR=5.9						
CRQM	Cirque	52.59	324	P	P	08 15 43.9	+0.7
RND	Reindeer	52.61	329	P	P	08 15 43.4	+0.3
RND				IAmb	IAmb	08 15 45.0	
	comp=Z,15nm,1.0s						
BNM	Barren Site	52.63	279	P	P	08 15 45.4	+1.4
M24K	Tolsona, Glenn	52.68	326	P	P	08 15 43.0	-0.7
	baz=45						
DBIC	Dimbokro	52.75	141	P	P	08 15 44.5	-0.1
	comp=Z,3.8nm,0.8s,baz=17,slow=8.0,SNR=3.7						
DBIC				LR	LR	08 35 26.5	
	comp=Z,240nm,20.3s,baz=33,slow=33						
BPAW	Bear Paw Mtn.	52.75	330	P	P	08 15 43.4	-0.7
	baz=43						
TRF	Thorofare Moun	53.02	329	P	P	08 15 45.6	-0.7
	baz=43						
KLU	Klutina	53.03	326	P	P	08 15 46.4	+0.1
	baz=44						
SCM	Sheep Creek Mo	53.26	327	P	P	08 15 47.8	-0.1
	baz=44						
G05D	Wamic, OR	53.39	299	P	P	08 15 48.7	-0.4
	baz=48						
CAST	Castle Rocks	53.59	330	P	P	08 15 50.3	0.0
	baz=42						
SML	Sawmill	53.61	327	P	P	08 15 50.5	0.0
	baz=43						
MNTX	Cornudas Mount	53.62	276	P	P	08 15 51.3	+0.3
	baz=44						
AKTO	Aktyubinsk	53.65	52	P	P	08 15 51.1	+0.3
	comp=Z,2.0nm,0.7s,baz=349,slow=5.2,SNR=4.0						
PSUT	Pine Spring	53.81	288	P	P	08 15 52.9	+0.3
GLI	Glacier Island	53.87	326	P	P	08 15 52.5	+0.1
	baz=44						
KNK	Knik Glacier	53.94	327	P	P	08 15 51.9	-1.0
	baz=43,SNR=5.7						
PMR	Palmer	54.02	327	P	P	08 15 54.6	+1.2
PMR	Palmer	54.02	327	P	P	08 15 53.8	+0.3
	baz=43						
K20K	Telida	54.22	331	P	P	08 15 54.2	-0.7
	baz=40						
M22K	Willow	54.22	328	P	P	08 15 55.1	+0.2
	baz=42						
TXAR	Lajitas Array	54.29	272	P	P	08 15 54.6	-1.4
	comp=Z,1.8nm,0.9s,baz=57,slow=9.1,SNR=13						
TX31	Lajitas Ar. Si	54.30	272	P	P	08 15 56.1	+0.1
TX31				IAmb	IAmb	08 15 58.5	
	comp=Z,10nm,1.1s						
PWL	Port Wells	54.30	326	P	P	08 15 54.9	-0.6
	baz=43						
X18A	Snowflake	54.33	282	P	P	08 15 55.5	-0.8
121A	Cookes Peak, D	54.46	278	P	P	08 15 57.5	+0.3
	baz=44						
WUAZ	Wupatki	54.47	283	P	P	08 15 56.9	-0.4
	baz=45						
SKT	Skwentna	54.50	329	P	P	08 15 55.8	-1.1
	baz=41,SNR=6.5						
RC01	Rabbit Creek A	54.59	327	P	P	08 15 57.9	+0.3
	baz=42						
SUA	Susitna One	54.64	328	P	P	08 15 58.5	+0.4
	baz=42						
J05D	Fort Rock, OR	54.66	297	P	P	08 15 58.3	-0.3
	baz=47						
TIXI	Tiksi	54.79	6	P	P	08 15 59.6	+0.7
	comp=Z,4.3nm,0.8s,baz=351,slow=6.0,SNR=7.5						
TIXI	Tiksi	54.79	6	P	P	08 15 59.0	+0.1
TIXI				IAmb	IAmb	08 16 01.5	
	comp=Z,8.0nm,1.1s						
L20K	Farewell, AK	54.84	330	P	P	08 15 57.8	-1.6
	baz=40						
R11A	Troy Canyon, C	54.93	289	P	P	08 16 00.2	-0.4
	baz=46						
MOD	Modoc Plateau	55.11	295	P	P	08 16 02.7	+0.9
TTA	Tatalina	55.11	331	P	P	08 15 59.0	-2.5
	baz=39						
SEW	Seward	55.23	326	P	P	08 16 02.0	-0.2
	baz=42						
X16A	Lo Mia Camp, P	55.28	283	P	P	08 16 04.7	+1.5
X16A				IAmb	IAmb	08 16 06.4	
	comp=Z,6.5nm,1.0s						
L19K	White Mountain	55.36	330	P	P	08 16 02.6	-0.6
	baz=39						
BRSE	Bradley Lake S	55.94	326	P	P	08 16 07.0	-0.3
	baz=41						
M04C	Macdoel	56.02	296	P	P	08 16 08.0	-0.4
	baz=46						
TUC	Tucson	56.39	280	P	P	08 16 12.3	+1.2
TUC	Tucson	56.39	280	P	P	08 16 11.0	-0.1
	baz=44						
NVAR	Mina Array Bea	56.41	291	P	P	08 16 10.6	-0.6
	comp=Z,1.0nm,0.8s,baz=53,slow=5.7,SNR=6.9						
GRAC	Grapevine Rang	56.88	289	P	P	08 16 14.2	-0.3
	baz=45						
FURC	Furnace Creek,	56.97	288	P	P	08 16 15.1	+0.1
	baz=45						
O18K	Koktuh Hills	57.29	329	P	P	08 16 16.4	-0.6
	baz=38						
BVAR	Borovoye Array	57.34	44	P	P	08 16 18.1	+0.7
	comp=Z,2.8nm,0.8s,baz=245,slow=11,SNR=9.8						
GSC	Goldstone, Bar	57.76	287	P	P	08 16 20.8	0.0
	baz=44						
HEC	Hector,Ludlow	57.83	286	P	P	08 16 21.1	-0.1
	baz=44						
214A	Organ Pipe Nat	57.84	281	P	P	08 16 21.9	+0.6
	baz=44						
ROSC	El Rosal	57.89	228	P	P	08 16 22.7	+0.6
	comp=Z,42nm,0.8s,baz=52,slow=2.4,SNR=24						
ROSC	El Rosal	57.89	228	P	P	08 16 24.2	+2.1
BC3	Big Chuckawall	58.16	285	P	P	08 16 23.9	+0.3
	baz=44						
BELC	Belle Mtn. Jos	58.23	285	P	P	08 16 24.4	+0.3
	baz=44						
VES	Vestal, Richgr	58.68	289	P	P	08 16 27.4	+0.4
	baz=44						
EDW2	Edwards Air Fo	58.74	287	P	P	08 16 27.9	+0.3
	baz=44						
PFO	Pinyon Flats O	58.77	285	P	P	08 16 29.5	+1.6
PFO				IAmb	IAmb	08 16 30.7	
	comp=Z,7.1nm,1.0s						
PFO	Pinyon Flats O	58.77	285	P	P	08 16 28.4	+0.5
	baz=44						
TPFO	Pinon Flats	58.77	285	P	P	08 16 28.0	+0.1
	baz=44						
HSIG		58.87	278	P	P	08 16 29.1	+0.7
HSIG				IAmb	IAmb	08 16 29.9	
	comp=Z,5.1nm,1.0s						
SWSC	Sam W. Stewart	58.87	284	P	P	08 16 28.5	+0.1
	baz=44						
BFSC	Mount Baldy Ra	59.01	287	P	P	08 16 29.6	+0.1
	baz=44						
MURC	Murrieta	59.20	286	P	P	08 16 31.2	+0.4
	baz=44						
IKP	In-Ko-Pah, Jac	59.26	284	P	P	08 16 30.9	-0.4
	baz=43						
MONP2	Monument Peak	59.27	285	P	P	08 16 31.0	-0.4
	baz=43						
ZALV	Zalesovo Beam	62.13	35	P	P	08 16 50.9	+0.6
	comp=Z,0.6nm,0.3s,baz=20,slow=4.6,SNR=1.9						
KURK	Kurchatov	62.42	41	P	P	08 16 52.7	+0.4
KURK				IAmb	IAmb	08 16 53.8	
	comp=Z,6.1nm,1.1s						
SAML	Samuel	66.42	210	P	P	08 17 17.7	-1.1
SAML				IAmb	IAmb	08 17 19.4	
	comp=Z,6.1nm,0.9s						
MKAR	Makanchi Array	67.02	41	P	P	08 17 22.1	-0.4
	comp=Z,1.9nm,0.8s,baz=324,slow=4.5,SNR=6.7						
MKAR	Makanchi Array	67.02	41	P	P	08 17 21.8	-0.7
GAR	Garm	67.95	54	P	P	08 17 30.0	+1.4
DRK	Karamyk	68.28	53	P	P	08 17 29.4	-1.4
WMQ	Urumqi	71.60	40	*e*P	P	08 17 53.1	+2.2
WMQ				LR	LR		
	comp=N,3μm,21.1s						
WMQ				LR	LR		
	comp=E,1μm,17.5s						
WMQ				LR	LR		
	comp=Z,760nm,20.1s						
SONM	Songino Array	74.08	26	P	P	08 18 05.7	+0.1
	comp=Z,2.6nm,1.0s,baz=326,slow=7.3,SNR=8.8						
LPAZ	La Paz	74.87	213	P	P	08 18 10.1	-1.0
	comp=Z,5.4nm,0.9s,baz=10,slow=6.3,SNR=19						
LPAZ	La Paz	74.87	213	P	P	08 18 10.7	-0.4
LPAZ				IAmb	IAmb	08 18 12.7	
	comp=Z,8.1nm,1.0s						
AQDB	Aquidauana	75.61	200	P	P	08 18 15.7	+1.3
AQDB				IAmb	IAmb	08 18 16.8	
	comp=Z,9.1nm,0.9s						
PB08	IPOC Station P	78.81	212	P	P	08 18 32.9	0.0
PB08				IAmb	IAmb	08 18 34.8	
	comp=Z,10nm,0.9s						
CPUP	Villa Florida	81.62	200	P	P	08 18 46.5	-0.9
	comp=Z,3.9nm,0.8s,baz=26,slow=6.7,SNR=7.6						
HHC	Hu-ho-hao-te	81.92	25	*e*P	P	08 18 48.0	-1.3
HHC				pmax	pmax		
	comp=Z,14nm,0.7s						
HHC				pmax	pmax		
	comp=Z,120nm,6.6s						
LZH	Lanzhou	84.16	32	*e*P	P	08 19 07.5	+6.5
LZH				pP	pwP	08 19 11.2	+4.5
LZH				sP	PcP	08 19 14.5	+10
NJ2	Nanjing	92.04	22	*e*P	P	08 19 36.3	-2.4
NJ2				pmax	pmax		
	comp=Z,17nm,0.7s						
VNA1	Neumayer--Stat	125.23	169	PKPdf	PKPdf	08 25 28.6	-0.1
VNA2	Neumayer--Watz	125.58	169	PKPdf	PKPdf	08 25 28.8	-0.6
	baz=352,slow=3.9						
VNA3	Neumayer Olymp	125.64	170	PKPdf	PKPdf	08 25 29.0	-0.5
SNAA	Sanae	126.83	168	PKPdf	PKPdf	08 25 31.4	-0.5
SNAA	Sanae	126.83	168	PKP	PKPdf	08 25 31.5	-0.4
	comp=Z,3.8nm,0.8s,baz=217,slow=0.6,SNR=23						
WRA	Warramunga Arr	145.71	17	PKPbc	PKPdf	08 26 08.1	-0.2
	comp=Z,3.9nm,0.9s,baz=347,slow=3.6,SNR=17						
ASAR	Alice Springs	149.26	20	PKPbc	PKPbc	08 26 16.9	-1.5
	comp=Z,3.7nm,0.5s,baz=348,slow=2.8,SNR=4.4						
VNDA	Vanda	154.94	189	PKP	PKPdf	08 26 20.6	-0.2
	comp=Z,0.9nm,0.9s,baz=268,slow=1.6,SNR=4.2						

DJA 02 08:12:10.0±0.4**,0˚S**±4˚×**12˚4E**±˚**,h92**^{km}±9^{km}**,M3.9**/12**,**
mb4.1/1**,MLv3.9**/12**,Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	Cibinong	0.96	356	P	Pn	08 12 30.5	+1.1
KMSI				S	Sn	08 12 44.7	+0.8
LUWI	Luwuk	1.42	243	P	Pn	08 12 36.1	+1.2
GTOI	Gorontalo	1.45	315	P	Pn	08 12 37.6	+2.4
GTOI				S	Sn	08 12 58.5	+4.2
MRSI	Marisa	2.27	292	P	Pn	08 12 45.8	0.0
APSI	Ampana	2.45	258	P	Pn	08 12 49.2	+1.0
SANI	Sanana	2.55	130	P	Pn	08 12 49.8	+0.2
SANI				S	Sn	08 13 18.3	-1.7
LBMI	Labuha	3.47	94	P	Pn	08 13 02.1	+0.2
LBMI				S	Sn	08 13 41.8	-0.3
MPSI	Mapaga	4.21	280	P	Pn	08 13 11.0	-0.9
TTSI	Tana Toraja	4.97	238	P	Pn	08 13 23.1	+0.8
BKSI	Bulukumba	6.27	219	P	Pn	08 13 41.4	+1.4

BJI ***02*** *08:15:31.1±0.0,51˚.85N×173˚.56W,h11^{km},mB5.8/70, mb5.7/87,Ms5.7/95,Ms7 5.5/89*

NEIC ***02*** *08:15:33.5±2.1,51˚.58N±0˚.05×173˚.33W±0˚.06,h13^{km}±1^{km}, mb5.8/271,Ms_20 5.5/245,Mwb5.6/110,Mww5.8, ML5.4(AEIC),Mwc5.9(GCMT),Error ellipse: s-maj=9.1km s-min=5.9km az=182.0*

NEIC ***02*** *08:15:34.5,51˚.63N×173˚.41W,h16^{km},Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}2.25; $M_{\theta\theta}$-2.20; $M_{\phi\phi}$-0.05; $M_{r\theta}$1.64; $M_{\theta\phi}$-0.82; $M_{\phi r}$1.19; Fault plane solution: $M_0$3.12000×10^{17} NP1:ϕ_s263.76000°, δ26.43000°,λ111.68000°. NP2:ϕ_s59.82000°,δ65.57000°, λ79.60000°. Principal axes: T 3.0535, Plg68.0000°, Azm310.0000°; N 0.1272, Plg9.0000°, Azm64.0000°; P -3.1808, Plg20.0000°, Azm158.0000°;*

MOS ***02*** *08:15:35.4±0.9,51˚.69N×173˚.40W,h40^{km},mb6.1/90, MS5.4/50 Error ellipse: s-maj=6.1km s-min=4.1km az=102.6*

AEIC ***02*** *08:15:35±2.5,51˚.61N±0˚.06×173˚.38W±0˚.07,h55^{km}±4^{km}, Error ellipse: s-maj=9.2km s-min=5.9km az=171.0*

GCMT ***02*** *08:15:36.5±0.1,51˚.55N×173˚.33W,h17^{km},MW5.9/157, Moment Tensor Solution. s153,c322; s157,c371; Duration: 2^{s}1 Moment tensor: Scale 10^{17}Nm; M_{rr}5.49±.06; $M_{\theta\theta}$-5.30±.05; $M_{\phi\phi}$-0.18±.04; $M_{r\theta}$4.56±.15; $M_{\theta\phi}$-1.95±.04; $M_{\phi r}$2.20±.13; Best double couple: $M_0$7.64400×10^{17} NP1:ϕ_s257.00000°,δ25.00000°, λ100.00000°. NP2:ϕ_s66.00000°,δ66.00000°,λ86.00000°. Principal axes: T 7.4310, Plg69.0000°, Azm328.0000°; N 0.4270, Plg4.0000°, Azm68.0000°; P -7.8570, Plg21.0000°, Azm160.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***02*** *08:15:36,51˚.54N×173˚.36W,h16^{km},Moment Tensor Solution. Duration: 4^{s}2 Moment tensor: Scale 10^{17}Nm; M_{rr}5.38; $M_{\theta\theta}$-5.21; $M_{\phi\phi}$-0.17; $M_{r\theta}$5.24; $M_{\theta\phi}$-1.96; $M_{\phi r}$3.19; Fault plane solution: $M_0$8.34000×10^{17} NP1: ϕ_s262.00000°,δ22.00000°,λ108.00000°. NP2: ϕ_s62.00000°,δ69.00000°,λ83.00000°. Principal axes: T 8.1627, Plg65.0000°, Azm319.0000°; N 0.3416, Plg7.0000°, Azm64.0000°; P -8.5043, Plg24.0000°, Azm157.0000°;*

IDC ***02*** *08:15:37.0±0.4,51˚.65N×173˚.36W,h42^{km}±3^{km},mb5.2/60, mb1 5.3/62,mb1mx5.2/72,mbtmp5.5/62,ML4.9/2,MS5.3/51, Ms1 5.3/51,ms1mx5.2/68 Error ellipse: s-maj=9.3km s-min=6.6km az=160.0*

NEIC ***02*** *08:15:41,51˚.49N×173˚.50W,h20^{km},Moment Tensor Solution. Duration: 16^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}4.76; $M_{\theta\theta}$-4.17; $M_{\phi\phi}$-0.60; $M_{r\theta}$3.06; $M_{\theta\phi}$-1.00; $M_{\phi r}$1.86; Fault plane solution: $M_0$5.83000×10^{17} NP1: ϕ_s263.00000°,δ27.00000°,λ106.00000°. NP2: ϕ_s66.00000°,δ64.00000°,λ82.00000°. Principal axes: T 6.0493, Plg70.0000°, Azm319.0000°; N -0.4645, Plg7.0000°, Azm69.0000°; P -5.5848, Plg19.0000°, Azm162.0000°;*

ISC 02 08:15:36.2±0.2**,51˚.60N**±0˚.04×**173˚.40W**±0˚.02**,h34**^{km}**,**
h34^{km}**:pP-P,n1686,**σ**1**^{s}**44**/1873**,mb5.8**/370**,MS5.4**/231**,**
183C-66D,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOFP	Korovin Flat P	0.80	328		Pn	08 15 51.2	+0.1
KOSE	Korovin Southe	0.85	332		Pb	08 15 52.0	-0.6
KOKL	Mount Kliuchef	0.88	326		Pn	08 15 52.3	+0.1
KONE	Korovin Northe	0.91	331		Pb	08 15 53.0	-0.7
GSMY	Great Sitkin M	1.71	286		Pn	08 16 03.0	-0.6
GSTR	Great Sitkin T	1.72	288	Pn	Pn	08 16 03.6	-0.2
GSTD	Great Sitkin T	1.77	286		Pn	08 16 04.3	-0.1
ETKA	Kagalaska Isla	1.89	279		Pn	08 16 06.4	+0.4
ETKA					Sb	08 16 31.2	-2.1
ADK	Adak	2.06	279	P	Pn	08 16 08.1	-0.3
ADK						08 16 34.4	
ADK	Adak	2.06	279	Pn	Pn	08 16 08.1	-0.3
ADK	Adak	2.06	279	⇓P	Pn	08 16 07.2	-1.2
ADK	Adak	2.06	279	P	Pn	08 16 09.8	+1.4
KINC	Kanaga Island	2.34	280		Pn	08 16 13.7	+1.5
KIWB	Kanaga Island	2.35	278		Pn	08 16 12.5	+0.2
KIKV	Kanaga Island	2.36	278		Pn	08 16 12.9	+0.4
KIMD	Kanaga Island	2.40	275		Pn	08 16 12.9	-0.1
TAFP	Tanaga Falls P	2.87	278		Pn	08 16 20.8	+1.3
TASE	Tanaga Southea	2.90	276		Pn	08 16 21.4	+1.6
NIKH	Nikolski High	3.11	62		Pn	08 16 22.1	-0.7
NIKH					Sn	08 16 57.6	-1.0
NIKH	Nikolski High	3.11	62	P	Pn	08 16 21.8	-1.0
	baz=246						
GAEA	Gareloi East	3.33	275		Pn	08 16 27.6	+1.7
GALAA	Gareloi Lava P	3.35	275		Pn	08 16 27.3	+1.2
OKSP	Okmok Steeple	3.54	60		Pn	08 16 28.6	-0.1
OKTU	Okmok Mt. Tuli	3.73	59		Pn	08 16 32.0	+0.6
OKFG	Magazine Ridge	3.81	59		Pn	08 16 33.3	+0.9
CERAA	Semis' Rag'd T	4.31	277		Pn	08 16 40.5	+1.2
CEAP	Semis' Anvil P	4.38	278		Pn	08 16 41.5	+1.2
CESW	Semis' Southwe	4.38	277		Pn	08 16 41.9	+1.6
AMKA	Amchitka	4.57	270	Pn	Pn	08 16 43.4	+0.6
AMKA	Amchitka	4.57	270		Sn	08 17 38.8	+4.1
MREP	Makushin Rep't	4.61	59		Pn	08 16 44.0	+0.6
MSW	Makushin Switc	4.64	57		Pn	08 16 44.3	+0.5
MNAT	Makushin Natee	4.68	58		Pn	08 16 45.0	+0.7
UNV	Unalaska Valle	4.75	59	Pn	Pn	08 16 45.5	+0.2
UNV	Unalaska Valle	4.75	59	P	Pn	08 16 44.5	-0.8
	baz=245						
LSPA	Little Sitkin	5.00	277		Pn	08 16 50.4	+1.7
LSPA					Sn	08 17 48.4	+3.1
LSNW	Little Sitkin	5.03	277		Pn	08 16 50.9	+1.7
LSSA	Little Sitkin	5.04	277		Pn	08 16 51.1	+1.8
AKRB	Akutan Reef Bi	5.11	57		Pn	08 16 51.3	+1.0
AKMO	Akutan Morgan	5.12	58		Pn	08 16 51.1	+0.7
AKBBA	Akutan Broad B	5.17	58		Pn	08 16 52.5	+1.4
AKGG	Akutan Green G	5.18	57		Pn	08 16 52.0	+0.7
AKLV	Akutan Long Va	5.18	57		Pn	08 16 52.4	+1.1
AKUT	Akutan	5.27	58	Pn	Pn	08 16 54.6	+2.1
AKUT	Akutan	5.27	58	⇑P	Pn	08 16 54.9	+2.5
AKSA	Akutan Strait	5.31	58		Pn	08 16 54.2	+1.2
SPIA	Saint Paul Isl	5.88	17		Pn	08 17 02.0	+1.2
SPIA	Saint Paul Isl	5.88	17	P	Pn	08 16 58.4	-2.4
	baz=200						
SPIA	Saint Paul Isl	5.88	17	P	Pn	08 17 07.0	+6.2
WECS	Westdahl Cape	5.97	57		Pn	08 17 03.1	+1.1
WESE	West Dahl East	6.04	58		Pn	08 17 04.1	+1.0
SSLS	Shishaldin Sou	6.45	57		Pn	08 17 09.6	+0.8
ISLZ	Isanotski Laza	6.61	58		Pn	08 17 11.8	+0.9
ISNN	Isanotski Nort	6.62	57		Pn	08 17 11.9	+0.9
FALS	False Pass	6.82	58		Pn	08 17 14.3	+0.6
FALS	False Pass	6.82	58	P	Pn	08 17 12.3	-1.4
	baz=246						
FALS	False Pass	6.82	58	P	Pn	08 17 17.7	+4.0
	1μm,1.0s						
SMY	Shemya	7.77	283	P	Pn	08 17 26.3	-0.5
SMY	Shemya	7.77	283	Pn	Pn	08 17 26.3	-0.5
SMY	Shemya	7.77	283	⇓P	Pn	08 17 30.4	+3.6
SDPT	Sand Point	8.57	59		Pn	08 17 37.8	+0.1
SDPT	Sand Point	8.57	59	P	Pn	08 17 35.9	-1.8
	baz=250						
CNBA	Chernabura Isl	8.89	63		Pn	08 17 41.4	-0.7
CHNA	Chernabura Isl	8.89	63	P	Pn	08 17 42.1	0.0
	baz=255						
CHGN	Chignik	10.00	56		Pn	08 17 57.3	0.0
CHGN	Chignik	10.00	56	P	Pn	08 17 56.8	-0.5
	baz=248						

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CHIR  Chirikof Islan   11.34  61  Pn       Pn       08 18 14.3 -1.3
CHIR  Chirikof Islan   11.34  61  P        Pn       08 18 13.8 -1.8
      baz=256
GAMB  Gambell          12.24   4  Pn       Pn       08 18 29.1 +1.3
GAMB  Gambell          12.24   4  P        Pn       08 18 25.0 -2.9
      baz=185,SNR=13
SII   Sitkinak Islan   12.31  59           Pn       08 18 29.4 +0.5
SII   Sitkinak Islan   12.31  59  P        Pn       08 18 26.3 -2.5
      baz=254
P18K  Big Mountain,    12.89  46           Pn       08 18 37.4 +0.6
P18K  Big Mountain,    12.89  46  P        Pn       08 18 34.4 -2.3
      baz=241,SNR=20
OHAK  Old Harbor       12.97  56  Pn       Pn       08 18 36.1 -1.7
OHAK  Old Harbor       12.97  56  P        Pn       08 18 35.7 -2.1
      baz=253
O18K  Koktuh Hills     13.13  44           Pn       08 18 39.7 -0.3
O18K  Koktuh Hills     13.13  44  P        Pn       08 18 38.4 -1.7
      baz=239,SNR=44
Q19K  Cape Douglas,    13.40  49           Pn       08 18 43.3 -0.5
Q19K  Cape Douglas,    13.40  49  P        Pn       08 18 41.7 -2.1
      baz=246
KDAK  Kodiak Island    13.50  55  P        Pn       08 18 40.9 -4.2
      2.7nm,0.3s,baz=246,slow=4.1,SNR=34
KDAK  Kodiak Island    13.50  55  P        Pn       08 18 43.4 -1.7
KDAK  Kodiak Island    13.50  55  Pn       Pn       08 18 43.4 -1.7
KDAK  Kodiak Island    13.50  55  P        Pn       08 18 43.2 -1.9
      baz=252
KDAK  Kodiak Island    13.50  55 ⇑P        Pn       08 18 42.3 -2.8
ANM   Nome             13.66  15  P        Pn       08 18 46.3 -0.9
      baz=202,SNR=6.4
SVW2  Sparrevohn       13.66  39           Pn       08 18 48.2 +0.9
O19K  Port Alsworth    13.69  44           Pn       08 18 47.6  0.0
O19K  Port Alsworth    13.69  44  P        Pn       08 18 45.4 -2.2
      baz=240,SNR=28
P19K  Oil Pt           13.91  47           Pn       08 18 51.2 +0.5
P19K  Oil Pt           13.91  47  P        Pn       08 18 48.3 -2.4
      baz=244,SNR=18
N19K  Bonanza Creek    13.94  41           Pn       08 18 53.0 +1.8
N19K  Bonanza Creek    13.94  41  P        Pn       08 18 48.9 -2.4
      baz=237,SNR=70
TNA   Tin City         14.28   9           Pn       08 18 57.3 +1.7
TNA   Tin City         14.28   9  P        Pn       08 18 53.4 -2.2
      baz=194
TNA   Tin City         14.28   9 ⇑P        P        08 18 59.1 -3.2
O20K  Slope Mountain   14.38  46  P        Pn       08 18 54.1 -3.0
      baz=243,SNR=13
RSO   Redoubt South    14.50  44           Pn       08 18 59.4 +0.5
L19K  White Mountain   14.60  36           Pn       08 19 00.8 +0.8
L19K  White Mountain   14.60  36  P        Pn       08 18 57.0 -3.0
      baz=232,SNR=137
M19K  Big River Lodg   14.60  38           Pn       08 19 00.2 +0.1
M19K  Big River Lodg   14.60  38  P        Pn       08 18 58.2 -1.9
      baz=234,SNR=61
HOM   Homer            14.64  48  P        Pn       08 18 58.9 -1.7
      baz=246
TTA   Tatalina         14.68  33  P        Pn       08 19 02.8 +1.7
TTA   Tatalina         14.68  33           Pn       08 19 02.8 +1.7
TTA   Tatalina         14.68  33  P        Pn       08 18 59.0 -2.1
      baz=228,SNR=181
CNPM  China Poot       14.78  49           Pn       08 19 02.1 -0.4
BRLK  Bradley Lake     15.04  48           Pn       08 19 03.8 -2.1
BRLK                              IAmb     IAmb     08 19 34.3
      comp=Z,1µm,1.6s
SPCR  Spurr Chakacha   15.09  42  P        Pn       08 19 04.3 -2.4
      baz=240,SNR=18
BRSE  Bradley Lake S   15.09  49  P        Pn       08 19 04.8 -1.8
      baz=248,SNR=13
L20K  Farewell, AK     15.14  36  P        Pn       08 19 05.4 -1.9
      baz=233,SNR=68
SPU   Mount Spurr      15.15  42           Pn       08 19 08.8 +1.4
CAPN  Captain Cook N   15.34  45  P        Pn       08 19 07.4 -2.4
      baz=243
K20K  Telida           15.62  34           Pn       08 19 14.1 +0.6
K20K                              IAmb     IAmb     08 19 20.4
      comp=Z,780nm,1.4s
K20K  Telida           15.62  34  P        Pn       08 19 12.2 -1.3
      baz=230,SNR=127
GCSA  Galena City Sc   15.72  27  P        Pn       08 19 12.8 -2.0
      baz=221,SNR=48
SKT   Skwentna         15.77  40  P        Pn       08 19 17.1 +1.7
SKT                               IAmb     IAmb     08 19 42.6
      comp=Z,524nm,1.4s
SKT   Skwentna         15.77  40  P        Pn       08 19 13.1 -2.3
      baz=239,SNR=54
SEW   Seward           15.83  48           Pn       08 19 14.5 -1.7
SEW   Seward           15.83  48  P        Pn       08 19 13.8 -2.4
      baz=248,SNR=21
SUA   Susitna One      15.84  43           Pn       08 19 16.3 -0.1
SUA   Susitna One      15.84  43  P        Pn       08 19 14.2 -2.2
      baz=242,SNR=29
O22K  Cooper Landing   15.85  47           Pn       08 19 15.4 -1.1
O22K                              IAmb     IAmb     08 19 45.2
      comp=Z,545nm,0.8s
O22K  Cooper Landing   15.85  47  P        Pn       08 19 15.1 -1.4
      baz=247,SNR=17
FIS   Fire Island      15.91  44           P        08 19 19.5 -1.0
FIS                               IAmb     IAmb     08 19 42.2
      comp=Z,594nm,0.9s
PPLA  Purkeypile       16.02  37  P        Pn       08 19 19.7 +1.0
PPLA                              IAmb     IAmb     08 19 54.3
      comp=Z,950nm,1.4s
PPLA  Purkeypile       16.02  37  P        Pn       08 19 18.2 -0.5
      baz=235,SNR=44
RC01  Rabbit Creek A   16.10  45           Pn       08 19 18.8 -0.8
RC01  Rabbit Creek A   16.10  45  P        Pn       08 19 18.9 -0.8
      baz=245,SNR=14
J20K  Nowinta River    16.14  31  P        Pn       08 19 21.0 +0.8
J20K                              IAmb     IAmb     08 19 42.3
      comp=Z,554nm,1.2s
J20K  Nowinta River    16.14  31  P        Pn       08 19 19.5 -0.6
      baz=228,SNR=124
M22K  Willow           16.24  42  P        Pn       08 19 20.2 -1.2
      baz=242,SNR=23
CAST  Castle Rocks     16.36  35  P        Pn       08 19 24.0 +1.0
CAST  Castle Rocks     16.36  35  P        Pn       08 19 22.6 -0.4
      baz=234,SNR=36
CUT   Chulitna         16.50  40  P        P        08 19 25.9 -1.1
CUT                               IAmb     IAmb     08 19 41.8
      comp=Z,1µm,1.5s
CUT   Chulitna         16.50  40  P        Pn       08 19 23.0 -1.6
      baz=240,SNR=9.4
CHUM  Lake Minchumin   16.56  34  P        Pn       08 19 25.5  0.0
      baz=232,SNR=98
PMR   Palmer           16.58  44  P        Pn       08 19 24.9 -0.9
PMR                               pmax     pmax
      comp=Z,420nm,1.9s
PMR   Palmer           16.58  44           Pn       08 19 24.9 -0.9
PMR   Palmer           16.58  44  P        Pn       08 19 24.1 -1.6
      baz=244,SNR=11
PWL   Port Wells       16.63  46           Pn       08 19 24.3 -2.1
PWL   Port Wells       16.63  46  P        Pn       08 19 24.4 -2.1
      baz=248,SNR=22
GHO   Glory Hole Cre   16.75  43           Pn       08 19 27.4 -0.6
KNK   Knik Glacier     16.80  45           Pn       08 19 27.0 -1.5
KNK                               IAmb     IAmb     08 20 00.8
      comp=Z,867nm,1.7s
KNK   Knik Glacier     16.80  45  P        Pn       08 19 26.4 -2.2
      baz=246,SNR=23
KTH   Kantishna Hill   16.87  36  P        P        08 19 30.6 -0.5
KTH                               IAmb     IAmb     08 19 37.9
      comp=Z,569nm,1.2s
SML   Sawmill          17.02  43           Pn       08 19 30.3 -1.1
SML   Sawmill          17.02  43  P        Pn       08 19 29.5 -1.9
      baz=245,SNR=24
TRF   Thorofare Moun   17.04  37  P        Pn       08 19 30.4 -1.3
      baz=237,SNR=27
PET   Petropavlovsk    17.11 286c iP       Pn       08 19 31.8 -0.6
PET                              eS        Sn       08 22 40.7 -0.7
PET                               pmax     pmax
      comp=Z,4µm,11.5s
PET                               pmax     pmax
      comp=Z,385nm,1.0s
PET                               pmax     pmax
      comp=Z,4µm,12.0s
PET                               MLR      MLR
      comp=Z,7µm,19.0s
PET                               MLR      MLR
      comp=Z,8µm,19.0s
PET   Petropavlovsk    17.11 286           Pn       08 19 31.6 -0.8
PET   Petropavlovsk    17.11 286 ⇑P        Pn       08 19 32.1 -0.3
BPAW  Bear Paw Mtn.    17.16  35  P        Pn       08 19 33.6 +0.6
BPAW  Bear Paw Mtn.    17.16  35  P        Pn       08 19 30.7 -2.3
      baz=234,SNR=79
GLI   Glacier Island   17.20  47           Pn       08 19 32.0 -1.6
GLI   Glacier Island   17.20  47  P        Pn       08 19 31.2 -2.3
      baz=249,SNR=12
RDOG  Red Dog Mine     17.28  13  P        Pn       08 19 32.6 -1.9
      baz=202,SNR=26
HIN   Hinchinbrook I   17.32  49           Pn       08 19 33.5 -1.5
FID   Port Fidalgo     17.44  48           Pn       08 19 33.8 -2.7
SCM   Sheep Creek Mo   17.46  44  P        Pn       08 19 35.1 -1.8
SCM                               pmax     pmax
      comp=Z,252nm,0.9s
SCM   Sheep Creek Mo   17.46  44           Pn       08 19 35.1 -1.8
SCM   Sheep Creek Mo   17.46  44  P        Pn       08 19 34.9 -2.0
      baz=246,SNR=32
I21K  Tanana           17.50  31  P        P        08 19 38.0 -0.1
I21K                              IAmb     IAmb     08 19 44.4
      comp=Z,500nm,1.1s
I21K  Tanana           17.50  31  P        Pn       08 19 37.6 +0.4
      baz=229,SNR=271
IMAR  Indian Mountai   17.52  27  P        Pn       08 19 37.4 -0.1
RND   Reindeer         17.57  38  P        Pn       08 19 37.0 -1.1
RND                               pmax     pmax
      comp=Z,174nm,1.0s
RND   Reindeer         17.57  38           Pn       08 19 37.0 -1.1
H21K  Melozitna Rive   17.57  29  P        P        08 19 38.4 -0.5
H21K  Melozitna Rive   17.57  29  P        P        08 19 38.4 -0.5
      baz=227,SNR=220
PEA0B Petropavlovsk-   17.67 286ceP        P        08 19 41.2 +1.1
PEA0B Petropavlovsk-   17.67 286  P        P        08 19 40.1 +0.1
PETK  Petropavlovsk-   17.67 286  P        Pn       08 19 39.2 -0.2
      comp=Z,6.8nm,0.3s,baz=92,slow=13,SNR=88
PETK                              LR       LR       08 25 58.2
      comp=Z,7µm,21.3s,baz=90,slow=35
MCK   McKinley         17.71  37  P        Pn       08 19 38.7 -1.1
MCK                               pmax     pmax
      comp=Z,246nm,1.0s
MCK   McKinley         17.71  37  P        Pn       08 19 38.7 -1.1
MCK   McKinley         17.71  37  P        Pn       08 19 37.9 -1.8
      baz=238,SNR=53
EYAK  Cordova Ski Ar   17.72  49           Pn       08 19 37.6 -2.2
EYAK  Cordova Ski Ar   17.72  49  P        Pn       08 19 36.9 -3.0
      baz=252,SNR=14
BWN   Browne           17.75  36           Pn       08 19 39.7 -0.6
BWN                               IAmb     IAmb     08 20 00.9
      comp=Z,1µm,1.2s
MLY   Manley           17.81  32  P        Pn       08 19 41.1  0.0
MLY   Manley           17.81  32  P        Pn       08 19 40.7 -0.4
      baz=232,SNR=146
DIV   Divide           17.89  47  Pn       Pn       08 19 40.2 -1.9
KLU   Klutina          17.95  46           Pn       08 19 40.8 -2.1
KLU   Klutina          17.95  46  P        Pn       08 19 40.6 -2.3
      baz=249,SNR=46
M24K  Tolsona, Glenn   18.07  44  P        Pn       08 19 43.3 -1.1
M24K                              IAmb     IAmb     08 20 09.5
      comp=Z,766nm,1.4s
M24K  Tolsona, Glenn   18.07  44  P        Pn       08 19 42.6 -1.7
      baz=247,SNR=22
NEA2  Nenana           18.13  35  P        Pn       08 19 43.5 -1.4
NEA2  Nenana           18.13  35  P        Pn       08 19 43.7 -1.2
      baz=236,SNR=44
RAGM  Ragged Mountai   18.18  50  P        Pn       08 19 44.0 -1.7
KAIM  Kayak Island     18.18  51  P        Pn       08 19 44.5 -1.1
KAIM                              IAmb     IAmb     08 20 12.5
      comp=Z,573nm,1.2s
KAIM  Kayak Island     18.18  51  P        Pn       08 19 44.3 -1.3
      baz=256
I23K  Minto, Yukon-K   18.35  33  P        P        08 19 46.9 -0.5
      baz=234,SNR=253
BMRM  Bremner River    18.38  48  P        P        08 19 45.9 -2.0
      baz=252,SNR=29
WRH   Wood River Hil   18.41  36  P        P        08 19 45.9 -2.2
SUCK  Suckling Hills   18.53  51  P        Pn       08 19 50.1 +0.3
N25K  Chitina, Valde   18.59  46  P        P        08 19 48.4 -1.8
N25K  Chitina, Valde   18.59  46  P        P        08 19 47.7 -2.5
      baz=251,SNR=24
CCB   Clear Creek Bu   18.61  36  P        P        08 19 48.3 -2.1
HARP  HAARP            18.63  44  P        P        08 19 48.8 -1.8
      baz=248,SNR=19
MDM   Murphy Dome      18.63  35  P        P        08 19 48.5 -2.1
H23K  Yukon River      18.70  31  P        P        08 19 49.9 -1.4
      baz=232,SNR=184
TCOL  CIGO, UAF Yank   18.72  35  P        P        08 19 50.3 -1.2
      baz=237,SNR=12
COLA  College          18.72  35d iP       P        08 19 51.6 +0.1
COLA                              pmax     pmax
      comp=Z,149nm,1.1s
COLA                              MLR      MLR
      comp=Z,19µm,16.0s
COLA  College          18.72  35  P        P        08 19 49.9 -1.6
COLA  College          18.72  35  P        P        08 19 50.0 -1.4
      baz=237
COLA  College          18.72  35 ⇑P        P        08 19 50.1 -1.4
PAX   Paxson           18.72  42  P        P        08 19 51.0 -0.7
PAX                               pmax     pmax
      comp=Z,120nm,1.0s
PAX   Paxson           18.72  42  P        P        08 19 51.0 -0.7
PAX   Paxson           18.72  42  P        P        08 19 50.1 -1.5
      baz=246,SNR=17
BGLC  Bering Glacier   18.78  51  P        P        08 19 50.8 -1.3
      baz=256
HDA   Harding Lake     18.80  37  P        P        08 19 51.5 -0.9
HDA   Harding Lake     18.80  37  P        P        08 19 51.0 -1.4
      baz=240,SNR=124
GLB   Gilahina Butte   18.89  47  P        P        08 19 52.2 -1.3
VRDI  Verde Repeater   18.99  48  P        P        08 19 53.5 -1.3
POKR  Poker Plat Res   19.00  35  P        P        08 19 53.0 -1.6
      baz=237,SNR=38
ILAR  Eielson Array    19.02  36  P        P        08 19 52.9 -1.9
      comp=Z,11nm,0.3s,baz=230,slow=9.1,SNR=146
ILAR                              ScP      ScP      08 27 50.9 -0.5
      comp=Z,0.2nm,0.3s,baz=291,slow=3.7,SNR=4.5
ILAR                              LR       LR       08 27 57.3
      comp=Z,15µm,18.4s,baz=248,slow=39
ILAR  Eielson Array    19.02  36  P        P        08 19 51.9 -2.9
CRQE  Cirque           19.03  49  P        P        08 19 53.2 -1.9
      baz=255,SNR=44
WAX   Waxell Ridge     19.07  50  P        P        08 19 54.5 -0.9
WAX                               IAmb     IAmb     08 20 10.4
      comp=Z,679nm,1.2s
SKR   Severo-Kuril's   19.09 279 eP        Pn       08 19 56.1 -0.5
SKR                              eS        Sn       08 23 29.1 -0.1
SKR                               pmax     pmax
      comp=Z,2µm,5.9s
SKR                               pmax     pmax
      comp=Z,300nm,5.4s
SKR                               pmax     pmax
      comp=Z,178nm,0.4s
SKR                               smax     smax
      comp=N,81nm,1.3s
SKR                               smax     smax
      comp=E,127nm,1.6s
SKR                               MLR      MLR
      comp=Z,4µm,14.0s
SKR                               MLR      MLR
      comp=Z,4µm,14.0s
MCARA McCarthy VSAT    19.24  48  P        P        08 19 55.1 -2.1
      baz=253,SNR=21
H24K  Noodor Dome      19.26  33  P        P        08 19 56.9 -0.5
      baz=235,SNR=464
RIDG  Independent Ri   19.30  40  P        P        08 19 56.9 -1.1
RIDG  Independent Ri   19.30  40  P        P        08 19 56.5 -1.5
      baz=244,SNR=30
ISLE  Juniper Island   19.35  50  P        P        08 19 58.3 -0.3
ISLE                              IAmb     IAmb     08 20 16.4
      comp=Z,563nm,1.5s
COLD  Coldfoot         19.41  27  P        P        08 19 59.0  0.0
      baz=228,SNR=100
MESA  MESA             19.44  52  P        P        08 19 59.0 -0.7
      baz=258,SNR=13
J25K  Salcha River,    19.50  37  P        P        08 19 58.3 -1.9
      baz=242,SNR=464
M26K  Nabesna, AK      19.57  45  P        P        08 19 58.6 -2.3
      baz=251,SNR=56
L26K  Log Cabin Wild   19.64  43  P        P        08 19 59.5 -2.1
      baz=248,SNR=31
SCRK  Sand Creek       19.75  40  P        P        08 20 01.2 -1.8
SCRK  Sand Creek       19.75  40  P        P        08 20 00.9 -2.1
      baz=245,SNR=156
PRP   Porcupine Dome   19.89  35  P        P        08 20 03.9 -0.6
PRP   Porcupine Dome   19.89  35  P        P        08 20 02.4 -2.1
      baz=239,SNR=78
CTG   Chitna Glacier   19.91  49  P        P        08 20 02.9 -1.8
      baz=256,SNR=26
M27K  Edge Creek, AK   20.05  45  IAMs_20  IAMs_20  08 28 17.8
      comp=Z,25µm,19.0s
M27K  Edge Creek, AK   20.05  45  P        P        08 20 04.0 -2.2
      baz=252,SNR=31
J26L  Joseph Creek     20.14  39  P        P        08 20 05.4 -1.8
      baz=244,SNR=394
PINM  Pinnacle         20.26  52  P        P        08 20 06.3 -2.2
      baz=260,SNR=37
L27K  Beaver Creek,    20.30  43  P        P        08 20 09.1 +0.3
L27K                              IAMs_20  IAMs_20  08 28 48.4
      comp=Z,18µm,18.0s
L27K  Beaver Creek,    20.30  43  P        P        08 20 06.7 -2.1
      baz=250,SNR=57
BCAR  Beaver Creek A   20.32  43  P        P        08 20 08.3 -0.7
BVCY  Beaver Creek     20.52  46  P        P        08 20 09.0 -2.2
      baz=253,SNR=25
YUK3  Moose Creek      20.52  48  P        P        08 20 09.5 -1.9
      baz=255,SNR=22
BCPM  Bancas Point     20.54  53  P        P        08 20 10.3 -1.1
BCPM                              IAmb     IAmb     08 20 30.6
      comp=Z,302nm,0.9s
FYU   Fort Yukon       20.55  33  P        P        08 20 10.3 -1.2
FYU                               IAmb     IAmb     08 20 18.5
      comp=Z,956nm,1.2s
TOLK  Toolik Lake Re   20.55  25  P        P        08 20 10.3 -1.2
      baz=226,SNR=165
PNL   Peninsula        20.62  54  P        P        08 20 11.6 -0.7
      baz=262,SNR=35
A21K  Barrow           21.19  15  P        P        08 20 17.8 -0.5
A21K                              IAmb     IAmb     08 20 46.6
      comp=Z,352nm,1.0s
A21K                              IAMs_20  IAMs_20  08 29 15.0
      comp=Z,19µm,19.0s
A21K  Barrow           21.19  15  P        P        08 20 16.9 -1.4
      baz=210
EGAK  Eagle            21.20  39  P        P        08 20 17.3 -1.2
EGAK                              IAmb     IAmb     08 20 24.0
      comp=Z,436nm,0.7s
EGAK                              IAMs_20  IAMs_20  08 28 57.8
      comp=Z,25µm,19.0s
EGAK  Eagle            21.20  39  P        P        08 20 17.0 -1.5
      baz=247,SNR=406
BMAR  Burnt Mountain   21.25  31  P        P        08 20 19.4 +0.4
YUK4  Talbot Arm       21.27  49  P        P        08 20 18.6 -0.9
      baz=258,SNR=32
YUK6  Outpost Mounta   21.33  50  P        P        08 20 18.7 -1.5
      baz=260,SNR=25
SEY   Seymchan         21.41 315  P        P        08 20 21.0 +0.3
      comp=Z,107nm,1.0s,baz=105,slow=9.0,SNR=45
SEY                               LR       LR       08 28 48.5
      comp=Z,8µm,19.9s,baz=108,slow=37
MA2   Magadan          21.54 306  P        P        08 20 22.6 +0.6
      comp=Z,145nm,1.0s,baz=98,slow=8.7,SNR=9.0
MA2                               LR       LR       08 28 35.7
      comp=Z,12µm,18.5s,baz=101,slow=36
MA2   Magadan          21.54 306ceP        P        08 20 23.6 +1.5
MA2                               pmax     pmax
      comp=Z,194nm,1.1s
MA2                               MLR      MLR
      comp=Z,11µm,17.0s
MA2   Magadan          21.54 306  P        P        08 20 22.2 +0.1
MA2                               IAMs_20  IAMs_20  08 27 56.1
      comp=Z,13µm,20.0s
MA2   Magadan          21.54 306 ⇑P        P        08 20 22.7 +0.6
DAWY  Dawson           21.66  42  P        P        08 20 21.9 -1.6
DAWY                              IAmb     IAmb     08 20 41.0
      comp=Z,496nm,1.6s
DAWY  Dawson           21.66  42  P        P        08 20 21.3 -2.1
      baz=251,SNR=70
HYT   Haines Junctio   21.73  51  P        P        08 20 22.9 -1.4
      baz=261,SNR=34
J29M  Klondike Camp    22.27  41  P        P        08 20 27.9 -2.2
      baz=252,SNR=28
M30M  Minto, Yukon     22.38  46  P        P        08 20 29.6 -1.6
      baz=258
I29M  Ogilvie Camp,    22.54  39  P        P        08 20 30.7 -2.2
      baz=249,SNR=202
SIT   Sitka            22.64  61  P        P        08 20 33.6 -0.3
SIT                               pmax     pmax
      comp=Z,174nm,0.9s
SIT   Sitka            22.64  61  P        P        08 20 33.5 -0.3
SIT   Sitka            22.64  61  P        P        08 20 32.7 -1.2
      baz=272,SNR=6.9
N31M  Braeburn, Yuko   22.65  50  P        P        08 20 33.1 -1.0
      baz=261,SNR=13
SKAG  Skagway          22.66  55  P        P        08 20 33.1 -1.0
SKAG                              IAmb     IAmb     08 21 12.6
      comp=Z,187nm,0.9s
SKAG  Skagway          22.66  55  P        P        08 20 32.9 -1.2
      baz=267,SNR=34
SKAG  Skagway          22.66  55 ⇑P        P        08 20 32.9 -1.2
BESE  Bessie Mountai   22.87  57  P        P        08 20 36.4  0.0
BESE                              IAmb     IAmb     08 21 17.7
      comp=Z,1µm,1.7s
WHY   Whitehorse       22.98  52  P        P        08 20 35.9 -1.7
      baz=264,SNR=21
WHY   Whitehorse       22.98  52 ⇑P        P        08 20 38.8 +1.2
M31M  Drury Creek, Y   23.41  48  P        P        08 20 41.1 -0.7
      baz=261,SNR=14
EPYK  Eagle Plains     23.51  37  P        P        08 20 41.1 -1.6
      baz=249,SNR=46
P33M  Teslin, Yukon    23.97  53  P        P        08 20 46.9 -0.3
      baz=267,SNR=19
CRAG  Craig            24.00  65  P        P        08 20 47.2 -0.2
      baz=278,SNR=14
CRAG  Craig            24.00  65 ⇓P        P        08 20 52.0 +4.6
WRAK  Wrangell Islan   24.32  62  IAMs_20  IAMs_20  08 30 17.7
      comp=Z,11µm,20.0s
WRAK  Wrangell Islan   24.32  62  P        P        08 20 49.8 -0.5
      baz=276,SNR=51
MMPY  Sheldon Lake,    24.91  47  P        P        08 20 55.2 -0.5
      baz=264,SNR=38
INK   Inuvik           25.36  34  P        P        08 20 58.6 -1.0
      comp=Z,196nm,0.9s,baz=226,slow=8.5,SNR=4.4
INK                               LR       LR       08 32 04.5
      comp=Z,11µm,18.6s,baz=234,slow=39
INK   Inuvik           25.36  34  P        P        08 20 59.0 -0.6
INK                               pmax     pmax
      comp=Z,264nm,0.9s
INK   Inuvik           25.36  34  P        P        08 20 59.0 -0.6
INK                               IAmb     IAmb     08 21 13.8
      comp=Z,264nm,0.9s
INK   Inuvik           25.36  34  P        P        08 20 58.8 -0.8
      baz=249,SNR=250
INK   Inuvik           25.36  34 ⇓P        P        08 20 58.3 -1.3
DLBC  Dease Lake       25.41  57  P        P        08 21 00.7 +0.5
      comp=Z,163nm,1.1s,baz=267,slow=13,SNR=97
DLBC                              LR       LR       08 31 13.9
      comp=Z,10µm,19.8s,baz=288,slow=37
DLBC  Dease Lake       25.41  57  P        P        08 21 01.2 +1.0
DLBC                              IAmb     IAmb     08 21 03.7
      comp=Z,250nm,1.1s
GRNB  Grenville Isla   26.10  68  P        P        08 21 07.2 +0.7
GRNB                              IAmb     IAmb     08 21 44.3
      comp=Z,352nm,1.5s
TGTN  Hyland Airport   26.24  50  P        P        08 21 07.2 -0.6
      baz=269,SNR=24
KUR   Kuril'sk         26.25 271c iP       P        08 21 08.1 +0.2
KUR                              ePPP      PPP      08 21 54.8
KUR                              eS        S        08 25 40.7 +3.0
KUR                              eSS       SnSn     08 26 41.4 +2.9
KUR                              eSSS      SSS      08 27 05.3
KUR                               pmax     pmax
      comp=Z,1µm,1.2s
KUR                               pmax     pmax
      comp=E,506nm,1.4s
KUR                               pmax     pmax
      comp=N,226nm,1.0s
KUR                               pmax     pmax
      comp=Z,4µm,2.5s
KUR                               pmax     pmax
      comp=E,3µm,2.2s
KUR                               pmax     pmax
      comp=N,1µm,2.4s
KUR                               MLR      MLR
      comp=N,2µm,18.0s
KUR                               MLR      MLR
      comp=Z,3µm,18.0s
TYV   Tymovskoe        27.22 286 eP        P        08 21 17.5 +0.9
TYV                              eS        S        08 25 56.2 +3.2
TYV                               pmax     pmax
      comp=Z,800nm,5.7s
TYV                               pmax     pmax
      comp=Z,104nm,1.0s
TYV                               smax     smax
      comp=N,18nm,1.5s
TYV                               smax     smax
      comp=E,14nm,1.5s
TYV                               smax     smax
      comp=N,500nm,8.1s
TYV                               smax     smax
      comp=E,900nm,8.1s
TYV                               MLR      MLR
      comp=N,4µm,21.0s
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TYV                                    MLR      MLR
         comp=Z,7µm,21.0s
BBB     Bella Bella        27.61  71   P        P         08 21 21.5 +1.5
         comp=Z,52nm,1.0s,baz=276,slow=8.0,SNR=8.1
BBB                                    LR       LR        08 30 54.6
         comp=Z,4µm,20.9s,baz=288,slow=33
BBB     Bella Bella        27.61  71 ⇑P        P         08 21 26.1 +6.1
NKL     Nikolayevsk        27.71 291  eP        P         08 21 20.9  0.0
NKL                                    pmax     pmax
         comp=E,5.0nm,0.5s
NKL                                    pmax     pmax
         comp=N,619nm,1.1s
NKL                                    pmax     pmax
         comp=Z,84nm,1.4s
NKL                                    MLR      MLR
         comp=E,15nm,12.0s
NKL                                    MLR      MLR
         comp=N,12µm,14.0s
NKL                                    MLR      MLR
         comp=Z,3µm,18.0s
YUK     Yuzh-Kuril'sk      28.08 271c iP        P         08 21 24.7 +0.4
YUK                                  i PPP      PPP       08 22 19.5
YUK                                  i S        S         08 26 08.0 +1.3
YUK                                  i SS       SnSn      08 27 24.8 +1.5
YUK                                    pmax     pmax
         comp=N,628nm,1.5s
YUK                                    pmax     pmax
         comp=E,998nm,1.5s
YUK                                    pmax     pmax
         comp=Z,1µm,1.5s
UGL     Uglegorsk          28.21 283c iP        P         08 21 26.6 +1.2
UGL                                   e                   08 22 27.4
UGL                                    pmax     pmax
         comp=Z,660nm,0.9s
UGL                                    pmax     pmax
         comp=Z,2µm,4.0s
UGL                                    MLR      MLR
         comp=E,8µm,21.0s
UGL                                    MLR      MLR
         comp=N,10µm,17.0s
UGL                                    MLR      MLR
         comp=Z,6µm,18.0s
WRGLY   Wrigley            28.51  47   P        P         08 21 27.4 -0.5
         baz=270,SNR=18
YSS     Yuzh-Sakhalins     28.65 278αeP         P         08 21 30.9 +1.6
YSS                                   e*SP      pwP       08 21 43.5 -0.1
YSS                                   e                   08 22 16.3
YSS                                   ePPP      PPP       08 22 34.3
YSS                                   eS        S         08 26 15.1 -0.4
YSS                                   eSS       SS        08 28 02.6  -15
YSS                                    pmax     pmax
         comp=Z,3µm,2.8s
YSS                                    pmax     pmax
         comp=E,2µm,2.0s
YSS                                    pmax     pmax
         comp=N,260nm,1.1s
YSS                                    pmax     pmax
         comp=E,500nm,1.1s
YSS                                    pmax     pmax
         comp=Z,800nm,1.1s
YSS                                    MLR      MLR
         comp=Z,10µm,19.0s
YSS                                    MLR      MLR
         comp=N,3µm,20.0s
YSS                                    MLR      MLR
         comp=E,6µm,19.0s
YSS     Yuzh-Sakhalins     28.65 278   P        P         08 21 30.5 +1.2
YSS                                    IAMs_20  IAMs_20   08 32 01.5
         comp=Z,13µm,21.0s
YSS     Yuzh-Sakhalins     28.65 278 ⇑P        P         08 21 30.6 +1.3
A36M    Sachs Harbour      29.27  28   P        P         08 21 34.3 -0.3
A36M                                   IAmb     IAmb      08 21 51.5
         comp=Z,126nm,1.0s
A36M                                   IAMs_20  IAMs_20   08 34 52.2
         comp=Z,8µm,20.0s
A36M    Sachs Harbour      29.27  28   P        P         08 21 34.1 -0.4
         baz=252,SNR=26
CBB     Campbell River     29.96  74   P        P         08 21 42.4 +1.4
CBB                                    IAmb     IAmb      08 22 33.7
         comp=Z,197nm,1.9s
ASAJ    Asahikawa          30.08 273   P        P         08 21 42.8 +0.7
         comp=Z,580nm,0.9s,baz=45,slow=5.9,SNR=103
ASAJ                                   LR       LR        08 33 06.4
         comp=Z,5µm,21.1s,baz=72,slow=35
ERM     Erimo              30.83 269ceP         P         08 21 49.9 +1.2
ERM                                    pmax     pmax
         comp=Z,304nm,1.1s
ERM                                    MLR      MLR
         comp=Z,5µm,16.0s
ERM     Erimo              30.83 269   P        P         08 21 49.8 +1.2
ERM                                    IAmb     IAmb      08 21 54.0
         comp=Z,311nm,1.1s
ERM     Erimo              30.83 269 ⇑P        P         08 21 49.4 +0.7
GRNR    Gornyy             30.97 289⇓iP        P         08 21 50.3 +0.4
GRNR                                  eS        S         08 26 54.4 +2.5
GRNR                                   pmax     pmax
         comp=E,10.0nm,0.9s
GRNR                                   pmax     pmax
         comp=N,7.0nm,1.1s
GRNR                                   pmax     pmax
         comp=Z,40nm,1.0s
GRNR                                   smax     smax
         comp=N,5.0nm,0.8s
GRNR                                   MLR      MLR
         comp=E,2µm,17.0s
GRNR                                   MLR      MLR
         comp=N,940nm,14.0s
GRNR                                   MLR      MLR
         comp=Z,2µm,18.0s
JEW     Eniwo              31.45 272 ⇑P        P         08 21 54.5 +0.3
YAK     Yakutsk            31.81 311   P        P         08 21 56.0 -1.0
         comp=Z,23nm,0.6s,baz=244,slow=1.4,SNR=9.0
YAK                                    LR       LR        08 35 16.1
         comp=Z,15µm,18.1s,baz=104,slow=37
YAK     Yakutsk            31.81 311  eP        P         08 21 55.6 -1.5
YAK                                   e*PP      sP        08 22 09.2 -0.1
YAK                                   e                   08 22 58.8
YAK                                   e                   08 24 47.2
YAK                                   eS        S         08 27 04.5 -0.2
YAK                                   e                   08 32 21.9
YAK                                    pmax     pmax
         comp=Z,74nm,0.9s
YAK                                    pmax     pmax
         comp=N,6.0nm,0.8s
YAK                                    pmax     pmax
         comp=E,23nm,1.0s
YAK                                    pmax     pmax
         comp=Z,100nm,1.6s
YAK                                    pmax     pmax
         comp=N,51nm,1.4s
YAK                                    pmax     pmax
         comp=E,164nm,1.8s
YAK                                    smax     smax
         comp=E,108nm,1.8s
YAK                                    smax     smax
         comp=N,90nm,2.1s
YAK                                    MLR      MLR
         comp=Z,13µm,17.0s
YAK                                    MLR      MLR
         comp=E,9µm,16.0s
LLLB    Lillooet           31.82  71   P        P         08 21 58.1 +0.7
LLLB                                   IAmb     IAmb      08 22 23.8
         comp=Z,75nm,1.0s
NLWA    Neilton Lookou     31.94  78 ⇓P        P         08 22 01.4 +3.0
A04D    Lummi Island       32.08  75   P        P         08 21 58.4 -1.1
         baz=295
TIXI    Tiksi              32.13 330   P        P         08 21 59.5 -0.4
         comp=Z,26nm,0.6s,baz=105,slow=9.5,SNR=56
TIXI                                   PcP      PcP       08 24 48.1 +0.1
         comp=Z,47nm,1.0s,baz=335,slow=1.3,SNR=7.0
TIXI                                   pPcP               08 25 01.8
         comp=Z,170nm,0.9s,baz=89,slow=1.6,SNR=18
TIXI                                   ScP      ScP       08 28 29.0 +0.4
         comp=Z,12nm,1.0s,baz=128,slow=4.1,SNR=4.0
TIXI                                   LR       LR        08 36 12.0
         comp=Z,7µm,18.4s,baz=118,slow=38
TIXI    Tiksi              32.13 330   P        P         08 22 00.0 +0.2
TIXI                                   pmax     pmax
         comp=Z,127nm,1.4s
TIXI                                   MLR      MLR
         comp=Z,8µm,18.0s
TIXI    Tiksi              32.13 330   P        P         08 21 60.0 +0.2
TIXI                                   IAmb     IAmb      08 22 01.2
         comp=Z,127nm,1.4s
TIXI                                   IAMs_20  IAMs_20   08 36 27.7
         comp=Z,8µm,18.0s
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TIXI    Tiksi              32.13 330 ⇑P        P         08 21 59.4 -0.4
TIXI                                 ⇓P        PcP       08 24 48.5 +0.5
D03D    Eldon              32.35  77   P        P         08 22 01.9 -0.1
         baz=296,SNR=7.8
KIP     Kipapa             32.42 153ceP         P         08 22 03.1 +0.3
KIP                                    pmax     pmax
         comp=Z,269nm,1.4s
KIP     Kipapa             32.42 153   P        P         08 22 03.2 +0.3
KIP                                    IAmb     IAmb      08 22 04.0
         comp=Z,273nm,1.3s
HON     Honolulu           32.52 153   P        P         08 22 03.8 +0.2
HON                                    pmax     pmax
         comp=Z,325nm,1.2s
HON     Honolulu           32.52 153   P        P         08 22 03.8 +0.2
HON                                    IAmb     IAmb      08 22 19.0
         comp=Z,325nm,1.2s
YKA     Yellowknife Ar     32.61  47   P        P         08 22 03.1 -1.0
         comp=Z,4.1nm,0.6s,baz=180,slow=3.7,SNR=40
YKA                                    PcP      PcP       08 24 50.4 +0.9
         comp=Z,23nm,1.1s,baz=296,slow=1.3,SNR=9.7
YKA                                    pPcP               08 25 03.9
         comp=Z,50nm,0.9s,baz=296,slow=1.6,SNR=19
YKA                                    LR       LR        08 36 56.7
         comp=Z,8µm,18.3s,baz=0.0,slow=39
YKA     Yellowknife Ar     32.61  47   P        P         08 22 03.8 -0.3
YKA     Yellowknife Ar     32.61  47   P        P         08 22 03.8 -0.3
B05A    Bryant             32.64  75   P        P         08 22 04.4 -0.1
         baz=296,SNR=17
D04E    Lakebay            32.70  77   P        P         08 22 03.7 -1.4
         baz=297
JTM     Tenmabayashi       32.82 269   P        P         08 22 07.2 +1.0
JTM                                    IAmb     IAmb      08 22 10.2
         comp=Z,302nm,1.1s
JTM     Tenmabayashi       32.82 269 ⇑P        P         08 22 06.2 +0.1
F04D    Rainier, OR        33.07  79   P        P         08 22 07.2 -1.1
         baz=298
E04D    Cinebar            33.12  78   P        P         08 22 09.2 +0.5
         baz=298,SNR=9.0
G03D    McMinnville, O     33.33  81   P        P         08 22 10.3 -0.3
         baz=300
TEY     Ternei             33.34 279⇑iP        P         08 22 09.7 -0.9
TEY                                   eS        S         08 27 26.4 -2.4
TEY                                    pmax     pmax
         comp=E,1µm,1.3s
TEY                                    pmax     pmax
         comp=Z,2µm,1.3s
TEY                                    pmax     pmax
         comp=N,380nm,1.3s
TEY                                    pmax     pmax
         comp=E,380nm,1.0s
TEY                                    pmax     pmax
         comp=Z,640nm,1.0s
TEY                                    pmax     pmax
         comp=N,150nm,1.0s
TEY                                    smax     smax
         comp=N,600nm,4.6s
TEY                                    smax     smax
         comp=E,500nm,4.6s
TEY                                    MLR      MLR
         comp=E,2µm,19.0s
TEY                                    MLR      MLR
         comp=N,1µm,15.0s
TEY                                    MLR      MLR
         comp=Z,3µm,22.0s
F04A    Amboy              33.50  79   P        P         08 22 12.6 +0.5
F04A                                   IAmb     IAmb      08 22 27.1
         comp=Z,61nm,0.8s
C06D    Leavenworth        33.51  75   P        P         08 22 10.8 -1.3
         baz=296
I02E    Swisshome, OR      33.52  83   P        P         08 22 11.0 -1.3
         baz=301
COR     Corvallis          33.62  82 ⇑P        P         08 22 16.3 +3.2
PNT     Penticton          33.67  72 ⇑P        P         08 22 14.2 +0.6
KEBM    Edson Butte        33.87  85   P        P         08 22 17.0 +1.6
LTY     Liberty            33.95  76   P        P         08 22 16.3 +0.3
J01E    Myrtle Point       33.96  85   P        P         08 22 15.8 -0.4
         baz=302
H04D    Lebanon            34.00  82   P        P         08 22 15.8 -0.7
         baz=301
I03D    Drain, OR          34.04  83   P        P         08 22 16.1 -0.7
         baz=302
F05D    White Salmon       34.11  79   P        P         08 22 18.0 +0.6
         baz=299,SNR=5.7
B08A    Colville Reser     34.25  74   P        P         08 22 19.0 +0.3
B08A                                   IAmb     IAmb      08 22 41.1
         comp=Z,167nm,1.3s
H04A    Detroit Lake       34.26  81   P        P         08 22 20.7 +1.9
H04A                                   IAmb     IAmb      08 22 22.5
         comp=Z,171nm,1.2s
HOOD    Mount Hood Mea     34.27  80   P        P         08 22 20.2 +1.3
HOOD                                   IAmb     IAmb      08 22 46.0
         comp=Z,139nm,1.1s
KBO     Bosley Butte       34.29  86   P        P         08 22 19.6 +0.5
KLR     Kul'dur            34.34 288   P        P         08 22 18.6 -0.8
         comp=Z,44nm,1.0s,baz=60,slow=8.3,SNR=58
KLR     Kul'dur            34.34 288ceP         P         08 22 18.5 -0.9
KLR                                    pmax     pmax
         comp=Z,231nm,1.5s
KLR                                    MLR      MLR
         comp=Z,5µm,19.0s
K02D    Willamette Mer     34.38  85   P        P         08 22 19.4 -0.5
         baz=303,SNR=9.1
HPAH    Hawaii Prepara     34.43 150   P        P         08 22 20.2 -0.2
HPAH                                   IAmb     IAmb      08 22 36.3
         comp=Z,239nm,1.2s
G05D    Wamic, OR          34.51  80   P        P         08 22 20.1 -0.9
         baz=300,SNR=8.1
I04A    Tendick Farm,      34.57  83   P        P         08 22 21.6 +0.1
         baz=302,SNR=18
L02E    Cave Junction      34.71  86   P        P         08 22 23.3 +0.6
         baz=303,SNR=17
JMM     Marumori           34.73 265 ⇑P        P         08 22 23.4 +0.6
POHA    Pohakuloa          34.74 150   P        P         08 22 23.1 -0.1
POHA                                   IAmb     IAmb      08 22 24.0
         comp=Z,203nm,1.1s
POHA    Pohakuloa          34.74 150   IAMs_20  IAMs_20   08 33 47.4
         comp=Z,6µm,19.0s
POHA    Pohakuloa          34.74 150 ⇓P        P         08 22 23.6 +0.3
E07A    Sunnyside          34.77  77   P        P         08 22 23.2 +0.1
E07A                                   IAmb     IAmb      08 22 46.0
         comp=Z,96nm,1.1s
HUMO    Hull Mountain      34.87  85 ⇓P        P         08 22 26.4 +2.4
I05D    Terrebonne, OR     34.95  81   P        P         08 22 24.8  0.0
         baz=301,SNR=19
HAWA    Hanford            35.04  77 ⇑P        P         08 22 26.1 +0.7
J04D    Umpqua Nationa     35.05  83   P        P         08 22 25.9 +0.1
         baz=302,SNR=18
ZEA     Zeya               35.15 297  eP        P         08 22 25.0 -1.3
ZEA                                   e                   08 23 50.9
ZEA                                   eS        S         08 27 49.0 -7.7
ZEA                                    pmax     pmax
         comp=N,30nm,0.9s
ZEA                                    pmax     pmax
         comp=E,50nm,0.9s
ZEA                                    pmax     pmax
         comp=Z,150nm,1.0s
ZEA                                    pmax     pmax
         comp=Z,400nm,11.8s
ZEA                                    smax     smax
         comp=E,500nm,15.9s
ZEA                                    MLR      MLR
         comp=N,2µm,17.0s
ZEA                                    MLR      MLR
         comp=E,4µm,17.0s
ZEA                                    MLR      MLR
         comp=Z,5µm,17.0s
KHMM    Horse Mountain     35.34  88   P        P         08 22 28.5 +0.2
KHMM                                   IAmb     IAmb      08 22 45.4
         comp=Z,343nm,1.2s
H11N2   WAKE ISLAND Hy     35.37 213   T        T         09 00 40.2
         baz=21,slow=76,SNR=2815
H11N3   WAKE ISLAND Hy     35.38 213   T        T         09 00 40.8
         baz=21,slow=76,SNR=4912
H11N1   WAKE ISLAND Hy     35.39 213   T        T         09 00 29.9
         baz=21,slow=76,SNR=2089
L04D    Klamath Falls      35.48  85   P        P         08 22 29.1 -0.4
         baz=304,SNR=18
YBH     Yreka Blue Hor     35.50  86   P        P         08 22 29.1 -0.4
         comp=Z,42nm,1.0s,baz=291,slow=3.7,SNR=43
YBH                                    LR       LR        08 33 34.0
         comp=Z,4µm,21.5s,baz=308,slow=30
YBH     Yreka Blue Hor     35.50  86   P        P         08 22 31.1 +1.6
YBH                                    pmax     pmax
         comp=Z,94nm,1.0s
YBH     Yreka Blue Hor     35.50  86   P        P         08 22 31.1 +1.6
YBH                                    IAmb     IAmb      08 22 45.9
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         comp=Z,94nm,0.9s
J05D    Fort Rock, OR      35.57  82   P        P         08 22 30.1 -0.1
         baz=302,SNR=27
M02C    Callahan           35.60  86   P        P         08 22 30.4  0.0
         baz=304,SNR=24
K04D    Chiloquin, OR      35.60  84   P        P         08 22 30.1 -0.4
         baz=303,SNR=10
NEW     Newport            35.62  73   P        P         08 22 30.1 -0.3
         comp=Z,17nm,0.5s,baz=304,slow=7.2,SNR=43
NEW     Newport            35.62  73   P        P         08 22 30.6 +0.2
NEW                                    pmax     pmax
         comp=Z,92nm,0.9s
NEW                                    MLR      MLR
         comp=Z,4µm,19.0s
NEW     Newport            35.62  73   P        P         08 22 30.6 +0.2
NEW                                    IAmb     IAmb      08 22 56.1
         comp=Z,92nm,0.9s
NEW     Newport            35.62  73   P        P         08 22 30.4  0.0
         baz=297,SNR=57
EDM     Edmonton           35.73  63   P        P         08 22 31.4 +0.1
EDM                                    pmax     pmax
         comp=Z,191nm,0.7s
EDM     Edmonton           35.73  63   P        P         08 22 31.4 +0.1
EDM                                    IAmb     IAmb      08 22 48.4
         comp=Z,191nm,0.7s
KMRM    Mail Ridge         35.73  89   P        P         08 22 32.1 +0.5
KMRM                                   IAmb     IAmb      08 22 47.0
         comp=Z,257nm,1.2s
N02D    Trinity Center     35.93  87   P        P         08 22 33.5 +0.3
         baz=305,SNR=18
M04C    Macdoel            36.01  85   P        P         08 22 33.3 -0.7
         baz=304,SNR=29
JYT     Yasato             36.13 263 ⇓P        P         08 22 36.1 +1.3
JSD     Sado               36.20 267 ⇑P        P         08 22 36.0 +0.5
WDC     Whiskeytown Da     36.26  87 ⇑P        P         08 22 37.9 +2.0
O02D    Mt. Diablo Mer     36.33  88   P        P         08 22 35.9 -0.8
         baz=306,SNR=29
H11S1   WAKE ISLAND Hy     36.57 213   T        T         09 01 49.8
         baz=20,slow=76,SNR=5133
H11S2   WAKE ISLAND Hy     36.59 213   T        T         09 01 50.9
         baz=20,slow=76,SNR=3889
H11S3   WAKE ISLAND Hy     36.59 213   T        T         09 01 50.8
         baz=20,slow=76,SNR=1489
USRK    Ussuriysk Ar.      36.60 280   P        P         08 22 39.0 +0.3
         comp=Z,152nm,0.9s,baz=58,slow=7.8,SNR=143
USRK                                   LR       LR        08 36 52.1
         comp=Z,7µm,21.6s,baz=58,slow=35
USRK    Ussuriysk Ar.      36.60 280   P        P         08 22 37.9 -0.8
USA0B   Ussuriysk Arra     36.60 280   P        P         08 22 39.0 +0.2
USA0B                                  pmax     pmax
         comp=Z,212nm,1.1s
USA0B   Ussuriysk Arra     36.60 280   P        P         08 22 39.0 +0.2
USA0B                                  IAmb     IAmb      08 22 41.4
         comp=Z,212nm,1.1s
F10A    Beach Ranch, E     36.64  76   P        P         08 22 39.3  0.0
F10A    Beach Ranch, E     36.64  76 ⇓P        P         08 22 39.7 +0.4
HOPS    Hopland Field      36.85  90   P        P         08 22 40.8 -0.3
HOPS                                   IAmb     IAmb      08 22 56.8
         comp=Z,261nm,1.2s
HOPS                                   IAMs_20  IAMs_20   08 36 27.3
         comp=Z,8µm,18.0s
O03E    Paynes Creek       36.88  87   P        P         08 22 40.3 -1.1
         baz=306,SNR=64
MOD     Modoc Plateau      36.90  84   P        P         08 22 42.0 +0.4
MOD                                    IAmb     IAmb      08 22 56.9
         comp=Z,168nm,1.1s
MOD                                    IAMs_20  IAMs_20   08 38 24.0
         comp=Z,8µm,18.0s
WALA    Waterton Lakes     37.15  70   P        P         08 22 44.1 +0.5
WALA    Waterton Lakes     37.15  70 ⇑P        P         08 22 44.1 +0.5
MJAR    Matsushiro Arr     37.16 265   P        P         08 22 43.6 -0.1
         comp=Z,58nm,0.9s,baz=50,slow=7.6,SNR=94
MJAR                                   PcP      PcP       08 25 03.0 -0.2
         comp=Z,18nm,1.0s,baz=62,slow=2.2,SNR=4.7
MJAR                                   pPcP               08 25 17.9
         comp=Z,13nm,0.9s,baz=107,slow=3.5,SNR=4.5
MJAR                                   LR       LR        08 37 12.6
         comp=Z,4µm,20.9s,baz=60,slow=35
MJAR    Matsushiro Arr     37.16 265   P        P         08 22 44.5 +0.8
MJAR                                   pmax     pmax
         comp=Z,130nm,1.2s
MJAR    Matsushiro Arr     37.16 265   P        P         08 22 44.5 +0.8
MJAR                                   IAmb     IAmb      08 22 46.2
         comp=Z,130nm,1.2s
MAJO    Matsushiro         37.16 265c iP        P         08 22 44.8 +1.1
MAJO                                   pmax     pmax
         comp=Z,311nm,1.1s
MAJO                                   MLR      MLR
         comp=Z,2µm,19.0s
MAJO    Matsushiro         37.16 265   P        P         08 22 44.5 +0.8
MAJO                                   IAmb     IAmb      08 22 46.1
         comp=Z,298nm,1.1s
MAJO    Matsushiro         37.16 265 ⇑P        P         08 22 44.5 +0.8
MAT     Matsushiro         37.16 265   P        P         08 22 44.6 +0.9
MAT                                    S        S         08 28 31.0 +3.1
MJB9    Matsu-Tunnel       37.16 265   P        P         08 22 45.0 +1.3
MJB9                                   IAmb     IAmb      08 22 58.5
         comp=Z,322nm,1.1s
VLA     Vladivostok        37.24 279c iP        P         08 22 45.2 +1.0
VLA                                    pmax     pmax
         comp=Z,1µm,1.4s
VLA                                    MLR      MLR
         comp=Z,2µm,16.0s
MCCM    Marconi Confer     37.49  91   IAMs_20  IAMs_20   08 37 16.1
         comp=Z,6µm,18.0s
WVOR    Wild Horse Val     37.64  82 ⇑P        P         08 22 49.0 +1.2
MDJ     Mudanjiang         37.85 282   P        P         08 22 48.3 -1.1
MDJ                                    pP       pP        08 22 55.6 -2.5
MDJ                                    sP       sP        08 22 59.2 -2.4
MDJ                                    PP       PP        08 24 14.0 -1.9
MDJ                                    S        S         08 28 38.7 +0.7
MDJ                                    ScP      ScP       08 28 49.5 -0.2
MDJ                                    PcS      PcS       08 28 55.9 +2.1
MDJ                                    ScS      ScS       08 33 02.2 +3.6
MDJ                                    pmax     pmax
         comp=Z,42nm,1.7s
MDJ                                    pmax     pmax
         comp=Z,960nm,7.4s
MDJ                                    LR       LR
         comp=Z,5µm,19.0s
MDJ                                    LR       LR
         comp=Z,8µm,20.1s
MDJ                                    LR       LR
         comp=Z,10µm,20.3s
MDJ     Mudanjiang         37.85 282   IAMs_20  IAMs_20   08 37 56.7
         comp=Z,10µm,20.0s
MSHR    Mys Shultsa        37.98 279ceP         P         08 22 51.4 +0.9
MSHR                                 i *PP      pwP       08 23 04.2 -0.6
MSHR                                   pmax     pmax
         comp=Z,782nm,1.0s
MSHR                                   MLR      MLR
         comp=Z,2µm,15.0s
BEKR    Beckworth          38.03  87   P        P         08 22 52.0 +0.9
BEKR                                   IAmb     IAmb      08 23 06.1
         comp=Z,133nm,1.1s
RES     Resolute Bay       38.13  25   P        P         08 22 50.2 -1.1
         comp=Z,17nm,1.1s,baz=263,slow=16,SNR=12
RES                                    PcP      PcP       08 25 06.4 +0.9
         comp=Z,28nm,1.0s,baz=294,slow=5.0,SNR=6.2
RES                                    pPcP               08 25 19.6
         comp=Z,41nm,0.7s,baz=289,slow=2.9,SNR=10
RES                                    LR       LR        08 42 16.0
         comp=Z,5µm,18.1s,baz=287,slow=42
RES     Resolute Bay       38.13  25   P        P         08 22 50.7 -0.7
MSO     Missoula           38.20  73   P        P         08 22 52.0 -0.4
MSO                                    IAmb     IAmb      08 23 18.4
         comp=Z,129nm,1.1s
MSO                                    IAMs_20  IAMs_20   08 39 44.6
         comp=Z,5µm,18.0s
MSO     Missoula           38.20  73   P        P         08 22 51.9 -0.5
         baz=300,SNR=60
JGF     Kuroka             38.30 265 ⇑P        P         08 22 54.1 +0.9
MPK     Martis Peak        38.57  87   P        P         08 22 56.7 +0.9
MPK                                    IAmb     IAmb      08 23 11.6
         comp=Z,404nm,1.1s
INU     Inuyama            38.67 265   P        P         08 22 55.8 -0.6
INU     Inuyama            38.67 265 ⇑P        P         08 22 56.5 +0.1
EMB     Emerald Bay        38.72  88   P        P         08 22 57.6 +0.5
PAHR    Pah Rah Range      38.73  86   P        P         08 22 58.5 +1.4
PAHR                                   IAmb     IAmb      08 23 12.1
         comp=Z,261nm,1.1s
VCNR    Virginia City      38.81  87   P        P         08 22 59.1 +1.4
VCNR                                   IAmb     IAmb      08 23 13.7
         comp=Z,262nm,1.0s
MFID    Camas Ranch        38.83  79   P        P         08 22 57.7 -0.1
PNTR    Pine Nut           38.96  87   P        P         08 22 59.9 +0.8
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PNTR				IAmb	IAmb	08 23 14.5	
	comp=Z,297nm,1.0s						
CMB	**Columbia Colle**	39.11	89	P	P	08 23 00.4	+0.3
CMB				pmax	pmax		
	comp=Z,145nm,1.2s						
CMB	**Columbia Colle**	39.11	89	P	P	08 23 00.4	+0.3
CMB				IAMs_20	IAMs_20	08 35 13.0	
	comp=Z,6µm,21.0s						
EUNU	**Eureka**	39.15	16	P	P	08 22 59.9	-0.1
SAO	**San Andreas Ge**	39.24	91	P	P	08 23 02.3	+1.2
SAO				pmax	pmax		
	comp=Z,105nm,1.0s						
SAO	**San Andreas Ge**	39.24	91	P	P	08 23 02.3	+1.2
SAO				IAMs_20	IAMs_20	08 37 49.4	
	comp=Z,5µm,18.0s						
SAO	**San Andreas Ge**	39.24	91	⇓P	P	08 23 03.4	+2.2
HLID	**Hailey**	39.61	78	P	P	08 23 03.8	-0.6
	baz=303,SNR=75						
BMN	**Battle Mountai**	39.65	84	P	P	08 23 05.5	+0.8
BMN				pmax	pmax		
	comp=Z,109nm,1.3s						
BMN	**Battle Mountai**	39.65	84	P	P	08 23 05.5	+0.8
JWT	**Wachi**	39.72	266	P	P	08 23 05.7	+0.6
JWT				IAmb	IAmb	08 23 07.6	
	comp=Z,296nm,1.1s						
JWT	**Wachi**	39.72	266	⇑P	P	08 23 06.0	+0.9
DLMT	**Dillon**	39.75	74	P	P	08 23 05.3	-0.2
BCYI	**Bear Canyon**	39.82	76	P	P	08 23 05.2	-1.0
PMPB	**Monarch Peak**	39.99	92	P	P	08 23 06.9	-0.5
PMPB				IAmb	IAmb	08 23 31.6	
	comp=Z,193nm,1.1s						
EGMT	**Eagleton**	40.07	69	P	P	08 23 08.2	+0.1
EGMT				IAmb	IAmb	08 23 14.0	
	comp=Z,362nm,1.4s						
EGMT	**Eagleton**	40.07	69	P	P	08 23 06.9	-1.1
	baz=300,SNR=73						
LHV	**Little Huntoon**	40.15	87	P	P	08 23 09.7	+1.0
LHV				IAmb	IAmb	08 23 24.5	
	comp=Z,215nm,1.2s						
NVAR	**Mina Array Bea**	40.17	87	P	P	08 23 09.3	+0.2
	comp=Z,28nm,1.0s,baz=289,slow=8.7,SNR=98						
NVAR				ScP	ScP	08 28 57.0	-2.0
	comp=Z,6.0nm,1.0s,baz=284,slow=2.7,SNR=6.8						
NVAR				LR	LR	08 38 45.5	
	comp=Z,3µm,18.3s,baz=304,slow=34						
MDPB	**Devils Postpil**	40.17	88	P	P	08 23 09.7	+0.5
MDPB				IAmb	IAmb	08 23 24.6	
	comp=Z,245nm,1.1s						
BOZ	**Bozeman (W)**	40.20	73	P	P	08 23 09.1	-0.2
BOZ				pmax	pmax		
	comp=Z,149nm,1.4s						
BOZ				MLR	MLR		
	comp=Z,4µm,19.0s						
BOZ	**Bozeman (W)**	40.20	73	P	P	08 23 09.1	-0.2
BOZ	**Bozeman (W)**	40.20	73	P	P	08 23 08.6	-0.7
	baz=302,SNR=99						
BOZ				S	S	08 29 14.5	+0.7
	baz=302						
NV11	**Mina Array Sit**	40.26	87	P	P	08 23 10.3	+0.5
MLAC	**Mammoth, Mammo**	40.33	88	P	P	08 23 10.4	-0.1
	baz=308						
BOD	**Bodaibo**	40.52	308	*e*P	P	08 23 09.7	-1.8
BOD				pmax	pmax		
	comp=Z,104nm,1.7s						
PAGB	**Antelope Grade**	40.64	92	P	P	08 23 13.1	+0.3
PAGB				IAmb	IAmb	08 23 28.0	
	comp=Z,176nm,1.0s						
ELK	**Elko**	40.69	82	P	P	08 23 13.6	+0.2
ELK				pmax	pmax		
	comp=Z,42nm,0.9s						
ELK				MLR	MLR		
	comp=Z,6µm,18.0s						
ELK	**Elko**	40.69	82	P	P	08 23 13.6	+0.2
ELK				IAMs_20	IAMs_20	08 39 51.8	
	comp=Z,6µm,18.0s						
QLMT	**Earthquake Lak**	40.73	74	P	P	08 23 13.6	-0.1
CN2	**Changchun**	40.80	284	*e*P	P	08 23 13.3	-0.7
CN2				PP	PP	08 24 49.0	+0.8
CN2				*e*S	S	08 29 21.7	-0.6
CN2				SS	SS	08 32 17.0	-6.7
CN2				pmax	pmax		
	comp=Z,50nm,1.3s						
CN2				pmax	pmax		
	comp=Z,1µm,3.0s						
CN2				LR	LR		
	comp=Z,8µm,19.0s						
CN2				LR	LR		
	comp=Z,6µm,19.0s						
CN2				LR	LR		
	comp=Z,10µm,21.0s						
VOG	**Valley Oaks Go**	40.80	90	P	P	08 23 13.8	-0.3
	baz=310						
VOG				S	S	08 29 20.9	-1.7
	baz=310						
TIN	**Tinemaha, Big**	41.06	89	P	P	08 23 16.2	-0.2
	baz=309,SNR=11						
TIN				S	S	08 29 30.2	+3.6
	baz=309						
SMMC	**Simmler**	41.07	92	P	P	08 23 15.9	-0.5
	baz=311,SNR=8.7						
SMMC				S	S	08 29 30.1	+3.5
	baz=311						
FFC	**Flin Flon**	41.24	57	IAMs_20	IAMs_20	08 40 12.0	
	comp=Z,7µm,20.0s						
FFC	**Flin Flon**	41.24	57	⇑P	P	08 23 17.3	-0.1
VES	**Vestal, Richgr**	41.30	91	P	P	08 23 18.3	+0.1
	baz=310,SNR=37						
VES				S	S	08 29 31.9	+2.0
	baz=310						
JCJ	**Chichijima**	41.30	251	P	P	08 23 18.9	+0.6
	comp=Z,308nm,0.8s,baz=47,slow=4.3,SNR=11						
JCJ	**Chichijima**	41.30	251	P	P	08 23 19.7	+1.4
JHS	**Saijyo**	41.33	268	P	P	08 23 18.4	-0.1
JHS				IAmb	IAmb	08 23 23.5	
	comp=Z,225nm,1.3s						
JHS	**Saijyo**	41.33	268	⇑P	P	08 23 19.1	+0.6
PKM	**Mcpherson Peak**	41.46	92	P	P	08 23 21.2	+1.4
	baz=311,SNR=9.7						
PKM				S	S	08 29 35.7	+3.0
	baz=311						
H17A	**Grant Village**	41.48	74	P	P	08 23 20.7	+0.8
	baz=303,SNR=29						
H17A				S	S	08 29 35.1	+2.1
	baz=303						
LKWY	**Lake**	41.49	74	IAMs_20	IAMs_20	08 42 02.9	
	comp=Z,4µm,19.0s						
CWC	**Cottonwood Cre**	41.54	89	P	P	08 23 21.6	+1.2
	baz=310						
CWC				S	S	08 29 33.6	-0.3
	baz=310						
HVU	**Hansel Valley**	41.61	79	P	P	08 23 21.1	+0.2
HVU				pmax	pmax		
	comp=Z,54nm,0.8s						
HVU	**Hansel Valley**	41.61	79	P	P	08 23 21.1	+0.2
FXWY	**Fox Creek**	41.62	76	P	P	08 23 21.2	+0.1
GRAC	**Grapevine Rang**	41.64	88	P	P	08 23 21.9	+0.9
	baz=309,SNR=34						
GRAC				S	S	08 29 37.1	+2.0
	baz=309						
JMN	**Monobe**	41.69	266	⇑P	P	08 23 22.3	+0.9
ISA	**Isabella, Lake**	41.79	90	P	P	08 23 22.6	+0.3
	baz=310,SNR=32						
ISA				S	S	08 29 38.4	+1.0
	baz=310						
SBC	**Santa Barbara**	41.81	93	P	P	08 23 21.0	-1.4
	baz=311						
SBC				S	S	08 29 40.5	+2.9
	baz=311						
RLMT	**Red Lodge**	41.87	73	P	P	08 23 23.6	+0.6
RLMT				IAmb	IAmb	08 23 49.4	
	comp=Z,194nm,1.1s						
RLMT	**Red Lodge**	41.87	73	P	P	08 23 23.1	+0.1
	baz=303,SNR=94						
RLMT				S	S	08 29 38.5	-0.1
	baz=303						
REDW	**Red Top Meadow**	41.88	76	P	P	08 23 23.7	+0.5
R11A	**Troy Canyon, C**	41.91	85	P	P	08 23 23.9	+0.5
R11A				IAmb	IAmb	08 23 38.0	
	comp=Z,125nm,1.1s						
R11A	**Troy Canyon, C**	41.91	85	P	P	08 23 23.4	0.0
	baz=308,SNR=107						
R11A				S	S	08 29 40.1	+0.8
	baz=308						
ARVC	**Arvin**	41.91	91	P	P	08 23 23.9	+0.6
	baz=311,SNR=9.4						
ARVC				S	S	08 29 40.4	+1.3
	baz=311						
AHID	**Auburn Hatcher**	42.07	77	P	P	08 23 25.5	+0.8
AHID				IAmb	IAmb	08 23 51.3	
	comp=Z,206nm,1.6s						
AHID				IAMs_20	IAMs_20	08 42 04.2	
	comp=Z,6µm,18.0s						
SCZ2	**Santa Cruz Isl**	42.15	93	P	P	08 23 25.2	-0.1
	baz=312						
FURC	**Furnace Creek,**	42.28	88	P	P	08 23 26.8	+0.6
	baz=310,SNR=62						
FURC				S	S	08 29 46.3	+1.9
	baz=310						
OSI	**Osito Audit: C**	42.31	92	P	P	08 23 27.4	+0.8
	baz=311,SNR=6.0						
OSI				S	S	08 29 46.7	+1.6
	baz=311						
LRMC	**Laurel Mtn Rad**	42.40	90	P	P	08 23 28.0	+0.6
	baz=310,SNR=5.3						
LRMC				S	S	08 29 47.3	+0.8
	baz=310						
DUG	**Dugway, Tooele**	42.51	81	IAMs_20	IAMs_20	08 41 09.9	
	comp=Z,5µm,18.0s						
DUG	**Dugway, Tooele**	42.51	81	P	P	08 23 28.3	0.0
	baz=307,SNR=99						
DUG				S	S	08 29 49.8	+1.7
	baz=307						
GWY	**Greenwater Val**	42.58	88	P	P	08 23 29.4	+0.5
GWY				IAmb	IAmb	08 23 43.5	
	comp=Z,179nm,1.1s						
EDW2	**Edwards Air Fo**	42.60	91	P	P	08 23 29.2	+0.3
	baz=311,SNR=16						
EDW2				S	S	08 29 51.1	+1.8
	baz=311						
SNCC	**San Nicolas Is**	42.72	94	P	P	08 23 29.9	+0.1
	baz=312						
DECC	**Green Verdugo**	42.79	92	P	P	08 23 30.5	0.0
	baz=311,SNR=11						
DECC				S	S	08 29 53.9	+1.8
	baz=311						
LAO	**LASA Array**	42.82	69	IAMs_20	IAMs_20	08 41 49.9	
	comp=Z,4µm,20.0s						
LAO	**LASA Array**	42.82	69	P	P	08 23 30.6	0.0
	baz=302,SNR=46						
LAO				S	S	08 29 52.9	+0.6
	baz=302						
PRN	**Pahroc Range**	42.82	86	P	P	08 23 31.5	+0.7
PRN				IAmb	IAmb	08 23 46.3	
	comp=Z,316nm,1.0s						
PRN	**Pahroc Range**	42.82	86	⇑P	P	08 23 31.1	+0.3
PASC	**Pasadena Art C**	42.94	92	IAMs_20	IAMs_20	08 40 51.1	
	comp=Z,4µm,18.0s						
BW06	**Boulder Array**	43.00	76	P	P	08 23 32.5	+0.2
BW06	**Boulder Array**	43.00	76	P	P	08 23 31.8	-0.5
	baz=305,SNR=108						
BW06				S	S	08 29 56.0	+0.6
	baz=305						
KSRS	**Korea Array**	43.00	275	P	P	08 23 33.3	+1.3
	comp=Z,162nm,1.0s,baz=58,slow=7.4,SNR=180						
KSRS				LR	LR	08 40 44.3	
	comp=Z,2µm,20.6s,baz=53,slow=35						
PD31	**Pinedale Array**	43.00	76	⇑P	P	08 23 32.3	0.0
PDAR	**Pinedale Array**	43.00	76	P	P	08 23 32.3	0.0
	comp=Z,37nm,0.9s,baz=302,slow=4.8,SNR=108						
PDAR				LR	LR	08 41 24.8	
	comp=Z,2µm,18.9s,baz=302,slow=36						
PDAR	**Pinedale Array**	43.00	76	P	P	08 23 32.5	+0.2
SHOC	**Shoshone, Teco**	43.01	88	P	P	08 23 32.8	+0.6
	baz=310,SNR=24						
SHOC				S	S	08 29 58.3	+3.1
	baz=310						
KSAR	**Wonju Array Be**	43.03	275	P	P	08 23 33.7	+1.4
KSAR	**Wonju Array Be**	43.03	275	P	P	08 23 33.7	+1.4
DGMT	**Dagmar**	43.05	66	IAMs_20	IAMs_20	08 43 39.9	
	comp=Z,6µm,18.0s						
DGMT	**Dagmar**	43.05	66	P	P	08 23 31.8	-0.6
	baz=302,SNR=30						
DGMT				S	S	08 29 56.1	+0.6
	baz=302						
SNY	**Shenyang**	43.05	283	⇑P	P	08 23 33.0	+0.7
SNY				S	S	08 30 00.2	+4.6
SNY				pmax	pmax		
	comp=Z,370nm,1.4s						
SNY				LR	LR		
	comp=Z,5µm,20.6s						
SNY				LR	LR		
	comp=Z,3µm,20.6s						
SNY				LR	LR		
	comp=Z,6µm,23.0s						
GSC	**Goldstone, Bar**	43.06	89	P	P	08 23 32.9	+0.2
GSC				pmax	pmax		
	comp=Z,339nm,1.1s						
GSC	**Goldstone, Bar**	43.06	89	P	P	08 23 32.9	+0.2
GSC				IAmb	IAmb	08 23 48.1	
	comp=Z,339nm,1.1s						
GSC	**Goldstone, Bar**	43.06	89	P	P	08 23 32.8	+0.2
	baz=310,SNR=52						
GSC				S	S	08 29 57.6	+1.4
	baz=310						
JLU	**Jordanelle**	43.11	80	P	P	08 23 33.7	+0.5
FMP	**Fort Macarthur**	43.18	92	P	P	08 23 33.1	-0.4
	baz=312						
FMP				S	S	08 30 01.0	+3.4
	baz=312						
RRX	**Edison Barstow**	43.22	90	P	P	08 23 33.6	-0.3
	baz=311						
RRX				S	S	08 30 00.1	+1.7
	baz=311						
BFSC	**Mount Baldy Ra**	43.23	91	P	P	08 23 34.5	+0.4
	baz=311,SNR=30						
BFSC				S	S	08 30 00.1	+1.5
	baz=311						
YNCB	**YEONCHEON**	43.26	276	P	P	08 23 35.9	+1.8
	SNR=22						
KSDDC	**Dongducheon**	43.26	276	P	P	08 23 35.9	+1.8
	SNR=17						
KSYOC	**YEONGCHEON**	43.30	272	P	P	08 23 36.0	+1.6
	SNR=8.2						
CIS	**Catalina Islan**	43.31	93	P	P	08 23 34.1	-0.5
	baz=312						
CIS				S	S	08 30 01.8	+2.1
	baz=312						
KSUSN	**Ulsan**	43.36	272	P	P	08 23 36.6	+1.6
	SNR=14						
CIT	**Chita**	43.37	301	*e*P	P	08 23 34.6	-0.3
CIT				*e*		08 23 48.3	
CIT				*e*		08 25 23.2	
CIT				*e*		08 25 51.5	
CIT				pmax	pmax		
	comp=Z,375nm,1.6s						
KSMGY	**Mungyeong**	43.42	274	P	P	08 23 36.5	+1.1
	SNR=21						
KSICN	**Icheon**	43.42	275	P	P	08 23 36.8	+1.4
	SNR=20						
KSMUS	**Musan**	43.45	276	P	P	08 23 37.7	+2.0
	SNR=6.8						
KSDAG	**Daegu**	43.46	272	P	P	08 23 37.1	+1.3
	SNR=12						
SCI2	**San Clemente I**	43.51	93	P	P	08 23 35.9	-0.2
	baz=312						
SCI2				S	S	08 30 05.2	+2.7
	baz=312						
KSSAJ	**Sangju**	43.51	273	P	P	08 23 37.6	+1.5
	SNR=21						
KSSOD	**Songwoldong**	43.52	275	P	P	08 23 38.6	+2.4
	SNR=14						
TUQ	**Turquoise Moun**	43.53	89	P	P	08 23 36.1	-0.4
	baz=310						
TUQ				S	S	08 30 04.0	+1.0
	baz=310						
KSSEO	**Seoul**	43.60	275	P	P	08 23 38.5	+1.6
	SNR=18						
KSSEO	**Seoul**	43.60	275	P	P	08 23 39.0	+2.1
	SNR=22						
KSBUS	**Busan**	43.66	271	P	P	08 23 42.0	+4.6
	SNR=14						
HEC	**Hector,Ludlow**	43.66	90	P	P	08 23 37.4	-0.1
	baz=311,SNR=32						
HEC				S	S	08 30 07.0	+2.0
	baz=311						
BBRC	**Big Bear Solar**	43.67	91	P	P	08 23 37.5	-0.3
	baz=311,SNR=18						
BBRC				S	S	08 30 07.4	+2.0
	baz=311						
KSBON	**Boeun**	43.68	274	P	P	08 23 38.8	+1.3
	SNR=30						
TULEG	**Thule**	43.69	19	*i* P	P	08 23 37.0	-0.1
TULEG	**Thule**	43.69	19	P	P	08 23 37.1	+0.1
TULEG	**Thule**	43.69	19	⇑P	P	08 23 36.0	-1.1
TCRU	**Three Creeks R**	43.69	82	P	P	08 23 38.7	+0.7
KSSWO	**Suwon**	43.71	275	P	P	08 23 39.6	+1.8
	SNR=14						
MIYA	**Miryang-si**	43.73	272	P	P	08 23 42.1	+4.1
	SNR=6.8						
KSCPR	**CHUPUNGNYEONG**	43.75	273	P	P	08 23 39.3	+1.2
	SNR=42						
KSGIC	**Gimchen**	43.76	273	P	P	08 23 40.2	+2.1
	SNR=6.3						
OKCB	**Cheongsan-myeo**	43.78	273	P	P	08 23 40.0	+1.7
	SNR=64						
CCUT	**Cedar City**	43.78	84	P	P	08 23 39.4	+0.8
INCN	**Inchon**	43.78	276	P	P	08 23 39.1	+0.7
INCN				pmax	pmax		
	comp=Z,706nm,1.2s						
INCN	**Inchon**	43.78	276	P	P	08 23 39.1	+0.7
INCN	**Inchon**	43.78	276	P	P	08 23 38.8	+0.4
INCN				P	P	08 23 38.8	+0.4
INCN				P	P	08 23 38.8	+0.4
INCN				S	S	08 30 04.7	-1.8
INCN				S	S	08 30 04.7	-1.8
INCN				S	S	08 30 04.7	-1.8
INCN	**Inchon**	43.78	276	⇑P	P	08 23 39.1	+0.7
PYTK	**Pyeongtaek**	43.80	275	P	P	08 23 40.2	+1.7
	SNR=6.1						
KSCEA	**Cheonan**	43.81	274	P	P	08 23 40.3	+1.7
	SNR=17						
MVU	**Marysvale**	43.90	82	P	P	08 23 40.1	+0.5
MVU				IAmb	IAmb	08 24 01.5	
	comp=Z,314nm,1.0s						
MURC	**Murrieta**	43.94	92	P	P	08 23 39.8	+0.1
	baz=312,SNR=16						
MURC				S	S	08 30 10.1	+1.3
	baz=312						
HAWB	**Hwaseong-si**	43.95	275	P	P	08 23 43.0	+3.3
	SNR=18						
JNU	**Nakatsue**	43.96	268	P	P	08 23 40.9	+1.0
	comp=Z,328nm,1.0s,baz=43,slow=5.9,SNR=70						
JNU	**Nakatsue**	43.96	268	P	P	08 23 40.9	+1.0
JNU	**Nakatsue**	43.96	268	⇑P	P	08 23 40.8	+0.9
TJN	**Taejon**	44.03	274	*ce*P	P	08 23 41.1	+0.8
GMRC	**Granite Mounta**	44.12	89	P	P	08 23 41.5	+0.3
	baz=311,SNR=55						
GMRC				S	S	08 30 13.0	+1.4
	baz=311						
LCMT	**Little Creek M**	44.19	85	P	P	08 23 42.1	+0.3
LCMT				IAmb	IAmb	08 23 56.9	
	comp=Z,133nm,1.0s						
PFO	**Pinyon Flats O**	44.39	91	P	P	08 23 42.9	-0.4
	comp=Z,21nm,1.1s,baz=321,slow=7.9,SNR=22						
PFO	**Pinyon Flats O**	44.39	91	IAMs_20	IAMs_20	08 42 30.8	
	comp=Z,4µm,18.0s						
PFO	**Pinyon Flats O**	44.39	91	P	P	08 23 43.6	+0.2
	baz=312,SNR=25						
PFO				S	S	08 30 17.4	+1.8
	baz=312						
TPFO	**Pinon Flats**	44.39	91	P	P	08 23 44.1	+0.7
	baz=312,SNR=27						
TPFO				S	S	08 30 17.1	+1.5
	baz=312						
BELC	**Belle Mtn. Jos**	44.42	90	P	P	08 23 43.6	-0.1
	baz=312,SNR=36						
BELC				S	S	08 30 17.0	+0.9
	baz=312						
109C	**Camp Elliot, M**	44.47	92	P	P	08 23 44.2	+0.3
	baz=312,SNR=15						
109C				S	S	08 30 18.4	+1.9
	baz=312						
NEE2	**Needles Airpor**	44.77	88	P	P	08 23 46.2	-0.2
	baz=311						
NEE2				S	S	08 30 20.4	-0.5
	baz=311						
IRM	**Iron Mountain**	44.85	89	P	P	08 23 47.5	+0.5
	baz=311,SNR=35						
IRM				S	S	08 30 23.4	+1.4
	baz=311						
MONP2	**Monument Peak**	44.89	92	P	P	08 23 47.4	-0.1
	baz=312,SNR=25						
MONP2				S	S	08 30 25.4	+2.3
	baz=312						
K22A	**Casper**	44.90	74	P	P	08 23 46.7	-0.7
	baz=306,SNR=24						
K22A				S	S	08 30 21.5	-1.3
	baz=306						
BC3	**Big Chuckawall**	44.98	90	P	P	08 23 47.8	-0.4
	baz=312,SNR=13						
BC3				S	S	08 30 25.5	+1.3
	baz=312						
RWWY	**Rawlins**	45.05	76	IAMs_20	IAMs_20	08 44 12.0	
	comp=Z,5µm,18.0s						
SWSC	**Sam W. Stewart**	45.24	91	P	P	08 23 49.8	-0.3
	baz=312,SNR=10						
SWSC				S	S	08 30 30.9	+3.2
	baz=312						
IKP	**In-Ko-Pah, Jac**	45.25	92	P	P	08 23 50.3	+0.1
	baz=313,SNR=29						
JSU	**Suzuyama**	45.31	266	⇑P	P	08 23 51.1	+0.5
O20A	**White River Ci**	45.35	78	P	P	08 23 50.4	-0.7
	baz=308,SNR=102						
O20A				S	S	08 30 28.3	-1.2
	baz=308						
PDMCI	**Parker Dam,Lak**	45.38	88	P	P	08 23 51.4	+0.3
	baz=311,SNR=22						
PDMCI				S	S	08 30 31.6	+2.0
	baz=311						
RSSD	**Black Hills**	45.52	71	P	P	08 23 51.5	-0.9
	baz=305						
RSSD				S	S	08 30 33.8	+1.7
	baz=305						
RSSD	**Black Hills**	45.52	71	⇑P	P	08 23 51.9	-0.5
GLA	**Glamis**	45.78	90	P	P	08 23 54.6	+0.3
	baz=312						
GLA				S	S	08 30 36.7	+1.1
	baz=312						
NRIK	**Noril'sk**	45.90	331	P	P	08 23 54.9	+0.2
	comp=Z,95nm,1.0s,baz=76,slow=7.8,SNR=90						
NRIK				PcP	PcP	08 25 32.5	+1.3
	comp=Z,44nm,1.0s,baz=79,slow=2.3,SNR=5.0						
NRIK				pPcP		08 25 45.1	
	comp=Z,70nm,0.9s,baz=82,slow=1.9,SNR=6.2						
NRIK				LR	LR	08 45 23.3	
	comp=Z,3µm,18.4s,baz=37,slow=39						
MDND	**Maddock**	45.97	64	P	P	08 23 55.8	+0.1
	baz=304,SNR=67						
MDND				S	S	08 30 36.8	-1.1
	baz=304						
DL2	**Dalian**	45.99	281	⇑*i*P	P	08 23 55.5	-0.4
DL2				S	S	08 30 42.9	+4.6
DL2				pmax	pmax		
	comp=Z,440nm,1.0s						
DL2				pmax	pmax		
	comp=Z,1µm,3.7s						
DL2				LR	LR		
	comp=Z,3µm,17.0s						
DL2				LR	LR		
	comp=Z,2µm,19.9s						
DL2				LR	LR		
	comp=Z,2µm,26.5s						
N23A	**Red Feather La**	46.29	76	P	P	08 23 58.0	-0.6
	baz=307,SNR=50						
N23A				S	S	08 30 43.9	+0.7
	baz=307						
WUAZ	**Wupatki**	46.31	85	IAMs_20	IAMs_20	08 40 32.5	
	comp=Z,5µm,20.0s						
WUAZ	**Wupatki**	46.31	85	P	P	08 23 58.8	+0.1
	baz=311,SNR=38						
WUAZ				S	S	08 30 46.5	+3.1
	baz=311						
WUAZ	**Wupatki**	46.31	85	⇓P	P	08 23 59.6	+1.0
NEEM	**North Greenlan**	46.39	15	⇑*i*P	P	08 23 58.4	-0.5
NEEM				IAmb	IAmb	08 23 59.5	
	comp=Z,289nm,1.3s						
NEEM				*i*		08 24 11.1	
NOR	**Nord**	46.45	5	*i* P	P	08 23 57.8	-1.2
NOR				*i*		08 25 32.2	
NOR	**Nord**	46.45	5	⇑P	P	08 23 58.3	-0.7
ULM	**Lac du Bonnet**	46.70	59	P	P	08 24 00.7	-0.6
	comp=Z,22nm,0.5s,baz=308,slow=7.8,SNR=40						
ULM				LR	LR	08 44 08.2	
	comp=Z,4µm,21.3s,baz=320,slow=37						
ULM	**Lac du Bonnet**	46.70	59	⇑P	P	08 24 00.6	-0.6
SMCO	**Snowmass**	46.71	78	⇑P	P	08 24 02.7	+0.7
MVCO	**Mesa Verde**	47.01	81	IAMs_20	IAMs_20	08 44 45.9	
	comp=Z,3µm,18.0s						
MVCO	**Mesa Verde**	47.01	81	P	P	08 24 03.8	-0.4
	baz=310,SNR=53						

MVCO				S	**S**	**08 30 54.2**	**+0.8**
	baz=310						
ISCO	**Idaho Springs**	**47.15**	**77**	IAMs_20	IAMs_20	08 45 22.7	
	comp=Z,6µm,18.0s						
ISCO	**Idaho Springs**	**47.15**	**77**	P	**P**	**08 24 05.2**	**-0.1**
	baz=308,SNR=41						
ISCO				S	**S**	**08 30 55.6**	**-0.1**
	baz=308						
W18A	**Petrified Fore**	**47.59**	**84**	P	**P**	**08 24 08.6**	**0.0**
	baz=311,SNR=21						
W18A				S	**S**	**08 31 04.7**	**+3.0**
	baz=311						
S22A	**4UR Ranch, Cre**	**47.69**	**80**	P	**P**	**08 24 10.0**	**+0.4**
	baz=310,SNR=116						
S22A				S	**S**	**08 31 05.6**	**+2.3**
	baz=310						
214A	**Organ Pipe Nat**	**47.77**	**90**	P	**P**	**08 24 09.7**	**-0.2**
	baz=313,SNR=21						
214A				S	**S**	**08 31 04.5**	**+0.4**
	baz=313						
AGMN	**Agassiz Nation**	**47.80**	**62**	P	**P**	**08 24 09.5**	**-0.4**
AGMN				IAmb	IAmb	08 24 14.8	
	comp=Z,185nm,1.2s						
AGMN				IAMs_20	IAMs_20	08 46 15.6	
	comp=Z,6µm,18.0s						
AGMN	**Agassiz Nation**	**47.80**	**62**	P	**P**	**08 24 09.0**	**-0.9**
	baz=305,SNR=81						
AGMN				S	**S**	**08 31 03.2**	**-0.7**
	baz=305						
D32A	**Dogwood Acres,**	**47.82**	**64**	P	**P**	**08 24 09.7**	**-0.4**
D32A				IAmb	IAmb	08 24 25.4	
	comp=Z,88nm,1.1s						
Q24A	**Divide**	**47.95**	**77**	P	**P**	**08 24 11.1**	**-0.5**
	baz=309						
Q24A				S	**S**	**08 31 09.4**	**+2.4**
	baz=309						
IRK	**Irkutsk**	**48.12**	**305**	*e*P	**P**	**08 24 10.7**	**-1.6**
IRK				pmax	pmax		
	comp=Z,245nm,2.2s						
SUSD	**Miller**	**48.30**	**68**	P	**P**	**08 24 13.1**	**-0.8**
	baz=307,SNR=31						
SUSD				S	**S**	**08 31 10.0**	**-1.2**
	baz=307						
SDCO	**Great Sand Dun**	**48.51**	**79**	P	**P**	**08 24 16.1**	**+0.2**
SDCO				IAmb	IAmb	08 24 30.4	
	comp=Z,66nm,1.0s						
SDCO	**Great Sand Dun**	**48.51**	**79**	P	**P**	**08 24 16.1**	**+0.2**
	baz=310,SNR=84						
SDCO				S	**S**	**08 31 14.0**	**-0.8**
	baz=310						
BJI	**Beijing**	**48.60**	**285**	P	**P**	**08 24 17.0**	**+0.8**
BJI				sP	**pP**	**08 24 25.8**	**+0.7**
BJI				PP	**PP**	**08 26 09.6**	**+0.6**
BJI				S	**S**	**08 31 15.3**	**-0.2**
BJI				SS	**SS**	**08 34 40.3**	**-5.0**
BJI				pmax	pmax		
	comp=Z,130nm,1.0s						
BJI				pmax	pmax		
	comp=Z,1µm,4.0s						
BJI				LR	LR		
	comp=Z,7µm,20.6s						
BJI				LR	LR		
	comp=Z,4µm,21.6s						
BJI				LR	LR		
	comp=Z,10µm,21.6s						
OGNE	**Ogallala**	**48.60**	**73**	P	**P**	**08 24 16.0**	**-0.3**
	baz=308,SNR=36						
OGNE				S	**S**	**08 31 16.8**	**+1.0**
	baz=308						
UPNV	**Upernavik**	**48.62**	**21**	*i* P	**P**	**08 24 16.2**	**+0.3**
TLY	**Talaya**	**48.76**	**305**	P	**P**	**08 24 17.1**	**-0.2**
	comp=Z,62nm,0.8s,baz=34,slow=6.2,SNR=40						
TLY				PcP	**PcP**	**08 25 42.6**	**+0.8**
	comp=Z,19nm,0.9s,baz=328,slow=3.8,SNR=3.3						
TLY				pPcP		08 25 55.6	
	comp=Z,141nm,1.1s,baz=321,slow=2.8,SNR=9.6						
TLY				LR	LR	08 45 58.9	
	comp=Z,4µm,19.6s,baz=48,slow=37						
TLY	**Talaya**	**48.76**	**305***c*	*i*P	**P**	**08 24 17.0**	**-0.2**
TLY				*e*		08 25 42.3	
TLY				*e*		08 26 12.1	
TLY				*e*S	**S**	**08 31 18.3**	**+0.8**
TLY				pmax	pmax		
	comp=Z,365nm,1.2s						
TLY				MLR	MLR		
	comp=Z,9µm,16.0s						
TLY	**Talaya**	**48.76**	**305**	IAMs_20	IAMs_20	08 46 04.9	
	comp=Z,4µm,19.0s						
TLY	**Talaya**	**48.76**	**305**	P	**P**	**08 24 16.9**	**-0.4**
TLY				P	**P**	**08 24 16.9**	**-0.4**
TLY	**Talaya**	**48.76**	**305**	⇑P	**P**	**08 24 17.1**	**-0.2**
TUC	**Tucson**	**48.80**	**88**	IAMs_20	IAMs_20	08 45 05.4	
	comp=Z,4µm,18.0s						
TUC	**Tucson**	**48.80**	**88**	P	**P**	**08 24 17.7**	**-0.2**
	baz=313						
TUC				S	**S**	**08 31 20.2**	**+1.6**
	baz=313						
TUC	**Tucson**	**48.80**	**88**	⇓P	**P**	**08 24 18.2**	**+0.3**
ULN	**Ulaanbaatar**	**49.15**	**299***c*	*e*P	**P**	**08 24 20.3**	**-0.1**
ULN				pmax	pmax		
	comp=Z,150nm,1.3s						
ULN				MLR	MLR		
	comp=Z,6µm,17.0s						
ULN	**Ulaanbaatar**	**49.15**	**299**	P	**P**	**08 24 20.4**	**-0.1**
ULN				P	**P**	**08 24 20.4**	**-0.1**
ULN				P	**P**	**08 24 20.4**	**-0.1**
ULN	**Ulaanbaatar**	**49.15**	**299**	⇑P	**P**	**08 24 20.0**	**-0.5**
KSCO	**Kaye Shedlock'**	**49.45**	**75**	P	**P**	**08 24 23.2**	**+0.3**
	baz=309,SNR=41						
KSCO				S	**S**	**08 31 28.8**	**+1.0**
	baz=309						
SONM	**Songino Array**	**49.53**	**299**	P	**P**	**08 24 23.6**	**+0.2**
	comp=Z,92nm,1.0s,baz=52,slow=6.5,SNR=216						
SONM				PcP	**PcP**	**08 25 45.0**	**+0.2**
	comp=Z,37nm,1.2s,baz=52,slow=3.5,SNR=4.3						
SONM				pPcP		08 25 58.2	
	comp=Z,76nm,1.1s,baz=84,slow=2.0,SNR=9.3						
SONM				ScP	**ScP**	**08 29 37.7**	**+0.4**
	comp=Z,5.5nm,1.1s,baz=76,slow=2.7,SNR=3.6						
SONM				LR	LR	08 46 19.3	
	comp=Z,9µm,19.4s,baz=54,slow=37						
T25A	**Trinidad**	**49.56**	**79**	P	**P**	**08 24 23.8**	**-0.1**
	baz=310,SNR=102						
T25A				S	**S**	**08 31 28.8**	**-0.7**
	baz=310						
ZAK	**Zakamensk**	**49.69**	**304**	*e*P	**P**	**08 24 24.3**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,194nm,1.3s						
KBS	**Kingsbay**	**49.70**	**359**	⇑*i*P	**P**	**08 24 24.6**	**+0.6**
KBS				pmax	pmax		
	comp=Z,70nm,1.2s						
KBS				MLR	MLR		
	comp=Z,3µm,17.0s						
KBS	**Kingsbay**	**49.70**	**359**	IAMs_20	IAMs_20	08 48 11.9	
	comp=Z,3µm,18.0s						
KBS	**Kingsbay**	**49.70**	**359**	⇑P	**P**	**08 24 24.9**	**+0.9**
ANMO	**Albuquerque**	**49.73**	**82**	LR	LR	08 43 31.0	
	comp=Z,2µm,19.8s,baz=300,slow=34						
ANMO	**Albuquerque**	**49.73**	**82***c*	*e*P	**P**	**08 24 25.1**	**0.0**
ANMO				pmax	pmax		
	comp=Z,65nm,1.4s						
ANMO				MLR	MLR		
	comp=Z,4µm,16.0s						
ANMO	**Albuquerque**	**49.73**	**82**	P	**P**	**08 24 25.3**	**+0.2**
ANMO				IAmb	IAmb	08 24 39.6	
	comp=Z,76nm,1.1s						
ANMO	**Albuquerque**	**49.73**	**82**	P	**P**	**08 24 24.9**	**-0.2**
	baz=311						
ANMO				S	**S**	**08 31 33.0**	**+1.1**
	baz=311						
ANMO	**Albuquerque**	**49.73**	**82**	⇓P	**P**	**08 24 25.3**	**+0.2**
JOW	**Kunigami**	**49.94**	**263**	P	**P**	**08 24 26.2**	**-0.3**
	comp=Z,96nm,1.0s,baz=354,slow=11,SNR=10						
JOW	**Kunigami**	**49.94**	**263**	⇑P	**P**	**08 24 27.0**	**+0.4**
Y22D	**IRIS PASSCAL I**	**50.02**	**83**	IAMs_20	IAMs_20	08 42 58.7	
	comp=Z,6µm,20.0s						
Y22D	**IRIS PASSCAL I**	**50.02**	**83**	P	**P**	**08 24 27.2**	**-0.1**
	baz=312						
Y22D				S	**S**	**08 31 37.0**	**+1.2**
	baz=312						
ECSD	**EROS Data Cent**	**50.07**	**67**	IAMs_20	IAMs_20	08 47 25.8	
	comp=Z,6µm,18.0s						
ECSD	**EROS Data Cent**	**50.07**	**67**	P	**P**	**08 24 26.6**	**-0.8**
	baz=308,SNR=65						
ECSD				S	**S**	**08 31 33.6**	**-2.5**
	baz=308						
MOY	**Mondy**	**50.11**	**306**	*e*P	**P**	**08 24 27.7**	**0.0**
MOY				pmax	pmax		
	comp=Z,206nm,2.0s						
SPITS	**Spitsbergen Ar**	**50.35**	**357**	P	**P**	**08 24 27.7**	**-1.3**
	comp=Z,42nm,1.0s,baz=44,slow=4.9,SNR=23						
SPITS				LR	LR	08 45 38.7	
	comp=Z,3µm,19.8s,baz=340,slow=36						
SPITS	**Spitsbergen Ar**	**50.35**	**357**	P	**P**	**08 24 28.8**	**-0.2**
SPITS				pmax	pmax		
	comp=Z,123nm,1.2s						
SPB2	**Spitsbergen Ar**	**50.35**	**357**	P	**P**	**08 24 28.8**	**-0.2**
SPB2				IAmb	IAmb	08 25 48.6	
	comp=Z,98nm,1.2s						
EYMN	**Ely**	**50.38**	**60**	P	**P**	**08 24 28.7**	**-1.0**
	baz=307,SNR=30						
EYMN				S	**S**	**08 31 38.2**	**-2.1**
	baz=307						
TIA	**Tai'an**	**50.46**	**281**	⇑P	**P**	**08 24 30.5**	**+0.1**
TIA				S	**S**	**08 31 46.4**	**+4.7**
TIA				pmax	pmax		
	comp=Z,280nm,1.1s						
TIA				pmax	pmax		
	comp=Z,1µm,4.9s						
TIA				LR	LR		
	comp=Z,2µm,16.7s						
TIA				LR	LR		
	comp=Z,4µm,19.1s						
TIA				LR	LR		
	comp=Z,4µm,20.1s						
121A	**Cookes Peak, D**	**50.51**	**85**	P	**P**	**08 24 30.7**	**-0.4**
	baz=313,SNR=19						
121A				S	**S**	**08 31 43.6**	**+0.8**
	baz=313						
GUMO	**Guam**	**50.58**	**237**	P	**P**	**08 24 30.2**	**-1.2**
	comp=Z,177nm,1.1s,baz=332,slow=6.3,SNR=4.7						
GUMO	**Guam**	**50.58**	**237**	P	**P**	**08 24 30.0**	**-1.4**
BGNE	**Belgrade**	**50.62**	**70**	P	**P**	**08 24 30.9**	**-0.7**
	baz=309,SNR=12						
BGNE				S	**S**	**08 31 42.7**	**-1.0**
	baz=309						
HHC	**Hu-ho-hao-te**	**50.84**	**289**	*e*P	**P**	**08 24 33.8**	**+0.4**
HHC				S	**S**	**08 31 39.2**	**-7.8**
HHC				SS	**SS**	**08 35 17.8**	**-3.6**
HHC				pmax	pmax		
	comp=Z,120nm,1.1s						
HHC				pmax	pmax		
	comp=Z,1µm,4.7s						
HHC				LR	LR		
	comp=Z,4µm,17.0s						
HHC				LR	LR		
	comp=Z,3µm,15.3s						
HHC				LR	LR		
	comp=Z,4µm,16.2s						
DAG	**Danmarks Havn**	**50.90**	**7**	⇑*i*P	**P**	**08 24 31.5**	**-1.6**
DAG				IAmb	IAmb	08 24 33.3	
	comp=Z,89nm,1.2s						
DAG	**Danmarks Havn**	**50.90**	**7**	⇓P	**P**	**08 24 31.9**	**-1.2**
SPMN	**Marine on St.**	**51.31**	**63**	P	**P**	**08 24 35.9**	**-0.8**
	baz=308,SNR=19						
SPMN				S	**S**	**08 31 51.4**	**-1.8**
	baz=308						
CBKS	**Cedar Bluff**	**51.32**	**74**	P	**P**	**08 24 36.7**	**-0.2**
	baz=310,SNR=22						
CBKS				S	**S**	**08 31 53.5**	**0.0**
	baz=310						
CBKS	**Cedar Bluff**	**51.32**	**74**	⇑P	**P**	**08 24 36.9**	**0.0**
SSE	**Sheshan**	**51.37**	**273**	P	**P**	**08 24 38.2**	**+0.9**
SSE				S	**S**	**08 31 56.0**	**+1.8**
SSE				pmax	pmax		
	comp=Z,79nm,1.4s						
SSE				pmax	pmax		
	comp=Z,960nm,3.5s						
SSE				LR	LR		
	comp=Z,230nm,19.6s						
SSE				LR	LR		
	comp=Z,710nm,19.6s						
SSE	**Sheshan**	**51.37**	**273**	P	**P**	**08 24 39.5**	**+2.2**
N33A	**J Bar K, Exete**	**51.45**	**70**	P	**P**	**08 24 37.3**	**-0.5**
N33A				IAmb	IAmb	08 24 42.6	
	comp=Z,193nm,1.2s						
BTO	**Baotou**	**51.91**	**290**	*e*P	**P**	**08 24 41.8**	**+0.5**
BTO				S	**S**	**08 32 05.6**	**+3.9**
BTO				LR	LR		
	comp=Z,13µm,17.7s						
BTO				LR	LR		
	comp=Z,14µm,18.4s						
NJ2	**Nanjing**	**52.17**	**276**	⇑P	**P**	**08 24 44.3**	**+1.1**
NJ2				pP	**pP**	**08 24 50.6**	**-1.6**
NJ2				sP	**pwP**	**08 24 56.7**	**-1.1**
NJ2				PP	**PP**	**08 26 39.4**	**-2.1**
NJ2				S	**S**	**08 32 03.5**	**-1.7**
NJ2				sS	**sS**	**08 32 20.1**	**0.0**
NJ2				SS	**SS**	**08 35 39.6**	**-2.8**
NJ2				pmax	pmax		
	comp=Z,110nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,1µm,5.2s						
NJ2				LR	LR		
	comp=Z,3µm,17.1s						
NJ2				LR	LR		
	comp=Z,2µm,17.5s						
NJ2				LR	LR		
	comp=Z,3µm,19.6s						
SUMG	**Summit**	**52.22**	**16**	*i* P	**P**	**08 24 43.3**	**-0.3**
SUMG				IAmb	IAmb	08 24 45.2	
	comp=Z,209nm,1.3s						
SUMG	**Summit**	**52.22**	**16**	⇑P	**P**	**08 24 43.4**	**-0.2**
ILULI	**Ilulissat**	**52.32**	**22**	IAMs_20	IAMs_20	08 48 17.5	
	comp=Z,4µm,21.0s						
TIY	**Taiyuan**	**52.33**	**285**	⇓P	**P**	**08 24 46.1**	**+1.6**
TIY				pP	**pP**	**08 24 51.4**	**-2.1**
TIY				S	**S**	**08 32 10.2**	**+2.7**
TIY				sS	**pS**	**08 32 20.1**	**+1.6**
TIY				pmax	pmax		
	comp=Z,500nm,1.4s						
TIY				pmax	pmax		
	comp=Z,540nm,3.7s						
TIY				LR	LR		
	comp=Z,4µm,20.6s						
TIY				LR	LR		
	comp=Z,2µm,20.9s						
TIY				LR	LR		
	comp=Z,6µm,20.5s						
MNTX	**Cornudas Mount**	**52.57**	**84**	P	**P**	**08 24 46.1**	**-0.2**
	baz=314,SNR=60						
MNTX				S	**S**	**08 32 13.3**	**+2.5**
	baz=314						
MSTX	**Muleshoe**	**52.65**	**80**	P	**P**	**08 24 46.6**	**-0.3**
	baz=312,SNR=42						
MSTX				S	**S**	**08 32 14.4**	**+2.3**
	baz=312						
AMTX	**Amarillo**	**52.71**	**79**	IAMs_20	IAMs_20	08 48 16.8	
	comp=Z,3µm,18.0s						
AMTX	**Amarillo**	**52.71**	**79**	P	**P**	**08 24 47.0**	**-0.3**
	baz=312						
AMTX				S	**S**	**08 32 13.5**	**+0.7**
	baz=312						
COWI	**Conover**	**52.78**	**60**	IAMs_20	IAMs_20	08 49 46.5	
	comp=Z,5µm,19.0s						
KSU1	**Kansas State U**	**52.99**	**72**	P	**P**	**08 24 48.3**	**-1.0**
	baz=311,SNR=46						
KSU1				S	**S**	**08 32 14.5**	**-1.9**
	baz=311						
KSU1	**Kansas State U**	**52.99**	**72**	⇑P	**P**	**08 24 48.3**	**-1.0**
DBG	**Daneborg**	**53.08**	**9**	*i* P	**P**	**08 24 46.8**	**-2.6**
DBG	**Daneborg**	**53.08**	**9**	⇑P	**P**	**08 24 47.7**	**-1.7**
SCIA	**State Center**	**53.16**	**67**	IAMs_20	IAMs_20	08 46 02.7	
	comp=Z,3µm,21.0s						
SCIA	**State Center**	**53.16**	**67**	P	**P**	**08 24 49.9**	**-0.6**
	baz=310,SNR=10						
SCIA				S	**S**	**08 32 16.8**	**-1.8**
	baz=310						
SFJD	**Kangerlussuaq**	**54.12**	**24**	P	**P**	**08 24 55.5**	**-1.6**
	comp=Z,66nm,1.2s,baz=325,slow=6.9,SNR=5.7						
SFJD				PcP	**PcP**	**08 26 02.2**	**+0.8**
	comp=Z,73nm,1.1s,baz=348,slow=2.3,SNR=4.4						
SFJD				pPcP		08 26 14.9	
	comp=Z,33nm,0.8s,baz=300,slow=2.6,SNR=4.8						
SFJD	**Kangerlussuaq**	**54.12**	**24**	IAMs_20	IAMs_20	08 50 30.0	
	comp=Z,4µm,18.0s						
SFJD	**Kangerlussuaq**	**54.12**	**24**	⇑P	**P**	**08 24 57.4**	**+0.3**
KAPO	**Kapuskasing**	**54.13**	**54**	⇓P	**P**	**08 24 57.1**	**-0.3**
JFWS	**Jewell Farm**	**54.20**	**64**	P	**P**	**08 24 56.7**	**-1.3**
	baz=310,SNR=28						
JFWS				S	**S**	**08 32 29.8**	**-2.8**
	baz=310						
WMOK	**Wichita Mounta**	**54.57**	**77**	P	**P**	**08 25 00.2**	**-0.7**
	baz=313,SNR=65						
WMOK				S	**S**	**08 32 38.4**	**+0.5**
	baz=313						
WMOK	**Wichita Mounta**	**54.57**	**77**	⇓P	**P**	**08 25 00.8**	**-0.1**
ICESG	**Greenland Ices**	**54.92**	**18**	*i* P	**P**	**08 25 01.8**	**-1.6**
TX31	**Lajitas Ar. Si**	**55.27**	**85**	⇑P	**P**	**08 25 05.2**	**-0.9**
TXAR	**Lajitas Array**	**55.27**	**85**	P	**P**	**08 25 05.2**	**-0.9**
	comp=Z,14nm,0.9s,baz=303,slow=5.7,SNR=56						
TXAR				ScP	**ScP**	**08 30 02.1**	**-0.3**
	comp=Z,3.0nm,1.0s,baz=248,slow=1.3,SNR=4.0						
TXAR				LR	LR	08 48 09.9	
	comp=Z,2µm,18.5s,baz=0.0,slow=35						
TXAR				PKPPKP		08 55 15.5	
	comp=Z,1.4nm,1.0s,baz=88,slow=2.9,SNR=5.3						
TXAR	**Lajitas Array**	**55.27**	**85**	P	**P**	**08 25 05.4**	**-0.8**
TXAR	**Lajitas Array**	**55.27**	**85**	P	**P**	**08 25 05.3**	**-0.8**
SLBS	**Sierra La Lagu**	**55.40**	**95**	P	**P**	**08 25 06.8**	**-0.3**
SLBS				IAmb	IAmb	08 25 21.4	
	comp=Z,143nm,1.2s						
SLBS	**Sierra La Lagu**	**55.40**	**95**	IAMs_20	IAMs_20	08 47 36.3	
	comp=Z,4µm,18.0s						
SLBS	**Sierra La Lagu**	**55.40**	**95**	⇓P	**P**	**08 25 08.5**	**+1.4**
ABTX	**Abilene, Hawle**	**55.48**	**80**	P	**P**	**08 25 07.2**	**-0.3**
	baz=314,SNR=52						
ABTX				S	**S**	**08 32 49.1**	**-1.1**
	baz=314						
TATO	**Taipei**	**55.50**	**267**	IAMs_20	IAMs_20	08 48 37.7	
	comp=Z,3µm,20.0s						
TUL1	**Leonard**	**55.59**	**74**	IAMs_20	IAMs_20	08 49 31.0	
	comp=Z,3µm,20.0s						
TUL1	**Leonard**	**55.59**	**74**	P	**P**	**08 25 07.2**	**-1.0**
	baz=313,SNR=37						
TUL1				S	**S**	**08 32 49.9**	**-1.5**
	baz=313						
L44A	**Lake County Fo**	**55.99**	**63**	P	**P**	**08 25 10.2**	**-0.8**
	baz=312,SNR=13						
L44A				S	**S**	**08 32 54.6**	**-1.9**
	baz=312						
WHN	**Wuhan**	**55.99**	**278**	⇑*i*P	**P**	**08 25 11.1**	**0.0**
WHN				pP	**pP**	**08 25 18.5**	**-1.7**
WHN				sP	**pwP**	**08 25 24.6**	**-1.2**
WHN				S	**S**	**08 32 56.5**	**-0.4**
WHN				sS	**sS**	**08 33 12.7**	**+0.9**
WHN				pmax	pmax		
	comp=Z,1µm,1.8s						
WHN				pmax	pmax		
	comp=Z,4µm,2.8s						
WHN				LR	LR		
	comp=Z,7µm,24.5s						
WHN				LR	LR		
	comp=Z,5µm,16.7s						
WHN				LR	LR		
	comp=Z,4µm,18.6s						
NACB	**Ninganchiao**	**56.02**	**267**	P	**P**	**08 25 11.0**	**-0.4**
NACB				IAmb	IAmb	08 25 25.0	
	comp=Z,160nm,1.0s						
GLMI	**Grayling**	**56.04**	**59**	IAMs_20	IAMs_20	08 49 51.6	
	comp=Z,5µm,20.0s						
GLMI	**Grayling**	**56.04**	**59**	P	**P**	**08 25 10.9**	**-0.4**
	baz=311,SNR=16						
GLMI				S	**S**	**08 32 56.7**	**-0.5**
	baz=311						
ZAA0	**Zalesovo Array**	**56.28**	**316**	P	**P**	**08 25 12.4**	**-0.4**
ZAA0				IAmb	IAmb	08 26 25.0	
	comp=Z,131nm,1.2s						
ZALV	**Zalesovo Beam**	**56.28**	**316**	P	**P**	**08 25 11.7**	**-1.1**
	comp=Z,3.6nm,0.7s,baz=38,slow=7.8,SNR=12						
ZALV				PcP	**PcP**	**08 26 09.9**	**0.0**
	comp=Z,37nm,1.0s,baz=42,slow=4.6,SNR=10						
ZALV				LR	LR	08 52 09.8	
	comp=Z,4µm,18.4s,baz=46,slow=39						
ZALV	**Zalesovo Beam**	**56.28**	**316**	P	**P**	**08 25 12.1**	**-0.7**
ZALV	**Zalesovo Beam**	**56.28**	**316**	P	**P**	**08 25 12.1**	**-0.7**
HDIL	**Hopedale**	**56.28**	**66**	IAMs_20	IAMs_20	08 51 44.2	
	comp=Z,4µm,20.0s						
HDIL	**Hopedale**	**56.28**	**66**	P	**P**	**08 25 12.3**	**-0.8**
	baz=312,SNR=33						
HDIL				S	**S**	**08 32 58.0**	**-2.5**
	baz=312						
SCO	**Scoresbysund**	**56.49**	**11**	IAMs_20	IAMs_20	08 52 14.6	
	comp=Z,3µm,19.0s						
SSLB	**Suanglung**	**56.70**	**267**	IAMs_20	IAMs_20	08 49 30.5	
	comp=Z,3µm,20.0s						
X37A	**Clayton**	**56.74**	**75**	IAMs_20	IAMs_20	08 50 47.4	
	comp=Z,3µm,19.0s						
CCM	**Cathedral Cave**	**56.84**	**69**	IAMs_20	IAMs_20	08 52 05.3	
	comp=Z,3µm,19.0s						
JCT	**Junction City**	**56.87**	**81**	IAMs_20	IAMs_20	08 50 04.0	
	comp=Z,4µm,18.0s						
JCT	**Junction City**	**56.87**	**81**	P	**P**	**08 25 16.4**	**-1.0**
	baz=315,SNR=25						
JCT				S	**S**	**08 33 07.9**	**-0.7**
	baz=315						
JCT	**Junction City**	**56.87**	**81**	⇓P	**P**	**08 25 16.6**	**-0.9**
XAN	**Xi'an**	**56.91**	**284**	P	**P**	**08 25 17.7**	**0.0**
XAN				pP	pP	08 25 26.3	-0.4
XAN				sP	sP	08 25 31.0	+0.8
XAN				PP	**PP**	**08 27 24.2**	**+0.1**
XAN				sS	sS	08 33 25.2	+1.2
XAN				pmax	pmax		
	comp=Z,400nm,1.2s						
XAN				pmax	pmax		
	comp=Z,620nm,8.0s						
XAN				LR	LR		
	comp=Z,3µm,23.4s						
XAN				LR	LR		
	comp=Z,4µm,20.6s						
XAN				LR	LR		
	comp=Z,4µm,22.0s						
XAN	**Xi'an**	**56.91**	**284**	P	**P**	**08 25 18.2**	**+0.5**
XAN	**Xi'an**	**56.91**	**284**	P	**P**	**08 25 18.2**	**+0.5**
U40A	**Yellville**	**57.04**	**72**	IAMs_20	IAMs_20	08 50 58.7	
	comp=Z,4µm,19.0s						
U40A	**Yellville**	**57.04**	**72**	P	**P**	**08 25 16.8**	**-1.7**
	baz=313,SNR=82						
U40A				S	**S**	**08 33 06.6**	**-4.0**
	baz=313						
TPUB	**Ta-pu**	**57.25**	**267**	IAMs_20	IAMs_20	08 49 27.3	
	comp=Z,3µm,20.0s						
WHTX	**Lake Whitney,**	**57.26**	**79**	P	**P**	**08 25 19.6**	**-0.5**
	baz=314,SNR=32						
WHTX				S	**S**	**08 33 13.9**	**+0.3**
	baz=314						
W39A	**Magazine**	**57.27**	**73**	IAMs_20	IAMs_20	08 50 42.0	
	comp=Z,3µm,21.0s						
W39A	**Magazine**	**57.27**	**73**	P	**P**	**08 25 19.3**	**-0.9**
	baz=313,SNR=72						
W39A				S	**S**	**08 33 11.4**	**-2.3**
	baz=313						
QZH	**Quanzhou**	**57.33**	**270**	⇑*i*P	**P**	**08 25 23.0**	**+2.3**
QZH				S	**S**	**08 33 15.7**	**+1.1**
QZH				pmax	pmax		
	comp=Z,95nm,1.2s						
QZH				pmax	pmax		
	comp=Z,760nm,3.9s						
QZH				LR	LR		
	comp=Z,1µm,17.0s						
QZH				LR	LR		
	comp=Z,620nm,16.6s						
QZH				LR	LR		
	comp=Z,1µm,19.4s						
SFIN	**Lafayette**	**57.65**	**64**	P	**P**	**08 25 21.8**	**-0.9**
	baz=313,SNR=56						
SFIN				S	**S**	**08 33 15.9**	**-2.6**
	baz=313						
SCHQ	**Schefferville**	**57.68**	**41**	P	**P**	**08 25 21.2**	**-1.5**
	comp=Z,14nm,0.8s,baz=318,slow=7.1,SNR=19						
SCHQ				LR	LR	08 51 21.3	
	comp=Z,6µm,18.1s,baz=319,slow=37						
SCHQ	**Schefferville**	**57.68**	**41**	⇓P	**P**	**08 25 22.1**	**-0.6**
MIAR	**Mount Ida**	**57.84**	**74**	P	**P**	**08 25 24.1**	**-0.1**
MIAR				pmax	pmax		
	comp=Z,276nm,1.0s						
MIAR				MLR	MLR		
	comp=Z,3µm,19.0s						
MIAR	**Mount Ida**	**57.84**	**74**	P	**P**	**08 25 24.1**	**-0.1**
MIAR				IAMs_20	IAMs_20	08 51 51.1	
	comp=Z,3µm,19.0s						
MIAR	**Mount Ida**	**57.84**	**74**	P	**P**	**08 25 23.6**	**-0.6**
	baz=314,SNR=132						
MIAR				S	**S**	**08 33 21.2**	**0.0**
	baz=314						
MIAR	**Mount Ida**	**57.84**	**74**	⇑P	**P**	**08 25 23.8**	**-0.5**
435B	**Jarrell**	**58.02**	**80**	P	**P**	**08 25 24.9**	**-0.6**
435B				IAmb	IAmb	08 25 41.8	
	comp=Z,140nm,0.9s						
435B				IAMs_20	IAMs_20	08 51 24.5	

	comp=Z,2µm,19.0s						
435B	Jarrell	58.02	80	P	P	08 25 24.6	-0.9
	baz=315						
435B				S	S	08 33 24.8	+1.2
	baz=315						
KEV	Kevo	58.04	352	P	P	08 25 25.7	+0.6
KEV				pmax	pmax		
	comp=Z,106nm,1.2s						
KEV	Kevo	58.04	352	P	P	08 25 25.7	+0.6
KEV				IAmb	IAmb	08 26 18.5	
	comp=Z,106nm,1.2s						
KEV				IAMs_20	IAMs_20	08 49 12.9	
	comp=Z,4µm,22.0s						
KEV	Kevo	58.04	352	⇑P	P	08 25 24.7	-0.3
L48A	N Adams	58.07	62	P	P	08 25 25.6	-0.1
L48A				IAmb	IAmb	08 25 27.2	
	comp=Z,222nm,1.4s						
W41B	Gary Mavity, V	58.20	72	P	P	08 25 25.4	-1.3
	baz=314,SNR=64						
W41B				S	S	08 33 23.7	-2.2
	baz=314						
AAM	Ann Arbor	58.25	61	IAMs_20	IAMs_20	08 53 05.1	
	comp=Z,4µm,18.0s						
AAM	Ann Arbor	58.25	61	P	P	08 25 25.8	-1.1
	baz=313						
AAM				S	S	08 33 22.7	-3.6
	baz=313						
ARA0	ARCESS Array S	58.39	352	*e*P	P	08 25 27.1	-0.4
ARCES	ARCESS Array B	58.39	352	P	P	08 25 26.8	-0.7
	comp=Z,12nm,0.7s,baz=10,slow=7.4,SNR=53						
ARCES				PcP	PcP	08 26 17.4	-0.6
	comp=Z,85nm,1.0s,baz=0.0,slow=5.0,SNR=19						
ARCES				pPcP		08 26 31.3	
	comp=Z,29nm,0.7s,baz=0.0,slow=4.9,SNR=6.6						
ARCES				LR	LR	08 50 17.1	
	comp=Z,2µm,21.8s,baz=5.0,slow=36						
ARCES	ARCESS Array B	58.39	352	P	P	08 25 28.0	+0.5
ARCES						08 26 18.5	
ARCES				pmax	pmax		
	comp=Z,164nm,1.2s						
ARCES	ARCESS Array B	58.39	352	P	P	08 25 28.0	+0.5
ARCES				PcP	PcP	08 26 18.5	+0.5
ARCES				IAmb	IAmb	08 26 20.1	
	comp=Z,164nm,1.1s						
K50A	Casco	58.48	60	P	P	08 25 28.4	-0.2
K50A				IAmb	IAmb	08 25 42.5	
	comp=Z,81nm,0.9s						
LZH	Lanzhou	58.53	290	*e*P	P	08 25 30.0	+0.8
LZH				PP	PP	08 27 37.1	-1.5
LZH				*e*S	S	08 33 31.1	+0.6
LZH				pmax	pmax		
	comp=Z,450nm,1.3s						
LZH				pmax	pmax		
	comp=Z,2µm,5.9s						
LZH				LR	LR		
	comp=Z,4µm,15.7s						
LZH				LR	LR		
	comp=Z,6µm,16.3s						
LZH				LR	LR		
	comp=Z,5µm,18.3s						
GTA	Gaotai	58.58	295	⇑P	P	08 25 29.2	-0.3
GTA				pP	pP	08 25 36.8	-1.7
GTA				sP	sP	08 25 41.0	-1.1
GTA				S	S	08 33 27.0	-4.0
GTA				pmax	pmax		
	comp=Z,160nm,1.3s						
GTA				pmax	pmax		
	comp=Z,970nm,10.8s						
GTA				LR	LR		
	comp=Z,5µm,17.5s						
GTA				LR	LR		
	comp=Z,5µm,17.1s						
GTA				LR	LR		
	comp=Z,7µm,17.9s						
833A	Chaparral WMA,	58.64	83	P	P	08 25 28.9	-0.9
	baz=316,SNR=13						
833A				S	S	08 33 32.3	+0.6
	baz=316						
PARMO	Parma	58.65	69	P	P	08 25 28.7	-1.1
JETT	Jettan, Norway	58.73	354	*e*P	P	08 25 30.3	+0.3
TRO	Tromso	58.74	355	*e*P	P	08 25 29.5	-0.4
SADO	Sadowa	58.96	56	P	P	08 25 31.5	-0.3
	comp=Z,18nm,0.4s,baz=304,slow=3.9,SNR=34						
SADO	Sadowa	58.96	56	⇑P	P	08 25 31.4	-0.5
LVZ	Lovozero	58.99	348	*ce*P	P	08 25 30.7	-1.1
LVZ				pmax	pmax		
	comp=Z,117nm,1.4s						
LVZ				MLR	MLR		
	comp=Z,3µm,17.0s						
LVZ	Lovozero	58.99	348	P	P	08 25 31.6	-0.2
LVZ				IAmb	IAmb	08 25 47.7	
	comp=Z,72nm,1.0s						
LVZ	Lovozero	58.99	348	⇑P	P	08 25 31.6	-0.2
KTK1	Kautokeino	59.08	353	*e*P	P	08 25 32.0	-0.4
NATX	Nacogdoches	59.12	77	IAMs_20	IAMs_20	08 51 57.6	
	comp=Z,2µm,20.0s						
NATX	Nacogdoches	59.12	77	P	P	08 25 32.4	-0.7
	baz=315,SNR=11						
GLAT	Glass	59.19	69	P	P	08 25 33.2	-0.4
M50A	Fremont	59.20	61	P	P	08 25 33.0	-0.5
M50A				IAmb	IAmb	08 26 36.2	
	comp=Z,50nm,0.9s						
Z41A	Richland Creek	59.20	74	P	P	08 25 33.0	-0.7
	baz=314,SNR=10						
Z41A				S	S	08 33 38.9	+0.1
	baz=314						
P48A	Milroy	59.21	64	P	P	08 25 32.5	-1.2
O49A	Covington	59.32	63	P	P	08 25 33.6	-0.9
O49A				IAmb	IAmb	08 25 35.7	
	comp=Z,172nm,1.4s						
CCAR	Cane Creek	59.36	73	P	P	08 25 34.5	-0.3
APA	Apatity	59.46	348	⇓*i*P	P	08 25 30.6	-4.3
APA				*i*		08 27 55.0	
APA				*i* S	S	08 33 31.0	-10
APA				*i* PS	PnS	08 33 51.0	-5.5
APA				*i*		08 35 20.0	
APA				pmax	pmax		
	comp=Z,15nm,1.1s						
P49A	Miami Univ. Ec	59.56	64	P	P	08 25 35.0	-1.1
	baz=314,SNR=40						
P49A				S	S	08 33 40.5	-2.9
	baz=314						
WCI	Wyandotte Cave	59.57	66	P	P	08 25 35.5	-0.6
WCI				pmax	pmax		
	comp=Z,304nm,1.5s						
WCI				MLR	MLR		
	comp=Z,6µm,18.0s						
WCI	Wyandotte Cave	59.57	66	P	P	08 25 35.5	-0.6
WCI	Wyandotte Cave	59.57	66	S	S	08 33 42.1	-1.4
	baz=314						
WCI	Wyandotte Cave	59.57	66	⇑P	P	08 25 35.3	-0.9
HKT	Hockley	59.68	79	*c i*P	P	08 25 36.9	0.0
HKT				pmax	pmax		
	comp=Z,77nm,1.6s						
HKT				MLR	MLR		
	comp=Z,4µm,16.0s						
HKT	Hockley	59.68	79	⇓P	P	08 25 37.3	+0.4
PLVO	Plevna	59.83	55	P	P	08 25 38.0	+0.1
M52A	Chesterland	60.02	60	P	P	08 25 38.9	-0.3
ACSO	Alum Creek Sta	60.04	62	IAMs_20	IAMs_20	08 54 09.5	
	comp=Z,4µm,18.0s						
ACSO	Alum Creek Sta	60.04	62	P	P	08 25 38.6	-0.7
	baz=314,SNR=24						
ACSO				S	S	08 33 48.6	-0.9
	baz=314						
WVT	Waverly	60.14	69	IAMs_20	IAMs_20	08 53 26.4	
	comp=Z,3µm,18.0s						
WVT	Waverly	60.14	69	P	P	08 25 39.5	-0.6
	baz=314						
WVT				S	S	08 33 50.4	-0.5
	baz=314						
WVT	Waverly	60.14	69	⇑P	P	08 25 39.3	-0.8
GAC	Glen Almond	60.17	53	⇑P	P	08 25 38.9	-1.3
FUNA	Funafuti	60.22	188	IAMs_20	IAMs_20	08 51 30.1	
	comp=Z,5µm,22.0s						
OXF	Oxford	60.34	71	P	P	08 25 41.1	-0.4
OXF				pmax	pmax		
	comp=Z,402nm,0.9s						
OXF				MLR	MLR		
	comp=Z,3µm,18.0s						
OXF	Oxford	60.34	71	P	P	08 25 41.1	-0.4
OXF				IAMs_20	IAMs_20	08 54 53.8	
	comp=Z,3µm,18.0s						
OXF	Oxford	60.34	71	P	P	08 25 40.5	-1.0
	baz=315,SNR=50						
OXF				S	S	08 33 52.5	-1.1
	baz=315						
ERPA	Erie	60.35	59	P	P	08 25 40.9	-0.6
	baz=314,SNR=15						
ERPA				S	S	08 33 53.4	-0.1
	baz=314						
M53A	WI Miller and	60.45	60	P	P	08 25 41.9	-0.3
M53A	WI Miller and	60.45	60	P	P	08 25 41.5	-0.7
	baz=314,SNR=17						
M53A				S	S	08 33 52.9	-1.9
	baz=314						
LOF	Lofoten	60.48	357	*e*P	P	08 25 40.8	-1.1
STEI	Steigen	60.62	356	*e*P	P	08 25 41.9	-0.9
SEM	Semipalatinsk	60.77	315	⇑*i*P	P	08 25 42.7	-1.8
	comp=Z,138nm,2.5s,baz=315						
SEM				*e*LR	LR	08 52 26.1	
	comp=Z,2µm,16.8s,baz=315						
SEM	Semipalatinsk	60.77	315	*c i*P	P	08 25 42.7	-1.8
SEM				pmax	pmax		
	comp=Z,138nm,2.5s						
SEM				MLR	MLR		
	comp=Z,2µm,17.0s						
ZSN	Zaisan	60.79	310	⇑*i*P	P	08 25 43.6	-0.9
	comp=Z,97nm,1.5s,baz=310						
ZSN	Zaisan	60.79	310	*c i*P	P	08 25 43.5	-0.9
ZSN				pmax	pmax		
	comp=Z,97nm,1.5s						
PLAL	Pickwick Lake	60.80	70	P	P	08 25 43.7	-1.0
PLAL				IAMs_20	IAMs_20	08 54 57.8	
	comp=Z,2µm,18.0s						
P52A	Corning	60.92	62	IAMs_20	IAMs_20	08 51 55.9	
	comp=Z,4µm,21.0s						
P52A	Corning	60.92	62	P	P	08 25 44.5	-1.0
	baz=315,SNR=36						
P52A				S	S	08 33 59.2	-1.6
	baz=315						
M54A	Oil Creek Stat	60.95	59	P	P	08 25 45.3	-0.3
M54A	Oil Creek Stat	60.95	59	P	P	08 25 45.2	-0.3
	baz=315,SNR=18						
M54A				S	S	08 33 59.3	-1.9
	baz=315						
O53A	New Philadelph	61.00	61	IAMs_20	IAMs_20	08 55 03.8	
	comp=Z,4µm,19.0s						
O53A	New Philadelph	61.00	61	P	P	08 25 45.0	-0.9
	baz=315,SNR=43						
O53A				S	S	08 34 00.6	-1.2
	baz=315						
N54A	Moraine State	61.16	60	P	P	08 25 46.6	-0.5
	baz=315,SNR=38						
N54A				S	S	08 34 02.9	-1.0
	baz=315						
FAUS	Fauske	61.16	356	*e*P	P	08 25 44.9	-1.7
MNTQ	Montreal, Queb	61.23	52	P	P	08 25 46.6	-0.8
MNTQ	Montreal, Queb	61.23	52	⇑P	P	08 25 46.3	-1.1
KURK	Kurchatov	61.25	316	*ce*P	P	08 25 47.7	+0.3
KURK				pmax	pmax		
	comp=Z,236nm,1.8s						
KURK				MLR	MLR		
	comp=Z,9µm,17.0s						
KURK	Kurchatov	61.25	316	P	P	08 25 47.8	+0.3
KURK				IAmb	IAmb	08 26 31.5	
	comp=Z,118nm,1.1s						
KURK	Kurchatov	61.25	316	P	P	08 25 47.0	-0.5
KURK				P	P	08 25 47.0	-0.5
KURK	Kurchatov	61.25	316	⇑P	P	08 25 47.0	-0.5
VBMS	Vicksburg	61.30	74	IAMs_20	IAMs_20	08 54 38.1	
	comp=Z,3µm,20.0s						
VBMS	Vicksburg	61.30	74	P	P	08 25 47.5	-0.5
	baz=315,SNR=26						
VBMS				S	S	08 34 06.4	+0.7
	baz=315						
Q52A	Bidwell	61.32	63	P	P	08 25 47.5	-0.6
Q52A				IAmb	IAmb	08 25 49.6	
	comp=Z,229nm,1.4s						
KURBB	Kurchatov Arra	61.36	316	P	P	08 25 48.2	0.0
	comp=Z,54nm,0.9s,baz=41,slow=6.9,SNR=114						
KURBB				PKPPKP	P'P'df	08 55 04.1	-3.6
	comp=Z,1.5nm,1.0s,baz=240,slow=3.8,SNR=6.0						
KURBB	Kurchatov Arra	61.36	316	P	P	08 25 47.1	-1.1
LONY	Lake Ozonia	61.38	54	P	P	08 25 47.4	-1.1
	baz=316,SNR=31						
LONY				S	S	08 34 05.5	-1.2
	baz=316						
GZH	Guangzhou	61.95	272	P	P	08 25 49.7	-2.8
GZH				S	S	08 34 09.6	-4.7
GZH				LR	LR		
	comp=Z,2µm,19.2s						
GZH				LR	LR		
	comp=Z,840nm,15.9s						
WMQ	Urumqi	62.00	306	⇑P	P	08 25 52.8	+0.1
WMQ				pP	sP	08 26 03.9	-1.4
WMQ				pmax	pmax		
	comp=Z,130nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,420nm,3.9s						
WMQ				LR	LR		
	comp=Z,6µm,21.7s						
WMQ				LR	LR		
	comp=Z,4µm,18.1s						
WMQ				LR	LR		
	comp=Z,4µm,20.5s						
WMQ	Urumqi	62.00	306	P	P	08 25 53.7	+1.0
WMQ	Urumqi	62.00	306	P	P	08 25 53.7	+1.0
Q54A	Coxs Mills	62.09	62	P	P	08 25 52.9	-0.4
KONS	Konsvik	62.12	357	*e*P	P	08 25 51.5	-1.6
MCWV	Mont Chateau	62.16	61	P	P	08 25 53.6	-0.2
MCWV	Mont Chateau	62.16	61	P	P	08 25 53.3	-0.4
	baz=315,SNR=41						
MCWV				S	S	08 34 15.5	-1.0
	baz=315						
CD2	Chengdu	62.20	285	⇑*i*P	P	08 25 54.9	+0.7
CD2				pP	pP	08 26 01.8	-1.6
CD2				sP	sP	08 26 04.3	-2.6
CD2				S	S	08 34 16.4	-1.1
CD2				SS	SS	08 38 21.1	+0.8
CD2				pmax	pmax		
	comp=Z,820nm,1.1s						
CD2				pmax	pmax		
	comp=Z,2µm,6.5s						
CD2				LR	LR		
	comp=Z,3µm,20.0s						
CD2				LR	LR		
	comp=Z,5µm,19.6s						
CD2				LR	LR		
	comp=Z,6µm,22.4s						
TZTN	Tazewell	62.31	65	P	P	08 25 54.2	-0.7
	baz=315,SNR=46						
TZTN				S	S	08 34 17.2	-1.3
	baz=315						
BINY	Binghamton	62.40	56	P	P	08 25 55.3	-0.1
	baz=316,SNR=45						
BINY				S	S	08 34 20.9	+1.4
	baz=316						
O56A	Blue Knob Stat	62.41	59	P	P	08 25 54.7	-0.8
	baz=316,SNR=36						
O56A				S	S	08 34 18.4	-1.5
	baz=316						
MK31	Makanchi Array	62.48	311	*i* P	P	08 25 54.9	-1.0
MK31	Makanchi Array	62.48	311	P	P	08 25 55.9	0.0
MK31				IAmb	IAmb	08 25 56.9	
	comp=Z,186nm,1.9s						
MKAR	Makanchi Array	62.48	311	P	P	08 25 55.3	-0.5
	comp=Z,37nm,0.9s,baz=43,slow=6.7,SNR=66						
MKAR				LR	LR	08 53 32.7	
	comp=Z,4µm,20.0s,baz=34,slow=36						
MKAR				PKPPKP	P'P'df	08 55 05.1	-0.5
	comp=Z,4.1nm,1.1s,baz=323,slow=3.2,SNR=4.8						
SSPA	Standing Stone	62.52	59	P	P	08 25 55.6	-0.5
	baz=316						
SSPA				S	S	08 34 19.7	-1.4
	baz=316						
SSPA	Standing Stone	62.52	59	⇑P	P	08 25 56.0	-0.1
CPCT	Cooper Cave	62.53	67	P	P	08 25 55.3	-0.9
CPCT				IAmb	IAmb	08 25 57.5	
	comp=Z,97nm,1.2s						
Y49A	Blount Mountai	62.56	69	P	P	08 25 55.9	-0.7
MAKZ	Makanchi	62.62	312	P	P	08 25 56.6	-0.1
MAKZ				pmax	pmax		
	comp=Z,242nm,1.7s						
MAKZ				MLR	MLR		
	comp=Z,4µm,18.0s						
MAKZ	Makanchi	62.62	312	P	P	08 25 56.6	-0.1
MAKZ				IAmb	IAmb	08 25 57.8	
	comp=Z,242nm,1.7s						
MAKZ				IAMs_20	IAMs_20	08 54 49.4	
	comp=Z,4µm,18.0s						
MAKZ	Makanchi	62.62	312	⇑P	P	08 25 55.9	-0.9
V52A	Sevierville	62.78	66	P	P	08 25 57.4	-0.5
BVAR	Borovoye Array	62.84	322	P	P	08 25 58.0	-0.1
	comp=Z,45nm,0.5s,baz=177,slow=0.5,SNR=149						
BVAR				PKPPKP	P'P'df	08 55 01.1	-4.4
	comp=Z,2.9nm,1.0s,baz=197,slow=1.5,SNR=6.6						
BVAR	Borovoye Array	62.84	322	P	P	08 25 58.0	-0.1
BRVK	Borovoye	62.85	323	*ce*P	P	08 25 58.1	-0.1
BRVK				pmax	pmax		
	comp=Z,184nm,1.2s						
BRVK				MLR	MLR		
	comp=Z,10µm,18.0s						
BRVK	Borovoye	62.85	323	P	P	08 25 58.2	-0.1
BRVK				IAmb	IAmb	08 25 59.9	
	comp=Z,157nm,1.1s						
BRVK	Borovoye	62.85	323	P	P	08 25 57.8	-0.3
BRVK				P	P	08 25 57.8	-0.3
BRVK				P	P	08 25 57.8	-0.3
BRVK	Borovoye	62.85	323	⇑P	P	08 25 58.0	-0.1
PRGR	Permogore	62.91	340	*e*P	P	08 25 58.5	+0.1
PRGR				*e**PP	sP	08 26 10.0	-1.0
PRGR				*e*		08 26 35.6	
PRGR				pmax	pmax		
	comp=Z,646nm,1.5s						
MANU	Manus Island	62.93	225	P	P	08 25 58.5	-0.6
MANU				IAmb	IAmb	08 26 17.1	
	comp=Z,63nm,1.2s						
LBNH	Lisbon	62.98	52	P	P	08 25 58.3	-0.9
	baz=317,SNR=17						
W52A	Murphy	63.12	67	P	P	08 25 59.7	-0.6
SVE	Sverdlovsk	63.16	330	*de*P	P	08 26 00.6	+0.5
SVE				*e*S	S	08 34 26.4	-2.1
SVE				pmax	pmax		
	comp=Z,197nm,1.5s						
SVE				MLR	MLR		
	comp=Z,7µm,16.0s						
HNH	Hanover	63.19	53	P	P	08 26 00.3	-0.3
HNH				IAmb	IAmb	08 26 01.9	
	comp=Z,190nm,1.3s						
TRY	Troy	63.20	54	P	P	08 26 00.2	-0.4
F63A	Nahmakanta, Br	63.27	49	P	P	08 26 00.8	-0.3
N59A	State Game Lan	63.43	57	P	P	08 26 01.3	-0.9
	baz=316,SNR=41						
N59A				S	S	08 34 33.6	+1.1
	baz=316						
PKME	Peaks-Kenny Pk	63.51	50	P	P	08 26 01.5	-1.1
	baz=318,SNR=15						
BLA	Blacksburg	63.59	63	P	P	08 26 03.2	-0.2
	baz=316,SNR=63						
BLA				S	S	08 34 34.5	-0.1
	baz=316						
GYA	Guiyang	63.64	280	⇑*i*P	P	08 26 04.0	+0.1
GYA				sP	pwP	08 26 17.6	-1.1
GYA				PP	PP	08 28 23.1	-0.7
GYA				S	S	08 34 34.8	-0.8
GYA				SKS	SKKSac	08 35 53.0	-1.7
GYA				pmax	pmax		
	comp=Z,160nm,1.3s						
GYA				LR	LR		
	comp=Z,2µm,21.9s						
GYA				LR	LR		
	comp=Z,2µm,18.6s						
GYA				LR	LR		
	comp=Z,2µm,18.7s						
LUPA	Lehigh Univers	63.87	57	P	P	08 26 05.1	0.0
L61B	Northampton	63.91	54	P	P	08 26 04.7	-0.6
	baz=317,SNR=16						
L61B				S	S	08 34 38.2	-0.1
	baz=317						
ODNJ	Ogdensburg	63.92	56	P	P	08 26 05.7	+0.3
BRAL	Brewton	64.11	72	IAMs_20	IAMs_20	08 57 25.0	
	comp=Z,4µm,18.0s						
BRAL	Brewton	64.11	72	P	P	08 26 05.7	-1.1
	baz=316,SNR=11						
BRAL				S	S	08 34 40.1	-1.0
	baz=316						
ARU	Arti	64.12	331	P	P	08 26 06.3	-0.1
	comp=Z,12nm,0.4s,baz=27,slow=3.6,SNR=70						
ARU				PKPPKP		08 55 02.1	
	comp=Z,1.3nm,0.3s,baz=124,slow=0.2,SNR=4.6						
ARU				LR	LR	08 58 02.0	
	comp=Z,3µm,19.0s,baz=41,slow=40						
ARU	Arti	64.12	331	*c i*P	P	08 26 06.4	-0.1
ARU				*PP	sP	08 26 18.1	-1.1
ARU						08 26 41.1	
ARU				S	S	08 34 39.6	-1.0
ARU				SS	SS	08 38 49.6	+0.7
ARU				pmax	pmax		
	comp=Z,209nm,1.4s						
ARU				MLR	MLR		
	comp=Z,7µm,18.0s						
ARU	Arti	64.12	331	P	P	08 26 06.6	+0.1
ARU				IAmb	IAmb	08 26 07.8	
	comp=Z,176nm,1.2s						
BRZS	Berezniki	64.30	319	*e*P	P	08 26 05.8	-2.0
	comp=Z,83nm,1.5s,baz=319						
BRZS	Berezniki	64.30	319	*e*P	P	08 26 05.8	-2.0
BRZS				pmax	pmax		
	comp=Z,83nm,1.5s						
P60A	Greenville	64.30	58	P	P	08 26 07.5	-0.4
	baz=317,SNR=9.4						
P60A				S	S	08 34 42.2	-1.1
	baz=317						
PAL	Palisades	64.34	56	P	P	08 26 08.3	+0.1
	baz=317,SNR=30						
PAL				S	S	08 34 42.3	-1.3
	baz=317						
HRV	Adam Dziewonsk	64.43	53	P	P	08 26 08.4	-0.4
	baz=318						
HRV	Adam Dziewonsk	64.43	53	⇑P	P	08 26 08.8	0.0
R58B	Mineral	64.44	61	P	P	08 26 08.8	-0.1
R58B				IAmb	IAmb	08 26 10.6	
	comp=Z,198nm,1.4s						
WSPT	Westport, CT	64.51	55	P	P	08 26 09.4	+0.2
PAULI	Pauline	64.52	66	P	P	08 26 09.0	-0.4
CBN	Corbin Frederi	64.54	60	P	P	08 26 09.4	-0.1
	baz=317,SNR=19						
CBN				S	S	08 34 46.5	+0.3
	baz=317						
KMSC	Kings Mountain	64.56	65	P	P	08 26 09.4	-0.4
	baz=316,SNR=104						
KMSC				S	S	08 34 44.7	-1.9
	baz=316						
GOGA	Godfrey	64.59	68	IAMs_20	IAMs_20	08 55 56.3	
	comp=Z,3µm,18.0s						
GOGA	Godfrey	64.59	68	P	P	08 26 09.1	-0.8
	baz=316,SNR=55						
GOGA				S	S	08 34 43.5	-3.6
	baz=316						
WES	Weston	64.64	53	P	P	08 26 09.6	-0.5
WES				pmax	pmax		
	comp=Z,191nm,0.9s						
WES				MLR	MLR		
	comp=Z,5µm,20.0s						
WES	Weston	64.64	53	P	P	08 26 09.6	-0.5
KIRV	Kirov	64.77	337	P	P	08 26 11.2	+0.6
	comp=Z,62nm,0.9s,baz=24,slow=10.0,SNR=37						
KIRV	Kirov	64.77	337	*c i*P	P	08 26 10.5	-0.2
KIRV				*i* *PP	sP	08 26 23.6	+0.3
HNR	Honiara	64.99	209	PKPPKP		08 54 59.6	
	comp=Z,94nm,0.4s,baz=220,slow=6.5,SNR=4.5						
352A	Blakely	65.14	70	P	P	08 26 12.5	-1.0
Q61A	Milford	65.15	58	P	P	08 26 13.3	-0.1
	baz=317						
JSC	Jenkinsville	65.23	66	P	P	08 26 13.5	-0.5
JSC				pmax	pmax		
	comp=Z,387nm,1.5s						
JSC	Jenkinsville	65.23	66	P	P	08 26 13.5	-0.5
AFI	Afiamalu	65.25	178	LR	LR	08 51 43.0	
	comp=Z,865nm,18.7s,baz=0.5,slow=33						
W57A	Gilead	65.31	64	P	P	08 26 14.2	-0.4
W57A				IAmb	IAmb	08 26 16.4	
	comp=Z,218nm,1.4s						
UNM	Universidad Na	65.33	90	IAMs_20	IAMs_20	08 53 13.4	
	comp=Z,3µm,20.0s						
T59A	Double "B" Far	65.34	61	P	P	08 26 14.8	+0.1
R61A	Willards	65.54	59	P	P	08 26 16.0	0.0
M65A	Busby, Falmout	65.59	53	P	P	08 26 15.6	-0.7
	baz=318						
TDK	Taldyqorghan	65.63	312	*e*P	P	08 26 15.9	-0.7
	comp=Z,232nm,1.3s,baz=312						
TDK				*e*LR	LR	08 55 32.1	
	comp=Z,2µm,16.6s,baz=312						
TDK	Taldyqorghan	65.63	312	*e*P	P	08 26 15.8	-0.7
TDK				pmax	pmax		
	comp=Z,232nm,1.3s						
TDK				MLR	MLR		

	comp=Z,2µm,17.0s						
T60A	Surry	65.66	61	P	P	08 26 16.9	+0.1
DRLN	Deer Lake	65.67	40	⇓P	P	08 26 16.5	-0.1
OTUK	Ortayu	65.79	318	P	P	08 26 17.1	-0.4
TIGA	Tifton	65.95	69	P	P	08 26 17.2	-1.6
	baz=317,SNR=5.8						
TIGA				S	S	08 35 05.5	+1.7
	baz=317						
MOL	Molde	66.17	360	eP	P	08 26 19.0	-0.7
FINES	FINESS Array B	66.24	350	P	P	08 26 19.5	-0.6
	comp=Z,35nm,1.0s,baz=6.2,slow=7.4,SNR=24						
FINES				PKPPKP	P'P'df	08 54 59.0	-1.4
	comp=Z,13nm,1.1s,baz=216,slow=6.1,SNR=4.7						
FINES				LR	LR	08 59 03.9	
	comp=Z,2µm,18.0s,baz=16,slow=39						
255A	Hazlehurst	66.24	68	P	P	08 26 19.8	-0.9
Y58A	Scranton	66.41	65	P	P	08 26 22.1	+0.4
CNNC	Cliffs of the	66.42	63	P	P	08 26 21.2	-0.5
	baz=318,SNR=14						
CNNC				S	S	08 35 10.4	+1.1
	baz=318						
CNNC	Cliffs of the	66.42	63	⇑P	P	08 26 21.9	+0.2
ARXS	Arharly	66.50	312	eP	P	08 26 22.3	+0.1
SHLS	Shalkode	66.53	310	⇑iP	P	08 26 21.3	-1.3
	comp=Z,374nm,1.5s,baz=310						
SHLS	Shalkode	66.53	310	c iP	P	08 26 21.2	-1.3
SHLS				pmax	pmax		
	comp=Z,375nm,1.5s						
AKN	Aaknes	66.57	360	eP	P	08 26 22.6	+0.4
KPKS	Kokpek	66.67	311	⇑iP	P	08 26 22.5	-0.9
	comp=Z,197nm,1.7s,baz=311						
KPKS	Kokpek	66.67	311	c iP	P	08 26 22.4	-0.9
KPKS				pmax	pmax		
	comp=Z,197nm,1.7s						
TAOE	Nuku Hiva Isla	66.68	144	eS	S	08 35 08.7	-4.1
	comp=Z,1µm,25.5s						
TAOE	Nuku Hiva Isla	66.68	144	eLR	LR	08 46 27.9	
	comp=Z,3µm,22.8s,baz=350						
TAOE	Nuku Hiva Isla	66.68	144	eT	T	09 38 43.8	
	comp=Z,42nm,0.3s						
DOMB	Dombas	66.69	359	eP	P	08 26 22.1	-0.9
NHSC	New Hope	66.70	66	P	P	08 26 23.9	+0.4
NHSC	New Hope	66.70	66	P	P	08 26 23.6	+0.1
	baz=318,SNR=33						
NHSC				S	S	08 35 13.5	+0.8
	baz=318						
DAV	Davao City (W)	66.71	251	P	P	08 26 23.6	-0.2
	comp=Z,100nm,0.3s,baz=59,slow=7.4,SNR=8.0						
UZB	Uzynbulak	66.75	311	eP	P	08 26 23.4	-0.6
	comp=Z,123nm,1.6s,baz=311						
UZB	Uzynbulak	66.75	311	eP	P	08 26 23.3	-0.6
UZB				pmax	pmax		
	comp=Z,123nm,1.6s						
CSU	Charleston Sou	66.85	66	P	P	08 26 25.0	+0.6
GBN	Guysborough	66.98	45	P	P	08 26 25.5	+0.4
KMI	Kunming	67.02	282	⇑P	P	08 26 26.4	+0.5
KMI				pP	pP	08 26 33.6	-1.6
KMI				sP	pwP	08 26 39.8	-0.9
KMI				PP	PP	08 28 52.0	-1.5
KMI				S	S	08 35 17.6	+0.4
KMI				SKS	SKSac	08 36 18.8	-1.8
KMI				pmax	pmax		
	comp=Z,120nm,1.4s						
KMI				pmax	pmax		
	comp=Z,1µm,3.9s						
KMI				LR	LR		
	comp=Z,2µm,18.9s						
KMI				LR	LR		
	comp=Z,1µm,20.3s						
KMI				LR	LR		
	comp=Z,2µm,21.2s						
KMI	Kunming	67.02	282	P	P	08 26 27.2	+1.3
KMI	Kunming	67.02	282	P	P	08 26 27.2	+1.3
SATY	Saty	67.11	311	eP	P	08 26 24.0	-2.1
	baz=311						
SATY	Saty	67.11	311	eP	P	08 26 24.0	-2.1
QIZ	Qiongzhong	67.14	272	P	P	08 26 24.1	-2.4
QIZ				PP	PP	08 28 55.1	+0.6
QIZ				S	S	08 35 22.4	+4.0
QIZ				SS	SS	08 39 36.4	-1.2
QIZ				pmax	pmax		
	comp=Z,1µm,13.9s						
QIZ				LR	LR		
	comp=Z,1µm,23.0s						
QIZ				LR	LR		
	comp=Z,2µm,18.1s						
QIZ				LR	LR		
	comp=Z,1µm,23.0s						
CHKK	Chushkaly	67.16	312	eP	P	08 26 24.9	-1.5
	baz=312						
NC204	NORSAR Array S	67.42	358	P	P	08 26 27.3	-0.5
NC204				IAmb	IAmb	08 26 29.0	
	comp=Z,180nm,1.4s						
KUU	Kurty	67.43	313	eP	P	08 26 26.8	-1.3
	comp=Z,225nm,1.6s,baz=313						
KUU	Kurty	67.43	313	eP	P	08 26 26.7	-1.3
KUU				pmax	pmax		
	comp=Z,225nm,1.6s						
NC405	NORSAR Array S	67.56	357	P	P	08 26 27.6	-1.0
BTLS	Baital	67.56	315	eP	P	08 26 28.3	-0.5
	comp=Z,102nm,1.4s,baz=315						
BTLS	Baital	67.56	315	eP	P	08 26 28.3	-0.5
BTLS				pmax	pmax		
	comp=Z,102nm,1.4s						
HYA	Hoyanger	67.58	0	eP	P	08 26 28.8	+0.2
NB2	NORSAR Subarra	67.65	358	P	P	08 26 28.4	-0.8
	comp=Z,3.1nm,0.6s,baz=4.7,slow=6.5						
NB2	NORSAR Subarra	67.65	358	P	P	08 26 28.4	-0.8
	baz=4.7,slow=6.5						
NOA	NORSAR Array B	67.65	358	P	P	08 26 28.6	-0.6
	comp=Z,7.9nm,0.7s,baz=2.5,slow=6.4,SNR=22						
NOA				LR	LR	08 57 06.8	
	comp=Z,1µm,18.5s,baz=5.0,slow=37						
MDOK	Medeo	67.66	312	eP	P	08 26 27.6	-2.1
	baz=312						
MDOK				eLR	LR	08 56 45.8	
	comp=Z,2µm,18.8s,baz=312						
MDOK	Medeo	67.66	312	P	P	08 26 29.6	-0.1
AAA	Alma-Ata	67.69	312	eP	P	08 26 28.5	-1.3
	baz=312						
AAA	Alma-Ata	67.69	312	eP	P	08 26 28.4	-1.3
TNSS	Tian-Shan	67.81	312	eP	P	08 26 28.8	-2.1
	baz=312						
NC602	NORSAR Array S	67.95	357	eP	P	08 26 30.2	-0.8
AAL	Aland	68.05	353	eP	P	08 26 30.3	-1.3
SKAR	Skarslia	68.06	359	eP	P	08 26 31.4	-0.3
656A	Willston	68.09	70	P	P	08 26 32.3	0.0
ASK	Askoy	68.26	1	eP	P	08 26 32.0	-0.9
HFS	Hagfors	68.47	356	P	P	08 26 33.1	-1.2
	comp=Z,16nm,0.4s,baz=29,slow=3.4,SNR=81						
TKM2	Tokmak 2	68.52	313	P	P	08 26 36.4	+1.2
	SNR=16						
TKM2	Tokmak 2	68.52	313	P	P	08 26 34.8	-0.4
UPP	Uppsala	68.54	354	eP	P	08 26 33.7	-1.0
SGDS	Sogindy	68.55	313	eP	P	08 26 34.9	-0.2
	comp=Z,163nm,1.6s,baz=314						
USP	Ospenovka	68.75	313	P	P	08 26 37.6	+1.2
	SNR=11						
ODD1	Odda	68.84	360	eP	P	08 26 37.1	+0.4
CHMS	Chumysh	68.85	313	P	P	08 26 37.9	+1.0
	SNR=42						
KBK	Karagaybulak	69.03	313	P	P	08 26 39.6	+1.4
	SNR=34						
FRU1	Bishkek	69.05	313	P	P	08 26 39.7	+1.4
FRU1				pmax	pmax		
	comp=Z,461nm,1.2s						
FRU1	Bishkek	69.05	313	P	P	08 26 39.6	+1.4
VSU	Vasula	69.07	349	eP	P	08 26 37.1	-0.9
VSU	Vasula	69.07	349	⇑P	P	08 26 37.8	-0.2
KONO	Kongsberg	69.08	358	P	P	08 26 38.1	+0.1
KONO				pmax	pmax		
	comp=Z,82nm,1.3s						
KONO				MLR	MLR		
	comp=Z,2µm,18.0s						
KONO	Kongsberg	69.08	358	P	P	08 26 38.1	+0.1
KONO				IAmb	IAmb	08 26 39.2	
	comp=Z,82nm,1.2s						
KONO	Kongsberg	69.08	358	IAMs_20	IAMs_20	08 57 27.9	
	comp=Z,2µm,18.0s						
KONO	Kongsberg	69.08	358	eP	P	08 26 37.4	-0.7
KONO	Kongsberg	69.08	358	⇓P	P	08 26 38.4	+0.3
SLVN	Son La	69.11	278	P	P	08 26 39.3	+0.4
SLVN				IAMs_20	IAMs_20	08 57 53.9	
	comp=Z,2µm,21.0s						
MTSE	Matsula	69.15	350	eP	P	08 26 37.6	-0.8
AAK	Ala-Archa	69.25	313	LR	LR	08 57 19.7	
	comp=Z,2µm,21.4s,baz=38,slow=36						
AAK	Ala-Archa	69.25	313	P	P	08 26 41.0	+1.4
	SNR=74						
AAK	Ala-Archa	69.25	313	i P	P	08 26 40.1	+0.5
	SNR=78						
AAK	Ala-Archa	69.25	313	i P	P	08 26 39.7	+0.1
AAK				pmax	pmax		
	comp=Z,586nm,1.1s						
AAK				MLR	MLR		
	comp=Z,10µm,17.0s						
AAK	Ala-Archa	69.25	313	P	P	08 26 39.4	-0.2
AAK				P	P	08 26 39.4	-0.2
AAK	Ala-Archa	69.25	313	⇑P	P	08 26 40.1	+0.5
BLS5	Blasjo	69.33	0	eP	P	08 26 39.2	-0.5
AKTO	Aktyubinsk	69.38	328	P	P	08 26 40.0	-0.1
	comp=Z,154nm,0.9s,baz=50,slow=7.1,SNR=186						
AKTO	Aktyubinsk	69.38	328	P	P	08 26 40.0	-0.1
MSVF	Nonsavu	69.44	189	LR	LR	08 54 14.1	
	comp=Z,3µm,18.9s,baz=346,slow=33						
LKP	Lekhapani	69.53	288	eP	P	08 26 43.3	+1.9
EKS2	Erkin-Say	69.56	313	P	P	08 26 42.2	+0.8
	SNR=16						
UCH	Uchtor	69.56	313	P	P	08 26 43.4	+1.5
	SNR=10						
PMG	Port Moresby	69.61	222	P	P	08 26 40.4	-1.4
	comp=Z,30nm,1.0s,baz=25,slow=11,SNR=6.5						
PMG	Port Moresby	69.61	222	P	P	08 26 41.7	-0.2
PMG				pmax	pmax		
	comp=Z,219nm,1.7s						
PMG	Port Moresby	69.61	222	P	P	08 26 41.7	-0.2
PMG				IAmb	IAmb	08 26 57.4	
	comp=Z,219nm,1.6s						
DWPF	Disney Wildern	69.67	70	IAMs_20	IAMs_20	09 00 01.7	
	comp=Z,3µm,18.0s						
DWPF	Disney Wildern	69.67	70	P	P	08 26 41.4	-0.8
	baz=318						
DWPF				S	S	08 35 46.7	-1.6
	baz=318						
DWPF	Disney Wildern	69.67	70	⇑P	P	08 26 41.9	-0.3
AB31	Akbulak array	69.73	326	i P	P	08 26 41.3	-0.9
ABKAR	Akbulak array	69.73	326	P	P	08 26 42.6	+0.4
ABKAR	Akbulak array	69.73	326	⇑P	P	08 26 42.1	-0.1
SWI	Sorong	69.94	241	P	P	08 26 44.0	0.0
	comp=Z,4µmcomp=Z,342nm,1.2s						
PMOR	Pomariorio Ree	69.94	154	eP	P	08 26 42.9	-0.9
	comp=Z,254nm,1.4s						
SIJI	Sorong	69.95	241	P	P	08 26 43.2	-0.8
	comp=Z,192nm,0.9s,baz=26,slow=6.9,SNR=39						
MOS	Moscow	69.98	342	eP	P	08 26 42.1	-1.5
MOS				e		08 26 53.7	
MOS				e		08 27 04.6	
MOS				e		08 29 15.1	
MOS				pmax	pmax		
	comp=Z,170nm,1.1s						
MOS				pmax	pmax		
	comp=N,122nm,1.2s						
MOS				MLR	MLR		
	comp=N,4µm,19.0s						
MOS				MLR	MLR		
	comp=Z,3µm,19.0s						
DIBR	DIBRUGARH	69.98	289	i P	P	08 26 46.4	+2.2
AML	Almayashu	70.01	313	P	P	08 26 46.0	+1.4
	SNR=53						
AML	Almayashu	70.01	313	i P	P	08 26 45.2	+0.6
	SNR=53						
AML	Almayashu	70.01	313	P	P	08 26 45.4	+0.7
VAH	Vaihoa	70.24	154	eP	P	08 26 44.5	-1.1
	comp=Z,110nm,1.1s						
SLIT	Slitere, Latvi	70.37	351	eP	P	08 26 44.8	-1.2
SNART	Snartemo	70.42	360	eP	P	08 26 46.1	-0.2
DZA	Taraz	70.46	315	eP	P	08 26 45.9	-1.0
	baz=315						
DZA	Taraz	70.46	315	eP	P	08 26 45.9	-1.0
HOMB	Homborsund	70.48	359	eP	P	08 26 46.5	-0.1
LSA	Lhasa	70.50	293	P	P	08 26 49.4	+1.5
LSA	Lhasa	70.50	293	IAMs_20	IAMs_20	09 00 02.2	
	comp=Z,3µm,20.0s						
LSA	Lhasa	70.50	293	P	P	08 26 49.6	+1.7
KK31	Karatay Array	70.65	316	P	P	08 26 48.3	+0.3
KK31				pmax	pmax		
	comp=Z,156nm,1.2s						
KK31	Karatay Array	70.65	316	P	P	08 26 48.3	+0.3
KK31				IAmb	IAmb	08 26 49.6	
	comp=Z,156nm,1.1s						
KKAR	Karatay Array	70.65	316	P	P	08 26 48.0	0.0
KKAR	Karatay Array	70.65	316	P	P	08 26 48.0	0.0
KKAR	Karatay Array	70.65	316	⇑P	P	08 26 47.8	-0.3
TNTI	Ternate	70.76	246	P	P	08 26 50.1	+1.1
OBN	Obninsk	70.77	342	IAMs_20	IAMs_20	09 02 17.7	
	comp=Z,3µm,21.0s						
MCD	Coleburn Disti	70.88	6	eP	P	08 26 49.0	-0.2
JORH	JORHAT	70.92	289	eP	P	08 26 51.1	+1.3
ITAN	ITANAGAR	70.93	290	eP	P	08 26 51.5	+1.5
KSH	Kashi	71.01	310	P	P	08 26 53.8	+3.4
KSH				S	S	08 36 09.2	+5.3
KSH				sS	pS	08 36 17.0	+0.5
KSH				SKS	SKSac	08 36 47.4	-2.9
KSH				SS	SS	08 40 43.2	+6.8
KSH				pmax	pmax		
	comp=Z,490nm,1.2s						
KSH				pmax	pmax		
	comp=Z,1µm,8.4s						
KSH				LR	LR		
	comp=Z,3µm,18.9s						
KSH				LR	LR		
	comp=Z,6µm,18.0s						
KSH				LR	LR		
	comp=Z,7µm,21.3s						
MOKO	MOKOCHONG	71.08	289	eP	P	08 26 52.8	+1.8
MOKO				i pP	pwP	08 27 05.9	-0.1
FAKI	Fak Fak	71.13	239	P	P	08 26 51.3	+0.1
FAKI				IAmb	IAmb	08 27 06.4	
	comp=Z,205nm,1.2s						
FAKI	Fak Fak	71.13	239	⇑P	P	08 26 50.8	-0.5
FAKI	Fak Fak	71.13	239	P	P	08 26 50.7	-0.5
	comp=Z,3µmcomp=Z,194nm,1.8s						
DRUM	Mains of Drumt	71.59	5	eP	P	08 26 53.0	-0.4
DRUM				IAmb	IAmb	08 26 55.1	
	comp=Z,167nm,1.3s						
061Z	Ochoppi	71.66	71	P	P	08 26 54.8	+0.5
KOHI	KOHIMA	71.77	288	eP	P	08 26 56.0	+0.9
KOHI				IAmb	IAmb	08 27 00.1	
PPT	Papeete	71.95	156	LR	LR	08 55 46.0	
	comp=Z,2µm,18.5s,baz=3.5,slow=34						
ISAL	Salakas	71.97	348	eP	P	08 26 55.3	-0.4
PPT2	Papeete2	71.97	156	eP	P	08 26 54.9	-1.3
	comp=Z,145nm,1.5s						
PPT2				eS	S	08 36 11.2	-3.9
	comp=Z,7µm,28.2s						
PPT2				eLQ	LQ	08 45 36.4	
	comp=Z,897nm,24.0s						
PPT2				eLR	LR	08 48 40.8	
	comp=Z,3µm,22.5s,baz=344						
PPT2	Papeete2	71.97	156	eT	T	09 45 19.2	
	comp=Z,9.0nm,0.3s						
PBUR	Paburge	71.99	351	eP	P	08 26 56.1	+0.3
LAWE	Loch Awe, Argy	72.05	7	eP	P	08 26 56.8	+0.6
LAWE				IAmb	IAmb	08 26 57.5	
	comp=Z,183nm,1.3s						
DEL	Delary	72.13	356	i P	P	08 26 54.0	-2.6
MUD	Monsted U'grnd	72.29	359	i P	P	08 26 57.2	-0.3
PABE	Paberze	72.29	350	eP	P	08 26 56.8	-0.9
PABE	Paberze	72.29	350	IAMs_20	IAMs_20	09 01 45.7	
	comp=Z,3µm,20.0s						
IMP	Imphal	72.53	288	eP	P	08 27 00.0	+0.3
IMP				IAmb	IAmb	08 27 06.2	
	comp=Z,128nm,1.1s						
IMP				i pP	pwP	08 27 13.4	-1.2
NACGM	Naroch	72.54	348	i P	P	08 26 59.0	-0.2
ESY	Stoneypath	72.58	5	eP	P	08 26 58.7	-0.7
TAS	Tashkent	72.62	315	P	P	08 27 00.6	+0.7
TAS				pmax	pmax		
	comp=Z,203nm,1.0s						
TAS	Tashkent	72.62	315	P	P	08 27 00.6	+0.7
LPSR	Galich'ya Gora	72.67	340	eP	P	08 26 59.9	0.0
LPSR				pmax	pmax		
	comp=Z,200nm,1.3s						
LPSR				pmax	pmax		
	comp=Z,190nm,1.3s						
LPSR				MLR	MLR		
	comp=Z,2µm,15.0s						
EBL	Broad Law	72.69	6	eP	P	08 26 59.7	-0.4
SOR	Soroa	72.71	75	P	P	08 27 01.4	+0.7
SOR				pmax	pmax		
	comp=Z,124nm,1.1s						
SOR	Soroa	72.71	75	P	P	08 27 01.4	+0.7
SOR				IAmb	IAmb	08 27 14.9	
	comp=Z,124nm,1.1s						
MNK	Minsk	72.78	347	i P	P	08 27 01.1	+0.5
MNK				i		08 27 16.9	
MNK				i		08 29 43.0	
MNK				i PPP	PPP	08 31 27.7	
MNK				i S	S	08 36 21.4	-2.1
MNK				pmax	pmax		
	comp=Z,146nm,1.0s						
MNK				pmax	pmax		
	comp=E,4.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,112nm,1.2s						
MNK				MLR	MLR		
	comp=Z,3µm,23.0s						
MNK				MLR	MLR		
	comp=N,1µm,18.0s						
MNK				MLR	MLR		
	comp=E,180nm,19.0s						
MNK	Minsk	72.78	347	i P	P	08 27 01.2	+0.6
	comp=E,4.0nm,0.9s						
MNK				i P	P	08 27 01.2	+0.6
	comp=N,112nm,1.2s						
MNK				i P	P	08 27 01.2	+0.6
	comp=Z,146nm,1.0s,baz=194						
MNK				i PcP	PcP	08 27 16.9	-0.8
MNK				i PP	PP	08 29 43.1	+1.1
MNK				i PPP	PPP	08 31 27.7	
MNK				i S	S	08 36 21.5	-2.0
MNK				i SS	SS	08 40 52.2	-10
MNK				i SSS	SSS	08 44 25.4	
MNK				i LQ	LQ	08 53 49.0	
MNK				i LR	LR	08 58 25.6	
MNK				i LRM	MLR	09 01 25.1	
	comp=Z,3µm,23.1s						
MNK				i LRM	MLR	09 01 31.8	
	comp=N,1µm,18.1s						
MNK				i LRM	MLR	09 01 37.3	
	comp=E,180nm,18.5s						
DRK	Karamyk	72.99	313	P	P	08 27 03.2	+0.7
EKA	Eskdalemuir Ar	73.13	6	P	P	08 27 01.9	-0.7
	comp=E,43nm,1.1s,baz=357,slow=5.0,SNR=32						
EKA				pP	sP	08 27 14.9	-0.4
	comp=E,22nm,0.9s,baz=357,slow=5.1,SNR=8.8						
ESK	Eskdalemuir	73.14	6	eP	P	08 27 02.5	-0.2
ESK				IAmb	IAmb	08 27 03.6	
	comp=Z,63nm,1.2s						
SHL	Shillong	73.19	290	P	P	08 27 03.4	-0.3
SHL				pmax	pmax		
	comp=Z,907nm,1.3s						
SHL	Shillong	73.19	290	P	P	08 27 03.4	-0.3
SHL	Shillong	73.19	290	eP	P	08 27 03.7	0.0
SHL				IAmb	IAmb	08 27 05.5	
	comp=Z,1000nm,1.6s						
SHL				i x	pP	08 27 17.0	+3.9
SHL	Shillong	73.19	290	P	P	08 27 04.3	+0.5
	SNR=231						
SILR	SILCHAR	73.25	289	eP	P	08 27 05.6	+1.8
SILR				i x	pP	08 27 19.0	+5.9
VRH	Novokhopyorsk	73.34	338	eP	P	08 27 03.4	-0.6
VRH				pmax	pmax		
	comp=Z,350nm,1.2s						
VRH				pmax	pmax		
	comp=Z,250nm,0.9s						
GTOI	Gorontalo	73.38	249	P	P	08 27 04.5	-0.2
	comp=Z,654nmcomp=Z,41nm,1.4s						
BSD	Bornholm Skovb	73.43	355	eP	P	08 27 03.4	-1.0
BSD	Bornholm Skovb	73.43	355	i P	P	08 27 02.6	-1.7
RAR	Rarotonga	73.48	167	LR	LR	08 53 46.8	
	comp=Z,3µm,20.4s,baz=33,slow=31						
GAL1	Galloway	73.48	7	eP	P	08 27 04.4	-0.3
GTK	Tadong	73.76	293	eP	P	08 27 07.7	+0.7
GTK				IAmb	IAmb	08 27 11.6	
	comp=Z,64nm,0.8s						
SUW	Suwalki	73.85	350	eP	P	08 27 05.9	-0.9
SUW				ePcP	sP	08 27 18.5	-1.1
SUW	Suwalki	73.85	350	eP	P	08 27 05.1	-1.7
SUW	Suwalki	73.85	350	P	P	08 27 06.2	-0.7
SUW				pmax	pmax		
	comp=Z,422nm,1.2s						
SUW				MLR	MLR		
	comp=Z,2µm,21.0s						
SUW	Suwalki	73.85	350	P	P	08 27 06.2	-0.7
SUW				IAMs_20	IAMs_20	09 00 16.8	
	comp=Z,2µm,21.0s						
SUW	Suwalki	73.85	350	⇑P	P	08 27 06.0	-0.9
SUW				⇑P	pP	08 27 06.1	-10
SANI	Sanana	73.86	245	⇑P	P	08 27 06.3	-1.2
SANI	Sanana	73.86	245	P	P	08 27 07.1	-0.3
	comp=Z,2µmcomp=Z,147nm,1.5s						
KESW	Keswick, Cumbr	73.87	6	eP	P	08 27 07.0	0.0
KESW				IAmb	IAmb	08 27 08.6	
	comp=Z,118nm,1.2s						
VSR	Storozhevoye	73.91	339	eP	P	08 27 07.1	-0.2
VSR				pmax	pmax		
	comp=Z,350nm,1.2s						
VSR				pmax	pmax		
	comp=Z,470nm,1.1s						
VSR				MLR	MLR		
	comp=Z,5µm,18.0s						
SPMM	Sapulut	74.04	257	P	P	08 27 09.0	+0.4
CHTO	Chiang Mai	74.06	280	IAMs_20	IAMs_20	09 04 41.7	
	comp=Z,2µm,18.0s						
CHTO	Chiang Mai	74.06	280	P	P	08 27 08.8	+0.1
CHTO				P	P	08 27 08.8	+0.1
CHTO				S	S	08 36 43.8	+4.9
CHTO				S	S	08 36 43.8	+4.9
CHTO	Chiang Mai	74.06	280	⇑P	P	08 27 08.7	0.0
RGN	Rugen	74.07	356	eP	P	08 27 08.6	+0.4
VORD	Divnogorie	74.12	339	eP	P	08 27 08.5	0.0
VORD				pmax	pmax		
	comp=Z,330nm,1.3s						
MRSI	Marisa	74.14	250	P	P	08 27 08.8	-0.3
	comp=Z,4µmcomp=Z,285nm,1.3s						
WIM	Isle of Man	74.20	7	eP	P	08 27 08.9	-0.1
TAPN	Taplejung	74.25	294	eP	P	08 27 10.7	+0.6
	comp=Z,2µm,1.2s						
CM31	Chiang Mai Arr	74.33	280	P	P	08 27 10.9	+0.7
CM31	Chiang Mai Arr	74.33	280	P	P	08 27 10.8	+0.6
	SNR=59						
CM31				P	P	08 27 10.8	+0.6
	SNR=59						
CMAR	Chiang Mai Arr	74.33	280	P	P	08 27 10.5	+0.3
	comp=Z,38nm,0.9s,baz=27,slow=6.3,SNR=114						
CMAR				PKPPKP	P'P'df	08 54 46.1	+3.3
	comp=Z,0.6nm,0.3s,baz=209,slow=3.9,SNR=4.5						
CMAR				LR	LR	09 04 43.5	
	comp=Z,1µm,18.1s,baz=84,slow=40						
CMAR	Chiang Mai Arr	74.33	280	P	P	08 27 10.7	+0.4
CMAR	Chiang Mai Arr	74.33	280	P	P	08 27 10.7	+0.4
HPK	Haverah Park	74.59	5	eP	P	08 27 10.8	-0.4
HPK				IAmb	IAmb	08 27 13.6	
	comp=Z,179nm,1.3s						
ODAN	Odare	74.81	294	eP	P	08 27 13.6	+0.4
	comp=Z,2µm,1.6s						
AGT	Agartala	74.84	289	eP	P	08 27 15.6	+2.4
AGT				i x	pP	08 27 27.4	+4.9
GUN	Gumba	74.86	296	eP	P	08 27 14.2	+0.6
	comp=Z,3µm,1.2s						
CHGR	Chuyangaron	74.86	314	P	P	08 27 13.0	-0.2
JIRN	Jiri	74.87	295	eP	P	08 27 14.4	+0.6
	comp=Z,2µm,1.1s						
LUWI	Luwuk	74.88	248	P	P	08 27 13.4	0.0
	comp=Z,6µmcomp=Z,449nm,1.0s						
DSB	Dublin	74.96	8	⇑P	P	08 27 13.0	-0.4
WME	Myndd Eilian	74.97	7	eP	P	08 27 13.5	+0.1
GKP	Gorka Klasztor	75.12	353	eP	P	08 27 14.6	+0.4
GKP				ePcP	sP	08 27 26.9	-0.1
GKP	Gorka Klasztor	75.12	353	eP	P	08 27 13.9	-0.4
LBWR	Ladybower, Pea	75.14	5	eP	P	08 27 14.5	+0.1
LBWR				IAmb	IAmb	08 27 16.4	
	comp=Z,131nm,1.1s						
RAMN	Ramite	75.19	295	eP	P	08 27 15.8	+0.4
	comp=Z,454nm,0.6s						
KKN	Kakani	75.28	296	eP	P	08 27 16.1	+0.2
	comp=Z,2µm,1.5s						
PKI	Pulchoki	75.38	296	eP	P	08 27 16.8	+0.2
	comp=Z,2µm,1.3s						
PKIN	Phulchoki	75.38	296	eP	P	08 27 16.7	+0.1
	comp=Z,2µm,1.3s						
APSI	Ampana	75.42	249	P	P	08 27 16.8	+0.3
	comp=Z,2µmcomp=Z,152nm,1.4s						
MPSI	Mapaga	75.45	252	P	P	08 27 16.9	+0.2

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      comp=Z,3µmcomp=Z,245nm,1.4s
DZM   Mont Dzumac     75.46 199 eP      P       08 27 15.2 -1.4
      comp=Z,208nm,1.4s
DZM                             eS      S       08 36 49.0 -5.3
      comp=Z,1µm,24.9s
DZM   Mont Dzumac     75.46 199 eLR     LR      08 50 32.0
      comp=Z,2µm,20.4s,baz=24
DZM   Mont Dzumac     75.46 199  LR     LR      08 57 31.5
      comp=Z,2µm,18.7s,baz=34,slow=33
GKN   Gorkha          75.48 297 eP      P       08 27 17.1 +0.1
      comp=Z,2µm,1.2s
DMN   Daman           75.52 296 eP      P       08 27 17.6 +0.2
      comp=Z,2µm,1.3s
FOEL  Foel Wylfa      75.56   6 eP      P       08 27 16.1 -0.7
FOEL                             IAmb   IAmb    08 27 17.9
      comp=Z,174nm,1.2s
LLW   Llanuwychllyn   75.56   6 eP      P       08 27 16.7 -0.2
BBSR  BB Station      75.68  56  IAMs_20 IAMs_20 09 03 40.8
      comp=Z,2µm,18.0s
BBSR  BB Station      75.68  56 ⇑P      P       08 27 18.0 +0.1
DANN  Dangsing        75.70 298 eP      P       08 27 19.0 +0.6
      comp=Z,2µm,1.0s
SNET  Serv Nac Est T  75.79  86  IAMs_20 IAMs_20 08 56 59.5
      comp=Z,2µm,20.0s
CWF   Charnwood Fore  75.82   5 eP      P       08 27 17.7 -0.6
CWF                              IAmb   IAmb    08 27 19.2
      comp=Z,68nm,1.1s
VAL   Valentia        75.86  11 ⇑P      P       08 27 19.2 +0.7
WACR  West Acre       75.93   4 eP      P       08 27 19.1 +0.2
WACR                             IAmb   IAmb    08 27 20.7
      comp=Z,331nm,1.0s
HLM1  Long Mynd       75.95   6 eP      P       08 27 18.9 -0.1
HLM1                             IAmb   IAmb    08 27 20.1
      comp=Z,60nm,1.3s
RUE   Ruedersdorf     76.12 355 eP      P       08 27 19.7 -0.2
KOLN  Koldanda        76.24 297 eP      P       08 27 21.6 +0.2
      comp=Z,1µm,1.2s
BEL   Belsk           76.24 351 eP      P       08 27 21.5 +0.8
BEL                             ePcP    sP      08 27 33.1 -0.4
AKASG Malin Array Be  76.28 345  P      P       08 27 19.6 -1.3
      comp=Z,21nm,0.4s,baz=18,slow=6.0,SNR=116
AKASG                            pP     PcP     08 27 32.5 -0.3
      comp=Z,30nm,0.6s,baz=18,slow=6.1,SNR=8.5
AKASG                            LR     LR      09 08 54.2
      comp=Z,1µm,18.2s,baz=5.0,slow=42
PYUN  Piuthan         76.32 298 eP      P       08 27 22.4 +0.6
      comp=Z,1µm,1.0s
FLTG  Flechtingen     76.37 357  P      P       08 27 21.1 -0.3
MCH1  Michaelchurch   76.46   6 eP      P       08 27 21.8 -0.1
MCH1                             IAmb   IAmb    08 27 22.9
      comp=Z,87nm,1.2s
IBBN  Ibbenburen      76.46 359 ⇑P      P       08 27 22.5 +0.6
IBBN                            ⇓P      P       08 27 22.9 +0.9
DHRM  DHARAMSHALA     76.60 305⇑iP      P       08 27 23.7 +0.3
DHRM                             IAmb   IAmb    08 27 31.8
      comp=Z,192nm,1.1s
TGUH  Tegucigalpa,Un  76.73  84  IAMs_20 IAMs_20 08 56 34.2
      comp=Z,2µm,22.0s
TGUH  Tegucigalpa,Un  76.73  84 ⇓P      P       08 27 24.8 +0.6
TGUH                            ⇑P      sP      08 27 37.5 +0.4
TGUH                            ⇓P      pwP     08 27 38.1 -0.8
NIL   Nilore          77.00 308  P      P       08 27 25.9 +0.5
SMLA  Simla           77.05 304 eP      P       08 27 25.6  0.0
DDI   Dehra Dun       77.23 303 eP      P       08 27 26.9 +0.2
DDI                              IAmb   IAmb    08 27 38.9
      comp=Z,653nm,1.6s
CLL   Collm           77.32 356 i P     P       08 27 26.6 -0.2
CLL                             i *SP   sP      08 27 39.2 -0.4
CLL                             eS      S       08 37 16.0 +1.9
CLL                              pmax   pmax
      comp=Z,98nm,1.1s
CLL                              MLR    MLR
      comp=Z,1µm,19.0s
CLL   Collm           77.32 356 i P     P       08 27 26.6 -0.2
      comp=Z,98nm,1.1s
CLL                             i PcP   sP      08 27 39.2 -0.4
CLL                             eS      S       08 37 16.0 +1.9
CLL                             eSS     SS      08 42 30.0  +19
CLL                              Lm     MLR     09 10 00.0
      comp=N,2µm,19.4s
CLL                              Lm     MLR     09 10 00.0
      comp=E,900nm,18.4s
CLL                              Lm     MLR     09 10 00.0
      comp=Z,1µm,19.0s
CLL   Collm           77.32 356  IAMs_20 IAMs_20 09 02 19.7
      comp=Z,2µm,20.0s
TBI   Tubuai          77.53 158 eT      T       09 52 15.0
      comp=Z,27nm,0.3s
KSP   Ksiaz           77.60 354 eP      P       08 27 28.4  0.0
KSP                             ePcP    sP      08 27 40.7 -0.5
BRG   Berggiesshubel  77.71 355 i P     P       08 27 28.6 -0.5
BRG                              Amp            08 27 31.1
      comp=Z,135nm,1.1s
BRG   Berggiesshubel  77.71 355  P      P       08 27 33.9 +4.9
BRG                              Amp            08 27 37.9
      comp=Z,84nm,1.1s
BRG   Berggiesshubel  77.71 355  P      P       08 27 41.9  +13
BRG                              Amp            08 27 43.3
      comp=Z,123nm,1.1s
BRG   Berggiesshubel  77.71 355  S      S       08 37 28.0  +10
CHVC  Chvalec         77.87 354 eP      P       08 27 29.8 -0.2
CHVC                             AMS    AMS     09 07 10.0
      comp=Z,2µm,19.2s
LVV   L'vov           77.87 349 eP      P       08 27 29.3 -0.6
LVV                             e               08 27 39.2
LVV                             e               08 30 25.7
LVV                             eS      S       08 37 17.2 -2.9
LVV                             e               08 38 13.0
LVV                              pmax   pmax
      comp=Z,270nm,1.2s
OSTC  Ostas           77.89 354 eP      P       08 27 30.4 +0.3
OSTC                             AMS    AMS     09 09 20.0
      comp=Z,2µm,16.0s
OJC   Ojcow           77.94 351 eP      P       08 27 29.9 -0.5
OJC                             ePcP    sP      08 27 42.8 -0.2
DYA   Yadsworthy      77.95   7 eP      P       08 27 30.0 -0.4
DYA                              IAmb   IAmb    08 27 32.3
      comp=Z,102nm,1.2s
UPC   Upice           77.95 354 eP      P       08 27 30.6 +0.2
UPC                              MLR    MLR
      comp=Z,2µm,19.3s
UPC   Upice           77.95 354 eP      P       08 27 30.6 +0.2
UPC                              AMS    AMS     09 07 20.0
      comp=Z,2µm,19.3s
PVCC  Panska Ves      78.02 355 eP      P       08 27 31.2 +0.4
PVCC                             MLR    MLR
      comp=Z,1µm,17.0s
PVCC  Panska Ves      78.02 355 eP      P       08 27 31.2 +0.4
PVCC                             AMS    AMS     09 12 20.0
      comp=Z,1µm,17.0s
BOK   Bokaro          78.03 293 eP      P       08 27 31.6 +0.4
BOK                             i pP    sP      08 27 44.9 +0.9
BOK                              IAmb   IAmb    08 27 46.9
      comp=Z,721nm,1.4s
DPC   Dobruska-Polom  78.09 354 eP      P       08 27 31.2  0.0
DPC                             e               08 27 44.2
DPC                              MLR    MLR
      comp=Z,2µm,18.3s
DPC   Dobruska-Polom  78.09 354 eP      P       08 27 31.2  0.0
DPC                             ePCP    sP      08 27 44.2 +0.2
DPC                              AMS    AMS     09 13 10.0
      comp=Z,2µm,18.3s
MEM   Membach         78.17   0 dP      P       08 27 31.1 -0.5
      comp=Z,39nm,1.1s
BTNL  Ternell         78.19   0 dP      P       08 27 32.3 +0.6
      comp=Z,36nm,1.1s
TTSI  Tana Toraja     78.21 250  P      P       08 27 32.6 +0.3
      comp=Z,3µmcomp=Z,211nm,1.4s
KWP   Kalwaria Pacla  78.22 349 eP      P       08 27 32.1 +0.2
KWP                             ePcP    sP      08 27 44.6 -0.1
SNF   Seneffe         78.25   2 dP      P       08 27 32.4 +0.4
      comp=Z,35nm,1.0s
KBL   Kabul           78.29 312  P      P       08 27 32.3 -0.5
      SNR=131
KBL                              S      S       08 37 22.8 -2.7
KRLC  Kraliky         78.33 353 eP      P       08 27 32.6 +0.1
KRLC                            e               08 27 45.6
KRLC                             MLR    MLR
      comp=Z,2µm,17.5s
KRLC  Kraliky         78.33 353 eP      P       08 27 32.6 +0.1
KRLC                            ePCP    sP      08 27 45.6 +0.3
KRLC                             AMS    AMS     09 14 10.0
      comp=Z,2µm,17.5s
BCLA  Clavier         78.35   1 dP      P       08 27 32.6 +0.1
      comp=Z,28nm,1.2s
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BGES  Gesves          78.38   1 dP      P       08 27 32.0 -0.7
SBUM  Sibu            78.41 259  P      P       08 27 35.0 +1.6
BHOU  Houvegnez       78.42   0 dP      P       08 27 33.0  0.0
NKC   Novy Kostel     78.42 356 eP      P       08 27 33.1 +0.1
NKC                              MLR    MLR
      comp=Z,2µm,18.4s
NKC   Novy Kostel     78.42 356 eP      P       08 27 33.1 +0.1
NKC                              AMS    AMS     09 11 40.0
      comp=Z,2µm,18.4s
BMRD  Maredsous       78.46   1 dP      P       08 27 33.3 +0.1
      comp=Z,51nm,1.1s
OKC   Ostrava-Krasne  78.46 352 eP      P       08 27 33.7 +0.5
OKC                              MLR    MLR
      comp=Z,2µm,17.4s
OKC   Ostrava-Krasne  78.46 352 eP      P       08 27 33.7 +0.5
OKC                              AMS    AMS     09 10 50.0
      comp=Z,2µm,17.4s
PRA   Prague          78.49 355 eP      P       08 27 34.2 +0.9
PRA   Prague          78.49 355 eP      P       08 27 34.2 +0.9
BKB   Balikpapan      78.51 253 ⇑P      P       08 27 35.0 +1.1
PRU   Pruhonice       78.56 355 eP      P       08 27 33.7  0.0
PRU                             e               08 27 46.4
PRU                              MLR    MLR
      comp=Z,2µm,16.8s
PRU   Pruhonice       78.56 355 eP      P       08 27 33.7  0.0
PRU                             ePCP    sP      08 27 46.4 -0.1
PRU                              AMS    AMS     09 12 40.0
      comp=Z,2µm,16.8s
MORC  Moravsky Berou  78.57 353 ⇓P      P       08 27 33.6 -0.3
MORC  Moravsky Berou  78.57 353  P      P       08 27 34.0 +0.1
MORC                             pmax   pmax
      comp=Z,87nm,1.2s
MORC  Moravsky Berou  78.57 353  P      P       08 27 34.0 +0.1
MORC                             IAmb   IAmb    08 27 35.2
      comp=Z,87nm,1.1s
MORC  Moravsky Berou  78.57 353 eP      P       08 27 34.0 +0.1
MORC  Moravsky Berou  78.57 353 ⇑P      P       08 27 34.0 +0.1
MORC                            ⇑P      P       08 27 34.0 +0.1
STHS  Stebnicka Huta  78.59 350 eP      P       08 27 35.1 +1.2
STHS                             pmax   pmax
      comp=Z,9.0nm,0.7s
STHS  Stebnicka Huta  78.59 350 eP      P       08 27 35.1 +1.2
RCHB  Rochefort       78.61   1 dP      P       08 27 34.0  0.0
      comp=Z,29nm,1.1s
DOU   Dourbes         78.67   1 dP      P       08 27 34.0 -0.3
      comp=Z,40nm,1.1s
NIE   Niedzica        78.68 351 eP      P       08 27 36.0 +1.5
NIE                             ePcP    PcP     08 27 42.5 -0.8
GOF   Gofitskoye      78.71 335⇑eP      P       08 27 35.7 +1.1
GOF                              pmax   pmax
      comp=Z,780nm,1.2s
SORM  Soroca          78.91 345 ⇑P      P       08 27 35.0 -0.7
KOLS  Kolonicke sedl  78.95 350 eP      P       08 27 35.9  0.0
KOLS                             pmax   pmax
      comp=Z,70nm,1.1s
KOLS  Kolonicke sedl  78.95 350 eP      P       08 27 35.9  0.0
GRA1  Grafenberg Arr  79.01 357  P      P       08 27 36.7 +0.5
GRA1                             IAmb   IAmb    08 27 38.3
      comp=Z,219nm,1.1s
GRF   Grafenberg Arr  79.01 357  P      P       08 27 36.7 +0.5
GRF                              pmax   pmax
      comp=Z,219nm,1.1s
GRFO  Grafenberg      79.01 357  P      P       08 27 37.0 +0.8
GRFO                             pmax   pmax
      comp=Z,211nm,1.1s
GRFO  Grafenberg      79.01 357  P      P       08 27 37.0 +0.8
GRFO                             IAmb   IAmb    08 27 38.3
      comp=Z,210nm,1.1s
LANS  Liptovska Anna  79.03 351 eP      P       08 27 37.4 +1.0
LANS                             pmax   pmax
      comp=Z,51nm,1.1s
LANS  Liptovska Anna  79.03 351 eP      P       08 27 37.4 +1.0
CRVS  Cervenica-Dubn  79.07 350 eP      P       08 27 36.6  0.0
CRVS                             pmax   pmax
      comp=Z,109nm,1.5s
CRVS  Cervenica-Dubn  79.07 350 eP      P       08 27 36.6  0.0
VRAC  Vranov          79.11 353 ⇓P      P       08 27 37.2 +0.4
VRAC  Vranov          79.11 353 eP      P       08 27 37.1 +0.3
WLF   Walferdange     79.11   0 dP      P       08 27 37.0 +0.3
WLF   Walferdange     79.11   0  P      P       08 27 37.5 +0.7
WLF                              pmax   pmax
      comp=Z,45nm,1.0s
WLF   Walferdange     79.11   0  P      P       08 27 37.5 +0.7
WLF   Walferdange     79.11   0 ⇓P      P       08 27 37.9 +1.1
WLF                             ⇓P      P       08 27 38.0 +1.2
TREC  Trest           79.20 354 eP      P       08 27 36.9 -0.4
TREC                             MLR    MLR
      comp=Z,2µm,20.4s
TREC  Trest           79.20 354 eP      P       08 27 36.9 -0.4
TREC                             AMS    AMS     09 08 00.0
      comp=Z,2µm,20.4s
UZH   Uzhgorod        79.25 349c iP     P       08 27 35.6 -1.9
UZH                             i               08 27 45.1
KDU   Kakadu          79.28 234 ⇑P      P       08 27 37.6 -0.4
KDU                             ⇑P      P       08 27 37.7 -0.3
MAK   Makhachkala     79.36 331 eP      P       08 27 38.0 -0.2
MAK                             ePPP    PPP     08 32 25.9
MAK                             eS      S       08 37 36.1  0.0
MAK                             eSS     SS      08 42 44.8 +2.6
MAK                              pmax   pmax
      comp=Z,361nm,1.4s
KRUC  Moravsky        79.37 353 eP      P       08 27 38.2  0.0
MTKI  Muara Teweh, K  79.46 255  P      P       08 27 39.7 +0.6
      comp=Z,2µmcomp=Z,72nm,1.3s
KHC   Kasperske Hory  79.47 355 eP      P       08 27 38.9 +0.1
KHC                             e               08 27 51.8
KHC                              MLR    MLR
      comp=Z,2µm,19.1s
KHC   Kasperske Hory  79.47 355 eP      P       08 27 38.9 +0.1
KHC                             ex      pP      08 27 51.8 +3.4
KHC                              AMS    AMS     09 12 40.0
      comp=Z,2µm,19.1s
JAVC  Velka Javorina  79.47 353 eP      P       08 27 40.2 +1.4
MTDJ  Mount Denham    79.49  74  P      P       08 27 38.8 -0.7
MTDJ                             IAMs_20 IAMs_20 09 06 40.0
      comp=Z,2µm,20.0s
MTDJ  Mount Denham    79.49  74 ⇑P      P       08 27 39.9 +0.5
MTDJ                            ⇑P      PcP     08 27 47.2 -0.2
MTDJ                            ⇓P      pP      08 27 48.5 -0.3
IZAB  Izabela         79.58 351 eP      P       08 27 39.6 +0.2
IZAB                             pmax   pmax
      comp=Z,481nm,1.1s
KECS  Kecovo          79.59 351 eP      P       08 27 39.2 -0.2
KECS                             pmax   pmax
      comp=Z,28nm,1.1s
KECS  Kecovo          79.59 351 eP      P       08 27 39.2 -0.2
GTBY  Guantanamo Bay  79.61  71  IAMs_20 IAMs_20 09 05 52.6
      comp=Z,3µm,20.0s
CTA   Charters Tower  79.64 218  P      P       08 27 39.8 -0.1
      comp=Z,22nm,0.9s,baz=25,slow=7.4,SNR=21
CTA                              pP     sP      08 27 52.5 -0.2
      comp=Z,49nm,0.9s,baz=37,slow=8.0,SNR=12
CTAO  Charters Tower  79.64 218  P      P       08 27 40.0 +0.1
CTAO                             pmax   pmax
      comp=Z,77nm,1.0s
CTAO  Charters Tower  79.64 218  P      P       08 27 40.0 +0.1
CTAO                             IAmb   IAmb    08 27 56.3
      comp=Z,77nm,1.0s
CTAO  Charters Tower  79.64 218 ⇑P      P       08 27 39.8 -0.1
TRPA  Tarpa           79.71 349 ⇓P      P       08 27 40.3 +0.2
TRPA  Tarpa           79.71 349 eP      P       08 27 39.8 -0.2
VYHS  Vyhne           79.74 352 eP      P       08 27 40.1 -0.2
VYHS                             pmax   pmax
      comp=Z,71nm,1.3s
VYHS  Vyhne           79.74 352 eP      P       08 27 40.0 -0.2
CKRC  Cesky Krumlov   79.74 355 eP      P       08 27 40.3  0.0
CKRC                            ex      pP      08 27 52.9 +3.0
CKRC                             AMS    AMS     09 07 30.0
      comp=Z,2µm,18.2s
GEC2  GERESS Array S  79.75 355  P      P       08 27 40.4 +0.1
GEC2                             IAmb   IAmb    08 27 54.5
      comp=Z,90nm,1.1s
GERES GERESS Array B  79.75 355  P      P       08 27 40.3 -0.1
      comp=Z,64nm,1.1s,baz=20,slow=4.3,SNR=108
GERES                            pP     sP      08 27 52.9 -0.3
      comp=Z,35nm,0.9s,baz=32,slow=1.8,SNR=12
KIV   Kislovodsk      79.83 334 ⇓P      P       08 27 41.4 +0.5
KIV   Kislovodsk      79.83 334 i P     P       08 27 40.7 -0.2
      SNR=10
KIV   Kislovodsk      79.83 334 eP      P       08 27 40.6 -0.2
KIV                             e               08 30 41.6
KIV                             eS      S       08 37 40.3 -1.1
KIV                             eSS     SS      08 42 55.3 +5.9
KIV                              pmax   pmax
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      comp=Z,119nm,1.0s
KIV                              pmax   pmax
      comp=Z,189nm,4.4s
KIV   Kislovodsk      79.83 334  IAMs_20 IAMs_20 09 09 17.6
      comp=Z,2µm,20.0s
KIV   Kislovodsk      79.83 334  P      P       08 27 40.9  0.0
SMOL  Smolenice       79.83 353 eP      P       08 27 41.4 +0.7
SMOL                             pmax   pmax
      comp=Z,42nm,1.3s
SMOL  Smolenice       79.83 353 eP      P       08 27 41.4 +0.7
KAPI  Kappang         79.84 249  P      P       08 27 41.8 +0.7
      comp=Z,38nm,1.0s,baz=68,slow=3.9,SNR=19
KAPI                             LR     LR      09 00 56.3
      comp=Z,400nm,19.8s,baz=71,slow=34
KAPI  Kappang         79.84 249  P      P       08 27 41.5 +0.3
KAPI                             S      S       08 37 45.6 +3.6
BUR08 Bucovina Ar. S  79.86 347  P      P       08 27 40.8 -0.2
BUR08                            IAmb   IAmb    08 27 42.3
      comp=Z,76nm,1.1s
BKSI  Bulukumba       79.87 248  P      P       08 27 41.6 +0.3
      comp=Z,3µmcomp=Z,231nm,1.5s
BURAR Bucovina Array  79.88 347 ⇑P      P       08 27 41.0 -0.2
BURAR Bucovina Array  79.88 347  P      P       08 27 40.9 -0.2
BURAR                            IAmb   IAmb    08 27 55.9
      comp=Z,59nm,0.8s
KIS   Kishinev        79.94 345⇑iP      P       08 27 41.0 -0.3
      comp=Z,320nm,1.2s
KIS                             eLR     LR      09 02 27.0
      comp=Z,1µm,18.0s
KIS   Kishinev        79.94 345c iP     P       08 27 41.0 -0.3
KIS                             e               08 27 54.0
KIS                              pmax   pmax
      comp=Z,320nm,1.2s
KBZ   Khabaz          79.98 334  P      P       08 27 42.3 +0.8
      comp=Z,53nm,0.9s,baz=14,slow=1.3,SNR=62
KBZ                              LR     LR      09 09 29.2
      comp=Z,3µm,18.3s,baz=20,slow=40
KBZ   Khabaz          79.98 334c iP     P       08 27 41.6 +0.1
KBZ                              pmax   pmax
      comp=Z,88nm,1.0s
STU   Stuttgart       79.98 358  P      P       08 27 41.6 +0.1
STU                              pmax   pmax
      comp=Z,104nm,1.0s
STU                              MLR    MLR
      comp=Z,1µm,21.0s
STU   Stuttgart       79.98 358  P      P       08 27 41.5 +0.1
STU                              IAmb   IAmb    08 27 55.9
      comp=Z,104nm,1.0s
MODS  Modra-Piesok    79.99 353 eP      P       08 27 41.4 -0.2
MODS                             pmax   pmax
      comp=Z,111nm,1.3s
MODS  Modra-Piesok    79.99 353 eP      P       08 27 41.4 -0.2
MILM  Milestii Mici   80.02 345 ⇓P      P       08 27 41.4 -0.4
MILM  Milestii Mici   80.02 345c iP     P       08 27 41.0 -0.7
MILM                            e               08 27 53.0
MILM                            e               08 30 45.0
MILM                            e               08 38 21.0
MILM                             pmax   pmax
      comp=Z,330nm,1.1s
SHA1  Shidzhatmaz     80.04 334c iP     P       08 27 42.0 -0.2
GEYT  Alibeck         80.12 321  P      P       08 27 42.7 +0.1
      comp=Z,102nm,1.1s,baz=270,slow=4.3,SNR=74
GEYT                             LR     LR      09 07 05.9
      comp=Z,4µm,18.1s,baz=20,slow=39
GYA0B ALIBECK ARRAY   80.12 321  P      P       08 27 43.1 +0.6
GYA0B                            IAmb   IAmb    08 27 44.6
      comp=Z,255nm,1.2s
ZST   Bratislava      80.18 353 eP      P       08 27 43.1 +0.5
ZST                              pmax   pmax
      comp=Z,294nm,1.1s
ZST   Bratislava      80.18 353 eP      P       08 27 43.1 +0.5
PSZ   Piszkesteto     80.21 351 ⇑P      P       08 27 42.9  0.0
PSZ   Piszkesteto     80.21 351 eP      P       08 27 43.5 +0.6
PSZ   Piszkesteto     80.21 351  P      P       08 27 43.2 +0.4
PSZ                              pmax   pmax
      comp=Z,103nm,1.2s
PSZ                              MLR    MLR
      comp=Z,2µm,21.0s
PSZ   Piszkesteto     80.21 351  P      P       08 27 43.2 +0.4
PSZ                              IAmb   IAmb    08 27 44.7
      comp=Z,103nm,1.2s
PSZ                              IAMs_20 IAMs_20 09 03 34.1
      comp=Z,2µm,21.0s
PSZ   Piszkesteto     80.21 351 ⇑P      P       08 27 43.2 +0.4
PSZ                             ⇓P      P       08 27 43.7 +0.8
BSSI  Bau Bau, Buton  80.33 247  P      P       08 27 44.3 +0.5
      comp=Z,1µmcomp=Z,75nm,1.4s
ANN   Anapa           80.35 338 eP      P       08 27 42.7 -0.8
ANN                             e*PP    pP      08 27 53.7 +0.5
ANN                             eS      S       08 37 51.6 +5.0
ANN                              pmax   pmax
      comp=Z,120nm,1.1s
ARCR  ARCALIA         80.52 348 ⇑P      P       08 27 44.7 +0.2
CONA  Conrad Observa  80.53 354 i P     P       08 27 45.2 +0.6
      comp=Z,125nm,1.1s,SNR=48
CONA                            eP      pwP     08 27 57.9 -1.0
      comp=Z,131nm,1.1s
KBKI  Kotabaru        80.57 252  P      P       08 27 45.4 +0.3
      comp=Z,2µmcomp=Z,72nm,1.1s
ZEI   Tsey            80.57 333 eP      P       08 27 42.4 -2.7
ZEI                              pmax   pmax
      comp=Z,34nm,1.0s
CLF   Chambon-Foret   80.68   3  IAMs_20 IAMs_20 09 06 51.4
      comp=Z,3µm,21.0s
GRTK  Grand Turk      80.70  67  IAMs_20 IAMs_20 09 02 33.8
      comp=Z,2µm,21.0s
MOA   Molln           80.71 355 i P     P       08 27 45.9 +0.4
      comp=Z,54nm,1.4s,SNR=13
MOA                             eP      sP      08 27 58.4 +0.1
      comp=Z,48nm,1.1s
BUD   Budapest        80.72 351 eP      P       08 27 45.2 -0.3
SOP   Sopron          80.73 353 eP      P       08 27 45.8 +0.2
STKI  Sintang         80.74 258  P      P       08 27 46.6 +0.6
      comp=Z,31nm,0.6s
TESR  Tescani         80.76 346 ⇑P      P       08 27 45.2 -0.5
SIM   Simferopol'     80.94 341ceP      P       08 27 47.2 +0.5
SIM                              pmax   pmax
      comp=Z,111nm,1.0s
SOC   Sochi           80.95 336 eP      P       08 27 45.2 -1.6
SOC                             e*PP    sP      08 27 58.1 -1.5
SOC                             e*SP    pwP     08 28 01.5 +0.5
SOC                             e               08 30 48.1
SOC                             ePPP    PPP     08 32 37.0
SOC                             eS      S       08 37 51.1 -1.8
SOC                             eSS     SS      08 43 11.5 +5.6
SOC                              pmax   pmax
      comp=Z,114nm,1.1s
DRGR                  81.01 349 ⇓P      P       08 27 47.1 -0.1
SOEI  Soe             81.15 242  P      P       08 27 48.0 -0.3
SOEI  Soe             81.15 242 ⇑P      P       08 27 48.0 -0.3
SOEI                            ⇓P      P       08 27 48.3  0.0
SOEI  Soe             81.15 242  P      P       08 27 48.5 +0.2
      comp=Z,2µmcomp=Z,212nm,1.3s
MPLH  Magyarpolny     81.16 352 eP      P       08 27 48.6 +0.8
VLDR  Vladesti        81.18 345 ⇑P      P       08 27 48.2 +0.2
RETA  Reutte          81.23 357 i P     P       08 27 48.8 +0.4
      comp=Z,68nm,1.3s,SNR=19
ARSA  Arzberg         81.23 354 i P     P       08 27 49.0 +0.8
      comp=Z,86nm,1.2s,SNR=22
ARSA                            eP      pwP     08 28 01.8 -0.8
      comp=Z,70nm,1.2s
OZUR                  81.29 347 ⇑P      P       08 27 49.3 +0.7
WATA  Walderalm       81.35 357 i P     P       08 27 49.6 +0.5
      comp=Z,140nm,1.2s,SNR=30
WATA                            eP      pwP     08 28 02.6 -0.8
      comp=Z,129nm,1.1s
MOTA  Moosalm         81.36 357 i P     P       08 27 49.6 +0.5
      comp=Z,138nm,1.2s,SNR=38
MOTA                            eP      pwP     08 28 02.7 -0.8
      comp=Z,147nm,1.1s
VRI   Vrincioaia      81.37 346 ⇓P      P       08 27 49.4 +0.3
TIH   Tihany          81.40 352 eP      P       08 27 48.4 -0.7
PLOR  Plostina        81.40 346 ⇓P      P       08 27 49.2  0.0
WTTA  Wattenberg      81.42 357 i P     P       08 27 50.2 +0.7
      comp=Z,137nm,1.2s,SNR=30
WTTA                            eP      pwP     08 28 02.9 -0.9
      comp=Z,127nm,1.0s
DAVA  Damuels         81.45 358 i P     P       08 27 50.1 +0.5
      comp=Z,57nm,1.1s,SNR=14
DAVA                            eP      pwP     08 28 03.1 -0.9
      comp=Z,61nm,1.2s
COVR  Voineasa-Covas  81.47 346 ⇓P      P       08 27 50.4 +0.8
SQTA  Sankt Quirin    81.48 357 i P     P       08 27 50.4 +0.7
      comp=Z,74nm,1.1s,SNR=26
SQTA                            eP      sP      08 28 03.0 +0.4
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	comp=Z,96nm,1.0s						
BBKI	Banjar Baru	81.49	253	P	P	08 27 50.9	+0.9
	comp=Z,61nm,1.7s						
KBA	Koelnbreinsper	81.53	355	i P	P	08 27 50.5	+0.4
	comp=Z,148nm,0.8s,SNR=77						
KBA				eP	pwP	08 28 04.0	-0.4
	comp=Z,250nm,1.2s						
FETA	Feichten	81.69	357	i P	P	08 27 51.7	+0.8
	comp=Z,109nm,1.0s,SNR=38						
FETA				eP	pwP	08 28 04.4	-0.8
	comp=Z,106nm,1.0s						
CFR	Carcaliu	81.82	345	⇑P	P	08 27 51.9	+0.6
SOKA	Soboth	81.83	354	i P	P	08 27 51.9	+0.3
	comp=Z,163nm,1.1s,SNR=62						
SOKA				eP	sP	08 28 04.7	+0.4
	comp=Z,205nm,1.2s						
BATI	Baumata	81.85	242	P	P	08 27 50.9	-1.1
	comp=Z,111nm,0.8s,baz=105,slow=1.1,SNR=10						
BATI				LR	LR	08 59 33.2	
	comp=Z,299nm,21.2s,baz=8.5,slow=32						
BATI	Baumata	81.85	242	P	P	08 27 52.8	+0.9
	comp=Z,1µmcomp=Z,96nm,1.2s						
MLR	Muntele Rosu	81.86	346	⇓P	P	08 27 53.1	+1.4
MLR	Muntele Rosu	81.86	346	IAMs_20	IAMs_20	09 07 54.9	
	comp=Z,2µm,21.0s						
PERS	Pernice	81.87	354	eP	P	08 27 51.6	-0.1
PERS				e		08 28 04.5	
ABTA	Abfaltersbach	81.90	356	eP	P	08 27 52.0	+0.1
	comp=Z,2.8nm,0.6s,SNR=28						
BEHE	Becsehely	81.92	353	eP	P	08 27 51.6	-0.3
BEHE	Becsehely	81.92	353	eP	P	08 27 52.1	+0.2
AKH	Akhalkalaki	81.96	333	⇓P	P	08 27 53.7	+1.3
MYKA	Terra Mystica	81.96	355	i P	P	08 27 52.6	+0.4
	comp=Z,66nm,1.5s,SNR=19						
MYKA				eP	sP	08 28 04.9	-0.1
	comp=Z,57nm,1.4s						
MORH	Mrgy, Hungar	82.01	352	eP	P	08 27 50.7	-1.7
GROS	Grobnik	82.02	354	i P	P	08 27 52.0	-0.5
OBKA	Obir	82.03	354	i P	P	08 27 53.2	+0.6
	comp=Z,54nm,1.1s,SNR=15						
OBKA				eP	sP	08 28 04.7	-0.7
	comp=Z,89nm,1.2s						
VOIR		82.04	347	⇓P	P	08 27 53.4	+0.7
DGPR	DIGLIPUR	82.06	281	eP	P	08 27 53.4	+0.4
DGPR				IAmb	IAmb	08 28 04.3	
	comp=Z,205nm,1.1s						
DGPR				i pP	sP	08 28 06.6	+0.6
ZOU	Zoufplan	82.07	356	P	P	08 27 53.0	0.0
ZOU				IAmb	IAmb	08 28 07.1	
	comp=Z,62nm,1.2s						
ARR	Arges	82.17	347	⇓P	P	08 27 53.9	+0.6
KOVH	Kovagotottos	82.19	352	eP	P	08 27 52.6	-0.7
KALN	Kalnik	82.28	353	i P	P	08 27 53.4	-0.4
TUE	Stuetta	82.28	358	P	P	08 27 54.6	+0.6
TUE				IAmb	IAmb	08 28 10.3	
	comp=Z,161nm,1.1s						
TUE				IAMs_20	IAMs_20	09 03 52.0	
	comp=Z,2µm,21.0s						
BZS	Buzias	82.30	349	⇓P	P	08 27 53.8	-0.1
STAL	STALIGIAL	82.38	356	P	P	08 27 53.8	-0.6
GZR	Gura Zlata	82.38	349	⇓P	P	08 27 54.4	-0.1
SENIN	Lac Senin/Sane	82.41	360	IAMs_20	IAMs_20	09 11 46.6	
	comp=Z,2µm,20.0s						
BCA	Borcka	82.45	334	⇓P	P	08 27 54.5	-0.3
CRNS	Crni Vrh	82.47	355	i P	P	08 27 53.6	-1.2
CRNS				e		08 28 02.6	
CRNS				i		08 28 06.5	
TIRR	Tirgusor	82.48	344	⇓P	P	08 27 54.9	+0.2
TIRR	Tirgusor	82.48	344	P	P	08 27 55.0	+0.2
TIRR				pmax	pmax		
	comp=Z,703nm,1.2s						
TIRR				MLR	MLR		
	comp=Z,8µm,21.0s						
TIRR	Tirgusor	82.48	344	P	P	08 27 55.0	+0.2
LJU	Ljubljana	82.50	354	⇑iP	P	08 27 54.2	-0.7
SDDR	Presa de Saban	82.59	69	IAMs_20	IAMs_20	09 05 04.0	
	comp=Z,2µm,20.0s						
CTI	Castel Tesino	82.63	356	P	P	08 27 55.6	-0.2
CTI				pmax	pmax		
	comp=Z,56nm,1.1s						
CTI	Castel Tesino	82.63	356	P	P	08 27 55.6	-0.2
CTI				IAmb	IAmb	08 28 10.7	
	comp=Z,56nm,1.1s						
CRES	Cresnjev	82.65	354	⇑iP	P	08 27 55.2	-0.6
GNI	Garni	82.76	332	P	P	08 27 57.3	+0.7
GNI	Garni	82.76	332c	iP	P	08 27 56.9	+0.3
GNI				pmax	pmax		
	comp=Z,192nm,1.7s						
GNI	Garni	82.76	332	P	P	08 27 57.8	+1.1
GNI				IAmb	IAmb	08 27 59.4	
	comp=Z,188nm,1.4s						
GNI	Garni	82.76	332	IAMs_20	IAMs_20	09 10 57.5	
	comp=Z,2µm,19.0s						
GNI	Garni	82.76	332	P	P	08 27 56.8	+0.3
MOSL	Moslavina	82.77	353	i P	P	08 27 56.1	-0.3
PBKI	Pangkalan Bun	82.80	256	P	P	08 27 59.3	+2.4
	comp=Z,244nm,1.2s						
CEY	Cerknica	82.81	354	⇑iP	P	08 27 55.6	-1.0
OZLJ	Ozalj	82.86	354	i P	P	08 27 56.5	-0.3
HERR	Herculane	82.93	349	⇑P	P	08 27 57.0	-0.1
FRGS	Fruska Gora	82.95	351	⇑P	P	08 27 57.4	+0.1
FRGS	Fruska Gora	82.95	351	⇑iP	P	08 27 57.0	-0.3
BOJS	Bojanci	82.99	354	i P	P	08 27 57.3	-0.1
MDVR	Moldovita	83.11	349	⇑P	P	08 27 58.2	0.0
BHPL	Bhopal	83.21	299	eP	P	08 27 58.3	-0.7
BHPL				i pP	sP	08 28 11.8	-0.1
RIY	Rijeka	83.22	354	⇑iP	P	08 27 58.0	-0.6
JRMM	Jerantut	83.32	268	P	P	08 28 00.0	+0.4
TEOL	Teolo	83.32	356	P	P	08 27 59.5	+0.3
MRAK	Mrakovica	83.36	353	⇑iP	P	08 27 58.7	-0.8
KULM	Kulim	83.37	270	P	P	08 28 01.0	+1.1
SSB	Saint Sauveur	83.48	1	IAMs_20	IAMs_20	09 11 30.9	
	comp=Z,2µm,20.0s						
SMRN	Sveta Marina	83.52	355	i P	P	08 27 58.8	-1.4
PLIT	Plitvice	83.58	354	i P	P	08 28 00.1	-0.5
BLY	Banja Luka	83.59	352	eP	P	08 28 00.2	-0.4
RABC	Rab	83.77	354	i P	P	08 28 01.6	+0.2
DIKM	Dikmen	83.84	339	⇑P	P	08 28 03.1	+1.2
DR12	Loma Pena Alta	83.85	68	P	P	08 28 02.8	+0.4
MGRS	Mrkonjic Grad	83.93	352	eP	P	08 28 01.5	-0.9
DIVS	Divibare	83.98	350	P	P	08 28 02.6	-0.1
DIVS				IAmb	IAmb	08 28 16.6	
	comp=Z,65nm,1.0s						
DIVS	Divibare	83.98	350	⇑iP	P	08 28 02.4	-0.3
PLAI	Plampang	84.06	248	P	P	08 28 02.0	-1.3
	comp=Z,3µmcomp=Z,163nm,1.6s						
HAPS	Han Pijesak,BI	84.09	351	⇑iP	P	08 28 03.6	+0.3
BOVS	Bovan	84.24	349	⇓P	P	08 28 03.3	-0.7
BBLS	Lazići	84.27	351	⇑iP	P	08 28 04.5	+0.3
KIJV	Kijevo	84.40	353	i P	P	08 28 04.2	-0.5
DUGI	Dugi Otok	84.51	354	i P	P	08 28 04.1	-1.2
RUDO	Rudo	84.52	351	eP	P	08 28 04.9	-0.5
VLC	Villacollemand	84.56	357	P	P	08 28 05.7	+0.1
VLC				IAmb	IAmb	08 28 07.5	
	comp=Z,196nm,1.5s						
VLC				IAMs_20	IAMs_20	09 12 48.5	
	comp=Z,1µm,19.0s						
MORI	Morici	84.59	353	i P	P	08 28 03.8	-1.8
WRA	Warramunga Arr	84.60	228	P	P	08 28 05.2	-0.7
	comp=Z,30nm,1.0s,baz=37,slow=6.2,SNR=98						
WRA				LR	LR	09 01 50.5	
	comp=Z,740nm,21.2s,baz=10.0,slow=33						
WRA	Warramunga Arr	84.60	228	P	P	08 28 05.6	-0.3
WRA				pmax	pmax		
	comp=Z,12nm,1.5s						
WRA	Warramunga Arr	84.60	228	P	P	08 28 05.6	-0.3
PLE	Pljevlja	84.80	351	⇑iP	P	08 28 07.5	+0.6
ZIRJ	Zirje	84.80	353	i P	P	08 28 04.7	-2.1
RICI	Ricice	84.84	352	i P	P	08 28 06.2	-0.9
KMMI	Kalianget	84.87	252	P	P	08 28 08.2	+0.8
	comp=Z,3µmcomp=Z,141nm,1.5s						
SRBI	Singaraja	84.96	250	P	P	08 28 07.4	-0.5
	comp=Z,2µmcomp=Z,95nm,1.5s						
UPM	Unac-Piva	84.97	351	eP	P	08 28 06.9	-1.0
UPM	Unac-Piva	84.97	351	⇑iP	P	08 28 07.4	-0.5
GURO	Guroymak-BITLI	85.03	333	P	P	08 28 08.8	+0.6
GURO				IAmb	IAmb	08 28 11.4	
	comp=Z,146nm,1.4s						
VTS	Vitosha	85.05	348	⇑P	P	08 28 08.1	-0.2
VTS	Vitosha	85.05	348	P	P	08 28 08.0	-0.2
VTS				pmax	pmax		
	comp=Z,168nm,1.4s						
VTS	Vitosha	85.05	348	P	P	08 28 08.0	-0.2
VTS				IAmb	IAmb	08 28 09.6	
	comp=Z,168nm,1.4s						
MAKA	Makarska	85.06	352	i P	P	08 28 05.8	-2.3
BCIP	Isla Barro Col	85.10	82	eP	P	08 28 14.1	+5.5
HVAR	Hvar	85.22	353	i P	P	08 28 07.7	-1.1
KOME	Kolasin	85.26	351	⇑iP	P	08 28 08.7	-0.5
EDRB	Edirne	85.30	345	P	P	08 28 09.0	-0.3
BRY	Bratogost	85.31	351	eP	P	08 28 08.4	-1.1
BRY	Bratogost	85.31	351	⇑iP	P	08 28 08.5	-1.1
NKY	Niksic	85.35	351	⇑iP	P	08 28 09.1	-0.6
MURB	Monte Urbino	85.38	356	P	P	08 28 10.0	+0.3
NKME	Niksic	85.40	351	⇑iP	P	08 28 09.3	-0.6
DSRI	Dabo	85.41	263	P	P	08 28 11.4	+1.2
	comp=Z,1µmcomp=Z,2µmcomp=Z,35nm,1.3s						
STON	Ston	85.42	352	⇑iP	P	08 28 08.8	-1.0
STON	Ston	85.42	352	i P	P	08 28 08.4	-1.4
TREB	Trebinje	85.51	351	eP	P	08 28 05.7	-4.6
DBRK	Dubrovnik	85.58	351	i P	P	08 28 09.1	-1.6
CEME	Cevo	85.62	351	⇑iP	P	08 28 10.3	-0.7
AOPR	Arecibo Observ	85.70	66	P	P	08 28 11.9	+0.2
AOPR				IAmb	IAmb	08 28 25.8	
	comp=Z,117nm,1.1s						
PDG	Podgorica	85.70	351	P	P	08 28 11.1	-0.1
PDG				IAMs_20	IAMs_20	09 13 47.5	
	comp=Z,2µm,18.0s						
PDG	Podgorica	85.70	351	⇑iP	P	08 28 10.8	-0.5
TTG	Podgorica	85.70	351	⇑iP	P	08 28 11.0	-0.3
LHMI	Lhok Sumawe	85.73	273	P	P	08 28 16.9	+5.1
	comp=Z,5µmcomp=Z,316nm,1.3s						
PPBI	Pangkal Pinang	85.76	261	P	P	08 28 12.5	+0.6
HCY	Herceg Novi	85.76	351	eP	P	08 28 10.7	-0.9
NRCA	Norcia	85.78	355	P	P	08 28 12.6	+0.8
NRCA				IAmb	IAmb	08 28 26.3	
	comp=Z,115nm,1.0s						
BUM	Brajici-Budva	85.87	351	⇑iP	P	08 28 12.2	0.0
JAGI	Jajag, Banyuwa	85.89	251	P	P	08 28 10.2	-2.3
	comp=Z,955nmcomp=Z,58nm,1.2s						
SKO	Skopje	85.92	349	i P	P	08 28 12.6	+0.2
DRME	Dracevica, Mon	85.95	351	⇑iP	P	08 28 11.8	-0.7
DRME	Dracevica, Mon	85.95	351	⇑iP	P	08 28 11.9	-0.6
BR131	Keskin Array S	86.04	339	P	P	08 28 13.5	+0.3
BR131				pmax	pmax		
	comp=Z,151nm,1.2s						
BR131	Keskin Array S	86.04	339	P	P	08 28 13.5	+0.3
BR131				IAmb	IAmb	08 28 14.9	
	comp=Z,151nm,1.1s						
BR131	Keskin Array S	86.04	339	P	P	08 28 13.1	0.0
	SNR=26						
BRTR	Keskin Array B	86.04	339	P	P	08 28 12.9	-0.2
	comp=Z,48nm,1.0s,baz=45,slow=2.3,SNR=98						
BRTR				PKKPbc	PKKPbc	08 46 23.4	+13
	comp=Z,2.5nm,0.9s,baz=191,slow=6.0,SNR=4.2						
BRTR				LR	LR	09 15 01.4	
	comp=Z,2µm,18.1s,baz=34,slow=41						
BRTR	Keskin Array B	86.04	339	P	P	08 28 13.7	+0.5
BRTR	Keskin Array B	86.04	339	P	P	08 28 13.7	+0.5
ANTO	Ankara	86.08	340	IAMs_20	IAMs_20	09 14 17.9	
	comp=Z,2µm,18.0s						
STIP	Stip	86.10	348	i P	P	08 28 13.0	-0.2
RDO	Rodhopi	86.17	346	P	P	08 28 13.4	-0.2
NVR	Nevrokopi	86.22	347	P	P	08 28 14.0	+0.1
PAYG	Puerto Ayora	86.23	96	IAMs_20	IAMs_20	09 02 04.3	
	comp=Z,2µm,18.0s						
SJG	San Juan	86.24	66	IAMs_20	IAMs_20	09 10 11.5	
	comp=Z,2µm,19.0s						
SJG	San Juan	86.24	66	eP	P	08 28 25.7	+11
AQU	L'Aquila	86.24	355	IAMs_20	IAMs_20	09 10 22.5	
	comp=Z,2µm,21.0s						
AQU	L'Aquila	86.24	355	eP	P	08 28 12.5	-1.5
PBRG	Braganca	86.25	10	eP	P	08 28 14.8	+0.7
	comp=Z,79nm,1.7s						
PHP	Peshkopia	86.31	350	P	P	08 28 13.7	-0.7
ALN	Alexandroupoli	86.33	345	P	P	08 28 13.3	-1.1
VAY	Valandovo	86.42	348	i P	P	08 28 15.8	+1.0
KAVA	Kavala	86.47	347	P	P	08 28 14.7	-0.4
SRS	Serrai	86.48	347	P	P	08 28 14.8	-0.4
KNT	Kendrikon	86.53	348	P	P	08 28 15.9	+0.5
POLO	Lamas de Olo	86.56	11	eP	P	08 28 16.4	+0.7
	comp=Z,38nm,1.7s						
TIR	Tirane	86.71	350	⇑P	P	08 28 15.8	-0.4
TIR	Tirane	86.71	350	P	P	08 28 16.2	-0.1
GRG	Griva	86.80	348	P	P	08 28 16.8	0.0
SOH	Sokhos	86.80	347	P	P	08 28 16.6	-0.2
THAS	Thassos island	86.82	346	P	P	08 28 16.7	-0.1
SMTH	Samothraki Isl	86.83	346	P	P	08 28 16.3	-0.6
OHR	Ohrid	86.84	349	i P	P	08 28 17.7	+0.7
MVO	Moncorvo	86.85	10	eP	P	08 28 17.7	+0.6
	comp=Z,85nm,1.0s						
MVO	Moncorvo	86.85	10	eS	S	08 38 55.5	+3.0
MVO				eSS	SS	08 45 05.7	+33
MVO				eLQ	LQ	08 51 22.4	
MVO				eLR	LR	08 57 26.8	
	comp=Z,1µm,20.0s						
PWJI	Pagerwojo	86.93	253	P	P	08 28 16.0	-1.6
	comp=Z,3µmcomp=Z,137nm,1.3s						
SMRC	Santa Marta, M	86.97	76	eP	P	08 28 21.9	+3.9
BKNI	Bangkinang	86.98	267	P	P	08 28 19.2	+1.3
	comp=Z,8µmcomp=Z,226nm,1.2s						
THE	Thessaloniki	87.04	348	P	P	08 28 16.8	-1.1
HORT	Hortiatis	87.06	347	P	P	08 28 16.8	-1.3
FNA	Florina	87.10	349	P	P	08 28 17.4	-0.8
OUR	Ouranopolis	87.19	347	P	P	08 28 17.8	-0.8
PLG	Polygyros	87.23	347	P	P	08 28 18.0	-0.9
HYB	Hyderabad	87.25	295	i P	P	08 28 18.0	-1.3
HYB				esP	pP	08 28 26.5	-2.3
HYB				eSKS	S	08 38 49.0	-7.8
HYB	Hyderabad	87.25	295	eP	P	08 28 19.1	-0.2
HYB				IAmb	IAmb	08 28 27.3	
	comp=Z,95nm,0.5s						
HYB				i pP	sP	08 28 32.2	+0.1
CDVI	St. Croix	87.31	65	P	P	08 28 19.9	+0.5
BHUJ	Bhuj	87.31	305	eP	P	08 28 19.8	+0.3
BHUJ				IAmb	IAmb	08 28 27.6	
	comp=Z,30nm,0.4s						
BHUJ				i pP	sP	08 28 33.2	+0.8
KBN	Korca	87.32	349	P	P	08 28 19.0	-0.4
KBN	Korca	87.32	349	P	P	08 28 19.2	-0.2
KBN				pmax	pmax		
	comp=Z,161nm,1.0s						
KBN	Korca	87.32	349	P	P	08 28 19.2	-0.2
FITZ	Fitzroy Crossi	87.33	236	P	P	08 28 19.0	-0.4
	comp=Z,84nm,1.1s,baz=36,slow=5.1,SNR=63						
FITZ				pP	sP	08 28 32.7	+0.3
	comp=Z,131nm,1.1s,baz=20,slow=4.6,SNR=22						
FITZ				LR	LR	09 04 31.3	
	comp=Z,619nm,20.4s,baz=38,slow=34						
FITZ	Fitzroy Crossi	87.33	236	P	P	08 28 19.9	+0.5
SJCC	San Jacinto, C	87.38	77	eP	P	08 28 25.7	+5.7
KTI	Kastanea	87.39	348	P	P	08 28 20.2	+0.4
NEST	Nestorio	87.50	349	P	P	08 28 19.6	-0.7
KZN	Kozani	87.52	348	P	P	08 28 19.4	-0.9
MTE	Manteigas	87.55	11	eP	P	08 28 20.9	+0.5
	comp=Z,76nm,1.4s						
MTE	Manteigas	87.55	11	eS	S	08 39 06.4	+7.2
MTE				eSS	SS	08 45 03.7	+20
MTE				eLQ	LQ	08 51 49.0	
MTE				eLR	LR	08 58 18.2	
	comp=Z,1µm,18.0s						
MTE	Manteigas	87.55	11	IAMs_20	IAMs_20	09 08 30.0	
	comp=Z,1µm,20.0s						
UGM	Wanagama	87.61	254	P	P	08 28 22.6	+1.7
	comp=Z,184nm,1.4s						
PAIG	Paliouri	87.64	347	P	P	08 28 20.2	-0.6
PENT	Pentalofos	87.70	349	P	P	08 28 21.0	-0.2
PCAS	Casmilo, Conde	87.78	12	eP	P	08 28 21.8	+0.3
	comp=Z,85nm,1.3s						
LSK	Leskovik	87.81	349	P	P	08 28 21.6	-0.1
URIC	Uribia, Colomb	87.90	74	P	P	08 28 22.6	+0.2
URIC				IAmb	IAmb	08 28 37.1	
	comp=Z,131nm,1.4s						
URIC	Uribia, Colomb	87.90	74	eP	P	08 28 21.9	-0.5
PRK	Paraskevi	87.91	345	P	P	08 28 21.9	-0.2
KPRO	Kipourio	87.92	349	P	P	08 28 20.8	-1.4
MOTC	Monteria, Cord	87.96	79	eP	P	08 28 26.7	+4.0
ARGC	Ariguani, Magd	87.98	77	eP	P	08 28 33.5	+11
AS31	Alice Springs	88.02	227	P	P	08 28 22.3	-0.4
ASAR	Alice Springs	88.02	227	P	P	08 28 22.8	+0.1
	comp=Z,46nm,0.9s,baz=31,slow=4.5,SNR=184						
ASAR				pP	sP	08 28 36.0	+0.3
	comp=Z,98nm,1.0s,baz=32,slow=4.3,SNR=19						
ASAR				PKKPbc	PKKPbc	08 46 19.7	+13
	comp=Z,0.9nm,0.7s,baz=194,slow=2.3,SNR=5.0						
ASAR				LR	LR	09 03 29.9	
	comp=Z,891nm,21.6s,baz=11,slow=33						
KPJI	Karang Pucung	88.11	256	P	P	08 28 22.4	-0.9
	comp=Z,60nm,1.2s						
THL	Klokotos Trika	88.22	348	P	P	08 28 21.7	-1.8
SABA	Saba	88.27	64	IAMs_20	IAMs_20	09 11 58.6	
	comp=Z,2µm,19.0s						
PSBE	So Bento	88.27	12	eP	P	08 28 24.0	+0.2
	comp=Z,129nm,1.3s						
JAN	Janina	88.27	349	P	P	08 28 23.8	-0.1
PDSI	Padang	88.30	266	P	P	08 28 23.8	-0.5
	comp=Z,37nm,1.2s						
NEO	Neokhori	88.31	347	P	P	08 28 23.1	-0.9
KEK	Kerkira	88.33	350	P	P	08 28 23.3	-0.8
GSI	Gunungsitoli	88.38	270	P	P	08 28 24.5	-0.2
GSI	Gunungsitoli	88.38	270	P	P	08 28 25.5	+0.8
	comp=Z,131nm,1.2s						
IGT	Igoumenitsa	88.45	349	P	P	08 28 24.0	-0.7
LEM	Lembang	88.51	257	LR	LR	09 03 15.4	
	comp=Z,315nm,21.1s,baz=78,slow=32						
ISP	Isparta	88.52	341	IAMs_20	IAMs_20	09 14 37.9	
	comp=Z,2µm,20.0s						
PMRV	Marv??o	88.53	11	eP	P	08 28 25.2	+0.2
	comp=Z,69nm,1.4s						
PMRV	Marv??o	88.53	11	eS	S	08 39 09.3	+0.9
PMRV				eSS	SS	08 45 29.3	+32
PMRV				eLQ	LQ	08 54 39.4	
PMRV				eLR	LR	08 58 21.4	
	comp=Z,1µm,20.0s						
KLSI		88.60	261	P	P	08 28 25.2	-0.5
	comp=Z,15nm,1.9s						
BLCB	Balcova	88.62	344	P	P	08 28 24.2	-1.3
ESDC	Sonseca Array	88.63	8	P	P	08 28 24.8	-0.8
	comp=Z,27nm,1.1s,baz=346,slow=4.7,SNR=37						
ESDC				pP	sP	08 28 37.9	-0.6
	comp=Z,27nm,0.9s,baz=352,slow=4.4,SNR=13						
ESDC	Sonseca Array	88.63	8	P	P	08 28 25.1	-0.5
ESDC				IAmb	IAmb	08 28 38.8	
	comp=Z,40nm,1.1s						
LL1C	La Loma 1 Cana	88.65	76	eP	P	08 28 36.4	+10
LL6C	La Loma 6 Bece	88.67	76	eP	P	08 28 36.4	+10
PAB	San Pablo	88.73	8	IAMs_20	IAMs_20	09 12 31.8	
	comp=Z,1µm,20.0s						
MAKR	Makrakomi, Fth	88.75	348	P	P	08 28 24.8	-1.3
PMAFR	Mafra	88.76	12	eP	P	08 28 26.6	+0.5
	comp=Z,371nm,1.5s						
PMTG	Montargil	88.78	11	eP	P	08 28 26.0	-0.2
	comp=Z,58nm,1.6s						
MDSI	Maura Dua	88.78	261	P	P	08 28 25.0	-1.5
UREC	San Jos de Ur	88.84	79	eP	P	08 28 25.7	-1.2
SOLC	Bahia Solano	88.88	81	eP	P	08 28 40.3	+13
EVR	Evrytania	88.88	348	P	P	08 28 26.8	0.0
SMLC	San Martn de	88.92	77	eP	P	08 28 24.8	-2.4
POO	Poona	88.97	299	eP	P	08 28 27.2	-0.3
POO				i pP	sP	08 28 40.8	+0.5
LKR	Lokris	88.99	347	P	P	08 28 25.7	-1.5
ANWB	Willy Bob	89.04	62	IAMs_20	IAMs_20	09 08 16.9	
	comp=Z,2µm,20.0s						
PESTR	Estremoz	89.06	11	eP	P	08 28 27.5	0.0
	comp=Z,120nm,1.4s						
TSLK	Tsoukalades, L	89.11	349	P	P	08 28 27.3	-0.5
TIP	Timpagrande	89.16	352	⇓P	P	08 28 27.3	-0.8
TIP	Timpagrande	89.16	352	IAMs_20	IAMs_20	09 13 56.0	
	comp=Z,2µm,19.0s						
ANX	Ano Chora	89.19	348	P	P	08 28 27.5	-0.8
PVO	Paravola	89.21	348	P	P	08 28 28.2	-0.1
NYDR	Nydri-Lefkada	89.22	349	P	P	08 28 27.4	-0.9
DRAG	Dragano-Lefkad	89.26	349	P	P	08 28 27.8	-0.7
EVGI	Lefkada island	89.32	349	P	P	08 28 28.2	-0.5
HATO	Hato, Curacao	89.32	71	IAMs_20	IAMs_20	09 08 36.5	
	comp=Z,2µm,20.0s						
SERG	Sergoula	89.35	348	P	P	08 28 28.3	-0.6
EFP	Efpalio	89.35	348	P	P	08 28 29.1	+0.2
TRIZ	Trizonia	89.39	348	P	P	08 28 27.9	-1.2
ZARC	Zaragoza, Cauc	89.46	79	eP	P	08 28 34.5	+4.7
FSK	Fiskardo	89.49	349	P	P	08 28 28.8	-0.7
LAKA	Lakka	89.53	348	P	P	08 28 29.6	-0.2
YER	Yerkesik	89.62	343	P	P	08 28 29.4	-0.9
ELL	Elmali	89.68	341	P	P	08 28 30.3	-0.4
ELL				pmax	pmax		
	comp=Z,101nm,1.0s						
ELL	Elmali	89.68	341	P	P	08 28 30.2	-0.4
ELL				IAmb	IAmb	08 28 51.8	
	comp=Z,101nm,1.0s						
PNCL	Nicolau / Gran	89.69	12	eP	P	08 28 30.9	+0.4
	comp=Z,95nm,1.5s						
KEF4	Livadi, Kephal	89.70	349	P	P	08 28 29.8	-0.7
DMLN	Damoulianata-K	89.73	349	P	P	08 28 30.2	-0.5
VLS	Valsamata	89.76	349	P	P	08 28 29.3	-1.6
KEF3	Kipouria, Keph	89.77	349	P	P	08 28 30.0	-0.8
RLS	Riolos of Patr	89.77	348	P	P	08 28 30.8	-0.1
PBAR	Barrancos	89.80	11	eP	P	08 28 30.7	-0.3
	comp=Z,128nm,1.3s						
OCAC	Ocana	89.81	77	P	P	08 28 31.6	0.0
OCAC				IAmb	IAmb	08 28 46.9	
	comp=Z,68nm,1.1s						
OCAC	Ocana	89.81	77	eP	P	08 28 28.6	-3.0
DRO	Drossia	89.84	348	P	P	08 28 31.0	-0.3
URZ	Urewera	89.87	187	LR	LR	09 02 24.4	
	comp=Z,2µm,20.4s,baz=31,slow=31						
URZ	Urewera	89.87	187	IAMs_20	IAMs_20	09 07 58.4	
	comp=Z,2µm,18.0s						
CBOC	Ciudad Bolivar	90.02	81	eP	P	08 28 38.3	+5.7
HELC	Santa Helena	90.07	80	eP	P	08 28 39.3	+6.3
CEL	Celeste	90.15	353	IAMs_20	IAMs_20	09 17 09.0	
	comp=Z,1µm,19.0s						
PVAQ	Vaqueiros	90.48	11	eP	P	08 28 34.1	-0.1
	comp=Z,77nm,1.9s						
PVAQ	Vaqueiros	90.48	11	eS	S	08 39 34.6	+7.9
PVAQ				eSS	SS	08 45 34.9	+9.0
PVAQ				eLQ	LQ	08 54 31.0	
PVAQ				eLR	LR	08 59 28.1	
	comp=Z,1µm,18.0s						
ARG	Arkhangelos	90.54	343	P	P	08 28 34.0	-0.5
ITM	Ithomi	90.58	348	P	P	08 28 34.3	-0.4
PLMC	San Jos del P	90.61	81	eP	P	08 28 46.1	+11
SANT	Santorini	90.85	345	IAMs_20	IAMs_20	09 14 39.0	
	comp=Z,1µm,19.0s						
PYL	PYLOS	90.88	348	P	P	08 28 27.3	-8.8
SDV	Santo Domingo	90.93	75	IAMs_20	IAMs_20	09 09 39.2	
	comp=Z,1µm,20.0s						
SDV	Santo Domingo	90.93	75	eP	P	08 28 48.0	+11
SDV	Santo Domingo	90.93	75	eP	P	08 28 37.2	+0.3
NORC	Norcasia	90.96	80	eP	P	08 28 37.4	+0.5
BARC	Barichara	91.19	78	eP	P	08 28 50.0	+12
YOTC	Yotoco, Valle	91.29	82	eP	P	08 28 36.4	-2.0
SHME	Shamm	91.30	317	i P	P	08 28 37.0	-1.2
	SNR=15						
SHME	Shamm	91.30	317	P	P	08 28 37.3	-0.9
	SNR=8.3						
BANOM	Banah	91.34	317	i P	P	08 28 37.4	-1.0
	SNR=5.9						
SPBC	San Pablo de B	91.38	79	eP	P	08 28 46.1	+7.3
GOA	Goa	91.45	297	eP	P	08 28 38.5	-0.5
GOA				IAmb	IAmb	08 28 46.7	
	comp=Z,72nm,1.1s						
GOA				i pP	sP	08 28 51.4	-0.5
SVN	Savane Anatole	91.67	64	IAMs_20	IAMs_20	09 10 14.9	
	comp=Z,2µm,21.0s						
FDF	Fort de France	91.77	64	IAMs_20	IAMs_20	09 10 28.5	
	comp=Z,2µm,20.0s						
RUSC	La Rusia	91.80	78	eP	P	08 28 53.8	+13
ROSC	El Rosal	91.86	80	eP	P	08 28 50.0	+8.5
MASF	Masafi	91.89	316	P	P	08 28 40.1	-0.9
	SNR=8.4						
MDH	Madha	91.89	316	i P	P	08 28 39.4	-1.5
	SNR=9.4						
MDH	Madha	91.89	316	P	P	08 28 39.5	-1.4
	SNR=6.3						
MSFE	Esma-Masafi	91.90	316	i P	P	08 28 40.0	-1.0
	SNR=6.2						
UMQ	Umm Al-Quwin	91.97	317	P	P	08 28 40.7	-0.6
ORTC	Ortega, Tolima	92.02	81	eP	P	08 28 40.3	-1.5
STKA	Stephens Creek	92.04	217	P	P	08 28 41.3	+0.1
	comp=Z,36nm,1.0s,baz=4.7,slow=5.6,SNR=40						
STKA				LR	LR	09 04 50.3	
	comp=Z,1µm,21.7s,baz=23,slow=32						
STKA	Stephens Creek	92.04	217	P	P	08 28 42.0	+0.8
STKA				pmax	pmax		
	comp=Z,28nm,1.4s						
STKA	Stephens Creek	92.04	217	P	P	08 28 42.0	+0.8
TAMC	Tame, Arauca	92.16	77	eP	P	08 28 50.9	+8.6
UOSS	Minazif	92.24	316	i P	P	08 28 40.8	-1.7
	SNR=6.3						
UOSS	Minazif	92.24	316	P	P	08 28 41.6	-0.9
UOSS				IAmb	IAmb	08 28 42.6	

	comp=Z,93nm,1.1s						
UOSS	Minazif	92.24	316	IAMs_20	IAMs_20	09 12 25.3	
	comp=Z,2µm,22.0s						
UOSS	Minazif	92.24	316	P	P	08 28 41.2	-1.4
HATD	Hatta, Dubai	92.38	316	*i* P	P	08 28 42.0	-1.2
	SNR=16						
HATD	Hatta, Dubai	92.38	316	P	P	08 28 42.4	-0.8
	SNR=12						
CHIC	Chingaza	92.39	80	*e*P	P	08 28 46.1	+2.2
MARP	Paez Belalcaza	92.42	82	*e*P	P	08 28 52.9	+9.0
NAZ	Nazwa, Dubai	92.44	317	*i* P	P	08 28 42.8	-0.6
	SNR=14						
NAZ	Nazwa, Dubai	92.44	317	P	P	08 28 42.9	-0.5
	SNR=8.4						
ASHO	Ashiyiah	92.53	316	*i* P	P	08 28 43.5	-0.5
	SNR=19						
ASHO	Ashiyiah	92.53	316	P	P	08 28 44.0	0.0
	SNR=12						
PCON	Cinco Dias	92.55	83	*e*P	P	08 28 54.8	+10
GVDS	Gavdos	92.56	346	P	P	08 28 43.0	-0.9
SOTA	Rioblanco	92.56	83	*e*P	P	08 28 46.1	+1.3
BIDO	Bidbid	92.64	314	P	P	08 28 45.0	+0.6
	SNR=11						
WSAR	Wadi Sarin	92.66	313	P	P	08 28 45.0	+0.4
	SNR=25						
PAC1	Pacto, Paraso	92.66	86	*e*P	P	08 28 54.8	+10
FAQ	Al Faqa, Dubai	92.68	317	*i* P	P	08 28 44.0	-0.6
	SNR=6.9						
SOHO	SOHO	92.81	316	*i* P	P	08 28 44.2	-1.0
	SNR=19						
GCUF	Volcan Galeras	92.82	85	*e*P	P	08 28 53.8	+7.9
VILC	Villavicencio,	92.82	80	*e*P	P	08 28 59.0	+13
CUSE	Cuicocha Este	92.88	86	*e*P	P	08 28 58.7	+13
ASUD	Al Ashush, Dub	92.90	317	*i* P	P	08 28 45.2	-0.4
	SNR=15						
ASUD	Al Ashush, Dub	92.90	317	P	P	08 28 46.0	+0.4
	SNR=7.1						
OTAV	Otavalo	92.90	86	*e*P	P	08 28 52.9	+6.6
OTAV	Otavalo	92.90	86	*e*P	P	08 28 48.4	+2.1
HOQ	Hoqain	92.95	315	P	P	08 28 46.0	+0.1
	SNR=13						
KEST	Kesra	93.00	358	P	P	08 28 46.4	+0.4
	comp=Z,32nm,1.1s,baz=304,slow=3.1,SNR=8.9						
KEST	Kesra	93.00	358	P	P	08 28 46.0	0.0
KEST				IAmb	IAmb	08 28 47.4	
	comp=Z,58nm,1.2s						
WBK	Wadi Bani Khal	93.05	313	P	P	08 28 47.0	+0.7
	SNR=23						
SMDO	Samad	93.07	314	P	P	08 28 47.0	+0.4
	SNR=18						
ALNE	Al Ain	93.22	316	*i* P	P	08 28 46.6	-0.5
	SNR=12						
ALNE	Al Ain	93.22	316	P	P	08 28 46.8	-0.3
	SNR=12						
JLN	Jalan Bani Buh	93.24	312	P	P	08 28 49.0	+1.8
	SNR=15						
PMOZ	Porto Moniz, M	93.37	20	*e*LR	LR	09 05 16.7	
	comp=Z,1µm,18.0s						
ARQ	Araqi	93.51	315	P	P	08 28 49.0	+0.5
	SNR=27						
JMDO	Jabal Madar	93.65	313	P	P	08 28 49.1	0.0
	SNR=17						
PTGC	Puerto Gaitan,	93.71	79	*e*P	P	08 29 00.6	+11
BSY	Bisya	93.73	314	P	P	08 28 50.0	+0.5
	SNR=17						
PALK	Pallekele	94.08	287	P	P	08 28 51.3	+0.1
PALK				pmax	pmax		
	comp=Z,181nm,1.3s						
PALK				MLR	MLR		
	comp=Z,1µm,20.0s						
PALK	Pallekele	94.08	287	P	P	08 28 51.3	+0.1
PALK	Pallekele	94.08	287	IAMs_20	IAMs_20	09 14 48.0	
	comp=Z,1µm,20.0s						
MACC	Macarena, Meta	94.26	81	*e*P	P	08 29 00.6	+8.6
MHTO	MHTO	94.91	313	P	P	08 28 55.0	+0.2
	SNR=27						
PTLC	Puerto Leguiza	95.22	83	*e*P	P	08 29 05.5	+9.1
BOAV	Boa Vista	102.11	70	*e*P	Pdif	08 29 29.6	+2.4
PTGA	Pitinga	104.94	72	IAMs_20	IAMs_20	09 17 09.5	
	comp=Z,2µm,21.0s						
TORD	Torodi Ar. Bea	115.38	5	PKP	PKiKP	08 34 13.2	-1.2
	comp=Z,2.5nm,0.8s,baz=351,slow=2.3,SNR=6.8						
TORD				pPKP	PKPdf	08 34 27.6	+13
	comp=Z,4.0nm,0.6s,baz=350,slow=2.3,SNR=8.3						
TORD				PKKPbc	PKKPab	08 44 52.7	-3.7
	comp=Z,3.3nm,0.9s,baz=183,slow=2.0,SNR=7.2						
TORD				SKKP		08 48 44.7	
	comp=Z,2.1nm,1.1s,baz=174,slow=3.8,SNR=3.8						
TORD	Torodi Ar. Bea	115.38	5		PKiKP	08 34 13.0	-1.4
LODK	Lodwar	119.97	326	PKPdf	PKiKP	08 34 23.7	+0.3
LODK				IAMs_20	IAMs_20	09 31 23.3	
	comp=Z,2µm,22.0s						
DBIC	Dimbokro	121.13	13	PKP	PKPdf	08 34 24.4	-1.1
	comp=Z,6.7nm,0.9s,baz=312,slow=3.7,SNR=2.9						
DBIC				PKKP	PKKPdf	08 44 56.2	-2.4
	comp=Z,6.9nm,1.1s,baz=160,slow=3.0,SNR=3.1						
ARAG	Araguaiana, MT	121.66	75	*e*P	PKiKP	08 34 29.2	+2.7
NBPA	Parau_RN	121.76	54	*e*P	PKiKP	08 34 28.4	+1.6
AQDB	Aquidauana	122.93	82	*e*P	PKiKP	08 34 32.3	+3.5
SDBA	SAO DESIDERIO	123.10	66	*e*P	PKiKP	08 34 31.6	+2.2
NBLV	Livramento - P	123.23	55	*e*P	PKiKP	08 34 32.0	+2.3
NBPV	Pedro Velho	123.24	53	*e*P	PKiKP	08 34 32.2	+2.5
KMBO	Kilima Mbogo	123.49	322	PKP	PKPdf	08 34 30.1	-0.2
	comp=Z,6.5nm,0.9s,baz=46,slow=2.2,SNR=9.0						
KMBO	Kilima Mbogo	123.49	322	*i* P	PKiKP	08 34 31.2	+0.6
	SNR=8.2						
KMBO	Kilima Mbogo	123.49	322	IAMs_20	IAMs_20	09 35 18.9	
	comp=Z,1µm,18.0s						
BDFB	Brasilia	123.88	71	PKP	PKPdf	08 34 29.9	-0.7
	comp=Z,2.6nm,0.8s,baz=238,slow=8.8,SNR=3.1						
BDFB				pPKP	sPKPdf	08 34 44.0	0.0
	comp=Z,14nm,1.1s,baz=28,slow=4.4,SNR=7.9						
BDFB	Brasilia	123.88	71	PKIKP	PKPdf	08 34 30.0	-0.7
BDFB				APKP	sPKPdf	08 34 44.0	0.0
KIBK	Kibwezi	124.29	321	IAMs_20	IAMs_20	09 34 57.8	
	comp=Z,1µm,19.0s						
NBPN	Ponto Novo - B	124.44	60	*e*P	PKiKP	08 34 34.6	+2.5
NBRF	Rio Formoso -	125.27	54	*e*P	PKiKP	08 34 36.0	+2.3
NBAN	Anadia - AL	125.53	56	*e*P	PKiKP	08 34 36.1	+1.9
JANB	Januaria	125.57	67	*e*P	PKiKP	08 34 36.5	+2.3
CPUP	Villa Florida	126.21	88	PKP	PKPdf	08 34 34.1	-0.7
	comp=Z,2.2nm,1.0s,baz=318,slow=4.4,SNR=4.4						
CPUP				pPKP	sPKPdf	08 34 48.3	+0.3
	comp=Z,14nm,0.9s,baz=324,slow=2.2,SNR=14						
CPUP	Villa Florida	126.21	88	*e*P	PKiKP	08 34 37.4	+2.2
GDU01	Guandu, BA	127.15	62	*e*P	PKiKP	08 34 39.5	+2.1
BB19B	Bebedouro	127.76	76	*e*P	PKiKP	08 34 40.6	+2.1
PLCA	Paso Flores	127.84	110	PKP	PKPdf	08 34 37.0	-0.5
	comp=Z,15nm,1.0s,baz=304,slow=2.3,SNR=18						
DIAM	Diamantina, MG	128.51	69	*e*P	PKiKP	08 34 42.4	+2.1
VNDA	Vanda	129.77	187	PKP	PKPdf	08 34 39.9	-0.1
	comp=Z,2.5nm,1.1s,baz=26,slow=5.5,SNR=7.8						
VNDA				SKPbc	SKPbc	08 38 00.5	+1.0
	comp=Z,2.1nm,1.0s,baz=360,slow=4.7,SNR=5.8						
VOI	Vohitsoka	137.09	298	PKP	PKiKP	08 35 00.7	+3.3
PMSA	Palmer Station	142.64	138	*e*P	PKiKP	08 35 07.4	+0.2
MATP	Matopo	144.48	323	*e*P	PKPab	08 35 06.6	-0.7
MATP	Matopo	144.48	323	*e*P	PKPab	08 35 06.6	-0.7
MAW	Mawson	148.73	218	PKP	PKPdf	08 35 14.5	0.0
	comp=Z,63nm,1.0s,baz=105,slow=5.2,SNR=5.1						
MAW				PKPbc	PKPbc	08 35 18.1	-0.2
	comp=Z,65nm,1.0s,baz=83,slow=5.7,SNR=83						
BOSA	Boshof	153.12	322	PKPbc	PKPbc	08 35 29.6	-0.5
	comp=Z,21nm,0.9s,baz=13,slow=2.3,SNR=20						
SYO	Syowa Base	156.59	210	⇓*e*PKPdf	PKPdf	08 35 28.2	+2.3
SYO	Syowa Base	156.59	210	⇑*e*pPKPdf	pPKPdf	08 35 32.0	-3.7
SYO	Syowa Base	156.59	210	⇑*e*PKPab	PKPab	08 35 59.6	+4.4
VNA3	Neumayer Olymp	158.96	165	PKPdf	PKPdf	08 35 27.7	-1.2
SNAA	Sanae	159.42	172	PKPab	PKPab	08 36 11.4	+3.9
SNAA	Sanae	159.42	172	PKPdf	PKPdf	08 35 27.1	-2.3
VNA2	Neumayer--Watz	159.58	167	PKPab	PKPab	08 36 12.2	+4.0
VNA2	Neumayer--Watz	159.58	167	PKPdf	PKPdf	08 35 28.6	-0.9
VNA1	Neumayer--Stat	159.70	166	PKPab	PKPab	08 36 12.1	+3.5
VNA1	Neumayer--Stat	159.70	166	PKPdf	PKPdf	08 35 28.9	-0.8

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*NEIC **02** 08:19:49.9±2.5, 51°.45N±0°.05×173°.29W±0°.06, h10^{km}±1^{km}, mb4.4/15, ML3.9/24(AEIC), Error ellipse: s-maj=9.2km s-min=6.2km az=193.0*

*AEIC **02** 08:19:52±1.9, 51°.52N±0°.07×173°.33W±0°.08, h41^{km}±7^{km}, Error ellipse: s-maj=9.6km s-min=6.7km az=188.0*

*IDC **02** 08:19:55.5±1.3, 51°.77N×173°.37W, h42^{km}±6^{km}, mb4.1/18, mb1 4.3/21, mb1mx4.0/67, mbtmp4.4/21, ML4.5/2, Error ellipse: s-maj=35.8km s-min=13.2km az=12.0*

ISC 02 08:19:53.7±0.7, **51°.59N**±0°.09×**173°.33W**±0°.04, **h35^{km}, n52,** σ1^{s}**31**/60, **mb4.4**/18, **Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOFP	Korovin Flat P	0.84	326		Pn	08 20 09.0	-0.1
KOSE	Korovin Southe	0.88	330		Pn	08 20 09.8	+0.2
KOKL	Mount Kliuchef	0.92	324		Pn	08 20 10.1	0.0
KONE	Korovin Northe	0.95	329		Pn	08 20 11.0	+0.5
KONE					Sn	08 20 25.9	+3.1
KOWE	Korovin West	0.97	324		Pn	08 20 11.2	+0.4
GSIG	Igitkin Island	1.66	285		Pn	08 20 20.6	+0.2
GSTD	Great Sitkin T	1.81	286		Pn	08 20 22.7	+0.3
GSTD					Sn	08 20 44.7	+0.5
GSSP	Great Sitkin S	1.84	287		Pn	08 20 22.6	-0.2
ADAG	Mount Adagdak	2.07	282		Pn	08 20 27.4	+1.4
ADK	Adak	2.11	279		Pn	08 20 26.8	+0.3
ADK					Sn	08 20 52.8	+1.4
KIWB	Kanaga Island	2.39	278		Pn	08 20 30.2	-0.1
TAFP	Tanaga Falls P	2.91	278		Sn	08 21 14.2	+3.0
TASE	Tanaga Southea	2.94	277		Pn	08 20 38.6	+0.7
NIKH	Nikolski High	3.08	61		Pn	08 20 40.2	+0.4
NIKH					Sn	08 21 16.4	+1.1
OKFG	Magazine Ridge	3.78	59		Sn	08 21 36.2	+3.5
UNV	Unalaska Valle	4.72	59		Pn	08 21 03.8	+1.4
KDAK	Kodiak Island	13.48	55	P	Pn	08 23 01.3	-0.8
	1.5nm,0.3s,baz=307,slow=10,SNR=1.3						
SEW	Seward	15.81	48	Pn	Pn	08 23 31.4	-1.9
SEW				IAmb	IAmb	08 23 44.4	
	comp=Z,23nm,0.9s						
PWL	Port Wells	16.61	46	Pn	Pn	08 23 41.6	-2.0
EYAK	Cordova Ski Ar	17.69	49	P	Pn	08 23 55.0	-2.0
PETK	Petropavlovsk-	17.72	286	P	P	08 23 58.2	+0.2
	comp=Z,0.0nm,0.3s,baz=92,slow=10,SNR=1.7						
HMT	Hamilton	18.34	50	P	Pn	08 24 02.7	-2.3
HMT				IAmb	IAmb	08 24 20.5	
	comp=Z,32nm,1.2s						
I23K	Minto, Yukon-K	18.34	33	P	P	08 24 04.7	0.0
I23K				IAmb	IAmb	08 24 19.1	
	comp=Z,28nm,1.1s						
CCB	Clear Creek Bu	18.60	36	P	P	08 24 06.1	-1.5
CCB				IAmb	IAmb	08 24 11.6	
	comp=Z,27nm,1.2s						
MDM	Murphy Dome	18.62	34	P	P	08 24 06.6	-1.2
MDM				IAmb	IAmb	08 24 18.9	
	comp=Z,21nm,1.0s						
HDA	Harding Lake	18.79	37		Pn	08 24 09.0	-1.4
HDA				IAmb	IAmb	08 24 26.6	
	comp=Z,34nm,1.2s						
IL31		19.00	36	P	P	08 24 11.2	-0.7
IL31				IAmb	IAmb	08 24 23.7	
	comp=Z,25nm,1.1s						
ILAR	Eielson Array	19.00	36	P	P	08 24 10.9	-1.1
	comp=Z,2.3nm,0.3s,baz=223,slow=8.9,SNR=9.8						
H24K	Noodor Dome	19.25	32	P	Pn	08 24 15.0	-0.9
M26K	Nabesna, AK	19.55	45	P	P	08 24 17.2	-0.8
M26K				IAmb	IAmb	08 24 36.9	
	comp=Z,18nm,0.9s						
DOT	Dot Lake	19.57	41	P	P	08 24 16.8	-1.5
DOT				IAmb	IAmb	08 24 34.7	
	comp=Z,22nm,0.8s						
BMAR	Burnt Mountain	21.24	31	P	P	08 24 36.4	0.0
HYT	Haines Junctio	21.70	51	P	P	08 24 39.5	-1.9
SKAG	Skagway	22.63	55	P	P	08 24 50.6	-0.6
INK	Inuvik	25.35	34	P	P	08 25 17.1	+0.1
	comp=Z,7.8nm,0.4s,baz=222,slow=6.4,SNR=8.2						
DLBC	Dease Lake	25.38	57	P	P	08 25 19.2	+1.8
	comp=Z,12nm,0.8s,baz=222,slow=9.9,SNR=2.6						
YKA	Yellowknife Ar	32.59	47	P	P	08 26 21.3	-0.1
	comp=Z,0.9nm,0.5s,baz=272,slow=6.5,SNR=6.0						
NEW	Newport	35.58	73	P	P	08 26 48.3	+0.8
	comp=Z,4.8nm,0.8s,baz=311,slow=5.9,SNR=1.5						
NVAR	Mina Array Bea	40.12	87	P	P	08 27 27.1	+0.9
	comp=Z,1.6nm,0.8s,baz=302,slow=9.0,SNR=2.1						
NVAR				pP	sP	08 27 40.1	+1.3
	comp=Z,2.4nm,0.8s,baz=283,slow=8.0,SNR=3.1						
PDAR	Pinedale Array	42.96	76	P	P	08 27 50.0	+0.7
	comp=Z,3.1nm,0.6s,baz=306,slow=3.5,SNR=6.9						
ULM	Lac du Bonnet	46.67	59	P	P	08 28 19.2	+0.7
	comp=Z,2.0nm,0.3s,baz=310,slow=9.0,SNR=1.5						
SONM	Songino Array	49.57	299	P	P	08 28 41.1	0.0
	comp=Z,1.6nm,0.5s,baz=70,slow=6.3,SNR=4.0						
TXAR	Lajitas Array	55.23	85	P	P	08 29 23.1	-0.2
	comp=Z,1.6nm,0.5s,baz=304,slow=6.4,SNR=8.9						
TXAR				pP	pwP	08 29 36.1	-1.7
	comp=Z,2.2nm,0.7s,baz=306,slow=5.4,SNR=4.1						
ARCES	ARCESS Array B	58.41	352	P	P	08 29 44.5	-0.6
	comp=Z,2.7nm,0.8s,baz=12,slow=7.7,SNR=1.4						
ARCES				pP	pwP	08 29 56.6	-2.8
	comp=Z,3.2nm,0.8s,baz=7.1,slow=3.9,SNR=4.6						
MKAR	Makanchi Array	62.53	311	P	P	08 30 13.4	-0.2
	comp=Z,1.3nm,0.5s,baz=44,slow=6.2,SNR=7.0						
BVAR	Borovoye Array	62.88	323	P	P	08 30 16.0	+0.3
	comp=Z,4.8nm,0.5s,baz=27,slow=0.7,SNR=7.2						
ARU	Arti	64.16	331	P	P	08 30 23.4	-0.7
	comp=Z,1.9nm,0.2s,baz=72,slow=20,SNR=1.3						
NOA	NORSAR Array B	67.67	358	P	P	08 30 46.3	-0.4
	comp=Z,0.5nm,0.5s,baz=0.4,slow=6.8,SNR=2.2						
HFS	Hagfors	68.49	356	P	P	08 30 51.3	-0.5
	comp=Z,2.1nm,0.4s,baz=0.0,slow=3.0,SNR=9.7						
AKTO	Aktyubinsk	69.42	328	P	P	08 30 58.1	+0.4
	comp=Z,3.7nm,0.5s,baz=54,slow=7.4,SNR=6.1						
AKTO				pP	pP	08 31 09.7	+2.3
	comp=Z,2.2nm,0.8s,baz=66,slow=12,SNR=1.6						
AKASG	Malin Array Be	76.31	345	P	P	08 31 37.7	-0.8
	comp=Z,1.9nm,0.4s,baz=16,slow=5.8,SNR=5.1						
GERES	GERESS Array B	79.77	355	P	P	08 31 57.7	-0.2
	comp=Z,1.2nm,0.6s,baz=27,slow=5.5,SNR=3.0						

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*MOS **02** 08:24:22.6±0.9, 51°.71N×173°.29W, h24^{km}, mb5.3/47, Error ellipse: s-maj=7.9km s-min=7.5km az=179.7*

*NEIC **02** 08:24:22.5±2.2, 51°.59N±0°.08×173°.33W±0°.06, h10^{km}±1^{km}, mb5.1/144, ML4.6(AEIC), Error ellipse: s-maj=13.6km s-min=6.2km az=173.0*

*BJI **02** 08:24:24.2±0.0, 51°.96N×173°.81W, h22^{km}, mB5.4/29, mb5.4/63, Ms5.5/25, Ms7 5.3/25*

*AEIC **02** 08:24:25±1.7, 51°.57N±0°.08×173°.31W±0°.07, h46^{km}±4^{km}, Error ellipse: s-maj=11.3km s-min=6.3km az=174.0*

*IDC **02** 08:24:26.8±0.6, 51°.64N×173°.31W, h44^{km}±5^{km}, mb4.7/43, mb1 4.8/45, mb1mx4.8/58, mbtmp5.0/45, ML4.7/2, Error ellipse: s-maj=12.4km s-min=7.3km az=173.0*

*BGR **02** 08:24:35.9±0.0, 52°.50N×174°.52W, h33^{km}, mb5.1*

ISC 02 08:24:25.0±0.6, **51°.64N**±0°.06×**173°.30W**±0°.03, **h28^{km}**±3^{km}, **h28^{km}:pP-P, n882,** σ1^{s}**04**/904, **mb5.2**/204, **191C-142D, Fault plane solution: NP1:**ϕ_s243.81754°, δ83.37663°, λ-123.60788°. **NP2:**ϕ_s143.97179°, δ34.17900°, λ-11.84799°. **Principal axes:** T Plg30.2266°, Azm0.7522°; N Plg33.3541°, Azm248.2010°; P Plg41.8005°, Azm122.1478°; **Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOFP	Korovin Flat P	0.80	322		Pn	08 24 41.4	+0.9
KOKL	Mount Kliuchef	0.88	321		Pb	08 24 42.5	+0.7
KOWE	Korovin West	0.93	321		Pb	08 24 43.4	+0.7
GSMY	Great Sitkin M	1.76	284		Pn	08 24 54.2	+0.6
GSTR	Great Sitkin T	1.77	286	Pn	Pn	08 24 54.2	+0.4
GSTD	Great Sitkin T	1.81	284		Pn	08 24 54.5	+0.1
ETKA	Kagalaska Isla	1.94	278		Pn	08 24 56.3	+0.2
ETKA					Sn	08 25 20.6	+1.1
ADAG	Mount Adagdak	2.08	281		Pn	08 24 59.3	+1.4
ADK	Adak	2.12	278	P	Pn	08 24 58.6	+0.1
ADK						08 25 25.9	
ADK	Adak	2.12	278	Pn	Pn	08 24 58.6	+0.1
KIWB	Kanaga Island	2.40	277		Pn	08 25 02.8	+0.4
KIWB	Kanaga Island	2.40	277		Sn	08 25 33.0	+2.1
KIKV	Kanaga Island	2.42	277		Pn	08 25 03.4	+0.8
KICM	Kanaga Island	2.44	278		Pn	08 25 03.9	+1.0
KIMD	Kanaga Island	2.45	274		Pn	08 25 03.4	+0.3
TAPA	Tanaga Point A	2.81	275		Pn	08 25 08.9	+0.8
TAFP	Tanaga Falls P	2.92	277		Pn	08 25 10.5	+1.0
TAFP					Sn	08 25 45.0	+1.3
TASE	Tanaga Southea	2.95	276		Pn	08 25 11.0	+1.0
NIKH	Nikolski High	3.04	62		Pn	08 25 11.6	+0.5
NIKH					Sn	08 25 50.3	+3.8
NIKH	Nikolski High	3.04	62	P	Pn	08 25 11.8	+0.6
	baz=245,SNR=19						
GAEA	Gareloi East	3.39	275		Pn	08 25 16.8	+0.8
GALAA	Gareloi Lava P	3.41	274		Pn	08 25 17.3	+1.1
GANO	Gareloi North	3.43	275		Pn	08 25 17.1	+0.6
GASW	Gareloi Southw	3.46	274		Pn	08 25 17.7	+0.8
OKSO	Okmok South	3.58	59		Pn	08 25 20.3	+1.7
OKTU	Okmok Mt. Tuli	3.66	59		Pn	08 25 21.4	+1.7
OKFG	Magazine Ridge	3.74	60		Pn	08 25 22.2	+1.4
CERAA	Semis' Rag'd T	4.37	276		Pn	08 25 30.1	+0.8
CEPE	Semis' Perret	4.39	277		Pn	08 25 30.3	+0.6
CESW	Semis' Southwe	4.44	276		Pn	08 25 30.9	+0.5
MSW	Makushin Switc	4.56	58		Pn	08 25 33.1	+1.0
MNAT	Makushin Natee	4.60	58		Pn	08 25 33.9	+1.3
AMKA	Amchitka	4.63	270	Pn	Pn	08 25 32.6	-0.4
UNV	Unalaska Valle	4.68	59	Pn	Pn	08 25 36.3	+2.6
UNV	Unalaska Valle	4.68	59	P	Pn	08 25 35.3	+1.6
	baz=244,SNR=12						
AKMO	Akutan Morgan	5.05	58		Pn	08 25 41.0	+2.2
LSPA	Little Sitkin	5.05	277		Pn	08 25 39.7	+0.8
LSNW	Little Sitkin	5.09	277		Pn	08 25 40.0	+0.7
LSSA	Little Sitkin	5.09	277		Pn	08 25 40.0	+0.7
AKBBA	Akutan Broad B	5.10	58		Pn	08 25 41.7	+2.3
AKUT	Akutan	5.20	58	Pn	Pn	08 25 43.0	+2.3
AKSA	Akutan Strait	5.24	59		Pn	08 25 43.2	+1.9
SPIA	Saint Paul Isl	5.83	17	P	Pn	08 25 50.2	+0.8
	baz=199						
WECS	Westdahl Cape	5.89	57		Pn	08 25 51.0	+0.6
ISLZ	Isanotski Laza	6.54	58		Pn	08 25 59.8	+0.5
FALS	False Pass	6.75	58		Pn	08 26 05.0	+3.0
FALS	False Pass	6.75	58	P	Pn	08 26 02.5	+0.5
	baz=245						
SMY	Shemya	7.82	283	P	Pn	08 26 19.6	+2.8
SMY	Shemya	7.82	283		Pn	08 26 19.6	+2.8
SDPT	Sand Point	8.50	59	Pn	Pn	08 26 28.2	+2.2
SDPT	Sand Point	8.50	59	P	Pn	08 26 26.7	+0.6
	baz=249						
CNBA	Chernabura Isl	8.82	63	Pn	Pn	08 26 31.6	+1.2
CHNA	Chernabura Isl	8.82	63	P	Pn	08 26 30.6	+0.1
	baz=254						
CHGN	Chignik	9.93	56	Pn	Pn	08 26 45.7	+0.1
CHGN	Chignik	9.93	56	P	Pn	08 26 45.9	+0.3
	baz=248						
GAMB	Gambell	12.20	3		Pn	08 27 20.8	+4.2
GAMB	Gambell	12.20	3	P	Pn	08 27 17.6	+1.0
	baz=185						
SII	Sitkinak Islan	12.24	59	Pn	Pn	08 27 17.4	+0.2
SII	Sitkinak Islan	12.24	59	P	Pn	08 27 18.4	+1.1
	baz=254						
P18K	Big Mountain,	12.81	46	Pn	Pn	08 27 28.4	+3.3
P18K	Big Mountain,	12.81	46	P	Pn	08 27 26.4	+1.3
	baz=240						
OHAK	Old Harbor	12.90	57	P	Pn	08 27 26.1	-0.1
	baz=253						
O18K	Koktuh Hills	13.06	44	Pn	Pn	08 27 32.3	+3.9
O18K	Koktuh Hills	13.06	44	P	Pn	08 27 28.3	-0.1
	baz=239						
Q19K	Cape Douglas,	13.33	49		Pn	08 27 32.8	+0.6
Q19K	Cape Douglas,	13.33	49	P	Pn	08 27 32.2	0.0
	baz=245						
KDAK	Kodiak Island	13.43	55	P	Pn	08 27 31.2	-2.2
	1.2nm,0.3s,baz=242,slow=5.5,SNR=18						
KDAK	Kodiak Island	13.43	55	⇑*i*P	Pn	08 27 31.4	-2.1
KDAK	Kodiak Island	13.43	55	P	Pn	08 27 33.8	+0.3
	baz=251						
SVW2	Sparrevohn	13.60	39		Pn	08 27 39.2	+3.5
ANM	Nome	13.60	15	P	Pn	08 27 37.3	+1.5
	baz=201						
O19K	Port Alsworth	13.62	44	P	Pn	08 27 36.6	+0.6
	baz=239						
N19K	Bonanza Creek	13.87	41	P	Pn	08 27 40.0	+0.4
	baz=237,SNR=12						
TNA	Tin City	14.23	9	P	Pn	08 27 44.9	+0.6
	baz=194						
O20K	Slope Mountain	14.30	46	P	Pn	08 27 45.4	-0.1
	baz=243						
L19K	White Mountain	14.53	36	P	Pn	08 27 49.7	+1.2
	baz=232,SNR=9.5						
M19K	Big River Lodg	14.54	38	P	Pn	08 27 49.0	+0.5
	baz=233						
TTA	Tatalina	14.61	33	P	Pn	08 27 50.3	+0.6
	baz=227,SNR=16						
BRSE	Bradley Lake S	15.02	49	P	Pn	08 27 53.6	-1.5
	baz=247						
L20K	Farewell, AK	15.07	36	P	Pn	08 27 55.3	-0.5
	baz=233,SNR=7.9						
K20K	Telida	15.55	34	P	Pn	08 28 01.3	-0.8
	baz=230,SNR=7.8						
GCSA	Galena City Sc	15.66	27	P	Pn	08 28 03.3	0.0
	baz=221						
SKT	Skwentna	15.70	40	P	Pn	08 28 03.4	-0.6
	baz=238						
SEW	Seward	15.76	48	Pn	Pn	08 28 02.5	-2.2
SEW	Seward	15.76	48	P	Pn	08 28 03.4	-1.3
	baz=248						
SUA	Susitna One	15.77	43		Pn	08 28 03.8	-1.1
SUA	Susitna One	15.77	43	P	Pn	08 28 04.0	-0.9
	baz=241						
O22K	Cooper Landing	15.78	47		Pn	08 28 05.6	+0.6
O22K	Cooper Landing	15.78	47	P	Pn	08 28 05.2	+0.3
	baz=246,SNR=15						
PPLA	Purkeypile	15.95	37	P	P	08 28 10.3	-0.4
PPLA	Purkeypile	15.95	37	P	Pn	08 28 05.8	-1.5
	baz=235						
RC01	Rabbit Creek A	16.03	45	P	Pn	08 28 06.8	-1.3
	baz=244						
J20K	Nowinta River	16.07	31	P	P	08 28 12.7	+0.9
J20K	Nowinta River	16.07	31	P	Pn	08 28 08.4	-0.3
	baz=228,SNR=8.7						
M22K	Willow	16.17	42	P	Pn	08 28 09.1	-0.8
	baz=242						
CAST	Castle Rocks	16.30	35	P	P	08 28 13.9	-0.4
CAST	Castle Rocks	16.30	35	P	Pn	08 28 11.0	-0.6
	baz=233						
CUT	Chulitna	16.43	40	P	Pn	08 28 12.7	-0.5
	baz=239						
CHUM	Lake Minchumin	16.50	34	P	Pn	08 28 14.0	-0.1
	baz=232,SNR=7.9						
PMR	Palmer	16.51	44	P	Pn	08 28 13.7	-0.6
	baz=244						
PWL	Port Wells	16.56	46	P	Pn	08 28 13.6	-1.4
	baz=247						
GHO	Glory Hole Cre	16.68	43		Pn	08 28 16.4	-0.2
KNK	Knik Glacier	16.73	45	P	Pn	08 28 16.9	-0.1
KNK	Knik Glacier	16.73	45	P	Pn	08 28 15.6	-1.4
	baz=245						
KTH	Kantishna Hill	16.80	36	P	P	08 28 19.6	-0.3
KTH				IAmb	IAmb	08 28 27.5	
	comp=Z,79nm,0.9s						
SML	Sawmill	16.95	43	P	Pn	08 28 18.4	-1.5
	baz=244						
TRF	Thorofare Moun	16.98	37	P	Pn	08 28 19.0	-1.3
	baz=236						
BPAW	Bear Paw Mtn.	17.09	35		P	08 28 23.0	-0.1
BPAW	Bear Paw Mtn.	17.09	35	P	Pn	08 28 21.4	-0.2
	baz=234						
GLI	Glacier Island	17.13	47	P	Pn	08 28 21.7	-0.4
	baz=249						
PET	Petropavlovsk	17.16	286	⇑*i*P	P	08 28 23.7	-0.2
PET	Petropavlovsk	17.16	286	P	P	08 28 23.6	-0.3
RDOG	Red Dog Mine	17.23	13	P	Pn	08 28 21.4	-1.8
	baz=202						
HIN	Hinchinbrook I	17.24	49	P	Pn	08 28 23.8	+0.2
FID	Port Fidalgo	17.37	48	P	Pn	08 28 22.9	-2.1
SCM	Sheep Creek Mo	17.39	44	P	Pn	08 28 25.5	+0.1
SCM				pmax	pmax		
	comp=Z,55nm,0.7s						
SCM	Sheep Creek Mo	17.39	44	P	Pn	08 28 25.5	+0.1
SCM	Sheep Creek Mo	17.39	44	P	Pn	08 28 25.2	-0.3
	baz=246,SNR=6.8						
I21K	Tanana	17.44	31	P	P	08 28 28.8	+1.9
I21K				IAmb	IAmb	08 28 30.2	
	comp=Z,76nm,0.9s						
I21K	Tanana	17.44	31	P	P	08 28 26.7	-0.2
	baz=229						
RND	Reindeer	17.50	38	P	Pn	08 28 26.5	-0.2
RND				pmax	pmax		
	comp=Z,31nm,0.8s						
RND	Reindeer	17.50	38	P	Pn	08 28 26.5	-0.2
H21K	Melozitna Rive	17.50	29	P	P	08 28 28.2	+0.6
H21K	Melozitna Rive	17.50	29	P	Pn	08 28 25.5	-1.2
	baz=226,SNR=10						
MCK	McKinley	17.64	37	P	Pn	08 28 28.6	+0.2
MCK				pmax	pmax		
	comp=Z,93nm,1.4s						
MCK	McKinley	17.64	37	P	Pn	08 28 28.6	+0.2
MCK	McKinley	17.64	37	P	Pn	08 28 27.4	-1.0
	baz=238						
EYAK	Cordova Ski Ar	17.64	49	P	Pn	08 28 27.5	-0.9
	baz=252						
BWN	Browne	17.68	36	P	Pn	08 28 29.0	+0.1

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BWN                                      IAmb    IAmb      08 28 49.3
      comp=Z,162nm,1.3s
PEA0B Petropavlovsk-    17.72 286⇑iP     P         08 28 30.6 +0.5
PETK  Petropavlovsk-    17.72 286  P     Pn        08 28 29.4 -0.1
      comp=Z,3.4nm,0.3s,baz=90,slow=14,SNR=40
MLY   Manley            17.75  32  P     Pn        08 28 30.0 +0.2
      baz=232,SNR=8.3
KLU   Klutina           17.88  46  P     Pn        08 28 30.1 -1.3
      baz=249
M24K  Tolsona, Glenn    18.00  44  P     Pn        08 28 31.9 -1.1
      baz=247
NEA2  Nenana            18.06  35  P     P         08 28 33.7 -0.1
NEA2  Nenana            18.06  35  P     Pn        08 28 32.6 -1.0
      baz=235
RAGM  Ragged Mountai    18.11  50  P     P         08 28 34.5 +0.1
KAIM  Kayak Island      18.11  52  P     Pn        08 28 32.7 -1.5
      baz=255
I23K  Minto, Yukon-K    18.28  33  P     P         08 28 36.1 -0.1
      baz=234,SNR=28
HMT   Hamilton          18.29  50  P     P         08 28 36.0 -0.4
HMT                                IAmb  IAmb      08 28 42.8
      comp=Z,55nm,0.7s
BMRM  Bremner River     18.31  48  P     Pn        08 28 37.2 +0.6
BMRM  Bremner River     18.31  48  P     P         08 28 34.9 -1.7
      baz=252
WRH   Wood River Hil    18.35  36  P     P         08 28 36.2 -0.8
N25K  Chitina, Valde    18.52  46  P     P         08 28 37.9 -1.0
      baz=250
HARP  HAARP             18.56  44  P     P         08 28 38.6 -0.7
      baz=247
MDM   Murphy Dome       18.57  35  P     P         08 28 39.0 -0.4
BERG  Berg Lake         18.57  50  P     P         08 28 39.3 -0.2
BERG                               IAmb  IAmb      08 28 46.7
      comp=Z,61nm,0.8s
H23K  Yukon River       18.63  31  P     P         08 28 39.7 -0.4
      baz=232,SNR=8.9
TCOL  CIGO, UAF Yank    18.65  35  P     P         08 28 39.4 -0.9
      baz=237
PAX   Paxson            18.65  42  P     P         08 28 40.4  0.0
PAX                                pmax  pmax
      comp=Z,56nm,1.4s
PAX   Paxson            18.65  42  P     P         08 28 40.4  0.0
PAX   Paxson            18.65  42  P     P         08 28 39.2 -1.2
      baz=245
COLA  College           18.65  35 eP     P         08 28 39.4 -0.9
COLA  College           18.65  35  P     P         08 28 39.4 -0.9
      baz=237
HDA   Harding Lake      18.74  37  P     P         08 28 40.6 -0.6
      baz=239,SNR=20
POKR  Poker Plat Res    18.93  35  P     P         08 28 42.9 -0.5
POKR  Poker Plat Res    18.93  35  P     P         08 28 42.0 -1.4
      baz=237,SNR=6.2
CRQM  Cirque            18.94  49  P     P         08 28 44.0 +0.4
SNH   Sunshine Point    18.94  51  P     P         08 28 43.6 +0.1
SNH                                IAmb  IAmb      08 28 49.3
      comp=Z,150nm,1.1s
IL31                    18.95  36  P     P         08 28 42.5 -1.0
ILAR  Eielson Array     18.95  36  P     P         08 28 42.1 -1.4
      comp=Z,7.0nm,0.3s,baz=242,slow=9.1,SNR=106
CRQE  Cirque            18.96  50  P     P         08 28 42.5 -1.3
      baz=255,SNR=6.7
WAX   Waxell Ridge      19.00  51  P     P         08 28 43.9 -0.3
WAX                                IAmb  IAmb      08 29 05.6
      comp=Z,115nm,1.2s
SKR   Severo-Kuril's    19.14 279⇓eP     P         08 28 45.7  0.0
MCARA McCarthy VSAT     19.16  48  P     P         08 28 44.5 -1.4
      baz=253
H24K  Noodor Dome       19.19  33  P     P         08 28 46.0 -0.2
      baz=234,SNR=46
RIDG  Independent Ri    19.23  40  P     P         08 28 47.0 +0.3
RIDG                               IAmb  IAmb      08 28 53.8
      comp=Z,46nm,0.5s
RIDG  Independent Ri    19.23  40  P     P         08 28 45.3 -1.5
      baz=244
COLD  Coldfoot          19.34  27  P     P         08 28 47.2 -0.7
      baz=228,SNR=11
MESA  MESA              19.37  52  P     Pn        08 28 49.1 -0.6
MESA                               IAmb  IAmb      08 28 54.1
      comp=Z,113nm,1.2s
MESA  MESA              19.37  52  P     P         08 28 47.0 -1.4
      baz=258
J25K  Salcha River,     19.43  37  P     P         08 28 47.6 -1.3
      baz=241,SNR=35
M26K  Nabesna, AK       19.50  45  P     P         08 28 50.0 +0.3
M26K  Nabesna, AK       19.50  45  P     P         08 28 48.4 -1.3
      baz=250,SNR=8.5
L26K  Log Cabin Wild    19.57  43  P     P         08 28 48.8 -1.5
      baz=248,SNR=10
SCRK  Sand Creek        19.68  40  P     P         08 28 51.0 -0.6
SCRK                               IAmb  IAmb      08 28 54.3
      comp=Z,42nm,0.6s
SCRK  Sand Creek        19.68  40  P     P         08 28 50.1 -1.6
      baz=245,SNR=18
PRP   Porcupine Dome    19.83  35  P     P         08 28 52.7 -0.6
      baz=239,SNR=10
CTG   Chitna Glacier    19.84  50  P     P         08 28 52.6 -0.8
      baz=256,SNR=8.3
LOGN  Logan Glacier     19.97  50  P     P         08 28 54.6 -0.3
LOGN                               IAmb  IAmb      08 29 15.3
      comp=Z,69nm,0.8s
M27K  Edge Creek, AK    19.98  45  P     P         08 28 54.1 -0.9
      baz=252
J26L  Joseph Creek      20.07  39  P     P         08 28 55.1 -0.8
      baz=244,SNR=47
PINM  Pinnacle          20.19  52  P     P         08 28 55.4 -1.8
      baz=260,SNR=15
L27K  Beaver Creek,     20.23  43  P     P         08 28 57.0 -0.5
      baz=250,SNR=11
BVCY  Beaver Creek      20.44  46  P     P         08 29 00.9 +1.0
      baz=253,SNR=12
YUK3  Moose Creek       20.45  48  P     P         08 28 58.5 -1.7
      baz=255
BCPM  Bancas Point      20.47  53  P     P         08 29 00.8 +0.6
BCPM                               IAmb  IAmb      08 29 28.0
      comp=Z,73nm,0.9s
FYU   Fort Yukon        20.49  33  P     P         08 29 00.5 +0.2
FYU                                IAmb  IAmb      08 29 03.1
      comp=Z,166nm,1.2s
TOLK  Toolik Lake Re    20.49  25  P     Pn        08 29 01.6 -1.0
TOLK                               IAmb  IAmb      08 29 02.4
      comp=Z,78nm,0.7s
TOLK  Toolik Lake Re    20.49  25  P     P         08 28 59.6 -0.8
      baz=226,SNR=17
PNL   Peninsula         20.55  54  P     P         08 29 00.5 -0.5
      baz=262,SNR=11
EGAK  Eagle             21.13  39  P     P         08 29 06.5 -0.7
      baz=247,SNR=66
BMAR  Burnt Mountain    21.18  31  P     P         08 29 09.0 +1.1
YUK4  Talbot Arm        21.20  49  P     P         08 29 07.4 -0.8
      baz=258
YUK6  Outpost Mounta    21.26  50  P     P         08 29 08.1 -0.8
      baz=260
SEY   Seymchan          21.42 315  P     P         08 29 11.6 +1.2
      comp=Z,9.8nm,0.5s,baz=99,slow=8.7,SNR=5.2
MA2   Magadan           21.56 306  P     P         08 29 12.5 +0.6
      comp=Z,18nm,0.6s,baz=103,slow=12,SNR=6.6
MA2   Magadan           21.56 306⇑iP     P         08 29 12.4 +0.5
MA2                                pmax  pmax
      comp=Z,19nm,0.7s
MA2   Magadan           21.56 306  IAmb  IAmb      08 29 19.5
      comp=Z,32nm,0.8s
DAWY  Dawson            21.59  42  P     P         08 29 11.8 -0.4
DAWY                               IAmb  IAmb      08 29 19.2
      comp=Z,96nm,1.4s
DAWY  Dawson            21.59  42  P     P         08 29 11.7 -0.6
      baz=251
HYT   Haines Junctio    21.65  51  P     P         08 29 12.8 -0.2
HYT   Haines Junctio    21.65  51  P     P         08 29 12.4 -0.6
      baz=261,SNR=8.1
J29M  Klondike Camp     22.20  41  P     P         08 29 18.4 -0.4
      baz=251,SNR=5.7
M30M  Minto, Yukon      22.31  47  P     P         08 29 19.1 -0.9
      baz=257
I29M  Ogilvie Camp,     22.47  39  P     P         08 29 20.0 -1.7
      baz=249
SIT   Sitka             22.57  61  P     P         08 29 23.6 +1.0
      baz=272
N31M  Braeburn, Yuko    22.58  50  P     P         08 29 24.5 +1.6
      baz=261
SKAG  Skagway           22.59  55  P     P         08 29 22.6 -0.2
SKAG                               IAmb  IAmb      08 29 50.6
      comp=Z,58nm,1.0s
SKAG  Skagway           22.59  55  P     P         08 29 23.3 +0.4
      baz=266,SNR=14
WHY   Whitehorse        22.91  52  P     P         08 29 25.9 -0.5
      baz=264
M31M  Drury Creek, Y    23.34  48  P     P         08 29 30.9 +0.3
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      baz=261
EPYK  Eagle Plains      23.44  37  P     P         08 29 30.9 -0.7
      baz=249,SNR=8.3
P33M  Teslin, Yukon     23.89  53  P     P         08 29 36.3 +0.3
      baz=267
CRAG  Craig             23.93  65  P     P         08 29 37.5 +1.2
      baz=278
WRAK  Wrangell Islan    24.25  62  P     P         08 29 41.1 +1.9
      baz=276,SNR=7.7
MMPY  Sheldon Lake,     24.84  47  P     P         08 29 45.2 +0.5
      baz=263,SNR=6.2
INK   Inuvik            25.30  34  P     P         08 29 48.2 -0.3
      comp=Z,56nm,0.8s,baz=238,slow=7.0,SNR=82
INK   Inuvik            25.30  34  P     P         08 29 48.0 -0.6
      baz=249,SNR=26
DLBC  Dease Lake        25.34  57  P     P         08 29 51.0 +1.8
      comp=Z,46nm,0.9s,baz=277,slow=8.2,SNR=37
DLBC  Dease Lake        25.34  57  P     P         08 29 51.3 +2.1
DLBC                               IAmb  IAmb      08 29 52.5
      comp=Z,73nm,1.1s
TGTN  Hyland Airport    26.17  50  P     P         08 29 57.1 +0.5
      baz=268,SNR=9.2
KUR   Kuril'sk          26.31 271 eP     P         08 29 57.5 -0.5
TYV   Tymovskoe         27.27 286 eP     P         08 30 06.9 +0.3
TYV                                pmax  pmax
      comp=Z,20nm,0.8s
BBB   Bella Bella       27.54  71  P     P         08 30 10.1 +1.1
      comp=Z,16nm,0.9s,baz=67,slow=6.2,SNR=3.1
YUK   Yuzh-Kuril'sk     28.14 271 eP     P         08 30 15.3 +0.9
UGL   Uglegorsk         28.26 283 eP     P         08 30 15.9 +0.5
UGL                               eS     S         08 35 02.3 +2.9
UGL                                pmax  pmax
      comp=Z,180nm,0.8s
UGL                                smax  smax
      comp=N,7µm,13.0s
UGL                                smax  smax
      comp=E,3µm,13.0s
UGL                                MLR   MLR
      comp=E,3µm,16.0s
UGL                                MLR   MLR
      comp=Z,2µm,17.0s
WRGLY Wrigley           28.44  47  P     P         08 30 16.4 -0.5
      baz=269
YSS   Yuzh-Sakhalins    28.70 278⇑eP     P         08 30 20.1 +0.7
YSS                               e                08 30 32.7
YSS                                pmax  pmax
      comp=N,30nm,0.9s
YSS                                pmax  pmax
      comp=Z,130nm,0.9s
YSS                                pmax  pmax
      comp=E,80nm,1.1s
A36M  Sachs Harbour     29.20  28  P     P         08 30 23.5 -0.1
A36M                               IAmb  IAmb      08 30 25.1
      comp=Z,31nm,0.8s
A36M  Sachs Harbour     29.20  28  P     P         08 30 22.8 -0.8
      baz=252,SNR=8.7
JKA   Kamikawa-asahi    30.13 273  P     P         08 30 32.9 +0.8
ASAJ  Asahikawa         30.13 273  P     P         08 30 33.9 +1.8
      comp=Z,137nm,0.9s,baz=44,slow=5.2,SNR=40
ERM   Erimo             30.89 269⇑iP     P         08 30 39.1 +0.3
ERM                                pmax  pmax
      comp=Z,84nm,0.8s
GRNR  Gornyy            31.01 289⇓iP     P         08 30 39.5 -0.3
GRNR                              eS     S         08 35 43.7 +1.0
GRNR                               pmax  pmax
      comp=Z,20nm,0.7s
GRNR                               smax  smax
      comp=N,3.0nm,0.6s
GRNR                               MLR   MLR
      comp=E,440nm,13.0s
GRNR                               MLR   MLR
      comp=N,2µm,15.0s
GRNR                               MLR   MLR
      comp=Z,2µm,15.0s
YAK   Yakutsk           31.82 311  P     P         08 30 46.4 -0.5
      comp=Z,15nm,0.7s,baz=357,slow=2.0,SNR=4.7
YAK   Yakutsk           31.82 311 eP     P         08 30 45.1 -1.7
YAK                                pmax  pmax
      comp=Z,31nm,0.9s
YAK   Yakutsk           31.82 311  IAmb  IAmb      08 30 47.4
      comp=Z,35nm,0.9s
TIXI  Tiksi             32.12 330  P     P         08 30 50.0 +0.6
      comp=Z,12nm,0.5s,baz=108,slow=13,SNR=16
TIXI  Tiksi             32.12 330 eP     P         08 30 49.6 +0.3
TIXI  Tiksi             32.12 330  P     P         08 30 49.1 -0.2
TIXI                               IAmb  IAmb      08 30 51.7
      comp=Z,30nm,1.2s
D03D  Eldon             32.28  77  P     P         08 30 51.4 +0.4
      baz=296
YKA   Yellowknife Ar    32.54  48  P     P         08 30 53.5 +0.4
      comp=Z,6.5nm,0.8s,baz=276,slow=20,SNR=16
YKA                                ScP   ScP       08 37 17.9 -2.7
      comp=Z,3.5nm,0.7s,baz=290,slow=1.6,SNR=7.7
YKA   Yellowknife Ar    32.54  48  P     P         08 30 52.6 -0.5
B05A  Bryant            32.57  75  P     P         08 30 51.8 -1.7
      baz=296,SNR=6.9
E04D  Cinebar           33.05  78  P     P         08 30 57.8 +0.1
      baz=298
TEY   Ternei            33.39 279⇑iP     P         08 31 00.3 -0.4
TEY                                pmax  pmax
      comp=N,50nm,0.8s
TEY                                pmax  pmax
      comp=E,120nm,0.8s
TEY                                pmax  pmax
      comp=Z,200nm,0.8s
F04A  Amboy             33.43  79  P     P         08 31 01.8 +0.7
F04A                               IAmb  IAmb      08 31 21.1
      comp=Z,48nm,1.3s
B08A  Colville Reser    34.19  74  P     P         08 31 08.5 +0.8
B08A                               IAmb  IAmb      08 31 17.4
      comp=Z,23nm,0.6s
H04A  Detroit Lake      34.19  81  P     P         08 31 08.6 +0.8
H04A                               IAmb  IAmb      08 31 23.1
      comp=Z,66nm,1.3s
KLR   Kul'dur           34.39 288  P     P         08 31 08.6 -0.8
      comp=Z,8.0nm,0.5s,baz=71,slow=6.5,SNR=25
KLR   Kul'dur           34.39 288c iP    P         08 31 07.9 -1.5
KLR                                pmax  pmax
      comp=Z,34nm,1.5s
G05D  Wamic, OR         34.45  80  P     P         08 31 08.7 -1.3
      baz=300
I04A  Tendick Farm,     34.51  83  P     P         08 31 09.3 -1.3
      baz=301
L02E  Cave Junction     34.65  86  P     P         08 31 10.5 -1.2
      baz=303
I05D  Terrebonne, OR    34.89  81  P     P         08 31 12.8 -1.1
      baz=301
J04D  Umpqua Nationa    34.99  83  P     P         08 31 14.2 -0.7
      baz=302
D08A  Wollman Farm,     35.03  76  P     P         08 31 15.2 +0.3
D08A                               IAmb  IAmb      08 31 16.2
      comp=Z,16nm,0.8s
ZEA   Zeya              35.18 297 eP     P         08 31 15.3 -0.9
ZEA                                pmax  pmax
      comp=Z,30nm,1.1s
KHMM  Horse Mountain    35.28  88  P     P         08 31 18.9 +1.6
KHMM                               IAmb  IAmb      08 31 34.7
      comp=Z,64nm,1.1s
L04D  Klamath Falls     35.42  85  P     P         08 31 17.6 -0.9
      baz=303
H11N2 WAKE ISLAND Hy    35.44 213  T     T         09 09 21.4
      baz=21,slow=76,SNR=11
YBH   Yreka Blue Hor    35.44  86  P     P         08 31 19.0 +0.4
      comp=Z,5.5nm,0.7s,baz=326,slow=5.4,SNR=14
YBH   Yreka Blue Hor    35.44  86  P     P         08 31 19.8 +1.2
YBH                                pmax  pmax
      comp=Z,27nm,1.0s
YBH   Yreka Blue Hor    35.44  86  P     P         08 31 19.8 +1.2
YBH                                IAmb  IAmb      08 31 34.6
      comp=Z,27nm,1.0s
H11N3 WAKE ISLAND Hy    35.44 213  T     T         09 09 22.0
      baz=21,slow=76,SNR=13
H11N1 WAKE ISLAND Hy    35.45 213  T     T         09 09 22.8
      baz=21,slow=76,SNR=11
J05D  Fort Rock, OR     35.51  83  P     P         08 31 18.8 -0.4
      baz=302
M02C  Callahan          35.54  86  P     P         08 31 19.2 -0.3
      baz=304
NEW   Newport           35.55  73  P     P         08 31 20.0 +0.6
      comp=Z,14nm,0.7s,baz=294,slow=7.0,SNR=23
NEW   Newport           35.55  73  P     P         08 31 20.0 +0.6
NEW   Newport           35.55  73  P     P         08 31 19.7 +0.3
NEW                                IAmb  IAmb      08 31 28.3
      comp=Z,22nm,0.6s
NEW   Newport           35.55  73  P     P         08 31 19.6 +0.1
      baz=297,SNR=10
N02D  Trinity Center    35.87  87  P     P         08 31 23.0 +0.8
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      baz=305
M04C  Macdoel           35.95  85  P     P         08 31 23.5 +0.4
      baz=304
I07A  Izee              36.15  80  P     P         08 31 25.2 +0.5
I07A                               IAmb  IAmb      08 31 39.5
      comp=Z,20nm,1.0s
WDC   Whiskeytown Da    36.19  87  P     P         08 31 25.5 +0.5
WDC                                pmax  pmax
      comp=Z,33nm,1.2s
WDC   Whiskeytown Da    36.19  87  P     P         08 31 25.5 +0.5
WDC                                IAmb  IAmb      08 31 40.7
      comp=Z,33nm,1.1s
JSD   Sado              36.26 267  P     P         08 31 26.1 +0.5
O02D  Mt. Diablo Mer    36.27  88  P     P         08 31 26.0 +0.2
      baz=306,SNR=6.6
F10A  Beach Ranch, E    36.58  76  P     P         08 31 29.0 +0.7
H11S1 WAKE ISLAND Hy    36.64 213  T     T         09 10 39.2
      baz=20,slow=76,SNR=31
USA0B Ussuriysk Arra    36.65 280c iP    P         08 31 28.0 -0.8
USRK  Ussuriysk Ar.     36.65 280  P     P         08 31 28.3 -0.5
      comp=Z,27nm,0.7s,baz=57,slow=7.4,SNR=40
USRK  Ussuriysk Ar.     36.65 280  P     P         08 31 28.5 -0.3
USRK  Ussuriysk Ar.     36.65 280  P     P         08 31 28.5 -0.3
H11S2 WAKE ISLAND Hy    36.65 213  T     T         09 10 37.5
      baz=20,slow=76,SNR=33
H11S3 WAKE ISLAND Hy    36.65 213  T     T         09 10 38.8
      baz=20,slow=76,SNR=22
O03E  Paynes Creek      36.82  87  P     P         08 31 31.1 +0.7
      baz=306,SNR=5.7
MOD   Modoc Plateau     36.84  84  P     P         08 31 31.4 +0.7
MOD                                IAmb  IAmb      08 31 46.2
      comp=Z,54nm,1.2s
MJAR  Matsushiro Arr    37.23 265  P     P         08 31 34.1 +0.3
      comp=Z,9.3nm,0.6s,baz=47,slow=7.6,SNR=24
MJAR                               PcP   PcP       08 33 52.3 -0.8
      comp=Z,6.3nm,1.0s,baz=96,slow=3.8,SNR=5.7
MJAR  Matsushiro Arr    37.23 265  P     P         08 31 33.5 -0.4
MAJO  Matsushiro        37.23 265 i P    P         08 31 33.9 +0.1
MAJO                               pmax  pmax
      comp=Z,47nm,1.1s
MAJO  Matsushiro        37.23 265  P     P         08 31 33.6 -0.3
MAJO                               IAmb  IAmb      08 31 38.2
      comp=Z,49nm,1.1s
MAT   Matsushiro        37.23 265  P     P         08 31 33.7 -0.1
MSHR  Mys Shultsa       38.03 279c iP    P         08 31 40.8 +0.3
MSHR                               pmax  pmax
      comp=Z,97nm,0.8s
RES   Resolute Bay      38.07  25  P     P         08 31 39.7 -0.8
      comp=Z,3.5nm,0.8s,baz=283,slow=9.2,SNR=4.3
RES                                PcP   PcP       08 33 55.2 +0.2
      comp=Z,7.2nm,0.7s,baz=241,slow=2.7,SNR=11
MSO   Missoula          38.12  73  P     P         08 31 41.4  0.0
      baz=300,SNR=7.1
HLID  Hailey            39.54  78  P     P         08 31 53.9 +0.4
      baz=303,SNR=5.8
BMN   Battle Mountai    39.58  84  P     P         08 31 54.4 +0.6
BMN                                pmax  pmax
      comp=Z,15nm,0.9s
BMN   Battle Mountai    39.58  84  P     P         08 31 54.4 +0.6
JWT   Wachi             39.78 266  P     P         08 31 55.6 +0.4
JWT                                IAmb  IAmb      08 31 59.4
      comp=Z,84nm,1.3s
EGMT  Eagleton          40.00  69  P     P         08 31 57.0 -0.1
      baz=300,SNR=10
NVAR  Mina Array Bea    40.11  87  P     P         08 31 58.9 +0.7
      comp=Z,5.5nm,0.8s,baz=292,slow=8.1,SNR=23
NVAR                               pP    pwP       08 32 10.8 -0.1
      comp=Z,17nm,0.9s,baz=291,slow=7.9,SNR=16
NVAR                               PcP   PcP       08 34 01.6 -0.8
      comp=Z,1.9nm,0.7s,baz=306,slow=3.1,SNR=3.2
BOZ   Bozeman (W)       40.13  73  P     P         08 31 57.9 -0.4
      baz=302,SNR=9.4
CN2   Changchun         40.85 284 eP     P         08 32 02.9 -1.1
CN2                                pmax  pmax
      comp=Z,10.0nm,1.1s
TIN   Tinemaha, Big     41.00  89  P     P         08 32 06.7 +1.1
      baz=309
SMMC  Simmler           41.01  92  P     P         08 32 04.5 -1.0
      baz=310
VES   Vestal, Richgr    41.24  91  P     P         08 32 06.8 -0.4
      baz=310
HIA   Hailar            41.35 294c iP    P         08 32 06.8 -1.3
HIA                                pmax  pmax
      comp=Z,33nm,0.8s
JCJ   Chichijima        41.37 251  P     P         08 32 07.8 -0.6
      comp=Z,74nm,0.7s,baz=263,slow=13,SNR=4.1
JHS   Saijyo            41.39 268  P     P         08 32 09.1 +0.5
JHS                                IAmb  IAmb      08 32 12.0
      comp=Z,26nm,0.9s
PKM   Mcpherson Peak    41.40  92  P     P         08 32 08.7 -0.2
      baz=311
H17A  Grant Village     41.41  74  P     P         08 32 07.9 -1.0
      baz=303,SNR=6.0
CWC   Cottonwood Cre    41.48  89  P     P         08 32 09.3 -0.2
      baz=309
GRAC  Grapevine Rang    41.58  88  P     P         08 32 09.8 -0.3
      baz=309
ISA   Isabella, Lake    41.73  90  P     P         08 32 10.6 -0.8
      baz=310,SNR=7.4
RLMT  Red Lodge         41.80  73  P     P         08 32 10.0 -2.0
      baz=303,SNR=9.5
LOHW  Long Hollow       41.83  75  P     P         08 32 13.1 +0.8
R11A  Troy Canyon, C    41.84  85  P     P         08 32 12.2 -0.3
      baz=308,SNR=8.2
SCZ2  Santa Cruz Isl    42.10  93  P     P         08 32 13.9 -0.5
      baz=312
FURC  Furnace Creek,    42.22  88  P     P         08 32 14.8 -0.5
      baz=309
OSI   Osito Audit: C    42.26  92  P     P         08 32 15.5 -0.3
      baz=311
DUG   Dugway, Tooele    42.45  81  P     P         08 32 17.5 +0.2
      baz=307,SNR=7.1
GWY   Greenwater Val    42.52  88  P     P         08 32 18.0  0.0
GWY                                IAmb  IAmb      08 32 33.5
      comp=Z,39nm,1.3s
EDW2  Edwards Air Fo    42.54  91  P     P         08 32 16.4 -1.6
      baz=311
DECC  Green Verdugo     42.74  92  P     P         08 32 18.3 -1.3
      baz=311
LAO   LASA Array        42.75  69  P     P         08 32 20.0 +0.4
      baz=302,SNR=8.4
PRN   Pahroc Range      42.76  86  P     P         08 32 20.7 +0.8
PRN                                IAmb  IAmb      08 32 35.6
      comp=Z,72nm,1.0s
BW06  Boulder Array     42.93  76  P     P         08 32 21.6 +0.2
      baz=305,SNR=18
PDAR  Pinedale Array    42.93  76  P     P         08 32 21.3 -0.1
      comp=Z,10nm,0.7s,baz=306,slow=4.4,SNR=55
SHOC  Shoshone, Teco    42.95  88  P     P         08 32 21.0 -0.3
      baz=310,SNR=7.4
DGMT  Dagmar            42.97  66  P     P         08 32 21.5 +0.1
      baz=301
GSC   Goldstone, Bar    43.00  90  P     P         08 32 22.0 +0.2
GSC                                pmax  pmax
      comp=Z,42nm,1.1s
GSC   Goldstone, Bar    43.00  90  P     P         08 32 22.0 +0.2
GSC                                IAmb  IAmb      08 32 36.8
      comp=Z,42nm,1.1s
GSC   Goldstone, Bar    43.00  90  P     P         08 32 22.0 +0.2
      baz=310,SNR=16
KSRS  Korea Array       43.06 275  P     P         08 32 22.3 +0.2
      comp=Z,42nm,1.1s,baz=58,slow=7.8,SNR=48
KSRS                               pP    pwP       08 32 35.5 +0.6
      comp=Z,12nm,0.6s,baz=56,slow=7.1,SNR=6.6
KSRS                               PcP   PcP       08 34 11.7  0.0
      comp=Z,4.2nm,0.8s,baz=62,slow=3.8,SNR=4.2
BFSC  Mount Baldy Ra    43.17  91  P     P         08 32 23.6 +0.4
      baz=311,SNR=7.6
MPU   Maple Canyon      43.28  80  P     P         08 32 24.4 +0.2
HEC   Hector,Ludlow     43.60  90  P     P         08 32 26.6 -0.1
      baz=311
BBRC  Big Bear Solar    43.61  91  P     P         08 32 27.4 +0.5
      baz=311
MSU   Marysvale         43.86  83  P     P         08 32 29.6 +0.7
MSU   Marysvale         43.86  83  P     P         08 32 29.6 +0.7
MURC  Murrieta          43.88  92  P     P         08 32 28.0 -0.8
      baz=312
JNU   Nakatsue          44.02 268  P     P         08 32 30.5 +0.5
      comp=Z,54nm,0.8s,baz=58,slow=6.3,SNR=19
GMRC  Granite Mounta    44.05  89  P     P         08 32 30.2 -0.2
      baz=311,SNR=8.5
TJN   Taejon            44.08 274c iP    P         08 32 30.5 +0.1
P17A  Butcher Ranch,    44.16  80  P     P         08 32 31.1  0.0
P17A                               IAmb  IAmb      08 32 45.5
      comp=Z,24nm,1.0s
PFO   Pinyon Flats O    44.33  91  P     P         08 32 32.5  0.0
      comp=Z,4.6nm,0.7s,baz=328,slow=6.4,SNR=11
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PFO   Pinyon Flats O    44.33  91⇑iP     P      08 32 32.2 -0.4
PFO                                pmax  pmax
      comp=Z,10.0nm,0.8s
PFO   Pinyon Flats O    44.33  91  P     P      08 32 32.1 -0.4
PFO   Pinyon Flats O    44.33  91  P     P      08 32 30.9 -1.7
      baz=312
TPFO  Pinon Flats       44.33  91  P     P      08 32 31.7 -0.9
      baz=312
BELC  Belle Mtn. Jos    44.36  90  P     P      08 32 32.1 -0.7
      baz=311,SNR=6.1
109C  Camp Elliot, M    44.41  92  P     P      08 32 33.3 +0.3
      baz=312
IRM   Iron Mountain     44.79  90  P     P      08 32 35.8 -0.3
      baz=311
K22A  Casper            44.83  74  P     P      08 32 36.0 -0.5
      baz=306
MONP2 Monument Peak     44.83  92  P     P      08 32 36.4 -0.2
      baz=312
BC3   Big Chuckawall    44.92  90  P     P      08 32 35.9 -1.4
      baz=312
CBX   Cerro Bola        45.07  93  P     P      08 32 39.1 +0.6
U15A  North Rim         45.09  85  P     P      08 32 39.3 +0.5
U15A                               IAmb  IAmb   08 32 53.9
      comp=Z,35nm,0.9s
SWSC  Sam W. Stewart    45.18  91  P     P      08 32 37.7 -1.5
      baz=312
IKP   In-Ko-Pah, Jac    45.19  92  P     P      08 32 38.3 -1.1
      baz=312
O20A  White River Ci    45.28  78  P     P      08 32 39.4 -0.7
      baz=307,SNR=6.5
PDMCI Parker Dam,Lak    45.31  89  P     P      08 32 38.9 -1.3
      baz=311
RSSD  Black Hills       45.45  71  P     P      08 32 41.3 -0.2
RSSD                               pmax  pmax
      comp=Z,15nm,0.8s
RSSD  Black Hills       45.45  71  P     P      08 32 41.2 -0.2
RSSD                               IAmb  IAmb   08 32 59.0
      comp=Z,15nm,0.8s
RSSD  Black Hills       45.45  71  P     P      08 32 40.9 -0.6
      baz=305
GLA   Glamis            45.72  90  P     P      08 32 42.9 -0.6
      baz=312
NRIK  Noril'sk          45.89 331  P     P      08 32 44.0 -0.4
      comp=Z,37nm,1.0s,baz=75,slow=8.5,SNR=19
NRIK                               PcP   PcP    08 34 21.6 +0.7
      comp=Z,10nm,0.8s,baz=25,slow=4.7,SNR=4.0
NRIK  Noril'sk          45.89 331c iP    P      08 32 44.2 -0.1
NRIK                               pmax  pmax
      comp=Z,37nm,0.9s
NRIK  Noril'sk          45.89 331  P     P      08 32 45.0 +0.7
NRIK                               IAmb  IAmb   08 32 45.3
      comp=Z,30nm,0.8s
MDND  Maddock           45.90  64  P     P      08 32 44.8 +0.1
      baz=304,SNR=11
N23A  Red Feather La    46.22  76  P     P      08 32 46.8 -0.9
      baz=307
WUAZ  Wupatki           46.25  85  P     P      08 32 47.5 -0.3
      baz=310,SNR=6.9
NEEM  North Greenlan    46.34  15 i P    P      08 32 48.0 -0.1
NEEM                               IAmb  IAmb   08 32 48.7
      comp=Z,39nm,0.8s
NOR   Nord              46.41   5 i P    P      08 32 48.0 -0.3
NOR                                IAmb  IAmb   08 32 48.9
      comp=Z,7.4nm,1.0s
NOR                               i             08 34 22.3
ULM   Lac du Bonnet     46.63  60  P     P      08 32 49.5 -0.8
      comp=Z,8.1nm,0.6s,baz=307,slow=7.5,SNR=20
ULM   Lac du Bonnet     46.63  60 eP     P      08 32 50.1 -0.3
ULM                                pmax  pmax
      comp=Z,8.0nm,0.6s
SMCO  Snowmass          46.64  78  P     P      08 32 50.5 -0.6
SMCO                               IAmb  IAmb   08 33 14.5
      comp=Z,13nm,1.2s
MVCO  Mesa Verde        46.94  81  P     P      08 32 52.6 -0.7
      baz=310
ISCO  Idaho Springs     47.09  77  P     P      08 32 54.4 -0.1
      baz=308
W18A  Petrified Fore    47.52  84  P     P      08 32 56.1 -1.6
      baz=311
S22A  4UR Ranch, Cre    47.63  80  P     P      08 32 57.1 -1.6
      baz=309
214A  Organ Pipe Nat    47.71  90  P     P      08 32 58.8 -0.3
      baz=313
AGMN  Agassiz Nation    47.73  62  P     P      08 32 57.2 -1.8
      baz=305,SNR=8.8
Q24A  Divide            47.89  77  P     P      08 32 59.1 -1.7
      baz=309
SUSD  Miller            48.23  68  P     P      08 33 01.5 -1.5
      baz=306,SNR=8.3
SDCO  Great Sand Dun    48.44  79  P     P      08 33 05.3 +0.3
SDCO                               IAmb  IAmb   08 33 19.7
      comp=Z,20nm,1.0s
SDCO  Great Sand Dun    48.44  79  P     P      08 33 03.9 -1.1
      baz=310
OGNE  Ogallala          48.53  73  P     P      08 33 04.0 -1.5
      baz=308
BJI   Beijing           48.65 285  P     P      08 33 05.9 -0.3
BJI                                pmax  pmax
      comp=Z,27nm,0.9s
TUC   Tucson            48.73  88  P     P      08 33 06.9 -0.1
TUC                                pmax  pmax
      comp=Z,20nm,1.3s
TUC   Tucson            48.73  88  P     P      08 33 06.9 -0.1
TUC                                IAmb  IAmb   08 33 21.8
      comp=Z,20nm,1.2s
TUC   Tucson            48.73  88  P     P      08 33 06.6 -0.4
      baz=313
TLY   Talaya            48.78 305c iP    P      08 33 06.8 -0.3
TLY                                pmax  pmax
      comp=Z,21nm,0.7s
TLY   Talaya            48.78 305  P     P      08 33 04.8 -2.3
TLY                                IAmb  IAmb   08 33 08.4
      comp=Z,22nm,0.8s
B35A  Bob, Littlefor    48.85  61  P     P      08 33 08.1 +0.4
B35A                               IAmb  IAmb   08 33 08.6
      comp=Z,14nm,0.7s
ULN   Ulaanbaatar       49.18 299 i P    P      08 33 10.1 -0.3
ULN                                pmax  pmax
      comp=Z,24nm,0.9s
KSCO  Kaye Shedlock’    49.38  76  P     P      08 33 10.3 -1.7
      baz=309
T25A  Trinidad          49.49  79  P     P      08 33 12.2 -0.8
      baz=310,SNR=5.7
SONM  Songino Array     49.56 299  P     P      08 33 13.0 -0.3
      comp=Z,19nm,0.6s,baz=50,slow=8.1,SNR=55
SONM  Songino Array     49.56 299  P     P      08 33 13.0 -0.3
SONM  Songino Array     49.56 299  P     P      08 33 12.9 -0.3
SONM                               IAmb  IAmb   08 33 14.8
      comp=Z,21nm,0.7s
KBS   Kingsbay          49.66 359  P     P      08 33 14.3 +0.9
KBS                                pmax  pmax
      comp=Z,63nm,1.5s
KBS   Kingsbay          49.66 359  P     P      08 33 14.2 +0.9
KBS                                IAmb  IAmb   08 33 32.7
      comp=Z,63nm,1.5s
ANMO  Albuquerque       49.66  82⇑iP     P      08 33 14.0 -0.3
ANMO                               pmax  pmax
      comp=Z,10.0nm,1.7s
ANMO  Albuquerque       49.66  82  P     P      08 33 12.8 -1.4
      baz=311
ZAK   Zakamensk         49.72 304 eP     P      08 33 13.6 -0.8
ZAK                                pmax  pmax
      comp=Z,32nm,1.2s
ECSD  EROS Data Cent    50.00  67  P     P      08 33 15.9 -0.6
ECSD                               IAmb  IAmb   08 33 16.4
      comp=Z,22nm,1.1s
ECSD  EROS Data Cent    50.00  67  P     P      08 33 14.8 -1.7
      baz=308,SNR=7.3
MOY   Mondy             50.14 306 eP     P      08 33 17.2 -0.3
MOY                                pmax  pmax
      comp=Z,20nm,1.4s
EYMN  Ely               50.31  60  P     P      08 33 16.2 -2.6
      baz=307,SNR=6.0
SPITS Spitsbergen Ar    50.31 357  P     P      08 33 17.8 -0.6
      comp=Z,17nm,0.8s,baz=46,slow=3.6,SNR=12
SPITS                              PcP   PcP    08 34 36.8 +0.1
      comp=Z,7.2nm,0.7s,baz=57,slow=5.3,SNR=2.5
121A  Cookes Peak, D    50.45  86  P     P      08 33 18.4 -1.9
      baz=313
TIA   Tai'an            50.51 281 ⇑P     P      08 33 20.3 -0.2
TIA                                pmax  pmax
      comp=Z,35nm,1.0s
BGNE  Belgrade          50.55  70  P     P      08 33 19.7 -0.9
      baz=309
DAG   Danmarks Havn     50.85   7 i P    P      08 33 21.0 -1.4
DAG                                IAmb  IAmb   08 33 22.3
      comp=Z,14nm,1.1s
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HHC   Hu-ho-hao-te      50.89 289 eP     P      08 33 21.6 -1.8
HHC                                pmax  pmax
      comp=Z,17nm,0.8s
HHC                                pmax  pmax
      comp=Z,200nm,6.2s
SPMN  Marine on St.     51.24  63  P     P      08 33 24.5 -1.3
      baz=308
CBKS  Cedar Bluff       51.25  74  P     P      08 33 25.4 -0.7
      baz=310
SUMG  Summit            52.17  16  P     P      08 33 33.0 +0.2
SUMG                               pmax  pmax
      comp=Z,30nm,1.0s
SUMG  Summit            52.17  16 i P    P      08 33 32.4 -0.4
SUMG  Summit            52.17  16  P     P      08 33 33.0 +0.2
SUMG                               IAmb  IAmb   08 33 34.5
      comp=Z,30nm,1.0s
NJ2   Nanjing           52.22 276 eP     P      08 33 32.3 -1.0
NJ2                                pmax  pmax
      comp=Z,16nm,0.6s
TIY   Taiyuan           52.38 285 eP     P      08 33 36.5 +2.0
TIY                                S     S      08 41 01.0 +2.6
TIY                                LR    LR
      comp=Z,1µm,15.8s
TIY                                LR    LR
      comp=Z,1µm,16.3s
TIY                                LR    LR
      comp=Z,2µm,17.9s
MNTX  Cornudas Mount    52.51  85  P     P      08 33 35.6 +0.1
      baz=313,SNR=5.5
MSTX  Muleshoe          52.58  81  P     P      08 33 34.7 -1.4
      baz=312
AMTX  Amarillo          52.64  79  P     P      08 33 35.9 -0.6
      baz=312
COWI  Conover           52.71  60  P     P      08 33 37.0 +0.2
COWI                               IAmb  IAmb   08 33 37.1
      comp=Z,16nm,1.0s
KSU1  Kansas State U    52.92  72  P     P      08 33 37.0 -1.4
      baz=311,SNR=6.0
DBG   Daneborg          53.03   9 i P    P      08 33 37.0 -1.7
DBG                                IAmb  IAmb   08 33 38.7
      comp=Z,11nm,0.9s
SCIA  State Center      53.09  67  P     P      08 33 38.6 -1.1
      baz=310
E43A  Lone Tree Farm    53.69  59  P     P      08 33 44.2 +0.2
E43A                               IAmb  IAmb   08 33 45.9
      comp=Z,28nm,0.8s
JFWS  Jewell Farm       54.13  64  P     P      08 33 45.1 -2.0
      baz=310,SNR=6.0
L40A  Anamosa           54.13  66  P     P      08 33 46.2 -1.0
L40A                               IAmb  IAmb   08 33 47.8
      comp=Z,21nm,0.7s
WMOK  Wichita Mounta    54.51  77  P     P      08 33 49.6 -0.5
WMOK                               pmax  pmax
      comp=Z,25nm,1.1s
WMOK  Wichita Mounta    54.51  77  P     P      08 33 49.6 -0.5
WMOK                               IAmb  IAmb   08 34 04.2
      comp=Z,25nm,1.1s
WMOK  Wichita Mounta    54.51  77  P     P      08 33 48.5 -1.6
      baz=312
ICESG Greenland Ices    54.86  19 i P    P      08 33 51.6 -1.0
TX32  Lajitas Array     55.21  85  P     P      08 33 54.7 -0.7
TX32                               IAmb  IAmb   08 34 09.6
      comp=Z,22nm,1.1s
TXAR  Lajitas Array     55.21  85  P     P      08 33 54.5 -0.8
      comp=Z,6.7nm,0.7s,baz=296,slow=4.9,SNR=43
TXAR  Lajitas Array     55.21  85  P     P      08 33 54.8 -0.5
TXAR  Lajitas Array     55.21  85  P     P      08 33 54.8 -0.5
ABTX  Abilene, Hawle    55.42  80  P     P      08 33 55.4 -1.3
      baz=314
TUL1  Leonard           55.52  74  P     P      08 33 56.5 -0.8
      baz=312
L44A  Lake County Fo    55.91  63  P     P      08 33 58.3 -1.8
      baz=311
GLMI  Grayling          55.97  59  P     P      08 34 00.1 -0.3
      baz=311
R40A  Maddies Statio    56.01  70  P     P      08 33 58.9 -1.9
R40A                               IAmb  IAmb   08 33 59.9
      comp=Z,22nm,0.6s
HDIL  Hopedale          56.21  66  P     P      08 34 00.2 -2.0
      baz=312
CHI   Chicago-Loyola    56.25  64  P     P      08 33 56.9 -5.6
ZALV  Zalesovo Beam     56.29 316  P     P      08 34 01.8 -0.8
      comp=Z,1.6nm,0.5s,baz=41,slow=7.3,SNR=2.9
ZALV                               PcP   PcP    08 34 59.8 +0.1
      comp=Z,8.0nm,0.9s,baz=38,slow=3.6,SNR=6.7
ZALV                               pPcP         08 35 12.9
      comp=Z,6.3nm,0.7s,baz=60,slow=3.6,SNR=7.1
ZALV  Zalesovo Beam     56.29 316 eP     P      08 34 07.4 +4.8
ZALV                               pmax  pmax
      comp=Z,1.0nm,0.4s
SSLB  Suanglung         56.76 267  P     P      08 34 05.6 -0.7
JCT   Junction City     56.80  82  P     P      08 34 04.6 -2.0
      baz=314
XAN   Xi'an             56.95 284  P     P      08 34 07.3 -0.4
XAN                                pP    sP     08 34 17.4 -0.4
XAN                                sP    pwP    08 34 23.6 +4.1
XAN                                pmax  pmax
      comp=Z,31nm,1.0s
XAN   Xi'an             56.95 284  P     P      08 34 07.7  0.0
XAN   Xi'an             56.95 284  P     P      08 34 07.7  0.0
U40A  Yellville         56.97  72  P     P      08 34 05.8 -1.9
      baz=313,SNR=9.0
WHTX  Lake Whitney,     57.19  79  P     P      08 34 08.3 -1.0
      baz=314
W39A  Magazine          57.21  73  P     P      08 34 07.8 -1.6
      baz=313
FVM   French Village    57.29  69  P     P      08 34 08.9 -1.1
FVM                                pmax  pmax
      comp=Z,31nm,0.7s
FVM   French Village    57.29  69  P     P      08 34 08.8 -1.1
FVM                                IAmb  IAmb   08 34 09.6
      comp=Z,31nm,0.7s
SFIN  Lafayette         57.57  65  P     P      08 34 10.6 -1.3
      baz=313,SNR=8.3
SCHQ  Schefferville     57.61  41  P     P      08 34 11.7 -0.3
      comp=Z,8.2nm,0.6s,baz=316,slow=6.8,SNR=17
MIAR  Mount Ida         57.78  74  P     P      08 34 12.6 -0.8
      baz=314,SNR=8.7
435B  Jarrell           57.95  80  P     P      08 34 12.7 -2.0
      baz=315
KEV   Kevo              58.01 352  P     P      08 34 14.3 -0.2
KEV                                pmax  pmax
      comp=Z,33nm,1.1s
KEV   Kevo              58.01 352  P     P      08 34 14.3 -0.2
KEV                                IAmb  IAmb   08 34 25.2
      comp=Z,33nm,1.1s
W41B  Gary Mavity, V    58.14  72  P     P      08 34 14.8 -1.1
      baz=314
AAM   Ann Arbor         58.18  61  P     P      08 34 14.3 -1.8
      baz=313
ARA0  ARCESS Array S    58.35 352 eP     P      08 34 16.6 -0.3
ARCES ARCESS Array B    58.35 352  P     P      08 34 16.4 -0.5
      comp=Z,6.8nm,0.6s,baz=9.4,slow=7.9,SNR=34
ARCES                              PcP   PcP    08 35 07.5 -0.1
      comp=Z,23nm,0.9s,baz=15,slow=5.0,SNR=8.7
ARCES                              pPcP         08 35 20.2
      comp=Z,11nm,0.7s,baz=14,slow=4.7,SNR=4.6
ARCES ARCESS Array B    58.35 352  P     P      08 34 16.2 -0.7
ARCES                              IAmb  IAmb   08 34 18.2
      comp=Z,34nm,1.5s
833A  Chaparral WMA,    58.57  83  P     P      08 34 18.7 -0.4
      baz=316
LZH   Lanzhou           58.57 290 eP     P      08 34 19.7 +0.5
LZH                                pP    pwP    08 34 32.9 +1.8
LZH                                pmax  pmax
      comp=Z,17nm,1.1s
GTA   Gaotai            58.62 295 ⇑P     P      08 34 19.0 -0.4
GTA                                pP    pwP    08 34 31.4  0.0
GTA                                pmax  pmax
      comp=Z,47nm,1.0s
GTA                                pmax  pmax
      comp=Z,340nm,10.4s
GTA                                LR    LR
      comp=Z,1µm,15.5s
GTA                                LR    LR
      comp=Z,2µm,16.7s
GTA                                LR    LR
      comp=Z,3µm,16.3s
JETT  Jettan, Norway    58.70 354 eP     P      08 34 19.4  0.0
TRO   Tromso            58.71 355 eP     P      08 34 19.4  0.0
LVZ   Lovozero          58.96 348  P     P      08 34 20.7 -0.5
LVZ                                pmax  pmax
      comp=Z,79nm,1.5s
LVZ   Lovozero          58.96 348  P     P      08 34 20.7 -0.5
KTK1  Kautokeino        59.05 353 eP     P      08 34 21.7  0.0
P49A  Miami Univ. Ec    59.49  64  P     P      08 34 24.0 -1.3
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      baz=314,SNR=7.3
WCI   Wyandotte Cave    59.50  66  P     P      08 34 24.1 -1.2
      baz=314
ACSO  Alum Creek Sta    59.97  62  P     P      08 34 27.2 -1.3
      baz=314
WVT   Waverly           60.07  69  P     P      08 34 27.6 -1.7
      baz=314
OXF   Oxford            60.27  71  P     P      08 34 30.1 -0.6
      baz=314
ERPA  Erie              60.28  59  P     P      08 34 30.3 -0.3
      baz=314
M53A  WI Miller and     60.38  60  P     P      08 34 31.3 -0.1
      baz=314
LOF   Lofoten           60.44 357 eP     P      08 34 30.4 -0.9
STEI  Steigen           60.58 356 eP     P      08 34 31.9 -0.4
PLAL  Pickwick Lake     60.73  70  P     P      08 34 32.9 -0.9
P52A  Corning           60.85  62  P     P      08 34 33.8 -0.8
      baz=314
M54A  Oil Creek Stat    60.88  59  P     P      08 34 33.9 -0.9
      baz=315
O53A  New Philadelph    60.92  61  P     P      08 34 34.0 -1.1
      baz=315,SNR=8.2
N54A  Moraine State     61.09  60  P     P      08 34 35.8 -0.3
      baz=315,SNR=8.6
FAUS  Fauske            61.12 356 eP     P      08 34 35.8 -0.2
VBMS  Vicksburg         61.23  74  P     P      08 34 36.4 -0.8
      baz=315
LONY  Lake Ozonia       61.31  54  P     P      08 34 36.5 -1.2
      baz=315,SNR=8.7
KURBB Kurchatov Arra    61.37 316  P     P      08 34 37.3 -0.6
WMQ   Urumqi            62.03 306 eP     P      08 34 42.9 +0.3
WMQ                                pP    pwP    08 34 54.8  0.0
WMQ                                PcP   PcP    08 35 22.6 -0.2
WMQ                                pmax  pmax
      comp=Z,47nm,0.7s
WMQ                                pmax  pmax
      comp=Z,280nm,4.7s
WMQ                                LR    LR
      comp=Z,2µm,19.1s
WMQ                                LR    LR
      comp=Z,2µm,17.1s
WMQ                                LR    LR
      comp=Z,2µm,18.1s
WMQ   Urumqi            62.03 306  P     P      08 34 43.1 +0.5
WMQ   Urumqi            62.03 306  P     P      08 34 43.1 +0.5
MCWV  Mont Chateau      62.09  61  P     P      08 34 41.6 -1.3
      baz=315,SNR=9.7
KONS  Konsvik           62.09 357 eP     P      08 34 42.3 -0.2
TZTN  Tazewell          62.23  66  P     P      08 34 41.7 -2.3
      baz=315
CD2   Chengdu           62.25 285⇑iP     P      08 34 44.2  0.0
CD2                                pmax  pmax
      comp=Z,120nm,1.0s
CD2                                pmax  pmax
      comp=Z,470nm,9.4s
BINY  Binghamton        62.33  56  P     P      08 34 44.1 -0.4
      baz=316,SNR=6.7
O56A  Blue Knob Stat    62.34  59  P     P      08 34 44.1 -0.6
      baz=316
SSPA  Standing Stone    62.44  59  P     P      08 34 44.5 -0.8
      baz=316
FPAL  Fort Paine        62.47  68  P     P      08 34 45.0 -0.7
MK31  Makanchi Array    62.50 311c iP    P      08 34 44.4 -1.2
MK31  Makanchi Array    62.50 311  P     P      08 34 45.1 -0.5
MK31                               IAmb  IAmb   08 34 46.4
      comp=Z,12nm,0.9s
MKAR  Makanchi Array    62.50 311  P     P      08 34 44.9 -0.7
      comp=Z,10nm,0.7s,baz=43,slow=6.7,SNR=54
MKAR  Makanchi Array    62.50 311  P     P      08 34 45.1 -0.5
MKAR  Makanchi Array    62.50 311  P     P      08 34 45.1 -0.5
S54A  Dingess, Beckl    62.60  63  P     P      08 34 46.3 -0.2
MAKZ  Makanchi          62.64 312  P     P      08 34 44.9 -1.6
BRVK  Borovoye          62.85 323 i P    P      08 34 47.8  0.0
BRVK                               pmax  pmax
      comp=Z,28nm,0.7s
LBNH  Lisbon            62.91  52  P     P      08 34 48.3  0.0
LBNH                               pmax  pmax
      comp=Z,71nm,1.4s
LBNH  Lisbon            62.91  52  P     P      08 34 48.3  0.0
LBNH  Lisbon            62.91  52  P     P      08 34 47.9 -0.4
      baz=317
H62A  Milan             63.04  52  P     P      08 34 49.1 -0.2
SVE   Sverdlovsk        63.15 330 eP     P      08 34 50.0 +0.3
N59A  State Game Lan    63.36  57  P     P      08 34 50.8 -0.6
      baz=316
PKME  Peaks-Kenny Pk    63.44  50  P     P      08 34 50.6 -1.2
      baz=318
BLA   Blacksburg        63.52  63  P     P      08 34 52.5 -0.1
BLA                                pmax  pmax
      comp=Z,43nm,0.9s
BLA   Blacksburg        63.52  63  P     P      08 34 52.5 -0.1
BLA   Blacksburg        63.52  63  P     P      08 34 52.2 -0.3
      baz=316,SNR=14
GYA   Guiyang           63.69 280 ⇓P     P      08 34 54.0 +0.1
GYA                                pP    pwP    08 35 06.9 -0.2
GYA                                pmax  pmax
      comp=Z,24nm,1.0s
I63A  Otisfield         63.71  52  P     P      08 34 53.9 +0.3
MVL   Millersville      63.72  58  P     P      08 34 53.4 -0.3
L61B  Northampton       63.84  54  P     P      08 34 53.9 -0.6
      baz=317
BRAL  Brewton           64.04  72  P     P      08 34 55.7 -0.3
      baz=316
NSS   Namsos            64.09 357 eP     P      08 34 56.0 +0.2
ARU   Arti              64.12 331c iP    P      08 34 55.7 -0.4
ARU                                *PP   pwP    08 35 08.0 -0.7
ARU                                             08 35 30.2
ARU                                             08 37 16.1
ARU                                S     S      08 43 31.8 +1.1
ARU                                pmax  pmax
      comp=Z,62nm,1.4s
ARU   Arti              64.12 331  P     P      08 34 56.0 -0.1
P60A  Greenville        64.23  58  P     P      08 34 56.0 -1.1
      baz=317
PAL   Palisades         64.26  56  P     P      08 34 57.2 -0.1
      baz=317,SNR=6.2
HRV   Adam Dziewonsk    64.36  53  P     P      08 34 58.6 +0.6
      baz=318
CBN   Corbin Frederi    64.47  60  P     P      08 34 59.2 +0.5
      baz=317
KMSC  Kings Mountain    64.49  65  P     P      08 34 58.7 -0.2
      baz=316,SNR=19
GOGA  Godfrey           64.52  68  P     P      08 34 58.0 -1.1
      baz=316,SNR=9.4
KIRV  Kirov             64.76 337c iP    P      08 35 00.2  0.0
352A  Blakely           65.07  70  P     P      08 35 02.2 -0.5
LMN   Caledonia Moun    65.09  47  P     P      08 35 02.7 +0.1
OTUK  Ortayu            65.80 318  P     P      08 35 06.3 -1.0
TIGA  Tifton            65.88  69  P     P      08 35 06.3 -1.6
      baz=317
MOL   Molde             66.13 360 eP     P      08 35 09.1  0.0
FINES FINESS Array B    66.21 350  P     P      08 35 08.8 -0.8
      comp=Z,7.2nm,0.6s,baz=9.6,slow=7.5,SNR=27
FINES                              PcP   PcP    08 35 39.5  0.0
      comp=Z,18nm,0.9s,baz=27,slow=5.1,SNR=6.5
FINES                              pPcP         08 35 52.0
      comp=Z,4.7nm,0.6s,baz=86,slow=3.2,SNR=5.5
CNNC  Cliffs of the     66.35  63  P     P      08 35 11.2 +0.3
      baz=317
NHSC  New Hope          66.63  66  P     P      08 35 12.8 +0.1
      baz=317,SNR=5.3
DOMB  Dombas            66.65 359 eP     P      08 35 11.4 -1.1
KMI   Kunming           67.07 282 ⇑P     P      08 35 15.9  0.0
KMI                                pP    pP     08 35 22.8 -0.5
KMI                                sP    pwP    08 35 28.3 -0.8
KMI                                pmax  pmax
      comp=Z,23nm,0.8s
NB201 NORSAR Array S    67.60 358  P     P      08 35 18.3 -0.2
NB2   NORSAR Subarra    67.61 358  P     P      08 35 18.3 -0.3
      comp=Z,1.9nm,0.4s,baz=4.5,slow=6.9
NB2   NORSAR Subarra    67.61 358  P     P      08 35 18.3 -0.3
      baz=4.5,slow=6.9
NOA   NORSAR Array B    67.61 358  P     P      08 35 17.9 -0.7
      comp=Z,3.6nm,0.6s,baz=2.7,slow=7.4,SNR=16
NC602 NORSAR Array S    67.91 357 eP     P      08 35 20.4  0.0
SKAR  Skarslia          68.02 359 eP     P      08 35 21.1 -0.1
TKM2  Tokmak 2          68.54 313  P     P      08 35 25.6 +0.7
      SNR=5.8
TKM2  Tokmak 2          68.54 313  P     P      08 35 24.0 -0.9
USP   Ospenovka         68.77 313  P     P      08 35 26.7 +0.6
      SNR=23
CHMS  Chumysh           68.86 313  P     P      08 35 27.3 +0.6
      SNR=9.6
KONO  Kongsberg         69.04 358 eP     P      08 35 25.4 -2.1
KONO                               pmax  pmax
      comp=Z,14nm,1.1s
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KONO	Kongsberg	69.04	358	eP	P	08 35 27.4	-0.1
KBK	Karagaybulak	69.04	313	P	P	08 35 28.7	+0.6
	SNR=16						
VSU	Vasula	69.05	349	eP	P	08 35 27.3	-0.2
VSU	Vasula	69.05	349	⇑iP	P	08 35 26.7	-0.8
VSU				pmax	pmax		
	comp=Z,138nm,0.7s						
AAK	Ala-Archa	69.27	313	P	P	08 35 29.9	+0.5
	SNR=27						
AAK	Ala-Archa	69.27	313	c iP	P	08 35 29.9	+0.5
AAK				pmax	pmax		
	comp=Z,203nm,0.9s						
AAK	Ala-Archa	69.27	313	P	P	08 35 29.8	+0.4
AKTO	Aktyubinsk	69.38	328	P	P	08 35 29.4	-0.3
EKS2	Erkin-Say	69.57	314	P	P	08 35 31.9	+0.7
	SNR=17						
DWPF	Disney Wildern	69.60	70	P	P	08 35 30.9	-0.5
	baz=318						
AB31	Akbulak array	69.72	326	i P	P	08 35 31.5	-0.4
ABKAR	Akbulak array	69.72	326	P	P	08 35 31.9	0.0
ABKAR	Akbulak array	69.72	326	P	P	08 35 32.1	+0.2
MOS	Moscow	69.96	342	eP	P	08 35 31.0	-2.2
MOS				pmax	pmax		
	comp=Z,38nm,0.6s						
AML	Almayashu	70.03	313	P	P	08 35 35.3	+0.9
	SNR=19						
SLIT	Slitere, Latvi	70.34	351	eP	P	08 35 35.8	+0.3
LSA	Lhasa	70.54	293	P	P	08 35 39.3	+1.5
LSA	Lhasa	70.54	293	P	P	08 35 39.6	+1.8
LSA				pmax	pmax		
	comp=Z,125nm,0.8s						
LSA	Lhasa	70.54	293	P	P	08 35 39.5	+1.8
KK31	Karatay Array	70.67	316	P	P	08 35 37.4	-0.4
KK31				pmax	pmax		
	comp=Z,23nm,0.8s						
KK31	Karatay Array	70.67	316	P	P	08 35 37.4	-0.4
KK31				IAmb	IAmb	08 35 38.6	
	comp=Z,23nm,0.8s						
KKAR	Karatay Array	70.67	316	P	P	08 35 37.7	-0.1
KKAR	Karatay Array	70.67	316	P	P	08 35 37.7	-0.1
KSH	Kashi	71.03	310	P	P	08 35 43.5	+3.3
KSH				pP	pwP	08 35 56.1	+3.6
KSH				pmax	pmax		
	comp=Z,130nm,1.2s						
ISAL	Salakas	71.94	349	eP	P	08 35 45.2	0.0
PABE	Paberze	72.26	350	eP	P	08 35 47.1	0.0
PABE	Paberze	72.26	350	P	P	08 35 46.9	-0.2
NACGM	Naroch	72.51	348	i P	P	08 35 46.0	-2.7
MNK	Minsk	72.76	347	i P	P	08 35 50.1	0.0
MNK				i		08 36 07.8	
MNK				i		08 38 32.3	
MNK				i PPP	PPP	08 40 12.9	
MNK				i S	S	08 45 12.2	-1.3
MNK				i SS	SS	08 49 47.9	-4.2
MNK				pmax	pmax		
	comp=E,2.0nm,1.0s						
MNK				pmax	pmax		
	comp=Z,47nm,0.8s						
MNK				pmax	pmax		
	comp=N,22nm,0.7s						
MNK	Minsk	72.76	347	i P	P	08 35 50.1	0.0
	comp=E,2.0nm,1.0s						
MNK				i P	P	08 35 50.1	0.0
	comp=N,22nm,0.7s						
MNK				i P	P	08 35 50.1	0.0
	comp=Z,47nm,0.8s,baz=193						
MNK				i PcP	PcP	08 36 07.8	+0.5
MNK				i PP	PP	08 38 32.3	+0.9
MNK				i PPP	PPP	08 40 12.9	
MNK				i S	S	08 45 12.3	-1.2
MNK				i SS	SS	08 49 47.9	-4.2
SUW	Suwalki	73.82	350	eP	P	08 35 55.5	-0.8
SUW	Suwalki	73.82	350	eP	P	08 35 55.7	-0.7
RGN	Rugen	74.04	356	eP	P	08 35 57.6	0.0
RGN	Rugen	74.04	356	eP	P	08 35 58.5	+0.8
	comp=Z,29nm,0.7s,baz=3.5,slow=5.5						
GAR	Garm	74.07	313	P	P	08 35 58.6	+0.2
TAPN	Taplejung	74.29	294	eP	P	08 36 00.5	+0.5
	comp=Z,243nm,0.9s						
CMAR	Chiang Mai Arr	74.38	280	P	P	08 36 00.1	-0.2
	comp=Z,10nm,0.8s,baz=26,slow=6.9,SNR=26						
HLG	Helgoland	74.54	359	eP	P	08 36 01.4	+0.8
	baz=3.5,slow=5.5						
BSEG	Bad Segeberg	74.75	358	eP	P	08 36 02.4	+0.6
	comp=Z,17nm,0.9s,baz=3.5,slow=5.5						
ODAN	Odare	74.84	294	eP	P	08 36 03.3	+0.2
	comp=Z,58nm,0.7s						
CHGR	Chuyangaron	74.87	314	P	P	08 36 03.1	+0.1
GUN	Gumba	74.89	296	eP	P	08 36 03.9	+0.4
	comp=Z,331nm,0.8s						
JIRN	Jiri	74.91	295	eP	P	08 36 04.2	+0.5
	comp=Z,365nm,0.8s						
RAMN	Ramite	75.22	295	eP	P	08 36 05.6	+0.3
	comp=Z,149nm,0.7s						
KKN	Kakani	75.32	296	eP	P	08 36 06.2	+0.4
	comp=Z,119nm,0.8s						
PKI	Pulchoki	75.42	296	eP	P	08 36 06.6	+0.1
	comp=Z,223nm,1.0s						
PKIN	Phulchoki	75.42	296	eP	P	08 36 06.4	-0.1
	comp=Z,190nm,1.1s						
GKN	Gorkha	75.51	297	eP	P	08 36 06.9	0.0
	comp=Z,241nm,0.9s						
DMN	Daman	75.56	296	eP	P	08 36 07.6	+0.4
	comp=Z,176nm,0.9s						
BBSR	BB Station	75.61	56	P	P	08 36 07.2	+0.1
BBSR				IAmb	IAmb	08 36 07.8	
	comp=Z,23nm,0.9s						
DANN	Dangsing	75.73	298	eP	P	08 36 08.5	+0.2
	comp=Z,438nm,0.9s						
RUE	Ruedersdorf	76.08	356	eP	P	08 36 09.9	+0.5
RUE	Ruedersdorf	76.08	356	eP	P	08 36 09.7	+0.3
	baz=3.5,slow=5.5						
NRDL	Niedersach Rie	76.20	358	eP	P	08 36 10.3	+0.3
	comp=Z,9.7nm,0.7s,baz=3.5,slow=5.5						
AKASG	Malin Array Be	76.26	345	P	P	08 36 09.4	-1.0
	comp=Z,18nm,0.4s,baz=17,slow=6.1,SNR=67						
AKASG	Malin Array Be	76.26	345	P	P	08 36 09.5	-1.0
AKASG				pmax	pmax		
	comp=Z,24nm,0.6s						
AKASG	Malin Array Be	76.26	345	P	P	08 36 09.5	-1.0
AKASG				IAmb	IAmb	08 36 10.2	
	comp=Z,24nm,0.6s						
AKBB	Malin Array Si	76.26	345	c iP	P	08 36 09.2	-1.3
AKBB				pmax	pmax		
	comp=Z,23nm,0.6s						
AKBB	Malin Array Si	76.26	345	P	P	08 36 09.7	-0.8
KOLN	Koldanda	76.27	297	eP	P	08 36 11.2	0.0
	comp=Z,209nm,1.0s						
FLTG	Flechtingen	76.33	357	eP	P	08 36 10.9	0.0
	comp=Z,22nm,0.7s,baz=3.5,slow=5.5						
PYUN	Piuthan	76.35	298	eP	P	08 36 11.8	+0.1
	comp=Z,351nm,1.0s						
IBBN	Ibbenburen	76.42	359	eP	P	08 36 12.2	+0.8
	comp=Z,22nm,0.7s,baz=3.5,slow=5.5						
ASSE	Asse, Remlinge	76.55	357	eP	P	08 36 12.3	+0.3
	baz=3.5,slow=5.5						
CLZ	Clausthal	76.84	358	eP	P	08 36 14.1	+0.2
	comp=Z,22nm,0.7s,baz=3.5,slow=5.5						
GTTG	Gottingen	77.15	358	eP	P	08 36 15.7	+0.2
	comp=Z,16nm,0.8s,baz=3.5,slow=5.5						
CLL	Collm	77.29	356	i P	P	08 36 16.0	-0.3
CLL				e*SP	pwP	08 36 29.0	+0.1
CLL	Collm	77.29	356	i P	P	08 36 16.0	-0.3
CLL				ePcP	pwP	08 36 29.0	+0.1
CLL	Collm	77.29	356	eP	P	08 36 16.3	0.0
	comp=Z,15nm,0.7s,baz=3.5,slow=5.5						
NEUB	Neuenburg	77.44	357	eP	P	08 36 17.3	+0.2
	comp=Z,27nm,0.9s,baz=3.5,slow=5.5						
KSP	Ksiaz	77.57	354	eP	P	08 36 17.9	-0.1
FBE	Freiberg	77.66	356	eP	P	08 36 18.7	+0.3
	baz=3.5,slow=5.5						
BRG	Berggiesshubel	77.68	355	eP	P	08 36 18.5	0.0
	comp=Z,19nm,0.7s,baz=3.5,slow=5.5						
BRG	Berggiesshubel	77.68	355	i P	P	08 36 18.8	+0.3
BRG				Amp		08 36 20.1	
	comp=Z,28nm,0.8s						
BRG	Berggiesshubel	77.68	355	P	P	08 36 25.6	+7.1
BRG				Amp		08 36 26.4	
	comp=Z,12nm,0.9s						
BRG	Berggiesshubel	77.68	355	P	P	08 36 31.1	+13
BRG				Amp		08 36 31.9	
	comp=Z,11nm,0.7s						
CHVC	Chvalec	77.84	354	eP	P	08 36 19.7	+0.2
LVV	L'vov	77.84	349	eP	P	08 36 18.3	-1.2
OSTC	Ostas	77.86	354	eP	P	08 36 19.8	+0.2
UBBA	Unterbreizbach	77.88	358	eP	P	08 36 19.6	+0.2
	baz=3.5,slow=5.5						
OJC	Ojcow	77.91	351	eP	P	08 36 20.0	+0.2
UPC	Upice	77.92	354	eP	P	08 36 20.2	+0.3
UPC	Upice	77.92	354	eP	P	08 36 20.2	+0.3
PVCC	Panska Ves	77.99	355	eP	P	08 36 20.4	+0.2
PVCC	Panska Ves	77.99	355	eP	P	08 36 20.4	+0.2
MOX	Moxa	78.00	357	eP	P	08 36 20.4	0.0
	comp=Z,14nm,0.7s,baz=3.5,slow=5.5						
DPC	Dobruska-Polom	78.06	354	eP	P	08 36 21.1	+0.4
DPC	Dobruska-Polom	78.06	354	eP	P	08 36 21.1	+0.4
MEM	Membach	78.12	0	dP	P	08 36 21.1	+0.1
	comp=Z,13nm,1.0s						
BTNL	Ternell	78.15	0	dP	P	08 36 20.9	-0.2
	comp=Z,12nm,1.1s						
WERD	Werda	78.18	356	eP	P	08 36 21.3	0.0
	comp=Z,7.4nm,0.8s,baz=3.5,slow=5.5						
KWP	Kalwaria Pacla	78.19	349	eP	P	08 36 21.7	+0.3
AHRW	Bad Neuenahr-A	78.19	360	eP	P	08 36 21.8	+0.4
	comp=Z,10nm,0.8s,baz=3.5,slow=5.5						
TANN	Tannenbergstha	78.20	356	eP	P	08 36 21.7	+0.2
	comp=Z,5.7nm,0.8s,baz=3.5,slow=5.5						
GUNZ	Gunzen	78.26	356	eP	P	08 36 22.1	+0.3
	comp=Z,12nm,1.0s,baz=3.5,slow=5.5						
KRLC	Kraliky	78.30	353	eP	P	08 36 22.3	+0.3
KRLC	Kraliky	78.30	353	eP	P	08 36 22.3	+0.3
KBL	Kabul	78.31	312	P	P	08 36 21.9	-0.7
KBL				pmax	pmax		
	comp=Z,60nm,0.8s						
KBL	Kabul	78.31	312	P	P	08 36 21.9	-0.7
BCLA	Clavier	78.31	1	dP	P	08 36 21.9	-0.1
	comp=Z,8.3nm,1.0s						
WERN	Wernitzgruen	78.33	356	eP	P	08 36 22.2	0.0
	comp=Z,22nm,0.9s,baz=3.5,slow=5.5						
NKC	Novy Kostel	78.39	356	eP	P	08 36 23.0	+0.5
NKC	Novy Kostel	78.39	356	eP	P	08 36 23.0	+0.5
BMRD	Maredsous	78.42	1	dP	P	08 36 22.8	+0.2
TNS	Taunus Mts	78.50	359	eP	P	08 36 23.4	+0.2
	comp=Z,16nm,0.8s,baz=3.5,slow=5.5						
PRU	Pruhonice	78.53	355	eP	P	08 36 23.3	+0.1
PRU	Pruhonice	78.53	355	eP	P	08 36 23.3	+0.1
MORC	Moravsky Berou	78.54	353	⇑P	P	08 36 23.5	+0.1
MORC	Moravsky Berou	78.54	353	eP	P	08 36 23.2	-0.2
STHS	Stebnicka Huta	78.56	350	eP	P	08 36 23.4	-0.1
STHS				pmax	pmax		
	comp=Z,8.0nm,1.0s						
STHS	Stebnicka Huta	78.56	350	eP	P	08 36 23.4	-0.1
DOU	Dourbes	78.62	1	dP	P	08 36 23.8	0.0
	comp=Z,13nm,0.9s						
MANZ	Manzenberg	78.64	356	eP	P	08 36 24.0	+0.1
	comp=Z,2.4nm,0.8s,baz=3.5,slow=5.5						
NIE	Niedzica	78.65	351	eP	P	08 36 25.1	+1.1
GOF	Gofitskoye	78.70	335	⇑eP	P	08 36 24.7	+0.4
GOF				pmax	pmax		
	comp=Z,202nm,1.1s						
ROTZ	Rotzenmuhle	78.86	356	eP	P	08 36 25.4	+0.3
	comp=Z,2.8nm,0.7s,baz=3.5,slow=5.5						
SORM	Soroca	78.89	345	⇑P	P	08 36 24.6	-0.6
KOLS	Kolonicke sedl	78.92	350	eP	P	08 36 25.4	-0.1
KOLS				pmax	pmax		
	comp=Z,11nm,0.9s						
KOLS	Kolonicke sedl	78.92	350	eP	P	08 36 25.4	-0.1
GRF	Grafenberg Arr	78.97	357	eP	P	08 36 26.2	+0.4
	comp=Z,53nm,0.7s,baz=3.5,slow=5.5						
LANS	Liptovska Anna	79.00	351	eP	P	08 36 27.0	+1.1
LANS				pmax	pmax		
	comp=Z,20nm,0.6s						
LANS	Liptovska Anna	79.00	351	eP	P	08 36 27.0	+1.1
CRVS	Cervenica-Dubn	79.04	350	eP	P	08 36 26.3	+0.2
CRVS				pmax	pmax		
	comp=Z,18nm,0.7s						
CRVS	Cervenica-Dubn	79.04	350	eP	P	08 36 26.3	+0.2
WLF	Walferdange	79.07	0	eP	P	08 36 27.1	+0.9
	comp=Z,7.6nm,0.8s,baz=3.5,slow=5.5						
VRAC	Vranov	79.08	353	⇓P	P	08 36 26.7	+0.4
VRAC	Vranov	79.08	353	eP	P	08 36 26.5	+0.2
TREC	Trest	79.16	354	eP	P	08 36 26.8	0.0
TREC	Trest	79.16	354	eP	P	08 36 26.8	0.0
UZH	Uzhgorod	79.22	350	c iP	P	08 36 24.7	-2.3
UZH				e		08 36 27.8	
UZH				i		08 36 42.6	
KRUC	Moravsky	79.33	354	eP	P	08 36 27.6	-0.1
KHC	Kasperske Hory	79.43	355	eP	P	08 36 28.9	+0.6
KHC				e		08 36 40.5	
KHC	Kasperske Hory	79.43	355	eP	P	08 36 28.9	+0.6
KHC				epP	pwP	08 36 40.5	-0.4
JAVC	Velka Javorina	79.44	353	eP	P	08 36 29.4	+1.1
WET	Wettzell	79.45	356	eP	P	08 36 28.5	+0.2
	comp=Z,5.9nm,0.7s,baz=3.5,slow=5.5						
IZAB	Izabela	79.55	351	eP	P	08 36 29.2	+0.3
IZAB				pmax	pmax		
	comp=Z,109nm,0.8s						
TRPA	Tarpa	79.69	349	eP	P	08 36 29.6	0.0
VYHS	Vyhne	79.70	352	eP	P	08 36 29.2	-0.5
VYHS				pmax	pmax		
	comp=Z,11nm,0.8s						
VYHS	Vyhne	79.70	352	eP	P	08 36 29.2	-0.5
CKRC	Cesky Krumlov	79.71	355	eP	P	08 36 29.7	0.0
CTAO	Charters Tower	79.71	218	P	P	08 36 28.7	-1.2
CTAO				pmax	pmax		
	comp=Z,13nm,1.0s						
CTAO	Charters Tower	79.71	218	P	P	08 36 28.7	-1.2
CTAO				IAmb	IAmb	08 36 29.6	
	comp=Z,13nm,1.0s						
GEC2	GERESS Array S	79.71	355	P	P	08 36 29.9	0.0
GEC2				IAmb	IAmb	08 36 30.8	
	comp=Z,16nm,0.8s						
GEC2	GERESS Array S	79.71	355	eP	P	08 36 29.8	0.0
	comp=Z,12nm,0.7s,baz=3.5,slow=5.5						
GERES	GERESS Array B	79.71	355	P	P	08 36 29.9	0.0
	comp=Z,11nm,0.6s,baz=25,slow=4.9,SNR=48						
SMOL	Smolenice	79.80	353	eP	P	08 36 29.0	-1.2
SMOL	Smolenice	79.80	353	eP	P	08 36 29.0	-1.2
KIV	Kislovodsk	79.82	334	⇓P	P	08 36 30.8	+0.3
KIV	Kislovodsk	79.82	334	eP	P	08 36 30.8	+0.3
KIV				pmax	pmax		
	comp=Z,46nm,1.0s						
BUR08	Bucovina Ar. S	79.83	347	P	P	08 36 30.5	0.0
BUR08				IAmb	IAmb	08 36 31.2	
	comp=Z,18nm,0.7s						
BURAR	Bucovina Array	79.86	347	⇑P	P	08 36 30.3	-0.4
BURAR	Bucovina Array	79.86	347	P	P	08 36 30.5	-0.1
STU	Stuttgart	79.94	358	eP	P	08 36 31.4	+0.4
	comp=Z,47nm,0.8s,baz=3.5,slow=5.5						
MODS	Modra-Piesok	79.95	353	eP	P	08 36 30.4	-0.7
MODS				pmax	pmax		
	comp=Z,21nm,0.9s						
MODS	Modra-Piesok	79.95	353	eP	P	08 36 30.4	-0.7
KBZ	Khabaz	79.97	334	P	P	08 36 31.9	+0.8
	comp=Z,27nm,0.9s,baz=102,slow=1.9,SNR=32						
KBZ	Khabaz	79.97	334	P	P	08 36 32.0	+0.8
MILM	Milestii Mici	80.00	345	⇑P	P	08 36 30.5	-0.8
GEYT	Alibeck	80.13	321	P	P	08 36 33.0	+0.7
	comp=Z,26nm,1.0s,baz=349,slow=2.3,SNR=18						
ZST	Bratislava	80.14	353	eP	P	08 36 32.6	+0.5
ZST				pmax	pmax		
	comp=Z,57nm,0.7s						
ZST	Bratislava	80.14	353	eP	P	08 36 32.6	+0.5
PSZ	Piszkesteto	80.18	351	⇑P	P	08 36 32.5	+0.2
PSZ	Piszkesteto	80.18	351	eP	P	08 36 31.9	-0.4
ANN	Anapa	80.33	338	eP	P	08 36 32.1	-1.0
ANN				pmax	pmax		
	comp=Z,39nm,1.1s						
BFO	Black Forest	80.40	359	eP	P	08 36 33.9	+0.4
	comp=Z,12nm,0.8s,baz=3.5,slow=5.5						
VASR	Vaslui	80.43	345	⇑P	P	08 36 33.6	0.0
ARCR	ARCALIA	80.49	348	⇑P	P	08 36 34.7	+0.7
FUR	Furstenfeldbru	80.50	357	eP	P	08 36 34.4	+0.4
	comp=Z,24nm,0.6s,baz=3.5,slow=5.5						
CONA	Conrad Observa	80.50	354	i P	P	08 36 34.7	+0.6
	comp=Z,22nm,0.7s,SNR=14						
ZEI	Tsey	80.56	333	eP	P	08 36 33.9	-0.8
ZEI				pmax	pmax		
	comp=Z,12nm,0.6s						
SOP	Sopron	80.69	353	eP	P	08 36 35.5	+0.4
TESR	Tescani	80.73	346	⇑P	P	08 36 34.9	-0.4
RJOB	Jochberg	80.86	356	eP	P	08 36 36.4	+0.4
	comp=Z,14nm,0.8s,baz=3.5,slow=5.5						
CJR	Cluj-Napoca	80.95	348	⇑P	P	08 36 36.6	+0.1
DRGR		80.98	349	⇑P	P	08 36 35.9	-0.8
UBR	Ueberruh	81.01	358	eP	P	08 36 37.4	+0.5
	comp=Z,29nm,1.3s,baz=3.5,slow=5.5						
MPLH	Magyarpolny	81.13	353	eP	P	08 36 37.5	+0.1
VLDR	Vladesti	81.16	345	⇓P	P	08 36 38.0	+0.5
RETA	Reutte	81.19	357	eP	P	08 36 38.1	+0.3
	comp=Z,10nm,0.7s						
ARSA	Arzberg	81.20	354	i P	P	08 36 38.4	+0.6
	comp=Z,14nm,0.6s,SNR=6.8						
WATA	Walderalm	81.31	357	i P	P	08 36 38.8	+0.2
	comp=Z,12nm,0.6s,SNR=6.4						
MOTA	Moosalm	81.32	357	i P	P	08 36 38.8	+0.2
	comp=Z,29nm,1.1s,SNR=7.4						
SCTR	Scanteiesti	81.34	345	⇑P	P	08 36 38.9	+0.4
VRI	Vrincioaia	81.35	346	⇑P	P	08 36 38.9	+0.3
PLOR	Plostina	81.38	346	⇑P	P	08 36 39.6	+0.8
WTTA	Wattenberg	81.38	357	i P	P	08 36 39.6	+0.6
	comp=Z,19nm,0.6s,SNR=7.3						
ODBI	Odobesti	81.40	346	⇑P	P	08 36 40.0	+1.1
DAVA	Damuels	81.41	358	eP	P	08 36 39.5	+0.4
	comp=Z,14nm,0.8s						
SQTA	Sankt Quirin	81.44	357	i P	P	08 36 39.8	+0.5
	comp=Z,21nm,0.7s,SNR=5.6						
DOPR	Dopca	81.45	347	⇑P	P	08 36 39.8	+0.7
COVR	Voineasa-Covas	81.45	346	⇑P	P	08 36 40.0	+0.8
KBA	Koelnbreinsper	81.49	355	i P	P	08 36 40.3	+0.8
	comp=Z,23nm,0.6s,SNR=22						
IZVR	Izvoarele	81.50	345	⇑P	P	08 36 38.4	-1.0
SIRR	Siria	81.62	350	⇑P	P	08 36 39.6	-0.4
FETA	Feichten	81.66	357	i P	P	08 36 40.7	+0.3
	comp=Z,20nm,0.8s,SNR=12						
BISRR	Bisoca	81.66	346	⇑P	P	08 36 39.3	-1.1
TLCR		81.68	344	⇑P	P	08 36 41.2	+0.9
SOKA	Soboth	81.80	354	i P	P	08 36 41.3	+0.3
	comp=Z,24nm,0.8s,SNR=15						
CFR	Carcaliu	81.80	345	⇑P	P	08 36 40.7	-0.3
MLR	Muntele Rosu	81.83	346	⇓P	P	08 36 42.1	+0.8
ABTA	Abfaltersbach	81.86	356	i P	P	08 36 41.4	0.0
	comp=Z,15nm,0.9s,SNR=6.4						
MYKA	Terra Mystica	81.93	355	eP	P	08 36 42.4	+0.7
	comp=Z,8.6nm,0.9s						
AKH	Akhalkalaki	81.95	333	⇑P	P	08 36 41.6	-0.5
OBKA	Obir	82.00	355	i P	P	08 36 42.6	+0.5
	comp=Z,14nm,0.5s,SNR=5.9						
VOIR		82.01	347	⇑P	P	08 36 42.3	+0.1
ISR	Istrita	82.11	346	⇑P	P	08 36 43.3	+0.6
ARR	Arges	82.14	347	⇓P	P	08 36 43.4	+0.5
LOT	Lotru	82.17	348	⇓P	P	08 36 42.6	-0.5
MTUR	Matau	82.22	347	⇓P	P	08 36 44.3	+1.1
SECR		82.26	346	⇓P	P	08 36 43.8	+0.4
BZS	Buzias	82.27	349	⇑P	P	08 36 42.7	-0.7
HARR	Harsova	82.31	345	⇑P	P	08 36 43.6	0.0
GZR	Gura Zlata	82.35	349	⇑P	P	08 36 43.8	-0.2
SENIN	Lac Senin/Sane	82.37	360	P	P	08 36 44.2	0.0
SENIN				IAmb	IAmb	08 36 50.2	
	comp=Z,19nm,1.4s						
TLBR	Topalu	82.43	345	⇓P	P	08 36 44.9	+0.6
TIRR	Tirgusor	82.45	344	⇑P	P	08 36 44.9	+0.5
TIRR	Tirgusor	82.45	344	P	P	08 36 44.7	+0.3
TIRR				pmax	pmax		
	comp=Z,184nm,0.6s						
TIRR	Tirgusor	82.45	344	P	P	08 36 44.7	+0.3
CRES	Cresnjev	82.62	354	eP	P	08 36 44.5	-0.8
MFTR	Murfatlar	82.72	344	⇓P	P	08 36 44.8	-1.0
CEY	Cerknica	82.77	355	eP	P	08 36 45.2	-0.9
HERR	Herculane	82.90	349	⇑P	P	08 36 46.2	-0.5
FRGS	Fruska Gora	82.92	351	⇑P	P	08 36 45.2	-1.6
FRGS	Fruska Gora	82.92	351	⇑iP	P	08 36 46.1	-0.7
SGRR	Singureni	83.07	346	⇑P	P	08 36 47.5	-0.1
MDVR	Moldovita	83.08	349	⇑P	P	08 36 46.3	-1.4
TEOL	Teolo	83.28	356	P	P	08 36 48.5	-0.2
MRAK	Mrakovica	83.32	353	⇑iP	P	08 36 48.4	-0.6
BLY	Banja Luka	83.56	353	eP	P	08 36 47.4	-2.7
BNI	Bardonecchia	83.69	0	P	P	08 36 52.7	+1.7
BNI				pmax	pmax		
	comp=Z,18nm,0.7s						
BNI	Bardonecchia	83.69	0	P	P	08 36 52.7	+1.7
BNI				IAmb	IAmb	08 36 53.4	
	comp=Z,18nm,0.7s						
DIKM	Dikmen	83.82	339	⇑P	P	08 36 52.1	+0.6
DIVS	Divibare	83.95	350	P	P	08 36 52.0	-0.2
DIVS				IAmb	IAmb	08 36 52.8	
	comp=Z,13nm,0.8s						
DIVS	Divibare	83.95	350	⇑iP	P	08 36 51.5	-0.7
HAPS	Han Pijesak,BI	84.06	351	⇑iP	P	08 36 52.9	0.0
BOVS	Bovan	84.22	349	⇑P	P	08 36 52.1	-1.4
BBLS	Lazići	84.24	351	⇑iP	P	08 36 53.8	+0.1
WR0	Warramunga Arr	84.59	228	P	P	08 36 53.7	-1.9
WR0				IAmb	IAmb	08 37 20.0	
	comp=Z,6.8nm,0.8s						
WRA	Warramunga Arr	84.67	228	P	P	08 36 54.2	-1.8
	comp=Z,8.4nm,0.9s,baz=33,slow=6.1,SNR=23						
WRA	Warramunga Arr	84.67	228	eP	P	08 37 00.1	+4.1
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
UPM	Unac-Piva	84.94	351	eP	P	08 36 56.5	-0.9
VTS	Vitosha	85.03	348	⇑P	P	08 36 57.5	-0.3
EDRB	Edirne	85.27	345	P	P	08 36 59.9	+1.1
BRY	Bratogost	85.28	351	⇑iP	P	08 36 58.2	-0.8
STON	Ston	85.38	352	eP	P	08 36 56.6	-2.7
PDG	Podgorica	85.67	351	⇑P	P	08 37 00.4	-0.4
PDG	Podgorica	85.67	351	⇑iP	P	08 37 00.2	-0.6
SKO	Skopje	85.89	349	i P	P	08 37 02.7	+0.8
DRME	Dracevica, Mon	85.92	351	⇑iP	P	08 37 01.7	-0.4
BRTR	Keskin Array B	86.02	339	P	P	08 37 03.0	+0.2
	comp=Z,17nm,0.8s,baz=49,slow=2.7,SNR=37						
BRTR	Keskin Array B	86.02	339	P	P	08 37 03.5	+0.7
BRTR	Keskin Array B	86.02	339	P	P	08 37 03.5	+0.7
STIP	Stip	86.07	348	i P	P	08 37 02.5	-0.3
RDO	Rodhopi	86.14	346	P	P	08 37 04.2	+1.0
NVR	Nevrokopi	86.19	347	P	P	08 37 04.0	+0.5
PHP	Peshkopia	86.29	350	P	P	08 37 03.6	-0.4
ALN	Alexandroupoli	86.31	345	P	P	08 37 04.1	+0.1
VAY	Valandovo	86.39	348	i P	P	08 37 05.0	+0.6
KAVA	Kavala	86.44	347	P	P	08 37 05.3	+0.6
SRS	Serrai	86.45	347	P	P	08 37 04.3	-0.4
TIR	Tirane	86.68	350	⇑P	P	08 37 06.6	+0.7
GRG	Griva	86.77	348	P	P	08 37 06.5	+0.2
OHR	Ohrid	86.81	349	i P	P	08 37 06.6	+0.1
HORT	Hortiatis	87.03	348	P	P	08 37 07.2	-0.5
FNA	Florina	87.07	349	P	P	08 37 07.4	-0.4
FNA	Florina	87.07	349	P	P	08 37 07.3	-0.5
FNA				pmax	pmax		
	comp=Z,57nm,0.7s						
FNA	Florina	87.07	349	P	P	08 37 07.3	-0.5
OUR	Ouranopolis	87.17	347	P	P	08 37 08.3	+0.1
HYB	Hyderabad	87.28	295	i P	P	08 37 08.0	-1.2
KTI	Kastanea	87.36	348	P	P	08 37 09.7	+0.4
FITZ	Fitzroy Crossi	87.40	236	P	P	08 37 08.7	-0.8
	comp=Z,16nm,0.9s,baz=92,slow=1.9,SNR=15						
FITZ	Fitzroy Crossi	87.40	236	P	P	08 37 08.8	-0.6
FITZ				IAmb	IAmb	08 37 09.8	
	comp=Z,20nm,1.0s						
KZN	Kozani	87.49	349	P	P	08 37 09.8	-0.1
LSK	Leskovik	87.78	349	P	P	08 37 11.8	+0.5
KPRO	Kipourio	87.89	349	P	P	08 37 11.7	-0.1
AS31	Alice Springs	88.09	227	P	P	08 37 12.1	-0.6
AS31				IAmb	IAmb	08 37 13.1	
	comp=Z,5.4nm,0.9s						
ASAR	Alice Springs	88.09	227	P	P	08 37 12.1	-0.7
	comp=Z,16nm,0.8s,baz=32,slow=4.8,SNR=70						
ASAR				pP	pwP	08 37 24.6	-1.2
	comp=Z,6.8nm,0.7s,baz=27,slow=4.7,SNR=7.8						
ASAR	Alice Springs	88.09	227	P	P	08 37 11.8	-0.9
KULA	Kula-Manisa	88.19	343	P	P	08 37 12.9	-0.3
JAN	Janina	88.24	349	P	P	08 37 13.9	+0.5
KEK	Kerkira	88.31	350	P	P	08 37 12.5	-1.2
IGT	Igoumenitsa	88.42	349	P	P	08 37 13.4	-0.8
ESDC	Sonseca Array	88.58	8	P	P	08 37 13.6	-1.5
	comp=Z,4.9nm,0.9s,baz=347,slow=3.9,SNR=11						
ESDC				pP	pwP	08 37 27.3	-0.4
	comp=Z,5.3nm,0.7s,baz=341,slow=4.2,SNR=10						
EVR	Evrytania	88.86	348	P	P	08 37 16.5	+0.1
EFP	Efpalio	89.33	348	P	P	08 37 18.2	-0.3
KARY	Karystos	89.36	346	P	P	08 37 17.9	-0.8
LAKA	Lakka	89.50	348	P	P	08 37 18.3	-1.1
DRO	Drossia	89.82	348	P	P	08 37 21.1	+0.3
ITM	Ithomi	90.55	348	P	P	08 37 23.9	-0.4
ITM	Ithomi	90.55	348	P	P	08 37 23.7	-0.5
SDV	Santo Domingo	90.86	75	eP	P	08 37 30.4	+4.2
STKA	Stephens Creek	92.11	217	P	P	08 37 30.8	-0.4
	comp=Z,12nm,0.9s,baz=6.8,slow=4.7,SNR=16						
STKA	Stephens Creek	92.11	217	P	P	08 37 30.4	-0.8
OTAV	Otavalo	92.83	86	eP	P	08 37 38.4	+2.7
TORD	Torodi Ar. Bea	115.34	5	PKP	PKiKP	08 43 02.9	-1.1
	comp=Z,0.6nm,0.6s,baz=357,slow=2.0,SNR=4.3						
TORD				pPKP	PKPdf	08 43 16.6	+13
	comp=Z,0.9nm,0.5s,baz=336,slow=1.8,SNR=4.1						

TORD				PKKPbc	PKKPbc	08 53 39.9	+3.7
	comp=Z,0.8nm,0.5s,baz=181,slow=3.2,SNR=4.4						
ARAG	Araguaiana, MT	121.59	75	*e*P	PKiKP	08 43 19.6	+3.5
NBPA	Parau_RN	121.69	54	*e*P	PKiKP	08 43 19.3	+2.9
NBMA	Muriti-CE	122.22	57	*e*P	PKiKP	08 43 21.1	+3.6
AQDB	Aquidauana	122.87	82	*e*P	PKiKP	08 43 22.0	+3.6
SDBA	SAO DESIDERIO	123.03	66	*e*P	PKiKP	08 43 22.0	+3.0
NBPV	Pedro Velho	123.17	53	*e*P	PKiKP	08 43 22.9	+3.6
CPUP	Villa Florida	126.15	88	PKP	PKPdf	08 43 23.3	-1.1
	comp=Z,3.8nm,1.1s,baz=303,slow=3.6,SNR=4.2						
PCMB	Pacaembu	126.44	79	*e*P	PKiKP	08 43 28.9	+3.4
GDU01	Guandu, BA	127.08	62	*e*P	PKiKP	08 43 30.8	+3.8
PLCA	Paso Flores	127.80	110	PKP	PKPdf	08 43 25.9	-1.2
	comp=Z,4.5nm,0.8s,baz=260,slow=1.5,SNR=8.4						
PLCA	Paso Flores	127.80	110	*e*PKIKP	PKPdf	08 43 26.9	-0.3
PLCA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SJMB	Sao Joao De Ma	130.19	67	*e*P	PKiKP	08 43 35.0	+1.9
BSFB	Barra de Sao F	130.49	67	*e*P	PKiKP	08 43 37.4	+3.7
MAN01	Angra dos Reis	131.80	73	*e*P	PKiKP	08 43 39.8	+3.5
MAW	Mawson	148.80	218	PKPbc	PKPbc	08 44 07.7	-0.5
	comp=Z,15nm,0.8s,baz=118,slow=2.8,SNR=38						
MAW	Mawson	148.80	218	PKP2	PKPbc	08 44 07.4	-0.8
MAW	Mawson	148.80	218		PKPbc	08 44 07.4	-0.8
BOSA	Boshof	153.13	322	PKPbc	PKPbc	08 44 18.6	-1.2
	comp=Z,7.4nm,0.5s,baz=12,slow=2.3,SNR=18						
VNA3	Neumayer Olymp	158.98	165	PKPdf	PKPdf	08 44 16.5	-2.2
SNAA	Sanae	159.45	171	PKPdf	PKPdf	08 44 17.9	-1.3
VNA2	Neumayer--Watz	159.61	167	PKPdf	PKPdf	08 44 16.9	-2.4
VNA1	Neumayer--Stat	159.73	166	PKPdf	PKPdf	08 44 17.8	-1.6

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*NEIC **02** 08:27:48.3±1.8, 51°.58N±0°.07×173°.24W±0°.05, h10km±1km, mb5.0/128, ML4.3(AEIC) Error ellipse: s-maj=12.6km s-min=4.7km az=189.0*

*AEIC **02** 08:27:48±1.8, 51°.52N±0°.05×173°.27W±0°.05, h7km±4km, Error ellipse: s-maj=7.5km s-min=3.7km az=207.0*

*MOS **02** 08:27:48.2±0.8, 51°.71N×173°.33W, h21km, mb5.2/40, Error ellipse: s-maj=9.5km s-min=8.7km az=152.8*

*BJI **02** 08:27:50.5±0.0, 52°.37N×173°.86W, h20km, mB5.2/21, mb5.1/53, Ms5.5/13, Ms7 5.3/13*

*IDC **02** 08:27:52.6±0.6, 51°.70N×173°.39W, h45km±4km, mb4.4/36, mb1 4.6/38, mb1mx4.4/61, mbtmp4.6/38, Error ellipse: s-maj=14.6km s-min=9.2km az=172.0*

*BGR **02** 08:28:03.9±0.0, 53°.08N×174°.30W, h33km, mb4.8*

ISC 02 08:27:50.6±0.5, **51°.57N**±0°.07×**173°.31W**±0°.03, **h31**km±2km, **h31**km**:pP-P, n626,** σ0ˢ**84**/634, **mb5.0**/176, **41C-16D, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOFP	Korovin Flat P	0.86	326		Pb	08 28 07.0	-0.1
KOSE	Korovin Southe	0.90	330		Pb	08 28 07.7	-0.1
KOKL	Mount Kliuchef	0.94	324		Pb	08 28 08.1	-0.3
KOWE	Korovin West	0.99	324		Pb	08 28 09.1	-0.2
GSIG	Igitkin Island	1.68	285		Pn	08 28 18.3	+0.5
GSIG					Sb	08 28 42.1	+0.5
GSTR	Great Sitkin T	1.78	288	Pn	Pn	08 28 20.0	+0.7
GSTD	Great Sitkin T	1.82	287		Pn	08 28 21.4	+1.5
GSTD					Sb	08 28 45.1	-0.7
ADAG	Mount Adagdak	2.08	283		Pn	08 28 25.1	+1.7
ADK	Adak	2.12	280	P	Pn	08 28 24.3	+0.4
ADK						08 28 52.9	
ADK	Adak	2.12	280	Pn	Pn	08 28 24.3	+0.4
KINC	Kanaga Island	2.40	280		Pn	08 28 29.0	+1.3
KIWB	Kanaga Island	2.41	278	Pn	Pn	08 28 28.8	+1.0
KIMD	Kanaga Island	2.45	276		Pn	08 28 29.2	+0.8
TAPA	Tanaga Point A	2.81	277		Pn	08 28 34.7	+1.3
TAFP	Tanaga Falls P	2.92	278		Pn	08 28 36.5	+1.6
TASE	Tanaga Southea	2.95	277		Pn	08 28 36.9	+1.5
NIKH	Nikolski High	3.08	61		Pn	08 28 37.4	+0.3
NIKH	Nikolski High	3.08	61	P	Pn	08 28 37.3	+0.3
	baz=243						
GALAA	Gareloi Lava P	3.41	275		Pn	08 28 42.9	+1.4
OKSO	Okmok South	3.62	58		Pn	08 28 45.7	+1.1
OKTU	Okmok Mt. Tuli	3.70	59		Pn	08 28 46.7	+1.1
CEPE	Semis' Perret	4.39	278		Pn	08 28 56.5	+1.4
MSW	Makushin Switc	4.61	57		Pn	08 28 58.8	+0.7
AMKA	Amchitka	4.62	271	Pn	Pn	08 28 57.7	-0.5
MNAT	Makushin Natee	4.65	57		Pn	08 28 59.6	+1.0
UNV	Unalaska Valle	4.72	58		Pn	08 29 00.2	+0.6
UNV	Unalaska Valle	4.72	58	P	Pn	08 29 03.8	+4.2
	baz=243						
AKRB	Akutan Reef Bi	5.08	57		Pn	08 29 05.3	+0.7
LSNW	Little Sitkin	5.09	278		Pn	08 29 06.3	+1.6
AKSA	Akutan Strait	5.28	58		Pn	08 29 08.8	+1.5
SPIA	Saint Paul Isl	5.90	16	P	Pn	08 29 18.5	+2.8
	baz=198						
WESE	West Dahl East	6.01	58		Pn	08 29 19.0	+1.5
ISLZ	Isanotski Laza	6.58	58		Pn	08 29 26.3	+1.1
FALS	False Pass	6.79	57	Pn	Pn	08 29 27.7	-0.3
FALS	False Pass	6.79	57	P	Pn	08 29 31.3	+3.3
	baz=244						
SDPT	Sand Point	8.54	59		Pn	08 29 53.0	+1.0
SDPT	Sand Point	8.54	59	P	Pn	08 29 52.9	+1.0
	baz=248						
CNBA	Chernabura Isl	8.86	63	Pn	Pn	08 29 55.8	-0.5
CHGN	Chignik	9.97	56	Pn	Pn	08 30 11.8	+0.2
GAMB	Gambell	12.27	3	P	Pn	08 30 45.3	+2.3
	baz=184						
P18K	Big Mountain,	12.87	45	P	Pn	08 30 48.5	-2.7
	baz=240						
OHAK	Old Harbor	12.94	56	Pn	Pn	08 30 50.7	-1.5
O18K	Koktuh Hills	13.12	44	Pn	Pn	08 30 55.7	+1.2
KDAK	Kodiak Island	13.48	54	P	Pn	08 30 57.1	-2.3
	1.1nm,0.3s,baz=279,slow=3.0,SNR=6.9						
KDAK	Kodiak Island	13.48	54	P	Pn	08 30 59.3	-0.2
KDAK	Kodiak Island	13.48	54	Pn	Pn	08 30 59.3	-0.2
O19K	Port Alsworth	13.67	43	P	Pn	08 30 59.5	-2.6
	baz=239						
P19K	Oil Pt	13.89	47	P	Pn	08 31 05.1	0.0
	baz=243						
N19K	Bonanza Creek	13.93	41	Pn	Pn	08 31 06.1	+0.3
N19K	Bonanza Creek	13.93	41	P	Pn	08 31 07.8	+2.0
	baz=236						
L19K	White Mountain	14.59	36	P	Pn	08 31 14.4	-0.3
	baz=231,SNR=5.3						
M19K	Big River Lodg	14.60	38	P	Pn	08 31 13.8	-0.8
	baz=233						
TTA	Tatalina	14.68	32	P	Pn	08 31 16.4	+0.6
	baz=227,SNR=17						
BRSE	Bradley Lake S	15.07	48	P	Pn	08 31 20.6	-0.6
	baz=247						
SPCR	Spurr Chakacha	15.08	42	P	Pn	08 31 19.4	-1.8
	baz=239						
K20K	Telida	15.62	33	P	Pn	08 31 29.0	+0.8
	baz=230,SNR=7.0						
GCSA	Galena City Sc	15.72	27	P	Pn	08 31 28.9	-0.6
	baz=220						
SUA	Susitna One	15.82	43	P	Pn	08 31 30.8	-0.1
	baz=241						
J20K	Nowinta River	16.14	31	P	Pn	08 31 36.0	+1.2
	baz=227,SNR=8.3						
M22K	Willow	16.23	42	P	Pn	08 31 36.3	+0.3
	baz=241						
CAST	Castle Rocks	16.36	35	P	Pn	08 31 38.1	+0.5
	baz=233						
CUT	Chulitna	16.49	40	P	Pn	08 31 38.9	-0.4
	baz=239						
CHUM	Lake Minchumin	16.56	34	P	Pn	08 31 39.9	-0.3
	baz=231,SNR=6.3						
PMR	Palmer	16.57	43	P	Pn	08 31 39.0	-1.4
	baz=243						
SML	Sawmill	17.01	43	P	Pn	08 31 44.2	-1.7
	baz=244						
TRF	Thorofare Moun	17.04	37	P	Pn	08 31 44.4	-1.9
	baz=236						
BPAW	Bear Paw Mtn.	17.16	34	P	P	08 31 48.8	-0.3
	baz=233						
PET	Petropavlovsk	17.17	286	⇑*i*P	P	08 31 49.5	+0.3
RDOG	Red Dog Mine	17.30	13	P	P	08 31 50.2	-0.4
	baz=202						
SCM	Sheep Creek Mo	17.45	44	P	Pn	08 31 51.8	+0.4
SCM				pmax	pmax		
	comp=Z,55nm,0.9s						
SCM	Sheep Creek Mo	17.45	44	P	Pn	08 31 51.8	+0.4
SCM	Sheep Creek Mo	17.45	44	P	Pn	08 31 51.3	-0.1
	baz=246						
I21K	Tanana	17.50	31	P	P	08 31 53.9	+1.0
I21K	Tanana	17.50	31	P	P	08 31 53.7	+0.8
	baz=229						
IMAR	Indian Mountai	17.53	27	P	Pn	08 31 52.3	+0.1
RND	Reindeer	17.56	38	P	Pn	08 31 52.3	-0.5
RND				pmax	pmax		
	comp=Z,29nm,0.9s						
RND	Reindeer	17.56	38		Pn	08 31 52.2	-0.5
H21K	Melozitna Rive	17.57	29	P	P	08 31 54.0	+0.4
H21K	Melozitna Rive	17.57	29	P	P	08 31 53.5	-0.1
	baz=226,SNR=11						
EYAK	Cordova Ski Ar	17.70	49	P	Pn	08 31 54.2	-0.1
	baz=252						
MCK	McKinley	17.70	37	P	Pn	08 31 53.8	-0.6
MCK				pmax	pmax		
	comp=Z,35nm,1.0s						
MCK	McKinley	17.70	37		Pn	08 31 53.8	-0.6
MCK	McKinley	17.70	37	P	Pn	08 31 53.8	-0.6
	baz=238						
PEA0B	Petropavlovsk-	17.73	286	⇑*e*P	P	08 31 55.3	-0.2
PETK	Petropavlovsk-	17.73	286	P	Pn	08 31 53.5	-1.4
	comp=Z,0.8nm,0.3s,baz=88,slow=14,SNR=6.3						
BWN	Browne	17.74	36	P	Pn	08 31 54.5	-0.4
BWN				IAmb	IAmb	08 32 22.6	
	comp=Z,80nm,1.0s						
MLY	Manley	17.81	32	P	P	08 31 57.4	+1.0
MLY	Manley	17.81	32	P	P	08 31 56.6	+0.3
	baz=231,SNR=9.1						
KLU	Klutina	17.94	46	P	Pn	08 31 56.6	-0.8
KLU	Klutina	17.94	46	P	Pn	08 31 56.2	-1.2
	baz=248						
M24K	Tolsona, Glenn	18.06	44	P	P	08 31 59.4	+0.3
	baz=246						
NEA2	Nenana	18.12	35	P	Pn	08 31 58.6	-1.0
NEA2	Nenana	18.12	35	P	Pn	08 31 58.8	-0.8
	baz=235						
HMT	Hamilton	18.34	50	P	P	08 32 01.5	-0.7
I23K	Minto, Yukon-K	18.35	33	P	Pn	08 32 03.0	+0.7
I23K	Minto, Yukon-K	18.35	33	P	Pn	08 32 02.4	+0.1
	baz=233,SNR=11						
BMRM	Bremner River	18.36	48	P	P	08 32 01.9	-0.6
	baz=252						
N25K	Chitina, Valde	18.57	46	P	P	08 32 03.8	-1.0
	baz=250						
HARP	HAARP	18.61	44	P	P	08 32 05.1	0.0
	baz=247						
BERG	Berg Lake	18.62	50	P	P	08 32 04.5	-0.8
H23K	Yukon River	18.70	31	P	Pn	08 32 06.9	+0.3
	baz=231						
PAX	Paxson	18.71	42	P	P	08 32 05.4	-0.9
	baz=245						
TCOL	CIGO, UAF Yank	18.71	35	P	P	08 32 05.3	-0.8
TCOL	CIGO, UAF Yank	18.71	35	P	P	08 32 06.2	0.0
	baz=236						
COLA	College	18.72	35	*e*P	P	08 32 06.1	-0.1
COLA	College	18.72	35	P	P	08 32 05.3	-0.8
COLA	College	18.72	35	P	P	08 32 05.9	-0.3
	baz=236						
HDA	Harding Lake	18.80	37	P	P	08 32 06.1	-1.1
HDA	Harding Lake	18.80	37	P	P	08 32 06.5	-0.6
	baz=239						
CRQM	Cirque	18.99	49	P	Pn	08 32 10.0	-0.3
POKR	Poker Plat Res	19.00	35	P	P	08 32 09.0	-0.3
	baz=236						
CRQE	Cirque	19.01	49	P	P	08 32 08.5	-1.1
	baz=254						
ILAR	Eielson Array	19.01	36	P	P	08 32 07.7	-1.8
	comp=Z,3.2nm,0.3s,baz=224,slow=9.0,SNR=21						
ILAR	Eielson Array	19.01	36	*e*P	P	08 32 09.6	+0.1
ILAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
WAX	Waxell Ridge	19.05	50	P	Pn	08 32 10.7	-0.2
TGL	Tana Glacier	19.14	49	P	P	08 32 11.0	+0.1
MCARA	McCarthy VSAT	19.22	48	P	P	08 32 11.4	-0.4
	baz=253						
H24K	Noodor Dome	19.25	32	P	P	08 32 12.5	+0.3
H24K				IAmb	IAmb	08 32 14.1	
	comp=Z,96nm,1.0s						
H24K	Noodor Dome	19.25	32	P	Pn	08 32 12.7	-0.6
	baz=234,SNR=24						
RIDG	Independent Ri	19.30	40	P	P	08 32 12.1	-0.5
	baz=244						
ISLE	Juniper Island	19.33	50	P	Pn	08 32 15.0	+0.7
COLD	Coldfoot	19.41	27	P	P	08 32 14.2	+0.4
	baz=227,SNR=9.2						
MESA	MESA	19.42	51	P	P	08 32 14.6	+0.4
MESA				IAmb	IAmb	08 32 31.5	
	comp=Z,126nm,1.4s						
MESA	MESA	19.42	51	P	P	08 32 13.8	-0.4
	baz=257						
J25K	Salcha River,	19.49	37	P	P	08 32 13.5	-1.3
	baz=241,SNR=16						
M26K	Nabesna, AK	19.55	45	P	P	08 32 15.8	+0.4
M26K	Nabesna, AK	19.55	45	P	P	08 32 14.5	-0.9
	baz=250						
DOT	Dot Lake	19.57	41	P	P	08 32 15.4	-0.3
L26K	Log Cabin Wild	19.62	43	P	Pn	08 32 17.3	-0.4
L26K	Log Cabin Wild	19.62	43	P	P	08 32 14.8	-1.4
	baz=248						
GRNC	Granite Creek	19.64	50	P	P	08 32 16.8	+0.1
GRNC				IAmb	IAmb	08 32 34.0	
	comp=Z,52nm,1.0s						
SCRK	Sand Creek	19.74	40	P	P	08 32 15.6	-2.0
	baz=245,SNR=11						
PRP	Porcupine Dome	19.89	35	P	P	08 32 18.5	-0.8
	baz=238,SNR=6.1						
CTG	Chitna Glacier	19.89	49	P	P	08 32 18.1	-1.2
	baz=256						
CTGM	Chitina Glacie	19.90	49	P	P	08 32 18.4	-0.9
LOGN	Logan Glacier	20.02	50	P	P	08 32 20.4	-0.3
LOGN				IAmb	IAmb	08 32 40.9	
	comp=Z,55nm,1.0s						
M27K	Edge Creek, AK	20.03	45	P	P	08 32 19.7	-1.1
	baz=252						
J26L	Joseph Creek	20.14	39	P	P	08 32 21.0	-0.8
	baz=244,SNR=19						
PCA	Pinnacle	20.24	52	P	P	08 32 23.1	+0.2
PCA				IAmb	IAmb	08 32 41.3	
	comp=Z,63nm,0.8s						
PINM	Pinnacle	20.24	52	P	P	08 32 22.6	-0.3
	baz=260						
L27K	Beaver Creek,	20.28	43	P	Pn	08 32 25.0	-0.5
	baz=250						
BVCY	Beaver Creek	20.50	46	P	Pn	08 32 27.3	-0.8
	baz=253						
YUK3	Moose Creek	20.50	47	P	P	08 32 25.1	-0.9
	baz=255						
BCPM	Bancas Point	20.52	53	P	P	08 32 26.2	+0.2
BCPM				IAmb	IAmb	08 32 42.2	
	comp=Z,82nm,1.1s						
FYU	Fort Yukon	20.55	32	P	P	08 32 26.5	+0.3
FYU				IAmb	IAmb	08 32 28.0	
	comp=Z,78nm,1.1s						
TOLK	Toolik Lake Re	20.56	25		P	08 32 27.2	+0.8
TOLK				IAmb	IAmb	08 32 27.9	
	comp=Z,56nm,0.9s						
TOLK	Toolik Lake Re	20.56	25	P	P	08 32 27.0	+0.7
	baz=226,SNR=13						
PNL	Peninsula	20.60	54	P	P	08 32 26.1	-0.6
	baz=262						
EGAK	Eagle	21.19	39	P	P	08 32 32.9	-0.2
EGAK				IAmb	IAmb	08 32 34.5	
	comp=Z,75nm,0.8s						
EGAK	Eagle	21.19	39	P	P	08 32 33.5	+0.4
	baz=246,SNR=18						
BMAR	Burnt Mountain	21.25	31	P	P	08 32 34.8	+1.0
YUK4	Talbot Arm	21.25	49	P	P	08 32 34.9	+0.8
	baz=258						
YUK6	Outpost Mounta	21.31	50	P	P	08 32 33.4	-1.3
	baz=259						
SEY	Seymchan	21.47	315	P	P	08 32 35.1	-1.0
	comp=Z,6.5nm,0.8s,baz=97,slow=12,SNR=4.2						
DAWY	Dawson	21.65	42	P	P	08 32 36.9	-1.2
DAWY	Dawson	21.65	42	P	P	08 32 38.1	0.0
	baz=250						
HYT	Haines Junctio	21.70	51	P	P	08 32 39.5	+0.7
	baz=261						
I29M	Ogilvie Camp,	22.53	39	P	P	08 32 45.6	-1.9
	baz=249,SNR=9.4						
SKAG	Skagway	22.64	55	P	P	08 32 48.6	0.0
SKAG				IAmb	IAmb	08 33 08.2	
	comp=Z,33nm,0.8s						
SKAG	Skagway	22.64	55	P	P	08 32 48.2	-0.4
	baz=266,SNR=6.3						
JIS	Juneau Island	23.09	58	P	P	08 32 53.8	+0.4
JIS				IAmb	IAmb	08 33 10.4	
	comp=Z,39nm,1.0s						
M31M	Drury Creek, Y	23.40	48	P	P	08 32 56.1	-0.3
	baz=261						
EPYK	Eagle Plains	23.50	37	P	P	08 32 55.9	-1.6
	baz=249						
WRAK	Wrangell Islan	24.29	62	P	P	08 33 06.8	+2.0
	baz=276						
MMPY	Sheldon Lake,	24.90	47	P	P	08 33 10.1	-0.3
	baz=263						
INK	Inuvik	25.36	34	P	P	08 33 13.5	-0.9
	comp=Z,46nm,0.9s,baz=233,slow=7.6,SNR=15						
INK	Inuvik	25.36	34	P	P	08 33 13.6	-0.8
INK				pmax	pmax		
	comp=Z,62nm,1.1s						
INK	Inuvik	25.36	34	P	P	08 33 13.6	-0.8
INK				IAmb	IAmb	08 33 15.6	
	comp=Z,62nm,1.1s						
INK	Inuvik	25.36	34	P	P	08 33 14.3	-0.1
	baz=249,SNR=21						
DLBC	Dease Lake	25.38	57	P	P	08 33 15.8	+1.1
	comp=Z,32nm,1.0s,baz=268,slow=10,SNR=8.8						
DLBC	Dease Lake	25.38	57	P	P	08 33 16.4	+1.6
DLBC				IAmb	IAmb	08 33 30.9	
	comp=Z,43nm,0.9s						
TGTN	Hyland Airport	26.22	50	P	P	08 33 23.1	+0.7
	baz=268						
UGL	Uglegorsk	28.27	283	*e*P	P	08 33 33.3	-7.4
UGL				*e*		08 33 42.2	
WRGLY	Wrigley	28.50	47	P	P	08 33 42.7	+0.1
	baz=269						
YSS	Yuzh-Sakhalins	28.71	278	⇑*e*P	P	08 33 45.8	+1.2
YSS				*e*		08 33 58.9	
YSS				pmax	pmax		
	comp=Z,60nm,1.1s						
YSS				pmax	pmax		
	comp=N,30nm,1.3s						
YSS				pmax	pmax		
	comp=E,40nm,0.9s						
A36M	Sachs Harbour	29.27	28	P	P	08 33 49.8	+0.4
	baz=252						
JKA	Kamikawa-asahi	30.13	273	P	P	08 33 59.4	+2.1
ASAJ	Asahikawa	30.13	273	P	P	08 33 57.4	+0.1
	comp=E,61nm,0.9s,baz=12,slow=5.7,SNR=12						
ASAJ	Asahikawa	30.13	273	P	P	08 33 59.4	+2.1
ASAJ				pmax	pmax		
	comp=Z,64nm,0.9s						
ERM	Erimo	30.88	269	*c i*P	P	08 34 06.1	+2.1
ERM				pmax	pmax		
	comp=Z,84nm,1.2s						
ERM	Erimo	30.88	269	P	P	08 34 04.9	+0.9
YAK	Yakutsk	31.87	312	*ce*P	P	08 34 11.7	-0.7
YAK				pmax	pmax		
	comp=Z,10.0nm,0.6s						
TIXI	Tiksi	32.18	330	⇑*e*P	P	08 34 15.7	+0.6
D03D	Eldon	32.31	77	P	P	08 34 17.5	+1.0
	baz=296						
B05A	Bryant	32.59	75	P	P	08 34 20.0	+1.0
	baz=295						
YKA	Yellowknife Ar	32.59	47	P	P	08 34 18.7	-0.1
	comp=Z,5.3nm,0.9s,baz=272,slow=9.2,SNR=4.5						
TEY	Ternei	33.39	279	⇑*i*P	P	08 34 26.2	+0.3
TEY				pmax	pmax		
	comp=N,20nm,0.8s						
TEY				pmax	pmax		
	comp=E,50nm,0.8s						
TEY				pmax	pmax		
	comp=Z,80nm,0.8s						
B08A	Colville Reser	34.21	74	P	P	08 34 34.4	+1.3
B08A				IAmb	IAmb	08 34 59.4	
	comp=Z,32nm,1.4s						
KLR	Kul'dur	34.41	288	⇑*i*P	P	08 34 33.6	-1.1
KLR				pmax	pmax		
	comp=Z,21nm,1.6s						
I04A	Tendick Farm,	34.53	83	P	P	08 34 37.5	+1.6
	baz=301						
ZEA	Zeya	35.21	297	*e*P	P	08 34 40.9	-0.7
ZEA				pmax	pmax		
	comp=Z,20nm,1.1s						
YBH	Yreka Blue Hor	35.45	86	P	P	08 34 45.6	+1.7
	comp=Z,1.8nm,0.6s,baz=318,slow=4.7,SNR=2.7						
YBH	Yreka Blue Hor	35.45	86	IAmb	IAmb	08 34 59.7	
	comp=Z,19nm,1.1s						
J05D	Fort Rock, OR	35.52	83	P	P	08 34 45.8	+1.2
	baz=302						
NEW	Newport	35.58	73	P	P	08 34 45.5	+0.6
	comp=Z,7.0nm,0.8s,baz=284,slow=4.0,SNR=3.2						
NEW	Newport	35.58	73	P	P	08 34 45.3	+0.4
NEW				IAmb	IAmb	08 35 02.4	
	comp=Z,13nm,0.8s						
NEW	Newport	35.58	73	P	P	08 34 44.4	-0.5
	baz=297						
EDM	Edmonton	35.69	63	P	P	08 34 47.3	+1.5
EDM				pmax	pmax		
	comp=Z,33nm,1.0s						
EDM	Edmonton	35.69	63	P	P	08 34 47.3	+1.5
EDM				IAmb	IAmb	08 35 10.5	
	comp=Z,33nm,1.0s						
M04C	Macdoel	35.96	85	P	P	08 34 49.6	+1.2
	baz=304						
K05A	Summer Lake	36.03	83	P	P	08 34 50.3	+1.3
K05A				IAmb	IAmb	08 35 17.4	
	comp=Z,35nm,0.9s						
WDC	Whiskeytown Da	36.20	87	P	P	08 34 51.9	+1.6
WDC				pmax	pmax		
	comp=Z,49nm,1.4s						
WDC	Whiskeytown Da	36.20	87		P	08 34 51.9	+1.6
WDC				IAmb	IAmb	08 35 06.8	
	comp=Z,50nm,1.4s						
O02D	Mt. Diablo Mer	36.28	88	P	P	08 34 52.1	+1.0
	baz=306						
USA0B	Ussuriysk Arra	36.66	281	*d i*P	P	08 34 54.0	-0.1
USRK	Ussuriysk Ar.	36.66	281	P	P	08 34 53.1	-1.0
	comp=Z,9.3nm,0.7s,baz=54,slow=7.2,SNR=6.4						
USRK	Ussuriysk Ar.	36.66	281	P	P	08 34 54.5	+0.4
USRK	Ussuriysk Ar.	36.66	281	P	P	08 34 54.5	+0.4
MAJO	Matsushiro	37.22	266	⇑*i*P	P	08 34 58.1	-0.8
MAJO				pmax	pmax		
	comp=Z,19nm,1.1s						
MAT	Matsushiro	37.22	266	P	P	08 34 59.3	+0.4
MJAR	Matsushiro Arr	37.22	266	P	P	08 34 59.4	+0.5
	comp=Z,5.3nm,0.9s,baz=43,slow=7.5,SNR=6.0						
MJAR	Matsushiro Arr	37.22	266	IAmb	IAmb	08 35 03.4	
	comp=Z,8.5nm,1.1s						
MSHR	Mys Shultsa	38.04	279	⇑*i*P	P	08 35 06.6	+0.8
MSHR				*i* *PP	pwP	08 35 19.5	+0.4
MSHR				pmax	pmax		
	comp=Z,59nm,0.9s						
MSO	Missoula	38.15	73	P	P	08 35 06.8	-0.1
	baz=300						
VCNR	Virginia City	38.76	87	P	P	08 35 13.1	+1.0
VCNR				IAmb	IAmb	08 35 28.6	
	comp=Z,59nm,1.2s						
PNTR	Pine Nut	38.91	87	P	P	08 35 14.4	+1.0
PNTR				IAmb	IAmb	08 35 28.7	
	comp=Z,39nm,0.9s						
CMB	Columbia Colle	39.06	89	P	P	08 35 14.3	-0.2
CMB				pmax	pmax		
	comp=Z,20nm,1.2s						
CMB	Columbia Colle	39.06	89	P	P	08 35 14.3	-0.2
YERR	Yerington	39.20	87	P	P	08 35 15.4	-0.4
YERR				IAmb	IAmb	08 35 32.1	
	comp=Z,43nm,1.2s						
HRY	Holter Researc	39.47	72	P	P	08 35 18.4	+0.5
HLID	Hailey	39.56	78	P	P	08 35 19.2	+0.4
	baz=303						
BCYI	Bear Canyon	39.77	76	P	P	08 35 20.5	-0.1
MCMT	McKenzie Canyo	39.83	75	P	P	08 35 20.9	-0.3
EGMT	Eagleton	40.03	69	P	P	08 35 22.2	-0.3
	baz=300,SNR=5.9						
NVAR	Mina Array Bea	40.12	87	P	P	08 35 24.2	+0.7
	comp=Z,1.5nm,0.7s,baz=306,slow=7.7,SNR=3.8						
NVAR				pP	pwP	08 35 37.2	0.0
	comp=Z,14nm,0.9s,baz=291,slow=8.9,SNR=16						
BOZ	Bozeman (W)	40.16	73	P	P	08 35 23.6	-0.1
	baz=302						
ELK	Elko	40.64	82	P	P	08 35 27.1	-0.8
ELK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ELK	Elko	40.64	82	P	P	08 35 27.1	-0.8
CN2	Changchun	40.86	284	*e*P	P	08 35 29.9	+0.6
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
VES	Vestal, Richgr	41.24	91	P	P	08 35 33.7	+1.1
	baz=310						
LCH	Last Change Ra	41.26	88	P	P	08 35 33.7	+0.8
LCH				IAmb	IAmb	08 35 48.5	
	comp=Z,36nm,1.2s						
HIA	Hailar	41.37	294	*i* P	P	08 35 32.6	-0.9
HIA				pmax	pmax		
	comp=Z,25nm,1.2s						

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H17A  Grant Village      41.44  74    P      P      08 35 35.5 +1.1
      baz=303
CWC   Cottonwood Cre     41.49  89    P      P      08 35 34.9 +0.1
      baz=309
GRAC  Grapevine Rang     41.59  88    P      P      08 35 35.9 +0.5
      baz=309
ISA   Isabella, Lake     41.74  90    P      P      08 35 36.1  -0.6
      baz=310
RLMT  Red Lodge          41.82  73    P      P      08 35 38.4 +0.9
RLMT                                  IAmb   IAmb   08 35 55.2
      comp=Z,21nm,0.9s
RLMT  Red Lodge          41.82  73    P      P      08 35 38.1 +0.6
      baz=303,SNR=5.8
R11A  Troy Canyon, C     41.86  85    P      P      08 35 38.4 +0.6
      baz=308
FURC  Furnace Creek,     42.23  88    P      P      08 35 41.5 +0.9
      baz=309
DUG   Dugway, Tooele     42.46  81    P      P      08 35 43.0 +0.4
      baz=306
LAO   LASA Array         42.78  69    P      P      08 35 44.5  -0.6
      baz=302
TCUT  Toone Canyon       42.78  79    P      P      08 35 45.6 +0.2
TCUT                                  IAmb   IAmb   08 36 08.0
      comp=Z,18nm,0.9s
CTU   Camp Tracy         42.82  80    P      P      08 35 46.1 +0.4
BW06  Boulder Array      42.96  76    P      P      08 35 45.9  -0.8
      baz=305,SNR=7.3
PD31  Pinedale Array     42.96  76    P      P      08 35 46.6  -0.1
PDAR  Pinedale Array     42.96  76    P      P      08 35 47.1 +0.4
      comp=Z,2.8nm,0.7s,baz=316,slow=4.1,SNR=6.0
PDAR  Pinedale Array     42.96  76    P      P      08 35 46.9 +0.2
SHOC  Shoshone, Teco     42.96  88    P      P      08 35 47.1 +0.5
      baz=310
GSC   Goldstone, Bar     43.01  89    P      P      08 35 47.3 +0.2
      baz=310
KSRS  Korea Array        43.06 275    P      P      08 35 46.8  -0.5
      comp=Z,17nm,1.0s,baz=58,slow=7.9,SNR=14
KSRS  Korea Array        43.06 275   eP      P      08 35 48.5 +1.2
KSRS                                  pmax   pmax
      comp=Z,17nm,1.0s
KS19  Wonju Array Si     43.06 275    P      P      08 35 47.9 +0.6
KS19                                  IAmb   IAmb   08 35 50.3
      comp=Z,19nm,1.0s
KSAR  Wonju Array Be     43.09 275    P      P      08 35 48.4 +0.9
KSAR  Wonju Array Be     43.09 275    P      P      08 35 48.4 +0.9
BFSC  Mount Baldy Ra     43.17  91    P      P      08 35 48.9 +0.4
      baz=311
HEC   Hector,Ludlow      43.61  90    P      P      08 35 52.1 +0.2
      baz=311
BBRC  Big Bear Solar     43.62  91    P      P      08 35 52.5 +0.3
      baz=311
MURC  Murrieta           43.88  92    P      P      08 35 54.6 +0.6
      baz=312
TMUT  Trail Mountain     43.99  81    P      P      08 35 55.2  0.0
TMUT                                  IAmb   IAmb   08 36 09.7
      comp=Z,23nm,1.0s
GMRC  Granite Mounta     44.06  89    P      P      08 35 54.7  -0.9
      baz=311
TJN   Taejon             44.08 274⇓iP        P      08 35 56.4 +0.9
LCMT  Little Creek M     44.14  85    P      P      08 35 56.4 +0.1
LCMT                                  IAmb   IAmb   08 36 11.6
      comp=Z,21nm,1.1s
PFO   Pinyon Flats O     44.33  91⇑eP        P      08 35 58.2 +0.4
PFO                                   pmax   pmax
      comp=Z,6.0nm,0.9s
PFO   Pinyon Flats O     44.33  91    P      P      08 35 57.7  -0.1
      baz=312
TPFO  Pinon Flats        44.34  91    P      P      08 35 58.6 +0.7
      baz=312
BELC  Belle Mtn. Jos     44.36  90    P      P      08 35 56.5  -1.5
      baz=311
P18A  Preston Nutter     44.38  80    P      P      08 35 58.4  0.0
P18A                                  IAmb   IAmb   08 36 13.4
      comp=Z,29nm,1.1s
109C  Camp Elliot, M     44.41  92    P      P      08 35 57.5  -0.7
      baz=312
NEE2  Needles Airpor     44.72  88    P      P      08 36 01.3 +0.6
      baz=311
IRM   Iron Mountain      44.79  89    P      P      08 36 01.6 +0.3
      baz=311
MONP2 Monument Peak      44.84  92    P      P      08 36 02.3 +0.4
      baz=312
K22A  Casper             44.85  74    P      P      08 36 01.2  -0.7
      baz=306
BC3   Big Chuckawall     44.93  90    P      P      08 36 01.9  -0.6
      baz=312
SWSC  Sam W. Stewart     45.19  91    P      P      08 36 04.2  -0.2
      baz=312
IKP   In-Ko-Pah, Jac     45.19  92    P      P      08 36 04.3  -0.3
      baz=312
O20A  White River Ci     45.30  78    P      P      08 36 05.9 +0.3
      baz=307
PDMCI Parker Dam,Lak     45.32  88    P      P      08 36 04.7  -0.8
      baz=311
RSSD  Black Hills        45.48  71    P      P      08 36 07.0 +0.1
      baz=305
MDND  Maddock            45.94  64    P      P      08 36 10.6 +0.4
MDND  Maddock            45.94  64    P      P      08 36 10.0  -0.2
      baz=304,SNR=5.9
NRIK  Noril'sk           45.95 331    P      P      08 36 09.0  -1.0
      comp=Z,11nm,0.8s,baz=73,slow=8.9,SNR=5.9
NRIK                                  pP     pwP    08 36 22.4  -0.3
      comp=Z,14nm,0.9s,baz=75,slow=5.4,SNR=6.3
N23A  Red Feather La     46.24  76    P      P      08 36 12.7  -0.3
      baz=307
WUAZ  Wupatki            46.26  85    P      P      08 36 12.9  -0.2
      baz=310
ULM   Lac du Bonnet      46.67  59    P      P      08 36 16.4 +0.5
      comp=Z,4.6nm,0.7s,baz=311,slow=11,SNR=4.0
ULM                                   pP     pwP    08 36 28.9  -0.5
      comp=Z,7.0nm,0.9s,baz=351,slow=7.1,SNR=3.6
MVCO  Mesa Verde         46.96  81    P      P      08 36 18.1  -0.5
      baz=309
ISCO  Idaho Springs      47.11  77    P      P      08 36 19.8  -0.1
      baz=308
W18A  Petrified Fore     47.53  84    P      P      08 36 22.9  -0.2
      baz=311
S22A  4UR Ranch, Cre     47.65  80    P      P      08 36 24.0  0.0
      baz=309
214A  Organ Pipe Nat     47.72  90    P      P      08 36 23.9  -0.5
      baz=313
AGMN  Agassiz Nation     47.77  62    P      P      08 36 23.8  -0.7
      baz=305,SNR=6.8
SUSD  Miller             48.26  68    P      P      08 36 28.1  -0.3
SUSD  Miller             48.26  68    P      P      08 36 27.3  -1.1
      baz=306
SDCO  Great Sand Dun     48.46  79    P      P      08 36 30.9 +0.5
      baz=310
BJI   Beijing            48.66 285    P      P      08 36 32.0 +0.5
BJI                                   pmax   pmax
      comp=Z,16nm,1.0s
TUC   Tucson             48.74  88    P      P      08 36 31.2  -1.1
      baz=313
TLY   Talaya             48.82 305   eP      P      08 36 33.2 +0.7
TLY                                   pmax   pmax
      comp=Z,25nm,0.9s
TLY   Talaya             48.82 305    P      P      08 36 33.2 +0.7
TLY                                   IAmb   IAmb   08 36 34.1
      comp=Z,11nm,0.9s
ULN   Ulaanbaatar        49.21 299   eP      P      08 36 36.0 +0.2
KSCO  Kaye Shedlock’     49.41  76    P      P      08 36 38.1 +0.7
      baz=309
T25A  Trinidad           49.52  79    P      P      08 36 38.9 +0.6
T25A                                  IAmb   IAmb   08 36 53.4
      comp=Z,32nm,1.0s
T25A  Trinidad           49.52  79    P      P      08 36 37.9  -0.5
      baz=310,SNR=9.0
SONM  Songino Array      49.59 299    P      P      08 36 39.0 +0.4
      comp=Z,6.0nm,0.6s,baz=48,slow=8.3,SNR=12
SONM  Songino Array      49.59 299   eP      P      08 36 39.7 +1.0
SONM                                  pmax   pmax
      comp=Z,6.0nm,0.6s
SONM  Songino Array      49.59 299    IAmb   IAmb   08 36 40.1
      comp=Z,9.4nm,0.8s
ANMO  Albuquerque        49.68  82    P      P      08 36 40.3 +0.7
ANMO                                  pmax   pmax
      comp=Z,9.0nm,1.2s
ANMO  Albuquerque        49.68  82    P      P      08 36 40.3 +0.7
ANMO  Albuquerque        49.68  82    P      P      08 36 39.7 +0.1
      baz=311
ECSD  EROS Data Cent     50.03  67    P      P      08 36 40.4  -1.6
      baz=308
EYMN  Ely                50.35  60    P      P      08 36 43.9  -0.4
EYMN                                  IAmb   IAmb   08 36 45.3
      comp=Z,11nm,1.0s
EYMN  Ely                50.35  60    P      P      08 36 43.6  -0.7
      baz=307
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SPITS Spitsbergen Ar     50.38 357    P      P      08 36 43.2  -0.9
      comp=Z,9.2nm,1.0s,baz=46,slow=8.3,SNR=1.6
TIA   Tai'an             50.52 281  ⇑P       P      08 36 46.0 +0.3
TIA                                   pmax   pmax
      comp=Z,18nm,1.0s
BGNE  Belgrade           50.58  70    P      P      08 36 45.9  -0.2
      baz=309
CBKS  Cedar Bluff        51.27  74    P      P      08 36 52.0 +0.6
      baz=310
SPMN  Marine on St.      51.28  63    P      P      08 36 50.6  -0.7
      baz=308
I37A  Lemond, Waseca     51.69  65    P      P      08 36 54.5 +0.1
NJ2   Nanjing            52.22 276   eP      P      08 37 01.2 +2.7
NJ2                                   pmax   pmax
      comp=Z,16nm,0.8s
MNTX  Cornudas Mount     52.52  84    P      P      08 37 00.6  -0.1
      baz=313
MSTX  Muleshoe           52.60  81    P      P      08 37 01.5 +0.1
MSTX                                  IAmb   IAmb   08 37 16.3
      comp=Z,33nm,1.1s
MSTX  Muleshoe           52.60  81    P      P      08 37 01.4  0.0
      baz=312
KSU1  Kansas State U     52.95  72    P      P      08 37 03.6  -0.2
      baz=310
SCIA  State Center       53.13  67    P      P      08 37 05.2 +0.1
      baz=310
U32A  Winter Ranch,      53.30  76    P      P      08 37 07.2 +0.7
U32A                                  IAmb   IAmb   08 37 14.6
      comp=Z,17nm,0.9s
F42A  Maple Grove Fa     53.51  60    P      P      08 37 07.6  -0.2
F42A                                  IAmb   IAmb   08 37 09.2
      comp=Z,16nm,0.9s
JFWS  Jewell Farm        54.16  64    P      P      08 37 12.0  -0.7
      baz=310
WMOK  Wichita Mounta     54.53  77    P      P      08 37 15.0  -0.4
      baz=312
TX31  Lajitas Ar. Si     55.22  85    P      P      08 37 20.1  -0.5
TX32  Lajitas Array      55.22  85    P      P      08 37 20.6  0.0
TX32                                  IAmb   IAmb   08 37 34.5
      comp=Z,22nm,1.1s
TXAR  Lajitas Array      55.22  85    P      P      08 37 20.3  -0.3
      comp=Z,3.4nm,0.7s,baz=305,slow=6.2,SNR=7.2
TXAR  Lajitas Array      55.22  85    P      P      08 37 20.6  0.0
TXAR  Lajitas Array      55.22  85    P      P      08 37 20.6  0.0
ABTX  Abilene, Hawle     55.44  80    P      P      08 37 21.3  -0.7
      baz=313
TUL1  Leonard            55.55  74    P      P      08 37 22.1  -0.7
      baz=312
L44A  Lake County Fo     55.95  63    P      P      08 37 25.2  -0.4
      baz=311
GLMI  Grayling           56.01  59    P      P      08 37 26.4 +0.4
      baz=311
HDIL  Hopedale           56.25  66    P      P      08 37 27.0  -0.6
      baz=312
ZALV  Zalesovo Beam      56.34 316    P      P      08 37 26.8  -1.3
      comp=Z,0.7nm,0.4s,baz=57,slow=10,SNR=1.7
ZALV                                  PcP    PcP    08 38 25.1 +0.1
      comp=Z,2.8nm,0.8s,baz=33,slow=3.5,SNR=3.8
JCT   Junction City      56.82  82    P      P      08 37 31.3  -0.6
      baz=314
XAN   Xi'an              56.97 285    P      P      08 37 33.0 +0.1
XAN                                   pP     pP     08 37 40.6  -0.6
XAN                                   sP     pwP    08 37 45.7  -1.0
XAN                                   pmax   pmax
      comp=Z,28nm,1.0s
XAN   Xi'an              56.97 285    P      P      08 37 33.5 +0.5
XAN   Xi'an              56.97 285    P      P      08 37 33.5 +0.5
U40A  Yellville          57.00  72    P      P      08 37 31.9  -1.2
      baz=313,SNR=5.3
WHTX  Lake Whitney,      57.21  79    P      P      08 37 35.1 +0.4
WHTX  Lake Whitney,      57.21  79    P      P      08 37 33.5  -1.1
      baz=314
W39A  Magazine           57.23  73    P      P      08 37 34.1  -0.6
      baz=313
SFIN  Lafayette          57.61  65    P      P      08 37 36.4  -0.9
      baz=312,SNR=5.1
MIAR  Mount Ida          57.80  74    P      P      08 37 38.9 +0.1
MIAR                                  pmax   pmax
      comp=Z,30nm,1.0s
MIAR  Mount Ida          57.80  74    P      P      08 37 38.9 +0.1
MIAR                                  IAmb   IAmb   08 37 52.4
      comp=Z,30nm,1.0s
MIAR  Mount Ida          57.80  74    P      P      08 37 38.4  -0.3
      baz=314,SNR=8.1
Z38A  Mt. Pleasant       57.84  76    P      P      08 37 39.2 +0.2
Z38A                                  IAmb   IAmb   08 37 53.5
      comp=Z,26nm,1.0s
435B  Jarrell            57.97  80    P      P      08 37 40.0  0.0
      baz=314
W41B  Gary Mavity, V     58.16  72    P      P      08 37 40.4  -0.9
      baz=314,SNR=5.7
ARCES ARCESS Array B     58.42 352    P      P      08 37 41.6  -1.0
      comp=Z,5.1nm,0.8s,baz=22,slow=6.7,SNR=3.6
ARCES                                 PcP    PcP    08 38 33.6 +0.6
      comp=Z,9.3nm,0.8s,baz=351,slow=3.9,SNR=5.6
ARCES ARCESS Array B     58.42 352   eP      P      08 37 43.8 +1.2
ARCES                                 pmax   pmax
      comp=Z,3.0nm,0.7s
833A  Chaparral WMA,     58.59  83    P      P      08 37 43.0  -1.3
      baz=315
LZH   Lanzhou            58.59 290   eP      P      08 37 45.5 +1.0
LZH                                   pP     pP     08 37 50.6  -2.1
LZH                                   sP     sP     08 37 55.2  -0.8
LZH                                   pmax   pmax
      comp=Z,21nm,1.0s
GTA   Gaotai             58.64 295   eP      P      08 37 44.4  -0.3
GTA                                   pP     pP     08 37 49.3  -3.7
GTA                                   sP     sP     08 37 52.6  -3.6
GTA                                   pmax   pmax
      comp=Z,16nm,1.0s
NATX  Nacogdoches        59.08  77    P      P      08 37 48.2 +0.5
P49A  Miami Univ. Ec     59.52  64    P      P      08 37 49.2  -1.4
      baz=314
WCI   Wyandotte Cave     59.53  66    P      P      08 37 50.1  -0.6
WCI                                   pmax   pmax
      comp=Z,16nm,0.9s
WCI   Wyandotte Cave     59.53  66    P      P      08 37 50.1  -0.6
WCI                                   IAmb   IAmb   08 38 18.0
      comp=Z,16nm,0.9s
WCI   Wyandotte Cave     59.53  66    P      P      08 37 49.3  -1.4
      baz=314
DELO  Deloro Mine        59.89  55    P      P      08 37 54.2 +1.1
ACSO  Alum Creek Sta     60.01  62    P      P      08 37 52.8  -1.2
      baz=314
WVT   Waverly            60.10  69    P      P      08 37 53.8  -0.8
      baz=314
OXF   Oxford             60.30  71    P      P      08 37 56.0  -0.1
OXF                                   pmax   pmax
      comp=Z,60nm,1.0s
OXF   Oxford             60.30  71    P      P      08 37 56.0  -0.1
OXF   Oxford             60.30  71    P      P      08 37 56.1  -0.1
      baz=314
M53A  WI Miller and      60.42  60    P      P      08 37 55.7  -1.1
      baz=314
ALLY  Alegheny Colle     60.56  59    P      P      08 37 57.8  0.0
ZAIG  Zacatecas          60.62  90    P      P      08 37 58.5  -0.2
ZAIG                                  IAmb   IAmb   08 38 13.8
      comp=Z,10nm,1.3s
P52A  Corning            60.89  62    P      P      08 37 58.9  -1.1
      baz=314
M54A  Oil Creek Stat     60.92  59    P      P      08 37 59.3  -0.9
      baz=315
O53A  New Philadelph     60.97  61    P      P      08 37 59.7  -0.9
      baz=314
N54A  Moraine State      61.13  60    P      P      08 38 01.6  0.0
      baz=315
VBMS  Vicksburg          61.26  74    P      P      08 38 02.1  -0.5
      baz=315
KURK  Kurchatov          61.31 316    P      P      08 38 03.2 +0.5
KURK                                                08 38 46.4
LONY  Lake Ozonia        61.36  54    P      P      08 38 02.0  -1.1
      baz=315,SNR=5.8
KURBB Kurchatov Arra     61.42 316    P      P      08 38 03.1  -0.3
      comp=Z,4.4nm,0.6s,baz=44,slow=6.4,SNR=16
KURBB                                 PcP    PcP    08 38 46.4 +1.1
      comp=Z,5.9nm,1.1s,baz=40,slow=5.6,SNR=5.6
J57A  Williamstown       61.50  55    P      P      08 38 04.4 +0.3
L56A  Greenwood          61.59  57    P      P      08 38 05.2 +0.4
146A  Union              61.83  72    P      P      08 38 06.2  -0.3
WMQ   Urumqi             62.06 306   eP      P      08 38 09.3 +1.3
WMQ                                   pP     pP     08 38 16.4 +0.1
WMQ                                   sP     pwP    08 38 21.9  0.0
WMQ                                   pmax   pmax
      comp=Z,19nm,0.7s
WMQ                                   pmax   pmax
      comp=Z,330nm,6.9s
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WMQ                                   LR     LR
      comp=Z,2µm,17.3s
WMQ                                   LR     LR
      comp=Z,1µm,18.5s
WMQ                                   LR     LR
      comp=Z,1µm,16.1s
MCWV  Mont Chateau       62.13  61    P      P      08 38 07.8  -0.6
      baz=315,SNR=5.4
CD2   Chengdu            62.26 285⇑iP        P      08 38 10.2 +0.7
CD2                                   pmax   pmax
      comp=Z,60nm,1.0s
TZTN  Tazewell           62.27  65    P      P      08 38 08.3  -1.1
      baz=315
BINY  Binghamton         62.37  56    P      P      08 38 09.4  -0.6
      baz=316
O56A  Blue Knob Stat     62.38  59    P      P      08 38 09.5  -0.6
      baz=315
SSPA  Standing Stone     62.49  59    P      P      08 38 09.9  -0.8
      baz=316
FPAL  Fort Paine         62.51  68    P      P      08 38 10.5  -0.5
FPAL                                  IAmb   IAmb   08 38 24.0
      comp=Z,17nm,0.8s
MK31  Makanchi Array     62.54 311deP        P      08 38 10.8  -0.3
MKAR  Makanchi Array     62.54 311    P      P      08 38 10.5  -0.6
      comp=Z,4.1nm,0.8s,baz=55,slow=7.1,SNR=6.9
MKAR  Makanchi Array     62.54 311    P      P      08 38 11.5 +0.4
MKAR  Makanchi Array     62.54 311    P      P      08 38 11.5 +0.4
S54A  Dingess, Beckl     62.64  63    P      P      08 38 12.2 +0.3
S54A                                  IAmb   IAmb   08 38 12.9
      comp=Z,18nm,0.9s
V52A  Sevierville        62.74  66    P      P      08 38 11.9  -0.6
V52A                                  IAmb   IAmb   08 38 30.5
      comp=Z,17nm,1.1s
TKL   Tuckaleechee C     62.77  66    P      P      08 38 12.8  0.0
      comp=Z,9.1nm,1.1s,baz=0.0,slow=9.1,SNR=2.7
L59A  Walton             62.87  56    P      P      08 38 13.8 +0.4
BRVK  Borovoye           62.91 323⇑iP        P      08 38 13.3  -0.1
BRVK                                  pmax   pmax
      comp=Z,26nm,1.3s
LBNH  Lisbon             62.96  52    P      P      08 38 11.7  -2.2
      baz=317
PRGR  Permogore          62.96 340   eP      P      08 38 12.0  -1.5
PRGR                                 e              08 38 51.3
PRGR                                  pmax   pmax
      comp=Z,46nm,1.2s
SVE   Sverdlovsk         63.21 330   eP      P      08 38 15.8 +0.5
N59A  State Game Lan     63.40  57    P      P      08 38 15.8  -1.1
      baz=316
PKME  Peaks-Kenny Pk     63.49  50    P      P      08 38 16.8  -0.5
      baz=317
BLA   Blacksburg         63.55  63    P      P      08 38 17.6  -0.3
      baz=316,SNR=5.9
GYA   Guiyang            63.69 280  ⇓P       P      08 38 19.8 +0.7
GYA                                   pP     pwP    08 38 32.5  -0.4
GYA                                   pmax   pmax
      comp=Z,16nm,1.0s
L61B  Northampton        63.88  54    P      P      08 38 20.0  0.0
      baz=317
SDMD  Soldier’s Deli     63.92  59    P      P      08 38 20.4  0.0
SDMD                                  IAmb   IAmb   08 38 21.7
      comp=Z,9.7nm,0.9s
V55A  Taylorsville       64.08  65    P      P      08 38 21.5 +0.1
ARU   Arti               64.18 331c iP       P      08 38 21.4  -0.3
ARU                                                 08 38 53.7
ARU                                   S      S      08 46 56.2  -0.2
ARU                                   pmax   pmax
      comp=Z,30nm,1.4s
U56A  King               64.19  64    P      P      08 38 21.7  -0.5
U56A                                  IAmb   IAmb   08 38 50.3
      comp=Z,17nm,1.1s
PAL   Palisades          64.31  56    P      P      08 38 22.6  -0.2
      baz=317
HRV   Adam Dziewonsk     64.41  53    P      P      08 38 22.9  -0.5
      baz=317
PAULI Pauline            64.49  66    P      P      08 38 24.1  0.0
PAULI                                 IAmb   IAmb   08 38 24.7
      comp=Z,16nm,1.0s
CBN   Corbin Frederi     64.51  60    P      P      08 38 23.9  -0.2
      baz=317
KMSC  Kings Mountain     64.53  65    P      P      08 38 23.3  -1.0
      baz=316,SNR=9.3
GOGA  Godfrey            64.56  68    P      P      08 38 22.9  -1.6
      baz=316,SNR=5.2
V58A  Windy Hill, Pi     65.30  63    P      P      08 38 29.3  0.0
V58A                                  IAmb   IAmb   08 38 48.0
      comp=Z,18nm,1.1s
FINES FINESS Array B     66.28 350    P      P      08 38 34.0  -1.2
      comp=Z,3.3nm,0.7s,baz=13,slow=6.8,SNR=4.9
NHSC  New Hope           66.67  66    P      P      08 38 38.0  -0.1
      baz=317
KMI   Kunming            67.07 282  ⇑P       P      08 38 41.7 +0.6
KMI                                   sP     pwP    08 38 54.9  -0.1
KMI                                   pmax   pmax
      comp=Z,15nm,1.0s
NC405 NORSAR Array S     67.60 357    P      P      08 38 42.7  -1.0
NB2   NORSAR Subarra     67.68 358    P      P      08 38 43.7  -0.5
      comp=Z,2.7nm,1.1s,baz=3.1,slow=6.5
NOA   NORSAR Array B     67.68 358    P      P      08 38 43.2  -1.0
      comp=Z,2.3nm,0.8s,baz=1.2,slow=6.3,SNR=4.5
NOA                                   pP     pwP    08 38 56.4  -0.7
      comp=Z,2.0nm,0.6s,baz=2.3,slow=6.4,SNR=4.7
USP   Ospenovka          68.81 313    P      P      08 38 52.5 +0.9
      SNR=8.6
CHMS  Chumysh            68.91 313    P      P      08 38 53.3 +1.1
      SNR=5.3
SLVN  Son La             69.17 278    P      P      08 38 54.9 +0.8
SLVN                                  IAmb   IAmb   08 39 09.5
      comp=Z,17nm,1.0s
AAK   Ala-Archa          69.31 313    P      P      08 38 55.4 +0.6
      SNR=8.9
AAK   Ala-Archa          69.31 313c iP       P      08 38 55.5 +0.6
AAK                                   pmax   pmax
      comp=Z,102nm,0.9s
AAK   Ala-Archa          69.31 313    P      P      08 38 55.2 +0.3
EKS2  Erkin-Say          69.62 314    P      P      08 38 57.5 +0.8
      SNR=8.2
ABKAR Akbulak array      69.78 326    P      P      08 38 57.5 +0.1
ABKAR Akbulak array      69.78 326    P      P      08 38 57.4 +0.1
ABKAR                                 IAmb   IAmb   08 38 58.6
      comp=Z,34nm,1.1s
AML   Almayashu          70.07 313    P      P      08 39 01.3 +1.5
      SNR=7.2
LSA   Lhasa              70.56 293    P      P      08 39 04.7 +1.6
LSA                                   LR     LR
      comp=Z,4µm,19.9s
LSA                                   LR     LR
      comp=Z,5µm,19.9s
LSA                                   LR     LR
      comp=Z,9µm,19.2s
LSA   Lhasa              70.56 293    P      P      08 39 04.3 +1.2
LSA                                   pmax   pmax
      comp=Z,56nm,0.8s
LSA   Lhasa              70.56 293    P      P      08 39 04.3 +1.2
KK31  Karatay Array      70.71 316    P      P      08 39 03.1  -0.2
KK31                                  pmax   pmax
      comp=Z,16nm,1.1s
KK31  Karatay Array      70.71 316    P      P      08 39 03.1  -0.2
KK31                                  IAmb   IAmb   08 39 04.2
      comp=Z,16nm,1.1s
KKAR  Karatay Array      70.71 316    P      P      08 39 03.1  -0.2
KKAR  Karatay Array      70.71 316    P      P      08 39 03.1  -0.2
KKAR  Karatay Array      70.71 316    P      P      08 39 03.1  -0.2
KKAR                                  IAmb   IAmb   08 39 04.3
      comp=Z,16nm,1.1s
KSH   Kashi              71.07 310    P      P      08 39 09.0 +3.4
KSH                                   pP     sP     08 39 17.5 +0.3
KSH                                   sP     pwP    08 39 21.4 +1.7
KSH                                   pmax   pmax
      comp=Z,66nm,0.9s
NACGM Naroch             72.58 348  i P      P      08 39 13.2  -1.1
BTK   Batken             73.03 314    P      P      08 39 17.5 +0.2
BTK                                   pmax   pmax
      comp=Z,24nm,0.9s
BTK   Batken             73.03 314    P      P      08 39 17.5 +0.2
SHL   Shillong           73.25 290    P      P      08 39 19.1 +0.1
SHL                                   pmax   pmax
      comp=Z,34nm,0.9s
SHL   Shillong           73.25 290    P      P      08 39 19.1 +0.1
SUW   Suwalki            73.89 350   eP      P      08 39 20.9  -1.0
TAPN  Taplejung          74.31 294   eP      P      08 39 26.1 +0.8
      comp=Z,268nm,1.3s
CMAR  Chiang Mai Arr     74.39 280    P      P      08 39 26.4 +0.9
      comp=Z,6.7nm,0.8s,baz=27,slow=6.8,SNR=6.8
CMAR  Chiang Mai Arr     74.39 280    P      P      08 39 26.1 +0.7
BSEG  Bad Segeberg       74.82 358   eP      P      08 39 27.8 +0.5
      comp=Z,10nm,0.8s,baz=3.4,slow=5.6
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ODAN  Odare            74.87 294  eP     P       08 39 28.9 +0.5
            comp=Z,68nm,1.1s
GUN   Gumba            74.92 296  eP     P       08 39 29.6 +0.8
            comp=Z,178nm,0.9s
CHGR  Chuyangaron      74.92 314   P     P       08 39 28.6 +0.2
JIRN  Jiri             74.93 295  eP     P       08 39 29.8 +0.8
            comp=Z,186nm,1.0s
RAMN  Ramite           75.25 295  eP     P       08 39 31.2 +0.6
KKN   Kakani           75.35 296  eP     P       08 39 31.8 +0.7
            comp=Z,60nm,0.9s
PKI   Pulchoki         75.44 296  eP     P       08 39 32.3 +0.5
            comp=Z,142nm,1.1s
PKIN  Phulchoki        75.44 296  eP     P       08 39 32.0 +0.2
            comp=Z,129nm,1.2s
GKN   Gorkha           75.54 297  eP     P       08 39 32.7 +0.5
            comp=Z,176nm,1.2s
DMN   Daman            75.58 296  eP     P       08 39 33.1 +0.5
            comp=Z,158nm,1.2s
DANN  Dangsing         75.76 298  eP     P       08 39 34.1 +0.5
            comp=Z,187nm,0.9s
KOLN  Koldanda         76.30 297  eP     P       08 39 36.8 +0.2
            comp=Z,127nm,1.1s
AKASG Malin Array Be   76.33 345   P     P       08 39 35.0 -1.0
            comp=Z,12nm,0.6s,baz=17,slow=6.1,SNR=15
AKBB  Malin Array Si   76.33 345d iP     P       08 39 35.2 -0.8
AKBB                          pmax   pmax
            comp=Z,27nm,1.3s
PYUN  Piuthan          76.38 298  eP     P       08 39 37.5 +0.5
FLTG  Flechtingen      76.40 357  eP     P       08 39 36.4 -0.1
            comp=Z,8.4nm,0.8s,baz=3.4,slow=5.6
IBBN  Ibbenburen       76.49 359  eP     P       08 39 37.0  0.0
            comp=Z,14nm,0.9s,baz=3.4,slow=5.6
ASSE  Asse, Remlinge   76.62 357  eP     P       08 39 37.7 +0.1
            comp=Z,3.5nm,0.8s,baz=3.4,slow=5.6
CLZ   Clausthal        76.92 358  eP     P       08 39 39.8 +0.3
            comp=Z,12nm,0.8s,baz=3.4,slow=5.6
NIL   Nilore           77.06 308   P     P       08 39 41.5 +0.9
NIL                               pmax   pmax
            comp=Z,87nm,1.1s
NIL   Nilore           77.06 308   P     P       08 39 41.5 +0.9
GTTG  Gottingen        77.22 358  eP     P       08 39 41.6 +0.5
            comp=Z,15nm,1.1s,baz=3.4,slow=5.6
CLL   Collm            77.36 356  i P    P       08 39 41.6 -0.3
CLL                               e*SP   sP      08 39 54.0 +0.5
CLL                               pmax   pmax
            comp=Z,10.0nm,0.8s
CLL   Collm            77.36 356  i P    P       08 39 41.6 -0.3
            comp=Z,10.0nm,0.8s
CLL                               ePcP   sP      08 39 54.0 +0.5
CLL   Collm            77.36 356  eP     P       08 39 41.8 -0.1
            comp=Z,4.1nm,0.8s,baz=3.4,slow=5.6
NEUB  Neuenburg        77.51 357  eP     P       08 39 43.0 +0.3
            comp=Z,17nm,0.9s,baz=3.4,slow=5.6
KSP   Ksiaz            77.64 354  eP     P       08 39 43.6 +0.1
FBE   Freiberg         77.73 356  eP     P       08 39 44.4 +0.4
            comp=Z,14nm,0.8s,baz=3.4,slow=5.6
BRG   Berggiesshubel   77.75 355  eP     P       08 39 44.2 +0.2
            comp=Z,10.0nm,0.9s,baz=3.4,slow=5.6
BRG   Berggiesshubel   77.75 355  eP     P       08 39 44.0 -0.1
BRG                               Amp            08 39 45.0
            comp=Z,22nm,1.1s
BRG   Berggiesshubel   77.75 355   P     P       08 39 48.7 +4.6
BRG                               Amp            08 39 50.9
            comp=Z,5.5nm,1.0s
BRG   Berggiesshubel   77.75 355   P     P       08 39 56.1  +12
BRG                               Amp            08 39 57.8
            comp=Z,13nm,1.1s
CHVC  Chvalec          77.91 354  eP     P       08 39 45.0  0.0
OSTC  Ostas            77.93 354  eP     P       08 39 45.0 -0.1
UBBA  Unterbreizbach   77.95 358  eP     P       08 39 45.3 +0.3
            comp=Z,2.7nm,0.9s,baz=3.4,slow=5.6
OJC   Ojcow            77.98 351  eP     P       08 39 45.3 -0.1
UPC   Upice            77.99 354  eP     P       08 39 46.0 +0.6
UPC   Upice            77.99 354  eP     P       08 39 46.0 +0.6
MOX   Moxa             78.08 357  eP     P       08 39 46.2 +0.3
            comp=Z,8.7nm,0.8s,baz=3.4,slow=5.6
DPC   Dobruska-Polom   78.13 354  eP     P       08 39 46.5 +0.2
DPC                               e              08 39 59.2
DPC   Dobruska-Polom   78.13 354  eP     P       08 39 46.5 +0.2
DPC                               ex     x       08 39 59.2
MEM   Membach          78.20   0  dP     P       08 39 46.6 +0.1
            comp=Z,9.7nm,0.9s
BTNL  Ternell          78.22   0  dP     P       08 39 46.9 +0.2
            comp=Z,8.8nm,1.1s
WERD  Werda            78.25 356  eP     P       08 39 47.2 +0.3
            comp=Z,3.6nm,0.9s,baz=3.4,slow=5.6
KWP   Kalwaria Pacla   78.26 349  eP     P       08 39 47.3 +0.4
AHRW  Bad Neuenahr-A   78.27 360  eP     P       08 39 47.8 +0.8
            comp=Z,5.8nm,0.7s,baz=3.4,slow=5.6
TANN  Tannenbergstha   78.28 356  eP     P       08 39 47.3 +0.2
            comp=Z,5.9nm,1.0s,baz=3.4,slow=5.6
GUNZ  Gunzen           78.33 356  eP     P       08 39 47.6 +0.2
            comp=Z,5.2nm,0.9s,baz=3.4,slow=5.6
KBL   Kabul            78.35 312   P     P       08 39 47.2 -0.8
KBL                               pmax   pmax
            comp=Z,31nm,0.9s
KBL   Kabul            78.35 312   P     P       08 39 47.2 -0.8
KRLC  Kraliky          78.37 353  eP     P       08 39 47.9 +0.3
KRLC                              e              08 40 00.8
KRLC  Kraliky          78.37 353  eP     P       08 39 47.9 +0.3
KRLC                              ex     x       08 40 00.8
BCLA  Clavier          78.38   1  bP     P       08 39 47.6 +0.1
            comp=Z,5.4nm,1.1s
WERN  Wernitzgruen     78.41 356  eP     P       08 39 48.4 +0.6
            comp=Z,13nm,0.9s,baz=3.4,slow=5.6
BGES  Gesves           78.41   1  dP     P       08 39 47.5 -0.3
NKC   Novy Kostel      78.46 356  eP     P       08 39 48.6 +0.6
NKC                               e              08 40 00.8
NKC   Novy Kostel      78.46 356  eP     P       08 39 48.6 +0.6
NKC                               ex     x       08 40 00.8
BMRD  Maredsous        78.49   1  dP     P       08 39 47.3 -0.9
            comp=Z,7.7nm,1.0s
TNS   Taunus Mts       78.58 359  eP     P       08 39 49.5 +0.8
            comp=Z,8.4nm,0.8s,baz=3.4,slow=5.6
PRU   Pruhonice        78.60 355  eP     P       08 39 48.9 +0.1
PRU   Pruhonice        78.60 355  eP     P       08 39 48.9 +0.1
MORC  Moravsky Berou   78.61 353  ⇓P     P       08 39 48.8 -0.1
MORC  Moravsky Berou   78.61 353   P     P       08 39 48.3 -0.6
MORC                              pmax   pmax
            comp=Z,9.0nm,0.9s
MORC  Moravsky Berou   78.61 353   P     P       08 39 48.3 -0.6
MORC                              IAmb   IAmb    08 39 49.8
            comp=Z,8.5nm,0.8s
MORC  Moravsky Berou   78.61 353  eP     P       08 39 48.4 -0.5
MANZ  Manzenberg       78.72 356  eP     P       08 39 49.9 +0.4
            comp=Z,1.3nm,0.9s,baz=3.4,slow=5.6
GOF   Gofitskoye       78.76 335⇑eP      P       08 39 50.3 +0.5
GOF                               pmax   pmax
            comp=Z,101nm,0.9s
ROTZ  Rotzenmuhle      78.93 356  eP     P       08 39 51.3 +0.6
            comp=Z,1.5nm,0.8s,baz=3.4,slow=5.6
SORM  Soroca           78.96 345  ⇑P     P       08 39 50.0 -0.7
KOLS  Kolonicke sedl   78.99 350  eP     P       08 39 51.4 +0.4
KOLS  Kolonicke sedl   78.99 350  eP     P       08 39 51.4 +0.4
GRF   Grafenberg Arr   79.04 357  eP     P       08 39 51.9 +0.6
            comp=Z,19nm,0.8s,baz=3.4,slow=5.6
GRFO  Grafenberg       79.04 357   P     P       08 39 52.0 +0.7
GRFO                              pmax   pmax
            comp=Z,25nm,0.8s
GRFO  Grafenberg       79.04 357   P     P       08 39 52.0 +0.7
GRFO                              IAmb   IAmb    08 39 52.8
            comp=Z,25nm,0.8s
LANS  Liptovska Anna   79.07 351  eP     P       08 39 51.7 +0.3
LANS                              pmax   pmax
            comp=Z,8.0nm,0.7s
LANS  Liptovska Anna   79.07 351  eP     P       08 39 51.7 +0.3
CRVS  Cervenica-Dubn   79.11 350  eP     P       08 39 51.7  0.0
CRVS  Cervenica-Dubn   79.11 350  eP     P       08 39 51.6 -0.1
VRAC  Vranov           79.15 353  ⇑P     P       08 39 52.1 +0.2
VRAC  Vranov           79.15 353  eP     P       08 39 51.7 -0.1
VRAC                              e              08 40 04.4
KRUC  Moravsky         79.41 354  eP     P       08 39 52.9 -0.3
KRUC                              e              08 40 05.7
KHC   Kasperske Hory   79.51 355  eP     P       08 39 54.2 +0.4
KHC                               e              08 40 07.0
KHC   Kasperske Hory   79.51 355  eP     P       08 39 54.2 +0.4
KHC                               ex     x       08 40 07.0
JAVC  Velka Javorina   79.51 353  eP     P       08 39 54.7 +0.8
JAVC                              e              08 40 07.5
WET   Wettzell         79.53 356  eP     P       08 39 54.4 +0.5
            comp=Z,6.9nm,1.1s,baz=3.4,slow=5.6
VYHS  Vyhne            79.78 352  eP     P       08 39 55.4 +0.1
VYHS                              pmax   pmax
            comp=Z,11nm,1.0s
VYHS  Vyhne            79.78 352  eP     P       08 39 55.4 +0.1
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CKRC  Cesky Krumlov    79.78 355  eP     P       08 39 55.2 -0.1
GEC2  GERESS Array S   79.78 355  eP     P       08 39 55.7 +0.2
            comp=Z,7.4nm,0.8s,baz=3.4,slow=5.6
GERES GERESS Array B   79.78 355   P     P       08 39 55.6 +0.2
            comp=Z,5.8nm,0.8s,baz=32,slow=5.2,SNR=18
KIV   Kislovodsk       79.88 334  ⇓P     P       08 39 56.9 +0.9
KIV   Kislovodsk       79.88 334  eP     P       08 39 56.2 +0.2
KIV                               pmax   pmax
            comp=Z,20nm,1.0s
KIV   Kislovodsk       79.88 334   P     P       08 39 55.6 -0.4
KIV                               IAmb   IAmb    08 39 57.2
            comp=Z,16nm,0.8s
BUR08 Bucovina Ar. S   79.90 347   P     P       08 39 55.5 -0.6
BURAR Bucovina Array   79.92 347  ⇓P     P       08 39 55.8 -0.4
BURAR Bucovina Array   79.92 347   P     P       08 39 55.6 -0.6
MODS  Modra-Piesok     80.02 353  eP     P       08 39 56.3 -0.3
MODS                              pmax   pmax
            comp=Z,19nm,1.1s
MODS  Modra-Piesok     80.02 353  eP     P       08 39 56.3 -0.3
KBZ   Khabaz           80.03 334   P     P       08 39 57.2 +0.5
            comp=Z,11nm,0.8s,baz=63,slow=2.6,SNR=9.9
GEYT  Alibeck          80.18 321   P     P       08 39 58.6 +0.9
            comp=Z,12nm,0.9s,baz=325,slow=1.8,SNR=8.3
GYA0B ALIBECK ARRAY    80.18 321   P     P       08 39 58.0 +0.3
GYA0B                             IAmb   IAmb    08 39 59.3
            comp=Z,32nm,1.2s
BFO   Black Forest     80.47 359  eP     P       08 39 59.4 +0.4
            comp=Z,5.2nm,0.8s,baz=3.4,slow=5.6
ARCR  ARCALIA          80.56 348  ⇑P     P       08 40 00.0 +0.5
CONA  Conrad Observa   80.57 354  i P    P       08 40 00.2 +0.5
            comp=Z,13nm,0.9s,SNR=5.9
ECH   Echery           80.59 360   P     P       08 40 00.1 +0.4
ECH                               pmax   pmax
            comp=Z,14nm,0.9s
ECH   Echery           80.59 360   P     P       08 40 00.1 +0.4
ECH                               IAmb   IAmb    08 40 00.8
            comp=Z,14nm,0.9s
ZEI   Tsey             80.62 333  eP     P       08 39 59.4 -0.8
ZEI                               pmax   pmax
            comp=Z,8.0nm,1.1s
MOA   Molln            80.75 355  eP     P       08 40 00.9 +0.4
            comp=Z,5.7nm,0.6s
RJOB  Jochberg         80.94 356  eP     P       08 40 01.9 +0.4
            comp=Z,6.1nm,0.8s,baz=3.4,slow=5.6
DRGR                   81.05 349  ⇑P     P       08 40 01.6 -0.7
VLDR  Vladesti         81.23 345  ⇑P     P       08 40 03.1  0.0
RETA  Reutte           81.26 357  eP     P       08 40 03.8 +0.4
            comp=Z,7.5nm,0.8s
ARSA  Arzberg          81.27 354  eP     P       08 40 04.1 +0.8
            comp=Z,7.5nm,0.7s
OZUR                   81.33 347  ⇑P     P       08 40 04.1 +0.4
WATA  Walderalm        81.39 357  eP     P       08 40 04.3 +0.2
            comp=Z,11nm,0.8s
MOTA  Moosalm          81.39 357  eP     P       08 40 04.3 +0.2
            comp=Z,13nm,1.1s
VRI   Vrincioaia       81.42 346  ⇑P     P       08 40 03.2 -0.9
PLOR  Plostina         81.44 346  ⇑P     P       08 40 04.2 -0.1
WTTA  Wattenberg       81.45 357  eP     P       08 40 05.1 +0.6
            comp=Z,13nm,1.0s
DAVA  Damuels          81.49 358  eP     P       08 40 05.9 +1.3
            comp=Z,8.8nm,0.8s
SQTA  Sankt Quirin     81.51 357  eP     P       08 40 05.2 +0.5
            comp=Z,14nm,0.8s
DOPR  Dopca            81.52 347  ⇓P     P       08 40 05.8 +1.2
COVR  Voineasa-Covas   81.52 346  ⇑P     P       08 40 05.4 +0.7
HRA   Herat            81.53 316   P     P       08 40 05.5 +0.3
KBA   Koelnbreinsper   81.57 355  i P    P       08 40 05.8 +0.7
            comp=Z,24nm,0.7s,SNR=9.6
SIRR  Siria            81.69 350  ⇑P     P       08 40 05.1 -0.5
FETA  Feichten         81.73 357  i P    P       08 40 06.5 +0.5
            comp=Z,15nm,0.9s,SNR=5.5
TLCR                   81.75 344  ⇑P     P       08 40 06.7 +0.9
CFR   Carcaliu         81.87 345  ⇑P     P       08 40 06.7 +0.3
SOKA  Soboth           81.87 354  i P    P       08 40 07.0 +0.4
            comp=Z,20nm,1.0s,SNR=7.5
MLR   Muntele Rosu     81.90 346  ⇑P     P       08 40 07.7 +0.8
ABTA  Abfaltersbach    81.94 356  eP     P       08 40 07.0 +0.1
            comp=Z,6.3nm,0.7s
MYKA  Terra Mystica    82.00 355  eP     P       08 40 08.0 +0.8
            comp=Z,2.0nm,0.4s
OBKA  Obir             82.07 355  eP     P       08 40 08.3 +0.7
            comp=Z,8.3nm,0.6s
VOIR                   82.08 347  ⇑P     P       08 40 08.6 +0.9
ARR   Arges            82.21 347  ⇑P     P       08 40 09.4 +1.1
HARR  Harsova          82.38 345  ⇑P     P       08 40 09.7 +0.6
GZR   Gura Zlata       82.42 349  ⇑P     P       08 40 09.1 -0.4
TIRR  Tirgusor         82.52 344  ⇑P     P       08 40 10.3 +0.4
MFTR  Murfatlar        82.79 344  ⇑P     P       08 40 12.1 +0.8
FRGS  Fruska Gora      82.99 351  ⇓P     P       08 40 12.7 +0.4
TEOL  Teolo            83.36 356   P     P       08 40 14.4 +0.2
BNI   Bardonecchia     83.76   0   P     P       08 40 17.6 +1.1
BNI                               pmax   pmax
            comp=Z,11nm,0.8s
BNI   Bardonecchia     83.76   0   P     P       08 40 17.6 +1.1
BNI                               IAmb   IAmb    08 40 32.2
            comp=Z,11nm,0.8s
DIVS  Divibare         84.02 350   P     P       08 40 17.5 -0.2
DIVS                              IAmb   IAmb    08 40 19.5
            comp=Z,13nm,1.3s
BOVS  Bovan            84.28 349  ⇑P     P       08 40 18.3 -0.7
WR0   Warramunga Arr   84.54 228   P     P       08 40 19.4 -1.0
WR0                               IAmb   IAmb    08 40 20.0
            comp=Z,9.8nm,1.0s
WRA   Warramunga Arr   84.62 228   P     P       08 40 20.3 -0.6
            comp=Z,4.9nm,1.0s,baz=34,slow=6.0,SNR=8.4
WRA                               pP     pwP     08 40 34.4 -0.8
            comp=Z,3.2nm,0.8s,baz=36,slow=5.8,SNR=5.9
WRA   Warramunga Arr   84.62 228   P     P       08 40 20.5 -0.4
WRA                               pmax   pmax
            comp=Z,1.0nm,1.3s
WRA   Warramunga Arr   84.62 228   P     P       08 40 20.5 -0.4
VTS   Vitosha          85.10 348  ⇓P     P       08 40 23.6 +0.3
PDG   Podgorica        85.74 351  ⇑P     P       08 40 26.0 -0.3
NRCA  Norcia           85.81 355   P     P       08 40 27.1 +0.4
NRCA                              IAmb   IAmb    08 40 42.8
            comp=Z,13nm,0.7s
BRTR  Keskin Array B   86.08 339   P     P       08 40 28.8 +0.5
            comp=Z,8.3nm,0.8s,baz=80,slow=1.4,SNR=15
BRTR  Keskin Array B   86.08 339   P     P       08 40 29.5 +1.2
BRTR  Keskin Array B   86.08 339   P     P       08 40 29.5 +1.2
FNA   Florina          87.14 349   P     P       08 40 33.1 -0.2
FNA                               pmax   pmax
            comp=Z,28nm,0.7s
FNA   Florina          87.14 349   P     P       08 40 33.1 -0.2
HYB   Hyderabad        87.31 295  i P    P       08 40 33.0 -1.4
ASAR  Alice Springs    88.04 227   P     P       08 40 37.8 +0.2
            comp=Z,7.5nm,0.9s,baz=31,slow=4.7,SNR=13
ASAR                              pP     pwP     08 40 52.1  0.0
            comp=Z,5.6nm,0.8s,baz=32,slow=4.5,SNR=7.9
ESDC  Sonseca Array    88.66   8   P     P       08 40 39.0 -1.6
            comp=Z,2.0nm,0.9s,baz=352,slow=3.7,SNR=5.3
ESDC                              pP     sP      08 40 52.6 +0.3
            comp=Z,3.1nm,0.7s,baz=353,slow=4.8,SNR=7.1
ESDC  Sonseca Array    88.66   8  IAmb   IAmb    08 40 59.6
            comp=Z,9.7nm,1.4s
STKA  Stephens Creek   92.05 217   P     P       08 40 55.8 -0.3
            comp=Z,6.5nm,0.9s,baz=339,slow=6.7,SNR=7.5
STKA  Stephens Creek   92.05 217⇑eP      P       08 40 56.3 +0.2
STKA                              pmax   pmax
            comp=Z,7.0nm,0.9s
MMAI  Mount Meron Ar   92.08 336   P     P       08 40 55.5 -1.1
            comp=Z,4.5nm,0.7s,baz=17,slow=8.9,SNR=5.0
WSAR  Wadi Sarin       92.72 314   P     P       08 40 58.8 -0.8
            comp=Z,20nm,1.1s,baz=62,slow=5.2,SNR=6.6
SIV   San Ignacio     116.17  83  PKP    PKiKP   08 46 31.1 +0.4
            comp=Z,4.6nm,0.7s,baz=295,slow=0.2,SNR=12
MC01  Montes Claros   127.06  68  eP     Pdif    08 43 31.7 -1.3
PLCA  Paso Flores     127.78 110  PKP    PKPdf   08 46 52.0 -0.3
            comp=Z,1.9nm,1.0s,baz=218,slow=6.5,SNR=3.8
PLCA  Paso Flores     127.78 110  PKIKP  PKPdf   08 46 52.0 -0.3
MAW   Mawson          148.74 218  PKPbc  PKPbc   08 47 33.3 +0.2
            comp=Z,8.8nm,0.9s,baz=118,slow=2.0,SNR=10
BOSA  Boshof          153.18 322  PKPbc  PKPbc   08 47 44.9 -0.2
            comp=Z,1.3nm,0.4s,baz=45,slow=4.5,SNR=1.6
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*MOS **02** 08:31:15.1±1.0, 51°.58N×173°.27W, h22^{km}, mb5.4/59,*
Error ellipse: s-maj=9.6km s-min=8.3km az=162.6
*NEIC **02** 08:31:15.3±2.3, 51°.56N±0°.07×173°.27W±0°.06, h10^{km}±1^{km},*
mb5.3/217, ML4.8(AEIC), Error ellipse: s-maj=12.3km
s-min=6.2km az=175.0
*AEIC **02** 08:31:16±1.9, 51°.45N±0°.07×173°.28W±0°.06, h17^{km}±3^{km},*
Error ellipse: s-maj=10.8km s-min=5.5km az=174.0
*BJI **02** 08:31:17.8±0.0, 52°.04N×173°.78W, h26^{km}, mB5.5/29,*
mb5.1/63, Ms5.4/22, Ms7 5.1/21
*IDC **02** 08:31:19.6±0.5, 51°.63N×173°.31W, h42^{km}±3^{km}, mb4.5/48,*
mb1 4.7/50, mb1mx4.6/72, mbtmp4.8/50, ML4.5/2, MS4.7/11,
Ms1 4.7/11, ms1mx4.4/54, Error ellipse: s-maj=12.3km
s-min=8.0km az=179.0
*GCMT **02** 08:31:19.3±0.2, 51°.44N±0°.01×173°.22W±0°.02, h21^{km},*
MW5.3/124, Moment Tensor Solution.   s38,c48;
s124,c200;   Duration: 1^s.1   Moment tensor: Scale 10^{17}
Nm; M$_{rr}$0.89±.05; M$_{\theta\theta}$-0.79±.03; M$_{\phi\phi}$-0.10±.03;
M$_{r\theta}$0.77±.05; M$_{\theta\phi}$-0.23±.01; M$_{\phi r}$0.30±.04;   Best double
couple: M$_0$1.20500×10^{17} NP1:ϕ_s255.00000°, δ24.00000°,
λ95.00000°.   NP2:ϕ_s70.00000°, δ67.00000°, λ88.00000°.
Principal axes: T 1.2210, Plg68.0000°, Azm336.0000°; N
-0.0320, Plg2.0000°, Azm71.0000°; P -1.1890,
Plg22.0000°, Azm162.0000°;   nsta1 refers to body waves,
cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
Triangular moment-rate function
*BGR **02** 08:31:23.9±0.0, 52°.16N×175°.64W, h46^{km}, mb4.7*
ISC 02 08:31:18.0±0.4, **51°.52N**±0°.06×**173°.27W**±0°.03, **h33**^{km}±1^{km},
h35^{km}**:pP-P, n904,** σ**0^s.93**/932, **mb5.1**/220, **MS4.9**/16,
36C-25D, Andreanof Islands

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Code  Station Name       Δ°   AZ°    Phase ID            Time      Res
                                   Op      ISC        h  m  s    ISC
KOFP  Korovin Flat P     0.91 326          Pb        08 31 35.2 -0.1
KOKL  Mount Kliuchef     0.99 325          Pn        08 31 35.5 -0.1
KONE  Korovin Northe     1.02 329          Pn        08 31 36.3 +0.4
GSIG  Igitkin Island     1.71 287          Pn        08 31 45.5  0.0
GSMY  Great Sitkin M     1.81 288          Pn        08 31 47.0 +0.3
GSTR  Great Sitkin T     1.82 289  Pn      Pn        08 31 47.3 +0.3
GSTD  Great Sitkin T     1.86 288          Pn        08 31 47.9 +0.3
GSTD                                       Sn        08 32 11.5 +1.6
GSSP  Great Sitkin S     1.89 289          Pn        08 31 48.6 +0.7
ETKA  Kagalaska Isla     1.98 281          Pn        08 31 49.4 +0.3
ADK   Adak               2.15 281  P       Pn        08 31 51.9 +0.4
ADK                                                  08 32 19.8
ADK   Adak               2.15 281  Pn      Pn        08 31 51.9 +0.4
KINC  Kanaga Island      2.43 281          Pn        08 31 55.7 +0.3
KIWB  Kanaga Island      2.44 279          Pn        08 31 56.1 +0.8
KIKV  Kanaga Island      2.45 280          Pn        08 31 56.1 +0.5
KIMD  Kanaga Island      2.48 277          Pn        08 31 56.4 +0.4
TAPA  Tanaga Point A     2.84 278          Pn        08 32 01.7 +0.7
TAFL  Tanaga Flats       2.89 276          Pn        08 32 02.4 +0.7
TAFP  Tanaga Falls P     2.95 279          Pn        08 32 03.7 +1.1
TAFP                                       Sn        08 32 39.7 +2.8
TASE  Tanaga Southea     2.98 278          Pn        08 32 04.1 +1.1
NIKH  Nikolski High      3.08  60          Pn        08 32 05.0 +0.8
NIKH                                       Sn        08 32 41.6 +1.8
NIKH  Nikolski High      3.08  60  P       Pn        08 32 04.4 +0.2
      baz=242
GAEA  Gareloi East       3.42 277          Pn        08 32 10.1 +1.2
GALAA Gareloi Lava P     3.43 276          Pn        08 32 10.6 +1.4
OKSP  Okmok Steeple      3.51  58          Pn        08 32 11.8 +1.6
OKSO  Okmok South        3.63  58          Pn        08 32 13.5 +1.7
OKCE  Okmok Cone E       3.66  57          Pn        08 32 14.0 +1.7
OKNC  Okmok New Cone     3.70  56          Pn        08 32 14.5 +1.8
OKTU  Okmok Mt. Tuli     3.70  58          Pn        08 32 14.6 +1.7
OKFG  Magazine Ridge     3.79  58          Pn        08 32 15.8 +1.8
CERAA Semis' Rag'd T     4.40 278          Pn        08 32 23.5 +1.2
CEPE  Semis' Perret      4.42 279          Pn        08 32 23.7 +1.0
CESW  Semis' Southwe     4.47 278          Pn        08 32 24.1 +0.7
MSW   Makushin Switc     4.62  56          Pn        08 32 26.7 +1.3
AMKA  Amchitka           4.65 271  Pn      Pn        08 32 25.9 +0.1
MNAT  Makushin Natee     4.65  57          Pn        08 32 28.2 +2.4
MTBL  Makushin Table     4.70  56          Pn        08 32 28.5 +2.0
UNV   Unalaska Valle     4.73  58  Pn      Pn        08 32 28.6 +1.7
UNV   Unalaska Valle     4.73  58  P       Pn        08 32 27.5 +0.6
      baz=242
AKMO  Akutan Morgan      5.10  57          Pn        08 32 34.3 +2.3
LSNW  Little Sitkin      5.12 278          Pn        08 32 32.5 +0.2
AKBBA Akutan Broad B     5.15  57          Pn        08 32 35.2 +2.5
AKUT  Akutan             5.25  57  Pn      Pn        08 32 35.9 +1.9
AKSA  Akutan Strait      5.29  57          Pn        08 32 36.5 +2.0
SPIA  Saint Paul Isl     5.94  16  Pn      Pn        08 32 46.9 +3.5
SPIA  Saint Paul Isl     5.94  16  P       Pn        08 32 43.6 +0.2
      baz=198
WECS  Westdahl Cape      5.95  56          Pn        08 32 45.0 +1.3
ISLZ  Isanotski Laza     6.59  57          Pn        08 32 54.5 +2.0
ISNN  Isanotski Nort     6.60  56          Pn        08 32 55.4 +2.8
FALS  False Pass         6.80  57          Pn        08 32 57.7 +2.5
FALS  False Pass         6.80  57  P       Pn        08 32 56.3 +1.0
      baz=244
SMY   Shemya             7.87 284  P       Pn        08 33 11.4 +1.5
SMY   Shemya             7.87 284          Pn        08 33 11.4 +1.5
SDPT  Sand Point         8.55  58  Pn      Pn        08 33 19.9 +0.7
SDPT  Sand Point         8.55  58  P       Pn        08 33 19.9 +0.7
      baz=248
CNBA  Chernabura Isl     8.86  63  Pn      Pn        08 33 24.1 +0.6
CHNA  Chernabura Isl     8.86  63  P       Pn        08 33 23.4 -0.1
      baz=253
CHGN  Chignik            9.98  56  Pn      Pn        08 33 39.0 +0.1
CHIR  Chirikof Islan    11.31  61  Pn      Pn        08 33 56.9 -0.1
SII   Sitkinak Islan    12.29  58  Pn      Pn        08 34 10.8 +0.4
SII   Sitkinak Islan    12.29  58  P       Pn        08 34 10.5 +0.1
      baz=254
GAMB  Gambell           12.32   3  Pn      Pn        08 34 14.5 +3.8
GAMB  Gambell           12.32   3  P       Pn        08 34 10.0 -0.7
      baz=185
P18K  Big Mountain,     12.89  45  Pn      Pn        08 34 18.3 -0.3
P18K  Big Mountain,     12.89  45  P       Pn        08 34 18.6 -0.1
      baz=240
OHAK  Old Harbor        12.95  56  Pn      Pn        08 34 17.6 -1.8
OHAK  Old Harbor        12.95  56  P       Pn        08 34 19.4  0.0
      baz=252
O18K  Koktuh Hills      13.13  44  Pn      Pn        08 34 21.6 -0.4
O18K  Koktuh Hills      13.13  44  P       Pn        08 34 21.7 -0.3
      baz=238
Q19K  Cape Douglas,     13.40  49          Pn        08 34 25.3 -0.2
Q19K  Cape Douglas,     13.40  49  P       Pn        08 34 25.0 -0.5
      baz=245
KDAK  Kodiak Island     13.49  54  P       Pn        08 34 24.7 -2.0
      3.3nm,0.3s,baz=263,slow=2.0,SNR=14
KDAK  Kodiak Island     13.49  54d iP      Pn        08 34 25.5 -1.2
KDAK  Kodiak Island     13.49  54          Pn        08 34 27.0 +0.2
KDAK  Kodiak Island     13.49  54  P       Pn        08 34 26.3 -0.4
      baz=251
SVW2  Sparrevohn        13.68  39          Pn        08 34 32.1 +2.7
O19K  Port Alsworth     13.69  43          Pn        08 34 31.3 +1.8
O19K  Port Alsworth     13.69  43  P       Pn        08 34 30.1 +0.6
      baz=239
ANM   Nome              13.71  14  P       Pn        08 34 32.1 +2.3
ANM   Nome              13.71  14  Pn      Pn        08 34 32.1 +2.3
P19K  Oil Pt            13.91  46  P       Pn        08 34 33.0 +0.5
      baz=243
N19K  Bonanza Creek     13.95  41  P       Pn        08 34 34.1 +0.9
      baz=236,SNR=8.2
O20K  Slope Mountain    14.38  45  P       Pn        08 34 39.1 +0.1
      baz=242
L19K  White Mountain    14.62  36  P       Pn        08 34 43.2 +1.0
      baz=231,SNR=8.7
M19K  Big River Lodg    14.62  37  P       Pn        08 34 42.6 +0.4
      baz=233
HOM   Homer             14.64  48  P       Pn        08 34 43.4 +1.0
      baz=246
TTA   Tatalina          14.70  32  P       Pn        08 34 45.1 +1.8
      baz=227,SNR=52
BRSE  Bradley Lake S    15.09  48  P       Pn        08 34 49.0 +0.5
      baz=247,SNR=10
SPCR  Spurr Chakacha    15.10  42  P       Pn        08 34 49.2 +0.5
      baz=239
L20K  Farewell, AK      15.16  36  P       Pn        08 34 49.2 -0.2
      baz=232,SNR=12
K20K  Telida            15.64  33  P       Pn        08 34 56.4 +0.7
      baz=230,SNR=12
GCSA  Galena City Sc    15.76  26  P       Pn        08 34 57.7 +0.7
      baz=220,SNR=11
SKT   Skwentna          15.78  40  P       Pn        08 34 58.2 +0.8
      baz=238,SNR=8.1
SEW   Seward            15.83  48  P       Pn        08 34 57.0 -1.0
      baz=248
SUA   Susitna One       15.84  42  P       Pn        08 34 57.5 -0.8
      baz=241
O22K  Cooper Landing    15.85  46  P       Pn        08 34 58.2 -0.2
      baz=246
PPLA  Purkeypile        16.03  37  P       Pn        08 35 01.1 +0.3
      baz=234
RC01  Rabbit Creek A    16.10  44  P       Pn        08 35 01.6  0.0
      baz=244
J20K  Nowinta River     16.16  31  P       Pn        08 35 02.7 +0.3
      baz=227,SNR=29
M22K  Willow            16.24  42  P       Pn        08 35 03.4 +0.1
      baz=241
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CAST	Castle Rocks	16.38	35		P	Pn	08 35 06.3	+1.1
	baz=233,SNR=12							
CHUM	Lake Minchumin	16.59	34		P	Pn	08 35 07.6	-0.1
	baz=231,SNR=17							
PMR	Palmer	16.59	43		P	Pn	08 35 08.2	+0.5
	baz=243							
PWL	Port Wells	16.63	46		P	Pn	08 35 07.7	-0.5
	baz=247							
KNK	Knik Glacier	16.80	44		P	Pn	08 35 10.1	-0.3
	baz=245,SNR=5.2							
SML	Sawmill	17.02	43		P	Pn	08 35 12.6	-0.6
	baz=244							
TRF	Thorofare Moun	17.06	37		P	Pn	08 35 13.4	-0.4
	baz=236							
Q23K	Middleton Isla	17.09	52		P	Pn	08 35 14.2	+0.2
	baz=254							
BPAW	Bear Paw Mtn.	17.18	34		P	P	08 35 17.6	+1.0
BPAW	Bear Paw Mtn.	17.18	34		P	Pn	08 35 15.6	+0.4
	baz=233,SNR=14							
GLI	Glacier Island	17.20	47			Pn	08 35 15.2	-0.2
GLI	Glacier Island	17.20	47		P	Pn	08 35 14.8	-0.6
	baz=249							
PET	Petropavlovsk	17.20	286	*i*	P	P	08 35 17.5	+0.7
HIN	Hinchinbrook I	17.31	49		P	Pn	08 35 16.4	-0.4
FID	Port Fidalgo	17.44	48		P	Pn	08 35 17.1	-1.2
SCM	Sheep Creek Mo	17.47	44		P	Pn	08 35 18.1	-0.7
	baz=245,SNR=9.9							
I21K	Tanana	17.53	31		P	P	08 35 21.7	+1.3
I21K	Tanana	17.53	31		P	P	08 35 20.3	0.0
	baz=229,SNR=30							
IMAR	Indian Mountai	17.56	27		P	P	08 35 21.1	+0.5
RND	Reindeer	17.58	38		P	Pn	08 35 19.9	-0.3
RND					pmax	pmax		
	comp=Z,94nm,1.3s							
RND	Reindeer	17.58	38		P	Pn	08 35 19.9	-0.3
H21K	Melozitna Rive	17.60	29		P	P	08 35 21.4	+0.3
H21K	Melozitna Rive	17.60	29		P	Pn	08 35 20.1	-0.2
	baz=226,SNR=26							
EYAK	Cordova Ski Ar	17.71	49		P	Pn	08 35 21.1	-0.5
	baz=251							
MCK	McKinley	17.72	37		P	Pn	08 35 21.1	-0.8
	baz=238,SNR=11							
BWN	Browne	17.77	35		P	P	08 35 24.3	+1.3
BWN					IAmb	IAmb	08 35 57.6	
	comp=Z,428nm,1.4s							
PEA0B	Petropavlovsk-	17.77	287		P	P	08 35 23.8	+0.7
PEA0B					pmax	pmax		
	comp=Z,71nm,1.3s							
PEA0B	Petropavlovsk-	17.77	287		P	P	08 35 23.8	+0.7
PETK	Petropavlovsk-	17.77	287		P	P	08 35 23.0	-0.1
	comp=Z,1.8nm,0.3s,baz=94,slow=14,SNR=15							
PETK					LR	LR	08 41 18.2	
	comp=Z,2µm,22.0s,baz=88,slow=34							
PETK	Petropavlovsk-	17.77	287		P	P	08 35 23.0	-0.1
MLY	Manley	17.84	32		P	P	08 35 23.9	+0.1
MLY	Manley	17.84	32		P	P	08 35 23.5	-0.3
	baz=231,SNR=21							
KLU	Klutina	17.95	46		P	Pn	08 35 24.1	-0.7
	baz=248							
M24K	Tolsona, Glenn	18.08	44		P	Pn	08 35 26.2	-0.1
M24K	Tolsona, Glenn	18.08	44		P	Pn	08 35 25.5	-0.8
	baz=246							
NEA2	Nenana	18.15	35		P	Pn	08 35 26.1	-1.0
NEA2	Nenana	18.15	35		P	Pn	08 35 26.1	-1.0
	baz=235,SNR=18							
KAIM	Kayak Island	18.17	51		P	Pn	08 35 26.6	-0.8
	baz=255							
RAGM	Ragged Mountai	18.17	50		P	P	08 35 28.1	+0.7
HMT	Hamilton	18.35	50		P	P	08 35 29.2	-0.3
I23K	Minto, Yukon-K	18.37	33		P	Pn	08 35 30.3	+0.6
I23K					IAmb	IAmb	08 35 47.6	
	comp=Z,129nm,1.0s							
I23K	Minto, Yukon-K	18.37	33		P	P	08 35 29.3	-0.3
	baz=233,SNR=35							
BMRM	Bremner River	18.38	48		P	Pn	08 35 31.2	+1.3
BMRM	Bremner River	18.38	48		P	P	08 35 29.1	-0.7
	baz=252							
WRH	Wood River Hil	18.43	36		P	P	08 35 28.8	-1.5
N25K	Chitina, Valde	18.59	46		P	P	08 35 32.1	0.0
N25K	Chitina, Valde	18.59	46		P	P	08 35 31.4	-0.7
	baz=250							
HARP	HAARP	18.63	43		P	P	08 35 31.9	-0.6
	baz=247							
CCB	Clear Creek Bu	18.63	35		P	P	08 35 31.5	-1.0
BERG	Berg Lake	18.64	50		P	Pn	08 35 33.1	+0.1
BERG					IAmb	IAmb	08 35 50.2	
	comp=Z,74nm,0.8s							
MDM	Murphy Dome	18.65	34		P	Pn	08 35 33.3	+0.1
H23K	Yukon River	18.73	31		P	P	08 35 33.4	-0.1
H23K	Yukon River	18.73	31		P	P	08 35 33.3	-0.2
	baz=231,SNR=16							
PAX	Paxson	18.73	42		P	P	08 35 33.3	-0.4
PAX					pmax	pmax		
	comp=Z,52nm,1.1s							
PAX	Paxson	18.73	42		P	P	08 35 33.3	-0.4
PAX	Paxson	18.73	42		P	P	08 35 32.8	-0.9
	baz=245							
TCOL	CIGO, UAF Yank	18.74	35		P	Pn	08 35 34.0	-0.2
TCOL	CIGO, UAF Yank	18.74	35		P	P	08 35 33.5	-0.1
	baz=236							
COLA	College	18.74	35	⇑*i*	P	P	08 35 33.7	+0.1
COLA	College	18.74	35		P	P	08 35 33.5	-0.1
COLA	College	18.74	35		P	Pn	08 35 33.8	-0.4
	baz=236							
BGLC	Bering Glacier	18.77	51		P	P	08 35 33.9	0.0
	baz=256							
HDA	Harding Lake	18.82	37		P	P	08 35 34.6	0.0
HDA					IAmb	IAmb	08 35 37.1	
	comp=Z,161nm,1.4s							
HDA	Harding Lake	18.82	37		P	P	08 35 33.9	-0.6
	baz=239,SNR=37							
GLB	Gilahina Butte	18.89	47		P	P	08 35 34.7	-0.7
VRDI	Verde Repeater	18.99	48		P	P	08 35 36.3	-0.3
SNH	Sunshine Point	19.00	51		P	P	08 35 36.7	+0.1
SNH					IAmb	IAmb	08 35 51.5	
	comp=Z,148nm,1.0s							
CRQE	Cirque	19.02	49		P	P	08 35 36.1	-0.8
	baz=254							
POKR	Poker Plat Res	19.02	34		P	P	08 35 35.8	-0.9
	baz=236							
IL31		19.03	36		P	Pn	08 35 37.2	-0.5
ILAR	Eielson Array	19.03	36		P	P	08 35 35.7	-1.2
	comp=Z,5.5nm,0.3s,baz=228,slow=8.9,SNR=61							
ILAR					LR	LR	08 42 40.5	
	comp=Z,1µm,21.6s,baz=255,slow=36							
ILAR					ScP	ScP	08 43 32.9	-0.6
	comp=Z,0.1nm,0.3s,baz=245,slow=3.9,SNR=2.1							
ILAR	Eielson Array	19.03	36		P	P	08 35 37.0	+0.2
TGL	Tana Glacier	19.15	49		P	P	08 35 38.5	+0.2
MCARA	McCarthy VSAT	19.23	47		P	P	08 35 39.4	+0.3
	baz=253,SNR=6.3							
H24K	Noodor Dome	19.28	32		P	P	08 35 39.4	-0.2
	baz=234,SNR=75							
RIDG	Independent Ri	19.32	40		P	P	08 35 39.7	-0.4
	baz=244,SNR=9.1							
MESA	MESA	19.43	51		P	Pn	08 35 42.4	-0.4
MESA					IAmb	IAmb	08 35 47.9	
	comp=Z,146nm,1.2s							
MESA	MESA	19.43	51		P	P	08 35 40.9	-0.5
	baz=257,SNR=7.3							
COLD	Coldfoot	19.44	27		P	Pn	08 35 42.8	+0.2
COLD	Coldfoot	19.44	27		P	P	08 35 41.4	+0.1
	baz=227,SNR=26							
MENT	Mentasta	19.45	43		P	Pn	08 35 42.3	-0.5
J25K	Salcha River,	19.52	37		P	P	08 35 41.0	-1.2
	baz=241,SNR=82							
M26K	Nabesna, AK	19.57	45		P	P	08 35 43.2	+0.5
M26K	Nabesna, AK	19.57	45		P	P	08 35 42.5	-0.3
	baz=250,SNR=11							
L26K	Log Cabin Wild	19.64	43		P	P	08 35 43.1	-0.4
	baz=248,SNR=12							
GRNC	Granite Creek	19.65	50		P	P	08 35 43.3	-0.6
GRNC					IAmb	IAmb	08 36 02.8	
	comp=Z,136nm,1.1s							
SCRK	Sand Creek	19.76	40		P	P	08 35 43.8	-1.2
SCRK	Sand Creek	19.76	40		P	P	08 35 43.8	-1.2
	baz=244,SNR=27							
CTG	Chitna Glacier	19.91	49		P	P	08 35 45.6	-1.0
	baz=256							
PRP	Porcupine Dome	19.91	35		P	P	08 35 45.1	-1.5
	baz=238,SNR=16							
LOGN	Logan Glacier	20.03	50		P	P	08 35 48.2	+0.2
LOGN					IAmb	IAmb	08 36 14.7	
	comp=Z,89nm,1.0s							
M27K	Edge Creek, AK	20.05	45		P	P	08 35 47.2	-0.9
M27K	Edge Creek, AK	20.05	45		P	P	08 35 46.8	-1.2
	baz=252							
J26L	Joseph Creek	20.16	39		P	P	08 35 48.1	-1.1
	baz=244,SNR=108							
PCA	Pinnacle	20.25	52		P	P	08 35 50.5	+0.3
PCA					IAmb	IAmb	08 36 07.6	
	comp=Z,90nm,0.8s							
PINM	Pinnacle	20.25	52		P	P	08 35 50.0	-0.2
	baz=260,SNR=12							
L27K	Beaver Creek,	20.30	43		P	Pn	08 35 51.7	-1.2
L27K	Beaver Creek,	20.30	43		P	P	08 35 50.6	-0.1
	baz=250,SNR=8.7							
BCAR	Beaver Creek A	20.32	43		P	P	08 35 51.9	+0.9
BVCY	Beaver Creek	20.52	45		P	P	08 35 52.1	-0.9
	baz=253							
YUK3	Moose Creek	20.52	47		P	P	08 35 52.0	-1.3
	baz=255,SNR=6.3							
BCPM	Bancas Point	20.53	53		P	P	08 35 53.5	+0.3
BCPM					IAmb	IAmb	08 36 10.1	
	comp=Z,148nm,0.9s							
FYU	Fort Yukon	20.58	32		P	P	08 35 54.2	+0.6
FYU					IAmb	IAmb	08 35 56.3	
	comp=Z,279nm,1.2s							
TOLK	Toolik Lake Re	20.59	25		P	P	08 35 54.1	+0.2
TOLK					IAmb	IAmb	08 36 12.6	
	comp=Z,104nm,0.8s							
TOLK	Toolik Lake Re	20.59	25		P	P	08 35 53.5	-0.4
	baz=226,SNR=29							
PNL	Peninsula	20.60	54		P	P	08 35 54.3	+0.3
	baz=262,SNR=11							
EGAK	Eagle	21.21	39		P	P	08 35 59.1	-1.4
EGAK	Eagle	21.21	39		P	P	08 36 00.0	-0.5
	baz=246,SNR=68							
A21K	Barrow	21.25	15		P	P	08 36 00.7	-0.1
	baz=210							
YUK4	Talbot Arm	21.26	49		P	P	08 36 01.3	0.0
	baz=258							
BMAR	Burnt Mountain	21.27	31		P	P	08 36 01.6	+0.4
YUK6	Outpost Mounta	21.32	50		P	P	08 36 01.3	-0.6
	baz=259							
SEY	Seymchan	21.52	315		P	P	08 36 03.9	+0.1
	comp=Z,3.7nm,0.8s,baz=107,slow=14,SNR=3.6							
SEY					ScP	ScP	08 43 38.7	-0.7
	comp=Z,1.2nm,0.8s,baz=96,slow=9.2,SNR=2.1							
SEY					LR	LR	08 44 12.1	
	comp=Z,2µm,19.7s,baz=108,slow=36							
MA2	Magadan	21.64	306	*i*	P	P	08 36 07.0	+1.9
MA2					pmax	pmax		
	comp=Z,66nm,2.7s							
DAWY	Dawson	21.67	42		P	P	08 36 04.1	-1.3
DAWY					IAmb	IAmb	08 36 19.7	
	comp=Z,62nm,1.1s							
DAWY	Dawson	21.67	42		P	P	08 36 04.8	-0.6
	baz=250,SNR=24							
HYT	Haines Junctio	21.71	51		P	P	08 36 07.4	+1.3
HYT	Haines Junctio	21.71	51		P	P	08 36 05.6	-0.4
	baz=261,SNR=9.7							
J29M	Klondike Camp	22.28	41		P	P	08 36 12.0	0.0
	baz=251,SNR=8.5							
M30M	Minto, Yukon	22.38	46		P	P	08 36 14.0	+0.9
	baz=257							
I29M	Ogilvie Camp,	22.55	39		P	P	08 36 13.8	-1.1
	baz=249,SNR=30							
SIT	Sitka	22.61	61		P	P	08 36 15.1	-0.4
	baz=272							
SKAG	Skagway	22.64	55		P	P	08 36 15.8	0.0
	baz=266,SNR=15							
N31M	Braeburn, Yuko	22.64	49		P	P	08 36 14.5	-1.4
	baz=261							
WHY	Whitehorse	22.97	52		P	P	08 36 18.5	-0.9
	baz=264							
JIS	Juneau Island	23.09	58		P	P	08 36 21.3	+0.8
JIS					IAmb	IAmb	08 36 55.2	
	comp=Z,85nm,1.1s							
M31M	Drury Creek, Y	23.41	48		P	P	08 36 23.4	-0.3
	baz=261							
EPYK	Eagle Plains	23.53	37		P	P	08 36 23.4	-1.4
	baz=249,SNR=9.7							
P33M	Teslin, Yukon	23.95	53		P	P	08 36 28.9	0.0
	baz=267							
CRAG	Craig	23.97	65		P	P	08 36 29.0	0.0
	baz=277							
WRAK	Wrangell Islan	24.29	62		P	P	08 36 31.8	-0.1
	baz=276,SNR=6.1							
MMPY	Sheldon Lake,	24.91	47		P	P	08 36 37.6	0.0
	baz=263,SNR=7.5							
DLBC	Dease Lake	25.39	57		P	P	08 36 43.2	+1.2
	comp=Z,32nm,0.9s,baz=279,slow=8.6,SNR=10							
DLBC	Dease Lake	25.39	57		P	P	08 36 44.2	+2.2
DLBC					IAmb	IAmb	08 36 58.7	
	comp=Z,101nm,1.1s							
INK	Inuvik	25.39	34		P	P	08 36 41.5	-0.3
	comp=Z,106nm,1.1s,baz=242,slow=6.4,SNR=28							
INK	Inuvik	25.39	34		P	P	08 36 41.0	-0.8
INK					pmax	pmax		
	comp=Z,132nm,1.1s							
INK	Inuvik	25.39	34		P	P	08 36 41.0	-0.8
INK					IAmb	IAmb	08 36 44.0	
	comp=Z,132nm,1.1s							
INK	Inuvik	25.39	34		P	P	08 36 41.2	-0.5
	baz=249,SNR=56							
TGTN	Hyland Airport	26.23	50		P	P	08 36 49.5	-0.1
	baz=268							
BBB	Bella Bella	27.56	71		LR	LR	08 46 34.5	
	comp=Z,2µm,18.4s,baz=320,slow=33							
WRGLY	Wrigley	28.51	46		P	P	08 37 09.0	-0.9
	baz=269							
YSS	Yuzh-Sakhalins	28.74	278	⇑*e*	P	P	08 37 13.2	+1.2
YSS				*e*			08 37 26.9	
YSS					pmax	pmax		
	comp=E,50nm,1.9s							
YSS					pmax	pmax		
	comp=Z,60nm,1.9s							
YSS					pmax	pmax		
	comp=N,30nm,2.1s							
YSS	Yuzh-Sakhalins	28.74	278		P	P	08 37 13.0	+0.9
A36M	Sachs Harbour	29.30	28		P	P	08 37 16.6	-0.2
A36M					IAmb	IAmb	08 37 26.7	
	comp=Z,26nm,0.8s							
A36M	Sachs Harbour	29.30	28		P	P	08 37 15.9	-0.9
	baz=252,SNR=7.4							
JKA	Kamikawa-asahi	30.16	273		P	P	08 37 24.3	-0.3
ASAJ	Asahikawa	30.16	273		P	P	08 37 25.8	+1.1
	comp=Z,31nm,0.7s,baz=46,slow=6.3,SNR=10							
ASAJ	Asahikawa	30.16	273		P	P	08 37 24.3	-0.4
ASAJ					pmax	pmax		
	comp=Z,123nm,1.2s							
ERM	Erimo	30.91	269	*i*	P	P	08 37 32.0	+0.7
ERM					pmax	pmax		
	comp=Z,49nm,1.0s							
GRNR	Gornyy	31.07	289	⇑*i*	P	P	08 37 32.1	-0.6
GRNR					pmax	pmax		
	comp=Z,5.0nm,1.0s							
GRNR					MLR	MLR		
	comp=E,370nm,15.0s							
GRNR					MLR	MLR		
	comp=N,710nm,13.0s							
GRNR					MLR	MLR		
	comp=Z,900nm,17.0s							
LLLB	Lillooet	31.77	71		P	P	08 37 40.0	+1.1
YAK	Yakutsk	31.92	312		LR	LR	08 51 09.2	
	comp=Z,3µm,18.0s,baz=97,slow=37							
TIXI	Tiksi	32.23	330		P	P	08 37 42.8	+0.1
	comp=Z,5.6nm,0.6s,baz=112,slow=14,SNR=6.6							
TIXI					ScP	ScP	08 44 11.6	+0.5
	comp=Z,1.5nm,0.3s,baz=95,slow=2.1,SNR=6.0							
TIXI	Tiksi	32.23	330		P	P	08 37 43.1	+0.5
TIXI					IAmb	IAmb	08 37 43.6	
	comp=Z,25nm,1.3s							
D03D	Eldon	32.30	77		P	P	08 37 44.1	+0.6
	baz=296							
B05A	Bryant	32.58	75		P	P	08 37 46.5	+0.6
	baz=295							
YKA	Yellowknife Ar	32.61	47		P	P	08 37 45.2	-0.8
	comp=Z,9.8nm,1.1s,baz=42,slow=3.9,SNR=14							
YKA					PcP	PcP	08 40 32.5	+1.1
	comp=Z,2.4nm,0.8s,baz=285,slow=1.9,SNR=3.3							
YKA					LR	LR	08 51 23.0	
	comp=Z,4µm,18.3s,baz=0.0,slow=37							
YKA	Yellowknife Ar	32.61	47		P	P	08 37 46.0	0.0
D04E	Lakebay	32.65	77		P	P	08 37 45.4	-1.1
	baz=297							
F04D	Rainier, OR	33.01	79		P	P	08 37 48.8	-0.9
	baz=298							
E04D	Cinebar	33.06	78		P	P	08 37 51.1	+1.0
	baz=298							
D05A	Enumclaw	33.12	77		P	P	08 37 52.5	+1.8
D05A					IAmb	IAmb	08 38 08.1	
	comp=Z,72nm,1.0s							
G03D	McMinnville, O	33.27	81		P	P	08 37 52.9	+0.9
	baz=299							
TEY	Ternei	33.42	279	⇑*i*	P	P	08 37 53.5	+0.2
TEY					pmax	pmax		
	comp=N,20nm,0.8s							
TEY					pmax	pmax		
	comp=E,50nm,0.8s							
TEY					pmax	pmax		
	comp=Z,80nm,0.8s							
H04D	Lebanon	33.93	82		P	P	08 37 58.6	+0.8
	baz=300							
H04A	Detroit Lake	34.19	81		P	P	08 38 00.6	+0.5
H04A					IAmb	IAmb	08 38 16.2	
	comp=Z,64nm,1.1s							
HOOD	Mount Hood Mea	34.21	80		P	P	08 38 01.4	+1.1
K02D	Willamette Mer	34.31	85		P	P	08 38 00.3	-0.9
	baz=302							
KLR	Kul'dur	34.44	288	⇑*i*	P	P	08 38 01.0	-1.2
KLR					pmax	pmax		
	comp=Z,37nm,1.5s							
G05D	Wamic, OR	34.45	80		P	P	08 38 01.2	-1.1
	baz=300							
I04A	Tendick Farm,	34.51	82		P	P	08 38 02.4	-0.5
	baz=301							
L02E	Cave Junction	34.64	86		P	P	08 38 04.4	+0.4
	baz=303							
I05D	Terrebonne, OR	34.89	81		P	P	08 38 06.8	+0.7
	baz=301							
J04D	Umpqua Nationa	34.98	83		P	P	08 38 05.7	-1.5
	baz=302							
D08A	Wollman Farm,	35.04	75		P	P	08 38 08.2	+0.8
ZEA	Zeya	35.25	298	*e*	P	P	08 38 08.3	-0.8
ZEA					pmax	pmax		
	comp=Z,20nm,1.1s							
H11N2	WAKE ISLAND Hy	35.34	214		T	T	09 16 12.4	
	baz=21,slow=76,SNR=11							
H11N3	WAKE ISLAND Hy	35.35	214		T	T	09 16 14.7	
	baz=21,slow=76,SNR=13							
H11N1	WAKE ISLAND Hy	35.36	214		T	T	09 16 22.2	
	baz=21,slow=76,SNR=11							
L04D	Klamath Falls	35.41	85		P	P	08 38 10.4	-0.4
	baz=303							
YBH	Yreka Blue Hor	35.43	86		P	P	08 38 12.6	+1.8
	comp=Z,8.7nm,0.9s,baz=328,slow=8.1,SNR=14							
YBH	Yreka Blue Hor	35.43	86		P	P	08 38 12.8	+2.0
YBH					IAmb	IAmb	08 38 27.8	
	comp=Z,30nm,1.0s							
J05D	Fort Rock, OR	35.50	82		P	P	08 38 12.0	+0.4
	baz=302,SNR=7.8							
M02C	Callahan	35.53	86		P	P	08 38 11.5	-0.2
	baz=304							
K04D	Chiloquin, OR	35.53	84		P	P	08 38 10.4	-1.4
	baz=303							
NEW	Newport	35.57	73		P	P	08 38 12.7	+0.8
	comp=Z,6.5nm,0.5s,baz=294,slow=8.4,SNR=21							
NEW	Newport	35.57	73		P	P	08 38 12.9	+1.0
NEW					IAmb	IAmb	08 38 33.6	
	comp=Z,22nm,0.9s							
NEW	Newport	35.57	73		P	P	08 38 12.1	+0.1
	baz=297,SNR=10							
EDM	Edmonton	35.69	63		P	P	08 38 13.9	+1.0
EDM					pmax	pmax		
	comp=Z,54nm,0.9s							
EDM	Edmonton	35.69	63		P	P	08 38 13.9	+1.0
EDM					IAmb	IAmb	08 38 31.2	
	comp=Z,54nm,0.9s							
N02D	Trinity Center	35.86	87		P	P	08 38 14.7	+0.2
	baz=304							
G08A	Pilot Rock	35.87	78		P	P	08 38 15.7	+1.0
M04C	Macdoel	35.94	85		P	P	08 38 15.8	+0.5
	baz=304							
K05A	Summer Lake	36.01	83		P	P	08 38 18.0	+2.0
O02D	Mt. Diablo Mer	36.26	88		P	P	08 38 18.6	+0.6
	baz=305							
JSD	Sado	36.27	268		P	P	08 38 18.2	+0.2
H11S1	WAKE ISLAND Hy	36.55	213		T	T	09 17 40.6	
	baz=20,slow=75,SNR=34							
H11S2	WAKE ISLAND Hy	36.56	213		T	T	09 17 38.9	
	baz=20,slow=75,SNR=32							
H11S3	WAKE ISLAND Hy	36.56	213		T	T	09 17 31.4	
	baz=20,slow=75,SNR=24							
F10A	Beach Ranch, E	36.59	76		P	P	08 38 21.9	+1.1
USA0B	Ussuriysk Arra	36.69	281	⇑*i*	P	P	08 38 20.9	-0.6
USRK	Ussuriysk Ar.	36.69	281		P	P	08 38 21.3	-0.2
	comp=Z,7.6nm,0.7s,baz=62,slow=7.0,SNR=9.6							
USRK					LR	LR	08 54 08.2	
	comp=Z,1µm,19.4s,baz=48,slow=37							
USRK	Ussuriysk Ar.	36.69	281		P	P	08 38 20.8	-0.6
USRK	Ussuriysk Ar.	36.69	281		P	P	08 38 20.8	-0.6
O03E	Paynes Creek	36.81	87		P	P	08 38 22.7	+0.1
	baz=305,SNR=7.4							
MOD	Modoc Plateau	36.83	84		P	P	08 38 25.1	+2.1
MOD					IAmb	IAmb	08 38 39.4	
	comp=Z,65nm,1.2s							
BMO	Blue Mountains	37.10	78		P	P	08 38 25.9	+0.7
BMO					pmax	pmax		
	comp=Z,13nm,1.0s							
BMO	Blue Mountains	37.10	78		P	P	08 38 25.9	+0.7
WALA	Waterton Lakes	37.10	70		P	P	08 38 26.1	+1.0
WALA					IAmb	IAmb	08 38 54.9	
	comp=Z,26nm,1.1s							
J08A	Circle Bar Ran	37.17	81		P	P	08 38 26.9	+1.1
J08A					IAmb	IAmb	08 38 41.6	
	comp=Z,32nm,1.0s							
MJA0	Matsu Arr-Jizo	37.21	266	*e*	P	P	08 38 25.9	-0.2
MJA0					pmax	pmax		
	comp=Z,4.0nm,0.8s							
MAJO	Matsushiro	37.23	266		P	P	08 38 26.6	+0.4
MAJO					pmax	pmax		
	comp=Z,112nm,1.9s							
MAJO	Matsushiro	37.23	266		P	P	08 38 26.6	+0.4
MAJO					IAmb	IAmb	08 38 53.7	
	comp=Z,112nm,1.9s							
MAT	Matsushiro	37.23	266		P	P	08 38 26.6	+0.4
MJAR	Matsushiro Arr	37.23	266		P	P	08 38 25.9	-0.3
	comp=Z,4.3nm,0.9s,baz=45,slow=7.3,SNR=7.0							
WVOR	Wild Horse Val	37.57	82		P	P	08 38 29.6	+0.4
WVOR					pmax	pmax		
	comp=Z,44nm,1.1s							
WVOR	Wild Horse Val	37.57	82		P	P	08 38 29.6	+0.4
WVOR					IAmb	IAmb	08 38 45.2	
	comp=Z,44nm,1.1s							
BEKR	Beckworth	37.96	87		P	P	08 38 33.3	+0.8
BEKR					IAmb	IAmb	08 38 48.6	
	comp=Z,47nm,1.3s							
MSHR	Mys Shultsa	38.07	279	*c i*	P	P	08 38 33.9	+0.8
MSHR					pmax	pmax		
	comp=Z,128nm,1.8s							
MSO	Missoula	38.14	73		P	P	08 38 34.5	+0.5
MSO					IAmb	IAmb	08 38 50.5	
	comp=Z,78nm,1.6s							
MSO	Missoula	38.14	73		P	P	08 38 33.8	-0.1
	baz=300,SNR=9.1							
RES	Resolute Bay	38.17	25		PcP	PcP	08 40 48.5	+0.9
	comp=Z,3.0nm,0.5s,baz=331,slow=1.5,SNR=6.2							
MPK	Martis Peak	38.50	87		P	P	08 38 37.2	+0.1
MPK					IAmb	IAmb	08 38 54.1	
	comp=Z,122nm,1.2s							
EMB	Emerald Bay	38.64	88		P	P	08 38 38.9	+0.6
PAHR	Pah Rah Range	38.66	86		P	P	08 38 39.5	+1.2
PAHR					IAmb	IAmb	08 38 54.6	
	comp=Z,63nm,1.1s							
VCNR	Virginia City	38.73	87		P	P	08 38 40.5	+1.4
VCNR					IAmb	IAmb	08 38 55.7	
	comp=Z,67nm,1.1s							
MFID	Camas Ranch	38.77	79		P	P	08 38 40.3	+1.1
PNTR	Pine Nut	38.89	87		P	P	08 38 42.0	+1.6
PNTR					IAmb	IAmb	08 38 57.7	
	comp=Z,190nm,1.5s							
CMB	Columbia Colle	39.03	89		P	P	08 38 41.8	+0.4
CMB					pmax	pmax		
	comp=Z,38nm,1.3s							
CMB	Columbia Colle	39.03	89		P	P	08 38 41.8	+0.4
YERR	Yerington	39.18	87		P	P	08 38 43.6	+0.8
YERR					IAmb	IAmb	08 38 59.1	
	comp=Z,64nm,1.2s							
HRY	Holter Researc	39.46	72		P	P	08 38 45.0	+0.1
LRM	Limekiln Ridge	39.54	74		P	P	08 38 46.2	+0.4
HLID	Hailey	39.55	78		P	P	08 38 45.4	-0.4
	baz=303,SNR=11							
BMN	Battle Mountai	39.58	84		P	P	08 38 47.2	+1.1
BMN					pmax	pmax		
	comp=Z,21nm,1.2s							
BMN	Battle Mountai	39.58	84		P	P	08 38 47.2	+1.1
BCYI	Bear Canyon	39.76	76		P	P	08 38 48.0	+0.4

MCMT	McKenzie Canyo	39.82	75	P	P	08 38 47.9	-0.3
EGMT	Eagleton	40.03	69	P	P	08 38 49.4	-0.2
	baz=300,SNR=14						
LHV	Little Huntoon	40.08	87	P	P	08 38 52.0	+2.0
LHV				IAmb	IAmb	08 39 06.9	
	comp=Z,60nm,1.3s						
NVAR	Mina Array Bea	40.09	87	P	P	08 38 51.7	+1.2
	comp=Z,4.6nm,0.7s,baz=291,slow=9.1,SNR=16						
NVAR				ScP	ScP	08 44 40.5	-0.4
	comp=Z,1.1nm,0.8s,baz=289,slow=4.3,SNR=5.8						
NVAR				LR	LR	08 54 36.8	
	comp=Z,711nm,18.1s,baz=350,slow=35						
NVAR	Mina Array Bea	40.09	87	P	P	08 38 50.7	+0.2
MDPB	Devils Postpil	40.10	88	P	P	08 38 52.1	+1.6
MDPB				IAmb	IAmb	08 39 07.9	
	comp=Z,78nm,1.3s						
BOZ	Bozeman (W)	40.15	73	P	P	08 38 51.2	+0.5
BOZ				pmax	pmax		
	comp=Z,35nm,1.4s						
BOZ	Bozeman (W)	40.15	73	P	P	08 38 51.2	+0.5
BOZ	Bozeman (W)	40.15	73	P	P	08 38 50.8	0.0
	baz=302,SNR=15						
NV11	Mina Array Sit	40.19	87	P	P	08 38 52.0	+0.9
VOG	Valley Oaks Go	40.73	90	P	P	08 38 56.6	+1.2
	baz=309						
YHB	Horse Butte	40.86	74	P	P	08 38 56.7	0.0
CN2	Changchun	40.89	284	*e*P	P	08 38 56.3	-0.4
CN2				pmax	pmax		
	comp=Z,10.0nm,1.4s						
TPH	Tonopah	40.99	87	P	P	08 38 59.0	+1.2
TPH				pmax	pmax		
	comp=Z,174nm,1.2s						
TPH	Tonopah	40.99	87	P	P	08 38 59.0	+1.2
TIN	Tinemaha, Big	40.99	89	P	P	08 38 59.1	+1.4
	baz=309						
SMMC	Simmler	40.99	92	P	P	08 38 58.0	+0.4
	baz=310						
YMR	Madison River	41.04	74	P	P	08 38 59.1	+0.9
YHH	Holmes Hill	41.05	74	P	P	08 38 58.9	+0.5
FFC	Flin Flon	41.22	57	P	P	08 38 59.2	0.0
FFC				pmax	pmax		
	comp=Z,51nm,1.5s						
FFC	Flin Flon	41.22	57	P	P	08 38 59.2	0.0
FFC				IAmb	IAmb	08 39 01.0	
	comp=Z,51nm,1.5s						
VES	Vestal, Richgr	41.22	91	P	P	08 39 00.2	+0.8
	baz=310						
GCMT	Greycliff	41.22	72	P	P	08 39 00.1	+0.6
LCH	Last Change Ra	41.24	88	P	P	08 39 01.2	+1.4
LCH				IAmb	IAmb	08 39 16.2	
	comp=Z,38nm,1.1s						
PKM	Mcpherson Peak	41.38	92	P	P	08 39 02.0	+1.0
	baz=311						
HIA	Hailar	41.41	294	⇓*i*P	P	08 39 00.6	-0.3
HIA				pmax	pmax		
	comp=Z,23nm,1.0s						
H17A	Grant Village	41.42	74	P	P	08 39 01.0	-0.4
	baz=303						
CWC	Cottonwood Cre	41.47	89	P	P	08 39 02.6	+0.9
	baz=309						
GRAC	Grapevine Rang	41.56	88	P	P	08 39 03.4	+1.0
	baz=309						
ISA	Isabella, Lake	41.71	90	P	P	08 39 04.0	+0.3
ISA				pmax	pmax		
	comp=Z,43nm,1.2s						
ISA	Isabella, Lake	41.71	90	P	P	08 39 04.0	+0.3
ISA				IAmb	IAmb	08 39 19.9	
	comp=Z,43nm,1.2s						
ISA	Isabella, Lake	41.71	90	P	P	08 39 03.8	+0.2
	baz=310,SNR=5.8						
RLMT	Red Lodge	41.82	73	P	P	08 39 05.5	+1.0
RLMT				IAmb	IAmb	08 39 09.1	
	comp=Z,31nm,1.1s						
RLMT	Red Lodge	41.82	73	P	P	08 39 04.4	-0.1
	baz=303,SNR=15						
REDW	Red Top Meadow	41.83	76	P	P	08 39 04.5	-0.2
REDW				IAmb	IAmb	08 39 21.4	
	comp=Z,53nm,1.7s						
SNOW	Snow King Moun	41.83	76	P	P	08 39 05.9	+1.1
ARVC	Arvin	41.84	91	P	P	08 39 03.6	-0.9
	baz=310						
R11A	Troy Canyon, C	41.84	85	P	P	08 39 05.0	+0.3
	baz=308,SNR=14						
FURC	Furnace Creek,	42.21	88	P	P	08 39 08.3	+0.7
	baz=309,SNR=8.6						
OSI	Osito Audit: C	42.24	92	P	P	08 39 07.8	-0.1
	baz=311						
LRMC	Laurel Mtn Rad	42.33	90	P	P	08 39 08.7	0.0
	baz=310						
DUG	Dugway, Tooele	42.45	81	P	P	08 39 10.2	+0.6
	baz=306,SNR=16						
EDW2	Edwards Air Fo	42.52	91	P	P	08 39 10.3	+0.1
	baz=311						
LAO	LASA Array	42.77	69	P	P	08 39 12.0	-0.1
	baz=302,SNR=7.4						
BW06	Boulder Array	42.95	76	P	P	08 39 13.7	-0.1
	baz=305,SNR=18						
PD31	Pinedale Array	42.95	76	P	P	08 39 14.3	+0.5
PD31				IAmb	IAmb	08 39 29.5	
	comp=Z,37nm,1.3s						
PDAR	Pinedale Array	42.95	76	P	P	08 39 14.2	+0.5
	comp=Z,7.6nm,0.5s,baz=312,slow=3.8,SNR=28						
GSC	Goldstone, Bar	42.99	89	P	P	08 39 14.6	+0.6
	baz=310,SNR=13						
DGMT	Dagmar	43.01	66	P	P	08 39 13.4	-0.5
	baz=301						
KSRS	Korea Array	43.08	275	P	P	08 39 15.7	+1.1
	comp=Z,13nm,1.1s,baz=57,slow=8.0,SNR=13						
KSRS				LR	LR	08 57 01.5	
	comp=Z,429nm,19.9s,baz=58,slow=36						
BFSC	Mount Baldy Ra	43.15	91	P	P	08 39 15.4	0.0
	baz=311,SNR=9.6						
HEC	Hector,Ludlow	43.59	90	P	P	08 39 18.7	-0.1
	baz=311						
BBRC	Big Bear Solar	43.59	91	P	P	08 39 18.8	-0.3
	baz=311						
MURC	Murrieta	43.86	92	P	P	08 39 20.3	-0.6
	baz=312						
GMRC	Granite Mounta	44.04	89	P	P	08 39 23.1	+0.5
	baz=311,SNR=7.9						
TJN	Taejon	44.11	274	*d* *i*P	P	08 39 24.0	+1.1
PFO	Pinyon Flats O	44.31	91	*i* P	P	08 39 24.8	+0.1
PFO				pmax	pmax		
	comp=Z,11nm,0.8s						
PFO	Pinyon Flats O	44.31	91	P	P	08 39 23.9	-0.8
	baz=312						
TPFO	Pinon Flats	44.31	91	P	P	08 39 23.9	-0.9
	baz=312						
BELC	Belle Mtn. Jos	44.34	90	P	P	08 39 25.1	+0.1
	baz=311,SNR=5.2						
IRM	Iron Mountain	44.77	89	P	P	08 39 28.3	0.0
	baz=311						
MONP2	Monument Peak	44.81	92	P	P	08 39 28.5	-0.3
	baz=312						
K22A	Casper	44.84	74	P	P	08 39 28.2	-0.7
	baz=306						
BC3	Big Chuckawall	44.91	90	P	P	08 39 29.5	0.0
	baz=312						
U15A	North Rim	45.09	85	P	P	08 39 31.6	+0.6
U15A				IAmb	IAmb	08 39 47.2	
	comp=Z,53nm,1.1s						
SWSC	Sam W. Stewart	45.16	91	P	P	08 39 30.8	-0.6
	baz=312						
IKP	In-Ko-Pah, Jac	45.17	92	P	P	08 39 31.3	-0.2
	baz=312						
O20A	White River Ci	45.29	78	P	P	08 39 32.5	0.0
	baz=307,SNR=15						
PDMCI	Parker Dam,Lak	45.30	88	P	P	08 39 32.9	+0.5
	baz=311						
RSSD	Black Hills	45.48	71	P	P	08 39 34.1	+0.1
RSSD				pmax	pmax		
	comp=Z,28nm,1.4s						
RSSD	Black Hills	45.48	71	P	P	08 39 34.1	+0.1
RSSD				IAmb	IAmb	08 39 36.8	
	comp=Z,28nm,1.4s						
RSSD	Black Hills	45.48	71	P	P	08 39 33.5	-0.5
	baz=305						
GLA	Glamis	45.70	90	P	P	08 39 36.1	+0.4
	baz=312						
MDND	Maddock	45.94	64	P	P	08 39 37.4	+0.1
	baz=303,SNR=15						
NRIK	Noril'sk	46.00	331	P	P	08 39 37.2	-0.3
	comp=Z,20nm,1.0s,baz=63,slow=7.3,SNR=11						
NRIK				pPcP		08 41 27.8	
	comp=Z,11nm,0.8s,baz=142,slow=1.8,SNR=5.5						
N23A	Red Feather La	46.23	76	P	P	08 39 39.1	-0.9
	baz=307						
WUAZ	Wupatki	46.24	85	P	P	08 39 40.0	-0.1
	baz=310,SNR=7.8						
NEEM	North Greenlan	46.45	15	*i* P	P	08 39 41.2	-0.1
NOR	Nord	46.53	5	*i* P	P	08 39 41.2	-0.3
ULM	Lac du Bonnet	46.67	59	P	P	08 39 43.5	+0.5
	comp=Z,5.6nm,0.5s,baz=310,slow=7.9,SNR=11						
ULM	Lac du Bonnet	46.67	59	*c* *i*P	P	08 39 42.8	-0.2
ULM				pmax	pmax		
	comp=Z,6.0nm,0.4s						
MVCO	Mesa Verde	46.94	81	P	P	08 39 45.5	-0.1
	baz=309,SNR=6.2						
ISCO	Idaho Springs	47.10	77	P	P	08 39 46.4	-0.4
	baz=308,SNR=5.6						
W18A	Petrified Fore	47.52	84	P	P	08 39 48.9	-1.1
	baz=311						
S22A	4UR Ranch, Cre	47.63	80	P	P	08 39 50.8	-0.3
	baz=309,SNR=14						
214A	Organ Pipe Nat	47.70	90	P	P	08 39 51.1	-0.2
	baz=313						
AGMN	Agassiz Nation	47.77	62	P	P	08 39 50.8	-0.8
	baz=305,SNR=12						
Q24A	Divide	47.90	77	P	P	08 39 52.4	-0.7
	baz=309						
SUSD	Miller	48.26	68	P	P	08 39 55.2	-0.3
	baz=306,SNR=8.0						
SDCO	Great Sand Dun	48.45	79	P	P	08 39 57.3	0.0
	baz=309,SNR=15						
OGNE	Ogallala	48.55	73	P	P	08 39 56.9	-1.0
	baz=308						
BJI	Beijing	48.70	286	P	P	08 39 59.6	+0.8
BJI				pmax	pmax		
	comp=Z,16nm,1.1s						
TUC	Tucson	48.72	88	P	P	08 39 58.9	-0.4
	baz=312						
TLY	Talaya	48.86	305	P	P	08 40 00.1	+0.1
	comp=Z,5.4nm,0.5s,baz=22,slow=5.3,SNR=3.6						
TLY	Talaya	48.86	305	*c* *i*P	P	08 39 59.8	-0.2
TLY				pmax	pmax		
	comp=Z,30nm,1.5s						
TLY	Talaya	48.86	305	IAmb	IAmb	08 40 01.6	
	comp=Z,50nm,1.6s						
KSCO	Kaye Shedlock'	49.40	76	P	P	08 40 04.0	-0.4
	baz=309,SNR=6.2						
T25A	Trinidad	49.50	79	P	P	08 40 05.3	-0.1
	baz=310,SNR=20						
SONM	Songino Array	49.63	299	P	P	08 40 06.5	+0.4
	comp=Z,6.0nm,0.6s,baz=50,slow=7.8,SNR=20						
SONM				pPcP		08 41 42.2	
	comp=Z,2.9nm,0.9s,baz=56,slow=2.7,SNR=5.0						
SONM				ScP	ScP	08 45 19.5	-0.4
	comp=Z,1.4nm,1.0s,baz=22,slow=4.8,SNR=3.5						
ANMO	Albuquerque	49.66	82	P	P	08 40 08.2	+1.6
	comp=Z,4.5nm,1.0s,baz=309,slow=8.8,SNR=5.9						
ANMO	Albuquerque	49.66	82	⇑*i*P	P	08 40 06.9	+0.3
ANMO				pmax	pmax		
	comp=Z,11nm,1.3s						
ANMO	Albuquerque	49.66	82	P	P	08 40 05.7	-0.9
	baz=311						
ZAK	Zakamensk	49.80	304	*e*P	P	08 40 06.6	-0.7
ZAK				pmax	pmax		
	comp=Z,28nm,1.5s						
ECSD	EROS Data Cent	50.03	67	P	P	08 40 07.8	-1.2
	baz=308,SNR=8.5						
BNM	Barren Site	50.08	83	P	P	08 40 10.7	+0.8
MOY	Mondy	50.22	306	*e*P	P	08 40 09.7	-0.8
MOY				pmax	pmax		
	comp=Z,35nm,1.8s						
EYMN	Ely	50.35	60	P	P	08 40 10.6	-0.8
	baz=307,SNR=6.3						
SPITS	Spitsbergen Ar	50.43	357	P	P	08 40 11.3	-0.3
	comp=Z,3.9nm,0.6s,baz=41,slow=4.4,SNR=10						
121A	Cookes Peak, D	50.44	85	P	P	08 40 11.9	-0.6
	baz=312						
TIA	Tai'an	50.55	281	⇑P	P	08 40 13.1	0.0
TIA				pmax	pmax		
	comp=Z,23nm,1.4s						
BGNE	Belgrade	50.57	70	P	P	08 40 12.3	-0.8
	baz=309						
HHC	Hu-ho-hao-te	50.94	289	*e*P	P	08 40 15.7	-0.4
HHC				pmax	pmax		
	comp=Z,15nm,0.8s						
HHC				pmax	pmax		
	comp=Z,270nm,6.4s						
DAG	Danmarks Havn	50.96	7	*i* P	P	08 40 14.8	-0.8
DAG				IAmb	IAmb	08 40 16.1	
	comp=Z,26nm,1.4s						
L34A	Svendsen Farm,	51.26	69	P	P	08 40 18.0	-0.3
L34A				IAmb	IAmb	08 40 27.6	
	comp=Z,39nm,0.7s						
CBKS	Cedar Bluff	51.26	74	P	P	08 40 17.3	-1.1
	baz=310						
SPMN	Marine on St.	51.28	63	P	P	08 40 17.5	-0.9
	baz=308						
I37A	Lemond, Waseca	51.69	65	P	P	08 40 21.5	0.0
NJ2	Nanjing	52.25	276	*e*P	P	08 40 25.7	-0.1
NJ2				sP	pwP	08 40 39.6	-0.6
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.7s						
SUMG	Summit	52.28	16	*i* P	P	08 40 26.1	+0.1
SUMG				IAmb	IAmb	08 40 28.1	
	comp=Z,37nm,1.2s						
N35A	Tabor	52.38	69	P	P	08 40 26.4	-0.3
N35A				IAmb	IAmb	08 40 28.8	
	comp=Z,32nm,0.6s						
TIY	Taiyuan	52.43	286	*e*P	P	08 40 28.4	+1.2
TIY				S	S	08 47 46.6	-4.3
TIY				pmax	pmax		
	comp=Z,32nm,0.6s						
TIY				pmax	pmax		
	comp=Z,190nm,4.0s						
TIY				LR	LR		
	comp=Z,490nm,13.5s						
TIY				LR	LR		
	comp=Z,1µm,17.5s						
TIY				LR	LR		
	comp=Z,960nm,17.8s						
MNTX	Cornudas Mount	52.50	84	P	P	08 40 27.9	+0.1
MNTX				IAmb	IAmb	08 40 43.4	
	comp=Z,20nm,1.1s						
MNTX	Cornudas Mount	52.50	84	P	P	08 40 27.4	-0.4
	baz=313,SNR=5.8						
MSTX	Muleshoe	52.59	81	P	P	08 40 28.2	-0.2
	baz=312,SNR=8.2						
AMTX	Amarillo	52.65	79	P	P	08 40 28.3	-0.5
	baz=312						
KSU1	Kansas State U	52.95	72	P	P	08 40 30.1	-0.8
	baz=310						
SCIA	State Center	53.12	67	P	P	08 40 31.3	-0.9
	baz=310						
DBG	Daneborg	53.15	9	*i* P	P	08 40 29.4	-2.4
DBG				IAmb	IAmb	08 40 32.7	
	comp=Z,18nm,1.2s						
F42A	Maple Grove Fa	53.52	60	P	P	08 40 34.7	-0.3
F42A				IAmb	IAmb	08 41 01.5	
	comp=Z,43nm,1.2s						
E43A	Lone Tree Farm	53.74	59	P	P	08 40 36.6	0.0
E43A				IAmb	IAmb	08 40 51.9	
	comp=Z,34nm,1.1s						
N38A	Joes South For	53.83	68	P	P	08 40 36.7	-0.7
JFWS	Jewell Farm	54.16	64	P	P	08 40 38.5	-1.2
	baz=310						
WMOK	Wichita Mounta	54.52	77	P	P	08 40 41.8	-0.7
	baz=312,SNR=9.0						
ICESG	Greenland Ices	54.97	19	*e*P	P	08 40 44.3	-1.4
L42A	Oliver, Polo	55.08	65	P	P	08 40 45.3	-1.1
L42A				IAmb	IAmb	08 40 48.0	
	comp=Z,34nm,1.3s						
E46A	Sault Ste Mari	55.17	58	P	P	08 40 47.2	+0.2
E46A				IAmb	IAmb	08 41 02.6	
	comp=Z,42nm,1.0s						
X34A	Smith Ranch, M	55.19	77	P	P	08 40 47.1	-0.2
X34A				IAmb	IAmb	08 41 07.7	
	comp=Z,21nm,1.1s						
TX32	Lajitas Array	55.20	85	P	P	08 40 47.4	-0.2
TX32				IAmb	IAmb	08 41 02.8	
	comp=Z,31nm,1.0s						
TXAR	Lajitas Array	55.20	85	P	P	08 40 47.6	+0.1
	comp=Z,5.2nm,0.7s,baz=304,slow=5.6,SNR=40						
TXAR				pP	sP	08 41 00.0	+0.5
	comp=Z,14nm,0.8s,baz=297,slow=5.0,SNR=16						
TXAR	Lajitas Array	55.20	85	P	P	08 40 47.8	+0.3
P40A	Paris	55.34	68	P	P	08 40 47.4	-0.9
ABTX	Abilene, Hawle	55.42	80	P	P	08 40 48.5	-0.5
	baz=313						
TUL1	Leonard	55.54	74	P	P	08 40 49.0	-0.8
	baz=312						
L44A	Lake County Fo	55.95	63	P	P	08 40 51.6	-1.0
	baz=311						
GLMI	Grayling	56.01	59	P	P	08 40 51.8	-1.2
	baz=311						
WHN	Wuhan	56.08	278	⇓P	P	08 40 54.8	+1.1
WHN				sP	pwP	08 41 07.7	-0.5
HDIL	Hopedale	56.25	66	P	P	08 40 54.4	-0.4
HDIL				IAmb	IAmb	08 41 10.0	
	comp=Z,30nm,0.6s						
HDIL	Hopedale	56.25	66	P	P	08 40 53.6	-1.2
	baz=312						
ZALV	Zalesovo Beam	56.39	316	P	P	08 40 55.7	+0.1
	comp=Z,1.0nm,0.4s,baz=38,slow=5.6,SNR=2.3						
ZALV				PcP	PcP	08 41 53.0	+0.7
	comp=Z,2.6nm,0.6s,baz=35,slow=4.2,SNR=3.8						
ZALV				pPcP		08 42 06.5	
	comp=Z,8.7nm,0.7s,baz=108,slow=2.3,SNR=4.1						
Z35A	Perchaven, San	56.40	77	P	P	08 40 56.3	+0.3
Z35A				IAmb	IAmb	08 41 10.8	
	comp=Z,38nm,1.0s						
X37A	Clayton	56.68	75	P	P	08 40 58.1	+0.1
X37A				IAmb	IAmb	08 41 13.5	
	comp=Z,29nm,0.8s						
JCT	Junction City	56.80	82	P	P	08 40 58.2	-0.7
JCT				pmax	pmax		
	comp=Z,32nm,1.0s						
JCT	Junction City	56.80	82	P	P	08 40 58.2	-0.7
JCT				IAmb	IAmb	08 41 13.3	
	comp=Z,32nm,1.0s						
JCT	Junction City	56.80	82	P	P	08 40 58.0	-1.0
	baz=314						
U40A	Yellville	56.99	72	P	P	08 40 58.5	-1.7
U40A				IAmb	IAmb	08 41 13.1	
	comp=Z,18nm,0.8s						
U40A	Yellville	56.99	72	P	P	08 40 58.5	-1.7
	baz=313,SNR=16						
XAN	Xi'an	57.00	285	P	P	08 41 00.2	-0.1
XAN				pP	pP	08 41 09.8	+0.9
XAN				sP	pwP	08 41 15.1	+0.2
XAN				pmax	pmax		
	comp=Z,43nm,1.6s						
XAN	Xi'an	57.00	285	P	P	08 41 00.5	+0.2
XAN	Xi'an	57.00	285	P	P	08 41 00.5	+0.2
WHTX	Lake Whitney,	57.20	79	P	P	08 41 01.9	+0.3
WHTX	Lake Whitney,	57.20	79	P	P	08 41 00.3	-1.4
	baz=314						
W39A	Magazine	57.22	73	P	P	08 41 01.2	-0.6
	baz=313,SNR=8.7						
SFIN	Lafayette	57.61	65	P	P	08 41 04.0	-0.4
SFIN				IAmb	IAmb	08 41 07.2	
	comp=Z,50nm,1.2s						
SFIN	Lafayette	57.61	65	P	P	08 41 03.8	-0.7
	baz=312,SNR=7.9						
SCHQ	Schefferville	57.69	41	P	P	08 41 04.6	-0.2
	comp=Z,4.7nm,0.5s,baz=322,slow=7.3,SNR=8.7						
MIAR	Mount Ida	57.79	74	P	P	08 41 05.5	-0.3
	baz=314,SNR=16						
Z38A	Mt. Pleasant	57.83	76	P	P	08 41 06.4	+0.3
Z38A				IAmb	IAmb	08 41 20.8	
	comp=Z,38nm,0.9s						
435B	Jarrell	57.96	80	P	P	08 41 06.3	-0.7
435B				IAmb	IAmb	08 41 22.2	
	comp=Z,39nm,1.0s						
435B	Jarrell	57.96	80	P	P	08 41 07.1	+0.1
	baz=314						
W41B	Gary Mavity, V	58.16	72	P	P	08 41 07.3	-1.0
	baz=314,SNR=9.5						
237A	Washetta, Mont	58.20	77	P	P	08 41 08.9	+0.3
AAM	Ann Arbor	58.22	61	P	P	08 41 07.0	-1.7
	baz=313						
ARCES	ARCESS Array B	58.47	352	P	P	08 41 09.3	-0.8
	comp=Z,5.5nm,0.8s,baz=9.6,slow=8.1,SNR=22						
ARCES				PcP	PcP	08 42 00.1	-0.2
	comp=Z,5.1nm,0.6s,baz=2.8,slow=5.0,SNR=5.2						
ARCES				LR	LR	09 07 23.5	
	comp=Z,662nm,20.4s,baz=0.0,slow=37						
833A	Chaparral WMA,	58.57	83	P	P	08 41 10.7	-0.6
	baz=315						
PARMO	Parma	58.61	69	P	P	08 41 10.5	-0.9
LZH	Lanzhou	58.63	290	*e*P	P	08 41 12.7	+0.9
LZH				pP	pP	08 41 21.0	+0.5
LZH				sP	pwP	08 41 25.2	-1.3
LZH				pmax	pmax		
	comp=Z,25nm,1.3s						
GTA	Gaotai	58.68	295	⇑P	P	08 41 11.8	-0.3
GTA				pP	sP	08 41 24.4	+0.2
GTA				sP	pwP	08 41 30.4	+3.6
GTA				pmax	pmax		
	comp=Z,18nm,1.3s						
GTA				pmax	pmax		
	comp=Z,420nm,10.4s						
GTA				LR	LR		
	comp=Z,1µm,17.1s						
GTA				LR	LR		
	comp=Z,2µm,15.9s						
GTA				LR	LR		
	comp=Z,2µm,15.9s						
NATX	Nacogdoches	59.06	77	P	P	08 41 12.7	-2.0
	baz=314						
Z41A	Richland Creek	59.15	74	P	P	08 41 13.9	-1.4
	baz=314						
P48A	Milroy	59.17	64	P	P	08 41 14.3	-1.1
HALT	Halls	59.37	70	P	P	08 41 16.0	-0.7
P49A	Miami Univ. Ec	59.52	64	P	P	08 41 16.6	-1.1
	baz=314,SNR=6.3						
WCI	Wyandotte Cave	59.53	66	P	P	08 41 16.8	-1.1
	baz=314						
APA	Apatity	59.55	348	⇓*i*P	P	08 41 10.4	-7.1
APA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
APA				MLR	MLR		
	comp=Z,2µm,16.0s						
HKT	Hockley	59.62	79	P	P	08 41 19.2	+0.7
HKT				pmax	pmax		
	comp=Z,44nm,1.4s						
HKT	Hockley	59.62	79	P	P	08 41 19.2	+0.7
HKT				IAmb	IAmb	08 41 34.8	
	comp=Z,44nm,1.4s						
N51A	Ashland	59.87	61	P	P	08 41 19.8	-0.4
WVT	Waverly	60.10	69	P	P	08 41 21.0	-0.7
WVT				pmax	pmax		
	comp=Z,101nm,1.9s						
WVT	Waverly	60.10	69	P	P	08 41 21.0	-0.7
WVT	Waverly	60.10	69	P	P	08 41 20.9	-0.9
	baz=314						
OXF	Oxford	60.30	71	P	P	08 41 22.6	-0.5
OXF				pmax	pmax		
	comp=Z,66nm,0.9s						
OXF	Oxford	60.30	71	P	P	08 41 22.6	-0.5
OXF	Oxford	60.30	71	P	P	08 41 22.3	-0.8
	baz=314,SNR=7.3						
ERPA	Erie	60.33	59	P	P	08 41 22.4	-0.8
	baz=314						
M53A	WI Miller and	60.43	60	P	P	08 41 22.8	-1.2
	baz=314						
P52A	Corning	60.89	62	P	P	08 41 26.7	-0.5
	baz=314,SNR=5.2						
M54A	Oil Creek Stat	60.92	59	P	P	08 41 26.5	-0.8
	baz=314						
O53A	New Philadelph	60.97	61	P	P	08 41 26.7	-1.0
	baz=314						
N54A	Moraine State	61.13	60	P	P	08 41 28.1	-0.7
	baz=315,SNR=8.8						
J56A	Wolcott	61.16	56	P	P	08 41 29.1	+0.2
T50A	Nancy	61.20	66	P	P	08 41 29.0	-0.2
KURK	Kurchatov	61.36	316	P	P	08 41 30.5	+0.4
KURK						08 42 12.5	
KURK	Kurchatov	61.36	316	P	P	08 41 29.8	-0.3
KURK				IAmb	IAmb	08 41 43.9	
	comp=Z,20nm,0.7s						
LONY	Lake Ozonia	61.37	54	P	P	08 41 29.7	-0.7
	baz=315,SNR=9.8						
KURBB	Kurchatov Arra	61.47	316	P	P	08 41 30.5	-0.4
	comp=Z,6.6nm,0.6s,baz=44,slow=6.6,SNR=19						
KURBB				PcP	PcP	08 42 12.5	-0.1
	comp=Z,2.5nm,0.6s,baz=44,slow=4.9,SNR=7.4						
Z47A	Carrollton	62.01	71	P	P	08 41 34.0	-0.8
MOQ	Mont Orford	62.03	52	P	P	08 41 34.5	-0.3
WMQ	Urumqi	62.11	306	*e*P	P	08 41 35.4	0.0
WMQ				pP	pwP	08 41 48.1	-1.5
WMQ				pmax	pmax		
	comp=Z,27nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,320nm,5.3s						
WMQ				LR	LR		
	comp=Z,2µm,15.7s						
WMQ				LR	LR		

	comp=Z,1µm,17.1s						
WMQ				LR	LR		
	comp=Z,2µm,18.5s						
MCWV	**Mont Chateau**	**62.13**	**61**	P	**P**	**08 41 35.3**	**-0.2**
MCWV				IAmb	IAmb	08 41 38.4	
	comp=Z,34nm,1.1s						
MCWV	**Mont Chateau**	**62.13**	**61**	P	**P**	**08 41 35.3**	**-0.2**
	baz=315,SNR=6.3						
TZTN	**Tazewell**	**62.27**	**65**	P	**P**	**08 41 36.1**	**-0.4**
	baz=315						
CD2	**Chengdu**	**62.30**	**286**	P	**P**	**08 41 36.9**	**+0.1**
CD2				pmax	pmax		
	comp=Z,70nm,1.2s						
BINY	**Binghamton**	**62.38**	**56**	P	**P**	**08 41 37.0**	**-0.2**
	baz=316,SNR=9.1						
O56A	**Blue Knob Stat**	**62.39**	**59**	P	**P**	**08 41 36.6**	**-0.7**
	baz=315,SNR=6.3						
SSPA	**Standing Stone**	**62.49**	**59**	P	**P**	**08 41 38.2**	**+0.3**
SSPA				IAmb	IAmb	08 41 52.2	
	comp=Z,26nm,1.0s						
SSPA	**Standing Stone**	**62.49**	**59**	P	**P**	**08 41 37.1**	**-0.8**
	baz=316						
FPAL	**Fort Paine**	**62.50**	**68**	P	**P**	**08 41 37.5**	**-0.6**
FPAL				IAmb	IAmb	08 41 39.6	
	comp=Z,25nm,0.8s						
MK31	**Makanchi Array**	**62.59**	**311**	*d* *i*P	**P**	**08 41 38.3**	**-0.2**
MK31	**Makanchi Array**	**62.59**	**311**	P	**P**	**08 41 38.1**	**-0.5**
MKAR	**Makanchi Array**	**62.59**	**311**	P	**P**	**08 41 37.5**	**-1.1**
	comp=Z,1.8nm,0.4s,baz=46,slow=6.9,SNR=31						
MKAR	**Makanchi Array**	**62.59**	**311**	*e*P	**P**	**08 41 38.5**	**0.0**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
MKAR	**Makanchi Array**	**62.59**	**311**	P	**P**	**08 41 38.1**	**-0.5**
TKL	**Tuckaleechee C**	**62.77**	**66**	P	**P**	**08 41 39.8**	**0.0**
	comp=Z,4.9nm,0.5s,baz=6.6,slow=2.7,SNR=8.3						
TKL	**Tuckaleechee C**	**62.77**	**66**	P	**P**	**08 41 39.6**	**-0.3**
TKL				pmax	pmax		
	comp=Z,78nm,1.7s						
TKL	**Tuckaleechee C**	**62.77**	**66**	P	**P**	**08 41 39.6**	**-0.3**
L59A	**Walton**	**62.87**	**56**	P	**P**	**08 41 41.0**	**+0.6**
R55A	**Marlinton**	**62.95**	**62**	P	**P**	**08 41 41.1**	**0.0**
BRVK	**Borovoye**	**62.96**	**323**	P	**P**	**08 41 40.4**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,28nm,1.0s						
BRVK	**Borovoye**	**62.96**	**323**	P	**P**	**08 41 40.4**	**-0.4**
BRVK				IAmb	IAmb	08 41 42.2	
	comp=Z,28nm,1.0s						
LBNH	**Lisbon**	**62.97**	**52**	P	**P**	**08 41 40.6**	**-0.5**
	baz=317						
N58A	**Sunbury**	**62.97**	**58**	P	**P**	**08 41 41.2**	**+0.1**
PRGR	**Permogore**	**63.01**	**340**	*e*P	**P**	**08 41 39.0**	**-2.0**
PRGR				*e**PP	**sP**	**08 41 51.3**	**-1.7**
PRGR				*e*		08 42 16.3	
PRGR				pmax	pmax		
	comp=Z,133nm,1.5s						
SVE	**Sverdlovsk**	**63.26**	**330**	*e*P	**P**	**08 41 43.1**	**+0.3**
SVE				pmax	pmax		
	comp=Z,53nm,1.6s						
U54A	**Nelsons Funny**	**63.26**	**64**	P	**P**	**08 41 43.3**	**+0.1**
N59A	**State Game Lan**	**63.41**	**57**	P	**P**	**08 41 43.8**	**-0.3**
	baz=316						
PKME	**Peaks-Kenny Pk**	**63.50**	**50**	P	**P**	**08 41 43.9**	**-0.6**
	baz=317						
BLA	**Blacksburg**	**63.55**	**63**	P	**P**	**08 41 45.3**	**+0.2**
BLA				pmax	pmax		
	comp=Z,101nm,1.5s						
BLA	**Blacksburg**	**63.55**	**63**	P	**P**	**08 41 45.3**	**+0.2**
BLA	**Blacksburg**	**63.55**	**63**	P	**P**	**08 41 44.8**	**-0.3**
	baz=316,SNR=10.0						
BG3	**Lake Jocassee**	**63.72**	**66**	P	**P**	**08 41 45.9**	**-0.3**
GYA	**Guiyang**	**63.73**	**280**	⇑P	**P**	**08 41 46.5**	**+0.1**
GYA				pP	sP	08 41 57.2	-1.3
GYA				sP	pwP	08 42 01.0	-0.1
GYA				pmax	pmax		
	comp=Z,14nm,1.2s						
L61B	**Northampton**	**63.89**	**54**	P	**P**	**08 41 46.6**	**-0.6**
	baz=317						
BRAL	**Brewton**	**64.06**	**72**	P	**P**	**08 41 48.2**	**-0.3**
	baz=316						
U56A	**King**	**64.19**	**64**	P	**P**	**08 41 49.5**	**+0.2**
WUPA	**West Chester U**	**64.21**	**58**	P	**P**	**08 41 49.6**	**+0.4**
WUPA				IAmb	IAmb	08 42 04.3	
	comp=Z,25nm,1.6s						
ARU	**Arti**	**64.23**	**331**	P	**P**	**08 41 48.9**	**-0.3**
	comp=Z,3.5nm,0.3s,baz=26,slow=5.8,SNR=16						
ARU	**Arti**	**64.23**	**331**	*d* *i*P	**P**	**08 41 48.8**	**-0.3**
ARU						08 44 06.9	
ARU				S	**S**	**08 50 23.9**	**-0.1**
ARU				SS	**SS**	**08 54 28.5**	**-4.1**
ARU				pmax	pmax		
	comp=Z,59nm,1.5s						
ARU	**Arti**	**64.23**	**331**	P	**P**	**08 41 48.3**	**-0.8**
P60A	**Greenville**	**64.28**	**58**	P	**P**	**08 41 49.0**	**-0.7**
	baz=317						
PAL	**Palisades**	**64.32**	**56**	P	**P**	**08 41 49.5**	**-0.4**
	baz=317						
T57A	**Hurt**	**64.35**	**62**	P	**P**	**08 41 50.2**	**-0.1**
T57A				IAmb	IAmb	08 41 52.6	
	comp=Z,28nm,1.1s						
R58B	**Mineral**	**64.41**	**61**	P	**P**	**08 41 50.6**	**-0.1**
R58B				IAmb	IAmb	08 41 53.5	
	comp=Z,38nm,1.4s						
HRV	**Adam Dziewonsk**	**64.42**	**53**	P	**P**	**08 41 50.0**	**-0.6**
	baz=317						
CPNY	**Central Park**	**64.44**	**56**	P	**P**	**08 41 51.7**	**+1.0**
PAULI	**Pauline**	**64.48**	**66**	P	**P**	**08 41 50.3**	**-0.9**
CBN	**Corbin Frederi**	**64.51**	**60**	P	**P**	**08 41 51.1**	**-0.1**
	baz=316						
KMSC	**Kings Mountain**	**64.53**	**65**	P	**P**	**08 41 50.6**	**-0.8**
	baz=316,SNR=13						
GOGA	**Godfrey**	**64.55**	**68**	P	**P**	**08 41 50.6**	**-1.0**
	baz=316,SNR=11						
KIRV	**Kirov**	**64.88**	**337**	P	**P**	**08 41 53.0**	**-0.2**
	comp=Z,6.6nm,0.4s,baz=4.8,slow=3.1,SNR=11						
KIRV				PcP	**PcP**	**08 42 26.9**	**+0.6**
	comp=Z,17nm,0.6s,baz=302,slow=1.3,SNR=4.3						
M63A	**Gales Ferry**	**64.98**	**55**	P	**P**	**08 41 54.5**	**+0.3**
Q61A	**Milford**	**65.12**	**58**	P	**P**	**08 41 54.7**	**-0.6**
	baz=317						
JSC	**Jenkinsville**	**65.19**	**66**	P	**P**	**08 41 55.6**	**-0.2**
JSC				pmax	pmax		
	comp=Z,50nm,1.3s						
JSC	**Jenkinsville**	**65.19**	**66**	P	**P**	**08 41 55.6**	**-0.2**
JSC				IAmb	IAmb	08 41 58.8	
	comp=Z,50nm,1.3s						
W57A	**Gilead**	**65.28**	**64**	P	**P**	**08 41 56.4**	**+0.1**
W57A				IAmb	IAmb	08 41 59.3	
	comp=Z,12nm,0.8s						
V58A	**Windy Hill, Pi**	**65.30**	**63**	P	**P**	**08 41 56.5**	**+0.1**
T59A	**Double "B" Far**	**65.31**	**61**	P	**P**	**08 41 56.4**	**-0.1**
T59A				IAmb	IAmb	08 41 59.9	
	comp=Z,53nm,1.4s						
U59A	**Littleton**	**65.63**	**62**	P	**P**	**08 41 58.7**	**+0.1**
U59A				IAmb	IAmb	08 42 01.2	
	comp=Z,33nm,1.2s						
TIGA	**Tifton**	**65.91**	**69**	P	**P**	**08 41 59.8**	**-0.6**
	baz=317						
FINES	**FINESS Array B**	**66.33**	**350**	P	**P**	**08 42 01.7**	**-0.9**
	comp=Z,3.6nm,0.5s,baz=9.6,slow=7.7,SNR=18						
FINES				PcP	**PcP**	**08 42 32.5**	**+0.2**
	comp=Z,5.5nm,0.6s,baz=37,slow=3.2,SNR=5.0						
CNNC	**Cliffs of the**	**66.39**	**63**	P	**P**	**08 42 03.4**	**0.0**
	baz=317						
NHSC	**New Hope**	**66.66**	**66**	P	**P**	**08 42 05.7**	**+0.5**
NHSC	**New Hope**	**66.66**	**66**	P	**P**	**08 42 05.1**	**-0.1**
	baz=317						
KMI	**Kunming**	**67.11**	**282**	⇑P	**P**	**08 42 10.6**	**+2.1**
KMI				pP	sP	08 42 19.6	-1.0
KMI				sP	pwP	08 42 23.5	+0.3
KMI				pmax	pmax		
	comp=Z,18nm,1.0s						
NB2	**NORSAR Subarra**	**67.73**	**358**	P	**P**	**08 42 11.2**	**-0.4**
	comp=Z,1.3nm,0.4s,baz=18,slow=6.5						
NOA	**NORSAR Array B**	**67.73**	**358**	P	**P**	**08 42 11.2**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=3.2,slow=7.5,SNR=9.9						
NOA				pP	**sP**	**08 42 23.4**	**-0.3**
	comp=Z,2.4nm,0.6s,baz=2.7,slow=6.5,SNR=5.6						
USP	**Ospenovka**	**68.86**	**314**	P	**P**	**08 42 19.8**	**+0.8**
	SNR=15						
CHMS	**Chumysh**	**68.96**	**313**	P	**P**	**08 42 20.8**	**+1.2**
	SNR=5.9						
VSU	**Vasula**	**69.17**	**349**	*e*P	**P**	**08 42 20.3**	**-0.2**
VSU	**Vasula**	**69.17**	**349**	*c* *i*P	**P**	**08 42 19.9**	**-0.6**
VSU				pmax	pmax		
	comp=Z,132nm,0.9s						
AAK	**Ala-Archa**	**69.36**	**313**	P	**P**	**08 42 22.8**	**+0.6**
	comp=Z,24nm,0.8s,baz=130,slow=3.4,SNR=18						
AAK	**Ala-Archa**	**69.36**	**313**	P	**P**	**08 42 23.0**	**+0.7**
	SNR=16						
AAK	**Ala-Archa**	**69.36**	**313**	P	**P**	**08 42 22.5**	**+0.2**
AAK				pmax	pmax		
	comp=Z,108nm,1.6s						
AAK	**Ala-Archa**	**69.36**	**313**	P	**P**	**08 42 22.5**	**+0.2**
AKTO	**Aktyubinsk**	**69.49**	**328**	P	**P**	**08 42 22.8**	**+0.1**
	comp=Z,25nm,0.6s,baz=49,slow=6.7,SNR=38						
EKS2	**Erkin-Say**	**69.67**	**314**	P	**P**	**08 42 24.6**	**+0.5**
	SNR=9.3						
ABKAR	**Akbulak array**	**69.83**	**326**	P	**P**	**08 42 24.4**	**-0.4**
MOS	**Moscow**	**70.08**	**342**	*e*P	**P**	**08 42 25.5**	**-0.7**
AML	**Almayashu**	**70.12**	**313**	P	**P**	**08 42 28.0**	**+0.7**
	SNR=10						
KK31	**Karatay Array**	**70.76**	**316**	P	**P**	**08 42 30.0**	**-0.7**
KK31				pmax	pmax		
	comp=Z,75nm,1.7s						
KK31	**Karatay Array**	**70.76**	**316**	P	**P**	**08 42 30.0**	**-0.7**
KK31				IAmb	IAmb	08 42 32.0	
	comp=Z,75nm,1.6s						
KKAR	**Karatay Array**	**70.76**	**316**	P	**P**	**08 42 30.2**	**-0.5**
KKAR	**Karatay Array**	**70.76**	**316**	P	**P**	**08 42 30.2**	**-0.5**
KSH	**Kashi**	**71.12**	**310**	P	**P**	**08 42 36.3**	**+3.3**
KSH				pP	sP	08 42 45.3	+0.1
KSH				sP	pwP	08 42 49.1	+1.7
KSH				pmax	pmax		
	comp=Z,74nm,1.0s						
PPT	**Papeete**	**71.85**	**156**	LR	LR	09 07 21.8	
	comp=Z,599nm,21.0s,baz=28,slow=30						
PABE	**Paberze**	**72.38**	**350**	*e*P	**P**	**08 42 39.8**	**-0.3**
PABE	**Paberze**	**72.38**	**350**	P	**P**	**08 42 39.2**	**-0.9**
NACGM	**Naroch**	**72.63**	**348**	*i* P	**P**	**08 42 39.9**	**-1.7**
MNK	**Minsk**	**72.88**	**347**	*i* P	**P**	**08 42 44.2**	**+1.1**
MNK				*i*		08 43 01.9	
MNK				*i*		08 45 27.5	
MNK				*i* PPP	PPP	08 47 05.4	
MNK				*i* S	**S**	**08 52 07.6**	**+0.9**
MNK				*i* SS	**SS**	**08 56 49.7**	**+3.9**
MNK				*i* SSS	SSS	09 00 06.9	
MNK				pmax	pmax		
	comp=E,4.0nm,1.4s						
MNK				pmax	pmax		
	comp=Z,49nm,1.2s						
MNK				pmax	pmax		
	comp=N,19nm,0.9s						
MNK	**Minsk**	**72.88**	**347**	*i* P	**P**	**08 42 44.2**	**+1.1**
	comp=E,4.0nm,1.4s						
MNK				*i* P	**P**	**08 42 44.2**	**+1.1**
	comp=N,19nm,0.9s						
MNK				*i* P	**P**	**08 42 44.2**	**+1.1**
	comp=Z,49nm,1.2s,baz=194						
MNK				*i* PcP	**PcP**	**08 43 02.0**	**+1.9**
MNK				*i* PP	**PP**	**08 45 27.5**	**+2.8**
MNK				*i* PPP	PPP	08 47 05.4	
MNK				*i* S	**S**	**08 52 07.7**	**+1.0**
MNK				*i* SS	**SS**	**08 56 49.7**	**+3.9**
MNK				*i* SSS	SSS	09 00 06.9	
MNK				*i* LR	LR	09 14 53.0	
MNK				*i* LRM	MLR	09 21 05.3	
	comp=Z,1µm,19.9s						
MNK				*i* LRM	MLR	09 21 08.9	
	comp=N,950nm,19.9s						
MNK				*i* LRM	MLR	09 22 05.9	
	comp=E,84nm,20.8s						
BTK	**Batken**	**73.08**	**314**	P	**P**	**08 42 44.5**	**-0.2**
BTK				pmax	pmax		
	comp=Z,70nm,1.3s						
BTK	**Batken**	**73.08**	**314**	P	**P**	**08 42 44.5**	**-0.2**
SHL	**Shillong**	**73.29**	**290**	P	**P**	**08 42 45.9**	**-0.4**
SHL				pmax	pmax		
	comp=Z,154nm,1.5s						
SHL	**Shillong**	**73.29**	**290**	P	**P**	**08 42 45.9**	**-0.4**
SUW	**Suwalki**	**73.94**	**350**	*e*P	**P**	**08 42 48.3**	**-1.0**
SUW	**Suwalki**	**73.94**	**350**	*e*P	**P**	**08 42 48.6**	**-0.8**
CHTO	**Chiang Mai**	**74.15**	**280**	P	**P**	**08 42 51.4**	**+0.2**
CHTO				pmax	pmax		
	comp=Z,44nm,1.3s						
CHTO	**Chiang Mai**	**74.15**	**280**	P	**P**	**08 42 51.4**	**+0.2**
CHTO				IAmb	IAmb	08 43 06.6	
	comp=Z,44nm,1.3s						
RGN	**Rugen**	**74.16**	**356**	*e*P	**P**	**08 42 50.9**	**+0.3**
	baz=4.3,slow=5.5						
GAR	**Garm**	**74.17**	**313**	P	**P**	**08 42 50.9**	**-0.2**
TAPN	**Taplejung**	**74.35**	**294**	*e*P	**P**	**08 42 53.4**	**+0.8**
	comp=Z,450nm,1.4s						
CMAR	**Chiang Mai Arr**	**74.42**	**280**	P	**P**	**08 42 53.2**	**+0.5**
	comp=Z,3.3nm,0.3s,baz=30,slow=6.8,SNR=8.4						
BSEG	**Bad Segeberg**	**74.87**	**358**	*e*P	**P**	**08 42 55.1**	**+0.4**
	baz=4.3,slow=5.5						
ODAN	**Odare**	**74.91**	**294**	*e*P	**P**	**08 42 56.4**	**+0.6**
	comp=Z,235nm,1.6s						
GUN	**Gumba**	**74.96**	**296**	*e*P	**P**	**08 42 56.9**	**+0.7**
	comp=Z,342nm,1.2s						
CHGR	**Chuyangaron**	**74.97**	**314**	P	**P**	**08 42 55.3**	**-0.4**
JIRN	**Jiri**	**74.98**	**295**	*e*P	**P**	**08 42 57.1**	**+0.8**
	comp=Z,204nm,1.0s						
RAMN	**Ramite**	**75.29**	**295**	*e*P	**P**	**08 42 58.1**	**+0.1**
	comp=Z,72nm,0.5s						
KKN	**Kakani**	**75.39**	**296**	*e*P	**P**	**08 42 59.1**	**+0.6**
	comp=Z,286nm,1.5s						
PKI	**Pulchoki**	**75.48**	**296**	*e*P	**P**	**08 42 59.6**	**+0.4**
PKIN	**Phulchoki**	**75.49**	**296**	*e*P	**P**	**08 42 59.4**	**+0.3**
	comp=Z,154nm,1.1s						
GKN	**Gorkha**	**75.58**	**297**	*e*P	**P**	**08 42 59.9**	**+0.4**
	comp=Z,382nm,1.4s						
DMN	**Daman**	**75.62**	**296**	*e*P	**P**	**08 43 00.5**	**+0.6**
	comp=Z,269nm,1.4s						
DANN	**Dangsing**	**75.80**	**298**	*e*P	**P**	**08 43 01.5**	**+0.6**
	comp=Z,269nm,0.9s						
NRDL	**Niedersach Rie**	**76.32**	**358**	*e*P	**P**	**08 43 03.3**	**+0.3**
	baz=4.3,slow=5.5						
BEL	**Belsk**	**76.33**	**351**	*e*P	**P**	**08 43 04.6**	**+1.4**
KOLN	**Koldanda**	**76.34**	**297**	*e*P	**P**	**08 43 04.4**	**+0.5**
	comp=Z,235nm,1.4s						
AKASG	**Malin Array Be**	**76.38**	**346**	P	**P**	**08 43 02.4**	**-1.0**
	comp=Z,6.8nm,0.3s,baz=17,slow=6.1,SNR=32						
AKBB	**Malin Array Si**	**76.38**	**346**	*c* *i*P	**P**	**08 43 02.3**	**-1.1**
AKBB				pmax	pmax		
	comp=Z,36nm,1.4s						
PYUN	**Piuthan**	**76.42**	**298**	*e*P	**P**	**08 43 04.7**	**+0.3**
IBBN	**Ibbenburen**	**76.54**	**359**	*e*P	**P**	**08 43 05.0**	**+0.7**
	baz=4.3,slow=5.5						
TGUH	**Tegucigalpa,Un**	**76.66**	**84**	*e*P	P	08 43 18.0	+12
ASSE	**Asse, Remlinge**	**76.67**	**358**	*e*P	**P**	**08 43 05.5**	**+0.5**
	comp=Z,5.2nm,0.9s,baz=4.3,slow=5.5						
CLZ	**Clausthal**	**76.97**	**358**	*e*P	**P**	**08 43 07.4**	**+0.6**
	comp=Z,11nm,0.8s,baz=4.3,slow=5.5						
NIL	**Nilore**	**77.11**	**308**	P	**P**	**08 43 08.1**	**+0.1**
NIL				pmax	pmax		
	comp=Z,352nm,1.7s						
NIL	**Nilore**	**77.11**	**308**	P	**P**	**08 43 08.1**	**+0.1**
GTTG	**Gottingen**	**77.27**	**358**	*e*P	**P**	**08 43 09.1**	**+0.6**
	baz=4.3,slow=5.5						
CLL	**Collm**	**77.41**	**356**	⇑*i*P	**P**	**08 43 08.7**	**-0.5**
CLL				*i* *SP	**pwP**	**08 43 22.4**	**-1.4**
CLL				pmax	pmax		
	comp=Z,19nm,0.9s						
CLL	**Collm**	**77.41**	**356**	⇑*i*P	**P**	**08 43 08.7**	**-0.5**
	comp=Z,19nm,0.9s						
CLL				*i* PcP	**pwP**	**08 43 22.4**	**-1.4**
CLL	**Collm**	**77.41**	**356**	*e*P	**P**	**08 43 09.5**	**+0.3**
	baz=4.3,slow=5.5						
BUG	**Bochum--Univer**	**77.41**	**360**	*e*P	**P**	**08 43 10.5**	**+1.2**
	comp=Z,6.6nm,0.8s,baz=4.3,slow=5.5						
NEUB	**Neuenburg**	**77.56**	**357**	*e*P	**P**	**08 43 10.5**	**+0.5**
	baz=4.3,slow=5.5						
KSP	**Ksiaz**	**77.69**	**354**	*e*P	**P**	**08 43 10.7**	**-0.1**
KSP				*e*sP	**sP**	**08 43 23.0**	**0.0**
FBE	**Freiberg**	**77.78**	**356**	*e*P	**P**	**08 43 11.8**	**+0.5**
	comp=Z,11nm,0.8s,baz=4.3,slow=5.5						
BRG	**Berggiesshubel**	**77.80**	**355**	*e*P	**P**	**08 43 11.8**	**+0.4**
	baz=4.3,slow=5.5						
BRG	**Berggiesshubel**	**77.80**	**355**	*i* P	**P**	**08 43 11.5**	**+0.1**
BRG				Amp		08 43 13.3	
	comp=Z,24nm,1.0s						
BRG	**Berggiesshubel**	**77.80**	**355**	P	P	08 43 23.8	+12
BRG				Amp		08 43 25.8	
	comp=Z,22nm,1.0s						
BRG				Amp		09 12 17.0	
	comp=N,1.4nm,16.5s						
BRG				Amp		09 12 21.0	
	comp=Z,1.8nm,15.2s						
BRG				Amp		09 12 27.0	
	comp=E,0.6nm,14.9s						
CHVC	**Chvalec**	**77.96**	**354**	*e*P	**P**	**08 43 12.6**	**+0.2**
UBBA	**Unterbreizbach**	**78.00**	**358**	*e*P	**P**	**08 43 13.1**	**+0.7**
	comp=E,3.6nm,0.9s,baz=4.3,slow=5.5						
OJC	**Ojcow**	**78.03**	**351**	*e*P	**P**	**08 43 12.9**	**+0.2**
OJC				*e*sP	**pwP**	**08 43 26.6**	**-0.7**
OJC	**Ojcow**	**78.03**	**351**	P	**P**	**08 43 12.6**	**-0.1**
OJC				pmax	pmax		
	comp=Z,17nm,1.0s						
OJC	**Ojcow**	**78.03**	**351**	P	**P**	**08 43 12.6**	**-0.1**
OJC				IAmb	IAmb	08 43 14.4	
	comp=Z,17nm,1.0s						
UPC	**Upice**	**78.04**	**354**	*e*P	**P**	**08 43 13.1**	**+0.3**
UPC	**Upice**	**78.04**	**354**	*e*P	**P**	**08 43 13.1**	**+0.3**
MOX	**Moxa**	**78.12**	**357**	*e*P	**P**	**08 43 13.8**	**+0.5**
	baz=4.3,slow=5.5						
DPC	**Dobruska-Polom**	**78.18**	**354**	*e*P	**P**	**08 43 13.9**	**+0.3**
DPC				*e*		08 43 27.8	
DPC	**Dobruska-Polom**	**78.18**	**354**	*e*P	**P**	**08 43 13.9**	**+0.3**
DPC				*e*x	**pP**	**08 43 27.8**	**+5.2**
BTNL	**Ternell**	**78.27**	**0**	*d*P	**P**	**08 43 14.8**	**+0.7**
WERD	**Werda**	**78.30**	**356**	*e*P	**P**	**08 43 14.3**	**+0.1**
	baz=4.3,slow=5.5						
KWP	**Kalwaria Pacla**	**78.31**	**349**	*e*P	**P**	**08 43 13.9**	**-0.4**
KWP				*e*sP	**pwP**	**08 43 27.7**	**-1.1**
TANN	**Tannenbergstha**	**78.32**	**356**	*e*P	**P**	**08 43 14.6**	**+0.2**
	comp=Z,9.5nm,1.1s,baz=4.3,slow=5.5						
GUNZ	**Gunzen**	**78.38**	**356**	*e*P	**P**	**08 43 15.0**	**+0.3**
	comp=Z,9.5nm,1.1s,baz=4.3,slow=5.5						
KBL	**Kabul**	**78.40**	**312**	P	**P**	**08 43 14.2**	**-1.2**
KBL				pmax	pmax		
	comp=Z,110nm,1.5s						
KBL	**Kabul**	**78.40**	**312**	P	**P**	**08 43 14.2**	**-1.2**
KRLC	**Kraliky**	**78.42**	**353**	*e*P	**P**	**08 43 15.2**	**+0.2**
KRLC	**Kraliky**	**78.42**	**353**	*e*P	**P**	**08 43 15.2**	**+0.2**
BCLA	**Clavier**	**78.43**	**1**	*d*P	**P**	**08 43 12.7**	**-2.2**
WERN	**Wernitzgruen**	**78.45**	**356**	*e*P	**P**	**08 43 15.4**	**+0.3**
	baz=4.3,slow=5.5						
BGES	**Gesves**	**78.46**	**1**	*d*P	**P**	**08 43 14.1**	**-1.0**
NKC	**Novy Kostel**	**78.50**	**356**	*e*P	**P**	**08 43 15.6**	**+0.2**
NKC	**Novy Kostel**	**78.50**	**356**	*e*P	**P**	**08 43 15.6**	**+0.2**
BMRD	**Maredsous**	**78.54**	**1**	*d*P	**P**	**08 43 16.0**	**+0.4**
	comp=Z,10nm,1.1s						
PRA	**Prague**	**78.57**	**355**	*e*P	**P**	**08 43 16.4**	**+0.7**
PRA	**Prague**	**78.57**	**355**	*e*P	**P**	**08 43 16.4**	**+0.7**
TNS	**Taunus Mts**	**78.62**	**359**	*e*P	**P**	**08 43 16.7**	**+0.6**
	comp=Z,8.2nm,0.9s,baz=4.3,slow=5.5						
PRU	**Pruhonice**	**78.65**	**355**	*e*P	**P**	**08 43 16.4**	**+0.2**
PRU				*e*		08 43 28.6	
PRU	**Pruhonice**	**78.65**	**355**	*e*P	**P**	**08 43 16.4**	**+0.2**
PRU				*e*PCP	**sP**	**08 43 28.6**	**+0.2**
MORC	**Moravsky Berou**	**78.66**	**353**	⇓P	**P**	**08 43 16.7**	**+0.4**
MORC	**Moravsky Berou**	**78.66**	**353**	P	**P**	**08 43 16.1**	**-0.2**
MORC				pmax	pmax		
	comp=Z,12nm,1.0s						
MORC	**Moravsky Berou**	**78.66**	**353**	P	**P**	**08 43 16.1**	**-0.2**
MORC	**Moravsky Berou**	**78.66**	**353**	*e*P	**P**	**08 43 15.9**	**-0.4**
MORC				*e*		08 43 29.6	
DOU	**Dourbes**	**78.74**	**1**	*d*P	**P**	**08 43 16.8**	**+0.1**
MANZ	**Manzenberg**	**78.77**	**356**	*e*P	**P**	**08 43 17.2**	**+0.4**
	comp=Z,1.2nm,0.9s,baz=4.3,slow=5.5						
MANZ				*e*pP	**pwP**	**08 43 30.8**	**-0.6**
NIE	**Niedzica**	**78.77**	**351**	*e*P	**P**	**08 43 18.1**	**+1.2**
GOF	**Gofitskoye**	**78.81**	**335**	⇑*e*P	**P**	**08 43 17.3**	**+0.1**
GOF				pmax	pmax		
	comp=Z,164nm,1.2s						
ROTZ	**Rotzenmuhle**	**78.98**	**356**	*e*P	**P**	**08 43 18.3**	**+0.3**
	comp=Z,1.9nm,1.0s,baz=4.3,slow=5.5						
ROTZ				*e*pP	**pwP**	**08 43 32.0**	**-0.6**
SORM	**Soroca**	**79.01**	**345**	⇓P	**P**	**08 43 17.8**	**-0.3**
KOLS	**Kolonicke sedl**	**79.04**	**350**	*e*P	**P**	**08 43 17.1**	**-1.3**
KOLS	**Kolonicke sedl**	**79.04**	**350**	*e*P	**P**	**08 43 17.1**	**-1.3**
GRF	**Grafenberg Arr**	**79.09**	**357**	*e*P	**P**	**08 43 19.3**	**+0.7**
	baz=4.3,slow=5.5						
LANS	**Liptovska Anna**	**79.12**	**352**	*e*P	**P**	**08 43 19.7**	**+0.9**
LANS				pmax	pmax		
	comp=Z,7.0nm,0.6s						
LANS	**Liptovska Anna**	**79.12**	**352**	*e*P	**P**	**08 43 19.7**	**+0.9**
CRVS	**Cervenica-Dubn**	**79.16**	**350**	*e*P	**P**	**08 43 20.3**	**+1.3**
CRVS	**Cervenica-Dubn**	**79.16**	**350**	*e*P	**P**	**08 43 20.3**	**+1.3**
VRAC	**Vranov**	**79.19**	**353**	⇓P	**P**	**08 43 19.9**	**+0.7**
VRAC	**Vranov**	**79.19**	**353**	P	**P**	**08 43 19.6**	**+0.3**
	comp=Z,18nm,0.8s,baz=358,slow=6.8,SNR=15						
VRAC	**Vranov**	**79.19**	**353**	*e*P	**P**	**08 43 19.5**	**+0.3**
VRAC				*e*		08 43 32.7	
UZH	**Uzhgorod**	**79.34**	**350**	*e*P	**P**	**08 43 19.6**	**-0.4**
UZH				*e*		08 43 28.2	
KRUC	**Moravsky**	**79.45**	**354**	*e*P	**P**	**08 43 20.6**	**0.0**
KRUC				*e*		08 43 33.8	
KHC	**Kasperske Hory**	**79.55**	**355**	*e*P	**P**	**08 43 21.6**	**+0.4**
KHC				*e*		08 43 34.2	
KHC	**Kasperske Hory**	**79.55**	**355**	*e*P	**P**	**08 43 21.6**	**+0.4**
KHC				*e*x	**pP**	**08 43 34.2**	**+4.0**
JAVC	**Velka Javorina**	**79.56**	**353**	*e*P	**P**	**08 43 22.3**	**+1.0**
WET	**Wettzell**	**79.57**	**356**	*e*P	**P**	**08 43 21.8**	**+0.5**
	comp=Z,18nm,1.3s,baz=4.3,slow=5.5						
WET				*e*pP	**pwP**	**08 43 34.9**	**-1.0**
CTAO	**Charters Tower**	**79.62**	**218**	P	**P**	**08 43 21.0**	**-0.8**
CTAO				pmax	pmax		
	comp=Z,69nm,2.0s						
CTAO	**Charters Tower**	**79.62**	**218**	P	**P**	**08 43 20.9**	**-0.8**
CTAO				IAmb	IAmb	08 43 39.4	
	comp=Z,69nm,1.9s						
KECS	**Kecovo**	**79.68**	**351**	*e*P	**P**	**08 43 22.1**	**+0.3**
KECS	**Kecovo**	**79.68**	**351**	*e*P	**P**	**08 43 22.1**	**+0.3**
VYHS	**Vyhne**	**79.83**	**352**	*e*P	**P**	**08 43 22.6**	**0.0**
VYHS				pmax	pmax		
	comp=Z,19nm,1.5s						
VYHS	**Vyhne**	**79.83**	**352**	*e*P	**P**	**08 43 22.6**	**0.0**
CKRC	**Cesky Krumlov**	**79.83**	**355**	*e*P	**P**	**08 43 22.8**	**+0.1**
GEC2	**GERESS Array S**	**79.83**	**355**	P	**P**	**08 43 22.7**	**-0.1**
GEC2				IAmb	IAmb	08 43 24.2	
	comp=Z,49nm,1.6s						
GEC2	**GERESS Array S**	**79.83**	**355**	*e*P	**P**	**08 43 23.0**	**+0.2**
	comp=Z,9.0nm,0.9s,baz=4.3,slow=5.5						
GERES	**GERESS Array B**	**79.83**	**355**	P	**P**	**08 43 22.8**	**-0.1**
	comp=Z,5.7nm,0.7s,baz=22,slow=4.6,SNR=21						
GERES				pP	**sP**	**08 43 35.5**	**+0.5**
	comp=Z,4.8nm,0.7s,baz=23,slow=4.4,SNR=8.4						
GERES	**GERESS Array B**	**79.83**	**355**	P	**P**	**08 43 22.3**	**-0.5**
GERES	**GERESS Array B**	**79.83**	**355**	P	**P**	**08 43 22.3**	**-0.5**
SMOL	**Smolenice**	**79.92**	**353**	*e*P	**P**	**08 43 24.2**	**+1.0**
SMOL	**Smolenice**	**79.92**	**353**	*e*P	**P**	**08 43 24.2**	**+1.0**
KIV	**Kislovodsk**	**79.93**	**334**	⇓P	**P**	**08 43 23.8**	**+0.4**
KIV	**Kislovodsk**	**79.93**	**334**	*e*P	**P**	**08 43 23.6**	**+0.2**
KIV				pmax	pmax		
	comp=Z,23nm,1.0s						
KIV	**Kislovodsk**	**79.93**	**334**	P	**P**	**08 43 23.0**	**-0.4**
KIV				IAmb	IAmb	08 43 25.9	
	comp=Z,18nm,0.8s						
BURAR	**Bucovina Array**	**79.97**	**347**	⇓P	**P**	**08 43 23.7**	**+0.1**
BURAR	**Bucovina Array**	**79.97**	**347**	P	**P**	**08 43 23.2**	**-0.4**
MODS	**Modra-Piesok**	**80.07**	**353**	*e*P	**P**	**08 43 23.2**	**-0.8**
MODS				pmax	pmax		
	comp=Z,18nm,1.1s						
MODS	**Modra-Piesok**	**80.07**	**353**	*e*P	**P**	**08 43 23.2**	**-0.8**
KBZ	**Khabaz**	**80.08**	**334**	P	**P**	**08 43 25.0**	**+0.9**
	comp=Z,6.8nm,0.7s,baz=87,slow=3.5,SNR=9.5						
KBZ	**Khabaz**	**80.08**	**334**	*e*P	**P**	**08 43 24.5**	**+0.4**
KBZ				pmax	pmax		
	comp=Z,29nm,1.5s						
MTN	**Manton Dam**	**80.11**	**235**	P	**P**	**08 43 24.4**	**-0.1**
MTN				IAmb	IAmb	08 43 42.1	
	comp=Z,27nm,0.9s						
GEYT	**Alibeck**	**80.23**	**321**	P	**P**	**08 43 25.7**	**+0.6**
	comp=Z,29nm,1.2s,baz=238,slow=8.3,SNR=14						
GYA0B	**ALIBECK ARRAY**	**80.23**	**321**	P	**P**	**08 43 25.2**	**+0.1**
GYA0B				IAmb	IAmb	08 43 26.9	
	comp=Z,65nm,1.4s						
ZST	**Bratislava**	**80.26**	**353**	*e*P	**P**	**08 43 25.5**	**+0.5**
ZST	**Bratislava**	**80.26**	**353**	*e*P	**P**	**08 43 25.5**	**+0.5**
PSZ	**Piszkesteto**	**80.30**	**351**	⇑P	**P**	**08 43 26.5**	**+1.3**
BFO	**Black Forest**	**80.52**	**359**	P	**P**	**08 43 25.6**	**-0.8**
BFO				pmax	pmax		
	comp=Z,15nm,1.1s						
BFO	**Black Forest**	**80.52**	**359**	P	**P**	**08 43 25.6**	**-0.8**
BFO	**Black Forest**	**80.52**	**359**	*e*P	**P**	**08 43 27.2**	**+0.8**
	comp=Z,8.3nm,1.0s,baz=4.3,slow=5.5						
VASR	**Vaslui**	**80.55**	**345**	⇑P	**P**	**08 43 26.7**	**+0.1**
ARCR	**ARCALIA**	**80.61**	**348**	⇑P	**P**	**08 43 27.7**	**+0.8**
CONA	**Conrad Observa**	**80.62**	**354**	*i* P	**P**	**08 43 27.4**	**+0.4**
	comp=Z,16nm,0.8s,SNR=12						
ECH	**Echery**	**80.64**	**360**	P	**P**	**08 43 27.2**	**+0.1**
ECH				pmax	pmax		

	comp=Z,44nm,1.5s						
ECH	Echery	80.64	360	P	P	08 43 27.2	+0.1
ECH				IAmb	IAmb	08 43 28.5	
	comp=Z,44nm,1.5s						
ZEI	Tsey	80.68	333	*e*P	P	08 43 26.1	-1.5
ZEI				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MOA	Molln	80.80	355	*e*P	P	08 43 29.2	+1.3
	comp=Z,9.9nm,1.0s						
TESR	Tescani	80.85	346	⇓P	P	08 43 27.6	-0.5
RJOB	Jochberg	80.98	356	*e*P	P	08 43 29.5	+0.5
	comp=Z,6.4nm,0.7s,baz=4.3,slow=5.5						
RJOB				*e*pP	pwP	08 43 42.9	-0.6
SOC	Sochi	81.05	336	*e*P	P	08 43 27.5	-1.8
SOC				*e*PPP	PPP	08 48 20.9	
SOC				*e*S	S	08 53 32.4	-3.6
SOC				*e*SS	SS	08 58 47.3	-2.2
SOC				*e*SSS	SSS	09 02 19.9	
SOC				pmax	pmax		
	comp=Z,28nm,0.9s						
SOC				MLR	MLR		
	comp=Z,761nm,18.0s						
DRGR		81.10	349	⇑P	P	08 43 29.6	0.0
UBR	Ueberruh	81.13	358	*e*P	P	08 43 30.6	+0.9
	baz=4.3,slow=5.5						
UBR				*e*pP	pwP	08 43 43.8	-0.6
VLDR	Vladesti	81.28	345	⇓P	P	08 43 31.1	+0.7
RETA	Reutte	81.31	357	*e*P	P	08 43 31.1	+0.4
	comp=Z,11nm,1.0s						
ARSA	Arzberg	81.32	354	*i* P	P	08 43 31.2	+0.5
	comp=Z,20nm,1.2s,SNR=5.9						
WATA	Walderalm	81.43	357	*i* P	P	08 43 31.9	+0.5
	comp=Z,30nm,1.4s,SNR=7.1						
MOTA	Moosalm	81.44	357	*i* P	P	08 43 32.0	+0.5
	comp=Z,26nm,1.3s,SNR=8.0						
VRI	Vrincioaia	81.47	346	⇑P	P	08 43 31.3	-0.2
PLOR	Plostina	81.50	346	⇓P	P	08 43 32.1	+0.5
WTTA	Wattenberg	81.50	357	*i* P	P	08 43 32.8	+0.9
	comp=Z,25nm,1.0s,SNR=8.5						
DAVA	Damuels	81.53	358	*e*P	P	08 43 33.4	+1.4
	comp=Z,8.7nm,0.9s						
SQTA	Sankt Quirin	81.56	357	*i* P	P	08 43 32.7	+0.6
	comp=Z,21nm,0.9s,SNR=5.2						
DOPR	Dopca	81.56	347	⇓P	P	08 43 32.5	+0.4
COVR	Voineasa-Covas	81.57	346	⇑P	P	08 43 32.2	+0.1
HRA	Herat	81.58	316	P	P	08 43 32.8	+0.3
KBA	Koelnbreinsper	81.61	355	*i* P	P	08 43 33.3	+0.8
	comp=Z,32nm,0.7s,SNR=18						
SIRR	Siria	81.74	350	⇑P	P	08 43 34.1	+1.1
FETA	Feichten	81.78	357	*i* P	P	08 43 33.9	+0.6
	comp=Z,11nm,1.0s,SNR=7.0						
TLCR		81.80	344	⇑P	P	08 43 34.2	+1.0
SOKA	Soboth	81.92	354	*i* P	P	08 43 34.4	+0.4
	comp=Z,32nm,1.1s,SNR=16						
CFR	Carcaliu	81.92	345	⇓P	P	08 43 34.5	+0.7
MLR	Muntele Rosu	81.95	346	⇑P	P	08 43 35.3	+1.1
MLR	Muntele Rosu	81.95	346	P	P	08 43 35.2	+1.0
	comp=Z,13nm,0.9s,baz=7.1,slow=5.2,SNR=6.6						
MLR	Muntele Rosu	81.95	346	P	P	08 43 34.2	0.0
MLR				pmax	pmax		
	comp=Z,39nm,1.4s						
MLR	Muntele Rosu	81.95	346	P	P	08 43 34.2	0.0
MLR				IAmb	IAmb	08 43 38.4	
	comp=Z,39nm,1.4s						
ABTA	Abfaltersbach	81.98	356	*i* P	P	08 43 34.8	+0.6
	comp=Z,26nm,1.4s,SNR=5.7						
MYKA	Terra Mystica	82.05	355	*e*P	P	08 43 34.5	-0.1
	comp=Z,14nm,1.1s						
OBKA	Obir	82.12	355	*e*P	P	08 43 35.6	+0.6
	comp=Z,18nm,0.9s						
VOIR		82.13	347	⇑P	P	08 43 35.6	+0.5
ARR	Arges	82.26	347	⇑P	P	08 43 36.9	+1.1
TUE	Stuetta	82.36	358	P	P	08 43 37.1	+0.7
TUE				IAmb	IAmb	08 43 39.1	
	comp=Z,29nm,1.0s						
BZS	Buzias	82.39	350	⇑P	P	08 43 36.2	-0.1
HARR	Harsova	82.43	345	⇑P	P	08 43 37.5	+1.0
GZR	Gura Zlata	82.47	349	⇑P	P	08 43 36.9	+0.1
TIRR	Tirgusor	82.57	345	⇑P	P	08 43 38.0	+0.7
CTI	Castel Tesino	82.72	357	P	P	08 43 38.9	+0.7
CTI				pmax	pmax		
	comp=Z,19nm,1.2s						
CTI	Castel Tesino	82.72	357	P	P	08 43 38.9	+0.7
CTI				IAmb	IAmb	08 43 42.8	
	comp=Z,19nm,1.2s						
GNI	Garni	82.87	332	P	P	08 43 40.2	+1.1
	comp=Z,9.1nm,0.5s,baz=73,slow=2.6,SNR=4.6						
GNI	Garni	82.87	332	IAmb	IAmb	08 43 41.7	
	comp=Z,43nm,1.4s						
HERR	Herculane	83.02	349	⇓P	P	08 43 39.7	+0.1
FRGS	Fruska Gora	83.04	351	⇓P	P	08 43 40.1	+0.4
MDVR	Moldovita	83.20	349	⇑P	P	08 43 41.0	+0.4
TEOL	Teolo	83.40	356	P	P	08 43 41.9	+0.3
BNI	Bardonecchia	83.81	0	P	P	08 43 43.8	0.0
BNI				pmax	pmax		
	comp=Z,18nm,0.8s						
BNI	Bardonecchia	83.81	0	P	P	08 43 43.8	0.0
BNI				IAmb	IAmb	08 43 59.7	
	comp=Z,18nm,0.8s						
DIVS	Divibare	84.07	350	P	P	08 43 44.9	-0.2
DIVS				IAmb	IAmb	08 43 46.7	
	comp=Z,17nm,1.2s						
BOVS	Bovan	84.34	349	⇓P	P	08 43 46.0	-0.4
WB2	Warramunga Arr	84.60	228	P	P	08 43 46.7	-1.2
WB2				IAmb	IAmb	08 44 06.6	
	comp=Z,14nm,1.2s						
WRA	Warramunga Arr	84.61	228	P	P	08 43 47.5	-0.4
	comp=Z,2.4nm,0.6s,baz=32,slow=5.7,SNR=17						
WRA				pP	pwP	08 44 01.9	-1.0
	comp=Z,4.1nm,0.7s,baz=36,slow=5.5,SNR=7.9						
WRA	Warramunga Arr	84.61	228	P	P	08 43 47.3	-0.6
WRA				pmax	pmax		
	comp=Z,3.0nm,1.9s						
WRA	Warramunga Arr	84.61	228	P	P	08 43 47.2	-0.6
VTS	Vitosha	85.15	348	⇑P	P	08 43 50.5	-0.2
VTS	Vitosha	85.15	348	P	P	08 43 50.1	-0.6
VTS				pmax	pmax		
	comp=Z,16nm,0.9s						
VTS	Vitosha	85.15	348	P	P	08 43 50.1	-0.6
VTS				IAmb	IAmb	08 43 52.6	
	comp=Z,16nm,0.9s						
OSSC	Osservatorio P	85.25	357	P	P	08 43 50.4	-0.6
OSSC				IAmb	IAmb	08 43 52.1	
	comp=Z,19nm,0.8s						
NRCA	Norcia	85.86	355	P	P	08 43 53.9	-0.2
NRCA				IAmb	IAmb	08 43 57.2	
	comp=Z,56nm,1.4s						
SKO	Skopje	86.01	349	*i* P	P	08 43 55.4	+0.7
BR131	Keskin Array S	86.14	340	P	P	08 43 56.1	+0.5
BR131				pmax	pmax		
	comp=Z,22nm,1.1s						
BR131	Keskin Array S	86.14	340	P	P	08 43 56.1	+0.5
BR131				IAmb	IAmb	08 43 57.1	
	comp=Z,22nm,1.1s						
BRTR	Keskin Array B	86.14	340	P	P	08 43 56.2	+0.6
	comp=Z,4.4nm,0.6s,baz=54,slow=2.3,SNR=15						
BRTR				pP	pwP	08 44 09.2	-1.0
	comp=Z,7.3nm,1.0s,baz=43,slow=3.9,SNR=5.0						
BRTR	Keskin Array B	86.14	340	P	P	08 43 55.3	-0.3
BRTR	Keskin Array B	86.14	340	P	P	08 43 55.3	-0.3
ANTO	Ankara	86.18	340	P	P	08 43 56.1	+0.3
ANTO				pmax	pmax		
	comp=Z,55nm,1.5s						
ANTO	Ankara	86.18	340	P	P	08 43 56.1	+0.3
ANTO				IAmb	IAmb	08 43 58.6	
	comp=Z,55nm,1.4s						
STIP	Stip	86.19	348	*i* P	P	08 43 55.3	-0.4
RDO	Rodhopi	86.26	346	P	P	08 43 56.2	+0.2
NVR	Nevrokopi	86.31	347	P	P	08 43 56.7	+0.4
ALN	Alexandroupoli	86.43	345	P	P	08 43 57.7	+0.9
ALN	Alexandroupoli	86.43	345	P	P	08 43 56.6	-0.2
ALN				pmax	pmax		
	comp=Z,53nm,1.1s						
ALN	Alexandroupoli	86.43	345	P	P	08 43 56.6	-0.2
BNN	Bunyan	86.47	338	P	P	08 43 57.5	+0.2
VAY	Valandovo	86.51	348	*i* P	P	08 43 57.9	+0.7
KAVA	Kavala	86.56	347	P	P	08 43 58.0	+0.5
SRS	Serrai	86.57	347	P	P	08 43 58.1	+0.5
GRG	Griva	86.89	348	P	P	08 43 59.4	+0.2
OHR	Ohrid	86.93	349	*i* P	P	08 43 59.3	-0.1
FNA	Florina	87.19	349	P	P	08 44 00.2	-0.4
FNA				pmax	pmax		
	comp=Z,37nm,0.7s						
FNA	Florina	87.19	349	P	P	08 44 00.2	-0.4
HYB	Hyderabad	87.35	295	*i* P	P	08 44 08.0	+6.3
FITZ	Fitzroy Crossi	87.35	236	P	P	08 44 01.2	-0.3
FITZ				IAmb	IAmb	08 44 19.5	
	comp=Z,16nm,1.1s						
KTI	Kastanea	87.48	348	P	P	08 44 02.9	+0.7
MOTC	Monteria, Cord	87.90	79	*e*P	P	08 44 13.2	+8.8
LSK	Leskovik	87.90	349	P	P	08 44 04.9	+0.8
KPRO	Kipourio	88.01	349	P	P	08 44 05.1	+0.5
AS31	Alice Springs	88.02	227	P	P	08 44 04.6	-0.1
ASAR	Alice Springs	88.02	227	P	P	08 44 04.8	+0.2
	comp=Z,6.0nm,0.7s,baz=28,slow=4.9,SNR=28						
ASAR				pP	pwP	08 44 19.4	-0.3
	comp=Z,12nm,0.8s,baz=26,slow=4.2,SNR=13						
ASAR	Alice Springs	88.02	227	P	P	08 44 04.7	+0.1
ASAR	Alice Springs	88.02	227	P	P	08 44 04.7	+0.1
JAN	Janina	88.36	349	P	P	08 44 07.1	+0.9
IGT	Igoumenitsa	88.55	350	P	P	08 44 06.7	-0.4
LL6C	La Loma 6 Bece	88.61	76	*e*P	P	08 44 19.0	+11
ESDC	Sonseca Array	88.70	8	P	P	08 44 07.3	-0.5
	comp=Z,3.6nm,0.9s,baz=346,slow=5.0,SNR=8.1						
ESDC				pP	sP	08 44 20.2	0.0
	comp=Z,5.2nm,0.8s,baz=345,slow=4.4,SNR=11						
ESDC	Sonseca Array	88.70	8	P	P	08 44 07.8	-0.1
ESDC				IAmb	IAmb	08 44 09.5	
	comp=Z,11nm,1.3s						
SMLC	San Martn de	88.86	77	*e*P	P	08 44 19.0	+10
EVR	Evrytania	88.97	348	P	P	08 44 09.4	+0.2
ANX	Ano Chora	89.28	348	P	P	08 44 10.5	-0.2
ZARC	Zaragoza, Cauc	89.40	79	*e*P	P	08 44 20.9	+9.5
OCAC	Ocana	89.76	77	*e*P	P	08 44 18.0	+4.7
PLMC	San Jos del P	90.54	82	*e*P	P	08 44 21.9	+5.0
PAMC	Pamplona, Colo	90.84	77	*e*P	P	08 44 21.9	+3.1
NORC	Norcasia	90.90	80	*e*P	P	08 44 18.0	-0.5
YOTC	Yotoco, Valle	91.22	82	*e*P	P	08 44 28.6	+8.6
SPBC	San Pablo de B	91.32	79	*e*P	P	08 44 18.0	-2.5
STKA	Stephens Creek	92.03	217	P	P	08 44 22.4	-0.7
	comp=Z,7.0nm,1.0s,baz=68,slow=4.5,SNR=11						
STKA	Stephens Creek	92.03	217	P	P	08 44 23.3	+0.3
MMAI	Mount Meron Ar	92.13	336	P	P	08 44 22.9	-1.1
	comp=Z,6.9nm,0.8s,baz=7.6,slow=6.9,SNR=7.1						
SOTA	Rioblanco	92.50	83	*e*P	P	08 44 35.4	+9.0
ASF	Jabal al Asfar	92.54	335	P	P	08 44 25.2	-0.7
	comp=Z,8.2nm,1.1s,baz=301,slow=5.6,SNR=6.4						
WSAR	Wadi Sarin	92.76	314	P	P	08 44 26.7	-0.3
	comp=Z,9.8nm,0.8s,baz=355,slow=3.2,SNR=8.1						
TORD	Torodi Ar. Bea	115.45	5	PKP	PKiKP	08 49 55.4	-1.1
	comp=Z,0.3nm,0.5s,baz=348,slow=3.8,SNR=1.3						
TORD				PKKPbc	PKKPbc	09 00 32.5	+4.5
	comp=Z,1.7nm,0.8s,baz=188,slow=4.2,SNR=6.9						
PLCA	Paso Flores	127.74	110	PKP	PKPdf	08 50 19.5	+0.2
	comp=Z,2.5nm,0.7s,baz=304,slow=9.4,SNR=4.0						
TSUM	Tsumeb	146.63	341	PKPab	PKPbc	08 50 56.5	+0.3
MAW	Mawson	148.71	218	PKPbc	PKPbc	08 51 00.6	+0.4
	comp=Z,6.7nm,0.7s,baz=106,slow=2.9,SNR=22						
MAW	Mawson	148.71	218		PKPbc	08 50 59.9	-0.4
BOSA	Boshof	153.23	322	PKPbc	PKPbc	08 51 12.2	0.0
	comp=Z,3.9nm,0.5s,baz=14,slow=3.0,SNR=8.0						
VNA3	Neumayer Olymp	158.86	165	PKPab	PKPab	08 51 48.1	+1.1
VNA3	Neumayer Olymp	158.86	165	PKPdf	PKPdf	08 51 09.2	-1.5
SNAA	Sanae	159.33	171	PKPab	PKPab	08 51 48.8	-0.3
SNAA	Sanae	159.33	171	PKPdf	PKPdf	08 51 11.0	-0.3
SNAA	Sanae	159.33	171	PKPab	PKPab	08 51 48.5	-0.6
	comp=Z,4.6nm,1.1s,baz=221,slow=6.3,SNR=6.4						
SNAA	Sanae	159.33	171		PKPab	08 51 49.1	0.0
VNA2	Neumayer--Watz	159.49	167	PKPab	PKPab	08 51 49.1	-0.6
VNA2	Neumayer--Watz	159.49	167	PKPdf	PKPdf	08 51 10.1	-1.4
	baz=224,slow=0.8						
VNA1	Neumayer--Stat	159.61	166	PKPab	PKPab	08 51 48.8	-1.4

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*IDC **02** 08:55:16.2±3.9, 38°.10N×75°.73E, h153^{km}±22^{km}, mb3.6/3, mb1 3.4/6, mb1mx3.1/45, mbtmp3.8/6, Error ellipse: s-maj=47.7km s-min=19.5km az=155.0*

*NNC **02** 08:55:30.3±7.7, 39°.37N×75°.23E, h0^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=60.2km s-min=57.9km az=166.0*

ISC 02 08:55:17.9±1.9, **38°.3N**±0°.2×**75°.4E**±0°.1, **h150**^{km}, **n9**, σ**1^s.49**/10, **mb4.0**/3, **1C-3D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	4.36	351	P	Pn	08 56 24.9	+1.9
	1.6nm,0.3s,baz=150,slow=7.4,SNR=11						
AAK	Ala-Archa	4.36	351	⇓Pn	Pn	08 56 24.6	+1.6
	1.8nm,0.3s						
AAK				⇓Sn	Sn	08 57 03.8	-10
	6.4nm,0.7s						
TKM2	Tokmak 2	4.59	2	⇑Pn	Pn	08 56 27.0	+1.0
	6.3nm,0.6s						
KK31	Karatay Array	6.06	323	⇓Pn	Pn	08 56 46.7	+1.4
	0.9nm,0.4s,baz=130,slow=12,SNR=11						
KK31				Sn	Sn	08 57 51.6	-2.1
	3.7nm,0.4s,baz=140,slow=20,SNR=17						
MKAR	Makanchi Array	9.85	29	P	Pn	08 57 35.8	-0.1
	0.1nm,0.3s,baz=215,slow=16,SNR=2.0						
ZALV	Zalesovo Beam	16.89	19	P	P	08 59 04.0	-0.8
	0.3nm,0.3s,baz=208,slow=12,SNR=3.7						
FINES	FINESS Array B	38.02	324	P	P	09 02 21.8	+0.7
	2.5nm,0.9s,baz=96,slow=14,SNR=2.4						
ARCES	ARCESS Array B	40.87	336	P	P	09 02 45.3	+0.7
	3.8nm,0.9s,baz=110,slow=8.0,SNR=1.3						
TORD	Torodi Ar. Bea	69.26	271	P	P	09 06 08.3	-0.7
	0.3nm,0.4s,baz=48,slow=6.2,SNR=4.5						

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*JMA **02** 09:07:30.2±0.1, 38°.60N×142°.53E, h38^{km}±2^{km}, M4.0*
JMA Felt I J1.

*IDC **02** 09:07:31.4±0.9, 38°.35N×142°.64E, h52^{km}±8^{km}, mb3.3/7, mb1 3.7/11, mb1mx3.4/54, mbtmp3.8/11, Error ellipse: s-maj=22.7km s-min=16.1km az=104.0*

ISC 02 09:07:30.5±0.8, **38°.48N**±0°.04×**142°.60E**±0°.07, **h46**^{km}±8^{km}, **n26**, σ**2^s.31**/41, **mb3.6**/7, **6D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.91	259	⇓P	Pn	09 07 46.3	-0.6
JIKH				S	Sn	09 07 57.6	-1.3
JKMT	Kesennumamotoy	0.94	291	⇓P	Pn	09 07 45.9	-1.5
JKMT				S	Sn	09 07 57.0	-2.7
OFUJ	Ofunato	0.94	310	⇓P	Pn	09 07 45.6	-1.8
OFUJ				S	Sn	09 07 56.5	-3.2
JIO	Ouri	0.98	269	P	Pn	09 07 47.1	-0.8
JIO				S	Sn	09 07 59.1	-1.6
JMK	Ichinoseki	1.18	294	⇓P	Pn	09 07 49.4	-1.2
JMK				S	Sn	09 08 03.2	-2.3
JOM	Ohasama	1.42	315	⇓P	Pn	09 07 52.8	-1.1
JOM				S	Sn	09 08 09.1	-2.3
JOU	Okura	1.53	266	P	Pn	09 07 55.4	0.0
JOU				S	Sn	09 08 13.9	-0.1
JMM	Marumori	1.55	247	P	Pn	09 07 55.7	0.0
JMM				*e*S	Sn	09 08 14.7	+0.1
JTH	Tanohata	1.56	339	⇓P	Pn	09 07 53.9	-2.0
JFK	Kawauchi	1.76	231	P	Pn	09 07 58.7	+0.1
JFK				S	Sn	09 08 19.3	-0.6
JRG	Rokugo	1.78	301	P	Pn	09 07 58.1	-0.8
JYK	Kaneyama	1.81	285	P	Pn	09 07 58.9	-0.3
JANG	Nango	2.07	336	P	Pn	09 08 00.8	-2.0
MJAR	Matsushiro Arr	3.99	242	P	Pn	09 08 31.4	+2.1
	0.3nm,0.3s,baz=50,slow=10,SNR=8.8						
MAT	Matsushiro	3.99	242	P	Pn	09 08 32.1	+2.9
MAT				*e*S	Sn	09 09 19.3	+4.5
ASAJ	Asahikawa	5.63	360	P	Pn	09 08 51.4	-0.2
	4.1nm,0.3s,baz=217,slow=11,SNR=31						
JHJ	Hachijo jima 2	5.82	204	P	Pn	09 08 53.8	-0.6
	9.8nm,0.3s,baz=319,slow=24,SNR=6.3						
JHJ				S	Sn	09 09 57.1	-2.6
	18nm,0.3s,baz=275,slow=22,SNR=1.7						
USRK	Ussuriysk Ar.	9.81	309	P	Pn	09 09 53.0	+4.1
	baz=106,slow=13,SNR=9.5						
JCJ	Chichijima	11.36	182	P	Pn	09 10 07.9	-2.3
	2.3nm,0.3s,baz=352,slow=19,SNR=9.0						
JCJ				S	Sn	09 12 07.8	-7.9
	1.9nm,0.3s,baz=177,slow=17,SNR=1.5						
SEY	Seymchan	25.19	11	P	P	09 12 53.3	+1.8
	1.4nm,0.6s,baz=190,slow=7.8,SNR=6.1						
MKAR	Makanchi Array	44.16	301	P	P	09 15 35.2	+0.5
	0.2nm,0.4s,baz=79,slow=13,SNR=1.6						
KURBB	Kurchatov Arra	45.87	307	P	P	09 15 48.0	-0.1
	1.0nm,0.5s,baz=80,slow=8.3,SNR=5.2						
KURBB				pP	pP	09 16 02.3	+1.9
	0.6nm,0.5s,baz=82,slow=8.0,SNR=2.7						
ILAR	Eielson Array	47.77	33	P	P	09 16 03.4	+0.6
	0.3nm,0.8s,baz=283,slow=7.6,SNR=1.7						
ILAR				pP	pP	09 16 17.2	+2.3
	0.4nm,0.6s,baz=265,slow=5.9,SNR=3.5						
WRA	Warramunga Arr	58.63	189	P	P	09 17 22.6	-0.4
	1.0nm,1.0s,baz=7.1,slow=7.1,SNR=6.7						
ASAR	Alice Springs	62.36	189	P	P	09 17 47.5	-0.9
	0.2nm,0.4s,baz=14,slow=5.3,SNR=4.2						
TXAR	Lajitas Array	88.50	53	P	P	09 20 19.6	+1.1
	0.3nm,0.9s,baz=297,slow=4.5,SNR=3.6						
TXAR				pP	pP	09 20 34.2	+2.6
	0.2nm,0.7s,baz=298,slow=2.7,SNR=2.8						

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*IDC **02** 09:17:07.4±6.5, 36°.36N×70°.55E, h185^{km}±63^{km}, mb3.2/4, mb1 3.4/7, mb1mx3.0/59, mbtmp3.9/7, Error ellipse: s-maj=52.5km s-min=32.1km az=6.0*

*NNC **02** 09:17:14.5±3.7, 36°.88N×70°.56E, h189^{km}±58^{km}, mb3.0, mpv3.9, Error ellipse: s-maj=38.1km s-min=21.7km az=16.0*

ISC 02 09:17:09.4±1.2, **36°.5N**±0°.1×**70°.6E**±0°.1, **h200**^{km}, **n18**, σ**1^s.47**/21, **mb3.4**/3, **1C-4D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	6.09	22	P	Pn	09 18 38.8	+0.7
	SNR=27						
KK31	Karatay Array	6.57	359	⇓P	Pn	09 18 44.6	+0.8
	0.7nm,0.2s,baz=33,slow=22,SNR=28						
KK31				⇓S	Sn	09 19 55.4	-3.5
	32nm,0.7s,baz=189,slow=25,SNR=9.4						
EKS2	Erkin-Say	6.60	21	P	Pn	09 18 45.9	+1.4
	SNR=6.6						
AAK	Ala-Archa	6.80	25	P	Pn	09 18 48.5	+1.4
	4.0nm,0.3s,baz=187,slow=4.5,SNR=21						
AAK				S	Sn	09 20 03.6	-1.0
	2.2nm,0.3s,baz=354,slow=21,SNR=3.7						
AAK	Ala-Archa	6.80	25	P	Pn	09 18 48.4	+1.2
	SNR=7.8						
AAK	Ala-Archa	6.80	25	⇑P	Pn	09 18 48.0	+0.9
	3.5nm,0.5s						
AAK				⇓S	Sn	09 20 03.4	-1.3
	37nm,0.8s						
CHMS	Chumysh	7.21	25	P	Pn	09 18 53.5	+1.2
	SNR=5.5						
USP	Ospenovka	7.37	23	P	Pn	09 18 55.0	+0.6
	SNR=8.4						
TKM2	Tokmak 2	7.46	30	P	Pn	09 18 57.0	+1.4
	SNR=15						
TKM2	Tokmak 2	7.46	30	⇓P	Pn	09 18 56.9	+1.2
	18nm,0.5s						
MK31	Makanchi Array	13.46	37	P	Pn	09 20 13.8	+1.3
	1.3nm,0.3s,baz=224,slow=12,SNR=19						
MKAR	Makanchi Array	13.46	37	P	P	09 20 14.4	-0.7
	0.7nm,0.3s,baz=211,slow=12,SNR=18						
AB31	Akbulak array	14.90	332	P	P	09 20 32.9	+1.9
	0.4nm,0.3s,baz=150,slow=12,SNR=22						
KURBB	Kurchatov Arra	15.20	20	P	Pn	09 20 34.1	+0.3
	0.1nm,0.3s,baz=203,slow=11,SNR=4.9						
ZALV	Zalesovo Beam	20.03	25	P	P	09 21 28.5	+1.7
	2.3nm,0.4s,baz=208,slow=11,SNR=6.9						
TORD	Torodi Ar. Bea	65.39	268	P	P	09 27 29.8	-1.0
	0.2nm,0.5s,baz=40,slow=5.6,SNR=1.6						
WRA	Warramunga Arr	82.29	122	P	P	09 29 07.4	-1.3
	0.6nm,0.7s,baz=325,slow=4.8,SNR=4.8						
ASAR	Alice Springs	84.54	125	P	P	09 29 19.8	-0.4
	0.4nm,0.6s,baz=311,slow=4.9,SNR=9.8						

NOU 02 09:43:14.2, 13°.04S×166°.68E, h108^{km}, **MLv5.6**/8, **Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	2.45	168	P	Pn	09 43 53.0	+0.1
DVP	Devils Point	4.88	163	P	Pn	09 44 25.3	-0.1
YATNC	Mamie plateau,	8.97	179	P	Pn	09 45 20.9	0.0
DZM	Mont Dzumac	8.98	181	P	Pn	09 45 21.3	+0.1
PINNC	Pines Island,	9.55	176	P	Pn	09 45 28.2	-0.5

NNC 02 09:47:10.2±3.5, **37°.03N×71°.18E, h144**^{km}±80^{km}, **mb3.0, mpv3.7, 3C-2D, Error ellipse: s-maj=35.8km s-min=25.3km az=30.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.09	355	⇓P	Pn	09 48 38.5	+0.5
	2.1nm,0.3s,baz=173,slow=13,SNR=63						
KK31				S	Sn	09 49 46.6	0.0
	3.4nm,0.3s,baz=188,slow=14,SNR=16						
AAK	Ala-Archa	6.15	23	⇑P	Pn	09 48 39.3	+0.3
	4.1nm,0.4s						
AAK				⇑S	Sn	09 49 49.3	+0.9
	7.6nm,0.6s						
TKM2	Tokmak 2	6.79	29	⇑P	Pn	09 48 46.5	-1.0
	2.8nm,0.5s						
AB31	Akbulak array	14.70	330	⇓P	Pn	09 50 31.1	+0.2
	1.3nm,0.7s,baz=149,slow=12,SNR=12						

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*VIE **02** 10:09:15.9±0.3, 50°.53N×14°.11E, h0^{km}, mb2.2/5, ml2.5/4, Error ellipse: s-maj=2.3km s-min=1.5km az=15.0 57 km NNW of Praha Suspected Mining explosion.*

ISC 02 10:09:14.3±2.3, **50°.71N**±0°.09×**13°.90E**±0°.09, **h0**^{km}, **n8**, σ**1^s.33**/12, **Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	1.52	84	*e*Pg	Pg	10 09 43.7	+0.2
KSP				*e*Sg	Sn	10 10 03.7	+0.3
VRAC	Vranov	2.23	128	*e*PN	Pb	10 09 54.7	-0.8
VRAC				*e*SG	Sn	10 10 19.7	-1.2
KRUC	Moravsky	2.31	135	*e*PN	Pb	10 09 56.4	-0.4
KRUC				*e*SG	Sn	10 10 22.3	-0.4
CONA	Conrad Observa	3.07	155	*e*Pn	Pn	10 10 03.7	-0.4
	0.1nm,0.1s						
CONA				*e*Sg	Sb	10 10 49.6	+1.8
	6.2nm,0.4s						
MODS	Modra-Piesok	3.21	135	*e*SG	Sg	10 10 59.4	+2.0
ARSA	Arzberg	3.62	162	*e*Sg	Sg	10 11 08.8	-1.9
	6.1nm,0.5s						
KBA	Koelnbreinsper	3.65	186	*e*Sg	Sg	10 11 11.5	-0.2
	6.6nm,0.6s						
WTTA	Wattenberg	3.76	204	*e*Sg	Sg	10 11 16.5	+1.5
	2.2nm,0.4s						

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*IDC **02** 10:23:44.8±1.7, 8°.59N×82°.62W, h0^{km}, mb3.8/10, mb1 4.0/10, mb1mx3.8/34, mbtmp3.8/10, Error ellipse: s-maj=57.9km s-min=23.5km az=32.0*

*NEIC **02** 10:23:48.1±2.1, 8°.35N±0°.10×82°.86W±0°.07, h19^{km}±4^{km}, mb4.3/14, Error ellipse: s-maj=16.7km s-min=4.5km az=212.0*

*UCR **02** 10:23:48.3±2.0, 8°.32N×82°.80W, h17^{km}±5^{km}, MW4.7, mb4.3(NEIC)*

*UPA **02** 10:23:48.2±3.1, 8°.33N×82°.81W, h10^{km}±6^{km}, MW4.8*

*INET **02** 10:23:51.6, 8°.82N×83°.23W, h15^{km}, MW4.0*

ISC 02 10:23:47.7±0.8, **8°.30N**±0°.03×**82°.84W**±0°.02, **h27**^{km}±5^{km}, **n110**, σ**1^s.48**/124, **mb4.1**/16, **5C-24D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTPM	Petroterminale	0.10	205	⇑*i*P	Pb	10 23 52.1	-0.4
PTPM				*i* S	Sb	10 23 56.5	+0.7
CDITO	Canoas	0.28	353		Pb	10 23 53.8	-0.7
CDITO	Canoas	0.28	353	⇓*e*P	Pb	10 23 53.8	-0.7
CDITO				*i* S	Sb	10 23 58.4	-0.8
BAGA3	Bagala, Chiriq	0.35	61	⇓*i*P	Pb	10 23 55.5	-0.1
BAGA3				*i* S	Sb	10 24 00.6	-0.4
DVD	David	0.41	70	⇑*i*P	Pb	10 23 55.9	-0.5
DVD				*i* S	Sb	10 24 01.3	-1.1
LOCO3	Loma Colorada,	0.43	75	⇓*i*P	Pb	10 23 56.4	-0.4
LOCO3				*i* S	Sn	10 24 04.0	-1.1
MLIR3	Monte Lirio, C	0.49	1	⇓*i*P	Pb	10 23 57.7	-0.2
MLIR3				*i* S	Sn	10 24 07.6	+0.8
CHIR3	Chiriqui UPA,	0.51	79	⇓*i*P	Pb	10 23 57.5	-0.7
CHIR3				*i* S	Sb	10 24 05.5	+0.2
BRU2	Volcan	0.51	16	*e*P	Pb	10 23 57.8	-0.5
BRU2				*e*S	Sb	10 24 05.7	+0.1
BRU2	Volcan	0.51	16	⇓*i*P	Pb	10 23 57.8	-0.5
BRU2				*i* S	Sn	10 24 07.8	+0.3
BCO2	Palmira	0.52	36	⇓*i*P	Pb	10 23 57.9	-0.5
BCO2				*i* S	Sb	10 24 05.7	+0.1

PTJ1	Puerto Jimnez	0.52	297	eP	Pb	10 23 57.5	-0.7
PTJ1				i S	Sn	10 24 06.9	-0.4
PTJ1	Puerto Jimnez	0.52	297	eP	Pb	10 23 57.5	-0.7
PTJ1				i S	Sb	10 24 05.5	0.0
EDSV	San Vito	0.54	346	eP	Pb	10 23 58.2	-0.5
EDSV				eS	Sn	10 24 07.4	-0.6
BC3P	Paso Ancho	0.56	23	⇓iP	Pb	10 23 58.3	-0.8
LNBQ3	Los Naranjos,	0.63	39	⇓iP	Pb	10 23 59.1	-1.1
PSOM3	Paja de Sombre	0.64	53	⇓iP	Pb	10 23 59.2	-1.1
EDPN	Palmar Norte	0.90	317	⇓eP	Pn	10 24 03.5	-1.2
EDPN				eS	Sn	10 24 16.8	0.0
CHGR2	Aguacate	0.94	47	⇓iP	Pn	10 24 03.8	-1.4
CHGR2				i S	Sb	10 24 16.0	-1.4
EDBA	Buenos Aires	0.96	333	eP	Pn	10 24 05.2	-0.4
SRBA	San Rafael, Bu	1.06	331		Pn	10 24 06.2	-0.8
CNI2	El Empalme, Bo	1.18	18	⇓iP	Pn	10 24 08.0	-0.4
CNI2				i S	Sb	10 24 24.4	+0.2
GMAL	Guarumal, Vera	1.67	108	⇓eP	Pn	10 24 14.2	-1.1
RSUS3	Rio de Jesus,	1.69	101	⇑eP	Pn	10 24 15.2	-0.3
RSUS3				i S	Sn	10 24 36.7	+0.4
RIMA	Rio Macho	1.78	325		Pn	10 24 16.9	+0.1
SFRA3	San Francisco,	1.85	91	⇓eP	Pn	10 24 18.0	+0.4
STIA3	Santiago, Vera	1.86	96	⇓iP	Pn	10 24 17.8	0.0
BATAN	Batan	1.87	343		Pn	10 24 19.3	+1.4
BATAN	Batan	1.87	343	eP	Pn	10 24 19.4	+1.4
BATAN				i S	Sb	10 24 46.5	+2.4
CVTR	Volcan Turrial	1.94	332		Pn	10 24 20.2	+0.9
MARI3	Mariato, Verag	1.94	109	⇓eP	Pn	10 24 20.3	+1.4
MARI3				i S	Sb	10 24 45.6	-0.5
HDC	Heredia	2.11	323	eP	Pn	10 24 22.4	+1.0
HDC	Heredia	2.11	323		Pn	10 24 22.7	+1.3
HDC	Heredia	2.11	323	⇓iP	Pn	10 24 22.7	+1.3
HDC				i S	Sb	10 24 51.3	+0.1
CACAO	El Cacao, Vera	2.17	116	eP	Pn	10 24 22.8	+0.7
CACAO				eS	Sb	10 24 52.8	-0.1
PESE3	Pese, Herrera	2.23	100	⇓eP	Pn	10 24 24.1	+1.2
SRA1	San Ramn	2.41	318	eP	Pn	10 24 26.9	+1.4
CHIT3	Chitre	2.42	98	⇑eP	Pn	10 24 26.2	+0.7
PNME	Penonome	2.49	85	⇓iP	Pn	10 24 27.7	+1.2
TOSI3	Tonosi	2.53	110	eP	Pb	10 24 30.3	-2.2
LAFE	Finca La Fe, P	2.54	306	eP	Pn	10 24 27.5	+0.3
AZU	Azuero	2.59	101	⇓iP	Pn	10 24 29.3	+1.5
CAO2	Cobano, Puntar	2.63	302		Pn	10 24 28.3	-0.2
VTON	El Valle, Cocl	2.71	83	eP	Pn	10 24 30.8	+1.2
ARE1	Arenal 1	2.84	319	eP	Pn	10 24 34.2	+2.9
COVE	Coope Vega, Sa	2.86	327	eP	Pn	10 24 33.2	+1.6
COVE	Coope Vega, Sa	2.86	327		Pn	10 24 33.0	+1.4
JTS	Las Juntas de	2.88	314	⇓eP	Pn	10 24 32.9	+1.0
ZANG	Zanguenga, Cho	3.01	77	i P	Pn	10 24 36.2	+2.6
BCIP	Isla Barro Col	3.09	74		Pn	10 24 35.4	+0.7
BCIP	Isla Barro Col	3.09	74	eP	Pn	10 24 35.0	+0.2
BCIP	Isla Barro Col	3.09	74	⇓iP	Pn	10 24 35.4	+0.7
DUNO	Dulce Nombre,	3.17	304		Pn	10 24 36.9	+1.1
PTEN	Parque Tenorio	3.21	319	eP	Pn	10 24 39.1	+2.7
ARRA3	Arraijan, Pana	3.21	78	eP	Pb	10 24 40.5	-3.5
CUI	Cuipilapa	3.28	316	eP	Pn	10 24 40.1	+2.7
TABO3	Taboga, Panama	3.28	81	eP	Pb	10 24 42.0	-3.2
GUAI	GUAI	3.29	307	⇓iP	Pn	10 24 38.9	+1.4
ORTG	Ortega, Santa	3.30	309		Pn	10 24 39.3	+1.5
UPA	Univ. de Panam	3.34	78	⇑eP	Pb	10 24 46.1	-0.1
UPA				i S	Sb	10 25 31.8	+5.5
LIM1	Limonal	3.37	315	eP	Pn	10 24 41.4	+2.7
BUEV	Buena Vista	3.55	315	i P	Pn	10 24 44.2	+3.0
GB1A	Borinquen Arri	3.56	315	i P	Pn	10 24 44.4	+3.1
GBS3	Finca Las Img	3.57	314	i P	Pn	10 24 44.2	+2.8
HZTE	Horizontes, Gu	3.63	312		Pn	10 24 44.7	+2.5
CHPO	Chepo, Panama	3.78	76	eP	Pb	10 24 54.2	+0.4
ACON	Acoyapa	4.31	328		Pn	10 24 52.0	+0.4
UPD2	Meteti	4.78	87	eP	Pn	10 25 00.4	+2.4
PRVC	Isla de Provid	5.25	16	Pn	Pn	10 25 05.8	+1.3
PRVC	Isla de Provid	5.25	16	eP	Pn	10 25 03.8	-0.6
CNGN	Cerro Negro	5.65	318		Pn	10 25 08.5	-1.4
SOLC	Bahia Solano	5.76	111	eP	Pn	10 25 10.8	-0.7
CRIN	San Cristobal	6.03	317		Pn	10 25 17.6	+2.4
MOTC	Monteria, Cord	7.11	86	Pn	Pn	10 25 31.1	+1.1
UREC	San Jos de Ur	7.25	94	eP	Pn	10 25 40.9	+8.9
PLMC	San Jos del P	7.33	117	eP	Pn	10 25 34.0	+0.9
SJCC	San Jacinto, C	7.73	78	Pn	Pn	10 25 41.3	+2.7
SJCC	San Jacinto, C	7.73	78	eP	Pn	10 25 40.7	+2.1
ZARC	Zaragoza, Cauc	7.94	95		Pn	10 25 42.6	+1.1
ZARC	Zaragoza, Cauc	7.94	95	eP	Pn	10 25 42.4	+0.9
GUY2C	Guyana, Caldas	8.02	112	eP	Pn	10 25 44.9	+1.9
SMLC	San Martn de	8.68	86	eP	Pn	10 26 38.6	+47
ORTC	Ortega, Tolima	8.71	120	eP	Pn	10 25 56.3	+4.1
RUSC	La Rusia	9.97	103	eP	Pn	10 26 26.0	+16
VILC	Villavicencio,	9.99	114	eP	Pn	10 26 15.7	+5.9
PTGA	Pitinga	24.50	110	P	P	10 29 05.4	+0.3
	1.2nm,0.4s,baz=321,slow=19,SNR=2.7						
WHAR	Wooly Hollow	28.23	343	P	P	10 29 38.6	+0.1
WHAR				IAmb	IAmb	10 29 39.4	
	comp=Z,4.9nm,0.8s						
TXAR	Lajitas Array	28.65	320	P	P	10 29 43.0	+0.5
	comp=Z,0.1nm,0.5s,baz=167,slow=7.3,SNR=2.2						
TXAR				PcP	PcP	10 32 54.1	+1.1
	comp=Z,0.1nm,0.6s,baz=145,slow=3.3,SNR=2.0						
LCAR	Lake Charles	28.67	346	P	P	10 29 42.6	+0.2
T42A	Van Buren	29.57	347	P	P	10 29 50.0	-0.3
T42A				IAmb	IAmb	10 29 52.5	
	comp=Z,2.2nm,0.7s						
LPIG	La Paz	30.61	304	P	P	10 29 59.1	-0.6
	comp=Z,17nm,0.6s,baz=54,slow=8.7,SNR=1.7						
S39A	Bolivar	30.77	344	P	P	10 30 00.5	-0.4
S39A				IAmb	IAmb	10 30 02.1	
	comp=Z,3.6nm,0.8s						
X16A	Lo Mia Camp, P	36.97	319	P	P	10 30 57.9	+2.8
PDAR	Pinedale Array	41.59	330	P	P	10 31 33.6	0.0
	comp=Z,0.3nm,0.5s,baz=133,slow=12,SNR=4.3						
ULM	Lac du Bonnet	43.21	348	P	P	10 31 44.6	-1.8
	comp=Z,3.2nm,0.8s,baz=164,slow=8.2,SNR=5.4						
ULM	Lac du Bonnet	43.21	348	IAmb	IAmb	10 31 58.6	
	comp=Z,5.9nm,1.1s						
NVAR	Mina Array Bea	43.80	319	P	P	10 31 53.8	+2.1
	comp=Z,0.7nm,0.6s,baz=121,slow=6.2,SNR=8.0						
BMN	Battle Mountai	44.27	322	P	P	10 31 57.0	+1.7
HLID	Hailey	44.66	327	P	P	10 31 59.5	+1.1
HLID				IAmb	IAmb	10 31 59.9	
	comp=Z,2.2nm,0.9s						
WVOR	Wild Horse Val	46.32	323	P	P	10 32 12.1	+0.6
WVOR				IAmb	IAmb	10 32 15.3	
	comp=Z,2.9nm,0.8s						
SCHQ	Schefferville	48.14	12	P	P	10 32 24.6	-0.7
	comp=Z,3.3nm,0.8s,baz=241,slow=13,SNR=2.8						
RES	Resolute Bay	66.71	357	P	P	10 34 34.5	-1.4
	comp=Z,1.1nm,0.7s,baz=194,slow=8.4,SNR=4.1						
RES	Resolute Bay	66.71	357	IAmb	IAmb	10 34 48.3	
	comp=Z,3.6nm,1.1s						
INK	Inuvik	68.52	342	P	P	10 34 47.4	-0.1
	comp=Z,1.7nm,0.9s,baz=78,slow=9.0,SNR=4.8						
INK	Inuvik	68.52	342	IAmb	IAmb	10 34 56.5	
	comp=Z,2.7nm,1.0s						
A36M	Sachs Harbour	68.68	347	P	P	10 34 47.9	-0.5
ILAR	Eielson Array	71.63	336	P	P	10 35 07.0	+0.4
	comp=Z,0.7nm,0.7s,baz=125,slow=4.5,SNR=7.2						
TORD	Torodi Ar. Bea	82.86	78	P	P	10 36 10.4	-0.2
	comp=Z,0.4nm,0.8s,baz=278,slow=4.5,SNR=2.5						
ASAR	Alice Springs	141.66	242	PKhKP	PKPpre	10 43 11.6	
	comp=Z,0.2nm,0.6s,baz=118,slow=3.7,SNR=7.5						
WRA	Warramunga Arr	142.23	248	PKhKP	PKPpre	10 43 14.0	
	comp=Z,0.1nm,0.3s,baz=97,slow=3.3,SNR=2.3						

IDC **02** *10:32:14.1±0.6, 51°.65N×173°.28W, h0^{km}, mb4.4/39, mb1 4.5/41, mb1mx4.4/71, mbtmp4.4/41, ML4.1/2, MS4.1/29, Ms1 4.1/29, ms1mx4.0/48, Error ellipse: s-maj=16.9km s-min=9.5km az=174.0*

MOS **02** *10:32:15.4±1.0, 51°.68N×173°.31W, h17^{km}, mb4.7/26, Error ellipse: s-maj=9.0km s-min=7.2km az=92.4*

NEIC **02** *10:32:16.4±2.7, 51°.56N±0°.07×173°.29W±0°.07, h10^{km}±1^{km}, mb4.5/163, ML4.1(AEIC), Error ellipse: s-maj=12.6km s-min=7.6km az=180.0*

AEIC **02** *10:32:16±2.8, 51°.43N±0°.08×173°.24W±0°.07, h18^{km}±4^{km}, Error ellipse: s-maj=11.7km s-min=6.7km az=178.0*

GCMT **02** *10:32:20.4±0.3, 51°.44N±0°.02×173°.30W±0°.04, h23^{km}±1^{km}, MW5.0/93, Moment Tensor Solution. s25,c30; s93,c116; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.08±.25; $M_{\theta\theta}$-2.63±.16; $M_{\phi\phi}$-0.44±.13; $M_{r\theta}$2.00±.19; $M_{\theta\phi}$-0.75±.07; $M_{\phi r}$0.75±.19; Best double couple: $M_0$3.65900×10^{16} NP1:ϕ_s254.00000°, δ27.00000°, λ93.00000°. NP2: ϕ_s71.00000°, δ63.00000°, λ88.00000°. Principal axes: T 3.7680, Plg72.0000°, Azm337.0000°; N -0.2160, Plg1.0000°, Azm72.0000°; P -3.5500, Plg18.0000°, Azm162.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 02 10:32:18.8±0.4**, 51°.51N**±0°.07×**173°.26W**±0°.03**, h37^{km}, n429, σ1^{s}25**/369**, mb4.5**/111**, MS4.1**/32**, 11C-2D, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOFP	Korovin Flat P	0.93	326		Pn	10 32 35.0	-0.3
KOSE	Korovin Southe	0.97	330		Pn	10 32 35.7	-0.1
KOSE					Sn	10 32 51.3	+2.9
KOKL	Mount Kliuchef	1.00	325		Pn	10 32 36.4	+0.1
KONE	Korovin Northe	1.03	329		Pn	10 32 36.6	-0.1
GSMY	Great Sitkin M	1.82	288		Pn	10 32 47.3	-0.2
GSTR	Great Sitkin T	1.84	290	Pn	Pn	10 32 48.7	+1.0
GSTD	Great Sitkin T	1.88	288		Pn	10 32 48.1	-0.2
GSTD					Sn	10 33 12.5	+1.8
GSSP	Great Sitkin S	1.90	289		Sn	10 33 14.0	+2.6
ADK	Adak	2.17	281	P	Pn	10 32 52.2	0.0
ADK	Adak	2.17	281		Pn	10 32 52.2	0.0
KIWB	Kanaga Island	2.45	280		Pn	10 32 56.5	+0.5
KIKV	Kanaga Island	2.46	280		Pn	10 32 57.0	+0.6
KIMD	Kanaga Island	2.49	277		Pn	10 32 56.9	+0.2
TAPA	Tanaga Point A	2.85	278		Pn	10 33 02.4	+0.7
TAFP	Tanaga Falls P	2.97	279		Pn	10 33 04.3	+1.0
TAFP					Sn	10 33 41.1	+3.6
TASE	Tanaga Southea	2.99	278		Pn	10 33 04.8	+1.2
NIKH	Nikolski High	3.08	60		Pn	10 33 05.0	+0.2
NIKH					Sn	10 33 43.3	+3.1
NIKH	Nikolski High	3.08	60	P	Pn	10 33 05.2	+0.5
	baz=245,SNR=17						
GAEA	Gareloi East	3.43	277		Pn	10 33 10.4	+0.8
GANO	Gareloi North	3.47	277		Pn	10 33 10.7	+0.6
OKNC	Okmok New Cone	3.69	56		Pn	10 33 14.6	+1.3
CERAA	Semis' Rag'd T	4.41	278		Pn	10 33 23.9	+0.9
MSW	Makushin Switc	4.62	56		Pn	10 33 26.7	+0.8
AMKA	Amchitka	4.66	271	Pn	Pn	10 33 26.7	+0.3
UNV	Unalaska Valle	4.73	58	Pn	Pn	10 33 29.3	+1.9
UNV	Unalaska Valle	4.73	58	P	Pn	10 33 29.3	+1.9
	baz=244						
LSSE	Little Sitkin	5.10	278		Pn	10 33 33.5	+1.0
LSSA	Little Sitkin	5.13	278		Pn	10 33 35.1	+2.1
FALS	False Pass	6.80	57	P	Pn	10 33 58.8	+3.0
	baz=245						
SDPT	Sand Point	8.54	58	P	Pn	10 34 21.0	+1.3
	baz=249						
CHNA	Chernabura Isl	8.86	63	P	Pn	10 34 25.4	+1.4
	baz=254						
OHAK	Old Harbor	12.95	56	P	Pn	10 35 20.2	+0.3
	baz=253						
Q19K	Cape Douglas,	13.40	49	Pn	Pn	10 35 25.9	-0.2
Q19K	Cape Douglas,	13.40	49	P	Pn	10 35 27.6	+1.5
	baz=245						
KDAK	Kodiak Island	13.49	54	Pn	Pn	10 35 24.1	-3.1
	0.7nm,0.3s,baz=256,slow=6.0,SNR=20						
KDAK	Kodiak Island	13.49	54	P	Pn	10 35 28.4	+1.1
	baz=252						
SVW2	Sparrevohn	13.68	39	Pn	Pn	10 35 33.2	+3.3
O19K	Port Alsworth	13.69	43	P	Pn	10 35 33.5	+3.4
	baz=240						
P19K	Oil Pt	13.91	46	Pn	P	10 35 38.3	-2.4
N19K	Bonanza Creek	13.96	41	Pn	Pn	10 35 34.8	+1.0
N19K	Bonanza Creek	13.96	41	P	Pn	10 35 36.8	+3.1
	baz=237						
O20K	Slope Mountain	14.38	45	P	Pn	10 35 42.0	+2.5
	baz=243						
L19K	White Mountain	14.62	36		P	10 35 47.6	-1.0
L19K	White Mountain	14.62	36	P	Pn	10 35 45.6	+2.9
	baz=232						
M19K	Big River Lodg	14.62	37	P	P	10 35 47.1	-1.4
M19K	Big River Lodg	14.62	37	P	P	10 35 46.4	-2.2
	baz=234						
TTA	Tatalina	14.71	32	P	P	10 35 48.3	-1.3
TTA	Tatalina	14.71	32		P	10 35 48.2	-1.3
TTA	Tatalina	14.71	32	P	P	10 35 47.6	-2.0
	baz=228,SNR=8.2						
BRLK	Bradley Lake	15.03	48	Pn	Pn	10 35 47.4	-0.8
BRSE	Bradley Lake S	15.09	48	P	Pn	10 35 49.6	+0.6
	baz=247						
L20K	Farewell, AK	15.16	36	P	Pn	10 35 51.6	+1.7
	baz=233						
CAPN	Captain Cook N	15.34	44	P	Pn	10 35 53.7	+1.5
	baz=243						
K20K	Telida	15.65	33	P	P	10 35 58.4	-1.6
K20K	Telida	15.65	33	P	Pn	10 35 57.2	+1.0
	baz=230						
GCSA	Galena City Sc	15.76	26	P	Pn	10 35 58.4	+0.8
	baz=221						
SKT	Skwentna	15.78	40	P	Pn	10 35 59.4	+1.4
	baz=239						
SEW	Seward	15.83	48	Pn	Pn	10 35 56.2	-2.3
SEW				IAmb	IAmb	10 36 17.8	
	comp=Z,43nm,1.5s						
SEW	Seward	15.83	48	P	Pn	10 35 58.5	0.0
	baz=248						
SUA	Susitna One	15.85	42	Pn	Pn	10 36 00.1	+1.2
SUA	Susitna One	15.85	42	P	Pn	10 36 00.2	+1.4
	baz=242						
O22K	Cooper Landing	15.85	46	Pn	Pn	10 35 58.8	0.0
O22K	Cooper Landing	15.85	46	P	Pn	10 35 59.2	+0.4
	baz=246						
PPLA	Purkeypile	16.04	37	P	P	10 36 04.4	0.0
PPLA				IAmb	IAmb	10 36 28.4	
	comp=Z,26nm,1.1s						
PPLA	Purkeypile	16.04	37	P	Pn	10 36 02.0	+0.6
	baz=235						
RC01	Rabbit Creek A	16.11	44	P	Pn	10 36 02.6	+0.5
	baz=244						
J20K	Nowinta River	16.17	31	P	P	10 36 05.2	-0.5
J20K				IAmb	IAmb	10 36 28.8	
	comp=Z,25nm,1.1s						
J20K	Nowinta River	16.17	31	P	Pn	10 36 04.2	+1.3
	baz=228						
CHUM	Lake Minchumin	16.59	34	P	Pn	10 36 08.1	-0.1
	baz=232						
PMR	Palmer	16.59	43	P	Pn	10 36 07.9	-0.3
	baz=244						
PWL	Port Wells	16.63	46	P	Pn	10 36 07.0	-1.7
PWL				IAmb	IAmb	10 36 22.9	
	comp=Z,15nm,0.5s						
PWL	Port Wells	16.63	46	P	Pn	10 36 08.2	-0.5
	baz=247						
GHO	Glory Hole Cre	16.76	43	P	Pn	10 36 10.7	+0.2
KNK	Knik Glacier	16.80	44	P	Pn	10 36 10.3	-0.6
	baz=246						
SML	Sawmill	17.03	43	P	Pn	10 36 13.0	-0.7
	baz=244						
TRF	Thorofare Moun	17.06	37	P	P	10 36 15.2	-0.6
TRF	Thorofare Moun	17.06	37	P	Pn	10 36 14.0	-0.3
	baz=237						
BPAW	Bear Paw Mtn.	17.19	34		P	10 36 18.0	+1.0
BPAW				IAmb	IAmb	10 36 37.8	
	comp=Z,31nm,1.2s						
BPAW	Bear Paw Mtn.	17.19	34	P	P	10 36 16.9	-0.1
	baz=234						
GLI	Glacier Island	17.20	47	P	Pn	10 36 15.7	-0.1
	baz=249						
PET	Petropavlovsk	17.22	286	eP	Pn	10 36 15.2	-0.9
PET				eS	Sn	10 39 20.2	-6.1
PET				pmax	pmax		
	comp=Z,300nm,12.3s						
PET				MLR	MLR		
	comp=Z,700nm,15.0s						
PET				MLR	MLR		
	comp=Z,600nm,14.0s						
FID	Port Fidalgo	17.44	48	Pn	Pn	10 36 17.2	-1.6
SCM	Sheep Creek Mo	17.47	44	P	Pn	10 36 18.6	-0.7
SCM				pmax	pmax		
	comp=Z,20nm,0.8s						
SCM	Sheep Creek Mo	17.47	44	Pn	Pn	10 36 18.6	-0.7
SCM				IAmb	IAmb	10 36 39.7	
	comp=Z,20nm,0.8s						
SCM	Sheep Creek Mo	17.47	44	P	Pn	10 36 18.4	-0.8
	baz=246						
I21K	Tanana	17.54	31		P	10 36 21.2	+0.5
I21K				IAmb	IAmb	10 36 49.6	
	comp=Z,19nm,0.8s						
I21K	Tanana	17.54	31	P	P	10 36 21.7	+1.0
	baz=229,SNR=14						
IMAR	Indian Mountai	17.56	27		P	10 36 22.1	+1.0
H21K	Melozitna Rive	17.61	29	P	P	10 36 22.6	+1.0
H21K	Melozitna Rive	17.61	29	P	P	10 36 21.8	+0.3
	baz=227						
MCK	McKinley	17.73	37	P	Pn	10 36 22.2	-0.1
MCK				pmax	pmax		
	comp=Z,20nm,1.0s						
MCK	McKinley	17.73	37	P	Pn	10 36 22.2	-0.1
MCK	McKinley	17.73	37	P	P	10 36 22.8	-0.1
	baz=238						
BWN	Browne	17.77	35	IAmb	IAmb	10 36 43.9	
	comp=Z,27nm,0.9s						
PEA0B	Petropavlovsk-	17.78	287	eP	P	10 36 24.5	+0.9
PETK	Petropavlovsk-	17.78	287	P	P	10 36 23.8	+0.3
	comp=Z,1.1nm,0.3s,baz=93,slow=14,SNR=4.4						
PETK				LR	LR	10 42 30.7	
	comp=Z,556nm,21.6s,baz=90,slow=35						
MLY	Manley	17.84	32	P	Pn	10 36 23.5	-0.3
	baz=232,SNR=5.3						
KLU	Klutina	17.95	46	P	Pn	10 36 24.1	-1.1
	baz=249						
M24K	Tolsona, Glenn	18.08	44	IAmb	IAmb	10 36 53.2	
	comp=Z,36nm,0.9s						
M24K	Tolsona, Glenn	18.08	44	P	Pn	10 36 26.4	-0.3
	baz=247						
BMRM	Bremner River	18.38	48	P	Pn	10 36 30.5	+0.1
	baz=252						
I23K	Minto, Yukon-K	18.38	33	IAmb	IAmb	10 36 53.1	
	comp=Z,16nm,0.7s						
I23K	Minto, Yukon-K	18.38	33	P	Pn	10 36 30.4	+0.2
	baz=234,SNR=14						
N25K	Chitina, Valde	18.59	46	P	P	10 36 32.7	+0.3
	baz=250						
HARP	HAARP	18.63	43	P	P	10 36 32.9	0.0
	baz=248						
H23K	Yukon River	18.73	31	P	Pn	10 36 34.9	+0.3
	baz=232						
PAX	Paxson	18.73	42	P	Pn	10 36 35.6	+0.9
PAX				pmax	pmax		
	comp=Z,13nm,1.4s						
PAX	Paxson	18.73	42	P	Pn	10 36 35.6	+0.9
PAX	Paxson	18.73	42	P	Pn	10 36 34.7	0.0
	baz=246						
TCOL	CIGO, UAF Yank	18.74	35	P	P	10 36 32.9	-1.1
	baz=237						
COLA	College	18.75	35	eP	P	10 36 33.8	-0.2
COLA	College	18.75	35	P	P	10 36 34.4	+0.3
	baz=237						
HDA	Harding Lake	18.83	37	IAmb	IAmb	10 36 54.9	
	comp=Z,26nm,1.2s						
HDA	Harding Lake	18.83	37	P	P	10 36 35.1	+0.1
	baz=240						
CRQM	Cirque	19.00	49	P	Pn	10 36 38.7	+0.7
CRQM				IAmb	IAmb	10 37 04.0	
	comp=Z,22nm,0.7s						
CRQE	Cirque	19.02	49	P	P	10 36 36.6	-0.7
	baz=255						
POKR	Poker Plat Res	19.03	34	P	Pn	10 36 37.7	-0.4
	baz=237						
IL31		19.04	36	IAmb	IAmb	10 36 57.8	
	comp=Z,22nm,1.3s						
ILAR	Eielson Array	19.04	36	P	P	10 36 35.6	-1.6
	comp=Z,1.6nm,0.3s,baz=243,slow=9.9,SNR=69						
ILAR				LR	LR	10 44 42.0	
	comp=Z,688nm,18.4s,baz=246,slow=40						
WAX	Waxell Ridge	19.06	50	P	Pn	10 36 38.6	0.0
WAX				IAmb	IAmb	10 37 00.9	
	comp=Z,43nm,1.2s						
TGL	Tana Glacier	19.15	49	IAmb	IAmb	10 37 01.4	
	comp=Z,22nm,1.0s						
MCARA	McCarthy VSAT	19.23	47	P	P	10 36 39.8	+0.3
	baz=253						
H24K	Noodor Dome	19.29	32	IAmb	IAmb	10 36 52.6	
	comp=Z,20nm,0.7s						
H24K	Noodor Dome	19.29	32	P	P	10 36 40.5	+0.5
	baz=235,SNR=15						
RIDG	Independent Ri	19.32	40	IAmb	IAmb	10 37 07.9	
	comp=Z,15nm,0.7s						
RIDG	Independent Ri	19.32	40	P	P	10 36 41.0	+0.6
	baz=244						
COLD	Coldfoot	19.45	27	P	Pn	10 36 43.3	+0.1
COLD	Coldfoot	19.45	27	P	Pn	10 36 43.3	+0.1
	baz=228,SNR=7.3						
J25K	Salcha River,	19.52	37	P	P	10 36 41.1	-1.5
	baz=242,SNR=27						
M26K	Nabesna, AK	19.57	44	P	P	10 36 43.9	+0.7
	baz=250						
YAH	Yahtse	19.57	51	P	Pn	10 36 44.7	-0.2
YAH				IAmb	IAmb	10 37 14.0	
	comp=Z,30nm,1.0s						
DOT	Dot Lake	19.60	40	IAmb	IAmb	10 37 03.3	
	comp=Z,9.8nm,0.6s						
L26K	Log Cabin Wild	19.64	43	IAmb	IAmb	10 37 05.0	
	comp=Z,11nm,0.6s						
L26K	Log Cabin Wild	19.64	43	P	Pn	10 36 44.9	-0.7
	baz=248						
GRNC	Granite Creek	19.65	50	IAmb	IAmb	10 37 04.0	
	comp=Z,20nm,0.8s						
SCRK	Sand Creek	19.77	40	IAmb	IAmb	10 37 14.3	
	comp=Z,15nm,0.6s						
SCRK	Sand Creek	19.77	40	P	P	10 36 44.2	-1.2
	baz=245,SNR=11						
BARN	Barnard Glacie	19.78	49	P	P	10 36 44.9	-0.7
BARN				IAmb	IAmb	10 37 11.2	
	comp=Z,22nm,1.3s						
CTG	Chitna Glacier	19.91	49	P	P	10 36 46.6	-0.3
	baz=256						
CTGM	Chitina Glacie	19.91	49	P	Pn	10 36 48.9	+0.1
CTGM				IAmb	IAmb	10 37 09.1	
	comp=Z,24nm,0.8s						
PRP	Porcupine Dome	19.92	35	P	P	10 36 46.4	-0.6
	baz=239						
LOGN	Logan Glacier	20.03	50	P	Pn	10 36 50.3	0.0
LOGN				IAmb	IAmb	10 37 15.2	
	comp=Z,23nm,0.9s						
M27K	Edge Creek, AK	20.05	45	P	P	10 36 47.4	-1.1
	baz=252,SNR=6.0						
J26L	Joseph Creek	20.16	38	P	P	10 36 48.5	-1.1
	baz=244,SNR=57						
PCA	Pinnacle	20.25	52	IAmb	IAmb	10 37 08.6	
	comp=Z,27nm,0.8s						
PINM	Pinnacle	20.25	52	P	P	10 36 51.1	+0.5
	baz=260						
L27K	Beaver Creek,	20.30	43	P	Pn	10 36 53.6	+0.3
L27K	Beaver Creek,	20.30	43	P	Pn	10 36 52.7	-0.6
	baz=250						
BVCY	Beaver Creek	20.52	45	P	Pn	10 36 55.3	-0.5
	baz=253						
YUK3	Moose Creek	20.52	47	P	P	10 36 53.7	0.0
	baz=255						
FYU	Fort Yukon	20.59	32	P	P	10 36 54.0	-0.1
FYU				IAmb	IAmb	10 37 19.6	
	comp=Z,54nm,1.4s						
TOLK	Toolik Lake Re	20.60	25	P	P	10 36 54.5	+0.2
TOLK				IAmb	IAmb	10 37 21.7	
	comp=Z,22nm,1.0s						
TOLK	Toolik Lake Re	20.60	25	P	P	10 36 53.9	-0.4
	baz=226,SNR=12						
PNL	Peninsula	20.60	53	P	P	10 36 54.9	+0.5
	baz=262						
EGAK	Eagle	21.22	39	P	P	10 37 00.1	-0.8
	baz=247,SNR=31						
YUK4	Talbot Arm	21.27	49	P	P	10 37 02.2	+0.5
	baz=258						
YUK6	Outpost Mounta	21.32	50	P	P	10 37 02.8	+0.5
	baz=260						
SEY	Seymchan	21.54	315	P	P	10 37 05.0	+0.7
	comp=Z,3.2nm,0.6s,baz=90,slow=7.1,SNR=7.8						
SEY				LR	LR	10 45 23.7	
	comp=Z,478nm,19.9s,baz=106,slow=37						
SEY	Seymchan	21.54	315	P	P	10 37 05.0	+0.7
MA2	Magadan	21.66	306	P	P	10 37 06.7	+1.0
	comp=Z,7.7nm,0.9s,baz=161,slow=19,SNR=1.6						
DAWY	Dawson	21.67	42	P	P	10 37 06.3	+0.5
	baz=251						
HYT	Haines Junctio	21.71	51	IAmb	IAmb	10 37 31.3	
	comp=Z,8.1nm,0.7s						
HYT	Haines Junctio	21.71	51	P	P	10 37 07.0	+0.6
	baz=261						
J29M	Klondike Camp	22.28	41	P	P	10 37 12.8	+0.4
	baz=252						
I29M	Ogilvie Camp,	22.56	39	P	P	10 37 13.7	-1.6
	baz=249						
SKAG	Skagway	22.64	55	IAmb	IAmb	10 37 43.3	
	comp=Z,19nm,0.8s						
SKAG	Skagway	22.64	55	P	P	10 37 17.4	+1.2
	baz=267						
WHY	Whitehorse	22.97	52	P	P	10 37 19.5	-0.2
	baz=264						
MMPY	Sheldon Lake,	24.91	47	P	P	10 37 38.9	+1.0
	baz=263						

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DLBC   Dease Lake        25.38  57    P      P      10 37 43.7 +1.4
       comp=Z,6.6nm,0.8s,baz=287,slow=9.8,SNR=12
DLBC                                  LR     LR     10 48 06.8
       comp=Z,589nm,18.7s,baz=292,slow=38
INK    Inuvik            25.39  34    P      P      10 37 41.5 -0.7
       comp=Z,11nm,0.7s,baz=244,slow=7.1,SNR=38
INK                                   LR     LR     10 48 40.5
       comp=Z,548nm,19.1s,baz=220,slow=39
INK    Inuvik            25.39  34    P      P      10 37 41.0 -1.1
INK                                   pmax   pmax
       comp=Z,10.0nm,0.6s
INK    Inuvik            25.39  34    P      P      10 37 41.0 -1.1
INK                                   IAmb   IAmb   10 37 44.0
       comp=Z,10nm,0.6s
INK    Inuvik            25.39  34    P      P      10 37 41.3 -0.8
       baz=249,SNR=20
TGTN   Hyland Airport    26.23  50    P      P      10 37 50.1 +0.2
       baz=268
BBB    Bella Bella       27.56  71    LR     LR     10 47 47.1
       comp=Z,237nm,18.9s,baz=295,slow=34
YSS    Yuzh-Sakhalins    28.75 278   eP      P      10 38 13.1 +0.6
YSS                                  eS      S      10 42 55.1 -4.0
YSS                                  eSS     ScP    10 44 53.0 -6.9
YSS                                   pmax   pmax
       comp=Z,30nm,1.1s
YSS                                   MLR    MLR
       comp=Z,700nm,13.0s
YSS                                   MLR    MLR
       comp=N,300nm,19.0s
YSS                                   MLR    MLR
       comp=E,400nm,18.0s
A36M   Sachs Harbour     29.31  28    IAmb   IAmb   10 38 19.9
       comp=Z,8.2nm,0.8s
A36M   Sachs Harbour     29.31  28    P      P      10 38 16.3 -0.9
       baz=252,SNR=7.9
JKA    Kamikawa-asahi    30.17 273    P      P      10 38 26.5 +1.4
JKA    Kamikawa-asahi    30.17 273    IAmb   IAmb   10 38 33.3
       comp=Z,25nm,1.1s
ASAJ   Asahikawa         30.17 273    P      P      10 38 26.5 +1.4
       comp=Z,14nm,0.8s,baz=58,slow=0.7,SNR=8.7
YAK    Yakutsk           31.93 312    LR     LR     10 52 01.7
       comp=Z,815nm,18.3s,baz=92,slow=37
TIXI   Tiksi             32.25 330    P      P      10 38 42.6 -0.5
       comp=Z,3.3nm,0.5s,baz=100,slow=13,SNR=10
TIXI   Tiksi             32.25 330⇑eP      P      10 38 43.3 +0.2
B05A   Bryant            32.58  75    P      P      10 38 44.7 -1.5
       baz=296
YKA    Yellowknife Ar    32.61  47    P      P      10 38 45.2 -1.2
       comp=Z,0.6nm,0.4s,baz=223,slow=13,SNR=7.7
YKA                                   LR     LR     10 53 42.0
       comp=Z,679nm,18.0s,baz=0.0,slow=40
YKA    Yellowknife Ar    32.61  47ceP      P      10 38 48.2 +1.9
YKA                                   pmax   pmax
       comp=Z,1.0nm,0.4s
B08A   Colville Reser    34.20  74    IAmb   IAmb   10 39 25.1
       comp=Z,11nm,1.1s
KLR    Kul'dur           34.46 288    P      P      10 39 02.2 -0.4
       comp=Z,3.1nm,0.5s,baz=73,slow=6.8,SNR=17
KLR                                   LR     LR     10 55 16.8
       comp=Z,262nm,18.4s,baz=65,slow=40
KLR    Kul'dur           34.46 288d iP      P      10 39 02.6  0.0
KLR                                   pmax   pmax
       comp=Z,10.0nm,1.6s
HAWA   Hanford           34.98  77    P      P      10 39 08.4 +1.2
HAWA                                  IAmb   IAmb   10 39 23.8
       comp=Z,6.3nm,0.7s
H11N2  WAKE ISLAND Hy    35.34 214    T      T      11 17 25.9
       baz=21,slow=76,SNR=66
H11N3  WAKE ISLAND Hy    35.35 214    T      T      11 17 14.3
       baz=21,slow=76,SNR=46
H11N1  WAKE ISLAND Hy    35.36 214    T      T      11 17 27.0
       baz=21,slow=76,SNR=36
NEW    Newport           35.56  73    P      P      10 39 12.8 +0.6
       comp=Z,3.7nm,0.8s,baz=290,slow=11,SNR=4.4
NEW    Newport           35.56  73    IAmb   IAmb   10 39 36.9
       comp=Z,12nm,1.1s
NEW    Newport           35.56  73    P      P      10 39 12.3 +0.1
       baz=297
EDM    Edmonton          35.69  63    P      P      10 39 14.3 +1.1
EDM                                   pmax   pmax
       comp=Z,19nm,1.1s
EDM    Edmonton          35.69  63    P      P      10 39 14.3 +1.1
M04C   Macdoel           35.93  85    P      P      10 39 16.0 +0.4
       baz=304
O02D   Mt. Diablo Mer    36.25  88    P      P      10 39 18.0 -0.2
       baz=306
H11S1  WAKE ISLAND Hy    36.54 213    T      T      11 18 42.8
       baz=20,slow=76,SNR=30
H11S2  WAKE ISLAND Hy    36.56 213    T      T      11 18 50.3
       baz=20,slow=76,SNR=25
H11S3  WAKE ISLAND Hy    36.56 213    T      T      11 18 46.9
       baz=20,slow=76,SNR=20
USRK   Ussuriysk Ar.     36.70 281    P      P      10 39 21.8 -0.1
       comp=Z,2.8nm,0.4s,baz=60,slow=9.5,SNR=20
USRK                                  LR     LR     10 54 58.7
       comp=Z,377nm,20.5s,baz=52,slow=37
USRK   Ussuriysk Ar.     36.70 281    P      P      10 39 20.9 -1.0
USRK   Ussuriysk Ar.     36.70 281    P      P      10 39 20.9 -1.0
O03E   Paynes Creek      36.80  87    P      P      10 39 22.9  0.0
       baz=306
MOD    Modoc Plateau     36.82  84    IAmb   IAmb   10 39 42.8
       comp=Z,20nm,1.4s
J08A   Circle Bar Ran    37.16  81    P      P      10 39 27.8 +1.8
J08A                                  IAmb   IAmb   10 39 54.9
       comp=Z,8.0nm,1.2s
MJA0   Matsu Arr-Jizo    37.22 266   eP      P      10 39 31.8 +5.4
MJA0                                  pmax   pmax
       comp=Z,1.0nm,0.5s
MJAR   Matsushiro Arr    37.24 266    P      P      10 39 27.9 +1.3
       comp=Z,1.0nm,0.5s,baz=26,slow=6.8,SNR=4.8
MJAR                                  LR     LR     10 53 14.0
       comp=Z,279nm,21.5s,baz=30,slow=34
WVOR   Wild Horse Val    37.56  82    IAmb   IAmb   10 39 58.4
       comp=Z,6.8nm,0.8s
BEKR   Beckworth         37.95  87    P      P      10 39 35.6 +2.8
MSO    Missoula          38.14  73    P      P      10 39 36.5 +2.3
MSO                                   IAmb   IAmb   10 39 50.1
       comp=Z,5.1nm,0.9s
MSO    Missoula          38.14  73    P      P      10 39 34.6 +0.4
       baz=300
PAHR   Pah Rah Range     38.65  86    P      P      10 39 40.2 +1.6
PAHR                                  IAmb   IAmb   10 39 55.4
       comp=Z,13nm,1.2s
PNTR   Pine Nut          38.88  87    P      P      10 39 42.8 +2.2
PNTR                                  IAmb   IAmb   10 40 00.5
       comp=Z,12nm,0.8s
YERR   Yerington         39.17  87    P      P      10 39 44.5 +1.5
YERR                                  IAmb   IAmb   10 39 59.8
       comp=Z,6.3nm,0.9s
HRY    Holter Researc    39.45  72    P      P      10 39 46.2 +1.0
HLID   Hailey            39.54  78    P      P      10 39 48.0 +2.0
HLID   Hailey            39.54  78    P      P      10 39 45.2 -0.9
       baz=303
KVN    Kaiserville       39.84  86    P      P      10 39 50.0 +1.4
KVN                                   pmax   pmax
       comp=Z,11nm,1.5s
KVN    Kaiserville       39.84  86    P      P      10 39 50.0 +1.4
KVN                                   IAmb   IAmb   10 40 02.9
       comp=Z,11nm,1.5s
EGMT   Eagleton          40.02  69    P      P      10 39 51.1 +1.2
EGMT                                  IAmb   IAmb   10 40 11.0
       comp=Z,11nm,0.8s
EGMT   Eagleton          40.02  69    P      P      10 39 49.2 -0.7
       baz=300
NVAR   Mina Array Bea    40.09  87    P      P      10 39 52.6 +1.9
       comp=Z,1.8nm,0.8s,baz=293,slow=8.2,SNR=14
NVAR                                  LR     LR     10 53 26.1
       comp=Z,181nm,20.7s,baz=282,slow=32
BOZ    Bozeman (W)       40.15  73    P      P      10 39 50.8 -0.2
       baz=302
ELK    Elko              40.62  82    P      P      10 39 55.9 +0.8
ELK                                   pmax   pmax
       comp=Z,3.0nm,0.9s
ELK    Elko              40.62  82    P      P      10 39 55.9 +0.8
YHL    Hebgen Lake       40.81  74    IAmb   IAmb   10 40 21.4
       comp=Z,5.3nm,1.0s
SMMC   Simmler           40.98  92    P      P      10 39 58.8 +1.0
       baz=310
YMR    Madison River     41.04  74    P      P      10 39 58.6 +0.2
YHH    Holmes Hill       41.04  74    P      P      10 39 58.4 -0.1
YHH                                   IAmb   IAmb   10 40 15.0
       comp=Z,5.7nm,0.9s
VES    Vestal, Richgr    41.21  91    P      P      10 40 00.7 +1.0
       baz=310
CWC    Cottonwood Cre    41.46  89    P      P      10 40 01.2 -0.7
       baz=309
HVU    Hansel Valley     41.54  79    P      P      10 40 04.2 +1.6
HVU                                   pmax   pmax
       comp=Z,4.0nm,0.9s
HVU    Hansel Valley     41.54  79    P      P      10 40 04.2 +1.6
GRAC   Grapevine Rang    41.55  88    P      P      10 40 01.5 -1.1
       baz=309
ISA    Isabella, Lake    41.70  90    P      P      10 40 03.5 -0.3
       baz=310
RLMT   Red Lodge         41.81  73    IAmb   IAmb   10 40 26.1
       comp=Z,7.3nm,0.9s
RLMT   Red Lodge         41.81  73    P      P      10 40 02.7 -2.1
       baz=303
R11A   Troy Canyon, C    41.83  85    P      P      10 40 05.1 +0.2
       baz=308,SNR=5.3
FURC   Furnace Creek,    42.20  88    P      P      10 40 07.8  0.0
       baz=309
DUG    Dugway, Tooele    42.44  81    P      P      10 40 08.8 -1.1
       baz=306
GWY    Greenwater Val    42.50  88    IAmb   IAmb   10 40 37.8
       comp=Z,5.8nm,1.1s
EDW2   Edwards Air Fo    42.51  91    P      P      10 40 09.6 -0.8
       baz=311
PRN    Pahroc Range      42.74  86    IAmb   IAmb   10 40 29.1
       comp=Z,17nm,1.0s
LAO    LASA Array        42.77  69    P      P      10 40 12.8 +0.4
       baz=302
PSUT   Pine Spring       42.79  84    IAmb   IAmb   10 40 29.1
       comp=Z,5.3nm,0.9s
BW06   Boulder Array     42.94  76    P      P      10 40 14.3 +0.3
BW06   Boulder Array     42.94  76    P      P      10 40 12.7 -1.4
       baz=305
PDAR   Pinedale Array    42.94  76    P      P      10 40 15.1 +1.1
       comp=Z,2.2nm,0.6s,baz=306,slow=3.9,SNR=24
PDAR                                  LR     LR     10 55 30.8
       comp=Z,66nm,18.3s,baz=318,slow=32
GSC    Goldstone, Bar    42.98  89    IAmb   IAmb   10 40 45.3
       comp=Z,7.6nm,0.8s
GSC    Goldstone, Bar    42.98  89    P      P      10 40 15.3 +1.0
       baz=310,SNR=5.8
KSRS   Korea Array       43.09 275    P      P      10 40 16.7 +1.7
       comp=Z,3.0nm,0.8s,baz=53,slow=8.6,SNR=10
KSRS                                  LR     LR     10 57 58.0
       comp=Z,160nm,19.9s,baz=30,slow=36
BFSC   Mount Baldy Ra    43.14  91    P      P      10 40 14.9 -0.6
       baz=311
HEC    Hector,Ludlow     43.58  90    P      P      10 40 19.6 +0.6
       baz=311
BBRC   Big Bear Solar    43.58  91    P      P      10 40 19.7 +0.4
       baz=311
TMUT   Trail Mountain    43.97  81    IAmb   IAmb   10 40 38.3
       comp=Z,5.9nm,0.8s
GMRC   Granite Mounta    44.03  89    P      P      10 40 22.3 -0.5
       baz=311
JNU    Nakatsue          44.04 268    P      P      10 40 23.5 +0.8
       comp=Z,5.8nm,0.6s,baz=127,slow=12,SNR=2.1
LCMT   Little Creek M    44.11  85    IAmb   IAmb   10 40 40.1
       comp=Z,5.8nm,0.9s
RDMU   Red Mountain      44.21  78    IAmb   IAmb   10 40 40.5
       comp=Z,8.4nm,0.9s
Q16A   Castle Valley     44.22  81    IAmb   IAmb   10 40 40.9
       comp=Z,7.5nm,0.8s
PFO    Pinyon Flats O    44.30  91  i P      P      10 40 27.4 +2.5
PFO                                   pmax   pmax
       comp=Z,17nm,2.7s
TPFO   Pinon Flats       44.30  91    P      P      10 40 23.3 -1.6
       baz=312
BELC   Belle Mtn. Jos    44.33  90    P      P      10 40 25.4 +0.3
       baz=311
P18A   Preston Nutter    44.36  80    IAmb   IAmb   10 40 42.1
       comp=Z,8.4nm,1.0s
KNB    Kanab             44.37  85    P      P      10 40 27.8 +2.2
KNB                                   pmax   pmax
       comp=Z,4.0nm,1.0s
KNB    Kanab             44.37  85    P      P      10 40 27.8 +2.2
KNB                                   IAmb   IAmb   10 40 52.6
       comp=Z,4.1nm,1.0s
SRU    San Rafael Swe    44.50  81    IAmb   IAmb   10 40 43.6
       comp=Z,7.5nm,0.9s
MONP2  Monument Peak     44.80  92    P      P      10 40 28.3 -0.8
       baz=312
BC3    Big Chuckawall    44.90  90    P      P      10 40 29.5 -0.2
       baz=312
W13A   Hualapai Mount    44.93  87    IAmb   IAmb   10 40 52.9
       comp=Z,3.7nm,0.8s
U15A   North Rim         45.08  85    P      P      10 40 32.5 +1.2
U15A                                  IAmb   IAmb   10 40 55.8
       comp=Z,9.0nm,1.1s
SWSC   Sam W. Stewart    45.15  91    P      P      10 40 30.8 -0.7
       baz=312
IKP    In-Ko-Pah, Jac    45.16  92    P      P      10 40 31.6 -0.1
       baz=312
O20A   White River Ci    45.28  78    P      P      10 40 32.5 -0.2
       baz=307,SNR=5.2
RSSD   Black Hills       45.47  71    P      P      10 40 34.1 -0.1
RSSD                                  pmax   pmax
       comp=Z,4.0nm,0.8s
RSSD   Black Hills       45.47  71    P      P      10 40 34.1 -0.1
RSSD                                  IAmb   IAmb   10 40 53.2
       comp=Z,4.2nm,0.8s
RSSD   Black Hills       45.47  71    P      P      10 40 33.9 -0.3
       baz=305
PV22   Blue Mesa, Par    45.93  80    IAmb   IAmb   10 40 54.4
       comp=Z,12nm,1.3s
PV16   Nyswonger Mesa    45.99  80    IAmb   IAmb   10 40 53.9
       comp=Z,5.9nm,0.8s
NRIK   Noril'sk          46.02 331    P      P      10 40 38.3 +0.3
       comp=Z,3.4nm,0.5s,baz=70,slow=11,SNR=6.8
NRIK   Noril'sk          46.02 331c iP      P      10 40 38.1 +0.2
NRIK                                  pmax   pmax
       comp=Z,4.0nm,0.7s
PV03   Paradox Valley    46.06  80    IAmb   IAmb   10 40 55.2
       comp=Z,6.2nm,0.8s
PV02   Paradox Valley    46.16  80    P      P      10 40 39.6 -0.2
N23A   Red Feather La    46.22  76    P      P      10 40 40.5 +0.2
       baz=307
WUAZ   Wupatki           46.23  85    IAmb   IAmb   10 40 56.6
       comp=Z,6.4nm,0.8s
WUAZ   Wupatki           46.23  85    P      P      10 40 40.8 +0.5
       baz=310
SMCO   Snowmass          46.64  78    IAmb   IAmb   10 40 51.6
       comp=Z,2.7nm,0.6s
ULM    Lac du Bonnet     46.67  59    P      P      10 40 44.4 +1.1
       comp=Z,1.9nm,0.4s,baz=329,slow=11,SNR=6.4
ULM                                   LR     LR     11 00 09.8
       comp=Z,202nm,18.2s,baz=330,slow=36
X16A   Lo Mia Camp, P    46.90  86    P      P      10 40 46.8 +1.2
X16A                                  IAmb   IAmb   10 41 01.6
       comp=Z,2.9nm,0.9s
MVCO   Mesa Verde        46.93  81    P      P      10 40 46.2 +0.3
       baz=310
S22A   4UR Ranch, Cre    47.62  80    P      P      10 40 50.8 -0.5
       baz=309
AGMN   Agassiz Nation    47.76  62    P      P      10 40 51.8 -0.1
       baz=305
SDCO   Great Sand Dun    48.44  79    IAmb   IAmb   10 41 14.2
       comp=Z,2.9nm,1.0s
SDCO   Great Sand Dun    48.44  79    P      P      10 40 57.5 -0.1
       baz=310
TUC    Tucson            48.71  88    P      P      10 41 00.6 +1.1
TUC                                   pmax   pmax
       comp=Z,3.0nm,0.9s
TUC    Tucson            48.71  88    P      P      10 41 00.6 +1.1
TUC                                   IAmb   IAmb   10 41 18.0
       comp=Z,2.7nm,0.9s
TUC    Tucson            48.71  88    P      P      10 41 00.9 +1.4
       baz=313
ULN    Ulaanbaatar       49.27 299⇑eP      P      10 41 04.6 +0.9
ULN                                   pmax   pmax
       comp=Z,3.0nm,0.9s
T25A   Trinidad          49.49  79    P      P      10 41 06.3 +0.7
       baz=310
SONM   Songino Array     49.65 299    P      P      10 41 07.3 +0.8
       comp=Z,2.8nm,0.6s,baz=55,slow=7.6,SNR=23
SONM                                  LR     LR     11 03 13.8
       comp=Z,536nm,19.4s,baz=58,slow=38
ANMO   Albuquerque       49.65  82ceP      P      10 41 10.1 +3.3
ANMO                                  pmax   pmax
       comp=Z,7.0nm,2.5s
ANMO   Albuquerque       49.65  82    P      P      10 41 07.9 +1.1
       baz=311
ZAK    Zakamensk         49.81 304   eP      P      10 41 07.7  0.0
ZAK                                   pmax   pmax
       comp=Z,6.0nm,1.4s
ECSD   EROS Data Cent    50.03  67    P      P      10 41 08.4 -0.8
ECSD                                  IAmb   IAmb   10 41 11.3
       comp=Z,9.4nm,1.4s
ECSD   EROS Data Cent    50.03  67    P      P      10 41 08.5 -0.8
       baz=308
EYMN   Ely               50.35  60    P      P      10 41 11.2 -0.4
       baz=307
121A   Cookes Peak, D    50.43  85    P      P      10 41 13.4 +0.7
       baz=313
NJ2    Nanjing           52.26 276   eP      P      10 41 25.1 -1.1
NJ2                                   pmax   pmax
       comp=Z,8.0nm,0.5s
MNTX   Cornudas Mount    52.49  84    IAmb   IAmb   10 41 55.5
       comp=Z,3.9nm,1.0s
MNTX   Cornudas Mount    52.49  84    P      P      10 41 27.6 -0.4
       baz=313
MSTX   Muleshoe          52.58  81    P      P      10 41 29.0 +0.4
       baz=312
P38A   Dawn              54.41  69           pwP    10 41 55.4 -1.9
WMOK   Wichita Mounta    54.51  77    IAmb   IAmb   10 41 58.2
       comp=Z,7.1nm,1.0s
WMOK   Wichita Mounta    54.51  77    P      P      10 41 41.4 -1.3
       baz=312
TX32   Lajitas Array     55.19  85    IAmb   IAmb   10 42 01.4
       comp=Z,3.3nm,0.9s
TXAR   Lajitas Array     55.19  85    P      P      10 41 48.0 +0.2
       comp=Z,1.6nm,0.6s,baz=296,slow=4.9,SNR=29
S39A   Bolivar           55.81  71           pwP    10 42 03.6 -3.9
S39A                                  IAmb   IAmb   10 42 05.3
       comp=Z,7.1nm,1.1s
U38A   Gravette          56.02  73    IAmb   IAmb   10 42 08.1
       comp=Z,4.9nm,0.8s
R40A   Maddies Statio    56.03  70    IAmb   IAmb   10 42 06.3
       comp=Z,5.3nm,0.6s
ZALV   Zalesovo Beam     56.40 316    LR     LR     11 07 35.6
       comp=Z,249nm,18.6s,baz=38,slow=38
X37A   Clayton           56.68  75    IAmb   IAmb   10 42 13.8
       comp=Z,6.1nm,0.8s
MGMO   Mountain Grove    56.79  71    IAmb   IAmb   10 42 12.7
       comp=Z,8.5nm,1.1s
JCT    Junction City     56.80  82    P      P      10 41 58.6 -0.5
       baz=314
U40A   Yellville         56.98  72    IAmb   IAmb   10 42 17.1
       comp=Z,5.4nm,0.7s
U40A   Yellville         56.98  72    P      P      10 41 59.6 -0.8
       baz=313
XAN    Xi'an             57.01 285    P      P      10 42 00.4 -0.3
XAN                                   pP     pP     10 42 07.9 -2.4
XAN                                   sP     sP     10 42 11.0 -3.9
XAN                                   pmax   pmax
       comp=Z,6.0nm,1.7s
WHTX   Lake Whitney,     57.19  79    P      P      10 42 02.1 +0.2
WHTX                                         sP     10 42 15.5 -0.2
WHTX   Lake Whitney,     57.19  79    P      P      10 42 01.8 -0.1
       baz=314
W39A   Magazine          57.22  73    P      P      10 42 02.3 +0.3
       baz=313
SFIN   Lafayette         57.61  65    P      P      10 42 04.2 -0.4
       baz=313
SCHQ   Schefferville     57.69  41    P      P      10 42 04.5 -0.6
       comp=Z,1.5nm,0.6s,baz=326,slow=15,SNR=1.3
SCHQ                                  LR     LR     11 08 14.8
       comp=Z,403nm,18.5s,baz=326,slow=38
MIAR   Mount Ida         57.79  74    P      P      10 42 06.6 +0.5
       baz=314
OLIL   Olney             58.15  67    P      P      10 42 08.5  0.0
W41B   Gary Mavity, V    58.15  72    P      P      10 42 08.1 -0.5
       baz=314
LCAR   Lake Charles      58.19  71    P      P      10 42 07.9 -0.8
LCAR                                         sP     10 42 21.1 -1.6
ARCES  ARCESS Array B    58.49 352    P      P      10 42 09.4 -1.1
       comp=Z,2.9nm,0.8s,baz=19,slow=6.2,SNR=5.2
ARCES                                 LR     LR     11 12 35.5
       comp=Z,194nm,18.3s,baz=5.0,slow=42
ARCES  ARCESS Array B    58.49 352    IAmb   IAmb   10 42 11.8
       comp=Z,20nm,1.2s
LZH    Lanzhou           58.64 290   eP      P      10 42 11.6 -0.6
LZH                                   pP     sP     10 42 25.0 -1.3
LZH                                   sP     pwP    10 42 30.0 +2.2
LZH                                   pmax   pmax
       comp=Z,23nm,1.3s
LZH                                   pmax   pmax
       comp=Z,76nm,5.6s
LZH                                   LR     LR
       comp=N,470nm,14.6s
LZH                                   LR     LR
       comp=E,460nm,14.9s
LZH                                   LR     LR
       comp=Z,330nm,18.4s
GTA    Gaotai            58.70 295   eP      P      10 42 13.0 +0.5
GTA                                   pP     pP     10 42 17.5 -4.7
GTA                                   sP     sP     10 42 20.5 -6.8
GTA                                   pmax   pmax
       comp=Z,12nm,0.6s
GTA                                   pmax   pmax
       comp=Z,140nm,9.6s
GTA                                   LR     LR
       comp=N,350nm,19.9s
GTA                                   LR     LR
       comp=E,320nm,16.7s
GTA                                   LR     LR
       comp=Z,410nm,17.1s
P49A   Miami Univ. Ec    59.52  64    P      P      10 42 17.3 -0.7
       baz=314
WCI    Wyandotte Cave    59.53  66    P      P      10 42 19.3 +1.2
WCI                                   pmax   pmax
       comp=Z,9.0nm,0.9s
WCI    Wyandotte Cave    59.53  66    P      P      10 42 19.3 +1.2
WCI    Wyandotte Cave    59.53  66    P      P      10 42 16.2 -1.9
       baz=314
TRQ    Mont Tremblant    60.25  52    P      P      10 42 23.4 +0.4
OXF    Oxford            60.29  71    P      P      10 42 25.2 +1.8
OXF                                   pmax   pmax
       comp=Z,23nm,0.8s
OXF    Oxford            60.29  71    P      P      10 42 25.2 +1.8
OXF    Oxford            60.29  71    P      P      10 42 23.6 +0.2
       baz=315
N54A   Moraine State     61.13  60    P      P      10 42 29.4 +0.3
       baz=315
LONY   Lake Ozonia       61.37  54    P      P      10 42 29.6 -1.0
       baz=316
KURK   Kurchatov         61.38 317c iP      P      10 42 30.2 -0.3
KURK                                  pmax   pmax
       comp=Z,4.0nm,0.6s
KURK   Kurchatov         61.38 317    P      P      10 42 30.5  0.0
KURBB  Kurchatov Arra    61.48 316    P      P      10 42 31.3 +0.1
       comp=Z,2.8nm,0.5s,baz=41,slow=6.4,SNR=18
MCWV   Mont Chateau      62.13  61    P      P      10 42 33.5 -2.3
       baz=315
WMQ    Urumqi            62.13 306   eP      P      10 42 36.7 +0.9
WMQ                                   pP     sP     10 42 54.4 +3.3
WMQ                                   sP     pwP    10 42 58.7 +7.7
WMQ                                   pmax   pmax
       comp=Z,13nm,0.7s
WMQ                                   pmax   pmax
       comp=Z,110nm,4.5s
WMQ                                   LR     LR
       comp=N,570nm,19.9s
WMQ                                   LR     LR
       comp=E,340nm,21.3s
WMQ                                   LR     LR
       comp=Z,220nm,19.9s
TZTN   Tazewell          62.27  65    P      P      10 42 36.0 -0.7
       baz=315
CD2    Chengdu           62.31 286   eP      P      10 42 35.2 -2.0
CD2                                   LR     LR
       comp=N,270nm,18.2s
CD2                                   LR     LR
       comp=E,280nm,18.4s
CD2                                   LR     LR
       comp=Z,360nm,17.6s
BINY   Binghamton        62.38  56    P      P      10 42 36.4 -1.0
       baz=316
SSPA   Standing Stone    62.49  59    P      P      10 42 37.2 -0.9
       baz=316
MK31   Makanchi Array    62.61 311⇑eP      P      10 42 39.5 +0.6
MK31   Makanchi Array    62.61 311    P      P      10 42 38.9  0.0
MK31                                  IAmb   IAmb   10 42 48.9
       comp=Z,4.1nm,0.8s
MKAR   Makanchi Array    62.61 311    P      P      10 42 38.5 -0.4
       comp=Z,5.3nm,0.8s,baz=51,slow=4.4,SNR=19
MKAR                                  LR     LR     11 11 50.8
       comp=Z,297nm,18.5s,baz=36,slow=38
MKAR   Makanchi Array    62.61 311   eP      P      10 42 39.2 +0.3
MKAR                                  pmax   pmax
       comp=Z,5.0nm,0.8s
MKAR   Makanchi Array    62.61 311    P      P      10 42 39.5 +0.6
TKL    Tuckaleechee C    62.76  66    P      P      10 42 40.3 +0.2
       comp=Z,1.6nm,0.6s,baz=258,slow=1.7,SNR=4.9
L59A   Walton            62.87  56    P      P      10 42 42.4 +1.6
BVAR   Borovoye Array    62.96 323    P      P      10 42 41.4 +0.2
       comp=Z,8.0nm,0.5s,baz=61,slow=2.0,SNR=44
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LBNH  Lisbon            62.97  52   P        P        10 42 40.2 -1.1
      baz=317
BRVK  Borovoye          62.98 323ceP         P        10 42 41.3 +0.1
BRVK                                pmax     pmax
      comp=Z,6.0nm,0.7s
BRVK  Borovoye          62.98 323   P        P        10 42 41.6 +0.4
ARU   Arti              64.25 331   P        P        10 42 49.4 -0.1
      comp=Z,2.2nm,0.3s,baz=54,slow=3.0,SNR=7.7
ARU   Arti              64.25 331c iP        P        10 42 49.7 +0.2
ARU                                 S        S        10 51 23.8 -0.3
ARU                                 SS       SS       10 55 31.7 -1.2
ARU                                 pmax     pmax
      comp=Z,5.0nm,0.6s
ARU   Arti              64.25 331   P        P        10 42 48.9 -0.7
KMSC  Kings Mountain    64.52  65   P        P        10 42 50.0 -1.7
      baz=316
GOGA  Godfrey           64.55  68   P        P        10 42 51.9 +0.1
      baz=316
KIRV  Kirov             64.89 337ceP         P        10 42 55.7 +2.1
FINES FINESS Array B    66.34 350   P        P        10 43 03.0 +0.1
      comp=Z,2.2nm,0.6s,baz=35,slow=4.7,SNR=7.4
FINES                               LR       LR       11 17 13.9
      comp=Z,118nm,18.1s,baz=63,slow=41
NOA   NORSAR Array B    67.75 358   P        P        10 43 12.6 +0.6
      comp=Z,1.3nm,0.8s,baz=3.1,slow=6.4,SNR=3.4
NOA                                 LR       LR       11 12 54.5
      comp=Z,58nm,19.1s,baz=10.0,slow=36
HFS   Hagfors           68.57 356   LR       LR       11 13 35.8
      comp=Z,115nm,18.2s,baz=358,slow=36
OBN   Obninsk           70.89 342   LR       LR       11 19 32.3
      comp=Z,45nm,18.8s,baz=89,slow=40
BELG  Belogornoye       70.89 335   P        P        10 43 31.3 -0.2
      comp=Z,16nm,0.7s,baz=30,slow=3.4,SNR=9.5
BELG  Belogornoye       70.89 335⇓iP         P        10 43 32.0 +0.5
BELG                                pmax     pmax
      comp=Z,3.0nm,0.9s
PPT   Papeete           71.83 156   LR       LR       11 13 20.4
      comp=Z,152nm,18.8s,baz=277,slow=34
PABE  Paberze           72.40 350   P        P        10 43 39.8 -0.6
VRH   Novokhopyorsk     73.46 338  eP        P        10 43 45.4 -1.4
VRH                                 pmax     pmax
      comp=Z,10.0nm,0.8s
VSR   Storozhevoye      74.03 339  eP        P        10 43 50.2  0.0
VSR                                 pmax     pmax
      comp=Z,10.0nm,0.8s
VORD  Divnogorie        74.24 339  eP        P        10 43 49.9 -1.5
VORD                                pmax     pmax
      comp=Z,10.0nm,0.9s
CMAR  Chiang Mai Arr    74.43 280   P        P        10 43 53.2 +0.2
      comp=Z,1.8nm,0.7s,baz=26,slow=6.9,SNR=8.0
CMAR                                LR       LR       11 21 01.0
      comp=Z,98nm,18.1s,baz=180,slow=39
CMAR  Chiang Mai Arr    74.43 280   P        P        10 43 52.3 -0.8
CMAR  Chiang Mai Arr    74.43 280   P        P        10 43 52.2 -0.8
AKASG Malin Array Be    76.39 346   P        P        10 44 02.5 -1.3
      comp=Z,2.8nm,0.4s,baz=17,slow=6.1,SNR=10
AKBB  Malin Array Si    76.39 346ceP         P        10 44 02.8 -1.0
AKBB                                pmax     pmax
      comp=Z,9.0nm,1.0s
CLL   Collm             77.42 356  eP        P        10 44 08.0 -1.6
CLL                                e*SP      pwP      10 44 26.0 +0.9
CLL   Collm             77.42 356  eP        P        10 44 11.0 +1.4
      comp=Z,9.0nm,1.2s
BRG   Berggiesshubel    77.81 355  eP        P        10 44 12.5 +0.7
BRG                                 Amp               10 44 14.5
      comp=Z,7.1nm,1.0s
DPC   Dobruska-Polom    78.19 354  eP        P        10 44 14.6 +0.6
DPC   Dobruska-Polom    78.19 354  eP        P        10 44 14.6 +0.6
KRLC  Kraliky           78.43 353  eP        P        10 44 15.6 +0.3
KRLC  Kraliky           78.43 353  eP        P        10 44 15.6 +0.3
NKC   Novy Kostel       78.52 356  eP        P        10 44 17.0 +1.3
NKC   Novy Kostel       78.52 356  eP        P        10 44 17.0 +1.3
KHC   Kasperske Hory    79.57 355  eP        P        10 44 22.6 +1.1
KHC                                e                  10 44 33.5
KHC   Kasperske Hory    79.57 355  eP        P        10 44 22.6 +1.1
KHC                                ex        pP       10 44 33.5 +1.9
GERES GERESS Array B    79.85 355   P        P        10 44 23.2 +0.1
      comp=Z,1.8nm,0.7s,baz=24,slow=4.5,SNR=12
KVAR  Kislovodsk Arr    79.94 334   LR       LR       11 23 47.4
      comp=Z,94nm,21.5s,baz=274,slow=39
KIV   Kislovodsk        79.95 334  eP        P        10 44 25.0 +1.3
KIV                                 pmax     pmax
      comp=Z,7.0nm,1.0s
KBZ   Khabaz            80.10 334   P        P        10 44 24.3 -0.1
      comp=Z,7.7nm,0.8s,baz=51,slow=3.3,SNR=13
GEYT  Alibeck           80.25 321   LR       LR       11 23 42.8
      comp=Z,229nm,18.2s,baz=40,slow=38
ZEI   Tsey              80.69 333  eP        P        10 44 27.9  0.0
ZEI                                 pmax     pmax
      comp=Z,4.0nm,1.0s
WRA   Warramunga Arr    84.61 228   P        P        10 44 48.0 -0.1
      comp=Z,0.8nm,0.6s,baz=35,slow=5.3,SNR=6.0
WRA                                 LR       LR       11 23 18.6
      comp=Z,34nm,18.4s,baz=280,slow=36
BRTR  Keskin Array B    86.15 340   P        P        10 44 57.2 +1.3
      comp=Z,2.8nm,0.7s,baz=46,slow=3.6,SNR=9.9
PSI   Prapat            86.47 270   P        P        10 44 58.2 +0.5
      comp=Z,1.5nm,0.4s,baz=51,slow=6.5,SNR=1.5
ASAR  Alice Springs     88.02 227   P        P        10 45 05.7 +0.8
      comp=Z,1.9nm,0.8s,baz=25,slow=4.8,SNR=28
ESDC  Sonseca Array     88.71   8   P        P        10 45 08.0 -0.1
      comp=Z,0.2nm,0.3s,baz=30,slow=3.4,SNR=2.6
STKA  Stephens Creek    92.02 217   P        P        10 45 24.8 +1.5
      comp=Z,1.7nm,0.9s,baz=7.0,slow=8.2,SNR=4.6
STKA  Stephens Creek    92.02 217   IAmb     IAmb     10 45 27.0
      comp=Z,1.4nm,1.1s
H03N2 Juan Fernandez   117.88 109   T        T        13 00 37.5
      baz=317,slow=77,SNR=5.6
H03N1 Juan Fernandez   117.89 109   T        T        13 00 38.8
      baz=317,slow=77,SNR=4.7
H03N3 Juan Fernandez   117.89 109   T        T        13 00 38.1
      baz=317,slow=77,SNR=4.1
MAW   Mawson           148.71 218   PKPbc    PKiKP    10 52 02.1 +0.3
      comp=Z,2.0nm,0.6s,baz=112,slow=3.0,SNR=3.5
MAW   Mawson           148.71 218   PKIKP    PKPdf    10 51 57.8 +1.2
MAW   Mawson           148.71 218   PKPdf    PKPdf    10 51 57.8 +1.2
BOSA  Boshof           153.25 322   PKPbc    PKiKP    10 52 13.9 +1.2
      comp=Z,2.6nm,0.5s,baz=14,slow=3.0,SNR=7.8
SNAA  Sanae            159.31 171   PKPab    PKPab    10 52 46.9 -2.3
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IDC ***02*** *10:34:46.3±2.0, 51.°61N×173.°18W, h0^{km}, mb3.7/6, mb1 3.9/9, mb1mx3.6/71, mbtmp3.8/9, ML3.0/2, Error ellipse: s-maj=57.0km s-min=21.1km az=179.0*

AEIC ***02*** *10:34:50.1±2.0, 51.°47N±0.°05×173.°2W±0.°1, h29^{km}±6^{km}, ML3.3/12, Error ellipse: s-maj=11.7km s-min=4.6km az=53.0*

NEIC ***02*** *10:34:50.9±1.5, 51.°52N±0.°07×173.°1W±0.°1, h31^{km}±4^{km}, Error ellipse: s-maj=13.0km s-min=4.5km az=225.0*

ISC 02 10:34:51.4±1.0**, 51.°5N**±0.°1×**173.°18W**±0.°07**, h35^{km}, n26, σ0.^{s}75**/22**, mb3.7**/6**, Andreanof Islands**

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Code  Station Name      Δ°    AZ°     Phase ID            Time     Res
                                    Op       ISC        h  m  s   ISC
KOFP  Korovin Flat P     0.95 324            Pn       10 35 07.6 -0.7
KOSE  Korovin Southe     1.00 328            Pn       10 35 08.9  0.0
KOKL  Mount Kliuchef     1.03 323            Pn       10 35 09.3 -0.1
KOKL                                         Sn       10 35 23.6 +0.9
KONE  Korovin Northe     1.06 327            Pn       10 35 09.2 -0.5
GSIG  Igitkin Island     1.77 287            Pn       10 35 18.5 -1.0
GSTR  Great Sitkin T     1.88 289   Pn       Pn       10 35 22.1 +1.1
GSTD  Great Sitkin T     1.92 288            Pn       10 35 20.8 -0.8
GSTD                                         Sn       10 35 45.6 +1.0
ADAG  Mount Adagdak      2.18 284            Pn       10 35 25.5 +0.4
ADK   Adak               2.21 281   Pn       Pn       10 35 26.1 +0.5
KIWB  Kanaga Island      2.50 279   Pn       Pn       10 35 30.1 +0.7
TASE  Tanaga Southea     3.04 278            Pn       10 35 36.4 -0.6
KDAK  Kodiak Island     13.45  54   Pn       Pn       10 38 00.8 +1.4
      baz=159,slow=21,SNR=2.1
PETK  Petropavlovsk-    17.83 287   P        P        10 38 57.2 +0.3
      0.1nm,0.3s,baz=78,slow=15,SNR=1.3
ILAR  Eielson Array     19.01  36   P        P        10 39 09.5 -0.3
      0.3nm,0.3s,baz=230,slow=8.9,SNR=1.6
INK   Inuvik            25.37  34   P        P        10 40 13.7 -1.0
      1.0nm,0.4s,baz=218,slow=4.5,SNR=1.5
H11N2 WAKE ISLAND Hy    35.37 214   T        T        11 19 53.8
      baz=16
H11N3 WAKE ISLAND Hy    35.37 214   T        T        11 19 53.5
      baz=16
H11N1 WAKE ISLAND Hy    35.38 214   T        T        11 19 56.7
      baz=16
H11S1 WAKE ISLAND Hy    36.57 213   T        T        11 21 07.5
      baz=18
H11S2 WAKE ISLAND Hy    36.58 213   T        T        11 21 07.9
      baz=18
H11S3 WAKE ISLAND Hy    36.58 213   T        T        11 21 14.0
      baz=18
PDAR  Pinedale Array    42.89  76   P        P        10 42 46.7 +0.2
      0.4nm,0.6s,baz=316,slow=5.0,SNR=1.1
SONM  Songino Array     49.69 299   P        P        10 43 38.9 -0.7
      0.5nm,0.6s,baz=48,slow=7.3,SNR=2.2
TXAR  Lajitas Array     55.15  85   P        P        10 44 20.2 -0.1
      0.2nm,0.6s,baz=304,slow=4.0,SNR=1.2
MKAR  Makanchi Array    62.65 312   P        P        10 45 11.6 -0.4
      0.4nm,0.5s,baz=46,slow=7.9,SNR=1.5
BVAR  Borovoye Array    62.99 323   P        P        10 45 13.7 -0.5
      1.4nm,0.5s,baz=41,slow=5.9,SNR=3.6
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IDC ***02*** *10:36:29.4±2.8, 8.°96N×82.°29W, h0^{km}, mb4.0/8, mb1 4.2/8, mb1mx4.0/31, mbtmp4.0/8, MS3.4/2, Ms1 3.4/2, ms1mx3.0/39, Error ellipse: s-maj=113.9km s-min=23.3km az=38.0*

UPA ***02*** *10:36:30.7±1.9, 8.°31N×82.°83W, h10^{km}±3^{km}, MW4.7*

INET ***02*** *10:36:30.3, 8.°51N×83.°28W, h15^{km}, MW4.1*

UCR ***02*** *10:36:31.4±1.7, 8.°32N×82.°85W, h19^{km}±3^{km}, MW4.6, mb4.4(NEIC)*

NEIC ***02*** *10:36:32.6±2.5, 8.°45N±0.°07×82.°74W±0.°03, h22^{km}±6^{km}, mb4.4/33, Error ellipse: s-maj=11.2km s-min=1.6km az=197.0*

ISC 02 10:36:31.1±0.8**, 8.°31N**±0.°03×**82.°82W**±0.°02**, h26^{km}**±5^{km}**, n134, σ1.^{s}30**/141**, mb4.4**/23**, 5C-20D, Panama-Costa Rica border region**

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Code  Station Name      Δ°    AZ°     Phase ID            Time     Res
                                    Op       ISC        h  m  s   ISC
PTPM  Petroterminale     0.12 209⇑iP         Pb       10 36 35.1 -1.0
PTPM                                iS       Sb       10 36 39.6 +0.2
CDITO Canoas             0.27 349   Pg       Pb       10 36 36.9 -0.9
CDITO Canoas             0.27 349⇓iP         Pb       10 36 36.9 -0.9
CDITO                               iS       Sb       10 36 41.2 -1.1
BAGA3 Bagala, Chiriq     0.33  62⇓iP         Pb       10 36 38.5 -0.2
BAGA3                               iS       Sb       10 36 43.7 -0.2
DVD   David              0.39  71⇑iP         Pb       10 36 39.0 -0.6
DVD                                 iS       Sb       10 36 45.2 -0.1
LOCO3 Loma Colorada,     0.41  76⇓iP         Pb       10 36 39.4 -0.5
MLIR3 Monte Lirio, C     0.48 360⇓iP         Pb       10 36 40.8 -0.4
MLIR3                               iS       Sn       10 36 49.0 -1.1
CHIR3 Chiriqui UPA,      0.49  80⇓iP         Pb       10 36 40.5 -0.7
CHIR3                               iS       Sb       10 36 48.8 +0.6
BCO2  Palmira            0.50  35⇓iP         Pb       10 36 41.0 -0.5
BCO2                                iS       Sb       10 36 49.0 +0.5
BRU2  Volcan             0.50  15  eP        Pb       10 36 40.8 -0.7
BRU2                               eS        Sb       10 36 48.8 +0.3
BRU2  Volcan             0.50  15⇓iP         Pb       10 36 40.8 -0.7
BRU2                                iS       Sn       10 36 50.0 -0.6
PTJ1  Puerto Jimnez      0.53 295  eP        Pb       10 36 40.8 -1.1
PTJ1  Puerto Jimnez      0.53 295⇓eP         Pb       10 36 40.7 -1.1
PTJ1                                iS       Sb       10 36 48.9 -0.2
EDSV  San Vito           0.53 344  eP        Pb       10 36 41.3 -0.7
EDSV                               eS        Sb       10 36 49.9 +0.6
BC3P  Paso Ancho         0.54  22⇓iP         Pb       10 36 41.4 -0.9
LNBQ3 Los Naranjos,      0.61  38⇓iP         Pb       10 36 42.2 -1.1
PSOM3 Paja de Sombre     0.62  53⇓iP         Pb       10 36 42.3 -1.1
POTG  Potrero Grande     0.79 338  eP        Pb       10 36 45.3 -1.1
POTG                               eS        Sb       10 36 57.3 +0.5
EDPN  Palmar Norte       0.90 316  eP        Pb       10 36 46.4 -1.8
EDPN                               eS        Sb       10 36 59.4 -0.4
CHGR2 Aguacate           0.91  47⇓iP         Pb       10 36 46.9 -1.5
CHGR2                               iS       Sb       10 36 59.2 -1.0
EDBA  Buenos Aires       0.96 332⇓eP         Pb       10 36 48.4 -0.8
SRBA  San Rafael, Bu     1.06 330  eP        Pn       10 36 49.1 -1.3
SRBA  San Rafael, Bu     1.06 330            Pn       10 36 49.2 -1.2
CNI2  El Empalme, Bo     1.16  17⇓iP         Pn       10 36 51.1 -0.6
EDDO  Dominical          1.39 312  eP        Pn       10 36 55.2 +0.3
EDDO                               eS        Sb       10 37 13.9  0.0
GMAL  Guarumal, Vera     1.66 109⇑eP         Pn       10 36 57.5 -1.2
RSUS3 Rio de Jesus,      1.68 101⇑eP         Pn       10 36 58.2 -0.6
RIMA  Rio Macho          1.78 325  eP        Pn       10 36 59.8 -0.5
RIMA  Rio Macho          1.78 325            Pn       10 37 00.1 -0.3
SFRA3 San Francisco,     1.83  92⇑eP         Pn       10 37 00.6 -0.3
LCR2  La Lucha 2         1.84 321  eP        Pn       10 37 00.8 -0.5
STIA3 Santiago, Vera     1.84  96⇓eP         Pn       10 37 00.8 -0.3
BATAN Batan              1.86 343   Pn       Pn       10 37 02.5 +1.2
BATAN Batan              1.86 343  eP        Pn       10 37 02.0 +0.7
VTCV  VTCV, Calle Va     1.89 332  eP        Pn       10 37 02.5 +0.6
RAFA  San Farael, Vo     1.91 329  eP        Pn       10 37 03.6 +1.3
MARI3 Mariato, Verag     1.93 110  eP        Pn       10 37 03.0 +0.8
CVTR  Volcan Turrial     1.94 331   Pn       Pn       10 37 03.2 +0.4
VTRT  Volcan Turrial     1.94 330  eP        Pn       10 37 03.1 +0.4
VTUC  Crater, Volcan     1.94 331  eP        Pn       10 37 03.3 +0.5
SJS   Escuela Geolog     2.03 323  eP        Pn       10 37 04.6 +0.9
HDC   Heredia            2.11 323  eP        Pn       10 37 05.5 +0.7
HDC   Heredia            2.11 323            Pn       10 37 05.7 +0.7
HDC   Heredia            2.11 323  eP        Pn       10 37 05.6 +0.7
HDC                                 iS       Sb       10 37 34.1 -0.6
CACAO El Cacao, Vera     2.17 116⇓eP         Pn       10 37 06.2 +0.6
CACAO                               iS       Sb       10 37 36.0 -0.1
PESE3 Pese, Herrera      2.22 100  eP        Pn       10 37 07.0 +0.7
CHIT3 Chitre             2.41  98  eP        Pn       10 37 09.4 +0.6
SRA1  San Ramn           2.41 317  eP        Pn       10 37 09.7 +0.7
PNME  Penonome           2.47  86  eP        Pn       10 37 11.9 +2.1
TOSI3 Tonosi             2.52 111⇓eP         Pn       10 37 12.6 +2.2
LAFE  Finca La Fe, P     2.54 306  eP        Pn       10 37 10.5 -0.3
AZU   Azuero             2.57 101  iP        Pn       10 37 11.6 +0.4
CAO2  Cobano, Puntar     2.64 301   Pn       Pn       10 37 11.2 -0.9
VTON  El Valle, Cocl     2.69  83  iP        Pn       10 37 15.3 +2.4
ARE1  Arenal 1           2.84 319  eP        Pn       10 37 16.4 +1.5
COVE  Coope Vega, Sa     2.86 327  eP        Pn       10 37 16.4 +1.3
COVE  Coope Vega, Sa     2.86 327   Pn       Pn       10 37 16.2 +1.1
JTS   Las Juntas de      2.88 313  eP        Pn       10 37 16.1 +0.6
JTS   Las Juntas de      2.88 313  iP        Pn       10 37 16.0 +0.6
ZANG  Zanguenga, Cho     2.99  77  eP        Pn       10 37 18.2 +1.3
INDI  Punta indio, G     3.07 300  eP        Pn       10 37 17.7 -0.3
BCIP  Isla Barro Col     3.07  74            Pn       10 37 18.7 +0.7
BCIP  Isla Barro Col     3.07  74⇓eP         Pn       10 37 18.3 +0.3
BCIP                               eS        Sb       10 38 00.8 -1.3
BCIP                               i                  10 38 15.9
      comp=Z,277nm,0.5s
BCIP  Isla Barro Col     3.07  74⇓iP         Pn       10 37 18.4 +0.5
DUNO  Dulce Nombre,      3.17 304   Pn       Pn       10 37 19.4 +0.1
ARRA3 Arraijan, Pana     3.19  78  eP        Pn       10 37 20.6 +0.9
PTEN  Parque Tenorio     3.21 318  iP        Pn       10 37 21.6 +1.7
TABO3 Taboga, Panama     3.27  81  eP        Pb       10 37 25.1 -3.3
CUI   Cuipilapa          3.28 315  iP        Pn       10 37 22.9 +1.9
GUAI  GUAI               3.29 306  iP        Pn       10 37 22.2 +1.1
ORTG  Ortega, Santa      3.31 308            Pn       10 37 22.7 +1.4
UPA   Univ. de Panam     3.32  78⇓eP         Pb       10 37 27.3 -2.0
HORNC Hornillas          3.33 316  iP        Pn       10 37 23.5 +1.8
SAJU  San Juanillo,      3.34 302  eP        Pn       10 37 21.7 -0.1
VMAR  Armenia, Volca     3.37 318  eP        Pn       10 37 23.7 +1.5
HZTE  Horizontes, Gu     3.63 311            Pn       10 37 28.1 +2.4
ACON  Acoyapa            4.31 328            Pn       10 37 35.5 +0.4
UPD2  Meteti             4.76  87  eP        Pb       10 37 54.1 +0.2
PRVC  Isla de Provid     5.23  16            Pn       10 37 47.1 -0.7
PRVC  Isla de Provid     5.23  16  eP        Pn       10 37 48.4 +0.6
PRVC                               eS        Sn       10 38 46.6 -0.7
PRVC                               i                  10 39 00.1
      comp=Z,42nm,0.6s
CNGN  Cerro Negro        5.65 318   Pn       Pn       10 37 56.1 +2.6
SOLC  Bahia Solano       5.75 111  eP        Pn       10 37 54.4 -0.5
SOLC                               eS        Sn       10 38 57.2 -2.9
SOLC                               i                  10 39 02.9
      comp=Z,17nm,0.5s
CRIN  San Cristobal      6.03 317   Pn       Pn       10 38 00.3 +1.5
MOTC  Monteria, Cord     7.09  86            Pn       10 38 15.1 +1.8
TGUH  Tegucigalpa,Un     7.19 323            Pn       10 38 16.3 +1.5
PLMC  San Jos del P      7.32 117  eP        Pn       10 38 17.5 +1.0
PLMC                               eS        Sn       10 39 39.3 +0.3
PLMC                               i                  10 39 44.6
      comp=Z,8.6nm,0.5s
SJCC  San Jacinto, C     7.71  78            Pn       10 38 22.7 +0.9
YOTC  Yotoco, Valle      7.74 123  eP        Pn       10 38 25.1 +2.8
ZARC  Zaragoza, Cauc     7.93  95            Pn       10 38 26.3 +1.4
ZARC  Zaragoza, Cauc     7.93  95  eP        Pn       10 38 25.5 +0.7
MTO3  Montecristo        8.81 314   Pn       Pn       10 38 39.3 +2.1
ESQI  Esquipulas         8.91 315   Pn       Pn       10 38 41.6 +3.3
VILC  Villavicencio,     9.98 114  eP        Pn       10 38 59.4 +6.2
SDV   Santo Domingo     12.06  86   LR       LR       10 45 14.9
      comp=Z,132nm,19.9s,baz=206,slow=46
ATAH  Atahualpa         15.96 164   LR       LR       10 45 42.8
      comp=Z,206nm,20.0s,baz=115,slow=34
344A  Westbrook Farm    24.18 343   P        P        10 41 46.0 +0.6
PTGA  Pitinga           24.49 110   P        P        10 41 47.2 -1.3
      comp=Z,1.9nm,0.2s,baz=331,slow=17,SNR=6.6
146A  Union             24.89 347   P        P        10 41 52.4 +0.4
SAML  Samuel            26.01 131   P        P        10 42 07.7 +5.4
V48A  Smith Brothers    27.55 353   IAmb     IAmb     10 42 17.2
      comp=Z,6.2nm,0.8s
WVT   Waverly           28.07 351   P        P        10 42 19.8 -0.8
WVT                                 IAmb     IAmb     10 42 40.9
      comp=Z,5.7nm,0.8s
WVT   Waverly           28.07 351   P        P        10 42 20.2 -0.3
      baz=314
R49A  Shelbyville       29.93 356   IAmb     IAmb     10 42 38.1
      comp=Z,8.5nm,0.8s
WCI   Wyandotte Cave    29.95 355            P        10 42 34.7 -2.6
WCI                                 IAmb     IAmb     10 42 45.5
      comp=Z,9.5nm,0.9s
Q51A  Peebles           30.59 359   IAmb     IAmb     10 42 45.1
      comp=Z,8.4nm,0.7s
X16A  Lo Mia Camp, P    36.97 319   P        P        10 43 40.6 +2.0
PSUT  Pine Spring       41.05 322   P        P        10 44 14.3 +1.5
QSM   Queen of Sheba    41.48 317   P        P        10 44 18.1 +2.0
QSM                                 IAmb     IAmb     10 44 19.7
      comp=Z,9.6nm,1.3s
PDAR  Pinedale Array    41.58 330   P        P        10 44 17.1 -0.1
      comp=Z,0.6nm,0.6s,baz=136,slow=10,SNR=3.6
BGU   Big Grassy Mou    42.12 325   P        P        10 44 22.8 +1.3
REDW  Red Top Meadow    42.66 330   P        P        10 44 25.4 -0.5
REDW                                IAmb     IAmb     10 44 27.0
      comp=Z,6.2nm,1.0s
SNOW  Snow King Moun    42.69 330   P        P        10 44 25.8 -0.4
TPH   Tonopah           42.90 319   P        P        10 44 29.8 +2.0
ULM   Lac du Bonnet     43.20 348   P        P        10 44 27.1 -2.7
      comp=Z,4.8nm,0.8s,baz=148,slow=8.8,SNR=6.2
ULM   Lac du Bonnet     43.20 348   IAmb     IAmb     10 44 29.4
      comp=Z,7.0nm,0.8s
RLMT  Red Lodge         43.22 333   P        P        10 44 30.5 +0.1
RLMT                                IAmb     IAmb     10 44 31.0
      comp=Z,5.6nm,0.8s
NVAR  Mina Array Bea    43.80 319   P        P        10 44 36.4 +1.2
      comp=Z,1.1nm,0.6s,baz=117,slow=6.5,SNR=9.7
NVAR  Mina Array Bea    43.80 319   P        P        10 44 35.9 +0.8
YHL   Hebgen Lake       43.92 331   IAmb     IAmb     10 44 38.6
      comp=Z,4.0nm,0.7s
BMN   Battle Mountai    44.27 322   P        P        10 44 39.8 +1.0
BMN                                 IAmb     IAmb     10 44 40.9
      comp=Z,6.7nm,0.8s
HLID  Hailey            44.65 327   P        P        10 44 42.2 +0.3
BOZ   Bozeman (W)       44.68 331   P        P        10 44 42.7 +0.7
BOZ                                 IAmb     IAmb     10 44 43.3
      comp=Z,3.9nm,0.9s
DLMT  Dillon            44.98 330   IAmb     IAmb     10 44 46.7
      comp=Z,4.3nm,1.0s
MFID  Camas Ranch       45.33 326   IAmb     IAmb     10 44 49.2
      comp=Z,6.6nm,1.3s
WVOR  Wild Horse Val    46.32 323   P        P        10 44 55.4 +0.3
WVOR                                IAmb     IAmb     10 44 56.5
      comp=Z,7.0nm,0.8s
YKA   Yellowknife Ar    58.82 343   P        P        10 46 25.7 -1.3
      comp=Z,0.4nm,0.5s,baz=204,slow=8.8,SNR=4.7
INK   Inuvik            68.51 342   P        P        10 47 30.6 -0.3
      comp=Z,1.9nm,0.9s,baz=118,slow=3.2,SNR=4.1
INK   Inuvik            68.51 342   IAmb     IAmb     10 47 32.2
      comp=Z,3.6nm,1.1s
ILAR  Eielson Array     71.63 336   P        P        10 47 50.2 +0.1
      comp=Z,0.9nm,0.6s,baz=118,slow=4.6,SNR=12
RND   Reindeer          71.99 334   P        P        10 47 55.0 +2.5
RND                                 IAmb     IAmb     10 47 55.4
      comp=Z,4.0nm,0.9s
TORD  Torodi Ar. Bea    82.84  78   P        P        10 48 54.8 +0.8
      comp=Z,0.6nm,0.7s,baz=310,slow=6.3,SNR=3.6
TORD  Torodi Ar. Bea    82.84  78   IAmb     IAmb     10 48 55.7
      comp=Z,6.2nm,0.8s
ASAR  Alice Springs    141.68 242   PKhKP    PKPpre   10 55 55.1
      comp=Z,0.3nm,0.5s,baz=124,slow=3.6,SNR=8.5
WRA   Warramunga Arr   142.25 248   PKhKP    PKPpre   10 55 57.1
      comp=Z,0.3nm,0.5s,baz=155,slow=4.5,SNR=3.0
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ISK ***02*** *10:37:06.9, 34.°72N×30.°05E, h24^{km}, ML3.1/14*

DDA ***02*** *10:37:07.5, 34.°93N×30.°10E, h30^{km}±4^{km}, ML2.6*

NIC ***02*** *10:37:09.3±0.0, 34.°81N×30.°08E, h33^{km}±20^{km}, Ml3.4/4*

ISC 02 10:37:07.7±1.3**, 34.°78N**±0.°04×**30.°04E**±0.°04**, h20^{km}**±8^{km}**, n40, σ1.^{s}10**/66**, 2C, Eastern Mediterranean Sea**

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Code  Station Name      Δ°    AZ°     Phase ID            Time     Res
                                    Op       ISC        h  m  s   ISC
KSL   Kastellorizon      1.41 345   S        Sb       10 37 50.6 -0.3
AKAS  Kas                1.49 346  iP        Pn       10 37 33.0 -0.4
AKAS                               iS        Sn       10 37 50.1 -2.2
AKAS  Kas                1.49 346   PN       Pn       10 37 33.9 +0.5
AKAS                                SN       Sb       10 37 53.7 +0.5
AKUM  Antalya-Kumluc     1.56   9  iP        Pn       10 37 32.7 -1.4
AKUM                               iS        Sn       10 37 52.9 -0.8
OSC1  CSNet OBS 1        1.64 141   P        Pn       10 37 35.1 -0.2
OSC1                                S        Sn       10 37 56.5 +0.8
AKMS  Akamas             1.90  82⇑iP         Pn       10 37 39.0  0.0
AKMS                                S        Sn       10 38 02.0 -0.3
AKMS                                AML      AML      10 38 02.8
      0.9nm,0.2s
AKMS                                AML      AML      10 38 02.8
      0.9nm,0.2s
AKMS                                AML      AML      10 38 03.2
      1.3nm,0.3s
AKMS                                AML      AML      10 38 03.2
      1.3nm,0.3s
ELL   Elmali             1.96 357   PN       Pn       10 37 40.6 +0.7
ELL                                 SN       Sn       10 38 04.6 +0.6
ELL   Elmali             1.96 357   P        Pn       10 37 40.8 +0.9
ELL                                 S        Sn       10 38 03.7 -0.3
FETY  Fethiye            2.01 337  iP        Pn       10 37 39.9 -0.5
FETY                               iS        Sn       10 38 01.6 -3.3
FETY  Fethiye            2.01 337   PN       Pn       10 37 40.8 +0.4
FETY                                SN       Sn       10 38 06.1 +1.2
NATA  Nata               2.08  89   P        Pn       10 37 41.8 +0.4
NATA                                S        Sn       10 38 06.7 -0.1
NATA                                AML      AML      10 38 07.6
      1.5nm,0.5s
NATA                                AML      AML      10 38 07.6
      1.5nm,0.5s
NATA                                AML      AML      10 38 11.1
      1.2nm,0.5s
NATA                                AML      AML      10 38 11.1
      1.2nm,0.5s
ARG   Arkhangelos        2.12 313   PN       Pn       10 37 42.6 +0.7
ARG                                 SN       Sn       10 38 08.6 +1.0
ALFC  Alefka             2.13  79⇑eP         Pn       10 37 42.0 -0.1
ALFC                                S        Sn       10 38 07.3 -0.8
ALFC                                AML      AML      10 38 07.9
      0.4nm,0.6s
ALFC                                AML      AML      10 38 07.9
      0.4nm,0.6s
ALFC                                AML      AML      10 38 08.4
      0.6nm,0.3s
ALFC                                AML      AML      10 38 08.4
      0.6nm,0.3s
KORT  Korkueli           2.23   6   PN       Pn       10 37 44.5 +1.0
KORT                                SN       Sn       10 38 11.4 +0.9
GAZI  Gazipasa           2.35  51  iP        Pn       10 37 45.0 -0.2
GAZI                               iS        Sn       10 38 12.7 -0.8
GAZI                                IAML              10 38 14.0
      comp=E,44nm,0.4s
GAZI                                IAML              10 38 19.0
      comp=N,37nm,0.9s
GAZI  Gazipasa           2.35  51   PN       Pn       10 37 45.1 -0.1
GAZI                                SN       Sn       10 38 13.4 -0.1
LEF   Lefka              2.36  81  iP        Pn       10 37 44.7 -0.6
LEF                                iS        Sn       10 38 10.7 -2.9
LEF                                 IAML              10 38 15.0
      comp=E,59nm,0.5s
LEF                                 IAML              10 38 19.0
      comp=N,75nm,1.0s
LEF   Lefka              2.36  81   PN       Pn       10 37 45.0 -0.3
LEF                                 SN       Sn       10 38 12.6 -1.1
KEPZ  Antalya-Kepez      2.47  31  iP        Pn       10 37 47.7 +1.0
KEPZ                                IAML              10 38 13.0
      comp=N,30nm,0.8s
KEPZ                               iS        Sn       10 38 16.0 -0.3
KEPZ                                IAML              10 38 20.0
      comp=E,27nm,0.7s
TURN  Turunc             2.47 324   PN       Pn       10 37 47.6 +0.9
TURN                                SN       Sn       10 38 16.7 +0.5
OSC2  CSNet OBS 4        2.52 132   P        Pn       10 37 47.8 +0.4
ASGA  Asgata             2.64  89   P        Pn       10 37 49.5 +0.4
ASGA                                AML      AML      10 38 22.2
      comp=E,0.3nm,0.4s
ASGA                                AML      AML      10 38 23.8
      comp=E,0.3nm,0.5s
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CSS	Mathiatis	2.71	85	PN	Pn	10 37 50.1	0.0
CSS				SN	Sn	10 38 21.8	-0.5
CSS	Mathiatis	2.71	85	P	Pn	10 37 50.4	+0.3
CSS				S	Sn	10 38 22.5	+0.3
YER	Yerkesik	2.75	329	PN	Pn	10 37 51.4	+0.8
DAT	Datca	2.79	315	iP	Pn	10 37 51.6	+0.3
DAT				iS	Sn	10 38 20.4	-4.0
DAT	Datca	2.79	315	PN	Pn	10 37 51.9	+0.7
TAVA	DENIZLI_Tavas	2.83	341	iP	Pn	10 37 51.8	0.0
MULA	Mugla, Merkez-	2.83	331	iP	Pn	10 37 53.2	+1.3
TEKE	Tekeli-Mersin	2.85	61	PN	Pn	10 37 52.7	+0.7
TEKE				SN	Sn	10 38 25.6	-0.1
BRDR	BURDUR-Merkez	2.91	0	iP	Pn	10 37 53.7	+0.9
BRDR				iS	Sn	10 38 26.1	-1.1
HDMB	Hadim	2.95	42	PN	Pn	10 37 54.5	+1.0
ERMK	Ermenek	2.98	51	iP	Pn	10 37 55.5	+1.6
SEYD	Seydisehir-KON	2.99	29	PN	Pn	10 37 54.8	+0.7
SEDI	Konya, Seydise	3.00	27	iP	Pn	10 37 55.2	+1.0
SEDI				iS	Sn	10 38 30.0	+0.4
BERE	Bereket-Mersin	3.03	58	PN	Pn	10 37 55.1	+0.6
BODT	Bodrum	3.17	317	PN	Pn	10 37 57.2	+0.7
GULN	MERSIN_Gulnar	3.18	63	iP	Pn	10 37 58.2	+1.7
GULN				iS	Sn	10 38 32.5	-1.3
GULN				IAML		10 38 39.0	
	comp=N,23nm,0.5s						
GULN				IAML		10 38 39.0	
	comp=E,22nm,0.5s						
TEVE	Tevekalti-Mers	3.23	58	PN	Pn	10 37 57.8	+0.6
AYDN	Tasoluk	3.36	329	iP	Pn	10 37 60.0	+0.9

*IDC **02** 10:39:32.9±0.8, 36°.98N×69°.87E, h0km, mb4.0/13, mb1 4.1/17, mb1mx3.9/48, mbtmp4.0/17, ML4.0/4, MS4.2/1, Ms1 4.2/1, ms1mx2.9/56, Error ellipse: s-maj=15.7km s-min=14.4km az=45.0*

*NNC **02** 10:39:40.0±1.4, 37°.17N×69°.66E, h122km±36km, mb3.7, mpv4.3, Error ellipse: s-maj=12.1km s-min=10.2km az=20.0*

ISC 02 10:39:33.9±0.6, **36°.96N**±0°.05×**69°.69E**±0°.06, **h10km**, **n35**, σ**2ˢ.11**/40, **mb3.9**/12, **4C-3D**, **Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	3.62	149	P	Pb	10 40 36.7	-1.3
CEP				S	Sg	10 41 31.0	+0.9
CHCP	Chirah Chowk	4.41	137	P	Pb	10 40 47.1	-4.3
THW	Thamme Wali	4.49	157	P	Pb	10 40 48.4	-4.4
AML	Almayashu	6.02	30	P	Pn	10 41 04.7	+1.4
	SNR=16						
KK31	Karatay Array	6.17	6	⇑P	Pn	10 41 05.9	+0.9
	2.9nm,0.3s,baz=198,slow=15,SNR=66						
KK31				⇑S	Sn	10 42 13.5	-2.1
	3.3nm,0.3s,baz=107,slow=36,SNR=4.2						
EKS2	Erkin-Say	6.50	28	P	Pn	10 41 13.1	+3.3
	SNR=17						
AAK	Ala-Archa	6.77	32	Pn	Pn	10 41 14.7	+1.3
	6.6nm,0.3s,baz=191,slow=5.6,SNR=38						
AAK				Sn	Sn	10 42 30.2	-0.4
	1.1nm,0.3s,baz=139,slow=20,SNR=1.2						
AAK				Lg	Lg	10 43 04.5	
	1.9nm,0.3s,baz=332,slow=22,SNR=2.9						
AAK	Ala-Archa	6.77	32	P	Pn	10 41 14.8	+1.3
	SNR=16						
AAK	Ala-Archa	6.77	32	⇓P	Pn	10 41 14.7	+1.3
	14nm,0.5s						
AAK				⇓S	Sn	10 42 28.7	-1.9
	19nm,0.7s						
KBK	Karagaybulak	6.98	34	P	Pn	10 41 17.8	+1.5
	SNR=12						
CHMS	Chumysh	7.17	31	P	Pn	10 41 20.1	+1.2
	SNR=20						
USP	Ospenovka	7.30	29	P	Pn	10 41 21.2	+0.7
	SNR=15						
TKM2	Tokmak 2	7.48	35	⇑P	Pn	10 41 24.4	+1.1
	10nm,0.5s						
TKM2				⇓S	Sn	10 42 47.3	-0.9
	24nm,1.1s						
MDOK	Medeo	8.38	40	P	Pn	10 41 36.5	+1.1
	18nm,0.5s						
GEYT	Alibeck	9.25	279	Pn	Pn	10 41 47.6	+0.2
	1.1nm,0.3s,baz=116,slow=13,SNR=6.3						
GEYT				Sn	Sn	10 43 30.2	-1.4
	0.6nm,0.3s,baz=66,slow=43,SNR=1.7						
AB31	Akbulak array	14.18	333	⇑P	Pn	10 42 52.7	-2.0
	1.5nm,0.3s,baz=256,slow=11,SNR=5.6						
AKTO	Aktyubinsk	15.87	332	Pn	Pn	10 43 15.8	-1.4
	0.8nm,0.3s,baz=145,slow=13,SNR=13						
AKTO				Sn	Sn	10 46 05.5	-7.5
	0.2nm,0.3s,baz=206,slow=23,SNR=1.2						
AKTO	Aktyubinsk	15.87	332			10 46 05.5	
AKTO	Aktyubinsk	15.87	332	P	Pn	10 43 15.8	-1.4
ZALV	Zalesovo Beam	19.96	27	P	P	10 44 04.7	-1.2
	0.9nm,0.3s,baz=217,slow=11,SNR=4.4						
ARU	Arti	20.86	342	P	P	10 44 17.2	+1.4
	2.3nm,0.2s,baz=164,slow=4.3,SNR=5.2						
BELG	Belogornoye	21.87	322	P	P	10 44 27.6	+0.9
	19nm,0.8s,baz=80,slow=3.2,SNR=6.1						
SONM	Songino Array	28.95	56	P	P	10 45 34.2	+0.9
	0.5nm,0.4s,baz=260,slow=8.9,SNR=3.9						
CMAR	Chiang Mai Arr	31.60	118	P	P	10 45 57.8	+0.9
	1.1nm,0.8s,baz=307,slow=8.5,SNR=4.4						
AKASG	Malin Array Be	31.83	309	P	P	10 46 00.7	+2.0
	0.6nm,0.4s,baz=78,slow=7.3,SNR=6.1						
FINES	FINESS Array B	36.51	326	P	P	10 46 40.5	+1.4
	2.7nm,0.8s,baz=155,slow=14,SNR=1.9						
ARCES	ARCESS Array B	40.32	338	P	P	10 47 12.3	+1.3
	3.5nm,0.8s,baz=110,slow=6.6,SNR=8.8						
NB2	NORSAR Subarra	43.38	323	P	P	10 47 37.4	+1.2
	comp=Z,0.6nm,0.4s,baz=97,slow=7.9						
NOA	NORSAR Array B	43.38	323	P	P	10 47 36.7	+0.5
	comp=Z,1.3nm,0.6s,baz=98,slow=8.1,SNR=4.6						
JMIC	Jan Mayen	51.73	336	LR	LR	11 09 51.7	
	comp=Z,217nm,18.4s,baz=37,slow=35						
TORD	Torodi Ar. Bea	64.68	268	P	P	10 50 13.9	+1.6
	comp=Z,0.5nm,0.6s,baz=54,slow=6.5,SNR=5.0						
INK	Inuvik	73.61	9	P	P	10 51 08.2	+1.3
	comp=Z,1.3nm,0.9s,baz=335,slow=4.4,SNR=2.6						
YKA	Yellowknife Ar	80.83	2	P	P	10 51 48.6	+1.2
	comp=Z,0.7nm,0.8s,baz=323,slow=6.3,SNR=1.4						
WRA	Warramunga Arr	83.13	121	P	P	10 51 59.1	-1.1
	comp=Z,0.5nm,0.5s,baz=315,slow=4.8,SNR=5.2						
ASAR	Alice Springs	85.38	124	P	P	10 52 10.8	-0.8
	comp=Z,0.5nm,0.6s,baz=314,slow=5.1,SNR=12						

WEL 02 10:42:11.6±1.0, **32°S**±16°×**17°9W**±2°8, **h454km**±23km, **M3.8**/16, **mB4.3**/12, **ML4.7**/24, **MLv4.6**/16, **Mw(mB)3.4**/12, **Error ellipse: s-maj=0.0km s-min=0.0km az=113.9, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	5.92	200	P	P	10 43 44.8	-0.4
MXZ				S	S	10 45 00.0	-1.6
WMGZ	Waiomatatini S	6.13	198	P	P	10 43 47.9	+0.6
WMGZ				S	S	10 45 06.5	+0.9
HAZ	Te Kaha	6.26	203	P	P	10 43 48.0	-0.6
HAZ				S	S	10 45 07.5	-0.5
PKGZ	Pakihiroa	6.29	200	P	P	10 43 50.5	+1.5
PKGZ				S	S	10 45 08.7	0.0
KUZ	Kuaotunu	6.33	220	P	P	10 43 50.8	+1.4
PUZ	Puketiti	6.41	198	P	P	10 43 50.5	+0.3
PUZ				S	S	10 45 11.3	+0.4
RUGZ	Raukumara Rang	6.48	203	P	P	10 43 51.3	+0.3
RUGZ				S	S	10 45 11.7	-0.8
TWGZ	Tauwhareparae	6.59	200	P	P	10 43 53.1	+1.1
TWGZ				S	S	10 45 18.2	+3.9
OPRZ	Ohinepanea	6.80	210	P	P	10 43 54.5	+0.4
CNGZ	Carnagh Statio	6.81	198	P	P	10 43 55.6	+1.3
TKGZ	Te Karaka	6.87	200	P	P	10 43 53.8	-1.1
TKGZ				S	S	10 45 20.5	+1.0
MWZ	Matawai	6.87	202	P	P	10 43 54.1	-0.9
MWZ				S	S	10 45 19.9	+0.3
URZ	Urewera	6.94	205	P	P	10 43 53.9	-1.8
URZ				S	S	10 45 20.2	-0.8
RIGZ	Rimuhau	7.14	200	P	P	10 43 58.4	+0.6
MUGZ	Murupara	7.26	206	P	P	10 43 58.3	-0.7
RTZ	Ruatahuna	7.31	204	P	P	10 43 59.1	-0.5
SNGZ	Shannon Statio	7.34	202	P	P	10 43 59.8	0.0
SNGZ				S	S	10 45 32.1	+3.4
PRRZ	Plateau Road	7.42	208	P	P	10 44 01.0	+0.2
RAHZ	Arahi	7.54	203	P	P	10 44 03.5	+1.5
MTHZ	Maungataniwha	7.57	204	P	P	10 44 02.1	-0.2
MTHZ				S	S	10 45 33.1	-0.1
TLZ	Tolley Road	7.65	213	P	P	10 44 04.8	+1.6
MRHZ	Matea Rd	7.71	207	P	P	10 44 02.6	-1.2
ARHZ	Aropaoanui	7.88	202	P	P	10 44 07.7	+2.0
HIZ	Hauiti	8.12	215	P	P	10 44 10.0	+1.7
TUVZ	Tukino	8.38	209	P	P	10 44 12.2	+1.0
KAHZ	Kahuranaki	8.41	201	P	P	10 44 11.6	+0.3
FWVZ	Far West T-bar	8.41	209	P	P	10 44 11.1	-0.5
BHHZ	Black Hill Sta	8.41	206	P	P	10 44 09.5	-1.9
KRHZ	Kereru	8.44	204	P	P	10 44 11.4	-0.2
PXZ	Pawanui	8.63	201	P	P	10 44 13.8	+0.1
VRZ	Vera Road	8.65	213	P	P	10 44 14.4	+0.5
TSZ	Takapari Road	8.95	205	P	P	10 44 16.2	-1.0
ANWZ	Angora Road	9.14	201	P	P	10 44 19.6	+0.3

NNC 02 10:49:43.1±2.3, **53°.02N**×**90°.78E**, **h0km**, **mb3.6**, **mpv3.2**, **3C-6D**, **Error ellipse: s-maj=16.9km s-min=12.3km az=72.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	3.68	287	⇓Pg	Pb	10 50 49.8	+0.9
	1.0nm,0.7s						
ZAA0				⇓Lg	Lg	10 51 40.8	
	4.0nm,0.7s						
KURK	Kurchatov	7.88	258	⇑Pn	Pn	10 51 38.7	0.0
	1.1nm,0.5s						
KURK				⇓Sn	Sn	10 53 08.2	-0.3
	2.7nm,0.7s						
KURK				⇑Lg	Lg	10 53 54.5	
	8.9nm,0.9s						
KURBB	Kurchatov Arra	7.96	257	⇓Pn	Pn	10 51 40.6	+0.6
	4.1nm,0.7s						
KURBB				⇑Sn	Sn	10 53 13.2	+2.5
	8.5nm,0.7s						
KURBB				⇓Lg	Lg	10 53 58.2	
	12nm,0.7s						
MK31	Makanchi Array	8.30	225	Pn	Pn	10 51 45.3	+0.7
	0.4nm,0.3s,baz=35,slow=12,SNR=6.6						
MK31				⇓Sn	Sn	10 53 19.9	+0.9
	1.0nm,0.6s,baz=35,slow=14,SNR=2.9						

NOU 02 11:07:06.1, **19°.20S**×**168°.76E**, **h0km**, **MLv4.2**/7, **Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTV	Rentapao	1.44	347	P	Pn	11 07 33.0	-0.4
DVP	Devils Point	1.56	340	P	Pn	11 07 34.4	-0.8
LIFNC	LIFOU	2.12	222	P	Pn	11 07 42.4	-0.4
MARNC	Mare, Loyalty	2.37	197	P	Pn	11 07 45.6	-0.7
DZM	Mont Dzumac	3.59	217	P	Pn	11 08 03.5	+0.4
PINNC	Pines Island,	3.61	200	P	Pn	11 08 03.6	+0.3

*IDC **02** 11:10:15.6±2.0, 2°.51N×95°.38E, h0km, mb3.8/5, mb1 4.0/7, mb1mx3.6/64, mbtmp3.9/7, ML3.8/2, Error ellipse: s-maj=61.0km s-min=21.0km az=55.0*

*NEIC **02** 11:10:20.6±0.5, 2°.6N±0°.1×95°.4E±0°.2, h29km±3km, mb4.4/8, Error ellipse: s-maj=28.1km s-min=10.4km az=62.0*

*DJA **02** 11:10:24.7±0.8, 3°N±3°×9°6E±°, h20km±3km, M4.1/7, mb4.8/2, mB5.7/1, MLv3.8/7, Mw(mB)5.2/1*

ISC 02 11:10:17.9±0.8, **2°.63N**±0°.06×**95°.62E**±0°.07, **h10km**, **n34**, σ**1ˢ.24**/33, **mb4.5**/9, **Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNSI	Sinabang, Aceh	0.73	107	P	Pn	11 10 35.2	+0.9
SNSI				S	Sg	11 10 40.6	-1.1
TPTI		1.68	68	P	Pn	11 10 47.7	+0.4
TPTI				S	Sn	11 11 08.5	-0.4
GSI	Gunungsitoli	2.35	124		Pn	11 10 58.0	+1.4
GSI	Gunungsitoli	2.35	124	P	Pn	11 10 58.2	+1.6
GSI				S	Sn	11 11 24.9	-0.7
LHMI	Lhok Sumawe	2.90	27		Pb	11 11 07.9	-1.9
LHMI	Lhok Sumawe	2.90	27	P	Pb	11 11 10.0	+0.2
PSI	Prapat	3.30	87	Pn	Pn	11 11 12.1	+2.3
	3.7nm,0.3s,baz=257,slow=14,SNR=12						
PSI				Sn	Sn	11 11 50.2	+1.0
	1.2nm,0.3s,baz=334,slow=10,SNR=2.3						
MNSI	Mandailing Nat	4.35	115	P	Pn	11 11 26.3	+2.2
MNSI				S	Sn	11 12 13.5	-1.4
SISI	Saibi	5.24	139	P	Pn	11 11 38.4	+2.1
SISI				S	Sn	11 12 33.5	-3.3
PALK	Pallekele	15.56	288	Sn	Sn	11 16 33.4	-17
	0.6nm,0.3s,baz=272,slow=23,SNR=1.7						
CM31	Chiang Mai Arr	16.07	11	Pn	Pn	11 14 05.3	+1.3
CMAR	Chiang Mai Arr	16.07	11	Pn	P	11 14 06.7	-0.8
	0.2nm,0.3s,baz=201,slow=11,SNR=21						
CMAR	Chiang Mai Arr	16.07	11		Pn	11 14 05.3	+1.3
H08S2	Diego Garcia H	25.23	246	T	T	11 41 51.7	
	baz=66,slow=75,SNR=423						
H08S3	Diego Garcia H	25.23	246	T	T	11 41 51.8	
	baz=66,slow=75,SNR=434						
H08S1	Diego Carcia H	25.25	246	T	T	11 41 50.3	
	baz=66,slow=75,SNR=202						
H01W3	Cape Leeuwin H	41.16	157	T	T	12 01 43.4	
	baz=331,slow=76						
H01W2	Cape Leeuwin H	41.17	157	T	T	12 01 45.1	
	baz=331,slow=76						
H01W1	Cape Leeuwin H	41.18	157	T	T	12 01 44.0	
	baz=331,slow=76						
WB0	Warramunga Arr	44.09	122	P	P	11 18 27.3	+0.6
WB0				IAmb	IAmb	11 18 27.8	
	comp=Z,10.0nm,1.4s						
WRA	Warramunga Arr	44.12	122	P	P	11 18 26.9	0.0
	comp=Z,0.5nm,0.7s,baz=299,slow=9.5,SNR=2.4						
WR0	Warramunga Arr	44.30	122	P	P	11 18 28.1	-0.2
WR0				IAmb	IAmb	11 18 32.0	
	comp=Z,5.7nm,1.3s						
MK31	Makanchi Array	45.50	347	P	P	11 18 37.1	-0.4
MK31				IAmb	IAmb	11 18 37.8	
	comp=Z,3.4nm,0.7s						
MKAR	Makanchi Array	45.50	347	P	P	11 18 37.4	-0.1
	comp=Z,3.8nm,0.6s,baz=161,slow=8.6,SNR=22						
MKAR	Makanchi Array	45.50	347	P	P	11 18 36.9	-0.6
ASAR	Alice Springs	45.51	127	P	P	11 18 38.5	+0.6
	comp=Z,0.2nm,0.6s,baz=296,slow=8.1,SNR=8.0						
ASAR	Alice Springs	45.51	127	P	P	11 18 37.9	0.0
MAKZ	Makanchi	45.58	347	P	P	11 18 37.5	-0.6
MAKZ				IAmb	IAmb	11 18 38.7	
	comp=Z,5.4nm,0.7s						
SONM	Songino Array	45.99	10	P	P	11 18 41.4	-0.1
	comp=Z,0.7nm,0.7s,baz=191,slow=9.8,SNR=5.1						
ZALV	Zalesovo Beam	51.92	352	P	P	11 19 26.4	-0.3
	comp=Z,3.8nm,0.7s,baz=182,slow=6.4,SNR=14						
ZALV	Zalesovo Beam	51.92	352	P	P	11 19 26.0	-0.7
CTAO	Charters Tower	54.55	117	P	P	11 19 47.2	+0.5
ABKAR	Akbulak array	55.53	332	P	P	11 19 53.0	-0.2
ARCES	ARCESS Array B	80.67	340	P	P	11 22 30.5	-0.3

*IDC **02** 11:16:32.6±0.8, 51°.70N×173°.32W, h0km, mb4.0/21, mb1 4.2/23, mb1mx4.0/50, mbtmp4.0/23, ML3.8/2, MS3.4/2, Ms1 3.4/2, ms1mx2.9/38, Error ellipse: s-maj=23.0km s-min=13.5km az=173.0*

*NEIC **02** 11:16:35.0±2.5, 51°.63N±0°.08×173°.28W±0°.08, h10km±2km, mb4.2/56, ML3.6(AEIC), Error ellipse: s-maj=14.3km s-min=8.4km az=173.0*

*AEIC **02** 11:16:35±2.6, 51°.48N±0°.09×173°.24W±0°.09, h26km±8km, Error ellipse: s-maj=13.2km s-min=7.6km az=175.0*

ISC 02 11:16:34.4±0.6, **51°.6N**±0°.1×**173°.30W**±0°.05, **h10km**, **n131**, σ**1ˢ.19**/124, **mb4.2**/28, **Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOFP	Korovin Flat P	0.80	322		Pn	11 16 52.9	+1.1
KOSE	Korovin Southe	0.84	327		Pn	11 16 53.8	+1.4
KOKL	Mount Kliuchef	0.88	321		Pn	11 16 54.0	+1.1
KONE	Korovin Northe	0.91	326		Pn	11 16 54.6	+1.4
GSIG	Igitkin Island	1.67	283		Pn	11 17 02.8	-0.9
GSMY	Great Sitkin M	1.76	284		Pn	11 17 04.8	-0.1
GSTR	Great Sitkin T	1.77	286		Pn	11 17 05.8	+0.7
GSTD	Great Sitkin T	1.81	284		Pn	11 17 05.5	-0.3
GSCK	Great Sitkin C	1.82	283		Pn	11 17 06.8	+1.1
ADK	Adak	2.12	278		Pn	11 17 10.9	+1.1
KIWB	Kanaga Island	2.41	277	Pn	Pn	11 17 15.4	+1.6
KIKV	Kanaga Island	2.42	277		Pn	11 17 15.7	+1.7
KIMD	Kanaga Island	2.45	274		Pn	11 17 15.6	+1.2
TAPA	Tanaga Point A	2.81	275		Pn	11 17 21.2	+1.7
TAFP	Tanaga Falls P	2.92	277		Pn	11 17 22.4	+1.4
TASE	Tanaga Southea	2.95	276		Pn	11 17 22.8	+1.4
NIKH	Nikolski High	3.03	62		Pn	11 17 23.0	+0.6
GAEA	Gareloi East	3.39	274		Pn	11 17 29.4	+2.0
OKWE	Okmok W'ng Wal	3.59	57		Pn	11 17 32.1	+2.0
OKFG	Magazine Ridge	3.73	60		Pn	11 17 34.3	+2.3
MSW	Makushin Switc	4.56	58		Pn	11 17 45.2	+1.8
AMKA	Amchitka	4.63	270	Pn	Pn	11 17 44.9	+0.6
UNV	Unalaska Valle	4.68	59		Pn	11 17 47.1	+2.2
AKUT	Akutan	5.19	58	Pn	Pn	11 17 53.7	+1.6
SDPT	Sand Point	8.49	59	Pn	Pn	11 18 39.1	+1.8
CHGN	Chignik	9.93	56	Pn	Pn	11 18 59.6	+2.7
SII	Sitkinak Islan	12.23	59	Pn	Pn	11 19 30.7	+2.2
OHAK	Old Harbor	12.89	57	Pn	Pn	11 19 37.2	-0.3
O18K	Koktuh Hills	13.05	44	Pn	Pn	11 19 42.7	+3.0
Q19K	Cape Douglas,	13.33	49	Pn	Pn	11 19 46.7	+3.3
KDAK	Kodiak Island	13.43	55	Pn	Pn	11 19 43.1	-1.6
	0.5nm,0.3s,baz=277,slow=2.5,SNR=8.0						
L19K	White Mountain	14.53	36		Pn	11 20 01.7	+1.9
M19K	Big River Lodg	14.53	38		Pn	11 19 59.4	-0.5
CNPM	China Poot	14.70	49	Pn	Pn	11 20 04.2	+1.9
BRLK	Bradley Lake	14.96	48	Pn	Pn	11 20 08.6	+2.9
K20K	Telida	15.55	34		Pn	11 20 14.1	+0.6
SKT	Skwentna	15.70	40	Pn	Pn	11 20 16.4	+1.0
SEW	Seward	15.76	48	Pn	Pn	11 20 16.3	+0.2
SUA	Susitna One	15.76	43	Pn	Pn	11 20 16.4	+0.1
SUA				IAmb	IAmb	11 20 25.9	
	comp=Z,44nm,1.9s						
O22K	Cooper Landing	15.78	47	Pn	Pn	11 20 18.2	+1.9
PPLA	Purkeypile	15.95	37		Pn	11 20 18.7	0.0
PPLA				IAmb	IAmb	11 21 17.6	
	comp=Z,45nm,1.9s						
J20K	Nowinta River	16.07	31		Pn	11 20 21.0	+0.9
J20K				IAmb	IAmb	11 20 39.0	
	comp=Z,26nm,1.6s						
PMR	Palmer	16.51	44	Pn	Pn	11 20 25.9	+0.1
PMR				IAmb	IAmb	11 20 55.9	
	comp=Z,33nm,2.0s						
PWL	Port Wells	16.56	46	Pn	Pn	11 20 25.6	-0.8
PWL				IAmb	IAmb	11 20 42.4	
	comp=Z,40nm,1.6s						
GHO	Glory Hole Cre	16.68	43	Pn	Pn	11 20 27.3	-0.7
GHO				IAmb	IAmb	11 20 31.6	
	comp=Z,57nm,1.9s						
KNK	Knik Glacier	16.72	45	Pn	Pn	11 20 28.5	0.0
KNK				IAmb	IAmb	11 21 02.2	
	comp=Z,34nm,1.7s						
SML	Sawmill	16.95	43	Pn	Pn	11 20 30.3	-1.1
SML				IAmb	IAmb	11 21 21.7	
	comp=Z,59nm,2.0s						
TRF	Thorofare Moun	16.97	37	Pn	Pn	11 20 32.0	+0.2
TRF				IAmb	IAmb	11 21 01.0	
	comp=Z,32nm,1.6s						
BPAW	Bear Paw Mtn.	17.09	35	Pn	Pn	11 20 32.7	-0.4
BPAW				IAmb	IAmb	11 21 10.3	
	comp=Z,51nm,2.0s						
HIN	Hinchinbrook I	17.24	49	Pn	Pn	11 20 33.8	-1.2
FID	Port Fidalgo	17.37	48	Pn	Pn	11 20 34.9	-1.6
FID				IAmb	IAmb	11 20 48.8	
	comp=Z,40nm,1.5s						
SCM	Sheep Creek Mo	17.39	44	Pn	Pn	11 20 34.8	-2.2
I21K	Tanana	17.43	31		Pn	11 20 35.7	-1.7
I21K				IAmb	IAmb	11 20 49.4	
	comp=Z,35nm,1.9s						
IMAR	Indian Mountai	17.45	27	Pn	Pn	11 20 36.1	-1.5
RND	Reindeer	17.49	38		Pn	11 20 37.1	-1.1
H21K	Melozitna Rive	17.50	29	P	P	11 20 41.2	+1.9
H21K				IAmb	IAmb	11 20 47.7	
	comp=Z,30nm,1.9s						
MCK	McKinley	17.63	37	P	Pn	11 20 40.6	+0.7
MCK				IAmb	IAmb	11 21 02.3	
	comp=Z,40nm,2.0s						
EYAK	Cordova Ski Ar	17.64	49	P	P	11 20 41.0	+0.1
PETK	Petropavlovsk-	17.72	286	P	Pn	11 20 42.1	+1.1
	comp=Z,0.2nm,0.3s,baz=94,slow=15,SNR=6.4						
MLY	Manley	17.74	32		Pn	11 20 40.5	-0.8
KLU	Klutina	17.88	46		Pn	11 20 42.2	-0.8
KLU				IAmb	IAmb	11 20 50.9	
	comp=Z,36nm,1.8s						
M24K	Tolsona, Glenn	18.00	44		Pn	11 20 44.1	-0.3
RAGM	Ragged Mountai	18.10	50		Pn	11 20 44.6	-1.1
I23K	Minto, Yukon-K	18.28	33	P	P	11 20 48.8	+0.9
BMRM	Bremner River	18.30	48	P	Pn	11 20 47.9	-0.3
BMRM				IAmb	IAmb	11 20 50.0	
	comp=Z,42nm,1.5s						
WRH	Wood River Hil	18.34	36	P	Pn	11 20 48.2	-0.4
N25K	Chitina, Valde	18.51	46	P	P	11 20 50.8	+0.2
N25K				IAmb	IAmb	11 20 51.1	
	comp=Z,43nm,2.0s						
CCB	Clear Creek Bu	18.54	36	P	P	11 20 50.4	-0.4
MDM	Murphy Dome	18.56	35	P	P	11 20 50.8	-0.2
BERG	Berg Lake	18.57	50	P	P	11 20 51.7	+0.5
H23K	Yukon River	18.63	31		Pn	11 20 53.9	+1.8
PAX	Paxson	18.65	42	P	Pn	11 20 52.9	+0.5
HDA	Harding Lake	18.73	37	P	P	11 20 53.4	+0.4
HDA				IAmb	IAmb	11 21 01.4	
	comp=Z,8.4nm,0.4s						
GLB	Gilahina Butte	18.82	47	P	P	11 20 53.5	-0.4
VRDI	Verde Repeater	18.92	48	P	P	11 20 55.7	+0.5
VRDI				IAmb	IAmb	11 21 03.3	
	comp=Z,28nm,1.8s						
IL31		18.94	36	P	P	11 20 55.2	+0.1
IL31				IAmb	IAmb	11 20 57.1	
	comp=Z,8.6nm,0.4s						
ILAR	Eielson Array	18.94	36	P	P	11 20 53.9	-1.3
	comp=Z,1.8nm,0.3s,baz=225,slow=8.7,SNR=104						
ILAR	Eielson Array	18.94	36	P	P	11 20 55.5	+0.2
RIDG	Independent Ri	19.23	40	P	P	11 20 58.8	+0.3
M26K	Nabesna, AK	19.49	45	P	P	11 21 01.8	+0.5
DOT	Dot Lake	19.51	41	P	P	11 21 00.9	-0.5
GRNC	Granite Creek	19.59	50	P	P	11 21 02.9	+0.3
GRNC				IAmb	IAmb	11 21 45.1	
	comp=Z,14nm,1.0s						
SCRK	Sand Creek	19.68	40	P	P	11 21 02.7	-0.7
SCRK				IAmb	IAmb	11 21 04.8	
	comp=Z,5.7nm,0.4s						
LOGN	Logan Glacier	19.97	50	P	P	11 21 06.7	+0.1
M27K	Edge Creek, AK	19.97	45	P	P	11 21 06.8	+0.2
PCA	Pinnacle	20.18	52	P	P	11 21 07.5	-1.4
L27K	Beaver Creek,	20.22	43		P	11 21 10.5	+1.2
FYU	Fort Yukon	20.48	33	P	P	11 21 12.7	+0.7
TOLK	Toolik Lake Re	20.49	25		P	11 21 13.2	+1.0
TOLK				IAmb	IAmb	11 21 14.1	
	comp=Z,7.9nm,0.8s						
EGAK	Eagle	21.13	39	P	P	11 21 20.0	+1.0
BMAR	Burnt Mountain	21.18	31	P	P	11 21 20.6	+1.0
SEY	Seymchan	21.42	315	P	P	11 21 23.0	+0.8
	comp=Z,0.6nm,0.4s,baz=144,slow=16,SNR=2.2						
DAWY	Dawson	21.59	42	P	P	11 21 24.0	0.0
DAWY				IAmb	IAmb	11 21 52.2	
	comp=Z,20nm,1.9s						
HYT	Haines Junctio	21.65	51	P	P	11 21 25.6	+0.8
HYT				IAmb	IAmb	11 21 31.7	
	comp=Z,25nm,1.7s						
SKAG	Skagway	22.58	55	P	P	11 21 33.1	-1.5
SKAG				IAmb	IAmb	11 21 59.8	
	comp=Z,16nm,1.4s						
INK	Inuvik	25.29	34	P	P	11 22 00.1	-0.5
	comp=Z,3.2nm,0.4s,baz=237,slow=6.7,SNR=50						
INK	Inuvik	25.29	34	P	P	11 21 59.7	-0.8
INK				IAmb	IAmb	11 22 01.7	
	comp=Z,6.1nm,1.0s						
DLBC	Dease Lake	25.33	57	P	P	11 22 00.8	-0.3
	comp=Z,5.7nm,1.0s,baz=275,slow=6.7,SNR=6.4						
A36M	Sachs Harbour	29.20	28	P	P	11 22 36.3	+0.7
A36M				IAmb	IAmb	11 22 36.8	
	comp=Z,4.3nm,0.9s						
H11N2	WAKE ISLAND Hy	35.44	213	T	T	12 01 46.8	
	baz=21,slow=76,SNR=16						
H11N3	WAKE ISLAND Hy	35.45	213	T	T	12 01 47.6	
	baz=21,slow=76,SNR=17						
H11N1	WAKE ISLAND Hy	35.46	213	T	T	12 01 40.2	
	baz=21,slow=76,SNR=15						
H11S1	WAKE ISLAND Hy	36.64	213	T	T	12 03 01.6	
	baz=20,slow=76,SNR=27						
H11S2	WAKE ISLAND Hy	36.66	213	T	T	12 02 54.8	
	baz=20,slow=76,SNR=15						
H11S3	WAKE ISLAND Hy	36.66	213	T	T	12 02 56.8	
	baz=20,slow=76,SNR=11						
MJAR	Matsushiro Arr	37.23	265	P	P	11 23 45.3	-0.6
	comp=Z,1.0nm,0.6s,baz=38,slow=9.4,SNR=2.0						
NVAR	Mina Array Bea	40.10	87	P	P	11 24 10.8	+0.6
	comp=Z,0.5nm,0.7s,baz=277,slow=10,SNR=4.9						

PDAR	Pinedale Array	42.93	76	P	P	11 24 34.2	+0.8
	comp=Z,0.6nm,0.5s,baz=316,slow=3.8,SNR=6.8						
KSRS	Korea Array	43.06	275	P	P	11 24 35.2	+1.0
	comp=Z,0.7nm,0.5s,baz=57,slow=7.5,SNR=2.5						
ULM	Lac du Bonnet	46.62	60	P	P	11 25 03.0	+0.6
	comp=Z,0.9nm,0.4s,baz=314,slow=8.5,SNR=4.7						
SONM	Songino Array	49.56	299	P	P	11 25 26.0	+0.7
	comp=Z,0.7nm,0.4s,baz=54,slow=8.0,SNR=4.4						
GUMO	Guam	50.65	237	LR	LR	11 45 44.4	
	comp=Z,37nm,18.1s,baz=98,slow=35						
TXAR	Lajitas Array	55.21	85	P	P	11 26 06.9	-0.5
	comp=Z,0.3nm,0.4s,baz=306,slow=6.5,SNR=12						
ARCES	ARCESS Array B	58.35	352	P	P	11 26 27.8	-1.3
	comp=Z,6.6nm,1.0s,baz=8.6,slow=7.9,SNR=8.0						
ARCES				LR	LR	11 52 58.9	
	comp=Z,26nm,19.1s,baz=85,slow=38						
MKAR	Makanchi Array	62.50	311	P	P	11 26 57.2	-0.6
	comp=Z,0.6nm,0.5s,baz=43,slow=5.5,SNR=4.4						
ARU	Arti	64.12	331	P	P	11 27 07.9	-0.4
	comp=Z,1.4nm,0.4s,baz=266,slow=3.4,SNR=4.2						
FINES	FINESS Array B	66.20	350	P	P	11 27 20.6	-1.1
	comp=Z,2.2nm,0.8s,baz=35,slow=7.0,SNR=2.4						
NOA	NORSAR Array B	67.61	358	P	P	11 27 29.7	-1.1
	comp=Z,0.2nm,0.5s,baz=8.0,slow=6.7,SNR=3.9						
AKTO	Aktyubinsk	69.38	328	P	P	11 27 41.5	-0.5
	comp=Z,3.8nm,0.5s,baz=52,slow=7.7,SNR=9.1						
TAPN	Taplejung	74.29	294	*e*P	P	11 28 12.5	+0.3
CMAR	Chiang Mai Arr	74.38	280	P	P	11 28 13.3	+0.9
	comp=Z,0.7nm,0.4s,baz=29,slow=6.1,SNR=5.6						
GUN	Gumba	74.89	296	*e*P	P	11 28 15.9	+0.2
	comp=Z,16nm,0.5s						
JIRN	Jiri	74.91	295	*e*P	P	11 28 16.3	+0.4
	comp=Z,12nm,0.6s						
RAMN	Ramite	75.23	295	*e*P	P	11 28 17.7	+0.2
	comp=Z,14nm,0.5s						
GKN	Gorkha	75.52	297	*e*P	P	11 28 19.2	+0.1
DANN	Dangsing	75.73	298	*e*P	P	11 28 20.7	+0.2
AKASG	Malin Array Be	76.26	345	P	P	11 28 20.7	-2.0
	comp=Z,2.2nm,0.4s,baz=17,slow=6.0,SNR=7.4						
KOLN	Koldanda	76.27	297	*e*P	P	11 28 23.6	+0.1
GERES	GERESS Array B	79.71	355	P	P	11 28 41.3	-0.8
	comp=Z,1.0nm,0.6s,baz=38,slow=5.2,SNR=5.7						
WRA	Warramunga Arr	84.68	228	P	P	11 29 06.5	-1.8
	comp=Z,0.2nm,0.5s,baz=34,slow=6.1,SNR=2.4						
ASAR	Alice Springs	88.09	227	P	P	11 29 24.3	-0.7
	comp=Z,0.4nm,0.5s,baz=23,slow=4.7,SNR=11						

NEIC 02 11:16:44.4±0.8**, 37°.04N**±0°.01×**97°.53W**±0°.01**, h5**^{km}±5^{km}**,**
Error ellipse: s-maj=2.0km s-min=1.5km az=196.0,
Kansas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T35A	Sooner Cattle	0.83	98		Pg	11 16 59.9	-0.4
T35A				Sg	Sg	11 17 11.0	0.0
U32A	Winter Ranch,	1.35	241	Pn	Pn	11 17 09.6	-0.3
OKCFA	Oklahoma City	1.62	178	Pn	Pn	11 17 13.4	-0.2
OKCSW	OKLAHOMA CITY	1.63	177	Pn	Pn	11 17 14.2	+0.5
R32A	Long Quarter,	1.67	326	Pn	Pn	11 17 14.3	0.0
FNO	Franklin	1.78	177		Pn	11 17 15.8	0.0
TUL1	Leonard	1.80	128	Pn	Pn	11 17 16.8	+0.8
KSU1	Kansas State U	2.18	19	Pn	Pn	11 17 21.5	+0.2
X34A	Smith Ranch, M	2.45	186	Pn	Pn	11 17 26.7	+1.7
WMOK	Wichita Mounta	2.51	204	Pn	Pn	11 17 26.5	+0.6
U38A	Gravette	2.60	102		Pn	11 17 27.7	+0.7
HHAR	Hobbs	2.99	104	Pn	Pn	11 17 33.1	+0.7
X37A	Clayton	3.01	144	Pn	Pn	11 17 33.3	+0.6
S39A	Bolivar	3.42	78		Pn	11 17 39.7	+1.4
U40A	Yellville	3.82	99		Pn	11 17 43.2	-0.6
AMTX	Amarillo	3.99	239		Pn	11 17 46.6	+0.3
MIAR	Mount Ida	4.07	127	Pn	Pn	11 17 47.1	-0.1
P38A	Dawn	4.07	49		Pn	11 17 47.7	+0.5
MGMO	Mountain Grove	4.21	87		Pn	11 17 49.8	+0.6
R40A	Maddies Statio	4.36	72	Pn	Pn	11 17 51.2	-0.1
FCAR	Ozark Folk Cen	4.51	103	Pn	Pn	11 17 52.7	-0.6
WHAR	Wooly Hollow	4.59	111	Pn	Pn	11 17 54.0	-0.3
P40A	Paris	4.98	58	Pn	Pn	11 18 00.1	+0.3
CCM	Cathedral Cave	5.10	77	Pn	Pn	11 18 02.0	+0.6
T25A	Trinidad	5.50	273	Pn	Pn	11 18 07.8	+0.7
PBMO	Poplar Bluff	5.70	90	Pn	Pn	11 18 08.3	-1.3

KRSC 02 11:25:45.4±1.9**, 54°.43N**×**165°.54E, h41**^{km}±25^{km}**, ML3.8,**
Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	Bering	0.82	18	*e*P	Pn	11 25 59.7	-0.7
BKI				*e*S	Sn	11 26 09.3	-2.0
MKZ	Mys Kozlova	2.22	275	*e*P	Pn	11 26 23.7	+4.0
MKZ				*e*S	Sn	11 26 49.6	+3.7
KBTR	Krutoberegovo	2.37	320	*e*P	Pn	11 26 23.3	+1.7
KBTR				*e*S	Sn	11 26 51.1	+1.7
TUMD	Tumrok D	3.07	287	*e*P	Pn	11 26 36.1	+4.7
TUMD				*e*S	Sn	11 27 11.4	+4.5
BZGR	Bezymyannyi-Gr	3.16	301	*e*P	Pn	11 26 37.8	+5.1
BZGR				*e*S	Sn	11 27 15.3	+6.1
SMKR	Semkarok	3.17	315	*e*P	Pn	11 26 36.7	+4.0
TUMR	Tumrok	3.23	288	*e*P	Pn	11 26 38.5	+4.9
TUMR				*e*S	Sn	11 27 16.0	+5.1
KMNR	Kamenistaya	3.32	296	*e*P	Pn	11 26 40.0	+5.1
KMNR				*e*S	Sn	11 27 18.8	+5.6
KLY	Klyuchi	3.37	306	*e*P	Pn	11 26 37.9	+2.5
KLY				*e*S	Sn	11 27 16.0	+2.0
SPN	Mys Shipunski	3.53	250	*e*P	Pn	11 26 41.1	+3.4
SPN				*e*S	Sn	11 27 20.8	+2.7
NLC	Nalytchevo	3.88	254	*e*P	Pn	11 26 46.9	+4.5
NLC				*e*S	Sn	11 27 30.5	+3.8
SDLR	Sedlovina	4.10	256	*e*P	Pn	11 26 50.4	+4.8
SDLR				*e*S	Sn	11 27 36.6	+4.2
SMAR	Somma	4.16	256	*e*P	Pn	11 26 52.0	+5.6
SMAR				*e*S	Sn	11 27 38.7	+4.9
UGLR	Uglovaya	4.16	256	*e*P	Pn	11 26 51.3	+4.9
UGLR				*e*S	Sn	11 27 38.3	+4.5
AVH	Avacha	4.19	257	*e*P	Pn	11 26 52.4	+5.6
AVH				*e*S	Sn	11 27 38.9	+4.4
ESO	Esso	4.20	294	*e*P	Pn	11 26 52.9	+6.1
KOK	Koryaka	4.24	257	*e*P	Pn	11 26 52.7	+5.2
KOK				*e*S	Sn	11 27 40.3	+4.6
DALK	Dalny	4.26	254	*e*P	Pn	11 26 52.9	+5.2
DALK				*e*S	Sn	11 27 39.5	+3.4
PET	Petropavlovsk	4.32	254	*e*P	Pn	11 26 53.1	+4.6
PET				*e*S	Sn	11 27 41.3	+3.7
RUS	Russkaya	4.65	247	*e*P	Pn	11 26 57.7	+4.7
RUS				*e*S	Sn	11 27 49.0	+3.3
MTVR	Mutnovka	4.81	249	*e*P	Pn	11 27 00.1	+4.8
MTVR				*e*S	Sn	11 27 52.7	+3.0
GRL	Gorelyy	4.84	250	*e*P	Pn	11 27 01.1	+5.4
GRL				*e*S	Sn	11 27 54.7	+4.3
ASAK	Asacha	5.01	249	*e*P	Pn	11 27 03.5	+5.5
KDTR	Khodutka, Kamc	5.20	243	*e*P	Pn	11 27 05.3	+4.7
KDTR				*e*S	Sn	11 28 00.5	+1.3

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*IDC **02** 11:35:43.6±1.9, 15°.46S×172°.83W, h0^{km}, mb3.8/5, mb1 4.1/5, mb1mx3.8/28, mbtmp3.8/5, MS3.7/9, Ms1 3.7/9, ms1mx3.5/29, Error ellipse: s-maj=100.1km s-min=20.2km az=141.0*

*NOU **02** 11:35:49.2, 14°.86S×172°.95W, h0^{km}, MLv4.1/4, Samoa Islands*

*NEIC **02** 11:35:50.2±1.0, 15°.3S±0°.1×173°.0W±0°.2, h35^{km}±2^{km}, mb4.3/7, Error ellipse: s-maj=25.3km s-min=17.9km az=87.0*

ISC 02 11:35:48.4±0.7**, 15°.13S**±0°.08×**172°.9W**±0°.1**, h29**^{km}**, n36,**
σ**1^{s}.60**/22**, mb4.2**/10**, MS3.6**/10**, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	1.62	42	Pn	Pn	11 36 14.5	-0.6
	36nm,0.3s,baz=206,slow=3.1,SNR=47						
AFI				Sn	Sn	11 36 31.4	-3.7
	319nm,0.3s,baz=181,slow=23,SNR=15						
NIUE	Niue	4.85	145	Pn	Pn	11 36 59.5	+0.1
MSVF	Nonsavu	9.07	252	LR	LR	11 41 13.8	
	comp=Z,295nm,19.5s,baz=353,slow=37						
KNTN	Kanton	12.33	6	Pn	Pn	11 38 42.9	+0.8
DZM	Mont Dzumac	20.75	247	*e*P	Pn	11 40 39.3	+10
	39nm,1.4s						
DZM				*e*LR	LR	11 45 39.0	
	comp=Z,266nm,25.2s						
DZM	Mont Dzumac	20.75	247	LR	LR	11 46 50.4	
	comp=Z,275nm,18.1s,baz=77,slow=32						
PPT	Papeete	22.51	99	LR	LR	11 46 55.8	
	comp=Z,227nm,21.2s,baz=243,slow=30						
PPT2	Papeete2	22.51	99	*e*LR	LR	11 46 05.8	
	comp=Z,331nm,23.5s						
XMAS	Kiritimati	22.91	43	P	P	11 40 52.5	+2.4
TBI	Tubuai	23.57	114	*e*LR	LR	11 46 33.3	
	comp=Z,310nm,26.2s						
HNR	Honiara	27.12	279	LR	LR	11 50 15.6	
	comp=Z,182nm,18.6s,baz=109,slow=32						
ARMA	Armidale	35.90	239	P	P	11 42 45.8	-0.6
ARMA				IAmb	IAmb	11 42 57.9	
	comp=Z,4.6nm,1.1s						
H11S2	WAKE ISLAND Hy	38.98	328	T	T	12 24 48.7	
	baz=148,slow=75,SNR=9.4						
H11S3	WAKE ISLAND Hy	39.00	328	T	T	12 25 02.4	
	baz=148,slow=75,SNR=10						
H11S1	WAKE ISLAND Hy	39.00	328	T	T	12 25 01.5	
	baz=148,slow=75,SNR=11						
H11N3	WAKE ISLAND Hy	39.92	330	T	T	12 26 02.8	
	baz=149,slow=76,SNR=2.4						
H11N1	WAKE ISLAND Hy	39.92	330	T	T	12 26 06.0	
	baz=149,slow=76,SNR=3.8						
H11N2	WAKE ISLAND Hy	39.94	330	T	T	12 25 59.5	
	baz=149,slow=76,SNR=2.5						
STKA	Stephens Creek	44.59	240	P	P	11 43 57.1	-1.1
	comp=Z,2.7nm,0.8s,baz=111,slow=12,SNR=4.1						
WB0	Warramunga Arr	50.34	257	P	P	11 44 42.2	-0.9
WB0				IAmb	IAmb	11 44 58.3	
	comp=Z,7.7nm,1.4s						
WB2	Warramunga Arr	50.37	256	P	P	11 44 41.6	-1.7
WB2				IAmb	IAmb	11 44 42.8	
	comp=Z,3.8nm,1.0s						
WRA	Warramunga Arr	50.38	256	P	P	11 44 41.7	-1.7
	comp=Z,0.8nm,0.7s,baz=91,slow=6.7,SNR=8.2						
WRA				LR	LR	12 04 03.6	
	comp=Z,59nm,20.4s,baz=95,slow=34						
WRA	Warramunga Arr	50.38	256	P	P	11 44 42.1	-1.3
AS31	Alice Springs	50.66	252	P	P	11 44 44.5	-1.0
AS31				IAmb	IAmb	11 44 53.2	
	comp=Z,1.1nm,0.8s						
ASAR	Alice Springs	50.66	252	P	P	11 44 43.9	-1.6
	comp=Z,2.3nm,0.6s,baz=86,slow=8.5,SNR=31						
ASAR				LR	LR	12 03 42.8	
	comp=Z,130nm,21.9s,baz=182,slow=33						
ASAR	Alice Springs	50.66	252	P	P	11 44 44.3	-1.2
MJAR	Matsushiro Arr	69.05	319	LR	LR	12 11 21.7	
	comp=Z,50nm,21.9s,baz=250,slow=31						
QSPA	South Pole Qui	74.92	180	P	P	11 47 26.4	-0.1
QSPA				IAmb	IAmb	11 47 43.2	
	comp=Z,3.6nm,1.2s						
KSRS	Korea Array	76.31	315	LR	LR	12 16 11.6	
	comp=Z,24nm,21.0s,baz=345,slow=32						
TXAR	Lajitas Array	80.06	56	P	P	11 47 55.7	-0.1
	comp=Z,0.2nm,0.9s,baz=201,slow=4.8,SNR=1.8						
TXAR				LR	LR	12 16 49.2	
	comp=Z,27nm,19.4s,baz=0.0,slow=31						
ILAR	Eielson Array	82.08	11	P	P	11 48 07.7	+2.0
	comp=Z,0.5nm,0.7s,baz=217,slow=5.8,SNR=5.0						
IMAR	Indian Mountai	82.14	8	P	P	11 48 07.9	+2.0
GERES	GERESS Array B	145.94	352	PKPbc	PKPab	11 55 27.4	+1.5
	comp=Z,0.6nm,0.3s,baz=39,slow=6.3,SNR=5.0						
GERES	GERESS Array B	145.94	352		PKPdf	11 55 23.5	-1.2
BRTR	Keskin Array B	146.25	322	PKPbc	PKPab	11 55 28.7	+1.3
	comp=Z,2.5nm,0.8s,baz=99,slow=3.9,SNR=6.8						
BRTR	Keskin Array B	146.25	322		PKPdf	11 55 25.1	-0.5

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*SKHL **02** 11:50:46.5±0.2, 43°.30N×150°.20E, h37^{km}±3^{km}, mb4.3/2*

*JMA **02** 11:50:47.1±1.0, 43°.84N×150°.28E, h30^{km}, M3.8*

ISC 02 11:50:47.7±3.6**, 43°.37N**±0°.09×**150°.2E**±0°.2**, h35**^{km}**, n20,**
σ**1^{s}.81**/32**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	Kuril'sk	2.49	319	*e*P	Pn	11 51 26.0	+0.3
KUR				AMB	AMB	11 51 26.0	
	34nm,0.3s						
KUR				*e*S	Sn	11 51 52.9	-1.9
KUR				A	A	11 51 58.0	
	122nm,0.3s						
KUR				A	A	11 51 58.0	
	51nm,0.3s						
YUK	Yuzh-Kuril'sk	3.19	284	*i* P	Pn	11 51 36.0	+0.7
YUK				AMB	AMB	11 51 38.0	
YUK				*e*S	Sn	11 52 11.0	-1.1
YUK				A	A	11 52 16.0	
	72nm,0.6s						
YUK				A	A	11 52 16.0	
	35nm,0.6s						
NEM2	Nemuro 2	3.22	271	P	Pn	11 51 36.6	+0.8
NEM2				*e*S	Sn	11 52 12.7	-0.2
NMR	Nemuro--Hokkai	3.23	272	*i* P	Pn	11 51 36.0	+0.1
NMR				*e*S	Sn	11 52 13.0	-0.1
GRPR	Tuman	3.24	283	*e*P	Pn	11 51 35.0	-1.1
GRPR				AMB	AMB	11 51 40.0	
	37nm,0.4s						
GRPR				*e*S	Sn	11 52 12.0	-1.5
GRPR				A	A	11 52 17.0	
	97nm,0.3s						
GRPR				A	A	11 52 17.0	
	30nm,0.3s						
GLVR	Golovnino	3.39	278	*e*P	Pn	11 51 37.0	-1.1
GLVR				*e*S	Sn	11 52 15.0	-2.1
JRA	Rausu	3.70	281	P	Pn	11 51 43.6	+1.2
JAK	Akkeshi	4.01	267	P	Pn	11 51 48.0	+1.4
JTKR	Abashiri--Toko	4.58	280	P	Pn	11 51 56.9	+2.5
JOB	Onbets	4.65	266	P	Pn	11 51 56.9	+1.5
JAR	Ashorobuto	4.66	271	P	Pn	11 51 57.4	+1.8
JAR				*e*S	Sn	11 52 50.4	+2.0
JCH	Churui	5.04	264	P	Pn	11 52 02.5	+1.7
JCH				*e*S	Sn	11 52 57.5	-0.3
JEM	Erimo	5.33	258	P	Pn	11 52 07.7	+2.9
JNBK	Urakawa-nobuka	5.55	261	P	Pn	11 52 09.3	+1.5
JNBK				*e*S	Sn	11 53 10.2	-0.2
JBT2	Biratori 2	5.74	267	P	Pn	11 52 12.0	+1.6
JNB	Noboribetsu	6.76	265	P	Pn	11 52 26.5	+2.1
JNB				*e*S	Sn	11 53 40.6	+0.6
JKB	Kayabe	6.89	261	P	Pn	11 52 28.4	+2.2
JKB				*e*S	Sn	11 53 41.8	-1.5
JTH	Tanohata	7.09	244	*e*S	Sn	11 53 44.3	-4.0
JANG	Nango	7.11	248	P	Pn	11 52 29.3	+0.1
JANG				*e*S	Sn	11 53 45.4	-3.4
JTM	Tenmabayashi	7.24	252	*e*S	Sn	11 53 49.7	-2.2

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*EAF **02** 12:02:18.2±1.4, 18°.55S×31°.22E, h10^{km}, MD3.6*

BUL 02 12:02:10.6±0.6**, 18°.94S**×**31°.79E, h10**^{km}**, MD3.1,**
Zimbabwe

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRI	Karoi	2.95	315	*i* P	Pn	12 02 48.6	-9.0
KRI				*i* S	Sn	12 03 15.4	-18
KRI	Karoi	2.95	315	*i* P	Pn	12 02 47.0	-11
KRI				*i* S	Sn	12 03 06.8	-26
KRI	Karoi	2.95	315	*i* P	Pn	12 02 47.0	-11
KRI				*i* S	Sn	12 03 06.8	-26
BLWY	Bulawayo	3.23	248	*i* P	Pn	12 03 01.0	-0.5
BLWY				*i* S	Sn	12 03 37.8	-2.3
BLWY	Bulawayo	3.23	248	*i* P	Pb	12 03 04.9	-3.3
BLWY				*i* S	Sn	12 03 37.7	-2.4
BLWY	Bulawayo	3.23	248	*i* P	Pb	12 03 04.9	-3.3
BLWY				*i* S	Sn	12 03 37.7	-2.4
MATP	Matopo	3.44	244	*i* P	Pn	12 03 04.1	-0.3
MATP				*i* S	Sn	12 03 42.9	-2.4
MATP	Matopo	3.44	244	*e*P	Pn	12 03 07.1	+2.7
MATP				*e*S	Sn	12 03 45.6	+0.3
MATP	Matopo	3.44	244	*e*P	Pn	12 03 07.1	+2.7
MATP				*e*S	Sn	12 03 45.6	+0.3
ZOMB	Zomba	4.91	44	*i* P	Pn	12 03 23.8	-0.7
ZOMB				*i* S	Sn	12 04 17.5	-4.0
BOSA	Boshof	11.33	211	*i* P	Pn	12 04 49.0	-3.8
BOSA				*i* S	Sn	12 06 46.6	-13

NEIC 02 12:07:18.5±0.6**, 37°.06N**±0°.01×**97°.52W**±0°.01**, h5**^{km}±1^{km}**,**
Error ellipse: s-maj=3.0km s-min=2.5km az=29.0,
Kansas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T35A	Sooner Cattle	0.82	100	Pg	Pg	12 07 34.0	-0.2
U32A	Winter Ranch,	1.37	241		Pn	12 07 43.4	-1.0
OKCFA	Oklahoma City	1.64	178		Pn	12 07 48.3	+0.2
OKCSW	OKLAHOMA CITY	1.65	178		Pb	12 07 48.8	-0.6
R32A	Long Quarter,	1.66	326		Pn	12 07 48.5	+0.1
FNO	Franklin	1.80	177		Pn	12 07 50.5	+0.2
TUL1	Leonard	1.80	129		Pn	12 07 51.0	+0.8
KSU1	Kansas State U	2.16	19	Pn	Pn	12 07 54.5	-0.8
WMOK	Wichita Mounta	2.53	204		Pn	12 08 00.0	-0.3
HHAR	Hobbs	2.98	104	Pn	Pn	12 08 07.1	+0.6
X37A	Clayton	3.02	144	Pn	Pn	12 08 07.1	+0.1
S39A	Bolivar	3.40	78	Pn	Pn	12 08 12.7	+0.4
U40A	Yellville	3.81	99		Pn	12 08 18.3	+0.4
AMTX	Amarillo	4.01	239		Pn	12 08 20.6	-0.2
P38A	Dawn	4.05	49		Pn	12 08 21.3	+0.2
MIAR	Mount Ida	4.07	127	Pn	Pn	12 08 22.0	+0.6
R40A	Maddies Statio	4.34	72	Pn	Pn	12 08 23.9	-1.3
FCAR	Ozark Folk Cen	4.50	103	Pn	Pn	12 08 27.3	0.0
WHAR	Wooly Hollow	4.58	111	Pn	Pn	12 08 27.2	-1.3
T42A	Van Buren	5.14	88	Pn	Pn	12 08 36.4	+0.2
FVM	French Village	5.71	79	Pn	Pn	12 08 44.0	-0.1

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*IDC **02** 12:17:13.1±1.7, 32°.21S×13°.41W, h0^{km}, mb4.1/8, mb1 4.1/8, mb1mx3.9/36, mbtmp4.1/8, MS4.0/10, Ms1 4.0/10, ms1mx3.7/36, Error ellipse: s-maj=47.3km s-min=21.9km az=163.0*

ISC 02 12:17:14.4±1.4**, 32°.2S**±0°.3×**13°.4W**±0°.1**, h10**^{km}**, n15,**
σ**0^{s}.85**/9**, mb4.2**/8**, MS4.0**/10**, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUR	Sutherland	28.86	100	LR	LR	12 31 52.1	
	comp=Z,352nm,21.6s,baz=236,slow=30						
BOSA	Boshof	33.42	94	LR	LR	12 34 47.5	
	comp=Z,256nm,20.7s,baz=215,slow=32						
LBTB	Lobatse	34.85	88	P	P	12 24 06.1	+0.1
	1.8nm,0.6s,baz=297,slow=13,SNR=1.6						
BDFB	Brasilia	35.48	290	P	P	12 24 11.5	0.0
	2.9nm,0.6s,baz=144,slow=9.3,SNR=4.9						
BDFB				LR	LR	12 36 02.5	
	comp=Z,254nm,19.2s,baz=81,slow=32						
CPUP	Villa Florida	38.55	267	LR	LR	12 39 33.8	
	comp=Z,101nm,21.0s,baz=163,slow=35						
DBIC	Dimbokro	39.54	13	P	P	12 24 45.5	-0.1
	2.8nm,0.9s,baz=213,slow=9.7,SNR=2.2						
SIV	San Ignacio	46.03	279	P	P	12 25 39.9	+1.4
	0.6nm,0.2s,baz=96,slow=10,SNR=4.7						
SIV				LR	LR	12 41 37.6	
	comp=Z,167nm,19.6s,baz=166,slow=32						
KOWA	Kowa	47.33	12	P	P	12 25 48.3	-0.2
	4.1nm,0.7s,baz=185,slow=6.1,SNR=11						
TORD	Torodi Ar. Bea	47.39	20	P	P	12 25 48.9	-0.1
	2.8nm,0.9s,baz=197,slow=6.2,SNR=11						
TORD				LR	LR	12 41 14.3	
	comp=Z,142nm,21.6s,baz=215,slow=30						
LPAZ	La Paz	51.83	274	P	P	12 26 22.2	-1.5
	0.4nm,0.6s,baz=128,slow=12,SNR=1.5						
LPAZ				LR	LR	12 47 10.3	
	comp=Z,108nm,18.0s,baz=130,slow=35						
PTGA	Pitinga	53.88	296	P	P	12 26 38.2	0.0
	0.8nm,0.2s,baz=111,slow=8.6,SNR=2.2						
MDT	Midelt	65.23	8	LR	LR	12 52 11.0	
	comp=Z,90nm,18.7s,baz=176,slow=32						
ROSC	El Rosal	68.52	291	LR	LR	12 57 08.0	
	comp=Z,177nm,18.6s,baz=112,slow=35						
VNDA	Vanda	70.47	179	LR	LR	12 57 13.3	
	comp=Z,112nm,18.1s,baz=144,slow=34						
ILAR	Eielson Array	136.84	333	PKP	PKPdf	12 36 36.8	+0.3
	0.2nm,0.8s,baz=56,slow=1.3,SNR=2.9						

IDC 02 12:20:10.5±2.8**, 4°.79N**×**93°.71E, h0**^{km}**, mb3.7**/4**, mb1 3.8**/5**,**
mb1mx3.6/44**, mbtmp3.7**/5**, ML4.2**/1**, MS3.6**/1**, Ms1 3.6**/1**,**
ms1mx2.7/43**, Error ellipse: s-maj=110.0km**
s-min=25.3km az=61.0, Off west coast of northern
Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	14.51	20	Pn	Pn	12 23 37.6	+0.2
	0.4nm,0.3s,baz=216,slow=12,SNR=4.6						
MKAR	Makanchi Array	42.99	348	P	P	12 28 11.8	+0.2
	1.0nm,0.5s,baz=167,slow=7.9,SNR=7.9						
WRA	Warramunga Arr	46.89	123	P	P	12 28 43.0	0.0
	0.8nm,0.8s,baz=305,slow=9.2,SNR=4.2						
ASAR	Alice Springs	48.33	128	P	P	12 28 53.9	-0.3
	0.4nm,0.9s,baz=300,slow=7.5,SNR=2.5						
ASAR				LR	LR	12 49 53.1	
	comp=Z,71nm,20.3s,baz=2.0,slow=37						
ZALV	Zalesovo Beam	49.54	353	P	P	12 29 02.3	-0.6
	0.4nm,0.4s,baz=165,slow=6.0,SNR=2.9						

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*NOU **02** 12:29:21.3, 24°.01S×179°.57W, h538^{km}, mb4.8/59, South of Fiji Islands*

*IDC **02** 12:29:23.5±0.7, 24°.14S×179°.89E, h513^{km}±7^{km}, mb4.1/32, mb1 4.2/34, mb1mx4.2/42, mbtmp5.0/34, Error ellipse: s-maj=9.2km s-min=8.5km az=96.0*

*NEIC **02** 12:29:24.4±1.4, 24°.09S±0°.09×179°.96E±0°.04, h516^{km}±6^{km}, mb4.9/74, Error ellipse: s-maj=13.0km s-min=4.1km az=198.0*

*GCMT **02** 12:29:26.4±0.4, 24°.42S±0°.04×179°.86E±0°.04, h530^{km}±2^{km}, MW5.3/61, Moment Tensor Solution. s61,c75; Duration: 1^{s}.1 Moment tensor: Scale 10^{17}Nm; M_{rr}0.64±.04; $M_{\theta\theta}$-0.17±.06; $M_{\phi\phi}$-0.46±.06; $M_{r\theta}$-0.05±.07; $M_{\theta\phi}$-0.36±.06; $M_{\phi r}$-0.74±.06; Best double couple: $M_0$1.00300×10^{17} NP1:ϕ_s53.00000°,δ26.00000°,λ127.00000°. NP2: ϕ_s193.00000°,δ70.00000°,λ74.00000°. Principal axes: T 1.0230, Plg62.0000°, Azm78.0000°; N -0.0390, Plg15.0000°, Azm198.0000°; P -0.9840, Plg23.0000°, Azm295.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 02 12:29:24.0±0.2**, 24°.20S**±0°.04×**179°.96E**±0°.05**, h526**^{km}**,**
n624, σ**1^{s}.09**/653**, mb4.8**/105**, 52C-28D, Fault plane solution: NP1:**ϕ_s219.36580°**,**δ67.40936°**,**λ65.85206°. **NP2:**ϕ_s88.77445°**,**δ32.59713°**,**λ134.51576°. **Principal axes:** T Plg60.1526°, Azm93.8287°**;** N Plg22.1916°, Azm229.1375°**;** P Plg18.9106°, Azm327.1707°**; South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RIZ	Raoul Island	5.37	160	P	P	12 30 54.4	-1.1
RAO	Raoul Island	5.38	160	P	P	12 30 55.4	-0.2
	237nm,0.3s,baz=157,slow=3.0,SNR=14						
RAO				S	S	12 32 06.0	-4.6
	178nm,0.3s,baz=122,slow=21,SNR=1.6						
RAO	Raoul Island	5.38	160	P	P	12 30 55.8	+0.1
GLKZ	Green Lake	5.39	160	P	P	12 30 54.4	-1.3
GLKZ				S	S	12 32 09.9	-0.9
MSVF	Nonsavu	6.68	344	P	P	12 31 06.9	-1.3
	35nm,0.3s,baz=138,slow=22,SNR=34						
MSVF				S	S	12 32 30.2	-3.1
	baz=36,slow=20,SNR=3.8						
MSVF	Nonsavu	6.68	344	P	P	12 31 06.2	-1.9
NIUE	Niue	10.70	63	P	P	12 31 47.7	-1.2
MARNC	Mare, Loyalty	11.33	281	P	P	12 31 55.6	+0.1
MARNC	Mare, Loyalty	11.33	281	P	P	12 31 56.5	+1.0
PINNC	Pines Island,	11.60	275	P	P	12 31 58.8	+0.5
PINNC	Pines Island,	11.60	275	P	P	12 32 01.4	+3.1
OUENC	Ouen Island, N	12.18	276	P	P	12 32 05.4	+1.0
OUENC	Ouen Island, N	12.18	276	P	P	12 32 05.2	+0.7
YATNC	Mamie plateau,	12.21	277	P	P	12 32 06.5	+1.7
LIFNC	LIFOU	12.24	284	P	P	12 32 04.5	-0.5
LIFNC	LIFOU	12.24	284	P	P	12 32 05.6	+0.5
OUZ	Omahuta	12.29	205	P	P	12 32 07.6	+2.3
OUZ	Omahuta	12.29	205	P	P	12 32 07.3	+2.0
OUZ	Omahuta	12.29	205	P	P	12 32 07.1	+1.8
ONTNC	Ouen Toro	12.56	276	P	P	12 32 08.3	0.0
ONTNC	Ouen Toro	12.56	276	P	P	12 32 09.8	+1.4
DZM	Mont Dzumac	12.61	277	*e*P	P	12 32 10.0	+0.9
	298nm,1.5s						
DZM	Mont Dzumac	12.61	277	P	P	12 32 10.2	+1.1
	6.9nm,0.3s,baz=185,slow=8.4,SNR=61						
DZM				S	S	12 34 24.4	-0.6
	0.2nm,0.3s,baz=335,slow=22,SNR=1.4						
DZM	Mont Dzumac	12.61	277	P	P	12 32 09.9	+0.9
WCZ	Waipu Caves	12.66	201	P	P	12 32 10.7	+1.4
NOUC	Port Laguerre	12.73	277	P	P	12 32 11.9	+1.7
AFI	Afiamalu	12.87	39	P	P	12 32 05.8	-6.1
	5.3nm,0.3s,baz=81,slow=7.3,SNR=5.2						
AFI				S	S	12 34 18.4	-12
	3.4nm,0.3s,baz=38,slow=24,SNR=1.5						

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KUZ   Kuaotunu          13.02 195  P      P      12 32 13.5 +0.5
WIAZ  Waiheke Island    13.22 197  P      P      12 32 16.1 +1.1
MBAZ  Motutapu North    13.26 198  P      P      12 32 20.6 +5.1
RVAZ  Riverhead Bore    13.35 199  P      P      12 32 21.1 +4.6
MXZ   Matakaoa Point    13.39 186  P      P      12 32 14.9 -2.0
MXZ                                S      S      12 34 32.9 -6.4
ETAZ  East Tamaki Re    13.43 198  P      P      12 32 19.2 +2.0
WTAZ  Waiatarua         13.51 199  P      P      12 32 21.7 +3.6
AWAZ  Awhitu Peninsu    13.61 198  P      P      12 32 19.8 +0.7
WMGZ  Waiomatatini S    13.64 185  P      P      12 32 19.0 -0.4
WMGZ                               S      S      12 34 39.5 -4.5
HAZ   Te Kaha           13.64 187  P      P      12 32 17.4 -2.0
PKGZ  Pakihiroa         13.74 186  P      P      12 32 19.9 -0.6
RUGZ  Raukumara Rang    13.86 188  P      P      12 32 21.6 -0.3
PUZ   Puketiti          13.90 186  P      P      12 32 22.4 +0.2
TOZ   Tahuroa Road      14.02 195  P      P      12 32 24.1 +0.8
KMRZ  Kaimai            14.03 193  P      P      12 32 25.1 +1.5
TWGZ  Tauwhareparae     14.03 186  P      P      12 32 22.7 -0.9
TWGZ                               S      S      12 34 47.4 -4.3
URZ   Urewera           14.22 189  P      P      12 32 21.1 -4.4
      4.8nm,0.3s,baz=122,slow=23,SNR=68
URZ                                S      S      12 34 52.2 -2.9
      13nm,0.3s,baz=238,slow=22,SNR=12
URZ   Urewera           14.22 189  P      P      12 32 22.4 -3.1
URZ   Urewera           14.22 189  P      P      12 32 24.4 -1.1
MWZ   Matawai           14.24 188  P      P      12 32 24.1 -1.6
CNGZ  Carnagh Statio    14.32 186  P      P      12 32 27.5 +1.0
MUGZ  Murupara          14.49 190  P      P      12 32 26.6 -1.7
TLZ   Tolley Road       14.58 194  P      P      12 32 28.3 -1.0
RIGZ  Rimuhau           14.58 187  P      P      12 32 23.3 -6.0
SNGZ  Shannon Statio    14.71 188  P      P      12 32 27.5 -3.1
SANVU Saraoutou         14.82 304  P      P      12 32 31.1 -0.9
KNZ   Kokohu            14.90 187  P      P      12 32 33.3 +0.7
HIZ   Hauiti            14.91 196  P      P      12 32 32.5 -0.2
BKZ   Black Stump Fm    15.21 190  P      P      12 32 34.3 -1.5
SNZO  South Karori      17.62 193  P      P      12 32 59.2 -0.1
      134nm,1.3s
QRZ   Quartz Range      17.71 199  P      P      12 32 59.4 -0.8
KHZ   Kahutara          18.93 195  P      P      12 33 10.3 -1.0
RPZ   Rata Peaks        20.79 198  P      P      12 33 28.4 +0.2
ODZ   Otahua Downs      22.13 198  P      P      12 33 39.9 -0.3
KNTN  Kanton            22.77  22  P      P      12 33 44.8 -1.6
HNR   Honiara           24.09 304  P      P      12 33 57.0 -1.1
      104nm,0.6s,baz=152,slow=4.8,SNR=8.0
HNR                                ScS    ScS    12 44 00.2 +1.7
      41nm,0.6s,baz=189,slow=5.8,SNR=4.4
HNR   Honiara           24.09 304  P      P      12 33 57.1 -1.1
ARMA  Armidale          25.88 250  P      P      12 34 15.7 +1.7
      baz=26,SNR=11
ARMA  Armidale          25.88 250  P      P      12 34 15.4 +1.5
ARMA                               IAmb   IAmb   12 34 16.4
      comp=Z,22nm,0.8s
ARMA  Armidale          25.88 250  P      P      12 34 15.2 +1.2
      comp=Z,36nm,1.0s
EIDS  Eidsvold          26.22 261  P      P      12 34 17.4 +0.5
      baz=26,SNR=16
EIDS  Eidsvold          26.22 261  P      P      12 34 17.1 +0.2
EIDS                               IAmb   IAmb   12 34 18.5
      comp=Z,52nm,1.1s
EIDS  Eidsvold          26.22 261  P      P      12 34 17.1 +0.2
      comp=Z,45nm,1.0s
TARA  Tarawa            26.31 344  P      P      12 34 17.1 -0.6
MGCD  Mangrove Creek    26.78 244  P      P      12 34 22.9 +1.2
      baz=27,SNR=7.6
MGCD  Mangrove Creek    26.78 244  P      P      12 34 22.9 +1.2
      comp=Z,38nm,0.7s
RK1H  Rockhampton Ha    26.95 266  P      P      12 34 24.5 +1.2
      comp=Z,15nm,0.8s
RMQ   Roma              28.25 259  P      P      12 34 36.2 +1.5
      baz=28,SNR=19
RMQ   Roma              28.25 259  P      P      12 34 36.0 +1.3
      comp=Z,58nm,0.8s
CNB   Canberra Magne    28.67 240  P      P      12 34 39.9 +1.6
      baz=28,SNR=6.7
CNB   Canberra Magne    28.67 240  P      P      12 34 40.2 +1.9
      comp=Z,23nm,1.1s
CAN   Canberra          28.96 240  P      P      12 34 42.2 +1.4
CAN                                IAmb   IAmb   12 34 43.0
      comp=Z,22nm,0.9s
CAN   Canberra          28.96 240  P      P      12 34 41.9 +1.1
YNG   Young             29.21 243  P      P      12 34 44.4 +1.4
      baz=29,SNR=5.3
CMSA  Cobar Meteorol    31.07 249  P      P      12 34 59.5 +0.5
      baz=31,SNR=45
CMSA  Cobar Meteorol    31.07 249  P      P      12 34 58.9 -0.1
      comp=Z,57nm,0.9s
CTA   Charters Tower    31.44 271  P      P      12 35 02.4  0.0
      comp=Z,209nm,0.4s
CTAO  Charters Tower    31.44 271  P      P      12 35 03.3 +0.9
CTAO  Charters Tower    31.44 271  P      P      12 35 03.0 +0.6
TOO   Toolangi          32.25 237  P      P      12 35 10.1 +1.0
      baz=32,SNR=6.3
TOO   Toolangi          32.25 237  P      P      12 35 10.0 +0.9
TOO   Toolangi          32.25 237  P      P      12 35 11.1 +2.0
      comp=Z,24nm,1.8s
QLP   Quilpie           32.30 258  P      P      12 35 09.8 +0.2
      baz=32,SNR=25
QLP   Quilpie           32.30 258  P      P      12 35 09.5 -0.1
      comp=Z,109nm,1.0s
TAU   Tasmania Unive    32.70 227  P      P      12 35 13.9 +1.1
TAU                                IAmb   IAmb   12 35 30.9
      comp=Z,52nm,1.3s
TAU   Tasmania Unive    32.70 227  P      P      12 35 14.0 +1.3
RABL  Rabaul            33.36 302  P      P      12 35 17.8 -0.9
RABL                               IAmb   IAmb   12 35 21.3
      comp=Z,29nm,0.5s
MTSU  Mount Surprise    33.72 273  P      P      12 35 22.1 +0.4
      baz=34,SNR=63
MTSU  Mount Surprise    33.72 273  P      P      12 35 21.9 +0.2
      comp=Z,95nm,0.9s
XMAS  Kiritimati        34.10  43  P      P      12 35 24.6 -0.3
XMAS                               IAmb   IAmb   12 35 27.0
      comp=Z,31nm,0.9s
PMG   Port Moresby      34.56 290  P      P      12 35 28.7 -0.1
      comp=Z,71nm,0.7s,baz=119,slow=7.8,SNR=16
PMG                                ScP    ScP    12 40 47.7 +3.7
      comp=Z,31nm,1.0s,baz=172,slow=5.0,SNR=3.8
PMG   Port Moresby      34.56 290  P      P      12 35 29.0 +0.2
PMG   Port Moresby      34.56 290  P      P      12 35 28.8  0.0
PMG   Port Moresby      34.56 290  P      P      12 35 28.8  0.0
STKA  Stephens Creek    34.58 249  P      P      12 35 29.3 +0.6
      comp=Z,7.3nm,0.5s,baz=89,slow=9.8,SNR=17
STKA                               S      S      12 40 19.7 -0.8
      comp=Z,4.5nm,0.8s,baz=270,slow=17,SNR=3.7
STKA                               ScP    ScP    12 40 45.5 +1.7
      comp=Z,8.2nm,0.9s,baz=47,slow=5.8,SNR=5.9
STKA                               ScS    ScS    12 44 50.6 +2.0
      comp=Z,0.7nm,0.3s,baz=39,slow=23,SNR=5.5
STKA  Stephens Creek    34.58 249  P      P      12 35 29.4 +0.6
      baz=34,SNR=11
STKA  Stephens Creek    34.58 249  P      P      12 35 29.4 +0.6
STKA  Stephens Creek    34.58 249  P      P      12 35 29.4 +0.6
      comp=Z,5.5nm,1.4s
INKA  Innaminka         35.33 256  P      P      12 35 36.1 +1.1
      comp=Z,88nm,1.1s
COEN  Coen              36.12 280  P      P      12 35 42.2 +0.4
COEN                               IAmb   IAmb   12 35 43.5
      comp=Z,85nm,1.2s
COEN  Coen              36.12 280  P      P      12 35 42.1 +0.3
      comp=Z,61nm,1.3s
HTT   Hallett           36.91 246  P      P      12 35 48.4 +0.2
      baz=37,SNR=13
HTT   Hallett           36.91 246  P      P      12 35 47.8 -0.4
      comp=Z,46nm,0.9s
PATS  Pohnpei           37.38 323  P      P      12 35 51.9 -0.3
QIS   Mount Isa         37.40 267  P      P      12 35 51.9 -0.4
      baz=37,SNR=13
QIS   Mount Isa         37.40 267  P      P      12 35 51.9 -0.4
      comp=Z,25nm,1.3s
LCRK  Leigh Creek       37.45 251  P      P      12 35 52.2 -0.3
      comp=Z,61nm,0.9s
MANU  Manus Island      38.44 300  P      P      12 36 00.2 -0.6
MANU                               IAmb   IAmb   12 36 00.6
      comp=Z,12nm,0.7s
BBOO  Buckleboo         39.29 247  P      P      12 36 07.0 -0.5
      baz=39,SNR=35
BBOO  Buckleboo         39.29 247  P      P      12 36 07.6 +0.1
BBOO                               IAmb   IAmb   12 36 08.0
      comp=Z,27nm,0.8s
BBOO  Buckleboo         39.29 247  P      P      12 36 06.5 -1.0
      comp=Z,41nm,1.0s
OOD   Oodnadatta        39.79 255  P      P      12 36 11.9 +0.3
      comp=Z,55nm,1.1s
MULG  Mulgathing        41.04 251  P      P      12 36 20.6 -0.9
      comp=Z,57nm,0.8s
AS31  Alice Springs     41.95 261  P      P      12 36 29.1 +0.3
ASAR  Alice Springs     41.95 261  P      P      12 36 28.6 -0.2
      comp=Z,42nm,0.9s,baz=94,slow=7.1,SNR=437
ASAR                               ScP    ScP    12 41 15.1 +2.7
      comp=Z,21nm,0.9s,baz=110,slow=4.0,SNR=32
ASAR                               S      S      12 42 08.1 -1.4
      comp=Z,6.5nm,0.8s,baz=100,slow=15,SNR=10
ASAR                               PKiKP  PKiKP  12 45 15.3 -1.1
      comp=Z,0.4nm,0.5s,baz=107,slow=1.3,SNR=4.7
ASAR                               ScS    SS     12 45 34.2 -1.2
      comp=Z,2.4nm,0.9s,baz=112,slow=6.3,SNR=6.5
WR0   Warramunga Arr    42.16 267  P      P      12 36 29.9 -0.6
WR0                                IAmb   IAmb   12 36 30.9
      comp=Z,48nm,1.1s
WB2   Warramunga Arr    42.34 266  P      P      12 36 31.8 -0.2
WRAB  Tennant Creek     42.34 266  P      P      12 36 31.1 -0.9
WRAB                               IAmb   IAmb   12 36 32.3
      comp=Z,74nm,1.1s
WRAB  Tennant Creek     42.34 266  P      P      12 36 31.4 -0.6
WB0   Warramunga Arr    42.34 267  P      P      12 36 32.0  0.0
WRA   Warramunga Arr    42.35 266  P      P      12 36 31.4 -0.7
      comp=Z,21nm,0.3s,baz=103,slow=8.3,SNR=372
WRA                                ScP    ScP    12 41 18.2 +4.1
      comp=Z,34nm,1.0s,baz=109,slow=4.4,SNR=31
WRA                                S      S      12 42 12.8 -2.5
      comp=Z,24nm,1.1s,baz=113,slow=15,SNR=15
WRA                                PKiKP  PKiKP  12 45 16.0 -0.8
      comp=Z,0.4nm,0.4s,baz=162,slow=0.6,SNR=6.7
WRA   Warramunga Arr    42.35 266  P      P      12 36 31.1 -0.9
JAY   Jayapura          43.60 294  P      P      12 36 41.3 -0.6
      comp=Z,34nm,0.5s,baz=121,slow=3.4,SNR=31
SMPI  Sarmi             45.56 293  P      P      12 36 56.3 -0.6
      comp=Z,35nm,1.2s
FORT  Forrest           46.17 250  P      P      12 37 00.9 -0.5
      baz=46,SNR=11
FORT  Forrest           46.17 250  P      P      12 37 00.9 -0.5
FORT  Forrest           46.17 250  P      P      12 37 00.2 -1.2
KDU   Kakadu            46.28 276  P      P      12 37 01.8 -0.5
      baz=46,SNR=10.0
KDU   Kakadu            46.28 276  P      P      12 37 01.4 -1.0
      comp=Z,59nm,1.1s
WRKA  Warakurna         46.73 258  P      P      12 37 05.5 -0.3
      baz=46,SNR=202
WRKA  Warakurna         46.73 258  P      P      12 37 04.7 -1.1
      comp=Z,77nm,0.9s
MTN   Manton Dam        47.44 275  P      P      12 37 10.7 -0.5
      baz=47,SNR=8.9
MTN   Manton Dam        47.44 275  P      P      12 37 10.6 -0.6
MTN                                IAmb   IAmb   12 37 11.0
      comp=Z,42nm,1.2s
DRS   Darwin Rock St    47.80 275  P      P      12 37 12.7 -1.2
      comp=Z,32nm,0.5s
BAKI  Biak              48.18 292  P      P      12 37 16.9 +0.2
KNRA  Kununurra         48.65 270  P      P      12 37 20.1  0.0
      baz=48,SNR=28
KNRA  Kununurra         48.65 270  P      P      12 37 19.9 -0.3
KNRA  Kununurra         48.65 270  P      P      12 37 19.5 -0.7
      comp=Z,124nm,1.1s
FAKI  Fak Fak           50.63 287  P      P      12 37 34.0 -0.8
FAKI                               IAmb   IAmb   12 37 35.2
      comp=Z,66nm,1.4s
FAKI  Fak Fak           50.63 287  P      P      12 37 33.3 -1.5
FITZ  Fitzroy Crossi    50.77 266  P      P      12 37 35.8 +0.1
      baz=51,SNR=69
FITZ  Fitzroy Crossi    50.77 266  P      P      12 37 35.9 +0.1
FITZ                               IAmb   IAmb   12 37 37.0
      comp=Z,44nm,0.9s
FITZ  Fitzroy Crossi    50.77 266  P      P      12 37 35.3 -0.5
      comp=Z,57nm,1.1s
GUMO  Guam              50.85 314  P      P      12 37 35.3 -1.0
      comp=Z,64nm,0.6s,baz=178,slow=9.8,SNR=4.2
GUMO  Guam              50.85 314  P      P      12 37 35.7 -0.6
SWI   Sorong            52.50 289  P      P      12 37 47.8 -0.5
      comp=Z,1μmcomp=Z,153nm,0.9s
MSAI  Masohi            53.35 285  P      P      12 37 52.1 -2.3
      comp=Z,389nmcomp=Z,7.4nm,0.5s
SBA   Scott Base        54.08 183  P      P      12 38 01.7 +3.2
SBA                                IAmb   IAmb   12 38 02.6
      comp=Z,37nm,0.9s
VNDA  Vanda             54.08 185  P      P      12 38 00.2 +1.7
      comp=Z,4.5nm,0.8s,baz=2.5,slow=7.9,SNR=40
VNDA                               ScP    ScP    12 42 05.0 +2.3
      comp=Z,2.3nm,0.7s,baz=329,slow=4.1,SNR=6.4
VNDA  Vanda             54.08 185  P      P      12 38 00.3 +1.7
SOEI  Soe               54.83 275  P      P      12 38 06.0 +1.1
SOEI  Soe               54.83 275  P      P      12 38 06.1 +1.1
      comp=Z,1μmcomp=Z,95nm,1.1s
MEEK  Meekatharra       54.99 254  P      P      12 38 05.6 -0.3
      baz=55,SNR=8.6
MEEK  Meekatharra       54.99 254  P      P      12 38 04.9 -1.0
PSA00 Pilbara Seismi    55.07 260  P      P      12 38 05.8 -0.6
PSA00 Pilbara Seismi    55.07 260  P      P      12 38 05.6 -0.9
BATI  Baumata           55.21 274  P      P      12 38 08.8 +1.3
      comp=Z,33nm,0.8s
MBWA  Marble Bar        55.28 260  P      P      12 38 07.6 -0.3
MBWA  Marble Bar        55.28 260  P      P      12 38 07.8 -0.1
BLDU  Ballidu           55.88 248  P      P      12 38 11.7 -0.3
      baz=56,SNR=16
BLDU  Ballidu           55.88 248  P      P      12 38 11.0 -1.0
MUN   Mundaring         56.08 247  P      P      12 38 13.4 +0.2
      baz=56,SNR=4.0
MUN   Mundaring         56.08 247  P      P      12 38 12.9 -0.4
SANI  Sanana            56.55 284  P      P      12 38 15.8 -1.0
      comp=Z,426nmcomp=Z,32nm,1.0s
SANI  Sanana            56.55 284  P      P      12 38 16.3 -0.5
TNTI  Ternate           56.69 288  P      P      12 38 16.8 -0.9
      comp=Z,2μmcomp=Z,46nm,1.1s
MORW  Morawa            56.73 250  P      P      12 38 17.6 -0.2
      baz=56,SNR=14
MORW  Morawa            56.73 250  P      P      12 38 17.7 -0.2
MORW                               IAmb   IAmb   12 38 20.6
      comp=Z,41nm,1.4s
MORW  Morawa            56.73 250  P      P      12 38 17.2 -0.7
MMRI  Maumere           57.11 275  P      P      12 38 20.6 -0.1
MMRI                               IAmb   IAmb   12 38 21.3
      comp=Z,85nm,1.3s
MMRI  Maumere           57.11 275  P      P      12 38 20.4 -0.2
      comp=Z,53nm,1.1s
BASI  Baing, Sumba      58.02 273  P      P      12 38 27.3 +0.5
      comp=Z,64nm,1.1s
GIRL  Giralia           59.81 257  P      P      12 38 38.8 +0.1
BKSI  Bulukumba         60.37 278  P      P      12 38 41.7 -0.9
      comp=Z,38nm,1.0s
PLAI  Plampang          61.10 273  P      P      12 38 46.6 -0.8
      comp=Z,2μmcomp=Z,80nm,1.0s
MRSI  Marisa            61.30 285  P      P      12 38 47.3 -1.4
      comp=Z,954nmcomp=Z,18nm,0.5s
TTSI  Tana Toraja       61.61 280  P      P      12 38 50.3 -0.4
      comp=Z,15nm,1.4s
TWSI  Taliwang, Sumb    61.95 273  P      P      12 38 52.3 -0.6
      comp=Z,26nm,1.2s
TOLI2 Tolitoli          62.62 285  P      P      12 38 56.3 -1.0
TOLI2                              IAmb   IAmb   12 38 57.3
      comp=Z,31nm,1.0s
JCJ   Chichijima        62.69 322  P      P      12 38 57.3 -0.1
      comp=Z,24nm,0.5s,baz=144,slow=17,SNR=1.5
MPSI  Mapaga            63.04 284  P      P      12 38 59.0 -1.0
      comp=Z,399nmcomp=Z,32nm,1.1s
JAGI  Jajag, Banyuwa    64.54 272  P      P      12 39 08.5 -1.1
QSPA  South Pole Qui    65.88 180  P      P      12 39 18.7 +1.4
      comp=Z,85nm,1.0s,baz=23,slow=1.2,SNR=319
QSPA  South Pole Qui    65.88 180  P      P      12 39 18.8 +1.5
BBKI  Banjar Baru       65.92 277  P      P      12 39 18.8 +0.5
      comp=Z,2μmcomp=Z,10nm,0.8s
PWJI  Pagerwojo         66.86 271  P      P      12 39 23.7 -0.4
      comp=Z,46nm,1.2s
SPMM  Sapulut           68.10 286  P      P      12 39 32.0 +0.3
STKI  Sintang           70.46 279  P      P      12 39 45.9  0.0
LEM   Lembang           71.14 271  P      P      12 39 50.3 +0.2
      comp=Z,25nm,0.9s
DBJI  Dramaga           72.04 271  P      P      12 39 52.8 -2.4
      comp=Z,21μmcomp=Z,75nm,0.8s
KSM   Kuching           72.12 280  P      P      12 39 56.0 +0.4
MJAR  Matsushiro Arr    72.12 326  P      P      12 39 55.2 +0.1
      comp=Z,6.6nm,0.8s,baz=159,slow=5.8,SNR=14
MJAR  Matsushiro Arr    72.12 326  P      P      12 39 55.7 +0.6
MAT   Matsushiro        72.12 326  P      P      12 39 54.8 -0.3
MDSI  Maura Dua         75.21 272  P      P      12 40 11.7 -1.5
      comp=Z,14nm,1.3s
ASAJ  Asahikawa         76.12 333  P      P      12 40 18.6 +1.1
      comp=Z,5.7nm,0.8s,baz=147,slow=2.3,SNR=5.7
MAW   Mawson            77.45 200  P      P      12 40 25.8 +1.3
      comp=Z,19nm,0.7s,baz=121,slow=6.3,SNR=49
MAW   Mawson            77.45 200  P      P      12 40 25.6 +1.0
      baz=77,SNR=29
MAW   Mawson            77.45 200  P      P      12 40 25.5 +1.0
NIKH  Nikolski High     77.46   7  P      P      12 40 24.7 +0.1
      baz=190
KSRS  Korea Array       78.45 320  P      P      12 40 31.0 +0.7
      comp=Z,2.8nm,0.7s,baz=135,slow=5.6,SNR=14
KSAR  Wonju Array Be    78.47 320  P      P      12 40 30.7 +0.3
PETK  Petropavlovsk-    79.38 347  P      P      12 40 35.8 +0.8
      comp=Z,6.2nm,0.6s,baz=130,slow=5.4,SNR=20
PETK  Petropavlovsk-    79.38 347  P      P      12 40 35.1 +0.2
JRMM  Jerantut          80.21 279  P      P      12 40 41.0 +0.8
NJ2   Nanjing           80.83 311  eP     P      12 40 44.3 +1.3
NJ2                                pmax   pmax
      comp=Z,12nm,1.1s
USRK  Ussuriysk Ar.     81.00 327  P      P      12 40 45.0 +1.5
      comp=Z,4.0nm,0.8s,baz=122,slow=3.7,SNR=6.5
IPM   Ipoh              81.77 279  P      P      12 40 49.0 +0.7
SMMC  Simmler           82.05  46  P      P      12 40 50.6 +1.3
      baz=233
OSI   Osito Audit: C    82.48  47  P      P      12 40 52.8 +1.3
      baz=234
109C  Camp Elliot, M    82.58  49  P      P      12 40 53.1 +1.2
      baz=235
ARVC  Arvin             82.71  46  P      P      12 40 53.7 +1.2
      baz=234
MURC  Murrieta          82.92  48  P      P      12 40 54.9 +1.2
      baz=235,SNR=5.1
VES   Vestal, Richgr    82.96  46  P      P      12 40 54.6 +0.8
      baz=234,SNR=7.9
BFSC  Mount Baldy Ra    82.97  48  P      P      12 40 55.0 +1.0
      baz=235,SNR=6.1
SLBS  Sierra La Lagu    82.99  60  P      P      12 40 55.5 +1.3
SLBS                               IAmb   IAmb   12 40 56.5
      comp=Z,20nm,0.7s
MONP2 Monument Peak     83.05  49  P      P      12 40 56.1 +1.5
      baz=236,SNR=12
VOG   Valley Oaks Go    83.05  45  P      P      12 40 55.0 +0.8
      baz=233
SRIG  Santa Rosalia     83.06  56  P      P      12 40 55.5 +1.1
SRIG                               IAmb   IAmb   12 40 57.2
      comp=Z,84nm,1.4s
EDW2  Edwards Air Fo    83.12  47  P      P      12 40 55.8 +1.1
      baz=234,SNR=6.3
SFX   San Felipe        83.12  52  P      P      12 40 56.0 +1.3
IKP   In-Ko-Pah, Jac    83.13  50  P      P      12 40 56.4 +1.6
      baz=236,SNR=10
ISA   Isabella, Lake    83.26  46  P      P      12 40 56.7 +1.3
      baz=234,SNR=15
O02D  Mt. Diablo Mer    83.31  40  P      P      12 40 57.4 +1.8
      baz=231,SNR=13
SII   Sitkinak Islan    83.37  14  P      P      12 40 56.6 +1.3
      baz=204
PFO   Pinyon Flats O    83.43  49  P      P      12 40 57.5 +1.2
      comp=Z,8.8nm,1.1s,baz=252,slow=4.8,SNR=9.4
PFO   Pinyon Flats O    83.43  49  P      P      12 40 57.6 +1.2
      baz=235,SNR=5.9
TPFO  Pinon Flats       83.43  49  P      P      12 40 57.6 +1.2
      baz=235,SNR=7.3
BBRC  Big Bear Solar    83.48  48  P      P      12 40 57.7 +0.9
      baz=235
SWSC  Sam W. Stewart    83.51  50  P      P      12 40 58.2 +1.6
      baz=236,SNR=10
LRMC  Laurel Mtn Rad    83.67  47  P      P      12 40 58.6 +1.1
      baz=234
WDC   Whiskeytown Da    83.71  40  P      P      12 40 58.9 +1.5
WDC                                IAmb   IAmb   12 41 00.3
      comp=Z,35nm,1.2s
RRX   Edison Barstow    83.78  47  P      P      12 40 59.1 +1.1
      baz=235
N02D  Trinity Center    83.86  40  P      P      12 41 00.1 +1.8
      baz=231,SNR=5.4
BELC  Belle Mtn. Jos    83.97  49  P      P      12 41 00.4 +1.4
      baz=236,SNR=6.0
CWC   Cottonwood Cre    83.97  46  P      P      12 41 00.1 +1.1
      baz=234
O03E  Paynes Creek      83.97  41  P      P      12 41 00.0 +1.2
      baz=231,SNR=15
M02C  Callahan          84.04  39  P      P      12 41 01.1 +1.9
      baz=230,SNR=5.6
L02E  Cave Junction     84.10  39  P      P      12 41 00.6 +1.3
      baz=230
BC3   Big Chuckawall    84.15  49  P      P      12 41 01.7 +1.8
      baz=236,SNR=15
GSC   Goldstone, Bar    84.16  47  P      P      12 41 01.1 +1.3
      baz=235,SNR=11
HEC   Hector,Ludlow     84.20  48  P      P      12 41 01.2 +1.1
      baz=235,SNR=20
TIN   Tinemaha, Big     84.23  45  P      P      12 41 01.5 +1.3
      baz=234
GLA   Glamis            84.25  50  P      P      12 41 02.2 +1.9
      baz=236,SNR=8.4
YBH   Yreka Blue Hor    84.34  39  P      P      12 41 02.2 +1.6
      comp=Z,9.4nm,1.1s,baz=205,slow=1.7,SNR=14
YBH   Yreka Blue Hor    84.34  39  P      P      12 41 02.6 +2.0
SNAA  Sanae             84.37 179  P      P      12 40 60.0 -0.4
SNAA  Sanae             84.37 179  P      P      12 41 00.8 +0.5
SNAA                               IAmb   IAmb   12 41 01.2
      comp=Z,13nm,0.9s
J01E  Myrtle Point      84.57  38  P      P      12 41 03.2 +1.7
      baz=230
VNA3  Neumayer Olymp    84.58 177  P      P      12 41 01.3  0.0
VNA3                               S      S      12 50 44.6 +0.6
GMRC  Granite Mounta    84.64  48  P      P      12 41 03.6 +1.3
      baz=236,SNR=11
IRM   Iron Mountain     84.64  49  P      P      12 41 04.0 +1.8
      baz=236,SNR=16
GRAC  Grapevine Rang    84.76  46  P      P      12 41 03.8 +1.1
      baz=234,SNR=9.9
KLR   Kul'dur           84.77 331  P      P      12 41 02.8 +0.4
      comp=Z,1.2nm,0.5s,baz=88,slow=1.8,SNR=5.0
FURC  Furnace Creek,    84.79  46  P      P      12 41 03.9 +1.1
      baz=235
TUQ   Turquoise Moun    84.83  48  P      P      12 41 03.9 +0.7
      baz=236
KDAK  Kodiak Island     84.85  14  P      P      12 41 03.4 +0.8
      comp=Z,7.3nm,0.8s,baz=252,slow=9.6,SNR=2.1
KDAK  Kodiak Island     84.85  14  P      P      12 41 03.1 +0.6
KDAK                               IAmb   IAmb   12 41 29.7
      comp=Z,19nm,1.1s
SHOC  Shoshone, Teco    84.85  47  P      P      12 41 04.1 +1.0
      baz=235,SNR=8.0
M04C  Macdoel           84.88  40  P      P      12 41 04.3 +0.9
      baz=231
L04D  Klamath Falls     84.89  39  P      P      12 41 04.3 +1.0
      baz=231
HSIG                    84.91  55  P      P      12 41 04.7 +1.1
HSIG                               IAmb   IAmb   12 41 06.3
      comp=Z,70nm,1.5s
VNA2  Neumayer--Watz    84.99 178  P      P      12 41 03.2 -0.1
      baz=183,slow=4.0
NVAR  Mina Array Bea    85.00  44  P      P      12 41 05.0 +1.0
      comp=Z,2.5nm,0.7s,baz=230,slow=7.6,SNR=20
NVAR  Mina Array Bea    85.00  44  P      P      12 41 04.8 +0.8
214A  Organ Pipe Nat    85.08  52  P      P      12 41 05.0 +0.6
214A                               IAmb   IAmb   12 41 06.9
      comp=Z,25nm,1.2s
214A  Organ Pipe Nat    85.08  52  P      P      12 41 05.7 +1.3
      baz=238
NV11  Mina Array Sit    85.09  44  P      P      12 41 04.6 +0.1
VNA1  Neumayer--Stat    85.23 177  P      P      12 41 04.5 +0.1
I03D  Drain, OR         85.24  37  P      P      12 41 06.2 +1.4
      baz=230
PDMCI Parker Dam,Lak    85.41  49  P      P      12 41 07.3 +1.4
      baz=237,SNR=6.7
K04D  Chiloquin, OR     85.46  39  P      P      12 41 07.1 +1.1
      baz=231
TPH   Tonopah           85.48  45  P      P      12 41 07.1 +0.7
J04D  Umpqua Nationa    85.64  38  P      P      12 41 08.6 +1.5
      baz=231
Q19K  Cape Douglas,     85.66  13  P      P      12 41 06.6 +0.1
      baz=204
I04A  Tendick Farm,     85.82  38  P      P      12 41 08.9 +1.2
      baz=231
MOD   Modoc Plateau     85.86  40  P      P      12 41 09.1 +1.1
MOD                                IAmb   IAmb   12 41 10.5
      comp=Z,35nm,1.4s
W13A  Hualapai Mount    86.03  49  P      P      12 41 10.4 +1.3
H04D  Lebanon           86.10  37  P      P      12 41 10.7 +1.7
      baz=230
J05D  Fort Rock, OR     86.17  39  P      P      12 41 10.8 +1.4
      baz=232
O18K  Koktuh Hills      86.20  12  P      P      12 41 09.1 +0.1
O18K                               IAmb   IAmb   12 41 10.8
      comp=Z,18nm,0.7s
O19K  Port Alsworth     86.69  13  P      P      12 41 11.2 -0.1
      baz=203
R11A  Troy Canyon, C    86.69  45  P      P      12 41 12.0 -0.1
      baz=236
TUC   Tucson            86.73  52  P      P      12 41 13.1 +0.8
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TUC				IAmb	IAmb	12 41 15.8	
	comp=Z,46nm,1.3s						
TUC	Tucson	86.73	52	P	P	12 41 14.6	+2.3
	baz=239						
I05D	Terrebonne, OR	86.76	38	P	P	12 41 13.8	+1.6
	baz=231						
F04D	Rainier, OR	86.95	36	P	P	12 41 14.0	+1.1
	baz=230						
G05D	Wamic, OR	87.34	37	P	P	12 41 16.6	+1.8
	baz=231						
319A	Douglas	87.36	54	P	P	12 41 16.6	+1.3
319A				IAmb	IAmb	12 41 18.9	
	comp=Z,47nm,1.1s						
X16A	Lo Mia Camp, P	87.36	50	P	P	12 41 15.9	+0.5
X16A				IAmb	IAmb	12 41 18.5	
	comp=Z,27nm,1.4s						
F05D	White Salmon	87.66	37	P	P	12 41 17.4	+1.1
	baz=231						
D03D	Eldon	87.84	35	P	P	12 41 17.9	+0.9
	baz=230						
O22K	Cooper Landing	87.93	14	P	P	12 41 17.3	+0.2
	baz=208						
GAMB	Gambell	87.93	4	P	P	12 41 17.0	0.0
	baz=188						
WUAZ	Wupatki	87.98	49	P	P	12 41 19.8	+1.6
	baz=238						
PLCA	Paso Flores	88.08	134	P	P	12 41 20.3	+1.6
	comp=Z,5.3nm,0.8s,baz=206,slow=5.6,SNR=7.6						
PLCA	Paso Flores	88.08	134	P	P	12 41 19.9	+1.3
PLCA				IAmb	IAmb	12 41 22.5	
	comp=Z,29nm,1.3s						
M19K	Big River Lodg	88.25	12	P	P	12 41 18.8	+0.2
	baz=203						
ELK	Elko	88.26	43	P	P	12 41 20.4	+0.9
	comp=Z,3.3nm,0.5s,baz=227,slow=2.1,SNR=14						
L19K	White Mountain	88.42	12	P	P	12 41 20.2	+0.7
	baz=203						
RC01	Rabbit Creek A	88.46	14	P	P	12 41 19.7	+0.1
	baz=207						
ZAIG	Zacatecas	88.52	64	P	P	12 41 20.6	-0.5
ZAIG				IAmb	IAmb	12 41 24.2	
	comp=Z,17nm,1.1s						
BBB	Bella Bella	88.54	29	P	P	12 41 21.3	+1.2
	comp=Z,69nm,1.4s,baz=246,slow=5.7,SNR=7.6						
BBB	Bella Bella	88.54	29	P	P	12 41 21.1	+1.0
SUA	Susitna One	88.58	14	P	P	12 41 20.3	0.0
	baz=206						
PWL	Port Wells	88.58	15	P	P	12 41 20.1	-0.1
	baz=209						
A04D	Lummi Island	88.80	34	P	P	12 41 22.7	+1.3
	baz=230						
B05A	Bryant	88.83	35	P	P	12 41 22.8	+1.2
	baz=231						
SKT	Skwentna	88.88	13	P	P	12 41 20.7	-0.9
	baz=206						
GLI	Glacier Island	88.90	15	P	P	12 41 21.6	-0.1
	baz=210						
TTA	Tatalina	88.91	11	P	P	12 41 21.9	+0.1
	baz=202						
EYAK	Cordova Ski Ar	88.94	16	P	P	12 41 21.5	-0.4
	baz=211						
M22K	Willow	88.97	14	P	P	12 41 21.7	-0.2
	baz=207						
121A	Cookes Peak, D	89.03	54	P	P	12 41 24.5	+1.3
	baz=240						
KNK	Knik Glacier	89.04	15	P	P	12 41 22.4	0.0
	baz=209						
PMR	Palmer	89.05	14	P	P	12 41 22.3	0.0
	baz=208						
MFID	Camas Ranch	89.41	41	P	P	12 41 25.7	+1.1
MFID				IAmb	IAmb	12 41 26.9	
	comp=Z,32nm,1.2s						
DUG	Dugway, Tooele	89.50	45	P	P	12 41 26.3	+1.2
	baz=237						
CUT	Chulitna	89.52	13	P	P	12 41 24.5	0.0
	baz=207						
SEY	Seymchan	89.56	348	P	P	12 41 25.4	+0.7
	comp=Z,4.1nm,0.6s,baz=164,slow=5.1,SNR=18						
CMAR	Chiang Mai Arr	89.59	290	P	P	12 41 27.6	+1.7
	comp=Z,1.5nm,0.4s,baz=134,slow=3.0,SNR=15						
CMAR				PP	PP	12 45 07.6	+0.2
	comp=Z,0.4nm,0.3s,baz=131,slow=5.5,SNR=4.6						
CMAR	Chiang Mai Arr	89.59	290		P	12 41 26.4	+0.5
BMRM	Bremner River	89.60	16	P	P	12 41 25.5	+0.5
	baz=212						
K20K	Telida	89.64	11	P	P	12 41 25.8	+0.7
	baz=204						
MESA	MESA	89.65	18	P	P	12 41 26.5	+1.1
	baz=214						
SCM	Sheep Creek Mo	89.67	15	P	P	12 41 25.8	+0.5
	baz=210						
KLU	Klutina	89.71	16	P	P	12 41 26.6	+1.1
	baz=211						
CRQE	Cirque	89.81	17	P	P	12 41 27.9	+1.8
	baz=213						
WRAK	Wrangell Islan	89.85	24	P	P	12 41 28.0	+1.9
	baz=222						
TNA	Tin City	89.96	5	P	P	12 41 27.8	+1.4
	baz=191						
PNL	Peninsula	89.98	19	P	P	12 41 27.5	+0.7
	baz=216						
CAST	Castle Rocks	90.07	12	P	P	12 41 26.8	-0.3
	baz=205						
PINM	Pinnacle	90.07	19	P	P	12 41 27.7	+0.5
	baz=216						
N25K	Chitina, Valde	90.14	16	P	P	12 41 28.6	+1.1
	baz=212						
HLID	Hailey	90.35	41	P	P	12 41 30.6	+1.5
	baz=236						
MCARA	McCarthy VSAT	90.36	17	P	P	12 41 30.4	+1.9
	baz=213						
MNTX	Cornudas Mount	90.42	55	P	P	12 41 30.9	+1.5
	baz=242						
Y22D	IRIS PASSCAL I	90.42	53	P	P	12 41 31.4	+1.8
	baz=241						
CHUM	Lake Minchumin	90.45	12	P	P	12 41 28.4	-0.4
	baz=205						
TRF	Thorofare Moun	90.45	13	P	P	12 41 28.2	-0.8
	baz=207						
TX31	Lajitas Ar. Si	90.62	58	P	P	12 41 31.1	+0.5
TX32	Lajitas Array	90.62	58	P	P	12 41 31.3	+0.7
TX32				IAmb	IAmb	12 41 33.4	
	comp=Z,34nm,1.4s						
TXAR	Lajitas Array	90.62	58	P	P	12 41 32.0	+1.5
	comp=Z,6.2nm,0.7s,baz=212,slow=6.4,SNR=80						
TXAR	Lajitas Array	90.62	58	P	P	12 41 31.5	+1.0
BNM	Barren Site	90.67	53	P	P	12 41 30.8	0.0
RND	Reindeer	90.71	13	P	P	12 41 30.3	+0.2
PV05	Paradox Valley	90.86	48	P	P	12 41 32.2	+0.6
PV05				IAmb	IAmb	12 41 34.1	
	comp=Z,16nm,1.5s						
MCK	McKinley	90.98	13	P	P	12 41 31.9	+0.6
	baz=208						
ANMO	Albuquerque	91.17	52	P	P	12 41 34.1	+1.0
	comp=Z,6.8nm,1.1s,baz=217,slow=4.9,SNR=11						
ANMO	Albuquerque	91.17	52	P	P	12 41 33.5	+0.4
ANMO				IAmb	IAmb	12 41 35.4	
	comp=Z,15nm,1.3s						
ANMO	Albuquerque	91.17	52	P	P	12 41 33.9	+0.9
	baz=241						
M26K	Nabesna, AK	91.22	16	P	P	12 41 32.7	+0.3
	baz=213						
BCYI	Bear Canyon	91.37	41	P	P	12 41 34.7	+0.9
YUK3	Moose Creek	91.38	18	P	P	12 41 33.8	+0.4
	baz=216						
NEW	Newport	91.46	37	P	P	12 41 33.7	-0.2
	comp=Z,1.2nm,0.6s,baz=169,slow=5.2,SNR=2.1						
M27K	Edge Creek, AK	91.48	17	P	P	12 41 34.7	+0.9
	baz=214						
YUK4	Talbot Arm	91.55	19	P	P	12 41 35.3	+1.2
	baz=217						
I21K	Tanana	91.69	11	P	P	12 41 34.4	-0.1
	baz=205						
NEA2	Nenana	91.72	13	P	P	12 41 34.5	-0.1
	baz=208						
MLY	Manley	91.78	12	P	P	12 41 34.5	-0.5
	baz=207						
BVCY	Beaver Creek	91.79	17	P	P	12 41 35.0	-0.1
	baz=215						
RIDG	Independent Ri	91.90	15	P	P	12 41 35.0	-0.5
	baz=212						
HDA	Harding Lake	92.00	14	P	P	12 41 35.7	-0.2
	baz=210						
L27K	Beaver Creek,	92.07	16	P	P	12 41 36.3	-0.1
	baz=214						
I23K	Minto, Yukon-K	92.15	12	P	P	12 41 36.7	+0.2
	baz=208						
TCOL	CIGO, UAF Yank	92.22	13	P	P	12 41 37.4	+0.5
	baz=209						
COLA	College	92.22	13	P	P	12 41 36.6	-0.3
	baz=209						
S22A	4UR Ranch, Cre	92.26	49	P	P	12 41 38.9	+0.8
	baz=241						
SCRK	Sand Creek	92.31	15	P	P	12 41 37.5	0.0
	baz=212						
IL31		92.33	14	P	P	12 41 36.8	-0.6
ILAR	Eielson Array	92.33	14	P	P	12 41 36.7	-0.7
	comp=Z,0.9nm,0.6s,baz=221,slow=5.4,SNR=22						
ILAR				PKiKP	PKiKP	12 46 22.2	-0.7
	comp=Z,0.2nm,0.4s,baz=264,slow=2.7,SNR=1.6						
MSO	Missoula	92.43	39	P	P	12 41 37.8	-0.6
	baz=237						
O20A	White River Ci	92.47	47	P	P	12 41 39.6	+0.6
	baz=240						
POKR	Poker Plat Res	92.52	13	P	P	12 41 39.1	+0.8
	baz=210						
J25K	Salcha River,	92.53	14	P	P	12 41 38.5	+0.1
	baz=211						
J26L	Joseph Creek	92.85	15	P	P	12 41 40.3	+0.4
	baz=213						
RDOG	Red Dog Mine	92.85	6	P	P	12 41 40.0	+0.2
	baz=196						
BW06	Boulder Array	92.93	44	P	P	12 41 41.6	+0.5
BW06	Boulder Array	92.93	44	P	P	12 41 41.5	+0.5
	baz=240						
PD31	Pinedale Array	92.93	44	P	P	12 41 41.3	+0.3
PDAR	Pinedale Array	92.93	44	P	P	12 41 41.6	+0.6
	comp=Z,2.0nm,0.6s,baz=212,slow=4.0,SNR=14						
PDAR	Pinedale Array	92.93	44	P	P	12 41 41.3	+0.3
YHL	Hebgen Lake	93.00	42	P	P	12 41 42.0	+0.7
YHL				IAmb	IAmb	12 41 46.0	
	comp=Z,10nm,1.4s						
M30M	Minto, Yukon	93.06	19	P	P	12 41 41.3	+0.4
	baz=219						
BOZ	Bozeman (W)	93.12	41	P	P	12 41 42.7	+0.9
	baz=238						
SDCO	Great Sand Dun	93.19	50	P	P	12 41 43.1	+0.7
	baz=242						
MSTX	Muleshoe	93.41	54	P	P	12 41 43.9	+0.6
	baz=243						
DAWY	Dawson	93.53	17	P	P	12 41 43.2	+0.2
DAWY	Dawson	93.53	17	P	P	12 41 43.2	+0.2
	baz=217						
833A	Chaparral WMA,	93.53	61	P	P	12 41 44.4	+0.6
	baz=244						
EGAK	Eagle	93.66	16	P	P	12 41 43.8	+0.3
	baz=215						
T25A	Trinidad	93.67	51	P	P	12 41 44.5	0.0
	baz=242						
COLD	Coldfoot	93.85	11	P	P	12 41 45.8	+1.4
	baz=207						
Q24A	Divide	94.00	49	P	P	12 41 46.8	+0.7
	baz=242						
ISCO	Idaho Springs	94.08	48	P	P	12 41 46.8	+0.4
	baz=242						
JCT	Junction City	94.14	59	P	P	12 41 47.0	+0.4
	baz=244						
RLMT	Red Lodge	94.30	42	P	P	12 41 47.8	+0.6
	baz=240						
N23A	Red Feather La	94.37	47	P	P	12 41 48.5	+0.8
	baz=242						
MMPY	Sheldon Lake,	94.78	20	P	P	12 41 49.5	+0.8
	baz=224						
K22A	Casper	94.82	45	P	P	12 41 49.6	+0.1
	baz=242						
I29M	Ogilvie Camp,	94.84	16	P	P	12 41 48.6	-0.3
	baz=218						
ABTX	Abilene, Hawle	95.18	57	P	P	12 41 52.0	+0.8
	baz=245						
TOLK	Toolik Lake Re	95.22	11	P	P	12 41 51.3	+0.7
	baz=208						
EGMT	Eagleton	95.47	39	P	P	12 41 52.7	+0.4
	baz=240						
KSCO	Kaye Shedlock’	95.77	50	P	P	12 41 53.9	0.0
KSCO				IAmb	IAmb	12 41 56.7	
	comp=Z,13nm,1.1s						
KSCO	Kaye Shedlock’	95.77	50	P	P	12 41 54.2	+0.3
	baz=244						
WMOK	Wichita Mounta	96.72	55	P	P	12 41 58.0	-0.1
	baz=245						
OGNE	Ogallala	97.03	48	P	P	12 41 58.5	-0.9
	baz=244						
INK	Inuvik	98.33	16	P	Pdif	12 42 04.0	-0.4
	comp=Z,1.0nm,0.5s,baz=222,slow=3.7,SNR=9.2						
INK	Inuvik	98.33	16	P	P	12 42 04.4	0.0
	baz=222						
RES	Resolute Bay	111.87	17	PKiKP	PKiKP	12 46 57.2	-0.9
	comp=Z,1.1nm,0.7s,baz=48,slow=19,SNR=2.6						
ZALV	Zalesovo Beam	112.16	321	PKiKP	PKiKP	12 46 58.2	-1.0
	comp=Z,1.2nm,0.4s,baz=83,slow=1.9,SNR=7.2						
ZALV				SKP		12 49 45.7	
	comp=Z,1.0nm,0.7s,baz=112,slow=0.8,SNR=5.1						
MKAR	Makanchi Array	112.33	313	PKiKP	PKiKP	12 46 59.3	-0.6
	comp=Z,0.9nm,0.4s,baz=206,slow=1.0,SNR=26						
MKAR				SKP		12 49 46.0	
	comp=Z,1.7nm,0.8s,baz=67,slow=3.2,SNR=6.5						
MKAR				PKKPbc	PKKPbc	12 57 52.3	-0.1
	comp=Z,1.3nm,0.8s,baz=280,slow=4.5,SNR=6.5						
KURK	Kurchatov	115.39	316		PKPdf	12 47 05.2	-0.4
KURBB	Kurchatov Arra	115.44	316	PKP	PKPdf	12 47 05.0	-0.7
	comp=Z,1.3nm,0.4s,baz=111,slow=2.0,SNR=15						
KURBB				SKP		12 49 52.3	
	comp=Z,1.9nm,1.0s,baz=100,slow=2.2,SNR=6.5						
N59A	State Game Lan	115.89	55	P	PKiKP	12 47 07.4	+0.5
	baz=260						
AAK	Ala-Archa	117.05	307	PKP	PKPdf	12 47 08.5	-0.7
	comp=Z,0.6nm,0.4s,baz=101,slow=3.9,SNR=4.3						
AML	Almayashu	117.56	306	P	PKiKP	12 47 10.7	0.0
L61B	Northampton	118.41	53	P	PKPdf	12 47 11.6	-0.1
	baz=262						
BDFB	Brasilia	118.67	125	PKP	PKPdf	12 47 12.9	-0.2
	comp=Z,1.5nm,0.4s,baz=108,slow=6.4,SNR=3.4						
MSEY	Mahe Island	118.83	250	P	PKPdf	12 47 13.1	-0.3
MSEY				P	PKiKP	12 47 13.2	-0.3
GAR	Garm	119.65	302	PKPdf	PKPdf	12 47 14.3	0.0
KK31	Karatay Array	120.01	307	PKPdf	PKPdf	12 47 14.8	0.0
KKAR	Karatay Array	120.01	307	PKPdf	PKPdf	12 47 14.7	-0.1
KKAR	Karatay Array	120.01	307		PKPdf	12 47 14.8	-0.1
SUR	Sutherland	120.31	200	P	PKPdf	12 47 15.7	-0.3
BVAR	Borovoye Array	120.64	319	PKP	PKPdf	12 47 15.5	-0.2
	comp=Z,2.4nm,0.4s,baz=201,slow=7.7,SNR=17						
BRVK	Borovoye	120.70	319	PKPdf	PKPdf	12 47 15.7	-0.1
BRVK	Borovoye	120.70	319	P	PKiKP	12 47 16.7	+0.8
FRB	Frobisher Bay	120.93	29	PKP	PKPdf	12 47 15.2	-0.6
	comp=Z,4.9nm,0.5s,baz=357,slow=0.9,SNR=7.7						
BOSA	Boshof	122.11	206	PKP	PKPdf	12 47 19.5	0.0
	comp=Z,1.0nm,0.3s,baz=203,slow=2.2,SNR=8.9						
SCHQ	Schefferville	122.73	39	PKP	PKPdf	12 47 18.9	-0.7
	comp=Z,6.3nm,1.0s,baz=203,slow=7.7,SNR=3.6						
SPA0	Spitsbergen Ar	125.42	356	*e*PKPdf	PKiKP	12 47 24.7	+0.1
SPITS	Spitsbergen Ar	125.42	356	PKP	PKPdf	12 47 24.1	0.0
	comp=Z,11nm,0.9s,baz=90,slow=4.2,SNR=7.7						
MDP	Montagnes des	126.05	102	PKP	PKiKP	12 47 27.5	-0.2
	comp=Z,4.0nm,0.4s,baz=308,slow=3.5,SNR=7.2						
DAG	Danmarks Havn	126.58	5	*i* P	PKPdf	12 47 25.0	-1.4
WSAR	Wadi Sarin	126.63	282	P	PKiKP	12 47 28.4	-0.2
MHTO	MHTO	126.67	279	P	PKiKP	12 47 28.5	-0.2
MHTO				P	PKPdf	12 47 28.7	+0.5
DQM	DQM	126.78	277	P	PKPdf	12 47 28.1	-0.3
DQM				P	PKiKP	12 47 28.3	-0.6
SFJD	Kangerlussuaq	127.07	22	PKP	PKPdf	12 47 27.4	0.0
	comp=Z,5.8nm,0.5s,baz=266,slow=1.2,SNR=11						
SFJD	Kangerlussuaq	127.07	22	*i* P	PKPdf	12 47 27.0	-0.5
ARU	Arti	127.10	324	PKP	PKPdf	12 47 28.1	+0.2
	comp=Z,4.2nm,0.4s,baz=96,slow=2.8,SNR=15						
ARU	Arti	127.10	324	PKPdf	PKPdf	12 47 27.9	0.0
SMDO	Samad	127.11	281	P	PKPdf	12 47 28.8	-0.3
SUMG	Summit	127.18	14	*e*P	PKPdf	12 47 27.7	-0.5
ABKAR	Akbulak array	127.39	314	PKPdf	PKiKP	12 47 29.1	-0.2
ABKAR	Akbulak array	127.39	314		PKiKP	12 47 29.2	0.0
BSY	Bisya	127.80	281	P	PKPdf	12 47 29.9	-0.4
AKTO	Aktyubinsk	128.49	316	PKP	PKPdf	12 47 30.3	-0.4
	comp=Z,3.7nm,0.9s,baz=112,slow=8.2,SNR=5.2						
DMTO	DMTO	128.51	274	P	PKPdf	12 47 31.4	-0.3
SOHO	SOHO	128.70	282	P	PKPdf	12 47 31.8	-0.1
SOHO				P	PKPdf	12 47 31.9	-0.1
DY2G	Dye2	128.83	22	*i* P	PKPdf	12 47 31.2	0.0
ASHO	Ashiyiah	129.24	283	P	PKPdf	12 47 33.0	0.0
ASHO				P	PKiKP	12 47 33.2	-0.6
ICESG	Greenland Ices	129.28	17	*i* P	PKPdf	12 47 31.6	-0.5
WHFO	Wadi Hawf	129.64	274	P	PKPdf	12 47 34.2	+0.2
ASUD	Al Ashush, Dub	129.88	283	P	PKiKP	12 47 35.1	+0.1
KIRV	Kirov	131.16	328	SKPbc	SKPab	12 50 12.9	+0.8
	comp=Z,54nm,0.9s,baz=93,slow=3.3,SNR=22						
HAMF	Hammerfest	131.53	350	*e*PKPdf	PKPdf	12 47 35.9	0.0
ARA0	ARCESS Array S	132.17	348	*e*PKPdf	PKPdf	12 47 37.1	-0.1
ARCES	ARCESS Array B	132.17	348	PKP	PKPdf	12 47 36.7	-0.4
	comp=Z,3.6nm,0.5s,baz=26,slow=1.5,SNR=26						
ARCES				SKPab	SKPab	12 50 17.3	+1.1
	comp=Z,12nm,0.9s,baz=35,slow=7.4,SNR=7.2						
ARCES	ARCESS Array B	132.17	348		PKPdf	12 47 37.5	+0.3
KTK1	Kautokeino	133.04	349	*e*PKPdf	PKiKP	12 47 39.5	-0.6
TRO	Tromso	133.17	351	*e*PKPdf	PKPdf	12 47 38.6	-0.4
TSUM	Tsumeb	133.56	203	SKPbc	SKPab	12 50 22.5	-1.4
	comp=Z,5.9nm,0.8s,baz=129,slow=4.8,SNR=5.5						
TSUM	Tsumeb	133.56	203	PKPdf	PKPdf	12 47 41.1	-0.4
BELG	Belogornoye	134.35	321	PKP	PKiKP	12 47 42.9	-0.3
	comp=Z,7.5nm,0.4s,baz=56,slow=0.8,SNR=5.2						
BELG				SKPbc	SKPbc	12 50 22.1	0.0
	comp=Z,68nm,1.0s,baz=118,slow=2.7,SNR=13						
LOF	Lofoten	135.28	353	*e*PKPdf	PKPdf	12 47 43.6	+0.6
KMBO	Kilima Mbogo	135.92	241		PKPdf	12 47 46.3	+0.1
ATD	Arta Tunnel	137.45	261	SKP		12 50 37.4	
	comp=Z,5.9nm,0.5s,baz=71,slow=21,SNR=3.6						
FINES	FINESS Array B	138.72	341	PKhKP	PKPpre	12 47 39.6	
	comp=Z,0.9nm,0.4s,baz=61,slow=4.0,SNR=9.8						
FINES				PKP	PKPdf	12 47 48.9	-0.6
	comp=Z,5.5nm,0.8s,baz=41,slow=2.3,SNR=6.1						
FINES				SKPbc	SKiKP	12 50 36.6	-1.3
	comp=Z,17nm,0.9s,baz=46,slow=5.5,SNR=16						
NSS	Namsos	138.92	352	*e*PKPdf	PKPdf	12 47 49.2	-0.6
GNI	Garni	139.34	304	SKPbc	SKPbc	12 50 38.4	+1.0
	comp=Z,5.4nm,0.4s,baz=154,slow=6.3,SNR=5.4						
DOMB	Dombas	141.67	353	*e*PKPdf	PKPdf	12 47 50.8	-4.1
NB2	NORSAR Subarra	142.37	351	PKP	PKPdf	12 47 52.0	-4.2
	comp=Z,0.9nm,0.6s,baz=10,slow=3.2						
NOA	NORSAR Array B	142.37	351	PKhKP	PKPpre	12 47 52.8	
	comp=Z,2.8nm,0.7s,baz=15,slow=4.7,SNR=8.2						
NOA				SKPbc	SKPbc	12 50 43.8	-0.5
	comp=Z,1.1nm,0.8s,baz=15,slow=4.2,SNR=3.7						
NC602	NORSAR Array S	142.62	351	*e*PKPdf	PKPdf	12 47 53.5	-3.0
HFS	Hagfors	142.83	349	PKhKP	PKPpre	12 47 54.0	
	comp=Z,23nm,0.4s,baz=66,slow=3.7,SNR=184						
HFS				SKPbc	SKiKP	12 50 46.1	-0.4
	comp=Z,5.9nm,0.8s,baz=222,slow=2.0,SNR=4.8						
SKAR	Skarslia	143.09	353	*e*PKPdf	PKPbc	12 47 56.0	+0.5
NACGM	Naroch	143.46	334	*i* PKP	PKPdf	12 47 57.6	-0.6
OSL	Oslo	143.50	351	*e*PKPbc	PKPbc	12 47 56.6	-0.1
ASK	Askoy	143.56	356	*e*PKPbc	PKPab	12 47 56.3	-0.4
BER	Bergen	143.65	355	*e*PKPab	PKPbc	12 47 57.4	+0.2
KONO	Kongsberg	143.93	352		PKPab	12 47 58.3	+0.1
KONO	Kongsberg	143.93	352	*e*PKPbc	PKPbc	12 47 57.9	-0.2
ODD1	Odda	144.01	354	*e*PKPab	PKPab	12 47 58.6	+0.1
PABE	Paberze	144.08	337	*e*P	PKPdf	12 47 59.3	+0.1
PABE	Paberze	144.08	337		PKPbc	12 47 58.6	0.0
PBUR	Paburge	144.37	339	*e*P	PKPab	12 47 59.9	-0.1
BLS5	Blasjo	144.51	354	*e*PKPdf	PKPab	12 48 00.2	-0.2
KMY	Karmoy	144.82	355	*e*PKPdf	PKPdf	12 48 00.2	-0.1
AKASG	Malin Array Be	145.20	327	PKPbc	PKPdf	12 48 01.7	+0.4
	comp=Z,6.3nm,0.5s,baz=45,slow=4.2,SNR=33						
AKASG				SKPbc	SKiKP	12 50 53.3	+1.7
	comp=Z,17nm,0.8s,baz=46,slow=2.7,SNR=26						
AKASG	Malin Array Be	145.20	327	PKPdf	PKPdf	12 48 01.4	0.0
AKBB	Malin Array Si	145.20	327	PKPdf	PKPdf	12 48 01.1	-0.2
HOMB	Homborsund	145.41	352	*e*PKPbc	PKPbc	12 48 02.7	0.0
SNART	Snartemo	145.50	353	*e*PKPbc	PKPbc	12 48 02.8	-0.1
SUW	Suwalki	145.52	336	*e*PKPab	PKPab	12 48 04.2	-0.2
SUW	Suwalki	145.52	336	*e*P	PKPab	12 48 04.0	-0.5
SUW				*e*PP	sPKPab	12 50 53.7	-0.9
SUW	Suwalki	145.52	336		PKPbc	12 48 03.0	-0.1
KAC	Achnashellach	146.52	5	*e*P	PKPdf	12 48 04.5	+1.2
MCD	Coleburn Disti	146.57	3	*e*P	PKPbc	12 48 05.5	-0.4
ASF	Jabal al Asfar	146.61	292	PKPbc	PKPbc	12 48 07.9	+0.9
	comp=Z,4.7nm,0.7s,baz=129,slow=3.2,SNR=5.0						
KPL	Plockton	146.65	6	*e*P	PKPbc	12 48 06.1	0.0
BSD	Bornholm Skovb	147.19	344	*e*P	PKPbc	12 48 07.6	0.0
SORM	Soroca	147.22	324	⇑P	PKPbc	12 48 08.1	+0.2
DRUM	Mains of Drumt	147.27	2	*e*P	PKPbc	12 48 07.5	-0.3
ELO	Logie Almond	147.65	4	*e*P	PKPbc	12 48 08.8	-0.1
INVG	Invergeldie, C	147.68	4	*e*P	PKPbc	12 48 08.7	-0.2
BR131	Keskin Array S	147.73	307	PKPdf	PKPdf	12 48 05.0	-1.1
BR131				PKPbc	PKiKP	12 48 10.5	-0.8
BR131	Keskin Array S	147.73	307	P	PKPbc	12 48 09.3	-0.5
BRTR	Keskin Array B	147.73	307	PKPbc	PKPbc	12 48 10.0	+0.2
	comp=Z,3.4nm,0.5s,baz=144,slow=4.8,SNR=7.7						
BRTR	Keskin Array B	147.73	307		PKPdf	12 48 06.3	+0.2
MMAI	Mount Meron Ar	147.79	294	PKPbc	PKiKP	12 48 11.1	-0.4
	comp=Z,12nm,0.5s,baz=67,slow=6.4,SNR=20						
BEL	Belsk	148.13	335	*e*PKPbc	PKiKP	12 48 11.1	-0.4
PGBU	Glenifferbraes	148.26	5	*e*P	PKPbc	12 48 10.1	-0.2
ESY	Stoneypath	148.26	3	*e*P	PKPbc	12 48 10.2	-0.2
ANTO	Ankara	148.30	307		PKPdf	12 48 06.6	-0.4
ANTO				PKPbc	PKiKP	12 48 11.7	-0.6
EBL	Broad Law	148.39	3	*e*P	PKPbc	12 48 10.7	0.0
EIL	Elat	148.41	288	PKPbc	PKiKP	12 48 12.7	-0.1
	comp=Z,6.1nm,0.6s,baz=138,slow=3.8,SNR=5.6						
EKA	Eskdalemuir Ar	148.82	3	PKPbc	PKPbc	12 48 11.7	-0.1
	comp=Z,4.2nm,0.4s,baz=348,slow=2.9,SNR=45						
ESK	Eskdalemuir	148.83	3	*e*P	PKPbc	12 48 11.3	-0.5
ESK	Eskdalemuir	148.83	3	PKPdf	PKPdf	12 48 08.0	+0.8
ESK					PKPbc	12 48 11.9	+0.1
KWP	Kalwaria Pacla	149.01	331	*e*PKPbc	PKiKP	12 48 13.3	-0.1
KWP	Kalwaria Pacla	149.01	331	PKPdf	PKPdf	12 48 06.8	-0.9
KWP					PKiKP	12 48 13.2	-0.2
CFR	Carcaliu	149.03	320	⇓P	PKiKP	12 48 13.1	-0.5
TESR	Tescani	149.12	323	⇑P	PKPbc	12 48 12.0	-0.8
GAL1	Galloway	149.18	5	*e*P	PKPbc	12 48 12.3	-0.3
CSS	Mathiatis	149.19	298	PKPdf	PKPdf	12 48 08.0	-0.4
CSS					PKPbc	12 48 13.7	+0.4
BURAR	Bucovina Array	149.20	326	⇓P	PKiKP	12 48 14.2	+0.3
TIRR	Tirgusor	149.25	318	⇑P	PKiKP	12 48 13.6	-0.4
TIRR	Tirgusor	149.25	318	PKPdf	PKPdf	12 48 07.4	-0.8
TIRR					PKPbc	12 48 13.4	+0.3
EDMD	Edmundbyers	149.38	2	*e*P	PKPbc	12 48 12.8	-0.4
HARR	Harsova	149.42	319	⇑P	PKiKP	12 48 14.8	+0.4
LEF	Lefka	149.51	299	⇑P	PKiKP	12 48 14.5	-0.4
KESW	Keswick, Cumbr	149.56	4	*e*P	PKPbc	12 48 13.5	-0.1
KOLS	Kolonicke sedl	149.71	330	*e*PKP	PKiKP	12 48 15.9	+1.0
IOMK	Kirk Michael	149.79	5	*e*P	PKPbc	12 48 14.1	-0.1
OJC	Ojcow	149.79	334	*e*PKPbc	PKiKP	12 48 14.8	-0.1
OJC	Ojcow	149.79	334	PKPdf	PKPdf	12 48 08.4	-0.4
OJC					PKPbc	12 48 14.0	-0.3
MLR	Muntele Rosu	150.13	322	⇑P	PKPbc	12 48 15.2	-0.2
MLR	Muntele Rosu	150.13	322	PKPbc	PKiKP	12 48 15.8	-0.2
	comp=Z,5.7nm,0.4s,baz=250,slow=3.7,SNR=7.7						
MLR	Muntele Rosu	150.13	322	PKPdf	PKPdf	12 48 08.4	-1.4
MLR					PKPbc	12 48 15.4	0.0
DOPR	Dopca	150.15	323	⇑P	PKiKP	12 48 16.1	+0.2
NIE	Niedzica	150.21	333	*e*pPKPab	pPKPab	12 50 19.4	-1.6
NIE	Niedzica	150.21	333	*e*PKPbc	PKiKP	12 48 17.1	+1.2
HPK	Haverah Park	150.26	2	*e*P	PKPbc	12 48 15.3	+0.1
KSP	Ksiaz	150.55	339	*e*pPKPab	pPKPab	12 50 13.8	-8.5
KSP	Ksiaz	150.55	339	*e*PKPbc	PKiKP	12 48 17.0	+0.4
CJR	Cluj-Napoca	150.62	326	⇑P	PKiKP	12 48 16.7	-0.2
WPS	Cemaes, Angles	150.65	5	*e*P	PKPbc	12 48 15.8	-0.3
VOIR		150.66	322	⇑P	PKPbc	12 48 16.5	-0.1
WME	Myndd Eilian	150.67	5	*e*P	PKPbc	12 48 15.8	-0.4
LANS	Liptovska Anna	150.76	333	*e*PKP	PKiKP	12 48 18.1	+1.0
WLF1	Llynfaes	150.77	5	*e*P	PKPbc	12 48 16.0	-0.4
OSTC	Ostas	150.82	339	⇑*e*PKP	PKiKP	12 48 17.8	+0.7
CHVC	Chvalec	150.85	339	⇑*e*PKP	PKiKP	12 48 17.7	+0.5
ARR	Arges	150.93	323	⇓P	PKPdf	12 48 12.3	+1.4
DPC	Dobruska-Polom	150.96	338	⇑*e*PKP	PKiKP	12 48 18.0	+0.5
MORC	Moravsky Berou	151.01	336	⇑P	PKPbc	12 48 16.9	-0.3
MORC	Moravsky Berou	151.01	336	PKPdf	PKPdf	12 48 09.9	-0.9
MORC					PKiKP	12 48 17.4	-0.2
MORC	Moravsky Berou	151.01	336	*e*PKP	PKiKP	12 48 17.7	+0.1
DRGR		151.02	327	⇑P	PKPbc	12 48 17.5	+0.1
KRLC	Kraliky	151.04	337	⇑*e*PKP	PKiKP	12 48 18.1	+0.5
CLL	Collm	151.13	343	*i* pPKPab	pPKPab	12 50 22.3	-2.4
	comp=Z,13nm,1.0s						
CLL	Collm	151.13	343	PKPdf	PKPdf	12 48 10.7	-0.2
CLL					PKPbc	12 48 17.4	0.0
CLL	Collm	151.13	343	*e*PKPdf	PKPdf	12 48 12.0	+1.1
CLL	Collm	151.13	343	*i* PKPbc	PKiKP	12 48 17.7	0.0
	comp=Z,60nm,1.4s						
FOEL	Foel Wylfa	151.25	4	*e*P	PKPbc	12 48 16.6	-1.0
BRG	Berggiesshubel	151.26	341	Amp		13 19 09.0	
	comp=Z,0.7nm,15.4s						
BRG	Berggiesshubel	151.26	341	*i* PKP	PKiKP	12 48 18.4	+0.4
BRG	Berggiesshubel	151.26	341	Amp		12 48 19.5	
	comp=Z,23nm,0.7s						
BRG	Berggiesshubel	151.26	341	pPKP	pPKPdf	12 50 23.8	+9.1
BRG	Berggiesshubel	151.26	341	Amp		12 50 24.6	
	comp=Z,11nm,1.1s						
BRG	Berggiesshubel	151.26	341	Amp		13 06 44.0	

	comp=E,0.3nm,16.1s						
BRG	**Berggiesshubel**	**151.26**	**341**	Amp		13 06 44.0	
	comp=N,0.2nm,12.9s						
BRG	**Berggiesshubel**	**151.26**	**341**	Amp		13 06 55.0	
	comp=Z,0.5nm,15.6s						
BRG	**Berggiesshubel**	**151.26**	**341**	Amp		13 19 00.0	
	comp=N,0.3nm,14.6s						
BRG	**Berggiesshubel**	**151.26**	**341**	Amp		13 19 06.0	
	comp=E,0.5nm,18.3s						
PVCC	**Panska Ves**	**151.38**	**340**	⇑*e*PKP	**PKiKP**	**12 48 18.9**	**+0.7**
ELL	**Elmali**	**151.44**	**303**		**PKPbc**	**12 48 18.8**	**+0.1**
JAVC	**Velka Javorina**	**151.71**	**335**	*e*PKP	**PKiKP**	**12 48 20.7**	**+1.6**
VRAC	**Vranov**	**151.75**	**337**	*e*PKP	**PKiKP**	**12 48 19.0**	**-0.1**
PRU	**Pruhonice**	**151.86**	**340**	⇑*e*PKP	**PKiKP**	**12 48 19.8**	**+0.6**
SIRR	**Siria**	**151.91**	**327**	⇑P	**PKiKP**	**12 48 19.7**	**+0.2**
GZR	**Gura Zlata**	**151.92**	**325**	⇑P	**PKPbc**	**12 48 19.4**	**0.0**
KRUC	**Moravsky**	**152.02**	**337**	*e*PKP	**PKiKP**	**12 48 20.0**	**+0.4**
RSBS	**Rosebush, Pemb**	**152.06**	**6**	*e*P	**PKPbc**	**12 48 19.0**	**-0.4**
MCH1	**Michaelchurch**	**152.16**	**4**	*e*P	**PKPbc**	**12 48 19.1**	**-0.5**
HERR	**Herculane**	**152.45**	**324**	⇑P	**PKPbc**	**12 48 20.5**	**0.0**
MDVR	**Moldovita**	**152.89**	**325**	⇑P	**PKPbc**	**12 48 21.3**	**-0.2**
KHC	**Kasperske Hory**	**152.91**	**340**	⇑*e*PKP	**PKiKP**	**12 48 21.9**	**+0.4**
KHC				*e*x	x	12 48 36.6	
GERES	**GERESS Array B**	**153.12**	**340**	PKPbc	**PKPbc**	**12 48 21.6**	**-0.3**
	comp=E,1.5nm,0.6s,baz=48,slow=2.0,SNR=10.0						
GERES				PKPab	**PKPab**	**12 48 36.6**	**+0.4**
	comp=E,0.7nm,0.5s,baz=35,slow=3.6,SNR=2.6						
GERES	**GERESS Array B**	**153.12**	**340**		**PKPdf**	**12 48 14.1**	**0.0**
GERES					**PKiKP**	**12 48 22.2**	**+0.2**
GERES					**PKPab**	**12 48 35.9**	**-0.2**
CONA	**Conrad Observa**	**153.16**	**336**	*e*P	**PKiKP**	**12 48 23.4**	**+1.3**
	comp=E,14nm,1.3s						
MORH	**Mrgy, Hungar**	**153.38**	**330**	⇑P	**PKPbc**	**12 48 22.3**	**-0.2**
MORH	**Mrgy, Hungar**	**153.38**	**330**	*e*PKPDF	**PKPdf**	**12 48 13.2**	**-1.1**
MORH	**Mrgy, Hungar**	**153.38**	**330**	*e*P	**PKPdf**	**12 48 15.0**	**+0.7**
MORH	**Mrgy, Hungar**	**153.38**	**330**	⇑*e*PKP	**PKPbc**	**12 48 22.2**	**-0.2**
VTS	**Vitosha**	**153.40**	**319**	⇑P	**PKPab**	**12 48 39.1**	**+1.4**
SOKA	**Soboth**	**154.52**	**335**	*i* P	**PKPdf**	**12 48 16.2**	**+0.2**
	comp=E,6.8nm,1.2s						
KBA	**Koelnbreinsper**	**154.78**	**338**	*e*P	**PKPdf**	**12 48 16.3**	**-0.2**
	comp=E,4.6nm,1.1s						
WATA	**Walderalm**	**155.12**	**341**	*i* P	**PKPdf**	**12 48 17.3**	**+0.4**
	comp=E,5.0nm,0.8s						
WTTA	**Wattenberg**	**155.17**	**341**	*i* P	**PKPdf**	**12 48 16.3**	**-0.8**
	comp=E,11nm,1.4s						
MOTA	**Moosalm**	**155.25**	**342**	*i* P	**PKPdf**	**12 48 17.4**	**+0.3**
	comp=E,6.5nm,1.0s						
ABTA	**Abfaltersbach**	**155.35**	**339**	*i* P	**PKPdf**	**12 48 17.2**	**0.0**
	comp=E,11nm,1.0s						
FETA	**Feichten**	**155.65**	**342**	*i* P	**PKPdf**	**12 48 17.3**	**-0.4**
	comp=E,6.5nm,1.1s						
DAVOX	**Davos/Dischmat**	**156.10**	**343**	PKPab	**PKPab**	**12 48 49.9**	**+0.8**
	comp=E,4.6nm,0.5s,baz=230,slow=7.1,SNR=6.5						
LIC	**Lamto**	**161.50**	**164**	*e*P	**PKPab**	**12 49 13.3**	**+0.2**
	comp=E,82nm,1.1s						
KIC	**Kosan Boka**	**161.70**	**165**	*e*P	**PKPab**	**12 49 14.3**	**+0.3**
	comp=E,46nm,1.0s						
TIC	**Toumodi**	**161.90**	**164**	*e*P	**PKPab**	**12 49 15.1**	**+0.2**
DBIC	**Dimbokro**	**161.97**	**164**	PKP	**PKPdf**	**12 48 25.6**	**-0.2**
	comp=E,9.0nm,1.0s,baz=127,slow=2.4,SNR=5.4						
DBIC				PKPab	**PKPab**	**12 49 15.2**	**0.0**
	comp=E,13nm,1.0s,baz=194,slow=4.1,SNR=7.4						
DBIC	**Dimbokro**	**161.97**	**164**		**PKPdf**	**12 48 24.1**	**-1.7**
DBIC					**PKPab**	**12 49 15.5**	**+0.3**
ESDC	**Sonseca Array**	**164.22**	**11**	PKPab	**PKPab**	**12 49 24.9**	**+0.3**
	comp=E,3.8nm,1.1s,baz=327,slow=4.4,SNR=6.9						
ESDC	**Sonseca Array**	**164.22**	**11**	PKPdf	**PKPdf**	**12 48 26.6**	**-0.6**
ESDC					**PKPab**	**12 49 23.8**	**-0.8**
TORD	**Torodi Ar. Bea**	**168.88**	**189**	PKP	**PKPdf**	**12 48 30.6**	**-0.7**
	comp=E,7.6nm,1.1s,baz=329,slow=1.3,SNR=24						
TORD				PKPab	**PKPab**	**12 49 46.0**	**+0.4**
	comp=E,13nm,0.9s,baz=180,slow=3.3,SNR=33						
TORD				PP	**PP**	**12 53 35.8**	**+1.2**
	comp=E,2.9nm,0.9s,baz=193,slow=4.3,SNR=6.0						
TORD	**Torodi Ar. Bea**	**168.88**	**189**		**PKPdf**	**12 48 30.0**	**-1.4**
TORD					**PKPab**	**12 49 45.3**	**-0.4**
KOWA	**Kowa**	**169.65**	**158**	PKP	**PKPdf**	**12 48 31.3**	**-0.5**
	comp=E,4.4nm,0.9s,baz=49,slow=1.0,SNR=7.7						
KOWA				PKPab	**PKPab**	**12 49 49.6**	**+0.6**
	comp=E,3.2nm,0.7s,baz=170,slow=4.6,SNR=5.9						
MDT	**Midelt**	**170.53**	**24**	PKP	**PKPdf**	**12 48 32.5**	**+0.5**
	comp=E,4.7nm,0.9s,baz=205,slow=3.7,SNR=5.0						

INET 02 12:30:15.3, 11°.12N×86°.62W, h26^{km}, MW3.8, Near coast of Nicaragua

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*UUSS **02** 12:34:48.5±1.2, 40°.08N±0°.01×111°.55W±0°.02, h1^{km}±7^{km}, ML2.9/18, ML2.9/126(NEIC), Error ellipse: s-maj=2.3km s-min=1.6km az=73.0*

NEIC 02 12:34:48.8±1.2**, 40°.08N**±0°.01×**111°.56W**±0°.02**, h4**^{km}±7^{km}**, Error ellipse: s-maj=2.1km s-min=1.7km az=65.0, Utah**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MPU	**Maple Canyon**	**0.08**	**222**	Pg	Pg	12 34 50.6	0.0
MPU				Sg	Sg	12 34 52.7	+0.8
MPU				IAML		12 34 53.0	
	comp=E,9µm,0.3s						
MPU				IAML		12 34 53.3	
	comp=N,7µm,0.3s						
WMUT	**West Mountain**	**0.21**	**271**		Pg	12 34 53.3	+0.4
SUU	**Santaquin Cany**	**0.26**	**223**		Pg	12 34 54.0	+0.3
TCVU	**Timpanogos Cav**	**0.38**	**344**		Pg	12 34 55.8	-0.4
DAU	**Daniels Canyon**	**0.41**	**35**		Pg	12 34 56.6	-0.2
NLU	**North Lily Min**	**0.41**	**253**		Pg	12 34 57.0	+0.3
NLU					Sg	12 35 03.3	+1.2
HEB	**Heber**	**0.46**	**22**		Pg	12 34 57.5	-0.2
WTU	**Western Traver**	**0.48**	**322**		Pg	12 34 58.2	+0.2
ELU	**Electric Lake**	**0.52**	**147**		Pg	12 34 59.1	+0.4
LDJ	**Lady**	**0.52**	**13**		Pg	12 34 59.0	+0.2
JLU	**Jordanelle**	**0.53**	**9**		Pg	12 34 58.8	-0.2
JLU					Sg	12 35 07.3	+1.2
JLU	**Jordanelle**	**0.53**	**9**	IAML		12 35 09.2	
	comp=N,1µm,0.7s						
HLJ	**Hailstone**	**0.55**	**13**		Pg	12 34 59.2	-0.1
CWU	**Camp Williams**	**0.55**	**312**		Pg	12 34 59.6	+0.2
KLJ	**Keetly**	**0.57**	**12**		Pg	12 34 59.7	0.0
RCJ	**Ross Creek**	**0.59**	**9**		Pg	12 35 00.0	-0.2
LEVU	**Levan**	**0.60**	**199**		Pg	12 35 00.1	-0.2
MHD	**Mile High Driv**	**0.61**	**343**		Pg	12 35 00.2	-0.4
EMUT	**Emma Park**	**0.63**	**114**		Pg	12 35 01.1	+0.2
EMUT					Sb	12 35 10.5	-1.3
CTU	**Camp Tracy**	**0.63**	**347**		Pg	12 35 00.6	-0.4
HTU	**Hoyt Peak**	**0.65**	**23**		Pg	12 35 01.5	+0.1
RBU	**Red Butte Cany**	**0.73**	**345**		Pg	12 35 02.4	-0.4
HRU	**Hogsback Ridge**	**0.75**	**341**		Pg	12 35 03.1	-0.2
SNO	**Snow College**	**0.76**	**179**		Pg	12 35 03.6	+0.2
N16A	**Rees Ranch, Co**	**0.82**	**7**		Pg	12 35 04.5	+0.1
ARGU	**Argyle Ridge**	**0.82**	**108**		Pg	12 35 04.7	+0.1
TMUT	**Trail Mountain**	**0.82**	**160**		Pg	12 35 04.5	-0.1
TMUT	**Trail Mountain**	**0.82**	**160**	IAML		12 35 22.2	
	comp=E,503nm,0.9s						
TMUT				IAML		12 35 22.4	
	comp=N,474nm,0.6s						
FLU	**Fool Peak**	**0.84**	**214**		Pg	12 35 04.6	-0.3
DCM	**Dugout Coal Mi**	**0.84**	**116**		Pg	12 35 04.7	-0.3
P17A	**Butcher Ranch,**	**0.87**	**133**		Pg	12 35 05.3	-0.2
SAIU	**Southern Antel**	**0.91**	**329**		Pg	12 35 06.0	-0.3
LHUT	**Little Humpy P**	**0.92**	**28**		Pg	12 35 06.7	+0.2
DUG	**Dugway, Tooele**	**0.97**	**278**		Pg	12 35 07.0	-0.4
DUG				Sg	Sg	12 35 20.2	+0.4
DUG				IAML		12 35 23.8	
	comp=N,230nm,0.8s						
BCE	**Book Cliffs Ea**	**1.00**	**117**		Pg	12 35 07.8	-0.2
ROA	**Roan Cliffs**	**1.01**	**114**		Pg	12 35 07.9	-0.3
TCUT	**Toone Canyon**	**1.05**	**6**		Pg	12 35 08.6	-0.4
NAIU	**Northern Antel**	**1.07**	**332**		Pg	12 35 08.6	-0.6
SNUT	**Stansbury Nort**	**1.08**	**319**		Pg	12 35 09.5	-0.1
P18A	**Preston Nutter**	**1.11**	**113**		Pg	12 35 09.6	-0.4
P18A	**Preston Nutter**	**1.11**	**113**	IAML		12 35 33.1	
	comp=N,201nm,0.5s						
Q16A	**Castle Valley**	**1.20**	**165**		Pg	12 35 11.6	-0.1
Q16A				Sg	Sg	12 35 27.2	+0.1
Q16A				IAML		12 35 31.2	
	comp=N,218nm,0.8s						
Q16A				IAML		12 35 31.6	
	comp=E,172nm,0.9s						
SRU	**San Rafael Swe**	**1.25**	**140**		Pg	12 35 12.0	-0.8
SRU	**San Rafael Swe**	**1.25**	**140**	IAML		12 35 33.5	
	comp=E,309nm,0.7s						
OWUT	**Old Woman Plat**	**1.30**	**175**		Pg	12 35 13.1	-0.6
GZU	**Grizzly Peak**	**1.39**	**347**		Pn	12 35 14.3	-0.8
MCU	**Monte Cristo P**	**1.39**	**2**		Pn	12 35 14.3	-0.9
SPUT	**South Promonto**	**1.40**	**332**		Pn	12 35 14.5	-0.8
SPUT				IAML		12 35 35.0	
	comp=N,210nm,0.7s						
SPUT				IAML		12 35 35.9	
	comp=E,111nm,0.7s						
BGU	**Big Grassy Mou**	**1.41**	**308**		Pn	12 35 13.9	-1.4
FSU	**Fish Springs**	**1.45**	**257**		Pn	12 35 15.5	-0.4
EPU	**East Promontor**	**1.46**	**334**		Pn	12 35 15.1	-1.0
WVUT	**Wellsville**	**1.56**	**349**		Pn	12 35 17.0	-0.5
LTU	**Little Mountai**	**1.60**	**341**		Pn	12 35 17.1	-0.9
RDMU	**Red Mountain**	**1.60**	**71**		Pn	12 35 18.1	+0.1
RDMU				IAML		12 35 43.4	
	comp=N,221nm,0.4s						
RDMU				IAML		12 35 43.9	
	comp=E,204nm,0.5s						
TCRU	**Three Creeks R**	**1.62**	**205**		Pn	12 35 18.4	+0.1
MSU	**Marysvale**	**1.63**	**197**		Pb	12 35 19.2	-0.3
MVU	**Marysvale**	**1.65**	**198**		Pb	12 35 19.7	-0.2
HVU	**Hansel Valley**	**1.94**	**332**		Pn	12 35 21.8	-0.8
HVU				IAML		12 35 53.0	
	comp=E,82nm,0.4s						
HVU				IAML		12 35 55.5	
	comp=N,78nm,0.6s						
MTPU	**Mount Pierson**	**2.09**	**194**		Pb	12 35 27.0	-0.4
MTPU				IAML		12 35 59.4	
	comp=E,61nm,0.9s						
MTPU				IAML		12 36 01.6	
	comp=N,58nm,1.0s						
PSUT	**Pine Spring**	**2.35**	**230**		Pn	12 35 29.6	+1.3
PSUT				IAML		12 36 06.3	
	comp=E,69nm,0.8s						
PSUT				IAML		12 36 08.2	
	comp=N,48nm,0.7s						
PV21	**Cone Mtn., Par**	**2.51**	**126**		Pn	12 35 31.4	+0.8
O20A	**White River Ci**	**2.55**	**88**		Pn	12 35 29.7	-1.3
PV23	**Carpenter Ridg**	**2.56**	**128**		Pn	12 35 32.1	+0.8
PV23				IAML		12 36 32.4	
	comp=N,64nm,0.8s						
PKCU	**Pink Cliffs**	**2.69**	**193**		Pn	12 35 33.0	-0.2
PKCU				IAML		12 36 18.4	
	comp=E,53nm,0.8s						
PKCU				IAML		12 36 27.8	
	comp=N,61nm,2.3s						
AHID	**Auburn Hatcher**	**2.71**	**7**		Pn	12 35 34.3	+1.0
SZCU	**Shurtz Canyon**	**2.75**	**206**		Pn	12 35 34.2	+0.4
ELK	**Elko**	**2.88**	**285**		Pn	12 35 36.1	+0.4
CCUT	**Cedar City**	**2.89**	**210**		Pn	12 35 35.7	-0.1
BW06	**Boulder Array**	**3.08**	**29**		Pn	12 35 38.4	-0.1
BW06				IAML		12 36 36.4	
	comp=N,27nm,0.8s						
BW06				IAML		12 36 39.0	
	comp=N,47nm,0.7s						
PD31	**Pinedale Array**	**3.08**	**29**		Pn	12 35 38.8	+0.4
PDAR	**Pinedale Array**	**3.08**	**29**		Pn	12 35 39.2	+0.8
KNB	**Kanab**	**3.21**	**198**		Pn	12 35 41.0	+0.8
REDW	**Red Top Meadow**	**3.33**	**9**		Pn	12 35 41.8	0.0
REDW				IAML		12 36 40.5	
	comp=N,44nm,1.6s						
REDW				IAML		12 36 49.2	
	comp=N,42nm,1.3s						
LCMT	**Little Creek M**	**3.33**	**204**		Pn	12 35 42.8	+1.1
LCMT				IAML		12 36 39.1	
	comp=E,16nm,0.8s						
SNOW	**Snow King Moun**	**3.44**	**10**		Pn	12 35 43.3	-0.1
SNOW				IAML		12 36 43.9	
	comp=E,35nm,0.9s						
SNOW				IAML		12 36 45.2	
	comp=E,39nm,1.6s						
TPAW	**Teton Pass**	**3.44**	**7**		Pn	12 35 43.1	-0.3
TPAW				IAML		12 36 46.0	
	comp=E,31nm,0.9s						
TPAW				IAML		12 37 00.7	
	comp=E,22nm,3.9s						
R11A	**Troy Canyon, C**	**3.57**	**242**		Pn	12 35 45.7	+0.7
R11A				IAML		12 36 51.0	
	comp=E,13nm,0.9s						
FXWY	**Fox Creek**	**3.58**	**6**		Pn	12 35 44.9	-0.5
FXWY				IAML		12 36 52.2	
	comp=E,13nm,1.2s						
LOHW	**Long Hollow**	**3.61**	**11**		Pn	12 35 45.7	+0.1
LOHW				IAML		12 36 45.4	
	comp=E,15nm,0.7s						
LOHW				IAML		12 36 48.2	
	comp=E,25nm,0.9s						
SMCO	**Snowmass**	**3.66**	**103**		Pn	12 35 47.3	+0.8
RWWY	**Rawlins**	**3.67**	**63**		Pn	12 35 46.2	-0.3
U15A	**North Rim**	**3.69**	**189**		Pn	12 35 47.1	+0.3
U15A				IAML		12 36 54.6	
	comp=N,26nm,0.8s						
U15A				IAML		12 36 55.0	
	comp=E,23nm,1.4s						
MOOW	**Moose Ponds**	**3.72**	**9**		Pn	12 35 47.2	0.0
MVCO	**Mesa Verde**	**3.73**	**139**		Pn	12 35 47.4	0.0
PRN	**Pahroc Range**	**3.81**	**227**		Pn	12 35 48.0	-0.4
PRN				IAML		12 36 55.4	
	comp=N,30nm,0.7s						
FLWY	**Flagg Ranch**	**4.06**	**9**		Pn	12 35 52.4	+0.6
FLWY				IAML		12 37 25.8	
	comp=N,23nm,2.9s						
FLWY				IAML		12 37 55.9	
	comp=N,20nm,4.3s						
HLID	**Hailey**	**4.08**	**329**	Pn	Pn	12 35 52.5	+0.3
BMN	**Battle Mountai**	**4.34**	**277**		Pn	12 35 56.6	+0.9
BMN				IAML		12 37 08.4	
	comp=E,11nm,4.9s						
H17A	**Grant Village**	**4.38**	**9**		Pn	12 35 56.4	+0.2
H17A				IAML		12 37 16.3	
	comp=E,9.5nm,3.9s						
H17A				IAML		12 37 21.1	
	comp=N,7.6nm,2.6s						
BCYI	**Bear Canyon**	**4.45**	**343**	Pn	Pn	12 35 56.2	-1.0
WUAZ	**Wupatki**	**4.55**	**178**		Pn	12 35 57.7	-0.9
ISCO	**Idaho Springs**	**4.58**	**92**		Pn	12 35 59.6	+0.5
ISCO				IAML		12 37 18.6	
	comp=N,8.7nm,0.9s						
ISCO				IAML		12 37 28.4	
	comp=N,8.8nm,1.5s						
K22A	**Casper**	**4.58**	**54**		Pn	12 35 59.8	+0.8
YMR	**Madison River**	**4.61**	**5**		Pn	12 36 00.3	+0.9
YMR				IAML		12 37 24.9	
	comp=N,19nm,5.0s						
YMR				IAML		12 37 43.0	
	comp=E,14nm,3.1s						
MFID	**Camas Ranch**	**4.62**	**318**		Pn	12 35 58.5	-0.9
MFID				IAML		12 37 16.1	
	comp=E,14nm,5.0s						
MFID				IAML		12 37 18.6	
	comp=E,12nm,4.1s						
YHB	**Horse Butte**	**4.68**	**3**		Pn	12 35 59.3	-1.1
YHB				IAML		12 36 32.6	
	comp=E,7.7nm,4.2s						
YHB				IAML		12 37 21.9	
	comp=N,11nm,4.6s						
YHH	**Holmes Hill**	**4.74**	**6**		Pn	12 36 00.1	-1.1
YHH				IAML		12 36 56.6	
	comp=N,6.6nm,4.8s						
YHH				IAML		12 39 04.4	
	comp=E,8.8nm,5.0s						
YHL	**Hebgen Lake**	**4.78**	**3**		Pn	12 36 02.6	+0.8
YHL				IAML		12 36 35.7	
	comp=N,14nm,4.7s						
YHL				IAML		12 37 26.7	
	comp=E,13nm,4.5s						
PHWY	**Pilot Hill**	**4.80**	**73**		Pn	12 36 01.9	-0.1
TPH	**Tonopah**	**4.84**	**247**		Pn	12 36 01.6	-0.8
MCMT	**McKenzie Canyo**	**4.84**	**349**		Pn	12 36 01.6	-1.1
KVN	**Kaiserville**	**5.16**	**261**		Pn	12 36 05.4	-1.5
KVN				IAML		12 37 47.5	
	comp=N,8.4nm,3.4s						
KVN				IAML		12 37 58.5	
	comp=E,7.4nm,4.2s						
SDCO	**Great Sand Dun**	**5.27**	**114**	Pn	Pn	12 36 07.8	-0.8
W13A	**Hualapai Mount**	**5.30**	**201**		Pn	12 36 08.8	-0.1
W13A				IAML		12 37 34.9	
	comp=N,4.7nm,3.9s						
W13A				IAML		12 37 42.8	
	comp=E,4.8nm,3.5s						
RLMT	**Red Lodge**	**5.32**	**18**	Pn	Pn	12 36 09.4	+0.2
RLMT				IAML		12 39 02.3	
	comp=E,9.4nm,4.5s						
DLMT	**Dillon**	**5.34**	**352**		Pn	12 36 08.8	-0.5
NV11	**Mina Array Sit**	**5.37**	**254**		Pn	12 36 09.0	-0.8
NV11				IAML		12 37 42.2	
	comp=E,9.6nm,4.6s						
NV11				IAML		12 37 55.3	
	comp=N,6.8nm,2.7s						
NVAR	**Mina Array Bea**	**5.48**	**255**	Pn	Pn	12 36 10.6	-0.9
BOZ	**Bozeman (W)**	**5.52**	**360**	Pn	Pn	12 36 12.6	+0.7
LCH	**Last Change Ra**	**5.54**	**241**		Pn	12 36 11.8	-0.4
RYN	**Ryan**	**5.58**	**257**	Pn	Pn	12 36 12.6	-0.2
GWY	**Greenwater Val**	**5.59**	**228**		Pn	12 36 13.5	+0.7
X16A	**Lo Mia Camp, P**	**5.65**	**179**	Pn	Pn	12 36 14.0	+0.3
X18A	**Snowflake**	**5.68**	**166**	Pn	Pn	12 36 12.9	-1.2
LHV	**Little Huntoon**	**5.69**	**254**	Pn	Pn	12 36 14.3	+0.2
GCMT	**Greycliff**	**5.88**	**13**	Pn	Pn	12 36 16.2	-0.6
J08A	**Circle Bar Ran**	**6.12**	**305**	Pn	Pn	12 36 20.4	+0.3
ANMO	**Albuquerque**	**6.53**	**140**	Pn	Pn	12 36 25.8	0.0
HRY	**Holter Researc**	**6.64**	**358**	Pn	Pn	12 36 26.2	-0.9
RSSD	**Black Hills**	**6.90**	**52**	Pn	Pn	12 36 30.2	-0.7
LAO	**LASA Array**	**7.67**	**29**	Pn	Pn	12 36 41.1	-0.1

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*TAP **02** 12:37:01.1, 25°.23N×122°.94E, h184^{km}, ML3.7, D*

*JMA **02** 12:37:01.6±0.2, 25°.11N×122°.92E, h182^{km}±3^{km}, M3.5*

ISC 02 12:37:01.8±1.7**, 25°.12N**±0°.06×**122°.93E**±0°.03**, h182**^{km}±9^{km}**, n98,** σ**0^{s}.59**/184**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.66**	**173**	*e*P	**Pn**	**12 37 28.3**	**+0.8**
	baz=176						
YOJ				*e*S	**Sn**	**12 37 48.3**	**+1.0**
	baz=176						
YOJ	**Yonaguni jima**	**0.66**	**173**	P	**Pn**	**12 37 27.8**	**+0.3**
YOJ				*e*S	**Sn**	**12 37 47.7**	**+0.4**
JYNG	**Yonagunijimaku**	**0.66**	**178**	P	**Pn**	**12 37 27.6**	**+0.1**
JYNG				*e*S	**Sn**	**12 37 47.8**	**+0.4**
TWB1	**Santiao Chiao**	**0.86**	**263**	*e*P	**Pn**	**12 37 28.8**	**+0.1**
	baz=262						
TWB1				*e*S	**Sn**	**12 37 49.7**	**+0.5**
	baz=262						
PCYT	**Pengchaiyu**	**0.93**	**304**	*e*P	**Pn**	**12 37 29.5**	**+0.4**
	baz=292						
TIPB	**Shuangxi**	**1.01**	**262**	P	**Pn**	**12 37 30.0**	**+0.3**
	baz=260						
TIPB				*e*S	**Sn**	**12 37 52.3**	**+1.1**
	baz=260						
NTC	**Toucheng**	**1.03**	**255**	*e*P	**Pn**	**12 37 29.4**	**-0.5**
	baz=246						
NTC				*e*S	**Sn**	**12 37 51.3**	**-0.1**
	baz=246						
NWF	**Wu-fen Shan**	**1.04**	**268**	P	**Pn**	**12 37 29.8**	**-0.2**
	baz=264						
NWF				*e*S	**Sn**	**12 37 51.5**	**-0.2**
	baz=264						
IRIF	**Iriomote-Funau**	**1.07**	**137**	P	**Pn**	**12 37 30.1**	**0.0**
IRIF				S	**Sn**	**12 37 51.6**	**-0.4**
TWC	**Suao**	**1.10**	**243**	*e*P	**Pn**	**12 37 30.5**	**+0.1**
	baz=235						
TWC				*e*S	**Sn**	**12 37 52.1**	**-0.4**
	baz=235						
NDS	**Dongshan**	**1.20**	**247**	P	**Pn**	**12 37 31.4**	**+0.2**
	baz=235						
NDS				S	**Sn**	**12 37 53.4**	**-0.5**
	baz=235						
TWE	**Neicheng**	**1.21**	**251**	P	**Pn**	**12 37 31.3**	**+0.1**
	baz=246						
TWE				S	**Sn**	**12 37 53.4**	**-0.6**
	baz=246						
TWA	**Mucha**	**1.22**	**264**	P	**Pn**	**12 37 31.5**	**+0.1**
	baz=259						
TWA				S	**Sn**	**12 37 53.5**	**-0.7**
	baz=259						
YM01	**YM01**	**1.23**	**272**	*e*P	**Pn**	**12 37 31.5**	**+0.1**
	baz=266						
EWUT	**Wuta**	**1.24**	**238**	P	**Pn**	**12 37 31.8**	**+0.3**
	baz=229						
EWUT				S	**Sn**	**12 37 54.2**	**-0.2**
	baz=229						
ANP	**Anpu**	**1.27**	**273**	*e*P	**Pn**	**12 37 31.9**	**0.0**
	baz=271						
ANP				*e*S	**Sn**	**12 37 54.9**	**-0.2**
	baz=271						
ENA	**Nanau**	**1.28**	**238**	P	**Pn**	**12 37 32.0**	**+0.2**
	baz=229						
ENA				S	**Sn**	**12 37 54.8**	**-0.2**
	baz=229						
NHDH	**Xindian Distri**	**1.28**	**263**	*e*P	**Pn**	**12 37 32.4**	**+0.5**
	baz=250						
JKRS	**Kuro-shima**	**1.32**	**131**	P	**Pn**	**12 37 32.6**	**+0.4**
JKRS				S	**Sn**	**12 37 55.8**	**+0.1**
ENTT	**Nioudou**	**1.32**	**249**	*e*P	**Pn**	**12 37 32.7**	**+0.4**
	baz=245						
ENTT				*e*S	**Sn**	**12 37 55.8**	**0.0**
	baz=245						
HATJ	**Hateruma jima**	**1.33**	**143**	P	**Pn**	**12 37 32.9**	**+0.6**
HATJ				S	**Sn**	**12 37 55.7**	**-0.2**
NWLT	**Wulai**	**1.33**	**256**	P	**Pn**	**12 37 32.3**	**-0.1**
	baz=251						
NWLT				S	**Sn**	**12 37 54.8**	**-1.2**
	baz=251						
JIJ	**Ishigaki jima**	**1.34**	**124**	P	**Pn**	**12 37 32.1**	**-0.3**
JIJ				S	**Sn**	**12 37 54.8**	**-1.2**
JISG	**Ishigakijimahi**	**1.36**	**113**	P	**Pn**	**12 37 32.1**	**-0.5**
JISG				S	**Sn**	**12 37 55.9**	**-0.5**
TWS1	**Kuangyinshan**	**1.37**	**270**	*e*P	**Pn**	**12 37 33.0**	**+0.4**
	baz=258						
NDT	**Datong Townshi**	**1.38**	**248**	P	**Pn**	**12 37 33.3**	**+0.6**
	baz=244						
NDT				S	**Sn**	**12 37 57.1**	**+0.4**
	baz=244						
YHNB	**Yeheng**	**1.48**	**253**	P	**Pn**	**12 37 33.6**	**-0.1**
	baz=249						
YHNB				S	**Sn**	**12 37 57.7**	**-0.7**
	baz=249						
YHNB	**Yeheng**	**1.48**	**253**	P	**Pn**	**12 37 34.0**	**+0.3**
NSK	**Sanguang**	**1.49**	**253**	P	**Pn**	**12 37 34.0**	**+0.2**
	baz=249						
NSK				S	**Sn**	**12 37 57.6**	**-1.0**
	baz=249						
ETL	**Fush Village**	**1.52**	**231**	*e*P	**Pn**	**12 37 33.9**	**-0.2**
	baz=225						
ETL				*e*S	**Sn**	**12 37 58.8**	**-0.4**
	baz=225						
NACB	**Ninganchiao**	**1.53**	**232**	P	**Pn**	**12 37 33.9**	**-0.2**
	baz=226						
NACB				S	**Sn**	**12 37 58.4**	**-0.9**
	baz=226						
NNSB	**Datong**	**1.56**	**244**	P	**Pn**	**12 37 34.8**	**+0.2**
	baz=236						
NNSB				S	**Sn**	**12 37 60.0**	**0.0**
	baz=236						
NNS	**Nan Shan**	**1.56**	**245**	P	**Pn**	**12 37 35.0**	**+0.4**
	baz=235						
NNS				S	**Sn**	**12 38 00.0**	**0.0**
	baz=235						
NCUH	**Zhongli**	**1.59**	**265**	*e*P	**Pn**	**12 37 34.8**	**+0.1**
	baz=268						
NCUH				*e*S	**Sn**	**12 38 00.5**	**+0.4**
	baz=268						
TWD	**Chiawan**	**1.59**	**230**	P	**Pn**	**12 37 34.5**	**-0.2**
	baz=225						
TWD				S	**Sn**	**12 38 00.2**	**-0.1**
	baz=225						
ETLH	**Xiulin Townshi**	**1.60**	**236**	P	**Pn**	**12 37 34.9**	**0.0**
	baz=228						
ETLH				S	**Sn**	**12 38 00.2**	**-0.3**
	baz=228						
HWA	**Hwalien**	**1.65**	**227**	*e*P	**Pn**	**12 37 35.5**	**+0.2**
	baz=221						
HWA				*e*S	**Sn**	**12 38 01.6**	**+0.2**
	baz=221						
JTJ	**Tarama**	**1.68**	**106**	P	**Pn**	**12 37 35.8**	**+0.2**
JTJ				S	**Sn**	**12 38 01.1**	**-0.7**
FUSS	**Fushou**	**1.76**	**241**	P	**Pn**	**12 37 37.3**	**+0.6**
	baz=238						
FUSS				S	**Sn**	**12 38 03.4**	**-0.3**
	baz=238						
WHF	**Hehuan Shan**	**1.79**	**238**	P	**Pn**	**12 37 37.6**	**+0.3**
	baz=233						
WHF				S	**Sn**	**12 38 03.7**	**-1.0**
	baz=233						
LIOB	**Emei**	**1.80**	**255**	P	**Pn**	**12 37 36.8**	**0.0**
	baz=245						
LIOB				S	**Sn**	**12 38 03.6**	**-0.4**
	baz=245						
TWT	**Tachien**	**1.81**	**242**	*e*P	**Pn**	**12 37 38.1**	**+1.0**
	baz=239						
TWT				*e*S	**Sn**	**12 38 05.0**	**+0.5**
	baz=239						

NSTT	**Nanjuang**	1.81	255	P	Pn	12 37 36.8	-0.1
	baz=245						
NSTT				S	Sn	12 38 03.1	-1.1
	baz=245						
TDCB	**Techi**	1.82	242	P	Pn	12 37 38.0	+0.7
	baz=235						
TDCB				S	Sn	12 38 04.7	0.0
	baz=235						
ESL	**Shilin**	1.88	227	P	Pn	12 37 36.8	-0.9
	baz=229						
ESL				*e*S	Sn	12 38 04.2	-1.3
	baz=229						
CHGB	**Renai**	1.91	237	P	Pn	12 37 38.8	+0.5
	baz=230						
CHGB				S	Sn	12 38 05.7	-0.7
	baz=230						
OWD	**Renai**	1.97	234	P	Pn	12 37 39.2	+0.5
	baz=229						
OWD				*e*S	Sn	12 38 06.9	-0.5
	baz=229						
WHP	**Taichung City**	1.98	245	P	Pn	12 37 39.3	+0.4
	baz=248						
WHP				S	Sn	12 38 07.2	-0.4
	baz=248						
EGFH	**Guangfu**	1.99	224	*e*P	Pn	12 37 39.3	+0.5
	baz=218						
EGFH				*e*S	Sn	12 38 07.5	0.0
	baz=218						
NMLH	**Miaoli**	2.02	254	*e*P	Pn	12 37 39.3	+0.1
	baz=246						
NMLH				*e*S	Sn	12 38 07.3	-0.9
	baz=246						
JIRB	**Irabujima**	2.06	98	P	Pn	12 37 39.5	-0.1
JIRB				*e*S	Sn	12 38 07.9	-1.0
NSY	**Sanyi**	2.09	251	*e*P	Pn	12 37 39.7	-0.2
	baz=248						
NSY				*e*S	Sn	12 38 09.7	+0.2
	baz=248						
TWQ1	**Liyutan**	2.10	249	P	Pn	12 37 40.0	0.0
	baz=246						
TWQ1				S	Sn	12 38 08.9	-0.8
	baz=246						
JIKM	**Ikemajima**	2.12	95	P	Pn	12 37 40.7	+0.5
JIKM				S	Sn	12 38 09.3	-0.7
WCS	**Beigang Elemen**	2.12	240	P	Pn	12 37 40.8	+0.6
	baz=238						
WCS				*e*S	Sn	12 38 10.1	+0.1
	baz=238						
HGSD	**Ruisui**	2.12	221	P	Pn	12 37 40.3	+0.1
	baz=217						
HGSD				S	Sn	12 38 10.3	+0.1
	baz=217						
EHY	**Hungye**	2.17	223	*e*P	Pn	12 37 41.4	+0.5
	baz=219						
EHY				*e*S	Sn	12 38 09.7	-1.5
	baz=219						
JMJ	**Miyako jima 2**	2.17	98	P	Pn	12 37 41.9	+1.1
JMJ2	**Miyako jima3**	2.21	99	P	Pn	12 37 41.6	+0.3
JMJ2				S	Sn	12 38 12.0	+0.1
WDJ	**Dajia District**	2.21	250	*e*P	Pn	12 37 41.7	+0.4
	baz=247						
WDJ				*e*S	Sn	12 38 11.9	0.0
	baz=247						
SMLT	**Sun Moon Lake**	2.22	237	*e*P	Pn	12 37 42.0	+0.5
	baz=239						
SMLT				*e*S	Sn	12 38 11.8	-0.5
	baz=239						
SSLB	**Suanglung**	2.23	234	P	Pn	12 37 42.1	+0.5
	baz=229						
SSLB				S	Sn	12 38 11.8	-0.6
	baz=229						
SSLB	**Suanglung**	2.23	234	P	Pn	12 37 42.5	+1.0
TYC	**Yuchr**	2.24	238	*e*P	Pn	12 37 42.0	+0.4
	baz=242						
TYC				*e*S	Sn	12 38 12.1	-0.3
	baz=242						
YULB	**Yu-li**	2.27	221	*e*P	Pn	12 37 41.5	-0.4
	baz=226						
YULB				*e*S	Sn	12 38 12.1	-1.1
	baz=226						
JOGS	**Gusukube**	2.28	98	P	Pn	12 37 42.5	+0.5
EYUL	**Yuli**	2.29	220	*e*P	Pn	12 37 42.3	+0.1
	baz=225						
EYUL				*e*S	Sn	12 38 12.7	-0.9
	baz=225						
WJS	**Zhushan**	2.38	238	*e*P	Pn	12 37 43.8	+0.6
	baz=235						
WJS				*e*S	Sn	12 38 15.4	0.0
	baz=235						
WNT	**Mingjian**	2.39	239	*e*P	Pn	12 37 43.6	+0.4
	baz=237						
WNT				*e*S	Sn	12 38 15.1	-0.3
	baz=237						
WCHH	**Zhanghua**	2.39	245	*e*P	Pn	12 37 44.4	+1.1
	baz=242						
WCHH				*e*S	Sn	12 38 15.6	+0.1
	baz=242						
FULB	**Fuli**	2.42	218	*e*P	Pn	12 37 44.7	+1.0
	baz=213						
FULB				*e*S	Sn	12 38 15.7	-0.6
	baz=213						
YUS	**Yu-Shan**	2.42	228	*e*P	Pn	12 37 44.1	-0.1
	baz=221						
YUS				*e*S	Sn	12 38 15.9	-1.2
	baz=221						
CHKT	**Chengkung**	2.46	216	*e*P	Pn	12 37 44.1	0.0
	baz=208						
CHKT				*e*S	Sn	12 38 16.2	-0.9
	baz=208						
ALS	**Alishan**	2.51	231	*e*P	Pn	12 37 45.6	+0.6
	baz=224						
ALS				*e*S	Sn	12 38 18.5	-0.1
	baz=224						
CHN5	**Tsauling**	2.55	234	*e*P	Pn	12 37 45.8	+0.6
	baz=232						
CHN5				*e*S	Sn	12 38 18.4	-0.5
	baz=232						
ELDTW	**Lidau**	2.59	223	*e*P	Pn	12 37 46.4	+0.6
	baz=220						
ELDTW				*e*S	Sn	12 38 19.8	-0.2
	baz=220						
EDH	**Donghe**	2.60	215	*e*P	Pn	12 37 45.7	0.0
	baz=208						
EDH				*e*S	Sn	12 38 19.6	-0.4
	baz=208						
WDLH	**Douliu**	2.60	237	*e*P	Pn	12 37 46.8	+1.1
	baz=235						
WDLH				*e*S	Sn	12 38 20.1	+0.2
	baz=235						
WRL	**Guolierlin Hig**	2.62	243	*e*P	Pn	12 37 46.4	+0.4
	baz=240						
WRL				*e*S	Sn	12 38 19.3	-0.9
	baz=240						
WTK	**Tuku**	2.72	239	*e*P	Pn	12 37 48.2	+1.1
	baz=236						
WTK				*e*S	Sn	12 38 22.3	0.0
	baz=236						
LONT	**Longtian**	2.75	217	*e*P	Pn	12 37 48.8	+1.3
	baz=219						
LONT				*e*S	Sn	12 38 23.1	0.0
	baz=219						
STYH	**Taoyuan**	2.76	226	*e*P	Pn	12 37 48.5	+0.9
	baz=224						
STYH				*e*S	Sn	12 38 23.4	+0.1
	baz=224						
CHN4	**Tsaushan**	2.76	231	*e*P	Pn	12 37 47.4	-0.2
	baz=236						
CHN4				*e*S	Sn	12 38 23.1	-0.3
	baz=236						
TPUB	**Ta-pu**	2.77	230	*e*P	Pn	12 37 48.6	+0.9
	baz=236						
TPUB				*e*S	Sn	12 38 23.4	-0.2
	baz=236						
TPUB	**Ta-pu**	2.77	230	P	Pn	12 37 48.2	+0.4
LDUT	**Ludao**	2.77	209	*e*P	Pn	12 37 48.6	+0.8
	baz=209						
LDUT				*e*S	Sn	12 38 23.7	0.0
	baz=209						
WTP	**Ta-pu**	2.82	229	*e*P	Pn	12 37 49.2	+0.9
	baz=236						
WTP				*e*S	Sn	12 38 25.1	+0.5
	baz=236						
TWGBT	**Beinan**	2.84	217	*e*S	Sn	12 38 24.6	-0.6
	baz=218						
TWG	**Pinlang**	2.85	217	*e*P	Pn	12 37 48.6	-0.1
	baz=218						
TWG				*e*S	Sn	12 38 24.8	-0.5
	baz=218						
TWK	**Hsinying**	2.89	231	*e*P	Pn	12 37 50.0	+0.7
	baz=235						
TWK				*e*S	Sn	12 38 25.4	-0.8
	baz=235						
CHN1	**Nanshi**	2.92	229	*e*P	Pn	12 37 50.4	+0.9
	baz=234						
CHN1				*e*S	Sn	12 38 26.4	-0.3
	baz=234						
SGST	**Jiashian**	2.95	227	*e*P	Pn	12 37 50.0	+0.1
	baz=231						
SGST				*e*S	Sn	12 38 26.7	-0.7
	baz=231						
SLGT	**Liugui**	2.97	225	*e*P	Pn	12 37 50.9	+0.7
	baz=229						
SLGT				*e*S	Sn	12 38 27.3	-0.5
	baz=229						
ECL	**Taimali**	3.09	216	*e*P	Pn	12 37 51.9	+0.3
	baz=211						
ECL				*e*S	Sn	12 38 30.2	-0.3
	baz=211						
SSD	**Sandimen**	3.16	222	*e*P	Pn	12 37 53.4	+1.0
	baz=219						
LYJJ	**Jianjiangzhen**	3.19	297	*e*P	Pn	12 37 53.0	+0.3
	baz=295						
MASBT	**Mashibuluo**	3.26	221	*e*P	Pn	12 37 54.8	+1.1
	baz=218						
MASBT				*e*S	Sn	12 38 33.2	-1.0
	baz=218						
PHUB	**P'eng-hu**	3.45	243	*e*P	Pn	12 37 56.1	+0.1
	baz=241						
PHUB				*e*S	Sn	12 38 36.5	-1.9
	baz=241						

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*IDC **02** 12:42:34.4±0.7, 53°.39N×35°.33W, h0^{km}, mb3.7/11, mb1 3.9/13, mb1mx3.7/75, mbtmp3.7/13, ML3.2/2, Error ellipse: s-maj=25.1km s-min=17.5km az=8.0*

ISC 02 12:42:35.9±0.7**, 53°.4N**±0°.2×**35°.3W**±0°.1**, h10^{km}, n16, σ0ˢ.82**/16**, mb3.8**/11**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCHQ	**Schefferville**	18.45	287	P	Pn	12 46 51.2	-0.3
	0.2nm,0.3s,baz=76,slow=14,SNR=1.7						
EKA	**Eskdalemuir Ar**	18.77	71	P	Pn	12 46 55.9	+0.5
	baz=274,slow=9.9,SNR=1.8						
ESDC	**Sonseca Array**	25.32	110	P	P	12 48 03.2	+0.5
	1.4nm,0.9s,baz=313,slow=9.1,SNR=3.3						
AKASG	**Malin Array Be**	38.59	67	P	P	12 49 59.1	+0.4
	0.2nm,0.3s,baz=300,slow=9.6,SNR=1.0						
PDAR	**Pinedale Array**	48.58	289	P	P	12 51 18.4	-1.1
	0.4nm,0.4s,baz=46,slow=9.3,SNR=5.2						
TORD	**Torodi Ar. Bea**	49.69	130	P	P	12 51 26.9	-1.1
	1.2nm,0.8s,baz=336,slow=8.8,SNR=3.7						
ILAR	**Eielson Array**	51.02	329	P	P	12 51 37.7	+0.2
	1.4nm,1.1s,baz=46,slow=4.9,SNR=9.2						
TXAR	**Lajitas Array**	54.31	272	P	P	12 52 03.2	+0.8
	0.4nm,0.7s,baz=60,slow=8.4,SNR=5.1						
TIXI	**Tiksi**	54.77	6	P	P	12 52 05.9	+0.8
	1.9nm,0.8s,baz=360,slow=8.1,SNR=4.0						
NVAR	**Mina Array Bea**	56.41	291	P	P	12 52 17.9	+0.2
	0.3nm,0.5s,baz=68,slow=7.3,SNR=1.4						
MKAR	**Makanchi Array**	66.99	41	P	P	12 53 28.9	+0.3
	0.4nm,0.6s,baz=279,slow=8.5,SNR=3.6						
SIV	**San Ignacio**	72.55	206	P	P	12 54 04.0	+1.0
	0.6nm,0.2s,baz=12,slow=8.6,SNR=3.8						
SONM	**Songino Array**	74.05	26	P	P	12 54 10.6	-1.2
	0.3nm,0.4s,baz=334,slow=9.6,SNR=1.9						
SNAA	**Sanae**	126.84	168	PKP	PKPdf	13 01 38.0	-0.2
	0.9nm,0.8s,baz=317,slow=2.9,SNR=2.7						
WRA	**Warramunga Arr**	145.69	17	PKPbc	PKPdf	13 02 14.2	-0.3
	1.1nm,0.9s,baz=340,slow=1.9,SNR=5.0						
ASAR	**Alice Springs**	149.23	20	PKPbc	PKPbc	13 02 23.4	-1.1
	0.9nm,0.5s,baz=351,slow=2.4,SNR=20						

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*DDA **02** 12:46:09.6, 37°.21N×27°.94E, h7^{km}±2^{km}, ML2.1*

*ISK **02** 12:46:09.9, 37°.21N×27°.93E, h0^{km}, ML2.4/15, Suspected Mining explosion.*

ISC 02 12:46:10.0±0.8**, 37°.22N**±0°.02×**27°.95E**±0°.02**, h10^{km}, n30, σ0ˢ.52**/45**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLSB	**Milas**	0.15	298	PG	Pg	12 46 13.8	+0.4
MLSB				SG	Sg	12 46 16.1	+0.3
YER	**Yerkesik**	0.28	108	PG	Pg	12 46 16.1	+0.4
YER				SG	Sb	12 46 20.7	-1.3
MULA	**Mugla, Merkez-**	0.30	83	*i* P	Pg	12 46 16.5	+0.5
MULA				*i* S	Sg	12 46 20.4	+0.3
BDRM	**Kayabasi**	0.43	249	*i* P	Pg	12 46 18.4	-0.1
BDRM				*i* S	Sg	12 46 24.9	+0.8
BDRM				IAML		12 46 25.0	
	comp=N,182nm,0.5s						
AYDN	**Tasoluk**	0.44	353	*i* P	Pg	12 46 19.1	+0.5
AYDN				*i* S	Sg	12 46 25.2	+0.7
TURN	**Turunc**	0.51	152	*i* P	Pg	12 46 19.7	-0.1
TURN				*i* S	Sb	12 46 29.8	+1.5
TURN				IAML		12 46 31.0	
	comp=N,131nm,0.2s						
TURN	**Turunc**	0.51	152	PG	Pg	12 46 19.9	+0.1
TURN				SG	Sb	12 46 27.5	-0.8
BODT	**Bodrum**	0.53	253	PG	Pg	12 46 20.1	-0.2
BODT				SG	Sg	12 46 27.9	+0.5
YKAV	**Yalikavak-Bodr**	0.54	260	PG	Pg	12 46 20.5	0.0
MRSB	**Marmaris-Mugla**	0.54	158	PG	Pg	12 46 20.7	+0.2
DAT	**Datca**	0.57	211	*i* P	Pg	12 46 20.9	-0.3
DAT				*i* S	Sg	12 46 29.3	+0.6
DAT	**Datca**	0.57	211	PG	Pg	12 46 21.3	+0.2
DDIM	**Aydin, Didim**	0.61	293	*e*P	Pg	12 46 22.1	+0.3
DDIM				*i* S	Sg	12 46 30.7	+0.9
DDIM				IAML		12 46 44.0	
	comp=N,97nm,1.3s						
DALY	**Dalyan (Mula)**	0.69	125	*i* P	Pg	12 46 23.3	-0.1
DALY				*i* S	Sb	12 46 34.7	+0.9
DALY				IAML		12 46 37.0	
	comp=N,64nm,0.6s						
DALY	**Dalyan (Mula)**	0.69	125	PG	Pb	12 46 24.1	-0.1
AYDB	**Zeytinkoy-Aydi**	0.72	356	PG	Pg	12 46 24.2	+0.2
GCAM	**G?zelcaml?**	0.74	310	*i* P	Pg	12 46 24.6	+0.3
GCAM				*i* S	Sg	12 46 34.4	+0.5
GCAM				IAML		12 46 36.0	
	comp=N,137nm,0.2s						
GCAM	**G?zelcaml?**	0.74	310	PG	Pg	12 46 24.6	+0.3
TAVA	**DENIZLI_Tavas**	0.81	72	*i* P	Pg	12 46 25.4	-0.1
TAVA				*i* S	Sg	12 46 36.0	-0.1
NIS1	**Nisyros Isl.**	0.87	225	PG	Pg	12 46 26.6	-0.2
KOSK	**Kos Island**	0.91	239	PG	Pg	12 46 27.2	-0.2
ARG	**Arkhangelos**	1.01	172	PG	Pg	12 46 29.4	-0.1
FETY	**Fethiye**	1.08	122	PN	Pn	12 46 31.1	-0.1
CAME	**Cameli-Denizli**	1.12	104	PN	Pn	12 46 32.0	+0.2
DGB	**zmir**	1.18	315	*i* P	Pb	12 46 31.8	-0.7
DGB				*i* S	Sb	12 46 47.6	-0.3
MANT	**Manisa**	1.35	21	*i* P	Pn	12 46 34.8	-0.4
MANT				*i* S	Sb	12 46 52.6	-0.5
BLCB	**Balcova**	1.36	329	PN	Pg	12 46 36.1	-0.1
KULA	**Kula-Manisa**	1.41	23	PN	Pg	12 46 37.0	0.0
ELL	**Elmali**	1.64	106	PN	Pb	12 46 40.1	-0.3
AKAS	**Kas**	1.66	126	PN	Pb	12 46 40.4	-0.3

LJU 02 12:46:37.1, 45°.86N×15°.23E, h1^{km}, ML0.7, 1C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LEGS	**Legarje**	0.11	36	*i* Pg	Pg	12 46 39.0	-0.2
LEGS				*i* Sg	Sg	12 46 40.5	0.0
CRES	**Cresnjev**	0.17	103	⇑*i*Pg	Pg	12 46 40.0	-0.3
CRES				*i* Sg	Sg	12 46 42.6	+0.2
CRES				IAML		12 46 44.6	
	comp=Z,7.5nm,0.1s						
PDKS	**Podkum**	0.26	321	*i* Pg	Pg	12 46 42.0	0.0
PDKS				*e*Sg	Sg	12 46 46.0	+0.7
PDKS				IAML		12 46 46.7	
	comp=Z,17nm,0.1s						
VISS	**Visnje**	0.28	258	*e*Pg	Pg	12 46 43.0	+0.6
VISS				*i* Sg	Sg	12 46 46.6	+0.6
VISS				IAML		12 46 48.0	
	comp=Z,3.5nm,0.1s						
GCIS	**Gornji Cirnik**	0.28	89	*i* Sg	Sg	12 46 47.5	+1.4
GCIS				IAML		12 46 49.0	
	comp=Z,1.4nm,0.1s						
OZLJ	**Ozalj**	0.30	146	*e*Pg	Pg	12 46 42.2	-0.6
OZLJ				Sg	Sg	12 46 47.1	+0.5
GOLS	**Golise**	0.32	62	*e*Sg	Sg	12 46 48.4	+1.2
GOLS				IAML		12 46 50.8	
	comp=Z,5.3nm,0.1s						
DOBS	**Dobrina**	0.33	30	*e*Pg	Pg	12 46 44.0	+0.5
DOBS				*i* Sg	Sg	12 46 48.5	+0.6
DOBS				IAML		12 46 49.8	
	comp=Z,3.2nm,0.1s						
BOJS	**Bojanci**	0.36	177	*i* Sg	Sg	12 46 49.6	+1.0
BOJS				IAML		12 46 49.6	
	comp=Z,5.3nm,0.1s						
SMRN	**Sveta Marina**	1.12	223	*e*Pg	Pb	12 46 59.2	0.0
SMRN				Sg	Sn	12 47 15.1	-0.8

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*IDC **02** 12:46:38.6±0.8, 53°.34N×35°.36W, h0^{km}, mb3.8/9, mb1 3.9/11, mb1mx3.6/69, mbtmp3.8/11, ML3.0/2, MS3.9/1, Ms1 4.0/1, ms1mx3.1/43, Error ellipse: s-maj=29.9km s-min=18.4km az=15.0*

ISC 02 12:46:40.9±0.8**, 53°.4N**±0°.2×**35°.4W**±0°.1**, h16^{km}, n14, σ0ˢ.65**/13**, mb3.8**/9**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCHQ	**Schefferville**	18.44	287	P	P	12 50 54.3	-1.2
	0.1nm,0.3s,baz=82,slow=15,SNR=1.5						
EKA	**Eskdalemuir Ar**	18.79	71	P	Pn	12 50 59.0	-0.8
	baz=268,slow=8.3,SNR=1.3						
ESDC	**Sonseca Array**	25.33	110	P	P	12 52 07.1	+0.3
	0.4nm,0.3s,baz=318,slow=8.5,SNR=1.8						
NOA	**NORSAR Array B**	25.87	54	LR	LR	13 01 49.3	
	comp=Z,274nm,19.9s,baz=270,slow=35						
PDAR	**Pinedale Array**	48.57	289	P	P	12 55 23.5	0.0
	0.4nm,0.5s,baz=57,slow=7.7,SNR=6.8						
TORD	**Torodi Ar. Bea**	49.69	130	P	P	12 55 31.9	-0.1
	1.0nm,0.7s,baz=333,slow=7.8,SNR=4.1						
ILAR	**Eielson Array**	51.03	329	P	P	12 55 41.6	0.0
	0.7nm,0.9s,baz=40,slow=7.1,SNR=4.2						
DBIC	**Dimbokro**	52.74	141	P	P	12 55 54.8	-0.1
	4.6nm,0.9s,baz=12,slow=9.3,SNR=2.5						
TXAR	**Lajitas Array**	54.30	272	P	P	12 56 07.3	+0.9
	0.4nm,0.8s,baz=64,slow=6.1,SNR=3.8						
BVAR	**Borovoye Array**	57.34	44	P	P	12 56 28.4	+0.7
	0.6nm,0.6s,baz=277,slow=12,SNR=4.2						
MKAR	**Makanchi Array**	67.02	41	P	P	12 57 33.4	+0.6
	0.7nm,0.7s,baz=329,slow=5.3,SNR=5.1						
AAK	**Ala-Archa**	67.05	49	P	P	12 57 33.1	-0.1
	5.9nm,1.1s,baz=290,slow=7.4,SNR=4.2						
WRA	**Warramunga Arr**	145.72	17	PKPbc	PKPab	13 06 18.7	-0.5
	0.5nm,0.7s,baz=347,slow=2.5,SNR=6.6						
ASAR	**Alice Springs**	149.26	20	PKPbc	PKPbc	13 06 28.6	-0.1
	1.8nm,0.6s,baz=353,slow=2.5,SNR=37						

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*IDC **02** 12:47:54.3±0.7, 53°.41N×35°.27W, h0^{km}, mb3.9/14, mb1 4.1/16, mb1mx3.9/63, mbtmp3.9/16, ML3.0/2, MS4.0/7, Ms1 4.0/7, ms1mx3.6/49, Error ellipse: s-maj=24.3km s-min=14.3km az=9.0*

*GCMT **02** 12:47:55.6±0.3, 53°.58N±0°.04×35°.23W±0°.03, h14^{km}±1^{km}, MW4.9/89, Moment Tensor Solution. s11,c13; s89,c117; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.89±.20; $M_{\theta\theta}$-0.38±.13; $M_{\phi\phi}$2.28±.15; $M_{r\theta}$1.42±.37; $M_{\theta\phi}$-0.14±.09; $M_{\phi r}$-0.29±.28; Best double couple: $M_0$2.53700×10^{16} NP1:ϕ_s203.00000°, δ47.00000°, λ-47.00000°. NP2: ϕ_s329.00000°, δ58.00000°, λ-127.00000°. Principal axes: T 2.3240, Plg6.0000°, Azm84.0000°; N 0.4320, Plg30.0000°, Azm351.0000°; P -2.7510, Plg59.0000°, Azm184.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **02** 12:47:57.6±0.8, 53°.4N±0°.1×35°.1W±0°.2, h11^{km}±6^{km}, mb4.6/13 Error ellipse: s-maj=22.5km s-min=12.3km az=214.0*

ISC 02 12:47:56.7±0.6**, 53°.4N**±0°.1×**35°.16W**±0°.07**, h12^{km}, n44, σ1ˢ.06**/38**, mb4.2**/21**, MS3.9**/4**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRS	**Narsarsuaq**	9.57	329	Pn	Pn	12 50 14.5	+0.3
BORG	**Borgarnes**	13.40	26	LR	LR	12 54 36.7	
	comp=Z,385nm,19.9s,baz=227,slow=30						
SFJD	**Kangerlussuaq**	15.60	337	LR	LR	12 56 24.1	
	comp=Z,545nm,20.7s,baz=158,slow=33						
SCHQ	**Schefferville**	18.55	287	P	P	12 52 12.5	-0.6
	0.3nm,0.3s,baz=74,slow=7.5,SNR=3.8						
SCHQ				LR	LR	12 57 54.7	
	comp=Z,624nm,20.7s,baz=103,slow=32						
EKA	**Eskdalemuir Ar**	18.67	71	P	Pn	12 52 14.2	-0.4
	baz=274,slow=9.9,SNR=3.3						
FRB	**Frobisher Bay**	20.02	314	LR	LR	12 58 35.8	
	comp=Z,657nm,18.1s,baz=92,slow=32						
JMIC	**Jan Mayen**	21.27	24	LR	LR	12 58 39.3	
	comp=Z,466nm,20.6s,baz=228,slow=30						
ESDC	**Sonseca Array**	25.22	110	P	P	12 53 24.0	+1.7
	2.6nm,1.0s,baz=316,slow=8.7,SNR=5.2						
CLL	**Collm**	29.06	74	*e*P	P	12 53 58.0	+1.5
RES	**Resolute Bay**	31.56	334	LR	LR	13 05 31.6	
	comp=Z,167nm,19.9s,baz=89,slow=34						
EYMN	**Ely**	35.31	285	P	P	12 54 51.7	+0.3
EYMN				IAmb	IAmb	12 54 56.5	
	comp=Z,18nm,1.2s						
KEST	**Kesra**	35.59	102	P	P	12 54 54.2	+0.2
	comp=Z,1.1nm,0.5s,baz=267,slow=10.0,SNR=1.3						
R50A	**Paris**	36.65	266	P	P	12 55 04.2	+1.3
R50A				IAmb	IAmb	12 55 08.7	
	comp=Z,13nm,1.1s						
ULM	**Lac du Bonnet**	36.68	290	P	P	12 55 02.0	-1.0
	comp=Z,3.8nm,1.0s,baz=53,slow=10,SNR=3.2						
AKASG	**Malin Array Be**	38.50	67	P	P	12 55 17.8	-0.6
	comp=Z,1.1nm,0.3s,baz=294,slow=8.5,SNR=5.5						
SIUC	**Southern Illin**	39.95	269	P	P	12 55 31.7	+1.1
SIUC				IAmb	IAmb	12 55 36.8	
	comp=Z,32nm,1.1s						
S44A	**Carbondale**	39.98	269	P	P	12 55 31.7	+0.8
A36M	**Sachs Harbour**	40.48	331	P	P	12 55 35.8	+1.2
INK	**Inuvik**	44.70	328	P	P	12 56 07.6	-1.3
	comp=Z,2.1nm,0.9s,baz=97,slow=3.2,SNR=5.4						
ISCO	**Idaho Springs**	48.33	284	P	P	12 56 39.1	+0.9
ISCO				IAmb	IAmb	12 56 43.8	
	comp=Z,3.5nm,0.9s						
BW06	**Boulder Array**	48.67	289	P	P	12 56 42.7	+1.9
BW06				IAmb	IAmb	12 56 45.0	
	comp=Z,4.3nm,1.1s						
PD31	**Pinedale Array**	48.67	289	P	P	12 56 41.2	+0.4
PDAR	**Pinedale Array**	48.67	289	P	P	12 56 39.0	-1.8
	comp=Z,2.3nm,1.0s,baz=40,slow=2.5,SNR=7.6						
PDAR	**Pinedale Array**	48.67	289	P	P	12 56 41.2	+0.4
AMTX	**Amarillo**	49.30	276	P	P	12 56 46.2	+0.8
TORD	**Torodi Ar. Bea**	49.61	130	P	P	12 56 47.4	-0.4
	comp=Z,1.1nm,0.6s,baz=330,slow=6.5,SNR=4.5						
ILAR	**Eielson Array**	51.08	329	P	P	12 56 58.5	+0.1
	comp=Z,1.1nm,0.9s,baz=44,slow=4.9,SNR=9.2						
ILAR	**Eielson Array**	51.08	329	P	P	12 56 59.1	+0.8
TXAR	**Lajitas Array**	54.41	273	P	P	12 57 23.5	-0.1
	comp=Z,2.9nm,1.1s,baz=60,slow=7.4,SNR=7.2						
TXAR	**Lajitas Array**	54.41	273	P	P	12 57 23.3	-0.3
TIXI	**Tiksi**	54.77	6	P	P	12 57 26.4	+0.9
TIXI				IAmb	IAmb	12 57 32.7	
	comp=Z,5.2nm,1.2s						
X16A	**Lo Mia Camp, P**	55.39	283	P	P	12 57 31.2	+0.4
X16A				IAmb	IAmb	12 57 38.7	
	comp=Z,3.9nm,1.0s						
NVAR	**Mina Array Bea**	56.51	291	P	P	12 57 36.2	-2.6
	comp=Z,0.4nm,0.8s,baz=64,slow=5.3,SNR=2.7						
BVAR	**Borovoye Array**	57.25	44	P	P	12 57 41.4	-2.1
	comp=Z,1.0nm,0.6s,baz=285,slow=12,SNR=4.7						
MKAR	**Makanchi Array**	66.93	42	P	P	12 58 48.2	-0.4
	comp=Z,1.5nm,0.9s,baz=350,slow=6.2,SNR=4.7						
MKAR	**Makanchi Array**	66.93	42	P	P	12 58 49.5	+0.9
GAR	**Garm**	67.84	54	P	P	12 58 54.9	+0.3
SIV	**San Ignacio**	72.59	206	LR	LR	13 27 16.8	
	comp=Z,104nm,18.8s,baz=181,slow=32						
SONM	**Songino Array**	74.01	26	P	P	12 59 31.6	-0.4
	comp=Z,0.9nm,0.8s,baz=328,slow=5.1,SNR=2.9						
SONM	**Songino Array**	74.01	26	P	P	12 59 32.4	+0.4
LPAZ	**La Paz**	74.95	213	P	P	12 59 37.0	-1.2
	comp=Z,1.8nm,0.9s,baz=35,slow=7.3,SNR=5.7						
WRA	**Warramunga Arr**	145.66	18	PKPbc	PKPdf	13 07 34.4	-0.5
	comp=Z,2.2nm,0.9s,baz=341,slow=3.2,SNR=9.4						
WRA	**Warramunga Arr**	145.66	18		PKPbc	13 07 35.1	0.0
ASAR	**Alice Springs**	149.20	20	PKPbc	PKPbc	13 07 44.0	-0.9
	comp=Z,2.4nm,0.7s,baz=351,slow=2.3,SNR=18						

IDC ***02*** *13:00:17.1±0.5, 53°.40N×35°.43W, h0^{km}, mb4.1/23, mb1 4.3/26, mb1mx4.2/43, mbtmp4.1/26, ML3.5/3, MS4.1/32, Ms1 4.1/32, ms1mx4.0/46, Error ellipse: s-maj=16.2km s-min=11.2km az=174.0*

GCMT ***02*** *13:00:17.8±0.2, 53°.52N±0°.04×35°.18W±0°.03, h12^{km}, MW4.9/96, Moment Tensor Solution. s15,c19; s96,c128; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.09±.09; $M_{\theta\theta}$-0.14±.10; $M_{\phi\phi}$2.23±.06; $M_{r\theta}$0.64±.37; $M_{\theta\phi}$-0.14±.07; $M_{\phi r}$-1.42±.34; Best double couple: $M_0$2.67000×10^{16} NP1:ϕ_s189.00000°, δ29.00000°, λ-68.00000°. NP2: ϕ_s344.00000°, δ63.00000°, λ-102.00000°. Principal axes: T 2.6910, Plg17.0000°, Azm83.0000°; N -0.0370, Plg11.0000°, Azm350.0000°; P -2.6490, Plg70.0000°, Azm230.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***02*** *13:00:18.8±1.6, 53°.39N±0°.08×35°.38W±0°.10, h11^{km}±3^{km}, mb4.7/191 Error ellipse: s-maj=11.8km s-min=8.7km az=182.0*

ISC 02 13:00:18.4±0.4**, 53°.34N**±0°.07×**35°.38W**±0°.05**, h10^{km}, n399,** σ**0^s.79**/383**, mb4.7**/116**, MS4.1**/28**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRS	Narsarsuaq	9.53	329	Pn	Pn	13 02 35.4	0.0
IVI	Ivigtut	10.47	324	Pn	Pn	13 02 48.6	+0.2
BORG	Borgarnes	13.48	27	LR	LR	13 06 58.7	
	comp=Z,500nm,20.5s,baz=227,slow=30						
DY2G	Dye2	14.22	342	i P	P	13 03 47.2	-0.1
DRLN	Deer Lake	14.41	262	Pn	Pn	13 03 42.5	+0.2
ROSA	Rosais	15.43	159	Pn	Pn	13 03 55.6	-0.4
SFJD	Kangerlussuaq	15.58	337	Pn	Pn	13 03 58.9	+1.2
	0.6nm,0.3s,baz=134,slow=14,SNR=2.6						
SFJD				LR	LR	13 08 45.6	
	comp=Z,751nm,20.3s,baz=152,slow=33						
SFJD	Kangerlussuaq	15.58	337	P	Pn	13 03 59.2	+1.5
ICESG	Greenland Ices	15.93	354	i P	P	13 04 06.2	-0.1
ICESG				IAmb	IAmb	13 04 07.2	
	comp=Z,13nm,1.0s						
SCHQ	Schefferville	18.43	287	P	Pn	13 04 32.5	-1.2
	comp=Z,0.5nm,0.3s,baz=86,slow=13,SNR=4.7						
SCHQ				LR	LR	13 10 28.6	
	comp=Z,661nm,22.0s,baz=94,slow=33						
SCHQ	Schefferville	18.43	287		Pn	13 04 33.1	-0.6
GBN	Guysborough	18.70	255	P	P	13 04 36.2	-0.5
GBN				IAmb	IAmb	13 04 44.6	
	comp=Z,50nm,1.2s						
EKA	Eskdalemuir Ar	18.80	71	P	P	13 04 38.1	+0.4
	baz=285,slow=9.4,SNR=7.8						
SUMG	Summit	19.35	357	i P	Pn	13 04 49.2	+4.1
SUMG				IAmb	IAmb	13 04 50.6	
	comp=Z,10nm,0.8s						
SUMG	Summit	19.35	357	P	P	13 04 44.0	0.0
FRB	Frobisher Bay	19.95	315	LR	LR	13 10 57.3	
	comp=Z,916nm,18.4s,baz=110,slow=32						
BATG	Bathurst New B	20.41	265	P	P	13 04 54.4	-1.0
BATG				IAmb	IAmb	13 05 06.8	
	comp=Z,38nm,1.4s						
JMIC	Jan Mayen	21.35	24	LR	LR	13 11 01.4	
	comp=Z,612nm,21.2s,baz=228,slow=30						
PQI	Presque Isle	21.87	265	P	P	13 05 10.2	-0.9
PQI				IAmb	IAmb	13 05 38.6	
	comp=Z,71nm,1.5s						
GGN	Saint George	21.99	261	P	P	13 05 11.0	-1.3
GGN				IAmb	IAmb	13 05 20.1	
	comp=Z,67nm,1.4s						
D62A	Allapoint, All	22.29	267	P	P	13 05 13.8	-1.8
D62A				IAmb	IAmb	13 05 33.2	
	comp=Z,33nm,1.2s						
G65A	Princeton	22.37	262	P	P	13 05 14.8	-1.6
G65A				IAmb	IAmb	13 05 36.3	
	comp=Z,50nm,1.4s						
F64A	Sherman	22.48	264	P	P	13 05 17.2	-0.4
E62A	Clayton Lake	22.80	267	P	P	13 05 20.8	-0.2
E62A				IAmb	IAmb	13 05 41.8	
	comp=Z,53nm,1.4s						
PKME	Peaks-Kenny Pk	23.36	264	P	P	13 05 26.8	0.0
PKME				IAmb	IAmb	13 05 31.2	
	comp=Z,31nm,1.3s						
PKME	Peaks-Kenny Pk	23.36	264	P	P	13 05 27.3	+0.5
	baz=57						
F62A	Pittston Farm,	23.43	266	P	P	13 05 27.9	+0.4
F62A				IAmb	IAmb	13 05 49.3	
	comp=Z,46nm,1.4s						
NEEM	North Greenlan	24.88	352	e	P	13 05 31.3	-10
	baz=159,slow=11						
NEEM				i P	P	13 05 40.4	-0.6
NEEM				IAmb	IAmb	13 05 42.4	
	comp=Z,39nm,1.3s						
ESDC	Sonseca Array	25.33	110	P	P	13 05 45.8	+0.6
	comp=Z,2.6nm,0.8s,baz=313,slow=8.2,SNR=8.9						
ESDC				LR	LR	13 13 53.3	
	comp=Z,685nm,18.2s,baz=290,slow=32						
NC204	NORSAR Array S	25.65	54	P	P	13 05 49.0	+1.0
NOA	NORSAR Array B	25.89	54	P	P	13 05 50.0	-0.1
	comp=Z,1.3nm,0.9s,baz=275,slow=8.9,SNR=2.4						
NOA				LR	LR	13 14 31.7	
	comp=Z,309nm,19.6s,baz=275,slow=33						
TRQ	Mont Tremblant	26.01	270	P	P	13 05 53.0	+1.7
HRV	Adam Dziewonsk	26.28	260	P	P	13 05 54.4	+0.7
HRV	Adam Dziewonsk	26.28	260	P	P	13 05 54.5	+0.8
	baz=53						
TULEG	Thule	26.46	343	i P	P	13 05 54.5	-0.6
TULEG				IAmb	IAmb	13 05 57.8	
	comp=Z,9.7nm,1.0s						
TULEG	Thule	26.46	343	P	P	13 05 54.4	-0.6
TULEG				IAmb	IAmb	13 06 05.4	
	comp=Z,13nm,1.1s						
LONY	Lake Ozonia	26.87	267	P	P	13 06 00.2	+1.1
	baz=57						
HFS	Hagfors	27.20	56	LR	LR	13 15 01.0	
	comp=Z,424nm,20.5s,baz=282,slow=32						
STU	Stuttgart	28.03	81	P	P	13 06 06.8	-2.6
CART	Cartagena	28.45	110	P	P	13 06 11.8	-1.4
GRA1	Grafenberg Arr	28.82	78	P	P	13 06 16.9	+0.5
GRFO	Grafenberg	28.82	78	P	P	13 06 16.9	+0.5
BINY	Binghamton	29.09	264	P	P	13 06 18.7	-0.2
BINY				IAmb	IAmb	13 06 28.6	
	comp=Z,12nm,1.1s						
BINY	Binghamton	29.09	264	P	P	13 06 19.8	+0.9
	baz=53						
CLL	Collm	29.19	74	eP	P	13 06 21.0	+1.3
	comp=Z,7.0nm,1.0s						
CLL	Collm	29.19	74	P	P	13 06 19.6	-0.1
DAVOX	Davos/Dischmat	29.38	84	P	P	13 06 22.8	+1.2
	comp=Z,0.8nm,0.3s,baz=339,slow=8.6,SNR=3.1						
DAVOX				LR	LR	13 17 37.0	
	comp=Z,487nm,18.0s,baz=262,slow=35						
SADO	Sadowa	29.52	271	P	P	13 06 21.9	-0.8
	comp=Z,6.4nm,0.8s,baz=78,slow=8.9,SNR=3.4						
SADO				LR	LR	13 17 20.9	
	comp=Z,823nm,19.0s,baz=32,slow=35						
SADO	Sadowa	29.52	271	P	P	13 06 22.0	-0.7
SADO				IAmb	IAmb	13 06 30.2	
	comp=Z,18nm,1.3s						
N59A	State Game Lan	29.75	262	P	P	13 06 25.5	+0.7
N59A				IAmb	IAmb	13 06 33.1	
	comp=Z,27nm,1.4s						
GERES	GERESS Array B	30.65	78	P	P	13 06 35.1	+2.3
	comp=Z,0.6nm,0.5s,baz=299,slow=8.4,SNR=4.8						
GERES				LR	LR	13 18 32.9	
	comp=Z,476nm,18.1s,baz=310,slow=36						
GERES	GERESS Array B	30.65	78	P	P	13 06 33.0	+0.2
STAL	STALIGIAL	31.32	83	P	P	13 06 38.1	-0.5
SDMD	Soldier's Deli	31.33	261	P	P	13 06 38.3	-0.5
SDMD				IAmb	IAmb	13 06 40.9	
	comp=Z,10nm,1.4s						
EUNU	Eureka	31.39	345	P	P	13 06 38.4	-0.5
EUNU				IAmb	IAmb	13 06 41.0	
	comp=Z,9.5nm,1.3s						
RES	Resolute Bay	31.53	334	P	P	13 06 38.3	-1.8
	comp=Z,3.5nm,1.0s,baz=78,slow=11,SNR=3.7						
RES	Resolute Bay	31.53	334	P	P	13 06 39.7	-0.4
RES				IAmb	IAmb	13 06 54.6	
	comp=Z,15nm,1.4s						
ARCES	ARCESS Array B	31.59	36	LR	LR	13 17 33.1	
	comp=Z,51nm,20.4s,baz=290,slow=33						
O56A	Blue Knob Stat	31.81	263	P	P	13 06 42.9	-0.1
	baz=51						
FINES	FINESS Array B	32.91	51	P	P	13 06 52.0	-0.3
	comp=Z,3.3nm,1.0s,baz=297,slow=6.1,SNR=1.8						
FINES				LR	LR	13 18 41.7	
	comp=Z,433nm,20.1s,baz=264,slow=34						
O52A	Adamsville	33.86	266	P	P	13 07 01.3	+0.5
P53A	Whipple	33.99	265	P	P	13 07 02.6	+0.6
P52A	Corning	34.34	266	P	P	13 07 05.1	+0.1
P52A				IAmb	IAmb	13 07 13.0	
	comp=Z,13nm,0.8s						
P52A	Corning	34.34	266	P	P	13 07 05.4	+0.4
	baz=50						
ACSO	Alum Creek Sta	34.47	267	P	P	13 07 06.7	+0.5
	baz=51						
N49A	Columbus Grove	34.77	269	P	P	13 07 08.3	-0.4
N49A				IAmb	IAmb	13 07 16.3	
	comp=Z,14nm,0.8s						
P51A	Williamsport	34.99	266	P	P	13 07 11.5	+0.8
EYMN	Ely	35.20	284	P	P	13 07 11.8	-0.5
EYMN				IAmb	IAmb	13 07 19.8	
	comp=Z,8.7nm,0.8s						
EYMN	Ely	35.20	284	P	P	13 07 11.9	-0.5
	baz=60						
O49A	Covington	35.31	268	P	P	13 07 13.2	-0.2
O49A				IAmb	IAmb	13 07 19.6	
	comp=Z,14nm,1.0s						
Q51A	Peebles	35.45	266	P	P	13 07 13.6	-1.0
KEST	Kesra	35.72	101	P	P	13 07 15.5	-1.5
	comp=Z,4.4nm,0.8s,baz=323,slow=10,SNR=2.0						
KEST				LR	LR	13 19 54.7	
	comp=Z,321nm,20.0s,baz=272,slow=33						
B35A	Bob, Littlefor	36.28	286	P	P	13 07 21.3	-0.3
B35A				IAmb	IAmb	13 07 22.8	
	comp=Z,11nm,1.3s						
S51A	Beattyville	36.50	264	P	P	13 07 22.2	-1.4
R50A	Paris	36.52	266	P	P	13 07 23.9	+0.1
R50A				IAmb	IAmb	13 07 31.5	
	comp=Z,10nm,0.8s						
ULM	Lac du Bonnet	36.57	290	P	P	13 07 22.5	-1.6
	comp=Z,2.5nm,0.8s,baz=63,slow=7.0,SNR=3.5						
ULM				LR	LR	13 21 01.3	
	comp=Z,429nm,18.7s,baz=76,slow=34						
SFIN	Lafayette	36.85	271	P	P	13 07 24.9	-1.6
SFIN				IAmb	IAmb	13 07 34.1	
	comp=Z,11nm,1.0s						
SFIN	Lafayette	36.85	271	P	P	13 07 26.8	+0.2
	baz=52						
TZTN	Tazewell	37.20	263	P	P	13 07 30.3	+0.6
	baz=47						
P46A	Rosedale	37.39	270	P	P	13 07 28.7	-2.4
P46A				IAmb	IAmb	13 07 38.5	
	comp=Z,13nm,0.8s						
AGMN	Agassiz Nation	37.53	287	P	P	13 07 31.6	-0.7
	baz=59						
WCI	Wyandotte Cave	37.73	267	P	P	13 07 33.5	-0.6
WCI				IAmb	IAmb	13 07 41.6	
	comp=Z,12nm,0.8s						
WCI	Wyandotte Cave	37.73	267	P	P	13 07 33.9	-0.1
	baz=49						
BURAR	Bucovina Array	37.95	73	P	P	13 07 37.1	+1.1
HDIL	Hopedale	38.06	273	P	P	13 07 36.8	+0.1
	baz=52						
AKASG	Malin Array Be	38.63	67	P	P	13 07 41.0	-0.4
	comp=Z,0.5nm,0.5s,baz=298,slow=8.2,SNR=2.3						
AKASG				LR	LR	13 23 25.0	
	comp=Z,219nm,18.2s,baz=270,slow=36						
P43A	Skaggs, Pawnee	38.76	272	P	P	13 07 43.1	+0.4
P43A				IAmb	IAmb	13 07 50.1	
	comp=Z,21nm,1.0s						
Q44A	Meyer Farm, Va	38.93	270	P	P	13 07 39.0	-5.1
Q44A				IAmb	IAmb	13 07 51.5	
	comp=Z,17nm,0.8s						
GOGA	Godfrey	39.32	259	P	P	13 07 47.7	+0.3
	baz=45						
SWET	Sewanee	39.52	263	P	P	13 07 47.5	-1.7
V48A	Smith Brothers	39.70	265	P	P	13 07 51.6	+1.1
V48A				IAmb	IAmb	13 08 08.6	
	comp=Z,20nm,1.4s						
FPAL	Fort Paine	39.80	262	P	P	13 07 52.2	+0.8
SIUC	Southern Illin	39.82	269	P	P	13 07 52.1	+0.5
SIUC				IAmb	IAmb	13 07 53.7	
	comp=Z,22nm,0.9s						
S44A	Carbondale	39.85	269	P	P	13 07 52.1	+0.3
S44A				IAmb	IAmb	13 07 58.6	
	comp=Z,21nm,0.8s						
WVT	Waverly	40.04	266	P	P	13 07 53.4	0.0
	baz=48						
P40A	Paris	40.35	274	P	P	13 07 56.1	+0.1
FVM	French Village	40.37	270	P	P	13 07 56.3	+0.2
FVM				IAmb	IAmb	13 08 06.6	
	comp=Z,23nm,1.4s						
A36M	Sachs Harbour	40.45	331	P	P	13 07 55.8	-0.5
A36M	Sachs Harbour	40.45	331	P	P	13 07 56.2	-0.1
	baz=68,SNR=5.7						
YKA	Yellowknife Ar	40.46	315	LR	LR	13 23 16.7	
	comp=Z,273nm,18.4s,baz=0.0,slow=34						
ECSD	EROS Data Cent	40.50	282	P	P	13 07 57.2	+0.1
ECSD	EROS Data Cent	40.50	282	P	P	13 07 57.2	+0.1
	baz=54,SNR=5.7						
Y49A	Blount Mountai	40.75	262	P	P	13 07 59.8	+0.5
PBMO	Poplar Bluff	41.16	269	P	P	13 08 03.0	+0.3
PBMO				IAmb	IAmb	13 08 04.5	
	comp=Z,9.3nm,0.8s						
P38A	Dawn	41.17	275	P	P	13 08 03.1	+0.4
P38A				IAmb	IAmb	13 08 12.9	
	comp=Z,21nm,1.4s						
E28A	Huff	41.23	288	P	P	13 08 03.1	-0.1
R40A	Maddies Statio	41.27	272	P	P	13 08 03.8	+0.3
T42A	Van Buren	41.39	270	P	P	13 08 04.8	+0.3
MGMO	Mountain Grove	42.02	271	P	P	13 08 10.1	+0.3
LCAR	Lake Charles	42.07	269	P	P	13 08 10.1	0.0
OXF	Oxford	42.08	266	P	P	13 08 09.4	-0.9
OXF	Oxford	42.08	266	P	P	13 08 09.9	-0.3
	baz=46						
Z47A	Carrollton	42.20	263	P	P	13 08 11.6	+0.5
Z47A				IAmb	IAmb	13 08 18.9	
	comp=Z,17nm,0.8s						
060A	Indiantown	42.26	250	P	P	13 08 13.3	+1.6
S39A	Bolivar	42.29	272	P	P	13 08 12.2	+0.3
S39A				IAmb	IAmb	13 08 19.1	
	comp=Z,9.0nm,0.8s						
Y45A	Yeager Farm, C	42.61	265	P	P	13 08 13.6	-0.9
Y45A				IAmb	IAmb	13 08 21.2	
	comp=Z,18nm,0.8s						
FCAR	Ozark Folk Cen	42.77	269	P	P	13 08 14.7	-1.1
U40A	Yellville	42.90	271	P	P	13 08 16.6	-0.3
U40A	Yellville	42.90	271	P	P	13 08 17.2	+0.3
	baz=48,SNR=5.8						
BRAL	Brewton	43.04	260	P	P	13 08 18.1	+0.1
	baz=43						
146A	Union	43.18	263	P	P	13 08 18.6	-0.6
WHAR	Wooly Hollow	43.27	269	P	P	13 08 19.5	-0.4
WHAR				IAmb	IAmb	13 08 37.4	
	comp=Z,24nm,1.5s						
W41B	Gary Mavity, V	43.33	269	P	P	13 08 20.0	-0.3
	baz=47						
KSU1	Kansas State U	43.34	276	P	P	13 08 20.4	0.0
KSU1				IAmb	IAmb	13 08 30.6	
	comp=Z,23nm,1.2s						
KSU1	Kansas State U	43.34	276	P	P	13 08 19.9	-0.5
	baz=50						
HHAR	Hobbs	43.60	271	P	P	13 08 22.5	0.0
HHAR				IAmb	IAmb	13 08 24.0	
	comp=Z,16nm,1.2s						
WRGLY	Wrigley	43.73	319	P	P	13 08 22.5	-0.7
	baz=60						
W39A	Magazine	44.24	270	P	P	13 08 27.9	+0.2
W39A	Magazine	44.24	270	P	P	13 08 27.9	+0.2
	baz=47,SNR=5.6						
LAO	LASA Array	44.28	291	P	P	13 08 28.5	+0.6
LAO				IAmb	IAmb	13 08 39.2	
	comp=Z,11nm,0.9s						
VBMS	Vicksburg	44.35	264	P	P	13 08 28.6	+0.1
	baz=44						
MIAR	Mount Ida	44.55	269	P	P	13 08 30.5	+0.3
MIAR				IAmb	IAmb	13 08 32.2	
	comp=Z,18nm,1.2s						
MIAR	Mount Ida	44.55	269	P	P	13 08 30.1	-0.1
	baz=46,SNR=6.5						
INK	Inuvik	44.66	328	P	P	13 08 29.8	-0.8
INK				IAmb	IAmb	13 08 36.0	
	comp=Z,12nm,1.4s						
INK	Inuvik	44.66	328	P	P	13 08 29.6	-0.9
	baz=58						
WLAR	White Oak Lake	44.87	268	P	P	13 08 32.8	+0.1
TUL1	Leonard	44.96	272	P	P	13 08 32.8	-0.6
TUL1				IAmb	IAmb	13 08 34.6	
	comp=Z,12nm,1.0s						
TUL1	Leonard	44.96	272	P	P	13 08 33.0	-0.4
	baz=47						
EGMT	Eagleton	45.45	295	P	P	13 08 36.9	-0.4
	baz=54						
OKCFA	Oklahoma City	46.28	273	P	P	13 08 44.2	+0.3
K22A	Casper	46.91	287	P	P	13 08 48.1	-0.8
K22A				IAmb	IAmb	13 09 02.0	
	comp=Z,13nm,1.1s						
K22A	Casper	46.91	287	P	P	13 08 48.7	-0.2
	baz=51						
RLMT	Red Lodge	46.92	291	P	P	13 08 47.2	-1.8
	baz=52						
MMPY	Sheldon Lake,	47.06	321	P	P	13 08 48.0	-1.8
	baz=54						
WALA	Waterton Lakes	47.06	298	P	P	13 08 48.6	-1.5
WALA				IAmb	IAmb	13 08 51.0	
	comp=Z,7.2nm,1.1s						
BRTR	Keskin Array B	47.54	77	P	P	13 08 54.6	+0.7
	comp=Z,1.7nm,0.8s,baz=345,slow=10,SNR=5.7						
BRTR				LR	LR	13 30 24.4	
	comp=Z,354nm,18.2s,baz=308,slow=38						
BRTR	Keskin Array B	47.54	77	P	P	13 08 53.0	-0.9
WMOK	Wichita Mounta	47.54	274	P	P	13 08 52.6	-1.2
WMOK				IAmb	IAmb	13 08 55.5	
	comp=Z,14nm,1.4s						
WMOK	Wichita Mounta	47.54	274	P	P	13 08 53.6	-0.2
	baz=46,SNR=5.3						
N23A	Red Feather La	47.69	285	P	P	13 08 55.6	+0.4
	baz=50,SNR=6.6						
I29M	Ogilvie Camp,	47.91	327	P	P	13 08 55.9	-0.3
	baz=52,SNR=9.8						
RWWY	Rawlins	47.91	286	P	P	13 08 56.3	-0.6
BOZ	Bozeman (W)	47.94	293	P	P	13 08 56.9	0.0
	baz=52,SNR=5.2						
ISCO	Idaho Springs	48.21	283	P	P	13 08 59.0	-0.2
ISCO				IAmb	IAmb	13 09 21.2	
	comp=Z,7.4nm,1.3s						
ISCO	Idaho Springs	48.21	283	P	P	13 08 59.2	-0.1
	baz=49,SNR=5.2						
LRM	Limekiln Ridge	48.25	294	P	P	13 08 59.4	0.0
J29M	Klondike Camp	48.44	326	P	P	13 08 59.6	-0.8
	baz=51						
M31M	Drury Creek, Y	48.48	322	P	P	13 09 00.6	-0.2
	baz=52						
BMAR	Burnt Mountain	48.54	331	P	P	13 09 01.3	+0.2
PD31	Pinedale Array	48.56	289	P	P	13 09 00.8	-1.0
PDAR	Pinedale Array	48.56	289	P	P	13 09 01.6	-0.3
	comp=Z,1.3nm,0.7s,baz=66,slow=7.5,SNR=12						
PDAR				LR	LR	13 28 18.7	
	comp=Z,306nm,19.2s,baz=53,slow=35						
PDAR	Pinedale Array	48.56	289	P	P	13 09 00.7	-1.2
BW06	Boulder Array	48.56	289	P	P	13 09 00.6	-1.3
BW06	Boulder Array	48.56	289	P	P	13 09 01.2	-0.7
	baz=50						
WHTX	Lake Whitney,	48.66	270	P	P	13 09 02.7	+0.2
	baz=45						
FXWY	Fox Creek	48.83	291	P	P	13 09 02.7	-1.2
DAWY	Dawson	49.09	326	P	P	13 09 03.7	-1.7
DAWY	Dawson	49.09	326	P	P	13 09 05.1	-0.2
	baz=50,SNR=7.7						
P33M	Teslin, Yukon	49.11	319	P	P	13 09 04.9	-0.7
	baz=52						
TOLK	Toolik Lake Re	49.11	334	P	P	13 09 05.6	+0.2
TOLK				IAmb	IAmb	13 09 08.7	
	comp=Z,7.3nm,1.1s						
TOLK	Toolik Lake Re	49.11	334	P	P	13 09 04.7	-0.8
	baz=46						
M30M	Minto, Yukon	49.13	323	P	P	13 09 05.4	-0.3
	baz=51						
HKT	Hockley	49.15	267	P	P	13 09 05.2	-0.9
HKT				IAmb	IAmb	13 09 13.1	
	comp=Z,7.1nm,1.1s						
AMTX	Amarillo	49.17	276	P	P	13 09 07.2	+0.7
	baz=46						
EGAK	Eagle	49.21	327	P	P	13 09 06.0	-0.3
	baz=50						
NEW	Newport	49.24	299	P	P	13 09 06.8	+0.1
	baz=52						
T25A	Trinidad	49.26	280	P	P	13 09 07.8	+0.5
	baz=48						
SDCO	Great Sand Dun	49.50	281	P	P	13 09 09.2	0.0
	baz=48						
O20A	White River Ci	49.51	286	P	P	13 09 09.6	+0.5
	baz=49						
WHY	Whitehorse	49.63	320	P	P	13 09 09.3	-0.3
	baz=51						
TORD	Torodi Ar. Bea	49.69	130	P	P	13 09 10.2	-0.3
	comp=Z,2.3nm,0.9s,baz=330,slow=8.0,SNR=10						
TORD				LR	LR	13 28 18.5	
	comp=Z,181nm,18.5s,baz=310,slow=34						
TORD	Torodi Ar. Bea	49.69	130	P	P	13 09 10.2	-0.3
TORD				IAmb	IAmb	13 09 20.0	
	comp=Z,11nm,1.4s						
RDMU	Red Mountain	49.99	287	P	P	13 09 13.5	+0.7
RDMU				IAmb	IAmb	13 09 14.3	
	comp=Z,7.3nm,1.0s						
J26L	Joseph Creek	50.17	328	P	P	13 09 13.6	-0.1
	baz=48,SNR=5.6						
KBZ	Khabaz	50.24	67	LR	LR	13 31 42.6	
	comp=Z,191nm,18.9s,baz=315,slow=38						
COLD	Coldfoot	50.27	333	P	P	13 09 14.3	0.0
	baz=45						
B08A	Colville Reser	50.33	300	P	P	13 09 15.2	+0.2
B08A				IAmb	IAmb	13 09 16.3	
	comp=Z,9.9nm,1.1s						
MSTX	Muleshoe	50.46	276	P	P	13 09 16.2	0.0
MSTX	Muleshoe	50.46	276	P	P	13 09 17.0	+0.7
	baz=46						
HYT	Haines Junctio	50.51	322	P	P	13 09 16.7	+0.4
HYT				IAmb	IAmb	13 09 18.8	
	comp=Z,14nm,1.1s						
HYT	Haines Junctio	50.51	322	P	P	13 09 16.0	-0.3
	baz=49						
BCAR	Beaver Creek A	50.55	326	P	P	13 09 16.6	+0.1
L27K	Beaver Creek,	50.57	326	P	P	13 09 16.6	-0.1
L27K				IAmb	IAmb	13 09 18.4	
	comp=Z,6.6nm,1.0s						
L27K	Beaver Creek,	50.57	326	P	P	13 09 16.5	-0.1
	baz=48,SNR=6.2						
H24K	Noodor Dome	50.59	331	P	P	13 09 16.5	-0.3
	baz=46						
YUK4	Talbot Arm	50.59	323	P	P	13 09 16.3	-0.7
	baz=49						
PLID	Pearl Lake	50.65	295	P	P	13 09 17.7	0.0
PLID				IAmb	IAmb	13 09 27.6	
	comp=Z,11nm,1.3s						
SCRK	Sand Creek	50.67	327	P	P	13 09 17.9	+0.4
SCRK	Sand Creek	50.67	327	P	P	13 09 17.6	+0.1
	baz=47,SNR=15						
BVCY	Beaver Creek	50.67	325	P	P	13 09 17.3	-0.1
	baz=48,SNR=6.2						
J25K	Salcha River,	50.67	328	P	P	13 09 17.5	+0.1
	baz=47,SNR=6.0						
TCUT	Toone Canyon	50.68	289	P	P	13 09 17.5	-0.6
TCUT				IAmb	IAmb	13 09 28.1	
	comp=Z,13nm,1.2s						
NRIK	Noril'sk	50.77	23	P	P	13 09 17.8	-0.1
HLID	Hailey	50.77	293	P	P	13 09 19.1	+0.5
HLID	Hailey	50.77	293	P	P	13 09 19.2	+0.7
	baz=49						
DOT	Dot Lake	50.92	327	P	P	13 09 20.0	+0.8
DOT				IAmb	IAmb	13 09 21.3	
	comp=Z,7.2nm,1.0s						
YUK3	Moose Creek	50.96	324	P	P	13 09 18.6	-1.2
	baz=48						
POKR	Poker Plat Res	50.96	330	P	P	13 09 19.1	-0.4
POKR				IAmb	IAmb	13 09 22.4	
	comp=Z,14nm,1.1s						
POKR	Poker Plat Res	50.96	330	P	P	13 09 19.4	-0.1
	baz=46						
HVU	Hansel Valley	51.02	290	P	P	13 09 18.4	-2.1
IL31		51.03	329	P	P	13 09 19.5	-0.5
ILAR	Eielson Array	51.03	329	P	P	13 09 20.9	+0.9
	comp=Z,3.1nm,0.9s,baz=41,slow=5.6,SNR=23						
ILAR				LR	LR	13 29 22.3	
	comp=Z,123nm,21.8s,baz=84,slow=34						
ILAR	Eielson Array	51.03	329	P	P	13 09 19.7	-0.4
PV12	Saucer Basin,	51.05	284	P	P	13 09 20.7	-0.1
PV12				IAmb	IAmb	13 09 35.1	
	comp=Z,21nm,1.4s						
PV04	Paradox Valley	51.05	284	P	P	13 09 21.6	+0.8
PV04				IAmb	IAmb	13 09 31.9	
	comp=Z,13nm,1.4s						
M27K	Edge Creek, AK	51.06	325	P	P	13 09 19.2	-1.3
	baz=48						
H23K	Yukon River	51.08	331	P	P	13 09 20.0	-0.5
H23K				IAmb	IAmb	13 09 22.0	
	comp=Z,8.4nm,1.2s						

H23K	Yukon River	51.08	331	P	P	13 09 20.3	-0.1
	baz=45,SNR=5.0						
PV02	Paradox Valley	51.08	284	P	P	13 09 21.8	+0.7
PV02				IAmb	IAmb	13 09 22.9	
	comp=Z,7.7nm,1.0s						
PV11	David Mesa, Pa	51.10	284	P	P	13 09 21.6	+0.5
PV11				IAmb	IAmb	13 09 26.0	
	comp=Z,7.6nm,0.8s						
L26K	Log Cabin Wild	51.11	326	P	P	13 09 20.0	-0.7
	baz=47						
RIDG	Independent Ri	51.11	327	P	P	13 09 20.0	-0.7
	baz=46						
PV03	Paradox Valley	51.12	284	P	P	13 09 21.4	+0.1
PV03				IAmb	IAmb	13 09 23.6	
	comp=Z,7.9nm,1.1s						
PV16	Nyswonger Mesa	51.12	284	P	P	13 09 21.3	0.0
PV16				IAmb	IAmb	13 09 23.0	
	comp=Z,6.2nm,0.8s						
PV20	West Nyswonger	51.12	284	P	P	13 09 20.9	-0.5
PV20				IAmb	IAmb	13 09 43.2	
	comp=Z,13nm,1.3s						
PV14	Lion Creek, Pa	51.14	284	P	P	13 09 21.0	-0.5
PV14				IAmb	IAmb	13 09 26.7	
	comp=Z,7.8nm,1.1s						
JCT	Junction City	51.14	270	P	P	13 09 21.0	-0.4
JCT				IAmb	IAmb	13 09 22.4	
	comp=Z,12nm,1.1s						
JCT	Junction City	51.14	270	P	P	13 09 21.5	+0.1
	baz=44						
PV10	Paradox Valley	51.14	284	P	P	13 09 21.8	+0.2
PV18	Skein Mesa, Pa	51.16	284	P	P	13 09 21.4	-0.2
PV18				IAmb	IAmb	13 09 23.8	
	comp=Z,10nm,1.0s						
PV19	Morning Glory	51.16	284	P	P	13 09 21.6	0.0
PV19				IAmb	IAmb	13 09 43.5	
	comp=Z,14nm,1.3s						
PV17	East Wray Mesa	51.16	284	P	P	13 09 22.1	+0.4
PV17				IAmb	IAmb	13 09 23.3	
	comp=Z,8.2nm,0.8s						
PV13	Radium Mtn., P	51.16	284	P	P	13 09 22.0	+0.3
PV13				IAmb	IAmb	13 09 24.1	
	comp=Z,8.7nm,1.1s						
COLA	College	51.26	330	P	P	13 09 21.6	-0.1
	baz=45						
TCOL	CIGO, UAF Yank	51.26	330	P	P	13 09 21.3	-0.4
	baz=45						
HDA	Harding Lake	51.31	329	P	P	13 09 21.6	-0.6
HDA				IAmb	IAmb	13 09 23.8	
	comp=Z,10.0nm,1.0s						
HDA	Harding Lake	51.31	329	P	P	13 09 21.8	-0.3
	baz=46,SNR=6.9						
MDM	Murphy Dome	51.31	330	P	P	13 09 22.2	+0.1
MDM				IAmb	IAmb	13 09 24.0	
	comp=Z,9.6nm,1.2s						
PV05	Paradox Valley	51.38	284	P	P	13 09 22.3	-1.0
PV05				IAmb	IAmb	13 09 44.4	
	comp=Z,16nm,1.4s						
CCB	Clear Creek Bu	51.40	329	P	P	13 09 22.5	-0.3
CCB				IAmb	IAmb	13 09 23.8	
	comp=Z,9.3nm,1.3s						
SRU	San Rafael Swe	51.51	286	P	P	13 09 23.4	-0.8
I23K	Minto, Yukon-K	51.51	330	P	P	13 09 24.3	+0.7
I23K				IAmb	IAmb	13 09 51.3	
	comp=Z,15nm,1.4s						
I23K	Minto, Yukon-K	51.51	330	P	P	13 09 23.8	+0.2
	baz=44						
WRH	Wood River Hil	51.62	329	P	P	13 09 23.1	-1.3
WRH				IAmb	IAmb	13 09 26.0	
	comp=Z,7.7nm,1.0s						
MVCO	Mesa Verde	51.62	283	P	P	13 09 24.9	-0.2
MVCO				IAmb	IAmb	13 09 47.5	
	comp=Z,11nm,1.4s						
MVCO	Mesa Verde	51.62	283	P	P	13 09 25.9	+0.8
	baz=47						
A04D	Lummi Island	51.82	303	P	P	13 09 26.4	+0.3
	baz=50						
NEA2	Nenana	51.83	330	P	P	13 09 25.4	-0.6
NEA2				IAmb	IAmb	13 09 27.9	
	comp=Z,13nm,1.2s						
NEA2	Nenana	51.83	330	P	P	13 09 26.5	+0.5
	baz=44						
NLU	North Lily Min	51.83	288	P	P	13 09 25.1	-1.5
PAX	Paxson	51.85	327	P	P	13 09 26.9	+0.6
PAX				IAmb	IAmb	13 09 28.4	
	comp=Z,13nm,1.2s						
PAX	Paxson	51.85	327	P	P	13 09 26.5	+0.3
	baz=46						
ANMO	Albuquerque	51.97	279	P	P	13 09 26.1	-1.7
ANMO	Albuquerque	51.97	279	P	P	13 09 28.7	+1.0
	baz=46						
MLY	Manley	52.00	331	P	P	13 09 27.4	+0.1
	baz=43						
PINM	Pinnacle	52.02	322	P	P	13 09 27.9	+0.3
	baz=47						
DUG	Dugway, Tooele	52.09	289	P	P	13 09 28.8	+0.3
DUG	Dugway, Tooele	52.09	289	P	P	13 09 29.3	+0.8
	baz=48						
MCARA	McCarthy VSAT	52.12	324	P	P	13 09 28.5	+0.3
	baz=46						
H21K	Melozitna Rive	52.13	332	P	P	13 09 27.9	-0.3
H21K	Melozitna Rive	52.13	332	P	P	13 09 28.4	+0.1
	baz=42						
HARP	HAARP	52.14	326	P	P	13 09 28.9	+0.5
	baz=46						
SIT	Sitka	52.14	317	P	P	13 09 29.4	+1.0
	baz=48						
IMAR	Indian Mountai	52.15	333	P	P	13 09 27.9	-0.5
BWN	Browne	52.25	330	P	P	13 09 26.1	-3.1
I21K	Tanana	52.25	331	P	P	13 09 29.4	+0.3
	baz=43						
MCK	McKinley	52.41	329	P	P	13 09 30.1	-0.2
MCK				IAmb	IAmb	13 09 32.0	
	comp=Z,15nm,1.0s						
MCK	McKinley	52.41	329	P	P	13 09 30.3	0.0
	baz=44,SNR=6.5						
TGL	Tana Glacier	52.49	324	P	P	13 09 30.8	-0.4
N25K	Chitina, Valde	52.51	325	P	P	13 09 31.5	+0.3
	baz=46						
CRQE	Cirque	52.59	324	P	P	13 09 31.9	0.0
	baz=46,SNR=5.1						
CRQM	Cirque	52.60	324	P	P	13 09 31.7	-0.3
RND	Reindeer	52.62	329	P	P	13 09 31.9	-0.1
RND				IAmb	IAmb	13 09 33.3	
	comp=Z,11nm,1.0s						
BNM	Barren Site	52.62	279	P	P	13 09 33.7	+1.0
SDV	Santo Domingo	52.65	226	LR	LR	13 28 52.8	
	comp=Z,79nm,21.9s,baz=43,slow=33						
M24K	Tolsona, Glenn	52.69	326	P	P	13 09 32.8	+0.3
	baz=45						
DBIC	Dimbokro	52.74	141	LR	LR	13 29 04.7	
	comp=Z,288nm,19.9s,baz=2.5,slow=33						
BPAW	Bear Paw Mtn.	52.76	330	P	P	13 09 33.2	+0.2
	baz=43						
MSU	Marysvale	52.87	287	P	P	13 09 34.7	+0.4
BMRM	Bremner River	52.97	325	P	P	13 09 34.5	0.0
	baz=45						
TRF	Thorofare Moun	53.03	329	P	P	13 09 34.7	-0.4
	baz=43,SNR=5.2						
F05D	White Salmon	53.04	299	P	P	13 09 35.2	0.0
	baz=48						
KLU	Klutina	53.04	326	P	P	13 09 34.5	-0.7
KLU				IAmb	IAmb	13 09 36.1	
	comp=Z,13nm,1.2s						
KLU	Klutina	53.04	326	P	P	13 09 35.0	-0.2
	baz=45						
ELK	Elko	53.09	291	P	P	13 09 36.9	+0.9
SCM	Sheep Creek Mo	53.27	327	P	P	13 09 36.8	+0.1
SCM	Sheep Creek Mo	53.27	327	P	P	13 09 37.0	+0.3
	baz=44						
CHUM	Lake Minchumin	53.31	331	P	P	13 09 37.0	0.0
	baz=42						
G05D	Wamic, OR	53.39	299	P	P	13 09 38.6	+0.8
	baz=48						
MNTX	Cornudas Mount	53.61	276	P	P	13 09 39.5	-0.2
MNTX	Cornudas Mount	53.61	276	P	P	13 09 40.1	+0.4
	baz=44						
SML	Sawmill	53.61	327	P	P	13 09 38.8	-0.5
SML	Sawmill	53.61	327	P	P	13 09 38.9	-0.4
	baz=43,SNR=5.4						
J20K	Nowinta River	53.62	332	P	P	13 09 38.8	-0.4
J20K	Nowinta River	53.62	332	P	P	13 09 39.1	-0.2
	baz=41						
KAIM	Kayak Island	53.64	324	P	P	13 09 39.6	+0.2
	baz=45						
EYAK	Cordova Ski Ar	53.66	325	P	P	13 09 39.1	-0.5
	baz=44						
W18A	Petrified Fore	53.78	282	P	P	13 09 41.5	+0.4
	baz=46						
CUT	Chulitna	53.79	328	P	P	13 09 40.8	+0.3
	baz=42						
GHO	Glory Hole Cre	53.83	327	P	P	13 09 39.8	-1.1
GLI	Glacier Island	53.88	326	P	P	13 09 41.4	+0.2
	baz=44						
KNK	Knik Glacier	53.94	327	P	P	13 09 42.2	+0.5
KNK	Knik Glacier	53.94	327	P	P	13 09 42.0	+0.3
	baz=43,SNR=6.0						
I05D	Terrebonne, OR	54.01	298	P	P	13 09 43.0	+0.5
	baz=48						
PMR	Palmer	54.03	327	P	P	13 09 42.7	+0.4
PMR				IAmb	IAmb	13 09 44.3	
	comp=Z,12nm,1.0s						
PMR	Palmer	54.03	327	P	P	13 09 42.4	+0.2
	baz=43						
PINE	Pine Mountain	54.16	297	P	P	13 09 44.5	+0.7
K20K	Telida	54.23	331	P	P	13 09 43.9	+0.2
K20K				IAmb	IAmb	13 09 45.2	
	comp=Z,10nm,1.1s						
K20K	Telida	54.23	331	P	P	13 09 44.1	+0.4
	baz=40						
M22K	Willow	54.23	328	P	P	13 09 44.3	+0.6
	baz=42						
TX31	Lajitas Ar. Si	54.29	272	P	P	13 09 43.4	-1.3
TX32	Lajitas Array	54.29	272	P	P	13 09 43.6	-1.1
TX32				IAmb	IAmb	13 09 46.6	
	comp=Z,8.1nm,1.4s						
TXAR	Lajitas Array	54.29	272	P	P	13 09 45.0	+0.3
	comp=Z,0.8nm,0.7s,baz=55,slow=8.2,SNR=12						
TXAR				LR	LR	13 32 23.7	
	comp=Z,312nm,18.8s,baz=0.0,slow=36						
TXAR	Lajitas Array	54.29	272	P	P	13 09 43.4	-1.4
PWL	Port Wells	54.31	326	P	P	13 09 43.9	-0.4
PWL	Port Wells	54.31	326	P	P	13 09 44.8	+0.4
	baz=43						
121A	Cookes Peak, D	54.45	278	P	P	13 09 46.9	+1.0
	baz=44						
WUAZ	Wupatki	54.46	283	P	P	13 09 44.2	-1.8
WUAZ	Wupatki	54.46	283	P	P	13 09 47.1	+1.1
	baz=46						
SKT	Skwentna	54.51	329	P	P	13 09 43.2	-2.6
SKT	Skwentna	54.51	329	P	P	13 09 45.9	+0.1
	baz=41						
RC01	Rabbit Creek A	54.60	327	P	P	13 09 46.4	0.0
RC01	Rabbit Creek A	54.60	327	P	P	13 09 47.0	+0.6
	baz=42						
SUA	Susitna One	54.65	328	P	P	13 09 47.1	+0.2
SUA	Susitna One	54.65	328	P	P	13 09 47.3	+0.4
	baz=42						
J05D	Fort Rock, OR	54.66	297	P	P	13 09 48.3	+1.0
	baz=47						
TIXI	Tiksi	54.81	6	P	P	13 09 47.6	-0.2
TIXI				IAmb	IAmb	13 09 49.8	
	comp=Z,9.4nm,1.0s						
L20K	Farewell, AK	54.84	330	P	P	13 09 48.1	-0.2
	baz=40						
R11A	Troy Canyon, C	54.92	289	P	P	13 09 49.2	-0.1
	baz=46						
I04A	Tendick Farm,	54.94	298	P	P	13 09 47.8	-1.4
	baz=47						
O22K	Cooper Landing	55.05	327	P	P	13 09 49.3	-0.4
	baz=42						
TTA	Tatalina	55.12	331	P	P	13 09 50.6	+0.3
	baz=39						
SEW	Seward	55.24	326	P	P	13 09 51.1	+0.1
	baz=42						
X16A	Lo Mia Camp, P	55.27	283	P	P	13 09 50.9	-1.0
SPU	Mount Spurr	55.27	328	P	P	13 09 50.6	-0.7
CAPN	Captain Cook N	55.30	327	P	P	13 09 51.5	+0.1
	baz=41						
SPCR	Spurr Chakacha	55.31	328	P	P	13 09 51.4	-0.2
	baz=40						
ABKAR	Akbulak array	55.38	52	P	P	13 09 51.7	-0.5
KVN	Kaiserville	55.85	291	P	P	13 09 56.4	+0.4
KVN				IAmb	IAmb	13 10 07.1	
	comp=Z,10nm,1.4s						
BRSE	Bradley Lake S	55.94	326	P	P	13 09 56.1	0.0
	baz=41						
M04C	Macdoel	56.02	296	P	P	13 09 57.0	-0.1
	baz=46						
TPH	Tonopah	56.04	290	P	P	13 09 57.1	-0.3
PAHR	Pah Rah Range	56.11	292	P	P	13 09 57.1	-0.7
PAHR				IAmb	IAmb	13 10 00.3	
	comp=Z,15nm,1.4s						
NV11	Mina Array Sit	56.32	291	P	P	13 09 59.4	+0.1
NV11				IAmb	IAmb	13 10 12.5	
	comp=Z,7.6nm,1.4s						
TUC	Tucson	56.38	280	P	P	13 10 00.3	+0.5
TUC	Tucson	56.38	280	P	P	13 10 00.2	+0.5
	baz=44						
NVAR	Mina Array Bea	56.40	291	P	P	13 09 58.9	-1.1
	comp=Z,0.3nm,0.7s,baz=82,slow=9.4,SNR=4.1						
NVAR				LR	LR	13 33 18.5	
	comp=Z,326nm,18.3s,baz=60,slow=35						
O19K	Port Alsworth	56.75	328	P	P	13 10 01.2	-0.6
	baz=39						
GRAC	Grapevine Rang	56.88	289	P	P	13 10 03.4	+0.2
	baz=45						
FURC	Furnace Creek,	56.96	288	P	P	13 10 03.2	-0.5
	baz=45						
O03E	Paynes Creek	57.03	295	P	P	13 10 03.2	-1.1
	baz=45						
GWY	Greenwater Val	57.05	288	P	P	13 10 04.1	-0.4
GWY				IAmb	IAmb	13 10 06.9	
	comp=Z,7.3nm,1.2s						
Q19K	Cape Douglas,	57.52	327	P	P	13 10 06.4	-1.0
	baz=39						
PTGA	Pitinga	57.65	210	LR	LR	13 30 12.9	
	comp=Z,91nm,21.6s,baz=92,slow=31						
GSC	Goldstone, Bar	57.76	287	P	P	13 10 09.4	0.0
	baz=44						
113A	Mohawk Valley,	57.81	283	P	P	13 10 10.3	+0.6
HEC	Hector,Ludlow	57.82	286	P	P	13 10 09.6	-0.4
	baz=44						
214A	Organ Pipe Nat	57.83	281	P	P	13 10 09.8	-0.2
214A	Organ Pipe Nat	57.83	281	P	P	13 10 10.5	+0.5
	baz=44						
ROSC	El Rosal	57.87	228	P	P	13 10 12.2	+1.5
	comp=Z,13nm,0.6s,baz=167,slow=3.5,SNR=11						
ROSC				LR	LR	13 36 08.1	
	comp=Z,59nm,19.3s,baz=68,slow=37						
ROSC	El Rosal	57.87	228	P	P	13 10 11.6	+0.8
BC3	Big Chuckawall	58.15	285	P	P	13 10 12.6	+0.3
	baz=44						
ISA	Isabella, Lake	58.45	288	P	P	13 10 14.9	+0.6
	baz=44						
BBRC	Big Bear Solar	58.57	286	P	P	13 10 16.4	+1.1
	baz=44						
EDW2	Edwards Air Fo	58.74	287	P	P	13 10 17.0	+0.7
	baz=44						
PFO	Pinyon Flats O	58.77	285	P	P	13 10 17.3	+0.6
	baz=44						
TPFO	Pinon Flats	58.77	285	P	P	13 10 17.4	+0.8
	baz=44						
HSIG		58.86	278	P	P	13 10 17.4	+0.2
MONP2	Monument Peak	59.26	285	P	P	13 10 21.3	+1.1
	baz=43						
CHIR	Chirikof Islan	60.64	326	P	P	13 10 27.9	-1.1
	baz=36						
SNCC	San Nicolas Is	60.79	287	P	P	13 10 29.3	-1.1
SNCC	San Nicolas Is	60.79	287	P	P	13 10 29.6	-0.8
	baz=43						
ZALV	Zalesovo Beam	62.14	35	P	P	13 10 38.7	-0.5
	comp=Z,1.1nm,0.7s,baz=324,slow=6.9,SNR=5.3						
SAML	Samuel	66.40	210	P	P	13 11 07.0	-0.5
MKAR	Makanchi Array	67.03	41	P	P	13 11 11.2	-0.1
	comp=Z,1.7nm,0.7s,baz=329,slow=6.1,SNR=9.5						
CHGR	Chuyangaron	67.66	55	P	P	13 11 15.6	0.0
CHGR				IAmb	IAmb	13 11 16.8	
	comp=Z,4.8nm,0.6s						
GAR	Garm	67.96	54	P	P	13 11 17.4	0.0
BDFB	Brasilia	69.56	193	P	P	13 11 27.9	+0.5
	comp=Z,2.3nm,0.6s,baz=23,slow=3.7,SNR=3.9						
KSH	Kashi	70.22	50	P	P	13 11 33.2	+1.7
KSH				pmax	pmax		
	comp=Z,10.0nm,1.3s						
ATAH	Atahualpa	70.35	226	LR	LR	13 42 46.7	
	comp=Z,52nm,18.8s,baz=23,slow=36						
WMQ	Urumqi	71.62	40	*e*P	P	13 11 42.3	+2.5
SONM	Songino Array	74.09	26	P	P	13 11 55.1	+0.6
	comp=Z,1.9nm,0.7s,baz=329,slow=6.4,SNR=8.1						
SONM	Songino Array	74.09	26	P	P	13 11 53.3	-1.2
LPAZ	La Paz	74.86	213	P	P	13 12 00.8	+1.1
	comp=Z,4.6nm,1.1s,baz=23,slow=8.3,SNR=9.2						
LPAZ	La Paz	74.86	213	P	P	13 11 59.6	-0.1
LPAZ				IAmb	IAmb	13 12 01.7	
	comp=Z,17nm,1.5s						
KMBO	Kilima Mbogo	80.60	105	LR	LR	13 48 59.1	
	comp=Z,83nm,18.4s,baz=289,slow=36						
CPUP	Villa Florida	81.60	200	P	P	13 12 36.1	+0.1
	comp=Z,5.4nm,1.1s,baz=27,slow=2.3,SNR=3.4						
CPUP	Villa Florida	81.60	200	IAmb	IAmb	13 12 38.9	
	comp=Z,5.0nm,1.1s						
CN2	Changchun	81.84	14	*e*P	P	13 12 38.1	+0.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HHC	Hu-ho-hao-te	81.94	25	*e*P	P	13 12 36.0	-2.1
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,180nm,6.0s						
KSRS	Korea Array	88.42	13	LR	LR	13 55 00.6	
	comp=Z,28nm,18.5s,baz=335,slow=37						
BOSA	Boshof	97.05	129	LR	LR	13 55 33.0	
	comp=Z,92nm,20.6s,baz=360,slow=34						
VNA2	Neumayer--Watz	125.57	169	PKPdf	PKiKP	13 19 19.1	+0.5
VNA3	Neumayer Olymp	125.63	170	PKPdf	PKPdf	13 19 18.1	-0.1
SNAA	Sanae	126.82	168	PKPdf	PKPdf	13 19 20.9	+0.2
WRA	Warramunga Arr	145.73	17	PKPbc	PKPdf	13 19 57.1	+0.1
	comp=Z,3.1nm,1.0s,baz=336,slow=2.3,SNR=12						
WRA	Warramunga Arr	145.73	17	PKPdf	PKPdf	13 19 56.2	-0.8
ASAR	Alice Springs	149.27	19	PKPbc	PKPbc	13 20 06.5	-0.6
	comp=Z,3.8nm,0.7s,baz=353,slow=2.3,SNR=50						
VNDA	Vanda	154.92	189	PKPbc	PKPbc	13 20 19.2	+0.9
	comp=Z,1.0nm,0.8s,baz=225,slow=2.2,SNR=6.9						

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*ANF **02** 13:20:00.5±0.3, 47°.45N×122°.03W, h21^{km}±7^{km}, ML2.9/9, Error ellipse: s-maj=3.3km s-min=2.1km az=136.0*

*PGC **02** 13:20:00.8, 47°.44N×122°.00W, h25^{km}, ML2.8, ML2.2/14, 30km Ese of Seattle, Wa Washington*

*NEIC **02** 13:20:00.6±1.4, 47°.42N±0°.02×122°.02W±0°.03, h25^{km}±2^{km}, Error ellipse: s-maj=3.1km s-min=2.9km az=85.0*

*SEA **02** 13:20:01.0±1.5, 47°.43N±0°.02×122°.01W±0°.03, h24^{km}±6^{km}, ML2.8/129, ML2.6/48(NEIC), Error ellipse: s-maj=3.2km s-min=2.3km az=83.0*

ISC 02 13:20:01.0±0.8**, 47°.41N**±0°.01×**122°.03W**±0°.01**, h26**^{km}±3^{km}**, n176, σ0^{s}.90**/231**, Washington**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAW	Raver	0.10	137		Pb	13 20 05.0	-0.8
RAW					Sb	13 20 08.3	-0.8
ELW	Echo Lake	0.14	52		Pb	13 20 05.0	-1.1
ELW					Sb	13 20 08.4	-1.3
KNEL	Kent Elementar	0.15	259		Pb	13 20 05.9	-0.4
KNEL					Sb	13 20 10.4	+0.6
RATT	Rattlesnake La	0.16	84		Pb	13 20 05.4	-1.0
RATT					Sb	13 20 08.8	-1.2
PNLK	Pine Lake Midd	0.17	0		Pb	13 20 06.0	-0.5
PNLK					Sb	13 20 10.1	-0.1
HICC	Highline Commu	0.18	264		Pb	13 20 06.1	-0.5
HICC					Sb	13 20 10.5	+0.1
CDMR	Cedar Moraine	0.19	86		Pb	13 20 05.9	-0.8
CDMR					Sb	13 20 09.6	-0.9
SP2	Seward Park 2	0.21	315		Pb	13 20 06.3	-0.6
SP2					Sb	13 20 10.9	0.0
BSFP	Boeing Fire Pr	0.21	301		Pb	13 20 07.0	+0.1
BSFP					Sb	13 20 12.2	+1.2
TKCO	King County	0.22	305		Sb	13 20 11.3	+0.2
D05A	Enumclaw	0.23	173		Pb	13 20 06.8	-0.3
D05A					Sb	13 20 11.4	+0.2
D05A	Enumclaw	0.23	173	IAML		13 20 11.5	
	comp=N,2μm,0.5s						
D05A				IAML		13 20 11.8	
	comp=E,620nm,0.4s						
D05A	Enumclaw	0.23	173	P	Pb	13 20 06.9	-0.3
D05A				S	Sb	13 20 09.9	-1.3
SMNR	Sumner High Sc	0.25	214		Pb	13 20 07.0	-0.4
SMNR					Sb	13 20 12.6	+0.8
GSM	Grass Mountain	0.26	142		Pb	13 20 07.0	-0.7
TBPA	Tacoma Substat	0.28	236		Pb	13 20 07.5	-0.3
TBPA					Sn	13 20 13.5	-1.1
VVHS	Vashon High Sc	0.29	273		Pb	13 20 07.3	-0.6
VVHS					Sb	13 20 12.9	+0.2
PAYL	Puyallup Schoo	0.29	222		Pb	13 20 07.5	-0.5
PAYL					Sb	13 20 13.5	+0.7
NOWS	NOAA--Sand Poi	0.32	331		Pb	13 20 08.6	+0.2
EARN	East Ridge Ele	0.33	359		Pb	13 20 08.3	-0.2
EARN					Sb	13 20 14.2	+0.5
UPS	University of	0.34	245		Pb	13 20 08.3	-0.4
PCEP	Pierce County	0.35	211		Pb	13 20 08.3	-0.5
C05A	Tolt Reservoir	0.37	39		Pb	13 20 08.3	-0.9
C05A					Sb	13 20 13.6	-1.2
C05A	Tolt Reservoir	0.37	39	P	Pb	13 20 08.3	-0.9
C05A				S	Sb	13 20 13.1	-1.6
TTW	Tolt Reservoir	0.37	39		Pb	13 20 08.2	-0.9
GHW	Garrison Hill	0.40	204		Pb	13 20 08.9	-0.8
HTW	Haystack Looko	0.43	24		Pb	13 20 09.2	-1.1
B941	Kapowsin	0.44	197		Pb	13 20 09.3	-1.0
RVC	Mount Rainier-	0.47	175		Pb	13 20 10.2	-0.6
MBPA	Monroe Substat	0.50	11		Pb	13 20 10.4	-0.9
MBPA					Sb	13 20 17.4	-0.8
KIMR	Kitsap County	0.51	281		Pb	13 20 10.6	-0.8
KIMR					Sb	13 20 18.5	0.0
GMW	Gold Mountain	0.53	285		Pb	13 20 10.7	-1.1
OBSR	Observation Ro	0.53	164		Pb	13 20 11.4	-0.6
FMW	Mount Fremont	0.54	153		Pb	13 20 11.2	-0.8
FMW	Mount Fremont	0.54	153	P	Pb	13 20 11.2	-0.8
FMW				S	Sb	13 20 18.7	-0.9
D04E	Lakebay	0.56	246		Pb	13 20 12.0	-0.2
D04E					Sn	13 20 21.5	-0.1
D04E	Lakebay	0.56	246	P	Pb	13 20 11.9	-0.2
	baz=64,SNR=95						
D04E				S	Sn	13 20 21.3	-0.2
	baz=64						
GNW	Green Mountain	0.56	286		Pb	13 20 11.1	-1.2
GNW					Sb	13 20 19.3	-0.6
GNW	Green Mountain	0.56	286	P	Pb	13 20 11.1	-1.2
GNW				S	Sb	13 20 19.1	-0.9
RCS	Mount Rainier-	0.58	159		Pb	13 20 12.2	-0.6
REMR	Mount Rainier-	0.61	168		Pb	13 20 12.4	-0.8
PANH	Panhandle Gap,	0.61	154		Pb	13 20 12.6	-0.7
PANH					Sb	13 20 21.5	-0.1
LON	Longmire	0.68	167		Pb	13 20 13.4	-0.9
LON					Sb	13 20 22.6	-0.7
C04A	Brinnon	0.71	296		Pb	13 20 13.4	-1.4
B013	Quilcene	0.72	304		Pb	13 20 13.5	-1.4
D03D	Eldon	0.73	280		Pb	13 20 13.8	-1.3
D03D					Sb	13 20 24.3	-0.4
D03D	Eldon	0.73	280	P	Pb	13 20 13.8	-1.3
	baz=98,SNR=10						
D03D				S	Sb	13 20 23.8	-0.9
	baz=98						
HDW	Hoodsport	0.73	289		Pb	13 20 13.8	-1.4
HDW	Hoodsport	0.73	289	P	Pb	13 20 13.9	-1.4
HDW				S	Sb	13 20 24.1	-0.8
JCW	Jim Creek	0.79	5		Pb	13 20 15.1	-1.0
JCW	Jim Creek	0.79	5	P	Pb	13 20 15.1	-1.0
WPW	White Pass	0.79	155		Pb	13 20 15.6	-0.6
TWW	Teanaway	0.84	109		Pn	13 20 17.4	+0.3
B05A	Bryant	0.85	357		Pb	13 20 16.3	-0.9
B05A	Bryant	0.85	357	P	Pb	13 20 16.1	-1.1
	baz=176,SNR=61						
B05A				S	Sb	13 20 27.4	-0.9
	baz=176						
CPW	Capitol Peak	0.87	240		Pb	13 20 16.5	-1.1
CPW	Capitol Peak	0.87	240	P	Pb	13 20 16.5	-1.1
CPW				S	Sb	13 20 28.3	-0.6
LCW	Lucas Creek	0.87	212		Pn	13 20 19.1	+1.5
GLK	Glacier Lake	0.90	161		Pb	13 20 17.7	-0.3
SMW	South Mountain	0.90	265		Pb	13 20 17.1	-0.9
SMW	South Mountain	0.90	265	P	Pb	13 20 17.1	-0.9
WRW	Wenatchee Ridg	0.90	60		Pb	13 20 17.3	-0.7
C06D	Leavenworth	0.92	56		Pb	13 20 17.6	-0.7
C06D	Leavenworth	0.92	56	P	Pb	13 20 17.7	-0.7
	baz=237,SNR=16						
C06D				S	Sb	13 20 29.9	-0.4
	baz=237						
GPW	Glacier Peak	0.93	40		Pb	13 20 17.8	-0.9
GPW	Glacier Peak	0.93	40	P	Pb	13 20 17.8	-0.9
GPW				S	Sb	13 20 29.6	-1.1
E04D	Cinebar	0.93	203		Pb	13 20 17.7	-0.8
E04D	Cinebar	0.93	203	P	Pb	13 20 17.7	-0.8
	baz=24,SNR=90						

E04D				S	Sn	13 20 30.8	-0.1
	baz=24						
LTY	Liberty	0.94	99		Pb	13 20 18.0	-0.7
LTY				IAML		13 20 30.9	
	comp=E,130nm,0.5s						
LTY				IAML		13 20 31.0	
	comp=N,140nm,0.4s						
LTY	Liberty	0.94	99	P	Pb	13 20 17.9	-0.7
LTY				S	Sb	13 20 30.3	-0.4
SQM	Sequim	0.95	314		Pn	13 20 17.9	-0.7
SVOH	Skagit Valley	0.97	335	P	Pb	13 20 18.8	-0.4
TBM	Table Mountain	1.00	103		Pb	13 20 20.0	+0.2
CMW	Cultus Mountai	1.01	357		Pn	13 20 19.2	-0.5
CMW	Cultus Mountai	1.01	357	P	Pn	13 20 19.2	-0.5
NAC	Naches	1.07	129		Pb	13 20 20.6	-0.3
SLFW	Sugar Loaf	1.07	71		Pb	13 20 20.7	-0.4
RPW	Rockport	1.09	18		Pn	13 20 20.4	-0.3
RPW	Rockport	1.09	18	P	Pn	13 20 20.5	-0.3
RPW				S	Sn	13 20 34.6	-0.4
EBG	Ellensburg	1.12	116		Pb	13 20 22.0	+0.3
B201	Coldwater, Mou	1.12	188		Pn	13 20 20.5	-0.5
B017	Montesano	1.12	249		Pn	13 20 21.0	0.0
ERK	Elk Rock	1.13	191		Pn	13 20 20.9	-0.3
JRO	Jston Ridge Ob	1.14	187		Pn	13 20 21.2	-0.2
B06A	Marblemount	1.17	18		Pn	13 20 21.2	-0.4
B06A	Marblemount	1.17	18	P	Pn	13 20 21.5	-0.1
B06A				S	Sb	13 20 36.8	-0.5
ETW	Entiat	1.17	80		Pb	13 20 22.4	-0.2
B202	Windy Ridge, M	1.17	184		Pn	13 20 21.3	-0.4
SOSW	Source of Smit	1.17	184		Pn	13 20 21.6	-0.2
STD	Studebaker Rid	1.18	186		Pn	13 20 21.8	-0.1
B04A	Port Angeles	1.19	304		Pn	13 20 21.2	-0.7
B04A	Port Angeles	1.19	304		Pn	13 20 21.1	-0.8
B04A				IAML		13 20 45.2	
	comp=E,52nm,2.6s						
B04A				IAML		13 20 49.4	
	comp=N,42nm,2.4s						
BOLM	Sugar Bowl	1.20	185		Pn	13 20 22.5	+0.2
VALT	Mount Saint He	1.20	185		Pn	13 20 22.4	+0.1
OSD	Olympics--Snow	1.20	291	P	Pn	13 20 22.1	-0.2
SEPW	September Lobe	1.22	185		Pn	13 20 22.7	+0.2
ESD	East Dome	1.22	184		Pn	13 20 22.7	+0.3
WISH	Wishkah	1.22	257	Pn	Pn	13 20 22.6	+0.3
WISH				IAML		13 20 32.4	
	comp=E,125nm,4.5s						
WISH				IAML		13 20 48.0	
	comp=N,183nm,2.0s						
WISH	Wishkah	1.22	257	P	Pb	13 20 22.8	-0.6
SHW	Mount Saint He	1.23	187		Pn	13 20 22.9	+0.3
FL2	Flat Top 2	1.23	190		Pn	13 20 22.6	-0.1
HSR	South Ridge	1.24	185		Pn	13 20 23.2	+0.3
BMW	Boistfort Moun	1.25	222		Pn	13 20 19.8	-3.0
NLWA	Neilton Lookou	1.25	270		Pn	13 20 22.2	-0.6
NLWA				IAML		13 20 42.5	
	comp=N,75nm,0.3s						
B203	Quarry, Mount	1.26	190		Pn	13 20 23.1	+0.1
JLK	June Lake	1.27	184		Pn	13 20 23.4	+0.3
CDFW	Cedar Flats	1.29	181		Pn	13 20 23.8	+0.4
ASR	Mount Adams--S	1.30	166		Pb	13 20 24.3	-0.5
NLW	Nelson Butte	1.32	59		Pb	13 20 24.7	-0.6
VGZ	Gonzales	1.33	320	P	Pn	13 20 23.4	-0.5
VGZ				S	Sn	13 20 39.8	-0.9
B019	Raymond	1.34	236		Pb	13 20 24.8	-0.7
RVW	Rose Valley	1.35	201		Pn	13 20 24.2	0.0
E03A	Lebam	1.36	231	Pn	Pn	13 20 24.1	-0.1
E03A				IAML		13 20 49.6	
	comp=E,110nm,2.5s						
E03A				IAML		13 20 50.1	
	comp=N,92nm,1.4s						
E03A	Lebam	1.36	231	P	Pn	13 20 24.4	+0.1
E03A				S	Sb	13 20 42.0	-0.7
LVP	Lakeview Peak	1.37	191		Pn	13 20 25.1	+0.6
MBW	Mount Baker	1.38	4		Pb	13 20 25.2	-1.0
MBW	Mount Baker	1.38	4	P	Pb	13 20 25.2	-1.0
MCW	Mount Constitu	1.38	337	P	Pn	13 20 24.6	0.0
MCW				S	Sn	13 20 41.5	-0.5
A04D	Lummi Island	1.39	341	Sb	Sb	13 20 43.5	0.0
	baz=160						
CBSW	Chelan Butte S	1.40	73		Pb	13 20 26.2	-0.4
WTV	Waterville	1.44	78		Pb	13 20 26.7	-0.5
B023	Clatskanie	1.49	209		Pn	13 20 26.6	+0.6
F04D	Rainier, OR	1.49	207		Pb	13 20 26.9	-1.1
F04D	Rainier, OR	1.49	207	P	Pn	13 20 26.7	+0.7
	baz=27,SNR=5.8						
F04D				S	Sb	13 20 46.3	-0.2
	baz=27						
F04A	Amboy	1.50	190		Pn	13 20 26.8	+0.6
OBC	Olympics--Boni	1.52	295	P	Pb	13 20 27.9	-0.6
PA12	PA12 Sannich	1.56	323	P	Pn	13 20 27.2	+0.2
B009	North Saanich	1.56	323	P	Pn	13 20 27.3	+0.2
B009				S	Sn	13 20 46.5	+0.1
B011	North Saanich	1.56	323		Pn	13 20 27.5	+0.5
B011	North Saanich	1.56	323	P	Pn	13 20 27.2	+0.1
B011				S	Sn	13 20 46.8	+0.3
B010	North Saanich	1.56	323	P	Pn	13 20 27.3	+0.2
B010				S	Sn	13 20 46.8	+0.4
PGC	Sidney	1.56	323		Pn	13 20 26.7	-0.3
PGC	Sidney	1.56	323	P	Pn	13 20 27.4	+0.3
PGC				S	Sn	13 20 47.2	+0.7
PA01	PA01 North	1.56	323	S	Sn	13 20 46.8	+0.3
SNB	Saturna Island	1.56	331	P	Pn	13 20 27.7	+0.5
SNB				S	Sn	13 20 47.1	+0.5
F05D	White Salmon	1.58	165		Pb	13 20 29.7	+0.2
F05D	White Salmon	1.58	165	Sb	Sb	13 20 50.9	+1.9
	baz=347						
VDB	Vedder Mountai	1.62	358		Pb	13 20 28.8	-1.3
VDB	Vedder Mountai	1.62	358	P	Pb	13 20 28.9	-1.3
VDB				S	Sb	13 20 49.4	-0.8
DHW2	Dyer Hill 2	1.63	69		Pb	13 20 30.5	+0.1
EPH	Ephrata	1.66	91		Pb	13 20 29.4	-1.5
BENWA	Benson Ranch	1.82	119		Pb	13 20 33.1	-0.4
GOBB	Galiano Island	1.83	328	P	Pn	13 20 31.8	+1.1
GOBB				S	Sn	13 20 53.8	+0.8
HNBB	Haney	1.91	349	P	Pn	13 20 32.7	+0.8
HNBB				S	Sn	13 20 56.2	+1.1
GBL	Gable Mountain	1.94	114		Pb	13 20 33.8	-1.9
B926	Mesachie Lake	1.99	316	P	Pb	13 20 34.9	-1.7
CLRS	Cowichan Lake	1.99	316	Pn	Pn	13 20 31.7	-1.2
CLRS				IAML		13 21 09.8	
	comp=E,48nm,3.8s						
CLRS				IAML		13 21 47.8	
	comp=N,32nm,4.2s						
CLRS	Cowichan Lake	1.99	316	P	Pn	13 20 34.3	+1.3
HAWA	Hanford	1.99	120	Pn	Pn	13 20 31.8	-1.2
HOPB	Hope	2.02	11	P	Pn	13 20 34.4	+1.1
HOPB				S	Sb	13 21 00.5	-1.2
B08A	Colville Reser	2.05	61	Pn	Pn	13 20 34.1	+0.4
B08A				IAML		13 21 06.3	
	comp=N,52nm,0.5s						
B08A				IAML		13 21 06.5	
	comp=E,44nm,0.2s						
B08A	Colville Reser	2.05	61	P	Pn	13 20 35.0	+1.2
B08A				S	Sn	13 20 59.9	+1.4
VGB	Gordon Butte	2.08	155		Pb	13 20 38.4	+0.2
F07A	Phinny Hill Vi	2.10	136	Pn	Pn	13 20 33.8	-0.6
F07A				IAML		13 21 06.8	
	comp=N,31nm,0.7s						
HOOD	Mount Hood Mea	2.11	173	Pn	Pn	13 20 35.1	+0.5
HOOD				IAML		13 21 16.4	
	comp=E,44nm,1.8s						
HOOD				IAML		13 21 29.9	
	comp=N,39nm,2.3s						
TDH	Tom, Dick, Har	2.13	175		Pb	13 20 38.5	-0.5
D08A	Wollman Farm,	2.15	98	Pn	Pn	13 20 34.4	-0.7
D08A				IAML		13 21 12.2	
	comp=N,25nm,0.4s						
E08A	Dider Farm, El	2.23	113	Pn	Pn	13 20 36.8	+0.5
NLLB	Nanaimo Lost L	2.24	325	P	Pn	13 20 37.4	+1.0
NLLB				S	Sn	13 21 05.1	+2.0
MGB	Mount Grey	2.39	313	P	Pn	13 20 40.4	+1.9
PNT	Penticton	2.50	39		Pb	13 20 45.3	+0.2
PNT	Penticton	2.50	39	P	Pn	13 20 41.5	+1.5
PNT				Sg	Sb	13 21 17.5	+2.1
HEBO	Mount Hebo	2.50	209	Pn	Pn	13 20 41.0	+0.9
SHB	Sechelt	2.51	331	P	Pn	13 20 41.9	+1.8
SHB				S	Sn	13 21 12.3	+2.3
C09A	Chrisman Ranch	2.57	80	Pn	Pn	13 20 39.1	-1.9
C09A	Chrisman Ranch	2.57	80	S	Sn	13 21 12.2	+0.8
H04A	Detroit Lake	2.73	182	Pn	Pn	13 20 42.4	-0.7
H04A				IAML		13 21 24.5	
	comp=E,33nm,0.4s						
H04A				IAML		13 21 25.8	
	comp=N,36nm,1.1s						
TXB	Texada	2.79	326	P	Pn	13 20 46.6	+2.7
LLLB	Lillooet	3.20	2	P	Pn	13 20 51.5	+1.9
LLLB				S	Sn	13 21 30.5	+3.6
HUOR	Husband	3.29	178		Pb	13 20 58.1	-0.7
NEW	Newport	3.41	74	S	Sn	13 21 32.6	+0.4
	baz=258						
F10A	Beach Ranch, E	3.60	112		Pn	13 20 55.1	-0.1
F10A				IAML		13 22 07.7	
	comp=N,12nm,2.2s						
F10A				IAML		13 22 52.2	
	comp=E,20nm,4.7s						
I04A	Tendick Farm,	3.63	184	Sb	Sb	13 21 48.7	+0.7
	baz=4.3						
BMO	Blue Mountains	4.16	126	Pn	Pn	13 21 03.0	+0.1
BMO				IAML		13 22 52.3	
	comp=E,9.1nm,4.5s						
BMO				IAML		13 23 04.5	
	comp=E,8.8nm,5.0s						
PLID	Pearl Lake	4.79	117	Pn	Pn	13 21 11.4	-0.2
PLID				IAML		13 22 24.9	
	comp=E,5.9nm,3.3s						
PLID				IAML		13 23 22.8	
	comp=E,6.5nm,4.8s						
JTMT	Jette	5.25	83	Pn	Pn	13 21 17.8	-0.1

IDC 02 13:38:39.0±68.0**, 20˚38S**×**177˚65W, h0**^{km}**, mb4.1**/3**, mb1 4.3**/3**, mb1mx3.8**/33**, mbtmp4.1**/3**, Error ellipse: s-maj=1251.0km s-min=174.4km az=83.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.13	244	P	P	13 45 59.1	-0.9
	0.9nm,0.6s,baz=86,slow=14,SNR=2.9						
ASAR	Alice Springs	44.86	257	P	P	13 46 55.5	0.0
	8.8nm,0.3s,baz=101,slow=8.3,SNR=12						
WRA	Warramunga Arr	44.94	262	P	P	13 46 56.4	+0.3
	0.3nm,0.3s,baz=94,slow=8.2,SNR=11						

*IDC **02** 13:40:29.7±0.4, 32˚02N×69˚53E, h0^{km}, mb4.8/37, mb1 4.9/42, mb1mx4.8/53, mbtmp4.8/42, ML4.1/5, MS3.8/35, Ms1 3.8/35, ms1mx3.7/48, Error ellipse: s-maj=11.4km s-min=10.1km az=23.0*

*NNC **02** 13:40:30.6±2.5, 32˚11N×69˚58E, h0^{km}, mb4.8, Error ellipse: s-maj=32.9km s-min=22.6km az=0.0*

*NDI **02** 13:40:30.5±3.3, 32˚09N×69˚12E, h33^{km}, mb5.1, mb5.0(NEIC)*

*GCMT **02** 13:40:32.2±0.5, 32˚03N±0˚03×69˚68E±0˚05, h15^{km}±2^{km}, MW4.7/73, Moment Tensor Solution. s8,c8; s73,c97; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.54±.20; $M_{\theta\theta}$-1.34±.12; $M_{\phi\phi}$-0.19±.10; $M_{r\theta}$0.12±.20; $M_{\theta\phi}$-0.70±.06; $M_{\phi r}$-0.33±.26; Best double couple: $M_0$1.64600×10^{16} NP1:ϕ_s78.00000°, δ46.00000°, λ109.00000°. NP2: ϕ_s232.00000°, δ47.00000°, λ72.00000°. Principal axes: T 1.6220, Plg77.0000°, Azm67.0000°; N 0.0540, Plg13.0000°, Azm244.0000°; P -1.6700, Plg1.0000°, Azm335.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MOS **02** 13:40:34.2±1.1, 32˚17N×69˚66E, h42^{km}, mb5.2/49, MS4.1/7 Error ellipse: s-maj=5.6km s-min=3.4km az=90.7*

*NEIC **02** 13:40:36.2±1.4, 32˚09N±0˚07×69˚56E±0˚03, h45^{km}±4^{km}, mb5.0/156, Error ellipse: s-maj=10.8km s-min=2.1km az=164.0*

*BJI **02** 13:40:36.7±0.0, 32˚25N×69˚87E, h42^{km}, mB4.9/34, mb4.7/54, Ms4.3/27, Ms7 4.0/28*

ISC 02 13:40:35.0±0.4**, 31˚97N**±0˚03×**69˚64E**±0˚03**, h40**^{km}±3^{km}**, h40**^{km}**:pP-P, n662,** σ1^{s}**46**/713**, mb5.0**/174**, MS3.9**/45**, 32C-19D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THW	Thamme Wali	1.96	65	P	Pn	13 41 07.0	+1.2
SARP	Sargodha	2.58	90	P	Pn	13 41 15.3	+1.0
KBL	Kabul	2.61	349	P	Pn	13 41 15.5	+0.6
KBL	Kabul	2.61	349	Pn	Pn	13 41 15.5	+0.6
KBL	Kabul	2.61	349	P	Pn	13 41 16.3	+1.3
	SNR=819						
KBL				S	Sn	13 41 50.1	+4.7
CEP	Cherat	2.65	45	P	Pn	13 41 17.0	+1.5
NIL	Nilore	3.47	60	P	Pn	13 41 28.4	+1.8
NIL	Nilore	3.47	60		Pn	13 41 28.4	+1.8
CHCP	Chirah Chowk	3.48	60	P	Pn	13 41 28.6	+1.8
JMU	Jammu	4.51	79	*e*P	Pn	13 41 43.5	+2.7
JMU				*e*S	Sn	13 42 37.0	+4.9
DHRM	DHARAMSHALA	5.66	85	*e*P	Pn	13 41 58.5	+1.7
DHRM				IAmb	IAmb	13 42 01.1	
	comp=Z,256nm,0.6s						
BHK	Bhakra	5.80	94	*e*x	Pn	13 41 57.0	-1.6
BHK				*e*S	Sn	13 43 06.2	+2.3
SMLA	Simla	6.48	95	*e*S	Sn	13 43 23.5	+3.0
HRA	Herat	6.65	293		Pn	13 42 10.1	-0.3
CHGR	Chuyangaron	6.68	357	Pn	Pn	13 42 10.1	-0.6
AJM	Ajmer	7.00	140	*e*P	Pn	13 42 15.0	-0.2
AJM				*e*P	Pn	13 42 15.5	+0.3
AJM				*e*x	x	13 44 16.0	
GAR	Garm	7.03	4	Pn	Pn	13 42 15.2	-0.4
KUDL	Kundal	7.06	121	*e*P	Pn	13 42 15.2	-0.6
NDI	New Delhi	7.32	115	*e*P	Pn	13 42 19.5	+0.1
NDI				*e*P	Pn	13 42 20.0	+0.5
NDI				*e*P	Pn	13 42 20.5	+1.1
AYAN	Aya Nagar	7.35	116	*e*P	Pn	13 42 19.6	-0.2
DDI	Dehra Dun	7.40	101	*e*P	Pn	13 42 23.0	+2.4
DDI				IAmb	IAmb	13 42 26.0	
	comp=Z,462nm,0.4s						
SONA	Sohna	7.44	118	*e*x	Sn	13 43 42.5	-1.6
DRK	Karamyk	7.69	13		Pn	13 42 24.9	+0.1
BTK	Batken	8.12	6	P	Pn	13 42 30.3	-0.2
BTK	Batken	8.12	6		Pn	13 42 30.3	-0.2
BHUJ	Bhuj	8.69	180	*e*P	Pn	13 42 37.4	-0.7
BHUJ				IAmb	IAmb	13 42 39.9	
	comp=Z,245nm,0.2s						
KSH	Kashi	9.12	33	P	Pn	13 42 39.2	-4.9
KSH				S	Sn	13 44 13.9	-12
KSH				LR	LR		
	comp=Z,2µm,9.4s						
KSH				LR	LR		
	comp=Z,3µm,7.6s						
KSH				LR	LR		
	comp=Z,2µm,8.0s						
TAS	Tashkent	9.34	358	P	Pn	13 42 46.5	-0.5
TAS	Tashkent	9.34	358	Pn	Pn	13 42 46.5	-0.5
CHM	Chimkent	10.33	360	*e*P	Pn	13 43 01.1	+0.5
	baz=359						
CHM				*e*S	Sn	13 44 52.0	-3.0
	baz=359						
CHM	Chimkent	10.33	360	*e*P	Pn	13 43 01.1	+0.5
CHM				*e*S	Sn	13 44 52.0	-3.0
AML	Almayashu	10.64	17	P	Pn	13 43 05.7	+0.4
	SNR=60						
AML	Almayashu	10.64	17	P	Pn	13 43 04.1	-1.1
DZA	Taraz	10.98	7	*e*P	Pn	13 43 07.6	-2.0
	baz=5.8						
DZA				*e*S	Sn	13 45 08.1	-3.0
	baz=5.8						
DZA	Taraz	10.98	7	*e*P	Pn	13 43 07.6	-2.0
DZA				*e*S	Sn	13 45 08.9	-2.2
BHPL	Bhopal	11.10	140	*e*P	Pn	13 43 09.5	-1.8
BHPL				IAmb	IAmb	13 43 12.4	
	comp=Z,101nm,0.7s						
KK31	Karatay Array	11.13	3	P	Pn	13 43 09.4	-2.2
KK31	Karatay Array	11.13	3	Pn	Pn	13 43 09.4	-2.2
KK31	Karatay Array	11.13	3	⇓P	Pn	13 43 09.5	-2.1
	comp=Z,37nm,0.7s,baz=191,slow=4.9,SNR=148						
KK31				⇓S	Sn	13 45 11.5	-3.2
	comp=Z,56nm,0.9s,baz=191,slow=27,SNR=4.2						
KKAR	Karatay Array	11.13	3	P	Pn	13 43 09.3	-2.3
KKAR	Karatay Array	11.13	3		Pn	13 43 09.3	-2.3
EKS2	Erkin-Say	11.16	16	P	Pn	13 43 12.0	-0.1
	SNR=16						
GEYT	Alibeck	11.16	305	Pn	Pn	13 43 10.8	-1.3
	comp=Z,0.4nm,0.3s,baz=200,slow=20,SNR=4.1						
GEYT				LR	LR	13 48 15.5	
	comp=Z,351nm,20.6s,baz=220,slow=42						
GYA0	ALIBECK ARRAY	11.16	305	P	Pn	13 43 13.5	+1.4
GYA0B	ALIBECK ARRAY	11.16	305	Pn	Pn	13 43 10.8	-1.3
AAK	Ala-Archa	11.32	19	Pn	Pn	13 43 13.4	-0.9
	comp=Z,7.1nm,0.3s,baz=186,slow=5.8,SNR=67						
AAK				Sn	Sn	13 45 17.9	-1.6
	comp=Z,1.4nm,0.3s,baz=355,slow=6.3,SNR=3.8						
AAK	Ala-Archa	11.32	19	P	Pn	13 43 13.5	-0.9
	SNR=29						
AAK	Ala-Archa	11.32	19	*d i*P	Pn	13 43 13.1	-1.3
AAK				pmax	pmax		
	comp=Z,155nm,0.7s						
AAK	Ala-Archa	11.32	19	Pn	Pn	13 43 12.9	-1.4
AAK	Ala-Archa	11.32	19	P	Pn	13 43 13.8	-0.5
AAK				S	Sn	13 45 23.0	+3.4
AAK	Ala-Archa	11.32	19	⇑P	Pn	13 43 13.1	-1.3
	comp=Z,49nm,0.7s						
KBK	Karagaybulak	11.47	20	P	Pn	13 43 16.5	+0.2
	SNR=27						
FRU1	Bishkek	11.52	19	P	Pn	13 43 16.0	-1.0
FRU1	Bishkek	11.52	19		Pn	13 43 15.9	-1.0
CHMS	Chumysh	11.73	19	P	Pn	13 43 18.5	-1.2
	SNR=57						
TKM2	Tokmak 2	11.90	22	P	Pn	13 43 21.3	-1.1
	SNR=21						
TKM2	Tokmak 2	11.90	22	P	Pn	13 43 22.2	-0.1
TKM2	Tokmak 2	11.90	22	⇑P	Pn	13 43 22.3	-0.1
	comp=Z,71nm,0.7s						
USP	Ospenovka	11.91	17	P	Pn	13 43 22.5	+0.2
	SNR=15						
SGDS	Sogindy	12.12	18	*e*P	Pn	13 43 22.4	-2.7
	comp=Z,6.8nm,0.7s,baz=17						
PYUN	Piuthan	12.19	105	*e*P	Pn	13 43 24.5	-1.9
	comp=Z,408nm,0.4s						
TNSS	Tian-Shan	12.47	26	*e*P	Pn	13 43 27.9	-2.3
	baz=25						
AAA	Alma-Ata	12.61	25	*e*P	Pn	13 43 30.6	-1.2
	baz=25						
AAA	Alma-Ata	12.61	25	*e*P	Pn	13 43 30.5	-1.2
MDOK	Medeo	12.61	26	*e*P	Pn	13 43 30.3	-1.7
	baz=25						
MDOK	Medeo	12.61	26	*e*P	Pn	13 43 30.3	-1.7
MDOK	Medeo	12.61	26	⇓P	Pn	13 43 31.5	-0.5
	comp=Z,16nm,0.7s						
DANN	Dangsing	12.74	103	*e*P	Pn	13 43 31.3	-2.6
	comp=Z,94nm,0.3s						
KOLN	Koldanda	12.82	105	*e*P	Pn	13 43 32.8	-2.1
	comp=Z,216nm,0.6s						
KUU	Kurty	13.01	22	*e*P	Pn	13 43 33.4	-3.9
	baz=22						
KUU	Kurty	13.01	22	*e*P	Pn	13 43 33.4	-3.9
SATY	Saty	13.06	30	*e*P	Pn	13 43 36.2	-1.8
	baz=29						
SATY	Saty	13.06	30	*e*P	Pn	13 43 36.2	-1.8
WSAR	Wadi Sarin	13.07	231	Pn	Pn	13 43 36.1	-2.0
	comp=Z,0.7nm,0.3s,baz=48,slow=8.9,SNR=7.4						
WSAR				Sn	Sn	13 45 53.8	-8.4
	comp=Z,0.7nm,0.3s,baz=315,slow=21,SNR=1.1						
WSAR	Wadi Sarin	13.07	231	P	Pn	13 43 36.2	-2.0
WSAR				S	Sn	13 46 01.8	-0.4
BANOM	Banah	13.14	246	P	Pn	13 43 38.9	-0.3
BANOM				P	Pn	13 43 38.9	-0.3
CHKK	Chushkaly	13.19	24	*i* P	Pn	13 43 36.2	-3.5
	baz=24						
SHME	Shamm	13.20	247	P	Pn	13 43 39.1	-0.8
BIDO	Bidbid	13.21	233	P	Pn	13 43 38.6	-1.6
WBK	Wadi Bani Khal	13.29	228	P	Pn	13 43 38.3	-3.0
WBK				P	Pn	13 43 38.3	-3.0
WBK				S	Sn	13 46 05.1	-2.7
WBK				S	Sn	13 46 05.1	-2.7
JLN	Jalan Bani Buh	13.36	225	P	Pn	13 43 40.7	-1.5
JLN				S	Sn	13 46 06.4	-3.0
UZB	Uzynbulak	13.40	31	*e*P	Pn	13 43 41.3	-1.4
	baz=31						
UZB	Uzynbulak	13.40	31	*e*P	Pn	13 43 41.3	-1.4
MDH	Madha	13.47	244	P	Pn	13 43 40.7	-2.9
BTLS	Baital	13.49	13	*i* P	Pn	13 43 40.9	-2.9
	baz=13						
BTLS	Baital	13.49	13	*i* P	Pn	13 43 40.9	-2.9
KPKS	Kokpek	13.51	29	*e*P	Pn	13 43 41.5	-2.7
	baz=29						
KPKS	Kokpek	13.51	29	*e*P	Pn	13 43 41.5	-2.7
MASF	Masafi	13.53	244	P	Pn	13 43 45.1	+0.5
MASF				S	Sn	13 46 17.0	+3.3
SMDO	Samad	13.58	232	P	Pn	13 43 43.9	-1.3
SMDO				P	Pn	13 43 43.9	-1.3
SMDO				S	Sn	13 46 16.8	+2.0
SMDO				S	Sn	13 46 16.8	+2.0
GKN	Gorkha	13.59	103	*e*P	Pn	13 43 42.4	-2.9
	comp=Z,135nm,0.4s						
SHLS	Shalkode	13.60	32	*e*P	Pn	13 43 45.6	+0.2
	baz=33						
SHLS	Shalkode	13.60	32	*e*P	Pn	13 43 45.6	+0.2
UOSS	Minazif	13.73	243	Pn	Pn	13 43 44.5	-2.7
UOSS	Minazif	13.73	243	P	Pn	13 43 46.1	-1.1
HOQ	Hoqain	13.74	236	P	Pn	13 43 44.3	-3.0
HOQ				P	Pn	13 43 44.3	-3.0
HATD	Hatta, Dubai	13.85	242	P	Pn	13 43 47.8	-1.0
POO	Poona	13.91	163	*e*P	Pn	13 43 50.0	+0.2
POO				*e*x	x	13 46 13.0	
ASHO	Ashiyiah	13.99	242	P	Pn	13 43 49.8	-0.9
	SNR=7.3						
JMDO	Jabal Madar	14.02	230	P	Pn	13 43 50.4	-0.8
DMN	Daman	14.11	104	*e*P	Pn	13 43 49.2	-3.4
	comp=Z,202nm,0.7s						
KKN	Kakani	14.19	103	*e*P	Pn	13 43 50.3	-3.4
	comp=Z,392nm,0.5s						
BSY	Bisya	14.37	233	P	Pn	13 43 55.0	-0.8
	SNR=6.6						
PKIN	Phulchoki	14.37	104	*e*P	Pn	13 43 52.9	-3.1
	comp=Z,162nm,0.5s						
PKI	Pulchoki	14.38	104	*e*P	Pn	13 43 52.6	-3.7
	comp=Z,99nm,0.4s						
ARQ	Araqi	14.45	237	P	Pn	13 43 56.3	-0.7
ARQ				P	Pn	13 43 56.3	-0.7
ASUD	Al Ashush, Dub	14.57	243	P	Pn	13 43 58.7	+0.2
GUN	Gumba	14.65	102	*e*P	Pn	13 43 56.4	-3.5
	comp=Z,579nm,0.5s						
JIRN	Jiri	14.99	102	*e*P	Pn	13 44 01.0	-3.5
	comp=Z,210nm,0.4s						
MHTO	MHTO	15.12	226	P	Pn	13 44 05.0	-0.8
	SNR=7.1						
MHTO				P	Pn	13 44 05.0	-0.8
	SNR=7.1						
RAMN	Ramite	15.59	104	*e*P	Pn	13 44 08.6	-3.7
	comp=Z,139nm,0.4s						
UMZA	Um Al Zommool	15.82	238	P	Pn	13 44 14.9	0.0
ODAN	Odare	16.28	104	*e*P	Pn	13 44 17.7	-3.3
	comp=Z,127nm,0.7s						
TAPN	Taplejung	16.36	102	*e*P	Pn	13 44 19.2	-3.0
	comp=Z,186nm,0.6s						
OTUK	Ortayu	16.38	6	P	Pn	13 44 19.3	-2.6
OTUK	Ortayu	16.38	6	⇓P	Pn	13 44 19.3	-2.6
	comp=Z,16nm,0.8s						
BOK	Bokaro	16.50	116	*e*x	Pn	13 44 17.4	-6.1
BOK				IAmb	IAmb	13 44 22.9	
	comp=Z,32nm,0.7s						
HYB	Hyderabad	16.59	149	*i* P	Pn	13 44 22.0	-2.8
HYB	Hyderabad	16.59	149	*e*P	Pn	13 44 23.5	-1.2
GHWR	Ruwais	16.81	246	P	Pn	13 44 28.0	+0.5
GTK	Tadong	17.12	101	*e*P	Pn	13 44 31.1	-0.4
MAKZ	Makanchi	17.58	29	P	Pn	13 44 34.3	-2.7
MAKZ				pmax	pmax		
	comp=Z,34nm,0.9s						
MAKZ	Makanchi	17.58	29	Pn	Pn	13 44 34.3	-2.7
MAKZ	Makanchi	17.58	29	⇑P	Pn	13 44 34.5	-2.5
	comp=Z,33nm,0.9s						
MK31	Makanchi Array	17.70	30	P	Pn	13 44 36.0	-2.4
MK31				pmax	pmax		
	comp=Z,14nm,0.7s						
MK31	Makanchi Array	17.70	30	P	Pn	13 44 36.0	-2.4
MK31	Makanchi Array	17.70	30	⇑P	Pn	13 44 38.1	-0.3
	comp=Z,12nm,0.6s,baz=212,slow=14,SNR=61						
MKAR	Makanchi Array	17.70	30	P	Pn	13 44 37.1	-1.3
	comp=Z,1.6nm,0.3s,baz=214,slow=11,SNR=30						
MKAR				LR	LR	13 52 44.0	
	comp=Z,254nm,19.0s,baz=216,slow=42						
MKAR	Makanchi Array	17.70	30	P	Pn	13 44 35.8	-2.6
MKAR	Makanchi Array	17.70	30		Pn	13 44 35.8	-2.6
BRZS	Berezniki	18.13	6	*i* P	Pn	13 44 41.4	-2.3
	baz=5.9						
BRZS	Berezniki	18.13	6	*i* P	Pn	13 44 41.3	-2.3
WMQ	Urumqi	18.47	45	*e*P	Pn	13 44 48.3	+0.4
WMQ				pP	P	13 44 52.1	+4.6
WMQ				sP	sP	13 45 05.2	+2.1
WMQ				S	Sn	13 48 05.1	-8.2
WMQ				sS	S	13 48 20.2	+3.9
WMQ				pmax	pmax		
	comp=Z,52nm,1.3s						

WMQ				pmax	pmax		
	comp=Z,180nm,3.7s						
WMQ				LR	LR		
	comp=Z,560nm,14.3s						
WMQ				LR	LR		
	comp=Z,390nm,14.3s						
WMQ				LR	LR		
	comp=Z,240nm,15.5s						
LSA	Lhasa	18.61	91	P	P	13 44 49.9	+0.4
LSA				pmax	pmax		
	comp=Z,63nm,1.6s						
LSA	Lhasa	18.61	91	P	P	13 44 48.1	-1.4
LSA				pmax	pmax		
	comp=Z,39nm,1.2s						
LSA	Lhasa	18.61	91		P	13 44 48.1	-1.4
AB31	Akbulak array	18.74	340	eP	P	13 44 48.8	-1.5
AB31	Akbulak array	18.74	340	⇓P	P	13 44 48.9	-1.5
	comp=Z,12nm,0.6s,baz=156,slow=12,SNR=196						
ABKAR	Akbulak array	18.74	340	P	P	13 44 47.0	-3.3
DOK	Doka	19.30	230	P	P	13 44 56.9	+0.2
	SNR=13						
DOK				P	P	13 44 56.9	+0.2
	SNR=13						
ZSN	Zaisan	19.34	33	eP	P	13 44 54.2	-2.7
	baz=32						
ZSN	Zaisan	19.34	33	eP	P	13 44 54.2	-2.7
KURBB	Kurchatov Arra	19.77	17	P	P	13 44 59.6	-1.8
	comp=Z,0.3nm,0.3s,baz=208,slow=11,SNR=24						
KURBB				PcP	PcP	13 49 19.8	+1.3
	comp=Z,0.1nm,0.3s,baz=224,slow=2.3,SNR=2.0						
KURBB	Kurchatov Arra	19.77	17	P	P	13 45 00.3	-1.2
KURBB	Kurchatov Arra	19.77	17	⇑P	P	13 45 00.4	-1.2
	comp=Z,23nm,1.1s						
KURK	Kurchatov	19.87	17	⇓iP	P	13 45 01.6	-1.1
KURK				pmax	pmax		
	comp=Z,13nm,2.5s						
KURK	Kurchatov	19.87	17	P	P	13 45 00.6	-2.0
WHFO	Wadi Hawf	20.04	229	P	P	13 45 05.3	+0.6
	SNR=7.1						
RBK	Rabkut	20.07	228	P	P	13 45 04.9	-0.2
AKTO	Aktyubinsk	20.37	338	P	P	13 45 07.8	-0.2
	comp=Z,18nm,0.6s,baz=160,slow=10,SNR=40						
AKTO				LR	LR	13 53 39.0	
	comp=Z,274nm,19.9s,baz=150,slow=39						
AKTO	Aktyubinsk	20.37	338	P	P	13 45 07.5	-0.5
AKTO	Aktyubinsk	20.37	338	⇑P	P	13 45 07.6	-0.5
	comp=Z,45nm,0.8s						
SHL	Shillong	20.50	102	P	P	13 45 10.0	+0.1
SHL				pmax	pmax		
	comp=Z,59nm,0.7s						
SHL	Shillong	20.50	102		P	13 45 10.0	+0.1
SHL				IAmb	IAmb	13 45 17.1	
	comp=Z,59nm,0.7s						
SHL	Shillong	20.50	102	eP	P	13 45 10.9	+1.0
SHL				IAmb	IAmb	13 45 16.0	
	comp=Z,30nm,0.6s						
MAK	Makhachkala	20.65	308	eP	P	13 45 10.0	-1.2
MAK				e*PP	pP	13 45 22.3	+0.8
MAK				e*SP	sP	13 45 28.6	+1.8
MAK				eS	S	13 48 56.9	-2.7
MAK				e*SS	sS	13 49 17.3	+1.0
MAK				pmax	pmax		
	comp=Z,44nm,0.5s						
MAK				MLR	MLR		
	comp=Z,631nm,12.0s						
ABTO	Aybut	20.76	229	P	P	13 45 12.2	-0.4
BVAR	Borovoye Array	21.05	1	P	P	13 45 14.6	-0.8
	comp=Z,6.6nm,0.5s,baz=195,slow=17,SNR=38						
BRVK	Borovoye	21.08	1	⇓iP	P	13 45 14.6	-1.1
BRVK				pmax	pmax		
	comp=Z,19nm,0.8s						
BRVK	Borovoye	21.08	1	P	P	13 45 14.2	-1.5
BRVK	Borovoye	21.08	1	P	P	13 45 15.5	-0.2
BRVK	Borovoye	21.08	1	⇑P	P	13 45 14.5	-1.2
	comp=Z,37nm,0.9s						
ITAN	ITANAGAR	21.48	97	eP	P	13 45 21.7	+1.5
ITAN				IAmb	IAmb	13 45 30.5	
	comp=Z,99nm,1.1s						
SILR	SILCHAR	21.58	104	ex	P	13 45 26.4	+5.1
GNI	Garni	21.67	299	P	P	13 45 21.9	-0.4
	comp=Z,54nm,0.8s,baz=97,slow=8.1,SNR=15						
GNI				LR	LR	13 55 03.8	
	comp=Z,100nm,19.5s,baz=138,slow=40						
GNI	Garni	21.67	299	d iP	P	13 45 24.9	+2.5
GNI				pmax	pmax		
	comp=Z,58nm,0.8s						
GNI	Garni	21.67	299	P	P	13 45 21.3	-1.1
GNI				IAmb	IAmb	13 45 29.7	
	comp=Z,66nm,0.9s						
GNI	Garni	21.67	299	P	P	13 45 23.4	+1.0
GROC	Groznyy	21.89	308	eP	P	13 45 25.6	+1.1
GROC				e		13 45 45.1	
GROC				eS	S	13 49 29.7	+5.6
GROC				pmax	pmax		
	comp=Z,96nm,1.2s						
KOHI	KOHIMA	22.30	100	eP	P	13 45 30.5	+1.3
KOHI				IAmb	IAmb	13 45 38.7	
	comp=Z,281nm,1.6s						
MOKO	MOKOCHONG	22.42	98	eP	P	13 45 31.4	+0.8
ZEI	Tsey	23.04	305	eP	P	13 45 38.0	+1.1
ZEI				pmax	pmax		
	comp=Z,6.0nm,0.7s						
LKP	Lekhapani	23.21	95	eP	P	13 45 39.2	+0.7
LKP				IAmb	IAmb	13 45 51.6	
	comp=Z,56nm,0.7s						
KBZ	Khabaz	24.05	307	P	P	13 45 46.1	-0.2
	comp=Z,8.4nm,0.7s,baz=132,slow=8.7,SNR=16						
KVAR	Kislovodsk Arr	24.27	307	LR	LR	13 57 58.1	
	comp=Z,130nm,18.3s,baz=219,slow=43						
KIV	Kislovodsk	24.27	307	eP	P	13 45 50.2	+1.7
KIV				pmax	pmax		
	comp=Z,27nm,1.1s						
KIV				MLR	MLR		
	comp=Z,111nm,15.0s						
ZAA0	Zalesovo Array	24.51	22	P	P	13 45 48.5	-1.9
ZAA0	Zalesovo Array	24.51	22	⇑P	P	13 45 50.2	-0.2
	comp=Z,3.1nm,0.7s						
ZALV	Zalesovo Beam	24.51	22	P	P	13 45 49.7	-0.7
	comp=Z,16nm,0.5s,baz=215,slow=10,SNR=69						
ZALV				PcP	PcP	13 49 28.7	+0.8
	comp=Z,1.1nm,0.5s,baz=215,slow=5.4,SNR=1.7						
ZALV				LR	LR	13 56 55.2	
	comp=Z,64nm,18.7s,baz=217,slow=40						
ZALV	Zalesovo Beam	24.51	22	P	P	13 45 48.8	-1.6
ZALV	Zalesovo Beam	24.51	22	P	P	13 45 48.8	-1.6
GTA	Gaotai	25.52	65	eP	P	13 46 01.6	+1.6
GTA				pP	pP	13 46 13.2	+2.0
GTA				sP	sP	13 46 18.1	+1.9
GTA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,93nm,6.8s						
GTA				LR	LR		
	comp=Z,200nm,13.1s						
GTA				LR	LR		
	comp=Z,150nm,11.9s						
GTA				LR	LR		
	comp=Z,120nm,13.1s						
SVE	Sverdlovsk	25.62	349	eP	P	13 46 01.7	+1.2
SVE				pmax	pmax		
	comp=Z,16nm,0.8s						
SVE				MLR	MLR		
	comp=Z,598nm,13.0s						
ARU	Arti	25.64	346	P	P	13 46 01.0	+0.4
	comp=Z,15nm,0.8s,baz=149,slow=4.4,SNR=28						
ARU				LR	LR	13 56 44.0	
	comp=Z,238nm,18.9s,baz=153,slow=38						
ARU	Arti	25.64	346	c iP	P	13 46 01.3	+0.6
ARU						13 46 34.3	
ARU				S	S	13 50 27.7	+1.6
ARU				SS	SnSn	13 51 25.7	+3.1
ARU				pmax	pmax		
	comp=Z,48nm,0.9s						
ARU				MLR	MLR		
	comp=Z,279nm,12.0s						
ARU	Arti	25.64	346	P	P	13 45 59.8	-0.9
ARU				IAmb	IAmb	13 46 05.7	
	comp=Z,40nm,0.8s						
BELG	Belogornoye	25.94	328	P	P	13 46 04.2	+0.9
	comp=Z,126nm,0.8s,baz=81,slow=1.2,SNR=23						
BELG				LR	LR	13 58 39.7	
	comp=Z,220nm,18.2s,baz=146,slow=42						
BELG	Belogornoye	25.94	328	c iP	P	13 46 04.0	+0.6
BELG				pmax	pmax		
	comp=Z,22nm,0.8s						
SOC	Sochi	26.20	305	eP	P	13 46 07.3	+1.4
SOC				e		13 46 41.4	
SOC				eS	S	13 50 37.7	+2.6
SOC				eSS		13 51 35.5	
SOC				pmax	pmax		
	comp=Z,29nm,0.7s						
PALK	Pallekele	26.65	155	P	P	13 46 13.0	+2.8
	comp=Z,13nm,1.0s,baz=292,slow=5.4,SNR=4.4						
PALK				LR	LR	13 57 45.9	
	comp=Z,313nm,19.8s,baz=94,slow=39						
PALK	Pallekele	26.65	155	P	P	13 46 13.0	+2.8
VRH	Novokhopyorsk	28.11	321	eP	P	13 46 21.7	-1.2
VRH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LZH	Lanzhou	28.55	72	eP	P	13 46 26.4	-0.9
LZH				pP	pP	13 46 38.6	0.0
LZH				sP	sP	13 46 45.4	+1.9
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
MMAI	Mount Meron Ar	28.82	281	LR	LR	13 59 29.9	
	comp=Z,158nm,18.6s,baz=100,slow=40						
CHTO	Chiang Mai	29.43	109	P	P	13 46 35.7	+0.7
CHTO				pmax	pmax		
	comp=Z,16nm,1.0s						
CHTO	Chiang Mai	29.43	109	P	P	13 46 35.7	+0.7
VSR	Storozhevoye	29.50	320	eP	P	13 46 35.2	0.0
VSR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
CM31	Chiang Mai Arr	29.62	110	P	P	13 46 37.1	+0.4
CMAR	Chiang Mai Arr	29.62	110	P	P	13 46 38.4	+1.7
	comp=Z,7.0nm,1.1s,baz=301,slow=8.1,SNR=27						
CMAR				PcP	PcP	13 49 42.9	+2.2
	comp=Z,5.3nm,0.9s,baz=288,slow=4.3,SNR=7.4						
CMAR	Chiang Mai Arr	29.62	110	P	P	13 46 36.9	+0.2
CMAR						13 49 43.0	
CMAR	Chiang Mai Arr	29.62	110	P	P	13 46 36.9	+0.2
CMAR					PcP	13 49 43.0	+2.2
KMI	Kunming	29.79	95	⇑P	P	13 46 39.7	+1.3
KMI				pP	pP	13 46 51.5	+1.7
KMI				sP	sP	13 46 57.4	+2.7
KMI				S	S	13 51 31.8	-0.6
KMI				SS	ScP	13 53 11.2	-9.0
KMI				pmax	pmax		
	comp=Z,11nm,0.9s						
KMI				LR	LR		
	comp=Z,220nm,7.2s						
KMI				LR	LR		
	comp=Z,100nm,5.2s						
KMI				LR	LR		
	comp=Z,210nm,10.7s						
EIL	Elat	29.80	275	LR	LR	13 59 44.0	
	comp=Z,72nm,18.9s,baz=98,slow=39						
KIRV	Kirov	29.93	339	P	P	13 46 40.2	+1.2
	comp=Z,9.8nm,0.6s,baz=117,slow=4.5,SNR=3.7						
KIRV				LR	LR	13 59 44.1	
	comp=Z,227nm,19.4s,baz=143,slow=39						
BR131	Keskin Array S	30.04	295	c iP	P	13 46 40.3	0.0
BR131	Keskin Array S	30.04	295	P	P	13 46 39.8	-0.6
BRTR	Keskin Array B	30.04	295	P	P	13 46 39.8	-0.6
	comp=Z,3.6nm,0.6s,baz=117,slow=7.2,SNR=8.7						
BRTR				LR	LR	14 01 41.4	
	comp=Z,86nm,18.6s,baz=102,slow=42						
BRTR	Keskin Array B	30.04	295	P	P	13 46 40.5	+0.1
LPSR	Galich'ya Gora	30.32	322	eP	P	13 46 42.2	-0.2
LPSR				pmax	pmax		
	comp=Z,30nm,0.7s						
ZAK	Zakamensk	30.93	44	eP	P	13 46 48.1	0.0
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
SONM	Songino Array	31.98	50	P	P	13 46 59.0	+1.6
	comp=Z,6.3nm,0.9s,baz=247,slow=9.3,SNR=19						
SONM				PcP	PcP	13 49 47.5	+0.8
	comp=Z,1.4nm,0.6s,baz=233,slow=4.3,SNR=2.4						
SONM				LR	LR	14 02 01.0	
	comp=Z,425nm,18.7s,baz=252,slow=40						
SONM	Songino Array	31.98	50	P	P	13 46 57.7	+0.3
SONM						13 49 47.5	
SONM				pmax	pmax		
	comp=Z,5.0nm,1.0s						
SONM	Songino Array	31.98	50	P	P	13 46 57.7	+0.3
ULN	Ulaanbaatar	32.42	50	eP	P	13 47 02.9	+1.6
ULN				pmax	pmax		
	comp=Z,8.0nm,1.2s						
MOS	Moscow	32.63	326	eP	P	13 47 03.5	+0.7
GYA	Guiyang	32.67	90	⇓P	P	13 47 06.0	+2.4
GYA				sP	sP	13 47 25.8	+5.7
GYA				PP	PnPn	13 48 13.7	+1.3
GYA				S	S	13 52 14.3	-3.0
GYA				pmax	pmax		
	comp=Z,11nm,0.7s						
GYA				LR	LR		
	comp=Z,160nm,9.0s						
OBN	Obninsk	32.81	325	⇑eP	P	13 47 04.8	+0.5
OBN				e		13 48 20.7	
OBN				eS	S	13 52 20.3	+1.8
OBN				pmax	pmax		
	comp=Z,26nm,0.8s						
OBN				MLR	MLR		
	comp=Z,341nm,18.0s						
XAN	Xi'an	32.87	76	P	P	13 47 02.4	-2.8
XAN				pP	pP	13 47 12.8	-3.8
XAN				pmax	pmax		
	comp=Z,5.0nm,1.2s						
ELL	Elmali	32.98	289	P	P	13 47 04.3	-1.9
ELL				pmax	pmax		
	comp=Z,54nm,0.8s						
ELL	Elmali	32.98	289	P	P	13 47 04.3	-1.9
PRGR	Permogore	33.52	339	eP	P	13 47 10.3	-0.1
PRGR				pmax	pmax		
	comp=Z,60nm,1.5s						
HHC	Hu-ho-hao-te	34.61	63	eP	P	13 47 21.1	+0.8
HHC				pmax	pmax		
	comp=Z,12nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,6.3s						
CFR	Carcaliu	34.64	304	⇑P	P	13 47 21.8	+1.4
AKASG	Malin Array Be	35.10	314	P	P	13 47 23.6	-0.6
	comp=Z,28nm,0.8s,baz=99,slow=7.4,SNR=46						
AKASG				PcP	PcP	13 49 55.0	-0.1
	comp=Z,3.1nm,0.7s,baz=83,slow=3.1,SNR=6.4						
AKASG				LR	LR	14 04 30.0	
	comp=Z,227nm,20.7s,baz=85,slow=41						
AKASG	Malin Array Be	35.10	314	P	P	13 47 22.1	-2.2
AKASG				pmax	pmax		
	comp=Z,22nm,0.8s						
AKASG	Malin Array Be	35.10	314	P	P	13 47 22.1	-2.2
AKASG				IAmb	IAmb	13 47 26.2	
	comp=Z,22nm,0.8s						
AKBB	Malin Array Si	35.10	314	P	P	13 47 22.3	-2.0
AKBB				pmax	pmax		
	comp=Z,26nm,0.8s						
AKBB	Malin Array Si	35.10	314	P	P	13 47 22.3	-2.0
VRI	Vrincioaia	35.72	305	⇓P	P	13 47 30.9	+1.2
PLOR	Plostina	35.77	305	⇑P	P	13 47 30.7	+0.5
COVR	Voineasa-Covas	36.08	305	⇓P	P	13 47 33.8	+1.0
MLR	Muntele Rosu	36.22	305	⇑P	P	13 47 35.1	+1.0
MLR	Muntele Rosu	36.22	305	P	P	13 47 33.1	-1.0
MLR				pmax	pmax		
	comp=Z,16nm,0.9s						
MLR	Muntele Rosu	36.22	305	P	P	13 47 33.1	-1.0
MLR				IAmb	IAmb	13 47 38.1	
	comp=Z,16nm,0.9s						
DOPR	Dopca	36.66	305	⇓P	P	13 47 38.9	+1.2
VOIR		36.84	304	⇑P	P	13 47 39.4	+0.1
BURAR	Bucovina Array	36.99	308	⇑P	P	13 47 40.9	+0.3
BURAR	Bucovina Array	36.99	308	P	P	13 47 38.7	-1.9
BUR08	Bucovina Ar. S	37.01	308	P	P	13 47 38.4	-2.4
MNK	Minsk	37.08	320	i P	P	13 47 41.0	-0.1
MNK				i *PP	pP	13 47 52.4	-0.3
MNK				i *SP	sP	13 47 58.7	+1.0
MNK				i		13 49 04.3	
MNK				i		13 50 00.0	
MNK				i S	S	13 53 24.2	0.0
MNK				i *SS	ScP	13 53 45.7	+0.9
MNK				pmax	pmax		
	comp=E,2.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,23nm,1.2s						
MNK				pmax	pmax		
	comp=Z,26nm,1.0s						
MNK				MLR	MLR		
	comp=N,277nm,24.0s						
MNK				MLR	MLR		
	comp=E,14nm,23.0s						
MNK				MLR	MLR		
	comp=Z,270nm,19.0s						
MNK	Minsk	37.08	320	i P	P	13 47 41.0	-0.1
	comp=E,2.0nm,0.8s						
MNK				i P	P	13 47 41.0	-0.1
	comp=N,23nm,1.2s						
MNK				i P	P	13 47 41.0	-0.1
	comp=Z,26nm,1.0s,baz=110						
MNK				i pP	pP	13 47 52.5	-0.3
MNK				i sP	sP	13 47 58.7	+1.0
MNK				i PP	PP	13 49 04.3	-1.7
MNK				i S	S	13 53 24.2	0.0
MNK				i sS	ScP	13 53 45.8	+1.0
MNK				i SS	SnSn	13 56 00.8	+0.4
MNK				i LQ	LQ	14 00 02.9	
MNK				i LR	LR	14 03 01.1	
MNK				i LRM	MLR	14 04 35.7	
	comp=N,277nm,24.2s						
MNK				i LRM	MLR	14 04 56.0	
	comp=E,14nm,22.6s						
MNK				i LRM	MLR	14 05 21.6	
	comp=Z,270nm,19.0s						
ARR	Arges	37.12	304	⇑P	P	13 47 42.1	+0.3
LOT	Lotru	37.74	304	⇑P	P	13 47 47.0	-0.1
NACGM	Naroch	37.81	320	i P	P	13 47 47.3	-0.1
VTS	Vitosha	37.99	300	⇑P	P	13 47 49.1	-0.1
VTS	Vitosha	37.99	300	P	P	13 47 49.6	+0.4
VTS				pmax	pmax		
	comp=Z,7.0nm,0.8s						
VTS	Vitosha	37.99	300	P	P	13 47 49.6	+0.4
WHN	Wuhan	38.04	80	⇑P	P	13 47 53.1	+3.5
LVV	L'vov	38.13	311	eP	P	13 47 51.1	+0.9
LVV				MLR	MLR		
	comp=Z,1μm,15.0s						
GZR	Gura Zlata	38.43	304	⇑P	P	13 47 53.8	+1.0
DRGR		38.59	306	⇑P	P	13 47 54.7	+0.6
NRIK	Noril'sk	38.77	10	P	P	13 47 56.1	+0.9
	comp=Z,15nm,0.7s,baz=200,slow=5.6,SNR=22						
NRIK				LR	LR	14 04 06.9	
	comp=Z,126nm,19.7s,baz=199,slow=37						
NRIK	Noril'sk	38.77	10	⇑iP	P	13 47 55.5	+0.3
NRIK				pmax	pmax		
	comp=Z,21nm,0.9s						
NRIK	Noril'sk	38.77	10	P	P	13 47 55.5	+0.3
NRIK				IAmb	IAmb	13 47 58.4	
	comp=Z,19nm,0.8s						
KWP	Kalwaria Pacla	38.95	311	eP	P	13 47 57.5	+0.4
KWP	Kalwaria Pacla	38.95	311	P	P	13 47 56.5	-0.5
KWP				pmax	pmax		
	comp=Z,99nm,0.7s						
KWP	Kalwaria Pacla	38.95	311	P	P	13 47 56.5	-0.5
UZH	Uzhgorod	39.08	309	eP	P	13 47 56.0	-2.1
UZH				i		13 48 13.0	
BOVS	Bovan	39.12	301	⇑P	P	13 47 59.4	+0.8
KOLS	Kolonicke sedl	39.13	310	eP	P	13 48 00.1	+1.6
KOLS	Kolonicke sedl	39.13	310	eP	P	13 48 00.1	+1.6
VSU	Vasula	39.15	325	eP	P	13 47 58.5	0.0
VSU	Vasula	39.15	325	⇑iP	P	13 47 57.8	-0.7
VSU				pmax	pmax		
	comp=Z,136nm,0.7s						
MDVR	Moldovita	39.15	303	⇑P	P	13 47 59.1	+0.3
BZS	Buzias	39.26	304	⇓P	P	13 48 00.4	+0.7
SIRR	Siria	39.27	305	⇓P	P	13 48 01.0	+1.3
ITM	Ithomi	39.30	291	P	P	13 47 58.7	-1.4
ITM				IAmb	IAmb	13 48 01.6	
	comp=Z,16nm,0.8s						
FNA	Florina	39.42	297	P	P	13 47 59.8	-1.3
FNA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
FNA	Florina	39.42	297	P	P	13 47 59.8	-1.3
PABE	Paberze	39.53	320	eP	P	13 48 01.9	+0.1
PABE	Paberze	39.53	320	P	P	13 48 01.3	-0.5
SUW	Suwalki	39.56	318	eP	P	13 48 01.3	-0.7
BOD	Bodaibo	39.62	36	eP	P	13 48 02.6	+0.1
BOD				pmax	pmax		
	comp=Z,10.0nm,1.2s						
GSI	Gunungsitoli	40.31	134	P	P	13 48 09.7	+1.0
GSI				IAmb	IAmb	13 48 13.3	
	comp=Z,22nm,0.7s						
NIE	Niedzica	40.47	310	eP	P	13 48 11.2	+1.4
PSZ	Piszkesteto	40.59	308	eP	P	13 48 11.0	+0.2
MTSE	Matsula	40.66	325	eP	P	13 48 11.5	+0.5
FINES	FINESS Array B	40.71	329	P	P	13 48 10.9	-0.5
	comp=Z,5.0nm,0.6s,baz=106,slow=6.6,SNR=13						
FINES				PcP	PcP	13 50 13.4	+1.1
	comp=Z,3.8nm,0.9s,baz=109,slow=6.0,SNR=4.3						
FINES				LR	LR	14 06 59.8	
	comp=Z,170nm,19.1s,baz=76,slow=39						
FINES	FINESS Array B	40.71	329	P	P	13 48 10.5	-0.9
FINES	FINESS Array B	40.71	329	P	P	13 48 10.5	-0.9
OJC	Ojcow	40.89	311	eP	P	13 48 13.4	+0.3
OJC	Ojcow	40.89	311	P	P	13 48 12.7	-0.5
OJC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
OJC	Ojcow	40.89	311	P	P	13 48 12.7	-0.5
MORH	Mrgy, Hungar	41.36	305	eP	P	13 48 16.3	-0.7
NJ2	Nanjing	41.43	76	eP	P	13 48 18.8	+1.0
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
KOVH	Kovagotottos	41.73	305	eP	P	13 48 21.1	+1.0
MNSI	Mandailing Nat	41.95	132	P	P	13 48 22.7	+0.5
	comp=Z,76nm,0.8s						
MORC	Moravsky Berou	42.29	311	P	P	13 48 23.0	-1.7
MORC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MORC	Moravsky Berou	42.29	311	P	P	13 48 23.0	-1.7
MORC	Moravsky Berou	42.29	311	eP	P	13 48 24.5	-0.2
KRLC	Kraliky	42.81	311	eP	P	13 48 28.9	0.0
KRLC	Kraliky	42.81	311	eP	P	13 48 28.9	0.0
VRAC	Vranov	42.88	310	eP	P	13 48 29.9	+0.5
KRUC	Moravsky	42.99	309	eP	P	13 48 30.3	0.0
TIP	Timpagrande	43.10	295	P	P	13 48 31.0	-0.4
TIP				IAmb	IAmb	13 48 47.1	
	comp=Z,34nm,1.4s						
DPC	Dobruska-Polom	43.12	311	eP	P	13 48 31.5	+0.1
DPC	Dobruska-Polom	43.12	311	eP	P	13 48 31.5	+0.1
KSP	Ksiaz	43.18	312	eP	P	13 48 32.1	+0.3
OSTC	Ostas	43.21	312	eP	P	13 48 33.4	+1.4
BKNI	Bangkinang	43.25	131	P	P	13 48 33.4	+0.7
	comp=Z,2μmcomp=Z,139nm,0.7s						
CHVC	Chvalec	43.31	312	eP	P	13 48 33.8	+0.9
PPI	Padang Panjang	43.44	132	P	P	13 48 35.1	+0.9
SGRT	San Giovanni R	43.59	299	P	P	13 48 34.0	-1.3
SGRT				IAmb	IAmb	13 48 44.5	
	comp=Z,42nm,1.2s						
PDSI	Padang	43.83	132	P	P	13 48 37.7	+0.3
	comp=Z,2μmcomp=Z,18nm,0.7s						
PRU	Pruhonice	44.24	311	eP	P	13 48 40.7	+0.4
PRU	Pruhonice	44.24	311	eP	P	13 48 40.7	+0.4
CKRC	Cesky Krumlov	44.36	309	eP	P	13 48 42.0	+0.7
BSD	Bornholm Skovb	44.50	318	eP	P	13 48 42.7	+0.5
KEV	Kevo	44.63	340	P	P	13 48 42.8	-0.3
KEV				pmax	pmax		
	comp=Z,59nm,1.5s						
KEV	Kevo	44.63	340	P	P	13 48 42.8	-0.3
KEV				IAmb	IAmb	13 49 03.5	
	comp=Z,59nm,1.5s						
BRG	Berggiesshubel	44.67	312	eP	P	13 48 44.1	+0.4
BRG				Amp		13 48 46.5	
	comp=Z,7.9nm,0.8s						
GERES	GERESS Array B	44.76	309	P	P	13 48 43.9	-0.7
	comp=Z,3.7nm,0.8s,baz=104,slow=5.6,SNR=22						
GERES				PcP	PcP	13 50 26.4	+0.2
	comp=Z,1.5nm,0.5s,baz=97,slow=4.6,SNR=5.6						
GERES				LR	LR	14 10 52.8	
	comp=Z,61nm,19.5s,baz=88,slow=41						
GERES	GERESS Array B	44.76	309	P	P	13 48 43.5	-1.1
GERES	GERESS Array B	44.76	309	P	P	13 48 43.5	-1.1
CN2	Changchun	44.82	58	eP	P	13 48 45.8	+0.8
CN2				eS	S	13 55 15.0	-4.6
CN2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,100nm,13.0s						
CN2				LR	LR		
	comp=Z,100nm,13.0s						
CN2				LR	LR		
	comp=Z,100nm,17.0s						
KHC	Kasperske Hory	44.85	309	eP	P	13 48 45.8	+0.6
KHC	Kasperske Hory	44.85	309	eP	P	13 48 45.8	+0.6
RUE	Ruedersdorf	44.88	314	eP	P	13 48 47.1	+1.8
ARCES	ARCESS Array B	44.94	340	P	P	13 48 45.2	-0.5
	comp=Z,8.0nm,0.7s,baz=124,slow=8.0,SNR=23						
ARCES				LR	LR	14 08 14.3	

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      comp=Z,193nm,19.7s,baz=75,slow=37
ARCES ARCESS Array B  44.94 340   P      P        13 48 44.7 -0.9
ARCES                             pmax   pmax
      comp=Z,12nm,0.9s
ARCES ARCESS Array B  44.94 340   P      P        13 48 44.7 -0.9
ZOU   Zoufplan        45.28 306   P      P        13 48 47.6 -1.3
CLL   Collm           45.28 312 i P      P        13 48 49.1 +0.5
CLL                               pmax   pmax
      comp=Z,10.0nm,1.1s
CLL   Collm           45.28 312 i P      P        13 48 49.1 +0.5
      comp=Z,10.0nm,1.1s
CLL                             eS       S        13 55 30.0 +3.9
CLL                             eSS      ScS      13 58 42.0 +0.2
CLL                               LmV             14 12 00.0
      comp=Z,100nm,19.0s
MURB  Monte Urbino    45.82 301   P      P        13 48 52.9 -0.2
MURB                              IAmb   IAmb     13 49 01.2
      comp=Z,38nm,1.3s
CORL  Corleone        45.97 294   P      P        13 48 51.9 -2.4
ZEA   Zeya            46.02  44 eP       P        13 48 56.7 +2.3
CLTB  Caltabellotta   46.10 293   P      P        13 48 52.8 -2.6
CLTB                              IAmb   IAmb     13 49 13.5
      comp=Z,38nm,1.3s
YULB  Yu-li           46.17  87   P      P        13 48 56.0  0.0
YULB                              IAmb   IAmb     13 49 14.7
      comp=Z,25nm,1.0s
CTI   Castel Tesino   46.22 305   P      P        13 48 55.3 -0.9
CTI                               pmax   pmax
      comp=Z,16nm,1.4s
CTI   Castel Tesino   46.22 305   P      P        13 48 55.3 -0.9
MASI  Maura Aman, Be  46.67 132   P      P        13 49 00.4 +0.5
      comp=Z,158nm,0.9s
NC405 NORSAR Array S  47.17 326   P      P        13 49 01.5 -1.8
NC602 NORSAR Array S  47.18 325   P      P        13 49 01.4 -2.0
NC602                             IAmb   IAmb     13 49 06.0
      comp=Z,28nm,1.1s
NC303 NORSAR Array S  47.36 326   P      P        13 49 04.0 -0.8
NC303                             IAmb   IAmb     13 49 18.4
      comp=Z,19nm,1.1s
NB201 NORSAR Array S  47.36 326   P      P        13 49 04.0 -0.8
NB201                             IAmb   IAmb     13 49 06.5
      comp=Z,33nm,1.1s
NB2   NORSAR Subarra  47.40 326   P      P        13 49 03.9 -1.1
      comp=Z,7.6nm,0.6s,baz=103,slow=7.9
NOA   NORSAR Array B  47.40 326   P      P        13 49 04.0 -1.1
      comp=Z,7.2nm,0.7s,baz=102,slow=7.8,SNR=20
NOA                               LR     LR       14 12 27.3
      comp=Z,405nm,18.6s,baz=105,slow=40
NOA   NORSAR Array B  47.40 326   P      P        13 49 04.0 -1.1
KSAR  Wonju Array Be  47.54  67   P      P        13 49 06.8 +0.3
KSAR  Wonju Array Be  47.54  67   P      P        13 49 06.8 +0.3
KSRS  Korea Array     47.57  67   P      P        13 49 07.2 +0.4
      comp=Z,5.7nm,0.8s,baz=273,slow=6.5,SNR=19
KSRS                              PcP    PcP      13 50 36.7 +0.6
      comp=Z,3.5nm,0.8s,baz=285,slow=3.1,SNR=5.8
KSRS                              LR     LR       14 12 27.3
      comp=Z,81nm,18.3s,baz=306,slow=40
NBO00 NORSAR Array S  47.60 326   P      P        13 49 04.9 -1.8
NC204 NORSAR Array S  47.65 326   P      P        13 49 06.2 -1.0
NC204                             IAmb   IAmb     13 49 20.6
      comp=Z,35nm,1.2s
MDJ   Mudanjiang      47.72  57   P      P        13 49 08.2 +0.4
MDJ                               pmax   pmax
      comp=Z,11nm,1.0s
MDJ                               pmax   pmax
      comp=Z,200nm,3.7s
TUE   Stuetta         47.78 306   P      P        13 49 07.5 -1.1
YAK   Yakutsk         48.33  33 eP       P        13 49 12.5 +0.3
YAK                               pmax   pmax
      comp=Z,27nm,0.7s
YAK   Yakutsk         48.33  33   P      P        13 49 11.0 -1.2
VSL   Villasalto      48.70 297   P      P        13 49 14.2 -1.2
KLR   Kul'dur         48.81  50c iP      P        13 49 16.9 +0.8
KLR                               pmax   pmax
      comp=Z,12nm,1.0s
SENIN Lac Senin/Sane  49.20 306   P      P        13 49 17.5 -1.9
USA0B Ussuriysk Arra  49.47  57c iP      P        13 49 21.9 +0.6
USA0B Ussuriysk Arra  49.47  57   P      P        13 49 21.5 +0.2
USA0B                             IAmb   IAmb     13 49 24.7
      comp=Z,9.5nm,0.8s
USRK  Ussuriysk Ar.   49.47  57   P      P        13 49 21.8 +0.6
      comp=Z,7.2nm,0.7s,baz=273,slow=6.4,SNR=15
USRK  Ussuriysk Ar.   49.47  57   P      P        13 49 21.5 +0.2
USRK  Ussuriysk Ar.   49.47  57   P      P        13 49 21.5 +0.2
KEST  Kesra           49.53 292   P      P        13 49 22.4 +0.4
      comp=Z,22nm,0.5s,baz=341,slow=1.6,SNR=24
KEST  Kesra           49.53 292   P      P        13 49 21.9  0.0
KEST  Kesra           49.53 292   P      P        13 49 22.2 +0.2
      SNR=22
TIXI  Tiksi           50.39  21⇓iP       P        13 49 27.1 -0.7
TIXI  Tiksi           50.39  21   P      P        13 49 26.9 -0.9
TIXI                              IAmb   IAmb     13 49 37.3
      comp=Z,8.3nm,0.6s
BMRD  Maredsous       50.52 311 dP       P        13 49 28.3 -0.9
STKI  Sintang         50.67 120   P      P        13 49 32.6 +1.9
      comp=Z,18nm,0.9s
JOW   Kunigami        50.81  80   LR     LR       14 13 39.0
      comp=Z,85nm,20.2s,baz=112,slow=39
JOW   Kunigami        50.81  80   P      P        13 49 31.0 -0.6
SNF   Seneffe         50.81 312 dP       P        13 49 31.9 +0.5
CGJI  Cibinong        51.52 132   P      P        13 49 35.2 -1.8
      comp=Z,46nm,0.8s
SPB2  Spitsbergen Ar  51.65 348   P      P        13 49 37.9 +0.7
SPITS Spitsbergen Ar  51.65 348   P      P        13 49 37.8 +0.5
SPITS                             pmax   pmax
      comp=Z,28nm,1.2s
GRNR  Gornyy          51.70  48⇑iP       P        13 49 38.8 +0.8
GRNR                              pmax   pmax
      comp=Z,1.0nm,0.9s
GRNR                              MLR    MLR
      comp=E,140nm,16.0s
GRNR                              MLR    MLR
      comp=N,50nm,10.0s
GRNR                              MLR    MLR
      comp=Z,160nm,11.0s
LEM   Lembang         52.91 130   LR     LR       14 12 19.1
      comp=Z,93nm,20.3s,baz=298,slow=36
CISI  Cisompet, Garu  53.59 130   P      P        13 49 51.2 -1.2
JWT   Wachi           53.95  67   P      P        13 49 55.2 +0.3
JWT                               IAmb   IAmb     13 50 00.6
      comp=Z,20nm,0.8s
KPJI  Karang Pucung   54.15 129   P      P        13 49 57.9 +1.5
      comp=Z,23nm,0.8s
ESK   Eskdalemuir     54.85 318   P      P        13 49 59.8 -1.3
ESK                               pmax   pmax
      comp=Z,31nm,1.5s
ESK   Eskdalemuir     54.85 318   P      P        13 49 59.8 -1.3
ESK                               IAmb   IAmb     13 50 07.5
      comp=Z,31nm,1.4s
INU   Inuyama         55.20  67   P      P        13 50 04.8 +0.9
INU                               IAmb   IAmb     13 50 05.8
      comp=Z,16nm,0.8s
JSD   Sado            55.39  63   P      P        13 50 04.8 -0.4
JSD                               IAmb   IAmb     13 50 26.4
      comp=Z,25nm,1.3s
MJAR  Matsushiro Arr  55.77  65   P      P        13 50 08.5 +0.5
      comp=Z,6.1nm,1.2s,baz=304,slow=8.9,SNR=6.8
YSS   Yuzh-Sakhalins  56.43  52 eP       P        13 50 12.8 +0.3
YSS                               pmax   pmax
      comp=Z,20nm,0.9s
YSS                               MLR    MLR
      comp=Z,300nm,19.0s
YSS   Yuzh-Sakhalins  56.43  52   P      P        13 50 13.2 +0.7
YSS                               IAmb   IAmb     13 50 16.7
      comp=Z,17nm,0.9s
JEW   Eniwo           56.48  57   P      P        13 50 13.9 +0.9
JTM   Tenmabayashi    56.74  59   P      P        13 50 14.3 -0.5
MPSI  Mapaga          56.88 113   P      P        13 50 18.1 +2.0
      comp=Z,20nm,1.1s
DSB   Dublin          57.00 316   P      P        13 50 16.4 -0.1
DSB                               IAmb   IAmb     13 50 26.3
      comp=Z,29nm,1.5s
JMM   Marumori        57.36  63   P      P        13 50 19.8 +0.6
JYT   Yasato          57.39  65   P      P        13 50 19.5  0.0
VOI   Vohitsoka       57.87 205   P      P        13 50 24.2 +1.2
VOI                               IAmb   IAmb     13 50 25.4
      comp=Z,14nm,0.9s
ERM   Erimo           57.92  57   P      P        13 50 24.0 +0.9
ERM                               pmax   pmax
      comp=Z,29nm,1.0s
ERM   Erimo           57.92  57   P      P        13 50 24.0 +0.9
NOR   Nord            58.05 350 i P      P        13 50 23.7 +0.3
NOR                               IAmb   IAmb     13 50 25.9
      comp=Z,5.6nm,0.7s
ESBB  Sonseca Array   58.65 300   P      P        13 50 26.4 -1.9
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ESDC  Sonseca Array   58.65 300   P      P        13 50 26.8 -1.6
      comp=Z,3.4nm,0.7s,baz=69,slow=6.8,SNR=20
ESDC                              LR     LR       14 21 38.7
      comp=Z,34nm,18.6s,baz=45,slow=42
ESDC  Sonseca Array   58.65 300   P      P        13 50 26.4 -2.0
DAG   Danmarks Havn   58.76 344 i P      P        13 50 27.8 -0.6
DAG                               IAmb   IAmb     13 50 31.1
      comp=Z,7.5nm,0.6s
SEY   Seymchan        58.82  32   P      P        13 50 30.2 +1.2
      comp=Z,9.1nm,0.8s,baz=284,slow=11
PAB   San Pablo       58.97 300   P      P        13 50 28.3 -2.3
PAB                               pmax   pmax
      comp=Z,9.0nm,1.2s
PAB   San Pablo       58.97 300   P      P        13 50 28.3 -2.3
DBG   Daneborg        59.49 342 i P      P        13 50 33.4 -0.2
DBG                               IAmb   IAmb     13 50 36.7
      comp=Z,4.0nm,0.7s
MTE   Manteigas       61.04 302   P      P        13 50 44.0 -0.8
MTE                               IAmb   IAmb     13 50 50.8
      comp=Z,19nm,1.0s
PVAQ  Vaqueiros       62.17 299   P      P        13 50 50.9 -1.5
LBMI  Labuha          63.49 109   P      P        13 51 01.8 +0.4
      comp=Z,802nmcomp=Z,27nm,1.1s
PETK  Petropavlovsk-  64.04  42   LR     LR       14 20 12.9
      comp=Z,76nm,20.6s,baz=292,slow=37
TORD  Torodi Ar. Bea  64.53 270   P      P        13 51 06.8 -1.5
      comp=Z,13nm,0.7s,baz=52,slow=5.7,SNR=74
TORD  Torodi Ar. Bea  64.53 270   P      P        13 51 06.8 -1.5
TORD                              IAmb   IAmb     13 51 07.8
      comp=Z,9.4nm,0.8s
SUMG  Summit          64.98 342   P      P        13 51 11.6 +0.8
SUMG                              pmax   pmax
      comp=Z,26nm,0.6s
SUMG  Summit          64.98 342 i P      P        13 51 10.8 +0.1
SUMG                              IAmb   IAmb     13 51 14.1
      comp=Z,21nm,0.5s
SUMG  Summit          64.98 342   P      P        13 51 11.6 +0.8
NEEM  North Greenlan  65.21 348 i P      P        13 51 12.2  0.0
NEEM                              IAmb   IAmb     13 51 14.7
      comp=Z,15nm,0.7s
SOEI  Soe             66.66 119   P      P        13 51 22.1 +0.1
      comp=Z,32nm,0.8s
ICESG Greenland Ices  66.98 338 i P      P        13 51 23.4 -0.2
ICESG                             IAmb   IAmb     13 51 26.3
      comp=Z,14nm,0.6s
EUNU  Eureka          67.42 356   P      P        13 51 26.8 +0.8
EUNU                              IAmb   IAmb     13 51 30.1
      comp=Z,9.9nm,0.9s
FAKI  Fak Fak         68.66 108   P      P        13 51 34.9 +0.2
TULEG Thule           68.70 350   P      P        13 51 34.2 +0.3
TULEG                             IAmb   IAmb     13 51 36.7
      comp=Z,13nm,0.9s
KOWA  Kowa            68.73 274   P      P        13 51 34.2 -0.9
GIRL  Giralia         69.06 136   P      P        13 51 38.2 +1.4
ILULI Ilulissat       70.30 341   P      P        13 51 44.4 +0.6
ILULI                             pmax   pmax
      comp=Z,60nm,0.8s
ILULI Ilulissat       70.30 341 eP       P        13 51 43.9 +0.1
ILULI                             IAmb   IAmb     13 51 46.5
      comp=Z,34nm,0.6s
ILULI Ilulissat       70.30 341   P      P        13 51 44.4 +0.6
GUMO  Guam            70.50  86   LR     LR       14 23 10.0
      comp=Z,28nm,20.0s,baz=48,slow=36
GUMO  Guam            70.50  86   P      P        13 51 45.9 -0.1
GUMO                              pmax   pmax
      comp=Z,303nm,1.4s
GUMO  Guam            70.50  86   P      P        13 51 45.9 -0.1
DY2G  Dye2            70.51 337 i P      P        13 51 45.7 +0.2
DY2G                              IAmb   IAmb     13 51 48.4
      comp=Z,44nm,0.6s
LBTB  Lobatse         70.57 222   P      P        13 51 47.2 +1.0
LBTB                              pmax   pmax
      comp=Z,13nm,0.9s
LBTB  Lobatse         70.57 222   P      P        13 51 47.2 +1.0
LBTB                              IAmb   IAmb     13 51 50.8
      comp=Z,13nm,0.9s
BAKI  Biak            70.83 104   P      P        13 51 50.0 +2.0
      comp=Z,88nm,0.8s
TSUM  Tsumeb          71.24 232   P      P        13 51 51.4 +0.9
SFJD  Kangerlussuaq   71.56 339   P      P        13 51 51.7 +0.1
SFJD  Kangerlussuaq   71.56 339 eP       P        13 51 51.6 +0.1
SFJD                              IAmb   IAmb     13 51 54.7
      comp=Z,12nm,0.6s
SFJD  Kangerlussuaq   71.56 339   P      P        13 51 51.7 +0.1
FITZ  Fitzroy Crossi  73.18 125   P      P        13 52 02.7 +0.8
DBIC  Dimbokro        73.35 267   P      P        13 52 02.4 -0.8
      comp=Z,12nm,0.6s,baz=48,slow=5.3,SNR=16
DBIC                              LR     LR       14 28 18.9
      comp=Z,106nm,19.8s,baz=223,slow=39
DBIC  Dimbokro        73.35 267   P      P        13 52 02.3 -0.8
DBIC                              pmax   pmax
      comp=Z,17nm,0.8s
DBIC  Dimbokro        73.35 267   P      P        13 52 02.2 -0.8
DBIC                              IAmb   IAmb     13 52 05.1
      comp=Z,17nm,0.8s
KIC   Kosan Boka      73.42 267 ePKP1    P        13 52 02.7 -0.8
      comp=Z,35nm,0.7s
SMPI  Sarmi           73.43 103   P      P        13 52 05.0 +1.5
      comp=Z,33nm,1.2s
TIC   Toumodi         73.51 268 ePKP1    P        13 52 02.7 -1.3
BOSA  Boshof          73.56 220   P      P        13 52 04.7 +0.6
      comp=Z,9.1nm,0.6s,baz=28,slow=5.3,SNR=16
BOSA  Boshof          73.56 220   P      P        13 52 04.7 +0.6
BOSA                              IAmb   IAmb     13 52 10.0
      comp=Z,11nm,0.8s
LIC   Lamto           73.73 267 ePKP1    P        13 52 03.4 -1.9
      comp=Z,69nm,0.6s
KNRA  Kununurra       73.82 121   P      P        13 52 06.7 +1.0
KNRA                              IAmb   IAmb     13 52 10.5
      comp=Z,14nm,0.8s
MORW  Morawa          75.03 139   P      P        13 52 12.5 +0.1
MORW                              IAmb   IAmb     13 52 16.5
      comp=Z,39nm,1.4s
TOLK  Toolik Lake Re  75.58  14   P      P        13 52 15.9 +0.7
TOLK  Toolik Lake Re  75.58  14   P      P        13 52 16.0 +0.7
      baz=326
A36M  Sachs Harbour   75.80   5   P      P        13 52 17.2 +0.9
A36M  Sachs Harbour   75.80   5   P      P        13 52 17.3 +0.9
      baz=347
COLD  Coldfoot        76.62  15   P      P        13 52 21.4 +0.3
COLD  Coldfoot        76.62  15   P      P        13 52 21.7 +0.6
      baz=326
IMAR  Indian Mountai  76.82  17   P      P        13 52 22.4 +0.1
GCSA  Galena City Sc  76.99  19   P      P        13 52 23.9 +0.8
      baz=321
H21K  Melozitna Rive  77.31  17   P      P        13 52 25.2 +0.1
H21K                              IAmb   IAmb     13 52 28.5
      comp=Z,19nm,0.9s
H21K  Melozitna Rive  77.31  17   P      P        13 52 24.7 -0.3
      baz=324,SNR=11
BMAR  Burnt Mountain  77.59  13   P      P        13 52 28.1 +1.4
I21K  Tanana          77.90  17   P      P        13 52 28.6 +0.3
I21K                              IAmb   IAmb     13 52 31.9
      comp=Z,11nm,0.8s
I21K  Tanana          77.90  17   P      P        13 52 28.1 -0.2
      baz=325,SNR=12
H23K  Yukon River     77.94  15   P      P        13 52 29.7 +1.1
H23K  Yukon River     77.94  15   P      P        13 52 29.1 +0.5
      baz=327,SNR=19
J20K  Nowinta River   78.17  18   P      P        13 52 30.7 +0.9
J20K                              IAmb   IAmb     13 52 33.5
      comp=Z,18nm,0.8s
J20K  Nowinta River   78.17  18   P      P        13 52 30.6 +0.9
      baz=323,SNR=9.1
FYU   Fort Yukon      78.22  14   P      P        13 52 31.1 +1.1
H24K  Noodor Dome     78.30  15   P      P        13 52 31.5 +0.9
H24K                              IAmb   IAmb     13 52 34.4
      comp=Z,17nm,0.7s
H24K  Noodor Dome     78.30  15   P      P        13 52 31.1 +0.5
      baz=328,SNR=11
MLY   Manley          78.33  16   P      P        13 52 31.3 +0.6
MLY                               IAmb   IAmb     13 52 34.1
      comp=Z,18nm,0.8s
MLY   Manley          78.33  16   P      P        13 52 30.6 -0.2
      baz=326,SNR=20
INK   Inuvik          78.54   9   P      P        13 52 32.7 +1.0
      comp=Z,40nm,0.6s,baz=348,slow=6.1,SNR=197
INK   Inuvik          78.54   9   P      P        13 52 32.5 +0.8
INK                               pmax   pmax
      comp=Z,44nm,0.7s
INK   Inuvik          78.54   9   P      P        13 52 32.5 +0.8
INK   Inuvik          78.54   9   P      P        13 52 32.2 +0.5
      baz=340
I23K  Minto, Yukon-K  78.55  16   P      P        13 52 32.6 +0.8
I23K                              IAmb   IAmb     13 52 35.6
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      comp=Z,14nm,0.9s
I23K  Minto, Yukon-K  78.55  16   P      P        13 52 32.5 +0.6
      baz=327,SNR=9.0
TTA   Tatalina        78.65  19   P      P        13 52 33.0 +0.4
      baz=322
K20K  Telida          78.85  19   P      P        13 52 33.8 +0.2
K20K                              IAmb   IAmb     13 52 37.2
      comp=Z,23nm,0.8s
K20K  Telida          78.85  19   P      P        13 52 34.4 +0.8
      baz=323,SNR=10
CHUM  Lake Minchumin  78.88  18   P      P        13 52 34.2 +0.5
      baz=325,SNR=7.2
SUR   Sutherland      78.90 220   P      P        13 52 36.1 +1.7
SUR                               IAmb   IAmb     13 52 37.1
      comp=Z,13nm,0.8s
MDM   Murphy Dome     78.97  15   P      P        13 52 34.4 +0.2
POKR  Poker Plat Res  79.01  15   P      P        13 52 34.6 +0.1
POKR  Poker Plat Res  79.01  15   P      P        13 52 35.1 +0.7
      baz=329,SNR=5.4
BPAW  Bear Paw Mtn.   79.04  17   P      P        13 52 33.8 -0.9
BPAW  Bear Paw Mtn.   79.04  17   P      P        13 52 34.4 -0.3
      baz=326,SNR=8.0
NEA2  Nenana          79.09  16   P      P        13 52 35.1 +0.2
NEA2  Nenana          79.09  16   P      P        13 52 35.1 +0.2
      baz=327,SNR=38
TCOL  CIGO, UAF Yank  79.13  15   P      P        13 52 34.7 -0.3
      baz=328,SNR=7.9
COLA  College         79.13  15d iP      P        13 52 35.8 +0.8
COLA                              pmax   pmax
      comp=Z,25nm,0.8s
COLA  College         79.13  15   P      P        13 52 34.8 -0.2
      baz=328
CAST  Castle Rocks    79.32  18   P      P        13 52 35.9 -0.3
      baz=325,SNR=8.3
CCB   Clear Creek Bu  79.33  15   P      P        13 52 35.4 -0.7
WRH   Wood River Hil  79.42  16   P      P        13 52 36.3 -0.3
WRH                               IAmb   IAmb     13 52 39.1
      comp=Z,11nm,0.8s
IL31                  79.43  15   P      P        13 52 36.2 -0.5
IL31                              IAmb   IAmb     13 52 39.3
      comp=Z,16nm,1.1s
ILAR  Eielson Array   79.43  15   P      P        13 52 36.3 -0.4
      comp=Z,6.1nm,0.8s,baz=320,slow=3.9,SNR=32
ILAR                              PKKPbc PKKPbc   14 11 25.9 -0.2
      comp=Z,0.5nm,0.5s,baz=186,slow=2.1,SNR=8.3
ILAR                              LR     LR       14 31 03.0
      comp=Z,55nm,18.3s,baz=296,slow=38
ILAR  Eielson Array   79.43  15   P      P        13 52 36.4 -0.3
L19K  White Mountain  79.57  20   P      P        13 52 35.5 -2.1
L19K                              IAmb   IAmb     13 52 41.2
      comp=Z,16nm,1.1s
L19K  White Mountain  79.57  20   P      P        13 52 37.8 +0.2
      baz=323
L20K  Farewell, AK    79.61  19   P      P        13 52 38.2 +0.4
      baz=324
PPLA  Purkeypile      79.72  18   P      P        13 52 38.4 -0.1
PPLA                              IAmb   IAmb     13 52 41.8
      comp=Z,11nm,0.8s
PPLA  Purkeypile      79.72  18   P      P        13 52 38.5 -0.1
      baz=325
TRF   Thorofare Moun  79.75  17   P      P        13 52 38.7  0.0
TRF   Thorofare Moun  79.75  17   P      P        13 52 38.5 -0.2
      baz=326
MCK   McKinley        79.85  16   P      P        13 52 39.0  0.0
MCK                               pmax   pmax
      comp=Z,17nm,0.8s
MCK   McKinley        79.85  16   P      P        13 52 39.0  0.0
MCK                               IAmb   IAmb     13 52 42.0
      comp=Z,17nm,0.8s
MCK   McKinley        79.85  16   P      P        13 52 38.8 -0.3
      baz=328,SNR=14
J25K  Salcha River,   79.90  15   P      P        13 52 38.7 -0.7
      baz=330,SNR=18
M19K  Big River Lodg  79.93  20   P      P        13 52 39.7 +0.2
M19K  Big River Lodg  79.93  20   P      P        13 52 39.8 +0.3
      baz=323
RND   Reindeer        80.14  17   P      P        13 52 40.1 -0.6
RND                               pmax   pmax
      comp=Z,16nm,0.8s
RND   Reindeer        80.14  17   P      P        13 52 40.1 -0.6
RND                               IAmb   IAmb     13 52 43.0
      comp=Z,16nm,0.8s
J26L  Joseph Creek    80.37  14   P      P        13 52 42.1 +0.2
      baz=332,SNR=24
I29M  Ogilvie Camp,   80.58  11   P      P        13 52 42.9 -0.1
      baz=336,SNR=20
EGAK  Eagle           80.60  13   P      P        13 52 42.9 -0.1
EGAK  Eagle           80.60  13   P      P        13 52 42.4 -0.6
      baz=334
WRA   Warramunga Arr  80.62 120   P      P        13 52 44.9 +1.1
      comp=Z,13nm,0.7s,baz=314,slow=4.3,SNR=109
WRA   Warramunga Arr  80.62 120   P      P        13 52 44.7 +0.9
WRA                               pmax   pmax
      comp=Z,1.0nm,0.8s
WRA   Warramunga Arr  80.62 120   P      P        13 52 44.7 +0.9
WRAB  Tennant Creek   80.62 120c iP      P        13 52 44.9 +1.1
WRAB                              pmax   pmax
      comp=Z,20nm,0.8s
WRAB  Tennant Creek   80.62 120   P      P        13 52 44.5 +0.7
WRAB                              IAmb   IAmb     13 52 45.9
      comp=Z,19nm,0.8s
WB2   Warramunga Arr  80.63 120   P      P        13 52 44.6 +0.8
WB2                               IAmb   IAmb     13 52 45.8
      comp=Z,20nm,0.8s
CUT   Chulitna        80.63  18   P      P        13 52 42.5 -0.8
      baz=327
SKT   Skwentna        80.65  18   P      P        13 52 43.1 -0.3
SKT                               IAmb   IAmb     13 52 45.8
      comp=Z,17nm,0.9s
SKT   Skwentna        80.65  18   P      P        13 52 43.3 -0.1
      baz=326
SCRK  Sand Creek      80.75  14   P      P        13 52 44.0  0.0
SCRK                              IAmb   IAmb     13 52 47.3
      comp=Z,12nm,0.8s
SCRK  Sand Creek      80.75  14   P      P        13 52 43.9  0.0
      baz=332,SNR=14
RIDG  Independent Ri  80.77  15   P      P        13 52 43.9 -0.2
RIDG  Independent Ri  80.77  15   P      P        13 52 43.6 -0.5
      baz=331,SNR=6.3
WR0   Warramunga Arr  80.78 120   P      P        13 52 45.5 +0.8
WR0                               IAmb   IAmb     13 52 46.5
      comp=Z,12nm,0.8s
N19K  Bonanza Creek   80.78  20   P      P        13 52 43.9 -0.3
N19K                              IAmb   IAmb     13 52 47.9
      comp=Z,14nm,0.9s
N19K  Bonanza Creek   80.78  20   P      P        13 52 43.8 -0.3
      baz=323
DOT   Dot Lake        81.02  15   P      P        13 52 45.5 +0.1
DOT                               IAmb   IAmb     13 52 48.3
      comp=Z,11nm,0.8s
SPCR  Spurr Chakacha  81.11  19   P      P        13 52 45.6 -0.3
      baz=325
M22K  Willow          81.22  18   P      P        13 52 45.7 -0.6
      baz=327
SUA   Susitna One     81.29  18   P      P        13 52 46.8 -0.2
SUA                               IAmb   IAmb     13 52 50.6
      comp=Z,14nm,0.8s
SUA   Susitna One     81.29  18   P      P        13 52 46.2 -0.7
      baz=326
PAX   Paxson          81.31  15   P      P        13 52 46.4 -0.6
PAX                               pmax   pmax
      comp=Z,13nm,0.8s
PAX   Paxson          81.31  15   P      P        13 52 46.4 -0.6
PAX                               IAmb   IAmb     13 52 49.9
      comp=Z,13nm,0.8s
PAX   Paxson          81.31  15   P      P        13 52 46.6 -0.4
      baz=330,SNR=14
NIKH  Nikolski High   81.31  31   P      P        13 52 46.1 -0.9
      baz=313
O19K  Port Alsworth   81.32  21   P      P        13 52 46.1 -0.9
      baz=324
GHO   Glory Hole Cre  81.51  17   P      P        13 52 47.5 -0.6
GHO                               IAmb   IAmb     13 52 51.1
      comp=Z,18nm,0.7s
DAWY  Dawson          81.57  12   P      P        13 52 47.5 -0.8
DAWY                              IAmb   IAmb     13 52 51.5
      comp=Z,14nm,0.8s
DAWY  Dawson          81.57  12   P      P        13 52 48.6 +0.3
      baz=336,SNR=18
PMR   Palmer          81.61  18   P      P        13 52 48.1 -0.3
PMR                               pmax   pmax
      comp=Z,11nm,0.9s
PMR   Palmer          81.61  18   P      P        13 52 48.1 -0.3
PMR                               IAmb   IAmb     13 52 51.1
      comp=Z,11nm,0.9s
PMR   Palmer          81.61  18   P      P        13 52 48.2 -0.2
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	baz=328						
SML	Sawmill	81.63	17	P	P	13 52 48.8	+0.1
	baz=328,SNR=10						
P18K	Big Mountain,	81.69	21	P	P	13 52 48.6	-0.4
	baz=323						
UNV	Unalaska Valle	81.72	30	P	P	13 52 49.2	0.0
	baz=315						
L26K	Log Cabin Wild	81.73	15	P	P	13 52 49.5	+0.4
	baz=332						
SCM	Sheep Creek Mo	81.86	17	P	P	13 52 49.7	-0.1
SCM				pmax	pmax		
	comp=Z,14nm,0.7s						
SCM	Sheep Creek Mo	81.86	17	P	P	13 52 49.7	-0.1
SCM				IAmb	IAmb	13 52 50.9	
	comp=Z,14nm,0.7s						
SCM	Sheep Creek Mo	81.86	17	P	P	13 52 49.7	-0.1
	baz=329						
RC01	Rabbit Creek A	81.88	18	P	P	13 52 49.6	-0.2
RC01				IAmb	IAmb	13 52 52.6	
	comp=Z,18nm,0.9s						
RC01	Rabbit Creek A	81.88	18	P	P	13 52 49.8	0.0
	baz=327						
HARP	HAARP	81.88	16	P	P	13 52 50.3	+0.4
	baz=331,SNR=9.8						
M24K	Tolsona, Glenn	81.90	16	P	P	13 52 50.7	+0.6
M24K	Tolsona, Glenn	81.90	16	P	P	13 52 49.9	-0.1
	baz=330,SNR=9.9						
KNK	Knik Glacier	81.93	17	P	P	13 52 50.5	+0.3
KNK	Knik Glacier	81.93	17	P	P	13 52 50.1	-0.1
	baz=328						
L27K	Beaver Creek,	82.01	14	P	P	13 52 50.4	-0.2
L27K				IAmb	IAmb	13 52 54.5	
	comp=Z,10nm,0.9s						
L27K	Beaver Creek,	82.01	14	P	P	13 52 50.7	+0.1
	baz=334,SNR=9.9						
BCAR	Beaver Creek A	82.02	14	P	P	13 52 51.0	+0.3
P19K	Oil Pt	82.08	20	P	P	13 52 51.0	0.0
	baz=324						
FALS	False Pass	82.26	28	P	P	13 52 51.4	-0.6
	baz=317						
M26K	Nabesna, AK	82.36	15	P	P	13 52 53.0	+0.5
M26K	Nabesna, AK	82.36	15	P	P	13 52 52.3	-0.1
	baz=333						
O22K	Cooper Landing	82.39	18	P	P	13 52 52.0	-0.6
	baz=327						
PWL	Port Wells	82.44	18	P	P	13 52 52.8	-0.1
PWL				IAmb	IAmb	13 52 56.8	
	comp=Z,20nm,1.2s						
PWL	Port Wells	82.44	18	P	P	13 52 52.1	-0.7
	baz=328						
KLU	Klutina	82.49	16	P	P	13 52 53.4	+0.2
KLU				IAmb	IAmb	13 52 54.7	
	comp=Z,10nm,0.8s						
KLU	Klutina	82.49	16	P	P	13 52 53.0	-0.2
	baz=330						
Q19K	Cape Douglas,	82.55	21	P	P	13 52 53.2	-0.3
	baz=324						
M27K	Edge Creek, AK	82.63	14	P	P	13 52 55.0	+1.0
M27K				IAmb	IAmb	13 52 58.5	
	comp=Z,16nm,1.0s						
M27K	Edge Creek, AK	82.63	14	P	P	13 52 53.9	-0.1
	baz=334,SNR=9.9						
AS31	Alice Springs	82.64	124	P	P	13 52 55.1	+0.7
ASAR	Alice Springs	82.64	124	P	P	13 52 55.3	+0.8
	comp=Z,11nm,0.4s,baz=304,slow=5.3,SNR=43						
ASAR				LR	LR	14 31 33.3	
	comp=Z,38nm,21.2s,baz=1.0,slow=37						
N25K	Chitina, Valde	82.70	16	P	P	13 52 54.6	+0.3
N25K	Chitina, Valde	82.70	16	P	P	13 52 54.2	-0.1
	baz=331						
BRSE	Bradley Lake S	82.73	19	P	P	13 52 54.5	+0.1
	baz=326						
GLI	Glacier Island	82.73	17	P	P	13 52 53.5	-0.8
	baz=329						
SEW	Seward	82.78	19	P	P	13 52 54.7	+0.1
	baz=327						
BVCY	Beaver Creek	82.79	14	P	P	13 52 55.1	+0.5
	baz=334						
DIV	Divide	82.84	16	P	P	13 52 54.5	-0.5
DIV				IAmb	IAmb	13 52 58.2	
	comp=Z,13nm,0.6s						
FID	Port Fidalgo	83.00	17	P	P	13 52 55.9	+0.1
FID				IAmb	IAmb	13 53 00.1	
	comp=Z,22nm,1.0s						
BMRM	Bremner River	83.26	16	P	P	13 52 57.2	0.0
	baz=331						
EYAK	Cordova Ski Ar	83.36	17	P	P	13 52 57.6	0.0
EYAK				IAmb	IAmb	13 53 01.2	
	comp=Z,15nm,0.8s						
EYAK	Cordova Ski Ar	83.36	17	P	P	13 52 57.9	+0.3
	baz=330						
M30M	Minto, Yukon	83.41	12	P	P	13 52 58.4	+0.5
	baz=338						
YUK3	Moose Creek	83.45	14	P	P	13 52 58.2	-0.1
	baz=335						
CHNA	Chernabura Isl	83.76	26	P	P	13 53 00.0	+0.3
	baz=320						
CRQE	Cirque	83.80	15	P	P	13 52 59.9	-0.1
	baz=333						
KDAK	Kodiak Island	83.81	21	P	P	13 53 00.4	+0.5
	comp=Z,12nm,0.6s,baz=298,slow=4.3,SNR=15						
KDAK	Kodiak Island	83.81	21	P	P	13 53 00.1	+0.1
	baz=325						
BARN	Barnard Glacie	83.84	15	P	P	13 53 00.2	-0.1
BARN				IAmb	IAmb	13 53 16.3	
	comp=Z,13nm,1.2s						
CTG	Chitna Glacier	84.00	15	P	P	13 53 01.2	+0.2
	baz=334						
OHAK	Old Harbor	84.05	22	P	P	13 53 01.6	+0.5
	baz=325						
M31M	Drury Creek, Y	84.17	11	P	P	13 53 02.0	+0.2
	baz=340,SNR=11						
YUK4	Talbot Arm	84.20	13	P	P	13 53 02.0	-0.2
	baz=336						
MMPY	Sheldon Lake,	84.25	10	P	P	13 53 02.9	+0.7
	baz=342,SNR=5.7						
PMG	Port Moresby	84.51	105	P	P	13 53 04.0	-0.2
PMG				pmax	pmax		
	comp=Z,32nm,1.0s						
PMG	Port Moresby	84.51	105	P	P	13 53 04.0	-0.2
WRGLY	Wrigley	84.55	6	P	P	13 53 04.5	+0.9
	baz=349,SNR=8.0						
YUK6	Outpost Mounta	84.63	13	P	P	13 53 04.5	+0.2
	baz=336						
HYT	Haines Junctio	84.90	13	P	P	13 53 05.5	-0.1
HYT				IAmb	IAmb	13 53 09.1	
	comp=Z,6.7nm,0.7s						
HYT	Haines Junctio	84.90	13	P	P	13 53 06.1	+0.5
	baz=337						
PINM	Pinnacle	85.02	15	P	P	13 53 06.4	+0.3
	baz=335						
WHY	Whitehorse	85.54	12	P	P	13 53 08.4	-0.4
WHY				IAmb	IAmb	13 53 11.4	
	comp=Z,7.1nm,0.6s						
WHY	Whitehorse	85.54	12	P	P	13 53 08.5	-0.3
	baz=339						
SCHQ	Schefferville	85.80	336	P	P	13 53 10.4	+0.4
	comp=Z,4.7nm,0.7s,baz=359,slow=3.3,SNR=6.3						
SCHQ				LR	LR	14 31 18.4	
	comp=Z,47nm,21.8s,baz=290,slow=36						
SCHQ	Schefferville	85.80	336	IAmb	IAmb	13 53 19.4	
	comp=Z,7.4nm,1.1s						
YKA	Yellowknife Ar	85.80	2	P	P	13 53 10.3	+0.5
	comp=Z,10nm,0.6s,baz=6.6,slow=5.1,SNR=34						
YKA				LR	LR	14 37 42.4	
	comp=Z,37nm,18.3s,baz=0.0,slow=40						
YKA	Yellowknife Ar	85.80	2	P	P	13 53 09.7	-0.2
YKA	Yellowknife Ar	85.80	2	P	P	13 53 09.7	-0.2
P33M	Teslin, Yukon	86.31	11	P	P	13 53 12.9	+0.3
	baz=341						
SKAG	Skagway	86.58	12	P	P	13 53 14.0	+0.3
	baz=339						
DLBC	Dease Lake	88.44	10	P	P	13 53 23.7	+0.9
	comp=Z,4.0nm,0.7s,baz=322,slow=2.5,SNR=11						
DLBC	Dease Lake	88.44	10	P	P	13 53 22.5	-0.3
CTAO	Charters Tower	89.71	114	P	P	13 53 29.6	+0.3
CTAO				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CTAO	Charters Tower	89.71	114	P	P	13 53 29.6	+0.3
CTAO				IAmb	IAmb	13 53 33.6	
	comp=Z,10nm,0.9s						
STKA	Stephens Creek	93.04	126	LR	LR	14 39 05.0	
	comp=Z,41nm,18.6s,baz=17,slow=38						
FFC	Flin Flon	93.35	355	P	P	13 53 44.5	-1.2
FFC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
FFC	Flin Flon	93.35	355	P	P	13 53 44.5	-1.2
FFC				IAmb	IAmb	13 53 49.0	
	comp=Z,7.5nm,0.7s						
EDM	Edmonton	95.12	2	P	P	13 53 53.7	-0.2
EDM				pmax	pmax		
	comp=Z,12nm,0.7s						
EDM	Edmonton	95.12	2	P	P	13 53 53.7	-0.2
ULM	Lac du Bonnet	97.14	351	P	P	13 54 02.9	-0.1
	comp=Z,2.5nm,0.8s,baz=35,slow=7.5,SNR=3.6						
ULM				LR	LR	14 41 39.9	
	comp=Z,72nm,19.3s,baz=12,slow=38						
ULM	Lac du Bonnet	97.14	351	IAmb	IAmb	13 54 05.6	
	comp=Z,11nm,1.3s						
SADO	Sadowa	98.50	338	LR	LR	14 38 41.8	
	comp=Z,54nm,18.6s,baz=20,slow=36						
MAW	Mawson	99.40	183	P	Pdif	13 54 13.8	+1.4
	comp=Z,2.1nm,0.8s,baz=337,slow=7.7,SNR=4.8						
MAW				LR	LR	14 32 30.4	
	comp=Z,108nm,20.7s,baz=240,slow=31						
MAW	Mawson	99.40	183	IAmb	IAmb	13 54 20.3	
	comp=Z,0.6nm,0.9s						
BC3	Big Chuckawall	114.55	5	P	PKiKP	13 59 11.2	0.0
	baz=355						
SNAA	Sanae	114.77	199	PKPdf	PKiKP	13 59 10.9	+0.6
VNA2	Neumayer--Watz	115.78	201	PKPdf	PKiKP	13 59 13.3	+1.2
MNTX	Cornudas Mount	116.50	355		PKPdf	13 59 14.8	-0.1
MNTX	Cornudas Mount	116.50	355	P	PKPdf	13 59 14.8	-0.1
	baz=4.8						
VNA3	Neumayer Olymp	116.59	201	PKPdf	PKiKP	13 59 14.6	+0.9
TXAR	Lajitas Array	118.70	353	PKP	PKiKP	13 59 19.8	+0.4
	comp=Z,0.3nm,0.5s,baz=229,slow=1.5,SNR=5.7						
VNDA	Vanda	121.43	165	PKP	PKiKP	13 59 23.4	+0.4
	comp=Z,0.7nm,0.8s,baz=284,slow=4.3,SNR=6.8						
ZARC	Zaragoza, Cauc	128.16	313		PKPdf	13 59 37.5	-0.1
CPUP	Villa Florida	133.72	263	PKP	PKPdf	13 59 48.0	+0.2
	comp=Z,3.6nm,0.5s,baz=63,slow=2.0,SNR=7.0						
CPUP	Villa Florida	133.72	263	PKIKP	PKPdf	13 59 47.6	-0.2
CPUP	Villa Florida	133.72	263		PKPdf	13 59 47.6	-0.2
LPAZ	La Paz	138.70	282	PKP	PKPdf	13 59 59.4	+1.3
	comp=Z,1.7nm,0.7s,baz=22,slow=5.9,SNR=6.8						
LPAZ	La Paz	138.70	282	PKIKP	PKPdf	13 59 57.0	-1.0
LPAZ	La Paz	138.70	282	PKPdf	PKPdf	13 59 57.0	-1.0
AVFE	Valle Fertil	143.50	260	*i* P	PKPbc	14 00 03.3	+0.3
AGUA	GUANDACOL	144.08	263	*i* P	PKPbc	14 00 05.3	+0.5
RTCV	Cerro Valdivia	144.66	259	*i* P	PKPab	14 00 06.4	0.0
ACDV	Cuesta del Vie	144.78	262	*i* P	PKPbc	14 00 07.5	+0.4
ACCO	Cerro Coronel	144.83	261	*i* P	PKPab	14 00 07.5	+0.1
AVIZ	Vizcacheras	144.94	256	*i* P	PKPdf	14 00 08.1	+0.1
GO03	Copiap	145.04	267		PKPbc	14 00 07.6	-0.2
ASAL	Salagasta	145.05	258	*i* P	PKPdf	14 00 08.6	+0.3
AROD	Rodeo	145.08	262	*i* P	PKPdf	14 00 09.0	+0.3
AAGR	Agrelo	145.13	257	*i* P	PKPdf	14 00 08.8	+0.3
RTLS	Leoncito	145.28	259	*i* P	PKPdf	14 00 09.4	+0.5
AUSP	Uspallata	145.44	258	*i* P	PKPab	14 00 10.2	+0.6
AC04	Llanos de Chal	145.93	266	PKPbc	PKPbc	14 00 11.0	+0.5
EDS3	Malargue	145.96	252	*i* P	PKPab	14 00 11.9	+0.7
ROC1	El Roble	146.92	258	*i* P	PKPbc	14 00 14.3	+0.6
BO02	Sierra Bellavi	146.98	254	PKPbc	PKPbc	14 00 14.6	+1.0
PLCA	Paso Flores	147.00	243	PKPbc	PKPab	14 00 14.7	-0.3
	comp=Z,11nm,0.8s,baz=130,slow=3.8,SNR=17						
PLCA	Paso Flores	147.00	243	PKIKP	PKPdf	14 00 11.6	+0.2
PLCA	Paso Flores	147.00	243	PKPdf	PKPdf	14 00 11.6	+0.2
BO01	Tunca	147.18	255	PKPbc	PKPbc	14 00 14.6	+0.6
GO05	Huala	147.94	254	PKPbc	PKPbc	14 00 15.2	-0.9

NNC 02 14:04:02.1±5.0, 36°.86N×70°.41E, h0km, mb4.1, mpv4.1, 1C, Error ellipse: s-maj=59.7km s-min=39.3km az=72.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.24	1	P	Pn	14 05 36.9	+1.5
	5.4nm,0.5s,baz=180,slow=16,SNR=63						
KK31				S	Sn	14 06 48.4	+1.0
	6.1nm,0.7s,baz=183,slow=15,SNR=7.5						
TKM2	Tokmak 2	7.25	32	⇑P	Pn	14 05 48.7	-0.7
	8.2nm,0.4s						
AB31	Akbulak array	14.54	332	P	Pn	14 07 27.2	-1.8
	0.3nm,0.4s,baz=150,slow=13,SNR=8.3						

*IDC **02** 14:07:27.6±1.7, 5°.53N×126°.10E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.5/38, mbtmp3.5/4, Error ellipse: s-maj=119.4km s-min=17.7km az=73.0*

*MAN **02** 14:07:33.5, 6°.04N×125°.28E, h70km, mb4.8, ML3.8, MS3.7*

ISC 02 14:07:32.3±1.7**, 6°.0N**±0°.2×**124°.9E**±0°.4**, h100km, n7, σ1^s.36**/8**, mb3.3**/4**, 2C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	General Santos	0.12	19	⇑*e*P	Pn	14 07 47.0	+0.6
GSPH				*e*S	Sn	14 07 54.5	-2.4
DMPH	Davao City--Mi	1.25	28	⇑*e*P	Pn	14 07 56.2	+0.6
DMPH				*e*S	Sn	14 08 13.4	+0.3
DAV	Davao City (W)	1.27	31	Pg	Pn	14 07 55.4	-0.4
	29nm,0.3s,baz=20,slow=3.7,SNR=1.5						
DAV				Lg	Lg	14 08 13.5	
	234nm,0.3s,baz=127,slow=23,SNR=14						
FITZ	Fitzroy Crossi	23.93	178	P	P	14 12 38.6	+1.4
	1.1nm,0.4s,baz=5.3,slow=9.5,SNR=11						
WRA	Warramunga Arr	27.38	160	P	P	14 13 07.7	-0.7
	0.4nm,0.7s,baz=341,slow=11,SNR=5.3						
ASAR	Alice Springs	30.74	164	P	P	14 13 37.9	-0.3
	0.1nm,0.3s,baz=340,slow=7.4,SNR=5.2						
MKAR	Makanchi Array	54.69	325	P	P	14 17 07.5	+16
	0.3nm,0.5s,baz=119,slow=8.3,SNR=2.7						

*NOU **02** 14:18:19.2, 19°.96S×169°.26E, h0km, MLv4.2/14, Vanuatu Islands*

ISC 02 14:18:23.0±2.5**, 19°.98S**±0°.07×**169°.2E**±0°.2**, h35km, n13, σ0^s.72**/14**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	1.88	217	P	Pn	14 18 52.3	-0.3
LIFNC	LIFOU	2.04	247	P	Pn	14 18 53.6	-1.2
RTV	Rentapao	2.31	340	P	Pn	14 18 58.9	+0.4
DVP	Devils Point	2.45	336	P	Pn	14 19 00.4	-0.1
YATNC	Mamie plateau,	3.02	226	P	Pn	14 19 07.7	-0.6
PINNC	Pines Island,	3.11	212	P	Pn	14 19 09.5	-0.1
OUENC	Ouen Island, N	3.30	222	P	Pn	14 19 13.2	+1.0
DZM	Mont Dzumac	3.34	231	*e*Pn	Pn	14 19 13.0	+0.1
	12nm,0.2s						
DZM				*e*Sn	Sn	14 19 51.0	-0.4
	61nm,0.2s						
DZM	Mont Dzumac	3.34	231	P	Pn	14 19 13.4	+0.5
NOUC	Port Laguerre	3.46	232	P	Pn	14 19 15.3	+0.9
ONTNC	Ouen Toro	3.48	228	P	Pn	14 19 15.4	+0.7
KOUNC	Koumac, New Ca	4.69	262	P	Pn	14 19 32.2	+1.0
SANVU	Saraoutou	4.90	336	P	Pn	14 19 34.0	-0.3

*IDC **02** 14:31:14.8±0.8, 6°.74N×72°.97W, h159km±11km, mb3.2/4, mb1 3.6/6, mb1mx3.2/36, mbtmp3.8/6, Error ellipse: s-maj=34.9km s-min=8.1km az=131.0*

*NEIC **02** 14:31:16.0±1.8, 6°.98N±0°.06×73°.18W±0°.08, h149km±7km, mb4.0/12, Error ellipse: s-maj=11.0km s-min=9.1km az=112.0*

*RSNC **02** 14:31:16.7±1.1, 6°.81N×73°.10W, h151km±4km, ML3.6, Mw3.7*

ISC 02 14:31:15.6±0.7**, 6°.86N**±0°.03×**73°.12W**±0°.04**, h156km**±5km**, n55, σ1^s.30**/79**, mb4.0**/9**, 1C-3D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.28	193	⇓*i*P	Pn	14 31 36.8	-0.3
BARC				*e*S	Sn	14 31 52.2	-1.2
BARC				*i*		14 31 54.3	
	comp=Z,721nm,0.4s						
PAMC	Pamplona, Colo	0.63	41	*i* P	Pn	14 31 39.5	+0.6
PAMC				*e*S	Sn	14 31 56.9	+0.2
PAMC				*i*		14 31 58.9	
	comp=Z,705nm,0.6s						
BRRC	Barranca, Sant	0.64	293	⇑*i*P	Pn	14 31 38.6	+0.3
BRRC				*e*S	Sn	14 31 56.2	+0.6
BRRC				*i*		14 31 59.0	
	comp=Z,363nm,0.4s						
RUSC	La Rusia	0.96	178	*i* P	Pn	14 31 40.5	-0.7
RUSC				*e*S	Sn	14 31 59.5	-1.3
RUSC				*i*		14 32 02.3	
	comp=Z,183nm,0.5s						
OCAC	Ocana	1.38	352		Pn	14 31 44.6	+0.1
OCAC	Ocana	1.38	352	*e*P	Pn	14 31 44.7	+0.1
OCAC				*e*S	Sn	14 32 08.1	+1.2
OCAC				*i*		14 32 12.7	
	comp=Z,795nm,0.3s						
TAMC	Tame, Arauca	1.39	108	⇓*i*P	Pn	14 31 44.9	+0.4
TAMC				*i*		14 32 05.7	
	comp=Z,200nm,0.4s						
TAMC				*e*S	Sn	14 32 06.7	0.0
SPBC	San Pablo de B	1.53	218	*e*P	Pn	14 31 45.7	-0.4
SPBC				*e*S	Sn	14 32 08.8	-0.6
SPBC				*i*		14 32 15.0	
	comp=Z,740nm,0.2s						
ZARC	Zaragoza, Cauc	1.84	290		Pn	14 31 48.8	-0.4
ZARC	Zaragoza, Cauc	1.84	290	*e*P	Pn	14 31 49.4	+0.1
ZARC				*e*S	Sn	14 32 15.8	+0.7
ZARC				*i*		14 32 20.5	
	comp=Z,346nm,0.3s						
SMLC	San Martn de	2.15	334	*e*P	Pn	14 31 53.3	+0.5
SMLC				*e*S	Sn	14 32 21.7	+0.2
SMLC				*i*		14 32 24.9	
	comp=Z,450nm,0.3s						
NORC	Norcasia	2.17	234	*e*P	Pn	14 31 53.0	-0.1
NORC				*e*S	Sn	14 32 21.5	-0.4
NORC				*i*		14 32 27.9	
	comp=Z,276nm,0.3s						
CHIC	Chingaza	2.30	195	⇓*e*P	Pn	14 31 54.5	-0.6
CHIC				*e*S	Sn	14 32 25.0	-0.4
CHIC				*i*		14 32 29.2	
	comp=Z,83nm,0.3s						
ROSC	El Rosal	2.34	211	P	Pn	14 31 56.3	+0.8
	comp=Z,67nm,0.3s,baz=225,slow=2.0,SNR=54						
ROSC				S	Sn	14 32 25.0	-1.2
	comp=Z,24nm,0.3s,baz=146,slow=24,SNR=5.9						
ROSC	El Rosal	2.34	211		Pn	14 31 56.0	+0.6
ROSC	El Rosal	2.34	211	*e*P	Pn	14 31 56.1	+0.6
ROSC				*e*S	Sn	14 32 28.9	+2.7
ROSC				*i*		14 32 34.7	
	comp=Z,398nm,0.3s						
HELC	Santa Helena	2.48	255	*e*P	Pn	14 31 58.2	+1.0
HELC				*e*S	Sn	14 32 30.4	+1.1
HELC				*i*		14 32 36.1	
	comp=Z,257nm,0.3s						
UREC	San Jos de Ur	2.55	290	*e*P	Pn	14 31 57.2	-0.4
UREC				*e*S	Sn	14 32 27.9	-2.3
UREC				*i*		14 32 37.6	
	comp=Z,172nm,0.3s						
LL1C	La Loma 1 Cana	2.70	351	*e*P	Pn	14 32 02.4	+2.9
LL1C				*e*S	Sn	14 32 37.2	+3.8
LL1C				*i*		14 32 44.5	
	comp=Z,639nm,0.4s						
GUY2C	Guyana, Caldas	2.76	234	*e*P	Pn	14 32 01.0	+0.3
GUY2C				*e*S	Sn	14 32 39.8	+4.3
GUY2C				*i*		14 32 43.7	
	comp=Z,345nm,0.8s						
VILC	Villavicencio,	2.79	192	*e*P	Pn	14 31 60.0	-0.8
VILC				*e*S	Sn	14 32 35.5	-0.3
CBOC	Ciudad Bolivar	3.04	251	*e*P	Pn	14 32 04.7	+0.8
CBOC				*e*S	Sn	14 32 44.3	+3.0
CBOC				*i*		14 32 52.3	
	comp=Z,81nm,0.7s						
DBBC	Dabeiba	3.07	273	*e*P	Pn	14 32 04.2	0.0
DBBC				*e*S	Sn	14 32 41.0	-0.8
MOTC	Monteria, Cord	3.16	307		Pn	14 32 03.8	-1.5
SDV	Santo Domingo	3.18	51	P	Pn	14 32 06.0	+0.4
	comp=Z,17nm,0.3s,baz=234,slow=11,SNR=24						
SDV				S	Sn	14 32 43.2	-1.3
	comp=Z,15nm,0.3s,baz=52,slow=20,SNR=14						
SDV	Santo Domingo	3.18	51		Pn	14 32 05.7	0.0
ANIL	Santa Ana	3.27	224	*e*P	Pn	14 32 08.0	+1.0
ANIL				*e*S	Sn	14 32 46.9	+0.1
ANIL				*i*		14 32 53.4	
	comp=Z,435nm,0.4s						
ORTC	Ortega, Tolima	3.62	216	*e*P	Pn	14 32 10.8	-0.4
ORTC				*e*S	Sn	14 32 54.3	0.0
ORTC				*i*		14 33 01.9	
	comp=Z,86nm,0.2s						
SJCC	San Jacinto, C	3.64	326		Pn	14 32 10.5	-0.9
SJCC	San Jacinto, C	3.64	326	*e*P	Pn	14 32 10.9	-0.5
SJCC				*e*S	Sn	14 32 52.2	-2.7
SJCC				*i*		14 32 56.4	
	comp=Z,100nm,0.5s						
MARP	Paez Belalcaza	4.89	215	*e*P	Pn	14 32 27.0	-1.0
MARP				*e*S	Sn	14 33 22.5	-1.9
URIC	Uribia, Colomb	4.94	13	Pn	Pn	14 32 25.4	-2.9
BCIP	Isla Barro Col	7.04	289	Pn	Pn	14 32 54.5	-1.8
SDDR	Presa de Saban	12.18	8	Pn	Pn	14 34 04.0	-0.1
LPAZ	La Paz	23.52	168	P	P	14 36 13.4	+0.9
CPUP	Villa Florida	36.38	156	P	P	14 38 07.8	+2.8
TXAR	Lajitas Array	36.44	312	P	P	14 38 06.5	+0.8
	comp=Z,0.1nm,0.4s,baz=126,slow=9.1,SNR=5.2						
TXAR	Lajitas Array	36.44	312	P	P	14 38 05.7	0.0
TX32	Lajitas Array	36.44	312	P	P	14 38 05.8	+0.1
EYMN	Ely	43.83	342	P	P	14 39 06.1	-0.1
EYMN				IAmb	IAmb	14 39 06.8	
	comp=Z,3.3nm,0.8s						
PV13	Radium Mtn., P	44.87	319	P	P	14 39 15.3	+0.4
PV13				IAmb	IAmb	14 39 39.3	
	comp=Z,5.9nm,1.5s						
ULM	Lac du Bonnet	47.25	340	P	P	14 39 32.5	-0.5
	comp=Z,1.3nm,0.4s,baz=153,slow=7.9,SNR=4.1						
ULM	Lac du Bonnet	47.25	340	IAmb	IAmb	14 39 34.1	
	comp=Z,4.2nm,1.1s						
PDAR	Pinedale Array	48.05	324	P	P	14 39 39.6	+0.1
	comp=Z,0.3nm,0.5s,baz=123,slow=9.8,SNR=2.6						
REDW	Red Top Meadow	49.16	324	P	P	14 39 47.0	-1.0
REDW				IAmb	IAmb	14 39 49.7	
	comp=Z,4.4nm,1.3s						
YKA	Yellowknife Ar	63.23	340	P	P	14 41 26.7	-0.4
	comp=Z,0.6nm,0.6s,baz=119,slow=7.4,SNR=1.5						
A36M	Sachs Harbour	72.40	345	P	P	14 42 24.0	-0.3
A36M				IAmb	IAmb	14 42 24.7	
	comp=Z,2.6nm,0.8s						
INK	Inuvik	72.99	340	P	P	14 42 27.9	0.0
INK				IAmb	IAmb	14 42 33.2	
	comp=Z,6.4nm,1.5s						
BCAR	Beaver Creek A	74.33	334	P	P	14 42 35.1	-0.8
SUA	Susitna One	78.10	331	P	P	14 42 57.8	+0.6
PPLA	Purkeypile	78.95	333	P	P	14 43 02.1	+0.1
J20K	Nowinta River	79.95	334	P	P	14 43 06.8	-0.3
ASAR	Alice Springs	149.13	234	PKPbc	PKPbc	14 50 45.1	-1.4
	comp=Z,0.2nm,0.7s,baz=120,slow=2.6,SNR=1.6						
ASAR	Alice Springs	149.13	234		PKPbc	14 50 45.0	-1.5
WRA	Warramunga Arr	150.36	241	PKPbc	PKPbc	14 50 47.9	-1.6
	comp=Z,0.2nm,0.3s,baz=121,slow=2.7,SNR=9.5						

NOU 02 14:41:20.8, 17°.67S×168°.02E, h37km, MLv3.9/12**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	0.17	109	P	Pn	14 41 29.6	-1.5
RTV	Rentapao	0.41	108	P	Pn	14 41 30.7	+0.8
SANVU	Saraoutou	2.34	340	P	Pn	14 41 56.6	-0.2
LIFNC	LIFOU	3.18	193	P	Pn	14 42 08.5	+0.3
MARNC	Mare, Loyalty	3.79	180	P	Pn	14 42 16.6	-0.1
KOUNC	Koumac, New Ca	4.55	230	P	Pn	14 42 27.1	0.0
DZM	Mont Dzumac	4.62	198	P	Pn	14 42 27.9	-0.3
NOUC	Port Laguerre	4.70	200	P	Pn	14 42 29.6	+0.5
OUENC	Ouen Island, N	4.85	193	P	Pn	14 42 31.6	+0.3

MAN 02 14:42:12.6, 16°.55N×119°.82E, h33km, mb3.8, ML2.5, MS2.1, Luzon

*MAN **02** 14:44:01.2, 5°.97N×125°.98E, h146km, mb4.4, ML3.0, MS3.2*

IDC 02 14:43:45.7±2.5**, 5°.97N×125°.34E, h0km, mb3.2**/3**, mb1 3.5**/3**, mb1mx3.2**/40**, mbtmp3.2**/3**, MS3.1**/1**, Ms1 3.1**/1**, ms1mx2.5**/24**, Error ellipse: s-maj=214.8km s-min=29.6km az=65.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	27.23	161	P	P	14 49 30.8	-0.8
	0.2nm,0.7s,baz=341,slow=9.6,SNR=1.5						
ASAR	Alice Springs	30.62	164	P	P	14 50 02.4	+0.6
	0.2nm,0.3s,baz=340,slow=7.3,SNR=9.4						
ASAJ	Asahikawa	40.90	19	LR	LR	15 11 05.1	
	comp=Z,25nm,18.1s,baz=171,slow=40						
MKAR	Makanchi Array	54.93	325	P	P	14 53 18.4	-0.1
	0.1nm,0.5s,baz=123,slow=9.2,SNR=1.6						

*IDC **02** 15:05:45.8±2.5, 33°.06N×70°.91E, h0^{km}, mb3.6/2, mb1 3.6/7, mb1mx3.4/78, mbtmp3.6/7, ML3.5/5, Error ellipse: s-maj=65.8km s-min=28.8km az=78.0*

*NNC **02** 15:05:51.3±3.9, 33°.26N×70°.45E, h0^{km}, mb3.5, Error ellipse: s-maj=51.9km s-min=38.3km az=94.0*

ISC 02 15:05:51.6±1.7, **33°.1N**±0°.1×**71°.1E**±0°.2, **h35**^{km}, **n10**, σ**1^{s}60**/12, **1C, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	Ala-Archa	9.92	15	Pn	Pn	15 08 13.7	+1.9
	2.0nm,0.3s,baz=183,slow=7.6,SNR=23						
AAK				Sn	Sn	15 09 59.7	-2.2
	0.1nm,0.3s,baz=202,slow=22,SNR=1.5						
KK31	Karatay Array	10.02	358	P	Pn	15 08 14.3	+1.3
	0.7nm,0.2s,baz=175,slow=12,SNR=17						
KK31				⇑S	Sn	15 10 06.0	+1.8
	0.6nm,0.4s,baz=12,slow=55,SNR=4.6						
MK31	Makanchi Array	16.16	29	P	P	15 09 40.7	+1.9
	0.4nm,0.5s,baz=206,slow=12,SNR=3.8						
MKAR	Makanchi Array	16.16	29	Pn	Pn	15 09 35.3	-0.6
	0.1nm,0.3s,baz=212,slow=12,SNR=5.2						
AB31	Akbulak array	18.17	336	P	P	15 09 60.0	-1.0
	0.4nm,0.5s,baz=160,slow=11,SNR=10						
KURBB	Kurchatov Arra	18.38	15	P	P	15 10 02.0	-1.2
	0.1nm,0.3s,baz=204,slow=10,SNR=6.2						
AKTO	Aktyubinsk	19.84	335	P	P	15 10 18.0	-1.3
	0.1nm,0.3s,baz=184,slow=13,SNR=2.3						
BVAR	Borovoye Array	19.94	359	P	P	15 10 19.4	-1.1
	0.2nm,0.3s,baz=189,slow=13,SNR=1.9						
ZALV	Zalesovo Beam	23.04	21	P	P	15 10 53.0	-0.6
	1.0nm,0.5s,baz=212,slow=11,SNR=4.8						
WRA	Warramunga Arr	80.15	121	P	P	15 17 58.8	+0.3
	0.6nm,0.8s,baz=313,slow=4.3,SNR=4.5						

IDC 02 15:05:58.9±69.0, **21°.28S**×**179°.98W**, **h0**^{km}, **mb3.8**/3, **mb1 4.0**/3, **mb1mx3.6**/40, **mbtmp3.8**/3, **Error ellipse: s-maj=1233.0km s-min=165.2km az=83.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	35.78	245	P	P	15 12 58.4	-1.6
	1.7nm,0.8s,baz=56,slow=11,SNR=1.5						
ASAR	Alice Springs	42.54	258	P	P	15 13 56.3	-0.3
	0.3nm,0.4s,baz=92,slow=7.4,SNR=9.9						
WRA	Warramunga Arr	42.66	263	P	P	15 13 58.6	+0.9
	2.0nm,1.1s,baz=93,slow=8.4,SNR=16						

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*IDC **02** 15:37:40.5±2.2, 5°.87S×103°.96E, h0^{km}, mb3.4/7, mb1 3.5/8, mb1mx3.4/39, mbtmp3.4/8, ML3.4/1, Error ellipse: s-maj=70.1km s-min=19.8km az=46.0*

ISC 02 15:37:43.9±1.8, **5°.6S**±0°.3×**104°.4E**±0°.2, **h10**^{km}, **n15**, σ**1^{s}65**/10, **mb3.6**/7, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LEM	Lembang	3.46	111	Pn	Pn	15 38 39.4	+1.3
	2.6nm,0.3s,baz=343,slow=23,SNR=1.6						
LEM				Sn	Sb	15 39 26.4	-1.3
	3.4nm,0.3s,baz=333,slow=20,SNR=2.6						
CMAR	Chiang Mai Arr	24.50	348	P	P	15 43 05.0	+1.3
	0.1nm,0.4s,baz=175,slow=11,SNR=2.0						
H01W3	Cape Leeuwin H	30.50	164	T	T	16 14 48.6	
	baz=341,slow=76,SNR=4.6						
H01W2	Cape Leeuwin H	30.52	164	T	T	16 14 48.7	
	baz=341,slow=76,SNR=6.2						
H01W1	Cape Leeuwin H	30.52	164	T	T	16 14 48.7	
	baz=341,slow=76,SNR=5.7						
H08S2	Diego Garcia H	31.71	265	T	T	16 17 02.5	
	baz=81						
H08S3	Diego Garcia H	31.72	265	T	T	16 17 06.8	
	baz=81						
H08S1	Diego Carcia H	31.73	265	T	T	16 17 08.2	
	baz=81						
WRA	Warramunga Arr	32.44	119	P	P	15 44 14.3	-0.3
	0.4nm,0.7s,baz=301,slow=10,SNR=2.3						
ASAR	Alice Springs	33.63	125	P	P	15 44 26.2	+1.2
	0.2nm,0.8s,baz=311,slow=8.2,SNR=1.7						
KSRS	Korea Array	48.15	25	P	P	15 46 25.1	+0.7
	0.3nm,0.5s,baz=227,slow=7.4,SNR=2.1						
SONM	Songino Array	53.24	2	P	P	15 47 03.5	+0.7
	1.0nm,0.4s,baz=197,slow=4.5,SNR=1.8						
MKAR	Makanchi Array	55.72	342	P	P	15 47 19.9	-0.9
	0.3nm,0.5s,baz=149,slow=8.4,SNR=7.5						
ZALV	Zalesovo Beam	61.57	347	P	P	15 47 59.8	-1.5
	0.6nm,0.3s,baz=162,slow=5.4,SNR=4.3						
TXAR	Lajitas Array	144.53	45	PKPbc	PKPab	15 57 17.1	-2.9
	0.2nm,0.5s,baz=337,slow=2.1,SNR=3.8						

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*IDC **02** 15:40:41.3±2.8, 4°.30N×120°.95E, h0^{km}, mb3.7/4, mb1 3.9/4, mb1mx3.4/39, mbtmp3.7/4, MS3.5/1, Ms1 3.5/1, ms1mx2.4/42, Error ellipse: s-maj=161.1km s-min=52.4km az=70.0*

ISC 02 15:40:42.6±3.2, **4°.3N**±0°.5×**12°1E**±°, **h10**^{km}, **n5**, σ**0^{s}39**/6, **mb3.5**/4, **Sulu Archipelago**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	22.71	168	P	P	15 45 45.0	+0.2
	0.6nm,0.6s,baz=350,slow=5.8,SNR=1.2						
WRA	Warramunga Arr	27.48	151	P	P	15 46 29.7	+0.5
	0.6nm,0.5s,baz=335,slow=9.5,SNR=10						
WRA				PcP	PcP	15 49 48.1	+0.3
	0.4nm,0.7s,baz=318,slow=2.7,SNR=2.0						
ASAR	Alice Springs	30.55	156	P	P	15 46 56.5	-0.1
	0.2nm,0.3s,baz=343,slow=15,SNR=8.0						
ASAR				PcP	PcP	15 49 55.4	-0.2
	0.2nm,0.4s,baz=343,slow=2.5,SNR=4.2						
STKA	Stephens Creek	41.02	153	P	P	15 48 25.9	-0.3
	1.9nm,0.5s,baz=330,slow=7.9,SNR=8.3						
YAK	Yakutsk	58.03	5	LR	LR	16 16 30.7	
	comp=Z,36nm,19.0s,baz=86,slow=37						

IDC 02 15:54:57.2±2.2, **1°.17N**×**127°.39E**, **h0**^{km}, **mb3.5**/3, **mb1 3.7**/3, **mb1mx3.4**/30, **mbtmp3.6**/3, **Error ellipse: s-maj=181.9km s-min=25.2km az=67.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.05	162	P	P	15 59 54.2	+0.4
	0.8nm,0.5s,baz=341,slow=11,SNR=9.7						
ASAR	Alice Springs	25.48	166	P	P	16 00 27.1	-0.3
	0.3nm,0.4s,baz=344,slow=8.9,SNR=11						
MKAR	Makanchi Array	60.03	326	P	P	16 05 05.9	0.0
	0.4nm,0.3s,baz=115,slow=7.7,SNR=6.8						

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*IDC **02** 16:03:15.2±1.6, 6°.53S×128°.82E, h212^{km}±20^{km}, mb3.5/5, mb1 3.7/10, mb1mx3.4/42, mbtmp4.2/10, MS4.2/1, Ms1 4.2/1, ms1mx2.5/32, Error ellipse: s-maj=19.5km s-min=13.9km az=93.0*

*NEIC **02** 16:03:15.5±1.7, 6°.54S±0°.05×128°.87E±0°.09, h216^{km}±9^{km}, mb4.4/17, Error ellipse: s-maj=13.3km s-min=7.2km az=75.0*

ISC 02 16:03:14.2±0.5, **6°.61S**±0°.05×**128°.89E**±0°.07, **h200**^{km}, **n57**, σ**1^{s}84**/59, **mb4.2**/12, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	Bandanaira	2.31	26	P	Pn	16 04 02.0	+6.0
FAKI	Fak Fak	4.96	43	Pn	Pn	16 04 29.5	+1.3
FAKI	Fak Fak	4.96	43	P	Pn	16 04 29.9	+1.7
SANI	Sanana	5.37	327	P	Pn	16 04 37.2	+3.8
SOEI	Soe	5.54	235		Pn	16 04 36.8	+1.2
SOEI	Soe	5.54	235	P	Pn	16 04 38.3	+2.7
DRS	Darwin Rock St	6.12	161	P	Pn	16 04 46.1	+3.1
	33nm,0.7s						
SIJI	Sorong	6.17	23	P	Pn	16 04 44.0	+0.2
	5.9nm,0.3s,baz=204,slow=8.9,SNR=40						
SIJI				S	Sn	16 05 50.3	-4.4
	2.4nm,0.3s,baz=97,slow=23,SNR=11						
BATI	Baumata	6.28	235	P	Pn	16 04 47.6	+2.5
	10nm,0.3s,baz=52,slow=14,SNR=16						
BATI				S	Sn	16 05 58.4	+1.2
	8.3nm,0.3s,baz=306,slow=22,SNR=19						
MTN	Manton Dam	6.58	161		Pn	16 04 51.5	+2.5
MTN	Manton Dam	6.58	161	P	Pn	16 04 51.1	+2.1
	31nm,0.5s						
MMRI	Maumere	6.89	253	Pn	Pn	16 04 54.0	+1.0
KDU	Kakadu	7.00	150	P	Pn	16 04 57.2	+2.8
	7.9nm,0.4s						
KNRA	Kununurra	9.01	181	Pn	Pn	16 05 22.1	+1.5
KNRA	Kununurra	9.01	181	P	Pn	16 05 21.9	+1.3
	13nm,0.4s						
FITZ	Fitzroy Crossi	11.85	195	P	Pn	16 05 58.2	+1.0
	1.0nm,0.3s,baz=20,slow=15,SNR=37						
FITZ				S	Sn	16 08 05.2	-4.2
	0.6nm,0.3s,baz=341,slow=18,SNR=3.0						
FITZ	Fitzroy Crossi	11.85	195		Pn	16 05 57.6	+0.4
WB0	Warramunga Arr	14.13	158	Pn	Pn	16 06 26.2	+0.4
WRAB	Tennant Creek	14.27	159	Pn	Pn	16 06 28.1	+0.5
WRAB	Tennant Creek	14.27	159	P	P	16 06 31.1	+2.1
WRA	Warramunga Arr	14.27	159	P	P	16 06 28.3	-0.8
	1.1nm,0.3s,baz=342,slow=12,SNR=47						
WRA				S	S	16 09 00.7	-5.7
	0.4nm,0.3s,baz=331,slow=22,SNR=6.5						
WRA	Warramunga Arr	14.27	159	Pn	Pn	16 06 28.1	+0.6
WB2	Warramunga Arr	14.28	159	Pn	Pn	16 06 28.1	+0.5
WR0	Warramunga Arr	14.36	158	Pn	Pn	16 06 28.8	+0.1
COEN	Coen	15.84	119		Pn	16 06 48.2	+1.5
COEN				IAmb	IAmb	16 06 58.3	
	comp=Z,22nm,1.3s						
COEN	Coen	15.84	119	P	Pn	16 06 48.1	+1.5
	comp=Z,8.0nm,0.4s						
QIS	Mount Isa	17.33	144	P	Pn	16 07 04.3	-0.1
	comp=Z,8.8nm,0.7s						
AS31	Alice Springs	17.63	165	Pn	Pn	16 07 08.1	+0.1
AS31				IAmb	IAmb	16 07 11.9	
	comp=Z,4.9nm,0.4s						
ASAR	Alice Springs	17.63	165	P	Pn	16 07 08.1	+0.1
	comp=Z,2.3nm,0.3s,baz=345,slow=11,SNR=160						
ASAR				S	S	16 10 15.3	-3.5
	comp=Z,0.1nm,0.3s,baz=343,slow=24,SNR=4.3						
WRKA	Warakurna	18.33	182	P	Pn	16 07 15.1	-1.1
	comp=Z,9.7nm,1.2s						
MTSU	Mount Surprise	18.91	129	P	Pn	16 07 23.2	+0.2
	comp=Z,4.3nm,0.6s						
CTA	Charters Tower	21.53	130	P	P	16 07 49.4	+1.6
	comp=Z,6.0nm,1.2s,baz=288,slow=9.6,SNR=1.6						
CTAO	Charters Tower	21.53	130	P	P	16 07 49.5	+1.6
CTAO				IAmb	IAmb	16 08 03.7	
	comp=Z,9.5nm,1.4s						
MULG	Mulgathing	24.05	169	P	P	16 08 12.6	+1.5
FORT	Forrest	24.06	182	P	P	16 08 11.5	+0.3
LCRK	Leigh Creek	25.28	161	P	P	16 08 22.7	+0.5
	comp=Z,22nm,3.0s						
MORW	Morawa	25.42	207	P	P	16 08 25.2	+1.7
MORW				IAmb	IAmb	16 08 38.1	
	comp=Z,6.3nm,1.1s						
BBOO	Buckleboo	26.91	167	P	P	16 08 37.0	+0.1
BBOO	Buckleboo	26.91	167	P	P	16 08 36.6	-0.2
	comp=Z,22nm,2.2s						
STKA	Stephens Creek	27.80	156	P	P	16 08 45.5	+0.8
	comp=Z,1.8nm,0.8s,baz=334,slow=10.0,SNR=4.0						
STKA	Stephens Creek	27.80	156	P	P	16 08 45.2	+0.5
NWAO	Narrogin (SRO)	28.34	201	P	P	16 08 49.5	-0.1
	comp=Z,2.1nm,0.6s,baz=90,slow=5.1,SNR=1.0						
NWAO	Narrogin (SRO)	28.34	201	IAmb	IAmb	16 09 18.2	
	comp=Z,27nm,1.4s						
HNR	Honiara	30.88	97	P	P	16 09 13.2	+1.0
JOW	Kunigami	33.25	359	P	P	16 09 32.4	-0.2
CAN	Canberra	34.04	150	P	P	16 09 41.1	+1.6
CAN				IAmb	IAmb	16 09 55.1	
	comp=Z,20nm,1.4s						
OUENC	Ouen Island, N	39.81	117	P	P	16 10 26.4	-1.8
OUENC				IAmb	IAmb	16 10 28.6	
	comp=Z,26nm,1.4s						
KSRS	Korea Array	43.84	359	P	P	16 10 59.7	-0.8
	comp=Z,0.8nm,0.6s,baz=177,slow=9.1,SNR=2.8						
MSVF	Nonsavu	49.18	108	LR	LR	16 30 29.5	
	comp=Z,236nm,20.7s,baz=153,slow=33						
PLWZ	Palliser	53.85	138	P	P	16 12 16.7	0.0
MK31	Makanchi Array	67.30	327	P	P	16 13 46.3	-1.1
MKAR	Makanchi Array	67.30	327	P	P	16 13 46.6	-0.8
	comp=Z,0.7nm,0.4s,baz=132,slow=7.6,SNR=4.5						
MKAR	Makanchi Array	67.30	327	P	P	16 13 46.1	-1.3
MAKZ	Makanchi	67.47	327	P	P	16 13 47.2	-1.3
MAKZ				IAmb	IAmb	16 13 49.8	
	comp=Z,2.9nm,1.2s						
KURK	Kurchatov	71.61	329	P	P	16 14 12.2	-1.4
VNDA	Vanda	72.97	173	P	P	16 14 20.6	-0.7
GYA0B	ALIBECK ARRAY	79.12	311	P	P	16 14 56.2	-0.6
GYA0B				IAmb	IAmb	16 14 56.7	
	comp=Z,4.8nm,0.5s						

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*NEIC **02** 16:09:28.4±1.2, 42°.12N±0°.07×137°.1E±0°.1, h306^{km}±9^{km}, mb4.0/19, Error ellipse: s-maj=12.2km s-min=10.1km az=77.0*

*IDC **02** 16:09:28.6±1.0, 42°.11N×137°.05E, h306^{km}±10^{km}, mb3.2/8, mb1 3.3/14, mb1mx3.1/43, mbtmp3.9/14, Error ellipse: s-maj=19.6km s-min=10.9km az=66.0*

*JMA **02** 16:09:29.1±0.4, 42°.08N×137°.18E, h314^{km}±4^{km}, M3.1*

ISC 02 16:09:27.8±0.5, **42°.07N**±0°.05×**137°.09E**±0°.05, **h300**^{km}, **n72**, σ**1^{s}25**/79, **mb3.8**/17, **Eastern Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOSM	Okushiri--Mats	1.77	89	P	Pn	16 10 14.7	+1.9
JHST	Hiyamasetana	2.10	79	P	Pn	16 10 17.5	+2.3
JOMM	Oshimamatsumae	2.25	103	P	Pn	16 10 18.7	+2.2
JSK	Shakotan	2.80	62	P	Pn	16 10 23.6	+2.1
JSK				*e*S	S	16 11 05.9	+1.5
JKB	Kayabe	2.94	92	P	Pn	16 10 24.8	+1.9
JOT	Ohata	3.04	102	P	Pn	16 10 25.5	+1.6
JTM	Tenmabayashi	3.25	112		Pn	16 10 27.3	+1.3
JEW	Eniwo	3.31	75	P	Pn	16 10 28.8	+2.2
JEW				*e*S	S	16 11 15.1	+1.4
JEW	Eniwo	3.31	75	Pn	Pn	16 10 28.7	+2.1
JANG	Nango	3.74	115	P	Pn	16 10 31.7	+0.5
JANG				*e*S	S	16 11 21.6	-0.4
JHR	Hokuryu	3.79	62	P	Pn	16 10 33.9	+2.3
JYK	Kaneyama	4.01	141	P	Pn	16 10 35.6	+1.4
JOM	Ohasama	4.11	128	P	Pn	16 10 36.2	+1.0
JSD	Sado	4.13	167	P	Pn	16 10 37.8	+2.4
JSD	Sado	4.13	167	Pn	Pn	16 10 37.3	+1.8
JFR	Furan	4.21	73	P	Pn	16 10 37.1	+0.9
JFR				*e*S	S	16 11 30.3	-0.7
JNBK	Urakawa-nobuka	4.21	85	P	Pn	16 10 37.2	+0.9
JNBK				*e*S	S	16 11 30.1	-1.1
USA0B	Ussuriysk Arra	4.30	301		Pn	16 10 37.7	+0.6
USRK	Ussuriysk Ar.	4.30	301	P	Pn	16 10 38.5	+1.3
	baz=100,slow=11,SNR=17						
USRK				S	S	16 11 33.6	+0.7
	baz=84,slow=21,SNR=1.7						
USRK	Ussuriysk Ar.	4.30	301		Pn	16 10 37.8	+0.6
JMK	Ichinoseki	4.43	133	P	Pn	16 10 39.4	+0.7
ERM	Erimo	4.52	89		Pn	16 10 40.6	+0.9
JEM	Erimo	4.52	89		Pn	16 10 40.2	+0.6
ASAJ	Asahikawa	4.52	61	P	Pn	16 10 41.1	+1.4
	12nm,0.3s,baz=247,slow=7.4,SNR=153						
JKA	Kamikawa-asahi	4.52	61		Pn	16 10 40.1	+0.5
JCH	Churui	4.68	81	P	Pn	16 10 42.5	+1.0
JCH				*e*S	S	16 11 38.0	-2.7
JWK2	Keihoku	4.76	45	P	Pn	16 10 44.8	+2.4
JMM	Marumori	5.07	145		Pn	16 10 46.5	+0.4
JTKR	Abashiri--Toko	5.35	67	P	Pn	16 10 50.4	+1.2
MJAR	Matsushiro Arr	5.59	171	P	Pn	16 10 54.3	+2.0
	0.1nm,0.3s,baz=355,slow=11,SNR=9.2						
MDJ	Mudanjiang	6.03	297		Pn	16 10 57.7	+0.3
JRY	Ryogami san	6.21	166	P	Pn	16 11 00.8	+1.2
JRY				*e*S	S	16 12 13.3	-0.5
JYT	Yasato	6.31	157	Pn	Pn	16 11 01.0	+0.1
YSS	Yuzh-Sakhalins	6.34	38		Pn	16 11 02.2	+1.2
NEM2	Nemuro 2	6.50	76	P	Pn	16 11 02.8	-0.2
NEM2				*e*X		16 12 13.2	
JWT	Wachi	6.91	192	Pn	Pn	16 11 11.0	+3.0
KLR	Kul'dur	8.08	334	P	Pn	16 11 22.4	+0.3
	0.9nm,0.3s,baz=153,slow=10,SNR=16						
KSRS	Korea Array	8.43	240	P	Pn	16 11 28.3	+1.7
	0.3nm,0.3s,baz=53,slow=13,SNR=15						
KSAR	Wonju Array Be	8.46	240	Pn	Pn	16 11 28.0	+1.0
JHJ	Hachijo jima 2	9.19	166	P	Pn	16 11 35.9	-0.1
	12nm,0.3s,baz=29,slow=14,SNR=6.2						
JNU	Nakatsue	10.20	211	P	P	16 11 52.2	+0.5
JSU	Suzuyama	11.80	209	P	P	16 12 10.1	+0.5
TIXI	Tiksi	29.93	355	P	P	16 15 08.1	+0.1
	1.7nm,0.6s,baz=136,slow=5.6,SNR=5.5						
TIXI	Tiksi	29.93	355	P	P	16 15 08.1	+0.1
TIXI				IAmb	IAmb	16 15 08.5	
	comp=Z,4.3nm,1.2s						
ZALV	Zalesovo Beam	36.12	308	P	P	16 16 01.1	-0.5
	comp=Z,1.5nm,0.6s,baz=91,slow=9.5,SNR=6.4						
MK31	Makanchi Array	38.75	296	P	P	16 16 23.2	-0.4
MKAR	Makanchi Array	38.75	296	P	P	16 16 23.4	-0.2
	comp=Z,1.0nm,0.6s,baz=85,slow=9.6,SNR=7.8						
MKAR	Makanchi Array	38.75	296	P	P	16 16 22.8	-0.7
MAKZ	Makanchi	38.95	296	P	P	16 16 23.1	-2.1
CMAR	Chiang Mai Arr	40.02	246	P	P	16 16 32.9	-1.4
KURK	Kurchatov	40.29	303	P	P	16 16 35.4	-0.6
KURK				IAmb	IAmb	16 16 36.2	
	comp=Z,4.3nm,0.9s						
LUWI	Luwuk	44.83	201	P	P	16 17 12.3	-0.4
LUWI				IAmb	IAmb	16 17 27.9	
	comp=Z,13nm,0.8s						
BRVK	Borovoye	44.83	308	P	P	16 17 12.1	-0.2
KKAR	Karatay Array	47.84	295	P	P	16 17 35.3	-0.5
ABKAR	Akbulak array	52.21	306	P	P	16 18 08.3	+0.1
ABKAR				IAmb	IAmb	16 18 08.8	
	comp=Z,3.7nm,0.5s						
MTN	Manton Dam	54.91	187	P	P	16 18 28.8	+0.8
EUNU	Eureka	55.70	8	P	P	16 18 31.8	-1.2
EUNU				IAmb	IAmb	16 18 32.1	
	comp=Z,3.7nm,1.4s						
KEV	Kevo	57.53	337	P	P	16 18 45.0	-0.7
KNRA	Kununurra	57.97	189	P	P	16 18 50.4	+1.0
KNRA				IAmb	IAmb	16 19 02.4	
	comp=Z,10nm,1.1s						
ARCES	ARCESS Array B	58.09	337	P	P	16 18 49.8	+0.1
RES	Resolute Bay	58.55	14	P	P	16 18 53.5	+0.8
RES				IAmb	IAmb	16 18 57.7	
	comp=Z,7.0nm,1.5s						
WB0	Warramunga Arr	61.58	183	P	P	16 19 13.8	-0.1
WB0				IAmb	IAmb	16 19 42.1	
	comp=Z,6.6nm,1.4s						
WRAB	Tennant Creek	61.74	183	P	P	16 19 14.3	-0.6
WRAB				IAmb	IAmb	16 19 43.5	
	comp=Z,4.3nm,1.1s						
WRA	Warramunga Arr	61.75	183	P	P	16 19 15.3	+0.3
	comp=Z,0.4nm,0.5s,baz=359,slow=6.9,SNR=11						
WRA	Warramunga Arr	61.75	183	P	P	16 19 15.3	+0.3
WR0	Warramunga Arr	61.76	183	P	P	16 19 15.1	+0.1
WR0				IAmb	IAmb	16 19 30.0	
	comp=Z,6.0nm,1.4s						
FIA1	FINESS Array S	62.80	330	P	P	16 19 20.6	-0.8
FINES	FINESS Array B	62.80	330	P	P	16 19 21.2	-0.2
	comp=Z,1.6nm,0.6s,baz=38,slow=9.6,SNR=9.5						
ASAR	Alice Springs	65.47	183	P	P	16 19 40.3	+1.2
	comp=Z,0.3nm,0.5s,baz=354,slow=6.4,SNR=7.5						
NOA	NORSAR Array B	68.23	335	P	P	16 19 56.1	+0.1
	comp=Z,0.2nm,0.4s,baz=40,slow=7.5,SNR=1.6						
AKASG	Malin Array Be	68.29	319	P	P	16 19 56.2	-0.2
	comp=Z,0.6nm,0.4s,baz=47,slow=6.5,SNR=4.4						
AKASG	Malin Array Be	68.29	319	IAmb	IAmb	16 20 21.1	
	comp=Z,2.4nm,1.4s						

IDC 02 16:22:23.4±1.9, **2°.62S**×**141°.98E**, **h0**^{km}, **mb3.3**/2, **mb1 3.7**/3, **mb1mx3.4**/26, **mbtmp3.4**/3, **ML3.4**/1, **MS4.0**/1, **Ms1 4.0**/1, **ms1mx2.8**/24, **Error ellipse: s-maj=303.7km s-min=31.5km az=112.0, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	18.76	203	P	P	16 26 44.1	-0.1
	0.1nm,0.3s,baz=25,slow=14,SNR=4.3						
ASAR	Alice Springs	22.33	200	P	P	16 27 23.0	0.0
	0.7nm,0.9s,baz=28,slow=10,SNR=2.5						
MSVF	Nonsavu	38.44	115	LR	LR	16 42 45.3	
	comp=Z,242nm,20.9s,baz=238,slow=32						
ILAR	Eielson Array	84.41	24	P	P	16 34 57.5	0.0
	0.5nm,0.7s,baz=272,slow=4.6,SNR=5.0						

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*IDC **02** 16:24:07.7±1.4, 23°.68S×174°.96W, h0^{km}, mb4.1/10, mb1 4.3/11, mb1mx4.1/31, mbtmp4.1/11, ML5.2/1, Error ellipse: s-maj=54.0km s-min=22.5km az=157.0*

*NEIC **02** 16:24:09.8±1.8, 23°.7S±0°.2×174°.98W±0°.05, h10^{km}±1^{km}, mb4.7/12, Error ellipse: s-maj=27.3km s-min=7.9km az=181.0*

ISC 02 16:24:09.1±0.9, **23°.8S**±0°.2×**175°.0W**±0°.1, **h10**^{km}, **n32**, σ**0^{s}99**/29, **mb4.5**/14, **Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	6.63	46	Pn	Pn	16 25 46.0	-0.6
MSVF	Nonsavu	8.83	311	Pn	Pn	16 26 16.9	0.0
	0.9nm,0.3s,baz=110,slow=17,SNR=7.6						
MSVF	Nonsavu	8.83	311		Pn	16 26 16.6	-0.3
DZM	Mont Dzumac	17.18	272	*e*LR	LR	16 32 27.8	
	comp=Z,154nm,26.0s						
SANVU	Saraoutou	18.67	293		Pn	16 28 29.0	+1.2
SANVU				IAmb	IAmb	16 28 43.3	
	comp=Z,37nm,0.9s						
PPT2	Papeete2	24.55	80	*e*LR	LR	16 35 10.4	
	comp=Z,159nm,25.0s						
CTA	Charters Tower	36.05	268	P	P	16 31 11.7	+0.7
	comp=Z,3.2nm,0.5s,baz=94,slow=10,SNR=10.0						
CTAO	Charters Tower	36.05	268	P	P	16 31 11.7	+0.7
AS31	Alice Springs	46.56	259	P	P	16 32 36.7	-0.7
ASAR	Alice Springs	46.57	259	P	P	16 32 38.1	+0.7
	comp=Z,4.7nm,0.9s,baz=90,slow=8.4,SNR=18						
WR0	Warramunga Arr	46.79	264	P	P	16 32 38.6	-0.6
WR0				IAmb	IAmb	16 32 41.6	
	comp=Z,10nm,1.4s						
WB2	Warramunga Arr	46.97	264	P	P	16 32 39.9	-0.7
WB2				IAmb	IAmb	16 32 40.9	
	comp=Z,7.6nm,0.9s						
WB0	Warramunga Arr	46.97	265	P	P	16 32 40.1	-0.5
WB0				IAmb	IAmb	16 32 40.8	
	comp=Z,4.5nm,0.6s						
WRA	Warramunga Arr	46.98	264	P	P	16 32 40.4	-0.3
	comp=Z,3.1nm,0.5s,baz=102,slow=8.1,SNR=32						
WRA	Warramunga Arr	46.98	264	P	P	16 32 40.1	-0.6
MTN	Manton Dam	52.02	272	P	P	16 33 18.5	-0.7
MTN				IAmb	IAmb	16 33 44.0	
	comp=Z,18nm,1.4s						
KNRA	Kununurra	53.27	268	P	P	16 33 28.4	0.0
FITZ	Fitzroy Crossi	55.40	264	P	P	16 33 44.5	+0.6
	comp=Z,1.6nm,0.6s,baz=88,slow=7.5,SNR=6.7						
FITZ	Fitzroy Crossi	55.40	264	S	S	16 41 25.3	-3.5
	baz=12						
FITZ	Fitzroy Crossi	55.40	264	IAmb	IAmb	16 34 10.6	
	comp=Z,7.0nm,1.1s						
SOEI	Soe	59.40	273	P	P	16 34 13.2	+0.8
MORW	Morawa	61.21	249	P	P	16 34 23.8	-0.6
KSRS	Korea Array	81.15	317	P	P	16 36 24.8	0.0
	comp=Z,1.3nm,0.8s,baz=130,slow=7.9,SNR=5.8						
NVAR	Mina Array Bea	81.53	42	P	P	16 36 26.6	-0.5
	comp=Z,0.2nm,0.4s,baz=221,slow=7.8,SNR=2.8						
USRK	Ussuriysk Ar.	83.20	325	P	P	16 36 35.4	-0.1
	comp=Z,4.1nm,0.7s,baz=113,slow=4.8,SNR=10.0						
USRK	Ussuriysk Ar.	83.20	325	P	P	16 36 34.8	-0.7
TXAR	Lajitas Array	86.51	56	P	P	16 36 53.0	+0.3
	comp=Z,0.3nm,0.7s,baz=209,slow=7.2,SNR=3.5						
ILAR	Eielson Array	90.89	12	P	P	16 37 12.8	+0.4
	comp=Z,0.2nm,0.6s,baz=230,slow=4.1,SNR=1.8						
CMAR	Chiang Mai Arr	93.79	288	P	P	16 37 28.8	+1.8
	comp=Z,1.2nm,0.9s,baz=137,slow=2.8,SNR=9.5						
AKASG	Malin Array Be	147.19	331	PKPbc	PKPdf	16 43 50.9	+0.8
	comp=Z,1.5nm,0.8s,baz=45,slow=4.2,SNR=4.4						
AKASG	Malin Array Be	147.19	331		PKPbc	16 43 51.8	-0.5
CLL	Collm	151.80	349	*e*PKPbc	PKPbc	16 44 03.0	-0.8

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*BJI **02** 16:36:42.9±0.0, 7°.22S×129°.84E, h111^{km}, mB5.2/39, mb5.0/64*

*IDC **02** 16:36:46.4±1.7, 6°.97S×129°.61E, h101^{km}±14^{km}, mb4.8/31, mb1 4.8/34, mb1mx4.7/43, mbtmp5.1/34, MS4.0/21, Ms1 4.0/21, ms1mx3.8/36, Error ellipse: s-maj=10.7km s-min=7.6km az=70.0*

*NEIC **02** 16:36:47.7±2.1, 7°.00S±0°.06×129°.68E±0°.06, h110^{km}±4^{km}, mb5.2/140, Error ellipse: s-maj=9.1km s-min=8.8km az=113.0*

*MOS **02** 16:36:48.5±0.9, 6°.92S×129°.63E, h138^{km}, mb5.3/31, Error ellipse: s-maj=8.3km s-min=4.8km az=118.1*

*GCMT **02** 16:36:48.7±0.1, 7°.02S±0°.01×129°.69E±0°.01, h129^{km}±1^{km}, MW5.2/134, Moment Tensor Solution. s93,c125; s134,c228; Duration: 1^{s}0 Moment tensor: Scale 10^{16} Nm; M_{rr}4.44±.14; $M_{\theta\theta}$-6.32±.15; $M_{\phi\phi}$1.88±.17; $M_{r\theta}$2.11±.11; $M_{\theta\phi}$2.51±.16; $M_{\phi r}$4.88±.11; Best double couple: $M_0$7.98400×10^{16} NP1:ϕ_s318.00000°, δ53.00000°, λ143.00000°. NP2:ϕ_s72.00000°, δ61.00000°, λ43.00000°.*

Principal axes: T 8.8820, Plg50.0000°, Azm289.0000°; N -1.7970, Plg40.0000°, Azm99.0000°; P -7.0850, Plg5.0000°, Azm193.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

*DJA **02** 16:36:49.2±0.2, 7°S±2°×13°0E±°, h129km±2km, M5.1/97, mb5.3/97, mB5.6/64, MLv5.8/11, Mw(mB)5.1/64, MwMwp4.8/13, Mwp5.1/13*

*KLM **02** 16:36:51, 7°.00S×129°.68E, h149km, mb5.4*

ISC 02 16:36:47.6±0.4**, 7°.11S**±0°.03×**129°.70E**±0°.04**, h120km**±3km**, h122km:pP-P, n809, σ1s.48**/831**, mb5.2**/178**, 29C-6D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	Bandanaira	2.58	5	P	Pn	16 37 30.1	+1.6
BNDI	Bandanaira	2.58	5	P	Pn	16 37 30.3	+1.8
MSAI	Masohi	3.82	348	P	Pn	16 37 47.2	+2.4
FAKI	Fak Fak	4.88	31	Pn	Pn	16 37 57.7	-1.3
FAKI	Fak Fak	4.88	31	P	Pn	16 37 57.7	-1.3
FAKI	Fak Fak	4.88	31	P	Pn	16 37 58.2	-0.8
DRS	Darwin Rock St	5.42	167	P	Pn	16 38 05.8	-0.4
	896nm,0.6s						
MTN	Manton Dam	5.87	166	P	Pn	16 38 11.6	-0.7
	baz=6.0,SNR=968						
MTN				S	Sn	16 39 15.5	-2.9
	baz=6.0						
MTN	Manton Dam	5.87	166	Pn	Pn	16 38 11.6	-0.7
MTN	Manton Dam	5.87	166	P	Pn	16 38 11.9	-0.4
	1µm,0.6s						
SOEI	Soe	5.98	244	Pn	Pn	16 38 14.7	+0.7
SOEI	Soe	5.98	244	P	Pn	16 38 14.9	+0.9
	33nm10µm16µm2µm,1.0s						
SOEI	Soe	5.98	244	P	Pn	16 38 15.7	+1.7
KDU	Kakadu	6.18	154	P	Pn	16 38 15.9	-0.6
	baz=6.3,SNR=1000						
KDU				S	Sn	16 39 20.5	-5.4
	baz=6.3						
KDU	Kakadu	6.18	154	P	Pn	16 38 15.8	-0.7
	1µm,0.6s						
SANI	Sanana	6.24	323	P	Pn	16 38 20.3	+2.9
	1.0nm3µm3µm212nm,1.5s						
SANI	Sanana	6.24	323	P	Pn	16 38 20.6	+3.2
SIJI	Sorong	6.39	14	P	Pn	16 38 17.2	-2.3
	117nm,0.3s,baz=222,slow=22,SNR=441						
SIJI				S	Sn	16 39 27.9	-3.3
	70nm,0.3s,baz=185,slow=24,SNR=8.9						
SIJI				LR	LR	16 40 41.9	
	comp=Z,1µm,21.9s,baz=137,slow=38						
SWI	Sorong	6.40	14	P	Pn	16 38 18.3	-1.2
BATI	Baumata	6.71	242	P	Pn	16 38 25.1	+1.3
	284nm,0.3s,baz=129,slow=2.8,SNR=266						
BATI				S	Sn	16 39 37.3	-1.6
	643nm,0.3s,baz=78,slow=21,SNR=21						
BATI	Baumata	6.71	242	P	Pn	16 38 24.7	+0.9
	10nm3µm12µm976nm,0.7s						
LBMI	Labuha	6.79	341	P	Pn	16 38 27.3	+2.4
	4.9nm7µm5µm570nm,1.0s						
MMRI	Maumere	7.55	258	Pn	Pn	16 38 35.5	+0.5
MMRI	Maumere	7.55	258	P	Pn	16 38 36.3	+1.3
	2.7nm3µm4µm277nm,1.6s						
MMRI	Maumere	7.55	258	P	Pn	16 38 36.9	+1.9
EDFI	Ende, Flores	8.10	258	P	Pn	16 38 44.1	+1.5
TNTI	Ternate	8.17	343	Pn	Pn	16 38 43.5	0.0
TNTI	Ternate	8.17	343	P	Pn	16 38 45.1	+1.6
	1µm2µm186nm,1.5s						
TNTI	Ternate	8.17	343	P	Pn	16 38 45.5	+2.0
SRPI	Serui, Papua	8.34	52	P	Pn	16 38 45.5	-0.3
	1µm3µm120nm,0.7s						
KNRA	Kununurra	8.56	186	P	Pn	16 38 46.8	-1.9
	baz=8.6,SNR=1000						
KNRA				S	Sn	16 40 17.1	-6.5
	baz=8.6						
KNRA	Kununurra	8.56	186	Pn	Pn	16 38 46.6	-2.1
KNRA	Kununurra	8.56	186	P	Pn	16 38 46.8	-1.9
	2µm,0.8s						
BAKI	Biak	8.68	48	P	Pn	16 38 50.5	+0.1
	22µm2µm,1.2s						
LUWI	Luwuk	9.17	311		Pn	16 38 56.6	-0.4
LUWI	Luwuk	9.17	311	P	Pn	16 39 00.6	+3.6
	2µm3µm239nm,1.2s						
BSSI	Bau Bau, Buton	9.20	275	P	Pn	16 38 59.3	+1.9
	2µm97nm,0.8s						
WAMI	Wamena	9.53	71	P	Pn	16 39 05.0	+3.2
KMSI	Cibinong	9.53	323	P	Pn	16 39 05.8	+3.9
	3µm211nm,1.1s						
BASI	Baing, Sumba	9.53	250	P	Pn	16 39 01.4	-0.5
WSI	Waingapu	9.64	254	P	Pn	16 39 02.3	-1.1
	21µm2µm,0.8s						
BKSI	Bulukumba	9.69	280	P	Pn	16 39 05.9	+2.0
	5µm446nm,1.1s						
KAPI	Kappang	10.11	281	P	Pn	16 39 11.9	+2.2
	baz=126,slow=7.4,SNR=43						
KAPI				LR	LR	16 43 06.3	
	comp=Z,510nm,19.0s,baz=128,slow=38						
KAPI	Kappang	10.11	281	P	Pn	16 39 09.7	0.0
KAPI	Kappang	10.11	281	Pn	Pn	16 39 09.7	0.0
KAPI	Kappang	10.11	281	P	Pn	16 39 12.5	+2.8
	176nm,1.3s						
SMPI	Sarmi	10.32	61	P	Pn	16 39 12.3	-0.2
	1µm96nm,1.0s						
TTSI	Tana Toraja	10.64	292	P	Pn	16 39 19.5	+2.7
	4µm228nm,1.1s						
MMPI	Merauke	10.67	98	P	Pn	16 39 17.4	+0.2
	19µm2µm,0.8s						
MRSI	Marisa	10.80	314	P	Pn	16 39 22.5	+3.5
	2µm7µm589nm,1.3s						
FITZ	Fitzroy Crossi	11.62	200	P	Pn	16 39 26.6	-3.1
	52nm,0.3s,baz=20,slow=10,SNR=552						
FITZ				S	Sn	16 41 28.1	-10
	33nm,0.3s,baz=54,slow=6.3,SNR=3.8						
FITZ				LR	LR	16 45 14.7	
	comp=Z,795nm,18.6s,baz=23,slow=43						
JAY	Jayapura	11.88	68	P	Pn	16 39 33.6	+0.3
	2.6nm,0.3s,baz=217,slow=9.0,SNR=20						
JAY				S	Sn	16 41 42.8	-1.4
	6.4nm,0.3s,baz=113,slow=22,SNR=7.6						
JAY				LR	LR	16 45 28.1	
	comp=Z,459nm,18.8s,baz=218,slow=44						
PLAI	Plampang	11.93	261	P	Pn	16 39 31.9	-2.1
	3µm372nm,0.8s						
PLAI	Plampang	11.93	261	P	Pn	16 39 33.1	-0.9
TOLI2	Tolitoli	12.08	312		Pn	16 39 38.7	+2.7
TOLI2	Tolitoli	12.08	312	P	Pn	16 39 39.1	+3.2
MPSI	Mapaga	12.26	307	P	Pn	16 39 41.1	+2.8
	2µm1µm116nm,1.7s						
TWSI	Taliwang, Sumb	12.80	262	P	Pn	16 39 44.7	-0.6
	1µm41nm,0.8s						
WRAB	Tennant Creek	13.52	161	d iP	Pn	16 39 51.2	-3.5
WRAB	Tennant Creek	13.52	161	Pn	Pn	16 39 51.2	-3.5
WRA	Warramunga Arr	13.53	161	P	Pn	16 39 51.7	-3.0
	48nm,0.3s,baz=342,slow=13,SNR=779						
WRA				S	Sn	16 42 11.9	-12
	72nm,0.3s,baz=333,slow=23,SNR=11						
WRA				LR	LR	16 45 56.0	
	comp=Z,2µm,19.3s,baz=335,slow=40						
WRA	Warramunga Arr	13.53	161	i P	Pn	16 39 51.0	-3.8
WRA				pmax	pmax		
	comp=Z,457nm,0.7s						
WRA	Warramunga Arr	13.53	161	Pn	Pn	16 39 50.5	-4.2
WB2	Warramunga Arr	13.53	161		Pn	16 39 50.7	-4.1
WR0	Warramunga Arr	13.61	160		Pn	16 39 51.9	-4.0
KBKI	Kotabaru	14.00	285	P	Pn	16 40 02.5	+1.7
	comp=Z,3µmcomp=Z,305nm,0.9s						
BKB	Balikpapan	14.03	294	P	P	16 40 06.0	+0.8
SRBI	Singaraja	14.39	265	P	Pn	16 40 07.1	+1.2
	comp=Z,78nm,0.9s						
IGBI	Denpasar	14.51	262	P	Pn	16 40 08.9	+1.5
DAV	Davao City (W)	14.68	344	LR	LR	16 46 25.8	
	comp=Z,550nm,19.0s,baz=140,slow=40						
DMPH	Davao City--Mi	14.71	343	⇓eP	P	16 40 14.0	+1.2
COEN	Coen	14.89	118		Pn	16 40 11.8	-0.3
COEN	Coen	14.89	118	P	Pn	16 40 12.6	+0.5
	comp=Z,486nm,0.9s						
BBKI	Banjar Baru	15.23	283	P	P	16 40 19.3	+0.7
	comp=Z,10µmcomp=Z,1µm,1.3s						
ABJI	Asem Bagus	15.35	266	P	Pn	16 40 18.7	+0.8
	comp=Z,183nm,1.1s						
JAGI	Jajag, Banyuwa	15.46	264	Pn	Pn	16 40 15.5	-3.8
JAGI				IAmb	IAmb	16 40 21.0	
	comp=Z,100nm,0.4s						
JAGI	Jajag, Banyuwa	15.46	264	P	Pn	16 40 18.8	-0.6
KMMI	Kalianget	15.61	269	P	Pn	16 40 21.7	+0.5
	comp=Z,3µmcomp=Z,254nm,1.0s						
MTKI	Muara Teweh, K	15.98	292	P	P	16 40 29.3	+2.4
BLJI	Banyuglugur	15.98	267	P	Pn	16 40 25.9	+0.1
	comp=Z,2µmcomp=Z,140nm,1.1s						
GMJI	Gumukmas	16.15	265	P	Pn	16 40 27.9	0.0
	comp=Z,69nm,1.2s						
QIS	Mount Isa	16.45	145	P	Pn	16 40 30.1	-1.5
	comp=Z,197nm,0.7s						
AS31	Alice Springs	16.95	167		P	16 40 35.8	-1.8
AS31				IAmb	IAmb	16 40 42.2	
	comp=Z,153nm,0.6s						
ASAR	Alice Springs	16.95	167	P	P	16 40 36.6	-0.9
	comp=Z,26nm,0.3s,baz=333,slow=9.5,SNR=525						
ASAR				S	Sn	16 43 36.9	-10
	comp=Z,29nm,0.3s,baz=349,slow=25,SNR=6.0						
ASAR				LR	LR	16 47 51.0	
	comp=Z,1µm,18.4s,baz=350,slow=39						
ASAR	Alice Springs	16.95	167	P	P	16 40 36.2	-1.4
ASAR				S	Sn	16 43 36.9	-10
ASAR	Alice Springs	16.95	167	P	P	16 40 36.2	-1.4
MBWA	Marble Bar	16.97	214	P	Pn	16 40 39.0	+1.2
BWJI	Bawean	16.98	273	P	Pn	16 40 40.7	+2.7
	comp=Z,3µmcomp=Z,213nm,0.9s						
GRJI	Gresik	17.09	270	P	Pn	16 40 41.1	+1.7
	comp=Z,1µmcomp=Z,111nm,0.9s						
PSA00	Pilbara Seismi	17.24	213	P	P	16 40 39.4	-1.4
PSA00	Pilbara Seismi	17.24	213	P	P	16 40 39.5	-1.3
PSA00				IAmb	IAmb	16 40 46.2	
	comp=Z,353nm,0.7s						
PSA00	Pilbara Seismi	17.24	213	P	P	16 40 40.3	-0.5
	comp=Z,500nm,0.8s						
PMG	Port Moresby	17.43	99	P	Pn	16 40 44.7	+1.2
	comp=Z,4.2nm,0.3s,baz=300,slow=7.9,SNR=36						
PMG				S	Sn	16 43 48.6	-10
	comp=Z,5.1nm,0.3s,baz=216,slow=22,SNR=6.9						
PMG				LR	LR	16 48 43.3	
	comp=Z,747nm,18.5s,baz=268,slow=41						
PMG	Port Moresby	17.43	99	P	Pn	16 40 44.8	+1.3
PMG				pmax	pmax		
	comp=Z,255nm,0.9s						
PMG	Port Moresby	17.43	99		Pn	16 40 44.8	+1.3
PMG	Port Moresby	17.43	99	P	Pn	16 40 46.3	+2.8
PMG	Port Moresby	17.43	99	P	Pn	16 40 46.3	+2.8
TBP	Tagbilaran	17.68	341	⇑eP	Pn	16 40 46.5	+0.1
TBP				i S	S	16 44 00.9	-2.4
PWJI	Pagerwojo	17.76	266	P	P	16 40 44.7	-1.9
	comp=Z,3µmcomp=Z,165nm,0.8s						
WRKA	Warakurna	17.88	184	P	P	16 40 47.6	-0.2
	baz=18,SNR=182						
WRKA	Warakurna	17.88	184	P	P	16 40 47.6	-0.2
	comp=Z,520nm,1.0s						
MTSU	Mount Surprise	17.97	129	P	Pn	16 40 50.8	+0.8
	baz=18,SNR=67						
MTSU	Mount Surprise	17.97	129	P	Pn	16 40 51.0	+1.1
	comp=Z,67nm,0.8s						
NGJI	Ngawi	18.09	268	P	Pn	16 40 51.9	+0.4
	comp=Z,64nm,0.9s						
MANU	Manus Island	18.31	75	P	P	16 40 52.5	-0.2
PCJI	Pacitan	18.39	265	P	P	16 40 53.9	+0.5
	comp=Z,101nm,0.7s						
PBKI	Pangkalan Bun	18.48	283	P	Pn	16 40 56.0	-0.1
	comp=Z,12µmcomp=Z,2µm,1.0s						
UGM	Wanagama	19.03	266	P	P	16 40 59.8	-0.7
UGM				IAmb	IAmb	16 41 12.4	
	comp=Z,128nm,1.0s						
UGM	Wanagama	19.03	266	P	Pn	16 41 01.6	-0.9
	comp=Z,138nm,1.7s						
SMRI	Semarang	19.11	269	P	Pn	16 41 05.9	+2.4
STKI	Sintang	19.52	291	P	P	16 41 06.0	+0.2
	comp=Z,121nm,1.1s						
RCP	Roxas	19.80	339	⇑eP	P	16 41 09.9	+1.1
SBUM	Sibu	19.86	298	P	Pn	16 41 11.0	-1.2
CTA	Charters Tower	20.59	130	P	Pn	16 41 19.8	-1.0
	comp=Z,94nm,1.0s,baz=301,slow=12,SNR=37						
CTA				S	S	16 45 06.7	+5.6
	comp=Z,38nm,0.7s,baz=247,slow=22,SNR=3.3						
CTA	Charters Tower	20.59	130	P	Pn	16 41 20.0	-0.7
	comp=Z,122nm,0.9s						
CTAO	Charters Tower	20.59	130	P	Pn	16 41 19.3	-1.4
CTAO				pmax	pmax		
	comp=Z,107nm,1.0s						
CTAO	Charters Tower	20.59	130	P	Pn	16 41 19.3	-1.4
CTAO				IAmb	IAmb	16 41 23.7	
	comp=Z,107nm,0.9s						
CTAO	Charters Tower	20.59	130	P	Pn	16 41 19.6	-1.1
KPJI	Karang Pucung	20.61	268	P	P	16 41 16.1	-1.4
	comp=Z,121nm,0.7s						
KSM	Kuching	21.14	293	P	P	16 41 23.0	-0.3
JCJI	Jatiwangi	21.29	270	P	P	16 41 24.9	+0.1
	comp=Z,277nm,0.4s						
OOD	Oodnadatta	21.34	165	P	P	16 41 26.2	+1.0
	comp=Z,1µm,0.7s						
GIRL	Giralia	21.46	222	P	P	16 41 28.1	+1.6
GIRL	Giralia	21.46	222	P	P	16 41 30.6	+4.1
	comp=Z,546nm,1.3s						
CISI	Cisompet, Garu	21.71	267	P	P	16 41 25.7	-3.7
CISI				IAmb	IAmb	16 41 32.4	
	comp=Z,159nm,0.8s						
CISI	Cisompet, Garu	21.71	267	P	P	16 41 27.8	-1.6
	comp=Z,2µmcomp=Z,235nm,0.8s						
LEM	Lembang	21.92	269	P	P	16 41 31.3	-0.4
	comp=Z,202nm,0.7s,baz=44,slow=6.9,SNR=33						
LEM				LR	LR	16 50 54.8	
	comp=Z,397nm,21.3s,baz=90,slow=39						
LEM	Lembang	21.92	269	P	P	16 41 30.2	-1.5
	comp=Z,1µmcomp=Z,144nm,0.9s						
MEEK	Meekatharra	22.10	207	P	P	16 41 33.8	+0.5
	baz=22,SNR=49						
MEEK	Meekatharra	22.10	207	P	P	16 41 37.6	+4.3
	comp=Z,143nm,0.9s						
PGP	Puerto Galera	22.25	337	⇑eP	P	16 41 34.6	-0.3
JCNP	Jose Panganiba	22.37	342	⇑eP	P	16 41 35.3	-0.7
JCNP	Jose Panganiba	22.37	342	⇑eP	P	16 41 39.6	+3.5
CNJI	Cibinong	22.39	268	P	P	16 41 34.3	-2.1
	comp=Z,6µmcomp=Z,734nm,1.0s						
RABL	Rabaul	22.54	84	P	P	16 41 38.2	+0.3
RABL	Rabaul	22.54	84	P	P	16 41 39.2	+1.3
LQP	Lukban	22.59	339	⇓eP	P	16 41 38.3	-0.1
DBJI	Dramaga	22.79	270	P	P	16 41 38.4	-1.9
	comp=Z,2µmcomp=Z,75nm,0.8s						
TGY	Tagaytay City	22.80	338	⇓iP	P	16 41 40.8	+0.4
INKA	Innaminka	23.04	154	P	P	16 41 44.2	+1.7
	comp=Z,926nm,1.2s						
MULG	Mulgathing	23.41	170	P	P	16 41 47.7	+1.8
	comp=Z,407nm,1.1s						
FORT	Forrest	23.60	184	P	P	16 41 49.1	+1.5
	baz=24,SNR=38						
FORT	Forrest	23.60	184	P	P	16 41 48.8	+1.2
FORT	Forrest	23.60	184	P	P	16 41 49.0	+1.5
	comp=Z,438nm,0.7s						
QLP	Quilpie	23.80	146	P	P	16 41 51.3	+1.9
	baz=24,SNR=43						
QLP	Quilpie	23.80	146	P	P	16 41 51.0	+1.5
	comp=Z,451nm,1.2s						
PPBI	Pangkal Pinang	23.99	281	P	P	16 41 52.0	+0.7
	comp=Z,4µmcomp=Z,290nm,1.1s						
XMIS	Christmas Isla	24.00	260	P	P	16 41 48.6	-2.8
XMIS				IAmb	IAmb	16 41 53.1	
	comp=Z,133nm,1.1s						
LCRK	Leigh Creek	24.55	162	P	P	16 41 57.8	+1.6
	comp=Z,892nm,0.8s						
KLSI		24.95	274	P	P	16 41 59.4	-0.7
	comp=Z,31nm,0.9s						
PMBI	Palembang	25.17	278	P	P	16 41 59.7	-2.4
PMBI	Palembang	25.17	278	P	P	16 42 04.5	+2.4
	comp=Z,11µmcomp=Z,629nm,0.9s						
PMBI	Palembang	25.17	278	P	P	16 42 05.4	+3.3
MORW	Morawa	25.36	209	P	P	16 42 04.8	+1.2
	baz=25,SNR=28						
MORW	Morawa	25.36	209	P	P	16 42 04.5	+0.9
MORW	Morawa	25.36	209	P	P	16 42 05.6	+2.0
	comp=Z,120nm,1.0s						
RK1H	Rockhampton Ha	25.71	131	P	P	16 42 08.9	+2.0
	comp=Z,30nm,0.8s						
DSRI	Dabo	25.90	284	P	P	16 42 09.3	+0.6
	comp=Z,972nmcomp=Z,74nm,1.1s						
BBOO	Buckleboo	26.25	168	P	P	16 42 12.6	+1.0
	baz=26,SNR=57						
BBOO	Buckleboo	26.25	168	P	P	16 42 12.4	+0.8
BBOO	Buckleboo	26.25	168	P	P	16 42 12.9	+1.3
	comp=Z,189nm,0.8s						
LHSI	Lahat	26.26	276	P	P	16 42 10.9	-1.0
	comp=Z,1µmcomp=Z,171nm,0.9s						
BLDU	Ballidu	26.36	206	P	P	16 42 14.0	+1.3
	baz=26,SNR=28						
RMQ	Roma	26.46	139	P	P	16 42 15.6	+2.0
	baz=27,SNR=12						
JMBI	JAMBI	26.54	281	P	P	16 42 15.5	+1.1
	comp=Z,71nm,0.4s						
MNAI	Manna	26.75	274	P	P	16 42 15.9	-0.4
STKA	Stephens Creek	27.02	157	P	P	16 42 20.2	+1.6
	comp=Z,76nm,0.8s,baz=327,slow=9.1,SNR=103						
STKA				pP	pP	16 42 42.9	-1.6
	comp=Z,58nm,0.6s,baz=311,slow=11,SNR=12						
STKA				LR	LR	16 54 10.9	
	comp=Z,387nm,22.0s,baz=332,slow=38						
STKA	Stephens Creek	27.02	157	P	P	16 42 20.1	+1.6
	baz=27,SNR=67						
STKA	Stephens Creek	27.02	157	P	P	16 42 19.9	+1.4
EIDS	Eidsvold	27.32	134	P	P	16 42 22.4	+1.1
HTT	Hallett	27.55	163	P	P	16 42 24.7	+1.4
	baz=28,SNR=16						
MUN	Mundaring	27.76	205	P	P	16 42 26.6	+1.5
	baz=28,SNR=16						
NWAO	Narrogin (SRO)	28.18	203	P	P	16 42 30.4	+1.6
	comp=Z,14nm,0.6s,baz=54,slow=8.4,SNR=21						
NWAO				LR	LR	16 54 49.2	
	comp=Z,301nm,19.6s,baz=290,slow=38						
NWAO	Narrogin (SRO)	28.18	203	P	P	16 42 30.6	+1.7
	baz=28,SNR=14						
NWAO				P	P	16 42 30.6	+1.7
	baz=28,SNR=14						
NWAO	Narrogin (SRO)	28.18	203	P	P	16 42 30.3	+1.4
CMSA	Cobar Meteorol	28.53	150	P	P	16 42 33.8	+1.8
	baz=29,SNR=90						
JRMM	Jerantut	29.29	291	P	P	16 42 41.0	+2.1
BKNI	Bangkinang	29.53	283	P	P	16 42 42.3	+1.2
	comp=Z,87nm,0.4s						
PDSI	Padang	29.80	281	P	P	16 42 41.3	-2.1
	comp=Z,20nm,1.0s						
PPI	Padang Panjang	29.96	281	P	P	16 42 44.8	-0.1
HNR	Honiara	30.02	97	P	P	16 42 46.5	+1.1
HNR				pmax	pmax		
	comp=Z,128nm,1.1s						
HNR	Honiara	30.02	97	P	P	16 42 46.5	+1.1
IPM	Ipoh	30.85	291	P	P	16 42 54.0	+1.3
ARMA	Armidale	31.00	141	P	P	16 42 56.7	+2.7
	baz=31,SNR=14						
ARMA	Armidale	31.00	141	P	P	16 42 55.5	+1.6
MNSI	Mandailing Nat	31.06	283	P	P	16 42 53.1	-1.5
	comp=Z,2µmcomp=Z,127nm,1.1s						
YULB	Yu-li	31.41	345	P	P	16 42 54.2	-3.3
YULB				IAmb	IAmb	16 42 56.1	
	comp=Z,48nm,1.4s						
KULM	Kulim	31.50	292	P	P	16 42 58.0	-0.4
TPUB	Ta-pu	31.50	344	P	P	16 42 55.6	-2.6
TPUB				IAmb	IAmb	16 42 57.4	
	comp=Z,110nm,1.5s						
ARPS	Mount Arapiles	31.53	161	P	P	16 43 00.7	+2.3
	baz=32,SNR=40						
SSLB	Suanglung	31.88	345	P	P	16 42 58.7	-2.8
SSLB				IAmb	IAmb	16 43 04.7	
	comp=Z,54nm,1.4s						
NACB	Ninganchiao	32.09	346	P	P	16 43 00.8	-2.6
YNG	Young	32.09	150	P	P	16 43 05.8	+2.4
	baz=32,SNR=23						
RPSI	Rantau Prapat	32.22	287	P	P	16 43 03.8	-0.9
PSI	Prapat	32.26	287	P	P	16 43 03.8	-1.4
	comp=Z,228nm,0.9s,baz=100,slow=5.8,SNR=65						
PSI				LR	LR	16 57 00.3	
	comp=Z,245nm,19.6s,baz=100,slow=38						
QIZ	Qiongzhong	32.52	323	P	P	16 43 06.3	-1.0
QIZ				S	S	16 48 09.5	-4.3
QIZ	Qiongzhong	32.52	323	P	P	16 43 05.6	-1.7
QIZ				IAmb	IAmb	16 43 06.3	
	comp=Z,50nm,1.2s						
YHNB	Yeheng	32.61	346	P	P	16 43 06.2	-1.9
YHNB				IAmb	IAmb	16 43 33.3	
	comp=Z,73nm,1.3s						
UBPT	Khong Chiam	32.73	313	P	P	16 43 07.7	-1.5
UBPT				IAmb	IAmb	16 43 09.9	
	comp=Z,62nm,1.0s						
TSI	Tuntungan	32.81	288	P	P	16 43 10.9	+1.0
	comp=Z,1µmcomp=Z,136nm,0.9s						
GSI	Gunungsitoli	33.12	283	P	P	16 43 11.0	-1.7
GSI	Gunungsitoli	33.12	283	P	P	16 43 10.8	-1.9
	comp=Z,166nm,1.1s						
CAN	Canberra	33.20	150	P	P	16 43 15.8	+2.6
CAN				pmax	pmax		
	comp=Z,55nm,0.8s						
CAN	Canberra	33.20	150	P	P	16 43 15.8	+2.6
CAN				IAmb	IAmb	16 43 16.9	
	comp=Z,55nm,0.8s						
KNMB	Chin-men Tao	33.27	341	P	P	16 43 12.8	-0.9
KNMB				IAmb	IAmb	16 43 18.4	
	comp=Z,42nm,0.9s						
TOO	Toolangi	33.55	157	P	P	16 43 19.1	+3.1
	baz=34,SNR=15						
TOO	Toolangi	33.55	157	P	P	16 43 18.0	+2.0
TOO				pmax	pmax		
	comp=Z,27nm,0.9s						
TOO	Toolangi	33.55	157	P	P	16 43 18.0	+2.0
TOO				IAmb	IAmb	16 43 20.2	
	comp=Z,27nm,0.8s						
JOW	Kunigami	33.77	358	P	P	16 43 17.1	-0.9
	comp=Z,32nm,0.8s,baz=92,slow=19,SNR=7.2						
TPTI		34.05	287	P	P	16 43 19.5	-1.2
	comp=Z,33nm,0.9s						
LHMI	Lhok Sumawe	34.91	290	P	P	16 43 26.9	-1.1
	comp=Z,4µmcomp=Z,586nm,0.9s						
JCJ	Chichijima	36.09	19	P	P	16 43 37.2	-0.8
	comp=Z,33nm,0.4s,baz=85,slow=22,SNR=12						
JCJ	Chichijima	36.09	19	P	P	16 43 35.9	-2.1
SANVU	Saraoutou	37.65	106	P	P	16 43 53.7	+2.3
SLVN	Son La	37.95	319	P	P	16 43 54.4	+0.6
SLVN				IAmb	IAmb	16 43 55.2	
	comp=Z,37nm,1.1s						
DZM	Mont Dzumac	38.41	117	P	P	16 43 59.4	+1.6
	comp=Z,9.3nm,0.7s,baz=262,slow=9.0,SNR=8.5						
DZM				LR	LR	16 59 29.6	
	comp=Z,194nm,20.7s,baz=264,slow=35						
DZM	Mont Dzumac	38.41	117	P	P	16 43 59.3	+1.6
OUENC	Ouen Island, N	38.86	117	P	P	16 44 03.7	+2.3
CM31	Chiang Mai Arr	39.58	310	P	P	16 44 07.5	+0.1
CM31	Chiang Mai Arr	39.58	310	P	P	16 44 07.5	+0.1
	SNR=27						
CMAR	Chiang Mai Arr	39.58	310	P	P	16 44 07.5	0.0
	comp=Z,38nm,0.9s,baz=142,slow=7.6,SNR=273						
CMAR				PcP	PcP	16 46 13.4	+0.9
	comp=Z,12nm,1.0s,baz=162,slow=2.8,SNR=6.7						
CMAR				ScP	ScP	16 49 52.4	+2.1
	comp=Z,0.7nm,0.9s,baz=160,slow=2.4,SNR=4.6						
CHTO	Chiang Mai	39.79	311	P	P	16 44 08.9	-0.3
CHTO				pmax	pmax		
	comp=Z,126nm,1.1s						
CHTO	Chiang Mai	39.79	311	P	P	16 44 08.9	-0.3
JNU	Nakatsue	40.03	2	P	P	16 44 10.5	-0.4
	comp=Z,14nm,0.8s,baz=247,slow=2.5,SNR=6.3						
JNU	Nakatsue	40.03	2	P	P	16 44 10.6	-0.4
JNU				IAmb	IAmb	16 44 11.4	
	comp=Z,37nm,1.1s						
GYA	Guiyang	40.16	327	⇓P	P	16 44 12.0	-0.3
GYA				pP	pP	16 44 34.4	-4.1
GYA				sP	sP	16 44 47.3	-4.5
GYA				S	S	16 50 05.8	-4.5
GYA				SS	SS	16 53 05.5	-7.6
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,200nm,3.9s						
WHN	Wuhan	40.23	339	⇑iP	P	16 44 12.9	+0.3
NJ2	Nanjing	40.30	346	⇑P	P	16 44 14.1	+1.0
NJ2				pP	pP	16 44 40.4	+0.8
NJ2				pmax	pmax		
	comp=Z,34nm,1.1s						
NJ2				pmax	pmax		
	comp=Z,300nm,4.3s						
JMN	Monobe	40.81	5	P	P	16 44 17.3	-0.1
PBA	Port Blair	41.22	297	P	P	16 44 20.7	-0.3
PBA				IAmb	IAmb	16 44 35.4	
	comp=Z,69nm,0.9s						
KMI	Kunming	41.42	322	⇑P	P	16 44 22.7	0.0
KMI				sP	sP	16 44 57.7	-4.9
KMI				S	S	16 50 30.7	+1.6
KMI				pmax	pmax		
	comp=Z,180nm,4.6s						
KMI				LR	LR		
	comp=Z,230nm,9.4s						
KMI				LR	LR		
	comp=Z,110nm,9.6s						
KMI				LR	LR		
	comp=Z,300nm,17.6s						
ENH	Enshi	41.93	333	P	P	16 44 25.6	-1.0
JHS	Saijyo	42.01	4	P	P	16 44 27.0	-0.2

JHS				IAmb	IAmb	16 44 39.1	
	comp=Z,79nm,1.4s						
JWT	Wachi	42.51	7	P	P	16 44 31.1	-0.1
INU	Inuyama	42.79	9	P	P	16 44 33.4	0.0
TJN	Taejon	43.31	357	*ce*P	P	16 44 37.4	-0.2
MAJO	Matsushiro	44.15	10	*c i*P	P	16 44 42.9	-1.5
MAJO				pmax	pmax		
	comp=Z,33nm,1.0s						
MAJO	Matsushiro	44.15	10	P	P	16 44 43.1	-1.3
MAJO				IAmb	IAmb	16 44 44.4	
	comp=Z,31nm,0.9s						
MAT	Matsushiro	44.15	10	P	P	16 44 42.5	-1.9
MJAR	Matsushiro Arr	44.15	10	P	P	16 44 42.8	-1.6
	comp=Z,19nm,0.9s,baz=189,slow=9.6,SNR=23						
MJAR				LR	LR	17 00 20.9	
	comp=Z,113nm,21.9s,baz=190,slow=32						
MJAR	Matsushiro Arr	44.15	10	P	P	16 44 42.8	-1.6
JYT	Yasato	44.22	12	P	P	16 44 44.0	-0.8
JYT				IAmb	IAmb	16 44 56.9	
	comp=Z,78nm,1.4s						
KSRS	Korea Array	44.36	358	P	P	16 44 45.8	-0.2
	comp=Z,8.2nm,1.0s,baz=176,slow=12,SNR=22						
KS19	Wonju Array Si	44.41	358	P	P	16 44 45.9	-0.5
KS19				IAmb	IAmb	16 44 46.6	
	comp=Z,39nm,1.4s						
CD2	Chengdu	45.24	328	*e*P	P	16 44 53.7	+0.6
CD2				LR	LR		
	comp=Z,380nm,17.7s						
CD2				LR	LR		
	comp=Z,540nm,20.6s						
CD2				LR	LR		
	comp=Z,280nm,15.7s						
XAN	Xi'an	45.41	336	P	P	16 44 53.0	-1.5
XAN				pmax	pmax		
	comp=Z,25nm,1.0s						
JSD	Sado	45.62	9	P	P	16 44 55.3	-0.6
JMM	Marumori	45.93	12	P	P	16 44 58.1	-0.2
JMM				IAmb	IAmb	16 45 27.0	
	comp=Z,30nm,0.6s						
BJT	Baijiatuau	48.53	346	P	P	16 45 17.8	-0.7
BJT				pmax	pmax		
	comp=Z,27nm,0.9s						
BJT	Baijiatuau	48.53	346	P	P	16 45 17.8	-0.7
BJT				IAmb	IAmb	16 45 19.2	
	comp=Z,27nm,0.9s						
BJI	Beijing	48.55	346	P	P	16 45 18.2	-0.4
BJI				sP	pwP	16 45 52.9	+4.0
BJI				PcP	PcP	16 46 43.6	+1.0
BJI				S	S	16 52 16.8	+5.8
BJI				pmax	pmax		
	comp=Z,40nm,1.1s						
BJI				pmax	pmax		
	comp=Z,120nm,10.9s						
OUZ	Omahuta	48.99	131	P	P	16 45 24.9	+2.7
SHL	Shillong	49.06	313	P	P	16 45 21.5	-1.5
SHL				pmax	pmax		
	comp=Z,82nm,1.1s						
SHL	Shillong	49.06	313	P	P	16 45 21.5	-1.5
SHL	Shillong	49.06	313	P	P	16 45 22.7	-0.3
	SNR=18						
LZH	Lanzhou	49.36	332	⇑P	P	16 45 25.2	0.0
LZH				pP	pP	16 45 51.7	-1.1
LZH				sP	sP	16 46 02.3	-3.8
LZH				pmax	pmax		
	comp=Z,56nm,1.3s						
LZH				pmax	pmax		
	comp=Z,150nm,6.0s						
LZH				LR	LR		
	comp=Z,300nm,14.1s						
LZH				LR	LR		
	comp=Z,400nm,14.1s						
LZH				LR	LR		
	comp=Z,270nm,16.5s						
MSHR	Mys Shultsa	49.47	1	*c i*P	P	16 45 25.5	-0.1
MSHR				pmax	pmax		
	comp=Z,17nm,1.0s						
VLA	Vladivostok	50.03	2	⇑*i*P	P	16 45 29.5	-0.3
VLA				pmax	pmax		
	comp=Z,40nm,1.1s						
ERM	Erimo	50.41	13	P	P	16 45 32.2	-0.6
ERM				pmax	pmax		
	comp=Z,30nm,1.3s						
ERM	Erimo	50.41	13	P	P	16 45 32.2	-0.6
ERM				IAmb	IAmb	16 45 52.3	
	comp=Z,30nm,1.2s						
HHC	Hu-ho-hao-te	50.56	342	*e*P	P	16 45 34.0	0.0
HHC				pmax	pmax		
	comp=Z,36nm,0.8s						
HHC				pmax	pmax		
	comp=Z,95nm,6.3s						
QRZ	Quartz Range	50.77	138	P	P	16 45 38.0	+2.4
WHZ	Wether Hill Ro	50.78	146	P	P	16 45 36.9	+1.4
CN2	Changchun	50.82	356	*e*P	P	16 45 34.4	-1.4
CN2				S	S	16 52 41.1	-1.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,100nm,16.0s						
CN2				LR	LR		
	comp=Z,100nm,16.0s						
CN2				LR	LR		
	comp=Z,100nm,19.0s						
JEW	Eniwo	50.85	11	P	P	16 45 36.8	+0.8
PALK	Pallekele	50.91	285	P	P	16 45 37.2	+0.1
	comp=Z,22nm,0.8s,baz=210,slow=5.1,SNR=10						
PALK				PcP	PcP	16 46 53.2	+1.2
	comp=Z,9.0nm,0.6s,baz=143,slow=3.3,SNR=4.5						
PALK	Pallekele	50.91	285	P	P	16 45 37.2	+0.1
PALK				IAmb	IAmb	16 45 39.5	
	comp=Z,28nm,0.9s						
USA0B	Ussuriysk Arra	51.11	2	P	P	16 45 37.9	-0.1
USA0B				pmax	pmax		
	comp=Z,17nm,1.0s						
USA0B	Ussuriysk Arra	51.11	2	P	P	16 45 37.9	-0.1
USRK	Ussuriysk Ar.	51.11	2	P	P	16 45 37.9	-0.1
	comp=Z,5.2nm,0.3s,baz=184,slow=7.4,SNR=32						
USRK	Ussuriysk Ar.	51.11	2	P	P	16 45 37.5	-0.5
MDJ	Mudanjiang	51.49	360	P	P	16 45 40.9	+0.1
MDJ				pmax	pmax		
	comp=Z,19nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,130nm,3.6s						
MDJ	Mudanjiang	51.49	360	P	P	16 45 40.5	-0.2
TUWZ	Tuamarina	52.00	138	P	P	16 45 45.3	+0.6
LSA	Lhasa	52.07	317	P	P	16 45 46.0	0.0
LSA	Lhasa	52.07	317	P	P	16 45 45.7	-0.3
LSA				pmax	pmax		
	comp=Z,25nm,1.0s						
LSA	Lhasa	52.07	317	P	P	16 45 45.7	-0.3
LSA				IAmb	IAmb	16 45 51.4	
	comp=Z,25nm,1.0s						
ASAJ	Asahikawa	52.31	12	P	P	16 45 46.9	0.0
	comp=Z,11nm,0.8s,baz=232,slow=12,SNR=14						
JKA	Kamikawa-asahi	52.31	12	P	P	16 45 46.7	-0.1
JKA				IAmb	IAmb	16 46 13.9	
	comp=Z,48nm,1.4s						
BKZ	Black Stump Fm	52.73	135	P	P	16 45 50.2	0.0
ODAN	Odare	53.10	311	*e*P	P	16 45 52.8	-0.6
	comp=Z,56nm,0.4s						
TAPN	Taplejung	53.14	312	*e*P	P	16 45 53.1	-0.6
	comp=Z,84nm,0.3s						
RAMN	Ramite	53.74	311	*e*P	P	16 45 57.7	-0.3
	comp=Z,143nm,0.4s						
GTA	Gaotai	53.93	331	⇑P	P	16 45 58.6	-0.4
GTA				pP	pP	16 46 24.9	-1.9
GTA				sP	sP	16 46 38.4	-1.5
GTA				ScS	ScS	16 55 34.8	-1.9
GTA				pmax	pmax		
	comp=Z,18nm,1.0s						
JIRN	Jiri	54.44	311	*e*P	P	16 46 02.7	-0.5
	comp=Z,34nm,0.3s						
GUN	Gumba	54.80	311	*e*P	P	16 46 05.3	-0.5
	comp=Z,108nm,0.4s						
PKI	Pulchoki	54.97	311	*e*P	P	16 46 06.1	-0.9
	comp=Z,51nm,0.5s						
PKIN	Phulchoki	54.98	311	*e*P	P	16 46 06.1	-0.9
	comp=Z,31nm,0.3s						
YSS	Yuzh-Sakhalins	55.06	11	*e*P	P	16 46 06.5	-0.4
YSS				*e*		16 46 38.0	
YSS	Yuzh-Sakhalins	55.06	11	P	P	16 46 06.5	-0.4
KKN	Kakani	55.19	311	*e*P	P	16 46 07.8	-0.6
	comp=Z,28nm,0.3s						
DMN	Daman	55.22	311	*e*P	P	16 46 08.2	-0.5
	comp=Z,42nm,0.5s						
GKN	Gorkha	55.78	311	*e*P	P	16 46 12.1	-0.5
	comp=Z,84nm,0.3s						
HYB	Hyderabad	56.10	296	*i* P	P	16 46 12.0	-2.9
KLR	Kul'dur	56.13	2	P	P	16 46 14.5	0.0
	comp=Z,13nm,1.0s,baz=196,slow=7.0,SNR=11						
KLR	Kul'dur	56.13	2	*c i*P	P	16 46 14.2	-0.3
KLR				pmax	pmax		
	comp=Z,30nm,1.3s						
KOLN	Koldanda	56.44	310	*e*P	P	16 46 17.0	-0.4
	comp=Z,70nm,0.3s						
DANN	Dangsing	56.62	311	*e*P	P	16 46 18.0	-0.7
	comp=Z,46nm,0.3s						
PYUN	Piuthan	57.07	310	*e*P	P	16 46 21.4	-0.4
	comp=Z,66nm,0.3s						
AFI	Afiamalu	57.82	102	LR	LR	17 11 27.0	
	comp=Z,129nm,20.1s,baz=274,slow=36						
GRNR	Gornyy	57.94	5	⇑*i*P	P	16 46 27.4	+0.2
GRNR				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GRNR				MLR	MLR		
	comp=E,60nm,10.0s						
ULN	Ulaanbaatar	58.28	342	*c i*P	P	16 46 30.2	+0.4
ULN				pmax	pmax		
	comp=Z,41nm,1.0s						
ULN	Ulaanbaatar	58.28	342	P	P	16 46 30.0	+0.2
ULN				IAmb	IAmb	16 46 31.5	
	comp=Z,39nm,1.0s						
SONM	Songino Array	58.45	342	P	P	16 46 31.5	+0.5
	comp=Z,14nm,0.8s,baz=157,slow=6.6,SNR=49						
SONM				PKP2bc		17 16 20.4	
	comp=Z,1.9nm,0.9s,baz=297,slow=1.7,SNR=7.1						
SONM	Songino Array	58.45	342	P	P	16 46 31.3	+0.3
SONM				IAmb	IAmb	16 46 32.8	
	comp=Z,24nm,1.0s						
KNTN	Kanton	58.49	89	P	P	16 46 32.0	+0.3
KNTN				IAmb	IAmb	16 46 44.0	
	comp=Z,40nm,1.2s						
ZEA	Zeya	60.65	358	*e*P	P	16 46 45.6	-0.2
ZEA				pmax	pmax		
	comp=N,20nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,30nm,0.9s						
ZAK	Zakamensk	61.67	341	*e*P	P	16 46 52.7	-0.2
ZAK				pmax	pmax		
	comp=Z,24nm,1.2s						
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.2s						
TLY	Talaya	62.69	342	*e*P	P	16 47 00.3	+0.8
TLY				*e*S	S	16 55 22.2	+3.7
TLY				pmax	pmax		
	comp=Z,59nm,1.1s						
TLY	Talaya	62.69	342	P	P	16 46 59.6	+0.1
TLY				IAmb	IAmb	16 47 01.5	
	comp=Z,20nm,1.0s						
IRK	Irkutsk	62.99	343	*e*P	P	16 47 01.1	-0.4
IRK				pmax	pmax		
	comp=Z,58nm,1.9s						
WMQ	Urumqi	63.33	327	P	P	16 47 03.9	-0.1
WMQ				pP	pP	16 47 29.8	-3.2
WMQ				PcP	PcP	16 47 39.2	-0.8
WMQ				sP	sP	16 47 44.8	-1.2
WMQ				pmax	pmax		
	comp=Z,56nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,250nm,6.5s						
MOY	Mondy	63.52	340	*e*P	P	16 47 05.7	+0.6
MOY				pmax	pmax		
	comp=Z,95nm,1.8s						
PEA0B	Petropavlovsk-	64.52	18	P	P	16 47 11.7	+0.2
PEA0B				pmax	pmax		
	comp=Z,72nm,1.2s						
PEA0B	Petropavlovsk-	64.52	18	P	P	16 47 11.7	+0.2
PETK	Petropavlovsk-	64.52	18	P	P	16 47 12.1	+0.5
	comp=Z,15nm,0.9s,baz=161,slow=2.4,SNR=18						
PETK				PcP	PcP	16 47 45.1	+0.5
	comp=Z,7.4nm,0.7s,baz=182,slow=4.3,SNR=7.4						
PETK	Petropavlovsk-	64.52	18	P	P	16 47 11.8	+0.3
PET	Petropavlovsk	64.75	19	P	P	16 47 13.4	+0.4
PET				IAmb	IAmb	16 47 25.4	
	comp=Z,36nm,1.1s						
BOD	Bodaibo	65.96	351	*e*P	P	16 47 20.2	-0.5
BOD				pmax	pmax		
	comp=Z,35nm,1.6s						
NIL	Nilore	67.06	311	P	P	16 47 27.4	-0.9
NIL				pmax	pmax		
	comp=Z,71nm,1.4s						
NIL	Nilore	67.06	311	P	P	16 47 27.4	-0.9
NIL				IAmb	IAmb	16 47 30.5	
	comp=Z,71nm,1.4s						
ZSN	Zaisan	67.21	329	*e*P	P	16 47 27.1	-1.9
	baz=329						
ZSN	Zaisan	67.21	329	*e*P	P	16 47 27.0	-1.9
SHLS	Shalkode	67.62	323	*e*P	P	16 47 29.3	-2.5
	comp=Z,48nm,1.8s,baz=323						
SHLS	Shalkode	67.62	323	*e*P	P	16 47 29.2	-2.5
SHLS				pmax	pmax		
	comp=Z,48nm,1.8s						
PDGK	Podgornoye	67.70	323	P	P	16 47 31.9	-0.4
UZB	Uzynbulak	67.89	322	*e*P	P	16 47 32.6	-0.9
	comp=Z,35nm,1.6s,baz=322						
UZB	Uzynbulak	67.89	322	*e*P	P	16 47 32.5	-0.9
UZB				pmax	pmax		
	comp=Z,35nm,1.6s						
KSH	Kashi	67.90	318	P	P	16 47 33.3	-0.3
KSH				pP	PcP	16 48 00.1	+0.9
KSH				sP	sP	16 48 13.4	-2.5
KSH				pmax	pmax		
	comp=Z,26nm,1.0s						
MK31	Makanchi Array	68.16	327	P	P	16 47 34.8	-0.1
MK31				pmax	pmax		
	comp=Z,51nm,1.3s						
MK31	Makanchi Array	68.16	327	P	P	16 47 34.8	-0.1
MK31				IAmb	IAmb	16 47 36.3	
	comp=Z,50nm,1.2s						
MKAR	Makanchi Array	68.16	327	P	P	16 47 35.2	+0.3
	comp=Z,25nm,0.3s,baz=114,slow=8.6,SNR=621						
MKAR	Makanchi Array	68.16	327	P	P	16 47 35.0	+0.1
SATY	Saty	68.21	322	*e*P	P	16 47 34.8	-0.7
	comp=Z,54nm,2.3s,baz=322						
SATY	Saty	68.21	322	*e*P	P	16 47 34.7	-0.7
SATY				pmax	pmax		
	comp=Z,54nm,2.3s						
KPKS	Kokpek	68.27	322	*e*P	P	16 47 34.8	-1.0
	comp=Z,47nm,1.7s,baz=322						
KPKS	Kokpek	68.27	322	*e*P	P	16 47 34.7	-1.0
KPKS				pmax	pmax		
	comp=Z,47nm,1.7s						
MAKZ	Makanchi	68.33	327	P	P	16 47 36.0	0.0
MAKZ				pmax	pmax		
	comp=Z,85nm,1.4s						
MAKZ	Makanchi	68.33	327	P	P	16 47 36.0	0.0
YAK	Yakutsk	68.94	360	*c i*P	P	16 47 39.0	-0.3
YAK				*e*		16 48 06.2	
YAK				*e**PP	pwP	16 48 13.4	+2.0
YAK				*e*		16 50 15.1	
YAK				*e*S	S	16 56 31.3	-2.6
YAK				*e*		16 57 05.3	
YAK				pmax	pmax		
	comp=Z,65nm,0.8s						
YAK				pmax	pmax		
	comp=N,22nm,0.9s						
YAK				pmax	pmax		
	comp=E,9.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,33nm,1.7s						
YAK				pmax	pmax		
	comp=N,31nm,1.7s						
YAK				pmax	pmax		
	comp=E,25nm,1.8s						
YAK				smax	smax		
	comp=N,56nm,1.2s						
YAK				smax	smax		
	comp=E,87nm,1.5s						
YAK	Yakutsk	68.94	360	P	P	16 47 39.2	-0.1
MDOK	Medeo	69.10	321	*e*P	P	16 47 40.1	-0.9
	baz=321						
MDOK	Medeo	69.10	321	P	P	16 47 41.1	+0.1
AAA	Alma-Ata	69.21	321	*e*P	P	16 47 41.0	-0.5
	baz=321						
AAA	Alma-Ata	69.21	321	*e*P	P	16 47 41.0	-0.5
TDK	Taldyqorghan	69.29	324	*e*P	P	16 47 40.2	-1.7
	baz=324						
TDK	Taldyqorghan	69.29	324	*e*P	P	16 47 40.2	-1.7
CHKK	Chushkaly	69.51	322	*e*P	P	16 47 41.2	-2.1
	baz=322						
TKM2	Tokmak 2	69.88	321	P	P	16 47 47.3	+1.4
	SNR=6.5						
TKM2	Tokmak 2	69.88	321	P	P	16 47 45.2	-0.7
KUU	Kurty	69.93	322	*e*P	P	16 47 44.1	-1.8
	comp=E,74nm,1.5s,baz=322						
KUU	Kurty	69.93	322	*e*P	P	16 47 44.9	-1.0
KUU				pmax	pmax		
	comp=Z,74nm,1.5s						
KBK	Karagaybulak	70.16	320	P	P	16 47 48.9	+1.4
	SNR=9.0						
AAK	Ala-Archa	70.43	320	*i* P	P	16 47 49.7	+0.5
	SNR=18						
AAK	Ala-Archa	70.43	320	*c i*P	P	16 47 49.7	+0.5
AAK				pmax	pmax		
	comp=Z,118nm,1.3s						
AAK	Ala-Archa	70.43	320	P	P	16 47 49.5	+0.3
AAK				IAmb	IAmb	16 47 51.3	
	comp=Z,46nm,1.4s						
CHMS	Chumysh	70.45	320	P	P	16 47 49.1	-0.1
	SNR=5.8						
KBL	Kabul	70.61	310	P	P	16 47 49.5	-1.0
KBL				pmax	pmax		
	comp=Z,15nm,1.0s						
KBL	Kabul	70.61	310	P	P	16 47 49.5	-1.0
KBL	Kabul	70.61	310	P	P	16 47 51.3	+0.8
	SNR=6.5						
AML	Almayashu	70.70	319	P	P	16 47 51.8	+0.7
	SNR=14						
AML	Almayashu	70.70	319	*i* P	P	16 47 51.5	+0.5
	SNR=14						
DRK	Karamyk	70.72	316	P	P	16 47 50.4	-0.7
USP	Ospenovka	70.75	321	P	P	16 47 51.3	+0.4
	SNR=21						
SGDS	Sogindy	70.76	321	*e*P	P	16 47 50.5	-0.5
	baz=321						
EKS2	Erkin-Say	70.91	320	P	P	16 47 52.8	+0.8
	SNR=17						
GAR	Garm	71.53	315	P	P	16 47 55.3	-0.6
GAR				IAmb	IAmb	16 47 57.9	
	comp=Z,54nm,0.9s						
ZAA0	Zalesovo Array	71.55	334	P	P	16 47 54.3	-1.2
ZALV	Zalesovo Beam	71.55	334	P	P	16 47 54.9	-0.6
	comp=Z,38nm,0.8s,baz=113,slow=3.9,SNR=115						
ZALV				S	S	16 57 00.6	-4.0
	comp=Z,0.3nm,0.3s,baz=137,slow=9.9,SNR=3.7						
ZALV	Zalesovo Beam	71.55	334	P	P	16 47 54.4	-1.0
BTK	Batken	71.65	316	P	P	16 47 56.4	-0.1
BTK				pmax	pmax		
	comp=Z,18nm,1.1s						
BTK	Batken	71.65	316	P	P	16 47 56.4	-0.1
BTLS	Baital	71.93	322	*e*P	P	16 47 57.0	-1.0
	baz=322						
BTLS	Baital	71.93	322	*e*P	P	16 47 56.9	-1.0
SEY	Seymchan	71.97	11	P	P	16 47 58.5	+0.7
	comp=Z,25nm,0.9s,baz=196,slow=5.1,SNR=36						
CHGR	Chuyangaron	72.20	314	P	P	16 47 59.2	-0.6
VNDA	Vanda	72.37	173	P	P	16 48 01.4	+1.3
	comp=Z,1.7nm,0.7s,baz=309,slow=6.9,SNR=15						
VNDA				LR	LR	17 19 02.2	
	comp=Z,113nm,18.7s,baz=38,slow=35						
VNDA	Vanda	72.37	173	P	P	16 48 01.1	+1.1
KURBB	Kurchatov Arra	72.45	329	P	P	16 48 00.3	-0.6
KURK	Kurchatov	72.46	329	*c i*P	P	16 48 00.9	0.0
KURK				pmax	pmax		
	comp=Z,123nm,1.2s						
KURK	Kurchatov	72.46	329	P	P	16 48 00.8	-0.1
RER	Riviere de l'E	72.53	250	P	P	16 48 03.2	+1.0
KK31	Karatay Array	73.23	319	*i* P	P	16 48 05.4	-0.3
KK31	Karatay Array	73.23	319	P	P	16 48 05.4	-0.3
KK31				IAmb	IAmb	16 48 07.0	
	comp=Z,42nm,1.1s						
KKAR	Karatay Array	73.23	319	P	P	16 48 05.6	-0.1
KKAR	Karatay Array	73.23	319	P	P	16 48 05.6	-0.1
TAS	Tashkent	73.25	317	P	P	16 48 05.5	-0.4
TAS				pmax	pmax		
	comp=Z,96nm,1.1s						
TAS	Tashkent	73.25	317	P	P	16 48 05.5	-0.4
SBA	Scott Base	73.27	172	P	P	16 48 07.0	+1.7
SBA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
SBA	Scott Base	73.27	172	P	P	16 48 07.0	+1.7
BRLS	Borolday	73.64	319	*e*P	P	16 48 07.4	-0.8
	baz=318						
BRLS	Borolday	73.64	319	*e*P	P	16 48 07.3	-0.8
MSEY	Mahe Island	73.80	267	P	P	16 48 10.4	+0.7
KIWB	Kanaga Island	74.18	31	P	P	16 48 10.3	-0.6
OTUK	Ortayu	74.56	324	P	P	16 48 13.4	+0.1
MAW	Mawson	74.74	201	P	P	16 48 15.8	+1.9
	comp=Z,15nm,0.8s,baz=70,slow=8.0,SNR=34						
MAW				LR	LR	17 19 57.8	
	comp=Z,138nm,18.2s,baz=7.5,slow=35						
MAW	Mawson	74.74	201	P	P	16 48 15.9	+1.9
	baz=75,SNR=25						
MAW	Mawson	74.74	201	P	P	16 48 15.4	+1.5
WBK	Wadi Bani Khal	75.19	296	P	P	16 48 17.9	+0.4
	SNR=5.0						
BRZS	Berezniki	75.24	326	*e*P	P	16 48 16.4	-0.8
	comp=Z,39nm,1.7s,baz=326						
BRZS	Berezniki	75.24	326	*e*P	P	16 48 16.4	-0.8
BRZS				pmax	pmax		
	comp=Z,39nm,1.7s						
WSAR	Wadi Sarin	75.65	296	P	P	16 48 20.6	+0.5
	SNR=7.2						
MHTO	MHTO	75.70	294	P	P	16 48 20.3	-0.1
	SNR=6.2						
HRA	Herat	75.79	308	P	P	16 48 20.2	-0.7
HRA				IAmb	IAmb	16 48 23.4	
	comp=Z,35nm,1.1s						
JMDO	Jabal Madar	75.91	295	P	P	16 48 21.9	+0.3
	SNR=6.0						
SMDO	Samad	76.12	296	P	P	16 48 24.0	+1.1
	SNR=6.9						
BIDO	Bidbid	76.16	296	P	P	16 48 23.7	+0.7
	SNR=16						
HOQ	Hoqain	76.91	296	P	P	16 48 27.4	+0.2
	SNR=15						
ARQ	Araqi	77.55	296	P	P	16 48 32.2	+1.3
	SNR=5.3						
SOCY	Socotra	77.66	284	P	P	16 48 30.7	-1.0
SOCY				IAmb	IAmb	16 48 31.1	
	comp=Z,57nm,1.2s						
SOHO	SOHO	77.73	297	*i* P	P	16 48 31.6	-0.1
	SNR=22						
HUH	Hualalai	77.92	68	P	P	16 48 31.2	-2.0
BRVK	Borovoye	78.07	328	*c i*P	P	16 48 32.8	-0.2
BRVK				pmax	pmax		
	comp=Z,79nm,1.2s						
BRVK	Borovoye	78.07	328	P	P	16 48 32.4	-0.6
BRVK				IAmb	IAmb	16 48 34.1	
	comp=Z,75nm,1.1s						
MDH	Madha	78.21	298	P	P	16 48 34.4	0.0
UOSS	Minazif	78.21	297	*i* P	P	16 48 34.4	0.0
	SNR=7.3						
UOSS	Minazif	78.21	297	P	P	16 48 34.0	-0.4
UOSS				IAmb	IAmb	16 48 36.5	
	comp=Z,48nm,1.1s						
HATD	Hatta, Dubai	78.24	297	*i* P	P	16 48 35.0	+0.4
	SNR=9.7						
HATD	Hatta, Dubai	78.24	297	P	P	16 48 35.5	+0.9
	SNR=7.3						
ASHO	Ashiyiah	78.28	297	*i* P	P	16 48 35.1	+0.2
	SNR=13						
ASHO	Ashiyiah	78.28	297	P	P	16 48 35.0	+0.2
	SNR=6.9						
MSFE	Esma-Masafi	78.34	298	*i* P	P	16 48 35.5	+0.3
	SNR=17						
MASF	Masafi	78.35	298	P	P	16 48 35.8	+0.6
	SNR=9.4						
BANOM	Banah	78.36	298	*i* P	P	16 48 35.5	+0.2
	SNR=14						
BANOM	Banah	78.36	298	P	P	16 48 35.4	+0.2
	SNR=5.4						
ALNE	Al Ain	78.41	296	P	P	16 48 35.8	+0.2
SHME	Shamm	78.52	298	*i* P	P	16 48 36.3	+0.2
	SNR=12						
SHME	Shamm	78.52	298	P	P	16 48 36.5	+0.4
	SNR=7.4						
TIXI	Tiksi	78.60	360	⇑*i*P	P	16 48 34.4	-1.1
TIXI	Tiksi	78.60	360	P	P	16 48 34.4	-1.1
TIXI				IAmb	IAmb	16 48 36.3	
	comp=Z,34nm,1.2s						
NAZ	Nazwa, Dubai	78.70	297	P	P	16 48 36.7	-0.4
NAZ	Nazwa, Dubai	78.70	297	P	P	16 48 37.3	+0.2
	SNR=6.0						
FAQ	Al Faqa, Dubai	78.70	297	*i* P	P	16 48 36.9	-0.2
	SNR=12						

ASUD	Al Ashush, Dub	78.91	297	*i* P	P	16 48 38.5	+0.3
	SNR=20						
GEYT	Alibeck	80.06	310	P	P	16 48 44.5	+0.3
	comp=Z,5.3nm,0.4s,baz=98,slow=7.6,SNR=16						
GYA0B	ALIBECK ARRAY	80.06	310	P	P	16 48 44.4	+0.1
GYA0B				IAmb	IAmb	16 48 46.5	
	comp=Z,36nm,1.1s						
UNV	Unalaska Valle	80.76	33	P	P	16 48 48.1	+0.6
	baz=244						
VOI	Vohitsoka	80.83	249	P	P	16 48 49.3	+0.5
VOI				IAmb	IAmb	16 48 50.9	
	comp=Z,37nm,0.9s						
VOI	Vohitsoka	80.83	249	P	P	16 48 49.9	+1.0
	SNR=5.8						
VOI	Vohitsoka	80.83	249	P	P	16 48 50.0	+1.1
NRIK	Noril'sk	81.59	346	P	P	16 48 51.8	+0.1
	comp=Z,26nm,0.9s,baz=135,slow=6.0,SNR=28						
NRIK				LR	LR	17 29 10.3	
	comp=Z,68nm,18.3s,baz=132,slow=39						
NRIK	Noril'sk	81.59	346	P	P	16 48 51.6	-0.1
NRIK				IAmb	IAmb	16 48 53.1	
	comp=Z,52nm,1.2s						
AB31	Akbulak array	82.41	322	*i* P	P	16 48 55.8	-0.6
ABKAR	Akbulak array	82.41	322	P	P	16 48 56.0	-0.4
ABKAR	Akbulak array	82.41	322	P	P	16 48 55.8	-0.6
ABKAR				IAmb	IAmb	16 48 58.6	
	comp=Z,45nm,1.0s						
FALS	False Pass	82.82	32	P	P	16 48 56.7	-1.6
	baz=247						
QSPA	South Pole Qui	82.87	180	P	P	16 48 59.6	+1.0
	comp=Z,7.4nm,0.7s,baz=323,slow=1.7,SNR=24						
QSPA	South Pole Qui	82.87	180	P	P	16 48 59.1	+0.5
SDPT	Sand Point	84.57	33	P	P	16 49 06.5	-0.8
	baz=249						
SVE	Sverdlovsk	84.71	329*de*	P	P	16 49 07.9	0.0
SVE				pmax	pmax		
	comp=Z,138nm,1.4s						
ARU	Arti	85.64	328*c*	*i*P	P	16 49 12.2	-0.4
ARU				*PP	pP	16 49 43.0	+0.4
ARU				S	SKSac	16 59 26.5	-0.2
ARU				pmax	pmax		
	comp=Z,76nm,1.0s						
ARU	Arti	85.64	328	P	P	16 49 11.9	-0.7
ANM	Nome	85.95	23	P	P	16 49 13.8	-0.1
	baz=244						
RDOG	Red Dog Mine	88.31	20	P	P	16 49 25.5	+0.2
	baz=246						
P18K	Big Mountain,	88.56	30	P	P	16 49 26.6	0.0
	baz=254						
AKT	Akhty	88.68	312*c*	*i*P	P	16 49 28.2	+0.4
AKT				pmax	pmax		
	comp=Z,66nm,1.1s						
OHAK	Old Harbor	88.96	32	P	P	16 49 28.3	-0.2
	baz=255						
TTA	Tatalina	89.22	26	P	P	16 49 29.4	-0.4
TTA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
TTA	Tatalina	89.22	26	P	P	16 49 29.4	-0.4
TTA	Tatalina	89.22	26	P	P	16 49 29.6	-0.1
	baz=253						
N19K	Bonanza Creek	89.31	28	P	P	16 49 30.5	+0.3
	baz=254						
L19K	White Mountain	89.52	27	P	P	16 49 31.8	+0.7
	baz=254						
M19K	Big River Lodg	89.65	27	P	P	16 49 32.8	+1.1
	baz=254						
O20K	Slope Mountain	90.01	29	P	P	16 49 34.1	+0.6
	baz=256						
L20K	Farewell, AK	90.04	27	P	P	16 49 34.0	+0.5
	baz=255						
K20K	Telida	90.19	26	P	P	16 49 34.5	+0.3
K20K	Telida	90.19	26	P	P	16 49 34.3	+0.2
	baz=255						
J20K	Nowinta River	90.38	25	P	P	16 49 35.3	+0.3
J20K	Nowinta River	90.38	25	P	P	16 49 35.4	+0.4
	baz=254,SNR=6.7						
GROC	Groznyy	90.39	313	*e*P	P	16 49 34.6	-0.9
GROC				*e**PP	pwP	16 50 09.0	-1.2
GROC				*e**SP	sP	16 50 21.4	+3.6
GROC				*e*		16 53 08.7	
GROC				pmax	pmax		
	comp=Z,42nm,1.0s						
GNI	Garni	90.69	310	P	P	16 49 38.2	+0.9
GNI	Garni	90.69	310*c*	*i*P	P	16 49 37.4	+0.1
GNI				pmax	pmax		
	comp=Z,26nm,1.5s						
PPLA	Purkeypile	90.90	27	P	P	16 49 37.3	-0.4
	baz=256						
KIRV	Kirov	90.98	329*c*	*i*P	P	16 49 36.3	-1.6
SKT	Skwentna	90.98	28	P	P	16 49 35.9	-2.0
SKT	Skwentna	90.98	28	P	P	16 49 37.2	-0.7
	baz=257						
CAST	Castle Rocks	91.07	26	P	P	16 49 38.9	+0.6
	baz=256						
CHUM	Lake Minchumin	91.08	26	P	P	16 49 38.6	+0.3
	baz=256,SNR=7.0						
SUA	Susitna One	91.23	28	P	P	16 49 39.3	+0.1
	baz=258						
H21K	Melozitna Rive	91.31	24	P	P	16 49 39.4	0.0
	baz=256						
KIBK	Kibwezi	91.35	267	P	P	16 49 40.5	-0.3
KIBK				IAmb	IAmb	16 49 42.8	
	comp=Z,23nm,1.3s						
I21K	Tanana	91.53	24	P	P	16 49 40.1	-0.2
I21K	Tanana	91.53	24	P	P	16 49 40.3	0.0
	baz=256						
SEW	Seward	91.57	30	P	P	16 49 40.5	-0.1
	baz=259						
M22K	Willow	91.58	28	P	P	16 49 40.2	-0.4
	baz=258						
CUT	Chulitna	91.65	27	P	P	16 49 40.1	-0.9
	baz=258						
BPAW	Bear Paw Mtn.	91.70	26	P	P	16 49 40.7	-0.5
BPAW				IAmb	IAmb	16 49 43.0	
	comp=Z,14nm,1.1s						
BPAW	Bear Paw Mtn.	91.70	26	P	P	16 49 41.2	0.0
	baz=257						
ZEI	Tsey	91.70	313	*e*P	P	16 49 41.6	-0.3
ZEI				pmax	pmax		
	comp=Z,12nm,1.3s						
TRF	Thorofare Moun	91.86	26	P	P	16 49 40.9	-1.2
	baz=258						
MLY	Manley	92.01	25	P	P	16 49 41.9	-0.7
MLY				IAmb	IAmb	16 49 47.3	
	comp=Z,8.2nm,0.9s						
MLY	Manley	92.01	25	P	P	16 49 41.9	-0.7
	baz=258,SNR=6.4						
PMR	Palmer	92.02	28	P	P	16 49 42.6	0.0
	baz=259						
SIRT	Sirnak	92.11	307	P	P	16 49 43.1	-0.7
PWL	Port Wells	92.25	29	P	P	16 49 43.5	-0.3
	baz=260						
KMBO	Kilima Mbogo	92.29	269	P	P	16 49 45.9	+0.6
	comp=Z,7.1nm,1.0s,baz=14,slow=2.5,SNR=8.5						
KMBO	Kilima Mbogo	92.29	269	P	P	16 49 46.1	+0.8
KMBO	Kilima Mbogo	92.29	269	P	P	16 49 45.6	+0.2
KMBO				IAmb	IAmb	16 49 47.3	
	comp=Z,15nm,1.2s						
KNK	Knik Glacier	92.30	28	P	P	16 49 43.1	-0.9
	baz=260						
BWN	Browne	92.37	26	P	P	16 49 43.7	-0.5
SML	Sawmill	92.43	28	P	P	16 49 43.3	-1.4
	baz=260						
RND	Reindeer	92.49	26	P	P	16 49 43.7	-1.2
RND				pmax	pmax		
	comp=Z,23nm,1.0s						
RND	Reindeer	92.49	26	P	P	16 49 43.7	-1.2
MCK	McKinley	92.51	26	P	P	16 49 43.6	-1.4
MCK				pmax	pmax		
	comp=Z,16nm,1.0s						
MCK	McKinley	92.51	26	P	P	16 49 43.5	-1.4
MCK				IAmb	IAmb	16 49 45.3	
	comp=Z,16nm,1.0s						
MCK	McKinley	92.51	26	P	P	16 49 44.3	-0.6
	baz=259						
KBZ	Khabaz	92.56	314	P	P	16 49 45.8	+0.2
	comp=Z,7.6nm,0.9s,baz=152,slow=3.6,SNR=7.9						
I23K	Minto, Yukon-K	92.60	25	P	P	16 49 44.6	-0.6
I23K				IAmb	IAmb	16 49 46.4	
	comp=Z,20nm,0.9s						
I23K	Minto, Yukon-K	92.60	25	P	P	16 49 44.6	-0.6
	baz=259,SNR=12						
NEA2	Nenana	92.62	25	P	P	16 49 45.1	-0.3
NEA2	Nenana	92.62	25	P	P	16 49 44.7	-0.7
	baz=259						
H23K	Yukon River	92.66	24	P	P	16 49 45.5	-0.2
H23K				IAmb	IAmb	16 49 46.8	
	comp=Z,10nm,1.1s						
H23K	Yukon River	92.66	24	P	P	16 49 45.0	-0.6
	baz=259,SNR=7.6						
COLD	Coldfoot	92.69	23	P	P	16 49 45.8	+0.1
COLD				IAmb	IAmb	16 49 47.1	
	comp=Z,9.8nm,0.9s						
COLD	Coldfoot	92.69	23	P	P	16 49 44.7	-1.0
	baz=258						
KIV	Kislovodsk	92.73	314	*e*P	P	16 49 44.0	-2.5
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,51nm,20.0s						
GLI	Glacier Island	92.86	29	P	P	16 49 46.5	-0.1
	baz=261						
SCM	Sheep Creek Mo	92.90	28	P	P	16 49 47.3	+0.4
	baz=260						
WRH	Wood River Hil	93.01	25	P	P	16 49 46.1	-1.0
WRH				IAmb	IAmb	16 49 47.3	
	comp=Z,23nm,1.1s						
MDM	Murphy Dome	93.04	25	P	P	16 49 46.1	-1.3
CCB	Clear Creek Bu	93.16	25	P	P	16 49 46.3	-1.6
CCB				IAmb	IAmb	16 49 47.7	
	comp=Z,24nm,1.1s						
TCOL	CIGO, UAF Yank	93.18	25	P	P	16 49 48.2	+0.2
	baz=260						
TOLK	Toolik Lake Re	93.20	21	P	P	16 49 47.7	-0.4
	baz=259						
H24K	Noodor Dome	93.34	24	P	P	16 49 48.2	-0.5
H24K				IAmb	IAmb	16 49 49.9	
	comp=Z,16nm,1.0s						
H24K	Noodor Dome	93.34	24	P	P	16 49 48.0	-0.8
	baz=260,SNR=12						
PRGR	Permogore	93.39	332	*e*P	P	16 49 45.1	-3.9
PRGR				pmax	pmax		
	comp=Z,35nm,0.9s						
M24K	Tolsona, Glenn	93.48	28	P	P	16 49 49.7	+0.2
	baz=262						
HDA	Harding Lake	93.49	26	P	P	16 49 48.1	-1.4
HDA				IAmb	IAmb	16 49 49.5	
	comp=Z,11nm,0.9s						
HDA	Harding Lake	93.49	26	P	P	16 49 48.0	-1.4
	baz=261,SNR=11						
IL31		93.57	25	P	P	16 49 48.6	-1.1
IL31				IAmb	IAmb	16 49 49.1	
	comp=Z,9.3nm,1.1s						
ILAR	Eielson Array	93.57	25	P	P	16 49 48.6	-1.2
	comp=Z,5.9nm,0.9s,baz=272,slow=4.1,SNR=35						
ILAR				LR	LR	17 25 48.9	
	comp=Z,27nm,21.9s,baz=276,slow=32						
ILAR	Eielson Array	93.57	25	P	P	16 49 48.0	-1.8
PAX	Paxson	93.93	27	P	P	16 49 50.3	-1.3
PAX				pmax	pmax		
	comp=Z,18nm,1.2s						
PAX	Paxson	93.93	27	P	P	16 49 50.3	-1.3
PAX				IAmb	IAmb	16 49 52.7	
	comp=Z,18nm,1.2s						
PAX	Paxson	93.93	27	P	P	16 49 51.6	0.0
	baz=262,SNR=9.2						
HARP	HAARP	94.00	28	P	P	16 49 52.5	+0.7
	baz=262						
BMRM	Bremner River	94.07	29	P	P	16 49 52.0	-0.2
	baz=263						
N25K	Chitina, Valde	94.16	29	P	P	16 49 52.2	-0.5
	baz=263						
J25K	Salcha River,	94.20	26	P	P	16 49 51.9	-0.8
	baz=262,SNR=6.7						
VRH	Novokhopyorsk	94.22	321	*e*P	P	16 49 49.8	-3.2
VRH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
RIDG	Independent Ri	94.31	26	P	P	16 49 52.4	-0.9
	baz=263,SNR=6.3						
DOT	Dot Lake	94.65	27	P	P	16 49 53.5	-1.3
DOT				IAmb	IAmb	16 49 55.6	
	comp=Z,12nm,1.0s						
SCRK	Sand Creek	94.72	26	P	P	16 49 54.9	-0.3
SCRK				IAmb	IAmb	16 49 56.1	
	comp=Z,8.1nm,1.2s						
SCRK	Sand Creek	94.72	26	P	P	16 49 54.6	-0.6
	baz=264,SNR=5.4						
CRQE	Cirque	94.78	29	P	P	16 49 55.0	-0.6
	baz=264						
SOC	Sochi	94.83	313	*e*P	P	16 49 53.2	-2.8
SOC				*e*PPP	PPP	16 55 47.7	
SOC				*e*S	SKSac	17 00 17.6	-2.9
SOC				*e*SS	SS	17 07 29.4	+2.4
SOC				*e*SSS	SSS	17 11 09.1	
BMAR	Burnt Mountain	94.87	23	P	P	16 49 55.7	-0.1
MCARA	McCarthy VSAT	94.88	29	P	P	16 49 55.1	-0.7
	baz=264						
L26K	Log Cabin Wild	94.90	27	P	P	16 49 55.4	-0.5
	baz=264						
J26L	Joseph Creek	94.96	26	P	P	16 49 55.8	-0.5
	baz=264,SNR=18						
M26K	Nabesna, AK	95.00	28	P	P	16 49 55.8	-0.7
	baz=264						
SNAA	Sanae	95.49	194	P	P	16 49 59.8	+1.2
SNAA	Sanae	95.49	194	P	P	16 49 59.8	+1.2
	comp=Z,8.2nm,1.0s,baz=116,slow=3.5,SNR=21						
SNAA	Sanae	95.49	194	P	P	16 49 59.7	+1.2
SNAA				IAmb	IAmb	16 50 01.1	
	comp=Z,8.8nm,1.0s						
M27K	Edge Creek, AK	95.51	28	P	P	16 49 58.8	-0.1
	baz=265						
L27K	Beaver Creek,	95.59	27	P	P	16 49 59.2	0.0
L27K				IAmb	IAmb	16 50 00.7	
	comp=Z,9.5nm,0.9s						
L27K	Beaver Creek,	95.59	27	P	P	16 49 58.7	-0.5
	baz=266,SNR=11						
BCAR	Beaver Creek A	95.61	27	P	P	16 49 59.2	0.0
CTG	Chitna Glacier	95.66	29	P	P	16 50 00.3	+0.7
	baz=266						
VORD	Divnogorie	95.72	321	*e*P	P	16 49 57.5	-2.4
VORD				pmax	pmax		
	comp=Z,40nm,1.2s						
VSR	Storozhevoye	95.82	321	*e*P	P	16 49 58.6	-1.7
VSR				pmax	pmax		
	comp=Z,30nm,1.2s						
BVCY	Beaver Creek	95.99	28	P	P	16 50 01.5	+0.5
	baz=266						
EGAK	Eagle	96.01	26	P	P	16 50 00.5	-0.4
EGAK				IAmb	IAmb	16 50 02.0	
	comp=Z,9.3nm,0.9s						
EGAK	Eagle	96.01	26	P	P	16 50 00.6	-0.4
	baz=266						
LPSR	Galich'ya Gora	96.06	322	*e*P	P	16 49 59.3	-2.1
LPSR				pmax	pmax		
	comp=Z,20nm,1.1s						
YUK3	Moose Creek	96.14	29	P	P	16 50 01.8	-0.1
	baz=267						
DAWY	Dawson	96.74	26	P	P	16 50 04.3	-0.1
DAWY	Dawson	96.74	26	P	P	16 50 04.6	+0.3
	baz=268						
VNA2	Neumayer--Watz	97.06	193	P	Pdif	16 50 06.9	+1.2
I29M	Ogilvie Camp,	97.25	25	P	P	16 50 06.5	0.0
	baz=269						
VNA3	Neumayer Olymp	97.31	192	P	Pdif	16 50 07.6	+0.8
VNA1	Neumayer--Stat	97.45	193	P	Pdif	16 50 07.4	0.0
HYT	Haines Junctio	97.52	30	P	P	16 50 07.8	-0.3
	baz=269						
OBN	Obninsk	97.57	325⥣	*e*P	P	16 50 06.2	-1.9
OBN				*e**PP	pP	16 50 37.2	-1.5
OBN				*e*		16 54 05.2	
OBN				pmax	pmax		
	comp=Z,16nm,0.9s						
M30M	Minto, Yukon	97.88	28	P	Pdif	16 50 09.6	0.0
	baz=270						
SKAG	Skagway	98.61	31	P	Pdif	16 50 13.4	+0.7
	baz=271						
SIT	Sitka	98.63	33	P	Pdif	16 50 13.2	+0.4
	baz=270						
WHY	Whitehorse	98.81	30		P	16 50 13.6	-0.2
WHY				IAmb	IAmb	16 50 15.1	
	comp=Z,6.2nm,0.6s						
WHY	Whitehorse	98.81	30	P	Pdif	16 50 14.0	+0.2
	baz=271						
INK	Inuvik	99.07	22	P	Pdif	16 50 13.5	-1.1
INK				pmax	pmax		
	comp=Z,12nm,1.5s						
INK	Inuvik	99.07	22		Pdif	16 50 13.4	-1.1
INK				IAmb	IAmb	16 50 15.0	
	comp=Z,12nm,1.4s						
INK	Inuvik	99.07	22	P	Pdif	16 50 14.0	-0.6
	baz=274						
BOSA	Boshof	99.15	240	LR	LR	17 28 41.0	
	comp=Z,66nm,21.4s,baz=179,slow=31						
BRTR	Keskin Array B	99.15	309	P	Pdif	16 50 14.8	-1.1
	comp=Z,2.1nm,0.9s,baz=102,slow=5.7,SNR=6.1						
BRTR				LR	LR	17 42 59.8	
	comp=Z,30nm,18.7s,baz=130,slow=40						
P33M	Teslin, Yukon	99.85	30	P	Pdif	16 50 18.5	+0.1
	baz=273						
ARCES	ARCESS Array B	101.58	340	P	Pdif	16 50 24.7	-1.1
	comp=Z,1.4nm,0.5s,baz=90,slow=4.2,SNR=11						
ARCES				PKiKP	PKiKP	16 54 49.5	+0.7
	comp=Z,4.0nm,0.9s,baz=67,slow=3.0,SNR=1.5						
AKASG	Malin Array Be	102.10	320	P	Pdif	16 50 27.5	-1.0
	comp=Z,2.8nm,0.8s,baz=68,slow=4.6,SNR=4.6						
AKASG	Malin Array Be	102.10	320		Pdif	16 50 27.4	-1.1
FINES	FINESS Array B	102.72	331	P	Pdif	16 50 30.1	-0.9
	comp=Z,3.4nm,0.9s,baz=64,slow=4.4,SNR=5.7						
FINES	FINESS Array B	102.72	331	*i* P	Pdif	16 50 30.2	-0.8
FINES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
PLOR	Plostina	104.16	315	⥣P	PKiKP	16 54 58.1	+3.8
M04C	Macdoel	108.46	48	P	PKiKP	16 55 03.5	+1.0
	baz=277						
J05D	Fort Rock, OR	108.71	47	P	PKiKP	16 55 03.8	+0.9
	baz=278						
MORC	Moravsky Berou	109.65	320	*e*PKIKP	PKiKP	16 55 04.4	0.0
DPC	Dobruska-Polom	110.28	321	*e*PKIKP	PKiKP	16 55 06.6	+1.0
DPC	Dobruska-Polom	110.28	321	*e*PKP	PKiKP	16 55 06.6	+1.0
OSTC	Ostas	110.30	321	*e*PKP	PKiKP	16 55 06.5	+1.0
CHVC	Chvalec	110.39	321	*e*PKP	PKiKP	16 55 06.6	+0.9
KRUC	Moravsky	110.54	320	*e*PKIKP	PKiKP	16 55 06.6	+0.6
PRU	Pruhonice	111.48	321	*e*PKIKP	PKiKP	16 55 07.7	-0.1
PRU	Pruhonice	111.48	321	*e*PKP	PKiKP	16 55 07.7	-0.1
NVAR	Mina Array Bea	111.60	52	PKiKP	PKiKP	16 55 10.0	+1.3
	comp=Z,0.4nm,0.4s,baz=251,slow=2.2,SNR=6.4						
CKRC	Cesky Krumlov	111.93	320	*e*PKP	PKiKP	16 55 09.0	+0.3
SOKA	Soboth	111.98	318	*i* P	PKiKP	16 55 08.8	-0.1
	comp=Z,4.2nm,0.9s						
CLL	Collm	112.06	323	*e*P	Pdif	16 51 13.0	+0.2
CLL				*e*		16 55 09.0	
CLL	Collm	112.06	323	*e*Pdif	Pdif	16 51 13.0	+0.2
CLL				*e*PKiKP	PKiKP	16 55 09.0	+0.2
EDW2	Edwards Air Fo	112.31	55	P	PKiKP	16 55 11.9	+2.0
	baz=277						
GERES	GERESS Array B	112.31	320	PKiKP	PKiKP	16 55 09.7	+0.2
	comp=Z,1.9nm,0.5s,baz=68,slow=1.9,SNR=19						
KHC	Kasperske Hory	112.32	320	*e*PKIKP	PKiKP	16 55 09.7	+0.3
KHC	Kasperske Hory	112.32	320	*e*PKP	PKiKP	16 55 09.7	+0.3
BFSC	Mount Baldy Ra	112.67	56	P	PKiKP	16 55 12.1	+1.5
	baz=277						
MYKA	Terra Mystica	112.93	318	*e*P	PKiKP	16 55 10.3	-0.5
	comp=Z,1.0nm,0.4s						
FURC	Furnace Creek,	113.02	53	P	PKiKP	16 55 13.0	+2.0
	baz=279						
MSO	Missoula	113.08	42	P	PKiKP	16 55 11.7	+0.6
	baz=285						
GSC	Goldstone, Bar	113.23	55	P	PKiKP	16 55 13.5	+1.9
	baz=278						
HLID	Hailey	113.54	46	P	PKiKP	16 55 13.9	+1.7
	baz=283						
ABTA	Abfaltersbach	113.65	318	*e*P	PKiKP	16 55 11.6	-0.5
	comp=Z,7.1nm,0.9s						
R11A	Troy Canyon, C	113.72	51	P	PKiKP	16 55 13.8	+1.1
	baz=280						
PFO	Pinyon Flats O	113.73	56	P	PKiKP	16 55 13.8	+1.1
	baz=278						
MONP2	Monument Peak	113.86	57	P	PKiKP	16 55 14.7	+1.6
	baz=277						
BELC	Belle Mtn. Jos	114.06	56	P	PKiKP	16 55 15.0	+1.7
	baz=278						
WTTA	Wattenberg	114.08	319	*i* P	PKiKP	16 55 13.1	+0.1
	comp=Z,8.5nm,0.5s						
WATA	Walderalm	114.10	319	*e*P	PKPdf	16 55 12.5	-0.5
	comp=Z,5.2nm,0.5s						
IKP	In-Ko-Pah, Jac	114.15	57	P	PKiKP	16 55 15.2	+1.7
	baz=277						
GMRC	Granite Mounta	114.23	55	P	PKiKP	16 55 15.2	+1.6
	baz=279						
SWSC	Sam W. Stewart	114.37	57	P	PKiKP	16 55 15.4	+1.6
	baz=278						
SQTA	Sankt Quirin	114.37	319	*e*P	PKPdf	16 55 13.5	0.0
	comp=Z,4.9nm,0.7s						
MOTA	Moosalm	114.41	319	*i* P	PKPdf	16 55 13.3	-0.4
	comp=Z,4.1nm,0.6s						
BC3	Big Chuckawall	114.56	56	P	PKiKP	16 55 15.9	+1.6
	baz=278						
RETA	Reutte	114.58	319	*i* P	PKPdf	16 55 13.3	-0.6
	comp=Z,2.8nm,0.8s						
IRM	Iron Mountain	114.74	56	P	PKiKP	16 55 16.5	+1.9
	baz=279						
FETA	Feichten	114.74	319	*e*P	PKPdf	16 55 14.4	+0.1
	comp=Z,3.6nm,0.9s						
BOZ	Bozeman (W)	114.95	43	P	PKPdf	16 55 16.0	+1.2
	baz=286						
DAVA	Damuels	115.22	319	*i* P	PKPdf	16 55 15.2	0.0
	comp=Z,8.1nm,0.5s						
DAVOX	Davos/Dischmat	115.37	319	PKP	PKPdf	16 55 15.7	+0.1
	comp=Z,2.9nm,0.5s,baz=108,slow=3.2						
EGMT	Eagleton	115.45	40		PKPdf	16 55 15.8	+0.3
EGMT	Eagleton	115.45	40	P	PKPdf	16 55 16.7	+1.1
	baz=289						
DUG	Dugway, Tooele	115.46	49	P	PKPdf	16 55 17.1	+1.2
	baz=283						
TUE	Stuetta	115.81	319		PKPdf	16 55 15.9	-0.5
FXWY	Fox Creek	115.91	45		PKiKP	16 55 17.3	+0.6
H17A	Grant Village	116.01	44	P	PKiKP	16 55 18.6	+1.6
	baz=287						
MOOW	Moose Ponds	116.07	45		PKiKP	16 55 17.4	+0.4
REDW	Red Top Meadow	116.10	45		PKiKP	16 55 17.9	+0.8
RLMT	Red Lodge	116.68	43	P	PKiKP	16 55 19.4	+1.2
	baz=288						
BW06	Boulder Array	117.18	45		PKiKP	16 55 19.4	+0.2
BW06	Boulder Array	117.18	45	P	PKiKP	16 55 20.0	+0.8
	baz=287						
PD31	Pinedale Array	117.18	45	PKPdf	PKiKP	16 55 19.5	+0.2
PDAR	Pinedale Array	117.18	45	PKP	PKiKP	16 55 19.9	+0.6
	comp=Z,2.7nm,0.8s,baz=218,slow=1.7,SNR=19						
PDAR	Pinedale Array	117.18	45		PKiKP	16 55 19.5	+0.2
WUAZ	Wupatki	117.56	54	P	PKiKP	16 55 20.9	+0.8
	baz=282						
LAO	LASA Array	118.16	40	P	PKiKP	16 55 22.1	+1.3
	baz=291						
TUC	Tucson	118.65	57	P	PKiKP	16 55 23.0	+0.8
	baz=280						
KEST	Kesra	118.65	307	PKP	PKiKP	16 55 22.8	+0.7
	comp=Z,9.0nm,0.8s,baz=335,slow=2.5,SNR=7.9						
DGMT	Dagmar	118.75	38	P	PKiKP	16 55 22.8	+1.0
	baz=294						
O20A	White River Ci	118.87	48	P	PKiKP	16 55 23.8	+1.2
	baz=286						
W18A	Petrified Fore	118.96	54	P	PKiKP	16 55 23.7	+0.8
	baz=283						
K22A	Casper	119.34	45		PKiKP	16 55 23.6	+0.3
K22A	Casper	119.34	45	P	PKiKP	16 55 24.4	+1.0
	baz=289						
MVCO	Mesa Verde	119.44	51	P	PKiKP	16 55 24.9	+1.1
	baz=285						
N23A	Red Feather La	120.32	46	P	PKiKP	16 55 25.9	+0.4
	baz=289						
RSSD	Black Hills	120.54	42	PKIKP	PKPdf	16 55 25.4	-0.2
RSSD	Black Hills	120.54	42	PKPdf	PKPdf	16 55 25.4	-0.2
RSSD	Black Hills	120.54	42	P	PKiKP	16 55 26.4	+0.7
	baz=292						
S22A	4UR Ranch, Cre	120.59	50	P	PKiKP	16 55 26.9	+0.8
	baz=286						
ISCO	Idaho Springs	120.90	48	P	PKiKP	16 55 27.4	+0.6
	baz=288						
121A	Cookes Peak, D	121.09	56	P	PKiKP	16 55 28.5	+1.3
	baz=282						
Q24A	Divide	121.50	48	P	PKiKP	16 55 29.0	+1.0
	baz=288						
SDCO	Great Sand Dun	121.60	50	P	PKiKP	16 55 28.6	+0.5
	baz=287						
ANMO	Albuquerque	121.61	53	PKP	PKiKP	16 55 29.6	+1.5
	comp=Z,9.6nm,1.0s,baz=205,slow=3.4,SNR=15						
ANMO	Albuquerque	121.61	53*c*	*i*PKIKP	PKiKP	16 55 29.4	+1.3
ANMO				pmax	pmax		
	comp=Z,12nm,1.0s						
ANMO	Albuquerque	121.61	53	PKPdf	PKiKP	16 55 28.4	+0.3
ANMO	Albuquerque	121.61	53	P	PKiKP	16 55 28.8	+0.7
	baz=285						
E28A	Huff	121.70	39		PKiKP	16 55 27.8	+0.1
T25A	Trinidad	122.61	50	P	PKiKP	16 55 31.0	+0.9
	baz=288						
ULM	Lac du Bonnet	122.70	33	PKP	PKPdf	16 55 29.2	-0.1
	comp=Z,6.3nm,0.4s,baz=316,slow=3.1,SNR=18						
ULM	Lac du Bonnet	122.70	33	PKPdf	PKPdf	16 55 28.8	-0.5
OGNE	Ogallala	123.08	45	P	PKiKP	16 55 31.0	+0.4

	baz=292						
MNTX	Cornudas Mount	123.27	57	P	PKiKP	16 55 32.0	+0.8
	baz=284						
AGMN	Agassiz Nation	123.75	35		PKPdf	16 55 30.8	-0.6
AGMN	Agassiz Nation	123.75	35	P	PKiKP	16 55 32.7	+1.0
	baz=302						
F33A	5 Mile Ranch,	124.75	38		PKPdf	16 55 33.5	+0.1
MSTX	Muleshoe	124.81	53	P	PKiKP	16 55 34.5	+0.2
	baz=287						
B35A	Bob, Littlefor	124.91	34		PKPdf	16 55 33.1	-0.5
TXAR	Lajitas Array	125.24	59	PKP	PKiKP	16 55 35.9	+0.6
	comp=Z,2.7nm,0.8s,baz=188,slow=1.6,SNR=22						
TXAR	Lajitas Array	125.24	59	PKPdf	PKiKP	16 55 35.6	+0.3
AMTX	Amarillo	125.40	52	P	PKiKP	16 55 35.5	0.0
	baz=288						
CBKS	Cedar Bluff	125.52	47	P	PKiKP	16 55 36.0	+0.5
	baz=292						
ECSD	EROS Data Cent	125.56	40	PKPdf	PKPdf	16 55 34.6	-0.4
ECSD	EROS Data Cent	125.56	40	P	PKiKP	16 55 35.3	-0.2
	baz=298						
BGNE	Belgrade	125.59	43	PKPdf	PKPdf	16 55 35.2	0.0
BGNE	Belgrade	125.59	43	P	PKiKP	16 55 35.6	0.0
	baz=295						
EYMN	Ely	126.38	33	PKPdf	PKPdf	16 55 36.2	-0.2
EYMN	Ely	126.38	33	P	PKiKP	16 55 38.0	+1.1
	baz=306						
F36A	Milaca	126.39	36	PKPdf	PKPdf	16 55 36.1	-0.5
E38A	The Farm, Brul	127.12	35	PKPdf	PKPdf	16 55 37.7	-0.2
SPMN	Marine on St.	127.16	37	P	PKiKP	16 55 39.1	+0.5
	baz=303						
ESDC	Sonseca Array	127.37	315	PKP	PKiKP	16 55 39.8	+0.6
	comp=Z,3.2nm,1.0s,baz=345,slow=1.7,SNR=7.5						
ESDC				PP	PP	16 57 40.3	+0.6
	comp=Z,2.2nm,0.9s,baz=58,slow=6.7,SNR=5.8						
KSU1	Kansas State U	127.64	45	P	PKiKP	16 55 39.8	+0.1
	baz=295						
WMOK	Wichita Mounta	127.70	51	P	PKiKP	16 55 40.3	+0.3
	baz=290						
ABTX	Abilene, Hawle	127.71	54	P	PKiKP	16 55 41.0	+1.0
	baz=288						
JCT	Junction City	128.20	57	P	PKiKP	16 55 41.4	+0.3
	baz=286						
TORD	Torodi Ar. Bea	128.54	281	PKP	PKPdf	16 55 41.7	+0.2
	comp=Z,9.6nm,0.8s,baz=48,slow=2.1,SNR=33						
TORD	Torodi Ar. Bea	128.54	281	PKPdf	PKPdf	16 55 40.9	-0.6
SCIA	State Center	128.64	41	P	PKiKP	16 55 42.3	+0.7
	baz=300						
G40A	Rib Lake	128.66	35	PKPdf	PKPdf	16 55 40.4	-0.5
COWI	Conover	128.77	34		PKPdf	16 55 41.0	-0.1
PLCA	Paso Flores	128.87	160	PKP	PKiKP	16 55 42.9	+0.6
	comp=Z,15nm,1.0s,baz=219,slow=4.0,SNR=10						
833A	Chaparral WMA,	129.12	59	P	PKiKP	16 55 43.4	+0.4
	baz=285						
I40A	Norwalk	129.20	37		PKPdf	16 55 41.8	-0.1
P38A	Dawn	129.54	43	PKPdf	PKPdf	16 55 43.0	+0.3
TUL1	Leonard	129.54	49	P	PKiKP	16 55 43.7	+0.2
	baz=294						
WHTX	Lake Whitney,	129.66	54	P	PKiKP	16 55 44.0	+0.1
	baz=289						
L40A	Anamosa	129.83	39	PKPdf	PKPdf	16 55 43.2	0.0
JFWS	Jewell Farm	129.97	38	PKIKP	PKPdf	16 55 43.4	0.0
JFWS	Jewell Farm	129.97	38	PKPdf	PKPdf	16 55 43.4	0.0
JFWS	Jewell Farm	129.97	38	P	PKPdf	16 55 43.7	+0.2
	baz=304						
U38A	Gravette	130.36	47		PKPdf	16 55 44.7	+0.3
S39A	Bolivar	130.57	45		PKPdf	16 55 44.6	-0.2
SCHQ	Schefferville	130.60	13	PKP	PKiKP	16 55 45.2	+0.1
	comp=Z,5.4nm,0.9s,baz=0.0,slow=3.0,SNR=3.8						
N41A	Harden Midland	130.78	41	PKPdf	PKPdf	16 55 45.4	+0.4
L42A	Oliver, Polo	130.83	39		PKPdf	16 55 45.2	+0.2
R40A	Maddies Statio	131.03	44	PKPdf	PKPdf	16 55 45.3	-0.3
W39A	Magazine	131.32	49	P	PKiKP	16 55 47.3	+0.1
	baz=295						
U40A	Yellville	131.51	47	PKPdf	PKPdf	16 55 46.1	-0.5
U40A	Yellville	131.51	47	P	PKiKP	16 55 47.4	-0.1
	baz=297						
MGMO	Mountain Grove	131.57	46		PKPdf	16 55 46.1	-0.6
MIAR	Mount Ida	131.75	49	P	PKiKP	16 55 47.9	-0.2
	baz=294						
CCM	Cathedral Cave	131.85	44	P	PKiKP	16 55 48.6	+0.5
	baz=299						
HDIL	Hopedale	131.86	40	P	PKiKP	16 55 48.3	+0.2
	baz=303						
FVM	French Village	132.45	44	PKIKP	PKPdf	16 55 48.2	-0.1
FVM	French Village	132.45	44	PKPdf	PKPdf	16 55 48.2	-0.1
T42A	Van Buren	132.46	45		PKPdf	16 55 48.3	0.0
W41B	Gary Mavity, V	132.47	48	P	PKiKP	16 55 49.6	+0.1
	baz=296						
SFIN	Lafayette	133.35	39	P	PKiKP	16 55 51.3	+0.1
	baz=305						
PARMO	Parma	133.57	45		PKPdf	16 55 50.3	-0.1
N47A	Urbana	133.92	38	PKPdf	PKPdf	16 55 50.0	-1.0
L48A	N Adams	134.01	36		PKPdf	16 55 51.2	+0.1
KIC	Kosan Boka	134.76	272	*e*PKIKP	PKiKP	16 55 54.9	+0.2
	comp=Z,22nm,1.0s						
N49A	Columbus Grove	134.79	37	PKPdf	PKPdf	16 55 52.8	+0.2
OXF	Oxford	134.85	47	P	PKiKP	16 55 53.9	-0.4
	baz=298						
SADO	Sadowa	134.87	29	PKP	PKiKP	16 55 54.1	+0.1
	comp=Z,2.7nm,0.3s,baz=294,slow=1.9,SNR=3.3						
DBIC	Dimbokro	134.90	272	PKP	PKiKP	16 55 55.0	0.0
	comp=Z,4.9nm,0.3s,baz=116,slow=0.5,SNR=11						
P48A	Milroy	134.93	39	PKPdf	PKPdf	16 55 53.2	+0.3
LIC	Lamto	135.04	272	*e*PKIKP	PKiKP	16 55 55.4	+0.1
	comp=Z,49nm,0.7s						
VBMS	Vicksburg	135.04	51	P	PKiKP	16 55 54.4	-0.4
	baz=295						
TIC	Toumodi	135.06	272	*e*PKIKP	PKiKP	16 55 55.4	0.0
WVT	Waverly	135.18	44	PKIKP	PKPdf	16 55 52.8	-0.6
WVT	Waverly	135.18	44	PKPdf	PKPdf	16 55 52.8	-0.6
WVT	Waverly	135.18	44	P	PKiKP	16 55 54.4	-0.6
	baz=301						
P49A	Miami Univ. Ec	135.32	38	P	PKiKP	16 55 54.8	-0.4
	baz=307						
PLAL	Pickwick Lake	135.59	46		PKPdf	16 55 53.7	-0.6
ACSO	Alum Creek Sta	135.94	36		PKPdf	16 55 54.7	0.0
ACSO	Alum Creek Sta	135.94	36	P	PKiKP	16 55 56.0	-0.4
	baz=310						
ERPA	Erie	136.35	32	P	PKPdf	16 55 56.2	+0.7
	baz=315						
M53A	WI Miller and	136.45	33		PKPdf	16 55 55.5	-0.2
M53A	WI Miller and	136.45	33	P	PKPdf	16 55 56.4	+0.7
	baz=314						
X48A	Hartselle	136.59	46	PKPdf	PKPdf	16 55 55.7	-0.4
O52A	Adamsville	136.68	36	PKPdf	PKPdf	16 55 56.2	0.0
T50A	Nancy	136.72	41	PKPdf	PKPdf	16 55 56.1	-0.2
P52A	Corning	136.82	37	P	PKPdf	16 55 56.8	+0.3
	baz=310						
WVNY	West Valley, N	136.87	31	PKPdf	PKPdf	16 55 56.4	-0.1
M54A	Oil Creek Stat	136.95	33		PKPdf	16 55 56.4	-0.2
M54A	Oil Creek Stat	136.95	33	P	PKPdf	16 55 56.8	+0.2
	baz=315						
O53A	New Philadelph	136.96	35	P	PKiKP	16 55 57.9	-0.6
	baz=312						
LONY	Lake Ozonia	137.06	26	P	PKiKP	16 55 57.8	-0.8
	baz=323						
N54A	Moraine State	137.16	33	P	PKPdf	16 55 57.5	+0.4
	baz=314						
P53A	Whipple	137.35	36	PKPdf	PKPdf	16 55 57.4	0.0
W50A	Signal Mountai	137.41	44		PKPdf	16 55 57.1	-0.6
O54A	Avella	137.47	35		PKPdf	16 55 57.5	-0.1
J58A	Remsen	137.75	27		PKPdf	16 55 58.1	0.0
TZTN	Tazewell	137.84	41	P	PKPdf	16 55 59.0	+0.6
	baz=306						
MCWV	Mont Chateau	138.13	35	P	PKPdf	16 55 59.4	+0.5
	baz=313						
BRAL	Brewton	138.15	50	P	PKPdf	16 56 00.1	+1.0
	baz=297						
TKL	Tuckaleechee C	138.20	42	PKP	PKiKP	16 56 00.1	-1.0
	comp=Z,13nm,0.6s,baz=157,slow=6.0,SNR=8.2						
TKL	Tuckaleechee C	138.20	42	PKPdf	PKPdf	16 55 59.5	+0.4
BINY	Binghamton	138.32	29	P	PKiKP	16 56 00.3	-0.9
	baz=320						
M57A	Sunshine Farm,	138.40	31		PKPdf	16 55 59.4	+0.1
O56A	Blue Knob Stat	138.42	33	P	PKiKP	16 56 00.7	-0.9
	baz=315						
LBNH	Lisbon	138.47	24	P	PKPdf	16 56 00.1	+0.8
	baz=327						
SSPA	Standing Stone	138.52	32	PKPdf	PKPdf	16 55 59.6	+0.1
SSPA	Standing Stone	138.52	32	P	PKiKP	16 56 00.8	-0.8
	baz=316						
N58A	Sunbury	138.98	31		PKPdf	16 56 00.8	+0.4
N59A	State Game Lan	139.40	30	P	PKPdf	16 56 01.2	0.0
	baz=319						
BLA	Blacksburg	139.41	38	P	PKPdf	16 56 01.8	+0.5
	baz=310						
L61B	Northampton	139.63	26	P	PKPdf	16 56 02.6	+1.1
	baz=324						
GOGA	Godfrey	139.66	45	P	PKPdf	16 56 02.9	+1.1
	baz=303						
HRV	Adam Dziewonsk	140.06	25	P	PKPdf	16 56 03.5	+1.2
	baz=326						
KMSC	Kings Mountain	140.12	41	P	PKPdf	16 56 03.3	+0.7
	baz=307						
P60A	Greenville	140.29	31	P	PKiKP	16 56 04.0	-1.2
	baz=319						
PB15	IPOC Station P	144.51	149		PKPdf	16 56 11.2	+0.1
JTS	Las Juntas de	145.61	82	PKPbc	PKPab	16 56 15.1	+1.4
	comp=Z,7.5nm,0.3s,baz=346,slow=5.4,SNR=10						
JTS	Las Juntas de	145.61	82		PKPdf	16 56 12.7	-0.2
CPUP	Villa Florida	146.06	169	PKPbc	PKPab	16 56 15.7	+0.7
	comp=Z,46nm,0.9s,baz=198,slow=1.5,SNR=19						
CPUP	Villa Florida	146.06	169	PKPbc	PKPbc	16 56 14.4	+0.1
PSGCX	Pisagua	147.05	144	PKPbc	PKPbc	16 56 17.2	-0.3
PB08	IPOC Station P	147.18	146		PKPbc	16 56 17.3	-0.9
PB11	IPOC Station P	147.19	145		PKPbc	16 56 17.0	-0.9
SRBA	San Rafael, Bu	147.22	84	PKPbc	PKPbc	16 56 17.2	-1.0
ATAH	Atahualpa	148.61	116	PKPbc	PKPbc	16 56 21.5	-0.7
	comp=Z,35nm,1.1s,baz=121,slow=1.7,SNR=10						
LPAZ	La Paz	150.81	143	PKP	PKPdf	16 56 23.7	+1.7
	comp=Z,10nm,0.9s,baz=99,slow=0.5,SNR=24						
LPAZ				PKPbc	PKiKP	16 56 29.7	+1.3
	comp=Z,22nm,0.4s,baz=275,slow=0.5,SNR=55						
LPAZ	La Paz	150.81	143		PKiKP	16 56 29.5	+1.1
OTAV	Otavalo	151.11	102	PKIKP	PKPbc	16 56 27.9	-0.5
OTAV	Otavalo	151.11	102		PKPbc	16 56 27.9	-0.5
BBSR	BB Station	151.52	26		PKiKP	16 56 28.4	-0.1
SIV	San Ignacio	154.69	155	PKP	PKPdf	16 56 28.2	+1.2
	comp=Z,6.6nm,0.9s,baz=187,slow=2.1,SNR=15						
SIV				PKPab	PKPab	16 56 52.5	+1.8
	comp=Z,9.3nm,0.8s,baz=176,slow=4.4,SNR=10						
ZARC	Zaragoza, Cauc	155.64	88		PKPdf	16 56 28.5	+0.1
ROSC	El Rosal	156.01	94	PKP	PKPdf	16 56 30.6	+1.2
	comp=Z,3.5nm,0.3s,baz=46,slow=13,SNR=5.6						
BDFB	Brasilia	157.28	186	PKP	PKPdf	16 56 31.7	+1.2
	comp=Z,9.7nm,1.0s,baz=206,slow=5.2,SNR=7.2						
SDV	Santo Domingo	159.79	84	PKPdf	PKPdf	16 56 33.5	-0.2

IDC ***02*** *16:43:10.3±0.5,27°.05N×127°.73E,h94^{km}±7^{km},mb4.4/20, mb1 4.5/25,mb1mx4.2/59,mbtmp4.8/25,MS3.4/2, Ms1 3.4/2,ms1mx2.8/38,Error ellipse: s-maj=19.0km s-min=15.4km az=130.0*

NEIC ***02*** *16:43:10.5±1.8,27°.06N±0°.07×127°.68E±0°.07,h94^{km}±6^{km}, mb4.9/124,Error ellipse: s-maj=10.2km s-min=9.2km az=151.0*

JMA ***02*** *16:43:11.1±0.1,27°.21N×127°.65E,h90^{km}±2^{km},M4.3*

JMA Felt I J1.

NIED ***02*** *16:43:11.1,27°.22N×127°.66E,h90^{km},MW4.5,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.15; $M_{\theta\theta}$-3.59; $M_{\phi\phi}$4.74; $M_{r\theta}$-3.12; $M_{\theta\phi}$-3.42; $M_{\phi r}$-2.21; Fault plane solution: $M_0$6.63000×10^{15} NP1: ϕ_s22.00000°,δ75.00000°,λ-31.00000°. NP2:ϕ_s120.00000°, δ60.00000°,λ-163.00000°.*

ISC 02 16:43:10.8±0.6,**27°.10N**±0°.05×**127°.71E**±0°.05,**h101**^{km}±5^{km}, **n338**,σ1^{s}.09/349,**mb4.8**/103,**14C-7D,Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIH	Iheya	0.24	106	P	Pn	16 43 25.0	-0.1
JIH				S	Sn	16 43 35.0	-0.9
JOW	Kunigami	0.57	118	P	Pn	16 43 27.4	+0.3
	2μm,0.3s,baz=117,slow=21,SNR=7947						
JOW				S	Sn	16 43 38.9	-0.6
	7μm,0.3s,baz=159,slow=27,SNR=28						
JOW	Kunigami	0.57	118	P	Pn	16 43 27.5	+0.3
JOW				S	Sn	16 43 39.2	-0.2
JOW	Kunigami	0.57	118	Pn	Pn	16 43 27.5	+0.3
JOW				Sn	Sn	16 43 38.2	-1.3
JNTH	Nagotoyohara	0.64	154	P	Pn	16 43 28.5	+0.7
JNTH				S	Sn	16 43 40.8	+0.3
JAGN	Aguni-jima	0.66	220	P	Pn	16 43 27.8	-0.1
JAGN				S	Sn	16 43 40.4	-0.3
JYRO	Yoronjima	0.66	96	P	Pn	16 43 28.1	+0.2
JYRO				S	Sn	16 43 40.2	-0.6
JOKE	Okinoerabujima	0.81	71	P	Pn	16 43 29.0	-0.3
JOKE				S	Sn	16 43 41.8	-1.4
JJT3	Tamagusuku3	0.95	176	P	Pn	16 43 32.4	+1.6
JJT3				S	Sn	16 43 47.9	+2.1
JKE	Kume jima 2	1.13	227	P	Pn	16 43 32.8	+0.1
JKE				S	Sn	16 43 49.1	-0.1
JTK	Tokunoshima	1.30	58	P	Pn	16 43 34.3	-0.3
JTK				S	Sn	16 43 51.4	-1.2
JAMN	Amaminishikomi	1.73	48	P	Pn	16 43 39.3	-0.6
JAMN				S	Sn	16 43 59.7	-2.3
JAM	Amami Oshima	2.13	52	P	Pn	16 43 44.6	-0.4
JAM				S	Sn	16 44 10.0	-1.2
JMZ	Minamidaito 2	3.40	111	Pn	Pn	16 44 01.0	-0.8
YOJ	Yonaguni jima	4.99	239		Pn	16 44 21.8	-1.4
JSU	Suzuyama	5.00	28	Pn	Pn	16 44 23.5	0.0
TATO	Taipei	5.98	251	Pn	Pn	16 44 36.2	-0.6
YHNB	Yeheng	6.20	248		Pn	16 44 39.1	-0.7
NACB	Ninganchiao	6.24	244		Pn	16 44 38.6	-1.7
JNU	Nakatsue	6.60	24	P	Pn	16 44 46.2	+1.0
	17nm,0.3s,baz=265,slow=1.7,SNR=81						
JNU				S	Sn	16 45 59.9	+0.9
	2.2nm,0.3s,baz=0.0,slow=20,SNR=1.4						
JNU	Nakatsue	6.60	24	Pn	Pn	16 44 45.5	+0.3
YULB	Yu-li	6.88	239		Pn	16 44 45.8	-3.3
SSLB	Suanglung	6.94	243	Pn	Pn	16 44 48.0	-1.9
TWG	Pinlang	7.38	236		Pn	16 44 51.9	-3.9
TPUB	Ta-pu	7.45	241		Pn	16 44 55.9	-0.9
QZH	Quanzhou	8.48	257	*e*P	Pn	16 45 12.7	+1.9
JMN	Monobe	8.48	37	Pn	Pn	16 45 08.2	-2.7
KNMB	Chin-men Tao	8.80	255	Pn	Pn	16 45 14.4	-0.7
NJ2	Nanjing	9.15	305	*e*P	Pn	16 45 20.2	+0.3
NJ2				S	Sn	16 47 03.0	+1.9
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KSRS	Korea Array	10.33	1	P	Pn	16 45 37.1	+1.3
	0.5nm,0.3s,baz=178,slow=14,SNR=17						
KS19	Wonju Array Si	10.37	1		Pn	16 45 36.3	-0.2
INCN	Inchon	10.39	355		Pn	16 45 37.4	+0.6
JWT	Wachi	10.48	37	Pn	Pn	16 45 36.7	-1.2
INU	Inuyama	11.44	42		Pn	16 45 51.0	+0.1
JGF	Kuroka	11.82	42	Pn	Pn	16 45 55.9	0.0
JHJ	Hachijo jima 2	12.05	57	P	Pn	16 46 00.8	+1.7
	9.6nm,0.3s,baz=222,slow=14,SNR=2.7						
JHJ2	Mitsune	12.07	57	Pn	Pn	16 46 00.7	+1.4
DL2	Dalian	12.83	338	P	P	16 46 17.8	+1.6
DL2				pmax	pmax		
	comp=Z,51nm,1.2s						
JCJ	Chichijima	12.90	87	P	Pn	16 46 11.1	+0.8
	comp=Z,4.7nm,0.3s,baz=139,slow=24,SNR=9.1						
JCJ				LR	LR	16 50 46.2	
	comp=Z,85nm,18.6s,baz=118,slow=35						
MAJO	Matsushiro	12.96	41	Pn	Pn	16 46 11.8	+0.7
MJAR	Matsushiro Arr	12.96	41	P	Pn	16 46 11.8	+0.7
	comp=Z,0.3nm,0.3s,baz=241,slow=14,SNR=3.3						
MJAR	Matsushiro Arr	12.96	41	Pn	Pn	16 46 12.0	+0.9
BJI	Beijing	16.07	326	P	Pn	16 46 51.0	+0.2
BJI				pmax	pmax		
	comp=Z,21nm,0.8s						
BJI				pmax	pmax		
	comp=Z,250nm,7.8s						
CN2	Changchun	16.77	354	*e*P	P	16 47 00.7	+0.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HHC	Hu-ho-hao-te	19.12	320	*e*P	Pn	16 47 27.3	-0.5
HHC				pmax	pmax		
	comp=Z,20nm,1.0s						
HHC				pmax	pmax		
	comp=Z,140nm,5.7s						
CD2	Chengdu	21.28	286	P	P	16 47 48.9	-0.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
LZH	Lanzhou	22.17	300	⇑P	P	16 47 58.1	-0.7
LZH				pP	pwP	16 48 18.5	+0.6
LZH				sP	sP	16 48 32.6	+2.3
LZH				S	S	16 51 52.4	-4.3
LZH				sS	sS	16 52 24.9	-4.9
LZH				pmax	pmax		
	comp=Z,25nm,1.3s						
LZH				pmax	pmax		
	comp=Z,130nm,4.6s						
LZH				LR	LR		
	comp=Z,300nm,10.8s						
LZH				LR	LR		
	comp=Z,400nm,10.8s						
LZH				LR	LR		
	comp=Z,290nm,13.5s						
YSS	Yuzh-Sakhalins	23.10	27	P	P	16 48 08.1	+0.4
GTA	Gaotai	26.25	305	*e*P	P	16 48 35.6	-1.0
GTA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
ULN	Ulaanbaatar	26.28	328	P	P	16 48 36.3	-0.5
SONM	Songino Array	26.57	327	P	P	16 48 41.4	+2.0
	comp=Z,6.7nm,0.5s,baz=139,slow=10,SNR=9.7						
SONM	Songino Array	26.57	327	P	P	16 48 40.0	+0.5
CMAR	Chiang Mai Arr	27.83	258	P	P	16 48 52.2	+1.4
	comp=Z,0.6nm,0.5s,baz=59,slow=7.4,SNR=4.4						
MA2	Magadan	36.15	20	P	P	16 50 03.4	+0.4
	comp=Z,26nm,0.3s,baz=303,slow=0.6,SNR=3.2						
WMQ	Urumqi	36.21	308	*e*P	P	16 50 05.5	+1.6
WMQ				pmax	pmax		
	comp=Z,16nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,120nm,5.1s						
H11N2	WAKE ISLAND Hy	36.59	93	T	T	17 28 11.6	
	baz=289,slow=74,SNR=7.5						
H11N1	WAKE ISLAND Hy	36.59	93	T	T	17 28 10.4	
	baz=289,SNR=6.0						
H11N3	WAKE ISLAND Hy	36.60	93	T	T	17 28 12.2	
	baz=289,slow=74,SNR=6.0						
H11S3	WAKE ISLAND Hy	36.82	95	T	T	17 28 48.6	
	baz=292						
H11S1	WAKE ISLAND Hy	36.83	95	T	T	17 28 57.7	
	baz=292						
H11S2	WAKE ISLAND Hy	36.84	95	T	T	17 29 05.0	
	baz=292						
MK31	Makanchi Array	40.61	311	P	P	16 50 39.9	-0.8
MKAR	Makanchi Array	40.61	311	P	P	16 50 40.6	-0.1
	comp=Z,3.1nm,0.5s,baz=102,slow=10,SNR=2.7						
MKAR				PcP	PcP	16 52 42.0	+1.2
	comp=Z,1.7nm,0.6s,baz=95,slow=2.9,SNR=2.9						
MKAR	Makanchi Array	40.61	311	P	P	16 50 40.0	-0.6
MAKZ	Makanchi	40.83	311	P	P	16 50 42.3	-0.1
ZAA0	Zalesovo Array	41.28	322	P	P	16 50 45.3	-0.7
ZALV	Zalesovo Beam	41.28	322	P	P	16 50 46.2	+0.3
	comp=Z,5.9nm,0.5s,baz=113,slow=9.1,SNR=7.4						
ZALV				PcP	PcP	16 52 43.1	+0.3
	comp=Z,1.2nm,0.3s,baz=111,slow=3.2,SNR=3.9						
ZALV	Zalesovo Beam	41.28	322	P	P	16 50 44.7	-1.2
KURK	Kurchatov	43.87	316	P	P	16 51 06.8	-0.1
KSH	Kashi	44.42	300	P	P	16 51 15.7	+4.0
KSH				pmax	pmax		
	comp=Z,7.0nm,0.9s						
AAK	Ala-Archa	45.60	304	P	P	16 51 21.2	+0.2
NRIK	Noril'sk	48.28	342	PcP	PcP	16 53 07.7	+1.1
	comp=Z,5.2nm,0.7s,baz=150,slow=3.7,SNR=5.0						
GAR	Garm	48.83	299	P	P	16 51 46.8	+0.6
GAR				IAmb	IAmb	16 51 48.3	
	comp=Z,21nm,1.1s						
BRVK	Borovoye	49.39	318	P	P	16 51 49.1	-0.8
BRVK				IAmb	IAmb	16 51 52.0	
	comp=Z,13nm,0.9s						
CHGR	Chuyangaron	49.76	299	P	P	16 51 51.2	-1.9
CHGR				IAmb	IAmb	16 51 54.5	
	comp=Z,10.0nm,0.7s						
TARA	Tarawa	50.32	113	P	P	16 51 54.8	-2.7
KBL	Kabul	50.33	294	P	P	16 51 57.0	-0.6
KBL				IAmb	IAmb	16 51 59.8	
	comp=Z,26nm,1.5s						
GIRL	Giralia	51.14	196	P	P	16 52 00.7	-2.7
SPIA	Saint Paul Isl	52.58	37	P	P	16 52 13.4	-0.4
	baz=262						
ABKAR	Akbulak array	55.72	313	P	P	16 52 36.7	0.0
ABKAR				IAmb	IAmb	16 52 38.3	
	comp=Z,7.0nm,0.8s						
ABKAR	Akbulak array	55.72	313	P	P	16 52 36.4	-0.3
ARU	Arti	56.42	321	P	P	16 52 41.4	-0.2
ARU				IAmb	IAmb	16 52 42.3	
	comp=Z,7.5nm,0.4s						
SDPT	Sand Point	57.94	40	P	P	16 52 52.5	+0.3
	baz=272						
CHGN	Chignik	59.06	39	P	P	16 53 01.0	+1.0
CHGN	Chignik	59.06	39	P	P	16 53 00.8	+0.7
	baz=273						
TTA	Tatalina	60.02	31	P	P	16 53 07.7	+1.0
	baz=271						
SVW2	Sparrevohn	60.29	33	P	P	16 53 10.6	+2.1
SVW2				IAmb	IAmb	16 53 24.3	
	comp=Z,19nm,1.5s						
L19K	White Mountain	60.58	32	P	P	16 53 12.6	+2.2
L19K				IAmb	IAmb	16 53 13.5	
	comp=Z,20nm,1.5s						
L19K	White Mountain	60.58	32	P	P	16 53 12.2	+1.7
	baz=273						
CHIR	Chirikof Islan	60.65	39	P	P	16 53 12.5	+1.5
M19K	Big River Lodg	60.82	32	P	P	16 53 13.6	+1.5
	baz=273						
J20K	Nowinta River	60.82	29	P	P	16 53 13.7	+1.6
J20K	Nowinta River	60.82	29	P	P	16 53 13.6	+1.6
	baz=272,SNR=7.0						
N19K	Bonanza Creek	60.84	33	P	P	16 53 14.3	+2.0
N19K				IAmb	IAmb	16 53 29.7	
	comp=Z,11nm,1.2s						
N19K	Bonanza Creek	60.84	33	P	P	16 53 12.6	+0.3
	baz=274						
K20K	Telida	60.89	30	P	P	16 53 14.5	+2.0
K20K				IAmb	IAmb	16 53 15.8	
	comp=Z,17nm,1.0s						
K20K	Telida	60.89	30	P	P	16 53 13.1	+0.6
	baz=273,SNR=7.3						
IMAR	Indian Mountai	60.93	27	P	P	16 53 14.0	+1.3
L20K	Farewell, AK	61.02	31	P	P	16 53 14.6	+1.2
	baz=273						
H21K	Melozitna Rive	61.33	28	P	P	16 53 16.9	+1.4
H21K	Melozitna Rive	61.33	28	P	P	16 53 16.9	+1.4
	baz=273,SNR=11						
CHUM	Lake Minchumin	61.64	30	P	P	16 53 18.5	+1.0
	baz=274						
I21K	Tanana	61.70	28	P	P	16 53 20.0	+2.1
I21K				IAmb	IAmb	16 53 21.1	
	comp=Z,16nm,0.8s						
I21K	Tanana	61.70	28	P	P	16 53 18.8	+0.9
	baz=274,SNR=9.6						
PPLA	Purkeypile	61.77	31	P	P	16 53 20.5	+1.9
PPLA				IAmb	IAmb	16 53 25.7	
	comp=Z,9.3nm,0.9s						
PPLA	Purkeypile	61.77	31	P	P	16 53 19.0	+0.3
	baz=275						
OHAK	Old Harbor	61.79	37	P	P	16 53 20.2	+1.6
SPCR	Spurr Chakacha	61.91	33	P	P	16 53 20.5	+1.0
	baz=276						
KDAK	Kodiak Island	62.10	37	P	P	16 53 21.8	+1.1
SKT	Skwentna	62.16	32	P	P	16 53 22.2	+1.1
SKT				IAmb	IAmb	16 53 48.8	
	comp=Z,12nm,1.4s						
SKT	Skwentna	62.16	32	P	P	16 53 21.9	+0.8
	baz=276						
BPAW	Bear Paw Mtn.	62.21	29	P	P	16 53 23.3	+1.9
BPAW				IAmb	IAmb	16 53 49.9	
	comp=Z,11nm,1.3s						
MLY	Manley	62.23	28	P	P	16 53 23.5	+1.9
MLY				IAmb	IAmb	16 53 24.4	
	comp=Z,9.6nm,0.8s						
MLY	Manley	62.23	28	P	P	16 53 22.9	+1.3
	baz=275,SNR=7.8						
COLD	Coldfoot	62.28	26	P	P	16 53 23.3	+1.5
COLD	Coldfoot	62.28	26	P	P	16 53 22.5	+0.7
	baz=274						
TOLK	Toolik Lake Re	62.42	24	P	P	16 53 24.2	+1.5
TOLK				IAmb	IAmb	16 53 25.2	
	comp=Z,12nm,0.8s						
TOLK	Toolik Lake Re	62.42	24	P	P	16 53 23.9	+1.1
	baz=274,SNR=5.4						
CAPN	Captain Cook N	62.47	33	P	P	16 53 24.3	+1.2
	baz=277						
TRF	Thorofare Moun	62.58	30	P	P	16 53 25.5	+1.4
	baz=276						
SUA	Susitna One	62.59	32	P	P	16 53 25.2	+1.1
SUA				IAmb	IAmb	16 53 27.1	
	comp=Z,15nm,0.8s						
SUA	Susitna One	62.59	32	P	P	16 53 25.1	+1.0
	baz=277						
H23K	Yukon River	62.66	27	P	P	16 53 26.4	+2.0
H23K	Yukon River	62.66	27	P	P	16 53 25.5	+1.1
	baz=275,SNR=16						
BRLK	Bradley Lake	62.73	34	P	P	16 53 24.9	0.0
BRSE	Bradley Lake S	62.80	34	P	P	16 53 25.5	+0.1
	baz=278						
I23K	Minto, Yukon-K	62.80	28	P	P	16 53 26.6	+1.3
I23K				IAmb	IAmb	16 53 30.5	

	comp=Z,13nm,1.3s						
I23K	Minto, Yukon-K	62.80	28	P	P	16 53 26.2	+0.9
	baz=276						
M22K	Willow	62.85	32	P	P	16 53 25.9	+0.3
	baz=277						
NEA2	Nenana	62.99	29	P	P	16 53 27.8	+1.2
NEA2				IAmb	IAmb	16 53 29.0	
	comp=Z,15nm,0.7s						
NEA2	Nenana	62.99	29	P	P	16 53 27.0	+0.5
	baz=276,SNR=11						
RC01	Rabbit Creek A	63.12	33	P	P	16 53 28.7	+1.3
RC01				IAmb	IAmb	16 53 39.6	
	comp=Z,14nm,1.3s						
MCK	McKinley	63.15	30	P	P	16 53 28.9	+1.2
MCK				IAmb	IAmb	16 53 30.4	
	comp=Z,11nm,0.8s						
MCK	McKinley	63.15	30	P	P	16 53 28.1	+0.5
	baz=277,SNR=6.7						
RND	Reindeer	63.23	30	P	P	16 53 29.0	+0.8
RND				IAmb	IAmb	16 53 30.3	
	comp=Z,18nm,0.8s						
MDM	Murphy Dome	63.30	28	P	P	16 53 30.1	+1.5
H24K	Noodor Dome	63.34	27	P	P	16 53 30.9	+2.0
H24K				IAmb	IAmb	16 53 32.0	
	comp=Z,9.8nm,0.8s						
H24K	Noodor Dome	63.34	27	P	P	16 53 29.7	+0.8
	baz=277,SNR=7.2						
SEW	Seward	63.39	34	P	P	16 53 29.6	+0.4
SEW				IAmb	IAmb	16 53 31.1	
	comp=Z,17nm,1.0s						
SEW	Seward	63.39	34	P	P	16 53 29.6	+0.4
	baz=278						
WRH	Wood River Hil	63.42	29	P	P	16 53 29.4	0.0
WRH				IAmb	IAmb	16 53 32.6	
	comp=Z,20nm,1.5s						
TCOL	CIGO, UAF Yank	63.47	28	P	P	16 53 30.4	+0.7
TCOL				IAmb	IAmb	16 53 32.7	
	comp=Z,10nm,0.7s						
TCOL	CIGO, UAF Yank	63.47	28	P	P	16 53 29.9	+0.2
	baz=277						
COLA	College	63.47	28	P	P	16 53 30.2	+0.5
COLA				IAmb	IAmb	16 53 32.7	
	comp=Z,11nm,0.7s						
COLA	College	63.47	28	P	P	16 53 29.9	+0.2
	baz=277						
CCB	Clear Creek Bu	63.52	29	P	P	16 53 30.6	+0.6
POKR	Poker Plat Res	63.62	28	P	P	16 53 30.1	-0.6
POKR	Poker Plat Res	63.62	28	P	P	16 53 31.0	+0.3
	baz=278						
KNK	Knik Glacier	63.68	32	P	P	16 53 31.9	+0.8
KNK	Knik Glacier	63.68	32	P	P	16 53 30.9	-0.2
	baz=279						
SML	Sawmill	63.68	32	P	P	16 53 31.7	+0.5
SML				IAmb	IAmb	16 53 48.3	
	comp=Z,19nm,1.5s						
SML	Sawmill	63.68	32	P	P	16 53 30.8	-0.4
	baz=278						
PWL	Port Wells	63.83	33	P	P	16 53 32.8	+0.6
PWL				IAmb	IAmb	16 53 33.9	
	comp=Z,12nm,1.2s						
PWL	Port Wells	63.83	33	P	P	16 53 32.0	-0.1
	baz=279						
IL31		63.90	28	P	P	16 53 32.9	+0.5
ILAR	Eielson Array	63.90	28	P	P	16 53 32.9	+0.4
	comp=Z,1.7nm,0.6s,baz=268,slow=3.4,SNR=30						
ILAR	Eielson Array	63.90	28	P	P	16 53 31.5	-1.0
HDA	Harding Lake	63.92	29	P	P	16 53 31.9	-0.7
HDA				IAmb	IAmb	16 53 34.4	
	comp=Z,11nm,0.8s						
HDA	Harding Lake	63.92	29	P	P	16 53 33.1	+0.4
	baz=278,SNR=10.0						
SCM	Sheep Creek Mo	64.15	32	P	P	16 53 33.7	-0.6
SCM				IAmb	IAmb	16 53 36.6	
	comp=Z,20nm,1.2s						
SCM	Sheep Creek Mo	64.15	32	P	P	16 53 34.6	+0.3
	baz=279						
BMAR	Burnt Mountain	64.42	25	P	P	16 53 37.8	+1.9
J25K	Salcha River,	64.56	28	P	P	16 53 36.8	-0.2
	baz=280						
M24K	Tolsona, Glenn	64.64	31	P	P	16 53 39.0	+1.6
M24K	Tolsona, Glenn	64.64	31	P	P	16 53 37.6	+0.2
	baz=280						
FID	Port Fidalgo	64.74	33	P	P	16 53 39.0	+0.9
FID				IAmb	IAmb	16 53 40.5	
	comp=Z,24nm,1.3s						
HIN	Hinchinbrook I	64.80	33	P	P	16 53 39.5	+1.1
PAX	Paxson	64.81	30	P	P	16 53 40.0	+1.4
PAX	Paxson	64.81	30	P	P	16 53 38.6	0.0
	baz=280,SNR=5.1						
KLU	Klutina	64.87	32	P	P	16 53 40.3	+1.3
KLU	Klutina	64.87	32	P	P	16 53 39.2	+0.2
	baz=281						
RIDG	Independent Ri	64.94	29	P	P	16 53 40.0	+0.6
RIDG	Independent Ri	64.94	29	P	P	16 53 39.7	+0.3
	baz=281						
HARP	HAARP	65.06	31	P	P	16 53 40.5	+0.4
	baz=281						
EYAK	Cordova Ski Ar	65.13	33	P	P	16 53 41.3	+0.7
	baz=281						
SCRK	Sand Creek	65.27	29	P	P	16 53 42.1	+0.5
SCRK	Sand Creek	65.27	29	P	P	16 53 41.6	0.0
	baz=281,SNR=6.8						
DOT	Dot Lake	65.30	29	P	P	16 53 42.1	+0.4
DOT				IAmb	IAmb	16 53 43.4	
	comp=Z,7.2nm,0.8s						
J26L	Joseph Creek	65.35	28	P	P	16 53 42.3	+0.2
	baz=281,SNR=13						
N25K	Chitina, Valde	65.47	32	P	P	16 53 44.3	+1.4
BMRM	Bremner River	65.60	32	P	P	16 53 45.1	+1.4
BMRM				IAmb	IAmb	16 53 49.8	
	comp=Z,11nm,1.1s						
BMRM	Bremner River	65.60	32	P	P	16 53 44.9	+1.2
	baz=282						
L26K	Log Cabin Wild	65.75	30	P	P	16 53 44.9	+0.3
L26K	Log Cabin Wild	65.75	30	P	P	16 53 45.3	+0.8
	baz=282						
GLB	Gilahina Butte	65.87	32	P	P	16 53 46.6	+1.2
GLB				IAmb	IAmb	16 53 51.3	
	comp=Z,17nm,1.5s						
M26K	Nabesna, AK	66.04	31	P	P	16 53 47.8	+1.3
M26K				IAmb	IAmb	16 53 49.1	
	comp=Z,18nm,1.2s						
M26K	Nabesna, AK	66.04	31	P	P	16 53 47.3	+0.8
	baz=283,SNR=9.3						
VRDI	Verde Repeater	66.09	32	P	P	16 53 48.1	+1.1
VRDI				IAmb	IAmb	16 53 49.3	
	comp=Z,25nm,1.4s						
MCARA	McCarthy VSAT	66.26	32	P	P	16 53 48.7	+0.9
	baz=283						
EGAK	Eagle	66.31	28	P	P	16 53 48.9	+0.9
	baz=283						
CRQE	Cirque	66.37	32	P	P	16 53 49.0	+0.3
	baz=283						
L27K	Beaver Creek,	66.41	30	P	P	16 53 50.3	+1.4
L27K	Beaver Creek,	66.41	30	P	P	16 53 49.6	+0.7
	baz=283						
BCAR	Beaver Creek A	66.43	30	P	P	16 53 50.2	+1.2
M27K	Edge Creek, AK	66.56	31	P	P	16 53 51.4	+1.5
M27K	Edge Creek, AK	66.56	31	P	P	16 53 50.3	+0.4
	baz=284						
ISLE	Juniper Island	66.76	32	P	P	16 53 52.5	+1.2
ISLE				IAmb	IAmb	16 54 15.1	
	comp=Z,24nm,1.4s						
BVCY	Beaver Creek	67.00	30	P	P	16 53 53.8	+1.2
	baz=284						
CTG	Chitna Glacier	67.15	32	P	P	16 53 54.5	+0.8
	baz=285						
DAWY	Dawson	67.22	28	P	P	16 53 55.1	+1.2
DAWY	Dawson	67.22	28	P	P	16 53 54.7	+0.7
	baz=285						
I29M	Ogilvie Camp,	67.33	27	P	P	16 53 55.5	+0.9
	baz=286						
SPB2	Spitsbergen Ar	67.88	348	P	P	16 53 58.1	+0.2
KBZ	Khabaz	68.25	309	P	P	16 54 02.0	+1.3
	comp=Z,16nm,0.8s,baz=111,slow=4.1,SNR=23						
INK	Inuvik	68.28	23	P	P	16 54 01.6	+1.1
INK				IAmb	IAmb	16 54 02.6	
	comp=Z,21nm,1.1s						
INK	Inuvik	68.28	23	P	P	16 54 01.1	+0.7
	baz=288						
YUK4	Talbot Arm	68.30	31	P	P	16 54 01.5	+0.5
	baz=287						
KIV	Kislovodsk	68.33	309	⇑P	P	16 54 02.7	+1.4
KIV	Kislovodsk	68.33	309	P	P	16 54 01.3	0.0
KIV				IAmb	IAmb	16 54 03.1	
	comp=Z,12nm,0.7s						
AKH	Akhalkalaki	68.52	306	⇑P	P	16 54 04.8	+2.1
M30M	Minto, Yukon	68.77	30	P	P	16 54 04.7	+1.0
	baz=288						
HYT	Haines Junctio	68.99	32	P	P	16 54 05.4	+0.2
HYT	Haines Junctio	68.99	32	P	P	16 54 05.4	+0.2
	baz=288						
ARCES	ARCESS Array B	69.03	338	P	P	16 54 05.5	+0.4
	comp=Z,4.5nm,0.9s,baz=69,slow=6.6,SNR=5.5						
ARCES	ARCESS Array B	69.03	338	P	P	16 54 05.2	+0.1
ARCES				IAmb	IAmb	16 54 31.1	
	comp=Z,16nm,1.3s						
A36M	Sachs Harbour	69.55	19	P	P	16 54 09.3	+1.1
A36M	Sachs Harbour	69.55	19	P	P	16 54 09.4	+1.1
	baz=295						
M31M	Drury Creek, Y	69.95	30	P	P	16 54 11.7	+0.8
	baz=290						
NOR	Nord	70.02	355	*i* P	P	16 54 10.0	-1.0
NOR				IAmb	IAmb	16 54 12.1	
	comp=Z,4.0nm,0.9s						
SOCY	Socotra	70.16	274	P	P	16 54 12.4	-0.7
WHY	Whitehorse	70.26	31	P	P	16 54 14.7	+1.7
WHY	Whitehorse	70.26	31	P	P	16 54 13.6	+0.7
	baz=290						
MMPY	Sheldon Lake,	71.16	29	P	P	16 54 18.8	+0.5
	baz=292						
EUNU	Eureka	71.46	6	P	P	16 54 20.3	+0.4
FIA1	FINESS Array S	71.88	330	P	P	16 54 22.6	+0.1
FIA1				IAmb	IAmb	16 54 23.9	
	comp=Z,9.8nm,0.8s						
FINES	FINESS Array B	71.88	330	P	P	16 54 22.8	+0.3
	comp=Z,7.3nm,0.7s,baz=64,slow=5.7,SNR=22						
FINES	FINESS Array B	71.88	330	P	P	16 54 22.6	0.0
MTSE	Matsula	74.05	328	*e*P	P	16 54 36.1	+0.7
NACGM	Naroch	74.20	324	*i* P	P	16 54 36.6	+0.2
DAG	Danmarks Havn	74.33	352	*i* P	P	16 54 36.7	-0.1
DAG				IAmb	IAmb	16 54 37.4	
	comp=Z,10.0nm,0.8s						
GAZ	Gaziantep	74.55	304	P	P	16 54 38.5	-0.4
GAZ				IAmb	IAmb	16 54 39.2	
	comp=Z,14nm,0.8s						
AKASG	Malin Array Be	74.57	319	P	P	16 54 38.4	-0.1
	comp=Z,3.1nm,0.4s,baz=58,slow=6.7,SNR=17						
AKASG	Malin Array Be	74.57	319	P	P	16 54 38.1	-0.5
AKBB	Malin Array Si	74.57	319	P	P	16 54 37.9	-0.7
AKBB				IAmb	IAmb	16 54 39.0	
	comp=Z,6.8nm,0.6s						
RES	Resolute Bay	74.78	11	P	P	16 54 39.5	+0.2
RES				IAmb	IAmb	16 54 40.9	
	comp=Z,16nm,0.8s						
PABE	Paberze	75.39	325	*e*P	P	16 54 43.9	+0.7
PABE	Paberze	75.39	325	P	P	16 54 43.5	+0.3
PABE				IAmb	IAmb	16 54 44.5	
	comp=Z,14nm,0.6s						
NEEM	North Greenlan	75.69	360	*i* P	P	16 54 45.4	+0.4
NEEM				IAmb	IAmb	16 54 46.4	
	comp=Z,13nm,0.6s						
TULEG	Thule	76.10	4	*i* P	P	16 54 47.2	+0.4
TULEG				IAmb	IAmb	16 54 47.5	
	comp=Z,16nm,0.8s						
TULEG	Thule	76.10	4	P	P	16 54 44.9	-1.9
TULEG				IAmb	IAmb	16 54 47.7	
	comp=Z,15nm,0.8s						
BR131	Keskin Array S	76.14	308	P	P	16 54 46.7	-1.3
BR131				IAmb	IAmb	16 54 49.2	
	comp=Z,15nm,0.7s						
BRTR	Keskin Array B	76.14	308	P	P	16 54 48.6	+0.7
	comp=Z,9.2nm,0.8s,baz=110,slow=3.8,SNR=19						
BRTR	Keskin Array B	76.14	308	P	P	16 54 47.3	-0.7
SORM	Soroca	76.15	317	⇑P	P	16 54 47.6	0.0
UPP	Uppsala	76.31	331	*e*P	P	16 54 48.9	+0.6
SUW	Suwalki	76.48	324	*e*P	P	16 54 49.7	+0.3
SUW	Suwalki	76.48	324	*e*P	P	16 54 50.0	+0.6
SUW	Suwalki	76.48	324	P	P	16 54 49.0	-0.5
DBG	Daneborg	76.68	351	*i* P	P	16 54 50.3	+0.1
DBG				IAmb	IAmb	16 54 51.9	
	comp=Z,12nm,1.0s						
HFS	Hagfors	77.84	332	P	P	16 54 57.1	+0.2
	comp=Z,4.0nm,0.6s,baz=35,slow=5.3,SNR=4.3						
TESR	Tescani	77.90	316	⇑P	P	16 54 58.1	+0.5
YKA	Yellowknife Ar	77.94	25	P	P	16 54 58.7	+1.3
	comp=Z,3.1nm,0.8s,baz=314,slow=4.6,SNR=7.0						
NC405	NORSAR Array S	78.09	334	P	P	16 54 57.1	-1.2
VRI	Vrincioaia	78.14	316	⇑P	P	16 54 59.2	+0.3
NC303	NORSAR Array S	78.16	334	P	P	16 54 58.4	-0.3
NC303				IAmb	IAmb	16 55 04.9	
	comp=Z,26nm,1.4s						
BUR08	Bucovina Ar. S	78.27	318	P	P	16 54 59.7	0.0
BURAR	Bucovina Array	78.28	318	⇓P	P	16 55 00.0	+0.3
BURAR	Bucovina Array	78.28	318	P	P	16 54 59.7	0.0
NB201	NORSAR Array S	78.29	334	P	P	16 54 58.9	-0.6
CSS	Mathiatis	78.31	303	P	P	16 54 59.1	-1.0
CSS				IAmb	IAmb	16 55 01.2	
	comp=Z,19nm,0.8s						
NB2	NORSAR Subarra	78.33	334	P	P	16 54 58.6	-1.1
	comp=Z,2.4nm,0.5s,baz=54,slow=5.6						
NOA	NORSAR Array B	78.33	334	P	P	16 54 59.3	-0.4
	comp=Z,2.9nm,0.6s,baz=52,slow=5.6,SNR=20						
NC204	NORSAR Array S	78.37	334	P	P	16 54 59.8	-0.1
NC602	NORSAR Array S	78.38	333	P	P	16 54 58.5	-1.4
NAO01	NORSAR Array S	78.57	334	P	P	16 55 00.3	-0.7
NAO01				IAmb	IAmb	16 55 18.2	
	comp=Z,12nm,0.9s						
MLR	Muntele Rosu	78.80	315	⇑P	P	16 55 03.9	+1.2
MLR	Muntele Rosu	78.80	315	P	P	16 55 03.8	+1.1
	comp=Z,4.4nm,0.6s,baz=88,slow=8.9,SNR=4.9						
MLR	Muntele Rosu	78.80	315	P	P	16 55 02.5	-0.2
MLR				IAmb	IAmb	16 55 05.5	
	comp=Z,16nm,1.1s						
DOPR	Dopca	78.93	316	⇑P	P	16 55 03.6	+0.4
ARR	Arges	79.68	316	⇑P	P	16 55 08.8	+1.4
BSD	Bornholm Skovb	80.07	327	*e*P	P	16 55 09.8	+0.7
SUMG	Summit	80.14	356	PKIKP	P	16 55 10.7	+1.0
SUMG	Summit	80.14	356	⇓*i*P	P	16 55 10.9	+1.1
SUMG				IAmb	IAmb	16 55 11.5	
	comp=Z,10.0nm,0.7s						
SUMG	Summit	80.14	356	P	P	16 55 10.7	+1.0
SUMG				IAmb	IAmb	16 55 11.8	
	comp=Z,21nm,1.2s						
SUMG	Summit	80.14	356	pmax	pmax		
	comp=Z,21nm,1.2s						
OJC	Ojcow	80.15	322	*e*	P	16 55 10.8	+1.0
OJC	Ojcow	80.15	322	P	P	16 55 10.1	+0.4
OJC				IAmb	IAmb	16 55 11.4	
	comp=Z,13nm,0.8s						
SCO	Scoresbysund	80.32	350	*i* P	P	16 55 11.1	+0.9
SCO				IAmb	IAmb	16 55 12.4	
	comp=Z,18nm,1.0s						
GZR	Gura Zlata	80.81	316	⇓P	P	16 55 13.9	+0.5
HERR	Herculane	81.29	316	⇑P	P	16 55 16.2	+0.3
MORC	Moravsky Berou	81.62	322	⇓P	P	16 55 18.4	+0.8
MORC	Moravsky Berou	81.62	322	P	P	16 55 18.2	+0.6
MORC	Moravsky Berou	81.62	322	*e*P	P	16 55 18.7	+1.1
KSP	Ksiaz	81.72	323	*e*P	P	16 55 19.1	+1.0
MDVR	Moldovita	81.77	316	⇑P	P	16 55 18.4	-0.1
KRLC	Kraliky	81.87	323	*e*P	P	16 55 19.9	+0.9
VTS	Vitosha	81.88	314	⇑P	P	16 55 21.3	+2.0
DPC	Dobruska-Polom	81.97	323	*e*P	P	16 55 20.4	+0.9
JAVC	Velka Javorina	82.04	321	*e*P	P	16 55 22.2	+2.3
VRAC	Vranov	82.39	322	P	P	16 55 22.5	+0.9
	comp=Z,15nm,0.7s,baz=68,slow=2.2,SNR=13						
VRAC	Vranov	82.39	322	*e*P	P	16 55 22.6	+0.9
KRUC	Moravsky	82.64	322	*e*P	P	16 55 24.1	+1.2
FRGS	Fruska Gora	82.74	317	⇑P	P	16 55 23.7	+0.1
MORH	Mrgy, Hungar	82.89	319	⇑P	P	16 55 25.3	+1.1
BRG	Berggiesshubel	82.94	324	*e*P	P	16 55 25.4	+1.0
BRG				Amp		16 55 27.3	
	comp=Z,6.2nm,0.9s						
PRU	Pruhonice	83.12	323	*e*P	P	16 55 26.5	+1.1
CLL	Collm	83.17	325	*i* P	P	16 55 25.9	+0.3
	comp=Z,8.0nm,0.7s						
CLL	Collm	83.17	325	P	P	16 55 25.3	-0.3
DIVS	Divibare	83.18	316	P	P	16 55 24.9	-1.1
DIVS				IAmb	IAmb	16 55 27.8	
	comp=Z,10.0nm,1.0s						
CONA	Conrad Observa	83.56	321	*i* P	P	16 55 29.4	+1.6
	comp=Z,8.6nm,0.7s,SNR=12						
ICESG	Greenland Ices	83.65	355	*i* P	P	16 55 29.1	+1.0
ICESG				IAmb	IAmb	16 55 30.0	
	comp=Z,28nm,1.0s						
CKRC	Cesky Krumlov	83.91	322	*e*P	P	16 55 30.7	+1.2
NKC	Novy Kostel	84.09	324	*e*P	P	16 55 31.9	+1.6
KHC	Kasperske Hory	84.13	323	*e*P	P	16 55 32.7	+2.1
GEC2	GERESS Array S	84.23	323	P	P	16 55 31.3	+0.1
GERES	GERESS Array B	84.23	323	P	P	16 55 31.6	+0.4
	comp=Z,4.5nm,0.7s,baz=53,slow=5.2,SNR=20						
GERES				LR	LR	17 35 01.8	
	comp=Z,34nm,18.4s,baz=12,slow=37						
GERES	GERESS Array B	84.23	323	P	P	16 55 31.2	0.0
PDG	Podgorica	84.51	315	P	P	16 55 31.5	-1.1
PDG				IAmb	IAmb	16 55 34.5	
	comp=Z,19nm,0.8s						
SOKA	Soboth	84.72	320	*e*P	P	16 55 34.7	+1.0
	comp=Z,5.9nm,0.8s						
RAR	Rarotonga	85.02	117	P	P	16 55 36.0	+0.7
	comp=Z,16nm,0.4s,baz=9.5,slow=6.1,SNR=2.5						
GRA1	Grafenberg Arr	85.05	324	P	P	16 55 33.7	-1.5
GRA1				IAmb	IAmb	16 55 37.4	
	comp=Z,19nm,0.9s						
GRFO	Grafenberg	85.05	324	P	P	16 55 33.4	-1.8
GRFO				IAmb	IAmb	16 55 37.4	
	comp=Z,21nm,1.0s						
OBKA	Obir	85.09	320	*e*P	P	16 55 36.4	+0.9
	comp=Z,8.1nm,1.0s,SNR=4.4						
KBA	Koelnbreinsper	85.44	321	*e*P	P	16 55 38.2	+0.8
	comp=Z,9.4nm,0.8s						
ITM	Ithomi	85.47	310	P	P	16 55 36.7	-0.9
MYKA	Terra Mystica	85.54	321	*e*P	P	16 55 38.3	+0.5
	comp=Z,5.4nm,0.6s						
ZOU	Zoufplan	85.96	321	P	P	16 55 39.0	-1.0
ZOU				IAmb	IAmb	16 55 40.5	
	comp=Z,12nm,0.6s						
ABTA	Abfaltersbach	86.10	321	*e*P	P	16 55 40.7	+0.1
	comp=Z,13nm,0.7s,SNR=6.0						
WATA	Walderalm	86.27	322	*e*P	P	16 55 41.6	+0.2
	comp=Z,8.1nm,0.6s						
WTTA	Wattenberg	86.28	322	*i* P	P	16 55 42.7	+1.2
	comp=Z,19nm,1.5s						
MOTA	Moosalm	86.52	322	*i* P	P	16 55 42.6	-0.1
	comp=Z,8.9nm,0.8s						
SQTA	Sankt Quirin	86.54	322	*e*P	P	16 55 43.8	+1.1
	comp=Z,13nm,1.0s						
RETA	Reutte	86.62	323	*e*P	P	16 55 44.1	+1.1
	comp=Z,3.9nm,0.5s						
FETA	Feichten	86.92	322	*e*P	P	16 55 45.1	+0.5
	comp=Z,10nm,1.5s,SNR=4.1						
CTI	Castel Tesino	87.00	321	P	P	16 55 44.4	-0.6
CTI				IAmb	IAmb	16 55 46.2	
	comp=Z,6.6nm,0.8s						
MEM	Membach	87.09	327	*d*PcP	P	16 55 45.5	+0.4
DAVA	Damuels	87.22	323	*e*P	P	16 55 46.7	+0.6
	comp=Z,11nm,0.6s,SNR=7.1						
TEOL	Teolo	87.40	321	P	P	16 55 45.4	-1.3
DAVOX	Davos/Dischmat	87.53	323	P	P	16 55 48.2	+0.6
	comp=Z,17nm,0.7s,baz=93,slow=3.0						
WLF	Walferdange	87.64	326	*d*PcP	P	16 55 48.4	+0.6
EKA	Eskdalemuir Ar	87.79	334	P	P	16 55 48.5	+0.1
	comp=Z,0.6nm,0.4s,baz=50,slow=5.2,SNR=3.6						
BMRD	Maredsous	87.89	327	*d*PcP	P	16 55 49.1	+0.1
TUE	Stuetta	88.01	323	P	P	16 55 49.5	-0.5
FFC	Flin Flon	88.02	26	P	P	16 55 50.4	+0.9
FFC				IAmb	IAmb	16 55 51.6	
	comp=Z,8.9nm,0.8s						
NRCA	Norcia	88.05	318	P	P	16 55 49.9	-0.1
MURB	Monte Urbino	88.15	319	P	P	16 55 50.2	-0.2
AQU	L'Aquila	88.16	317	P	P	16 55 50.4	-0.2
ESDC	Sonseca Array	99.75	324	P	Pdif	16 56 44.0	+0.3
	comp=Z,1.0nm,0.7s,baz=27,slow=4.3,SNR=2.7						

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*IDC **02** 16:48:56.2±1.5, 30°.52S×71°.86W, h0^{km}, mb4.3/4, mb1 4.1/8, mb1mx3.9/43, mbtmp4.1/8, ML3.7/4, MS3.5/2, Ms1 3.5/2, ms1mx3.2/20, Error ellipse: s-maj=62.3km s-min=20.8km az=108.0*

*GUC **02** 16:48:56.6±0.7, 30°.49S×72°.19W, h38^{km}±3^{km}, ML4.0*

*VAO **02** 16:48:58.4±0.6, 30°.43S×72°.01W, h19^{km}, mb4.2*

*NEIC **02** 16:48:58.4±1.7, 30°.44S±0°.04×72°.00W±0°.03, h17^{km}±4^{km}, mb4.4/11, ML4.0(GUC), Error ellipse: s-maj=6.4km s-min=3.1km az=156.0*

ISC 02 16:48:57.8±1.1**, 30°.44S**±0°.03×**72°.06W**±0°.06**, h19**^{km}±3^{km}**, n128,** σ**0^{s}89**/133**, mb4.2**/6**, 1C-2D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	Fray Jorge	0.43	122		Pg	16 49 06.5	-0.2
CO06				Sg	Sg	16 49 12.1	-0.6
CO06	Fray Jorge	0.43	122	⇓*i*P	Pg	16 49 06.5	-0.2
CO06				*i* S	Sb	16 49 13.1	0.0
CO05	La Serena	0.88	54		Pb	16 49 14.3	-0.2
CO05	La Serena	0.88	54	*e*P	Pb	16 49 14.6	+0.1
CO05				*e*S	Sn	16 49 27.8	+0.3
CO05				AMP		16 49 31.0	
GO04	Tololo Observa	1.12	76		Pn	16 49 18.6	-0.2
GO04	Tololo Observa	1.12	76	*e*P	Pn	16 49 18.6	-0.2
GO04				*i* S	Sg	16 49 35.7	+1.2
CO03	El Pedregal	1.25	109		Pn	16 49 19.9	-0.4
CO03	El Pedregal	1.25	109	⇓*i*P	Pn	16 49 20.0	-0.4
CO03				*i* S	Sg	16 49 37.7	-0.6
CO03				IAML		16 49 44.7	
	comp=E,3μm,0.4s						
LCO	Las Campanas	1.85	40	⇑*e*P	Pn	16 49 29.1	+0.3
LCO				*e*S	Sb	16 49 54.1	-0.1
VA06	Catapilco	2.21	163	*e*P	Pn	16 49 32.5	-0.9
VA06				IAML		16 50 13.3	
	comp=E,2μm,0.7s						
AC04	Llanos de Chal	2.39	21	Pn	Pn	16 49 35.1	-0.9
AC04	Llanos de Chal	2.39	21	*e*P	Pn	16 49 35.3	-0.7
AC04				*e*S	Sn	16 50 04.5	-0.3
AC04				IAML		16 50 25.9	
	comp=E,489nm,0.5s						
VA01	Torpederas	2.59	172	Pn	Pn	16 49 38.4	-0.4
VA03	San Esteban	2.65	151		Pn	16 49 39.9	+0.3
VA03	San Esteban	2.65	151	*e*P	Pn	16 49 40.2	+0.6
VA03				*e*S	Sn	16 50 11.4	+0.2
VA03				IAML		16 50 27.9	
	comp=N,973nm,0.6s						
ROCH	El Roble	2.67	161	*e*P	Pn	16 49 39.3	-0.8
ROCH				*e*S	Sn	16 50 11.4	-0.7
ROCH				IAML		16 50 26.4	
	comp=E,784nm,0.6s						
MT02	Curacav	2.91	165		Pn	16 49 42.8	-0.4
MT02	Curacav	2.91	165	*e*P	Pn	16 49 42.7	-0.4
MT02				*e*S	Sn	16 50 16.6	-1.1
MT02				IAML		16 50 39.6	
	comp=E,231nm,0.5s						
PEL	Peldehue	2.94	157	*e*P	Pn	16 49 42.9	-0.6
PEL				*i* S	Sn	16 50 17.6	-0.6
PEL				IAML		16 50 40.7	
	comp=N,510nm,0.5s						
ZON	Zonda	3.10	112	Pn	Pn	16 49 46.4	+0.5
MT05	Renca	3.15	159	Pn	Pn	16 49 48.8	+2.3
VA05	Santo Domingo	3.23	173		Pn	16 49 47.2	-0.2
VA05	Santo Domingo	3.23	173	*e*P	Pn	16 49 50.7	+3.3
VA05				IAML		16 50 49.7	
	comp=N,353nm,0.6s						
GO03	Copiap	3.26	30	Pn	Pn	16 49 47.9	-0.1
MT09	Talagante	3.44	165		Pn	16 49 50.2	-0.4
MT09	Talagante	3.44	165	*e*P	Pn	16 49 50.4	-0.2
MT09				*i* S	Sn	16 50 29.7	-1.3
MT09				IAML		16 50 49.0	
	comp=E,213nm,0.4s						
MT01	Popeta	3.48	169		Pn	16 49 50.3	-0.7
MT01	Popeta	3.48	169	*e*P	Pn	16 49 49.9	-1.1
MT01				IAML		16 50 55.5	
	comp=E,219nm,0.7s						
BO01	Tunca	4.02	168		Pn	16 49 57.6	-0.8
AC02	Maricunga	4.42	36	Pn	Pn	16 50 04.4	0.0
BO02	Sierra Bellavi	4.47	166		Pn	16 50 03.9	-0.8
H03N1	Juan Fernandez	6.54	241	T	T	16 57 39.8	
	baz=71,slow=72,SNR=490						
H03N2	Juan Fernandez	6.56	241	T	T	16 57 31.2	
	baz=71,slow=72,SNR=392						
H03N3	Juan Fernandez	6.56	241	T	T	16 57 30.4	
	baz=71,slow=72,SNR=390						
PB15	IPOC Station P	7.57	18		Pn	16 50 45.2	-2.2
LVC	Limon Verde	8.30	21	Pn	Pn	16 50 58.6	+1.1
	comp=E,0.4nm,0.3s,baz=210,slow=8.1,SNR=2.0						
LVC				LR	LR	16 54 10.2	
	comp=E,383nm,19.1s,baz=198,slow=38						
LVC	Limon Verde	8.30	21	*e*P	Pn	16 50 56.6	-0.9
LVC	Limon Verde	8.30	21	*e*P	Pn	16 50 56.2	-1.3
PB07	IPOC Station P	8.90	13	Pn	Pn	16 51 04.5	-1.1
PB01	IPOC Station P	9.64	14	Pn	Pn	16 51 12.7	-3.1
PLCA	Paso Flores	10.34	174	Pn	Pn	16 51 25.6	+0.4
	comp=E,0.1nm,0.3s,baz=331,slow=12,SNR=3.3						
PLCA	Paso Flores	10.34	174	Pn	Pn	16 51 25.1	-0.1
PLCA	Paso Flores	10.34	174	*e*P	Pn	16 51 25.7	+0.5

PSGCX	Pisagua	10.94	10	Pn	Pn	16 51 29.4	-4.1
TRQA	Tornquist	11.27	135	eP	Pn	16 51 38.5	+0.6
ITQB	Itaqui	13.39	91	eP	Pn	16 52 06.6	-0.3
CPUP	Villa Florida	13.60	76	LR	LR	16 58 09.8	
	comp=E,179nm,21.7s,baz=206,slow=41						
LPAZ	La Paz	14.54	15	Pn	Pn	16 52 24.8	+1.5
	comp=E,0.2nm,0.3s,baz=182,slow=7.2,SNR=10						
LPAZ	La Paz	14.54	15	Pn	Pn	16 52 23.6	+0.3
LPAZ	La Paz	14.54	15	eP	Pn	16 52 22.1	-1.2
CPSB	Cacapava Do Su	16.07	95	eP	Pn	16 52 43.3	+0.6
SIV	San Ignacio	17.56	37	P	P	16 53 02.7	+0.1
	comp=E,0.6nm,0.3s,baz=213,slow=11,SNR=51						
AQDB	Aquidauana	17.78	60	eP	Pn	16 53 02.7	-1.6
PTGB	Pitanga	18.61	77	eP	Pn	16 53 15.2	+0.6
PTGB	Pitanga	18.61	77	eP	P	16 53 14.2	0.0
TRCB	Terra Rica	18.95	71	eP	P	16 53 17.9	0.0
TRCB	Terra Rica	18.95	71	eP	P	16 53 17.9	0.0
PTLB	Pontes e Lacer	19.06	41	eP	Pn	16 53 19.8	-0.2
PTLB	Pontes e Lacer	19.06	41	eP	Pn	16 53 19.8	-0.2
TER01	Tubaro-SC	20.05	90	eP	P	16 53 30.0	+0.1
PP1B	Ponte de Pedra	20.21	55	eP	P	16 53 31.5	-0.2
VILB	Vilhena	20.57	35	eP	P	16 53 36.2	+0.5
VILB	Vilhena	20.57	35	eP	P	16 53 36.2	+0.5
PCMB	Pacaembu	20.63	70	eP	P	16 53 36.5	+0.2
PCMB	Pacaembu	20.63	70	eP	P	16 53 35.6	-0.7
SALV	Santo Antonio	20.84	50	eP	P	16 53 38.8	+0.2
SALV	Santo Antonio	20.84	50	eP	P	16 53 37.9	-0.6
TIJ01	Guaruva-PR	21.00	82	eP	P	16 53 40.2	-0.1
TIJ01	Guaruva-PR	21.00	82	eP	P	16 53 40.4	+0.1
ETMB	Extrema	21.24	16	eP	P	16 53 43.5	+0.7
ETMB	Extrema	21.24	16	eP	P	16 53 42.8	0.0
ITRB	Iturama	22.34	66	eP	P	16 53 54.7	0.0
ITRB	Iturama	22.34	66	eP	P	16 53 54.2	-0.5
CZSB	Cruzeiro do Su	22.61	358	eP	P	16 53 57.9	+0.4
CZSB	Cruzeiro do Su	22.61	358	eP	P	16 53 57.9	+0.4
SAML	Samuel	22.94	23	P	P	16 54 00.8	-0.2
SAML				IAmb	IAmb	16 54 03.6	
	comp=Z,5.6nm,1.0s						
SAML	Samuel	22.94	23	eP	P	16 54 02.3	+1.3
SAML	Samuel	22.94	23	eP	P	16 54 01.1	+0.1
RCLB	Rio Claro- Sao	23.34	76	eP	P	16 54 05.7	+0.6
PDRB	Porto dos Gac	23.53	40	eP	P	16 54 08.2	+1.3
PDRB	Porto dos Gac	23.53	40	eP	P	16 54 06.5	-0.5
ARAG	Araguaiana, MT	23.65	56	eP	P	16 54 09.5	+1.3
PARB	Paraibuna	24.58	80	eP	P	16 54 16.9	0.0
CLDB	Colider	24.65	41	eP	P	16 54 18.1	+0.6
IPMB	Ipameri, GO	24.98	66	eP	P	16 54 20.4	-0.1
IPMB	Ipameri, GO	24.98	66	eP	P	16 54 20.2	-0.2
BSCB	Bom Sucesso	26.27	75	eP	P	16 54 32.3	+0.1
BDFB	Brasilia	26.50	62	P	P	16 54 34.5	+0.1
	comp=Z,6.4nm,0.7s,baz=231,slow=9.9,SNR=10.0						
BDFB	Brasilia	26.50	62	P	P	16 54 34.2	-0.2
BDFB				IAmb	IAmb	16 54 35.2	
	comp=Z,5.8nm,0.7s						
SNDB	Serra Nova Dou	26.61	51	eP	P	16 54 34.4	-0.8
SNDB	Serra Nova Dou	26.61	51	eP	P	16 54 34.5	-0.8
VAS01	Vassouras-RJ	26.85	79	eP	P	16 54 38.6	+1.3
DUB01	Friburgo-RJ	27.83	80	eP	P	16 54 46.9	+0.6
NPGB	Novo Progresso	28.06	37	eP	P	16 54 47.9	-0.3
NPGB	Novo Progresso	28.06	37	eP	P	16 54 48.3	+0.1
DIAM	Diamantina, MG	28.46	71	eP	P	16 54 51.7	-0.3
DIAM	Diamantina, MG	28.46	71	eP	P	16 54 52.4	+0.4
CAM01	Campos-RJ	28.54	80	eP	P	16 54 53.6	+1.2
PEXB	Peixe	28.59	55	eP	P	16 54 53.5	+0.6
MC01	Montes Claros	29.08	68	eP	P	16 54 56.9	-0.5
JANB	Januaria	29.71	65	eP	P	16 55 03.8	+0.8
JANB	Januaria	29.71	65	eP	P	16 55 02.5	-0.5
ITTB	Itaituba	30.17	34	eP	P	16 55 05.8	-1.1
ITTB	Itaituba	30.17	34	eP	P	16 55 06.1	-0.8
SJMB	Sao Joao De Ma	30.32	74	eP	P	16 55 08.4	+0.1
SJMB	Sao Joao De Ma	30.32	74	eP	P	16 55 08.3	+0.1
BSFB	Barra de Sao F	30.54	75	eP	P	16 55 09.8	-0.4
SDBA	SAO DESIDERIO	30.87	60	eP	P	16 55 13.4	+0.2
NBIT	Itapeh - BA	33.68	70	eP	P	16 55 38.6	+0.8
BOAV	Boa Vista	34.46	21	eP	P	16 55 45.5	+1.0
BOAV	Boa Vista	34.46	21	eP	P	16 55 44.2	-0.3
NBPN	Ponto Novo - B	35.43	63	eP	P	16 55 52.9	-0.1
SJCC	San Jacinto, C	40.22	355	P	P	16 56 33.2	-0.2
NBPA	Parau_RN	41.02	60	eP	P	16 56 37.9	-2.1
VNA2	Neumayer--Watz	53.30	158	P	P	16 58 15.8	+0.6
	baz=287,slow=7.3						
SNAA	Sanae	54.89	159	P	P	16 58 27.2	+0.5
SNAA	Sanae	54.89	159	P	P	16 58 27.2	+0.5
SNAA				IAmb	IAmb	16 58 28.0	
	comp=Z,7.9nm,1.3s						
QSPA	South Pole Qui	59.78	180	P	P	16 59 02.5	+1.0
	comp=Z,1.2nm,0.8s,baz=134,slow=8.1,SNR=6.0						
QSPA	South Pole Qui	59.78	180	P	P	16 59 02.7	+1.2
MAW	Mawson	76.59	164	P	P	17 00 47.3	+0.7
	comp=Z,1.1nm,0.7s,baz=202,slow=5.4,SNR=2.3						
TORD	Torodi Ar. Bea	83.03	70	P	P	17 01 23.1	+0.7
	comp=Z,2.9nm,0.8s,baz=242,slow=6.1,SNR=11						
TORD	Torodi Ar. Bea	83.03	70	P	P	17 01 22.7	+0.3
TORD				IAmb	IAmb	17 01 23.8	
	comp=Z,2.8nm,0.8s						
H11S2	WAKE ISLAND Hy	125.73	272	T	T	19 26 48.7	
	baz=115,slow=74,SNR=7.2						
H11S1	WAKE ISLAND Hy	125.74	272	T	T	19 26 49.7	
	baz=115,slow=74,SNR=7.1						
H11S3	WAKE ISLAND Hy	125.74	272	T	T	19 26 45.8	
	baz=115,slow=74,SNR=5.3						
KURBB	Kurchatov Arra	150.21	39	PKPbc	PKiKP	17 08 48.1	+0.1
	comp=Z,2.8nm,0.9s,baz=308,slow=3.1,SNR=6.1						
KURK	Kurchatov	150.21	39		PKiKP	17 08 48.1	+0.1
ZALV	Zalesovo Beam	151.18	29	PKPbc	PKiKP	17 08 50.6	+0.7
	comp=Z,8.4nm,0.7s,baz=325,slow=3.4,SNR=12						

NEIC **02** *16:57:36.2±1.6, 35°.95N±0°.02×97°.33W±0°.04, h5^{km}±5^{km}, Error ellipse: s-maj=5.0km s-min=2.2km az=65.0*

NEIC **02** *16:57:36.7, 35°.92N×97°.33W, h6^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.06; $M_{\theta\theta}$0.78; $M_{\phi\phi}$-0.72; $M_{r\theta}$0.10; $M_{\theta\phi}$-0.64; $M_{\phi r}$-0.16; Fault plane solution: $M_0$1.01000×10^{15} NP1:ϕ_s155.25000°, δ89.37000°, λ10.51000°. NP2:ϕ_s65.13000°, δ79.49000°, λ179.36000°. Principal axes: T 1.0410, Plg8.0000°, Azm21.0000°; N -0.0703, Plg79.0000°, Azm159.0000°; P -0.9707, Plg7.0000°, Azm290.0000°;*

TUL **02** *16:57:36.7±1.9, 35°.92N±0°.02×97°.33W±0°.04, h5^{km}±5^{km}, ML4.6, mb4.1/11(NEIC), mb_Lg4.5/119(NEIC), Mwr3.9/62(NEIC) Error ellipse: s-maj=5.2km s-min=2.1km az=63.0*

IDC **02** *16:57:36.3±0.8, 35°.99N×97°.36W, h0^{km}, mb4.1/4, mb1 4.3/12, mb1mx3.9/69, mbtmp4.1/12, ML3.6/7, MS3.2/10, Ms1 3.2/10, ms1mx3.1/40, Error ellipse: s-maj=12.0km s-min=9.9km az=164.0*

ANF **02** *16:57:39.1±0.2, 35°.95N×97°.30W, h91^{km}±14^{km}, ML5.3/17, Error ellipse: s-maj=3.5km s-min=2.5km az=13.0*

ISC 02 16:57:36.4±1.1, **35°.96N**±0°.03×**97°.30W**±0°.03, **h11**^{km}±8^{km}, **n286**, σ1^s.**25**/294, **mb4.0**/4, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK005	Luther M Schoo	0.32	164		Pg	16 57 42.8	+0.1
OK009	Oakdale Elemen	0.39	195		Pg	16 57 43.6	-0.6
OKCFA	Oklahoma City	0.56	193		Pg	16 57 46.8	-0.5
OKCFA	Oklahoma City	0.56	193	P	Pg	16 57 46.8	-0.5
	baz=11,SNR=327						
OKCFA				S	Sg	16 57 54.1	-0.5
	baz=11						
OKCSW	OKLAHOMA CITY	0.57	192		Pg	16 57 46.9	-0.5
FNO	Franklin	0.71	187		Pg	16 57 49.4	-0.7
FNO				IAmb_Lg		16 57 58.9	
	comp=Z,5µm,1.1s						
T35A	Sooner Cattle	1.14	33		Pn	16 57 58.9	+0.5
T35B	Sooner Cattle	1.14	33	P	Pn	16 57 58.8	+0.4
	baz=214,SNR=1000						
T35B				S	Sg	16 58 15.0	+1.7
	baz=214						
TUL1	Leonard	1.22	92		Pn	16 57 59.3	-0.1
TUL1	Leonard	1.22	92	P	Pn	16 57 59.4	-0.1
	baz=271,SNR=506						
TUL1				S	Sg	16 58 16.7	+1.0
	baz=271						
TUL1	Leonard	1.22	92	P	Pn	16 57 59.3	-0.1
	baz=271,SNR=376						
TUL1				S	Sg	16 58 16.7	+1.0
	baz=271						
X34A	Smith Ranch, M	1.43	198	Pn	Pn	16 58 02.5	+0.2
U32A	Winter Ranch,	1.44	287		Pn	16 58 02.6	+0.1
U32A				IAmb_Lg		16 58 24.2	
	comp=Z,3µm,0.7s						
U32A	Winter Ranch,	1.44	287	P	Pn	16 58 02.8	+0.3
	baz=108						
U32A				S	Sb	16 58 22.6	+0.9
	baz=108						
WMOK	Wichita Mounta	1.72	225	Pn	Pn	16 58 06.6	+0.2
WMOK				IAmb_Lg		16 58 32.4	
	comp=Z,2µm,0.8s						
WMOK	Wichita Mounta	1.72	225	P	Pn	16 58 06.7	+0.4
	baz=45,SNR=1000						
WMOK				S	Sn	16 58 29.0	+0.7
	baz=45						
WMOK	Wichita Mounta	1.72	225	P	Pn	16 58 07.0	+0.6
	baz=45,SNR=1000						
WMOK				S	Sn	16 58 29.1	+0.7
	baz=45						
X37A	Clayton	2.09	130		Pn	16 58 12.7	+1.4
X37A				IAmb_Lg		16 58 44.6	
	comp=Z,3µm,0.9s						
X37A	Clayton	2.09	130	P	Pn	16 58 12.7	+1.4
	baz=310,SNR=848						
X37A				S	Sb	16 58 40.5	+0.3
	baz=310						
U38A	Gravette	2.40	78		Pn	16 58 17.1	+1.4
U38A	Gravette	2.40	78	P	Pn	16 58 17.7	+2.0
	baz=258,SNR=76						
Z35A	Perchaven, San	2.62	179		Pn	16 58 19.2	+0.4
Z35A				IAmb_Lg		16 59 03.0	
	comp=Z,1µm,1.2s						
Z35A	Perchaven, San	2.62	179	P	Pn	16 58 19.7	+1.0
	baz=359,SNR=176						
Z35A				S	Sn	16 58 52.3	+1.8
	baz=359						
R32A	Long Quarter,	2.70	336		Pn	16 58 21.1	+1.2
R32A				IAmb_Lg		16 59 08.3	
	comp=Z,1µm,0.8s						
R32A	Long Quarter,	2.70	336	P	Pn	16 58 21.2	+1.4
	baz=156,SNR=113						
HHAR	Hobbs	2.74	82		Pn	16 58 21.6	+1.3
HHAR	Hobbs	2.74	82	P	Pn	16 58 22.1	+1.8
	baz=264						
W39A	Magazine	2.96	104		Pn	16 58 24.6	+1.3
W39A				IAmb_Lg		16 59 19.0	
	comp=Z,1µm,0.8s						
W39A	Magazine	2.96	104	P	Pn	16 58 24.9	+1.4
	baz=285,SNR=198						
W39A	Magazine	2.96	104	P	Pn	16 58 24.8	+1.4
	baz=285,SNR=87						
KSU1	Kansas State U	3.18	10	Pn	Pn	16 58 27.9	+1.5
KSU1				IAmb_Lg		16 59 23.8	
	comp=Z,847nm,0.7s						
KSU1	Kansas State U	3.18	10	P	Pn	16 58 27.9	+1.5
	baz=190,SNR=19						
KSU1	Kansas State U	3.18	10	P	Pn	16 58 28.6	+2.2
	baz=190,SNR=17						
Z38A	Mt. Pleasant	3.30	144	Pn	Pn	16 58 28.7	+0.7
Z38A				IAmb_Lg		16 59 25.4	
	comp=Z,1µm,0.8s						
Z38A	Mt. Pleasant	3.30	144	P	Pn	16 58 29.0	+1.0
	baz=325,SNR=35						
MIAR	Mount Ida	3.36	114		Pn	16 58 29.8	+1.0
MIAR				IAmb_Lg		16 59 30.4	
	comp=Z,781nm,0.7s						
MIAR	Mount Ida	3.36	114	P	Pn	16 58 30.1	+1.3
	baz=295,SNR=182						
MIAR				S	Sn	16 59 09.7	+1.0
	baz=295						
MIAR	Mount Ida	3.36	114	P	Pn	16 58 30.1	+1.3
	baz=295,SNR=296						
MIAR				S	Sn	16 59 11.1	+2.5
	baz=295						
CBKS	Cedar Bluff	3.45	326	Pn	Pn	16 58 31.1	+1.0
CBKS				IAmb_Lg		16 59 35.4	
	comp=Z,775nm,0.8s						
CBKS	Cedar Bluff	3.45	326	P	Pn	16 58 31.7	+1.5
	baz=146,SNR=9.9						
CBKS	Cedar Bluff	3.45	326	P	Pn	16 58 31.6	+1.5
	baz=146,SNR=19						
U40A	Yellville	3.62	82	Pn	Pn	16 58 33.2	+0.8
U40A				IAmb_Lg		16 59 39.6	
	comp=Z,917nm,0.7s						
U40A	Yellville	3.62	82	P	Pn	16 58 33.2	+0.8
	baz=264,SNR=33						
U40A	Yellville	3.62	82	P	Pn	16 58 33.4	+1.0
	baz=264,SNR=38						
U40A				P	Pn	16 58 33.4	+1.0
	baz=264,SNR=38						
S39A	Bolivar	3.63	60		Pn	16 58 33.7	+1.2
S39A				IAmb_Lg		16 59 40.1	
	comp=Z,805nm,0.9s						
S39A	Bolivar	3.63	60	P	Pn	16 58 34.3	+1.8
	baz=242,SNR=27						
AMTX	Amarillo	3.74	255	Pn	Pn	16 58 34.4	+0.3
AMTX				IAmb_Lg		16 59 41.5	
	comp=Z,1µm,0.8s						
AMTX	Amarillo	3.74	255	P	Pn	16 58 35.2	+1.1
	baz=72						
AMTX	Amarillo	3.74	255	P	Pn	16 58 35.3	+1.1
	baz=72,SNR=51						
ABTX	Abilene, Hawle	3.85	211	Pn	Pn	16 58 35.4	-0.2
ABTX	Abilene, Hawle	3.85	211	P	Pn	16 58 35.5	-0.2
	baz=29,SNR=43						
ABTX	Abilene, Hawle	3.85	211	P	Pn	16 58 35.7	0.0
	baz=29						
X40A	Basin Creek Fa	3.94	111		Pn	16 58 37.6	+0.8
X40A				IAmb_Lg		16 59 43.1	
	comp=Z,654nm,0.9s						
X40A	Basin Creek Fa	3.94	111	P	Pn	16 58 37.7	+0.8
	baz=293						
X40A	Basin Creek Fa	3.94	111	P	Pn	16 58 37.8	+1.1
	baz=293						
X40A				P	Pn	16 58 37.8	+1.1
	baz=293						
WHTX	Lake Whitney,	3.96	182	Pn	Pn	16 58 37.1	-0.1
WHTX	Lake Whitney,	3.96	182	P	Pn	16 58 37.5	+0.3
	baz=1.5,SNR=17						
WHTX	Lake Whitney,	3.96	182	P	Pn	16 58 37.7	+0.6
	baz=1.5,SNR=31						
WLAR	White Oak Lake	4.12	122	Pn	Pn	16 58 40.0	+0.7
WHAR	Wooly Hollow	4.13	98	Pn	Pn	16 58 40.4	+0.9
WHAR				IAmb_Lg		16 59 54.1	
	comp=Z,704nm,0.8s						
237A	Washetta, Mont	4.14	162	Pn	Pn	16 58 39.7	+0.1
237A				IAmb_Lg		16 59 58.4	
	comp=Z,701nm,1.0s						
237A	Washetta, Mont	4.14	162	P	Pn	16 58 40.0	+0.4
	baz=343,SNR=16						
W41B	Gary Mavity, V	4.19	99	P	Pn	16 58 41.2	+0.9
	baz=282,SNR=66						
W41B	Gary Mavity, V	4.19	99	P	Pn	16 58 41.5	+1.2
	baz=282,SNR=163						
FCAR	Ozark Folk Cen	4.20	89		Pn	16 58 40.9	+0.5
FCAR				IAmb_Lg		16 59 56.8	
	comp=Z,985nm,0.8s						
MGMO	Mountain Grove	4.22	72		Pn	16 58 41.4	+0.7
MGMO				IAmb_Lg		16 59 51.6	
	comp=Z,1µm,0.7s						
Z41A	Richland Creek	4.58	125	P	Pn	16 58 45.9	+0.3
	baz=307,SNR=6.4						
Z41A	Richland Creek	4.58	125	P	Pn	16 58 46.2	+0.5
	baz=307,SNR=8.3						
Z41A				P	Pn	16 58 46.2	+0.5
	baz=307,SNR=8.3						
R40A	Maddies Statio	4.64	58	Pn	Pn	16 58 47.3	+0.8
R40A	Maddies Statio	4.64	58	P	Pn	16 58 47.8	+1.3
	baz=241,SNR=18						
P38A	Dawn	4.72	38	Pn	Pn	16 58 49.0	+1.5
P38A				IAmb_Lg		17 00 18.0	
	comp=Z,696nm,1.1s						
NATX	Nacogdoches	4.73	152	S	Sn	16 59 40.4	-2.1
	baz=333						
N33B	J Bar K, Exete	4.77	359	P	Pn	16 58 49.9	+1.6
	baz=179						
N33A	J Bar K, Exete	4.77	359	IAmb_Lg		17 00 22.5	
	comp=Z,717nm,0.8s						
MSTX	Muleshoe	4.92	248		Pn	16 58 50.5	+0.1
MSTX				IAmb_Lg		17 00 17.1	
	comp=Z,500nm,0.9s						
MSTX	Muleshoe	4.92	248	P	Pn	16 58 50.6	+0.2
	baz=65						
MSTX	Muleshoe	4.92	248	P	Pn	16 58 50.7	+0.4
	baz=65						
CCAR	Cane Creek	4.97	113		Pn	16 58 51.9	+0.9
CCAR	Cane Creek	4.97	113	P	Pn	16 58 51.9	+0.9
	baz=295,SNR=11						
LCAR	Lake Charles	4.98	87	Pn	Pn	16 58 50.9	-0.2
LCAR				IAmb_Lg		17 00 15.5	
	comp=Z,711nm,0.7s						
LCAR	Lake Charles	4.98	87	P	Pn	16 58 51.5	+0.4
	baz=270,SNR=6.7						
N35A	Tabor	5.06	14		Pn	16 58 53.1	+0.9
N35A	Tabor	5.06	14	P	Pn	16 58 53.4	+1.1
	baz=196,SNR=37						
T42A	Van Buren	5.11	76		Pn	16 58 53.7	+0.8
T42A	Van Buren	5.11	76	P	Pn	16 58 53.7	+0.8
	baz=259,SNR=24						
435B	Jarrell	5.17	183	Pn	Pn	16 58 53.9	+0.2
435B				IAmb_Lg		17 00 29.0	
	comp=Z,698nm,0.8s						
435B	Jarrell	5.17	183	P	Pn	16 58 53.4	-0.3
	baz=2.3						
435B				S	Sn	16 59 52.4	-1.1
	baz=2.3						
KSCO	Kaye Shedlock’	5.22	307	Pn	Pn	16 58 54.8	+0.2
KSCO				IAmb_Lg		17 00 33.7	
	comp=Z,639nm,0.8s						
KSCO	Kaye Shedlock’	5.22	307	P	Pn	16 58 55.0	+0.4
	baz=125,SNR=12						
KSCO				S	Sn	16 59 53.1	-1.7
	baz=125						
KSCO	Kaye Shedlock’	5.22	307	P	Pn	16 58 54.9	+0.4
	baz=125,SNR=34						
CCM	Cathedral Cave	5.28	65	IAmb_Lg		17 00 32.7	
	comp=Z,993nm,1.0s						
HBAR	Harrisburg	5.41	92	Pn	Pn	16 58 57.9	+0.8
P40A	Paris	5.48	48		Pn	16 58 57.1	-0.8
P40A				IAmb_Lg		17 00 40.3	
	comp=Z,994nm,0.7s						
P40A	Paris	5.48	48	P	Pn	16 58 58.3	+0.4
	baz=231,SNR=23						
BGNE	Belgrade	5.48	353		Pn	16 58 59.2	+1.2
BGNE				IAmb_Lg		17 00 45.4	
	comp=Z,1µm,0.8s						
BGNE	Belgrade	5.48	353	P	Pn	16 58 59.0	+1.0
	baz=173						
BGNE				S	Sn	17 00 00.5	-0.5
	baz=173						
PBMO	Poplar Bluff	5.60	80	Pn	Pn	16 59 00.8	+1.1
LPAR	Lepanto	5.70	92	Pn	Pn	16 59 00.8	-0.2
LPAR				IAmb_Lg		17 00 47.6	
	comp=Z,1µm,0.9s						
N38A	Joes South For	5.78	32		Pn	16 59 03.0	+0.8
N38A				IAmb_Lg		17 00 44.5	
	comp=Z,1µm,0.8s						
N38A	Joes South For	5.78	32	P	Pn	16 59 03.2	+1.0
	baz=215,SNR=14						
T25A	Trinidad	5.85	284	Pn	Pn	16 59 03.2	0.0
T25A				IAmb_Lg		17 00 53.0	
	comp=Z,598nm,0.8s						
T25A	Trinidad	5.85	284	P	Pn	16 59 03.3	0.0
	baz=100,SNR=36						
T25A				S	Sn	17 00 08.8	-1.6
	baz=100						
JCT	Junction City	5.86	202	Pn	Pn	16 59 02.5	-0.8
JCT				IAmb_Lg		17 00 52.7	
	comp=Z,671nm,0.8s						
JCT	Junction City	5.86	202	P	Pn	16 59 02.7	-0.5
	baz=20,SNR=12						
143A	Socs Landing,	5.86	122		Pn	16 59 03.5	+0.3
143A	Socs Landing,	5.86	122	P	Pn	16 59 04.7	+1.5
	baz=305,SNR=7.1						
FVM	French Village	5.86	68		Pn	16 59 04.3	+1.1
FVM				IAmb_Lg		17 00 42.0	
	comp=Z,893nm,0.8s						
GNAR	Gosnell	5.90	88	Pn	Pn	16 59 04.6	+0.8
HDBT	Hernando Brdge	5.96	96	Pn	Pn	16 59 05.5	+1.0
HDBT				IAmb_Lg		17 00 54.7	
	comp=Z,1µm,0.7s						
L34A	Svendsen Farm,	6.04	7	Pn	Pn	16 59 06.7	+1.0
MET	Memphis--Engin	6.06	96	IAmb_Lg		17 00 53.1	
	comp=Z,776nm,0.8s						
PVMO	Portageville	6.16	84	IAmb_Lg		17 01 04.3	
	comp=Z,994nm,0.7s						
342A	Flagon Creek P	6.17	136	Pn	Pn	16 59 07.8	+0.3
OGNE	Ogallala	6.21	325	Pn	Pn	16 59 08.4	+0.3
OGNE				IAmb_Lg		17 01 03.4	
	comp=Z,849nm,0.8s						
OGNE	Ogallala	6.21	325	P	Pn	16 59 09.6	+1.5
	baz=142,SNR=8.0						
OGNE				S	Sn	17 00 17.7	-1.4
	baz=142						
441A	DeRidder	6.23	145	Pn	Pn	16 59 07.6	-0.7
LNXT	Lenox	6.33	86	Pn	Pn	16 59 09.2	-0.4
HALT	Halls	6.46	88	IAmb_Lg		17 01 08.3	
	comp=Z,1µm,0.8s						
OXF	Oxford	6.61	100		Pn	16 59 13.5	0.0
OXF				IAmb_Lg		17 01 16.4	
	comp=Z,660nm,1.1s						
OXF	Oxford	6.61	100	P	Pn	16 59 12.4	-1.2
	baz=284,SNR=13						
OXF	Oxford	6.61	100	P	Pn	16 59 13.4	-0.2
	baz=284,SNR=15						
W45A	Hickory Valley	6.66	95	Pn	Pn	16 59 15.2	+1.0
W45A				IAmb_Lg		17 01 16.7	
	comp=Z,644nm,0.8s						
S44A	Carbondale	6.68	73		Pn	16 59 15.4	+1.0
SIUC	Southern Illin	6.71	72	Pn	Pn	16 59 15.6	+0.7
SCIA	State Center	6.74	27		Pn	16 59 15.8	+0.6
SCIA				IAmb_Lg		17 01 26.8	
	comp=Z,596nm,0.9s						
SCIA	State Center	6.74	27	P	Pn	16 59 16.1	+0.9
	baz=210,SNR=12						
K31A	O'Neill	6.75	351	Pn	Pn	16 59 16.8	+1.4
SDCO	Great Sand Dun	6.81	288	Pn	Pn	16 59 17.3	+0.7
SDCO	Great Sand Dun	6.81	288	P	Pn	16 59 17.3	+0.7
	baz=103,SNR=177						
SDCO	Great Sand Dun	6.81	288	P	Pn	16 59 17.9	+1.3
	baz=103,SNR=118						
Q24A	Divide	6.93	298	P	Pn	16 59 18.3	+0.2
	baz=114,SNR=12						
Q24A				S	Sn	17 00 36.2	-0.9
	baz=114						
N41A	Harden Midland	6.93	45	Pn	Pn	16 59 19.2	+1.2
344A	Westbrook Farm	7.08	128	Pn	Pn	16 59 20.2	+0.3
344A	Westbrook Farm	7.08	128	P	Pn	16 59 20.5	+0.5
	baz=311,SNR=5.6						
735A	Kenedy	7.10	184	IAmb_Lg		17 01 36.6	
	comp=Z,414nm,0.8s						
P43A	Skaggs, Pawnee	7.17	57	Pn	Pn	16 59 22.0	+0.8
P43A	Skaggs, Pawnee	7.17	57	P	Pn	16 59 22.3	+1.2
	baz=241,SNR=9.3						
K38A	Parkersburg	7.54	26		Pn	16 59 27.0	+0.7
K38A				IAmb_Lg		17 01 51.5	
	comp=Z,351nm,0.8s						
ANMO	Albuquerque	7.54	265	Pn	Pn	16 59 27.0	+0.5
	comp=Z,0.3nm,0.3s,baz=90,slow=15,SNR=3.3						
ANMO				Pg	Pb	16 59 53.0	+5.6
	comp=Z,2.9nm,0.3s,baz=80,slow=17,SNR=22						
ANMO				Lg	Lg	17 01 32.7	
	comp=Z,17nm,0.3s,baz=56,slow=6.9,SNR=7.7						
ANMO				LR	LR	17 01 56.2	
	comp=Z,29nm,18.9s,baz=80,slow=35						
ANMO	Albuquerque	7.54	265	P	Pn	16 59 26.5	-0.1
	baz=80						
146A	Union	7.58	114		Pn	16 59 26.9	+0.1
PLAL	Pickwick Lake	7.59	95		Pn	16 59 26.0	-0.9
ISCO	Idaho Springs	7.61	303	Pn	Pn	16 59 27.6	+0.1
ISCO	Idaho Springs	7.61	303	P	Pn	16 59 27.9	+0.3
	baz=118,SNR=40						
ISCO	Idaho Springs	7.61	303	P	Pn	16 59 28.1	+0.6
	baz=118,SNR=14						
WVT	Waverly	7.67	86	Pn	Pn	16 59 27.5	-0.5
WVT				IAmb_Lg		17 01 38.5	
	comp=Z,300nm,0.9s						
WVT	Waverly	7.67	86	P	Pn	16 59 27.8	-0.3
	baz=271						
L40A	Anamosa	7.71	36	Pn	Pn	16 59 28.5	-0.1
L40A				IAmb_Lg		17 01 47.4	
	comp=Z,374nm,0.8s						
ECSD	EROS Data Cent	7.78	4	Pn	Pn	16 59 29.1	-0.5
ECSD				IAmb_Lg		17 01 45.3	
	comp=Z,315nm,0.8s						
ECSD	EROS Data Cent	7.78	4	P	Pn	16 59 29.2	-0.3
	baz=184,SNR=28						
ECSD	EROS Data Cent	7.78	4	P	Pn	16 59 29.4	-0.2
	baz=184,SNR=28						
HDIL	Hopedale	7.79	52	Pn	Pn	16 59 30.0	+0.3
HDIL	Hopedale	7.79	52	P	Pn	16 59 29.0	-0.6
	baz=236,SNR=8.6						
833A	Chaparral WMA,	7.82	194	P	Pn	16 59 29.8	-0.3
	baz=12						
BNM	Barren Site	7.86	259	Pn	Pn	16 59 30.9	0.0

MNTX	Cornudas Mount	7.96	240	Pn	Pn	16 59 31.9	-0.1
MNTX	Cornudas Mount	7.96	240	P	Pn	16 59 31.5	-0.5
	baz=56,SNR=18						
USIN	University of	7.96	73	IAmb_Lg		17 02 05.7	
	comp=Z,756nm,0.9s						
Z47A	Carrollton	8.09	107	Pn	Pn	16 59 34.6	+0.8
Y22D	IRIS PASSCAL I	8.12	259	IAmb_Lg		17 02 14.6	
	comp=Z,586nm,1.1s						
O44A	Mansfield	8.12	56	Pn	Pn	16 59 35.0	+0.7
T47A	Sharon Grove	8.27	80		Pn	16 59 36.5	+0.2
T47A	Sharon Grove	8.27	80	P	Pn	16 59 36.8	+0.5
	baz=266,SNR=7.6						
PHWY	Pilot Hill	8.32	312		Pn	16 59 37.6	+0.3
PHWY				IAmb_Lg		17 02 06.2	
	comp=Z,331nm,0.8s						
N23A	Red Feather La	8.38	309	P	Pn	16 59 39.1	+1.0
	baz=124						
L42A	Oliver, Polo	8.46	42		Pn	16 59 39.2	+0.2
L42A				IAmb_Lg		17 02 15.4	
	comp=Z,552nm,0.8s						
TX31	Lajitas Ar. Si	8.51	221	Pn	Pn	16 59 37.7	-2.0
TX32	Lajitas Array	8.51	221	Pn	Pn	16 59 37.9	-1.9
TXAR	Lajitas Array	8.51	221	Pn	Pn	16 59 38.9	-0.9
	comp=Z,1.1nm,0.3s,baz=43,slow=11,SNR=40						
TXAR				Lg	Lg	17 02 00.6	
	comp=Z,14nm,0.3s,baz=32,slow=22,SNR=12						
TXAR				LR	LR	17 03 09.8	
	comp=Z,271nm,19.1s,baz=0.0,slow=39						
TXAR	Lajitas Array	8.51	221	Pn	Pn	16 59 37.7	-2.1
X48A	Hartselle	8.53	97	Pn	Pn	16 59 40.0	+0.2
SUSD	Miller	8.57	352	IAmb_Lg		17 02 26.0	
	comp=Z,397nm,0.8s						
I37A	Lemond, Waseca	8.58	19	Pn	Pn	16 59 39.4	-1.1
I37A				IAmb_Lg		17 02 29.4	
	comp=Z,300nm,0.8s						
JFWS	Jewell Farm	8.83	36	Pn	Pn	16 59 43.4	-0.6
JFWS				IAmb_Lg		17 02 29.8	
	comp=Z,416nm,0.7s						
JFWS	Jewell Farm	8.83	36	P	Pn	16 59 43.3	-0.6
	baz=220,SNR=11						
CLTN	Cedars of Leba	8.88	86	Pn	Pn	16 59 46.1	+1.4
M44A	Midewin, Midew	9.04	50	Pn	Pn	16 59 47.3	+0.5
WCI	Wyandotte Cave	9.08	72	P	Pn	16 59 47.0	-0.4
	baz=259						
MVCO	Mesa Verde	9.10	281	P	Pn	16 59 49.0	+1.1
	baz=95						
BLO	Bloomington	9.13	66		Pn	16 59 49.6	+1.4
SFIN	Lafayette	9.16	58	Pn	Pn	16 59 49.5	+1.0
SFIN	Lafayette	9.16	58	P	Pn	16 59 49.4	+0.9
	baz=244						
Y49A	Blount Mountai	9.18	100	Pn	Pn	16 59 48.9	+0.1
SWET	Sewanee	9.29	91	Pn	Pn	16 59 51.0	+0.8
U49A	Red Boiling Sp	9.32	83	Pn	Pn	16 59 52.0	+1.3
121A	Cookes Peak, D	9.33	252	P	Pn	16 59 50.6	-0.4
	baz=66						
PV02	Paradox Valley	9.41	287	Pn	Pn	16 59 52.9	+0.7
I40A	Norwalk	9.43	31		Pn	16 59 52.2	0.0
I40A				IAmb_Lg		17 02 50.9	
	comp=Z,246nm,1.0s						
I40A	Norwalk	9.43	31	P	Pn	16 59 52.6	+0.3
	baz=215,SNR=5.3						
PV18	Skein Mesa, Pa	9.55	287	Pn	Pn	16 59 54.1	0.0
RWWY	Rawlins	9.62	309	Pn	Pn	16 59 56.1	+1.1
RWWY				IAmb_Lg		17 02 46.8	
	comp=Z,355nm,1.2s						
RSSD	Black Hills	9.65	330	Pn	Pn	16 59 55.8	+0.5
RSSD				IAmb_Lg		17 02 47.9	
	comp=Z,207nm,0.8s						
RSSD	Black Hills	9.65	330	P	Pn	16 59 55.6	+0.2
	baz=146						
PV14	Lion Creek, Pa	9.66	288	Pn	Pn	16 59 56.4	+0.8
K43A	Burlington	9.67	43	IAmb_Lg		17 02 51.5	
	comp=Z,490nm,0.8s						
PV23	Carpenter Ridg	9.67	288	Pn	Pn	16 59 55.7	0.0
K22A	Casper	9.78	316		Pn	16 59 57.1	0.0
K22A				IAmb_Lg		17 03 05.1	
	comp=Z,392nm,0.9s						
K22A	Casper	9.78	316	P	Pn	16 59 56.7	-0.5
	baz=130,SNR=16						
SPMN	Marine on St.	9.86	19	Pn	Pn	16 59 56.5	-1.6
SPMN	Marine on St.	9.86	19	P	Pn	16 59 57.4	-0.7
	baz=202,SNR=6.9						
SPMN	Marine on St.	9.86	19	P	Pn	16 59 57.7	-0.4
	baz=202,SNR=6.9						
F33A	5 Mile Ranch,	9.90	4	Pn	Pn	16 59 57.0	-1.6
F33A				IAmb_Lg		17 02 49.8	
	comp=Z,282nm,1.1s						
F33A	5 Mile Ranch,	9.90	4	P	Pn	16 59 57.3	-1.3
	baz=185,SNR=9.3						
250A	Grady	9.98	110	Pn	Pn	16 59 58.3	-1.5
P48A	Milroy	10.03	66	Pn	Pn	16 59 59.0	-1.4
W18A	Petrified Fore	10.17	269	Pn	Pn	17 00 00.2	-2.4
I42A	Draeger Farm,	10.20	37		Pn	17 00 01.2	-1.5
F36A	Milaca	10.29	15	Pn	Pn	17 00 02.1	-1.9
F36A	Milaca	10.29	15	P	Pn	17 00 02.7	-1.2
	baz=197,SNR=15						
Z51A	Franklin	10.33	101		Pn	17 00 03.4	-1.1
CPCT	Cooper Cave	10.40	89		Pn	17 00 05.1	-0.4
L46A	Eue Claire	10.48	51	Pn	Pn	17 00 06.0	-0.5
V51A	Loudon	10.51	87		Pn	17 00 07.0	0.0
G40A	Rib Lake	10.74	28	Pn	Pn	17 00 09.2	-1.0
E28A	Huff	10.91	348	Pn	Pn	17 00 11.8	-0.6
152A	Waverly Hall	10.91	104		Pn	17 00 11.8	-0.7
TKL	Tuckaleechee C	10.99	88	Pn	Pn	17 00 14.8	+1.3
	comp=Z,0.5nm,0.3s,baz=281,slow=10,SNR=6.3						
TKL				Lg	Lg	17 03 17.2	
	comp=Z,4.8nm,0.3s,baz=181,slow=20,SNR=4.5						
TKL				LR	LR	17 04 37.5	
	comp=Z,90nm,19.0s,baz=267,slow=38						
TKL	Tuckaleechee C	10.99	88	Pn	Pn	17 00 13.0	-0.6
S51A	Beattyville	11.12	77		Pn	17 00 13.9	-1.3
V52A	Sevierville	11.12	87	Pn	Pn	17 00 14.2	-1.1
H43A	Windswept, Lux	11.18	38	Pn	Pn	17 00 15.2	-1.0
N49A	Columbus Grove	11.41	60	Pn	Pn	17 00 17.9	-1.4
E38A	The Farm, Brul	11.47	20	Pn	Pn	17 00 18.1	-2.0
BW06	Boulder Array	11.67	309		Pn	17 00 22.2	-0.8
BW06	Boulder Array	11.67	309	P	Pn	17 00 22.8	-0.2
	baz=122						
GOGA	Godfrey	11.67	99	Pn	Pn	17 00 22.0	-0.8
GOGA	Godfrey	11.67	99	P	Pn	17 00 22.4	-0.4
	baz=286						
PD31	Pinedale Array	11.67	309	Pn	Pn	17 00 22.2	-0.8
PDAR	Pinedale Array	11.67	309	Pn	Pn	17 00 22.9	-0.1
	comp=Z,2.1nm,0.3s,baz=125,slow=14,SNR=30						
PDAR				Lg	Lg	17 03 37.3	
	comp=Z,1.6nm,0.3s,baz=278,slow=36,SNR=2.4						
PDAR				LR	LR	17 05 05.0	
	comp=Z,178nm,18.3s,baz=138,slow=39						
PDAR	Pinedale Array	11.67	309		Pn	17 00 22.5	-0.5
V53A	Saluda	11.77	87	Pn	Pn	17 00 24.2	0.0
COWI	Conover	11.85	29		Pn	17 00 24.1	-1.2
F42A	Maple Grove Fa	11.99	32	Pn	Pn	17 00 24.9	-2.2
ACSO	Alum Creek Sta	12.05	65	Pn	Pn	17 00 27.8	-0.3
553A	Crawfordville	12.22	114	Pn	Pn	17 00 29.3	-1.2
AGMN	Agassiz Nation	12.37	4	Pn	Pn	17 00 29.8	-2.6
AGMN	Agassiz Nation	12.37	4	P	Pn	17 00 29.7	-2.6
	baz=186,SNR=13						
AGMN	Agassiz Nation	12.37	4	P	Pn	17 00 29.9	-2.6
	baz=186,SNR=13						
U54A	Nelsons Funny	12.51	83	Pn	Pn	17 00 33.0	-1.5
P52A	Corning	12.54	68		Pn	17 00 34.5	-0.3
P52A	Corning	12.54	68	P	Pn	17 00 35.1	+0.3
	baz=258						
B35A	Bob, Littlefor	12.67	11	Pn	Pn	17 00 33.5	-2.9
B35A	Bob, Littlefor	12.67	11	P	Pn	17 00 33.8	-2.6
	baz=193,SNR=12						
N51A	Ashland	12.70	63	Pn	Pn	17 00 36.2	-0.7
EYMN	Ely	12.72	18	Pn	Pn	17 00 33.8	-3.4
EYMN	Ely	12.72	18	P	Pn	17 00 34.3	-2.9
	baz=202,SNR=13						
EYMN	Ely	12.72	18	P	Pn	17 00 34.6	-2.6
	baz=202,SNR=13						
LOHW	Long Hollow	12.76	311	Pn	Pn	17 00 38.2	+0.2
REDW	Red Top Meadow	12.79	309		Pn	17 00 38.3	0.0
D41A	Chassel	12.87	28	Pn	Pn	17 00 36.2	-2.9
D41A	Chassel	12.87	28	P	Pn	17 00 36.6	-2.5
	baz=214,SNR=6.2						
RLMT	Red Lodge	12.89	319	Pn	Pn	17 00 39.3	-0.5
TPAW	Teton Pass	12.91	310	Pn	Pn	17 00 39.8	-0.3
MOOW	Moose Ponds	12.92	311	Pn	Pn	17 00 39.7	-0.5
E43A	Lone Tree Farm	12.97	33	Pn	Pn	17 00 37.7	-2.9
DGMT	Dagmar	13.50	340	Pn	Pn	17 00 47.4	-0.4
M52A	Chesterland	13.62	61	Pn	Pn	17 00 49.7	+0.2
YHL	Hebgen Lake	13.80	314	Pn	Pn	17 00 51.2	-1.0
R55A	Marlinton	13.90	75	Pn	Pn	17 00 52.1	-1.3
W57A	Gilead	14.11	88	P	P	17 01 05.0	+1.1
E46A	Sault Ste Mari	14.26	39	Pn	Pn	17 00 54.7	-3.4
ULM	Lac du Bonnet	14.32	4	Pn	Pn	17 00 55.2	-3.7
	comp=Z,1.8nm,0.3s,baz=175,slow=13,SNR=16						
ULM				Lg	Lg	17 04 57.8	
	comp=Z,1.2nm,0.3s,baz=80,slow=16,SNR=1.9						
ULM				LR	LR	17 06 41.8	
	comp=Z,140nm,18.9s,baz=171,slow=38						
ULM	Lac du Bonnet	14.32	4	Pn	Pn	17 00 54.5	-4.5
T57A	Hurt	14.56	81	Pn	Pn	17 01 01.1	-1.2
R11A	Troy Canyon, C	14.78	285	Pn	Pn	17 01 01.5	-4.0
M54A	Oil Creek Stat	14.83	63	Pn	Pn	17 01 06.1	+0.1
BCYI	Bear Canyon	14.86	309	Pn	Pn	17 01 04.8	-1.8
ELK	Elko	14.86	294	Pn	Pn	17 01 08.2	+1.6
	comp=Z,0.1nm,0.3s,baz=91,slow=7.9,SNR=9.5						
ELK				LR	LR	17 07 40.5	
	comp=Z,116nm,18.2s,baz=108,slow=41						
EGMT	Eagleton	15.18	326	Pn	Pn	17 01 10.2	-0.5
EGMT				IAmb	IAmb	17 01 37.7	
	comp=Z,8.0nm,0.7s						
PFO	Pinyon Flats O	15.92	267	LR	LR	17 07 48.2	
	comp=Z,98nm,19.7s,baz=234,slow=39						
BMN	Battle Mountai	16.28	292	Pn	Pn	17 01 23.9	-1.3
BMN				IAmb	IAmb	17 01 33.5	
	comp=Z,4.9nm,0.9s						
SADO	Sadowa	16.37	52	Pn	P	17 01 28.4	-0.5
	comp=Z,0.4nm,0.3s,baz=268,slow=14,SNR=1.2						
SADO				Sn	Sn	17 04 20.6	-7.1
	comp=Z,0.9nm,0.3s,baz=279,slow=5.1,SNR=3.1						
SADO				Lg	Lg	17 06 02.8	
	comp=Z,1.0nm,0.3s,baz=334,slow=3.1,SNR=7.9						
SADO				LR	LR	17 07 47.3	
	comp=Z,101nm,20.1s,baz=168,slow=37						
KVN	Kaiserville	16.79	287	P	P	17 01 34.9	+1.0
PLID	Pearl Lake	16.86	308	P	P	17 01 34.7	+0.1
NVAR	Mina Array Bea	16.92	285	Pn	P	17 01 35.8	+0.4
	comp=Z,0.2nm,0.3s,baz=91,slow=11,SNR=11						
NVAR				LR	LR	17 08 43.4	
	comp=Z,99nm,21.0s,baz=110,slow=40						
LHV	Little Huntoon	17.07	284	P	P	17 01 36.8	+0.1
LHV				IAmb	IAmb	17 01 41.5	
	comp=Z,12nm,1.1s						
J57A	Williamstown	17.97	59	P	P	17 01 48.1	+1.4
J57A				IAmb	IAmb	17 02 15.8	
	comp=Z,16nm,1.3s						
CMIG	Matias Romero	18.92	173	P	Pn	17 01 59.8	+2.0
	comp=Z,0.5nm,0.3s,baz=2.0,slow=5.6,SNR=4.4						
PINE	Pine Mountain	19.72	301	Pn	Pn	17 02 08.4	+0.9
PINE				IAmb	IAmb	17 02 19.6	
	comp=Z,12nm,1.1s						
YBH	Yreka Blue Hor	20.58	294	P	Pn	17 02 17.6	0.0
	comp=Z,17nm,0.9s,baz=81,slow=4.5,SNR=24						
YBH				LR	LR	17 09 47.0	
	comp=Z,52nm,19.1s,baz=82,slow=36						
YBH	Yreka Blue Hor	20.58	294	P	P	17 02 15.6	+0.3
YBH				IAmb	IAmb	17 02 22.7	
	comp=Z,17nm,0.8s						
DLBC	Dease Lake	31.11	327	P	P	17 03 58.3	+3.6
	comp=Z,0.5nm,0.3s,baz=153,slow=16,SNR=1.7						
ILAR	Eielson Array	41.09	330	P	P	17 05 21.7	+1.8
	comp=Z,0.8nm,0.8s,baz=113,slow=7.4,SNR=7.6						
SUMG	Summit	46.85	21	P	P	17 06 07.7	+1.3
EKA	Eskdalemuir Ar	63.49	40	P	P	17 08 06.7	+0.4
	comp=Z,1.1nm,0.8s,baz=286,slow=5.8,SNR=3.4						
ARCES	ARCESS Array B	66.88	19	P	P	17 08 29.9	+1.8
	comp=Z,3.1nm,0.8s,baz=313,slow=7.3,SNR=1.6						

IDC ***02*** *17:02:59.7±0.5, 31°.97N×69°.59E, h0km, mb4.2/29, mb1 4.3/33, mb1mx4.2/64, mbtmp4.2/33, ML3.7/4, MS3.3/8, Ms1 3.4/8, ms1mx3.1/39, Error ellipse: s-maj=12.7km s-min=11.9km az=10.0*

NNC ***02*** *17:03:03.3±7.8, 32°.16N×69°.65E, h16km±51km, mb4.2, Error ellipse: s-maj=38.3km s-min=25.9km az=3.0*

BJI ***02*** *17:03:03.9±0.0, 32°.13N×69°.76E, h24km, mB4.7/18, mb4.3/26, ML4.5/1, Ms4.0/9, Ms7 3.7/9*

NEIC ***02*** *17:03:05.8±1.9, 32°.06N±0°.09×69°.55E±0°.09, h40km±6km, mb4.6/35, Error ellipse: s-maj=13.8km s-min=10.2km az=193.0*

MOS ***02*** *17:03:05.6±1.6, 32°.19N×69°.78E, h54km, mb4.7/13, Error ellipse: s-maj=8.4km s-min=4.7km az=88.1*

ISC 02 17:03:04.4±0.3**, 31°.94N**±0°.05×**69°.49E**±0°.04**, h35km, n194, σ1.96**/202**, mb4.5**/62**, MS3.4**/10**, 14C-9D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THW	Thamme Wali	2.09	65	⇑P	Pn	17 03 36.7	-0.2
KBL	Kabul	2.62	352	P	Pn	17 03 44.1	-0.4
KBL	Kabul	2.62	352		Pn	17 03 44.1	-0.4
NIL	Nilore	3.60	61	P	Pn	17 03 57.8	+0.1
NIL	Nilore	3.60	61		Pn	17 03 57.8	+0.1
CHCP	Chirah Chowk	3.61	61	⇑P	Pn	17 03 58.2	+0.3
JMU	Jammu	4.64	79	*e*P	Pn	17 04 13.5	+1.5
JMU				*e*S	Sn	17 05 07.5	+2.9
DHRM	DHARAMSHALA	5.78	85	*e*P	Pn	17 04 27.9	0.0
BHK	Bhakra	5.92	93	*e*P	Pn	17 04 27.0	-2.7
BHK				*e*S	Sn	17 05 38.4	+2.1
HRA	Herat	6.55	294	Pn	Pn	17 04 38.8	+0.4
SMLA	Simla	6.60	95	*e*P	Pn	17 04 39.3	+0.4
CHGR	Chuyangaron	6.71	358	Pn	Pn	17 04 40.0	-0.5
AJM	Ajmer	7.06	139	*e*P	Pn	17 04 44.0	-1.3
GAR	Garm	7.08	5	Pn	Pn	17 04 44.5	-1.1
KUDL	Kundal	7.14	120	*e*P	Pn	17 04 47.0	+0.6
NDI	New Delhi	7.42	114	*e*P	Pn	17 04 51.0	+0.8
NDI				*e*S	Sn	17 06 15.0	+1.8
AYAN	Aya Nagar	7.45	116	*e*P	Pn	17 04 50.6	0.0
DDI	Dehra Dun	7.51	100	*e*P	Pn	17 04 52.2	+0.7
DRK	Karamyk	7.76	13		Pn	17 04 53.6	-1.5
BTK	Batken	8.17	7	P	Pn	17 05 00.0	-0.6
BTK	Batken	8.17	7	Pn	Pn	17 04 60.0	-0.6
BHUJ	Bhuj	8.65	179	*e*P	Pn	17 05 04.9	-2.2
KSH	Kashi	9.21	33	P	Pn	17 05 10.0	-4.9
KSH				pP		17 05 14.4	
KSH				sP		17 05 19.2	
KSH				S	Sn	17 06 45.0	-12
KSH				smax	smax		
	comp=N,120nm,0.8s						
KSH				smax	smax		
	comp=E,99nm,0.8s						
KSH				LR	LR		
	comp=E,630nm,8.1s						
KSH				LR	LR		
	comp=Z,440nm,9.6s						
AML	Almayashu	10.71	17	P	Pn	17 05 34.6	-1.0
	SNR=14						
GEYT	Alibeck	11.08	306	Pn	Pn	17 05 42.8	+2.4
	0.4nm,0.3s,baz=107,slow=4.8,SNR=1.7						
GEYT				LR	LR	17 10 44.3	
	comp=Z,131nm,19.0s,baz=60,slow=42						
BHPL	Bhopal	11.15	139	*e*P	Pn	17 05 39.4	-2.1
KK31	Karatay Array	11.18	4	*i* P	Pn	17 05 40.4	-1.2
KK31	Karatay Array	11.18	4	Pn	Pn	17 05 38.0	-3.6
KK31	Karatay Array	11.18	4	⇑P	Pn	17 05 40.4	-1.2
	5.7nm,0.6s,baz=171,slow=12,SNR=45						
KK31				S	Sn	17 07 43.1	-2.2
	0.8nm,0.2s,baz=2.2,slow=26,SNR=4.7						
KKAR	Karatay Array	11.18	4	P	Pn	17 05 38.4	-3.2
KKAR	Karatay Array	11.18	4	Pn	Pn	17 05 38.4	-3.2
KKAR	Karatay Array	11.18	4		Pn	17 05 37.6	-4.0
EKS2	Erkin-Say	11.23	16	P	Pn	17 05 43.7	+1.2
	SNR=11						
AAK	Ala-Archa	11.40	19	Pn	Pn	17 05 43.3	-1.5
	2.3nm,0.3s,baz=191,slow=7.1,SNR=26						
AAK				Sn	Sn	17 07 48.2	-2.7
	0.3nm,0.3s,baz=127,slow=20,SNR=2.3						
AAK	Ala-Archa	11.40	19	*d i*P	Pn	17 05 43.8	-1.0
AAK				pmax	pmax		
	comp=Z,71nm,1.3s						
AAK	Ala-Archa	11.40	19	Pn	Pn	17 05 42.5	-2.3
KBK	Karagaybulak	11.54	21	P	Pn	17 05 46.9	+0.1
	SNR=8.0						
FRU1	Bishkek	11.59	19	P	Pn	17 05 46.2	-1.2
FRU1	Bishkek	11.59	19		Pn	17 05 46.2	-1.2
CHMS	Chumysh	11.80	19	P	Pn	17 05 48.2	-2.0
	SNR=13						
TKM2	Tokmak 2	11.98	22	P	Pn	17 05 52.4	-0.5
	SNR=11						
TKM2	Tokmak 2	11.98	22	P	Pn	17 05 50.5	-2.4
TKM2	Tokmak 2	11.98	22	⇑P	Pn	17 05 51.6	-1.2
	comp=Z,23nm,0.9s						
PYUN	Piuthan	12.30	105	*e*P	Pn	17 05 54.6	-2.7
	comp=Z,112nm,0.3s						
MDOK	Medeo	12.70	26	P	Pn	17 05 59.7	-2.8
MDOK	Medeo	12.70	26	⇑P	Pn	17 05 59.8	-2.8
	comp=Z,6.3nm,1.0s						
DANN	Dangsing	12.85	102	*e*P	Pn	17 06 02.9	-2.0
	comp=Z,85nm,0.7s						
KOLN	Koldanda	12.93	105	*e*P	Pn	17 06 03.4	-2.4
WSAR	Wadi Sarin	12.95	231	Pn	Pn	17 06 06.0	0.0
	comp=Z,0.1nm,0.3s,baz=58,slow=13,SNR=1.6						
WSAR				Sn	Sn	17 08 21.4	-7.4
	comp=Z,0.1nm,0.3s,baz=315,slow=19,SNR=2.1						
GKN	Gorkha	13.70	103	*e*P	Pn	17 06 13.0	-3.3
	comp=Z,35nm,0.3s						
DMN	Daman	14.23	104	*e*P	Pn	17 06 20.2	-3.4
	comp=Z,54nm,0.7s						
KKN	Kakani	14.31	103	*e*P	Pn	17 06 20.3	-4.4
	comp=Z,63nm,0.6s						
PKIN	Phulchoki	14.48	103	*e*P	Pn	17 06 23.0	-4.0
	comp=Z,54nm,0.6s						
PKI	Pulchoki	14.49	103	*e*P	Pn	17 06 23.8	-3.5
	comp=Z,107nm,0.8s						
GUN	Gumba	14.76	102	*e*P	Pn	17 06 27.8	-3.2
	comp=Z,211nm,0.8s						
JIRN	Jiri	15.11	102	*e*P	Pn	17 06 31.7	-3.9
	comp=Z,86nm,0.6s						
RAMN	Ramite	15.71	104	*e*P	Pn	17 06 38.9	-4.4
	comp=Z,60nm,0.5s						
ODAN	Odare	16.39	103	*e*P	Pn	17 06 49.6	-2.4
	comp=Z,49nm,0.7s						
OTUK	Ortayu	16.43	7	P	Pn	17 06 48.7	-3.4
OTUK	Ortayu	16.43	7	⇑P	Pn	17 06 48.8	-3.4
	comp=Z,7.2nm,0.9s						
TAPN	Taplejung	16.48	101	*e*P	Pn	17 06 49.4	-3.8
	comp=Z,110nm,1.0s						
BOK	Bokaro	16.60	115	*e*x	x	17 06 52.0	
GOA	Goa	16.84	165	IAmb	IAmb	17 03 52.4	
	comp=Z,13nm,0.6s						
MAKZ	Makanchi	17.68	29	P	Pn	17 07 04.8	-2.9
MAKZ	Makanchi	17.68	29	Pn	Pn	17 07 02.9	-4.9
MAKZ	Makanchi	17.68	29	⇑P	Pn	17 07 04.8	-2.9
	comp=Z,18nm,1.1s						
MK31	Makanchi Array	17.80	30	P	Pn	17 07 04.6	-4.6
MK31				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MK31	Makanchi Array	17.80	30	P	Pn	17 07 04.6	-4.6
MK31	Makanchi Array	17.80	30	⇑P	Pn	17 07 08.5	-0.7
	comp=Z,6.4nm,0.9s,baz=205,slow=9.9,SNR=22						
MKAR	Makanchi Array	17.80	30	P	Pn	17 07 07.5	-1.7
	comp=Z,0.4nm,0.3s,baz=210,slow=11,SNR=19						
MKAR				LR	LR	17 15 03.3	
	comp=Z,97nm,20.8s,baz=194,slow=41						
MKAR	Makanchi Array	17.80	30	P	Pn	17 07 06.0	-3.2
MKAR	Makanchi Array	17.80	30	P	Pn	17 07 06.0	-3.2
WMQ	Urumqi	18.59	45	*e*P	Pn	17 07 19.7	+0.8
WMQ				pP	P	17 07 21.8	+3.3
WMQ				sP	sP	17 07 30.7	-1.8
WMQ				pmax	pmax		
	comp=Z,18nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,82nm,4.5s						
AB31	Akbulak array	18.73	340	*i* P	P	17 07 19.1	-0.8
AB31	Akbulak array	18.73	340	P	P	17 07 19.2	-0.8
	comp=Z,4.3nm,0.7s,baz=153,slow=12,SNR=58						
ABKAR	Akbulak array	18.73	340	P	P	17 07 18.8	-1.2
ABKAR	Akbulak array	18.73	340	P	P	17 07 18.2	-1.7
LSA	Lhasa	18.73	91	P	P	17 07 16.9	-3.7
LSA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
LSA	Lhasa	18.73	91		P	17 07 16.9	-3.7
KURBB	Kurchatov Arra	19.84	17	P	P	17 07 30.6	-1.4
	comp=Z,0.1nm,0.3s,baz=209,slow=10,SNR=12						
KURBB	Kurchatov Arra	19.84	17	P	P	17 07 29.2	-2.8
KURBB	Kurchatov Arra	19.84	17	⇓P	P	17 07 29.3	-2.8
	comp=Z,3.4nm,0.7s						
KURK	Kurchatov	19.95	17	*d i*P	P	17 07 30.0	-3.2
KURK				pmax	pmax		
	comp=Z,9.0nm,2.5s						
KURK	Kurchatov	19.95	17	P	P	17 07 29.8	-3.4
AKTO	Aktyubinsk	20.36	339	P	P	17 07 37.1	-0.5
	comp=Z,4.5nm,0.5s,baz=154,slow=13,SNR=12						
AKTO				LR	LR	17 16 06.2	
	comp=Z,89nm,19.0s,baz=140,slow=39						
AKTO	Aktyubinsk	20.36	339	⇓P	P	17 07 37.8	+0.1
	comp=Z,12nm,0.9s						
MAK	Makhachkala	20.57	309	*e*P	P	17 07 38.1	-2.0
MAK				*e*S	S	17 11 25.7	-2.5
MAK				pmax	pmax		
	comp=Z,37nm,0.5s						
MAK				MLR	MLR		
	comp=Z,264nm,10.0s						
SHL	Shillong	20.61	102	P	P	17 07 38.8	-2.1
SHL				pmax	pmax		
	comp=Z,25nm,1.0s						
SHL	Shillong	20.61	102	P	P	17 07 38.8	-2.1
SHL				IAmb	IAmb	17 08 04.0	
	comp=Z,25nm,1.0s						
BVAR	Borovoye Array	21.09	2	P	P	17 07 44.7	-0.8
	comp=Z,1.9nm,0.5s,baz=192,slow=14,SNR=15						
BRVK	Borovoye	21.12	1	*c i*P	P	17 07 44.5	-1.4
BRVK				pmax	pmax		
	comp=Z,16nm,1.2s						
BRVK	Borovoye	21.12	1	P	P	17 07 43.1	-2.8
BRVK				IAmb	IAmb	17 07 55.7	
	comp=Z,13nm,0.9s						
BRVK	Borovoye	21.12	1	⇑P	P	17 07 44.1	-1.8
	comp=Z,14nm,0.9s						
GNI	Garni	21.58	299	P	P	17 07 54.4	+3.2
	comp=Z,10nm,0.7s,baz=11,slow=5.2,SNR=6.3						
GNI				LR	LR	17 18 09.1	
	comp=Z,46nm,21.8s,baz=114,slow=42						
GNI	Garni	21.58	299	*c i*P	P	17 07 54.9	+3.8
GNI				pmax	pmax		
	comp=Z,24nm,1.2s						
GNI	Garni	21.58	299	P	P	17 07 49.5	-1.7
GNI				IAmb	IAmb	17 08 03.7	
	comp=Z,34nm,1.3s						
KOHI	KOHIMA	22.41	100	IAmb	IAmb	17 08 08.5	
	comp=Z,27nm,0.7s						
MOKO	MOKOCHONG	22.54	98	IAmb	IAmb	17 08 06.2	
	comp=Z,14nm,0.4s						
ZEI	Tsey	22.96	305	*e*P	P	17 08 09.1	+3.2
ZEI				pmax	pmax		
	comp=Z,5.0nm,1.5s						
KBZ	Khabaz	23.97	307	P	P	17 08 16.3	+0.9
	comp=Z,2.0nm,0.8s,baz=51,slow=5.3,SNR=5.0						
ZAA0	Zalesovo Array	24.59	22	P	P	17 08 18.9	-2.1
ZAA0				IAmb	IAmb	17 08 22.7	
	comp=Z,14nm,1.5s						
ZAA0	Zalesovo Array	24.59	22	⇓P	P	17 08 20.6	-0.4
	comp=Z,1.8nm,1.2s						
ZALV	Zalesovo Beam	24.59	22	P	P	17 08 20.9	-0.1
	comp=Z,2.1nm,0.3s,baz=221,slow=9.8,SNR=15						
ZALV	Zalesovo Beam	24.59	22	*i* P	P	17 08 20.7	-0.3
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ZALV	Zalesovo Beam	24.59	22	P	P	17 08 20.4	-0.6
SVE	Sverdlovsk	25.63	349	*e*P	P	17 08 32.3	+1.9
SVE				pmax	pmax		
	comp=Z,25nm,1.6s						
ARU	Arti	25.65	346	P	P	17 08 31.5	+1.0
	comp=Z,4.7nm,0.9s,baz=167,slow=8.0,SNR=14						
ARU	Arti	25.65	346	*c i*P	P	17 08 32.3	+1.8
ARU				pmax	pmax		
	comp=Z,30nm,1.1s						
ARU	Arti	25.65	346	P	P	17 08 30.7	+0.2
GTA	Gaotai	25.65	65	*e*P	P	17 08 34.1	+3.1
GTA				pP	pP	17 08 38.1	-3.1
GTA				sP	sP	17 08 41.5	-4.1
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BELG	Belogornoye	25.90	328	P	P	17 08 34.3	+1.4
	comp=Z,54nm,0.9s,baz=342,slow=1.7,SNR=19						
BELG				LR	LR	17 20 49.4	
	comp=Z,88nm,19.7s,baz=108,slow=41						
BELG	Belogornoye	25.90	328	*d i*P	P	17 08 35.4	+2.5
BELG				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PALK	Pallekele	26.67	155	LR	LR	17 19 03.8	
	comp=Z,73nm,20.4s,baz=117,slow=36						
LZH	Lanzhou	28.68	72	*e*P	P	17 08 57.7	-0.6
LZH				pP	pP	17 09 06.2	-2.4
LZH				sP	sP	17 09 11.6	-1.4
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
MMAI	Mount Meron Ar	28.71	281	PcP	PcP	17 12 10.0	+1.8
	comp=Z,0.8nm,0.3s,baz=268,slow=4.8,SNR=4.1						
CMAR	Chiang Mai Arr	29.73	110	P	P	17 09 07.7	+0.2

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              comp=Z,0.7nm,0.6s,baz=311,slow=6.4,SNR=8.7
CMAR                                   PcP     PcP     17 12 12.5 +1.5
              comp=Z,0.8nm,0.7s,baz=290,slow=4.8,SNR=3.0
CMAR                                   LR      LR      17 22 49.6
              comp=Z,47nm,20.2s,baz=290,slow=40
BRTR   Keskin Array B     29.94 295    P       P       17 09 10.7 +1.4
              comp=Z,1.3nm,0.9s,baz=141,slow=6.1,SNR=4.6
SONM   Songino Array      32.10  50    P       P       17 09 28.2 -0.1
              comp=Z,1.9nm,1.0s,baz=245,slow=9.9,SNR=7.5
SONM   Songino Array      32.10  50    IAmb    IAmb    17 09 30.9
              comp=Z,2.4nm,1.2s
ULN    Ulaanbaatar        32.54  50⇓iP     P       17 09 33.2 +1.1
ULN                                    pmax    pmax
              comp=Z,2.0nm,1.1s
OBN    Obninsk            32.77 325⇑eP     P       17 09 35.8 +2.0
OBN                                   e                17 10 49.0
OBN                                    pmax    pmax
              comp=Z,13nm,1.1s
OBN                                    MLR     MLR
              comp=Z,107nm,16.0s
HHC    Hu-ho-hao-te       34.74  63   eP       P       17 09 52.0 +0.7
HHC                                    pmax    pmax
              comp=Z,25nm,0.8s
HHC                                    pmax    pmax
              comp=Z,160nm,6.6s
AKASG  Malin Array Be     35.03 314    P       P       17 09 54.3 +0.7
              comp=Z,4.5nm,0.6s,baz=98,slow=7.3,SNR=16
AKASG  Malin Array Be     35.03 314    P       P       17 09 53.6  0.0
AKASG                                  pmax    pmax
              comp=Z,4.0nm,1.3s
AKASG  Malin Array Be     35.03 314    P       P       17 09 53.6  0.0
AKBB   Malin Array Si     35.03 314ceP     P       17 09 55.2 +1.6
AKBB                                   pmax    pmax
              comp=Z,11nm,1.0s
AKBB   Malin Array Si     35.03 314    P       P       17 09 54.5 +0.9
AKBB                                   IAmb    IAmb    17 09 55.6
              comp=Z,11nm,0.9s
MLR    Muntele Rosu       36.13 305    P       P       17 10 03.7 +0.4
MLR                                    pmax    pmax
              comp=Z,15nm,1.3s
MLR    Muntele Rosu       36.13 305    P       P       17 10 03.7 +0.4
MLR                                    IAmb    IAmb    17 10 07.6
              comp=Z,15nm,1.3s
MNK    Minsk              37.02 320  i P       P       17 10 09.1 -1.4
MNK                                  i                 17 11 33.1
MNK                                  i S       S       17 15 52.8 -0.9
MNK                                  i SS      SnSn    17 18 27.9 -0.7
MNK                                    pmax    pmax
              comp=Z,10.0nm,0.7s
MNK                                    pmax    pmax
              comp=N,19nm,0.9s
MNK                                    pmax    pmax
              comp=E,4.0nm,1.0s
MNK                                    MLR     MLR
              comp=E,8.0nm,13.0s
MNK                                    MLR     MLR
              comp=N,290nm,22.0s
MNK                                    MLR     MLR
              comp=Z,131nm,18.0s
MNK    Minsk              37.02 320  i P       P       17 10 09.2 -1.4
              comp=E,4.0nm,1.0s
MNK                                  i P       P       17 10 09.2 -1.4
              comp=N,19nm,0.9s
MNK                                  i P       P       17 10 09.2 -1.4
              comp=Z,10.0nm,0.7s,baz=110
MNK                                  i PP      PP      17 11 33.1 -2.1
MNK                                  i PPP     PPP     17 11 48.4
MNK                                  i S       S       17 15 52.8 -0.8
MNK                                  i SS      SnSn    17 18 27.9 -0.7
MNK                                  i SSS     SSS     17 18 44.6
MNK                                  i LQ      LQ      17 22 32.2
MNK                                  i LR      LR      17 25 20.7
MNK                                  i LRM     MLR     17 27 27.4
              comp=E,8.0nm,12.7s
MNK                                  i LRM     MLR     17 27 39.5
              comp=N,290nm,21.6s
MNK                                  i LRM     MLR     17 27 39.5
              comp=Z,131nm,17.6s
NACGM  Naroch             37.76 320  i P       P       17 10 16.6 -0.2
NRIK   Noril'sk           38.83  10    P       P       17 10 25.9 +0.3
              comp=Z,5.1nm,0.8s,baz=207,slow=4.8,SNR=11
NRIK   Noril'sk           38.83  10d iP      P       17 10 26.9 +1.3
NRIK                                   pmax    pmax
              comp=Z,8.0nm,1.0s
NRIK   Noril'sk           38.83  10    P       P       17 10 25.6 +0.1
NRIK                                   IAmb    IAmb    17 10 27.9
              comp=Z,7.6nm,1.0s
FINES  FINESS Array B     40.67 330    P       P       17 10 41.8 +0.8
              comp=Z,2.1nm,0.7s,baz=109,slow=10,SNR=6.8
NJ2    Nanjing            41.56  76   eP       P       17 10 47.9 -0.8
NJ2                                    pmax    pmax
              comp=Z,10.0nm,0.5s
MNSI   Mandailing Nat     42.02 132    P       P       17 10 53.2 +0.6
              comp=Z,17nm,0.9s
MNSI   Mandailing Nat     42.02 132    P       P       17 10 53.4 +0.8
              comp=Z,17nm,0.9s
MORC   Moravsky Berou     42.22 311    P       P       17 10 54.0 +0.1
MORC                                   pmax    pmax
              comp=Z,3.0nm,0.7s
MORC   Moravsky Berou     42.22 311    P       P       17 10 54.0 +0.1
BRG    Berggiesshubel     44.60 312   eP       P       17 11 15.3 +2.3
BRG                                    Amp             17 11 16.8
              comp=Z,6.5nm,1.2s
GEC2   GERESS Array S     44.69 309    P       P       17 11 13.1 -0.8
GEC2                                   IAmb    IAmb    17 11 16.8
              comp=Z,8.0nm,1.3s
GERES  GERESS Array B     44.69 309    P       P       17 11 14.6 +0.7
              comp=Z,1.3nm,0.8s,baz=85,slow=5.9,SNR=8.7
GERES                                  PcP     PcP     17 12 57.3 +1.4
              comp=Z,0.4nm,0.7s,baz=199,slow=2.8,SNR=3.6
KMBO   Kilima Mbogo       44.87 229    P       P       17 11 17.9 +2.0
              comp=Z,1.7nm,0.8s,baz=358,slow=8.2,SNR=4.1
ARCES  ARCESS Array B     44.93 340    P       P       17 11 16.7 +1.2
              comp=Z,2.6nm,0.7s,baz=116,slow=11,SNR=6.7
CLL    Collm              45.22 312   eP       P       17 11 20.0 +2.1
CLL    Collm              45.22 312   eP       P       17 11 20.0 +2.1
NB2    NORSAR Subarra     47.36 326    P       P       17 11 34.7  0.0
              comp=Z,2.1nm,0.6s,baz=104,slow=7.9
NOA    NORSAR Array B     47.36 326    P       P       17 11 34.9 +0.2
              comp=Z,2.0nm,0.7s,baz=103,slow=7.8,SNR=7.8
NOA                                    LR      LR      17 34 27.3
              comp=Z,60nm,19.4s,baz=85,slow=40
KSRS   Korea Array        47.70  66    P       P       17 11 36.7 -0.9
              comp=Z,1.6nm,0.9s,baz=271,slow=9.4,SNR=5.1
YAK    Yakutsk            48.43  33d iP      P       17 11 42.8 -0.1
YAK                                    pmax    pmax
              comp=Z,10.0nm,0.8s
KLR    Kul'dur            48.93  50   eP       P       17 11 50.4 +3.5
KLR                                    pmax    pmax
              comp=Z,7.0nm,1.8s
KEST   Kesra              49.43 292    P       P       17 11 52.2 +1.2
              comp=Z,6.9nm,0.8s,baz=256,slow=1.2,SNR=6.9
USRK   Ussuriysk Ar.      49.60  57    P       P       17 11 51.9 -0.2
              comp=Z,2.1nm,0.8s,baz=300,slow=4.2,SNR=4.5
SPITS  Spitsbergen Ar     51.66 348    P       P       17 12 08.7 +1.5
              comp=Z,7.3nm,0.7s,baz=92,slow=11,SNR=4.1
MPSI   Mapaga             56.98 113    P       P       17 12 48.2 +1.5
ESDC   Sonseca Array      58.56 300    P       P       17 12 58.6 +0.9
              comp=Z,1.2nm,0.7s,baz=75,slow=6.9,SNR=4.8
MDT    Midelt             61.31 293    P       P       17 13 17.2 +0.6
              comp=Z,6.3nm,0.8s,baz=96,slow=5.1,SNR=6.3
TORD   Torodi Ar. Bea     64.41 270    P       P       17 13 37.2 -0.2
              comp=Z,7.8nm,1.1s,baz=53,slow=5.4,SNR=18
TORD   Torodi Ar. Bea     64.41 270    P       P       17 13 36.5 -0.9
TORD                                   IAmb    IAmb    17 13 39.2
              comp=Z,4.1nm,1.0s
SUMG   Summit             64.97 342    P       P       17 13 41.5 +0.9
SUMG                                   pmax    pmax
              comp=Z,9.0nm,0.8s
SUMG   Summit             64.97 342  i P       P       17 13 41.2 +0.5
SUMG                                   IAmb    IAmb    17 13 43.6
              comp=Z,5.1nm,0.7s
SUMG   Summit             64.97 342    P       P       17 13 41.5 +0.9
NEEM   North Greenlan     65.22 348  i P       P       17 13 42.1 +0.1
NEEM                                   IAmb    IAmb    17 13 45.3
              comp=Z,4.1nm,0.6s
ICESG  Greenland Ices     66.97 338  i P       P       17 13 54.9 +1.5
KOWA   Kowa               68.61 274    P       P       17 14 02.6 -1.7
KOWA                                   IAmb    IAmb    17 14 05.8
              comp=Z,13nm,1.4s
DY2G   Dye2               70.50 337  i P       P       17 14 15.8 +0.4
DY2G                                   IAmb    IAmb    17 14 18.0
              comp=Z,11nm,0.6s
DBIC   Dimbokro           73.23 267    P       P       17 14 32.8 +0.5
              comp=Z,7.0nm,1.0s,baz=65,slow=5.0,SNR=3.6
DBIC   Dimbokro           73.23 267    IAmb    IAmb    17 14 34.7
              comp=Z,20nm,1.3s
FITZ   Fitzroy Crossi     73.27 124    P       P       17 14 33.4 +1.0
              comp=Z,1.4nm,0.8s,baz=307,slow=5.1,SNR=2.1
BOSA   Boshof             73.46 220    P       P       17 14 34.8 +1.4
              comp=Z,3.4nm,0.8s,baz=50,slow=6.6,SNR=4.0
TOLK   Toolik Lake Re     75.64  14    P       P       17 14 45.9 +0.4
TOLK                                   IAmb    IAmb    17 14 48.3
              comp=Z,7.0nm,0.7s
A36M   Sachs Harbour      75.85   5    P       P       17 14 46.4 -0.2
COLD   Coldfoot           76.69  15    P       P       17 14 50.9 -0.5
COLD                                   IAmb    IAmb    17 14 55.1
              comp=Z,6.5nm,0.8s
BMAR   Burnt Mountain     77.66  13    P       P       17 14 57.5 +0.6
H23K   Yukon River        78.01  15    P       P       17 14 60.0 +1.1
H23K                                   IAmb    IAmb    17 15 02.7
              comp=Z,9.4nm,1.1s
MLY    Manley             78.40  16    P       P       17 15 01.5 +0.5
MLY                                    IAmb    IAmb    17 15 03.8
              comp=Z,6.0nm,1.1s
INK    Inuvik             78.59   9    P       P       17 15 02.2 +0.2
INK                                    pmax    pmax
              comp=Z,11nm,0.8s
INK    Inuvik             78.59   9    P       P       17 15 02.2 +0.2
MDM    Murphy Dome        79.04  15    P       P       17 15 04.4 -0.2
NEA2   Nenana             79.16  16    P       P       17 15 04.4 -0.8
NEA2                                   IAmb    IAmb    17 15 07.5
              comp=Z,8.8nm,0.8s
ILAR   Eielson Array      79.50  15    P       P       17 15 06.7 -0.3
              comp=Z,3.1nm,1.0s,baz=323,slow=3.8,SNR=14
ILAR   Eielson Array      79.50  15    P       P       17 15 06.1 -0.9
ILAR   Eielson Array      79.50  15    P       P       17 15 06.1 -0.9
WRA    Warramunga Arr     80.71 120    P       P       17 15 14.5 +0.3
              comp=Z,3.1nm,0.7s,baz=320,slow=5.0,SNR=16
WB2    Warramunga Arr     80.72 120    P       P       17 15 13.8 -0.4
WB2                                    IAmb    IAmb    17 15 15.3
              comp=Z,4.8nm,0.8s
DAWY   Dawson             81.64  12    P       P       17 15 18.6  0.0
DAWY                                   IAmb    IAmb    17 15 21.2
              comp=Z,4.3nm,0.9s
M26K   Nabesna, AK        82.42  15    P       P       17 15 22.1 -0.6
M26K                                   IAmb    IAmb    17 15 25.7
              comp=Z,6.3nm,0.9s
ASAR   Alice Springs      82.73 124    P       P       17 15 25.3 +0.5
              comp=Z,2.0nm,1.1s,baz=316,slow=4.5,SNR=5.1
GLB    Gilahina Butte     83.10  15    P       P       17 15 27.4 +1.2
RAGM   Ragged Mountai     83.83  16    P       P       17 15 31.7 +1.7
YKA    Yellowknife Ar     85.84   2    P       P       17 15 40.7 +0.7
              comp=Z,2.4nm,0.7s,baz=9.8,slow=5.1,SNR=7.2
PLCA   Paso Flores       146.87 243    PKPbc   PKPab   17 22 44.3 -0.1
              comp=Z,4.2nm,1.0s,baz=73,slow=5.4,SNR=3.9
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*DJA **02** 17:05:20.1±0.7, 13°N±9°×12°3E±°, h10^{km}, M4.6/15, mb4.6/15*

*IDC **02** 17:05:34.0±0.6, 10°.74N×124°.17E, h0^{km}, mb4.2/19, mb1 4.3/20, mb1mx4.1/51, mbtmp4.2/20, ML3.6/1, MS3.1/3, Ms1 3.1/3, ms1mx2.7/39, Error ellipse: s-maj=34.0km s-min=11.2km az=73.0*

*MAN **02** 17:05:35.5, 10°.71N×123°.87E, h6^{km}, mb4.8, ML3.7, MS3.7*

*NEIC **02** 17:05:36.1±1.8, 10°.77N±0°.09×124°.10E±0°.07, h10^{km}±1^{km}, mb4.5/23, Error ellipse: s-maj=15.0km s-min=11.6km az=198.0*

ISC 02 17:05:35.6±1.3**, 10°.73N**±0°.03×**124°.16E**±0°.05**, h12**^{km}±8^{km}**, n75, σ1^s.29**/74**, mb4.4**/28**, 4C-6D, Leyte**

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Code   Station Name         Δ°  AZ°     Phase ID           Time      Res
                                      Op      ISC        h  m  s     ISC
LLP    Lapu-Lapu           0.45 205⇓iP     Pg         17 05 44.1 -0.4
LLP                                  i S      Sg         17 05 50.3 -0.2
TBP    Tagbilaran          1.07 196  eP      Pb         17 05 55.4 -0.7
TBP                                  i S      Sn         17 06 12.7 +1.5
SCPH   Surigao             1.61 126⇑eP     Pg         17 06 07.3 +0.8
RCP    Roxas               1.62 301⇓eP     Pn         17 06 00.2 -3.7
RCP                                  eS      Sn         17 06 22.2 -2.5
SNPH   Sibulan             1.65 214⇓iP     Pn         17 06 03.0 -1.5
SNPH                                 i S      Sb         17 06 26.9 +0.2
MMPH   Masbate             1.70 342⇑eP     Pn         17 06 05.4 +0.3
MMPH                                 eS      Sb         17 06 27.7 -0.5
JAP    San Jose, Anti      2.18 271⇓iP     Pg         17 06 20.7 +3.3
DCPH   Dipolog City        2.27 201⇓eP     Pn         17 06 12.1 -0.9
DCPH                                 eS      Sn         17 06 40.4 -0.6
JCNP   Jose Panganiba      3.82 338⇑eP     Pg         17 06 49.4 +0.6
DMPH   Davao City--Mi      3.86 160⇑eP     Pb         17 06 40.2 -3.4
DAV    Davao City (W)      3.90 159   LR      LR         17 08 19.1
              comp=Z,249nm,20.7s,baz=138,slow=42
DAV    Davao City (W)      3.90 159   Pn      Pn         17 06 35.1 -0.2
LQP    Lukban              4.23 323⇓eP     Pn         17 06 41.4 +1.4
TOLI2  Tolitoli           10.13 200   Pn      Pn         17 08 02.0 +1.1
TNTI   Ternate            10.39 162   Pn      Pn         17 08 05.6 +1.1
SIJI   Sorong             13.52 148   LR      LR         17 14 46.8
              comp=Z,63nm,18.5s,baz=64,slow=41
TTSI   Tana Toraja        14.35 198   P       P          17 09 03.1 -2.6
              35nm,0.9s
KAPI   Kappang            16.24 196   Pn      P          17 09 26.0 -0.8
              0.2nm,0.3s,baz=34,slow=5.5,SNR=5.4
KAPI   Kappang            16.24 196   IAmb    IAmb       17 09 29.8
              comp=Z,27nm,0.9s
BKSI   Bulukumba          16.44 194   P       P          17 09 32.5 +3.5
              comp=Z,9.7nm,0.9s
BSSI   Bau Bau, Buton     17.15 192   P       P          17 09 39.4 +2.5
              comp=Z,7.7nm,0.5s
EDFI   Ende, Flores       19.50 187   P       Pn         17 10 04.0 -0.1
              comp=Z,5.6nm,0.7s
SOEI   Soe                20.35 180   P       Pn         17 10 13.7 -0.5
SOEI                                  IAmb    IAmb       17 10 32.5
              comp=Z,26nm,1.0s
SOEI   Soe                20.35 180   P       Pn         17 10 17.2 +3.0
KMMI   Kalianget          20.37 210   P       P          17 10 13.2 +1.0
              comp=Z,46nm,1.2s
GUMO   Guam               20.44  80   LR      LR         17 16 01.6
              comp=Z,78nm,21.8s,baz=268,slow=31
SRBI   Singaraja          20.70 206   P       P          17 10 16.3 +0.5
              comp=Z,43nm,0.8s
BATI   Baumata            20.80 181   P       P          17 10 18.1 +1.2
              comp=Z,14nm,0.5s,baz=352,slow=1.9,SNR=5.9
BATI   Baumata            20.80 181   P       Pn         17 10 19.2 -0.2
              comp=Z,15nm,1.0s
CMAR   Chiang Mai Arr     25.56 290   P       P          17 11 05.6 +1.0
              comp=Z,0.7nm,0.7s,baz=104,slow=9.1,SNR=5.1
KNRA   Kununurra          26.63 170   P       P          17 11 14.5 +0.3
KNRA                                  IAmb    IAmb       17 11 20.1
              comp=Z,9.7nm,0.8s
KSRS   Korea Array        26.83   7   P       P          17 11 17.1 +1.3
              comp=Z,1.3nm,0.7s,baz=184,slow=10,SNR=7.1
FITZ   Fitzroy Crossi     28.68 177   P       P          17 11 32.1 -0.4
              comp=Z,1.5nm,0.7s,baz=357,slow=11,SNR=2.5
FITZ   Fitzroy Crossi     28.68 177   IAmb    IAmb       17 11 55.2
              comp=Z,9.2nm,1.4s
WRA    Warramunga Arr     32.08 162   P       P          17 12 02.7 +0.1
              comp=Z,1.6nm,0.6s,baz=342,slow=9.1,SNR=17
WRA                                   PcP     PcP        17 14 51.7 -0.5
              comp=Z,1.4nm,0.7s,baz=339,slow=3.1,SNR=9.1
WB2    Warramunga Arr     32.09 162   P       P          17 12 03.1 +0.4
WB2                                   IAmb    IAmb       17 12 10.2
              comp=Z,11nm,1.4s
WR0    Warramunga Arr     32.16 161   P       P          17 12 05.0 +1.7
WR0                                   IAmb    IAmb       17 12 18.0
              comp=Z,5.9nm,1.2s
USRK   Ussuriysk Ar.      34.03  10   P       P          17 12 19.5 +0.1
              comp=Z,3.6nm,1.0s,baz=190,slow=9.2,SNR=6.1
MDJ    Mudanjiang         34.09   7   P       P          17 12 19.6 -0.3
MDJ                                   IAmb    IAmb       17 12 22.4
              comp=Z,8.1nm,1.0s
AS31   Alice Springs      35.48 164   P       P          17 12 32.8 +0.6
AS31                                  IAmb    IAmb       17 12 34.1
              comp=Z,3.2nm,0.6s
ASAR   Alice Springs      35.49 164   P       P          17 12 32.9 +0.6
              comp=Z,6.7nm,0.5s,baz=344,slow=7.0,SNR=104
ASAR                                  PcP     PcP        17 15 01.3 -0.5
              comp=Z,1.2nm,0.7s,baz=346,slow=2.9,SNR=7.2
ASAR   Alice Springs      35.49 164   P       P          17 12 32.5 +0.3
ULN    Ulaanbaatar        39.72 342   P       P          17 13 08.0  0.0
SONM   Songino Array      39.90 341   P       P          17 13 10.7 +1.2
              comp=Z,1.5nm,0.9s,baz=161,slow=9.4,SNR=4.7
SONM   Songino Array      39.90 341   IAmb    IAmb       17 13 12.9
              comp=Z,2.1nm,1.1s
BBOO   Buckleboo          44.76 166   P       P          17 13 49.5 +0.5
STKA   Stephens Creek     45.53 159   P       P          17 13 56.4 +1.2
              comp=Z,8.9nm,0.7s,baz=333,slow=7.7,SNR=21
STKA   Stephens Creek     45.53 159   P       P          17 13 56.4 +1.2
MK31   Makanchi Array     50.42 323   P       P          17 14 31.9 -1.0
MK31                                  IAmb    IAmb       17 14 42.9
              comp=Z,3.5nm,1.2s
MKAR   Makanchi Array     50.42 323   P       P          17 14 33.5 +0.6
              comp=Z,2.0nm,0.8s,baz=126,slow=8.2,SNR=9.1
MKAR                                  PcP     PcP        17 15 50.9 -0.4
              comp=Z,0.9nm,0.8s,baz=114,slow=5.2,SNR=2.8
MKAR   Makanchi Array     50.42 323   P       P          17 14 31.5 -1.5
MAKZ   Makanchi           50.61 323   P       P          17 14 34.5 +0.1
ZALV   Zalesovo Beam      53.24 332   P       P          17 14 53.6 -0.2
              comp=Z,0.8nm,0.6s,baz=114,slow=7.1,SNR=3.1
KURK   Kurchatov          54.53 326   P       P          17 15 03.1 -0.2
KURBB  Kurchatov Arra     54.53 326   P       P          17 15 03.4 +0.1
              comp=Z,2.8nm,0.8s,baz=125,slow=6.9,SNR=12
GAR    Garm               55.41 310   P       P          17 15 09.5 -0.6
GAR                                   IAmb    IAmb       17 15 13.3
              comp=Z,7.8nm,0.9s
KK31   Karatay Array      56.46 315   P       P          17 15 16.4 -1.0
KK31                                  IAmb    IAmb       17 15 20.1
              comp=Z,10nm,1.4s
KKAR   Karatay Array      56.46 315   P       P          17 15 15.8 -1.6
KKAR                                  IAmb    IAmb       17 15 20.1
              comp=Z,10nm,1.4s
KKAR   Karatay Array      56.46 315   P       P          17 15 15.9 -1.5
BVAR   Borovoye Array     60.12 326   P       P          17 15 43.8 +1.0
              comp=Z,2.4nm,0.9s,baz=193,slow=11,SNR=3.7
BRVK   Borovoye           60.19 326   P       P          17 15 44.5 +1.3
BRVK                                  IAmb    IAmb       17 15 51.4
              comp=Z,5.4nm,0.8s
TIXI   Tiksi              60.95   2   P       P          17 15 48.0 -0.1
NRIK   Noril'sk           63.07 346   P       P          17 16 02.3 -0.1
              comp=Z,1.1nm,0.2s,baz=187,slow=8.1,SNR=2.2
ABKAR  Akbulak array      65.18 319   P       P          17 16 15.6 -1.0
AKTO   Aktyubinsk         66.65 320   P       P          17 16 27.1 +1.0
              comp=Z,1.6nm,0.8s,baz=95,slow=3.2,SNR=2.6
ARU    Arti               67.71 327   P       P          17 16 32.2 -0.5
              comp=Z,1.2nm,0.7s,baz=141,slow=5.7,SNR=5.7
ARU    Arti               67.71 327   IAmb    IAmb       17 16 40.2
              comp=Z,5.2nm,0.8s
BKZ    Black Stump Fm     69.48 139   P       P          17 16 45.6 +1.6
ARCES  ARCESS Array B     83.04 339   P       P          17 18 00.5 -0.1
              comp=Z,2.8nm,0.8s,baz=64,slow=5.5,SNR=7.5
VNDA   Vanda              90.65 172   P       P          17 18 37.4  0.0
              comp=Z,1.5nm,0.9s,baz=319,slow=5.2,SNR=8.2
GERES  GERESS Array B     95.05 322   P       P          17 18 57.4 -1.2
              comp=Z,0.3nm,0.5s,baz=49,slow=7.9,SNR=3.8
PLCA   Paso Flores       147.41 159   PKPbc   PKPbc      17 25 20.0 +0.2
              comp=Z,2.6nm,0.6s,baz=274,slow=3.3,SNR=8.9
PLCA   Paso Flores       147.41 159           PKPdf      17 25 16.4 -0.9
LPAZ   La Paz            166.83 116   PKP     PKPdf      17 25 43.8 +0.9
              comp=Z,1.7nm,0.9s,baz=33,slow=2.1,SNR=5.2
LPAZ   La Paz            166.83 116           PKPdf      17 25 42.2 -0.7
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*TUL **02** 17:14:36.1±0.9, 35°.75N±0°.02×97°.36W±0°.02, h4^{km}±6^{km}, ML2.8, mb_Lg2.7/34(NEIC), Error ellipse: s-maj=2.9km s-min=1.7km az=129.0*

NEIC 02 17:14:36.3±0.7**, 35°.76N**±0°.02×**97°.38W**±0°.02**, h7**^{km}±6^{km}**, Error ellipse: s-maj=2.8km s-min=1.1km az=140.0, Oklahoma**

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Code   Station Name         Δ°  AZ°     Phase ID           Time      Res
                                      Op      ISC        h  m  s     ISC
OK005  Luther M Schoo      0.18 124   Pg      Pg         17 14 39.4 -0.6
OK005                                 Sg      Sg         17 14 42.9 +0.4
OKCFA  Oklahoma City       0.35 190           Pg         17 14 43.1  0.0
OKCFA                                 Sg      Sg         17 14 48.1 +0.5
OKCSW  OKLAHOMA CITY       0.35 188           Pg         17 14 43.1 -0.1
FNO    Franklin            0.50 182           Pg         17 14 45.9 -0.1
FNO                                   Sg      Sg         17 14 52.9 +0.4
X34A   Smith Ranch, M      1.21 198           Pg         17 14 59.1 -0.5
TUL1   Leonard             1.30  83           Pn         17 14 59.5 -1.5
T35A   Sooner Cattle       1.35  31           Pn         17 15 01.1 -0.6
U32A   Winter Ranch,       1.45 296   Pn      Pn         17 15 03.3 +0.2
U32A                                          Sg         17 15 23.0 -0.1
WMOK   Wichita Mounta      1.53 229           Pn         17 15 04.1 -0.1
X37A   Clayton             2.02 125           Pn         17 15 11.2 +0.4
X37A                                  IAmb_Lg            17 15 39.4
              comp=Z,30nm,1.2s
Z35A   Perchaven, San      2.42 177   Pn      Pn         17 15 16.3 -0.1
Z35A                                  IAmb_Lg            17 15 54.2
              comp=Z,30nm,1.3s
U38A   Gravette            2.52  73           Pn         17 15 17.3 -0.4
HHAR   Hobbs               2.84  78           Pn         17 15 22.0 -0.1
MIAR   Mount Ida           3.34 110   Pn      Pn         17 15 28.9 -0.2
KSU1   Kansas State U      3.39  10   IAmb_Lg            17 16 27.9
              comp=Z,21nm,0.8s
CBKS   Cedar Bluff         3.58 329   IAmb_Lg            17 16 35.8
              comp=Z,29nm,0.7s
AMTX   Amarillo            3.62 257           Pn         17 15 32.9 -0.2
ABTX   Abilene, Hawle      3.65 212   IAmb_Lg            17 16 31.1
              comp=Z,12nm,0.7s
U40A   Yellville           3.72  79           Pn         17 15 34.3 +0.1
WHAR   Wooly Hollow        4.18  95   Pn      Pn         17 15 40.0 -0.6
WHAR                                  IAmb_Lg            17 16 51.6
              comp=Z,17nm,1.1s
FCAR   Ozark Folk Cen      4.27  87   Pn      Pn         17 15 41.8 -0.1
FCAR                                  IAmb_Lg            17 17 03.2
              comp=Z,10nm,0.8s
MGMO   Mountain Grove      4.35  70   IAmb_Lg            17 16 57.8
              comp=Z,15nm,0.7s
R40A   Maddies Statio      4.81  57   IAmb_Lg            17 17 18.8
              comp=Z,13nm,0.8s
P38A   Dawn                4.92  37   IAmb_Lg            17 17 09.3
              comp=Z,10nm,0.8s
LCAR   Lake Charles        5.06  85   IAmb_Lg            17 17 19.6
              comp=Z,16nm,1.3s
T42A   Van Buren           5.23  74   IAmb_Lg            17 17 22.8
              comp=Z,8.3nm,0.7s
KSCO   Kaye Shedlock'      5.29 309   IAmb_Lg            17 17 35.4
              comp=Z,12nm,0.7s
JCT    Junction City       5.64 202   IAmb_Lg            17 17 51.2
              comp=Z,14nm,0.9s
PBMO   Poplar Bluff        5.71  78   IAmb_Lg            17 17 43.6
              comp=Z,15nm,0.7s
T25A   Trinidad            5.83 286   IAmb_Lg            17 17 52.0
              comp=Z,12nm,0.8s
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*NEIC **02** 17:35:39.2±0.4, 35°.943N±0°.004×97°.36W±0°.02, h5^{km}±2^{km}, Error ellipse: s-maj=3.0km s-min=2.7km az=162.0*

*TUL **02** 17:35:39.4±1.5, 35°.918N±0°.010×97°.33W±0°.02, h7^{km}±6^{km}, ML3.7, mb_Lg3.4/99(NEIC), Error ellipse: s-maj=2.1km s-min=0.8km az=127.0*

*ANF **02** 17:35:41.5±1.2, 35°.95N×97°.33W, h26^{km}±10^{km}, ML4.2/17, Error ellipse: s-maj=4.0km s-min=2.8km az=176.0*

ISC 02 17:35:39.2±1.1**, 35°.94N**±0°.02×**97°.33W**±0°.02**, h7**^{km}±9^{km}**, n110, σ0^s.72**/111**, Oklahoma**

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Code   Station Name         Δ°  AZ°     Phase ID           Time      Res
                                      Op      ISC        h  m  s     ISC
OK005  Luther M Schoo      0.31 158   Pg      Pg         17 35 45.4 +0.2
OK005                                 Sg      Sg         17 35 49.6 +0.2
OK009  Oakdale Elemen      0.37 191           Pg         17 35 46.5 +0.2
OK001  Jones High Sch      0.38 175   Pg      Pg         17 35 46.6 -0.1
OK001                                 Sg      Sg         17 35 51.9 +0.2
OKCFA  Oklahoma City       0.54 190           Pg         17 35 49.5  0.0
OKCFA  Oklahoma City       0.54 190   P       Pg         17 35 49.5  0.0
              baz=8.3,SNR=34
OKCFA                                 S       Sg         17 35 56.9 +0.4
              baz=8.3
OKCSW  OKLAHOMA CITY       0.54 189           Pg         17 35 49.5 -0.1
OKCSW                                 Sg      Sg         17 35 56.8  0.0
FNO    Franklin            0.69 185   Pg      Pg         17 35 52.1 -0.3
FNO                                   Sg      Sg         17 36 01.3  0.0
T35A   Sooner Cattle       1.18  34           Pg         17 36 01.4 -0.3
T35B   Sooner Cattle       1.18  34   P       Pg         17 36 01.5 -0.3
              baz=215,SNR=266
T35B                                  S       Sb         17 36 17.6 +0.3
              baz=215
TUL1   Leonard             1.25  91   P       Pn         17 36 01.9 -1.2
              baz=272,SNR=48
TUL1                                  S       Sg         17 36 19.3 -0.2
              baz=272
TUL1   Leonard             1.25  91   P       Pn         17 36 01.9 -1.2
              baz=272,SNR=97
TUL1                                  S       Sg         17 36 19.1 -0.4
              baz=272
X34A   Smith Ranch, M      1.40 197   Pn      Pn         17 36 05.1 -0.1
U32A   Winter Ranch,       1.42 288           Pn         17 36 05.2 -0.2
U32A   Winter Ranch,       1.42 288   P       Pn         17 36 05.5  0.0
              baz=108
U32A                                  S       Sg         17 36 25.2 +0.5
              baz=108
WMOK   Wichita Mounta      1.69 225           Pn         17 36 09.1 -0.1
WMOK                                  IAmb_Lg            17 36 33.5
              comp=Z,143nm,0.7s
WMOK   Wichita Mounta      1.69 225   P       Pn         17 36 09.5 +0.3
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	baz=44						
WMOK				S	Sb	17 36 32.0	-0.1
	baz=44						
WMOK	Wichita Mounta	1.69	225	P	Pn	17 36 09.3	+0.2
	baz=44,SNR=145						
WMOK				S	Sb	17 36 31.8	-0.3
	baz=44						
X37A	Clayton	2.10	130		Pn	17 36 15.1	+0.4
X37A				IAmb_Lg		17 36 47.1	
	comp=Z,232nm,1.0s						
X37A	Clayton	2.10	130	P	Pn	17 36 15.3	+0.6
	baz=310,SNR=121						
X37A				S	Sb	17 36 42.8	-1.0
	baz=310						
U38A	Gravette	2.44	77		Pn	17 36 19.9	+0.5
Z35A	Perchaven, San	2.61	179		Pn	17 36 21.9	+0.1
Z35A				IAmb_Lg		17 37 07.1	
	comp=Z,90nm,1.0s						
Z35A	Perchaven, San	2.61	179	S	Sn	17 36 55.2	+1.5
	baz=358						
R32A	Long Quarter,	2.71	336		Pn	17 36 23.2	+0.1
R32A				IAmb_Lg		17 37 12.8	
	comp=Z,105nm,0.9s						
R32A	Long Quarter,	2.71	336	S	Sn	17 36 57.6	+1.4
	baz=156						
HHAR	Hobbs	2.77	82		Pn	17 36 24.3	+0.3
W39A	Magazine	2.99	103		Pn	17 36 27.3	+0.3
W39A				IAmb_Lg		17 37 21.9	
	comp=Z,156nm,1.0s						
W39A	Magazine	2.99	103	P	Pn	17 36 27.6	+0.5
	baz=286,SNR=70						
W39A				S	Sn	17 37 04.5	+1.4
	baz=286						
W39A	Magazine	2.99	103	P	Pn	17 36 27.5	+0.5
	baz=286,SNR=24						
W39A				S	Sn	17 37 05.0	+1.9
	baz=286						
KSU1	Kansas State U	3.20	10		Pn	17 36 31.3	+1.3
KSU1				IAmb_Lg		17 37 26.4	
	comp=Z,88nm,0.8s						
KSU1	Kansas State U	3.20	10	P	Pn	17 36 30.8	+0.8
	baz=191,SNR=22						
KSU1				Sb	Sg	17 37 20.8	-1.3
	baz=191						
KSU1	Kansas State U	3.20	10	P	Pn	17 36 31.3	+1.3
	baz=191,SNR=7.3						
Z38A	Mt. Pleasant	3.31	143		Pn	17 36 31.7	+0.3
Z38A				IAmb_Lg		17 37 31.5	
	comp=Z,121nm,0.8s						
Z38A	Mt. Pleasant	3.31	143	P	Pn	17 36 31.9	+0.5
	baz=325						
MIAR	Mount Ida	3.38	113	Pn	Pn	17 36 33.0	+0.6
MIAR				IAmb_Lg		17 37 34.4	
	comp=Z,109nm,1.1s						
MIAR	Mount Ida	3.38	113	P	Pn	17 36 33.0	+0.6
	baz=295,SNR=32						
MIAR				S	Sn	17 37 13.5	+0.9
	baz=295						
MIAR	Mount Ida	3.38	113	P	Pn	17 36 33.4	+1.1
	baz=295,SNR=82						
MIAR				S	Sn	17 37 14.1	+1.5
	baz=295						
CBKS	Cedar Bluff	3.45	327	IAmb_Lg		17 37 30.7	
	comp=Z,90nm,0.8s						
CBKS	Cedar Bluff	3.45	327	S	Sn	17 37 14.8	+0.3
	baz=146						
CBKS	Cedar Bluff	3.45	327	S	Sn	17 37 15.0	+0.6
	baz=146						
U40A	Yellville	3.65	82	P	Pn	17 36 36.1	0.0
	baz=265,SNR=6.7						
U40A				S	Sn	17 37 19.1	-0.3
	baz=265						
U40A	Yellville	3.65	82	P	Pn	17 36 36.5	+0.4
	baz=265,SNR=7.4						
U40A				P	Pn	17 36 36.5	+0.4
	baz=265,SNR=7.4						
U40A				S	Sn	17 37 19.4	0.0
	baz=265						
U40A				S	Sn	17 37 19.4	0.0
	baz=265						
S39A	Bolivar	3.66	60		Pn	17 36 37.1	+0.9
S39A				IAmb_Lg		17 37 39.0	
	comp=Z,115nm,0.8s						
S39A	Bolivar	3.66	60	P	Pn	17 36 36.5	+0.3
	baz=243,SNR=11						
S39A				S	Sn	17 37 20.6	+0.9
	baz=243						
AMTX	Amarillo	3.71	255		Pn	17 36 37.4	+0.5
AMTX				IAmb_Lg		17 37 44.5	
	comp=Z,128nm,0.8s						
AMTX	Amarillo	3.71	255	S	Sn	17 37 22.1	+1.1
	baz=72						
ABTX	Abilene, Hawle	3.82	211		Pn	17 36 38.1	-0.5
ABTX	Abilene, Hawle	3.82	211	S	Sn	17 37 23.4	-0.4
	baz=29						
WHTX	Lake Whitney,	3.94	182		Pn	17 36 41.0	+0.8
WHTX	Lake Whitney,	3.94	182	S	Sn	17 37 26.0	-0.6
	baz=1.2						
X40A	Basin Creek Fa	3.96	110		Pn	17 36 40.7	+0.3
X40A	Basin Creek Fa	3.96	110	P	Pn	17 36 40.8	+0.4
	baz=293,SNR=7.3						
X40A				S	Sn	17 37 27.6	+0.6
	baz=293						
X40A	Basin Creek Fa	3.96	110	P	Pn	17 36 40.8	+0.4
	baz=293,SNR=16						
X40A				P	Pn	17 36 40.8	+0.4
	baz=293,SNR=16						
WLAR	White Oak Lake	4.14	122		Pn	17 36 43.2	+0.4
WHAR	Wooly Hollow	4.16	98		Pn	17 36 43.3	+0.1
WHAR				IAmb_Lg		17 37 51.7	
	comp=Z,68nm,0.8s						
W41B	Gary Mavity, V	4.22	99	P	Pn	17 36 44.1	+0.2
	baz=282,SNR=7.0						
W41B				S	Sn	17 37 32.8	-0.5
	baz=282						
W41B	Gary Mavity, V	4.22	99	P	Pn	17 36 44.1	+0.2
	baz=282,SNR=16						
FCAR	Ozark Folk Cen	4.23	89		Pn	17 36 43.6	-0.4
FCAR				IAmb_Lg		17 37 55.6	
	comp=Z,126nm,1.1s						
MGMO	Mountain Grove	4.25	72	IAmb_Lg		17 37 54.1	
	comp=Z,101nm,0.8s						
Z41A	Richland Creek	4.60	124	P	Pn	17 36 49.1	0.0
	baz=307						
Z41A				S	Sn	17 37 41.7	-1.1
	baz=307						
Z41A	Richland Creek	4.60	124	P	Pn	17 36 49.4	+0.3
	baz=307						
Z41A				P	Pn	17 36 49.4	+0.3
	baz=307						
R40A	Maddies Statio	4.68	58		Pn	17 36 50.2	0.0
R40A				IAmb_Lg		17 38 07.5	
	comp=Z,122nm,0.9s						
NATX	Nacogdoches	4.73	151	S	Sn	17 37 44.4	-1.6
	baz=333						
P38A	Dawn	4.75	38		Pn	17 36 51.2	0.0
MSTX	Muleshoe	4.88	248		Pn	17 36 52.6	-0.6
MSTX	Muleshoe	4.88	248	S	Sn	17 37 49.0	-1.0
	baz=64						
CCAR	Cane Creek	5.00	112	IAmb_Lg		17 38 25.8	
	comp=Z,47nm,0.8s						
LCAR	Lake Charles	5.01	87	IAmb_Lg		17 38 19.1	
	comp=Z,62nm,0.8s						
N35A	Tabor	5.09	15		Pn	17 36 56.0	+0.2
N35A				IAmb_Lg		17 38 29.4	
	comp=Z,128nm,0.8s						
N35A	Tabor	5.09	15	P	Pn	17 36 56.1	+0.2
	baz=196,SNR=9.6						
T42A	Van Buren	5.14	76		Pn	17 36 56.5	-0.1
T42A				IAmb_Lg		17 38 27.4	
	comp=Z,136nm,0.8s						
435B	Jarrell	5.15	182	IAmb_Lg		17 38 23.9	
	comp=Z,61nm,0.7s						
435B	Jarrell	5.15	182	S	Sn	17 37 54.7	-1.8
	baz=2.0						
KSCO	Kaye Shedlock'	5.21	308		Pn	17 36 57.5	-0.1
KSCO				IAmb_Lg		17 38 32.7	
	comp=Z,45nm,0.8s						
KSCO	Kaye Shedlock'	5.21	308	S	Sn	17 37 56.7	-1.3
	baz=125						
CCM	Cathedral Cave	5.31	65	IAmb_Lg		17 38 33.3	
	comp=Z,80nm,0.8s						
BGNE	Belgrade	5.49	354	Pn	Pn	17 37 00.9	-0.5
BGNE				IAmb_Lg		17 38 44.4	
	comp=Z,90nm,0.7s						
BGNE	Belgrade	5.49	354	P	Pn	17 37 01.3	-0.2
	baz=173						
BGNE				S	Sn	17 38 03.3	-1.6
	baz=173						
P40A	Paris	5.51	48		Pn	17 37 01.9	+0.2
P40A				IAmb_Lg		17 38 35.1	
	comp=Z,94nm,0.7s						
LPAR	Lepanto	5.73	91	IAmb_Lg		17 38 49.0	
	comp=Z,118nm,0.8s						
N38A	Joes South For	5.81	32		Pn	17 37 05.8	0.0
N38A				IAmb_Lg		17 38 47.4	
	comp=Z,94nm,0.7s						
T25A	Trinidad	5.82	284		Pn	17 37 06.1	0.0
T25A				IAmb_Lg		17 38 55.7	
	comp=Z,41nm,0.8s						
T25A	Trinidad	5.82	284	P	Pn	17 37 06.1	0.0
	baz=100						
JCT	Junction City	5.83	201		Pn	17 37 06.7	+0.6
JCT				IAmb_Lg		17 38 51.4	
	comp=Z,64nm,0.8s						
FVM	French Village	5.89	68	Pn	Pn	17 37 08.1	+1.1
FVM				IAmb_Lg		17 38 50.2	
	comp=Z,90nm,0.7s						
342A	Flagon Creek P	6.18	136	IAmb_Lg		17 38 51.4	
	comp=Z,34nm,1.2s						
OGNE	Ogallala	6.21	325	IAmb_Lg		17 39 06.0	
	comp=Z,69nm,0.8s						
HALT	Halls	6.49	88	IAmb_Lg		17 39 10.4	
	comp=Z,79nm,0.7s						
OXF	Oxford	6.64	100	Pn	Pn	17 37 15.9	-1.2
OXF				IAmb_Lg		17 39 25.7	
	comp=Z,41nm,0.7s						
OXF	Oxford	6.64	100	P	Pn	17 37 16.0	-1.2
	baz=285						
W45A	Hickory Valley	6.69	94	IAmb_Lg		17 39 18.8	
	comp=Z,61nm,0.7s						
SCIA	State Center	6.76	27	IAmb_Lg		17 39 19.7	
	comp=Z,40nm,0.8s						
SDCO	Great Sand Dun	6.79	288	Pn	Pn	17 37 20.9	+1.4
SDCO	Great Sand Dun	6.79	288	P	Pn	17 37 20.5	+1.0
	baz=103						
K38A	Parkersburg	7.57	26	IAmb_Lg		17 39 54.0	
	comp=Z,30nm,0.7s						
PLAL	Pickwick Lake	7.62	95	IAmb_Lg		17 39 47.0	
	comp=Z,27nm,1.0s						
L40A	Anamosa	7.74	36	IAmb_Lg		17 39 49.9	
	comp=Z,31nm,0.8s						
ECSD	EROS Data Cent	7.80	4	IAmb_Lg		17 39 47.4	
	comp=Z,29nm,0.9s						
ECSD	EROS Data Cent	7.80	4	P	Pn	17 37 32.2	-0.9
	baz=184						
HDIL	Hopedale	7.82	52	P	Pn	17 37 33.7	+0.4
	baz=236						
Y22D	IRIS PASSCAL I	8.08	259	IAmb_Lg		17 40 15.6	
	comp=Z,63nm,0.7s						
O44A	Mansfield	8.16	56	IAmb_Lg		17 40 10.4	
	comp=Z,75nm,0.9s						
PHWY	Pilot Hill	8.31	313	IAmb_Lg		17 40 22.6	
	comp=Z,29nm,0.7s						
L42A	Oliver, Polo	8.50	42	IAmb_Lg		17 40 17.9	
	comp=Z,55nm,0.8s						
I37A	Lemond, Waseca	8.61	19	IAmb_Lg		17 40 22.9	
	comp=Z,27nm,0.8s						
JFWS	Jewell Farm	8.86	36	IAmb_Lg		17 40 22.7	
	comp=Z,38nm,0.7s						
M44A	Midewin, Midew	9.07	50	IAmb_Lg		17 40 33.8	
	comp=Z,59nm,1.0s						
RWWY	Rawlins	9.60	310	IAmb_Lg		17 41 07.9	
	comp=Z,24nm,1.0s						
L44A	Lake County Fo	9.61	47	IAmb_Lg		17 40 56.1	
	comp=Z,48nm,0.8s						
K22A	Casper	9.77	316	IAmb_Lg		17 41 08.3	
	comp=Z,49nm,1.1s						
F33A	5 Mile Ranch,	9.92	4	IAmb_Lg		17 40 56.4	
	comp=Z,18nm,1.0s						

*TUL **02** 17:44:14.5±1.5, 35°.92N±0°.01×97°.33W±0°.02, h5^{km}±7^{km}, ML3.0, mb_Lg2.8/44(NEIC), Error ellipse: s-maj=2.0km s-min=1.6km az=116.0*

NEIC 02 17:44:14.7±0.8**, 35°.93N**±0°.01×**97°.34W**±0°.02**, h7**^{km}±7^{km}**, Error ellipse: s-maj=2.3km s-min=1.6km az=127.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
OK005	Luther M Schoo	0.30	156	Pg	Pg	17 44 19.4	-1.2
OK005				Sg	Sg	17 44 24.9	+0.3
OKCFA	Oklahoma City	0.52	190	Pg	Pg	17 44 24.6	-0.2
OKCSW	OKLAHOMA CITY	0.53	188		Pg	17 44 24.5	-0.5
FNO	Franklin	0.68	184		Pg	17 44 27.2	-0.5
T35A	Sooner Cattle	1.19	34		Pg	17 44 36.8	-0.7
TUL1	Leonard	1.26	91		Pn	17 44 37.2	-1.5
X34A	Smith Ranch, M	1.39	197		Pn	17 44 40.2	-0.3
U32A	Winter Ranch,	1.41	289		Pn	17 44 40.6	-0.2
WMOK	Wichita Mounta	1.67	225		Pn	17 44 44.6	+0.2
X37A	Clayton	2.10	129		Pn	17 44 50.6	+0.4
X37A				IAmb_Lg		17 45 22.6	
	comp=Z,71nm,1.0s						
U38A	Gravette	2.44	77		Pn	17 44 55.3	+0.3
Z35A	Perchaven, San	2.60	178	Pn	Pn	17 44 56.8	-0.2
HHAR	Hobbs	2.78	82		Pn	17 44 59.2	-0.4
W39A	Magazine	2.99	103		Pn	17 45 02.9	+0.3
KSU1	Kansas State U	3.22	10	IAmb_Lg		17 46 04.9	
	comp=Z,19nm,0.9s						
Z38A	Mt. Pleasant	3.30	143		Pn	17 45 05.5	-1.3
MIAR	Mount Ida	3.38	113		Pn	17 45 08.6	+0.8
U40A	Yellville	3.66	82		Pn	17 45 11.0	-0.7
S39A	Bolivar	3.67	60	Pn	Pn	17 45 12.3	+0.4
S39A				IAmb_Lg		17 46 14.3	
	comp=Z,25nm,1.0s						
AMTX	Amarillo	3.69	255		Pn	17 45 14.1	+1.8
X40A	Basin Creek Fa	3.96	110	IAmb_Lg		17 46 24.1	
	comp=Z,25nm,0.7s						
WLAR	White Oak Lake	4.14	122	IAmb_Lg		17 46 29.4	
	comp=Z,18nm,0.8s						
WHAR	Wooly Hollow	4.17	97	Pn	Pn	17 45 18.7	+0.1
WHAR				IAmb_Lg		17 46 25.2	
	comp=Z,30nm,0.9s						
FCAR	Ozark Folk Cen	4.24	89		Pn	17 45 17.5	-2.1
FCAR				IAmb_Lg		17 46 27.4	
	comp=Z,26nm,0.7s						
MGMO	Mountain Grove	4.26	72	IAmb_Lg		17 46 31.1	
	comp=Z,20nm,0.8s						
R40A	Maddies Statio	4.69	58	Pn	Pn	17 45 26.1	+0.3
MSTX	Muleshoe	4.87	248		Pn	17 45 28.8	+0.3
LCAR	Lake Charles	5.02	87	IAmb_Lg		17 46 57.7	
	comp=Z,16nm,0.9s						
N35A	Tabor	5.10	15	IAmb_Lg		17 47 09.6	
	comp=Z,18nm,0.7s						
435B	Jarrell	5.14	182	IAmb_Lg		17 47 05.7	
	comp=Z,15nm,0.8s						
T42A	Van Buren	5.15	76	Pn	Pn	17 45 32.1	-0.1
T42A				IAmb_Lg		17 47 03.2	
	comp=Z,20nm,0.9s						
KSCO	Kaye Shedlock'	5.21	308	IAmb_Lg		17 47 14.1	
	comp=Z,17nm,0.8s						
CCM	Cathedral Cave	5.32	65	IAmb_Lg		17 47 03.6	
	comp=Z,12nm,0.7s						
JCT	Junction City	5.82	201	IAmb_Lg		17 47 26.1	
	comp=Z,10nm,0.8s						
T25A	Trinidad	5.82	284	IAmb_Lg		17 47 21.6	
	comp=Z,12nm,0.8s						
N38A	Joes South For	5.83	32	IAmb_Lg		17 47 28.2	
	comp=Z,16nm,0.7s						
FVM	French Village	5.91	68	IAmb_Lg		17 47 22.2	
	comp=Z,10nm,0.7s						
L34A	Svendsen Farm,	6.07	7	IAmb_Lg		17 47 43.7	
	comp=Z,20nm,0.8s						
SIUC	Southern Illin	6.76	72	IAmb_Lg		17 47 49.4	
	comp=Z,19nm,0.8s						
SDCO	Great Sand Dun	6.79	288	Pn	Pn	17 45 56.2	+1.3
WVT	Waverly	7.71	86	IAmb_Lg		17 48 21.1	
	comp=Z,8.6nm,1.1s						

IDC 02 18:11:01.5±7.4**, 4°.21S**×**106°.16W, h0**^{km}**, mb3.5**/3**, mb1 4.0**/3**, mb1mx3.6**/34**, mbtmp3.5**/3**, Error ellipse: s-maj=362.7km s-min=64.0km az=108.0, Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
TXAR	Lajitas Array	33.44	4	P	P	18 17 42.3	0.0
	0.3nm,0.7s,baz=188,slow=11,SNR=3.8						
PDAR	Pinedale Array	46.86	357	P	P	18 19 33.2	-0.4
	0.5nm,0.7s,baz=158,slow=7.4,SNR=5.0						
ILAR	Eielson Array	75.05	343	P	P	18 22 45.2	+0.4
	1.0nm,0.8s,baz=161,slow=5.7,SNR=6.5						
H11N3	WAKE ISLAND Hy	88.52	290	T	T	20 03 05.8	
	baz=96,slow=74,SNR=33						
H11N2	WAKE ISLAND Hy	88.53	290	T	T	20 03 11.1	
	baz=96,slow=74,SNR=36						
H11N1	WAKE ISLAND Hy	88.54	290	T	T	20 03 08.3	
	baz=96,slow=74,SNR=29						
H11S2	WAKE ISLAND Hy	88.61	289	T	T	20 03 15.7	
	baz=94,slow=74,SNR=16						
H11S1	WAKE ISLAND Hy	88.61	289	T	T	20 03 14.2	
	baz=94,slow=74,SNR=25						
H11S3	WAKE ISLAND Hy	88.63	289	T	T	20 03 13.0	
	baz=94,slow=74,SNR=15						
CMAR	Chiang Mai Arr	151.67	302	PKPbc	PKPbc	18 30 58.5	-0.5
	0.3nm,0.8s,baz=51,slow=1.7,SNR=2.3						

*NEIC **02** 18:18:46.9±0.5, 30°.46S±0°.05×72°.75W±0°.06, h7^{km}±9^{km}, mb4.5/2, Error ellipse: s-maj=9.3km s-min=5.2km az=47.0*

*IDC **02** 18:18:48.8±2.9, 30°.22S×72°.63W, h0^{km}, mb3.8/1, mb1 3.7/4, mb1mx3.5/28, mbtmp3.7/4, ML3.5/3, Error ellipse: s-maj=120.3km s-min=40.1km az=109.0*

ISC 02 18:18:47.6±1.1**, 30°.44S**±0°.06×**72°.7W**±0°.1**, h10**^{km}**, n23,** σ**0^{s}.99**/23**, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.95	104		Pb	18 19 05.8	-0.4
CO05	La Serena	1.37	68		Pb	18 19 12.9	-0.4
GO04	Tololo Observa	1.67	81		Pb	18 19 17.5	-1.1
CO03	El Pedregal	1.78	103		Pn	18 19 18.7	+0.2
AC04	Llanos de Chal	2.65	33		Pn	18 19 30.4	+0.1
VA01	Torpederas	2.73	161	Pn	Pn	18 19 30.8	-0.6
VA03	San Esteban	2.96	142		Pn	18 19 34.3	-0.3
MT02	Curacav	3.11	155	Pn	Pn	18 19 36.1	-0.6
VA05	Santo Domingo	3.34	164	Pn	Pn	18 19 39.3	-0.5
MT01	Popeta	3.63	160	Pn	Pn	18 19 43.2	-0.6
MT09	Talagante	3.63	157		Pn	18 19 44.3	+0.3
ZON	Zonda	3.63	109		Pn	18 19 44.8	+0.9
BO01	Tunca	4.17	161	Pn	Pn	18 19 50.7	-0.6
GO05	Huala	4.60	172	Pn	Pn	18 19 56.1	-1.1
BO02	Sierra Bellavi	4.63	160		Pn	18 19 57.5	-0.2
AC02	Maricunga	4.77	42		Pn	18 20 01.5	+1.5
LVC	Limon Verde	8.51	24	Pn	Pn	18 20 50.7	-0.5
	0.4nm,0.3s,baz=160,slow=12,SNR=2.2						
LVC				Sn	Sn	18 22 25.6	-1.9
	0.0nm,0.3s,baz=68,slow=19,SNR=1.3						
LPAZ	La Paz	14.70	18	Pn	Pn	18 22 15.6	-0.7
	0.1nm,0.3s,baz=191,slow=10,SNR=3.6						
SIV	San Ignacio	17.90	39	P	Pn	18 22 56.5	-0.3
	0.2nm,0.3s,baz=210,slow=10.0,SNR=9.1						
MTO3	Montecristo	47.38	338	P	P	18 27 22.0	-0.3
MTO3				IAmb	IAmb	18 27 22.9	
	comp=Z,8.7nm,1.0s						
TORD	Torodi Ar. Bea	83.55	71	P	P	18 31 18.6	+2.3
	comp=Z,0.6nm,0.7s,baz=253,slow=4.5,SNR=3.2						
TORD	Torodi Ar. Bea	83.55	71	IAmb	IAmb	18 31 32.8	
	comp=Z,1.7nm,1.2s						
ZALV	Zalesovo Beam	151.44	28	PKPbc	PKiKP	18 38 43.3	+1.6
	comp=Z,0.7nm,0.6s,baz=322,slow=4.4,SNR=3.8						

*IDC **02** 18:31:28.3±0.9, 0°.03N×125°.51E, h0^{km}, mb3.9/6, mb1 4.0/8, mb1mx3.6/59, mbtmp3.9/8, ML3.6/2, Error ellipse: s-maj=47.8km s-min=16.6km az=63.0*

*DJA **02** 18:31:34.8±1.1, 0°N±3°×12°6E±°, h19^{km}±10^{km}, M3.6/13, mb3.9/3, MLv3.5/13*

ISC 02 18:31:35.8±0.9**, 0°.04S**±0°.06×**125°.70E**±0°.05**, h49**^{km}**, n22,** σ**1^{s}.76**/25**, mb3.9**/6**, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KMSI	Cibinong	1.82	289	P	Pn	18 32 04.8	+0.1
TNTI	Ternate	1.85	64	P	Pn	18 32 05.8	+0.7
TNTI				S	Sn	18 32 28.0	+0.7
TNTI	Ternate	1.85	64	P	Pn	18 32 07.0	+1.9
LBMI	Labuha	1.90	108	P	Pn	18 32 05.7	0.0
LBMI				S	Sn	18 32 29.2	+0.8
SANI	Sanana	2.02	172	P	Pn	18 32 06.2	-1.2
SANI				S	Sn	18 32 36.6	+5.2
SANI	Sanana	2.02	172	P	Pn	18 32 05.8	-1.6
LUWI	Luwuk	3.09	251	P	Pn	18 32 24.2	+2.1
LUWI	Luwuk	3.09	251	P	Pn	18 32 24.6	+2.5
MRSI	Marisa	3.79	278	P	Pn	18 32 32.7	+1.0
MSAI	Masohi	4.61	136	P	Pn	18 32 44.6	+1.7
TOLI2	Tolitoli	5.05	283	P	Pn	18 32 50.2	+1.2
SIJI	Sorong	5.63	98	Pn	Pn	18 32 57.2	+0.2
	1.2nm,0.3s,baz=267,slow=12,SNR=9.9						
MPSI	Mapaga	5.81	274	P	Pn	18 33 01.7	+2.2
	0.0nm6.6nm,0.7s						
FAKI	Fak Fak	7.14	114	P	Pn	18 33 16.9	-0.9
FAKI	Fak Fak	7.14	114	P	Pn	18 33 18.3	+0.5
FITZ	Fitzroy Crossi	17.95	180	P	Pn	18 35 41.5	-0.4
	0.2nm,0.3s,baz=13,slow=10,SNR=7.5						
WRA	Warramunga Arr	21.52	157	P	P	18 36 19.6	-1.2
	1.8nm,0.4s,baz=336,slow=10,SNR=28						
ASAR	Alice Springs	24.80	162	P	P	18 36 53.3	-0.1
	1.1nm,0.4s,baz=345,slow=7.4,SNR=45						
STKA	Stephens Creek	35.06	156	P	P	18 38 24.2	+0.1
	1.4nm,0.5s,baz=335,slow=9.2,SNR=7.2						
MKAR	Makanchi Array	60.09	327	P	P	18 41 36.5	-1.6
	1.4nm,0.4s,baz=122,slow=8.2,SNR=47						
ZALV	Zalesovo Beam	63.49	334	P	P	18 41 59.4	-1.3
	0.4nm,0.4s,baz=115,slow=5.7,SNR=2.2						
KURBB	Kurchatov Arra	64.37	329	P	P	18 42 04.4	-2.2
	0.6nm,0.4s,baz=135,slow=6.7,SNR=4.2						

*IDC **02** 18:32:57.8±0.7, 51°.66N×173°.29W, h0^{km}, mb4.1/28, mb1 4.3/30, mb1mx4.1/72, mbtmp4.1/30, ML3.8/2, MS3.4/6, Ms1 3.4/6, ms1mx3.0/48, Error ellipse: s-maj=21.0km s-min=11.8km az=172.0*

*NEIC **02** 18:32:59.8±1.7, 51°.54N±0°.07×173°.27W±0°.06, h14^{km}±5^{km}, mb4.2/101, ML3.9(AEIC), Error ellipse: s-maj=10.0km s-min=5.3km az=174.0*

*AEIC **02** 18:33:00±2.8, 51°.42N±0°.07×173°.26W±0°.02, h48^{km}±5^{km}, Error ellipse: s-maj=9.9km s-min=1.7km az=171.0*

ISC 02 18:32:58.8±0.5**, 51°.52N**±0°.08×**173°.20W**±0°.04**, h10**^{km}**, n289,** σ**1^{s}.09**/278**, mb4.3**/45**, MS3.4**/4**, 7C-4D, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KOFP	Korovin Flat P	0.94	324		Pn	18 33 18.5	+0.3
KOSE	Korovin Southe	0.98	328		Pn	18 33 19.4	+0.7
KOSE					Sn	18 33 33.8	+1.1
KOKL	Mount Kliuchef	1.02	323		Pn	18 33 19.6	+0.3
KOWE	Korovin West	1.07	323		Pn	18 33 20.6	+0.7
GSIG	Igitkin Island	1.76	287		Pn	18 33 28.6	-0.7
GSIG					Sn	18 33 49.8	-1.9
GSMY	Great Sitkin M	1.85	288		Pn	18 33 30.3	-0.3
GSTR	Great Sitkin T	1.86	289	Pn	Pn	18 33 30.3	-0.6
GSCK	Great Sitkin C	1.91	286		Pn	18 33 31.0	-0.4
GSTD	Great Sitkin T	1.91	288		Pn	18 33 31.1	-0.3
GSTD					Sb	18 33 56.6	-1.0
ADK	Adak	2.20	281	Pn	Pn	18 33 34.8	-0.6
ADK	Adak	2.20	281		Sn	18 34 03.5	+0.9
KIWB	Kanaga Island	2.48	279		Pn	18 33 39.3	+0.1
KIKV	Kanaga Island	2.50	280		Pn	18 33 39.5	0.0
KIMD	Kanaga Island	2.52	277		Pn	18 33 39.7	-0.2
TAFP	Tanaga Falls P	3.00	279		Sn	18 34 22.2	-0.2
TASE	Tanaga Southea	3.03	278		Pn	18 33 48.0	+1.2
NIKH	Nikolski High	3.04	60		Pn	18 33 47.7	+0.8
NIKH	Nikolski High	3.04	60	P	Pn	18 33 48.6	+1.6
	baz=241						
GAEA	Gareloi East	3.46	277		Pn	18 33 52.8	0.0
OKNC	Okmok New Cone	3.66	56		Pn	18 33 56.8	+1.3
OKFG	Magazine Ridge	3.75	58		Pn	18 33 58.3	+1.7
MSW	Makushin Switc	4.58	56		Pn	18 34 10.0	+1.9
MNAT	Makushin Natee	4.62	57		Pn	18 34 10.2	+1.5
AMKA	Amchitka	4.69	271	Pn	Pn	18 34 10.9	+1.3
UNV	Unalaska Valle	4.69	58	Pn	Pn	18 34 10.1	+0.5
UNV	Unalaska Valle	4.69	58	P	Pn	18 34 11.6	+1.9
	baz=242						
AKBBA	Akutan Broad B	5.11	57		Pn	18 34 17.0	+1.6
LSSE	Little Sitkin	5.13	278		Pn	18 34 16.2	+0.5
LSNW	Little Sitkin	5.17	278		Pn	18 34 15.6	-0.6
AKUT	Akutan	5.21	57	Pn	Pn	18 34 16.5	-0.2
SPIA	Saint Paul Isl	5.93	16		Pn	18 34 28.2	+1.7
FALS	False Pass	6.76	57	Pn	Pn	18 34 39.2	+1.2
FALS	False Pass	6.76	57	P	Pn	18 34 40.6	+2.6
	baz=244						

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SDPT  Sand Point          8.51  58  Pn    Pn    18 35 01.9  0.0
SDPT  Sand Point          8.51  58  P     Pn    18 35 04.9 +2.9
      baz=248
CNBA  Chernabura Isl      8.82  63  Pn    Pn    18 35 04.0 -2.2
CHGN  Chignik             9.95  55  Pn    Pn    18 35 22.6 +1.0
SII   Sitkinak Islan     12.25  58  Pn    Pn    18 35 53.1 -0.1
P18K  Big Mountain,      12.86  45  P     Pn    18 36 03.2 +1.7
      baz=240
OHAK  Old Harbor         12.91  56  Pn    Pn    18 36 00.9 -1.3
OHAK  Old Harbor         12.91  56  P     Pn    18 36 01.9 -0.3
      baz=252
Q19K  Cape Douglas,      13.37  49  Pn    Pn    18 36 06.8 -1.6
Q19K  Cape Douglas,      13.37  49  P     Pn    18 36 08.2 -0.2
      baz=244
KDAK  Kodiak Island      13.45  54  Pn    Pn    18 36 08.8 -0.7
      0.5nm,0.3s,baz=220,slow=3.3,SNR=15
KDAK                                Sn    Sn    18 38 34.1 -4.9
      0.1nm,0.3s,baz=23,slow=20,SNR=1.5
KDAK  Kodiak Island      13.45  54  P     Pn    18 36 10.0 +0.4
      baz=251
N19K  Bonanza Creek      13.93  41        Pn    18 36 17.3 +1.2
N19K  Bonanza Creek      13.93  41  P     Pn    18 36 18.2 +2.1
      baz=236
L19K  White Mountain     14.59  36  Pn    Pn    18 36 24.1 -1.1
L19K  White Mountain     14.59  36  P     Pn    18 36 26.5 +1.4
      baz=231
M19K  Big River Lodg     14.59  37  Pn    Pn    18 36 25.9 +0.7
M19K  Big River Lodg     14.59  37  P     Pn    18 36 28.0 +2.8
      baz=233
TTA   Tatalina           14.68  32  P     Pn    18 36 27.5 +1.1
      baz=226
CNPM  China Poot         14.74  49  Pn    Pn    18 36 26.1 -1.1
BRLK  Bradley Lake       15.00  48  Pn    Pn    18 36 29.8 -0.9
BRLK                                IAmb  IAmb  18 36 54.3
      comp=Z,14nm,1.0s
BRSE  Bradley Lake S     15.06  48  P     Pn    18 36 32.9 +1.4
      baz=246
L20K  Farewell, AK       15.13  36  P     P     18 36 35.6 -2.1
      baz=232
K20K  Telida             15.62  33        Pn    18 36 38.7 -0.1
K20K  Telida             15.62  33  P     Pn    18 36 40.1 +1.3
      baz=229
SKT   Skwentna           15.75  40  P     P     18 36 44.4 -0.1
SKT   Skwentna           15.75  40  P     Pn    18 36 41.5 +0.9
      baz=238
SEW   Seward             15.80  48        Pn    18 36 39.2 -1.9
SEW                                 IAmb  IAmb  18 36 48.4
      comp=Z,47nm,1.4s
SEW   Seward             15.80  48  P     Pn    18 36 40.4 -0.7
      baz=247
SUA   Susitna One        15.81  42  Pn    Pn    18 36 41.7 +0.3
SUA                                 IAmb  IAmb  18 36 53.8
      comp=Z,10nm,1.0s
SUA   Susitna One        15.81  42  P     Pn    18 36 41.8 +0.3
      baz=241
O22K  Cooper Landing     15.82  46        Pn    18 36 39.7 -1.7
O22K  Cooper Landing     15.82  46  P     Pn    18 36 41.0 -0.3
      baz=246
PPLA  Purkeypile         16.01  37  Pn    Pn    18 36 43.2 -0.8
PPLA                                IAmb  IAmb  18 36 44.6
      comp=Z,21nm,1.4s
PPLA  Purkeypile         16.01  37  P     Pn    18 36 43.4 -0.6
      baz=234
J20K  Nowinta River      16.14  31        P     18 36 48.3 -0.5
J20K  Nowinta River      16.14  31  P     Pn    18 36 47.0 +1.4
      baz=227
M22K  Willow             16.22  42  P     P     18 36 48.6 -1.0
      baz=241
CHUM  Lake Minchumin     16.56  34  P     Pn    18 36 49.2 -1.7
      baz=231
PWL   Port Wells         16.60  46  Pn    Pn    18 36 49.3 -2.1
PWL                                 IAmb  IAmb  18 37 02.5
      comp=Z,15nm,1.2s
PWL   Port Wells         16.60  46  P     Pn    18 36 50.4 -1.0
      baz=247
GHO   Glory Hole Cre     16.73  43  Pn    Pn    18 36 52.6 -0.5
GHO                                 IAmb  IAmb  18 36 59.5
      comp=Z,20nm,1.3s
KNK   Knik Glacier       16.77  44        Pn    18 36 54.0 +0.4
KNK   Knik Glacier       16.77  44  P     Pn    18 36 52.9 -0.7
      baz=245
SML   Sawmill            17.00  43  Pn    Pn    18 36 55.0 -1.5
SML                                 IAmb  IAmb  18 37 07.0
      comp=Z,23nm,1.5s
SML   Sawmill            17.00  43  P     Pn    18 36 55.8 -0.7
      baz=244
TRF   Thorofare Moun     17.04  37  Pn    Pn    18 36 55.8 -1.2
TRF   Thorofare Moun     17.04  37  P     Pn    18 36 56.7 -0.3
      baz=236
Q23K  Middleton Isla     17.06  52  P     Pn    18 36 57.2  0.0
      baz=254
BPAW  Bear Paw Mtn.      17.16  34  Pn    Pn    18 36 57.3 -1.1
BPAW  Bear Paw Mtn.      17.16  34  P     Pn    18 36 58.7 +0.3
      baz=233
GLI   Glacier Island     17.17  47  Pn    Pn    18 36 57.5 -1.1
GLI                                 IAmb  IAmb  18 37 20.4
      comp=Z,16nm,1.2s
GLI   Glacier Island     17.17  47  P     Pn    18 36 57.9 -0.7
      baz=248
FID   Port Fidalgo       17.41  48  Pn    Pn    18 36 59.5 -2.0
FID                                 IAmb  IAmb  18 37 06.0
      comp=Z,17nm,1.2s
SCM   Sheep Creek Mo     17.44  44  P     Pn    18 37 02.5 +0.5
SCM                                 IAmb  IAmb  18 37 04.5
      comp=Z,12nm,1.0s
SCM   Sheep Creek Mo     17.44  44  P     Pn    18 37 02.5 +0.5
      baz=245
I21K  Tanana             17.51  31  P     Pn    18 37 02.0 -0.8
      baz=228,SNR=5.5
IMAR  Indian Mountai     17.54  27  Pn    Pn    18 37 00.2 -2.9
RND   Reindeer           17.56  38        Pn    18 37 03.4  0.0
H21K  Melozitna Rive     17.58  29        Pn    18 37 01.6 -2.1
H21K  Melozitna Rive     17.58  29  P     Pn    18 37 03.3 -0.4
      baz=226
EYAK  Cordova Ski Ar     17.68  49  P     Pn    18 37 04.7 -0.1
      baz=251
MCK   McKinley           17.70  37  Pn    Pn    18 37 04.0 -1.1
MCK   McKinley           17.70  37  P     Pn    18 37 04.8 -0.3
      baz=237
PETK  Petropavlovsk-     17.81 287  P     Pn    18 37 05.7 -0.9
      comp=Z,0.3nm,0.3s,baz=86,slow=15,SNR=5.4
PETK                                LR    LR    18 44 06.4
      comp=Z,58nm,18.4s,baz=80,slow=38
MLY   Manley             17.82  32        Pn    18 37 06.8 +0.1
MLY   Manley             17.82  32  P     Pn    18 37 07.0 +0.4
      baz=231
KLU   Klutina            17.92  46  P     Pn    18 37 08.1 +0.1
KLU   Klutina            17.92  46  P     Pn    18 37 07.8 -0.2
      baz=248
M24K  Tolsona, Glenn     18.05  44  P     Pn    18 37 09.7 +0.2
M24K                                IAmb  IAmb  18 37 25.6
      comp=Z,25nm,1.1s
M24K  Tolsona, Glenn     18.05  44  P     Pn    18 37 08.7 -0.9
      baz=246
NEA2  Nenana             18.13  35  P     Pn    18 37 10.5 +0.1
NEA2  Nenana             18.13  35  P     Pn    18 37 10.4 +0.1
      baz=235
HMT   Hamilton           18.32  50  P     P     18 37 13.6 +0.7
HMT                                 IAmb  IAmb  18 37 30.6
      comp=Z,22nm,1.0s
BMRM  Bremner River      18.34  48        Pn    18 37 12.0 -1.1
BMRM                                IAmb  IAmb  18 37 30.1
      comp=Z,27nm,1.4s
BMRM  Bremner River      18.34  48  P     Pn    18 37 11.6 -1.5
      baz=252
I23K  Minto, Yukon-K     18.35  33  P     P     18 37 14.3 +1.2
I23K                                IAmb  IAmb  18 37 17.6
      comp=Z,10nm,0.7s
I23K  Minto, Yukon-K     18.35  33  P     P     18 37 13.4 +0.2
      baz=233,SNR=9.2
WRH   Wood River Hil     18.41  36  P     Pn    18 37 12.2 -1.6
SUCK  Suckling Hills     18.48  51  P     P     18 37 14.6 -0.1
SUCK                                IAmb  IAmb  18 37 36.5
      comp=Z,59nm,1.3s
N25K  Chitina, Valde     18.56  46  P     P     18 37 13.1 -2.5
N25K  Chitina, Valde     18.56  46  P     P     18 37 14.6 -0.9
      baz=250
HARP  HAARP              18.60  43  P     P     18 37 14.4 -1.6
      baz=247
BERG  Berg Lake          18.60  50  P     P     18 37 15.2 -0.8
BERG                                IAmb  IAmb  18 37 32.8
      comp=Z,48nm,1.3s
CCB   Clear Creek Bu     18.61  35  P     P     18 37 14.8 -1.2
MDM   Murphy Dome        18.63  34  P     P     18 37 16.0 -0.3
PAX   Paxson             18.70  42  P     P     18 37 15.2 -2.0
PAX   Paxson             18.70  42  P     P     18 37 16.5 -0.7
      baz=245
H23K  Yukon River        18.71  31        P     18 37 16.4 -0.7
H23K  Yukon River        18.71  31  P     P     18 37 16.7 -0.4
      baz=231
HDA   Harding Lake       18.80  37  P     P     18 37 17.1 -1.0
HDA                                 IAmb  IAmb  18 37 25.0
      comp=Z,12nm,0.4s
HDA   Harding Lake       18.80  37  P     Pn    18 37 18.9 +0.3
      baz=239
GLB   Gilahina Butte     18.86  47  P     P     18 37 17.4 -1.5
VRDI  Verde Repeater     18.96  48  P     P     18 37 19.6 -0.5
SNH   Sunshine Point     18.97  51  P     Pn    18 37 21.0 +0.3
POKR  Poker Plat Res     19.00  34  P     Pn    18 37 22.7 +1.7
      baz=236
IL31                     19.01  36  P     P     18 37 18.8 -1.6
IL31                                IAmb  IAmb  18 37 22.8
      comp=Z,9.0nm,0.4s
ILAR  Eielson Array      19.01  36  P     P     18 37 19.2 -1.2
      comp=Z,2.1nm,0.3s,baz=222,slow=8.9,SNR=108
ILAR                                LR    LR    18 44 14.1
      comp=Z,77nm,18.8s,baz=235,slow=36
ILAR  Eielson Array      19.01  36        P     18 37 19.5 -0.9
WAX   Waxell Ridge       19.03  50  P     P     18 37 20.8 +0.1
WAX                                 IAmb  IAmb  18 37 42.9
      comp=Z,22nm,1.1s
TGL   Tana Glacier       19.11  49  P     P     18 37 20.9 -0.8
TGL                                 IAmb  IAmb  18 37 38.9
      comp=Z,8.9nm,0.8s
H24K  Noodor Dome        19.26  32        Pn    18 37 23.9 -0.2
H24K                                IAmb  IAmb  18 37 25.9
      comp=Z,18nm,1.1s
H24K  Noodor Dome        19.26  32  P     Pn    18 37 24.5 +0.3
      baz=234,SNR=11
RIDG  Independent Ri     19.29  40  P     P     18 37 23.8 +0.3
RIDG                                IAmb  IAmb  18 37 31.3
      comp=Z,8.2nm,0.5s
RIDG  Independent Ri     19.29  40  P     P     18 37 23.9 +0.3
      baz=244,SNR=8.7
ISLE  Juniper Island     19.31  50        P     18 37 24.3 +0.4
ISLE                                IAmb  IAmb  18 37 53.8
      comp=Z,9.0nm,0.9s
MESA  MESA               19.40  51  P     P     18 37 24.8 -0.2
MESA                                IAmb  IAmb  18 37 28.9
      comp=Z,53nm,1.5s
MENT  Mentasta           19.42  43  P     Pn    18 37 25.8 -0.3
COLD  Coldfoot           19.43  27  P     P     18 37 25.4 +0.5
      baz=227
J25K  Salcha River,      19.49  37  P     P     18 37 25.3 -0.4
      baz=241,SNR=38
M26K  Nabesna, AK        19.54  44  P     P     18 37 26.5 +0.2
M26K                                IAmb  IAmb  18 37 37.3
      comp=Z,12nm,1.5s
M26K  Nabesna, AK        19.54  44  P     P     18 37 26.2 -0.1
      baz=250
YAH   Yahtse             19.54  51  P     P     18 37 26.2 -0.3
YAH                                 IAmb  IAmb  18 37 54.6
      comp=Z,12nm,0.8s
DOT   Dot Lake           19.57  40  P     P     18 37 26.7 +0.2
DOT                                 IAmb  IAmb  18 37 34.3
      comp=Z,5.3nm,0.5s
L26K  Log Cabin Wild     19.61  43  P     P     18 37 25.7 -1.3
      baz=248
GRNC  Granite Creek      19.62  50  P     Pn    18 37 28.4 -0.3
GRNC                                IAmb  IAmb  18 37 42.7
      comp=Z,8.8nm,0.8s
SCRK  Sand Creek         19.74  40  P     P     18 37 28.0 -0.5
SCRK                                IAmb  IAmb  18 37 41.4
      comp=Z,6.1nm,0.7s
SCRK  Sand Creek         19.74  40  P     P     18 37 27.9 -0.6
      baz=244,SNR=12
TABL  Table Mountain     19.85  51  P     P     18 37 29.4 -0.4
TABL                                IAmb  IAmb  18 37 55.4
      comp=Z,12nm,0.9s
CTG   Chitna Glacier     19.87  49  P     P     18 37 30.5 +0.5
      baz=256
CTGM  Chitina Glacie     19.88  49  P     P     18 37 30.3 +0.2
CTGM                                IAmb  IAmb  18 37 40.9
      comp=Z,10.0nm,0.8s
PRP   Porcupine Dome     19.89  35  P     P     18 37 30.3 +0.1
      baz=238
LOGN  Logan Glacier      20.00  50  P     P     18 37 31.1 -0.4
LOGN                                IAmb  IAmb  18 37 39.5
      comp=Z,19nm,1.2s
J26L  Joseph Creek       20.13  38  P     P     18 37 32.4 -0.4
      baz=244,SNR=20
PCA   Pinnacle           20.21  52  P     P     18 37 34.7 +1.0
PCA                                 IAmb  IAmb  18 37 48.0
      comp=Z,16nm,0.8s
PINM  Pinnacle           20.21  52  P     P     18 37 33.6 -0.1
      baz=259
L27K  Beaver Creek,      20.27  43        P     18 37 34.6 +0.3
L27K  Beaver Creek,      20.27  43  P     Pn    18 37 35.7 -0.5
      baz=250
BCAR  Beaver Creek A     20.29  43  P     P     18 37 35.0 +0.5
YUK3  Moose Creek        20.49  47  P     P     18 37 36.9 +0.1
      baz=255
BCPM  Bancas Point       20.50  53  P     P     18 37 36.5 -0.1
BCPM                                IAmb  IAmb  18 37 51.0
      comp=Z,16nm,1.0s
FYU   Fort Yukon         20.56  32  P     P     18 37 37.8 +0.6
FYU                                 IAmb  IAmb  18 37 39.7
      comp=Z,18nm,1.1s
PNL   Peninsula          20.57  53  P     P     18 37 38.2 +0.7
      baz=261
TOLK  Toolik Lake Re     20.58  25  P     P     18 37 38.6 +1.0
TOLK                                IAmb  IAmb  18 37 47.3
      comp=Z,10nm,0.8s
TOLK  Toolik Lake Re     20.58  25  P     P     18 37 38.4 +0.9
      baz=225,SNR=5.5
EGAK  Eagle              21.19  39  P     P     18 37 44.8 +0.7
EGAK  Eagle              21.19  39  P     P     18 37 44.6 +0.6
      baz=246
BMAR  Burnt Mountain     21.25  31  P     P     18 37 45.4 +0.6
YUK6  Outpost Mounta     21.29  50  P     P     18 37 45.4 -0.1
      baz=259
SEY   Seymchan           21.55 315  LR    LR    18 45 22.6
      comp=Z,82nm,20.5s,baz=109,slow=35
DAWY  Dawson             21.64  42  P     P     18 37 49.5 +0.5
DAWY                                IAmb  IAmb  18 38 14.5
      comp=Z,17nm,1.5s
DAWY  Dawson             21.64  42  P     P     18 37 49.0  0.0
      baz=250
HYT   Haines Junctio     21.68  51  P     P     18 37 49.8 +0.2
M30M  Minto, Yukon       22.35  46  P     P     18 37 55.5 -1.1
      baz=257
I29M  Ogilvie Camp,      22.53  39  P     P     18 37 58.0 -0.5
      baz=249
WHY   Whitehorse         22.94  52  P     P     18 38 03.4 +0.5
WHY                                 IAmb  IAmb  18 38 15.6
      comp=Z,6.1nm,1.0s
MMPY  Sheldon Lake,      24.88  47  P     P     18 38 20.5 -0.9
      baz=263
DLBC  Dease Lake         25.35  57  P     P     18 38 26.2 +0.5
      comp=Z,3.5nm,0.8s,baz=271,slow=7.1,SNR=9.2
DLBC  Dease Lake         25.35  57  P     P     18 38 26.4 +0.7
DLBC                                IAmb  IAmb  18 38 42.7
      comp=Z,3.9nm,0.8s
INK   Inuvik             25.36  34  P     P     18 38 25.6  0.0
      comp=Z,3.8nm,0.4s,baz=234,slow=6.7,SNR=36
INK                                 LR    LR    18 49 30.8
      comp=Z,80nm,18.1s,baz=194,slow=39
INK   Inuvik             25.36  34  P     P     18 38 25.8 +0.2
INK                                 IAmb  IAmb  18 38 27.4
      comp=Z,8.1nm,0.9s
INK   Inuvik             25.36  34  P     P     18 38 24.8 -0.9
      baz=248,SNR=8.4
JKA   Kamikawa-asahi     30.20 273  P     P     18 39 09.6 +0.5
ASAJ  Asahikawa          30.20 273  P     P     18 39 09.6 +0.4
      comp=Z,11nm,1.0s,baz=63,slow=8.6,SNR=4.2
TIXI  Tiksi              32.26 330  P     P     18 39 26.9 -0.1
      comp=Z,0.8nm,0.4s,baz=100,slow=14,SNR=11
TIXI  Tiksi              32.26 330  IAmb  IAmb  18 39 28.7
      comp=Z,2.3nm,0.9s
YKA   Yellowknife Ar     32.58  47  P     P     18 39 30.8 +0.9
      comp=Z,1.4nm,0.8s,baz=293,slow=43,SNR=2.7
YKA                                 LR    LR    18 54 15.3
      comp=Z,89nm,18.5s,baz=0.0,slow=39
KLR   Kul'dur            34.49 288  P     P     18 39 46.5 -0.2
      comp=Z,0.9nm,0.5s,baz=48,slow=10,SNR=2.4
H11N2 WAKE ISLAND Hy     35.37 214  T     T     19 17 50.6
      baz=21,slow=76
H11N3 WAKE ISLAND Hy     35.38 214  T     T     19 17 54.1
      baz=21,slow=76
H11N1 WAKE ISLAND Hy     35.39 214  T     T     19 17 57.8
      baz=21,slow=76
H11S1 WAKE ISLAND Hy     36.57 213  T     T     19 19 12.8
      baz=20,slow=76
H11S2 WAKE ISLAND Hy     36.58 213  T     T     19 19 17.9
      baz=20,slow=76
H11S3 WAKE ISLAND Hy     36.59 213  T     T     19 19 17.8
      baz=20,slow=76
USRK  Ussuriysk Ar.      36.73 281  P     P     18 40 05.8 -0.2
      comp=Z,2.9nm,0.8s,baz=42,slow=8.9,SNR=4.1
MCMT  McKenzie Canyo     39.78  75  P     P     18 40 33.5 +1.5
EGMT  Eagleton           39.99  69  P     P     18 40 31.9 -1.5
      baz=300
NVAR  Mina Array Bea     40.05  87  P     P     18 40 35.4 +1.2
      comp=Z,1.2nm,0.8s,baz=304,slow=6.4,SNR=5.2
BOZ   Bozeman (W)        40.11  73  P     P     18 40 33.2 -1.3
      baz=301
YHH   Holmes Hill        41.01  74  P     P     18 40 44.2 +2.0
YHH                                 IAmb  IAmb  18 40 59.9
      comp=Z,2.8nm,1.0s
BW06  Boulder Array      42.90  76  P     P     18 40 58.4 +0.7
BW06  Boulder Array      42.90  76  P     P     18 40 54.7 -2.9
      baz=305
PD31  Pinedale Array     42.90  76  P     P     18 40 59.6 +2.0
PDAR  Pinedale Array     42.90  76  P     P     18 40 58.9 +1.3
      comp=Z,0.8nm,0.5s,baz=310,slow=3.9,SNR=10
PDAR  Pinedale Array     42.90  76  P     P     18 40 59.3 +1.7
KSRS  Korea Array        43.13 275  P     P     18 41 00.1 +1.0
      comp=Z,1.9nm,0.8s,baz=52,slow=7.5,SNR=6.5
PV13  Radium Mtn., P     46.10  81  P     P     18 41 24.3 +1.1
ULM   Lac du Bonnet      46.64  59  P     P     18 41 28.0 +1.0
      comp=Z,1.1nm,0.4s,baz=307,slow=12,SNR=2.9
ULM                                 LR    LR    19 01 45.2
      comp=Z,66nm,18.2s,baz=27,slow=37
ULM   Lac du Bonnet      46.64  59  IAmb  IAmb  18 41 42.8
      comp=Z,5.0nm,1.2s
SONM  Songino Array      49.67 299  P     P     18 41 51.2 +0.6
      comp=Z,1.7nm,0.6s,baz=49,slow=7.6,SNR=6.6
SONM  Songino Array      49.67 299  IAmb  IAmb  18 41 51.8
      comp=Z,1.1nm,0.6s
ECSD  EROS Data Cent     49.99  67  P     P     18 41 50.6 -2.4
      baz=307
121A  Cookes Peak, D     50.40  86  P     P     18 41 54.2 -2.2
      baz=312
HHC   Hu-ho-hao-te       50.98 289  eP    P     18 42 00.2 -0.4
HHC                                 pmax  pmax
      comp=Z,16nm,0.9s
HHC                                 pmax  pmax
      comp=Z,120nm,6.1s
WMOK  Wichita Mounta     54.47  77  P     P     18 42 27.5 +1.1
WMOK  Wichita Mounta     54.47  77  P     P     18 42 24.8 -1.6
      baz=312
TX32  Lajitas Array      55.16  85  P     P     18 42 31.3 -0.2
TX32                                IAmb  IAmb  18 42 48.6
      comp=Z,2.1nm,0.9s
TXAR  Lajitas Array      55.16  85  P     P     18 42 31.7 +0.1
      comp=Z,0.6nm,0.5s,baz=300,slow=5.8,SNR=8.7
X37A  Clayton            56.64  75  P     P     18 42 41.8 -0.1
L48A  N Adams            58.00  62  P     P     18 42 52.5 +1.0
AAM   Ann Arbor          58.18  61  P     P     18 42 51.3 -1.4
ARCES ARCESS Array B     58.48 352  P     P     18 42 53.4 -1.1
      comp=Z,2.0nm,0.8s,baz=11,slow=7.9,SNR=16
N49A  Columbus Grove     58.83  62  P     P     18 42 56.1 -1.2
N51A  Ashland            59.83  61  P     P     18 43 03.2 -1.0
KURK  Kurchatov          61.40 317  P     P     18 43 13.7 -1.0
KURK                                IAmb  IAmb  18 43 14.8
      comp=Z,2.1nm,0.6s
KURBB Kurchatov Arra     61.50 317  P     P     18 43 14.6 -0.8
      comp=Z,1.4nm,0.5s,baz=45,slow=6.4,SNR=7.3
WMQ   Urumqi             62.15 306  eP    P     18 43 23.1 +3.1
MKAR  Makanchi Array     62.63 311  P     P     18 43 22.3 -0.8
      comp=Z,0.8nm,0.6s,baz=46,slow=7.0,SNR=15
L59A  Walton             62.84  56  P     P     18 43 25.8 +1.3
BVAR  Borovoye Array     62.98 323  P     P     18 43 25.3  0.0
      comp=Z,4.1nm,0.5s,baz=207,slow=1.0,SNR=34
BRVK  Borovoye           62.99 323  P     P     18 43 24.9 -0.4
FINES FINESS Array B     66.34 350  P     P     18 43 45.8 -1.3
      comp=Z,2.3nm,0.8s,baz=3.4,slow=7.0,SNR=8.6
NOA   NORSAR Array B     67.74 358  P     P     18 43 55.1 -0.9
      comp=Z,0.2nm,0.4s,baz=3.2,slow=7.2,SNR=6.1
AAK   Ala-Archa          69.39 313  P     P     18 44 06.9 +0.1
      comp=Z,2.5nm,0.6s,baz=75,slow=3.7,SNR=9.0
AAK   Ala-Archa          69.39 313  P     P     18 44 07.1 +0.2
ABKAR Akbulak array      69.86 326  P     P     18 44 09.1 -0.3
ABKAR                               IAmb  IAmb  18 44 10.8
      comp=Z,4.5nm,0.9s
LSA   Lhasa              70.65 293  P     P     18 44 16.6 +1.5
KSH   Kashi              71.16 310  P     P     18 44 20.7 +3.1
KSH                                 pmax  pmax
      comp=Z,10.0nm,0.8s
DRK   Karamyk            73.14 313  P     P     18 44 29.9 +0.2
GAR   Garm               74.20 314  P     P     18 44 35.7  0.0
TAPN  Taplejung          74.39 294  eP    P     18 44 38.0 +0.8
      comp=Z,18nm,0.8s
CMAR  Chiang Mai Arr     74.46 280  P     P     18 44 38.0 +0.6
      comp=Z,0.9nm,0.3s,baz=24,slow=6.9,SNR=8.0
ODAN  Odare              74.95 294  eP    P     18 44 41.1 +0.7
      comp=Z,4.2nm,0.3s
GUN   Gumba              75.00 296  eP    P     18 44 41.7 +0.9
      comp=Z,16nm,0.4s
CHGR  Chuyangaron        75.00 314  P     P     18 44 40.6 +0.3
JIRN  Jiri               75.02 296  eP    P     18 44 41.9 +1.0
      comp=Z,19nm,0.6s
RAMN  Ramite             75.33 295  eP    P     18 44 43.1 +0.5
      comp=Z,16nm,0.6s
KKN   Kakani             75.43 296  eP    P     18 44 43.8 +0.7
      comp=Z,6.8nm,0.6s
PKI   Pulchoki           75.53 296  eP    P     18 44 44.3 +0.5
PKIN  Phulchoki          75.53 296  eP    P     18 44 44.1 +0.3
      comp=Z,18nm,1.0s
GKN   Gorkha             75.62 297  eP    P     18 44 44.5 +0.3
DMN   Daman              75.67 296  eP    P     18 44 45.4 +0.9
DANN  Dangsing           75.84 298  eP    P     18 44 46.1 +0.5
KOLN  Koldanda           76.38 297  eP    P     18 44 48.9 +0.4
AKASG Malin Array Be     76.39 346  P     P     18 44 47.0 -1.0
      comp=Z,2.8nm,0.4s,baz=17,slow=6.1,SNR=19
AKBB  Malin Array Si     76.39 346  P     P     18 44 47.5 -0.4
AKBB                                IAmb  IAmb  18 44 48.7
      comp=Z,4.3nm,0.9s
PYUN  Piuthan            76.46 298  eP    P     18 44 49.5 +0.5
NIL   Nilore             77.15 308  P     P     18 44 53.1 +0.6
CLL   Collm              77.41 356  eP    P     18 44 54.0 +0.3
BRG   Berggiesshubel     77.80 355  eP    P     18 44 55.9  0.0
BRG                                 Amp         18 44 57.9
      comp=Z,5.6nm,1.1s
DPC   Dobruska-Polom     78.19 354  eP    P     18 44 58.4 +0.3
KRLC  Kraliky            78.43 353  eP    P     18 44 59.7 +0.3
SORM  Soroca             79.02 345  ⇑P    P     18 45 02.0 -0.6
VRAC  Vranov             79.20 353  ⇑P    P     18 45 04.2 +0.5
KHC   Kasperske Hory     79.56 355  eP    P     18 45 06.3 +0.6
GERES GERESS Array B     79.84 355  P     P     18 45 06.6 -0.6
      comp=Z,1.3nm,0.7s,baz=22,slow=4.9,SNR=11
KIV   Kislovodsk         79.95 335  ⇓P    P     18 45 08.5 +0.5
BUR08 Bucovina Ar. S     79.96 347  P     P     18 45 07.2 -0.7
BUR08                               IAmb  IAmb  18 45 10.3
      comp=Z,2.9nm,0.9s
BURAR Bucovina Array     79.99 347  ⇑P    P     18 45 07.9 -0.1
KBZ   Khabaz             80.11 334  P     P     18 45 08.3 -0.3
      comp=Z,3.1nm,0.8s,baz=58,slow=5.5,SNR=5.0
PLOR  Plostina           81.51 346  ⇑P    P     18 45 17.2 +1.0
COVR  Voineasa-Covas     81.58 346  ⇑P    P     18 45 17.5 +1.0
CFR   Carcaliu           81.93 345  ⇓P    P     18 45 19.3 +1.0
MLR   Muntele Rosu       81.97 347  ⇓P    P     18 45 16.6 -2.1
VOIR                     82.15 347  ⇑P    P     18 45 21.1 +1.5
GZR   Gura Zlata         82.49 349  ⇑P    P     18 45 21.1 -0.3
BOVS  Bovan              84.35 349  ⇓P    P     18 45 30.0 -0.9
WRA   Warramunga Arr     84.64 229  P     P     18 45 32.2 -0.3
      comp=Z,0.3nm,0.7s,baz=35,slow=6.2,SNR=1.7
BRTR  Keskin Array B     86.16 340  P     P     18 45 39.9 -0.3
      comp=Z,1.5nm,0.8s,baz=272,slow=1.3,SNR=6.9
FNA   Florina            87.20 349  P     P     18 45 44.3 -0.9
FITZ  Fitzroy Crossi     87.39 237  P     P     18 45 45.9 -0.1
      comp=Z,2.0nm,1.1s,baz=2.2,slow=8.5,SNR=1.6
FITZ  Fitzroy Crossi     87.39 237  IAmb  IAmb  18 45 54.9
      comp=Z,8.4nm,1.3s
ASAR  Alice Springs      88.05 227  P     P     18 45 49.9 +0.6
      comp=Z,0.7nm,1.0s,baz=22,slow=4.9,SNR=7.5
H03N2 Juan Fernandez    117.85 109  T     T     21 00 55.2
      baz=316,slow=76
H03N1 Juan Fernandez    117.86 109  T     T     21 01 01.4
      baz=316,slow=76
H03N3 Juan Fernandez    117.86 109  T     T     21 00 40.9
      baz=316
```

PLV ***02*** *18:43:31.0±0.9, 22°.90N×101°.99E, h8^{km}±999^{km}, ML4.2*

IDC ***02*** *18:43:34.0±0.7, 22°.69N×102°.10E, h0^{km}, mb3.8/11,*
mb1 4.0/12, mb1mx3.7/56, mbtmp3.8/12, ML3.7/1, MS3.5/4,

Ms1 3.5/4,ms1mx3.0/45,Error ellipse: s-maj=23.7km s-min=13.6km az=81.0
*BJI **02** 18:43:34.6±0.0,22°.70N×101°.98E,h10^{km},mB4.4/4, mb4.0/11,ML3.8/7,Ms3.6/7,Ms7 3.6/8*
*NEIC **02** 18:43:35.0±1.2,22°.56N±0°.06×102°.24E±0°.06,h10^{km}±1^{km}, mb4.0/12,Error ellipse: s-maj=13.6km s-min=3.3km az=140.0*
ISC 02 18:43:34.3±0.6,**22°.61N**±0°.04×**102°.03E**±0°.04,**h10^{km},n47, σ1^s.64**/47,**mb3.9**/15,**MS3.6**/3,**1D,Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MLAV	**Muong La stati**	**1.19**	**119**	*e*Pg	**Pn**	**18 43 57.2**	**+0.2**
MLAV				*e*Sg	**Sn**	**18 44 16.3**	**+3.1**
MLAV				IAML		18 44 18.4	
	comp=E,3µm,0.9s						
MLAV				IAML		18 44 19.9	
	comp=N,2µm,0.9s						
TGV	**Tuan Giao**	**1.64**	**128**	*e*Pg	**Pg**	**18 44 06.9**	**+1.0**
TGV				IAML		18 44 35.8	
	comp=E,4µm,1.0s						
TGV				IAML		18 44 43.6	
	comp=N,2µm,1.0s						
SLVN	**Son La**	**2.15**	**126**		**Pn**	**18 44 08.4**	**-2.0**
KMI	**Kunming**	**2.58**	**14**	⇓Pn	**Pn**	**18 44 16.2**	**-0.2**
KMI				Pg	**Pb**	**18 44 21.9**	**+1.0**
KMI				Sg	**Sg**	**18 44 58.2**	**+0.9**
KMI				smax	smax		
	comp=N,410nm,1.6s						
KMI				smax	smax		
	comp=N,460nm,1.1s						
HBVN	**Hoa-Binh**	**3.56**	**119**	IAML		18 45 49.9	
	comp=E,569nm,0.9s						
HBVN	**Hoa-Binh**	**3.56**	**119**	*e*Pg	**Pg**	**18 44 42.7**	**+0.1**
HBVN	**Hoa-Binh**	**3.56**	**119**	IAML		18 45 44.4	
	comp=N,404nm,0.4s						
PLV	**Phu-Lien**	**4.64**	**112**	*e*Pg	**Pg**	**18 45 02.2**	**-1.1**
CHTO	**Chiang Mai**	**4.76**	**218**		**Pn**	**18 44 47.4**	**+1.2**
CM31	**Chiang Mai Arr**	**5.05**	**216**	Pn	**Pn**	**18 44 51.9**	**+1.7**
CMAR	**Chiang Mai Arr**	**5.05**	**216**	Pn	**Pn**	**18 44 51.8**	**+1.6**
	comp=N,0.7nm,0.3s,baz=30,slow=6.8,SNR=6.9						
CMAR				Pg	**Pg**	**18 45 09.4**	**-1.6**
	comp=N,4.7nm,0.3s,baz=37,slow=17,SNR=20						
CMAR				Sn	**Sn**	**18 45 47.3**	**-1.3**
	comp=N,2.1nm,0.3s,baz=34,slow=18,SNR=4.4						
CMAR				Lg	Lg	18 46 16.0	
	comp=N,2.8nm,0.3s,baz=50,slow=33,SNR=8.3						
CMAR				LR	LR	18 46 52.0	
	comp=N,106nm,19.4s,baz=304,slow=38						
GYA	**Guiyang**	**5.70**	**47**	Pg	**Pg**	**18 45 22.9**	**-0.6**
GYA	**Guiyang**	**5.70**	**47**	Sg	**Sg**	**18 46 39.9**	**+2.6**
PBKT	**Sadao Pong**	**6.10**	**190**	Pn	**Pn**	**18 45 04.9**	**+0.4**
UBPT	**Khong Chiam**	**7.99**	**155**	Pn	**Pn**	**18 45 29.3**	**-1.3**
CD2	**Chengdu**	**8.40**	**10**	P	**Pn**	**18 45 34.6**	**-1.7**
CD2				pmax	pmax		
	comp=N,20nm,0.5s						
CD2				LR	LR		
	comp=N,500nm,15.2s						
ENH	**Enshi**	**10.13**	**40**		**Pn**	**18 45 59.5**	**-0.5**
WHN	**Wuhan**	**13.55**	**52**	P	**P**	**18 46 51.4**	**-4.4**
PSI	**Prapat**	**19.93**	**189**	LR	LR	18 55 22.9	
	comp=N,105nm,18.5s,baz=222,slow=35						
BJI	**Beijing**	**21.11**	**31**	P	**P**	**18 48 21.8**	**+2.7**
BJI				S	**S**	**18 52 11.6**	**-2.4**
BJI				pmax	pmax		
	comp=N,16nm,1.0s						
BJI				pmax	pmax		
	comp=N,72nm,3.9s						
BJI				LR	LR		
	comp=N,160nm,16.7s						
BJI				LR	LR		
	comp=N,170nm,16.5s						
WMQ	**Urumqi**	**24.24**	**334**	*e*P	**P**	**18 48 50.8**	**-0.7**
SONM	**Songino Array**	**25.41**	**7**	P	**P**	**18 49 02.9**	**+0.8**
	comp=N,3.5nm,0.9s,baz=195,slow=9.6,SNR=11						
SONM	**Songino Array**	**25.41**	**7**	P	**P**	**18 49 03.2**	**+1.1**
SONM				IAmb	IAmb	18 49 04.3	
	comp=Z,3.7nm,1.0s						
ULN	**Ulaanbaatar**	**25.52**	**8**	P	**P**	**18 49 04.0**	**+0.9**
ULN				IAmb	IAmb	18 49 08.6	
	comp=Z,5.7nm,1.0s						
MK31	**Makanchi Array**	**28.91**	**331**	P	**P**	**18 49 33.6**	**+0.1**
MKAR	**Makanchi Array**	**28.91**	**331**	P	**P**	**18 49 34.5**	**+1.0**
	comp=Z,0.8nm,0.5s,baz=140,slow=9.9,SNR=14						
MKAR	**Makanchi Array**	**28.91**	**331**	P	**P**	**18 49 34.6**	**+1.1**
LEM	**Lembang**	**29.77**	**169**	LR	LR	19 03 47.5	
	comp=Z,125nm,20.1s,baz=280,slow=41						
KURBB	**Kurchatov Arra**	**33.44**	**333**	P	**P**	**18 50 15.2**	**+1.9**
	comp=Z,0.8nm,0.6s,baz=129,slow=9.0,SNR=7.1						
ZAA0	**Zalesovo Array**	**33.89**	**342**	P	**P**	**18 50 17.2**	**+0.1**
ZAA0				IAmb	IAmb	18 50 21.5	
	comp=Z,1.7nm,0.8s						
ZALV	**Zalesovo Beam**	**33.89**	**342**	P	**P**	**18 50 17.7**	**+0.5**
	comp=Z,1.0nm,0.5s,baz=165,slow=8.2,SNR=4.6						
BVAR	**Borovoye Array**	**38.75**	**330**	P	**P**	**18 50 59.6**	**+0.9**
	comp=Z,0.5nm,0.5s,baz=161,slow=9.2,SNR=6.1						
BRVK	**Borovoye**	**38.82**	**330**	P	**P**	**18 51 00.3**	**+1.0**
BRVK				IAmb	IAmb	18 51 02.8	
	comp=Z,1.6nm,0.7s						
ABKAR	**Akbulak array**	**42.43**	**319**	P	**P**	**18 51 31.0**	**+1.8**
FITZ	**Fitzroy Crossi**	**46.59**	**148**	P	**P**	**18 52 05.9**	**+3.2**
	comp=Z,0.8nm,0.7s,baz=346,slow=8.3,SNR=1.1						
TIXI	**Tiksi**	**51.41**	**11**	P	**P**	**18 52 38.4**	**-0.6**
	comp=Z,1.7nm,0.7s,baz=205,slow=3.6,SNR=5.7						
TIXI	**Tiksi**	**51.41**	**11**	P	**P**	**18 52 39.0**	**0.0**
TIXI				IAmb	IAmb	18 52 41.8	
	comp=Z,3.4nm,1.1s						
WB0	**Warramunga Arr**	**52.66**	**141**	P	**P**	**18 52 47.6**	**-1.4**
WRA	**Warramunga Arr**	**52.77**	**141**	P	**P**	**18 52 50.2**	**+0.4**
	comp=Z,1.9nm,0.7s,baz=331,slow=8.4,SNR=18						
WRA	**Warramunga Arr**	**52.77**	**141**	IAmb	IAmb	18 52 54.5	
	comp=Z,0.2nm,0.8s						
WB2	**Warramunga Arr**	**52.77**	**141**	P	**P**	**18 52 49.4**	**-0.5**
WR0	**Warramunga Arr**	**52.90**	**141**	P	**P**	**18 52 48.8**	**-2.0**
ASAR	**Alice Springs**	**55.47**	**144**	P	**P**	**18 53 11.0**	**+1.5**
	comp=Z,0.8nm,0.7s,baz=322,slow=6.9,SNR=10.0						
ASAR	**Alice Springs**	**55.47**	**144**	P	**P**	**18 53 06.2**	**-3.3**
NOA	**NORSAR Array B**	**70.88**	**329**	P	**P**	**18 54 51.6**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=77,slow=6.0,SNR=3.4						
GERES	**GERESS Array B**	**72.25**	**316**	P	**P**	**18 55 00.8**	**+0.8**
	comp=Z,0.3nm,0.6s,baz=72,slow=6.5,SNR=2.5						
FRB	**Frobisher Bay**	**93.61**	**356**	LR	LR	19 41 35.6	
	comp=Z,67nm,19.0s,baz=160,slow=37						

JMA 02 18:47:56.5,34°.09N×135°.10E,h8^{km}±1^{km},M0.4,Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JWM	**Minabe**	**0.32**	**139**	P	Pg	18 48 02.9	+0.1
JWM				S	Sg	18 48 07.2	+0.1
JWY	**Kouya**	**0.43**	**72**	P	Pg	18 48 04.7	-0.2
JTNC	**Tanabenakahech**	**0.50**	**122**	P	Pg	18 48 06.6	+0.3
JTNC				*e*S	Sg	18 48 13.2	+0.3

JMA 02 18:48:49.1,36°.02N×138°.08E,h8^{km}±1^{km},M0.9,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNT	**Takato**	**0.15**	**162**	P	Pg	18 48 52.3	-0.1
JNT				S	Sg	18 48 54.6	0.0
JNG	**Nsakai**	**0.39**	**2**	P	Pg	18 48 56.6	-0.1
JNG				S	Sg	18 49 01.9	+0.1
MAT	**Matsushiro**	**0.53**	**11**	P	Pg	18 48 59.1	-0.3
MAT				S	Sg	18 49 05.9	-0.5
MAT	**Matsushiro**	**0.53**	**11**	P	Pg	18 48 59.1	-0.3
MAT				S	Sg	18 49 06.0	-0.4

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*SJA **02** 19:01:03.0,29°.67S×71°.88W,h10^{km},ML4.4*
*GUC **02** 19:01:03.2±0.5,29°.83S×71°.81W,h21^{km}±3^{km},ML3.9*
ISC 02 19:01:00.7±2.0,**29°.74S**±0°.04×**71°.93W**±0°.08,**h11^{km}**±12^{km},**n36,σ2^s.14**/42,**1C-4D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO05	**La Serena**	**0.62**	**107**	⇓*i*P	**Pg**	**19 01 13.4**	**+0.6**
CO05				*i* S	**Sg**	**19 01 20.3**	**-0.7**
CO05				IAML		19 01 22.3	
	comp=E,12µm,0.4s						
CO06	**Fray Jorge**	**0.96**	**165**	*i* P	**Pb**	**19 01 18.5**	**-0.9**
CO06				*i* S	**Sb**	**19 01 30.7**	**-1.5**
CO06				IAML		19 01 34.6	
	comp=E,3µm,0.1s						
GO04	**Tololo Observa**	**1.07**	**114**	⇓*i*P	**Pb**	**19 01 20.6**	**-0.8**
GO04				*i* S	**Sb**	**19 01 31.9**	**-3.6**
GO04				IAML		19 01 36.6	
	comp=N,14µm,0.4s						
GO04	**Tololo Observa**	**1.07**	**114**	*i* P	**Pb**	**19 01 20.0**	**-1.4**
LCO	**Las Campanas**	**1.29**	**56**	⇓*i*P	**Pn**	**19 01 25.5**	**+0.5**
LCO				*i* S	**Sb**	**19 01 42.4**	**+0.4**
LCO	**Las Campanas**	**1.29**	**56**	*i* P	**Pn**	**19 01 25.0**	**0.0**
CO03	**El Pedregal**	**1.53**	**136**	⇓*i*P	**Pn**	**19 01 27.6**	**-0.5**
CO03				*i* S	**Sn**	**19 01 45.9**	**-2.2**
CO03				IAML		19 01 49.9	
	comp=N,3µm,0.4s						
CO03	**El Pedregal**	**1.53**	**136**	*i* P	**Pn**	**19 01 27.0**	**-1.1**
AC04	**Llanos de Chal**	**1.70**	**26**	⇑*i*P	**Pn**	**19 01 30.8**	**+0.5**
AC04				IAML		19 02 01.3	
	comp=N,622nm,0.7s						
AC04	**Llanos de Chal**	**1.70**	**26**	*i* P	**Pn**	**19 01 31.0**	**+0.6**
AROD	**Rodeo**	**2.17**	**102**	*i* P	**Pn**	**19 01 39.0**	**+1.9**
GO03	**Copiap**	**2.60**	**35**	*e*P	**Pn**	**19 01 43.9**	**+1.1**
GO03				*e*S	**Sb**	**19 02 18.8**	**-0.7**
GO03				IAML		19 02 33.1	
	comp=N,388nm,0.3s						
GO03	**Copiap**	**2.60**	**35**	*i* P	**Pn**	**19 01 44.0**	**+1.1**
ACCO	**Cerro Coronel**	**2.62**	**110**	*i* P	**Pn**	**19 01 46.0**	**+2.7**
VA06	**Catapilco**	**2.86**	**169**	*e*P	**Pn**	**19 01 47.9**	**+1.6**
VA06				IAML		19 02 40.3	
	comp=E,779nm,0.5s						
RTLS	**Leoncito**	**3.05**	**133**	*i* P	**Pn**	**19 01 52.0**	**+2.8**
VA03	**San Esteban**	**3.24**	**159**	*e*P	**Pn**	**19 01 53.4**	**+1.8**
VA03				*e*S	**Sn**	**19 02 31.2**	**+1.1**
VA03				IAML		19 02 45.2	
	comp=N,691nm,0.4s						
VA03	**San Esteban**	**3.24**	**159**	*i* P	**Pn**	**19 01 54.0**	**+2.4**
AUSP	**Uspallata**	**3.30**	**139**	*i* P	**Pn**	**19 01 56.0**	**+3.4**
ROCH	**El Roble**	**3.31**	**167**	*e*P	**Pn**	**19 01 53.0**	**+0.2**
ROCH				IAML		19 02 52.2	
	comp=E,431nm,0.7s						
PEL	**Peldehue**	**3.55**	**163**	*e*P	**Pn**	**19 01 57.7**	**+1.8**
PEL				IAML		19 02 58.2	
	comp=E,239nm,0.5s						
PEL	**Peldehue**	**3.55**	**163**	*i* P	Pn	19 02 01.0	+5.1
MT02	**Curacav**	**3.57**	**169**	*e*P	**Pn**	**19 01 56.3**	**+0.2**
MT02				IAML		19 02 56.5	
	comp=E,127nm,0.6s						
RTCV	**Cerro Valdivia**	**3.60**	**127**	*i* P	**Pn**	**19 02 00.0**	**+3.5**
AC02	**Maricunga**	**3.80**	**41**	*i* P	**Pn**	**19 02 01.0**	**+1.3**
ASAL	**Salagasta**	**3.88**	**138**	*i* P	**Pn**	**19 02 04.0**	**+3.5**
AVFE	**Valle Fertil**	**3.98**	**104**	*i* P	**Pn**	**19 02 04.0**	**+2.3**
ARCO	**CERRO ARCO**	**4.01**	**141**	*i* P	**Pn**	**19 02 07.0**	**+4.7**
AAGR	**Agrelo**	**4.26**	**142**	*i* P	**Pn**	**19 02 10.0**	**+4.4**
ACLC	**CERRO LA CRUZ**	**4.34**	**87**	*i* P	**Pn**	**19 02 09.0**	**+2.1**
BO01	**Tunca**	**4.69**	**171**	*i* P	**Pn**	**19 02 14.0**	**+2.5**
APLL	**PUNTA DE LOS L**	**4.72**	**99**	*i* P	**Pn**	**19 02 14.0**	**+2.0**
ACHE	**Chepes**	**4.76**	**109**	*i* P	**Pn**	**19 02 15.0**	**+2.5**
RFA	**San Rafael**	**5.81**	**151**	*i* P	**Pn**	**19 02 28.0**	**+1.1**
MRA	**San Martin**	**5.96**	**118**	*i* P	**Pn**	**19 02 30.0**	**+1.0**
PB15	**IPOC Station P**	**6.87**	**19**	*i* P	**Pn**	**19 02 43.0**	**+1.4**

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*NEIC **02** 19:01:28.0±0.7,52°.1N±0°.3×178°.2E±0°.1,h178^{km}±10^{km}, Error ellipse: s-maj=38.7km s-min=10.5km az=184.0*
*AEIC **02** 19:01:29±0.8,52°.2N±0°.2×178°.2E±0°.1,h173^{km}±7^{km}, ML3.1,mb4.1/29(NEIC),Error ellipse: s-maj=34.2km s-min=10.0km az=186.0*
*IDC **02** 19:01:34.1±5.7,52°.64N×178°.16E,h229^{km}±57^{km},mb3.0/7, mb1 3.3/9,mb1mx3.0/48,mbtmp3.7/9,Error ellipse: s-maj=51.2km s-min=15.3km az=166.0*
ISC 02 19:01:27.7±0.8,**52°.4N**±0°.1×**178°.26E**±0°.05,**h150^{km},n58, σ1^s.59**/57,**mb3.9**/16,**Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSNW	**Little Sitkin**	**0.47**	**160**		**Pn**	**19 01 51.3**	**+2.4**
LSSA	**Little Sitkin**	**0.49**	**162**		**Pn**	**19 01 51.7**	**+2.6**
LSPA	**Little Sitkin**	**0.49**	**157**		**Pn**	**19 01 51.8**	**+2.8**
LSSE	**Little Sitkin**	**0.51**	**158**		**Pn**	**19 01 51.8**	**+2.7**
CETU	**Semis' Tuman**	**0.88**	**120**		**Pn**	**19 01 54.3**	**+2.8**
CEAP	**Semis' Anvil P**	**0.91**	**116**		**Pn**	**19 01 54.5**	**+2.8**
CESW	**Semis' Southwe**	**0.95**	**122**		**Pn**	**19 01 54.2**	**+2.1**
CEPE	**Semis' Perret**	**0.96**	**117**		**Pn**	**19 01 54.8**	**+2.6**
CERAA	**Semis' Rag'd T**	**1.01**	**119**		**Pn**	**19 01 54.7**	**+2.1**
AMKA	**Amchitka**	**1.22**	**148**		**Pn**	**19 01 55.4**	**+1.0**
GANO	**Gareloi North**	**1.90**	**107**		**Pn**	**19 02 03.5**	**+1.8**
GAEA	**Gareloi East**	**1.95**	**108**		**Pn**	**19 02 04.1**	**+1.9**
TASE	**Tanaga Southea**	**2.35**	**103**		**Pn**	**19 02 09.3**	**+2.3**
TAFP	**Tanaga Falls P**	**2.37**	**101**		**Pn**	**19 02 09.1**	**+1.9**
SMY	**Shemya**	**2.56**	**279**		**Pn**	**19 02 11.0**	**+1.4**
KIWB	**Kanaga Island**	**2.88**	**99**	Pn	**Pn**	**19 02 13.6**	**+0.1**
ADK	**Adak**	**3.16**	**98**	Pn	**Pn**	**19 02 18.2**	**+1.2**
PETK	**Petropavlovsk-**	**12.47**	**281**	P	**Pn**	**19 04 23.2**	**+3.2**
	0.2nm,0.3s,baz=101,slow=19,SNR=5.6						
PETK				S	**Sn**	**19 06 34.2**	**-3.5**
	0.2nm,0.3s,baz=91,slow=23,SNR=1.0						
SDPT	**Sand Point**	**12.87**	**68**	Pn	**Pn**	**19 04 25.2**	**+0.2**
OHAK	**Old Harbor**	**17.02**	**62**	P	**P**	**19 05 15.9**	**+0.1**
Q19K	**Cape Douglas,**	**17.05**	**56**	P	**Pn**	**19 05 17.0**	**+0.2**
KDAK	**Kodiak Island**	**17.44**	**61**	P	**P**	**19 05 20.0**	**-0.6**
	0.2nm,0.3s,baz=216,slow=2.4,SNR=8.7						
KDAK	**Kodiak Island**	**17.44**	**61**	IAmb	IAmb	19 05 26.9	
	comp=Z,34nm,1.4s						
CNPM	**China Poot**	**18.37**	**55**	P	**P**	**19 05 31.7**	**+1.0**
J20K	**Nowinta River**	**18.50**	**40**	P	**Pn**	**19 05 33.4**	**-0.6**
J20K				IAmb	IAmb	19 05 58.9	
	comp=Z,18nm,1.5s						
BRLK	**Bradley Lake**	**18.58**	**55**	P	**P**	**19 05 33.7**	**+0.7**
SUA	**Susitna One**	**19.01**	**49**	P	**P**	**19 05 38.9**	**+1.2**
SUA				IAmb	IAmb	19 06 04.0	
	comp=Z,20nm,1.3s						
TRF	**Thorofare Moun**	**19.79**	**44**	P	**P**	**19 05 47.2**	**+1.0**
GHO	**Glory Hole Cre**	**19.93**	**49**	P	**P**	**19 05 47.7**	**+0.1**
GHO				IAmb	IAmb	19 05 55.4	
	comp=Z,12nm,1.3s						
PWL	**Port Wells**	**20.02**	**52**	P	**P**	**19 05 49.2**	**+0.7**
SML	**Sawmill**	**20.21**	**49**	P	**P**	**19 05 51.4**	**+0.8**
SML				IAmb	IAmb	19 05 54.8	
	comp=Z,6.7nm,0.8s						
SCM	**Sheep Creek Mo**	**20.68**	**49**	P	**P**	**19 05 56.3**	**+0.7**
SCM				IAmb	IAmb	19 06 22.3	
	comp=Z,14nm,1.3s						
NEA2	**Nenana**	**20.68**	**41**	P	**P**	**19 05 56.9**	**+1.3**
FID	**Port Fidalgo**	**20.90**	**53**	P	**P**	**19 05 58.9**	**+0.9**
FID				IAmb	IAmb	19 06 02.7	
	comp=Z,9.3nm,1.1s						
WRH	**Wood River Hil**	**21.04**	**42**	P	**P**	**19 06 01.4**	**+2.0**
MDM	**Murphy Dome**	**21.15**	**41**	P	**P**	**19 06 02.1**	**+1.5**
KLU	**Klutina**	**21.28**	**51**	P	**P**	**19 06 02.7**	**+0.7**
KLU				IAmb	IAmb	19 06 10.5	
	comp=Z,9.8nm,1.4s						
HDA	**Harding Lake**	**21.49**	**43**	P	**P**	**19 06 05.2**	**+1.0**
HDA				IAmb	IAmb	19 06 06.2	
	comp=Z,7.3nm,1.4s						
H24K	**Noodor Dome**	**21.61**	**39**	P	**P**	**19 06 06.5**	**+1.1**
ILAR	**Eielson Array**	**21.63**	**42**	P	**P**	**19 06 05.1**	**-0.6**
	comp=Z,0.7nm,0.6s,baz=248,slow=8.0,SNR=7.7						
HMT	**Hamilton**	**21.95**	**54**	P	**P**	**19 06 09.4**	**+0.4**
RIDG	**Independent Ri**	**22.20**	**45**	P	**P**	**19 06 11.7**	**0.0**
RIDG				IAmb	IAmb	19 06 14.6	
	comp=Z,9.1nm,1.4s						
TOLK	**Toolik Lake Re**	**22.27**	**31**	P	**P**	**19 06 13.0**	**+0.8**
TOLK				IAmb	IAmb	19 06 16.6	
	comp=Z,9.0nm,1.4s						
GLB	**Gilahina Butte**	**22.28**	**51**	P	**P**	**19 06 12.6**	**+0.2**
GLB				IAmb	IAmb	19 06 20.6	
	comp=Z,5.9nm,1.2s						
DOT	**Dot Lake**	**22.52**	**45**	P	**P**	**19 06 14.7**	**0.0**
MENT	**Mentasta**	**22.54**	**47**	P	**P**	**19 06 15.6**	**+0.8**
MENT				IAmb	IAmb	19 06 29.0	
	comp=Z,4.7nm,1.0s						
SCRK	**Sand Creek**	**22.63**	**45**	P	**P**	**19 06 15.6**	**-0.1**
L27K	**Beaver Creek,**	**23.41**	**47**	P	**P**	**19 06 23.5**	**+0.6**
L27K				IAmb	IAmb	19 06 26.1	
	comp=Z,7.4nm,0.7s						
BMAR	**Burnt Mountain**	**23.42**	**36**	P	**P**	**19 06 24.0**	**+1.1**
BCAR	**Beaver Creek A**	**23.43**	**47**	P	**P**	**19 06 23.4**	**+0.3**
EGAK	**Eagle**	**24.00**	**43**	P	**P**	**19 06 28.2**	**0.0**
EGAK				IAmb	IAmb	19 06 29.8	
	comp=Z,5.1nm,0.8s						
DAWY	**Dawson**	**24.64**	**45**	P	**P**	**19 06 34.5**	**+0.6**
DAWY				IAmb	IAmb	19 06 35.7	
	comp=Z,5.0nm,0.7s						
NVAR	**Mina Array Bea**	**45.22**	**82**	P	**P**	**19 09 30.0**	**+0.1**
	comp=Z,0.8nm,0.7s,baz=293,slow=9.4,SNR=3.9						
PDAR	**Pinedale Array**	**47.72**	**71**	P	**P**	**19 09 48.2**	**-1.1**
	comp=Z,0.4nm,0.5s,baz=317,slow=3.8,SNR=3.4						
TXAR	**Lajitas Array**	**60.28**	**80**	P	**P**	**19 11 17.7**	**-2.6**
	comp=Z,0.2nm,0.3s,baz=304,slow=5.9,SNR=5.0						
CMAR	**Chiang Mai Arr**	**69.12**	**273**	P	P	19 12 15.1	-2.6
	comp=Z,0.3nm,0.2s,baz=24,slow=6.9,SNR=9.4						
WRA	**Warramunga Arr**	**81.54**	**221**	P	**P**	**19 13 26.7**	**-1.7**
	comp=Z,0.5nm,0.7s,baz=27,slow=5.7,SNR=6.1						
ASAR	**Alice Springs**	**85.06**	**220**	P	**P**	**19 13 44.7**	**-1.7**
	comp=Z,0.3nm,0.8s,baz=25,slow=5.3,SNR=2.0						

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*IDC **02** 19:07:50.4±1.7,37°.16N×26°.29E,h0^{km},mb3.6/3, mb1 3.6/3,mb1mx3.3/27,mbtmp3.6/3,Error ellipse: s-maj=346.5km s-min=26.2km az=141.0*
*THE **02** 19:08:08.0,36°.51N×26°.75E,h130^{km}±9^{km},ML3.4/1,Error ellipse: s-maj=9.1km s-min=1.2km az=193.0*
*ISK **02** 19:08:08.8,36°.70N×26°.84E,h104^{km}±2^{km},ML2.3/11*
ISC 02 19:08:06.4±1.8,**36°.58N**±0°.06×**26°.69E**±0°.05,**h115^{km}**±12^{km},**n35,σ0^s.94**/40,**mb3.5**/3,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOSK	**Kos Island**	**0.29**	**53**	PG	**Pn**	**19 08 23.2**	**+0.5**
NIS1	**Nisyros Isl.**	**0.39**	**86**	PG	**Pn**	**19 08 24.5**	**+1.3**
BODT	**Bodrum**	**0.69**	**45**	P	**Pn**	**19 08 26.0**	**+0.8**
BODT	**Bodrum**	**0.69**	**45**	PG	**Pn**	**19 08 26.0**	**+0.8**
BODT				SG	**Sn**	**19 08 38.1**	**-1.3**
DAT	**Datca**	**0.73**	**78**	P	**Pn**	**19 08 26.2**	**+0.6**
DAT	**Datca**	**0.73**	**78**	PG	**Pn**	**19 08 26.4**	**+0.8**
DAT				SG	**Sn**	**19 08 39.2**	**-0.9**
THR8	**Santorini-Mono**	**0.99**	**260**	P	**Pn**	**19 08 28.8**	**+0.9**
THR6	**Thira Island,**	**1.07**	**258**	P	**Pn**	**19 08 29.8**	**+1.1**
THR5	**Thira Island,**	**1.10**	**262**	P	**Pn**	**19 08 30.2**	**+1.2**
MLSB	**Milas**	**1.13**	**50**	PG	**Pn**	**19 08 29.9**	**+0.6**
MLSB				SG	**Sn**	**19 08 45.1**	**-1.6**
GCAM	**G?zelcaml?**	**1.20**	**21**	PG	**Pn**	**19 08 30.9**	**+0.8**
GCAM				SG	**Sn**	**19 08 47.0**	**-1.1**
ARG	**Arkhangelos**	**1.21**	**107**	P	**Pn**	**19 08 30.6**	**+0.4**
ARG	**Arkhangelos**	**1.21**	**107**	PN	**Pn**	**19 08 30.9**	**+0.7**
ARG				SN	**Sn**	**19 08 48.8**	**+0.6**
TURN	**Turunc**	**1.26**	**81**	PN	**Pn**	**19 08 31.3**	**+0.6**
TURN				SN	**Sn**	**19 08 48.5**	**-0.7**
YER	**Yerkesik**	**1.39**	**66**	P	**Pn**	**19 08 33.2**	**+0.9**
YER	**Yerkesik**	**1.39**	**66**	PN	**Pn**	**19 08 33.0**	**+0.7**
STIA	**Sitia Lasithi**	**1.46**	**200**	P	**Pn**	**19 08 32.5**	**-0.5**
STIA				S	**Sn**	**19 08 53.3**	**+0.1**
ZKR	**Zakros**	**1.51**	**195**	P	**Pn**	**19 08 34.5**	**+0.8**
NPS	**Neapolis**	**1.58**	**214**	P	**Pn**	**19 08 34.5**	**0.0**
NPS				S	**Sn**	**19 08 55.2**	**-0.6**
	632nm,0.3s						
DALY	**Dalyan (Mula)**	**1.59**	**81**	PN	**Pn**	**19 08 35.8**	**+1.2**
AYDB	**Zeytinkoy-Aydi**	**1.67**	**35**	PN	**Pn**	**19 08 36.2**	**+0.6**
FRMA	**Ierapetra Chan**	**1.74**	**207**	P	**Pn**	**19 08 36.9**	**+0.5**
HRKL	**Herakleio**	**1.81**	**226**	PN	Pn	19 08 42.8	+5.6
FETY	**Fethiye**	**1.92**	**88**	P	**Pn**	**19 08 38.7**	**0.0**
FETY				S	**Sn**	**19 09 01.6**	**-1.7**
FETY	**Fethiye**	**1.92**	**88**	PN	**Pn**	**19 08 39.2**	**+0.5**
IDI	**Anoyia**	**1.95**	**229**	P	**Pn**	**19 08 38.8**	**-0.2**
CAME	**Cameli-Denizli**	**2.13**	**79**	PN	**Pn**	**19 08 41.6**	**+0.3**
VAM	**Vamos**	**2.33**	**241**	P	**Pn**	**19 08 44.1**	**+0.2**
KSL	**Kastellorizon**	**2.37**	**100**	P	**Pn**	**19 08 44.2**	**-0.1**
AKAS	**Kas**	**2.37**	**97**	PN	**Pn**	**19 08 46.4**	**+1.9**
ELL	**Elmali**	**2.59**	**85**	PN	**Pn**	**19 08 48.9**	**+1.6**
GVD	**Gavdhos**	**2.74**	**231**	P	**Pn**	**19 08 49.6**	**+0.5**
TORD	**Torodi Ar. Bea**	**32.35**	**230**	P	P	19 14 22.7	-2.2
	0.3nm,0.3s,baz=32,slow=9.1,SNR=10						
MKAR	**Makanchi Array**	**41.96**	**58**	P	P	19 15 42.6	-3.2
	0.4nm,0.8s,baz=271,slow=8.2,SNR=4.7						
ZALV	**Zalesovo Beam**	**43.13**	**47**	P	P	19 15 50.9	-4.1
	0.3nm,0.2s,baz=266,slow=9.4,SNR=2.1						

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*DJA **02** 19:31:26.5±0.4,4°S±4°×12°8E±°,h206^{km}±4^{km},M4.0/11, mb4.0/3,MLv3.9/11*
*IDC **02** 19:31:27.7±2.1,3°.99S×128°.11E,h242^{km}±26^{km},mb3.4/4, mb1 3.5/7,mb1mx3.1/39,mbtmp4.0/7,Error ellipse: s-maj=30.8km s-min=10.3km az=68.0*
ISC 02 19:31:26.3±0.8,**3°.91S**±0°.07×**127°.80E**±0°.07,**h250^{km},n17, σ2^s.91**/22,**mb3.9**/3,**Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**1.26**	**64**	P	**Pn**	**19 32 00.3**	**-2.7**
MSAI				S	**S**	**19 32 25.3**	**-6.5**
BNDI	**Bandanaira**	**2.19**	**106**	P	**Pn**	**19 32 08.9**	**-1.7**
BNDI	**Bandanaira**	**2.19**	**106**	P	**Pn**	**19 32 09.3**	**-1.3**
SANI	**Sanana**	**2.58**	**316**	P	**Pn**	**19 32 12.1**	**-2.3**
SANI				S	**S**	**19 32 46.0**	**-6.4**
LBMI	**Labuha**	**3.26**	**355**	P	**Pn**	**19 32 20.4**	**-1.3**
FAKI	**Fak Fak**	**4.55**	**78**	P	**Pn**	**19 32 36.8**	**0.0**
SWI	**Sorong**	**4.60**	**49**	P	**Pn**	**19 32 37.9**	**+0.6**
SIJI	**Sorong**	**4.60**	**49**	P	**Pn**	**19 32 37.0**	**-0.3**
	4.9nm,0.3s,baz=111,slow=17,SNR=42						
SIJI				S	**S**	**19 33 30.8**	**-3.0**
	13nm,0.3s,baz=131,slow=23,SNR=27						
TNTI	**Ternate**	**4.67**	**355**	P	**Pn**	**19 32 37.5**	**-0.6**
SOEI	**Soe**	**6.78**	**211**	P	**Pn**	**19 33 02.5**	**-2.0**
	0.1nm13nm,1.0s						
KDU	**Kakadu**	**9.87**	**152**	P	**Pn**	**19 33 43.9**	**+0.5**
	7.9nm,1.9s						
FITZ	**Fitzroy Crossi**	**14.26**	**188**	P	**P**	**19 34 37.6**	**-0.4**
	0.4nm,0.3s,baz=20,slow=10,SNR=18						
WRA	**Warramunga Arr**	**17.17**	**159**	P	**P**	**19 35 09.6**	**-0.5**
	0.9nm,0.3s,baz=340,slow=12,SNR=56						
WRA				S	**S**	**19 38 12.9**	**-3.1**
	0.0nm,0.3s,baz=338,slow=20,SNR=2.0						
ASAR	**Alice Springs**	**20.51**	**164**	P	**P**	**19 35 45.8**	**-0.2**
	1.0nm,0.3s,baz=345,slow=11,SNR=19						
ASAR				S	**S**	**19 39 20.3**	**-0.3**
	0.6nm,0.9s,baz=348,slow=22,SNR=4.4						
STKA	**Stephens Creek**	**30.70**	**157**	P	**P**	**19 37 19.9**	**+1.8**
	3.6nm,0.8s,baz=331,slow=8.4,SNR=11						
CMAR	**Chiang Mai Arr**	**36.08**	**309**	P	**P**	**19 38 08.8**	**+4.1**
	1.0nm,0.5s,baz=134,slow=7.0,SNR=14						
MKAR	**Makanchi Array**	**64.45**	**327**	P	**P**	**19 41 40.0**	**+3.7**
	0.8nm,0.3s,baz=119,slow=7.7,SNR=21						

IDC 02 19:39:36.7±4.7,**17°.21S**×**174°.54W,h0^{km},mb3.9**/3,**mb1 4.1**/4,**mb1mx3.7**/37,**mbtmp4.0**/4,**ML4.4**/1,**Error ellipse: s-maj=221.0km s-min=32.9km az=140.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**4.23**	**39**	Pn	Pn	19 40 42.5	0.0
	20nm,0.3s,baz=19,slow=16,SNR=4.3						
AFI				Sn	Sn	19 41 22.8	-10
	36nm,0.3s,baz=158,slow=22,SNR=6.3						
STKA	**Stephens Creek**	**42.20**	**241**	P	P	19 47 31.8	+0.3
	1.6nm,0.7s,baz=103,slow=12,SNR=3.6						
WRA	**Warramunga Arr**	**48.39**	**258**	P	P	19 48 20.6	-0.2
	0.6nm,0.8s,baz=97,slow=7.0,SNR=4.7						
ASAR	**Alice Springs**	**48.53**	**253**	P	P	19 48 21.6	-0.3
	2.6nm,0.8s,baz=87,slow=8.5,SNR=22						

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*IDC **02** 19:39:48.6±1.4,6°.35N×123°.75E,h0^{km},mb3.7/6, mb1 3.8/6,mb1mx3.5/51,mbtmp3.7/6,MS3.2/2,Ms1 3.2/2, ms1mx2.6/40,Error ellipse: s-maj=132.7km s-min=18.4km az=69.0*
ISC 02 19:39:53.2±1.4,**6°.6N**±0°.3×**124°.5E**±0°.8,**h35^{km},n7,**σ1^s.**10**/6,**mb3.7**/6,**Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOW	**Kunigami**	**20.45**	**10**	LR	LR	19 52 09.5	
	comp=Z,41nm,20.7s,baz=338,slow=36						
FITZ	**Fitzroy Crossi**	**24.57**	**177**	P	**P**	**19 45 10.5**	**+0.6**
	1.8nm,0.9s,baz=348,slow=14,SNR=1.9						
WRA	**Warramunga Arr**	**28.11**	**160**	P	**P**	**19 45 41.5**	**-0.5**
	0.2nm,0.7s,baz=331,slow=11,SNR=2.0						
ASAR	**Alice Springs**	**31.46**	**163**	P	**P**	**19 46 11.6**	**-0.1**
	0.4nm,0.3s,baz=340,slow=7.2,SNR=15						
SONM	**Songino Array**	**43.89**	**342**	P	**P**	**19 47 57.5**	**+1.1**
	0.5nm,0.7s,baz=162,slow=10.0,SNR=2.5						
SONM				LR	LR	20 07 55.5	
	comp=Z,50nm,18.4s,baz=98,slow=38						
MKAR	**Makanchi Array**	**53.92**	**325**	P	**P**	**19 49 13.0**	**-0.4**
	1.1nm,0.5s,baz=120,slow=8.2,SNR=27						

KURBB	**Kurchatov Arra**	58.12	327	P	**P**	19 49 41.8	-1.4
	0.5nm,0.5s,baz=130,slow=6.5,SNR=7.1						

IDC 02 19:46:02.5±5.7**, 39°.33N**×**110°.51E, h0^{km}, mb3.3**/3**, mb1 3.4**/4**, mb1mx3.2**/46**, mbtmp3.3**/4**, ML2.9**/1**, Error ellipse: s-maj=120.1km s-min=25.0km az=84.0, Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	**Songino Array**	9.01	342	Pn	Pn	19 48 14.3	+0.4
	0.1nm,0.3s,baz=156,slow=13,SNR=2.6						
SONM				Lg	Lg	19 50 47.4	
	0.1nm,0.3s,baz=155,slow=28,SNR=3.9						
MKAR	**Makanchi Array**	21.84	299	P	P	19 50 55.7	-0.8
	1.1nm,0.9s,baz=103,slow=11,SNR=4.1						
CMAR	**Chiang Mai Arr**	23.09	209	P	P	19 51 09.7	-0.2
	0.9nm,0.8s,baz=13,slow=9.4,SNR=7.2						
KURBB	**Kurchatov Arra**	25.09	307	P	P	19 51 29.2	+0.7
	0.7nm,0.8s,baz=109,slow=9.7,SNR=4.6						

IDC 02 19:54:05.9±7.5**, 19°.55S**×**178°.61W, h0^{km}, mb3.5**/2**, mb1 3.7**/2**, mb1mx3.4**/31**, mbtmp3.5**/2**, Error ellipse: s-maj=390.5km s-min=56.1km az=149.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	44.17	261	P	P	20 02 16.8	-0.1
	0.3nm,0.8s,baz=98,slow=7.3,SNR=5.6						
ASAR	**Alice Springs**	44.19	256	P	P	20 02 16.7	-0.2
	0.7nm,0.5s,baz=88,slow=7.3,SNR=12						
GERES	**GERESS Array B**	149.13	344	PKPbc	PKPbc	20 13 55.8	-0.5
	0.2nm,0.4s,baz=46,slow=4.2,SNR=2.7						

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*KRSC **02** 20:02:46.9±0.9, 55°.78N×161°.32E, h156^{km}±8^{km}, ML4.3*

*MOS **02** 20:02:47.2±0.7, 55°.86N×161°.16E, h163^{km}, mb4.2/5, Error ellipse: s-maj=14.4km s-min=5.1km az=76.5*

*NEIC **02** 20:02:48.5±1.6, 55°.9N±0°.1×161°.0E±0°.2, h155^{km}±11^{km}, mb4.3/14, Error ellipse: s-maj=20.4km s-min=15.4km az=151.0*

*IDC **02** 20:02:48.7±1.8, 56°.02N×160°.96E, h148^{km}±18^{km}, mb3.4/14, mb1 3.5/16, mb1mx3.3/50, mbtmp3.8/16, Error ellipse: s-maj=17.6km s-min=14.2km az=140.0*

ISC 02 20:02:48.2±0.6**, 55°.78N**±0°.03×**161°.28E**±0°.03**, h155^{km}**±4^{km}**, n123,** σ1^{s}04/183**, mb3.7**/19**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZLN	**Zelenaya**	0.36	312	PN	Pn	20 03 10.0	+0.3
ZLN				S	Sn	20 03 26.6	+0.5
ZLN	**Zelenaya**	0.36	312	*i* P	Pn	20 03 10.0	+0.3
ZLN				*e*S	Sn	20 03 26.6	+0.5
BZGR	**Bezymyannyi-Gr**	0.37	296	PN	Pn	20 03 09.8	+0.1
BZGR				S	Sn	20 03 26.7	+0.6
BZGR	**Bezymyannyi-Gr**	0.37	296	*e*P	Pn	20 03 09.8	+0.1
BZGR				*e*S	Sn	20 03 26.7	+0.6
CIRR	**Tsirk**	0.45	318	PN	Pn	20 03 10.2	+0.1
CIRR				S	Sn	20 03 26.7	-0.1
CIRR	**Tsirk**	0.45	318	*i* P	Pn	20 03 10.2	+0.1
CIRR				*e*S	Sn	20 03 26.7	-0.1
LGNR	**Loginova**	0.45	312	PN	Pn	20 03 10.2	0.0
LGNR				S	Sn	20 03 26.7	-0.4
LGNR	**Loginova**	0.45	312	*e*P	Pn	20 03 10.2	0.0
LGNR				*e*S	Sn	20 03 26.7	-0.4
BZWR	**Bezymyannyi-We**	0.48	293	PN	Pn	20 03 10.4	+0.2
BZWR				S	Sn	20 03 27.7	+0.6
BZWR	**Bezymyannyi-We**	0.48	293	*i* P	Pn	20 03 10.4	+0.2
BZWR				*e*S	Sn	20 03 27.7	+0.6
KIRR	**Kirishev**	0.56	288	PN	Pn	20 03 10.5	-0.1
KIRR				S	Sn	20 03 27.1	-0.6
KIRR	**Kirishev**	0.56	288	*e*P	Pn	20 03 10.5	-0.1
KIRR				*e*S	Sn	20 03 27.1	-0.6
KMNR	**Kamenistaya**	0.59	268	PN	Pn	20 03 10.9	+0.2
KMNR				S	Sn	20 03 28.9	+1.0
KMNR	**Kamenistaya**	0.59	268	*e*P	Pn	20 03 10.9	+0.2
KMNR				*e*S	Sn	20 03 28.9	+1.0
KRSR	**Krestovskiy**	0.59	318	PN	Pn	20 03 10.2	-0.5
KRSR				S	Sn	20 03 27.1	-0.9
KRSR	**Krestovskiy**	0.59	318	*e*P	Pn	20 03 10.2	-0.5
KRSR				*e*S	Sn	20 03 27.1	-0.9
KPT	**Kopyto**	0.63	288	PN	Pn	20 03 10.8	-0.1
KPT				S	Sn	20 03 27.5	-0.7
KPT	**Kopyto**	0.63	288	*e*P	Pn	20 03 10.8	-0.1
KPT				*e*S	Sn	20 03 27.5	-0.7
KLY	**Klyuchi**	0.64	327	PN	Pn	20 03 10.2	-0.6
KLY				S	Sn	20 03 27.0	-1.2
KLY	**Klyuchi**	0.64	327	*e*P	Pn	20 03 10.2	-0.6
KLY				*e*S	Sn	20 03 27.0	-1.2
TUMD	**Tumrok D**	0.77	221	*e*P	Pn	20 03 12.0	+0.3
TUMD				*e*S	Sn	20 03 29.7	+0.1
BDR	**Baidarnaya**	0.79	357	PN	Pn	20 03 11.9	0.0
BDR				S	Sn	20 03 30.6	+0.4
BDR	**Baidarnaya**	0.79	357	*e*P	Pn	20 03 11.9	0.0
BDR				*e*S	Sn	20 03 30.6	+0.4
SMKR	**Semkarok**	0.81	7	PN	Pn	20 03 12.1	+0.1
SMKR				S	Sn	20 03 30.2	-0.2
SMKR	**Semkarok**	0.81	7	*e*P	Pn	20 03 12.1	+0.1
SMKR				*e*S	Sn	20 03 30.2	-0.2
TUMR	**Tumrok**	0.82	233	PN	Pn	20 03 12.0	-0.2
TUMR				S	Sn	20 03 29.7	-0.8
TUMR	**Tumrok**	0.82	233	*e*P	Pn	20 03 13.0	+0.8
TUMR				*e*S	Sn	20 03 31.5	+1.0
KOZ	**Kozyrevsk**	0.84	290	PN	Pn	20 03 12.0	-0.2
KOZ				S	Sn	20 03 30.0	-0.6
KOZ	**Kozyrevsk**	0.84	290	*i* P	Pn	20 03 12.0	-0.2
KOZ				*e*S	Sn	20 03 30.0	-0.6
SRKR	**Sorokina**	0.88	356	PN	Pn	20 03 12.4	-0.1
SRKR				S	Sn	20 03 31.0	-0.3
SRKR	**Sorokina**	0.88	356	*e*P	Pn	20 03 12.4	-0.1
SRKR				*e*S	Sn	20 03 31.0	-0.3
KBG	**Krutoberegovo**	0.93	59	PN	Pn	20 03 12.7	-0.1
KBG				S	Sn	20 03 31.3	-0.4
KBG	**Krutoberegovo**	0.93	59	*i* P	Pn	20 03 12.7	-0.1
KBG				*e*S	Sn	20 03 31.3	-0.4
KBTR	**Krutoberegovo**	0.96	63	PN	Pn	20 03 13.0	-0.1
KBTR				S	Sn	20 03 31.5	-0.7
KBTR	**Krutoberegovo**	0.96	63	*i* P	Pn	20 03 13.0	-0.1
KBTR				*e*S	Sn	20 03 31.5	-0.7
MKZ	**Mys Kozlova**	1.25	168	PN	Pn	20 03 15.6	-0.1
MKZ				S	Sn	20 03 36.4	-0.3
MKZ	**Mys Kozlova**	1.25	168	*e*P	Pn	20 03 15.6	-0.1
MKZ				*e*S	Sn	20 03 36.4	-0.3
ESO	**Esso**	1.46	277	PN	Pn	20 03 19.6	+1.9
ESO				S	Sn	20 03 41.7	+1.3
ESO	**Esso**	1.46	277	*i* P	Pn	20 03 19.6	+1.9
ESO				*e*S	Sn	20 03 41.7	+1.3
BKI	**Bering**	2.73	100	PN	Pn	20 03 33.4	+1.1
BKI				S	Sn	20 04 06.7	+0.3
BKI	**Bering**	2.73	100	*i* P	Pn	20 03 33.4	+1.1
BKI				*e*S	Sn	20 04 06.7	+0.3
SPN	**Mys Shipunski**	2.79	196	PN	Pn	20 03 32.1	-0.9
SPN				S	Sn	20 04 05.4	-2.3
SPN	**Mys Shipunski**	2.79	196	*e*P	Pn	20 03 32.1	-0.9
SPN				*e*S	Sn	20 04 05.4	-2.3
GNL	**Ganaly**	2.85	224	PN	Pn	20 03 34.7	+0.8
GNL				S	Sn	20 04 10.4	+1.1
GNL	**Ganaly**	2.85	224	*e*P	Pn	20 03 34.7	+0.8
GNL				*e*S	Sn	20 04 10.4	+1.1
NLC	**Nalytchevo**	2.85	204	PN	Pn	20 03 33.4	-0.4
NLC				S	Sn	20 04 07.7	-1.4
NLC	**Nalytchevo**	2.85	204	*e*P	Pn	20 03 33.4	-0.4
NLC				*e*S	Sn	20 04 07.7	-1.4
SDLR	**Sedlovina**	2.87	210	PN	Pn	20 03 35.2	+1.0
SDLR	**Sedlovina**	2.87	210	*e*P	Pn	20 03 35.2	+1.0
KRER	**Koryakskii**	2.89	212	PN	Pn	20 03 35.9	+1.4
KRER	**Koryakskii**	2.89	212	*e*P	Pn	20 03 35.9	+1.4
SMAR	**Somma**	2.91	211	PN	Pn	20 03 36.0	+1.2
SMAR	**Somma**	2.91	211	*e*P	Pn	20 03 36.0	+1.2
AVH	**Avacha**	2.92	212	PN	Pn	20 03 36.3	+1.4
AVH	**Avacha**	2.92	212	*e*P	Pn	20 03 36.3	+1.4
KOK	**Koryaka**	2.93	213	PN	Pn	20 03 36.0	+1.0
KOK	**Koryaka**	2.93	213	*e*P	Pn	20 03 36.0	+1.0
DALK	**Dalny**	3.13	209	PN	Pn	20 03 37.8	+0.5
DALK				S	Sn	20 04 15.7	+0.4
DALK	**Dalny**	3.13	209	*e*P	Pn	20 03 37.8	+0.5
DALK				*e*S	Sn	20 04 15.7	+0.4
PET	**Petropavlovsk**	3.16	210	*e*PN	Pn	20 03 38.5	+0.8
PET				*e*S	Sn	20 04 15.8	-0.3
PET				pmax	pmax		
	comp=Z,52nm,0.6s						
PET				smax	smax		
	comp=E,277nm,0.8s						
PET				smax	smax		
	comp=N,206nm,0.6s						
PET	**Petropavlovsk**	3.16	210	*e*P	Pn	20 03 38.1	+0.4
PET				*e*S	Sn	20 04 15.9	-0.2
PET	**Petropavlovsk**	3.16	210		Pn	20 03 38.2	+0.5
PALN	**Palana**	3.39	348	PN	Pn	20 03 40.3	-0.3
PALN	**Palana**	3.39	348	*e*P	Pn	20 03 40.3	-0.3
PEA0B	**Petropavlovsk-**	3.40	219	PN	Pn	20 03 41.7	+0.9
PEA0B	**Petropavlovsk-**	3.40	219	Pn	Pn	20 03 41.7	+0.9
PETK	**Petropavlovsk-**	3.40	219	P	Pn	20 03 40.8	0.0
	comp=N,3.9nm,0.3s,baz=70,slow=15,SNR=48						
PETK				S	Sn	20 04 24.5	+3.0
	comp=N,2.7nm,0.3s,baz=94,slow=20,SNR=1.6						
KRMR	**Karymshinskiy**	3.49	213	PN	Pn	20 03 41.4	-0.5
KRMR	**Karymshinskiy**	3.49	213	*e*P	Pn	20 03 41.4	-0.5
OSSR	**Ossora**	3.61	15	PN	Pn	20 03 43.7	+0.4
OSSR				S	Sn	20 04 26.6	+0.3
OSSR	**Ossora**	3.61	15	*e*P	Pn	20 03 43.7	+0.4
OSSR				*e*S	Sn	20 04 26.6	+0.3
RUS	**Russkaya**	3.73	207	PN	Pn	20 03 45.0	0.0
RUS				S	Sn	20 04 27.6	-1.5
RUS	**Russkaya**	3.73	207	*e*P	Pn	20 03 45.0	0.0
RUS				*e*S	Sn	20 04 27.6	-1.5
APC	**Apacha**	3.74	222	PN	Pn	20 03 46.6	+1.4
APC	**Apacha**	3.74	222	*e*P	Pn	20 03 46.6	+1.4
GRL	**Gorelyy**	3.74	212	PN	Pn	20 03 45.8	+0.5
GRL	**Gorelyy**	3.74	212	*e*P	Pn	20 03 45.8	+0.5
MTVR	**Mutnovka**	3.77	210	PN	Pn	20 03 47.0	+1.3
MTVR				S	Sn	20 04 30.9	+0.5
MTVR	**Mutnovka**	3.77	210	*e*P	Pn	20 03 47.0	+1.3
MTVR				*e*S	Sn	20 04 30.9	+0.5
ASAK	**Asacha**	3.94	212	PN	Pn	20 03 48.4	+0.5
ASAK	**Asacha**	3.94	212	*e*P	Pn	20 03 48.4	+0.5
KDTR	**Khodutka, Kamc**	4.41	207	PN	Pn	20 03 52.7	-1.1
KDTR				S	Sn	20 04 41.3	-3.7
KDTR	**Khodutka, Kamc**	4.41	207	*e*P	Pn	20 03 52.7	-1.1
KDTR				*e*S	Sn	20 04 41.3	-3.7
JKA	**Kamikawa-asahi**	16.69	233	P	Pn	20 06 33.7	+0.9
JKA				IAmb	IAmb	20 06 36.3	
	comp=Z,21nm,0.8s						
ASAJ	**Asahikawa**	16.69	233	P	Pn	20 06 34.3	+1.4
	comp=Z,0.8nm,0.3s,baz=63,slow=11,SNR=17						
ASAJ	**Asahikawa**	16.69	233	P	Pn	20 06 33.7	+0.8
ASAJ				pmax	pmax		
	comp=Z,21nm,0.8s						
ERM	**Erimo**	18.13	228	P	P	20 06 48.1	-0.2
ERM				pmax	pmax		
	comp=Z,35nm,0.5s						
ERM	**Erimo**	18.13	228	P	P	20 06 48.1	-0.2
TIXI	**Tiksi**	20.98	332	P	P	20 07 18.4	-0.3
	comp=Z,8.0nm,0.6s,baz=116,slow=9.7,SNR=25						
TIXI	**Tiksi**	20.98	332		P	20 07 17.9	-0.8
TIXI				IAmb	IAmb	20 07 21.1	
	comp=Z,8.3nm,0.7s						
MJAR	**Matsushiro Arr**	24.81	229	P	P	20 07 55.6	-0.1
	comp=Z,0.9nm,0.5s,baz=54,slow=9.1,SNR=4.5						
MJAR	**Matsushiro Arr**	24.81	229	IAmb	IAmb	20 08 03.9	
	comp=Z,1.4nm,0.8s						
KDAK	**Kodiak Island**	24.98	66	P	P	20 07 58.9	+1.9
	comp=Z,1.6nm,0.4s,baz=260,slow=3.1,SNR=7.3						
KDAK	**Kodiak Island**	24.98	66	P	P	20 07 57.9	+0.9
KDAK				pmax	pmax		
	comp=Z,22nm,1.4s						
KDAK	**Kodiak Island**	24.98	66	P	P	20 07 57.9	+0.9
KDAK				IAmb	IAmb	20 08 14.4	
	comp=Z,22nm,1.4s						
SUA	**Susitna One**	25.12	57	P	P	20 07 59.1	+0.7
SUA				IAmb	IAmb	20 08 25.2	
	comp=Z,19nm,1.4s						
TOLK	**Toolik Lake Re**	25.43	40	P	P	20 08 03.0	+2.0
ILAR	**Eielson Array**	26.47	49	P	P	20 08 10.6	+0.2
	comp=Z,0.2nm,0.5s,baz=263,slow=7.2,SNR=1.6						
BMAR	**Burnt Mountain**	27.26	43	P	P	20 08 17.4	0.0
EUNU	**Eureka**	39.17	15	P	P	20 09 59.6	-0.6
SPITS	**Spitsbergen Ar**	44.60	350	P	P	20 10 44.2	+0.1
	comp=Z,7.4nm,0.9s,baz=63,slow=7.6,SNR=6.2						
KURK	**Kurchatov**	46.94	300	P	P	20 11 01.8	-0.9
KURK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KURK	**Kurchatov**	46.94	300	P	P	20 11 01.8	-0.9
MK31	**Makanchi Array**	47.65	294	P	P	20 11 07.1	-1.3
MK31				pmax	pmax		
	comp=Z,5.0nm,1.5s						
MK31	**Makanchi Array**	47.65	294	P	P	20 11 07.0	-1.3
MK31				IAmb	IAmb	20 11 19.0	
	comp=Z,5.4nm,1.5s						
MKAR	**Makanchi Array**	47.65	294	P	P	20 11 07.1	-1.3
	comp=Z,0.8nm,0.6s,baz=54,slow=6.7,SNR=18						
MKAR				PcP	PcP	20 12 35.8	+0.5
	comp=Z,0.6nm,0.8s,baz=81,slow=4.8,SNR=1.9						
BRVK	**Borovoye**	49.31	307	P	P	20 11 20.3	-0.7
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BRVK	**Borovoye**	49.31	307	P	P	20 11 20.3	-0.7
BRVK				IAmb	IAmb	20 11 20.9	
	comp=Z,2.1nm,0.6s						
PDAR	**Pinedale Array**	55.64	63	P	P	20 12 09.1	+1.2
	comp=Z,0.2nm,0.5s,baz=330,slow=5.2,SNR=1.9						
TCUT	**Toone Canyon**	55.90	66	P	P	20 12 09.0	-0.9
KK31	**Karatay Array**	56.20	298	P	P	20 12 09.8	-1.9
KK31				pmax	pmax		
	comp=Z,7.0nm,1.4s						
KK31	**Karatay Array**	56.20	298	P	P	20 12 09.8	-1.9
KK31				IAmb	IAmb	20 12 12.5	
	comp=Z,6.8nm,1.4s						
KKAR	**Karatay Array**	56.20	298	P	P	20 12 09.8	-1.9
KKAR	**Karatay Array**	56.20	298	P	P	20 12 09.8	-1.9
ABKAR	**Akbulak array**	56.59	310	P	P	20 12 13.2	-1.1
ABKAR				IAmb	IAmb	20 12 14.0	
	comp=Z,1.5nm,0.6s						
FINES	**FINESS Array B**	57.93	336	P	P	20 12 21.6	-1.8
	comp=Z,0.8nm,0.5s,baz=42,slow=8.8,SNR=5.3						
PV03	**Paradox Valley**	59.35	66	P	P	20 12 33.9	0.0
NOA	**NORSAR Array B**	61.15	344	P	P	20 12 44.0	-1.5
	comp=Z,0.7nm,0.6s,baz=19,slow=6.8,SNR=3.6						
AKASG	**Malin Array Be**	66.66	329	P	P	20 13 19.9	-1.7
	comp=Z,0.4nm,0.3s,baz=26,slow=6.3,SNR=3.4						
TXAR	**Lajitas Array**	68.98	69	P	P	20 13 38.7	+2.1
	comp=Z,0.5nm,0.6s,baz=307,slow=5.3,SNR=7.2						
WRA	**Warramunga Arr**	78.81	206	P	P	20 14 36.3	+2.7
	comp=Z,0.2nm,0.6s,baz=13,slow=5.9,SNR=1.3						
ASAR	**Alice Springs**	82.50	205	P	P	20 14 56.5	+3.5
	comp=Z,0.3nm,0.8s,baz=14,slow=5.5,SNR=1.9						
ESDC	**Sonseca Array**	84.09	349	P	P	20 15 01.6	+0.3
	comp=Z,2.4nm,1.3s,baz=349,slow=5.6,SNR=4.0						

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*AEIC **02** 20:08:35±1.0, 68°.01N±0°.03×152°.4W±0°.1, h3^{km}±5^{km}, ML3.2, ML3.4/60(NEIC), Error ellipse: s-maj=6.5km s-min=3.9km az=87.0*

*NEIC **02** 20:08:37.3±1.0, 68°.01N±0°.03×152°.3W±0°.1, h7^{km}±6^{km}, Error ellipse: s-maj=5.6km s-min=4.4km az=91.0*

*ANF **02** 20:08:38.0±0.6, 68°.00N×152°.27W, h12^{km}±5^{km}, ML3.6/29, ML3.6/28, Error ellipse: s-maj=3.7km s-min=2.1km az=142.0*

ISC 02 20:08:36.5±1.5**, 68°.01N**±0°.04×**152°.33W**±0°.04**, h1^{km}**±11^{km}**, n149,** σ0^{s}69/174**, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COLD	**Coldfoot**	1.14	133		Pg	20 08 57.2	-1.0
COLD					Sg	20 09 13.1	+0.2
COLD	**Coldfoot**	1.14	133	P	Pg	20 08 57.3	-1.0
	baz=314,SNR=139						
COLD				S	Sg	20 09 13.2	+0.3
	baz=314						
TOLK	**Toolik Lake Re**	1.20	57		Pg	20 08 59.2	-0.4
TOLK					Sb	20 09 16.6	+0.5
TOLK	**Toolik Lake Re**	1.20	57	P	Pg	20 08 59.3	-0.2
	baz=240,SNR=315						
TOLK				S	Sg	20 09 16.1	+1.0
	baz=240						
PS05	**TAPS Pump Stn5**	1.37	151		Pn	20 09 01.0	-1.7
PS05					Sb	20 09 20.3	-0.5
IM03		2.11	196		Pn	20 09 12.1	-0.8
IMAR	**Indian Mountai**	2.11	196		Pn	20 09 12.1	-0.8
IM05	**Indian Mountai**	2.12	196		Pn	20 09 12.3	-0.8
H21K	**Melozitna Rive**	2.38	185		Pn	20 09 16.0	-0.5
H21K	**Melozitna Rive**	2.38	185	IAML		20 09 52.3	
	comp=E,170nm,0.9s						
H21K	**Melozitna Rive**	2.38	185	P	Pn	20 09 16.1	-0.4
	baz=3.8,SNR=70						
H21K				S	Sn	20 09 45.4	-0.9
	baz=3.8						
PS06	**TAPS Pump Stn6**	2.40	154		Pn	20 09 16.6	-0.2
PS06					Sn	20 09 46.0	-0.8
H23K	**Yukon River**	2.46	152		Pn	20 09 17.2	-0.5
H23K	**Yukon River**	2.46	152	IAML		20 09 56.5	
	comp=N,177nm,0.6s						
H23K				IAML		20 09 57.1	
	comp=E,157nm,0.7s						
H23K	**Yukon River**	2.46	152	P	Pn	20 09 17.3	-0.5
	baz=334,SNR=74						
H23K				Sb	Sb	20 09 53.3	+1.1
	baz=334						
PS01	**TAPS Pump Stn**	2.62	29		Pn	20 09 19.6	-0.3
H24K	**Noodor Dome**	2.80	139		Pn	20 09 22.1	-0.3
H24K	**Noodor Dome**	2.80	139	IAML		20 10 08.8	
	comp=E,126nm,0.7s						
H24K				IAML		20 10 10.4	
	comp=N,114nm,1.0s						
H24K	**Noodor Dome**	2.80	139	P	Pn	20 09 22.1	-0.3
	baz=323,SNR=28						
H24K				S	Sn	20 09 57.2	+0.3
	baz=323						
I21K	**Tanana**	2.85	177		Pn	20 09 22.7	-0.3
I21K					Sn	20 09 59.2	+1.2
I21K	**Tanana**	2.85	177	IAML		20 10 12.3	
	comp=N,104nm,1.2s						
I21K				IAML		20 10 16.2	
	comp=E,102nm,1.2s						
I21K	**Tanana**	2.85	177	P	Pn	20 09 22.7	-0.3
	baz=357,SNR=26						
I21K				S	Sn	20 09 58.1	+0.2
	baz=357						
BM03	**Burnt Mountain**	3.00	98		Pn	20 09 24.9	-0.3
BMAR	**Burnt Mountain**	3.01	98		Pn	20 09 25.4	+0.1
MLY	**Manley**	3.06	167		Pn	20 09 26.1	0.0
MLY	**Manley**	3.06	167	P	Pn	20 09 25.7	-0.3
	baz=348,SNR=30						
MLY				S	Sn	20 10 03.1	-0.2
	baz=348						
I23K	**Minto, Yukon-K**	3.11	156		Pn	20 09 26.5	-0.1
I23K	**Minto, Yukon-K**	3.11	156	IAML		20 10 17.5	
	comp=E,121nm,0.6s						
I23K	**Minto, Yukon-K**	3.11	156	P	Pn	20 09 26.5	-0.1
	baz=338,SNR=11						
I23K				Sb	Sb	20 10 13.1	+2.1
	baz=338						
FYU	**Fort Yukon**	3.12	115	Pn	Pn	20 09 26.8	+0.1
MDM	**Murphy Dome**	3.48	150		Pn	20 09 31.5	-0.3
MDM	**Murphy Dome**	3.48	150	IAML		20 10 29.2	
	comp=N,56nm,0.6s						
POKR	**Poker Plat Res**	3.51	144		Pn	20 09 32.4	+0.3
POKR	**Poker Plat Res**	3.51	144	IAML		20 10 29.6	
	comp=E,61nm,0.7s						
POKR				IAML		20 10 32.0	
	comp=N,66nm,1.4s						
POKR	**Poker Plat Res**	3.51	144	P	Pn	20 09 32.1	0.0
	baz=328,SNR=7.6						
POKR				Sb	Sb	20 10 23.8	+1.5
	baz=328						
TCOL	**CIGO, UAF Yank**	3.63	148		Pn	20 09 34.0	+0.2
TCOL	**CIGO, UAF Yank**	3.63	148	P	Pn	20 09 33.8	+0.1
	baz=332,SNR=8.3						
TCOL				S	Sn	20 10 16.6	-0.5
	baz=332						
COLA	**College**	3.63	148		Pn	20 09 33.6	-0.2
COLA					Sn	20 10 17.4	+0.3
COLA	**College**	3.63	148		Pn	20 09 33.9	+0.1
COLA				IAML		20 10 36.0	
	comp=N,305nm,0.5s						
COLA				IAML		20 10 38.1	
	comp=N,338nm,0.5s						
COLA	**College**	3.63	148	P	Pn	20 09 33.5	-0.2
	baz=332						
COLA				S	Sn	20 10 16.6	-0.5
	baz=332						
A21K	**Barrow**	3.65	338		Pn	20 09 33.0	-0.9
A21K					Sn	20 10 17.1	-0.3
A21K	**Barrow**	3.65	338	S	Sn	20 10 15.1	-2.4
	baz=154						
NEA2	**Nenana**	3.68	157		Pn	20 09 34.0	-0.4
NEA2	**Nenana**	3.68	157	P	Pn	20 09 34.0	-0.4
	baz=340,SNR=31						
NEA2				S	Sn	20 10 17.4	-1.0
	baz=340						
PRP	**Porcupine Dome**	3.68	130		Pn	20 09 34.8	+0.1
PRP					Sn	20 10 18.9	+0.2
PRP	**Porcupine Dome**	3.68	130	IAML		20 10 20.0	
	comp=E,71nm,0.7s						
PRP	**Porcupine Dome**	3.68	130	P	Pn	20 09 34.7	0.0
	baz=316,SNR=35						
PRP				S	Sn	20 10 17.8	-0.8
	baz=316						
GCSA	**Galena City Sc**	3.76	211		Pn	20 09 34.0	-1.4
GCSA	**Galena City Sc**	3.76	211	P	Pn	20 09 35.1	-0.4
	baz=27						
GCSA				Sb	Sb	20 10 32.2	+2.8
	baz=27						
CCB	**Clear Creek Bu**	3.84	150		Pn	20 09 36.5	-0.2
CCB	**Clear Creek Bu**	3.84	150	IAML		20 12 09.4	
	comp=N,48nm,0.2s						
IL31		3.92	144		Pn	20 09 37.8	0.0
ILAR	**Eielson Array**	3.92	144		Pn	20 09 37.4	-0.4
J20K	**Nowinta River**	3.92	192		Pn	20 09 37.3	-0.6
J20K	**Nowinta River**	3.92	192	IAML		20 10 43.8	
	comp=N,62nm,0.6s						
J20K				IAML		20 10 49.9	
	comp=E,50nm,0.7s						
J20K	**Nowinta River**	3.92	192	P	Pn	20 09 37.2	-0.6
	baz=9.7,SNR=13						
J20K				S	Sn	20 10 23.8	-0.6
	baz=9.7						
WRH	**Wood River Hil**	3.95	152		Pn	20 09 37.8	-0.4
BPAW	**Bear Paw Mtn.**	3.97	171		Pn	20 09 38.5	0.0
BPAW	**Bear Paw Mtn.**	3.97	171	IAML		20 10 27.4	
	comp=N,42nm,0.7s						
BPAW	**Bear Paw Mtn.**	3.97	171	P	Pn	20 09 38.5	0.0
	baz=352,SNR=16						
BPAW				S	Sn	20 10 24.7	-0.9
	baz=352						
RDOG	**Red Dog Mine**	3.97	275		Pn	20 09 38.4	-0.1
RDOG	**Red Dog Mine**	3.97	275	IAML		20 10 48.8	
	comp=E,45nm,1.4s						
RDOG				IAML		20 10 57.9	
	comp=N,55nm,1.6s						
RDOG	**Red Dog Mine**	3.97	275	S	Sn	20 10 27.5	+1.9
	baz=86						
BWN	**Browne**	4.03	162		Pn	20 09 39.6	+0.3
BWN	**Browne**	4.03	162	IAML		20 10 49.4	
	comp=N,60nm,1.0s						
BWN				IAML		20 10 53.3	
	comp=E,46nm,0.9s						
PS08	**TAPS Pump Stn8**	4.14	145		Pn	20 09 40.9	+0.2
CHUM	**Lake Minchumin**	4.15	180		Pn	20 09 41.0	+0.2
CHUM	**Lake Minchumin**	4.15	180	P	Pn	20 09 41.1	+0.2
	baz=360,SNR=10						
CHUM				S	Sn	20 10 29.3	-0.7
	baz=360						
HDA	**Harding Lake**	4.23	146		Pn	20 09 42.0	0.0
HDA	**Harding Lake**	4.23	146	IAML		20 10 51.0	
	comp=E,44nm,0.7s						
HDA	**Harding Lake**	4.23	146	P	Pn	20 09 41.7	-0.3
	baz=331,SNR=36						
HDA				S	Sn	20 10 31.0	-0.9
	baz=331						
HDA				S	Sn	20 10 31.0	-0.9
	baz=331						
J25K	**Salcha River,**	4.42	137		Pn	20 09 44.8	+0.1
J25K	**Salcha River,**	4.42	137	P	Pn	20 09 44.6	-0.1
	baz=323,SNR=15						
J25K				S	Sn	20 10 36.0	-0.7
	baz=323						
KTH	**Kantishna Hill**	4.52	172		Pn	20 09 46.1	+0.1
KTH	**Kantishna Hill**	4.52	172	IAML		20 10 40.4	
	comp=E,29nm,0.6s						
KTH				IAML		20 10 40.5	
	comp=N,30nm,0.7s						
MCK	**McKinley**	4.52	160		Pn	20 09 46.1	+0.1
MCK	**McKinley**	4.52	160	P	Pn	20 09 46.0	0.0
	baz=343,SNR=16						

MCK				S	Sn	20 10 38.3	-0.8
	baz=343						
CAST	Castle Rocks	4.62	179		Pn	20 09 47.1	-0.3
CAST	Castle Rocks	4.62	179	IAML		20 10 42.8	
	comp=E,34nm,1.0s						
CAST	Castle Rocks	4.62	179	P	Pn	20 09 47.0	-0.3
	baz=359,SNR=6.2						
CAST				S	Sn	20 10 39.3	-2.2
	baz=359						
TRF	Thorofare Moun	4.66	169		Pn	20 09 48.5	+0.4
TRF	Thorofare Moun	4.66	169	IAML		20 11 07.7	
	comp=E,26nm,1.6s						
TRF				IAML		20 11 13.3	
	comp=N,24nm,1.6s						
TRF	Thorofare Moun	4.66	169	P	Pn	20 09 48.2	+0.2
	baz=350,SNR=7.7						
TRF				S	Sn	20 10 42.2	-0.6
	baz=350						
K20K	Telida	4.73	190		Pn	20 09 49.0	+0.1
K20K	Telida	4.73	190	IAML		20 11 09.9	
	comp=E,31nm,1.1s						
K20K	Telida	4.73	190	P	Pn	20 09 48.9	-0.1
	baz=7.7						
K20K				S	Sn	20 10 43.1	-1.2
	baz=7.7						
RND	Reindeer	4.84	161		Pn	20 09 50.9	+0.4
RND	Reindeer	4.84	161	IAML		20 10 48.5	
	comp=E,33nm,0.5s						
RND				IAML		20 10 49.0	
	comp=N,26nm,0.7s						
J26L	Joseph Creek	5.00	131	P	Pn	20 09 52.4	-0.2
	baz=319,SNR=19						
J26L				S	Sn	20 10 50.7	-0.3
	baz=319						
PPLA	Purkeypile	5.14	179		Pn	20 09 54.6	0.0
PPLA	Purkeypile	5.14	179	P	Pn	20 09 54.6	0.0
	baz=359						
PPLA				S	Sn	20 10 53.9	-0.7
	baz=359						
RIDG	Independent Ri	5.27	141		Pn	20 09 56.5	+0.1
RIDG	Independent Ri	5.27	141	P	Pn	20 09 56.3	-0.1
	baz=328,SNR=16						
RIDG				S	Sn	20 10 57.5	-0.3
	baz=328						
SCRK	Sand Creek	5.29	136		Pn	20 09 57.0	+0.3
SCRK	Sand Creek	5.29	136	IAML		20 11 29.3	
	comp=N,19nm,0.9s						
SCRK	Sand Creek	5.29	136	P	Pn	20 09 56.8	+0.1
	baz=324,SNR=22						
SCRK				S	Sn	20 10 57.2	-1.1
	baz=324						
TT01	Tatalina	5.35	198		Pn	20 09 56.8	-0.6
EGAK	Eagle	5.54	121		Pn	20 10 00.2	+0.2
DOT	Dot Lake	5.54	138		Pn	20 09 59.8	-0.2
L20K	Farewell, AK	5.60	187		Pn	20 10 00.7	-0.1
L20K	Farewell, AK	5.60	187	P	Pn	20 10 00.8	-0.1
	baz=5.8						
L20K				S	Sn	20 11 03.7	-1.9
	baz=5.8						
CUT	Chulitna	5.70	170	S	Sn	20 11 08.7	+0.6
	baz=352						
PAX	Paxson	5.81	147		Pn	20 10 04.6	+0.8
PAX	Paxson	5.81	147	P	Pn	20 10 04.4	+0.6
	baz=333,SNR=6.0						
PAX				S	Sn	20 11 10.6	-0.4
	baz=333						
L19K	White Mountain	5.95	191		Pn	20 10 05.8	+0.1
L19K	White Mountain	5.95	191	P	Pn	20 10 05.5	-0.1
	baz=9.0						
L19K				S	Sn	20 11 12.5	-1.9
	baz=9.0						
SKT	Skwentna	6.07	176		Pn	20 10 07.8	+0.6
SKT	Skwentna	6.07	176	P	Pn	20 10 07.6	+0.3
	baz=357						
SKT				S	Sn	20 11 18.0	+0.7
	baz=357						
M19K	Big River Lodg	6.20	189		Pn	20 10 09.6	+0.5
M19K	Big River Lodg	6.20	189	P	Pn	20 10 09.3	+0.2
	baz=7.0,SNR=6.3						
M19K				S	Sn	20 11 19.2	-1.2
	baz=7.0						
MENT	Mentasta	6.23	141		Pn	20 10 09.3	-0.2
L26K	Log Cabin Wild	6.24	139		Pn	20 10 09.5	-0.2
L26K	Log Cabin Wild	6.24	139	P	Pn	20 10 09.4	-0.2
	baz=327						
L26K				S	Sn	20 11 21.7	+0.2
	baz=327						
HARP	HAARP	6.39	148		Pn	20 10 11.9	+0.2
GHO	Glory Hole Cre	6.43	165		Pn	20 10 13.4	+1.1
SML	Sawmill	6.46	163		Pn	20 10 13.6	+0.9
M24K	Tolsona, Glenn	6.47	153		Pn	20 10 13.6	+0.7
STLK	Strandline Lak	6.55	178		Pn	20 10 14.4	+0.5
SCM	Sheep Creek Mo	6.56	159	Pn	Pn	20 10 15.1	+1.0
DAWY	Dawson	6.59	121		Pn	20 10 14.3	-0.2
DAWY	Dawson	6.59	121	P	Pn	20 10 14.2	-0.2
	baz=313						
DAWY				S	Sn	20 11 30.1	0.0
	baz=313						
L27K	Beaver Creek,	6.61	134		Pn	20 10 14.3	-0.4
L27K	Beaver Creek,	6.61	134	P	Pn	20 10 14.3	-0.4
	baz=323,SNR=10						
L27K				S	Sn	20 11 29.5	-1.1
	baz=323						
SUA	Susitna One	6.61	173		Pn	20 10 15.6	+0.8
BC03		6.62	134		Pn	20 10 14.5	-0.2
BCAR	Beaver Creek A	6.62	134	Pn	Pn	20 10 14.3	-0.5
J29M	Klondike Camp	6.72	115	S	Sn	20 11 32.8	-0.6
	baz=308						
KNK	Knik Glacier	6.83	164	Pn	Pn	20 10 18.1	+0.4
KNK	Knik Glacier	6.83	164	S	Sn	20 11 35.5	-0.5
	baz=348						
M26K	Nabesna, AK	6.86	141		Pn	20 10 18.2	+0.1
M26K	Nabesna, AK	6.86	141	P	Pn	20 10 18.1	-0.1
	baz=329						
M26K				S	Sn	20 11 37.0	+0.2
	baz=329						
INK	Inuvik	7.02	79		Pn	20 10 20.8	+0.6
INK	Inuvik	7.02	79	P	Pn	20 10 20.5	+0.3
	baz=276						
SVW2	Sparrevohn	7.08	193	Pn	Pn	20 10 21.3	+0.1
N19K	Bonanza Creek	7.29	188		Pn	20 10 23.6	-0.5
N19K	Bonanza Creek	7.29	188	P	Pn	20 10 23.7	-0.5
	baz=6.2						
BVCY	Beaver Creek	7.39	134		Pn	20 10 25.7	+0.2
BVCY	Beaver Creek	7.39	134	P	Pn	20 10 25.3	-0.2
	baz=324						
YUK1	Sand Pete Hill	7.70	134		Pn	20 10 30.4	+0.7
YUK2	White River	7.92	137		Pn	20 10 32.9	+0.2
YUK3	Moose Creek	8.03	136		Pn	20 10 34.1	-0.2
YUK3	Moose Creek	8.03	136	P	Pn	20 10 34.1	-0.2
	baz=326						
M30M	Minto, Yukon	8.47	123		Pn	20 10 39.8	-0.5
M30M	Minto, Yukon	8.47	123	P	Pn	20 10 39.6	-0.6
	baz=317						
YUK4	Talbot Arm	8.88	132	P	Pn	20 10 45.5	-0.5
	baz=324						
YUK5	Granite Creek	9.27	131		Pn	20 10 51.5	+0.2
YUK6	Outpost Mounta	9.29	133		Pn	20 10 51.9	+0.4
HYT	Haines Junctio	9.62	131	P	Pn	20 10 56.4	+0.4
	baz=325						
MMPY	Sheldon Lake,	10.30	112	P	Pn	20 11 05.2	0.0
	baz=311						

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*IDC **02** 20:10:14.0±1.4, 13°.92N×120°.99E, h0^{km}, mb3.5/4, mb1 3.8/4, mb1mx3.4/42, mbtmp3.5/4, Error ellipse: s-maj=58.4km s-min=22.3km az=58.0*

*MAN **02** 20:10:28.3, 13°.98N×120°.44E, h104^{km}, mb4.3, ML3.2, MS2.9*

ISC 02 20:10:27.1±1.1**, 13°.7N**±0°.1×**120°.3E**±0°.1**, h100**^{km}**, n7, σ2^{s}56**/8**, mb3.5**/4**, 2C-1D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PGP	Puerto Galera	0.64	106	⇑*e*P	Pn	20 10 46.7	+2.6
TGY	Tagaytay City	0.73	55	⇑*e*P	Pn	20 10 46.2	+1.3
TGY				*i* S	Sn	20 11 00.1	+1.8
LQP	Lukban	1.26	70	⇓*i*P	Pn	20 10 50.8	+0.1
LQP				*i* S	Sn	20 11 14.2	+5.7
CMAR	Chiang Mai Arr	21.08	286	P	P	20 15 06.5	+2.9
	0.8nm,0.5s,baz=94,slow=7.4,SNR=13						
SONM	Songino Array	35.98	344	P	P	20 17 15.9	-2.5
	0.7nm,0.5s,baz=164,slow=9.9,SNR=5.2						
WRA	Warramunga Arr	36.15	157	P	P	20 17 18.3	-1.6
	0.3nm,0.5s,baz=332,slow=9.9,SNR=11						
ASAR	Alice Springs	39.42	160	P	P	20 17 45.5	-2.0
	0.3nm,0.5s,baz=341,slow=6.9,SNR=7.1						

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*VAO **02** 20:13:38.7±0.3, 31°.26S×68°.69W, h10^{km}, mb4.5*

*IDC **02** 20:13:44.9±0.5, 31°.40S×68°.60W, h101^{km}±3^{km}, mb4.3/10, mb1 4.4/15, mb1mx4.2/24, mbtmp4.6/15, MS3.4/1, Ms1 3.4/1, ms1mx3.0/20, Error ellipse: s-maj=17.9km s-min=13.4km az=70.0*

*NEIC **02** 20:13:45.4±1.6, 31°.38S±0°.06×68°.54W±0°.09, h104^{km}±5^{km}, mb4.7/146, Md4.6(SJA), ML5.0(GUC), Error ellipse: s-maj=11.3km s-min=8.5km az=85.0*

*SJA **02** 20:13:45±1.5, 31°.39S±0°.06×68°.66W±0°.09, h107^{km}±4^{km}, Error ellipse: s-maj=10.9km s-min=8.1km az=85.0*

*GUC **02** 20:13:45.8±0.6, 31°.39S×69°.11W, h182^{km}±6^{km}, ML5.0*

ISC 02 20:13:45.0±0.4**, 31°.39S**±0°.03×**68°.71W**±0°.03**, h103**^{km}±3^{km}**, h103**^{km}**:pP-P, n314, σ1^{s}49**/358**, mb4.7**/72**, 26C-7D, Fault plane solution: NP1:**ϕ_s236.43332°, δ73.92661°, λ-103.86340°. **NP2:**ϕ_s98.14674°, δ21.10593°, λ-50.25341°. **Principal axes:** T Plg27.6388°, Azm337.4592°; N Plg13.3113°, Azm240.3423°; P Plg58.8092°, Azm127.3374°; **San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZON	Zonda	0.15	169	Pn	Pn	20 14 00.2	+0.6
ZON	Zonda	0.15	169	*e*P	Pn	20 14 00.2	+0.6
ZON				*e*S	Sn	20 14 11.7	+1.3
RTLL	Cerro Villicun	0.21	73	*e*P	Pn	20 14 00.2	+0.6
RTLL				*e*S	Sn	20 14 08.1	-2.5
RTCV	Cerro Valdivia	0.49	163	*e*P	Pn	20 14 01.9	+0.7
RTLS	Leoncito	0.64	231	*e*P	Pn	20 14 04.0	+1.4
RTLS				*e*S	Sn	20 14 18.6	+2.9
RTLS				IAML		20 14 19.8	
	comp=Z,9µm,0.3s						
ACCO	Cerro Coronel	0.86	339	*e*P	Pn	20 14 06.0	+1.4
AUSP	Uspallata	1.01	215	*e*P	Pn	20 14 07.3	+1.2
ASAL	Salagasta	1.20	185	*e*P	Pn	20 14 09.2	+1.2
ACDV	Cuesta del Vie	1.27	344	*e*P	Pn	20 14 10.2	+1.3
ACDV				*e*S	Sn	20 14 29.4	+2.6
ACDV				IAML		20 14 29.9	
	comp=Z,6µm,0.6s						
AVFE	Valle Fertil	1.30	56	*e*P	Pn	20 14 09.5	+0.4
AVFE				*e*S	Sn	20 14 28.6	+1.1
AVFE				IAML		20 14 29.9	
	comp=Z,4µm,0.4s						
AROD	Rodeo	1.39	332	*e*P	Pn	20 14 12.1	+1.7
ARCO	CERRO ARCO	1.46	187	*e*P	Pn	20 14 12.4	+1.3
ARCO				*e*S	Sn	20 14 33.4	+2.6
ARCO				IAML		20 14 34.4	
	comp=Z,10µm,0.8s						
ACAN	Cantantal	1.57	125	*e*P	Pn	20 14 02.0	-10
AAGR	Agrelo	1.69	183	*e*P	Pn	20 14 15.1	+1.2
ACHE	Chepes	1.77	83	*e*P	Pn	20 14 15.3	+0.3
CO03	El Pedregal	1.78	288		Pn	20 14 17.2	+2.1
CO03	El Pedregal	1.78	288	⇑*e*P	Pn	20 14 17.2	+2.1
CO03				*i* S	Sn	20 14 40.6	+2.7
CO03				IAML		20 14 42.5	
	comp=E,18µm,0.3s						
AGUA	GUANDACOL	1.91	6	*e*P	Pn	20 14 18.0	+1.3
AGUA				*e*S	Sn	20 14 46.3	+5.5
AGUA				IAML		20 14 49.9	
	comp=Z,4µm,1.1s						
VA03	San Esteban	2.07	228		Pn	20 14 20.8	+2.0
VA03	San Esteban	2.07	228	⇑*e*P	Pn	20 14 20.7	+2.0
VA03				*i* S	Sn	20 14 47.0	+2.5
VA03				IAML		20 14 50.9	
	comp=N,6µm,0.7s						
VA03	San Esteban	2.07	228	*e*P	Pn	20 14 09.5	-9.3
VA03				IAML		20 14 51.3	
	comp=Z,4µm,0.9s						
AVIZ	Vizcacheras	2.08	175	*e*P	Pn	20 14 19.9	+1.1
APLL	PUNTA DE LOS L	2.12	63	*e*P	Pn	20 14 20.0	+0.6
GO04	Tololo Observa	2.17	304		Pn	20 14 21.5	+1.3
GO04	Tololo Observa	2.17	304	⇑*e*P	Pn	20 14 21.4	+1.2
GO04				*i* S	Sn	20 14 48.1	+1.2
GO04	Tololo Observa	2.17	304	*e*P	Pn	20 14 21.4	+1.2
GO04				*e*S	Sn	20 14 42.3	-4.7
PEL	Peldehue	2.42	223	⇑*e*P	Pn	20 14 24.4	+1.2
PEL				*i* S	Sn	20 14 53.9	+1.5
PEL				IAML		20 14 57.7	
	comp=N,3µm,0.3s						
PEL	Peldehue	2.42	223	*e*P	Pn	20 14 24.5	+1.4
PEL				*e*S	Sn	20 14 55.2	+2.8
ACLC	CERRO LA CRUZ	2.48	38	*e*P	Pn	20 14 24.7	+0.5
ACLC				*e*S	Sn	20 14 55.8	+1.6
ACLC				IAML		20 14 56.4	
	comp=Z,5µm,0.6s						
VA06	Catapilco	2.49	241	⇑*e*P	Pn	20 14 24.6	+0.6
ROCH	El Roble	2.50	230	⇑*e*P	Pn	20 14 25.4	+0.9
ROCH				*i* S	Sn	20 14 55.6	+0.8
ROCH				IAML		20 15 01.3	
	comp=N,5µm,0.4s						
ROC1	El Roble	2.51	230	*e*P	Pn	20 14 25.4	+0.8
ROC1				*e*S	Sn	20 14 57.0	+2.0
FSR	Penalolen	2.58	216	*e*S	Sn	20 14 58.6	+2.2
CO06	Fray Jorge	2.61	285		Pn	20 14 25.4	-0.3
CO06	Fray Jorge	2.61	285	⇑*i*P	Pn	20 14 25.4	-0.3
CO06				*i* S	Sn	20 14 55.6	-1.3
CO06				IAML		20 15 07.7	
	comp=E,3µm,0.4s						
CO05	La Serena	2.63	303		Pn	20 14 26.2	+0.3
CO05	La Serena	2.63	303	⇑*e*P	Pn	20 14 26.4	+0.5
CO05				*i* S	Sn	20 14 56.3	-1.0
CO05				IAML		20 14 59.5	
	comp=N,8µm,0.2s						
MT05	Renca	2.63	220	Pn	Pn	20 14 27.5	+1.5
MT05	Renca	2.63	220	⇑*e*P	Pn	20 14 27.4	+1.4
MT05				*i* S	Sn	20 14 58.3	+0.9
MT05				IAML		20 15 02.1	
	comp=E,7µm,0.3s						
MT05	Renca	2.63	220	*e*P	Pn	20 14 28.0	+2.0
VCA	Vinchina	2.68	10	⇑*i*P	Pn	20 14 27.9	+1.1
VCA				*i* S	Sn	20 15 00.5	+1.6
VCA				IAML		20 15 07.5	
	comp=E,4µm,0.3s						
VCA	Vinchina	2.68	10	*e*P	Pn	20 14 27.9	+1.1
VCA				*e*S	Sn	20 14 49.3	-10
VCA				IAML		20 15 10.1	
	comp=Z,3µm,0.4s						
MRA	San Martin	2.75	113	*e*P	Pn	20 14 27.7	+0.2
MRA				*e*S	Sn	20 14 59.5	-0.8
MRA				IAML		20 15 01.0	
	comp=Z,3µm,0.8s						
LMEL	Las Melosas	2.75	207	⇑*i*P	Pn	20 14 29.2	+1.5
LMEL				*i* S	Sn	20 15 02.4	+1.9
MT02	Curacav	2.77	227		Pn	20 14 28.2	+0.4
MT02	Curacav	2.77	227	*e*P	Pn	20 14 28.1	+0.4
MT02				*i* S	Sn	20 15 00.1	-0.6
MT02				IAML		20 15 05.6	
	comp=E,4µm,0.9s						
MT02	Curacav	2.77	227	*e*P	Pn	20 14 28.0	+0.2
MT02				IAML		20 15 05.5	
	comp=Z,901nm,0.5s						
LCO	Las Campanas	2.93	324	Pn	Pn	20 14 31.1	+0.8
LCO	Las Campanas	2.93	324	⇑*i*P	Pn	20 14 31.0	+0.8
LCO				*i* S	Sn	20 15 05.5	+0.6
LCO	Las Campanas	2.93	324	*e*P	Pn	20 14 31.1	+0.8
VA01	Torpederas	2.97	236	Pn	Pn	20 14 29.9	-0.5
VA01	Torpederas	2.97	236	*e*P	Pn	20 14 30.1	-0.3
VA01				*i* S	Sn	20 15 03.9	-1.5
VA01				IAML		20 15 13.3	
	comp=E,2µm,0.3s						
VA01	Torpederas	2.97	236	*e*P	Pn	20 14 31.0	+0.6
BO04	La Punta	3.04	211	*e*P	Pn	20 14 32.6	+1.1
BO04				*i* S	Sn	20 15 08.2	+1.0
MT09	Talagante	3.06	218		Pn	20 14 32.0	+0.2
MT09	Talagante	3.06	218	⇑*i*P	Pn	20 14 32.1	+0.4
MT09				*i* S	Sn	20 15 03.0	-4.7
MT09				IAML		20 15 10.2	
	comp=N,3µm,0.5s						
MT01	Popeta	3.27	220		Pn	20 14 34.0	-0.4
MT01	Popeta	3.27	220	*e*P	Pn	20 14 34.1	-0.3
MT01				*i* S	Sn	20 15 11.6	-0.9
MT01				IAML		20 15 14.2	
	comp=N,1µm,0.5s						
VA05	Santo Domingo	3.33	227		Pn	20 14 35.5	+0.2
VA05	Santo Domingo	3.33	227	*e*P	Pn	20 14 35.1	-0.2
VA05				*i* S	Sn	20 15 12.4	-1.6
VA05				IAML		20 15 23.0	
	comp=E,3µm,0.4s						
RFA	San Rafael	3.38	177	*e*P	Pn	20 14 35.8	-0.1
RFA				IAML		20 15 17.7	
	comp=Z,1µm,0.6s						
TINO	Tinogasta	3.46	17	*e*P	Pn	20 14 38.1	+0.8
BO01	Tunca	3.59	213		Pn	20 14 38.5	-0.3
BO01	Tunca	3.59	213	*e*P	Pn	20 14 38.6	-0.3
BO01				*i* S	Sn	20 15 19.6	-0.8
AC04	Llanos de Chal	3.78	327	Pn	Pn	20 14 41.3	-0.1
AC04	Llanos de Chal	3.78	327	⇑*i*P	Pn	20 14 41.2	-0.1
AC04				*i* S	Sn	20 15 14.3	-11
BO02	Sierra Bellavi	3.81	207		Pn	20 14 42.4	+0.7
BO02	Sierra Bellavi	3.81	207	*e*P	Pn	20 14 42.3	+0.6
BO02				*i* S	Sn	20 15 26.4	+0.8
GO03	Copiap	4.01	340	Pn	Pn	20 14 44.9	+0.4
GO03	Copiap	4.01	340	⇑*i*P	Pn	20 14 44.9	+0.4
GO03				*i* S	Sn	20 15 30.6	0.0
GO03	Copiap	4.01	340	*e*P	Pn	20 14 45.2	+0.7
GO05	Huala	4.50	216	Pn	Pn	20 14 49.3	-1.8
GO05	Huala	4.50	216	*e*P	Pn	20 14 49.2	-1.8
GO05				*i* S	Sn	20 15 39.4	-2.9
AC02	Maricunga	4.56	355	Pn	Pn	20 14 53.7	+1.5
AC02	Maricunga	4.56	355	⇑*i*P	Pn	20 14 53.6	+1.3
AC02				*i* S	Sn	20 15 41.5	-2.9
ML02	Panimavida	4.91	207	Pn	Pn	20 14 55.3	-1.2
FSA	Cafayete	5.78	25	*e*P	Pn	20 15 08.8	+0.2
PB14	IPOC Station P	6.91	347	Pn	Pn	20 15 22.1	-1.9
SLA	San Lorenzo	7.22	24	*e*P	Pn	20 15 28.0	-0.2
SLA				IAML		20 17 44.5	
	comp=Z,123nm,1.1s						
LC01	Cunco	7.92	198	Pn	Pn	20 15 35.1	-2.3
PB10	IPOC Station P	8.02	348	Pn	Pn	20 15 36.0	-2.9
PB15	IPOC Station P	8.18	355	Pn	Pn	20 15 39.3	-1.9
TRQA	Tornquist	8.65	142	Pn	Pn	20 15 46.2	-1.2
TRQA	Tornquist	8.65	142	*e*P	Pn	20 15 46.0	-1.4
PB06	IPOC Station P	8.69	355	Pn	Pn	20 15 45.4	-2.7
LVC	Limon Verde	8.75	359	P	Pn	20 15 47.1	-2.0
	comp=Z,18nm,0.3s,baz=196,slow=8.5,SNR=56						
LVC				S	Sn	20 17 19.7	-6.5
	baz=246,slow=20,SNR=1.6						
LVC	Limon Verde	8.75	359	Pn	Pn	20 15 46.8	-2.3
PB04	IPOC Station P	9.11	352	Pn	Pn	20 15 50.2	-3.7
PLCA	Paso Flores	9.44	189	P	Pn	20 15 56.8	-1.3
	comp=Z,1.1nm,0.3s,baz=353,slow=12,SNR=14						
PLCA				LR	LR	20 19 00.5	
	comp=Z,254nm,21.0s,baz=147,slow=33						
PLCA	Paso Flores	9.44	189	Pn	Pn	20 15 55.7	-2.4
PLCA	Paso Flores	9.44	189	*e*P	Pn	20 15 56.8	-1.3
PB07	IPOC Station P	9.68	353	Pn	Pn	20 15 57.5	-4.2
LL04	Puerto Octay	9.95	196	Pn	Pn	20 16 00.1	-5.0
PB01	IPOC Station P	10.33	356	Pn	Pn	20 16 06.2	-4.1
ITQB	Itaqui	10.56	84	Pn	Pn	20 16 10.7	-2.7
ITQB	Itaqui	10.56	84	*e*P	Pn	20 16 10.0	-3.4
TA01	Diego Aracena	10.86	353	Pn	Pn	20 16 12.0	-5.5
TA02	Huaiquique	11.15	353	Pn	Pn	20 16 21.4	+0.1
CPUP	Villa Florida	11.18	66	P	Pn	20 16 19.8	-1.9
	comp=Z,0.3nm,0.3s,baz=243,slow=11,SNR=6.4						
CPUP	Villa Florida	11.18	66	Pn	Pn	20 16 13.6	-8.1
CPUP	Villa Florida	11.18	66	*e*P	Pn	20 16 18.2	-3.5
PB08	IPOC Station P	11.21	358	Pn	Pn	20 16 18.4	-4.1
PB11	IPOC Station P	11.61	356	Pn	Pn	20 16 21.4	-6.3
PSGCX	Pisagua	11.81	353	Pn	Pn	20 16 23.4	-6.9
PLTB	Pedras Altas	12.89	96	Pn	Pn	20 16 39.8	-4.6
PLTB	Pedras Altas	12.89	96	*e*P	Pn	20 16 41.7	-2.7
CPSB	Cacapava Do Su	13.15	90	*e*P	Pn	20 16 45.5	-2.3
COYC	Coyhaique	14.40	190	Pn	Pn	20 17 02.2	-1.6
LPAZ	La Paz	15.05	2	P	Pn	20 17 12.4	-0.4
	comp=Z,1.0nm,0.3s,baz=170,slow=7.6,SNR=67						
LPAZ	La Paz	15.05	2	Pn	Pn	20 17 12.5	-0.4
LPAZ				IAmb	IAmb	20 17 15.4	
	comp=Z,39nm,1.0s						
LPAZ	La Paz	15.05	2	*e*P	Pn	20 17 11.8	-1.1
PTGB	Pitanga	16.12	70	*e*P	Pn	20 17 24.9	-1.0
TRCB	Terra Rica	16.67	63	*e*P	Pn	20 17 31.7	-0.9
SIV	San Ignacio	16.84	26	P	Pn	20 17 32.3	-2.3
	comp=Z,0.8nm,0.3s,baz=205,slow=14,SNR=23						
TER01	Tubaro-SC	17.21	85	*e*P	Pn	20 17 39.3	+0.2
PTLB	Pontes e Lacer	18.12	31	*e*P	P	20 17 48.5	-0.6
TIJ01	Guaruva-PR	18.36	76	*e*P	Pn	20 17 52.5	-0.5
PCMB	Pacaembu	18.39	62	*e*P	Pn	20 17 53.5	+0.1
PP1B	Ponte de Pedra	18.60	46	*e*P	P	20 17 55.1	+0.7
SALV	Santo Antonio	19.46	41	*e*P	P	20 18 04.6	+0.8
VILB	Vilhena	19.96	25	*e*P	P	20 18 09.5	+0.3
ITRB	Iturama	20.21	59	*e*P	P	20 18 12.0	+0.2
PET01	Itanhaem-SP	20.22	75	*e*P	Pn	20 18 13.6	-1.1
SPB	Sao Paulo	20.39	73	*e*P	Pn	20 18 15.4	-1.3
BB19B	Bebedouro	20.79	65	*e*P	P	20 18 17.8	-0.4
RCLB	Rio Claro- Sao	20.87	70	*e*P	P	20 18 20.4	+1.4
ETMB	Extrema	21.59	7	*e*P	P	20 18 26.9	+0.2
ARAG	Araguaiana, MT	21.95	49	*e*P	P	20 18 30.9	+0.4
PDRB	Porto dos Gac	22.59	32	*e*P	P	20 18 38.4	+1.2
IPMB	Ipameri, GO	22.86	59	*e*P	P	20 18 42.0	+2.1
SAML	Samuel	22.92	14	P	P	20 18 39.6	-0.8
SAML	Samuel	22.92	14	*e*P	P	20 18 40.4	0.0
MAN01	Angra dos Reis	23.57	75	*e*P	P	20 18 49.9	+3.4
CLDB	Colider	23.66	33	*e*P	P	20 18 49.9	+2.6
BSCB	Bom Sucesso	23.80	70	*e*P	P	20 18 51.7	+3.2
CZSB	Cruzeiro do Su	23.84	350	*e*P	P	20 18 50.3	+1.5
BDFB	Brasilia	24.55	55	P	P	20 18 51.0	-4.4
CAM01	Campos-RJ	25.94	75	*e*P	P	20 19 07.3	-0.5
MC01	Montes Claros	26.85	63	*e*P	P	20 19 19.2	+3.0
PEXB	Peixe	26.89	49	*e*P	P	20 19 19.4	+2.9
TBTG	Tabatinga, AM	27.09	357	*e*P	P	20 19 20.8	+2.6
NPGB	Novo Progresso	27.25	30	*e*P	P	20 19 22.9	+3.1
ALF01	Guarapari-ES	27.27	74	*e*P	P	20 19 22.8	+2.9
JANB	Januaria	27.60	59	*e*P	P	20 19 25.9	+3.0
SJMB	Sao Joao De Ma	27.87	70	*e*P	P	20 19 28.5	+3.3
MACA	Manacapuru-AM	29.08	17	*e*P	P	20 19 39.2	+3.2
OTAV	Otavalo	32.79	342	P	P	20 20 08.8	-0.2
OTAV	Otavalo	32.79	342	*e*P	P	20 20 11.4	+2.3
BOAV	Boa Vista	34.49	15	*e*P	P	20 20 25.6	+2.2
MCPB	Macapa, AP	34.66	30	*e*P	P	20 20 26.0	+1.1
ZARC	Zaragoza, Cauc	39.11	350	P	P	20 21 01.5	-1.0
MDP	Montagnes des	39.40	26	pP	pP	20 21 29.8	+1.0
	comp=Z,11nm,0.9s,baz=205,slow=10,SNR=5.5						
MTO3	Montecristo	49.66	333	P	P	20 22 26.0	-0.7
MTO3				IAmb	IAmb	20 22 28.8	
	comp=Z,7.0nm,1.0s						
VNA3	Neumayer Olymp	50.74	159	P	P	20 22 34.1	0.0
VNA1	Neumayer--Stat	51.00	158	P	P	20 22 35.5	-0.4
VNA2	Neumayer--Watz	51.36	158	P	P	20 22 38.9	+0.3
	baz=284,slow=8.9						
SNAA	Sanae	52.96	159	P	P	20 22 50.6	0.0
SNAA	Sanae	52.96	159	P	P	20 22 50.2	-0.4
SNAA				IAmb	IAmb	20 22 52.0	
	comp=Z,12nm,1.1s						
QSPA	South Pole Qui	58.84	180	P	P	20 23 33.0	+0.3
JSC	Jenkinsville	66.39	349	P	P	20 24 22.9	0.0
JSC				IAmb	IAmb	20 24 34.1	
	comp=Z,11nm,1.1s						
Y52A	Lilburn	66.50	346	P	P	20 24 22.9	-0.7
Y52A				IAmb	IAmb	20 24 24.9	
	comp=Z,17nm,1.2s						
Z47A	Carrollton	66.80	342	P	P	20 24 24.7	-0.8
VNDA	Vanda	67.18	191	P	P	20 24 28.5	+1.0
	comp=Z,2.8nm,0.8s,baz=206,slow=1.2,SNR=3.2						
VNDA	Vanda	67.18	191	P	P	20 24 28.8	+1.3
143A	Socs Landing,	67.27	339	P	P	20 24 29.4	+0.9
X51A	Calhoun	67.35	346	P	P	20 24 29.0	0.0
FPAL	Fort Paine	67.49	345	P	P	20 24 29.3	-0.6
W52A	Murphy	67.67	347	P	P	20 24 30.7	-0.3
W52A				IAmb	IAmb	20 24 31.4	
	comp=Z,7.3nm,0.9s						
X48A	Hartselle	67.73	344	P	P	20 24 30.6	-0.8
X48A				IAmb	IAmb	20 24 33.0	
	comp=Z,12nm,0.9s						
HPIG		67.88	325	P	P	20 24 33.6	+0.9
HPIG				IAmb	IAmb	20 24 35.0	
	comp=Z,12nm,1.1s						
W50A	Signal Mountai	68.06	345	P	P	20 24 31.6	-1.8
W50A				IAmb	IAmb	20 24 34.4	
	comp=Z,9.4nm,0.8s						
237A	Washetta, Mont	68.07	335	P	P	20 24 32.7	-0.9
CPCT	Cooper Cave	68.13	346	P	P	20 24 33.6	-0.3
CPCT				IAmb	IAmb	20 24 34.6	
	comp=Z,14nm,1.2s						
TKL	Tuckaleechee C	68.18	347	P	P	20 24 33.2	-1.0
SWET	Sewanee	68.21	345	P	P	20 24 33.8	-0.6
SWET				IAmb	IAmb	20 24 35.2	
	comp=Z,14nm,1.0s						
JCT	Junction City	68.25	331	P	P	20 24 34.8	0.0
PLAL	Pickwick Lake	68.49	343	P	P	20 24 35.5	-0.6
TX31	Lajitas Ar. Si	68.94	328	P	P	20 24 39.4	+0.2

TX31				IAmb	IAmb	20 24 41.1	
	comp=Z,10nm,0.8s						
TX32	Lajitas Array	68.94	328	P	P	20 24 39.5	+0.3
TXAR	Lajitas Array	68.94	328	P	P	20 24 40.1	+0.9
	comp=Z,2.8nm,0.7s,baz=151,slow=8.6,SNR=33						
TXAR				pP	pP	20 25 05.8	+0.1
	comp=Z,1.5nm,0.7s,baz=150,slow=7.2,SNR=5.8						
TXAR	Lajitas Array	68.94	328	P	P	20 24 39.6	+0.5
CLTN	Cedars of Leba	69.14	345	P	P	20 24 39.9	-0.2
CLTN				IAmb	IAmb	20 24 44.9	
	comp=Z,8.6nm,0.8s						
WVT	Waverly	69.52	344	P	P	20 24 42.1	-0.4
MIAR	Mount Ida	69.64	338	P	P	20 24 42.9	-0.4
Z35A	Perchaven, San	69.79	335	P	P	20 24 44.4	+0.2
WHAR	Wooly Hollow	69.94	340	P	P	20 24 45.1	+0.1
WHAR				IAmb	IAmb	20 24 46.3	
	comp=Z,13nm,1.2s						
PEBM	Pemiscott Bayo	70.02	342	P	P	20 24 46.3	+0.8
ABTX	Abilene, Hawle	70.07	333	P	P	20 24 46.5	+0.6
R55A	Marlinton	70.13	350	P	P	20 24 46.9	+0.6
R55A				IAmb	IAmb	20 24 47.9	
	comp=Z,9.5nm,0.8s						
T47A	Sharon Grove	70.17	344	P	P	20 24 44.8	-1.6
X37A	Clayton	70.27	337	P	P	20 24 47.2	+0.1
X37A				IAmb	IAmb	20 24 49.4	
	comp=Z,16nm,1.3s						
W39A	Magazine	70.31	338	P	P	20 24 47.5	+0.2
W39A				IAmb	IAmb	20 24 49.2	
	comp=Z,20nm,0.9s						
LCAR	Lake Charles	70.33	341	P	P	20 24 47.0	-0.5
FCAR	Ozark Folk Cen	70.45	340	P	P	20 24 47.9	-0.2
PBMO	Poplar Bluff	70.80	342	P	P	20 24 49.9	-0.3
P57A	Homestead Farm	71.05	352	P	P	20 24 51.2	-0.5
P57A				IAmb	IAmb	20 24 53.6	
	comp=Z,16nm,1.1s						
U40A	Yellville	71.09	340	P	P	20 24 51.7	-0.4
U40A				IAmb	IAmb	20 24 53.2	
	comp=Z,12nm,0.9s						
X34A	Smith Ranch, M	71.14	335	P	P	20 24 52.3	-0.1
X34A				IAmb	IAmb	20 24 54.0	
	comp=Z,14nm,0.9s						
T42A	Van Buren	71.22	341	P	P	20 24 52.9	+0.1
T42A				IAmb	IAmb	20 24 53.7	
	comp=Z,18nm,1.5s						
HHAR	Hobbs	71.36	339	P	P	20 24 53.0	-0.6
HHAR				IAmb	IAmb	20 24 54.8	
	comp=Z,17nm,1.1s						
WMOK	Wichita Mounta	71.61	334	P	P	20 24 54.9	-0.4
MGMO	Mountain Grove	71.67	340	P	P	20 24 55.7	+0.2
MGMO				IAmb	IAmb	20 24 56.8	
	comp=Z,10nm,0.9s						
DBIC	Dimbokro	71.67	70	P	P	20 24 55.8	-0.3
	comp=Z,8.0nm,1.0s,baz=240,slow=6.7,SNR=5.2						
DBIC				pP	pP	20 25 22.4	+0.1
	comp=Z,5.1nm,0.7s,baz=230,slow=6.5,SNR=4.3						
DBIC	Dimbokro	71.67	70	IAmb	IAmb	20 25 22.9	
	comp=Z,12nm,1.1s						
MNTX	Cornudas Mount	71.72	328	P	P	20 24 55.0	-0.9
MNTX					pP	20 25 23.5	+0.8
P51A	Williamsport	71.77	348	P	P	20 24 55.0	-1.0
FVM	French Village	71.94	342	P	P	20 24 56.9	-0.2
O52A	Adamsville	72.18	349	P	P	20 24 57.6	-0.9
O52A				IAmb	IAmb	20 24 59.0	
	comp=Z,10nm,1.0s						
CCM	Cathedral Cave	72.22	341	P	P	20 24 58.0	-0.7
CCM				IAmb	IAmb	20 24 59.9	
	comp=Z,15nm,1.0s						
HSIG		72.28	322	P	P	20 25 00.3	+1.0
HSIG				IAmb	IAmb	20 25 02.5	
	comp=Z,25nm,1.5s						
S39A	Bolivar	72.47	340	P	P	20 25 00.1	-0.2
S39A				pP	pP	20 25 28.2	+1.2
ACSO	Alum Creek Sta	72.48	349	P	P	20 24 59.7	-0.6
ACSO				IAmb	IAmb	20 25 00.8	
	comp=Z,20nm,1.0s						
MSTX	Muleshoe	72.51	331	P	P	20 25 01.0	+0.2
MSTX				pP	pP	20 25 28.4	+0.9
O49A	Covington	72.68	348	P	P	20 25 00.7	-0.8
O49A				IAmb	IAmb	20 25 01.9	
	comp=Z,15nm,1.1s						
P46A	Rosedale	72.71	345	P	P	20 25 00.6	-1.0
P46A				IAmb	IAmb	20 25 01.7	
	comp=Z,21nm,1.1s						
R40A	Maddies Statio	72.72	341	P	P	20 25 00.9	-0.9
T35A	Sooner Cattle	72.77	337	P	P	20 25 01.7	-0.3
T35A				IAmb	IAmb	20 25 03.6	
	comp=Z,16nm,1.1s						
AMTX	Amarillo	72.86	332	P	P	20 25 03.1	+0.4
AMTX				IAmb	IAmb	20 25 04.3	
	comp=Z,17nm,1.1s						
KSCT	Kent School, K	72.89	356	P	P	20 25 01.7	-0.9
319A	Douglas	73.32	324	P	P	20 25 06.7	+1.1
N49A	Columbus Grove	73.36	348	P	P	20 25 05.3	-0.2
N49A				IAmb	IAmb	20 25 06.6	
	comp=Z,20nm,1.1s						
121A	Cookes Peak, D	73.54	326	P	P	20 25 08.0	+1.1
121A				IAmb	IAmb	20 25 09.7	
	comp=Z,16nm,1.1s						
P40A	Paris	73.82	341	P	P	20 25 07.4	-0.8
P38A	Dawn	74.32	340	P	P	20 25 11.3	+0.2
MAW	Mawson	74.85	163	P	P	20 25 14.1	+0.2
	comp=Z,12nm,0.9s,baz=217,slow=7.1,SNR=20						
MAW	Mawson	74.85	163	P	P	20 25 14.0	+0.1
ANMO	Albuquerque	74.93	329	P	P	20 25 16.5	+1.5
ANMO				IAmb	IAmb	20 25 17.5	
	comp=Z,16nm,1.4s						
PECO	Prince Edward	75.35	354	P	P	20 25 17.1	+0.3
PECO				IAmb	IAmb	20 25 17.9	
	comp=Z,16nm,1.1s						
214A	Organ Pipe Nat	75.58	322	P	P	20 25 19.9	+1.4
214A				IAmb	IAmb	20 25 21.3	
	comp=Z,13nm,1.1s						
T25A	Trinidad	75.92	331	P	P	20 25 21.8	+1.2
T25A				IAmb	IAmb	20 25 23.1	
	comp=Z,18nm,1.1s						
L40A	Anamosa	75.98	343	P	P	20 25 20.1	-0.4
N35A	Tabor	76.09	339	P	P	20 25 21.3	+0.1
X18A	Snowflake	76.20	326	P	P	20 25 21.1	-1.1
G62A	West of Eustis	76.27	359	P	P	20 25 23.0	+0.9
X16A	Lo Mia Camp, P	76.84	325	P	P	20 25 27.2	+1.3
X16A				IAmb	IAmb	20 25 29.0	
	comp=Z,10.0nm,0.9s						
KOWA	Kowa	76.99	64	P	P	20 25 26.6	-0.3
KOWA				IAmb	IAmb	20 25 55.8	
	comp=Z,9.8nm,0.8s						
Y14A	Wickenburg	77.24	323	P	P	20 25 29.3	+1.4
BGNE	Belgrade	77.37	338	P	P	20 25 28.7	+0.2
WUAZ	Wupatki	77.69	326	P	P	20 25 32.3	+1.8
WUAZ				IAmb	IAmb	20 25 33.3	
	comp=Z,10nm,0.9s						
MVCO	Mesa Verde	77.73	328	P	P	20 25 31.7	+0.9
I37A	Lemond, Waseca	78.36	342	P	P	20 25 33.6	-0.3
PV13	Radium Mtn., P	78.66	329	P	P	20 25 36.0	+0.1
PV13				IAmb	IAmb	20 25 38.0	
	comp=Z,11nm,1.0s						
K31A	O'Neill	78.66	338	P	P	20 25 36.1	+0.5
ISCO	Idaho Springs	78.68	332	P	P	20 25 37.0	+1.0
SMCO	Snowmass	78.71	331	P	P	20 25 37.8	+1.4
SMCO				IAmb	IAmb	20 25 39.1	
	comp=Z,12nm,0.9s						
BOSA	Boshof	78.76	117	P	P	20 25 36.3	-0.5
	comp=Z,7.1nm,0.8s,baz=250,slow=7.9,SNR=8.4						
BOSA				pP	pP	20 26 02.4	-1.1
	comp=Z,5.1nm,0.8s,baz=306,slow=2.2,SNR=1.8						
BOSA	Boshof	78.76	117	IAmb	IAmb	20 25 39.2	
	comp=Z,16nm,1.2s						
U15A	North Rim	78.86	325	P	P	20 25 38.6	+1.5
PV22	Blue Mesa, Par	78.95	329	P	P	20 25 38.9	+1.4
ECSD	EROS Data Cent	79.00	340	P	P	20 25 36.8	-0.5
ECSD				IAmb	IAmb	20 25 38.4	
	comp=Z,20nm,1.1s						
KNB	Kanab	79.59	325	P	P	20 25 41.5	+0.6
KNB				IAmb	IAmb	20 25 43.7	
	comp=Z,17nm,1.1s						
PHWY	Pilot Hill	79.89	333	P	P	20 25 42.8	+0.2
PHWY				IAmb	IAmb	20 25 44.6	
	comp=Z,13nm,1.0s						
SRU	San Rafael Swe	80.20	328	P	P	20 25 44.8	+0.6
CCUT	Cedar City	80.27	325	P	P	20 25 46.4	+1.7
CCUT				IAmb	IAmb	20 25 47.6	
	comp=Z,9.9nm,0.9s						
Q16A	Castle Valley	80.34	328	P	P	20 25 43.1	-1.8
Q16A					pP	20 26 14.4	+2.2
P18A	Preston Nutter	80.50	329	P	P	20 25 44.2	-1.7
P18A				IAmb	IAmb	20 25 48.2	
	comp=Z,10nm,1.0s						
P17A	Butcher Ranch,	80.59	328	P	P	20 25 46.3	0.0
P17A				IAmb	IAmb	20 25 48.1	
	comp=Z,16nm,1.4s						
TMUT	Trail Mountain	80.66	328	P	P	20 25 47.1	+0.3
TORD	Torodi Ar. Bea	80.67	68	P	P	20 25 46.5	-0.5
	comp=Z,9.2nm,0.9s,baz=259,slow=5.0,SNR=39						
TORD				pP	pP	20 26 13.1	-0.6
	comp=Z,5.9nm,0.8s,baz=262,slow=5.2,SNR=9.0						
TORD	Torodi Ar. Bea	80.67	68	P	P	20 25 46.1	-0.9
TORD				IAmb	IAmb	20 25 47.8	
	comp=Z,10nm,0.8s						
TORD				pP	pP	20 26 13.5	-0.2
RWWY	Rawlins	80.92	332	P	P	20 25 48.3	+0.2
RDMU	Red Mountain	80.97	330	P	P	20 25 48.3	0.0
RDMU				IAmb	IAmb	20 25 50.1	
	comp=Z,11nm,0.9s						
PRN	Pahroc Range	80.99	324	P	P	20 25 50.0	+1.6
PRN				IAmb	IAmb	20 25 51.1	
	comp=Z,13nm,1.0s						
PSUT	Pine Spring	81.29	326	P	P	20 25 51.0	+0.9
K22A	Casper	81.46	333	P	P	20 25 51.8	+1.0
K22A				IAmb	IAmb	20 25 53.0	
	comp=Z,20nm,1.1s						
EYMN	Ely	81.58	345	P	P	20 25 50.8	-0.4
EYMN				IAmb	IAmb	20 25 51.8	
	comp=Z,11nm,1.1s						
R11A	Troy Canyon, C	81.99	325	P	P	20 25 54.8	+1.1
DUG	Dugway, Tooele	82.12	327	P	P	20 25 54.9	+0.6
LCH	Last Change Ra	82.18	323	P	P	20 25 55.3	+0.6
B35A	Bob, Littlefor	82.50	343	P	P	20 25 55.2	-0.6
B35A				IAmb	IAmb	20 25 56.5	
	comp=Z,9.3nm,0.9s						
TPH	Tonopah	82.60	323	P	P	20 25 57.3	+0.4
PDAR	Pinedale Array	82.78	331	P	P	20 25 58.1	+0.3
	comp=Z,2.7nm,0.8s,baz=140,slow=5.8,SNR=8.4						
PDAR				pP	pP	20 26 24.9	-0.2
	comp=Z,1.1nm,0.7s,baz=116,slow=3.4,SNR=2.4						
PDAR	Pinedale Array	82.78	331	P	P	20 25 57.6	-0.1
BGU	Big Grassy Mou	82.80	328	P	P	20 25 57.9	0.0
HVU	Hansel Valley	83.37	328	P	P	20 26 00.7	-0.1
NVAR	Mina Array Bea	83.42	323	P	P	20 26 02.3	+1.1
	comp=Z,3.7nm,0.8s,baz=156,slow=6.2,SNR=16						
NVAR	Mina Array Bea	83.42	323	P	P	20 26 01.4	+0.2
ELK	Elko	83.68	326	P	P	20 26 03.0	+0.5
KVN	Kaiserville	83.79	324	P	P	20 26 03.0	0.0
YERR	Yerington	84.32	323	P	P	20 26 06.7	+0.9
YERR				IAmb	IAmb	20 26 08.1	
	comp=Z,9.1nm,0.9s						
ULM	Lac du Bonnet	84.78	343	P	P	20 26 07.4	0.0
	comp=Z,8.8nm,0.9s,baz=152,slow=4.1,SNR=10						
ULM	Lac du Bonnet	84.78	343	P	P	20 26 06.5	-1.0
ULM				IAmb	IAmb	20 26 08.0	
	comp=Z,12nm,1.0s						
PAHR	Pah Rah Range	84.94	323	P	P	20 26 09.3	+0.6
PAHR				IAmb	IAmb	20 26 11.0	
	comp=Z,8.1nm,1.0s						
YHH	Holmes Hill	84.97	331	P	P	20 26 09.5	+0.5
YHH				IAmb	IAmb	20 26 11.1	
	comp=Z,9.9nm,1.0s						
HLID	Hailey	85.52	329	P	P	20 26 12.4	+0.9
HLID				IAmb	IAmb	20 26 13.7	
	comp=Z,9.0nm,1.0s						
BEKR	Beckworth	85.56	323	P	P	20 26 12.6	+0.7
DGMT	Dagmar	85.61	337	P	P	20 26 11.8	+0.1
BCYI	Bear Canyon	85.67	330	P	P	20 26 12.8	+0.4
MCMT	McKenzie Canyo	85.84	330	P	P	20 26 14.4	+1.2
SCHQ	Schefferville	85.89	1	P	P	20 26 12.3	-0.6
	comp=Z,4.8nm,0.9s,baz=179,slow=4.1,SNR=4.1						
ORV	Oroville	85.92	322	P	P	20 26 14.4	+0.9
ORV				IAmb	IAmb	20 26 15.8	
	comp=Z,12nm,1.3s						
DLMT	Dillon	86.16	331	P	P	20 26 15.1	+0.4
DLMT				IAmb	IAmb	20 26 16.7	
	comp=Z,14nm,1.4s						
LRM	Limekiln Ridge	86.47	331	P	P	20 26 16.3	0.0
MOD	Modoc Plateau	87.04	324	P	P	20 26 19.4	+0.4
MOD				IAmb	IAmb	20 26 20.9	
	comp=Z,8.2nm,0.8s						
J08A	Circle Bar Ran	87.23	326	P	P	20 26 20.9	+1.0
J08A				pP	pP	20 26 49.7	+2.2
PLID	Pearl Lake	87.42	329	P	P	20 26 21.4	+0.6
PLID				IAmb	IAmb	20 26 22.5	
	comp=Z,11nm,0.9s						
PLID				pP	pP	20 26 49.4	+1.0
K05A	Summer Lake	87.94	324	P	P	20 26 24.2	+0.9
I07A	Izee	88.27	326	P	P	20 26 24.7	-0.1
I07A				IAmb	IAmb	20 26 26.9	
	comp=Z,9.7nm,1.1s						
PINE	Pine Mountain	88.75	325	P	P	20 26 28.4	+1.3
PINE				pP	pP	20 26 56.6	+1.7
WALA	Waterton Lakes	89.66	332	P	P	20 26 31.4	+0.2
CLL	Collm	109.04	41	*e*PP	PP	20 32 36.0	+3.9
ILAR	Eielson Array	113.16	333	PKiKP	PKiKP	20 32 07.8	-1.7
	comp=Z,0.6nm,1.0s,baz=140,slow=4.7,SNR=4.7						
ARCES	ARCESS Array B	120.49	24	PKP	PKPdf	20 32 22.6	-0.9
	comp=Z,3.9nm,0.9s,baz=254,slow=3.3,SNR=2.4						
ASAR	Alice Springs	121.12	204	PKP	PKPdf	20 32 24.6	-1.7
	comp=Z,0.6nm,0.6s,baz=134,slow=2.3,SNR=6.1						
ASAR				pPKP	pPKPdf	20 32 52.3	-2.6
	comp=Z,0.6nm,0.7s,baz=150,slow=1.7,SNR=3.9						
WRA	Warramunga Arr	124.37	207	PKP	PKPdf	20 32 31.6	-1.0
	comp=Z,1.3nm,0.5s,baz=154,slow=2.0,SNR=36						
WRA				pPKP	pPKPdf	20 32 59.6	-1.5
	comp=Z,1.7nm,0.6s,baz=164,slow=1.6,SNR=7.8						
KSH	Kashi	150.26	64	PKPbc	PKPbc	20 33 23.6	-0.7
KSH				pPKP	pPKPdf	20 33 50.0	+2.5
KSH				sPKP	sPKPdf	20 33 58.2	-0.1
ZALV	Zalesovo Beam	150.53	32	PKPbc	PKPbc	20 33 24.1	-0.2
	comp=Z,6.4nm,0.5s,baz=290,slow=3.4,SNR=43						
ZALV				pPKPbc	pPKPbc	20 33 50.4	-2.2
	comp=Z,13nm,0.8s,baz=298,slow=3.2,SNR=11						
MKAR	Makanchi Array	152.94	47	PKPbc	PKPbc	20 33 29.9	-0.1
	comp=Z,4.0nm,0.8s,baz=302,slow=2.3,SNR=15						
MKAR				PKPab	PKPab	20 33 41.9	+0.2
	comp=Z,2.7nm,0.7s,baz=297,slow=2.9,SNR=13						
MKAR				pPKPbc	pPKPbc	20 33 57.9	-0.5
	comp=Z,5.1nm,0.9s,baz=276,slow=2.0,SNR=6.8						
MJAR	Matsushiro Arr	157.12	290	PKPab	PKPab	20 33 59.5	-0.5
	comp=Z,0.4nm,0.5s,baz=104,slow=1.5,SNR=6.8						
USRK	Ussuriysk Ar.	159.31	314	PKPab	PKPab	20 34 09.7	+0.7
	comp=Z,2.9nm,0.8s,baz=242,slow=5.0,SNR=4.8						
CMAR	Chiang Mai Arr	162.96	136	PKP	PKPdf	20 33 35.9	+0.1
	comp=Z,0.8nm,0.8s,baz=244,slow=2.3,SNR=6.8						
CMAR				pPKP	pPKPdf	20 34 04.3	+0.1
	comp=Z,0.7nm,0.8s,baz=243,slow=2.6,SNR=3.5						
CMAR				PKPab	PKPab	20 34 25.0	-0.6
	comp=Z,0.7nm,0.9s,baz=244,slow=4.7,SNR=4.7						
CMAR	Chiang Mai Arr	162.96	136		PKPdf	20 33 34.7	-1.1
SONM	Songino Array	163.16	11	PKPab	PKPab	20 34 26.2	+0.4
	comp=Z,1.5nm,0.7s,baz=313,slow=4.1,SNR=8.2						
SONM				pPKPab	pPKPab	20 34 53.7	+0.4
	comp=Z,1.1nm,0.7s,baz=330,slow=4.9,SNR=4.7						
LZH	Lanzhou	172.23	51	⇑PKP	PKPdf	20 33 40.1	-1.9
LZH				pPKP	pPKPdf	20 34 08.8	-1.9
LZH				sPKP	sPKPdf	20 34 17.6	-3.9

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*IDC **02** 20:24:56.1±0.8, 55°.18S×29°.17W, h0km, mb4.1/6, mb1 4.2/6, mb1mx4.0/21, mbtmp4.1/6, ML4.1/1, MS3.9/4, Ms1 3.9/4, ms1mx3.5/19 Error ellipse: s-maj=34.2km s-min=19.3km az=65.0*

*NEIC **02** 20:24:58.0±2.0, 55°.2S±0°.1×29°.5W±0°.2, h11km±5km, mb4.7/14, Error ellipse: s-maj=23.2km s-min=15.1km az=217.0*

ISC 02 20:24:56.8±0.7**, 55°.1S**±0°.1×**29°.4W**±0°.1**, h10km, n35, σ1s.26**/30**, mb4.5**/10**, MS4.0**/4**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	4.23	279		Pn	20 26 00.6	-0.6
VNA1	Neumayer--Stat	18.10	157	P	Pn	20 29 07.8	-0.2
VNA3	Neumayer Olymp	18.27	160	P	P	20 29 10.2	0.0
VNA2	Neumayer--Watz	18.50	157	P	P	20 29 12.0	-0.7
	baz=315,slow=12						
SNAA	Sanae	20.07	156	P	P	20 29 28.7	-1.3
SNAA	Sanae	20.07	156	P	P	20 29 28.8	-1.2
	0.6nm,0.3s,baz=322,slow=12,SNR=11						
SNAA	Sanae	20.07	156	P	P	20 29 28.5	-1.5
TRQA	Tornquist	27.83	294	P	P	20 30 44.1	-2.1
TRQA				IAmb	IAmb	20 30 47.0	
	comp=Z,10nm,1.4s						
PLCA	Paso Flores	30.63	281	LR	LR	20 44 11.9	
	comp=Z,282nm,18.3s,baz=184,slow=38						
QSPA	South Pole Qui	35.11	180	P	P	20 31 50.9	+0.9
	comp=Z,2.0nm,0.7s,baz=225,slow=5.7,SNR=2.2						
QSPA	South Pole Qui	35.11	180	IAmb	IAmb	20 32 16.2	
	comp=Z,14nm,1.4s						
GO05	Huala	35.45	287	P	P	20 31 52.2	-0.9
MT09	Talagante	35.86	289	P	P	20 31 55.7	-1.0
MT09				IAmb	IAmb	20 31 57.4	
	comp=Z,9.0nm,0.8s						
MT01	Popeta	35.93	289	P	P	20 31 56.9	-0.3
MT01				IAmb	IAmb	20 32 12.8	
	comp=Z,14nm,1.2s						
VA03	San Esteban	36.39	291	P	P	20 32 02.4	+1.1
MAW	Mawson	41.60	145	P	P	20 32 43.1	-1.2
	comp=Z,0.6nm,0.5s,baz=226,slow=8.5,SNR=1.8						
MAW				LR	LR	20 49 26.3	
	comp=Z,110nm,18.4s,baz=238,slow=35						
MAW	Mawson	41.60	145	P	P	20 32 46.1	+1.8
LVC	Limon Verde	43.78	302	P	P	20 33 02.6	-0.4
	comp=Z,3.7nm,0.5s,baz=249,slow=4.9,SNR=3.4						
LVC	Limon Verde	43.78	302		P	20 33 04.5	+1.5
LVC				IAmb	IAmb	20 33 05.9	
	comp=Z,16nm,1.4s						
PB01	IPOC Station P	45.39	302	P	P	20 33 16.7	+1.2
PB01				IAmb	IAmb	20 33 18.3	
	comp=Z,9.9nm,1.0s						
VNDA	Vanda	47.42	183	P	P	20 33 32.1	+1.5
	comp=Z,0.7nm,0.8s,baz=179,slow=3.4,SNR=5.6						
VNDA	Vanda	47.42	183	IAmb	IAmb	20 33 34.6	
	comp=Z,2.0nm,1.1s						
LPAZ	La Paz	48.85	307	P	P	20 33 45.2	+2.1
	comp=Z,6.1nm,0.6s,baz=120,slow=5.0,SNR=25						
LPAZ	La Paz	48.85	307	P	P	20 33 45.1	+2.0
LPAZ				IAmb	IAmb	20 33 46.0	
	comp=Z,5.5nm,0.7s						
TORD	Torodi Ar. Bea	72.90	32	P	P	20 36 27.0	+1.1
	comp=Z,0.9nm,0.5s,baz=201,slow=6.6,SNR=12						
CRPR	Cabo Rojo, PR	79.61	324	P	P	20 37 04.0	0.0
STKA	Stephens Creek	92.98	172	LR	LR	21 17 36.5	
	comp=Z,64nm,18.4s,baz=207,slow=34						
ESDC	Sonseca Array	96.91	19	LR	LR	21 15 45.5	
	comp=Z,49nm,20.2s,baz=255,slow=32						
ZALV	Zalesovo Beam	143.07	64	PKP	PKiKP	20 44 30.9	-2.0
	comp=Z,0.4nm,0.5s,baz=208,slow=2.8,SNR=2.3						
INK	Inuvik	144.33	322	PKP	PKPdf	20 44 30.2	-1.2
	comp=Z,2.4nm,0.9s,baz=99,slow=7.1,SNR=4.4						
ILAR	Eielson Array	148.60	313	PKPbc	PKiKP	20 44 43.4	-0.5
	comp=Z,3.1nm,0.7s,baz=124,slow=1.7,SNR=34						
ILAR	Eielson Array	148.60	313		PKiKP	20 44 43.0	-0.9
KDAK	Kodiak Island	149.31	299	PKPbc	PKiKP	20 44 45.2	-0.3
	comp=Z,5.3nm,0.7s,baz=227,slow=4.9,SNR=5.9						
SONM	Songino Array	151.90	86	PKPbc	PKiKP	20 44 51.6	+0.2
	comp=Z,0.6nm,0.6s,baz=226,slow=2.4,SNR=6.3						
SONM	Songino Array	151.90	86		PKPbc	20 44 50.2	-0.9

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*TUL **02** 20:25:39.3±0.6, 36°.91N±0°.02×98°.16W±0°.03, h6km±7km, ML2.7, mb_Lg2.5/15(NEIC), Error ellipse: s-maj=4.2km s-min=1.6km az=139.0*

NEIC 02 20:25:39.5±0.6**, 36°.88N**±0°.03×**98°.16W**±0°.04**, h9**km±4km**, Error ellipse: s-maj=5.9km s-min=2.1km az=137.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
U32A	Winter Ranch,	0.85	234	Pg	Pg	20 25 55.7	0.0
T35A	Sooner Cattle	1.32	88		Pn	20 26 04.0	-0.1
R32A	Long Quarter,	1.60	344		Pn	20 26 08.4	+0.4
FNO	Franklin	1.73	159	IAmb_Lg		20 26 39.2	
	comp=Z,17nm,0.7s						
TUL1	Leonard	2.14	116	IAmb_Lg		20 26 49.4	
	comp=Z,35nm,0.9s						
WMOK	Wichita Mounta	2.20	194		Pb	20 26 18.3	-1.2
X34A	Smith Ranch, M	2.29	173		Pn	20 26 18.2	+0.7
CBKS	Cedar Bluff	2.30	327	IAmb_Lg		20 26 54.0	
	comp=Z,18nm,0.8s						
X37A	Clayton	3.22	134	Pn	Pn	20 26 31.6	+1.3
HHAR	Hobbs	3.44	99	Pn	Pn	20 26 34.0	+0.6
AMTX	Amarillo	3.49	236	IAmb_Lg		20 27 33.0	
	comp=Z,8.3nm,0.8s						
S39A	Bolivar	3.94	77	Pn	Pn	20 26 40.8	+0.7
P38A	Dawn	4.55	52	IAmb_Lg		20 28 06.2	
	comp=Z,6.3nm,0.8s						
MGMO	Mountain Grove	4.72	85	Pn	Pn	20 26 51.9	+1.0
FCAR	Ozark Folk Cen	4.97	100	IAmb_Lg		20 28 15.7	
	comp=Z,9.3nm,1.2s						
T25A	Trinidad	5.01	275	Pn	Pn	20 26 55.3	+0.2
N38A	Joes South For	5.48	43	IAmb_Lg		20 28 36.9	
	comp=Z,16nm,0.9s						
CCM	Cathedral Cave	5.62	76	IAmb_Lg		20 28 36.4	
	comp=Z,5.7nm,0.7s						
SCIA	State Center	6.31	36	IAmb_Lg		20 29 01.5	
	comp=Z,11nm,0.7s						

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*IDC **02** 20:43:56.3±0.8, 51°.62N×173°.43W, h0km, mb3.9/13, mb1 4.1/14, mb1mx3.9/35, mbtmp3.9/14, ML3.8/1, MS3.7/2, Ms1 3.6/2, ms1mx2.9/35, Error ellipse: s-maj=28.2km s-min=16.8km az=160.0*

*NEIC **02** 20:43:58.3±1.4, 51°.43N±0°.05×173°.26W±0°.10, h10km±1km, mb3.9/17, ML3.6(AEIC), Error ellipse: s-maj=10.2km s-min=7.8km az=76.0*

*AEIC **02** 20:43:59±3.4, 51°.44N±0°.07×173°.2W±0°.1, h51km±6km, Error ellipse: s-maj=11.4km s-min=9.9km az=113.0*

ISC 02 20:43:57.6±0.7**, 51°.41N**±0°.07×**173°.24W**±0°.06**, h10km, n71, σ0s.85**/66**, mb4.2**/25**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOFP	Korovin Flat P	1.02	329		Pn	20 44 18.3	+0.4
KOSE	Korovin Southe	1.06	332		Pg	20 44 18.5	+0.4
KOSE					Sb	20 44 33.0	+1.0
KOKL	Mount Kliuchef	1.09	327		Pg	20 44 18.7	+0.1
KONE	Korovin Northe	1.13	331		Pb	20 44 19.6	+0.4
GSIG	Igitkin Island	1.77	290		Pn	20 44 28.5	+0.2
GSIG					Sn	20 44 50.1	-0.7
GSMY	Great Sitkin M	1.86	291		Pn	20 44 30.1	+0.5
GSTR	Great Sitkin T	1.88	292	Pn	Pn	20 44 30.4	+0.6
GSTD	Great Sitkin T	1.92	291		Pn	20 44 30.4	0.0
GSTD					Sn	20 44 54.6	0.0
ADK	Adak	2.20	284	Pn	Pn	20 44 34.6	+0.4
ADK	Adak	2.20	284		Sn	20 45 00.8	-0.6
KIWB	Kanaga Island	2.48	282		Pn	20 44 39.0	+1.0
KIMD	Kanaga Island	2.52	280		Pn	20 44 39.4	+0.9
TAPA	Tanaga Point A	2.88	280		Pn	20 44 44.2	+0.7
TAFP	Tanaga Falls P	3.00	281		Pn	20 44 46.5	+1.4
TAFP					Sn	20 45 21.4	+0.3
TASE	Tanaga Southea	3.02	280		Pn	20 44 46.9	+1.4
AMKA	Amchitka	4.67	273	Pn	Pn	20 45 08.1	0.0
KDAK	Kodiak Island	13.54	54	Pn	Pn	20 47 09.5	+0.1
	0.2nm,0.3s,baz=251,slow=4.9,SNR=5.0						
KDAK	Kodiak Island	13.54	54	Pn	Pn	20 47 08.3	-1.1
I23K	Minto, Yukon-K	18.46	33	P	Pn	20 48 14.2	+1.0
I23K				IAmb	IAmb	20 48 16.1	
	comp=Z,12nm,1.4s						
CCB	Clear Creek Bu	18.71	35	P	P	20 48 15.1	-0.8
HDA	Harding Lake	18.90	36	P	P	20 48 18.8	+0.8
HDA				IAmb	IAmb	20 48 20.4	
	comp=Z,5.7nm,0.9s						
IL31		19.11	36	P	P	20 48 19.8	-0.5
IL31				IAmb	IAmb	20 48 21.9	
	comp=Z,5.0nm,1.0s						
ILAR	Eielson Array	19.11	36	P	P	20 48 18.8	-1.5
	comp=Z,0.3nm,0.3s,baz=235,slow=7.9,SNR=17						
ILAR	Eielson Array	19.11	36	P	P	20 48 19.4	-0.9
H24K	Noodor Dome	19.36	32	P	P	20 48 24.0	+0.9
H24K				IAmb	IAmb	20 48 25.6	
	comp=Z,8.2nm,0.9s						
RIDG	Independent Ri	19.39	40	P	P	20 48 23.8	+0.4
RIDG				IAmb	IAmb	20 48 25.4	
	comp=Z,8.2nm,1.3s						
YAH	Yahtse	19.63	51	P	P	20 48 25.6	-0.5
YAH				IAmb	IAmb	20 48 30.7	
	comp=Z,10.0nm,1.0s						
GRNC	Granite Creek	19.71	50	P	P	20 48 27.8	+0.7
GRNC				IAmb	IAmb	20 48 32.9	
	comp=Z,8.5nm,1.0s						
SCRK	Sand Creek	19.84	39		P	20 48 27.4	-0.9
L27K	Beaver Creek,	20.37	43	P	P	20 48 35.0	+1.0
TOLK	Toolik Lake Re	20.69	25	P	P	20 48 38.1	+0.7
TOLK				IAmb	IAmb	20 48 39.8	
	comp=Z,7.0nm,1.1s						

EGAK	Eagle	21.29	39	P	P	20 48 44.9	+1.0
BMAR	Burnt Mountain	21.36	31	P	P	20 48 45.6	+0.8
DAWY	Dawson	21.74	41	P	P	20 48 48.8	0.0
DAWY				IAmb	IAmb	20 48 57.1	
	comp=Z,3.0nm,1.0s						
DLBC	Dease Lake	25.43	57	P	P	20 49 25.5	+0.3
	comp=Z,3.6nm,1.0s,baz=263,slow=13,SNR=5.6						
INK	Inuvik	25.47	34	P	P	20 49 24.9	-0.4
	comp=Z,3.0nm,0.9s,baz=218,slow=8.2,SNR=7.5						
INK	Inuvik	25.47	34	P	P	20 49 25.3	0.0
H11N2	WAKE ISLAND Hy	35.26	214	T	T	21 28 52.9	
	baz=21,slow=76,SNR=7.2						
H11N3	WAKE ISLAND Hy	35.27	214	T	T	21 28 52.9	
	baz=21,slow=76,SNR=6.3						
H11N1	WAKE ISLAND Hy	35.28	214	T	T	21 28 52.4	
	baz=21,slow=76,SNR=5.1						
H11S1	WAKE ISLAND Hy	36.46	213	T	T	21 30 18.5	
	baz=20,slow=76,SNR=9.9						
H11S2	WAKE ISLAND Hy	36.48	213	T	T	21 30 19.1	
	baz=20,slow=76,SNR=7.5						
H11S3	WAKE ISLAND Hy	36.48	213	T	T	21 30 17.4	
	baz=20,slow=76,SNR=4.4						
PDAR	Pinedale Array	42.95	76	P	P	20 51 58.5	+1.7
	comp=Z,0.7nm,0.8s,baz=258,slow=6.0,SNR=5.0						
KSRS	Korea Array	43.12	275	P	P	20 51 58.4	+0.5
	comp=Z,1.8nm,1.0s,baz=56,slow=9.2,SNR=5.1						
SONM	Songino Array	49.71	299	P	P	20 52 49.8	+0.1
	comp=Z,0.9nm,0.6s,baz=47,slow=8.2,SNR=7.2						
SONM				LR	LR	21 14 44.5	
	comp=Z,51nm,18.6s,baz=344,slow=37						
TXAR	Lajitas Array	55.19	85	P	P	20 53 31.4	+0.9
	comp=Z,0.4nm,0.7s,baz=307,slow=4.6,SNR=3.4						
ARCES	ARCESS Array B	58.59	352	P	P	20 53 52.2	-1.7
	comp=Z,12nm,1.2s,baz=24,slow=7.0,SNR=2.4						
ARCES	ARCESS Array B	58.59	352	IAmb	IAmb	20 53 58.8	
	comp=Z,39nm,1.5s						
MKAR	Makanchi Array	62.68	312	P	P	20 54 19.6	-2.7
	comp=Z,1.2nm,0.8s,baz=47,slow=6.9,SNR=6.3						
TAPN	Taplejung	74.42	294	eP	P	20 55 37.0	+0.9
	comp=Z,14nm,0.9s						
CMAR	Chiang Mai Arr	74.46	280	P	P	20 55 36.2	+0.1
	comp=Z,0.7nm,0.7s,baz=25,slow=6.9,SNR=4.4						
ODAN	Odare	74.98	294	eP	P	20 55 40.1	+0.8
GUN	Gumba	75.03	296	eP	P	20 55 40.5	+0.8
JIRN	Jiri	75.05	296	eP	P	20 55 40.5	+0.6
	comp=Z,20nm,0.8s						
RAMN	Ramite	75.36	295	eP	P	20 55 41.9	+0.4
	comp=Z,11nm,0.7s						
KKN	Kakani	75.46	296	eP	P	20 55 42.7	+0.7
	comp=Z,9.6nm,0.8s						
PKIN	Phulchoki	75.56	296	eP	P	20 55 42.7	0.0
	comp=Z,14nm,1.1s						
GKN	Gorkha	75.65	297	eP	P	20 55 43.2	+0.1
	comp=Z,14nm,0.9s						
DANN	Dangsing	75.87	298	eP	P	20 55 45.0	+0.5
	comp=Z,25nm,0.8s						
KOLN	Koldanda	76.41	297	eP	P	20 55 47.6	+0.1
	comp=Z,12nm,0.9s						
AKASG	Malin Array Be	76.49	346	P	P	20 55 45.6	-1.7
	comp=Z,0.3nm,0.3s,baz=9.1,slow=5.5,SNR=2.2						
PYUN	Piuthan	76.49	298	eP	P	20 55 48.4	+0.5
	comp=Z,24nm,0.9s						
GERES	GERESS Array B	79.95	355	P	P	20 56 05.5	-1.1
	comp=Z,0.8nm,0.8s,baz=28,slow=6.0,SNR=6.3						
CONA	Conrad Observa	80.73	354	eP	P	20 56 11.1	+0.3
	comp=Z,2.5nm,0.8s						
KBA	Koelnbreinsper	81.73	355	eP	P	20 56 17.0	+0.7
	comp=Z,3.9nm,0.9s						
WRA	Warramunga Arr	84.55	229	P	P	20 56 30.1	-0.7
	comp=Z,0.5nm,0.7s,baz=21,slow=5.6,SNR=4.9						
WRA	Warramunga Arr	84.55	229	IAmb	IAmb	20 56 34.3	
	comp=Z,0.1nm,1.2s						
ASAR	Alice Springs	87.96	227	P	P	20 56 48.1	+0.6
	comp=Z,1.2nm,0.9s,baz=50,slow=3.6,SNR=7.6						
STKA	Stephens Creek	91.95	217	LR	LR	21 37 45.2	
	comp=Z,44nm,19.7s,baz=206,slow=35						
MAW	Mawson	148.64	218	PKPbc	PKPbc	21 03 43.0	-0.3
	comp=Z,1.5nm,0.9s,baz=0.0,slow=1.0,SNR=2.6						

IDC 02 20:59:15.9±2.5**, 22°.64N×102°.04E, h0^{km}, mb3.4**/2**, mb1 3.3**/3**, mb1mx3.1**/43**, mbtmp3.2**/3**, ML3.3**/1**, Error ellipse: s-maj=59.5km s-min=19.6km az=113.0, Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	5.07	215	Pn	Pn	21 00 32.8	-0.5
	0.3nm,0.3s,baz=26,slow=13,SNR=5.4						
CMAR				Pg	Pg	21 00 49.5	-3.7
	1.4nm,0.3s,baz=26,slow=16,SNR=26						
CMAR				Lg	Lg	21 01 56.1	
	1.2nm,0.3s,baz=36,slow=32,SNR=3.6						
SONM	Songino Array	25.38	7	P	P	21 04 44.3	-0.6
	0.6nm,0.9s,baz=187,slow=10,SNR=3.7						
MKAR	Makanchi Array	28.90	331	P	P	21 05 17.2	+0.8
	0.3nm,0.6s,baz=124,slow=9.8,SNR=1.6						

*IDC **02** 21:17:26.1±3.2, 3°.66N×95°.57E, h0^{km}, mb3.7/2, mb1 3.9/4, mb1mx3.4/47, mbtmp3.6/4, ML3.1/1, Error ellipse: s-maj=64.1km s-min=45.1km az=54.0*

*DJA **02** 21:17:33.3±1.0, 5°N±5°×9°7E±1°0, h78^{km}±9^{km}, M4.0/7, mb4.0/2, MLv4.0/7*

ISC 02 21:17:33.8±1.1**, 4°.54N**±0°.06×**97°.1E**±0°.1**, h10^{km}, n14, σ0^{s}80**/13**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	0.70	346	P	Pn	21 17 48.8	-1.0
LHMI				S	Sn	21 18 01.8	+1.0
TPTI		1.27	177	P	Pn	21 17 56.9	-0.8
TPTI				S	Sg	21 18 16.0	+1.1
TSI	Tuntungan	1.77	126	P	Pb	21 18 06.2	-0.2
PSI	Prapat	2.50	134	Pn	Pg	21 18 21.6	-0.2
	1.8nm,0.3s,baz=324,slow=12,SNR=8.5						
PSI				Sn	Sg	21 19 05.7	+12
	7.7nm,0.3s,baz=200,slow=5.5,SNR=7.1						
GSI	Gunungsitoli	3.25	172	P	Pn	21 18 24.5	-0.4
MNSI	Mandailing Nat	4.46	147	P	Pn	21 18 41.4	-0.1
PPI	Padang Panjang	5.95	147	P	Pn	21 19 02.0	0.0
	5.3nm,0.5s						
SISI	Saibi	6.15	161	P	Pn	21 19 04.0	-0.8
CMAR	Chiang Mai Arr	13.94	7	Pn	P	21 21 00.7	+0.9
	baz=202,slow=10,SNR=6.8						
H08S2	Diego Garcia H	27.39	244	T	T	21 50 25.3	
	baz=61,slow=74,SNR=3.8						
H08S3	Diego Garcia H	27.39	244	T	T	21 50 23.6	
	baz=61,slow=74,SNR=3.6						
H08S1	Diego Carcia H	27.41	244	T	T	21 50 24.8	
	baz=61						
WRA	Warramunga Arr	43.93	125	P	P	21 25 41.0	-0.3
	1.0nm,0.7s,baz=302,slow=9.2,SNR=12						
ASAR	Alice Springs	45.52	130	P	P	21 25 53.2	-0.7
	0.4nm,0.4s,baz=302,slow=7.6,SNR=8.0						

IDC 02 21:35:08.3±4.0**, 4°.68S×153°.58E, h0^{km}, mb3.2**/2**, mb1 3.5**/2**, mb1mx3.2**/35**, mbtmp3.3**/2**, Error ellipse: s-maj=184.8km s-min=54.3km az=123.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.11	229	P	P	21 40 26.4	+0.4
	0.4nm,0.4s,baz=54,slow=9.9,SNR=7.2						
ASAR	Alice Springs	26.77	223	P	P	21 40 50.1	0.0
	0.2nm,0.4s,baz=60,slow=8.8,SNR=2.2						
TORD	Torodi Ar. Bea	151.01	289	PKPbc	PKPbc	21 55 03.6	-0.7
	0.5nm,0.8s,baz=84,slow=2.7,SNR=2.6						

*IDC **02** 22:07:54.2±2.0, 7°.13S×155°.59E, h0^{km}, mb3.7/4, mb1 4.0/4, mb1mx3.6/31, mbtmp3.7/4, Error ellipse: s-maj=76.1km s-min=30.3km az=129.0*

ISC 02 22:08:01.1±2.0**, 7°.2S**±0°.3×**155°.6E**±0°.4**, h50^{km}, n8, σ0^{s}36**/6**, mb3.5**/4**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.18	236	P	P	22 13 12.8	-0.2
	0.6nm,0.4s,baz=60,slow=9.4,SNR=12						
ASAR	Alice Springs	26.47	230	P	P	22 13 33.8	0.0
	0.4nm,0.7s,baz=69,slow=8.0,SNR=5.8						
H11S3	WAKE ISLAND Hy	27.81	23	T	T	22 42 10.7	
	baz=203,slow=75,SNR=21						
H11S2	WAKE ISLAND Hy	27.81	23	T	T	22 42 11.4	
	baz=203,slow=75,SNR=21						
H11S1	WAKE ISLAND Hy	27.82	23	T	T	22 42 01.9	
	baz=203,slow=75,SNR=11						
CMAR	Chiang Mai Arr	61.43	295	P	P	22 18 12.8	-0.1
	0.9nm,0.3s,baz=120,slow=5.3,SNR=4.5						
CMAR				pP	pP	22 18 26.4	-0.1
	0.9nm,0.4s,baz=150,slow=6.0,SNR=1.7						
ILAR	Eielson Array	83.38	21	P	P	22 20 22.4	-0.2
	0.2nm,0.4s,baz=241,slow=5.7,SNR=4.8						
TORD	Torodi Ar. Bea	153.67	285	PKPbc	PKiKP	22 27 56.2	+0.5
	0.3nm,0.5s,baz=92,slow=1.8,SNR=3.0						

IDC 02 22:26:44.1±1.7**, 2°.45S×141°.37E, h0^{km}, mb3.6**/3**, mb1 3.9**/4**, mb1mx3.5**/26**, mbtmp3.7**/4**, ML3.7**/1**, MS2.7**/1**, Ms1 2.7**/1**, ms1mx2.4**/31**, Error ellipse: s-maj=96.3km s-min=27.3km az=116.0, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.70	201	P	P	22 31 02.4	-1.9
	0.3nm,0.3s,baz=23,slow=12,SNR=13						
KAPI	Kappang	21.72	263	LR	LR	22 41 45.6	
	comp=Z,18nm,19.2s,baz=292,slow=42						
FITZ	Fitzroy Crossi	21.91	224	P	P	22 31 39.6	+0.5
	3.5nm,0.9s,baz=33,slow=9.6,SNR=5.3						
ASAR	Alice Springs	22.30	198	P	P	22 31 43.7	+0.4
	0.7nm,0.6s,baz=31,slow=11,SNR=9.3						
H11S3	WAKE ISLAND Hy	32.47	49	T	T	23 07 17.8	
	baz=231,slow=75,SNR=10						
H11S2	WAKE ISLAND Hy	32.48	49	T	T	23 07 16.2	
	baz=231,slow=75,SNR=8.2						
H11S1	WAKE ISLAND Hy	32.48	49	T	T	23 07 22.2	
	baz=231,slow=75,SNR=10						
H11N1	WAKE ISLAND Hy	33.36	48	T	T	23 08 24.2	
	baz=229,slow=76,SNR=53						
H11N2	WAKE ISLAND Hy	33.38	48	T	T	23 08 22.7	
	baz=229,slow=76,SNR=81						
H11N3	WAKE ISLAND Hy	33.38	48	T	T	23 08 28.7	
	baz=229,slow=76,SNR=31						
ILAR	Eielson Array	84.50	24	P	P	22 39 18.9	+0.2
	0.6nm,0.7s,baz=258,slow=5.8,SNR=5.5						

*KRSZO **02** 22:49:36.3±0.8, 43°.52N×17°.04E, h2^{km}±3^{km}, ML3.4/19, Error ellipse: s-maj=3.0km s-min=2.0km az=46.0*

*PDG **02** 22:49:36.1±0.3, 43°.54N×17°.04E, h1^{km}, ML3.0/14, Error ellipse: s-maj=0.7km s-min=1.0km az=0.0*

*IASPEI **02** 22:49:36.6±1.1, 43°.52N±0°.02×17°.03E±0°.03, h6^{km}±8^{km}, Error ellipse: s-maj=4.6km s-min=3.0km az=59.4, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*BEO **02** 22:49:36.8±0.6, 43°.52N×16°.94E, h0^{km}, ML3.0/12*

*RHSSO **02** 22:49:37.2±0.3, 43°.52N×17°.05E, h2^{km}±1^{km}, ML3.1/16*

*PRU **02** 22:49:38.7±0.0, 43°.58N×17°.08E, h0^{km}*

ISC 02 22:49:37.1±1.0**, 43°.52N**±0°.02×**17°.04E**±0°.02**, h4^{km}**±8^{km}**, n136, σ1^{s}19**/224**, 19C-14D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RICI	Ricice	0.07	107	ePg	Pg	22 49 38.5	-0.2
RICI				Sg	Sg	22 49 39.9	+0.1
MAKA	Makarska	0.23	183	ePg	Pg	22 49 41.5	-0.1
MAKA				Sg	Sg	22 49 44.7	+0.1
HVAR	Hvar	0.55	232	ePg	Pg	22 49 46.6	-1.0
HVAR				Sg	Sg	22 49 55.0	+0.3
KIJV	Kijevo	0.67	317	ePg	Pg	22 49 48.0	-2.0
KIJV				Sg	Sg	22 49 58.4	-0.3
STON	Ston	0.81	143	ePg	Pg	22 49 51.3	-1.3
STON				eSg	Sb	22 50 04.7	-0.2
STON	Ston	0.81	143	⇑iPg	Pg	22 49 51.1	-1.4
STON				eSg	Sg	22 50 03.2	+0.2
STON	Ston	0.81	143	ePg	Pg	22 49 51.1	-1.4
STON				Sg	Sg	22 50 03.8	+0.8
MGRS	Mrkonjic Grad	0.90	2	ePg	Pg	22 49 53.5	-0.9
MGRS				eSg	Sg	22 50 05.7	-0.4
ZIRJ	Zirje	1.02	278	ePg	Pg	22 49 54.4	-2.3
MORI	Morici	1.03	290	ePg	Pg	22 49 54.8	-2.1
DBRK	Dubrovnik	1.17	136	ePg	Pb	22 49 57.5	-2.4
DBRK				Sg	Sg	22 50 15.6	+0.7
BLY	Banja Luka	1.24	5	ePg	Pn	22 50 00.1	-1.1
BLY				eSg	Sb	22 50 17.2	-0.2
BLY	Banja Luka	1.24	5	ePg	Pn	22 49 59.5	-1.7
BLY				eSg	Sb	22 50 16.5	-0.9
BLY	Banja Luka	1.24	5	Pb	Pn	22 49 59.9	-1.3
	comp=Z,1.0nm,SNR=41						
TREB	Trebinje	1.25	129	ePg	Pn	22 49 59.3	-2.1
TREB				eSg	Sn	22 50 19.3	+0.7
TREB	Trebinje	1.25	129	ePg	Pn	22 49 58.8	-2.6
TREB				eSg	Sb	22 50 16.8	-0.9
BRY	Bratogost	1.26	119	⇓iPg	Pn	22 49 58.9	-2.7
BRY				eSg	Sb	22 50 17.1	-1.0
BRY	Bratogost	1.26	119	ePg	Pn	22 49 59.1	-2.5
BRY				i Sg	Sn	22 50 19.2	+0.2
UDBI	Udbina	1.37	318	ePn	Pn	22 50 01.8	-1.3
UDBI				Sn	Sn	22 50 21.3	-0.3
UPM	Unac-Piva	1.40	102	⇓iPg	Pn	22 50 02.0	-1.6
UPM				eSg	Sb	22 50 21.3	-0.8
UPM	Unac-Piva	1.40	102	ePg	Pn	22 50 02.0	-1.6
UPM				i Sg	Sg	22 50 23.8	+1.8
DOB	Doboj	1.44	32	ePg	Pn	22 50 02.0	-1.9
DOB				eSg	Sn	22 50 22.8	-0.4
PRIJ	Prijedor	1.48	351	ePg	Pn	22 50 03.7	-0.8
PRIJ				eSg	Sn	22 50 24.0	-0.3
HAPS	Han Pijesak,Bl	1.50	67	⇑iPg	Pn	22 50 04.4	-0.5
HAPS				eSg	Sn	22 50 23.9	-1.0
MRAK	Mrakovica	1.50	356	⇑iPg	Pn	22 50 04.1	-0.8
MRAK				eSg	Sn	22 50 24.7	-0.2
HCY	Herceg Novi	1.51	135	ePg	Pn	22 50 03.5	-1.5
HCY				eSg	Sb	22 50 25.1	-0.1
HCY	Herceg Novi	1.51	135	ePg	Pn	22 50 03.5	-1.5
HCY				eSg	Sg	22 50 28.0	+2.4
DUGI	Dugi Otok	1.51	289	ePn	Pn	22 50 03.7	-1.3
DUGI				Sn	Sg	22 50 26.4	+0.7
NKME	Niksic	1.59	117	ePn	Pn	22 50 05.2	-0.9
NKME				i Sn	Sg	22 50 30.6	+2.4
NKY	Niksic	1.59	115	⇑iPn	Pn	22 50 05.6	-0.6
NKY				i Sn	Sg	22 50 30.8	+2.5
CEME	Cevo	1.68	124	⇓iPn	Pn	22 50 07.2	-0.2
CEME				eSn	Sg	22 50 32.9	+1.7
RUDO	Rudo	1.70	86	ePn	Pn	22 50 06.5	-1.0
RUDO				eSn	Sb	22 50 30.0	-0.6
PLIT	Plitvice	1.70	324	ePn	Pn	22 50 07.9	+0.3
PLIT				Sg	Sg	22 50 32.4	+0.7
PLE	Pljevlja	1.72	95	⇑iPn	Pn	22 50 07.9	-0.1
PLE				i Sn	Sg	22 50 33.8	+1.3
BBLS	Lazići	1.75	78	ePg	Pb	22 50 09.4	-0.5
BBLS				eSg	Sg	22 50 35.3	+1.9
BBLS	Lazići	1.75	78	ePn	Pn	22 50 09.0	+0.7
BBLS				eSn	Sn	22 50 30.8	-0.3
BBLS	Lazići	1.75	78	Pb	Pb	22 50 09.7	-0.1
	comp=Z,2.0nm,SNR=19						
BUM	Brajici-Budva	1.83	131	ePn	Pn	22 50 09.5	+0.2
BUM				eSn	Sg	22 50 36.5	+0.7
KOME	Kolasin	1.93	109	⇓iPn	Pn	22 50 11.1	+0.3
KOME				i Sn	Sg	22 50 38.7	-0.4
PDG	Podgorica	1.96	123	⇑P	Pb	22 50 12.2	-1.1
PDG				⇓S	Sg	22 50 40.3	+0.3
PDG	Podgorica	1.96	123	ePg	Pb	22 50 12.6	-0.7
PDG				eSg	Sg	22 50 40.5	+0.6
PDG	Podgorica	1.96	123	⇑iPn	Pn	22 50 11.7	+0.7
PDG				eSn	Sn	22 50 36.4	+0.4
TTG	Podgorica	1.96	123	⇑iPn	Pn	22 50 11.6	+0.6
TTG				i Sn	Sg	22 50 39.5	-0.4
RABC	Rab	2.04	308	ePn	Pn	22 50 12.8	+0.6
RABC				Sg	Sb	22 50 41.7	+1.3
BLJ	Bijeljina	2.04	51	ePn	Pn	22 50 11.2	-1.1
BLJ				eSn	Sn	22 50 37.4	-0.8
DRME	Dracevica, Mon	2.06	129	ePn	Pn	22 50 13.0	+0.5
DRME				eSn	Sn	22 50 38.9	+0.2
DRME	Dracevica, Mon	2.06	129	⇑iPn	Pn	22 50 13.3	+0.8
DRME				i Sn	Sb	22 50 42.1	+1.0
MOSL	Moslavina	2.11	355	ePn	Pn	22 50 12.4	-0.8
SJES	Sjenica	2.15	96	ePg	Pb	22 50 17.0	+0.2
SJES				eSg	Sg	22 50 46.6	+0.3
IVA	Berane	2.19	106	⇑iPn	Pn	22 50 14.8	+0.5
IVA				i Sn	Sb	22 50 45.0	+0.3
DIVS	Divibare	2.22	74	ePn	Pn	22 50 14.8	+0.1
DIVS	Divibare	2.22	74	ePn	Pn	22 50 15.1	+0.4
DIVS				eSn	Sn	22 50 42.5	-0.1
DIVS	Divibare	2.22	74	Pn	Pn	22 50 15.3	+0.6
	comp=Z,0.3nm,SNR=8.7						
ULC	Ulcinj	2.25	133	ePn	Pn	22 50 15.7	+0.6
ULC				i Sn	Sb	22 50 46.7	+0.3
PVY	Plav	2.33	112	⇓iPn	Pn	22 50 16.8	+0.5
PVY				i Sn	Sg	22 50 50.7	-1.3
BOJS	Bojanci	2.36	328	i Pn	Pn	22 50 17.5	+0.8
BOJS				eSn	Sb	22 50 48.6	-1.1
BOJS				IAML		22 50 49.9	
	comp=Z,117nm,0.5s						
OZLJ	Ozalj	2.38	332	ePn	Pn	22 50 17.7	+0.8
ZAG	Zagreb	2.43	342	ePn	Pn	22 50 18.7	+1.1
ZAG				eSn	Sn	22 50 48.4	+0.7
PTJ	Puntijarka	2.51	343	ePn	Pn	22 50 18.5	-0.3
PTJ	Puntijarka	2.51	343	Pg	Pn	22 50 19.0	+0.2
	comp=Z,0.3nm,SNR=5.1						
TRUS	Trudelj	2.54	73	ePn	Pn	22 50 18.7	-0.4
GBRS	Gornja Briga	2.57	322	i Pn	Pn	22 50 21.2	+1.6
GBRS				eSn	Sb	22 50 54.5	-1.2
SMRN	Sveta Marina	2.57	307	ePn	Pn	22 50 19.7	+0.2
CRES	Cresnjev	2.57	335	⇑iPn	Pn	22 50 19.4	-0.1
CRES				eSn	Sn	22 50 51.5	+0.2
CRES	Cresnjev	2.57	335	Pn	Pn	22 50 20.0	+0.4
	comp=Z,0.8nm,SNR=8.2						
RIY	Rijeka	2.57	316	ePn	Pn	22 50 20.5	+0.9
RIY				eSn	Sn	22 50 51.8	+0.5
RIY	Rijeka	2.57	316	ePn	Pn	22 50 19.3	-0.2
FRGS	Fruska Gora	2.58	50	⇑P	Pn	22 50 18.9	-0.7
FRGS				⇑S	Sn	22 50 52.2	+0.7
FRGS	Fruska Gora	2.58	50	ePn	Pn	22 50 19.9	+0.2
FRGS				eSn	Sn	22 50 51.3	-0.2
KALN	Kalnik	2.65	351	ePn	Pn	22 50 19.9	-0.7
KOVH	Kovagotottos	2.68	16	ePN	Pn	22 50 20.8	-0.2
KOVH	Kovagotottos	2.68	16	eS	Sn	22 50 53.5	-0.5
KOVH	Kovagotottos	2.68	16	Pn	Pn	22 50 20.8	-0.2
	comp=Z,0.1nm,SNR=2.3						
KOVH				Sn	Sn	22 50 53.5	-0.5
GRUS	Gruza	2.69	81	ePn	Pn	22 50 22.3	+1.1
LOBO	Lobor	2.73	346	ePn	Pn	22 50 21.3	-0.4
CEY	Cerknica	2.90	321	⇑iPn	Pn	22 50 25.3	+1.2
CEY				eSn	Sn	22 50 59.8	+0.4
AQU	L'Aquila	2.91	248	ePn	Pn	22 50 25.0	+0.7
AQU				eSn	Sn	22 50 59.4	-0.3
AQU	L'Aquila	2.91	248	Pg	Pn	22 50 24.9	+0.6
	comp=Z,0.1nm,SNR=3.8						
PDKS	Podkum	2.93	331	i Pn	Pn	22 50 25.1	+0.6
PDKS				eSn	Sn	22 51 01.0	+0.9
BEHE	Becsehely	2.96	356	ePN	Pn	22 50 26.1	+1.3
BEHE	Becsehely	2.96	356	eS	Sn	22 51 02.5	+1.7
BEHE	Becsehely	2.96	356	ePn	Pn	22 50 25.0	+0.1
BEHE				eSn	Sn	22 51 01.1	+0.3
BEHE	Becsehely	2.96	356	Pg	Pn	22 50 26.1	+1.3
	comp=Z,0.3nm,SNR=5.2						
BEHE				Lg	Lg	22 51 02.5	
KOGS	Kog	2.98	349	Pn	Pn	22 50 25.7	+0.5
	comp=Z,0.5nm,SNR=4.4						
SELS	Selova	2.99	94	ePn	Pn	22 50 26.9	+1.6
SELS				eSn	Sn	22 51 03.3	+1.7
LJU	Ljubljana	3.10	326	ePn	Pn	22 50 27.2	+0.4
LJU				eSn	Sn	22 51 04.4	+0.2
TRI	Trieste	3.21	314	Pn	Pn	22 50 28.7	+0.5
	comp=Z,0.2nm,SNR=8.0						
VOJS	Vojsko	3.37	319	i Pn	Pn	22 50 31.5	+0.8
BOVS	Bovan	3.39	86	⇓P	Pn	22 50 30.5	-0.3
BOVS				⇓S	Sn	22 51 12.9	+1.4
TIH	Tihany	3.44	10	ePN	Pn	22 50 31.6	+0.2
TIH	Tihany	3.44	10	eS	Sn	22 51 13.2	+0.6
TIH	Tihany	3.44	10	Pn	Pn	22 50 31.6	+0.2
	comp=Z,0.3nm,SNR=4.6						
TIH				Sn	Sn	22 51 13.2	+0.6
SOKA	Soboth	3.47	337	ePn	Pn	22 50 32.4	+0.5
	comp=Z,3.4nm,0.2s,SNR=14						
SOKA				i Sn	Sn	22 51 14.5	+1.0
	comp=Z,7.0nm,0.3s						
OBKA	Obir	3.48	330	ePn	Pn	22 50 33.7	+1.7
	comp=Z,2.5nm,0.2s,SNR=12						
OBKA				eSn	Sn	22 51 15.7	+2.0
	comp=Z,15nm,0.3s						
OBKA	Obir	3.48	330	Pg	Pn	22 50 34.0	+2.0
	comp=Z,0.2nm,SNR=4.8						
BARS	Barje	3.56	100	ePn	Pn	22 50 35.1	+1.9
MDVR	Moldovita	3.59	68	⇓P	Pn	22 50 33.7	0.0
MDVR				⇓S	Sn	22 51 14.7	-1.8
MPLH	Magyarpolny	3.67	5	ePN	Pn	22 50 35.4	+0.7
MPLH	Magyarpolny	3.67	5	eS	Sn	22 51 20.9	+2.6
MPLH	Magyarpolny	3.67	5	Pn	Pn	22 50 35.4	+0.7
	comp=Z,0.1nm,SNR=2.5						
MPLH				Sn	Sn	22 51 20.9	+2.6
ZAGS	Zajecar	3.78	84	ePn	Pn	22 50 37.3	+1.2
ARSA	Arzberg	3.88	345	ePn	Pn	22 50 37.9	+0.3
	comp=Z,7.3nm,0.4s,SNR=13						
ARSA				i Sn	Sn	22 51 22.5	-1.2
	comp=Z,3.5nm,0.4s						
ARSA	Arzberg	3.88	345	Pn	Pn	22 50 37.8	+0.3
	comp=Z,0.1nm,SNR=2.4						
BZS	Buzias	3.89	56	⇓P	Pn	22 50 37.0	-0.7
BZS				⇑S	Sn	22 51 23.2	-0.5
BZS	Buzias	3.89	56	Pn	Pn	22 50 37.1	-0.5
	SNR=2.0						
MYKA	Terra Mystica	3.94	323	i Pn	Pn	22 50 39.2	+0.9
	comp=Z,0.7nm,0.2s						
MYKA				eSn	Sn	22 51 26.6	+1.6
	comp=Z,2.3nm,0.3s						
ZAPS	Zavoj	4.08	91	ePn	Pn	22 50 42.5	+2.1
BLKB	Belogradchik	4.10	87	⇑S	Sn	22 51 29.8	+0.8
HERR	Herculane	4.10	69	⇓S	Sn	22 51 28.0	-1.0
STIP	Stip	4.21	114	i Pn	Pn	22 50 44.9	+2.8
SIRR	Siria	4.28	48	⇑P	Pn	22 50 42.9	-0.2
SIRR	Siria	4.28	48	Pg	Pg	22 51 01.1	+1.9
	SNR=2.3						
KBA	Koelnbreinsper	4.41	325	i Pn	Pn	22 50 46.0	+1.0
	comp=Z,1.3nm,0.2s,SNR=8.5						
KBA				eSn	Sn	22 51 38.0	+1.1
	comp=Z,2.8nm,0.3s						
CONA	Conrad Observa	4.49	350	i Pn	Pn	22 50 46.0	+0.1
	comp=Z,1.3nm,0.2s						
CONA				eSn	Sn	22 51 37.3	-1.4
	comp=Z,3.7nm,0.3s						
GZR	Gura Zlata	4.52	63	⇓P	Pn	22 50 45.9	-0.4
GZR				⇑S	Sn	22 51 38.1	-1.2
GZR	Gura Zlata	4.52	63	Pg	Pg	22 51 08.7	+5.0
	SNR=1.7						
ABTA	Abfaltersbach	4.55	317	i Pn	Pn	22 50 47.2	+0.4
	comp=Z,0.9nm,0.2s,SNR=7.7						
ABTA				i Sn	Sn	22 51 41.2	+1.0
	comp=Z,2.1nm,0.2s						
VTS	Vitosha	4.63	99	⇑P	Pn	22 50 49.6	+1.7
VTS				⇓S	Sn	22 51 44.2	+2.0
VTS	Vitosha	4.63	99	ePn	Pn	22 50 48.4	+0.5
VTS				eSn	Sn	22 51 42.2	0.0
VTS	Vitosha	4.63	99	Pn	Pn	22 50 50.0	+2.1
	SNR=1.4						
MOA	Molln	4.75	337	ePn	Pn	22 50 51.1	+1.6
	comp=Z,2.6nm,0.3s,SNR=14						
MOA				i Sn	Sn	22 51 46.3	+1.3
	comp=Z,11nm,0.5s						
PSZ	Piszkesteto	4.83	23	ePN	Pn	22 50 49.9	-0.8
PSZ				ePG	Pg	22 51 09.9	+0.2
PSZ	Piszkesteto	4.83	23	Pn	Pn	22 50 49.9	-0.8
	comp=Z,0.1nm,SNR=2.0						
PSZ				Pg	Pg	22 51 09.9	+0.2
MODS	Modra-Piesok	4.86	2	eSN	Sn	22 51 45.0	-2.7
SMOL	Smolenice	5.01	3	ePN	Pn	22 50 53.4	+0.4
SMOL				eSN	Sn	22 51 49.6	-1.7
VYHS	Vyhne	5.13	13	ePN	Pn	22 50 55.5	+0.7
VYHS				eSN	Sn	22 51 53.0	-1.4
KOLL	Kolacno	5.15	10	ePN	Pn	22 50 55.8	+0.8
KOLL				eSN	Sn	22 51 52.6	-2.2
WTTA	Wattenberg	5.34	316	ePn	Pn	22 50 58.7	+1.0
	comp=Z,4.3nm,0.2s,SNR=9.8						
WTTA				eSn	Sn	22 52 01.9	+2.1
	comp=Z,9.1nm,0.4s						
WATA	Walderalm	5.42	317	i Pn	Pn	22 51 00.9	+2.1
	comp=Z,2.5nm,0.2s						
SQTA	Sankt Quirin	5.53	314	ePn	Pn	22 51 01.8	+1.5
	comp=Z,1.7nm,0.1s,SNR=8.7						
SQTA				i Sn	Sn	22 52 06.3	+2.0
	comp=Z,2.6nm,0.3s						

KRUC	**Moravsky**	**5.56**	**356**	*e*SN	**Sn**	**22 52 04.3**	**-0.7**
MOTA	**Moosalm**	**5.67**	**315**	*e*Pn	**Pn**	**22 51 03.5**	**+1.3**
	comp=Z,0.4nm,0.1s,SNR=14						
MOTA				*e*Sn	**Sn**	**22 52 10.4**	**+2.7**
	comp=Z,5.9nm,0.5s						
RETA	**Reutte**	**5.93**	**314**	*i* Pn	**Pn**	**22 51 06.7**	**+0.8**
	comp=Z,1.1nm,0.2s						
RETA				*e*Sn	**Sn**	**22 52 16.5**	**+2.3**
	comp=Z,4.8nm,0.4s						
KHC	**Kasperske Hory**	**6.11**	**338**	*e*PN	**Pn**	**22 51 09.0**	**+0.9**
KHC				*e*x	x	22 51 20.0	
KHC				*e*SN	**Sn**	**22 52 16.9**	**-1.5**
DAVA	**Damuels**	**6.29**	**309**	*i* Pn	**Pn**	**22 51 13.1**	**+2.3**
	comp=Z,0.7nm,0.2s						
DAVA				*i* Sn	**Sn**	**22 52 25.3**	**+2.1**
	comp=Z,3.9nm,0.4s						
CLL	**Collm**	**8.26**	**342**	*e*Sb	Sb	22 53 37.0	-2.2
CLL				*e*Sg	**Sg**	**22 54 04.0**	**+1.9**

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*ANF **02** 23:22:43.3±0.3, 37°.93N×118°.17W, h10^{km}±2^{km}, ML3.3/8, Error ellipse: s-maj=3.0km s-min=1.8km az=144.0*

*REN **02** 23:22:43.3±0.9, 37°.93N±0°.03×118°.17W±0°.04, h9^{km}±4^{km}, ML3.5/6, ML3.0/73(NEIC), Error ellipse: s-maj=4.7km s-min=4.2km az=113.0*

*NEIC **02** 23:22:43.1±1.3, 37°.92N±0°.03×118°.14W±0°.04, h10^{km}±6^{km}, Error ellipse: s-maj=4.5km s-min=4.2km az=80.0*

ISC 02 23:22:42.2±1.2**, 37°.95N**±0°.02×**118°.12W**±0°.02**, h4**^{km}±11^{km}**, n55, σ0^{s}81**/66**, California-Nevada border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLNR	**Milner Canyon**	**0.40**	**207**		**Pg**	**23 22 50.6**	**+0.7**
BENR	**Benton**	**0.43**	**237**		**Pg**	**23 22 50.9**	**+0.4**
LHV	**Little Huntoon**	**0.43**	**315**		**Pb**	**23 22 51.7**	**-0.7**
LHV					**Sb**	**23 22 58.0**	**-1.3**
NV11	**Mina Array Sit**	**0.48**	**356**		**Pb**	**23 22 53.1**	**-0.3**
NV11				Sg	**Sb**	**23 22 60.0**	**-1.0**
NVAR	**Mina Array Bea**	**0.50**	**343**	Pg	**Pg**	**23 22 51.7**	**-0.2**
ORC	**Owens River**	**0.53**	**234**		**Pg**	**23 22 52.8**	**+0.5**
DSP	**Deep Springs**	**0.59**	**169**		**Pb**	**23 22 54.6**	**-0.5**
POCCA	**Poleta Canyon**	**0.60**	**193**		**Pg**	**23 22 54.3**	**+0.6**
MLAC	**Mammoth, Mammo**	**0.65**	**241**	P	**Pg**	**23 22 55.2**	**+0.5**
	baz=60						
MLAC				S	**Sg**	**23 23 03.9**	**+0.7**
	baz=60						
WMD		**0.66**	**219**		**Pg**	**23 22 52.8**	**-2.0**
RCCR	**Rock Creek Can**	**0.67**	**226**		**Pg**	**23 22 55.4**	**+0.4**
TPH	**Tonopah**	**0.72**	**80**		**Pb**	**23 22 57.9**	**+0.5**
TPH				Sg	**Sb**	**23 23 08.2**	**+0.4**
SCHCA	**Scheelite**	**0.74**	**218**		**Pg**	**23 22 56.7**	**+0.3**
LCH	**Last Change Ra**	**0.81**	**152**		**Pb**	**23 22 58.9**	**0.0**
LCH				IAML		23 23 14.3	
	comp=E,482nm,0.4s						
MDPB	**Devils Postpil**	**0.82**	**248**		**Pg**	**23 22 58.2**	**+0.2**
LUL	**Lundy Lake**	**0.85**	**277**		**Pg**	**23 22 58.8**	**+0.3**
TIN	**Tinemaha, Big**	**0.90**	**186**	P	**Pb**	**23 23 00.2**	**-0.2**
	baz=3.2						
TIN				S	**Sb**	**23 23 12.1**	**-0.7**
	baz=3.2						
KVN	**Kaiserville**	**1.10**	**1**	Pn	**Pb**	**23 23 04.2**	**+0.2**
KVN				IAML		23 23 22.5	
	comp=N,323nm,0.5s						
KVN				IAML		23 23 23.0	
	comp=E,270nm,0.4s						
GRAC	**Grapevine Rang**	**1.12**	**148**	P	**Pn**	**23 23 05.3**	**+0.5**
	baz=326						
GRAC				S	**Sn**	**23 23 21.2**	**+0.5**
	baz=326						
KCC	**Kaiser Creek**	**1.14**	**237**		**Pg**	**23 23 03.6**	**-0.4**
Q09A	**Carvers**	**1.15**	**39**		**Pn**	**23 23 05.9**	**+0.6**
CWC	**Cottonwood Cre**	**1.50**	**179**	Pb	**Pb**	**23 23 11.0**	**+0.1**
	baz=357						
CWC				S	**Sn**	**23 23 30.5**	**+0.1**
	baz=357						
PNTR	**Pine Nut**	**1.63**	**315**	Pn	**Pn**	**23 23 12.0**	**0.0**
PNTR				IAML		23 23 37.5	
	comp=E,225nm,1.0s						
PNTR				IAML		23 23 37.9	
	comp=N,218nm,0.8s						
CMB	**Columbia Colle**	**1.79**	**273**		**Pn**	**23 23 13.8**	**-0.2**
CMB	**Columbia Colle**	**1.79**	**273**	Pn	**Pn**	**23 23 13.4**	**-0.6**
VCNR	**Virginia City**	**1.80**	**319**		**Pn**	**23 23 14.5**	**+0.1**
VCNR				IAML		23 23 43.4	
	comp=N,187nm,0.4s						
EMB	**Emerald Bay**	**1.87**	**304**		**Pn**	**23 23 15.1**	**-0.1**
EMB				Pg	**Pg**	**23 23 17.5**	**-0.5**
RUBR	**Rubicon Trail**	**1.94**	**305**		**Pn**	**23 23 16.8**	**+0.6**
RUBR				IAML		23 23 48.1	
	comp=N,98nm,1.1s						
RUBR				IAML		23 23 49.3	
	comp=E,94nm,0.8s						
MPK	**Martis Peak**	**2.01**	**313**	Pg	**Pb**	**23 23 20.1**	**+0.5**
MPK				IAML		23 23 48.7	
	comp=N,74nm,0.8s						
MPK				IAML		23 23 56.5	
	comp=E,124nm,0.8s						
PAHR	**Pah Rah Range**	**2.02**	**331**		**Pn**	**23 23 17.6**	**+0.4**
R11A	**Troy Canyon, C**	**2.04**	**78**	Pg	**Pg**	**23 23 21.0**	**-0.2**
R11A				IAML		23 23 50.7	
	comp=N,95nm,0.2s						
R11A				IAML		23 23 50.9	
	comp=E,83nm,0.7s						
R11A	**Troy Canyon, C**	**2.04**	**78**	Pb	**Pg**	**23 23 21.0**	**-0.2**
	baz=259						
R11A				Sb	**Sg**	**23 23 49.1**	**+1.5**
	baz=259						
GWY	**Greenwater Val**	**2.10**	**146**		**Pn**	**23 23 18.8**	**+0.4**
GWY				IAML		23 23 55.8	
	comp=E,137nm,0.7s						
GWY				IAML		23 24 00.4	
	comp=N,102nm,0.8s						
PEAR	**Peavine Mounta**	**2.20**	**320**		**Pn**	**23 23 20.4**	**+0.7**
QSM	**Queen of Sheba**	**2.22**	**153**	Pn	**Pn**	**23 23 19.3**	**-0.5**
QSM				IAML		23 23 59.7	
	comp=E,58nm,1.1s						
VES	**Vestal, Richgr**	**2.24**	**201**	Sb	**Sg**	**23 23 53.4**	**-0.8**
	baz=19						
ISA	**Isabella, Lake**	**2.30**	**187**		**Pb**	**23 23 24.0**	**-0.3**
ISA				IAML		23 23 55.9	
	comp=N,70nm,0.3s						
ISA				IAML		23 23 57.4	
	comp=E,79nm,0.5s						
ISA	**Isabella, Lake**	**2.30**	**187**	Pb	**Pb**	**23 23 25.2**	**+0.9**
	baz=6.1						
ISA				Sb	**Sg**	**23 23 54.8**	**-1.3**
	baz=6.1						
PRN	**Pahroc Range**	**2.49**	**102**		**Pn**	**23 23 25.1**	**+1.4**
BMN	**Battle Mountai**	**2.58**	**15**		**Pn**	**23 23 24.8**	**-0.1**
BMN				IAML		23 24 06.6	
	comp=E,78nm,0.6s						
BEKR	**Beckworth**	**2.59**	**318**		**Pn**	**23 23 25.5**	**+0.3**
PAGB	**Antelope Grade**	**2.80**	**218**	Pn	**Pn**	**23 23 27.9**	**+0.1**
PAGB				IAML		23 24 34.6	
	comp=E,34nm,3.8s						
GSC	**Goldstone, Bar**	**2.84**	**158**	Pn	**Pn**	**23 23 28.6**	**+0.1**
GSC				IAML		23 24 21.1	
	comp=N,39nm,1.1s						
GSC				IAML		23 24 27.5	
	comp=E,33nm,1.5s						
ARVC	**Arvin**	**2.87**	**192**	Sb	**Sb**	**23 24 12.1**	**+2.6**
	baz=11						
ORV	**Oroville**	**3.09**	**302**		**Pn**	**23 23 31.8**	**-0.1**
PSUT	**Pine Spring**	**3.41**	**79**	Pg	**Pg**	**23 23 48.0**	**+0.5**
PSUT				IAML		23 24 34.0	
	comp=N,41nm,0.3s						
PSUT				IAML		23 24 34.3	
	comp=E,40nm,0.5s						
ELK	**Elko**	**3.58**	**38**	Pn	**Pn**	**23 23 39.1**	**+0.4**
CCUT	**Cedar City**	**3.79**	**95**		**Pn**	**23 23 42.5**	**+0.8**
CCUT				IAML		23 24 48.9	
	comp=N,31nm,1.3s						
CCUT				IAML		23 24 50.3	
	comp=E,27nm,0.8s						
LCMT	**Little Creek M**	**3.99**	**102**	Pn	**Pn**	**23 23 42.3**	**-1.9**
LCMT				IAML		23 24 52.0	
	comp=N,17nm,0.9s						
SZCU	**Shurtz Canyon**	**4.00**	**94**	Pn	**Pn**	**23 23 44.7**	**+0.2**
MOD	**Modoc Plateau**	**4.29**	**338**	Pn	**Pn**	**23 23 48.2**	**-0.3**
MOD				IAML		23 25 00.5	
	comp=N,13nm,4.0s						
MOD				IAML		23 25 32.8	
	comp=E,15nm,5.0s						
KNB	**Kanab**	**4.31**	**101**		**Pg**	**23 24 04.6**	**-0.3**
KNB				IAML		23 25 13.9	
	comp=N,17nm,1.8s						
KNB				IAML		23 25 21.4	
	comp=E,11nm,1.6s						
WDC	**Whiskeytown Da**	**4.32**	**309**	Pn	**Pn**	**23 23 49.8**	**+1.0**
WDC				IAML		23 25 19.5	
	comp=N,12nm,3.9s						
WDC				IAML		23 26 11.2	
	comp=E,12nm,4.3s						
W13A	**Hualapai Mount**	**4.44**	**129**	Pn	**Pn**	**23 23 49.4**	**-1.2**
W13A					**Pg**	**23 24 05.8**	**-1.4**
W13A				IAML		23 25 09.5	
	comp=N,8.7nm,0.7s						
W13A				IAML		23 25 13.9	
	comp=E,9.5nm,0.8s						
U15A	**North Rim**	**4.89**	**106**	Pg	**Pg**	**23 24 14.1**	**-1.8**

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*IDC **03** 00:06:29.8±0.4, 24°.79N×121°.97E, h0^{km}, mb4.6/31, mb1 4.7/36, mb1mx4.6/58, mbtmp4.6/36, ML3.6/5, MS4.4/37, Ms1 4.4/37, ms1mx4.3/45, Error ellipse: s-maj=13.8km s-min=9.9km az=70.0*

*JMA **03** 00:06:30.7±0.1, 24°.89N×121°.98E, h42^{km}, M5.0*

*BJI **03** 00:06:30.7±0.0, 24°.95N×121°.95E, h10^{km}, mB5.1/50, mb4.5/62, ML5.2/8, Ms5.2/80, Ms7 5.0/74*

*NIED **03** 00:06:30.8, 24°.89N×121°.98E, h42^{km}, MW5.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-4.05; M$_{\theta\theta}$2.59; M$_{\phi\phi}$1.46; M$_{r\theta}$0.87; M$_{\theta\phi}$1.87; M$_{\phi r}$-0.39; Fault plane solution: M$_0$4.12000×10^{16} NP1: φ$_s$244.00000°, δ49.00000°, λ-76.00000°. NP2:φ$_s$43.00000°, δ43.00000°, λ-106.00000°.*

*TAP **03** 00:06:30.3, 24°.85N×122°.03E, h9^{km}, ML4.8, C*

*MOS **03** 00:06:30.9±1.4, 24°.89N×121°.97E, h12^{km}, mb5.1/44, MS4.6/8, Error ellipse: s-maj=7.6km s-min=5.1km az=99.2*

*GCMT **03** 00:06:30.3±0.2, 25°.04N±0°.01×122°.16E±0°.02, h12^{km}, MW5.1/116, Moment Tensor Solution. s42,c55; s116,c183; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-3.51±.10; M$_{\theta\theta}$1.50±.08; M$_{\phi\phi}$2.01±.09; M$_{r\theta}$3.55±.29; M$_{\theta\phi}$2.55±.08; M$_{\phi r}$-0.97±.29; Best double couple: M$_0$5.32700×10^{16} NP1:φ$_s$17.00000°, δ40.00000°, λ-140.00000°. NP2:φ$_s$254.00000°, δ66.00000°, λ-57.00000°. Principal axes: T 4.7540, Plg15.0000°, Azm321.0000°; N 1.1460, Plg30.0000°, Azm59.0000°; P -5.9000, Plg56.0000°, Azm208.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*ASIES **03** 00:06:31.0, 24°.84N×121°.97E, h18^{km}, MW4.8*

*NEIC **03** 00:06:32.3, 24°.72N×122°.03E, h21^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.90; M$_{\theta\theta}$-0.47; M$_{\phi\phi}$1.37; M$_{r\theta}$0.71; M$_{\theta\phi}$-1.89; M$_{\phi r}$0.71; Fault plane solution: M$_0$2.46000×10^{16} NP1:φ$_s$288.26000°, δ63.16000°, λ-156.73000°. NP2:φ$_s$187.27000°, δ69.36000°, λ-28.85000°. Principal axes: T 2.5685, Plg4.0000°, Azm239.0000°; N -0.2347, Plg55.0000°, Azm335.0000°; P -2.3338, Plg35.0000°, Azm146.0000°;*

*NEIC **03** 00:06:32.3±2.5, 24°.74N±0°.05×122°.04E±0°.02, h10^{km}±1^{km}, mb5.0/113, Mwr4.9/23, ML4.4(TAP) Error ellipse: s-maj=9.0km s-min=3.2km az=184.0*

ISC 03 00:06:31.8±0.5**, 24°.84N**±0°.02×**122°.06E**±0°.02**, h11**^{km}±2^{km}**, n457, σ1^{s}81**/515**, mb4.9**/137**, MS4.6**/51**, 37C-18D, Fault plane solution: NP1:**φ$_s$34.12523°, δ34.08567°, λ-87.03748°. **NP2:**φ$_s$210.54962°, δ55.96613°, λ-92.00299°. **Principal axes:** T Plg10.9452°, Azm301.9920°; N Plg1.6598°, Azm211.6710°; P Plg78.9266°, Azm113.1565°; **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.18**	**340**	⇑*i*P	**Pg**	**00 06 34.2**	**-1.5**
	baz=349						
TWB1				S	**Sg**	**00 06 36.7**	**-1.7**
	baz=349						
NTC	**Toucheng**	**0.21**	**275**	⇑*i*P	**Pg**	**00 06 35.0**	**-1.2**
	baz=272						
NTC				*i* S	**Sg**	**00 06 37.8**	**-1.3**
	baz=272						
TIPB	**Shuangxi**	**0.25**	**302**	⇑*i*P	**Pg**	**00 06 35.5**	**-1.5**
	baz=302						
TIPB				*i* S	**Sg**	**00 06 38.8**	**-1.6**
	baz=302						
ILA	**Ilan**	**0.29**	**256**	⇑*i*P	**Pg**	**00 06 36.4**	**-1.2**
	baz=252						
ILA				S	**Sg**	**00 06 40.9**	**-0.7**
	baz=252						
TWC	**Suao**	**0.30**	**220**	*e*P	**Pg**	**00 06 36.6**	**-1.2**
	baz=223						
TWC				*e*S	**Sg**	**00 06 40.2**	**-1.5**
	baz=223						
NWF	**Wu-fen Shan**	**0.34**	**313**	⇑*i*P	**Pg**	**00 06 37.4**	**-1.3**
	baz=305						
NWF				S	**Sg**	**00 06 42.1**	**-1.1**
	baz=305						
WFSB	**Wu-fen Shan**	**0.34**	**313**	P	**Pg**	**00 06 37.5**	**-1.1**
	baz=305						
WFSB				S	**Sg**	**00 06 42.6**	**-0.6**
	baz=305						
NDS	**Dongshan**	**0.37**	**237**	⇑*i*P	**Pg**	**00 06 37.9**	**-1.2**
	baz=234						
TWE	**Neicheng**	**0.37**	**252**	⇑*i*P	**Pg**	**00 06 37.8**	**-1.4**
	baz=248						
TWE				S	**Sg**	**00 06 42.5**	**-1.6**
	baz=248						
TWA	**Mucha**	**0.45**	**288**	⇑*i*P	**Pg**	**00 06 39.5**	**-1.2**
	baz=278						
TWA				S	**Sg**	**00 06 44.9**	**-1.8**
	baz=278						
EWUT	**Wuta**	**0.47**	**213**	P	**Pg**	**00 06 39.5**	**-1.4**
	baz=218						
EWUT				*e*S	**Sg**	**00 06 46.0**	**-1.1**
	baz=218						
NHY	**Taipei**	**0.49**	**294**	P	**Pg**	**00 06 40.6**	**-0.6**
	baz=285						
NHY				*e*S	**Sg**	**00 06 46.8**	**-1.0**
	baz=285						
ENTT	**Nioudou**	**0.49**	**246**	*e*P	**Pg**	**00 06 40.2**	**-1.2**
	baz=244						
ENTT				*e*S	**Sg**	**00 06 47.6**	**-0.2**
	baz=244						
ENA	**Nanau**	**0.50**	**215**	*e*P	**Pg**	**00 06 40.1**	**-1.5**
	baz=213						
NHDH	**Xindian Distri**	**0.50**	**285**	⇑P	**Pg**	**00 06 40.4**	**-1.1**
	baz=275						
NHDH				S	**Sg**	**00 06 46.8**	**-1.4**
	baz=275						
NWLT	**Wulai**	**0.51**	**263**	⇑P	**Pg**	**00 06 40.1**	**-1.6**
	baz=262						
NWLT				*e*S	**Sg**	**00 06 46.3**	**-2.1**
	baz=262						
NWRT	**Kuosheng**	**0.51**	**315**	P	**Pg**	**00 06 40.9**	**-0.9**
	baz=315						
NWRT				*e*S	**Sg**	**00 06 46.9**	**-1.6**
	baz=315						
TATO	**Taipei**	**0.53**	**285**	Pg	**Pg**	**00 06 40.9**	**-1.3**
TATO				Sg	**Sg**	**00 06 47.7**	**-1.6**
YM01	**YM01**	**0.54**	**305**	P	**Pg**	**00 06 41.4**	**-0.9**
	baz=304						
YM01				*e*S	**Sg**	**00 06 47.7**	**-1.7**
	baz=304						
NDT	**Datong Townshi**	**0.55**	**245**	P	**Pg**	**00 06 41.0**	**-1.4**
	baz=244						
NDT				*e*S	**Sg**	**00 06 49.7**	**0.0**
	baz=244						
ANP	**Anpu**	**0.60**	**306**	P	**Pg**	**00 06 42.4**	**-1.1**
	baz=305						
EHP	**Heping Village**	**0.60**	**209**	*e*P	**Pg**	**00 06 42.8**	**-0.6**
	baz=206						
NTST	**Danshui**	**0.64**	**301**	P	**Pg**	**00 06 43.9**	**-0.4**
	baz=300						
NTST				*e*S	**Sg**	**00 06 52.6**	**0.0**
	baz=300						
YHNB	**Yeheng**	**0.64**	**255**	⇑*i*P	**Pg**	**00 06 42.5**	**-1.7**
	baz=254						
YHNB				*e*S	**Sg**	**00 06 49.5**	**-3.2**
	baz=254						
YHNB	**Yeheng**	**0.64**	**255**	Pg	**Pg**	**00 06 42.4**	**-1.9**
YHNB				Sg	**Sg**	**00 06 52.1**	**-0.6**
YHNB	**Yeheng**	**0.64**	**255**	P	**Pg**	**00 06 42.5**	**-1.7**
NSK	**Sanguang**	**0.66**	**256**	⇑*i*P	**Pg**	**00 06 42.5**	**-2.0**
	baz=254						
NSK				S	**Sg**	**00 06 52.0**	**-1.1**
	baz=254						
NNSB	**Datong**	**0.74**	**237**	*e*P	**Pg**	**00 06 44.1**	**-2.0**
	baz=250						
NNS	**Nan Shan**	**0.74**	**238**	*e*P	**Pg**	**00 06 44.8**	**-1.3**
	baz=250						
ETL	**Fush Village**	**0.78**	**210**	P	**Pg**	**00 06 45.6**	**-1.4**
	baz=201						
ETL				*e*S	**Sg**	**00 06 56.3**	**-0.9**
	baz=201						
NACB	**Ninganchiao**	**0.78**	**213**	*e*P	**Pg**	**00 06 45.7**	**-1.2**
	baz=224						
NACB				*e*S	**Sg**	**00 06 55.5**	**-1.7**
	baz=224						
NACB	**Ninganchiao**	**0.78**	**213**		**Pg**	**00 06 45.7**	**-1.2**
NACB				Sg	**Sg**	**00 06 55.8**	**-1.4**
NCU	**National Centr**	**0.80**	**280**	⇑*i*P	**Pg**	**00 06 46.9**	**-0.4**
	baz=278						
NCU				*e*S	**Sb**	**00 06 58.6**	**0.0**
	baz=278						
NCUH	**Zhongli**	**0.80**	**279**	⇑*i*P	**Pg**	**00 06 47.1**	**-0.1**
	baz=278						
NCUH				*e*S	**Sb**	**00 06 59.2**	**+0.6**
	baz=278						
ETLH	**Xiulin Townshi**	**0.82**	**220**	*e*P	**Pg**	**00 06 46.6**	**-1.0**
	baz=229						
ETLH				*e*S	**Sg**	**00 06 58.1**	**-0.2**
	baz=229						
TWD	**Chiawan**	**0.86**	**209**	*i* P	**Pg**	**00 06 46.9**	**-1.5**
	baz=209						
TWD				*e*S	**Sg**	**00 06 58.2**	**-1.5**
	baz=209						
JYNG	**Yonagunijimaku**	**0.90**	**115**	P	**Pg**	**00 06 48.4**	**-0.6**
JYNG				*e*S	**Sg**	**00 07 00.7**	**0.0**
FUSS	**Fushou**	**0.94**	**232**	*e*P	**Pg**	**00 06 48.5**	**-1.6**
	baz=232						
FUSS				*e*S	**Sg**	**00 07 02.6**	**+0.2**
	baz=232						
YOJ	**Yonaguni jima**	**0.95**	**113**	*e*P	**Pg**	**00 06 48.9**	**-1.0**
	baz=115						
YOJ				*e*S	**Sb**	**00 07 02.6**	**-0.1**
	baz=115						
YOJ	**Yonaguni jima**	**0.95**	**113**	P	**Pg**	**00 06 49.0**	**-1.0**
YOJ				*e*S	**Sb**	**00 07 02.5**	**-0.3**
YOJ	**Yonaguni jima**	**0.95**	**113**	P	**Pg**	**00 06 48.6**	**-1.4**
YOJ						00 07 01.6	
YOJ	**Yonaguni jima**	**0.95**	**113**	Pg	**Pg**	**00 06 48.6**	**-1.4**
YOJ				Sg	**Sg**	**00 07 01.6**	**-0.8**
YOJ	**Yonaguni jima**	**0.95**	**113**	P	**Pg**	**00 06 49.0**	**-1.0**
HWA	**Hwalien**	**0.95**	**206**	*e*P	**Pg**	**00 06 49.9**	**-0.2**
	baz=218						
HWA				*e*S	**Sg**	**00 07 01.9**	**-0.6**
	baz=218						
LIOB	**Emei**	**0.97**	**259**	*e*P	**Pg**	**00 06 49.1**	**-1.3**
	baz=251						
SBCB	**Hsinchu**	**0.97**	**268**	⇑*i*P	**Pg**	**00 06 50.0**	**-0.6**
	baz=284						
SBCB				*e*S	**Sg**	**00 07 02.5**	**-0.8**
	baz=284						
NSTT	**Nanjuang**	**0.98**	**258**	*e*P	**Pg**	**00 06 50.3**	**-0.4**
	baz=250						
HSN	**Hsinchu**	**0.99**	**268**	⇑*i*P	**Pg**	**00 06 49.6**	**-1.2**
	baz=269						
HSN				*e*S	**Sg**	**00 07 02.4**	**-1.3**
	baz=269						
TWT	**Tachien**	**0.99**	**234**	*e*P	**Pg**	**00 06 50.3**	**-0.6**
	baz=227						
WHF	**Hehuan Shan**	**1.00**	**226**	*e*P	**Pg**	**00 06 50.0**	**-1.1**
	baz=227						
WHF				*e*S	**Sg**	**00 07 03.1**	**-1.1**
	baz=227						
TDCB	**Techi**	**1.00**	**235**	*e*P	**Pg**	**00 06 50.1**	**-1.0**
	baz=230						
TDCB				*e*S	**Sg**	**00 07 02.5**	**-1.7**
	baz=230						
CHGB	**Renai**	**1.12**	**226**	*e*P	**Pb**	**00 06 51.4**	**-1.9**
	baz=227						
CHGB				*e*S	**Sg**	**00 07 05.6**	**-2.2**
	baz=227						
WHP	**Taichung City**	**1.16**	**241**	*e*P	**Pb**	**00 06 52.9**	**-1.0**
	baz=242						
WHP				*e*S	**Sb**	**00 07 06.6**	**-2.3**
	baz=242						
ESL	**Shilin**	**1.17**	**209**	*e*P	**Pb**	**00 06 52.4**	**-1.6**
	baz=220						
ESL				*e*S	**Sb**	**00 07 06.0**	**-3.2**
	baz=220						
NMLH	**Miaoli**	**1.19**	**256**	*e*P	**Pb**	**00 06 54.1**	**-0.2**
	baz=256						
NMLH				*e*S	**Sn**	**00 07 11.0**	**+0.4**
	baz=256						
OWD	**Renai**	**1.19**	**223**	*e*P	**Pb**	**00 06 53.5**	**-1.0**
	baz=224						
OWD				*e*S	**Sb**	**00 07 08.2**	**-1.7**
	baz=224						
NSY	**Sanyi**	**1.25**	**251**	*e*P	**Pn**	**00 06 54.7**	**-0.5**
	baz=251						
NSY				S	**Sb**	**00 07 10.7**	**-1.0**
	baz=251						
TWQ1	**Liyutan**	**1.27**	**248**	P	**Pn**	**00 06 54.8**	**-0.7**
	baz=248						
TWQ1				*e*S	**Sb**	**00 07 12.1**	**+0.1**
	baz=248						
EGFH	**Guangfu**	**1.30**	**206**	*e*P	**Pb**	**00 06 56.1**	**-0.1**
	baz=224						
WCS	**Beigang Elemen**	**1.30**	**234**	*e*P	**Pb**	**00 06 56.1**	**-0.1**
	baz=241						
WDJ	**Dajia District**	**1.38**	**250**	*e*P	**Pb**	**00 06 57.5**	**-0.1**
	baz=267						
SMLT	**Sun Moon Lake**	**1.42**	**228**	*e*P	**Pn**	**00 06 57.7**	**0.0**
	baz=220						
TCU	**Taichung**	**1.43**	**242**	*e*P	**Pb**	**00 06 58.2**	**-0.3**
	baz=261						
TYC	**Yuchr**	**1.44**	**230**	*e*P	**Pb**	**00 06 58.6**	**0.0**
	baz=222						
SSLB	**Suanglung**	**1.45**	**224**	*e*P	**Pn**	**00 06 58.0**	**0.0**
	baz=226						
SSLB				*e*S	**Sn**	**00 07 17.2**	**+0.1**
	baz=226						
SSLB	**Suanglung**	**1.45**	**224**		**Pn**	**00 06 55.7**	**-2.3**
SSLB	**Suanglung**	**1.45**	**224**	P	**Pn**	**00 06 56.4**	**-1.6**
HGSD	**Ruisui**	**1.46**	**203**	*e*P	**Pn**	**00 06 55.4**	**-2.7**
	baz=221						
EHY	**Hungye**	**1.49**	**207**	*e*P	**Pn**	**00 06 58.8**	**+0.3**
	baz=220						
EHY				*e*S	**Sn**	**00 07 18.1**	**+0.2**
	baz=220						
WCHH	**Zhanghua**	**1.56**	**241**	*e*P	**Pn**	**00 06 59.2**	**-0.3**
	baz=260						
WNT	**Mingjian**	**1.57**	**233**	*e*P	**Pg**	**00 07 01.6**	**-0.5**
	baz=224						
WJS	**Zhushan**	**1.58**	**230**	*e*P	**Pg**	**00 07 01.9**	**-0.2**
	baz=224						
WJS				*e*S	**Sg**	**00 07 23.1**	**+0.5**
	baz=224						
YULB	**Yu-li**	**1.60**	**206**	*e*P	**Pn**	**00 06 59.9**	**-0.1**
	baz=210						
YULB	**Yu-li**	**1.60**	**206**		**Pn**	**00 06 58.4**	**-1.6**
IRIF	**Iriomote-Funau**	**1.60**	**108**	P	**Pn**	**00 06 58.3**	**-1.8**
IRIF				*e*S	**Sn**	**00 07 19.0**	**-1.8**
EYUL	**Yuli**	**1.63**	**205**	*e*P	**Pn**	**00 07 00.3**	**-0.1**
	baz=221						
ALS	**Alishan**	**1.75**	**221**	*e*P	**Pb**	**00 07 03.6**	**-0.4**
	baz=212						
ALS				*e*S	**Sb**	**00 07 26.7**	**+0.5**
	baz=212						
CHN5	**Tsauling**	**1.76**	**226**	P	**Pb**	**00 07 04.2**	**0.0**
	baz=230						
CHN5				*e*S	**Sg**	**00 07 28.9**	**+0.4**
	baz=230						
HATJ	**Hateruma jima**	**1.77**	**116**	P	**Pn**	**00 07 01.2**	**-1.2**
HATJ				S	**Sn**	**00 07 22.0**	**-3.0**
FULB	**Fuli**	**1.77**	**203**	*e*P	**Pn**	**00 07 02.0**	**-0.5**
	baz=223						
FULB				*e*S	**Sn**	**00 07 25.6**	**+0.5**
	baz=223						
WRL	**Guolierlin Hig**	**1.79**	**239**	*e*P	**Pb**	**00 07 04.4**	**-0.3**
	baz=257						
WDLH	**Douliu**	**1.80**	**231**	*e*P	**Pb**	**00 07 04.1**	**-0.6**
	baz=249						
WDLH				*e*S	**Sb**	**00 07 26.6**	**-0.7**
	baz=249						
CHKT	**Chengkung**	**1.84**	**200**	*e*P	**Pn**	**00 07 02.6**	**-0.8**
	baz=190						
CHKT				*e*S	**Sn**	**00 07 25.2**	**-1.5**
	baz=190						
JKRS	**Kuro-shima**	**1.88**	**108**	P	**Pn**	**00 07 02.4**	**-1.4**
JKRS				*e*S	**Sn**	**00 07 25.5**	**-2.0**

ELDTW	Lidau	1.90	210	*e*P	Pn	00 07 02.9	-1.4
	baz=216						
ELDTW				*e*S	Sn	00 07 27.7	-0.6
	baz=216						
WTK	Tuku	1.91	233	*e*P	Pb	00 07 06.2	-0.4
	baz=253						
CHN2	Minshiung	1.94	228	*e*P	Pb	00 07 06.6	-0.6
	baz=250						
JIJ	Ishigaki jima	1.96	104	P	Pn	00 07 02.9	-2.1
EDH	Donghe	1.98	201	*e*P	Pn	00 07 04.3	-1.0
	baz=193						
EDH				*e*S	Sn	00 07 29.6	-0.5
	baz=193						
CHY	Chiayi	2.00	229	*e*P	Pn	00 07 06.8	+1.2
	baz=232						
TPUB	Ta-pu	2.01	221	*e*P	Pn	00 07 06.4	+0.6
	baz=211						
TPUB				*e*S	Sg	00 07 35.3	-1.2
	baz=211						
TPUB	Ta-pu	2.01	221		Pn	00 07 03.2	-2.6
TPUB	Ta-pu	2.01	221	P	Pn	00 07 06.0	+0.3
STYH	Taoyuan	2.03	215	*e*P	Pn	00 07 06.9	+0.9
	baz=211						
STYH				*e*S	Sb	00 07 34.9	+0.8
	baz=211						
WTP	Ta-pu	2.06	220	*e*P	Pb	00 07 08.0	-1.3
	baz=213						
WTP				*e*S	Sb	00 07 35.9	+0.9
	baz=213						
JISG	Ishigakijimahi	2.06	96	P	Pn	00 07 04.9	-1.5
LONT	Longtian	2.10	204	*e*P	Pn	00 07 06.9	-0.1
	baz=194						
TWK	Hsinying	2.12	223	⇓*i*P	Pb	00 07 09.4	-0.9
	baz=231						
TWK				*e*S	Sb	00 07 36.5	-0.2
	baz=231						
SNST	Tainan City	2.15	222	*e*P	Pb	00 07 10.2	-0.6
	baz=226						
CHN1	Nanshi	2.16	221	*e*P	Pb	00 07 09.4	-1.5
	baz=229						
CHN1				*e*S	Sb	00 07 38.5	+0.7
	baz=229						
ICHU	Yijhu	2.19	228	*e*P	Pn	00 07 09.4	+1.3
	baz=248						
ICHU				*e*S	Sb	00 07 39.9	+1.2
	baz=248						
TWGBT	Beinan	2.20	204	*e*P	Pn	00 07 09.0	+0.6
	baz=196						
TWG	Pinlang	2.20	204	*e*P	Pn	00 07 06.1	-2.2
	baz=196						
TWG	Pinlang	2.20	204		Pn	00 07 07.0	-1.3
SGST	Jiashian	2.21	218	*e*P	Pn	00 07 08.7	+0.3
	baz=213						
SGST				*e*S	Sb	00 07 38.5	-0.7
	baz=213						
LDUT	Ludao	2.22	194	*e*P	Pn	00 07 07.3	-1.2
	baz=185						
SLGT	Liugui	2.25	215	*e*P	Pb	00 07 11.7	-0.7
	baz=220						
CHN8	Yiju	2.25	229	*e*P	Pn	00 07 09.7	+0.7
	baz=248						
CHN8				*e*S	Sb	00 07 39.7	-0.6
	baz=248						
MATB	Ma-tsu	2.31	305	*e*P	Pn	00 07 07.7	-2.2
	baz=300						
JTJ	Tarama	2.41	94	P	Pn	00 07 10.9	-0.3
ECL	Taimali	2.45	205	*e*P	Pn	00 07 10.4	-1.3
	baz=198						
SSD	Sandimen	2.46	212	*e*P	Pn	00 07 13.4	+1.6
	baz=217						
TWM1	Shoushan	2.50	217	*e*P	Pb	00 07 15.5	-1.3
	baz=222						
SGLT	Jiouru	2.55	215	*e*P	Pb	00 07 16.7	-0.8
	baz=219						
MASBT	Mashibuluo	2.57	211	*e*P	Pb	00 07 15.8	-2.2
	baz=216						
PNG	Penghu	2.61	242	*e*P	Pn	00 07 14.1	+0.2
	baz=245						
PHUB	P'eng-hu	2.62	240	*e*P	Pn	00 07 14.4	+0.2
	baz=254						
PTMZ	Houxiangcun	2.67	275	*e*P	Pn	00 07 12.4	-2.4
	baz=273						
XPSS	Dashiqiu	2.68	321	*e*P	Pn	00 07 12.3	-2.5
	baz=318						
LYJJ	Jianjiangzhen	2.68	310	*e*P	Pn	00 07 12.5	-2.5
	baz=306						
SSPT	Xinbi	2.71	211	*e*P	Pb	00 07 18.3	-2.0
	baz=216						
SCZT	Fangliau	2.79	209	*e*P	Pb	00 07 19.7	-1.9
	baz=200						
LAY	Lan-yu	2.83	190	*e*P	Pn	00 07 15.1	-1.9
	baz=182						
JIRB	Irabujima	2.83	90	P	Pn	00 07 17.2	+0.2
SLIU	Shizi	2.85	204	*e*P	Pn	00 07 17.2	-0.1
	baz=200						
JIKM	Ikemajima	2.90	88	P	Pn	00 07 18.4	+0.5
WLCH	Liuqiu	2.92	212	*e*P	Pb	00 07 21.9	-1.9
	baz=233						
JMJ	Miyako jima 2	2.94	90	P	Pn	00 07 19.6	+1.1
JMJ2	Miyako jima3	2.97	91	P	Pn	00 07 19.4	+0.4
MHZQ	Yeshan	3.01	295	*e*P	Pn	00 07 16.7	-2.8
	baz=291						
JOGS	Gusukube	3.04	91	P	Pn	00 07 20.8	+0.9
HEN	Hengchun	3.07	204	*e*P	Pn	00 07 22.5	+2.2
	baz=201						
TWK1	Hengchun	3.10	202	*e*P	Pn	00 07 21.6	+0.9
	baz=196						
TWKBT	Hengchun	3.10	202	*e*P	Pn	00 07 21.8	+1.1
	baz=196						
QZH	Quanzhou	3.15	273	*e*Pn	Pn	00 07 21.0	-0.3
QZH				Sn	Sn	00 07 57.9	-1.0
QZH				LR	LR		
	comp=N,35µm,14.0s						
QZH				LR	LR		
	comp=Z,15µm,8.2s						
KNM	Kinmen	3.32	264	*e*P	Pn	00 07 23.7	0.0
	baz=263						
KNMB	Chin-men Tao	3.36	264	*e*P	Pn	00 07 22.8	-1.5
	baz=263						
KNMB	Chin-men Tao	3.36	264	Pn	Pn	00 07 22.3	-1.9
AXDP	Jialang	3.71	272	*e*P	Pn	00 07 28.0	-1.1
	baz=268						
ZPLA	Ao Xicun	4.03	258	*e*P	Pn	00 07 32.6	-0.9
	baz=254						
JKE	Kume jima 2	4.52	70	P	Pn	00 07 43.1	+2.9
JIH	Iheya	5.75	66	P	Pn	00 07 59.4	+2.2
JOW	Kunigami	5.94	69	Pn	Pn	00 08 01.7	+1.9
	9.1nm,0.3s,baz=246,slow=12,SNR=17						
JOW	Kunigami	5.94	69	Pn	Pn	00 08 00.7	+0.9
JOW	Kunigami	5.94	69	P	Pn	00 07 59.7	-0.1
SSE	Sheshan	6.28	353	Pn	Pn	00 08 02.1	-2.3
SSE				Sn	Sn	00 09 16.4	+0.2
SSE				smax	smax		
	comp=N,310nm,1.0s						
SSE				smax	smax		
	comp=E,580nm,1.1s						
NJ2	Nanjing	7.72	339	*e*Pn	Pn	00 08 22.0	-2.1
NJ2				Sn	Sn	00 09 49.2	-2.4
NJ2				smax	smax		
	comp=N,880nm,1.2s						
NJ2				smax	smax		
	comp=E,670nm,1.4s						
NJ2				LR	LR		
	comp=N,16µm,9.6s						
NJ2				LR	LR		
	comp=E,10µm,8.8s						
NJ2				LR	LR		
	comp=Z,16µm,9.2s						
JMZ	Minamidaito 2	8.35	81	Pn	Pn	00 08 32.5	-0.3
WHN	Wuhan	8.88	311	⇑P	Pn	00 08 36.7	-3.4
WHN				S	Sn	00 10 17.5	-2.8
WHN				LR	LR		
	comp=N,14µm,10.5s						
WHN				LR	LR		
	comp=E,13µm,9.1s						
WHN				LR	LR		
	comp=Z,19µm,9.1s						
JSU	Suzuyama	9.95	46	Pn	Pn	00 08 56.2	+1.5
JNU	Nakatsue	11.30	41	Pn	Pn	00 09 15.4	+2.1
	0.1nm,0.3s,baz=195,slow=13,SNR=4.9						
JNU	Nakatsue	11.30	41	Pn	Pn	00 09 15.1	+1.8
TIA	Tai'an	12.10	341	⇑P	Pn	00 09 28.4	+4.2
TIA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
TIA				LR	LR		
	comp=N,5µm,8.9s						
TIA				LR	LR		
	comp=E,4µm,9.3s						
TIA				LR	LR		
	comp=Z,10µm,9.6s						
TJN	Taejon	12.37	20	*e*P	Pn	00 09 28.1	+0.2
QIZ	Qiongzhong	12.72	245	P	Pn	00 09 32.4	-0.3
QIZ				S	Sn	00 11 56.9	+2.4
QIZ				pmax	pmax		
	comp=Z,41nm,2.0s						
QIZ				LR	LR		
	comp=N,4µm,15.7s						
QIZ				LR	LR		
	comp=E,3µm,13.7s						
QIZ				LR	LR		
	comp=Z,2µm,10.6s						
INCN	Inchon	13.20	16	P	Pn	00 09 41.4	+2.2
INCN	Inchon	13.20	16	Pn	Pn	00 09 41.4	+2.2
KSAR	Wonju Array Be	13.51	20	P	Pn	00 09 46.4	+2.9
KSAR	Wonju Array Be	13.51	20	Pn	Pn	00 09 46.4	+2.9
KSRS	Korea Array	13.54	20	Pn	Pn	00 09 43.3	-0.4
	0.4nm,0.3s,baz=204,slow=14,SNR=4.7						
KSRS				LR	LR	00 16 01.2	
	comp=Z,1µm,20.7s,baz=204,slow=42						
KS19	Wonju Array Si	13.56	20	Pn	Pn	00 09 46.7	+2.5
JMN	Monobe	13.59	47	Pn	Pn	00 09 45.7	+1.2
JHS	Saijyo	13.94	41		Pn	00 09 51.2	+2.0
GYA	Guiyang	13.98	280	⇑P	Pn	00 09 53.3	+3.3
GYA				S	Sn	00 12 26.8	+1.5
GYA				pmax	pmax		
	comp=Z,330nm,8.2s						
GYA				LR	LR		
	comp=N,3µm,6.7s						
GYA				LR	LR		
	comp=E,4µm,6.3s						
GYA				LR	LR		
	comp=Z,7µm,9.0s						
DL2	Dalian	14.03	359	*e*P	Pn	00 09 53.3	+2.8
DL2				S	Sn	00 12 28.3	+2.0
DL2				pmax	pmax		
	comp=Z,27nm,1.3s						
DL2				pmax	pmax		
	comp=Z,260nm,4.0s						
DL2				LR	LR		
	comp=N,3µm,12.6s						
DL2				LR	LR		
	comp=E,1µm,12.7s						
DL2				LR	LR		
	comp=Z,4µm,12.1s						
XAN	Xi'an	14.65	312	P	Pn	00 09 58.3	-0.8
XAN				pP	P	00 10 05.5	0.0
XAN				pmax	pmax		
	comp=Z,11nm,1.2s						
XAN				LR	LR		
	comp=N,5µm,7.6s						
XAN				LR	LR		
	comp=E,2µm,10.3s						
XAN				LR	LR		
	comp=Z,4µm,8.9s						
TBP	Tagbilaran	15.16	173	⇑*i*P	P	00 10 18.1	+6.9
TBP				*i* S	S	00 13 03.3	-8.0
TIY	Taiyuan	15.23	330	*e*P	P	00 10 12.1	+0.2
TIY				S	S	00 13 07.1	-5.5
TIY				pmax	pmax		
	comp=Z,37nm,0.5s						
TIY				pmax	pmax		
	comp=Z,410nm,3.8s						
TIY				LR	LR		
	comp=N,4µm,8.7s						
TIY				LR	LR		
	comp=E,3µm,10.5s						
TIY				LR	LR		
	comp=Z,4µm,11.0s						
BJT	Baijiatuau	15.93	343	P	P	00 10 21.4	+1.9
BJT				pmax	pmax		
	comp=Z,41nm,1.5s						
BJT	Baijiatuau	15.93	343	P	P	00 10 21.4	+1.9
BJI	Beijing	15.94	343	P	Pn	00 10 16.1	0.0
BJI				pP	sP	00 10 24.7	+0.7
CD2	Chengdu	17.27	295	⇑*i*P	Pn	00 10 33.6	+0.6
CD2				pP	pP	00 10 37.3	-0.2
CD2				sP	sP	00 10 39.7	+0.8
CD2				S	Sn	00 13 46.2	+1.0
CD2				pmax	pmax		
	comp=Z,80nm,1.1s						
CD2				pmax	pmax		
	comp=Z,520nm,9.4s						
CD2				LR	LR		
	comp=Z,8µm,14.5s						
CD2				LR	LR		
	comp=Z,5µm,13.8s						
CD2				LR	LR		
	comp=Z,5µm,8.8s						
KMI	Kunming	17.52	275	⇑P	P	00 10 37.9	+0.4
KMI				sP	sP	00 10 43.8	+1.9
KMI				S	Sn	00 13 53.0	+1.4
KMI				SS	S	00 14 12.8	+13
KMI				pmax	pmax		
	comp=Z,15nm,1.6s						
KMI				pmax	pmax		
	comp=Z,230nm,5.0s						
KMI				LR	LR		
	comp=Z,2µm,6.4s						
KMI				LR	LR		
	comp=Z,4µm,12.4s						
KMI				LR	LR		
	comp=Z,4µm,12.4s						
JHJ	Hachijo jima 2	17.55	58	P	P	00 10 38.4	+0.8
	comp=Z,7.4nm,0.3s,baz=73,slow=16,SNR=2.5						
DAV	Davao City (W)	17.99	169	LR	LR	00 17 57.9	
	comp=Z,1µm,18.8s,baz=346,slow=38						
MAJO	Matsushiro	18.11	46	*e*P	P	00 10 45.2	+1.5
MAJO	Matsushiro	18.11	46	P	P	00 10 43.7	-0.1
MAT	Matsushiro	18.11	46	P	P	00 10 43.8	+0.1
MJAR	Matsushiro Arr	18.11	46	P	P	00 10 44.3	+0.6
	comp=Z,0.0nm,0.3s,baz=241,slow=10,SNR=13						
MJAR				LR	LR	00 18 00.9	
	comp=Z,798nm,21.0s,baz=250,slow=38						
MJAR	Matsushiro Arr	18.11	46	P	Pn	00 10 43.2	-0.2
MJAR				pmax	pmax		
	comp=Z,16nm,1.2s						
MJAR	Matsushiro Arr	18.11	46	Pn	Pn	00 10 43.1	-0.2
HHC	Hu-ho-hao-te	18.21	334	*e*P	P	00 10 46.2	+1.2
HHC				sP	sP	00 10 54.7	+5.5
HHC				S	S	00 14 11.9	-1.6
HHC				pmax	pmax		
	comp=Z,50nm,1.3s						
HHC				pmax	pmax		
	comp=Z,780nm,6.6s						
HHC				LR	LR		
	comp=Z,5µm,10.6s						
HHC				LR	LR		
	comp=Z,3µm,10.5s						
HHC				LR	LR		
	comp=Z,6µm,10.9s						
JCJ	Chichijima	18.24	79	P	Pn	00 10 42.1	-2.9
	comp=Z,1.8nm,0.3s,baz=274,slow=19,SNR=3.7						
JCJ				LR	LR	00 17 36.6	
	comp=Z,634nm,18.5s,baz=251,slow=36						
JCJ	Chichijima	18.24	79		Pn	00 10 44.8	-0.2
BTO	Baotou	18.67	330	*e*P	Pn	00 10 52.4	+2.1
BTO				LR	LR		
	comp=Z,16µm,11.0s						
BTO				LR	LR		
	comp=Z,11µm,10.8s						
CN2	Changchun	19.12	8	*e*P	Pn	00 10 56.0	+0.4
CN2				PP	PnPn	00 11 13.1	+4.8
CN2				S	Sn	00 14 26.5	-3.3
CN2				sS	S	00 14 32.2	+0.7
CN2				pmax	pmax		
	comp=Z,20nm,1.3s						
CN2				pmax	pmax		
	comp=Z,240nm,3.5s						
CN2				LR	LR		
	comp=Z,1µm,15.0s						
CN2				LR	LR		
	comp=Z,5µm,15.0s						
CN2				LR	LR		
	comp=Z,3µm,15.0s						
MSHR	Mys Shultsa	19.23	21	*e*P	Pn	00 10 57.1	+0.2
MSHR				pmax	pmax		
	comp=Z,103nm,1.3s						
LZH	Lanzhou	19.26	310	⇓P	Pn	00 10 58.5	+1.0
LZH				pP	sP	00 11 01.7	+0.9
LZH				sP	pP	00 11 06.6	+7.1
LZH				S	Sn	00 14 16.4	-17
LZH				sS	sS	00 14 38.9	-0.5
LZH				SS	SnSn	00 14 56.7	+9.1
LZH				pmax	pmax		
	comp=Z,26nm,1.2s						
LZH				pmax	pmax		
	comp=Z,920nm,4.6s						
LZH				LR	LR		
	comp=Z,2µm,14.6s						
LZH				LR	LR		
	comp=Z,3µm,13.6s						
LZH				LR	LR		
	comp=Z,3µm,14.6s						
VLA	Vladivostok	19.95	21	*d i*P	Pn	00 11 06.4	+0.9
VLA				pmax	pmax		
	comp=Z,171nm,1.3s						
MDJ	Mudanjiang	20.66	15	P	Pn	00 11 13.1	-0.8
MDJ				pP	sP	00 11 16.1	+0.2
MDJ				S	Sn	00 15 07.2	+0.3
MDJ				sS	pS	00 15 11.6	+0.3
MDJ				SS	SnSn	00 15 25.8	+4.0
MDJ				pmax	pmax		
	comp=Z,32nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,340nm,3.6s						
MDJ				LR	LR		
	comp=Z,3µm,15.4s						
MDJ				LR	LR		
	comp=Z,6µm,16.6s						
MDJ				LR	LR		
	comp=Z,5µm,12.1s						
MDJ	Mudanjiang	20.66	15	IAmb	IAmb	00 11 17.2	
	comp=Z,49nm,0.8s						
USA0B	Ussuriysk Arra	20.95	20	P	Pn	00 11 16.0	-1.2
USA0B				pmax	pmax		
	comp=Z,62nm,1.1s						
USA0B	Ussuriysk Arra	20.95	20	P	Pn	00 11 15.9	-1.2
USA0B				IAmb	IAmb	00 11 23.2	
	comp=Z,62nm,1.1s						
USRK	Ussuriysk Ar.	20.95	20	P	Pn	00 11 16.7	-0.5
	comp=Z,21nm,0.8s,baz=206,slow=11,SNR=24						
USRK				LR	LR	00 20 30.6	
	comp=Z,807nm,18.0s,baz=187,slow=40						
USRK	Ussuriysk Ar.	20.95	20	P	Pn	00 11 16.1	-1.1
USRK	Ussuriysk Ar.	20.95	20	P	Pn	00 11 16.1	-1.1
CHTO	Chiang Mai	22.26	259	P	P	00 11 29.3	+0.3
CHTO				pmax	pmax		
	comp=Z,28nm,1.5s						
CHTO	Chiang Mai	22.26	259	P	P	00 11 29.3	+0.3
CM31	Chiang Mai Arr	22.39	258		P	00 11 32.3	+1.9
CMAR	Chiang Mai Arr	22.39	258	P	P	00 11 30.4	+0.1
	comp=Z,3.5nm,0.9s,baz=61,slow=8.9,SNR=14						
CMAR				PcP	PcP	00 15 25.4	-0.1
	comp=Z,1.5nm,0.7s,baz=329,slow=1.1,SNR=7.2						
CMAR				LR	LR	00 21 13.2	
	comp=Z,2µm,18.6s,baz=106,slow=40						
CMAR	Chiang Mai Arr	22.39	258	P	P	00 11 33.0	+2.6
CMAR	Chiang Mai Arr	22.39	258	P	P	00 11 33.0	+2.6
TEY	Ternei	23.34	27	*e*P	P	00 11 41.0	+0.9
TOLI2	Tolitoli	23.62	183	P	P	00 11 42.9	-0.1
GTA	Gaotai	23.70	313	*e*P	P	00 11 43.2	-0.7
GTA				pP	sP	00 11 47.6	-0.6
GTA				sP	pP	00 11 50.6	+3.7
GTA				S	S	00 15 57.9	-1.1
GTA				sS	sS	00 16 07.5	+3.2
GTA				pmax	pmax		
	comp=Z,18nm,1.1s						
GTA				pmax	pmax		
	comp=Z,300nm,7.2s						
GTA				LR	LR		
	comp=Z,1µm,10.4s						
GTA				LR	LR		
	comp=Z,2µm,12.7s						
GTA				LR	LR		
	comp=Z,2µm,13.1s						
JEW	Eniwo	24.02	37	P	P	00 11 45.7	-1.0
GTOI	Gorontalo	24.08	178	P	P	00 11 48.6	+1.2
	comp=Z,226nmcomp=Z,16nm,1.2s						
SBUM	Sibu	24.20	205	P	P	00 11 48.0	-0.5
MRSI	Marisa	24.22	180	P	P	00 11 47.3	-1.4
	comp=Z,27nm,0.9s						
GUMO	Guam	24.23	113	LR	LR	00 19 30.1	
	comp=Z,617nm,21.7s,baz=281,slow=32						
MPSI	Mapaga	24.45	185	P	P	00 11 51.1	+0.3
	comp=Z,10.0nm,1.0s						
HIA	Hailar	24.45	356	IAmb	IAmb	00 11 53.6	
	comp=Z,47nm,1.0s						
ERM	Erimo	24.46	40	*e*P	P	00 11 50.6	-0.2
ERM				pmax	pmax		
	comp=Z,89nm,1.2s						
TNTI	Ternate	24.47	167	P	P	00 11 51.8	+0.8
TNTI	Ternate	24.47	167	P	P	00 11 52.4	+1.4
	comp=Z,70nm,1.1s						
ASAJ	Asahikawa	25.50	36	P	P	00 12 00.5	+0.3
	comp=Z,52nm,1.0s,baz=249,slow=18,SNR=16						
ASAJ				LR	LR	00 21 33.8	
	comp=Z,544nm,20.4s,baz=232,slow=35						
ASAJ	Asahikawa	25.50	36	P	P	00 12 00.9	+0.8
ASAJ				pmax	pmax		
	comp=Z,46nm,0.9s						
JKA	Kamikawa-asahi	25.50	36	P	P	00 12 00.9	+0.7
JKA				IAmb	IAmb	00 12 03.6	
	comp=Z,46nm,0.9s						
KLR	Kul'dur	25.50	15	P	P	00 12 00.3	+0.2
	comp=Z,19nm,1.0s,baz=231,slow=8.0,SNR=25						
KLR				LR	LR	00 21 56.9	
	comp=Z,912nm,18.9s,baz=198,slow=36						
KLR	Kul'dur	25.50	15	*d i*P	P	00 12 00.7	+0.6
KLR				pmax	pmax		
	comp=Z,38nm,1.4s						
APSI	Ampana	25.60	181	P	P	00 12 02.8	+1.6
	comp=Z,449nmcomp=Z,23nm,0.9s						
LUWI	Luwuk	25.74	178	P	P	00 12 03.5	+1.0
LUWI	Luwuk	25.74	178	P	P	00 12 00.7	-1.8
	comp=Z,3µmcomp=Z,29nm,1.2s						
LBMI	Labuha	25.87	167	P	P	00 12 05.7	+2.0
	comp=Z,57nm,1.1s						
ULN	Ulaanbaatar	25.87	336	⇑*e*P	P	00 12 03.6	-0.1
ULN				pmax	pmax		
	comp=Z,46nm,1.1s						
ULN	Ulaanbaatar	25.87	336	P	P	00 12 03.8	+0.2
ULN				IAmb	IAmb	00 12 06.3	
	comp=Z,39nm,1.1s						
SONM	Songino Array	26.09	336	P	P	00 12 05.6	0.0
	comp=Z,72nm,1.0s,baz=160,slow=4.9,SNR=117						
SONM				LR	LR	00 23 18.2	
	comp=Z,2µm,18.4s,baz=149,slow=39						
SONM	Songino Array	26.09	336	P	P	00 12 05.4	-0.2
SONM				pmax	pmax		
	comp=Z,86nm,1.0s						
SONM	Songino Array	26.09	336	P	P	00 12 05.4	-0.2
MTKI	Muara Teweh, K	26.55	196	P	P	00 12 09.0	-0.9
STKI	Sintang	26.67	204	P	P	00 12 13.1	+2.1
SANI	Sanana	27.00	171	P	P	00 12 15.0	+1.1
	comp=Z,2µmcomp=Z,22nm,1.1s						
SIJI	Sorong	27.07	159	P	P	00 12 12.7	-1.9
	comp=Z,6.0nm,0.6s,baz=271,slow=23,SNR=2.0						
SIJI				LR	LR	00 21 26.1	
	comp=Z,463nm,21.7s,baz=16,slow=33						
YUK	Yuzh-Kuril'sk	27.26	39	*i* P	P	00 12 16.4	+0.3
YUK				*i* S	S	00 16 56.3	+1.1
YUK				MLR	MLR		
	comp=N,713nm,19.0s						
YUK				MLR	MLR		
	comp=Z,546nm,19.0s						
YUK				MLR	MLR		
	comp=E,858nm,15.0s						
SHL	Shillong	27.29	278	P	P	00 12 17.0	+0.3
SHL				pmax	pmax		
	comp=Z,41nm,1.0s						
SHL	Shillong	27.29	278	P	P	00 12 17.0	+0.3
SHL				IAmb	IAmb	00 12 23.1	
	comp=Z,41nm,1.0s						
YSS	Yuzh-Sakhalins	27.56	32	α *i*P	P	00 12 22.5	+3.8
YSS				*e*		00 13 24.1	
YSS				*e*S	S	00 17 08.6	+8.8
YSS				pmax	pmax		
	comp=Z,120nm,1.2s						
YSS				pmax	pmax		
	comp=Z,500nm,2.7s						
YSS				pmax	pmax		
	comp=N,300nm,3.3s						
YSS				pmax	pmax		
	comp=E,300nm,2.9s						
YSS				MLR	MLR		
	comp=Z,800nm,12.0s						
YSS	Yuzh-Sakhalins	27.56	32	P	P	00 12 20.7	+2.1
TTSI	Tana Toraja	27.80	185	P	P	00 12 22.8	+1.7

CIT	**Chita**	**27.91**	**349**	*e*P	**P**	**00 12 22.2**	**+0.4**
JRMM	**Jerantut**	**28.09**	**225**	P	P	00 12 31.0	+7.3
KULM	**Kulim**	**28.29**	**230**	P	P	00 12 31.0	+5.5
MSAI	**Masohi**	**28.80**	**166**	P	**P**	**00 12 30.0**	**0.0**
	comp=Z,7.6nm,0.4s						
ZEA	**Zeya**	**29.12**	**6**	*e*P	**P**	**00 12 34.1**	**+1.5**
ZEA				*e*S	**S**	**00 17 21.1**	**-3.2**
ZEA				pmax	pmax		
	comp=Z,40nm,1.3s						
ZEA				pmax	pmax		
	comp=Z,100nm,5.5s						
ZEA				pmax	pmax		
	comp=Z,100nm,5.1s						
ZEA				smax	smax		
	comp=Z,1µm,10.9s						
ZEA				smax	smax		
	comp=N,400nm,15.2s						
ZEA				MLR	MLR		
	comp=N,1µm,14.0s						
ZEA				MLR	MLR		
	comp=Z,1µm,11.0s						
ZAK	**Zakamensk**	**29.35**	**335**	*e*P	**P**	**00 12 33.6**	**-1.2**
ZAK				pmax	pmax		
	comp=Z,18nm,1.2s						
KAPI	**Kappang**	**29.76**	**185**	LR	LR	00 26 33.6	
	comp=Z,165nm,19.1s,baz=12,slow=40						
SRPI	**Serui, Papua**	**29.90**	**151**	P	**P**	**00 12 40.8**	**+1.0**
TLY	**Talaya**	**30.27**	**337**	*c i*P	**P**	**00 12 42.2**	**-0.6**
TLY				pmax	pmax		
	comp=Z,81nm,0.9s						
TLY				MLR	MLR		
	comp=Z,5µm,11.0s						
TLY	**Talaya**	**30.27**	**337**	P	**P**	**00 12 42.4**	**-0.4**
TLY				IAmb	IAmb	00 12 45.3	
	comp=Z,30nm,0.9s						
TYV	**Tymovskoe**	**30.45**	**26**	*e*P	P	00 12 50.8	+6.5
TYV				pmax	pmax		
	comp=Z,200nm,2.8s						
TYV				pmax	pmax		
	comp=Z,28nm,1.1s						
SMPI	**Sarmi**	**31.18**	**146**	P	**P**	**00 12 52.3**	**+1.2**
	comp=Z,27nm,1.7s						
MOY	**Mondy**	**31.25**	**334**	*e*P	**P**	**00 12 50.8**	**-0.8**
MOY				pmax	pmax		
	comp=Z,79nm,2.5s						
MNSI	**Mandailing Nat**	**32.30**	**226**	P	**P**	**00 13 00.7**	**-0.3**
	comp=Z,15nm,0.9s						
EDFI	**Ende, Flores**	**33.39**	**181**	P	**P**	**00 13 09.6**	**-1.0**
	comp=Z,9.4nm,0.8s						
BOD	**Bodaibo**	**33.45**	**352**	*e*P	**P**	**00 13 10.3**	**-0.3**
BOD				pmax	pmax		
	comp=Z,19nm,1.9s						
LHSI	**Lahat**	**33.71**	**215**	P	**P**	**00 13 13.2**	**-0.1**
	comp=Z,26nm,0.8s						
WMQ	**Urumqi**	**33.79**	**313**	*e*P	**P**	**00 13 14.4**	**+0.6**
WMQ				sP	sP	00 13 28.2	+10
WMQ				pmax	pmax		
	comp=Z,24nm,1.9s						
WMQ				pmax	pmax		
	comp=Z,230nm,4.9s						
WMQ				LR	LR		
	comp=Z,1µm,12.9s						
WMQ				LR	LR		
	comp=Z,2µm,11.5s						
WMQ				LR	LR		
	comp=Z,1µm,12.7s						
MDSI	**Maura Dua**	**33.94**	**213**	P	**P**	**00 13 14.5**	**-0.8**
	comp=Z,1µmcomp=Z,7.1nm,1.1s						
PWJI	**Pagerwojo**	**34.16**	**198**	P	**P**	**00 13 16.3**	**-0.8**
	comp=Z,29nm,0.9s						
YAK	**Yakutsk**	**37.54**	**6**	*e*P	**P**	**00 13 43.9**	**-1.7**
YAK				*e**PP	**sP**	**00 13 51.2**	**+1.0**
YAK				*e*		00 15 09.5	
YAK				*e*		00 16 00.8	
YAK				*e*S	**S**	**00 19 34.0**	**-0.4**
YAK				pmax	pmax		
	comp=Z,38nm,1.4s						
YAK				pmax	pmax		
	comp=N,20nm,1.1s						
YAK				pmax	pmax		
	comp=E,14nm,1.8s						
YAK				pmax	pmax		
	comp=Z,10.0nm,0.4s						
YAK				pmax	pmax		
	comp=N,113nm,3.8s						
YAK				pmax	pmax		
	comp=E,45nm,2.9s						
YAK				smax	smax		
	comp=E,70nm,3.8s						
YAK				smax	smax		
	comp=N,105nm,3.7s						
YAK				MLR	MLR		
	comp=Z,811nm,17.0s						
YAK				MLR	MLR		
	comp=N,423nm,17.0s						
YAK				MLR	MLR		
	comp=E,469nm,15.0s						
YAK	**Yakutsk**	**37.54**	**6**	P	**P**	**00 13 45.6**	**0.0**
MKAR	**Makanchi Array**	**38.43**	**315**	P	**P**	**00 13 53.0**	**-0.5**
	comp=E,6.5nm,0.6s,baz=103,slow=11,SNR=28						
MKAR				PcP	**PcP**	**00 16 06.5**	**-0.2**
	comp=E,1.0nm,0.8s,baz=105,slow=3.0,SNR=2.3						
MKAR				LR	LR	00 31 09.2	
	comp=E,1µm,18.0s,baz=88,slow=38						
MKAR	**Makanchi Array**	**38.43**	**315**	P	**P**	**00 13 52.6**	**-0.9**
MKAR						00 16 06.5	
MKAR	**Makanchi Array**	**38.43**	**315**	P	**P**	**00 13 52.6**	**-0.9**
MTN	**Manton Dam**	**38.48**	**166**	P	**P**	**00 13 52.8**	**-1.3**
MTN				IAmb	IAmb	00 13 56.1	
	comp=Z,36nm,1.2s						
MAKZ	**Makanchi**	**38.64**	**315**	P	**P**	**00 13 54.9**	**-0.4**
MAKZ				pmax	pmax		
	comp=Z,20nm,1.2s						
MAKZ	**Makanchi**	**38.64**	**315**	P	**P**	**00 13 54.9**	**-0.4**
PETK	**Petropavlovsk-**	**38.88**	**34**	LR	LR	00 31 54.0	
	comp=Z,237nm,18.9s,baz=223,slow=39						
MA2	**Magadan**	**40.08**	**22**	*e*P	**P**	**00 14 08.9**	**+1.9**
MA2				pmax	pmax		
	comp=Z,19nm,1.2s						
ZAA0	**Zalesovo Array**	**40.14**	**326**	P	**P**	**00 14 06.5**	**-1.1**
ZAA0				IAmb	IAmb	00 14 11.0	
	comp=Z,37nm,1.2s						
ZALV	**Zalesovo Beam**	**40.14**	**326**	P	**P**	**00 14 06.3**	**-1.3**
	comp=Z,16nm,0.9s,baz=111,slow=8.1,SNR=53						
ZALV				LR	LR	00 31 58.3	
	comp=Z,1µm,21.1s,baz=122,slow=38						
KSH	**Kashi**	**41.22**	**302**	P	**P**	**00 14 19.2**	**+2.3**
KSH				pP	sP	00 14 24.0	+2.6
KSH				sP	pP	00 14 26.1	+6.0
KSH				pmax	pmax		
	comp=Z,6.0nm,1.6s						
KSH				LR	LR		
	comp=Z,940nm,14.8s						
KSH				LR	LR		
	comp=Z,1µm,14.9s						
KSH				LR	LR		
	comp=Z,1µm,18.6s						
KURK	**Kurchatov**	**42.11**	**319**	*e*P	**P**	**00 14 22.6**	**-1.3**
KURK				pmax	pmax		
	comp=Z,31nm,1.4s						
KURK	**Kurchatov**	**42.11**	**319**	P	**P**	**00 14 23.1**	**-0.7**
KURK				IAmb	IAmb	00 14 27.8	
	comp=Z,30nm,1.3s						
AAK	**Ala-Archa**	**42.75**	**307**	P	**P**	**00 14 29.7**	**+0.3**
	comp=Z,3.7nm,0.9s,baz=133,slow=4.8,SNR=9.5						
AAK	**Ala-Archa**	**42.75**	**307**	*ce*P	**P**	**00 14 29.6**	**+0.2**
AAK				pmax	pmax		
	comp=Z,11nm,0.8s						
AAK	**Ala-Archa**	**42.75**	**307**	P	**P**	**00 14 29.8**	**+0.3**
FITZ	**Fitzroy Crossi**	**42.82**	**175**	P	**P**	**00 14 29.7**	**-0.2**
	comp=Z,1.4nm,0.7s,baz=18,slow=19,SNR=2.2						
COEN	**Coen**	**43.72**	**150**	P	**P**	**00 14 37.0**	**-0.3**
COEN				IAmb	IAmb	00 14 51.3	
	comp=Z,15nm,0.8s						
DRK	**Karamyk**	**44.43**	**302**	P	**P**	**00 14 45.6**	**+2.4**
BTK	**Batken**	**45.22**	**303**	P	**P**	**00 14 50.3**	**+1.1**
BTK				pmax	pmax		
	comp=Z,8.0nm,1.2s						
BTK	**Batken**	**45.22**	**303**	P	**P**	**00 14 50.3**	**+1.1**
GAR	**Garm**	**45.56**	**301**	P	**P**	**00 14 52.1**	**+0.2**
GAR				IAmb	IAmb	00 14 57.0	
	comp=Z,26nm,1.3s						
KK31	**Karatay Array**	**45.71**	**307**	P	**P**	**00 14 53.7**	**+0.7**
KK31				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KK31	**Karatay Array**	**45.71**	**307**	P	**P**	**00 14 53.7**	**+0.7**
KKAR	**Karatay Array**	**45.71**	**307**	P	**P**	**00 14 53.3**	**+0.3**
KKAR	**Karatay Array**	**45.71**	**307**	P	**P**	**00 14 53.8**	**+0.8**
KKAR	**Karatay Array**	**45.71**	**307**	P	**P**	**00 14 53.3**	**+0.3**
WRA	**Warramunga Arr**	**46.09**	**164**	P	**P**	**00 14 54.0**	**-2.1**
	comp=Z,20nm,0.8s,baz=346,slow=8.4,SNR=45						
WRA				PcP	**PcP**	**00 16 31.9**	**-0.4**
	comp=Z,2.1nm,1.0s,baz=347,slow=3.1,SNR=1.8						
WRA				LR	LR	00 35 37.4	
	comp=Z,86nm,20.0s,baz=350,slow=38						
WB2	**Warramunga Arr**	**46.09**	**164**	P	**P**	**00 14 55.2**	**-0.9**
WR0	**Warramunga Arr**	**46.16**	**164**	P	**P**	**00 14 55.2**	**-1.4**
CHGR	**Chuyangaron**	**46.45**	**301**	IAmb	IAmb	00 15 02.5	
	comp=Z,8.2nm,0.7s						
KBL	**Kabul**	**46.61**	**295**	P	**P**	**00 15 00.8**	**+0.4**
KBL				pmax	pmax		
	comp=Z,15nm,1.2s						
KBL	**Kabul**	**46.61**	**295**	P	**P**	**00 15 00.8**	**+0.4**
KBL				IAmb	IAmb	00 15 09.0	
	comp=Z,15nm,1.2s						
TIXI	**Tiksi**	**47.00**	**3**	*de*P	**P**	**00 15 01.7**	**-0.9**
TIXI	**Tiksi**	**47.00**	**3**	P	**P**	**00 15 01.1**	**-1.6**
BVAR	**Borovoye Array**	**47.68**	**320**	P	**P**	**00 15 08.0**	**-0.3**
	comp=Z,3.1nm,0.6s,baz=157,slow=16,SNR=13						
BRVK	**Borovoye**	**47.75**	**320**	*ce*P	**P**	**00 15 09.1**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,23nm,1.1s						
BRVK	**Borovoye**	**47.75**	**320**	P	**P**	**00 15 09.2**	**+0.5**
BRVK				IAmb	IAmb	00 15 13.1	
	comp=Z,19nm,1.1s						
NRIK	**Noril'sk**	**48.98**	**345**	P	**P**	**00 15 16.2**	**-1.8**
	comp=Z,39nm,1.0s,baz=129,slow=8.7,SNR=32						
NRIK				LR	LR	00 37 07.9	
	comp=Z,625nm,19.7s,baz=142,slow=38						
NRIK	**Noril'sk**	**48.98**	**345**	*d i*P	**P**	**00 15 16.8**	**-1.2**
NRIK				pmax	pmax		
	comp=Z,68nm,1.1s						
ASAR	**Alice Springs**	**49.57**	**166**	P	**P**	**00 15 23.2**	**+0.2**
	comp=Z,5.1nm,0.8s,baz=341,slow=7.2,SNR=34						
ASAR				PcP	**PcP**	**00 16 45.2**	**+0.4**
	comp=Z,1.5nm,0.8s,baz=332,slow=3.3,SNR=1.9						
ASAR				LR	LR	00 36 09.1	
	comp=Z,202nm,20.1s,baz=1.0,slow=36						
CTA	**Charters Tower**	**50.48**	**150**	P	**P**	**00 15 31.2**	**+1.1**
	comp=Z,7.5nm,1.1s,baz=309,slow=10,SNR=4.9						
CTAO	**Charters Tower**	**50.48**	**150**	P	**P**	**00 15 31.8**	**+1.8**
CTAO				pmax	pmax		
	comp=Z,14nm,1.2s						
CTAO	**Charters Tower**	**50.48**	**150**	P	**P**	**00 15 31.8**	**+1.8**
CTAO				IAmb	IAmb	00 15 32.8	
	comp=Z,14nm,1.1s						
ABKAR	**Akbulak array**	**53.56**	**314**	IAmb	IAmb	00 15 57.2	
	comp=Z,13nm,1.4s						
SVE	**Sverdlovsk**	**53.99**	**323**	*e*P	**P**	**00 15 58.4**	**+2.7**
SVE				pmax	pmax		
	comp=Z,25nm,1.3s						
ARU	**Arti**	**55.07**	**323**	*c i*P	**P**	**00 16 05.8**	**+2.3**
ARU						00 18 02.8	
ARU				S	**S**	**00 23 52.2**	**+6.4**
ARU				SS	**SS**	**00 27 34.1**	**+4.8**
ARU				pmax	pmax		
	comp=Z,19nm,0.9s						
ARU				MLR	MLR		
	comp=Z,524nm,22.0s						
ARU	**Arti**	**55.07**	**323**	P	**P**	**00 16 04.6**	**+1.1**
ARU				IAmb	IAmb	00 16 06.6	
	comp=Z,14nm,0.8s						
GEYT	**Alibeck**	**55.16**	**300**	P	**P**	**00 16 04.9**	**+0.4**
	comp=Z,5.2nm,0.7s,baz=342,slow=0.5,SNR=5.7						
GEYT				LR	LR	00 43 55.3	
	comp=Z,614nm,18.6s,baz=65,slow=41						
NWAO	**Narrogin (SRO)**	**57.63**	**185**	P	**P**	**00 16 21.5**	**-0.5**
	comp=Z,9.0nm,1.0s,baz=100,slow=11,SNR=2.9						
STKA	**Stephens Creek**	**59.41**	**161**	P	**P**	**00 16 33.1**	**-1.3**
	comp=Z,6.4nm,0.7s,baz=332,slow=6.0,SNR=8.9						
STKA				LR	LR	00 43 16.2	
	comp=Z,215nm,20.1s,baz=9.2,slow=37						
STKA	**Stephens Creek**	**59.41**	**161**	P	**P**	**00 16 34.9**	**+0.5**
STKA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
STKA	**Stephens Creek**	**59.41**	**161**	P	**P**	**00 16 34.9**	**+0.5**
PRGR	**Permogore**	**62.04**	**328**	*e*P	**P**	**00 16 51.2**	**-0.8**
PRGR				pmax	pmax		
	comp=Z,89nm,1.5s						
DZM	**Mont Dzumac**	**63.50**	**134**	*e*P	**P**	**00 17 02.0**	**-0.4**
	comp=Z,56nm,1.4s						
DZM				*e*S	**S**	**00 25 33.3**	**-2.6**
	comp=Z,299nm,26.0s						
DZM	**Mont Dzumac**	**63.50**	**134**	*e*LR	LR	00 36 06.8	
	comp=Z,2µm,25.5s						
DZM	**Mont Dzumac**	**63.50**	**134**	P	**P**	**00 17 01.0**	**-1.4**
	comp=Z,10.0nm,1.0s,baz=27,slow=4.9,SNR=5.1						
DZM				LR	LR	00 40 02.7	
	comp=Z,448nm,21.8s,baz=284,slow=32						
OUENC	**Ouen Island, N**	**64.00**	**134**	P	**P**	**00 17 07.4**	**+1.8**
VRH	**Novokhopyorsk**	**65.12**	**317**	*e*P	**P**	**00 17 10.2**	**-2.4**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZEI	**Tsey**	**65.16**	**307**	*e*P	**P**	**00 17 11.4**	**-1.9**
ZEI				pmax	pmax		
	comp=Z,3.0nm,1.0s						
J20K	**Nowinta River**	**65.26**	**29**	IAmb	IAmb	00 17 28.1	
	comp=Z,15nm,1.2s						
K20K	**Telida**	**65.38**	**30**	P	**P**	**00 17 17.2**	**+3.1**
K20K				IAmb	IAmb	00 17 25.1	
	comp=Z,13nm,1.2s						
ONI	**Oni**	**65.53**	**307**	P	**P**	**00 17 17.0**	**+1.5**
ONI				pmax	pmax		
	comp=Z,21nm,1.3s						
ONI	**Oni**	**65.53**	**307**	P	**P**	**00 17 17.0**	**+1.5**
ONI				IAmb	IAmb	00 17 23.0	
	comp=Z,20nm,1.3s						
H21K	**Melozitna Rive**	**65.66**	**27**	P	**P**	**00 17 17.8**	**+1.9**
H21K				IAmb	IAmb	00 17 23.9	
	comp=Z,14nm,1.1s						
KBZ	**Khabaz**	**65.69**	**309**	P	**P**	**00 17 16.1**	**-0.4**
	comp=Z,5.0nm,1.0s,baz=136,slow=5.5,SNR=5.5						
KBZ				LR	LR	00 49 28.8	
	comp=Z,566nm,19.6s,baz=79,slow=39						
KBZ	**Khabaz**	**65.69**	**309**	⇑*i*P	**P**	**00 17 15.7**	**-0.7**
KBZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KIV	**Kislovodsk**	**65.80**	**309**	*e*P	**P**	**00 17 16.3**	**-1.0**
KIV				pmax	pmax		
	comp=Z,12nm,1.0s						
KIV				MLR	MLR		
	comp=Z,353nm,17.0s						
KIV	**Kislovodsk**	**65.80**	**309**	P	**P**	**00 17 16.3**	**-1.0**
TOO	**Toolangi**	**65.88**	**160**	P	**P**	**00 17 19.7**	**+2.2**
TOO				pmax	pmax		
	comp=Z,27nm,1.3s						
TOO	**Toolangi**	**65.88**	**160**	P	**P**	**00 17 19.7**	**+2.2**
I21K	**Tanana**	**66.06**	**27**	IAmb	IAmb	00 17 25.4	
	comp=Z,12nm,1.0s						
TOLK	**Toolik Lake Re**	**66.54**	**24**	IAmb	IAmb	00 17 25.4	
	comp=Z,20nm,1.4s						
LPSR	**Galich'ya Gora**	**66.59**	**319**	*e*P	**P**	**00 17 19.8**	**-2.2**
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BPAW	**Bear Paw Mtn.**	**66.64**	**29**	P	**P**	**00 17 22.9**	**+0.6**
BPAW				IAmb	IAmb	00 17 36.5	
	comp=Z,6.9nm,1.0s						
VORD	**Divnogorie**	**66.67**	**317**	*e*P	**P**	**00 17 20.0**	**-2.6**
VORD				pmax	pmax		
	comp=Z,7.0nm,0.9s						
VSR	**Storozhevoye**	**66.70**	**317**	*e*P	**P**	**00 17 20.8**	**-2.0**
VSR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MOS	**Moscow**	**66.77**	**322**	*e*P	**P**	**00 17 23.3**	**+0.2**
MOS				pmax	pmax		
	comp=Z,58nm,1.9s						
H23K	**Yukon River**	**66.98**	**27**	P	**P**	**00 17 25.0**	**+0.7**
H23K				IAmb	IAmb	00 17 32.7	
	comp=Z,14nm,0.9s						
I23K	**Minto, Yukon-K**	**67.16**	**27**	IAmb	IAmb	00 17 30.6	
	comp=Z,19nm,1.4s						
SUA	**Susitna One**	**67.19**	**31**	P	**P**	**00 17 26.6**	**+0.7**
SUA				IAmb	IAmb	00 17 44.7	
	comp=Z,15nm,1.0s						
NEA2	**Nenana**	**67.38**	**28**	IAmb	IAmb	00 17 33.8	
	comp=Z,16nm,1.0s						
OBN	**Obninsk**	**67.48**	**322**	⇑*i*P	**P**	**00 17 27.8**	**+0.2**
OBN				*e*		00 19 55.4	
OBN				*e*S	**S**	**00 26 21.7**	**-2.0**
OBN				*e*SS	**SS**	**00 30 43.1**	**-0.3**
OBN				pmax	pmax		
	comp=Z,11nm,1.6s						
OBN				MLR	MLR		
	comp=Z,412nm,17.0s						
H24K	**Noodor Dome**	**67.65**	**26**	IAmb	IAmb	00 17 36.6	
	comp=Z,8.7nm,1.1s						
RND	**Reindeer**	**67.69**	**29**	IAmb	IAmb	00 17 42.7	
	comp=Z,12nm,1.0s						
WRH	**Wood River Hil**	**67.82**	**28**	IAmb	IAmb	00 17 44.4	
	comp=Z,5.8nm,1.0s						
COLA	**College**	**67.84**	**27**	*d i*P	**P**	**00 17 31.9**	**+2.2**
COLA				pmax	pmax		
	comp=Z,8.0nm,1.4s						
CCB	**Clear Creek Bu**	**67.91**	**28**	IAmb	IAmb	00 17 40.6	
	comp=Z,7.5nm,1.3s						
POKR	**Poker Plat Res**	**67.97**	**27**	IAmb	IAmb	00 17 35.5	
	comp=Z,8.5nm,0.8s						
SOC	**Sochi**	**67.98**	**309**	*e*P	**P**	**00 17 27.3**	**-3.7**
SOC				*e*		00 20 00.0	
SOC				*e*S	**S**	**00 26 25.0**	**-5.1**
SOC				*e*SS	**SS**	**00 30 51.5**	**-0.2**
SOC				MLR	MLR		
	comp=Z,314nm,18.0s						
ILAR	**Eielson Array**	**68.27**	**27**	P	**P**	**00 17 33.1**	**+0.7**
	comp=Z,1.7nm,0.8s,baz=283,slow=7.6,SNR=16						
ILAR				LR	LR	00 48 06.8	
	comp=Z,83nm,20.6s,baz=322,slow=36						
HDA	**Harding Lake**	**68.32**	**28**	IAmb	IAmb	00 17 36.2	
	comp=Z,6.2nm,1.0s						
MSVF	**Nonsavu**	**69.03**	**122**	LR	LR	00 44 25.2	
	comp=Z,114nm,19.7s,baz=355,slow=33						
MSVF	**Nonsavu**	**69.03**	**122**	P	**P**	**00 17 40.0**	**+2.0**
MSVF				pmax	pmax		
	comp=Z,50nm,1.5s						
MSVF	**Nonsavu**	**69.03**	**122**	P	**P**	**00 17 40.0**	**+2.0**
ARCES	**ARCESS Array B**	**69.23**	**338**	P	**P**	**00 17 39.3**	**+0.9**
	comp=Z,6.6nm,1.0s,baz=55,slow=6.7,SNR=5.0						
ARCES				LR	LR	00 53 06.4	
	comp=Z,323nm,19.8s,baz=40,slow=40						
ARCES	**ARCESS Array B**	**69.23**	**338**	IAmb	IAmb	00 17 56.3	
	comp=Z,19nm,1.4s						
ANN	**Anapa**	**69.27**	**311**	*e*P	**P**	**00 17 35.1**	**-3.9**
ANN				*e**PP	**pP**	**00 17 40.0**	**-2.4**
ANN				*e*S	**S**	**00 26 40.0**	**-5.3**
ANN				pmax	pmax		
	comp=Z,45nm,1.0s						
SCRK	**Sand Creek**	**69.68**	**28**	IAmb	IAmb	00 17 52.9	
	comp=Z,8.9nm,1.2s						
M26K	**Nabesna, AK**	**70.54**	**29**	IAmb	IAmb	00 17 51.9	
	comp=Z,12nm,1.1s						
L27K	**Beaver Creek,**	**70.86**	**29**	IAmb	IAmb	00 18 08.9	
	comp=Z,14nm,1.4s						
FINES	**FINESS Array B**	**71.28**	**330**	P	**P**	**00 17 51.0**	**-0.1**
	comp=Z,6.1nm,0.8s,baz=82,slow=2.9,SNR=12						
FINES				LR	LR	00 52 29.9	
	comp=Z,842nm,18.1s,baz=72,slow=39						
FINES	**FINESS Array B**	**71.28**	**330**	*i* P	**P**	**00 17 52.7**	**+1.7**
FINES				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GAZ	**Gaziantep**	**71.55**	**303**	IAmb	IAmb	00 17 56.7	
	comp=Z,24nm,1.4s						
DAWY	**Dawson**	**71.59**	**27**	IAmb	IAmb	00 17 57.5	
	comp=Z,11nm,1.1s						
INK	**Inuvik**	**72.32**	**22**	LR	LR	00 56 03.9	
	comp=Z,90nm,19.9s,baz=320,slow=41						
INK	**Inuvik**	**72.32**	**22**	IAmb	IAmb	00 18 01.4	
	comp=Z,17nm,1.1s						
MNK	**Minsk**	**72.50**	**322**	*i* P	**P**	**00 17 55.9**	**-2.6**
MNK				*i*		00 18 15.8	
MNK				*i*		00 20 39.5	
MNK				*i* PPP	PPP	00 22 20.6	
MNK				*i* S	**S**	**00 27 20.0**	**-2.5**
MNK				*i*		00 28 03.4	
MNK				*i* SS	**SS**	**00 31 57.8**	**-2.8**
MNK				*i* SSS	SSS	00 35 18.3	
MNK				pmax	pmax		
	comp=E,2.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,13nm,1.2s						
MNK				pmax	pmax		
	comp=Z,11nm,0.9s						
MNK				MLR	MLR		
	comp=N,236nm,15.0s						
MNK				MLR	MLR		
	comp=Z,413nm,15.0s						
MNK				MLR	MLR		
	comp=E,35nm,11.0s						
MNK	**Minsk**	**72.50**	**322**	*i* P	**P**	**00 17 56.0**	**-2.5**
	comp=E,2.0nm,0.9s						
MNK				*i* P	**P**	**00 17 56.0**	**-2.5**
	comp=N,13nm,1.2s						
MNK				*i* P	**P**	**00 17 56.0**	**-2.5**
	comp=Z,11nm,0.9s,baz=72						
MNK				*i* PcP	**PcP**	**00 18 15.8**	**-0.4**
MNK				*i* PP	**PP**	**00 20 39.5**	**+0.3**
MNK				*i* PPP	PPP	00 22 16.8	
MNK				*i* S	**S**	**00 27 20.1**	**-2.5**
MNK				*i* SS	**SS**	**00 31 57.9**	**-2.7**
MNK				*i* SSS	SSS	00 35 18.3	
MNK				*i* LQ	LQ	00 44 48.3	
MNK				*i* LR	LR	00 49 60.0	
MNK				*i* LRM	MLR	00 52 33.3	
	comp=N,236nm,15.3s						
MNK				*i* LRM	MLR	00 52 42.9	
	comp=Z,413nm,14.7s						
MNK				*i* LRM	MLR	00 52 45.4	
	comp=E,35nm,10.9s						
AKASG	**Malin Array Be**	**72.91**	**318**	P	**P**	**00 17 59.6**	**-1.4**
	comp=E,4.1nm,0.9s,baz=58,slow=6.0,SNR=16						
AKASG	**Malin Array Be**	**72.91**	**318**	*i* P	**P**	**00 18 02.0**	**+1.0**
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.7s						
AKASG	**Malin Array Be**	**72.91**	**318**	IAmb	IAmb	00 18 04.0	
	comp=Z,9.9nm,1.4s						
AKBB	**Malin Array Si**	**72.91**	**318**	*ce*P	**P**	**00 18 02.2**	**+1.2**
AKBB				pmax	pmax		
	comp=Z,24nm,1.7s						
AKBB	**Malin Array Si**	**72.91**	**318**	P	**P**	**00 18 02.3**	**+1.2**
AKBB				IAmb	IAmb	00 18 05.3	
	comp=Z,7.3nm,0.9s						
NACGM	**Naroch**	**72.97**	**323**	*i* P	**P**	**00 18 00.8**	**-0.5**
A36M	**Sachs Harbour**	**73.27**	**17**	IAmb	IAmb	00 18 06.6	
	comp=Z,12nm,1.0s						
ASF	**Jabal al Asfar**	**73.36**	**298**	P	**P**	**00 18 03.6**	**-0.5**
	comp=Z,7.4nm,1.0s,baz=9.7,slow=4.3,SNR=5.0						
BR131	**Keskin Array S**	**73.42**	**306**	IAmb	IAmb	00 18 08.0	
	comp=Z,17nm,1.1s						
BRTR	**Keskin Array B**	**73.42**	**306**	P	**P**	**00 18 03.7**	**-0.8**
	comp=Z,5.7nm,1.0s,baz=134,slow=3.6,SNR=8.8						
BRTR				LR	LR	00 55 24.5	
	comp=Z,204nm,18.9s,baz=86,slow=40						
HYT	**Haines Junctio**	**73.53**	**30**	IAmb	IAmb	00 18 12.4	
	comp=Z,11nm,1.2s						
PABE	**Paberze**	**74.29**	**324**	P	**P**	**00 18 10.6**	**+1.6**
WHY	**Whitehorse**	**74.79**	**30**	IAmb	IAmb	00 18 16.0	
	comp=Z,14nm,1.4s						
SUW	**Suwalki**	**75.26**	**323**	*e*P	**P**	**00 18 16.3**	**+1.7**
SUW	**Suwalki**	**75.26**	**323**	P	**P**	**00 18 15.5**	**+0.9**
SUW				pmax	pmax		
	comp=Z,43nm,1.1s						
SUW	**Suwalki**	**75.26**	**323**	P	**P**	**00 18 15.5**	**+0.9**
BUR08	**Bucovina Ar. S**	**76.44**	**316**	P	**P**	**00 18 21.5**	**-0.2**
BURAR	**Bucovina Array**	**76.44**	**316**	P	**P**	**00 18 22.0**	**+0.3**
ELL	**Elmali**	**77.20**	**305**	P	**P**	**00 18 25.6**	**-0.6**
ELL				pmax	pmax		
	comp=Z,59nm,1.0s						
ELL	**Elmali**	**77.20**	**305**	P	**P**	**00 18 25.6**	**-0.6**
KWP	**Kalwaria Pacla**	**77.21**	**319**	*e*P	**P**	**00 18 28.2**	**+2.3**
UZH	**Uzhgorod**	**77.86**	**318**	*e*P	**P**	**00 18 31.3**	**+1.8**
TRPA	**Tarpa**	**77.91**	**317**	*e*P	**P**	**00 18 31.0**	**+1.2**
NB2	**NORSAR Subarra**	**78.02**	**332**	P	**P**	**00 18 28.4**	**-1.8**
	comp=Z,9.2nm,1.2s,baz=58,slow=5.6						
NOA	**NORSAR Array B**	**78.02**	**332**	P	**P**	**00 18 28.8**	**-1.5**
	comp=Z,2.0nm,0.7s,baz=59,slow=5.6,SNR=7.3						
NOA				LR	LR	00 56 33.2	
	comp=Z,639nm,18.6s,baz=70,slow=38						
OJC	**Ojcow**	**78.68**	**320**	*e*P	**P**	**00 18 36.5**	**+2.5**
OJC	**Ojcow**	**78.68**	**320**	P	**P**	**00 18 34.4**	**+0.4**
OJC				pmax	pmax		
	comp=Z,33nm,1.4s						
OJC	**Ojcow**	**78.68**	**320**	P	**P**	**00 18 34.4**	**+0.4**
VTS	**Vitosha**	**79.69**	**312**	IAmb	IAmb	00 18 46.2	
	comp=Z,24nm,1.4s						
VYHS	**Vyhne**	**80.00**	**319**	*e*P	**P**	**00 18 43.0**	**+1.7**
VYHS	**Vyhne**	**80.00**	**319**	*e*P	**P**	**00 18 43.0**	**+1.7**
MORC	**Moravsky Berou**	**80.19**	**320**	*e*P	**P**	**00 18 44.9**	**+2.6**
KSP	**Ksiaz**	**80.41**	**322**	*e*P	**P**	**00 18 45.6**	**+2.2**
JAVC	**Velka Javorina**	**80.53**	**320**	*e*P	**P**	**00 18 48.2**	**+4.0**

VRAC	Vranov	80.95	320	*e*P	P	00 18 49.2	+2.8
DIVS	Divibare	81.21	315	IAmb	IAmb	00 18 51.5	
	comp=Z,10nm,1.3s						
MPLH	Magyarpolny	81.37	318	*e*P	P	00 18 48.2	-0.5
KOVH	Kovagotottos	81.52	317	*e*P	P	00 18 50.9	+1.4
BRG	Berggiesshubel	81.71	323	*e*P	P	00 18 54.6	+4.2
BRG				Amp		00 18 55.6	
	comp=Z,3.7nm,1.1s						
CLL	Collm	82.01	323	*e*P	P	00 18 53.0	+1.1
CLL	Collm	82.01	323	*e*P	P	00 18 53.0	+1.1
CLL				*e*		00 19 04.0	
CLL				*e*PP	PP	00 22 00.0	+0.9
CLL				*e*SS	SS	00 34 36.0	+12
CLL				*e*		00 38 43.0	
CLL				Lm	MLR	01 00 00.0	
	comp=N,400nm,19.2s						
CLL				Lm	MLR	01 00 00.0	
	comp=E,400nm,18.1s						
CONA	Conrad Observa	82.03	319	*i* P	P	00 18 55.2	+3.0
	comp=E,8.3nm,1.8s						
YKA	Yellowknife Ar	82.06	23	P	P	00 18 51.9	-0.1
	comp=E,2.1nm,0.7s,baz=324,slow=3.9,SNR=7.9						
YKA	Yellowknife Ar	82.06	23	*i* P	P	00 18 53.2	+1.3
YKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GERES	GERESS Array B	82.84	321	P	P	00 18 55.2	-1.3
	comp=Z,1.0nm,0.9s,baz=352,slow=4.0,SNR=7.5						
GERES				LR	LR	00 58 15.8	
	comp=Z,270nm,18.2s,baz=62,slow=38						
MOA	Molln	83.00	320	*i* P	P	00 18 60.0	+2.7
	comp=Z,8.4nm,1.4s						
SOKA	Soboth	83.12	318	*e*P	P	00 19 00.2	+2.2
	comp=Z,4.0nm,1.0s						
OBKA	Obir	83.49	318	*e*P	P	00 18 59.6	-0.2
	comp=Z,4.0nm,1.1s						
MYKA	Terra Mystica	83.98	319	*e*P	P	00 19 03.9	+1.5
	comp=Z,1.8nm,0.8s						
ABTA	Abfaltersbach	84.59	319	*i* P	P	00 19 06.3	+0.8
	comp=Z,5.2nm,1.1s						
WATA	Walderalm	84.84	320	*e*P	P	00 19 07.2	+0.4
	comp=Z,11nm,2.0s						
WTTA	Wattenberg	84.84	320	*e*P	P	00 19 07.3	+0.5
	comp=Z,6.3nm,1.0s						
KMBO	Kilima Mbogo	85.75	267	P	P	00 19 12.5	+0.5
	comp=Z,1.1nm,0.5s,baz=58,slow=1.4,SNR=5.9						
KMBO				LR	LR	00 58 08.0	
	comp=Z,114nm,20.1s,baz=91,slow=36						
KMBO	Kilima Mbogo	85.75	267	*i* P	P	00 19 11.8	-0.2
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KMBO	Kilima Mbogo	85.75	267	P	P	00 19 10.2	-1.8
KMBO				IAmb	IAmb	00 19 18.2	
	comp=Z,8.0nm,1.3s						
NRCA	Norcia	86.21	316	IAmb	IAmb	00 19 29.4	
	comp=Z,10.0nm,1.1s						
EKA	Eskdalemuir Ar	87.51	332	LR	LR	01 02 32.6	
	comp=Z,366nm,18.9s,baz=30,slow=38						
J08A	Circle Bar Ran	92.31	39	P	P	00 19 42.7	+0.2
KEST	Kesra	92.44	311	LR	LR	01 08 02.1	
	comp=Z,248nm,18.2s,baz=285,slow=40						
MSO	Missoula	92.59	35	IAmb	IAmb	00 19 48.7	
	comp=Z,13nm,1.4s						
CMB	Columbia Colle	94.34	45	P	P	00 19 53.2	+1.4
CMB				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CMB	Columbia Colle	94.34	45	P	P	00 19 53.2	+1.4
CMB				IAmb	IAmb	00 19 56.0	
	comp=Z,10nm,1.2s						
BMN	Battle Mountai	94.84	41	P	P	00 19 57.8	+3.5
BMN				pmax	pmax		
	comp=Z,8.0nm,1.2s						
BMN	Battle Mountai	94.84	41	P	P	00 19 57.8	+3.5
BMN				IAmb	IAmb	00 20 00.0	
	comp=Z,7.9nm,1.2s						
KVN	Kaiserville	95.16	43	P	P	00 19 56.6	+0.8
KVN				pmax	pmax		
	comp=Z,11nm,1.2s						
KVN	Kaiserville	95.16	43	P	P	00 19 56.5	+0.8
KVN				IAmb	IAmb	00 20 00.3	
	comp=Z,11nm,1.2s						
NVAR	Mina Array Bea	95.41	43	P	P	00 19 57.3	+0.4
	comp=Z,0.7nm,0.8s,baz=115,slow=17,SNR=8.5						
NVAR				LR	LR	00 57 16.5	
	comp=Z,33nm,21.2s,baz=311,slow=32						
PPT	Papeete	95.78	107	LR	LR	00 54 03.4	
	comp=Z,95nm,19.8s,baz=258,slow=30						
PPT2	Papeete2	95.78	107	*e*LR	LR	00 51 10.5	
	comp=Z,440nm,30.2s						
ULM	Lac du Bonnet	98.03	23	LR	LR	01 07 37.3	
	comp=Z,203nm,18.2s,baz=358,slow=37						
TBI	Tubuai	98.19	112	*e*LR	LR	00 52 12.0	
	comp=Z,238nm,26.8s						
ESDC	Sonseca Array	98.44	321	LR	LR	01 10 04.9	
	comp=Z,247nm,18.1s,baz=340,slow=39						
VNA2	Neumayer--Watz	125.75	198	PKPdf	PKPdf	00 25 31.1	-1.7
	baz=102,slow=2.2						
VNA1	Neumayer--Stat	126.14	198	PKPdf	PKPdf	00 25 31.3	-2.1
VNA3	Neumayer Olymp	126.22	197	PKPdf	PKPdf	00 25 32.5	-1.2
ZARC	Zaragoza, Cauc	143.88	29	*e*P	PKiKP	00 26 16.8	+5.2
CBOC	Ciudad Bolivar	144.78	32	*e*P	PKPdf	00 26 10.6	+0.6
PAMC	Pamplona, Colo	144.93	26	*i* P	PKPab	00 26 06.6	-3.1
BARC	Barichara	145.41	27	*e*P	PKPbc	00 26 03.4	-7.5
PLMC	San Jos del P	145.47	34	*e*P	PKPbc	00 26 06.2	-4.8
GUY2C	Guyana, Caldas	145.65	32	*e*P	PKPdf	00 26 09.8	-2.1
SPBC	San Pablo de B	145.87	30	*e*P	PKPdf	00 26 09.9	-1.8
RUSC	La Rusia	146.08	28	*e*P	PKPdf	00 26 07.9	-4.7
YOTC	Yotoco, Valle	146.22	35	*e*P	PKPdf	00 26 10.0	-2.4
CHIC	Chingaza	146.93	30	*e*P	PKPdf	00 26 10.4	-3.5
VILC	Villavicencio,	147.40	30	*e*P	PKPdf	00 26 13.1	-1.2
SOTA	Rioblanco	147.64	37	*e*P	PKPbc	00 26 17.5	-0.4

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*NEIC **03** 00:30:55.8±1.1, 51°.48N±0°.09×172°.98W±0°.04, h10^{km}±2^{km}, ML3.2/14(AEIC) Error ellipse: s-maj=15.4km s-min=4.2km az=185.0*

*AEIC **03** 00:30:59±1.6, 51°.6N±0°.1×173°.2W±0°.2, h50^{km}±10^{km}, Error ellipse: s-maj=17.4km s-min=15.6km az=129.0*

*IDC **03** 00:31:05.2±2.3, 53°.10N×174°.04W, h0^{km}, mb3.7/6, mb1 3.8/8, mb1mx3.6/51, mbtmp3.6/8, ML3.5/2, Error ellipse: s-maj=57.0km s-min=24.0km az=178.0*

ISC 03 00:30:55.2±1.3**, 51°.5N**±0°.2×**172°.88W**±0°.09**, h10^{km}, n27, σ0^{s}.97**/20**, mb3.6**/6**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOFP	Korovin Flat P	1.12	318		Pn	00 31 16.5	-0.5
KOKL	Mount Kliuchef	1.20	317		Pb	00 31 17.5	-0.6
KONE	Korovin Northe	1.22	321		Pn	00 31 18.4	0.0
GSMY	Great Sitkin M	2.06	288		Pn	00 31 29.7	-0.2
GSTR	Great Sitkin T	2.08	289		Pn	00 31 29.2	-1.0
GSTD	Great Sitkin T	2.12	288		Pn	00 31 30.3	-0.4
ADK	Adak	2.41	282		Pn	00 31 33.9	-0.8
KIWB	Kanaga Island	2.69	280		Pn	00 31 38.1	-0.5
KIMD	Kanaga Island	2.73	278		Pn	00 31 39.5	+0.3
TAFP	Tanaga Falls P	3.21	280		Pn	00 31 46.1	+0.4
TASE	Tanaga Southea	3.24	279		Pn	00 31 46.6	+0.5
AMKA	Amchitka	4.89	272	Pn	Pn	00 32 08.3	-0.5
KDAK	Kodiak Island	13.33	54	Pn	P	00 34 11.7	-2.3
	0.2nm,0.3s,baz=0.6,slow=18,SNR=9.4						
BRLK	Bradley Lake	14.90	47	Pn	Pn	00 34 25.9	+0.2
ILAR	Eielson Array	18.95	35	P	Pn	00 35 18.6	+1.9
	0.2nm,0.3s,baz=225,slow=8.4,SNR=15						
INK	Inuvik	25.31	33	P	P	00 36 23.4	+1.9
	1.0nm,0.6s,baz=218,slow=5.4,SNR=5.2						
H11N2	WAKE ISLAND Hy	35.42	214	T	T	01 16 01.5	
	baz=21,slow=76,SNR=8.8						
H11N3	WAKE ISLAND Hy	35.43	214	T	T	01 16 02.1	
	baz=21,slow=76,SNR=10						
H11N1	WAKE ISLAND Hy	35.44	214	T	T	01 15 58.0	
	baz=21,slow=76,SNR=11						
H11S1	WAKE ISLAND Hy	36.62	214	T	T	01 17 13.2	
	baz=20,slow=76,SNR=11						
H11S2	WAKE ISLAND Hy	36.64	214	T	T	01 17 21.8	
	baz=20,slow=76,SNR=9.6						
H11S3	WAKE ISLAND Hy	36.64	214	T	T	01 17 14.9	
	baz=20,slow=76,SNR=8.1						
SONM	Songino Array	49.88	300	P	P	00 39 49.0	+0.3
	0.4nm,0.7s,baz=49,slow=9.7,SNR=2.2						
TXAR	Lajitas Array	54.96	86	P	P	00 40 42.6	+16
	0.2nm,0.6s,baz=292,slow=4.8,SNR=4.1						
ARCES	ARCESS Array B	58.58	353	P	P	00 40 51.8	+0.3
	3.1nm,1.0s,baz=16,slow=8.0,SNR=1.2						
MKAR	Makanchi Array	62.83	312	P	P	00 41 20.9	+0.1
	0.1nm,0.4s,baz=52,slow=6.6,SNR=2.2						
FINES	FINESS Array B	66.44	350	P	P	00 41 44.5	+0.4
	2.3nm,0.9s,baz=29,slow=6.3,SNR=1.8						

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*JMA **03** 00:44:19.3±0.1, 24°.08N×121°.53E, h29^{km}±1^{km}, M3.3*

*TAP **03** 00:44:20.3, 24°.15N×121°.55E, h29^{km}, ML3.8, B*

ISC 03 00:44:20.7±0.8**, 24°.12N**±0°.01×**121°.59E**±0°.02**, h28**^{km}±4^{km}**, n111, σ0^{s}.88**/200**, 8C-7D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWD	Chiawan	0.04	170	⇑*i*P	Pb	00 44 25.4	0.0
	baz=141						
TWD				*i* S	Sb	00 44 28.8	+0.2
	baz=141						
ETL	Fush Village	0.05	42	⇑*i*P	Pb	00 44 25.4	-0.1
	baz=83						
ETL				S	Sb	00 44 29.1	+0.3
	baz=83						
NACB	Ninganchiao	0.05	7	⇑*i*P	Pb	00 44 25.3	-0.2
	baz=63						
NACB				*i* S	Sb	00 44 28.9	+0.2
	baz=63						
ETLH	Xiulin Townshi	0.13	311	⇑*i*P	Pb	00 44 25.7	-0.3
	baz=315						
ETLH				S	Sb	00 44 29.6	-0.2
	baz=315						
HWA	Hwalien	0.15	174	⇑*i*P	Pb	00 44 26.4	+0.3
	baz=166						
HWA				S	Sb	00 44 31.2	+1.4
	baz=166						
EHP	Heping Village	0.23	37	*e*P	Pb	00 44 26.8	-0.3
	baz=56						
EHP				*e*S	Sb	00 44 31.4	0.0
	baz=56						
WHF	Hehuan Shan	0.30	274	⇑*i*P	Pb	00 44 27.6	-0.7
	baz=274						
WHF				S	Sb	00 44 32.8	-0.7
	baz=274						
ENA	Nanau	0.33	25	⇑*i*P	Pb	00 44 28.0	-0.4
	baz=39						
ENA				S	Sb	00 44 33.6	-0.1
	baz=39						
FUSS	Fushou	0.34	292	⇓*i*P	Pb	00 44 28.1	-0.6
	baz=294						
FUSS				S	Sb	00 44 33.7	-0.5
	baz=294						
ESL	Shilin	0.34	205	P	Pb	00 44 27.5	-1.0
	baz=195						
ESL				*e*S	Sb	00 44 32.4	-1.5
	baz=195						
NNSB	Datong	0.36	328	⇓*i*P	Pb	00 44 28.2	-0.7
	baz=337						
NNSB				S	Sb	00 44 33.5	-0.9
	baz=337						
EWUT	Wuta	0.36	28	*e*P	Pb	00 44 28.5	-0.4
	baz=37						
EWUT				*e*S	Sb	00 44 34.1	-0.4
	baz=37						
NNS	Nan Shan	0.37	328	⇓*i*P	Pb	00 44 28.3	-0.8
	baz=337						
NNS				*e*S	Sb	00 44 33.9	-0.9
	baz=337						
CHGB	Renai	0.38	261	⇓*i*P	Pb	00 44 28.9	-0.5
	baz=250						
CHGB				*i* S	Sb	00 44 34.6	-0.7
	baz=250						
TWT	Tachien	0.40	289	P	Pb	00 44 29.1	-0.5
	baz=286						
TWT				S	Sb	00 44 34.9	-0.6
	baz=286						
OWD	Renai	0.41	246	*e*P	Pb	00 44 29.3	-0.4
	baz=235						
OWD				*e*S	Sb	00 44 35.1	-0.7
	baz=235						
TDCB	Techi	0.41	288	⇓*i*P	Pb	00 44 29.1	-0.7
	baz=282						
TDCB				*i* S	Sb	00 44 34.8	-1.1
	baz=282						
EGFH	Guangfu	0.48	198	P	Pb	00 44 29.8	-0.9
	baz=193						
EGFH				S	Sb	00 44 38.0	+0.6
	baz=193						
NDT	Datong Townshi	0.48	352	P	Pb	00 44 30.2	-0.6
	baz=351						
NDT				S	Sb	00 44 36.9	-0.7
	baz=351						
ENTT	Nioudou	0.51	358	P	Pb	00 44 30.9	-0.5
	baz=5.0						
ENTT				S	Sb	00 44 38.1	-0.4
	baz=5.0						
NDS	Dongshan	0.52	13	P	Pb	00 44 30.7	-0.7
	baz=19						
NDS				*e*S	Sb	00 44 37.9	-0.8
	baz=19						
TWC	Suao	0.54	26	*e*P	Pb	00 44 31.1	-0.6
	baz=29						
TWC				S	Sb	00 44 38.8	-0.3
	baz=29						
YHNB	Yeheng	0.58	340	*i* P	Pb	00 44 31.8	-0.6
	baz=344						
YHNB				S	Sb	00 44 37.9	-2.4
	baz=344						
YHNB	Yeheng	0.58	340	P	Pb	00 44 31.5	-0.9
NSK	Sanguang	0.59	339	⇓*i*P	Pb	00 44 31.8	-0.8
	baz=343						
NSK				*i* S	Sb	00 44 39.1	-1.5
	baz=343						
TWE	Neicheng	0.60	7	P	Pb	00 44 32.1	-0.6
	baz=18						
TWE				*e*S	Sb	00 44 40.2	-0.6
	baz=18						
WHP	Taichung City	0.61	285	*e*P	Pb	00 44 32.1	-0.8
	baz=283						
WHP				*e*S	Sb	00 44 40.4	-0.8
	baz=283						
WCS	Beigang Elemen	0.62	264	*e*P	Pb	00 44 32.2	-0.9
	baz=257						
WCS				*e*S	Sb	00 44 40.2	-1.2
	baz=257						
HGSD	Ruisui	0.65	193	*e*P	Pb	00 44 32.5	-1.0
	baz=193						
HGSD				*e*S	Sb	00 44 41.8	-0.3
	baz=193						
ILA	Ilan	0.66	13	*e*P	Pb	00 44 32.7	-0.9
	baz=19						
ILA				*e*S	Sb	00 44 42.6	+0.2
	baz=19						
NWLT	Wulai	0.66	353	P	Pb	00 44 33.2	-0.5
	baz=352						
NWLT				S	Sb	00 44 41.3	-1.2
	baz=352						
EHY	Hungye	0.66	202	*e*P	Pb	00 44 31.8	-1.9
	baz=191						
EHY				*e*S	Sb	00 44 40.2	-2.3
	baz=191						
SSLB	Suanglung	0.67	240	P	Pb	00 44 32.8	-1.0
	baz=235						
SSLB				*e*S	Sb	00 44 41.5	-1.3
	baz=235						
SSLB	Suanglung	0.67	240	P	Pb	00 44 33.0	-0.9
SMLT	Sun Moon Lake	0.67	249	P	Pb	00 44 33.4	-0.6
	baz=241						
SMLT				*e*S	Sb	00 44 42.5	-0.5
	baz=241						
TYC	Yuchr	0.70	252	⇑*i*P	Pb	00 44 33.7	-0.7
	baz=245						
TYC				*e*S	Sb	00 44 42.4	-1.3
	baz=245						
LIOB	Emei	0.74	315	*i* P	Pb	00 44 34.7	-0.3
	baz=316						
LIOB				*e*S	Sb	00 44 44.6	-0.2
	baz=316						
NSTT	Nanjuang	0.74	313	⇓*i*P	Pb	00 44 34.5	-0.4
	baz=314						
NSTT				*e*S	Sb	00 44 43.5	-1.2
	baz=314						
NTC	Toucheng	0.76	17	*e*P	Pb	00 44 34.5	-0.9
	baz=22						
NTC				*e*S	Sb	00 44 44.4	-0.9
	baz=22						
YULB	Yu-li	0.78	200	*e*P	Pb	00 44 33.0	-2.7
	baz=189						
TWQ1	Liyutan	0.78	287	P	Pb	00 44 35.5	-0.2
	baz=285						
TWQ1				S	Sb	00 44 46.1	+0.2
	baz=285						
NSY	Sanyi	0.81	291	P	Pn	00 44 36.4	+0.2
	baz=294						
NSY				*e*S	Sn	00 44 47.2	-0.1
	baz=294						
EYUL	Yuli	0.81	198	*e*P	Pb	00 44 36.2	-0.1
	baz=192						
EYUL				*e*S	Sn	00 44 47.2	-0.2
	baz=192						
TCU	Taichung	0.83	272	P	Pb	00 44 37.2	+0.7
	baz=268						
TCU				S	Sn	00 44 49.3	+1.3
	baz=268						
NMLH	Miaoli	0.83	300	*e*P	Pb	00 44 37.2	+0.6
	baz=298						
NMLH				*e*S	Sn	00 44 48.4	+0.4
	baz=298						
NHDH	Xindian Distri	0.84	356	P	Pn	00 44 36.4	-0.3
	baz=360						
NHDH				S	Sb	00 44 47.1	-0.5
	baz=360						
WJS	Zhushan	0.84	249	*e*P	Pn	00 44 36.6	-0.1
	baz=245						
WJS				*e*S	Sn	00 44 49.1	+0.9
	baz=245						
YUS	Yu-Shan	0.86	223	*e*P	Pb	00 44 36.6	-0.8
	baz=205						
YUS				*e*S	Sb	00 44 48.0	-0.7
	baz=205						
WNT	Mingjian	0.86	254	*e*P	Pn	00 44 36.7	-0.2
	baz=248						
WNT				*e*S	Sn	00 44 49.0	+0.4
	baz=248						
SBCB	Hsinchu	0.86	321	*e*P	Pb	00 44 37.3	+0.2
	baz=325						
SBCB				*e*S	Sn	00 44 49.1	+0.4
	baz=325						
TIPB	Shuangxi	0.87	14	*e*P	Pn	00 44 37.2	0.0
	baz=19						
TIPB				*e*S	Sb	00 44 48.5	-0.1
	baz=19						
HSN	Hsinchu	0.88	320	*e*P	Pn	00 44 36.7	-0.5
	baz=325						
HSN				*e*S	Sn	00 44 49.6	+0.5
	baz=325						
WDJ	Dajia District	0.89	285	*e*P	Pb	00 44 37.7	+0.1
	baz=282						
WDJ				*e*S	Sn	00 44 49.7	+0.2
	baz=282						
TAP	Taipei	0.92	355	*e*P	Pb	00 44 39.3	+1.4
	baz=360						
TAP				*e*S	Sb	00 44 49.8	0.0
	baz=360						
NCUH	Zhongli	0.92	336	P	Pn	00 44 37.8	0.0
	baz=339						
NCUH				*e*S	Sn	00 44 50.7	+0.6
	baz=339						
NCU	National Centr	0.92	337	P	Pb	00 44 38.0	-0.1
	baz=339						
NCU				S	Sn	00 44 51.0	+0.9
	baz=339						
ALS	Alishan	0.94	230	P	Pn	00 44 38.1	-0.2
	baz=213						
ALS				*e*S	Sn	00 44 51.3	+0.3
	baz=213						
WCHH	Zhanghua	0.94	268	*e*P	Pb	00 44 38.5	0.0
	baz=263						
WCHH				*e*S	Sn	00 44 51.0	+0.4
	baz=263						
TWB1	Santiao Chiao	0.95	22	*e*P	Pb	00 44 38.4	-0.2
	baz=19						
TWB1				*e*S	Sb	00 44 51.5	+0.6
	baz=19						
NWF	Wu-fen Shan	0.96	11	P	Pn	00 44 38.0	-0.4
	baz=22						
NWF				*e*S	Sb	00 44 50.7	-0.4
	baz=22						
CHN5	Tsauling	0.98	238	P	Pn	00 44 38.3	-0.4
	baz=232						
CHN5				*e*S	Sb	00 44 52.7	+0.9
	baz=232						
TWS1	Kuangyinshan	0.98	351	P	Pb	00 44 39.5	+0.4
	baz=6.0						
TWS1				*e*S	Sb	00 44 52.9	+1.1
	baz=6.0						
YM01	YM01	1.02	359	*e*P	Pb	00 44 39.5	-0.2
	baz=3.0						
YM01				*e*S	Sn	00 44 52.2	-0.4
	baz=3.0						
CHKT	Chengkung	1.04	191	*e*P	Pn	00 44 38.7	-0.7
	baz=186						
CHKT				*e*S	Sn	00 44 51.8	-1.3
	baz=186						
NTST	Danshui	1.04	353	*e*P	Pn	00 44 39.2	-0.3
	baz=7.0						
NTST				*e*S	Sb	00 44 54.0	+0.6
	baz=7.0						
WDLH	Douliu	1.05	246	P	Pb	00 44 40.2	-0.1
	baz=240						
WDLH				*e*S	Sb	00 44 54.8	+1.1
	baz=240						
ANP	Anpu	1.06	357	*e*P	Pn	00 44 39.9	+0.1
	baz=1.0						
ANP				*e*S	Sn	00 44 52.2	-1.5
	baz=1.0						
ELDTW	Lidau	1.07	209	*e*P	Pn	00 44 39.6	-0.3
	baz=194						
ELDTW				*e*S	Sn	00 44 53.4	-0.5
	baz=194						
WRL	Guolierlin Hig	1.13	259	*e*P	Pn	00 44 40.7	+0.1
	baz=254						
WRL				*e*S	Sb	00 44 56.0	+0.1
	baz=254						
EDH	Donghe	1.18	193	*e*P	Pn	00 44 40.3	-1.0
	baz=187						
EDH				*e*S	Sn	00 44 54.8	-1.6
	baz=187						
CHN2	Minshiung	1.18	240	*e*P	Pb	00 44 43.1	+0.7
	baz=235						
CHN2				*e*S	Sb	00 44 59.5	+2.2
	baz=235						
WTK	Tuku	1.18	249	*e*P	Pn	00 44 41.8	+0.4
	baz=244						
WTK				*e*S	Sb	00 44 57.5	+0.2
	baz=244						
CHN4	Tsaushan	1.19	230	*e*P	Pn	00 44 41.2	-0.3
	baz=214						
CHN4				*e*S	Sb	00 44 59.0	+1.3
	baz=214						
TPUB	Ta-pu	1.20	227	P	Pb	00 44 42.6	-0.3
	baz=211						
TPUB				*e*S	Sb	00 44 59.3	+1.3
	baz=211						
TPUB	Ta-pu	1.20	227	P	Pb	00 44 43.0	+0.2
STYH	Taoyuan	1.21	218	*e*P	Pb	00 44 43.0	+0.1
	baz=206						
STYH				*e*S	Sb	00 44 58.8	+0.7
	baz=206						
WTCT	Ta-ch'eng	1.22	258	*e*P	Pn	00 44 42.2	+0.3
	baz=253						
WTCT				*e*S	Sb	00 44 59.3	+0.7
	baz=253						
CHY	Chiayi	1.23	240	*e*P	Pn	00 44 42.7	+0.6
	baz=234						
CHY				*e*S	Sb	00 44 59.5	+0.6
	baz=234						
WTP	Ta-pu	1.25	226	P	Pb	00 44 43.4	-0.3
	baz=211						
WTP				*e*S	Sb	00 45 01.2	+1.8
	baz=211						
LONT	Longtian	1.28	199	*e*P	Pn	00 44 43.0	+0.2
	baz=184						
TWK	Hsinying	1.32	230	P	Pb	00 44 44.6	-0.2
	baz=223						
TWK				*e*S	Sb	00 45 02.1	+0.7
	baz=223						
WSF	Szhu	1.34	249	*e*P	Pn	00 44 44.2	+0.7
	baz=244						
WSF				*e*S	Sb	00 45 02.6	+0.7
	baz=244						
YOJ	Yonaguni jima	1.34	75	*e*P	Pn	00 44 43.6	0.0
	baz=78						
YOJ	Yonaguni jima	1.34	75	P	Pn	00 44 43.6	0.0
YOJ				*e*S	Sb	00 45 01.8	-0.2
YOJ	Yonaguni jima	1.34	75	P	Pn	00 44 44.0	+0.4
SNST	Tainan City	1.34	228	*e*P	Pb	00 44 44.9	-0.3
	baz=211						
SNST				*e*S	Sb	00 45 03.7	+1.6
	baz=211						
CHN1	Nanshi	1.35	226	*e*P	Pb	00 44 45.2	-0.1

	baz=209						
CHN1	baz=209			*e*S	Sb	00 45 04.4	+2.2
TWG	**Pinlang** baz=184	1.38	200	*e*P	Pn	00 44 44.4	+0.3
TWGBT	**Beinan** baz=184	1.38	200	*e*P	Pb	00 44 45.0	-0.8
SGST	**Jiashian** baz=203	1.39	222	*e*P	Pn	00 44 45.0	+0.8
SGST	baz=203			*e*S	Sb	00 45 03.5	+0.2
ICHU	**Yijhu** baz=217	1.42	238	*e*P	Pn	00 44 45.5	+0.8
ICHU	baz=217			*e*S	Sb	00 45 04.9	+0.7
SLGT	**Liugui** baz=200	1.42	218	*e*P	Pn	00 44 45.6	+0.9
SLGT	baz=200			*e*S	Sb	00 45 04.8	+0.6
TTN	**Taitung** baz=180	1.42	197	*e*P	Pn	00 44 44.8	+0.1
LDUT	**Ludao** baz=170	1.45	184	*e*P	Pn	00 44 44.9	-0.1
LDUT	baz=170			*e*S	Sn	00 45 02.4	-0.7
ECL	**Taimali** baz=186	1.63	201	*e*P	Pn	00 44 48.2	+0.7
SSD	**Sandimen** baz=193	1.63	213	*e*P	Pb	00 44 49.4	-0.7
MASBT	**Mashibuluo** baz=206	1.74	210	*e*P	Pn	00 44 50.3	+1.2
EAST	**Anshuo** baz=185	1.86	202	*e*P	Pb	00 44 52.4	-1.7
SSPT	**Xinbi** baz=204	1.88	210	*e*P	Pb	00 44 53.0	-1.4
PNG	**Penghu** baz=248	1.94	254	*e*P	Pn	00 44 50.8	-1.0
SCZT	**Fangliau** baz=188	1.96	207	*e*P	Pn	00 44 53.3	+1.3
IRIF	**Iriomote-Funau**	1.97	83	P	Pn	00 44 52.5	+0.3
IRIF				S	Sn	00 45 16.2	+0.3
SLIU	**Shizi** baz=186	2.03	201	*e*P	Pn	00 44 54.6	+1.5
JKRS	**Kuro-shima**	2.21	87	P	Pn	00 44 56.3	+0.7
JKRS				*e*S	Sn	00 45 23.2	+1.2
JIJ	**Ishigaki jima**	2.34	84	P	Pn	00 44 57.5	+0.1
JIJ				S	Sn	00 45 24.9	-0.4
JISG	**Ishigakijimahi**	2.53	79	P	Pn	00 45 00.1	+0.2
JISG				*e*S	Sn	00 45 29.8	+0.1
JTJ	**Tarama**	2.89	79	P	Pn	00 45 05.8	+1.0
JTJ				S	Sn	00 45 40.6	+2.0
KNM	**Kinmen** baz=270	2.89	276	*e*P	Pn	00 45 04.9	0.0
KNMB	**Chin-men Tao** baz=272	2.94	277	*e*P	Pn	00 45 03.9	-1.7
AXDP	**Jialang** baz=279	3.38	284	*e*P	Pn	00 45 15.5	+3.8
ZPLA	**Ao Xicun** baz=260	3.51	268	*e*P	Pn	00 45 12.2	-1.2

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*MOS **03** 00:44:44.3±2.3, 52°.63N×142°.67E, h10^{km}, mb4.3/1, Error ellipse: s-maj=21.4km s-min=10.9km az=85.4*
MOS Felt (II-III) at Val, (II) at Chayvo.
*SKHL **03** 00:44:44.1±0.4, 52°.60N×142°.80E, h11^{km}±2^{km}, mb4.8/3*
*IDC **03** 00:44:45.6±2.9, 52°.54N×143°.45E, h0^{km}, mb3.5/4, mb1 3.9/4, mb1mx3.4/52, mbtmp3.5/4, Error ellipse: s-maj=147.3km s-min=40.9km az=150.0*
ISC 03 00:44:46.2±1.5, **52°.56N**±0°.04×**142°.76E**±0°.06, **h17**^{km}±11^{km}, **n16**, σ1^{s}01/22, **mb3.5**/4, **1C-1D, Sakhalin Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NGLR	**Nogliki**	0.81	164	*e*PN	Pb	00 45 02.1	+0.4
NGLR				*e*S	Sn	00 45 14.6	+0.3
NGLR	comp=Z,1.0nm,0.3s			pmax	pmax		
NGLR	comp=E,4.0nm,0.3s			smax	smax		
OKH	**Okha**	1.00	6	⇓*i*PN	Pn	00 45 05.3	0.0
OKH				*i* S	Sn	00 45 19.8	+0.8
OKH	comp=Z,655nm,0.5s			pmax	pmax		
OKH	comp=N,4µm,0.9s			smax	smax		
OKH	comp=E,2µm,0.6s			smax	smax		
OKH	**Okha**	1.00	6	*i* Pg	Pn	00 45 04.8	-0.5
OKH	comp=E,600nm,0.5s			AMB	AMB	00 45 05.5	
OKH				*i* Sg	Sn	00 45 19.6	+0.6
OKH	comp=E,4µm,0.9s			A	A	00 45 20.5	
OKH	comp=E,2µm,0.9s			A	A	00 45 20.5	
NKL	**Nikolayevsk**	1.39	296	*e*PN	Pb	00 45 12.0	+0.4
NKL				*e*S	Sg	00 45 32.4	+1.2
NKL	comp=E,2.0nm,0.2s			pmax	pmax		
NKL	comp=N,242nm,0.3s			pmax	pmax		
NKL	comp=Z,147nm,0.4s			pmax	pmax		
NKL	comp=E,2.0nm,0.2s			smax	smax		
NKL	comp=N,281nm,0.3s			smax	smax		
NKL	**Nikolayevsk**	1.39	296	*e*Pg	Pb	00 45 12.1	+0.4
NKL	comp=N,200nm,0.3s			AMB	AMB	00 45 12.8	
NKL				*e*Sg	Sg	00 45 31.4	+0.2
NKL	comp=N,1µm,0.6s			A	A	00 45 33.0	
NKL	comp=N,1µm,0.6s			A	A	00 45 33.0	
TYV	**Tymovskoe**	1.70	182	*e*PN	Pg	00 45 18.1	-0.7
TYV				*e*S	Sg	00 45 43.0	+2.1
TYV	comp=Z,25nm,0.3s			pmax	pmax		
TYV	comp=N,79nm,0.3s			smax	smax		
TYV	comp=E,91nm,0.3s			smax	smax		
TYV	**Tymovskoe**	1.70	182	*e*Pg	Pg	00 45 19.5	+0.7
TYV	comp=E,50nm,0.4s			AMB	AMB	00 45 21.0	
TYV				*e*S	Sn	00 45 37.8	+1.5
TYV	comp=E,100nm,0.4s			A	A	00 45 38.9	
TYV	comp=E,87nm,0.4s			A	A	00 45 38.9	
GRNR	**Gornyy**	4.33	248	⇑*i*PN	Pg	00 46 07.5	-1.6
GRNR	comp=E,8.0nm,0.7s			pmax	pmax		
GRNR	comp=N,3.0nm,0.5s			pmax	pmax		
GRNR	comp=Z,8.0nm,0.5s			pmax	pmax		
GRNR	comp=E,140nm,14.0s			MLR	MLR		
GRNR	comp=N,80nm,16.0s			MLR	MLR		
GRNR	comp=Z,110nm,11.0s			MLR	MLR		
YSS	**Yuzh-Sakhalins**	5.61	180	*i* PN	Pn	00 46 08.0	-0.7
KLR	**Kul'dur** comp=Z,0.4nm,0.3s,baz=55,slow=17,SNR=4.2	7.72	249	Pg		00 47 13.4	
KLR	comp=Z,0.3nm,0.3s,baz=322,slow=23,SNR=2.2			Lg	Lg	00 48 55.3	
KLR	**Kul'dur**	7.72	249	*e*PN	Pn	00 46 37.7	+0.1
PEA0B	**Petropavlovsk-**	9.06	81	*i* PN	Pn	00 46 54.2	-1.8
ILAR	**Eielson Array** comp=Z,0.6nm,0.6s,baz=274,slow=6.7,SNR=8.1	36.53	43	P	P	00 51 50.2	0.0
INK	**Inuvik** comp=Z,0.5nm,0.6s,baz=304,slow=5.6,SNR=4.0	40.53	35	P	P	00 52 23.5	-0.2
PDAR	**Pinedale Array** comp=Z,0.4nm,0.5s,baz=344,slow=1.8,SNR=3.7	66.47	50	P	P	00 55 34.7	+0.1
TXAR	**Lajitas Array** comp=Z,0.3nm,0.7s,baz=309,slow=4.5,SNR=2.7	80.05	54	P	P	00 56 55.5	+0.8

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*JMA **03** 00:46:19.5±0.1, 24°.44N×121°.64E, h61^{km}±2^{km}, M2.6*
*TAP **03** 00:46:20.2, 24°.47N×121°.69E, h57^{km}, ML3.6, B*
ISC 03 00:46:20.8±1.2, **24°.49N**±0°.02×**121°.70E**±0°.02, **h54**^{km}±4^{km}, **n102**, σ0^{s}99/181, **8C-10D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	**Nanau** baz=130	0.07	147	*e*P	Pn	00 46 29.1	+0.1
ENA	baz=130			*e*S	Sn	00 46 35.1	+0.2
EWUT	**Wuta** baz=105	0.08	119	P	Pn	00 46 29.1	0.0
EWUT	baz=105			*e*S	Sn	00 46 35.4	+0.5
NDS	**Dongshan** baz=3.0	0.15	6	⇑*i*P	Pn	00 46 29.5	+0.1
NDS	baz=3.0			*e*S	Sn	00 46 35.5	0.0
TWC	**Suao** baz=45	0.18	48	⇑*i*P	Pn	00 46 29.9	+0.4
TWC	baz=45			*e*S	Sn	00 46 36.3	+0.6
ENTT	**Nioudou** baz=327	0.20	322	P	Pn	00 46 29.8	+0.2
ENTT	baz=327			*e*S	Sn	00 46 36.2	+0.3
NDT	**Datong Townshi** baz=310	0.21	304	⇑P	Pn	00 46 29.9	+0.2
NDT	baz=310			S	Sn	00 46 36.6	+0.6
TWE	**Neicheng** baz=352	0.24	353	⇑*i*P	Pn	00 46 30.1	+0.3
TWE	baz=352			*e*S	Sn	00 46 37.1	+0.8
ILA	**Ilan** baz=6.0	0.28	9	P	Pn	00 46 30.5	+0.3
ILA	baz=6.0			*e*S	Sn	00 46 36.9	0.0
NNSB	**Datong** baz=263	0.29	259	⇓*i*P	Pn	00 46 30.5	+0.1
NNSB	baz=263			S	Sn	00 46 37.4	+0.1
NNS	**Nan Shan** baz=264	0.30	261	⇓*i*P	Pn	00 46 30.6	+0.1
NNS	baz=264			S	Sn	00 46 37.6	+0.2
NACB	**Ninganchiao** baz=197	0.33	197	⇓*i*P	Pn	00 46 29.7	-0.8
NACB	baz=197			*i* S	Sn	00 46 36.7	-0.8
ETL	**Fush Village** baz=191	0.33	192	P	Pn	00 46 29.9	-0.8
ETL	baz=191			*e*S	Sn	00 46 37.1	-0.6
ETLH	**Xiulin Townshi** baz=221	0.34	216	⇓*i*P	Pn	00 46 30.4	-0.5
ETLH	baz=221			S	Sn	00 46 37.4	-0.5
NWLT	**Wulai** baz=331	0.34	328	⇑*i*P	Pn	00 46 30.8	0.0
NWLT	baz=331			*e*S	Sn	00 46 37.8	-0.1
YHNB	**Yeheng** baz=301	0.35	302	⇑*i*P	Pn	00 46 30.7	-0.2
YHNB	baz=301			S	Sn	00 46 37.7	-0.3
NSK	**Sanguang** baz=301	0.36	301	⇑*i*P	Pn	00 46 30.7	-0.3
NSK	baz=301			*e*S	Sn	00 46 38.0	-0.3
NTC	**Toucheng** baz=8.0	0.39	18	*e*P	Pn	00 46 31.3	+0.1
NTC	baz=8.0			*e*S	Sn	00 46 39.0	+0.5
TWD	**Chiawan** baz=192	0.41	193	⇓*i*P	Pn	00 46 30.4	-1.0
TWD	baz=192			S	Sn	00 46 38.2	-0.8
FUSS	**Fushou** baz=236	0.48	240	⇓*i*P	Pn	00 46 32.6	+0.2
FUSS	baz=236			*i* S	Sn	00 46 40.7	+0.1
TIPB	**Shuangxi** baz=3.0	0.50	13	*e*P	Pn	00 46 32.5	+0.1
TIPB	baz=3.0			*e*S	Sn	00 46 40.8	+0.1
NHDH	**Xindian Distri** baz=343	0.50	342	*e*P	Pn	00 46 31.7	-0.6
NHDH	baz=343			*e*S	Sn	00 46 40.4	-0.3
HWA	**Hwalien** baz=199	0.51	190	*e*P	Pn	00 46 31.7	-0.8
HWA	baz=199			*e*S	Sn	00 46 41.0	+0.1
WHF	**Hehuan Shan** baz=228	0.52	230	⇓*i*P	Pn	00 46 32.8	-0.2
WHF	baz=228			*e*S	Sn	00 46 42.3	+0.5
TWT	**Tachien** baz=241	0.53	244	⇓*i*P	Pn	00 46 33.3	+0.4
TWT	baz=241			S	Sn	00 46 42.0	+0.4
TDCB	**Techi** baz=242	0.55	245	⇓*i*P	Pn	00 46 33.2	+0.2
TDCB	baz=242			S	Sn	00 46 41.8	0.0
TWB1	**Santiao Chiao** baz=18	0.58	27	*e*P	Pn	00 46 33.6	+0.3
TWB1	baz=18			*e*S	Sn	00 46 43.9	+1.5
NWF	**Wu-fen Shan** baz=355	0.59	7	⇑*i*P	Pn	00 46 33.5	0.0
NWF	baz=355			S	Sn	00 46 42.3	-0.3
CHGB	**Renai** baz=231	0.64	229	⇓*i*P	Pn	00 46 34.2	0.0
CHGB	baz=231			*e*S	Sn	00 46 43.4	-0.6
LIOB	**Emei** baz=286	0.64	285	*e*P	Pn	00 46 34.1	+0.1
LIOB	baz=286			*e*S	Sn	00 46 44.1	+0.4
NSTT	**Nanjuang** baz=285	0.65	283	*e*P	Pn	00 46 34.4	+0.2
NSTT	baz=285			*e*S	Sn	00 46 43.6	-0.2
TWS1	**Kuangyinshan** baz=337	0.66	337	P	Pn	00 46 33.9	-0.4
TWS1	baz=337			*e*S	Sn	00 46 44.0	-0.1
YM01	**YM01** baz=341	0.67	350	P	Pn	00 46 33.9	-0.5
YM01	baz=341			S	Sn	00 46 43.4	-0.9
NCU	**National Centr** baz=317	0.67	316	P	Pn	00 46 33.8	-0.6
NCU	baz=317			S	Sn	00 46 44.0	-0.2
NCUH	**Zhongli** baz=316	0.67	316	*e*P	Pn	00 46 34.0	-0.4
NCUH	baz=316			*e*S	Sn	00 46 43.2	-1.0
ESL	**Shilin** baz=192	0.71	200	P	Pn	00 46 33.0	-1.9
NTST	**Danshui** baz=349	0.71	341	*e*P	Pn	00 46 34.4	-0.6
NTST	baz=349			*e*S	Sn	00 46 44.8	-0.4
OWD	**Renai** baz=218	0.71	222	*e*P	Pn	00 46 34.8	-0.2
ANP	**Anpu** baz=346	0.72	347	*e*P	Pn	00 46 34.2	-0.8
ANP	baz=346			*e*S	Sn	00 46 44.5	-1.0
SBCB	**Hsinchu** baz=308	0.72	295	*e*P	Pn	00 46 35.5	+0.5
SBCB	baz=308			*e*S	Sn	00 46 45.6	+0.3
WHP	**Taichung City** baz=256	0.72	253	*e*P	Pn	00 46 35.7	+0.6
WHP	baz=256			*e*S	Sn	00 46 46.3	+0.8
NMLH	**Miaoli** baz=275	0.83	274	*e*P	Pn	00 46 36.3	-0.1
NMLH	baz=275			*e*S	Sn	00 46 48.1	+0.3
WCS	**Beigang Elemen** baz=236	0.84	240	*e*P	Pn	00 46 36.9	+0.4
WCS	baz=236			*e*S	Sn	00 46 49.2	+1.3
EGFH	**Guangfu** baz=198	0.85	197	*e*P	Pn	00 46 34.8	-1.9
EGFH	baz=198			*e*S	Sn	00 46 46.1	-2.2
TWQ1	**Liyutan** baz=263	0.86	261	*e*P	Pn	00 46 36.0	-0.7
TWQ1	baz=263			*e*S	Sn	00 46 48.2	-0.2
NSY	**Sanyi** baz=267	0.86	266	*e*P	Pn	00 46 36.8	-0.1
NSY	baz=267			*e*S	Sn	00 46 49.1	+0.6
SMLT	**Sun Moon Lake** baz=227	0.94	231	*e*P	Pn	00 46 38.5	+0.5
SMLT	baz=227			*e*S	Sn	00 46 51.3	+0.6
TYC	**Yuchr** baz=230	0.96	233	*e*P	Pn	00 46 38.4	+0.3
TYC	baz=230			*e*S	Sn	00 46 51.7	+0.8
SSLB	**Suanglung** baz=227	0.97	225	*e*P	Pn	00 46 38.1	-0.2
SSLB	baz=227			*e*S	Sn	00 46 52.6	+1.3
WDJ	**Dajia District** baz=263	0.98	262	*e*P	Pn	00 46 37.2	-1.1
WDJ	baz=263			*e*S	Sn	00 46 51.9	+0.6
TCU	**Taichung** baz=251	0.99	250	*e*P	Pn	00 46 37.8	-0.8
HGSD	**Ruisui** baz=204	1.02	194	*e*P	Pn	00 46 37.9	-1.1
HGSD	baz=204			*e*S	Sn	00 46 53.5	+1.1
EHY	**Hungye** baz=194	1.03	200	*e*P	Pn	00 46 36.8	-2.3
EHY	baz=194			*e*S	Sn	00 46 49.7	-3.0
WJS	**Zhushan** baz=248	1.11	234	*e*P	Pn	00 46 40.9	+0.8
WJS	baz=248			*e*S	Sn	00 46 55.7	+1.4
WNT	**Mingjian** baz=251	1.11	237	*e*P	Pn	00 46 40.1	0.0
WNT	baz=251			*e*S	Sn	00 46 55.6	+1.2
JYNG	**Yonagunijimaku**	1.14	91	P	Pn	00 46 40.7	+0.2
JYNG				*e*S	Sn	00 46 55.6	+0.6
YULB	**Yu-li** baz=193	1.15	199	*e*P	Pn	00 46 38.4	-2.3
YULB	baz=193			*e*S	Sn	00 46 51.7	-3.7
EYUL	**Yuli** baz=199	1.19	197	*e*P	Pn	00 46 40.4	-0.8
YOJ	**Yonaguni jima** baz=80	1.20	91	*e*P	Pn	00 46 40.5	-0.7
YOJ	baz=80			*e*S	Sn	00 46 56.9	+0.4
YUS	**Yu-Shan** baz=209	1.21	215	*e*P	Pn	00 46 41.9	0.0
ALS	**Alishan** baz=231	1.27	220	*e*P	Pn	00 46 43.4	+0.8
ALS	baz=231			*e*S	Sn	00 47 00.4	+1.7
CHN5	**Tsauling** baz=229	1.29	227	*e*P	Pn	00 46 43.1	+0.5
CHN5	baz=229			*e*S	Sn	00 47 00.5	+1.6
WDLH	**Douliu** baz=247	1.32	233	*e*P	Pn	00 46 43.3	+0.3
WDLH	baz=247			*e*S	Sn	00 47 00.1	+0.5
WRL	**Guolierlin Hig** baz=256	1.34	245	P	Pn	00 46 42.5	-0.7
WRL	baz=256			*e*S	Sn	00 46 58.9	-1.1
CHKT	**Chengkung** baz=195	1.41	193	*e*P	Pn	00 46 43.3	-0.9
CHKT	baz=195			*e*S	Sn	00 47 00.5	-1.2
ELDTW	**Lidau** baz=200	1.43	206	*e*P	Pn	00 46 44.0	-0.6
ELDTW	baz=200			*e*S	Sn	00 47 02.0	-0.4
WTK	**Tuku** baz=239	1.44	237	*e*P	Pn	00 46 43.8	-0.7
WTK	baz=239			*e*S	Sn	00 47 02.4	+0.1
CHN2	**Minshiung** baz=243	1.47	230	*e*P	Pn	00 46 45.9	+1.0
CHN2	baz=243			*e*S	Sn	00 47 05.1	+2.0
CHN4	**Tsaushan** baz=225	1.52	222	P	Pn	00 46 45.5	-0.2
CHN4	baz=225			*e*S	Sn	00 47 05.8	+1.5
CHY	**Chiayi** baz=243	1.53	230	*e*P	Pn	00 46 45.6	-0.1
CHY	baz=243			*e*S	Sn	00 47 04.7	+0.2
TPUB	**Ta-pu** baz=223	1.53	220	*e*P	Pn	00 46 46.8	+1.0
TPUB	baz=223			*e*S	Sn	00 47 06.0	+1.2
EDH	**Donghe** baz=196	1.55	194	P	Pn	00 46 45.1	-1.0
EDH	baz=196			*e*S	Sn	00 47 05.0	-0.1
STYH	**Taoyuan** baz=207	1.56	213	*e*P	Pn	00 46 46.1	-0.1
STYH	baz=207			*e*S	Sn	00 47 05.6	+0.3
WTP	**Ta-pu** baz=232	1.58	219	P	Pn	00 46 47.5	+0.9
WTP	baz=232			*e*S	Sn	00 47 09.1	+3.1
TWK	**Hsinying** baz=225	1.64	223	*e*P	Pn	00 46 48.4	+1.0
TWK	baz=225			*e*S	Sn	00 47 10.3	+2.8
LONT	**Longtian** baz=191	1.66	199	*e*P	Pn	00 46 45.2	-2.3
CHN1	**Nanshi** baz=223	1.68	220	*e*P	Pn	00 46 48.1	+0.2
CHN1	baz=223			*e*S	Sn	00 47 10.0	+1.6
ICHU	**Yijhu** baz=232	1.72	230	*e*P	Pn	00 46 48.9	+0.6
ICHU	baz=232			*e*S	Sn	00 47 08.9	-0.2
SGST	**Jiashian** baz=229	1.73	216	*e*P	Pn	00 46 48.5	-0.1
TWG	**Pinlang** baz=191	1.75	199	*e*P	Pn	00 46 47.6	-1.2
TWGBT	**Beinan** baz=191	1.75	199	*e*P	Pn	00 46 47.3	-1.6
SLGT	**Liugui** baz=216	1.77	213	*e*P	Pn	00 46 51.9	+2.7
SLGT	baz=216			*e*S	Sn	00 47 10.7	+0.2
TTN	**Taitung** baz=190	1.80	197	*e*P	Pn	00 46 49.9	+0.5
IRIF	**Iriomote-Funau**	1.86	94	P	Pn	00 46 50.2	0.0
IRIF				S	Sn	00 47 12.4	-0.2
SSD	**Sandimen** baz=212	1.99	210	*e*P	Pn	00 46 53.3	+1.2
ECL	**Taimali** baz=194	2.00	200	*e*P	Pn	00 46 52.3	+0.1
MASBT	**Mashibuluo** baz=211	2.11	208	*e*P	Pn	00 46 54.4	+0.7
MASBT	baz=211			*e*S	Sn	00 47 21.1	+2.4
JKRS	**Kuro-shima**	2.12	96	P	Pn	00 46 53.6	-0.2
JKRS				*e*S	Sn	00 47 19.4	+0.4
PNG	**Penghu** baz=246	2.16	245	*e*P	Pn	00 46 52.4	-2.0
PHUB	**P'eng-hu** baz=245	2.17	244	*e*P	Pn	00 46 54.0	-0.6
JIJ	**Ishigaki jima**	2.23	93	P	Pn	00 46 55.5	+0.1
JIJ				S	Sn	00 47 21.3	-0.4
EAST	**Anshuo** baz=196	2.23	201	*e*P	Pn	00 46 56.1	+0.6
EAST	baz=196			*e*S	Sn	00 47 23.1	+1.2
SSPT	**Xinbi** baz=210	2.25	208	*e*P	Pn	00 46 56.6	+1.1
MATB	**Ma-tsu** baz=315	2.30	317	*e*P	Pn	00 46 56.3	0.0
SCZT	**Fangliau** baz=208	2.33	205	*e*P	Pn	00 46 58.0	+1.3

JISG	Ishigakijimahi	2.38	87	P	Pn	00 46 57.3	-0.1
JISG				eS	Sn	00 47 24.8	-0.6
SLIU	Shizi	2.41	200	eP	Pn	00 46 58.8	+1.0
	baz=195						
PTMZ	Houxiangcun	2.41	284	eP	Pn	00 46 56.0	-1.8
	baz=284						
WLCH	Liuqiu	2.45	210	eP	Pn	00 46 58.4	+0.1
	baz=225						
JTJ	Tarama	2.74	86	P	Pn	00 47 03.0	+0.7
JTJ				eS	Sn	00 47 36.2	+2.0
XPSS	Dashiqiu	2.79	331	eP	Pn	00 47 01.6	-1.4
	baz=328						
MHZQ	Yeshan	2.90	304	eP	Pn	00 47 04.2	-0.3
	baz=303						
KNMB	Chin-men Tao	3.02	270	eP	Pn	00 47 04.4	-1.8
	baz=270						

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*VIE **03** 00:56:44.4±1.3, 51°.43N×16°.17E, h0^{km}, mb2.5/8, ml2.6/8, Error ellipse: s-maj=14.6km s-min=5.1km az=41.0 70 km NW of Wroclaw Suspected Mining induced.*
*IPEC **03** 00:56:44.0±0.4, 51°.46N×16°.25E, h0^{km}±2^{km}, ML2.3/3, Error ellipse: s-maj=4.0km s-min=1.8km az=57.0*
*PRU **03** 00:56:44.6±0.0, 51°.46N×16°.07E, h0^{km}*
*IDC **03** 00:56:44.7±0.9, 51°.47N×15°.92E, h0^{km}, mb1 3.5/8, mb1mx3.3/45, mbtmp3.4/8, ML2.7/8, Error ellipse: s-maj=18.6km s-min=8.4km az=95.0*
ISC 03 00:56:42.7±0.8, 51°.53N±0°.04×16°.10E±0°.02, h0^{km}, n43, σ0^{s}.93/80, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.70	170	ePg	Pg	00 56 56.4	+0.4
KSP				eSg	Sg	00 57 05.0	0.0
CHVC	Chvalec	0.94	182	ePG	Pg	00 57 01.1	+0.3
CHVC				eSG	Sg	00 57 12.7	-0.2
	comp=Z,43nm,0.5s						
OSTC	Ostas	0.98	176	ePG	Pg	00 57 01.6	+0.2
OSTC				eSG	Sg	00 57 14.1	+0.1
	comp=Z,41nm,0.5s						
UPC	Upice	1.02	183	ePG	Pg	00 57 02.3	0.0
UPC				eSG	Sg	00 57 15.2	-0.4
	comp=Z,97nm,0.7s						
DPC	Dobruska-Polom	1.19	173	ePG	Pg	00 57 05.2	-0.3
DPC				eSG	Sg	00 57 20.1	-0.8
	comp=Z,30nm,0.3s						
PVCC	Panska Ves	1.39	225	ePG	Pb	00 57 09.6	0.0
PVCC				eSG	Sn	00 57 28.4	0.0
	comp=Z,106nm,0.3s						
BRG	Berggiesshubel	1.50	245	Pg	Pg	00 57 12.2	+0.7
BRG				Sg	Sn	00 57 32.3	+1.1
BRG				Amp		00 57 32.8	
	comp=Z,36nm,0.3s						
BRG				Amp		00 59 19.0	
	comp=Z,0.6nm,14.3s						
BRG				Amp		00 59 24.0	
	comp=N,0.1nm,14.5s						
BRG				Amp		00 59 33.0	
	comp=E,0.4nm,15.4s						
KRLC	Kraliky	1.52	163	ePG	Pn	00 57 11.2	0.0
KRLC				eSG	Sg	00 57 29.7	-1.8
	comp=E,33nm,0.3s						
PRA	Prague	1.80	217	ePG	Pn	00 57 15.2	+0.2
PRA				eSG	Sg	00 57 40.9	+0.4
	comp=E,25nm,0.6s						
PRU	Pruhonice	1.83	213	ePG	Pn	00 57 15.4	0.0
PRU				eSG	Sg	00 57 41.5	0.0
	comp=E,25nm,0.7s						
CLL	Collm	1.95	265	ePn	Pn	00 57 17.0	-0.1
CLL				ePg	Pg	00 57 20.0	-0.1
CLL				i		00 57 23.1	
CLL				eSg	Sg	00 57 46.0	+0.7
	comp=Z,22nm,0.4s						
MORC	Moravsky Berou	1.98	152	ePn	Pn	00 57 17.3	-0.2
	baz=334						
MORC				eSg	Sn	00 57 42.8	-0.3
	comp=Z,22nm,0.3s,baz=334						
OKC	Ostrava-Krasne	2.14	142	ePG	Pb	00 57 22.0	-0.3
OKC				eSG	Sb	00 57 49.1	-0.2
	comp=Z,33nm,0.7s						
VRAC	Vranov	2.25	172	Pn	Pn	00 57 22.2	+1.1
	comp=Z,1.9nm,0.3s,baz=344,slow=15,SNR=11						
VRAC				Lg	Lg	00 57 53.5	
	comp=Z,3.0nm,0.3s,baz=317,slow=19,SNR=6.9						
VRAC	Vranov	2.25	172	ePn	Pn	00 57 21.3	+0.1
	baz=354						
VRAC				eSg	Sb	00 57 52.0	-0.4
	comp=Z,15nm,0.3s,baz=354						
VRAC	Vranov	2.25	172	ePN	Pn	00 57 21.4	+0.2
VRAC				eSG	Sb	00 57 52.1	-0.4
TREC	Trest	2.27	190	ePN	Pn	00 57 22.1	+0.6
TREC				ePG	Pb	00 57 25.0	+0.4
TREC				eSG	Sb	00 57 53.9	+0.7
	comp=Z,21nm,0.2s						
KRUC	Moravsky	2.48	175	ePn	Pn	00 57 24.5	+0.2
	baz=358						
KRUC				eSg	Sb	00 57 59.1	0.0
	comp=Z,18nm,0.4s,baz=358						
NKC	Novy Kostel	2.65	242	ePN	Pn	00 57 27.4	+0.7
NKC				ePG	Pb	00 57 31.3	+0.2
NKC				eSG	Sg	00 58 08.4	+0.6
	comp=Z,27nm,0.3s						
OJC	Ojcow	2.69	118	ePg	Pg	00 57 36.0	+1.8
OJC				eSg	Sg	00 58 10.2	+1.2
KHC	Kasperske Hory	2.89	215	ePN	Pn	00 57 30.8	+0.7
KHC				ePG	Pb	00 57 36.4	+1.2
KHC				eSN	Sn	00 58 05.3	-0.2
KHC				eSG	Sg	00 58 15.7	+0.1
	comp=Z,10.0nm,0.4s						
CKRC	Cesky Krumlov	2.94	204	ePN	Pn	00 57 31.4	+0.6
CKRC				ePG	Pb	00 57 37.0	+0.9
CKRC				eSG	Sg	00 58 16.0	-1.3
GERES	GERESS Array B	3.10	211	Pn	Pn	00 57 34.1	+1.2
	comp=Z,0.6nm,0.3s,baz=28,slow=13,SNR=19						
GERES				Lg	Lg	00 58 18.4	
	comp=Z,2.1nm,0.3s,baz=23,slow=26,SNR=5.7						
SMOL	Smolenice	3.14	164	ePG	Pg	00 57 42.9	+0.1
SMOL				eSG	Sg	00 58 25.6	+2.1
LANS	Liptovska Anna	3.21	136	ePN	Pn	00 57 37.4	+2.9
LANS				ePG	Pg	00 57 44.4	+0.1
LANS				eSG	Sg	00 58 26.3	+0.4
MODS	Modra-Piesok	3.25	166	ePG	Pg	00 57 44.9	-0.1
MODS				eSG	Sg	00 58 28.0	+1.0
KOLL	Kolacno	3.31	152	ePN	Pn	00 57 37.8	+2.1
ZST	Bratislava	3.40	169	ePG	Pg	00 57 47.9	+0.1
VYHS	Vyhne	3.51	149	ePG	Pg	00 57 49.2	-0.9
VYHS				eSG	Sg	00 58 34.8	-0.8
CONA	Conrad Observa	3.61	183	i Pn	Pn	00 57 40.7	+0.8
	comp=Z,0.6nm,0.2s						
MOA	Molln	3.87	199	i Pn	Pn	00 57 44.2	+0.7
	comp=Z,0.9nm,0.1s						
MOA				Sg	Sg	00 58 46.6	-0.4
	comp=Z,6.6nm,0.4s						
ARSA	Arzberg	4.30	185	ePn	Pn	00 57 50.2	+0.8
	comp=Z,1.4nm,0.3s						
ARSA				eSg	Sg	00 59 00.3	-0.4
	comp=Z,3.7nm,0.4s						
KBA	Koelnbreinsper	4.80	203	ePn	Pn	00 57 57.5	+1.0
	comp=Z,0.3nm,0.1s						
KBA				Sg	Sg	00 59 16.7	-0.2
	comp=Z,3.4nm,0.5s						
WTTA	Wattenberg	5.17	216	i Pn	Pn	00 58 03.4	+2.0
	comp=Z,0.9nm,0.2s						
WTTA				Sg	Sg	00 59 29.1	+0.4
	comp=Z,3.9nm,0.6s						
MOTA	Moosalm	5.30	220	i Pn	Pn	00 58 04.1	+0.8
	comp=Z,0.5nm,0.2s						
ABTA	Abfaltersbach	5.33	208	i Pn	Pn	00 58 05.2	+1.6
	comp=Z,0.9nm,0.5s						
ABTA				Sg	Sg	00 59 34.3	+0.4
	comp=Z,5.6nm,0.7s						
SQTA	Sankt Quirin	5.36	218	i Pn	Pn	00 58 05.0	+0.9
	comp=Z,1.2nm,0.2s						
DAVOX	Davos/Dischmat	6.26	223	Pn	Pn	00 58 18.0	+1.5
	comp=Z,0.2nm,0.3s,baz=27,slow=4.5,SNR=2.3						
DAVOX				Lg	Lg	00 59 59.7	
	comp=Z,0.1nm,0.3s,baz=188,slow=22,SNR=2.2						
HFS	Hagfors	8.73	352	Pn	Pn	00 58 50.2	+0.1
	comp=Z,0.1nm,0.3s,baz=164,slow=14,SNR=2.0						
NOA	NORSAR Array B	9.91	346	Pn	Pn	00 59 06.0	-0.4
	comp=Z,0.0nm,0.3s,baz=176,slow=12,SNR=2.0						
FINES	FINESS Array B	11.35	25	Pn	Pn	00 59 25.4	-0.5
	comp=Z,0.1nm,0.3s,baz=217,slow=10,SNR=3.4						
EKA	Eskdalemuir Ar	12.09	296	Pn	Pn	00 59 35.8	-0.3
	baz=101,slow=14,SNR=2.1						
ARCES	ARCESS Array B	18.61	10	Pn	P	01 00 57.9	-3.4
	baz=195,slow=13,SNR=5.2						

TAP 03 01:01:45.1, 24°.87N×122°.02E, h8^{km}, ML2.4, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.15	348	P	Pg	01 01 48.8	+0.5
	baz=350						
TWB1				S	Sg	01 01 51.3	+1.0
	baz=350						
NTC	Toucheng	0.18	267	P	Pg	01 01 49.8	+1.1
	baz=266						
NTC				S	Sg	01 01 53.1	+2.0
	baz=266						
TIPB	Shuangxi	0.21	301	P	Pg	01 01 50.5	+1.1
	baz=300						
TIPB				S	Sg	01 01 53.7	+1.5
	baz=300						
ILA	Ilan	0.27	248	eP	Pg	01 01 50.8	+0.4
	baz=247						
ILA				eS	Sb	01 01 55.8	-1.2
	baz=247						
TWC	Suao	0.30	212	P	Pg	01 01 51.8	+0.8
	baz=210						
TWC				eS	Sg	01 01 56.1	+1.1
	baz=210						
NWF	Wu-fen Shan	0.30	313	P	Pb	01 01 52.4	-0.5
	baz=313						
NWF				S	Sb	01 01 57.3	-0.7
	baz=313						
TWE	Neicheng	0.35	246	P	Pb	01 01 53.0	-0.7
	baz=244						
TWE				eS	Sb	01 01 58.1	-1.3
	baz=244						
NDS	Dongshan	0.36	231	eP	Pb	01 01 53.2	-0.6
	baz=230						
NDS				eS	Sb	01 01 59.4	-0.3
	baz=230						
TWA	Mucha	0.41	286	eP	Pb	01 01 55.0	+0.3
	baz=286						
TWA				S	Sb	01 02 00.4	-0.8
	baz=286						
NHDH	Xindian Distri	0.46	282	S	Sb	01 02 02.8	+0.2
	baz=282						
ENTT	Nioudou	0.47	242	P	Pb	01 01 55.6	-0.1
	baz=241						
ENTT				eS	Sb	01 02 03.0	+0.1
	baz=241						
NWLT	Wulai	0.48	260	eP	Pb	01 01 55.8	-0.1
	baz=259						
NWLT				S	Sb	01 02 02.5	-0.7
	baz=259						
YM01	YM01	0.50	304	P	Pb	01 01 56.4	+0.2
	baz=304						
YM01				S	Sb	01 02 03.6	0.0
	baz=304						
ENA	Nanau	0.51	211	eP	Pb	01 01 56.3	0.0
	baz=209						
ENA				eS	Sb	01 02 03.4	-0.3
	baz=209						
NDT	Datong Townshi	0.53	241	eP	Pb	01 01 56.9	+0.1
	baz=240						
NDT				eS	Sb	01 02 05.3	+0.7
	baz=240						
ANP	Anpu	0.56	305	eP	Pb	01 01 57.5	+0.3
	baz=305						
TWS1	Kuangyinshan	0.60	293	eP	Pb	01 01 57.8	0.0
	baz=293						
TWS1				eS	Sb	01 02 07.4	+0.9
	baz=293						
YHNB	Yeheng	0.62	252	eP	Pb	01 01 57.7	-0.5
	baz=251						
NSK	Sanguang	0.63	253	eP	Pb	01 01 58.3	-0.2
	baz=252						
NSK				eS	Sb	01 02 07.5	0.0
	baz=252						
NNSB	Datong	0.73	233	eP	Pb	01 02 00.5	+0.4
	baz=233						
NNSB				eS	Sb	01 02 10.6	+0.3
	baz=233						
PCYT	Pengchaiyu	0.76	3	eP	Pg	01 01 59.3	-0.5
	baz=3.0						
NCUH	Zhongli	0.77	278	eP	Pb	01 02 00.8	+0.1
	baz=277						
NCUH				eS	Sb	01 02 12.7	+1.3
	baz=277						
NACB	Ninganchiao	0.79	210	eP	Pb	01 02 01.4	+0.3
	baz=209						
NACB				eS	Sb	01 02 12.0	0.0
	baz=209						
ETL	Fush Village	0.79	207	eP	Pb	01 02 01.1	-0.1
	baz=207						
ETL				eS	Sb	01 02 11.9	-0.2
	baz=207						
ETLH	Xiulin Townshi	0.82	217	eP	Pb	01 02 02.4	+0.7
	baz=216						
ETLH				eS	Sb	01 02 13.4	+0.5
	baz=216						
TWD	Chiawan	0.87	207	eS	Sb	01 02 14.9	+0.6
	baz=206						
FUSS	Fushou	0.94	229	eP	Pb	01 02 04.2	+0.4
	baz=229						
FUSS				eS	Sb	01 02 17.5	+0.9
	baz=229						
LIOB	Emei	0.94	257	eP	Pn	01 02 04.9	+0.2
	baz=256						
LIOB				eS	Sn	01 02 18.4	+0.1
	baz=256						
NSTT	Nanjuang	0.96	256	eP	Pn	01 02 04.9	0.0
	baz=255						
NSTT				eS	Sn	01 02 18.4	-0.3
	baz=255						
TWT	Tachien	0.98	232	eP	Pn	01 02 05.6	+0.2
	baz=231						
TWT				eS	Sn	01 02 19.7	+0.1
	baz=231						
YOJ	Yonaguni jima	0.98	114	eP	Pb	01 02 04.6	+0.2
	baz=113						
WHF	Hehuan Shan	0.99	224	eP	Pn	01 02 05.6	-0.2
	baz=223						
WHF				eS	Sn	01 02 19.4	-0.9
	baz=223						
TDCB	Techi	1.00	232	eP	Pn	01 02 05.6	0.0
	baz=232						
CHGB	Renai	1.11	224	eP	Pn	01 02 08.0	+0.7
	baz=223						
WCS	Beigang Elemen	1.29	232	eP	Pg	01 02 10.5	+0.5
	baz=231						
TYC	Yuchr	1.43	228	eP	Pb	01 02 12.3	+0.3
	baz=227						
SSLB	Suanglung	1.45	222	eP	Pg	01 02 13.0	+0.1
	baz=222						
HGSD	Ruisui	1.47	202	eP	Pb	01 02 12.7	-0.1
	baz=201						
YULB	Yu-li	1.61	204	eP	Pn	01 02 13.3	-0.6
	baz=204						

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*NOU **03** 01:07:42.1, 19°.88S×133°.90E, h0^{km}, mb4.3/18, Northern Territory, Australia*
*IDC **03** 01:07:43.6±0.8, 19°.92S×133°.87E, h0^{km}, mb4.1/5, mb1 4.1/5, mb1mx4.0/22, mbtmp4.1/5, MS2.6/1, Ms1 2.6/1, ms1mx2.5/23, Error ellipse: s-maj=15.7km s-min=7.7km az=3.0*
*NEIC **03** 01:07:44.0±1.5, 19°.84S±0°.05×133°.91E±0°.02, h8^{km}±5^{km}, Error ellipse: s-maj=7.2km s-min=2.6km az=187.0*
*AUST **03** 01:07:44.1±0.8, 19°.78S×133°.94E, h11^{km}±5^{km}, Error ellipse: s-maj=5.1km s-min=4.3km az=54.0*
ISC 03 01:07:43.9±0.5, 19°.84S±0°.04×133°.92E±0°.04, h12^{km}, n81, σ1^{s}.81/94, mb4.2/8, Northern Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I07AU	WARRAMUNGA INF	0.40	103	Pg	Pg	01 07 52.2	+0.4
	baz=285,slow=30,SNR=2.2						
WRA	Warramunga Arr	0.41	104	Pg	Pg	01 07 52.5	+0.5
	97nm,0.3s,baz=275,slow=18,SNR=3116						
WRA				Lg	Lg	01 07 57.6	
	569nm,0.3s,baz=275,slow=36,SNR=12						
WRA				Rg	Rg	01 07 59.0	
	421nm,0.2s,baz=278,slow=31,SNR=39						
WRA	Warramunga Arr	0.41	104	Pg	Pg	01 07 50.7	-1.3
WRAB	Tennant Creek	0.42	102		Pg	01 07 52.7	+0.6
WRAB				Sg	Sg	01 07 58.1	+0.4
WB2	Warramunga Arr	0.42	104	P	Pg	01 07 52.8	+0.6
	baz=0.4						
WB2				S	Sg	01 07 58.2	+0.4
	baz=0.4						
WB2	Warramunga Arr	0.42	104	Pg	Pg	01 07 52.6	+0.4
WB2				Sg	Sg	01 07 58.0	+0.2
WB0	Warramunga Arr	0.45	80		Pg	01 07 53.3	+0.4
WB0				Sg	Sg	01 07 59.0	+0.1
WR0	Warramunga Arr	0.60	101	Pg	Pg	01 07 55.8	+0.3
AS31	Alice Springs	3.80	180	Pn	Pn	01 08 45.2	+2.8
ASAR	Alice Springs	3.80	180	Pn	Pn	01 08 45.3	+2.9
	27nm,0.3s,baz=4.0,slow=15,SNR=313						
ASAR				Pg	Pb	01 08 53.3	+2.3
	17nm,0.3s,baz=3.8,slow=18,SNR=15						
ASAR				Sn	Sn	01 09 29.7	+2.6
	19nm,0.3s,baz=2.6,slow=29,SNR=7.0						
ASAR				LR	LR	01 09 35.5	
	comp=Z,79nm,18.0s,baz=358,slow=30						
ASAR				Lg	Lg	01 09 42.4	
	44nm,0.3s,baz=3.4,slow=31,SNR=12						
ASAR	Alice Springs	3.80	180	Pn	Pn	01 08 45.1	+2.7
ASPA	Alice Springs	3.81	180	P	Pn	01 08 45.8	+3.4
	baz=3.9						
ASPA				S	Sn	01 09 30.6	+3.5
	baz=3.9						
QIS	Mount Isa	5.39	99	P	Pn	01 09 06.0	+1.8
	baz=5.4,SNR=16						
QIS				S	Sn	01 10 07.1	+0.9
	baz=5.4						
QIS	Mount Isa	5.39	99	P	Pn	01 09 05.8	+1.6
	22nm,0.6s						
AUKAT	Katherine High	5.58	343	P	Pn	01 09 07.1	+0.3
	baz=5.6						
KNRA	Kununurra	6.43	309	P	Pn	01 09 21.4	+3.0
	baz=6.4,SNR=4.8						
KNRA	Kununurra	6.43	309	Pn	Pn	01 09 17.7	-0.7
KDU	Kakadu	7.25	349	P	Pn	01 09 30.0	+0.2
	baz=7.2,SNR=50						
KDU	Kakadu	7.25	349	P	Pn	01 09 29.2	-0.5
	32nm,0.6s						
WRKA	Warakurna	7.33	224	P	Pn	01 09 30.7	-0.1
	baz=7.4,SNR=9.6						
WRKA				S	Sn	01 10 52.4	-1.6
	baz=7.4						
WRKA	Warakurna	7.33	224	P	Pn	01 09 30.2	-0.7
	15nm,2.0s						
MTN	Manton Dam	7.46	339	P	Pn	01 09 32.3	-0.3
	baz=7.4,SNR=7.7						
MTN				S	Sn	01 10 54.8	-2.3
	baz=7.4						
MTN	Manton Dam	7.46	339	Pn	Pn	01 09 31.9	-0.6
FITZ	Fitzroy Crossi	8.02	281	P	Pn	01 09 40.4	+0.1
	baz=8.0,SNR=12						
FITZ	Fitzroy Crossi	8.02	281	Pn	Pn	01 09 40.6	+0.3
FITZ	Fitzroy Crossi	8.02	281	P	Pn	01 09 40.3	0.0
	5.9nm,0.6s						
OOD	Oodnadatta	8.08	169	P	Pn	01 09 43.2	+2.1
	baz=8.2,SNR=13						
OOD				S	Sn	01 11 10.4	-2.0
	baz=8.2						
MTSU	Mount Surprise	9.98	82	P	Pn	01 10 08.3	+1.0
	baz=10.0,SNR=15						
INKA	Innaminka	10.04	143	P	Pn	01 10 08.3	+0.3
	baz=10,SNR=5.3						
MULG	Mulgathing	10.39	179	P	Pn	01 10 13.4	+0.6
	baz=10,SNR=8.3						
MULG	Mulgathing	10.39	179	P	Pn	01 10 13.5	+0.6
	23nm,0.8s						
COEN	Coen	10.62	58	P	Pn	01 10 15.3	-0.7
	baz=11						
COEN	Coen	10.62	58	P	Pn	01 10 15.4	-0.5
	11nm,1.5s						
LCRK	Leigh Creek	11.25	161	P	Pn	01 10 24.7	+0.2
	baz=11,SNR=5.3						
QLP	Quilpie	11.61	127	P	Pn	01 10 29.3	-0.3
	baz=12,SNR=10						
QLP				S	Sn	01 12 35.1	-4.1
	baz=12						
QLP	Quilpie	11.61	127	P	Pn	01 10 29.0	-0.5
	31nm,0.8s						
FORT	Forrest	12.11	205	P	Pn	01 10 34.7	-1.6
	baz=12,SNR=40						
FORT	Forrest	12.11	205	Pn	Pn	01 10 34.6	-1.6
FORT	Forrest	12.11	205	P	Pn	01 10 34.6	-1.6
	113nm,0.6s						
BBOO	Buckleboo	13.05	172	P	Pn	01 10 47.4	-1.8
	baz=13,SNR=8.3						
BBOO	Buckleboo	13.05	172	P	Pn	01 10 47.8	-1.4
	20nm,0.9s						
STKA	Stephens Creek	13.82	152	Pn	Pn	01 10 56.9	-2.9
	0.8nm,0.3s,baz=324,slow=13,SNR=16						
STKA				Sn	Sn	01 13 25.6	-7.7
	1.2nm,0.3s,baz=27,slow=11,SNR=7.8						
STKA				Lg	Lg	01 15 06.6	
	0.5nm,0.3s,baz=61,slow=22,SNR=1.4						
STKA	Stephens Creek	13.82	152	P	Pn	01 10 58.0	-1.7
	baz=14						
STKA	Stephens Creek	13.82	152	Pn	Pn	01 10 56.7	-3.0
STKA	Stephens Creek	13.82	152	P	Pn	01 10 57.8	-1.9
	4.1nm,0.8s						
HTT	Hallett	14.25	163	P	Pn	01 11 05.3	-0.3
	baz=14						
HTT	Hallett	14.25	163	P	Pn	01 11 04.7	-0.9
	19nm,2.1s						
MEEK	Meekatharra	15.60	241	P	Pn	01 11 19.5	-4.3
	baz=16,SNR=8.1						
CMSA	Cobar Meteorol	15.74	140	P	Pn	01 11 23.4	-2.1
	baz=16						
CMSA	Cobar Meteorol	15.74	140	P	Pn	01 11 23.2	-2.3
	23nm,2.5s						
ARPS	Mount Arapiles	18.23	159	P	P	01 11 58.0	+0.9
	baz=18,SNR=7.2						
ARPS	Mount Arapiles	18.23	159	P	P	01 11 57.5	+0.5
	19nm,0.7s						
GIRL	Giralia	18.56	258	P	P	01 11 59.9	-0.8
	baz=19						
MORW	Morawa	18.67	237	P	P	01 11 58.2	-3.6
MORW				IAmb	IAmb	01 12 05.6	
	comp=Z,32nm,1.2s						
MORW	Morawa	18.67	237	P	Pn	01 12 02.6	+0.4
	comp=Z,31nm,1.6s						
BLDU	Ballidu	18.88	232	P	P	01 12 01.5	-2.7
	comp=Z,22nm,2.3s						
ARMA	Armidale	19.16	127	P	P	01 12 07.3	-0.1
ARMA				IAmb	IAmb	01 12 09.7	
	comp=Z,12nm,1.4s						
NWAO	Narrogin (SRO)	19.79	225	P	P	01 12 11.8	-2.3
NWAO				IAmb	IAmb	01 12 27.7	
	comp=Z,23nm,1.3s						
NWAO	Narrogin (SRO)	19.79	225	P	P	01 12 13.7	-0.5
NWAO	Narrogin (SRO)	19.79	225	P	P	01 12 13.2	-1.0
MTKN	Mount Kenneth	20.25	230	P	P	01 12 19.0	-0.1
	comp=Z,147nm,0.6s						
TOO	Toolangi	20.34	153	P	P	01 12 20.9	+0.7
TOO				IAmb	IAmb	01 12 25.7	
	comp=Z,10nm,0.9s						
VNDA	Vanda	59.32	173	P	P	01 17 45.3	+0.1
	comp=Z,0.6nm,0.6s,baz=313,slow=6.4,SNR=5.5						
VNDA	Vanda	59.32	173	P	P	01 17 45.6	+0.4
MAW	Mawson	64.61	204	P	P	01 18 21.3	+0.4
	comp=Z,1.1nm,0.7s,baz=45,slow=8.7,SNR=4.3						
MAW	Mawson	64.61	204	P	P	01 18 21.5	+0.6
ULN	Ulaanbaatar	71.58	341	P	P	01 19 06.4	+1.4
SONM	Songino Array	71.75	341	P	P	01 19 09.1	+3.1
	comp=Z,0.5nm,0.4s,baz=159,slow=4.5,SNR=5.1						
SONM	Songino Array	71.75	341	P	P	01 19 06.0	-0.1
MSEY	Mahe Island	77.56	269	P	P	01 19 39.2	-1.3
MSEY				IAmb	IAmb	01 19 42.3	
	comp=Z,9.2nm,1.1s						
MK31	Makanchi Array	81.01	327	P	P	01 19 57.8	-0.7
MK31				IAmb	IAmb	01 20 02.3	
	comp=Z,2.3nm,0.8s						
MKAR	Makanchi Array	81.01	327	P	P	01 20 00.2	+1.7
	comp=Z,2.9nm,0.7s,baz=128,slow=6.8,SNR=24						
MKAR	Makanchi Array	81.01	327	P	P	01 19 59.5	+1.0
SNAA	Sanae	84.08	193	Pdiff	P	01 20 14.8	+0.6
SNAA	Sanae	84.08	193	P	P	01 20 15.0	+0.7
SNAA				IAmb	IAmb	01 20 16.1	
	comp=Z,1.4nm,1.0s						
ZALV	Zalesovo Beam	84.71	333	P	P	01 20 19.0	+1.5
	comp=Z,1.7nm,0.7s,baz=116,slow=3.4,SNR=8.5						
VNA2	Neumayer--Watz	85.58	192	Pdiff	P	01 20 22.7	+1.0
	baz=131,slow=2.0						
VNA3	Neumayer Olymp	85.74	191	Pdiff	P	01 20 23.1	+0.5
VNA1	Neumayer--Stat	85.97	192	Pdiff	P	01 20 23.8	+0.1
NVAR	Mina Array Bea	115.76	56	PKP	PKiKP	01 26 29.1	+2.3

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
	comp=Z,0.2nm,0.5s,baz=265,slow=5.3,SNR=2.3						
TORD	**Torodi Ar. Bea**	**133.83**	**269**	PKP	**PKiKP**	**01 27 03.7**	**+0.7**
	comp=Z,0.5nm,1.0s,baz=68,slow=2.2,SNR=2.2						

BJI ***03*** *01:10:41.2±0.0, 13°.44N×146°.24E, h38^{km}, mB5.0/38, mb5.0/67, Ms4.6/51, Ms7 4.4/50*

DJA ***03*** *01:10:43.0±1.2, 14°N±4°×14°6E±°, h26^{km}±8^{km}, M5.3/55, mB5.7/19, mb5.3/55, MLv5.3/1, Mw(mB)5.3/19*

MOS ***03*** *01:10:43.5±1.0, 13°.52N×145°.75E, h36^{km}, mb5.2/45, MS4.4/6, Error ellipse: s-maj=10.5km s-min=5.4km az=106.6*

NEIC ***03*** *01:10:44.0±1.7, 13°.44N±0°.09×145°.98E±0°.07, h26^{km}±4^{km}, mb5.1/103, Error ellipse: s-maj=13.8km s-min=9.7km az=189.0*

IDC ***03*** *01:10:44.5±2.4, 13°.52N×145°.92E, h31^{km}±16^{km}, mb4.7/28, mb1 4.8/30, mb1mx4.8/36, mbtmp4.9/30, ML4.5/2, MS4.3/37, Ms1 4.4/37, ms1mx4.3/47, Error ellipse: s-maj=16.6km s-min=10.6km az=90.0*

GCMT ***03*** *01:10:51.0±0.2, 13°.30N±0°.01×145°.90E±0°.01, h26^{km}, MW5.2/120, Moment Tensor Solution. s54,c73; s120,c201; Duration: 1s.0 Moment tensor: Scale 10^{16} Nm; M_{rr}-2.01±.21; $M_{\theta\theta}$-1.58±.15; $M_{\phi\phi}$3.58±.17; $M_{r\theta}$5.46±.41; $M_{\theta\phi}$4.80±.12; $M_{\phi r}$0.88±.31; Best double couple: $M_0$7.95600×10^{16} NP1:ϕ_s351.00000°, δ44.00000°, λ-165.00000°. NP2:ϕ_s251.00000°, δ80.00000°, λ-47.00000°. Principal axes: T 7.9370, Plg22.0000°, Azm309.0000°; N 0.0290, Plg42.0000°, Azm61.0000°; P -7.9750, Plg39.0000°, Azm199.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 01:10:45.0±0.6**, 13°.50N**±0°.04×**145°.91E**±0°.04**, h35^{km}**±2^{km}**, h35^{km}:pP-P, n515,** σ**1s.28**/540**, mb5.0**/168**, MS4.4**/61**, 19C-3D, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.02**	**275**	Pn	**Pn**	**01 11 03.8**	**+1.0**
	3µm,0.3s,baz=131,slow=14,SNR=607						
GUMO				LR	LR	01 11 24.3	
	comp=Z,40µm,18.6s,baz=76,slow=39						
GUMO	**Guam**	**1.02**	**275**	P	**Pn**	**01 11 03.7**	**+1.0**
GUMO						01 11 18.0	
GUMO	**Guam**	**1.02**	**275**		**Pn**	**01 11 03.7**	**+1.0**
GUMO				Sn	**Sb**	**01 11 18.0**	**+0.7**
GUMO	**Guam**	**1.02**	**275**	P	**Pb**	**01 11 04.2**	**0.0**
PATS	**Pohnpei**	**13.88**	**117**	Pn	**Pn**	**01 13 54.9**	**-4.4**
PATS	**Pohnpei**	**13.88**	**117**	P	**Pn**	**01 13 56.5**	**-2.9**
JCJ	**Chichijima**	**13.97**	**346**	Pn	**Pn**	**01 13 60.0**	**-0.5**
	5.0nm,0.3s,baz=234,slow=18,SNR=1.2						
JCJ				Sn	**Sn**	**01 16 35.4**	**+1.0**
	2.3nm,0.3s,baz=283,slow=21,SNR=2.4						
JAY	**Jayapura**	**16.73**	**198**	Pn	**P**	**01 14 37.7**	**-1.1**
	0.7nm,0.3s,baz=351,slow=7.8,SNR=5.3						
JAY				Sn	**Sn**	**01 17 36.5**	**-5.3**
	0.7nm,0.3s,baz=90,slow=20,SNR=1.5						
JAY				LR	LR	01 20 54.1	
	comp=Z,2µm,18.0s,baz=12,slow=36						
SMPI	**Sarmi**	**16.97**	**205**	P	**P**	**01 14 42.2**	**+0.8**
	25nm,1.4s						
BAKI	**Biak**	**17.54**	**214**	P	**P**	**01 14 49.2**	**+1.5**
	2µm64nm,1.0s						
JHJ2	**Mitsune**	**20.30**	**345**	P	**P**	**01 15 18.4**	**+0.6**
JHJ	**Hachijo jima 2**	**20.32**	**345**	P	**P**	**01 15 18.0**	**-0.1**
	53nm,0.3s,baz=251,slow=18,SNR=1.7						
JHJ				LR	LR	01 22 23.4	
	comp=Z,1µm,19.1s,baz=179,slow=34						
SIJI	**Sorong**	**20.36**	**227**	P	**P**	**01 15 19.1**	**+0.4**
	16nm,0.6s,baz=30,slow=12,SNR=20						
SIJI				LR	LR	01 22 10.4	
	comp=Z,607nm,21.8s,baz=59,slow=34						
SWI	**Sorong**	**20.36**	**227**	P	**P**	**01 15 19.7**	**+1.0**
	2µm54nm,0.7s						
H11N1	**WAKE ISLAND Hy**	**21.02**	**70**	T	T	01 37 36.8	
	baz=256,slow=74						
H11N2	**WAKE ISLAND Hy**	**21.03**	**70**	T	T	01 37 24.7	
	baz=256,slow=74						
H11N3	**WAKE ISLAND Hy**	**21.04**	**70**	T	T	01 37 24.7	
	baz=256						
JOW	**Kunigami**	**21.18**	**311**	P	**P**	**01 15 27.4**	**-0.1**
	51nm,0.4s,baz=158,slow=10,SNR=9.1						
JOW				LR	LR	01 22 29.0	
	comp=Z,1µm,19.2s,baz=68,slow=33						
JOW	**Kunigami**	**21.18**	**311**	P	**P**	**01 15 31.0**	**+3.6**
FAKI	**Fak Fak**	**21.21**	**221**	P	**P**	**01 15 28.1**	**+0.2**
FAKI	**Fak Fak**	**21.21**	**221**	P	**P**	**01 15 28.6**	**+0.7**
	4µm298nm,1.6s						
FAKI	**Fak Fak**	**21.21**	**221**	P	**P**	**01 15 29.2**	**+1.3**
BUKP	**Musuan**	**21.23**	**257**	*i* P	**P**	**01 15 28.1**	**-0.1**
PMG	**Port Moresby**	**22.79**	**177**	LR	LR	01 24 52.0	
	comp=Z,486nm,18.5s,baz=355,slow=37						
PMG	**Port Moresby**	**22.79**	**177**	P	**P**	**01 15 42.8**	**-1.9**
PMG				pmax	pmax		
	comp=Z,40nm,0.9s						
PMG	**Port Moresby**	**22.79**	**177**	P	**P**	**01 15 42.8**	**-1.9**
PMG				IAmb	IAmb	01 15 59.1	
	comp=Z,40nm,0.9s						
PMG	**Port Moresby**	**22.79**	**177**	P	**P**	**01 15 45.1**	**+0.4**
PMG	**Port Moresby**	**22.79**	**177**	P	**P**	**01 15 44.8**	**+0.1**
JSU	**Suzuyama**	**22.86**	**324**	P	**P**	**01 15 45.1**	**-0.4**
JSU				IAmb	IAmb	01 15 47.9	
	comp=Z,60nm,0.8s						
JMN	**Monobe**	**22.92**	**334**	P	**P**	**01 15 46.1**	**+0.1**
JMN				IAmb	IAmb	01 16 01.6	
	comp=Z,63nm,0.9s						
LBMI	**Labuha**	**23.03**	**234**	P	**P**	**01 15 46.5**	**-0.8**
	comp=Z,23nm,0.5s						
INU	**Inuyama**	**23.19**	**341**	P	**P**	**01 15 51.1**	**+2.4**
JGF	**Kuroka**	**23.32**	**342**	P	**P**	**01 15 50.1**	**+0.1**
MSAI	**Masohi**	**23.75**	**226**	P	**P**	**01 15 55.1**	**+0.8**
	comp=Z,5.5nm,0.9s						
JNU	**Nakatsue**	**23.86**	**327**	P	**P**	**01 15 54.5**	**-0.8**
	comp=Z,40nm,0.5s,baz=148,slow=2.3,SNR=36						
JNU	**Nakatsue**	**23.86**	**327**	P	**P**	**01 15 54.7**	**-0.6**
JNU				IAmb	IAmb	01 15 56.8	
	comp=Z,46nm,0.7s						
JNU	**Nakatsue**	**23.86**	**327**	P	**P**	**01 15 56.5**	**+1.2**
MJAR	**Matsushiro Arr**	**23.96**	**345**	P	**P**	**01 15 54.7**	**-1.4**
	comp=Z,13nm,0.7s,baz=168,slow=10,SNR=22						
MJAR				LR	LR	01 24 16.8	
	comp=Z,2µm,21.5s,baz=185,slow=34						
MJAR	**Matsushiro Arr**	**23.96**	**345**	P	**P**	**01 15 54.1**	**-2.0**
MAJO	**Matsushiro**	**23.96**	**345**	*c i*P	**P**	**01 15 54.8**	**-1.3**
MAJO				pmax	pmax		
	comp=Z,13nm,0.8s						
MAJO	**Matsushiro**	**23.96**	**345**	P	**P**	**01 15 54.6**	**-1.5**
MAJO	**Matsushiro**	**23.96**	**345**	P	**P**	**01 15 56.0**	**-0.1**
MAT	**Matsushiro**	**23.96**	**345**	P	**P**	**01 15 53.7**	**-2.5**
MAT				*e*S	**S**	**01 20 12.4**	**+1.8**
JMM	**Marumori**	**24.69**	**350**	P	**P**	**01 16 02.4**	**-0.4**
JMM				IAmb	IAmb	01 16 18.6	
	comp=Z,37nm,0.5s						
SANI	**Sanana**	**25.08**	**233**	P	**P**	**01 16 06.0**	**-0.5**
	comp=Z,764nmcomp=Z,26nm,1.0s						
SANI	**Sanana**	**25.08**	**233**	P	**P**	**01 16 08.0**	**+1.5**
KMSI	**Cibinong**	**25.23**	**241**	P	**P**	**01 16 08.7**	**+0.8**
	comp=Z,189nm,0.7s						
YULB	**Yu-li**	**25.30**	**296**	P	**P**	**01 16 07.5**	**-1.0**
YULB				IAmb	IAmb	01 16 16.7	
	comp=Z,89nm,1.5s						
NACB	**Ninganchiao**	**25.30**	**298**	P	**P**	**01 16 08.0**	**-0.5**
JSD	**Sado**	**25.37**	**346**	P	**P**	**01 16 07.8**	**-1.1**
JSD				IAmb	IAmb	01 16 11.7	
	comp=Z,48nm,0.8s						
SSLB	**Suanglung**	**25.73**	**297**	P	**P**	**01 16 12.4**	**0.0**
SSLB				IAmb	IAmb	01 16 29.9	
	comp=Z,72nm,1.0s						
SSLB	**Suanglung**	**25.73**	**297**	P	**P**	**01 16 12.7**	**+0.3**
GTOI	**Gorontalo**	**26.03**	**242**	P	**P**	**01 16 15.5**	**+0.4**
	comp=Z,27nm,0.8s						
HNR	**Honiara**	**26.70**	**148**	LR	LR	01 25 38.2	
	comp=Z,1µm,21.9s,baz=314,slow=33						
MRSI	**Marisa**	**27.04**	**243**	P	**P**	**01 16 24.6**	**+0.4**
	comp=Z,110nm,0.8s						
LUWI	**Luwuk**	**27.11**	**240**	P	**P**	**01 16 23.7**	**-1.2**
LUWI	**Luwuk**	**27.11**	**240**	P	**P**	**01 16 24.1**	**-0.8**
	comp=Z,3µmcomp=Z,272nm,0.8s						
LUWI	**Luwuk**	**27.11**	**240**	P	**P**	**01 16 24.5**	**-0.4**
TOLI2	**Tolitoli**	**27.75**	**246**	P	**P**	**01 16 31.1**	**+0.4**
APSI	**Ampana**	**27.99**	**241**	P	**P**	**01 16 33.0**	**+0.2**
	comp=Z,24nm,0.8s						
TJN	**Taejon**	**28.21**	**327**	⇑*i*P	**P**	**01 16 34.3**	**-0.2**
SSE	**Sheshan**	**28.70**	**312**	P	**P**	**01 16 38.7**	**-0.2**
SSE				S	**S**	**01 21 28.9**	**+3.1**
SSE				pmax	pmax		
	comp=Z,22nm,0.7s						
SSE				LR	LR		
	comp=Z,130nm,17.8s						
SSE				LR	LR		
	comp=Z,240nm,17.3s						
SSE				LR	LR		
	comp=Z,270nm,23.9s						
KSRS	**Korea Array**	**28.75**	**329**	P	**P**	**01 16 39.2**	**-0.1**
	comp=Z,19nm,0.7s,baz=146,slow=9.6,SNR=59						
KSRS				PcP	**PcP**	**01 19 49.4**	**+0.4**
	comp=Z,1.5nm,0.7s,baz=158,slow=4.4,SNR=4.6						
KSRS				LR	LR	01 27 44.8	
	comp=Z,717nm,19.4s,baz=134,slow=36						
KSAR	**Wonju Array Be**	**28.76**	**329**	P	**P**	**01 16 39.1**	**-0.3**
KSAR	**Wonju Array Be**	**28.76**	**329**	P	**P**	**01 16 39.1**	**-0.3**
MPSI	**Mapaga**	**28.89**	**245**	P	**P**	**01 16 40.8**	**0.0**
	comp=Z,574nmcomp=Z,30nm,1.1s						
KDI	**Kendari**	**28.90**	**235**	P	**P**	**01 16 41.2**	**+0.3**
KDU	**Kakadu**	**29.23**	**208**	P	**P**	**01 16 44.2**	**+0.5**
	comp=Z,52nm,0.9s						
DRS	**Darwin Rock St**	**29.75**	**211**	P	**P**	**01 16 50.0**	**+1.6**
	comp=Z,34nm,0.8s						
MTN	**Manton Dam**	**29.99**	**210**	P	**P**	**01 16 50.0**	**-0.5**
MTN	**Manton Dam**	**29.99**	**210**	P	**P**	**01 16 51.4**	**+0.9**
	comp=Z,70nm,0.8s						
YUK	**Yuzh-Kuril'sk**	**30.43**	**360**	*i* P	**P**	**01 16 52.0**	**-2.1**
YUK				*i* S	**S**	**01 21 49.1**	**-3.5**
YUK				MLR	MLR		
	comp=Z,403nm,17.0s						
YUK				MLR	MLR		
	comp=E,971nm,16.0s						
YUK				MLR	MLR		
	comp=N,2µm,18.0s						
JKA	**Kamikawa-asahi**	**30.64**	**355**	P	**P**	**01 16 55.1**	**-0.9**
ASAJ	**Asahikawa**	**30.64**	**355**	P	**P**	**01 16 55.1**	**-0.9**
ASAJ				pmax	pmax		
	comp=Z,12nm,0.7s						
TTSI	**Tana Toraja**	**30.67**	**239**	P	**P**	**01 16 58.1**	**+1.6**
BNSI	**Bone**	**31.18**	**237**	P	**P**	**01 17 01.8**	**+0.7**
	comp=Z,730nmcomp=Z,59nm,1.1s						
SOEI	**Soe**	**31.55**	**224**	P	**P**	**01 17 03.2**	**-1.2**
SOEI	**Soe**	**31.55**	**224**	P	**P**	**01 17 03.3**	**-1.2**
	comp=Z,89nm,0.8s						
SOEI	**Soe**	**31.55**	**224**	P	**P**	**01 17 04.8**	**+0.4**
MSHR	**Mys Shultsa**	**31.66**	**339**	*de*P	**P**	**01 17 05.4**	**+0.4**
MSHR				pmax	pmax		
	comp=Z,23nm,0.9s						
BKSI	**Bulukumba**	**31.71**	**236**	P	**P**	**01 17 05.4**	**-0.3**
	comp=Z,12nm,0.9s						
KAPI	**Kappang**	**31.83**	**236**	P	**P**	**01 17 06.7**	**0.0**
KAPI				pmax	pmax		
	comp=Z,41nm,1.1s						
KAPI	**Kappang**	**31.83**	**236**	P	**P**	**01 17 06.7**	**0.0**
KAPI	**Kappang**	**31.83**	**236**	P	**P**	**01 17 07.5**	**+0.8**
BSSI	**Bau Bau, Buton**	**31.91**	**234**	P	**P**	**01 17 08.2**	**+0.7**
	comp=Z,26nm,1.0s						
BATI	**Baumata**	**32.28**	**224**	P	**P**	**01 17 10.9**	**+0.1**
	comp=Z,20nm,0.6s						
EDFI	**Ende, Flores**	**32.66**	**229**	P	**P**	**01 17 13.0**	**-1.2**
	comp=Z,16nm,0.9s						
USA0B	**Ussuriysk Arra**	**32.84**	**341**	P	**P**	**01 17 15.4**	**+0.2**
USA0B				pmax	pmax		
	comp=Z,15nm,1.1s						
USA0B	**Ussuriysk Arra**	**32.84**	**341**	P	**P**	**01 17 15.4**	**+0.2**
USRK	**Ussuriysk Ar.**	**32.84**	**341**	P	**P**	**01 17 14.0**	**-1.2**
	comp=Z,11nm,0.8s,baz=144,slow=8.1,SNR=15						
USRK				LR	LR	01 29 15.4	
	comp=Z,654nm,19.5s,baz=145,slow=34						
USRK	**Ussuriysk Ar.**	**32.84**	**341**	P	**P**	**01 17 14.8**	**-0.5**
USRK	**Ussuriysk Ar.**	**32.84**	**341**	P	**P**	**01 17 14.8**	**-0.5**
YSS	**Yuzh-Sakhalins**	**33.45**	**356**	*e*P	**P**	**01 17 20.1**	**-0.5**
YSS				*e*		01 24 42.0	
YSS				MLR	MLR		
	comp=Z,500nm,19.0s						
YSS				MLR	MLR		
	comp=N,400nm,16.0s						
YSS				MLR	MLR		
	comp=E,500nm,16.0s						
KNRA	**Kununurra**	**33.59**	**211**	P	**P**	**01 17 21.6**	**-0.4**
KNRA	**Kununurra**	**33.59**	**211**	P	**P**	**01 17 22.9**	**+0.8**
	comp=E,134nm,1.0s						
WHN	**Wuhan**	**33.66**	**305**	⇓P	P	01 17 36.9	+14
MDJ	**Mudanjiang**	**34.00**	**339**	P	**P**	**01 17 26.3**	**+0.9**
MDJ				pP	sP	01 17 36.6	-0.4
MDJ				sP	pwP	01 17 40.0	-0.1
MDJ				S	**S**	**01 22 52.4**	**+4.1**
MDJ				pmax	pmax		
	comp=E,16nm,0.9s						
MDJ				pmax	pmax		
	comp=E,140nm,4.5s						
MDJ				LR	LR		
	comp=E,670nm,18.4s						
MDJ				LR	LR		
	comp=E,480nm,17.9s						
MDJ				LR	LR		
	comp=E,970nm,21.0s						
MDJ	**Mudanjiang**	**34.00**	**339**	P	**P**	**01 17 26.2**	**+0.9**
TIA	**Tai'an**	**34.32**	**316**	⇓P	**P**	**01 17 28.2**	**-0.1**
TIA				pmax	pmax		
	comp=E,7.0nm,0.6s						
TIA				LR	LR		
	comp=E,500nm,14.9s						
TIA				LR	LR		
	comp=E,550nm,18.7s						
TIA				LR	LR		
	comp=E,800nm,22.0s						
QIS	**Mount Isa**	**34.41**	**190**	P	**P**	**01 17 30.7**	**+1.5**
	comp=E,34nm,1.0s						
BASI	**Baing, Sumba**	**34.46**	**228**	P	**P**	**01 17 27.8**	**-1.9**
CN2	**Changchun**	**34.93**	**334**	*e*P	**P**	**01 17 31.3**	**-2.2**
CN2				*e*PP	**PnPn**	**01 18 50.0**	**-0.8**
CN2				S	**S**	**01 23 00.2**	**-2.5**
CN2				*e*sS	sS	01 23 16.1	-1.4
CN2				pmax	pmax		
	comp=E,20nm,0.7s						
CN2				LR	LR		
	comp=E,550nm,18.0s						
CN2				LR	LR		
	comp=E,510nm,18.0s						
CN2				LR	LR		
	comp=E,750nm,18.0s						
WB0	**Warramunga Arr**	**34.95**	**199**	P	**P**	**01 17 32.7**	**-1.1**
QIZ	**Qiongzhong**	**35.02**	**284**	P	**P**	**01 17 33.0**	**-1.5**
QIZ				S	**S**	**01 23 08.6**	**+4.0**
QIZ				pmax	pmax		
	comp=E,30nm,1.8s						
QIZ				LR	LR		
	comp=E,470nm,30.9s						
QIZ				LR	LR		
	comp=E,590nm,19.1s						
QIZ				LR	LR		
	comp=E,610nm,20.6s						
SBUM	**Sibu**	**35.07**	**255**	P	**P**	**01 17 36.0**	**+1.0**
WR0	**Warramunga Arr**	**35.08**	**199**	P	**P**	**01 17 34.0**	**-1.0**
WRAB	**Tennant Creek**	**35.12**	**199**	P	**P**	**01 17 34.8**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,41nm,0.8s						
WRAB	**Tennant Creek**	**35.12**	**199**	P	**P**	**01 17 34.8**	**-0.5**
WB2	**Warramunga Arr**	**35.13**	**199**	P	**P**	**01 17 34.6**	**-0.8**
WRA	**Warramunga Arr**	**35.13**	**199**	P	**P**	**01 17 34.6**	**-0.8**
	comp=Z,42nm,0.9s,baz=20,slow=9.5,SNR=33						
WRA				PcP	**PcP**	**01 20 06.2**	**-0.4**
	comp=Z,4.4nm,0.8s,baz=16,slow=3.4,SNR=4.8						
WRA				LR	LR	01 32 06.5	
	comp=Z,338nm,20.6s,baz=20,slow=36						
WRA	**Warramunga Arr**	**35.13**	**199**	*ce*P	**P**	**01 17 34.5**	**-0.9**
WRA				pmax	pmax		
	comp=Z,43nm,0.8s						
WRA	**Warramunga Arr**	**35.13**	**199**	P	**P**	**01 17 34.5**	**-0.9**
STKI	**Sintang**	**36.63**	**251**	P	**P**	**01 17 48.6**	**+0.2**
RK1H	**Rockhampton Ha**	**36.93**	**173**	P	**P**	**01 17 51.4**	**+0.6**
	comp=Z,26nm,0.8s						
BJI	**Beijing**	**37.15**	**321**	P	**P**	**01 17 52.6**	**+0.1**
BJI				pP	**sP**	**01 18 01.8**	**-2.4**
BJI				PP	**PP**	**01 19 17.2**	**-0.4**
BJI				S	**S**	**01 23 39.8**	**+3.1**
BJI				sS	**sS**	**01 23 54.0**	**+2.2**
BJI				pmax	pmax		
	comp=Z,26nm,0.6s						
BJI				pmax	pmax		
	comp=Z,100nm,4.2s						
BJI				LR	LR		
	comp=Z,550nm,18.0s						
BJI				LR	LR		
	comp=Z,270nm,18.0s						
BJI				LR	LR		
	comp=Z,750nm,18.6s						
KSM	**Kuching**	**37.20**	**254**	P	**P**	**01 17 56.0**	**+2.7**
FITZ	**Fitzroy Crossi**	**37.23**	**213**	LR	LR	01 36 27.2	
	comp=Z,233nm,19.1s,baz=44,slow=41						
FITZ	**Fitzroy Crossi**	**37.23**	**213**	P	**P**	**01 17 53.1**	**-0.3**
FITZ				IAmb	IAmb	01 17 54.7	
	comp=Z,34nm,0.9s						
FITZ	**Fitzroy Crossi**	**37.23**	**213**	P	**P**	**01 17 54.0**	**+0.7**
	comp=Z,48nm,0.9s						
SRBI	**Singaraja**	**37.27**	**237**	P	**P**	**01 17 55.2**	**+1.4**
	comp=Z,43nm,1.3s						
KLR	**Kul'dur**	**37.49**	**345**	*c i*P	**P**	**01 17 54.4**	**-0.9**
KLR				pmax	pmax		
	comp=Z,11nm,0.8s						
KMMI	**Kalianget**	**37.72**	**239**	P	**P**	**01 17 58.5**	**+0.8**
	comp=Z,65nm,0.9s						
ABJI	**Asem Bagus**	**37.91**	**238**	P	**P**	**01 18 01.0**	**+1.8**
	comp=Z,116nm,0.8s						
JAGI	**Jajag, Banyuwa**	**38.35**	**237**	P	**P**	**01 18 04.6**	**+1.6**
BLJI	**Banyuglugur**	**38.41**	**239**	P	**P**	**01 18 05.0**	**+1.6**
	comp=Z,2µmcomp=Z,44nm,0.8s						
AS31	**Alice Springs**	**38.76**	**198**	P	**P**	**01 18 05.5**	**-0.7**
ASAR	**Alice Springs**	**38.76**	**198**	P	**P**	**01 18 05.7**	**-0.6**
	comp=Z,12nm,0.6s,baz=18,slow=8.8,SNR=27						
ASAR				PcP	**PcP**	**01 20 18.9**	**+1.4**
	comp=Z,2.3nm,0.9s,baz=29,slow=4.1,SNR=2.1						
ASAR				LR	LR	01 34 09.5	
	comp=Z,399nm,21.7s,baz=1.5,slow=36						
ASAR	**Alice Springs**	**38.76**	**198**	P	**P**	**01 18 05.3**	**-1.0**
GMJI	**Gumukmas**	**38.82**	**238**	P	**P**	**01 18 07.8**	**+0.9**
	comp=Z,2µmcomp=Z,121nm,0.9s						
GYA	**Guiyang**	**38.91**	**295**	⇑P	**P**	**01 18 08.4**	**+0.6**
GYA				S	**S**	**01 24 02.3**	**-1.8**
GYA				SS	**SnSn**	**01 26 52.6**	**-3.7**
GYA				pmax	pmax		
	comp=Z,14nm,0.9s						
GYA				pmax	pmax		
	comp=Z,180nm,4.6s						
GYA				LR	LR		
	comp=Z,560nm,19.0s						
XAN	**Xi'an**	**39.25**	**308**	P	**P**	**01 18 09.8**	**-0.6**
XAN				pP	pP	01 18 16.1	-3.1
XAN				sP	pwP	01 18 26.0	+1.3
XAN				S	**S**	**01 24 08.6**	**-0.2**
XAN				pmax	pmax		
	comp=Z,18nm,0.5s						
XAN				LR	LR		
	comp=Z,290nm,14.4s						
XAN				LR	LR		
	comp=Z,400nm,13.7s						
XAN				LR	LR		
	comp=Z,550nm,17.2s						
RMQ	**Roma**	**39.84**	**176**	P	**P**	**01 18 15.3**	**+0.1**
	comp=Z,73nm,0.8s						
QLP	**Quilpie**	**39.87**	**182**	P	**P**	**01 18 14.7**	**-0.8**
	comp=Z,150nm,0.8s						
PWJI	**Pagerwojo**	**40.05**	**240**	P	**P**	**01 18 16.7**	**-0.5**
	comp=Z,153nm,0.8s						
HHC	**Hu-ho-hao-te**	**40.50**	**319**	*e*P	**P**	**01 18 22.2**	**+1.4**
HHC				S	**S**	**01 24 22.3**	**-5.2**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,170nm,6.6s						
HHC				LR	LR		
	comp=Z,390nm,18.9s						
HHC				LR	LR		
	comp=Z,540nm,19.1s						
HHC				LR	LR		
	comp=Z,570nm,22.7s						
PETK	**Petropavlovsk-**	**40.61**	**11**	P	**P**	**01 18 21.8**	**+0.5**
	comp=Z,5.0nm,0.7s,baz=158,slow=5.9,SNR=5.3						
PETK				PcP	**PcP**	**01 20 23.3**	**+0.4**
	comp=Z,4.3nm,0.8s,baz=159,slow=5.7,SNR=2.6						
PETK				LR	LR	01 33 29.3	
	comp=Z,605nm,22.0s,baz=194,slow=34						
PETK	**Petropavlovsk-**	**40.61**	**11**	P	**P**	**01 18 20.9**	**-0.4**
PCJI	**Pacitan**	**40.67**	**240**	P	**P**	**01 18 22.1**	**-0.2**
	comp=Z,72nm,0.8s						
DZM	**Mont Dzumac**	**40.68**	**150**	*e*P	**P**	**01 18 26.0**	**+3.6**
	comp=Z,41nm,1.3s						
DZM				*e*S	**S**	**01 24 34.4**	**+3.9**
	comp=Z,161nm,28.3s						
DZM				*e*LR	LR	01 29 37.4	
	comp=Z,584nm,23.3s						
WRKA	**Warakurna**	**41.98**	**204**	P	**P**	**01 18 33.0**	**+0.1**
	comp=Z,69nm,0.8s						
KPJI	**Karang Pucung**	**42.15**	**243**	P	**P**	**01 18 34.5**	**0.0**
	comp=Z,54nm,0.8s						
KMI	**Kunming**	**42.18**	**293**	⇑P	**P**	**01 18 37.1**	**+2.2**
KMI				S	**S**	**01 24 54.3**	**+1.2**
KMI				sS	sS	01 25 12.8	+4.4
KMI				SS	**SS**	**01 28 02.1**	**+0.3**
KMI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KMI				LR	LR		
	comp=Z,360nm,17.1s						
KMI				LR	LR		
	comp=Z,220nm,21.3s						
KMI				LR	LR		
	comp=Z,340nm,18.8s						
CD2	**Chengdu**	**42.41**	**301**	P	**P**	**01 18 35.4**	**-1.1**
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
CD2				LR	LR		
	comp=Z,580nm,16.7s						
CD2				LR	LR		
	comp=Z,510nm,20.1s						
CD2				LR	LR		
	comp=Z,520nm,19.1s						
ZEA	**Zeya**	**42.77**	**344**	*e*P	**P**	**01 18 38.5**	**-0.5**
ZEA				pmax	pmax		
	comp=E,10.0nm,0.4s						
ZEA				pmax	pmax		
	comp=N,10.0nm,0.5s						
ZEA				pmax	pmax		
	comp=Z,20nm,0.7s						
LEM	**Lembang**	**43.05**	**244**	LR	LR	01 37 38.3	
	comp=Z,104nm,21.7s,baz=270,slow=38						
DSRI	**Dabo**	**43.24**	**255**	P	**P**	**01 18 42.8**	**-0.6**
	comp=Z,8.1nm,0.7s						
LZH	**Lanzhou**	**43.87**	**308**	⇑P	**P**	**01 18 50.0**	**+1.7**
LZH				pP	sP	01 18 59.6	-0.5
LZH				sP	pwP	01 19 04.4	+1.6
LZH				S	**S**	**01 25 16.2**	**-1.3**
LZH				sS	sS	01 25 39.2	+6.6
LZH				SS	**SS**	**01 28 27.9**	**-6.5**
LZH				pmax	pmax		
	comp=Z,25nm,1.3s						
LZH				pmax	pmax		
	comp=Z,180nm,5.4s						
LZH				LR	LR		
	comp=Z,540nm,13.8s						
LZH				LR	LR		
	comp=Z,510nm,13.7s						
LZH				LR	LR		
	comp=Z,520nm,12.8s						
LCRK	**Leigh Creek**	**44.32**	**190**	P	**P**	**01 18 51.5**	**-0.2**
CGJI	**Cibinong**	**44.66**	**246**	P	**P**	**01 18 53.1**	**-1.6**
	comp=Z,2µmcomp=Z,38nm,0.8s						
KLSI		**44.70**	**249**	P	**P**	**01 18 55.2**	**+0.2**
	comp=Z,14nm,1.1s						
CMSA	**Cobar Meteorol**	**44.78**	**180**	P	**P**	**01 18 55.5**	**+0.1**
MULG	**Mulgathing**	**45.00**	**195**	P	**P**	**01 18 57.0**	**-0.1**
MDSI	**Maura Dua**	**45.12**	**249**	P	**P**	**01 18 57.7**	**-0.7**
	comp=Z,17nm,0.8s						
IPM	**Ipoh**	**45.16**	**263**	P	**P**	**01 19 01.0**	**+2.2**
STKA	**Stephens Creek**	**45.31**	**185**	P	**P**	**01 18 58.4**	**-1.2**
	comp=Z,19nm,0.8s,baz=353,slow=9.0,SNR=12						
STKA				LR	LR	01 38 43.2	
	comp=Z,686nm,18.9s,baz=6.7,slow=37						
STKA	**Stephens Creek**	**45.31**	**185**	P	**P**	**01 18 58.3**	**-1.2**
STKA	**Stephens Creek**	**45.31**	**185**	P	**P**	**01 18 59.4**	**-0.1**
CMAR	**Chiang Mai Arr**	**45.33**	**283**	P	**P**	**01 19 00.2**	**+0.2**
	comp=Z,9.1nm,0.7s,baz=86,slow=6.0,SNR=38						
CMAR				PcP	**PcP**	**01 20 41.7**	**+2.3**
	comp=Z,12nm,0.8s,baz=98,slow=1.7,SNR=22						
CMAR				LR	LR	01 37 46.6	
	comp=Z,285nm,19.2s,baz=125,slow=36						
CMAR	**Chiang Mai Arr**	**45.33**	**283**	*ce*P	**P**	**01 19 01.1**	**+1.1**
CMAR				pmax	pmax		
	comp=Z,9.0nm,0.7s						

CMAR	**Chiang Mai Arr**	**45.33**	**283**	P	**P**	**01 18 59.8**	**-0.2**
KULM	**Kulim**	**45.33**	**264**	P	**P**	**01 19 01.0**	**+0.9**
MA2	**Magadan**	**46.14**	**3**	*e*P	**P**	**01 19 06.5**	**+0.7**
MA2				pmax	pmax		
	comp=Z,20nm,0.9s						
CIT	**Chita**	**46.36**	**333**	*e*P	**P**	**01 19 08.8**	**+1.0**
CIT				*e*		01 19 20.6	
WHYH	**Whyalla**	**46.95**	**190**	P	**P**	**01 19 13.4**	**+1.0**
BBOO	**Buckleboo**	**47.00**	**191**	P	**P**	**01 19 13.1**	**+0.2**
ULN	**Ulaanbaatar**	**47.04**	**325***c*	*i*P	**P**	**01 19 13.5**	**+0.2**
ULN				pmax	pmax		
	comp=Z,9.0nm,0.7s						
ULN	**Ulaanbaatar**	**47.04**	**325**	P	**P**	**01 19 13.2**	**-0.1**
ULN				IAmb	IAmb	01 19 19.0	
	comp=Z,12nm,0.7s						
SONM	**Songino Array**	**47.39**	**324**	P	**P**	**01 19 16.2**	**+0.2**
	comp=Z,9.9nm,0.7s,baz=141,slow=9.0,SNR=40						
SONM				PcP	**PcP**	**01 20 47.6**	**+1.4**
	comp=Z,4.6nm,0.9s,baz=153,slow=4.1,SNR=2.6						
SONM				LR	LR	01 38 45.3	
	comp=Z,581nm,21.2s,baz=122,slow=36						
GTA	**Gaotai**	**47.99**	**311**	⇑P	**P**	**01 19 21.0**	**+0.2**
GTA				pP	sP	01 19 30.2	-2.4
GTA				sP	pwP	01 19 34.8	-0.5
GTA				pmax	pmax		
	comp=Z,11nm,0.7s						
GTA				pmax	pmax		
	comp=Z,160nm,9.6s						
GTA				LR	LR		
	comp=Z,240nm,17.5s						
GTA				LR	LR		
	comp=Z,290nm,17.5s						
GTA				LR	LR		
	comp=Z,310nm,18.3s						
YAK	**Yakutsk**	**49.84**	**350**	*e*P	**P**	**01 19 33.3**	**-1.1**
YAK				*e**PP	**pP**	**01 19 40.7**	**-2.7**
YAK				*e*		01 20 53.1	
YAK				*e*		01 21 28.3	
YAK				*e*PPP	PPP	01 22 21.7	
YAK				*e*S	**S**	**01 26 42.1**	**+0.5**
YAK				*e**SS	**sS**	**01 26 58.9**	**+2.3**
YAK				*e*		01 29 21.1	
YAK				*e*SS	**SS**	**01 30 16.7**	**+2.3**
YAK				*e*SSS	SSS	01 31 41.5	
YAK				pmax	pmax		
	comp=Z,44nm,0.8s						
YAK				pmax	pmax		
	comp=N,12nm,1.0s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,18nm,0.7s						
YAK				pmax	pmax		
	comp=N,64nm,3.2s						
YAK				pmax	pmax		
	comp=E,78nm,3.3s						
YAK				smax	smax		
	comp=E,35nm,2.2s						
YAK				smax	smax		
	comp=N,51nm,3.6s						
YAK				MLR	MLR		
	comp=Z,292nm,21.0s						
YAK				MLR	MLR		
	comp=N,574nm,27.0s						
YAK				MLR	MLR		
	comp=E,141nm,24.0s						
ARPS	**Mount Arapiles**	**50.15**	**184**	P	**P**	**01 19 37.7**	**+0.7**
BOD	**Bodaibo**	**50.37**	**338**	*e*P	**P**	**01 19 38.0**	**-0.5**
BOD				pmax	pmax		
	comp=Z,18nm,0.9s						
ZAK	**Zakamensk**	**50.48**	**326**	*e*P	**P**	**01 19 37.9**	**-1.7**
ZAK				pmax	pmax		
	comp=Z,12nm,1.6s						
TOO	**Toolangi**	**50.80**	**180**	P	**P**	**01 19 40.5**	**-1.5**
TOO				pmax	pmax		
	comp=Z,38nm,1.0s						
TOO	**Toolangi**	**50.80**	**180**	P	**P**	**01 19 40.5**	**-1.5**
TOO	**Toolangi**	**50.80**	**180**	P	**P**	**01 19 43.6**	**+1.6**
TLY	**Talaya**	**50.97**	**327**	*e*P	**P**	**01 19 44.8**	**+1.6**
TLY				pmax	pmax		
	comp=Z,44nm,0.9s						
TLY				MLR	MLR		
	comp=Z,629nm,16.0s						
TLY	**Talaya**	**50.97**	**327**	P	**P**	**01 19 44.4**	**+1.2**
TLY				IAmb	IAmb	01 19 47.3	
	comp=Z,17nm,0.9s						
MORW	**Morawa**	**51.22**	**214**	P	**P**	**01 19 43.6**	**-1.7**
MORW				IAmb	IAmb	01 19 46.3	
	comp=Z,39nm,1.1s						
MORW	**Morawa**	**51.22**	**214**	P	**P**	**01 19 47.4**	**+2.1**
LSA	**Lhasa**	**52.94**	**297**	P	**P**	**01 19 59.2**	**+0.5**
NWAO	**Narrogin (SRO)**	**53.68**	**210**	LR	LR	01 44 40.4	
	comp=Z,381nm,18.8s,baz=130,slow=38						
TAPN	**Taplejung**	**55.81**	**294**	*e*P	**P**	**01 20 18.4**	**-1.1**
	comp=Z,20nm,0.6s						
ODAN	**Odare**	**56.08**	**293**	*e*P	**P**	**01 20 21.1**	**-0.2**
	comp=Z,22nm,0.7s						
RAMN	**Ramite**	**56.79**	**293**	*e*P	**P**	**01 20 26.1**	**-0.3**
	comp=Z,7.0nm,0.3s						
JIRN	**Jiri**	**57.17**	**294**	*e*P	**P**	**01 20 29.0**	**-0.2**
	comp=Z,8.6nm,0.3s						
GUN	**Gumba**	**57.45**	**295**	*e*P	**P**	**01 20 30.9**	**-0.3**
	comp=Z,28nm,0.4s						
PKI	**Pulchoki**	**57.86**	**294**	*e*P	**P**	**01 20 33.5**	**-0.6**
PKIN	**Phulchoki**	**57.87**	**294**	*e*P	**P**	**01 20 33.1**	**-1.0**
	comp=Z,10nm,0.4s						
WMQ	**Urumqi**	**57.93**	**313**	*e*P	**P**	**01 20 34.4**	**+0.4**
WMQ				pP	sP	01 20 43.7	-2.2
WMQ				PcP	**PcP**	**01 21 27.0**	**+1.0**
WMQ				pmax	pmax		
	comp=Z,16nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,160nm,4.3s						
WMQ				LR	LR		
	comp=Z,340nm,17.7s						
WMQ				LR	LR		
	comp=Z,330nm,18.3s						
WMQ				LR	LR		
	comp=Z,370nm,21.1s						
KKN	**Kakani**	**57.98**	**294**	*e*P	**P**	**01 20 34.3**	**-0.4**
	comp=Z,8.5nm,0.2s						
DMN	**Daman**	**58.13**	**294**	*e*P	**P**	**01 20 35.5**	**-0.4**
	comp=Z,29nm,0.6s						
GKN	**Gorkha**	**58.55**	**295**	*e*P	**P**	**01 20 38.0**	**-0.7**
	comp=Z,26nm,0.4s						
CHNA	**Chernabura Isl**	**58.93**	**33**	P	**P**	**01 20 41.1**	**+0.4**
	baz=247						
TIXI	**Tiksi**	**59.03**	**354**	LR	LR	01 46 50.1	
	comp=Z,189nm,20.5s,baz=190,slow=37						
TIXI	**Tiksi**	**59.03**	**354**	*e*P	**P**	**01 20 39.6**	**-1.4**
DANN	**Dangsing**	**59.33**	**295**	*e*P	**P**	**01 20 43.7**	**-0.5**
	comp=Z,55nm,0.6s						
KOLN	**Koldanda**	**59.47**	**294**	*e*P	**P**	**01 20 44.4**	**-0.7**
	comp=Z,13nm,0.4s						
PYUN	**Piuthan**	**60.01**	**295**	*e*P	**P**	**01 20 48.1**	**-0.7**
	comp=Z,20nm,0.4s						
MK31	**Makanchi Array**	**62.26**	**316**	*e*P	**P**	**01 21 03.5**	**0.0**
MKAR	**Makanchi Array**	**62.26**	**316**	P	**P**	**01 21 03.7**	**+0.2**
	comp=Z,7.3nm,0.3s,baz=91,slow=8.5,SNR=111						
MKAR				LR	LR	01 49 58.5	
	comp=Z,245nm,18.1s,baz=92,slow=38						
MKAR	**Makanchi Array**	**62.26**	**316**	P	**P**	**01 21 03.4**	**-0.1**
ZAA0	**Zalesovo Array**	**62.29**	**324**	P	**P**	**01 21 02.9**	**-0.6**
ZALV	**Zalesovo Beam**	**62.29**	**324**	P	**P**	**01 21 02.5**	**-1.0**
	comp=Z,6.1nm,0.5s,baz=108,slow=8.3,SNR=22						
ZALV				LR	LR	01 48 41.0	
	comp=Z,343nm,19.7s,baz=103,slow=37						
SII	**Sitkinak Islan**	**62.41**	**33**	P	**P**	**01 21 04.6**	**+0.4**
	baz=252						
MAKZ	**Makanchi**	**62.47**	**316**	P	**P**	**01 21 04.8**	**-0.2**
MAKZ				pmax	pmax		
	comp=Z,17nm,0.7s						
MAKZ	**Makanchi**	**62.47**	**316**	P	**P**	**01 21 04.8**	**-0.2**
P18K	**Big Mountain,**	**62.83**	**29**	P	**P**	**01 21 08.4**	**+1.4**
	baz=249						
OHAK	**Old Harbor**	**63.08**	**32**	P	**P**	**01 21 10.2**	**+1.5**
	baz=252						
KDAK	**Kodiak Island**	**63.61**	**32**	P	**P**	**01 21 13.3**	**+1.1**
	baz=252						
N19K	**Bonanza Creek**	**63.68**	**28**	P	**P**	**01 21 12.1**	**-0.7**
N19K				IAmb	IAmb	01 21 31.4	
	comp=Z,12nm,0.7s						
N19K	**Bonanza Creek**	**63.68**	**28**	P	**P**	**01 21 14.3**	**+1.5**
	baz=249						
PDGK	**Podgornoye**	**63.73**	**312**	P	**P**	**01 21 13.0**	**-0.5**
TTA	**Tatalina**	**63.80**	**26**	P	**P**	**01 21 13.3**	**-0.2**
TTA				pmax	pmax		
	comp=Z,30nm,1.5s						
TTA	**Tatalina**	**63.80**	**26**	P	**P**	**01 21 13.3**	**-0.2**
TTA				IAmb	IAmb	01 21 16.7	
	comp=Z,30nm,1.5s						
TTA	**Tatalina**	**63.80**	**26**	P	**P**	**01 21 14.1**	**+0.6**
	baz=247						
P19K	**Oil Pt**	**63.87**	**30**	P	**P**	**01 21 14.9**	**+0.9**
	baz=251						
L19K	**White Mountain**	**64.01**	**27**	P	**P**	**01 21 14.7**	**-0.1**
L19K				IAmb	IAmb	01 21 30.3	
	comp=Z,15nm,1.0s						
L19K	**White Mountain**	**64.01**	**27**	P	**P**	**01 21 16.0**	**+1.2**
	baz=248						
M19K	**Big River Lodg**	**64.11**	**27**	P	**P**	**01 21 16.5**	**+1.0**
	baz=249						
GCSA	**Galena City Sc**	**64.18**	**24**	P	**P**	**01 21 17.2**	**+1.4**
	baz=245						
PRZ	**Przheval'sk**	**64.45**	**311**	P	**P**	**01 21 18.4**	**+0.1**
PRZ				pmax	pmax		
	comp=Z,28nm,0.6s						
PRZ	**Przheval'sk**	**64.45**	**311**	P	**P**	**01 21 18.4**	**+0.1**
L20K	**Farewell, AK**	**64.54**	**27**	P	**P**	**01 21 19.4**	**+1.1**
	baz=249						
HYB	**Hyderabad**	**64.75**	**283**	*i*P	**P**	**01 21 21.0**	**+0.5**
K20K	**Telida**	**64.77**	**26**	P	**P**	**01 21 21.0**	**+1.2**
K20K				IAmb	IAmb	01 21 35.0	
	comp=Z,19nm,0.8s						
K20K	**Telida**	**64.77**	**26**	P	**P**	**01 21 21.7**	**+1.9**
	baz=248,SNR=9.4						
J20K	**Nowinta River**	**65.04**	**25**	P	**P**	**01 21 21.6**	**+0.1**
J20K				IAmb	IAmb	01 21 25.3	
	comp=Z,17nm,1.0s						
J20K	**Nowinta River**	**65.04**	**25**	P	**P**	**01 21 23.2**	**+1.7**
	baz=248,SNR=8.7						
BRSE	**Bradley Lake S**	**65.10**	**30**	P	**P**	**01 21 23.3**	**+1.3**
	baz=253						
KURK	**Kurchatov**	**65.31**	**320***c*	*i*P	**P**	**01 21 23.1**	**-0.3**
KURK				pmax	pmax		
	comp=Z,18nm,0.8s						
KURK	**Kurchatov**	**65.31**	**320**	P	**P**	**01 21 22.9**	**-0.5**
KURK				IAmb	IAmb	01 21 24.0	
	comp=Z,18nm,0.8s						
KURBB	**Kurchatov Arra**	**65.35**	**320**	P	**P**	**01 21 23.1**	**-0.6**
SKT	**Skwentna**	**65.41**	**27**	P	**P**	**01 21 24.1**	**+0.1**
	baz=252						
PPLA	**Purkeypile**	**65.41**	**26**	P	**P**	**01 21 25.4**	**+1.3**
	baz=250						
MDOK	**Medeo**	**65.50**	**311**	P	**P**	**01 21 25.1**	**0.0**
SUA	**Susitna One**	**65.60**	**28**	P	**P**	**01 21 26.6**	**+1.3**
	baz=252						
CAST	**Castle Rocks**	**65.63**	**26**	P	**P**	**01 21 26.5**	**+1.1**
	baz=250,SNR=10.0						
CHUM	**Lake Minchumin**	**65.69**	**25**	P	**P**	**01 21 27.2**	**+1.5**
	baz=250						
O22K	**Cooper Landing**	**65.80**	**29**	P	**P**	**01 21 27.0**	**+0.6**
	baz=254						
SEW	**Seward**	**65.83**	**30**	P	**P**	**01 21 26.8**	**+0.1**
	baz=254						
RC01	**Rabbit Creek A**	**65.96**	**29**	P	**P**	**01 21 28.1**	**+0.6**
	baz=254						
M22K	**Willow**	**65.98**	**28**	P	**P**	**01 21 27.9**	**+0.3**
	baz=253						
KSH	**Kashi**	**66.10**	**307**	P	**P**	**01 21 30.0**	**+1.0**
KSH				pP	pwP	01 21 40.7	-3.2
KSH				sP	sP	01 21 43.0	+2.0
KSH				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KSH				LR	LR		
	comp=Z,180nm,18.0s						
KSH				LR	LR		
	comp=Z,270nm,17.2s						
KSH				LR	LR		
	comp=Z,290nm,16.1s						
H21K	**Melozitna Rive**	**66.12**	**23**	P	**P**	**01 21 29.8**	**+1.4**
	baz=249,SNR=7.9						
I21K	**Tanana**	**66.27**	**24**	P	**P**	**01 21 30.8**	**+1.3**
	baz=250,SNR=8.1						
BPAW	**Bear Paw Mtn.**	**66.32**	**25**	P	**P**	**01 21 29.8**	**+0.1**
BPAW				IAmb	IAmb	01 21 33.4	
	comp=Z,14nm,1.0s						
BPAW	**Bear Paw Mtn.**	**66.32**	**25**	P	**P**	**01 21 30.6**	**+0.9**
	baz=251,SNR=11						
PMR	**Palmer**	**66.38**	**28**	P	**P**	**01 21 31.4**	**+1.2**
	baz=254						
TRF	**Thorofare Moun**	**66.41**	**26**	P	**P**	**01 21 30.8**	**+0.3**
	baz=252,SNR=6.7						
TKM2	**Tokmak 2**	**66.54**	**311**	P	**P**	**01 21 31.9**	**0.0**
	SNR=12						
TKM2	**Tokmak 2**	**66.54**	**311**	P	**P**	**01 21 31.6**	**-0.3**
NRIK	**Noril'sk**	**66.55**	**341**	P	**P**	**01 21 30.7**	**-0.3**
	comp=Z,22nm,0.6s,baz=109,slow=7.9,SNR=53						
NRIK				LR	LR	01 50 04.1	
	comp=Z,502nm,20.9s,baz=114,slow=36						
NRIK	**Noril'sk**	**66.55**	**341***c*	*i*P	**P**	**01 21 30.5**	**-0.6**
NRIK				pmax	pmax		
	comp=Z,21nm,0.6s						
NRIK	**Noril'sk**	**66.55**	**341**	P	**P**	**01 21 30.8**	**-0.3**
PWL	**Port Wells**	**66.56**	**29**	P	**P**	**01 21 31.9**	**+0.5**
	baz=255,SNR=9.5						
KNK	**Knik Glacier**	**66.65**	**29**	P	**P**	**01 21 32.8**	**+0.9**
	baz=255,SNR=9.0						
MLY	**Manley**	**66.72**	**24**	P	**P**	**01 21 33.4**	**+1.1**
	baz=251						
SML	**Sawmill**	**66.81**	**28**	P	**P**	**01 21 33.8**	**+0.8**
	baz=255,SNR=9.6						
KBK	**Karagaybulak**	**67.00**	**311**	P	**P**	**01 21 34.7**	**0.0**
	SNR=10						
MCK	**McKinley**	**67.07**	**26**	P	**P**	**01 21 36.2**	**+1.6**
	baz=253						
GLI	**Glacier Island**	**67.15**	**29**	P	**P**	**01 21 36.1**	**+1.0**
	baz=256						
NEA2	**Nenana**	**67.26**	**25**	P	**P**	**01 21 36.3**	**+0.5**
	baz=253						
SCM	**Sheep Creek Mo**	**67.28**	**28**	P	**P**	**01 21 37.0**	**+1.0**
	baz=256,SNR=6.9						
I23K	**Minto, Yukon-K**	**67.31**	**24**	P	**P**	**01 21 37.0**	**+0.9**
	baz=252,SNR=8.2						
AAK	**Ala-Archa**	**67.34**	**311**	LR	LR	01 53 14.0	
	comp=Z,230nm,19.1s,baz=84,slow=38						
AAK	**Ala-Archa**	**67.34**	**311**	P	**P**	**01 21 36.9**	**0.0**
	SNR=7.3						
AAK	**Ala-Archa**	**67.34**	**311***c*	*e*P	**P**	**01 21 36.8**	**-0.1**
AAK				pmax	pmax		
	comp=Z,6.0nm,0.5s						
AAK	**Ala-Archa**	**67.34**	**311**	P	**P**	**01 21 35.9**	**-1.0**
USP	**Ospenovka**	**67.36**	**311**	P	**P**	**01 21 36.5**	**-0.4**
	SNR=8.0						
H23K	**Yukon River**	**67.45**	**24**	P	**P**	**01 21 37.5**	**+0.5**
H23K				IAmb	IAmb	01 21 56.3	
	comp=Z,7.6nm,0.8s						
H23K	**Yukon River**	**67.45**	**24**	P	**P**	**01 21 38.2**	**+1.3**
	baz=252,SNR=9.2						
COLD	**Coldfoot**	**67.65**	**22**	P	**P**	**01 21 37.6**	**-0.5**
COLD				IAmb	IAmb	01 21 42.4	
	comp=Z,14nm,0.9s						
COLD	**Coldfoot**	**67.65**	**22**	P	**P**	**01 21 39.4**	**+1.3**
	baz=251,SNR=8.2						
EYAK	**Cordova Ski Ar**	**67.72**	**30**	P	**P**	**01 21 39.8**	**+1.1**
	baz=258						
COLA	**College**	**67.85**	**25***c*	*i*P	**P**	**01 21 40.7**	**+1.3**
COLA				pmax	pmax		
	comp=Z,15nm,1.8s						
KLU	**Klutina**	**67.85**	**29**	P	**P**	**01 21 40.6**	**+1.0**
	baz=257						
M24K	**Tolsona, Glenn**	**67.87**	**28**	P	**P**	**01 21 40.8**	**+1.1**
	baz=256						
AML	**Almayashu**	**67.91**	**310**	P	**P**	**01 21 41.5**	**+0.7**
	SNR=8.7						
HDA	**Harding Lake**	**68.10**	**26**	P	**P**	**01 21 40.7**	**-0.3**
	baz=255,SNR=7.7						
H24K	**Noodor Dome**	**68.11**	**24**	P	**P**	**01 21 40.4**	**-0.7**
H24K				IAmb	IAmb	01 21 44.3	
	comp=Z,23nm,1.4s						
H24K	**Noodor Dome**	**68.11**	**24**	P	**P**	**01 21 42.3**	**+1.2**
	baz=253,SNR=9.4						
ILAR	**Eielson Array**	**68.22**	**25**	P	**P**	**01 21 41.2**	**-0.5**
	comp=Z,5.2nm,0.4s,baz=250,slow=5.6,SNR=61						
ILAR				LR	LR	01 49 27.1	
	comp=Z,240nm,21.2s,baz=268,slow=34						
ILAR	**Eielson Array**	**68.22**	**25**	P	**P**	**01 21 41.5**	**-0.3**
ILAR	**Eielson Array**	**68.22**	**25**	P	**P**	**01 21 41.5**	**-0.3**
NIL	**Nilore**	**68.30**	**301**	P	**P**	**01 21 42.0**	**-0.9**
NIL				pmax	pmax		
	comp=Z,41nm,0.8s						
NIL	**Nilore**	**68.30**	**301**	P	**P**	**01 21 42.0**	**-0.9**
TOLK	**Toolik Lake Re**	**68.34**	**21**	P	**P**	**01 21 43.6**	**+1.1**
TOLK				IAmb	IAmb	01 21 45.8	
	comp=Z,28nm,1.4s						
TOLK	**Toolik Lake Re**	**68.34**	**21**	P	**P**	**01 21 43.9**	**+1.4**
	baz=251,SNR=7.5						
BMRM	**Bremner River**	**68.36**	**29**	P	**P**	**01 21 43.7**	**+0.9**
	baz=258						
PAX	**Paxson**	**68.39**	**27**	P	**P**	**01 21 43.9**	**+0.9**
	baz=257,SNR=12						
HARP	**HAARP**	**68.40**	**28**	P	**P**	**01 21 44.3**	**+1.3**
	baz=257,SNR=5.3						
N25K	**Chitina, Valde**	**68.49**	**29**	P	**P**	**01 21 44.4**	**+0.8**
	baz=258						
J25K	**Salcha River,**	**68.81**	**26**	P	**P**	**01 21 46.3**	**+0.8**
	baz=256,SNR=13						
RIDG	**Independent Ri**	**68.83**	**26**	P	**P**	**01 21 46.1**	**+0.4**
	baz=257,SNR=5.8						
VRDI	**Verde Repeater**	**68.96**	**29**	P	**P**	**01 21 47.5**	**+0.8**
VRDI				IAmb	IAmb	01 21 58.8	
	comp=Z,29nm,1.4s						
PRP	**Porcupine Dome**	**68.96**	**25**	P	**P**	**01 21 46.5**	**-0.1**
	baz=256						
CRQE	**Cirque**	**69.05**	**30**	P	**P**	**01 21 48.1**	**+0.9**
	baz=260						
OTUK	**Ortayu**	**69.12**	**317**	P	**P**	**01 21 47.0**	**-0.8**
MCARA	**McCarthy VSAT**	**69.19**	**29**	P	**P**	**01 21 49.1**	**+1.2**
	baz=260						
SCRK	**Sand Creek**	**69.25**	**26**	P	**P**	**01 21 48.1**	**-0.3**
SCRK				IAmb	IAmb	01 22 04.7	
	comp=Z,9.0nm,0.8s						
SCRK	**Sand Creek**	**69.25**	**26**	P	**P**	**01 21 49.1**	**+0.7**
	baz=258,SNR=9.0						
FYU	**Fort Yukon**	**69.33**	**23**	P	**P**	**01 21 50.3**	**+1.7**
L26K	**Log Cabin Wild**	**69.34**	**27**	P	**P**	**01 21 50.1**	**+1.2**
	baz=259,SNR=9.9						
M26K	**Nabesna, AK**	**69.39**	**28**	P	**P**	**01 21 50.2**	**+1.0**
	baz=259						
MESA	**MESA**	**69.51**	**31**	P	**P**	**01 21 50.6**	**+0.4**
	baz=261						
J26L	**Joseph Creek**	**69.54**	**26**	P	**P**	**01 21 50.8**	**+0.7**
	baz=258,SNR=17						
GRNC	**Granite Creek**	**69.69**	**30**	P	**P**	**01 21 51.3**	**0.0**
GRNC				IAmb	IAmb	01 21 55.5	
	comp=Z,14nm,0.7s						
BMAR	**Burnt Mountain**	**69.79**	**23**	P	**P**	**01 21 52.4**	**+0.8**
CTG	**Chitna Glacier**	**69.93**	**30**	P	**P**	**01 21 53.7**	**+1.1**
	baz=261						
L27K	**Beaver Creek,**	**70.03**	**27**	P	**P**	**01 21 54.3**	**+1.2**
L27K	**Beaver Creek,**	**70.03**	**27**	P	**P**	**01 21 54.3**	**+1.2**
	baz=260,SNR=7.7						
BCAR	**Beaver Creek A**	**70.05**	**27**	P	**P**	**01 21 54.3**	**+1.0**
BTK	**Batken**	**70.08**	**308**	P	**P**	**01 21 53.6**	**-0.3**
BTK				pmax	pmax		
	comp=Z,7.0nm,0.5s						
BTK	**Batken**	**70.08**	**308**	P	**P**	**01 21 53.6**	**-0.3**
BTK				IAmb	IAmb	01 22 04.7	
	comp=Z,6.8nm,0.5s						
KK31	**Karatay Array**	**70.27**	**311**	*i*P	**P**	**01 21 54.6**	**-0.4**
KK31	**Karatay Array**	**70.27**	**311**	P	**P**	**01 21 54.6**	**-0.4**
KKAR	**Karatay Array**	**70.27**	**311**	P	**P**	**01 21 54.6**	**-0.4**
KKAR	**Karatay Array**	**70.27**	**311**	P	**P**	**01 21 54.6**	**-0.4**
YUK3	**Moose Creek**	**70.46**	**29**	P	**P**	**01 21 57.1**	**+1.1**
	baz=262						
EGAK	**Eagle**	**70.61**	**26**	P	**P**	**01 21 58.1**	**+1.5**
	baz=260						
BRVK	**Borovoye**	**70.69**	**322***c*	*i*P	**P**	**01 21 57.1**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
BRVK	**Borovoye**	**70.69**	**322**	P	**P**	**01 21 57.2**	**-0.1**
BRVK				IAmb	IAmb	01 21 57.9	
	comp=Z,11nm,0.6s						
PNL	**Peninsula**	**70.72**	**31**	P	**P**	**01 21 58.2**	**+0.8**
	baz=264						
PPT	**Papeete**	**70.75**	**114**	LR	LR	01 46 15.4	
	comp=Z,275nm,21.3s,baz=268,slow=30						
PPT2	**Papeete2**	**70.76**	**114**	*e*S	**S**	**01 31 10.8**	**-0.3**
	comp=Z,123nm,24.0s						
PPT2	**Papeete2**	**70.76**	**114**	*e*LR	LR	01 43 25.9	
	comp=Z,439nm,23.0s						
DAWY	**Dawson**	**71.26**	**27**	P	**P**	**01 22 01.3**	**+0.7**
	baz=262						
YUK4	**Talbot Arm**	**71.27**	**30**	P	**P**	**01 22 02.3**	**+1.4**
	baz=264						
YUK6	**Outpost Mounta**	**71.37**	**30**	P	**P**	**01 22 02.6**	**+1.0**
	baz=264						
CHGR	**Chuyangaron**	**71.41**	**306**	P	**P**	**01 22 01.6**	**-0.4**
KBL	**Kabul**	**71.74**	**302**	P	**P**	**01 22 03.8**	**-0.5**
KBL				pmax	pmax		
	comp=Z,11nm,0.8s						
KBL	**Kabul**	**71.74**	**302**	P	**P**	**01 22 03.8**	**-0.5**
KBL				IAmb	IAmb	01 22 05.5	
	comp=Z,11nm,0.8s						
HYT	**Haines Junctio**	**71.77**	**30**	P	**P**	**01 22 05.6**	**+1.7**
	baz=265						
I29M	**Ogilvie Camp,**	**71.90**	**25**	P	**P**	**01 22 05.6**	**+1.2**
	baz=263						
M30M	**Minto, Yukon**	**72.26**	**28**	P	**P**	**01 22 07.9**	**+1.3**
	baz=265						
SKAG	**Skagway**	**72.77**	**32**	P	**P**	**01 22 09.5**	**-0.1**
SKAG				IAmb	IAmb	01 22 24.1	
	comp=Z,20nm,1.1s						
SKAG	**Skagway**	**72.77**	**32**	P	**P**	**01 22 10.7**	**+1.1**
	baz=267						
TBI	**Tubuai**	**73.04**	**120**	*e*LR	LR	01 44 38.0	
	comp=Z,280nm,24.8s						
WHY	**Whitehorse**	**73.05**	**30**	P	**P**	**01 22 12.6**	**+1.2**
	baz=267						
M31M	**Drury Creek, Y**	**73.36**	**29**	P	**P**	**01 22 14.4**	**+1.3**
	baz=267						
INK	**Inuvik**	**74.06**	**22**	P	**P**	**01 22 16.8**	**-0.2**
INK				pmax	pmax		
	comp=Z,14nm,0.9s						
INK	**Inuvik**	**74.06**	**22**	P	**P**	**01 22 16.8**	**-0.2**
INK				IAmb	IAmb	01 22 20.1	
	comp=Z,14nm,0.9s						
INK	**Inuvik**	**74.06**	**22**	P	**P**	**01 22 18.3**	**+1.2**
	baz=266						
SVE	**Sverdlovsk**	**76.24**	**326**	*e*P	**P**	**01 22 29.9**	**+0.1**
SVE				pmax	pmax		
	comp=Z,12nm,0.9s						
A36M	**Sachs Harbour**	**76.91**	**19**	P	**P**	**01 22 33.1**	**-0.2**
A36M				IAmb	IAmb	01 22 35.7	
	comp=Z,27nm,1.1s						
A36M	**Sachs Harbour**	**76.91**	**19**	P	**P**	**01 22 34.1**	**+0.8**
	baz=273						
AB31	**Akbulak array**	**77.29**	**318**	*i*P	**P**	**01 22 35.1**	**-0.8**
ABKAR	**Akbulak array**	**77.29**	**318**	P	**P**	**01 22 35.4**	**-0.5**
HRA	**Herat**	**77.34**	**303**	P	**P**	**01 22 36.5**	**-0.4**
HRA				IAmb	IAmb	01 22 38.0	
	comp=Z,13nm,0.8s						
ARU	**Arti**	**77.42**	**325**	LR	LR	01 57 10.3	
	comp=Z,69nm,20.9s,baz=88,slow=36						
ARU	**Arti**	**77.42**	**325***c*	*i*P	**P**	**01 22 36.0**	**-0.5**
ARU				S	**S**	**01 32 26.3**	**+1.7**
ARU				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ARU				MLR	MLR		
	comp=Z,356nm,17.0s						
ARU	**Arti**	**77.42**	**325**	P	**P**	**01 22 35.9**	**-0.6**
ARU				IAmb	IAmb	01 22 38.0	
	comp=Z,12nm,0.6s						
AKTO	**Aktyubinsk**	**78.39**	**319**	LR	LR	01 58 04.9	
	comp=Z,360nm,21.0s,baz=85,slow=36						
AKTO	**Aktyubinsk**	**78.39**	**319**	P	**P**	**01 22 41.0**	**-1.1**
GEYT	**Alibeck**	**80.12**	**307**	P	**P**	**01 22 51.6**	**-0.2**
	comp=Z,8.0nm,0.8s,baz=60,slow=6.8,SNR=10						
GEYT				LR	LR	02 01 57.9	
	comp=Z,105nm,19.4s,baz=230,slow=38						
LLLB	**Lillooet**	**81.09**	**40**	P	**P**	**01 22 57.9**	**+1.2**
B05A	**Bryant**	**81.37**	**42**	P	**P**	**01 22 59.4**	**+1.2**
	baz=280						
KIRV	**Kirov**	**81.95**	**328***c*	*i*P	**P**	**01 23 01.0**	**0.0**
J04D	**Umpqua Nationa**	**82.31**	**47**	P	**P**	**01 23 04.2**	**+0.6**
	baz=281						
N02D	**Trinity Center**	**82.31**	**50**	P	**P**	**01 23 04.9**	**+1.4**
	baz=281						
L04D	**Klamath Falls**	**82.37**	**49**	P	**P**	**01 23 05.1**	**+1.4**
	baz=281						
O02D	**Mt. Diablo Mer**	**82.41**	**51**	P	**P**	**01 23 05.0**	**+1.1**
	baz=281						
YKA	**Yellowknife Ar**	**82.47**	**28**	P	**P**	**01 23 03.5**	**-0.2**
	comp=Z,4.7nm,0.8s,baz=285,slow=5.5,SNR=17						
YKA	**Yellowknife Ar**	**82.47**	**28**	P	**P**	**01 23 04.5**	**+0.8**
YKA	**Yellowknife Ar**	**82.47**	**28**	P	**P**	**01 23 04.5**	**+0.8**
M04C	**Macdoel**	**82.80**	**49**	P	**P**	**01 23 07.5**	**+1.5**
	baz=282						
EUNU	**Eureka**	**82.81**	**8**	P	**P**	**01 23 06.2**	**+1.0**

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J05D   Fort Rock, OR      82.93  47  P        P       01 23 08.1 +1.4
       baz=282
PINE   Pine Mountain      83.03  47  P        P       01 23 07.1 -0.2
PRGR   Permogore          83.06 332  eP       P       01 23 05.5 -1.2
PRGR                                 e*PP     pP      01 23 14.8 -1.4
PRGR                                 pmax     pmax
       comp=Z,58nm,1.5s
O03E   Paynes Creek       83.12  50  P        P       01 23 09.2 +1.5
       baz=282
B08A   Colville Reser     83.16  42  P        P       01 23 08.5 +0.8
B08A                                 IAmb     IAmb    01 23 14.1
       comp=Z,11nm,0.9s
D08A   Wollman Farm,      83.72  43  P        P       01 23 11.3 +0.8
C09A   Chrisman Ranch     83.98  42  P        P       01 23 12.6 +0.7
C09A                                 IAmb     IAmb    01 23 21.1
       comp=Z,6.4nm,0.7s
SPA0   Spitsbergen Ar     84.30 351  eP       P       01 23 12.6 -0.3
RES    Resolute Bay       84.40  13  P        P       01 23 13.3 -0.1
RES                                  pmax     pmax
       comp=Z,9.0nm,1.0s
RES    Resolute Bay       84.40  13  P        P       01 23 13.3 -0.1
RES                                  IAmb     IAmb    01 23 15.1
       comp=Z,9.1nm,1.0s
KBS    Kingsbay           84.43 352  eP       P       01 23 14.2 +0.7
NEW    Newport            84.62  42  P        P       01 23 15.4 +0.3
NEW                                  pmax     pmax
       comp=Z,15nm,1.1s
NEW    Newport            84.62  42  P        P       01 23 15.4 +0.3
NEW                                  IAmb     IAmb    01 23 26.1
       comp=Z,15nm,1.1s
NEW    Newport            84.62  42  P        P       01 23 16.8 +1.7
       baz=284
CMB    Columbia Colle     84.68  52  P        P       01 23 15.8 +0.2
CMB                                  pmax     pmax
       comp=Z,6.0nm,0.9s
CMB    Columbia Colle     84.68  52  P        P       01 23 15.8 +0.2
PNTR   Pine Nut           85.04  51  P        P       01 23 17.7  0.0
PNTR                                 IAmb     IAmb    01 23 28.0
       comp=Z,8.5nm,0.8s
HSPB   Hornsund (broa     85.22 350  eP       P       01 23 16.9 -0.6
SMMC   Simmler            85.60  55  P        P       01 23 22.0 +1.8
       baz=283
EDM    Edmonton           85.62  36  P        P       01 23 21.1 +1.1
EDM                                  pmax     pmax
       comp=Z,35nm,1.2s
EDM    Edmonton           85.62  36  P        P       01 23 21.1 +1.1
PKM    Mcpherson Peak     85.84  55  P        P       01 23 23.4 +1.7
       baz=283
PLID   Pearl Lake         86.17  45  P        P       01 23 22.6 -0.6
PLID                                 IAmb     IAmb    01 23 29.2
       comp=Z,6.7nm,0.7s
NVAR   Mina Array Bea     86.18  52  P        P       01 23 24.2 +0.9
       comp=Z,3.9nm,0.6s,baz=271,slow=5.4,SNR=38
NVAR                                 LR       LR      01 58 15.4
       comp=Z,83nm,18.3s,baz=278,slow=33
NVAR   Mina Array Bea     86.18  52  P        P       01 23 22.9 -0.5
KVN    Kaiserville        86.19  51  P        P       01 23 23.4 +0.1
KVN                                  pmax     pmax
       comp=Z,11nm,1.4s
KVN    Kaiserville        86.19  51  P        P       01 23 23.4 +0.1
KVN                                  IAmb     IAmb    01 23 35.4
       comp=Z,11nm,1.4s
WALA   Waterton Lakes     86.47  40  P        P       01 23 24.4  0.0
BMN    Battle Mountai     86.50  49  P        P       01 23 25.2 +0.4
BMN                                  pmax     pmax
       comp=Z,4.0nm,0.8s
BMN    Battle Mountai     86.50  49  P        P       01 23 25.2 +0.4
JTMT   Jette              86.60  42  P        P       01 23 25.2 +0.2
JTMT                                 IAmb     IAmb    01 23 35.9
       comp=Z,13nm,1.2s
ISA    Isabella, Lake     86.72  54  P        P       01 23 27.1 +1.3
       baz=284
MFID   Camas Ranch        86.73  46  P        P       01 23 26.1 +0.4
MFID                                 IAmb     IAmb    01 23 37.0
       comp=Z,20nm,1.2s
CWC    Cottonwood Cre     86.84  53  P        P       01 23 27.0 +0.5
       baz=284
MSO    Missoula           87.08  43  P        P       01 23 29.2 +1.8
       baz=286
EDW2   Edwards Air Fo     87.30  55  P        P       01 23 30.7 +2.1
       baz=284
HAMF   Hammerfest         87.38 344  eP       P       01 23 26.8 -1.4
LRMC   Laurel Mtn Rad     87.39  54  P        P       01 23 30.9 +1.7
       baz=285
ARA0   ARCESS Array S     87.48 342  eP       P       01 23 28.7 -0.1
ARCES  ARCESS Array B     87.48 342  P        P       01 23 28.6 -0.1
       comp=Z,16nm,0.8s,baz=70,slow=6.0,SNR=44
ARCES                                LR       LR      02 05 29.0
       comp=Z,281nm,21.9s,baz=20,slow=38
ARCES  ARCESS Array B     87.48 342  P        P       01 23 29.1 +0.4
ARCES                                pmax     pmax
       comp=Z,20nm,0.9s
ARCES  ARCESS Array B     87.48 342  P        P       01 23 29.1 +0.4
HLID   Hailey             87.68  46  P        P       01 23 30.1 -0.4
HLID                                 IAmb     IAmb    01 23 41.2
       comp=Z,8.4nm,1.0s
HLID   Hailey             87.68  46  P        P       01 23 32.6 +2.2
       baz=286
ELK    Elko               87.87  49  P        P       01 23 32.2 +0.7
ELK                                  pmax     pmax
       comp=Z,13nm,1.0s
ELK    Elko               87.87  49  P        P       01 23 32.2 +0.7
ELK                                  IAmb     IAmb    01 23 42.7
       comp=Z,13nm,0.9s
GSC    Goldstone, Bar     88.13  54  P        P       01 23 33.5 +0.8
GSC                                  pmax     pmax
       comp=Z,12nm,1.1s
GSC    Goldstone, Bar     88.13  54  P        P       01 23 33.5 +0.8
GSC                                  IAmb     IAmb    01 23 36.6
       comp=Z,12nm,1.1s
GSC    Goldstone, Bar     88.13  54  P        P       01 23 35.1 +2.5
       baz=285
R11A   Troy Canyon, C     88.27  51  P        P       01 23 35.8 +2.4
       baz=286
KTK1   Kautokeino         88.44 342  eP       P       01 23 32.7 -0.6
HEC    Hector,Ludlow      88.63  55  P        P       01 23 37.0 +2.0
       baz=285
TUQ    Turquoise Moun     88.79  54  P        P       01 23 38.1 +2.3
       baz=286
JETT   Jettan, Norway     88.93 343  eP       P       01 23 35.7 +0.1
BOZ    Bozeman (W)        88.98  43  P        P       01 23 38.2 +1.7
       baz=288
GMRC   Granite Mounta     89.18  55  P        P       01 23 39.8 +2.2
       baz=286
TRO    Tromso             89.29 344  eP       P       01 23 36.7 -0.5
HVU    Hansel Valley      89.36  47  P        P       01 23 38.6 +0.2
HVU                                  pmax     pmax
       comp=Z,8.0nm,0.9s
HVU    Hansel Valley      89.36  47  P        P       01 23 38.6 +0.2
HVU                                  IAmb     IAmb    01 23 42.0
       comp=Z,7.7nm,0.9s
EGMT   Eagleton           89.41  41  P        P       01 23 40.6 +2.1
       baz=290
ZEI    Tsey               89.54 314  eP       P       01 23 37.1 -2.2
ZEI                                  pmax     pmax
       comp=Z,5.0nm,1.4s
IRM    Iron Mountain      89.76  55  P        P       01 23 42.4 +2.2
       baz=286
YHH    Holmes Hill        89.76  44  P        P       01 23 40.5 +0.1
YHH                                  IAmb     IAmb    01 23 52.2
       comp=Z,13nm,1.4s
DUG    Dugway, Tooele     89.80  49  P        P       01 23 40.5  0.0
DUG                                  pmax     pmax
       comp=Z,27nm,1.5s
DUG    Dugway, Tooele     89.80  49  P        P       01 23 40.5  0.0
DUG    Dugway, Tooele     89.80  49  P        P       01 23 42.4 +1.9
       baz=287
KBZ    Khabaz             89.94 315  P        P       01 23 39.2 -1.7
       comp=Z,2.4nm,0.8s,baz=64,slow=1.0,SNR=6.7
KBZ                                  LR       LR      02 07 32.2
       comp=Z,217nm,19.3s,baz=62,slow=38
KBZ    Khabaz             89.94 315  eP       P       01 23 40.2 -0.6
KBZ                                  pmax     pmax
       comp=Z,5.0nm,1.0s
FXWY   Fox Creek          90.00  45  P        P       01 23 40.7 -0.8
KIV    Kislovodsk         90.02 315  eP       P       01 23 38.2 -3.1
KIV                                  pmax     pmax
       comp=Z,6.0nm,1.0s
MOOW   Moose Ponds        90.16  45  P        P       01 23 42.4 +0.1
GLA    Glamis             90.32  56  P        P       01 23 45.4 +2.5
       baz=286
W13A   Hualapai Mount     90.49  54  P        P       01 23 43.5 -0.4
W13A                                 PP       PP      01 27 17.3 -1.3
PDMCI  Parker Dam,Lak     90.51  55  P        P       01 23 46.2 +2.4
       baz=287
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RLMT   Red Lodge          90.71  43  P        P       01 23 45.1 +0.4
RLMT                                 IAmb     IAmb    01 23 59.5
       comp=Z,12nm,1.2s
RLMT   Red Lodge          90.71  43  P        P       01 23 47.1 +2.4
       baz=290
PDAR   Pinedale Array     91.31  45  P        P       01 23 48.0 +0.4
       comp=Z,0.6nm,0.6s,baz=236,slow=3.4,SNR=7.8
PDAR                                 LR       LR      02 01 54.2
       comp=Z,91nm,19.0s,baz=294,slow=34
PDAR   Pinedale Array     91.31  45  P        P       01 23 47.8 +0.2
VNDA   Vanda              91.31 177  P        P       01 23 45.7 -0.7
       comp=Z,3.7nm,0.9s,baz=318,slow=6.3,SNR=22
VNDA                                 LR       LR      02 05 00.1
       comp=Z,87nm,18.2s,baz=354,slow=36
VNDA   Vanda              91.31 177  P        P       01 23 45.4 -1.0
STEI   Steigen            91.42 343  eP       P       01 23 46.4 -0.8
FINES  FINESS Array B     91.67 335  P        P       01 23 47.2 -1.2
       comp=Z,9.4nm,0.5s,baz=66,slow=4.8,SNR=143
FINES                                LR       LR      02 07 06.7
       comp=Z,254nm,21.1s,baz=66,slow=37
LOF    Lofoten            91.75 344  eP       P       01 23 49.0 +0.3
FAUS   Fauske             91.78 343  eP       P       01 23 48.1 -0.8
RDMU   Red Mountain       92.03  48  P        P       01 23 51.9 +0.9
RDMU                                 IAmb     IAmb    01 24 00.9
       comp=Z,5.3nm,0.9s
LAO    LASA Array         92.13  41  P        P       01 23 50.2 -0.9
LAO    LASA Array         92.13  41  P        P       01 23 53.5 +2.4
       baz=292
GURO   Guroymak-BITLI     92.23 310  P        P       01 23 51.3 -0.5
GURO                                 IAmb     IAmb    01 23 52.2
       comp=Z,5.8nm,1.1s
214A   Organ Pipe Nat     92.27  57  P        P       01 23 54.5 +2.5
       baz=287
WUAZ   Wupatki            92.32  53  P        P       01 23 52.9 +0.5
WUAZ                                 IAmb     IAmb    01 24 03.8
       comp=Z,11nm,1.1s
WUAZ   Wupatki            92.32  53  P        P       01 23 54.5 +2.2
       baz=288
MOR8   Moi Rana           92.85 342  eP       P       01 23 52.6 -1.3
O20A   White River Ci     93.14  48  P        P       01 23 57.8 +1.7
       baz=290
K22A   Casper             93.44  45  P        P       01 24 00.1 +2.7
       baz=292
TUC    Tucson             93.79  56  P        P       01 24 01.1 +2.0
       baz=288
MVCO   Mesa Verde         93.96  50  P        P       01 24 01.7 +1.7
       baz=290
MNK    Minsk              94.48 329  i P      P       01 23 58.8 -2.8
MNK                                  i                01 27 47.9
MNK                                  i PPP    PPP     01 29 49.9
MNK                                  i S      SKSac   01 34 31.1 -3.2
MNK                                  i SS     SS      01 41 33.1 -0.3
MNK                                  i SSS    SSS     01 45 14.5
MNK                                  pmax     pmax
       comp=Z,6.0nm,1.2s
MNK                                  pmax     pmax
       comp=E,1.0nm,1.2s
MNK                                  pmax     pmax
       comp=N,8.0nm,1.0s
MNK                                  MLR      MLR
       comp=N,221nm,21.0s
MNK                                  MLR      MLR
       comp=E,24nm,16.0s
MNK                                  MLR      MLR
       comp=Z,134nm,17.0s
MNK    Minsk              94.48 329  i P      P       01 23 58.8 -2.8
       comp=E,1.0nm,1.2s
MNK                                  i P      P       01 23 58.8 -2.8
       comp=N,8.0nm,1.0s,baz=59
MNK                                  i P      P       01 23 58.8 -2.8
       comp=Z,6.0nm,1.2s
MNK                                  i PP     PP      01 27 48.0 -1.0
MNK                                  i PPP    PPP     01 29 49.9
MNK                                  i S      SKSac   01 34 31.1 -3.1
MNK                                  i SS     SS      01 41 33.1 -0.2
MNK                                  i SSS    SSS     01 45 14.6
MNK                                  i LQ     LQ      02 00 44.4
MNK                                  i LR     LR      02 03 33.3
MNK                                  i LRM    MLR     02 07 00.7
       comp=N,221nm,21.0s
MNK                                  i LRM    MLR     02 07 02.0
       comp=E,24nm,15.9s
MNK                                  i LRM    MLR     02 07 08.3
       comp=Z,134nm,16.6s
N23A   Red Feather La     94.50  46  P        P       01 24 03.8 +1.4
       baz=292
RSSD   Black Hills        94.55  43  P        P       01 24 03.8 +1.3
       baz=294
S22A   4UR Ranch, Cre     95.01  49  P        P       01 24 06.0 +1.2
       baz=291
ISCO   Idaho Springs      95.14  47  P        P       01 24 07.2 +1.8
       baz=292
AKASG  Malin Array Be     95.67 325  LR       LR      02 09 20.4
       comp=Z,279nm,19.6s,baz=45,slow=37
MDND   Maddock            95.75  38  P        P       01 24 09.7 +2.2
       baz=297
SDCO   Great Sand Dun     95.99  49  P        P       01 24 10.9 +1.6
       baz=292
ANMO   Albuquerque        96.30  52  P        P       01 24 11.8 +1.1
       baz=291
ULM    Lac du Bonnet      96.74  35  LR       LR      02 04 15.2
       comp=Z,128nm,19.8s,baz=294,slow=33
DOMB   Dombas             97.46 341  eP       P       01 24 13.8 -1.2
NB2    NORSAR Subarra     97.49 340  P        P       01 24 14.1 -1.1
       comp=Z,1.7nm,0.7s,baz=49,slow=4.8
NB2    NORSAR Subarra     97.49 340  P        P       01 24 14.1 -1.1
       baz=49,slow=4.8
NOA    NORSAR Array B     97.49 340  P        P       01 24 13.6 -1.6
       comp=Z,2.1nm,0.8s,baz=52,slow=4.4,SNR=11
NOA                                  LR       LR      02 11 08.3
       comp=Z,257nm,20.8s,baz=40,slow=37
NC602  NORSAR Array S     97.60 339  eP       P       01 24 14.4 -1.2
AGMN   Agassiz Nation     97.73  36  P        Pdif    01 24 17.4 +0.8
       baz=300
BRTR   Keskin Array B     97.86 314  P        P       01 24 16.4 -1.1
       comp=Z,1.5nm,0.8s,baz=112,slow=2.9,SNR=3.8
MNTX   Cornudas Mount     98.32  55  P        P       01 24 18.6 -1.0
MNTX   Cornudas Mount     98.32  55  P        Pdif    01 24 21.2 +1.7
       baz=291
MAW    Mawson             99.73 203  P        Pdif    01 24 26.0 +1.1
       comp=Z,1.8nm,0.9s,baz=130,slow=7.4,SNR=3.7
TXAR   Lajitas Array     100.56  56  P        Pdif    01 24 30.7 +1.0
       comp=Z,0.4nm,0.9s,baz=264,slow=5.8,SNR=4.2
CLL    Collm             103.60 332  ePP      PKiKP   01 29 01.0 +0.1
CLL                                  Lm       MLR     02 14 00.0
       comp=N,100nm,20.2s
CLL                                  Lm       MLR     02 14 00.0
       comp=E,200nm,19.1s
CLL                                  Lm       MLR     02 14 00.0
       comp=Z,300nm,20.4s
CLL                                  Lm       MLR     02 49 00.0
       comp=Z,200nm,18.3s
JFWS   Jewell Farm       103.92  39  P        Pdif    01 24 45.2 +0.9
       baz=304
GERES  GERESS Array B    104.93 330  PP       PP      01 29 09.2 +0.8
       comp=Z,0.8nm,0.8s,baz=69,slow=7.3,SNR=4.8
SYO    Syowa Base        108.35 201⇑ ePdiff   Pdif    01 25 04.0 +0.8
SYO    Syowa Base        108.35 201⇑ epPdiff  pPdif   01 25 12.6 -0.1
SNAA   Sanae             118.89 191  PKPdf    PKiKP   01 29 29.7 +0.4
ESDC   Sonseca Array     120.12 333  PKP      PKiKP   01 29 33.7 +0.9
       comp=Z,0.4nm,0.7s,baz=0.9,slow=3.3,SNR=2.4
ESDC                                 PP       PP      01 30 54.9 -1.9
       comp=Z,1.2nm,0.7s,baz=30,slow=6.7,SNR=7.7
VNA2   Neumayer--Watz    120.32 190  PKPdf    PKiKP   01 29 32.7 +0.7
VNA3   Neumayer Olymp    120.40 189  PKPdf    PKiKP   01 29 32.8 +0.5
VNA1   Neumayer--Stat    120.70 190  PKPdf    PKiKP   01 29 33.5 +0.7
BOSA   Boshof            123.13 245  PKP      PKiKP   01 29 39.4 +0.4
       comp=Z,7.7nm,1.0s,baz=117,slow=4.5,SNR=3.1
TORD   Torodi Ar. Bea    135.75 305  PKP      PKPdf   01 30 03.0 +0.1
       comp=Z,1.3nm,0.5s,baz=34,slow=2.3,SNR=16
TORD                                 SKP      SKPab   01 33 35.1 -1.6
       comp=Z,2.5nm,0.9s,baz=34,slow=3.6,SNR=6.6
TORD   Torodi Ar. Bea    135.75 305  PKPdf    PKPdf   01 30 02.6 -0.3
PLCA   Paso Flores       138.18 137  PKP      PKPdf   01 30 07.8 +1.0
       comp=Z,2.1nm,0.9s,baz=276,slow=5.4,SNR=3.9
AC02   Maricunga         144.66 118  PKPdf    PKPab   01 30 17.8 -0.2
DBIC   Dimbokro          144.73 303  PKP      PKPab   01 30 18.1 +0.2
       comp=Z,39nm,0.9s,baz=53,slow=2.9,SNR=39
DBIC   Dimbokro          144.73 303  PKIKP    PKPab   01 30 18.3 +0.3
DBIC   Dimbokro          144.73 303  PKPdf    PKPab   01 30 18.3 +0.3
KIC    Kosan Boka        144.81 302  ePKIKP   PKPab   01 30 18.7 +0.4
       comp=Z,31nm,0.4s
TIC    Toumodi           144.88 303  ePKIKP   PKPab   01 30 18.8 +0.2
LIC    Lamto             145.12 302  ePKIKP   PKPbc   01 30 19.3 -0.1
       comp=Z,113nm,0.6s
TRQA   Tornquist         145.19 140  PKP2     PKPbc   01 30 17.6 -1.4
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TRQA   Tornquist         145.19 140           PKPbc   01 30 17.6 -1.4
PB11   IPOC Station P    145.40 105  PKPab    PKPbc   01 30 19.3 -1.0
LVC    Limon Verde       145.75 110  PKP2     PKPdf   01 30 21.4 +0.2
LVC    Limon Verde       145.75 110  PKPab    PKPdf   01 30 21.4 +0.2
LPAZ   La Paz            147.01  99  PKPbc    PKPdf   01 30 24.8 +1.1
       comp=Z,5.4nm,0.7s,baz=322,slow=2.2,SNR=15
LPAZ   La Paz            147.01  99  PKP2     PKPbc   01 30 26.4 +0.6
LPAZ   La Paz            147.01  99           PKPbc   01 30 26.4 +0.6
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*IDC **03** 01:30:43.5±0.6, 9°.68S×124°.84E, h0^{km}, mb4.2/17, mb1 4.4/21, mb1mx4.2/46, mbtmp4.4/21, ML4.8/4, MS3.3/2, Ms1 3.4/2, ms1mx2.9/34, Error ellipse: s-maj=27.3km s-min=13.5km az=64.0*

*NEIC **03** 01:30:50.8±1.9, 9°.77S±0°.08×124°.85E±0°.06, h58^{km}±7^{km}, mb4.5/15, Error ellipse: s-maj=12.5km s-min=7.5km az=201.0*

*DJA **03** 01:30:52.1±0.3, 10°S±3°×12°5E±°, h64^{km}±4^{km}, M4.7/24, mB5.2/9, mb4.9/24, MLv4.7/9, Mw(mB)4.6/9*

ISC 03 01:30:48.5±0.4, **9°.67S**±0°.05×**125°.02E**±0°.05, **h33**^{km}**, n121,** σ**2^s.17**/117, **mb4.6**/42, **Timor region**

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Code   Station Name         Δ°  AZ°   Phase ID         Time      Res
                                     Op       ISC     h  m  s    ISC
SOEI   Soe                0.75 263            Pb      01 31 02.7 -0.6
SOEI                                 Sn       Sb      01 31 13.3  0.0
SOEI   Soe                0.75 263   P        Pb      01 31 04.1 +0.8
SOEI   Soe                0.75 263   P        Pb      01 31 04.2 +0.9
BATI   Baumata            1.44 248   Pn       Pb      01 31 13.8 -1.1
       94nm,0.3s,baz=90,slow=4.7,SNR=38
BATI                                 Sn       Sb      01 31 33.9 +1.0
       429nm,0.3s,baz=72,slow=20,SNR=11
BATI   Baumata            1.44 248   P        Pb      01 31 14.9  0.0
MMRI   Maumere            2.93 290   Pn       Pn      01 31 33.8 +0.9
MMRI                                 Sn       Sn      01 32 06.0 -1.0
MMRI   Maumere            2.93 290   P        Pn      01 31 35.0 +2.1
MMRI   Maumere            2.93 290   P        Pn      01 31 35.3 +2.4
BSSI   Bau Bau, Buton     5.69 308   P        Pn      01 32 13.7 +2.9
       0.2nm47nm,0.8s
DRS    Darwin Rock St     6.39 116   P        Pn      01 32 24.1 +3.7
       132nm,0.7s
BKSI   Bulukumba          6.50 311   P        Pn      01 32 24.5 +2.6
       0.1nm36nm,0.8s
MTN    Manton Dam         6.78 118   Pn       Pn      01 32 28.2 +2.5
MTN    Manton Dam         6.78 118   P        Pn      01 32 28.9 +3.2
KAPI   Kappang            6.97 311   Pn       Pn      01 32 31.3 +2.8
       2.2nm,0.3s,baz=155,slow=5.4,SNR=8.4
KAPI                                 LR       LR      01 35 21.7
       comp=Z,344nm,19.3s,baz=165,slow=41
KAPI   Kappang            6.97 311   Pn       Pn      01 32 29.8 +1.4
KAPI   Kappang            6.97 311   P        Pn      01 32 33.3 +4.8
KNRA   Kununurra          7.00 149   Pn       Pn      01 32 30.6 +1.8
KNRA   Kununurra          7.00 149   P        Pn      01 32 31.0 +2.2
       186nm,0.5s
BNSI   Bone               7.15 317   P        Pn      01 32 36.1 +5.2
       0.3nm88nm,0.8s
PLAI   Plampang           7.20 276   P        Pn      01 32 32.9 +1.3
       0.4nm2μm101nm,0.5s
PLAI   Plampang           7.20 276   P        Pn      01 32 33.1 +1.5
SANI   Sanana             7.63   7   P        Pn      01 32 43.6 +6.2
       0.2nm833nm63nm,0.6s
SANI   Sanana             7.63   7   P        Pn      01 32 44.5 +7.1
KDU    Kakadu             7.90 113   P        Pn      01 32 43.7 +2.5
       69nm,0.5s
TTSI   Tana Toraja        8.36 322   P        Pn      01 32 52.5 +5.0
       26nm,0.9s
FITZ   Fitzroy Crossi     8.40 176   Pn       Pn      01 32 47.2 -0.9
       9.6nm,0.3s,baz=5.5,slow=9.3,SNR=166
FITZ                                 Sn       Sn      01 34 18.5 -3.4
       9.2nm,0.3s,baz=284,slow=12,SNR=9.8
FITZ   Fitzroy Crossi     8.40 176   Pn       Pn      01 32 48.6 +0.6
FITZ   Fitzroy Crossi     8.40 176   P        Pn      01 32 48.7 +0.6
       60nm,0.7s
LUWI   Luwuk              8.85 345            Pn      01 32 56.4 +2.1
LUWI   Luwuk              8.85 345   P        Pn      01 32 57.9 +3.6
       127nm,0.8s
APSI   Ampana             9.32 339   P        Pn      01 33 07.4 +6.7
       35nm,0.8s
GTOI   Gorontalo         10.43 349   P        Pn      01 33 22.4 +6.6
       6.8nm,0.7s
JAGI   Jajag, Banyuwa    10.80 275   P        Pn      01 33 23.6 +2.6
       24nm,0.6s
MPSI   Mapaga            11.17 333   P        Pn      01 33 28.8 +2.8
       2μm13nm,0.7s
TOLI2  Tolitoli          11.51 338   Pn       Pn      01 33 31.4 +0.7
PSA00  Pilbara Seismi    12.84 202   P        Pn      01 33 51.1 +2.2
       31nm,1.7s
NGJI   Ngawi             13.60 279   P        Pn      01 33 57.5 -1.8
WRA    Warramunga Arr    13.62 140   Pn       Pn      01 33 57.6 -1.8
       5.1nm,0.3s,baz=310,slow=15,SNR=146
WRA                                  Sn       Sn      01 36 23.1 -6.6
       1.8nm,0.3s,baz=291,slow=22,SNR=4.8
WRA    Warramunga Arr    13.62 140            Pn      01 33 58.1 -1.4
WB2    Warramunga Arr    13.62 140   Pn       Pn      01 33 58.5 -1.1
PCJI   Pacitan           13.76 275   P        Pn      01 33 59.4 -2.0
       60nm,0.5s
WR0    Warramunga Arr    13.76 139   Pn       Pn      01 34 00.3 -1.1
UGM    Wanagama          14.43 276   P        P       01 34 15.0 -2.1
WRKA   Warakurna         15.60 169   P        Pn      01 34 25.4 -0.8
       52nm,0.7s
KPJI   Karang Pucung     16.08 277   P        Pn      01 34 29.8 -2.5
       48nm,0.6s
AS31   Alice Springs     16.31 150            Pn      01 34 35.3 +0.1
ASAR   Alice Springs     16.31 150   Pn       Pn      01 34 34.3 -0.9
       3.1nm,0.3s,baz=320,slow=11,SNR=210
ASAR                                 Sn       Sn      01 37 28.8 -6.5
       1.8nm,0.3s,baz=329,slow=24,SNR=8.9
ASAR   Alice Springs     16.31 150            Pn      01 34 34.6 -0.6
CMJI   Cimerak           16.49 275   P        Pn      01 34 35.9 -1.6
       68nm,1.0s
CISI   Cisompet, Garu    17.14 276            Pn      01 34 42.6 -3.2
CISI   Cisompet, Garu    17.14 276   P        Pn      01 34 42.7 -3.1
       3μm50nm,0.7s
LEM    Lembang           17.45 278   P        Pn      01 34 44.9 -4.9
       5.7nm,0.3s,baz=55,slow=16,SNR=1.7
QIS    Mount Isa         17.75 129   P        P       01 34 53.5 -0.3
       43nm,0.7s
MEEK   Meekatharra       17.94 199   P        P       01 34 58.0 +2.1
       22nm,2.6s
COEN   Coen              18.27 105   P        Pn      01 35 00.6 +0.9
COEN                                 IAmb     IAmb    01 35 03.2
       comp=Z,15nm,0.7s
COEN   Coen              18.27 105   P        Pn      01 35 00.9 +1.2
       comp=Z,24nm,0.7s
CBJI   Citeko            18.28 279   P        P       01 34 58.0 -1.7
       comp=Z,157nm,0.8s
DBJI   Dramaga           18.35 278   P        Pn      01 35 00.4 -0.3
       comp=Z,83nm,0.8s
CGJI   Cibinong          19.37 278   P        P       01 35 11.5 -0.2
       comp=Z,2μmcomp=Z,74nm,0.5s
OOD    Oodnadatta        20.65 152   P        Pn      01 35 28.7 +0.8
       comp=Z,34nm,0.7s
MORW   Morawa            21.06 202   P        P       01 35 34.8 +4.8
       comp=Z,16nm,2.2s
FORT   Forrest           21.20 173   P        P       01 35 34.4 +3.0
       comp=Z,43nm,0.7s
MULG   Mulgathing        22.18 159   P        P       01 35 47.6 +5.7
       comp=Z,30nm,0.9s
BLDU   Ballidu           22.24 199   P        P       01 35 46.1 +3.5
       comp=Z,19nm,1.9s
CTA    Charters Tower    22.96 119   P        P       01 35 52.0 +1.7
       comp=Z,6.0nm,0.7s,baz=281,slow=12,SNR=11
CTAO   Charters Tower    22.96 119   P        P       01 35 50.1 -0.2
BBOO   Buckleboo         25.19 158   P        P       01 36 14.6 +3.5
       comp=Z,17nm,1.4s
HTT    Hallett           26.89 154   P        P       01 36 31.2 +4.6
       comp=Z,20nm,1.5s
STKA   Stephens Creek    26.92 148   P        P       01 36 27.5 +0.7
       comp=Z,3.3nm,0.8s,baz=333,slow=9.2,SNR=2.5
STKA   Stephens Creek    26.92 148   P        P       01 36 26.6 -0.2
ARPS   Mount Arapiles    30.99 153   P        P       01 37 07.9 +5.0
       comp=Z,12nm,0.6s
CMAR   Chiang Mai Arr    37.99 317   P        P       01 38 02.9 -0.8
       comp=Z,2.4nm,0.6s,baz=150,slow=6.8,SNR=8.5
CMAR                                 LR       LR      01 57 27.6
       comp=Z,32nm,18.7s,baz=220,slow=42
CMAR   Chiang Mai Arr    37.99 317   P        P       01 38 02.1 -1.6
KSRS   Korea Array       46.95   3   P        P       01 39 15.9 -0.3
       comp=Z,0.6nm,0.3s,baz=187,slow=19,SNR=1.7
MJAR   Matsushiro Arr    47.61  14   P        P       01 39 20.8 -0.6
       comp=Z,1.6nm,0.5s,baz=173,slow=11,SNR=4.1
LSA    Lhasa             50.95 321   P        P       01 39 35.4  -12
LSA                                  pmax     pmax
       comp=Z,77nm,0.7s
ODAN   Odare             51.49 316   eP       P       01 39 50.4 -1.1
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	comp=Z,10.0nm,0.6s						
TAPN	Taplejung	51.59	317	eP	P	01 39 49.2	-3.1
	comp=Z,11nm,0.6s						
RAMN	Ramite	52.09	315	eP	P	01 39 55.2	-0.8
	comp=Z,24nm,0.5s						
JIRN	Jiri	52.82	316	eP	P	01 40 00.3	-1.2
	comp=Z,6.1nm,0.3s						
GUN	Gumba	53.20	316	eP	P	01 40 03.3	-0.9
	comp=Z,16nm,0.4s						
PKI	Pulchoki	53.31	315	eP	P	01 40 04.1	-1.0
	comp=Z,19nm,0.5s						
PKIN	Phulchoki	53.32	315	eP	P	01 40 03.7	-1.4
	comp=Z,19nm,0.4s						
KKN	Kakani	53.53	315	eP	P	01 40 05.8	-0.8
	comp=Z,6.9nm,0.4s						
DMN	Daman	53.54	315	eP	P	01 40 05.8	-0.9
GKN	Gorkha	54.11	315	eP	P	01 40 09.7	-1.1
	comp=Z,14nm,0.4s						
KOLN	Koldanda	54.70	314	eP	P	01 40 14.1	-1.0
	comp=Z,31nm,0.7s						
DANN	Dangsing	54.94	315	eP	P	01 40 16.1	-0.8
	comp=Z,47nm,0.6s						
PYUN	Piuthan	55.33	314	eP	P	01 40 18.9	-0.7
	comp=Z,28nm,0.4s						
ULN	Ulaanbaatar	59.45	346	P	P	01 40 48.0	-0.3
SONM	Songino Array	59.59	346	P	P	01 40 48.5	-0.7
	comp=Z,3.1nm,0.6s,baz=167,slow=8.3,SNR=21						
SONM	Songino Array	59.59	346	P	P	01 40 48.1	-1.0
SONM				IAmb	IAmb	01 40 49.6	
	comp=Z,3.6nm,0.8s						
NIL	Nilore	65.36	314	P	P	01 41 26.5	-1.4
KSH	Kashi	66.78	321	P	P	01 41 35.6	-1.5
KSH				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MK31	Makanchi Array	67.89	330	P	P	01 41 42.7	-1.1
MK31				IAmb	IAmb	01 41 44.8	
	comp=Z,3.4nm,0.7s						
MKAR	Makanchi Array	67.89	330	P	P	01 41 43.1	-0.7
	comp=Z,4.3nm,0.5s,baz=132,slow=7.4,SNR=50						
AAK	Ala-Archa	69.52	323	P	P	01 41 54.0	-0.2
	comp=Z,4.0nm,0.6s,baz=138,slow=4.3,SNR=6.3						
AAK	Ala-Archa	69.52	323	P	P	01 41 52.8	-1.4
AAK				IAmb	IAmb	01 41 55.2	
	comp=Z,3.9nm,0.7s						
VNDA	Vanda	70.46	172	P	P	01 41 58.6	-0.7
	comp=Z,0.1nm,0.4s,baz=294,slow=8.4,SNR=1.6						
MAW	Mawson	70.70	201	P	P	01 41 58.7	-2.1
	comp=Z,1.0nm,0.9s,baz=72,slow=6.3,SNR=2.0						
ZAA0	Zalesovo Array	71.90	336	P	P	01 42 06.1	-2.2
ZAA0				IAmb	IAmb	01 42 08.3	
	comp=Z,5.2nm,1.1s						
ZALV	Zalesovo Beam	71.90	336	P	P	01 42 07.2	-1.0
	comp=Z,2.1nm,0.5s,baz=108,slow=4.8,SNR=14						
ZALV	Zalesovo Beam	71.90	336	P	P	01 42 06.7	-1.6
KURBB	Kurchatov Arra	72.31	331	P	P	01 42 10.6	-0.2
	comp=Z,2.4nm,0.7s,baz=141,slow=5.2,SNR=32						
KURK	Kurchatov	72.33	331	P	P	01 42 09.9	-1.0
KURK				IAmb	IAmb	01 42 12.2	
	comp=Z,5.7nm,0.8s						
SEY	Seymchan	75.39	13	P	P	01 42 29.1	+0.6
	comp=Z,3.8nm,0.6s,baz=224,slow=5.5,SNR=16						
BVAR	Borovoye Array	77.77	330	P	P	01 42 43.2	+0.9
	comp=Z,0.7nm,0.6s,baz=159,slow=4.5,SNR=4.1						
TIXI	Tiksi	81.18	1	P	P	01 42 59.7	-0.6
	comp=Z,2.6nm,0.5s,baz=181,slow=3.5,SNR=6.0						
TIXI	Tiksi	81.18	1	P	P	01 42 60.0	-0.4
TIXI				IAmb	IAmb	01 43 01.5	
	comp=Z,3.1nm,0.5s						
ABKAR	Akbulak array	81.59	323	P	P	01 43 02.5	-0.6
ABKAR				IAmb	IAmb	01 43 03.1	
	comp=Z,5.4nm,1.4s						
AKTO	Aktyubinsk	83.22	324	P	P	01 43 11.4	-0.2
	comp=Z,2.7nm,0.9s,baz=117,slow=6.2,SNR=7.2						
ARU	Arti	85.41	329	P	P	01 43 22.6	+0.1
	comp=Z,0.5nm,0.4s,baz=153,slow=14,SNR=4.1						
ARU	Arti	85.41	329	P	P	01 43 20.1	-2.4
ARU				IAmb	IAmb	01 43 23.9	
	comp=Z,4.1nm,0.9s						
SNAA	Sanae	91.90	194	P	P	01 43 57.0	+3.7
VNA2	Neumayer--Watz	93.50	194	P	P	01 44 04.2	+3.5
	baz=126,slow=4.3						
VNA1	Neumayer--Stat	93.90	194	P	P	01 44 06.3	+3.8
PDAR	Pinedale Array	122.25	45	PKP	PKiKP	01 49 41.6	+0.7
	comp=Z,0.1nm,0.3s,baz=248,slow=0.5,SNR=2.1						
PDAR	Pinedale Array	122.25	45		PKPdf	01 49 37.2	-3.5
TORD	Torodi Ar. Bea	124.43	279	PKP	PKiKP	01 49 47.4	+1.7
	comp=Z,1.6nm,0.6s,baz=71,slow=1.4,SNR=16						
ESDC	Sonseca Array	125.79	312	PKP	PKiKP	01 49 49.3	+1.5
	comp=Z,0.7nm,1.0s,baz=101,slow=6.7,SNR=2.5						
ULM	Lac du Bonnet	127.33	32	PKP	PKiKP	01 49 50.9	+0.5
	comp=Z,1.1nm,0.6s,baz=346,slow=4.2,SNR=2.2						

IDC ***03*** *01:43:24.6±0.6, 30°.59S×71°.70W, h0^{km}, mb4.4/12, mb1 4.4/17, mb1mx4.4/26, mbtmp4.3/17, ML4.2/5, MS4.2/11, Ms1 4.2/11, ms1mx3.9/22, Error ellipse: s-maj=22.1km s-min=15.1km az=95.0*

SJA ***03*** *01:43:24.1±1.6, 30°.58S×72°.08W, h10^{km}, ML4.9, MW4.6*

VAO ***03*** *01:43:28.2±0.4, 30°.55S×71°.60W, h10^{km}, mb4.7*

NEIC ***03*** *01:43:28.8±1.7, 30°.57S±0°.04×71°.87W±0°.06, h28^{km}±2^{km}, mb4.7/33, Mwr4.7/51, ML4.9(GUC), Error ellipse: s-maj=7.5km s-min=5.7km az=118.0*

GUC ***03*** *01:43:29.9±0.7, 30°.64S×71°.72W, h36^{km}±1^{km}, ML4.9*

NEIC ***03*** *01:43:29, 30°.57S×71°.86W, h33^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.95; $M_{\theta\theta}$0.26; $M_{\phi\phi}$-1.21; $M_{r\theta}$0.31; $M_{\theta\phi}$-0.01; $M_{\phi r}$-0.31; Fault plane solution: $M_0$1.19000×10^{16} NP1:ϕ_s20.27000°, δ40.74000°, λ121.21000°. NP2:ϕ_s161.62000°, δ56.07000°, λ65.94000°. Principal axes: T 1.1082, Plg69.0000°, Azm20.0000°; N 0.1500, Plg20.0000°, Azm176.0000°; P -1.2582, Plg8.0000°, Azm269.0000°;*

ISC 03 01:43:28.7±0.8**, 30°.54S**±0°.02×**71°.85W**±0°.04**, h27**^{km}±6^{km}**, n232,** $\sigma 1^{s}$**67**/264**, mb4.7**/23**, MS4.3**/10**, 19C-8D, Fault plane solution: NP1:**ϕ_s152.28850°**,** δ72.62897°**,** λ87.62985°. **NP2:**ϕ_s340.18137°**,** δ17.52704°**,** λ97.53075°. **Principal axes:** T Plg62.2998°, Azm58.6818°**;** N Plg2.2620°, Azm152.9965°**;** P Plg27.5916°, Azm244.1793°**; Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.23	125	Pg	Pb	01 43 35.2	+0.4
CO06				Sg	Sb	01 43 38.8	-0.3
CO06	Fray Jorge	0.23	125	eP	Pb	01 43 35.3	+0.4
CO06				i S	Sb	01 43 38.9	-0.2
CO06				IAML		01 43 40.7	
	comp=E,319µm,0.5s						
CO05	La Serena	0.82	41		Pn	01 43 44.8	+0.4
CO05					Sn	01 43 56.2	+0.6
CO05	La Serena	0.82	41	eP	Pn	01 43 44.8	+0.4
CO05				i S	Sn	01 43 57.1	+1.5
CO05				IAML		01 43 58.2	
	comp=N,57µm,0.4s						
GO04	Tololo Observa	0.98	68		Pn	01 43 46.7	-0.2
GO04					Sn	01 44 00.6	+0.6
GO04	Tololo Observa	0.98	68	eP	Pn	01 43 46.6	-0.2
GO04				i S	Sn	01 43 59.8	-0.2
GO04				IAML		01 44 04.7	
	comp=N,141µm,0.5s						
GO04	Tololo Observa	0.98	68	eP	Pb	01 43 48.7	+1.5
GO04				eS	Sn	01 44 00.9	+0.9
CO03	El Pedregal	1.04	107		Pn	01 43 46.6	-1.0
CO03	El Pedregal	1.04	107	eP	Pn	01 43 46.6	-1.0
CO03				i S	Sn	01 43 58.9	-2.5
CO03				IAML		01 44 01.8	
	comp=E,33µm,0.2s						
LCO	Las Campanas	1.82	33		Pn	01 43 59.2	+0.7
LCO	Las Campanas	1.82	33	i S	Sb	01 44 24.6	+0.6
LCO	Las Campanas	1.82	33	eP	Pb	01 44 00.0	-1.5
VA06	Catapilco	2.07	167	eP	Pn	01 44 01.8	+0.2
VA06				i S	Sn	01 44 27.2	+0.7
VA06				IAML		01 44 35.1	
	comp=N,22µm,0.4s						
AROD	Rodeo	2.09	80	eP	Pb	01 44 05.1	-0.9
AROD				eS	Sb	01 44 33.6	+1.9
ACDV	Cuesta del Vie	2.39	82	eP	Pb	01 44 10.0	-1.1
ACCO	Cerro Coronel	2.40	92	eP	Pb	01 44 10.0	-1.4
AC04	Llanos de Chal	2.43	16		Pn	01 44 07.6	+1.0
AC04	Llanos de Chal	2.43	16	i S	Sb	01 44 40.7	-0.4
AC04	Llanos de Chal	2.43	16	eP	Pn	01 44 07.0	+0.4
AC04				eS	Sn	01 44 38.0	+2.6
VA03	San Esteban	2.48	154		Pn	01 44 08.0	+0.6
VA03	San Esteban	2.48	154	eP	Pn	01 44 08.2	+0.8
VA03				IAML		01 44 49.7	
	comp=N,11µm,0.4s						
VA03	San Esteban	2.48	154	eP	Pn	01 44 08.0	+0.6
VA03				eP	Pb	01 44 08.6	-4.0
VA03				eS	Sn	01 44 38.0	+1.2
VA03				IAML		01 44 47.5	
	comp=Z,6µm,0.3s						
VA01	Torpederas	2.48	176		Pn	01 44 07.1	-0.1
VA01	Torpederas	2.48	176	eP	Pn	01 44 08.6	+1.3
VA01				i S	Sn	01 44 37.6	+0.9
VA01				IAML		01 44 46.5	
	comp=E,4µm,0.7s						
RTLS	Leoncito	2.52	120	eP	Pb	01 44 11.0	-2.4
RTLS				IAML		01 44 52.3	
	comp=Z,7µm,0.5s						
ROC1	El Roble	2.53	164	eP	Pn	01 44 03.0	-5.2
ROC1				eP	Pb	01 44 08.0	-5.5
AUSP	Uspallata	2.69	129	eP	Pn	01 44 13.3	+2.8
AUSP				eS	Sb	01 44 49.6	+0.6
MT02	Curacav	2.78	168	Pn	Pn	01 44 11.3	-0.1
MT02	Curacav	2.78	168	eP	Pn	01 44 11.6	+0.2
MT02				eP	Pn	01 44 12.0	+0.6
MT02				eS	Sn	01 44 44.5	+0.5
MT02				IAML		01 44 58.9	
	comp=Z,3µm,0.9s						
PEL	Peldehue	2.78	159	eP	Pn	01 44 12.3	+0.9
PEL	Peldehue	2.78	159	eP	Pn	01 44 12.0	+0.6
PEL				eS	Sn	01 44 46.5	+2.4
ZON	Zonda	2.90	111	eP	Pn	01 44 16.0	+2.9
ZON				IAML		01 45 13.9	
	comp=Z,2µm,0.5s						
MT05	Renca	2.99	162	Pn	Pn	01 44 14.8	+0.4
MT05	Renca	2.99	162	i S	Sn	01 44 50.3	+0.8
MT05	Renca	2.99	162	eP	Pn	01 44 16.0	+1.6
AGUA	GUANDACOL	3.10	71	eP	Pn	01 44 04.7	-11
AGUA				IAML		01 45 16.1	
	comp=Z,3µm,0.6s						
VA05	Santo Domingo	3.11	176		Pn	01 44 15.7	-0.3
RTCV	Cerro Valdivia	3.13	116	eP	Pn	01 44 14.0	-2.2
RTCV				eP	Pb	01 44 19.0	-4.6
GO03	Copiap	3.26	26	Pn	Pn	01 44 19.0	+0.9
GO03	Copiap	3.26	26	eP	Pn	01 44 19.5	+1.4
GO03				eS	Sb	01 45 02.5	-2.7
ASAL	Salagasta	3.29	129	eP	Pn	01 44 22.0	+3.5
ASAL				eS	Sb	01 45 03.0	-2.9
MT09	Talagante	3.31	167		Pn	01 44 18.4	-0.4
MT09	Talagante	3.31	167	eP	Pn	01 44 19.7	+0.9
MT09				i S	Sn	01 44 57.5	+0.2
MT01	Popeta	3.35	171		Pn	01 44 19.2	0.0
MT01	Popeta	3.35	171	eP	Pn	01 44 19.7	+0.4
MT01	Popeta	3.35	171	eP	Pn	01 44 19.7	+0.4
MT01				eS	Sb	01 45 06.0	-1.7
MT01				IAML		01 45 17.0	
	comp=Z,2µm,0.5s						
ARCO	CERRO ARCO	3.38	133	eP	Pn	01 44 18.5	-1.4
ARCO				eP	Pb	01 44 23.7	-4.3
ARCO				eS	Sb	01 45 06.5	-2.3
ARCO				IAML		01 45 19.6	
	comp=Z,2µm,1.0s						
LMEL	Las Melosas	3.58	157	eP	Pn	01 44 23.4	+0.8
LMEL				i S	Sn	01 45 04.0	0.0
BO04	La Punta	3.59	163	eP	Pn	01 44 23.4	+0.7
AAGR	Agrelo	3.61	135	eP	Pn	01 44 27.0	+4.0
AAGR				eS	Sb	01 45 21.7	+6.4
VCA	Vinchina	3.65	61	eP	Pb	01 44 28.0	-4.5
VCA				eS	Sb	01 45 16.5	+0.1
VCA				IAML		01 45 28.2	
	comp=Z,4µm,0.7s						
BO01	Tunca	3.89	171		Pn	01 44 26.5	-0.2
BO01	Tunca	3.89	171	eP	Pn	01 44 27.0	+0.3
BO01	Tunca	3.89	171	eP	Pn	01 44 27.0	+0.3
BO01				eS	Sb	01 45 18.5	-4.8
BO01				IAML		01 45 36.7	
	comp=Z,954nm,0.6s						
BO02	Sierra Bellavi	4.33	168		Pn	01 44 32.5	-0.3
BO02	Sierra Bellavi	4.33	168	eP	Pn	01 44 33.6	+0.7
BO02	Sierra Bellavi	4.33	168	eP	Pn	01 44 34.0	+1.2
BO02				eS	Sb	01 45 33.0	-3.0
BO02				IAML		01 45 47.9	
	comp=Z,1µm,0.7s						
ACLC	CERRO LA CRUZ	4.39	77	eP	Pn	01 44 36.7	+3.0
ACLC				eS	Sb	01 45 32.8	-5.1
ACLC				IAML		01 45 37.3	
	comp=Z,2µm,0.5s						
AC02	Maricunga	4.40	34	Pn	Pn	01 44 34.4	+0.3
AC02	Maricunga	4.40	34	eP	Pn	01 44 36.0	+1.9
AC02	Maricunga	4.40	34	eP	Pn	01 44 36.2	+2.0
AC02				eS	Sb	01 45 33.0	-5.4
AC02				IAML		01 45 52.0	
	comp=Z,2µm,0.9s						
GO05	Huala	4.46	181		Pn	01 44 33.4	-1.0
GO05	Huala	4.46	181	eP	Pn	01 44 33.0	-1.5
GO05				eS	Sb	01 45 45.5	+6.0
RFA	San Rafael	5.09	147	eP	Pn	01 44 45.0	+1.7
RFA				eS	Sb	01 46 03.5	+5.7
H03N1	Juan Fernandez	6.66	242	Pn	Pn	01 45 04.6	+0.2
	baz=114,slow=19,SNR=815						
H03N1				T	T	01 51 59.1	
	baz=72,slow=72,SNR=9190						
H03N2	Juan Fernandez	6.67	243	Pn	Pn	01 45 05.0	+0.3
	baz=114,slow=19,SNR=309						
H03N2				T	T	01 52 02.7	
	baz=72,slow=72,SNR=5661						
H03N3	Juan Fernandez	6.67	242	Pn	Pn	01 45 04.7	0.0
	baz=114,slow=19,SNR=402						
H03N3				T	T	01 51 58.2	
	baz=72,slow=72,SNR=5382						
VA04	Juan Fernndez	6.68	241	Pn	Pn	01 45 04.5	-0.5
VA04					Sn	01 46 18.2	-2.0
FSA	Cafayete	6.80	51	eP	Pn	01 45 10.0	+3.1
H03S3	Juan Fernandez	6.82	239	Pn	Pn	01 45 05.8	-0.9
	baz=2.8,slow=21,SNR=38						
H03S3				T	T	01 52 12.1	
	baz=106,slow=77,SNR=32						
H03S1	Juan Fernandez	6.83	239	Pn	Pn	01 45 05.5	-1.2
	baz=2.8,slow=21,SNR=37						
H03S1				T	T	01 52 07.9	
	baz=106,slow=77,SNR=28						
H03S2	Juan Fernandez	6.84	239	Pn	Pn	01 45 05.9	-1.0
	baz=2.8,slow=21,SNR=44						
H03S2				T	T	01 52 08.1	
	baz=106,slow=77,SNR=40						
AHML	Horco Molle	6.84	58	eP	Pn	01 45 03.0	-4.3
AHML				eP	Pn	01 45 03.5	-3.8
AHML				eP	Pn	01 45 08.0	+0.7
AHML				eP	Pn	01 45 09.5	+2.2
AHML				eS	Sn	01 46 33.5	+9.2
PB15	IPOC Station P	7.61	17		Pn	01 45 16.6	-1.4
PB05	IPOC Station P	7.80	11	eP	Pn	01 45 14.0	-6.5
PB05				eS	Sn	01 46 43.6	-4.4
PB06	IPOC Station P	8.07	15	Pn	Pn	01 45 22.4	-1.9
PB04	IPOC Station P	8.32	11		Pn	01 45 26.6	-1.1
LVC	Limon Verde	8.33	19	Pn	Pn	01 45 25.9	-2.1
	comp=Z,1.7nm,0.3s,baz=169,slow=8.2,SNR=9.8						
LVC				Sn	Sn	01 47 01.1	-0.3
	baz=202,slow=21,SNR=1.0						
LVC				LR	LR	01 48 43.9	
	comp=Z,2µm,18.6s,baz=211,slow=38						
LVC	Limon Verde	8.33	19		Pn	01 45 26.4	-1.6
LVC					Sn	01 47 00.7	-0.6
LVC	Limon Verde	8.33	19	eP	Pn	01 45 28.9	+0.9
LC01	Cunco	8.34	180		Pn	01 45 26.0	-1.8
PB07	IPOC Station P	8.96	12	Pn	Pn	01 45 35.1	-1.3
LR03	Panguipulli	9.08	182		Pn	01 45 38.0	0.0
PB01	IPOC Station P	9.70	13		Pn	01 45 47.2	+0.7
PLCA	Paso Flores	10.22	174	Pn	Pn	01 45 52.5	-1.2
	comp=Z,0.4nm,0.3s,baz=340,slow=13,SNR=7.8						
PLCA				LR	LR	01 49 44.8	
	comp=Z,749nm,20.8s,baz=352,slow=37						
PLCA	Paso Flores	10.22	174		Pn	01 45 52.7	-1.0
PLCA	Paso Flores	10.22	174	eP	Pn	01 45 54.4	+0.7
TRQA	Tornquist	11.08	135	Pn	Pn	01 46 03.7	-1.6
TRQA	Tornquist	11.08	135	eP	Pn	01 46 04.7	-0.6
ITQB	Itaqui	13.21	90	Pn	Pn	01 46 32.4	-2.1
ITQB	Itaqui	13.21	90	eP	Pn	01 46 32.5	-2.0
CPUP	Villa Florida	13.45	75	Pn	Pn	01 46 34.9	-2.8
	comp=Z,0.9nm,0.3s,baz=242,slow=11,SNR=9.4						
CPUP				LR	LR	01 52 07.8	
	comp=Z,1µm,21.1s,baz=242,slow=39						
CPUP	Villa Florida	13.45	75	Pn	Pn	01 46 36.9	-0.9
CPUP	Villa Florida	13.45	75	eP	Pn	01 46 35.8	-1.9
LPAZ	La Paz	14.59	14	Pn	Pn	01 46 53.1	-0.9
	comp=Z,0.2nm,0.3s,baz=136,slow=13,SNR=9.5						
LPAZ	La Paz	14.59	14	Pn	Pn	01 46 54.0	0.0
LPAZ	La Paz	14.59	14	eP	Pn	01 46 54.5	+0.5
COYC	Coyhaique	15.01	181		Pn	01 46 57.9	-1.0
PLTB	Pedras Altas	15.67	99	Pn	Pn	01 47 07.3	-0.3
PLTB	Pedras Altas	15.67	99	eP	Pn	01 47 06.5	-1.1
CPSB	Cacapava Do Su	15.88	94	eP	Pn	01 47 09.1	-1.2
SIV	San Ignacio	17.53	37	P	Pn	01 47 30.6	-0.6
	comp=Z,1.1nm,0.3s,baz=216,slow=11,SNR=38						
AQDB	Aquidauana	17.67	59	eP	Pn	01 47 31.4	-1.6
PTGB	Pitanga	18.46	76	eP	Pn	01 47 43.3	+0.6
TRCB	Terra Rica	18.81	70	P	P	01 47 45.2	-1.1
TRCB				IAmb	IAmb	01 48 02.6	
	comp=Z,76nm,1.4s						
TRCB	Terra Rica	18.81	70	eP	P	01 47 46.0	-0.3
PTLB	Pontes e Lacer	19.02	41	eP	Pn	01 47 48.9	-0.5
TER01	Tubaro-SC	19.87	90	eP	P	01 47 57.8	0.0
PP1B	Ponte de Pedra	20.12	54	eP	P	01 48 00.7	+0.2
PCMB	Pacaembu	20.50	69	eP	P	01 48 04.5	-0.2
VILB	Vilhena	20.55	34	eP	P	01 48 05.8	+0.5
SALV	Santo Antonio	20.77	49	eP	P	01 48 07.2	-0.4
TIJ01	Guaruva-PR	20.83	81	eP	P	01 48 07.2	-1.2
ETMB	Extrema	21.28	15	eP	P	01 48 14.5	+1.4
ITRB	Iturama	22.21	66	eP	P	01 48 23.6	+0.4
PET01	Itanhaem-SP	22.66	80	eP	P	01 48 26.8	-1.1
CZSB	Cruzeiro do Su	22.71	358	eP	P	01 48 30.8	+2.3
SPB	Sao Paulo	22.79	78	P	P	01 48 28.2	-1.1
SPB	Sao Paulo	22.79	78	eP	P	01 48 29.8	+0.5
SAML	Samuel	22.96	22	P	P	01 48 31.3	+0.3
SAML	Samuel	22.96	22	eP	P	01 48 31.4	+0.3
BB19B	Bebedouro	22.98	71	eP	P	01 48 31.0	-0.4
RCLB	Rio Claro- Sao	23.19	75	eP	P	01 48 33.3	-0.1
PDRB	Porto dos Gac	23.48	40	eP	P	01 48 37.5	+1.1
ARAG	Araguaiana, MT	23.56	56	eP	P	01 48 36.9	-0.1
ATAH	Atahualpa	24.08	344	LR	LR	01 56 07.8	
	comp=Z,318nm,19.5s,baz=180,slow=32						
USHA	Ushuaia	24.40	175	P	P	01 48 44.2	-0.3
	comp=Z,9.0nm,0.5s,baz=3.3,slow=11,SNR=7.0						
CLDB	Colider	24.61	41	eP	P	01 48 48.3	+1.5
IPMB	Ipameri, GO	24.85	65	eP	P	01 48 48.3	-0.9
MAN01	Angra dos Reis	26.01	80	eP	P	01 48 59.2	-0.4
BSCB	Bom Sucesso	26.11	75	eP	P	01 49 00.1	-0.5
TBTG	Tabatinga, AM	26.28	4	eP	P	01 49 04.5	+2.6
BDFB	Brasilia	26.39	61	P	P	01 49 02.4	-0.7
	comp=Z,10nm,0.6s,baz=233,slow=7.7,SNR=18						
BDFB				LR	LR	02 00 32.6	
	comp=Z,958nm,21.6s,baz=272,slow=39						
BDFB	Brasilia	26.39	61	P	P	01 49 02.1	-1.0
BDFB				IAmb	IAmb	01 49 14.6	
	comp=Z,14nm,0.8s						
SNDB	Serra Nova Dou	26.53	50	eP	P	01 49 04.2	-0.1
VAS01	Vassouras-RJ	26.69	79	eP	P	01 49 06.0	+0.3
DUB01	Friburgo-RJ	27.67	79	eP	P	01 49 15.5	+1.0
NPGB	Novo Progresso	28.03	37	eP	P	01 49 18.0	+0.3
DIAM	Diamantina, MG	28.32	71	eP	P	01 49 20.5	0.0
PEXB	Peixe	28.49	55	eP	P	01 49 22.1	+0.3
MC01	Montes Claros	28.94	68	eP	P	01 49 25.2	-0.7
MACA	Manacapuru-AM	29.21	23	eP	P	01 49 28.9	+0.7
JANB	Januaria	29.59	65	eP	P	01 49 31.3	-0.3
ITTB	Itaituba	30.15	33	eP	P	01 49 36.6	0.0
SJMB	Sao Joao De Ma	30.17	74	eP	P	01 49 36.1	-0.6
BSFB	Barra de Sao F	30.39	75	eP	P	01 49 38.0	-0.6
RIB01	Linhares ES	30.54	76	eP	P	01 49 41.0	+1.0
SDBA	SAO DESIDERIO	30.76	60	eP	P	01 49 42.3	+0.3
OTAV	Otavalo	31.25	347	eP	P	01 49 48.9	+2.2
SMTB	Santa Maria do	31.28	51	eP	P	01 49 46.8	+0.3
NAN01	Guarapari, ES	31.46	74	eP	P	01 49 47.2	-0.9
PTGA	Pitinga	31.72	23	P	P	01 49 50.0	-0.4
PRPB	Parauapebas	31.88	45	eP	P	01 49 53.3	+1.5
GUA01	Guaratinga, BA	32.36	72	eP	P	01 49 56.5	+0.4
MALB	Monte Alegre	33.05	34	eP	P	01 50 01.8	-0.2
CMC01	Camacan, BA	33.24	70	eP	P	01 50 04.3	+0.6
NBIT	Itapeh - BA	33.54	70	eP	P	01 50 06.5	+0.2
GDU01	Guandu, BA	34.10	68	eP	P	01 50 11.5	+0.3
ORTC	Ortega, Tolima	34.41	354	i P	P	01 50 17.7	+3.8
BOAV	Boa Vista	34.49	20	eP	P	01 50 15.4	+0.8
VILC	Villavicencio,	34.50	357⇑	eP	P	01 50 18.5	+3.7
CHIC	Chingaza	35.02	357	eP	P	01 50 21.5	+1.9
ROSC	El Rosal	35.26	356	P	P	01 50 21.0	-0.6
ROSC				IAmb	IAmb	01 50 40.9	
	comp=Z,21nm,1.4s						
MCPB	Macapa, AP	35.42	36	eP	P	01 50 22.8	+0.2
GUY2C	Guyana, Caldas	35.72	354	eP	P	01 50 28.1	+2.4
TMAB	Tom-Au,PA,Br	35.93	43	eP	P	01 50 28.7	+1.8
NORC	Norcasia	36.02	355	eP	P	01 50 30.6	+2.8
SPBC	San Pablo de B	36.05	356	eP	P	01 50 30.2	+2.1
RUSC	La Rusia	36.25	358⇑	i P	P	01 50 33.0	+2.8
CBOC	Ciudad Bolivar	36.42	353	eP	P	01 50 33.0	+1.7
HELC	Santa Helena	36.69	354	eP	P	01 50 36.3	+2.5
NBLA	Lagarto - SE	37.10	66	eP	P	01 50 38.4	+1.4
ZARC	Zaragoza, Cauc	37.93	355	P	P	01 50 41.5	-2.4
ZARC				IAmb	IAmb	01 50 47.0	
	comp=Z,7.0nm,0.5s						
ZARC	Zaragoza, Cauc	37.93	355	eP	P	01 50 45.5	+1.6
UREC	San Jos de Ur	38.24	354	eP	P	01 50 48.0	+1.4
NBMA	Muriti-CE	38.62	60	eP	P	01 50 49.4	-0.4
NBPS	Pedro II - PI	38.70	54	eP	P	01 50 50.9	+0.3
NBAN	Anadia - AL	39.08	65	eP	P	01 50 55.4	+1.7
SMLC	San Martn de	39.17	357⇓	eP	P	01 50 55.0	+0.6
SDV	Santo Domingo	39.22	2	P	P	01 50 52.7	-2.2
SDV	Santo Domingo	39.22	2	eP	P	01 50 56.9	+1.9
NBLV	Livramento - P	40.01	62	eP	P	01 51 00.7	-0.8
MLPR	Magueyes Islan	48.45	6	P	P	01 52 08.0	-0.9
OBIP	Obispado Ponce	48.57	7	P	P	01 52 10.3	+0.5
SMRT	St. Maarten	49.05	11	P	P	01 52 14.0	+0.5
VNA3	Neumayer Olymp	52.50	159	P	P	01 52 39.4	+0.4
VNA1	Neumayer--Stat	52.80	158	P	P	01 52 41.7	+0.6
VNA2	Neumayer--Watz	53.14	158	P	P	01 52 44.0	+0.4
	baz=290,slow=8.3						
SNAA	Sanae	54.73	159	P	P	01 52 55.6	+0.3
SNAA	Sanae	54.73	159	P	P	01 52 53.9	-1.4
SNAA				IAmb	IAmb	01 53 04.7	
	comp=Z,17nm,1.3s						
QSPA	South Pole Qui	59.68	180	P	P	01 53 29.6	-0.9
QSPA				IAmb	IAmb	01 53 32.3	
	comp=Z,4.6nm,0.7s						
X48A	Hartselle	66.22	346	P	P	01 54 14.9	+0.9
X48A				IAmb	IAmb	01 54 24.8	
	comp=Z,8.5nm,1.0s						
TXAR	Lajitas Array	66.82	330	P	P	01 54 19.2	+1.1
	comp=Z,0.3nm,0.6s,baz=161,slow=9.1,SNR=6.5						
VNDA	Vanda	67.52	191	P	P	01 54 22.2	+0.4
	comp=Z,0.3nm,0.4s,baz=125,slow=5.6,SNR=2.3						
VNDA				LR	LR	02 22 08.6	
	comp=Z,84nm,18.0s,baz=149,slow=34						
VNDA	Vanda	67.52	191	P	P	01 54 21.7	-0.1
WVT	Waverly	68.00	346	P	P	01 54 26.2	+1.0
WVT				IAmb	IAmb	01 54 36.0	
	comp=Z,9.9nm,1.1s						
TBI	Tubuai	68.32	255	eT	T	03 09 02.0	
	comp=Z,17nm,0.2s						
MEH	Mehetia	69.51	261	eT	T	03 10 34.0	
	comp=Z,36nm,0.2s						
TIAR	Tiarei	70.74	261	eT	T	03 12 06.0	
	comp=Z,4.1nm,0.2s						
PPT2	Papeete2	70.92	260	eLR	LR	02 16 21.9	
	comp=Z,192nm,24.2s						
R40A	Maddies Statio	71.08	343	P	P	01 54 43.9	-0.3
R40A				IAmb	IAmb	01 54 47.0	
	comp=Z,6.0nm,0.6s						
LIC	Lamto	73.55	72	eP	P	01 54 59.5	-0.1
	comp=Z,36nm,1.1s						
TIC	Toumodi	73.80	72	eP	P	01 55 01.7	+0.6
KIC	Kosan Boka	73.86	72	eP	P	01 55 01.4	-0.1
	comp=Z,56nm,1.1s						
DBIC	Dimbokro	73.94	72	P	P	01 55 01.5	-0.4
	comp=Z,10nm,0.6s,baz=227,slow=5.3,SNR=18						
DBIC				LR	LR	02 25 07.5	
	comp=Z,240nm,19.5s,baz=234,slow=34						
DBIC	Dimbokro	73.94	72	P	P	01 55 01.6	-0.2
MAW	Mawson	76.44	164	P	P	01 55 15.3	-0.1
	comp=Z,6.7nm,0.5s,baz=211,slow=6.7,SNR=64						
MAW				LR	LR	02 31 32.8	
	comp=Z,214nm,18.8s,baz=237,slow=38						
MAW	Mawson	76.44	164		P	01 55 15.4	0.0
ECSD	EROS Data Cent	77.32	342	P	P	01 55 21.4	+0.9
ECSD				IAmb	IAmb	01 55 34.3	
	comp=Z,5.1nm,0.8s						
KOWA	Kowa	79.08	66	P	P	01 55 29.9	-1.1
R11A	Troy Canyon, C	79.76	326	P	P	01 55 35.0	+0.6
R11A				IAmb	IAmb	01 55 42.4	
	comp=Z,6.3nm,0.8s						
PDAR	Pinedale Array	80.76	333	P	P	01 55 41.2	+1.5

	comp=Z,0.6nm,0.6s,baz=132,slow=7.0,SNR=6.7						
PDAR				LR	LR	02 28 09.3	
	comp=Z,65nm,20.5s,baz=123,slow=33						
PDAR	**Pinedale Array**	**80.76**	**333**	P	**P**	**01 55 39.6**	**-0.1**
B35A	**Bob, Littlefor**	**80.96**	**345**	P	**P**	**01 55 41.0**	**+0.6**
B35A				IAmb	IAmb	01 55 42.4	
	comp=Z,4.2nm,0.7s						
NVAR	**Mina Array Bea**	**81.15**	**325**	P	**P**	**01 55 43.6**	**+1.7**
	comp=Z,0.7nm,0.8s,baz=161,slow=5.9,SNR=4.0						
AGMN	**Agassiz Nation**	**81.38**	**344**	P	**P**	**01 55 42.0**	**-0.5**
ELK	**Elko**	**81.51**	**328**	P	**P**	**01 55 42.7**	**-1.1**
BOSA	**Boshof**	**81.54**	**118**	P	**P**	**01 55 44.5**	**+0.2**
	comp=Z,4.8nm,1.0s,baz=218,slow=3.7,SNR=6.0						
BOSA				LR	LR	02 27 52.9	
	comp=Z,119nm,18.3s,baz=193,slow=33						
TORD	**Torodi Ar. Bea**	**82.89**	**70**	P	**P**	**01 55 51.1**	**-0.2**
	comp=Z,3.4nm,0.5s,baz=284,slow=6.2,SNR=72						
TORD	**Torodi Ar. Bea**	**82.89**	**70**	P	**P**	**01 55 51.2**	**0.0**
ULM	**Lac du Bonnet**	**83.21**	**345**	P	**P**	**01 55 51.5**	**-0.5**
	comp=Z,2.4nm,0.7s,baz=205,slow=4.6,SNR=5.2						
ESDC	**Sonseca Array**	**94.06**	**46**	LR	LR	02 39 37.4	
	comp=Z,129nm,18.1s,baz=280,slow=36						
YKA	**Yellowknife Ar**	**98.84**	**341**	P	Pdif	01 57 06.2	+0.7
	comp=Z,0.4nm,0.7s,baz=254,slow=5.0,SNR=4.3						
DZM	**Mont Dzumac**	**103.40**	**234**	*e*LR	LR	02 31 28.3	
	comp=Z,184nm,24.4s						
ASAR	**Alice Springs**	**120.71**	**208**	PKP	**PKPdf**	**02 02 17.8**	**-0.9**
	comp=Z,0.4nm,0.5s,baz=130,slow=1.7,SNR=8.2						
WRA	**Warramunga Arr**	**123.84**	**210**	PKP	**PKPdf**	**02 02 23.8**	**-1.0**
	comp=Z,1.3nm,0.5s,baz=157,slow=1.6,SNR=38						
ZALV	**Zalesovo Beam**	**151.18**	**29**	PKPbc	**PKiKP**	**02 03 19.9**	**+0.4**
	comp=Z,15nm,0.5s,baz=301,slow=3.3,SNR=74						
ZALV				PKPab	**PKPab**	**02 03 26.5**	**-0.3**
	comp=Z,39nm,0.9s,baz=298,slow=3.2,SNR=30						
ZALV	**Zalesovo Beam**	**151.18**	**29**		**PKiKP**	**02 03 19.5**	**+0.1**
KSH	**Kashi**	**152.29**	**62**	PKPbc	**PKPbc**	**02 03 20.9**	**-1.2**
KSH				pPKP	pPKPbc	02 03 31.5	+0.5
MKAR	**Makanchi Array**	**154.26**	**44**	PKPbc	**PKPbc**	**02 03 25.7**	**-0.4**
	comp=Z,1.8nm,0.9s,baz=318,slow=1.8,SNR=9.8						
MKAR				PKPab	**PKPab**	**02 03 40.0**	**-0.2**
	comp=Z,1.0nm,0.7s,baz=339,slow=2.5,SNR=6.3						
MKAR	**Makanchi Array**	**154.26**	**44**		**PKPbc**	**02 03 25.6**	**-0.5**
SONM	**Songino Array**	**162.68**	**4**	PKPab	**PKPab**	**02 04 18.3**	**+1.8**
	comp=Z,0.2nm,0.3s,baz=316,slow=4.0,SNR=2.5						

NOU 03 01:58:02.7, 19°.97S×169°.15E, h0^{km}, MLv3.7/9, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**1.83**	**215**	P	Pn	01 58 34.6	-0.9
LIFNC	**LIFOU**	**1.96**	**246**	P	Pn	01 58 35.5	-1.8
RTV	**Rentapao**	**2.27**	**342**	P	Pn	01 58 41.3	-0.2
DVP	**Devils Point**	**2.41**	**338**	P	Pn	01 58 42.9	-0.5
OUENC	**Ouen Island, N**	**3.25**	**221**	P	Pn	01 58 55.3	+0.3
DZM	**Mont Dzumac**	**3.28**	**230**	P	Pn	01 58 55.3	-0.2
NOUC	**Port Laguerre**	**3.40**	**231**	P	Pn	01 58 57.7	+0.6
KOUNC	**Koumac, New Ca**	**4.60**	**262**	P	Pn	01 59 14.5	+0.9

NEIC 03 02:12:58.7±0.7, 36°.839N±0°.010×97°.89W±0°.01, h7^{km}±2^{km}, mb_Lg2.3/3, Error ellipse: s-maj=1.7km s-min=1.4km az=103.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	**Winter Ranch,**	**1.00**	**243**	Pg	Pg	02 13 17.6	-0.4
U32A				Sg	Sg	02 13 31.0	0.0
T35A	**Sooner Cattle**	**1.11**	**86**	Pg	Pg	02 13 20.0	0.0
T35A				Sg	Sg	02 13 34.3	-0.1
OKCSW	**OKLAHOMA CITY**	**1.48**	**165**	Pn	Pn	02 13 26.1	+0.3
R32A	**Long Quarter,**	**1.71**	**338**		Pn	02 13 29.8	+0.8
TUL1	**Leonard**	**1.93**	**118**	IAmb_Lg		02 14 01.4	
	comp=Z,15nm,0.9s						
WMOK	**Wichita Mounta**	**2.22**	**199**	Pn	Pn	02 13 34.4	-1.6
X34A	**Smith Ranch, M**	**2.23**	**179**	Pn	Pn	02 13 35.9	-0.3
X37A	**Clayton**	**3.04**	**137**	Pn	Pn	02 13 46.5	-0.8
N35A	**Tabor**	**4.38**	**23**	IAmb_Lg		02 15 24.2	
	comp=Z,10nm,0.7s						

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*IDC **03** 02:37:13.0±1.9, 32°.71S×178°.11W, h0^{km}, mb4.2/2, mb1 4.4/3, mb1mx3.8/30, mbtmp4.1/3, ML3.7/1, Error ellipse: s-maj=47.3km s-min=33.6km az=56.0*

*NEIC **03** 02:37:18.4±0.9, 33°.08S±0°.08×178°.0W±0°.2, h39^{km}±8^{km}, mb4.3/7, Error ellipse: s-maj=27.5km s-min=4.9km az=111.0*

ISC 03 02:37:19.3±1.3, 33°.0S±0°.1×178°.2W±0°.2, h35^{km}, n16, σ0^{s}.87/18, mb4.2/7, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**5.38**	**211**	Pn	**Pn**	**02 38 37.1**	**+0.1**
URZ	**Urewera**	**6.49**	**215**	Pn	**Pn**	**02 38 52.2**	**-0.1**
	1.3nm,0.3s,baz=127,slow=20,SNR=2.7						
URZ				Sn	**Sn**	**02 40 06.2**	**+1.1**
	2.7nm,0.3s,baz=126,slow=22,SNR=4.3						
URZ	**Urewera**	**6.49**	**215**		**Pn**	**02 38 51.8**	**-0.5**
URZ					**Sn**	**02 40 05.2**	**+0.1**
BKZ	**Black Stump Fm**	**7.50**	**213**	Pn	**Pn**	**02 39 04.9**	**-1.4**
COEN	**Coen**	**39.88**	**289**	P	**P**	**02 44 51.0**	**+1.1**
ASAR	**Alice Springs**	**42.86**	**270**	P	**P**	**02 45 14.1**	**-0.3**
	2.1nm,0.7s,baz=105,slow=7.3,SNR=22						
ASAR	**Alice Springs**	**42.86**	**270**	P	**P**	**02 45 13.3**	**-1.1**
WR0	**Warramunga Arr**	**43.90**	**275**	P	**P**	**02 45 22.0**	**-0.8**
WR0				IAmb	IAmb	02 45 23.3	
	comp=Z,5.5nm,1.1s						
WB2	**Warramunga Arr**	**44.07**	**275**	P	**P**	**02 45 23.4**	**-0.7**
WB2				IAmb	IAmb	02 45 37.4	
	comp=Z,3.2nm,0.8s						
WRA	**Warramunga Arr**	**44.08**	**275**	P	**P**	**02 45 23.4**	**-0.7**
	comp=Z,1.2nm,0.3s,baz=115,slow=7.8,SNR=34						
WRA	**Warramunga Arr**	**44.08**	**275**	P	**P**	**02 45 23.5**	**-0.7**
WB0	**Warramunga Arr**	**44.11**	**275**	P	**P**	**02 45 23.6**	**-0.9**
WB0				IAmb	IAmb	02 45 37.1	
	comp=Z,6.2nm,1.1s						
FITZ	**Fitzroy Crossi**	**52.22**	**272**	P	**P**	**02 46 26.7**	**-0.4**
FITZ				IAmb	IAmb	02 46 41.3	
	comp=Z,6.1nm,1.4s						
QSPA	**South Pole Qui**	**57.13**	**180**	P	**P**	**02 47 03.2**	**+1.1**
	baz=90,slow=5.1						
SNAA	**Sanae**	**75.58**	**178**	P	**P**	**02 48 59.0**	**-1.0**
SNAA				IAmb	IAmb	02 49 10.2	
	comp=Z,3.2nm,1.5s						
FINES	**FINESS Array B**	**147.50**	**338**	PKPbc	**PKPdf**	**02 56 56.7**	**+0.5**
	comp=Z,1.5nm,0.6s,baz=45,slow=3.4,SNR=6.7						

IDC 03 02:38:42.5±8.0, 31°.15S×178°.83W, h0^{km}, mb3.9/2, mb1 4.1/2, mb1mx3.6/30, mbtmp3.9/2, MS3.1/1, Ms1 3.1/1, ms1mx2.7/29, Error ellipse: s-maj=333.7km s-min=64.9km az=157.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**15.96**	**301**	LR	LR	02 47 30.1	
	comp=Z,59nm,18.9s,baz=214,slow=33						
ASAR	**Alice Springs**	**42.36**	**268**	P	P	02 46 38.4	-0.4
	1.2nm,0.7s,baz=110,slow=7.8,SNR=5.7						
WRA	**Warramunga Arr**	**43.42**	**273**	P	P	02 46 47.5	+0.1
	0.7nm,0.4s,baz=114,slow=7.7,SNR=3.6						
FINES	**FINESS Array B**	**145.59**	**339**	PKPbc	PKPdf	02 58 21.4	-0.7
	3.1nm,1.0s,baz=50,slow=4.3,SNR=2.0						

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*IDC **03** 02:40:12.3±2.1, 32°.74S×178°.06W, h0^{km}, mb4.2/3, mb1 4.4/3, mb1mx3.8/32, mbtmp4.2/3, Error ellipse: s-maj=61.2km s-min=32.2km az=49.0*

*NEIC **03** 02:40:17.6±1.5, 32°.8S±0°.1×177°.9W±0°.2, h47^{km}±12^{km}, mb4.5/9, Error ellipse: s-maj=24.6km s-min=16.5km az=79.0*

ISC 03 02:40:17.6±1.3, 32°.8S±0°.1×177°.9W±0°.2, h50^{km}, n19, σ0^{s}.89/19, mb4.3/7, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**10.91**	**213**	Pn	**Pn**	**02 42 49.9**	**-1.1**
QRZ	**Quartz Range**	**11.08**	**221**	Pn	**Pn**	**02 42 55.0**	**+1.7**
MSVF	**Nonsavu**	**15.43**	**345**		**Pn**	**02 43 52.7**	**+0.6**
MSVF				IAmb	IAmb	02 43 54.3	
	comp=Z,39nm,0.7s						
MARNC	**Mare, Loyalty**	**16.81**	**309**	Pn	**Pn**	**02 44 09.4**	**-0.1**
SANVU	**Saraoutou**	**21.92**	**318**	P	**P**	**02 45 05.9**	**-0.9**
SANVU				IAmb	IAmb	02 45 09.9	
	comp=Z,30nm,1.0s						
PMG	**Port Moresby**	**39.74**	**298**	P	**P**	**02 47 46.6**	**+1.1**
	comp=Z,5.4nm,0.3s,baz=197,slow=14,SNR=1.7						
ASAR	**Alice Springs**	**43.10**	**269**	P	**P**	**02 48 13.2**	**0.0**
	comp=Z,1.0nm,0.6s,baz=106,slow=7.7,SNR=7.9						
ASAR	**Alice Springs**	**43.10**	**269**	P	**P**	**02 48 12.5**	**-0.7**
WR0	**Warramunga Arr**	**44.13**	**275**	P	**P**	**02 48 21.3**	**-0.1**
WR0				IAmb	IAmb	02 48 24.6	
	comp=Z,6.6nm,1.3s						
WB2	**Warramunga Arr**	**44.30**	**275**	P	**P**	**02 48 22.8**	**+0.1**
WB2				IAmb	IAmb	02 48 25.3	
	comp=Z,7.4nm,1.2s						
WRA	**Warramunga Arr**	**44.31**	**275**	P	**P**	**02 48 22.8**	**-0.1**
	comp=Z,1.4nm,0.5s,baz=114,slow=7.7,SNR=11						
WRA	**Warramunga Arr**	**44.31**	**275**	P	**P**	**02 48 22.5**	**-0.3**
WB0	**Warramunga Arr**	**44.34**	**275**	P	**P**	**02 48 23.1**	**0.0**
CASY	**Casey**	**53.07**	**209**	P	**P**	**02 49 28.7**	**-0.7**
NWAO	**Narrogin (SRO)**	**53.65**	**251**	P	**P**	**02 49 33.3**	**-0.9**
QSPA	**South Pole Qui**	**57.33**	**180**	P	**P**	**02 50 02.2**	**+1.9**
	baz=0.0,slow=2.0						
QSPA	**South Pole Qui**	**57.33**	**180**	P	**P**	**02 50 00.2**	**-0.1**
SNAA	**Sanae**	**75.77**	**178**	P	**P**	**02 51 57.9**	**+0.1**
SNAA				IAmb	IAmb	02 52 06.7	
	comp=Z,2.1nm,0.3s						
FINES	**FINESS Array B**	**147.40**	**339**	PKPbc	**PKPab**	**02 59 56.2**	**-0.8**
	comp=Z,1.8nm,0.7s,baz=45,slow=4.1,SNR=5.2						

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*IDC **03** 02:41:52.6±6.2, 36°.18S×176°.31E, h215^{km}±49^{km}, mb3.2/2, mb1 3.4/3, mb1mx3.1/29, mbtmp3.6/3, Error ellipse: s-maj=130.2km s-min=44.6km az=28.0*

*WEL **03** 02:41:55.1±0.8, 37°S±7°×17°7E±°, h269^{km}±8^{km}, M3.2/16, MLv3.2/16, Error ellipse: s-maj=0.0km s-min=0.0km az=121.0*

ISC 03 02:41:54.5±1.2, 36°.76S±0°.09×176°.95E±0°.10, h271^{km}±9^{km}, n33, σ1^{s}.15/58, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUZ	**Kuaotunu**	**0.99**	**271**	P	**Pn**	**02 42 32.7**	**+1.1**
HAZ	**Te Kaha**	**1.19**	**146**	P	**Pn**	**02 42 32.7**	**0.0**
HAZ				S	**S**	**02 43 02.2**	**-0.8**
RUGZ	**Raukumara Rang**	**1.33**	**154**	P	**Pn**	**02 42 33.5**	**-0.3**
RUGZ				S	**S**	**02 43 03.5**	**-1.4**
MXZ	**Matakaoa Point**	**1.35**	**127**	P	**Pn**	**02 42 33.4**	**-0.3**
MXZ				S	**S**	**02 43 03.8**	**-0.9**
PKGZ	**Pakihiroa**	**1.44**	**142**	P	**Pn**	**02 42 33.8**	**-0.5**
PKGZ				S	**S**	**02 43 05.5**	**-0.5**
URZ	**Urewera**	**1.50**	**175**	P	**Pn**	**02 42 35.0**	**+0.3**
	2.4nm,0.3s,baz=300,slow=23,SNR=13						
URZ				S	**S**	**02 43 06.4**	**-0.2**
	6.9nm,0.3s,baz=58,slow=21,SNR=6.4						
URZ	**Urewera**	**1.50**	**175**	P	**Pn**	**02 42 34.9**	**+0.2**
URZ				S	**S**	**02 43 06.6**	**0.0**
WMGZ	**Waiomatatini S**	**1.57**	**132**	P	**Pn**	**02 42 35.3**	**+0.1**
WMGZ				S	**S**	**02 43 07.3**	**-0.3**
TWGZ	**Tauwhareparae**	**1.63**	**150**	P	**Pn**	**02 42 36.4**	**+0.6**
TWGZ				S	**S**	**02 43 08.5**	**0.0**
SNGZ	**Shannon Statio**	**2.04**	**171**	P	**Pn**	**02 42 39.5**	**+0.6**
SNGZ				S	**S**	**02 43 14.4**	**0.0**
RIGZ	**Rimuhau**	**2.04**	**162**	P	**Pn**	**02 42 39.8**	**+0.8**
RIGZ				S	**S**	**02 43 14.9**	**+0.4**
MTHZ	**Maungataniwha**	**2.09**	**182**	P	**Pn**	**02 42 40.5**	**+1.1**
MTHZ				S	**S**	**02 43 13.0**	**-2.1**
RAHZ	**Arahi**	**2.15**	**177**	P	**Pn**	**02 42 40.4**	**+0.4**
RAHZ				S	**S**	**02 43 16.7**	**+0.6**
PRGZ	**Paritu Road**	**2.28**	**161**	S	**S**	**02 43 20.4**	**+2.2**
WHHZ	**Waihua**	**2.32**	**174**	S	**S**	**02 43 19.2**	**+0.4**
KNZ	**Kokohu**	**2.33**	**166**	P	**Pn**	**02 42 41.6**	**+0.1**
KNZ				S	**S**	**02 43 17.8**	**-1.1**
NMHZ	**Naumai**	**2.33**	**183**	P	**Pn**	**02 42 42.8**	**+1.1**
NMHZ				S	**S**	**02 43 21.0**	**+1.8**
BKZ	**Black Stump Fm**	**2.43**	**188**	P	**Pn**	**02 42 42.6**	**+0.1**
BKZ				S	**S**	**02 43 20.4**	**-0.4**
MHGZ	**Mahia Peninsul**	**2.50**	**163**	P	**Pn**	**02 42 42.9**	**-0.3**
MHGZ				S	**S**	**02 43 21.2**	**-0.7**
MCHZ	**McNeill Hill**	**2.68**	**184**	P	**Pn**	**02 42 45.6**	**+0.6**
MCHZ				S	**S**	**02 43 25.8**	**+0.7**
KWHZ	**Kaweka Forest**	**2.69**	**189**	P	**Pn**	**02 42 45.1**	**0.0**
KWHZ				S	**S**	**02 43 25.9**	**+0.6**
WHVZ	**Whangaehu Hut**	**2.73**	**203**	P	**Pn**	**02 42 46.9**	**+1.1**
WNVZ	**Wahianoa**	**2.77**	**202**	P	**Pn**	**02 42 47.1**	**+1.1**
WNVZ				S	**S**	**02 43 28.5**	**+1.4**
KRHZ	**Kereru**	**2.91**	**189**	P	**Pn**	**02 42 47.0**	**-0.3**
KRHZ				S	**S**	**02 43 28.4**	**-1.0**
KAHZ	**Kahuranaki**	**3.03**	**181**	P	**Pn**	**02 42 48.7**	**+0.2**
KAHZ				S	**S**	**02 43 33.3**	**+1.8**
PNHZ	**Pukenui**	**3.20**	**190**	P	**Pn**	**02 42 49.7**	**-0.6**
PNHZ				S	**S**	**02 43 34.1**	**-0.8**
TSZ	**Takapari Road**	**3.38**	**193**	P	**Pn**	**02 42 51.6**	**-0.6**
TSZ				P	**S**	**02 43 37.8**	**-0.5**
DVHZ	**Dannevirke**	**3.58**	**190**	P	**Pn**	**02 42 54.1**	**-0.4**
DVHZ				S	**S**	**02 43 41.0**	**-1.3**
ANWZ	**Angora Road**	**3.71**	**186**	S	**S**	**02 43 45.3**	**+0.5**
MRZ	**Mangatainoka R**	**4.04**	**195**	P	**Pn**	**02 42 58.3**	**-1.2**
MRZ				S	**S**	**02 43 49.9**	**-1.6**
ASAR	**Alice Springs**	**39.11**	**277**	P	**P**	**02 48 54.4**	**-1.8**
	1.1nm,0.5s,baz=117,slow=7.9,SNR=7.9						
WRA	**Warramunga Arr**	**40.71**	**282**	P	**P**	**02 49 06.9**	**-2.4**
	0.4nm,0.4s,baz=119,slow=7.7,SNR=1.9						
TORD	**Torodi Ar. Bea**	**156.10**	**191**	PKP	**PKPdf**	**03 01 21.5**	**+4.5**
	0.9nm,1.1s,baz=172,slow=1.4,SNR=3.2						

IDC 03 02:48:24.7±2.0, 31°.09S×178°.47W, h0^{km}, mb4.2/3, mb1 4.4/3, mb1mx3.8/34, mbtmp4.2/3, Error ellipse: s-maj=60.4km s-min=32.3km az=41.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**42.67**	**268**	P	P	02 56 22.8	-0.6
	2.3nm,0.8s,baz=110,slow=7.6,SNR=19						
WRA	**Warramunga Arr**	**43.72**	**273**	P	P	02 56 32.2	+0.4
	2.4nm,0.7s,baz=113,slow=7.8,SNR=16						
QSPA	**South Pole Qui**	**59.02**	**180**	P	P	02 58 25.8	-0.3
	3.8nm,0.7s,baz=25,slow=3.7						
FINES	**FINESS Array B**	**145.65**	**339**	PKPbc	PKPdf	03 08 03.5	-0.8
	2.3nm,0.9s,baz=49,slow=4.4,SNR=5.2						
TORD	**Torodi Ar. Bea**	**162.14**	**181**	PKPab	PKPab	03 09 15.3	+0.2
	1.0nm,1.0s,baz=202,slow=3.1,SNR=4.0						

JMA 03 02:51:44.3, 38°.45N×141°.92E, h61^{km}±1^{km}, M3.6, 5C-3D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.38**	**249**	⇑P	Pn	02 51 55.2	0.0
JIKH				S	Sn	02 52 02.9	-0.2
JIO	**Ouri**	**0.45**	**271**	⇑P	Pn	02 51 55.8	0.0
JIO				S	Sn	02 52 04.0	-0.1
JKMT	**Kesennumamotoy**	**0.50**	**316**	⇑P	Pn	02 51 56.5	+0.2
JKMT				S	Sn	02 52 05.0	-0.1
OFUJ	**Ofunato**	**0.66**	**343**	⇑P	Pn	02 51 58.2	+0.1
OFUJ				S	Sn	02 52 08.2	0.0
JMK	**Ichinoseki**	**0.74**	**313**	⇑P	Pn	02 51 59.4	+0.3
JMK				S	Sn	02 52 10.2	+0.2
JOU	**Okura**	**0.99**	**266**	P	Pn	02 52 02.3	0.0
JOU				S	Sn	02 52 15.5	-0.1
JMM	**Marumori**	**1.06**	**237**	⇓P	Pn	02 52 02.8	-0.4
JMM				S	Sn	02 52 16.3	-0.9
JOM	**Ohasama**	**1.13**	**335**	⇓P	Pn	02 52 04.3	+0.2
JOM				S	Sn	02 52 19.2	+0.3
JYK	**Kaneyama**	**1.31**	**291**	⇓P	Pn	02 52 06.7	+0.3
JYK				S	Sn	02 52 23.3	+0.3
JFK	**Kawauchi**	**1.36**	**218**	P	Pn	02 52 07.0	-0.2
JFK				S	Sn	02 52 23.7	-0.6
JRG	**Rokugo**	**1.38**	**314**	P	Pn	02 52 07.5	+0.1
JYS	**Shirataka**	**1.48**	**262**	P	Pn	02 52 09.1	+0.4
JYS				S	Sn	02 52 27.7	+0.7
JFT	**Otama**	**1.56**	**234**	P	Pn	02 52 10.3	+0.5
JFT				*e*S	Sn	02 52 29.2	+0.2
MAT	**Matsushiro**	**3.51**	**238**	P	Pn	02 52 36.7	+0.3
MAT				*e*S	Sn	02 53 22.4	+5.6

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*IDC **03** 03:00:33.0±0.7, 45°.39N×151°.06E, h0^{km}, mb4.1/23, mb1 4.3/26, mb1mx4.2/50, mbtmp4.1/26, ML4.8/2, MS3.7/11, Ms1 3.7/11, ms1mx3.3/38, Error ellipse: s-maj=18.3km s-min=14.2km az=141.0*

*NIED **03** 03:00:34.7, 45°.36N×151°.43E, h30^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}3.55; $M_{\theta\theta}$-0.96; $M_{\phi\phi}$-2.59; $M_{r\theta}$0.19; $M_{\theta\phi}$-2.08; $M_{\phi r}$1.69; Fault plane solution: $M_0$4.16000×10^{15} NP1:ϕ_s22.00000°, δ57.00000°, λ76.00000°. NP2:ϕ_s227.00000°, δ36.00000°, λ111.00000°.*

*JMA **03** 03:00:34.7±0.7, 45°.36N×151°.43E, h30^{km}, M4.9*

*SKHL **03** 03:00:35.0±0.4, 44°.90N×151°.60E, h48^{km}±7^{km}, mb5.1/8*

*MOS **03** 03:00:37.7±1.1, 45°.21N×151°.14E, h52^{km}, mb4.9/19, MS3.5/4, Error ellipse: s-maj=7.3km s-min=6.7km az=74.8*

*NEIC **03** 03:00:42.4±1.1, 45°.3N±0°.1×151°.1E±0°.1, h72^{km}±8^{km}, mb4.7/32, Error ellipse: s-maj=18.9km s-min=12.2km az=144.0*

ISC 03 03:00:36.1±0.5, 44°.85N±0°.07×151°.39E±0°.06, h36^{km}, n233, σ1^{s}.72/244, mb4.6/63, MS3.8/8, 20C-11D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.53**	**280**	⇓*i*PN	**Pn**	**03 01 14.4**	**-0.1**
KUR				*e*S	**Sn**	**03 01 44.7**	**+0.6**
KUR				pmax	pmax		
	comp=Z,462nm,0.4s						
KUR				pmax	pmax		
	comp=N,210nm,0.1s						
KUR				pmax	pmax		
	comp=E,158nm,0.1s						
KUR				smax	smax		
	comp=N,2µm,0.6s						
KUR				smax	smax		
	comp=E,410nm,0.6s						
KUR	**Kuril'sk**	**2.53**	**280**	*i* P	**Pn**	**03 01 14.4**	**-0.1**
KUR				AMB	AMB	03 01 15.7	
	comp=E,370nm,0.3s						
KUR				*e*S	**Sn**	**03 01 43.8**	**-0.3**
KUR				A	A	03 01 48.0	
	comp=E,2µm,0.5s						
KUR				A	A	03 01 48.0	
	comp=E,1µm,0.5s						
YUK	**Yuzh-Kuril'sk**	**4.04**	**260**	*e*PN	**Pn**	**03 01 36.9**	**+1.5**
YUK				*e*S	**Sn**	**03 02 25.8**	**+4.4**
YUK				pmax	pmax		
	comp=Z,476nm,0.2s						
YUK				smax	smax		
	comp=E,2µm,0.8s						
YUK				smax	smax		
	comp=N,348nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**4.04**	**260**	*e*P	**Pn**	**03 01 36.6**	**+1.2**
YUK				AMB	AMB	03 01 45.0	
	comp=N,476nm,0.4s						
YUK				*e*S	**Sn**	**03 02 23.2**	**+1.8**
YUK				A	A	03 02 32.0	
	comp=N,348nm,0.6s						
YUK				A	A	03 02 32.0	
	comp=N,2µm,0.6s						
GRPR	**Tuman**	**4.11**	**260**	*e*PN	**Pn**	**03 01 37.8**	**+1.4**
GRPR				*e*S	**Sn**	**03 02 26.2**	**+3.0**
GRPR				pmax	pmax		
	comp=N,248nm,0.4s						
GRPR				pmax	pmax		
	comp=Z,386nm,0.4s						
GRPR				pmax	pmax		
	comp=E,109nm,0.2s						
GRPR				smax	smax		
	comp=N,808nm,0.3s						
GRPR				smax	smax		
	comp=E,383nm,0.3s						
GRPR	**Tuman**	**4.11**	**260**	*e*P	**Pn**	**03 01 37.8**	**+1.4**
GRPR				AMB	AMB	03 01 47.0	
	comp=E,386nm,0.4s						
GRPR				*e*S	**Sn**	**03 02 25.2**	**+2.0**
GRPR				A	A	03 02 43.0	
	comp=E,808nm,0.3s						
GRPR				A	A	03 02 43.0	
	comp=E,383nm,0.3s						
NEM2	**Nemuro 2**	**4.33**	**252**	P	**Pn**	**03 01 40.5**	**+1.2**
NEM2				*e*S	**Sn**	**03 02 29.4**	**+0.9**
NMR	**Nemuro--Hokkai**	**4.34**	**252**	*e*PN	**Pn**	**03 01 40.8**	**+1.4**
NMR				*e*S	**Sn**	**03 02 29.2**	**+0.5**
NMR	**Nemuro--Hokkai**	**4.34**	**252**	*e*P	**Pn**	**03 01 40.8**	**+1.4**
NMR				*e*S	**Sn**	**03 02 29.8**	**+1.1**
GLVR	**Golovnino**	**4.36**	**257**	*e*PN	**Pn**	**03 01 42.2**	**+2.5**
GLVR				*e*S	**Sn**	**03 02 31.6**	**+2.4**
GLVR				pmax	pmax		
	comp=Z,402nm,0.4s						
GLVR				pmax	pmax		
	comp=E,97nm,0.2s						
GLVR				smax	smax		
	comp=E,241nm,0.2s						
GLVR				smax	smax		
	comp=N,983nm,0.4s						
GLVR	**Golovnino**	**4.36**	**257**	*e*P	**Pn**	**03 01 41.3**	**+1.6**
GLVR				AMB	AMB	03 01 46.0	
	comp=N,402nm,0.4s						
GLVR				*e*S	**Sn**	**03 02 30.8**	**+1.6**
GLVR				A	A	03 02 48.0	
	comp=N,983nm,0.4s						
GLVR				A	A	03 02 48.0	
	comp=N,241nm,0.4s						
RUSJ	**Misakicho**	**4.46**	**263**	*e*PN	**Pn**	**03 01 44.8**	**+3.7**
RUSJ				*e*S	**Sn**	**03 02 36.1**	**+4.4**
JRA	**Rausu**	**4.58**	**261**	P	**Pn**	**03 01 45.4**	**+2.6**
JNK	**Nakash**	**4.96**	**258**	P	**Pn**	**03 01 50.1**	**+2.1**
JAK	**Akkeshi**	**5.18**	**251**	P	**Pn**	**03 01 52.1**	**+1.2**
JAK				*e*S	**Sn**	**03 02 49.6**	**+0.2**
JTKR	**Abashiri--Toko**	**5.43**	**263**	P	**Pn**	**03 01 56.9**	**+2.5**
JAR	**Ashorobuto**	**5.70**	**257**	P	**Pn**	**03 02 01.1**	**+2.9**
JOB	**Onbets**	**5.80**	**253**	P	**Pn**	**03 02 01.2**	**+1.7**
JMP	**Maruseppu**	**5.81**	**265**	P	**Pn**	**03 02 02.0**	**+2.3**
JCH	**Churui**	**6.23**	**252**	P	**Pn**	**03 02 07.7**	**+2.3**
JCH				*e*S	**Sn**	**03 03 16.2**	**+0.9**
JKK2	**Kamakawa 2**	**6.27**	**264**	P	**Pn**	**03 02 08.9**	**+2.9**
JKA	**Kamikawa-asahi**	**6.33**	**266**	Pn	**Pn**	**03 02 09.7**	**+2.9**
JKA	**Kamikawa-asahi**	**6.33**	**266**	*e*P	**Pn**	**03 02 09.7**	**+2.9**
ASAJ	**Asahikawa**	**6.33**	**266**	Pn	**Pn**	**03 02 09.6**	**+2.8**
	comp=N,5.5nm,0.3s,baz=69,slow=21,SNR=30						
ASAJ				Sn	**Sn**	**03 03 22.7**	**+4.8**
	baz=83,slow=22,SNR=1.0						
ASAJ				LR	LR	03 04 48.6	
	comp=N,534nm,18.9s,baz=130,slow=42						
ASAJ	**Asahikawa**	**6.33**	**266**	P	**Pn**	**03 02 09.8**	**+2.9**
YSS	**Yuzh-Sakhalins**	**6.38**	**292**	*e*PN	**Pn**	**03 02 07.7**	**+0.2**
YSS				pmax	pmax		
	comp=Z,20nm,0.7s						
YSS				MLR	MLR		
	comp=Z,700nm,14.0s						
YSS				MLR	MLR		
	comp=N,200nm,12.0s						
YSS				MLR	MLR		
	comp=E,400nm,13.0s						
YSS	**Yuzh-Sakhalins**	**6.38**	**292**		**Pn**	**03 02 09.3**	**+1.8**
YSS	**Yuzh-Sakhalins**	**6.38**	**292**	*e*P	**Pn**	**03 02 08.5**	**+1.0**
YSS				AMB	AMB	03 02 18.2	
	comp=E,30nm,0.7s						
JEM	**Erimo**	**6.63**	**248**		**Pn**	**03 02 14.4**	**+3.5**
ERM	**Erimo**	**6.63**	**248**	*i* PN	**Pn**	**03 02 12.6**	**+1.7**
SKR	**Severo-Kuril’s**	**6.65**	**27**	*e*PN	**Pn**	**03 02 11.1**	**-0.1**
SKR				MLR	MLR		
	comp=Z,1µm,15.0s						
SKR	**Severo-Kuril’s**	**6.65**	**27**	*e*P	**Pn**	**03 02 11.1**	**-0.1**
SKR				AMB	AMB	03 02 18.4	
	comp=Z,120nm,0.8s						
JNBK	**Urakawa-nobuka**	**6.78**	**251**	P	**Pn**	**03 02 14.2**	**+1.2**
JBT2	**Biratori 2**	**6.85**	**256**	P	**Pn**	**03 02 15.3**	**+1.4**
JEW	**Eniwo**	**7.46**	**258**	Pn	Pn	03 02 27.3	+5.0
PAU	**Pauzhetka**	**7.55**	**27**	*e*P	**Pn**	**03 02 23.5**	**0.0**
PAU				AMB	AMB	03 02 36.0	
	comp=Z,20nm,0.3s						
JKB	**Kayabe**	**8.10**	**252**	*e*S	**Sn**	**03 03 57.5**	**-3.9**
TYV	**Tymovskoe**	**8.41**	**319**	*e*P	**Pn**	**03 02 35.6**	**+0.4**
TYV				AMB	AMB	03 02 39.6	
	comp=Z,10.0nm,0.3s						
JANG	**Nango**	**8.54**	**242**	P	**Pn**	**03 02 37.1**	**-0.1**
JANG				*e*S	**Sn**	**03 04 07.2**	**-5.0**
JTH	**Tanohata**	**8.59**	**238**	*e*S	**Sn**	**03 04 08.0**	**-5.3**
JTM	**Tenmabayashi**	**8.60**	**245**	P	**Pn**	**03 02 38.8**	**+0.8**
JTM				*e*S	**Sn**	**03 04 09.8**	**-3.9**
JOSM	**Okushiri--Mats**	**9.09**	**256**	P	**Pn**	**03 02 46.4**	**+1.7**
PEA0B	**Petropavlovsk-**	**9.25**	**24**	PN	**Pn**	**03 02 49.9**	**+3.1**
PEA0B	**Petropavlovsk-**	**9.25**	**24**	Pn	**Pn**	**03 02 49.9**	**+3.1**
PETK	**Petropavlovsk-**	**9.25**	**24**	Pn	**Pn**	**03 02 47.5**	**+0.7**
	comp=Z,0.6nm,0.3s,baz=191,slow=12,SNR=2.7						

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PETK   Petropavlovsk-     9.25  24  PN     Pn      03 02 46.9 +0.1
PETK   Petropavlovsk-     9.25  24         Pn      03 02 46.9 +0.1
OFUJ   Ofunato            9.25 235  P      Pn      03 02 47.9 +1.0
OFUJ                                eS     Sn      03 04 26.2 -3.4
OKH    Okha              10.31 331  eP     Pn      03 03 04.8 +3.5
MJAR   Matsushiro Arr    12.98 235  Pn     Pn      03 03 42.2 +4.2
       comp=Z,0.1nm,0.3s,baz=19,slow=14,SNR=2.3
MJAR   Matsushiro Arr    12.98 235         P       03 03 45.0 -2.9
USRK   Ussuriysk Ar.     13.86 274  Pn     Pn      03 03 49.7 -0.2
       baz=81,slow=15,SNR=9.3
USRK                                LR     LR      03 09 08.4
       comp=Z,178nm,18.2s,baz=64,slow=38
USRK   Ussuriysk Ar.     13.86 274  P      Pn      03 03 52.6 +2.7
USRK   Ussuriysk Ar.     13.86 274  Pn     Pn      03 03 52.6 +2.7
KLR    Kul'dur           14.08 295  Pn     Pn      03 03 53.1 +0.2
       comp=Z,0.1nm,0.3s,baz=76,slow=7.7,SNR=2.1
KLR    Kul'dur           14.08 295  i P    Pn      03 03 52.2 -0.7
KLR    Kul'dur           14.08 295  eP     Pn      03 03 52.2 -0.7
MA2    Magadan           14.76 359  Pn     Pn      03 03 58.8 -3.2
       comp=Z,1.0nm,0.3s,baz=161,slow=21,SNR=1.7
MA2                                 LR     LR      03 09 47.2
       comp=Z,112nm,18.0s,baz=177,slow=39
MA2    Magadan           14.76 359  P      Pn      03 03 59.1 -2.8
MA2    Magadan           14.76 359         Pn      03 03 59.1 -2.8
MA2    Magadan           14.76 359  eP     Pn      03 03 59.1 -2.8
MSHR   Mys Shultsa       14.81 268  eP     Pn      03 04 02.6 -0.1
ZEA    Zeya              18.01 308  eP     P       03 04 42.7 -0.8
ZEA                                 pmax   pmax
       comp=Z,10.0nm,1.0s
ZEA                                 MLR    MLR
       comp=E,100nm,11.0s
ZEA                                 MLR    MLR
       comp=N,100nm,13.0s
ZEA                                 MLR    MLR
       comp=Z,200nm,15.0s
ZEA    Zeya              18.01 308  eP     P       03 04 42.7 -0.8
ZEA                                 AMB    AMB     03 04 43.7
       comp=Z,10.0nm,1.0s
KSRS   Korea Array       19.11 255  P      Pn      03 04 58.6 +1.8
       comp=Z,0.4nm,0.3s,baz=58,slow=11,SNR=8.2
KSRS                                LR     LR      03 12 22.6
       comp=Z,96nm,19.1s,baz=64,slow=37
H11N2  WAKE ISLAND Hy    28.17 148  T      T       03 37 26.1
       baz=336,slow=75,SNR=239
H11N1  WAKE ISLAND Hy    28.18 148  T      T       03 37 25.0
       baz=336,slow=75,SNR=168
H11N3  WAKE ISLAND Hy    28.18 148  T      T       03 37 53.6
       baz=336,slow=75,SNR=187
H11S1  WAKE ISLAND Hy    29.21 149  T      T       03 38 56.5
       baz=337,slow=76,SNR=202
H11S3  WAKE ISLAND Hy    29.22 149  T      T       03 38 33.0
       baz=337,slow=76,SNR=116
H11S2  WAKE ISLAND Hy    29.23 149  T      T       03 38 33.9
       baz=337,slow=76,SNR=116
SONM   Songino Array     30.88 292  LR     LR      03 20 19.1
       comp=Z,177nm,18.5s,baz=18,slow=39
KTH    Kantishna Hill    36.99  39  P      P       03 07 42.5 +0.7
KTH                                 IAmb   IAmb    03 07 43.5
       comp=Z,7.8nm,1.0s
GTA    Gaotai            38.10 280  eP     P       03 07 51.6 +0.1
GTA                                 pP     pP      03 07 56.3 -3.8
GTA                                 sP     sP      03 07 58.9 -5.7
GTA                                 pmax   pmax
       comp=Z,5.0nm,0.7s
COLA   College           38.38  37⇑iP    P       03 07 54.0 +0.7
COLA                                pmax   pmax
       comp=Z,16nm,3.2s
ILAR   Eielson Array     38.79  37  P      P       03 07 56.4 -0.4
       comp=Z,0.8nm,0.5s,baz=263,slow=7.5,SNR=18
NRIK   Noril'sk          39.79 330⇑iP    P       03 08 02.1 -3.0
NRIK                                pmax   pmax
       comp=Z,3.0nm,1.3s
SCRK   Sand Creek        40.07  38  P      P       03 08 07.6 -0.1
M26K   Nabesna, AK       40.65  41  P      P       03 08 13.5 +1.1
L27K   Beaver Creek,     41.11  40  P      P       03 08 17.2 +1.0
ZALV   Zalesovo Beam     42.77 307  P      P       03 08 26.5 -3.2
       comp=Z,0.7nm,0.5s,baz=90,slow=7.2,SNR=2.2
ZALV                                PcP    PcP     03 10 21.2 +0.6
       comp=Z,1.2nm,0.5s,baz=81,slow=3.0,SNR=6.0
INK    Inuvik            43.90  31  P      P       03 08 38.7 +0.1
       comp=Z,2.0nm,0.7s,baz=291,slow=6.6,SNR=11
INK    Inuvik            43.90  31  P      P       03 08 38.7 +0.1
A36M   Sachs Harbour     46.09  25  P      P       03 08 56.3 +0.3
A36M                                IAmb   IAmb    03 08 57.2
       comp=Z,6.8nm,0.7s
MK31   Makanchi Array    46.76 298  P      P       03 09 01.5 -0.2
MK31                                pmax   pmax
       comp=Z,3.0nm,0.7s
MK31   Makanchi Array    46.76 298  P      P       03 09 01.5 -0.2
MKAR   Makanchi Array    46.76 298  P      P       03 09 00.2 -1.5
       comp=Z,2.4nm,0.7s,baz=73,slow=7.4,SNR=19
MKAR                                PcP    PcP     03 10 35.2 +0.7
       comp=Z,0.7nm,0.5s,baz=60,slow=4.2,SNR=6.2
MKAR                                LR     LR      03 29 33.6
       comp=Z,170nm,19.9s,baz=32,slow=38
MKAR   Makanchi Array    46.76 298ceP    P       03 09 01.1 -0.6
MKAR                                pmax   pmax
       comp=Z,2.0nm,0.7s
MKAR   Makanchi Array    46.76 298  P      P       03 09 01.3 -0.3
MKAR   Makanchi Array    46.76 298  eP     P       03 09 01.1 -0.6
MAKZ   Makanchi          46.95 298  P      P       03 09 02.5 -0.7
MAKZ                                pmax   pmax
       comp=Z,9.0nm,1.5s
MAKZ   Makanchi          46.95 298  P      P       03 09 02.5 -0.7
MAKZ                                IAmb   IAmb    03 09 16.9
       comp=Z,9.3nm,1.4s
KURK   Kurchatov         47.43 304⇑iP    P       03 09 05.2 -1.6
KURK                                pmax   pmax
       comp=Z,2.0nm,0.6s
KURK   Kurchatov         47.43 304  eP     P       03 09 05.2 -1.6
CMAR   Chiang Mai Arr    50.75 256  P      P       03 09 34.8 +2.3
       comp=Z,0.8nm,0.3s,baz=36,slow=6.7,SNR=1.2
CMAR                                LR     LR      03 33 17.6
       comp=Z,54nm,18.1s,baz=180,slow=39
CMAR   Chiang Mai Arr    50.75 256  P      P       03 09 34.5 +1.9
CMAR   Chiang Mai Arr    50.75 256  P      P       03 09 34.5 +1.9
SHL    Shillong          51.12 269  P      P       03 09 35.8 +0.3
SHL                                 pmax   pmax
       comp=Z,12nm,0.7s
SHL    Shillong          51.12 269  P      P       03 09 35.8 +0.3
EUNU   Eureka            51.23  11  P      P       03 09 34.3 -1.2
EUNU                                IAmb   IAmb    03 09 35.1
       comp=Z,13nm,1.3s
TAPN   Taplejung         53.01 273  eP     P       03 09 50.9 +1.2
YKA    Yellowknife Ar    53.17  35  P      P       03 09 50.9 +0.8
       comp=Z,1.4nm,1.0s,baz=297,slow=6.9,SNR=1.8
ODAN   Odare             53.53 273  eP     P       03 09 55.1 +1.7
       comp=Z,7.1nm,0.4s
AAK    Ala-Archa         53.60 297  P      P       03 09 53.5 -0.2
       comp=Z,1.3nm,0.4s,baz=80,slow=6.1,SNR=6.5
AAK    Ala-Archa         53.60 297⇑iP    P       03 09 53.6 -0.2
AAK                                 pmax   pmax
       comp=Z,10.0nm,0.9s
AAK    Ala-Archa         53.60 297  P      P       03 09 51.8 -1.9
JIRN   Jiri              53.90 275  eP     P       03 09 57.6 +1.3
       comp=Z,19nm,0.6s
RAMN   Ramite            54.03 274  eP     P       03 09 58.1 +0.9
       comp=Z,15nm,0.4s
KSH    Kashi             54.27 293  P      P       03 10 02.3 +3.7
KSH                                 pmax   pmax
       comp=Z,5.0nm,0.4s
KKN    Kakani            54.47 275  eP     P       03 10 01.5 +1.2
       comp=Z,20nm,0.8s
PKIN   Phulchoki         54.51 275  eP     P       03 10 01.4 +0.8
DMN    Daman             54.70 275  eP     P       03 10 03.2 +1.2
GKN    Gorkha            54.79 276  eP     P       03 10 03.7 +1.1
DANN   Dangsing          55.21 277  eP     P       03 10 07.0 +1.3
       comp=Z,19nm,0.5s
ARU    Arti              55.61 318d iP     P       03 10 09.6 +1.8
ARU                                                03 12 12.7
ARU                                 S      S       03 17 53.4 +2.6
ARU                                 SS     SS      03 21 35.4 -0.1
ARU                                 pmax   pmax
       comp=Z,2.0nm,0.5s
ARU    Arti              55.61 318  eP     P       03 10 09.4 +1.6
KOLN   Koldanda          55.67 277  eP     P       03 10 10.0 +1.1
       comp=Z,15nm,0.8s
PYUN   Piuthan           55.90 277  eP     P       03 10 11.7 +1.1
NEEM   North Greenlan    57.18   6  i P    P       03 10 17.0 -2.1
NEEM                                IAmb   IAmb    03 10 18.1
       comp=Z,7.8nm,0.7s
GAR    Garm              58.23 295  P      P       03 10 26.3 -0.5
DAG    Danmarks Havn     58.49 357  i P    P       03 10 25.0 -2.9
DAG                                 i P    P       03 10 26.0 -1.9
ABKAR  Akbulak array     58.72 310  P      P       03 10 28.6 -1.3
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ABKAR                               IAmb   IAmb    03 10 29.7
       comp=Z,3.8nm,0.4s
ABKAR  Akbulak array     58.72 310  P      P       03 10 28.1 -1.8
AKTO   Aktyubinsk        59.10 312  P      P       03 10 31.0 -1.5
       comp=Z,1.1nm,0.6s,baz=78,slow=6.0,SNR=4.9
CHGR   Chuyangaron       59.17 295  P      P       03 10 33.4 +0.1
ARCES  ARCESS Array B    59.25 341  P      P       03 10 30.9 -2.4
       comp=Z,2.4nm,0.9s,baz=30,slow=9.4,SNR=6.5
NIL    Nilore            59.36 288  P      P       03 10 34.1 -0.6
NIL                                 pmax   pmax
       comp=Z,13nm,0.9s
NIL    Nilore            59.36 288  P      P       03 10 34.1 -0.6
KBL    Kabul             61.65 292  P      P       03 10 49.8 -0.6
KBL                                 pmax   pmax
       comp=Z,9.0nm,0.8s
KBL    Kabul             61.65 292  P      P       03 10 49.8 -0.6
KBL                                 IAmb   IAmb    03 10 50.4
       comp=Z,8.5nm,0.8s
SUMG   Summit            62.68   3  P      P       03 10 56.3 -0.7
SUMG                                pmax   pmax
       comp=Z,10.0nm,0.9s
SUMG   Summit            62.68   3  i P    P       03 10 55.8 -1.2
SUMG                                IAmb   IAmb    03 10 58.1
       comp=Z,11nm,0.9s
SUMG   Summit            62.68   3  P      P       03 10 56.3 -0.7
SUMG                                IAmb   IAmb    03 10 57.7
       comp=Z,10nm,0.9s
BELG   Belogornoye       63.15 318  P      P       03 10 58.3 -1.6
       comp=Z,7.1nm,0.7s,baz=103,slow=5.2,SNR=4.6
NVAR   Mina Array Bea    64.40  61  P      P       03 11 11.9 +3.2
       comp=Z,0.3nm,0.7s,baz=288,slow=6.5,SNR=2.8
FINES  FINESS Array B    65.24 334  P      P       03 11 11.2 -2.2
       comp=Z,3.8nm,0.5s,baz=38,slow=7.0,SNR=31
FINES                               LR     LR      03 41 25.9
       comp=Z,66nm,18.9s,baz=328,slow=38
WRA    Warramunga Arr    66.33 198  P      P       03 11 24.9 +4.0
       comp=Z,0.7nm,0.4s,baz=14,slow=6.7,SNR=7.5
WRA    Warramunga Arr    66.33 198  eP     P       03 11 25.4 +4.5
WRA                                 pmax   pmax
       comp=Z,1.0nm,0.4s
WRA    Warramunga Arr    66.33 198  P      P       03 11 25.2 +4.3
GEYT   Alibeck           66.54 301  P      P       03 11 21.6 -0.7
       comp=Z,1.8nm,0.6s,baz=72,slow=9.5,SNR=3.3
PDAR   Pinedale Array    66.85  52  P      P       03 11 26.5 +2.0
       comp=Z,0.7nm,0.9s,baz=286,slow=3.6,SNR=3.2
PDAR   Pinedale Array    66.85  52  P      P       03 11 25.5 +1.0
NB2    NORSAR Subarra    69.63 341  P      P       03 11 39.7 -1.6
       comp=Z,2.3nm,0.5s,baz=27,slow=6.5
NOA    NORSAR Array B    69.63 341  P      P       03 11 39.7 -1.6
       comp=Z,2.7nm,0.5s,baz=30,slow=6.6,SNR=33
NOA                                 LR     LR      03 44 58.8
       comp=Z,23nm,18.7s,baz=20,slow=39
ASAR   Alice Springs     70.03 197  P      P       03 11 49.1 +5.1
       comp=Z,0.8nm,0.7s,baz=10,slow=5.2,SNR=8.5
KIV    Kislovodsk        71.25 314  eP     P       03 11 51.1 -0.5
KIV                                 pmax   pmax
       comp=Z,15nm,1.1s
KIV                                 MLR    MLR
       comp=Z,50nm,18.0s
KIV    Kislovodsk        71.25 314  eP     P       03 11 51.1 -0.5
KBZ    Khabaz            71.30 313  P      P       03 11 52.0 +0.3
       comp=Z,10nm,0.8s,baz=68,slow=4.0,SNR=14
KBZ                                 LR     LR      03 46 38.7
       comp=Z,111nm,18.1s,baz=36,slow=39
ONI    Oni               71.81 312  P      P       03 11 54.9  0.0
ONI                                 pmax   pmax
       comp=Z,8.0nm,0.8s
ONI    Oni               71.81 312  P      P       03 11 54.9  0.0
ONI                                 IAmb   IAmb    03 11 56.5
       comp=Z,8.1nm,0.8s
AKASG  Malin Array Be    72.45 326  P      P       03 11 56.7 -1.8
       comp=Z,4.6nm,0.3s,baz=38,slow=6.2,SNR=23
AKASG                               LR     LR      03 45 34.8
       comp=Z,68nm,18.2s,baz=265,slow=38
AKASG  Malin Array Be    72.45 326ceP    P       03 11 57.0 -1.5
AKASG                               pmax   pmax
       comp=Z,4.0nm,0.4s
AKASG  Malin Array Be    72.45 326  P      P       03 11 57.4 -1.0
AKBB   Malin Array Si    72.45 326ceP    P       03 11 56.9 -1.6
AKBB                                pmax   pmax
       comp=Z,29nm,3.1s
AKBB   Malin Array Si    72.45 326  P      P       03 11 57.1 -1.3
AKBB                                IAmb   IAmb    03 11 57.6
       comp=Z,15nm,1.4s
GKP    Gorka Klasztor    74.67 333  eP     P       03 12 10.4 -1.1
SORM   Soroca            74.81 324  ⇑P     P       03 12 11.1 -1.3
SCHQ   Schefferville     75.53  22  P      P       03 12 16.3 -0.1
       comp=Z,3.5nm,0.9s,baz=315,slow=8.6,SNR=2.2
MILM   Milestii Mici     75.57 323  ⇓P     P       03 12 15.4 -1.4
KWP    Kalwaria Pacla    75.83 328  eP     P       03 12 18.1 -0.2
KWP    Kalwaria Pacla    75.83 328  P      P       03 12 18.0 -0.2
KWP                                 pmax   pmax
       comp=Z,204nm,1.1s
KWP    Kalwaria Pacla    75.83 328  P      P       03 12 18.0 -0.2
OJC    Ojcow             76.39 330  eP     P       03 12 21.1 -0.4
OJC    Ojcow             76.39 330  P      P       03 12 21.0 -0.4
OJC                                 pmax   pmax
       comp=Z,12nm,1.1s
OJC    Ojcow             76.39 330  P      P       03 12 21.0 -0.4
OJC                                 IAmb   IAmb    03 12 21.7
       comp=Z,12nm,1.1s
BUR08  Bucovina Ar. S    76.48 326  P      P       03 12 21.6 -0.5
BURAR  Bucovina Array    76.50 326  ⇓P     P       03 12 21.4 -0.8
BURAR  Bucovina Array    76.50 326  P      P       03 12 21.8 -0.4
KOLS   Kolonicke sedl    76.56 328  eP     P       03 12 21.4 -1.0
KOLS   Kolonicke sedl    76.56 328  eP     P       03 12 21.3 -1.1
VLDR   Vladesti          76.73 323  ⇑P     P       03 12 23.3 -0.1
TESR   Tescani           76.80 324  ⇑P     P       03 12 22.7 -1.1
NIE    Niedzica          76.88 330  eP     P       03 12 25.2 +0.9
TLCR                     76.94 322  ⇑P     P       03 12 23.9 -0.6
KSP    Ksiaz             77.05 333  eP     P       03 12 24.8 -0.3
TRPA   Tarpa             77.12 328  ⇑P     P       03 12 25.5 -0.1
CFR    Carcaliu          77.23 323  ⇑P     P       03 12 24.7 -1.5
CHVC   Chvalec           77.35 333  eP     P       03 12 26.0 -0.8
DPC    Dobruska-Polom    77.47 332  eP     P       03 12 26.9 -0.6
DPC    Dobruska-Polom    77.47 332  eP     P       03 12 26.9 -0.6
OZUR                     77.49 325  ⇑P     P       03 12 28.1 +0.4
COVR   Voineasa-Covas    77.52 324  ⇑P     P       03 12 27.4 -0.5
MORC   Moravsky Berou    77.55 331  P      P       03 12 27.4 -0.6
MORC                                pmax   pmax
       comp=Z,6.0nm,0.8s
MORC   Moravsky Berou    77.55 331  P      P       03 12 27.4 -0.6
MORC                                IAmb   IAmb    03 12 28.5
       comp=Z,6.4nm,0.8s
MORC   Moravsky Berou    77.55 331  eP     P       03 12 27.4 -0.6
CLL    Collm             77.69 335  P      P       03 12 27.8 -0.9
CLL                                 pmax   pmax
       comp=Z,13nm,1.1s
CLL    Collm             77.69 335  i P    P       03 12 27.3 -1.3
       comp=Z,12nm,1.1s
CLL    Collm             77.69 335  P      P       03 12 27.8 -0.9
CLL                                 IAmb   IAmb    03 12 28.4
       comp=Z,13nm,1.1s
HARR   Harsova           77.71 322  ⇓P     P       03 12 28.1 -0.8
MLR    Muntele Rosu      77.92 324  ⇑P     P       03 12 30.3 +0.1
ISR    Istrita           77.96 324  ⇓P     P       03 12 29.5 -0.9
VYHS   Vyhne             78.18 330  eP     P       03 12 31.0 -0.5
VYHS   Vyhne             78.18 330  eP     P       03 12 31.0 -0.5
VRAC   Vranov            78.27 332  eP     P       03 12 31.5 -0.5
JAVC   Velka Javorina    78.28 331  eP     P       03 12 32.8 +0.7
VOIR                     78.33 325  ⇓P     P       03 12 32.5 +0.1
PRU    Pruhonice         78.36 333  eP     P       03 12 31.6 -0.8
PRU    Pruhonice         78.36 333  eP     P       03 12 31.6 -0.8
KRUC   Moravsky          78.55 332  eP     P       03 12 33.1 -0.4
MODS   Modra-Piesok      78.83 331  eP     P       03 12 34.7 -0.4
MODS   Modra-Piesok      78.83 331  eP     P       03 12 34.7 -0.4
BRTR   Keskin Array B    78.93 316  P      P       03 12 36.1 +0.2
       comp=Z,2.0nm,0.9s,baz=46,slow=13,SNR=6.8
SIRR   Siria             79.00 327  ⇑P     P       03 12 35.8 -0.3
GZR    Gura Zlata        79.29 326  ⇓P     P       03 12 37.1 -0.6
COPA   Copaceanca        79.32 324  ⇑P     P       03 12 36.8 -1.0
KHC    Kasperske Hory    79.41 333  eP     P       03 12 38.0 -0.3
KHC    Kasperske Hory    79.41 333  eP     P       03 12 38.0 -0.3
CKRC   Cesky Krumlov     79.45 333  eP     P       03 12 37.8 -0.7
TXAR   Lajitas Array     79.49  59  P      P       03 12 40.8 +1.6
       comp=Z,0.2nm,0.5s,baz=293,slow=4.5,SNR=6.6
TXAR   Lajitas Array     79.49  59  P      P       03 12 40.6 +1.5
TXAR   Lajitas Array     79.49  59  P      P       03 12 40.6 +1.5
BZS    Buzias            79.56 327  ⇓P     P       03 12 38.6 -0.5
GERES  GERESS Array B    79.62 333  P      P       03 12 38.8 -0.7
       comp=Z,1.7nm,0.7s,baz=39,slow=5.2,SNR=14
CONA   Conrad Observa    79.70 331  eP     P       03 12 39.6 -0.3
       comp=Z,2.4nm,0.7s
ARSA   Arzberg           80.41 331  eP     P       03 12 43.2 -0.5
```

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       comp=Z,3.1nm,1.0s
FRGS   Fruska Gora       80.64 328  ⇓P     P       03 12 44.7 -0.2
SOKA   Soboth            81.07 331  eP     P       03 12 47.5 +0.2
       comp=Z,5.5nm,1.3s
BOVS   Bovan             81.17 326  ⇑P     P       03 12 44.2 -3.6
KBA    Koelnbreinsper    81.29 332  i P    P       03 12 48.8 +0.3
       comp=Z,3.0nm,0.5s
VTS    Vitosha           81.39 324  ⇑P     P       03 12 48.9 -0.2
VTS    Vitosha           81.39 324  P      P       03 12 49.2  0.0
VTS                                 pmax   pmax
       comp=Z,8.0nm,1.0s
VTS    Vitosha           81.39 324  P      P       03 12 49.2  0.0
VTS                                 IAmb   IAmb    03 12 50.1
       comp=Z,7.6nm,1.0s
WATA   Walderalm         81.63 334  i P    P       03 12 50.1 -0.3
       comp=Z,4.5nm,0.6s
WTTA   Wattenberg        81.67 334  i P    P       03 12 50.7 +0.1
       comp=Z,2.9nm,0.4s
RETA   Reutte            81.75 334  eP     P       03 12 51.2 +0.4
       comp=Z,5.3nm,1.4s
MOTA   Moosalm           81.77 334  eP     P       03 12 51.0 -0.1
       comp=Z,6.8nm,1.1s
SQTA   Sankt Quirin      81.85 334  i P    P       03 12 51.6 +0.1
       comp=Z,3.9nm,1.0s
PDG    Podgorica         83.16 326  ⇓P     P       03 12 56.5 -1.6
NRCA   Norcia            85.09 331  P      P       03 13 07.4 -0.7
NRCA                                IAmb   IAmb    03 13 09.2
       comp=Z,13nm,1.3s
TORD   Torodi Ar. Bea   116.07 327  PKP    PKPdf   03 19 15.8 +0.2
       comp=Z,0.2nm,0.5s,baz=18,slow=1.4,SNR=2.2
H03N2  Juan Fernandez   139.93  91  T      T       05 57 05.8
       baz=304
H03N3  Juan Fernandez   139.94  91  T      T       05 57 00.4
       baz=304
H03N1  Juan Fernandez   139.94  91  T      T       05 57 07.5
       baz=304
```

IDC 03 03:08:02.5±3.3**, 16°.71S**×**177°.22W, h195km**±46km**, mb3.5**/2**, mb1 3.7**/3**, mb1mx3.2**/28**, mbtmp4.1**/3**, Error ellipse: s-maj=246.5km s-min=29.3km az=153.0, Fiji Islands region**

```
Code   Station Name         Δ°  AZ°   Phase ID         Time     Res
                                    Op     ISC       h  m  s    ISC
AFI    Afiamalu           5.94  63  P      Pn      03 09 29.7 +0.6
       5.3nm,0.3s,baz=329,slow=22,SNR=1.6
AFI                                 S      Sn      03 10 37.2 -0.2
       3.9nm,0.3s,baz=296,slow=17,SNR=1.7
WRA    Warramunga Arr    45.98 258  P      P       03 16 07.2 +0.6
       0.7nm,0.3s,baz=91,slow=7.8,SNR=53
ASAR   Alice Springs     46.22 253  P      P       03 16 07.6 -0.9
       1.6nm,0.7s,baz=91,slow=8.6,SNR=23
ARCES  ARCESS Array B   125.34 350  PKP    PKPdf   03 26 39.2 -0.3
       3.0nm,0.8s,baz=358,slow=2.7,SNR=3.8
```

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*NEIC **03** 03:35:48.0±1.2, 36°.75N±0°.03×98°.54W±0°.03, h10km±7km, Error ellipse: s-maj=6.2km s-min=0.8km az=142.0*

TUL 03 03:35:47.7±0.7**, 36°.77N**±0°.03×**98°.56W**±0°.02**, h6km**±7km**, ML2.6, mb_Lg2.4**/22(NEIC)**, Error ellipse: s-maj=4.3km s-min=1.4km az=147.0, Oklahoma**

```
Code   Station Name         Δ°  AZ°   Phase ID         Time     Res
                                    Op     ISC       h  m  s    ISC
U32A   Winter Ranch,      0.53 223         Pg      03 35 57.8 -0.1
U32A                                Sg     Sg      03 36 05.4 +0.6
OKCFA  Oklahoma City      1.62 146  Pn     Pn      03 36 17.0 +0.2
OKCFA                               IAmb_Lg        03 36 42.6
       comp=Z,27nm,0.8s
T35A   Sooner Cattle      1.65  84         Pn      03 36 17.1 -0.1
R32A   Long Quarter,      1.65 356         Pn      03 36 17.5 +0.2
R32A                                IAmb_Lg        03 36 41.2
       comp=Z,27nm,0.9s
FNO    Franklin           1.78 148         Pn      03 36 18.7 -0.2
WMOK   Wichita Mounta     2.04 185  Pn     Pn      03 36 23.2 +0.7
WMOK                                IAmb_Lg        03 36 57.7
       comp=Z,14nm,1.1s
CBKS   Cedar Bluff        2.24 336  Pn     Pb      03 36 27.6 -1.1
CBKS                                IAmb_Lg        03 36 60.0
       comp=Z,16nm,0.8s
X34A   Smith Ranch, M     2.24 165  Pn     Pn      03 36 26.6 +1.2
TUL1   Leonard            2.39 110  IAmb_Lg        03 37 03.2
       comp=Z,12nm,0.8s
AMTX   Amarillo           3.16 234  IAmb_Lg        03 37 31.6
       comp=Z,14nm,0.8s
U38A   Gravette           3.37  94  Pn     Pn      03 36 41.6 +0.7
X37A   Clayton            3.39 129  Pn     Pn      03 36 41.4 +0.3
KSCO   Kaye Shedlock'     3.92 306  IAmb_Lg        03 37 51.4
       comp=Z,8.1nm,0.9s
S39A   Bolivar            4.28  76  Pn     Pn      03 36 53.4  0.0
MIAR   Mount Ida          4.62 117  Pn     Pn      03 36 58.7 +0.7
MIAR                                IAmb_Lg        03 38 23.9
       comp=Z,7.5nm,1.1s
N35A   Tabor              4.68  28  Pn     Pn      03 36 58.7 -0.1
T25A   Trinidad           4.70 276  Pn     Pn      03 36 59.1 -0.3
T25A                                IAmb_Lg        03 38 17.0
       comp=Z,8.7nm,0.8s
R40A   Maddies Statio     5.22  71  IAmb_Lg        03 38 43.4
       comp=Z,5.5nm,1.0s
CCM    Cathedral Cave     5.96  75  IAmb_Lg        03 39 00.2
       comp=Z,5.3nm,0.8s
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*TEH **03** 03:53:36.1, 30°.41N×50°.26E, h8km, ML3.5*

*THR **03** 03:53:36.1±0.2, 30°.38N×50°.22E, h15km±9km, ML3.4*

ISC 03 03:53:37.2±1.0**, 30°.42N**±0°.05×**50°.30E**±0°.04**, h10km, n51, σ1s.40**/52**, Northern and central Iran**

```
Code   Station Name         Δ°  AZ°   Phase ID         Time     Res
                                    Op     ISC       h  m  s    ISC
ABEH   Behbahan           0.19 349  ePg    Pg      03 53 40.5 -0.7
KLNJ   Kolanjah           1.26  62  ePg    Pn      03 54 00.5 -0.8
KLNJ                                e              03 54 26.0
       comp=Z,8µm,0.7s
KAZ1   Kazerun            1.41 124  ePg    Pg      03 54 04.2  0.0
KAZ1                                e              03 54 40.5
       comp=Z,8µm,0.3s
AMIS   Naft Sefid         1.52 325  ePg    Pb      03 54 04.2 -1.2
AHWZ   Ahwaz              1.69 303  eSg    Sg      03 54 31.9 +0.4
AHWZ                                ePg    Pg      03 54 09.2 -0.4
AHBU   AHRAM              1.78 150  ePn    Pb      03 54 08.4 -1.4
SHK1   Shahrekord         1.97  15  ePn    Pb      03 54 13.2 -0.1
SHK1                                e              03 54 44.3
       comp=Z,4µm,0.5s
SHI    Shiraz             2.07 111  ePn    Pb      03 54 13.9 -1.1
SHI                                 e              03 55 00.5
       comp=Z,2µm,0.9s
IRAM   Ramesheh           2.26  52  ePn    Pb      03 54 17.4 -0.9
IPIR   Pirpir             2.32  13  ePn    Pb      03 54 18.6 -0.7
IPIR                                e              03 54 56.5
       comp=Z,2µm,0.4s
IGAR   Gharneh            2.48  37  ePn    Pb      03 54 19.8 -2.2
IGAR                                e              03 55 04.2
       comp=Z,2µm,0.7s
IZEF   Zefreh             3.02  35  ePn    Pn      03 54 27.5 +2.2
IKLH   Kolahrood          3.09  20  ePn    Pn      03 54 28.5 +2.2
IKLH                                e              03 55 37.9
       comp=Z,1µm,0.7s
NASN   Na'in              3.20  41  ePn    Pn      03 54 29.3 +1.4
NASN   Na'in              3.20  41  ePn    Pn      03 54 29.3 +1.4
ISAD   Sadrabad           3.27  62  ePn    Pn      03 54 31.0 +2.2
KHMZ   Khomeyn            3.32 355  ePn    Pn      03 54 30.3 +0.8
KHMZ   Khomeyn            3.32 355  ePn    Pn      03 54 30.3 +0.8
QAMS   Qamsar             3.44  15  ePn    Pn      03 54 33.3 +2.2
IKFM   Kafar-mosalman     3.73 327  ePn    Pn      03 54 36.5 +1.6
IMEH   Mehriz             3.83  74  ePn    Pn      03 54 38.7 +2.2
KRSH   Karshahi           3.87  23  ePn    Pn      03 54 38.8 +1.9
ICHK   Chekchek           3.96  62  ePn    Pn      03 54 39.9 +1.6
ANAR   Anarak             4.02  46  ePn    Pn      03 54 39.1 +0.1
ASAO   Ashtian            4.12 357  ePn    Pn      03 54 41.5 +1.0
ASAO                                 IAML          03 55 56.4
       comp=N,37nm,0.6s
ASAO                                 IAML          03 55 57.6
       comp=E,33nm,0.6s
ASAO   Ashtian            4.12 357  ePn    Pn      03 54 41.5 +1.0
GHVR   GHOM               4.14  12  ePn    Pn      03 54 41.5 +1.0
GHVR                                 IAML          03 55 35.8
       comp=E,38nm,0.8s
GHVR                                 IAML          03 56 02.7
       comp=N,31nm,0.4s
GHVR   GHOM               4.14  12  ePn    Pn      03 54 41.5 +1.0
YZKH   Yazd               4.17  61  ePn    Pn      03 54 42.5 +1.6
YZKH                                 IAML          03 55 35.4
       comp=N,21nm,0.5s
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```
YZKH                                  IAML           03 55 35.9
         comp=E,20nm,0.5s
YZKH  Yazd              4.17  61 ePn      Pn         03 54 42.5 +1.6
ISFB  Sefidab           4.25  22 ePn      Pn         03 54 42.6 +0.5
IQOM  Qom               4.46   8 ePn      Pn         03 54 46.3 +1.2
IBZA  Bozab             4.54 334 ePn      Pn         03 54 47.8 +1.6
IVRN  Varamin           4.72  14 ePn      Pn         03 54 49.1 +0.5
IRAZ  Razeghan          4.98 357 ePn      Pn         03 54 53.3 +1.0
IGHG  Ghaleghazi        5.01 322 ePn      Pn         03 54 53.7 +1.0
SNGE  Sanandaj          5.28 333 ePn      Pn         03 54 53.3 -3.1
SNGE                              IAML               03 55 57.0
         comp=N,23nm,0.7s
QABG  Abgarm-Qazvin     5.31 354 ePn      Pn         03 54 57.0 +0.2
IDMV  Damavand          5.35  15 ePn      Pn         03 54 58.0 +0.6
DAMV  Damavand          5.38  15 ePn      Pn         03 54 59.1 +1.2
DAMV  Damavand          5.38  15 ePn      Pn         03 54 59.1 +1.2
IDHR  Dehrash           5.40 323 ePn      Pn         03 54 58.7 +0.7
KRBR  Kerman            5.61  93 ePn      Pn         03 55 02.4 +1.4
KRBR  Kerman            5.61  93 ePn      Pn         03 55 02.4 +1.4
IANJ  Anjilo            5.88  30 ePn      Pn         03 55 05.6 +0.9
ISHM  Shahmirzad        5.93  24 ePn      Pn         03 55 07.0 +1.6
TPRV  Parvadeh(Tabas    6.03  63 ePn      Pn         03 55 07.1 +0.5
TNSJ  Nastanj           6.41  55 ePn      Pn         03 55 13.6 +1.8
TKDS  Koohdasht(Taba    6.62  59 ePn      Pn         03 55 15.1 +0.5
MRVT  Maraveh tapeh     8.68  32 ePn      Pn         03 55 44.5 +1.7
MRVT  Maraveh tapeh     8.68  32 ePn      Pn         03 55 44.5 +1.7
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   IDC 03 03:59:40.8±1.6,5°.70S×146°.81E,h95km±14km,mb4.2/17,
      mb1 4.3/20,mb1mx4.1/46,mbtmp4.5/20,MS3.2/6,
      Ms1 3.2/6,ms1mx2.9/31,Error ellipse: s-maj=14.9km
      s-min=8.9km az=102.0
  NEIC 03 03:59:42.8±1.5,5°.83S±0°.06×146°.69E±0°.04,h110km±6km,
      mb4.5/19,Error ellipse: s-maj=9.7km s-min=4.7km
      az=205.0
   DJA 03 03:59:43.1±0.4,6°S±3°×14°7E±°,h96km±6km,M4.7/17,
      mB5.0/5,mb4.7/17,MLv4.9/3,Mw(mB)4.3/5
   ISC 03 03:59:41.3±0.4,5°.78S±0°.05×146°.81E±0°.07,h100km,n83,
      σ1s.54/84,mb4.3/28,Eastern New Guinea region
Code  Station Name       Δ°   AZ°   Phase ID           Time      Res
                                   Op       ISC        h  m  s   ISC
PMG   Port Moresby      3.62 174  P        Pn         04 00 36.2 +0.7
         52nm,0.3s,baz=7.3,slow=6.0,SNR=67
PMG                               S        Sn         04 01 17.7 +0.4
         51nm,0.3s,baz=36,slow=24,SNR=16
PMG   Port Moresby      3.62 174  Pn       Pn         04 00 36.2 +0.7
PMG                               Sn       Sn         04 01 16.7 -0.5
PMG   Port Moresby      3.62 174  P        Pn         04 00 36.2 +0.7
PMG   Port Moresby      3.62 174  P        Pn         04 00 36.1 +0.7
MANU  Manus Island      3.75   9           Pn         04 00 39.8 +2.5
RABL  Rabaul            5.57  74           Pn         04 01 05.5 +3.7
JAY   Jayapura          6.90 298  P        Pn         04 01 20.6 +0.6
         1.8nm,0.3s,baz=123,slow=8.4,SNR=4.4
JAY                               S        Sn         04 02 43.9 +6.9
         0.3nm,0.3s,baz=320,slow=16,SNR=1.4
JAY                               LR       LR         04 04 27.3
         comp=Z,133nm,18.7s,baz=244,slow=42
COEN  Coen              8.88 203  Pn       Pn         04 01 47.1 +0.3
COEN  Coen              8.88 203  P        Pn         04 01 47.0 +0.2
         147nm,0.7s
CTA   Charters Tower   14.23 182  P        P          04 03 02.5 -0.1
         2.6nm,0.3s,baz=0.9,slow=14,SNR=35
CTA   Charters Tower   14.23 182  P        P          04 03 02.5 -0.1
         22nm,0.6s
CTAO  Charters Tower   14.23 182  Pn       Pn         04 02 58.4  0.0
CTAO  Charters Tower   14.23 182  P        P          04 03 03.0 +0.3
QIS   Mount Isa        16.27 205  P        P          04 03 26.4 +1.1
         28nm,0.7s
MTN   Manton Dam       16.98 244  P        Pn         04 03 31.4 -1.4
WB0   Warramunga Arr   18.41 220  P        P          04 03 47.9 -1.0
WB0                               IAmb     IAmb       04 03 51.1
         comp=Z,23nm,0.8s
WR0   Warramunga Arr   18.46 219  P        P          04 03 48.2 -1.2
WR0                               IAmb     IAmb       04 03 58.8
         comp=Z,45nm,0.9s
WRAB  Tennant Creek    18.56 220  P        P          04 03 49.1 -1.4
WRAB                              IAmb     IAmb       04 03 53.2
         comp=Z,36nm,0.8s
WB2   Warramunga Arr   18.57 220  P        P          04 03 49.8 -0.8
WB2                               IAmb     IAmb       04 03 53.3
         comp=Z,36nm,0.8s
WRA   Warramunga Arr   18.58 220  P        P          04 03 50.1 -0.6
         comp=Z,3.7nm,0.3s,baz=36,slow=10,SNR=181
WRA                               S        Sn         04 07 25.3 +5.3
         comp=Z,0.2nm,0.3s,baz=40,slow=18,SNR=9.2
WRA                               PcP      PcP        04 08 16.7 +0.5
         comp=Z,0.2nm,0.3s,baz=29,slow=1.8,SNR=3.0
WRA                               LR       LR         04 11 48.7
         comp=Z,137nm,18.1s,baz=300,slow=39
WRA   Warramunga Arr   18.58 220  P        P          04 03 48.8 -1.9
EIDS  Eidsvold         19.91 169  P        P          04 04 05.8 +0.8
EIDS                              IAmb     IAmb       04 04 08.2
         comp=Z,16nm,0.6s
EIDS  Eidsvold         19.91 169  P        Pn         04 04 07.3 -0.3
         comp=Z,23nm,0.7s
KNRA  Kununurra        20.25 240  P        P          04 04 08.0 -1.0
QLP   Quilpie          20.83 186  P        Pn         04 04 19.1 +0.7
         comp=Z,24nm,0.7s
SANI  Sanana           21.09 279  P        P          04 04 19.4 +1.4
         comp=Z,23nm,0.8s
ASAR  Alice Springs    21.69 214  P        P          04 04 24.1 -0.2
         comp=Z,9.6nm,0.4s,baz=53,slow=8.4,SNR=207
ASAR                              S        S          04 08 16.8 -2.1
         comp=Z,2.4nm,0.6s,baz=39,slow=13,SNR=5.6
ASAR  Alice Springs    21.69 214  P        P          04 04 23.8 -0.6
FITZ  Fitzroy Crossi   24.02 238  P        P          04 04 46.4 -0.7
         comp=Z,37nm,0.7s,baz=42,slow=9.6,SNR=185
FITZ                              LR       LR         04 14 25.7
         comp=Z,66nm,21.1s,baz=80,slow=37
FITZ  Fitzroy Crossi   24.02 238  P        P          04 04 46.1 -1.0
FITZ  Fitzroy Crossi   24.02 238  P        P          04 04 45.7 -1.4
         comp=Z,49nm,0.9s
OOD   Oodnadatta       24.31 205  P        P          04 04 50.2 +0.6
         comp=Z,34nm,0.8s
GTOI  Gorontalo        24.60 284  P        P          04 04 53.2 +0.7
         comp=Z,240nmcomp=Z,27nm,0.8s
LIFNC LIFOU            24.80 129  P        P          04 04 55.7 +1.5
ARMA  Armidale         24.93 170  P        P          04 04 57.7 +2.3
DZM   Mont Dzumac      24.96 132  P        P          04 04 56.9 +1.2
         comp=Z,16nm,0.8s,baz=310,slow=7.9,SNR=15
DZM   Mont Dzumac      24.96 132  P        P          04 04 55.9 +0.2
DZM                               IAmb     IAmb       04 04 58.3
         comp=Z,15nm,0.7s
DZM   Mont Dzumac      24.96 132  P        P          04 04 57.3 +1.6
EDFI  Ende, Flores     25.09 262  P        P          04 04 54.6 -2.4
         comp=Z,6.0nm,0.8s
CMSA  Cobar Meteorol   25.65 182  P        P          04 05 04.5 +2.7
         comp=Z,21nm,2.0s
MARNC Mare, Loyalty    25.81 129  P        P          04 05 05.8 +2.5
LCRK  Leigh Creek      25.84 197  P        P          04 05 03.8 +0.3
         comp=Z,66nm,0.6s
WRKA  Warakurna        26.11 221  P        P          04 05 05.2 -0.9
         comp=Z,19nm,1.7s
STKA  Stephens Creek   26.42 190  P        P          04 05 09.2 +0.4
         comp=Z,5.4nm,0.6s,baz=2.3,slow=8.5,SNR=11
STKA  Stephens Creek   26.42 190  P        P          04 05 08.7  0.0
STKA  Stephens Creek   26.42 190  P        P          04 05 09.6 +0.9
         comp=Z,2.5nm,0.8s
KAPI  Kappang          26.95 270  LR       LR         04 19 02.3
         comp=Z,38nm,18.4s,baz=108,slow=43
MULG  Mulgathing       27.17 205  P        P          04 05 15.6 +0.1
         comp=Z,18nm,1.4s
HTT   Hallett          28.47 194  P        P          04 05 28.2 +1.1
         comp=Z,13nm,2.8s
MJAR  Matsushiro Arr   42.86 350  LR       LR         04 25 17.5
         comp=Z,22nm,18.1s,baz=230,slow=36
KSRS  Korea Array      46.48 339  P        P          04 07 58.1 -0.3
         comp=Z,2.8nm,0.9s,baz=154,slow=8.7,SNR=7.5
KSRS                              LR       LR         04 26 40.1
         comp=Z,17nm,18.3s,baz=35,slow=35
CMAR  Chiang Mai Arr   52.98 298  P        P          04 08 47.4 -0.7
         comp=Z,1.0nm,0.4s,baz=144,slow=6.7,SNR=1.8
CMAR  Chiang Mai Arr   52.98 298  P        P          04 08 46.7 -1.4
PETK  Petropavlovsk-   59.39   8  P        P          04 09 34.3 +1.2
         comp=Z,5.8nm,1.0s,baz=201,slow=7.7,SNR=2.2
PETK  Petropavlovsk-   59.39   8  P        P          04 09 32.6 -0.5
SONM  Songino Array    64.12 331  P        P          04 10 05.0 -0.1
         comp=Z,1.8nm,0.9s,baz=134,slow=6.4,SNR=4.9
VNDA  Vanda            72.14 177  P        P          04 10 55.5 +0.9
         comp=Z,2.4nm,0.7s,baz=334,slow=6.9,SNR=20
VNDA  Vanda            72.14 177  P        P          04 10 54.8 +0.2
VNDA                              IAmb     IAmb       04 10 56.7
         comp=Z,3.3nm,0.8s
MKAR  Makanchi Array   77.21 321  P        P          04 11 22.8 -1.7
         comp=Z,0.8nm,0.6s,baz=96,slow=7.3,SNR=8.0
MKAR  Makanchi Array   77.21 321  P        P          04 11 22.7 -1.8
TIXI  Tiksi            78.17 354  P        P          04 11 28.4 -0.9
         comp=Z,0.8nm,0.3s,baz=155,slow=6.0,SNR=3.9
ZALV  Zalesovo Beam    78.72 328  P        P          04 11 30.5 -2.1
         comp=Z,1.4nm,0.4s,baz=116,slow=6.8,SNR=4.8
DRK   Karamyk          82.19 311  P        P          04 11 51.0 -0.9
MAW   Mawson           82.38 203  P        P          04 11 52.1 +0.2
         comp=Z,3.1nm,0.6s,baz=82,slow=7.8,SNR=9.8
MAW   Mawson           82.38 203  P        P          04 11 51.2 -0.7
MLY   Manley           83.99  22  P        P          04 12 00.2 -0.1
MLY                               IAmb     IAmb       04 12 00.8
         comp=Z,3.2nm,0.8s
QSPA  South Pole Qui   84.19 180  P        P          04 12 01.6 +0.2
QSPA                              IAmb     IAmb       04 12 02.2
         comp=Z,5.6nm,0.8s
CCB   Clear Creek Bu   84.94  23  P        P          04 12 04.2 -0.9
CCB                               IAmb     IAmb       04 12 04.8
         comp=Z,3.8nm,1.0s
NRIK  Noril'sk         85.01 342  P        P          04 12 04.0 -1.3
         comp=Z,2.6nm,0.6s,baz=132,slow=7.3,SNR=3.0
IL31                   85.36  23  P        P          04 12 05.6 -1.4
IL31                              IAmb     IAmb       04 12 06.5
         comp=Z,3.7nm,0.7s
ILAR  Eielson Array    85.36  23  P        P          04 12 05.7 -1.5
         comp=Z,3.8nm,0.7s,baz=253,slow=4.8,SNR=43
ILAR  Eielson Array    85.36  23  P        P          04 12 05.8 -1.3
DAWY  Dawson           88.16  25  P        P          04 12 20.4 -0.4
NVAR  Mina Array Bea   97.39  52  P        Pdif       04 13 05.7 +1.4
         comp=Z,0.8nm,0.7s,baz=248,slow=7.5,SNR=4.8
NEW   Newport          98.32  42  P        Pdif       04 13 09.1 +1.2
         comp=Z,0.4nm,0.3s,baz=252,slow=6.4,SNR=4.4
PDAR  Pinedale Array  103.91  47  Pdiff    Pdif       04 13 33.7 +0.5
         comp=Z,0.4nm,0.7s,baz=238,slow=5.2,SNR=3.6
PLCA  Paso Flores     122.41 147  PKP      PKiKP      04 18 26.1 +0.4
         comp=Z,1.0nm,0.5s,baz=225,slow=7.3,SNR=5.1
PLCA  Paso Flores     122.41 147  PKPdf    PKiKP      04 18 25.3 -0.3
TORD  Torodi Ar. Bea  144.85 285  PKP      PKPab      04 19 05.6 -1.4
         comp=Z,1.8nm,0.4s,baz=70,slow=3.6,SNR=26
DBIC  Dimbokro        151.82 273  PKPbc    PKiKP      04 19 26.1 +0.2
         comp=Z,1.5nm,0.5s,baz=66,slow=5.5,SNR=4.5
DBIC  Dimbokro        151.82 273           PKPbc      04 19 23.9 -1.7
BDFB  Brasilia        154.15 146  PKPbc    PKiKP      04 19 31.4 +0.5
         comp=Z,6.2nm,0.5s,baz=222,slow=2.5,SNR=10
BDFB  Brasilia        154.15 146           PKPbc      04 19 29.1 -1.6
```

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   IDC 03 04:16:23.4±1.2,4°.46N×127°.43E,h0km,mb3.6/5,
      mb1 3.8/5,mb1mx3.6/37,mbtmp3.7/5,Error ellipse:
      s-maj=75.3km s-min=19.4km az=77.0,Talaud Islands
Code  Station Name       Δ°   AZ°   Phase ID           Time      Res
                                   Op       ISC        h  m  s   ISC
FITZ  Fitzroy Crossi   22.49 184  P        P          04 21 26.2 +1.7
         0.5nm,0.4s,baz=356,slow=12,SNR=1.4
WRA   Warramunga Arr   25.19 165  P        P          04 21 50.2 -0.5
         0.8nm,0.8s,baz=342,slow=10,SNR=14
ASAR  Alice Springs    28.66 168  P        P          04 22 21.6 -0.5
         0.2nm,0.6s,baz=357,slow=8.7,SNR=5.2
KSRS  Korea Array      32.84   1  P        P          04 22 58.6 -0.2
         0.7nm,0.4s,baz=183,slow=10,SNR=4.6
MKAR  Makanchi Array   57.36 325  P        P          04 26 13.5  0.0
         1.1nm,0.4s,baz=114,slow=8.2,SNR=18
```

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   DDA 03 04:50:05.6,35°.09N×36°.74E,h14km±1km,ML2.4
   GII 03 04:50:05.1±0.0,35°.02N×36°.38E,h5km,MD2.3/5,Mm2.5/4
   ISC 03 04:50:04.7±2.5,35°.00N±0°.04×36°.8E±0°.2,h17km±25km,
      n13,σ0s.80/24,Jordan-Syria region
Code  Station Name       Δ°   AZ°   Phase ID           Time      Res
                                   Op       ISC        h  m  s   ISC
YAYL  Yayladag          1.16 333 i P       Pb         04 50 26.0 -0.4
YAYL                             i S       Sn         04 50 41.9 -0.1
YAYL                               IAML               04 50 46.0
         comp=N,85nm,0.3s
YAYL                               IAML               04 50 47.0
         comp=E,80nm,0.3s
NATI  Neve Ativ         1.93 206   Pn      Pn         04 50 36.4 -0.4
NATI                               Sn      Sn         04 51 00.7 +0.1
GEM   Giv'at Ha'Em      2.00 207   Pn      Pn         04 50 37.6 -0.2
GEM                                Sn      Sn         04 51 02.7 +0.2
MMA0B Mount Meron ar    2.28 210   Pn      Pn         04 50 41.1 -0.6
MMA0B                              Sn      Sn         04 51 09.5 +0.1
HNTI  Hanita            2.32 215   Pn      Pn         04 50 41.5 -0.7
HNTI                               Sn      Sn         04 51 09.4 -1.0
HCB   Kahramanmara      2.34   3 i P       Pb         04 50 45.8 -0.7
HCB                              i S       Sb         04 51 15.0 -0.2
HCB                                IAML               04 51 21.0
         comp=E,23nm,0.6s
HCB                                IAML               04 51 28.0
         comp=N,24nm,0.5s
SURC  SANLIURFA_SURC 2.40  38 i P       Pg         04 50 52.1 +1.3
SURC                             i S       Sg         04 51 20.2 -1.7
BLGI  Bet Lehem HaGe    2.61 211   Pn      Pn         04 50 46.0 -0.2
BLGI                               Sn      Sn         04 51 17.3 -0.2
MMLI  Mount Malkishu    2.79 204   Pn      Pn         04 50 49.6 +1.0
MMLI                               Sn      Sn         04 51 23.1 +1.2
OFRI  `Ofer             2.80 212   Pn      Pn         04 50 48.8 +0.1
OFRI                               Sn      Sn         04 51 21.5 -0.6
HMDT  Nahal Hemdat      2.93 201   Pn      Pn         04 50 51.4 +0.9
SLTI  Sal'it            3.10 208   Pn      Pn         04 50 53.0 +0.1
SLTI                               Sn      Sn         04 51 30.6 +0.9
KERG  Konya-Eregli      3.22 319 i P       Pn         04 50 55.6 +1.0
```

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   NNC 03 05:25:52.0±3.7,36°.84N×70°.74E,h202km±55km,mb2.5,
      mpv3.5,2C-5D,Error ellipse: s-maj=35.2km
      s-min=24.3km az=13.0,Hindu Kush region
Code  Station Name       Δ°   AZ°   Phase ID           Time      Res
                                   Op       ISC        h  m  s   ISC
KK31  Karatay Array     6.26 358 ⇓P        Pn         05 27 22.8 +0.2
         1.7nm,0.4s,baz=189,slow=9.7,SNR=11
KK31                             ⇓S        S          05 28 34.6 +0.4
         5.4nm,0.5s,baz=185,slow=22,SNR=14
AAK   Ala-Archa         6.47  25 ⇓P        Pn         05 27 25.3 -0.2
         1.7nm,0.5s
AAK                              ⇑S        S          05 28 41.2 +1.8
         4.7nm,0.7s
TKM2  Tokmak 2          7.13  30 ⇓P        Pn         05 27 34.0 -0.1
         3.6nm,0.8s
TKM2                             ⇓S        S          05 28 54.6 -0.3
         1.8nm,0.7s
AB31  Akbulak array    14.69 331  P        P          05 29 11.3 +0.1
         0.2nm,0.4s,baz=147,slow=12,SNR=5.1
AKTO  Aktyubinsk       16.38 330 ⇑P        P          05 29 29.6 -0.2
         1.0nm,0.5s
```

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   GUC 03 05:32:37.2±0.8,24°.05S×67°.24W,h201km±11km,ML3.9,
      3C-2D,Chile-Argentina border region
Code  Station Name       Δ°   AZ°   Phase ID           Time      Res
                                   Op       ISC        h  m  s   ISC
LVC   Limon Verde       2.10 313⇑i P       Pn         05 33 16.7 -0.6
LVC                              i S       S          05 33 47.3 -0.5
PB15  IPOC Station P    2.21 292 e P       Pn         05 33 17.9 -0.4
PB15                             i S       S          05 33 49.5 -0.1
PB06  IPOC Station P    2.53 302 e P       Pn         05 33 21.3 -0.4
PB06                             i S       S          05 33 55.0 -0.7
PB06                               IAML               05 33 57.4
         comp=E,279nm,0.1s
PB05  IPOC Station P    2.98 293 e P       Pn         05 33 26.2 -0.6
PB05                             i S       S          05 34 02.4 -2.4
PB05                               IAML               05 34 06.0
         comp=N,72nm,0.2s
PB03  IPOC Station P    3.06 310 e P       Pn         05 33 27.2 -0.6
PB03                             i S       S          05 34 05.7 -0.9
PB03                               IAML               05 34 07.4
         comp=N,194nm,0.2s
PB10  IPOC Station P    3.09 279 e P       Pn         05 33 27.4 -0.6
PB10                             i S       S          05 34 05.5 -1.4
PB10                               IAML               05 34 09.0
         comp=N,80nm,0.4s
PB04  IPOC Station P    3.18 302 e P       Pn         05 33 28.8 -0.5
PB04                             i S       S          05 34 07.8 -1.5
PB04                               IAML               05 34 10.9
         comp=N,150nm,0.3s
PB07  IPOC Station P    3.37 313 e P       Pn         05 33 30.5 -1.0
PB07                             i S       S          05 34 11.6 -1.7
PB07                               IAML               05 34 13.1
         comp=N,200nm,0.2s
PB01  IPOC Station P    3.65 325 e P       Pn         05 33 33.6 -1.3
PB01                             i S       S          05 34 17.7 -1.7
PB02  IPOC Station P    3.67 317⇑i P       Pn         05 33 33.7 -1.3
PB02                             i S       S          05 34 17.5 -2.2
PB08  IPOC Station P    4.28 335⇓i P       Pn         05 33 42.7 -0.3
PB08                             i S       S          05 34 32.8 -1.2
HMBC  Humberstone       4.49 326⇑i P       Pn         05 33 43.1 -2.3
HMBC                             i S       S          05 34 34.7 -3.7
AC04  Llanos de Chal    5.38 219⇓i P       Pn         05 33 52.8 -3.8
AC04                             i S       S          05 34 52.5 -6.3
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   ROM 03 05:53:36.2±0.4,45°.328N±0°.008×10°.37E±0°.01,h8km±1km,
      ML1.6/5,Error ellipse: s-maj=0.9km s-min=0.6km
      az=151.0,Northern Italy
Code  Station Name       Δ°   AZ°   Phase ID           Time      Res
                                   Op       ISC        h  m  s   ISC
LEOD  Capriano del C    0.21 307   P       Pg         05 53 42.9 +2.4
LEOD                               S       Sg         05 53 49.0 +5.6
SALO  Salr              0.31  21   P       Pn         05 53 45.8 -1.3
SALO                               S       Sb         05 53 52.8 +3.5
GARGN Gargnano BS       0.42  30 e Pg      Pn         05 53 47.9 -0.8
GARGN                            e Sg      Sb         05 53 55.5 +3.0
BALD  Monte Baldo       0.48  42 e Pg      Pn         05 53 49.1 -0.4
BALD                             e Sg      Sb         05 53 57.2 +3.0
MAGA  Magasa            0.48  22   P       Pn         05 53 48.5 -1.1
MAGA                               AML     AML
         comp=N,109μm,0.5s
MAGA                               AML     AML
         comp=E,161μm,0.6s
MAGA                               AML     AML
         comp=N,108μm,0.5s
ROVR  Rover Verones     0.59  57   P       Pn         05 53 50.7 -0.4
ROVR                               S       Sn         05 54 02.1 +1.1
ROVR                               AML     AML
         comp=E,28μm,1.2s
ROVR                               AML     AML
         comp=N,42μm,1.5s
ROVR                               AML     AML
         comp=E,28μm,1.2s
MARN  Marana (Italy)    0.67  62 e Pg      Pn         05 53 52.7 +0.6
MARN                             e Sg      Sn         05 54 04.8 +2.1
MABI  Malga Bissina     0.73   8   P       Pn         05 53 53.3 +0.2
MABI                               AML     AML
         comp=E,43μm,0.4s
MABI                               AML     AML
         comp=N,37μm,1.4s
DOSS  Dosso del Somm    0.80  46 e Pg      Pn         05 53 55.6 +1.6
DOSS                             e Sg      Sn         05 54 08.5 +2.3
DOSS  Dosso del Somm    0.80  46   P       Pn         05 53 54.5 +0.6
DOSS                               S       Sn         05 54 08.1 +1.9
DOSS                               AML     AML
         comp=E,52μm,1.1s
DOSS                               AML     AML
         comp=N,46μm,1.4s
BOB   Bobbio (Coli)     0.86 230   P       Pn         05 53 54.4 -0.3
GAGG  Gaggia            0.86  29 e Pg      Pn         05 53 56.6 +1.8
GAGG                             e Sg      Sn         05 54 10.1 +2.3
GAGG  Gaggia            0.86  29   P       Pn         05 53 56.0 +1.2
GAGG                               S       Sn         05 54 10.5 +2.8
GAGG                               AML     AML
         comp=E,45μm,1.3s
GAGG                               AML     AML
         comp=N,58μm,1.4s
GRAM  Graiana           0.86 194   AML     AML
         comp=N,130μm,1.1s
GRAM                               AML     AML
         comp=E,105μm,0.4s
TEOL  Teolo             0.92  88 e Pg      Pn         05 53 57.5 +2.0
TEOL  Teolo             0.92  88   P       Pn         05 53 56.7 +1.2
TEOL                               AML     AML
         comp=E,138μm,0.6s
TEOL                               AML     AML
         comp=N,95μm,0.5s
GORR  Gorreto           1.05 227   P       Pn         05 53 58.8 +1.6
SARO  Sassorosso        1.14 179   P       Pn         05 54 01.2 +2.6
CGRP  Cima Grappa       1.15  61   AML     AML
         comp=E,51μm,0.4s
CGRP                               AML     AML
         comp=N,47μm,0.4s
CTI   Castel Tesino     1.15  51   P       Pn         05 54 01.0 +2.3
CTI                                S       Sn         05 54 18.1 +3.3
CTI                                AML     AML
         comp=E,64μm,1.0s
CTI                                AML     AML
         comp=N,76μm,1.1s
MOSI  Grossmontoni      1.29   6   AML     AML
         comp=E,45μm,1.6s
MOSI                               AML     AML
         comp=N,75μm,1.5s
APPI  Appiano           1.30  27   AML     AML
         comp=E,50μm,0.6s
APPI                               AML     AML
         comp=N,66μm,0.5s
TUE   Stuetta           1.35 328   AML     AML
         comp=E,37μm,0.3s
TUE                                AML     AML
         comp=N,36μm,1.6s
ABSI  Aberstueckl       1.55  25   AML     AML
         comp=E,38μm,0.8s
ABSI                               AML     AML
         comp=N,32μm,1.6s
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   GEN 03 05:54:17.4,44°.18N×10°.22E,h1km±1km,Ml0.7,Northern
      Italy
Code  Station Name       Δ°   AZ°   Phase ID           Time      Res
                                   Op       ISC        h  m  s   ISC
EQUI  Equi              0.05 258   P       Pg         05 54 18.4 +0.1
EQUI                               S       Sg         05 54 19.2 +0.3
SARO  Sassorosso        0.13  86   P       Pg         05 54 20.4 +0.5
SARO                               S       Sg         05 54 22.7 +1.1
CARD  Cardoso           0.24 128   P       Pg         05 54 22.5 +0.5
CARD                               S       Sg         05 54 25.9 +0.8
MAIM  Mastiano          0.33 143   P       Pg         05 54 24.3 +0.7
MAIM                               S       Sg         05 54 29.3 +1.4
GRAM  Graiana           0.33 341   P       Pg         05 54 24.3 +0.5
GRAM                               S       Sg         05 54 29.4 +1.3
```

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   NOU 03 06:18:20.3,19°.10S×168°.77E,h0km,MLv4.0/11,Vanuatu
      Islands,Vanuatu Islands
Code  Station Name       Δ°   AZ°   Phase ID           Time      Res
                                   Op       ISC        h  m  s   ISC
RTV   Rentapao          1.34 346   P       Pg         06 18 45.6 -0.4
DVP   Devils Point      1.48 338   P       Pn         06 18 46.5 -1.6
LIFNC LIFOU             2.20 221   P       Pn         06 18 56.8 -1.4
MARNC Mare, Loyalty     2.47 196   P       Pn         06 19 00.9 -0.9
YATNC Mamie plateau,    3.43 211   P       Pn         06 19 13.8 -1.3
DZM   Mont Dzumac       3.67 216   P       Pn         06 19 18.4 -0.1
PINNC Pines Island,     3.71 199   P       Pn         06 19 19.2 +0.3
OUENC Ouen Island, N    3.76 208   P       Pn         06 19 20.3 +0.7
NOUC  Port Laguerre     3.78 217   P       Pn         06 19 20.8 +1.0
ONTNC Ouen Toro         3.86 214   P       Pn         06 19 21.9 +1.0
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  NEIC 03 06:56:55.9±1.6,36°.50N±0°.02×98°.77W±0°.05,h13km±4km,
      Error ellipse: s-maj=6.2km s-min=2.3km az=85.0
   TUL 03 06:56:55.9±1.8,36°.47N±0°.03×98°.75W±0°.05,h5km±2km,
      ML2.5,mb_Lg2.3/10(NEIC),Error ellipse: s-maj=6.2km
      s-min=4.3km az=271.0,Oklahoma
Code  Station Name       Δ°   AZ°   Phase ID           Time      Res
                                   Op       ISC        h  m  s   ISC
U32A  Winter Ranch,     0.22 245   Pg      Pg         06 57 00.5 +0.3
WMOK  Wichita Mounta    1.73 181   Pn      Pn         06 57 26.5 -0.2
T35A  Sooner Cattle     1.85  76   Pn      Pn         06 57 29.1 +0.7
R32A  Long Quarter,     1.94   1   Pn      Pn         06 57 30.4 +0.7
X34A  Smith Ranch, M    2.01 158   Pn      Pb         06 57 31.9 -1.1
TUL1  Leonard           2.46 102   Pn      Pn         06 57 37.3 +0.6
TUL1                               IAmb_Lg            06 58 14.6
         comp=Z,8.9nm,0.9s
AMTX  Amarillo          2.86 237   IAmb_Lg            06 58 32.5
         comp=Z,8.2nm,0.7s
KSU1  Kansas State U    3.12  32   IAmb_Lg            06 58 41.8
         comp=Z,8.2nm,0.9s
X37A  Clayton           3.34 123   Pn      Pn         06 57 50.3 +1.6
KSCO  Kaye Shedlock'    3.98 311   IAmb_Lg            06 59 09.9
         comp=Z,6.7nm,0.7s
T25A  Trinidad          4.59 280   IAmb_Lg            06 59 26.1
         comp=Z,14nm,1.2s
SMCO  Snowmass          7.04 295   IAmb_Lg            07 00 40.8
         comp=Z,5.5nm,1.1s
```

*IDC **03** 07:03:54.6±1.1, 51°.94N×96°.09E, h0^{km}, mb3.7/3, mb1 3.6/6, mb1mx3.3/63, mbtmp3.6/6, ML2.7/3, MS3.4/2, Ms1 3.4/2, ms1mx2.5/59, Error ellipse: s-maj=31.4km s-min=11.8km az=179.0*

ISC 03 07:03:54.8±0.7**, 51°.79N**±0°.06×**95°.99E**±0°.04**, h10^{km}, n18, σ2^{s}07**/25**, mb3.7**/3**, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KZLR	Kyzyl	0.96	265	Pg	Pg	07 04 11.1	-2.2
KZLR				Sg	Sg	07 04 22.9	-2.8
KNGR	Kungurtug, Tuv	1.53	141	Pg	Pn	07 04 23.6	+1.3
KNGR				Sg	Sb	07 04 44.7	+2.0
CERR	Cheremushki	3.00	293	Pg	Pn	07 04 44.6	+2.2
CERR				Sg	Sb	07 05 26.3	+1.3
DJO	Djoy, Khakassi	3.10	291	Pg	Pn	07 04 45.9	+2.3
DJO				Sg	Sb	07 05 28.2	+0.6
SHRR	Shira	4.43	310	Pg	Pb	07 05 12.5	-0.1
SHRR				Sg	Sb	07 06 08.6	+2.5
TLY	Talaya	4.76	88	Pg	Pb	07 05 18.0	-0.2
	0.0nm,0.3s,baz=269,slow=14,SNR=2.0						
TLY				Lg	Lg	07 06 22.5	
	0.1nm,0.3s,baz=124,slow=12,SNR=8.3						
TLY	Talaya	4.76	88	Pg	Pb	07 05 19.3	+1.1
TLY				Sg	Sg	07 06 23.6	-3.9
GZLN	Zheleznogorsk	4.78	345	Pg	Pb	07 05 17.6	-0.9
GZLN				Sg	Sb	07 06 18.1	+2.0
ZAK	Zakamensk	4.81	104	Pg	Pb	07 05 21.2	+2.1
ZAK				Sg	Sg	07 06 26.4	-2.6
ZALV	Zalesovo Beam	7.10	292	Pn	Pn	07 05 39.8	+1.2
	0.4nm,0.3s,baz=102,slow=13,SNR=2.9						
ZALV				Sn	Sn	07 06 57.0	-2.3
	0.7nm,0.3s,baz=102,slow=21,SNR=4.1						
ZALV				Lg	Lg	07 07 33.5	
	2.3nm,0.3s,baz=122,slow=24,SNR=9.4						
SONM	Songino Array	7.81	116	Pg	Pb	07 06 16.1	+5.9
	0.3nm,0.3s,baz=300,slow=18,SNR=5.5						
SONM				Sn	Sn	07 07 16.3	-0.6
	0.8nm,0.3s,baz=287,slow=27,SNR=7.2						
SONM				Lg	Lg	07 08 04.3	
	0.9nm,0.3s,baz=302,slow=30,SNR=14						
MKAR	Makanchi Array	10.25	246	Pn	Pn	07 06 24.8	+3.0
	0.1nm,0.3s,baz=57,slow=16,SNR=2.7						
MKAR				Lg	Lg	07 09 17.8	
	0.2nm,0.3s,baz=67,slow=28,SNR=4.1						
KURBB	Kurchatov Arra	11.02	271	Pn	Pn	07 06 35.2	+2.9
	0.1nm,0.3s,baz=77,slow=16,SNR=2.4						
KURBB				Lg	Lg	07 09 41.9	
	0.1nm,0.3s,baz=77,slow=32,SNR=2.4						
AKTO	Aktyubinsk	23.70	282	P	P	07 09 07.8	+1.2
	1.2nm,0.5s,baz=90,slow=13,SNR=5.4						
TIXI	Tiksi	24.68	24	P	P	07 09 15.2	-0.2
	0.8nm,0.3s,baz=246,slow=5.1,SNR=4.3						
KIRV	Kirov	26.97	303	LR	LR	07 21 29.4	
	comp=Z,41nm,20.6s,baz=202,slow=39						
ATD	Arta Tunnel	58.62	247	LR	LR	07 41 19.7	
	comp=Z,49nm,18.9s,baz=8.0,slow=38						
TORD	Torodi Ar. Bea	82.43	281	P	P	07 16 17.1	-0.2
	0.2nm,0.6s,baz=48,slow=4.4,SNR=1.8						

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*IDC **03** 07:09:23.2±5.5, 36°.26N×70°.33E, h170^{km}±50^{km}, mb3.3/7, mb1 3.4/11, mb1mx3.1/59, mbtmp3.8/11, Error ellipse: s-maj=39.9km s-min=21.4km az=27.0*

*NNC **03** 07:09:32.6±4.3, 36°.98N×70°.26E, h205^{km}±63^{km}, mb3.0, mpv4.0, Error ellipse: s-maj=42.9km s-min=27.9km az=0.0*

ISC 03 07:09:28.0±0.8**, 36°.66N**±0°.07×**70°.18E**±0°.09**, h200^{km}, n31, σ1^{s}59**/35**, mb3.5**/6**, 2C-4D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	6.10	25	P	Pn	07 10 57.4	+0.5
	SNR=137						
KK31	Karatay Array	6.44	2	P	Pn	07 11 01.9	+1.1
	1.8nm,0.2s,baz=178,slow=12,SNR=69						
KK31				⇓S	Sn	07 12 10.3	-4.2
	2.1nm,0.3s,baz=182,slow=21,SNR=4.7						
UCH	Uchtor	6.49	30	P	Pn	07 11 03.2	+1.3
	SNR=5.2						
EKS2	Erkin-Say	6.60	24	P	Pn	07 11 04.0	+0.8
	SNR=18						
AAK	Ala-Archa	6.83	28	P	Pn	07 11 06.8	+0.7
	3.4nm,0.3s,baz=164,slow=3.1,SNR=23						
AAK				S	Sn	07 12 22.5	-1.5
	2.4nm,0.3s,baz=140,slow=22,SNR=12						
AAK	Ala-Archa	6.83	28	P	Pn	07 11 06.9	+0.7
	SNR=10						
AAK	Ala-Archa	6.83	28	⇓P	Pn	07 11 06.6	+0.5
	2.5nm,0.2s						
AAK				⇓S	Sn	07 12 22.3	-1.7
	12nm,0.5s						
KBK	Karagaybulak	7.03	30	P	Pn	07 11 09.7	+1.1
	SNR=6.6						
CHMS	Chumysh	7.24	28	P	Pn	07 11 12.0	+0.7
	SNR=6.7						
USP	Ospenovka	7.38	25	P	Pn	07 11 13.3	+0.2
	SNR=6.5						
TKM2	Tokmak 2	7.51	32	P	Pn	07 11 15.2	+0.2
	SNR=37						
TKM2	Tokmak 2	7.51	32	⇓P	Pn	07 11 15.2	+0.2
	13nm,0.5s						
TKM2				⇑S	Sn	07 12 38.8	-1.3
	5.1nm,0.6s						
MKAR	Makanchi Array	13.56	38	P	Pn	07 12 33.4	+1.0
	0.2nm,0.3s,baz=196,slow=10,SNR=5.8						
DANN	Dangsing	14.13	122	*e*P	Pn	07 12 40.3	+0.4
	14nm,0.4s						
KOLN	Koldanda	14.40	124	*e*P	Pn	07 12 42.2	-0.9
	5.7nm,0.3s						
AB31	Akbulak array	14.63	333	P	Pn	07 12 46.5	+1.0
	0.9nm,0.3s,baz=150,slow=12,SNR=77						
GKN	Gorkha	14.95	121	*e*P	P	07 12 51.3	+0.7
	12nm,0.3s						
KKN	Kakani	15.53	120	*e*P	P	07 12 58.3	+1.3
	5.6nm,0.3s						
PKIN	Phulchoki	15.74	121	*e*P	Pn	07 13 01.2	+1.7
	8.7nm,0.3s						
PKI	Pulchoki	15.76	121	*e*P	Pn	07 13 01.6	+1.8
	11nm,0.3s						
JIRN	Jiri	16.25	119	*e*P	Pn	07 13 08.1	+2.4
	17nm,0.4s						
AKTO	Aktyubinsk	16.31	331	P	Pn	07 13 07.2	+1.2
	0.4nm,0.3s,baz=142,slow=13,SNR=11						
AKTO	Aktyubinsk	16.31	331	⇑P	Pn	07 13 07.1	+1.2
	3.2nm,0.8s						
BVAR	Borovoye Array	16.36	0	P	Pn	07 13 07.7	+1.2
	0.2nm,0.3s,baz=190,slow=14,SNR=3.2						
ZALV	Zalesovo Beam	20.05	26	P	P	07 13 47.0	+1.4
	1.9nm,0.4s,baz=214,slow=10,SNR=5.1						
FINES	FINESS Array B	36.98	326	P	P	07 16 18.9	+1.1
	1.2nm,0.7s,baz=123,slow=12,SNR=1.5						
ARCES	ARCESS Array B	40.74	338	P	P	07 16 50.3	+1.4
	4.1nm,0.9s,baz=106,slow=7.7,SNR=6.0						
ESDC	Sonseca Array	56.79	297	P	P	07 18 52.0	+0.6
	0.3nm,0.3s,baz=90,slow=7.7,SNR=2.9						
TORD	Torodi Ar. Bea	65.06	268	P	P	07 19 45.9	-1.4
	0.3nm,0.4s,baz=46,slow=5.7,SNR=4.8						
WRA	Warramunga Arr	82.64	121	P	P	07 21 25.9	-3.2
	0.8nm,1.0s,baz=317,slow=4.0,SNR=2.3						
ASAR	Alice Springs	84.89	124	P	P	07 21 37.2	-3.3
	0.2nm,0.5s,baz=308,slow=4.3,SNR=4.6						

IDC 03 07:28:12.0±1.8**, 3°.44S**×**149°.33E, h0^{km}, mb3.9**/4**, mb1 4.2**/4**, mb1mx3.7**/29**, mbtmp3.9**/4**, MS3.3**/9**, Ms1 3.2**/9**, ms1mx3.0**/35**, Error ellipse: s-maj=109.7km s-min=25.9km az=125.0, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.31	200	LR	LR	07 32 12.9	
	comp=Z,107nm,20.6s,baz=76,slow=38						
JAY	Jayapura	8.66	276	LR	LR	07 33 28.3	
	comp=Z,193nm,18.5s,baz=54,slow=36						
HNR	Honiara	12.11	120	LR	LR	07 35 26.8	
	comp=Z,100nm,19.2s,baz=296,slow=36						
WRA	Warramunga Arr	21.97	221	P	P	07 33 08.5	+0.8
	2.7nm,0.8s,baz=43,slow=11,SNR=11						
WRA				LR	LR	07 42 17.2	
	comp=Z,58nm,19.6s,baz=215,slow=38						
DZM	Mont Dzumac	24.88	140	LR	LR	07 42 12.8	
	comp=Z,95nm,18.9s,baz=244,slow=34						
ASAR	Alice Springs	25.03	215	P	P	07 33 36.5	-1.5
	0.7nm,0.8s,baz=50,slow=8.1,SNR=5.5						
FITZ	Fitzroy Crossi	27.39	236	P	P	07 33 59.9	+0.5
	4.8nm,0.7s,baz=61,slow=8.9,SNR=9.5						
STKA	Stephens Creek	29.21	194	LR	LR	07 45 09.4	
	comp=Z,69nm,18.2s,baz=24,slow=35						
MJAR	Matsushiro Arr	41.11	346	LR	LR	07 53 15.6	
	comp=Z,20nm,18.6s,baz=195,slow=37						
KSRS	Korea Array	45.29	336	LR	LR	07 53 39.3	
	comp=Z,40nm,18.5s,baz=156,slow=34						
PETK	Petropavlovsk-	56.78	6	LR	LR	07 57 16.4	
	comp=Z,34nm,21.0s,baz=124,slow=31						
ILAR	Eielson Array	82.23	23	P	P	07 40 34.8	-0.1
	0.6nm,0.7s,baz=251,slow=5.0,SNR=7.8						
TORD	Torodi Ar. Bea	146.59	289	PKPbc	PKPbc	07 47 56.3	-0.4
	0.7nm,1.0s,baz=61,slow=2.9,SNR=2.5						

NNC 03 07:32:48.0±8.9**, 36°.87N**×**70°.57E, h0^{km}, mb3.6, mpv3.2, 3C-2D, Error ellipse: s-maj=83.1km s-min=60.1km az=145.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.22	360	P	Pn	07 34 20.7	-0.4
	0.4nm,0.3s,baz=179,slow=12,SNR=4.2						
KK31				⇑S	Sn	07 35 32.0	-1.0
	0.5nm,0.3s,baz=179,slow=28,SNR=4.3						
AAK	Ala-Archa	6.50	27	⇓P	Pn	07 34 27.0	+2.0
	0.7nm,0.4s						
AAK				⇑S	Sn	07 35 43.8	+3.8
	8.2nm,0.8s						
TKM2	Tokmak 2	7.17	31	⇑P	Pn	07 34 32.4	-1.9
	2.2nm,0.5s						
TKM2				⇓S	Sn	07 35 55.5	-1.1
	2.0nm,0.8s						

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*NEIC **03** 07:45:01.3±1.5, 24°.3S±0°.1×179°.0W±0°.1, h368^{km}±6^{km}, mb4.4/31, Error ellipse: s-maj=19.9km s-min=15.7km az=178.0*

*IDC **03** 07:45:02.5±2.4, 24°.20S×179°.15W, h383^{km}±24^{km}, mb4.0/11, mb1 4.1/13, mb1mx3.8/39, mbtmp4.8/13, Error ellipse: s-maj=19.1km s-min=14.4km az=57.0*

*NOU **03** 07:45:03.3, 24°.32S×178°.59W, h435^{km}, mb4.4/23, South of Fiji Islands*

ISC 03 07:44:58.8±0.5**, 24°.30S**±0°.06×**178°.89W**±0°.07**, h350^{km}, n106, σ1^{s}40**/120**, mb4.4**/31**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	7.13	336	P	Pn	07 46 45.7	+2.8
	4.7nm,0.3s,baz=210,slow=22,SNR=32						
NIUE	Niue	9.82	60	P	P	07 47 18.6	+2.3
NIUE	Niue	9.82	60	P	P	07 47 18.5	+2.3
AFI	Afiamalu	12.32	34	P	P	07 47 41.2	-3.0
	2.9nm,0.3s,baz=196,slow=2.3,SNR=7.9						
AFI				S	S	07 49 48.5	-13
	13nm,0.3s,baz=114,slow=23,SNR=8.4						
MARNC	Mare, Loyalty	12.38	280	P	Pn	07 47 45.5	+0.4
MARNC	Mare, Loyalty	12.38	280	P	Pn	07 47 49.2	+4.1
PINNC	Pines Island,	12.66	275	P	P	07 47 47.2	-0.5
WCZ	Waipu Caves	12.99	205	P	Pn	07 47 56.4	+4.4
KUZ	Kuaotunu	13.24	199	P	Pn	07 47 58.5	+3.5
MXZ	Matakaoa Point	13.44	190	P	Pn	07 47 59.0	+1.7
MXZ				S	S	07 50 22.4	-0.6
DZM	Mont Dzumac	13.67	276	P	Pn	07 48 01.7	+1.3
	0.8nm,0.3s,baz=66,slow=19,SNR=8.5						
DZM	Mont Dzumac	13.67	276	P	P	07 47 58.7	-0.3
DZM	Mont Dzumac	13.67	276	P	Pn	07 48 04.8	+4.4
	12nm,2.0s						
WMGZ	Waiomatatini S	13.67	189	P	Pn	07 48 01.0	+0.9
WMGZ				S	S	07 50 23.9	-3.9
HAZ	Te Kaha	13.71	191	P	P	07 47 59.4	+0.2
HAZ				S	S	07 50 27.3	-1.3
PKGZ	Pakihiroa	13.79	190	P	Pn	07 48 02.9	+1.4
PKGZ				S	S	07 50 30.0	-0.4
RUGZ	Raukumara Rang	13.94	191	P	Pn	07 48 03.7	+0.5
RUGZ				S	S	07 50 31.6	-1.7
PUZ	Puketiti	13.94	189	P	P	07 48 00.2	-1.5
PUZ				S	S	07 50 30.2	-3.2
OPRZ	Ohinepanea	14.05	195	P	Pn	07 48 06.2	+1.7
TWGZ	Tauwhareparae	14.09	190	P	Pn	07 48 06.2	+1.2
TWGZ				S	S	07 50 36.1	-0.2
MWZ	Matawai	14.32	191	P	Pn	07 48 07.6	-0.1
MWZ				S	S	07 50 39.6	-1.4
URZ	Urewera	14.33	193	P	Pn	07 48 07.2	-0.4
	7.1nm,0.3s,baz=121,slow=23,SNR=34						
URZ				S	S	07 50 40.6	-0.4
	5.5nm,0.3s,baz=78,slow=22,SNR=7.0						
URZ	Urewera	14.33	193	P	P	07 48 05.4	-0.4
URZ				S	S	07 50 38.7	-2.3
MUGZ	Murupara	14.61	194	P	P	07 48 09.5	+0.5
MUGZ				S	S	07 50 46.9	+0.2
HRRZ	Handcock Road	14.64	195	P	Pn	07 48 13.9	+2.6
PRGZ	Paritu Road	14.83	190	P	Pn	07 48 15.0	+1.4
PRGZ				S	S	07 50 50.7	-0.6
KNZ	Kokohu	14.96	190	P	Pn	07 48 15.0	0.0
KNZ				S	S	07 50 54.4	+0.7
MRHZ	Matea Rd	15.03	194	P	Pn	07 48 15.3	-0.5
BKZ	Black Stump Fm	15.33	194	P	P	07 48 17.9	+1.0
	96nm,1.8s						
BFZ	Birch Farm	16.84	193	P	P	07 48 34.5	+1.3
	35nm,2.5s						
QRZ	Quartz Range	17.98	202	P	P	07 48 46.0	+0.6
	72nm,2.5s						
KHZ	Kahutara	19.13	197	P	P	07 48 58.1	+0.6
RPZ	Rata Peaks	21.05	201	P	P	07 49 16.0	-0.2
ODZ	Otahua Downs	22.38	200	P	P	07 49 27.7	-0.5
ARMA	Armidale	26.84	250	P	P	07 50 09.4	+0.8
ARMA				IAmb	IAmb	07 50 11.2	
	comp=Z,21nm,1.1s						
EIDS	Eidsvold	27.25	261	P	P	07 50 11.7	-0.5
MGCD	Mangrove Creek	27.68	244	P	P	07 50 17.6	+1.7
	comp=Z,36nm,0.9s						
PPTF	Pamatai, Papee	28.15	82	P	P	07 50 20.7	+0.4
CNB	Canberra Magne	29.54	241	P	P	07 50 33.6	+1.3
	comp=Z,17nm,1.3s						
CAN	Canberra	29.83	241	P	P	07 50 35.0	+0.2
CAN				IAmb	IAmb	07 50 50.7	
	comp=Z,30nm,1.4s						
CAN	Canberra	29.83	241	P	P	07 50 35.7	+0.9
	comp=Z,34nm,2.2s						
CTA	Charters Tower	32.49	270	P	P	07 50 57.0	-1.1
	comp=Z,18nm,0.3s,baz=94,slow=10,SNR=33						
CTA	Charters Tower	32.49	270	P	P	07 50 57.8	-0.3
	comp=Z,29nm,0.5s						
CTAO	Charters Tower	32.49	270	P	P	07 50 57.9	-0.3
CTAO				IAmb	IAmb	07 50 58.8	
	comp=Z,19nm,0.6s						
CTAO	Charters Tower	32.49	270	P	P	07 50 58.5	+0.4
TOO	Toolangi	33.09	238	P	P	07 51 03.3	+0.2
TOO				IAmb	IAmb	07 51 04.4	
	comp=Z,11nm,0.8s						
TOO	Toolangi	33.09	238	P	P	07 51 03.6	+0.5
	comp=Z,20nm,1.4s						
TAU	Tasmania Unive	33.41	228	P	P	07 51 06.1	+0.4
TAU				IAmb	IAmb	07 51 21.8	
	comp=Z,38nm,1.4s						
BRAT	Ballarat	34.30	238	P	P	07 51 14.6	+1.3
	comp=Z,14nm,0.8s						
STKA	Stephens Creek	35.52	249	P	P	07 51 24.0	+0.2
	comp=Z,9.7nm,0.6s,baz=99,slow=12,SNR=47						
STKA	Stephens Creek	35.52	249	P	P	07 51 23.9	+0.1
STKA	Stephens Creek	35.52	249	P	P	07 51 23.3	-0.5
	comp=Z,4.2nm,0.9s						
PMG	Port Moresby	35.58	289	P	P	07 51 24.3	-0.2
PMG				IAmb	IAmb	07 51 25.2	
	comp=Z,17nm,0.8s						
ARPS	Mount Arapiles	35.80	240	P	P	07 51 26.2	+0.1
	comp=Z,34nm,0.8s						
COEN	Coen	37.18	279	P	P	07 51 38.0	+0.1
COEN				IAmb	IAmb	07 51 56.1	
	comp=Z,16nm,1.1s						
COEN	Coen	37.18	279	P	P	07 51 38.1	+0.2
	comp=Z,18nm,1.0s						
HTT	Hallett	37.84	246	P	P	07 51 42.5	-0.7
	comp=Z,37nm,0.7s						
LCRK	Leigh Creek	38.41	251	P	P	07 51 47.6	-0.3
	comp=Z,47nm,0.7s						
BBOO	Buckleboo	40.23	247	P	P	07 52 01.7	-1.0
BBOO				IAmb	IAmb	07 52 02.4	
	comp=Z,20nm,0.8s						
BBOO	Buckleboo	40.23	247	P	P	07 52 01.3	-1.4
	comp=Z,29nm,1.1s						
ASAR	Alice Springs	42.97	261	P	P	07 52 24.0	-1.0
	comp=Z,9.0nm,0.8s,baz=93,slow=8.3,SNR=26						
ASAR	Alice Springs	42.97	261	P	P	07 52 24.5	-0.5
WB2	Warramunga Arr	43.38	266	P	P	07 52 27.1	-1.1
WB0	Warramunga Arr	43.39	266	P	P	07 52 27.6	-0.7
WRA	Warramunga Arr	43.39	266	P	P	07 52 26.8	-1.6
	comp=Z,9.9nm,0.3s,baz=96,slow=8.4,SNR=29						
WRA	Warramunga Arr	43.39	266	P	P	07 52 27.3	-1.0
FORT	Forrest	47.13	250	P	P	07 52 55.4	-1.8
MTN	Manton Dam	48.50	274	P	P	07 53 06.9	-0.9
MTN				IAmb	IAmb	07 53 34.7	
	comp=Z,14nm,1.3s						
KNRA	Kununurra	49.70	270	P	P	07 53 15.7	-1.1
FAKI	Fak Fak	51.67	286	P	P	07 53 30.3	-1.1
FAKI				IAmb	IAmb	07 53 30.8	
	comp=Z,13nm,1.2s						
FITZ	Fitzroy Crossi	51.81	266	P	P	07 53 31.7	-0.7
	comp=Z,11nm,0.8s,baz=117,slow=6.5,SNR=6.8						
FITZ	Fitzroy Crossi	51.81	266	P	P	07 53 32.2	-0.2
FITZ				IAmb	IAmb	07 53 32.8	
	comp=Z,12nm,0.8s						
SIJI	Sorong	53.52	288	P	P	07 53 42.6	-2.2
	comp=Z,26nm,0.6s,baz=88,slow=3.6,SNR=12						
SBA	Scott Base	54.04	184	P	P	07 53 48.3	+0.7
SBA				IAmb	IAmb	07 53 51.8	
	comp=Z,9.7nm,1.2s						
VNDA	Vanda	54.07	185	P	P	07 53 49.3	+1.5
	comp=Z,1.0nm,0.5s,baz=5.7,slow=8.0,SNR=15						
VNDA	Vanda	54.07	185	P	P	07 53 49.1	+1.4
SOEI	Soe	55.89	275	P	P	07 54 00.5	-1.4
SOEI				IAmb	IAmb	07 54 11.7	
	comp=Z,20nm,0.7s						
NWAO	Narrogin (SRO)	56.00	246	P	P	07 54 01.8	-0.4
PSA00	Pilbara Seismi	56.09	260	P	P	07 54 01.4	-1.7
PSA00				IAmb	IAmb	07 54 11.5	
	comp=Z,12nm,1.4s						
MORW	Morawa	57.69	250	P	P	07 54 13.8	-0.2
MORW				IAmb	IAmb	07 54 22.7	
	comp=Z,27nm,1.5s						
CASY	Casey	60.20	206	P	P	07 54 30.7	+0.3
GIRL	Giralia	60.81	257	P	P	07 54 34.5	-0.8
TOLI2	Tolitoli	63.66	284	P	P	07 54 53.9	-0.3
TOLI2				IAmb	IAmb	07 54 54.5	
	comp=Z,14nm,0.8s						
QSPA	South Pole Qui	65.79	180	P	P	07 55 08.3	+1.3
	comp=Z,3.5nm,0.6s,baz=344,slow=1.0,SNR=33						
QSPA	South Pole Qui	65.79	180	P	P	07 55 08.6	+1.5
QSPA				IAmb	IAmb	07 55 09.1	
	comp=Z,3.8nm,0.7s						
MAW	Mawson	77.73	200	P	P	07 56 17.6	+0.4
	comp=Z,4.9nm,0.5s,baz=135,slow=5.9,SNR=33						
MAW	Mawson	77.73	200	P	P	07 56 17.9	+0.6
SNAA	Sanae	84.25	179	P	P	07 56 50.3	-1.1
SNAA	Sanae	84.25	179	P	P	07 56 51.2	-0.3
VNA3	Neumayer Olymp	84.42	177	P	P	07 56 51.4	-0.8
VNA2	Neumayer--Watz	84.85	177	P	P	07 56 53.9	-0.4
	baz=187,slow=4.0						
VNA1	Neumayer--Stat	85.08	177	P	P	07 56 54.9	-0.6
TXAR	Lajitas Array	89.78	58	P	P	07 57 18.9	+0.3
	comp=Z,0.8nm,0.9s,baz=207,slow=5.0,SNR=6.7						
CMAR	Chiang Mai Arr	90.62	290	P	P	07 57 22.6	0.0
	comp=Z,1.0nm,0.3s,baz=130,slow=2.8,SNR=6.7						
CMAR	Chiang Mai Arr	90.62	290	P	P	07 57 22.0	-0.6
ARCES	ARCESS Array B	132.48	349	PKP	PKPdf	08 03 31.4	+0.3
	comp=Z,4.9nm,1.1s,baz=339,slow=3.1,SNR=8.3						
ARCES	ARCESS Array B	132.48	349		PKiKP	08 03 31.9	-0.4
FINES	FINESS Array B	139.14	342	PKhKP	PKPpre	08 03 38.3	
	comp=Z,2.0nm,0.9s,baz=28,slow=4.5,SNR=4.7						
FINES				PKP	PKPdf	08 03 43.8	+0.1
	comp=Z,6.8nm,1.1s,baz=48,slow=5.9,SNR=3.5						
FINES	FINESS Array B	139.14	342		PKPdf	08 03 42.4	-1.3
AKASG	Malin Array Be	145.85	328	PKPbc	PKPdf	08 03 56.3	+0.5
	comp=Z,0.8nm,0.3s,baz=44,slow=3.8,SNR=7.4						
AKASG	Malin Array Be	145.85	328		PKPdf	08 03 55.7	-0.1
BRTR	Keskin Array B	148.63	307	PKPbc	PKPbc	08 04 04.7	-0.5
	comp=Z,1.2nm,0.6s,baz=94,slow=2.0,SNR=2.1						
BRTR	Keskin Array B	148.63	307		PKPdf	08 03 59.9	-1.2
CLL	Collm	151.52	344	*e*PKPbc	PKiKP	08 04 12.0	+0.2
	comp=Z,5.0nm,0.7s						
TORD	Torodi Ar. Bea	168.89	183	PKPab	PKPab	08 05 36.8	-0.9
	comp=Z,0.5nm,0.7s,baz=178,slow=4.2,SNR=3.6						
TORD	Torodi Ar. Bea	168.89	183	PKPdf	PKPdf	08 04 21.7	-3.3
TORD					PKPab	08 05 37.1	-0.7

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*IDC **03** 07:45:37.3±0.9, 6°.26S×130°.24E, h31^{km}±6^{km}, mb3.7/5, mb1 4.1/10, mb1mx3.9/32, mbtmp4.1/10, ML4.3/5, MS3.2/8, Ms1 3.2/8, ms1mx2.9/32, Error ellipse: s-maj=36.0km s-min=13.6km az=81.0*

*NEIC **03** 07:45:39.6±1.1, 6°.11S±0°.06×129°.84E±0°.08, h43^{km}±3^{km}, mb4.2/9, Error ellipse: s-maj=11.7km s-min=9.3km az=87.0*

*DJA **03** 07:45:40.1±0.2, 6°S±2°×13°0E±°, h80^{km}±8^{km}, M4.3/13, mB4.8/6, mb4.6/13, MLv4.3/7, Mw(mB)4.1/6*

ISC 03 07:45:38.3±0.5**, 6°.12S**±0°.04×**129°.85E**±0°.07**, h35^{km}, n62, σ2^{s}22**/61**, mb4.2**/8**, MS3.3**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.59	2	P	Pn	07 46 03.5	-0.4
BNDI	Bandanaira	1.59	2	P	Pn	07 46 03.6	-0.4
SAUI	Saumlaki	2.34	142		Pn	07 46 17.4	+3.0
SAUI	Saumlaki	2.34	142	P	Pn	07 46 18.2	+3.9
SAUI				S	Sn	07 46 48.4	+6.5
MSAI	Masohi	2.91	342	P	Pn	07 46 22.8	+0.7
FAKI	Fak Fak	3.98	37	Pn	Pn	07 46 37.4	+0.5
FAKI				Sn	Sn	07 47 22.8	+0.5
FAKI	Fak Fak	3.98	37	P	Pn	07 46 37.8	+1.0
FAKI	Fak Fak	3.98	37	P	Pn	07 46 37.8	+1.0
SIJI	Sorong	5.41	15	Pn	Pn	07 46 55.5	-1.0
	14nm,0.3s,baz=194,slow=21,SNR=16						
SIJI				Sn	Sn	07 47 55.0	-2.5
	2.9nm,0.3s,baz=272,slow=23,SNR=1.6						
SIJI				LR	LR	07 49 55.7	
	comp=Z,53nm,20.1s,baz=128,slow=47						
SWI	Sorong	5.41	15	P	Pn	07 46 57.4	+0.9
	0.2nm68nm,0.7s						
SANI	Sanana	5.58	316	P	Pn	07 47 01.2	+2.3
	0.2nm531nm54nm,0.8s						
SANI	Sanana	5.58	316	P	Pn	07 47 01.2	+2.3
SOEI	Soe	6.60	236	Pn	Pn	07 47 15.2	+2.1
MTN	Manton Dam	6.80	169	Pn	Pn	07 47 16.7	+1.1
KDU	Kakadu	7.02	159	P	Pn	07 47 18.4	-0.2
	38nm,0.6s						
BATI	Baumata	7.35	236	LR	LR	07 50 31.4	
	comp=Z,343nm,21.7s,baz=70,slow=39						
EDFI	Ende, Flores	8.50	252	P	Pn	07 47 40.1	+1.0
	21nm,0.9s						
BSSI	Bau Bau, Buton	9.31	269	P	Pn	07 47 52.0	+2.0
	634nm60nm,0.6s						
KNRA	Kununurra	9.56	186	Pn	Pn	07 47 52.6	-0.9
KNRA	Kununurra	9.56	186	P	Pn	07 47 52.1	-1.4
	34nm,0.7s						
APSI	Ampana	9.68	302	P	Pn	07 47 59.0	+3.8
	26nm,0.9s						
BKSI	Bulukumba	9.71	274	P	Pn	07 47 57.6	+2.0
	459nm44nm,0.6s						
BNSI	Bone	9.85	280	P	Pn	07 48 01.3	+3.8
	1µm44nm,0.6s						
KAPI	Kappang	10.11	276	Pn	Pn	07 48 04.8	+3.8
	4.8nm,0.3s,baz=130,slow=9.0,SNR=15						
KAPI	Kappang	10.11	276	Pn	Pn	07 48 01.2	+0.2
KAPI	Kappang	10.11	276	P	Pn	07 48 04.2	+3.1
TOLI2	Tolitoli	11.56	308	Pn	Pn	07 48 21.9	+1.0
FITZ	Fitzroy Crossi	12.59	199	Pn	Pn	07 48 32.6	-2.4
	0.7nm,0.3s,baz=1.3,slow=12,SNR=34						
FITZ				Sn	Sn	07 50 49.5	-4.7
	0.9nm,0.3s,baz=88,slow=6.6,SNR=4.4						
FITZ				LR	LR	07 54 12.5	
	comp=Z,112nm,19.0s,baz=14,slow=41						
FITZ	Fitzroy Crossi	12.59	199		Pn	07 48 34.2	-0.8
FITZ	Fitzroy Crossi	12.59	199	P	Pn	07 48 32.2	-2.8
	13nm,1.2s						
WRAB	Tennant Creek	14.41	163	P	Pn	07 48 56.0	-3.9
WRA	Warramunga Arr	14.42	163	Pn	Pn	07 48 55.1	-4.8
	1.2nm,0.3s,baz=345,slow=13,SNR=51						
WRA				Sn	Sn	07 51 29.9	-8.8
	1.5nm,0.3s,baz=324,slow=23,SNR=8.7						
WRA				LR	LR	07 54 21.1	
	comp=Z,82nm,19.9s,baz=190,slow=37						
BBKI	Banjar Baru	15.19	279	P	Pn	07 49 12.2	+1.9
COEN	Coen	15.25	122	Pn	Pn	07 49 10.3	-0.8
COEN				IAmb	IAmb	07 49 22.5	
	comp=Z,14nm,0.8s						
COEN	Coen	15.25	122	P	Pn	07 49 10.7	-0.4
	comp=Z,18nm,0.7s						

QIS	Mount Isa	17.19	148	P	Pn	07 49 34.2	-1.7
	comp=Z,10nm,0.6s						
PMG	Port Moresby	17.46	102	LR	LR	07 57 57.6	
	comp=Z,65nm,18.1s,baz=254,slow=43						
ASAR	Alice Springs	17.88	168	P	Pn	07 49 41.5	-2.9
	comp=Z,0.7nm,0.3s,baz=344,slow=10,SNR=33						
ASAR				S	Sn	07 52 55.2	-7.5
	comp=Z,0.6nm,0.3s,baz=343,slow=17,SNR=6.0						
ASAR	Alice Springs	17.88	168	P	Pn	07 49 44.9	+0.5
PSA00	Pilbara Seismi	18.16	211	P	Pn	07 49 47.3	-0.4
PSA00				IAmb	IAmb	07 50 06.3	
	comp=Z,32nm,1.3s						
PSA00	Pilbara Seismi	18.16	211	P	P	07 49 49.2	+1.4
	comp=Z,32nm,1.9s						
WRKA	Warakurna	18.87	184	P	P	07 49 54.0	-1.7
	comp=Z,19nm,1.2s						
CTAO	Charters Tower	21.14	133		P	07 50 20.8	+0.5
CTAO				IAmb	IAmb	07 50 26.4	
	comp=Z,13nm,0.9s						
LEM	Lembang	22.10	267	LR	LR	08 01 48.7	
	comp=Z,120nm,18.1s,baz=164,slow=43						
STKA	Stephens Creek	27.88	158	LR	LR	08 04 10.2	
	comp=Z,82nm,19.5s,baz=15,slow=40						
HNR	Honiara	30.00	98	LR	LR	08 03 14.3	
	comp=Z,34nm,21.5s,baz=288,slow=36						
MJAR	Matsushiro Arr	43.16	10	P	P	07 53 34.1	-1.5
	comp=Z,0.8nm,0.7s,baz=151,slow=5.3,SNR=1.1						
MJAR				pP	pP	07 53 45.0	+0.2
	comp=Z,4.6nm,0.9s,baz=191,slow=9.2,SNR=6.8						
MJAR	Matsushiro Arr	43.16	10	P	P	07 53 35.6	0.0
MAT	Matsushiro	43.16	10	P	pP	07 53 45.7	+0.8
USRK	Ussuriysk Ar.	50.12	2	pP	pP	07 54 41.5	+2.1
	comp=Z,2.1nm,0.7s,baz=177,slow=7.9,SNR=4.3						
MK31	Makanchi Array	67.41	327	P	P	07 56 30.1	-0.2
MK31				IAmb	IAmb	07 56 53.6	
	comp=Z,2.0nm,0.8s						
MKAR	Makanchi Array	67.41	327	P	P	07 56 31.8	+1.5
	comp=Z,1.6nm,0.7s,baz=130,slow=8.0,SNR=12						
MKAR				pP	pP	07 56 41.9	+2.0
	comp=Z,1.5nm,0.6s,baz=122,slow=7.1,SNR=5.9						
MKAR	Makanchi Array	67.41	327	P	P	07 56 30.3	0.0
ZALV	Zalesovo Beam	70.73	334	P	P	07 56 51.8	+1.1
	comp=Z,0.4nm,0.3s,baz=147,slow=2.9,SNR=2.1						
ZALV				pP	pP	07 57 02.1	+1.7
	comp=Z,1.9nm,0.8s,baz=116,slow=3.4,SNR=4.3						
ZALV	Zalesovo Beam	70.73	334	P	P	07 56 51.4	+0.7
KURK	Kurchatov	71.69	329	P	P	07 56 56.8	+0.3
VNDA	Vanda	73.33	173	P	P	07 57 06.3	+0.3
	comp=Z,0.6nm,0.7s,baz=326,slow=5.4,SNR=4.2						
VNDA	Vanda	73.33	173	P	P	07 57 06.2	+0.3
BRVK	Borovoye	77.32	328	P	P	07 57 29.5	+0.3
ABKAR	Akbulak array	81.73	322	P	P	07 57 53.1	-0.2
QSPA	South Pole Qui	83.85	180	P	P	07 58 04.7	+0.5
	comp=Z,0.6nm,0.7s,baz=345,slow=20,SNR=1.6						
QSPA	South Pole Qui	83.85	180	P	P	07 58 04.7	+0.5
QSPA				IAmb	IAmb	07 58 22.9	
	comp=Z,2.9nm,1.2s						

INET ***03*** *07:51:05.7, 12°.51N×86°.92W, h217^{km}, MW3.4*
SNET ***03*** *07:51:12.5±0.6, 11°.59N×87°.48W, h160^{km}±35^{km}, ML3.5*
IDC ***03*** *07:51:13.4±1.3, 12°.34N×86°.98W, h184^{km}±30^{km}, mb3.4/2, mb1 3.6/4, mb1mx3.1/33, mbtmp3.8/4, Error ellipse: s-maj=53.9km s-min=23.5km az=34.0*
UCR ***03*** *07:51:15.6±1.7, 12°.18N×87°.15W, h163^{km}, ML3.3, MW4.1, mb4.1(NEIC)*
NEIC ***03*** *07:51:15.1±1.1, 12°.53N±0°.09×86°.9W±0°.1, h180^{km}±7^{km}, mb4.1/8, Error ellipse: s-maj=18.7km s-min=9.3km az=52.0*
ISC 03 07:51:14.4±0.8**, 12°.41N**±0°.09×**86°.96W**±0°.08**, h185**^{km}±7^{km}**, n58,** σ**0^{s}.91**/71**, mb4.0**/6**, 2C-4D, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNGN	Cerro Negro	0.27	70	Pn	Pn	07 51 39.3	+0.2
CRIN	San Cristobal	0.31	343	Pn	Pn	07 51 38.6	-0.6
LCND	La Caada	1.28	315	*e*P	Pn	07 51 45.8	+1.0
LCND				IAML		07 52 18.4	
	comp=Z,196nm,0.4s						
LCND	La Caada	1.28	315	*e*P	Pn	07 51 45.8	+1.0
LCND				IAML		07 52 18.4	
	comp=Z,196nm,0.4s						
TGUH	Tegucigalpa,Un	1.67	349		Pn	07 51 47.7	-0.8
ACON	Acoyapa	1.80	104		Pn	07 51 49.0	-0.7
ALJI	Alcalda de J	1.82	300	*e*P	Pn	07 51 49.2	-0.7
ALJI				*e*S	Sn	07 52 17.2	-0.2
ALJI				IAML		07 52 20.8	
	comp=Z,235nm,0.1s						
ALJI	Alcalda de J	1.82	300	*e*P	Pn	07 51 49.2	-0.7
ALJI				*e*S	Sn	07 52 17.2	-0.2
ALJI				IAML		07 52 20.8	
	comp=Z,235nm,0.1s						
COEB	Comit de Eme	1.88	305	*e*P	Pn	07 51 50.6	0.0
COEB				*e*S	Sn	07 52 21.1	+2.3
COEB				IAML		07 52 27.1	
	comp=Z,155nm,0.3s						
COEB	Comit de Eme	1.88	305	*e*P	Pn	07 51 50.6	0.0
COEB				*e*S	Sn	07 52 21.1	+2.3
COEB				IAML		07 52 27.1	
	comp=Z,155nm,0.3s						
HZTE	Horizontes, Gu	2.15	141	⇑*e*P	Pn	07 51 54.1	+0.6
HZTE	Horizontes, Gu	2.15	141	Pn	Pn	07 51 54.0	+0.6
SCLA	Alcaldia de Sa	2.15	307	*e*P	Pn	07 51 53.6	+0.1
SCLA				*e*S	Sn	07 52 24.3	+0.3
SCLA	Alcaldia de Sa	2.15	307	*e*P	Pn	07 51 53.6	+0.1
SCLA				*e*S	Sn	07 52 24.3	+0.3
GBS3	Finca Las Img	2.19	137	*i* P	Pn	07 51 54.0	+0.1
GBS3				*i* S	Sn	07 52 23.6	-1.0
BUEV	Buena Vista	2.21	136	*i* P	Pn	07 51 54.3	+0.1
BUEV				*i* S	Sn	07 52 25.6	+0.5
LAPC	Finca la Perla	2.21	137	*i* P	Pn	07 51 54.2	0.0
PAVA	Las Pavas	2.33	304	*e*P	Pn	07 51 55.5	0.0
PAVA				IAML		07 52 35.2	
	comp=Z,101nm,0.2s						
PAVA	Las Pavas	2.33	304	*e*P	Pn	07 51 55.5	0.0
PAVA				IAML		07 52 35.2	
	comp=Z,101nm,0.2s						
SJTE	Alcalda de S	2.33	301	⇓*i*P	Pn	07 51 55.5	0.0
SJTE				*e*S	Sn	07 52 28.2	+0.6
SJTE	Alcalda de S	2.33	301	⇓*i*P	Pn	07 51 55.5	0.0
SJTE				*e*S	Sn	07 52 28.2	+0.6
LIM1	Limonal	2.38	135	*i* P	Pn	07 51 56.6	+0.5
VMAR	Armenia, Volca	2.40	131	*e*P	Pn	07 51 56.4	+0.1
COLC	Colonia	2.44	135	*i* P	Pn	07 51 56.9	+0.2
CUI	Cuipilapa	2.47	134	*i* P	Pn	07 51 58.0	+0.9
ORTG	Ortega, Santa	2.51	144		Pn	07 51 58.4	+0.8
ACAL	Aguas Claras	2.58	133	*i* P	Pn	07 51 58.7	+0.3
DUNO	Dulce Nombre,	2.72	148	Pn	Pn	07 52 00.8	+0.8
JAYA	Jayaque - finc	2.73	297	*e*P	Pn	07 51 58.4	-1.8
JAYA				*e*S	Sn	07 52 34.3	-1.5
JAYA				IAML		07 52 38.4	
	comp=Z,350nm,0.1s						
JAYA	Jayaque - finc	2.73	297	*e*P	Pn	07 51 58.4	-1.8
JAYA				*e*S	Sn	07 52 34.3	-1.5
JAYA				IAML		07 52 38.4	
	comp=Z,350nm,0.1s						
TACO	Tacachico	2.80	304	⇓*i*P	Pn	07 52 00.9	0.0
TACO	Tacachico	2.80	304	⇓*i*P	Pn	07 52 00.9	0.0
JTS	Las Juntas de	2.88	137	P	Pn	07 52 02.4	+0.5
	comp=Z,12nm,0.3s,baz=177,slow=22,SNR=30						
JTS				S	Sn	07 52 36.8	-2.1
	comp=Z,34nm,0.3s,baz=6.5,slow=20,SNR=14						
JTS	Las Juntas de	2.88	137	*e*P	Pn	07 52 02.2	+0.4
MTO3	Montecristo	3.06	311	Pn	Pn	07 52 04.5	+0.3
ESQI	Esquipulas	3.16	313	Pn	Pn	07 52 05.4	+0.2
CAO2	Cobano, Puntar	3.26	146	Pn	Pn	07 52 07.1	+0.7
LAFE	Finca La Fe, P	3.27	142	⇑*e*P	Pn	07 52 07.0	+0.4
SRA1	San Ramn	3.35	133	*e*P	Pn	07 52 09.1	+1.4
RIMA	Rio Macho	4.01	131		Pn	07 52 17.1	+1.1
SRBA	San Rafael, Bu	4.74	131	Pn	Pn	07 52 26.1	+0.9
RIOS	Rincon, Osa	5.00	137	Pn	Pn	07 52 29.5	+1.0
CDITO	Canoas	5.54	133	Pn	Pn	07 52 35.7	+0.3
CMIG	Matias Romero	8.97	302	P	Pn	07 53 19.9	-0.5
	comp=Z,0.6nm,0.3s,baz=144,slow=11,SNR=11						
GOGA	Godfrey	21.15	8	P	P	07 55 43.4	-1.6
GOGA				IAmb	IAmb	07 55 45.4	
	comp=Z,5.7nm,0.8s						
Y49A	Blount Mountai	21.36	1	P	P	07 55 45.7	-1.6
W50A	Signal Mountai	22.74	3	P	P	07 55 59.3	-1.4
W50A				IAmb	IAmb	07 56 02.0	
	comp=Z,3.9nm,0.8s						
TX31	Lajitas Ar. Si	22.92	320	P	P	07 56 03.1	+0.7
TX31				IAmb	IAmb	07 56 03.3	
	comp=Z,5.1nm,0.8s						
TX32	Lajitas Array	22.92	320	P	P	07 56 03.0	+0.6
TXAR	Lajitas Array	22.92	320	P	P	07 56 01.4	-1.0
	comp=Z,1.9nm,0.7s,baz=138,slow=9.8,SNR=25						
TXAR	Lajitas Array	22.92	320	P	P	07 56 03.2	+0.8
TKL	Tuckaleechee C	23.33	7	P	P	07 56 05.8	-0.2
	comp=Z,2.0nm,0.8s,baz=172,slow=9.3,SNR=5.3						
TKL	Tuckaleechee C	23.33	7	P	P	07 56 05.4	-0.6
X37A	Clayton	23.37	342	P	P	07 56 05.6	-0.7
V53A	Saluda	23.46	9	P	P	07 56 07.1	-0.1
V53A				IAmb	IAmb	07 56 08.1	
	comp=Z,4.0nm,0.8s						
MOQ	Mont Orford	35.11	18	P	P	07 57 51.6	+1.6
ASAR	Alice Springs	139.70	248	PKP	PKPdf	08 10 20.4	-0.6
	comp=Z,0.3nm,0.6s,baz=102,slow=2.1,SNR=2.3						
WRA	Warramunga Arr	139.72	254	PKP	PKPdf	08 10 20.7	-0.4
	comp=Z,0.4nm,0.7s,baz=92,slow=2.6,SNR=8.2						

INET ***03*** *08:10:33.4, 10°.77N×87°.00W, h15^{km}, MW3.8*
UCR 03 08:10:42.5±1.3**, 10°.73N×86°.72W, h16**^{km}**, MW4.3, 6D, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HZTE	Horizontes, Gu	1.10	91	⇓*e*P	Pb	08 11 02.6	-0.6
SAJU	San Juanillo,	1.19	123	⇓*e*P	Pn	08 11 03.2	-1.2
GBS3	Finca Las Img	1.24	87	*i* P	Pn	08 11 04.3	-0.9
LAPC	Finca la Perla	1.27	88	⇓*i*P	Pn	08 11 04.4	-1.1
GUAI	GUAI	1.27	111	⇓*i*P	Pn	08 11 04.7	-0.9
BUEV	Buena Vista	1.29	87	⇓*i*P	Pn	08 11 05.1	-0.9
BUEV				*i* S	Sn	08 11 23.2	+0.2
GB1A	Borinquen Arri	1.30	86	*i* P	Pn	08 11 05.4	-0.7
GPS2	Hotel Rincn d	1.34	89	*i* P	Pn	08 11 06.0	-0.6
BUAI	Buenos Aires	1.37	84	*i* P	Pn	08 11 07.0	0.0
LIM1	Limonal	1.44	91	⇓*i*P	Pn	08 11 07.3	-0.7
LIM1				*i* S	Sb	08 11 27.6	+0.5
INDI	Punta indio, G	1.47	125	*e*P	Pn	08 11 07.2	-1.2
COLC	Colonia	1.49	92	*i* P	Pn	08 11 08.2	-0.4
HORNC	Hornillas	1.52	90	*i* P	Pn	08 11 08.5	-0.5
CUI	Cuipilapa	1.53	93	*i* P	Pn	08 11 08.7	-0.5
ACAL	Aguas Claras	1.66	93	*i* P	Pn	08 11 11.0	0.0
JTS	Las Juntas de	1.79	104	*e*P	Pn	08 11 12.1	-0.7
ARE1	Arenal 1	1.98	98	*e*P	Pn	08 11 15.6	+0.2
LAFE	Finca La Fe, P	2.00	117	*e*P	Pn	08 11 14.4	-1.2
LCR2	La Lucha 2	2.85	110	*e*P	Pn	08 11 28.3	+0.8
RIMA	Rio Macho	2.97	109	*e*P	Pn	08 11 30.3	+1.1

TAP ***03*** *08:12:14.6, 24°.51N×122°.52E, h63^{km}±1^{km}, ML3.9, B*
JMA ***03*** *08:12:14.2±0.1, 24°.47N×122°.52E, h72^{km}±1^{km}, M3.0*
ISC 03 08:12:15.3±1.1**, 24°.50N**±0°.02×**122°.53E**±0°.02**, h33**^{km}±3^{km}**, n118,** σ**1^{s}.00**/220**, 1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	Yonagunijimaku	0.39	97	P	Pn	08 12 26.3	+1.7
JYNG				S	Sb	08 12 34.9	+4.6
YOJ	Yonaguni jima	0.44	94	P	Pn	08 12 26.7	+1.3
	baz=94						
YOJ				S	Sn	08 12 35.7	+3.5
	baz=94						
YOJ	Yonaguni jima	0.44	94	P	Pn	08 12 26.7	+1.3
YOJ				S	Sn	08 12 35.7	+3.5
TWC	Suao	0.63	280	*i* P	Pb	08 12 28.4	+0.4
	baz=279						
TWC				*i* S	Sb	08 12 38.2	+1.6
	baz=279						
EWUT	Wuta	0.68	266	P	Pb	08 12 29.5	+0.6
	baz=264						
EWUT				S	Sb	08 12 40.0	+1.9
	baz=264						
TWB1	Santiao Chiao	0.71	316	P	Pb	08 12 29.7	+0.4
	baz=316						
TWB1				S	Sb	08 12 39.3	+0.5
	baz=316						
ENA	Nanau	0.72	265	P	Pb	08 12 30.0	+0.5
	baz=263						
ENA				S	Sb	08 12 41.6	+2.5
	baz=263						
NTC	Toucheng	0.73	299	*i* P	Pb	08 12 29.9	+0.2
	baz=298						
NTC				*i* S	Sb	08 12 41.0	+1.6
	baz=298						
EHP	Heping Village	0.74	256	*e*P	Pb	08 12 30.1	+0.3
	baz=254						
EHP				*e*S	Sb	08 12 41.0	+1.3
	baz=254						
NDS	Dongshan	0.75	281	P	Pb	08 12 30.2	+0.2
	baz=279						
NDS				S	Sb	08 12 41.3	+1.3
	baz=279						
ILA	Ilan	0.76	291	P	Pb	08 12 30.3	+0.2
	baz=290						
ILA				S	Sb	08 12 41.5	+1.3
	baz=290						
TIPB	Shuangxi	0.79	307	*i* P	Pn	08 12 30.2	0.0
	baz=306						
TIPB				*i* S	Sn	08 12 41.1	+0.2
	baz=306						
TWE	Neicheng	0.81	286	*i* P	Pn	08 12 30.8	+0.4
	baz=285						
TWE				*i* S	Sb	08 12 42.5	+0.7
	baz=285						
ENTT	Nioudou	0.89	279	P	Pn	08 12 32.0	+0.5
	baz=278						
ENTT				S	Sb	08 12 44.5	+0.7
	baz=278						
NWF	Wu-fen Shan	0.89	310	*i* P	Pn	08 12 31.6	0.0
	baz=310						
NWF				*i* S	Sn	08 12 43.7	+0.4
	baz=310						
WFSB	Wu-fen Shan	0.89	310	P	Pn	08 12 31.7	+0.2
	baz=310						
WFSB				S	Sb	08 12 43.9	+0.1
	baz=310						
ETL	Fush Village	0.89	248	P	Pn	08 12 31.6	+0.1
	baz=246						
ETL				S	Sb	08 12 44.5	+0.6
	baz=246						
NACB	Ninganchiao	0.91	249	P	Pn	08 12 31.8	+0.1
	baz=248						
NACB				S	Sb	08 12 45.1	+0.6
	baz=248						
NDT	Datong Townshi	0.93	277	*i* P	Pb	08 12 33.0	0.0
	baz=275						
NDT				*i* S	Sb	08 12 46.4	+1.4
	baz=275						
TWD	Chiawan	0.94	244	*i* P	Pn	08 12 32.2	0.0
	baz=243						
TWD				*i* S	Sn	08 12 45.4	+0.8
	baz=243						
NWLT	Wulai	0.97	287	*i* P	Pn	08 12 33.3	+0.7
	baz=286						
NWLT				*i* S	Sn	08 12 46.2	+0.9
	baz=286						
TWA	Mucha	0.98	300	*i* P	Pn	08 12 32.9	+0.1
	baz=299						
TWA				*i* S	Sn	08 12 45.6	0.0
	baz=299						
HWA	Hwalien	0.99	239	P	Pn	08 12 33.1	+0.3
	baz=237						
HWA				S	Sb	08 12 47.2	+0.5
	baz=237						
ETLH	Xiulin Townshi	0.99	253	P	Pn	08 12 33.1	+0.1
	baz=252						
ETLH				S	Sn	08 12 47.1	+1.1
	baz=252						
NHDH	Xindian Distri	1.02	297	*i* P	Pn	08 12 33.6	+0.3
	baz=296						
NHDH				*i* S	Sb	08 12 47.5	-0.1
	baz=296						
NNSB	Datong	1.04	266	P	Pn	08 12 33.9	+0.2
	baz=265						
NNSB				*e*S	Sb	08 12 48.9	+0.5
	baz=265						
NNS	Nan Shan	1.05	267	*i* P	Pn	08 12 34.0	+0.1
	baz=266						
NNS				S	Sb	08 12 49.0	+0.3
	baz=266						
YHNB	Yeheng	1.06	280	⇓P	Pn	08 12 34.5	+0.5
	baz=278						
YHNB				S	Sn	08 12 48.7	+1.1
	baz=278						
TAP	Taipei	1.07	300	P	Pn	08 12 34.2	+0.2
	baz=300						
TAP				S	Sn	08 12 48.6	+0.9
	baz=300						
NSK	Sanguang	1.08	280	P	Pn	08 12 34.6	+0.4
	baz=279						
NSK				S	Sn	08 12 49.1	+1.1
	baz=279						
YM01	YM01	1.08	307	P	Pn	08 12 34.2	0.0
	baz=306						
YM01				S	Sn	08 12 47.9	-0.2
	baz=306						
IRIF	Iriomote-Funau	1.11	98	P	Pn	08 12 34.2	-0.3
IRIF				*e*S	Sb	08 12 49.2	-1.0
ANP	Anpu	1.14	307	P	Pn	08 12 35.0	-0.1
	baz=306						
ANP				*e*S	Sn	08 12 50.0	+0.3
	baz=306						
TWS1	Kuangyinshan	1.17	301	P	Pn	08 12 35.3	-0.1
	baz=300						
TWS1				S	Sn	08 12 51.3	+1.0
	baz=300						
NTST	Danshui	1.18	304	*i* P	Pn	08 12 35.8	+0.3
	baz=304						
NTST				*i* S	Sb	08 12 52.1	-0.1
	baz=304						
FUSS	Fushou	1.20	258	*i* P	Pn	08 12 36.2	+0.3
	baz=257						
FUSS				S	Sn	08 12 51.8	+0.7
	baz=257						
PCYT	Pengchaiyu	1.20	340	*i* P	Pn	08 12 35.8	0.0
	baz=340						
WHF	Hehuan Shan	1.20	253	*i* P	Pn	08 12 36.2	0.0
	baz=252						
WHF				S	Sn	08 12 51.8	+0.2
	baz=252						
ESL	Shilin	1.21	236	*i* P	Pn	08 12 35.5	-0.4
	baz=234						
ESL				*i* S	Sn	08 12 51.3	+0.2
	baz=234						
HATJ	Hateruma jima	1.25	110	P	Pb	08 12 36.5	-1.8
HATJ				*e*S	Sb	08 12 52.7	-1.4
TWT	Tachien	1.25	259	P	Pn	08 12 37.6	+0.9
	baz=258						
TWT				S	Sn	08 12 53.2	+0.7
	baz=258						
TDCB	Techi	1.27	259	P	Pn	08 12 37.2	+0.3
	baz=258						
TDCB				S	Sn	08 12 53.4	+0.5
	baz=258						
EGFH	Guangfu	1.30	231	P	Pn	08 12 37.0	-0.1
	baz=230						
EGFH				S	Sn	08 12 53.5	+0.1
	baz=230						
NCU	National Centr	1.30	291	*i* P	Pn	08 12 37.6	+0.4
	baz=290						
NCU				S	Sn	08 12 53.6	0.0
	baz=290						
NCUH	Zhongli	1.31	291	P	Pn	08 12 37.5	+0.3
	baz=290						
NCUH				*e*S	Sn	08 12 54.0	+0.5
	baz=290						
CHGB	Renai	1.31	251	P	Pn	08 12 37.5	+0.1
	baz=250						
CHGB				S	Sn	08 12 54.5	+0.6
	baz=250						
OWD	Renai	1.34	247	*i* P	Pn	08 12 37.9	0.0
	baz=245						
OWD				S	Sn	08 12 54.7	0.0
	baz=245						
JKRS	Kuro-shima	1.38	100	P	Pn	08 12 38.1	-0.1
JKRS				*e*S	Sb	08 12 56.2	-1.6
LIOB	Emei	1.38	276	P	Pn	08 12 38.7	+0.4
	baz=275						
LIOB				S	Sn	08 12 56.0	+0.6
	baz=275						
NSTT	Nanjuang	1.40	276	*i* P	Pn	08 12 38.7	+0.3
	baz=275						
NSTT				*e*S	Sn	08 12 56.1	+0.4
	baz=275						
HGSD	Ruisui	1.42	225	P	Pn	08 12 38.2	-0.6
	baz=224						
HGSD				S	Sn	08 12 56.1	-0.2
	baz=224						
SBCB	Hsinchu	1.43	282	P	Pn	08 12 38.5	-0.4
	baz=281						
SBCB				*e*S	Sn	08 12 57.1	+0.5
	baz=281						
HSN	Hsinchu	1.45	282	*e*P	Pn	08 12 38.4	-0.8
	baz=283						
HSN				*e*S	Sn	08 12 56.8	-0.2
	baz=283						
WHP	Taichung City	1.46	262	*i* P	Pn	08 12 40.8	+1.4
	baz=260						
WHP				*i* S	Sn	08 12 58.7	+1.3
	baz=260						
EHY	Hungye	1.48	228	P	Pn	08 12 38.9	-0.8
	baz=227						
EHY				S	Sn	08 12 56.5	-1.3
	baz=227						
JIJ	Ishigaki jima	1.48	95	P	Pn	08 12 38.9	-0.7
JIJ				*e*S	Sn	08 12 57.2	-0.6
WCS	Beigang Elemen	1.54	254	P	Pn	08 12 41.0	+0.6
	baz=253						
WCS				*e*S	Sn	08 13 00.9	+1.7
	baz=253						
YULB	Yu-li	1.57	226	P	Pn	08 12 40.1	-0.8
	baz=225						
YULB				S	Sn	08 12 59.1	-1.1
	baz=225						
NMLH	Miaoli	1.58	272	P	Pn	08 12 41.3	+0.3
	baz=271						
NMLH				*e*S	Sn	08 13 01.3	+0.9
	baz=271						
EYUL	Yuli	1.59	224	*e*P	Pn	08 12 40.8	-0.4
	baz=223						
EYUL				*i* S	Sn	08 13 01.8	+1.2
	baz=223						
SSLB	Suanglung	1.60	244	P	Pn	08 12 41.3	0.0
	baz=243						
SSLB				*e*S	Sn	08 13 00.7	-0.1
	baz=243						
TWQ1	Liyutan	1.60	265	*i* P	Pn	08 12 41.1	-0.2
	baz=264						
TWQ1				*e*S	Sn	08 13 01.4	+0.5
	baz=264						
SMLT	Sun Moon Lake	1.61	248	P	Pn	08 12 41.8	+0.4
	baz=247						
SMLT				S	Sn	08 13 01.4	+0.3
	baz=247						
NSY	Sanyi	1.61	268	P	Pn	08 12 42.3	+0.9
	baz=266						
NSY				S	Sn	08 13 03.0	+1.9
	baz=266						
JISG	Ishigakijimahi	1.63	86	P	Pn	08 12 41.1	-0.5
JISG				S	Sn	08 13 01.2	-0.3
TYC	Yuchr	1.63	249	P	Pn	08 12 42.3	+0.6
	baz=248						
TYC				*e*S	Sn	08 13 02.1	+0.5
	baz=248						
FULB	Fuli	1.71	221	P	Pn	08 12 42.2	-0.7
	baz=220						
FULB				S	Sn	08 13 03.0	-0.7
	baz=220						
TCU	Taichung	1.72	259	*e*P	Pn	08 12 43.4	+0.4
	baz=257						
TCU				*e*S	Sn	08 13 03.2	-0.7
	baz=257						
WDJ	Dajia District	1.73	265	*e*P	Pn	08 12 43.7	+0.7
	baz=264						
WDJ				*e*S	Sn	08 13 04.2	+0.3
	baz=264						
CHKT	Chengkung	1.75	218	*e*P	Pn	08 12 44.2	+0.9
	baz=216						
CHKT				S	Sn	08 13 03.3	-1.2
	baz=216						
WJS	Zhushan	1.77	248	*i* P	Pn	08 12 45.3	+1.6
	baz=247						
WNT	Mingjian	1.79	250	P	Pn	08 12 45.3	+1.4
	baz=249						
WCHH	Zhanghua	1.84	257	P	Pn	08 12 45.1	+0.5
	baz=256						
WCHH				*e*S	Sn	08 13 07.1	+0.3
	baz=256						
ALS	Alishan	1.85	238	*i* P	Pn	08 12 45.8	+0.7
	baz=237						
ALS				*e*S	Sn	08 13 08.5	+1.0
	baz=237						
EDH	Donghe	1.89	217	P	Pn	08 12 44.2	-1.0
	baz=216						

EDH				S	Sn	08 13 06.4	-1.4
	baz=216						
ELDTW	**Lidau**	1.90	227	P	Pn	08 12 45.1	-0.4
	baz=226						
ELDTW				S	Sn	08 13 06.9	-1.4
	baz=226						
CHN5	**Tsauling**	1.91	242	P	Pn	08 12 46.1	+0.5
	baz=241						
CHN5				*e*S	Sn	08 13 08.8	+0.2
	baz=241						
JTJ	**Tarama**	1.99	85	P	Pn	08 12 46.4	-0.2
JTJ				*e*S	Sn	08 13 11.1	+0.8
WDLH	**Douliu**	1.99	247	*e*P	Pn	08 12 47.9	+1.3
	baz=245						
WDLH				*e*S	Sn	08 13 10.9	+0.6
	baz=245						
LONT	**Longtian**	2.04	219	*e*P	Pn	08 12 46.1	-1.2
	baz=218						
LONT				*e*S	Sn	08 13 10.6	-1.0
	baz=218						
WRL	**Guolierlin Hig**	2.05	254	*e*P	Pn	08 12 47.5	0.0
	baz=252						
WRL				*e*S	Sn	08 13 12.4	+0.6
	baz=252						
LDUT	**Ludao**	2.06	208	*e*P	Pn	08 12 47.5	-0.1
	baz=207						
STYH	**Taoyuan**	2.08	231	P	Pn	08 12 48.6	+0.8
	baz=230						
STYH				*e*S	Sn	08 13 13.7	+1.2
	baz=230						
CHN4	**Tsaushan**	2.10	238	P	Pn	08 12 48.0	-0.2
	baz=236						
CHN4				S	Sn	08 13 14.3	+1.1
	baz=236						
TPUB	**Ta-pu**	2.10	236	*e*P	Pn	08 12 49.4	+1.1
	baz=235						
CHN2	**Minshiung**	2.11	243	*e*P	Pn	08 12 48.5	+0.3
	baz=242						
WTK	**Tuku**	2.11	248	*e*P	Pn	08 12 48.9	+0.6
	baz=247						
WTK				*e*S	Sn	08 13 14.9	+1.4
	baz=247						
TWGBT	**Beinan**	2.13	219	P	Pn	08 12 47.5	-1.1
	baz=218						
TWGBT				*e*S	Sn	08 13 12.6	-1.4
	baz=218						
WTCT	**Ta-ch'eng**	2.15	253	*e*P	Pn	08 12 48.7	-0.1
	baz=252						
WTCT				*e*S	Sn	08 13 14.7	+0.5
	baz=252						
TTN	**Taitung**	2.15	216	*e*P	Pn	08 12 49.6	+0.8
	baz=215						
TTN				*e*S	Sn	08 13 14.5	+0.2
	baz=215						
WTP	**Ta-pu**	2.15	235	P	Pn	08 12 47.4	-1.4
	baz=234						
WTP				*e*S	Sn	08 13 14.5	+0.1
	baz=234						
CHY	**Chiayi**	2.16	243	P	Pn	08 12 48.9	-0.1
	baz=242						
CHY				*e*S	Sn	08 13 14.3	-0.4
	baz=242						
TWK	**Hsinying**	2.23	237	P	Pn	08 12 50.8	+0.8
	baz=236						
TWK				*e*S	Sn	08 13 15.9	-0.6
	baz=236						
CHN1	**Nanshi**	2.25	235	*e*P	Pn	08 12 51.3	+1.1
	baz=234						
CHN1				*e*S	Sn	08 13 16.6	-0.3
	baz=234						
SNST	**Tainan City**	2.25	236	*e*P	Pn	08 12 50.1	-0.2
	baz=235						
SNST				*e*S	Sn	08 13 17.4	+0.6
	baz=235						
WSF	**Szhu**	2.27	248	*e*S	Sn	08 13 17.9	+0.6
	baz=247						
SLGT	**Liugui**	2.28	229	*e*P	Pn	08 12 52.3	+1.6
	baz=228						
ICHU	**Yijhu**	2.35	242	*e*P	Pn	08 12 52.1	+0.6
	baz=240						
ICHU				*e*S	Sn	08 13 19.1	0.0
	baz=240						
ECL	**Taimali**	2.38	218	P	Pn	08 12 52.0	0.0
	baz=216						
ECL				*e*S	Sn	08 13 18.8	-1.2
	baz=216						
CHN8	**Yiju**	2.41	242	*e*S	Sn	08 13 20.5	-0.2
	baz=241						
SSD	**Sandimen**	2.46	225	*e*P	Pn	08 12 53.9	+0.7
	baz=224						
SSD				*e*S	Sn	08 13 22.1	0.0
	baz=224						
MASBT	**Mashibuluo**	2.56	223	*e*P	Pn	08 12 54.9	+0.5
	baz=222						
MASBT				*e*S	Sn	08 13 24.8	+0.4
	baz=222						
EAST	**Anshuo**	2.61	217	*e*P	Pn	08 12 55.1	-0.1
	baz=215						
EAST				*e*S	Sn	08 13 25.0	-0.7
	baz=215						
SSPT	**Xinbi**	2.69	222	*e*P	Pn	08 12 57.5	+1.2
	baz=221						
SSPT				*e*S	Sn	08 13 27.4	-0.3
	baz=221						
SCZT	**Fangliau**	2.75	220	*e*P	Pn	08 12 57.6	+0.6
	baz=219						
SLIU	**Shizi**	2.77	215	*e*P	Pn	08 12 57.6	+0.3
	baz=214						
SLIU				*e*S	Sn	08 13 28.1	-1.6
	baz=214						
MATB	**Ma-tsu**	2.86	306	*e*P	Pn	08 12 57.5	-1.1
	baz=304						
PNG	**Penghu**	2.87	252	*e*P	Pn	08 12 57.8	-0.9
	baz=250						
PHUB	**P'eng-hu**	2.87	251	*e*P	Pn	08 12 57.3	-1.5
	baz=249						
PHUB				*e*S	Sn	08 13 29.6	-2.6
	baz=249						
TWKBT	**Hengchun**	2.99	212	*e*P	Pn	08 12 59.7	-0.7
	baz=211						
TWK1	**Hengchun**	2.99	212	*e*P	Pn	08 13 00.2	-0.2
	baz=211						
TWK1				*e*S	Sn	08 13 34.5	-0.7
	baz=211						
PTMZ	**Houxiangcun**	3.14	281	*e*P	Pn	08 13 01.1	-1.4
	baz=279						
PTMZ				*e*S	Sn	08 13 36.4	-2.5
	baz=279						
XPSS	**Dashiqiu**	3.21	319	*e*P	Pn	08 13 01.8	-1.6
	baz=318						
XPSS				*e*S	Sn	08 13 37.9	-2.6
	baz=318						
LYJJ	**Jianjiangzhen**	3.23	310	*e*P	Pn	08 13 02.3	-1.4
	baz=309						
LYJJ				*e*S	Sn	08 13 38.9	-2.0
	baz=309						
MHZQ	**Yeshan**	3.54	298	*e*P	Pn	08 13 06.8	-1.2
	baz=296						
MHZQ				*e*S	Sn	08 13 46.7	-2.1
	baz=296						
KNM	**Kinmen**	3.73	270	*e*P	Pn	08 13 10.4	-0.2
	baz=268						
KNMB	**Chin-men Tao**	3.77	270	*e*P	Pn	08 13 09.5	-1.6
	baz=269						
ZPLA	**Ao Xicun**	4.40	264	*e*P	Pn	08 13 18.6	-1.1
	baz=262						

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*ROM **03** 08:22:57.9±0.1, 41°.826N±0°.008×15°.196E±0°.010, h16^{km}±1^{km}, ML3.1/66, Error ellipse: s-maj=0.8km s-min=0.6km az=32.0*

ISC 03 08:22:58.0±0.8, **41°.82N**±0°.02×**15°.19E**±0°.02, **h16**^{km}±6^{km}, **n107**, σ**1^{s}.32**/109, **4C-1D, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MELA	**Melanico ??? S**	0.12	204	⇑P	Pg	08 23 01.5	-0.1
MELA				S	Sg	08 23 04.0	0.0
MELA				AML	AML		
MELA				AML	AML		
	comp=N,71750µm,0.1s						
MELA				AML	AML		
	comp=N,68200µm,0.3s						
MELA				AML	AML		
CIGN	**Sant'Elia a Pi**	0.27	233	⇑P	Pb	08 23 04.2	-0.3
CIGN				S	Sg	08 23 07.8	-0.1
CIGN				AML	AML		
	comp=E,2620µm,0.5s						
CIGN				AML	AML		
	comp=N,2885µm,0.4s						
GATE	**Gambatesa**	0.37	215	P	Pb	08 23 06.3	0.0
GATE				AML	AML		
	comp=E,2760µm,0.5s						
GATE				AML	AML		
	comp=N,2595µm,0.4s						
GATE				AML	AML		
	comp=N,2530µm,0.4s						
GATE				AML	AML		
	comp=E,2760µm,0.2s						
TREM	**Isole Tremiti**	0.39	38	P	Pb	08 23 06.5	-0.1
TREM				AML	AML		
	comp=E,3430µm,0.5s						
TREM				AML	AML		
	comp=N,3715µm,0.6s						
SGRT	**San Giovanni R**	0.42	98	⇓P	Pg	08 23 06.2	-0.3
SGRT				S	Sg	08 23 12.4	+0.2
SGRT				AML	AML		
	comp=N,4575µm,0.4s						
SGRT				AML	AML		
	comp=E,6090µm,0.4s						
FRES	**Fresagrandinar**	0.42	292	P	Pg	08 23 06.6	+0.1
FRES				S	Sb	08 23 13.3	0.0
MOCO	**Biccari - m.te**	0.45	183	⇑P	Pg	08 23 07.2	+0.2
MOCO				S	Sb	08 23 14.2	+0.1
MOCO				AML	AML		
	comp=N,1755µm,0.3s						
MOCO				AML	AML		
	comp=E,2510µm,1.0s						
MOCO				AML	AML		
	comp=N,1670µm,0.3s						
MOCO				AML	AML		
	comp=E,2560µm,1.0s						
TRIV	**Trivento**	0.48	264	P	Pb	08 23 08.0	-0.2
TRIV				S	Sb	08 23 16.1	+1.0
TRIV				AML	AML		
	comp=N,1915µm,0.5s						
TRIV				AML	AML		
	comp=E,1575µm,0.5s						
TRIV				AML	AML		
	comp=E,1545µm,0.5s						
TRIV				AML	AML		
	comp=N,2035µm,0.5s						
TRIV				AML	AML		
	comp=E,1540µm,0.5s						
BSSO	**Busso**	0.52	239	P	Pg	08 23 08.4	0.0
BSSO				S	Sb	08 23 17.2	+0.9
BSSO				AML	AML		
	comp=E,1335µm,1.0s						
BSSO				AML	AML		
	comp=E,590µm,1.0s						
BSSO				AML	AML		
	comp=N,520µm,0.3s						
BSSO				AML	AML		
	comp=N,1194µm,0.3s						
MSAG	**Monte S. Angel**	0.55	101	P	Pg	08 23 08.7	-0.2
MSAG				S	Sb	08 23 16.6	-0.3
MSAG				AML	AML		
	comp=E,3475µm,0.3s						
MSAG				AML	AML		
	comp=N,8245µm,0.3s						
MSAG				AML	AML		
	comp=E,3915µm,0.3s						
MSAG				AML	AML		
	comp=N,8445µm,0.3s						
PSB1	**Pescosannita**	0.66	206	⇑P	Pg	08 23 10.2	-0.8
PSB1				AML	AML		
	comp=E,1310µm,0.6s						
PSB1				AML	AML		
	comp=E,1351µm,0.6s						
PSB1				AML	AML		
	comp=N,984µm,0.5s						
PSB1				AML	AML		
	comp=N,949µm,0.7s						
PTRJ	**Pietraroja**	0.67	228	AML	AML		
	comp=E,1800µm,0.3s						
PTRJ				AML	AML		
	comp=N,1140µm,0.4s						
SGTA	**Sant Agata di**	0.69	169	P	Pg	08 23 10.7	-0.9
SGTA				AML	AML		
	comp=N,2465µm,0.5s						
SGTA				AML	AML		
	comp=E,2815µm,0.8s						
SGTA				AML	AML		
	comp=N,2440µm,0.5s						
SGTA				AML	AML		
	comp=E,2990µm,0.8s						
MRB1	**Monte Rocchett**	0.71	194	P	Pg	08 23 11.3	-0.6
MRB1				S	Sb	08 23 21.8	+0.2
MRB1				AML	AML		
	comp=N,2855µm,0.4s						
MRB1				AML	AML		
	comp=E,3630µm,0.6s						
MRB1				AML	AML		
	comp=E,3630µm,0.6s						
MRB1				AML	AML		
	comp=N,2970µm,0.4s						
SGG	**Gregorio Mates**	0.75	235	AML	AML		
	comp=E,994µm,0.4s						
SGG				AML	AML		
	comp=N,1145µm,0.4s						
SGG				AML	AML		
	comp=N,3.5nm,0.4s						
SGG				AML	AML		
	comp=E,2.5nm,0.4s						
VITU	**Vitulano (BN)**	0.76	214	P	Pb	08 23 11.7	-1.2
VITU				AML	AML		
	comp=N,3835µm,0.4s						
VITU				AML	AML		
	comp=E,2310µm,0.5s						
RNI2	**Rionero Sannit**	0.79	262	P	Pb	08 23 12.6	-0.8
RNI2				S	Sg	08 23 24.3	+0.5
RNI2				AML	AML		
	comp=E,2640µm,0.3s						
RNI2				AML	AML		
	comp=E,2645µm,0.3s						
RNI2				AML	AML		
	comp=E,2755µm,0.3s						
RNI2				AML	AML		
	comp=N,2035µm,0.4s						
RNI2				AML	AML		
	comp=N,1960µm,0.4s						
LPEL	**Lama dei Pelig**	0.79	287	P	Pb	08 23 12.6	-0.8
LPEL				AML	AML		
	comp=E,2545µm,0.2s						
LPEL				AML	AML		
	comp=N,3190µm,1.0s						
CAFE	**Carife**	0.79	178	P	Pb	08 23 12.4	-1.0
CAFE				S	Sg	08 23 24.1	+0.3
CAFE				AML	AML		
	comp=N,3150µm,0.9s						
CAFE				AML	AML		
	comp=E,4030µm,0.8s						
CAFE				AML	AML		
	comp=E,3970µm,0.8s						
CAFE				AML	AML		
	comp=N,3150µm,0.9s						
CAPA	**Cerignola FG**	0.81	144	P	Pb	08 23 13.1	-0.6
CAPA				AML	AML		
	comp=E,1510µm,1.0s						
CAPA				AML	AML		
	comp=E,1505µm,1.0s						
CAPA				AML	AML		
	comp=N,1715µm,0.6s						
VAGA	**Valle Agricola**	0.82	241	P	Pb	08 23 13.1	-0.9
VAGA				AML	AML		
	comp=N,3830µm,0.3s						
VAGA				AML	AML		
	comp=N,3695µm,0.3s						
VAGA				AML	AML		
	comp=E,1495µm,0.3s						
VAGA				AML	AML		
	comp=E,1575µm,0.3s						
SNAL	**S. Angelo Dei**	0.89	179	P	Pb	08 23 14.7	-0.4
SNAL				S	Sg	08 23 27.3	+0.3
SNAL				AML	AML		
	comp=E,2955µm,0.8s						
SNAL				AML	AML		
	comp=N,2955µm,1.0s						
SNAL				AML	AML		
	comp=E,2850µm,0.8s						
SNAL				AML	AML		
	comp=N,2770µm,1.0s						
CERA	**Filignano**	0.91	256	P	Pb	08 23 15.1	-0.3
CERA				AML	AML		
	comp=E,1406µm,0.5s						
CERA				AML	AML		
	comp=N,2035µm,0.5s						
CERA				AML	AML		
	comp=N,2105µm,0.5s						
CERA				AML	AML		
	comp=E,1430µm,0.6s						
PAOL	**Paolisi**	0.92	211	P	Pb	08 23 14.6	-1.0
PAOL				AML	AML		
	comp=E,869µm,0.3s						
PAOL				AML	AML		
	comp=E,902µm,0.3s						
PAOL				AML	AML		
	comp=N,1038µm,0.9s						
PAOL				AML	AML		
	comp=N,1060µm,0.9s						
VULT	**Monte Vulture**	0.92	160	P	Pb	08 23 15.6	0.0
VULT				S	Sg	08 23 28.6	+0.7
VULT				AML	AML		
	comp=N,5835µm,0.3s						
VULT				AML	AML		
	comp=E,3740µm,0.3s						
VULT				AML	AML		
	comp=N,6135µm,0.3s						
VULT				AML	AML		
	comp=E,3570µm,0.3s						
PIGN	**Pignataro Magg**	0.98	231	P	Pb	08 23 15.9	-0.7
PIGN				AML	AML		
	comp=E,401µm,0.3s						
PIGN				AML	AML		
	comp=N,372µm,0.4s						
MCRV	**Calabrutti - M**	1.03	181	P	Pb	08 23 17.4	-0.2
MCRV				S	Sn	08 23 32.0	-0.2
MCRV				AML	AML		
	comp=E,1690µm,0.7s						
MCRV				AML	AML		
	comp=N,2005µm,0.9s						
PALZ	**Palazzo San Ge**	1.05	146	P	Pb	08 23 17.4	-0.3
PALZ				S	Sn	08 23 32.8	+0.5
PALZ				AML	AML		
	comp=E,1895µm,0.4s						
PALZ				AML	AML		
	comp=N,3765µm,0.4s						
MRVN	**Minervino Murg**	1.07	135	P	Pb	08 23 17.1	-1.0
MRVN				S	Sb	08 23 32.1	+0.2
MRVN				AML	AML		
	comp=N,702µm,0.8s						
MRVN				AML	AML		
	comp=E,855µm,1.4s						
MRLC	**Muro Lucano**	1.08	168	P	Pn	08 23 18.6	0.0
MRLC				S	Sg	08 23 34.0	+0.9
MRLC				AML	AML		
	comp=E,1175µm,0.5s						
MRLC				AML	AML		
	comp=E,1180µm,0.5s						
MRLC				AML	AML		
	comp=N,880µm,0.9s						
POFI	**Posta Fibreno**	1.11	265	P	Pb	08 23 17.5	-1.4
POFI				AML	AML		
	comp=N,571µm,0.7s						
POFI				AML	AML		
	comp=E,970µm,0.5s						
T0110	**Collepietro**	1.13	292	P	Pb	08 23 18.3	-0.9
T0110				AML	AML		
	comp=N,1495µm,0.5s						
T0110				AML	AML		
	comp=E,1760µm,0.5s						
VCEL	**Villa Celiera**	1.16	300	P	Pn	08 23 18.7	-1.0
VCEL				AML	AML		
	comp=E,2130µm,1.1s						
VCEL				AML	AML		
	comp=N,1665µm,1.1s						
VCEL				AML	AML		
	comp=E,2125µm,1.1s						
VCEL				AML	AML		
	comp=N,1670µm,1.1s						
ACER	**Acerenza**	1.17	151	P	Pb	08 23 19.9	-0.1
ACER				S	Sg	08 23 36.1	+0.1
ACER				AML	AML		
	comp=N,1459µm,1.5s						
ACER				AML	AML		
	comp=E,1675µm,0.7s						
ACER				AML	AML		
	comp=N,1523µm,1.5s						
ACER				AML	AML		
	comp=N,1460µm,1.5s						
ACER				AML	AML		
	comp=E,1645µm,0.8s						
VVLD	**Villa Vallelon**	1.18	273	P	Pn	08 23 18.6	-1.3
VVLD				AML	AML		
	comp=N,450µm,1.3s						
VVLD				AML	AML		
	comp=E,556µm,0.5s						
MODR	**Mondragone**	1.19	236	P	Pb	08 23 20.3	0.0
MODR				AML	AML		
	comp=N,625µm,0.7s						
MODR				AML	AML		
	comp=E,578µm,0.4s						
CDRU	**Civita di Ruta**	1.33	176	P	Pn	08 23 22.1	0.0
CDRU				AML	AML		
	comp=N,402µm,0.3s						
CDRU				AML	AML		
	comp=E,923µm,0.5s						
PTQR	**Pietraquaria**	1.35	279	AML	AML		
	comp=N,248µm,0.7s						
PTQR				AML	AML		
	comp=E,228µm,0.8s						
GIGS	**Gran Sasso**	1.36	298	AML	AML		
	comp=N,241µm,0.9s						
GIGS				AML	AML		
	comp=N,242µm,0.9s						
GIGS				AML	AML		
	comp=E,154µm,1.2s						
TERO	**Teramo**	1.43	305	P	Pn	08 23 22.8	-0.6
TERO				AML	AML		
	comp=E,206µm,0.4s						
TERO				AML	AML		
	comp=E,207µm,0.4s						
TERO				AML	AML		
	comp=N,266µm,0.7s						
AQU	**L'Aquila**	1.44	293	*e*Pn	Pn	08 23 21.8	-1.7
GIUL	**Giuliano Di Ro**	1.48	261	P	Pb	08 23 25.0	-0.1
GIUL				AML	AML		
	comp=N,252µm,0.8s						
GIUL				AML	AML		
	comp=E,291µm,1.1s						
GIUL				AML	AML		
	comp=N,252µm,0.8s						
CAMP	**Campotosto**	1.51	299	AML	AML		
	comp=E,490µm,0.7s						
CAMP				AML	AML		
	comp=N,442µm,0.8s						
MIGL	**Miglionico**	1.53	142	P	Pn	08 23 24.6	-0.1
MIGL				AML	AML		
	comp=E,1680µm,0.4s						
MIGL				AML	AML		
	comp=N,1895µm,0.3s						
MCEL	**Monticello**	1.56	163	P	Pn	08 23 25.2	0.0
MCEL				AML	AML		
	comp=E,324µm,0.4s						
MCEL				AML	AML		
	comp=E,324µm,0.4s						
MCEL				AML	AML		
	comp=N,295µm,0.9s						
SMA1	**SAN MARTINO**	1.60	301	AML	AML		
	comp=N,614µm,1.2s						
SMA1				AML	AML		
	comp=E,616µm,1.4s						
SMA1				AML	AML		
	comp=N,614µm,1.2s						
SMA1				AML	AML		
	comp=E,615µm,1.4s						
MTSN	**Montesano sull**	1.61	165	P	Pn	08 23 25.8	0.0
MTSN				AML	AML		
	comp=N,320µm,0.4s						
MTSN				AML	AML		
	comp=E,314µm,0.6s						
MATE	**Matera**	1.63	135	P	Pn	08 23 25.9	-0.1
MATE				AML	AML		
	comp=E,650µm,0.3s						
MATE				AML	AML		
	comp=N,586µm,0.7s						
HVAR	**Hvar**	1.65	34	*e*Pg	Pb	08 23 26.9	-1.1
HVAR				Sg	Sn	08 23 42.3	-4.8
CERT	**Cerreto**	1.66	275	AML	AML		
	comp=N,302µm,0.8s						
CERT				AML	AML		
	comp=E,406µm,0.7s						

MGR	**Morigerati**	**1.70**	**171**	AML	AML		
	comp=E,292µm,0.4s						
MGR				AML	AML		
	comp=N,369µm,0.6s						
LATB	**Latina**	**1.70**	**260**	AML	AML		
	comp=N,57µm,0.7s						
LATB				AML	AML		
	comp=E,96µm,0.7s						
SIRI	**Monte Sirino -**	**1.71**	**162**	P	**Pn**	**08 23 27.1**	**-0.2**
SIRI				AML	AML		
	comp=E,384µm,0.4s						
SIRI				AML	AML		
	comp=N,245µm,1.4s						
SIRI				AML	AML		
	comp=N,252µm,1.4s						
SIRI				AML	AML		
	comp=E,392µm,0.4s						
BULG	**Bulgheria - Ca**	**1.74**	**175**	P	**Pn**	**08 23 28.1**	**+0.4**
BULG				AML	AML		
	comp=E,402µm,0.9s						
BULG				AML	AML		
	comp=N,387µm,0.7s						
SCHR	**S. Chirico Rap**	**1.75**	**157**	AML	AML		
	comp=N,188µm,0.9s						
SCHR				AML	AML		
	comp=E,180µm,1.1s						
SCHR				AML	AML		
	comp=N,188µm,0.9s						
SCHR				AML	AML		
	comp=E,180µm,1.1s						
LNSS	**Leonessa**	**1.78**	**297**	AML	AML		
	comp=N,318µm,0.3s						
LNSS				AML	AML		
	comp=E,464µm,0.4s						
NRCA	**Norcia**	**1.85**	**304**	P	**Pb**	**08 23 31.1**	**-0.4**
NRCA				AML	AML		
	comp=E,302µm,0.1s						
NRCA				AML	AML		
	comp=N,363µm,0.5s						
ZIRJ	**Zirje**	**1.87**	**10**	*e*Pn	**Pn**	**08 23 29.8**	**+0.5**
CUC	**Castrocucco**	**1.88**	**165**	AML	AML		
	comp=E,308µm,0.8s						
CUC				AML	AML		
	comp=N,146µm,0.5s						
CUC				AML	AML		
	comp=E,373µm,0.8s						
CUC				AML	AML		
	comp=N,121µm,0.5s						
CSP1	**Cessapalombo**	**1.95**	**312**	P	**Pb**	**08 23 32.3**	**-0.8**
CSP1				AML	AML		
	comp=N,486µm,0.5s						
CSP1				AML	AML		
	comp=E,438µm,0.4s						
MAKA	**Makarska**	**2.00**	**42**	*e*Pn	**Pn**	**08 23 31.9**	**+0.8**
MAKA				Sn	**Sn**	**08 23 49.4**	**-6.3**
CESI	**CESI - Serrava**	**2.07**	**306**	P	**Pb**	**08 23 34.4**	**-0.9**
CESI				AML	AML		
	comp=E,154µm,1.0s						
CESI				AML	AML		
	comp=N,155µm,0.6s						
MORI	**Morici**	**2.08**	**10**	*e*Pn	**Pn**	**08 23 32.2**	**-0.1**
SALB	**San Lorenzo Be**	**2.13**	**155**	P	**Pn**	**08 23 33.3**	**+0.3**
SALB				AML	AML		
	comp=N,130µm,0.7s						
SALB				AML	AML		
	comp=E,158µm,1.4s						
STON	**Ston**	**2.14**	**60**	*e*Pn	**Pb**	**08 23 35.6**	**-0.7**
STON	**Ston**	**2.14**	**60**	*e*Pn	**Pn**	**08 23 33.0**	**0.0**
DUGI	**Dugi Otok**	**2.18**	**357**	*e*Pn	**Pn**	**08 23 33.8**	**+0.2**
MOMA	**Monte Martano**	**2.18**	**298**	AML	AML		
	comp=N,160µm,0.5s						
MOMA				AML	AML		
	comp=E,162µm,0.9s						
SNTG	**Esanatoglia**	**2.20**	**312**	AML	AML		
	comp=N,159µm,0.6s						
SNTG				AML	AML		
	comp=E,143µm,0.5s						
RICI	**Ricice**	**2.20**	**40**	*e*Pn	**Pn**	**08 23 35.0**	**+1.0**
ASSB	**Assisi San Ben**	**2.24**	**304**	AML	AML		
	comp=N,178µm,1.0s						
ASSB				AML	AML		
	comp=E,150µm,0.4s						
KIJV	**Kijevo**	**2.36**	**22**	*e*Pn	**Pn**	**08 23 37.5**	**+1.4**
TREB	**Trebinje**	**2.51**	**68**	*e*Pn	**Pn**	**08 23 38.3**	**+0.1**
ATTE	**AVT- Monte Tez**	**2.51**	**304**	AML	AML		
	comp=N,74µm,0.4s						
ATTE				AML	AML		
	comp=E,86µm,0.6s						
MGAB	**Montegabbione**	**2.53**	**297**	AML	AML		
	comp=N,101µm,0.7s						
MGAB				AML	AML		
	comp=E,121µm,0.6s						
HCY	**Herceg Novi**	**2.53**	**75**	*e*Pn	**Pb**	**08 23 43.8**	**+0.7**
MPAG	**Monte Paganucc**	**2.55**	**316**	AML	AML		
	comp=N,80µm,0.8s						
MPAG				AML	AML		
	comp=E,87µm,0.6s						
PIEI	**Pieia**	**2.61**	**312**	AML	AML		
	comp=N,69µm,0.6s						
PIEI				AML	AML		
	comp=E,79µm,0.3s						
ATPI	**Pietralunga -**	**2.63**	**309**	AML	AML		
	comp=E,107µm,0.7s						
ATPI				AML	AML		
	comp=N,92µm,0.6s						
PIPA	**Pietrapaola**	**2.64**	**152**	AML	AML		
	comp=N,62µm,1.6s						
PIPA				AML	AML		
	comp=E,88µm,0.4s						
BRY	**Bratogost**	**2.71**	**65**	*e*Pn	**Pn**	**08 23 42.3**	**+1.3**
MGRS	**Mrkonjic Grad**	**2.94**	**27**	*e*Pn	**Pb**	**08 23 47.6**	**-2.5**
RABC	**Rab**	**2.95**	**354**	*e*Pn	**Pn**	**08 23 45.0**	**+0.8**
CRE	**Caprese Michel**	**2.99**	**308**	AML	AML		
	comp=E,40µm,1.5s						
CRE				AML	AML		
	comp=N,51µm,0.4s						
DRME	**Dracevica, Mon**	**3.00**	**82**	*e*Pn	**Pn**	**08 23 45.9**	**+1.0**
UPM	**Unac-Piva**	**3.07**	**62**	*e*Pn	**Pn**	**08 23 48.2**	**+2.1**
BLY	**Banja Luka**	**3.27**	**26**	*e*Pn	**Pn**	**08 23 51.2**	**+2.6**
SMRN	**Sveta Marina**	**3.31**	**347**	*e*Pn	**Pn**	**08 23 49.0**	**0.0**
MRAK	**Mrakovica**	**3.43**	**21**	*e*Pn	**Pn**	**08 23 53.0**	**+2.1**
RIY	**Rijeka**	**3.54**	**352**	*e*Pn	**Pb**	**08 23 59.0**	**-1.3**
RUDO	**Rudo**	**3.56**	**58**	*e*Pn	**Pn**	**08 23 55.1**	**+2.4**
HAPS	**Han Pijesak,BI**	**3.57**	**49**	*e*Pn	**Pn**	**08 23 54.4**	**+1.5**
BBLS	**Lazići**	**3.71**	**55**	*e*Pn	**Pn**	**08 23 57.6**	**+2.8**
CEY	**Cerknica**	**3.96**	**352**	*e*Pn	**Pb**	**08 24 08.3**	**+0.9**
MOSL	**Moslavina**	**3.96**	**16**	*e*Pn	**Pn**	**08 23 57.2**	**-0.9**
CRES	**Cresnjev**	**4.01**	**3**	*e*Pn	**Pb**	**08 24 06.3**	**-2.0**
DIVS	**Divibare**	**4.20**	**55**	*e*Pn	**Pn**	**08 24 02.0**	**+0.6**
OBKA	**Obir**	**4.71**	**355**	*e*Pn	**Pn**	**08 24 09.4**	**+0.8**
	comp=N,2.6nm,0.3s						
OBKA				*i* Sn	**Sn**	**08 25 04.5**	**+1.6**
	comp=N,9.2nm,0.3s						
SOKA	**Soboth**	**4.86**	**359**	*i* Pn	**Pn**	**08 24 11.6**	**+1.0**
	comp=N,0.8nm,0.2s						
MYKA	**Terra Mystica**	**4.94**	**347**	*e*Sn	**Sn**	**08 25 08.8**	**+0.4**
	comp=N,5.6nm,0.4s						
STIP	**Stip**	**5.23**	**89**	*i* Pn	**Pn**	**08 24 19.3**	**+3.7**
ABTA	**Abfaltersbach**	**5.29**	**340**	*i* Pn	**Pn**	**08 24 17.6**	**+1.1**
	comp=N,0.9nm,0.2s						
ABTA				*i* Sn	**Sn**	**08 25 18.5**	**+1.3**
	comp=N,2.7nm,0.3s						
KBA	**Koelnbreinsper**	**5.42**	**347**	*e*Sn	**Sn**	**08 25 21.5**	**+1.0**
	comp=N,2.5nm,0.3s						
WTTA	**Wattenberg**	**6.01**	**336**	*e*Pn	**Pn**	**08 24 28.8**	**+2.4**
	comp=N,1.4nm,0.2s						
WTTA				*e*Sn	**Sn**	**08 25 35.9**	**+0.9**
	comp=N,4.2nm,0.3s						
MOA	**Molln**	**6.07**	**354**	*e*Sn	**Sn**	**08 25 35.6**	**-0.6**
	comp=N,8.0nm,0.6s						
FETA	**Feichten**	**6.11**	**330**	*e*Pn	**Pn**	**08 24 30.2**	**+2.4**
	comp=N,0.9nm,0.4s						
FETA				*e*Sn	**Sn**	**08 25 38.3**	**+1.0**
	comp=N,1.9nm,0.4s						
MOTA	**Moosalm**	**6.25**	**334**	*e*Sn	**Sn**	**08 25 42.8**	**+2.0**
	comp=N,2.1nm,0.3s						

ATH 03 08:39:30.9,38°.30N×23°.63E,h18^{km}±2^{km}**,ML2.1**/1**,Error ellipse: s-maj=3.3km s-min=1.0km az=200.0,Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VIL2	**Platees**	**0.30**	**253**	P	Pg	08 39 37.2	-0.2
VIL2				S	Sg	08 39 41.4	-0.5
VIL2				AML	AML	08 39 44.4	
	comp=E,1022µm,0.6s						
VIL2				AML	AML	08 39 45.6	
	comp=N,1186µm,0.6s						
DION	**Dionisos Attik**	**0.32**	**132**	P	Pg	08 39 37.5	-0.4
DION				S	Sg	08 39 42.8	+0.2
ATH	**Athens Observa**	**0.33**	**168**	P	Pg	08 39 37.3	-0.6
ATHU	**Athens Univers**	**0.35**	**160**	P	Pg	08 39 38.2	-0.1
ATHU				S	Sg	08 39 43.3	-0.1
VLY	**Voula,Athens**	**0.46**	**164**	P	Pg	08 39 40.0	-0.3
VLY				S	Sb	08 39 47.0	-0.1
LTK	**Loutraki**	**0.59**	**243**	P	Pg	08 39 42.1	-0.6
LTK				S	Sg	08 39 50.5	0.0

ATH ***03*** *08:39:54.1,38°.75N×20°.92E,h14*^{km}*±1*^{km}*,ML2.5/16,Error ellipse: s-maj=1.6km s-min=0.6km az=246.0*

THE ***03*** *08:39:54.3,38°.78N×20°.95E,h13*^{km}*±2*^{km}*,ML2.7/7,Error ellipse: s-maj=2.2km s-min=0.8km az=256.0*

ISC 03 08:39:53.9±0.8**,38°.75N**±0°.02×**20°.94E**±0°.02**,h15**^{km}±6^{km}**, n61,**σ**0**^{s}**.62**/87**,Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NYDR	**Nydri-Lefkada**	**0.19**	**258**	P	**Pg**	**08 39 57.9**	**-0.5**
NYDR				S	**Sg**	**08 40 01.8**	**+0.4**
NYDR	**Nydri-Lefkada**	**0.19**	**258**	P	**Pg**	**08 39 57.8**	**-0.5**
NYDR				S	**Sg**	**08 40 01.3**	**-0.1**
LKD2	**Lefkada island**	**0.22**	**279**	P	**Pg**	**08 39 58.6**	**-0.3**
LKD2				S	**Sb**	**08 40 03.4**	**-0.2**
	2µm,0.2s						
LKD2	**Lefkada island**	**0.22**	**279**	P	**Pg**	**08 39 58.5**	**-0.3**
LKD2				S	**Sg**	**08 40 02.7**	**+0.4**
LKD2				AML	AML	08 40 05.2	
	comp=N,3122µm,0.2s						
LKD2				AML	AML	08 40 06.4	
	comp=E,3842µm,0.3s						
EVGI	**Lefkada island**	**0.26**	**239**	P	**Pg**	**08 39 59.3**	**-0.1**
EVGI				S	**Sb**	**08 40 04.8**	**+0.2**
EVGI	**Lefkada island**	**0.26**	**239**	P	**Pg**	**08 39 59.3**	**-0.1**
EVGI				S	**Sg**	**08 40 03.7**	**+0.5**
DRAG	**Dragano-Lefkad**	**0.29**	**256**	P	**Pg**	**08 39 59.9**	**-0.2**
DRAG				S	**Sb**	**08 40 06.3**	**+0.6**
	comp=E,4µm,0.3s						
DRAG	**Dragano-Lefkad**	**0.29**	**256**	P	**Pg**	**08 39 59.9**	**-0.2**
DRAG				S	**Sg**	**08 40 04.6**	**+0.3**
DSL	**Palaion Diasel**	**0.40**	**18**	P	**Pg**	**08 40 01.6**	**-0.3**
FSK	**Fiskardo**	**0.42**	**225**	P	**Pg**	**08 40 02.5**	**+0.2**
FSK				S	**Sb**	**08 40 10.1**	**+0.9**
	comp=E,872nm,0.3s						
FSK	**Fiskardo**	**0.42**	**225**	P	**Pg**	**08 40 02.4**	**+0.2**
FSK				S	**Sg**	**08 40 07.9**	**0.0**
FSK				AML	AML	08 40 13.1	
	comp=N,1318µm,0.3s						
FSK				AML	AML	08 40 13.7	
	comp=E,2129µm,0.3s						
PVO	**Paravola**	**0.48**	**107**	P	**Pg**	**08 40 03.5**	**+0.1**
PVO				S	**Sb**	**08 40 12.6**	**+1.7**
	comp=E,2µm,0.4s						
PVO	**Paravola**	**0.48**	**107**	P	**Pg**	**08 40 03.4**	**+0.1**
PVO				S	**Sb**	**08 40 10.9**	**0.0**
PVO				AML	AML	08 40 14.8	
	comp=N,3635µm,0.3s						
PVO				AML	AML	08 40 19.2	
	comp=E,2693µm,0.5s						
VLS	**Valsamata**	**0.64**	**206**	P	**Pg**	**08 40 06.3**	**-0.1**
VLS	**Valsamata**	**0.64**	**206**	P	**Pg**	**08 40 06.2**	**-0.1**
VLS				S	**Sg**	**08 40 14.2**	**-0.7**
VLS				AML	AML	08 40 21.9	
	comp=E,795µm,0.3s						
VLS				AML	AML	08 40 26.9	
	comp=N,766µm,0.6s						
KEF4	**Livadi, Kephal**	**0.64**	**219**	P	**Pg**	**08 40 06.2**	**-0.2**
KEF4				S	**Sb**	**08 40 17.4**	**+1.9**
KEF4	**Livadi, Kephal**	**0.64**	**219**	P	**Pg**	**08 40 06.2**	**-0.2**
KEF4				S	**Sg**	**08 40 14.6**	**-0.3**
DMLN	**Damoulianata-K**	**0.68**	**221**	P	**Pg**	**08 40 06.8**	**-0.3**
DMLN	**Damoulianata-K**	**0.68**	**221**	P	**Pg**	**08 40 06.9**	**-0.3**
EVR	**Evrytania**	**0.70**	**76**	P	**Pg**	**08 40 07.3**	**-0.3**
EVR				S	**Sb**	**08 40 17.8**	**+0.4**
	comp=N,240nm,0.3s						
EVR	**Evrytania**	**0.70**	**76**	P	**Pg**	**08 40 07.3**	**-0.3**
EVR				AML	AML	08 40 21.2	
	comp=N,377µm,0.4s						
EVR				AML	AML	08 40 22.4	
	comp=E,393µm,0.3s						
PSDA	**Pessada-Kefalo**	**0.70**	**204**	P	**Pg**	**08 40 07.1**	**-0.4**
PSDA				S	**Sn**	**08 40 19.9**	**+0.1**
PSDA	**Pessada-Kefalo**	**0.70**	**204**	P	**Pg**	**08 40 07.1**	**-0.4**
PSDA				S	**Sg**	**08 40 16.4**	**-0.3**
KEF3	**Kipouria, Keph**	**0.72**	**220**	P	**Pg**	**08 40 07.1**	**-0.8**
KEF3	**Kipouria, Keph**	**0.72**	**220**	P	**Pg**	**08 40 06.5**	**-1.4**
ANX	**Ano Chora**	**0.79**	**102**	P	**Pg**	**08 40 08.1**	**-1.1**
ANX				S	**Sb**	**08 40 20.6**	**+0.7**
	comp=E,588nm,0.4s						
ANX	**Ano Chora**	**0.79**	**102**	P	**Pg**	**08 40 08.9**	**-0.3**
ANX				S	**Sb**	**08 40 20.6**	**+0.7**
ANX				AML	AML	08 40 25.5	
	comp=N,1137µm,0.4s						
ANX				AML	AML	08 40 27.2	
	comp=E,1025µm,0.4s						
RLS	**Riolos of Patr**	**0.81**	**149**	P	**Pg**	**08 40 08.7**	**-0.9**
RLS				S	**Sg**	**08 40 20.0**	**-0.2**
RLS				AML	AML	08 40 27.6	
	comp=E,339µm,0.5s						
RLS				AML	AML	08 40 31.6	
	comp=N,634µm,0.4s						
EFP	**Efpalio**	**0.82**	**113**	P	**Pg**	**08 40 10.0**	**+0.1**
EFP				S	**Sb**	**08 40 21.8**	**+0.9**
EFP				AML	AML	08 40 26.4	
	comp=E,798µm,0.3s						
EFP				AML	AML	08 40 26.9	
	comp=N,1490µm,0.3s						
VTN	**Vitineika**	**0.86**	**167**	P	**Pg**	**08 40 10.9**	**+0.4**
JAN	**Janina**	**0.90**	**356**	P	**Pg**	**08 40 11.1**	**-0.4**
JAN	**Janina**	**0.90**	**356**	P	**Pg**	**08 40 11.0**	**-0.4**
JAN				S	**Sb**	**08 40 23.7**	**+0.5**
JAN				AML	AML	08 40 27.1	
	comp=N,570µm,0.5s						
JAN				AML	AML	08 40 36.1	
	comp=E,354µm,0.7s						
IGT	**Igoumenitsa**	**0.91**	**329**	P	**Pg**	**08 40 10.6**	**-0.9**
IGT	**Igoumenitsa**	**0.91**	**329**	P	**Pg**	**08 40 10.7**	**-0.9**
IGT				AML	AML	08 40 30.8	
	comp=N,206µm,0.4s						
IGT				AML	AML	08 40 33.0	
	comp=E,249µm,0.4s						
SERG	**Sergoula**	**0.94**	**111**	P	**Pb**	**08 40 12.2**	**+0.3**
SERG	**Sergoula**	**0.94**	**111**	P	**Pb**	**08 40 12.3**	**+0.3**
SERG				AML	AML	08 40 30.1	
	comp=E,802µm,0.3s						
SERG				AML	AML	08 40 30.6	
	comp=N,1060µm,0.3s						
LAKA	**Lakka**	**0.96**	**122**	P	**Pb**	**08 40 12.0**	**-0.4**
LAKA	**Lakka**	**0.96**	**122**	P	**Pb**	**08 40 11.9**	**-0.4**
LAKA				S	**Sb**	**08 40 24.9**	**0.0**
LAKA				AML	AML	08 40 35.5	
	comp=E,1136µm,0.8s						
LAKA				AML	AML	08 40 36.5	
	comp=N,1120µm,0.5s						
MAKR	**Makrakomi, Fth**	**0.96**	**74**	P	**Pb**	**08 40 11.8**	**-0.6**
MAKR	**Makrakomi, Fth**	**0.96**	**74**	P	**Pb**	**08 40 12.4**	**0.0**
TRIZ	**Trizonia**	**0.97**	**113**	P	**Pb**	**08 40 12.3**	**-0.1**
TRIZ	**Trizonia**	**0.97**	**113**	P	**Pb**	**08 40 12.1**	**-0.4**
DRO	**Drossia**	**1.00**	**143**	P	**Pb**	**08 40 12.7**	**-0.3**
DRO				S	**Sn**	**08 40 28.2**	**+0.8**
	comp=N,520nm,0.4s						
DRO	**Drossia**	**1.00**	**143**	P	**Pb**	**08 40 12.7**	**-0.3**
DRO				S	**Sb**	**08 40 26.2**	**+0.2**
DRO				AML	AML	08 40 34.5	
	comp=E,693µm,0.4s						
DRO				AML	AML	08 40 35.9	
	comp=N,1387µm,0.5s						
LTHK	**Lithakia**	**1.05**	**184**	P	**Pb**	**08 40 13.6**	**-0.1**
THL	**Klokotos Trika**	**1.16**	**46**	P	**Pb**	**08 40 15.9**	**+0.2**
THL	**Klokotos Trika**	**1.16**	**46**	P	**Pb**	**08 40 15.6**	**-0.1**
THL				AML	AML	08 40 39.1	
	comp=N,150µm,0.5s						
THL				AML	AML	08 40 40.2	
	comp=E,146µm,0.6s						
KLV	**Kalavryta, Ach**	**1.19**	**126**	P	**Pn**	**08 40 15.3**	**-0.8**
KLV	**Kalavryta, Ach**	**1.19**	**126**	P	**Pn**	**08 40 15.4**	**-0.7**
KLV				AML	AML	08 40 42.6	
	comp=E,162µm,0.4s						
KLV				AML	AML	08 40 47.9	
	comp=N,232µm,0.8s						
KPRO	**Kipourio**	**1.24**	**15**	P	**Pn**	**08 40 16.6**	**-0.3**
KPRO	**Kipourio**	**1.24**	**15**	P	**Pn**	**08 40 16.8**	**-0.1**
KPRO				AML	AML	08 40 40.9	
	comp=E,401µm,0.6s						
KPRO				AML	AML	08 40 44.0	
	comp=N,592µm,0.5s						
KEK	**Kerkira**	**1.30**	**318**	P	**Pg**	**08 40 19.1**	**+0.1**
KEK	**Kerkira**	**1.30**	**318**	P	**Pn**	**08 40 17.8**	**+0.1**
NEST	**Nestorio**	**1.66**	**3**	P	**Pn**	**08 40 23.7**	**+1.0**
STON	**Ston**	**4.79**	**330**	*e*Pn	**Pn**	**08 41 03.9**	**-1.7**
MAKA	**Makarska**	**5.41**	**328**	*e*Pn	**Pn**	**08 41 14.5**	**+0.4**
HVAR	**Hvar**	**5.58**	**324**	*e*Pn	**Pn**	**08 41 14.3**	**-2.0**
KIJV	**Kijevo**	**6.26**	**328**	*e*Pn	**Pn**	**08 41 25.6**	**-0.1**
ZIRJ	**Zirje**	**6.32**	**322**	*e*Pn	**Pn**	**08 41 26.4**	**-0.1**
MORI	**Morici**	**6.45**	**324**	*e*Pn	**Pn**	**08 41 28.8**	**+0.5**
DUGI	**Dugi Otok**	**6.85**	**322**	*e*Pn	**Pn**	**08 41 34.5**	**+0.7**

IDC ***03*** *09:10:44.8±1.8,17°.64S×178°.13W,h590*^{km}*±20*^{km}*,mb3.2/3, mb1 3.3/6,mb1mx3.0/27,mbtmp4.2/6,Error ellipse: s-maj=108.2km s-min=28.8km az=157.0*

ISC 03 09:10:44.9±1.4**,17°.4S**±0°.8×**178°.2W**±0°.4**,h600**^{km}**,n6,** σ**0**^{s}**.82**/7**,mb4.0**/3**,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.64**	**264**	P	**P**	**09 12 08.0**	**0.0**
	4.1nm,0.3s,baz=132,slow=3.9,SNR=24						
AFI	**Afiamalu**	**7.04**	**62**	P	**P**	**09 12 35.1**	**-0.2**
	3.0nm,0.3s,baz=225,slow=7.1,SNR=4.2						
DZM	**Mont Dzumac**	**15.24**	**250**	P	**P**	**09 13 55.3**	**-0.1**
	0.4nm,0.3s,baz=25,slow=17,SNR=1.6						
STKA	**Stephens Creek**	**39.11**	**241**	P	**P**	**09 17 21.9**	**-0.4**
	2.2nm,0.5s,baz=96,slow=9.4,SNR=7.8						
WRA	**Warramunga Arr**	**44.97**	**259**	P	**P**	**09 18 08.0**	**-0.4**
	0.8nm,0.4s,baz=97,slow=7.4,SNR=31						
ASAR	**Alice Springs**	**45.18**	**254**	P	**P**	**09 18 09.9**	**0.0**
	5.0nm,0.6s,baz=88,slow=8.7,SNR=100						
ASAR				PcP	**PcP**	**09 19 38.6**	**+1.5**
	0.3nm,0.4s,baz=104,slow=3.9,SNR=5.6						

RSNC 03 09:22:35.8±0.8**,4°.55N×72°.70W,h4**^{km}±4^{km}**,ML2.5,1C-1D, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTGC	**Puerto Gaitan,**	**0.66**	**121**	⇓*e*P	Pg	09 22 47.5	-1.0
PTGC				*e*S	Sg	09 22 56.7	-0.5
PTGC				*i*		09 22 59.2	
	comp=Z,94nm,0.2s						
CHIC	**Chingaza**	**1.03**	**275**	*e*P	Pg	09 22 54.1	-1.6
CHIC				*e*S	Sg	09 23 08.1	-0.9
VILC	**Villavicencio,**	**1.08**	**246**	*e*P	Pg	09 22 54.8	-1.8
VILC				*e*S	Sg	09 23 10.2	-0.4
RUSC	**La Rusia**	**1.39**	**344**	⇑*e*P	Pn	09 23 00.7	-1.7
RUSC				*e*S	Sg	09 23 19.5	-1.1
RUSC				*i*		09 23 23.7	
	comp=Z,34nm,0.4s						
SPBC	**San Pablo de B**	**1.75**	**309**	*e*P	Pn	09 23 05.3	-1.8
SPBC				*e*S	Sn	09 23 29.0	-0.9
SPBC				*i*		09 23 33.8	
	comp=Z,26nm,0.2s						
SPBC	**San Pablo de B**	**1.75**	**309**	*e*S	Sn	09 23 28.9	-1.1
SPBC				*i*		09 23 33.8	
	comp=Z,26nm,0.2s						
GUVC	**San Jose del G**	**1.99**	**178**	*e*P	Pn	09 23 09.6	-0.8
GUVC				*e*S	Sn	09 23 32.8	-3.0
GUVC				*i*		09 23 36.7	
	comp=Z,105nm,0.2s						
BARC	**Barichara**	**2.09**	**347**	*e*P	Pn	09 23 10.3	-1.5
ORTC	**Ortega, Tolima**	**2.62**	**256**	*e*P	Pn	09 23 17.8	-1.2
ORTC				*e*S	Sn	09 23 53.2	+1.9
MACC	**Macarena, Meta**	**2.65**	**206**	*e*P	Pn	09 23 17.6	-1.8
MACC				*e*S	Sn	09 23 48.3	-3.6
MACC				*i*		09 24 01.8	
	comp=Z,13nm,0.2s						
GUY2C	**Guyana, Caldas**	**2.74**	**284**	*e*P	Pn	09 23 20.3	-0.7
GARC	**Garzon, Huila**	**3.64**	**230**	*e*P	Pn	09 23 31.3	-2.0
GARC				*e*S	Sn	09 24 15.2	-1.7
GARC				*i*		09 24 33.4	
	comp=Z,21nm,0.2s						

RSNC 03 09:22:49.0±0.3**,6°.66N×73°.46W,h105**^{km}±5^{km}**,ML1.8, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAMC	**Pamplona, Colo**	**1.01**	**48**	*e*P	Pn	09 23 10.1	-0.3
PAMC				*e*S	Sn	09 23 26.4	-0.1
PAMC				*i*		09 23 28.1	
	comp=Z,4.3nm,0.1s						
ZARC	**Zaragoza, Cauc**	**1.62**	**301**	*e*P	Pn	09 23 19.4	+2.4
ZARC				*e*S	Sn	09 23 45.0	+6.7
ZARC				*i*		09 23 52.3	
	comp=Z,8.7nm,0.4s						
SMLC	**San Martn de**	**2.21**	**344**	*e*P	Pn	09 23 23.9	-0.6
SMLC				*e*S	Sn	09 23 51.2	-0.4
SMLC				*i*		09 23 55.4	
	comp=Z,7.5nm,0.1s						
GUY2C	**Guyana, Caldas**	**2.38**	**233**	*e*P	Pn	09 23 26.6	-0.5

NNC 03 09:25:18.1±2.7**,53°.55N×90°.53E,h0**^{km}**,mb3.9,mpv3.6, 5C-5D,Error ellipse: s-maj=20.6km s-min=15.6km az=53.0,Suspected Mining explosion.,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAA0	**Zalesovo Array**	**3.42**	**279**	⇑Pg	Pb	09 26 19.5	0.0
	2.2nm,0.6s						
ZAA0				⇑Lg	Lg	09 27 08.9	
	32nm,1.0s						
KURK	**Kurchatov**	**7.86**	**254**	⇓Pn	Pn	09 27 13.5	-0.1
	4.4nm,0.8s						
KURK				⇓Sn	Sn	09 28 43.8	+0.6
	25nm,0.9s						
KURK				⇓Lg	Lg	09 29 29.7	
	67nm,1.2s						
KURBB	**Kurchatov Arra**	**7.96**	**253**	⇓Pn	Pn	09 27 15.1	+0.2
	5.1nm,0.8s						
KURBB				⇓Sn	Sn	09 28 46.0	+0.5
	78nm,0.9s						
KURBB				⇑Lg	Lg	09 29 33.9	
	99nm,1.1s						
MK31	**Makanchi Array**	**8.59**	**221**	Pn	Pn	09 27 25.2	+1.6
	2.3nm,0.8s,baz=30,slow=12,SNR=23						
MK31				⇑Sn	Sn	09 29 01.5	+0.4
	4.6nm,0.9s						
MK31				⇑Lg	Lg	09 29 51.3	
	17nm,1.0s,baz=30,slow=31,SNR=3.6						

STR ***03*** *09:37:02.6±1.0,45°N±6°×1°0E±°,h13*^{km}*±10*^{km}*,MLv2.4/7, preliminary*

ROM ***03*** *09:37:03.6±0.1,44°.626N±0°.010×9°.497E±0°.006, h11*^{km}*,ML2.3/14,Error ellipse: s-maj=1.1km s-min=0.5km az=0.0*

GEN ***03*** *09:37:03.9,44°.64N×9°.51E,h10*^{km}*±3*^{km}*,Ml2.1*

LDG ***03*** *09:37:04.7±0.1,44°.58N×9°.51E,h11*^{km}*,Ml2.6/12,Error ellipse: s-maj=3.5km s-min=2.1km az=19.0*

ISC 03 09:37:04.0±0.8**,44°.59N**±0°.03×**9°.49E**±0°.02**,h15**^{km}±6^{km}**, n51,**σ**1**^{s}**.14**/78**,3C-2D,Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GORR	**Gorreto**	**0.14**	**276**	P	**Pg**	**09 37 07.6**	**-0.2**
GORR				S	**Sg**	**09 37 10.6**	**+0.3**
GORR	**Gorreto**	**0.14**	**276**	⇑P	**Pg**	**09 37 07.6**	**-0.2**
GORR				S	**Sg**	**09 37 10.3**	**0.0**
GORR				AML	AML		
	comp=N,2615µm,0.6s						
GORR				AML	AML		
	comp=E,2160µm,0.2s						
BOB	**Bobbio (Coli)**	**0.18**	**351**	⇓P	**Pg**	**09 37 07.5**	**-0.9**
BOB				S	**Sg**	**09 37 10.2**	**-1.1**
BOB				AML	AML		
	comp=E,5410µm,0.6s						
BOB				AML	AML		
	comp=N,5805µm,0.2s						
BOB				AML	AML		

	comp=N,5595µm,0.3s						
BOB				AML	AML		
	comp=N,5810µm,0.2s						
BOB				AML	AML		
	comp=E,5405µm,0.6s						
BOB				AML	AML		
	comp=N,5600µm,0.3s						
BOB				AML	AML		
	comp=E,6235µm,0.6s						
RNCA	Ronca, Sant'Ol	0.40	253	P	Pg	09 37 12.2	+0.1
RNCA				S	Sg	09 37 18.3	+0.7
GRAM	Graiana	0.42	104	P	Pg	09 37 12.4	-0.2
GRAM				S	Sg	09 37 18.5	+0.2
GRAM	Graiana	0.42	104	⇑P	Pg	09 37 12.3	-0.2
GRAM				S	Sg	09 37 18.3	0.0
GRAM				AML	AML		
	comp=E,1845µm,0.3s						
GRAM				AML	AML		
	comp=N,1032µm,0.3s						
PLMA	Palmaria, Port	0.60	154	P	Pg	09 37 15.8	0.0
PLMA				S	Sg	09 37 24.4	+0.6
PLMA				AML	AML		
	comp=E,202µm,0.2s						
PLMA				AML	AML		
	comp=N,272µm,0.2s						
EQUI	Equi	0.64	132	P	Pg	09 37 16.3	-0.3
EQUI				S	Sg	09 37 25.5	+0.5
EQUI	Equi	0.64	132	P	Pg	09 37 16.0	-0.6
EQUI				S	Sg	09 37 25.0	0.0
EQUI				AML	AML		
	comp=N,109µm,0.3s						
EQUI				AML	AML		
	comp=E,122µm,0.4s						
EQUI				AML	AML		
	comp=N,109µm,0.3s						
PCP	Piancastagn	0.68	266	P	Pg	09 37 17.0	-0.2
PCP	Piancastagn	0.68	266	P	Pg	09 37 16.7	-0.5
PCP				AML	AML		
	comp=E,132µm,1.4s						
PCP				AML	AML		
	comp=N,105µm,1.2s						
PCP				AML	AML		
	comp=E,132µm,1.4s						
SARO	Sassorosso	0.77	122	P	Pg	09 37 18.8	-0.3
SARO				S	Sb	09 37 29.9	+0.4
SARO	Sassorosso	0.77	122	P	Pg	09 37 18.7	-0.3
SARO				S	Sb	09 37 29.7	+0.1
SARO				AML	AML		
	comp=N,126µm,0.5s						
SARO				AML	AML		
	comp=E,132µm,0.3s						
QLNO	Quiliano	0.86	252	P	Pg	09 37 20.7	0.0
QLNO				AML	AML		
	comp=N,74µm,1.6s						
QLNO				AML	AML		
	comp=E,82µm,1.2s						
CARD	Cardoso	0.91	128	P	Pg	09 37 21.7	0.0
CARD				S	Sg	09 37 33.5	-0.1
CARD				AML	AML		
	comp=E,282µm,0.7s						
CARD				AML	AML		
	comp=N,368µm,0.2s						
BDI	Bagni Di Lucca	0.96	123	P	Pg	09 37 22.1	-0.4
BDI				S	Sg	09 37 35.0	-0.1
BDI				AML	AML		
	comp=E,200µm,0.9s						
BDI				AML	AML		
	comp=N,274µm,0.4s						
BDI				AML	AML		
	comp=N,275µm,0.4s						
BDI				AML	AML		
	comp=E,234µm,1.0s						
ZCCA	Zocca	1.09	102	AML	AML		
	comp=N,270µm,0.4s						
ZCCA				AML	AML		
	comp=E,348µm,0.4s						
RORO	Rocca Rossa	1.13	245	P	Pb	09 37 24.4	-0.8
RORO				AML	AML		
	comp=N,88µm,1.5s						
RORO				AML	AML		
	comp=E,58µm,0.7s						
PII	Pisa	1.15	139	P	Pn	09 37 26.1	+0.5
PII				AML	AML		
	comp=E,136µm,1.0s						
PII				AML	AML		
	comp=N,144µm,0.2s						
GBOS	Grotte di Boss	1.23	254	P	Pn	09 37 26.3	-0.5
GBOS				S	Sb	09 37 42.5	-0.3
SAOF	Saorge	1.52	247	Pn	Pn	09 37 30.7	+0.1
SAOF				Sn	Sn	09 37 50.7	+0.6
ROVR	Rover Verones	1.54	46	⇓P	Pn	09 37 31.4	+0.3
ROVR				AML	AML		
	comp=E,30µm,0.5s						
ROVR				AML	AML		
	comp=N,80µm,0.3s						
TURF	col de Turini	1.63	248	Pn	Pn	09 37 32.5	+0.2
TURF				Sn	Sn	09 37 53.3	+0.1
SBF	Sospel	1.65	244	ePn	Pn	09 37 32.0	-0.5
SBF				eSn	Sn	09 37 51.9	-1.6
	comp=N,32nm,0.3s						
ESCA	l'Escarene	1.70	244	Pn	Pn	09 37 34.3	+1.1
ESCA				Sn	Sn	09 37 55.7	+1.0
SPIF	crte de Spivo	1.70	252	Pn	Pn	09 37 34.2	+0.9
ISO	Isola	1.79	258	Pn	Pn	09 37 35.4	+0.9
SURF	Saint Ours	1.92	268	Pn	Pn	09 37 37.1	+0.8
SURF				Pg	Pb	09 37 39.9	+1.1
MBDF	Montbardon	1.94	275	ePn	Pn	09 37 36.8	+0.1
MBDF				eSn	Sn	09 38 00.1	-0.8
	comp=N,16nm,0.5s						
CALF	Calern	2.03	246	Pn	Pn	09 37 38.1	+0.3
CALF				Sn	Sn	09 38 03.6	+0.6
PGF	Pioggiola	2.07	190	ePn	Pn	09 37 37.2	-1.2
PGF				eSn	Sn	09 38 01.2	-2.9
	comp=N,5.9nm,0.3s						
PGF	Pioggiola	2.07	190	Pn	Pn	09 37 37.0	-1.4
CTI	Castel Tesino	2.11	46	P	Pn	09 37 38.4	-0.5
CTI				AML	AML		
	comp=E,41µm,1.1s						
CTI				AML	AML		
	comp=N,60µm,1.3s						
LPG	La Plagne	2.14	296	ePn	Pn	09 37 40.0	+0.5
FRF	La Foret Royal	2.29	244	ePn	Pn	09 37 41.3	0.0
FRF	La Foret Royal	2.29	244	eP	Pn	09 37 43.2	+1.9
FRF	La Foret Royal	2.29	244	ePg	Pb	09 37 46.7	+1.6
FRF				eSn	Sn	09 38 07.9	-1.4
	comp=N,5.9nm,0.2s						
LMR	La Mourre	2.49	241	ePn	Pn	09 37 44.0	-0.1
LMR				eSn	Sn	09 38 12.0	-2.2
	comp=N,7.5nm,0.3s						
ORIF	Oris-en-Rattie	2.59	278	eP	Pn	09 37 48.2	+2.7
ORIF				eSn	Sn	09 38 15.3	-1.5
	comp=N,5.3nm,0.3s						
SMRF	Simiane la Rot	2.88	259	eP	Pn	09 37 50.9	+1.5
SMRF				eSn	Sn	09 38 22.3	-1.5
	comp=N,5.4nm,0.5s						
GAG1	Gagliole	2.92	116	S	Sg	09 38 39.0	+1.2
CRM1	Catelraimondo	2.93	117	P	Pn	09 37 51.9	+1.9
CABF	La Chapelle	3.13	311	eP	Pn	09 37 55.6	+2.7
SMA1	SAN MARTINO	3.41	124	P	Pg	09 38 07.6	-1.8
VIVF	Saint-Julien-l	3.44	276	ePn	Pn	09 37 56.0	-1.2
VIVF				eSn	Sn	09 38 35.5	-2.2
	comp=N,3.2nm,0.5s						
FAGN	Fagnano	3.78	127	⇑P	Pn	09 38 03.9	+2.1
FAGN				AML	AML		
	comp=E,324µm,0.3s						
FAGN				AML	AML		
	comp=N,422µm,0.3s						
ECH	Echery	3.97	337	Pn	Pn	09 38 04.8	+0.4
DUGI	Dugi Otok	4.04	97	ePn	Pn	09 38 06.4	+1.0
SMF	Signal de Mont	4.46	299	eP	Pn	09 38 13.2	+2.0
SMF				eSn	Sn	09 39 00.4	-2.4
	comp=N,2.7nm,0.4s						
MORI	Morici	4.53	97	ePn	Pn	09 38 13.8	+1.8
ZIRJ	Zirje	4.53	100	ePn	Pn	09 38 12.9	+0.8

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*IDC **03** 09:44:27.2±1.4, 30°.74S×179°.52W, h286^{km}±17^{km}, mb2.6/2, mb1 3.0/3, mb1mx2.9/20, mbtmp3.5/3, Error ellipse: s-maj=42.9km s-min=19.2km az=123.0*

*WEL **03** 09:44:29.6±0.6, 31°S±4°×17°8E±$^{\circ}$, h33^{km}, M4.7/12, mB5.2/12, ML5.2/13, MLv5.0/12, Mw(mB)4.6/12, Error ellipse: s-maj=0.0km s-min=0.0km az=113.7*

ISC 03 09:44:29.8±1.0**, 30°.93S**±0°.09×**180°.0W**±0°.1**, h300^{km}, n64,**
σ2^{s}.45/92, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.42	47	P	Pn	09 45 21.4	+1.3
GLKZ				S	S	09 46 00.4	+0.1
RAO	Raoul Island	2.43	47	P	Pn	09 45 12.6	-7.6
	993nm,0.3s,baz=92,slow=16,SNR=13						
MXZ	Matakaoa Point	6.77	192	P	Pn	09 46 09.0	+0.7
MXZ				S	S	09 47 30.2	+2.3
WMGZ	Waiomatatini S	7.00	191	P	Pn	09 46 13.8	+2.7
WMGZ				S	S	09 47 34.3	+1.3
HAZ	Te Kaha	7.06	195	P	Pn	09 46 15.7	+3.9
HAZ				S	S	09 47 37.5	+3.2
PKGZ	Pakihiroa	7.13	193	P	Pn	09 46 18.7	+6.0
PKGZ				S	S	09 47 38.1	+2.2
PUZ	Puketiti	7.28	191	P	Pn	09 46 20.5	+6.1
PUZ				S	S	09 47 40.1	+1.0
RUGZ	Raukumara Rang	7.29	195	P	Pn	09 46 19.3	+4.6
RUGZ				S	S	09 47 40.4	+0.9
TWGZ	Tauwhareparae	7.43	193	P	Pn	09 46 23.5	+7.2
TWGZ				S	S	09 47 46.1	+3.6
MWZ	Matawai	7.67	195	P	Pn	09 46 20.9	+1.6
MWZ				S	S	09 47 48.9	+0.9
URZ	Urewera	7.70	198	P	Pn	09 46 21.3	+1.7
	18nm,0.3s,baz=120,slow=24,SNR=79						
URZ				S	S	09 47 52.1	+3.6
	8.4nm,0.3s,baz=294,slow=23,SNR=9.0						
URZ	Urewera	7.70	198	P	Pn	09 46 22.2	+2.7
URZ				S	S	09 47 52.5	+3.9
TKGZ	Te Karaka	7.71	193	P	Pn	09 46 21.1	+1.4
TKGZ				S	S	09 47 49.6	+0.9
MUGZ	Murupara	8.00	199	P	Pn	09 46 28.4	+5.2
MUGZ				S	S	09 47 57.7	+2.5
KNZ	Kokohu	8.30	193	P	Pn	09 46 28.3	+1.4
KNZ				S	S	09 47 59.4	-2.7
MRHZ	Matea Rd	8.43	200	P	Pn	09 46 31.9	+3.3
MRHZ				S	S	09 48 06.6	+1.6
BKZ	Black Stump Fm	8.72	199	P	Pn	09 46 34.2	+2.1
BKZ				S	S	09 48 13.7	+2.2
MCHZ	McNeill Hill	8.93	197	P	Pn	09 46 37.0	+2.4
WTVZ	West Tongariro	8.95	203	P	P	09 46 39.1	-0.7
FWVZ	Far West T-bar	9.09	203	P	Pn	09 46 37.7	+0.9
BHHZ	Black Hill Sta	9.14	200	P	Pn	09 46 38.6	+1.3
BHHZ				S	S	09 48 22.2	+1.1
KRHZ	Kereru	9.20	198	P	Pn	09 46 39.0	+1.0
KRHZ				S	S	09 48 22.6	+0.3
KAHZ	Kahuranaki	9.22	195	P	Pn	09 46 40.1	+1.9
PXZ	Pawanui	9.45	195	P	Pn	09 46 42.3	+1.3
PXZ				S	S	09 48 26.3	-1.5
PNHZ	Pukenui	9.50	198	P	Pn	09 46 42.4	+0.8
PNHZ				S	S	09 48 28.7	-0.5
TSZ	Takapari Road	9.70	199	P	Pn	09 46 44.0	-0.1
TSZ				S	S	09 48 33.0	-0.6
PRHZ	Porangahau	9.72	196	P	Pn	09 46 43.8	-0.6
PRHZ				S	S	09 48 31.5	-2.6
ANWZ	Angora Road	9.94	196	P	P	09 46 49.0	-1.7
ANWZ				S	S	09 48 37.2	-2.0
POWZ	Post Office Ro	10.06	199	P	P	09 46 51.6	-0.4
POWZ				S	S	09 48 39.6	-2.3
POWZ	Post Office Ro	10.06	199	P	S	09 48 42.3	+0.5
MRZ	Mangatainoka R	10.36	199	P	Pn	09 46 52.9	+0.6
MRZ				S	S	09 48 46.0	-2.7
MRZ	Mangatainoka R	10.36	199	P	S	09 48 41.6	-7.1
CPWZ	Castlepoint	10.44	196	P	S	09 48 52.4	+2.1
HOWZ	Holdsworth Sta	10.60	199	P	Pn	09 46 56.0	+0.8
HOWZ				S	S	09 48 51.1	-3.0
HOWZ	Holdsworth Sta	10.60	199	P	S	09 48 50.9	-3.2
OGWZ	Otaki Gorge	10.63	200	P	Pn	09 46 56.2	+0.8
OGWZ				S	S	09 48 52.9	-1.8
OGWZ	Otaki Gorge	10.63	200	P	S	09 48 52.8	-1.8
TMWZ	Te Maipa	10.70	197	P	P	09 46 58.2	-1.0
TMWZ				S	S	09 48 52.6	-3.6
TMWZ	Te Maipa	10.70	197	P	S	09 48 51.5	-4.8
KIW	Kapiti Island	10.75	201	P	P	09 46 59.0	-0.6
KIW				S	S	09 48 54.8	-2.6
KIW	Kapiti Island	10.75	201	P	S	09 48 54.7	-2.6
MTW	Mount Morrison	10.85	199	P	P	09 46 59.9	-0.9
MTW				S	S	09 48 55.9	-3.7
MTW	Mount Morrison	10.85	199	P	S	09 48 53.7	-5.9
CAW	Cannon Point	10.93	200	P	Pn	09 46 58.7	-0.4
TRWZ	Traveller	11.02	197	P	P	09 47 02.7	0.0
TRWZ				S	S	09 49 02.3	-1.3
TRWZ	Traveller	11.02	197	P	S	09 49 01.2	-2.4
DUWZ	D'Urville Isla	11.03	205	P	S	09 49 04.4	+0.6
PAWZ	Paruwai Farm	11.08	198	P	P	09 47 02.9	-0.5
PAWZ				S	S	09 49 00.6	-4.3
PAWZ	Paruwai Farm	11.08	198	P	S	09 49 01.3	-3.5
MSWZ	Moikau Station	11.16	199	P	Pn	09 47 02.3	+0.3
MSWZ				S	S	09 49 01.1	-5.6
MSWZ	Moikau Station	11.16	199	P	S	09 49 02.9	-3.7
BHW	Baring Head	11.26	200	P	S	09 49 06.7	-2.2
TCW	Tory Channel	11.27	203	P	P	09 47 05.2	-0.2
TCW	Tory Channel	11.27	203	P	S	09 49 06.8	-2.4
PLWZ	Palliser	11.30	199	P	Pn	09 47 04.6	+0.9
PLWZ	Palliser	11.30	199	P	S	09 49 04.3	-5.6
TUWZ	Tuamarina	11.58	203	P	P	09 47 09.3	+0.4
NNZ	Nelson	11.59	206	P	S	09 49 15.1	-1.3
QRZ	Quartz Range	11.60	210	P	S	09 49 17.6	+0.9
BSWZ	Blackbirch Sta	11.85	203	P	S	09 49 20.8	-1.6
ASAR	Alice Springs	41.40	268	P	P	09 51 49.1	+1.4
	0.1nm,0.4s,baz=108,slow=7.9,SNR=1.8						
WRA	Warramunga Arr	42.44	274	P	P	09 51 57.0	+1.0
	0.3nm,0.4s,baz=112,slow=7.5,SNR=6.6						
FINES	FINESS Array B	145.04	338	PKPbc	PKPdf	10 03 29.1	-1.6
	3.7nm,0.6s,baz=48,slow=3.7,SNR=20						
NOA	NORSAR Array B	148.99	349	PKPbc	PKPbc	10 03 40.0	-1.8
	0.7nm,0.6s,baz=12,slow=4.1,SNR=3.5						

JMA 03 10:04:51.3±0.1**, 37°.34N**×**140°.88E, h97**^{km}±1^{km}**, M3.5,**
Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	Kawauchi	0.03	351	P	Pn	10 05 04.8	-0.1
JFK				S	Sn	10 05 14.7	-0.3
ONAJ	Iwakimizuishiy	0.25	195	P	Pn	10 05 05.4	0.0
ONAJ				S	Sn	10 05 15.9	0.0
JFFD	Fukushimafurud	0.36	226	P	Pn	10 05 05.9	0.0
JFFD				S	Sn	10 05 16.7	0.0
JMST	Minamisoumatoc	0.38	1	P	Pn	10 05 06.0	0.0
JMST				S	Sn	10 05 16.9	0.0
JFT	Otama	0.47	293	P	Pn	10 05 06.6	+0.1
JFT				S	Sn	10 05 18.2	+0.2
JMM	Marumori	0.53	353	P	Pn	10 05 07.0	0.0
JMM				S	Sn	10 05 18.6	-0.1
JFY	Yanaizu	0.94	274	P	Pn	10 05 11.0	+0.2
JOU	Okura	1.04	351	P	Pn	10 05 12.4	+0.5
JOU				S	Sn	10 05 28.0	+0.5
JYS	Shirataka	1.09	324	P	Pn	10 05 13.0	+0.5
JYS				S	Sn	10 05 29.6	+1.1
JIO	Ouri	1.17	18	P	Pn	10 05 13.2	-0.2
JIO				S	Sn	10 05 28.9	-1.2
JNS	Sasagawa	1.33	292	P	Pn	10 05 15.4	+0.1
JKT	Katashina	1.43	247	P	Pn	10 05 17.3	+0.8
JKT				S	Sn	10 05 38.9	+3.2
JAG	Ashikaga	1.46	232	P	Pn	10 05 17.1	+0.2
JAG				eS	Sn	10 05 36.4	0.0
JYA	Atsumi	1.55	324	P	Pn	10 05 18.7	+0.7
JYA				S	Sn	10 05 40.1	+1.8
JYK	Kaneyama	1.63	346	P	Pn	10 05 19.4	+0.4
JYK				S	Sn	10 05 40.7	+0.7
JMK	Ichinoseki	1.63	9	P	Pn	10 05 18.8	-0.2
JMK				S	Sn	10 05 39.8	-0.2
JAW	Awa shima	1.71	311	P	Pn	10 05 20.4	+0.5
MAT	Matsushiro	2.29	250	P	Pn	10 05 28.0	+0.5
MAT				eS	Sn	10 05 56.3	+1.1

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*KRNET **03** 10:08:55.1±0.1, 41°.23N×73°.33E, h14^{km}, mb2.7*

*SOME **03** 10:08:55.0, 41°.28N×73°.28E, h15^{km}*

*NNC **03** 10:08:57.9±1.3, 41°.34N×73°.44E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=10.6km s-min=5.6km az=175.0*

*KNET **03** 10:08:57.2±0.5, 41°.35N×73°.41E, h7^{km}±3^{km}, ml2.1, Error ellipse: s-maj=7.1km s-min=3.0km az=104.0*

ISC 03 10:08:55.4±0.7**, 41°.21N**±0°.02×**73°.25E**±0°.02**, h10^{km}, n53,**
σ1^{s}.23/91, 40C-13D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SALK	Salom-Alik	0.54	127	⇑iP	Pg	10 09 05.2	-0.6
	baz=33						
SALK				⇑iS	Sg	10 09 11.9	-1.0
	baz=33						
OHH	Osh	0.77	208	⇑iP	Pb	10 09 10.9	0.0
	baz=10.0						
OHH				⇑iS	Sn	10 09 22.2	-1.8
	baz=10.0						
AML	Almayashu	0.98	19	⇓P	Pg	10 09 13.1	-1.2
	62nm,0.1s,SNR=255						
AML				⇑S	Sg	10 09 25.9	-1.3
	59nm,0.2s						
AML	Almayashu	0.98	19	⇑iP	Pg	10 09 13.1	-1.2
	baz=17						
AML				⇑iS	Sg	10 09 26.0	-1.2
	baz=17						
SFK	Sufi-Kurgan	1.21	171	⇓iP	Pb	10 09 17.9	-0.5
	baz=74						
SFK				⇓iS	Sn	10 09 34.7	-0.3
	baz=74						
UCH	Uchtor	1.39	42	⇑iP	Pn	10 09 20.3	-1.0
	baz=41						
UCH				⇑iS	Sb	10 09 38.5	-1.2
	baz=41						
MNAS	Manas	1.40	337	⇑iP	Pn	10 09 21.2	+0.1
	baz=34						
MNAS				⇑iS	Sb	10 09 40.3	+0.7
	baz=34						
EKS2	Erkin-Say	1.51	15	⇓P	Pn	10 09 22.5	-0.1
	3.0nm,0.1s,SNR=20						
EKS2				⇓S	Sn	10 09 42.3	0.0
	14nm,0.2s						
EKS2	Erkin-Say	1.51	15	⇑iP	Pn	10 09 22.2	-0.4
	baz=13						
EKS2				⇑iS	Sn	10 09 42.4	0.0
	baz=13						
MRKS	Merke	1.54	359	eP	Pn	10 09 23.4	+0.4
	7.4nm,0.1s						
MRKS				eS	Sn	10 09 43.4	+0.3
	55nm,0.2s						
MRKS	Merke	1.54	359	P	Pn	10 09 23.4	+0.4
	7.4nm,0.1s						
MRKS				S	Sn	10 09 43.4	+0.3
	55nm,0.2s						
TRKS	Terek-Say	1.62	282	⇑iP	Pb	10 09 25.7	+0.2
	baz=79						
TRKS				⇑iS	Sg	10 09 47.8	+0.2
	baz=79						
AAK	Ala-Archa	1.70	32	⇑P	Pn	10 09 25.9	+0.6
	4.3nm,0.1s,SNR=6.8						
AAK				⇑S	Sn	10 09 47.5	+0.3
	12nm,0.2s						
AAK	Ala-Archa	1.70	32	⇑Pn	Pn	10 09 26.0	+0.7
	1.7nm,0.3s						
AAK				⇑Sn	Sn	10 09 47.6	+0.3
	3.3nm,0.2s						
AAK	Ala-Archa	1.70	32	⇓iP	Pn	10 09 25.7	+0.4
	baz=31						
AAK				⇓iS	Sn	10 09 47.9	+0.6
	baz=31						
KBK	Karagaybulak	1.92	41	⇑P	Pb	10 09 30.0	-0.6
	4.2nm,0.1s						
KBK				⇓S	Sb	10 09 54.9	+0.2
	48nm,0.3s						
KBK	Karagaybulak	1.92	41	⇑iP	Pn	10 09 29.4	+1.1
	baz=40						
KBK				⇑iS	Sb	10 09 54.7	-0.1
	baz=40						
DRK	Karamyk	2.05	213	⇑iP	Pb	10 09 32.8	-0.1
	baz=14						
DRK				⇑iS	Sg	10 10 00.5	-0.8
	baz=14						
CHMS	Chumysh	2.11	31	⇑P	Pb	10 09 33.3	-0.5
	5.8nm,0.2s,SNR=6.2						
CHMS				⇓S	Sb	10 10 00.2	+0.2
	11nm,0.2s						
CHMS	Chumysh	2.11	31	⇑iP	Pb	10 09 32.5	-1.2
	baz=31						
CHMS				⇑iS	Sb	10 09 59.8	-0.2
	baz=31						
BTK	Batken	2.18	239	⇑iP	Pb	10 09 34.8	-0.1
	baz=39						
BTK				⇑iS	Sg	10 10 04.2	-1.2
	baz=39						
USP	Ospenovka	2.26	24	⇓P	Pb	10 09 35.4	-0.8
	7.0nm,0.2s,SNR=13						
USP				⇓S	Sb	10 10 05.7	+1.4
	21nm,0.3s						
USP	Ospenovka	2.26	24	⇑iP	Pn	10 09 34.6	+1.8
	baz=23						
USP				⇑iS	Sb	10 10 03.6	-0.7
	baz=23						
BOOM	Boomskoye usch	2.38	56	⇑eP	Pn	10 09 36.4	+1.8
	baz=56						
BOOM				⇑eS	Sb	10 10 06.5	-1.5
	baz=56						
TKM2	Tokmak 2	2.45	45	⇓P	Pb	10 09 38.7	-0.8
	3.9nm,0.2s,SNR=9.4						
TKM2	Tokmak 2	2.45	45	⇓Pn	Pb	10 09 38.3	-1.2
	2.2nm,0.3s						
TKM2	Tokmak 2	2.45	45	⇑iP	Pn	10 09 37.0	+1.5
	baz=44						
TKM2				⇑iS	Sb	10 10 07.9	-1.9
	baz=44						
SGDS	Sogindy	2.47	24	Pg	Pb	10 09 39.6	-0.2
	7.1nm,0.4s						
SGDS				Lg	Lg	10 10 10.3	
	17nm,0.4s						
ULHL	Ulahol	2.47	64	⇑iP	Pn	10 09 37.2	+1.4
	baz=64						
ULHL				⇑iS	Sb	10 10 08.3	-2.1
	baz=64						
IUG	Iuzhnay	2.59	292	eP	Pg	10 09 44.3	-0.7
	124nm,0.3s						
IUG				eS	Sg	10 10 19.1	+0.5
	33nm,0.3s						
IUG	Iuzhnay	2.59	292	Pg	Pg	10 09 44.3	-0.7
	124nm,0.3s						
KST	Kastek	2.73	47	eP	Pb	10 09 43.9	-0.4
	2.7nm,0.5s						
KST				eS	Sb	10 10 19.0	+1.2
	13nm,0.3s						
DGS	Degeres	2.76	42	eP	Pb	10 09 44.8	-0.1
	12nm,0.4s						
DGS				eS	Sb	10 10 19.8	+0.9
	13nm,0.6s						
DGS	Degeres	2.76	42	Pg	Pb	10 09 44.8	-0.1
	12nm,0.4s						
DGS				Lg	Lg	10 10 19.8	
	13nm,0.4s						
KK31	Karatay Array	2.79	314	⇑Pn	Pb	10 09 44.4	-0.8
	0.7nm,0.3s,baz=125,slow=13,SNR=13						
KK31				Sn	Sg	10 10 23.6	-1.2
	5.5nm,0.4s,baz=130,slow=28,SNR=14						
KRBS	Karabastau	3.07	35	eP	Pb	10 09 49.8	-0.2
	2.3nm,0.3s						
KRBS				eS	Sb	10 10 28.3	+0.8
	8.4nm,0.4s						
KRBS	Karabastau	3.07	35	Pg	Pb	10 09 50.0	-0.1
	2.3nm,0.3s						
KRBS				Lg	Lg	10 10 29.1	
BRLS	Borolday	3.13	307	Pg	Pb	10 09 53.5	+2.4
BRLS				Lg	Lg	10 10 34.4	
TNSS	Tian-Shan	3.30	55	eP	Pb	10 09 54.8	+0.5
	0.9nm,0.4s						
TNSS				eS	Sb	10 10 37.1	+2.5
	3.4nm,0.6s						
TNSS	Tian-Shan	3.30	55	Pg	Pb	10 09 55.2	+1.0
	1.7nm,0.4s						
TNSS				Lg	Lg	10 10 37.1	
	3.4nm,0.6s						
TNSS	Tian-Shan	3.30	55	Pg	Pb	10 09 55.9	+1.7
TNSS				Lg	Lg	10 10 38.4	
TARG	Taragay, Kyrgy	3.46	80	⇑eP	Pn	10 09 51.2	+1.5
	baz=80						
TARG				⇑iS	Sn	10 10 32.1	+1.2
	baz=80						
KOTS	Kotyrbulak	3.51	53	Pg	Pb	10 09 59.1	+1.5
KOTS				Lg	Lg	10 10 43.7	
KUU	Kurty	3.52	39	eP	Pb	10 09 57.5	-0.2
	3.3nm,0.5s						
KUU				eS	Sb	10 10 42.1	+1.5
	8.2nm,0.5s						
KUU	Kurty	3.52	39	Pg	Pb	10 09 57.6	-0.2
	3.3nm,0.5s						
KUU				Lg	Lg	10 10 41.1	
	8.2nm,0.5s						
KTBS	Karatobe	3.56	44	eP	Pb	10 09 58.6	+0.1

	2.5nm,0.5s						
KTBS				*e*S	Sb	10 10 44.1	+2.2
	15nm,0.4s						
KTBS	**Karatobe**	3.56	44	Pg	Pb	10 09 59.3	+0.8
	2.5nm,0.5s						
KTBS				Lg	Lg	10 10 44.1	
	15nm,0.4s						
SATY	**Saty**	4.25	62	*e*P	Pb	10 10 11.8	+1.5
	1.1nm,0.1s						
SATY				*e*S	Sg	10 11 07.8	-4.2
	6.4nm,0.5s						
SATY	**Saty**	4.25	62	Pg	Pb	10 10 11.8	+1.5
	1.1nm,0.1s						
SATY				Lg	Lg	10 11 05.6	
	6.4nm,0.5s						
ARXS	**Arharly**	4.51	47	*e*P	Pb	10 10 15.3	+0.6
	1.7nm,0.4s						
ARXS				*e*S	Sb	10 11 12.7	+3.5
	4.8nm,0.5s						
ARXS	**Arharly**	4.51	47	Pg	Pb	10 10 15.5	+0.7
	2.1nm,0.4s						
UZB	**Uzynbulak**	4.71	64	*e*P	Pb	10 10 18.6	+0.6
	1.3nm,0.3s						
UZB				*e*S	Sb	10 11 18.3	+3.6
	3.1nm,0.4s						
UZB	**Uzynbulak**	4.71	64	Pg	Pb	10 10 19.3	+1.3
	3.6nm,0.4s						

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*NEIC **03** 10:28:58.6±1.4, 31°.20S±0°.04×72°.2W±0°.1, h4^{km}±6^{km}, mb4.1/5, ML4.0(GUC), Error ellipse: s-maj=13.9km s-min=6.0km az=92.0*

*GUC **03** 10:28:59.6±0.6, 31°.26S×72°.18W, h20^{km}±5^{km}, ML3.9*

*IDC **03** 10:28:59.2±4.5, 31°.26S×71°.92W, h0^{km}, mb4.0/3, mb1 3.9/6, mb1mx3.7/27, mbtmp3.8/6, ML3.7/3, MS4.4/2, Ms1 4.4/2, ms1mx3.1/26, Error ellipse: s-maj=139.2km s-min=25.6km az=104.0*

ISC 03 10:28:59.6±1.6, **31°.23S**±0°.03×**72°.19W**±0°.08, **h11**^{km}±10^{km}, **n50**, σ**0^{s}.95**/57, **mb4.0**/4, **8C-3D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	**Fray Jorge**	0.73	41		Pg	10 29 14.0	+0.2
CO06	**Fray Jorge**	0.73	41	⇑*i*P	Pg	10 29 13.5	-0.3
CO06				*e*S	Sg	10 29 24.1	+0.8
CO03	**El Pedregal**	1.34	74		Pn	10 29 23.9	-0.5
CO03	**El Pedregal**	1.34	74	⇓*i*P	Pn	10 29 23.5	-0.9
CO03				*e*S	Sg	10 29 41.4	-1.6
CO03				IAML		10 29 45.9	
	comp=E,3µm,0.3s						
VA06	**Catapilco**	1.53	150	⇑*i*P	Pn	10 29 26.4	-0.3
VA06				*e*S	Sn	10 29 44.9	-1.7
VA06				IAML		10 29 55.5	
	comp=E,4µm,0.4s						
CO05	**La Serena**	1.54	32	Pn	Pn	10 29 26.5	-0.5
CO05	**La Serena**	1.54	32	*e*P	Pn	10 29 26.4	-0.6
CO05				*e*S	Sn	10 29 46.8	-0.2
GO04	**Tololo Observa**	1.59	49		Pn	10 29 28.1	+0.1
GO04	**Tololo Observa**	1.59	49	⇑*e*P	Pn	10 29 27.3	-0.7
GO04				*e*S	Sn	10 29 48.6	-0.1
VA01	**Torpederas**	1.84	166		Pn	10 29 30.0	-1.2
VA01	**Torpederas**	1.84	166	*e*P	Pn	10 29 30.6	-0.5
VA01				*e*S	Sn	10 29 52.0	-2.5
VA01				IAML		10 29 53.6	
	comp=E,905nm,0.1s						
ROCH	**El Roble**	2.00	150	⇑*i*P	Pn	10 29 33.4	-0.1
ROCH				*e*S	Sn	10 29 58.7	0.0
ROCH				IAML		10 30 09.9	
	comp=E,2µm,0.6s						
VA03	**San Esteban**	2.07	138		Pn	10 29 35.0	+0.7
VA03	**San Esteban**	2.07	138	⇑*i*P	Pn	10 29 35.0	+0.7
VA03				*e*S	Sn	10 30 00.3	+0.2
VA03				IAML		10 30 11.6	
	comp=E,3µm,0.5s						
MT02	**Curacav**	2.21	157		Pn	10 29 35.4	-0.8
PEL	**Peldehue**	2.29	147	*e*P	Pn	10 29 37.9	+0.5
PEL				*e*S	Sn	10 30 07.0	+1.4
PEL				IAML		10 30 17.7	
	comp=E,817nm,0.5s						
VA05	**Santo Domingo**	2.47	169	Pn	Pn	10 29 39.2	-0.5
VA05	**Santo Domingo**	2.47	169	*e*P	Pn	10 29 40.0	+0.3
VA05				*e*S	Sg	10 30 20.5	+1.6
VA05				IAML		10 30 34.3	
	comp=N,667nm,0.3s						
MT05	**Renca**	2.48	151	Pn	Pn	10 29 39.7	-0.3
MT05	**Renca**	2.48	151	*e*P	Pn	10 29 40.1	+0.2
MT05				*e*S	Sn	10 30 09.3	-0.9
MT05				IAML		10 30 22.7	
	comp=E,2µm,0.4s						
LCO	**Las Campanas**	2.56	31		Pn	10 29 40.8	-0.5
FCH	**Farellones**	2.64	143	*e*P	Pn	10 29 42.8	+0.5
FCH				*i* S	Sn	10 30 16.6	+2.1
FCH				IAML		10 30 27.8	
	comp=E,300nm,0.4s						
MT09	**Talagante**	2.73	159	Pn	Pn	10 29 44.1	+0.6
MT09	**Talagante**	2.73	159	⇑*e*P	Pn	10 29 44.0	+0.6
MT09				*e*S	Sn	10 30 16.0	-0.6
MT09				IAML		10 30 35.5	
	comp=E,398nm,0.4s						
MT01	**Popeta**	2.74	163	Pn	Pn	10 29 43.2	-0.3
MT01	**Popeta**	2.74	163	⇑*i*P	Pn	10 29 43.2	-0.3
MT01				IAML		10 30 34.8	
	comp=E,334nm,0.7s						
BO04	**La Punta**	3.06	155	*e*P	Pn	10 29 48.4	+0.5
BO04				*e*S	Sb	10 30 28.4	-2.9
BO04				IAML		10 30 41.5	
	comp=E,456nm,0.5s						
LMEL	**Las Melosas**	3.10	148	⇓*i*P	Pn	10 29 49.7	+1.1
LMEL				*i* S	Sn	10 30 26.6	+0.8
LMEL				IAML		10 30 43.8	
	comp=N,252nm,0.6s						
AC04	**Llanos de Chal**	3.17	18	⇓*i*P	Pn	10 29 48.0	-1.4
AC04				IAML		10 30 54.4	
	comp=N,120nm,0.5s						
BO01	**Tunca**	3.29	164	Pn	Pn	10 29 51.4	+0.4
BO02	**Sierra Bellavi**	3.74	162	Pn	Pn	10 29 57.7	+0.4
BO02	**Sierra Bellavi**	3.74	162	⇑*i*P	Pn	10 29 57.8	+0.5
BO02				IAML		10 31 08.2	
	comp=E,286nm,0.6s						
GO05	**Huala**	3.77	177	Pn	Pn	10 29 56.7	-1.0
H03N1	**Juan Fernandez**	6.10	247	T	T	10 37 15.1	
	baz=78,slow=72,SNR=525						
H03N3	**Juan Fernandez**	6.12	247	T	T	10 37 16.7	
	baz=78,slow=72,SNR=419						
H03N2	**Juan Fernandez**	6.12	247	T	T	10 37 12.3	
	baz=78,slow=72,SNR=378						
LC01	**Cunco**	7.65	178	Pn	Pn	10 30 49.9	-1.1
PLCA	**Paso Flores**	9.57	172	Pn	Pn	10 31 17.8	+0.4
	comp=E,0.3nm,0.3s,baz=359,slow=15,SNR=1.9						
LPAZ	**La Paz**	15.33	15	Pn	Pn	10 32 37.2	+0.7
	comp=E,0.1nm,0.3s,baz=257,slow=5.0,SNR=4.4						
LPAZ	**La Paz**	15.33	15	IAmb	IAmb	10 32 43.3	
	comp=Z,1.7nm,0.9s						
SIV	**San Ignacio**	18.25	36	P	Pn	10 33 12.9	0.0
	comp=Z,0.1nm,0.3s,baz=270,slow=13,SNR=3.0						
BDFB	**Brasilia**	26.98	60	P	P	10 34 41.3	-0.3
	comp=Z,0.9nm,0.3s,baz=221,slow=9.3,SNR=3.1						
BDFB	**Brasilia**	26.98	60	IAmb	IAmb	10 34 50.4	
	comp=Z,15nm,1.5s						
SNAA	**Sanae**	54.20	159	P	P	10 38 25.2	+0.5
	comp=Z,0.7nm,0.9s,baz=282,slow=7.7,SNR=8.3						
SNAA	**Sanae**	54.20	159	P	P	10 38 24.6	-0.2
SNAA				IAmb	IAmb	10 38 27.5	
	comp=Z,1.9nm,1.2s						
QSPA	**South Pole Qui**	59.00	180	LR	LR	11 04 34.8	
	comp=Z,576nm,20.0s,baz=249,slow=36						
QSPA	**South Pole Qui**	59.00	180	P	P	10 39 00.2	+1.2
QSPA				IAmb	IAmb	10 39 09.4	
	comp=Z,2.0nm,1.1s						
TORD	**Torodi Ar. Bea**	83.39	70	P	P	10 41 27.5	+0.2
	comp=Z,1.2nm,0.8s,baz=256,slow=4.2,SNR=7.0						
TORD	**Torodi Ar. Bea**	83.39	70	IAmb	IAmb	10 41 28.3	
	comp=Z,1.1nm,0.8s						
BBB	**Bella Bella**	96.38	329	LR	LR	11 23 24.6	
	comp=Z,83nm,20.3s,baz=272,slow=34						

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*IDC **03** 10:30:17.8±1.7, 37°.01N×28°.74E, h0^{km}, mb3.6/2, mb1 3.6/3, mb1mx3.4/40, mbtmp3.6/3, ML3.6/1, MS2.5/2, Ms1 2.6/2, ms1mx2.3/38, Error ellipse: s-maj=201.1km s-min=21.4km az=144.0*

*DDA **03** 10:30:18.4, 37°.16N×28°.70E, h7^{km}±3^{km}, ML3.4*

*ISK **03** 10:30:18.0, 37°.18N×28°.70E, h9^{km}, ML3.5/23*

*ATH **03** 10:30:19.6, 37°.21N×28°.64E, h10^{km}±31^{km}, ML3.4/5, Error ellipse: s-maj=31.6km s-min=2.6km az=0.0*

*THE **03** 10:30:19.1, 37°.16N×28°.71E, h0^{km}±1^{km}, ML3.5/2, Error ellipse: s-maj=2.4km s-min=1.5km az=48.0*

ISC 03 10:30:18.8±1.0, **37°.18N**±0°.02×**28°.68E**±0°.01, **h6**^{km}±8^{km}, **n75**, σ**0^{s}.95**/104, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MULA	**Mugla, Merkez-**	0.30	286	*i* P	Pg	10 30 25.3	+0.7
MULA				*i* S	Sg	10 30 30.1	+1.5
MULA				IAML		10 30 35.0	
	comp=E,3µm,0.8s						
YER	**Yerkesik**	0.32	263	P	Pg	10 30 25.8	+0.7
YER				S	Sb	10 30 31.3	-1.2
YER	**Yerkesik**	0.32	263	PG	Pg	10 30 25.7	+0.7
TAVA	**DENIZLI_Tavas**	0.34	33	*i* P	Pg	10 30 25.1	-0.4
TAVA				*i* S	Sg	10 30 30.0	0.0
TAVA				IAML		10 30 33.0	
	comp=N,2µm,0.4s						
DALY	**Dalyan (Mula)**	0.36	184	*i* P	Pg	10 30 25.4	-0.4
DALY				*i* S	Sb	10 30 31.7	-1.8
DALY	**Dalyan (Mula)**	0.36	184	PG	Pg	10 30 25.5	-0.2
CAEL	**Denizli, Camel**	0.51	96	*i* P	Pg	10 30 28.5	-0.2
CAEL				*i* S	Sb	10 30 39.4	+1.3
CAEL				IAML		10 30 43.0	
	comp=N,3µm,0.4s						
CAEL				IAML		10 30 45.0	
	comp=E,3µm,0.7s						
TURN	**Turunc**	0.53	221	*i* P	Pg	10 30 28.5	-0.5
TURN				*i* S	Sb	10 30 37.1	-1.4
TURN	**Turunc**	0.53	221	PG	Pg	10 30 29.0	0.0
TURN				SG	Sb	10 30 37.2	-1.3
MRSB	**Marmaris-Mugla**	0.60	220	PG	Pg	10 30 30.5	+0.1
FETY	**Fethiye**	0.63	149	P	Pg	10 30 30.0	-0.9
FETY				S	Sb	10 30 41.0	-0.3
FETY	**Fethiye**	0.63	149	PG	Pg	10 30 30.3	-0.6
FETY				SG	Sb	10 30 39.8	-1.5
MLSB	**Milas**	0.73	280	PG	Pb	10 30 33.4	-0.6
MLSB				SG	Sb	10 30 43.5	-0.8
AYDN	**Tasoluk**	0.80	307	*i* P	Pb	10 30 34.6	-0.6
AYDN				*i* S	Sg	10 30 45.5	+0.9
DAT	**Datca**	0.99	244	P	Pg	10 30 37.8	0.0
DAT				S	Sn	10 30 53.9	+0.1
DAT	**Datca**	0.99	244	PG	Pg	10 30 37.7	0.0
AYDB	**Zeytinkoy-Aydi**	0.99	321	PG	Pg	10 30 37.7	-0.1
BDRM	**Kayabasi**	0.99	264	*i* P	Pb	10 30 38.2	-0.2
BDRM				*i* S	Sn	10 30 53.6	-0.2
BDRM				IAML		10 30 57.0	
	comp=N,1µm,0.7s						
ARG	**Arkhangelos**	1.06	205	P	Pb	10 30 39.0	-0.6
ARG				S	Sn	10 30 56.2	+0.9
	comp=N,1µm,0.7s						
ARG	**Arkhangelos**	1.06	205	P	Pb	10 30 39.0	-0.6
ARG				AML	AML	10 30 58.0	
	comp=E,2374µm,0.7s						
ARG				AML	AML	10 31 01.7	
	comp=N,2124µm,0.7s						
ARG	**Arkhangelos**	1.06	205	PG	Pb	10 30 38.9	-0.6
ELL	**Elmali**	1.07	113	PG	Pb	10 30 38.9	-1.0
BODT	**Bodrum**	1.10	264	P	Pg	10 30 39.9	0.0
BODT				S	Sn	10 30 57.5	+1.1
BODT	**Bodrum**	1.10	264	PN	Pb	10 30 40.1	-0.2
YKAV	**Yalikavak-Bodr**	1.12	268	PN	Pb	10 30 40.5	-0.1
DIDI	**Didim-Aydin**	1.17	280	PN	Pg	10 30 40.9	-0.3
DDIM	**Aydin, Didim**	1.18	284	*i* P	Pn	10 30 41.7	-0.2
DDIM				*i* S	Sn	10 30 59.0	+0.7
DDIM				IAML		10 31 16.0	
	comp=E,725nm,1.2s						
DDIM				IAML		10 31 21.0	
	comp=N,599nm,1.4s						
AKAS	**Kas**	1.20	141	*i* P	Pn	10 30 41.9	-0.3
AKAS				*i* S	Sn	10 31 01.5	+2.5
AKAS				IAML		10 31 05.0	
	comp=N,2µm,1.0s						
AKAS				IAML		10 31 05.0	
	comp=E,1µm,0.5s						
AKAS	**Kas**	1.20	141	PN	Pn	10 30 41.6	-0.7
BRDR	**BURDUR-Merkez**	1.22	64	*i* P	Pn	10 30 41.9	-0.5
BRDR				*i* S	Sn	10 31 00.2	+0.9
KSL	**Kastellorizon**	1.25	144	P	Pg	10 30 43.9	+1.0
KSL	**Kastellorizon**	1.25	144	P	Pg	10 30 43.9	+1.0
KSL				AML	AML	10 31 06.0	
	comp=E,10952µm,0.8s						
KSL				AML	AML	10 31 07.0	
	comp=N,7203µm,0.6s						
GCAM	**G?zelcaml?**	1.27	295	*i* P	Pg	10 30 43.8	+0.8
GCAM				*i* S	Sn	10 31 01.6	+1.2
GCAM				IAML		10 31 07.0	
	comp=N,437nm,0.8s						
GCAM	**G?zelcaml?**	1.27	295	PN	Pg	10 30 43.2	+0.1
BASM	**Basmaki-Afyon**	1.32	55	PN	Pn	10 30 43.0	-0.9
MANT	**Manisa**	1.32	356	*i* P	Pn	10 30 43.1	-0.8
MANT				*i* S	Sn	10 31 01.9	-0.1
PASA	**Karahalli, USA**	1.33	28	*i* P	Pn	10 30 42.6	-1.5
PASA				*i* S	Sn	10 31 02.8	+0.5
NIS1	**Nisyros Isl.**	1.33	245	P	Pg	10 30 44.9	+0.5
NIS1				S	Sn	10 31 03.0	+0.9
	comp=N,3µm,0.7s						
NIS1	**Nisyros Isl.**	1.33	245	P	Pg	10 30 44.8	+0.4
NIS1				AML	AML	10 31 13.9	
	comp=N,6909µm,0.6s						
NIS1				AML	AML	10 31 14.3	
	comp=E,5445µm,0.7s						
NIS1	**Nisyros Isl.**	1.33	245	PN	Pn	10 30 43.3	-0.7
KULA	**Kula-Manisa**	1.34	359	P	Pn	10 30 43.6	-0.5
KULA				S	Sn	10 31 03.0	+0.7
KULA	**Kula-Manisa**	1.34	359	PN	Pn	10 30 42.8	-1.3
KORT	**Korkueli**	1.35	97	*i* P	Pg	10 30 45.3	+0.7
KORT				*i* S	Sn	10 31 04.9	+2.3
KORT				IAML		10 31 09.0	
	comp=E,679nm,0.7s						
KORT				IAML		10 31 13.0	
	comp=N,614nm,0.7s						
KORT	**Korkueli**	1.35	97	PN	Pg	10 30 43.9	-0.7
DEMR	**Demre-Antalya**	1.36	133	PN	Pb	10 30 43.9	-0.8
NISR	**Nisiros**	1.37	246	P	Pb	10 30 44.5	-0.3
NISR				AML	AML	10 31 14.7	
	comp=E,3477µm,1.0s						
NISR				AML	AML	10 31 21.5	
	comp=N,1575µm,0.6s						
KOSK	**Kos Island**	1.43	253	PN	Pn	10 30 45.0	-0.3
BUCA	**Burdur, Bucak-**	1.51	84	*i* P	Pg	10 30 47.5	-0.2
BUCA				*i* S	Sg	10 31 10.5	+3.3
BUCA				IAML		10 31 12.0	
	comp=E,343nm,0.7s						
BCK	**Bucak**	1.55	79	PN	Pn	10 30 46.2	-0.8
USAK	**Uak-Merkez**	1.56	10	*i* P	Pn	10 30 46.5	-0.7
USAK				*i* S	Sg	10 31 09.0	+0.1
SMG	**Samos**	1.56	290	P	Pn	10 30 47.2	+0.1
SMG	**Samos**	1.56	290	P	Pn	10 30 47.2	+0.1
SMG				AML	AML	10 31 16.0	
	comp=E,826µm,0.6s						
SMG				AML	AML	10 31 17.5	
	comp=N,1060µm,0.5s						
KZIL	**AFYON_Kizioren**	1.58	47	*i* P	Pb	10 30 48.0	-0.5
KZIL				*i* S	Sg	10 31 10.7	+1.0
ISP	**Isparta**	1.60	66	PN	Pn	10 30 46.6	-1.2
ANTB	**Antalya**	1.60	99	PN	Pb	10 30 47.5	-1.3
BLCB	**Balcova**	1.77	313	P	Pn	10 30 50.3	+0.3
BLCB	**Balcova**	1.77	313	PN	Pn	10 30 49.8	-0.2
BAGO	**Egridir - ISPA**	1.86	63	*i* P	Pb	10 30 52.6	-0.7
BAGO				*i* S	Sg	10 31 17.6	-1.0
DEMI	**Demirci**	1.86	1	*i* P	Pn	10 30 51.2	-0.1
DEMI				*i* S	Sb	10 31 16.6	-0.3
SHAP	**Saphane-Kutahy**	1.89	13	PN	Pn	10 30 51.4	-0.4
SIMA	**Simav-Kutahya**	1.92	7	PN	Pn	10 30 50.9	-1.2
GEDZ	**Gediz**	1.95	17	PN	Pn	10 30 52.3	-0.3
SHUT	**Suhut-Afyon**	2.02	47	PN	Pn	10 30 52.5	-1.1
TVSB	**Tavsanli**	2.35	15	PN	Pn	10 30 57.3	-0.8
DKL	**Dikili**	2.35	324	PN	Pn	10 30 57.9	-0.1
CHOS	**Chios island**	2.41	301	P	Pn	10 30 59.6	+0.8
CHOS	**Chios island**	2.41	301	P	Pb	10 31 00.8	-1.8
CHOS	**Chios island**	2.41	301	PN	Pn	10 30 58.9	+0.1
SEYD	**Seydisehir-KON**	2.53	84	PN	Pn	10 31 00.1	-0.4
ZKR	**Zakros**	2.87	225	P	Pb	10 31 08.6	-1.8
SIGR	**SIGRI**	3.01	313	P	Pb	10 31 11.4	-1.5
BRTR	**Keskin Array B**	4.65	55	Pn	Pn	10 31 31.5	+1.8
	comp=N,2.8nm,0.3s,baz=234,slow=17,SNR=31						
BRTR				Sn	Sn	10 32 25.2	+1.1
	comp=N,0.0nm,0.3s,baz=268,slow=39,SNR=5.6						
BRTR				LR	LR	10 33 59.0	
	comp=N,61nm,19.5s,baz=244,slow=47						
NOA	**NORSAR Array B**	26.31	341	LR	LR	10 48 14.6	
	comp=N,10nm,21.0s,baz=250,slow=41						
TORD	**Torodi Ar. Bea**	33.97	232	P	P	10 37 02.2	-1.1
	comp=N,0.7nm,0.5s,baz=38,slow=8.4,SNR=8.2						
MKAR	**Makanchi Array**	40.29	59	P	P	10 37 58.1	+1.4
	comp=N,0.3nm,0.5s,baz=283,slow=7.1,SNR=1.6						

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*ATH **03** 10:47:11.0, 33°.95N×23°.84E, h11^{km}±5^{km}, ML3.5/5, Error ellipse: s-maj=17.2km s-min=3.2km az=18.0*

*THE **03** 10:47:18.4, 34°.38N×24°.07E, h0^{km}±3^{km}, ML3.1/4, Error ellipse: s-maj=6.8km s-min=1.2km az=213.0*

ISC 03 10:47:16.6±2.3, **34°.3N**±0°.1×**23°.99E**±0°.07, **h10**^{km}, **n20**, σ**0^{s}.77**/24, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GVD	**Gavdhos**	0.55	8	P	Pb	10 47 28.0	-0.3
GVD				S	Sg	10 47 34.3	-0.3
	4µm,0.4s						
GVD	**Gavdhos**	0.55	8	P	Pb	10 47 28.0	-0.3
GVD				AML	AML	10 47 42.4	
	comp=N,9002µm,0.4s						
GVD				AML	AML	10 47 42.5	
	comp=E,8751µm,0.3s						
GVDS	**Gavdos**	0.56	8	P	Pg	10 47 27.9	+0.5
GVDS				S	Sg	10 47 34.9	+0.2
	comp=E,3µm,0.3s						
SIVA	**Sivas**	0.99	43	P	Pg	10 47 35.6	0.0
SIVA	**Sivas**	0.99	43	P	Pg	10 47 35.4	-0.2
SIVA				AML	AML	10 47 58.8	
	comp=N,4004µm,0.6s						
SIVA				AML	AML	10 47 59.4	
	comp=E,9138µm,0.6s						
VAM	**Vamos**	1.12	9	P	Pb	10 47 37.8	-0.3
VAM				S	Sn	10 47 54.0	+0.1
	comp=E,842nm,0.6s						
VAM	**Vamos**	1.12	9	P	Pb	10 47 37.8	-0.3
VAM				AML	AML	10 47 59.8	
	comp=N,1448µm,0.5s						
VAM				AML	AML	10 48 03.8	
	comp=E,1871µm,0.9s						
IMMV	**Iera Moni Meta**	1.17	359	P	Pb	10 47 38.3	-0.5
IMMV				S	Sb	10 47 54.4	+0.4
	comp=E,2µm,0.4s						
IMMV	**Iera Moni Meta**	1.17	359	P	Pb	10 47 38.3	-0.5
IMMV				AML	AML	10 47 59.2	
	comp=N,4241µm,0.5s						
IMMV				AML	AML	10 48 03.7	
	comp=E,3289µm,0.5s						
IDI	**Anoyia**	1.24	36	P	Pn	10 47 39.5	-0.5
IDI	**Anoyia**	1.24	36	P	Pn	10 47 39.5	-0.5
IDI				AML	AML	10 48 00.5	
	comp=E,1020µm,0.6s						
IDI				AML	AML	10 48 00.8	
	comp=N,1011µm,0.6s						
NPS	**Neapolis**	1.65	54	P	Pn	10 47 46.1	+0.5
NPS	**Neapolis**	1.65	54	P	Pn	10 47 45.9	+0.3
ANKY	**Antikythira Is**	1.67	340	P	Pg	10 47 49.9	+1.3
ANKY	**Antikythira Is**	1.67	340	P	Pn	10 47 46.0	+0.1
ZKR	**Zakros**	2.01	65	P	Pn	10 47 51.2	+0.7
ZKR	**Zakros**	2.01	65	P	Pn	10 47 51.2	+0.7
KTHR	**Kythira**	2.12	338	P	Pg	10 47 58.1	+0.8
VLI	**Veliai**	2.57	341	P	Pb	10 48 00.9	-1.8
VLI	**Veliai**	2.57	341	P	Pb	10 48 00.9	-1.8

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*BGR **03** 11:00:31.0±0.0, 48°.96N×149°.16E, h420^{km}±1^{km}, mb4.5*

*BJI **03** 11:00:32.7±0.0, 50°.34N×150°.63E, h419^{km}, mB4.5/20, mb4.5/31*

*MOS **03** 11:00:33.6±0.9, 50°.26N×150°.54E, h423^{km}, mb4.6/45, Error ellipse: s-maj=6.5km s-min=3.8km az=65.9*

*SKHL **03** 11:00:33.0±0.2, 50°.10N×150°.80E, h414^{km}±13^{km}, mb5.5/13, mbv5.1/4, msh5.3/4, msha5.6/7*

*KRSC **03** 11:00:33.6±2.3, 49°.92N×151°.41E, h461^{km}±30^{km}, ML5.5*

*IDC **03** 11:00:35.5±0.5, 50°.36N×150°.47E, h423^{km}±5^{km}, mb4.1/34, mb1 4.2/42, mb1mx4.1/54, mbtmp4.9/42, Error ellipse: s-maj=7.6km s-min=5.6km az=136.0*

*NEIC **03** 11:00:35.4±1.8, 50°.38N±0°.09×150°.5E±0°.1, h421^{km}±5^{km}, mb4.8/254, Error ellipse: s-maj=14.4km s-min=11.7km az=129.0*

ISC 03 11:00:34.6±0.3, **50°.24N**±0°.04×**150°.68E**±0°.04, **h419**^{km}±3^{km}, **h419**^{km}**:pP-P**, **n903**, σ**1^{s}.32**/989, **mb4.7**/228, **160C-59D**, **Fault plane solution: NP1:**ϕ_s83.99069°, δ83.98977°, λ105.78033°. **NP2:**ϕ_s194.32080°, δ16.85891°, λ21.16380°. **Principal axes:** T Plg48.6558°, Azm10.9147°; N Plg15.6913°, Azm262.2958°; P Plg37.0620°, Azm160.0463°; **Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	3.50	81	*e*PN	P	11 01 43.3	+0.2
SKR				*e*S	S	11 02 37.6	-1.5
SKR				pmax	pmax		
	comp=Z,324nm,0.7s						
SKR				smax	smax		
	comp=N,524nm,0.5s						
SKR				smax	smax		
	comp=E,637nm,0.5s						
SKR				MLR	MLR		
	comp=Z,600nm,13.0s						
SKR	**Severo-Kuril's**	3.50	81	*e*P	P	11 01 42.9	-0.2
SKR				*e*S	S	11 02 37.5	-1.5
SKR	**Severo-Kuril's**	3.50	81	*e*P	P	11 01 42.5	-0.6
SKR				AMB	AMB	11 01 45.7	
	comp=Z,100nm,0.4s						
SKR				*e*S	S	11 02 36.5	-2.6
SKR				A	A	11 02 43.2	
	comp=Z,220nm,0.6s						
SKR				A	A	11 02 43.2	
	comp=Z,310nm,0.6s						
PAU	**Pauzhetka**	4.08	70	PN	P	11 01 48.5	+0.3
PAU	**Pauzhetka**	4.08	70	*e*P	P	11 01 48.5	+0.3
PAU	**Pauzhetka**	4.08	70	*e*P	P	11 01 47.8	-0.4
PAU				AMB	AMB	11 01 52.0	
	comp=Z,670nm,3.0s						
PAU				AMB	AMB	11 01 52.3	
	comp=Z,150nm,0.5s						
PAU				*e*S	S	11 02 46.3	-2.1
PAU				A	A	11 02 50.6	
	comp=Z,550nm,0.5s						
PAU				A	A	11 02 50.6	
	comp=Z,170nm,0.5s						
PAU				A	A	11 02 51.0	
	comp=Z,2µm,3.0s						
PAU				A	A	11 02 51.0	
	comp=Z,820nm,3.0s						
APC	**Apacha**	4.85	54	PN	P	11 01 55.4	-0.2
APC	**Apacha**	4.85	54	*e*P	P	11 01 55.4	-0.2
KDTR	**Khodutka, Kamc**	4.93	69	PN	P	11 01 56.3	-0.1
KDTR				S	S	11 02 59.7	-3.7
KDTR	**Khodutka, Kamc**	4.93	69	*e*P	P	11 01 56.3	-0.1
KDTR				*e*S	S	11 02 59.7	-3.7
TYV	**Tymovskoe**	5.15	280	*e*PN	P	11 01 59.5	+0.8
TYV				*e*S	S	11 03 07.4	-0.2
TYV				pmax	pmax		
	comp=Z,900nm,2.2s						
TYV				pmax	pmax		
	comp=Z,233nm,1.1s						
TYV				smax	smax		
	comp=N,61nm,1.1s						
TYV				smax	smax		
	comp=E,114nm,1.1s						
TYV				smax	smax		
	comp=N,2µm,2.4s						
TYV				smax	smax		
	comp=E,1µm,2.4s						
TYV	**Tymovskoe**	5.15	280	*e*P	P	11 01 59.5	+0.8
TYV				AMB	AMB	11 02 00.0	
	comp=E,900nm,2.0s						
TYV				AMB	AMB	11 02 00.0	
	comp=E,233nm,1.0s						
TYV				*e*S	S	11 03 07.4	-0.2
TYV				A	A	11 03 08.6	
	comp=E,61nm,1.0s						
TYV				A	A	11 03 08.6	
	comp=E,113nm,1.0s						
TYV				A	A	11 03 09.2	
	comp=E,2µm,2.0s						
TYV				A	A	11 03 09.2	
	comp=E,1µm,2.0s						
GRL	**Gorelyy**	5.18	61	PN	P	11 02 00.6	+1.5

GRL	Gorelyy	5.18	61	eP	P	11 02 00.6	+1.5
MTVR	Mutnovka	5.21	62	PN	P	11 02 00.6	+1.2
MTVR				S	S	11 03 07.8	-1.1
MTVR	Mutnovka	5.21	62	eP	P	11 02 00.6	+1.2
MTVR				eS	S	11 03 07.8	-1.1
PEA0B	Petropavlovsk-	5.23	54⇑	ePN	P	11 01 59.9	+0.5
PEA0B	Petropavlovsk-	5.23	54	P	P	11 02 00.1	+0.7
PETK	Petropavlovsk-	5.23	54	P	P	11 01 59.2	-0.2
	comp=E,4.9nm,0.3s,baz=219,slow=11,SNR=62						
PETK				S	S	11 03 10.7	+1.7
	comp=E,2.4nm,0.3s,baz=202,slow=13,SNR=2.2						
PETK	Petropavlovsk-	5.23	54	PN	P	11 01 59.2	-0.2
PETK				S	S	11 03 10.7	+1.7
KUR	Kuril'sk	5.36	202c	iPN	P	11 02 00.2	-0.7
KUR				eS	S	11 03 11.2	-0.4
KUR				pmax	pmax		
	comp=Z,1μm,1.0s						
KUR				pmax	pmax		
	comp=N,222nm,0.9s						
KUR				pmax	pmax		
	comp=E,304nm,0.9s						
KUR				smax	smax		
	comp=E,2μm,2.5s						
KUR				smax	smax		
	comp=N,1μm,1.8s						
KUR				smax	smax		
	comp=N,270nm,0.5s						
KUR				smax	smax		
	comp=E,187nm,0.5s						
KUR	Kuril'sk	5.36	202	iP	P	11 01 59.6	-1.3
KUR				AMB	AMB	11 02 02.3	
	comp=E,2μm,0.9s						
KUR				eS	S	11 03 08.8	-2.8
KUR				A	A	11 03 12.0	
	comp=E,1μm,3.0s						
KUR				A	A	11 03 12.0	
	comp=E,2μm,3.0s						
KUR				A	A	11 03 15.9	
	comp=E,320nm,0.7s						
KUR				A	A	11 03 15.9	
	comp=E,187nm,0.7s						
RUS	Russkaya	5.38	63	PN	P	11 02 00.6	-0.4
RUS				S	S	11 03 07.3	-4.5
RUS	Russkaya	5.38	63	eP	P	11 02 00.6	-0.4
RUS				eS	S	11 03 07.3	-4.5
GNL	Ganaly	5.67	50	PN	P	11 02 04.6	+0.5
GNL	Ganaly	5.67	50	eP	P	11 02 04.6	+0.5
PET	Petropavlovsk	5.70	58	ePN	P	11 02 03.7	-0.5
PET				eS	S	11 03 14.8	-3.0
PET				pmax	pmax		
	comp=Z,194nm,0.5s						
PET				smax	smax		
	comp=N,449nm,0.7s						
PET				smax	smax		
	comp=E,336nm,0.6s						
PET				MLR	MLR		
	comp=Z,200nm,14.0s						
PET				MLR	MLR		
	comp=Z,500nm,13.0s						
PET	Petropavlovsk	5.70	58	eP	P	11 02 05.1	+0.9
PET	Petropavlovsk	5.70	58	P	P	11 02 03.5	-0.7
PET	Petropavlovsk	5.70	58	eP	P	11 02 03.7	-0.5
PET				AMB	AMB	11 02 08.5	
	comp=Z,190nm,0.5s						
PET				eS	S	11 03 14.8	-3.0
UGL	Uglegorsk	5.71	262⇓	iPN	P	11 02 05.2	+0.7
UGL				eS	S	11 03 17.4	-0.8
UGL				pmax	pmax		
	comp=Z,500nm,1.0s						
UGL				pmax	pmax		
	comp=Z,369nm,0.9s						
UGL				smax	smax		
	comp=N,2μm,4.9s						
UGL				smax	smax		
	comp=N,243nm,1.1s						
UGL				smax	smax		
	comp=E,182nm,1.4s						
UGL				smax	smax		
	comp=E,1μm,2.1s						
UGL	Uglegorsk	5.71	262	iP	P	11 02 05.2	+0.7
UGL				AMB	AMB	11 02 06.0	
	comp=E,500nm,1.0s						
UGL				AMB	AMB	11 02 06.1	
	comp=E,368nm,0.9s						
UGL				eS	S	11 03 17.4	-0.8
UGL				A	A	11 03 19.1	
	comp=E,2μm,5.0s						
UGL				A	A	11 03 19.1	
	comp=E,1μm,5.0s						
UGL				A	A	11 03 19.5	
	comp=E,243nm,1.0s						
UGL				A	A	11 03 19.5	
	comp=E,181nm,1.0s						
DALK	Dalny	5.75	58	PN	P	11 02 05.3	+0.5
DALK				S	S	11 03 15.8	-3.1
DALK	Dalny	5.75	58	eP	P	11 02 05.3	+0.5
DALK				eS	S	11 03 15.8	-3.1
KOK	Koryaka	5.81	55	PN	P	11 02 06.8	+1.3
KOK	Koryaka	5.81	55	eP	P	11 02 06.8	+1.3
OKH	Okha	5.83	308d	iPN	P	11 02 08.4	+2.8
OKH				pmax	pmax		
	comp=Z,200nm,12.2s						
OKH	Okha	5.83	308	eP	P	11 02 08.4	+2.8
OKH				eS	S	11 03 22.9	+2.7
AVH	Avacha	5.85	56	PN	P	11 02 09.4	+3.5
AVH				S	S	11 03 23.2	+2.3
AVH	Avacha	5.85	56	eP	P	11 02 09.4	+3.5
AVH				eS	S	11 03 23.2	+2.3
UGLR	Uglovaya	5.87	56	PN	P	11 02 07.9	+1.7
UGLR				S	S	11 03 20.4	-1.0
UGLR	Uglovaya	5.87	56	eP	P	11 02 07.9	+1.7
UGLR				eS	S	11 03 20.4	-1.0
KRER	Koryakskii	5.87	55	PN	P	11 02 07.4	+1.1
KRER	Koryakskii	5.87	55	eP	P	11 02 07.4	+1.1
SMAR	Somma	5.88	56	PN	P	11 02 07.2	+0.8
SMAR				S	S	11 03 19.7	-2.1
SMAR	Somma	5.88	56	eP	P	11 02 07.2	+0.8
SMAR				eS	S	11 03 19.7	-2.1
SDLR	Sedlovina	5.93	56	PN	P	11 02 07.6	+0.7
SDLR				S	S	11 03 19.9	-2.7
SDLR	Sedlovina	5.93	56	eP	P	11 02 07.6	+0.7
SDLR				eS	S	11 03 19.9	-2.7
NLC	Nalytchevo	6.13	58	PN	P	11 02 09.1	+0.3
NLC	Nalytchevo	6.13	58	eP	P	11 02 09.1	+0.3
YSS	Yuzh-Sakhalins	6.20	241α	iPN	P	11 02 10.3	+0.6
YSS				eS	S	11 03 27.1	-0.6
YSS				pmax	pmax		
	comp=Z,310nm,0.4s						
YSS				smax	smax		
	comp=N,110nm,1.1s						
YSS				smax	smax		
	comp=E,180nm,1.3s						
YSS	Yuzh-Sakhalins	6.20	241	P	P	11 02 09.7	+0.1
YSS	Yuzh-Sakhalins	6.20	241	iP	P	11 02 10.3	+0.6
YSS				AMB	AMB	11 02 10.6	
	comp=E,500nm,3.0s						
YSS				AMB	AMB	11 02 10.6	
	comp=E,310nm,0.4s						
YSS				eS	S	11 03 26.9	-0.8
YSS				A	A	11 03 28.1	
	comp=E,110nm,1.1s						
YSS				A	A	11 03 28.1	
	comp=E,180nm,1.1s						
SPN	Mys Shipunski	6.48	60	PN	P	11 02 11.8	-0.7
SPN	Mys Shipunski	6.48	60	eP	P	11 02 11.8	-0.7
SPN				eS	S	11 03 25.4	-7.7
NKL	Nikolayevsk	6.86	299	ePN	P	11 02 17.1	-0.1
NKL				pmax	pmax		
	comp=E,4.0nm,0.2s						
NKL				pmax	pmax		
	comp=N,199nm,0.3s						
NKL				pmax	pmax		
	comp=Z,187nm,0.5s						
NKL	Nikolayevsk	6.86	299	eP	P	11 02 17.1	-0.1
NKL				AMB	AMB	11 02 17.6	
	comp=Z,180nm,0.4s						
YUK	Yuzh-Kuril'sk	7.02	210	ePN	P	11 02 16.8	-2.3
YUK				eS	S	11 03 42.3	-1.8
YUK				pmax	pmax		
	comp=Z,5μm,0.4s						
YUK	Yuzh-Kuril'sk	7.02	210	eP	P	11 02 16.9	-2.2
YUK				AMB	AMB	11 02 18.0	
	comp=Z,6μm,0.4s						
YUK				eS	S	11 03 40.0	-4.1
YUK				A	A	11 03 43.1	
	comp=Z,4μm,0.8s						
YUK				A	A	11 03 43.1	
	comp=Z,4μm,0.8s						
GRPR	Tuman	7.09	210	ePN	P	11 02 17.0	-2.9
GRPR				eS	S	11 03 42.6	-2.9
GRPR				pmax	pmax		
	comp=Z,2μm,0.4s						
GRPR	Tuman	7.09	210	eP	P	11 02 17.0	-2.9
GRPR				AMB	AMB	11 02 22.0	
	comp=Z,2μm,0.4s						
GRPR				eS	S	11 03 42.0	-3.5
RUSJ	Misakicho	7.17	213	ePN	P	11 02 19.0	-1.7
GLVR	Golovnino	7.40	210	ePN	P	11 02 20.7	-2.5
GLVR				eS	S	11 03 48.0	-3.7
GLVR				pmax	pmax		
	comp=Z,2μm,0.6s						
GLVR	Golovnino	7.40	210	eP	P	11 02 20.0	-3.2
GLVR				AMB	AMB	11 02 27.0	
	comp=Z,2μm,0.6s						
GLVR				eS	S	11 03 48.0	-3.7
ESO	Esso	7.46	37	PN	P	11 02 27.4	+3.6
ESO	Esso	7.46	37	eP	P	11 02 27.4	+3.6
TUMR	Tumrok	7.64	45	PN	P	11 02 27.0	+1.1
TUMR	Tumrok	7.64	45	eP	P	11 02 26.9	+1.1
NMR	Nemuro--Hokkai	7.67	208	iPN	P	11 02 21.2	-5.0
NMR	Nemuro--Hokkai	7.67	208	iP	P	11 02 21.0	-5.2
JWK2	Keihoku	7.70	234	P	P	11 02 27.0	+0.5
TUMD	Tumrok D	7.71	46	eP	P	11 02 27.0	+0.5
KMNR	Kamenistaya	7.98	43	PN	P	11 02 30.4	+0.9
KMNR	Kamenistaya	7.98	43	eP	P	11 02 30.4	+0.9
JMP	Maruseppu	7.98	221	P	P	11 02 28.8	-0.9
MKZ	Mys Kozlova	8.02	53	PN	P	11 02 29.4	-0.3
MKZ	Mys Kozlova	8.02	53	eP	P	11 02 29.4	-0.3
KPT	Kopyto	8.11	41	PN	P	11 02 32.2	+1.4
KPT	Kopyto	8.11	41	eP	P	11 02 32.2	+1.4
KIRR	Kirishev	8.15	42	PN	P	11 02 31.5	+0.1
KIRR	Kirishev	8.15	42	eP	P	11 02 31.5	+0.1
BZWR	Bezymyannyi-We	8.23	42	PN	P	11 02 34.1	+1.9
BZWR	Bezymyannyi-We	8.23	42	eP	P	11 02 34.1	+1.9
JKA	Kamikawa-asahi	8.23	225	P	P	11 02 32.6	+0.3
JKA	Kamikawa-asahi	8.23	225	eP	P	11 02 32.9	+0.6
ASAJ	Asahikawa	8.23	225	P	P	11 02 32.9	+0.6
	comp=Z,54nm,0.3s,baz=61,slow=6.9,SNR=768						
ASAJ				S	S	11 04 08.8	-0.1
	baz=250,slow=32,SNR=8.2						
ASAJ	Asahikawa	8.23	225	P	P	11 02 32.8	+0.6
ASAJ	Asahikawa	8.23	225	PN	P	11 02 32.9	+0.6
ASAJ				S	S	11 04 08.8	-0.1
BZGR	Bezymyannyi-Gr	8.30	43	PN	P	11 02 33.8	+0.9
BZGR	Bezymyannyi-Gr	8.30	43	eP	P	11 02 33.8	+0.9
CIRR	Tsirk	8.43	42	PN	P	11 02 36.5	+2.1
CIRR	Tsirk	8.43	42	eP	P	11 02 36.5	+2.1
KLY	Klyuchi	8.52	41	PN	P	11 02 38.0	+2.8
KLY	Klyuchi	8.52	41	eP	P	11 02 38.0	+2.8
BDR	Baidarnaya	8.92	41	PN	P	11 02 42.2	+2.5
BDR	Baidarnaya	8.92	41	eP	P	11 02 42.2	+2.5
SRKR	Sorokina	8.96	40	PN	P	11 02 41.2	+1.0
SRKR	Sorokina	8.96	40	eP	P	11 02 41.2	+1.0
GRNR	Gornyy	9.10	279⇓	iPN	P	11 02 42.5	+0.7
GRNR				pmax	pmax		
	comp=E,20nm,0.8s						
GRNR				pmax	pmax		
	comp=Z,40nm,0.8s						
GRNR				MLR	MLR		
	comp=E,230nm,17.0s						
GRNR				MLR	MLR		
	comp=N,260nm,11.0s						
GRNR				MLR	MLR		
	comp=Z,80nm,12.0s						
GRNR	Gornyy	9.10	279	eP	P	11 02 42.5	+0.7
GRNR				AMB	AMB	11 02 43.2	
	comp=Z,40nm,0.8s						
MA2	Magadan	9.36	0	P	P	11 02 44.8	+0.4
	comp=Z,12nm,0.3s,baz=174,slow=12,SNR=86						
MA2				S	S	11 04 31.4	-0.2
	baz=22,slow=18,SNR=4.0						
MA2	Magadan	9.36	0c	iPN	P	11 02 44.7	+0.3
MA2				pmax	pmax		
	comp=Z,754nm,1.7s						
MA2	Magadan	9.36	0		P	11 02 44.5	+0.1
MA2	Magadan	9.36	0	eP	P	11 02 44.7	+0.3
KBG	Krutoberegovo	9.39	45	PN	P	11 02 44.4	-0.3
KBG	Krutoberegovo	9.39	45	eP	P	11 02 44.4	-0.3
KBG	Krutoberegovo	9.39	45	eP	P	11 02 44.4	-0.3
KBTR	Krutoberegovo	9.41	46	PN	P	11 02 44.3	-0.8
KBTR	Krutoberegovo	9.41	46	eP	P	11 02 44.3	-0.8
ERM	Erimo	9.74	215c	ePN	P	11 02 46.2	-2.7
ERM	Erimo	9.74	215	P	P	11 02 46.0	-2.9
JEM	Erimo	9.74	215	P	P	11 02 46.2	-2.7
JEW	Eniwo	9.75	224	P	P	11 02 48.2	-0.8
JEW	Eniwo	9.75	224		P	11 02 47.1	-2.0
BKI	Bering	10.52	56	PN	P	11 02 58.9	+1.7
BKI				S	S	11 04 49.7	-5.4
BKI	Bering	10.52	56	eP	P	11 02 58.9	+1.7
BKI				eS	S	11 04 49.7	-5.4
BKI	Bering	10.52	56	eP	P	11 02 58.9	+1.7
JSH	Shimam	10.55	228	P	P	11 02 55.7	-2.2
TEY	Ternei	10.82	247⇑	ePN	P	11 03 01.2	+0.4
TEY				e		11 04 57.6	
TEY				pmax	pmax		
	comp=N,20nm,0.5s						
TEY				pmax	pmax		
	comp=E,20nm,0.5s						
TEY				pmax	pmax		
	comp=Z,20nm,0.5s						
TEY	Ternei	10.82	247	eP	P	11 03 01.2	+0.4
TEY				AMB	AMB	11 03 01.9	
	comp=Z,20nm,0.5s						
JOT	Ohata	11.11	221	P	P	11 03 00.0	-4.0
JTM	Tenmabayashi	11.60	219	P	P	11 03 05.9	-3.5
JTM	Tenmabayashi	11.60	219	P	P	11 03 05.7	-3.7
KLR	Kul'dur	12.29	273	P	P	11 03 17.8	+0.9
	comp=Z,1.1nm,0.3s,baz=76,slow=9.6,SNR=24						
KLR	Kul'dur	12.29	273d	iPN	P	11 03 17.7	+0.9
KLR	Kul'dur	12.29	273	eP	P	11 03 17.7	+0.9
JOM	Ohasama	12.65	215	P	P	11 03 19.2	-1.7
SEY	Seymchan	12.76	4	P	P	11 03 22.9	+1.2
	comp=Z,10nm,0.3s,baz=185,slow=9.3,SNR=174						
SEY	Seymchan	12.76	4	PN	P	11 03 22.9	+1.2
JYA	Atsumi	14.02	218	P	P	11 03 36.5	+0.7
USA0B	Ussuriysk Arra	14.05	252	P	P	11 03 35.9	-0.1
USA0B	Ussuriysk Arra	14.05	252	P	P	11 03 35.9	-0.1
USRK	Ussuriysk Ar.	14.05	252	P	P	11 03 34.9	-1.1
	baz=59,slow=11,SNR=8.9						
USRK	Ussuriysk Ar.	14.05	252	P	P	11 03 35.0	-1.1
JMM	Marumori	14.25	213	P	P	11 03 38.2	-0.1
JMM	Marumori	14.25	213	P	P	11 03 38.4	+0.1
SMY	Shemya	14.79	71	P	P	11 03 44.4	+0.5
SMY	Shemya	14.79	71	P	P	11 03 44.4	+0.5
ZEA	Zeya	14.83	293	eP	P	11 03 43.7	-0.6
ZEA				eS	S	11 06 20.0	-1.3
ZEA				pmax	pmax		
	comp=E,10.0nm,0.5s						
ZEA				pmax	pmax		
	comp=N,10.0nm,0.6s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.1s						
ZEA				smax	smax		
	comp=Z,100nm,2.9s						
ZEA				smax	smax		
	comp=E,200nm,3.0s						
ZEA	Zeya	14.83	293	eP	P	11 03 43.7	-0.6
ZEA				AMB	AMB	11 03 44.8	
	comp=E,20nm,0.7s						
ZEA				eS	S	11 06 20.0	-1.3
ZEA				A	A	11 06 22.0	
	comp=E,200nm,3.0s						
ZEA				A	A	11 06 22.0	
	comp=E,100nm,3.0s						
KMSK	Kamenskaya	14.91	29	P	P	11 03 45.7	+0.6
KMSK	Kamenskaya	14.91	29	eP	P	11 03 45.7	+0.6
JSD	Sado	15.08	221	P	P	11 03 47.7	+0.4
JSD	Sado	15.08	221	P	P	11 03 47.2	0.0
MDJ	Mudanjiang	15.32	257	P	P	11 03 48.9	-0.8
MDJ				sP	sP	11 05 30.4	-8.5
MDJ				S	S	11 06 29.6	-1.5
MDJ				ScS	ScS	11 15 01.1	+3.3
MDJ				pmax	pmax		
	comp=E,11nm,1.2s						
MDJ				pmax	pmax		
	comp=E,94nm,7.2s						
JYT	Yasato	15.93	212	P	P	11 03 55.9	-0.5
JYT	Yasato	15.93	212	P	P	11 03 55.2	-1.1
MAJO	Matsushiro	16.39	218c	iP	P	11 04 01.1	-0.2
MAJO	Matsushiro	16.39	218	P	P	11 04 01.0	-0.2
MAT	Matsushiro	16.39	218	P	P	11 04 00.9	-0.4
MAT				S	S	11 06 53.0	+0.7
MAT	Matsushiro	16.39	218	P	P	11 04 00.9	-0.4
MJAR	Matsushiro Arr	16.39	218	P	P	11 04 00.6	-0.7
	comp=E,0.9nm,0.3s,baz=18,slow=11,SNR=96						
MJAR	Matsushiro Arr	16.39	218	P	P	11 04 00.6	-0.7
MJAR	Matsushiro Arr	16.39	218	P	P	11 04 00.6	-0.7
YAK	Yakutsk	16.52	324	P	P	11 04 01.0	-1.4
	comp=E,1.3nm,0.3s,baz=120,slow=4.7,SNR=33						
YAK				S	S	11 06 49.9	-4.3
	comp=E,0.1nm,0.3s,baz=84,slow=22,SNR=10						
YAK	Yakutsk	16.52	324c	iP	P	11 04 00.8	-1.5
YAK				eS	S	11 06 53.4	-0.8
YAK				pmax	pmax		
	comp=Z,90nm,0.8s						
YAK				pmax	pmax		
	comp=N,12nm,0.9s						
YAK				pmax	pmax		
	comp=E,10.0nm,0.9s						
YAK				smax	smax		
	comp=E,536nm,2.3s						
YAK				smax	smax		
	comp=N,507nm,1.8s						
YAK	Yakutsk	16.52	324	P	P	11 04 00.9	-1.4
YAK	Yakutsk	16.52	324	eP	P	11 04 00.8	-1.5
JRY	Ryogami san	16.58	215	P	P	11 04 03.3	-0.1
JGN	Niukaw	17.02	220	P	P	11 04 07.5	-0.6
JOD2	Odawara 2	17.19	214	P	P	11 04 09.7	-0.1
JGF	Kuroka	17.54	219	P	P	11 04 13.4	-0.2
INU	Inuyama	17.90	219	P	P	11 04 16.1	-1.2
INU				IAmb	IAmb	11 04 17.6	
	comp=Z,30nm,1.0s						
JWT	Wachi	18.63	222	P	P	11 04 24.1	-0.7
JWT				IAmb	IAmb	11 04 30.1	
	comp=Z,48nm,1.4s						
JHJ	Hachijo jima 2	18.91	209	P	P	11 04 28.8	+1.2
	comp=Z,9.0nm,0.3s,baz=60,slow=20,SNR=1.6						
JHS	Saijyo	19.90	227	P	P	11 04 38.0	+1.1
JHS				IAmb	IAmb	11 04 39.0	
	comp=Z,21nm,0.9s						
KIWB	Kanaga Island	20.21	73	P	P	11 04 39.9	+0.5
KSRS	Korea Array	20.70	241	P	P	11 04 44.5	+0.5
	comp=Z,2.3nm,0.6s,baz=48,slow=8.9,SNR=8.8						
KSRS				ScP	ScP	11 11 30.6	-0.5
	comp=Z,1.7nm,0.7s,baz=8.7,slow=1.5,SNR=11						
KSRS	Korea Array	20.70	241	P	P	11 04 44.5	+0.5
KSRS	Korea Array	20.70	241	eP	P	11 04 44.5	+0.5
KSAR	Wonju Array Be	20.73	241	P	P	11 04 44.8	+0.5
KSAR	Wonju Array Be	20.73	241	P	P	11 04 44.8	+0.5
JNU	Nakatsue	22.50	228	P	P	11 05 00.8	+0.4
	comp=Z,11nm,0.9s,baz=29,slow=11,SNR=3.6						
BOD	Bodaibo	22.60	304	eP	P	11 04 59.6	-1.4
BOD				pmax	pmax		
	comp=Z,12nm,1.9s						
BOD	Bodaibo	22.60	304	eP	P	11 04 59.6	-1.4
TIK	Tiksi	23.64	343	eP	P	11 05 09.5	-0.7
TIXI	Tiksi	23.66	343	P	P	11 05 09.7	-0.7
	comp=Z,13nm,0.5s,baz=139,slow=8.1,SNR=42						
TIXI				ScP	ScP	11 11 37.5	-0.7
	comp=Z,2.8nm,0.6s,baz=106,slow=7.6,SNR=5.9						
TIXI	Tiksi	23.66	343c	iP	P	11 05 09.5	-0.8
TIXI	Tiksi	23.66	343	P	P	11 05 09.3	-1.0
TIXI				IAmb	IAmb	11 05 11.5	
	comp=Z,52nm,1.4s						
ANM	Nome	26.99	41	P	P	11 05 41.2	+1.1
ANM				pmax	pmax		
	comp=Z,80nm,1.2s						
ANM	Nome	26.99	41	P	P	11 05 41.2	+1.1
ANM				IAmb	IAmb	11 05 55.2	
	comp=Z,80nm,1.2s						
ULN	Ulaanbaatar	28.39	282⇓	eP	P	11 05 53.2	+0.4
ULN				pmax	pmax		
	comp=Z,6.0nm,2.4s						
ULN	Ulaanbaatar	28.39	282	eP	P	11 05 53.2	+0.4
HHC	Hu-ho-hao-te	28.66	266	eP	P	11 05 54.3	-0.9
HHC				pmax	pmax		
	comp=Z,26nm,0.7s						
HHC				pmax	pmax		
	comp=Z,67nm,6.6s						
RDOG	Red Dog Mine	28.74	34	P	P	11 05 59.5	+4.0
RDOG				IAmb	IAmb	11 06 02.7	
	comp=Z,41nm,1.2s						
RDOG	Red Dog Mine	28.74	34	P	P	11 05 58.5	+3.1
	baz=256,SNR=8.6						
SONM	Songino Array	28.81	283	P	P	11 05 55.5	-0.9
	comp=Z,0.5nm,0.3s,baz=88,slow=9.4,SNR=3.0						
SONM				pP	PP	11 07 12.7	+0.4
	comp=Z,5.0nm,0.8s,baz=59,slow=9.7,SNR=12						
SONM	Songino Array	28.81	283	P	P	11 05 55.5	-0.9
TLY	Talaya	29.26	291	P	P	11 06 00.7	+0.5
	comp=Z,11nm,0.5s,baz=44,slow=3.3,SNR=10						
TLY				pP	PP	11 07 19.0	+2.5
	comp=Z,6.4nm,0.7s,baz=69,slow=3.9,SNR=3.3						
TLY	Talaya	29.26	291	P	P	11 06 00.7	+0.5
TLY	Talaya	29.26	291	P	P	11 06 00.0	-0.2
TLY	Talaya	29.26	291	eP	P	11 06 00.7	+0.5
NJ2	Nanjing	29.75	244	eP	P	11 06 03.9	-0.8
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
ZAK	Zakamensk	29.87	289	eP	P	11 06 04.9	-0.7
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
ZAK	Zakamensk	29.87	289	eP	P	11 06 04.9	-0.7
GCSA	Galena City Sc	30.64	42	P	P	11 06 12.2	+0.2
	baz=268,SNR=7.0						
TTA	Tatalina	31.00	45	P	P	11 06 16.3	+1.0
TTA				pmax	pmax		
	comp=Z,70nm,0.6s						
TTA	Tatalina	31.00	45	P	P	11 06 16.3	+1.0
TTA	Tatalina	31.00	45	P	P	11 06 16.2	+1.0
	baz=271,SNR=51						
SVW2	Sparrevohn	31.29	49	P	P	11 06 19.5	+1.8
SVW2				IAmb	IAmb	11 06 20.4	
	comp=Z,33nm,0.7s						
L19K	White Mountain	31.56	47	P	P	11 06 21.2	+1.1
L19K				IAmb	IAmb	11 06 24.5	
	comp=Z,24nm,0.8s						
L19K	White Mountain	31.56	47	P	P	11 06 21.2	+1.1
	baz=274,SNR=13						
P18K	Big Mountain,	31.64	52	P	P	11 06 22.5	+1.7
P18K				IAmb	IAmb	11 06 23.2	
	comp=Z,41nm,0.8s						
P18K	Big Mountain,	31.64	52	P	P	11 06 22.1	+1.3
	baz=278						
A21K	Barrow	31.67	29	P	P	11 06 21.5	+0.7
A21K	Barrow	31.67	29	P	P	11 06 20.3	-0.5
	baz=257						
M19K	Big River Lodg	31.80	47	P	P	11 06 23.6	+1.5
M19K				IAmb	IAmb	11 06 24.5	
	comp=Z,28nm,0.8s						
M19K	Big River Lodg	31.80	47	P	P	11 06 23.6	+1.5
	baz=274						
J20K	Nowinta River	31.81	43	P	P	11 06 23.1	+1.0
J20K				IAmb	IAmb	11 06 24.2	
	comp=Z,43nm,0.9s						
J20K	Nowinta River	31.81	43	P	P	11 06 23.2	+1.0
	baz=271,SNR=26						
N19K	Bonanza Creek	31.85	49	P	P	11 06 24.5	+1.9
N19K				IAmb	IAmb	11 06 25.3	
	comp=Z,43nm,0.7s						
N19K	Bonanza Creek	31.85	49	P	P	11 06 24.4	+1.8
	baz=276,SNR=9.0						
K20K	Telida	31.87	45	P	P	11 06 23.8	+1.1
K20K				IAmb	IAmb	11 06 24.8	
	comp=Z,34nm,0.7s						
K20K	Telida	31.87	45	P	P	11 06 23.7	+1.1
	baz=272,SNR=20						
L20K	Farewell, AK	32.00	46	P	P	11 06 25.0	+1.2
	baz=274,SNR=10						
O19K	Port Alsworth	32.00	51	P	P	11 06 24.6	+0.9
	baz=277						
IMAR	Indian Mountai	32.00	40	P	P	11 06 24.2	+0.4
H21K	Melozitna Rive	32.38	40	P	P	11 06 27.8	+0.7
H21K				IAmb	IAmb	11 06 29.6	
	comp=Z,40nm,0.8s						
H21K	Melozitna Rive	32.38	40	P	P	11 06 27.6	+0.6
	baz=270,SNR=31						
Q19K	Cape Douglas,	32.52	53	P	P	11 06 29.5	+1.2
Q19K	Cape Douglas,	32.52	53	P	P	11 06 29.4	+1.0
	baz=280						
P19K	Oil Pt	32.61	51	P	P	11 06 30.4	+1.2
	baz=279						

CHUM	Lake Minchumin	32.63	44	P	P	11 06 30.6	+1.5
	baz=273,SNR=18						
I21K	Tanana	32.73	41	P	P	11 06 31.1	+1.1
I21K				IAmb	IAmb	11 06 33.0	
	comp=Z,44nm,1.3s						
I21K	Tanana	32.73	41	P	P	11 06 31.0	+1.1
	baz=271,SNR=14						
RSO	Redoubt South	32.73	50	P	P	11 06 29.4	-0.9
PPLA	Purkeypile	32.74	45	P	P	11 06 32.3	+2.0
PPLA				IAmb	IAmb	11 06 36.2	
	comp=Z,65nm,1.0s						
PPLA	Purkeypile	32.74	45	P	P	11 06 32.1	+1.8
	baz=275,SNR=14						
CAST	Castle Rocks	32.76	44	P	P	11 06 31.2	+0.9
CAST				IAmb	IAmb	11 06 32.7	
	comp=Z,65nm,0.9s						
CAST	Castle Rocks	32.76	44	P	P	11 06 31.8	+1.5
	baz=274,SNR=32						
O20K	Slope Mountain	32.85	51	P	P	11 06 32.2	+0.9
	baz=279						
SPCR	Spurr Chakacha	32.91	48	P	P	11 06 33.5	+1.9
	baz=277,SNR=14						
SPU	Mount Spurr	32.98	48	P	P	11 06 34.1	+1.8
OHAK	Old Harbor	33.03	56	P	P	11 06 33.7	+1.0
	baz=283						
SKT	Skwentna	33.14	47	P	P	11 06 34.7	+1.1
SKT				IAmb	IAmb	11 06 36.8	
	comp=Z,60nm,1.3s						
SKT	Skwentna	33.14	47	P	P	11 06 34.6	+1.1
	baz=277,SNR=19						
BPAW	Bear Paw Mtn.	33.20	43	P	P	11 06 35.2	+1.1
BPAW				IAmb	IAmb	11 06 36.1	
	comp=Z,37nm,0.8s						
BPAW	Bear Paw Mtn.	33.20	43	P	P	11 06 35.1	+1.0
	baz=274,SNR=35						
MLY	Manley	33.26	41	P	P	11 06 35.4	+0.8
MLY	Manley	33.26	41	P	P	11 06 35.5	+0.9
	baz=273,SNR=16						
KDAK	Kodiak Island	33.28	55	P	P	11 06 35.1	+0.3
	comp=Z,13nm,0.5s,baz=267,slow=2.3,SNR=45						
KDAK	Kodiak Island	33.28	55	P	P	11 06 34.7	-0.1
KDAK				pmax	pmax		
	comp=Z,37nm,1.2s						
KDAK	Kodiak Island	33.28	55	P	P	11 06 34.7	-0.1
KDAK				IAmb	IAmb	11 06 36.4	
	comp=Z,37nm,1.1s						
KDAK	Kodiak Island	33.28	55	P	P	11 06 35.6	+0.8
	baz=282						
COLD	Coldfoot	33.44	37	P	P	11 06 36.5	+0.5
	baz=270,SNR=62						
TRF	Thorofare Moun	33.56	44	P	P	11 06 38.4	+1.1
	baz=275,SNR=26						
SUA	Susitna One	33.57	48	P	P	11 06 38.2	+0.8
	baz=278						
CNPM	China Poot	33.64	51	P	P	11 06 38.7	+0.9
CUT	Chulitna	33.68	46	P	P	11 06 38.8	+0.8
CUT	Chulitna	33.68	46	P	P	11 06 38.9	+0.8
	baz=277,SNR=40						
TOLK	Toolik Lake Re	33.71	35	P	P	11 06 38.8	+0.4
TOLK	Toolik Lake Re	33.71	35	P	P	11 06 38.7	+0.2
	baz=268,SNR=83						
H23K	Yukon River	33.73	40	P	P	11 06 39.9	+1.4
H23K	Yukon River	33.73	40	P	P	11 06 39.7	+1.1
	baz=272,SNR=60						
BRLK	Bradley Lake	33.77	51	P	P	11 06 39.6	+0.6
BRLK				IAmb	IAmb	11 06 40.2	
	comp=Z,48nm,1.0s						
M22K	Willow	33.83	47	P	P	11 06 39.2	-0.2
	baz=278						
I23K	Minto, Yukon-K	33.84	41	P	P	11 06 40.5	+1.1
	baz=274,SNR=42						
BRSE	Bradley Lake S	33.84	51	P	P	11 06 39.7	0.0
	baz=281						
BWN	Browne	33.86	43	P	P	11 06 41.6	+1.9
NEA2	Nenana	34.00	42	P	P	11 06 41.6	+0.7
NEA2				IAmb	IAmb	11 06 42.6	
	comp=Z,55nm,0.8s						
NEA2	Nenana	34.00	42	P	P	11 06 41.5	+0.7
	baz=275,SNR=55						
RC01	Rabbit Creek A	34.11	48	P	P	11 06 42.4	+0.6
	baz=279						
MCK	McKinley	34.13	44	P	P	11 06 42.9	+0.9
MCK				pmax	pmax		
	comp=Z,57nm,0.7s						
MCK	McKinley	34.13	44	P	P	11 06 42.9	+0.9
MCK	McKinley	34.13	44	P	P	11 06 42.6	+0.6
	baz=276,SNR=34						
RND	Reindeer	34.20	44	P	P	11 06 43.1	+0.4
RND				pmax	pmax		
	comp=Z,58nm,0.9s						
RND	Reindeer	34.20	44	P	P	11 06 43.1	+0.4
RND				IAmb	IAmb	11 06 43.9	
	comp=Z,58nm,0.9s						
O22K	Cooper Landing	34.22	49	P	P	11 06 43.0	+0.3
	baz=280						
PMR	Palmer	34.32	47	P	P	11 06 44.0	+0.5
PMR				pmax	pmax		
	comp=Z,20nm,0.7s						
PMR	Palmer	34.32	47	P	P	11 06 44.0	+0.5
PMR				IAmb	IAmb	11 06 45.9	
	comp=Z,20nm,0.7s						
PMR	Palmer	34.32	47	P	P	11 06 44.0	+0.5
	baz=279,SNR=7.8						
MDM	Murphy Dome	34.33	41	P	P	11 06 43.5	-0.1
MDM				IAmb	IAmb	11 06 48.0	
	comp=Z,29nm,0.8s						
H24K	Noodor Dome	34.41	40	P	P	11 06 45.5	+1.1
H24K				IAmb	IAmb	11 06 48.0	
	comp=Z,35nm,0.8s						
H24K	Noodor Dome	34.41	40	P	P	11 06 45.4	+1.1
	baz=274,SNR=35						
SEW	Seward	34.42	50	P	P	11 06 44.8	+0.4
SEW				IAmb	IAmb	11 06 45.7	
	comp=Z,44nm,0.7s						
SEW	Seward	34.42	50	P	P	11 06 44.8	+0.4
	baz=281						
WRH	Wood River Hil	34.43	42	P	P	11 06 45.2	+0.8
TCOL	CIGO, UAF Yank	34.49	41	P	P	11 06 46.0	+1.1
	baz=275,SNR=37						
COLA	College	34.50	41	*c* *i*P	P	11 06 46.1	+1.1
COLA				pmax	pmax		
	comp=Z,79nm,0.9s						
COLA	College	34.50	41	P	P	11 06 46.1	+1.1
CCB	Clear Creek Bu	34.54	42	P	P	11 06 46.1	+0.7
CCB				IAmb	IAmb	11 06 48.6	
	comp=Z,28nm,0.9s						
POKR	Poker Plat Res	34.65	41	P	P	11 06 47.3	+0.9
	baz=275,SNR=20						
SML	Sawmill	34.66	47	P	P	11 06 47.7	+1.1
SML	Sawmill	34.66	47	P	P	11 06 47.6	+1.1
	baz=279,SNR=57						
KNK	Knik Glacier	34.66	48	P	P	11 06 47.4	+0.9
	baz=280,SNR=39						
PWL	Port Wells	34.82	49	P	P	11 06 48.2	+0.3
	baz=281,SNR=12						
IL31		34.92	42	P	P	11 06 48.2	-0.3
IL31				IAmb	IAmb	11 06 50.0	
	comp=Z,33nm,0.7s						
ILAR	Eielson Array	34.92	42	P	P	11 06 48.8	+0.2
	comp=Z,25nm,0.7s,baz=270,slow=9.0,SNR=226						
ILAR				S	S	11 11 46.9	-1.5
	comp=Z,0.3nm,0.8s,baz=293,slow=9.7,SNR=1.7						
ILAR				ScP	ScP	11 12 14.7	0.0
	comp=Z,1.2nm,1.0s,baz=266,slow=3.1,SNR=4.9						
ILAR	Eielson Array	34.92	42	P	P	11 06 48.5	-0.1
ILAR				S	S	11 11 46.9	-1.5
ILAR	Eielson Array	34.92	42	P	P	11 06 48.5	-0.1
HDA	Harding Lake	34.93	42	P	P	11 06 48.8	+0.1
HDA				IAmb	IAmb	11 06 51.0	
	comp=Z,45nm,1.2s						
HDA	Harding Lake	34.93	42	P	P	11 06 48.7	0.0
	baz=277,SNR=26						
NRIK	Noril'sk	34.94	326	P	P	11 06 48.0	-0.7
	comp=Z,7.4nm,0.4s,baz=94,slow=9.1,SNR=19						
NRIK				ScP	ScP	11 12 13.5	-1.1
	comp=Z,2.6nm,0.6s,baz=104,slow=2.6,SNR=4.0						
NRIK	Noril'sk	34.94	326	P	P	11 06 48.0	-0.7
NRIK	Noril'sk	34.94	326	P	P	11 06 48.2	-0.4
SCM	Sheep Creek Mo	35.13	47	P	P	11 06 51.4	+0.9
	baz=280,SNR=17						
PRP	Porcupine Dome	35.41	40	P	P	11 06 53.9	+1.1
PRP	Porcupine Dome	35.41	40	P	P	11 06 53.8	+0.9
	baz=276,SNR=32						
GLI	Glacier Island	35.41	48	P	P	11 06 53.7	+0.9
GLI				IAmb	IAmb	11 06 54.3	
	comp=Z,44nm,0.8s						
GLI	Glacier Island	35.41	48	P	P	11 06 53.0	+0.2
	baz=282,SNR=5.5						
J25K	Salcha River,	35.58	42	P	P	11 06 53.4	-0.9
	baz=278,SNR=32						
BMAR	Burnt Mountain	35.61	37	P	P	11 06 55.5	+1.0
M24K	Tolsona, Glenn	35.62	46	P	P	11 06 55.9	+1.4
	baz=281,SNR=11						
PAX	Paxson	35.79	45	P	P	11 06 56.3	+0.3
PAX				pmax	pmax		
	comp=Z,17nm,0.7s						
PAX	Paxson	35.79	45	P	P	11 06 56.3	+0.3
PAX	Paxson	35.79	45	P	P	11 06 55.9	-0.1
	baz=280,SNR=10						
KLU	Klutina	35.85	47	P	P	11 06 57.6	+1.1
	baz=282,SNR=28						
RIDG	Independent Ri	35.94	43	P	P	11 06 57.0	-0.2
	baz=279,SNR=7.1						
DIV	Divide	35.99	48	P	P	11 06 59.1	+1.3
HARP	HAARP	36.03	45	P	P	11 06 59.2	+1.2
	baz=281,SNR=19						
EYAK	Cordova Ski Ar	36.13	49	P	P	11 06 59.8	+1.0
EYAK				IAmb	IAmb	11 07 01.1	
	comp=Z,36nm,0.7s						
EYAK	Cordova Ski Ar	36.13	49	P	P	11 06 60.0	+1.2
	baz=283,SNR=6.7						
SCRK	Sand Creek	36.27	43	P	P	11 06 59.9	-0.2
SCRK				IAmb	IAmb	11 07 00.9	
	comp=Z,62nm,0.9s						
SCRK	Sand Creek	36.27	43	P	P	11 07 00.0	-0.1
	baz=280,SNR=97						
DOT	Dot Lake	36.30	43	P	P	11 07 00.1	-0.1
DOT				IAmb	IAmb	11 07 01.9	
	comp=Z,45nm,0.6s						
LZH	Lanzhou	36.35	265	*e*P	P	11 07 02.8	+1.6
LZH				sP	sP	11 09 02.0	-4.7
LZH				pmax	pmax		
	comp=Z,13nm,1.3s						
J26L	Joseph Creek	36.37	42	P	P	11 07 00.1	-0.7
	baz=279,SNR=20						
N25K	Chitina, Valde	36.45	47	P	P	11 07 03.0	+1.5
N25K				IAmb	IAmb	11 07 03.9	
	comp=Z,34nm,0.7s						
N25K	Chitina, Valde	36.45	47	P	P	11 07 02.8	+1.3
	baz=282,SNR=15						
BMRM	Bremner River	36.58	48	P	P	11 07 03.9	+1.2
BMRM	Bremner River	36.58	48	P	P	11 07 03.8	+1.2
	baz=283,SNR=17						
RAGM	Ragged Mountai	36.69	49	P	P	11 07 05.3	+1.8
L26K	Log Cabin Wild	36.73	44	P	P	11 07 05.2	+1.5
L26K				IAmb	IAmb	11 07 06.7	
	comp=Z,35nm,1.1s						
L26K	Log Cabin Wild	36.73	44	P	P	11 07 04.7	+0.9
	baz=282,SNR=24						
GLB	Gilahina Butte	36.85	47	P	P	11 07 06.4	+1.5
GLB				IAmb	IAmb	11 07 10.8	
	comp=Z,28nm,0.6s						
KAIM	Kayak Island	36.92	49	P	P	11 07 07.1	+1.7
	baz=285						
M26K	Nabesna, AK	37.02	45	P	P	11 07 08.2	+2.0
M26K	Nabesna, AK	37.02	45	P	P	11 07 08.1	+1.9
	baz=283,SNR=85						
VRDI	Verde Repeater	37.07	47	P	P	11 07 08.2	+1.4
VRDI				IAmb	IAmb	11 07 09.2	
	comp=Z,44nm,0.6s						
BERG	Berg Lake	37.15	48	P	P	11 07 09.3	+2.0
BERG				IAmb	IAmb	11 07 10.8	
	comp=Z,76nm,1.1s						
MCARA	McCarthy VSAT	37.23	47	P	P	11 07 09.7	+1.7
	baz=284,SNR=23						
CRQM	Cirque	37.33	48	P	P	11 07 10.9	+1.9
EGAK	Eagle	37.34	41	P	P	11 07 09.1	+0.2
EGAK				IAmb	IAmb	11 07 09.9	
	comp=Z,52nm,0.8s						
EGAK	Eagle	37.34	41	P	P	11 07 08.8	0.0
	baz=281,SNR=39						
CRQE	Cirque	37.35	48	P	P	11 07 10.7	+1.6
	baz=285,SNR=30						
L27K	Beaver Creek,	37.40	44	P	P	11 07 11.2	+1.9
L27K	Beaver Creek,	37.40	44	P	P	11 07 11.0	+1.7
	baz=283,SNR=143						
BCAR	Beaver Creek A	37.42	44	P	P	11 07 11.2	+1.7
BGLC	Bering Glacier	37.42	49	P	P	11 07 11.3	+1.8
	baz=285						
TGL	Tana Glacier	37.48	48	P	P	11 07 11.5	+1.4
TGL				IAmb	IAmb	11 07 12.1	
	comp=Z,35nm,0.5s						
M27K	Edge Creek, AK	37.53	45	P	P	11 07 12.6	+2.0
M27K	Edge Creek, AK	37.53	45	P	P	11 07 12.6	+2.0
	baz=284,SNR=95						
WAX	Waxell Ridge	37.55	48	P	P	11 07 12.7	+2.0
ISLE	Juniper Island	37.75	48	P	P	11 07 13.7	+1.3
BVCY	Beaver Creek	37.98	45	P	P	11 07 15.9	+1.7
	baz=284,SNR=44						
GRNC	Granite Creek	37.99	48	P	P	11 07 16.1	+1.6
MESA	MESA	38.05	48	P	P	11 07 16.8	+1.9
MESA	MESA	38.05	48	P	P	11 07 16.9	+1.9
	baz=286,SNR=6.1						
YAH	Yahtse	38.10	48	P	P	11 07 17.4	+2.0
CTG	Chitna Glacier	38.13	47	P	P	11 07 17.2	+1.7
	baz=286,SNR=39						
CTGM	Chitina Glacie	38.13	47	P	P	11 07 17.6	+2.0
DAWY	Dawson	38.24	42	P	P	11 07 16.7	+0.4
DAWY	Dawson	38.24	42	P	P	11 07 16.7	+0.4
	baz=283,SNR=16						
YUK3	Moose Creek	38.32	46	P	P	11 07 18.3	+1.1
	baz=285,SNR=24						
LOGN	Logan Glacier	38.32	47	P	P	11 07 18.6	+1.4
I29M	Ogilvie Camp,	38.41	40	P	P	11 07 18.3	+0.7
	baz=282,SNR=81						
EPYK	Eagle Plains	38.83	38	P	P	11 07 21.9	+0.8
EPYK				IAmb	IAmb	11 07 23.7	
	comp=Z,69nm,0.9s						
EPYK	Eagle Plains	38.83	38	P	P	11 07 21.9	+0.8
	baz=283,SNR=47						
PINM	Pinnacle	38.89	48	P	P	11 07 23.0	+1.4
	baz=288,SNR=8.0						
BCPM	Bancas Point	39.23	48	P	P	11 07 24.9	+0.5
BCPM				IAmb	IAmb	11 07 26.2	
	comp=Z,27nm,0.5s						
YUK4	Talbot Arm	39.28	46	P	P	11 07 26.3	+1.4
	baz=287,SNR=20						
ZAA0	Zalesovo Array	39.32	302	P	P	11 07 23.9	-1.2
ZALV	Zalesovo Beam	39.32	302	P	P	11 07 24.2	-1.0
	comp=Z,9.4nm,0.4s,baz=60,slow=6.7,SNR=37						
ZALV				PcP	PcP	11 09 23.1	-0.6
	comp=Z,1.9nm,0.3s,baz=99,slow=3.3,SNR=5.8						
ZALV				ScP	ScP	11 12 29.8	-1.6
	comp=Z,1.3nm,0.6s,baz=34,slow=2.5,SNR=4.1						
ZALV	Zalesovo Beam	39.32	302	P	P	11 07 24.2	-1.0
ZALV						11 09 23.1	
PNL	Peninsula	39.43	49	P	P	11 07 27.3	+1.3
	baz=289						
YUK6	Outpost Mounta	39.53	46	P	P	11 07 28.6	+1.6
	baz=288,SNR=13						
INK	Inuvik	39.62	34	P	P	11 07 27.8	+0.5
	comp=Z,58nm,0.6s,baz=289,slow=6.3,SNR=448						
INK	Inuvik	39.62	34	P	P	11 07 27.8	+0.5
INK	Inuvik	39.62	34	P	P	11 07 27.9	+0.5
INK				IAmb	IAmb	11 07 29.3	
	comp=Z,49nm,0.7s						
INK	Inuvik	39.62	34	P	P	11 07 27.9	+0.5
	baz=283,SNR=87						
M30M	Minto, Yukon	39.76	44	P	P	11 07 30.7	+2.1
	baz=287,SNR=33						
HYT	Haines Junctio	39.96	46	P	P	11 07 32.6	+2.2
	baz=288,SNR=77						
N31M	Braeburn, Yuko	40.55	45	P	P	11 07 37.4	+2.3
	baz=289,SNR=37						
M31M	Drury Creek, Y	40.94	44	P	P	11 07 39.9	+1.8
	baz=289,SNR=24						
WHY	Whitehorse	41.23	46	P	P	11 07 42.6	+1.9
WHY	Whitehorse	41.23	46	P	P	11 07 42.7	+2.0
	baz=290,SNR=24						
SKAG	Skagway	41.45	48	P	P	11 07 44.7	+2.5
SKAG				IAmb	IAmb	11 07 45.6	
	comp=Z,37nm,1.2s						
SKAG	Skagway	41.45	48	P	P	11 07 44.4	+2.1
	baz=292						
A36M	Sachs Harbour	41.48	28	P	P	11 07 42.6	+0.3
A36M	Sachs Harbour	41.48	28	P	P	11 07 42.5	+0.3
	baz=286,SNR=57						
BESE	Bessie Mountai	42.01	49	P	P	11 07 48.9	+2.1
MMPY	Sheldon Lake,	42.17	42	P	P	11 07 49.8	+1.8
	baz=291,SNR=21						
WMQ	Urumqi	42.26	286	*e*P	P	11 07 49.9	+0.9
P33M	Teslin, Yukon	42.35	46	P	P	11 07 51.5	+2.0
	baz=292,SNR=29						
SIT	Sitka	42.37	51	P	P	11 07 52.2	+2.6
	baz=294						
MK31	Makanchi Array	43.98	293	P	P	11 08 02.1	-0.4
MK31				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MK31	Makanchi Array	43.98	293	P	P	11 08 02.1	-0.4
MKAR	Makanchi Array	43.98	293	P	P	11 08 02.0	-0.5
	comp=Z,7.0nm,0.6s,baz=66,slow=8.3,SNR=48						
MKAR				pP	pP	11 09 25.8	+2.7
	comp=Z,3.3nm,0.8s,baz=57,slow=11,SNR=3.6						
MKAR				ScP	ScP	11 12 47.9	-2.4
	comp=Z,0.6nm,0.7s,baz=66,slow=6.8,SNR=1.6						
MKAR	Makanchi Array	43.98	293	P	P	11 08 02.0	-0.5
MKAR	Makanchi Array	43.98	293	P	P	11 08 01.9	-0.5
WRAK	Wrangell Islan	44.13	51	P	P	11 08 05.9	+2.5
	baz=296						
KURK	Kurchatov	44.15	300	*c* *i*P	P	11 08 03.1	-0.6
KURK				pmax	pmax		
	comp=Z,25nm,0.8s						
KURK	Kurchatov	44.15	300	P	P	11 08 03.3	-0.4
KURK				IAmb	IAmb	11 08 04.0	
	comp=Z,22nm,0.8s						
KURK	Kurchatov	44.15	300	*e*P	P	11 08 03.1	-0.6
MAKZ	Makanchi	44.16	293	P	P	11 08 03.1	-0.8
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MAKZ	Makanchi	44.16	293	P	P	11 08 03.1	-0.8
DLBC	Dease Lake	44.38	48	P	P	11 08 08.0	+2.6
	comp=Z,20nm,0.6s,baz=286,slow=4.5,SNR=87						
DLBC	Dease Lake	44.38	48	P	P	11 08 07.8	+2.4
DLBC				IAmb	IAmb	11 08 09.0	
	comp=Z,55nm,1.2s						
KMI	Kunming	44.47	254	⇑P	P	11 08 07.1	+0.3
KMI				pmax	pmax		
	comp=Z,18nm,0.8s						
WRGLY	Wrigley	45.21	40	P	P	11 08 13.0	+1.3
	baz=296,SNR=8.5						
EUNU	Eureka	46.03	12	P	P	11 08 17.3	-0.6
EUNU				IAmb	IAmb	11 08 18.4	
	comp=Z,38nm,1.2s						
SLVN	Son La	46.59	249	P	P	11 08 22.8	-0.1
BRVK	Borovoye	47.48	306	*c* *i*P	P	11 08 28.7	-0.5
BRVK				pmax	pmax		
	comp=Z,23nm,0.6s						
BRVK	Borovoye	47.48	306	P	P	11 08 28.9	-0.3
BRVK				IAmb	IAmb	11 08 29.6	
	comp=Z,27nm,0.7s						
BRVK	Borovoye	47.48	306	*e*P	P	11 08 28.7	-0.5
RES	Resolute Bay	48.05	19	P	P	11 08 32.5	-0.8
	comp=Z,37nm,0.8s,baz=320,slow=7.7,SNR=80						
RES	Resolute Bay	48.05	19	P	P	11 08 32.4	-0.8
RES				pmax	pmax		
	comp=Z,40nm,0.9s						
RES	Resolute Bay	48.05	19	P	P	11 08 32.4	-0.8
RES				IAmb	IAmb	11 08 34.0	
	comp=Z,40nm,0.8s						
NOR	Nord	48.23	358	⇑*i*P	P	11 08 33.2	-1.3
NOR				IAmb	IAmb	11 08 34.1	
	comp=Z,4.3nm,0.8s						
SPA0	Spitsbergen Ar	48.88	349	*e*P	P	11 08 38.7	-0.7
YKA	Yellowknife Ar	49.12	38	P	P	11 08 41.3	-0.1
	comp=Z,20nm,0.7s,baz=294,slow=16,SNR=110						
YKA	Yellowknife Ar	49.12	38	P	P	11 08 41.3	-0.1
YKA	Yellowknife Ar	49.12	38	P	P	11 08 41.8	+0.3
SVE	Sverdlovsk	50.20	314	*e*P	P	11 08 49.0	-0.5
SVE				pmax	pmax		
	comp=Z,24nm,0.8s						
AAK	Ala-Archa	50.91	293	⇑*i*P	P	11 08 54.8	-0.4
AAK				pmax	pmax		
	comp=Z,25nm,1.7s						
AAK	Ala-Archa	50.91	293	P	P	11 08 55.4	+0.2
AAK	Ala-Archa	50.91	293	*e*P	P	11 08 54.8	-0.4
SHL	Shillong	50.98	264	P	P	11 08 55.9	-0.1
SHL				pmax	pmax		
	comp=Z,17nm,0.5s						
SHL	Shillong	50.98	264	P	P	11 08 55.9	-0.1
SHL				IAmb	IAmb	11 08 56.8	
	comp=Z,17nm,0.5s						
TULEG	Thule	51.01	11	⇑*i*P	P	11 08 53.6	-1.6
TULEG				IAmb	IAmb	11 08 54.3	
	comp=Z,17nm,0.6s						
TULEG	Thule	51.01	11	P	P	11 08 53.3	-1.9
TULEG				IAmb	IAmb	11 08 54.5	
	comp=Z,18nm,0.6s						
ARU	Arti	51.37	315	*c* *i*P	P	11 08 57.4	-0.7
ARU						11 10 03.9	
ARU				*PP	pP	11 10 21.4	-0.3
ARU						11 10 56.2	
ARU				S	S	11 15 46.1	+1.5
ARU				SS	SS	11 19 26.2	0.0
ARU				pmax	pmax		
	comp=Z,30nm,0.7s						
ARU	Arti	51.37	315	P	P	11 08 57.3	-0.9
ARU				IAmb	IAmb	11 08 58.3	
	comp=Z,32nm,0.8s						
ARU	Arti	51.37	315	*e*P	P	11 08 57.4	-0.7
CHTO	Chiang Mai	51.51	252	P	P	11 09 00.2	+0.5
CHTO				pmax	pmax		
	comp=Z,14nm,0.8s						
CHTO	Chiang Mai	51.51	252	P	P	11 09 00.2	+0.5
CMAR	Chiang Mai Arr	51.78	252	P	P	11 09 02.1	+0.5
	comp=Z,6.6nm,0.7s,baz=30,slow=6.7,SNR=32						
CMAR	Chiang Mai Arr	51.78	252	P	P	11 09 02.2	+0.5
CMAR	Chiang Mai Arr	51.78	252	P	P	11 09 02.5	+0.8
NEEM	North Greenlan	51.86	6	⇑*i*P	P	11 09 00.4	-1.4
NEEM				IAmb	IAmb	11 09 01.1	
	comp=Z,48nm,0.7s						
LLLB	Lillooet	52.47	53	P	P	11 09 07.7	+1.4
PGC	Sidney	52.81	56	P	P	11 09 10.4	+1.8
KK31	Karatay Array	52.97	295	P	P	11 09 09.1	-0.8
KK31				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KK31	Karatay Array	52.97	295	P	P	11 09 09.1	-0.8
KKAR	Karatay Array	52.97	295	P	P	11 09 09.3	-0.7
KKAR	Karatay Array	52.97	295	P	P	11 09 09.3	-0.7
DAG	Danmarks Havn	53.08	357	*i* P	P	11 09 08.9	-1.3
DAG				⇑*i*P	P	11 09 09.0	-1.2
DAG				IAmb	IAmb	11 09 09.7	
	comp=Z,14nm,0.6s						
PRGR	Permogore	53.56	325	*e*P	P	11 09 12.2	-1.7
PRGR				pmax	pmax		
	comp=Z,24nm,0.6s						
HAMF	Hammerfest	53.56	341	*e*P	P	11 09 13.0	-0.8
D03D	Eldon	53.67	57	P	P	11 09 16.8	+1.8
	baz=308						
B05A	Bryant	53.76	56	P	P	11 09 17.3	+1.8
	baz=308						
ARA0	ARCESS Array S	54.02	339	*e*P	P	11 09 16.1	-1.0
ARCES	ARCESS Array B	54.02	339	P	P	11 09 16.4	-0.6
	comp=Z,2.8nm,0.3s,baz=23,slow=7.3,SNR=50						
ARCES				PcP	PcP	11 10 14.7	-1.1
	comp=Z,2.2nm,0.7s,baz=17,slow=4.0,SNR=3.6						
ARCES	ARCESS Array B	54.02	339	P	P	11 09 16.4	-0.6
ARCES						11 10 14.7	
KIRV	Kirov	54.03	321	*ce*P	P	11 09 16.6	-0.6
D04E	Lakebay	54.06	57	P	P	11 09 19.8	+2.1
	baz=308						
RABL	Rabaul	54.23	178	P	P	11 09 20.7	+1.4
RABL				IAmb	IAmb	11 09 21.1	
	comp=Z,64nm,1.1s						
E04D	Cinebar	54.56	58	P	P	11 09 23.2	+2.0
	baz=308						
KTK1	Kautokeino	54.93	340	*e*P	P	11 09 22.8	-0.8
ABKAR	Akbulak array	54.99	307	P	P	11 09 23.6	-0.6
EDM	Edmonton	55.08	47	P	P	11 09 25.8	+0.9
EDM				pmax	pmax		
	comp=Z,51nm,0.6s						
EDM	Edmonton	55.08	47	P	P	11 09 25.8	+0.9
EDM				IAmb	IAmb	11 09 26.7	
	comp=Z,51nm,0.6s						
JETT	Jettan, Norway	55.12	341	*e*P	P	11 09 25.1	+0.2
LTY	Liberty	55.14	56	P	P	11 09 26.5	+1.0
B08A	Colville Reser	55.16	54	P	P	11 09 26.4	+0.9
FAKI	Fak Fak	55.28	203	P	P	11 09 26.4	-0.3
TRO	Tromso	55.36	341	*e*P	P	11 09 25.6	-0.9
DBG	Daneborg	55.59	357	*i* P	P	11 09 26.6	-1.5
DBG				IAmb	IAmb	11 09 27.8	
	comp=Z,7.2nm,0.8s						
GAR	Garm	55.65	291	P	P	11 09 28.7	-0.5
UPNV	Upernavik	55.86	9	⇑*i*P	P	11 09 28.2	-1.7
UPNV				IAmb	IAmb	11 09 28.6	
	comp=Z,34nm,0.6s						
I03D	Drain, OR	55.91	61	P	P	11 09 33.4	+2.6

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      baz=310
C09A  Chrisman Ranch   56.06  54   P      P      11 09 32.9 +1.1
NEW   Newport          56.37  53   P      P      11 09 34.9 +1.0
      comp=Z,5.8nm,0.7s,baz=318,slow=6.5,SNR=17
NEW   Newport          56.37  53   P      P      11 09 34.9 +1.0
NEW   Newport          56.37  53   P      P      11 09 35.2 +1.2
NEW   Newport          56.37  53   P      P      11 09 35.0 +1.0
      baz=310,SNR=11
I04A  Tendick Farm,    56.38  60   P      P      11 09 36.1 +2.0
      baz=310
F07A  Phinny Hill Vi   56.40  57   P      P      11 09 36.1 +2.0
CHGR  Chuyangaron      56.56 292   P      P      11 09 34.7 -0.8
CHGR                               IAmb   IAmb   11 09 35.7
      comp=Z,14nm,0.5s
I05D  Terrebonne, OR   56.62  59   P      P      11 09 37.8 +2.0
      baz=310
PINE  Pine Mountain    57.19  59   P      P      11 09 42.5 +2.6
SUMG  Summit           57.31   3   P      P      11 09 40.3 -0.3
SUMG                               pmax   pmax
      comp=Z,59nm,1.0s
SUMG  Summit           57.31   3 i P      P      11 09 40.3 -0.3
SUMG  Summit           57.31   3   P      P      11 09 40.3 -0.3
SUMG                               IAmb   IAmb   11 09 41.2
      comp=Z,59nm,1.0s
J05D  Fort Rock, OR    57.36  60   P      P      11 09 43.4 +2.4
      baz=311,SNR=5.1
L04D  Klamath Falls    57.45  62   P      P      11 09 43.8 +2.1
      baz=311
K04D  Chiloquin, OR    57.50  61   P      P      11 09 44.0 +2.0
      baz=311
STEI  Steigen          57.53 342  eP      P      11 09 40.5 -1.0
YBH   Yreka Blue Hor   57.53  62   P      P      11 09 44.7 +2.5
      comp=Z,3.3nm,0.7s,baz=9.6,slow=7.1,SNR=12
YBH   Yreka Blue Hor   57.53  62   P      P      11 09 44.7 +2.5
YBH   Yreka Blue Hor   57.53  62   IAmb   IAmb   11 09 46.6
      comp=Z,6.5nm,1.2s
M02C  Callahan         57.67  63   P      P      11 09 45.3 +2.1
      baz=311
LOF   Lofoten          57.69 342  eP      P      11 09 41.9 -0.8
FAUS  Fauske           57.98 341  eP      P      11 09 43.8 -0.9
M04C  Macdoel          58.00  62   P      P      11 09 47.6 +2.2
      baz=311
N02D  Trinity Center   58.03  63   P      P      11 09 48.1 +2.5
      baz=311
JTMT  Jette            58.15  52   P      P      11 09 47.6 +1.2
O02D  Mt. Diablo Mer   58.51  64   P      P      11 09 51.0 +2.2
      baz=312
MOD   Modoc Plateau    58.78  61   P      P      11 09 52.6 +1.8
MSO   Missoula         58.94  53   P      P      11 09 52.8 +1.1
MSO   Missoula         58.94  53   P      P      11 09 53.1 +1.4
      baz=312,SNR=27
O03E  Paynes Creek     59.00  63   P      P      11 09 53.7 +1.5
      baz=312
PLID  Pearl Lake       59.02  56   P      P      11 09 54.0 +1.6
FFC   Flin Flon        59.11  40   P      P      11 09 53.1 +0.6
FFC                                pmax   pmax
      comp=Z,39nm,1.0s
FFC   Flin Flon        59.11  40   P      P      11 09 53.1 +0.6
FFC                                IAmb   IAmb   11 09 54.2
      comp=Z,39nm,0.9s
KONS  Konsvik          59.18 342  eP      P      11 09 52.3 -0.6
MOR8  Moi Rana         59.20 341  eP      P      11 09 50.9 -2.1
FCC   Fort Churchill   59.23  33   P      P      11 09 53.3 +0.1
FCC                                pmax   pmax
      comp=Z,40nm,1.2s
FCC   Fort Churchill   59.23  33   P      P      11 09 53.3 +0.1
FCC                                IAmb   IAmb   11 09 53.9
      comp=Z,40nm,1.1s
STOK  Stokkvaagen      59.35 342  eP      P      11 09 53.3 -0.7
WVOR  Wild Horse Val   59.36  59   P      P      11 09 56.6 +2.0
WVOR                               pmax   pmax
      comp=Z,6.0nm,0.9s
WVOR  Wild Horse Val   59.36  59   P      P      11 09 56.6 +2.0
KSM   Kuching          59.43 229   P      P      11 09 57.0 +1.8
SCO   Scoresbysund     59.47 357 i P      P      11 09 54.4 -0.3
ILULI Ilulissat        59.78   9   P      P      11 09 55.4 -1.4
ILULI                              pmax   pmax
      comp=Z,32nm,0.6s
ILULI Ilulissat        59.78   9 i P      P      11 09 55.0 -1.8
ILULI                              IAmb   IAmb   11 09 55.7
      comp=Z,33nm,0.7s
ILULI Ilulissat        59.78   9   P      P      11 09 55.4 -1.4
ILULI                              IAmb   IAmb   11 09 55.9
      comp=Z,32nm,0.6s
HRY   Holter Researc   60.09  52   P      P      11 10 01.1 +1.6
FIA1  FINESS Array S   60.19 333   P      P      11 09 59.0 -0.7
FIA1                               IAmb   IAmb   11 09 59.7
      comp=Z,27nm,1.1s
FINES FINESS Array B   60.19 333   P      P      11 09 58.8 -0.9
      comp=Z,13nm,0.4s,baz=34,slow=7.5,SNR=150
FINES                              PcP    PcP    11 10 38.9 -1.4
      comp=Z,3.4nm,0.5s,baz=69,slow=3.3,SNR=5.7
FINES FINESS Array B   60.19 333   P      P      11 09 58.8 -0.9
FINES                                            11 10 38.9
FINES FINESS Array B   60.19 333   P      P      11 09 59.0 -0.7
EGMT  Eagleton         60.23  50   P      P      11 10 01.5 +1.1
      baz=313,SNR=7.8
MFID  Camas Ranch      60.23  57   P      P      11 10 02.6 +2.1
DLMT  Dillon           60.62  53   P      P      11 10 05.1 +2.0
ICESG Greenland Ices   60.74   4 ⇑iP      P      11 10 03.2 -0.5
ICESG                              IAmb   IAmb   11 10 04.0
      comp=Z,65nm,0.8s
MCMT  McKenzie Canyo   60.85  54   P      P      11 10 06.2 +1.4
HLID  Hailey           60.89  56   P      P      11 10 06.4 +1.5
      baz=313
BOZ   Bozeman (W)      60.95  53   P      P      11 10 06.9 +1.7
BOZ                                pmax   pmax
      comp=Z,14nm,0.8s
BOZ   Bozeman (W)      60.95  53   P      P      11 10 06.9 +1.7
BOZ                                IAmb   IAmb   11 10 07.8
      comp=Z,14nm,0.8s
BOZ   Bozeman (W)      60.95  53   P      P      11 10 06.9 +1.7
      baz=314,SNR=29
NSS   Namsos           61.14 341  eP      P      11 10 05.3 -0.6
KULM  Kulim            61.25 241   P      P      11 10 09.0 +1.6
OBN   Obninsk          61.52 323⇓eP      P      11 10 08.0 -0.6
OBN                                pmax   pmax
      comp=Z,8.0nm,0.5s
OBN   Obninsk          61.52 323  eP      P      11 10 08.0 -0.6
GCMT  Greycliff        61.81  51   P      P      11 10 12.8 +1.8
YHH   Holmes Hill      61.91  53   P      P      11 10 13.8 +2.0
KVN   Kaiserville      61.94  62   P      P      11 10 14.2 +2.2
KVN                                pmax   pmax
      comp=Z,4.0nm,0.7s
KVN   Kaiserville      61.94  62   P      P      11 10 14.2 +2.2
SFJD  Kangerlussuaq    61.98   9 i P      P      11 10 10.1 -1.3
NVAR  Mina Array Bea   62.25  63   P      P      11 10 16.0 +2.0
      comp=Z,1.6nm,0.6s,baz=292,slow=6.7,SNR=7.6
VRH   Novokhopyorsk    62.31 318  eP      P      11 10 12.2 -1.7
VRH                                pmax   pmax
      comp=Z,30nm,1.2s
H17A  Grant Village    62.32  53   P      P      11 10 17.4 +3.0
      baz=314,SNR=7.7
VSU   Vasula           62.37 331⇓eP      P      11 10 13.5 -0.6
VSU                                pmax   pmax
      comp=Z,75nm,1.8s
LPSR  Galich'ya Gora   62.46 320  eP      P      11 10 12.0 -2.8
LPSR                               pmax   pmax
      comp=Z,30nm,1.2s
RLMT  Red Lodge        62.48  52   P      P      11 10 17.4 +2.0
RLMT  Red Lodge        62.48  52   P      P      11 10 17.2 +1.7
      baz=315
MLAC  Mammoth, Mammo62.50  64   P      P      11 10 17.2 +1.5
      baz=314
DGMT  Dagmar           62.57  46   P      P      11 10 16.5 +0.8
DGMT  Dagmar           62.57  46   P      P      11 10 16.8 +1.1
      baz=316,SNR=19
TPAW  Teton Pass       62.76  54   P      P      11 10 19.7 +2.4
LAO   LASA Array       62.88  49   P      P      11 10 19.2 +1.4
      baz=316,SNR=6.1
DY2G  Dye2             62.90   8 i P      P      11 10 16.8 -0.9
DY2G                               IAmb   IAmb   11 10 18.6
      comp=Z,27nm,0.7s
REDW  Red Top Meadow   62.90  54   P      P      11 10 19.9 +1.7
AHID  Auburn Hatcher   63.19  55   P      P      11 10 21.1 +1.0
VSR   Storozhevoye     63.39 319  eP      P      11 10 18.7 -2.2
VSR                                pmax   pmax
      comp=Z,8.0nm,0.9s
GRAC  Grapevine Rang   63.78  63   P      P      11 10 25.8 +2.0
      baz=315
MOL   Molde            63.80 342  eP      P      11 10 23.8 +0.6
DOMB  Dombas           63.96 341  eP      P      11 10 23.7 -0.8
BW06  Boulder Array    63.99  54   P      P      11 10 26.4 +1.1
BW06                               IAmb   IAmb   11 10 27.1
      comp=Z,9.2nm,0.7s
BW06  Boulder Array    63.99  54   P      P      11 10 26.3 +1.1
      baz=316,SNR=5.2
PD31  Pinedale Array   63.99  54   P      P      11 10 26.6 +1.3
PDAR  Pinedale Array   63.99  54   P      P      11 10 26.6 +1.3
      comp=Z,10.0nm,0.8s,baz=318,slow=1.3,SNR=74
PDAR  Pinedale Array   63.99  54   P      P      11 10 26.4 +1.1
DUG   Dugway, Tooele   64.08  58   P      P      11 10 27.3 +1.6
      baz=315
NC405 NORSAR Array S   64.21 339   P      P      11 10 24.2 -1.8
NC405                              IAmb   IAmb   11 10 25.3
      comp=Z,31nm,0.8s
AKN   Aaknes           64.26 342  eP      P      11 10 25.7 -0.6
COEN  Coen             64.26 188   P      P      11 10 27.9 +1.1
COEN                               IAmb   IAmb   11 10 28.8
      comp=Z,22nm,0.9s
NB2   NORSAR Subarra   64.39 339   P      P      11 10 26.7 -0.5
      comp=Z,3.9nm,0.5s,baz=28,slow=6.5
NB2   NORSAR Subarra   64.39 339   P      P      11 10 26.7 -0.5
      baz=28,slow=6.5
NOA   NORSAR Array B   64.39 339   P      P      11 10 26.6 -0.7
      comp=Z,5.5nm,0.5s,baz=28,slow=6.4,SNR=25
NOA                                pP     pP     11 11 55.2 -0.4
      comp=Z,2.7nm,0.9s,baz=28,slow=6.6,SNR=4.6
NOA   NORSAR Array B   64.39 339   P      P      11 10 26.6 -0.7
NOA                                *PP    pP     11 11 55.2 -0.4
FURC  Furnace Creek,   64.44  63   P      P      11 10 29.7 +1.9
      baz=315,SNR=6.4
NBO00 NORSAR Array S   64.50 340   P      P      11 10 26.0 -1.9
NBO00                              IAmb   IAmb   11 10 27.4
      comp=Z,24nm,0.9s
NC602 NORSAR Array S   64.59 339  eP      P      11 10 27.7 -0.7
NLU   North Lily Min   64.65  58   P      P      11 10 31.4 +1.9
EDW2  Edwards Air Fo   64.90  65   P      P      11 10 32.8 +1.8
      baz=315
ULM   Lac du Bonnet    64.93  41   P      P      11 10 30.2 -0.6
      comp=Z,5.6nm,0.5s,baz=310,slow=6.2,SNR=20
ULM   Lac du Bonnet    64.93  41   P      P      11 10 30.2 -0.6
ULM   Lac du Bonnet    64.93  41   P      P      11 10 30.2 -0.6
MTN   Manton Dam       65.11 201   P      P      11 10 32.6 +0.3
MTN                                IAmb   IAmb   11 10 33.7
      comp=Z,20nm,1.1s
MDND  Maddock          65.12  44   P      P      11 10 33.0 +0.9
      baz=318
MNK   Minsk            65.17 327 i P      P      11 10 31.0 -1.2
MNK                              i               11 10 59.6
MNK                              i               11 13 00.4
MNK                              i PPP    PPP    11 14 41.1
MNK                              i S      S      11 18 40.4 -0.4
MNK                              i               11 19 42.0
MNK                              i SS     SS     11 23 03.7 +2.1
MNK                                pmax   pmax
      comp=Z,28nm,1.1s
MNK                                pmax   pmax
      comp=E,2.0nm,0.8s
MNK                                pmax   pmax
      comp=N,32nm,1.1s
MNK                                MLR    MLR
      comp=Z,110nm,16.0s
MNK                                MLR    MLR
      comp=N,225nm,18.0s
MNK                                MLR    MLR
      comp=E,14nm,16.0s
MNK   Minsk            65.17 327 i P      P      11 10 31.0 -1.2
      comp=E,2.0nm,0.8s
MNK                              i P      P      11 10 31.0 -1.2
      comp=N,32nm,1.1s
MNK                              i P      P      11 10 31.0 -1.2
      comp=Z,28nm,1.1s,baz=36
MNK                              i PcP    PcP    11 10 59.6 -1.2
MNK                              i PP     PP     11 13 00.4 -1.0
MNK                              i PPP    PPP    11 14 41.1
MNK                              i S      S      11 18 40.4 -0.4
MNK                              i SS     SS     11 23 03.8 +2.2
MNK                              i SSS    SSS    11 26 18.8
MNK                              i LRM    MLR    11 40 57.7
      comp=Z,110nm,16.3s
MNK                              i LRM    MLR    11 41 05.4
      comp=N,225nm,17.8s
MNK                              i LRM    MLR    11 41 15.0
      comp=E,14nm,16.4s
NACGM Naroch           65.22 328 i P      P      11 10 31.4 -1.1
GSC   Goldstone, Bar   65.29  64   P      P      11 10 34.5 +1.0
      baz=315
SKAR  Skarslia         65.35 341  eP      P      11 10 33.1 -0.2
BFSC  Mount Baldy Ra   65.55  65   P      P      11 10 36.5 +1.3
      baz=316
RDMU  Red Mountain     65.56  56   P      P      11 10 36.4 +1.1
RDMU                               IAmb   IAmb   11 10 37.9
      comp=Z,12nm,0.8s
E28A  Huff             65.57  46   P      P      11 10 35.8 +0.8
K22A  Casper           65.63  52   P      P      11 10 36.2 +0.5
      baz=317,SNR=6.6
RSSD  Black Hills      65.80  50   P      P      11 10 37.5 +0.8
RSSD                               pmax   pmax
      comp=Z,21nm,0.9s
RSSD  Black Hills      65.80  50   P      P      11 10 37.5 +0.8
RSSD                               IAmb   IAmb   11 10 38.5
      comp=Z,22nm,0.8s
RSSD  Black Hills      65.80  50   P      P      11 10 37.4 +0.8
      baz=318
KONO  Kongsberg        66.00 340⇓eP      P      11 10 37.1 -0.2
KONO                               pmax   pmax
      comp=Z,53nm,2.5s
KONO  Kongsberg        66.00 340  eP      P      11 10 37.2 -0.2
MURC  Murrieta         66.27  66   P      P      11 10 41.1 +1.5
      baz=316
GMRC  Granite Mounta   66.32  64   P      P      11 10 41.7 +1.7
      baz=316
ODD1  Odda             66.40 341  eP      P      11 10 39.7 -0.2
AGMN  Agassiz Nation   66.42  42   P      P      11 10 39.8 -0.4
      baz=320,SNR=5.9
O20A  White River Ci   66.57  55   P      P      11 10 42.3 +0.7
      baz=317,SNR=5.7
IRM   Iron Mountain    67.07  64   P      P      11 10 46.0 +1.5
      baz=316
N23A  Red Feather La   67.21  53   P      P      11 10 46.5 +0.9
      baz=318
KIV   Kislovodsk       67.23 312  eP      P      11 10 47.1 +1.7
KIV                                pmax   pmax
      comp=Z,10.0nm,1.1s
B35A  Bob, Littlefor   67.28  41   P      P      11 10 45.1 -0.4
B35A                               IAmb   IAmb   11 10 46.1
      comp=Z,20nm,0.8s
KBZ   Khabaz           67.30 312   P      P      11 10 45.5 -0.3
      comp=Z,3.8nm,0.6s,baz=160,slow=4.6,SNR=6.6
KBZ   Khabaz           67.30 312⇓eP      P      11 10 45.0 -0.7
KBZ                                pmax   pmax
      comp=Z,8.0nm,1.1s
KBZ   Khabaz           67.30 312  eP      P      11 10 45.0 -0.7
NEY   Neytrino         67.74 311⇓iP      P      11 10 51.2 +2.5
NEY                                pmax   pmax
      comp=Z,3.0nm,1.2s
AKASG Malin Array Be   67.75 324   P      P      11 10 47.0 -1.4
      comp=Z,3.8nm,0.4s,baz=33,slow=6.3,SNR=8.0
AKASG                              pP     pP     11 12 20.2 +2.3
      comp=Z,0.7nm,0.3s,baz=32,slow=6.9,SNR=2.0
AKASG Malin Array Be   67.75 324   P      P      11 10 47.0 -1.4
AKASG                              *PP    pP     11 12 20.2 +2.3
AKBB  Malin Array Si   67.75 324ceP      P      11 10 46.9 -1.5
AKBB                               pmax   pmax
      comp=Z,13nm,0.9s
AKBB  Malin Array Si   67.75 324   P      P      11 10 47.0 -1.5
AKBB                               IAmb   IAmb   11 10 47.8
      comp=Z,13nm,1.0s
SUSD  Miller           67.98  46   P      P      11 10 50.3 +0.3
      baz=320,SNR=8.3
ISCO  Idaho Springs    68.19  54   P      P      11 10 53.2 +1.4
      baz=318,SNR=7.3
KNRA  Kununurra        68.41 203   P      P      11 10 53.3 +0.6
KNRA                               IAmb   IAmb   11 10 54.3
      comp=Z,18nm,0.7s
EYMN  Ely              68.53  40   P      P      11 10 52.9 -0.4
EYMN                               IAmb   IAmb   11 10 53.9
      comp=Z,25nm,1.0s
EYMN  Ely              68.53  40   P      P      11 10 52.9 -0.4
      baz=323,SNR=14
MVCO  Mesa Verde       68.57  57   P      P      11 10 55.3 +1.3
MVCO  Mesa Verde       68.57  57   P      P      11 10 55.4 +1.3
      baz=318,SNR=6.2
BSD   Bornholm Skovb   68.70 335  eP      P      11 10 53.3 -0.8
Q24A  Divide           69.05  54   P      P      11 10 57.9 +0.9
      baz=318
S22A  4UR Ranch, Cre   69.07  56   P      P      11 10 58.6 +1.5
      baz=318
OGNE  Ogallala         69.15  51   P      P      11 10 58.4 +1.1
OGNE  Ogallala         69.15  51   P      P      11 10 58.2 +0.9
      baz=319,SNR=8.6
W18A  Petrified Fore   69.43  60   P      P      11 11 00.6 +1.5
      baz=318
ECSD  EROS Data Cent   69.61  46   P      P      11 11 00.3 +0.4
ECSD  EROS Data Cent   69.61  46   P      P      11 11 00.3 +0.4
      baz=321,SNR=63
SDCO  Great Sand Dun   69.77  55   P      P      11 11 02.7 +1.4
SDCO  Great Sand Dun   69.77  55   P      P      11 11 02.6 +1.2
      baz=319,SNR=8.0
CTA   Charters Tower   70.13 184   P      P      11 11 03.8 +0.6
      comp=Z,16nm,0.8s,baz=359,slow=8.0,SNR=22
CTA   Charters Tower   70.13 184   P      P      11 11 03.8 +0.6
CTAO  Charters Tower   70.13 184   P      P      11 11 03.7 +0.6
CTAO                               pmax   pmax
      comp=Z,24nm,1.0s
CTAO  Charters Tower   70.13 184   P      P      11 11 03.7 +0.6
CTAO                               IAmb   IAmb   11 11 04.6
      comp=Z,24nm,0.9s
SPMN  Marine on St.    70.14  42   P      P      11 11 02.9 -0.1
SPMN                               IAmb   IAmb   11 11 03.6
      comp=Z,36nm,1.1s
SPMN  Marine on St.    70.14  42   P      P      11 11 02.9 -0.1
      baz=323,SNR=14
D41A  Chassel          70.43  39   P      P      11 11 04.3 -0.4
D41A                               IAmb   IAmb   11 11 06.1
      comp=Z,14nm,0.7s
BGNE  Belgrade         70.69  48   P      P      11 11 06.8 +0.3
BGNE  Belgrade         70.69  48   P      P      11 11 06.7 +0.3
      baz=321,SNR=8.3
SCHQ  Schefferville    70.69  22   P      P      11 11 05.5 -0.6
      comp=Z,13nm,0.4s,baz=335,slow=6.0,SNR=68
T25A  Trinidad         70.80  55   P      P      11 11 08.5 +1.1
      baz=319
I37A  Lemond, Waseca   70.83  43   P      P      11 11 07.7 +0.5
COWI  Conover          70.98  40   P      P      11 11 07.5 -0.5
COWI                               IAmb   IAmb   11 11 08.0
      comp=Z,11nm,0.7s
BSEG  Bad Segeberg     70.98 336  eP      P      11 11 07.1 -0.7
      comp=Z,4.1nm,0.7s,baz=27,slow=5.9
KWP   Kalwaria Pacla   71.00 327  eP      P      11 11 07.2 -0.8
G40A  Rib Lake         71.21  41   P      P      11 11 09.3 -0.1
G40A                               IAmb   IAmb   11 11 10.1
      comp=Z,27nm,1.4s
WR0   Warramunga Arr   71.33 196   P      P      11 11 10.6 +0.3
WR0                                IAmb   IAmb   11 11 11.1
      comp=Z,9.8nm,0.7s
WRAB  Tennant Creek    71.34 196d iP      P      11 11 10.7 +0.3
WRAB                               pmax   pmax
      comp=Z,14nm,0.8s
WRAB  Tennant Creek    71.34 196   P      P      11 11 10.8 +0.5
WRAB                               IAmb   IAmb   11 11 11.6
      comp=Z,14nm,0.8s
WRA   Warramunga Arr   71.35 196   P      P      11 11 10.8 +0.3
      comp=Z,12nm,0.6s,baz=19,slow=5.1,SNR=136
WRA                                pP     pP     11 12 42.2 +1.7
      comp=Z,1.5nm,0.8s,baz=14,slow=5.8,SNR=4.5
WRA   Warramunga Arr   71.35 196   P      P      11 11 10.7 +0.3
WRA                                pmax   pmax
      comp=Z,1.0nm,0.9s
WRA   Warramunga Arr   71.35 196   P      P      11 11 10.7 +0.3
ANMO  Albuquerque      71.36  58⇓iP      P      11 11 12.6 +1.9
ANMO                               pmax   pmax
      comp=Z,13nm,2.5s
ANMO  Albuquerque      71.36  58   P      P      11 11 12.3 +1.7
ANMO  Albuquerque      71.36  58   P      P      11 11 12.3 +1.7
      baz=319
OJC   Ojcow            71.48 329  eP      P      11 11 09.8 -1.1
FITZ  Fitzroy Crossi   71.54 205   P      P      11 11 12.2 +0.7
E43A  Lone Tree Farm   71.61  38   P      P      11 11 11.4 -0.3
E43A                               IAmb   IAmb   11 11 12.8
      comp=Z,26nm,1.3s
BUR08 Bucovina Ar. S   71.77 325   P      P      11 11 11.9 -0.9
BURAR Bucovina Array   71.79 325  ⇑P      P      11 11 12.0 -0.9
BURAR Bucovina Array   71.79 325  ⇑P      P      11 11 12.0 -0.9
BURAR Bucovina Array   71.79 325   P      P      11 11 11.9 -0.9
CBKS  Cedar Bluff      71.92  51   P      P      11 11 13.4 -0.3
      baz=321
KSP   Ksiaz            72.05 332  eP      P      11 11 13.8 -0.4
TESR  Tescani          72.17 323  ⇑P      P      11 11 13.4 -1.6
FLTG  Flechtingen      72.19 335  eP      P      11 11 13.8 -1.1
      comp=Z,5.1nm,0.8s,baz=27,slow=5.9
N35A  Tabor            72.30  47   P      P      11 11 16.4 +0.5
TRPA  Tarpa            72.33 326  ⇑P      P      11 11 14.7 -1.2
NRDL  Niedersach Rie   72.34 336  eP      P      11 11 15.0 -0.7
      comp=Z,4.1nm,0.8s,baz=27,slow=5.9
NRDL                              epP     pP     11 12 47.1 +0.5
DPC   Dobruska-Polom   72.48 331  eP      P      11 11 16.4 -0.4
DPC   Dobruska-Polom   72.48 331  eP      P      11 11 16.4 -0.4
LANS  Liptovska Anna   72.51 329  eP      P      11 11 17.7 +0.7
LANS                               pmax   pmax
      comp=Z,5.0nm,0.8s
LANS  Liptovska Anna   72.51 329  eP      P      11 11 17.7 +0.7
ASSE  Asse, Remlinge   72.52 335  eP      P      11 11 15.7 -1.1
      comp=Z,1.9nm,0.8s,baz=27,slow=5.9
ASSE                              epP     pP     11 12 48.1 +0.3
SCIA  State Center     72.59  45   P      P      11 11 18.2 +0.7
SCIA  State Center     72.59  45   P      P      11 11 17.7 +0.2
      baz=323,SNR=8.4
MORC  Moravsky Berou   72.60 330  ⇓P      P      11 11 17.5  0.0
MORC  Moravsky Berou   72.60 330  ⇓P      P      11 11 17.5  0.0
MORC  Moravsky Berou   72.60 330   P      P      11 11 17.2 -0.3
MORC  Moravsky Berou   72.60 330  eP      P      11 11 17.0 -0.5
CLL   Collm            72.61 334⇑iP      P      11 11 16.4 -1.1
CLL                              i *PP    pP     11 12 46.9 -1.6
CLL                                pmax   pmax
      comp=Z,15nm,0.9s
CLL   Collm            72.61 334⇑iP      P      11 11 16.4 -1.1
      comp=Z,15nm,0.9s
CLL                              i pP     pP     11 12 46.9 -1.6
CLL   Collm            72.61 334   P      P      11 11 16.5 -1.1
CLL                                IAmb   IAmb   11 11 17.3
      comp=Z,14nm,0.8s
CLL   Collm            72.61 334  eP      P      11 11 16.4 -1.1
      comp=Z,11nm,0.8s,baz=27,slow=5.9
E46A  Sault Ste Mari   72.67  36   P      P      11 11 17.0 -0.9
E46A                               IAmb   IAmb   11 11 18.8
      comp=Z,22nm,1.4s
CFR   Carcaliu         72.68 321  ⇑P      P      11 11 17.1 -0.9
CFR   Carcaliu         72.68 321  ⇑P      P      11 11 17.1 -0.9
PLOR  Plostina         72.71 323  ⇑P      P      11 11 17.3 -0.9
PLOR  Plostina         72.71 323  ⇑P      P      11 11 17.3 -0.9
BRG   Berggiesshubel   72.73 333  eP      P      11 11 17.2 -1.0
      comp=Z,4.5nm,1.1s,baz=27,slow=5.9
OZUR                   72.84 323  ⇑P      P      11 11 18.4 -0.6
FBE   Freiberg         72.86 333  eP      P      11 11 18.2 -0.7
      comp=Z,7.1nm,0.8s,baz=27,slow=5.9
CLZ   Clausthal        72.86 336  eP      P      11 11 18.4 -0.6
      comp=Z,7.0nm,0.9s,baz=27,slow=5.9
CLZ                               epP     pP     11 12 50.5 +0.4
I42A  Draeger Farm,    72.86  41   P      P      11 11 19.0 -0.1
I42A                               IAmb   IAmb   11 11 19.8
      comp=Z,27nm,1.1s
H43A  Windswept, Lux   72.86  40   P      P      11 11 19.3 +0.2
COVR  Voineasa-Covas   72.89 323  ⇓P      P      11 11 19.4 +0.1
JFWS  Jewell Farm      73.09  42   P      P      11 11 19.7 -0.7
      baz=324
HARR  Harsova          73.17 321  ⇑P      P      11 11 20.2 -0.6
HARR  Harsova          73.17 321  ⇑P      P      11 11 20.2 -0.6
KSU1  Kansas State U   73.22  49   P      P      11 11 20.9 -0.3
      baz=322,SNR=12
TLBR  Topalu           73.24 321  ⇓P      P      11 11 21.1 -0.2
MLR   Muntele Rosu     73.29 323  ⇓P      P      11 11 22.2 +0.5
MLR   Muntele Rosu     73.29 323  ⇓P      P      11 11 22.2 +0.5
VYHS  Vyhne            73.29 329  eP      P      11 11 20.9 -0.6
VYHS  Vyhne            73.29 329  eP      P      11 11 20.9 -0.6
VRAC  Vranov           73.31 331  eP      P      11 11 21.0 -0.6
DZM   Mont Dzumac      73.33 165   P      P      11 11 23.9 +1.8
      comp=Z,16nm,0.9s,baz=25,slow=6.2,SNR=8.9
PRU   Pruhonice        73.34 332  eP      P      11 11 21.0 -0.7
PRU   Pruhonice        73.34 332  eP      P      11 11 21.0 -0.7
JAVC  Velka Javorina   73.36 330  eP      P      11 11 22.1 +0.2
ISR   Istrita          73.36 322  ⇑P      P      11 11 22.3 +0.3
ISR   Istrita          73.36 322  ⇑P      P      11 11 22.3 +0.3
N38A  Joes South For   73.47  45   P      P      11 11 23.0 +0.3
TANN  Tannenbergstha   73.57 334  eP      P      11 11 22.1 -0.9
      comp=Z,2.2nm,0.7s,baz=27,slow=5.9
KRUC  Moravsky         73.58 331  eP      P      11 11 22.5 -0.6
MOX   Moxa             73.60 334  eP      P      11 11 22.5 -0.7
      comp=Z,3.8nm,0.9s,baz=27,slow=5.9
GUNZ  Gunzen           73.65 334  eP      P      11 11 22.7 -0.8
      comp=Z,3.6nm,0.8s,baz=27,slow=5.9
VOIR                   73.68 323  ⇑P      P      11 11 23.5 -0.3
VOIR                   73.68 323  ⇑P      P      11 11 23.5 -0.3
WERN  Wernitzgruen     73.70 334  eP      P      11 11 23.4 -0.5
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	comp=Z,5.8nm,0.8s,baz=27,slow=5.9						
GLMI	**Grayling**	**73.83**	**38**	P	**P**	**11 11 24.7**	**0.0**
GLMI	**Grayling**	**73.83**	**38**	P	**P**	**11 11 24.4**	**-0.2**
	baz=327						
ARR	**Arges**	**73.89**	**324**	⇑P	**P**	**11 11 25.3**	**+0.2**
AMTX	**Amarillo**	**73.95**	**55**	P	**P**	**11 11 27.0**	**+1.3**
AMTX				IAmb	IAmb	11 11 27.5	
	comp=Z,11nm,0.6s						
AMTX	**Amarillo**	**73.95**	**55**	P	**P**	**11 11 26.5**	**+0.9**
	baz=321						
MANZ	**Manzenberg**	**74.05**	**334**	*e*P	**P**	**11 11 25.3**	**-0.6**
	comp=Z,0.5nm,0.8s,baz=27,slow=5.9						
MSTX	**Muleshoe**	**74.08**	**56**	P	**P**	**11 11 27.1**	**+0.7**
	baz=320						
K43A	**Burlington**	**74.08**	**41**	P	**P**	**11 11 25.6**	**-0.5**
K43A				IAmb	IAmb	11 11 26.5	
	comp=Z,25nm,1.0s						
ROTZ	**Rotzenmuhle**	**74.22**	**333**	*e*P	**P**	**11 11 26.5**	**-0.3**
	comp=Z,1.0nm,0.9s,baz=27,slow=5.9						
SIRR	**Siria**	**74.23**	**326**	⇑P	**P**	**11 11 26.3**	**-0.6**
P38A	**Dawn**	**74.26**	**46**	P	**P**	**11 11 27.4**	**+0.2**
KHC	**Kasperske Hory**	**74.39**	**332**	*e*P	**P**	**11 11 27.1**	**-0.7**
KHC	**Kasperske Hory**	**74.39**	**332**	*e*P	**P**	**11 11 27.1**	**-0.7**
KHC				*e*x	x	11 11 32.6	
MNTX	**Cornudas Mount**	**74.39**	**59**	P	**P**	**11 11 29.4**	**+1.3**
	baz=320						
CKRC	**Cesky Krumlov**	**74.44**	**332**	*e*P	**P**	**11 11 27.0**	**-1.1**
GRF	**Grafenberg Arr**	**74.57**	**334**	*e*P	**P**	**11 11 28.4**	**-0.4**
	comp=Z,10nm,0.8s,baz=27,slow=5.9						
GZR	**Gura Zlata**	**74.57**	**325**	⇓P	**P**	**11 11 27.9**	**-1.0**
GZR	**Gura Zlata**	**74.57**	**325**	⇓P	**P**	**11 11 27.9**	**-1.0**
WET	**Wettzell**	**74.58**	**333**	*e*P	**P**	**11 11 28.3**	**-0.6**
	comp=Z,3.7nm,0.8s,baz=27,slow=5.9						
GEC2	**GERESS Array S**	**74.61**	**332**	*e*P	**P**	**11 11 28.4**	**-0.6**
	comp=Z,1.7nm,0.6s,baz=27,slow=5.9						
GERES	**GERESS Array B**	**74.61**	**332**	P	**P**	**11 11 28.4**	**-0.6**
	comp=Z,1.8nm,0.6s,baz=32,slow=5.2,SNR=14						
GERES	**GERESS Array B**	**74.61**	**332**	P	**P**	**11 11 28.5**	**-0.6**
L44A	**Lake County Fo**	**74.69**	**41**	P	**P**	**11 11 29.1**	**-0.5**
	baz=326						
BR131	**Keskin Array S**	**74.76**	**315**	P	**P**	**11 11 30.2**	**0.0**
BR131				pmax	pmax		
	comp=Z,11nm,1.0s						
BR131	**Keskin Array S**	**74.76**	**315**	P	**P**	**11 11 30.2**	**0.0**
BRTR	**Keskin Array B**	**74.76**	**315**	P	**P**	**11 11 29.5**	**-0.7**
	comp=Z,5.0nm,0.8s,baz=54,slow=6.3,SNR=14						
BRTR	**Keskin Array B**	**74.76**	**315**	P	**P**	**11 11 29.5**	**-0.7**
BRTR	**Keskin Array B**	**74.76**	**315**	P	**P**	**11 11 29.7**	**-0.5**
TNS	**Taunus Mts**	**74.84**	**336**	*e*P	**P**	**11 11 30.2**	**-0.2**
	comp=Z,5.5nm,0.7s,baz=27,slow=5.9						
AHRW	**Bad Neuenahr-A**	**74.90**	**337**	*e*P	**P**	**11 11 30.7**	**+0.1**
	comp=Z,6.6nm,0.8s,baz=27,slow=5.9						
ANTO	**Ankara**	**75.03**	**315**	P	**P**	**11 11 30.0**	**-1.6**
ANTO				pmax	pmax		
	comp=Z,12nm,0.8s						
ANTO	**Ankara**	**75.03**	**315**	P	**P**	**11 11 30.0**	**-1.6**
ANTO				IAmb	IAmb	11 11 32.5	
	comp=Z,12nm,0.8s						
AS31	**Alice Springs**	**75.07**	**196**	P	**P**	**11 11 33.2**	**+1.4**
AS31				IAmb	IAmb	11 11 33.8	
	comp=Z,12nm,0.5s						
ASAR	**Alice Springs**	**75.07**	**196**	P	**P**	**11 11 33.1**	**+1.3**
	comp=Z,20nm,0.5s,baz=8.1,slow=5.1,SNR=390						
ASAR				pP	**pwP**	**11 13 06.0**	**-1.0**
	comp=Z,2.9nm,0.9s,baz=14,slow=6.5,SNR=5.5						
ASAR	**Alice Springs**	**75.07**	**196**	P	**P**	**11 11 33.0**	**+1.2**
ASAR				*PP	**pwP**	**11 13 06.0**	**-1.0**
ASAR	**Alice Springs**	**75.07**	**196**	P	**P**	**11 11 33.0**	**+1.2**
BTNL	**Ternell**	**75.09**	**338**	*d*P	**P**	**11 11 30.9**	**-0.8**
	comp=Z,6.9nm,0.9s						
M44A	**Midewin, Midew**	**75.28**	**42**	P	**P**	**11 11 32.6**	**-0.3**
M44A				IAmb	IAmb	11 11 33.4	
	comp=Z,19nm,0.8s						
MOA	**Molln**	**75.32**	**331**	*e*P	**P**	**11 11 32.6**	**-0.4**
	comp=Z,4.0nm,0.9s						
HDIL	**Hopedale**	**75.42**	**43**	P	**P**	**11 11 33.3**	**-0.4**
	baz=325,SNR=6.6						
WMOK	**Wichita Mounta**	**75.56**	**53**	P	**P**	**11 11 35.3**	**+0.6**
	baz=322,SNR=12						
BMRD	**Maredsous**	**75.69**	**338**	*d*P	**P**	**11 11 34.6**	**-0.4**
	comp=Z,7.3nm,0.8s						
FNO	**Franklin**	**75.86**	**52**	P	**P**	**11 11 37.4**	**+1.2**
FNO				IAmb	IAmb	11 11 38.1	
	comp=Z,21nm,0.7s						
RJOB	**Jochberg**	**75.87**	**332**	*e*P	**P**	**11 11 35.2**	**-1.0**
	comp=Z,3.6nm,0.7s,baz=27,slow=5.9						
R40A	**Maddies Statio**	**75.92**	**46**	P	**P**	**11 11 36.5**	**0.0**
SOKA	**Soboth**	**76.12**	**330**	*e*P	**P**	**11 11 37.1**	**-0.5**
	comp=Z,3.5nm,0.5s						
PERS	**Pernice**	**76.13**	**330**	*i* P	**P**	**11 11 37.0**	**-0.7**
TUL1	**Leonard**	**76.14**	**50**	P	**P**	**11 11 38.4**	**+0.6**
	baz=323,SNR=7.4						
KBA	**Koelnbreinsper**	**76.29**	**332**	*e*P	**P**	**11 11 38.8**	**+0.2**
	comp=Z,13nm,0.8s						
L48A	**N Adams**	**76.32**	**39**	P	**P**	**11 11 38.6**	**-0.1**
L48A				IAmb	IAmb	11 11 39.6	
	comp=Z,18nm,0.8s						
U38A	**Gravette**	**76.41**	**49**	P	**P**	**11 11 39.4**	**+0.1**
U38A				IAmb	IAmb	11 11 40.2	
	comp=Z,14nm,0.7s						
OBKA	**Obir**	**76.42**	**330**	*e*P	**P**	**11 11 38.7**	**-0.6**
	comp=Z,3.6nm,0.7s						
SFIN	**Lafayette**	**76.52**	**42**	P	**P**	**11 11 39.4**	**-0.4**
	baz=326						
CCM	**Cathedral Cave**	**76.58**	**46**	P	**P**	**11 11 40.3**	**0.0**
CCM				pmax	pmax		
	comp=Z,18nm,0.7s						
CCM	**Cathedral Cave**	**76.58**	**46**	P	**P**	**11 11 40.3**	**0.0**
CCM				IAmb	IAmb	11 11 41.1	
	comp=Z,18nm,0.7s						
CCM	**Cathedral Cave**	**76.58**	**46**	P	**P**	**11 11 40.3**	**0.0**
	baz=325						
WATA	**Walderalm**	**76.59**	**333**	*e*P	**P**	**11 11 40.1**	**-0.2**
	comp=Z,12nm,1.0s						
BFO	**Black Forest**	**76.60**	**335**	P	**P**	**11 11 39.5**	**-0.7**
BFO				pmax	pmax		
	comp=Z,14nm,0.8s						
BFO	**Black Forest**	**76.60**	**335**	P	**P**	**11 11 39.5**	**-0.7**
BFO				IAmb	IAmb	11 11 46.5	
	comp=Z,14nm,0.8s						
BFO	**Black Forest**	**76.60**	**335**	*e*P	**P**	**11 11 39.8**	**-0.4**
	comp=Z,4.4nm,0.7s,baz=27,slow=5.9						
MYKA	**Terra Mystica**	**76.60**	**331**	*i* P	**P**	**11 11 39.4**	**-0.9**
	comp=Z,3.8nm,0.6s						
WTTA	**Wattenberg**	**76.64**	**333**	*e*P	**P**	**11 11 40.2**	**-0.4**
	comp=Z,15nm,0.7s						
RETA	**Reutte**	**76.69**	**333**	*i* P	**P**	**11 11 40.3**	**-0.5**
	comp=Z,3.5nm,0.6s						
N47A	**Urbana**	**76.69**	**40**	P	**P**	**11 11 40.4**	**-0.4**
N47A				IAmb	IAmb	11 11 41.1	
	comp=Z,18nm,0.7s						
MOTA	**Moosalm**	**76.72**	**333**	*e*P	**P**	**11 11 40.7**	**-0.4**
	comp=Z,11nm,0.9s						
ABTX	**Abilene, Hawle**	**76.77**	**55**	P	**P**	**11 11 42.0**	**+0.6**
	baz=322						
SQTA	**Sankt Quirin**	**76.80**	**333**	*i* P	**P**	**11 11 41.2**	**-0.2**
	comp=Z,10nm,1.0s						
MGMO	**Mountain Grove**	**76.84**	**47**	P	**P**	**11 11 41.3**	**-0.4**
MGMO				IAmb	IAmb	11 11 41.8	
	comp=Z,9.5nm,0.6s						
ABTA	**Abfaltersbach**	**76.84**	**332**	*e*P	**P**	**11 11 41.4**	**-0.2**
	comp=Z,3.4nm,0.8s						
VISS	**Visnje**	**76.96**	**330**	*i* P	**P**	**11 11 41.1**	**-1.1**
FVM	**French Village**	**77.02**	**45**	P	**P**	**11 11 42.7**	**+0.1**
FVM				pmax	pmax		
	comp=Z,33nm,0.6s						
FVM	**French Village**	**77.02**	**45**	P	**P**	**11 11 42.7**	**+0.1**
P46A	**Rosedale**	**77.10**	**42**	P	**P**	**11 11 43.2**	**+0.2**
FETA	**Feichten**	**77.12**	**333**	*e*P	**P**	**11 11 41.3**	**-1.9**
	comp=Z,5.5nm,1.3s						
DAVA	**Damuels**	**77.12**	**334**	*e*P	**P**	**11 11 42.8**	**-0.4**
	comp=Z,7.7nm,0.8s						
TX31	**Lajitas Ar. Si**	**77.15**	**60**	P	**P**	**11 11 45.2**	**+1.6**
TX32	**Lajitas Array**	**77.15**	**60**	P	**P**	**11 11 45.2**	**+1.6**
TXAR	**Lajitas Array**	**77.15**	**60**	P	**P**	**11 11 45.3**	**+1.7**
	comp=Z,1.6nm,0.7s,baz=299,slow=4.4,SNR=27						
TXAR				pP	**pP**	**11 13 16.8**	**+0.8**
	comp=Z,0.6nm,0.8s,baz=297,slow=4.0,SNR=2.2						
TXAR	**Lajitas Array**	**77.15**	**60**	P	**P**	**11 11 45.3**	**+1.7**
TXAR				*PP	**pP**	**11 13 16.8**	**+0.8**
D62A	**Allapoint, All**	**77.16**	**27**	P	**P**	**11 11 42.9**	**-0.4**
U40A	**Yellville**	**77.21**	**48**	P	**P**	**11 11 43.9**	**+0.2**
U40A	**Yellville**	**77.21**	**48**	P	**P**	**11 11 43.9**	**+0.2**
	baz=324,SNR=69						
GBRS	**Gornja Briga**	**77.21**	**330**	*i* P	**P**	**11 11 42.5**	**-1.1**
E62A	**Clayton Lake**	**77.44**	**27**	P	**P**	**11 11 44.4**	**-0.4**
OLIL	**Olney**	**77.44**	**43**	P	**P**	**11 11 44.5**	**-0.4**
OLIL				IAmb	IAmb	11 11 45.4	
	comp=Z,10nm,0.6s						
T42A	**Van Buren**	**77.49**	**46**	P	**P**	**11 11 45.4**	**+0.2**
T42A				IAmb	IAmb	11 11 46.1	
	comp=Z,15nm,0.8s						
LONY	**Lake Ozonia**	**77.65**	**31**	P	**P**	**11 11 45.3**	**-0.7**
	baz=332						
W39A	**Magazine**	**77.69**	**49**	P	**P**	**11 11 46.6**	**+0.2**
	baz=324						
SIUC	**Southern Illin**	**77.78**	**45**	P	**P**	**11 11 47.2**	**+0.4**
S44A	**Carbondale**	**77.79**	**45**	P	**P**	**11 11 47.2**	**+0.4**
MOQ	**Mont Orford**	**77.79**	**29**	P	**P**	**11 11 46.3**	**-0.5**
BATG	**Bathurst New B**	**77.81**	**25**	P	**P**	**11 11 46.9**	**+0.1**
BATG				IAmb	IAmb	11 11 48.0	
	comp=Z,45nm,1.4s						
ERPA	**Erie**	**77.91**	**36**	P	**P**	**11 11 47.3**	**-0.2**
ERPA				IAmb	IAmb	11 11 48.2	
	comp=Z,24nm,1.1s						
ERPA	**Erie**	**77.91**	**36**	P	**P**	**11 11 47.2**	**-0.2**
	baz=330						
FCAR	**Ozark Folk Cen**	**77.93**	**48**	P	**P**	**11 11 47.6**	**0.0**
PBMO	**Poplar Bluff**	**78.00**	**46**	P	**P**	**11 11 48.3**	**+0.3**
MMNY	**Mt. Morris Dam**	**78.15**	**34**	P	**P**	**11 11 48.4**	**-0.4**
MMNY				IAmb	IAmb	11 11 48.9	
	comp=Z,16nm,0.9s						
WVNY	**West Valley, N**	**78.18**	**35**	P	**P**	**11 11 48.3**	**-0.6**
WVNY				IAmb	IAmb	11 11 49.5	
	comp=Z,17nm,1.0s						
P49A	**Miami Univ. Ec**	**78.23**	**41**	P	**P**	**11 11 48.6**	**-0.6**
P49A				IAmb	IAmb	11 11 49.6	
	comp=Z,42nm,1.1s						
P49A	**Miami Univ. Ec**	**78.23**	**41**	P	**P**	**11 11 48.9**	**-0.3**
	baz=328,SNR=10						
M53A	**WI Miller and**	**78.23**	**37**	P	**P**	**11 11 49.2**	**0.0**
	baz=329,SNR=5.0						
LCAR	**Lake Charles**	**78.24**	**47**	P	**P**	**11 11 48.9**	**-0.4**
USIN	**University of**	**78.27**	**43**	P	**P**	**11 11 49.9**	**+0.4**
MIAR	**Mount Ida**	**78.32**	**49**	P	**P**	**11 11 50.5**	**+0.7**
MIAR				pmax	pmax		
	comp=Z,14nm,0.9s						
MIAR	**Mount Ida**	**78.32**	**49**	P	**P**	**11 11 50.5**	**+0.7**
MIAR				IAmb	IAmb	11 11 51.3	
	comp=Z,14nm,0.8s						
MIAR	**Mount Ida**	**78.32**	**49**	P	**P**	**11 11 50.4**	**+0.6**
	baz=324,SNR=11						
WHAR	**Wooly Hollow**	**78.34**	**48**	P	**P**	**11 11 50.1**	**+0.2**
ACSO	**Alum Creek Sta**	**78.35**	**39**	P	**P**	**11 11 49.6**	**-0.2**
	baz=328,SNR=6.1						
JCT	**Junction City**	**78.36**	**56**	P	**P**	**11 11 50.7**	**+0.5**
	baz=322						
PARMO	**Parma**	**78.41**	**46**	P	**P**	**11 11 50.8**	**+0.6**
WHTX	**Lake Whitney,**	**78.41**	**54**	P	**P**	**11 11 51.4**	**+1.1**
WHTX				IAmb	IAmb	11 11 52.1	
	comp=Z,13nm,0.8s						
WHTX	**Lake Whitney,**	**78.41**	**54**	P	**P**	**11 11 51.0**	**+0.7**
	baz=323						
W41B	**Gary Mavity, V**	**78.45**	**48**	P	**P**	**11 11 50.7**	**+0.2**
	baz=325,SNR=23						
M54A	**Oil Creek Stat**	**78.56**	**36**	P	**P**	**11 11 50.7**	**-0.3**
M54A				IAmb	IAmb	11 11 51.2	
	comp=Z,15nm,0.9s						
M54A	**Oil Creek Stat**	**78.56**	**36**	P	**P**	**11 11 50.6**	**-0.3**
	baz=330,SNR=5.2						
WCI	**Wyandotte Cave**	**78.65**	**42**	P	**P**	**11 11 51.1**	**-0.4**
WCI				pmax	pmax		
	comp=Z,33nm,0.7s						
WCI	**Wyandotte Cave**	**78.65**	**42**	P	**P**	**11 11 51.1**	**-0.4**
WCI	**Wyandotte Cave**	**78.65**	**42**	P	**P**	**11 11 51.3**	**-0.2**
	baz=327						
X40A	**Basin Creek Fa**	**78.72**	**49**	P	**P**	**11 11 52.2**	**+0.3**
	baz=324,SNR=5.0						
PKME	**Peaks-Kenny Pk**	**78.74**	**28**	P	**P**	**11 11 52.7**	**+0.9**
	baz=335						
LBNH	**Lisbon**	**78.85**	**30**	P	**P**	**11 11 52.0**	**-0.5**
	baz=334						
N54A	**Moraine State**	**78.91**	**37**	P	**P**	**11 11 52.8**	**0.0**
N54A				IAmb	IAmb	11 11 53.6	
	comp=Z,22nm,0.9s						
N54A	**Moraine State**	**78.91**	**37**	P	**P**	**11 11 52.7**	**-0.2**
	baz=330,SNR=5.1						
LPAR	**Lepanto**	**79.02**	**47**	P	**P**	**11 11 54.9**	**+1.4**
O53A	**New Philadelph**	**79.04**	**38**	P	**P**	**11 11 53.3**	**-0.3**
	baz=329,SNR=8.0						
P52A	**Corning**	**79.20**	**39**	P	**P**	**11 11 53.8**	**-0.7**
	baz=329						
Q51A	**Peebles**	**79.22**	**40**	P	**P**	**11 11 55.0**	**+0.4**
WLAR	**White Oak Lake**	**79.23**	**50**	P	**P**	**11 11 55.8**	**+1.1**
WLAR				IAmb	IAmb	11 11 56.5	
	comp=Z,14nm,0.8s						
BINY	**Binghamton**	**79.30**	**33**	P	**P**	**11 11 54.3**	**-0.7**
	baz=332						
P53A	**Whipple**	**79.62**	**38**	P	**P**	**11 11 56.4**	**-0.2**
P53A				IAmb	IAmb	11 11 57.0	
	comp=Z,11nm,0.8s						
WVT	**Waverly**	**79.72**	**45**	P	**P**	**11 11 57.1**	**-0.1**
WVT				pmax	pmax		
	comp=Z,15nm,0.6s						
WVT	**Waverly**	**79.72**	**45**	P	**P**	**11 11 57.1**	**-0.1**
WVT				IAmb	IAmb	11 11 58.3	
	comp=Z,15nm,0.6s						
WVT	**Waverly**	**79.72**	**45**	P	**P**	**11 11 57.4**	**+0.2**
	baz=326						
W45A	**Hickory Valley**	**79.90**	**46**	P	**P**	**11 11 58.5**	**+0.3**
W45A				IAmb	IAmb	11 11 59.6	
	comp=Z,28nm,0.8s						
SSPA	**Standing Stone**	**79.98**	**35**	P	**P**	**11 11 58.2**	**-0.4**
	baz=331						
NATX	**Nacogdoches**	**80.02**	**52**	P	**P**	**11 12 00.3**	**+1.4**
	baz=324						
O56A	**Blue Knob Stat**	**80.05**	**36**	P	**P**	**11 11 58.9**	**-0.1**
O56A				IAmb	IAmb	11 11 59.7	
	comp=Z,22nm,1.0s						
O56A	**Blue Knob Stat**	**80.05**	**36**	P	**P**	**11 11 58.7**	**-0.3**
	baz=331,SNR=5.6						
MCWV	**Mont Chateau**	**80.09**	**37**	P	**P**	**11 11 59.1**	**0.0**
	baz=330						
NRCA	**Norcia**	**80.17**	**330**	P	**P**	**11 11 59.1**	**-0.5**
NRCA				IAmb	IAmb	11 12 00.0	
	comp=Z,14nm,0.9s						
T50A	**Nancy**	**80.29**	**42**	P	**P**	**11 12 00.3**	**+0.1**
T50A				IAmb	IAmb	11 12 01.2	
	comp=Z,17nm,0.7s						
ARMA	**Armidale**	**80.31**	**179**	P	**P**	**11 12 02.4**	**+2.1**
ARMA				IAmb	IAmb	11 12 03.3	
	comp=Z,17nm,0.9s						
OXF	**Oxford**	**80.33**	**47**	P	**P**	**11 12 00.7**	**+0.3**
	baz=326,SNR=7.6						
V48A	**Smith Brothers**	**80.50**	**44**	P	**P**	**11 12 01.4**	**+0.1**
V48A				IAmb	IAmb	11 12 02.2	
	comp=Z,12nm,0.8s						
N59A	**State Game Lan**	**80.51**	**34**	P	**P**	**11 12 00.7**	**-0.6**
	baz=332						
HRV	**Adam Dziewonsk**	**80.53**	**30**	P	**P**	**11 12 01.0**	**-0.4**
	baz=334						
PLAL	**Pickwick Lake**	**80.56**	**45**	P	**P**	**11 12 01.8**	**+0.1**
PLAL				IAmb	IAmb	11 12 02.4	
	comp=Z,16nm,0.7s						
UCCT	**U. Connecticut**	**80.95**	**31**	P	**P**	**11 12 03.4**	**-0.2**
UCCT				IAmb	IAmb	11 12 04.4	
	comp=Z,16nm,1.1s						
PAL	**Palisades**	**81.08**	**33**	P	**P**	**11 12 03.7**	**-0.6**
	baz=333						
TZTN	**Tazewell**	**81.25**	**41**	P	**P**	**11 12 05.2**	**-0.1**
	baz=328						
SWET	**Sewanee**	**81.33**	**44**	P	**P**	**11 12 05.4**	**-0.4**
SWET				IAmb	IAmb	11 12 06.3	
	comp=Z,20nm,0.7s						
X48A	**Hartselle**	**81.47**	**45**	P	**P**	**11 12 06.0**	**-0.4**
X48A				IAmb	IAmb	11 12 07.0	
	comp=Z,11nm,0.7s						
VBMS	**Vicksburg**	**81.69**	**49**	P	**P**	**11 12 08.5**	**+1.0**
	baz=326						
CPCT	**Cooper Cave**	**81.75**	**43**	P	**P**	**11 12 07.7**	**-0.2**
V52A	**Sevierville**	**81.82**	**42**	P	**P**	**11 12 08.4**	**+0.2**
V52A				IAmb	IAmb	11 12 08.8	
	comp=Z,10.0nm,0.6s						
TKL	**Tuckaleechee C**	**81.90**	**42**	P	**P**	**11 12 08.6**	**-0.1**
TKL				pmax	pmax		
	comp=Z,7.0nm,0.7s						
TKL	**Tuckaleechee C**	**81.90**	**42**	P	**P**	**11 12 08.6**	**-0.1**
BLA	**Blacksburg**	**81.97**	**39**	P	**P**	**11 12 08.9**	**-0.1**
	baz=330						
U54A	**Nelsons Funny**	**81.99**	**40**	P	**P**	**11 12 09.3**	**+0.1**
U54A				IAmb	IAmb	11 12 10.0	
	comp=Z,16nm,0.6s						
FPAL	**Fort Paine**	**82.04**	**44**	P	**P**	**11 12 09.6**	**+0.2**
FPAL				IAmb	IAmb	11 12 10.1	
	comp=Z,11nm,0.7s						
Z47A	**Carrollton**	**82.04**	**46**	P	**P**	**11 12 10.1**	**+0.7**
Z47A				IAmb	IAmb	11 12 10.6	
	comp=Z,18nm,0.7s						
STKA	**Stephens Creek**	**82.15**	**188**	P	**P**	**11 12 10.6**	**+0.9**
	comp=Z,4.1nm,0.7s,baz=333,slow=11,SNR=5.4						
STKA	**Stephens Creek**	**82.15**	**188**	P	**P**	**11 12 10.6**	**+0.9**
STKA	**Stephens Creek**	**82.15**	**188**	P	**P**	**11 12 11.0**	**+1.3**
Y49A	**Blount Mountai**	**82.25**	**45**	P	**P**	**11 12 10.4**	**-0.1**
Y49A				IAmb	IAmb	11 12 11.1	
	comp=Z,14nm,0.7s						
Y52A	**Lilburn**	**83.29**	**43**	P	**P**	**11 12 16.1**	**+0.3**
Y52A				IAmb	IAmb	11 12 16.9	
	comp=Z,12nm,0.9s						
KMSC	**Kings Mountain**	**83.37**	**41**	P	**P**	**11 12 15.9**	**-0.3**
	baz=330						
250A	**Grady**	**83.89**	**46**	P	**P**	**11 12 19.4**	**+0.6**
RAO	**Raoul Island**	**83.90**	**153**	P	**P**	**11 12 18.4**	**-0.2**
	comp=Z,373nm,0.3s,baz=303,slow=17,SNR=4.2						
RAO	**Raoul Island**	**83.90**	**153**	P	**P**	**11 12 18.4**	**-0.2**
RAO	**Raoul Island**	**83.90**	**153**	IAmb	IAmb	11 12 19.3	
	comp=Z,428nm,0.5s						
GOGA	**Godfrey**	**83.94**	**43**	P	**P**	**11 12 19.0**	**0.0**
	baz=329						
152A	**Waverly Hall**	**84.01**	**44**	P	**P**	**11 12 19.2**	**-0.2**
BIRD	**Birdtown, Kers**	**84.16**	**40**	P	**P**	**11 12 20.3**	**+0.2**
BIRD				IAmb	IAmb	11 12 21.0	
	comp=Z,12nm,0.9s						
TIGA	**Tifton**	**85.56**	**44**	P	**P**	**11 12 27.3**	**+0.3**
	baz=329						
ESDC	**Sonseca Array**	**87.72**	**341**	P	**P**	**11 12 35.2**	**-2.0**
	comp=Z,0.4nm,0.5s,baz=7.0,slow=3.8,SNR=3.3						
KEST	**Kesra**	**87.83**	**329**	P	**P**	**11 12 36.9**	**-1.0**
	comp=Z,4.1nm,0.6s,baz=30,slow=4.4,SNR=3.9						
KEST	**Kesra**	**87.83**	**329**	IAmb	IAmb	11 12 38.0	
	comp=Z,21nm,1.2s						
TORD	**Torodi Ar. Bea**	**111.27**	**327**	PP	PP	11 18 58.2	-7.9
	comp=Z,0.8nm,1.0s,baz=15,slow=6.9,SNR=2.8						
TORD				PKKPbc	**PKKPbc**	**11 29 15.7**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=187,slow=2.3,SNR=4.3						
TORD				PKKPab	**PKKPab**	**11 29 27.0**	**-2.6**
	comp=Z,0.6nm,1.1s,baz=201,slow=3.6,SNR=3.6						
VNDA	**Vanda**	**127.68**	**177**	PKP	**PKPdf**	**11 18 49.2**	**0.0**
	comp=Z,0.6nm,0.6s,baz=330,slow=6.4,SNR=4.5						
VNDA	**Vanda**	**127.68**	**177**	PKIKP	**PKPdf**	**11 18 49.2**	**0.0**
LPAZ	**La Paz**	**133.96**	**57**	SKPbc	**SKPbc**	**11 21 53.6**	**+0.9**
	comp=Z,0.6nm,0.4s,baz=297,slow=5.6,SNR=4.6						
MAW	**Mawson**	**134.32**	**212**	PKP	**PKiKP**	**11 19 03.5**	**0.0**
	comp=Z,1.4nm,1.1s,baz=100,slow=3.5,SNR=1.7						
MAW				SKPbc	**SKPbc**	**11 21 51.1**	**-0.3**
	comp=Z,2.3nm,0.9s,baz=35,slow=3.9,SNR=4.4						
MAW	**Mawson**	**134.32**	**212**	PKIKP	**PKiKP**	**11 19 03.5**	**0.0**
AQDB	**Aquidauana**	**143.70**	**45**		PKPbc	11 19 19.2	+0.2
CPUP	**Villa Florida**	**147.88**	**52**	PKPbc	**PKPbc**	**11 19 31.7**	**+0.6**
	comp=Z,1.8nm,0.5s,baz=338,slow=2.1,SNR=5.1						
CPUP	**Villa Florida**	**147.88**	**52**	PKP2	**PKPbc**	**11 19 31.7**	**+0.6**
PLCA	**Paso Flores**	**149.92**	**88**	PKPbc	**PKiKP**	**11 19 36.8**	**+0.3**
	comp=Z,5.5nm,0.8s,baz=288,slow=3.1,SNR=12						
PLCA	**Paso Flores**	**149.92**	**88**	PKIKP	**PKiKP**	**11 19 36.8**	**+0.3**
SNAA	**Sanae**	**155.38**	**200**	PKPab	**PKPab**	**11 20 04.7**	**-0.7**
SNAA	**Sanae**	**155.38**	**200**	PKPdf	PKPdf	11 19 46.1	+8.7
VNA2	**Neumayer--Watz**	**156.90**	**198**	PKPdf	**PKPdf**	**11 19 46.6**	**+7.3**
VNA3	**Neumayer Olymp**	**157.08**	**196**	PKPab	**PKPab**	**11 20 12.5**	**-0.3**

JMA 03 11:05:02.2±0.1, 37°.38N×141°.87E, h39^{km}±3^{km}, M3.7, 2C-4D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.79**	**269**	⇓P	Pn	11 05 17.1	+0.2
JFK				S	Sn	11 05 27.3	-0.3
JMST	**Minamisoumatoc**	**0.85**	**294**	⇓P	Pn	11 05 17.8	+0.1
JMST				S	Sn	11 05 28.4	-0.6
ONAJ	**Iwakimizuishiy**	**0.90**	**252**	⇓P	Pn	11 05 18.5	+0.1
ONAJ				S	Sn	11 05 29.9	-0.3
JIKH	**Ishinomakikobu**	**0.98**	**341**	⇑P	Pn	11 05 19.6	+0.1
JIKH				S	Sn	11 05 31.9	-0.3
JMM	**Marumori**	**0.98**	**300**	⇓P	Pn	11 05 19.9	+0.4
JMM				*e*S	Sn	11 05 32.4	+0.2
JIO	**Ouri**	**1.15**	**339**	⇑P	Pn	11 05 22.2	+0.4
JIO				S	Sn	11 05 36.0	-0.2
JFT	**Otama**	**1.23**	**277**	P	Pn	11 05 24.1	+1.2
JFT				*e*S	Sn	11 05 39.9	+1.7
JHO	**Hitachi**	**1.29**	**234**	P	Pn	11 05 23.6	-0.2
JHO				S	Sn	11 05 38.8	-1.0
JOU	**Okura**	**1.37**	**316**	P	Pn	11 05 26.1	+1.3
JOU				S	Sn	11 05 43.8	+2.0
JMK	**Ichinoseki**	**1.65**	**342**	P	Pn	11 05 29.8	+1.2
JMK				*e*S	Sn	11 05 49.6	+1.0
JYS	**Shirataka**	**1.66**	**301**	P	Pn	11 05 30.8	+2.0
JYS				S	Sn	11 05 52.1	+3.3
JFY	**Yanaizu**	**1.73**	**272**	P	Pn	11 05 31.3	+1.6
JFY				*e*S	Sn	11 05 54.2	+3.7
MAT	**Matsushiro**	**3.05**	**255**	P	Pn	11 05 50.2	+2.3
MAT				S	Sn	11 06 28.1	+4.9

NOU 03 11:19:34.4, 18°.45S×169°.00E, h125^{km}, MLv3.9/10, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
RTV	**Rentapao**	**0.85**	**320**	P	Pn	11 19 56.6	+1.1
DVP	**Devils Point**	**1.06**	**313**	P	Pn	11 19 57.6	+0.2
LIFNC	**LIFOU**	**2.85**	**215**	P	Pn	11 20 17.8	-1.1
MARNC	**Mare, Loyalty**	**3.15**	**197**	P	Pn	11 20 22.1	-0.7
YATNC	**Mamie plateau,**	**4.10**	**209**	P	Pn	11 20 35.0	-0.4
DZM	**Mont Dzumac**	**4.33**	**213**	P	Pn	11 20 38.3	-0.2
NOUC	**Port Laguerre**	**4.43**	**214**	P	Pn	11 20 40.8	+1.1
OUENC	**Ouen Island, N**	**4.44**	**207**	P	Pn	11 20 41.2	+1.3

NEIC ***03*** *11:21:18±2.2, 51°.51N±0°.07×173°.26W±0°.07, h10^{km}±1^{km}, mb4.6/134, ML4.1(AEIC), Error ellipse: s-maj=12.6km s-min=6.8km az=180.0*

MOS ***03*** *11:21:20.0±1.0, 51°.55N×173°.15W, h34^{km}, mb4.9/38, Error ellipse: s-maj=9.1km s-min=6.0km az=88.4*

AEIC ***03*** *11:21:21±2.3, 51°.53N±0°.08×173°.28W±0°.08, h41^{km}±5^{km}, Error ellipse: s-maj=10.9km s-min=7.3km az=179.0*

IDC ***03*** *11:21:23.8±0.5, 51°.69N×173°.37W, h41^{km}±3^{km}, mb4.1/28, mb1 4.3/30, mb1mx4.2/49, mbtmp4.4/30, ML3.9/2, MS3.5/18, Ms1 3.5/18, ms1mx3.3/39, Error ellipse: s-maj=15.8km s-min=9.8km az=165.0*

ISC 03 11:21:22.0±0.5, 51°.63N±0°.07×173°.24W±0°.04, h34^{km}±1^{km}, h35^{km}:pP-P, n494, σ1^s.18/503, mb4.7/135, MS3.5/20, 35C-15D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KOFP	**Korovin Flat P**	**0.84**	**321**		**Pb**	**11 21 38.0**	**-0.3**
KOKL	**Mount Kliuchef**	**0.91**	**320**		**Pb**	**11 21 39.0**	**-0.5**
KONE	**Korovin Northe**	**0.94**	**325**		**Pb**	**11 21 39.7**	**-0.2**
KOWE	**Korovin West**	**0.97**	**320**		**Pb**	**11 21 40.1**	**-0.2**
GSIG	**Igitkin Island**	**1.71**	**283**		**Pn**	**11 21 49.0**	**-0.4**
GSIG					**Sn**	**11 22 10.0**	**0.0**
GSMY	**Great Sitkin M**	**1.80**	**284**		**Pn**	**11 21 50.6**	**0.0**
GSTR	**Great Sitkin T**	**1.81**	**286**	Pn	**Pn**	**11 21 49.9**	**-0.9**
GSTD	**Great Sitkin T**	**1.85**	**284**		**Pn**	**11 21 51.0**	**-0.5**
GSTD					**Sn**	**11 22 14.9**	**+1.2**
ADAG	**Mount Adagdak**	**2.12**	**281**		**Pn**	**11 21 56.1**	**+1.1**
ADK	**Adak**	**2.16**	**278**		**Sn**	**11 22 22.1**	**+1.0**
ADK	**Adak**	**2.16**	**278**	Pn	**Pn**	**11 21 54.3**	**-1.2**
KIWB	**Kanaga Island**	**2.44**	**277**		**Pn**	**11 22 00.1**	**+0.6**
KIKV	**Kanaga Island**	**2.46**	**277**		**Pn**	**11 22 00.1**	**+0.4**
KIMD	**Kanaga Island**	**2.49**	**275**		**Pn**	**11 22 00.3**	**+0.2**
TAFP	**Tanaga Falls P**	**2.96**	**277**		**Pn**	**11 22 07.7**	**+1.1**
TASE	**Tanaga Southea**	**2.99**	**276**		**Pn**	**11 22 08.1**	**+1.0**
NIKH	**Nikolski High**	**3.00**	**62**		**Pn**	**11 22 09.0**	**+1.8**
NIKH	**Nikolski High**	**3.00**	**62**	P	**Pn**	**11 22 09.2**	**+2.0**
	baz=243						
GALAA	**Gareloi Lava P**	**3.45**	**274**		**Pn**	**11 22 14.6**	**+1.4**
MNAT	**Makushin Natee**	**4.57**	**58**		**Pn**	**11 22 31.4**	**+2.6**
UNV	**Unalaska Valle**	**4.65**	**59**	Pn	**Pn**	**11 22 32.3**	**+2.5**
UNV	**Unalaska Valle**	**4.65**	**59**	P	Pn	11 22 34.8	+5.1
	baz=243						
AMKA	**Amchitka**	**4.67**	**270**	Pn	**Pn**	**11 22 29.8**	**-0.3**
SPIA	**Saint Paul Isl**	**5.82**	**16**	Pn	**Pn**	**11 22 45.7**	**-0.2**
SDPT	**Sand Point**	**8.47**	**59**	Pn	**Pn**	**11 23 23.5**	**+1.4**
SDPT	**Sand Point**	**8.47**	**59**	P	**Pn**	**11 23 23.9**	**+1.8**

	baz=248						
OHAK	Old Harbor	12.87	56	Pn	Pn	11 24 22.3	0.0
KDAK	Kodiak Island	13.40	55	P	Pn	11 24 28.2	-1.4
	0.3nm,0.3s,baz=253,slow=3.7,SNR=18						
KDAK	Kodiak Island	13.40	55	P	Pn	11 24 29.0	-0.6
KDAK	Kodiak Island	13.40	55	Pn	Pn	11 24 29.0	-0.6
N19K	Bonanza Creek	13.85	41	Pn	P	11 24 41.5	-2.2
N19K	Bonanza Creek	13.85	41	P	Pn	11 24 39.2	+3.4
	baz=236						
L19K	White Mountain	14.51	36		P	11 24 51.2	+0.3
L19K	White Mountain	14.51	36	P	Pn	11 24 47.6	+2.9
	baz=231						
M19K	Big River Lodg	14.52	38	P	P	11 24 48.2	-2.8
	baz=233						
TTA	Tatalina	14.60	33	P	Pn	11 24 48.9	+3.0
	baz=227,SNR=11						
CNPM	China Poot	14.68	49		P	11 24 50.4	-2.4
K20K	Telida	15.54	34		P	11 25 02.1	-0.2
K20K				IAmb	IAmb	11 25 18.4	
	comp=Z,18nm,1.1s						
K20K	Telida	15.54	34	P	P	11 25 01.2	-1.1
	baz=230						
GCSA	Galena City Sc	15.64	27	P	P	11 25 01.9	-1.5
	baz=220						
SKT	Skwentna	15.68	40	P	P	11 25 02.8	-1.1
	baz=238						
SUA	Susitna One	15.74	43		P	11 25 03.3	-1.4
SUA				IAmb	IAmb	11 25 20.7	
	comp=Z,39nm,1.3s						
O22K	Cooper Landing	15.76	47	P	P	11 25 04.9	+0.2
	baz=246						
J20K	Nowinta River	16.06	31	P	P	11 25 07.4	-0.6
	baz=227,SNR=9.4						
M22K	Willow	16.15	42	P	P	11 25 09.5	+0.6
	baz=241						
CUT	Chulitna	16.41	40	P	P	11 25 11.9	0.0
	baz=239						
CHUM	Lake Minchumin	16.48	34	P	P	11 25 11.9	-0.7
	baz=231						
PMR	Palmer	16.49	43	P	P	11 25 12.1	-0.7
PMR				pmax	pmax		
	comp=Z,11nm,1.1s						
PMR	Palmer	16.49	43		P	11 25 12.1	-0.7
PWL	Port Wells	16.54	46		Pn	11 25 11.1	0.0
GHO	Glory Hole Cre	16.66	43		Pn	11 25 13.6	+0.9
KNK	Knik Glacier	16.70	45		Pn	11 25 13.5	+0.3
KNK	Knik Glacier	16.70	45	P	P	11 25 14.6	-0.6
	baz=245						
SML	Sawmill	16.93	43		Pn	11 25 16.4	+0.4
SML	Sawmill	16.93	43	P	P	11 25 18.0	+0.2
	baz=244						
TRF	Thorofare Moun	16.96	37	P	P	11 25 17.9	-0.3
	baz=236						
BPAW	Bear Paw Mtn.	17.08	34	P	P	11 25 20.5	+1.2
	baz=233,SNR=12						
FID	Port Fidalgo	17.34	48		Pn	11 25 20.6	-0.6
FID				IAmb	IAmb	11 25 29.0	
	comp=Z,24nm,0.8s						
SCM	Sheep Creek Mo	17.37	44	P	Pn	11 25 21.7	+0.2
SCM				pmax	pmax		
	comp=Z,17nm,0.8s						
SCM	Sheep Creek Mo	17.37	44	P	Pn	11 25 21.7	+0.2
SCM	Sheep Creek Mo	17.37	44	P	P	11 25 22.4	-0.2
	baz=246						
I21K	Tanana	17.42	31	P	P	11 25 24.5	+1.4
	baz=229,SNR=16						
H21K	Melozitna Rive	17.49	29	P	P	11 25 23.7	-0.1
H21K	Melozitna Rive	17.49	29	P	P	11 25 25.0	+1.1
	baz=226,SNR=9.1						
MCK	McKinley	17.62	37	P	P	11 25 25.2	-0.1
MCK				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MCK	McKinley	17.62	37	P	P	11 25 25.1	-0.1
MCK	McKinley	17.62	37	P	P	11 25 26.0	+0.7
	baz=238						
MLY	Manley	17.73	32	P	P	11 25 27.6	+1.0
	baz=231,SNR=12						
PETK	Petropavlovsk-	17.76	286	P	P	11 25 26.8	-0.1
	comp=Z,0.6nm,0.3s,baz=91,slow=13,SNR=11						
PETK				LR	LR	11 31 22.3	
	comp=Z,132nm,21.3s,baz=84,slow=34						
KLU	Klutina	17.86	46	P	P	11 25 29.1	+1.1
	baz=248						
M24K	Tolsona, Glenn	17.98	44	P	Pn	11 25 29.1	+0.1
M24K				IAmb	IAmb	11 25 46.8	
	comp=Z,22nm,0.9s						
NEA2	Nenana	18.05	35	P	P	11 25 30.1	+0.1
NEA2	Nenana	18.05	35	P	Pn	11 25 29.8	0.0
	baz=235						
I23K	Minto, Yukon-K	18.27	33	P	Pn	11 25 34.0	+1.6
I23K				IAmb	IAmb	11 25 36.9	
	comp=Z,46nm,1.3s						
I23K	Minto, Yukon-K	18.27	33	P	Pn	11 25 33.6	+1.1
	baz=233,SNR=20						
BMRM	Bremner River	18.28	48	P	Pn	11 25 33.1	+0.3
WRH	Wood River Hil	18.33	36	P	P	11 25 32.9	-0.2
N25K	Chitina, Valde	18.49	46	P	P	11 25 34.8	-0.2
CCB	Clear Creek Bu	18.53	36	P	P	11 25 35.1	-0.1
HARP	HAARP	18.53	44	P	P	11 25 35.0	-0.4
	baz=247						
MDM	Murphy Dome	18.55	34	P	P	11 25 35.7	+0.2
H23K	Yukon River	18.62	31	P	Pn	11 25 37.2	+0.4
	baz=231						
PAX	Paxson	18.63	42	P	Pn	11 25 37.7	+0.7
PAX				pmax	pmax		
	comp=Z,11nm,1.3s						
PAX	Paxson	18.63	42	P	Pn	11 25 37.7	+0.7
PAX	Paxson	18.63	42	P	Pn	11 25 38.1	+1.1
	baz=245						
TCOL	CIGO, UAF Yank	18.63	35	P	P	11 25 36.4	+0.1
TCOL	CIGO, UAF Yank	18.63	35	P	Pn	11 25 37.0	+0.1
	baz=236						
COLA	College	18.64	35⇑	*e*P	P	11 25 36.7	+0.3
COLA	College	18.64	35	P	Pn	11 25 37.2	+0.3
	baz=236						
HDA	Harding Lake	18.72	37	P	P	11 25 36.5	-0.9
HDA				IAmb	IAmb	11 25 51.7	
	comp=Z,18nm,0.5s						
HDA	Harding Lake	18.72	37	P	Pn	11 25 39.3	+1.3
	baz=239						
IL31		18.93	36	P	P	11 25 39.2	-0.4
ILAR	Eielson Array	18.93	36	P	P	11 25 38.9	-0.8
	comp=Z,1.4nm,0.3s,baz=226,slow=9.2,SNR=94						
ILAR				LR	LR	11 33 43.3	
	comp=Z,150nm,18.4s,baz=250,slow=39						
ILAR	Eielson Array	18.93	36	P	P	11 25 38.1	-1.5
MCARA	McCarthy VSAT	19.14	48	P	P	11 25 41.0	-1.0
MCARA	McCarthy VSAT	19.14	48	P	P	11 25 41.8	-0.2
	baz=253						
H24K	Noodor Dome	19.17	32	P	P	11 25 42.6	+0.2
H24K				IAmb	IAmb	11 25 45.3	
	comp=Z,36nm,1.0s						
H24K	Noodor Dome	19.17	32	P	Pn	11 25 43.8	+0.3
	baz=234,SNR=30						
SKR	Severo-Kuril's	19.18	279	*e*P	P	11 25 30.7	-12
SKR				pmax	pmax		
	comp=Z,100nm,4.2s						
SKR				pmax	pmax		
	comp=Z,79nm,1.1s						
SKR				MLR	MLR		
	comp=Z,200nm,12.0s						
RIDG	Independent Ri	19.21	40	P	Pn	11 25 44.4	+0.4
	baz=244						
COLD	Coldfoot	19.33	27	P	P	11 25 44.2	+0.2
COLD	Coldfoot	19.33	27	P	Pn	11 25 45.2	-0.1
	baz=227,SNR=7.8						
MENT	Mentasta	19.35	43	P	P	11 25 44.9	+0.6
J25K	Salcha River,	19.41	37	P	P	11 25 44.3	-0.8
	baz=241,SNR=57						
M26K	Nabesna, AK	19.47	45	P	P	11 25 45.9	+0.2
M26K	Nabesna, AK	19.47	45	P	P	11 25 45.3	-0.4
	baz=250						
DOT	Dot Lake	19.49	41	P	P	11 25 46.4	+0.5
L26K	Log Cabin Wild	19.54	43	P	P	11 25 47.1	+0.7
	baz=248						
GRNC	Granite Creek	19.56	50	P	P	11 25 47.1	+0.2
GRNC				IAmb	IAmb	11 26 05.7	
	comp=Z,14nm,0.8s						
SCRK	Sand Creek	19.66	40	P	P	11 25 47.7	-0.1
SCRK				IAmb	IAmb	11 25 52.0	
	comp=Z,12nm,0.7s						
SCRK	Sand Creek	19.66	40	P	P	11 25 47.7	-0.1
	baz=245,SNR=17						
BARN	Barnard Glacie	19.69	49	P	P	11 25 47.1	-1.1
BARN				IAmb	IAmb	11 26 05.7	
	comp=Z,14nm,1.0s						
PRP	Porcupine Dome	19.81	35	P	P	11 25 49.1	-0.3
PRP	Porcupine Dome	19.81	35	P	P	11 25 49.9	+0.4
	baz=239,SNR=6.2						
CTG	Chitna Glacier	19.82	49	P	P	11 25 50.0	+0.4
	baz=256						
LOGN	Logan Glacier	19.94	50	P	P	11 25 49.9	-1.1
LOGN				IAmb	IAmb	11 26 12.1	
	comp=Z,20nm,0.9s						
M27K	Edge Creek, AK	19.95	45	P	P	11 25 51.1	+0.1
M27K	Edge Creek, AK	19.95	45	P	Pn	11 25 52.2	-0.6
	baz=252,SNR=5.3						
J26L	Joseph Creek	20.05	39	P	P	11 25 51.9	-0.1
	baz=244,SNR=54						
PCA	Pinnacle	20.16	52	P	P	11 25 52.3	-0.8
PCA				IAmb	IAmb	11 25 59.6	
	comp=Z,21nm,0.7s						
PINM	Pinnacle	20.16	52	P	P	11 25 53.8	+0.6
	baz=260						
L27K	Beaver Creek,	20.20	43	P	P	11 25 52.4	-1.2
L27K	Beaver Creek,	20.20	43	P	P	11 25 54.4	+0.7
	baz=250						
BVCY	Beaver Creek	20.42	46	P	Pn	11 25 58.0	-0.2
	baz=253						
YUK3	Moose Creek	20.43	48	P	P	11 25 56.9	+0.7
	baz=255						
FYU	Fort Yukon	20.47	32	P	P	11 25 57.6	+1.2
FYU				IAmb	IAmb	11 25 59.1	
	comp=Z,31nm,1.1s						
TOLK	Toolik Lake Re	20.48	25	P	P	11 25 56.7	+0.1
TOLK				IAmb	IAmb	11 25 59.5	
	comp=Z,23nm,0.9s						
TOLK	Toolik Lake Re	20.48	25	P	P	11 25 57.5	+0.9
	baz=226,SNR=16						
PNL	Peninsula	20.52	54	P	Pn	11 25 58.5	-0.9
	baz=262						
EGAK	Eagle	21.11	39	P	P	11 26 04.2	+0.9
EGAK	Eagle	21.11	39	P	P	11 26 04.2	+0.9
	baz=246,SNR=33						
BMAR	Burnt Mountain	21.17	31	P	P	11 26 05.5	+1.5
YUK6	Outpost Mounta	21.23	50	P	P	11 26 06.9	+1.9
	baz=259						
SEY	Seymchan	21.46	315	P	P	11 26 07.7	+0.7
	comp=Z,4.1nm,0.9s,baz=189,slow=19,SNR=3.9						
SEY				LR	LR	11 34 44.6	
	comp=Z,107nm,18.8s,baz=110,slow=38						
DAWY	Dawson	21.57	42	P	P	11 26 07.6	-0.7
DAWY				IAmb	IAmb	11 26 33.8	
	comp=Z,21nm,1.4s						
DAWY	Dawson	21.57	42	P	P	11 26 09.3	+1.0
	baz=250						
HYT	Haines Junctio	21.63	51	P	P	11 26 08.3	-0.8
HYT	Haines Junctio	21.63	51	P	P	11 26 11.1	+2.0
	baz=261						
M30M	Minto, Yukon	22.29	46	P	P	11 26 16.7	+0.7
	baz=257						
I29M	Ogilvie Camp,	22.45	39	P	P	11 26 17.1	-0.7
	baz=249						
SKAG	Skagway	22.56	55	P	P	11 26 19.9	+1.0
	baz=266						
JIS	Juneau Island	23.02	58	P	P	11 26 24.2	+0.5
JIS				IAmb	IAmb	11 26 51.8	
	comp=Z,14nm,0.9s						
M31M	Drury Creek, Y	23.32	48	P	P	11 26 27.5	+0.8
	baz=261						
EPYK	Eagle Plains	23.43	37	P	P	11 26 27.4	-0.3
EPYK				IAmb	IAmb	11 26 43.4	
	comp=Z,10nm,0.8s						
EPYK	Eagle Plains	23.43	37	P	P	11 26 26.5	-1.3
	baz=249,SNR=5.3						
MMPY	Sheldon Lake,	24.82	47	P	P	11 26 41.1	+0.4
	baz=263						
INK	Inuvik	25.28	34	P	P	11 26 45.5	+0.8
	comp=Z,24nm,1.0s,baz=222,slow=10,SNR=49						
INK				LR	LR	11 37 50.8	
	comp=Z,122nm,18.0s,baz=210,slow=39						
INK	Inuvik	25.28	34	P	P	11 26 44.4	-0.3
INK				IAmb	IAmb	11 26 47.3	
	comp=Z,22nm,0.9s						
INK	Inuvik	25.28	34	P	P	11 26 44.7	0.0
	baz=249,SNR=21						
DLBC	Dease Lake	25.31	57	P	P	11 26 47.3	+2.1
	comp=Z,12nm,0.9s,baz=280,slow=9.7,SNR=20						
DLBC				LR	LR	11 37 28.7	
	comp=Z,148nm,18.0s,baz=292,slow=38						
YSS	Yuzh-Sakhalins	28.74	278	*e*P	P	11 27 17.2	+1.2
YSS				*e*		11 27 29.4	
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS				MLR	MLR		
	comp=Z,100nm,20.0s						
A36M	Sachs Harbour	29.19	28	P	P	11 27 20.4	+0.7
A36M				IAmb	IAmb	11 27 21.8	
	comp=Z,9.8nm,0.8s						
A36M	Sachs Harbour	29.19	28	P	P	11 27 19.6	-0.1
	baz=252,SNR=8.9						
ASAJ	Asahikawa	30.18	273	P	P	11 27 29.7	+0.9
	comp=Z,20nm,0.8s,baz=52,slow=6.0,SNR=20						
ASAJ				LR	LR	11 38 31.3	
	comp=Z,49nm,20.2s,baz=104,slow=34						
TIXI	Tiksi	32.15	330	P	P	11 27 46.4	+0.6
	comp=Z,2.5nm,0.5s,baz=111,slow=10,SNR=8.0						
TIXI				PcP	PcP	11 30 34.0	+0.1
	comp=Z,1.0nm,0.3s,baz=318,slow=2.3,SNR=4.8						
TIXI	Tiksi	32.15	330⇑	*e*P	P	11 27 45.6	-0.2
TIXI	Tiksi	32.15	330	P	P	11 27 46.3	+0.4
TIXI				IAmb	IAmb	11 27 49.0	
	comp=Z,9.7nm,1.4s						
YKA	Yellowknife Ar	32.52	48	P	P	11 27 50.6	+1.5
	comp=Z,0.8nm,0.7s,baz=270,slow=8.5,SNR=8.2						
YKA				LR	LR	11 41 29.7	
	comp=Z,112nm,21.9s,baz=0.0,slow=37						
KLR	Kul'dur	34.43	288⇓	*i*P	P	11 28 05.7	-0.3
KLR				pmax	pmax		
	comp=Z,7.0nm,1.6s						
ZEA	Zeya	35.22	297	*e*P	P	11 28 12.2	-0.6
ZEA				pmax	pmax		
	comp=E,10.0nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
YBH	Yreka Blue Hor	35.40	86	LR	LR	11 39 38.4	
	comp=Z,92nm,18.5s,baz=307,slow=31						
H11N2	WAKE ISLAND Hy	35.45	214	T	T	12 06 26.5	
	baz=21,slow=76,SNR=87						
H11N3	WAKE ISLAND Hy	35.46	213	T	T	12 06 27.1	
	baz=21,slow=76,SNR=82						
H11N1	WAKE ISLAND Hy	35.47	214	T	T	12 06 14.7	
	baz=21,slow=76,SNR=73						
NEW	Newport	35.51	73	LR	LR	11 42 30.2	
	comp=Z,38nm,18.5s,baz=306,slow=36						
NEW	Newport	35.51	73	P	P	11 28 15.6	+0.2
NEW				pmax	pmax		
	comp=Z,7.0nm,0.9s						
NEW	Newport	35.51	73	P	P	11 28 15.6	+0.2
NEW				IAmb	IAmb	11 28 33.4	
	comp=Z,6.6nm,0.9s						
NEW	Newport	35.51	73	P	P	11 28 17.2	+1.8
	baz=297						
EDM	Edmonton	35.62	63	P	P	11 28 15.4	-0.8
EDM				pmax	pmax		
	comp=Z,9.0nm,0.7s						
EDM	Edmonton	35.62	63	P	P	11 28 15.4	-0.8
EDM				IAmb	IAmb	11 28 38.7	
	comp=Z,9.2nm,0.7s						
H11S1	WAKE ISLAND Hy	36.65	213	T	T	12 07 40.9	
	baz=20,slow=76,SNR=112						
H11S2	WAKE ISLAND Hy	36.67	213	T	T	12 07 36.0	
	baz=20,slow=76,SNR=120						
H11S3	WAKE ISLAND Hy	36.67	213	T	T	12 07 40.9	
	baz=20,slow=76,SNR=46						
USRK	Ussuriysk Ar.	36.69	280	P	P	11 28 24.5	-0.9
	comp=Z,2.9nm,0.5s,baz=55,slow=5.2,SNR=6.4						
USRK				LR	LR	11 43 51.0	
	comp=Z,87nm,19.9s,baz=52,slow=37						
USRK	Ussuriysk Ar.	36.69	280	P	P	11 28 24.7	-0.7
USRK	Ussuriysk Ar.	36.69	280	P	P	11 28 24.7	-0.7
O03E	Paynes Creek	36.78	87	P	P	11 28 27.7	+1.4
	baz=305						
MJAR	Matsushiro Arr	37.27	266	P	P	11 28 30.5	+0.1
	comp=Z,1.7nm,0.6s,baz=51,slow=7.5,SNR=4.9						
MJAR				LR	LR	11 43 09.7	
	comp=Z,38nm,21.1s,baz=40,slow=35						
MJAR	Matsushiro Arr	37.27	266	P	P	11 28 30.5	+0.1
MJAR				pmax	pmax		
	comp=Z,3.0nm,1.2s						
MAJO	Matsushiro	37.27	266⇓	*e*P	P	11 28 30.0	-0.4
MAJO				pmax	pmax		
	comp=Z,21nm,1.8s						
MAT	Matsushiro	37.27	266	P	P	11 28 30.2	-0.2
VLA	Vladivostok	37.33	279⇓	*e*P	P	11 28 31.8	+1.0
VLA				pmax	pmax		
	comp=Z,15nm,0.6s						
RES	Resolute Bay	38.06	25	P	P	11 28 37.1	+0.5
RES				pmax	pmax		
	comp=Z,6.0nm,1.3s						
RES	Resolute Bay	38.06	25	P	P	11 28 37.1	+0.5
MSHR	Mys Shultsa	38.07	279⇓	*e*P	P	11 28 37.2	+0.1
MSHR				pmax	pmax		
	comp=Z,33nm,1.6s						
MSO	Missoula	38.09	73	P	P	11 28 36.4	-1.0
MSO				IAmb	IAmb	11 28 54.1	
	comp=Z,6.9nm,1.0s						
MSO	Missoula	38.09	73	P	P	11 28 38.1	+0.7
	baz=300						
HRY	Holter Researc	39.40	72	P	P	11 28 46.6	-1.8
HLID	Hailey	39.50	78	P	P	11 28 51.2	+1.8
	baz=303						
MCMT	McKenzie Canyo	39.77	75	P	P	11 28 49.9	-1.8
KVN	Kaiserville	39.82	86	P	P	11 28 50.4	-1.6
KVN				pmax	pmax		
	comp=Z,5.0nm,1.2s						
KVN	Kaiserville	39.82	86	P	P	11 28 50.4	-1.6
EGMT	Eagleton	39.97	69	P	P	11 28 52.1	-0.9
EGMT				IAmb	IAmb	11 29 08.2	
	comp=Z,18nm,1.4s						
EGMT	Eagleton	39.97	69	P	P	11 28 52.9	-0.2
	baz=300						
NVAR	Mina Array Bea	40.06	87	P	P	11 28 56.1	+2.0
	comp=Z,1.9nm,0.8s,baz=313,slow=6.8,SNR=2.3						
NVAR				pP	pwP	11 29 07.2	-1.1
	comp=Z,3.9nm,0.8s,baz=290,slow=8.4,SNR=5.0						
NVAR				LR	LR	11 42 32.9	
	comp=Z,60nm,18.9s,baz=273,slow=32						
MDPB	Devils Postpil	40.07	89	P	P	11 28 51.3	-2.9
MDPB				IAmb	IAmb	11 29 10.0	
	comp=Z,7.7nm,0.9s						
BOZ	Bozeman (W)	40.10	74	P	P	11 28 53.7	-0.5
BOZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BOZ	Bozeman (W)	40.10	74	P	P	11 28 53.7	-0.5
BOZ	Bozeman (W)	40.10	74	P	P	11 28 55.4	+1.1
	baz=302						
YHL	Hebgen Lake	40.76	74	P	P	11 28 58.6	-1.3
YHL				IAmb	IAmb	11 29 17.4	
	comp=Z,6.7nm,0.9s						
TPH	Tonopah	40.95	87	P	P	11 28 59.9	-1.6
TPH				pmax	pmax		
	comp=Z,24nm,1.0s						
TPH	Tonopah	40.95	87	P	P	11 28 59.9	-1.6
YMR	Madison River	40.99	74	P	P	11 29 00.9	-0.8
YMR				IAmb	IAmb	11 29 19.3	
	comp=Z,11nm,1.4s						
YHH	Holmes Hill	40.99	74	P	P	11 29 01.1	-0.7
YHH				IAmb	IAmb	11 29 19.2	
	comp=Z,9.2nm,1.2s						
YNR	Norris Junctio	41.14	74	P	P	11 29 00.9	-2.0
YNR				IAmb	IAmb	11 29 21.0	
	comp=Z,7.2nm,1.1s						
VES	Vestal, Richgr	41.20	91	P	P	11 29 04.3	+1.1
	baz=310						
H17A	Grant Village	41.37	74	P	P	11 29 05.5	+0.6
	baz=303						
JHS	Saijyo	41.43	268	P	P	11 29 03.0	-2.2
JHS				IAmb	IAmb	11 29 09.7	
	comp=Z,31nm,1.5s						
ISA	Isabella, Lake	41.69	90	P	P	11 29 08.7	+1.3
	baz=310						
RLMT	Red Lodge	41.76	73	P	P	11 29 05.7	-2.3
RLMT				IAmb	IAmb	11 29 25.3	
	comp=Z,8.2nm,1.1s						
RLMT	Red Lodge	41.76	73	P	P	11 29 09.4	+1.4
	baz=303						
FURC	Furnace Creek,	42.18	88	P	P	11 29 13.1	+1.8
	baz=309						
DUG	Dugway, Tooele	42.41	81	P	P	11 29 12.1	-1.1
DUG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
DUG	Dugway, Tooele	42.41	81	P	P	11 29 12.1	-1.1
DUG				IAmb	IAmb	11 29 38.7	
	comp=Z,5.1nm,0.9s						
DUG	Dugway, Tooele	42.41	81	P	P	11 29 14.6	+1.3
	baz=306						
PRN	Pahroc Range	42.72	86	P	P	11 29 13.8	-2.0
PRN				IAmb	IAmb	11 29 31.7	
	comp=Z,15nm,0.9s						
BW06	Boulder Array	42.90	76	P	P	11 29 17.8	+0.5
BW06	Boulder Array	42.90	76	P	P	11 29 18.2	+0.9
	baz=305,SNR=6.4						
PD31	Pinedale Array	42.90	76	P	P	11 29 17.4	+0.1
PDAR	Pinedale Array	42.90	76	P	P	11 29 19.4	+2.1
	comp=Z,2.3nm,0.7s,baz=302,slow=5.0,SNR=18						
PDAR	Pinedale Array	42.90	76	P	P	11 29 16.4	-0.8
GSC	Goldstone, Bar	42.96	90	P	P	11 29 16.0	-1.8
GSC				pmax	pmax		
	comp=Z,16nm,1.1s						
GSC	Goldstone, Bar	42.96	90	P	P	11 29 16.0	-1.8
GSC				IAmb	IAmb	11 29 33.4	
	comp=Z,16nm,1.1s						
GSC	Goldstone, Bar	42.96	90	P	P	11 29 19.0	+1.3
	baz=310						
NLU	North Lily Min	43.00	81	P	P	11 29 17.9	-0.2
KSRS	Korea Array	43.10	275	P	P	11 29 20.0	+1.3
	comp=Z,5.5nm,0.8s,baz=58,slow=7.8,SNR=26						
KSRS				pP	pwP	11 29 32.5	-0.5
	comp=Z,4.6nm,0.8s,baz=55,slow=7.8,SNR=8.6						
KSRS				LR	LR	11 46 30.3	
	comp=Z,30nm,19.0s,baz=59,slow=35						
KSAR	Wonju Array Be	43.13	275	P	P	11 29 17.8	-1.1
KSAR	Wonju Array Be	43.13	275	P	P	11 29 17.8	-1.1
JNU	Nakatsue	44.06	268	P	P	11 29 24.7	-1.8
JNU				IAmb	IAmb	11 29 30.8	
	comp=Z,13nm,0.9s						
TJN	Taejon	44.12	274*d*	*i*P	P	11 29 28.8	+1.9
RDMU	Red Mountain	44.17	78	P	P	11 29 26.7	-0.9
RDMU				IAmb	IAmb	11 29 42.6	
	comp=Z,6.8nm,0.8s						
P18A	Preston Nutter	44.33	80	P	P	11 29 27.3	-1.6
P18A				IAmb	IAmb	11 29 44.0	
	comp=Z,6.0nm,0.8s						
IRM	Iron Mountain	44.74	90	P	P	11 29 32.9	+0.9
	baz=311						
K22A	Casper	44.79	74	P	P	11 29 32.2	-0.2
	baz=306						
O20A	White River Ci	45.24	78	P	P	11 29 34.3	-1.8
O20A				IAmb	IAmb	11 29 50.6	
	comp=Z,6.7nm,0.9s						
O20A	White River Ci	45.24	78	P	P	11 29 36.3	+0.2
	baz=307						
RSSD	Black Hills	45.42	71	P	P	11 29 37.8	+0.4
	baz=305						
MDND	Maddock	45.87	64	P	P	11 29 40.7	0.0
	baz=304						
NRIK	Noril'sk	45.92	331	P	P	11 29 41.0	+0.3
	comp=Z,4.8nm,0.7s,baz=68,slow=7.8,SNR=5.3						
NRIK	Noril'sk	45.92	331	P	P	11 29 41.2	+0.4
NRIK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
NRIK	Noril'sk	45.92	331	P	P	11 29 41.2	+0.4
NRIK				IAmb	IAmb	11 29 54.6	
	comp=Z,6.2nm,0.8s						
N23A	Red Feather La	46.18	76	P	P	11 29 44.0	+0.5
	baz=307						
NEEM	North Greenlan	46.33	15	*i* P	P	11 29 45.0	+0.7
ULM	Lac du Bonnet	46.60	60	P	P	11 29 47.5	+1.1
	comp=Z,0.9nm,0.3s,baz=315,slow=9.8,SNR=4.1						
ULM	Lac du Bonnet	46.60	60	P	P	11 29 47.5	+1.1
ULM				pmax	pmax		
	comp=Z,9.0nm,1.3s						
ULM	Lac du Bonnet	46.60	60	IAmb	IAmb	11 30 12.4	
	comp=Z,8.6nm,1.2s						
MVCO	Mesa Verde	46.90	81	P	P	11 29 50.8	+1.5
	baz=309						
ISCO	Idaho Springs	47.05	77	P	P	11 29 51.1	+0.6
	baz=308						
W18A	Petrified Fore	47.48	84	P	P	11 29 55.4	+1.7
	baz=311						
S22A	4UR Ranch, Cre	47.59	80	P	P	11 29 54.9	+0.3
	baz=309						
AGMN	Agassiz Nation	47.69	62	P	P	11 29 54.3	-0.6
AGMN				IAmb	IAmb	11 29 57.7	
	comp=Z,6.2nm,0.9s						
AGMN	Agassiz Nation	47.69	62	P	P	11 29 55.6	+0.7
	baz=305						
SDCO	Great Sand Dun	48.40	79	P	P	11 30 01.8	+0.9

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       baz=310
TLY    Talaya            48.82 305 eP     P      11 30 05.0 +1.4
TLY                                 pmax  pmax
       comp=Z,21nm,1.0s
TLY                                 MLR   MLR
       comp=Z,135nm,9.0s
ULN    Ulaanbaatar       49.22 299⇑eP     P      11 30 07.9 +1.0
ULN                                 pmax  pmax
       comp=Z,10.0nm,2.5s
KSCO   Kaye Shedlock'    49.35  76  P     P      11 30 07.7 -0.2
KSCO                                IAmb  IAmb   11 30 25.7
       comp=Z,11nm,0.9s
KSCO   Kaye Shedlock'    49.35  76  P     P      11 30 08.8 +0.9
       baz=309
T25A   Trinidad          49.45  79  P     P      11 30 05.6 -3.3
T25A                                IAmb  IAmb   11 30 24.5
       comp=Z,9.6nm,0.9s
T25A   Trinidad          49.45  79  P     P      11 30 10.9 +2.0
       baz=310
SONM   Songino Array     49.60 299  P     P      11 30 10.4 +0.7
       comp=Z,3.9nm,0.6s,baz=48,slow=8.3,SNR=15
SONM                                LR    LR     11 52 15.3
       comp=Z,104nm,18.2s,baz=56,slow=37
SONM   Songino Array     49.60 299  P     P      11 30 06.8 -3.0
SONM                                IAmb  IAmb   11 30 11.1
       comp=Z,3.3nm,0.7s
ANMO   Albuquerque       49.62  82  P     P      11 30 12.9 +2.7
       comp=Z,0.3nm,0.3s,baz=0.0,slow=6.1,SNR=2.0
ANMO   Albuquerque       49.62  82⇑eP     P      11 30 14.6 +4.4
ANMO                                pmax  pmax
       comp=Z,4.0nm,1.2s
ANMO   Albuquerque       49.62  82  P     P      11 30 07.7 -2.5
ANMO                                IAmb  IAmb   11 30 25.0
       comp=Z,4.1nm,1.1s
ECSD   EROS Data Cent    49.97  67  P     P      11 30 12.0 -0.4
       baz=308
EYMN   Ely               50.27  60  P     P      11 30 14.9 +0.1
       baz=307
DAG    Danmarks Havn     50.85   7 i P    P      11 30 17.8 -0.8
HHC    Hu-ho-hao-te      50.93 289 eP     P      11 30 19.8 -0.1
HHC                                 pmax  pmax
       comp=Z,13nm,0.7s
HHC                                 pmax  pmax
       comp=Z,77nm,6.6s
E38A   The Farm, Brul    51.05  61  P     P      11 30 19.5 -1.1
E38A                                IAmb  IAmb   11 30 21.7
       comp=Z,16nm,1.4s
SUMG   Summit            52.16  16  P     P      11 30 27.4 -1.6
SUMG                                pmax  pmax
       comp=Z,23nm,1.4s
SUMG   Summit            52.16  16 i P    P      11 30 29.6 +0.6
SUMG   Summit            52.16  16  P     P      11 30 27.4 -1.6
NJ2    Nanjing           52.26 276 eP     P      11 30 30.2 +0.4
NJ2                                 pmax  pmax
       comp=Z,6.0nm,0.6s
MSTX   Muleshoe          52.54  81  P     P      11 30 30.7 -1.3
MSTX                                IAmb  IAmb   11 30 47.4
       comp=Z,10nm,1.1s
MSTX   Muleshoe          52.54  81  P     P      11 30 33.2 +1.2
       baz=312
E43A   Lone Tree Farm    53.66  59  P     P      11 30 39.3 -0.6
E43A                                IAmb  IAmb   11 30 41.8
       comp=Z,4.9nm,0.7s
I42A   Draeger Farm,     54.21  62  P     P      11 30 43.5 -0.4
I42A                                IAmb  IAmb   11 30 45.7
       comp=Z,8.0nm,1.1s
P38A   Dawn              54.35  69  P     P      11 30 44.1 -1.0
P38A                                IAmb  IAmb   11 30 46.1
       comp=Z,5.9nm,0.7s
TX31   Lajitas Ar. Si    55.17  85  P     P      11 30 47.2 -4.0
TX32   Lajitas Array     55.17  85  P     P      11 30 47.2 -4.0
TX32                                IAmb  IAmb   11 31 05.6
       comp=Z,7.5nm,1.1s
TXAR   Lajitas Array     55.17  85  P     P      11 30 48.3 -3.0
TXAR   Lajitas Array     55.17  85  P     P      11 30 48.3 -3.0
P40A   Paris             55.28  68  P     P      11 30 50.2 -1.5
R40A   Maddies Statio    55.97  70  P     P      11 30 54.9 -1.8
R40A                                IAmb  IAmb   11 31 08.7
       comp=Z,16nm,1.5s
HDIL   Hopedale          56.18  66  P     P      11 30 58.6 +0.4
       baz=312
ZALV   Zalesovo Beam     56.32 316  PcP   PcP    11 31 57.0 +1.0
       comp=Z,1.6nm,0.8s,baz=43,slow=2.6,SNR=4.8
ZALV                                LR    LR     11 56 46.4
       comp=Z,47nm,18.1s,baz=50,slow=38
CCM    Cathedral Cave    56.73  69  P     P      11 31 00.2 -2.0
CCM                                 pmax  pmax
       comp=Z,3.0nm,0.7s
CCM    Cathedral Cave    56.73  69  P     P      11 31 00.2 -2.0
CCM                                 IAmb  IAmb   11 31 15.5
       comp=Z,2.8nm,0.7s
CCM    Cathedral Cave    56.73  69  P     P      11 31 01.8 -0.4
       baz=312
MGMO   Mountain Grove    56.74  71  P     P      11 31 01.1 -1.2
MGMO                                IAmb  IAmb   11 31 03.1
       comp=Z,9.7nm,1.4s
U40A   Yellville         56.93  72  P     P      11 31 02.4 -1.2
U40A                                IAmb  IAmb   11 31 16.1
       comp=Z,4.4nm,0.6s
U40A   Yellville         56.93  72  P     P      11 31 03.3 -0.3
       baz=313
XAN    Xi'an             56.99 285  P     P      11 31 04.2  0.0
XAN                                 pP    pP     11 31 10.7 -2.4
XAN                                 sP    sP     11 31 16.7 -0.1
XAN                                 pmax  pmax
       comp=Z,11nm,1.1s
W39A   Magazine          57.17  73  P     P      11 31 05.1 -0.2
       baz=313
SFIN   Lafayette         57.54  65  P     P      11 31 08.6 +0.8
       baz=312
SCHQ   Schefferville     57.59  41  P     P      11 31 08.6 +0.6
       comp=Z,3.3nm,0.9s,baz=273,slow=11,SNR=4.3
FCAR   Ozark Folk Cen    57.68  72  P     P      11 31 07.9 -1.0
FCAR                                IAmb  IAmb   11 31 09.6
       comp=Z,16nm,1.4s
MIAR   Mount Ida         57.74  74  P     P      11 31 08.3 -1.1
MIAR                                pmax  pmax
       comp=Z,10.0nm,1.0s
MIAR   Mount Ida         57.74  74  P     P      11 31 08.3 -1.1
MIAR                                IAmb  IAmb   11 31 12.0
       comp=Z,9.6nm,0.9s
MIAR   Mount Ida         57.74  74  P     P      11 31 10.0 +0.7
       baz=314,SNR=7.2
W41B   Gary Mavity, V    58.10  72  P     P      11 31 11.9 +0.1
       baz=314
X40A   Basin Creek Fa    58.22  73  P     P      11 31 13.2 +0.4
       baz=314
ARCES  ARCESS Array B    58.37 352  P     P      11 31 12.7 -0.6
       comp=Z,5.0nm,1.0s,baz=14,slow=7.7,SNR=8.4
ARCES                               PcP   PcP    11 32 04.6 +0.8
       comp=Z,3.2nm,0.9s,baz=358,slow=3.6,SNR=5.1
ARCES                               LR    LR     12 01 08.3
       comp=Z,31nm,18.4s,baz=40,slow=41
ARCES  ARCESS Array B    58.37 352  P     P      11 31 12.7 -0.6
ARCES                               pmax  pmax
       comp=Z,20nm,1.4s
833A   Chaparral WMA,    58.53  83  P     P      11 31 15.3 +0.4
       baz=315
WLAR   White Oak Lake    58.61  74  P     P      11 31 14.8 -0.6
LZH    Lanzhou           58.61 290 ⇓P     P      11 31 17.0 +1.3
LZH                                 pP    pwP    11 31 33.9 +4.7
LZH                                 sP    sP     11 31 40.6  +13
LZH                                 pmax  pmax
       comp=Z,23nm,1.2s
GTA    Gaotai            58.66 295 ⇓P     P      11 31 16.2 +0.3
GTA                                 pP    pwP    11 31 29.0 -0.5
GTA                                 sP    sP     11 31 34.9 +6.6
GTA                                 pmax  pmax
       comp=Z,9.0nm,0.6s
GTA                                 pmax  pmax
       comp=Z,46nm,8.0s
GTA                                 LR    LR
       comp=N,68nm,15.5s
GTA                                 LR    LR
       comp=E,120nm,16.7s
GTA                                 LR    LR
       comp=Z,140nm,16.3s
LVZ    Lovozero          58.98 348⇓eP     P      11 31 18.5 +1.0
LVZ                                 pmax  pmax
       comp=Z,122nm,3.1s
WCI    Wyandotte Cave    59.46  66  P     P      11 31 21.5 +0.3
       baz=314
WVT    Waverly           60.03  69  P     P      11 31 25.2  0.0
       baz=314
TRQ    Mont Tremblant    60.16  52  P     P      11 31 25.4 -0.7
M53A   WI Miller and     60.35  60  P     P      11 31 27.4  0.0
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       baz=314
PLAL   Pickwick Lake     60.69  70  P     P      11 31 29.6 -0.1
PLAL                                IAmb  IAmb   11 31 31.0
       comp=Z,5.2nm,0.7s
M54A   Oil Creek Stat    60.85  59  P     P      11 31 30.3 -0.4
       baz=315
O53A   New Philadelph    60.89  61  P     P      11 31 31.1 +0.1
       baz=314
LONY   Lake Ozonia       61.28  54  P     P      11 31 33.8 +0.2
LONY                                IAmb  IAmb   11 31 35.7
       comp=Z,7.7nm,0.9s
LONY   Lake Ozonia       61.28  54  P     P      11 31 33.3 -0.3
       baz=315
KURK   Kurchatov         61.30 316⇑eP     P      11 31 33.5 -0.1
344A   Westbrook Farm    61.60  74  P     P      11 31 33.1 -2.8
MOQ    Mont Orford       61.94  52  P     P      11 31 37.3 -0.9
WMQ    Urumqi            62.07 306 eP     P      11 31 39.4 +0.4
WMQ                                 pmax  pmax
       comp=Z,14nm,0.7s
WMQ                                 pmax  pmax
       comp=Z,160nm,4.5s
D62A   Allapoint, All    62.19  49  P     P      11 31 39.7  0.0
TZTN   Tazewell          62.20  66  P     P      11 31 39.8 -0.2
       baz=315
BINY   Binghamton        62.30  56  P     P      11 31 41.2 +0.7
       baz=316
O56A   Blue Knob Stat    62.31  59  P     P      11 31 41.1 +0.4
       baz=315
SSPA   Standing Stone    62.41  59  P     P      11 31 41.7 +0.4
       baz=316
FPAL   Fort Paine        62.44  68  P     P      11 31 41.4 -0.2
MK31   Makanchi Array    62.54 311  P     P      11 31 41.2 -0.9
MK31                                pmax  pmax
       comp=Z,4.0nm,1.1s
MK31   Makanchi Array    62.54 311  P     P      11 31 41.2 -0.9
MK31                                IAmb  IAmb   11 31 55.2
       comp=Z,4.5nm,1.1s
MKAR   Makanchi Array    62.54 311  P     P      11 31 41.8 -0.3
       comp=Z,2.5nm,0.9s,baz=46,slow=6.7,SNR=12
MKAR                                pP    sP     11 31 54.4 -0.2
       comp=Z,1.8nm,0.6s,baz=51,slow=6.6,SNR=6.8
MKAR                                LR    LR     11 59 37.9
       comp=Z,51nm,18.9s,baz=28,slow=37
MKAR   Makanchi Array    62.54 311 i P    P      11 31 42.0 -0.1
MKAR                                pmax  pmax
       comp=Z,3.0nm,0.9s
F62A   Pittston Farm,    62.62  50  P     P      11 31 43.1 +0.5
ACCN   Adirondack Com    62.63  54  P     P      11 31 41.1 -1.6
G62A   West of Eustis    62.85  51  P     P      11 31 45.5 +1.4
BRVK   Borovoye          62.89 323ceP     P      11 31 44.5 +0.3
BRVK                                pmax  pmax
       comp=Z,9.0nm,1.3s
BRVK   Borovoye          62.89 323  P     P      11 31 44.3 +0.1
H62A   Milan             63.02  52  P     P      11 31 44.7 -0.5
N59A   State Game Lan    63.33  57  P     P      11 31 48.2 +0.7
       baz=316
PKME   Peaks-Kenny Pk    63.41  50  P     P      11 31 48.1 +0.3
       baz=317
BLA    Blacksburg        63.48  63  P     P      11 31 48.9 +0.4
       baz=316
L61B   Northampton       63.81  54  P     P      11 31 49.9 -0.6
       baz=317
ARU    Arti              64.14 331c iP    P      11 31 52.3 -0.2
ARU                                              11 32 23.4
ARU                                              11 34 11.4
ARU                                 S     S      11 40 24.7 -2.0
ARU                                 pmax  pmax
       comp=Z,15nm,1.4s
PAL    Palisades         64.23  56  P     P      11 31 53.7 +0.4
       baz=317
KMSC   Kings Mountain    64.46  65  P     P      11 31 54.7 -0.2
       baz=316
GOGA   Godfrey           64.49  68  P     P      11 31 54.6 -0.4
       baz=316
M63A   Gales Ferry       64.90  55  P     P      11 31 58.5 +0.9
FINES  FINESS Array B    66.22 350  P     P      11 32 06.0 +0.2
       comp=Z,2.0nm,0.6s,baz=4.4,slow=7.4,SNR=8.2
KMI    Kunming           67.11 282 ⇑P     P      11 32 15.9 +3.5
KMI                                 pP    pwP    11 32 25.9 -1.4
KMI                                 pmax  pmax
       comp=Z,9.0nm,0.6s
NOA    NORSAR Array B    67.62 358  P     P      11 32 15.0 +0.1
       comp=Z,0.7nm,0.5s,baz=4.5,slow=6.2,SNR=2.5
NOA                                 pP    pwP    11 32 28.1 -1.2
       comp=Z,0.8nm,0.6s,baz=3.3,slow=6.4,SNR=2.8
TKM2   Tokmak 2          68.58 313  P     P      11 32 22.4 +1.1
       SNR=6.8
USP    Ospenovka         68.80 314  P     P      11 32 23.7 +1.1
       SNR=8.6
VSU    Vasula            69.06 349⇓eP     P      11 32 24.0 +0.2
VSU                                 pmax  pmax
       comp=Z,43nm,0.8s
AAK    Ala-Archa         69.30 313  P     P      11 32 26.5 +0.8
       SNR=8.2
AAK    Ala-Archa         69.30 313c iP    P      11 32 26.6 +0.8
AAK                                 pmax  pmax
       comp=Z,53nm,1.3s
AAK    Ala-Archa         69.30 313  P     P      11 32 26.8 +1.0
EKS2   Erkin-Say         69.61 314  P     P      11 32 28.8 +1.2
       SNR=8.5
ABKAR  Akbulak array     69.75 326  P     P      11 32 28.6 +0.4
AML    Almayashu         70.06 313  P     P      11 32 32.1 +1.3
       SNR=13
LSA    Lhasa             70.58 293  P     P      11 32 36.2 +2.0
LSA                                 pmax  pmax
       comp=Z,140nm,0.9s
KK31   Karatay Array     70.70 316  P     P      11 32 34.5 +0.3
KK31                                pmax  pmax
       comp=Z,5.0nm,0.7s
KK31   Karatay Array     70.70 316  P     P      11 32 34.5 +0.3
KK31                                IAmb  IAmb   11 32 35.3
       comp=Z,4.5nm,0.7s
KKAR   Karatay Array     70.70 316  P     P      11 32 34.6 +0.4
KKAR                                pmax  pmax
       comp=Z,5.0nm,0.7s
KKAR   Karatay Array     70.70 316  P     P      11 32 34.6 +0.4
KKAR                                IAmb  IAmb   11 32 35.3
       comp=Z,4.5nm,0.7s
KKAR   Karatay Array     70.70 316  P     P      11 32 34.2  0.0
KSH    Kashi             71.07 310  P     P      11 32 40.4 +3.8
KSH                                 pmax  pmax
       comp=Z,24nm,0.7s
NACGM  Naroch            72.53 348 i P    P      11 32 43.8 -1.1
MNK    Minsk             72.78 347 i P    P      11 32 45.7 -0.7
MNK                                i                11 33 03.2
MNK                                i                11 35 26.6
MNK                                i PPP  PPP    11 37 11.0
MNK                                i S    S      11 42 07.6 -1.7
MNK                                i                11 42 49.6
MNK                                i SSS  SSS    11 50 07.7
MNK                                 pmax  pmax
       comp=E,3.0nm,0.9s
MNK                                 pmax  pmax
       comp=N,21nm,0.8s
MNK                                 pmax  pmax
       comp=Z,17nm,0.9s
MNK                                 MLR   MLR
       comp=N,273nm,18.0s
MNK                                 MLR   MLR
       comp=E,30nm,12.0s
MNK                                 MLR   MLR
       comp=Z,210nm,18.0s
MNK    Minsk             72.78 347 i P    P      11 32 45.8 -0.7
       comp=E,3.0nm,0.9s
MNK                                i P    P      11 32 45.8 -0.7
       comp=N,21nm,0.8s
MNK                                i P    P      11 32 45.8 -0.7
       comp=Z,17nm,0.9s,baz=14
MNK                                i PcP  PcP    11 33 03.3 -0.2
MNK                                i PP   PP     11 35 26.6 -1.1
MNK                                i PPP  PPP    11 37 11.1
MNK                                i S    S      11 42 07.6 -1.7
MNK                                i SS   SS     11 46 39.8 -8.3
MNK                                i SSS  SSS    11 50 07.8
MNK                                i LQ   LQ     11 59 42.7
MNK                                i LR   LR     12 04 42.0
MNK                                i LR   LR     12 05 13.4
MNK                                i LRM  MLR    12 07 29.3
       comp=N,273nm,18.4s
MNK                                i LRM  MLR    12 07 32.5
       comp=E,30nm,12.1s
MNK                                i LRM  MLR    12 07 45.2
       comp=Z,210nm,17.8s
SHL    Shillong          73.28 290  P     P      11 32 50.1  0.0
SHL                                 pmax  pmax
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       comp=Z,17nm,0.9s
SHL    Shillong          73.28 290  P     P      11 32 50.1  0.0
GAR    Garm              74.11 314  P     P      11 32 55.1 +0.4
CHTO   Chiang Mai        74.15 280  P     P      11 32 54.0 -1.1
CHTO                                pmax  pmax
       comp=Z,6.0nm,1.0s
CHTO   Chiang Mai        74.15 280  P     P      11 32 54.0 -1.1
CHTO                                IAmb  IAmb   11 33 10.5
       comp=Z,5.8nm,1.0s
TAPN   Taplejung         74.33 294 eP     P      11 32 57.3 +0.9
       comp=Z,47nm,0.8s
CMAR   Chiang Mai Arr    74.42 280  P     P      11 32 57.1 +0.5
       comp=Z,3.0nm,0.6s,baz=35,slow=6.1,SNR=12
CMAR   Chiang Mai Arr    74.42 280 i P    P      11 32 57.4 +0.8
CMAR                                pmax  pmax
       comp=Z,3.0nm,0.6s
CMAR   Chiang Mai Arr    74.42 280  P     P      11 32 56.9 +0.3
ODAN   Odare             74.89 294 eP     P      11 33 00.7 +1.2
CHGR   Chuyangaron       74.91 314  P     P      11 32 59.5 +0.2
GUN    Gumba             74.93 296 eP     P      11 33 00.9 +1.0
       comp=Z,79nm,0.9s
JIRN   Jiri              74.95 295 eP     P      11 33 01.1 +1.0
       comp=Z,74nm,0.8s
RAMN   Ramite            75.27 295 eP     P      11 33 02.6 +0.9
       comp=Z,35nm,0.6s
KKN    Kakani            75.36 296 eP     P      11 33 03.1 +0.9
PKI    Pulchoki          75.46 296 eP     P      11 33 03.4 +0.5
       comp=Z,50nm,1.0s
PKIN   Phulchoki         75.46 296 eP     P      11 33 03.3 +0.4
       comp=Z,35nm,1.0s
GKN    Gorkha            75.55 297 eP     P      11 33 03.8 +0.5
       comp=Z,28nm,0.5s
DMN    Daman             75.60 296 eP     P      11 33 04.1 +0.4
       comp=Z,38nm,0.9s
DANN   Dangsing          75.77 298 eP     P      11 33 05.5 +0.8
       comp=Z,86nm,0.8s
AKASG  Malin Array Be    76.28 346  P     P      11 33 06.4 -0.4
       comp=Z,4.0nm,0.4s,baz=16,slow=6.0,SNR=4.2
AKASG                               pP    PcP    11 33 18.7 +0.1
       comp=Z,5.0nm,0.8s,baz=18,slow=5.7,SNR=3.1
AKBB   Malin Array Si    76.28 346deP     P      11 33 06.5 -0.3
KOLN   Koldanda          76.31 297 eP     P      11 33 08.2 +0.6
       comp=Z,38nm,1.0s
PYUN   Piuthan           76.39 298 eP     P      11 33 08.8 +0.7
       comp=Z,51nm,0.8s
NIL    Nilore            77.06 308  P     P      11 33 12.5 +0.9
NIL                                 pmax  pmax
       comp=Z,28nm,0.8s
NIL    Nilore            77.06 308  P     P      11 33 12.5 +0.9
CLL    Collm             77.30 356⇑iP     P      11 33 12.7 +0.2
CLL                                e                11 33 27.0
CLL                                 pmax  pmax
       comp=Z,6.0nm,0.6s
CLL    Collm             77.30 356⇑iP     P      11 33 12.7 +0.2
       comp=Z,6.0nm,0.6s
CLL                                e(PcP) pwP    11 33 27.0  0.0
BRG    Berggiesshubel    77.69 355 eP     P      11 33 15.6 +0.8
BRG                                 Amp          11 33 17.3
       comp=Z,5.2nm,0.7s
DPC    Dobruska-Polom    78.07 354 eP     P      11 33 17.7 +0.8
DPC                                e                11 33 29.6
DPC    Dobruska-Polom    78.07 354 eP     P      11 33 17.7 +0.8
DPC                                ex     pP     11 33 29.6 +3.3
KWP    Kalwaria Pacla    78.20 349  P     P      11 33 18.2 +0.6
KWP                                 pmax  pmax
       comp=Z,95nm,0.7s
KWP    Kalwaria Pacla    78.20 349  P     P      11 33 18.2 +0.6
KBL    Kabul             78.34 312  P     P      11 33 18.9 -0.1
KBL                                 pmax  pmax
       comp=Z,11nm,0.8s
KBL    Kabul             78.34 312  P     P      11 33 18.9 -0.1
NKC    Novy Kostel       78.40 356 eP     P      11 33 19.3 +0.6
NKC    Novy Kostel       78.40 356 eP     P      11 33 19.3 +0.6
MORC   Moravsky Berou    78.55 353 ⇑P     P      11 33 19.3 -0.3
MORC   Moravsky Berou    78.55 353 ⇑P     P      11 33 19.3 -0.3
MORC   Moravsky Berou    78.55 353 eP     P      11 33 20.1 +0.5
LANS   Liptovska Anna    79.01 352 eP     P      11 33 23.8 +1.7
LANS                                pmax  pmax
       comp=Z,5.0nm,0.7s
LANS   Liptovska Anna    79.01 352 eP     P      11 33 23.8 +1.7
CRVS   Cervenica-Dubn    79.06 350 eP     P      11 33 23.2 +0.8
CRVS   Cervenica-Dubn    79.06 350 eP     P      11 33 23.2 +0.8
VRAC   Vranov            79.09 353 ⇑P     P      11 33 21.1 -1.4
VRAC   Vranov            79.09 353 ⇑P     P      11 33 21.1 -1.4
VRAC   Vranov            79.09 353 eP     P      11 33 23.2 +0.7
KRUC   Moravsky          79.35 354 eP     P      11 33 24.3 +0.4
KHC    Kasperske Hory    79.45 355 eP     P      11 33 25.0 +0.5
KHC                                e                11 33 37.4
KHC    Kasperske Hory    79.45 355 eP     P      11 33 25.0 +0.5
KHC                                ex     pP     11 33 37.4 +3.4
JAVC   Velka Javorina    79.45 353 eP     P      11 33 25.8 +1.2
TRPA   Tarpa             79.70 349 ⇑P     P      11 33 25.2 -0.7
CKRC   Cesky Krumlov     79.72 355 eP     P      11 33 26.2 +0.2
VYHS   Vyhne             79.72 352 eP     P      11 33 26.3 +0.3
VYHS                                pmax  pmax
       comp=Z,4.0nm,0.9s
VYHS   Vyhne             79.72 352 eP     P      11 33 26.3 +0.3
GEC2   GERESS Array S    79.72 355  P     P      11 33 26.9 +0.8
GEC2                                IAmb  IAmb   11 33 27.5
       comp=Z,5.2nm,0.9s
GERES  GERESS Array B    79.72 355  P     P      11 33 26.5 +0.4
       comp=Z,2.7nm,0.6s,baz=19,slow=4.5,SNR=20
GERES                               pP    sP     11 33 39.1 +0.3
       comp=Z,2.3nm,0.8s,baz=21,slow=5.7,SNR=6.2
GERES  GERESS Array B    79.72 355  P     P      11 33 26.2 +0.1
KIV    Kislovodsk        79.84 335 eP     P      11 33 27.9 +1.1
KIV                                 pmax  pmax
       comp=Z,11nm,1.0s
BUR08  Bucovina Ar. S    79.85 347  P     P      11 33 27.2 +0.4
BUR08                               IAmb  IAmb   11 33 28.0
       comp=Z,6.0nm,0.9s
BURAR  Bucovina Array    79.87 347 ⇑P     P      11 33 26.9  0.0
BURAR  Bucovina Array    79.87 347 ⇑P     P      11 33 26.9  0.0
MODS   Modra-Piesok      79.97 353 eP     P      11 33 27.2 -0.1
MODS                                pmax  pmax
       comp=Z,8.0nm,1.0s
MODS   Modra-Piesok      79.97 353 eP     P      11 33 27.2 -0.1
KBZ    Khabaz            80.00 334  P     P      11 33 28.6 +1.1
       comp=Z,4.4nm,0.7s,baz=103,slow=1.3,SNR=10.0
KBZ                                 LR    LR     12 16 10.7
       comp=Z,45nm,18.1s,baz=11,slow=41
KBZ    Khabaz            80.00 334d iP    P      11 33 28.6 +1.1
KBZ                                 pmax  pmax
       comp=Z,6.0nm,0.8s
NCK    Nalchik           80.02 334⇓eP     P      11 33 28.5 +0.8
NCK                                 pmax  pmax
       comp=Z,35nm,0.3s
MTN    Manton Dam        80.19 235  P     P      11 33 28.3 -0.5
MTN                                 IAmb  IAmb   11 33 29.2
       comp=Z,7.6nm,0.8s
CONA   Conrad Observa    80.51 354 eP     P      11 33 31.2 +0.8
       comp=Z,7.8nm,1.1s
ECH    Echery            80.53 360  P     P      11 33 30.7 +0.3
ECH                                 pmax  pmax
       comp=Z,9.0nm,1.1s
ECH    Echery            80.53 360  P     P      11 33 30.7 +0.3
ECH                                 IAmb  IAmb   11 33 33.0
       comp=Z,8.9nm,1.1s
ZEI    Tsey              80.59 333 eP     P      11 33 30.7 -0.3
ZEI                                 pmax  pmax
       comp=Z,4.0nm,1.0s
DRGR                     81.00 349 ⇑P     P      11 33 31.1 -1.9
DRGR                     81.00 349 ⇑P     P      11 33 31.1 -1.9
OZUR                     81.28 347 ⇑P     P      11 33 34.6 +0.2
MOTA   Moosalm           81.33 357 i P    P      11 33 36.2 +1.4
       comp=Z,6.2nm,1.0s
PLOR   Plostina          81.39 346 ⇑P     P      11 33 34.7 -0.3
PLOR   Plostina          81.39 346 ⇑P     P      11 33 34.7 -0.3
WTTA   Wattenberg        81.39 357 i P    P      11 33 36.2 +1.0
       comp=Z,4.6nm,0.6s
SQTA   Sankt Quirin      81.45 357 i P    P      11 33 36.2 +0.8
       comp=Z,5.0nm,0.7s
KBA    Koelnbreinsper    81.51 355 i P    P      11 33 37.1 +1.3
       comp=Z,12nm,0.7s
HRA    Herat             81.52 316  P     P      11 33 36.6 +0.5
FETA   Feichten          81.67 357 i P    P      11 33 38.3 +1.7
       comp=Z,8.6nm,0.9s
SOKA   Soboth            81.81 354 i P    P      11 33 38.1 +0.8
       comp=Z,9.6nm,1.1s
CFR    Carcaliu          81.82 345 ⇑P     P      11 33 36.8 -0.4
CFR    Carcaliu          81.82 345 ⇑P     P      11 33 36.8 -0.4
MLR    Muntele Rosu      81.85 346 ⇓P     P      11 33 37.4 -0.2
MLR    Muntele Rosu      81.85 346  P     P      11 33 37.4 -0.2
MLR                                 pmax  pmax
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	comp=Z,6.0nm,0.8s						
MLR	**Muntele Rosu**	81.85	346	P	**P**	**11 33 37.4**	**-0.2**
MLR				IAmb	IAmb	11 33 42.2	
	comp=Z,6.2nm,0.8s						
ABTA	**Abfaltersbach**	81.88	356	*i* P	**P**	**11 33 37.8**	**+0.2**
	comp=Z,4.5nm,1.0s						
OBKA	**Obir**	82.01	355	*i* P	**P**	**11 33 38.8**	**+0.5**
	comp=Z,4.3nm,0.6s						
VOIR		82.03	347	⇑P	**P**	**11 33 39.8**	**+1.4**
VOIR		82.03	347	⇑P	**P**	**11 33 39.8**	**+1.4**
TUE	**Stuetta**	82.25	358	P	**P**	**11 33 40.8**	**+1.0**
HARR	**Harsova**	82.33	345	⇑P	**P**	**11 33 37.7**	**-2.2**
HARR	**Harsova**	82.33	345	⇑P	**P**	**11 33 37.7**	**-2.2**
GZR	**Gura Zlata**	82.37	349	⇑P	**P**	**11 33 40.5**	**+0.3**
GZR	**Gura Zlata**	82.37	349	⇑P	**P**	**11 33 40.5**	**+0.3**
TLBR	**Topalu**	82.45	345	⇓P	**P**	**11 33 41.9**	**+1.3**
TIRR	**Tirgusor**	82.47	345	⇑P	**P**	**11 33 41.4**	**+0.8**
TIRR	**Tirgusor**	82.47	345	P	**P**	**11 33 41.9**	**+1.3**
TIRR				pmax	pmax		
	comp=Z,38nm,0.7s						
TIRR	**Tirgusor**	82.47	345	P	**P**	**11 33 41.9**	**+1.3**
HERR	**Herculane**	82.92	349	⇑P	**P**	**11 33 42.9**	**-0.1**
MDVR	**Moldovita**	83.10	349	⇑P	**P**	**11 33 44.2**	**+0.2**
TEOL	**Teolo**	83.29	357	P	**P**	**11 33 45.6**	**+0.7**
BOVS	**Bovan**	84.23	349	⇑P	**P**	**11 33 49.4**	**-0.3**
WRA	**Warramunga Arr**	84.70	228	P	**P**	**11 33 51.3**	**-1.0**
	comp=Z,0.7nm,0.6s,baz=38,slow=4.8,SNR=12						
WRA				pP	**sP**	**11 34 04.6**	**-0.8**
	comp=Z,0.9nm,0.6s,baz=37,slow=6.0,SNR=4.1						
PDG	**Podgorica**	85.69	351	⇓P	**P**	**11 33 56.3**	**-0.8**
BRTR	**Keskin Array B**	86.04	340	P	**P**	**11 33 58.5**	**-0.6**
	comp=Z,4.7nm,0.9s,baz=66,slow=0.8,SNR=11						
BRTR	**Keskin Array B**	86.04	340	*i* P	**P**	**11 34 00.4**	**+1.3**
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BRTR	**Keskin Array B**	86.04	340	P	**P**	**11 33 57.3**	**-1.7**
FNA	**Florina**	87.08	349	P	**P**	**11 34 04.1**	**+0.1**
FNA				pmax	pmax		
	comp=Z,14nm,0.7s						
FNA	**Florina**	87.08	349	P	**P**	**11 34 04.1**	**+0.1**
HYB	**Hyderabad**	87.33	295	*i* P	**P**	**11 34 04.5**	**-1.0**
ASAR	**Alice Springs**	88.12	227	P	**P**	**11 34 09.4**	**+0.4**
	comp=Z,2.4nm,0.8s,baz=30,slow=4.8,SNR=26						
ASAR				pP	**sP**	**11 34 22.5**	**+0.3**
	comp=Z,2.1nm,0.7s,baz=29,slow=5.0,SNR=8.6						
ESDC	**Sonseca Array**	88.59	8	P	**P**	**11 34 11.0**	**-0.2**
	comp=Z,0.7nm,0.4s,baz=345,slow=4.0,SNR=4.1						
H03N2	**Juan Fernandez**	117.91	109	T	T	13 49 42.5	
	baz=317,slow=77,SNR=5.7						
H03N1	**Juan Fernandez**	117.92	109	T	T	13 49 43.6	
	baz=317,slow=77,SNR=7.2						
H03N3	**Juan Fernandez**	117.92	109	T	T	13 49 42.8	
	baz=317,slow=77,SNR=8.0						
MATP	**Matopo**	144.52	323	PKP	PKPbc	11 40 54.0	+0.4
	comp=Z,5.4nm,0.8s,baz=24,slow=15,SNR=6.3						
MATP				pPKP	sPKPdf	11 41 07.0	-1.1
	comp=Z,7.2nm,0.8s,baz=28,slow=6.2,SNR=5.3						
TSUM	**Tsumeb**	146.53	341	PKPbc	**PKPab**	**11 41 01.2**	**+0.4**
	comp=Z,4.6nm,0.6s,baz=346,slow=7.0,SNR=8.7						
TSUM				pPKPbc	sPKPab	11 41 13.7	0.0
	comp=Z,9.4nm,0.6s,baz=3.5,slow=6.5,SNR=7.8						
MAW	**Mawson**	148.82	218	PKPbc	**PKPbc**	**11 41 04.6**	**+0.3**
	comp=Z,2.3nm,0.7s,baz=95,slow=4.1,SNR=7.8						
MAW				pPKPbc	**sPKPbc**	**11 41 16.9**	**-1.1**
	comp=Z,4.9nm,0.8s,baz=96,slow=3.4,SNR=6.7						
LBTB	**Lobatse**	149.78	324	PKPbc	**PKiKP**	**11 41 09.2**	**0.0**
	comp=Z,2.0nm,0.5s,baz=23,slow=1.2,SNR=6.5						
LBTB				pPKPbc	**sPKPbc**	**11 41 22.1**	**+0.7**
	comp=Z,4.4nm,0.6s,baz=314,slow=1.4,SNR=4.0						
BOSA	**Boshof**	153.16	322	PKPbc	**PKiKP**	**11 41 17.1**	**+0.9**
	comp=Z,4.8nm,1.1s,baz=18,slow=1.4,SNR=5.0						
BOSA				pPKPbc	**sPKPbc**	**11 41 28.2**	**-0.9**
	comp=Z,3.8nm,0.6s,baz=10,slow=4.0,SNR=3.1						
VNA2	**Neumayer--Watz**	159.59	167	PKPdf	**PKPdf**	**11 41 15.8**	**+0.4**

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*IDC **03** 11:27:05.4±3.8, 3°.47N×31°.93W, h0^{km}, mb3.9/6, mb1 4.1/6, mb1mx3.7/51, mbtmp3.9/6, MS3.6/20, Ms1 3.6/20, ms1mx3.5/34, Error ellipse: s-maj=151.2km s-min=25.7km az=177.0*

ISC 03 11:27:09.3±0.8, **4°.1N**±0°.1×**32°.1W**±0°.1, **h10^{km}, n56, σ2^{s}.83**/27, **mb4.0**/5, **MS3.6**/20, **Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NBCL	**Cascavel-CE**	10.31	217	*e*P	**Pn**	**11 29 33.5**	**-4.0**
NBMO	**Morrinhos-CE**	10.82	228	*e*P	**Pn**	**11 29 40.4**	**-4.1**
NBPA	**Parau_RN**	10.97	207	*e*P	Pn	11 29 41.9	-4.6
NBPB	**Pedra_Branca-C**	12.14	218	*e*P	**Pn**	**11 29 58.8**	**-3.8**
NBLV	**Livramento - P**	12.33	203	*e*P	**Pn**	**11 30 01.3**	**-3.9**
NBPS	**Pedro II - PI**	12.58	228	*e*P	Pn	11 30 04.1	-4.6
NBRF	**Rio Formoso -**	13.01	194	*e*P	**Pn**	**11 30 13.8**	**-0.6**
NBMA	**Muriti-CE**	13.17	211	*e*P	**Pn**	**11 30 13.4**	**-3.2**
ROSB	**Rosrio**	13.89	240	*e*P	**Pn**	**11 30 22.8**	**-3.7**
NBLA	**Lagarto - SE**	16.00	201	*e*P	**Pn**	**11 30 53.5**	**-1.2**
NBPN	**Ponto Novo - B**	16.87	209	*e*P	**Pn**	**11 31 03.9**	**-2.0**
TMAB	**Tom-Au,PA,Br**	17.25	249	*e*P	**Pn**	**11 31 10.9**	**+0.3**
SMTB	**Santa Maria do**	20.11	230	*e*P	**P**	**11 31 43.0**	**-0.5**
NBIT	**Itapeh - BA**	20.23	201	*e*P	Pn	11 31 47.5	+0.8
MCPB	**Macapa, AP**	20.46	258	*e*P	Pn	11 31 51.8	+2.4
MDP	**Montagnes des**	20.54	274	P	**P**	**11 31 46.5**	**-1.8**
	3.3nm,0.6s,baz=83,slow=8.1,SNR=2.6						
SDBA	**SAO DESIDERIO**	20.75	218	*e*P	**P**	**11 31 49.4**	**-1.1**
H10N3	**ASCENSION HYDR**	21.13	124	T	T	11 53 36.1	
	baz=303,slow=75,SNR=79						
H10N2	**ASCENSION HYDR**	21.14	124	T	T	11 53 36.5	
	baz=303,slow=75,SNR=91						
H10N1	**ASCENSION HYDR**	21.15	124	T	T	11 53 38.1	
	baz=303,slow=75,SNR=94						
H10S3	**ASCENSION HYDR**	21.63	127	T	T	11 54 19.0	
	baz=303,slow=74,SNR=60						
H10S2	**ASCENSION HYDR**	21.65	127	T	T	11 54 20.4	
	baz=277,slow=74,SNR=28						
GUA01	**Guaratinga, BA**	21.89	200	*e*P	**P**	**11 32 05.3**	**+2.6**
PEXB	**Peixe**	22.77	225	*e*P	**P**	**11 32 11.8**	**-0.4**
MALB	**Monte Alegre**	22.95	256	*e*P	**P**	**11 32 17.9**	**+3.7**
MC01	**Montes Claros**	23.74	209	*e*P	**P**	**11 32 23.7**	**+1.7**
BSFB	**Barra de Sao F**	24.33	201	*e*P	**P**	**11 32 31.1**	**+3.6**
SJMB	**Sao Joao De Ma**	24.33	201	*e*P	**P**	**11 32 31.3**	**+3.7**
RIB01	**Linhares ES**	24.63	199	*e*P	**P**	**11 32 34.5**	**+4.3**
DIAM	**Diamantina, MG**	24.98	207	*e*P	**P**	**11 32 37.1**	**+3.5**
BDFB	**Brasilia**	25.15	219	LR	LR	11 41 19.7	
	comp=Z,198nm,19.2s,baz=35,slow=34						
DBIC	**Dimbokro**	27.21	83	LR	LR	11 40 53.2	
	comp=Z,117nm,20.7s,baz=272,slow=30						
CLDB	**Colider**	27.89	238	*e*P	**P**	**11 33 01.9**	**+2.1**
PTGA	**Pitinga**	28.29	261	LR	LR	11 43 00.8	
	comp=Z,115nm,21.8s,baz=91,slow=34						
BOAV	**Boa Vista**	28.46	268	*e*P	P	11 33 12.9	+8.0
KOWA	**Kowa**	29.52	68	P	**P**	**11 33 12.8**	**-1.5**
	1.5nm,0.6s,baz=263,slow=8.0,SNR=4.0						
KOWA				LR	LR	11 43 07.3	
	comp=Z,219nm,20.6s,baz=224,slow=32						
PMOZ	**Porto Moniz, M**	31.82	24	*e*T	T	12 06 35.6	
PMAR	**Madeira**	31.85	25	*e*T	T	12 06 33.5	
TORD	**Torodi Ar. Bea**	34.54	73	P	**P**	**11 33 56.6**	**-1.8**
	1.2nm,0.7s,baz=264,slow=7.1,SNR=7.0						
TORD				LR	LR	11 45 39.1	
	comp=Z,136nm,20.0s,baz=260,slow=32						
CPUP	**Villa Florida**	38.87	218	LR	LR	11 50 25.9	
	comp=Z,223nm,19.7s,baz=46,slow=36						
LPAZ	**La Paz**	40.99	240	LR	LR	11 51 40.5	
	comp=Z,86nm,18.6s,baz=92,slow=36						
ESDC	**Sonseca Array**	43.63	32	LR	LR	11 50 46.2	
	comp=Z,48nm,20.3s,baz=255,slow=32						
TSUM	**Tsumeb**	54.02	117	LR	LR	11 52 43.2	
	comp=Z,61nm,19.9s,baz=350,slow=29						
PLCA	**Paso Flores**	56.79	214	LR	LR	12 00 56.0	
	comp=Z,182nm,19.3s,baz=76,slow=36						
GERES	**GERESS Array B**	59.17	33	LR	LR	12 01 21.1	
	comp=Z,27nm,19.0s,baz=304,slow=34						
BOSA	**Boshof**	63.89	124	LR	LR	11 59 45.1	
	comp=Z,66nm,20.8s,baz=342,slow=31						
BRTR	**Keskin Array B**	68.82	49	LR	LR	12 08 05.9	
	comp=Z,29nm,21.9s,baz=294,slow=36						
AKASG	**Malin Array Be**	68.96	37	P	**P**	**11 38 13.9**	**-0.9**
	0.5nm,0.4s,baz=252,slow=5.5,SNR=2.3						
FINES	**FINESS Array B**	71.66	25	LR	LR	12 07 47.2	
	comp=Z,50nm,18.2s,baz=281,slow=34						
TXAR	**Lajitas Array**	72.00	299	LR	LR	12 06 21.5	
	comp=Z,11nm,21.5s,baz=0.0,slow=32						
PDAR	**Pinedale Array**	78.08	313	P	**P**	**11 39 10.6**	**+1.6**
	0.5nm,0.9s,baz=116,slow=4.1,SNR=2.4						
PDAR				LR	LR	12 10 20.9	
	comp=Z,18nm,20.9s,baz=98,slow=33						
YKA	**Yellowknife Ar**	82.97	332	LR	LR	12 13 57.0	
	comp=Z,28nm,18.1s,baz=0.0,slow=34						
NVAR	**Mina Array Bea**	84.56	308	LR	LR	12 15 07.5	
	comp=Z,17nm,18.0s,baz=305,slow=34						
AKTO	**Aktyubinsk**	86.95	40	LR	LR	12 21 52.5	
	comp=Z,28nm,18.9s,baz=310,slow=38						
ARU	**Arti**	87.00	34	LR	LR	12 16 37.9	
	comp=Z,44nm,19.3s,baz=258,slow=34						
ILAR	**Eielson Array**	96.66	337	P	**P**	**11 40 40.0**	**+0.4**
	0.4nm,0.9s,baz=37,slow=2.3,SNR=2.4						

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*NEIC **03** 12:08:03.8±2.3, 29°.94S±0°.08×177°.07W±0°.09, h10^{km}±2^{km}, mb4.5/16, Error ellipse: s-maj=17.5km s-min=5.6km az=43.0*

*IDC **03** 12:08:03.1±0.8, 30°.10S×177°.49W, h0^{km}, mb4.4/7, mb1 4.5/7, mb1mx4.2/23, mbtmp4.4/7, MS3.6/10, Ms1 3.5/10, ms1mx3.3/27, Error ellipse: s-maj=28.6km s-min=14.7km az=78.0*

ISC 03 12:08:05.3±0.7, **30°.27S**±0°.04×**177°.6W**±0°.1, **h10^{km}, n84, σ2^{s}.18**/96, **mb4.6**/15, **MS3.6**/9, **Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	1.04	344	P	**Pg**	**12 08 25.0**	**-0.4**
GLKZ				S	**Sg**	**12 08 37.5**	**-1.5**
RAO	**Raoul Island**	1.05	344	Pn	**Pg**	**12 08 24.9**	**-0.6**
	881nm,0.3s,baz=202,slow=1.9,SNR=22						
RAO				Sn	**Sg**	**12 08 37.9**	**-1.4**
	2µm,0.3s,baz=106,slow=22,SNR=8.4						
RAO				LR	LR	12 08 49.4	
	comp=Z,2µm,19.1s,baz=50,slow=50						
RAO	**Raoul Island**	1.05	344		**Pg**	**12 08 25.3**	**-0.2**
RIZ	**Raoul Island**	1.06	344	P	**Pg**	**12 08 24.6**	**-1.2**
RIZ				S	**Sg**	**12 08 37.3**	**-2.3**
MXZ	**Matakaoa Point**	8.03	204	S	**Sn**	**12 11 32.3**	**-0.6**
WMGZ	**Waiomatatini S**	8.23	203	P	**Pn**	**12 10 00.8**	**-3.9**
WMGZ				S	**Sn**	**12 11 39.5**	**+1.8**
HAZ	**Te Kaha**	8.39	206	P	**Pn**	**12 10 06.2**	**-0.8**
HAZ				S	**Sn**	**12 11 43.4**	**+1.5**
PKGZ	**Pakihiroa**	8.40	204	P	**Pn**	**12 10 06.6**	**-0.6**
PKGZ				S	**Sn**	**12 11 42.1**	**-0.1**
PUZ	**Puketiti**	8.51	203	P	**Pn**	**12 10 05.4**	**-3.2**
PUZ				S	**Sn**	**12 11 42.5**	**-2.2**
RUGZ	**Raukumara Rang**	8.62	206	P	**Pn**	**12 10 08.3**	**-1.9**
RUGZ				S	**Sn**	**12 11 48.1**	**+0.5**
TWGZ	**Tauwhareparae**	8.70	204	P	**Pn**	**12 10 09.6**	**-1.7**
TWGZ				S	**Sn**	**12 11 45.6**	**-3.7**
OUZ	**Omahuta**	8.91	234	Pn	Pn	12 10 22.4	+8.2
TKGZ	**Te Karaka**	8.98	204	P	**Pn**	**12 10 15.0**	**0.0**
TKGZ				S	**Sn**	**12 11 53.2**	**-3.0**
MWZ	**Matawai**	9.00	205	P	**Pn**	**12 10 13.2**	**-2.1**
MWZ				S	**Sn**	**12 11 55.6**	**-1.1**
URZ	**Urewera**	9.09	207	Pn	**Pn**	**12 10 15.0**	**-1.6**
	0.5nm,0.3s,baz=303,slow=24,SNR=2.0						
URZ				Sn	**Sn**	**12 11 57.2**	**-1.8**
	4.0nm,0.3s,baz=114,slow=22,SNR=6.4						
URZ	**Urewera**	9.09	207	Pn	Pn	12 10 23.1	+6.5
URZ	**Urewera**	9.09	207	P	**Pn**	**12 10 12.8**	**-3.8**
URZ				S	**Sn**	**12 12 00.5**	**+1.5**
RIGZ	**Rimuhau**	9.25	203	S	**Sn**	**12 12 01.3**	**-1.5**
PRGZ	**Paritu Road**	9.40	202	P	**Pn**	**12 10 19.4**	**-1.5**
PRGZ				S	**Sn**	**12 12 02.9**	**-3.8**
SNGZ	**Shannon Statio**	9.46	205	P	**Pn**	**12 10 22.5**	**+0.8**
SNGZ				S	**Sn**	**12 12 08.1**	**-0.1**
KNZ	**Kokohu**	9.56	203	P	Pn	12 10 16.2	-6.8
KNZ				S	**Sn**	**12 12 06.5**	**-3.9**
MHGZ	**Mahia Peninsul**	9.60	201	S	**Sn**	**12 12 09.2**	**-2.4**
RAHZ	**Arahi**	9.67	206	P	Pn	12 10 34.8	+10
RAHZ				P	**Sn**	**12 12 15.0**	**+1.6**
WHHZ	**Waihua**	9.76	204	S	**Sn**	**12 12 14.8**	**-0.7**
ARHZ	**Aropaoanui**	10.01	205	P	**Pn**	**12 10 27.5**	**-1.7**
ARHZ				S	**Sn**	**12 12 16.9**	**-4.7**
MCHZ	**McNeill Hill**	10.28	206	P	**Pn**	**12 10 31.4**	**-1.6**
MCHZ				S	**Sn**	**12 12 25.7**	**-2.5**
KWHZ	**Kaweka Forest**	10.37	207	P	**Pn**	**12 10 33.2**	**-1.0**
KWHZ				P	**Sn**	**12 12 28.9**	**-1.6**
KAHZ	**Kahuranaki**	10.53	204	P	**Pn**	**12 10 34.2**	**-2.1**
KAHZ				S	**Sn**	**12 12 28.8**	**-5.5**
KRHZ	**Kereru**	10.58	206	P	**Pn**	**12 10 35.5**	**-1.5**
KRHZ				P	**Sn**	**12 12 32.4**	**-3.1**
PXZ	**Pawanui**	10.74	203	P	**Pn**	**12 10 39.8**	**+0.6**
PXZ				P	**Sn**	**12 12 34.2**	**-5.3**
PNHZ	**Pukenui**	10.88	206	P	**Pn**	**12 10 37.2**	**-4.0**
PNHZ				P	**Sn**	**12 12 39.7**	**-3.2**
WPHZ	**Waipukurau**	10.92	205	P	Pn	12 10 49.6	+7.9
WPHZ				P	**Sn**	**12 12 40.5**	**-3.4**
PRHZ	**Porangahau**	11.03	204	P	Pn	12 10 37.1	-6.0
PRHZ				P	**Sn**	**12 12 40.7**	**-5.9**
POWZ	**Post Office Ro**	11.46	206	P	**Pn**	**12 10 48.4**	**-0.6**
POWZ				P	**Sn**	**12 12 54.1**	**-2.9**
MSVF	**Nonsavu**	13.10	341	LR	LR	12 15 29.6	
	comp=Z,184nm,19.2s,baz=167,slow=34						
DZM	**Mont Dzumac**	16.48	296	*e*LR	LR	12 15 42.9	
	comp=Z,344nm,23.6s						
DZM	**Mont Dzumac**	16.48	296	Pn	**P**	**12 12 04.6**	**+5.1**
	0.4nm,0.3s,baz=145,slow=13,SNR=4.3						
DZM				LR	LR	12 17 11.2	
	comp=Z,290nm,18.9s,baz=115,slow=33						
RAR	**Rarotonga**	18.39	65	LR	LR	12 18 27.5	
	comp=Z,135nm,19.5s,baz=192,slow=34						
TBI	**Tubuai**	25.99	81	*e*LR	LR	12 19 41.7	
	comp=Z,226nm,26.8s						
CAN	**Canberra**	28.45	251	P	**P**	**12 14 04.4**	**+3.9**
PPT2	**Papeete2**	28.46	70	*e*LR	LR	12 20 52.7	
	comp=Z,175nm,24.2s						
PPT	**Papeete**	28.47	70	LR	LR	12 24 11.9	
	comp=Z,70nm,18.6s,baz=228,slow=34						
HNR	**Honiara**	29.48	310	LR	LR	12 24 51.1	
	comp=Z,54nm,18.3s,baz=146,slow=34						
CTAO	**Charters Tower**	34.13	279	P	**P**	**12 14 52.4**	**+1.8**
STKA	**Stephens Creek**	34.85	257	P	**P**	**12 14 56.9**	**+0.1**
	7.1nm,0.5s,baz=102,slow=12,SNR=24						
STKA				LR	LR	12 28 23.8	
	comp=Z,124nm,18.3s,baz=39,slow=35						
STKA	**Stephens Creek**	34.85	257	P	**P**	**12 14 58.7**	**+2.0**
BBOO	**Buckleboo**	39.34	254	P	**P**	**12 15 36.3**	**+1.4**
BBOO				IAmb	IAmb	12 15 37.2	
	comp=Z,18nm,0.9s						
COEN	**Coen**	39.58	285	P	**P**	**12 15 37.3**	**+0.3**
COEN				IAmb	IAmb	12 16 02.4	
	comp=Z,8.4nm,1.1s						
AS31	**Alice Springs**	43.47	267	P	**P**	**12 16 09.5**	**+0.6**
ASAR	**Alice Springs**	43.47	267	P	**P**	**12 16 09.2**	**+0.2**
	comp=Z,1.9nm,0.4s,baz=104,slow=7.5,SNR=39						
ASAR				PcP	**PcP**	**12 17 55.3**	**-1.8**
	comp=Z,1.4nm,0.7s,baz=123,slow=3.8,SNR=5.5						
MANU	**Manus Island**	43.48	303	P	**P**	**12 16 08.1**	**-0.9**
MANU				IAmb	IAmb	12 16 25.5	
	comp=Z,9.4nm,1.4s						
WB2	**Warramunga Arr**	44.44	272	P	**P**	**12 16 17.1**	**+0.4**
WB2				IAmb	IAmb	12 16 22.2	
	comp=Z,7.9nm,0.7s						
WRAB	**Tennant Creek**	44.44	272	P	**P**	**12 16 16.9**	**+0.2**
WRAB				IAmb	IAmb	12 16 22.5	
	comp=Z,6.5nm,0.7s						
WRA	**Warramunga Arr**	44.45	272	P	**P**	**12 16 16.9**	**+0.1**
	comp=Z,7.2nm,0.7s,baz=113,slow=7.4,SNR=50						
WRA				PcP	**PP**	**12 17 59.4**	**-1.1**
	comp=Z,1.0nm,0.8s,baz=124,slow=2.9,SNR=2.5						
WRA				LR	LR	12 34 40.2	
	comp=Z,82nm,18.0s,baz=300,slow=36						
WRA	**Warramunga Arr**	44.45	272	P	**P**	**12 16 16.9**	**+0.1**
VNDA	**Vanda**	48.26	186	P	**P**	**12 16 46.1**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=308,slow=3.0,SNR=2.4						
KNRA	**Kununurra**	51.05	274	P	**P**	**12 17 08.9**	**+0.8**
KNRA				IAmb	IAmb	12 17 17.3	
	comp=Z,11nm,1.1s						
FITZ	**Fitzroy Crossi**	52.71	270	P	**P**	**12 17 21.3**	**+0.8**
FITZ				IAmb	IAmb	12 17 24.2	
	comp=Z,2.6nm,0.8s						
CASY	**Casey**	55.42	208	P	**P**	**12 17 41.0**	**+1.5**
QSPA	**South Pole Qui**	59.84	180	P	**P**	**12 18 12.7**	**+1.8**
	comp=Z,5.2nm,0.9s,baz=43,slow=1.0,SNR=25						
QSPA	**South Pole Qui**	59.84	180	P	**P**	**12 18 13.4**	**+2.5**
MAW	**Mawson**	72.55	200	P	**P**	**12 19 33.3**	**+1.2**
	comp=Z,4.0nm,0.9s,baz=109,slow=5.8,SNR=8.2						
MAW				LR	LR	12 51 03.9	
	comp=Z,74nm,18.2s,baz=239,slow=36						
MAW	**Mawson**	72.55	200	P	**P**	**12 19 34.1**	**+2.0**
SNAA	**Sanae**	78.28	178	P	**P**	**12 20 05.6**	**+0.5**
SNAA	**Sanae**	78.28	178	P	**P**	**12 20 06.2**	**+1.2**
SNAA				IAmb	IAmb	12 20 27.9	
	comp=Z,3.9nm,1.2s						
VNA3	**Neumayer Olymp**	78.41	176	P	**P**	**12 20 06.0**	**+0.3**
VNA2	**Neumayer--Watz**	78.85	177	P	**P**	**12 20 08.9**	**+0.7**
	baz=173,slow=6.4						
VNA1	**Neumayer--Stat**	79.08	176	P	**P**	**12 20 10.1**	**+0.7**
H03S2	**Juan Fernandez**	80.24	123	T	T	13 49 48.4	
	baz=238,slow=74,SNR=6.2						
H03S1	**Juan Fernandez**	80.25	123	T	T	13 49 43.8	
	baz=238,slow=74,SNR=6.7						
H03S3	**Juan Fernandez**	80.26	123	T	T	13 49 25.4	
	baz=238,slow=74,SNR=6.7						
PETK	**Petropavlovsk-**	85.78	345	P	**P**	**12 20 43.0**	**-1.4**
	comp=Z,4.2nm,0.8s,baz=123,slow=5.5,SNR=4.4						
TXAR	**Lajitas Array**	92.02	57	LR	LR	12 57 57.6	
	comp=Z,17nm,18.4s,baz=0.0,slow=33						
PDAR	**Pinedale Array**	95.80	43	LR	LR	12 56 08.3	
	comp=Z,18nm,22.0s,baz=252,slow=30						
MKAR	**Makanchi Array**	117.96	310	PKP	**PKPdf**	**12 26 50.7**	**-1.3**
	comp=Z,0.5nm,0.8s,baz=106,slow=3.4,SNR=1.9						
ZALV	**Zalesovo Beam**	118.17	318	PKP	**PKPdf**	**12 26 50.2**	**-1.9**
	comp=Z,0.5nm,0.5s,baz=104,slow=3.6,SNR=1.7						
ARCES	**ARCESS Array B**	138.54	348	PKhKP	PKPpre	12 27 21.2	
	comp=Z,6.0nm,1.1s,baz=5.4,slow=1.9,SNR=2.1						
FINES	**FINESS Array B**	145.14	340	PKPbc	**PKPbc**	**12 27 41.0**	**-0.9**
	comp=Z,6.2nm,0.5s,baz=63,slow=2.9,SNR=32						
NB2	**NORSAR Subarra**	148.67	352	PKP	**PKPbc**	**12 27 51.1**	**-1.0**
	comp=Z,0.8nm,0.6s,baz=9.9,slow=2.7						
NOA	**NORSAR Array B**	148.67	352	PKPbc	**PKPdf**	**12 27 49.7**	**+1.3**
	comp=Z,3.2nm,0.9s,baz=16,slow=4.3,SNR=6.0						
AKASG	**Malin Array Be**	151.41	323	PKPbc	**PKPbc**	**12 27 58.1**	**-0.9**
	comp=Z,0.7nm,0.3s,baz=49,slow=2.7,SNR=5.7						
AKASG				PKPab	**sPKPbc**	**12 28 04.4**	**+2.5**
	comp=Z,4.0nm,0.6s,baz=50,slow=3.2,SNR=10						
BRTR	**Keskin Array B**	152.85	299	PKP	**PKPdf**	**12 27 54.5**	**-1.2**
	comp=Z,0.5nm,0.5s,baz=104,slow=6.1,SNR=1.2						
BRTR				PKPbc	**PKPbc**	**12 28 01.5**	**-1.3**
	comp=Z,1.5nm,0.8s,baz=182,slow=3.2,SNR=5.0						
GERES	**GERESS Array B**	159.55	338	PKPab	**PKPab**	**12 28 41.9**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=20,slow=4.3,SNR=6.2						
TORD	**Torodi Ar. Bea**	162.95	178	PKPab	**PKPab**	**12 28 58.0**	**+0.3**
	comp=Z,0.6nm,0.8s,baz=173,slow=3.7,SNR=2.6						

NOU 03 12:24:46.6, 16°.32S×167°.91E, h171^{km}, MLv3.5/4, **Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	1.10	322	P	Pn	12 25 14.4	+0.2
MARNC	**Mare, Loyalty**	5.13	179	P	Pn	12 26 02.1	0.0

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*IDC **03** 12:41:03.6±0.6, 57°.30N×122°.46W, h0^{km}, mb3.7/5, mb1 3.8/12, mb1mx3.6/45, mbtmp3.6/12, ML3.6/6, MS3.2/5, Ms1 3.2/5, ms1mx2.7/42, Error ellipse: s-maj=8.4km s-min=7.6km az=147.0*

*PGC **03** 12:41:05.3, 57°.23N×122°.47W, h5^{km}, ML3.6/11, 147km Wnw of Fort St. John, Bc British Columbia, Canada*

ISC 03 12:41:03.2±1.1, **57°.20N**±0°.02×**122°.49W**±0°.03, **h10^{km}**±8^{km}, **n50, σ2^{s}.37**/77, **mb3.9**/4, **British Columbia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NBC5	**NorthernBC 5**	0.34	342	P	**Pb**	**12 41 11.2**	**-0.1**
NBC5				S	**Sb**	**12 41 15.9**	**-0.9**
BMBC	**Bull Mountain**	1.18	170	P	**Pb**	**12 41 26.9**	**+1.2**
BMBC				S	**Sg**	**12 41 42.9**	**+1.8**
NBC6	**NorthernBC 6**	1.52	24	Pn	**Pg**	**12 41 32.4**	**+0.2**
NBC6				Sg	**Sg**	**12 41 51.9**	**0.0**
NBC1	**NorthernBC 1**	2.56	345	Pn	**Pn**	**12 41 46.2**	**+1.5**
NBC2	**NorthernBC 2**	2.58	0	Pn	**Pn**	**12 41 46.0**	**+1.0**
NBC2				Sn	**Sn**	**12 42 17.8**	**+1.4**
NBC2				Sg	**Sg**	**12 42 24.6**	**-1.5**
NBC3	**NorthernBC 3**	2.62	21	Sn	**Sb**	**12 42 20.1**	**-2.3**
FSB	**Fort Saint Jam**	2.92	202	Pn	**Pn**	**12 41 52.6**	**+2.9**
FSB				Pg	**Pg**	**12 41 58.8**	**-0.3**
FSB				Sg	**Sg**	**12 42 36.2**	**-0.7**
DLBC	**Dease Lake**	4.22	290	Pn	**Pn**	**12 42 09.1**	**+1.6**
	2.0nm,0.3s,baz=100,slow=9.7,SNR=43						
DLBC				Pg	**Pb**	**12 42 19.6**	**+2.2**
	3.6nm,0.3s,baz=108,slow=9.6,SNR=19						
DLBC				Sn	**Sn**	**12 42 57.9**	**+1.1**
	5.4nm,0.3s,baz=24,slow=23,SNR=4.4						
DLBC				Lg	Lg	12 43 13.6	
	3.1nm,0.3s,baz=308,slow=26,SNR=2.1						
DLBC				LR	LR	12 44 00.2	
	comp=Z,139nm,21.2s,baz=139,slow=42						
DLBC	**Dease Lake**	4.22	290	Pn	**Pn**	**12 42 08.8**	**+1.4**
DLBC				Sg	**Sg**	**12 43 16.4**	**-2.1**
WTLY	**Watson Lake, Y**	4.40	314	Sn	**Sn**	**12 42 59.8**	**-1.4**
WTLY				Sg	**Sg**	**12 43 21.5**	**-2.8**
UBRB	**Upper Baezaeko**	4.42	193	Pn	**Pn**	**12 42 12.7**	**+2.4**
UBRB				Sg	**Sg**	**12 43 22.4**	**-2.5**
KITB	**Kitimat**	4.68	231	Pn	**Pn**	**12 42 15.5**	**+1.7**
KITB				Sn	**Sn**	**12 43 08.3**	**+0.2**
KITB				Sg	**Sg**	**12 43 32.1**	**-1.2**
HWKB	**Hawksbury Isla**	5.24	229	Sg	**Sg**	**12 43 49.2**	**-2.0**
RUBB	**Prince Rupert**	5.25	240	Pn	**Pn**	**12 42 24.1**	**+2.6**
RUBB				Sg	**Sg**	**12 43 49.6**	**-1.8**
TGTN	**Hyland Airport**	5.25	328	Pn	**Pn**	**12 42 23.1**	**+1.4**
BUTB	**Butedale**	5.38	222	Pn	**Pn**	**12 42 25.5**	**+2.0**
BUTB				Sn	**Sn**	**12 43 24.7**	**-0.8**
BUTB				Sg	**Sg**	**12 43 51.8**	**-4.0**
GRNB	**Grenville Isla**	5.41	235	Pn	**Pn**	**12 42 25.3**	**+1.5**
GRNB				Sg	**Sg**	**12 43 54.6**	**-2.1**
BLBC	**Blue River**	5.50	159	Pn	**Pn**	**12 42 27.7**	**+2.3**
BLBC				Sn	**Sn**	**12 43 28.5**	**-0.3**
MNB	**Mounoet Dainar**	5.55	153	Pn	**Pn**	**12 42 28.7**	**+2.8**
MNB				Sn	**Sn**	**12 43 31.7**	**+1.8**
BNKB	**Banks Island**	5.74	231	Sg	**Sg**	**12 44 03.3**	**-4.0**
BNAB	**Bonilla**	5.95	235	Sg	**Sg**	**12 44 11.2**	**-2.7**
BBB	**Bella Bella**	5.99	215	Pn	**Pn**	**12 42 33.2**	**+1.5**
	0.4nm,0.3s,baz=61,slow=8.0,SNR=10						
BBB				Sn	**Sn**	**12 43 40.0**	**-0.3**
	1.0nm,0.3s,baz=126,slow=23,SNR=0.9						
BBB				Lg	Lg	12 44 14.6	
	3.3nm,0.3s,baz=302,slow=18,SNR=7.8						
BBB				LR	LR	12 44 24.0	
	comp=Z,45nm,20.1s,baz=31,slow=33						
BBB	**Bella Bella**	5.99	215	Pn	**Pn**	**12 42 33.4**	**+1.6**
BBB				Sn	**Sn**	**12 43 40.0**	**-0.3**
BBB				Sg	**Sg**	**12 44 12.6**	**-2.7**
SLEB	**Sale Mountain**	6.56	155	Pn	**Pn**	**12 42 41.0**	**+1.1**
SLEB				Sg	**Sg**	**12 44 30.4**	**-3.3**
EDM	**Edmonton**	6.58	123	Pn	**Pn**	**12 42 41.5**	**+1.6**
EDM				Sn	**Sn**	**12 43 51.5**	**-3.3**
LLLB	**Lillooet**	6.62	177	Pn	**Pn**	**12 42 42.9**	**+2.4**
YKA	**Yellowknife Ar**	6.62	34	Pn	**Pn**	**12 42 39.5**	**-0.9**
	2.1nm,0.3s,baz=223,slow=13,SNR=92						
YKA				Pg	Pg	12 43 04.3	-5.5
	2.7nm,0.3s,baz=235,slow=20,SNR=7.9						
YKA				Sn	**Sn**	**12 43 52.4**	**-3.5**
	9.2nm,0.3s,baz=210,slow=22,SNR=12						
YKA				Lg	Lg	12 44 25.8	
	11nm,0.3s,baz=215,slow=27,SNR=7.3						
MMPY	**Sheldon Lake,**	6.99	325	Pn	**Pn**	**12 42 47.2**	**+1.7**
MMPY				Sn	**Sn**	**12 44 03.2**	**-1.8**
PHC	**Port Hardy**	7.13	206	Pn	**Pn**	**12 42 49.8**	**+2.4**
WHY	**Whitehorse**	7.29	304	Pn	**Pn**	**12 42 49.5**	**-0.2**
WHY				Sn	**Sn**	**12 44 08.9**	**-3.5**
MAYB	**Maynard**	7.35	204	Pn	**Pn**	**12 42 52.4**	**+1.8**
HOLB	**Holberg**	7.37	209	Pn	**Pn**	**12 42 52.6**	**+1.9**
WOSB	**Woss**	7.46	201	Pn	**Pn**	**12 42 54.7**	**+2.7**
SHB	**Sechelt**	7.67	187	Sg	**Sg**	**12 45 02.4**	**-6.6**
PRDA	**Priddis**	7.97	139	Pn	**Pn**	**12 43 01.1**	**+2.1**
PRDA				Sn	**Sn**	**12 44 25.8**	**-3.4**
PNT	**Penticton**	8.09	167	Pn	**Pn**	**12 43 03.5**	**+3.0**
NEW	**Newport**	9.52	158	Pg	Pg	12 43 56.5	
	0.1nm,0.3s,baz=10,slow=13,SNR=1.1						
NEW				Lg	Lg	12 46 00.8	
	0.2nm,0.3s,baz=63,slow=19,SNR=3.1						
INK	**Inuvik**	12.21	340	Pn	**Pn**	**12 43 55.6**	**-1.1**
	0.3nm,0.3s,baz=148,slow=11,SNR=17						
INK				Sn	**Sn**	**12 46 09.3**	**-3.4**
	0.1nm,0.3s,baz=332,slow=8.4,SNR=1.7						
ILAR	**Eielson Array**	13.98	313	Pn	**Pn**	**12 44 21.3**	**+0.4**
	0.0nm,0.3s,baz=112,slow=13,SNR=7.4						
ILAR				Lg	Lg	12 48 24.6	
	0.1nm,0.3s,baz=115,slow=27,SNR=5.7						
KDAK	**Kodiak Island**	16.13	285	LR	LR	12 50 41.9	
	comp=Z,64nm,20.1s,baz=75,slow=36						
PDAR	**Pinedale Array**	16.63	145	Pn	**P**	**12 44 58.7**	**-0.1**
	0.0nm,0.3s,baz=337,slow=6.3,SNR=6.2						
ULM	**Lac du Bonnet**	17.14	103	P	**Pn**	**12 45 00.5**	**-2.0**

	0.1nm,0.3s,baz=301,slow=12,SNR=1.8						
ULM				S	Sn	12 48 06.0	-7.0
	0.3nm,0.3s,baz=54,slow=3.2,SNR=4.0						
ULM				Lg	Lg	12 49 57.0	
	0.2nm,0.3s,baz=183,slow=20,SNR=2.6						
NVAR	**Mina Array Bea**	18.99	170	P	Pn	12 45 28.4	+2.8
	baz=345,slow=10,SNR=2.4						
RES	**Resolute Bay**	20.45	21	P	P	12 45 40.8	+0.4
	2.0nm,0.6s,baz=221,slow=13,SNR=12						
ANMO	**Albuquerque**	24.76	147	P	P	12 46 27.2	+2.2
	1.3nm,0.7s,baz=346,slow=9.8,SNR=6.3						
TXAR	**Lajitas Array**	30.83	147	P	P	12 47 22.2	+3.0
	0.2nm,0.6s,baz=2.4,slow=3.0,SNR=3.6						
BORG	**Borgarnes**	44.55	37	LR	LR	13 07 53.7	
	comp=Z,41nm,19.1s,baz=254,slow=36						
FINES	**FINESS Array B**	59.16	17	P	P	12 51 04.4	+1.0
	1.1nm,0.7s,baz=350,slow=7.2,SNR=2.0						
ESDC	**Sonseca Array**	70.56	46	P	P	12 52 20.4	+2.3
	1.4nm,0.8s,baz=319,slow=6.6,SNR=8.5						
LPAZ	**La Paz**	85.94	129	LR	LR	13 38 53.0	
	comp=Z,61nm,18.5s,baz=178,slow=40						

NNC 03 12:42:43.0±16.0**, 39°.51N×67°.69E, h0^{km}, mb3.5, mpv3.1, 1C-3D, Error ellipse: s-maj=129.8km s-min=81.9km az=22.0, Southeastern Uzbekistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	4.17	30	Pg	Pg	12 44 00.7	-2.3
	0.5nm,0.3s,baz=217,slow=17,SNR=11						
KK31				⇓Lg	Lg	12 44 57.8	
	1.7nm,0.4s,baz=211,slow=27,SNR=4.3						
AAK	**Ala-Archa**	6.02	57	⇑Pn	Pn	12 44 14.0	+0.6
	2.6nm,0.6s						
AAK				Sn	Sn	12 45 28.3	+5.2
	1.0nm,0.5s						
TKM2	**Tokmak 2**	6.87	58	⇓Pn	Pn	12 44 24.5	-0.6
	1.4nm,0.7s						
TKM2				⇓Sn	Sn	12 45 38.6	-5.4
	1.3nm,0.7s						

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*DJA **03** 12:48:50.4±0.3, 1°N±2°×12°7E±°, h10^{km}, M3.1/7, MLv3.1/7*
*IDC **03** 12:48:51.2±2.4, 0°.85N×127°.32E, h0^{km}, mb3.3/3, mb1 3.6/3, mb1mx3.4/39, mbtmp3.4/3, Error ellipse: s-maj=185.3km s-min=28.5km az=66.0*
ISC 03 12:48:52.8±1.5**, 0°.86N**±0°.09×**127°.11E**±0°.09**, h10^{km}, n5, σ1^s.58**/7**, mb3.4**/3**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	0.27	109	P	Pg	12 48 57.7	-0.6
TNTI				S	Sg	12 49 02.7	+0.7
LBMI	**Labuha**	1.54	165	P	Pg	12 49 21.1	-1.3
LBMI				S	Sg	12 49 44.7	+2.3
WRA	**Warramunga Arr**	21.86	161	P	P	12 53 44.8	-1.0
	0.6nm,0.6s,baz=341,slow=11,SNR=6.7						
ASAR	**Alice Springs**	25.26	165	P	P	12 54 18.6	-0.7
	0.7nm,0.8s,baz=343,slow=8.3,SNR=8.5						
MKAR	**Makanchi Array**	60.12	326	P	P	12 59 01.4	+0.9
	0.2nm,0.5s,baz=111,slow=8.0,SNR=2.2						

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*IDC **03** 12:54:15.8±9.5, 0°.39N×122°.22E, h189^{km}±90^{km}, mb3.4/4, mb1 3.6/5, mb1mx3.1/53, mbtmp3.9/5, Error ellipse: s-maj=123.3km s-min=26.5km az=59.0*
*DJA **03** 12:54:18.3±0.6, 0°N±4°×12°2E±°, h173^{km}±5^{km}, M3.5/7, MLv3.5/7*
ISC 03 12:54:16.2±0.9**, 0°.33N**±0°.08×**122°.04E**±0°.06**, h192**^{km}±7^{km}**, n11, σ0^s.79**/18**, mb3.8**/4**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRSI	**Marisa**	0.18	328	P	Pn	12 54 41.8	+0.3
MRSI				S	Sn	12 54 59.9	-1.2
GTOI	**Gorontalo**	1.02	72	P	Pn	12 54 45.6	+0.3
GTOI				S	Sn	12 55 06.9	-0.8
APSI	**Ampana**	1.29	198	P	Pn	12 54 48.5	+1.1
APSI				S	Sn	12 55 11.4	-0.2
LUWI	**Luwuk**	1.54	152	P	Pn	12 54 50.1	+0.5
LUWI				S	Sn	12 55 15.4	-0.2
KMSI	**Cibinong**	1.96	83	P	Pn	12 54 55.3	+1.6
KMSI				S	Sn	12 55 23.3	+0.5
MPSI	**Mapaga**	2.14	270	P	Pn	12 54 56.6	+1.0
MPSI				S	Sn	12 55 26.3	+0.1
FITZ	**Fitzroy Crossi**	18.65	169	P	P	12 58 19.9	+0.2
	0.7nm,0.3s,baz=354,slow=8.4,SNR=26						
WRA	**Warramunga Arr**	23.48	150	P	P	12 59 08.0	-0.7
	2.1nm,0.7s,baz=326,slow=11,SNR=51						
ASAR	**Alice Springs**	26.49	155	P	P	12 59 35.8	-0.2
	0.9nm,0.5s,baz=339,slow=9.9,SNR=30						
ASAR				PcP	PcP	13 02 55.4	-0.6
	0.2nm,0.3s,baz=348,slow=2.3,SNR=6.7						
STKA	**Stephens Creek**	36.99	152	P	P	13 01 07.0	-0.3
	2.1nm,0.7s,baz=312,slow=14,SNR=3.1						
MKAR	**Makanchi Array**	57.84	329	P	P	13 03 47.9	+0.1
	0.3nm,0.3s,baz=131,slow=8.5,SNR=2.5						

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*ANF **03** 13:01:05.8±0.3, 41°.86N×119°.61W, h0^{km}, ML3.5/18, Error ellipse: s-maj=2.6km s-min=2.0km az=61.0*
*NEIC **03** 13:01:06.9, 41°.86N×119°.63W, h16^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M$_{rr}$-0.14; M$_{\theta\theta}$-1.77; M$_{\phi\phi}$1.91; M$_{r\theta}$-0.70; M$_{\theta\phi}$0.21; M$_{\phi r}$-0.42; Fault plane solution: M$_0$2.02000×10^{14} NP1:ϕ_s47.13000°, δ84.98000°, λ-23.63000°. NP2:ϕ_s139.32000°, δ66.46000°, λ-174.53000°. Principal axes: T 2.0233, Plg13.0000°, Azm96.0000°; N 0.0027, Plg66.0000°, Azm216.0000°; P -2.0260, Plg20.0000°, Azm1.0000°;*
*REN **03** 13:01:06.9±0.9, 41°.86N±0°.04×119°.63W±0°.06, h12^{km}±6^{km}, ML3.6/5, ML3.3/68(NEIC), Mwr3.5/68(NEIC) Error ellipse: s-maj=6.6km s-min=5.8km az=107.0*
*NEIC **03** 13:01:07.1±1.0, 41°.86N±0°.04×119°.60W±0°.04, h16^{km}±6^{km}, Error ellipse: s-maj=5.8km s-min=4.4km az=187.0*
ISC 03 13:01:06.3±1.4**, 41°.84N**±0°.03×**119°.59W**±0°.03**, h2**^{km}±14^{km}**, n64, σ1^s.35**/75**, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOD	**Modoc Plateau**	0.54	277		Pg	13 01 17.3	+0.6
MOD					Sg	13 01 24.6	+0.9
MOD	**Modoc Plateau**	0.54	277	IAML		13 01 24.8	
	comp=E,4µm,0.5s						
WVOR	**Wild Horse Val**	0.92	49		Pg	13 01 24.7	+0.7
WVOR					Sb	13 01 37.5	-0.4
WVOR	**Wild Horse Val**	0.92	49	IAML		13 01 40.5	
	comp=E,986nm,0.5s						
K05A	**Summer Lake**	1.32	313	Pn	Pn	13 01 31.0	-0.9
M04C	**Macdoel**	1.69	269	P	Pn	13 01 36.1	-0.8
	baz=87,SNR=219						
M04C				Sg	Sg	13 02 01.0	+0.6
	baz=87						
J08A	**Circle Bar Ran**	1.73	28		Pn	13 01 36.7	-0.7
K04D	**Chiloquin, OR**	1.79	297	P	Pn	13 01 37.5	-0.9
	baz=115,SNR=29						
K04D				Sg	Sg	13 02 04.0	+0.2
	baz=115						
J05D	**Fort Rock, OR**	1.89	320	Pb	Pb	13 01 40.9	-0.7
	baz=140,SNR=195						
J05D				Sb	Sg	13 02 06.3	-0.8
	baz=140						
L04D	**Klamath Falls**	2.06	282	P	Pn	13 01 41.1	-1.0
	baz=99,SNR=72						
L04D				Sb	Sb	13 02 11.2	+0.6
	baz=99						
PAHR	**Pah Rah Range**	2.13	176	Pn	Pn	13 01 43.3	+0.2
PAHR				IAML		13 02 22.0	
	comp=E,108nm,1.3s						
PINE	**Pine Mountain**	2.19	333	Pn	Pn	13 01 43.3	-0.7
PINE				IAML		13 02 26.8	
	comp=N,186nm,0.8s						
I07A	**Izee**	2.25	2	Pn	Pn	13 01 43.5	-1.0
I07A				IAML		13 02 18.0	
	comp=N,115nm,0.8s						
BMN	**Battle Mountai**	2.27	127	Pn	Pn	13 01 44.6	-0.4
BMN				IAML		13 02 27.9	
	comp=N,144nm,0.6s						
BMN				IAML		13 02 29.4	
	comp=E,157nm,0.7s						
O03E	**Paynes Creek**	2.28	228	P	Pn	13 01 45.3	+0.3
	baz=46,SNR=33						
O03E				Sb	Sg	13 02 18.6	-0.8
	baz=46						
J04D	**Umpqua Nationa**	2.33	308	Pb	Pb	13 01 48.3	-0.9
	baz=126,SNR=32						
J04D				Sb	Sb	13 02 19.1	+0.5
	baz=126						
YBH	**Yreka Blue Hor**	2.34	268		Pn	13 01 45.1	-0.8
YBH	**Yreka Blue Hor**	2.34	268	Pn	Pn	13 01 44.3	-1.6
M02C	**Callahan**	2.49	261	P	Pn	13 01 47.0	-0.9
	baz=78,SNR=49						
N02D	**Trinity Center**	2.50	251	P	Pn	13 01 47.7	-0.4
	baz=68,SNR=27						
N02D				Sb	Sg	13 02 25.4	-1.1
	baz=68						
VCNR	**Virginia City**	2.54	181	Pn	Pn	13 01 47.3	-1.4
VCNR				IAML		13 02 32.1	
	comp=N,130nm,0.5s						
VCNR				IAML		13 02 36.0	
	comp=E,159nm,0.8s						
WDC	**Whiskeytown Da**	2.56	242	Pn	Pn	13 01 48.1	-0.7
WDC				IAML		13 02 30.9	
	comp=N,73nm,1.2s						
MPK	**Martis Peak**	2.56	188	Pn	Pn	13 01 48.5	-0.6
MPK				IAML		13 02 33.2	
	comp=N,148nm,0.8s						
MPK				IAML		13 02 35.6	
	comp=E,139nm,0.9s						
HUMO	**Hull Mountain**	2.62	288	Pn	Pn	13 01 48.2	-1.5
HUMO				IAML		13 02 28.5	
	comp=N,105nm,0.5s						
HUMO				IAML		13 02 35.3	
	comp=E,78nm,0.7s						
ORV	**Oroville**	2.71	213	Pn	Pn	13 01 50.2	-0.6
I05D	**Terrebonne, OR**	2.81	333	Pb	Pb	13 01 56.4	-0.8
	baz=153,SNR=16						
I05D				Sb	Sb	13 02 33.3	+1.2
	baz=153						
I04A	**Tendick Farm,**	2.85	314	Pb	Pb	13 01 56.8	-1.1
	baz=133,SNR=8.3						
I04A				Sb	Sb	13 02 34.8	+1.4
	baz=133						
O02D	**Mt. Diablo Mer**	2.94	237	Pb	Pb	13 01 58.3	-1.1
	baz=54,SNR=15						
O02D				Sb	Sb	13 02 37.8	+2.0
	baz=54						
DBO	**Dodson Butte**	2.99	297	Pn	Pn	13 01 53.5	-1.3
DBO				IAML		13 02 41.7	
	comp=N,116nm,0.5s						
DBO				IAML		13 02 54.8	
	comp=E,57nm,1.1s						
KVN	**Kaiserville**	3.00	157	Pn	Pn	13 01 54.6	-0.5
KVN				IAML		13 02 47.9	
	comp=E,47nm,0.7s						
L02E	**Cave Junction**	3.01	277	P	Pn	13 01 54.8	-0.3
	baz=94,SNR=42						
K02D	**Willamette Mer**	3.15	287	P	Pn	13 01 56.7	-0.2
	baz=104,SNR=119						
K02D				Sb	Sb	13 02 43.1	+1.3
	baz=104						
MFID	**Camas Ranch**	3.19	59	Pn	Pn	13 01 56.6	-1.0
KRMB	**Red Mountain**	3.25	266	Pn	Pn	13 01 57.5	-1.0
KRMB				IAML		13 02 34.6	
	comp=E,46nm,3.0s						
KRMB				IAML		13 02 43.5	
	comp=N,65nm,3.4s						
KHMM	**Horse Mountain**	3.27	254	Pn	Pn	13 01 57.7	-0.9
KHMM				IAML		13 02 58.5	
	comp=N,95nm,4.3s						
KHMM				IAML		13 03 13.7	
	comp=E,73nm,4.9s						
I03D	**Drain, OR**	3.34	305	Sb	Sb	13 02 49.5	+2.4
	baz=123						
H04A	**Detroit Lake**	3.42	327	Pn	Pn	13 01 59.0	-1.6
BUCK	**Buck Mountain**	3.43	315	Pn	Pn	13 01 58.7	-2.2
BUCK				IAML		13 03 00.8	
	comp=N,73nm,1.7s						
BUCK				IAML		13 03 50.9	
	comp=E,92nm,3.0s						
BMO	**Blue Mountains**	3.44	28	Pn	Pn	13 01 59.8	-1.2
BMO				IAML		13 03 06.3	
	comp=E,41nm,1.8s						
KBO	**Bosley Butte**	3.48	278	Pn	Pn	13 01 59.7	-1.8
KBO				IAML		13 03 29.9	
	comp=N,104nm,3.1s						
G08A	**Pilot Rock**	3.48	7	Pn	Pn	13 02 00.2	-1.4
KMRM	**Mail Ridge**	3.51	244	Pn	Pn	13 02 01.1	-0.8
KMRM				IAML		13 03 16.6	
	comp=N,76nm,3.9s						
H04D	**Lebanon**	3.54	320	Sb	Sb	13 02 55.5	+2.5
	baz=139						
NVAR	**Mina Array Bea**	3.54	163	Pn	Pn	13 02 01.5	-1.0
G05D	**Wamic, OR**	3.63	340	Sb	Sb	13 02 58.5	+2.9
	baz=160						
KEBM	**Edson Butte**	3.67	288	Pn	Pn	13 02 03.6	-0.5
LHV	**Little Huntoon**	3.68	167	Pn	Pn	13 02 04.1	0.0
LHV				IAML		13 03 08.9	
	comp=N,79nm,0.7s						
LHV				IAML		13 03 12.6	
	comp=E,78nm,0.9s						
PLID	**Pearl Lake**	4.17	38	Pn	Pn	13 02 10.6	-0.5
HLID	**Hailey**	4.18	64	Pn	Pn	13 02 10.0	-1.3
HLID				IAML		13 03 26.9	
	comp=E,26nm,1.2s						
HLID				IAML		13 03 27.0	
	comp=E,41nm,0.9s						
HLID	**Hailey**	4.18	64	Sb	Sb	13 03 15.1	+3.3
	baz=248						
F05D	**White Salmon**	4.27	342	Sb	Sb	13 03 17.4	+3.4
	baz=161						
HAWA	**Hanford**	4.55	0	Pn	Pn	13 02 15.1	-1.2
R11A	**Troy Canyon, C**	4.64	137	Pn	Pn	13 02 17.3	-0.3
R11A				IAML		13 03 40.2	
	comp=N,22nm,0.5s						
R11A				IAML		13 03 43.2	
	comp=E,21nm,1.7s						
R11A	**Troy Canyon, C**	4.64	137	P	Pn	13 02 17.4	-0.2
	baz=320						
HVU	**Hansel Valley**	5.09	88	Pn	Pn	13 02 23.6	-0.2
BCYI	**Bear Canyon**	5.16	59	Pn	Pn	13 02 24.3	-0.4
SPUT	**South Promonto**	5.38	93	Pn	Pn	13 02 27.4	-0.3
D05A	**Enumclaw**	5.62	343	Pn	Pn	13 02 28.2	-2.6
MCMT	**McKenzie Canyo**	5.75	56	Pn	Pn	13 02 32.1	-0.8
LRM	**Limekiln Ridge**	6.52	50	Pn	Pn	13 02 41.0	-2.4
FXWY	**Fox Creek**	6.55	71	Pn	Pn	13 02 41.4	-2.5
SNOW	**Snow King Moun**	6.71	73	Pn	Pn	13 02 43.3	-2.7
LOHW	**Long Hollow**	6.85	72	Pn	Pn	13 02 46.7	-1.2
U15A	**North Rim**	7.83	131	Pn	Pn	13 03 01.1	-0.3

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*IDC **03** 13:02:20.4±1.5, 48°.40N×19°.59E, h0^{km}, mb3.5/1, mb1 3.6/8, mb1mx3.3/43, mbtmp3.5/8, ML3.2/7, Error ellipse: s-maj=24.1km s-min=8.5km az=172.0*
*IPEC **03** 13:02:23.3±0.1, 48°.79N×19°.48E, h8^{km}, ML3.2/6, Error ellipse: s-maj=0.5km s-min=0.4km az=3.0*
*PRU **03** 13:02:23.3±0.0, 48°.75N×19°.35E, h0^{km}, Slovakia*
*KRSZO **03** 13:02:23.3±0.7, 48°.78N×19°.46E, h8^{km}, ML3.4/31, Error ellipse: s-maj=2.6km s-min=2.3km az=42.0*
*BGR **03** 13:02:26.2±0.4, 48°.86N×19°.43E, h10^{km}, ML3.4/14, Error ellipse: s-maj=10.0km s-min=6.7km az=33.0*
ISC 03 13:02:23.3±1.0**, 48°.81N**±0°.02×**19°.47E**±0°.01**, h6**^{km}±9^{km}**, n133, σ1^s.14**/194**, 6C-10D, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LANS	**Liptovska Anna**	0.35	360	Pg	Pg	13 02 30.5	+0.5
	comp=Z,22nm,SNR=1000						
LANS	**Liptovska Anna**	0.35	360	*e*PG	Pg	13 02 30.5	+0.5
LANS				*e*SG	Sg	13 02 35.1	+0.5
LANS				*e*LG	Lg	13 02 35.5	
VYHS	**Vyhne**	0.52	234	Pg	Pg	13 02 33.5	+0.2
	comp=Z,1.5nm,SNR=118						
VYHS	**Vyhne**	0.52	234	*e*PG	Pg	13 02 33.5	+0.2
VYHS				*e*SG	Sg	13 02 40.3	+0.2
VYHS				*e*LG	Lg	13 02 42.1	
KOLL	**Kolacno**	0.74	253	*e*PG	Pg	13 02 37.6	+0.1
KOLL				*e*SG	Sg	13 02 47.9	+0.8
KECS	**Kecovo**	0.75	115	Pg	Pg	13 02 37.3	-0.3
	comp=Z,70nm,SNR=562						
KECS	**Kecovo**	0.75	115	*e*PG	Pg	13 02 37.3	-0.3
KECS				*e*SG	Sg	13 02 46.7	-0.6
KECS				*e*LG	Lg	13 02 47.7	
NIE	**Niedzica**	0.82	41	*e*Pg	Pg	13 02 39.5	+0.4
NIE				*e*Sg	Sb	13 02 50.9	-0.4
NIE	**Niedzica**	0.82	41	*e*Pg	Pg	13 02 39.5	+0.4
NIE	**Niedzica**	0.82	41	Pn	Pg	13 02 39.4	+0.3
	comp=Z,0.9nm,SNR=47						
PSZ	**Piszkesteto**	0.93	162	⇓P	Pg	13 02 41.1	0.0
PSZ				⇑S	Sg	13 02 53.7	+0.5
PSZ	**Piszkesteto**	0.93	162	*e*PG	Pg	13 02 41.0	-0.1
PSZ				*e*SG	Sb	13 02 53.8	-0.7
PSZ	**Piszkesteto**	0.93	162	Pn	Pg	13 02 41.0	-0.1
	comp=Z,3.1nm,SNR=92						
PSZ				Lg	Lg	13 02 53.8	
JAVC	**Velka Javorina**	1.19	273	*e*Pg	Pg	13 02 46.0	0.0
	baz=93						
JAVC				*e*Sg	Sg	13 03 01.0	-0.4
	comp=Z,318nm,0.8s,baz=93						
JAVC	**Velka Javorina**	1.19	273	*e*PG	Pg	13 02 46.1	0.0
JAVC				*e*SG	Sg	13 03 01.1	-0.4
SRO	**Srobarova**	1.26	218	Pg	Pn	13 02 48.0	+0.6
	comp=Z,8.7nm,SNR=8.3						
SRO	**Srobarova**	1.26	218	*e*PG	Pn	13 02 48.0	+0.6
SRO				*e*SG	Sn	13 03 04.6	0.0
SRO				*e*LG	Lg	13 03 07.6	
SRO2	**Moca**	1.27	215	*e*SG	Sg	13 03 02.2	-1.7
STHS	**Stebnicka Huta**	1.32	62	Pg	Pn	13 02 47.7	-0.5
	comp=Z,5.1nm,SNR=81						
STHS	**Stebnicka Huta**	1.32	62	*e*PG	Pn	13 02 48.1	-0.1
STHS				*e*SG	Sn	13 03 07.8	+1.7
CRVS	**Cervenica-Dubn**	1.32	85	Pg	Pn	13 02 48.0	-0.2
	comp=Z,0.6nm,SNR=48						
CRVS	**Cervenica-Dubn**	1.32	85	*e*PG	Pb	13 02 48.3	-0.2
CRVS				*e*SG	Sb	13 03 05.3	-0.3
OKC	**Ostrava-Krasne**	1.35	321	*e*PG	Pb	13 02 48.9	0.0
OKC				*e*SG	Sn	13 03 07.3	+0.4
	comp=Z,373nm,1.0s						
OKC	**Ostrava-Krasne**	1.35	321	*e*Pn	Pg	13 02 49.1	0.0
OKC				*e*Pg	Pb	13 02 50.0	+1.1
OKC				*e*Sg	Sn	13 03 06.8	0.0
BUD	**Budapest**	1.35	193	*e*PG	Pg	13 02 49.4	+0.1
BUD				*e*SG	Sn	13 03 08.6	+1.6
BUD	**Budapest**	1.35	193	Pb	Pg	13 02 49.4	+0.1
	comp=Z,1.0nm,SNR=17						
BUD				Lg	Lg	13 03 08.6	
SMOL	**Smolenice**	1.38	259	*e*PG	Pn	13 02 49.2	+0.1
SMOL				*e*SG	Sb	13 03 07.2	-0.3
OJC	**Ojcow**	1.43	8	*e*Pg	Pn	13 02 50.0	+0.2
OJC				*e*Sg	Sg	13 03 10.5	+1.2
OJC	**Ojcow**	1.43	8	Pn	Pn	13 02 50.1	+0.2
	comp=Z,1.1nm,SNR=30						
MODS	**Modra-Piesok**	1.52	254	*e*PG	Pn	13 02 49.8	-1.2
MODS				*e*SG	Sn	13 03 10.0	-1.1
MODS				*e*LG	Lg	13 03 14.6	
RAC	**Raciborz**	1.53	327	*e*PG	Pg	13 02 53.1	+0.6
RAC				*e*SG	Sg	13 03 13.2	+0.9
MORC	**Moravsky Berou**	1.59	308	⇑P	Pb	13 02 52.7	-0.5
MORC	**Moravsky Berou**	1.59	308	*e*Pn	Pn	13 02 52.0	-0.1
	baz=127						
MORC				*e*Sg	Sb	13 03 14.0	+0.5
	comp=Z,318nm,0.6s,baz=127						
MORC	**Moravsky Berou**	1.59	308	*e*Pn	Pb	13 02 52.8	-0.3
MORC				*e*Pg	Pg	13 02 53.9	+0.1
MORC				*e*Sg	Sg	13 03 15.3	+0.8
BSZH	**Besenyszg**	1.60	160	*e*PG	Pg	13 02 54.5	+0.6
BSZH	**Besenyszg**	1.60	160	Pb	Pg	13 02 54.5	+0.6
	comp=Z,0.9nm,SNR=5.4						
LOSC	**Losov**	1.60	302	*e*Pn	Pn	13 02 51.9	-0.2
	baz=120						
LOSC				*e*Sg	Sb	13 03 13.8	+0.1
	comp=Z,154nm,0.5s,baz=120						
CSKK	**Cskako**	1.66	210	*e*P	Pb	13 02 54.3	+0.2
CSKK				*e*S	Sn	13 03 14.7	+0.3
CSKK	**Cskako**	1.66	210	Pg	Pb	13 02 54.3	+0.2
	comp=Z,0.5nm,SNR=8.8						
CSKK				Sn	Sn	13 03 14.7	+0.3
ZST	**Bratislava**	1.69	250	Pn	Pn	13 02 53.0	-0.3
	comp=Z,9.0nm,SNR=18						
ZST	**Bratislava**	1.69	250	*e*PG	Pn	13 02 53.0	-0.3
ZST				*e*SG	Sn	13 03 15.2	0.0
ZST				*e*LG	Lg	13 03 21.6	
KOLS	**Kolonicke sedl**	1.86	85	Pb	Pg	13 02 59.8	+1.0
	comp=Z,112nm,SNR=11						
KOLS	**Kolonicke sedl**	1.86	85	*e*PG	Pg	13 02 58.8	0.0
KOLS				*e*SG	Sb	13 03 21.5	+0.4
KOLS				*e*LG	Lg	13 03 33.3	
LIPC	**Lipinka**	1.89	304	*e*Pn	Pn	13 02 56.3	+0.1
	baz=123						
VRAC	**Vranov**	1.96	286	⇓P	Pn	13 02 56.7	-0.3
VRAC	**Vranov**	1.96	286	Pn	Pn	13 02 56.7	-0.3
	comp=Z,10nm,0.3s,baz=98,slow=14,SNR=34						
VRAC				Sn	Sn	13 03 20.5	-1.5
	comp=Z,14nm,0.3s,baz=172,slow=23,SNR=4.4						
VRAC				Lg	Lg	13 03 28.7	
	comp=Z,12nm,0.3s,baz=102,slow=17,SNR=6.5						
VRAC	**Vranov**	1.96	286	*e*Pn	Pn	13 02 57.1	+0.1
	baz=104						
VRAC				*e*Sg	Sn	13 03 22.5	+0.6
	comp=Z,138nm,1.0s						
EGYH	**Egyhazaskeszo**	2.00	227	Pg	Pg	13 03 01.5	0.0
	comp=Z,0.6nm,SNR=5.8						
KRUC	**Moravsky**	2.04	278	*e*Pn	Pn	13 02 57.8	-0.4
	baz=96						
KRUC				*e*Sg	Sn	13 03 23.0	-1.0
	comp=Z,93nm,0.8s						
MPLH	**Magyarpolny**	2.09	219	*e*PN	Pb	13 03 00.6	-0.9
MPLH	**Magyarpolny**	2.09	219	Pg	Pb	13 03 00.6	-0.9
	comp=Z,0.4nm,SNR=17						
TRPA	**Tarpa**	2.15	107	⇓P	Pn	13 02 59.6	-0.1
TRPA	**Tarpa**	2.15	107	*e*PN	Pn	13 02 59.4	-0.3
TRPA	**Tarpa**	2.15	107	Pb	Pn	13 02 59.4	-0.3
	comp=Z,0.6nm,SNR=15						
KRLC	**Kraliky**	2.17	307	*e*PG	Pb	13 03 01.6	-1.3
KRLC				*e*SG	Sb	13 03 30.9	+0.9
	comp=Z,99nm,0.7s						
TIH	**Tihany**	2.18	210	*e*PN	Pn	13 03 01.4	+1.3
TIH	**Tihany**	2.18	210	Pn	Pn	13 03 01.4	+1.3
	comp=Z,1.3nm,SNR=9.3						
SOP	**Sopron**	2.25	241	*e*PN	Pn	13 03 01.7	+0.7
SOP				*e*PG	Pg	13 03 06.4	+0.1
SOP	**Sopron**	2.25	241	Pn	Pn	13 03 01.7	+0.7
	comp=Z,0.3nm,SNR=6.1						
SOP				Pg	Pg	13 03 06.4	+0.1
KWP	**Kalwaria Pacla**	2.28	67	Pn	Pb	13 03 03.3	-1.5
	comp=Z,2.2nm,SNR=4.5						
DPC	**Dobruska-Polom**	2.57	308	*e*PN	Pn	13 03 06.3	+0.9
DPC				*e*SG	Sg	13 03 44.3	-1.4
	comp=Z,148nm,1.3s						
DPC	**Dobruska-Polom**	2.57	308	*e*Pn	Pn	13 03 06.6	+1.2
DPC				*e*Sg	Sg	13 03 46.3	+0.6
MORH	**Mrgy, Hungar**	2.65	192	⇑P	Pn	13 03 06.2	-0.4
MORH	**Mrgy, Hungar**	2.65	192	*e*PN	Pn	13 03 06.1	-0.4
MORH	**Mrgy, Hungar**	2.65	192	Pn	Pn	13 03 06.1	-0.4
	comp=Z,0.1nm,SNR=6.2						
TREC	**Trest**	2.67	282	*e*Pg	Pg	13 03 16.4	+2.0
OSTC	**Ostas**	2.75	311	*e*PN	Pn	13 03 09.4	+1.5
OSTC				*e*PG	Pb	13 03 13.5	+0.7
OSTC				*e*SG	Sg	13 03 49.6	-1.8
	comp=Z,183nm,0.9s						
UPC	**Upice**	2.82	308	*e*PN	Pn	13 03 09.9	+1.0
UPC				*e*PG	Pb	13 03 14.8	+0.8
UPC				*e*SG	Sg	13 03 52.8	-1.0
	comp=Z,108nm,0.8s						
CHVC	**Chvalec**	2.85	310	*e*PN	Pn	13 03 10.9	+1.6
CHVC				*e*PG	Pb	13 03 15.5	+1.0
CHVC				*e*SG	Sg	13 03 52.8	-1.8
	comp=Z,129nm,0.9s						
KOVH	**Kovagotottos**	2.87	199	*e*PN	Pn	13 03 10.6	+1.0
KOVH	**Kovagotottos**	2.87	199	Pn	Pn	13 03 10.6	+1.0
	comp=Z,0.1nm,SNR=4.5						
KSP	**Ksiaz**	2.90	316	*e*Pg	Pn	13 03 11.8	+1.9
KSP				*i*		13 03 19.4	
KSP				*e*Sg	Sn	13 03 46.2	+1.1
KSP	**Ksiaz**	2.90	316	*e*Pn	Pn	13 03 11.5	+1.6
KSP				*e*Pg	Pg	13 03 19.5	+0.7
KSP				*e*Sg	Sg	13 03 58.3	+2.1
KSP	**Ksiaz**	2.90	316	Pn	Pn	13 03 11.0	+1.0
	comp=Z,0.5nm,SNR=14						
BMR	**Baia Mare**	2.92	111	⇑P	Pn	13 03 10.1	-0.2
BMR	**Baia Mare**	2.92	111	Pb	Pn	13 03 09.8	-0.4
	comp=Z,0.6nm,SNR=8.5						
SIRR	**Siria**	2.94	149	⇓P	Pn	13 03 10.7	+0.1
SIRR	**Siria**	2.94	149	Pg	Pn	13 03 10.8	+0.3
	comp=Z,0.1nm,SNR=7.8						
DRGR		2.97	131	⇑P	Pn	13 03 11.9	+0.9
DRGR		2.97	131	Pn	Pn	13 03 11.8	+0.8
	comp=Z,0.2nm,SNR=6.5						
ARSA	**Arzberg**	3.07	241	*e*Pn	Pn	13 03 12.9	+0.5
	comp=Z,0.8nm,0.2s						
ARSA				*e*Sn	Sn	13 03 51.1	+1.7

	comp=Z,6.4nm,0.3s						
ARSA	**Arzberg**	3.07	241	*e*Pn	Pn	13 03 13.5	+1.2
ARSA	**Arzberg**	3.07	241	Pb	Pn	13 03 13.6	+1.2
	comp=Z,0.1nm,SNR=3.7						
KALN	**Kalnik**	3.37	219	*e*Pn	Pn	13 03 17.1	+0.6
CKRC	**Cesky Krumlov**	3.41	272	*e*PN	Pn	13 03 16.6	-0.4
CKRC				*e*SN	Sn	13 03 54.8	-3.0
CKRC	**Cesky Krumlov**	3.41	272	*e*Pn	Pn	13 03 17.5	+0.5
PRU	**Pruhonice**	3.43	292	*e*PN	Pn	13 03 16.8	-0.4
PRU				*e*SG	Sb	13 04 08.4	+2.1
	comp=Z,40nm,0.9s						
PRU	**Pruhonice**	3.43	292	*e*Pn	Pn	13 03 17.2	0.0
PRU				*e*Pg	Pg	13 03 28.2	-0.8
PRU				*e*Sg	Sg	13 04 11.4	-1.9
CJR	**Cluj-Napoca**	3.48	125	⇓P	Pn	13 03 19.0	+0.9
CJR	**Cluj-Napoca**	3.48	125	Pn	Pn	13 03 18.9	+0.9
	comp=Z,0.4nm,SNR=4.5						
BZS	**Buzias**	3.51	155	⇓P	Pn	13 03 19.1	+0.7
BZS	**Buzias**	3.51	155	Pg	Pn	13 03 19.0	+0.7
	comp=Z,0.1nm,SNR=3.4						
MOA	**Molln**	3.60	257	*i* Pn	Pn	13 03 19.9	+0.3
	comp=Z,2.8nm,0.1s						
PVCC	**Panska Ves**	3.62	300	*e*Pn	Pn	13 03 20.2	+0.3
FRGS	**Fruska Gora**	3.66	176	⇓P	Pn	13 03 20.9	+0.5
SOKA	**Soboth**	3.67	236	*e*Pn	Pn	13 03 21.0	+0.3
	comp=Z,6.1nm,0.5s						
SOKA				*e*Sn	Sn	13 04 05.3	+0.9
	comp=Z,1.8nm,0.2s						
MOSL	**Moslavina**	3.69	211	*e*Pn	Pn	13 03 21.5	+0.6
ARCR	**ARCALIA**	3.71	116	Pg	Pg	13 03 35.0	+0.7
GEC2	**GERESS Array S**	3.81	273	*e*Pn	Pn	13 03 23.3	+0.7
GERES	**GERESS Array B**	3.81	273	Pn	Pn	13 03 23.2	+0.6
	comp=Z,4.9nm,0.3s,baz=90,slow=15,SNR=36						
GERES				Sn	Sn	13 04 07.4	-0.3
	comp=Z,5.4nm,0.3s,baz=92,slow=27,SNR=17						
KHC	**Kasperske Hory**	3.90	277	*e*PN	Pn	13 03 23.4	-0.3
KHC				*e*SG	Sb	13 04 20.7	+0.9
	comp=Z,17nm,0.6s						
KHC	**Kasperske Hory**	3.90	277	*e*Pn	Pn	13 03 24.3	+0.7
BURAR	**Bucovina Array**	4.02	105	⇑P	Pn	13 03 26.1	+0.6
OBKA	**Obir**	4.04	237	*e*Pn	Pn	13 03 26.5	+0.8
	comp=Z,5.8nm,0.4s,SNR=9.1						
OBKA				*e*Sn	Sn	13 04 15.3	+1.9
	comp=Z,8.2nm,0.4s						
OBKA	**Obir**	4.04	237	Pn	Pn	13 03 26.8	+1.1
	comp=Z,0.1nm,SNR=2.3						
GZR	**Gura Zlata**	4.09	145	⇓P	Pn	13 03 27.8	+1.4
GZR	**Gura Zlata**	4.09	145	Pn	Pn	13 03 27.8	+1.4
	comp=Z,0.1nm,SNR=3.9						
BRG	**Berggiesshubel**	4.13	302	*e*Pg	Pg	13 03 41.3	-1.1
HERR	**Herculane**	4.42	152	⇓P	Pn	13 03 31.8	+1.0
KBA	**Koelnbreinsper**	4.46	250	*e*Pn	Pn	13 03 32.7	+1.1
	comp=Z,2.9nm,0.3s						
KBA				*e*Sn	Sn	13 04 26.0	+2.1
	comp=Z,0.9nm,0.2s						
NKC	**Novy Kostel**	4.79	290	*e*PN	Pn	13 03 35.0	-1.0
TANN	**Tannenbergstha**	4.83	292	*e*Pn	Pn	13 03 37.6	+1.0
TANN				*e*Sg	Sg	13 04 55.9	-2.5
WERN	**Wernitzgruen**	4.85	290	*e*Pn	Pn	13 03 38.1	+1.3
CLL	**Collm**	4.86	303	*e*Pn	Pn	13 03 35.0	-1.9
CLL				*i*		13 03 40.3	
CLL				*e*Pg	Pg	13 03 54.0	-2.3
CLL				*e*		13 03 56.0	
CLL				*e*		13 04 46.0	
CLL				*e*Sg	Sg	13 05 01.0	+1.7
	comp=Z,28nm,0.6s						
CLL	**Collm**	4.86	303	*e*Pn	Pn	13 03 40.3	+3.4
MULD	**Muldenberg**	4.87	292	*e*Pn	Pn	13 03 37.5	+0.5
ROHR	**Rohrbach**	4.87	290	*e*Pn	Pn	13 03 36.7	-0.4
VOIR		5.08	129	⇓P	Pn	13 03 41.8	+1.8
SMRN	**Sveta Marina**	5.24	226	*e*Pn	Pn	13 03 43.4	+1.3
SMRN				Sn	Sn	13 04 40.8	-2.0
KIJV	**Kijevo**	5.25	205	*e*Pn	Pn	13 03 44.3	+2.0
WTTA	**Wattenberg**	5.48	257	*e*Pn	Pn	13 03 47.5	+1.9
	comp=Z,1.8nm,0.3s						
MORI	**Morici**	5.58	209	*e*Pn	Pn	13 03 48.6	+1.8
DUGI	**Dugi Otok**	5.70	214	*e*Pn	Pn	13 03 50.3	+1.9
ZIRJ	**Zirje**	5.79	209	*e*Pn	Pn	13 03 52.2	+2.5
HVAR	**Hvar**	6.01	202	*e*Pn	Pn	13 03 55.0	+2.3
STON	**Ston**	6.06	192	*e*Pn	Pn	13 03 55.6	+2.2
FETA	**Feichten**	6.14	256	*e*Pn	Pn	13 03 55.8	+1.2
	comp=Z,0.6nm,0.3s						
AKASG	**Malin Array Be**	6.60	70	Pn	Pn	13 03 58.8	-2.0
	comp=Z,1.9nm,0.3s,baz=255,slow=13,SNR=5.9						
AKASG				Sn	Sn	13 05 13.1	-3.1
	comp=Z,1.4nm,0.3s,baz=249,slow=24,SNR=4.2						
DAVOX	**Davos/Dischmat**	6.77	256	Pn	Pn	13 04 00.7	-2.6
	comp=Z,0.3nm,0.3s,baz=326,slow=11,SNR=1.7						
DAVOX				Sn	Sn	13 05 18.2	-2.6
	comp=Z,0.5nm,0.3s,baz=179,slow=20,SNR=1.5						
DAVOX				Lg	Lg	13 05 49.5	
	comp=Z,0.3nm,0.3s,baz=133,slow=23,SNR=1.3						
HFS	**Hagfors**	11.83	346	Pn	Pn	13 05 11.1	-1.3
	comp=Z,0.1nm,0.3s,baz=154,slow=14,SNR=1.3						
NOA	**NORSAR Array B**	13.13	342	Pn	Pn	13 05 28.4	-1.8
	comp=Z,0.0nm,0.3s,baz=157,slow=15,SNR=1.6						
FINES	**FINESS Array B**	13.21	14	Pn	Pn	13 05 29.0	-2.1
	comp=Z,0.4nm,0.3s,baz=196,slow=11,SNR=6.1						
ARCES	**ARCESS Array B**	21.00	6	P	P	13 07 09.6	+2.5
	comp=Z,1.9nm,0.9s,baz=180,slow=12,SNR=1.3						

SKO 03 13:02:25.1, 42°.54N×24°.08E, h0^{km}, Bulgaria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VTS	**Vitosha**	0.63	277	*i* Sg	Sg	13 02 45.7	+0.4
VTS	**Vitosha**	0.63	277	*i* Pg	Pg	13 02 36.0	-1.2
PLD	**Plovdiv**	0.64	133	*i* Pg	Pg	13 02 35.6	-1.7
PLD	**Plovdiv**	0.64	133	*i* Sg	Sg	13 02 45.5	+0.1
SRS	**Serrai**	1.47	195	*i* Pg	Pn	13 02 51.5	-1.4
STIP	**Stip**	1.64	240	*i* Pg	Pn	13 02 51.5	-3.8
VAY	**Valandovo**	1.66	223	*i* Pn	Pb	13 02 56.2	-0.4
BARS	**Barje**	1.69	280	*i* Pg	Pn	13 02 55.7	-0.3

JMA ***03*** *13:28:13.3±0.2, 37°.84N×142°.54E, h34^{km}±3^{km}, M3.3*
IDC ***03*** *13:28:16.1±6.6, 37°.11N×142°.62E, h0^{km}, mb3.3/2, mb1 3.5/3, mb1mx3.3/31, mbtmp3.2/3, ML2.1/1, Error ellipse: s-maj=133.7km s-min=37.7km az=17.0*

ISC 03 13:28:13.3±3.9, 37°.90N±0°.05×142°.47E±0°.08, h10^{km}±25^{km}, n24, σ1^{s}.30/29, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	0.89	298	P	Pb	13 28 30.6	-0.2
JIKH				S	Sb	13 28 43.6	+1.0
JIO	**Ouri**	1.04	302	P	Pn	13 28 32.9	-1.0
JIO				*e*S	Sb	13 28 47.2	+0.2
JKMT	**Kesennumamotoy**	1.20	320	P	Pn	13 28 35.2	-0.8
JKMT				S	Sb	13 28 51.0	-0.5
JMST	**Minamisoumatoc**	1.26	262	P	Pn	13 28 35.5	-1.4
JMST				*e*S	Sn	13 28 51.6	-2.3
JMM	**Marumori**	1.32	269	P	Pn	13 28 36.7	-1.1
JMM				*e*S	Sn	13 28 54.6	-0.8
JFK	**Kawauchi**	1.37	248	P	Pn	13 28 37.1	-1.4
JMK	**Ichinoseki**	1.43	317	P	Pn	13 28 39.1	-0.2
JMK				*e*S	Sn	13 28 57.8	-0.4
JOU	**Okura**	1.49	289	P	Pn	13 28 40.6	+0.4
JFT	**Otama**	1.73	258	P	Pn	13 28 43.4	0.0
JFT				*e*S	Sn	13 29 06.5	+1.0
JOM	**Ohasama**	1.82	330	P	Pn	13 28 44.8	+0.2
JOM				*e*S	Sb	13 29 09.3	-0.1
JYS	**Shirataka**	1.92	280	P	Pn	13 28 47.1	+1.1
JYK	**Kaneyama**	1.94	302	P	Pn	13 28 46.7	+0.4
JANG	**Nango**	2.58	344	P	Pn	13 28 56.3	+1.3
JANG				*e*S	Sn	13 29 27.4	+1.0
JAG	**Ashikaga**	2.82	239	P	Pn	13 28 58.7	+0.3
MJAR	**Matsushiro Arr**	3.66	250	Pn	Pn	13 29 12.2	+2.3
	0.2nm,0.3s,baz=80,slow=16,SNR=8.7						
MJAR				Sn	Sn	13 29 56.7	+3.5
	baz=10,slow=39,SNR=1.6						
MAT	**Matsushiro**	3.66	250	P	Pn	13 29 11.6	+1.7
MAT				*e*S	Sn	13 29 53.7	+0.6
H11N2	**WAKE ISLAND Hy**	27.90	124	T	T	14 03 09.3	
	baz=316,slow=75,SNR=57						
H11N1	**WAKE ISLAND Hy**	27.91	124	T	T	14 03 06.4	
	baz=316,slow=75,SNR=32						
H11N3	**WAKE ISLAND Hy**	27.92	124	T	T	14 03 10.2	
	baz=316,slow=75,SNR=34						
H11S1	**WAKE ISLAND Hy**	28.66	126	T	T	14 04 04.1	
	baz=318,slow=76,SNR=17						
H11S3	**WAKE ISLAND Hy**	28.66	126	T	T	14 04 03.6	
	baz=318,slow=76,SNR=18						
H11S2	**WAKE ISLAND Hy**	28.67	126	T	T	14 04 05.4	
	baz=318,slow=76,SNR=18						
WRA	**Warramunga Arr**	58.04	189	P	P	13 38 05.1	-1.3
	0.4nm,0.8s,baz=8.2,slow=7.0,SNR=2.3						
ASAR	**Alice Springs**	61.77	189	P	P	13 38 31.8	-0.3
	0.3nm,0.8s,baz=15,slow=7.7,SNR=1.8						

KRSC ***03*** *13:43:01.5±1.5, 53°.78N×162°.65E, h61^{km}±21^{km}, ML4.6*
MOS ***03*** *13:43:03.2±0.8, 53°.79N×162°.71E, h44^{km}, mb4.6/4, Error ellipse: s-maj=6.9km s-min=4.6km az=92.5*
NEIC ***03*** *13:43:05.5±1.2, 53°.9N±0°.1×162°.4E±0°.1, h42^{km}±6^{km}, mb4.5/34, Error ellipse: s-maj=20.2km s-min=8.4km az=154.0*
IDC ***03*** *13:43:08.3±2.2, 53°.96N×162°.26E, h64^{km}±20^{km}, mb3.7/17, mb1 3.9/20, mb1mx3.7/37, mbtmp4.0/20, MS3.4/5, Ms1 3.4/5, ms1mx2.8/44, Error ellipse: s-maj=18.9km s-min=12.7km az=135.0*

ISC 03 13:43:04.1±0.5, 53°.80N±0°.03×162°.66E±0°.04, h35^{km}±4^{km}, n162, σ1^{s}.18/193, mb4.3/32, MS3.9/3, 2C-1D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	0.93	325	PN	Pn	13 43 19.9	-0.8
MKZ				S	Sn	13 43 31.5	-1.3
MKZ	**Mys Kozlova**	0.93	325	*e*P	Pn	13 43 19.9	-0.8
MKZ				*e*S	Sn	13 43 31.5	-1.3
SPN	**Mys Shipunski**	1.73	247	PN	Pn	13 43 30.9	-0.7
SPN				S	Sn	13 43 50.7	-1.6
SPN	**Mys Shipunski**	1.73	247	*e*P	Pn	13 43 30.9	-0.7
SPN				*e*S	Sn	13 43 50.7	-1.6
TUMD	**Tumrok D**	1.93	318	*e*P	Pn	13 43 33.9	-0.5
TUMD				*e*S	Sn	13 43 56.1	-1.3
NLC	**Nalytchevo**	2.08	254	PN	Pn	13 43 36.4	0.0
NLC	**Nalytchevo**	2.08	254	*e*P	Pn	13 43 36.4	0.0
TUMR	**Tumrok**	2.08	316	PN	Pn	13 43 36.8	+0.1
TUMR	**Tumrok**	2.08	316	*e*P	Pn	13 43 36.8	+0.1
SDLR	**Sedlovina**	2.31	258	PN	Pn	13 43 40.0	+0.2
SDLR				S	Sn	13 44 07.0	0.0
SDLR	**Sedlovina**	2.31	258	*e*P	Pn	13 43 40.0	+0.2
SDLR				*e*S	Sn	13 44 07.0	0.0
SMAR	**Somma**	2.36	258	PN	Pn	13 43 40.9	+0.3
SMAR				S	Sn	13 44 08.6	+0.2
SMAR	**Somma**	2.36	258	*e*P	Pn	13 43 40.9	+0.3
SMAR				*e*S	Sn	13 44 08.6	+0.2
UGLR	**Uglovaya**	2.36	257	PN	Pn	13 43 41.2	+0.7
UGLR				S	Sn	13 44 08.6	+0.3
UGLR	**Uglovaya**	2.36	257	*e*P	Pn	13 43 41.2	+0.7
UGLR				*e*S	Sn	13 44 08.6	+0.3
KRER	**Koryakskii**	2.38	260	PN	Pn	13 43 41.7	+0.9
KRER				S	Sn	13 44 09.0	+0.1
KRER	**Koryakskii**	2.38	260	*e*P	Pn	13 43 41.7	+0.9
KRER				*e*S	Sn	13 44 09.0	+0.1
BKI	**Bering**	2.39	53	PN	Pn	13 43 40.3	-0.4
BKI				S	Sn	13 44 06.6	-2.1
BKI	**Bering**	2.39	53	*e*P	Pn	13 43 40.3	-0.4
BKI				*e*S	Sn	13 44 06.6	-2.1
AVH	**Avacha**	2.40	259	PN	Pn	13 43 41.6	+0.7
AVH				S	Sn	13 44 09.4	+0.3
AVH	**Avacha**	2.40	259	*e*P	Pn	13 43 41.6	+0.7
AVH				*e*S	Sn	13 44 09.4	+0.3
KMNR	**Kamenistaya**	2.41	325	PN	Pn	13 43 42.0	+0.9
KMNR	**Kamenistaya**	2.41	325	*e*P	Pn	13 43 42.0	+0.9
KBTR	**Krutoberegovo**	2.42	2	PN	Pn	13 43 40.4	-0.7
KBTR	**Krutoberegovo**	2.42	2	*e*P	Pn	13 43 40.4	-0.7
BZGR	**Bezymyannyi-Gr**	2.43	333	PN	Pn	13 43 41.9	+0.6
BZGR	**Bezymyannyi-Gr**	2.43	333	*e*P	Pn	13 43 41.9	+0.6
KOK	**Koryaka**	2.45	260	PN	Pn	13 43 42.4	+0.7
KOK				S	Sn	13 44 10.3	-0.1
KOK	**Koryaka**	2.45	260	*e*P	Pn	13 43 42.4	+0.7
KOK				*e*S	Sn	13 44 10.3	-0.1
DALK	**Dalny**	2.46	253	PN	Pn	13 43 41.8	+0.1
DALK				S	Sn	13 44 09.7	-0.7
DALK	**Dalny**	2.46	253	*e*P	Pn	13 43 41.8	+0.1
DALK				*e*S	Sn	13 44 09.7	-0.7
KBG	**Krutoberegovo**	2.46	1	PN	Pn	13 43 41.5	-0.2
KBG				S	Sn	13 44 10.3	-0.2
KBG	**Krutoberegovo**	2.46	1	*e*P	Pn	13 43 41.5	-0.2
KBG				*e*S	Sn	13 44 10.3	-0.2
ZLN	**Zelenaya**	2.47	335	PN	Pn	13 43 42.9	+1.0
ZLN	**Zelenaya**	2.47	335	*e*P	Pn	13 43 42.9	+1.0
PET	**Petropavlovsk**	2.52	254	*e*PN	Pn	13 43 42.9	+0.4
PET				*e*S	Sn	13 44 10.9	-1.0
PET				pmax	pmax		
	comp=Z,76nm,0.5s						
PET				smax	smax		
	comp=E,1µm,0.4s						
PET				smax	smax		
	comp=N,964nm,0.5s						
PET	**Petropavlovsk**	2.52	254	*e*P	Pn	13 43 42.9	+0.4
PET				*e*S	Sn	13 44 11.3	-0.6
PET	**Petropavlovsk**	2.52	254		Pn	13 43 42.6	+0.1
KIRR	**Kirishev**	2.54	329	PN	Pn	13 43 43.8	+0.9
KIRR	**Kirishev**	2.54	329	*e*P	Pn	13 43 43.8	+0.9
LGNR	**Loginova**	2.55	334	PN	Pn	13 43 44.5	+1.3
LGNR	**Loginova**	2.55	334	*e*P	Pn	13 43 44.5	+1.3
CIRR	**Tsirk**	2.57	335	PN	Pn	13 43 44.1	+0.8
CIRR	**Tsirk**	2.57	335	*e*P	Pn	13 43 44.1	+0.8
KPT	**Kopyto**	2.59	328	PN	Pn	13 43 44.7	+1.2
KPT	**Kopyto**	2.59	328	*e*P	Pn	13 43 44.7	+1.2
KRSR	**Krestovskiy**	2.71	334	PN	Pn	13 43 45.7	+0.5
KRSR	**Krestovskiy**	2.71	334	*e*P	Pn	13 43 45.7	+0.5
KLY	**Klyuchi**	2.77	336	PN	Pn	13 43 46.0	+0.1
KLY				S	Sn	13 44 17.6	-0.5
KLY	**Klyuchi**	2.77	336	*e*P	Pn	13 43 46.0	+0.1
KLY				*e*S	Sn	13 44 17.6	-0.5
KOZ	**Kozyrevsk**	2.77	326	PN	Pn	13 43 47.2	+1.2
KOZ	**Kozyrevsk**	2.77	326	*e*P	Pn	13 43 47.2	+1.2
GNL	**Ganaly**	2.80	270	PN	Pn	13 43 47.9	+1.4
GNL				S	Sn	13 44 20.8	+1.7
GNL	**Ganaly**	2.80	270	*e*P	Pn	13 43 47.9	+1.4
GNL				*e*S	Sn	13 44 20.8	+1.7
RUS	**Russkaya**	2.85	243	PN	Pn	13 43 47.1	+0.1
RUS				S	Sn	13 44 19.3	-0.7
RUS	**Russkaya**	2.85	243	*e*P	Pn	13 43 47.1	+0.1
RUS				*e*S	Sn	13 44 19.3	-0.7
SMKR	**Semkarok**	2.87	347	PN	Pn	13 43 48.1	+0.7
SMKR				S	Sn	13 44 20.4	-0.3
SMKR	**Semkarok**	2.87	347	*e*P	Pn	13 43 48.1	+0.7
SMKR				*e*S	Sn	13 44 20.4	-0.3
BDR	**Baidarnaya**	2.90	344	PN	Pn	13 43 49.0	+1.2
BDR	**Baidarnaya**	2.90	344	*e*P	Pn	13 43 49.0	+1.2
SRKR	**Sorokina**	2.98	344	PN	Pn	13 43 49.8	+0.8
SRKR	**Sorokina**	2.98	344	*e*P	Pn	13 43 49.8	+0.8
MTVR	**Mutnovka**	3.00	246	PN	Pn	13 43 49.9	+0.7
MTVR				S	Sn	13 44 23.6	-0.4
MTVR	**Mutnovka**	3.00	246	*e*P	Pn	13 43 49.9	+0.7
MTVR				*e*S	Sn	13 44 23.6	-0.4
GRL	**Gorelyy**	3.03	247	PN	Pn	13 43 50.8	+1.2
GRL				S	Sn	13 44 25.6	+0.9
GRL	**Gorelyy**	3.03	247	*e*P	Pn	13 43 50.8	+1.2
GRL				*e*S	Sn	13 44 25.6	+0.9
PEA0B	**Petropavlovsk-**	3.04	259*c*	*e*PN	Pn	13 43 51.3	+1.6
PEA0B	**Petropavlovsk-**	3.04	259		Pn	13 43 51.0	+1.3
PETK	**Petropavlovsk-**	3.04	259	P	Pn	13 43 50.4	+0.7
	comp=N,11nm,0.3s,baz=99,slow=21,SNR=187						
PETK				S	Sn	13 44 25.6	+0.7
	comp=N,40nm,0.3s,baz=282,slow=14,SNR=7.8						
PETK				LR	LR	13 44 42.1	
	comp=N,27nm,19.6s,baz=76,slow=33						
PETK	**Petropavlovsk-**	3.04	259		Pn	13 43 50.0	+0.3
ESO	**Esso**	3.12	315	PN	Pn	13 43 53.6	+2.8
ESO	**Esso**	3.12	315	*e*P	Pn	13 43 53.6	+2.8
ASAK	**Asacha**	3.20	246	PN	Pn	13 43 53.3	+1.4
ASAK				S	Sn	13 44 30.2	+1.4
ASAK	**Asacha**	3.20	246	*e*P	Pn	13 43 53.3	+1.4
ASAK				*e*S	Sn	13 44 30.2	+1.4
APC	**Apacha**	3.41	257	PN	Pn	13 43 56.7	+2.0
APC				S	Sn	13 44 35.0	+1.2
APC	**Apacha**	3.41	257	*e*P	Pn	13 43 56.7	+2.0
APC				*e*S	Sn	13 44 35.0	+1.2
KDTR	**Khodutka, Kamc**	3.42	236	PN	Pn	13 43 54.7	-0.2
KDTR	**Khodutka, Kamc**	3.42	236	*e*P	Pn	13 43 54.7	-0.2
KDTR				*e*S	Sn	13 44 32.0	-2.1
PAU	**Pauzhetka**	4.26	239	PN	Pn	13 44 07.5	+1.1
PAU	**Pauzhetka**	4.26	239	*e*P	Pn	13 44 07.5	+1.1
SKR	**Severo-Kuril's**	5.09	235	*e*P	Pn	13 44 17.7	-0.1
OSSR	**Ossora**	5.47	2	PN	Pn	13 44 23.0	0.0
OSSR	**Ossora**	5.47	2	*e*P	Pn	13 44 23.0	0.0
SMY	**Shemya**	6.95	94	PN	Pn	13 44 43.6	+0.3
SMY	**Shemya**	6.95	94	Pn	Pn	13 44 43.6	+0.3
MA2	**Magadan**	8.73	316	P	Pn	13 45 08.7	+1.1
	comp=N,0.3nm,0.3s,baz=175,slow=23,SNR=1.3						
MA2				LR	LR	13 49 01.3	
	comp=N,84nm,18.6s,baz=103,slow=42						
AMKA	**Amchitka**	10.41	97	Pn	Pn	13 45 31.8	+1.0
SEY	**Seymchan**	10.61	334	LR	LR	13 49 32.3	
	comp=N,26nm,21.0s,baz=110,slow=37						
JKA	**Kamikawa-asahi**	16.30	242		Pn	13 46 50.1	0.0
JKA	**Kamikawa-asahi**	16.30	242	IAmb	IAmb	13 46 51.0	
	comp=Z,9.2nm,0.7s						
ASAJ	**Asahikawa**	16.30	242	P	Pn	13 46 50.1	0.0
	comp=Z,0.8nm,0.3s,baz=83,slow=13,SNR=14						
ERM	**Erimo**	17.53	236	P	Pn	13 47 02.0	-3.5
ERM				pmax	pmax		
	comp=Z,65nm,1.3s						
ERM	**Erimo**	17.53	236	Pn	Pn	13 47 02.0	-3.5
ERM				IAmb	IAmb	13 47 27.8	
	comp=Z,65nm,1.3s						
TNA	**Tin City**	18.73	40	P	P	13 47 18.2	-1.2
TNA				IAmb	IAmb	13 47 21.2	
	comp=Z,126nm,1.5s						
TIXI	**Tiksi**	23.11	333	P	P	13 48 04.8	-1.6
	comp=Z,2.2nm,0.3s,baz=120,slow=11,SNR=8.3						
TIXI	**Tiksi**	23.11	333	⇓*i*P	P	13 48 05.9	-0.5
TIXI	**Tiksi**	23.11	333	P	P	13 48 05.3	-1.2
L19K	**White Mountain**	23.63	52	P	P	13 48 13.2	+1.6
L19K				IAmb	IAmb	13 48 36.6	
	comp=Z,13nm,1.4s						
M19K	**Big River Lodg**	23.84	53	P	P	13 48 15.2	+1.6
M19K				IAmb	IAmb	13 48 23.4	
	comp=Z,18nm,1.4s						
CHIR	**Chirikof Islan**	23.87	68	P	P	13 48 15.2	+1.3
K20K	**Telida**	24.03	49	P	P	13 48 15.6	+0.2
K20K				IAmb	IAmb	13 48 44.0	
	comp=Z,9.7nm,1.4s						
J20K	**Nowinta River**	24.06	47	P	P	13 48 14.3	-1.3
MJAR	**Matsushiro Arr**	24.20	234	P	P	13 48 18.0	+0.9
	comp=Z,1.4nm,0.6s,baz=34,slow=5.8,SNR=4.9						
MJAR	**Matsushiro Arr**	24.20	234	P	P	13 48 16.9	-0.3
MJAR				pmax	pmax		
	comp=Z,5.0nm,1.5s						
MJAR	**Matsushiro Arr**	24.20	234	P	P	13 48 16.9	-0.3
IMAR	**Indian Mountai**	24.44	43	P	P	13 48 20.5	+1.3
KDAK	**Kodiak Island**	25.12	63	P	P	13 48 28.1	+2.8
	comp=Z,10nm,0.9s,baz=24,slow=12,SNR=1.4						
KDAK	**Kodiak Island**	25.12	63	IAmb	IAmb	13 48 35.7	
	comp=Z,84nm,1.5s						
H23K	**Yukon River**	26.14	44	P	P	13 48 34.1	-0.4
TOLK	**Toolik Lake Re**	26.47	37	P	P	13 48 40.2	+2.7
TOLK				IAmb	IAmb	13 49 06.0	
	comp=Z,8.5nm,1.4s						
KNK	**Knik Glacier**	26.69	54	P	P	13 48 41.0	+1.4
KNK				IAmb	IAmb	13 49 07.7	
	comp=Z,21nm,1.4s						
ILAR	**Eielson Array**	27.22	46	P	P	13 48 46.2	+2.0
	comp=Z,0.5nm,0.8s,baz=261,slow=8.6,SNR=3.2						
M24K	**Tolsona, Glenn**	27.70	52	P	P	13 48 48.3	-0.3
M24K				IAmb	IAmb	13 49 02.6	
	comp=Z,46nm,1.4s						
FID	**Port Fidalgo**	27.73	55	P	P	13 48 48.3	-0.6
INK	**Inuvik**	32.37	39	P	P	13 49 31.2	+1.6
	comp=Z,0.7nm,0.8s,baz=238,slow=5.8,SNR=2.0						
INK	**Inuvik**	32.37	39	IAmb	IAmb	13 50 00.5	
	comp=Z,5.7nm,1.4s						
H11N2	**WAKE ISLAND Hy**	34.16	173	T	T	14 27 00.8	
	baz=354,slow=76,SNR=15						
H11N3	**WAKE ISLAND Hy**	34.18	173	T	T	14 27 03.3	
	baz=354,slow=76,SNR=11						
H11N1	**WAKE ISLAND Hy**	34.18	173	T	T	14 26 59.9	
	baz=354,slow=76,SNR=16						
H11S1	**WAKE ISLAND Hy**	35.36	173	T	T	14 28 23.7	
	baz=352						
H11S3	**WAKE ISLAND Hy**	35.38	173	T	T	14 28 16.1	
	baz=352						
H11S2	**WAKE ISLAND Hy**	35.38	173	T	T	14 28 19.7	
	baz=352						
EUNU	**Eureka**	40.89	14	P	P	13 50 43.3	+1.1
CLRS	**Cowichan Lake**	44.16	65	P	P	13 51 09.5	+0.5
CLRS				IAmb	IAmb	13 51 37.8	
	comp=Z,38nm,1.5s						
SPITS	**Spitsbergen Ar**	46.69	351	P	P	13 51 28.6	0.0
SPITS				pmax	pmax		
	comp=Z,35nm,1.3s						
SPB2	**Spitsbergen Ar**	46.69	351	P	P	13 51 28.9	+0.2
MK31	**Makanchi Array**	49.22	297	P	P	13 51 46.9	-1.8
MK31				pmax	pmax		
	comp=Z,4.0nm,1.3s						
MK31	**Makanchi Array**	49.22	297	P	P	13 51 46.9	-1.8
MK31				IAmb	IAmb	13 51 58.0	
	comp=Z,3.9nm,1.3s						
MKAR	**Makanchi Array**	49.22	297	P	P	13 51 45.8	-2.8
	comp=Z,0.2nm,0.3s,baz=61,slow=6.3,SNR=2.6						
MKAR	**Makanchi Array**	49.22	297	P	P	13 51 46.4	-2.3
MKAR	**Makanchi Array**	49.22	297	P	P	13 51 46.4	-2.3
MAKZ	**Makanchi**	49.38	297	P	P	13 51 47.2	-2.6
MAKZ				pmax	pmax		
	comp=Z,9.0nm,1.4s						
MAKZ	**Makanchi**	49.38	297	P	P	13 51 47.2	-2.6
MAKZ				IAmb	IAmb	13 51 51.9	
	comp=Z,9.0nm,1.4s						
ARCES	**ARCESS Array B**	53.08	343	P	P	13 52 15.2	-2.1
	comp=Z,3.3nm,0.9s,baz=23,slow=9.8,SNR=1.8						
ARU	**Arti**	53.90	318*c*	*i*P	P	13 52 22.9	-0.5
ARU						13 53 28.5	
ARU						13 54 20.6	
ARU				S	S	13 59 55.1	-0.8
ARU				SS	SS	14 03 32.3	-4.2
ARU				pmax	pmax		
	comp=Z,16nm,3.5s						
ARU	**Arti**	53.90	318	P	P	13 52 23.0	-0.5
ARU				IAmb	IAmb	13 52 23.9	
	comp=Z,5.6nm,1.1s						
NVAR	**Mina Array Bea**	54.06	72	P	P	13 52 27.7	+2.6
	comp=Z,0.2nm,0.5s,baz=303,slow=8.3,SNR=1.9						
ABKAR	**Akbulak array**	58.49	311	P	P	13 52 55.6	-0.6
ABKAR				IAmb	IAmb	13 52 56.9	
	comp=Z,2.5nm,1.2s						
CMAR	**Chiang Mai Arr**	59.82	260	P	P	13 53 05.4	-0.5
	comp=Z,1.0nm,0.4s,baz=24,slow=7.0,SNR=9.1						
FIA1	**FINESS Array S**	60.06	338	P	P	13 53 06.4	-0.6
FINES	**FINESS Array B**	60.07	338	P	P	13 53 06.6	-0.3
	comp=Z,1.9nm,0.5s,baz=31,slow=8.3,SNR=19						
NC405	**NORSAR Array S**	63.13	345	P	P	13 53 27.3	-0.4
NB201	**NORSAR Array S**	63.25	345	P	P	13 53 29.5	+1.0
NB2	**NORSAR Subarra**	63.28	345	P	P	13 53 29.3	+0.6
	comp=Z,0.8nm,0.5s,baz=20,slow=6.9						
NOA	**NORSAR Array B**	63.28	345	P	P	13 53 28.6	0.0
	comp=Z,1.6nm,0.6s,baz=19,slow=6.8,SNR=7.0						
AKASG	**Malin Array Be**	68.78	330	P	P	13 54 03.9	-0.1
	comp=Z,0.7nm,0.3s,baz=26,slow=6.6,SNR=5.2						
AKASG	**Malin Array Be**	68.78	330	IAmb	IAmb	13 54 05.7	
	comp=Z,2.3nm,1.4s						
TXAR	**Lajitas Array**	68.95	69	P	P	13 54 07.4	+1.7
	comp=Z,0.3nm,0.7s,baz=287,slow=2.9,SNR=3.9						
KBZ	**Khabaz**	70.06	318	P	P	13 54 12.2	+0.1
	comp=Z,4.4nm,0.8s,baz=267,slow=1.9,SNR=7.6						
AFI	**Afiamalu**	70.89	154	LR	LR	14 21 50.2	
	comp=Z,51nm,19.8s,baz=297,slow=33						
BRTR	**Keskin Array B**	77.03	322	P	P	13 54 52.8	-0.6
	comp=Z,1.1nm,0.5s,baz=57,slow=4.6,SNR=3.8						
WB0	**Warramunga Arr**	77.21	207	P	P	13 54 54.5	+0.3
WB0				IAmb	IAmb	13 55 03.5	
	comp=Z,8.4nm,1.5s						
WR0	**Warramunga Arr**	77.35	207	P	P	13 54 55.5	+0.6
WR0				IAmb	IAmb	13 55 20.8	
	comp=Z,3.8nm,1.2s						
WRAB	**Tennant Creek**	77.38	207	P	P	13 54 55.4	+0.3
WRAB				pmax	pmax		
	comp=Z,4.0nm,1.1s						
WRAB	**Tennant Creek**	77.38	207	P	P	13 54 55.4	+0.3
WRAB				IAmb	IAmb	13 55 03.0	
	comp=Z,3.9nm,1.1s						
WB2	**Warramunga Arr**	77.39	207	P	P	13 54 55.7	+0.5
WB2				IAmb	IAmb	13 55 20.1	
	comp=Z,5.4nm,1.3s						
WRA	**Warramunga Arr**	77.39	207	P	P	13 54 55.9	+0.7
	comp=Z,0.5nm,0.4s,baz=18,slow=6.4,SNR=12						
WRA	**Warramunga Arr**	77.39	207	P	P	13 54 55.1	-0.1
WRA	**Warramunga Arr**	77.39	207	P	P	13 54 55.1	-0.1
PALK	**Pallekele**	79.42	268	LR	LR	14 35 40.5	
	comp=Z,56nm,18.1s,baz=272,slow=40						
ASAR	**Alice Springs**	81.06	207	P	P	13 55 16.6	+1.4
	comp=Z,0.6nm,0.6s,baz=15,slow=5.0,SNR=12						

RAR	Rarotonga	81.42	145	LR	LR	14 28 45.5	
	comp=Z,99nm,18.7s,baz=128,slow=34						

NNC 03 14:04:54.0±5.0, 36°.92N×70°.58E, h0^{km}, mb3.9, mpv3.6, 4C, Error ellipse: s-maj=39.8km s-min=36.7km az=33.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	Karatay Array	6.18	360	⇑P	Pn	14 06 27.7	+1.2
	0.6nm,0.3s,baz=179,slow=13,SNR=15						
KK31				⇑S	Sn	14 07 39.1	+1.2
	3.6nm,0.5s,baz=182,slow=20,SNR=17						
AAK	Ala-Archa	6.46	27	P	Pn	14 06 30.5	0.0
	2.1nm,0.5s						
AAK				⇑S	Sn	14 07 45.9	+0.9
	2.2nm,0.5s						
TKM2	Tokmak 2	7.13	31	⇑P	Pn	14 06 38.7	-1.0
	5.1nm,0.6s						

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*NEIC **03** 14:05:50.8±0.6, 35°.836N±0°.010×97°.44W±0°.01, h8^{km}±5^{km}, Error ellipse: s-maj=1.9km s-min=0.8km az=47.0*

TUL 03 14:05:50.9±1.0**, 35°.82N**±0°.01×**97°.44W**±0°.02**, h6^{km}**±**6^{km}, ML2.5, mb_Lg2.3**/10(NEIC)**, Error ellipse: s-maj=2.1km s-min=1.3km az=126.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKCFA	Oklahoma City	0.40	182	Pg	Pg	14 05 58.9	+0.2
OKCSW	OKLAHOMA CITY	0.41	180	Pg	Pg	14 05 59.0	+0.1
OKCSW				Sg	Sg	14 06 04.2	-0.1
FNO	Franklin	0.56	177		Pg	14 06 01.8	+0.1
X34A	Smith Ranch, M	1.26	195		Pg	14 06 14.6	-0.4
T35A	Sooner Cattle	1.32	34	Pn	Pn	14 06 15.4	-0.6
TUL1	Leonard	1.34	86	Pn	Pn	14 06 15.0	-1.2
U32A	Winter Ranch,	1.39	294	Pn	Pn	14 06 16.5	-0.3
WMOK	Wichita Mounta	1.54	226		Pn	14 06 18.7	-0.2
X37A	Clayton	2.09	125	Pn	Pn	14 06 25.0	-1.5
U38A	Gravette	2.55	75	Pn	Pn	14 06 33.4	+0.7
W39A	Magazine	3.04	101	IAmb_Lg		14 07 30.5	
	comp=Z,14nm,1.3s						
CBKS	Cedar Bluff	3.51	329	IAmb_Lg		14 07 47.4	
	comp=Z,7.8nm,0.8s						
S39A	Bolivar	3.79	59	IAmb_Lg		14 07 52.2	
	comp=Z,10.0nm,1.1s						
X40A	Basin Creek Fa	4.00	108	IAmb_Lg		14 08 01.3	
	comp=Z,6.4nm,0.8s						
T25A	Trinidad	5.77	285	IAmb_Lg		14 09 04.4	
	comp=Z,3.8nm,0.9s						

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*BGR **03** 14:10:31.7±0.0, 22°.24S×178°.23W, h649^{km}±2^{km}*

*BJI **03** 14:11:43.4±0.0, 20°.09S×178°.16W, h605^{km}, mB5.0/15, mb4.8/30*

*NOU **03** 14:11:44.4, 20°.60S×178°.49W, h601^{km}, mb4.8/71, Fiji Islands Region*

*NEIC **03** 14:11:44.3±2.2, 20°.55S±0°.08×178°.60W±0°.10, h600^{km}±4^{km}, mb4.8/157, Error ellipse: s-maj=12.8km s-min=11.0km az=83.0*

*GCMT **03** 14:11:45.3±0.5, 20°.48S±0°.04×178°.66W±0°.06, h615^{km}±4^{km}, MW5.3/57, Moment Tensor Solution. s57,c71; Duration: 1^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.50±.04; $M_{\theta\theta}$0.50±.06; $M_{\phi\phi}$0.00±.07; $M_{r\theta}$-0.27±.06; $M_{\theta\phi}$0.18±.06; $M_{\phi r}$-0.86±.06; Best double couple: $M_0$1.01900×10^{17} NP1:ϕ_s268.00000°, δ23.00000°, λ-34.00000°. NP2:ϕ_s30.00000°, δ77.00000°, λ-109.00000°. Principal axes: T 0.8870, Plg30.0000°, Azm135.0000°; N 0.2640, Plg19.0000°, Azm34.0000°; P -1.1510, Plg54.0000°, Azm277.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

*IDC **03** 14:11:46.5±0.5, 20°.58S×178°.69W, h626^{km}±5^{km}, mb4.1/39, mb1 4.2/42, mb1mx4.1/54, mbtmp5.1/42 Error ellipse: s-maj=9.2km s-min=7.0km az=164.0*

ISC 03 14:11:45.8±0.4**, 20°.60S**±0°.05×**178°.63W**±0°.05**, h625^{km}**±**4^{km}, h626^{km}:pP-P, n720,** σ1^{s}**12**/772**, mb4.8**/165**, 39C-39D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.24	312	P	P	14 13 13.5	-1.4
	70nm,0.3s,baz=250,slow=21,SNR=242						
MSVF	Nonsavu	4.24	312	P	P	14 13 13.1	-1.7
MSVF	Nonsavu	4.24	312	P	P	14 13 13.5	-1.4
NIUE	Niue	8.33	81	P	P	14 13 46.2	-2.9
	baz=8.3,SNR=7.9						
NIUE				S	S	14 15 37.2	+7.0
	baz=8.3						
NIUE	Niue	8.33	81	P	P	14 13 45.8	-3.4
NIUE	Niue	8.33	81	P	P	14 13 46.2	-2.9
RAO	Raoul Island	8.64	176	S	S	14 15 29.8	-5.4
	baz=86,slow=23,SNR=5.6						
AFI	Afiamalu	9.33	46	P	P	14 13 54.3	-4.5
	15nm,0.3s,baz=68,slow=0.2,SNR=18						
AFI				S	S	14 15 38.6	-9.2
	12nm,0.3s,baz=41,slow=20,SNR=9.5						
FUNA	Funafuti	12.18	350	P	P	14 14 23.8	-2.6
MARNC	Mare, Loyalty	12.48	264	P	P	14 14 27.2	-2.0
PINNC	Pines Island,	13.10	259	P	P	14 14 34.7	-0.4
PINNC	Pines Island,	13.10	259	P	P	14 14 36.0	+0.9
LIFNC	LIFOU	13.22	267	P	P	14 14 33.3	-3.0
OUENC	Ouen Island, N	13.64	260	P	P	14 14 39.4	-1.0
OUENC	Ouen Island, N	13.64	260	P	P	14 14 39.6	-0.8
DZM	Mont Dzumac	13.98	261	*e*P	P	14 14 40.9	-2.9
	84nm,1.4s						
DZM	Mont Dzumac	13.98	261	P	P	14 14 43.5	-0.2
	2.6nm,0.3s,baz=120,slow=13,SNR=49						
DZM	Mont Dzumac	13.98	261	P	P	14 14 43.1	-0.7
DZM	Mont Dzumac	13.98	261	P	P	14 14 43.6	-0.2
ONTNC	Ouen Toro	13.99	260	P	P	14 14 42.5	-1.2
NOUC	Port Laguerre	14.12	261	P	P	14 14 44.8	-0.1
SANVU	Saraoutou	14.41	289	P	P	14 14 46.8	-0.9
NFK	Norfolk Island	14.80	233	P	P	14 14 53.1	+2.0
	baz=15,SNR=3.6						
NFK	Norfolk Island	14.80	233	P	P	14 14 52.9	+1.9
KOUNC	Koumac, New Ca	16.00	267	P	P	14 15 03.0	+0.9
OUZ	Omahuta	16.09	204	P	P	14 15 04.1	+1.4
OUZ				IAmb	IAmb	14 15 06.2	
	comp=Z,52nm,0.8s						
RAR	Rarotonga	17.63	95	P	P	14 15 16.5	-0.5
	comp=Z,2.5nm,0.3s,baz=325,slow=6.6,SNR=5.4						
RAR	Rarotonga	17.63	95	P	P	14 15 15.4	-1.6
RAR	Rarotonga	17.63	95	P	P	14 15 16.4	-0.5
URZ	Urewera	17.98	191	P	P	14 15 17.2	-2.7
	comp=Z,2.9nm,0.3s,baz=120,slow=24,SNR=27						
URZ				S	S	14 18 09.0	-4.5
	comp=Z,0.8nm,0.3s,baz=160,slow=20,SNR=7.6						
URZ	Urewera	17.98	191	P	P	14 15 17.2	-2.7
URZ				IAmb	IAmb	14 15 19.3	
	comp=Z,33nm,0.7s						
QRZ	Quartz Range	21.52	199	P	P	14 15 52.2	+0.4
KHZ	Kahutara	22.73	195	P	P	14 16 01.6	-0.8
HNR	Honiara	23.45	295	S	S	14 19 35.0	-5.6
	comp=Z,68nm,0.4s,baz=61,slow=4.9,SNR=5.9						
PPT	Papeete	27.61	89	P	P	14 16 45.1	-0.6
	comp=Z,86nm,0.8s,baz=113,slow=16,SNR=4.0						
TIAR	Tiarei	27.83	89	*e*P	P	14 16 46.3	-1.3
	comp=Z,13nm,0.8s						
EIDS	Eidsvold	28.25	255	P	P	14 16 51.2	+0.1
	baz=28,SNR=11						
EIDS	Eidsvold	28.25	255	P	P	14 16 50.9	-0.2
EIDS				IAmb	IAmb	14 16 52.5	
	comp=Z,33nm,1.2s						
EIDS	Eidsvold	28.25	255	P	P	14 16 51.7	+0.5
	comp=Z,25nm,1.3s						
ARMA	Armidale	28.49	244	P	P	14 16 54.2	+0.8
	baz=28,SNR=21						
ARMA	Armidale	28.49	244	P	P	14 16 55.3	+2.0
	comp=Z,24nm,1.5s						
MEH	Mehetia	28.97	90	*e*P	P	14 16 55.9	-1.6
	comp=Z,35nm,0.9s						
PMOR	Pomariorio Ree	29.76	84	*e*P	P	14 17 02.8	-1.5
	comp=Z,233nm,1.2s						
VAH	Vaihoa	29.95	85	*e*P	P	14 17 04.0	-1.9
	comp=Z,164nm,1.1s						
RMQ	Roma	30.41	253	P	P	14 17 10.8	+1.1
	baz=30,SNR=11						
RMQ	Roma	30.41	253	P	P	14 17 11.0	+1.2
	comp=Z,29nm,1.0s						
CNB	Canberra Magne	31.68	236	P	P	14 17 21.2	+0.7
	baz=32,SNR=11						
CNB	Canberra Magne	31.68	236	P	P	14 17 22.3	+1.8
	comp=Z,56nm,1.4s						
RABL	Rabaul	32.76	296	P	P	14 17 28.0	-1.7
RABL				IAmb	IAmb	14 17 44.5	
	comp=Z,51nm,1.3s						
RABL	Rabaul	32.76	296	P	P	14 17 32.0	+2.2
	comp=Z,34nm,0.5s						
CTA	Charters Tower	32.89	265	P	P	14 17 31.1	+0.3
	comp=Z,19nm,0.4s,baz=90,slow=11,SNR=132						
CTA	Charters Tower	32.89	265	P	P	14 17 31.4	+0.6
	comp=Z,42nm,1.2s						
CTAO	Charters Tower	32.89	265	P	P	14 17 31.0	+0.1
CTAO	Charters Tower	32.89	265	P	P	14 17 31.5	+0.6
CMSA	Cobar Meteorol	33.71	244	P	P	14 17 37.8	+0.3
	baz=34,SNR=28						
CMSA	Cobar Meteorol	33.71	244	P	P	14 17 38.2	+0.7
	comp=Z,47nm,1.1s						
QLP	Quilpie	34.46	253	P	P	14 17 44.0	+0.2
	baz=34,SNR=34						
QLP	Quilpie	34.46	253	P	P	14 17 44.1	+0.2
	comp=Z,114nm,0.9s						
PMG	Port Moresby	34.79	284	P	P	14 17 47.4	+0.7
	comp=Z,51nm,0.8s,baz=132,slow=4.9,SNR=10						
PMG	Port Moresby	34.79	284	P	P	14 17 46.8	+0.2
PMG	Port Moresby	34.79	284	P	P	14 17 48.0	+1.3
PMG	Port Moresby	34.79	284	P	P	14 17 47.8	+1.1
MTSU	Mount Surprise	34.99	268	P	P	14 17 48.6	+0.3
	baz=35,SNR=16						
MTSU	Mount Surprise	34.99	268	P	P	14 17 48.9	+0.5
	comp=Z,18nm,0.8s						
TOO	Toolangi	35.36	234	P	P	14 17 51.6	+0.4
	baz=35,SNR=12						
TOO	Toolangi	35.36	234	P	P	14 17 51.5	+0.4
TOO				IAmb	IAmb	14 17 52.8	
	comp=Z,28nm,1.1s						
TOO	Toolangi	35.36	234	P	P	14 17 52.6	+1.5
	comp=Z,28nm,1.1s						
BRAT	Ballarat	36.53	234	P	P	14 18 02.5	+1.8
	comp=Z,24nm,1.0s						
COEN	Coen	37.00	274	P	P	14 18 04.9	+0.1
COEN	Coen	37.00	274	P	P	14 18 05.8	+1.0
	comp=Z,43nm,1.4s						
STKA	Stephens Creek	37.21	244	P	P	14 18 07.0	+0.7
	comp=Z,12nm,0.4s,baz=89,slow=11,SNR=62						
STKA				PcP	PcP	14 20 09.3	+0.6
	comp=Z,2.0nm,0.4s,baz=243,slow=16,SNR=3.0						
STKA	Stephens Creek	37.21	244	P	P	14 18 07.0	+0.7
	baz=37,SNR=52						
STKA	Stephens Creek	37.21	244	P	P	14 18 06.8	+0.5
STKA	Stephens Creek	37.21	244	P	P	14 18 07.3	+1.0
	comp=Z,10nm,1.2s						
INKA	Innaminka	37.61	251	P	P	14 18 11.1	+1.5
	comp=Z,105nm,1.2s						
ARPS	Mount Arapiles	37.94	236	P	P	14 18 12.4	+0.3
	baz=38,SNR=5.9						
ARPS	Mount Arapiles	37.94	236	P	P	14 18 13.1	+1.0
	comp=Z,59nm,0.9s						
TAOE	Nuku Hiva Isla	38.90	78	P	P	14 18 19.5	-0.8
QIS	Mount Isa	39.02	262	P	P	14 18 20.7	-0.4
	baz=39,SNR=7.9						
QIS	Mount Isa	39.02	262	P	P	14 18 21.4	+0.3
	comp=Z,23nm,1.6s						
HTT	Hallett	39.66	242	P	P	14 18 26.4	+0.4
	baz=40,SNR=28						
HTT	Hallett	39.66	242	P	P	14 18 27.0	+1.0
	comp=Z,68nm,1.2s						
LCRK	Leigh Creek	39.95	247	P	P	14 18 29.2	+0.9
	comp=Z,94nm,1.0s						
WHYH	Whyalla	40.73	243	P	P	14 18 35.7	+1.3
	comp=Z,48nm,0.9s						
BBOO	Buckleboo	41.97	244	P	P	14 18 44.4	+0.1
	baz=42,SNR=70						
BBOO	Buckleboo	41.97	244	P	P	14 18 44.2	0.0
BBOO	Buckleboo	41.97	244	P	P	14 18 44.9	+0.7
	comp=Z,78nm,1.0s						
OOD	Oodnadatta	42.09	251	P	P	14 18 46.3	+1.1
	comp=Z,105nm,1.1s						
WAKE	Wake Island	42.17	339	P	P	14 18 45.7	-0.1
JAY	Jayapura	43.51	289	P	P	14 18 57.1	+0.6
	comp=Z,42nm,0.4s,baz=145,slow=5.0,SNR=49						
MULG	Mulgathing	43.53	247	P	P	14 18 56.7	+0.3
	comp=Z,112nm,0.9s						
WR0	Warramunga Arr	43.81	262	P	P	14 18 58.0	-0.7
WR0				IAmb	IAmb	14 18 59.5	
	comp=Z,57nm,1.1s						
AS31	Alice Springs	43.92	257	P	P	14 18 59.4	-0.1
AS31				IAmb	IAmb	14 19 01.1	
	comp=Z,20nm,0.6s						
ASAR	Alice Springs	43.92	257	P	P	14 18 59.5	+0.1
	comp=Z,63nm,0.8s,baz=91,slow=7.6,SNR=439						
ASAR				PcP	PcP	14 20 31.4	+0.2
	comp=Z,5.8nm,0.5s,baz=103,slow=4.1,SNR=11						
ASAR				S	S	14 24 45.9	-1.6
	comp=Z,5.8nm,1.1s,baz=95,slow=16,SNR=12						
ASPA	Alice Springs	43.92	257	P	P	14 18 59.1	-0.4
	baz=44						
WC3	Warramunga Arr	43.97	262	P	P	14 18 59.4	-0.5
	baz=44						
WB0	Warramunga Arr	43.98	263	P	P	14 18 59.4	-0.5
WB2	Warramunga Arr	43.99	262	P	P	14 18 59.4	-0.6
WRAB	Tennant Creek	43.99	262	P	P	14 18 59.4	-0.6
WRAB	Tennant Creek	43.99	262	P	P	14 19 00.8	+0.8
WRA	Warramunga Arr	44.00	262	P	P	14 18 59.5	-0.6
	comp=Z,21nm,0.4s,baz=100,slow=7.9,SNR=629						
WRA				PcP	PcP	14 20 31.9	+0.4
	comp=Z,11nm,1.2s,baz=110,slow=4.0,SNR=6.6						
WRA				S	S	14 24 46.2	-2.4
	comp=Z,0.8nm,0.7s,baz=96,slow=14,SNR=4.1						
WRA	Warramunga Arr	44.00	262	P	P	14 18 58.4	-1.7
DHH	Diamond Head	46.32	27	P	P	14 19 17.2	-0.4
KDU	Kakadu	47.36	272	P	P	14 19 25.1	-0.4
	baz=47,SNR=45						
KDU	Kakadu	47.36	272	P	P	14 19 25.6	+0.1
	comp=Z,61nm,1.2s						
MTN	Manton Dam	48.57	271	P	P	14 19 34.0	-0.5
	baz=49,SNR=38						
MTN	Manton Dam	48.57	271	P	P	14 19 34.0	-0.5
MTN				IAmb	IAmb	14 19 35.0	
	comp=Z,45nm,0.9s						
MTN	Manton Dam	48.57	271	P	P	14 19 34.3	-0.2
	comp=Z,53nm,0.8s						
FORT	Forrest	48.71	247	P	P	14 19 35.3	0.0
	baz=49,SNR=18						
FORT	Forrest	48.71	247	P	P	14 19 34.9	-0.5
FORT	Forrest	48.71	247	P	P	14 19 36.4	+1.1
	comp=Z,82nm,1.1s						
WRKA	Warakurna	48.87	254	P	P	14 19 36.6	0.0
	baz=49,SNR=242						
WRKA	Warakurna	48.87	254	P	P	14 19 36.7	0.0
	comp=Z,115nm,0.9s						
DRS	Darwin Rock St	48.90	271	P	P	14 19 37.6	+0.6
	comp=Z,28nm,0.9s						
KNRA	Kununurra	50.06	266	P	P	14 19 45.3	-0.1
	baz=50,SNR=20						
KNRA	Kununurra	50.06	266	P	P	14 19 45.1	-0.3
KNRA				IAmb	IAmb	14 19 46.0	
	comp=Z,26nm,0.7s						
KNRA	Kununurra	50.06	266	P	P	14 19 45.7	+0.3
	comp=Z,59nm,1.3s						
FAKI	Fak Fak	50.95	283	P	P	14 19 51.5	-0.3
FAKI				IAmb	IAmb	14 19 52.9	
	comp=Z,59nm,1.1s						
FAKI	Fak Fak	50.95	283	P	P	14 19 51.8	-0.1
	comp=Z,637nmcomp=Z,52nm,1.2s						
FAKI	Fak Fak	50.95	283	P	P	14 19 54.2	+2.3
FITZ	Fitzroy Crossi	52.43	263	P	P	14 20 02.5	+0.1
	comp=Z,14nm,0.4s,baz=85,slow=4.9,SNR=224						
FITZ	Fitzroy Crossi	52.43	263	P	P	14 20 02.5	+0.1
	baz=52,SNR=46						
FITZ	Fitzroy Crossi	52.43	263	P	P	14 20 02.6	+0.3
FITZ				IAmb	IAmb	14 20 04.0	
	comp=Z,52nm,1.2s						
FITZ	Fitzroy Crossi	52.43	263	P	P	14 20 02.7	+0.3
	comp=Z,34nm,1.2s						
BNDI	Bandanaira	52.46	280	P	P	14 20 03.2	+0.5
	comp=Z,2μmcomp=Z,137nm,1.5s						
BNDI	Bandanaira	52.46	280	P	P	14 20 03.6	+0.9
SIJI	Sorong	52.69	285	P	P	14 20 03.9	-0.4
	comp=Z,68nm,0.6s,baz=107,slow=4.5,SNR=49						
SOEI	Soe	55.91	272	P	P	14 20 27.6	+0.6
SOEI	Soe	55.91	272	P	P	14 20 28.4	+1.5
	comp=Z,1μmcomp=Z,180nm,1.0s						
SOEI	Soe	55.91	272	P	P	14 20 29.7	+2.8
LBMI	Labuha	56.20	284	P	P	14 20 28.9	+0.1
	comp=Z,44nm,1.1s						
BATI	Baumata	56.34	271	P	P	14 20 31.6	+1.9
	comp=Z,39nm,0.6s,baz=162,slow=1.1,SNR=10						
BATI	Baumata	56.34	271	P	P	14 20 31.2	+1.5
	comp=Z,34nm,0.9s						
TNTI	Ternate	56.91	285	P	P	14 20 34.0	+0.4
TNTI				IAmb	IAmb	14 20 35.1	
	comp=Z,72nm,1.1s						
TNTI	Ternate	56.91	285	P	P	14 20 36.6	+3.0
SANI	Sanana	57.02	281	P	P	14 20 34.2	-0.2
	comp=Z,512nmcomp=Z,54nm,1.2s						
SANI	Sanana	57.02	281	P	P	14 20 35.0	+0.6
PSA00	Pilbara Seismi	57.07	257	P	P	14 20 33.8	-0.8
PSA00				IAmb	IAmb	14 20 35.5	
	comp=Z,69nm,1.1s						
PSA00	Pilbara Seismi	57.07	257	P	P	14 20 33.8	-0.8
PSA00				IAmb	IAmb	14 20 35.5	
	comp=Z,34nm,1.1s						
PSA00	Pilbara Seismi	57.07	257	P	P	14 20 34.7	+0.1
	comp=Z,68nm,1.2s						
MBWA	Marble Bar	57.25	258	P	P	14 20 35.9	0.0
MEEK	Meekatharra	57.33	251	P	P	14 20 35.7	-0.6
	baz=57,SNR=9.8						
MEEK	Meekatharra	57.33	251	P	P	14 20 36.3	0.0
	comp=Z,35nm,1.4s						
SBA	Scott Base	57.73	184	P	P	14 20 40.7	+2.6
VNDA	Vanda	57.76	185	P	P	14 20 39.8	+1.5
	comp=Z,2.5nm,0.7s,baz=357,slow=6.6,SNR=20						
VNDA	Vanda	57.76	185	P	P	14 20 39.2	+0.9
NWAO	Narrogin (SRO)	57.79	243	P	P	14 20 39.9	+0.6
	comp=Z,15nm,0.9s,baz=122,slow=7.8,SNR=7.7						
NWAO	Narrogin (SRO)	57.79	243	P	P	14 20 40.1	+0.7
	baz=58,SNR=4.0						
NWAO				P	P	14 20 40.1	+0.7
	baz=58,SNR=4.0						
NWAO	Narrogin (SRO)	57.79	243	P	P	14 20 39.6	+0.3
NWAO				IAmb	IAmb	14 20 40.7	
	comp=Z,54nm,1.4s						
NWAO	Narrogin (SRO)	57.79	243	P	P	14 20 40.3	+1.0
NWAO	Narrogin (SRO)	57.79	243	P	P	14 20 40.6	+1.3
BLDU	Ballidu	58.47	246	P	P	14 20 43.7	-0.2
	baz=58,SNR=25						
BLDU	Ballidu	58.47	246	P	P	14 20 44.7	+0.8
	comp=Z,42nm,1.2s						
EDFI	Ende, Flores	58.64	272	P	P	14 20 45.1	-0.3
	comp=Z,399nmcomp=Z,35nm,1.2s						
MUN	Mundaring	58.75	244	P	P	14 20 46.2	+0.5
	baz=59,SNR=6.4						
MUN	Mundaring	58.75	244	P	P	14 20 47.0	+1.3
	comp=Z,39nm,1.2s						
MORW	Morawa	59.24	248	P	P	14 20 48.9	-0.2
	baz=59,SNR=8.7						
MORW	Morawa	59.24	248	P	P	14 20 48.4	-0.7
MORW				IAmb	IAmb	14 20 50.3	
	comp=Z,55nm,1.2s						
MORW	Morawa	59.24	248	P	P	14 20 49.8	+0.7
	comp=Z,44nm,1.6s						
LUWI	Luwuk	60.37	281	P	P	14 20 57.2	+0.4
LUWI	Luwuk	60.37	281	P	P	14 20 58.0	+1.3
WBSI	Waikabubak, Su	60.51	270	P	P	14 20 58.0	+0.3
	comp=Z,861nmcomp=Z,33nm,0.9s						
BSSI	Bau Bau, Buton	60.62	275	P	P	14 20 57.8	-0.6
	comp=Z,26nm,1.1s						
BKSI	Bulukumba	61.25	275	P	P	14 21 01.8	-0.7
	comp=Z,18nm,1.3s						
GIRL	Giralia	61.95	255	P	P	14 21 08.2	+1.3
	baz=62,SNR=5.0						
GIRL	Giralia	61.95	255	P	P	14 21 07.7	+0.8
PLAI	Plampang	62.28	271	P	P	14 21 08.9	-0.3
	comp=Z,1μmcomp=Z,112nm,1.1s						
PLAI	Plampang	62.28	271	P	P	14 21 10.2	+1.0
RPN	Rapa Nui	63.01	111	P	P	14 21 15.3	+1.7
	comp=Z,60nm,0.9s,baz=59,slow=1.2,SNR=4.2						
TOLI2	Tolitoli	63.05	282	P	P	14 21 13.5	-0.6
TOLI2				IAmb	IAmb	14 21 15.2	
	comp=Z,37nm,1.1s						
TOLI2	Tolitoli	63.05	282	P	P	14 21 15.7	+1.6
TWSI	Taliwang, Sumb	63.15	270	P	P	14 21 14.5	-0.2
	comp=Z,51nm,0.9s						
MPSI	Mapaga	63.55	281	P	P	14 21 17.8	+0.5
	comp=Z,425nmcomp=Z,40nm,1.2s						
CASY	Casey	63.62	205	P	P	14 21 17.1	+0.3
JAGI	Jajag, Banyuwa	65.79	270	P	P	14 21 30.4	-0.9
JAGI				IAmb	IAmb	14 21 31.5	
	comp=Z,68nm,1.1s						
JAGI	Jajag, Banyuwa	65.79	270	P	P	14 21 30.4	-0.9
	comp=Z,61nm,1.1s						
JAGI	Jajag, Banyuwa	65.79	270	P	P	14 21 32.4	+1.1
JHJ2	Mitsune	66.53	323	P	P	14 21 35.0	-0.4
JHJ	Hachijo jima 2	66.56	323	P	P	14 21 35.9	+0.3
	comp=Z,63nm,0.4s,baz=175,slow=3.6,SNR=9.3						
PWJI	Pagerwojo	68.13	269	P	P	14 21 45.6	0.0
	comp=Z,45nm,1.1s						
SPMM	Sapulut	68.44	284	P	P	14 21 49.0	+1.5
JYT	Yasato	68.63	325	P	P	14 21 48.3	+0.2
JYT				IAmb	IAmb	14 21 49.7	
	comp=Z,41nm,1.2s						
PCJI	Pacitan	68.67	269	P	P	14 21 49.3	+0.5
	comp=Z,203nm,0.6s						
UGM	Wanagama	69.37	269	P	P	14 21 52.8	-0.3
UGM	Wanagama	69.37	269	P	P	14 21 51.7	-1.4
	comp=Z,140nm,1.9s						
QSPA	South Pole Qui	69.47	180	P	P	14 21 53.9	+1.1
	comp=Z,13nm,0.8s,baz=45,slow=1.4,SNR=12						
QSPA	South Pole Qui	69.47	180	P	P	14 21 53.7	+0.9
QSPA				IAmb	IAmb	14 21 55.2	
	comp=Z,15nm,0.9s						
JMM	Marumori	69.55	327	P	P	14 21 53.7	+0.1
JMM				IAmb	IAmb	14 21 55.0	
	comp=Z,43nm,1.2s						
JGF	Kuroka	69.73	323	P	P	14 21 53.9	-0.8
JOW	Kunigami	69.78	310	P	P	14 21 56.8	+1.6
	comp=Z,13nm,0.3s,baz=92,slow=11,SNR=4.8						
JOW	Kunigami	69.78	310	IAmb	IAmb	14 21 57.1	
	comp=Z,29nm,0.8s						
MJAR	Matsushiro Arr	69.94	324	P	P	14 21 55.9	0.0
	comp=Z,6.7nm,0.5s,baz=162,slow=6.2,SNR=20						
MJAR	Matsushiro Arr	69.94	324	P	P	14 21 55.1	-0.8
MAJO	Matsushiro	69.94	324	P	P	14 21 55.8	-0.2
MAJO				IAmb	IAmb	14 21 56.9	
	comp=Z,25nm,1.2s						
MAJO	Matsushiro	69.94	324	P	P	14 21 56.9	+0.9
MAT	Matsushiro	69.94	324	P	P	14 21 55.8	-0.1
MAT				*e*S	SKiKP	14 30 28.0	-7.8
JWT	Wachi	70.63	321	P	P	14 22 00.4	+0.4
JWT				IAmb	IAmb	14 22 01.6	
	comp=Z,24nm,1.0s						
KPJI	Karang Pucung	71.05	269	P	P	14 22 03.3	+0.4
	comp=Z,55nm,0.9s						
JSU	Suzuyama	71.18	316	P	P	14 22 03.7	+0.4
JSU				IAmb	IAmb	14 22 04.9	
	comp=Z,41nm,1.2s						
SBUM	Sibu	71.44	280	P	P	14 22 06.0	+0.8
JTM	Tenmabayashi	71.64	329	P	P	14 22 06.5	+0.8
JTM				IAmb	IAmb	14 22 07.5	
	comp=Z,39nm,1.1s						
JHS	Saijyo	71.79	320	P	P	14 22 06.9	+0.1
JNU	Nakatsue	71.94	317	P	P	14 22 08.1	+0.3
	comp=Z,24nm,0.9s,baz=88,slow=5.3,SNR=11						
JNU	Nakatsue	71.94	317	P	P	14 22 07.8	0.0
JNU	Nakatsue	71.94	317	P	P	14 22 08.6	+0.9
CISI	Cisompet, Garu	72.02	269	P	P	14 22 07.7	-1.0
CISI				IAmb	IAmb	14 22 09.0	
	comp=Z,28nm,1.1s						
KIWB	Kanaga Island	72.15	1	P	P	14 22 08.1	-0.3
ADK	Adak	72.19	1	P	P	14 22 08.3	-0.3
ADK				IAmb	IAmb	14 22 15.6	
	comp=Z,34nm,0.9s						
LEM	Lembang	72.44	269	P	P	14 22 12.3	+1.1
	comp=Z,77nm,0.9s,baz=101,slow=6.4,SNR=11						
LEM	Lembang	72.44	269	P	P	14 22 11.7	+0.5
	comp=Z,829nmcomp=Z,62nm,1.0s						
KSM	Kuching	72.84	278	P	P	14 22 14.0	+0.7
TWG	Pinlang	72.94	303	P	P	14 22 12.6	-1.0
TWG				IAmb	IAmb	14 22 13.0	
	comp=Z,24nm,0.6s						
JEW	Eniwo	73.05	330	P	P	14 22 14.1	+0.4
YULB	Yu-li	73.06	304	P	P	14 22 13.5	-0.8
YULB				IAmb	IAmb	14 22 38.2	
	comp=Z,60nm,1.4s						
NACB	Ninganchiao	73.24	304	P	P	14 22 15.0	-0.3
NACB				IAmb	IAmb	14 22 15.5	
	comp=Z,28nm,0.7s						
CBJI	Citeko	73.30	269	P	P	14 22 15.6	-0.3
	comp=Z,39nm,0.6s						
DBJI	Dramaga	73.35	269	P	P	14 22 16.9	+0.7
	comp=Z,50nm,1.2s						
JKA	Kamikawa-asahi	73.53	332	P	P	14 22 17.8	+1.3
JKA				IAmb	IAmb	14 22 19.5	

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      comp=Z,57nm,1.2s
ASAJ  Asahikawa        73.53 332  P     P      14 22 18.2 +1.7
      comp=Z,16nm,0.6s,baz=224,slow=4.5,SNR=32
TPUB  Ta-pu            73.53 303  P     P      14 22 16.1 -1.0
TPUB  Ta-pu            73.53 303  P     P      14 22 17.9 +0.9
SSLB  Suanglung        73.53 304  P     P      14 22 15.9 -1.1
SSLB                              IAmb  IAmb   14 22 17.1
      comp=Z,62nm,1.2s
YHNB  Yeheng           73.67 305  P     P      14 22 17.0 -0.8
YHNB                              IAmb  IAmb   14 22 18.8
      comp=Z,51nm,1.1s
NIKH  Nikolski High    73.75   6  P     P      14 22 15.7 -1.8
      baz=190
UNV   Unalaska Valle   74.87   7  P     P      14 22 22.9 -0.8
UNV                               IAmb  IAmb   14 22 35.8
      comp=Z,66nm,1.4s
UNV   Unalaska Valle   74.87   7  P     P      14 22 23.4 -0.4
      baz=192
AKUT  Akutan           75.25   8  P     P      14 22 24.1 -1.7
KASI  Kota Agung       75.80 269  P     P      14 22 29.7 -0.2
      comp=Z,85nm,1.0s
PET   Petropavlovsk    75.92 346  P     P      14 22 29.0 -0.6
PET                               IAmb  IAmb   14 22 49.2
      comp=Z,47nm,1.4s
PEA0B Petropavlovsk-   76.22 346  P     P      14 22 31.0 -0.2
PETK  Petropavlovsk-   76.22 346  P     P      14 22 30.9 -0.3
      comp=Z,20nm,0.9s,baz=126,slow=7.9,SNR=20
PETK  Petropavlovsk-   76.22 346  P     P      14 22 30.6 -0.6
TJN   Taejon           76.24 318  P     P      14 22 34.1 +2.4
MDSI  Maura Dua        76.45 270  P     P      14 22 32.9 -0.5
      comp=Z,27nm,1.0s
KSRS  Korea Array      76.57 319  P     P      14 22 34.6 +1.1
      comp=Z,9.4nm,1.0s,baz=136,slow=6.1,SNR=25
SDPT  Sand Point       77.21  11  P     P      14 22 36.0 -0.5
LHSI  Lahat            77.29 271  P     P      14 22 38.1 +0.1
      comp=Z,3µmcomp=Z,25nm,0.5s
SNCC  San Nicolas Is   77.75  47  P     P      14 22 38.9 -1.1
KSI   Kapahiang        78.22 271  P     P      14 22 42.4 -0.7
      comp=Z,99nm,1.0s
CHGN  Chignik          78.48  11  P     P      14 22 43.2 -0.1
CHGN                              IAmb  IAmb   14 22 50.3
      comp=Z,50nm,1.2s
CHGN  Chignik          78.48  11  P     P      14 22 42.8 -0.5
      baz=199
PAGB  Antelope Grade   78.68  45  P     P      14 22 45.2 +0.3
USA0B Ussuriysk Arra   78.71 326  P     P      14 22 45.5 +0.7
USA0B                             IAmb  IAmb   14 22 47.3
      comp=Z,30nm,1.0s
USRK  Ussuriysk Ar.    78.71 326  P     P      14 22 46.3 +1.5
      comp=Z,15nm,0.8s,baz=143,slow=3.6,SNR=25
USRK  Ussuriysk Ar.    78.71 326  P     P      14 22 45.5 +0.6
MASI  Maura Aman, Be   78.73 271  P     P      14 22 45.8 +0.1
      comp=Z,93nm,1.3s
HOPS  Hopland Field    78.83  41  P     P      14 22 46.4 +0.7
HOPS                              IAmb  IAmb   14 22 51.1
      comp=Z,84nm,1.4s
SII   Sitkinak Islan   79.58  13  P     P      14 22 49.9 +0.8
SII   Sitkinak Islan   79.58  13  P     P      14 22 50.2 +1.1
      baz=203
EDW2  Edwards Air Fo   79.72  47  P     P      14 22 51.7 +1.3
      baz=236
O02D  Mt. Diablo Mer   79.73  40  P     P      14 22 51.7 +1.2
      baz=232
ISA   Isabella, Lake   79.83  46  P     P      14 22 52.8 +1.7
      baz=236
PFO   Pinyon Flats O   80.08  49  P     P      14 22 53.4 +1.0
      baz=237
TPFO  Pinon Flats      80.08  49  P     P      14 22 53.5 +1.0
      baz=237
MDJ   Mudanjiang       80.26 325  P     P      14 22 54.1 +1.1
MDJ                               IAmb  IAmb   14 22 55.4
      comp=Z,32nm,1.0s
MDJ   Mudanjiang       80.26 325  P     P      14 22 54.8 +1.9
N02D  Trinity Center   80.27  40  P     P      14 22 54.5 +1.3
      baz=232
O03E  Paynes Creek     80.40  40  P     P      14 22 55.4 +1.5
      baz=233
M02C  Callahan         80.44  39  P     P      14 22 55.6 +1.5
      baz=232
CWC   Cottonwood Cre   80.53  45  P     P      14 22 56.4 +1.6
      baz=236
BELC  Belle Mtn. Jos   80.61  48  P     P      14 22 56.1 +0.9
      baz=237
YBH   Yreka Blue Hor   80.74  39  P     P      14 22 57.2 +1.6
      comp=Z,7.2nm,0.9s,baz=86,slow=1.5,SNR=9.6
YBH   Yreka Blue Hor   80.74  39  IAmb  IAmb   14 22 58.3
      comp=Z,7.7nm,0.9s
GSC   Goldstone, Bar   80.76  47  P     P      14 22 56.5 +0.6
      baz=237
TIN   Tinemaha, Big    80.78  45  P     P      14 22 56.9 +0.9
      baz=236
K02D  Willamette Mer   80.78  38  P     P      14 22 57.4 +1.6
      baz=231
GLA   Glamis           80.94  50  P     P      14 22 58.2 +1.4
      baz=238
JRMM  Jerantut         80.99 278  P     P      14 22 59.0 +1.6
PNTR  Pine Nut         81.05  42  P     P      14 22 58.8 +1.4
YERR  Yerington        81.22  43  P     P      14 22 59.3 +1.0
GMRC  Granite Mounta   81.27  48  P     P      14 22 59.7 +1.1
      baz=238
MAW   Mawson           81.27 200  P     P      14 22 58.6 +0.8
      comp=Z,1.2nm,0.5s,baz=117,slow=9.6,SNR=6.9
MAW   Mawson           81.27 200  P     P      14 22 58.3 +0.5
L04D  Klamath Falls    81.28  39  P     P      14 22 59.5 +1.1
      baz=232
M04C  Macdoel          81.28  39  P     P      14 23 00.2 +1.7
      baz=232
IRM   Iron Mountain    81.30  49  P     P      14 22 59.9 +1.3
      baz=238
GRAC  Grapevine Rang   81.31  45  P     P      14 23 00.6 +2.0
      baz=236
NVAR  Mina Array Bea   81.50  44  P     P      14 23 00.6 +0.8
      comp=Z,2.3nm,0.7s,baz=220,slow=8.7,SNR=13
NVAR                              pP    pwP    14 25 12.3 -0.6
      comp=Z,1.4nm,0.7s,baz=228,slow=8.2,SNR=4.9
NVAR  Mina Array Bea   81.50  44  P     P      14 23 00.1 +0.3
I02E  Swisshome, OR    81.57  37  P     P      14 23 01.0 +1.4
      baz=231
I03D  Drain, OR        81.59  37  P     P      14 23 00.8 +1.0
      baz=231
NV11  Mina Array Sit   81.60  44  P     P      14 23 01.3 +1.1
214A  Organ Pipe Nat   81.84  52  P     P      14 23 01.9 +0.5
      baz=240
P18K  Big Mountain,    81.98  12  P     P      14 23 03.6 +2.2
      baz=202
CN2   Changchun        82.02 323 ePP    P      14 23 02.3 +0.4
CN2                              ePP    PP     14 26 24.3 +2.1
CN2                               S     S      14 32 29.2 +3.3
CN2                               pmax  pmax
      comp=Z,30nm,1.2s
J04D  Umpqua Nationa   82.02  38  P     P      14 23 03.8 +1.6
      baz=232
I04A  Tendick Farm,    82.19  37  P     P      14 23 03.4 +0.6
      baz=232
MOD   Modoc Plateau    82.27  40  P     P      14 23 04.5 +1.0
KLR   Kul'dur          82.31 330  P     P      14 23 04.4 +1.1
      comp=Z,6.1nm,0.9s,baz=101,slow=2.5,SNR=14
K05A  Summer Lake      82.41  39  P     P      14 23 05.6 +1.4
J05D  Fort Rock, OR    82.55  38  P     P      14 23 05.7 +0.9
      baz=233
IPM   Ipoh             82.56 278  P     P      14 23 07.0 +1.6
MNSI  Mandailing Nat   82.59 274  P     P      14 23 05.1 -0.4
      comp=Z,27nm,0.9s
P19K  Oil Pt           82.62  13  P     P      14 23 04.8 +0.1
      baz=204
O19K  Port Alsworth    82.91  12  P     P      14 23 05.6 -0.4
O19K  Port Alsworth    82.91  12  P     P      14 23 05.4 -0.5
      baz=203
HOM   Homer            82.96  13  P     P      14 23 07.6 +1.3
      baz=205
PINE  Pine Mountain    83.03  38  P     P      14 23 08.8 +1.5
PINE                              IAmb  IAmb   14 23 09.9
      comp=Z,26nm,1.0s
I05D  Terrebonne, OR   83.13  37  P     P      14 23 07.6  0.0
      baz=232
BRSE  Bradley Lake S   83.24  14  P     P      14 23 07.9 +0.2
      baz=206
N19K  Bonanza Creek    83.44  12  P     P      14 23 08.1 -0.7
      baz=203
E04D  Cinebar          83.81  35  P     P      14 23 11.4 +0.6
      baz=231
PSI   Prapat           83.91 275  P     P      14 23 12.0 -0.3
      comp=Z,13nm,0.8s,baz=177,slow=6.3,SNR=12
I07A  Izee             84.03  38  P     P      14 23 13.2 +1.1
J08A  Circle Bar Ran   84.22  39  P     P      14 23 13.7 +0.7
M19K  Big River Lodg   84.47  11  P     P      14 23 13.9 +0.2
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      baz=203
GSI   Gunungsitoli     84.64 273  P     P      14 23 15.5 -0.2
GSI   Gunungsitoli     84.64 273  P     P      14 23 17.6 +1.9
      comp=Z,77nm,1.4s
GSI   Gunungsitoli     84.64 273  P     P      14 23 18.0 +2.3
      comp=Z,77nm,1.4s
L19K  White Mountain   84.65  11  P     P      14 23 15.0 +0.4
L19K                              IAmb  IAmb   14 23 16.1
      comp=Z,19nm,1.1s
L19K  White Mountain   84.65  11  P     P      14 23 14.6  0.0
      baz=202
RC01  Rabbit Creek A   84.67  14  P     P      14 23 14.5 -0.1
      baz=207
PWL   Port Wells       84.78  14  P     P      14 23 14.5 -0.7
      baz=208
SUA   Susitna One      84.79  13  P     P      14 23 15.3  0.0
      baz=206
G08A  Pilot Rock       85.06  38  P     P      14 23 17.3 +0.2
SKT   Skwentna         85.09  12  P     P      14 23 16.2 -0.5
      baz=205
A04D  Lummi Island     85.09  33  P     P      14 23 18.4 +1.5
      baz=231
GLI   Glacier Island   85.09  15  P     P      14 23 16.2 -0.5
      baz=209
L20K  Farewell, AK     85.10  11  P     P      14 23 15.8 -1.0
      baz=203
B05A  Bryant           85.13  34  P     P      14 23 17.8 +0.6
      baz=232
TTA   Tatalina         85.14  10  P     P      14 23 17.2 +0.2
TTA                               IAmb  IAmb   14 23 18.6
      comp=Z,25nm,1.3s
TTA   Tatalina         85.14  10  P     P      14 23 17.4 +0.4
      baz=201
M22K  Willow           85.18  13  P     P      14 23 16.4 -0.6
      baz=207
KNK   Knik Glacier     85.25  14  P     P      14 23 16.9 -0.5
      baz=208
PMR   Palmer           85.25  14  P     P      14 23 16.7 -0.7
      baz=208
HAWA  Hanford          85.38  37  P     P      14 23 19.2 +0.8
HAWA                              IAmb  IAmb   14 23 20.8
      comp=Z,15nm,1.0s
ENH   Enshi            85.61 304  P     P      14 23 20.0 +0.1
SML   Sawmill          85.62  14  P     P      14 23 18.0 -1.3
      baz=208
DIV   Divide           85.64  15  P     P      14 23 19.3 -0.1
DIV                               IAmb  IAmb   14 23 21.0
      comp=Z,19nm,1.0s
E08A  Dider Farm, El   85.70  37  P     P      14 23 21.1 +1.2
CUT   Chulitna         85.73  13  P     P      14 23 19.4 -0.3
CUT   Chulitna         85.73  13  P     P      14 23 18.9 -0.8
      baz=206
BMO   Blue Mountains   85.76  39  P     P      14 23 21.1 +0.7
BMRM  Bremner River    85.79  16  P     P      14 23 19.4 -0.7
      baz=212
MFID  Camas Ranch      85.84  41  P     P      14 23 21.9 +1.1
K20K  Telida           85.87  11  P     P      14 23 20.4  0.0
K20K                              IAmb  IAmb   14 23 21.5
      comp=Z,24nm,1.3s
K20K  Telida           85.87  11  P     P      14 23 20.1 -0.3
      baz=203,SNR=6.3
SCM   Sheep Creek Mo   85.87  14  P     P      14 23 20.7 +0.2
SCM   Sheep Creek Mo   85.87  14  P     P      14 23 20.4 -0.1
      baz=209
KLU   Klutina          85.91  15  P     P      14 23 20.9 +0.2
      baz=210
CRQE  Cirque           86.00  17  P     P      14 23 20.3 -0.9
      baz=213
DUG   Dugway, Tooele   86.04  44  P     P      14 23 23.5 +1.6
      baz=239
WRAK  Wrangell Islan   86.05  24  P     P      14 23 21.2 -0.1
      baz=223
D08A  Wollman Farm,    86.11  36  P     P      14 23 23.1 +1.2
D08A                              IAmb  IAmb   14 23 24.1
      comp=Z,11nm,0.9s
E09A  Wood Farm, Sta   86.23  37  P     P      14 23 23.2 +0.8
E09A                              IAmb  IAmb   14 23 24.4
      comp=Z,17nm,1.2s
PINM  Pinnacle         86.26  18  P     P      14 23 22.6 +0.3
      baz=216
CAST  Castle Rocks     86.29  12  P     P      14 23 21.0 -1.4
CAST                              IAmb  IAmb   14 23 22.1
      comp=Z,17nm,0.9s
CAST  Castle Rocks     86.29  12  P     P      14 23 20.8 -1.6
      baz=205,SNR=9.6
N25K  Chitina, Valde   86.34  16  P     P      14 23 22.6 -0.1
N25K                              IAmb  IAmb   14 23 24.8
      comp=Z,21nm,1.3s
N25K  Chitina, Valde   86.34  16  P     P      14 23 22.1 -0.6
      baz=212
SEY   Seymchan         86.34 347  P     P      14 23 22.9 +0.3
      comp=Z,11nm,0.6s,baz=158,slow=5.3,SNR=24
M24K  Tolsona, Glenn   86.38  15  P     P      14 23 22.2 -0.6
      baz=210
F10A  Beach Ranch, E   86.44  38  P     P      14 23 24.1 +0.5
F10A                              IAmb  IAmb   14 23 25.3
      comp=Z,19nm,0.8s
MCARA McCarthy VSAT    86.55  16  P     P      14 23 24.1 +0.5
MCARA                             IAmb  IAmb   14 23 25.2
      comp=Z,30nm,1.2s
MCARA McCarthy VSAT    86.55  16  P     P      14 23 23.4 -0.2
      baz=213
J20K  Nowinta River    86.62  10  P     P      14 23 24.0 +0.1
J20K  Nowinta River    86.62  10  P     P      14 23 23.5 -0.3
      baz=203
KTH   Kantishna Hill   86.64  12  P     P      14 23 22.8 -1.3
KTH                               IAmb  IAmb   14 23 24.0
      comp=Z,12nm,0.9s
B08A  Colville Reser   86.65  35  P     P      14 23 24.4 -0.1
CTG   Chitna Glacier   86.66  17  P     P      14 23 23.7 -0.6
      baz=215
PLID  Pearl Lake       86.66  39  P     P      14 23 25.6 +0.7
PLID                              IAmb  IAmb   14 23 26.7
      comp=Z,17nm,1.4s
TRF   Thorofare Moun   86.67  12  P     P      14 23 23.6 -0.8
TRF                               IAmb  IAmb   14 23 24.7
      comp=Z,23nm,0.8s
TRF   Thorofare Moun   86.67  12  P     P      14 23 23.2 -1.1
      baz=206,SNR=11
CHUM  Lake Minchumin   86.67  11  P     P      14 23 22.9 -1.1
      baz=204,SNR=5.1
LLLB  Lillooet         86.69  32  P     P      14 23 25.2 +0.6
GCSA  Galena City Sc   86.71   9  P     P      14 23 23.0 -1.3
      baz=200
HLID  Hailey           86.79  41  P     P      14 23 26.3 +0.9
HLID  Hailey           86.79  41  P     P      14 23 25.7 +0.3
      baz=238
HARP  HAARP            86.88  15  P     P      14 23 25.3 +0.1
      baz=211
C09A  Chrisman Ranch   86.90  36  P     P      14 23 26.3 +0.7
C09A                              IAmb  IAmb   14 23 27.5
      comp=Z,15nm,1.1s
RND   Reindeer         86.93  13  P     P      14 23 25.2 -0.2
BPAW  Bear Paw Mtn.    87.12  12  P     P      14 23 25.9 -0.3
      baz=206
MCK   McKinley         87.20  13  P     P      14 23 26.3 -0.3
MCK                               IAmb  IAmb   14 23 27.8
      comp=Z,19nm,1.0s
MCK   McKinley         87.20  13  P     P      14 23 25.7 -0.9
      baz=208,SNR=7.0
SKAG  Skagway          87.28  21  P     P      14 23 26.9 -0.1
      baz=220
PAX   Paxson           87.30  14  P     P      14 23 26.6 -0.6
      baz=211
M26K  Nabesna, AK      87.42  16  P     P      14 23 27.9 +0.2
M26K                              IAmb  IAmb   14 23 29.3
      comp=Z,12nm,1.0s
M26K  Nabesna, AK      87.42  16  P     P      14 23 27.9 +0.2
      baz=213,SNR=6.6
BWN   Browne           87.48  12  P     P      14 23 27.5 -0.4
YUK6  Outpost Mounta   87.50  18  P     P      14 23 28.1 -0.2
      baz=217
YUK3  Moose Creek      87.57  17  P     P      14 23 28.7  0.0
      baz=215,SNR=15
TX31  Lajitas Ar. Si   87.61  58  P     P      14 23 30.1 +0.6
TX32  Lajitas Array    87.61  58  P     P      14 23 30.1 +0.6
TXAR  Lajitas Array    87.61  58  P     P      14 23 31.1 +1.7
      comp=Z,1.9nm,0.9s,baz=221,slow=5.0,SNR=12
TXAR                              pP    pP     14 25 43.0 +1.0
      comp=Z,5.6nm,1.1s,baz=218,slow=5.7,SNR=15
TXAR  Lajitas Array    87.61  58  P     P      14 23 30.2 +0.8
HYT   Haines Junctio   87.66  19  P     P      14 23 29.2 +0.2
      baz=218
M27K  Edge Creek, AK   87.67  16  P     P      14 23 29.7 +0.7
M27K  Edge Creek, AK   87.67  16  P     P      14 23 29.0  0.0
      baz=214,SNR=12
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MENT  Mentasta         87.69  15  P     P      14 23 29.4 +0.5
MENT                              IAmb  IAmb   14 23 30.5
      comp=Z,7.5nm,0.8s
XAN   Xi'an            87.72 308  P     P      14 23 30.9 +1.1
XAN                               pmax  pmax
      comp=Z,28nm,1.1s
YUK4  Talbot Arm       87.73  18  P     P      14 23 29.5 +0.1
      baz=217
NEW   Newport          87.80  36  P     P      14 23 30.2 +0.4
      comp=Z,4.2nm,1.0s,baz=256,slow=2.6,SNR=5.9
NEW   Newport          87.80  36  IAmb  IAmb   14 23 30.8
      comp=Z,3.5nm,0.8s
NEW   Newport          87.80  36  P     P      14 23 28.9 -0.9
      baz=235
L26K  Log Cabin Wild   87.85  15  P     P      14 23 29.9 +0.2
L26K  Log Cabin Wild   87.85  15  P     P      14 23 29.4 -0.3
      baz=213
I21K  Tanana           87.92  11  P     P      14 23 29.6 -0.3
I21K                              IAmb  IAmb   14 23 30.8
      comp=Z,22nm,0.9s
I21K  Tanana           87.92  11  P     P      14 23 29.2 -0.7
      baz=205,SNR=12
SNAA  Sanae            87.93 179  P     P      14 23 29.4 -0.7
ANMO  Albuquerque      87.93  51  P     P      14 23 31.4 +0.4
      baz=243
NEA2  Nenana           87.94  12  P     P      14 23 28.9 -1.1
NEA2  Nenana           87.94  12  P     P      14 23 29.5 -0.5
      baz=208
BVCY  Beaver Creek     87.98  17  P     P      14 23 30.2 -0.1
      baz=215
MLY   Manley           88.01  11  P     P      14 23 29.3 -1.1
MLY                               IAmb  IAmb   14 23 30.5
      comp=Z,14nm,1.1s
MLY   Manley           88.01  11  P     P      14 23 29.5 -0.9
      baz=206,SNR=11
WRH   Wood River Hil   88.03  13  P     P      14 23 29.7 -0.7
VNA3  Neumayer Olymp   88.08 176  P     P      14 23 30.4 -0.4
RIDG  Independent Ri   88.10  14  P     P      14 23 30.2 -0.7
      baz=211
DOT   Dot Lake         88.21  15  P     P      14 23 31.4 +0.1
DOT                               IAmb  IAmb   14 23 32.5
      comp=Z,11nm,0.9s
H21K  Melozitna Rive   88.21  10  P     P      14 23 31.4 +0.1
H21K                              IAmb  IAmb   14 23 32.5
      comp=Z,9.0nm,0.9s
H21K  Melozitna Rive   88.21  10  P     P      14 23 31.4 +0.1
      baz=204,SNR=6.1
HDA   Harding Lake     88.21  13  P     P      14 23 30.8 -0.5
HDA                               IAmb  IAmb   14 23 31.9
      comp=Z,14nm,0.8s
HDA   Harding Lake     88.21  13  P     P      14 23 31.0 -0.3
      baz=209,SNR=10
CCB   Clear Creek Bu   88.24  13  P     P      14 23 30.5 -0.9
CCB                               IAmb  IAmb   14 23 31.7
      comp=Z,21nm,0.8s
L27K  Beaver Creek,    88.27  16  P     P      14 23 31.7  0.0
L27K                              IAmb  IAmb   14 23 33.1
      comp=Z,9.6nm,1.1s
L27K  Beaver Creek,    88.27  16  P     P      14 23 31.6 -0.1
      baz=214,SNR=5.7
BCAR  Beaver Creek A   88.28  16  P     P      14 23 31.7  0.0
WHY   Whitehorse       88.34  20  P     P      14 23 32.3 +0.1
      baz=220
IMAR  Indian Mountai   88.35  10  P     P      14 23 31.8 -0.1
DLBC  Dease Lake       88.37  23  P     P      14 23 33.3 +1.0
      comp=Z,4.4nm,0.8s,baz=239,slow=9.7,SNR=4.0
DLBC  Dease Lake       88.37  23  IAmb  IAmb   14 23 34.4
      comp=Z,9.3nm,1.1s
I23K  Minto, Yukon-K   88.37  12  P     P      14 23 31.2 -0.8
I23K                              IAmb  IAmb   14 23 36.4
      comp=Z,17nm,1.3s
I23K  Minto, Yukon-K   88.37  12  P     P      14 23 31.2 -0.8
      baz=207
MCMT  McKenzie Canyo   88.41  40  P     P      14 23 34.1 +1.0
TCOL  CIGO, UAF Yank   88.43  13  P     P      14 23 31.6 -0.7
TCOL  CIGO, UAF Yank   88.43  13  P     P      14 23 31.4 -0.9
      baz=209,SNR=9.3
MDM   Murphy Dome      88.43  12  P     P      14 23 31.5 -0.8
COLA  College          88.43  13  P     P      14 23 31.4 -0.9
COLA  College          88.43  13  P     P      14 23 31.2 -1.0
      baz=209
SCRK  Sand Creek       88.50  15  P     P      14 23 32.9  0.0
SCRK                              IAmb  IAmb   14 23 35.3
      comp=Z,10nm,1.0s
SCRK  Sand Creek       88.50  15  P     P      14 23 32.8  0.0
      baz=212,SNR=6.9
VNA2  Neumayer--Watz   88.52 177  P     P      14 23 33.0 +0.1
      baz=179,slow=3.8
IL31                   88.54  13  P     P      14 23 32.0 -0.7
IL31                              IAmb  IAmb   14 23 33.3
      comp=Z,19nm,1.2s
ILAR  Eielson Array    88.54  13  P     P      14 23 32.2 -0.6
      comp=Z,5.1nm,0.7s,baz=216,slow=5.0,SNR=53
ILAR                              pP    pP     14 25 44.0 -1.8
      comp=Z,3.2nm,1.1s,baz=228,slow=4.5,SNR=7.8
ILAR  Eielson Array    88.54  13  P     P      14 23 32.1 -0.8
P33M  Teslin, Yukon    88.68  21  P     P      14 23 33.7  0.0
      baz=222
N31M  Braeburn, Yuko   88.70  19  P     P      14 23 33.6 -0.1
      baz=220
POKR  Poker Plat Res   88.73  13  P     P      14 23 33.0 -0.7
      baz=209
J25K  Salcha River,    88.73  14  P     P      14 23 33.1 -0.7
      baz=211,SNR=8.3
VNA1  Neumayer--Stat   88.75 177  P     P      14 23 34.1 +0.3
MSO   Missoula         88.81  38  P     P      14 23 34.0 -0.6
      baz=238
DLMT  Dillon           88.84  40  P     P      14 23 35.9 +1.0
KMI   Kunming          88.87 297 ⇓P     P      14 23 37.1 +1.5
KMI                               pmax  pmax
      comp=Z,19nm,1.2s
REDW  Red Top Meadow   88.91  42  P     P      14 23 36.2 +0.8
REDW                              IAmb  IAmb   14 23 37.5
      comp=Z,7.2nm,1.0s
TPAW  Teton Pass       88.91  42  P     P      14 23 36.4 +1.0
H23K  Yukon River      88.94  12  P     P      14 23 34.1 -0.6
H23K  Yukon River      88.94  12  P     P      14 23 34.0 -0.6
      baz=207
SNOW  Snow King Moun   89.02  42  P     P      14 23 36.9 +1.0
SNOW                              IAmb  IAmb   14 23 38.7
      comp=Z,8.8nm,1.1s
J26L  Joseph Creek     89.05  14  P     P      14 23 35.8 +0.4
      baz=212,SNR=24
O20A  White River Ci   89.06  46  P     P      14 23 35.5 -0.6
      baz=242
LOHW  Long Hollow      89.19  42  P     P      14 23 37.2 +0.6
M30M  Minto, Yukon     89.25  18  P     P      14 23 36.3 +0.1
      baz=219,SNR=13
FLWY  Flagg Ranch      89.36  42  P     P      14 23 38.5 +1.1
FLWY                              IAmb  IAmb   14 23 39.9
      comp=Z,7.0nm,1.0s
PD31  Pinedale Array   89.44  43  P     P      14 23 38.0 +0.2
PDAR  Pinedale Array   89.44  43  P     P      14 23 38.6 +0.8
      comp=Z,2.0nm,0.7s,baz=204,slow=3.3,SNR=13
PDAR                              pP    pP     14 25 51.5 +0.5
      comp=Z,0.9nm,0.7s,baz=212,slow=8.2,SNR=4.2
PDAR  Pinedale Array   89.44  43  P     P      14 23 38.0 +0.2
YHL   Hebgen Lake      89.44  41  P     P      14 23 39.3 +1.4
PRP   Porcupine Dome   89.48  13  P     P      14 23 36.9 -0.5
PRP                               IAmb  IAmb   14 23 38.8
      comp=Z,21nm,1.5s
PRP   Porcupine Dome   89.48  13  P     P      14 23 36.9 -0.5
      baz=211,SNR=6.4
BOZ   Bozeman (W)      89.55  40  P     P      14 23 39.0 +0.8
BOZ   Bozeman (W)      89.55  40  P     P      14 23 38.2  0.0
      baz=240
CM31  Chiang Mai Arr   89.59 290  P     P      14 23 40.2 +1.5
CMAR  Chiang Mai Arr   89.59 290  P     P      14 23 41.0 +2.3
      comp=Z,14nm,0.9s,baz=119,slow=3.0,SNR=83
CMAR                              pP    pP     14 25 52.9 +1.3
      comp=Z,0.3nm,0.4s,baz=92,slow=4.6,SNR=2.9
CMAR                              PP    PP     14 27 24.8 +2.1
      comp=Z,1.0nm,1.0s,baz=120,slow=6.2,SNR=4.9
CMAR  Chiang Mai Arr   89.59 290  P     P      14 23 40.0 +1.2
H17A  Grant Village    89.59  42  P     P      14 23 40.8 +2.2
      baz=240
PLCA  Paso Flores      89.64 134  P     P      14 23 39.9 +1.2
      comp=Z,5.6nm,0.8s,baz=220,slow=3.6,SNR=11
PLCA  Paso Flores      89.64 134  P     P      14 23 39.4 +0.7
PLCA                              IAmb  IAmb   14 23 41.0
      comp=Z,6.4nm,0.8s
M31M  Drury Creek, Y   89.67  19  P     P      14 23 37.7 -0.4
      baz=221
DAWY  Dawson           89.72  16  P     P      14 23 38.7 +0.3
DAWY                              IAmb  IAmb   14 23 39.8
      comp=Z,12nm,0.9s
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DAWY  Dawson             89.72  16  P          P        14 23 39.0 +0.6
            baz=216
CHTO  Chiang Mai         89.72 290  P          P        14 23 40.4 +1.1
CHTO  Chiang Mai         89.72 290  P          P        14 23 41.1 +1.7
EGAK  Eagle              89.85  15  P          P        14 23 39.2 +0.3
EGAK                                IAmb       IAmb     14 23 40.1
            comp=Z,16nm,1.0s
EGAK  Eagle              89.85  15  P          P        14 23 39.0 +0.1
            baz=215,SNR=7.7
COLD  Coldfoot           90.08  11  P          P        14 23 40.3 +0.4
COLD                                IAmb       IAmb     14 23 41.6
            comp=Z,12nm,1.0s
COLD  Coldfoot           90.08  11  P          P        14 23 40.0  0.0
            baz=206
RLMT  Red Lodge          90.76  42  P          P        14 23 44.2 +0.3
            baz=241
MMPY  Sheldon Lake,      90.96  20  P          P        14 23 44.6 +0.5
            baz=224
N23A  Red Feather La     90.96  46  P          P        14 23 46.3 +1.4
            baz=243
BMAR  Burnt Mountain     91.32  12  P          P        14 23 46.6 +0.9
TOLK  Toolik Lake Re     91.46  10  P          P        14 23 45.5 -0.8
            baz=207
YAK   Yakutsk            91.98 338  P          P        14 23 48.2 -0.6
            comp=Z,9.0nm,0.8s,baz=210,slow=1.6,SNR=7.6
YAK   Yakutsk            91.98 338  IAmb       IAmb     14 23 49.3
            comp=Z,23nm,0.9s
EPYK  Eagle Plains       92.24  16  P          P        14 23 50.0 +0.1
EPYK                                IAmb       IAmb     14 23 51.0
            comp=Z,10nm,1.0s
EPYK  Eagle Plains       92.24  16  P          P        14 23 49.3 -0.6
            baz=219
INK   Inuvik             94.52  15  P          P        14 23 59.8 -0.4
            comp=Z,2.0nm,0.8s,baz=243,slow=1.6,SNR=6.0
INK   Inuvik             94.52  15  IAmb       IAmb     14 24 00.7
            comp=Z,5.3nm,1.1s
INK   Inuvik             94.52  15  P          P        14 23 59.2 -1.0
            baz=222
SONM  Songino Array      95.44 319  P          P        14 24 04.2 -0.8
            comp=Z,0.4nm,0.5s,baz=155,slow=4.9,SNR=3.8
GTA   Gaotai             96.58 310 ⇑P          P        14 24 11.4 +1.1
GTA                                 pmax       pmax
            comp=Z,6.0nm,1.5s
ZALV  Zalesovo Beam     110.20 321  PKiKP      PKiKP    14 29 06.5 -1.1
            comp=Z,2.0nm,0.6s,baz=169,slow=0.8,SNR=11
MKAR  Makanchi Array    110.83 313  PKiKP      PKiKP    14 29 08.3 -0.8
            comp=Z,1.4nm,0.4s,baz=135,slow=0.8,SNR=34
KURK  Kurchatov         113.67 317             PKiKP    14 29 13.4 -0.8
KURBB Kurchatov Arra    113.72 317  PKiKP      PKiKP    14 29 13.6 -0.8
            comp=Z,2.2nm,0.6s,baz=93,slow=1.9,SNR=24
KSH   Kashi             114.46 305  PKP        PKiKP    14 29 17.3 +0.9
BTK   Batken            118.46 305             PKPdf    14 29 23.6 -0.4
BVAR  Borovoye Array    118.77 320  PKP        PKPdf    14 29 23.5 -0.6
            comp=Z,5.8nm,0.4s,baz=213,slow=7.3,SNR=45
GAR   Garm              118.78 304             PKPdf    14 29 23.8 -0.9
KKAR  Karatay Array     118.84 309             PKPdf    14 29 23.9 -0.6
KBL   Kabul             119.42 299             PKPdf    14 29 25.6 -0.5
CHGR  Chuyangaron       119.66 303  PKPdf      PKPdf    14 29 25.9 -0.5
SPA0  Spitsbergen Ar    121.93 356 ePKPdf      PKiKP    14 29 29.7  0.0
ARU   Arti              124.94 325  PKPdf      PKPdf    14 29 35.5 -0.2
ABKAR Akbulak array     125.75 316             PKPdf    14 29 37.1 -0.5
ABKAR Akbulak array     125.75 316  PKPdf      PKPdf    14 29 37.0 -0.5
HAMF  Hammerfest        128.22 351 ePKPdf      PKPdf    14 29 41.6  0.0
GEYT  Alibeck           128.34 303  PKP        PKiKP    14 29 43.7 +0.1
            comp=Z,2.6nm,0.6s,baz=52,slow=17,SNR=4.8
ARA0  ARCESS Array S    128.91 349 ePKPdf      PKiKP    14 29 43.5 -0.3
ARCES ARCESS Array B    128.91 349  PKP        PKPdf    14 29 43.2 +0.2
            comp=Z,2.4nm,0.4s,baz=26,slow=1.4,SNR=27
JETT  Jettan, Norway    129.69 351 ePKPdf      PKPdf    14 29 44.0 -0.6
KTK1  Kautokeino        129.75 350 ePKPdf      PKPdf    14 29 44.6 -0.1
TRO   Tromso            129.82 352 ePKPdf      PKPdf    14 29 45.0 +0.3
STEI  Steigen           131.88 353 ePKPdf      PKiKP    14 29 49.3 -0.5
FAUS  Fauske            132.40 353 ePKPdf      PKPdf    14 29 48.7 -0.9
KONS  Konsvik           133.49 354 ePKPdf      PKiKP    14 29 52.4 -0.7
FINES FINESS Array B    135.70 343  PKhKP      PKPpre   14 29 47.6
            comp=Z,0.8nm,0.4s,baz=29,slow=2.5,SNR=5.2
FINES                               PKP        PKPdf    14 29 56.5 +0.6
            comp=Z,2.3nm,0.4s,baz=103,slow=2.9,SNR=14
FOO   Floro             138.96 357 ePKPdf      PKPdf    14 30 01.9  0.0
NB2   NORSAR Subarra139.01 353  PKP        PKPpre   14 29 54.0
            comp=Z,0.4nm,0.4s,baz=16,slow=3.2
NOA   NORSAR Array B 139.01 353  PKhKP      PKPpre   14 29 53.2
            comp=Z,0.7nm,0.7s,baz=15,slow=3.5,SNR=6.1
NOA                                 PKP        PKPdf    14 30 02.7 +0.6
            comp=Z,0.4nm,0.4s,baz=14,slow=4.0,SNR=5.2
NOA                                 SKPbc      SKiKP    14 32 41.5 -0.9
            comp=Z,0.9nm,0.8s,baz=14,slow=4.3,SNR=3.2
HYA   Hoyanger          139.33 356 ePKPdf      PKPdf    14 30 02.7 +0.1
KONO  Kongsberg         140.55 353 ePKPdf      PKPdf    14 30 05.0 +0.1
NACGM Naroch            140.74 337 i PKP       PKPdf    14 30 00.9 -4.4
STRU  Stroemstad        140.96 352 i P         PKPdf    14 30 01.1 -4.5
PABE  Paberze           141.23 340 eP          PKPdf    14 30 03.4 -2.8
HOMB  Homborsund        142.02 354 i P         PKPdf    14 30 04.2 -3.3
HOMB  Homborsund        142.02 354 ePKPdf      PKPdf    14 30 04.2 -3.3
BORU  Boraas            142.07 350 eP          PKPdf    14 30 02.4 -5.3
BORU                               i P         PKPdf    14 30 02.8 -4.8
ONAU  Onsala            142.44 351 i P         PKPdf    14 30 04.5 -3.7
FABU  Falkenberg        142.69 350 i P         PKPdf    14 30 05.6 -3.1
SUW   Suwalki           142.72 339 ePKPdf      PKPdf    14 30 06.8 -2.1
SUW   Suwalki           142.72 339 eP          PKPdf    14 30 07.1 -1.8
BLEU  Blekinge          142.75 347 i P         PKPdf    14 30 05.3 -3.6
BLEU                                IAmb       IAmb     14 30 06.2
            comp=Z,4.6nm,0.6s
LODK  Lodwar            142.76 247  PKPdf      PKPdf    14 30 09.0 -1.3
AKASG Malin Array Be    142.81 331  PKhKP      PKPpre   14 30 06.2
            comp=Z,21nm,0.4s,baz=44,slow=4.4,SNR=88
AKASG                               SKPbc      SKPbc    14 32 49.5 +0.1
            comp=Z,2.0nm,0.8s,baz=44,slow=2.4,SNR=7.3
AKASG Malin Array Be    142.81 331             PKPpre   14 30 05.9
AKBB  Malin Array Si    142.81 331             PKPpre   14 30 05.7
DEL   Delary            142.99 348 i P         PKPdf    14 30 06.9 -2.4
DEL                                 IAmb       IAmb     14 30 07.6
            comp=Z,16nm,0.5s
BJUU  Bjuv              143.52 349 i P         PKPab    14 30 08.5 -0.7
MUD   Monsted U'grnd    143.72 353 i P         PKPab    14 30 09.9  0.0
MUD                                 IAmb       IAmb     14 30 10.7
            comp=Z,41nm,0.8s
BSD   Bornholm Skovb    144.05 347 eP          PKPdf    14 30 11.1 -0.1
BSD   Bornholm Skovb    144.05 347 e           PKPbc    14 30 06.3 -4.5
            baz=24,slow=12
BSD                               ⇓iP          PKPdf    14 30 10.3 -0.9
BSD                                 IAmb       IAmb     14 30 11.5
            comp=Z,63nm,0.9s
MBAR  Mbarara           144.36 237  PKPbc      PKPab    14 30 14.0  0.0
DIKM  Dikmen            144.53 314 ⇓P          PKPab    14 30 14.0 +0.3
GAZ   Gaziantep         144.79 306  PKPdf      PKPdf    14 30 13.1  0.0
SORM  Soroca            144.98 328 ⇑P          PKPbc    14 30 14.2 +0.3
ESK   Eskdalemuir       145.16   5  PKPdf      PKPbc    14 30 13.8 -0.4
BNN   Bunyan            145.24 309  PKPbc      PKPbc    14 30 15.4 +0.2
BEL   Belsk             145.34 339 ePKPbc      PKPab    14 30 15.6 -0.7
MILM  Milestii Mici     145.54 326 ⇓P          PKPbc    14 30 15.5 -0.2
BSEG  Bad Segeberg      146.02 351 ePKPbc      PKPbc    14 30 17.6 +0.9
            baz=19,slow=2.4
HLG   Helgoland         146.10 353 ePKPbc      PKPbc    14 30 18.0 +1.1
            baz=19,slow=2.4
VASR  Vaslui            146.26 326 ⇑P          PKPbc    14 30 18.3 +0.7
KWP   Kalwaria Pacla    146.42 335 ePKPbc      PKPbc    14 30 18.5 +0.5
KWP                                ePKPab      PKPab    14 30 21.6 +0.7
KWP   Kalwaria Pacla    146.42 335             PKPbc    14 30 18.1 +0.1
BR131 Keskin Array S    146.46 312             PKPbc    14 30 18.6 -0.1
BRTR  Keskin Array B    146.47 312  PKPbc      PKPbc    14 30 18.8 +0.1
            comp=Z,7.5nm,0.5s,baz=128,slow=2.6,SNR=21
BRTR                                pPKPbc     pPKPdf   14 32 41.4 +2.2
            comp=Z,0.5nm,0.4s,baz=116,slow=3.4,SNR=1.7
BRTR  Keskin Array B    146.47 312  PKPbc      PKPbc    14 30 18.5 -0.1
VLDR  Vladesti          146.62 325 ⇑P          PKPdf    14 30 17.0 +1.2
TLCR                    146.64 324 ⇓P          PKPbc    14 30 18.1 -0.5
RUE   Ruedersdorf       146.75 346 eP          PKiKP    14 30 20.0 -0.6
RUE   Ruedersdorf       146.75 346 ePKPbc      PKiKP    14 30 19.6 -1.0
            baz=19,slow=2.4
RUE                                epPKPbc     pPKPbc   14 32 46.9 +7.2
SCTR  Scanteiesti       146.78 325 ⇑P          PKPbc    14 30 20.0 +0.9
BURAR Bucovina Array    146.85 330 ⇑P          PKPbc    14 30 20.0 +0.6
JURR  Jurilovca         146.86 323 ⇓P          PKPbc    14 30 19.5 +0.3
DSB   Dublin            146.87   9             PKPbc    14 30 19.0  0.0
TESR  Tescani           146.93 327 ⇑P          PKPbc    14 30 20.1 +0.7
ANTO  Ankara            146.99 313             PKPbc    14 30 20.1 +0.2
CFR   Carcaliu          147.02 324 ⇑P          PKPbc    14 30 19.8 +0.1
OJC   Ojcow             147.03 338 ePKPbc      PKPbc    14 30 20.0 +0.4
OJC                                ePKPab      PKPab    14 30 23.8 +0.6
OJC   Ojcow             147.03 338             PKPbc    14 30 19.7 +0.1
KOLS  Kolonicke sedl    147.15 334 ePKP        PKiKP    14 30 21.0 -0.6
STHS  Stebnicka Huta    147.17 336 ePKP        PKPbc    14 30 20.5 +0.5
ODBI  Odobesti          147.22 326 ⇓P          PKiKP    14 30 21.9 +0.1
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TIRR  Tirgusor          147.31 323 ⇑P          PKPbc    14 30 21.2 +0.7
TIRR  Tirgusor          147.31 323             PKPbc    14 30 20.7 +0.2
VRI   Vrincioaia        147.32 326 ⇑P          PKPbc    14 30 20.6  0.0
PLOR  Plostina          147.37 326 ⇓P          PKPbc    14 30 20.8 +0.1
FLTG  Flechtingen       147.41 349 ePKPbc      PKPbc    14 30 21.1 +0.6
            baz=19,slow=2.4
EFOR  EFORIE            147.42 322 ⇓P          PKiKP    14 30 21.7 -0.5
HARR  Harsova           147.44 324 ⇑P          PKPbc    14 30 21.1 +0.3
NRDL  Niedersach Rie    147.45 350 ePKPbc      PKiKP    14 30 21.3 -0.7
            baz=19,slow=2.4
NIE   Niedzica          147.52 337 ePKPbc      PKiKP    14 30 22.4  0.0
NIE                                ePKPab      PKPab    14 30 26.6 +1.3
BISRR Bisoca            147.54 326 ⇓P          PKiKP    14 30 22.4 -0.3
BMR   Baia Mare         147.60 332 ⇑P          PKiKP    14 30 22.0 -0.5
MANR  Mangalia          147.60 322 ⇓P          PKiKP    14 30 21.9 -0.7
COVR  Voineasa-Covas    147.61 327 ⇓P          PKPbc    14 30 21.3 +0.1
KSP   Ksiaz             147.61 342 ePKPbc      PKiKP    14 30 22.0 -0.5
KSP                                ePKPab      PKPab    14 30 26.5 +0.9
OZUR                    147.65 327 ⇓P          PKiKP    14 30 22.7 -0.1
TRPA  Tarpa             147.66 333 ⇓P          PKPbc    14 30 21.8 +0.6
TRPA  Tarpa             147.66 333 eP          PKiKP    14 30 21.9 -0.7
TRPA  Tarpa             147.66 333⇑ePKP        PKPbc    14 30 21.1 -0.2
ASSE  Asse, Remlinge    147.70 349 ePKPbc      PKiKP    14 30 22.0 -0.5
            baz=19,slow=2.4
MDUB  Mudurnu           147.79 315             PKPbc    14 30 21.9 -0.1
OSTC  Ostas             147.88 342⇑ePKP        PKiKP    14 30 22.9 -0.2
CHVC  Chvalec           147.90 342⇑ePKP        PKiKP    14 30 22.6 -0.5
ISR   Istrita           147.92 325 ⇑P          PKiKP    14 30 23.2 -0.2
DOPR  Dopca             147.94 328 ⇑P          PKiKP    14 30 23.3 -0.1
KALB  Balgarevo         147.95 321 ⇓P          PKiKP    14 30 22.8 -0.6
IBBN  Ibbenburen        147.96 353 ePKPbc      PKiKP    14 30 22.7 -0.5
            baz=19,slow=2.4
IBBN                               epPKPbc     pPKPab   14 32 49.2 +5.1
MLR   Muntele Rosu      147.98 327 ⇑P          PKiKP    14 30 23.1 -0.5
MLR   Muntele Rosu      147.98 327             PKPbc    14 30 22.1 -0.3
UPC   Upice             147.99 342⇑ePKP        PKiKP    14 30 22.7 -0.6
UPC                                ePKPAB      PKPab    14 30 27.7 +0.5
CLL   Collm             148.02 346 ePKPdf      PKPdf    14 30 19.0 +1.0
CLL                               ⇓iPKPbc      PKPbc    14 30 22.6 +0.5
            comp=Z,53nm,0.9s
CLL                                i PKPab     PKPab    14 30 26.7 -0.5
            comp=Z,30nm,0.9s
CLL                                epPKPbc     pPKPdf   14 32 42.0 +0.5
CLL                                ePKSdf      PKSdf    14 33 54.0 +1.2
CLL   Collm             148.02 346             PKPbc    14 30 22.1 +0.1
CLZ   Clausthal         148.03 349 ePKPbc      PKiKP    14 30 22.9 -0.5
            baz=19,slow=2.4
DPC   Dobruska-Polom    148.04 342⇑ePKP        PKiKP    14 30 22.9 -0.6
DPC                                ePKPAB      PKPab    14 30 27.3 -0.1
LANS  Liptovska Anna    148.05 337 ePKP        PKiKP    14 30 24.0 +0.5
LANS                               e                    14 30 28.8
KRLC  Kraliky           148.15 341⇑ePKP        PKiKP    14 30 23.2 -0.5
MORC  Moravsky Berou    148.17 340 ⇑P          PKiKP    14 30 23.8  0.0
MORC  Moravsky Berou    148.17 340             PKPbc    14 30 23.1 +0.5
MORC  Moravsky Berou    148.17 340 ePKP        PKiKP    14 30 23.3 -0.4
MORC                               e                    14 30 28.7
BRG   Berggiesshubel    148.20 345 ePKPbc      PKPbc    14 30 23.0 +0.5
            baz=19,slow=2.4
BRG   Berggiesshubel    148.20 345  Amp                 14 30 19.9
            comp=Z,3.6nm,0.9s
BRG                               ⇓ePKPf       PKPdf    14 30 18.9 +0.6
BRG                               ⇑iPKPb                14 30 23.5
BRG                                 Amp                 14 30 24.3
            comp=Z,22nm,0.8s
BRG                                ePKPab      PKPab    14 30 28.8 +0.8
BRG                                 Amp                 14 30 29.6
            comp=Z,9.7nm,0.8s
KECS  Kecovo            148.22 336 ePKP        PKPbc    14 30 23.0 +0.3
SECR                    148.22 326 ⇑P          PKPbc    14 30 22.4 -0.4
FBE   Freiberg          148.30 346 ePKPbc      PKiKP    14 30 23.8 -0.1
            baz=19,slow=2.4
PVCC  Panska Ves        148.36 344⇑ePKP        PKiKP    14 30 23.8 -0.2
NEUB  Neuenburg         148.38 347 ePKPbc      PKiKP    14 30 23.7 -0.4
            baz=19,slow=2.4
GTTG  Gottingen         148.39 350 ePKPbc      PKiKP    14 30 23.5 -0.5
            baz=19,slow=2.4
CSS   Mathiatis         148.46 304             PKPbc    14 30 23.6 -0.1
VOIR                    148.48 327 ⇑P          PKiKP    14 30 24.3 -0.3
DRGR                    148.61 331 ⇓P          PKPbc    14 30 24.0 +0.2
ARR   Arges             148.74 328 ⇓P          PKiKP    14 30 25.0 -0.1
LEF   Lefka             148.75 304 ⇓P          PKPbc    14 30 24.2 -0.2
VYHS  Vyhne             148.82 337 ePKP        PKiKP    14 30 25.0 -0.1
VYHS                               e                    14 30 31.6
PRU   Pruhonice         148.86 343⇑ePKP        PKiKP    14 30 24.8 -0.3
PRU                                ePKPAB      PKPab    14 30 31.3 +0.5
BUG   Bochum--Univer    148.87 353 ePKPbc      PKiKP    14 30 24.9 -0.1
            baz=19,slow=2.4
VRAC  Vranov            148.88 341 ⇓P          PKiKP    14 30 25.1 -0.1
VRAC  Vranov            148.88 341 ePKP        PKiKP    14 30 25.0 -0.2
VRAC                               e                    14 30 31.9
PSZ   Piszkesteto       148.91 336 ⇑P          PKPbc    14 30 24.7 +0.2
PSZ   Piszkesteto       148.91 336 eP          PKiKP    14 30 25.2 -0.1
PSZ   Piszkesteto       148.91 336             PKPbc    14 30 24.3 -0.1
JAVC  Velka Javorina    148.92 339 ePKP        PKiKP    14 30 26.3 +1.0
JAVC                               e                    14 30 33.0
MOX   Moxa              148.94 347 ePKPbc      PKPbc    14 30 24.6 +0.2
            baz=19,slow=2.4
TANN  Tannenbergstha    148.98 346 ePKPbc      PKiKP    14 30 25.2 -0.2
            baz=19,slow=2.4
WERD  Werda             148.98 346 ePKPbc      PKiKP    14 30 25.1 -0.3
            baz=19,slow=2.4
GUNZ  Gunzen            149.06 346 ePKPbc      PKiKP    14 30 25.4 -0.1
            baz=19,slow=2.4
UBBA  Unterbreizbach    149.08 349 ePKPbc      PKiKP    14 30 25.1 -0.3
            baz=19,slow=2.4
LOT   Lotru             149.11 328 ⇑P          PKPbc    14 30 25.3 +0.2
WERN  Wernitzgruen      149.12 346 ePKPbc      PKiKP    14 30 25.8 +0.1
            baz=19,slow=2.4
HUMR  Humele            149.14 326 ⇓P          PKPbc    14 30 24.5 -0.5
NKC   Novy Kostel       149.15 346⇑ePKP        PKiKP    14 30 25.6 -0.1
NKC                                ePKPAB      PKPab    14 30 32.4 +0.4
KRUC  Moravsky          149.16 341 ePKP        PKiKP    14 30 25.6 -0.1
KRUC                               e                    14 30 32.6
DEV   Deva              149.21 330 ⇓P          PKiKP    14 30 26.1 +0.2
SMOL  Smolenice         149.30 339 ePKP        PKiKP    14 30 26.8 +0.7
SMOL                               e                    14 30 33.8
MANZ  Manzenberg        149.46 346 ePKPbc      PKiKP    14 30 26.5 +0.1
            baz=19,slow=2.4
MODS  Modra-Piesok      149.47 339 ePKP        PKPbc    14 30 26.0 +0.3
SIRR  Siria             149.48 332 ⇑P          PKiKP    14 30 26.8 +0.2
GZR   Gura Zlata        149.63 329 ⇓P          PKPbc    14 30 26.2 -0.1
ROTZ  Rotzenmuhle       149.64 346 ePKPbc      PKiKP    14 30 26.5 -0.2
            baz=19,slow=2.4
AHRW  Bad Neuenahr-A    149.78 353 ePKPbc      PKiKP    14 30 27.6 +0.6
            baz=19,slow=2.4
MEM   Membach           149.83 354 dPKP        PKiKP    14 30 26.9 -0.2
MEM                                dPKPab      PKPab    14 30 34.7  0.0
BTNL  Ternell           149.84 354 dPKPdf      PKPdf    14 30 21.5 +0.6
BTNL                               dPKP        PKiKP    14 30 27.1  0.0
KHC   Kasperske Hory    149.90 344 ePKPDF      PKPdf    14 30 20.8 -0.3
KHC                               ⇑ePKP        PKiKP    14 30 27.2 -0.1
KHC                                ePKPAB      PKPab    14 30 36.0 +0.8
KHC                                epPKP       pPKPbc   14 32 48.0 -0.5
TNS   Taunus Mts        149.91 351 ePKPbc      PKiKP    14 30 27.3  0.0
            baz=19,slow=2.4
GRF   Grafenberg Arr    149.93 347 ePKPbc      PKiKP    14 30 27.4 +0.1
            baz=19,slow=2.4
SRE   Strehaia          149.95 328 ⇑P          PKiKP    14 30 28.1 +0.6
CKRC  Cesky Krumlov     149.99 343⇑ePKP        PKPdf    14 30 21.6 +0.4
CKRC                               ePKPAB      PKiKP    14 30 27.7 +0.2
CKRC                               ex          x        14 30 36.1
BZS   Buzias            150.00 331 ⇓P          PKPbc    14 30 27.1 +0.1
WET   Wettzell          150.07 345 ePKPbc      PKiKP    14 30 27.5 -0.1
            baz=19,slow=2.4
BCLA  Clavier           150.08 355 dPKPbc      PKiKP    14 30 27.5  0.0
BCLA                               dPKPab      PKPab    14 30 35.7 -0.1
BHOU  Houvegnez         150.08 354 dPKP        PKiKP    14 30 27.9 +0.2
BHOU                               dPKPab      PKPab    14 30 36.2 +0.3
GEC2  GERESS Array S    150.13 344             PKPbc    14 30 27.4 +0.1
GEC2  GERESS Array S    150.13 344 ePKPbc      PKiKP    14 30 27.8 -0.1
            baz=19,slow=2.4
GERES GERESS Array B    150.13 344  PKPbc      PKPbc    14 30 27.0 -0.4
            comp=Z,6.4nm,0.7s,baz=251,slow=4.1,SNR=11
GERES                               pPKPbc     pPKPbc   14 32 49.4 +0.3
            comp=Z,1.4nm,0.7s,baz=64,slow=6.1,SNR=3.3
GERES GERESS Array B    150.13 344             PKPbc    14 30 27.3  0.0
HERR  Herculane         150.18 329 ⇓P          PKPbc    14 30 27.4 -0.1
BMRD  Maredsous         150.24 356 dPKP        PKiKP    14 30 28.0 +0.1
CONA  Conrad Observa    150.32 340 eP          PKiKP    14 30 28.2 -0.1
            comp=Z,14nm,0.7s,SNR=12
CONA                               eP          PKPab    14 30 37.9 +0.8
            comp=Z,14nm,1.0s
ELL   Elmali            150.39 309             PKPbc    14 30 28.3 -0.1
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DOU   Dourbes           150.45 356 dPKP        PKiKP    14 30 28.5 +0.1
DOU                                dPKPab      PKPab    14 30 37.3 -0.1
MDVR  Moldovita         150.59 330 ⇓P          PKiKP    14 30 28.8 -0.1
WLF   Walferdange       150.75 354             PKiKP    14 30 29.4 +0.4
WLF   Walferdange       150.75 354 ePKPbc      PKiKP    14 30 29.9 +0.9
            baz=19,slow=2.4
MORH  Mrgy, Hungar      150.79 335 ⇑P          PKiKP    14 30 29.1  0.0
MORH  Mrgy, Hungar      150.79 335 ePKPDF      PKPdf    14 30 21.2 -1.3
MORH  Mrgy, Hungar      150.79 335⇑ePKP        PKPbc    14 30 28.4 -0.4
MORH  Mrgy, Hungar      150.79 335 eP          PKPbc    14 30 28.8  0.0
MOA   Molln             150.88 342 i P         PKPbc    14 30 29.1 +0.1
            comp=Z,3.2nm,0.5s
MOA                                eP          PKPab    14 30 40.1 +0.7
            comp=Z,11nm,1.1s
ARSA  Arzberg           151.03 340 eP          PKPab    14 30 41.0 +1.0
KOVH  Kovagotottos      151.11 335 ePKPDF      PKPdf    14 30 22.6 -0.4
KOVH  Kovagotottos      151.11 335⇑ePKP        PKPbc    14 30 28.6 -0.9
KOVH  Kovagotottos      151.11 335 eP          PKiKP    14 30 29.9  0.0
KOVH                               ePKPpB               14 30 39.5
FRGS  Fruska Gora       151.16 332 ⇑P          PKiKP    14 30 30.0 -0.1
STU   Stuttgart         151.20 349 ePKPbc      PKiKP    14 30 30.4 +0.4
            baz=19,slow=2.4
FUR   Furstenfeldbru    151.36 346 ePKPbc      PKiKP    14 30 30.7 +0.3
            baz=19,slow=2.4
VTS   Vitosha           151.37 325 ⇑P          PKiKP    14 30 30.9 +0.2
VTS   Vitosha           151.37 325             PKPbc    14 30 30.2 -0.2
RJOB  Jochberg          151.39 344 ePKPbc      PKiKP    14 30 30.5 +0.1
            baz=19,slow=2.4
BOVS  Bovan             151.44 328 ⇓P          PKPbc    14 30 30.0 -0.4
SOKA  Soboth            151.69 340 eP          PKPbc    14 30 30.6 -0.4
            comp=Z,13nm,1.2s,SNR=5.6
SOKA                               eP          PKPab    14 30 42.8 -0.1
            comp=Z,8.9nm,1.0s
BFO   Black Forest      151.77 350             PKPbc    14 30 30.8 -0.2
BFO                                 PKPab      PKPab    14 30 42.8 -0.2
BFO   Black Forest      151.77 350 ePKPbc      PKiKP    14 30 31.8 +0.5
            baz=19,slow=2.4
KBA   Koelnbreinsper    151.84 343 eP          PKPbc    14 30 30.6 -0.8
            comp=Z,12nm,1.2s
DIVS  Divibare          151.91 331  PKPbc      PKPbc    14 30 31.3 -0.2
OBKA  Obir              152.00 340 eP          PKPbc    14 30 31.4 -0.3
            comp=Z,7.2nm,1.3s
ECH   Echery            152.05 352             PKPab    14 30 43.9 -0.4
WATA  Walderalm         152.07 345 eP          PKPbc    14 30 31.6 -0.2
            comp=Z,8.3nm,0.6s
WATA                               eP          PKPab    14 30 44.7 +0.2
            comp=Z,18nm,1.2s
UBR   Ueberruh          152.07 347 ePKPbc      PKiKP    14 30 31.9  0.0
            baz=19,slow=2.4
RETA  Reutte            152.11 346 eP          PKPbc    14 30 31.9  0.0
            comp=Z,3.5nm,0.5s
RETA                               eP          PKPab    14 30 44.9 +0.3
            comp=Z,17nm,1.1s
WTTA  Wattenberg        152.12 345 eP          PKPbc    14 30 31.9 -0.1
            comp=Z,6.6nm,0.4s,SNR=6.6
WTTA                               eP          PKPab    14 30 45.3 +0.5
            comp=Z,9.8nm,0.6s
MYKA  Terra Mystica     152.16 342 i P         PKPbc    14 30 31.3 -0.7
            comp=Z,4.2nm,0.5s
MYKA                               eP          PKPab    14 30 44.7 -0.1
            comp=Z,4.4nm,0.5s
MOTA  Moosalm           152.17 346 eP          PKPdf    14 30 24.5 -0.2
            comp=Z,4.6nm,0.8s
MOTA                               i P         PKPbc    14 30 32.1  0.0
            comp=Z,7.9nm,0.8s
MOTA                               eP          PKPab    14 30 45.3 +0.4
            comp=Z,8.2nm,0.7s
SQTA  Sankt Quirin      152.26 346 eP          PKPbc    14 30 32.2  0.0
            comp=Z,12nm,0.8s
SQTA                               eP          PKPab    14 30 45.7 +0.4
            comp=Z,22nm,1.2s
ABTA  Abfaltersbach     152.38 343 eP          PKPdf    14 30 24.6 -0.4
            comp=Z,12nm,1.5s
ABTA                               eP          PKPbc    14 30 32.0 -0.4
            comp=Z,13nm,0.6s,SNR=5.2
LJU   Ljubljana         152.42 340 i PKPbc     PKiKP    14 30 32.6  0.0
DAVA  Damuels           152.49 347 eP          PKPab    14 30 46.5 +0.2
            comp=Z,6.6nm,0.8s
FETA  Feichten          152.56 346 eP          PKPdf    14 30 25.6 +0.3
            comp=Z,6.2nm,1.1s
FETA                               eP          PKiKP    14 30 33.3 +0.3
            comp=Z,12nm,0.9s
FETA                               eP          PKPab    14 30 46.9 +0.3
            comp=Z,11nm,1.0s
BOJS  Bojanci           152.65 338 i PKPbc     PKiKP    14 30 33.4 +0.3
JAVS  Javornik          152.70 340 i PKPbc     PKPbc    14 30 32.9 -0.3
JAVS                               i PKPab     PKPab    14 30 46.8 -0.4
STAL  STALIGIAL         152.77 343  PKPbc      PKPbc    14 30 32.7 -0.6
CTI   Castel Tesino     153.25 344  PKPbc      PKPbc    14 30 33.9 -0.5
CTI                                            PKPab    14 30 49.0 -0.5
TUE   Stuetta           153.38 348  PKPbc      PKiKP    14 30 34.8  0.0
TUE                                 PKPab      PKPab    14 30 50.4 +0.3
NRCA  Norcia            155.73 339             PKPab    14 31 00.3  0.0
ESDC  Sonseca Array     160.44  12  PKPab      PKPab    14 31 20.9 +0.1
            comp=Z,4.7nm,1.1s,baz=344,slow=4.6,SNR=12
ESDC  Sonseca Array     160.44  12  PKPab      PKPab    14 31 20.1 -0.7
DBIC  Dimbokro          164.90 156  PKP        PKPdf    14 30 40.0 -0.4
            comp=Z,4.6nm,1.0s,baz=297,slow=2.6,SNR=3.0
DBIC                                PKPab      PKPab    14 31 42.9 +2.0
            comp=Z,2.3nm,1.0s,baz=59,slow=1.4,SNR=4.1
DBIC  Dimbokro          164.90 156             PKPab    14 31 41.8 +0.9
KOWA  Kowa              172.05 139             PKPab    14 32 12.5 -0.2
TORD  Torodi Ar. Bea    172.58 182  PKP        PKPdf    14 30 44.3 -0.8
            comp=Z,3.2nm,0.9s,baz=324,slow=1.5,SNR=13
TORD                                PKPab      PKPab    14 32 14.8 -0.1
            comp=Z,0.6nm,0.9s,baz=183,slow=3.0,SNR=4.0
TORD                                pPKP       pPKPdf   14 33 11.4 +1.3
            comp=Z,1.0nm,0.8s,baz=230,slow=1.3,SNR=4.0
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IDC ***03*** *14:14:06.8±1.7, 62°.24N×151°.13W, h58^{km}±18^{km}, mb3.6/8, mb1 3.8/10, mb1mx3.4/62, mbtmp3.9/10, ML3.6/3, MS2.8/1, Ms1 2.8/1, ms1mx2.3/39, Error ellipse: s-maj=23.3km s-min=10.8km az=112.0*

ANF ***03*** *14:14:09.4±0.1, 62°.22N×150°.89W, h77^{km}±2^{km}, ML4.1/63, Error ellipse: s-maj=1.5km s-min=1.2km az=49.0*

NEIC ***03*** *14:14:09.4±1.1, 62°.23N±0°.03×150°.91W±0°.04, h80^{km}±5^{km}, Error ellipse: s-maj=4.5km s-min=2.5km az=183.0*

AEIC ***03*** *14:14:10±1.1, 62°.23N±0°.03×150°.89W±0°.05, h74^{km}±5^{km}, ML3.6, mb4.4/6(NEIC), ML3.8/166(NEIC), Error ellipse: s-maj=4.4km s-min=3.0km az=185.0*

ISC 03 14:14:09.2±0.6**, 62°.22N**±0°.02×**150°.89W**±0°.03**, h83**^{km}±5^{km}**, n289, σ0^{s}.69**/293**, mb4.0**/11**, Central Alaska**

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Code  Station Name       Δ°   AZ°   Phase ID         Time       Res
                                    Op     ISC     h  m  s     ISC
CUT   Chulitna          0.34  58           Pn      14 14 21.8 -0.2
CUT   Chulitna          0.34  58           Sn      14 14 31.4 -0.1
CUT   Chulitna          0.34  58    IAML           14 14 27.1
            comp=N,2μm,0.5s
CUT   Chulitna          0.34  58    P      Pn      14 14 21.9 -0.2
            baz=239,SNR=407
CUT                                 S      Sn      14 14 31.4 -0.1
            baz=239
SKT   Skwentna          0.39 231           Pn      14 14 21.8 -0.5
SKT                                        Sn      14 14 31.4 -0.7
SKT   Skwentna          0.39 231    IAML           14 14 31.8
            comp=E,9μm,0.6s
SKT   Skwentna          0.39 231    P      Pn      14 14 22.1 -0.3
            baz=50,SNR=734
SKT                                 S      Sn      14 14 31.4 -0.7
            baz=50
M22K  Willow            0.60 142           Pn      14 14 23.7 -0.3
M22K                                       Sn      14 14 34.9 -0.1
M22K  Willow            0.60 142    P      Pn      14 14 23.8 -0.3
            baz=323,SNR=203
M22K                                S      Sn      14 14 34.9 -0.1
            baz=323
SUA   Susitna One       0.77 175           Pn      14 14 26.0 +0.1
SUA                                        Sn      14 14 38.5 +0.2
SUA   Susitna One       0.77 175    IAML           14 14 39.0
            comp=E,6μm,0.7s
SUA                                 IAML           14 14 40.7
            comp=N,4μm,0.6s
SUA   Susitna One       0.77 175    P      Pn      14 14 26.0 +0.1
            baz=355,SNR=61
SUA                                 S      Sn      14 14 38.3  0.0
            baz=355
STLK  Strandline Lak    0.85 212           Pn      14 14 26.9 +0.1
PPLA  Purkeypile        0.90 319           Pn      14 14 27.4  0.0
PPLA                                       Sn      14 14 41.0  0.0
PPLA  Purkeypile        0.90 319    P      Pn      14 14 27.5  0.0
            baz=138,SNR=52
PPLA                                S      Sn      14 14 40.5 -0.6
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	baz=138						
GHO	Glory Hole Cre	1.03	115		Pn	14 14 29.1	+0.3
GHO					Sn	14 14 44.2	+0.6
GHO	Glory Hole Cre	1.03	115	IAML		14 14 46.4	
	comp=N,2µm,0.6s						
PMR	Palmer	1.05	126		Pn	14 14 28.9	0.0
PMR	Palmer	1.05	126	P	Pn	14 14 28.7	-0.3
	baz=308,SNR=138						
PMR				S	Sn	14 14 43.6	-0.1
	baz=308						
SPCG	Spurr Capps Gl	1.08	210		Pn	14 14 29.5	0.0
SPCG					Sn	14 14 45.0	+0.4
FIS	Fire Island	1.13	163		Pn	14 14 31.3	+1.4
FIS	Fire Island	1.13	163	IAML		14 14 49.5	
	comp=N,3µm,0.5s						
CRP	Crater Peak	1.13	213		Pn	14 14 30.5	+0.4
SPCP	Crater Peak Br	1.13	213		Pn	14 14 30.4	+0.2
SPCP					Sn	14 14 46.7	+0.8
SPCN	Chakachatna No	1.18	212		Pn	14 14 31.1	+0.5
SPU	Mount Spurr	1.18	208		Pn	14 14 30.7	+0.1
SPBG	Spurr Blockage	1.20	217		Pn	14 14 31.3	+0.5
SPBG					Sn	14 14 48.2	+1.1
BGL	Barrier Glacie	1.20	217		Pn	14 14 31.4	+0.5
SPCR	Spurr Chakacha	1.20	212		Pn	14 14 31.2	+0.3
SPCR	Spurr Chakacha	1.20	212	P	Pn	14 14 31.1	+0.1
	baz=31,SNR=201						
SPCR				S	Sn	14 14 47.2	0.0
	baz=31						
TRF	Thorofare Moun	1.26	12		Pn	14 14 32.0	+0.3
TRF	Thorofare Moun	1.26	12	IAML		14 14 50.7	
	comp=E,3µm,0.8s						
TRF				IAML		14 14 51.1	
	comp=N,2µm,0.8s						
TRF	Thorofare Moun	1.26	12	P	Pn	14 14 32.1	+0.3
	baz=193,SNR=329						
TRF				S	Sn	14 14 48.8	+0.1
	baz=193						
RC01	Rabbit Creek A	1.27	154		Pn	14 14 31.5	-0.1
RC01	Rabbit Creek A	1.27	154	IAML		14 14 52.5	
	comp=N,1µm,0.3s						
RC01	Rabbit Creek A	1.27	154	P	Pn	14 14 31.4	-0.2
	baz=335,SNR=29						
RC01				S	Sn	14 14 48.1	-0.3
	baz=335						
SML	Sawmill	1.28	108		Pn	14 14 32.0	+0.2
SML					Sn	14 14 50.0	+1.2
SML	Sawmill	1.28	108	IAML		14 14 53.0	
	comp=E,2µm,0.9s						
SML				IAML		14 14 59.1	
	comp=N,2µm,1.0s						
SML	Sawmill	1.28	108	P	Pn	14 14 32.1	+0.2
	baz=290,SNR=190						
SML				S	Sn	14 14 49.2	+0.4
	baz=290						
CAST	Castle Rocks	1.32	336		Pn	14 14 32.4	0.0
CAST	Castle Rocks	1.32	336	P	Pn	14 14 32.3	0.0
	baz=155,SNR=72						
CAST				S	Sn	14 14 48.6	-1.1
	baz=155						
KTH	Kantishna Hill	1.33	359		Pn	14 14 33.0	+0.5
KTH					Sn	14 14 50.1	0.0
KTH	Kantishna Hill	1.33	359	IAML		14 14 51.1	
	comp=E,2µm,0.8s						
KTH				IAML		14 14 52.5	
	comp=N,1µm,0.5s						
KNK	Knik Glacier	1.41	124		Pn	14 14 33.7	+0.2
KNK	Knik Glacier	1.41	124	IAML		14 14 55.6	
	comp=N,2µm,0.6s						
KNK				IAML		14 14 59.4	
	comp=E,2µm,0.7s						
KNK	Knik Glacier	1.41	124	P	Pn	14 14 33.7	+0.2
	baz=306,SNR=116						
KNK				S	Sn	14 14 51.7	-0.1
	baz=306						
L20K	Farewell, AK	1.42	282		Pn	14 14 33.7	+0.1
L20K					Sn	14 14 51.5	-0.5
L20K	Farewell, AK	1.42	282	P	Pn	14 14 33.6	0.0
	baz=99,SNR=64						
L20K				S	Sn	14 14 51.5	-0.5
	baz=99						
CAPN	Captain Cook N	1.47	185		Pn	14 14 36.5	+2.3
RND	Reindeer	1.51	37		Pn	14 14 34.8	-0.1
M19K	Big River Lodg	1.68	261		Pn	14 14 37.1	+0.2
M19K					Sn	14 14 57.6	-0.3
M19K	Big River Lodg	1.68	261	IAML		14 14 58.2	
	comp=N,1µm,0.4s						
SCM	Sheep Creek Mo	1.73	102		Pn	14 14 37.6	0.0
SCM	Sheep Creek Mo	1.73	102	IAML		14 15 03.8	
	comp=N,1µm,0.6s						
SCM	Sheep Creek Mo	1.73	102	P	Pn	14 14 37.6	0.0
	baz=285,SNR=44						
SCM				S	Sn	14 14 59.5	+0.4
	baz=285						
SLKM	Skilak Lake	1.75	169		Pn	14 14 38.5	+0.6
SLKM					Sn	14 14 59.4	-0.3
MCK	McKinley	1.76	30		Pn	14 14 38.2	+0.3
MCK	McKinley	1.76	30	IAML		14 15 02.3	
	comp=E,850nm,0.6s						
MCK	McKinley	1.76	30	P	Pn	14 14 38.3	+0.3
	baz=211,SNR=115						
MCK				S	Sn	14 14 59.3	-0.6
	baz=211						
CHUM	Lake Minchumin	1.79	339		Pn	14 14 38.7	+0.4
CHUM	Lake Minchumin	1.79	339	P	Pn	14 14 38.7	+0.4
	baz=158,SNR=116						
CHUM				S	Sn	14 14 59.8	-0.6
	baz=158						
O22K	Cooper Landing	1.84	162		Pn	14 14 39.1	+0.2
O22K					Sn	14 15 00.8	-0.7
O22K	Cooper Landing	1.84	162	P	Pn	14 14 38.9	-0.1
	baz=343,SNR=25						
O22K				S	Sn	14 15 00.3	-1.3
	baz=343						
PWL	Port Wells	1.84	137		Pn	14 14 38.5	-0.5
PWL	Port Wells	1.84	137	P	Pn	14 14 38.5	-0.5
	baz=320,SNR=44						
PWL				S	Sn	14 15 00.9	-0.7
	baz=320						
DFR	Drift River	1.85	209		Pn	14 14 39.5	+0.2
K20K	Telida	1.85	309		Pn	14 14 39.4	+0.2
K20K	Telida	1.85	309	P	Pn	14 14 39.3	+0.2
	baz=126,SNR=81						
K20K				S	Sn	14 15 00.8	-1.1
	baz=126						
L19K	White Mountain	1.86	270		Pn	14 14 39.5	+0.3
L19K	White Mountain	1.86	270	IAML		14 15 02.9	
	comp=N,1µm,0.9s						
L19K				IAML		14 15 03.6	
	comp=E,1µm,0.4s						
L19K	White Mountain	1.86	270	P	Pn	14 14 39.6	+0.3
	baz=87,SNR=97						
L19K				S	Sn	14 15 01.7	-0.4
	baz=87						
BPAW	Bear Paw Mtn.	1.88	359		Pn	14 14 39.5	-0.1
BPAW					Sn	14 15 01.2	-1.6
BPAW	Bear Paw Mtn.	1.88	359	IAML		14 15 03.1	
	comp=N,573nm,0.6s						
BPAW	Bear Paw Mtn.	1.88	359	P	Pn	14 14 39.6	0.0
	baz=179,SNR=251						
BPAW				S	Sn	14 15 01.0	-1.7
	baz=179						
NCT	North Crescent	1.94	211		Pn	14 14 40.8	+0.4
RDWB	Redoubt West	1.98	209		Pn	14 14 41.4	+0.4
RDWB					Sn	14 15 05.9	+0.8
RSO	Redoubt South	1.98	208		Pn	14 14 41.2	+0.1
RED	Redoubt Volcan	2.02	207		Pn	14 14 41.8	+0.3
BWN	Browne	2.06	18		Pn	14 14 42.5	+0.6
BWN	Browne	2.06	18	IAML		14 15 28.0	
	comp=N,726nm,0.9s						
BWN				IAML		14 15 30.7	
	comp=E,712nm,1.1s						
M24K	Tolsona, Glenn	2.22	91		Pn	14 14 44.6	+0.6
M24K					Sn	14 15 09.5	-1.2
M24K	Tolsona, Glenn	2.22	91	P	Pn	14 14 44.7	+0.6
	baz=275,SNR=52						
M24K				S	Sn	14 15 10.0	-0.7
	baz=275						
N19K	Bonanza Creek	2.23	232		Pn	14 14 44.5	+0.3
N19K	Bonanza Creek	2.23	232	IAML		14 15 15.5	
	comp=E,425nm,0.7s						
N19K	Bonanza Creek	2.23	232	P	Pn	14 14 44.6	+0.3
	baz=49,SNR=29						
SEW	Seward	2.24	161		Pn	14 14 43.9	-0.4
SEW	Seward	2.24	161	S	Sn	14 15 08.6	-2.4
	baz=343						
GLI	Glacier Island	2.26	125		Pn	14 14 44.0	-0.7
GLI					Sn	14 15 11.1	-0.7
GLI	Glacier Island	2.26	125	IAML		14 15 12.2	
	comp=N,845nm,0.7s						
GLI	Glacier Island	2.26	125	P	Pn	14 14 43.9	-0.7
	baz=308,SNR=8.1						
GLI				S	Sn	14 15 11.1	-0.7
	baz=308						
O20K	Slope Mountain	2.31	202		Pn	14 14 45.6	+0.3
O20K	Slope Mountain	2.31	202	P	Pn	14 14 45.4	+0.1
	baz=21,SNR=5.9						
JPK	Jack Peak	2.36	118		Pn	14 14 46.1	+0.1
IVE	Iliamna Volcan	2.44	206		Pn	14 14 47.0	-0.1
VMT	TAPS TI Valdez	2.44	116		Pn	14 14 46.7	-0.3
J20K	Nowinta River	2.45	324		Pn	14 14 47.3	+0.2
J20K	Nowinta River	2.45	324	IAML		14 15 17.4	
	comp=E,682nm,0.5s						
J20K				IAML		14 15 17.4	
	comp=N,631nm,0.9s						
J20K	Nowinta River	2.45	324	P	Pn	14 14 47.3	+0.2
	baz=142,SNR=76						
KLU	Klutina	2.47	105		Pn	14 14 46.9	-0.6
KLU					Sn	14 15 15.9	-0.8
KLU	Klutina	2.47	105	IAML		14 15 30.4	
	comp=N,363nm,0.7s						
KLU	Klutina	2.47	105	P	Pn	14 14 46.9	-0.6
	baz=290,SNR=25						
BRLK	Bradley Lake	2.47	180		Pn	14 14 47.6	+0.2
BRLK				IAML		14 15 27.0	
	comp=E,328nm,0.5s						
TTA	Tatalina	2.47	289		Pn	14 14 47.5	0.0
TTA					Sn	14 15 15.4	-1.4
TTA	Tatalina	2.47	289	IAML		14 15 18.1	
	comp=N,461nm,0.7s						
TTA	Tatalina	2.47	289	P	Pn	14 14 47.5	0.0
	baz=104,SNR=28						
BRSE	Bradley Lake S	2.49	178		Pn	14 14 48.6	+0.9
BRSE					Sn	14 15 16.3	-1.0
SVW2	Sparrevohn	2.51	245		Pn	14 14 48.1	+0.2
SVW2	Sparrevohn	2.51	245	IAML		14 15 18.8	
	comp=E,643nm,0.6s						
ILS	Iliamna Low So	2.51	206		Pn	14 14 48.5	+0.4
NEA2	Nenana	2.52	18		Pn	14 14 47.7	-0.3
NEA2	Nenana	2.52	18	P	Pn	14 14 47.8	-0.3
	baz=200,SNR=56						
PS11	TAPS Pump St11	2.55	91		Pn	14 14 48.5	+0.1
PS11					Sn	14 15 19.8	+1.2
FID	Port Fidalgo	2.58	123		Pn	14 14 47.9	-1.0
FID	Port Fidalgo	2.58	123	IAML		14 15 20.2	
	comp=N,552nm,0.6s						
WRH	Wood River Hil	2.59	28		Pn	14 14 49.0	+0.1
HOM	Homer	2.60	188	Pn	Pn	14 14 49.5	+0.4
PAX	Paxson	2.62	71		Pn	14 14 50.1	+0.6
PAX					Sn	14 15 21.4	+1.0
PAX	Paxson	2.62	71	P	Pn	14 14 50.1	+0.6
	baz=256,SNR=77						
O19K	Port Alsworth	2.62	221		Pn	14 14 49.9	+0.4
O19K	Port Alsworth	2.62	221	IAML		14 15 39.2	
	comp=N,418nm,0.5s						
O19K	Port Alsworth	2.62	221	P	Pn	14 14 49.8	+0.4
	baz=38,SNR=19						
DIV	Divide	2.68	112		Pn	14 14 49.5	-0.8
HARP	HAARP	2.68	84		Pn	14 14 51.1	+0.8
HARP	HAARP	2.68	84	P	Pn	14 14 51.1	+0.8
	baz=269,SNR=40						
CNPM	China Poot	2.71	184		Pn	14 14 52.2	+1.5
CNPM	China Poot	2.71	184	IAML		14 15 33.7	
	comp=E,346nm,0.6s						
CNPM				IAML		14 15 47.8	
	comp=N,320nm,0.8s						
CCB	Clear Creek Bu	2.80	28		Pn	14 14 51.8	0.0
HIN	Hinchinbrook I	2.80	129		Pn	14 14 51.2	-0.6
HIN				IAML		14 15 25.9	
	comp=N,379nm,1.1s						
HIN				IAML		14 15 35.1	
	comp=E,468nm,0.8s						
MLY	Manley	2.82	1		Pn	14 14 52.1	-0.1
MLY	Manley	2.82	1	P	Pn	14 14 52.0	-0.1
	baz=181,SNR=77						
P19K	Oil Pt	2.82	205		Pn	14 14 52.4	+0.2
P19K				IAML		14 16 04.2	
	comp=N,260nm,0.6s						
P19K				IAML		14 16 06.2	
	comp=E,291nm,0.7s						
HDA	Harding Lake	2.83	37		Pn	14 14 52.4	+0.2
HDA	Harding Lake	2.83	37	IAML		14 15 26.2	
	comp=N,413nm,0.7s						
HDA				IAML		14 15 31.0	
	comp=E,326nm,0.6s						
HDA	Harding Lake	2.83	37	P	Pn	14 14 52.4	+0.2
	baz=221,SNR=152						
PS12	TAPS Pump St12	2.83	103		Pn	14 14 51.8	-0.5
PS08	TAPS Pump Stn8	2.96	36		Pn	14 14 54.2	+0.2
TCOL	CIGO, UAF Yank	2.99	26		Pn	14 14 54.5	+0.2
TCOL	CIGO, UAF Yank	2.99	26	P	Pn	14 14 54.5	+0.2
	baz=208,SNR=106						
COLA	College	2.99	26		Pn	14 14 54.5	+0.2
COLA	College	2.99	26	P	Pn	14 14 54.5	+0.2
	baz=208						
EYAK	Cordova Ski Ar	2.99	122		Pn	14 14 53.5	-0.8
EYAK	Cordova Ski Ar	2.99	122	P	Pn	14 14 53.6	-0.8
	baz=306,SNR=11						
MDM	Murphy Dome	2.99	22		Pn	14 14 54.6	+0.2
I21K	Tanana	3.01	351		Pn	14 14 54.7	+0.1
I21K	Tanana	3.01	351	IAML		14 15 30.5	
	comp=N,217nm,0.8s						
I21K	Tanana	3.01	351	P	Pn	14 14 54.7	+0.1
	baz=170,SNR=35						
I23K	Minto, Yukon-K	3.01	12		Pn	14 14 54.7	0.0
I23K	Minto, Yukon-K	3.01	12	P	Pn	14 14 54.8	+0.1
	baz=194,SNR=144						
N25K	Chitina, Valde	3.04	99		Pn	14 14 54.9	-0.3
N25K	Chitina, Valde	3.04	99	IAML		14 15 33.5	
	comp=E,262nm,0.7s						
N25K				IAML		14 15 49.8	
	comp=N,233nm,0.6s						
N25K	Chitina, Valde	3.04	99	P	Pn	14 14 54.9	-0.3
	baz=285,SNR=26						
IL31		3.12	33		Pn	14 14 56.2	+0.1
ILAR	Eielson Array	3.12	33	P	Pn	14 14 56.0	-0.2
	comp=N,20nm,0.3s,baz=220,slow=14,SNR=1896						
ILAR				S	Sn	14 15 30.6	-1.8
	comp=N,20nm,0.3s,baz=222,slow=18,SNR=3.4						
ILAR	Eielson Array	3.12	33	Pn	Pn	14 14 56.2	-0.1
RIDG	Independent Ri	3.15	58		Pn	14 14 58.0	+1.3
RIDG	Independent Ri	3.15	58	P	Pn	14 14 57.9	+1.3
	baz=244,SNR=22						
BMRM	Bremner River	3.26	110		Pn	14 14 57.0	-1.1
BMRM				IAML		14 15 53.4	
	comp=E,220nm,0.9s						
BMRM				IAML		14 15 55.2	
	comp=N,329nm,0.7s						
BMRM	Bremner River	3.26	110	P	Pn	14 14 57.1	-1.1
	baz=296						
POKR	Poker Plat Res	3.29	26		Pn	14 14 58.7	+0.3
POKR	Poker Plat Res	3.29	26	P	Pn	14 14 58.8	+0.3
	baz=210,SNR=52						
MENT	Mentasta	3.40	75		Pn	14 14 59.7	-0.2
DOT	Dot Lake	3.43	62		Pn	14 15 00.7	+0.3
GLB	Gilahina Butte	3.45	100		Pn	14 15 00.5	-0.2
GLB	Gilahina Butte	3.45	100	IAML		14 15 42.1	
	comp=E,148nm,0.6s						
GLB				IAML		14 15 52.8	
	comp=N,180nm,0.7s						
J25K	Salcha River,	3.45	44		Pn	14 15 00.7	0.0
J25K	Salcha River,	3.45	44	P	Pn	14 15 00.8	+0.1
	baz=228,SNR=96						
P18K	Big Mountain,	3.55	219		Pn	14 15 02.6	+0.6
P18K	Big Mountain,	3.55	219	P	Pn	14 15 02.2	+0.2
	baz=35						
H21K	Melozitna Rive	3.55	347		Pn	14 15 02.0	+0.1
H21K	Melozitna Rive	3.55	347	P	Pn	14 15 02.1	+0.1
	baz=165,SNR=68						
Q19K	Cape Douglas,	3.57	204	Pn	Pn	14 15 04.0	+1.6
L26K	Log Cabin Wild	3.58	74		Pn	14 15 02.8	+0.4
L26K	Log Cabin Wild	3.58	74	P	Pn	14 15 02.9	+0.6
	baz=260,SNR=55						
Q23K	Middleton Isla	3.58	140	Pn	Pn	14 15 02.6	+0.3
Q23K				IAML		14 16 11.3	
	comp=E,270nm,2.0s						
Q23K				IAML		14 17 23.0	
	comp=N,246nm,2.4s						
MID	Middleton Isla	3.58	140	Pn	Pn	14 15 02.7	+0.3
MID				IAML		14 16 26.4	
	comp=E,278nm,2.3s						
MID				IAML		14 17 23.0	
	comp=N,250nm,2.4s						
SCRK	Sand Creek	3.60	58		Pn	14 15 03.0	+0.2
SCRK	Sand Creek	3.60	58	IAML		14 15 49.3	
	comp=N,232nm,1.1s						
SCRK				IAML		14 15 49.8	
	comp=E,148nm,0.6s						
SCRK	Sand Creek	3.60	58	P	Pn	14 15 03.0	+0.2
	baz=244,SNR=54						
H23K	Yukon River	3.67	9		Pn	14 15 03.6	+0.1
H23K	Yukon River	3.67	9	IAML		14 15 45.0	
	comp=E,148nm,0.7s						
H23K				IAML		14 15 46.8	
	comp=N,121nm,0.7s						
H23K	Yukon River	3.67	9	P	Pn	14 15 03.6	+0.1
	baz=190,SNR=68						
VRDI	Verde Repeater	3.68	102		Pn	14 15 03.5	-0.4
VRDI	Verde Repeater	3.68	102	IAML		14 15 49.7	
	comp=N,121nm,1.0s						
VRDI				IAML		14 16 04.5	
	comp=E,122nm,1.1s						
PS06	TAPS Pump Stn6	3.68	7		Pn	14 15 04.2	+0.5
GCSA	Galena City Sc	3.69	316		Pn	14 15 04.5	+0.7
GCSA	Galena City Sc	3.69	316	P	Pn	14 15 03.8	0.0
	baz=131,SNR=22						
M26K	Nabesna, AK	3.69	84		Pn	14 15 03.8	-0.1
M26K	Nabesna, AK	3.69	84	IAML		14 16 06.4	
	comp=E,162nm,0.6s						
M26K				IAML		14 16 06.9	
	comp=N,160nm,0.6s						
M26K	Nabesna, AK	3.69	84	P	Pn	14 15 03.6	-0.3
	baz=271,SNR=10						
MCARA	McCarthy VSAT	3.83	99		Pn	14 15 05.5	-0.3
MCARA	McCarthy VSAT	3.83	99	P	Pn	14 15 05.5	-0.3
	baz=286,SNR=14						
H24K	Noodor Dome	3.86	19		Pn	14 15 06.4	+0.2
H24K	Noodor Dome	3.86	19	IAML		14 15 51.2	
	comp=E,164nm,0.7s						
H24K	Noodor Dome	3.86	19	P	Pn	14 15 06.4	+0.2
	baz=201,SNR=68						
BERG	Berg Lake	3.92	115	Pn	Pn	14 15 06.9	-0.1
IMAR	Indian Mountai	3.98	343	Pn	Pn	14 15 08.1	+0.3
CRQM	Cirque	4.00	108		Pn	14 15 08.8	+0.6
CRQM				IAML		14 16 15.9	
	comp=N,199nm,0.9s						
CRQM				IAML		14 16 24.5	
	comp=E,190nm,0.7s						
J26L	Joseph Creek	4.01	52	P	Pn	14 15 09.1	+0.8
	baz=239,SNR=64						
CRQE	Cirque	4.02	108	P	Pn	14 15 08.4	0.0
	baz=295						
PRP	Porcupine Dome	4.07	33		Pn	14 15 09.5	+0.3
PRP	Porcupine Dome	4.07	33	IAML		14 16 22.9	
	comp=N,93nm,0.6s						
PRP	Porcupine Dome	4.07	33	P	Pn	14 15 09.5	+0.3
	baz=218,SNR=116						
TGL	Tana Glacier	4.14	107		Pn	14 15 09.5	-0.5
TGL	Tana Glacier	4.14	107	IAML		14 15 58.2	
	comp=N,164nm,0.8s						
TGL				IAML		14 16 16.1	
	comp=E,188nm,0.6s						
M27K	Edge Creek, AK	4.21	84		Pn	14 15 11.8	+0.8
M27K	Edge Creek, AK	4.21	84	IAML		14 16 22.8	
	comp=E,98nm,0.9s						
M27K				IAML		14 16 26.1	
	comp=N,123nm,0.8s						
M27K	Edge Creek, AK	4.21	84	P	Pn	14 15 11.9	+0.8
	baz=272,SNR=14						
BGLC	Bering Glacier	4.25	116	P	Pn	14 15 11.2	-0.2
	baz=303						
BALM	Baldy	4.25	102		Pn	14 15 11.0	-0.6
WAX	Waxell Ridge	4.26	111		Pn	14 15 11.3	-0.4
L27K	Beaver Creek,	4.27	75		Pn	14 15 11.6	-0.2
L27K	Beaver Creek,	4.27	75	P	Pn	14 15 11.6	-0.2
	baz=263,SNR=21						
KIAG	Kiagna River	4.28	104		Pn	14 15 11.5	-0.6
BCAR	Beaver Creek A	4.29	75	Pn	Pn	14 15 11.8	-0.2
SNH	Sunshine Point	4.40	114	Pn	Pn	14 15 13.8	+0.2
ISLE	Juniper Island	4.42	108	Pn	Pn	14 15 13.4	-0.6
ISLE				IAML		14 16 25.6	
	comp=E,136nm,1.3s						
KDAK	Kodiak Island	4.54	192	P	Pn	14 15 14.3	-1.1
	comp=E,0.6nm,0.3s,baz=67,slow=8.1,SNR=10						
KDAK				S	Sn	14 16 02.9	-3.8
	comp=E,0.7nm,0.3s,baz=95,slow=18,SNR=1.4						
KDAK	Kodiak Island	4.54	192	IAML		14 16 34.1	
	comp=E,68nm,2.8s						
KDAK				IAML		14 16 56.0	
	comp=E,87nm,3.4s						
BARN	Barnard Glacie	4.56	101		Pn	14 15 16.0	+0.2
BARN	Barnard Glacie	4.56	101	IAML		14 16 34.8	
	comp=N,88nm,1.4s						
BARN				IAML		14 16 45.0	
	comp=E,88nm,1.0s						
BAGL	Bagley Icefiel	4.58	108		Pn	14 15 16.0	+0.1
GRNC	Granite Creek	4.63	105		Pn	14 15 16.5	-0.4
GRNC	Granite Creek	4.63	105	IAML		14 16 28.8	
	comp=N,106nm,1.1s						
GRNC				IAML		14 16 29.7	
	comp=E,60nm,0.9s						
CTG	Chitna Glacier	4.73	101	P	Pn	14 15 18.1	-0.1
	baz=290,SNR=5.0						
CTGM	Chitina Glacie	4.74	101		Pn	14 15 18.1	-0.1
CTGM	Chitina Glacie	4.74	101	IAML		14 16 34.7	
	comp=N,99nm,0.6s						
CTGM				IAML		14 16 39.8	
	comp=E,58nm,1.1s						
YUK2	White River	4.76	91		Pn	14 15 18.5	+0.1
MESA	MESA	4.79	111		Pn	14 15 18.2	-0.8
MESA	MESA	4.79	111	P	Pn	14 15 18.8	-0.2
	baz=299						
YAH	Yahtse	4.79	109		Pn	14 15 18.8	-0.2
YAH	Yahtse	4.79	109	IAML		14 16 13.3	
	comp=E,125nm,0.5s						
YAH				IAML		14 16 40.2	
	comp=N,95nm,0.8s						
LOGN	Logan Glacier	4.94	102		Pn	14 15 20.5	-0.5
LOGN	Logan Glacier	4.94	102	IAML		14 16 19.8	
	comp=N,64nm,0.7s						
LOGN				IAML		14 16 49.1	
	comp=E,78nm,1.3s						
YUK3	Moose Creek	4.94	91		Pn	14 15 21.0	-0.1
YUK3	Moose Creek	4.94	91	P	Pn	14 15 20.9	-0.1
	baz=280,SNR=11						
FYU	Fort Yukon	5.00	27	Pn	Pn	14 15 22.1	+0.4
FYU				IAML		14 16 53.7	
	comp=N,66nm,1.3s						
FYU				IAML		14 17 04.7	
	comp=E,70nm,0.9s						
COLD	Coldfoot	5.03	3		Pn	14 15 22.8	+0.7
COLD	Coldfoot	5.03	3	P	Pn	14 15 22.5	+0.3
	baz=184,SNR=29						
EGAK	Eagle	5.06	55		Pn	14 15 22.6	+0.1
EGAK	Eagle	5.06	55	IAML		14 16 42.8	
	comp=E,93nm,1.0s						
EGAK	Eagle	5.06	55	P	Pn	14 15 22.3	-0.1
	baz=244,SNR=21						
DAWY	Dawson	5.53	65		Pn	14 15 28.8	-0.2
DAWY	Dawson	5.53	65	P	Pn	14 15 28.7	-0.2
	baz=256,SNR=42						
PCA	Pinnacle	5.57	108		Pn	14 15 29.3	-0.3
PINM	Pinnacle	5.58	108	P	Pn	14 15 29.2	-0.4
	baz=297						
BMAR	Burnt Mountain	5.88	24	Pn	Pn	14 15 34.1	+0.4
YUK4	Talbot Arm	5.88	93	P	Pn	14 15 33.7	-0.1
	baz=283						
BCPM	Bancas Point	5.92	108	Pn	Pn	14 15 33.5	-0.6
YUK6	Outpost Mounta	6.12	97	P	Pn	14 15 36.9	-0.3
	baz=288						
PNL	Peninsula	6.16	109	P	Pn	14 15 37.6	+0.1
	baz=300						
TOLK	Toolik Lake Re	6.47	4	Pn	Pn	14 15 43.5	+1.8
TOLK	Toolik Lake Re	6.47	4	P	Pn	14 15 42.7	+1.0
	baz=186,SNR=25						
HYT	Haines Junctio	6.56	96	Pn	Pn	14 15 42.8	-0.2
HYT	Haines Junctio	6.56	96	P	Pn	14 15 42.9	-0.1
	baz=288						
M30M	Minto, Yukon	6.56	81	P	Pn	14 15 43.0	0.0
	baz=273						
ANM	Nome	6.91	296	Pn	Pn	14 15 48.3	+0.6
N31M	Braeburn, Yuko	7.19	89	P	Pn	14 15 51.8	+0.3
	baz=283						
EPYK	Eagle Plains	7.43	50		Pn	14 15 54.8	0.0
EPYK	Eagle Plains	7.43	50	P	Pn	14 15 54.4	-0.4
	baz=242						
M31M	Drury Creek, Y	7.71	83	P	Pn	14 15 59.0	+0.3

	baz=278						
WHY	**Whitehorse**	**7.83**	**94**	Pn	**Pn**	**14 15 59.6**	**-0.8**
SKAG	**Skagway**	**8.09**	**103**	Pn	**Pn**	**14 16 03.3**	**-0.4**
SKAG	**Skagway**	**8.09**	**103**	P	**Pn**	**14 16 03.3**	**-0.4**
	baz=297						
TNA	**Tin City**	**8.21**	**301**	Pn	**Pn**	**14 16 05.7**	**+0.3**
BESE	**Bessie Mountai**	**8.73**	**108**	Pn	**Pn**	**14 16 11.8**	**-0.8**
MMPY	**Sheldon Lake,**	**9.11**	**79**	P	**Pn**	**14 16 18.3**	**+0.6**
	baz=276						
SIT	**Sitka**	**9.42**	**116**	Pn	**Pn**	**14 16 21.4**	**-0.4**
INK	**Inuvik**	**9.47**	**42**	P	**Pn**	**14 16 22.1**	**-0.4**
	comp=E,0.5nm,0.3s,baz=236,slow=23,SNR=57						
INK				S	**Sn**	**14 18 03.6**	**-3.3**
	comp=E,0.2nm,0.3s,baz=319,slow=19,SNR=1.9						
INK	**Inuvik**	**9.47**	**42**	Pn	**Pn**	**14 16 22.2**	**-0.3**
INK	**Inuvik**	**9.47**	**42**	P	**Pn**	**14 16 22.5**	**0.0**
	baz=238,SNR=12						
DLBC	**Dease Lake**	**10.99**	**101**	LR	LR	14 20 59.0	
	comp=E,56nm,21.8s,baz=305,slow=37						
WRAK	**Wrangell Islan**	**11.09**	**113**	P	**Pn**	**14 16 43.8**	**-0.8**
	baz=309						
A36M	**Sachs Harbour**	**13.83**	**34**	Pn	**Pn**	**14 17 19.1**	**-2.0**
A36M	**Sachs Harbour**	**13.83**	**34**	P	**Pn**	**14 17 19.2**	**-2.0**
	baz=238,SNR=9.4						
ADK	**Adak**	**17.30**	**245**		**Pn**	**14 18 05.8**	**+0.6**
ADK				IAmb	IAmb	14 18 33.9	
	comp=Z,39nm,1.1s						
RES	**Resolute Bay**	**22.88**	**35**	P	**P**	**14 19 05.0**	**-0.3**
	comp=Z,2.0nm,0.7s,baz=253,slow=14,SNR=7.0						
RES	**Resolute Bay**	**22.88**	**35**	P	**P**	**14 19 05.2**	**0.0**
EUNU	**Eureka**	**25.16**	**22**	P	**P**	**14 19 27.6**	**+1.4**
EUNU				IAmb	IAmb	14 19 36.9	
	comp=Z,8.4nm,1.5s						
M02C	**Callahan**	**26.74**	**128**	P	**P**	**14 19 40.1**	**-0.7**
	baz=331						
SCHQ	**Schefferville**	**41.53**	**60**	P	**P**	**14 21 48.3**	**+0.4**
	comp=Z,2.3nm,0.7s,baz=275,slow=12,SNR=1.6						
WMOK	**Wichita Mounta**	**42.43**	**106**	P	**P**	**14 21 57.0**	**+1.5**
WMOK				IAmb	IAmb	14 21 58.2	
	comp=Z,3.6nm,0.7s						
PBMO	**Poplar Bluff**	**44.59**	**96**	P	**P**	**14 22 13.1**	**+0.3**
PBMO				IAmb	IAmb	14 22 13.9	
	comp=Z,6.8nm,0.8s						
TXAR	**Lajitas Array**	**44.90**	**115**	P	**P**	**14 22 17.3**	**+1.9**
	comp=Z,0.4nm,0.6s,baz=324,slow=5.6,SNR=6.3						
SONM	**Songino Array**	**54.31**	**306**	P	**P**	**14 23 27.7**	**+0.9**
	comp=Z,0.4nm,0.4s,baz=23,slow=12,SNR=4.3						
ZALV	**Zalesovo Beam**	**56.18**	**324**	P	**P**	**14 23 39.3**	**-0.6**
	comp=Z,0.8nm,0.5s,baz=39,slow=7.5,SNR=3.9						
FINES	**FINESS Array B**	**56.63**	**2**	P	**P**	**14 23 41.6**	**-1.4**
	comp=Z,6.7nm,1.2s,baz=308,slow=6.3,SNR=3.3						
MKAR	**Makanchi Array**	**63.32**	**322**	P	**P**	**14 24 28.5**	**-0.5**
	comp=Z,1.2nm,0.8s,baz=41,slow=6.8,SNR=5.7						
CLL	**Collm**	**66.09**	**11**	*e*P	**P**	**14 24 48.0**	**+1.1**
ESDC	**Sonseca Array**	**75.00**	**26**	P	**P**	**14 25 41.8**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=322,slow=4.7,SNR=4.1						

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*IDC **03** 14:49:48.5±0.9, 3°.23S×139°.91E, h0^{km}, mb3.8/6, mb1 4.3/10, mb1mx4.0/30, mbtmp4.1/10, ML4.1/3, MS3.2/4, Ms1 3.2/4, ms1mx2.8/35, Error ellipse: s-maj=24.2km s-min=14.9km az=126.0*

*DJA **03** 14:49:56.1±0.4, 4°S±3°×14°0E±°, h61^{km}±5^{km}, M4.6/22, mB5.4/5, mb4.4/22, MLv4.6/6, Mw(mB)4.8/5*

*NEIC **03** 14:49:59.8±1.2, 3°.75S±0°.08×139°.78E±0°.08, h63^{km}±10^{km}, mb4.3/18, Error ellipse: s-maj=13.0km s-min=10.5km az=221.0*

ISC 03 14:49:56.8±0.6**, 3°.58S**±0°.06×**139°.85E**±0°.07**, h56^{km}, n67, σ1^{s}.62**/68**, mb3.7**/6**, MS3.2**/3**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WAMI	**Wamena**	**1.17**	**255**	P	**Pn**	**14 50 17.1**	**+0.1**
WAMI				S	**Sn**	**14 50 32.8**	**+0.8**
JAY	**Jayapura**	**1.36**	**39**	Pn	Pn	14 50 11.6	-8.0
	28nm,0.3s,baz=254,slow=19,SNR=134						
JAY				Sn	Sn	14 50 25.7	-11
	92nm,0.3s,baz=182,slow=12,SNR=14						
SMPI	**Sarmi**	**1.95**	**324**	P	**Pn**	**14 50 26.6**	**-0.9**
SMPI				S	**Sn**	**14 50 52.0**	**+1.2**
SRPI	**Serui, Papua**	**3.98**	**295**	P	**Pn**	**14 50 56.1**	**+0.7**
BAKI	**Biak**	**4.43**	**302**	P	**Pn**	**14 51 00.6**	**-0.9**
MMPI	**Merauke**	**4.88**	**174**	P	**Pn**	**14 51 08.9**	**+1.2**
FAKI	**Fak Fak**	**7.61**	**275**	Pn	**Pn**	**14 51 47.5**	**+2.3**
FAKI	**Fak Fak**	**7.61**	**275**	P	**Pn**	**14 51 47.8**	**+2.6**
	0.1nm24nm,1.1s						
FAKI	**Fak Fak**	**7.61**	**275**	P	**Pn**	**14 51 47.8**	**+2.6**
SIJI	**Sorong**	**8.99**	**287**	Pn	**Pn**	**14 52 03.6**	**-0.4**
	0.6nm,0.3s,baz=348,slow=23,SNR=4.0						
SIJI				LR	LR	14 56 24.7	
	comp=Z,208nm,19.8s,baz=100,slow=44						
SWI	**Sorong**	**8.99**	**287**	P	**Pn**	**14 52 05.5**	**+1.4**
	16nm,0.7s						
PMG	**Port Moresby**	**9.29**	**129**	Pn	**Pn**	**14 52 07.6**	**-0.5**
	baz=37,slow=11,SNR=1.9						
PMG	**Port Moresby**	**9.29**	**129**	Pn	**Pn**	**14 52 08.6**	**+0.5**
BNDI	**Bandanaira**	**9.96**	**264**	P	**Pn**	**14 52 18.2**	**+0.9**
	9μm65nm,1.1s						
COEN	**Coen**	**10.82**	**163**	Pn	**Pn**	**14 52 30.0**	**+0.9**
COEN	**Coen**	**10.82**	**163**	P	**Pn**	**14 52 31.0**	**+1.9**
	14nm,1.2s						
MSAI	**Masohi**	**10.90**	**271**	P	**Pn**	**14 52 29.3**	**-0.9**
	1.7nm,0.4s						
KDU	**Kakadu**	**11.62**	**218**	P	**Pn**	**14 52 39.7**	**-0.3**
	90nm,0.4s						
DRS	**Darwin Rock St**	**12.48**	**225**	P	**Pn**	**14 52 52.7**	**+1.0**
	12nm,0.6s						
MTN	**Manton Dam**	**12.61**	**223**	Pn	**Pn**	**14 52 53.1**	**-0.4**
LBMI	**Labuha**	**12.68**	**283**	P	**Pn**	**14 52 55.6**	**+1.1**
	17nm,0.9s						
TNTI	**Ternate**	**13.20**	**289**	P	**Pn**	**14 53 01.9**	**+0.3**
	8.0nm,0.5s						
SANI	**Sanana**	**13.93**	**276**	P	**Pn**	**14 53 12.5**	**+1.0**
	9.9nm,0.9s						
KNRA	**Kununurra**	**16.23**	**221**	Pn	**Pn**	**14 53 40.9**	**-0.3**
KNRA	**Kununurra**	**16.23**	**221**	P	**Pn**	**14 53 40.3**	**-1.0**
	34nm,0.7s						
SOEI	**Soe**	**16.64**	**248**	Pn	**Pn**	**14 53 47.1**	**+0.6**
SOEI	**Soe**	**16.64**	**248**	P	**P**	**14 53 48.1**	**-0.1**
	74nm,0.8s						
QIS	**Mount Isa**	**16.88**	**181**	P	**Pn**	**14 53 49.9**	**+0.5**
	19nm,0.9s						
WB0	**Warramunga Arr**	**16.94**	**198**	Pn	**Pn**	**14 53 49.6**	**-0.6**
WR0	**Warramunga Arr**	**17.08**	**197**	Pn	**Pn**	**14 53 50.0**	**-1.9**
WR0				IAmb	IAmb	14 53 58.0	
	comp=Z,11nm,0.6s						
WRAB	**Tennant Creek**	**17.11**	**198**		**Pn**	**14 53 50.6**	**-1.7**
WRAB				IAmb	IAmb	14 53 58.2	
	comp=Z,23nm,0.8s						
WRAB	**Tennant Creek**	**17.11**	**198**	P	**Pn**	**14 53 52.2**	**-0.1**
WB2	**Warramunga Arr**	**17.12**	**198**		**Pn**	**14 53 51.2**	**-1.2**
WB2				IAmb	IAmb	14 53 58.0	
	comp=Z,25nm,0.9s						
WRA	**Warramunga Arr**	**17.13**	**198**	P	**Pn**	**14 53 52.4**	**-0.1**
	comp=Z,1.0nm,0.3s,baz=17,slow=12,SNR=29						
WRA				S	**Sn**	**14 56 55.2**	**-7.0**
	comp=Z,0.7nm,0.3s,baz=18,slow=22,SNR=7.9						
WRA	**Warramunga Arr**	**17.13**	**198**		**Pn**	**14 53 50.4**	**-2.1**
LUWI	**Luwuk**	**17.25**	**278**	P	**Pn**	**14 53 54.1**	**+0.1**
	comp=Z,2μmcomp=Z,23nm,0.8s						
GTOI	**Gorontalo**	**17.34**	**284**	P	**P**	**14 53 58.1**	**+2.3**
	comp=Z,8.3nm,1.1s						
BATI	**Baumata**	**17.35**	**247**	P	**P**	**14 53 56.0**	**0.0**
	comp=Z,4.1nm,0.3s,baz=109,slow=4.3,SNR=6.1						
BATI	**Baumata**	**17.35**	**247**	P	**P**	**14 53 56.6**	**+0.6**
	comp=Z,22nm,0.6s						
CTA	**Charters Tower**	**17.56**	**160**	P	**P**	**14 54 00.0**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=344,slow=12,SNR=3.8						
MRSI	**Marisa**	**18.34**	**282**	P	**P**	**14 54 06.0**	**-0.9**
	comp=Z,419nmcomp=Z,17nm,1.1s						
BSSI	**Bau Bau, Buton**	**19.45**	**262**	P	**P**	**14 54 19.3**	**+0.2**
	comp=Z,12nm,0.9s						
TOLI2	**Tolitoli**	**19.62**	**283**		**Pn**	**14 54 22.3**	**-0.4**
TOLI2				IAmb	IAmb	14 54 31.9	
	comp=Z,12nm,0.9s						
TOLI2	**Tolitoli**	**19.62**	**283**	P	**Pn**	**14 54 23.1**	**+0.4**
	comp=Z,17nm,1.0s						
BKSI	**Bulukumba**	**19.74**	**264**	P	**P**	**14 54 22.3**	**+0.1**
	comp=Z,9.8nm,1.1s						
TTSI	**Tana Toraja**	**20.00**	**271**	P	**Pn**	**14 54 27.1**	**-0.1**
	comp=Z,20nm,1.0s						
FITZ	**Fitzroy Crossi**	**20.04**	**223**	P	**P**	**14 54 26.4**	**+0.9**
	comp=Z,17nm,1.0s,baz=35,slow=9.7,SNR=27						
FITZ				S	**S**	**14 58 02.6**	**-5.3**
	comp=Z,5.2nm,0.8s,baz=128,slow=11,SNR=3.8						
FITZ				LR	LR	15 03 01.0	
	comp=Z,102nm,20.0s,baz=51,slow=39						
FITZ	**Fitzroy Crossi**	**20.04**	**223**	P	**P**	**14 54 25.3**	**-0.1**
FITZ				IAmb	IAmb	14 54 29.9	
	comp=Z,14nm,0.9s						
FITZ	**Fitzroy Crossi**	**20.04**	**223**	P	**P**	**14 54 26.0**	**+0.6**
	comp=Z,20nm,1.1s						
AS31	**Alice Springs**	**20.77**	**196**		**P**	**14 54 34.5**	**+1.1**
ASAR	**Alice Springs**	**20.78**	**196**	P	Pn	14 54 35.5	-0.8
	comp=Z,11nm,0.8s,baz=22,slow=9.9,SNR=41						
ASAR				S	**S**	**14 58 24.0**	**+1.6**
	comp=Z,4.4nm,0.8s,baz=12,slow=27,SNR=8.1						
ASAR	**Alice Springs**	**20.78**	**196**	P	**P**	**14 54 34.1**	**+0.7**
EIDS	**Eidsvold**	**24.21**	**155**	P	**P**	**14 55 09.5**	**+1.2**
EIDS				IAmb	IAmb	14 55 20.7	
	comp=Z,7.5nm,1.0s						
PSA00	**Pilbara Seismi**	**26.41**	**226**	P	**P**	**14 55 27.9**	**-0.4**
JOW	**Kunigami**	**32.24**	**340**	LR	LR	15 07 16.8	
	comp=Z,58nm,20.1s,baz=164,slow=33						
MORW	**Morawa**	**33.96**	**219**	P	**P**	**14 56 36.4**	**+1.2**
KSRS	**Korea Array**	**42.31**	**346**	LR	LR	15 11 45.9	
	comp=Z,15nm,21.1s,baz=190,slow=31						
CMAR	**Chiang Mai Arr**	**45.85**	**300**	P	**P**	**14 58 12.3**	**-1.6**
	comp=Z,0.2nm,0.4s,baz=113,slow=6.9,SNR=2.1						
TUWZ	**Tuamarina**	**48.52**	**146**	P	**P**	**14 58 35.1**	**+0.8**
LBZ	**Lake Benmore**	**48.63**	**151**	P	**P**	**14 58 35.4**	**+0.3**
BSWZ	**Blackbirch Sta**	**48.67**	**146**	P	**P**	**14 58 35.9**	**+0.5**
LSA	**Lhasa**	**57.14**	**309**	P	**P**	**14 59 40.3**	**+1.6**
MKAR	**Makanchi Array**	**71.17**	**322**	P	**P**	**15 01 08.0**	**-1.7**
	comp=Z,0.4nm,0.6s,baz=91,slow=9.9,SNR=1.9						
VNDA	**Vanda**	**74.82**	**175**	P	**P**	**15 01 31.7**	**+0.9**
	comp=Z,0.9nm,0.7s,baz=316,slow=6.3,SNR=7.8						
VNDA	**Vanda**	**74.82**	**175**	P	**P**	**15 01 31.5**	**+0.7**
SBA	**Scott Base**	**75.57**	**174**	P	**P**	**15 01 37.4**	**+2.3**
SBA				IAmb	IAmb	15 02 03.1	
	comp=Z,6.8nm,1.5s						
ILAR	**Eielson Array**	**86.15**	**24**	P	**P**	**15 02 28.8**	**-2.9**
	comp=Z,0.3nm,0.7s,baz=251,slow=5.3,SNR=2.4						

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*JMA **03** 15:01:31.5, 34°.47N×135°.61E, h12^{km}±1^{km}, M3.5 Broadband fault plane solution: P waves. NP1: ϕ_s129.00000°, δ62.00000°, λ31.00000°. NP2: ϕ_s23.00000°, δ63.00000°, λ148.00000°. Principal axes: T Plg41.0000°, Azm345.0000°; N Plg49.0000°, Azm167.0000°; P Plg1.0000°, Azm76.0000°;*

JMA Felt II J1.

*NIED **03** 15:01:31.6, 34°.47N×135°.61E, h12^{km}, MW3.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.52; $M_{\theta\theta}$0.47; $M_{\phi\phi}$-0.99; $M_{r\theta}$0.66; $M_{\theta\phi}$0.37; $M_{\phi r}$0.45; Fault plane solution: $M_0$1.22000×10^{14} NP1: ϕ_s24.00000°, δ70.00000°, λ136.00000°. NP2: ϕ_s132.00000°, δ50.00000°, λ27.00000°.*

*IDC **03** 15:01:35.0±2.3, 35°.43N×135°.11E, h98^{km}±34^{km}, mb3.2/2, mb1 3.2/4, mb1mx3.0/46, mbtmp3.3/4 Error ellipse: s-maj=85.0km s-min=19.9km az=155.0*

ISC 03 15:01:31.8±1.0**, 34°.47N**±0°.04×**135°.65E**±0°.06**, h14^{km}**±7^{km}**, n8, σ1^{s}.05**/13**, 2C-1D, Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHE	**Heguri**	**0.18**	**8**	⇓P	**Pg**	**15 01 35.9**	**-0.1**
JHE				S	**Sg**	**15 01 38.8**	**-0.1**
JWY	**Kouya**	**0.26**	**191**	⇑P	**Pg**	**15 01 36.9**	**-0.4**
JWY				S	**Sg**	**15 01 40.4**	**-0.6**
JNTK	**Naratenkawa**	**0.28**	**137**	⇑P	**Pg**	**15 01 37.8**	**+0.2**
JNTK				S	**Sg**	**15 01 41.8**	**+0.2**
MAT	**Matsushiro**	**2.93**	**45**	P	**Pn**	**15 02 19.4**	**+1.4**
MAT				S	**Sb**	**15 02 59.9**	**+0.3**
MJAR	**Matsushiro Arr**	**2.93**	**45**	P	**Pn**	**15 02 18.9**	**+0.8**
	0.3nm,0.3s,baz=249,slow=14,SNR=3.1						
MJAR				S	**Sn**	**15 02 50.8**	**-2.4**
	0.4nm,0.3s,baz=246,slow=17,SNR=5.1						
JNU	**Nakatsue**	**4.20**	**253**	P	**Pn**	**15 02 36.5**	**+1.0**
	0.3nm,0.3s,baz=195,slow=22,SNR=2.0						
WRA	**Warramunga Arr**	**54.13**	**182**	P	**P**	**15 10 56.6**	**+0.1**
	0.7nm,0.5s,baz=357,slow=7.1,SNR=17						
ASAR	**Alice Springs**	**57.84**	**182**	P	**P**	**15 11 22.9**	**-0.2**
	0.2nm,0.8s,baz=10,slow=14,SNR=4.6						

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*NOU **03** 15:07:31.4, 19°.20S×168°.41E, h0^{km}, MLv4.1/12, Vanuatu Islands*

ISC 03 15:07:34.2±1.8**, 19°.18S**±0°.06×**168°.4E**±0°.2**, h42^{km}, n16, σ1^{s}.21**/17**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTV	**Rentapao**	**1.38**	**360**	P	**Pn**	**15 07 57.2**	**+0.2**
DVP	**Devils Point**	**1.46**	**351**	P	**Pn**	**15 07 58.3**	**+0.1**
LIFNC	**LIFOU**	**1.95**	**215**	P	**Pn**	**15 08 03.3**	**-1.5**
MARNC	**Mare, Loyalty**	**2.32**	**189**	P	**Pn**	**15 08 09.5**	**-0.5**
YATNC	**Mamie plateau,**	**3.21**	**206**	P	**Pn**	**15 08 22.9**	**+0.7**
YATNC	**Mamie plateau,**	**3.21**	**206**	P	**Pn**	**15 08 22.4**	**+0.2**
DZM	**Mont Dzumac**	**3.43**	**213**	*e*Pn	**Pn**	**15 08 25.7**	**+0.4**
	23nm,0.3s						
DZM				*e*Sn	**Sn**	**15 09 03.3**	**-1.5**
	66nm,0.3s						
DZM	**Mont Dzumac**	**3.43**	**213**	P	**Pn**	**15 08 27.1**	**+1.8**
DZM	**Mont Dzumac**	**3.43**	**213**	P	**Pn**	**15 08 25.5**	**+0.2**
NOUC	**Port Laguerre**	**3.53**	**214**	P	**Pn**	**15 08 28.2**	**+1.7**
NOUC	**Port Laguerre**	**3.53**	**214**	P	**Pn**	**15 08 28.0**	**+1.5**
PINNC	**Pines Island,**	**3.54**	**195**	P	**Pn**	**15 08 27.6**	**+0.9**
OUENC	**Ouen Island, N**	**3.55**	**205**	P	**Pn**	**15 08 28.0**	**+1.1**
ONTNC	**Ouen Toro**	**3.62**	**210**	P	**Pn**	**15 08 29.5**	**+1.6**
ONTNC	**Ouen Toro**	**3.62**	**210**	P	**Pn**	**15 08 29.3**	**+1.4**
KOUNC	**Koumac, New Ca**	**4.13**	**250**	P	**Pn**	**15 08 35.3**	**+0.4**

NNC 03 15:09:29.7±2.0**, 36°.84N**×**71°.21E, h123^{km}**±34^{km}**, mb3.0, mpv3.5, 4C-1D, Error ellipse: s-maj=20.8km s-min=15.1km az=135.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.28**	**355**	P	Pn	15 10 59.8	0.0
	7.1nm,0.4s,baz=182,slow=20,SNR=93						
KK31				⇑S	Sn	15 12 10.7	+0.5
	2.3nm,0.5s,baz=180,slow=24,SNR=4.9						
AAK	**Ala-Archa**	**6.32**	**23**	⇓P	Pn	15 11 01.1	+0.6
	1.4nm,0.6s						
AAK				S	Sn	15 12 12.3	+0.8
	4.6nm,0.7s						
TKM2	**Tokmak 2**	**6.95**	**28**	⇑P	Pn	15 11 08.5	-0.5
	1.1nm,0.5s						
TKM2				⇑S	Sn	15 12 27.0	+0.3
	2.0nm,0.8s						
AB31	**Akbulak array**	**14.87**	**330**	P	Pn	15 12 52.6	-0.9
	0.5nm,0.3s,baz=142,slow=14,SNR=41						
AKTO	**Aktyubinsk**	**16.57**	**329**	⇑P	P	15 13 15.4	+0.4
	3.9nm,0.9s						

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*IDC **03** 15:33:04.8±1.0, 12°.10N×143°.08E, h0^{km}, mb3.8/6, mb1 4.1/7, mb1mx3.7/50, mbtmp3.9/7, ML4.0/1, MS2.0/1, Ms1 2.0/1, ms1mx1.9/46, Error ellipse: s-maj=40.8km s-min=19.1km az=118.0*

*NEIC **03** 15:33:07.9±1.1, 12°.1N±0°.1×143°.1E±0°.2, h14^{km}±6^{km}, mb4.4/7, Error ellipse: s-maj=26.9km s-min=14.2km az=134.0*

ISC 03 15:33:09.7±0.9**, 12°.1N**±0°.1×**143°.1E**±0°.1**, h31^{km}, n22, σ0^{s}.76**/20**, mb4.2**/11**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**2.29**	**48**	Pn	**Pn**	**15 33 45.3**	**-0.1**
	36nm,0.3s,baz=166,slow=3.3,SNR=26						
GUMO				LR	LR	15 34 06.2	
	comp=Z,33nm,20.2s,baz=93,slow=27						
GUMO				Sn	**Sn**	**15 34 12.6**	**0.0**
	74nm,0.3s,baz=0.6,slow=22,SNR=9.3						
GUMO	**Guam**	**2.29**	**48**		**Pn**	**15 33 44.8**	**-0.7**
H11N1	**WAKE ISLAND Hy**	**24.09**	**69**	T	T	16 03 15.8	
	baz=255,slow=75,SNR=8.8						
H11N2	**WAKE ISLAND Hy**	**24.10**	**69**	T	T	16 03 13.5	
	baz=255,slow=75,SNR=8.7						
H11N3	**WAKE ISLAND Hy**	**24.11**	**69**	T	T	16 03 17.0	
	baz=255,slow=75,SNR=9.2						
WB0	**Warramunga Arr**	**32.77**	**195**	P	**P**	**15 39 40.0**	**-0.3**
WB0				IAmb	IAmb	15 39 56.3	
	comp=Z,4.1nm,1.2s						
WR0	**Warramunga Arr**	**32.92**	**195**	P	**P**	**15 39 41.0**	**-0.5**
WR0				IAmb	IAmb	15 40 01.0	
	comp=Z,3.8nm,1.1s						
WB2	**Warramunga Arr**	**32.95**	**195**	P	**P**	**15 39 41.1**	**-0.7**
WB2				IAmb	IAmb	15 40 09.0	
	comp=Z,8.8nm,1.4s						
WRA	**Warramunga Arr**	**32.95**	**195**	P	**P**	**15 39 41.1**	**-0.6**
	comp=Z,1.0nm,0.9s,baz=21,slow=9.5,SNR=7.9						
USRK	**Ussuriysk Ar.**	**33.42**	**345**	P	**P**	**15 39 44.6**	**-1.1**
ASAR	**Alice Springs**	**36.63**	**194**	P	**P**	**15 40 13.6**	**0.0**
	comp=Z,0.4nm,0.9s,baz=25,slow=11,SNR=4.8						
ZALV	**Zalesovo Beam**	**61.88**	**325**	P	**P**	**15 43 26.4**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=108,slow=4.7,SNR=2.3						
IMAR	**Indian Mountai**	**68.27**	**23**	P	**P**	**15 44 07.7**	**+0.3**
MLY	**Manley**	**69.15**	**25**	P	**P**	**15 44 13.6**	**+0.6**
TOLK	**Toolik Lake Re**	**70.65**	**21**	P	**P**	**15 44 23.2**	**+1.1**
TOLK				IAmb	IAmb	15 44 49.0	
	comp=Z,6.8nm,1.4s						
IL31		**70.67**	**25**	P	**P**	**15 44 21.2**	**-1.0**
IL31				IAmb	IAmb	15 44 45.7	
	comp=Z,3.7nm,1.4s						
ILAR	**Eielson Array**	**70.67**	**25**	P	**P**	**15 44 20.9**	**-1.3**
	comp=Z,0.9nm,0.4s,baz=250,slow=5.9,SNR=17						
DOT	**Dot Lake**	**71.66**	**27**	P	**P**	**15 44 28.5**	**+0.2**
BMAR	**Burnt Mountain**	**72.17**	**23**	P	**P**	**15 44 32.1**	**+0.8**
ABKAR	**Akbulak array**	**76.52**	**318**	P	**P**	**15 44 57.4**	**+0.5**
NVAR	**Mina Array Bea**	**89.21**	**51**	P	**P**	**15 46 04.4**	**+1.2**
	comp=Z,0.5nm,0.7s,baz=260,slow=5.1,SNR=2.3						
FINES	**FINESS Array B**	**91.81**	**335**	P	**P**	**15 46 14.1**	**-0.3**
	comp=Z,0.6nm,0.4s,baz=29,slow=4.4,SNR=4.3						

MAN 03 15:37:01.9, 9°.34N×125°.80E, h14^{km}, mb4.1, ML2.8, MS2.5, Mindanao

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*NIED **03** 15:55:39.0, 32°.67N×132°.01E, h36^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.43; $M_{\theta\theta}$0.31; $M_{\phi\phi}$0.12; $M_{r\theta}$0.42; $M_{\theta\phi}$0.43; $M_{\phi r}$1.57; Fault plane solution: $M_0$1.72000×10^{15} NP1: ϕ_s197.00000°, δ83.00000°, λ-104.00000°. NP2: ϕ_s81.00000°, δ16.00000°, λ-27.00000°.*

*JMA **03** 15:55:39.0, 32°.67N×132°.01E, h36^{km}, M4.0 Broadband fault plane solution: P waves. NP1: ϕ_s101.00000°, δ17.00000°, λ13.00000°. NP2: ϕ_s359.00000°, δ86.00000°, λ107.00000°. Principal axes: T Plg46.0000°, Azm286.0000°; N Plg17.0000°, Azm178.0000°; P Plg39.0000°, Azm74.0000°;*

JMA Felt III J1.

*IDC **03** 15:55:40.3±2.6, 32°.61N×131°.90E, h57^{km}±17^{km}, mb3.4/5, mb1 3.7/8, mb1mx3.4/60, mbtmp3.7/8, ML3.4/3, MS3.1/13, Ms1 3.1/13, ms1mx2.9/34 Error ellipse: s-maj=36.1km s-min=20.4km az=9.0*

*NEIC **03** 15:55:40.2±1.7, 32°.70N±0°.06×131°.98E±0°.06, h42^{km}±8^{km}, mb4.5/23, Error ellipse: s-maj=8.6km s-min=7.1km az=182.0*

*KMA **03** 15:55:40.6, 32°.74N×131°.80E, h15^{km}*

ISC 03 15:55:38.9±0.6**, 32°.66N**±0°.04×**132°.01E**±0°.03**, h35^{km}, n106, σ1^{s}.18**/102**, mb4.4**/18**, MS3.2**/8**, 2C-8D, Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSKE	**Saikikamae**	**0.17**	**327**	⇓P	**Pn**	**15 55 45.3**	**-0.1**
JSKE				S	**Sn**	**15 55 50.0**	**+0.1**
JHHC	**Hyugahichiya**	**0.38**	**236**	⇓P	**Pn**	**15 55 47.7**	**-0.1**
JHHC				S	**Sn**	**15 55 54.3**	**+0.3**
JUS	**Usuki**	**0.46**	**332**	⇑P	**Pn**	**15 55 48.7**	**-0.3**
JUS				S	**Sn**	**15 55 56.0**	**0.0**
JKIT	**Kitakata**	**0.47**	**266**	⇓P	**Pn**	**15 55 48.9**	**-0.2**
JKIT				S	**Sn**	**15 55 56.1**	**-0.1**
JTSN	**Tsuno**	**0.59**	**226**	⇓P	**Pn**	**15 55 50.8**	**0.0**
JTSN				S	**Sn**	**15 55 59.7**	**+0.5**
JTO	**Tosashimizu**	**0.70**	**73**	⇓P	**Pn**	**15 55 52.1**	**-0.2**
JTO				S	**Sn**	**15 56 02.1**	**+0.2**
UWA2	**Uwa jima 2**	**0.76**	**43**	⇓P	**Pn**	**15 55 53.0**	**-0.1**
UWA2				*e*S	**Sn**	**15 56 03.1**	**-0.3**
JNA	**Nagahama**	**0.98**	**24**	⇓P	**Pn**	**15 55 56.4**	**+0.2**
JNA				S	**Sn**	**15 56 09.0**	**+0.2**
JIU3	**Izumi3**	**1.01**	**264**	⇑P	**Pn**	**15 55 57.4**	**+0.8**
JNU	**Nakatsue**	**1.06**	**296**	P	**Pn**	**15 55 57.9**	**+0.6**
JNU				S	**Sn**	**15 56 12.2**	**+1.4**
JNU	**Nakatsue**	**1.06**	**296**		**Pn**	**15 55 58.0**	**+0.8**
JNU				Sn	**Sn**	**15 56 11.5**	**+0.7**
JTZ	**Takazaki**	**1.08**	**226**	P	**Pn**	**15 55 58.7**	**+1.1**
JKU	**Kubokawa**	**1.10**	**54**	⇓P	**Pn**	**15 55 57.7**	**-0.1**
JSU	**Suzuyama**	**1.75**	**229**		**Pn**	**15 56 08.0**	**+1.2**
JMN	**Monobe**	**1.90**	**55**		**Pn**	**15 56 09.1**	**+0.3**
JHS	**Saijyo**	**2.51**	**21**		**Pn**	**15 56 17.6**	**+0.4**
JTU	**Tsushima**	**2.87**	**311**		**Pn**	**15 56 22.2**	**+0.2**
KSBUS	**Busan**	**3.53**	**318**	P	**Pn**	**15 56 32.0**	**+0.8**
	SNR=35						
JWT	**Wachi**	**3.85**	**46**	Pn	**Pn**	**15 56 36.6**	**+1.1**
KSUSN	**Ulsan**	**3.87**	**323**	P	**Pn**	**15 56 36.4**	**+0.6**
	SNR=14						
MIYA	**Miryang-si**	**3.91**	**317**	P	**Pn**	**15 56 38.0**	**+1.5**
	SNR=7.4						
KSDAG	**Daegu**	**4.03**	**321**	P	**Pn**	**15 56 39.0**	**+0.9**
	SNR=12						
KSDAG	**Daegu**	**4.03**	**321**	P	**Pn**	**15 56 39.0**	**+0.9**
	SNR=12						
KSPHA	**Pohang**	**4.14**	**329**	P	**Pn**	**15 56 42.0**	**+2.3**
	SNR=6.8						
KSYOC	**YEONGCHEON**	**4.16**	**323**	P	**Pn**	**15 56 41.0**	**+1.2**
	SNR=6.6						
KOHB	**KOHEUNG**	**4.41**	**298**	P	**Pn**	**15 56 45.4**	**+2.2**
	SNR=16						
KOHB	**KOHEUNG**	**4.41**	**298**	P	**Pn**	**15 56 43.8**	**+0.6**
	SNR=6.3						
BOSB	**Boseong-gun**	**4.51**	**299**	P	**Pn**	**15 56 46.0**	**+1.2**
	SNR=8.7						
KSADO	**Andong**	**4.52**	**327**	P	**Pn**	**15 56 46.0**	**+1.3**
	SNR=8.6						
KSADO	**Andong**	**4.52**	**327**	P	**Pn**	**15 56 46.0**	**+1.3**
	SNR=34						
HAMB	**Hamyang**	**4.54**	**310**	P	**Pn**	**15 56 46.0**	**+1.0**
	SNR=10						
KSEUS	**ULSEONG**	**4.59**	**324**	P	**Pn**	**15 56 46.8**	**+1.0**
	SNR=6.7						
KSGIC	**Gimchen**	**4.70**	**318**	P	**Pn**	**15 56 48.7**	**+1.4**
	SNR=6.3						
INU	**Inuyama**	**4.95**	**56**		**Pn**	**15 56 51.9**	**+1.1**
OKCB	**Cheongsan-myeo**	**5.06**	**318**	P	**Pn**	**15 56 55.0**	**+2.7**
	SNR=6.5						
IMWB	**Imwonan-gil**	**5.07**	**335**	P	**Pn**	**15 56 54.1**	**+1.8**
	SNR=8.1						
KSJEU	**Jeongeup**	**5.08**	**305**	P	**Pn**	**15 56 53.7**	**+1.2**
	SNR=8.7						
KSJEO	**Jeonju**	**5.09**	**311**	P	**Pn**	**15 56 54.0**	**+1.3**
	SNR=12						
KSJEO	**Jeonju**	**5.09**	**311**	P	**Pn**	**15 56 54.0**	**+1.3**
	SNR=10						
KSTBA	**Taebaek**	**5.11**	**331**	P	**Pn**	**15 56 55.1**	**+2.0**
	SNR=9.5						
GOCB	**Gochang-gun**	**5.23**	**302**	P	**Pn**	**15 56 56.0**	**+1.4**
	SNR=7.2						
JGF	**Kuroka**	**5.32**	**55**	Pn	**Pn**	**15 56 57.3**	**+1.5**
KSYOW	**Yeongwol**	**5.37**	**328**	P	**Pn**	**15 56 57.6**	**+1.1**
	SNR=7.5						
JSG	**Sagara**	**5.53**	**67**	Pn	**Pn**	**15 57 00.8**	**+2.2**
OKEB	**Okgye-meyeon**	**5.54**	**334**	P	**Pn**	**15 56 60.0**	**+1.2**
	SNR=6.2						
KSCEA	**Cheonan**	**5.71**	**318**	P	**Pn**	**15 57 03.2**	**+2.1**
	SNR=7.1						
KSRS	**Korea Array**	**5.84**	**326**	P	**Pn**	**15 57 04.8**	**+1.9**
	1.2nm,0.3s,baz=144,slow=14,SNR=24						
KSRS				S	**Sn**	**15 58 10.2**	**+1.5**
	1.6nm,0.3s,baz=146,slow=26,SNR=8.3						
KSAR	**Wonju Array Be**	**5.85**	**326**		**Pn**	**15 57 03.7**	**+0.6**
KSJMJ	**Jumunjin**	**5.85**	**334**	P	**Pn**	**15 57 04.9**	**+1.9**
	SNR=9.4						
KS19	**Wonju Array Si**	**5.91**	**326**		**Pn**	**15 57 04.6**	**+0.8**
HAWB	**Hwaseong-si**	**6.16**	**317**	P	**Pn**	**15 57 09.3**	**+1.9**
	SNR=5.3						
SEHB	**SEOHWA**	**6.38**	**332**	P	**Pn**	**15 57 12.7**	**+2.3**
	SNR=13						
MAJO	**Matsushiro**	**6.41**	**51**		**Pn**	**15 57 11.9**	**+1.1**
MJAR	**Matsushiro Arr**	**6.41**	**51**	P	**Pn**	**15 57 12.4**	**+1.5**
	0.3nm,0.3s,baz=252,slow=14,SNR=16						
MJAR				LR	LR	15 59 25.1	
	comp=Z,41nm,21.2s,baz=245,slow=34						
MJAR	**Matsushiro Arr**	**6.41**	**51**		**Pn**	**15 57 11.7**	**+0.8**

JHJ	Hachijo jima 2	6.56	84	LR	LR	16 00 02.7	
	comp=Z,145nm,18.5s,baz=234,slow=39						
JHJ2	Mitsune	6.58	84	Pn	Pn	15 57 14.2	+1.0
KSGBI	Gyogryolbido	6.62	308	P	Pn	15 57 15.2	+1.4
	SNR=22						
JCJ	Chichijima	10.43	119	LR	LR	16 01 36.0	
	comp=Z,89nm,20.8s,baz=96,slow=34						
JCJ	Chichijima	10.43	119	Pn	Pn	15 58 07.3	+1.4
ASAJ	Asahikawa	14.12	33	LR	LR	16 03 36.6	
	comp=Z,50nm,21.9s,baz=256,slow=34						
KLR	Kul'dur	16.56	359	P	P	15 59 31.0	+0.6
	0.2nm,0.3s,baz=150,slow=16,SNR=4.9						
KLR				LR	LR	16 05 26.7	
	comp=Z,32nm,19.2s,baz=24,slow=35						
SONM	Songino Array	24.58	316	P	P	16 00 53.9	-1.8
	0.8nm,0.6s,baz=131,slow=11,SNR=5.0						
SONM				LR	LR	16 11 51.1	
	comp=Z,85nm,20.5s,baz=108,slow=40						
PETK	Petropavlovsk-	27.53	34	LR	LR	16 13 32.2	
	comp=Z,33nm,18.3s,baz=152,slow=39						
TLY	Talaya	28.07	321	LR	LR	16 13 52.0	
	comp=Z,47nm,18.7s,baz=160,slow=39						
YAK	Yakutsk	29.43	358	LR	LR	16 13 29.5	
	comp=Z,32nm,18.7s,baz=104,slow=36						
CMAR	Chiang Mai Arr	32.86	253	LR	LR	16 15 30.6	
	comp=Z,22nm,19.5s,baz=198,slow=36						
H11N2	WAKE ISLAND Hy	33.69	104	T	T	16 38 21.1	
	baz=296,slow=75,SNR=5.4						
H11N1	WAKE ISLAND Hy	33.70	104	T	T	16 38 22.4	
	baz=296,slow=75,SNR=5.1						
H11N3	WAKE ISLAND Hy	33.71	104	T	T	16 38 22.5	
	baz=296,slow=75,SNR=6.8						
H11S3	WAKE ISLAND Hy	34.14	106	T	T	16 38 44.0	
	baz=292						
H11S1	WAKE ISLAND Hy	34.15	106	T	T	16 38 38.4	
	baz=292						
H11S2	WAKE ISLAND Hy	34.16	106	T	T	16 38 41.5	
	baz=292						
ZALV	Zalesovo Beam	39.46	317	LR	LR	16 19 53.2	
	comp=Z,55nm,18.4s,baz=100,slow=37						
MKAR	Makanchi Array	40.10	306	P	P	16 03 09.4	-1.6
	0.6nm,0.6s,baz=90,slow=12,SNR=3.0						
MAKZ	Makanchi	40.31	306	P	P	16 03 11.4	-1.4
MAKZ				IAmb	IAmb	16 03 35.2	
	comp=Z,4.9nm,0.9s						
TARG	Taragay, Kyrgy	43.49	298	P	P	16 03 39.0	-0.3
KNRA	Kununurra	48.16	184	P	P	16 04 15.3	-0.4
KNRA				IAmb	IAmb	16 04 31.8	
	comp=Z,6.4nm,0.9s						
KK31	Karatay Array	48.66	301	P	P	16 04 17.6	-1.9
KK31				IAmb	IAmb	16 04 30.8	
	comp=Z,12nm,1.5s						
KKAR	Karatay Array	48.66	301	P	P	16 04 17.6	-1.9
FITZ	Fitzroy Crossi	50.84	188	P	P	16 04 35.3	-0.8
FITZ				IAmb	IAmb	16 05 04.1	
	comp=Z,4.6nm,1.3s						
WB0	Warramunga Arr	52.18	177	P	P	16 04 45.7	-0.5
WB0				IAmb	IAmb	16 04 50.1	
	comp=Z,4.0nm,0.5s						
WRAB	Tennant Creek	52.34	177	P	P	16 04 46.7	-0.7
WRAB				IAmb	IAmb	16 04 51.3	
	comp=Z,4.6nm,0.6s						
WRA	Warramunga Arr	52.35	177	P	P	16 04 46.8	-0.7
WR0	Warramunga Arr	52.38	177	P	P	16 04 46.9	-0.7
WR0				IAmb	IAmb	16 05 06.4	
	comp=Z,5.5nm,1.1s						
J20K	Nowinta River	54.15	31	P	P	16 05 01.6	+1.3
J20K				IAmb	IAmb	16 05 02.8	
	comp=Z,6.8nm,1.1s						
CTAO	Charters Tower	54.19	163	P	P	16 05 00.7	-0.2
K20K	Telida	54.22	32	P	P	16 05 01.6	+0.9
K20K				IAmb	IAmb	16 05 30.2	
	comp=Z,7.9nm,1.2s						
IMAR	Indian Mountai	54.28	29	P	P	16 05 02.2	+1.0
ABKAR	Akbulak array	54.84	310	P	P	16 05 03.5	-1.9
P19K	Oil Pt	54.88	37	P	P	16 05 06.3	+0.6
MLY	Manley	55.58	30	P	P	16 05 11.8	+1.2
SUA	Susitna One	55.91	34	P	P	16 05 13.7	+0.6
H23K	Yukon River	56.02	29	P	P	16 05 14.8	+1.1
H23K				IAmb	IAmb	16 05 31.0	
	comp=Z,6.6nm,1.2s						
MDM	Murphy Dome	56.65	30	P	P	16 05 19.2	+1.0
MDM				IAmb	IAmb	16 05 35.3	
	comp=Z,3.2nm,0.9s						
ILAR	Eielson Array	57.24	30	P	P	16 05 22.0	-0.4
	comp=Z,0.4nm,0.7s,baz=289,slow=6.6,SNR=5.4						
GLI	Glacier Island	57.74	35	P	P	16 05 25.6	-0.4
BMAR	Burnt Mountain	57.81	27	P	P	16 05 28.4	+2.0
M24K	Tolsona, Glenn	57.97	33	P	P	16 05 28.1	+0.5
SCRK	Sand Creek	58.61	31	P	P	16 05 32.5	+0.3
INK	Inuvik	61.70	25	P	P	16 05 53.8	+0.7
DZM	Mont Dzumac	63.60	144	P	P	16 06 07.5	+1.1
DZM				IAmb	IAmb	16 06 27.6	
	comp=Z,7.2nm,1.0s						
ARCES	ARCESS Array B	65.26	338	LR	LR	16 41 14.0	
	comp=Z,23nm,19.7s,baz=275,slow=42						
RES	Resolute Bay	68.62	12	P	P	16 06 37.5	-0.3
RES				IAmb	IAmb	16 06 49.6	
	comp=Z,4.7nm,1.2s						
FINES	FINESS Array B	68.92	330	P	P	16 06 38.6	-1.2
	comp=Z,1.5nm,0.9s,baz=174,slow=1.9,SNR=1.9						
FINES				LR	LR	16 42 00.3	
	comp=Z,51nm,18.9s,baz=80,slow=40						
NVAR	Mina Array Bea	83.73	48	P	P	16 08 05.1	+0.4
	comp=Z,0.7nm,0.6s,baz=293,slow=5.0,SNR=3.9						

MEX 03 15:57:30.4±1.1**, 16°.56N×94°.82W, h98**^{km}±11^{km}**, MD3.2, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.54	353	*i* P	Pn	15 57 44.7	-1.6
CMIG				*e*S	Sn	15 57 56.5	-1.6
CMIG	Matias Romero	0.54	353	*i* P	Pn	15 57 44.6	-1.6
HUIG	Huatulco	1.47	238	*i* P	Pn	15 57 55.7	-0.5
HUIG				*i* S	Sn	15 58 13.6	-2.0
HUIG	Huatulco	1.47	238	*i* P	Pn	15 57 55.7	-0.5
HUIG				*i* S	Sn	15 58 18.0	+2.4

MEX 03 15:57:33.3±0.6**, 15°.03N×93°.52W, h27**^{km}±57^{km}**, MD3.9, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		0.73	23	*i* P	Pb	15 57 45.1	-2.4
PCIG				*i* S	Sb	15 57 54.4	-2.7
THIG		1.22	95	*i* S	Sn	15 58 06.5	-3.6
TGIG		1.78	12	*i* P	Pn	15 57 59.3	-3.2
TGIG				*i* S	Sn	15 58 18.1	-6.1
CCIG	Comitan	1.82	47	*i* P	Pn	15 58 01.2	-1.9
CCIG				*i* S	Sn	15 58 22.3	-3.1
CMIG	Matias Romero	2.44	328	*i* S	Sn	15 58 33.6	-6.8

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*NEIC **03** 15:59:46.4±0.9, 4°.4S±0°.1×153°.1E±0°.1, h98^{km}±7^{km}, mb4.5/7, Error ellipse: s-maj=20.4km s-min=11.2km az=54.0*

*IDC **03** 15:59:48.3±8.7, 4°.60S×153°.17E, h131^{km}±60^{km}, mb3.5/4, mb1 3.7/5, mb1mx3.2/42, mbtmp3.9/5, MS2.8/1, Ms1 2.8/1, ms1mx2.3/24, Error ellipse: s-maj=89.4km s-min=38.9km az=105.0*

ISC 03 15:59:45.3±1.1**, 4°.4S**±0°.1×**153°.2E**±0°.2**, h100**^{km}**, n17, σ0**^{s}**94**/17**, mb4.2**/9**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	Rabaul	1.01	283	Pn	Pn	16 00 06.4	+0.5
PMG	Port Moresby	7.74	230	P	Pn	16 01 36.7	+1.3
	1.1nm,0.3s,baz=21,slow=19,SNR=1.7						
PMG				S	Sn	16 03 02.2	+0.7
	6.1nm,0.3s,baz=331,slow=22,SNR=11						
JAY	Jayapura	12.57	278	LR	LR	16 07 50.4	
	comp=Z,42nm,18.5s,baz=266,slow=38						
EIDS	Eidsvold	20.93	185	P	P	16 04 20.2	+0.1
WB2	Warramunga Arr	23.95	228	P	P	16 04 50.5	0.0
WB2				IAmb	IAmb	16 04 51.4	
	comp=Z,5.5nm,0.6s						
WRA	Warramunga Arr	23.96	228	P	P	16 04 50.4	-0.3
	comp=Z,3.9nm,0.6s,baz=54,slow=10,SNR=28						
KNRA	Kununurra	26.46	243	P	P	16 05 13.0	-0.3
KNRA				IAmb	IAmb	16 05 39.3	
	comp=Z,22nm,1.5s						
ASAR	Alice Springs	26.67	222	P	P	16 05 13.8	-1.3
	comp=Z,0.7nm,0.8s,baz=54,slow=8.9,SNR=13						
ASAR	Alice Springs	26.67	222	P	P	16 05 13.9	-1.2
FITZ	Fitzroy Crossi	30.15	241	P	P	16 05 45.6	-0.5
	comp=Z,2.0nm,0.6s,baz=64,slow=7.0,SNR=8.2						
FITZ	Fitzroy Crossi	30.15	241	P	P	16 05 45.5	-0.6
TOO	Toolangi	33.73	191	P	P	16 06 17.6	+0.3
TOO				IAmb	IAmb	16 06 34.1	
	comp=Z,28nm,1.4s						
FORT	Forrest	35.30	219	P	P	16 06 29.5	-1.4
PSA00	Pilbara Seismi	36.53	239	P	P	16 06 40.8	-0.7
PSA00				IAmb	IAmb	16 07 07.7	
	comp=Z,8.6nm,1.5s						
L19K	White Mountain	77.26	22	P	P	16 11 29.6	+1.1
L19K				IAmb	IAmb	16 11 30.9	
	comp=Z,11nm,1.4s						
MKAR	Makanchi Array	80.27	319	P	P	16 11 45.7	+0.4
	comp=Z,0.6nm,0.6s,baz=109,slow=7.1,SNR=4.3						
TORD	Torodi Ar. Bea	150.52	289	PKPbc	PKPbc	16 19 25.2	-1.4
	comp=Z,0.7nm,0.7s,baz=39,slow=3.4,SNR=4.3						

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*NEIC **03** 16:09:26.4±2.6, 14°.58S±0°.08×167°.50E±0°.09, h126^{km}±6^{km}, mb4.2/19, Error ellipse: s-maj=16.5km s-min=6.6km az=131.0*

*IDC **03** 16:09:27.8±3.1, 14°.59S×167°.28E, h132^{km}±26^{km}, mb3.8/7, mb1 3.9/9, mb1mx3.5/35, mbtmp4.2/9, Error ellipse: s-maj=27.0km s-min=21.8km az=92.0*

*NOU **03** 16:09:29.7, 14°.75S×167°.26E, h111^{km}, mb4.0/12, Vanuatu Islands*

ISC 03 16:09:28.0±0.9**, 14°.60S**±0°.08×**167°.4E**±0°.1**, h150**^{km}**, n47, σ1**^{s}**58**/46**, mb4.1**/13**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.86	192	Pn	Pn	16 09 48.7	-3.0
SANVU				Sn	Sn	16 10 03.9	-5.9
SANVU	Saraoutou	0.86	192	P	Pn	16 09 49.0	-2.7
DVP	Devils Point	3.20	166	P	Pn	16 10 17.3	-0.6
LIFNC	LIFOU	6.14	181	Pn	Pn	16 10 51.7	-5.0
LIFNC	LIFOU	6.14	181	P	Pn	16 10 55.0	-1.6
KOUNC	Koumac, New Ca	6.61	206	P	Pn	16 11 02.4	-0.5
MARNC	Mare, Loyalty	6.87	175	Pn	Pn	16 11 02.5	-3.8
YATNC	Mamie plateau,	7.43	184	P	Pn	16 11 12.1	-1.7
DZM	Mont Dzumac	7.48	187	P	Pn	16 11 13.3	-1.3
	1.5nm,0.3s,baz=337,slow=11,SNR=27						
DZM				S	Sn	16 12 39.5	+1.2
	3.2nm,0.3s,baz=91,slow=23,SNR=8.6						
DZM	Mont Dzumac	7.48	187		Pn	16 11 12.9	-1.7
DZM	Mont Dzumac	7.48	187	P	Pn	16 11 13.2	-1.4
NOUC	Port Laguerre	7.53	188	P	Pn	16 11 14.4	-0.7
ONTNC	Ouen Toro	7.71	186	Pn	Pn	16 11 18.2	+0.6
ONTNC	Ouen Toro	7.71	186	P	Pn	16 11 18.0	+0.4
OUENC	Ouen Island, N	7.79	184	Pn	Pn	16 11 20.1	+1.5
OUENC	Ouen Island, N	7.79	184	P	Pn	16 11 19.3	+0.7
PINNC	Pines Island,	7.97	180	Pn	Pn	16 11 19.9	-1.1
PINNC	Pines Island,	7.97	180	P	Pn	16 11 20.5	-0.5
HNR	Honiara	8.91	304	P	Pn	16 11 32.6	-1.0
	9.6nm,0.3s,baz=163,slow=22,SNR=13						
HNR	Honiara	8.91	304		Pn	16 11 32.9	-0.8
LHI	Lord Howe Isla	18.48	203	P	Pn	16 13 34.2	-0.3
EIDS	Eidsvold	18.67	232	P	Pn	16 13 36.5	-0.3
EIDS				IAmb	IAmb	16 13 37.5	
	comp=Z,9.1nm,0.7s						
CTA	Charters Tower	20.89	252	P	P	16 13 60.0	+1.3
	comp=Z,2.7nm,0.7s,baz=83,slow=11,SNR=4.5						
CTAO	Charters Tower	20.89	252	P	P	16 13 59.8	+1.2
CTAO				IAmb	IAmb	16 14 10.9	
	comp=Z,6.9nm,1.2s						
ARMA	Armidale	21.40	220	P	P	16 14 05.0	+0.9
ARMA				IAmb	IAmb	16 14 06.5	
	comp=Z,12nm,1.2s						
COEN	Coen	23.47	269	P	P	16 14 25.9	+1.6
COEN				IAmb	IAmb	16 14 34.6	
	comp=Z,7.3nm,1.1s						
BFZ	Birch Farm	27.11	165	P	P	16 14 58.6	+1.7
STKA	Stephens Creek	29.16	229	P	P	16 15 16.6	+1.3
	comp=Z,4.1nm,0.5s,baz=55,slow=9.7,SNR=22						
WR0	Warramunga Arr	31.78	256	P	P	16 15 37.7	-0.7
WR0				IAmb	IAmb	16 15 47.5	
	comp=Z,3.2nm,1.2s						
WB0	Warramunga Arr	31.90	256	P	P	16 15 38.1	-1.4
WB0				IAmb	IAmb	16 15 39.9	
	comp=Z,3.6nm,1.2s						
WB2	Warramunga Arr	31.95	256	P	P	16 15 39.5	-0.5
WB2				IAmb	IAmb	16 15 50.8	
	comp=Z,6.8nm,1.4s						
WRA	Warramunga Arr	31.97	256	P	P	16 15 39.8	-0.3
	comp=Z,1.2nm,0.9s,baz=83,slow=8.5,SNR=9.2						
WRA	Warramunga Arr	31.97	256	IAmb	IAmb	16 15 40.8	
	comp=Z,0.1nm,1.1s						
ASAR	Alice Springs	32.82	249	P	P	16 15 47.3	-0.3
	comp=Z,1.8nm,0.5s,baz=78,slow=9.3,SNR=74						
ASAR	Alice Springs	32.82	249	P	P	16 15 46.8	-0.8
BBOO	Buckleboo	33.74	232	P	P	16 15 56.1	+0.7
KNRA	Kununurra	37.27	263	P	P	16 16 25.9	+0.2
KNRA				IAmb	IAmb	16 16 27.7	
	comp=Z,9.0nm,1.0s						
FORT	Forrest	39.46	239	P	P	16 16 44.0	+0.1
FITZ	Fitzroy Crossi	40.15	259	P	P	16 16 50.1	+0.4
	comp=Z,2.7nm,0.5s,baz=67,slow=9.2,SNR=23						
FITZ	Fitzroy Crossi	40.15	259	P	P	16 16 50.2	+0.5
FITZ				IAmb	IAmb	16 17 12.7	
	comp=Z,7.4nm,1.4s						
NWAO	Narrogin (SRO)	48.91	239	P	P	16 17 58.4	-0.6
NWAO				IAmb	IAmb	16 18 03.2	
	comp=Z,2.9nm,0.8s						
VNDA	Vanda	62.99	181	P	P	16 19 38.3	-0.1
SBA	Scott Base	63.26	180	P	P	16 19 40.5	+0.3
SBA				IAmb	IAmb	16 19 45.0	
	comp=Z,6.4nm,1.4s						
QSPA	South Pole Qui	75.42	180	P	P	16 20 55.2	0.0
ILAR	Eielson Array	86.37	18	P	P	16 21 54.2	+1.3
	comp=Z,0.4nm,0.7s,baz=229,slow=5.1,SNR=4.8						
MKAR	Makanchi Array	97.19	316	P	Pdif	16 22 46.7	+3.0
	comp=Z,0.7nm,0.8s,baz=97,slow=6.0,SNR=2.4						
ARCES	ARCESS Array B	120.16	345	PKP	PKiKP	16 28 02.4	+1.7
	comp=Z,1.3nm,0.6s,baz=78,slow=2.1,SNR=7.2						

NNC 03 16:13:23.8±12.0**, 36°.92N×71°.04E, h0**^{km}**, mb4.0, mpv3.6, 3C-3D, Error ellipse: s-maj=119.8km s-min=75.4km az=147.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	6.19	356	⇓P	Pn	16 14 55.4	-1.0
	0.6nm,0.2s,baz=171,slow=12,SNR=13						
KK31				⇑S	Sn	16 16 03.8	-4.1
	0.7nm,0.4s,baz=174,slow=22,SNR=4.0						
AAK	Ala-Archa	6.30	24	⇓P	Pn	16 14 58.8	+0.8
	2.1nm,0.3s						
AAK				⇑S	Sn	16 16 16.1	+5.3
	3.7nm,0.6s						
TKM2	Tokmak 2	6.94	29	⇑P	Pn	16 15 06.8	-0.1
	4.2nm,0.5s						
TKM2				⇓S	Sn	16 16 24.9	-1.7
	0.9nm,0.6s						

IDC 03 16:18:23.1±999.0**, 29°.18N×100°.14E, h0**^{km}**, Error ellipse: s-maj=890.6km s-min=263.6km az=81.0, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I30JP	ISUMI INFRASON	34.35	69	*i*		19 48 00.0	
	baz=267,slow=326,SNR=1.3						
I39PW	PALAU INFRASON	38.87	117	*i*		20 16 50.0	
	baz=309,slow=315,SNR=1.8						
I44RU	PETROPAVLOVSK	47.96	43	*i*		21 11 30.0	
	baz=267,slow=328,SNR=0.7						

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*IDC **03** 16:18:53.8±1.8, 7°.69S×127°.59E, h0^{km}, mb3.6/1, mb1 3.5/4, mb1mx3.3/24, mbtmp3.4/4, ML3.4/3, Error ellipse: s-maj=61.7km s-min=30.2km az=75.0*

*DJA **03** 16:19:04.8±0.8, 7°S±7°×12°9E±°, h237^{km}±26^{km}, M4.2/5, mb3.9/4, mB4.4/1, MLv4.3/5, Mw(mB)3.6/1*

ISC 03 16:19:05.9±0.9**, 7°.69S**±0°.06×**129°.0E**±0°.1**, h131**^{km}**, n8, σ2**^{s}**30**/11**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	Bandanaira	3.28	16	P	Pn	16 19 58.1	+1.9
SOEI	Soe	5.10	246	P	Pn	16 20 20.0	-0.5
FAKI	Fak Fak	5.75	35	P	Pn	16 20 29.6	+0.5
	0.1nm746nm24nm,0.8s						
BATI	Baumata	5.82	244	P	Pn	16 20 29.2	-0.9
	0.2nm18nm,0.5s						
SIJI	Sorong	7.15	19	Pn	Pn	16 20 47.5	-0.4
	1.2nm,0.3s,baz=45,slow=24,SNR=25						
SIJI				Sn	Sn	16 22 05.8	-2.0
	0.2nm,0.3s,baz=234,slow=23,SNR=1.8						
WRA	Warramunga Arr	13.24	157	Pn	Pn	16 22 10.8	+1.9
	0.2nm,0.3s,baz=340,slow=13,SNR=17						
WRA				Sn	Sn	16 24 31.1	-4.0
	1.0nm,0.3s,baz=332,slow=22,SNR=14						
ASAR	Alice Springs	16.57	164	P	P	16 22 53.6	+2.7
	0.1nm,0.3s,baz=343,slow=11,SNR=10						
ASAR				S	Sn	16 25 52.9	-2.5
	0.3nm,0.3s,baz=315,slow=16,SNR=8.7						
MKAR	Makanchi Array	68.26	327	P	P	16 29 51.9	-0.7
	0.3nm,0.5s,baz=128,slow=5.7,SNR=6.0						

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*NEIC **03** 16:22:48.0±1.0, 36°.75N±0°.01×98°.02W±0°.02, h11^{km}±3^{km}, Error ellipse: s-maj=2.9km s-min=0.7km az=52.0*

TUL 03 16:22:47.6±1.5**, 36°.77N**±0°.01×**98°.08W**±0°.03**, h6**^{km}±5^{km}**, ML3.2, mb_Lg2.9**/57(NEIC)**, Error ellipse: s-maj=3.0km s-min=1.7km az=89.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
U32A	Winter Ranch,	0.84	243		Pg	16 23 03.3	-0.4
T35A	Sooner Cattle	1.27	83		Pn	16 23 10.9	-0.9
OKCFA	Oklahoma City	1.44	159		Pn	16 23 13.5	-0.8
OKCFA				IAmb_Lg		16 23 36.7	
	comp=Z,52nm,0.7s						
OKCSW	OKLAHOMA CITY	1.45	159		Pn	16 23 13.5	-1.0
FNO	Franklin	1.60	160		Pn	16 23 16.4	-0.1
R32A	Long Quarter,	1.73	343		Pb	16 23 19.2	-0.6
TUL1	Leonard	2.04	114	Pn	Pn	16 23 22.8	+0.4
WMOK	Wichita Mounta	2.10	196		Pn	16 23 23.8	+0.4
X34A	Smith Ranch, M	2.17	175		Pn	16 23 25.2	+0.9
CBKS	Cedar Bluff	2.43	328		Pn	16 23 29.2	+1.2
KSU1	Kansas State U	2.60	26		Pn	16 23 31.2	+1.0
KSU1				IAmb_Lg		16 24 12.1	
	comp=Z,44nm,0.7s						
U38A	Gravette	2.99	95	Pn	Pn	16 23 35.7	+0.1
U38A				IAmb_Lg		16 24 29.5	
	comp=Z,26nm,0.8s						
X37A	Clayton	3.10	134		Pn	16 23 36.4	-0.7
HHAR	Hobbs	3.37	97	Pn	Pn	16 23 40.4	-0.4
AMTX	Amarillo	3.48	238	Pn	Pn	16 23 42.1	-0.3
AMTX				IAmb_Lg		16 24 40.4	
	comp=Z,20nm,0.7s						
S39A	Bolivar	3.91	75		Pn	16 23 47.8	-0.4
U40A	Yellville	4.23	94	Pn	Pn	16 23 51.3	-1.3
U40A				IAmb_Lg		16 25 05.0	
	comp=Z,31nm,0.8s						
KSCO	Kaye Shedlock'	4.24	303	IAmb_Lg		16 24 59.6	
	comp=Z,17nm,0.7s						
MIAR	Mount Ida	4.28	120	IAmb_Lg		16 25 07.2	
	comp=Z,18nm,0.8s						
ABTX	Abilene, Hawle	4.33	198	IAmb_Lg		16 25 05.2	
	comp=Z,22nm,0.8s						
P38A	Dawn	4.58	50	IAmb_Lg		16 25 21.2	
	comp=Z,32nm,0.8s						
MGMO	Mountain Grove	4.67	84		Pn	16 23 58.3	-0.4
MSTX	Muleshoe	4.74	235	Pn	Pn	16 23 58.6	-1.2
R40A	Maddies Statio	4.86	70	Pn	Pn	16 24 01.2	-0.1
WHAR	Wooly Hollow	4.92	106	IAmb_Lg		16 25 26.6	
	comp=Z,18nm,1.0s						
T25A	Trinidad	5.08	276	IAmb_Lg		16 25 31.8	
	comp=Z,25nm,0.7s						
WLAR	White Oak Lake	5.09	126	IAmb_Lg		16 25 35.2	
	comp=Z,17nm,0.8s						
OGNE	Ogallala	5.19	325	Pn	Pn	16 24 07.0	+1.2
OGNE				IAmb_Lg		16 25 45.1	
	comp=Z,30nm,0.7s						
P40A	Paris	5.50	58	IAmb_Lg		16 25 47.7	
	comp=Z,19nm,0.7s						
N38A	Joes South For	5.52	42	Pn	Pn	16 24 10.1	-0.3
N38A				IAmb_Lg		16 25 52.8	
	comp=Z,26nm,0.8s						
CCM	Cathedral Cave	5.59	75	IAmb_Lg		16 25 47.4	
	comp=Z,16nm,0.8s						
LCAR	Lake Charles	5.63	95	IAmb_Lg		16 25 45.9	
	comp=Z,13nm,0.8s						
435B	Jarrell	5.98	176	IAmb_Lg		16 26 05.5	
	comp=Z,12nm,0.8s						
PBMO	Poplar Bluff	6.14	88	IAmb_Lg		16 26 06.0	
	comp=Z,12nm,0.8s						
FVM	French Village	6.21	76	IAmb_Lg		16 26 06.7	
	comp=Z,15nm,0.7s						
SCIA	State Center	6.37	35	IAmb_Lg		16 26 24.9	
	comp=Z,19nm,0.7s						
JCT	Junction City	6.43	193	IAmb_Lg		16 26 12.1	
	comp=Z,21nm,1.0s						
S44A	Carbondale	7.10	80	IAmb_Lg		16 26 49.6	
	comp=Z,16nm,0.8s						
SIUC	Southern Illin	7.13	80	IAmb_Lg		16 26 35.8	
	comp=Z,16nm,0.8s						
P43A	Skaggs, Pawnee	7.32	64	IAmb_Lg		16 26 39.6	
	comp=Z,20nm,0.8s						
L40A	Anamosa	7.49	43	IAmb_Lg		16 26 47.3	
	comp=Z,14nm,0.7s						
O44A	Mansfield	8.26	63	IAmb_Lg		16 27 14.9	
	comp=Z,16nm,0.7s						
L42A	Oliver, Polo	8.35	49	IAmb_Lg		16 27 14.1	
	comp=Z,13nm,0.8s						
JFWS	Jewell Farm	8.60	42	IAmb_Lg		16 27 33.6	
	comp=Z,11nm,0.7s						

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*ANF **03** 16:32:03.5±0.3, 35°.87N×97°.21W, h0^{km}, ML3.2/8, Error ellipse: s-maj=4.0km s-min=2.5km az=152.0*

*TUL **03** 16:32:03.5±1.1, 35°.91N±0°.02×97°.24W±0°.02, h7^{km}±7^{km}, ML3.3, mb_Lg2.8/52(NEIC), Error ellipse: s-maj=2.9km s-min=1.6km az=131.0*

*NEIC **03** 16:32:03.6±0.9, 35°.94N±0°.02×97°.26W±0°.02, h7^{km}±5^{km}, Error ellipse: s-maj=2.7km s-min=1.8km az=133.0*

ISC 03 16:32:02.8±1.3**, 35°.96N**±0°.03×**97°.25W**±0°.03**, h1**^{km}±14^{km}**, n62, σ0**^{s}**67**/52**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK005	Luther M Schoo	0.31	171	Pg	Pg	16 32 09.0	+0.4
OKCFA	Oklahoma City	0.57	197		Pg	16 32 13.7	+0.1
OKCFA	Oklahoma City	0.57	197	P	Pg	16 32 13.9	+0.2
	baz=19,SNR=32						
OKCFA				S	Sg	16 32 21.4	+0.5
	baz=19						
OKCSW	OKLAHOMA CITY	0.57	196	Pg	Pg	16 32 13.9	+0.1
FNO	Franklin	0.71	190	Pg	Pg	16 32 16.2	-0.1
T35A	Sooner Cattle	1.13	32		Pb	16 32 25.0	0.0
T35B	Sooner Cattle	1.13	32	P	Pb	16 32 25.0	0.0
	baz=211						
T35B				S	Sb	16 32 40.7	+0.5
	baz=211						
TUL1	Leonard	1.18	92	Pg	Pb	16 32 24.8	-1.2
TUL1	Leonard	1.18	92	P	Pb	16 32 24.9	-1.1
	baz=271						
TUL1				S	Sb	16 32 41.3	-0.5
	baz=271						
TUL1	Leonard	1.18	92	P	Pb	16 32 24.9	-1.1
	baz=271						
TUL1				S	Sb	16 32 41.2	-0.6
	baz=271						
X34A	Smith Ranch, M	1.44	200		Pb	16 32 29.5	-0.8
U32A	Winter Ranch,	1.48	287		Pn	16 32 30.7	+0.2
U32A	Winter Ranch,	1.48	287	P	Pn	16 32 30.8	+0.2
	baz=108,SNR=36						
U32A				S	Sg	16 32 51.2	+0.9
	baz=108						
WMOK	Wichita Mounta	1.75	226		Pb	16 32 34.4	-1.2
WMOK	Wichita Mounta	1.75	226	P	Pb	16 32 34.5	-1.1
	baz=46						
WMOK				S	Sb	16 32 57.9	-0.2
	baz=46						
WMOK	Wichita Mounta	1.75	226	P	Pb	16 32 34.5	-1.1
	baz=46,SNR=125						
WMOK				S	Sb	16 32 57.7	-0.3
	baz=46						
X37A	Clayton	2.06	131		Pn	16 32 38.7	+0.3
X37A				IAmb_Lg		16 33 11.2	
	comp=Z,45nm,0.8s						
X37A	Clayton	2.06	131	P	Pn	16 32 38.7	+0.3
	baz=311,SNR=19						
U38A	Gravette	2.37	77		Pn	16 32 43.4	+0.7

Z35A	Perchaven, San	2.62	180	Pn	Pn	16 32 46.4	+0.3
Z35A	Perchaven, San	2.62	180	P	Pn	16 32 46.3	+0.1
	baz=0.2						
HHAR	Hobbs	2.70	82		Pn	16 32 48.0	+0.8
W39A	Magazine	2.92	104		Pn	16 32 50.7	+0.4
W39A				IAmb_Lg		16 33 41.8	
	comp=Z,33nm,1.2s						
W39A	Magazine	2.92	104	P	Pn	16 32 50.8	+0.4
	baz=285						
W39A	Magazine	2.92	104	P	Pn	16 32 50.8	+0.4
	baz=285,SNR=12						
KSU1	Kansas State U	3.18	9	IAmb_Lg		16 33 47.8	
	comp=Z,26nm,1.0s						
KSU1	Kansas State U	3.18	9	Pb	Pg	16 33 03.3	-0.4
	baz=189						
KSU1				Sb	Sg	16 33 44.5	-0.4
	baz=189						
MIAR	Mount Ida	3.32	114	Pn	Pn	16 32 56.3	+0.5
MIAR	Mount Ida	3.32	114	P	Pn	16 32 56.4	+0.6
	baz=296						
MIAR	Mount Ida	3.32	114	P	Pn	16 32 56.4	+0.6
	baz=296,SNR=24						
U40A	Yellville	3.58	82		Pn	16 32 59.6	+0.2
U40A	Yellville	3.58	82	P	Pn	16 32 59.6	+0.2
	baz=264,SNR=9.6						
U40A				P	Pn	16 32 59.6	+0.2
	baz=264,SNR=9.6						
S39A	Bolivar	3.59	60	Pn	Pn	16 33 00.2	+0.7
S39A	Bolivar	3.59	60	P	Pn	16 33 00.3	+0.7
	baz=242,SNR=9.5						
AMTX	Amarillo	3.77	255	IAmb_Lg		16 34 11.9	
	comp=Z,25nm,0.7s						
X40A	Basin Creek Fa	3.90	111	Pn	Pn	16 33 04.2	+0.4
X40A				IAmb_Lg		16 34 10.5	
	comp=Z,19nm,0.9s						
X40A	Basin Creek Fa	3.90	111	P	Pn	16 33 04.5	+0.7
	baz=293						
X40A	Basin Creek Fa	3.90	111	P	Pn	16 33 04.4	+0.7
	baz=293,SNR=12						
X40A				P	Pn	16 33 04.4	+0.7
	baz=293,SNR=12						
WHTX	Lake Whitney,	3.96	183	Sb	Sb	16 34 03.7	+1.9
	baz=2.5						
WLAR	White Oak Lake	4.09	122	IAmb_Lg		16 34 13.8	
	comp=Z,16nm,0.8s						
WHAR	Wooly Hollow	4.09	98	Pn	Pn	16 33 06.6	+0.2
W41B	Gary Mavity, V	4.15	99	P	Pn	16 33 07.6	+0.4
	baz=282						
W41B	Gary Mavity, V	4.15	99	P	Pn	16 33 07.4	+0.2
	baz=282,SNR=18						
FCAR	Ozark Folk Cen	4.16	89	Pn	Pn	16 33 08.1	+0.7
FCAR				IAmb_Lg		16 34 18.0	
	comp=Z,17nm,0.8s						
MGMO	Mountain Grove	4.18	72	IAmb_Lg		16 34 19.2	
	comp=Z,25nm,0.8s						
R40A	Maddies Statio	4.61	58	Pn	Pn	16 33 13.9	+0.4
R40A				IAmb_Lg		16 34 31.8	
	comp=Z,18nm,0.8s						
P38A	Dawn	4.70	38	IAmb_Lg		16 34 45.5	
	comp=Z,14nm,0.8s						
LCAR	Lake Charles	4.94	87	IAmb_Lg		16 34 43.7	
	comp=Z,12nm,0.8s						
MSTX	Muleshoe	4.95	248	IAmb_Lg		16 34 42.7	
	comp=Z,13nm,1.0s						
N35A	Tabor	5.05	14	IAmb_Lg		16 34 54.2	
	comp=Z,25nm,0.8s						
T42A	Van Buren	5.07	76	IAmb_Lg		16 34 50.5	
	comp=Z,25nm,0.7s						
435B	Jarrell	5.17	183	IAmb_Lg		16 34 55.0	
	comp=Z,17nm,0.8s						
CCM	Cathedral Cave	5.24	65	IAmb_Lg		16 34 59.0	
	comp=Z,16nm,0.8s						
KSCO	Kaye Shedlock'	5.25	307	IAmb_Lg		16 35 02.9	
	comp=Z,13nm,0.8s						
FVM	French Village	5.82	68	IAmb_Lg		16 35 18.7	
	comp=Z,11nm,0.7s						
JCT	Junction City	5.87	202	IAmb_Lg		16 35 19.5	
	comp=Z,14nm,0.8s						
L34A	Svendsen Farm,	6.04	6	IAmb_Lg		16 35 33.9	
	comp=Z,20nm,0.8s						
SCIA	State Center	6.72	27	IAmb_Lg		16 35 38.2	
	comp=Z,15nm,0.8s						
SDCO	Great Sand Dun	6.85	288	IAmb_Lg		16 35 44.9	
	comp=Z,9.7nm,1.2s						
PLAL	Pickwick Lake	7.55	95	IAmb_Lg		16 36 10.4	
	comp=Z,10nm,1.3s						
L40A	Anamosa	7.69	36	IAmb_Lg		16 36 06.3	
	comp=Z,8.7nm,0.8s						
JFWS	Jewell Farm	8.80	36	IAmb_Lg		16 36 41.3	
	comp=Z,13nm,0.7s						

BER 03 16:48:09.4±0.7,66°.40N×14°.72E,h0^{km},ML1.3,1C, Suspected explosion,Northern Norway

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOR8	Moi Rana	0.26	206	⇑*i*P	Pg	16 48 11.1	-3.2
MOR8				*e*S	Sg	16 48 13.1	-4.5
MOR8				IAML		16 48 15.1	
	comp=Z,90nm,0.7s						
KONS	Konsvik	0.65	279	*e*S	Sg	16 48 29.9	-0.3
NBB30	Finnes	0.69	326	*e*S	Sg	16 48 30.4	-1.2
STEI	Steigen	1.55	7	*e*P	Pn	16 48 36.5	-1.6
STEI				*e*Sg	Sn	16 48 57.6	-1.3

BER 03 16:48:09.5±0.9,66°.64N×13°.42E,h7^{km}±4^{km},ML1.0,1C, Confirmed Earthquake,Northern Norway

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NBB13	Alf Garage	0.04	257	*e*P	Pg	16 48 10.7	-0.2
NBB13				*e*S	Sg	16 48 11.6	-0.5
NBB13				IAML		16 48 11.7	
	comp=Z,113nm,0.2s						
KONS	Konsvik	0.18	221	*e*P	Pg	16 48 12.8	-0.3
KONS				*e*S	Sg	16 48 15.6	-0.1
KONS				IAML		16 48 15.8	
	comp=Z,44nm,0.2s						
NBB40	Tonnes	0.21	233	*e*S	Sg	16 48 16.1	-0.3
NBB14	Nordeng Farm	0.34	186	*e*S	Sg	16 48 20.2	-0.3
STOK	Stokkvaagen	0.34	208	*e*P	Pg	16 48 16.0	-0.2
STOK				*e*S	Sg	16 48 20.7	0.0
NBB30	Finnes	0.36	20	*e*P	Pg	16 48 16.4	-0.1
NBB30				*e*S	Pn	16 48 21.6	+0.5
NBB30				IAML		16 48 21.9	
	comp=Z,8.7nm,0.2s						
NBB30	Finnes	0.36	20	⇑*i*P	Sg	16 48 21.8	+0.6
FAUS	Fauske	1.05	44	*e*S	Sg	16 48 41.1	-2.1
FAUS				IAML		16 48 42.9	
	comp=Z,3.7nm,0.8s						

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*IGQ **03** 16:55:04±0.4,2°S±2°×8°1W±°,h33^{km}*

*VAO **03** 16:55:05.0±0.9,2°.10S×79°.88W,h10^{km},mb4.6*

*NEIC **03** 16:55:07.0±1.7,1°.87S±0°.05×80°.34W±0°.09,h63^{km}±8^{km}, mb4.5/20,Error ellipse: s-maj=12.9km s-min=6.2km az=105.0*

*IDC **03** 16:55:16.8±2.6,2°.41S×79°.38W,h118^{km}±25^{km},mb4.0/5, mb1 4.1/9,mb1mx3.7/33,mbtmp4.5/9,MS3.3/10, Ms1 3.3/10,ms1mx3.1/34,Error ellipse: s-maj=26.6km s-min=23.7km az=56.0*

ISC 03 16:55:00.5±1.2,1°.76S±0°.02×80°.42W±0°.04,h12^{km}±7^{km}, n187,σ1^{s}.73/187,mb4.4/13,MS3.2/7,Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APLA	Playas - Guaya	0.87	178	P	Pn	16 55 18.0	-0.6
APLA				S	Sb	16 55 28.0	-1.2
MORR	Playas El Morr	0.88	175	P	Pn	16 55 18.0	-0.7
MORR				S	Sg	16 55 29.0	0.0
AMIL	Milagro (Trans	0.90	114	P	Pn	16 55 21.0	+2.0
ISPG	Isla Puna-Puer	1.22	168	P	Pg	16 55 24.0	-0.1
ISPG				S	Sg	16 55 41.0	+0.9
COHC	Cochancay	1.36	121	P	Pb	16 55 26.0	+0.1
COHC				S	Sb	16 55 43.0	-0.2
CAB1	Cabo Pasado-Ma	1.37	360	P	Pg	16 55 29.0	+2.2
CABP	Cabo Pasado	1.37	360	P	Pg	16 55 28.0	+1.2
JAMA	Jama	1.51	8	P	Pg	16 55 30.0	+0.5
FLF1	Flavio Alfaro-	1.51	22	P	Pg	16 55 30.0	+0.4
CHSH	Refugio Sur-Vo	1.57	80	P	Pg	16 55 32.0	+1.2
CHSH				S	Sg	16 55 54.0	+2.7
ACH2	Ecuador-Machal	1.61	158	P	Pn	16 55 28.0	-0.8
TAMH	Tambohuasha Ch	1.65	82	P	Pg	16 55 33.0	+0.7
TAMH				S	Sg	16 55 56.0	+2.2
PORT	Chimborazo Vol	1.67	80	P	Pg	16 55 34.0	+1.3
MAG1	Magdalena	1.80	21	P	Pg	16 55 35.0	-0.1
IGUA	Igualata	1.80	81	P	Pg	16 55 36.0	+0.9
ARNL	Arenillas	1.81	169	P	Pn	16 55 30.0	-1.5
ARNL				S	Sn	16 55 49.0	-5.4
ACUE	Ecuador-Cuenca	1.85	128	P	Pn	16 55 33.0	+0.6
ACUE				S	Sn	16 55 56.0	+0.1
BBIL	Ulba Tungurahu	1.95	81	P	Pg	16 55 39.0	+0.9
BMAS	Trigal station	1.96	82	P	Pg	16 55 38.0	-0.1
JUI6	Juive	1.98	80	P	Pg	16 55 39.0	+0.5
ARRY	Arrayan	1.98	83	P	Pg	16 55 38.0	-0.6
ILLI	Illinizas Sur	1.98	58	P	Pg	16 55 38.0	-0.7
POND	Pondoa	1.99	80	P	Pg	16 55 39.0	+0.1
POND				S	Sg	16 56 06.0	+1.2
RETU	Refugio	2.00	81	P	Pg	16 55 39.0	+0.1
BPAT	Tungurahua Vol	2.00	83	P	Pg	16 55 39.0	0.0
RUN5	Runtun	2.02	80	P	Pg	16 55 39.0	-0.4
BRUN	Tungurahua Vol	2.03	80	P	Pg	16 55 40.0	+0.4
SANGA	Volcan Sangay	2.06	98	P	Pb	16 55 38.0	-0.3
SRAM	San Ramn-Vol	2.11	62	P	Pg	16 55 41.0	0.0
PIS1	Pisayambo	2.15	71	P	Pg	16 55 42.0	+0.2
SLOR	San Lorenzo -	2.18	62	P	Pg	16 55 42.0	-0.4
CAMI	Rancho Maria	2.20	61	P	Pg	16 55 43.0	+0.3
BMOR	Cotopaxi Volca	2.21	62	P	Pg	16 55 43.0	0.0
BNAS	Cotopaxi Volca	2.22	61	P	Pg	16 55 43.0	-0.2
SUCR	Mariscal Sucre	2.22	60	P	Pg	16 55 43.0	-0.2
VCES	Cotopaxi	2.24	65	P	Pg	16 55 43.0	-0.5
NAS2	Nasa	2.24	60	P	Pg	16 55 45.0	+1.4
BV15	Puerto Quito-O	2.25	32	P	Pb	16 55 41.0	-0.2
BREF	Cotopaxi Volca	2.25	61	P	Pg	16 55 44.0	+0.1
BVC2	Cotopaxi Volca	2.29	61	P	Pg	16 55 44.0	-0.5
PIAT	Ana Tenorio	2.29	71	P	Pg	16 55 44.0	-0.4
BTAM	Cotopaxi Volca	2.29	62	P	Pg	16 55 44.0	-0.6
VC1	Cotopaxi 1	2.30	61	P	Pg	16 55 45.0	+0.2
TAMB	Tambo	2.31	63	P	Pg	16 55 44.0	-0.9
PITA	Cotopaxi Volc	2.32	59	P	Pg	16 55 44.0	-1.1
HPAL	Hacienda Las P	2.34	49	P	Pb	16 55 43.0	+0.1
TOMA	Boca Toma-Volc	2.35	58	P	Pg	16 55 45.0	-0.6
GGPT	Toaza - Volcan	2.36	50	P	Pb	16 55 44.0	+0.8
JUA2	San Juan 2	2.38	50	P	Pb	16 55 44.0	+0.4
TERV	Terraza Guagua	2.40	49	P	Pb	16 55 44.0	-0.1
GGPC	Guagua Pichinc	2.41	49	P	Pb	16 55 45.0	+0.9
ANTG	Antisana-Guama	2.50	60	P	Pb	16 55 47.0	+1.3
ANTM	Antisana-La Mi	2.51	61	P	Pb	16 55 47.0	+1.1
ANTS	Antisana-Sarah	2.57	61	P	Pb	16 55 48.0	+1.0
PAC1	Pacto, Paraso	2.59	39	*e*P	Pb	16 55 46.9	-0.2
PAC1				*e*S	Sg	16 56 21.7	-2.2
PAC1				*i*		16 56 24.6	
	comp=Z,3µm,0.3s						
PAC1	Pacto, Paraso	2.59	39	P	Pb	16 55 46.0	-1.0
ANTI	Antisana	2.61	60	P	Pb	16 55 49.0	+1.4
PULU	Pululahua	2.61	47	P	Pb	16 55 48.0	+0.5
GONZ	Gonzanam	2.66	157	P	Pn	16 55 44.0	+0.4
OTAV	Otavalo	2.79	45	Pn	Pb	16 55 49.9	-0.9
OTAV	Otavalo	2.79	45	*e*P	Pb	16 55 50.1	-0.6
OTAV				*e*S	Sg	16 56 29.1	-1.4
OTAV				*i*		16 56 38.5	
	comp=Z,523nm,0.4s						
OTAV	Otavalo	2.79	45	*e*P	Pb	16 55 50.0	-0.7
CUSE	Cuicocha Este	2.88	45	*e*P	Pb	16 55 52.0	-0.1
CUSE				*e*S	Sb	16 56 28.3	+0.8
CUSE				*i*		16 56 37.0	
	comp=Z,3µm,0.3s						
CUSE	Cuicocha Este	2.88	45	P	Pb	16 55 51.0	-1.1
CUSW	Cuicocha Oeste	2.90	45	P	Pb	16 55 52.0	-0.5
CUIC	Cuicocha-Domo	2.91	45	P	Pb	16 55 52.0	-0.6
COTA	Cotacachi	2.94	45	P	Pb	16 55 53.0	-0.3
CAYR	Refugio Cayamb	2.99	54	P	Pb	16 55 55.0	+0.9
RVRD	Rio Verde	3.00	20	P	Pb	16 55 51.0	-2.8
IMBA	Imbabura, San	3.00	48	P	Pb	16 55 55.0	+0.7
ANGU	Angureal	3.01	53	P	Pb	16 55 56.0	+1.6
LOJ1	Universidad t	3.02	137	P	Pn	16 55 42.0	-6.4
URCU	Urcuqui	3.07	45	P	Pb	16 55 55.0	-0.5
AIB2	Ibarra (Univer	3.12	48	P	Pb	16 55 57.0	+0.9
YAHU	Yahuarcocha	3.16	48	P	Pb	16 55 57.0	+0.1
LAV4	Lava4-Reventad	3.24	59	P	Pb	16 55 57.0	-1.3
REVS	Reventador Sur	3.25	60	P	Pb	16 55 57.0	-1.3
REVN	San Rafael	3.26	59	P	Pb	16 55 57.0	-1.5
LNGL	El Angel-Carch	3.46	44	P	Pb	16 56 01.0	-1.2
CHMA	Chilma	3.51	42	P	Pb	16 56 00.0	-2.9
CHL1	Volc¡n Chiles	3.54	44	P	Pb	16 56 02.0	-1.5
ECEN	Cerro Negro	3.55	44	P	Pb	16 56 02.0	-1.6
CHL2	Volc¡n Chiles	3.57	44	P	Pb	16 56 03.0	-1.0
TULM	Tulcn-Chalpat	3.60	47	*e*P	Pb	16 56 03.4	-1.1
TULM	Tulcn-Chalpat	3.60	47	P	Pb	16 56 03.0	-1.5
CASC	Dorado de Casc	3.61	59	P	Pb	16 56 03.0	-1.4
TUMC	Tumaco	3.94	25	Pn	Pb	16 56 05.6	-4.5
TUMC	Tumaco	3.94	25	*e*P	Pb	16 56 09.0	-1.1
TUMC				*e*S	Sg	16 57 03.9	-3.4
TUMC				*i*		16 57 09.2	
	comp=Z,186nm,0.7s						
GCUF	Volcan Galeras	4.27	46	*e*P	Pb	16 56 13.5	-2.5
SOTA	Rioblanco	5.43	45	*e*P	Pn	16 56 27.7	+5.8
SOTA				*e*S	Sb	16 57 36.4	-4.7
SOTA				*i*		16 57 52.3	
	comp=Z,54nm,0.6s						
ATAH	Atahualpa	5.71	159	P	Pn	16 56 27.5	+2.0
	comp=Z,12nm,0.3s,baz=357,slow=8.0,SNR=54						
ATAH				S	Sn	16 57 28.1	-3.2
	comp=Z,10nm,0.3s,baz=336,slow=20,SNR=3.8						
PCON	Cinco Dias	5.71	45	*e*P	Pn	16 56 30.6	+4.9
GARC	Garzon, Huila	6.29	51	*e*P	Pn	16 56 26.6	-6.9
BETC	Betania	6.65	48	*e*P	Pb	16 56 52.5	-3.8
YOTC	Yotoco, Valle	7.01	35	*e*P	Pn	16 56 46.9	+3.7
YOTC				*e*S	Sn	16 58 07.5	+4.6
YOTC				*i*	Sb	16 58 21.6	-4.5
	comp=Z,16nm,0.4s						
MACC	Macarena, Meta	7.63	59	*e*P	Pn	16 56 54.6	+3.0
MACC				*e*S	Sb	16 58 58.5	+15
ORTC	Ortega, Tolima	7.64	43	*e*P	Pn	16 56 59.3	+7.4
PLMC	San Jos del P	7.81	32	*e*P	Pn	16 56 57.4	+3.3
ANIL	Santa Ana	7.98	39	*e*P	Pn	16 57 03.4	+6.7
VILC	Villavicencio,	8.90	49	*e*P	Pn	16 57 21.6	+12
ROSC	El Rosal	8.95	43	P	Pn	16 57 20.7	+11
	comp=Z,2.8nm,0.3s,baz=209,slow=19,SNR=2.0						
ROSC				LR	LR	17 00 27.4	
	comp=Z,61nm,19.9s,baz=280,slow=35						
CHIC	Chingaza	9.22	46	*e*P	Pn	16 57 25.4	+12
PAYG	Puerto Ayora	9.93	276	Pn	Pn	16 57 25.7	+2.6
TBTG	Tabatinga, AM	10.77	103	*e*P	Pn	16 57 31.5	-3.2
JTS	Las Juntas de	12.80	339	LR	LR	17 01 59.7	
	comp=Z,96nm,18.8s,baz=165,slow=29						
SDV	Santo Domingo	14.39	43	P	P	16 58 33.7	+2.3
	comp=Z,2.6nm,0.3s,baz=274,slow=8.3,SNR=23						
SDV				LR	LR	17 04 50.7	
	comp=Z,222nm,21.3s,baz=211,slow=40						
SDV	Santo Domingo	14.39	43	P	P	16 58 33.0	+1.6
SDV	Santo Domingo	14.39	43	*e*P	P	16 58 28.5	-2.9
URIC	Uribia, Colomb	15.78	32	Pn	Pn	16 58 43.8	+1.0
ETMB	Extrema	16.23	120	*e*P	Pn	16 58 45.4	-3.1
SAML	Samuel	18.57	113	P	Pn	16 59 17.7	-0.2
SAML				IAmb	IAmb	16 59 18.5	
	comp=Z,32nm,0.7s						
SAML	Samuel	18.57	113	*e*P	P	16 59 15.6	-2.1
LPAZ	La Paz	18.84	141	P	P	16 59 20.4	-0.6
	comp=Z,0.9nm,0.3s,baz=329,slow=11,SNR=20						
LPAZ	La Paz	18.84	141	P	P	16 59 20.5	-0.6
LPAZ	La Paz	18.84	141	*e*P	P	16 59 18.6	-2.5
PCRV	Puerto La Cruz	19.68	53	P	Pn	16 59 32.2	+1.0
	comp=Z,2.4nm,0.3s,baz=274,slow=3.6,SNR=8.4						
MACA	Manacapuru-AM	19.76	94	*e*P	P	16 59 30.1	-0.6
BOAV	Boa Vista	20.32	78	*e*P	P	16 59 37.0	+0.3
PSGCX	Pisagua	20.39	151	P	P	16 59 36.9	-0.7
PTGA	Pitinga	20.47	87	P	P	16 59 38.5	+0.1
	comp=Z,2.2nm,0.3s,baz=278,slow=9.9,SNR=33						
PTGA				LR	LR	17 07 05.8	
	comp=Z,60nm,21.2s,baz=161,slow=36						
PTGA	Pitinga	20.47	87	P	P	16 59 38.5	+0.1
PTGA				IAmb	IAmb	16 59 40.6	
	comp=Z,12nm,0.7s						
VILB	Vilhena	22.90	120	*e*P	P	17 00 04.0	-0.5
LVC	Limon Verde	23.55	153	P	P	17 00 11.3	0.0
	comp=Z,1.1nm,0.3s,baz=310,slow=12,SNR=1.9						
LVC				LR	LR	17 10 22.6	
	comp=Z,92nm,21.7s,baz=307,slow=40						
LVC	Limon Verde	23.55	153	*e*P	P	17 00 10.2	-1.2
CMIG	Matias Romero	23.55	323	LR	LR	17 08 53.5	
	comp=Z,32nm,21.1s,baz=181,slow=33						
SIV	San Ignacio	23.73	128	P	P	17 00 11.6	-1.2
	comp=Z,4.3nm,0.6s,baz=313,slow=9.5,SNR=24						
SIV				LR	LR	17 10 42.4	
	comp=Z,126nm,19.7s,baz=196,slow=41						
SJG	San Juan	24.24	35	LR	LR	17 11 03.6	
	comp=Z,54nm,20.2s,baz=158,slow=39						
GCPR	Guaynabo City	24.43	35	P	P	17 00 19.8	+0.5
CBYP	Canovanas	24.53	35	P	P	17 00 20.3	0.0
ITTB	Itaituba	24.78	97	*e*P	P	17 00 22.0	-0.6
GRTK	Grand Turk	24.85	21	P	P	17 00 24.0	+1.0
CUPR	Culebra, Puert	24.89	36	P	P	17 00 24.0	+0.5
CUPR				IAmb	IAmb	17 00 25.2	
	comp=Z,15nm,0.7s						
PTLB	Pontes e Lacer	25.01	124	*e*P	P	17 00 24.5	-0.1
PDRB	Porto dos Gac	25.45	114	*e*P	P	17 00 28.5	-0.2
NPGB	Novo Progresso	25.52	103	*e*P	P	17 00 28.3	-1.0
CLDB	Colider	26.07	111	*e*P	P	17 00 33.3	-0.9
MALB	Monte Alegre	26.14	91	*e*P	P	17 00 34.6	-0.2
MCPB	Macapa, AP	28.39	88	*e*P	P	17 00 54.8	-0.3
MDP	Montagnes des	28.57	76	P	P	17 00 55.1	-1.7
	comp=Z,6.1nm,0.5s,baz=255,slow=10.0,SNR=5.5						
MDP				LR	LR	17 12 35.0	
	comp=Z,192nm,19.2s,baz=246,slow=37						
AQDB	Aquidauana	30.47	129	*e*P	P	17 01 12.1	-1.3
SNDB	Serra Nova Dou	30.60	111	*e*P	P	17 01 14.2	-0.6
ARAG	Araguaiana, MT	31.42	118	*e*P	P	17 01 20.8	-1.1
CPUP	Villa Florida	33.00	140	*e*P	P	17 01 34.8	-0.9
SMTB	Santa Maria do	33.42	103	*e*P	P	17 01 39.5	0.0
PEXB	Peixe	33.45	109	*e*P	P	17 01 38.5	-1.3
IPMB	Ipameri, GO	35.48	119	*e*P	P	17 01 55.6	-1.8
PTGB	Pitanga	35.64	132	*e*P	P	17 01 58.8	+0.1
ITQB	Itaqui	35.81	143	*e*P	P	17 02 00.0	+0.1
ROSB	Rosrio	36.28	92	*e*P	P	17 02 03.2	-1.0
BB19B	Bebedouro	36.53	124	*e*P	P	17 02 06.0	-0.3
SDBA	SAO DESIDERIO	36.74	108	*e*P	P	17 02 06.8	-1.5
JANB	Januaria	38.00	112	*e*P	P	17 02 17.3	-1.5
TX31	Lajitas Ar. Si	38.09	326	P	P	17 02 21.7	+2.1
TX32	Lajitas Array	38.09	326	P	P	17 02 22.0	+2.4
TX32				IAmb	IAmb	17 02 35.9	
	comp=Z,5.3nm,1.4s						
TXAR	Lajitas Array	38.09	326	P	P	17 02 21.6	+2.0
NBPS	Pedro II - PI	39.00	95	*e*P	P	17 02 26.7	-0.7
DIAM	Diamantina, MG	39.60	117	*e*P	P	17 02 30.8	-1.6
PLCA	Paso Flores	39.81	168	P	P	17 02 33.8	+0.1
PLCA				IAmb	IAmb	17 03 01.5	
	comp=Z,8.3nm,1.3s						
WMOK	Wichita Mounta	40.19	336	P	P	17 02 38.7	+1.8
NBPB	Pedra_Branca-C	40.91	96	*e*P	P	17 02 43.0	-0.3
NBPN	Ponto Novo - B	40.93	104	*e*P	P	17 02 42.4	-1.0
MAN01	Angra dos Reis	41.12	124	*e*P	P	17 02 43.2	-1.6
NBMA	Muriti-CE	41.87	99	*e*P	P	17 02 50.9	-0.2
SJMB	Sao Joao De Ma	41.96	116	*e*P	P	17 02 50.0	-1.8
CMC01	Camacan, BA	42.53	111	*e*P	P	17 02 55.5	-1.0
GUA01	Guaratinga, BA	42.59	113	*e*P	P	17 02 57.3	+0.4
NBLA	Lagarto - SE	43.29	104	*e*P	P	17 03 01.1	-1.5
NBLV	Livramento - P	43.69	99	*e*P	P	17 03 05.0	-1.0
NBAN	Anadia - AL	44.58	102	*e*P	P	17 03 11.6	-1.4
NVAR	Mina Array Bea	53.08	323	P	P	17 04 30.2	+12
	comp=Z,1.1nm,0.8s,baz=150,slow=4.6,SNR=5.4						
NVAR	Mina Array Bea	53.08	323	P	P	17 04 17.6	-0.6
ULM	Lac du Bonnet	53.48	348	P	P	17 04 31.5	+11
	comp=Z,4.4nm,0.6s,baz=150,slow=5.5,SNR=6.2						
ULM	Lac du Bonnet	53.48	348	P	P	17 04 21.0	+0.3
ULM				IAmb	IAmb	17 04 33.6	
	comp=Z,3.5nm,0.6s						
LIC	Lamto	75.68	83	*e*P	P	17 06 44.8	-1.7
	comp=Z,35nm,1.2s						
TIC	Toumodi	75.71	83	*e*P	P	17 06 44.9	-1.8
DBIC	Dimbokro	75.88	83	P	P	17 06 46.1	-1.5
	comp=Z,4.1nm,0.6s,baz=277,slow=5.4,SNR=4.0						
DBIC				LR	LR	17 37 58.1	
	comp=Z,39nm,18.6s,baz=196,slow=34						
DBIC	Dimbokro	75.88	83	P	P	17 06 46.0	-1.5
DBIC				IAmb	IAmb	17 06 47.2	
	comp=Z,5.2nm,0.8s						
KIC	Kosan Boka	75.97	83	*e*P	P	17 06 46.2	-2.0
	comp=Z,16nm,0.6s						
KOWA	Kowa	77.29	75	P	P	17 06 54.3	-1.3
KOWA				IAmb	IAmb	17 06 55.5	
	comp=Z,2.8nm,0.8s						
SUMG	Summit	78.77	12	P	P	17 07 01.8	-1.3
VNA3	Neumayer Olymp	82.21	162	P	P	17 07 25.2	+3.9
VNA3	Neumayer Olymp	82.21	162	PP	PP	17 10 34.0	+4.5
VNA3	Neumayer Olymp	82.21	162	PcP	PcP	17 07 33.5	+6.9
VNA1	Neumayer--Stat	82.48	161	P	P	17 07 27.0	+4.4
TORD	Torodi Ar. Bea	82.72	77	P	P	17 07 22.7	-2.3
	comp=Z,0.9nm,0.8s,baz=285,slow=5.1,SNR=5.8						
VNA2	Neumayer--Watz	82.83	162	PP	PP	17 10 37.0	+2.4
VNA2	Neumayer--Watz	82.83	162	PcP	PcP	17 07 36.5	+7.3
	baz=298,slow=6.7						

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*IDC **03** 16:58:17.4±1.8,27°.17S×176°.57W,h0^{km},mb3.8/4, mb1 4.0/4,mb1mx3.7/22,mbtmp3.8/4,ML4.9/1,MS3.2/4, Ms1 3.2/4,ms1mx2.9/31,Error ellipse: s-maj=39.7km s-min=31.7km az=85.0*

*NEIC **03** 16:58:40.8±1.0,28°.7S±0°.1×177°.9W±0°.2,h116^{km}±9^{km}, mb4.5/15,Error ellipse: s-maj=28.0km s-min=15.8km az=67.0*

ISC 03 16:58:38.1±1.6,28°.5S±0°.2×177°.9W±0°.2,h100^{km},n26, σ1^{s}.59/22,mb4.2/8,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.71	179	Pn	Pn	16 58 58.9	+3.2
	267nm,0.3s,baz=110,slow=12,SNR=7.4						
RAO				Sn	Sn	16 59 27.5	+19
	459nm,0.3s,baz=230,slow=23,SNR=5.0						
URZ	Urewera	10.54	202	Pn	Pn	17 01 03.6	-2.5
MSVF	Nonsavu	11.37	340	LR	LR	17 04 08.9	
	comp=Z,74nm,20.5s,baz=126,slow=33						
TUWZ	Tuamarina	14.47	205	P	P	17 02 01.5	-0.4
THZ	Tophouse	15.16	207	P	P	17 02 10.5	+0.9
OXZ	Oxford	16.82	206	P	P	17 02 28.3	+0.4
OXZ				IAmb	IAmb	17 02 55.5	
	comp=Z,61nm,1.5s						
WHZ	Wether Hill Ro	20.60	209	P	P	17 03 08.4	-0.7
WHZ				IAmb	IAmb	17 03 36.0	
	comp=Z,63nm,1.5s						
DCZ	Deep Cove	20.61	211	P	P	17 03 09.0	-0.2
DCZ				IAmb	IAmb	17 03 27.7	
	comp=Z,42nm,1.3s						
HNR	Honiara	28.17	308	LR	LR	17 13 14.6	
	comp=Z,58nm,21.8s,baz=206,slow=32						
CTA	Charters Tower	33.60	276	P	P	17 05 10.9	+1.8
	comp=Z,2.7nm,0.7s,baz=90,slow=9.1,SNR=4.5						
CTAO	Charters Tower	33.60	276	P	P	17 05 09.8	+0.8
CTAO				IAmb	IAmb	17 05 26.4	
	comp=Z,5.0nm,1.0s						
STKA	Stephens Creek	34.99	254	LR	LR	17 18 17.6	
	comp=Z,55nm,18.8s,baz=73,slow=33						
PMG	Port Moresby	37.90	293	LR	LR	17 19 30.1	
	comp=Z,41nm,18.3s,baz=85,slow=33						
BBOO	Buckleboo	39.56	252	P	P	17 05 59.3	-0.3
ASAR	Alice Springs	43.30	265	P	P	17 06 30.8	+0.6
	comp=Z,0.2nm,0.3s,baz=102,slow=7.9,SNR=9.3						
WR0	Warramunga Arr	43.93	270	P	P	17 06 35.7	+0.3
WR0				IAmb	IAmb	17 06 43.9	
	comp=Z,5.2nm,1.3s						
WB2	Warramunga Arr	44.11	270	P	P	17 06 36.8	0.0
WB2				IAmb	IAmb	17 06 46.8	
	comp=Z,7.9nm,1.3s						
WRAB	Tennant Creek	44.11	270	P	P	17 06 36.8	0.0
WRAB				IAmb	IAmb	17 06 46.8	
	comp=Z,9.7nm,1.5s						
WRA	Warramunga Arr	44.12	270	P	P	17 06 36.9	0.0
	comp=Z,0.8nm,0.6s,baz=106,slow=7.4,SNR=14						
WB0	Warramunga Arr	44.13	270	P	P	17 06 36.8	-0.2
KNRA	Kununurra	50.65	273	P	P	17 07 26.8	-0.6
QSPA	South Pole Qui	61.57	180		P	17 08 44.6	0.0
QSPA				IAmb	IAmb	17 08 46.0	
	comp=Z,4.7nm,1.1s						
MAW	Mawson	74.07	200	P	P	17 10 05.0	+2.2
	comp=Z,0.8nm,0.6s,baz=139,slow=11,SNR=3.8						
MAW	Mawson	74.07	200	P	P	17 10 04.0	+1.3
AKASG	Malin Array Be	149.84	325	PKPbc	PKPdf	17 18 08.2	-3.1
	comp=Z,0.6nm,0.4s,baz=43,slow=3.6,SNR=2.0						
TORD	Torodi Ar. Bea	164.68	179	PKPab	PKPab	17 19 23.6	-2.9
	comp=Z,0.4nm,0.6s,baz=164,slow=4.5,SNR=2.4						

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*NEIC **03** 17:01:31.6±1.2,20°.46S±0°.10×170°.01E±0°.06, h247^{km}±10^{km},mb4.1/5,Error ellipse: s-maj=15.1km s-min=6.2km az=159.0*

*NOU **03** 17:01:33.8, 20°.53S×170°.14E, h203^{km}, MLv4.9/11, Vanuatu Islands*

*IDC **03** 17:01:34.0±1.4, 20°.84S×170°.10E, h268^{km}±14^{km}, mb3.0/5, mb1 3.5/8, mb1mx3.2/22, mbtmp4.0/8, Error ellipse: s-maj=29.7km s-min=15.7km az=166.0*

ISC 03 17:01:32.3±0.7**, 20°.47S**±0°.06×**169°.96E**±0°.08**, h250^{km}, n36, σ1^s.49**/38**, mb3.7**/9**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**2.07**	**240**	Pn	**Pn**	**17 02 14.9**	**-0.4**
MARNC				Sn	**S**	**17 02 48.3**	**-0.9**
MARNC	**Mare, Loyalty**	**2.07**	**240**	P	**Pn**	**17 02 15.1**	**-0.2**
LIFNC	**LIFOU**	**2.57**	**263**		**Pn**	**17 02 19.3**	**-0.8**
LIFNC				Sn	**S**	**17 02 56.1**	**-1.9**
LIFNC	**LIFOU**	**2.57**	**263**	P	**Pn**	**17 02 19.4**	**-0.8**
RTV	**Rentapao**	**3.03**	**331**	P	**Pn**	**17 02 26.2**	**+1.1**
PINNC	**Pines Island,**	**3.17**	**227**		**Pn**	**17 02 26.1**	**-0.4**
PINNC	**Pines Island,**	**3.17**	**227**	P	**Pn**	**17 02 26.5**	**0.0**
DVP	**Devils Point**	**3.20**	**328**	P	**Pn**	**17 02 27.9**	**+0.9**
YATNC	**Mamie plateau,**	**3.27**	**241**	P	**Pn**	**17 02 27.4**	**-0.3**
OUENC	**Ouen Island, N**	**3.49**	**236**		**Pn**	**17 02 30.6**	**+0.4**
OUENC	**Ouen Island, N**	**3.49**	**236**	P	**Pn**	**17 02 31.1**	**+0.9**
DZM	**Mont Dzumac**	**3.65**	**243**	*e*P	**Pn**	**17 02 33.4**	**+1.4**
	125nm,1.2s						
DZM	**Mont Dzumac**	**3.65**	**243**	P	**Pn**	**17 02 33.4**	**+1.4**
	18nm,0.3s,baz=111,slow=13,SNR=402						
DZM				S	**S**	**17 03 23.2**	**+3.7**
	baz=149,slow=19,SNR=0.8						
DZM	**Mont Dzumac**	**3.65**	**243**		**Pn**	**17 02 33.1**	**+1.1**
ONTNC	**Ouen Toro**	**3.75**	**240**		**Pn**	**17 02 34.3**	**+1.3**
ONTNC	**Ouen Toro**	**3.75**	**240**	P	**Pn**	**17 02 34.4**	**+1.3**
KOUNC	**Koumac, New Ca**	**5.32**	**268**	P	**Pn**	**17 02 55.1**	**+3.1**
SANVU	**Saraoutou**	**5.64**	**332**	IAmb	IAmb	17 03 05.5	
	comp=Z,28nm,0.7s						
SANVU	**Saraoutou**	**5.64**	**332**	Pn	**Pn**	**17 02 56.2**	**+0.3**
SANVU				Sn	**S**	**17 04 00.8**	**-2.1**
SANVU	**Saraoutou**	**5.64**	**332**	Pn	**Pn**	**17 02 56.3**	**+0.3**
MSVF	**Nonsavu**	**8.12**	**72**	P	**Pn**	**17 03 29.8**	**+2.6**
	comp=Z,0.4nm,0.3s,baz=286,slow=19,SNR=2.9						
MSVF	**Nonsavu**	**8.12**	**72**		**Pn**	**17 03 29.6**	**+2.5**
HNR	**Honiara**	**14.62**	**317**	P	Pn	17 04 54.2	+6.2
	comp=Z,27nm,0.3s,baz=203,slow=15,SNR=10						
WB0	**Warramunga Arr**	**33.37**	**265**	P	**P**	**17 07 46.2**	**-1.2**
WB0				IAmb	IAmb	17 08 04.7	
	comp=Z,8.4nm,1.4s						
WB2	**Warramunga Arr**	**33.38**	**265**	P	**P**	**17 07 46.1**	**-1.5**
WRAB	**Tennant Creek**	**33.38**	**265**	P	**P**	**17 07 46.9**	**-0.7**
WRAB				IAmb	IAmb	17 08 16.3	
	comp=Z,2.8nm,1.1s						
WRA	**Warramunga Arr**	**33.39**	**265**	P	**P**	**17 07 48.7**	**+1.0**
	comp=Z,0.3nm,0.7s,baz=107,slow=6.8,SNR=1.2						
WRA	**Warramunga Arr**	**33.39**	**265**	P	**P**	**17 07 46.9**	**-0.8**
ASAR	**Alice Springs**	**33.51**	**258**	P	**P**	**17 07 49.3**	**+0.6**
	comp=Z,0.5nm,0.5s,baz=86,slow=8.0,SNR=6.9						
ASAR	**Alice Springs**	**33.51**	**258**	P	**P**	**17 07 48.2**	**-0.4**
MTN	**Manton Dam**	**37.89**	**275**	P	**P**	**17 08 27.0**	**+1.2**
MTN				IAmb	IAmb	17 08 33.9	
	comp=Z,11nm,1.3s						
PPT	**Papeete**	**38.30**	**93**	P	**P**	**17 08 27.5**	**-1.7**
	comp=Z,50nm,0.9s,baz=253,slow=19,SNR=2.6						
VNDA	**Vanda**	**57.23**	**182**	P	**P**	**17 10 51.0**	**-2.2**
	comp=Z,0.5nm,0.8s,baz=341,slow=9.8,SNR=2.2						
NVAR	**Mina Array Bea**	**89.11**	**48**	P	**P**	**17 14 01.4**	**+1.7**
	comp=Z,0.6nm,0.7s,baz=228,slow=7.1,SNR=4.5						
ILAR	**Eielson Array**	**91.20**	**17**	P	**P**	**17 14 08.0**	**-0.5**
	comp=Z,0.4nm,0.9s,baz=254,slow=4.8,SNR=4.5						
GERES	**GERESS Array B**	**145.89**	**332**	PKPbc	**PKPab**	**17 20 42.3**	**-1.0**
	comp=Z,1.3nm,0.9s,baz=48,slow=2.0,SNR=6.6						

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*JMA **03** 17:12:58.6±0.1, 23°.11N×123°.03E, h50^{km}, M2.7*

*TAP **03** 17:13:00.2, 23°.12N×122°.89E, h83^{km}±2^{km}, ML3.3, D*

ISC 03 17:12:54.7±1.3**, 23°.10N**±0°.03×**122°.98E**±0°.03**, h11^{km}**±10^{km}**, n79, σ0^s.75**/123**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HATJ	**Hateruma jima**	**1.22**	**38**	P	**Pg**	**17 13 19.3**	**+1.1**
HATJ				S	**Sg**	**17 13 33.8**	**-0.2**
JYNG	**Yonagunijimaku**	**1.35**	**359**	P	**Pg**	**17 13 21.7**	**+1.0**
JYNG				*e*S	**Sg**	**17 13 37.9**	**-0.3**
YOJ	**Yonaguni jima**	**1.36**	**1**	*e*P	**Pg**	**17 13 21.2**	**+0.4**
	baz=9.0						
YOJ				*e*S	**Sg**	**17 13 37.9**	**-0.6**
	baz=9.0						
YOJ	**Yonaguni jima**	**1.36**	**1**	P	**Pg**	**17 13 21.7**	**+0.9**
YOJ				*e*S	**Sg**	**17 13 38.1**	**-0.4**
IRIF	**Iriomote-Funau**	**1.41**	**29**	P	**Pg**	**17 13 22.1**	**+0.3**
IRIF				*e*S	**Sn**	**17 13 38.8**	**-0.2**
LDUT	**Ludao**	**1.46**	**253**	*e*P	**Pg**	**17 13 22.9**	**+0.2**
	baz=251						
LDUT				*e*S	**Sn**	**17 13 39.5**	**-0.5**
	baz=251						
JKRS	**Kuro-shima**	**1.48**	**40**	P	**Pg**	**17 13 23.0**	**-0.1**
JKRS				*e*S	**Sn**	**17 13 40.1**	**-0.5**
HGSD	**Ruisui**	**1.48**	**286**	P	**Pg**	**17 13 22.9**	**-0.3**
	baz=291						
HGSD				*e*S	**Sn**	**17 13 39.9**	**-0.9**
	baz=291						
CHKT	**Chengkung**	**1.49**	**270**	*e*P	**Pg**	**17 13 23.0**	**-0.2**
	baz=273						
CHKT				*e*S	**Sn**	**17 13 39.5**	**-1.3**
	baz=273						
EGFH	**Guangfu**	**1.54**	**292**	*e*P	**Pg**	**17 13 24.1**	**-0.1**
	baz=298						
EGFH				*e*S	**Sn**	**17 13 42.0**	**-0.1**
	baz=298						
EYUL	**Yuli**	**1.55**	**280**	P	**Pg**	**17 13 24.7**	**+0.2**
	baz=276						
EYUL				*e*S	**Sn**	**17 13 41.3**	**-1.1**
	baz=276						
EDH	**Donghe**	**1.55**	**266**	*e*P	**Pb**	**17 13 23.7**	**+0.3**
	baz=265						
EDH				*e*S	**Sn**	**17 13 41.7**	**-0.7**
	baz=265						
FULB	**Fuli**	**1.56**	**274**	*e*P	**Pb**	**17 13 24.1**	**+0.5**
	baz=273						
FULB				*e*S	**Sn**	**17 13 41.8**	**-0.8**
	baz=273						
YULB	**Yu-li**	**1.57**	**281**	P	**Pg**	**17 13 24.6**	**-0.3**
	baz=278						
YULB				*e*S	**Sb**	**17 13 44.1**	**+0.3**
	baz=278						
EHY	**Hungye**	**1.58**	**285**	P	**Pg**	**17 13 24.9**	**-0.2**
	baz=285						
EHY				*e*S	**Sb**	**17 13 43.3**	**-0.6**
	baz=285						
ESL	**Shilin**	**1.59**	**297**	*e*P	**Pb**	**17 13 24.4**	**+0.3**
	baz=297						
ESL				*e*S	**Sn**	**17 13 42.6**	**-0.8**
	baz=297						
TWD	**Chiawan**	**1.60**	**308**	*e*P	**Pb**	**17 13 24.7**	**+0.4**
	baz=309						
TWD				*e*S	**Sn**	**17 13 43.5**	**-0.2**
	baz=309						
ETL	**Fush Village**	**1.63**	**311**	*e*P	**Pg**	**17 13 26.1**	**+0.1**
	baz=306						
JIJ	**Ishigaki jima**	**1.65**	**40**	P	**Pb**	**17 13 25.4**	**+0.2**
JIJ				*e*S	**Sn**	**17 13 43.7**	**-1.2**
NACB	**Ninganchiao**	**1.66**	**310**	*e*P	**Pb**	**17 13 25.4**	**0.0**
	baz=311						
LAY	**Lan-yu**	**1.69**	**232**	*e*P	**Pb**	**17 13 25.9**	**+0.1**
	baz=235						
LONT	**Longtian**	**1.71**	**264**	*e*P	**Pg**	**17 13 27.4**	**-0.3**
	baz=263						
LONT				*e*S	**Sb**	**17 13 48.0**	**+0.2**
	baz=263						
EWUT	**Wuta**	**1.74**	**321**	*e*P	**Pg**	**17 13 27.3**	**-0.7**
	baz=329						
EWUT				*e*S	**Sb**	**17 13 48.7**	**+0.3**
	baz=329						
ETLH	**Xiulin Townshi**	**1.76**	**309**	*e*P	**Pb**	**17 13 27.5**	**+0.4**
	baz=310						
TWGBT	**Beinan**	**1.77**	**261**	*e*P	**Pb**	**17 13 27.9**	**+0.6**
	baz=256						
TWGBT				*e*S	**Sb**	**17 13 48.8**	**-0.7**
	baz=256						
TWG	**Pinlang**	**1.78**	**261**	*e*P	**Pb**	**17 13 28.2**	**+0.8**
	baz=256						
TWG				*e*S	**Sn**	**17 13 48.9**	**+0.8**
	baz=256						
ELDTW	**Lidau**	**1.81**	**273**	*e*P	**Pb**	**17 13 28.1**	**+0.1**
	baz=272						
TWC	**Suao**	**1.83**	**326**	*e*P	**Pg**	**17 13 29.3**	**-0.5**
	baz=333						
OWD	**Renai**	**1.86**	**298**	*e*P	**Pb**	**17 13 29.2**	**+0.3**
	baz=303						
WHF	**Hehuan Shan**	**1.89**	**304**	*e*P	**Pb**	**17 13 29.7**	**+0.3**
	baz=298						
YUS	**Yu-Shan**	**1.90**	**282**	*e*P	**Pg**	**17 13 30.6**	**-0.7**
	baz=277						
CHGB	**Renai**	**1.91**	**300**	*e*P	**Pb**	**17 13 30.2**	**+0.4**
	baz=300						
CHGB				*e*S	**Sb**	**17 13 52.7**	**-1.1**
	baz=300						
NDS	**Dongshan**	**1.92**	**323**	*e*P	**Pg**	**17 13 30.6**	**-0.9**
	baz=331						
JISG	**Ishigakijimahi**	**1.92**	**39**	P	**Pb**	**17 13 28.8**	**-1.0**
JISG				S	**Sn**	**17 13 50.2**	**-1.3**
ECL	**Taimali**	**1.93**	**255**	P	**Pb**	**17 13 29.9**	**-0.1**
	baz=254						
ECL				*e*S	**Sn**	**17 13 51.1**	**-0.7**
	baz=254						
FUSS	**Fushou**	**1.96**	**306**	*e*P	**Pb**	**17 13 30.8**	**+0.2**
	baz=306						
FUSS				*e*S	**Sn**	**17 13 53.6**	**+0.7**
	baz=306						
NNSB	**Datong**	**1.97**	**312**	*e*P	**Pb**	**17 13 31.0**	**+0.3**
	baz=313						
SSLB	**Suanglung**	**1.98**	**291**	*e*P	**Pb**	**17 13 30.9**	**0.0**
	baz=294						
NNS	**Nan Shan**	**1.99**	**313**	*e*P	**Pb**	**17 13 30.9**	**-0.1**
	baz=313						
ENTT	**Nioudou**	**2.01**	**320**	*e*P	**Pb**	**17 13 31.7**	**+0.4**
	baz=321						
NDT	**Datong Townshi**	**2.01**	**318**	*e*P	**Pb**	**17 13 31.8**	**+0.4**
	baz=326						
TWE	**Neicheng**	**2.01**	**324**	*e*P	**Pb**	**17 13 31.8**	**+0.4**
	baz=331						
TWE				*e*S	**Sn**	**17 13 54.4**	**+0.6**
	baz=331						
TWT	**Tachien**	**2.02**	**305**	*e*P	**Pn**	**17 13 29.9**	**+1.1**
	baz=301						
TDCB	**Techi**	**2.03**	**305**	*e*P	**Pb**	**17 13 31.2**	**-0.5**
	baz=301						
STYH	**Taoyuan**	**2.03**	**272**	*e*P	**Pb**	**17 13 31.7**	**+0.1**
	baz=272						
STYH				*e*S	**Sn**	**17 13 55.5**	**+1.2**
	baz=272						
ALS	**Alishan**	**2.04**	**282**	P	**Pb**	**17 13 32.8**	**+0.8**
	baz=286						
ALS				*e*S	**Sb**	**17 13 56.2**	**-1.3**
	baz=286						
SMLT	**Sun Moon Lake**	**2.06**	**293**	*e*P	**Pb**	**17 13 32.5**	**+0.3**
	baz=295						
SMLT				*e*S	**Sb**	**17 13 57.5**	**-0.5**
	baz=295						
EAST	**Anshuo**	**2.09**	**251**	*e*P	**Pb**	**17 13 32.6**	**-0.1**
	baz=254						
TYC	**Yuchr**	**2.11**	**293**	*e*P	**Pb**	**17 13 33.4**	**+0.5**
	baz=296						
TYC				*e*S	**Sb**	**17 13 58.6**	**-0.5**
	baz=296						
WCS	**Beigang Elemen**	**2.12**	**297**	*e*P	**Pb**	**17 13 33.6**	**+0.4**
	baz=300						
WCS				*e*S	**Sb**	**17 13 58.0**	**-1.7**
	baz=300						
TIPB	**Shuangxi**	**2.14**	**331**	*e*P	**Pb**	**17 13 32.9**	**-0.7**
	baz=337						
YHNB	**Yeheng**	**2.15**	**317**	*e*P	**Pb**	**17 13 33.9**	**+0.2**
	baz=318						
NWLT	**Wulai**	**2.15**	**321**	*e*P	**Pb**	**17 13 33.5**	**-0.2**
	baz=322						
SLGT	**Liugui**	**2.15**	**268**	*e*P	**Pg**	**17 13 35.5**	**-0.4**
	baz=266						
NSK	**Sanguang**	**2.16**	**317**	*e*P	**Pb**	**17 13 33.9**	**-0.1**
	baz=318						
TPUB	**Ta-pu**	**2.17**	**276**	*e*P	**Pb**	**17 13 35.2**	**+1.2**
	baz=275						
TPUB				*e*S	**Sb**	**17 14 00.7**	**-0.3**
	baz=275						
CHN5	**Tsauling**	**2.17**	**284**	*e*P	**Pg**	**17 13 35.5**	**-1.0**
	baz=283						
CHN5				*e*S	**Sb**	**17 14 00.6**	**-0.5**
	baz=283						
WTP	**Ta-pu**	**2.18**	**274**	P	**Pb**	**17 13 35.3**	**+1.0**
	baz=271						
WJS	**Zhushan**	**2.19**	**290**	*e*P	**Pg**	**17 13 36.2**	**-0.5**
	baz=292						
WJS				*e*S	**Sb**	**17 14 01.5**	**-0.1**
	baz=292						
SSD	**Sandimen**	**2.19**	**261**	*e*P	**Pb**	**17 13 34.1**	**-0.3**
	baz=263						
SLIU	**Shizi**	**2.20**	**247**	*e*P	**Pb**	**17 13 34.3**	**-0.2**
	baz=235						
SLIU				*e*S	**Sn**	**17 13 58.7**	**+0.3**
	baz=235						
JTJ	**Tarama**	**2.20**	**45**	P	**Pb**	**17 13 33.1**	**-1.5**
JTJ				*e*S	**Sn**	**17 13 58.2**	**-0.3**
WHP	**Taichung City**	**2.20**	**303**	*e*P	**Pg**	**17 13 36.0**	**-1.0**
	baz=302						
WHP				*e*S	**Sn**	**17 13 59.6**	**+0.9**
	baz=302						
SGST	**Jiashian**	**2.21**	**270**	*e*P	**Pb**	**17 13 34.9**	**+0.2**
	baz=271						
CHN4	**Tsaushan**	**2.21**	**277**	*e*P	**Pb**	**17 13 34.1**	**-0.7**
	baz=275						
CHN4				*e*S	**Sb**	**17 14 01.1**	**-1.0**
	baz=275						
MASBT	**Mashibuluo**	**2.22**	**258**	*e*P	**Pb**	**17 13 34.5**	**-0.3**
	baz=254						
WNT	**Mingjian**	**2.25**	**291**	*e*P	**Pb**	**17 13 36.4**	**+1.1**
	baz=291						
NWF	**Wu-fen Shan**	**2.25**	**331**	*e*P	**Pb**	**17 13 34.9**	**-0.6**
	baz=341						
CHN1	**Nanshi**	**2.26**	**273**	*e*P	**Pb**	**17 13 36.9**	**+1.3**
	baz=272						
CHN1				*e*S	**Sb**	**17 14 03.1**	**-0.4**
	baz=272						
TWA	**Mucha**	**2.27**	**326**	*e*P	**Pb**	**17 13 36.5**	**+0.8**
	baz=327						
NHDH	**Xindian Distri**	**2.28**	**325**	*e*P	**Pb**	**17 13 35.8**	**-0.2**
	baz=325						
SNST	**Tainan City**	**2.29**	**274**	*e*P	**Pb**	**17 13 37.3**	**+1.2**
	baz=271						
SCZT	**Fangliau**	**2.29**	**252**	*e*P	**Pb**	**17 13 35.7**	**-0.4**
	baz=252						
TWK	**Hsinying**	**2.30**	**275**	*e*P	**Pb**	**17 13 37.4**	**+1.1**
	baz=274						
TWK				*e*S	**Sb**	**17 14 05.3**	**+0.6**
	baz=274						
TWKBT	**Hengchun**	**2.31**	**241**	*e*P	**Pb**	**17 13 35.2**	**-1.3**
	baz=238						
LIOB	**Emei**	**2.37**	**311**	*e*P	**Pb**	**17 13 38.3**	**+0.9**
	baz=320						
NSTT	**Nanjuang**	**2.37**	**311**	*e*P	**Pb**	**17 13 37.7**	**+0.2**
	baz=316						
NSTT				*e*S	**Sb**	**17 14 04.4**	**-2.3**
	baz=316						
JIRB	**Irabujima**	**2.65**	**49**	P	**Pn**	**17 13 39.0**	**+1.7**
JIRB				*e*S	**Sn**	**17 14 08.4**	**-1.0**
JMJ2	**Miyako jima3**	**2.70**	**52**	P	**Pn**	**17 13 39.9**	**+1.8**
JMJ2				*e*S	**Sn**	**17 14 10.7**	**-0.1**

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*CRAAG **03** 17:16:17.4, 35°.99N×4°.00E, Ml2.8*

*MDD **03** 17:16:18.9±0.7, 35°.94N×3°.97E, h0^{km}, mb3.9/8, Error ellipse: s-maj=15.3km s-min=4.3km az=25.0, PRXIMO*

ISC 03 17:16:18.2±1.4**, 35°.95N**±0°.07×**3°.96E**±0°.04**, h9^{km}**±9^{km}**, n20, σ1^s.75**/25**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKET	**Djebel Ketaf**	**0.12**	**330**	P	**Pg**	**17 16 20.6**	**-0.4**
AKET	**Djebel Ketaf**	**0.12**	**330**	P	**Pg**	**17 16 20.6**	**-0.4**
ATAF	**Djebel Tarf**	**0.27**	**105**	P	**Pg**	**17 16 23.3**	**-0.3**
ATAF	**Djebel Tarf**	**0.27**	**105**	P	**Pg**	**17 16 23.3**	**-0.3**
ADJB	**Djebel Djouab**	**0.47**	**297**	P	**Pg**	**17 16 27.5**	**+0.1**
ADJB	**Djebel Djouab**	**0.47**	**297**	P	**Pg**	**17 16 27.5**	**+0.1**
ABA	**Alger-Bouzarea**	**1.13**	**319**	P	**Pb**	**17 16 39.5**	**-0.4**
ABA	**Alger-Bouzarea**	**1.13**	**319**	P	**Pb**	**17 16 39.5**	**-0.4**
SET	**Setif**	**1.20**	**77**	P	**Pg**	**17 16 41.0**	**-0.2**
SET	**Setif**	**1.20**	**77**	P	**Pg**	**17 16 41.0**	**-0.2**
EIBI	**Ibiza**	**3.71**	**327**	P	**Pn**	**17 17 16.9**	**+1.2**
	1.9nm,0.2s,SNR=7.9						
EIBI				S	**Sn**	**17 17 59.9**	**+0.3**
	13nm,0.7s,SNR=7.9						
ETOS	**Mallorca**	**3.92**	**347**	P	**Pn**	**17 17 19.5**	**+0.9**
	2.3nm,0.2s,SNR=6.4						
ETOS				S	**Sn**	**17 18 01.4**	**-3.3**
	7.0nm,0.7s,SNR=7.9						
EMUR	**La Murta**	**4.58**	**296**	P	**Pn**	**17 17 28.2**	**+0.6**
	2.5nm,0.2s,SNR=7.9						
EMUR				S	**Sn**	**17 18 19.0**	**-1.9**
	13nm,0.8s,SNR=4.0						
ETOB	**Tobarra**	**5.15**	**303**	P	**Pn**	**17 17 37.0**	**+1.5**
	1.5nm,0.3s,SNR=5.9						
ETOB				S	**Sn**	**17 18 33.2**	**-1.9**
	2.9nm,0.7s,SNR=7.9						
ECHE	**Chera**	**5.33**	**314**	P	**Pn**	**17 17 41.6**	**+3.6**
	2.8nm,0.5s,SNR=7.9						
EBER	**Berja**	**5.60**	**282**	P	**Pn**	**17 17 42.5**	**+0.7**
	0.9nm,0.2s,SNR=7.9						
EBER				S	**Sn**	**17 18 44.1**	**-2.3**
	4.7nm,0.6s,SNR=7.9						
EMOS	**Mosqueruela**	**5.62**	**323**	P	**Pn**	**17 17 44.0**	**+1.9**
	2.2nm,0.5s,SNR=7.9						
SESP	**Santiago Espad**	**5.64**	**295**	P	**Pn**	**17 17 43.9**	**+1.6**
	2.8nm,0.2s,SNR=7.9						
EQES	**Quesada**	**5.93**	**290**	P	**Pn**	**17 17 48.9**	**+2.6**
	1.9nm,0.3s,SNR=7.9						
CSOR	**Sort**	**6.79**	**342**	P	**Pn**	**17 18 00.9**	**+2.9**
	0.3nm,0.2s,SNR=7.9						

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*TRN **03** 17:32:04.8, 15°.32N×61°.33W, h143^{km}, MD4.6*

TRN Felt in Saint Lucia MMI III.

*NEIC **03** 17:32:05.8±1.8, 15°.33N±0°.05×61°.33W±0°.07, h142^{km}±4^{km}, mb4.8/213, Error ellipse: s-maj=9.5km s-min=6.2km az=68.0*

*IDC **03** 17:32:06.5±1.5, 15°.27N×61°.40W, h154^{km}±14^{km}, mb4.3/35, mb1 4.4/40, mb1mx4.3/52, mbtmp4.7/40, MS3.3/2, Ms1 3.3/2, ms1mx2.7/37, Error ellipse: s-maj=9.5km s-min=7.9km az=107.0*

*BGR **03** 17:32:06.0±0.0, 15°.32N×61°.19W, h136^{km}, mb4.9*

ISC 03 17:32:06.1±0.3**, 15°.30N**±0°.03×**61°.36W**±0°.03**, h152^{km}**±2^{km}**, h152^{km}:pP-P, n579, σ1^s.75**/674**, mb4.8**/187**, 22C-20D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MDN	**Morne-Daniel**	**0.04**	**295**	*i* P	**Pn**	**17 32 25.7**	**-0.7**
MDN				*e*S	**Sn**	**17 32 40.3**	**-1.5**
DLPL	**La Plaine**	**0.11**	**75**		**Pn**	**17 32 25.2**	**-1.2**
DLPL	**La Plaine**	**0.11**	**75**	⇑*i*P	**Pn**	**17 32 25.3**	**-1.2**
DLPL				*e*S	**Sn**	**17 32 39.8**	**-2.2**
DSLB	**Salisbury**	**0.15**	**336**	*i* P	**Pn**	**17 32 25.9**	**-0.6**
DSLB				*e*S	**Sn**	**17 32 40.3**	**-1.9**
SVN	**Savane Anatole**	**0.49**	**158**		**Pn**	**17 32 26.6**	**-1.0**
SVN				Sn	**Sn**	**17 32 42.0**	**-2.1**
SVN	**Savane Anatole**	**0.49**	**158**	*e*P	**Pn**	**17 32 26.7**	**-1.0**
FDF	**Fort de France**	**0.60**	**160**		**Pn**	**17 32 27.2**	**-1.0**
FDF				Sn	**Sn**	**17 32 43.6**	**-1.5**
FDF	**Fort de France**	**0.60**	**160**	*i* P	**Pn**	**17 32 27.4**	**-0.9**
FDF				*e*S	**Sn**	**17 32 43.6**	**-1.5**
TDBA	**Terre de Bas,**	**0.60**	**334**	*e*P	**Pn**	**17 32 27.7**	**-0.5**
TDBA				*e*S	**Sn**	**17 32 43.4**	**-1.7**
TBG	**Guadaloupe-3**	**0.61**	**333**	*e*P	**Pn**	**17 32 27.6**	**-0.6**
MAGL	**Barre de l'ile**	**0.65**	**6**	*e*P	**Pn**	**17 32 27.2**	**-1.3**
MAGL				*e*S	**Sn**	**17 32 42.9**	**-2.7**
ILAM	**Ilet Lapin Mar**	**0.70**	**138**		**Pn**	**17 32 27.3**	**-1.4**
ILAM					**Sn**	**17 32 43.2**	**-2.9**
ILAM	**Ilet Lapin Mar**	**0.70**	**138**	*i* P	**Pn**	**17 32 27.4**	**-1.4**
ILAM				*e*S	**Sn**	**17 32 43.5**	**-2.6**
CBE	**Ff, Capester**	**0.80**	**343**	*i* P	**Pn**	**17 32 28.7**	**-0.8**
CBE				*e*S	**Sn**	**17 32 45.9**	**-1.6**
BIM	**Bigot**	**0.83**	**160**		**Pn**	**17 32 28.8**	**-0.9**
BIM				Sn	**Sn**	**17 32 46.2**	**-1.6**
BIM	**Bigot**	**0.83**	**160**	*i* P	**Pn**	**17 32 28.9**	**-0.9**
BIM				*e*S	**Sn**	**17 32 46.3**	**-1.6**
MPOM	**Morne Pois Mar**	**0.98**	**150**		**Pn**	**17 32 29.3**	**-1.5**
MPOM				Sn	**Sn**	**17 32 47.1**	**-2.7**
MPOM	**Morne Pois Mar**	**0.98**	**150**	*e*P	**Pn**	**17 32 29.4**	**-1.5**
MPOM				*e*S	**Sn**	**17 32 47.0**	**-2.8**
H05S1	**Guadeloupe/Mar**	**1.01**	**150**	P	**Pn**	**17 32 29.9**	**-1.2**
H05S1				S	**Sn**	**17 32 47.0**	**-3.2**
H05N1	**Guadeloupe/Mar**	**1.05**	**16**	P	**Pn**	**17 32 29.9**	**-1.6**
H05N1				S	**Sn**	**17 32 47.2**	**-3.7**
SLBI	**Saint Lucia, B**	**1.33**	**164**	*i* P	**Pn**	**17 32 32.9**	**-1.1**
SLBI				*e*S	**Sn**	**17 32 53.1**	**-2.3**
MCLT	**Moule a Chique**	**1.64**	**166**		**Pn**	**17 32 35.1**	**-2.2**
MCLT	**Moule a Chique**	**1.64**	**166**	*e*P	**Pn**	**17 32 36.8**	**-0.5**
MCLT				*e*S	**Sn**	**17 33 00.1**	**-1.1**
ANBD	**Bethesda, Anti**	**1.78**	**347**	*i* P	**Pn**	**17 32 37.3**	**-1.4**
ANBD				*e*S	**Sn**	**17 33 00.9**	**-3.1**
ANDO	**Antigua, Disas**	**1.85**	**346**	*i* P	**Pn**	**17 32 38.2**	**-1.4**
ANDO				*e*S	**Sn**	**17 33 02.2**	**-3.3**
SVV	**Soufriere Volc**	**1.98**	**176**	*e*S	**Sn**	**17 33 07.5**	**-0.6**
SVB	**Belmont**	**2.02**	**177**		**Pn**	**17 32 41.1**	**-0.6**
SVB	**Belmont**	**2.02**	**177**	*i* P	**Pn**	**17 32 41.2**	**-0.4**
SVB				*e*S	**Sn**	**17 33 07.8**	**-1.2**
SVOC	**Richmond Hill,**	**2.14**	**176**	*e*P	**Pn**	**17 32 42.4**	**-0.6**
SVOC				*e*S	**Sn**	**17 33 09.8**	**-1.6**
NVDO	**Nevis, Disaste**	**2.17**	**326**	*i* P	**Pn**	**17 32 43.2**	**-0.1**
NVDO				*e*S	**Sn**	**17 33 10.8**	**-1.3**
SKOC	**St. Kitts, UWI**	**2.38**	**326**	*e*P	**Pn**	**17 32 45.5**	**-0.3**
SKOC				*e*S	**Sn**	**17 33 15.2**	**-1.3**
ANWB	**Willy Bob**	**2.39**	**350**		**Pn**	**17 32 43.8**	**-2.1**
ANWB				Sn	**Sn**	**17 33 12.7**	**-4.0**
ANWB	**Willy Bob**	**2.39**	**350**	⇑*i*P	**Pn**	**17 32 44.0**	**-1.9**
ANWB				*e*S	**Sn**	**17 33 15.4**	**-1.3**
SKI	**Saint Kitts**	**2.42**	**327**	Pn	**Pn**	**17 32 43.8**	**-2.5**
SKI	**Saint Kitts**	**2.42**	**327**	*e*P	**Pn**	**17 32 46.0**	**-0.2**
SKI				*e*S	**Sn**	**17 33 16.3**	**-1.0**
SEUS	**St. Eustatius**	**2.68**	**325**		**Pn**	**17 32 49.2**	**-0.2**
SEUS				Sn	**Sn**	**17 33 23.8**	**+0.8**
SEUS	**St. Eustatius**	**2.68**	**325**	*e*P	**Pn**	**17 32 49.1**	**-0.4**
SEUS				*e*S	**Sn**	**17 33 22.1**	**-1.0**
BCHC	**Barbados, Cave**	**2.73**	**142**	*e*P	**Pn**	**17 32 50.0**	**-0.1**
BCHC				*e*S	**Sn**	**17 33 23.4**	**-0.8**
BBGH	**Gun Hill**	**2.77**	**141**		**Pn**	**17 32 50.6**	**0.0**
BBGH				Sn	**Sn**	**17 33 23.8**	**-1.2**
BBGH	**Gun Hill**	**2.77**	**141**	*i* P	**Pn**	**17 32 50.6**	**0.0**
BBGH				*e*S	**Sn**	**17 33 23.7**	**-1.3**
GCMP	**Grenada, Carri**	**2.80**	**181**	*i* P	**Pn**	**17 32 50.4**	**-0.6**
GCMP				*e*S	**Sn**	**17 33 24.2**	**-1.6**
BBSP	**Saint Philip**	**2.86**	**140**	*i* P	**Pn**	**17 32 52.1**	**+0.4**
BBSP				*e*S	**Sn**	**17 33 25.4**	**-1.7**
SABA	**Saba**	**2.93**	**322**		**Pn**	**17 32 52.6**	**0.0**
SABA	**Saba**	**2.93**	**322**	*i* P	**Pn**	**17 32 52.4**	**-0.3**
SABA				*e*S	**Sn**	**17 33 26.8**	**-1.9**
GRGR	**Grenville**	**3.17**	**185**		**Pn**	**17 32 55.5**	**-0.2**
GRGR				Sn	**Sn**	**17 33 34.1**	**+0.1**
GRGR	**Grenville**	**3.17**	**185**	*i* P	**Pn**	**17 32 55.0**	**-0.7**
GRGR				*e*S	**Sn**	**17 33 32.2**	**-1.9**
SMRT	**St. Maarten**	**3.19**	**329**	Pn	**Pn**	**17 32 54.7**	**-1.3**
SMRT				Sn	**Sn**	**17 33 30.3**	**-4.3**
SMRT	**St. Maarten**	**3.19**	**329**	*i* P	**Pn**	**17 32 54.6**	**-1.3**
SMRT				*e*S	**Sn**	**17 33 32.9**	**-1.7**
TOSP	**Speyside**	**4.06**	**169**		**Pn**	**17 33 06.5**	**-0.7**
TOSP	**Speyside**	**4.06**	**169**	*i* P	**Pn**	**17 33 06.0**	**-1.2**
TOSP	**Speyside**	**4.06**	**169**	*e*S	**Sn**	**17 33 51.1**	**-3.6**
CDVI	**St. Croix**	**4.08**	**307**	Pn	**Pn**	**17 33 06.8**	**-0.6**
STVI	**Saint Thomas**	**4.59**	**312**		**Pn**	**17 33 14.0**	**0.0**
TRN	**Trinidad (W)**	**4.63**	**181**	*i* P	**Pn**	**17 33 14.4**	**-0.2**
TRN	**Trinidad (W)**	**4.63**	**181**	*e*S	**Sn**	**17 34 04.3**	**-3.8**
TBH	**Brigand Hill**	**4.80**	**177**	*e*P	**Pn**	**17 33 17.4**	**+0.5**
CUPR	**Culebra, Puert**	**4.80**	**309**	Pn	**Pn**	**17 33 16.9**	**0.0**
MTP	**Monte Pirata**	**4.89**	**305**		**Pn**	**17 33 17.9**	**-0.1**
TPP	**Pointe-a-Pierr**	**4.96**	**181**	*e*P	**Pn**	**17 33 19.3**	**+0.3**
HUMP	**Col San Antoni**	**5.15**	**304**		**Pn**	**17 33 21.7**	**+0.2**
PDPR	**Patillas Dam,**	**5.22**	**302**		**Pn**	**17 33 22.2**	**-0.2**
CBYP	**Canovanas**	**5.22**	**305**		**Pn**	**17 33 22.7**	**+0.2**
IGPR	**InterUniversit**	**5.27**	**301**	Pn	**Pn**	**17 33 22.6**	**-0.5**
SJG	**San Juan**	**5.37**	**302**	P	**Pn**	**17 33 24.3**	**-0.1**
	43nm,0.3s,baz=98,slow=10,SNR=34						
SJG				S	**Sn**	**17 34 23.6**	**-2.1**
	6.0nm,0.3s,baz=217,slow=20,SNR=6.5						
SJG	**San Juan**	**5.37**	**302**	*e*P	**Pn**	**17 33 24.6**	**+0.1**
GCPR	**Guaynabo City**	**5.42**	**304**		**Pn**	**17 33 25.2**	**0.0**
OBIP	**Obispado Ponce**	**5.72**	**299**	Pn	**Pn**	**17 33 28.8**	**-0.2**
EMPR	**Esperanza - Ma**	**5.87**	**303**		**Pn**	**17 33 31.9**	**+0.8**
AOPR	**Arecibo Observ**	**5.99**	**301**		**Pn**	**17 33 33.1**	**+0.5**
PLCV	**Puerto La Cruz**	**6.00**	**212**		**Pn**	**17 33 33.2**	**+0.3**
PLCV					**Sn**	**17 34 38.7**	**-2.2**
PCRV	**Puerto La Cruz**	**6.02**	**212**	P	**Pn**	**17 33 33.2**	**+0.1**
	6.1nm,0.3s,baz=12,slow=6.4,SNR=30						
PCRV				S	**Sn**	**17 34 38.7**	**-2.5**
	1.6nm,0.3s,baz=49,slow=11,SNR=1.2						
MLPR	**Magueyes Islan**	**6.06**	**297**	Pn	**Pn**	**17 33 33.5**	**-0.1**
CRPR	**Cabo Rojo, PR**	**6.13**	**297**	Pn	**Pn**	**17 33 34.7**	**+0.1**
AGPR	**Aguadilla, PR**	**6.34**	**301**		**Pn**	**17 33 37.6**	**+0.3**

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HATO  Hato, Curacao      8.01 248  Pn    Pn     17 33 59.6  0.0
DR12  Loma Pena Alta     8.42 295        Pn     17 34 05.0 -0.2
BAUV  El Baul            9.09 227 eP     Pn     17 34 13.9 -0.1
BAUV  El Baul            9.09 227 eS     Sn     17 35 47.4 -7.6
BANI  BANI               9.15 291        Pn     17 34 16.1 +1.2
SC01  Santiago de lo     9.84 296        Pn     17 34 23.6 -0.4
SDDR  Presa de Saban    10.17 292        Pn     17 34 27.9 -0.5
SDDR  Presa de Saban    10.17 292 eP     Pn     17 34 28.6 +0.1
URIC  Uribia, Colomb    10.94 252        Pn     17 34 36.8 -1.8
URIC  Uribia, Colomb    10.94 252 eP     Pn     17 34 36.8 -1.8
SDV   Santo Domingo     11.09 236  P     Pn     17 34 40.7 +0.1
      1.9nm,0.3s,baz=20,slow=9.0,SNR=8.9
SDV                                S     Sn     17 36 45.0 +1.6
      1.4nm,0.3s,baz=5.3,slow=12,SNR=1.3
SDV                                LR    LR     17 39 29.6
      comp=Z,132nm,18.5s,baz=46,slow=40
SDV   Santo Domingo     11.09 236  Pn    Pn     17 34 40.2 -0.4
SDV   Santo Domingo     11.09 236 eP     P      17 34 50.7 +1.7
SDV   Santo Domingo     11.09 236 eP     Pn     17 34 42.9 +2.2
GRTK  Grand Turk        11.14 305  Pn    Pn     17 34 37.2 -3.9
BOAV  Boa Vista         12.85 176 eP     Pn     17 34 59.6 -3.8
MDP   Montagnes des     13.27 139  P     Pn     17 35 04.7 -4.1
      8.5nm,0.3s,baz=314,slow=15,SNR=30
MDP                                S     Sn     17 37 23.2  -13
      11nm,0.3s,baz=57,slow=11,SNR=19
TAMC  Tame, Arauca      13.51 230 eP     P      17 35 18.2 +2.5
PAMC  Pamplona, Colo    13.64 236 eP     P      17 35 18.7 +1.0
OCAC  Ocana             13.65 240        Pn     17 35 12.8 -0.9
GTBY  Guantanamo Bay    13.89 291  Pn    Pn     17 35 16.4 -0.2
SMLC  San Martn de      14.01 244 eP     Pn     17 35 18.9 +0.8
BARC  Barichara         14.47 235 eP     P      17 35 28.8 +2.1
SJCC  San Jacinto, C    14.52 250  P     Pn     17 35 25.3 +0.7
SJCC  San Jacinto, C    14.52 250 eP     P      17 35 26.0 -1.0
BRRC  Barranca, Sant    14.59 237 eP     P      17 35 29.2 +1.4
RUSC  La Rusia          14.83 232 eP     P      17 35 31.5 +0.6
ZARC  Zaragoza, Cauc    15.34 241        Pn     17 35 34.2 -0.5
ZARC  Zaragoza, Cauc    15.34 241 eP     P      17 35 37.5 +1.5
MOTC  Monteria, Cord    15.42 247  P     Pn     17 35 36.0 +0.3
SPBC  San Pablo de B    15.75 234 eP     Pn     17 35 39.3 -0.6
MTDJ  Mount Denham      15.76 283        P      17 35 41.1 +0.4
MTDJ                               IAmb  IAmb   17 36 01.1
      comp=Z,37nm,1.0s
PTGA  Pitinga           15.99 175  P     Pn     17 35 41.1 -1.7
      comp=Z,6.8nm,0.3s,baz=1.9,slow=14,SNR=156
PTGA                               S     S      17 38 29.9  -11
      comp=Z,6.2nm,0.3s,baz=91,slow=21,SNR=7.0
PTGA  Pitinga           15.99 175  P     Pn     17 35 40.7 -2.0
CHIC  Chingaza          16.14 230 eP     P      17 35 45.8 +0.4
NORC  Norcasia          16.43 235 eP     P      17 35 49.9 +1.7
ROSC  El Rosal          16.45 232  P     P      17 35 49.7 +1.0
      comp=Z,5.9nm,0.3s,baz=58,slow=1.6,SNR=19
ROSC                               S     Sn     17 38 56.7 +4.1
      comp=Z,1.9nm,0.3s,baz=122,slow=23,SNR=1.5
ROSC  El Rosal          16.45 232  P     P      17 35 49.3 +0.6
ROSC                               IAmb  IAmb   17 36 09.9
      comp=Z,90nm,1.1s
ROSC  El Rosal          16.45 232 eP     P      17 35 51.4 +2.7
VILC  Villavicencio,    16.46 229 eP     Pn     17 35 52.4 +3.8
HELC  Santa Helena      16.60 238 eP     Pn     17 35 52.8 +2.3
GUY2C Guyana, Caldas    17.02 235 eP     Pn     17 35 56.5 +0.8
CBOC  Ciudad Bolivar    17.18 238 eP     Pn     17 35 59.2 +1.9
BBSR  BB Station        17.26 350  P     Pn     17 35 58.0  0.0
ANIL  Santa Ana         17.50 234 eP     Pn     17 36 02.8 +1.5
ORTC  Ortega, Tolima    17.75 232 eP     Pn     17 36 04.8 +0.8
PLMC  San Jos del P     17.95 236 eP     P      17 36 03.9 -1.0
MACC  Macarena, Meta    17.96 224 eP     P      17 36 05.8 +0.8
MCPB  Macapa, AP        18.08 149 eP     P      17 36 06.1 -0.1
MACA  Manacapuru-AM     18.36 178 eP     Pn     17 36 10.4 -0.7
LCCY  Blossom Villag    18.38 286  P     P      17 36 08.8 -0.6
MALB  Monte Alegre      18.43 157 eP     P      17 36 10.2 +0.2
YOTC  Yotoco, Valle     18.55 234 eP     P      17 36 10.2 -1.3
BETC  Betania           18.71 229 eP     P      17 36 13.9 +0.8
BCIP  Isla Barro Col    19.05 253  P     P      17 36 18.0 +1.2
BCIP                               IAmb  IAmb   17 36 49.2
      comp=Z,37nm,1.1s
PRVC  Isla de Provid    19.48 267  P     P      17 36 21.4  0.0
PCON  Cinco Dias        19.65 230 eP     P      17 36 24.9 +1.0
SOTA  Rioblanco         19.93 230 eP     Pn     17 36 29.0 -1.1
ITTB  Itaituba          20.32 164 eP     P      17 36 31.0 +0.5
061Z  Ochoppi           21.08 303  P     P      17 36 38.5 +0.1
GCUF  Volcan Galeras    21.09 230 eP     P      17 36 37.8 -1.4
TBTG  Tabatinga, AM     21.14 204 eP     P      17 36 37.8 -1.3
SOR   Soroa             21.76 293  P     P      17 36 45.7 -0.1
TMAB  Tom-Au,PA,Br      21.92 142 eP     P      17 36 49.1 +1.6
CDITO Canoas            22.07 255  P     P      17 36 49.7 +0.6
SRBA  San Rafael, Bu    22.32 257  P     P      17 36 52.8 +1.1
SRBA                               IAmb  IAmb   17 37 30.9
      comp=Z,35nm,1.1s
OTAV  Otavalo           22.57 230  P     P      17 36 53.4 -1.0
OTAV                               IAmb  IAmb   17 37 30.8
      comp=Z,42nm,1.4s
OTAV  Otavalo           22.57 230 eP     P      17 36 53.7 -0.6
OTAV  Otavalo           22.57 230 eP     P      17 36 54.1 -0.2
RIMA  Rio Macho         22.64 259  P     P      17 36 56.2 +1.4
COVE  Coope Vega, Sa    22.90 261  P     P      17 36 57.5 +0.5
COVE                               IAmb  IAmb   17 37 33.5
      comp=Z,48nm,1.1s
NPGB  Novo Progresso    22.99 165 eP     P      17 36 58.5 +0.8
JTS   Las Juntas de     23.53 261  P     P      17 37 02.7  0.0
      comp=Z,2.1nm,0.4s,baz=11,slow=20,SNR=2.1
JTS   Las Juntas de     23.53 261  P     P      17 37 02.3 -0.5
ORTG  Ortega, Santa     24.00 261  P     P      17 37 06.9 -0.1
SAML  Samuel            24.16 184  P     P      17 37 08.5 +0.1
SAML  Samuel            24.16 184 eP     P      17 37 08.7 +0.4
SAML  Samuel            24.16 184 eP     P      17 37 08.2 -0.2
PRPB  Parauapebas       24.21 151 eP     P      17 37 10.8 +2.0
RGRS  Roger Stewart     24.48 319  P     P      17 37 12.3 +1.1
V61A  Roper             24.53 329  P     P      17 37 08.3 -3.2
V61A                                     pP     17 37 42.0 -0.2
NHSC  New Hope          24.60 319  P     P      17 37 11.3 -0.9
NHSC                                     pP     17 37 45.3 +2.4
Y58A  Scranton          24.83 322  P     P      17 37 10.0 -4.3
Y58A                                     pP     17 37 47.6 +2.3
255A  Hazlehurst        25.38 314  P     P      17 37 15.7 -3.7
255A                                     pwP    17 37 53.9 +3.4
255A                               IAmb  IAmb   17 37 56.1
      comp=Z,33nm,0.7s
ETMB  Extrema           25.42 191 eP     P      17 37 19.2 -0.5
BIRD  Birdtown, Kers    25.81 322  P     P      17 37 23.7 +0.5
BIRD                                     pP     17 38 00.5 +6.1
BIRD                               IAmb  IAmb   17 38 03.6
      comp=Z,16nm,0.6s
V58A  Windy Hill, Pi    25.86 325  P     P      17 37 23.1 -0.5
V58A                                     pwP    17 38 01.5 +4.7
V58A                               IAmb  IAmb   17 38 21.7
      comp=Z,60nm,1.6s
W57A  Gilead            25.89 323  P     P      17 37 24.1 +0.2
W57A                                     pP     17 38 02.3 +7.2
T59A  Double "B" Far    25.94 329  P     P      17 37 23.5 -0.8
T59A                                     pP     17 38 02.1 +6.4
T59A                               IAmb  IAmb   17 38 13.9
      comp=Z,16nm,0.6s
JSC   Jenkinsville      26.05 320  P     P      17 37 25.2 -0.1
JSC                                      pP     17 38 03.4 +6.8
JSC                                IAmb  IAmb   17 38 04.7
      comp=Z,30nm,1.0s
154A  Montrose          26.22 315  P     P      17 37 27.1 +0.3
154A                                     pwP    17 38 05.6 +5.5
CLDB  Colider           26.59 168 eP     P      17 37 31.0 +0.7
HODGE Hodges            26.65 319  P     P      17 37 29.8 -0.9
HODGE                                    sP     17 38 11.5 -7.7
HODGE                              IAmb  IAmb   17 38 13.5
      comp=Z,27nm,0.7s
JSRW  J. Sargeant Re    26.67 330  P     P      17 37 32.7 +1.8
KMSC  Kings Mountain    26.68 321  P     P      17 37 28.2 -2.8
KMSC                                     sP     17 38 12.4 -7.2
KMSC                               IAmb  IAmb   17 38 13.9
      comp=Z,25nm,0.6s
PAULI Pauline           26.75 320  P     P      17 37 31.2 -0.4
PAULI                              IAmb  IAmb   17 38 14.8
      comp=Z,32nm,1.0s
T57A  Hurt              26.83 327  P     P      17 37 32.9 +0.6
T57A                                     sP     17 38 12.1 -9.0
R58B  Mineral           26.89 330  P     P      17 37 33.6 +0.8
R58B                                     sP     17 38 14.1 -7.6
R58B                               IAmb  IAmb   17 38 31.9
      comp=Z,14nm,0.8s
GOGA  Godfrey           26.93 316  P     P      17 37 32.7 -0.5
GOGA                                     sP     17 38 15.3 -6.7
V55A  Taylorsville      27.09 323  P     P      17 37 34.1 -0.6
V55A                                     sP     17 38 18.6 -4.9
V55A                               IAmb  IAmb   17 38 30.8
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      comp=Z,26nm,1.2s
PDRB  Porto dos Gac     27.13 170 eP     P      17 37 36.1 +0.9
S57A  Dark Hollow, R    27.26 328        P      17 37 37.1 +1.0
S57A                                     sP     17 38 18.4 -6.7
S57A                               IAmb  IAmb   17 38 22.0
      comp=Z,29nm,0.8s
P60A  Greenville        27.43 336  P     P      17 37 36.7 -0.8
P60A                                     sP     17 38 21.4 -5.3
P60A                               IAmb  IAmb   17 38 22.9
      comp=Z,18nm,0.8s
WUPA  West Chester U    27.52 336  P     P      17 37 37.0 -1.4
WUPA                                     sP     17 38 22.0 -5.4
WUPA                               IAmb  IAmb   17 38 23.9
      comp=Z,16nm,0.6s
BG3   Lake Jocassee     27.56 319  P     P      17 37 38.3 -0.6
BG3                                      sP     17 38 24.0 -3.6
SDMD  Soldier's Deli    27.59 333  P     P      17 37 39.0  0.0
SDMD                                     sP     17 38 22.7 -5.5
SDMD                               IAmb  IAmb   17 38 25.0
      comp=Z,22nm,0.7s
SMTB  Santa Maria do    27.62 150 eP     P      17 37 41.1 +1.6
BRNJ  Basking Ridge     27.78 338  P     P      17 37 40.1 -0.6
BRNJ                               IAmb  IAmb   17 38 21.2
      comp=Z,50nm,1.4s
BRNJ                                     sP     17 38 26.9 -3.1
WSPT  Westport, CT      27.79 340  P     P      17 37 41.3 +0.5
WSPT                                     sP     17 38 26.2 -4.1
WSPT                               IAmb  IAmb   17 38 29.1
      comp=Z,16nm,0.5s
PAL   Palisades         27.83 339  P     P      17 37 40.0 -1.1
PAL                                      sP     17 38 27.5 -2.9
PAL                                IAmb  IAmb   17 38 30.5
      comp=Z,20nm,0.6s
ATAH  Atahualpa         27.96 218  P     P      17 37 43.9 +0.8
      comp=Z,25nm,0.9s,baz=47,slow=5.8,SNR=11
VILB  Vilhena           28.10 178 eP     P      17 37 45.6 +1.8
ODNJ  Ogdensburg        28.14 338  P     P      17 37 42.4 -1.5
ODNJ                                     sP     17 38 32.0 -1.2
ODNJ                               IAmb  IAmb   17 38 33.4
      comp=Z,13nm,0.6s
P57A  Homestead Farm    28.17 332  P     P      17 37 42.5 -1.7
P57A                                     sP     17 38 31.1 -2.3
P57A                               IAmb  IAmb   17 38 32.5
      comp=Z,13nm,0.9s
R55A  Marlinton         28.25 328  P     P      17 37 43.7 -1.3
R55A                                     sP     17 38 34.9 +1.0
KSCT  Kent School, K    28.34 341  P     P      17 37 45.6  0.0
Q56A  Snyder Ridge,     28.36 330  P     P      17 37 43.5 -2.5
Q56A                                     sP     17 38 35.5 +0.5
TKL   Tuckaleechee C    28.52 319  P     P      17 37 48.2 +0.8
      comp=Z,1.1nm,0.5s,baz=182,slow=21,SNR=1.4
TKL   Tuckaleechee C    28.52 319  P     P      17 37 47.8 +0.5
TKL                                      sP     17 38 37.3 +1.2
S54A  Dingess, Beckl    28.52 326  P     P      17 37 47.8 +0.3
S54A                                     sP     17 38 38.9 +2.5
N58A  Sunbury           28.73 335  P     P      17 37 49.1  0.0
N58A                                     sP     17 38 39.2 +0.8
N58A                               IAmb  IAmb   17 38 43.8
      comp=Z,17nm,0.6s
SNDB  Serra Nova Dou    28.88 159 eP     P      17 37 51.3 +0.6
TZTN  Tazewell          28.95 321  P     P      17 37 49.5 -1.7
TZTN                                     sP     17 38 44.5 +4.5
TZTN                               IAmb  IAmb   17 38 54.1
      comp=Z,36nm,1.4s
O56A  Blue Knob Stat    29.05 332  P     P      17 37 49.9 -2.1
O56A                                     sP     17 38 43.7 +2.4
SSPA  Standing Stone    29.05 334  P     P      17 37 52.2 +0.2
SSPA                                     sP     17 38 43.7 +2.5
SSPA                               IAmb  IAmb   17 38 46.9
      comp=Z,19nm,1.1s
R53A  Hurricane         29.26 326  P     P      17 37 53.2 -0.7
R53A                                     sP     17 38 48.7 +5.9
L59A  Walton            29.27 339  P     P      17 37 54.2 +0.2
S51A  Beattyville       29.70 323  P     P      17 37 59.0 +1.2
S51A                                     PnPn   17 38 55.1 -5.6
S51A                               IAmb  IAmb   17 38 57.8
      comp=Z,14nm,0.8s
I62A  Tamworth          29.72 345  P     P      17 37 56.5 -1.4
I62A                               IAmb  IAmb   17 38 20.5
      comp=Z,23nm,1.4s
O54A  Avella            29.83 330  P     P      17 37 57.1 -1.7
Q52A  Bidwell           29.88 326  P     P      17 37 59.2 -0.1
Q52A                               IAmb  IAmb   17 39 00.0
      comp=Z,20nm,0.7s
M55A  Ridgway           30.11 333  P     P      17 38 01.5 +0.1
M55A                                     sP     17 38 57.4 +6.7
M55A                               IAmb  IAmb   17 38 58.3
      comp=Z,14nm,1.1s
PEXB  Peixe             30.14 154 eP     P      17 38 04.6 +2.7
J59A  Piesco            30.23 341  P     P      17 38 02.5 +0.1
J59A                                     PnPn   17 38 59.9 -7.5
J59A                               IAmb  IAmb   17 39 06.5
      comp=Z,34nm,1.7s
O53A  New Philadelph    30.29 329  P     P      17 38 02.8 -0.2
O53A                               IAmb  IAmb   17 38 21.9
      comp=Z,43nm,1.6s
J58A  Remsen            30.39 340  P     P      17 38 03.2 -0.6
J58A                                     PnPn   17 39 03.2 -6.2
J58A                               IAmb  IAmb   17 39 05.4
      comp=Z,14nm,0.8s
LMN   Caledonia Moun    30.59 355  P     P      17 38 05.8 +0.3
LMN                                      PnPn   17 39 03.7 -8.2
LMN                                IAmb  IAmb   17 39 04.3
      comp=Z,49nm,1.6s
PTLB  Pontes e Lacer    30.63 176 eP     P      17 38 07.2 +1.0
J57A  Williamstown      30.68 339  P     P      17 38 05.7 -0.6
J57A                                     PnPn   17 39 06.7 -6.3
J57A                               IAmb  IAmb   17 39 08.9
      comp=Z,17nm,1.1s
PLAL  Pickwick Lake     30.96 314  P     P      17 38 09.3 +0.4
F63A  Nahmakanta, Br    31.00 349  P     P      17 38 08.8 -0.3
F63A                               IAmb  IAmb   17 38 18.8
      comp=Z,33nm,1.6s
SIV   San Ignacio       31.10 179  P     P      17 38 11.3 +1.0
      comp=Z,45nm,0.6s,baz=6.4,slow=8.4,SNR=173
SALV  Santo Antonio     31.51 170 eP     P      17 38 15.1 +1.3
P49A  Miami Univ. Ec    31.64 324  P     P      17 38 14.3 -0.5
P49A                               IAmb  IAmb   17 39 23.5
      comp=Z,10nm,0.5s
OXF   Oxford            31.66 312  P     P      17 38 16.0 +0.9
OXF                                IAmb  IAmb   17 39 22.3
      comp=Z,29nm,1.1s
E62A  Clayton Lake      31.96 349  P     P      17 38 18.4 +0.9
E62A                               IAmb  IAmb   17 38 45.9
      comp=Z,28nm,1.7s
E62A                                     PnPn   17 39 25.8 -3.2
LPAZ  La Paz            32.09 192  P     P      17 38 18.9 -0.7
      comp=Z,3.6nm,0.8s,baz=6.6,slow=7.9,SNR=10
LPAZ                               LR    LR     17 55 03.3
      comp=Z,43nm,18.2s,baz=348,slow=43
LPAZ  La Paz            32.09 192  P     P      17 38 19.1 -0.7
LPAZ  La Paz            32.09 192 eP     P      17 38 19.6 -0.1
BATG  Bathurst New B    32.12 354  P     P      17 38 19.5 +0.6
BATG                               IAmb  IAmb   17 39 22.6
      comp=Z,13nm,1.2s
BATG                                     PnPn   17 39 25.1 -5.9
ARAG  Araguaiana, MT    32.22 163 eP     P      17 38 21.5 +1.4
PLVO  Plevna            32.48 339  P     P      17 38 22.6 +0.6
PLVO                               IAmb  IAmb   17 38 59.0
      comp=Z,34nm,1.8s
PLVO                                     PnPn   17 39 29.4 -6.2
TRQ   Mont Tremblant    32.75 343  P     P      17 38 25.3 +0.8
TRQ                                IAmb  IAmb   17 39 13.5
      comp=Z,20nm,1.6s
SIUC  Southern Illin    33.24 317  P     P      17 38 29.1 +0.3
SIUC                               IAmb  IAmb   17 39 42.3
      comp=Z,12nm,0.8s
S44A  Carbondale        33.26 317  P     P      17 38 29.0 +0.1
S44A                               IAmb  IAmb   17 39 42.4
      comp=Z,11nm,0.8s
BDFB  Brasilia          33.45 156  P     P      17 38 32.1 +1.2
      comp=Z,8.0nm,0.8s,baz=326,slow=5.6,SNR=5.9
BDFB  Brasilia          33.45 156  P     P      17 38 31.3 +0.4
BDFB                               IAmb  IAmb   17 38 33.3
      comp=Z,22nm,1.2s
NBPV  Pedro Velho       33.66 128 eP     P      17 38 36.7 +4.0
DRLN  Deer Lake         34.01   5  P     P      17 38 35.7 +0.4
T42A  Van Buren         34.12 315  P     P      17 38 35.7 -0.7
JANB  Januaria          34.55 150 eP     P      17 38 41.8 +1.4
CCM   Cathedral Cave    34.77 316  P     P      17 38 41.5 -0.5
CCM                                      PP     17 40 03.9  0.0
MGMO  Mountain Grove    34.99 314  P     P      17 38 44.0  0.0
IPMB  Ipameri, GO       35.52 158 eP     P      17 38 49.4 +0.7
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R40A  Maddies Statio    35.58 316  P     P      17 38 48.3 -0.6
PSGCX Pisagua           35.74 194  P     P      17 38 47.2 -3.3
PSGCX                              IAmb  IAmb   17 39 16.0
      comp=Z,24nm,1.3s
PB11  IPOC Station P    35.79 193  P     P      17 38 47.6 -3.4
S39A  Bolivar           35.99 314  P     P      17 38 52.7 +0.2
PB08  IPOC Station P    36.05 193  P     P      17 38 50.5 -2.9
PB08                               IAmb  IAmb   17 38 51.9
      comp=Z,18nm,1.2s
SACV  Santiago Islan    36.41  85  P     P      17 38 54.8 -1.5
H43A  Windswept, Lux    36.69 328  P     P      17 38 57.8 -0.5
H43A                               IAmb  IAmb   17 39 38.3
      comp=Z,27nm,1.5s
PB01  IPOC Station P    36.99 193  P     P      17 38 57.9 -3.2
PB01                               IAmb  IAmb   17 38 59.5
      comp=Z,15nm,1.1s
L40A  Anamosa           37.04 322  P     P      17 39 00.4 -0.8
PB07  IPOC Station P    37.74 193  P     P      17 39 05.1 -2.5
PB07                               IAmb  IAmb   17 39 05.8
      comp=Z,16nm,0.7s
LVC   Limon Verde       38.40 191  P     P      17 39 11.5 -1.7
      comp=Z,6.8nm,0.6s,baz=24,slow=5.1,SNR=9.4
LVC   Limon Verde       38.40 191  P     P      17 39 10.8 -2.5
TRCB  Terra Rica        38.81 167 eP     P      17 39 17.6 +1.3
SCHQ  Schefferville     39.67 355  P     P      17 39 24.1 +1.0
      comp=Z,4.3nm,0.4s,baz=180,slow=7.3,SNR=21
SCHQ  Schefferville     39.67 355  P     P      17 39 23.6 +0.5
SCHQ                               IAmb  IAmb   17 39 25.0
      comp=Z,30nm,1.4s
EYMN  Ely               40.95 329  P     P      17 39 33.3 -0.5
ECSD  EROS Data Cent    41.25 321  P     P      17 39 36.1 -0.1
TXAR  Lajitas Array     41.33 297  P     P      17 39 37.1 -0.1
      comp=Z,0.2nm,0.4s,baz=125,slow=7.5,SNR=6.9
TXAR                               pP    pwP    17 40 12.8 +0.2
      comp=Z,1.1nm,0.8s,baz=99,slow=7.7,SNR=3.3
TXAR                               PcP   PcP    17 41 33.8 +1.0
      comp=Z,1.7nm,0.8s,baz=124,slow=5.7,SNR=7.2
TXAR                               ScP   ScP    17 45 09.2 +0.5
      comp=Z,0.9nm,0.9s,baz=115,slow=8.4,SNR=5.0
TXAR  Lajitas Array     41.33 297  P     P      17 39 37.6 +0.4
DUB01 Friburgo-RJ       41.55 153 eP     P      17 39 41.1 +2.2
CPUP  Villa Florida     41.57 175  P     P      17 39 38.2 -0.7
      comp=Z,10nm,0.7s,baz=358,slow=7.8,SNR=20
CPUP  Villa Florida     41.57 175  P     P      17 39 38.5 -0.4
CPUP                               IAmb  IAmb   17 39 40.3
      comp=Z,12nm,0.8s
AC02  Maricunga         42.56 190  P     P      17 39 46.8 -0.8
AC02                               IAmb  IAmb   17 39 47.7
      comp=Z,19nm,0.8s
MNTX  Cornudas Mount    43.23 300  P     P      17 39 52.3 -0.2
AGMN  Agassiz Nation    43.43 327  P     P      17 39 53.7  0.0
AGMN                               IAmb  IAmb   17 39 54.1
      comp=Z,9.6nm,0.5s
PMOZ  Porto Moniz, M    43.58  58  P     P      17 39 56.2 +0.8
ULM   Lac du Bonnet     44.64 329  P     P      17 40 02.5 -0.9
      comp=Z,3.9nm,0.4s,baz=117,slow=7.1,SNR=7.6
ULM   Lac du Bonnet     44.64 329  P     P      17 40 03.0 -0.4
ITQB  Itaqui            44.95 174  P     P      17 40 05.9  0.0
ITQB                               IAmb  IAmb   17 41 41.7
      comp=Z,41nm,1.4s
CO03  El Pedregal       46.75 191  P     P      17 40 19.1 -1.0
CO03                               IAmb  IAmb   17 40 19.6
      comp=Z,30nm,0.8s
CO06  Fray Jorge        46.77 192  P     P      17 40 19.2 -1.1
NRS   Narsarsuaq        47.21  10  P     P      17 40 24.5 +1.2
PLTB  Pedras Altas      47.38 171  P     P      17 40 25.2 +0.2
PLTB                               IAmb  IAmb   17 40 25.7
      comp=Z,14nm,1.0s
DGMT  Dagmar            48.19 323  P     P      17 40 31.7 +0.6
MT02  Curacav           49.18 191  P     P      17 40 37.8 -1.0
MT02                               IAmb  IAmb   17 40 39.4
      comp=Z,19nm,1.3s
PD31  Pinedale Array    49.38 314  P     P      17 40 41.1 +0.5
PD31                               PcP   PcP    17 42 00.9 +0.2
PDAR  Pinedale Array    49.38 314  P     P      17 40 40.9 +0.3
      comp=Z,3.5nm,0.7s,baz=118,slow=9.3,SNR=20
PDAR                               pP    pP     17 41 13.9 -0.6
      comp=Z,1.1nm,0.5s,baz=116,slow=10.0,SNR=2.6
PDAR                               PcP   PcP    17 41 59.6 -1.2
      comp=Z,1.4nm,0.6s,baz=101,slow=7.7,SNR=1.5
PDAR                               ScP   ScP    17 45 41.7 -0.2
      comp=Z,0.3nm,0.5s,baz=97,slow=7.4,SNR=1.8
MT09  Talagante         49.66 191  P     P      17 40 41.3 -1.3
MT09                               IAmb  IAmb   17 41 28.3
      comp=Z,47nm,1.8s
BO01  Tunca             50.28 190  P     P      17 40 46.0 -1.0
BO01                               IAmb  IAmb   17 40 47.5
      comp=Z,26nm,1.2s
REDW  Red Top Meadow    50.46 314  P     P      17 40 47.1 -1.6
MOOW  Moose Ponds       50.51 315  P     P      17 40 47.7 -1.3
TPAW  Teton Pass        50.57 314  P     P      17 40 49.9 +0.4
TPAW                               PcP   PcP    17 42 05.7 +0.5
BO02  Sierra Bellavi    50.62 190  P     P      17 40 48.6 -1.0
BO02                               IAmb  IAmb   17 40 50.6
      comp=Z,33nm,1.1s
YHH   Holmes Hill       50.91 316  P     P      17 40 52.1 -0.1
GO05  Huala             51.03 191  P     P      17 40 52.0 -0.7
PTEO  Sao Teotonio      51.34  54 eP     P      17 40 56.3 +1.2
BGU   Big Grassy Mou    51.34 310  P     P      17 40 55.9 +0.6
BGU                                IAmb  IAmb   17 41 05.5
      comp=Z,9.3nm,0.8s
EGMT  Eagleton          51.35 320  P     P      17 40 55.8 +0.7
MORF  Marmelete         51.35  54 eP     P      17 40 56.3 +1.0
      comp=Z,63nm,1.4s
HVU   Hansel Valley     51.38 312  P     P      17 40 54.9 -0.6
PNCL  Nicolau / Gran    51.60  53 eP     P      17 40 58.4 +1.4
      comp=Z,49nm,1.7s
ML02  Panimavida        51.67 190  P     P      17 40 56.4 -1.0
H10N3 ASCENSION HYDR51.81 113      T     T      18 37 34.9
      baz=297,slow=76,SNR=34
H10N2 ASCENSION HYDR51.82 113      T     T      18 37 35.4
      baz=297,slow=76,SNR=42
H10N1 ASCENSION HYDR51.83 113      T     T      18 37 36.5
      baz=297,slow=76,SNR=35
PCVE  Castro Verde      51.89  54 eP     P      17 41 00.3 +1.1
PCAS  Casmilo, Conde    52.02  51 eP     P      17 41 00.7 +0.6
PMTG  Montargil         52.02  52 eP     P      17 41 01.1 +1.0
      comp=Z,32nm,1.5s
PBEJ  Beja              52.10  54 eP     P      17 41 01.9 +1.2
PVAQ  Vaqueiros         52.10  54  P     P      17 41 01.4 +0.6
H10S3 ASCENSION HYDR52.17 114      T     T      18 37 59.4
      baz=284
H10S2 ASCENSION HYDR52.19 114      T     T      18 38 03.8
      baz=296
PESTR Estremoz          52.47  53 eP     P      17 41 04.5 +1.1
      comp=Z,34nm,1.8s
PVIS  Viseu             52.62  50 eP     P      17 41 05.1 +0.5
PGAV  Gavieira, Arco    52.63  49 eP     P      17 41 05.5 +0.8
      comp=Z,62nm,1.7s
PMRV  Marv??o           52.73  52 eP     P      17 41 06.1 +0.8
PCAB  Cabril            52.75  49 eP     P      17 41 06.3 +0.9
PCBR  Castelo Branco    52.75  51 eP     P      17 41 06.7 +1.3
PBAR  Barrancos         52.77  54 eP     P      17 41 06.9 +1.3
MTE   Manteigas         52.81  51 eP     P      17 41 07.1 +1.1
MTE   Manteigas         52.81  51  P     P      17 41 06.7 +0.7
MTE                                IAmb  IAmb   17 42 57.6
      comp=Z,39nm,1.5s
POLO  Lamas de Olo      52.84  49 eP     P      17 41 07.1 +0.9
      comp=Z,23nm,1.7s
HLID  Hailey            53.01 313  P     P      17 41 07.3 -0.2
TRQA  Tornquist         53.08 181  P     P      17 41 07.5 -0.3
TRQA                               IAmb  IAmb   17 41 08.9
      comp=Z,23nm,1.1s
MVO   Moncorvo          53.36  50 eP     P      17 41 11.7 +1.7
PBRG  Braganca          53.70  49 eP     P      17 41 13.9 +1.4
PLID  Pearl Lake        54.50 315  P     P      17 41 18.8 +0.4
LC01  Cunco             54.81 190  P     P      17 41 19.6 -0.7
LC01                               IAmb  IAmb   17 41 20.4
      comp=Z,21nm,0.9s
NVAR  Mina Array Bea    54.85 306  P     P      17 41 21.6 +0.6
      comp=Z,1.2nm,0.7s,baz=94,slow=6.3,SNR=8.3
NVAR                               PcP   PcP    17 42 22.2 +0.8
      comp=Z,0.4nm,0.4s,baz=116,slow=2.1,SNR=2.1
NVAR  Mina Array Bea    54.85 306  P     P      17 41 20.2 -0.8
PAB   San Pablo         55.07  52  P     P      17 41 22.4  0.0
KOWA  Kowa              55.28  83  P     P      17 41 24.4 +0.3
ESDC  Sonseca Array     55.38  52  P     P      17 41 25.4 +0.8
      comp=Z,5.8nm,0.7s,baz=260,slow=7.5,SNR=41
ESDC                               PcP   PcP    17 42 22.9 -0.3
      comp=Z,1.8nm,0.8s,baz=288,slow=5.3,SNR=5.3
ESDC  Sonseca Array     55.38  52  P     P      17 41 24.4 -0.2
ESDC                               PcP   PcP    17 42 23.7 +0.5
ESBB  Sonseca Array     55.38  52  P     P      17 41 25.3 +0.7
ESBB                               IAmb  IAmb   17 41 26.7
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      comp=Z,8.4nm,0.8s
EDM   Edmonton          55.47 325  P     P      17 41 24.6 -0.4
EDM                                IAmb  IAmb   17 41 25.5
      comp=Z,13nm,1.0s
TIC   Toumodi           55.84  92 eP     P      17 41 27.6 -0.6
LIC   Lamto             55.94  93 eP     P      17 41 28.3 -0.6
      comp=Z,94nm,0.8s
DBIC  Dimbokro          55.99  92  P     P      17 41 29.5 +0.2
      comp=Z,14nm,0.5s,baz=296,slow=5.9,SNR=28
DBIC  Dimbokro          55.99  92  P     P      17 41 29.3  0.0
NEW   Newport           56.09 318  P     P      17 41 29.4 -0.1
NEW                                IAmb  IAmb   17 41 30.3
      comp=Z,9.6nm,0.7s
KIC   Kosan Boka        56.18  93 eP     P      17 41 30.0 -0.6
      comp=Z,30nm,0.5s
PLCA  Paso Flores       56.40 188  P     P      17 41 31.1 -0.6
      comp=Z,8.0nm,0.8s,baz=12,slow=8.6,SNR=14
PLCA  Paso Flores       56.40 188  P     P      17 41 31.2 -0.5
PLCA                               IAmb  IAmb   17 41 31.8
      comp=Z,9.1nm,0.8s
RSBS  Rosebush, Pemb    57.68  38 eP     P      17 41 41.1 +0.6
RSBS                               IAmb  IAmb   17 41 41.8
      comp=Z,33nm,0.8s
YLL   Llanberis         58.37  36 eP     P      17 41 46.1 +0.8
WME   Myndd Eilian      58.38  36 eP     P      17 41 45.8 +0.4
GAL1  Galloway          58.62  34 eP     P      17 41 47.5 +0.6
YBH   Yreka Blue Hor    58.65 310  P     P      17 41 47.0 -0.7
YBH                                IAmb  IAmb   17 43 18.4
      comp=Z,25nm,1.7s
SUMG  Summit            58.81   8  P     P      17 41 48.8 +0.3
FOEL  Foel Wylfa        58.86  37 eP     P      17 41 48.7 -0.1
FOEL                               IAmb  IAmb   17 41 49.5
      comp=Z,26nm,0.6s
HLM1  Long Mynd         58.94  37 eP     P      17 41 50.0 +0.7
HLM1                               IAmb  IAmb   17 41 50.6
      comp=Z,30nm,0.7s
NEWG  New Galloway      58.96  34 eP     P      17 41 50.0 +0.6
NEWG                               IAmb  IAmb   17 41 50.8
      comp=Z,23nm,0.9s
KPL   Plockton          58.99  32 eP     P      17 41 49.7 +0.2
PGBU  Glenifferbraes    59.06  33 eP     P      17 41 50.6 +0.6
PGBU                               IAmb  IAmb   17 41 51.6
      comp=Z,36nm,1.0s
KAC   Achnashellach     59.23  31 eP     P      17 41 51.2  0.0
INVG  Invergeldie, C    59.49  33 eP     P      17 41 53.2 +0.2
KRMB  Red Mountain      59.52 309  P     P      17 41 53.7 +0.1
ESK   Eskdalemuir       59.58  34  P     P      17 41 53.6  0.0
MDO   Dochfour          59.68  32 eP     P      17 41 54.7 +0.5
LLLB  Lillooet          59.69 320  P     P      17 41 54.9 +0.4
LLLB                               IAmb  IAmb   17 41 55.7
      comp=Z,9.6nm,0.6s
EBL   Broad Law         59.81  34 eP     P      17 41 55.4 +0.2
LBWR  Ladybower, Pea    59.86  37 eP     P      17 41 56.4 +0.8
LBWR                               IAmb  IAmb   17 41 57.6
      comp=Z,31nm,0.9s
YKA   Yellowknife Ar    59.97 335  P     P      17 41 55.6 -0.5
      comp=Z,2.7nm,0.8s,baz=105,slow=8.9,SNR=5.2
HPK   Haverah Park      60.06  36 eP     P      17 41 57.1 +0.1
HPK                                IAmb  IAmb   17 41 58.1
      comp=Z,22nm,0.7s
ESY   Stoneypath        60.09  34 eP     P      17 41 57.4 +0.3
B04A  Port Angeles      60.20 317  P     P      17 41 58.6 +0.6
GDLE  Glaisdale, N Y    60.65  36 eP     P      17 42 01.6 +0.6
GDLE                               IAmb  IAmb   17 42 02.3
      comp=Z,32nm,0.8s
TORD  Torodi Ar. Bea    60.97  83  P     P      17 42 03.8  0.0
      comp=Z,14nm,0.5s,baz=282,slow=6.1,SNR=94
TORD  Torodi Ar. Bea    60.97  83  P     P      17 42 03.7  0.0
TORD                               IAmb  IAmb   17 42 04.7
      comp=Z,14nm,0.9s
WACR  West Acre         61.06  38 eP     P      17 42 03.6 -0.1
WACR                               IAmb  IAmb   17 42 04.6
      comp=Z,76nm,1.0s
CLF   Chambon-Foret     61.17  43  P     P      17 42 05.3 +0.8
RES   Resolute Bay      62.19 350  P     P      17 42 10.7 -0.2
SNF   Seneffe           62.87  41 dP     P      17 42 16.0 +0.1
      comp=Z,23nm,0.7s
DOU   Dourbes           63.01  41 dP     P      17 42 17.0 +0.2
      comp=Z,9.2nm,0.8s
BMRD  Maredsous         63.15  41 dP     P      17 42 18.0 +0.3
      comp=Z,11nm,0.7s
BGES  Gesves            63.36  41 dP     P      17 42 19.5 +0.4
      comp=Z,12nm,0.8s
RCHB  Rochefort         63.42  41 dP     P      17 42 19.6 +0.1
      comp=Z,16nm,0.8s
BCLA  Clavier           63.50  41 dP     P      17 42 20.3 +0.3
BBB   Bella Bella       63.82 321  P     P      17 42 23.1 +1.1
BNI   Bardonecchia      63.84  47  P     P      17 42 23.9 +1.3
BNI                                IAmb  IAmb   17 43 57.1
      comp=Z,31nm,1.6s
BHOU  Houvegnez         63.94  41 dP     P      17 42 23.8 +0.9
      comp=Z,17nm,0.0s
WLF   Walferdange       63.95  42 dP     P      17 42 23.9 +0.9
      comp=Z,14nm,0.9s
WLF   Walferdange       63.95  42  P     P      17 42 23.6 +0.7
WLF                                IAmb  IAmb   17 42 24.6
      comp=Z,17nm,0.8s
WLF   Walferdange       63.95  42 eP     P      17 42 23.9 +0.9
      comp=Z,13nm,0.8s,baz=266,slow=6.2
MEM   Membach           63.97  41 dP     P      17 42 23.7 +0.6
      comp=Z,10nm,1.0s
SENIN Lac Senin/Sane    64.38  46  P     P      17 42 26.8 +0.7
SENIN                              IAmb  IAmb   17 42 27.6
      comp=Z,7.7nm,0.9s
ECH   Echery            64.45  44  P     P      17 42 25.8 -0.5
ECH                                IAmb  IAmb   17 42 27.7
      comp=Z,13nm,1.0s
AHRW  Bad Neuenahr-A    64.64  41 eP     P      17 42 28.2 +0.8
      comp=Z,14nm,0.8s,baz=266,slow=6.2
BUG   Bochum--Univer    64.87  40 eP     P      17 42 29.8 +0.9
      comp=Z,7.5nm,0.7s,baz=266,slow=6.2
KMY   Karmoy            65.04  31 eP     P      17 42 29.4 -0.4
BFO   Black Forest      65.24  44  P     P      17 42 30.3 -1.1
BFO                                IAmb  IAmb   17 42 35.9
      comp=Z,16nm,1.5s
BFO   Black Forest      65.24  44 eP     P      17 42 31.7 +0.3
      comp=Z,3.3nm,0.9s,baz=266,slow=6.2
IBBN  Ibbenburen        65.28  39 eP     P      17 42 32.3 +0.8
      comp=Z,19nm,0.9s,baz=266,slow=6.2
BER   Bergen            65.34  30 eP     P      17 42 31.1 -0.6
FOO   Floro             65.48  29 eP     P      17 42 31.2 -1.4
TNS   Taunus Mts        65.48  41 eP     P      17 42 34.0 +1.0
      comp=Z,15nm,0.8s,baz=266,slow=6.2
VSL   Villasalto        65.64  53  P     P      17 42 35.1 +1.0
KEST  Kesra             65.67  57  P     P      17 42 35.5 +1.0
      comp=Z,46nm,0.8s,baz=178,slow=2.0,SNR=44
KEST  Kesra             65.67  57  P     P      17 42 35.2 +0.7
BLS5  Blasjo            65.69  31 eP     P      17 42 34.8 +0.7
EUNU  Eureka            65.78 355  P     P      17 42 34.9 +0.5
TUE   Stuetta           65.80  46  P     P      17 42 35.3  0.0
TUE                                IAmb  IAmb   17 42 37.2
      comp=Z,15nm,0.9s
MSSA  Maissana          65.82  48  P     P      17 42 35.2 -0.1
STU   Stuttgart         65.84  43 eP     P      17 42 35.8 +0.5
      comp=Z,39nm,0.9s,baz=266,slow=6.2
SNART Snartemo          65.87  33 eP     P      17 42 35.0 -0.2
ODD1  Odda              65.87  31 eP     P      17 42 34.1 -1.1
HYA   Hoyanger          65.92  29 eP     P      17 42 34.0 -1.4
DAVOX Davos/Dischmat    66.18  45  P     P      17 42 38.6 +0.9
      comp=Z,14nm,0.7s,baz=238,slow=9.5
DAVA  Damuels           66.21  45 i P    P      17 42 38.4 +0.6
      comp=Z,23nm,0.7s,SNR=9.3
UBR   Ueberruh          66.38  44 eP     P      17 42 39.0 +0.2
      baz=266,slow=6.2
AKN   Aaknes            66.51  28 eP     P      17 42 38.2 -1.1
UBBA  Unterbreizbach    66.52  41 eP     P      17 42 40.2 +0.8
      baz=266,slow=6.2
GTTG  Gottingen         66.56  40 eP     P      17 42 40.4 +0.7
      comp=Z,6.6nm,0.8s,baz=266,slow=6.2
NRDL  Niedersach Rie    66.73  39 eP     P      17 42 41.6 +1.0
      comp=Z,9.5nm,0.8s,baz=266,slow=6.2
FETA  Feichten          66.77  45 eP     P      17 42 42.1 +0.7
      comp=Z,23nm,0.7s,SNR=14
RETA  Reutte            66.82  45 eP     P      17 42 42.2 +0.6
      comp=Z,16nm,1.4s
CLZ   Clausthal         66.83  40 eP     P      17 42 42.1 +0.6
      comp=Z,8.6nm,0.8s,baz=266,slow=6.2
MOL   Molde             66.84  28 eP     P      17 42 39.7 -1.5
ZCCA  Zocca             66.87  48  P     P      17 42 42.0 +0.1
BSEG  Bad Segeberg      66.99  38 eP     P      17 42 42.7 +0.3
      comp=Z,9.2nm,0.8s,baz=266,slow=6.2
MOTA  Moosalm           67.04  45 eP     P      17 42 43.3 +0.2
      comp=Z,4.8nm,0.5s
ASSE  Asse, Remlinge    67.04  40 eP     P      17 42 43.1 +0.4
      comp=Z,6.5nm,0.8s,baz=266,slow=6.2
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OSSC  Osservatorio P    67.06  49  P     P      17 42 43.0 -0.1
OSSC                               IAmb  IAmb   17 42 51.9
      comp=Z,16nm,1.2s
SQTA  Sankt Quirin      67.11  45 eP     P      17 42 44.0 +0.5
      comp=Z,9.9nm,0.5s,SNR=7.3
GRF   Grafenberg Arr    67.23  42 eP     P      17 42 44.3 +0.2
      comp=Z,7.7nm,0.9s,baz=266,slow=6.2
KONO  Kongsberg         67.30  31 eP     P      17 42 43.0 -1.3
CTI   Castel Tesino     67.38  46  P     P      17 42 45.1 -0.1
CTI                                IAmb  IAmb   17 42 46.0
      comp=Z,11nm,0.8s
TEOL  Teolo             67.38  47  P     P      17 42 45.0 -0.1
WTTA  Wattenberg        67.40  45 i P    P      17 42 45.8 +0.5
      comp=Z,6.4nm,0.7s
FLTG  Flechtingen       67.40  39 eP     P      17 42 45.5 +0.5
      comp=Z,6.6nm,0.7s,baz=266,slow=6.2
DOMB  Dombas            67.44  29 eP     P      17 42 44.0 -1.1
MOX   Moxa              67.53  41 eP     P      17 42 46.0  0.0
      comp=Z,3.0nm,0.8s,baz=266,slow=6.2
A36M  Sachs Harbour     67.58 342  P     P      17 42 45.2 -0.5
NEUB  Neuenburg         67.67  41 eP     P      17 42 47.1 +0.4
      comp=Z,9.7nm,0.9s,baz=266,slow=6.2
MANZ  Manzenberg        67.82  42 eP     P      17 42 48.5 +0.7
      comp=Z,3.1nm,0.9s,baz=266,slow=6.2
ROTZ  Rotzenmuhle       67.87  42 eP     P      17 42 48.5 +0.4
      comp=Z,1.8nm,1.1s,baz=266,slow=6.2
OSL   Oslo              67.91  31 eP     P      17 42 47.2 -0.8
WERD  Werda             67.96  41 eP     P      17 42 49.2 +0.5
      comp=Z,5.1nm,0.7s,baz=266,slow=6.2
GUNZ  Gunzen            67.98  42 eP     P      17 42 49.2 +0.5
      comp=Z,5.6nm,0.7s,baz=266,slow=6.2
MURB  Monte Urbino      67.99  49  P     P      17 42 48.2 -0.8
MURB                               IAmb  IAmb   17 42 49.1
      comp=Z,16nm,0.7s
ABTA  Abfaltersbach     67.99  45 eP     P      17 42 49.1 +0.2
      comp=Z,12nm,0.8s,SNR=5.7
WERN  Wernitzgruen      68.00  42 eP     P      17 42 49.5 +0.6
      comp=Z,4.4nm,0.8s,baz=266,slow=6.2
NKC   Novy Kostel       68.05  42 eP     P      17 42 49.3 +0.1
TANN  Tannenbergstha    68.06  41 eP     P      17 42 49.7 +0.4
      comp=Z,5.4nm,0.7s,baz=266,slow=6.2
NAO01 NORSAR Array S    68.11  30  P     P      17 42 50.4 +1.0
STAL  STALIGIAL         68.12  46  P     P      17 42 49.1 -0.6
STAL                               IAmb  IAmb   17 42 49.9
      comp=Z,12nm,1.1s
RJOB  Jochberg          68.20  44 eP     P      17 42 50.5 +0.2
      baz=266,slow=6.2
WET   Wettzell          68.29  43 eP     P      17 42 51.4 +0.7
      comp=Z,5.4nm,0.9s,baz=266,slow=6.2
NB2   NORSAR Subarra    68.30  30  P     P      17 42 51.7 +1.2
      comp=Z,3.1nm,0.8s,baz=262,slow=6.5
NB2   NORSAR Subarra    68.30  30  P     P      17 42 51.7 +1.2
      baz=262,slow=6.5
NOA   NORSAR Array B    68.30  30  P     P      17 42 51.4 +0.9
      comp=Z,4.3nm,0.8s,baz=262,slow=6.3,SNR=15
ZOU   Zoufplan          68.31  46  P     P      17 42 50.6 -0.4
ZOU                                IAmb  IAmb   17 42 51.8
      comp=Z,7.4nm,0.7s
NC602 NORSAR Array S    68.42  30 eP     P      17 42 50.4 -0.9
NRCA  Norcia            68.43  50  P     P      17 42 51.4 -0.4
CLL   Collm             68.44  41⇓iP     P      17 42 51.9 +0.4
      comp=Z,15nm,1.1s
CLL   Collm             68.44  41  P     P      17 42 52.0 +0.4
CLL                                IAmb  IAmb   17 42 52.9
      comp=Z,17nm,1.1s
CLL   Collm             68.44  41 eP     P      17 42 52.1 +0.5
      comp=Z,8.5nm,0.8s,baz=266,slow=6.2
KBA   Koelnbreinsper    68.56  45 eP     P      17 42 52.8 +0.2
      comp=Z,14nm,0.8s,SNR=7.7
FBE   Freiberg          68.65  41 eP     P      17 42 53.5 +0.7
      comp=Z,7.1nm,0.7s,baz=266,slow=6.2
KHC   Kasperske Hory    68.75  43 eP     P      17 42 53.6  0.0
CORL  Corleone          68.75  55  P     P      17 42 54.8 +1.0
CORL                               IAmb  IAmb   17 43 01.7
      comp=Z,11nm,0.9s
MYKA  Terra Mystica     68.77  46 i P    P      17 42 54.0 +0.2
      comp=Z,5.4nm,0.5s,SNR=7.7
GEC2  GERESS Array S    68.82  43  P     P      17 42 54.0 -0.1
GEC2                               IAmb  IAmb   17 42 55.2
      comp=Z,20nm,1.4s
GEC2  GERESS Array S    68.82  43 eP     P      17 42 54.1 -0.1
      comp=Z,4.4nm,0.8s,baz=266,slow=6.2
GERES GERESS Array B    68.82  43  P     P      17 42 54.2 +0.1
      comp=Z,5.5nm,0.8s,baz=274,slow=4.8,SNR=37
GERES GERESS Array B    68.82  43  P     P      17 42 53.8 -0.3
BRG   Berggiesshubel    69.02  41 eP     P      17 42 55.6 +0.5
      comp=Z,8.6nm,0.8s,baz=266,slow=6.2
BRG   Berggiesshubel    69.02  41 i P    P      17 42 55.7 +0.5
BRG                                Amp          17 42 56.7
      comp=Z,12nm,0.9s
NSS   Namsos            69.13  26 eP     P      17 42 54.6 -0.9
MOA   Molln             69.19  44 eP     P      17 42 56.1 -0.2
      comp=Z,4.4nm,0.5s
CKRC  Cesky Krumlov     69.22  43 eP     P      17 42 55.9 -0.6
CEY   Cerknica          69.32  47⇓iP     P      17 42 57.6 +0.5
GBAS  Gorenja Brezov    69.33  46 i P    P      17 42 57.6 +0.4
LJU   Ljubljana         69.38  46 eP     P      17 42 58.3 +0.8
LJU   Ljubljana         69.38  46 i P    P      17 42 58.2 +0.8
PRU   Pruhonice         69.39  42 eP     P      17 42 58.1 +0.7
OBKA  Obir              69.39  46 eP     P      17 42 57.8 +0.1
      comp=Z,6.9nm,0.8s,SNR=9.0
PVCC  Panska Ves        69.41  41 eP     P      17 42 58.4 +0.8
HFS   Hagfors           69.41  31  P     P      17 42 57.8 +0.4
      comp=Z,1.4nm,0.4s,baz=234,slow=4.6,SNR=5.5
SOKA  Soboth            69.72  46 eP     P      17 42 59.3 -0.4
      comp=Z,4.7nm,0.7s
LEGS  Legarje           69.94  46 i P    P      17 43 01.2 +0.3
CRES  Cresnjev          70.04  46⇓iP     P      17 43 01.8 +0.3
DOBS  Dobrina           70.04  46 i P    P      17 43 01.8 +0.3
ARSA  Arzberg           70.05  45 eP     P      17 43 01.4 -0.2
CONA  Conrad Observa    70.27  44 eP     P      17 43 03.1 +0.1
UPC   Upice             70.33  41 eP     P      17 43 03.6 +0.4
CHVC  Chvalec           70.36  41 eP     P      17 43 03.8 +0.4
MOR8  Moi Rana          70.38  25 eP     P      17 43 02.3 -0.9
OSTC  Ostas             70.46  41 eP     P      17 43 04.8 +0.8
KSP   Ksiaz             70.51  41 eP     P      17 43 04.9 +0.6
DPC   Dobruska-Polom    70.53  42 eP     P      17 43 04.9 +0.4
KRUC  Moravsky          70.60  43 eP     P      17 43 05.1 +0.3
VRAC  Vranov            70.72  43 ⇑P     P      17 43 06.6 +1.0
VRAC  Vranov            70.72  43  P     P      17 43 06.1 +0.5
      comp=Z,10nm,0.8s,baz=274,slow=4.8,SNR=12
VRAC  Vranov            70.72  43 eP     P      17 43 06.1 +0.5
KRLC  Kraliky           70.83  42 eP     P      17 43 07.0 +0.7
MRAK  Mrakovica         71.08  47⇓iP     P      17 43 08.4 +0.4
ZST   Bratislava        71.09  44 eP     P      17 43 08.7 +0.9
DAWY  Dawson            71.12 333  IAmb  IAmb   17 43 09.3
      comp=Z,44nm,1.8s
MODS  Modra-Piesok      71.20  44 eP     P      17 43 08.4 -0.1
MGRS  Mrkonjic Grad     71.25  48 eP     P      17 43 09.8 +0.9
MORC  Moravsky Berou    71.33  42 ⇑P     P      17 43 09.3  0.0
MORC  Moravsky Berou    71.33  42  IAmb  IAmb   17 43 11.0
      comp=Z,14nm,1.1s
MORC  Moravsky Berou    71.33  42 eP     P      17 43 10.0 +0.7
JAVC  Velka Javorina    71.44  43 eP     P      17 43 11.2 +1.2
OKC   Ostrava-Krasne    71.72  42 eP     P      17 43 12.2 +0.6
EGAK  Eagle             71.93 334  P     P      17 43 12.5  0.0
EGAK                               IAmb  IAmb   17 43 13.9
      comp=Z,28nm,1.6s
VYHS  Vyhne             72.23  43 eP     P      17 43 15.3 +0.6
MORH  Mrgy, Hungar      72.24  46 ⇓P     P      17 43 15.6 +0.9
MORH  Mrgy, Hungar      72.24  46⇓iP     P      17 43 15.2 +0.5
TREB  Trebinje          72.28  50 eP     P      17 43 15.5 +0.4
TRO   Tromso            72.38  21 eP     P      17 43 14.2 -0.9
BRY   Bratogost         72.41  49 eP     P      17 43 16.3 +0.3
SPA0  Spitsbergen Ar    72.61  12 eP     P      17 43 16.0 -0.3
LANS  Liptovska Anna    72.61  43 eP     P      17 43 18.6 +1.6
UPM   Unac-Piva         72.65  49 eP     P      17 43 18.6 +1.1
OJC   Ojcow             72.76  42 eP     P      17 43 13.9 -3.8
OJC   Ojcow             72.76  42  IAmb  IAmb   17 43 19.7
      comp=Z,19nm,1.1s
DRME  Dracevica, Mon    72.94  50 eP     P      17 43 19.6 +0.6
RUDO  Rudo              72.95  49 eP     P      17 43 19.0  0.0
BBLS  Lazi&#263;i       72.95  48 eP     P      17 43 18.3 -0.8
PDG   Podgorica         72.97  50 ⇑P     P      17 43 17.7 -1.4
PDG   Podgorica         72.97  50  IAmb  IAmb   17 43 21.1
      comp=Z,16nm,0.8s
PDG   Podgorica         72.97  50 eP     P      17 43 19.5 +0.4
FRGS  Fruska Gora       73.13  47 ⇑P     P      17 43 21.2 +1.2
FRGS  Fruska Gora       73.13  47⇓iP     P      17 43 21.5 +1.4
NIE   Niedzica          73.14  42 eP     P      17 43 22.5 +2.4
DIVS  Divibare          73.35  48  P     P      17 43 22.2 +0.7
DIVS                               IAmb  IAmb   17 43 23.4
      comp=Z,14nm,1.0s
DIVS  Divibare          73.35  48 eP     P      17 43 20.9 -0.6
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KTK1  Kautokeino        73.89  22 eP     P      17 43 22.9 -1.1
CRVS  Cervenica-Dubn    73.94  43 eP     P      17 43 26.2 +1.5
HAMF  Hammerfest        74.03  20 eP     P      17 43 24.0 -0.7
SIRR  Siria             74.32  46 ⇑P     P      17 43 28.1 +1.1
BZS   Buzias            74.36  46 ⇓P     P      17 43 27.6 +0.4
ILAR  Eielson Array     74.38 334  P     P      17 43 26.6 -0.3
      comp=Z,1.9nm,0.5s,baz=79,slow=5.2,SNR=34
ILAR                               pP    pP     17 44 03.0 -1.0
      comp=Z,1.3nm,0.8s,baz=90,slow=4.4,SNR=3.3
MDVR  Moldovita         74.51  47 ⇑P     P      17 43 29.0 +0.8
SUW   Suwalki           74.58  38 eP     P      17 43 28.8 +0.6
BOVS  Bovan             74.64  48 ⇓P     P      17 43 29.2 +0.4
KWP   Kalwaria Pacla    74.68  42 eP     P      17 43 30.5 +1.5
ARA0  ARCESS Array S    74.69  21 eP     P      17 43 29.0 +0.3
ARCES ARCESS Array B    74.69  21  P     P      17 43 29.1 +0.5
      comp=Z,11nm,0.8s,baz=286,slow=3.9,SNR=20
ARCES ARCESS Array B    74.69  21  IAmb  IAmb   17 43 30.5
      comp=Z,25nm,1.1s
TRPA  Tarpa             74.72  44 ⇑P     P      17 43 30.6 +1.4
FNA   Florina           74.73  51  P     P      17 43 30.5 +1.0
FNA                                IAmb  IAmb   17 43 31.4
      comp=Z,20nm,0.8s
PABE  Paberze           74.90  36  P     P      17 43 30.7 +0.7
DRGR                    74.98  45 ⇓P     P      17 43 30.4 -0.5
HERR  Herculane         75.00  47 ⇑P     P      17 43 30.8  0.0
GZR   Gura Zlata        75.19  46 ⇓P     P      17 43 33.1 +1.0
NEA2  Nenana            75.33 334  P     P      17 43 31.6 -0.8
NEA2                               IAmb  IAmb   17 43 33.6
      comp=Z,12nm,1.0s
FINES FINESS Array B    75.48  30  P     P      17 43 33.6 +0.4
      comp=Z,6.7nm,0.8s,baz=271,slow=4.5,SNR=23
VTS   Vitosha           75.87  49 ⇑P     P      17 43 37.0 +0.9
LOT   Lotru             75.88  46 ⇑P     P      17 43 35.1 -0.9
TRF   Thorofare Moun    75.97 332  P     P      17 43 36.6 +0.3
TRF                                IAmb  IAmb   17 43 37.5
      comp=Z,16nm,0.7s
BPAW  Bear Paw Mtn.     76.21 333  IAmb  IAmb   17 43 38.1
      comp=Z,12nm,1.0s
ARR   Arges             76.49  46 ⇑P     P      17 43 40.7 +1.2
BUR08 Bucovina Ar. S    76.56  44  IAmb  IAmb   17 43 42.3
      comp=Z,16nm,0.8s
NACGM Naroch            76.57  36 i P    P      17 43 40.7 +1.1
BURAR Bucovina Array    76.58  44 ⇑P     P      17 43 41.1 +1.1
BURAR Bucovina Array    76.58  44  P     P      17 43 41.1 +1.1
BURAR                              IAmb  IAmb   17 43 42.7
      comp=Z,23nm,0.8s
VOIR                    76.77  46 ⇑P     P      17 43 41.8 +0.7
DOPR  Dopca             76.93  46 ⇑P     P      17 43 42.9 +1.1
OZUR                    77.18  45 ⇑P     P      17 43 42.1 -1.1
MNK   Minsk             77.26  37 i P    P      17 43 44.1 +0.6
      comp=E,1.0nm,0.9s
MNK                               i P    P      17 43 44.1 +0.6
      comp=N,7.0nm,0.9s
MNK                               i P    P      17 43 44.1 +0.6
      comp=Z,23nm,0.9s,baz=278
MNK                               i pP   pP     17 44 21.4 +1.0
MNK                               i PP   PP     17 46 40.5 +1.2
MNK                               i PPP  PPP    17 48 27.6
MNK                               i S    S      17 53 22.4 +1.7
MNK                               i sS   sS     17 54 26.4 +3.9
MNK                               i SS   SS     17 58 21.9 +0.4
MNK                               i SSS  SSS    18 01 49.1
MNK                               i LRM  MLR    18 20 02.5
      comp=Z,145nm,23.2s
MNK                               i LRM  MLR    18 20 05.0
      comp=N,125nm,22.4s
MNK                               i LRM  MLR    18 20 12.8
      comp=E,9.0nm,15.5s
MLR   Muntele Rosu      77.39  46 ⇑P     P      17 43 45.6 +1.1
MLR   Muntele Rosu      77.39  46  P     P      17 43 45.6 +1.1
      comp=E,5.7nm,0.6s,baz=260,slow=2.2,SNR=11
MLR   Muntele Rosu      77.39  46  IAmb  IAmb   17 46 01.0
      comp=Z,11nm,0.7s
COVR  Voineasa-Covas    77.51  46 ⇑P     P      17 43 46.5 +1.4
TESR  Tescani           77.71  45 ⇑P     P      17 43 46.3 +0.2
BISRR Bisoca            77.91  46 ⇑P     P      17 43 47.2 -0.1
IDI   Anoyia            78.32  56  P     P      17 43 50.7 +0.9
      comp=Z,12nm,0.5s,baz=284,slow=8.0,SNR=14
SORM  Soroca            78.58  43 ⇑P     P      17 43 51.0 +0.1
AKASG Malin Array Be    78.69  40  P     P      17 43 51.5 +0.1
      comp=Z,2.3nm,0.5s,baz=263,slow=4.9,SNR=14
AKASG Malin Array Be    78.69  40  IAmb  IAmb   17 46 25.6
      comp=Z,28nm,1.1s
AKBB  Malin Array Si    78.69  40  IAmb  IAmb   17 46 08.1
      comp=Z,11nm,0.5s
OBN   Obninsk           82.06  35  P     P      17 44 09.9 +0.6
      comp=Z,4.6nm,0.4s,baz=280,slow=1.9,SNR=5.6
BR131 Keskin Array S    84.14  51  P     P      17 44 20.5  0.0
BR131                              IAmb  IAmb   17 45 25.9
      comp=Z,20nm,1.1s
BRTR  Keskin Array B    84.14  51  P     P      17 44 20.9 +0.3
      comp=Z,4.5nm,0.7s,baz=253,slow=3.8,SNR=16
MMAI  Mount Meron Ar    87.32  57  P     P      17 44 37.5 +1.2
      comp=Z,0.5nm,0.3s,baz=319,slow=4.2,SNR=2.9
ASF   Jabal al Asfar    88.77  57  P     P      17 44 44.9 +1.7
      comp=Z,4.5nm,0.7s,baz=265,slow=6.3,SNR=6.1
NRIK  Noril'sk          92.76  11  P     P      17 44 59.8 -1.0
      comp=Z,1.0nm,0.3s,baz=39,slow=1.9,SNR=4.0
TIXI  Tiksi             92.98 357  P     P      17 45 01.2 -0.5
AKTO  Aktyubinsk        95.80  34  P     P      17 45 14.6 -0.5
      comp=Z,1.2nm,0.5s,baz=321,slow=5.4,SNR=7.1
SONM  Songino Array    116.20   9  PKP   PKPdf  17 50 31.1 -0.6
      comp=Z,0.4nm,0.6s,baz=277,slow=2.7,SNR=2.2
MAW   Mawson           116.76 159  PKP   PKiKP  17 50 31.9 +0.1
      comp=Z,1.6nm,0.9s,baz=312,slow=8.5,SNR=3.0
MAT   Matsushiro       125.22 341  PKP   PKPdf  17 50 48.4 -0.8
MJAR  Matsushiro Arr   125.22 341  PKP   PKPdf  17 50 48.3 -0.8
      comp=Z,1.3nm,0.6s,baz=90,slow=0.4,SNR=4.2
KSRS  Korea Array      126.80 351  PKP   PKPdf  17 50 52.2 +0.1
      comp=Z,0.5nm,0.6s,baz=66,slow=2.5,SNR=3.9
CMAR  Chiang Mai Arr   141.24  31  PKP   PKPdf  17 51 18.6 -1.0
      comp=Z,0.9nm,0.7s,baz=303,slow=2.8,SNR=8.3
ASAR  Alice Springs    163.39 238  PKP   PKPdf  17 51 51.0 -0.4
      comp=Z,0.7nm,0.8s,baz=112,slow=1.1,SNR=6.5
ASAR                               PKPab PKPab  17 52 41.8 -1.4
      comp=Z,0.8nm,1.0s,baz=123,slow=4.4,SNR=4.4
WRA   Warramunga Arr   164.34 251  PKP   PKPdf  17 51 51.2 -1.1
      comp=Z,1.9nm,1.0s,baz=57,slow=0.3,SNR=7.0
WRA                                PKPab PKPab  17 52 47.5  0.0
      comp=Z,1.3nm,0.9s,baz=97,slow=4.3,SNR=7.3
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*MOS **03** 17:43:19.6±1.2, 44°.89N×41°.50E, h10^{km}, mb4.7/11, Error ellipse: s-maj=4.4km s-min=3.0km az=127.6*

MOS Felt (IV) at Stavropol', Nevinnomyssk, Uspenskaya, Malanino, (III) at Armavir, Kazinka, Vodorazdel, Kursavka, Gofitskoye, Cherkessk, Novokubansk, (II-III) at Uchkeken, Kislovodsk, Essentuki, Lermontov, Pyatigorsk, Geleznovodsk, Labinsk, Gul'kevichi, Otradnaya, (II) at Karachaevsk, Mostovskoy.

*IDC **03** 17:43:19.6±0.4, 44°.68N×41°.53E, h0^{km}, mb3.9/15, mb1 4.1/28, mb1mx4.0/57, mbtmp4.1/28, ML4.0/12, MS2.9/8, Ms1 2.9/8, ms1mx2.6/50, Error ellipse: s-maj=7.3km s-min=5.3km az=43.0*

*NEIC **03** 17:43:21.2±2.9, 44°.88N±0°.05×41°.61E±0°.06, h15^{km}±5^{km}, mb4.4/51, Error ellipse: s-maj=8.8km s-min=3.9km az=219.0*

*CFUSG **03** 17:43:22.4, 44°.74N×41°.42E, h33^{km}, mb2.8/6, MD3.3/6, Krasnodar region Magtype MSH 3.0 from 6 stations*

*NORS **03** 17:43:22.0±0.0, 44°.60N×41°.48E, h10^{km}, MPVA5.3*

*NNC **03** 17:43:34.2±5.5, 45°.54N×42°.36E, h69^{km}±30^{km}, mb3.9, Error ellipse: s-maj=88.0km s-min=39.5km az=131.0*

ISC 03 17:43:22.1±0.9, **44°.82N**±0°.02×**41°.55E**±0°.02, **h26**^{km}±8^{km}, **n330**, σ**1^{s}.98**/414, **mb4.2**/40, **50C-27D**, **Western Caucasus**

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Code  Station Name       Δ°   AZ°   Phase ID        Time      Res
                                    Op    ISC      h  m  s    ISC
NVNR  Nevinnomyssk      0.36 124⇓iPG    Pb      17 43 27.8 -2.3
AHMR  Akhmetovskaya     0.75 209⇓iPG    Pb      17 43 36.2 -0.4
AHMR                             i S    Sb      17 43 45.7 -0.8
AHMR  Akhmetovskaya     0.75 209 i Pg   Pb      17 43 36.1 -0.5
AHMR                             i Sg   Sb      17 43 46.1 -0.4
ALER  Alexandrovskoy    0.97  93⇑iPG    Pn      17 43 39.8 -0.2
ALER                             i S    Sn      17 43 52.7 -0.2
ALER  Alexandrovskoy    0.97  93 i Pg   Pn      17 43 39.8 -0.2
ALER                             i Sg   Sn      17 43 52.7 -0.2
GOF   Gofitskoye        1.09  77⇑iPG    Pn      17 43 42.1 +0.5
GOF                              eS     Sb      17 43 57.7 +1.7
GOF                               pmax  pmax
      comp=Z,2µm,0.8s
GOF                               smax  smax
      comp=E,2µm,0.4s
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GOF				smax	smax		
	comp=N,5μm,1.1s						
GOF	**Gofitskoye**	1.09	77	*i* Pg	Pn	17 43 42.2	+0.7
GOF				*e*Sg	Sb	17 43 57.1	+1.1
ERBR	**Yeremizino-Bor**	1.17	320	⇑*i*PG	Pb	17 43 45.8	+2.1
ERBR				*e*S	Sb	17 44 02.8	+4.3
ERBR	**Yeremizino-Bor**	1.17	320	*i* Pg	Pb	17 43 45.7	+2.1
ERBR				*e*Sg	Sb	17 44 03.0	+4.5
KIV	**Kislovodsk**	1.18	136	⇑P	Pn	17 43 42.7	-0.3
KIV	**Kislovodsk**	1.18	136	⇓*i*PG	Pn	17 43 42.5	-0.5
KIV	**Kislovodsk**	1.18	136		Pn	17 43 41.8	-1.2
KIV				Sn	Sn	17 43 56.8	-1.5
KIV	**Kislovodsk**	1.18	136	*i* Pg	Pn	17 43 42.3	-0.7
	comp=N,2μm,0.2s						
KIV				*i* Sg	Sn	17 43 57.1	-1.2
	comp=N,6μm,0.2s						
KVAR	**Kislovodsk Arr**	1.19	136	Pg	Pn	17 43 42.6	-0.5
	baz=279,slow=19						
KVAR				Lg	Lg	17 43 56.5	
	baz=328,slow=9.5						
KVAR				LR	LR	17 44 13.6	
	comp=N,2μm,20.8s,baz=267,slow=49						
BEYR	**Belyy Ugol+**	1.21	131	⇑*i*PG	Pn	17 43 43.2	-0.1
BEYR				*i* S	Sn	17 43 57.7	-1.2
BEYR	**Belyy Ugol+**	1.21	131	*i* Pg	Pn	17 43 43.2	-0.1
BEYR				*i* Sg	Sn	17 43 57.7	-1.2
GUZR	**Guzeripl'**	1.31	232	*i* PG	Pn	17 43 44.8	0.0
GUZR				*e*S	Sn	17 44 01.5	0.0
GUZR	**Guzeripl'**	1.31	232	*i* Pg	Pn	17 43 44.6	-0.2
GUZR				*e*Sg	Sn	17 44 02.1	+0.7
PYA1	**Pyatigorsk**	1.34	124	⇓*i*PG	Pn	17 43 45.8	+0.7
PYA1				*i* S	Sn	17 44 02.4	+0.4
PYA1	**Pyatigorsk**	1.34	124	*i* Pg	Pn	17 43 45.8	+0.7
	comp=N,378nm,0.1s						
PYA1				*i* Sg	Sn	17 44 02.4	+0.4
	comp=N,2μm,0.2s						
SHA1	**Shidzhatmaz**	1.34	143	⇓*i*PG	Pn	17 43 45.1	-0.2
SHA1	**Shidzhatmaz**	1.34	143	*i* Pg	Pn	17 43 45.0	-0.3
SHA1				*i* Sg	Sn	17 44 01.5	-0.8
RPOR	**Krasnaya Polya**	1.45	220	*i* PG	Pn	17 43 47.3	+0.7
RPOR				*i* S	Sn	17 44 05.8	+1.0
RPOR	**Krasnaya Polya**	1.45	220	*e*Pg	Pn	17 43 47.3	+0.7
RPOR				*e*Sg	Sb	17 44 07.0	+0.6
KBZ	**Khabaz**	1.46	138	Pg	Pn	17 43 47.0	+0.4
	comp=N,451nm,0.3s,baz=312,slow=11,SNR=5875						
KBZ				Lg	Lg	17 44 05.0	
	comp=N,1μm,0.3s,baz=216,slow=19,SNR=38						
KBZ	**Khabaz**	1.46	138*d*	*i*PG	Pn	17 43 46.8	+0.2
KBZ	**Khabaz**	1.46	138	*i* Pg	Pn	17 43 46.8	+0.2
KBZ				*e*Sg	Sn	17 44 05.7	+0.9
GOYR	**Goytkh**	1.66	251	⇓*i*PN	Pb	17 43 51.8	-0.1
GOYR				*e*S	Sb	17 44 13.5	+1.1
GOYR	**Goytkh**	1.66	251	*i* Pg	Pb	17 43 51.6	-0.3
GOYR				*e*Sg	Sb	17 44 13.9	+1.5
VSLR	**Vesyoloye**	1.74	219	*e*PN	Pb	17 43 52.8	-0.6
VSLR				*e*S	Sn	17 44 14.3	+2.4
NEY	**Neytrino**	1.78	151	⇑*i*PN	Pn	17 43 52.3	+1.0
NEY	**Neytrino**	1.78	151	*e*Pg	Pn	17 43 52.0	+0.7
	comp=N,126nm,0.2s						
NEY				*i* Sg	Sn	17 44 15.1	+2.0
	comp=N,780nm,0.4s						
LZRR	**Lazarevskoye**	1.79	241	*i* PN	Pb	17 43 53.8	-0.4
LZRR				*e*S	Sb	17 44 17.6	+1.4
LZRR	**Lazarevskoye**	1.79	241	*e*Pg	Pb	17 43 54.0	-0.2
LZRR				*e*Sg	Sb	17 44 17.9	+1.7
KGUR	**Krasnodar**	1.80	277	*e*PN	Pb	17 43 55.0	+0.6
KGUR				*e*S	Sb	17 44 19.7	+3.1
KGUR	**Krasnodar**	1.80	277	*i* Pg	Pb	17 43 56.2	+1.8
KGUR				*e*Sg	Sb	17 44 20.9	+4.3
SOC	**Sochi**	1.81	228	*e*PN	Pn	17 43 53.1	+1.6
SOC				*e*		17 44 17.8	
SOC				pmax	pmax		
	comp=Z,327nm,0.6s						
SOC				smax	smax		
	comp=N,1μm,0.5s						
SOC				smax	smax		
	comp=E,2μm,0.5s						
NCK	**Nalchik**	1.98	131	*e*PN	Pn	17 43 55.9	+2.1
NCK	**Nalchik**	1.98	131	*e*Pg	Pn	17 43 55.8	+1.9
	comp=E,714nm,0.3s						
NCK				*i* Sg	Sb	17 44 21.1	-0.5
	comp=E,7μm,0.6s						
PRTR	**Priterechnaya**	2.23	118	*e*PN	Pn	17 43 59.4	+2.1
PRTR				*e*S	Sn	17 44 27.2	+3.3
PRTR	**Priterechnaya**	2.23	118	*e*Pg	Pn	17 43 58.8	+1.5
PRTR				*e*Sg	Sn	17 44 26.7	+2.7
LSNR	**Lesken**	2.25	132	*e*PN	Pn	17 43 59.0	+1.4
LSNR				pmax	pmax		
	comp=Z,447nm,0.4s						
LSNR	**Lesken**	2.25	132	*e*Pg	Pn	17 43 59.5	+1.9
LSNR				*e*Sg	Sn	17 44 27.2	+2.7
STDR	**Stavd-Durt**	2.32	128	*e*Pg	Pn	17 44 00.3	+1.8
STDR				*e*Sg	Sn	17 44 28.7	+2.6
DIGR	**Digorskoe uzhe**	2.41	142	*e*PN	Pn	17 44 02.3	+2.3
DIGR				*e*S	Sb	17 44 33.0	-1.3
DIGR	**Digorskoe uzhe**	2.41	142	*e*Pn	Pn	17 44 02.2	+2.2
DIGR				*e*Sn	Sn	17 44 31.1	+2.3
SPGR	**Shapsug**	2.48	270	*e*Pn	Pb	17 44 04.4	-1.5
SPGR				*e*Sn	Sb	17 44 35.2	-0.8
GL1R	**Gelendzhik**	2.50	265	⇑*i*PN	Pb	17 44 04.2	-2.0
GL1R				*e*S	Sn	17 44 32.8	+2.3
GL1R	**Gelendzhik**	2.50	265	*i* Pn	Pb	17 44 04.2	-2.0
GL1R				*e*Sn	Sb	17 44 35.5	-1.0
KORR	**Kora**	2.51	133*d*	*e*PN	Pn	17 44 02.7	+1.5
KORR	**Kora**	2.51	133	*e*Pn	Pb	17 44 08.8	+2.4
KORR				*i* Sn	Sb	17 44 39.8	+2.9
TRKR	**Terskaya**	2.53	114	*e*Pn	Pn	17 44 02.8	+1.3
TRKR				*e*Sn	Sn	17 44 34.0	+2.6
ONI	**Oni**	2.62	148	P	Pn	17 44 05.5	+2.8
ONI				S	Sb	17 44 41.1	+1.0
ONI	**Oni**	2.62	148	*i* PN	Pn	17 44 05.7	+3.0
ONI				*i* S	Sb	17 44 38.7	-1.3
ONI	**Oni**	2.62	148		Pn	17 44 05.3	+2.6
ONI					Sb	17 44 40.6	+0.6
ZEI	**Tsey**	2.65	139	*e*PN	Pn	17 44 04.6	+1.4
ZEI				*e*S	Sb	17 44 39.9	-1.1
ZEI				pmax	pmax		
	comp=Z,15nm,0.4s						
ZEI				smax	smax		
	comp=E,3μm,0.4s						
ZEI				smax	smax		
	comp=N,3μm,0.4s						
ZEI	**Tsey**	2.65	139	*e*Pn	Pn	17 44 04.8	+1.6
ZEI				*e*Sn	Sn	17 44 36.1	+1.6
TKB	**Tkibuli**	2.68	156	P	Pn	17 44 05.8	+2.3
TKB	**Tkibuli**	2.68	156	*e*PN	Pn	17 44 05.8	+2.3
LACR	**Lac**	2.81	134*d*	*e*PN	Pn	17 44 06.6	+1.2
LACR	**Lac**	2.81	134	*i* Pn	Pn	17 44 06.9	+1.5
VLKR	**Vladikavkaz**	2.87	127	*i* PN	Pn	17 44 07.1	+1.0
ANN	**Anapa**	2.93	271	*e*PN	Pb	17 44 11.5	-2.1
ANN				*e*		17 44 12.1	
ANN				*e*		17 44 48.0	
ANN				*e*		17 44 49.8	
ANN				pmax	pmax		
	comp=N,35nm,0.5s						
ANN				pmax	pmax		
	comp=Z,106nm,0.5s						
ANN				pmax	pmax		
	comp=E,28nm,0.4s						
ANN				smax	smax		
	comp=E,472nm,0.7s						
ANN				smax	smax		
	comp=N,533nm,0.5s						
ANN				smax	smax		
	comp=N,489nm,0.2s						
ANN				smax	smax		
	comp=E,308nm,0.3s						
ANN	**Anapa**	2.93	271	*e*Pn	Pb	17 44 11.4	-2.1
ANN				*e*Sn	Sb	17 44 48.8	-0.2
MTEO	**Meteo**	3.04	134	P	Pn	17 44 09.9	+1.1
MTEO				S	Sb	17 44 52.3	-0.2
PNSH	**Pansheti**	3.11	133	P	Pn	17 44 02.9	-6.7
PNSH				S	Sn	17 44 47.5	+1.4
PNSH	**Pansheti**	3.11	133	*e*PN	Pn	17 44 02.8	-6.8
PNSH				*e*S	Sn	17 44 47.4	+1.4
GUDG	**Gudauri**	3.17	137	P	Pn	17 44 14.2	+3.7
GUDG				S	Sb	17 44 58.9	+2.8
GUDG	**Gudauri**	3.17	137	*e*PN	Pn	17 44 14.1	+3.7
GUDG				*e*S	Sb	17 44 58.8	+2.8
ABS	**Abastumani**	3.19	163	P	Pn	17 44 12.6	+1.8
ABS	**Abastumani**	3.19	163	*e*PN	Pn	17 44 12.5	+1.8
BCA	**Borcka**	3.37	179	⇑P	Pb	17 44 19.8	-1.3
BKRG	**Bakuriani**	3.38	154	P	Pn	17 44 15.3	+2.1
BKRG				S	Sb	17 45 07.1	+5.1
BKRG	**Bakuriani**	3.38	154	*e*PN	Pn	17 44 15.3	+2.1
BKRG				*e*S	Sb	17 45 07.1	+5.1
GROC	**Groznyy**	3.46	116	*e*PN	Pn	17 44 16.0	+1.8
GROC				*e*		17 44 25.2	
GROC				*e*		17 44 57.4	
GROC				*e*		17 45 16.8	
GROC				pmax	pmax		
	comp=Z,97nm,0.4s						
GROC				pmax	pmax		
	comp=Z,167nm,0.3s						
GROC				smax	smax		
	comp=E,358nm,0.4s						
GROC				smax	smax		
	comp=E,358nm,0.4s						
GROC				smax	smax		
	comp=N,821nm,0.6s						
GROC				smax	smax		
	comp=N,1μm,0.5s						
GROC				MLR	MLR		
	comp=Z,317nm,2.0s						
GROC	**Groznyy**	3.46	116	*e*Pn	Pn	17 44 15.9	+1.8
GROC				*e*Sn	Sn	17 44 56.9	+2.6
BRNG	**Burnasheti**	3.60	152	P	Pn	17 44 19.1	+2.8
AKH	**Akhalkalaki**	3.69	157	⇓P	Pn	17 44 20.2	+2.7
AKH	**Akhalkalaki**	3.69	157	P	Pn	17 44 20.1	+2.5
AKH				S	Sb	17 45 16.9	+6.0
AKH	**Akhalkalaki**	3.69	157	*e*PN	Pn	17 44 20.0	+2.5
AKH				*e*S	Sb	17 45 16.9	+6.0
BGD	**Bogdanovka**	3.85	156	P	Pn	17 44 23.7	+3.9
BGD	**Bogdanovka**	3.85	156	*e*PN	Pn	17 44 23.7	+3.9
SEAG	**Tbilisi Sea**	3.87	141	P	Pb	17 44 29.0	-0.5
SEAG	**Tbilisi Sea**	3.87	141	*e*PN	Pb	17 44 29.0	-0.5
BTNK	**Botanikuri**	3.93	142	P	Pn	17 44 19.5	-1.2
BTNK	**Botanikuri**	3.93	142	*e*PN	Pn	17 44 19.4	-1.2
BTLR	**Botlikh**	4.01	121*d*	*i*PN	Pn	17 44 22.4	+0.6
BTLR	**Botlikh**	4.01	121	*e*Pn	Pn	17 44 23.5	+1.7
BTLR				*e*Sn	Sn	17 45 08.3	+0.4
KTUT	**Trabzon**	4.05	200	⇑P	Pn	17 44 19.8	-2.5
KARS	**Kars**	4.33	164	PN	Pn	17 44 28.7	+2.3
KARS	**Kars**	4.33	164	Pn	Pn	17 44 28.7	+2.3
FEO	**Feodosiya**	4.38	275	PN	Pn	17 44 26.9	+0.1
FEO				*e*S	Sn	17 45 17.0	0.0
FEO	**Feodosiya**	4.38	275	*i* P	Pn	17 44 26.9	+0.1
FEO				Pm		17 44 29.0	
	comp=Z,59nm,0.2s						
FEO				*e*S	Sn	17 45 17.0	0.0
FEO				Sm		17 45 27.4	
	comp=N,133nm,0.3s						
FEO				Sm		17 45 27.4	
	comp=E,110nm,0.3s						
LGD	**Lagodekhi**	4.54	129	P	Pn	17 44 32.2	+3.2
LGD	**Lagodekhi**	4.54	129	*e*PN	Pn	17 44 32.2	+3.2
GNBR	**Gunib**	4.62	120*d*	*i*PN	Pn	17 44 31.7	+1.5
SUDU	**Sudak**	4.66	273	⇑PN	Pn	17 44 31.4	+0.7
SUDU				*i* S	Sn	17 45 24.9	+1.0
SUDU	**Sudak**	4.66	273	*i* P	Pn	17 44 31.4	+0.7
SUDU				Pm		17 44 32.0	
	comp=Z,126nm,0.2s						
SUDU				*i* S	Sn	17 45 24.9	+1.0
SUDU				Sm		17 45 27.1	
	comp=N,382nm,0.5s						
SUDU				Sm		17 45 27.1	
	comp=E,143nm,0.6s						
MAK	**Makhachkala**	4.69	111	*e*PN	Pn	17 44 30.7	-0.3
MAK				*e*		17 44 46.7	
MAK				*e*S	Sn	17 45 25.0	+0.5
MAK				*e*		17 45 42.1	
MAK				*e*		17 45 54.8	
MAK				pmax	pmax		
	comp=Z,134nm,0.4s						
MAK				smax	smax		
	comp=N,1μm,0.5s						
MAK				smax	smax		
	comp=N,953nm,0.6s						
MAK				MLR	MLR		
	comp=Z,156nm,7.0s						
DDFL	**Dedoflistskaro**	4.74	134	P	Pn	17 44 36.0	+4.0
DDFL	**Dedoflistskaro**	4.74	134	*e*PN	Pn	17 44 35.9	+4.0
ALU	**Alushta**	5.09	271	⇓PN	Pn	17 44 37.3	+0.7
ALU				*i* S	Sn	17 45 35.3	+0.7
ALU	**Alushta**	5.09	271	*i* P	Pn	17 44 37.3	+0.7
ALU				Pm		17 44 37.7	
	comp=Z,58nm,0.6s						
ALU				*i* S	Sn	17 45 35.3	+0.7
ALU				Sm		17 45 41.0	
	comp=N,41nm,0.3s						
ALU				Sm		17 45 41.0	
	comp=E,54nm,0.5s						
GNI	**Garni**	5.23	152	Pn	Pn	17 44 41.5	+2.9
	comp=E,0.3nm,0.3s,baz=247,slow=23,SNR=2.0						
GNI				Sn	Sn	17 45 40.5	+2.4
	comp=E,3.6nm,0.3s,baz=281,slow=5.2,SNR=3.2						
GNI				Lg	Lg	17 46 02.9	
	comp=E,1.9nm,0.3s,baz=324,slow=22,SNR=3.0						
GNI				LR	LR	17 46 34.7	
	comp=E,39nm,18.1s,baz=348,slow=38						
GNI	**Garni**	5.23	152	PN	Pn	17 44 39.4	+0.8
GNI						17 44 58.1	
GNI						17 45 40.5	
GNI	**Garni**	5.23	152		Pn	17 44 39.4	+0.8
GNI				Pb	Pb	17 44 48.5	-4.2
GNI				Pg		17 44 58.1	
SIM	**Simferopol'**	5.29	274	⇑*i*PN	Pn	17 44 39.9	+0.6
SIM				*i* S	Sn	17 45 39.5	+0.2
SIM	**Simferopol'**	5.29	274	*i* P	Pn	17 44 39.9	+0.6
SIM				Pm		17 44 44.4	
	comp=Z,111nm,0.4s						
SIM				*i* S	Sn	17 45 39.5	+0.2
SIM				Sm		17 45 41.8	
	comp=N,70nm,0.3s						
SIM				Sm		17 45 41.8	
	comp=E,117nm,0.3s						
YAL	**Yalta**	5.29	269	PN	Pn	17 44 39.7	+0.4
YAL				*e*S	Sn	17 45 39.2	-0.1
YAL	**Yalta**	5.29	269	*i* P	Pn	17 44 39.7	+0.4
YAL				Pm		17 44 46.7	
	comp=Z,63nm,0.3s						
YAL				x	Pn	17 45 39.2	+60
YAL				Sm		17 45 44.9	
	comp=N,167nm,0.4s						
YAL				Sm		17 45 44.9	
	comp=E,230nm,0.4s						
SNOP	**Sinop**	5.40	241	Pn	Pn	17 44 41.7	+0.8
SNOP				Sn	Sn	17 45 42.8	+0.6
SEKA	**Sheki**	5.49	129	P	Pn	17 44 47.2	+5.1
DIKM	**Dikmen**	5.58	238	⇑P	Pn	17 44 43.0	-0.4
AKT	**Akhty**	5.62	124*c*	*i*P	Pn	17 44 46.1	+2.2
AKT	**Akhty**	5.62	124	*e*Pn	Pn	17 44 45.7	+1.7
AKT				*e*Sn	Sn	17 45 47.6	0.0
SEV	**Sevastopol'**	5.63	270	⇓*i*P	Pn	17 44 44.9	+0.9
SEV				*i* S	Sn	17 45 48.1	+0.4
SEV	**Sevastopol'**	5.63	270	*i* P	Pn	17 44 44.9	+0.9
SEV				Pm		17 44 51.7	
	comp=Z,32nm,0.3s						
SEV				*i* S	Sn	17 45 48.1	+0.4
SEV				Sm		17 45 53.7	
	comp=N,114nm,0.4s						
SEV				Sm		17 45 53.7	
	comp=E,53nm,0.3s						
BZK	**Bozkurt**	6.20	245	Pn	Pn	17 44 54.1	+2.3
BZK				Sn	Sn	17 46 03.9	+2.1
GURO	**Guroymak-BITLI**	6.27	177	Pn	Pn	17 44 53.5	+0.6
VORD	**Divnogorie**	6.34	347	*e*P	Pn	17 44 55.7	+2.0
VORD				*e*S	Sn	17 46 05.2	+0.1
VORD				pmax	pmax		
	comp=Z,30nm,0.3s						
VORD				smax	smax		
	comp=N,40nm,0.4s						
VRH	**Novokhopyorsk**	6.39	1	*e*P	Pn	17 44 56.7	+2.3
VRH				*e*S	Sn	17 46 06.2	-0.2
VRH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VRH				smax	smax		
	comp=N,130nm,0.4s						
VSR	**Storozhevoye**	6.60	347	*e*P	Pn	17 44 59.2	+1.9
VSR				*e*S	Sn	17 46 10.8	-0.8
VSR				pmax	pmax		
	comp=Z,130nm,0.4s						
VSR				smax	smax		
	comp=N,70nm,0.4s						
VORR	**Voronezh**	7.04	348	P	Pn	17 45 05.0	+1.7
VORR				pmax	pmax		
	comp=Z,250nm,0.8s						
BNN	**Bunyan**	7.32	218	Pn	Pn	17 45 07.0	-0.4
BR131	**Keskin Array S**	7.76	232	P	Pn	17 45 13.6	+0.1
BR131	**Keskin Array S**	7.76	232	Pn	Pn	17 45 13.6	+0.1
BRTR	**Keskin Array B**	7.76	232	Pn	Pn	17 45 15.1	+1.6
	comp=Z,1.5nm,0.3s,baz=36,slow=11,SNR=27						
BRTR				Sn	Sn	17 46 40.7	+0.1
	comp=Z,0.2nm,0.3s,baz=102,slow=38,SNR=1.6						
BRTR				LR	LR	17 49 19.3	
	comp=Z,100nm,18.0s,baz=60,slow=47						
BRTR	**Keskin Array B**	7.76	232		Pn	17 45 13.4	-0.1
LPSR	**Galich'ya Gora**	7.98	348	*e*P	Pn	17 45 17.4	+1.2
LPSR				*e*S	Sn	17 46 42.8	-2.7
LPSR				pmax	pmax		
	comp=Z,50nm,0.8s						
LPSR				smax	smax		
	comp=E,70nm,0.4s						
BELG	**Belogornoye**	8.58	26	Pn	Pn	17 45 25.2	+0.8
	comp=E,4.8nm,0.3s,baz=218,slow=19,SNR=17						
BELG				Sn	Sn	17 46 56.6	-3.6
	comp=E,8.9nm,0.3s,baz=180,slow=20,SNR=13						
BELG				Lg	Lg	17 47 58.6	
	comp=E,5.4nm,0.3s,baz=295,slow=17,SNR=2.0						
BELG				LR	LR	17 49 35.2	
	comp=E,18nm,20.2s,baz=335,slow=43						
TLCR		9.04	277	⇑P	Pn	17 45 31.7	+1.0
TLCR		9.04	277	⇑P	Pn	17 45 31.7	+1.0
MILM	**Milestii Mici**	9.14	288	⇑P	Pn	17 45 34.8	+2.8
MILM	**Milestii Mici**	9.14	288	*e*P	Pn	17 45 33.0	+0.9
MILM				*e*		17 47 09.0	
MILM				smax	smax		
	comp=N,130nm,1.0s						
MILM				MLR	MLR		
	comp=Z,300nm,5.0s						
MANR	**Mangalia**	9.35	268	⇑P	Pn	17 45 35.5	+0.4
TIRR	**Tirgusor**	9.38	272	⇓P	Pn	17 45 34.8	-0.6
TIRR	**Tirgusor**	9.38	272	⇓P	Pn	17 45 34.8	-0.6
TIRR	**Tirgusor**	9.38	272	Pn	Pn	17 45 34.2	-1.2
TIRR					Sn	17 47 14.7	-5.2
MFTR	**Murfatlar**	9.41	271	⇑P	Pn	17 45 36.0	+0.2
CFR	**Carcaliu**	9.52	277	⇓P	Pn	17 45 36.7	-0.6
CFR	**Carcaliu**	9.52	277	⇓P	Pn	17 45 36.7	-0.6
VLDR	**Vladesti**	9.55	281	⇑P	Pn	17 45 38.5	+0.8
SCTR	**Scanteiesti**	9.61	280	⇑P	Pn	17 45 38.6	+0.1
TLBR	**Topalu**	9.63	273	⇑P	Pn	17 45 38.5	-0.3
SORM	**Soroca**	9.69	295	⇓P	Pn	17 45 40.9	+1.2
SORM	**Soroca**	9.69	295	⇓P	Pn	17 45 40.9	+1.2
HARR	**Harsova**	9.70	274	⇑P	Pn	17 45 40.0	+0.3
HARR	**Harsova**	9.70	274	⇑P	Pn	17 45 40.0	+0.3
IZVR	**Izvoarele**	9.77	279	⇑P	Pn	17 45 39.1	-1.6
TUDR		9.83	279	⇑P	Pn	17 45 30.5	-11
AKASG	**Malin Array Be**	10.17	310	Pn	Pn	17 45 45.9	-0.3
	comp=Z,5.6nm,0.3s,baz=112,slow=12,SNR=21						
AKASG				Sn	Sn	17 47 34.4	-4.9
	comp=Z,9.9nm,0.3s,baz=118,slow=24,SNR=8.0						
AKASG				Lg	Lg	17 48 41.2	
	comp=Z,5.6nm,0.3s,baz=114,slow=30,SNR=4.1						
AKASG	**Malin Array Be**	10.17	310	Pn	Pn	17 45 45.6	-0.7
AKASG				Sn	Sn	17 47 33.7	-5.6
AKBB	**Malin Array Si**	10.17	310	*i* P	Pn	17 45 50.8	+4.6
AKBB	**Malin Array Si**	10.17	310	Pn	Pn	17 45 45.6	-0.7
AKBB				Sn	Sn	17 47 34.2	-5.1
GRER		10.33	278	⇑P	Pn	17 45 49.6	+1.2
VRI	**Vrincioaia**	10.49	281	⇑P	Pn	17 45 50.7	0.0
VRI	**Vrincioaia**	10.49	281	⇑P	Pn	17 45 50.7	0.0
BISRR	**Bisoca**	10.51	279	⇑P	Pn	17 45 53.6	+2.7
PLOR	**Plostina**	10.55	281	⇑P	Pn	17 45 52.6	+1.1
PLOR	**Plostina**	10.55	281	⇑P	Pn	17 45 52.6	+1.1
TESR	**Tescani**	10.57	284	⇑P	Pn	17 45 52.3	+0.6
ISR	**Istrita**	10.64	277	⇑P	Pn	17 45 54.4	+1.6
ISR	**Istrita**	10.64	277	⇑P	Pn	17 45 54.4	+1.6
OBN	**Obninsk**	10.79	345	Pn	Pn	17 45 54.8	+0.1
	comp=Z,2.5nm,0.3s,baz=163,slow=14,SNR=2.7						
OBN				Sn	Sn	17 47 49.8	-4.7
	comp=Z,1.0nm,0.3s,baz=122,slow=21,SNR=2.3						
OBN				Lg	Lg	17 49 03.6	
	comp=Z,1.2nm,0.3s,baz=164,slow=23,SNR=3.1						
OBN	**Obninsk**	10.79	345*d*	*i*P	Pn	17 45 59.7	+5.0
OBN				*e*S	Sn	17 48 03.9	+9.4
OBN				pmax	pmax		
	comp=Z,23nm,0.6s						
OBN				MLR	MLR		
	comp=Z,101nm,10.0s						
OBN	**Obninsk**	10.79	345	Pn	Pn	17 45 54.9	+0.3
NEHR	**Nehoiu**	10.80	279	⇑P	Pn	17 45 56.7	+1.7
COVR	**Voineasa-Covas**	10.86	281	⇓P	Pn	17 45 56.8	+1.1
RAZG	**Razgrad**	10.88	269	⇓P	Pn	17 45 55.1	-0.9
MLR	**Muntele Rosu**	11.05	279	⇑P	Pn	17 46 00.1	+1.7
MLR	**Muntele Rosu**	11.05	279	Pn	Pn	17 45 59.4	+1.0
	comp=Z,1.3nm,0.3s,baz=37,slow=5.1,SNR=16						
MLR				Sn	Sn	17 47 58.1	-3.0
	comp=Z,1.9nm,0.3s,baz=99,slow=19,SNR=4.0						
MLR				LR	LR	17 51 13.6	
	comp=Z,100nm,21.2s,baz=70,slow=43						
MLR	**Muntele Rosu**	11.05	279	⇑P	Pn	17 46 00.1	+1.7
MLR	**Muntele Rosu**	11.05	279	Pn	Pn	17 45 59.0	+0.6
OZUR		11.15	282	⇑P	Pn	17 45 54.0	-5.8
DOPR	**Dopca**	11.43	281	⇑P	Pn	17 46 03.5	0.0
BURAR	**Bucovina Array**	11.66	290	⇑P	Pn	17 46 06.7	0.0
BURAR	**Bucovina Array**	11.66	290	⇑P	Pn	17 46 06.7	0.0
BURAR	**Bucovina Array**	11.66	290	Pn	Pn	17 46 06.0	-0.7
BUR08	**Bucovina Ar. S**	11.67	290	Pn	Pn	17 46 06.1	-0.9
VOIR		11.68	279	⇑P	Pn	17 46 07.5	+0.5
VOIR		11.68	279	⇑P	Pn	17 46 07.5	+0.5
AKTO	**Aktyubinsk**	12.44	57	Pn	Pn	17 46 14.8	-2.4
	comp=Z,1.5nm,0.3s,baz=242,slow=10,SNR=19						
AKTO				Sn	Sn	17 48 23.5	-11
	comp=Z,2.0nm,0.3s,baz=346,slow=8.3,SNR=6.2						
AKTO				LR	LR	17 53 06.0	
	comp=Z,24nm,19.5s,baz=228,slow=47						
AKTO	**Aktyubinsk**	12.44	57	⇑P	Pn	17 46 14.8	-2.4
	comp=Z,9.9nm,0.5s						
AKTO				⇑S	Sn	17 48 25.0	-10
	comp=Z,15nm,0.7s						
LOT	**Lotru**	12.58	279	⇑P	Pn	17 46 19.7	+0.4
MNK	**Minsk**	13.11	323	*i* P	Pn	17 46 24.7	-1.6
MNK				*i* S	Sn	17 48 47.8	-3.2
MNK				pmax	pmax		
	comp=N,18nm,1.3s						
MNK				pmax	pmax		
	comp=E,1.0nm,1.0s						
MNK				pmax	pmax		
	comp=Z,12nm,1.7s						
MNK				MLR	MLR		
	comp=N,90nm,17.0s						
MNK				MLR	MLR		
	comp=Z,48nm,11.0s						
MNK	**Minsk**	13.11	323	*i* P	Pn	17 46 24.7	-1.6
	comp=E,1.0nm,1.0s						
MNK				*i* P	Pn	17 46 24.7	-1.6
	comp=N,18nm,1.3s						
MNK				*i* P	Pn	17 46 24.7	-1.6
	comp=Z,12nm,1.7s,baz=132						
MNK				*i* PP	PnPn	17 46 32.6	-1.4
MNK				*i* S	Sn	17 48 47.8	-3.2
MNK				*i* SS	SnSn	17 49 06.2	+3.1
MNK				*i* LR	LR	17 51 03.1	
MNK				*i* LRM	MLR	17 51 54.6	
	comp=E,5.0nm,12.7s						
MNK				*i* LRM	MLR	17 51 56.7	
	comp=N,90nm,16.5s						
MNK				*i* LRM	MLR	17 52 06.1	
	comp=Z,48nm,11.4s						
AB31	**Akbulak array**	13.30	64	*i* P	Pn	17 46 26.9	-2.1
AB31	**Akbulak array**	13.30	64	P	Pn	17 46 26.9	-2.1
	comp=Z,2.0nm,0.3s,baz=256,slow=10,SNR=120						
AB31				S	Sn	17 48 49.2	-6.7
	comp=Z,4.7nm,0.6s,baz=260,slow=21,SNR=4.7						
ABKAR	**Akbulak array**	13.30	64		Pn	17 46 26.4	-2.5
ABKAR	**Akbulak array**	13.30	64	Pn	Pn	17 46 26.1	-2.9
KWP	**Kalwaria Pacla**	13.67	297	P	Pn	17 46 32.9	-1.2
KWP	**Kalwaria Pacla**	13.67	297		Pn	17 46 32.9	-1.2
KOLS	**Kolonicke sedl**	13.81	294	*e*P	Pn	17 46 37.3	+1.3
KOLS				*e*		17 49 01.8	
KOLS	**Kolonicke sedl**	13.81	294	*e*PN	Pn	17 46 37.3	+1.3
KOLS	**Kolonicke sedl**	13.81	294	*e*SN	Sn	17 49 01.8	-6.5
NACGM	**Naroch**	13.85	322	*i* P	P	17 46 46.5	+1.9
GEYT	**Alibeck**	14.20	113	Pn	Pn	17 46 40.0	-1.4
	comp=Z,1.0nm,0.3s,baz=316,slow=12,SNR=6.1						
CRVS	**Cervenica-Dubn**	14.33	294	*e*P	Pn	17 46 42.4	-0.7
CRVS	**Cervenica-Dubn**	14.33	294	*e*PN	Pn	17 46 42.3	-0.8
ISAL	**Salakas**	14.57	323	IAmb	IAmb	17 47 01.7	
	comp=Z,5.5nm,0.9s						

KIRV	**Kirov**	**14.61**	**17**	Pn	**Pn**	**17 46 43.7**	**-3.0**
	comp=Z,1.9nm,0.3s,baz=206,slow=6.3,SNR=2.5						
KIRV				Sn	**Sn**	**17 49 19.9**	**-7.7**
	comp=Z,1.7nm,0.3s,baz=125,slow=23,SNR=2.1						
KIRV				Lg	Lg	17 51 08.4	
	comp=Z,0.6nm,0.3s,baz=114,slow=21,SNR=2.0						
PSZ	**Piszkesteto**	**15.26**	**289**	P	**Pn**	**17 46 53.5**	**-2.2**
PSZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
PSZ	**Piszkesteto**	**15.26**	**289**	Pn	**Pn**	**17 46 53.5**	**-2.2**
FNA	**Florina**	**15.34**	**262**	P	**Pn**	**17 46 54.9**	**-1.9**
FNA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
FNA	**Florina**	**15.34**	**262**	Pn	**Pn**	**17 46 54.9**	**-1.9**
FNA				IAmb	IAmb	17 47 11.4	
	comp=Z,7.7nm,0.8s						
DIVS	**Divibare**	**15.41**	**275**	Pn	**Pn**	**17 46 57.3**	**-0.4**
PABE	**Paberze**	**15.49**	**320**	*e*P	**P**	**17 47 02.6**	**-0.1**
PABE				IAmb	IAmb	17 47 13.2	
	comp=Z,21nm,0.5s						
PABE	**Paberze**	**15.49**	**320**	P	**Pn**	**17 46 56.9**	**-1.6**
PABE				IAmb	IAmb	17 47 11.1	
	comp=Z,23nm,0.7s						
OJC	**Ojcow**	**15.64**	**298**	P	**Pn**	**17 46 58.8**	**-1.7**
OJC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
OJC	**Ojcow**	**15.64**	**298**	Pn	**Pn**	**17 46 58.8**	**-1.7**
LANS	**Liptovska Anna**	**15.67**	**294**	*e*P	**Pn**	**17 47 01.6**	**+0.7**
LANS				*e*		17 49 45.7	
LANS	**Liptovska Anna**	**15.67**	**294**	*e*PN	**Pn**	**17 47 01.6**	**+0.7**
LANS	**Liptovska Anna**	**15.67**	**294**	*e*SN	**Sn**	**17 49 45.7**	**-7.9**
ARU	**Arti**	**15.81**	**37**	Pn	**Pn**	**17 46 59.8**	**-2.8**
	comp=Z,0.0nm,0.3s,baz=222,slow=9.5,SNR=14						
ARU				Sn	Sn	17 49 46.0	-11
	comp=Z,0.0nm,0.3s,baz=126,slow=19,SNR=7.1						
ARU	**Arti**	**15.81**	**37**	*c i*P	**Pn**	**17 46 59.8**	**-2.8**
ARU				S	**Sn**	**17 49 53.2**	**-3.6**
ARU				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ARU	**Arti**	**15.81**	**37**		**Pn**	**17 46 59.3**	**-3.4**
ARU				IAmb	IAmb	17 47 06.7	
	comp=Z,8.3nm,0.6s						
IDI	**Anoyia**	**15.89**	**239**	Pn	**Pn**	**17 47 03.3**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=108,slow=6.4,SNR=3.0						
VYHS	**Vyhne**	**16.01**	**291**	*e*P	**Pn**	**17 47 06.8**	**+1.5**
VYHS	**Vyhne**	**16.01**	**291**	*e*PN	**Pn**	**17 47 06.8**	**+1.5**
VSU	**Vasula**	**16.41**	**332**	*e*P	**P**	**17 47 12.1**	**-0.8**
ITM	**Ithomi**	**16.64**	**250**		**P**	**17 47 15.8**	**+0.1**
ITM				IAmb	IAmb	17 48 08.2	
	comp=Z,26nm,1.3s						
SVE	**Sverdlovsk**	**16.95**	**38**	*e*P	**Pn**	**17 47 14.6**	**-2.6**
SVE				pmax	pmax		
	comp=Z,14nm,0.5s						
MORC	**Moravsky Berou**	**17.00**	**296**	P	**Pn**	**17 47 15.7**	**-2.1**
MORC				pmax	pmax		
	comp=Z,3.0nm,1.1s						
MORC	**Moravsky Berou**	**17.00**	**296**	P	**Pn**	**17 47 15.7**	**-2.1**
PRGR	**Permogore**	**17.02**	**7**	*e*P	**P**	**17 47 20.2**	**+0.6**
PRGR				*e*		17 50 27.0	
PRGR				pmax	pmax		
	comp=Z,23nm,0.9s						
VRAC	**Vranov**	**17.56**	**294**	S	**Sn**	**17 50 32.9**	**-6.4**
	comp=Z,0.5nm,0.3s,baz=30,slow=18,SNR=2.1						
VRAC				LR	LR	17 54 18.1	
	comp=Z,65nm,18.4s,baz=94,slow=37						
FIA1	**FINESS Array S**	**18.98**	**337**	P	**P**	**17 47 38.5**	**-2.7**
FIA1				IAmb	IAmb	17 48 21.6	
	comp=Z,28nm,1.4s						
FINES	**FINESS Array B**	**18.98**	**337**	Pn	**P**	**17 47 38.4**	**-2.8**
	comp=Z,1.1nm,0.3s,baz=152,slow=12,SNR=22						
FINES				Sn	Sn	17 51 02.4	-11
	comp=Z,0.4nm,0.3s,baz=135,slow=25,SNR=3.1						
HRA	**Herat**	**18.99**	**116**	P	**P**	**17 47 40.6**	**-1.2**
TIP	**Timpagrande**	**19.23**	**262**	P	**Pn**	**17 47 45.4**	**0.0**
TIP				IAmb	IAmb	17 47 52.1	
	comp=Z,15nm,1.4s						
GERES	**GERESS Array B**	**19.43**	**292**	P	**Pn**	**17 47 49.4**	**+1.7**
	comp=Z,0.2nm,0.3s,baz=78,slow=12,SNR=5.5						
KHC	**Kasperske Hory**	**19.52**	**293**	*e*P	**Pn**	**17 47 53.6**	**+5.0**
KHC	**Kasperske Hory**	**19.52**	**293**	*e*P	**Pn**	**17 47 53.6**	**+5.0**
AAL	**Aland**	**20.07**	**328**	*e*P	**P**	**17 47 53.2**	**+0.2**
CLL	**Collm**	**20.07**	**299**	*e*P	Pn	17 47 55.0	-0.1
CLL				*e**PP	pP	17 48 02.0	+1.5
CLL	**Collm**	**20.07**	**299**	*e*P	Pn	17 47 55.0	-0.1
CLL				*e*sP	pP	17 48 02.0	+1.5
CLL				*e*PP	**PnPn**	**17 48 12.0**	**+2.4**
CLL				*e*S	Sn	17 51 43.0	+3.0
CLL				*e*SSS	SSS	17 52 12.0	
ABTA	**Abfaltersbach**	**20.30**	**286**	*e*P	Pn	17 47 58.6	+0.7
	comp=Z,0.2nm,0.3s						
BRVK	**Borovoye**	**20.48**	**56**	*d i*P	**P**	**17 47 58.8**	**+1.1**
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BRVK	**Borovoye**	**20.48**	**56**	P	**P**	**17 47 57.6**	**-0.1**
BRVK	**Borovoye**	**20.48**	**56**	⇑P	**P**	**17 47 58.1**	**+0.4**
	comp=Z,4.4nm,0.6s						
BRVK				⇓S	S	17 51 34.6	-11
	comp=Z,3.1nm,0.6s						
BVAR	**Borovoye Array**	**20.54**	**56**	P	**P**	**17 47 59.2**	**+1.0**
	comp=Z,4.4nm,0.5s,baz=244,slow=21,SNR=11						
BVAR				S	S	17 51 36.1	-10
	comp=Z,1.0nm,0.5s,baz=257,slow=26,SNR=2.0						
WTTA	**Wattenberg**	**20.85**	**287**	*e*P	Pn	17 48 04.7	+0.2
	comp=Z,2.7nm,0.6s						
KK31	**Karatay Array**	**20.87**	**84**	*e*P	**P**	**17 48 03.6**	**+1.7**
KK31	**Karatay Array**	**20.87**	**84**	P	**P**	**17 48 02.3**	**+0.3**
KK31	**Karatay Array**	**20.87**	**84**	⇑P	**P**	**17 48 03.7**	**+1.7**
	comp=Z,1.5nm,0.5s,baz=298,slow=9.7,SNR=25						
KKAR	**Karatay Array**	**20.87**	**84**	P	**P**	**17 48 03.2**	**+1.2**
KKAR	**Karatay Array**	**20.87**	**84**	P	**P**	**17 48 03.2**	**+1.2**
KKAR	**Karatay Array**	**20.87**	**84**	P	**P**	**17 48 01.3**	**-0.7**
KKAR				IAmb	IAmb	17 48 33.5	
	comp=Z,10nm,1.4s						
MURB	**Monte Urbino**	**20.88**	**276**	P	**P**	**17 48 03.1**	**+0.9**
MURB				IAmb	IAmb	17 48 18.0	
	comp=Z,17nm,1.1s						
TEOL	**Teolo**	**21.05**	**282**	P	**P**	**17 48 04.8**	**+0.9**
TEOL				IAmb	IAmb	17 48 28.2	
	comp=Z,8.0nm,0.7s						
SQTA	**Sankt Quirin**	**21.15**	**287**	*i* P	**P**	**17 48 07.3**	**+2.3**
	comp=Z,1.1nm,0.2s						
MOTA	**Moosalm**	**21.21**	**288**	*e*P	**P**	**17 48 06.9**	**+1.2**
	comp=Z,0.9nm,0.3s						
CHGR	**Chuyangaron**	**21.44**	**97**	P	**P**	**17 48 08.8**	**+0.6**
CHGR				IAmb	IAmb	17 48 10.8	
	comp=Z,15nm,0.8s						
FETA	**Feichten**	**21.49**	**287**	*e*P	**P**	**17 48 09.8**	**+1.1**
	comp=Z,0.4nm,0.3s						
VAE	**Valguarnera**	**21.65**	**260**	P	**P**	**17 48 10.8**	**+0.5**
	comp=Z,4.5nm,0.4s,baz=125,slow=14,SNR=1.3						
ZCCA	**Zocca**	**21.73**	**280**	P	**P**	**17 48 11.1**	**-0.1**
ZCCA				IAmb	IAmb	17 48 13.7	
	comp=Z,52nm,1.6s						
RAFF	**Raffo Rosso**	**21.80**	**259**	P	**P**	**17 48 12.8**	**+0.8**
RAFF				IAmb	IAmb	17 48 47.8	
	comp=Z,44nm,1.5s						
DAVA	**Damuels**	**22.04**	**288**	*e*P	**P**	**17 48 16.4**	**+1.8**
	comp=Z,0.8nm,0.2s						
BTK	**Batken**	**22.05**	**92**	P	**P**	**17 48 15.5**	**+0.7**
BTK				pmax	pmax		
	comp=Z,12nm,0.9s						
BTK	**Batken**	**22.05**	**92**	P	**P**	**17 48 15.5**	**+0.7**
BTK				IAmb	IAmb	17 48 20.9	
	comp=Z,12nm,0.9s						
DAVOX	**Davos/Dischmat**	**22.09**	**286**	P	**P**	**17 48 15.2**	**-0.1**
	comp=Z,1.1nm,0.4s,baz=346,slow=7.0,SNR=2.2						
DAVOX				LR	LR	17 57 26.7	
	comp=Z,69nm,18.7s,baz=70,slow=38						
GAR	**Garm**	**22.11**	**95**	P	**P**	**17 48 16.8**	**+1.3**
GAR				IAmb	IAmb	17 48 27.4	
	comp=Z,37nm,1.1s						
CORL	**Corleone**	**22.23**	**262**	P	**P**	**17 48 17.9**	**+1.2**
CORL				IAmb	IAmb	17 48 34.4	
	comp=Z,28nm,1.6s						
HFS	**Hagfors**	**22.62**	**323**	P	**P**	**17 48 21.6**	**+1.0**
	comp=Z,3.1nm,0.4s,baz=113,slow=11,SNR=16						
MSSA	**Maissana**	**22.76**	**280**	P	**P**	**17 48 24.9**	**+2.7**
DRK	**Karamyk**	**22.97**	**93**	P	**P**	**17 48 25.0**	**+0.2**
DRK				IAmb	IAmb	17 48 56.1	
	comp=Z,8.1nm,0.5s						
KBL	**Kabul**	**23.41**	**106**	P	**P**	**17 48 29.1**	**-0.1**
KBL				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KBL	**Kabul**	**23.41**	**106**	P	**P**	**17 48 29.1**	**-0.1**
LVZ	**Lovozero**	**23.42**	**353**	P	**P**	**17 48 29.8**	**+1.1**
LVZ				pmax	pmax		
	comp=Z,54nm,1.4s						
LVZ	**Lovozero**	**23.42**	**353**	P	**P**	**17 48 29.8**	**+1.1**
AAK	**Ala-Archa**	**23.82**	**84**	P	**P**	**17 48 34.9**	**+2.0**
	comp=Z,2.1nm,0.7s,baz=276,slow=5.8,SNR=7.0						
AAK				LR	LR	18 00 04.0	
	comp=Z,47nm,21.6s,baz=291,slow=42						
AAK	**Ala-Archa**	**23.82**	**84**	⇑*e*P	**P**	**17 48 35.2**	**+2.3**
AAK				pmax	pmax		
	comp=Z,27nm,1.8s						
AAK	**Ala-Archa**	**23.82**	**84**	P	**P**	**17 48 33.7**	**+0.8**
NC602	**NORSAR Array S**	**23.85**	**323**	P	**P**	**17 48 33.6**	**+0.8**
NC602	**NORSAR Array S**	**23.85**	**323**	*e*P	**P**	**17 48 33.1**	**+0.3**
SENIN	**Lac Senin/Sane**	**23.91**	**286**	P	**P**	**17 48 33.7**	**-0.2**
SENIN				IAmb	IAmb	17 48 53.1	
	comp=Z,6.3nm,0.9s						
NC405	**NORSAR Array S**	**23.95**	**323**	P	**P**	**17 48 33.0**	**-0.9**
NB201	**NORSAR Array S**	**24.10**	**323**	P	**P**	**17 48 35.6**	**+0.4**
NB2	**NORSAR Subarra**	**24.13**	**323**	P	**P**	**17 48 37.0**	**+1.5**
	comp=Z,1.5nm,0.5s,baz=119,slow=9.3						
NB2	**NORSAR Subarra**	**24.13**	**323**	P	**P**	**17 48 37.0**	**+1.5**
	baz=119,slow=9.3						
NOA	**NORSAR Array B**	**24.13**	**323**	P	**P**	**17 48 37.0**	**+1.5**
	comp=Z,2.1nm,0.6s,baz=120,slow=8.9,SNR=10						
NC303	**NORSAR Array S**	**24.16**	**324**	P	**P**	**17 48 35.3**	**-0.4**
NC303				IAmb	IAmb	17 49 12.8	
	comp=Z,46nm,1.6s						
NAO01	**NORSAR Array S**	**24.18**	**322**	P	**P**	**17 48 37.2**	**+1.2**
KONO	**Kongsberg**	**24.25**	**319**	P	**P**	**17 48 36.6**	**+0.1**
KONO				pmax	pmax		
	comp=Z,23nm,1.3s						
KONO	**Kongsberg**	**24.25**	**319**	P	**P**	**17 48 36.6**	**+0.1**
KONO				IAmb	IAmb	17 48 45.0	
	comp=Z,23nm,1.2s						
KONO	**Kongsberg**	**24.25**	**319**	*e*P	**P**	**17 48 36.1**	**-0.4**
NBO00	**NORSAR Array S**	**24.32**	**323**	P	**P**	**17 48 37.1**	**-0.1**
NC204	**NORSAR Array S**	**24.44**	**323**	P	**P**	**17 48 39.4**	**+1.1**
BNI	**Bardonecchia**	**24.58**	**283**	P	**P**	**17 48 42.4**	**+2.5**
BNI				pmax	pmax		
	comp=Z,23nm,1.4s						
BNI	**Bardonecchia**	**24.58**	**283**	P	**P**	**17 48 42.4**	**+2.5**
BNI				IAmb	IAmb	17 49 00.4	
	comp=Z,22nm,1.4s						
BMRD	**Maredsous**	**25.24**	**296**	*d*P	**P**	**17 48 44.6**	**-1.0**
	comp=Z,3.8nm,0.9s						
BMRD				*d*PnPn	**PnPn**	**17 49 19.8**	**-0.4**
KURBB	**Kurchatov Arra**	**25.35**	**63**	P	**P**	**17 48 47.9**	**+1.2**
	comp=Z,1.6nm,0.2s,baz=278,slow=9.6,SNR=4.0						
KURK	**Kurchatov**	**25.41**	**63**	P	**P**	**17 48 47.9**	**+0.8**
KURK	**Kurchatov**	**25.41**	**63**	P	**P**	**17 48 46.9**	**-0.2**
KURK				IAmb	IAmb	17 49 33.9	
	comp=Z,3.1nm,0.6s						
DOMB	**Dombas**	**25.51**	**324**	*e*P	**P**	**17 48 47.2**	**-0.8**
BLS5	**Blasjo**	**25.65**	**317**	*e*P	**P**	**17 48 49.1**	**-0.2**
NSS	**Namsos**	**25.71**	**331**	*e*P	**P**	**17 48 49.9**	**+0.1**
ODD1	**Odda**	**25.74**	**318**	*e*P	**P**	**17 48 49.4**	**-0.7**
KSH	**Kashi**	**25.93**	**90**	P	**P**	**17 48 52.9**	**+0.7**
KSH				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KTK1	**Kautokeino**	**26.01**	**345**	*e*P	**P**	**17 48 53.2**	**+0.7**
KEV	**Kevo**	**26.06**	**349**	P	**P**	**17 48 54.4**	**+1.5**
KEV				pmax	pmax		
	comp=Z,69nm,1.6s						
KEV	**Kevo**	**26.06**	**349**	P	**P**	**17 48 54.4**	**+1.5**
ARCES	**ARCESS Array B**	**26.09**	**347**	P	**P**	**17 48 55.2**	**+2.0**
	comp=Z,3.1nm,0.6s,baz=150,slow=8.8,SNR=22						
ARCES	**ARCESS Array B**	**26.09**	**347**	P	**P**	**17 48 51.6**	**-1.5**
ARCES				IAmb	IAmb	17 49 17.1	
	comp=Z,20nm,1.4s						
FAUS	**Fauske**	**26.54**	**337**	*e*P	**P**	**17 48 57.8**	**+0.7**
KONS	**Konsvik**	**26.56**	**335**	*e*P	**P**	**17 48 59.2**	**+1.9**
STEI	**Steigen**	**26.94**	**338**	*e*P	**P**	**17 49 02.0**	**+1.2**
HAMF	**Hammerfest**	**27.36**	**347**	*e*P	**P**	**17 49 04.6**	**0.0**
TRO	**Tromso**	**27.38**	**343**	*e*P	**P**	**17 49 05.0**	**+0.3**
MAKZ	**Makanchi**	**28.03**	**71**	P	**P**	**17 49 13.2**	**+2.3**
MAKZ				pmax	pmax		
	comp=Z,18nm,1.4s						
MAKZ	**Makanchi**	**28.03**	**71**	P	**P**	**17 49 13.2**	**+2.3**
MAKZ				IAmb	IAmb	17 49 20.2	
	comp=Z,18nm,1.4s						
MK31	**Makanchi Array**	**28.25**	**71**	P	**P**	**17 49 14.5**	**+1.7**
MK31				pmax	pmax		
	comp=Z,8.0nm,1.3s						
MK31	**Makanchi Array**	**28.25**	**71**	P	**P**	**17 49 14.5**	**+1.7**
MK31				IAmb	IAmb	17 49 51.7	
	comp=Z,7.6nm,1.2s						
MKAR	**Makanchi Array**	**28.25**	**71**	P	**P**	**17 49 14.4**	**+1.6**
	comp=Z,0.5nm,0.4s,baz=272,slow=8.4,SNR=9.0						
MKAR	**Makanchi Array**	**28.25**	**71**	*i* P	**P**	**17 49 15.3**	**+2.5**
MKAR	**Makanchi Array**	**28.25**	**71**	P	**P**	**17 49 13.9**	**+1.1**
ZALV	**Zalesovo Beam**	**29.20**	**56**	P	**P**	**17 49 22.4**	**+1.3**
	comp=Z,0.5nm,0.6s,baz=294,slow=19,SNR=2.2						
EKA	**Eskdalemuir Ar**	**30.06**	**307**	P	**P**	**17 49 31.7**	**+3.0**
	comp=Z,0.1nm,0.4s,baz=53,slow=22,SNR=1.3						
WMQ	**Urumqi**	**32.69**	**75**	*e*P	**P**	**17 49 54.1**	**+2.0**
NRIK	**Noril'sk**	**33.68**	**27**	P	**P**	**17 50 04.4**	**+4.1**
	comp=Z,1.4nm,0.4s,baz=198,slow=7.8,SNR=2.7						
SPB2	**Spitsbergen Ar**	**34.89**	**351**	P	**P**	**17 50 11.7**	**+0.9**
SPA0	**Spitsbergen Ar**	**34.90**	**351**	*e*P	**P**	**17 50 10.5**	**-0.4**
SPITS	**Spitsbergen Ar**	**34.90**	**351**	P	**P**	**17 50 14.4**	**+3.6**
	comp=Z,12nm,1.0s,baz=165,slow=11,SNR=1.8						
KBS	**Kingsbay**	**36.02**	**351**	*e*P	**P**	**17 50 20.4**	**-0.1**
SONM	**Songino Array**	**43.70**	**62**	P	**P**	**17 51 26.7**	**+1.9**
	comp=Z,0.6nm,0.6s,baz=300,slow=8.2,SNR=3.2						
TORD	**Torodi Ar. Bea**	**46.29**	**240**	P	**P**	**17 51 46.8**	**+1.3**
	comp=Z,0.8nm,0.5s,baz=36,slow=8.4,SNR=4.7						
TORD	**Torodi Ar. Bea**	**46.29**	**240**	P	**P**	**17 51 46.5**	**+1.0**
HHC	**Hu-ho-hao-te**	**50.04**	**68**	*e*P	**P**	**17 52 15.2**	**+0.8**
HHC				pmax	pmax		
	comp=Z,12nm,0.8s						
HHC				pmax	pmax		
	comp=Z,65nm,6.6s						
ROSA	**Rosais**	**50.96**	**289**	P	**P**	**17 52 21.7**	**+0.5**
TULEG	**Thule**	**51.33**	**344**	P	**P**	**17 52 23.5**	**+0.1**
TULEG				IAmb	IAmb	17 53 51.9	
	comp=Z,14nm,1.1s						

NOU 03 17:44:30.8, 19°.10S×168°.60E, h0^{km}, MLv3.1/5, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	**Devils Point**	**1.42**	**344**	P	Pn	17 44 57.0	-0.9
LIFNC	**LIFOU**	**2.10**	**217**	P	Pn	17 45 06.9	-0.4
MARNC	**Mare, Loyalty**	**2.43**	**193**	P	Pn	17 45 10.8	-1.0
PINNC	**Pines Island,**	**3.66**	**197**	P	Pn	17 45 29.5	+0.8

TAP 03 17:53:28.6, 24°.88N×122°.17E, h37^{km}±1^{km}, ML2.2, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.21**	**309**	P	Pn	17 53 35.6	-2.1
	baz=309						
TWB1				*e*S	Sn	17 53 38.4	-8.1
	baz=309						
TIPB	**Shuangxi**	**0.32**	**287**	*e*S	Sn	17 53 43.0	-0.9
	baz=283						
NWF	**Wu-fen Shan**	**0.40**	**299**	*e*P	Pn	17 53 38.5	+0.8
	baz=289						
NWF				*e*S	Sn	17 53 45.1	+0.6
	baz=289						
TWE	**Neicheng**	**0.48**	**251**	*e*S	Sn	17 53 46.3	+0.3
	baz=247						
PCYT	**Pengchaiyu**	**0.76**	**354**	*e*P	Pn	17 53 43.3	+0.6
	baz=353						

ANF ***03*** *17:55:08.1±0.3, 36°.33N×97°.54W, h2^{km}±3^{km}, ML2.9/6, Error ellipse: s-maj=2.2km s-min=1.9km az=163.0*

TUL ***03*** *17:55:08.6±0.8, 36°.321N±0°.009×97°.55W±0°.01, h4^{km}±7^{km}, ML3.1, mb_Lg2.6/41(NEIC), Error ellipse: s-maj=1.7km s-min=1.2km az=108.0*

NEIC ***03*** *17:55:09.0±0.8, 36°.32N±0°.01×97°.55W±0°.01, h5^{km}±7^{km}, Error ellipse: s-maj=1.6km s-min=1.5km az=163.0*

ISC 03 17:55:09.1±0.9, **36°.31N**±0°.04×**97°.54W**±0°.04, **h10^{km}, n39, σ0ˢ.85**/29, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKCFA	**Oklahoma City**	**0.90**	**175**	Pg	**Pg**	**17 55 25.1**	**-1.2**
OKCFA	**Oklahoma City**	**0.90**	**175**	P	**Pg**	**17 55 25.3**	**-1.1**
	baz=355						
OKCFA				S	**Sg**	**17 55 38.7**	**+0.6**
	baz=355						
OKCSW	**OKLAHOMA CITY**	**0.91**	**175**		**Pg**	**17 55 26.1**	**-0.4**
T35A	**Sooner Cattle**	**1.02**	**54**	Pg	**Pg**	**17 55 28.1**	**-0.7**
T35B	**Sooner Cattle**	**1.02**	**54**	P	**Pg**	**17 55 28.0**	**-0.8**
	baz=235						
T35B				S	**Sg**	**17 55 41.4**	**-0.7**
	baz=235						
FNO	**Franklin**	**1.06**	**174**	Pg	**Pg**	**17 55 28.6**	**-0.8**
U32A	**Winter Ranch,**	**1.18**	**274**		**Pb**	**17 55 30.7**	**-0.9**
U32A	**Winter Ranch,**	**1.18**	**274**	P	**Pb**	**17 55 30.8**	**-0.7**
	baz=92						
U32A				S	**Sg**	**17 55 47.1**	**+0.1**
	baz=92						
TUL1	**Leonard**	**1.48**	**105**		**Pn**	**17 55 35.2**	**-0.4**
TUL1				IAmb_Lg		17 55 56.9	
	comp=Z,26nm,0.8s						
TUL1	**Leonard**	**1.48**	**105**	P	**Pn**	**17 55 35.3**	**-0.4**
	baz=287						
TUL1				S	**Sb**	**17 55 55.8**	**+0.5**
	baz=287						
WMOK	**Wichita Mounta**	**1.87**	**213**		**Pn**	**17 55 41.5**	**+0.4**
WMOK	**Wichita Mounta**	**1.87**	**213**	P	**Pn**	**17 55 41.9**	**+0.7**
	baz=32						
R32A	**Long Quarter,**	**2.30**	**337**	S	**Sn**	**17 56 16.9**	**+1.4**
	baz=156						
X37A	**Clayton**	**2.47**	**134**	Pn	**Pn**	**17 55 50.4**	**+1.0**
X37A	**Clayton**	**2.47**	**134**	P	**Pn**	**17 55 50.5**	**+1.0**
	baz=315						
U38A	**Gravette**	**2.55**	**86**	Pn	**Pn**	**17 55 51.0**	**+0.5**
HHAR	**Hobbs**	**2.91**	**90**	Pn	**Pn**	**17 55 56.2**	**+0.7**
W39A	**Magazine**	**3.25**	**109**	Pn	**Pn**	**17 56 00.7**	**+0.5**
W39A				IAmb_Lg		17 56 57.1	
	comp=Z,17nm,0.9s						
S39A	**Bolivar**	**3.65**	**67**	Pn	**Pn**	**17 56 06.8**	**+1.2**
S39A				IAmb_Lg		17 57 07.3	
	comp=Z,21nm,0.8s						
MIAR	**Mount Ida**	**3.69**	**117**	Pn	**Pn**	**17 56 07.0**	**+0.9**
MIAR				IAmb_Lg		17 57 15.7	
	comp=Z,11nm,0.9s						
Z38A	**Mt. Pleasant**	**3.70**	**145**	IAmb_Lg		17 57 09.3	
	comp=Z,21nm,1.0s						
U40A	**Yellville**	**3.79**	**88**	IAmb_Lg		17 57 10.9	
	comp=Z,24nm,0.8s						
X40A	**Basin Creek Fa**	**4.26**	**114**	Pn	**Pn**	**17 56 15.1**	**+1.2**
WHTX	**Lake Whitney,**	**4.31**	**179**	Pn	**Pn**	**17 56 15.5**	**+0.8**
MGMO	**Mountain Grove**	**4.32**	**77**	IAmb_Lg		17 57 35.7	
	comp=Z,12nm,0.7s						
WHAR	**Wooly Hollow**	**4.39**	**102**	Pn	**Pn**	**17 56 16.5**	**+0.7**
WHAR				IAmb_Lg		17 57 28.1	
	comp=Z,11nm,1.1s						
237A	**Washetta, Mont**	**4.54**	**161**	IAmb_Lg		17 57 44.7	
	comp=Z,9.7nm,0.9s						
P38A	**Dawn**	**4.58**	**43**	IAmb_Lg		17 57 40.4	
	comp=Z,9.6nm,0.7s						
R40A	**Maddies Statio**	**4.65**	**63**	Pn	**Pn**	**17 56 20.1**	**+0.8**
N35A	**Tabor**	**4.78**	**18**	IAmb_Lg		17 57 44.3	
	comp=Z,16nm,0.8s						
LCAR	**Lake Charles**	**5.17**	**91**	IAmb_Lg		17 57 53.8	
	comp=Z,6.6nm,0.8s						
T42A	**Van Buren**	**5.24**	**80**	Pn	**Pn**	**17 56 27.8**	**+0.4**
T42A				IAmb_Lg		17 57 55.1	
	comp=Z,9.7nm,0.8s						
CCM	**Cathedral Cave**	**5.32**	**69**	IAmb_Lg		17 58 03.0	
	comp=Z,20nm,0.9s						
P40A	**Paris**	**5.40**	**52**	IAmb_Lg		17 58 06.2	
	comp=Z,14nm,0.8s						
T25A	**Trinidad**	**5.58**	**281**	IAmb_Lg		17 58 11.3	
	comp=Z,6.5nm,0.7s						
PBMO	**Poplar Bluff**	**5.75**	**83**	IAmb_Lg		17 58 18.9	
	comp=Z,7.3nm,0.7s						
FVM	**French Village**	**5.92**	**72**	IAmb_Lg		17 58 20.5	
	comp=Z,16nm,0.9s						
JCT	**Junction City**	**6.12**	**199**	IAmb_Lg		17 58 35.9	
	comp=Z,8.8nm,0.8s						
S44A	**Carbondale**	**6.77**	**76**	IAmb_Lg		17 58 43.1	
	comp=Z,14nm,0.7s						

IDC ***03*** *17:58:30.9±2.7, 22°.89N×11°.49W, h0^{km}, mb3.5/2, mb1 3.7/4, mb1mx3.4/43, mbtmp3.5/4, ML3.5/2, Error ellipse: s-maj=77.6km s-min=29.0km az=67.0*

ISC 03 17:58:31.5±2.1, **22°.8N**±0°.2×**11°.6W**±0°.3, **h10^{km}, n8, σ0ˢ.99**/8, **Mauritania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOWA	**Kowa**	**10.99**	**138**	Pn	**Pn**	**18 01 10.2**	**+1.2**
	0.6nm,0.3s,baz=312,slow=10,SNR=7.5						
KOWA				Sn	**Sn**	**18 03 11.3**	**-0.7**
	0.2nm,0.3s,baz=169,slow=20,SNR=6.3						
KOWA				Lg	Lg	18 04 22.6	
	0.2nm,0.3s,baz=50,slow=22,SNR=1.2						
MDT	**Midelt**	**11.71**	**30**	Lg	Lg	18 04 35.6	
	0.2nm,0.3s,baz=288,slow=15,SNR=1.9						
TORD	**Torodi Ar. Bea**	**15.91**	**125**	Pn	**Pn**	**18 02 15.3**	**-0.3**
	0.1nm,0.3s,baz=317,slow=10,SNR=2.9						
TORD				Sn	**Sn**	**18 05 11.9**	**-0.3**
	0.1nm,0.3s,baz=309,slow=19,SNR=1.5						
I17CI	**DIMBOKRO INFRA**	**17.35**	**157**	*i*		19 52 10.0	
	baz=340,slow=315,SNR=3.9						
GERES	**GERESS Array B**	**32.80**	**31**	P	**P**	**18 05 05.1**	**+0.1**
	0.5nm,0.8s,baz=210,slow=7.7,SNR=4.3						
MKAR	**Makanchi Array**	**76.28**	**45**	P	**P**	**18 10 21.1**	**+0.5**
	0.3nm,0.5s,baz=276,slow=5.6,SNR=4.2						
WRA	**Warramunga Arr**	**148.22**	**91**	PKPbc	**PKPbc**	**18 18 18.6**	**0.0**
	0.4nm,0.7s,baz=290,slow=2.0,SNR=4.7						
ASAR	**Alice Springs**	**148.37**	**98**	PKPbc	**PKiKP**	**18 18 18.9**	**-1.6**
	0.3nm,0.6s,baz=287,slow=1.9,SNR=7.6						

IDC ***03*** *18:00:46.5±1.1, 67°.19N×20°.73E, h0^{km}, mb1 2.9/2, mb1mx2.8/40, mbtmp2.8/2, ML1.9/2, Error ellipse: s-maj=19.2km s-min=7.2km az=114.0*

HEL ***03*** *18:00:48.9±0.1, 67°.08N×20°.94E, h0^{km}, ML1.9, ML1.8(UPP), Explosion*

UPP ***03*** *18:00:48.2±0.1, 67°.06N×20°.92E, h0^{km}, ML1.8, Explosion*

ISC 03 18:00:47.7±0.8, **67°.08N**±0°.02×**20°.89E**±0°.03, **h0^{km}, n41, σ1ˢ.09**/58, **Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASU	**Masugnsbyn**	**0.57**	**48**	P	**Pg**	**18 00 59.2**	**+0.5**
MASU				S	**Sb**	**18 01 08.2**	**-1.2**
MASU	**Masugnsbyn**	**0.57**	**48**	*i* P	**Pg**	**18 00 59.2**	**+0.5**
MASU				*i* S	**Sb**	**18 01 08.2**	**-1.2**
ERTU	**Ertsjaerv**	**0.74**	**135**	P	**Pg**	**18 01 01.6**	**-0.2**
ERTU	**Ertsjaerv**	**0.74**	**135**	*e*P	**Pg**	**18 01 01.4**	**-0.4**
PAJU	**Pajala**	**0.88**	**93**	P	**Pg**	**18 01 04.1**	**-0.3**
PAJU	**Pajala**	**0.88**	**93**	*e*P	**Pg**	**18 01 03.9**	**-0.5**
RATU	**Laukkuluspa**	**0.90**	**327**	P	**Pg**	**18 01 05.2**	**+0.4**
RATU				S	**Sb**	**18 01 18.1**	**-0.5**
RATU	**Laukkuluspa**	**0.90**	**327**	*e*P	**Pg**	**18 01 05.2**	**+0.4**
RATU				*e*S	**Sb**	**18 01 18.1**	**-0.5**
HARU	**Harads**	**0.92**	**178**	P	**Pg**	**18 01 05.2**	**-0.1**
HARU	**Harads**	**0.92**	**178**	*e*P	**Pg**	**18 01 05.2**	**-0.1**
SALU	**Saltoluokta**	**0.97**	**289**	P	**Pg**	**18 01 06.8**	**+0.5**
SALU	**Saltoluokta**	**0.97**	**289**	*e*P	**Pg**	**18 01 06.8**	**+0.5**
LANU	**Lannavaara**	**1.06**	**23**	*e*P	**Pg**	**18 01 07.6**	**-0.4**
LANU				*e*SB	**Sb**	**18 01 24.0**	**+0.7**
NIKU	**Nikkaluokta**	**1.06**	**319**	P	**Pg**	**18 01 08.3**	**+0.2**
NIKU	**Nikkaluokta**	**1.06**	**319**	*e*P	**Pg**	**18 01 08.3**	**+0.2**
KOVU	**Salmi**	**1.18**	**347**	P	**Pg**	**18 01 10.2**	**-0.1**
KOVU	**Salmi**	**1.18**	**347**	*e*P	**Pg**	**18 01 10.2**	**-0.1**
KLF	**Kolari**	**1.21**	**81**	*e*P	**Pg**	**18 01 10.2**	**-0.7**
	baz=265						
KLF				*e*SB	**Sg**	**18 01 26.8**	**+0.3**
KALU	**Kalix**	**1.58**	**140**	P	**Pn**	**18 01 16.6**	**-0.3**
KALU	**Kalix**	**1.58**	**140**	*e*P	**Pn**	**18 01 16.5**	**-0.3**
KALU				*e*SN	**Sg**	**18 01 39.4**	**+1.2**
SJUU	**Sjulsmark**	**1.61**	**169**	P	**Pn**	**18 01 17.4**	**+0.2**
SJUU	**Sjulsmark**	**1.61**	**169**	*e*P	**Pn**	**18 01 17.4**	**+0.2**
HEF	**Hetta**	**1.70**	**37**	*e*P	**Pn**	**18 01 18.7**	**+0.1**
	baz=223						
HEF				MSG		18 01 39.7	
	comp=Z,11nm,0.2s						
HEF				*e*SN	**Sn**	**18 01 41.5**	**+0.5**
TOF	**Tornio**	**1.70**	**125**	*e*P	**Pn**	**18 01 18.9**	**+0.3**
TOF				MSG		18 01 39.2	
	comp=Z,12nm,0.2s						
TOF				*e*SN	**Sb**	**18 01 41.6**	**-0.1**
KIF	**Kilpisjarvi**	**1.93**	**359**	*e*P	**Pb**	**18 01 23.4**	**-0.4**
KIF	**Kilpisjarvi**	**1.93**	**359**	*e*PG	**Pb**	**18 01 24.2**	**+0.5**
KIF				MSG		18 01 47.5	

	comp=Z,16nm,0.2s						
KIF				*e*SG	**Sg**	**18 01 49.7**	**0.0**
RNF	**Rovaniemi**	**2.08**	**101**	*e*PB	**Pn**	**18 01 24.9**	**+1.1**
RNF				*e*SG	**Sb**	**18 01 52.8**	**+0.2**
SGF	**Sodankyl**	**2.22**	**78**	*e*P	**Pn**	**18 01 26.8**	**+1.1**
	baz=259						
SGF				*e*SG	**Sb**	**18 01 56.8**	**+0.2**
BURU	**Burvik**	**2.52**	**175**	*e*P	**Pn**	**18 01 31.1**	**+1.4**
	baz=357						
ARA0	**ARCESS Array S**	**3.00**	**33**	*e*P	**Pn**	**18 01 37.9**	**+1.4**
ARA0	**ARCESS Array S**	**3.00**	**33**	*e*P	**Pn**	**18 01 37.5**	**+1.0**
ARCES	**ARCESS Array B**	**3.00**	**33**	Pg	**Pn**	**18 01 37.5**	**+1.0**
	baz=221,slow=12,SNR=58						
ARCES				Sn	**Sn**	**18 02 11.9**	**-1.2**
	baz=218,slow=25,SNR=8.2						
ARCES				Lg	Lg	18 02 19.1	
	baz=216,slow=27,SNR=12						
OUF	**Merijarvi**	**3.15**	**148**	*e*P	**Pn**	**18 01 39.8**	**+1.3**
OUF				MSG		18 02 20.6	
	comp=Z,1.3nm,0.2s						
VRF	**Varrio**	**3.43**	**75**	*e*PG	**Pg**	**18 01 51.7**	**-1.7**
	baz=264						
VRF				*e*SG	**Sb**	**18 02 33.4**	**+1.9**
MSF	**Maaselka**	**3.47**	**106**	*e*PG	**Pb**	**18 01 50.0**	**+0.1**
	baz=291						
KEV	**Kevo**	**3.51**	**37**	*e*P	**Pn**	**18 01 43.9**	**+0.5**
KEV				*e*S	**Sn**	**18 02 27.2**	**+1.6**
KU6	**Riekki**	**3.75**	**102**	*e*P	**Pn**	**18 01 49.0**	**+2.3**
HUSU	**Husum**	**3.82**	**191**	*e*P	**Pn**	**18 01 49.0**	**+1.4**
VAF	**Ylistaro**	**4.12**	**169**	*e*P	**Pn**	**18 01 53.7**	**+1.9**
FINES	**FINESS Array B**	**6.09**	**156**	Pn	**Pn**	**18 02 20.1**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=346,slow=13,SNR=5.7						
FINES				Sn	**Sn**	**18 03 30.4**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=343,slow=22,SNR=5.8						
NOA	**NORSAR Array B**	**7.39**	**219**	Pn	**Pn**	**18 02 34.7**	**-2.0**
	comp=Z,0.0nm,0.3s,baz=59,slow=17,SNR=1.9						
NOA				Sn	**Sn**	**18 03 56.9**	**-4.3**
	comp=Z,0.0nm,0.3s,baz=12,slow=20,SNR=1.3						

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*NEIC **03** 18:08:10.2±2.6, 20°.05S±0°.04×68°.1W±0°.1, h189^{km}±12^{km}, mb4.1/5, Error ellipse: s-maj=14.3km s-min=5.8km az=95.0*

*IDC **03** 18:08:10.8±0.7, 20°.09S×67°.92W, h168^{km}±8^{km}, mb3.6/5, mb1 3.7/9, mb1mx3.5/26, mbtmp4.0/9, Error ellipse: s-maj=16.6km s-min=8.3km az=101.0*

*GUC **03** 18:08:13.1±0.7, 20°.10S×68°.16W, h178^{km}±6^{km}, ML3.8*

ISC 03 18:08:10.5±0.7**, 20°.09S**±0°.04×**68°.05W**±0°.06**, h177**^{km}±8^{km}**, n47,** σ**1**^{s}**.46**/80**, mb3.7**/3**, 5C-6D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB08	**IPOC Station P**	**1.04**	**267**		**Pn**	**18 08 40.2**	**+1.5**
PB08				Sn	**Sn**	**18 09 01.9**	**+1.6**
PB08	**IPOC Station P**	**1.04**	**267**	⇓*i*P	**Pn**	**18 08 40.2**	**+1.5**
PB08				*i* S	**Sn**	**18 09 01.3**	**+1.0**
PB08				IAML		18 09 02.2	
	comp=E,680nm,0.3s						
PB11	**IPOC Station P**	**1.55**	**282**		**Pn**	**18 08 43.8**	**+1.0**
PB11					**Sn**	**18 09 07.4**	**-0.4**
PB11	**IPOC Station P**	**1.55**	**282**	⇓*i*P	**Pn**	**18 08 43.8**	**+1.0**
PB11				*i* S	**Sn**	**18 09 06.8**	**-1.0**
PB11				IAML		18 09 08.8	
	comp=E,1µm,0.2s						
PB01	**IPOC Station P**	**1.65**	**235**		**Pn**	**18 08 45.0**	**+1.2**
PB01					**Sn**	**18 09 09.7**	**+0.2**
PB01	**IPOC Station P**	**1.65**	**235**	⇑*i*P	**Pn**	**18 08 45.0**	**+1.2**
PB01				*i* S	**Sn**	**18 09 09.5**	**-0.1**
PB01				IAML		18 09 11.0	
	comp=N,844nm,0.3s						
HMBC	**Humberstone**	**1.74**	**263**	⇓*i*P	**Pn**	**18 08 45.2**	**+0.5**
HMBC				*i* S	**Sn**	**18 09 10.5**	**-0.7**
HMBC				IAML		18 09 11.5	
	comp=E,908nm,0.3s						
TA02	**Huaiquique**	**1.97**	**264**		**Pn**	**18 08 47.9**	**+1.0**
TA02				Sn	**Sn**	**18 09 14.2**	**-1.0**
TA02	**Huaiquique**	**1.97**	**264**	*e*P	**Pn**	**18 08 47.8**	**+1.0**
TA02				*i* S	**Sn**	**18 09 14.3**	**-0.9**
PSGC	**Pisagua**	**2.01**	**284**	⇓*i*P	**Pn**	**18 08 48.2**	**+0.7**
PSGC				*i* S	**Sn**	**18 09 15.0**	**-1.3**
PSGCX	**Pisagua**	**2.01**	**284**	Pn	**Pn**	**18 08 48.3**	**+0.7**
PSGCX				Sn	**Sn**	**18 09 14.9**	**-1.5**
TA01	**Diego Aracena**	**2.06**	**256**		**Pn**	**18 08 48.8**	**+0.8**
TA01				Sn	**Sn**	**18 09 15.4**	**-1.6**
TA01	**Diego Aracena**	**2.06**	**256**	*i* P	**Pn**	**18 08 48.5**	**+0.6**
TA01				*i* S	**Sn**	**18 09 15.3**	**-1.6**
TA01				IAML		18 09 17.4	
	comp=N,358nm,0.5s						
PB02	**IPOC Station P**	**2.12**	**234**	⇑*i*P	**Pn**	**18 08 50.0**	**+1.2**
PB02				*i* S	**Sn**	**18 09 18.0**	**-0.6**
PB02				IAML		18 09 20.4	
	comp=N,693nm,0.3s						
PB07	**IPOC Station P**	**2.37**	**226**		**Pn**	**18 08 52.9**	**+1.2**
PB07				Sn	**Sn**	**18 09 22.8**	**-0.9**
PB07	**IPOC Station P**	**2.37**	**226**	⇓*i*P	**Pn**	**18 08 52.9**	**+1.2**
PB07				*i* S	**Sn**	**18 09 22.9**	**-0.8**
PB07				IAML		18 09 26.5	
	comp=E,231nm,0.3s						
PB03	**IPOC Station P**	**2.52**	**219**	⇓*i*P	**Pn**	**18 08 54.9**	**+1.5**
PB03				*i* S	**Sn**	**18 09 26.0**	**-0.8**
LVC	**Limon Verde**	**2.64**	**198**	P	**Pn**	**18 08 56.7**	**+1.8**
	comp=E,12nm,0.3s,baz=35,slow=11,SNR=64						
LVC				S	**Sn**	**18 09 29.4**	**-0.2**
	comp=E,21nm,0.3s,baz=114,slow=20,SNR=44						
LVC	**Limon Verde**	**2.64**	**198**		**Pn**	**18 08 56.5**	**+1.5**
LVC				Sn	**Sn**	**18 09 29.8**	**+0.1**
AP01	**Chacalluta**	**2.76**	**308**	Pn	**Pn**	**18 08 54.0**	**-2.1**
AP01				Sn	**Sn**	**18 09 30.4**	**-1.1**
AP01	**Chacalluta**	**2.76**	**308**	*e*P	**Pn**	**18 08 52.6**	**-3.4**
AP01				*i* S	**Sn**	**18 09 29.6**	**-1.9**
AF01	**San Pedro de A**	**2.85**	**182**	Pn	**Pn**	**18 08 56.0**	**-1.5**
AF01				Sn	**Sn**	**18 09 35.1**	**+0.8**
PB06	**IPOC Station P**	**2.97**	**208**		**Pn**	**18 08 59.8**	**+1.0**
PB06				Sn	**Sn**	**18 09 35.7**	**-0.7**
PB06	**IPOC Station P**	**2.97**	**208**	⇑*i*P	**Pn**	**18 08 60.0**	**+1.2**
PB06				*i* S	**Sn**	**18 09 35.6**	**-0.9**
PB06				IAML		18 09 36.5	
	comp=E,376nm,0.5s						
PB04	**IPOC Station P**	**2.98**	**221**		**Pn**	**18 08 60.0**	**+1.1**
PB04				Sn	**Sn**	**18 09 35.1**	**-1.5**
PB04	**IPOC Station P**	**2.98**	**221**	*e*P	**Pn**	**18 08 59.5**	**+0.7**
PB04				*i* S	**Sn**	**18 09 35.6**	**-1.0**
PB04				IAML		18 09 37.8	
	comp=N,136nm,0.3s						
PB15	**IPOC Station P**	**3.38**	**203**		**Pn**	**18 09 05.2**	**+1.3**
PB15				Sn	**Sn**	**18 09 45.3**	**-0.3**
PB15	**IPOC Station P**	**3.38**	**203**	⇑*i*P	**Pn**	**18 09 05.4**	**+1.6**
PB15				*e*S	**Sn**	**18 09 44.3**	**-1.2**
PB05	**IPOC Station P**	**3.41**	**216**	⇑*i*P	**Pn**	**18 09 05.1**	**+1.0**
PB05				*i* S	**Sn**	**18 09 44.1**	**-2.0**
PB05				IAML		18 09 46.9	
	comp=N,104nm,0.6s						
LPAZ	**La Paz**	**3.78**	**359**	P	**Pn**	**18 09 11.4**	**+2.1**
	comp=N,12nm,0.3s,baz=162,slow=6.7,SNR=213						
LPAZ				S	**Sn**	**18 09 55.3**	**+0.1**
	comp=N,2.0nm,0.3s,baz=192,slow=19,SNR=6.9						
PB10	**IPOC Station P**	**4.13**	**214**	Pn	**Pn**	**18 09 10.6**	**-2.6**
PB10				Sn	**Sn**	**18 09 58.4**	**-3.9**
AC02	**Maricunga**	**6.79**	**188**	Pn	**Pn**	**18 09 48.6**	**+0.4**
GO03	**Copiap**	**7.74**	**195**	Pn	**Pn**	**18 09 57.4**	**-3.0**
SIV	**San Ignacio**	**7.78**	**60**	P	**Pn**	**18 09 59.9**	**-1.1**
	comp=N,2.4nm,0.3s,baz=250,slow=8.9,SNR=27						
SIV				S	**Sn**	**18 11 25.8**	**-2.6**
	comp=N,0.2nm,0.3s,baz=223,slow=19,SNR=1.3						
CO03	**El Pedregal**	**10.97**	**192**	Pn	**Pn**	**18 10 40.1**	**-2.6**
CO06	**Fray Jorge**	**11.03**	**196**	Pn	**Pn**	**18 10 41.9**	**-1.6**
CPUP	**Villa Florida**	**11.65**	**124**	P	**Pn**	**18 10 52.2**	**+0.7**
	comp=N,0.2nm,0.3s,baz=297,slow=14,SNR=1.6						
CPUP				S	**Sn**	**18 12 58.0**	**-2.8**
	comp=N,0.1nm,0.3s,baz=208,slow=20,SNR=1.8						
PLTB	**Pedras Altas**	**17.41**	**135**	Pn	**P**	**18 12 01.6**	**+0.1**
PLTB				IAmb	IAmb	18 12 08.6	
	comp=Z,9.4nm,1.4s						
TRQA	**Tornquist**	**18.67**	**165**		**P**	**18 12 14.7**	**-0.4**
LC01	**Cunco**	**19.04**	**189**	P	**P**	**18 12 18.4**	**-0.7**
LC01				IAmb	IAmb	18 12 41.3	
	comp=Z,12nm,1.2s						
PLCA	**Paso Flores**	**20.69**	**185**	P	**P**	**18 12 38.6**	**+1.8**
	comp=Z,4.4nm,0.8s,baz=353,slow=16,SNR=4.0						
PLCA	**Paso Flores**	**20.69**	**185**	P	**P**	**18 12 36.1**	**-0.7**
PLCA				IAmb	IAmb	18 12 42.3	
	comp=Z,4.8nm,0.9s						
PTGA	**Pitinga**	**20.80**	**23**	P	**P**	**18 12 38.2**	**+0.1**
	comp=Z,2.3nm,0.4s,baz=122,slow=13,SNR=4.9						
PTGA	**Pitinga**	**20.80**	**23**	P	**P**	**18 12 36.0**	**-2.1**
TXAR	**Lajitas Array**	**59.95**	**324**	P	**P**	**18 18 00.1**	**+1.8**
	comp=Z,0.4nm,0.5s,baz=151,slow=8.5,SNR=6.4						
ULM	**Lac du Bonnet**	**74.22**	**342**	P	**P**	**18 19 28.9**	**+1.3**
	comp=Z,0.7nm,0.4s,baz=159,slow=5.8,SNR=5.9						
TORD	**Torodi Ar. Bea**	**76.12**	**70**	P	**P**	**18 19 40.1**	**+0.8**
	comp=Z,1.4nm,0.4s,baz=255,slow=5.3,SNR=19						

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*DJA **03** 18:16:47.1±1.9, 6°N±30°×9°5E±2°8, h28^{km}±69^{km}, M5.0/7, mb4.9/4, mB5.0/2, MLv5.0/7, Mw(mB)4.3/2*

*NEIC **03** 18:16:53.0±2.6, 5°.42N±0°.07×95°.13E±0°.06, h10^{km}±1^{km}, mb4.6/43, Error ellipse: s-maj=12.2km s-min=9.2km az=197.0*

*IDC **03** 18:16:53.1±0.5, 5°.61N×95°.33E, h0^{km}, mb4.0/18, mb1 4.1/21, mb1mx4.0/37, mbtmp4.0/21, ML3.7/3, MS3.6/22, Ms1 3.6/22, ms1mx3.5/37, Error ellipse: s-maj=21.1km s-min=12.1km az=48.0*

ISC 03 18:16:56.6±0.4**, 5°.42N**±0°.06×**95°.07E**±0°.05**, h35**^{km}**, n119,** σ**1**^{s}**.91**/108**, mb4.5**/43**, MS3.7**/23**, 2C, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	**Lhok Sumawe**	**1.88**	**96**		**Pn**	**18 17 23.1**	**-3.2**
LHMI				Sn	**Sn**	**18 17 48.9**	**+0.1**
LHMI	**Lhok Sumawe**	**1.88**	**96**	P	**Pn**	**18 17 22.7**	**-3.6**
LHMI				S	**Sn**	**18 17 49.5**	**+0.7**
TPTI		**3.01**	**135**	P	**Pn**	**18 17 42.8**	**+1.0**
TPTI				S	Sn	18 18 26.3	+10
SNSI	**Sinabang, Aceh**	**3.25**	**157**	P	Pn	18 17 48.1	+3.0
TSI	**Tuntungan**	**3.97**	**119**	P	**Pn**	**18 17 53.3**	**-1.8**
PSI	**Prapat**	**4.64**	**124**	Pn	**Pn**	**18 18 05.7**	**+1.2**
	3.4nm,0.3s,baz=324,slow=14,SNR=11						
PSI				Lg	Lg	18 19 19.7	
	8.9nm,0.3s,baz=340,slow=3.4,SNR=4.1						
RPSI	**Rantau Prapat**	**4.71**	**125**		**Pn**	**18 18 05.7**	**+0.5**
GSI	**Gunungsitoli**	**4.80**	**148**	Pn	**Pn**	**18 18 07.7**	**+1.2**
GSI	**Gunungsitoli**	**4.80**	**148**	P	**Pn**	**18 18 08.3**	**+1.8**
	0.5nm2µm69nm,1.0s						
SRIT	**Nakonsritamara**	**5.49**	**55**	Pn	**Pn**	**18 18 11.4**	**-4.6**
MNSI	**Mandailing Nat**	**6.43**	**135**	P	**Pn**	**18 18 30.2**	**+1.2**
PBA	**Port Blair**	**6.61**	**340**	Pn	**Pn**	**18 18 32.1**	**+0.8**
PBKT	**Sadao Pong**	**12.50**	**27**	Pn	**Pn**	**18 19 48.3**	**-3.8**
MNAI	**Manna**	**12.51**	**141**	Pn	**Pn**	**18 19 48.9**	**-3.4**
CM31	**Chiang Mai Arr**	**13.50**	**16**		**Pn**	**18 20 04.8**	**-1.0**
CMAR	**Chiang Mai Arr**	**13.50**	**16**	Pn	**Pn**	**18 20 04.1**	**-1.6**
	0.2nm,0.3s,baz=209,slow=14,SNR=4.8						
CMAR				Lg	Lg	18 23 49.4	
	0.1nm,0.3s,baz=191,slow=22,SNR=5.7						
CMAR				LR	LR	18 24 50.7	
	comp=Z,237nm,20.9s,baz=256,slow=36						
CMAR	**Chiang Mai Arr**	**13.50**	**16**	Pn	**Pn**	**18 20 03.7**	**-2.1**
CMAR	**Chiang Mai Arr**	**13.50**	**16**		LR	18 23 49.4	
CHTO	**Chiang Mai**	**13.84**	**16**	Pn	**Pn**	**18 20 07.6**	**-2.8**
PALK	**Pallekele**	**14.40**	**278**	Pn	**P**	**18 20 22.9**	**-1.7**
	0.2nm,0.3s,baz=132,slow=16,SNR=1.5						
PALK				LR	LR	18 25 53.5	
	comp=Z,264nm,18.4s,baz=210,slow=37						
PALK	**Pallekele**	**14.40**	**278**	Pn	**Pn**	**18 20 18.6**	**+0.5**
LEM	**Lembang**	**17.46**	**134**	LR	LR	18 28 52.9	
	comp=Z,275nm,20.2s,baz=288,slow=41						
SLVN	**Son La**	**17.99**	**28**	P	**Pn**	**18 21 02.3**	**-1.8**
CISI	**Cisompet, Garu**	**18.11**	**135**	P	P	18 21 12.1	+6.3
QIZ	**Qiongzhong**	**19.76**	**46**	P	**Pn**	**18 21 25.6**	**+0.2**
QIZ				S	**Sn**	**18 25 10.0**	**+3.4**
QIZ				LR	LR		
	comp=N,890nm,13.7s						
QIZ				LR	LR		
	comp=E,560nm,15.7s						
QIZ				LR	LR		
	comp=Z,490nm,12.3s						
KOHI	**KOHIMA**	**20.20**	**357**	*e*P	**P**	**18 21 26.3**	**-2.4**
MOKO	**MOKOCHONG**	**20.79**	**359**	*e*P	**P**	**18 21 33.4**	**-1.6**
KMI	**Kunming**	**20.93**	**20**	⇑P	**P**	**18 21 41.9**	**+5.3**
KMI				pP	pP	18 21 48.2	+2.3
KMI				pmax	pmax		
	comp=Z,13nm,1.2s						
KMI				LR	LR		
	comp=N,520nm,12.5s						
KMI				LR	LR		
	comp=E,330nm,12.5s						
KMI				LR	LR		
	comp=Z,430nm,12.5s						
BBKI	**Banjar Baru**	**21.63**	**114**	P	P	18 21 52.1	+8.0
KAAM	**Kaadhehdhoo**	**22.57**	**258**	P	**P**	**18 21 51.8**	**-2.4**
KAAM				IAmb	IAmb	18 22 31.8	
	comp=Z,54nm,1.0s						
GYA	**Guiyang**	**23.67**	**27**	⇑P	**P**	**18 22 07.4**	**+2.1**
GYA				pP	sP	18 22 19.4	0.0
GYA				S	**S**	**18 26 23.6**	**+5.6**
GYA				sS	Sn	18 26 43.0	+2.5
GYA				pmax	pmax		
	comp=Z,12nm,0.9s						
GYA				LR	LR		
	comp=N,340nm,11.1s						
GYA				LR	LR		
	comp=E,420nm,13.3s						
GYA				LR	LR		
	comp=Z,590nm,12.8s						
H08S2	**Diego Garcia H**	**26.00**	**240**	T	T	18 49 34.6	
	baz=59,slow=76,SNR=92						
H08S3	**Diego Garcia H**	**26.00**	**240**	T	T	18 49 38.5	
	baz=59,slow=76,SNR=293						
H08S1	**Diego Carcia H**	**26.01**	**240**	T	T	18 49 39.9	
	baz=59,slow=76,SNR=5.3						
CD2	**Chengdu**	**26.64**	**17**	P	**P**	**18 22 33.2**	**+1.0**
CD2				LR	LR		
	comp=N,290nm,12.4s						
CD2				LR	LR		
	comp=E,770nm,11.5s						
CD2				LR	LR		
	comp=Z,450nm,12.8s						
KAPI	**Kappang**	**26.74**	**112**	LR	LR	18 34 11.0	
	comp=Z,153nm,19.8s,baz=286,slow=39						
BATI	**Baumata**	**32.44**	**119**	LR	LR	18 37 07.1	
	comp=Z,432nm,19.4s,baz=301,slow=38						
BATI	**Baumata**	**32.44**	**119**		**SKiKP**	**18 37 07.1**	**-0.4**
GTA	**Gaotai**	**34.11**	**7**	*e*P	**P**	**18 23 38.4**	**+0.2**
GTA				pP	pP	18 23 42.6	-5.7
GTA				sP	sP	18 23 46.3	-6.3
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
NJ2	**Nanjing**	**34.59**	**37**	*e*P	**P**	**18 23 43.7**	**+1.3**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
NIL	**Nilore**	**34.64**	**327**	P	**P**	**18 23 41.3**	**-1.5**
NIL				IAmb	IAmb	18 23 44.8	
	comp=Z,7.7nm,0.9s						
FITZ	**Fitzroy Crossi**	**38.16**	**128**	P	**P**	**18 24 11.8**	**-1.2**
FITZ				IAmb	IAmb	18 24 16.9	
	comp=Z,7.4nm,1.3s						
HHC	**Hu-ho-hao-te**	**38.25**	**20**	*e*P	**P**	**18 24 15.7**	**+2.1**
HHC				pmax	pmax		
	comp=Z,13nm,0.8s						
HHC				pmax	pmax		
	comp=Z,100nm,5.7s						
WMQ	**Urumqi**	**38.79**	**351**	*e*P	**P**	**18 24 19.9**	**+1.9**
WSAR	**Wadi Sarin**	**39.33**	**300**	P	**P**	**18 24 27.1**	**+4.3**
	comp=Z,2.8nm,0.8s,baz=107,slow=17,SNR=2.1						
WSAR	**Wadi Sarin**	**39.33**	**300**	P	**P**	**18 24 27.1**	**+4.3**
BJT	**Baijiatuau**	**39.34**	**26**	P	**P**	**18 24 24.0**	**+1.4**
BJT				IAmb	IAmb	18 24 26.2	
	comp=Z,15nm,1.1s						
BJI	**Beijing**	**39.36**	**26**	P	**P**	**18 24 23.6**	**+0.9**
BJI				ScP	**ScP**	**18 30 16.5**	**-0.4**
BJI				S	**S**	**18 30 23.6**	**+1.9**
BJI				pmax	pmax		
	comp=Z,16nm,1.0s						
BJI				pmax	pmax		
	comp=Z,22nm,3.7s						
BJI				LR	LR		
	comp=N,210nm,12.9s						
BJI				LR	LR		
	comp=E,170nm,17.0s						
BJI				LR	LR		
	comp=Z,200nm,20.8s						
KNRA	**Kununurra**	**39.40**	**123**	P	**P**	**18 24 22.1**	**-1.3**
KNRA				IAmb	IAmb	18 25 16.9	
	comp=Z,21nm,1.4s						
DRK	**Karamyk**	**39.89**	**332**	P	**P**	**18 24 27.4**	**-0.1**
DRK				IAmb	IAmb	18 25 42.3	
	comp=Z,27nm,0.9s						
MTN	**Manton Dam**	**40.17**	**117**	P	**P**	**18 24 27.7**	**-2.1**
MTN				IAmb	IAmb	18 24 30.9	
	comp=Z,25nm,1.6s						
GAR	**Garm**	**40.24**	**330**	P	**P**	**18 24 28.7**	**-1.6**
GAR				IAmb	IAmb	18 24 31.8	
	comp=Z,17nm,1.3s						
CHGR	**Chuyangaron**	**40.58**	**328**	P	**P**	**18 24 32.6**	**-0.5**
CHGR				IAmb	IAmb	18 24 34.2	
	comp=Z,9.7nm,0.9s						
AAK	**Ala-Archa**	**41.31**	**337**	P	**P**	**18 24 41.3**	**+2.2**
	comp=Z,0.7nm,0.4s,baz=162,slow=8.4,SNR=4.4						
AAK	**Ala-Archa**	**41.31**	**337**	P	**P**	**18 24 39.3**	**+0.2**
MK31	**Makanchi Array**	**42.67**	**347**	P	**P**	**18 24 50.5**	**+0.6**
MKAR	**Makanchi Array**	**42.67**	**347**	P	**P**	**18 24 49.7**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=155,slow=8.1,SNR=5.2						
MKAR				LR	LR	18 44 52.3	
	comp=Z,42nm,19.8s,baz=174,slow=40						
MKAR	**Makanchi Array**	**42.67**	**347**	P	**P**	**18 24 49.1**	**-0.8**
MAKZ	**Makanchi**	**42.75**	**347**	P	**P**	**18 24 51.5**	**+0.9**
MAKZ				IAmb	IAmb	18 25 37.2	
	comp=Z,29nm,1.6s						
KK31	**Karatay Array**	**43.35**	**334**	P	**P**	**18 24 54.8**	**-0.7**
KKAR	**Karatay Array**	**43.35**	**334**	P	**P**	**18 24 54.8**	**-0.7**
KKAR	**Karatay Array**	**43.35**	**334**	P	**P**	**18 24 54.4**	**-1.1**
KKAR				IAmb	IAmb	18 25 25.1	
	comp=Z,2.6nm,0.9s						
SONM	**Songino Array**	**43.36**	**11**	P	**P**	**18 24 55.3**	**-0.3**
	comp=Z,0.9nm,0.8s,baz=185,slow=8.1,SNR=3.6						
SONM				LR	LR	18 45 11.4	
	comp=Z,96nm,20.5s,baz=174,slow=39						
SONM	**Songino Array**	**43.36**	**11**	P	**P**	**18 24 55.3**	**-0.3**
NWAO	**Narrogin (SRO)**	**43.56**	**153**	LR	LR	18 42 02.9	
	comp=Z,97nm,20.5s,baz=272,slow=35						
KSRS	**Korea Array**	**43.75**	**39**	P	**P**	**18 24 58.9**	**+0.1**
	comp=Z,1.3nm,0.8s,baz=221,slow=8.7,SNR=6.5						
KSRS				LR	LR	18 43 07.0	
	comp=Z,53nm,18.5s,baz=224,slow=36						
KSRS	**Korea Array**	**43.75**	**39**	P	**P**	**18 24 58.9**	**+0.1**
JMN	**Monobe**	**45.70**	**47**	P	**P**	**18 25 14.8**	**+0.3**
WB0	**Warramunga Arr**	**46.07**	**124**	P	**P**	**18 25 16.4**	**-1.2**
WB0				IAmb	IAmb	18 26 34.4	
	comp=Z,9.0nm,1.2s						
WRA	**Warramunga Arr**	**46.11**	**124**	P	**P**	**18 25 17.6**	**-0.3**
	comp=Z,4.6nm,0.7s,baz=303,slow=9.1,SNR=44						
WRA				PcP	**PcP**	**18 26 55.5**	**+1.7**
	comp=Z,0.6nm,0.3s,baz=312,slow=3.0,SNR=7.7						
WRA				LR	LR	18 46 12.1	
	comp=Z,99nm,19.3s,baz=320,slow=38						
WRA	**Warramunga Arr**	**46.11**	**124**	P	**P**	**18 25 16.2**	**-1.7**
WRAB	**Tennant Creek**	**46.12**	**124**	P	**P**	**18 25 17.3**	**-0.6**
WRAB				IAmb	IAmb	18 25 21.4	
	comp=Z,12nm,1.2s						
WB2	**Warramunga Arr**	**46.12**	**124**	P	**P**	**18 25 16.2**	**-1.7**
WB2				IAmb	IAmb	18 25 21.4	
	comp=Z,10nm,1.1s						
WR0	**Warramunga Arr**	**46.29**	**124**	P	**P**	**18 25 18.6**	**-0.6**
WR0				IAmb	IAmb	18 26 12.6	
	comp=Z,9.7nm,1.2s						
GEYT	**Alibeck**	**46.64**	**319**	P	**P**	**18 25 22.8**	**+1.0**
	comp=Z,3.2nm,0.7s,baz=146,slow=9.0,SNR=5.2						
GEYT				LR	LR	18 47 16.7	
	comp=Z,80nm,18.3s,baz=235,slow=39						
GEYT	**Alibeck**	**46.64**	**319**	P	**P**	**18 25 22.8**	**+1.0**
KURK	**Kurchatov**	**47.20**	**346**	P	**P**	**18 25 25.8**	**-0.1**
KURK				IAmb	IAmb	18 25 49.8	
	comp=Z,8.6nm,1.3s						
ASAR	**Alice Springs**	**47.66**	**129**	P	**P**	**18 25 29.9**	**0.0**
	comp=Z,3.3nm,0.6s,baz=300,slow=7.5,SNR=68						
ASAR				PcP	**PcP**	**18 27 01.5**	**+2.3**
	comp=Z,1.2nm,0.8s,baz=308,slow=3.6,SNR=2.2						
ASAR	**Alice Springs**	**47.66**	**129**	P	**P**	**18 25 29.2**	**-0.7**
AS31	**Alice Springs**	**47.66**	**129**	P	**P**	**18 25 28.5**	**-1.4**
FORT	**Forrest**	**47.86**	**141**	P	**P**	**18 25 30.1**	**-1.2**
ZAA0	**Zalesovo Array**	**49.09**	**352**	P	**P**	**18 25 40.0**	**-0.4**
ZAA0				IAmb	IAmb	18 26 17.7	
	comp=Z,2.9nm,0.9s						
ZALV	**Zalesovo Beam**	**49.09**	**352**	P	**P**	**18 25 42.1**	**+1.7**
	comp=Z,0.4nm,0.4s,baz=203,slow=5.8,SNR=2.6						
ZALV				PcP	**PcP**	**18 27 05.1**	**+1.5**
	comp=Z,1.2nm,0.8s,baz=155,slow=4.8,SNR=1.3						
ZALV				LR	LR	18 50 46.3	
	comp=Z,32nm,19.3s,baz=214,slow=42						
ZALV	**Zalesovo Beam**	**49.09**	**352**	P	**P**	**18 25 40.3**	**-0.2**
JSG	**Sagara**	**49.30**	**48**	P	**P**	**18 25 41.2**	**-1.2**
MDJ	**Mudanjiang**	**49.34**	**32**	P	**P**	**18 25 42.7**	**+0.1**
MDJ				IAmb	IAmb	18 26 17.9	
	comp=Z,19nm,1.5s						
GUMO	**Guam**	**49.70**	**77**	LR	LR	18 48 47.6	
	comp=Z,25nm,18.4s,baz=108,slow=39						
MJAR	**Matsushiro Arr**	**50.16**	**46**	LR	LR	18 47 29.2	
	comp=Z,48nm,19.2s,baz=265,slow=37						
ABKAR	**Akbulak array**	**52.81**	**332**	P	**P**	**18 26 07.8**	**-0.7**
ABKAR				IAmb	IAmb	18 26 12.6	
	comp=Z,7.1nm,1.1s						
ABKAR	**Akbulak array**	**52.81**	**332**	P	**P**	**18 26 07.6**	**-0.9**
STKA	**Stephens Creek**	**57.76**	**133**	P	**P**	**18 26 46.9**	**+2.4**
	comp=Z,1.6nm,0.7s,baz=321,slow=8.7,SNR=3.0						
STKA				LR	LR	18 53 52.5	
	comp=Z,62nm,18.8s,baz=248,slow=38						
STKA	**Stephens Creek**	**57.76**	**133**	IAmb	IAmb	18 26 48.8	
	comp=Z,4.4nm,1.6s						
KMBO	**Kilima Mbogo**	**58.11**	**265**	P	P	18 26 52.2	+4.7
	comp=Z,0.9nm,0.5s,baz=58,slow=15,SNR=3.0						
KMBO				LR	LR	18 48 00.3	
	comp=Z,50nm,19.7s,baz=104,slow=32						
NRIK	**Noril'sk**	**64.02**	**357**	LR	LR	18 56 45.6	
	comp=Z,61nm,19.5s,baz=206,slow=38						
BRTR	**Keskin Array B**	**64.72**	**311**	LR	LR	18 57 57.3	
	comp=Z,37nm,21.4s,baz=137,slow=38						
CAN	**Canberra**	**64.83**	**133**	P	**P**	**18 27 30.2**	**-2.1**
AKASG	**Malin Array Be**	**70.64**	**322**	P	**P**	**18 28 09.6**	**+0.9**
	comp=Z,1.0nm,0.4s,baz=89,slow=5.2,SNR=5.8						
AKASG				LR	LR	19 02 00.2	
	comp=Z,13nm,22.0s,baz=85,slow=38						
BURAR	**Bucovina Array**	**72.47**	**318**	P	**P**	**18 28 18.7**	**-1.2**
BURAR				IAmb	IAmb	18 28 23.8	
	comp=Z,3.5nm,1.4s						
PABE	**Paberze**	**74.89**	**326**	P	**P**	**18 28 32.5**	**-1.2**
BOSA	**Boshof**	**75.09**	**239**	P	**P**	**18 28 39.3**	**+3.7**
	comp=Z,5.4nm,1.0s,baz=34,slow=3.6,SNR=3.2						
BOSA	**Boshof**	**75.09**	**239**	P	**P**	**18 28 33.1**	**-2.5**
BOSA				IAmb	IAmb	18 28 50.2	
	comp=Z,21nm,1.3s						
FIA1	**FINESS Array S**	**75.30**	**332**	P	**P**	**18 28 34.0**	**-2.0**
FINES	**FINESS Array B**	**75.30**	**332**	P	**P**	**18 28 36.2**	**+0.2**
	comp=Z,0.9nm,0.4s,baz=116,slow=4.4,SNR=8.4						
FINES	**FINESS Array B**	**75.30**	**332**	P	**P**	**18 28 34.3**	**-1.6**
LIFNC	**LIFOU**	**75.40**	**113**	P	**P**	**18 28 35.0**	**-2.4**
MAW	**Mawson**	**76.34**	**192**	P	P	18 28 45.6	+3.9
	comp=Z,0.8nm,0.6s,baz=48,slow=12,SNR=2.1						
MAW	**Mawson**	**76.34**	**192**	P	**P**	**18 28 42.8**	**+1.0**
ARCES	**ARCESS Array B**	**77.87**	**340**	P	**P**	**18 28 50.6**	**+0.2**
	comp=Z,2.6nm,0.9s,baz=106,slow=6.7,SNR=1.8						
ARCES				LR	LR	19 05 58.5	
	comp=Z,80nm,19.1s,baz=240,slow=38						
ARCES	**ARCESS Array B**	**77.87**	**340**	P	**P**	**18 28 50.6**	**+0.2**
GERES	**GERESS Array B**	**80.26**	**318**	P	**P**	**18 29 06.0**	**+1.9**
	comp=Z,1.2nm,0.7s,baz=90,slow=5.3,SNR=11						
GERES	**GERESS Array B**	**80.26**	**318**	P	**P**	**18 29 03.5**	**-0.5**
STAL	**STALIGIAL**	**80.82**	**316**	P	**P**	**18 29 03.6**	**-3.5**
STAL				IAmb	IAmb	18 29 10.4	
	comp=Z,9.6nm,1.2s						
CLL	**Collm**	**80.83**	**321**	*e*P	**P**	**18 29 09.0**	**+2.1**
NOA	**NORSAR Array B**	**82.31**	**331**	LR	LR	19 08 35.7	
	comp=Z,24nm,18.3s,baz=115,slow=38						
KBS	**Kingsbay**	**83.39**	**349**	P	**P**	**18 29 17.8**	**-2.0**
TORD	**Torodi Ar. Bea**	**92.05**	**283**	P	**P**	**18 30 05.7**	**+2.8**
	comp=Z,0.5nm,0.7s,baz=87,slow=5.6,SNR=3.5						
ESDC	**Sonseca Array**	**93.49**	**310**	LR	LR	19 16 30.3	
	comp=Z,21nm,18.0s,baz=280,slow=38						
CPUP	**Villa Florida**	**146.43**	**229**	PKPbc	**PKiKP**	**18 36 37.3**	**-0.5**
	comp=Z,1.0nm,0.6s,baz=162,slow=3.2,SNR=2.1						
CPUP	**Villa Florida**	**146.43**	**229**		**PKiKP**	**18 36 37.3**	**-0.5**

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*IDC **03** 18:28:19.0±1.4, 4°.06S×129°.77E, h0^{km}, mb3.8/3, mb1 3.9/7, mb1mx3.6/37, mbtmp3.8/7, ML3.8/4, Error ellipse: s-maj=36.8km s-min=22.5km az=85.0*

*DJA **03** 18:28:20.1±0.3, 4°S±3°×13°0E±°, h10^{km}, M3.9/9, mb4.2/1, MLv3.7/9*

ISC 03 18:28:22.3±0.8**, 4°.14S**±0°.05×**129°.66E**±0°.06**, h36**^{km}**, n18,** σ**2**^{s}**.84**/23**, mb3.7**/3**, Banda Sea**

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

BNDI	Bandanaira	0.46	147	P	Pn	18 28 31.2	-1.0
BNDI				S	Sn	18 28 38.6	-0.6
BNDI	Bandanaira	0.46	147	P	Pn	18 28 31.7	-0.5
MSAI	Masohi	1.07	317	P	Pn	18 28 40.0	-0.7
MSAI				S	Sn	18 28 53.0	-1.4
FAKI	Fak Fak	2.86	65	P	Pn	18 29 06.5	+1.1
FAKI	Fak Fak	2.86	65	P	Pn	18 29 06.6	+1.2
SIJI	Sorong	3.62	26	Pn	Pn	18 29 15.4	-0.5
	8.1nm,0.3s,baz=254,slow=23,SNR=92						
SIJI				Sn	Sn	18 29 53.4	-4.1
	5.4nm,0.3s,baz=341,slow=23,SNR=6.0						
SWI	Sorong	3.63	26	P	Pn	18 29 16.3	+0.4
LBMI	Labuha	4.09	328	P	Pn	18 29 22.3	0.0
SANI	Sanana	4.21	299	P	Pn	18 29 24.1	+0.2
SANI	Sanana	4.21	299	P	Pn	18 29 25.0	+1.1
BATI	Baumata	8.46	224	Pn	Pn	18 30 26.4	+3.9
	2.5nm,0.3s,baz=82,slow=1.9,SNR=6.1						
KDU	Kakadu	8.94	162	P	Pn	18 30 30.7	+1.8
	7.9nm,0.5s						
FITZ	Fitzroy Crossi	14.42	196	Pn	Pn	18 31 44.5	+0.6
	0.2nm,0.3s,baz=25,slow=9.3,SNR=7.7						
FITZ				Sn	Sn	18 34 15.5	-7.1
	baz=15,slow=18,SNR=1.5						
WRA	Warramunga Arr	16.36	164	Pn	Pn	18 32 06.9	-2.5
	0.2nm,0.3s,baz=349,slow=13,SNR=9.3						
WRA				Sn	Sn	18 35 03.5	-6.4
	0.1nm,0.3s,baz=98,slow=19,SNR=2.9						
ASAR	Alice Springs	19.84	168	P	P	18 32 50.6	+0.4
	0.2nm,0.3s,baz=349,slow=9.3,SNR=38						
CTA	Charters Tower	22.65	136	P	P	18 33 21.3	+0.8
	1.7nm,0.6s,baz=326,slow=12,SNR=5.4						
STKA	Stephens Creek	29.79	159	P	P	18 34 29.7	+4.0
	2.4nm,1.0s,baz=330,slow=16,SNR=1.4						
MKAR	Makanchi Array	65.66	326	P	P	18 39 04.6	+1.6
	0.5nm,0.7s,baz=120,slow=7.4,SNR=1.9						

NOU 03 18:29:54.6, 22°.18S × 171°.99E, h121km, MLv3.8/5, Southeast of Loyalty Islands, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	Mare, Loyalty	3.74	280	P	Pn	18 30 50.8	+0.1
PINNC	Pines Island,	4.23	263	P	Pn	18 30 57.2	0.0
YATNC	Mamie plateau,	4.73	271	P	Pn	18 31 04.2	+0.3
DZM	Mont Dzumac	5.14	270	P	Pn	18 31 09.0	-0.6
NOUC	Port Laguerre	5.27	270	P	Pn	18 31 11.5	+0.3

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*OTT **03** 18:43:42.7±0.1, 71°.94N × 75°.43W, h18km, MN3.8/8, 121km southeast from Pond Inlet, Nu Baffin Island Seismic Zone, Nt.*

ISC 03 18:43:42.3±0.8, 71°.95N±0°.05 × 75°.55W±0°.06, h35km, n16, σ1^s.99/29, Baffin Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CLRN	Clyde River	2.70	120	PN	Pn	18 44 26.0	+3.0
CLRN				SN	Sn	18 44 56.4	+2.0
CLRN				Trac		18 45 01.2	
	comp=Z,110nm,0.1s						
TULEG	Thule	4.96	18	e	Pn	18 44 54.9	+0.8
	baz=226,slow=7.4						
TULEG				i P	Pn	18 44 55.6	+1.5
TULEG				i P	Pn	18 44 55.6	+1.5
TULEG				i S	Sn	18 45 49.5	-0.6
TULEG				i		18 45 50.0	
TULEG				IAML		18 45 56.5	
	comp=Z,65nm,0.4s						
TULEG				IAML		18 45 56.6	
	comp=Z,65nm,0.4s						
TULEG	Thule	4.96	18	PN	Pn	18 44 55.6	+1.5
TULEG				SN	Sn	18 45 49.9	-0.2
TULEG				Trac		18 45 56.3	
	comp=Z,100nm,0.5s						
UPNV	Upernavik	5.95	73	e	Pn	18 45 07.6	0.0
	baz=239,slow=12						
UPNV				i P	Pn	18 45 08.9	+1.2
UPNV				i P	Pn	18 45 08.9	+1.2
UPNV				i		18 46 11.0	
UPNV				i S	Sn	18 46 11.8	-2.6
UPNV				IAML		18 46 15.6	
	comp=Z,12nm,0.4s						
RES	Resolute Bay	6.19	305	PN	Pn	18 45 12.1	+1.1
RES				SN	Sn	18 46 20.6	+0.1
RES				LG	Lg	18 46 58.5	
RES				Trac		18 47 06.5	
	comp=Z,83nm,0.6s						
NEEM	North Greenlan	8.42	38	i P	Pn	18 45 43.1	+1.2
NEEM				i		18 47 15.0	
EUNU	Eureka	8.54	347	PN	Pn	18 45 44.6	+1.4
EUNU				SN	Sn	18 47 14.5	-3.6
EUNU				Trac		18 47 42.5	
	comp=Z,498nm,3.9s						
FRB	Frobisher Bay	8.64	159	PN	Pn	18 45 46.0	+1.4
FRB				SN	Sn	18 47 16.7	-3.9
FRB				Trac		18 48 06.7	
	comp=Z,35nm,0.4s						
FRB				LG	Lg	18 48 12.2	
KNGQ	Kangiqsujuaq	10.50	171	PN	Pn	18 46 11.1	+1.1
KNGQ				SN	Sn	18 48 00.7	-5.5
KNGQ				LG	Lg	18 49 08.2	
KNGQ				Trac		18 49 16.3	
	comp=Z,2.5nm,0.0s						
SUMG	Summit	11.21	69	i P	Pn	18 46 20.0	0.0
SUMG				i P	Pn	18 46 20.3	+0.2
SUMG				i		18 48 17.0	
SUMG				IAML		18 48 26.3	
	comp=Z,2.6nm,0.4s						
SUMG				IAML		18 48 26.3	
	comp=Z,2.6nm,0.4s						
ICESG	Greenland Ices	12.18	86	i P	Pn	18 46 34.5	+1.2
KAJQ	Kangiqsualujju	13.87	159	PN	Pn	18 46 56.2	+0.2
KAJQ				SN	Sn	18 49 17.7	-11
KAJQ				LG	Lg	18 50 56.0	
KAJQ				Trac		18 50 58.6	
	comp=Z,54nm,0.7s						
KUKN	Kugluktuk,NWT	14.00	272	PN	Pn	18 46 57.3	-0.4
KUKN				Trac		18 51 05.7	
	comp=Z,54nm,1.2s						
SCHQ	Schefferville	17.58	163	PN	Pn	18 47 44.5	+0.3
SCHQ				SN	Sn	18 50 48.3	-10
SCHQ				Trac		18 52 54.3	
	comp=Z,601nm,3.5s						
LG4Q	La Grande 4	18.40	177	PN	P	18 47 54.9	+1.0
LG4Q				SN	Sn	18 51 07.3	-11
LG4Q				Trac		18 53 22.7	
	comp=Z,3.9nm,0.3s						
VIMO	Victor Mine	19.54	195	PN	Pn	18 48 09.7	+1.9

JMA 03 18:55:10.2, 34°.76N × 136°.99E, h11km, M2.6, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAA	Atsumi	0.18	135	P	Pg	18 55 14.2	+0.1
JAA				S	Sg	18 55 16.8	0.0
JIE	Ise	0.44	213	P	Pg	18 55 18.7	-0.1
JIE				eS	Sg	18 55 24.5	0.0
TSUJ	Tsu 2	0.47	264	P	Pg	18 55 19.2	-0.3
TSUJ				eS	Sg	18 55 25.6	-0.1
JICN	Ichinomiyachia	0.55	347	eS	Sg	18 55 28.7	+0.4
MAT	Matsushiro	2.04	29	P	Pb	18 55 46.5	-0.7
MAT				S	Sb	18 56 12.5	-0.1

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*KRSC **03** 19:13:02.1±1.6, 48°.90N × 157°.05E, h30km±23km, ML4.4*
*SKHL **03** 19:13:03.7±0.3, 48°.80N × 156°.40E, h45km±3km, mb4.5/4*
*MOS **03** 19:13:04.1±1.1, 48°.97N × 156°.21E, h45km, mb4.6/4, Error ellipse: s-maj=12.7km s-min=4.3km az=78.5*
*NEIC **03** 19:13:06.5±1.6, 49°.1N±0°.1 × 156°.0E±0°.2, h47km±8km, mb4.3/14, Error ellipse: s-maj=20.6km s-min=10.4km az=135.0*
*IDC **03** 19:13:06.1±1.1, 49°.01N × 156°.12E, h43km±6km, mb3.6/13, mb1 3.8/17, mb1mx3.6/48, mbtmp3.9/17, ML3.2/3, MS3.1/4, Ms1 3.1/4, ms1mx2.7/56, Error ellipse: s-maj=25.1km s-min=15.3km az=123.0*

ISC 03 19:13:05.7±0.8, 48°.93N±0°.07 × 156°.25E±0°.09, h49km±5km, h49km:pP-P, n133, σ1^s.06/136, mb4.2/29, 2C-3D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	1.76	357	ePN	Pn	19 13 33.2	-0.5
SKR				e		19 13 50.0	
SKR				pmax	pmax		
	comp=Z,32nm,0.3s						
SKR				smax	smax		
	comp=E,662nm,0.6s						
SKR				smax	smax		
	comp=N,579nm,0.6s						
SKR	Severo-Kuril's	1.76	357	eP	Pn	19 13 33.0	-0.7
SKR				eS	Sn	19 13 55.9	+1.0
SKR	Severo-Kuril's	1.76	357	eP	Pn	19 13 33.0	-0.7
SKR				AMB	AMB	19 13 38.3	
	comp=N,230nm,0.5s						
SKR				eS	Sn	19 13 54.2	-0.7
SKR				A	A	19 14 10.5	
	comp=N,430nm,0.5s						
SKR				A	A	19 14 10.5	
	comp=N,600nm,0.5s						
PAU	Pauzhetka	2.57	8	PN	Pn	19 13 44.7	-0.1
PAU				S	Sn	19 14 16.4	+1.7
PAU	Pauzhetka	2.57	8	eP	Pn	19 13 44.7	-0.1
PAU				eS	Sn	19 14 16.4	+1.7
PAU	Pauzhetka	2.57	8	eP	Pn	19 13 44.6	-0.2
PAU				AMB	AMB	19 13 45.6	
	comp=N,95nm,0.5s						
PAU				eS	Sn	19 14 15.1	+0.4
PAU				A	A	19 14 16.7	
	comp=N,550nm,0.3s						
PAU				A	A	19 14 16.7	
	comp=N,365nm,0.3s						
KDTR	Khodutka, Kamc	3.11	21	PN	Pn	19 13 50.8	-1.4
KDTR	Khodutka, Kamc	3.11	21	eP	Pn	19 13 50.8	-1.4
MTVR	Mutnovka	3.77	18	PN	Pn	19 14 00.8	-0.5
MTVR				S	Sn	19 14 44.2	-0.2
MTVR	Mutnovka	3.77	18	eP	Pn	19 14 00.8	-0.5
MTVR				eS	Sn	19 14 44.2	-0.2
RUS	Russkaya	3.79	21	PN	Pn	19 14 00.4	-1.1
RUS				S	Sn	19 14 43.6	-1.2
RUS	Russkaya	3.79	21	eP	Pn	19 14 00.4	-1.1
RUS				eS	Sn	19 14 43.6	-1.2
RUS	Russkaya	3.79	21	eP	Pn	19 14 00.4	-1.1
GRL	Gorelyy	3.81	17	PN	Pn	19 14 01.8	-0.1
GRL	Gorelyy	3.81	17	eP	Pn	19 14 01.8	-0.1
APC	Apacha	4.04	8	PN	Pn	19 14 05.9	+0.9
APC	Apacha	4.04	8	eP	Pn	19 14 05.9	+0.9
PEA0B	Petropavlovsk-	4.29	12	PN	Pn	19 14 07.1	-1.2
PEA0B	Petropavlovsk-	4.29	12	Pn	Pn	19 14 07.1	-1.2
PETK	Petropavlovsk-	4.29	12	P	Pn	19 14 08.2	-0.1
	comp=N,1.5nm,0.3s,baz=202,slow=13,SNR=39						
PETK				LR	LR	19 16 18.4	
	comp=N,196nm,18.7s,baz=173,slow=46						
PET	Petropavlovsk	4.37	19	ePN	Pn	19 14 08.7	-0.8
PET				eS	Sn	19 14 58.7	-0.4
PET				pmax	pmax		
	comp=Z,53nm,1.0s						
PET				smax	smax		
	comp=N,157nm,0.6s						
PET				smax	smax		
	comp=E,108nm,0.5s						
PET				MLR	MLR		
	comp=Z,200nm,16.0s						
PET	Petropavlovsk	4.37	19	eP	Pn	19 14 09.1	-0.4
PET	Petropavlovsk	4.37	19		Pn	19 14 08.8	-0.6
PET	Petropavlovsk	4.37	19	eP	Pn	19 14 08.9	-0.6
PET				AMB	AMB	19 14 11.7	
	comp=Z,50nm,1.0s						
PET				eS	Sn	19 14 58.7	-0.4
PET				A	A	19 15 15.0	
	comp=Z,160nm,0.6s						
PET				A	A	19 15 15.0	
	comp=Z,110nm,0.6s						
DALK	Dalny	4.40	20	PN	Pn	19 14 08.9	-1.0
DALK	Dalny	4.40	20	eP	Pn	19 14 08.9	-1.0
UGLR	Uglovaya	4.58	20	PN	Pn	19 14 13.0	+0.5
UGLR	Uglovaya	4.58	20	eP	Pn	19 14 13.0	+0.5
AVH	Avacha	4.62	19	PN	Pn	19 14 13.8	+0.9
AVH	Avacha	4.62	19	eP	Pn	19 14 13.8	+0.9
KOK	Koryaka	4.62	18	PN	Pn	19 14 13.9	+0.9
KOK	Koryaka	4.62	18	eP	Pn	19 14 13.9	+0.9
KOK	Koryaka	4.62	18	eP	Pn	19 14 13.9	+0.9
SMAR	Somma	4.63	19	PN	Pn	19 14 13.1	-0.1
SMAR	Somma	4.63	19	eP	Pn	19 14 13.1	-0.1
KRER	Koryakskii	4.66	19	PN	Pn	19 14 14.0	+0.4
KRER	Koryakskii	4.66	19	eP	Pn	19 14 14.0	+0.4
SDLR	Sedlovina	4.66	20	PN	Pn	19 14 13.1	-0.5
SDLR	Sedlovina	4.66	20	eP	Pn	19 14 13.1	-0.5
SPN	Mys Shipunski	4.81	28	PN	Pn	19 14 14.8	-0.6
SPN	Mys Shipunski	4.81	28	eP	Pn	19 14 14.8	-0.6
SPN	Mys Shipunski	4.81	28	eP	Pn	19 14 14.8	-0.6
GNL	Ganaly	4.89	12	PN	Pn	19 14 17.6	+0.9
GNL	Ganaly	4.89	12	eP	Pn	19 14 17.6	+0.9
MKZ	Mys Kozlova	6.58	29	PN	Pn	19 14 38.0	-1.7
MKZ	Mys Kozlova	6.58	29	eP	Pn	19 14 38.0	-1.7
TUMD	Tumrok D	6.78	21	eP	Pn	19 14 42.1	-0.5
TUMR	Tumrok	6.80	19	PN	Pn	19 14 43.5	+0.6
TUMR	Tumrok	6.80	19	eP	Pn	19 14 43.5	+0.6
KUR	Kuril'sk	6.81	240	⇑iPN	Pn	19 14 43.1	+0.1
KUR				pmax	pmax		
	comp=Z,47nm,0.5s						
KUR	Kuril'sk	6.81	240	i P	Pn	19 14 42.9	-0.1
KUR				AMB	AMB	19 14 48.0	
	comp=Z,47nm,0.5s						
KUR				eS	Sn	19 15 58.2	-1.0
ZLN	Zelenaya	7.62	20	PN	Pn	19 14 54.6	+0.5
ZLN	Zelenaya	7.62	20	eP	Pn	19 14 54.6	+0.5
YSS	Yuzh-Sakhalins	9.28	263	ePN	Pn	19 15 19.5	+2.8
YSS				MLR	MLR		
	comp=Z,200nm,15.0s						
YSS	Yuzh-Sakhalins	9.28	263	Pn	Pn	19 15 16.3	-0.4
YSS	Yuzh-Sakhalins	9.28	263	eP	Pn	19 15 18.2	+1.5
OKH	Okha	9.55	304	eP	Pn	19 15 22.2	+1.9
JKA	Kamikawa-asahi	10.56	248		Pn	19 15 34.1	-0.3
ASAJ	Asahikawa	10.57	248	P	Pn	19 15 34.1	-0.3
	comp=Z,1.1nm,0.3s,baz=80,slow=16,SNR=11						
ASAJ				LR	LR	19 19 29.0	
	comp=Z,91nm,18.9s,baz=160,slow=36						
MA2	Magadan	11.14	345	LR	LR	19 20 09.0	
	comp=Z,84nm,19.4s,baz=154,slow=38						
JEM	Erimo	11.49	238	Pn	Pn	19 15 34.4	-13
ERM	Erimo	11.49	238	PN	Pn	19 15 44.8	-2.2
ERM	Erimo	11.49	238	Pn	Pn	19 15 44.8	-2.2
JSD	Sado	16.95	237	Pn	Pn	19 16 58.9	-0.4
JSD				IAmb	IAmb	19 17 20.5	
	comp=Z,36nm,1.5s						
USRK	Ussuriysk Ar.	17.31	263	P	P	19 17 05.0	+0.4
	baz=57,slow=14,SNR=4.0						
USRK	Ussuriysk Ar.	17.31	263	P	P	19 17 05.0	+0.4
YAK	Yakutsk	19.78	321	P	P	19 17 30.3	-1.2
	comp=Z,0.1nm,0.3s,baz=143,slow=0.6,SNR=1.6						
YAK	Yakutsk	19.78	321	⇓eP	P	19 17 30.7	-0.7
YAK				pmax	pmax		
	comp=Z,11nm,0.8s						
YAK	Yakutsk	19.78	321	eP	P	19 17 30.7	-0.7
JWT	Wachi	20.53	236	P	P	19 17 39.7	-0.1
JWT				IAmb	IAmb	19 18 01.8	
	comp=Z,17nm,1.3s						
JHS	Saijyo	22.02	239	P	P	19 17 55.4	-0.4
JHS				IAmb	IAmb	19 18 08.6	
	comp=Z,13nm,1.1s						
KSRS	Korea Array	23.48	251	P	P	19 18 11.4	+0.6
	comp=Z,1.7nm,0.7s,baz=46,slow=9.7,SNR=7.7						
KSAR	Wonju Array Be	23.52	251	P	P	19 18 10.0	-1.1
KSAR	Wonju Array Be	23.52	251	P	P	19 18 10.0	-1.1
TIK	Tiksi	26.03	341	eP	P	19 18 32.3	-1.4
TIXI	Tiksi	26.04	341	P	P	19 18 32.4	-1.4
	comp=Z,3.9nm,0.6s,baz=123,slow=11,SNR=12						
TIXI				pP	pP	19 18 44.9	-0.9
	comp=Z,1.8nm,0.5s,baz=128,slow=11,SNR=3.4						
TIXI	Tiksi	26.04	341	⇓eP	P	19 18 32.3	-1.5
TIXI	Tiksi	26.04	341	P	P	19 18 31.3	-2.5
H11N2	WAKE ISLAND Hy	30.36	160	T	T	19 51 41.2	
	baz=342						
H11N1	WAKE ISLAND Hy	30.38	160	T	T	19 51 38.7	
	baz=342						
H11N3	WAKE ISLAND Hy	30.38	160	T	T	19 51 59.5	
	baz=342						
H21K	Melozitna Rive	31.09	39	P	P	19 19 18.6	-0.3
H21K				IAmb	IAmb	19 19 51.9	
	comp=Z,8.2nm,1.6s						
H11S1	WAKE ISLAND Hy	31.50	161	T	T	19 53 01.9	
	baz=346,slow=76,SNR=19						
H11S3	WAKE ISLAND Hy	31.51	161	T	T	19 53 12.0	
	baz=346,slow=76,SNR=24						
H11S2	WAKE ISLAND Hy	31.52	161	T	T	19 53 07.6	
	baz=346,slow=76,SNR=19						
BMAR	Burnt Mountain	34.52	36	P	P	19 19 49.6	+0.8
BCAR	Beaver Creek A	35.87	43	P	P	19 20 02.4	+1.9
INK	Inuvik	38.67	34	P	P	19 20 25.8	+1.9
	comp=Z,0.6nm,0.5s,baz=279,slow=2.1,SNR=4.5						
INK	Inuvik	38.67	34	P	P	19 20 25.5	+1.5
INK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
INK	Inuvik	38.67	34	P	P	19 20 25.5	+1.5
MKAR	Makanchi Array	47.83	297	P	P	19 21 37.5	-0.7
	comp=Z,1.2nm,0.8s,baz=54,slow=6.3,SNR=6.2						
KURK	Kurchatov	47.93	303	⇓eP	P	19 21 37.2	-1.6
KURK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KURK	Kurchatov	47.93	303	P	P	19 21 37.2	-1.6
KURK				IAmb	IAmb	19 21 38.8	
	comp=Z,2.0nm,0.9s						
KURK	Kurchatov	47.93	303	eP	P	19 21 37.2	-1.6
SPITS	Spitsbergen Ar	50.84	350	P	P	19 21 59.6	-1.1
SPITS				pmax	pmax		
	comp=Z,45nm,1.2s						
CHTO	Chiang Mai	54.66	258	P	P	19 22 29.3	-0.4
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CHTO	Chiang Mai	54.66	258	P	P	19 22 29.3	-0.4
CHTO				IAmb	IAmb	19 22 44.3	
	comp=Z,4.3nm,0.8s						
ARU	Arti	54.83	318	c iP	P	19 22 30.2	-0.2
ARU				*PP	pP	19 22 42.7	-0.6
ARU				S	S	19 30 05.6	-1.9
ARU				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ARU	Arti	54.83	318	P	P	19 22 29.5	-0.9
ARU	Arti	54.83	318	eP	P	19 22 30.2	-0.2
CM31	Chiang Mai Arr	54.92	257	P	P	19 22 31.6	0.0
CM31				IAmb	IAmb	19 22 46.5	
	comp=Z,3.6nm,0.8s						
CMAR	Chiang Mai Arr	54.92	257	P	P	19 22 33.0	+1.4
	comp=Z,1.1nm,0.8s,baz=37,slow=7.1,SNR=11						
CMAR				pP	pP	19 22 44.8	+0.8
	comp=Z,1.9nm,0.7s,baz=36,slow=7.3,SNR=10						
CMAR	Chiang Mai Arr	54.92	257	P	P	19 22 31.7	+0.1
ARCES	ARCESS Array B	56.48	341	LR	LR	19 50 25.5	
	comp=Z,24nm,19.1s,baz=320,slow=40						
ABKAR	Akbulak array	58.64	310	P	P	19 22 56.3	-1.2
ABKAR	Akbulak array	58.64	310	P	P	19 22 55.9	-1.6
ABKAR				IAmb	IAmb	19 22 58.6	
	comp=Z,1.4nm,0.6s						
FINES	FINESS Array B	62.95	336	P	P	19 23 26.3	-0.2
	comp=Z,3.1nm,0.9s,baz=39,slow=7.8,SNR=9.2						
FINES	FINESS Array B	62.95	336	eP	P	19 23 27.4	+0.9
FINES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KBZ	Khabaz	70.84	315	P	P	19 24 18.1	+1.1
	comp=Z,2.2nm,0.9s,baz=76,slow=4.2,SNR=4.2						
AKASG	Malin Array Be	70.88	328	P	P	19 24 16.7	-0.4
	comp=Z,0.7nm,0.4s,baz=31,slow=6.3,SNR=3.5						
AKASG				pP	pP	19 24 29.2	-0.9
	comp=Z,1.1nm,0.5s,baz=31,slow=6.4,SNR=4.6						
AKASG	Malin Array Be	70.88	328	IAmb	IAmb	19 24 21.2	
	comp=Z,1.5nm,1.2s						
WRA	Warramunga Arr	71.29	202	P	P	19 24 19.5	-0.3
	comp=Z,0.4nm,0.8s,baz=21,slow=6.9,SNR=2.1						
TXAR	Lajitas Array	74.60	63	P	P	19 24 41.2	+1.6
	comp=Z,0.1nm,0.3s,baz=258,slow=4.5,SNR=2.2						
ASAR	Alice Springs	74.97	201	P	P	19 24 42.3	+0.7
	comp=Z,0.5nm,1.0s,baz=21,slow=5.4,SNR=3.4						
DPC	Dobruska-Polom	75.30	335	eP	P	19 24 44.7	+1.4
DPC				e		19 24 57.4	
DPC	Dobruska-Polom	75.30	335	eP	P	19 24 44.7	+1.4
DPC				epP	pP	19 24 57.4	+1.0
CLL	Collm	75.32	337	i P	P	19 24 44.2	+0.9
CLL				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CLL	Collm	75.32	337	i P	P	19 24 44.2	+0.9
	comp=Z,5.0nm,0.9s						
KRLC	Kraliky	75.41	334	eP	P	19 24 44.2	+0.3
KRLC	Kraliky	75.41	334	eP	P	19 24 44.2	+0.3
KHC	Kasperske Hory	77.16	336	eP	P	19 24 55.5	+1.7
KHC				e		19 25 08.1	
KHC	Kasperske Hory	77.16	336	eP	P	19 24 55.5	+1.7
KHC				epP	pP	19 25 08.1	+1.1
GERES	GERESS Array B	77.38	336	P	P	19 24 56.4	+1.2
	comp=Z,0.9nm,0.6s,baz=39,slow=5.3,SNR=7.7						
GERES				pP	pP	19 25 08.8	+0.4
	comp=Z,1.1nm,0.6s,baz=33,slow=5.6,SNR=6.7						
CONA	Conrad Observa	77.61	334	i P	pP	19 25 10.6	+0.9
	comp=Z,1.8nm,0.7s						
BRTR	Keskin Array B	78.21	318	P	P	19 25 01.5	+1.5
	comp=Z,1.8nm,0.8s,baz=28,slow=6.5,SNR=4.7						
BRTR				pP	pP	19 25 13.7	+0.5
	comp=Z,1.2nm,0.8s,baz=29,slow=2.8,SNR=2.5						
BRTR	Keskin Array B	78.21	318	P	P	19 25 01.3	+1.3
SOKA	Soboth	78.98	334	eP	pP	19 25 17.5	+0.2
	comp=Z,3.0nm,0.9s						
KBA	Koelnbreinsper	79.09	335	eP	pP	19 25 19.6	+1.5
	comp=Z,9.0nm,0.7s						
OBKA	Obir	79.28	334	eP	pP	19 25 20.1	+1.1
	comp=Z,2.0nm,0.6s						
WTTA	Wattenberg	79.39	336	eP	pP	19 25 21.2	+1.6
	comp=Z,7.2nm,0.9s						
MOTA	Moosalm	79.45	337	eP	pP	19 25 21.1	+1.1
	comp=Z,3.8nm,1.1s						
ABTA	Abfaltersbach	79.63	336	i P	pP	19 25 21.6	+0.8
	comp=Z,2.1nm,0.9s						
FETA	Feichten	79.85	337	eP	pP	19 25 23.4	+1.2
	comp=Z,1.8nm,0.8s						

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*IDC **03** 19:30:23.3±1.7, 2°.27N × 128°.44E, h0km, mb3.6/4, mb1 3.8/5, mb1mx3.5/34, mbtmp3.7/5, ML3.5/1, MS3.3/2, Ms1 3.3/2, ms1mx2.5/36, Error ellipse: s-maj=90.8km s-min=24.0km az=63.0*
*DJA **03** 19:30:27.8±0.5, 2°N±5° × 12°9E±°, h10km, M3.6/10, mb3.8/3, MLv3.6/10*

ISC 03 19:30:29.7±1.2, 2°.2N±0°.1 × 128°.64E±0°.09, h50km, n19, σ1^s.29/12, mb3.6/4, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.91	222	P	Pn	19 30 58.3	-1.5
LBMI	Labuha	3.05	202	P	Pn	19 31 16.3	+0.9
SGSI	Sangihe	3.44	295	P	Pn	19 31 20.9	+0.1
SWI	Sorong	4.02	139	P	Pn	19 31 29.1	+0.4
SIJI	Sorong	4.02	139	Pn	Pn	19 31 28.9	0.0
	2.6nm,0.3s,baz=331,slow=19,SNR=19						
SIJI				Sn	Sn	19 32 11.8	-2.9
	3.1nm,0.3s,baz=161,slow=22,SNR=10						
GTOI	Gorontalo	5.84	255	P	Pn	19 31 54.6	+0.8
	0.0nm5.1nm,1.0s						
FAKI	Fak Fak	6.24	145	P	Pn	19 31 59.7	+0.5
FITZ	Fitzroy Crossi	20.39	188	LR	LR	19 44 19.0	
	comp=Z,68nm,18.4s,baz=172,slow=41						
WRA	Warramunga Arr	22.71	166	P	P	19 35 27.8	+0.4
	1.5nm,0.7s,baz=345,slow=10,SNR=9.8						
ASAR	Alice Springs	26.22	169	P	P	19 36 00.9	+0.8
	0.4nm,0.6s,baz=347,slow=8.5,SNR=9.5						
STKA	Stephens Creek	36.06	161	P	P	19 37 27.6	+1.1
	1.0nm,0.5s,baz=330,slow=8.9,SNR=3.9						
H11S3	WAKE ISLAND Hy	40.63	64	T	T	20 21 25.7	
	baz=253						
H11S2	WAKE ISLAND Hy	40.65	64	T	T	20 21 30.6	
	baz=253						
H11S1	WAKE ISLAND Hy	40.65	64	T	T	20 21 28.8	
	baz=253						
H11N1	WAKE ISLAND Hy	41.22	62	T	T	20 22 13.2	
	baz=250,slow=75						
H11N2	WAKE ISLAND Hy	41.23	62	T	T	20 22 15.1	
	baz=250						
H11N3	WAKE ISLAND Hy	41.24	62	T	T	20 22 13.8	
	baz=250,slow=75						
MKAR	Makanchi Array	59.89	325	P	P	19 40 30.1	-0.4
	0.3nm,0.6s,baz=114,slow=8.6,SNR=4.5						
NRIK	Noril'sk	72.36	346	LR	LR	20 16 45.7	
	comp=Z,19nm,20.5s,baz=235,slow=38						

NOU 03 19:30:37.6, 22°.34S × 172°.29E, h40km, mb3.9/8, Southeast of Loyalty Islands, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	4.05	281	P	Pn	19 31 37.5	+0.5
PINNC	Pines Island,	4.49	266	P	Pn	19 31 43.1	0.0
LIFNC	LIFOU	4.95	287	P	Pn	19 31 49.3	-0.2
YATNC	Mamie plateau,	5.01	272	P	Pn	19 31 49.6	-0.7
OUENC	Ouen Island, N	5.04	268	P	Pn	19 31 50.5	-0.2
ONTNC	Ouen Toro	5.40	269	P	Pn	19 31 56.4	+0.7
DZM	Mont Dzumac	5.42	272	P	Pn	19 31 55.9	-0.2
NOUC	Port Laguerre	5.55	271	P	Pn	19 31 58.1	+0.4

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*DJA **03** 19:36:24.7±0.3, 6°S±3°×13°0E±°, h209^{km}±6^{km}, M4.2/13, mb4.1/10, mB4.9/4, MLv4.3/13, Mw(mB)4.1/4*

*NEIC **03** 19:36:24.2±2.2, 5°.86S±0°.07×129°.67E±0°.08, h184^{km}±8^{km}, mb4.3/8, Error ellipse: s-maj=12.6km s-min=8.9km az=67.0*

*IDC **03** 19:36:24.3±1.9, 5°.75S×129°.63E, h180^{km}±21^{km}, mb3.4/5, mb1 3.7/9, mb1mx3.4/29, mbtmp4.1/9, Error ellipse: s-maj=29.6km s-min=15.6km az=84.0*

ISC 03 19:36:24.2±0.6**, 5°.88S**±0°.05×**129°.71E**±0°.06**, h200^{km}, n62,** σ**1$\overset{s}{.}$87**/69**, mb3.9**/9**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.36	8	P	Pn	19 36 58.7	+2.0
BNDI				S	Sn	19 37 24.2	+2.1
BNDI	Bandanaira	1.36	8	P	Pn	19 36 59.1	+2.4
MSAI	Masohi	2.63	343	P	Pn	19 37 10.4	+0.8
MSAI				S	Sn	19 37 44.9	-0.2
FAKI	Fak Fak	3.88	41		Pn	19 37 23.9	-0.7
FAKI				Sn	Sn	19 38 03.0	-8.9
FAKI	Fak Fak	3.88	41	P	Pn	19 37 24.7	+0.2
FAKI	Fak Fak	3.88	41	P	Pn	19 37 24.9	+0.4
SIJI	Sorong	5.21	17	P	Pn	19 37 39.6	-1.7
	13nm,0.3s,baz=218,slow=20,SNR=58						
SIJI				S	Sn	19 38 34.9	-7.4
	20nm,0.3s,baz=0.7,slow=22,SNR=26						
SWI	Sorong	5.22	17	P	Pn	19 37 41.2	-0.2
	0.8nm3μm55nm,0.4s						
SANI	Sanana	5.31	316	P	Pn	19 37 43.0	+0.4
	0.1nm33nm,1.2s						
SANI	Sanana	5.31	316	P	Pn	19 37 43.5	+0.9
LBMI	Labuha	5.65	337	P	Pn	19 37 47.5	+0.5
	0.2nm482nm43nm,0.9s						
DRS	Darwin Rock St	6.62	170	P	Pn	19 38 00.4	+0.9
	106nm,0.7s						
SOEI	Soe	6.62	234	Pn	Pn	19 37 55.7	-4.0
SOEI				Sn	Sn	19 39 14.0	-1.4
SOEI	Soe	6.62	234	P	Pn	19 38 00.9	+1.2
	0.1nm22nm,0.9s						
SOEI	Soe	6.62	234	P	Pn	19 38 02.5	+2.8
TNTI	Ternate	7.01	340		Pn	19 38 04.8	+0.2
TNTI	Ternate	7.01	340	P	Pn	19 38 04.5	-0.1
	0.1nm19nm,0.7s						
MTN	Manton Dam	7.06	169		Pn	19 38 06.4	+1.1
MTN				Sn	Sn	19 39 21.7	-3.9
MTN	Manton Dam	7.06	169	P	Pn	19 38 05.7	+0.4
	102nm,0.4s						
KDU	Kakadu	7.30	158	P	Pn	19 38 09.0	+0.7
BATI	Baumata	7.37	234	P	Pn	19 38 10.8	+1.5
	1.4nm,0.3s,baz=24,slow=19,SNR=5.4						
BATI				S	Sn	19 39 30.2	-2.7
	2.4nm,0.3s,baz=156,slow=11,SNR=2.3						
BATI	Baumata	7.37	234	P	Pn	19 38 10.3	+1.0
	0.1nm8.6nm,0.5s						
SRPI	Serui, Papua	7.64	59	P	Pn	19 38 12.0	-0.8
	0.3nm26nm,0.5s						
MMRI	Maumere	7.90	249	Pn	Pn	19 38 16.0	-0.2
MMRI	Maumere	7.90	249	P	Pn	19 38 20.0	+3.8
LUWI	Luwuk	8.42	305	Pn	Pn	19 38 19.9	-3.2
EDFI	Ende, Flores	8.45	250	P	Pn	19 38 24.0	+0.5
KNRA	Kununurra	9.78	185		Pn	19 38 40.8	+0.1
KNRA	Kununurra	9.78	185	P	Pn	19 38 40.4	-0.3
	35nm,0.5s						
TOLI2	Tolitoli	11.30	308	Pn	Pn	19 39 00.2	-0.1
TOLI2	Tolitoli	11.30	308	P	P	19 39 04.1	-2.0
	4.9nm,0.9s						
FITZ	Fitzroy Crossi	12.78	198	P	Pn	19 39 19.1	+0.2
	1.0nm,0.3s,baz=20,slow=9.3,SNR=47						
FITZ				S	Sn	19 41 32.4	-9.3
	1.7nm,0.3s,baz=94,slow=19,SNR=8.6						
FITZ	Fitzroy Crossi	12.78	198	P	Pn	19 39 19.0	0.0
	8.3nm,0.6s						
WB0	Warramunga Arr	14.54	162	P	Pn	19 39 40.8	-0.1
WRAB	Tennant Creek	14.68	163	P	Pn	19 39 42.0	-0.6
WRAB	Tennant Creek	14.68	163	P	Pn	19 39 43.4	+0.8
WRA	Warramunga Arr	14.69	163	P	Pn	19 39 42.5	-0.2
	1.5nm,0.3s,baz=342,slow=12,SNR=38						
WRA				S	S	19 42 17.6	-8.4
	0.3nm,0.3s,baz=337,slow=23,SNR=2.5						
WRA	Warramunga Arr	14.69	163	P	Pn	19 39 41.4	-1.4
WB2	Warramunga Arr	14.69	163	P	Pn	19 39 42.5	-0.3
WR0	Warramunga Arr	14.77	162	P	Pn	19 39 43.7	+0.1
COEN	Coen	15.50	122		Pn	19 39 51.9	-0.7
COEN				IAmb	IAmb	19 39 57.2	
	comp=Z,6.0nm,0.8s						
COEN	Coen	15.50	122	P	P	19 39 55.9	+3.2
	comp=Z,11nm,1.3s						
QIS	Mount Isa	17.47	148	P	Pn	19 40 17.4	+1.2
PMG	Port Moresby	17.65	103	P	P	19 40 13.5	-2.9
PMG				IAmb	IAmb	19 40 18.5	
	comp=Z,20nm,1.1s						
AS31	Alice Springs	18.14	168		Pn	19 40 24.9	+0.9
ASAR	Alice Springs	18.14	168	P	Pn	19 40 25.0	+1.0
	comp=Z,6.7nm,0.3s,baz=349,slow=12,SNR=152						
ASAR				S	S	19 43 37.5	-1.7
	comp=Z,0.2nm,0.3s,baz=348,slow=23,SNR=6.7						
ASAR	Alice Springs	18.14	168		Pn	19 40 24.8	+0.8
ASAR					S	19 43 39.5	+0.4
PSA00	Pilbara Seismi	18.29	211	P	P	19 40 22.8	-0.5
PSA00				IAmb	IAmb	19 41 01.3	
	comp=Z,18nm,1.2s						
PSA00	Pilbara Seismi	18.29	211	P	Pn	19 40 25.5	-0.2
	comp=Z,21nm,2.4s						
WRKA	Warakurna	19.10	184	P	Pn	19 40 34.2	-1.1
	comp=Z,14nm,1.4s						
OOD	Oodnadatta	22.53	166	P	P	19 41 09.1	+1.8
	comp=Z,14nm,0.6s						
MULG	Mulgathing	24.62	171	P	P	19 41 30.0	+3.7
	comp=Z,15nm,2.6s						
BBOO	Buckleboo	27.44	168	P	P	19 41 53.7	+2.1
STKA	Stephens Creek	28.16	158	P	P	19 42 01.4	+3.5
	comp=Z,1.8nm,0.8s,baz=326,slow=9.2,SNR=2.1						
STKA	Stephens Creek	28.16	158	P	P	19 41 59.1	+1.1
CMAR	Chiang Mai Arr	38.80	309	P	P	19 43 30.3	+0.4
	comp=Z,0.5nm,0.5s,baz=141,slow=7.7,SNR=8.5						
SONM	Songino Array	57.29	342	P	P	19 45 52.8	+1.7
	comp=Z,0.3nm,0.4s,baz=160,slow=6.2,SNR=2.3						
PETK	Petropavlovsk-	63.36	18	pP	pP	19 47 16.4	-0.5
	comp=Z,3.6nm,0.8s,baz=217,slow=4.5,SNR=2.6						
MK31	Makanchi Array	67.13	327	P	P	19 46 57.4	+1.0
MK31				IAmb	IAmb	19 47 24.9	
	comp=Z,5.3nm,1.2s						
MKAR	Makanchi Array	67.13	327	P	P	19 46 57.8	+1.4
	comp=Z,0.8nm,0.5s,baz=130,slow=7.9,SNR=14						
MKAR	Makanchi Array	67.13	327	P	P	19 46 57.4	+1.0
ZALV	Zalesovo Beam	70.45	334	P	P	19 47 17.7	+1.0
	comp=Z,0.5nm,0.4s,baz=120,slow=5.7,SNR=2.8						

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*IDC **03** 20:54:41.6±0.5, 8°.25S×124°.98E, h0^{km}, mb4.5/18, mb1 4.6/23, mb1mx4.5/36, mbtmp4.5/23, ML4.0/5, MS4.1/14, Ms1 4.1/14, ms1mx3.7/52, Error ellipse: s-maj=15.7km s-min=11.4km az=78.0*

*DJA **03** 20:54:44.8±0.1, 8°S±2°×12°5E±°, h10^{km}, M4.7/42, mb4.8/42, mB5.2/18, MLv4.8/15, Mw(mB)4.6/18, MwMwp5.0/3, Mwp5.3/3*

*NEIC **03** 20:54:44.6±2.2, 8°.35S±0°.05×125°.02E±0°.04, h24^{km}±4^{km}, mb4.9/69, Error ellipse: s-maj=7.5km s-min=5.5km az=170.0*

*GCMT **03** 20:54:44.6±0.2, 8°.27S±0°.02×125°.00E±0°.01, h14^{km}±1^{km}, MW4.9/88, Moment Tensor Solution. s33,c37; s88,c108; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.99±.11; $M_{\theta\theta}$-0.54±.08; $M_{\phi\phi}$1.53±.10; $M_{r\theta}$-1.15±.25; $M_{\theta\phi}$-2.16±.08; $M_{\phi r}$-1.50±.29; Best double couple: $M_0$3.16000×10^{16} NP1:ϕ_s110.00000°, δ55.00000°, λ-158.00000°. NP2: ϕ_s7.00000°, δ72.00000°, λ-37.00000°. Principal axes: T 3.0190, Plg11.0000°, Azm62.0000°; N 0.2820, Plg50.0000°, Azm165.0000°; P -3.3010, Plg38.0000°, Azm323.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*KLM **03** 20:54:46, 8°.47S×124°.90E, h50^{km}, mb4.9*

ISC 03 20:54:44.3±0.3**, 8°.42S**±0°.04×**125°.04E**±0°.04**, h24^{km}, n228,** σ**1$\overset{s}{.}$96**/239**, mb4.8**/67**, MS4.0**/9**, 2C-3D, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.54	210	Pn	Pb	20 55 11.4	-0.8
SOEI	Soe	1.54	210	P	Pb	20 55 14.3	+2.1
SOEI	Soe	1.54	210	P	Pb	20 55 14.3	+2.1
BATI	Baumata	2.24	217	Pn	Pb	20 55 23.3	-0.9
	56nm,0.3s,baz=188,slow=1.2,SNR=44						
BATI				LR	LR	20 55 50.0	
	comp=Z,2μm,21.0s,baz=53,slow=29						
BATI				Sn	Sb	20 55 53.2	+1.7
	83nm,0.3s,baz=72,slow=20,SNR=5.8						
BATI	Baumata	2.24	217	P	Pb	20 55 23.2	-0.9
MMRI	Maumere	2.78	265	Pn	Pn	20 55 28.9	+1.5
MMRI	Maumere	2.78	265	P	Pn	20 55 28.7	+1.3
MMRI	Maumere	2.78	265	P	Pn	20 55 29.6	+2.2
EDFI	Ende, Flores	3.33	264	P	Pn	20 55 36.8	+1.8
BASI	Baing, Sumba	4.75	247	P	Pn	20 55 57.4	+2.9
WSI	Waingapu	4.85	255	P	Pn	20 55 58.7	+2.9
KDI	Kendari	5.04	331	P	Pn	20 55 56.0	-2.5
BSSI	Bau Bau, Buton	5.05	296	P	Pn	20 55 58.3	-0.3
BKSI	Bulukumba	5.77	302	P	Pn	20 56 07.5	-1.0
	0.2nm819nm69nm,0.8s						
KAPI	Kappang	6.24	302	Pn	Pn	20 56 14.7	-0.4
	1.8nm,0.3s,baz=172,slow=16,SNR=2.3						
KAPI				LR	LR	20 58 36.0	
	comp=Z,2μm,20.1s,baz=155,slow=38						
KAPI	Kappang	6.24	302	Pn	Pn	20 56 16.2	+1.2
KAPI	Kappang	6.24	302	P	Pn	20 56 16.5	+1.5
MSAI	Masohi	6.35	38	P	Pn	20 56 21.6	+5.1
SANI	Sanana	6.39	9	P	Pn	20 56 16.0	-1.1
	0.2nm896nm51nm,0.6s						
SANI	Sanana	6.39	9	P	Pn	20 56 16.2	-0.9
DRS	Darwin Rock St	7.01	125	P	Pn	20 56 29.9	+4.3
	62nm,0.8s						
PLAI	Plampang	7.19	266	P	Pn	20 56 30.7	+2.6
	0.8nm2μm246nm,1.2s						
PLAI	Plampang	7.19	266	P	Pn	20 56 32.4	+4.3
MTN	Manton Dam	7.43	127	P	Pn	20 56 32.8	+1.5
	baz=7.6,SNR=47						
MTN				S	Sn	20 57 51.8	-3.2
	baz=7.6						
MTN	Manton Dam	7.43	127	Pn	Pn	20 56 32.8	+1.5
MTN	Manton Dam	7.43	127	P	Pn	20 56 36.0	+4.6
	135nm,0.8s						
TTSI	Tana Toraja	7.44	315	P	Pn	20 56 33.0	+1.5
	0.2nm2μm49nm,1.1s						
LUWI	Luwuk	7.67	343	Pn	Pn	20 56 33.0	-1.6
LUWI	Luwuk	7.67	343	P	Pn	20 56 34.7	+0.2
	0.6nm2μm116nm,1.1s						
LUWI	Luwuk	7.67	343	P	Pn	20 56 34.7	+0.2
TWSI	Taliwang, Sumb	8.07	267	P	Pn	20 56 43.2	+3.0
	943nm67nm,0.9s						
KNRA	Kununurra	8.08	154	P	Pn	20 56 41.6	+1.3
	baz=8.2,SNR=187						
KNRA				S	Sn	20 58 10.3	-0.7
	baz=8.2						
KNRA	Kununurra	8.08	154	Pn	Pn	20 56 41.6	+1.3
KNRA	Kununurra	8.08	154	P	Pn	20 56 43.6	+3.3
	132nm,0.9s						
LBMI	Labuha	8.11	18	P	Pn	20 56 47.4	+6.8
APSI	Ampana	8.18	335	P	Pn	20 56 41.5	-0.2
	0.3nm970nm101nm,1.0s						
KDU	Kakadu	8.45	121	P	Pn	20 56 46.1	+0.8
	baz=8.6,SNR=41						
KDU				S	Sn	20 58 17.4	-2.6
	baz=8.6						
KDU	Kakadu	8.45	121	P	Pn	20 56 48.0	+2.7
	47nm,0.8s						
FAKI	Fak Fak	9.01	53	Pn	Pn	20 56 54.0	+0.9
FAKI	Fak Fak	9.01	53	P	Pn	20 56 56.8	+3.7
	0.3nm2μm1μm64nm,1.2s						
FAKI	Fak Fak	9.01	53	P	Pn	20 56 54.7	+1.6
GTOI	Gorontalo	9.21	347	P	Pn	20 56 57.1	+1.3
	6.0nm,0.6s						
MRSI	Marisa	9.36	341	P	Pn	20 56 58.3	+0.5
	431nm29nm,0.9s						
TNTI	Ternate	9.42	14	P	Pn	20 57 07.4	+8.8
TNTI	Ternate	9.42	14	P	Pn	20 56 59.8	+1.2
FITZ	Fitzroy Crossi	9.64	177	Pn	Pn	20 57 02.0	+0.3
	2.3nm,0.3s,baz=5.1,slow=9.4,SNR=50						
FITZ				Sn	Sn	20 58 46.0	-3.3
	5.7nm,0.3s,baz=266,slow=5.5,SNR=6.1						
FITZ	Fitzroy Crossi	9.64	177	P	Pn	20 57 01.6	-0.1
	baz=9.8,SNR=88						
FITZ	Fitzroy Crossi	9.64	177	Pn	Pn	20 57 02.0	+0.3
SIJI	Sorong	9.73	40	Pn	Pn	20 57 02.2	-0.7
	0.3nm,0.3s,baz=145,slow=0.9,SNR=16						
SIJI				LR	LR	21 00 39.2	
	comp=Z,1μm,20.0s,baz=244,slow=37						
SWI	Sorong	9.73	40	P	Pn	20 57 04.1	+1.2
	783nm39nm,1.2s						
SRBI	Singaraja	9.73	271	P	Pn	20 57 05.0	+2.1
	28nm,0.9s						
IGBI	Denpasar	9.79	267	P	Pn	20 57 05.5	+1.8
	71nm,1.0s						
MPSI	Mapaga	10.09	329	P	Pn	20 57 07.2	-0.7
	29nm,0.9s						
TOLI2	Tolitoli	10.37	336	Pn	Pn	20 57 11.3	-0.4
JAGI	Jajag, Banyuwa	10.77	269		Pn	20 57 17.4	+0.3
BBKI	Banjar Baru	11.27	295	P	Pn	20 57 29.6	+5.6
MTKI	Muara Teweh, K	12.54	306	P	P	20 57 57.5	+4.7
GRJI	Gresik	12.54	276	P	Pn	20 57 42.6	+1.2
	57nm,1.0s						
SRPI	Serui, Papua	12.91	60	P	Pn	20 57 46.9	+0.5
PWJI	Pagerwojo	13.11	271	P	P	20 57 59.2	+0.1
NGJI	Ngawi	13.49	273	P	P	20 58 07.7	+4.3
PSA00	Pilbara Seismi	14.01	200		Pn	20 58 01.9	+0.4
PSA00	Pilbara Seismi	14.01	200		Pn	20 58 01.5	+0.1
UGM	Wanagama	14.38	271		Pn	20 58 06.3	-0.3
WB0	Warramunga Arr	14.47	142		Pn	20 58 05.0	-2.8
SMRI	Semarang	14.53	274	P	Pn	20 58 09.4	+0.8
SMRI	Semarang	14.53	274	P	Pn	20 58 09.4	+0.8
	88nm,1.2s						
WRAB	Tennant Creek	14.57	143		Pn	20 58 04.9	-4.3
WRA	Warramunga Arr	14.57	143	Pn	Pn	20 58 05.2	-4.0
	1.2nm,0.3s,baz=316,slow=12,SNR=58						
WRA				Sn	Sn	21 00 44.6	-5.4
	1.3nm,0.3s,baz=326,slow=21,SNR=5.2						
WRA				LR	LR	21 04 52.9	
	comp=Z,645nm,20.9s,baz=315,slow=42						
WRA	Warramunga Arr	14.57	143		Pn	20 58 06.5	-2.7
WB2	Warramunga Arr	14.58	143		Pn	20 58 05.4	-3.9
WR0	Warramunga Arr	14.71	142		Pn	20 58 07.2	-3.8
STKI	Sintang	15.93	301	P	P	20 58 34.5	+4.0
KPJI	Karang Pucung	15.99	273	P	Pn	20 58 28.7	+0.8
	35nm,0.9s						
SBUM	Sibu	16.73	310	P	P	20 58 39.0	-0.4
JCJI	Jatiwangi	16.74	275	P	Pn	20 58 38.2	+0.8
CISI	Cisompet, Garu	17.08	272	Pn	Pn	20 58 39.9	-1.9
LEM	Lembang	17.34	274	P	Pn	20 58 45.9	+0.7
	2.3nm,0.3s,baz=55,slow=17,SNR=4.6						
LEM				LR	LR	21 07 32.0	
	comp=Z,840nm,18.9s,baz=92,slow=45						
LEM	Lembang	17.34	274	S	P	20 58 47.0	+0.6
AS31	Alice Springs	17.38	152	P	Pn	20 58 42.2	-3.2
ASAR	Alice Springs	17.38	152	P	Pn	20 58 45.0	-0.5
	1.0nm,0.3s,baz=324,slow=12,SNR=42						
ASAR				S	Sn	21 01 50.0	-8.3
	0.4nm,0.3s,baz=149,slow=47,SNR=2.6						
ASAR				LR	LR	21 07 05.8	
	comp=Z,902nm,18.7s,baz=328,slow=42						
ASAR	Alice Springs	17.38	152	P	Pn	20 58 43.9	-1.6
KSM	Kuching	17.67	303	P	P	20 58 50.0	+0.2
CBJI	Citeko	18.15	275	P	Pn	20 58 54.1	-0.8
	73nm,0.7s						
CBJI				S	P	20 58 55.4	+0.3
	73nm,0.7s						
DBJI	Dramaga	18.23	275	P	P	20 58 57.3	+1.3
QIS	Mount Isa	18.54	132	P	Pn	20 59 02.0	+2.2
	baz=19,SNR=16						
COEN	Coen	18.62	109	P	P	20 58 59.6	-0.7
COEN	Coen	18.62	109	P	Pn	20 59 04.6	+3.9
	18nm,0.8s						
XMIS	Christmas Isla	19.23	262	P	P	20 59 06.7	-0.4
XMIS				IAmb	IAmb	20 59 19.6	
	comp=Z,131nm,1.1s						
PPBI	Pangkal Pinang	19.81	287	P	Pn	20 59 15.9	+0.9
MTSU	Mount Surprise	21.08	119	P	P	20 59 29.2	+2.0
	baz=21,SNR=14						
MTSU	Mount Surprise	21.08	119	P	P	20 59 30.7	+3.5
	comp=Z,21nm,0.9s						
DSRI	Dabo	21.86	290	P	P	20 59 38.4	+2.9
	comp=Z,339nmcomp=Z,18nm,1.3s						
PMG	Port Moresby	21.88	94	P	P	20 59 37.9	+2.2
	comp=Z,11nm,0.7s,baz=219,slow=11,SNR=2.3						
PMG	Port Moresby	21.88	94	P	P	20 59 35.4	-0.3
PMG				IAmb	IAmb	20 59 53.5	
	comp=Z,38nm,1.0s						
PMG	Port Moresby	21.88	94	P	P	20 59 40.0	+4.3
PMG	Port Moresby	21.88	94	P	P	20 59 40.0	+4.3
MORW	Morawa	22.22	201	P	P	20 59 41.2	+1.9
	baz=22,SNR=5.1						
MORW	Morawa	22.22	201	P	P	20 59 39.6	+0.3
FORT	Forrest	22.43	173	P	P	20 59 42.9	+1.4
FORT				IAmb	IAmb	20 59 59.4	
	comp=Z,32nm,0.8s						
MANU	Manus Island	23.11	75	P	P	20 59 46.1	-2.6
BLDU	Ballidu	23.42	198	P	P	20 59 52.1	+0.3
	baz=24,SNR=11						
CTA	Charters Tower	23.57	122	P	P	20 59 55.7	+2.3
	comp=Z,8.0nm,0.8s,baz=288,slow=14,SNR=8.9						
CTA	Charters Tower	23.57	122	P	P	20 59 58.0	+4.6
	comp=Z,27nm,1.9s						
CTAO	Charters Tower	23.57	122	P	P	20 59 56.1	+2.8
CTAO	Charters Tower	23.57	122	P	P	20 59 57.7	+4.3
INKA	Innaminka	24.29	144	P	P	21 00 04.8	+4.8
	comp=Z,50nm,0.9s						
NWAO	Narrogin (SRO)	25.44	195	P	P	21 00 12.8	+2.4
	comp=Z,6.7nm,0.6s,baz=45,slow=7.9,SNR=3.9						
QLP	Quilpie	25.65	137	P	P	21 00 18.3	+5.9
	comp=Z,50nm,1.0s						
BBOO	Buckleboo	26.34	159	P	P	21 00 18.4	-0.2
BBOO				IAmb	IAmb	21 00 43.9	
	comp=Z,42nm,1.4s						
STKA	Stephens Creek	27.96	149	P	P	21 00 34.9	+1.7
	comp=Z,4.6nm,0.8s,baz=327,slow=9.2,SNR=7.1						
STKA				LR	LR	21 13 27.9	
	comp=Z,413nm,18.5s,baz=321,slow=40						
STKA	Stephens Creek	27.96	149	P	P	21 00 35.5	+2.4
	baz=28,SNR=4.7						
STKA	Stephens Creek	27.96	149	P	P	21 00 31.1	-2.0
HTT	Hallett	28.00	155	P	P	21 00 36.1	+2.6
	baz=28,SNR=3.8						
PSI	Prapat	28.33	292	P	P	21 00 37.0	+0.3
	comp=Z,8.4nm,0.9s,baz=173,slow=6.6,SNR=7.3						
PSI				LR	LR	21 12 47.4	
	comp=Z,1μm,18.6s,baz=120,slow=39						
GUMO	Guam	29.42	42	LR	LR	21 11 36.1	
	comp=Z,115nm,21.7s,baz=218,slow=35						
ARMA	Armidale	33.12	135	P	P	21 01 17.2	-1.7
TOO	Toolangi	34.43	151	P	P	21 01 28.2	-1.8
TOO				IAmb	IAmb	21 02 17.9	
	comp=Z,44nm,1.6s						
CM31	Chiang Mai Arr	37.10	316	P	P	21 01 50.8	-2.3
CM31				IAmb	IAmb	21 01 55.1	
	comp=Z,16nm,0.9s						
CMAR	Chiang Mai Arr	37.10	316	P	P	21 01 53.4	+0.3
	comp=Z,8.3nm,0.9s,baz=140,slow=6.6,SNR=51						
CMAR				PcP	PcP	21 04 14.5	+1.0
	comp=Z,0.4nm,0.4s,baz=172,slow=2.9,SNR=4.1						
CMAR				LR	LR	21 18 49.2	
	comp=Z,230nm,18.2s,baz=195,slow=39						
CMAR	Chiang Mai Arr	37.10	316	P	P	21 01 51.7	-1.4
CHTO	Chiang Mai	37.34	317	P	P	21 01 54.1	-1.1
CHTO				IAmb	IAmb	21 01 57.1	
	comp=Z,18nm,1.0s						
GYA	Guiyang	38.99	333	⇓*i*P	P	21 02 10.6	+1.5
GYA				pP	sP	21 02 20.3	+0.6
GYA				PP	PnPn	21 03 45.0	+3.7
GYA				S	S	21 08 08.3	+1.5
GYA				pmax	pmax		
	comp=Z,12nm,0.9s						
KMI	Kunming	39.79	327	⇑P	P	21 02 17.3	+1.4
KMI				sP	pwP	21 02 34.3	+11
KMI				S	S	21 08 16.9	-2.2
KMI				sS	sS	21 08 35.8	+4.4
KMI				pmax	pmax		
	comp=Z,19nm,1.3s						
KMI				pmax	pmax		
	comp=Z,61nm,3.5s						
KMI				LR	LR		
	comp=N,110nm,10.0s						
KMI				LR	LR		
	comp=E,150nm,15.4s						
KMI				LR	LR		
	comp=Z,170nm,16.2s						
NJ2	Nanjing	40.67	352	*e*P	P	21 02 23.3	+0.5
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
DZM	Mont Dzumac	42.04	114	P	P	21 02 36.9	+2.4
	comp=Z,4.4nm,0.8s,baz=253,slow=15,SNR=3.8						
DZM	Mont Dzumac	42.04	114	P	P	21 02 35.8	+1.3
JHS	Saijyo	43.85	10	P	P	21 02 48.0	-0.7
CD2	Chengdu	44.10	333	P	P	21 02 51.5	+0.6
CD2				pP	sP	21 03 02.4	+2.4
CD2				sP	pP	21 03 07.7	+9.2
CD2				S	S	21 09 22.4	0.0
CD2				sS	sS	21 09 42.6	+7.8
CD2				SS	SS	21 12 42.9	+2.3
CD2				pmax	pmax		
	comp=Z,30nm,1.4s						
CD2				pmax	pmax		
	comp=Z,170nm,5.1s						
JWT	Wachi	44.55	12	P	P	21 02 54.4	+0.1
JWT				IAmb	IAmb	21 02 57.8	
	comp=Z,50nm,1.6s						
INU	Inuyama	44.97	14	P	P	21 02 57.9	+0.2
INU				IAmb	IAmb	21 03 02.4	
	comp=Z,14nm,1.0s						
JGF	Kuroka	45.29	14	P	P	21 02 59.7	-0.7
JGF				IAmb	IAmb	21 03 06.6	
	comp=Z,21nm,1.3s						
KSAR	Wonju Array Be	45.69	3	P	P	21 03 03.3	-0.1
KSRS	Korea Array	45.71	3	P	P	21 03 04.3	+0.8
	comp=Z,2.2nm,0.9s,baz=180,slow=9.4,SNR=8.5						
KSRS				PcP	PcP	21 04 41.5	+0.3
	comp=Z,1.0nm,0.8s,baz=180,slow=2.4,SNR=2.6						
KSRS				LR	LR	21 20 37.0	
	comp=Z,53nm,21.3s,baz=183,slow=34						
KWAJ	Kwajalein Atol	45.73	69	P	P	21 03 05.3	+1.2
MAJO	Matsushiro	46.40	15		P	21 03 08.2	-0.8
MAJO				IAmb	IAmb	21 03 11.2	
	comp=Z,15nm,0.9s						
MAT	Matsushiro	46.40	15	P	P	21 03 08.1	-0.9
MJAR	Matsushiro Arr	46.40	15	P	P	21 03 08.5	-0.5
	comp=Z,12nm,0.8s,baz=183,slow=8.8,SNR=31						
MJAR				LR	LR	21 23 52.2	
	comp=Z,62nm,19.1s,baz=210,slow=38						
MJAR	Matsushiro Arr	46.40	15	P	P	21 03 07.6	-1.4
SHL	Shillong	46.71	317	P	P	21 03 10.4	-1.4
SHL				IAmb	IAmb	21 03 12.1	
	comp=Z,12nm,0.8s						
PALK	Pallekele	46.86	288	P	P	21 03 12.4	-0.7
PALK				IAmb	IAmb	21 03 34.3	
	comp=Z,19nm,1.3s						
JSD	Sado	47.83	14	P	P	21 03 19.7	-0.4
JSD				IAmb	IAmb	21 03 22.3	
	comp=Z,20nm,0.9s						
JMM	Marumori	48.34	17	P	P	21 03 23.8	-0.3
LZH	Lanzhou	48.55	337	⇓P	P	21 03 27.4	+1.5
LZH				pP	pwP	21 03 38.4	+4.8
LZH				sP	sP	21 03 46.2	+11
LZH				S	S	21 10 27.5	+1.2
LZH				sS	sS	21 10 44.4	+5.6
LSA	Lhasa	49.99	321	P	P	21 03 37.4	0.0
LSA				LR	LR		
	comp=Z,95nm,1.4s						
LSA	Lhasa	49.99	321	P	P	21 03 37.5	+0.1
LSA				IAmb	IAmb	21 03 39.4	
	comp=Z,23nm,1.0s						
HHC	Hu-ho-hao-te	50.57	347	*e*P	P	21 03 43.9	+2.7
HHC				pmax	pmax		
	comp=Z,15nm,0.9s						
HHC				pmax	pmax		
	comp=Z,57nm,6.6s						
ODAN	Odare	50.62	315	*e*P	P	21 03 41.3	-0.7
	comp=Z,47nm,1.3s						
TAPN	Taplejung	50.70	316	*e*P	P	21 03 42.6	-0.1
	comp=Z,74nm,1.2s						
JTM	Tenmabayashi	51.14	16	P	P	21 03 45.1	-0.2
RAMN	Ramite	51.23	315	*e*P	P	21 03 46.4	-0.2
	comp=Z,9.5nm,0.5s						
JIRN	Jiri	51.95	315	*e*P	P	21 03 51.3	-0.8

GUN	Gumba	52.32	315	*e*P	P	21 03 54.6	-0.2
	comp=Z,44nm,1.0s						
PKIN	Phulchoki	52.46	314	*e*P	P	21 03 54.8	-1.0
	comp=Z,14nm,0.8s						
KKN	Kakani	52.67	315	*e*P	P	21 03 56.7	-0.6
USA0B	Ussuriysk Arra	52.74	6	P	P	21 03 56.9	-0.3
USA0B				IAmb	IAmb	21 03 58.6	
	comp=Z,12nm,0.8s						
USRK	Ussuriysk Ar.	52.74	6	P	P	21 03 57.5	+0.3
	comp=Z,9.1nm,0.8s,baz=202,slow=6.4,SNR=19						
USRK	Ussuriysk Ar.	52.74	6	P	P	21 03 56.7	-0.5
MDJ	Mudanjiang	52.94	4	P	P	21 03 59.6	+0.9
MDJ				sP	pwP	21 04 16.2	+10
MDJ				pmax	pmax		
	comp=Z,42nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,220nm,6.0s						
MDJ	Mudanjiang	52.94	4	P	P	21 03 58.6	-0.1
GTA	Gaotai	53.03	336	⇑P	P	21 03 59.2	-0.4
GTA				pP	pwP	21 04 11.6	+4.3
GTA				sP	sP	21 04 16.4	+7.6
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GKN	Gorkha	53.25	314	*e*P	P	21 04 00.8	-0.7
KOLN	Koldanda	53.85	313	*e*P	P	21 04 05.4	-0.6
	comp=Z,30nm,1.0s						
DANN	Dangsing	54.08	314	*e*P	P	21 04 06.8	-0.9
	comp=Z,37nm,1.0s						
PYUN	Piuthan	54.48	313	*e*P	P	21 04 09.3	-1.3
	comp=Z,33nm,0.9s						
JKA	Kamikawa-asahi	54.65	15	P	P	21 04 10.8	-0.4
MXZ	Matakaoa Point	56.05	130	P	P	21 04 20.3	-1.2
YSS	Yuzh-Sakhalins	57.34	14	P	P	21 04 29.9	-0.5
ULN	Ulaanbaatar	58.25	346	P	P	21 04 36.2	-0.8
ULN				IAmb	IAmb	21 04 38.7	
	comp=Z,17nm,1.1s						
SONM	Songino Array	58.39	345	P	P	21 04 38.0	+0.1
	comp=Z,5.1nm,0.9s,baz=165,slow=7.7,SNR=24						
SONM	Songino Array	58.39	345	P	P	21 04 36.7	-1.2
SONM				IAmb	IAmb	21 04 39.5	
	comp=Z,20nm,1.5s						
WMQ	Urumqi	62.03	330	*e*P	P	21 05 02.9	0.0
WMQ				pP	pwP	21 05 13.2	+0.9
WMQ				PP	PP	21 07 16.2	-3.5
WMQ				pmax	pmax		
	comp=Z,16nm,1.9s						
WMQ				pmax	pmax		
	comp=Z,94nm,4.7s						
TLY	Talaya	62.63	345	P	P	21 05 05.5	-1.1
TLY				IAmb	IAmb	21 05 07.9	
	comp=Z,6.4nm,0.9s						
NIL	Nilore	64.51	313	P	P	21 05 17.9	-1.7
NIL				IAmb	IAmb	21 05 19.7	
	comp=Z,9.3nm,1.1s						
KSH	Kashi	65.84	320	P	P	21 05 27.5	-0.6
KSH				sP	sP	21 05 46.1	+8.0
KSH				pmax	pmax		
	comp=Z,11nm,0.9s						
MK31	Makanchi Array	66.83	330	P	P	21 05 33.4	-0.8
MKAR	Makanchi Array	66.83	330	P	P	21 05 33.6	-0.5
	comp=Z,17nm,0.8s,baz=134,slow=7.9,SNR=73						
MKAR	Makanchi Array	66.83	330	P	P	21 05 32.8	-1.4
MAKZ	Makanchi	66.99	329	P	P	21 05 34.3	-0.9
PEA0B	Petropavlovsk-	67.28	21	P	P	21 05 36.2	-0.7
PETK	Petropavlovsk-	67.28	21	P	P	21 05 37.6	+0.8
	comp=Z,4.9nm,0.7s,baz=204,slow=4.8,SNR=7.1						
PETK	Petropavlovsk-	67.28	21	P	P	21 05 36.5	-0.4
KBL	Kabul	67.99	312	P	P	21 05 40.8	-1.2
KBL				IAmb	IAmb	21 05 44.3	
	comp=Z,7.6nm,0.8s						
AAK	Ala-Archa	68.54	322	P	P	21 05 44.2	-1.1
AAK				IAmb	IAmb	21 05 46.5	
	comp=Z,7.4nm,0.9s						
MSEY	Mahe Island	69.14	268	P	P	21 05 49.1	-0.3
GAR	Garm	69.26	317	P	P	21 05 49.0	-0.7
GAR				IAmb	IAmb	21 05 51.4	
	comp=Z,7.4nm,0.8s						
BTK	Batken	69.47	318	P	P	21 05 51.1	+0.1
BTK				IAmb	IAmb	21 05 53.1	
	comp=Z,11nm,1.5s						
CHGR	Chuyangaron	69.88	316	P	P	21 05 51.9	-1.7
CHGR				IAmb	IAmb	21 05 54.3	
	comp=Z,13nm,1.0s						
YAK	Yakutsk	70.32	2	P	P	21 05 54.4	-1.2
YAK				IAmb	IAmb	21 05 56.7	
	comp=Z,14nm,0.8s						
ZAA0	Zalesovo Array	70.77	336	P	P	21 05 56.2	-2.3
ZALV	Zalesovo Beam	70.77	336	P	P	21 05 56.7	-1.8
	comp=Z,23nm,0.9s,baz=124,slow=4.5,SNR=64						
ZALV	Zalesovo Beam	70.77	336	P	P	21 05 56.2	-2.3
TAS	Tashkent	71.11	319	P	P	21 05 59.5	-1.4
KK31	Karatay Array	71.25	321	P	P	21 05 59.5	-2.1
KKAR	Karatay Array	71.25	321	P	P	21 05 59.8	-1.9
KURK	Kurchatov	71.25	331	P	P	21 06 00.1	-1.4
VNDA	Vanda	71.69	172	P	P	21 06 05.2	+1.4
	comp=Z,1.4nm,0.7s,baz=326,slow=7.7,SNR=11						
VNDA	Vanda	71.69	172	P	P	21 06 04.5	+0.7
MAW	Mawson	71.86	201	P	P	21 06 07.4	+2.5
	comp=Z,2.2nm,0.9s,baz=60,slow=20,SNR=4.4						
MAW	Mawson	71.86	201	P	P	21 06 04.1	-0.8
SOCY	Socotra	73.52	285	P	P	21 06 14.2	-1.7
VOI	Vohitsoka	76.05	250	P	P	21 06 29.5	-1.0
VOI				IAmb	IAmb	21 06 31.8	
	comp=Z,27nm,1.2s						
BRVK	Borovoye	76.78	330	P	P	21 06 32.5	-1.3
BRVK				IAmb	IAmb	21 06 39.7	
	comp=Z,11nm,1.2s						
TIXI	Tiksi	79.93	1	P	P	21 06 48.9	-1.9
SYO	Syowa Base	80.57	201	⇓*e*PcP	PcP	21 07 01.2	0.0
ABKAR	Akbulak array	80.61	323	P	P	21 06 53.0	-2.0
ABKAR	Akbulak array	80.61	323	P	P	21 06 53.1	-1.9
ABKAR				IAmb	IAmb	21 06 55.9	
	comp=Z,3.8nm,0.8s						
QSPA	South Pole Qui	81.57	180	P	P	21 06 59.8	-0.2
QSPA				IAmb	IAmb	21 07 10.1	
	comp=Z,11nm,1.0s						
AKTO	Aktyubinsk	82.23	324	LR	LR	21 46 48.8	
	comp=Z,95nm,18.4s,baz=173,slow=38						
KMBO	Kilima Mbogo	87.65	269	P	P	21 07 31.3	-0.6
	comp=Z,1.8nm,0.8s,baz=356,slow=4.3,SNR=5.9						
SIRT	Sirnak	89.24	308	P	P	21 07 37.6	-1.2
GURO	Guroymak-BITLI	89.76	309	P	P	21 07 40.4	-0.8
GURO				IAmb	IAmb	21 07 42.9	
	comp=Z,6.2nm,0.9s						
KBZ	Khabaz	90.12	314	P	P	21 07 42.2	-0.3
	comp=Z,3.3nm,0.9s,baz=134,slow=2.5,SNR=7.4						
SNAA	Sanae	93.11	194	P	P	21 07 57.9	+1.9
SNAA	Sanae	93.11	194	LR	LR	21 46 55.4	
	comp=Z,475nm,21.4s,baz=344,slow=34						
SNAA	Sanae	93.11	194	P	P	21 07 57.0	+0.9
SNAA				IAmb	IAmb	21 08 03.2	
	comp=Z,4.2nm,0.9s						
VNA2	Neumayer--Watz	94.71	194	P	P	21 08 05.2	+1.9
VNA3	Neumayer Olymp	95.03	193	P	P	21 08 07.1	+2.3
VNA1	Neumayer--Stat	95.11	194	P	P	21 08 06.2	+1.1
CRVS	Cervenica-Dubn	105.22	318	*e*PDIFF	Pdif	21 08 51.0	+0.2
TORD	Torodi Ar. Bea	124.24	280	PKP	PKPdf	21 13 41.6	-0.5
	comp=Z,0.8nm,0.7s,baz=91,slow=3.3,SNR=6.3						
CPUP	Villa Florida	145.39	176	PKPbc	PKPdf	21 14 22.8	+1.7
	comp=Z,8.6nm,1.0s,baz=188,slow=3.2,SNR=14						
CPUP	Villa Florida	145.39	176		PKPdf	21 14 22.3	+1.2
PB11	IPOC Station P	148.48	153		PKPbc	21 14 30.1	-0.1
JTS	Las Juntas de	150.35	84	PKPdf	PKPdf	21 14 26.2	-3.3
JTS					PKPbc	21 14 34.7	-0.2
LPAZ	La Paz	152.21	152	PKPbc	PKiKP	21 14 41.9	+1.8
	comp=Z,3.0nm,0.9s,baz=126,slow=3.2,SNR=12						
LPAZ	La Paz	152.21	152	PKPdf	PKPdf	21 14 29.4	-3.7
LPAZ					PKPbc	21 14 36.9	-2.9
SAML	Samuel	160.91	154	PKPdf	PKPdf	21 14 42.2	-1.4
SAML				PKPab	PKPab	21 15 27.5	+1.6

IDC ***03*** *21:04:25.3±0.8, 20°.81S×67°.26W, h182^{km}±11^{km}, mb3.2/2, mb1 3.5/5, mb1mx3.2/25, mbtmp3.8/5, MS3.3/1, Ms1 3.2/1, ms1mx2.6/9, Error ellipse: s-maj=21.7km s-min=10.2km az=111.0*

ISC 03 21:04:25.7±1.0**, 20°.84S**±0°.07×**67°.3W**±0°.1**, h200^{km}, n6, σ1^{s}98**/8**, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	2.34	221	P	Pn	21 05 08.1	-0.1
	24nm,0.3s,baz=42,slow=11,SNR=206						
LVC				S	Sn	21 05 39.2	-2.1
	8.0nm,0.3s,baz=230,slow=19,SNR=18						
LPAZ	La Paz	4.60	350	P	Pn	21 05 36.1	+0.4
	0.6nm,0.3s,baz=146,slow=3.6,SNR=15						
LPAZ				S	Sn	21 06 28.4	-2.4
	0.3nm,0.3s,baz=301,slow=15,SNR=8.1						
SIV	San Ignacio	7.60	52	P	Pn	21 06 14.2	+0.3
	6.8nm,0.3s,baz=238,slow=11,SNR=47						
SIV				S	Sn	21 07 37.4	-2.4
	0.2nm,0.3s,baz=302,slow=16,SNR=4.7						
BDFB	Brasilia	18.99	77	LR	LR	21 16 30.3	
	comp=Z,96nm,19.2s,baz=20,slow=38						
TXAR	Lajitas Array	60.99	324	P	P	21 14 19.4	+1.2
	0.2nm,0.4s,baz=146,slow=9.8,SNR=3.3						
TORD	Torodi Ar. Bea	75.68	70	P	P	21 15 50.9	+1.4
	0.4nm,0.4s,baz=256,slow=5.4,SNR=19						

DJA ***03*** *21:06:44.8±0.2, 8°S±3°×12°5E±°, h10^{km}, M4.3/13, mB5.0/1, mb4.6/13, MLv4.2/10, Mw(mB)4.3/1*

NEIC ***03*** *21:06:44.3±1.7, 8°.29S±0°.03×125°.16E±0°.06, h10^{km}±1^{km}, mb4.2/9, Error ellipse: s-maj=10.2km s-min=4.7km az=264.0*

IDC ***03*** *21:06:47.5±1.9, 8°.42S×125°.39E, h49^{km}±21^{km}, mb3.7/10, mb1 3.9/15, mb1mx3.8/36, mbtmp4.0/15, ML3.9/5, Error ellipse: s-maj=18.9km s-min=15.5km az=101.0*

ISC 03 21:06:44.9±0.5**, 8°.44S**±0°.04×**125°.25E**±0°.06**, h24^{km}, n60, σ2^{s}30**/62**, mb4.0**/12**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.63	217	Pn	Pb	21 07 14.3	0.0
SOEI					Sb	21 07 39.5	+5.1
SOEI	Soe	1.63	217	P	Pb	21 07 15.3	+1.0
SOEI	Soe	1.63	217	P	Pb	21 07 15.1	+0.8
BATI	Baumata	2.35	222	P	Pn	21 07 24.9	+2.8
	13nm,0.3s,baz=122,slow=3.4,SNR=17						
BATI				S	Sb	21 07 55.2	+0.1
	23nm,0.3s,baz=322,slow=23,SNR=6.3						
BATI	Baumata	2.35	222	P	Pb	21 07 25.3	-1.3
MMRI	Maumere	2.99	266		Pn	21 07 29.6	-1.2
MMRI	Maumere	2.99	266	P	Pn	21 07 30.5	-0.2
MMRI	Maumere	2.99	266	P	Pn	21 07 30.9	+0.2
EDFI	Ende, Flores	3.53	265	P	Pn	21 07 38.5	+0.1
KDI	Kendari	5.17	329	P	Pn	21 07 58.0	-2.8
BSSI	Bau Bau, Buton	5.25	296	P	Pn	21 07 59.9	-1.9
	0.1nm38nm,0.6s						
WBSI	Waikabubak, Su	5.91	258	P	Pn	21 08 10.4	-0.6
	65nm,0.7s						
BKSI	Bulukumba	5.96	301	P	Pn	21 08 10.0	-1.7
	0.1nm18nm,0.7s						
SANI	Sanana	6.39	7	P	Pn	21 08 17.1	-0.5
	0.1nm17nm,0.6s						
SANI	Sanana	6.39	7	P	Pn	21 08 18.6	+1.0
DRS	Darwin Rock St	6.83	126	P	Pn	21 08 30.0	+6.5
	14nm,0.8s						
MTN	Manton Dam	7.25	128		Pn	21 08 33.5	+4.1
MTN	Manton Dam	7.25	128	P	Pn	21 08 34.0	+4.6
	66nm,0.5s						
PLAI	Plampang	7.40	266	P	Pn	21 08 31.0	-0.5
	0.3nm89nm,0.8s						
PLAI	Plampang	7.40	266	P	Pn	21 08 34.6	+3.1
LUWI	Luwuk	7.75	341	P	Pn	21 08 37.8	+1.5
KNRA	Kununurra	7.97	155		Pn	21 08 42.7	+3.5
KNRA	Kununurra	7.97	155	P	Pn	21 08 42.6	+3.4
	28nm,0.5s						
KDU	Kakadu	8.26	121	P	Pn	21 08 49.0	+5.8
	15nm,0.5s						
APSI	Ampana	8.30	334	P	Pn	21 08 42.0	-1.8
	26nm,1.1s						
FAKI	Fak Fak	8.87	52	P	Pn	21 08 54.7	+3.1
FITZ	Fitzroy Crossi	9.61	178	P	Pn	21 09 03.5	+1.8
	1.1nm,0.3s,baz=8.3,slow=11,SNR=21						
FITZ				S	Sn	21 10 42.5	-6.5
	0.6nm,0.3s,baz=240,slow=14,SNR=1.8						
FITZ	Fitzroy Crossi	9.61	178		Pn	21 09 03.8	+2.1
SIJI	Sorong	9.62	39	P	Pn	21 09 01.4	-0.6
	0.4nm,0.3s,baz=180,slow=20,SNR=2.8						
TOLI2	Tolitoli	10.48	335		Pn	21 09 12.8	-1.0
PSA00	Pilbara Seismi	14.05	201	Pn	Pn	21 10 05.0	+2.4
WRAB	Tennant Creek	14.43	143		Pn	21 10 07.7	0.0
WRA	Warramunga Arr	14.43	143	P	Pn	21 10 06.6	-1.1
	1.0nm,0.3s,baz=318,slow=13,SNR=56						
WRA				S	Sn	21 12 42.2	-4.8
	0.4nm,0.3s,baz=304,slow=22,SNR=4.7						
WRA	Warramunga Arr	14.43	143		Pn	21 10 07.7	0.0
AS31	Alice Springs	17.26	152		Pn	21 10 46.0	+1.5
ASAR	Alice Springs	17.26	152	P	Pn	21 10 45.6	+1.1
	0.7nm,0.3s,baz=324,slow=11,SNR=29						
ASAR				S	Sn	21 13 47.9	-8.1
	0.0nm,0.3s,baz=318,slow=20,SNR=6.3						
ASAR	Alice Springs	17.26	152		P	21 10 46.3	+0.5
CISI	Cisompet, Garu	17.29	272		Pn	21 10 45.2	+0.3
CISI				IAmb	IAmb	21 10 57.9	
	comp=Z,16nm,0.9s						
COEN	Coen	18.41	109	P	Pn	21 11 00.0	+1.3
LWLI	Liwa	21.32	278	P	P	21 11 29.8	-0.5
	comp=Z,37nm,0.9s						
MORW	Morawa	22.27	202	P	P	21 11 42.3	+2.0
MORW				IAmb	IAmb	21 11 51.2	
	comp=Z,17nm,1.3s						
STKA	Stephens Creek	27.83	149	P	P	21 12 30.0	-2.5
	comp=Z,0.6nm,0.4s,baz=308,slow=12,SNR=1.0						
CMAR	Chiang Mai Arr	37.26	316	P	P	21 13 54.2	-0.9
	comp=Z,0.5nm,0.8s,baz=144,slow=6.1,SNR=7.0						
CMAR	Chiang Mai Arr	37.26	316	P	P	21 13 53.9	-1.1
JWT	Wachi	44.53	12	P	P	21 14 55.3	+0.6
KSRS	Korea Array	45.72	3	P	P	21 15 05.1	+1.0
	comp=Z,1.0nm,0.9s,baz=179,slow=11,SNR=2.7						
MAT	Matsushiro	46.37	14	P	P	21 15 10.0	+0.7
MJAR	Matsushiro Arr	46.37	14	P	P	21 15 08.9	-0.5
	comp=Z,8.6nm,1.1s,baz=184,slow=8.8,SNR=10.0						
MJAR	Matsushiro Arr	46.37	14	P	P	21 15 09.7	+0.4
MJAR				IAmb	IAmb	21 15 12.3	
	comp=Z,2.3nm,1.0s						
SONM	Songino Array	58.47	345	P	P	21 16 39.4	+0.4
	comp=Z,1.1nm,0.9s,baz=165,slow=8.5,SNR=6.2						
SONM	Songino Array	58.47	345	IAmb	IAmb	21 16 40.4	
	comp=Z,2.3nm,1.2s						
MKAR	Makanchi Array	66.95	329	P	P	21 17 34.6	-0.9
	comp=Z,0.9nm,0.7s,baz=129,slow=8.1,SNR=11						
ZAA0	Zalesovo Array	70.88	336	P	P	21 17 59.5	-0.3
ZALV	Zalesovo Beam	70.88	336	P	P	21 17 58.5	-1.2
	comp=Z,0.9nm,0.7s,baz=116,slow=3.4,SNR=6.2						
VNDA	Vanda	71.63	172	P	P	21 18 03.5	-0.4
	comp=Z,0.3nm,0.6s,baz=327,slow=8.0,SNR=1.5						
SEY	Seymchan	74.15	13	P	P	21 18 19.5	+0.5
	comp=Z,2.4nm,0.9s,baz=243,slow=23,SNR=2.4						
TIXI	Tiksi	79.96	1	P	P	21 18 50.4	-1.1
	comp=Z,1.4nm,0.3s,baz=182,slow=1.7,SNR=10						
TIXI	Tiksi	79.96	1	P	P	21 18 51.1	-0.4
TIXI				IAmb	IAmb	21 18 53.2	
	comp=Z,1.5nm,0.8s						
ABKAR	Akbulak array	80.76	323	P	P	21 18 55.2	-1.1
CPUP	Villa Florida	145.34	176	PKPbc	PKPbc	21 26 21.3	0.0
	comp=Z,1.8nm,0.7s,baz=331,slow=3.6,SNR=4.5						

BJI ***03*** *21:25:00.8±0.0, 8°.58S×125°.10E, h31^{km}, mB5.5/66, mb5.4/81, Ms5.3/89, Ms7 5.0/81*

MOS ***03*** *21:25:01.1±0.9, 8°.20S×124°.90E, h20^{km}, mb5.9/53, MS4.9/19, Error ellipse: s-maj=8.2km s-min=4.6km az=114.1*

DJA ***03*** *21:25:02.8±0.1, 8°S±1°×12°5E±°, h10^{km}, M5.3/108, mb5.4/108, mB5.8/94, MLv5.6/20, Mw(mB)5.4/94, MwMwp5.3/53, Mwp5.5/53*

NEIC ***03*** *21:25:02.0±1.9, 8°.28S±0°.06×124°.91E±0°.06, h10^{km}±3^{km}, mb5.8/139, Ms_20 5.3/107, Mwb5.4/14, Mww5.7, Mwc5.7(GCMT), Error ellipse: s-maj=8.3km s-min=7.8km az=132.0*

NEIC ***03*** *21:25:02.8, 8°.36S×124°.95E, h15^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.03; $M_{\theta\theta}$-0.21; $M_{\phi\phi}$0.18; $M_{r\theta}$0.04; $M_{\theta\phi}$-1.26; $M_{\phi r}$-0.86; Fault plane solution: $M_0$1.54000×10^{17} NP1:ϕ_s184.69000°, δ87.67000°, λ33.93000°. NP2:ϕ_s93.13000°, δ56.10000°, λ177.19000°. Principal axes: T 1.5761, Plg25.0000°, Azm54.0000°; N -0.0779, Plg56.0000°, Azm188.0000°; P -1.4982, Plg21.0000°, Azm314.0000°;*

KLM ***03*** *21:25:04, 8°.29S×124°.97E, h10^{km}, mb5.6*

GCMT ***03*** *21:25:04.0±0.1, 8°.22S±0°.01×125°.03E±0°.01, h16^{km}, MW5.6/157, Moment Tensor Solution. s135,c237; s157,c289; Duration: 1^{s}6 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.93±.03; $M_{\theta\theta}$-0.84±.03; $M_{\phi\phi}$1.78±.03; $M_{r\theta}$-1.56±.10; $M_{\theta\phi}$-2.49±.03; $M_{\phi r}$-1.64±.11; Best double couple: $M_0$3.66800×10^{17} NP1:ϕ_s111.00000°, δ57.00000°, λ-159.00000°. NP2:ϕ_s9.00000°, δ73.00000°, λ-34.00000°. Principal axes: T 3.3850, Plg10.0000°, Azm63.0000°; N 0.5700, Plg52.0000°, Azm165.0000°; P -3.9510, Plg36.0000°, Azm325.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***03*** *21:25:04, 8°.22S×125°.05E, h16^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-1.07; $M_{\theta\theta}$-0.86; $M_{\phi\phi}$1.93; $M_{r\theta}$-1.21; $M_{\theta\phi}$-2.64; $M_{\phi r}$-1.78; Fault plane solution: $M_0$3.80000×10^{17} NP1:ϕ_s110.00000°, δ56.00000°, λ-161.00000°. NP2:ϕ_s9.00000°, δ75.00000°, λ-36.00000°. Principal axes: T 3.7155, Plg12.0000°, Azm63.0000°; N 0.1557, Plg51.0000°, Azm169.0000°; P -3.8712, Plg36.0000°, Azm324.0000°;*

IDC ***03*** *21:25:05.3±1.2, 8°.18S×124°.92E, h40^{km}±10^{km}, mb5.0/45, mb1 5.0/50, mb1mx4.9/56, mbtmp5.2/50, ML4.3/5, MS5.0/27, Ms1 5.0/27, ms1mx4.9/41 Error ellipse: s-maj=10.3km s-min=7.7km az=64.0*

NEIC ***03*** *21:25:06, 8°.38S×124°.97E, h20^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-1.55; $M_{\theta\theta}$-1.15; $M_{\phi\phi}$2.70; $M_{r\theta}$-0.79; $M_{\theta\phi}$-2.81; $M_{\phi r}$-0.61; Fault plane solution: $M_0$3.80000×10^{17} NP1:ϕ_s111.00000°, δ68.00000°, λ-158.00000°. NP2:ϕ_s13.00000°, δ70.00000°, λ-23.00000°. Principal axes: T 4.1876, Plg2.0000°, Azm62.0000°; N -0.9706, Plg59.0000°, Azm155.0000°; P -3.2170, Plg31.0000°, Azm331.0000°;*

ISC 03 21:25:04.7±0.2**, 8°.28S**±0°.03×**124°.98E**±0°.03**, h35^{km}**±2^{km}**, h37^{km}:pP-P, n872, σ1^{s}68**/968**, mb5.7**/216**, MS5.2**/114**, 15C-48D, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.63	206		Pn	21 25 28.9	-2.1
SOEI	Soe	1.63	206	P	Pn	21 25 32.5	+1.5
SOEI	Soe	1.63	206	P	Pn	21 25 31.6	+0.6
BATI	Baumata	2.31	214	Pn	Pn	21 25 42.3	+1.9
	113nm,0.3s,baz=80,slow=2.4,SNR=171						
BATI				Sn	Sn	21 26 09.7	+2.1
	194nm,0.3s,baz=295,slow=2.9,SNR=7.1						
BATI				LR	LR	21 26 34.9	
	comp=Z,52μm,20.9s,baz=46,slow=38						
BATI	Baumata	2.31	214	P	Pn	21 25 42.4	+2.1
MMRI	Maumere	2.73	262	Pn	Pn	21 25 46.7	+0.6
MMRI	Maumere	2.73	262	P	Pn	21 25 46.9	+0.8
MMRI	Maumere	2.73	262	P	Pn	21 25 49.1	+3.0
EDFI	Ende, Flores	3.29	262	P	Pn	21 25 55.6	+1.8
BASI	Baing, Sumba	4.75	246	P	Pn	21 26 16.3	+2.4
WSI	Waingapu	4.83	253	P	Pn	21 26 17.8	+2.9
KDI	Kendari	4.89	331	P	Pn	21 26 15.6	-0.2
BSSI	Bau Bau, Buton	4.93	295	P	Pn	21 26 16.1	-0.3
BKSI	Bulukumba	5.65	301	P	Pn	21 26 25.9	-0.3
	1.6nm15μm6μm284nm,1.2s						
WBSI	Waikabubak, Su	5.68	256	P	Pn	21 26 28.7	+2.0
	4.4nm14μm1μm,0.8s						
KAPI	Kappang	6.12	302	Pn	Pn	21 26 32.9	+0.2
	2.0nm,0.3s,baz=152,slow=12,SNR=16						
KAPI				Sn	Sn	21 27 38.4	-3.1
	baz=243,slow=21,SNR=1.0						
KAPI				LR	LR	21 28 54.9	
	comp=Z,24μm,20.2s,baz=153,slow=38						
KAPI	Kappang	6.12	302	P	Pn	21 26 32.4	-0.3
KAPI	Kappang	6.12	302	Pn	Pn	21 26 32.4	-0.3
KAPI	Kappang	6.12	302	P	Pn	21 26 33.6	+0.9
BNDI	Bandanaira	6.16	53	P	Pn	21 26 34.2	+1.0
	4.2nm28μm35μm1μm,1.4s						
SANI	Sanana	6.27	9	P	Pn	21 26 33.9	-0.8
	2.1nm10μm6μm401nm,1.4s						
SANI	Sanana	6.27	9	P	Pn	21 26 34.6	-0.1
MSAI	Masohi	6.28	39	P	Pn	21 26 35.4	+0.5
	0.3nm924nm108nm,1.0s						
DRS	Darwin Rock St	7.14	126	P	Pn	21 26 46.1	-0.5
	309nm,0.7s						
PLAI	Plampang	7.14	265	P	Pn	21 26 48.6	+1.8
	5.5nm21μm25μm1μm,0.8s						
PLAI	Plampang	7.14	265	P	Pn	21 26 49.5	+2.7
TTSI	Tana Toraja	7.31	315	P	Pn	21 26 50.7	+1.7
	1.3nm15μm5μm309nm,1.1s						
LUWI	Luwuk	7.52	343	Pn	Pn	21 26 51.3	-0.6
LUWI	Luwuk	7.52	343	P	Pn	21 26 51.7	-0.2
	6.1nm15μm22μm1μm,1.6s						
LUWI	Luwuk	7.52	343	P	Pn	21 26 51.3	-0.6
MTN	Manton Dam	7.56	127	P	Pn	21 26 51.6	-0.8
	baz=7.5,SNR=121						
MTN				S	Sn	21 28 11.2	-5.8
	baz=7.5						
MTN	Manton Dam	7.56	127	Pn	Pn	21 26 51.5	-1.0
MTN	Manton Dam	7.56	127	P	Pn	21 26 52.0	-0.5
	541nm,0.7s						
LBMI	Labuha	8.00	18	P	Pn	21 26 59.2	+0.7
	1.5nm6μm6μm303nm,1.4s						
TWSI	Taliwang, Sumb	8.02	266	P	Pn	21 27 01.0	+2.2
	10μm5μm292nm,1.0s						
APSI	Ampana	8.04	335	P	Pn	21 26 58.3	-0.7
	8μm10μm643nm,1.2s						
KNRA	Kununurra	8.23	154	P	Pn	21 26 60.0	-1.7
	baz=8.2,SNR=695						
KNRA	Kununurra	8.23	154	Pn	Pn	21 26 59.5	-2.1
KNRA	Kununurra	8.23	154	P	Pn	21 26 59.9	-1.7
	813nm,0.8s						
KDU	Kakadu	8.57	121	P	Pn	21 27 04.9	-1.5
	baz=8.5,SNR=65						
KDU				S	Sn	21 28 36.3	-5.6
	baz=8.5						
KDU	Kakadu	8.57	121	P	Pn	21 27 05.1	-1.2
	287nm,0.9s						
KMSI	Cibinong	8.85	353	P	Pn	21 27 11.5	+1.3
	5μm388nm,1.0s						
FAKI	Fak Fak	8.98	54	Pn	Pn	21 27 12.5	+0.5
FAKI	Fak Fak	8.98	54	P	Pn	21 27 12.5	+0.5
	21μm14μm668nm,1.7s						
FAKI	Fak Fak	8.98	54	P	Pn	21 27 12.2	+0.2
GTOI	Gorontalo	9.07	347	P	Pn	21 27 15.8	+2.6
	5μm958nm61nm,1.1s						
MRSI	Marisa	9.21	341	P	Pn	21 27 15.1	0.0
	10μm4μm207nm,1.1s						
TNTI	Ternate	9.30	15	Pn	Pn	21 27 18.1	+1.7
TNTI	Ternate	9.30	15	P	Pn	21 27 17.2	+0.8
	3μm5μm316nm,1.4s						
SIJI	Sorong	9.67	41	Pn	Pn	21 27 21.1	-0.3
	2.7nm,0.3s,baz=209,slow=7.3,SNR=56						
SIJI				Sn	Sn	21 29 07.8	-1.1
	baz=148,slow=22,SNR=1.2						
SIJI				LR	LR	21 30 58.0	
	comp=Z,16μm,19.7s,baz=244,slow=37						
SIJI	Sorong	9.67	41		Pn	21 27 21.1	-0.3
SWI	Sorong	9.67	41	P	Pn	21 27 22.7	+1.3
	11μm11μm583nm,1.5s						
SRBI	Singaraja	9.67	270	P	Pn	21 27 23.5	+2.1
	8μm6μm254nm,1.2s						
DNP	Denpasar	9.67	267	P	Pn	21 27 22.8	+1.4
	13μm557nm,1.5s						
IGBI	Denpasar	9.74	266	P	Pn	21 27 23.9	+1.5
	4μm221nm,1.2s						
FITZ	Fitzroy Crossi	9.78	176	Pn	Pn	21 27 20.1	-2.9
	6.7nm,0.3s,baz=9.3,slow=9.6,SNR=122						
FITZ				Sn	Sn	21 29 01.2	-10
	6.9nm,0.3s,baz=104,slow=16,SNR=6.2						
FITZ	Fitzroy Crossi	9.78	176	S	Sn	21 29 08.5	-3.0
	baz=9.8						
FITZ	Fitzroy Crossi	9.78	176		Pn	21 27 20.8	-2.2
MPSI	Mapaga	9.95	329	P	Pn	21 27 25.0	-0.2
	16μm3μm106nm,1.4s						
KBKI	Kotabaru	10.06	299	P	Pn	21 27 28.7	+1.9
	1μm51nm,1.0s						
TOLI2	Tolitoli	10.22	336	Pn	Pn	21 27 29.1	0.0
TOLI2	Tolitoli	10.22	336	P	Pn	21 27 29.7	+0.7
ABJI	Asem Bagus	10.65	272	P	Pn	21 27 37.4	+2.5
	12μm5μm413nm,1.3s						
JAGI	Jajag, Banyuwa	10.71	268		Pn	21 27 34.8	-0.9
JAGI	Jajag, Banyuwa	10.71	268	P	Pn	21 27 38.2	+2.4
	9μm4μm132nm,1.2s						
JAGI	Jajag, Banyuwa	10.71	268	P	Pn	21 27 35.2	-0.6
KMMI	Kalianget	10.98	276	P	Pn	21 27 41.3	+1.9
	9μm8μm263nm,1.4s						
BBKI	Banjar Baru	11.16	295	P	Pn	21 27 43.1	+1.2
	5μm194nm,2.5s						
BLJI	Banyuglugur	11.29	272	P	Pn	21 27 45.3	+1.7
	6μm2μm118nm,1.8s						
GMJI	Gumukmas	11.42	269	P	Pn	21 27 47.3	+2.0

	9µm2µm148nm,1.6s						
MTKI	**Muara Teweh, K**	**12.41**	**305**	P	**Pn**	**21 28 00.0**	**+1.0**
	3µm3µm161nm,1.5s						
BWJI	**Bawean**	**12.46**	**280**	P	**Pn**	**21 28 01.6**	**+1.9**
	3µm6µm220nm,1.4s						
GRJI	**Gresik**	**12.46**	**275**	P	**Pn**	**21 28 01.4**	**+1.7**
	3µm284nm,1.1s						
SRPI	**Serui, Papua**	**12.89**	**61**	P	**Pn**	**21 28 07.3**	**+1.7**
	5µm5µm96nm,0.9s						
PWJI	**Pagerwojo**	**13.05**	**270**	P	**Pn**	**21 28 08.9**	**+1.3**
	17µm3µm114nm,0.7s						
TBJI	**Tambak Boyo**	**13.10**	**275**	P	**Pn**	**21 28 09.2**	**+0.8**
	4µm7µm299nm,1.6s						
BAKI	**Biak**	**13.13**	**58**	P	**Pn**	**21 28 09.5**	**+0.7**
	943nm,1.8s						
NGJI	**Ngawi**	**13.42**	**273**	P	**P**	**21 28 21.5**	**-0.2**
PCJI	**Pacitan**	**13.66**	**269**	P	**Pn**	**21 28 16.7**	**+0.7**
	6µm3µm178nm,0.8s						
MBWA	**Marble Bar**	**13.77**	**201**	P	**P**	**21 28 24.8**	**-0.7**
MBWA	**Marble Bar**	**13.77**	**201**	P	**Pn**	**21 28 16.6**	**-0.9**
PSA00	**Pilbara Seismi**	**14.11**	**200**		**Pn**	**21 28 19.7**	**-2.5**
PSA00	**Pilbara Seismi**	**14.11**	**200**		**Pn**	**21 28 20.3**	**-1.9**
PSA00	**Pilbara Seismi**	**14.11**	**200**	P	**Pn**	**21 28 22.0**	**-0.2**
	187nm,1.1s						
UGM	**Wanagama**	**14.32**	**270**	Pn	**Pn**	**21 28 24.6**	**-0.4**
UGM	**Wanagama**	**14.32**	**270**	P	**Pn**	**21 28 25.4**	**+0.3**
	8µm252nm,1.5s						
UGM	**Wanagama**	**14.32**	**270**	P	**Pn**	**21 28 25.4**	**+0.3**
	251nm,1.4s						
PBKI	**Pangkalan Bun**	**14.36**	**292**	P	**P**	**21 28 29.4**	**-2.7**
	4µm229nm,1.2s						
SMRI	**Semarang**	**14.46**	**274**		**Pn**	**21 28 27.3**	**+0.3**
SMRI	**Semarang**	**14.46**	**274**	P	**Pn**	**21 28 29.6**	**+2.6**
	9µm331nm,1.1s						
WRA	**Warramunga Arr**	**14.71**	**143**	Pn	Pn	21 28 24.1	-6.4
	5.7nm,0.3s,baz=318,slow=13,SNR=106						
WRA				Sn	Sn	21 31 03.0	-9.4
	4.1nm,0.3s,baz=316,slow=23,SNR=8.0						
WRA				LR	LR	21 35 50.8	
	comp=Z,9µm,18.1s,baz=320,slow=44						
WRA	**Warramunga Arr**	**14.71**	**143**	*i* P	Pn	21 28 24.1	-6.3
WRA				pmax	pmax		
	comp=Z,257nm,0.8s						
WRA	**Warramunga Arr**	**14.71**	**143**	Pn	Pn	21 28 22.2	-8.2
WRAB	**Tennant Creek**	**14.71**	**143**	*de*P	Pn	21 28 24.1	-6.3
WB2	**Warramunga Arr**	**14.72**	**143**	Pn	Pn	21 28 23.8	-6.7
SMPI	**Sarmi**	**15.03**	**66**	P	**Pn**	**21 28 36.2**	**+1.6**
	comp=Z,5µmcomp=Z,2µmcomp=Z,87nm,1.7s						
MMPI	**Merauke**	**15.24**	**92**	P	**Pn**	**21 28 36.9**	**-0.5**
	comp=Z,612nm,1.1s						
DAV	**Davao City (W)**	**15.26**	**2**	Pn	**Pn**	**21 28 35.3**	**-2.4**
	baz=42,slow=18,SNR=0.8						
DAV	**Davao City (W)**	**15.26**	**2**	Pn	**Pn**	**21 28 37.8**	**+0.1**
DAV				IAmb	IAmb	21 28 54.3	
	comp=Z,946nm,1.6s						
SPMM	**Sapulut**	**15.45**	**326**	P	**P**	**21 28 43.0**	**-1.2**
STKI	**Sintang**	**15.80**	**301**	P	**P**	**21 28 47.1**	**-1.1**
	comp=Z,6µmcomp=Z,112nm,1.1s						
KPJI	**Karang Pucung**	**15.93**	**272**	P	**P**	**21 28 48.4**	**-1.2**
	comp=Z,49µmcomp=Z,3µmcomp=Z,112nm,0.7s						
CMJI	**Cimerak**	**16.38**	**271**	P	**P**	**21 28 54.1**	**-0.4**
	comp=Z,2µmcomp=Z,159nm,1.2s						
SBUM	**Sibu**	**16.60**	**309**	P	**P**	**21 28 58.0**	**+1.0**
JAY	**Jayapura**	**16.66**	**71**	Pn	**Pn**	**21 28 55.2**	**-0.5**
	comp=Z,1.0nm,0.3s,baz=238,slow=12,SNR=19						
JAY				Sn	**Sn**	**21 32 03.0**	**+3.2**
	comp=Z,0.4nm,0.3s,baz=353,slow=18,SNR=1.4						
JAY	**Jayapura**	**16.66**	**71**	P	**Pn**	**21 28 55.2**	**-0.5**
JAY	**Jayapura**	**16.66**	**71**		**Pn**	**21 28 55.2**	**-0.5**
CISI	**Cisompet, Garu**	**17.02**	**271**	Pn	**Pn**	**21 28 58.8**	**-1.4**
CISI	**Cisompet, Garu**	**17.02**	**271**	P	**Pn**	**21 29 00.8**	**+0.6**
	comp=Z,3µmcomp=Z,1µmcomp=Z,110nm,0.7s						
CISI	**Cisompet, Garu**	**17.02**	**271**	P	**Pn**	**21 28 59.7**	**-0.5**
LEM	**Lembang**	**17.27**	**274**	P	**Pn**	**21 29 01.8**	**-1.7**
	comp=Z,4.2nm,0.3s,baz=119,slow=6.3,SNR=13						
AS31	**Alice Springs**	**17.53**	**152**	Pn	**Pn**	**21 29 02.7**	**-3.7**
ASAR	**Alice Springs**	**17.53**	**152**	P	**Pn**	**21 29 03.1**	**-3.3**
	comp=Z,2.0nm,0.3s,baz=319,slow=10,SNR=99						
ASAR				S	Sn	21 32 08.6	-12
	comp=Z,0.8nm,0.3s,baz=318,slow=10.0,SNR=5.8						
ASAR				ScP	**ScP**	**21 37 18.1**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=335,slow=2.5,SNR=5.0						
ASAR				LR	LR	21 37 33.5	
	comp=Z,10µm,18.2s,baz=328,slow=42						
ASAR	**Alice Springs**	**17.53**	**152**	P	**Pn**	**21 29 02.3**	**-4.1**
ASAR	**Alice Springs**	**17.53**	**152**		**Pn**	**21 29 02.3**	**-4.1**
GIRL	**Giralia**	**17.62**	**215**	P	**Pn**	**21 29 07.8**	**+0.2**
	baz=18,SNR=3.7						
CNJI	**Cibinong**	**17.71**	**272**	P	**P**	**21 29 12.2**	**+2.9**
	comp=Z,6µmcomp=Z,5µmcomp=Z,416nm,1.1s						
TBP	**Tagbilaran**	**17.89**	**356**	⇓*i*P	**P**	**21 29 11.5**	**+0.3**
TBP				*i* S	**S**	**21 32 39.2**	**+4.2**
CBJI	**Citeko**	**18.07**	**275**	P	**Pn**	**21 29 12.7**	**-0.5**
	comp=Z,5µmcomp=Z,283nm,1.1s						
DBJI	**Dramaga**	**18.16**	**274**	P	**P**	**21 29 15.2**	**+0.9**
	comp=Z,725µmcomp=Z,14µmcomp=Z,122nm,1.5s						
I39PW	**PALAU INFRASON**	**18.38**	**32**	*i*		23 22 50.0	
	baz=210,slow=316,SNR=0.9						
QIS	**Mount Isa**	**18.68**	**132**	P	**P**	**21 29 18.0**	**-1.9**
	baz=19,SNR=110						
QIS	**Mount Isa**	**18.68**	**132**	P	**P**	**21 29 19.4**	**-0.6**
	comp=Z,206nm,0.9s						
COEN	**Coen**	**18.72**	**109**	P	**P**	**21 29 18.0**	**-2.4**
COEN				IAmb	IAmb	21 29 29.1	
	comp=Z,798nm,1.9s						
COEN	**Coen**	**18.72**	**109**	P	**P**	**21 29 19.8**	**-0.6**
	comp=Z,206nm,1.4s						
XMIS	**Christmas Isla**	**19.19**	**262**	P	**P**	**21 29 24.2**	**-1.4**
CGJI	**Cibinong**	**19.20**	**274**	P	**Pn**	**21 29 26.5**	**-0.3**
	comp=Z,4µmcomp=Z,185nm,1.4s						
MEEK	**Meekatharra**	**19.23**	**198**	P	**Pn**	**21 29 27.3**	**+0.2**
	baz=19,SNR=31						
MEEK	**Meekatharra**	**19.23**	**198**	P	**Pn**	**21 29 27.1**	**-0.1**
	comp=Z,125nm,0.9s						
PPBI	**Pangkal Pinang**	**19.72**	**287**	P	**Pn**	**21 29 33.7**	**+0.7**
	comp=Z,3µmcomp=Z,5µmcomp=Z,176nm,1.4s						
RCP	**Roxas**	**19.84**	**354**	⇓*e*P	**Pn**	**21 29 38.3**	**+4.0**
KLI	**Kotabumi**	**20.27**	**278**	P	Pn	21 29 52.0	+12
KLSI		**20.43**	**279**	P	Pn	21 29 41.0	-0.4
	comp=Z,926nmcomp=Z,38nm,1.4s						
KASI	**Kota Agung**	**20.52**	**276**	P	Pn	21 29 44.4	+2.0
	comp=Z,2µmcomp=Z,85nm,0.8s						
PMBI	**Palembang**	**20.80**	**284**	P	**P**	**21 29 44.1**	**+1.0**
PMBI				IAmb	IAmb	21 29 50.3	
	comp=Z,297nm,1.0s						
PMBI				IAMs_20	IAMs_20	21 38 06.1	
	comp=Z,15µm,20.0s						
PMBI	**Palembang**	**20.80**	**284**	P	Pn	21 29 45.9	+0.2
	comp=Z,5µmcomp=Z,352nm,1.3s						
MDSI	**Maura Dua**	**21.01**	**279**	P	**P**	**21 29 50.2**	**+4.8**
	comp=Z,2µmcomp=Z,805nmcomp=Z,15nm,1.1s						
LWLI	**Liwa**	**21.03**	**278**	P	P	21 29 58.8	+13
MTSU	**Mount Surprise**	**21.20**	**119**	P	**P**	**21 29 47.7**	**+0.2**
	baz=21,SNR=132						
MTSU	**Mount Surprise**	**21.20**	**119**	P	**P**	**21 29 48.0**	**+0.5**
	comp=Z,175nm,1.0s						
DSRI	**Dabo**	**21.75**	**290**	P	**P**	**21 29 56.0**	**+2.6**
	comp=Z,2µmcomp=Z,2µmcomp=Z,113nm,1.7s						
LHSI	**Lahat**	**21.79**	**280**	P	**P**	**21 29 56.2**	**+2.5**
	comp=Z,97nm,1.8s						
OOD	**Oodnadatta**	**21.89**	**154**	P	**P**	**21 29 54.6**	**-0.1**
	comp=Z,282nm,0.7s						
PMG	**Port Moresby**	**21.95**	**95**	P	**P**	**21 29 56.0**	**+0.6**
	comp=Z,293nm,0.9s,baz=284,slow=6.4,SNR=14						
PMG	**Port Moresby**	**21.95**	**95**	P	**P**	**21 29 55.5**	**0.0**
PMG				pmax	pmax		
	comp=Z,576nm,1.1s						
PMG				MLR	MLR		
	comp=Z,11µm,18.0s						
PMG	**Port Moresby**	**21.95**	**95**	P	**P**	**21 29 55.5**	**0.0**
PMG				IAmb	IAmb	21 30 03.6	
	comp=Z,576nm,1.1s						
PMG	**Port Moresby**	**21.95**	**95**	IAMs_20	IAMs_20	21 39 48.6	
	comp=Z,11µm,18.0s						
PGP	**Puerto Galera**	**22.01**	**349**	⇓*e*P	**P**	**21 29 57.6**	**+1.5**
MNAI	**Manna**	**22.23**	**279**	IAMs_20	IAMs_20	21 39 37.0	
	comp=Z,8µm,19.0s						
MNAI	**Manna**	**22.23**	**279**	P	**P**	**21 30 01.1**	**+2.6**
	comp=Z,239nm,2.1s						
JMBI	**JAMBI**	**22.25**	**286**	P	**P**	**21 30 00.5**	**+1.8**
	comp=Z,3µmcomp=Z,110nm,1.3s						
MORW	**Morawa**	**22.32**	**201**	P	**P**	**21 29 59.5**	**+0.1**
	baz=22,SNR=14						
MORW	**Morawa**	**22.32**	**201**	P	**P**	**21 29 58.2**	**-1.2**
MORW	**Morawa**	**22.32**	**201**	P	**P**	**21 30 01.1**	**+1.7**
	comp=Z,119nm,1.1s						
LQP	**Lukban**	**22.51**	**351**	⇑*i*P	**P**	**21 30 03.3**	**+1.7**
FORT	**Forrest**	**22.57**	**173**	P	**P**	**21 30 03.1**	**+1.1**
	baz=23,SNR=12						
FORT	**Forrest**	**22.57**	**173**	P	**P**	**21 30 00.9**	**-1.0**
FORT				IAmb	IAmb	21 30 20.2	
	comp=Z,262nm,0.9s						
FORT	**Forrest**	**22.57**	**173**	P	**P**	**21 30 02.3**	**+0.3**
	comp=Z,336nm,0.9s						
TGY	**Tagaytay City**	**22.60**	**350**	*e*P	**P**	**21 30 00.4**	**-2.1**
MANU	**Manus Island**	**23.13**	**76**	P	**P**	**21 30 06.7**	**-1.3**
MANU				IAmb	IAmb	21 30 10.2	
	comp=Z,604nm,1.5s						
MASI	**Maura Aman, Be**	**23.19**	**281**	P	**P**	**21 30 09.6**	**+1.0**
	comp=Z,4µmcomp=Z,163nm,1.1s						
MULG	**Mulgathing**	**23.48**	**160**	P	**P**	**21 30 11.4**	**+0.1**
	comp=Z,209nm,1.3s						
BLDU	**Ballidu**	**23.53**	**198**	P	**P**	**21 30 10.7**	**-1.0**
	baz=24,SNR=26						
BLDU	**Ballidu**	**23.53**	**198**	P	**P**	**21 30 11.3**	**-0.4**
	comp=Z,154nm,0.9s						
CTA	**Charters Tower**	**23.70**	**122**	P	**P**	**21 30 13.7**	**+0.2**
	comp=Z,84nm,1.0s,baz=300,slow=12,SNR=56						
CTA				PcP	**PcP**	**21 33 58.8**	**+1.5**
	comp=Z,9.8nm,0.8s,baz=244,slow=3.0,SNR=2.1						
CTA				S	**S**	**21 34 27.2**	**+0.9**
	comp=Z,4.6nm,0.6s,baz=86,slow=22,SNR=1.8						
CTAO	**Charters Tower**	**23.70**	**122**	P	**P**	**21 30 14.1**	**+0.6**
CTAO				pmax	pmax		
	comp=Z,535nm,1.5s						
CTAO				MLR	MLR		
	comp=Z,4µm,19.0s						
CTAO	**Charters Tower**	**23.70**	**122**	P	**P**	**21 30 14.1**	**+0.6**
CTAO				IAmb	IAmb	21 30 17.2	
	comp=Z,535nm,1.5s						
CTAO	**Charters Tower**	**23.70**	**122**	P	**P**	**21 30 14.8**	**+1.3**
INKA	**Innaminka**	**24.43**	**144**	P	**P**	**21 30 22.3**	**+2.1**
	comp=Z,608nm,1.1s						
MUN	**Mundaring**	**24.95**	**198**	P	**P**	**21 30 26.2**	**+1.3**
	baz=25,SNR=5.2						
MUN	**Mundaring**	**24.95**	**198**	P	**P**	**21 30 27.2**	**+2.4**
	comp=Z,101nm,2.0s						
LCRK	**Leigh Creek**	**25.30**	**152**	P	**P**	**21 30 30.4**	**+2.4**
	comp=Z,414nm,1.1s						
BKNI	**Bangkinang**	**25.34**	**289**	P	**P**	**21 30 28.4**	**-0.2**
BKNI				IAmb	IAmb	21 30 51.6	
	comp=Z,198nm,1.3s						
BKNI	**Bangkinang**	**25.34**	**289**	P	**P**	**21 30 30.5**	**+1.9**
	comp=Z,3µmcomp=Z,110nm,1.7s						
JRMM	**Jerantut**	**25.49**	**297**	P	**P**	**21 30 32.0**	**+2.1**
PDSI	**Padang**	**25.50**	**285**	P	**P**	**21 30 34.5**	**+4.5**
	comp=Z,677nmcomp=Z,21nm,1.2s						
NWAO	**Narrogin (SRO)**	**25.55**	**195**	P	**P**	**21 30 30.7**	**+0.4**
	comp=Z,47nm,0.9s,baz=20,slow=12,SNR=17						
NWAO				S	**S**	**21 34 55.5**	**-0.3**
	comp=Z,14nm,1.0s,baz=268,slow=19,SNR=1.2						
NWAO	**Narrogin (SRO)**	**25.55**	**195**	P	**P**	**21 30 32.4**	**+2.1**
	baz=26,SNR=10.0						
NWAO				P	**P**	**21 30 32.4**	**+2.1**
	baz=26,SNR=10.0						
NWAO	**Narrogin (SRO)**	**25.55**	**195**	P	**P**	**21 30 30.6**	**+0.3**
NWAO				pmax	pmax		
	comp=Z,72nm,1.1s						
NWAO	**Narrogin (SRO)**	**25.55**	**195**	P	**P**	**21 30 30.6**	**+0.3**
NWAO	**Narrogin (SRO)**	**25.55**	**195**	IAMs_20	IAMs_20	21 41 51.2	
	comp=Z,6µm,18.0s						
NWAO	**Narrogin (SRO)**	**25.55**	**195**	P	**P**	**21 30 33.0**	**+2.7**
NWAO	**Narrogin (SRO)**	**25.55**	**195**	P	**P**	**21 30 31.7**	**+1.4**
NWAO	**Narrogin (SRO)**	**25.55**	**195**	P	**P**	**21 30 31.9**	**+1.6**
PPI	**Padang Panjang**	**25.70**	**286**	P	**P**	**21 30 33.7**	**+1.9**
	comp=Z,374nmcomp=Z,28nm,1.3s						
QLP	**Quilpie**	**25.79**	**137**	P	**P**	**21 30 34.1**	**+1.6**
	baz=26,SNR=21						
QLP	**Quilpie**	**25.79**	**137**	P	**P**	**21 30 35.3**	**+2.8**
	comp=Z,697nm,1.3s						
DLV	**T Lat**	**25.93**	**321**	P	**P**	**21 30 35.2**	**+1.1**
DLV				IAmb	IAmb	21 30 38.5	
	comp=Z,204nm,1.6s						
CVP	**Callao Caves**	**26.00**	**353**	⇑*e*P	**P**	**21 30 34.3**	**-0.1**
BBOO	**Buckleboo**	**26.48**	**159**	P	**P**	**21 30 39.0**	**+0.2**
	baz=27,SNR=20						
BBOO	**Buckleboo**	**26.48**	**159**	P	**P**	**21 30 37.4**	**-1.3**
BBOO	**Buckleboo**	**26.48**	**159**	P	**P**	**21 30 38.9**	**+0.2**
	comp=Z,102nm,1.7s						
MNSI	**Mandailing Nat**	**26.88**	**288**	P	**P**	**21 30 43.9**	**+1.4**
	comp=Z,817nmcomp=Z,41nm,1.9s						
IPM	**Ipoh**	**27.05**	**297**	P	**P**	**21 30 46.0**	**+2.0**
RABL	**Rabaul**	**27.32**	**83**	P	**P**	**21 30 45.8**	**-0.7**
KULM	**Kulim**	**27.76**	**298**	P	**P**	**21 30 52.0**	**+1.6**
STKA	**Stephens Creek**	**28.11**	**149**	P	**P**	**21 30 54.1**	**+0.8**
	comp=Z,27nm,0.7s,baz=320,slow=9.4,SNR=24						
STKA				S	**S**	**21 35 37.9**	**+1.7**
	comp=Z,4.9nm,0.8s,baz=224,slow=20,SNR=1.3						
STKA				LR	LR	21 42 52.6	
	comp=Z,6µm,19.2s,baz=317,slow=38						
STKA	**Stephens Creek**	**28.11**	**149**	P	**P**	**21 30 54.1**	**+0.8**
	baz=28,SNR=12						
STKA	**Stephens Creek**	**28.11**	**149**	⇓*e*P	**P**	**21 30 53.9**	**+0.6**
STKA	**Stephens Creek**	**28.11**	**149**	P	**P**	**21 30 53.5**	**+0.1**
STKA	**Stephens Creek**	**28.11**	**149**	P	**P**	**21 30 56.3**	**+3.0**
	comp=Z,16nm,1.1s						
HTT	**Hallett**	**28.15**	**155**	P	**P**	**21 30 55.1**	**+1.3**
	baz=28,SNR=16						
HTT	**Hallett**	**28.15**	**155**	P	**P**	**21 30 55.0**	**+1.3**
	comp=Z,96nm,1.7s						
PSI	**Prapat**	**28.22**	**292**	P	**P**	**21 30 53.6**	**-1.1**
	comp=Z,27nm,1.0s,baz=111,slow=9.8,SNR=26						
PSI				S	**S**	**21 35 36.5**	**-1.9**
	comp=Z,3.5nm,1.1s,baz=289,slow=21,SNR=1.2						
TSI	**Tuntungan**	**28.83**	**293**	P	**P**	**21 31 03.4**	**+3.5**
	comp=Z,89nm,0.7s						
GSI	**Gunungsitoli**	**28.93**	**288**	P	**P**	**21 30 59.9**	**-1.0**
GSI	**Gunungsitoli**	**28.93**	**288**	P	**P**	**21 31 03.2**	**+2.3**
	comp=Z,26nm,1.1s						
RMQ	**Roma**	**28.93**	**132**	P	**P**	**21 31 02.2**	**+1.4**
	baz=29,SNR=18						
RMQ	**Roma**	**28.93**	**132**	P	**P**	**21 31 04.2**	**+3.4**
	comp=Z,31nm,0.9s						
GUMO	**Guam**	**29.36**	**42**	LR	LR	21 41 55.0	
	comp=Z,1µm,21.1s,baz=224,slow=34						
TPTI		**30.00**	**291**	P	**P**	**21 31 12.8**	**+2.5**
	comp=Z,374nmcomp=Z,29nm,1.6s						
EIDS	**Eidsvold**	**30.12**	**128**	P	**P**	**21 31 11.1**	**-0.1**
CMSA	**Cobar Meteorol**	**30.13**	**143**	P	**P**	**21 31 12.0**	**+0.8**
	baz=30,SNR=35						
CMSA	**Cobar Meteorol**	**30.13**	**143**	P	**P**	**21 31 12.1**	**+0.8**
	comp=Z,59nm,0.8s						
UBPT	**Khong Chiam**	**30.36**	**320**	P	**P**	**21 31 14.4**	**+0.9**
UBPT				IAmb	IAmb	21 31 17.2	
	comp=Z,310nm,1.9s						
QIZ	**Qiongzhong**	**30.97**	**331**	P	**P**	**21 31 16.9**	**-1.9**
QIZ				S	**S**	**21 36 21.6**	**+0.4**
QIZ				pmax	pmax		
	comp=Z,550nm,8.2s						
QIZ				LR	LR		
	comp=Z,1µm,16.9s						
QIZ				LR	LR		
	comp=Z,2µm,13.7s						
QIZ				LR	LR		
	comp=Z,2µm,15.2s						
LHMI	**Lhok Sumawe**	**31.01**	**295**	P	**P**	**21 31 19.2**	**-0.1**
LHMI				IAmb	IAmb	21 31 24.3	
	comp=Z,86nm,1.0s						
LHMI	**Lhok Sumawe**	**31.01**	**295**	P	**P**	**21 31 21.6**	**+2.4**
	comp=Z,93nm,1.1s						
TPUB	**Ta-pu**	**31.67**	**352**	P	**P**	**21 31 24.7**	**-0.2**
TPUB	**Ta-pu**	**31.67**	**352**	P	**P**	**21 31 24.8**	**-0.2**
ARPS	**Mount Arapiles**	**32.24**	**154**	P	**P**	**21 31 31.5**	**+1.7**
	baz=32,SNR=19						
ARPS	**Mount Arapiles**	**32.24**	**154**	P	**P**	**21 31 31.6**	**+1.8**
	comp=Z,210nm,1.1s						
ARMA	**Armidale**	**33.26**	**135**	P	**P**	**21 31 41.2**	**+2.2**
	baz=33,SNR=6.4						
ARMA	**Armidale**	**33.26**	**135**	P	**P**	**21 31 39.2**	**+0.2**
ARMA				IAmb	IAmb	21 31 44.1	
	comp=Z,187nm,1.9s						
ARMA	**Armidale**	**33.26**	**135**	P	**P**	**21 31 42.5**	**+3.5**
	comp=Z,42nm,1.7s						
QZH	**Quanzhou**	**33.60**	**349**	P	**P**	**21 31 43.2**	**+1.4**
QZH				S	**S**	**21 37 04.9**	**+2.8**
QZH				LR	LR		
	comp=Z,1µm,16.6s						
QZH				LR	LR		
	comp=Z,1µm,13.3s						
QZH				LR	LR		
	comp=Z,1µm,18.0s						
PBKT	**Sadao Pong**	**34.26**	**316**	P	**P**	**21 31 48.0**	**+0.4**
HNR	**Honiara**	**34.56**	**95**	P	**P**	**21 31 50.2**	**-0.1**
	comp=Z,74nm,0.4s,baz=164,slow=6.5,SNR=19						
HNR				S	**S**	**21 37 16.4**	**-0.9**
	comp=Z,87nm,0.3s,baz=240,slow=8.6,SNR=2.7						
HNR				LR	LR	21 46 19.0	
	comp=Z,3µm,21.9s,baz=274,slow=37						
HNR	**Honiara**	**34.56**	**95**	P	**P**	**21 31 50.2**	**-0.1**
HNR				pmax	pmax		
	comp=Z,282nm,1.0s						
HNR				MLR	MLR		
	comp=Z,3µm,20.0s						
HNR	**Honiara**	**34.56**	**95**	P	**P**	**21 31 50.2**	**-0.1**
TOO	**Toolangi**	**34.57**	**151**	P	**P**	**21 31 52.0**	**+1.8**
TOO				pmax	pmax		
	comp=Z,211nm,1.4s						
TOO	**Toolangi**	**34.57**	**151**	P	**P**	**21 31 52.0**	**+1.8**
TOO				IAmb	IAmb	21 32 00.7	
	comp=Z,210nm,1.4s						
CAN	**Canberra**	**34.76**	**144**	P	**P**	**21 31 52.0**	**+0.2**
CAN				pmax	pmax		
	comp=Z,326nm,1.9s						
CAN				MLR	MLR		
	comp=Z,3µm,19.0s						
CAN	**Canberra**	**34.76**	**144**	P	**P**	**21 31 52.0**	**+0.2**
CAN				IAmb	IAmb	21 32 01.9	
	comp=Z,326nm,1.9s						
CNB	**Canberra Magne**	**34.96**	**144**	P	**P**	**21 31 55.6**	**+2.0**
	baz=35,SNR=5.6						
JOW	**Kunigami**	**35.05**	**5**	P	**P**	**21 31 54.9**	**+0.6**
JOW				IAmb	IAmb	21 32 00.1	
	comp=Z,209nm,1.4s						
SLVN	**Son La**	**35.98**	**325**	P	**P**	**21 32 03.4**	**+0.9**
SLVN				IAmb	IAmb	21 32 06.6	
	comp=Z,213nm,1.7s						
CM31	**Chiang Mai Arr**	**36.96**	**316**	P	**P**	**21 32 11.8**	**+1.0**
CM31				IAmb	IAmb	21 32 14.5	
	comp=Z,420nm,1.9s						
CM31				PcP	**PcP**	**21 34 33.0**	**+1.3**
CM31	**Chiang Mai Arr**	**36.96**	**316**	P	**P**	**21 32 12.7**	**+1.9**
	SNR=63						
CMAR	**Chiang Mai Arr**	**36.96**	**316**	P	**P**	**21 32 11.5**	**+0.7**
	comp=Z,20nm,1.0s,baz=144,slow=6.7,SNR=110						
CMAR				PcP	**PcP**	**21 34 32.7**	**+1.0**
	comp=Z,15nm,1.1s,baz=166,slow=3.1,SNR=7.4						
CMAR				S	**S**	**21 37 54.0**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=7.1,slow=3.4,SNR=1.2						
CMAR				LR	LR	21 48 36.5	
	comp=Z,3µm,21.2s,baz=196,slow=38						
CMAR	**Chiang Mai Arr**	**36.96**	**316**	*i* P	**P**	**21 32 12.3**	**+1.5**
CMAR				pmax	pmax		
	comp=Z,12nm,0.7s						
CMAR	**Chiang Mai Arr**	**36.96**	**316**	P	**P**	**21 32 11.2**	**+0.4**
CMAR				PcP	**PcP**	**21 34 33.0**	**+1.2**
CHTO	**Chiang Mai**	**37.20**	**317**	P	**P**	**21 32 13.6**	**+0.7**
CHTO				pmax	pmax		
	comp=Z,447nm,1.7s						
CHTO				MLR	MLR		
	comp=Z,3µm,20.0s						
CHTO	**Chiang Mai**	**37.20**	**317**	P	**P**	**21 32 13.6**	**+0.7**
CHTO				IAmb	IAmb	21 32 16.5	
	comp=Z,447nm,1.6s						
CHTO	**Chiang Mai**	**37.20**	**317**	P	**P**	**21 32 14.1**	**+1.2**
CHTO	**Chiang Mai**	**37.20**	**317**	P	**P**	**21 32 14.1**	**+1.2**
GYA	**Guiyang**	**38.84**	**333**	⇑*i*P	**P**	**21 32 28.3**	**+1.6**
GYA				pP	sP	21 32 41.3	+1.8
GYA				sP	pP	21 32 44.4	+7.5
GYA				PP	**PnPn**	**21 34 06.1**	**+7.5**
GYA				S	**S**	**21 38 22.1**	**-0.4**
GYA				pmax	pmax		
	comp=Z,110nm,1.7s						
GYA				LR	LR		
	comp=Z,1µm,21.2s						
GYA				LR	LR		
	comp=Z,710nm,17.7s						
GYA				LR	LR		
	comp=Z,2µm,15.6s						
JCJ	**Chichijima**	**38.92**	**25**	LR	LR	21 49 14.6	
	comp=Z,762nm,19.6s,baz=212,slow=37						
JCJ	**Chichijima**	**38.92**	**25**	P	**P**	**21 32 27.8**	**+0.6**
JCJ	**Chichijima**	**38.92**	**25**	P	**P**	**21 32 30.2**	**+3.0**
LHI	**Lord Howe Isla**	**39.24**	**131**	P	**P**	**21 32 30.8**	**+0.9**
	baz=39,SNR=3.8						
SSE	**Sheshan**	**39.32**	**355**	P	**P**	**21 32 31.8**	**+1.3**
SSE				S	**S**	**21 38 31.2**	**+2.0**
SSE				pmax	pmax		
	comp=Z,39nm,0.8s						
SSE				pmax	pmax		
	comp=Z,280nm,10.3s						
SSE				LR	LR		
	comp=Z,330nm,17.1s						
SSE				LR	LR		
	comp=Z,400nm,13.4s						
KMI	**Kunming**	**39.65**	**327**	⇓P	**P**	**21 32 35.3**	**+1.7**
KMI				sP	sP	21 32 53.5	+7.1
KMI				PP	**PnPn**	**21 34 11.1**	**+2.8**
KMI				PcP	**PcP**	**21 34 41.2**	**+1.0**
KMI				PcS	**PcS**	**21 38 26.5**	**-4.1**
KMI				S	**S**	**21 38 36.8**	**+2.0**
KMI				SS	**SS**	**21 41 28.4**	**-2.6**
KMI				pmax	pmax		
	comp=Z,140nm,1.6s						
KMI				pmax	pmax		
	comp=Z,950nm,3.5s						
KMI				LR	LR		
	comp=Z,1µm,14.6s						
KMI				LR	LR		
	comp=Z,3µm,17.2s						
KMI				LR	LR		
	comp=Z,2µm,14.6s						
WHN	**Wuhan**	**39.93**	**346**	⇓P	**P**	**21 32 36.4**	**+0.9**
WHN				S	**S**	**21 38 42.4**	**+4.0**
WHN				pmax	pmax		
	comp=Z,530nm,1.5s						
WHN				LR	LR		
	comp=Z,2µm,15.0s						
WHN				LR	LR		
	comp=Z,4µm,18.2s						
WHN				LR	LR		
	comp=Z,4µm,17.1s						
NJ2	**Nanjing**	**40.53**	**352**	⇓P	**P**	**21 32 41.6**	**+1.1**
NJ2				pP	**pP**	**21 32 50.3**	**-0.6**
NJ2				sP	**sP**	**21 32 54.6**	**+1.2**
NJ2				PP	**PnPn**	**21 34 21.5**	**+3.1**
NJ2				PcS	**PcS**	**21 38 34.6**	**+1.3**
NJ2				S	**S**	**21 38 47.6**	**+0.3**
NJ2				sS	**sS**	**21 39 03.7**	**-0.9**
NJ2				SS	**SS**	**21 41 44.7**	**-3.4**
NJ2				ScS	**ScS**	**21 42 42.3**	**-1.5**
NJ2				pmax	pmax		
	comp=Z,85nm,1.2s						
NJ2				pmax	pmax		
	comp=Z,410nm,3.9s						
NJ2				LR	LR		
	comp=Z,810nm,17.3s						
NJ2				LR	LR		
	comp=Z,850nm,16.2s						
NJ2				LR	LR		
	comp=Z,930nm,16.0s						
ENH	**Enshi**	**41.12**	**339**	P	**P**	**21 32 45.9**	**+0.5**
ENH				IAmb	IAmb	21 32 47.5	
	comp=Z,188nm,1.6s						
JNU	**Nakatsue**	**41.55**	**7**	P	**P**	**21 32 48.8**	**-0.2**
JNU	**Nakatsue**	**41.55**	**7**	P	**P**	**21 32 49.9**	**+0.9**
SANVU	**Saraoutou**	**41.87**	**104**	P	**P**	**21 32 52.4**	**+0.5**
SANVU				IAmb	IAmb	21 32 57.5	
	comp=Z,131nm,0.9s						
SANVU				IAMs_20	IAMs_20	21 51 39.3	
	comp=Z,4µm,18.0s						
NOUC	**Port Laguerre**	**42.03**	**114**	P	**P**	**21 32 54.5**	**+1.4**
DZM	**Mont Dzumac**	**42.15**	**114**	*e*P	**P**	**21 32 54.4**	**+0.2**
	comp=Z,271nm,1.4s						
DZM	**Mont Dzumac**	**42.15**	**114**	*e*LR	LR	21 44 37.0	
	comp=Z,5µm,24.6s						
DZM	**Mont Dzumac**	**42.15**	**114**	P	**P**	**21 32 55.0**	**+0.8**
	comp=Z,27nm,0.9s,baz=296,slow=1.4,SNR=17						
DZM				LR	LR	21 50 10.6	
	comp=Z,3µm,20.5s,baz=296,slow=36						
DZM	**Mont Dzumac**	**42.15**	**114**	P	**P**	**21 32 54.6**	**+0.4**
DZM	**Mont Dzumac**	**42.15**	**114**	P	**P**	**21 32 55.9**	**+1.7**
ONTNC	**Ouen Toro**	**42.21**	**114**	P	**P**	**21 32 54.9**	**+0.4**
ONTNC				IAmb	IAmb	21 33 03.3	
	comp=Z,172nm,1.3s						
YATNC	**Mamie plateau,**	**42.55**	**114**	P	**P**	**21 32 59.3**	**+1.9**
OUENC	**Ouen Island, N**	**42.58**	**114**	P	**P**	**21 32 57.9**	**+0.2**
OUENC				IAmb	IAmb	21 33 07.0	
	comp=Z,339nm,1.8s						
OUENC	**Ouen Island, N**	**42.58**	**114**	P	**P**	**21 32 59.3**	**+1.7**

LIFNC	**LIFOU**	**42.62**	**112**	P	**P**	**21 32 58.5**	**+0.6**
JMN	**Monobe**	**42.62**	**11**	P	**P**	**21 32 58.6**	**+0.8**
JMN				IAmb	IAmb	21 33 04.0	
	comp=Z,254nm,1.1s						
PINNC	**Pines Island,**	**43.17**	**114**	P	**P**	**21 33 02.9**	**+0.5**
PINNC				IAmb	IAmb	21 33 23.1	
	comp=Z,345nm,1.8s						
MARNC	**Mare, Loyalty**	**43.48**	**112**	P	**P**	**21 33 05.7**	**+0.9**
JHS	**Saijyo**	**43.73**	**10**	P	**P**	**21 33 07.5**	**+0.9**
JHS				IAmb	IAmb	21 33 12.9	
	comp=Z,320nm,1.3s						
CD2	**Chengdu**	**43.96**	**333**	⇑*i*P	**P**	**21 33 09.3**	**+0.7**
CD2				pP	pP	21 33 19.9	+1.1
CD2				sP	sP	21 33 24.4	+3.0
CD2				PP	**PcP**	**21 34 53.1**	**-1.0**
CD2				S	**S**	**21 39 40.1**	**+2.0**
CD2				sS	sS	21 39 59.6	+4.0
CD2				ScS	**ScS**	**21 43 05.0**	**-0.1**
CD2				pmax	pmax		
	comp=Z,170nm,1.4s						
CD2				pmax	pmax		
	comp=Z,800nm,6.9s						
CD2				LR	LR		
	comp=Z,3µm,17.1s						
CD2				LR	LR		
	comp=Z,5µm,15.5s						
CD2				LR	LR		
	comp=Z,3µm,16.9s						
JWT	**Wachi**	**44.43**	**12**	P	**P**	**21 33 13.1**	**+0.9**
TJN	**Taejon**	**44.48**	**3**	*di*P	**P**	**21 33 12.0**	**-0.5**
XAN	**Xi'an**	**44.76**	**341**	P	**P**	**21 33 14.1**	**-0.8**
XAN				PP	**PP**	**21 35 05.8**	**+5.8**
XAN				S	**S**	**21 39 52.7**	**+3.0**
XAN				pmax	pmax		
	comp=Z,390nm,5.3s						
XAN				LR	LR		
	comp=Z,1µm,16.5s						
XAN				LR	LR		
	comp=Z,2µm,15.8s						
XAN				LR	LR		
	comp=Z,1µm,16.5s						
INU	**Inuyama**	**44.86**	**14**	P	**P**	**21 33 16.2**	**+0.6**
INU				IAmb	IAmb	21 33 21.3	
	comp=Z,178nm,1.2s						
TIA	**Tai'an**	**44.87**	**351**	⇑P	**P**	**21 33 15.5**	**-0.2**
TIA				S	**S**	**21 39 49.5**	**-1.6**
TIA				pmax	pmax		
	comp=Z,27nm,1.1s						
TIA				pmax	pmax		
	comp=Z,330nm,4.9s						
TIA				LR	LR		
	comp=Z,790nm,12.8s						
TIA				LR	LR		
	comp=Z,1µm,13.2s						
TIA				LR	LR		
	comp=Z,870nm,13.9s						
JGF	**Kuroka**	**45.18**	**14**	P	**P**	**21 33 18.5**	**+0.3**
KOHI	**KOHIMA**	**45.21**	**319**	*e*P	**P**	**21 33 17.4**	**-1.3**
LKP	**Lekhapani**	**45.27**	**322**	*e*P	**P**	**21 33 18.1**	**-1.0**
MOKO	**MOKOCHONG**	**45.37**	**320**	*e*P	**P**	**21 33 20.0**	**-0.1**
SILR	**SILCHAR**	**45.43**	**317**	*e*P	**P**	**21 33 20.6**	**+0.3**
INCN	**Inchon**	**45.55**	**2**	P	**P**	**21 33 21.5**	**+0.4**
INCN				pmax	pmax		
	comp=Z,65nm,1.3s						
INCN	**Inchon**	**45.55**	**2**	P	**P**	**21 33 21.5**	**+0.4**
KSAR	**Wonju Array Be**	**45.56**	**3**	P	**P**	**21 33 22.1**	**+1.0**
KSAR	**Wonju Array Be**	**45.56**	**3**	P	**P**	**21 33 22.1**	**+1.0**
KSRS	**Korea Array**	**45.58**	**3**	P	**P**	**21 33 21.6**	**+0.3**
	comp=Z,17nm,1.1s,baz=177,slow=9.3,SNR=39						
KSRS				PcP	**PcP**	**21 34 59.0**	**-0.4**
	comp=Z,7.9nm,0.9s,baz=182,slow=4.0,SNR=8.9						
KSRS				S	**S**	**21 40 00.2**	**-1.0**
	comp=Z,0.5nm,0.4s,baz=247,slow=42,SNR=1.5						
KSRS				LR	LR	21 50 55.7	
	comp=Z,622nm,21.1s,baz=182,slow=34						
KSRS	**Korea Array**	**45.58**	**3**	P	**P**	**21 33 21.6**	**+0.3**
KSRS	**Korea Array**	**45.58**	**3**	P	**P**	**21 33 21.6**	**+0.3**
KS19	**Wonju Array Si**	**45.62**	**3**	P	**P**	**21 33 22.6**	**+0.9**
KS19				IAmb	IAmb	21 33 27.5	
	comp=Z,160nm,1.6s						
JORH	**JORHAT**	**45.83**	**320**	*e*P	**P**	**21 33 23.1**	**-0.4**
JORH				IAmb	IAmb	21 33 32.5	
	comp=Z,730nm,1.5s						
MJAR	**Matsushiro Arr**	**46.28**	**15**	P	**P**	**21 33 26.1**	**-0.8**
	comp=Z,90nm,1.1s,baz=182,slow=7.7,SNR=112						
MJAR				S	**S**	**21 40 11.9**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=58,slow=9.1,SNR=1.0						
MJAR	**Matsushiro Arr**	**46.28**	**15**	P	**P**	**21 33 26.6**	**-0.3**
MJAR				pmax	pmax		
	comp=Z,227nm,1.2s						
MJAR	**Matsushiro Arr**	**46.28**	**15**	P	**P**	**21 33 26.6**	**-0.3**
MAJO	**Matsushiro**	**46.28**	**15**	*di*P	**P**	**21 33 26.4**	**-0.5**
MAJO				pmax	pmax		
	comp=Z,312nm,1.2s						
MAJO				MLR	MLR		
	comp=Z,1µm,18.0s						
MAJO	**Matsushiro**	**46.28**	**15**	P	**P**	**21 33 26.9**	**-0.1**
MAT	**Matsushiro**	**46.28**	**15**	P	**P**	**21 33 26.1**	**-0.8**
MAT				S	**S**	**21 40 11.4**	**-0.1**
MJB9	**Matsu-Tunnel**	**46.29**	**15**	P	**P**	**21 33 26.7**	**-0.3**
ITAN	**ITANAGAR**	**46.45**	**320**	*e*P	**P**	**21 33 27.9**	**-0.5**
JYT	**Yasato**	**46.53**	**17**	P	**P**	**21 33 28.6**	**-0.1**
SHL	**Shillong**	**46.57**	**317**	P	**P**	**21 33 28.9**	**-0.6**
SHL				pmax	pmax		
	comp=Z,200nm,1.5s						
SHL	**Shillong**	**46.57**	**317**	P	**P**	**21 33 28.9**	**-0.6**
SHL				IAmb	IAmb	21 33 30.7	
	comp=Z,200nm,1.5s						
SHL	**Shillong**	**46.57**	**317**	*e*P	**P**	**21 33 28.5**	**-1.1**
SHL	**Shillong**	**46.57**	**317**	P	**P**	**21 33 30.0**	**+0.4**
	SNR=42						
PALK	**Pallekele**	**46.77**	**288**	LR	LR	21 53 07.5	
	comp=Z,6µm,21.2s,baz=219,slow=36						
PALK	**Pallekele**	**46.77**	**288**	P	**P**	**21 33 31.0**	**-0.2**
PALK				pmax	pmax		
	comp=Z,69nm,1.5s						
PALK				MLR	MLR		
	comp=Z,6µm,21.0s						
PALK	**Pallekele**	**46.77**	**288**	P	**P**	**21 33 30.9**	**-0.2**
DL2	**Dalian**	**47.05**	**356**	P	**P**	**21 33 31.8**	**-1.0**
DL2				S	**S**	**21 40 23.6**	**+1.3**
DL2				pmax	pmax		
	comp=Z,64nm,1.4s						
DL2				pmax	pmax		
	comp=Z,330nm,9.4s						
DL2				LR	LR		
	comp=Z,590nm,13.7s						
DL2				LR	LR		
	comp=Z,1µm,20.9s						
DL2				LR	LR		
	comp=Z,750nm,17.2s						
TIY	**Taiyuan**	**47.23**	**346**	*e*P	**P**	**21 33 32.0**	**-2.4**
TIY				PP	**PP**	**21 35 30.9**	**+5.0**
TIY				S	**S**	**21 40 27.3**	**+2.1**
TIY				pmax	pmax		
	comp=Z,270nm,3.5s						
TIY				LR	LR		
	comp=Z,860nm,12.0s						
TIY				LR	LR		
	comp=Z,210nm,11.2s						
TIY				LR	LR		
	comp=Z,760nm,13.4s						
JSD	**Sado**	**47.72**	**14**	P	**P**	**21 33 38.4**	**+0.4**
JMM	**Marumori**	**48.23**	**17**	P	**P**	**21 33 42.5**	**+0.6**
LZH	**Lanzhou**	**48.41**	**337**	⇑P	**P**	**21 33 44.9**	**+1.3**
LZH				pP	sP	21 33 57.0	+0.5
LZH				sP	pP	21 34 03.2	+9.3
LZH				PP	**PP**	**21 35 39.4**	**+2.8**
LZH				S	**S**	**21 40 42.6**	**+0.5**
LZH				sS	sS	21 41 03.0	+3.4
LZH				pmax	pmax		
	comp=Z,140nm,1.3s						
LZH				pmax	pmax		
	comp=Z,460nm,5.7s						
LZH				LR	LR		
	comp=Z,1µm,15.1s						
LZH				LR	LR		
	comp=Z,2µm,14.8s						
LZH				LR	LR		
	comp=Z,960nm,17.5s						
VIS	**Vishakhapatnam**	**48.58**	**302**	*e*P	P	21 33 39.2	-5.8
VIS				IAmb	IAmb	21 33 44.9	
	comp=Z,81nm,1.2s						
BJT	**Baijiatuau**	**48.74**	**351**	P	**P**	**21 33 45.6**	**-0.3**
BJT				pmax	pmax		
	comp=Z,46nm,1.1s						
BJT	**Baijiatuau**	**48.74**	**351**	P	**P**	**21 33 45.6**	**-0.3**
BJI	**Beijing**	**48.76**	**351**	P	**P**	**21 33 45.2**	**-0.9**
BJI				PP	**PP**	**21 35 39.8**	**+0.2**
BJI				S	**S**	**21 40 47.7**	**+1.2**
BJI				SS	**SS**	**21 44 14.4**	**-3.2**
BJI				pmax	pmax		
	comp=Z,45nm,1.2s						
BJI				pmax	pmax		
	comp=Z,230nm,4.5s						
BJI				LR	LR		
	comp=Z,750nm,17.3s						
BJI				LR	LR		
	comp=Z,690nm,17.7s						
BJI				LR	LR		
	comp=Z,810nm,17.5s						
MDRS	**Chennai**	**49.23**	**295**	*e*P	**P**	**21 33 49.0**	**-1.1**
MDRS				IAmb	IAmb	21 33 53.4	
	comp=Z,259nm,2.0s						
BOK	**Bokaro**	**49.74**	**311**	*e*P	**P**	**21 33 54.1**	**+0.2**
LSA	**Lhasa**	**49.85**	**321**	P	**P**	**21 33 56.3**	**+1.1**
LSA				S	**S**	**21 40 59.4**	**-3.8**
LSA				pmax	pmax		
	comp=Z,660nm,1.7s						
LSA				LR	LR		
	comp=Z,3µm,17.8s						
LSA				LR	LR		
	comp=Z,2µm,22.1s						
LSA				LR	LR		
	comp=Z,4µm,21.4s						
LSA	**Lhasa**	**49.85**	**321**	P	**P**	**21 33 56.1**	**+0.9**
LSA	**Lhasa**	**49.85**	**321**	P	**P**	**21 33 55.5**	**+0.3**
LSA				pmax	pmax		
	comp=Z,412nm,1.5s						
LSA	**Lhasa**	**49.85**	**321**	P	**P**	**21 33 55.5**	**+0.3**
GTK	**Tadong**	**49.94**	**316**	*e*P	**P**	**21 33 56.0**	**+0.5**
HHC	**Hu-ho-hao-te**	**50.42**	**347**	*e*P	**P**	**21 33 58.8**	**-0.1**
HHC				sP	pP	21 34 09.5	+0.2
HHC				PP	**PP**	**21 35 55.2**	**+0.3**
HHC				S	**S**	**21 41 12.3**	**+2.2**
HHC				SS	**SS**	**21 44 43.7**	**-0.8**
HHC				pmax	pmax		
	comp=Z,43nm,1.5s						
HHC				pmax	pmax		
	comp=Z,250nm,5.7s						
HHC				LR	LR		
	comp=Z,1µm,16.1s						
HHC				LR	LR		
	comp=Z,2µm,16.8s						
HHC				LR	LR		
	comp=Z,950nm,17.5s						
ODAN	**Odare**	**50.48**	**315**	*e*P	**P**	**21 33 59.3**	**-0.4**
	comp=Z,1µm,1.9s						
BTO	**Baotou**	**50.56**	**345**	*e*P	**P**	**21 34 00.3**	**+0.4**
BTO				PP	**PP**	**21 35 54.7**	**-1.4**
BTO				S	**S**	**21 41 11.4**	**-0.6**
BTO				LR	LR		
	comp=Z,2µm,15.2s						
BTO				LR	LR		
	comp=Z,2µm,15.7s						
TAPN	**Taplejung**	**50.57**	**316**	*e*P	**P**	**21 33 59.9**	**-0.5**
	comp=Z,818nm,1.7s						
MSHR	**Mys Shultsa**	**50.93**	**6**	⇑*e*P	**P**	**21 34 03.8**	**+1.3**
MSHR				pmax	pmax		
	comp=Z,142nm,1.7s						
JTM	**Tenmabayashi**	**51.03**	**16**	P	**P**	**21 34 03.8**	**+0.6**
RAMN	**Ramite**	**51.09**	**315**	*e*P	**P**	**21 34 04.4**	**0.0**
	comp=Z,60nm,0.6s						
VLA	**Vladivostok**	**51.54**	**6**	*di*P	**P**	**21 34 07.5**	**+0.5**
VLA				pmax	pmax		
	comp=Z,302nm,1.4s						
JIRN	**Jiri**	**51.82**	**315**	*e*P	**P**	**21 34 09.5**	**-0.4**
	comp=Z,772nm,1.7s						
CN2	**Changchun**	**51.84**	**0**	*e*P	**P**	**21 34 08.2**	**-1.1**
CN2				sP	sP	21 34 22.1	-0.1
CN2				PP	**PP**	**21 36 07.0**	**-0.5**
CN2				S	**S**	**21 41 27.9**	**-1.3**
CN2				sS	sS	21 41 44.5	-2.4
CN2				SS	**SS**	**21 45 03.0**	**-3.6**
CN2				pmax	pmax		
	comp=Z,60nm,1.3s						
CN2				pmax	pmax		
	comp=Z,470nm,8.0s						
CN2				LR	LR		
	comp=Z,680nm,22.0s						
CN2				LR	LR		
	comp=Z,580nm,22.0s						
CN2				LR	LR		
	comp=Z,990nm,22.0s						
GUN	**Gumba**	**52.19**	**315**	*e*P	**P**	**21 34 12.4**	**-0.2**
	comp=Z,1µm,1.8s						
PKI	**Pulchoki**	**52.31**	**314**	*e*P	**P**	**21 34 12.6**	**-0.9**
	comp=Z,553nm,1.8s						
PKIN	**Phulchoki**	**52.32**	**314**	*e*P	**P**	**21 34 12.6**	**-1.0**
	comp=Z,408nm,1.6s						
MLZ	**Mavora Lakes**	**52.37**	**143**	P	**P**	**21 34 15.6**	**+2.2**
MLZ				IAmb	IAmb	21 34 20.2	
	comp=Z,99nm,1.3s						
MSVF	**Nonsavu**	**52.41**	**106**	P	**P**	**21 34 15.3**	**+1.1**
	comp=Z,30nm,0.9s,baz=228,slow=8.1,SNR=12						
MSVF				LR	LR	21 56 49.2	
	comp=Z,1µm,18.4s,baz=283,slow=36						
MSVF	**Nonsavu**	**52.41**	**106**	P	**P**	**21 34 15.5**	**+1.4**
MSVF				pmax	pmax		
	comp=Z,75nm,1.2s						
MSVF	**Nonsavu**	**52.41**	**106**	P	**P**	**21 34 15.5**	**+1.4**
HYB	**Hyderabad**	**52.50**	**299**	*i* P	**P**	**21 34 13.0**	**-1.8**
HYB	**Hyderabad**	**52.50**	**299**	*e*P	**P**	**21 34 12.4**	**-2.4**
HYB				IAmb	IAmb	21 34 17.9	
	comp=Z,37nm,0.8s						
KAAM	**Kaadhehdhoo**	**52.53**	**277**	P	**P**	**21 34 17.2**	**+2.2**
KKN	**Kakani**	**52.53**	**315**	*e*P	**P**	**21 34 14.1**	**-1.0**
	comp=Z,691nm,1.8s						
WHZ	**Wether Hill Ro**	**52.54**	**143**	P	**P**	**21 34 15.9**	**+1.3**
DMN	**Daman**	**52.55**	**314**	*e*P	**P**	**21 34 14.3**	**-0.9**
	comp=Z,956nm,2.1s						
USA0B	**Ussuriysk Arra**	**52.62**	**6**	P	**P**	**21 34 15.6**	**+0.5**
USA0B				pmax	pmax		
	comp=Z,192nm,1.3s						
USA0B	**Ussuriysk Arra**	**52.62**	**6**	P	**P**	**21 34 15.6**	**+0.5**
USA0B				IAmb	IAmb	21 34 17.9	
	comp=Z,192nm,1.3s						
USRK	**Ussuriysk Ar.**	**52.62**	**6**	P	**P**	**21 34 15.8**	**+0.7**
	comp=Z,42nm,1.0s,baz=188,slow=5.6,SNR=65						
USRK				S	**S**	**21 41 39.5**	**-0.5**
	comp=Z,1.5nm,0.6s,baz=140,slow=39,SNR=1.3						
USRK	**Ussuriysk Ar.**	**52.62**	**6**	P	**P**	**21 34 15.6**	**+0.6**
USRK	**Ussuriysk Ar.**	**52.62**	**6**	P	**P**	**21 34 15.6**	**+0.6**
ERM	**Erimo**	**52.75**	**17**	P	**P**	**21 34 17.8**	**+1.7**
ERM				pmax	pmax		
	comp=Z,87nm,1.0s						
ERM	**Erimo**	**52.75**	**17**	P	**P**	**21 34 17.8**	**+1.7**
ERM				IAmb	IAmb	21 34 24.8	
	comp=Z,87nm,1.0s						
MDJ	**Mudanjiang**	**52.81**	**4**	P	**P**	**21 34 17.2**	**+0.7**
MDJ				pP	pP	21 34 27.5	+0.6
MDJ				sP	sP	21 34 31.8	+2.4
MDJ				S	**S**	**21 41 44.6**	**+2.0**
MDJ				sS	sS	21 41 59.5	+1.5
MDJ				pmax	pmax		
	comp=Z,240nm,1.6s						
MDJ				pmax	pmax		
	comp=Z,870nm,7.7s						
MDJ	**Mudanjiang**	**52.81**	**4**	P	**P**	**21 34 17.1**	**+0.7**
GTA	**Gaotai**	**52.88**	**336**	⇓P	**P**	**21 34 17.7**	**+0.4**
GTA				sP	sP	21 34 32.2	+1.5
GTA				S	**S**	**21 41 41.4**	**-2.6**
GTA				sS	sS	21 42 04.5	+5.0
GTA				pmax	pmax		
	comp=Z,80nm,1.7s						
GTA				pmax	pmax		
	comp=Z,440nm,8.8s						
GTA				LR	LR		
	comp=Z,870nm,19.9s						
GTA				LR	LR		
	comp=Z,2µm,16.7s						
GTA				LR	LR		
	comp=Z,1µm,19.9s						
JEW	**Eniwo**	**53.05**	**15**	P	**P**	**21 34 19.7**	**+1.4**
GKN	**Gorkha**	**53.12**	**314**	*e*P	**P**	**21 34 18.5**	**-0.8**
	comp=Z,939nm,2.0s						
RPZ	**Rata Peaks**	**53.39**	**139**	P	**P**	**21 34 23.0**	**+2.0**
RPZ				IAmb	IAmb	21 34 25.8	
	comp=Z,150nm,1.0s						
FUNA	**Funafuti**	**53.60**	**94**	P	**P**	**21 34 22.4**	**-0.5**
KOLN	**Koldanda**	**53.72**	**313**	*e*P	**P**	**21 34 23.4**	**-0.4**
	comp=Z,564nm,1.7s						
THZ	**Tophouse**	**53.77**	**136**	P	**P**	**21 34 24.8**	**+1.0**
THZ				IAmb	IAmb	21 34 30.9	
	comp=Z,64nm,0.9s						
DANN	**Dangsing**	**53.94**	**314**	*e*P	**P**	**21 34 24.7**	**-0.8**
	comp=Z,732nm,1.6s						
TEY	**Ternei**	**54.09**	**10**	⇓*e*P	**P**	**21 34 27.3**	**+1.4**
TEY				*e*S	**S**	**21 42 00.3**	**+0.4**
TEY				pmax	pmax		
	comp=N,50nm,1.2s						
TEY				pmax	pmax		
	comp=E,10.0nm,1.2s						
TEY				pmax	pmax		
	comp=Z,90nm,1.2s						
TEY				pmax	pmax		
	comp=N,200nm,1.6s						
TEY				pmax	pmax		
	comp=E,100nm,1.6s						
TEY				pmax	pmax		
	comp=Z,400nm,1.5s						
TEY				smax	smax		
	comp=E,1µm,6.2s						
TEY				smax	smax		
	comp=N,500nm,4.8s						
TUWZ	**Tuamarina**	**54.34**	**136**	P	**P**	**21 34 29.4**	**+1.5**
PYUN	**Piuthan**	**54.35**	**313**	*e*P	**P**	**21 34 27.8**	**-0.6**
	comp=N,733nm,1.7s						
KHZ	**Kahutara**	**54.46**	**137**	P	**P**	**21 34 30.5**	**+1.8**
KHZ				IAmb	IAmb	21 34 34.9	
	comp=Z,196nm,1.2s						
ASAJ	**Asahikawa**	**54.54**	**16**	S	**S**	**21 42 05.0**	**-1.0**
	comp=Z,4.0nm,0.8s,baz=225,slow=33,SNR=1.2						
ASAJ	**Asahikawa**	**54.54**	**16**	P	**P**	**21 34 29.6**	**+0.4**
ASAJ				pmax	pmax		
	comp=Z,101nm,1.1s						
JKA	**Kamikawa-asahi**	**54.54**	**16**	P	**P**	**21 34 29.6**	**+0.4**
JKA				IAmb	IAmb	21 34 35.0	
	comp=Z,101nm,1.1s						
BKZ	**Black Stump Fm**	**55.33**	**132**	P	**P**	**21 34 36.8**	**+1.6**
BKZ				IAmb	IAmb	21 34 41.2	
	comp=Z,75nm,1.1s						
YUK	**Yuzh-Kuril'sk**	**55.40**	**18**	*i* P	**P**	**21 34 32.7**	**-2.7**
YUK				*i*		21 36 37.6	
YUK				*i* S	**S**	**21 42 25.0**	**+7.5**
YUK				*i* SS	**SS**	**21 46 04.6**	**+1.8**
YUK				*i* SSS	SSS	21 48 12.4	
YUK				pmax	pmax		
	comp=Z,299nm,1.3s						
URZ	**Urewera**	**55.49**	**131**	P	**P**	**21 34 39.6**	**+3.3**
	comp=Z,34nm,0.9s,baz=124,slow=24,SNR=8.2						
GOA	**Goa**	**55.91**	**295**	*e*P	**P**	**21 34 37.9**	**-1.6**
GOA				IAmb	IAmb	21 34 42.8	
	comp=Z,229nm,2.1s						
BHPL	**Bhopal**	**56.06**	**305**	*e*P	**P**	**21 34 38.2**	**-2.4**
MXZ	**Matakaoa Point**	**56.18**	**130**	P	**P**	**21 34 43.1**	**+1.9**
MXZ				IAmb	IAmb	21 34 47.4	
	comp=Z,138nm,1.0s						
YSS	**Yuzh-Sakhalins**	**57.22**	**14**	*e*P	**P**	**21 34 49.1**	**+0.8**
YSS				*e*		21 36 56.2	
YSS				*e*S	**S**	**21 42 42.1**	**+0.5**
YSS				*e*PS	**PnS**	**21 42 49.0**	**-6.9**
YSS				*e*SS	**SS**	**21 46 35.2**	**+3.8**
YSS				pmax	pmax		
	comp=Z,40nm,1.2s						
YSS				pmax	pmax		
	comp=Z,700nm,7.7s						
YSS				MLR	MLR		
	comp=Z,500nm,20.0s						
YSS	**Yuzh-Sakhalins**	**57.22**	**14**	P	**P**	**21 34 48.5**	**+0.2**
HIA	**Hailar**	**57.49**	**356**	P	**P**	**21 34 50.6**	**+0.4**
HIA				pmax	pmax		
	comp=Z,224nm,1.4s						
HIA				MLR	MLR		
	comp=Z,900nm,18.0s						
HIA	**Hailar**	**57.49**	**356**	P	**P**	**21 34 50.6**	**+0.4**
KLR	**Kul'dur**	**57.57**	**5**	*ce*P	**P**	**21 34 50.2**	**-0.6**
KLR				pmax	pmax		
	comp=Z,112nm,1.8s						
ULN	**Ulaanbaatar**	**58.11**	**346**	*di*P	**P**	**21 34 54.2**	**-0.6**
ULN				pmax	pmax		
	comp=Z,193nm,1.7s						
ULN	**Ulaanbaatar**	**58.11**	**346**	P	**P**	**21 34 54.5**	**-0.3**
ULN				IAmb	IAmb	21 34 57.4	
	comp=Z,203nm,1.4s						
SONM	**Songino Array**	**58.24**	**345**	P	**P**	**21 34 55.5**	**-0.2**
	comp=Z,58nm,1.2s,baz=166,slow=7.0,SNR=106						
SONM				ScP	**ScP**	**21 39 44.3**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=33,slow=30,SNR=2.5						
SONM				LR	LR	22 01 04.4	
	comp=Z,724nm,21.5s,baz=171,slow=37						
SONM				PKP2bc		22 04 46.7	
	comp=Z,3.0nm,1.1s,baz=270,slow=1.9,SNR=9.0						
SONM	**Songino Array**	**58.24**	**345**	P	**P**	**21 34 55.3**	**-0.4**
SONM				pmax	pmax		
	comp=Z,162nm,1.4s						
SONM	**Songino Array**	**58.24**	**345**	P	**P**	**21 34 55.3**	**-0.4**
SONM				IAmb	IAmb	21 34 58.2	
	comp=Z,162nm,1.4s						
CASY	**Casey**	**58.76**	**187**	P	**P**	**21 35 00.4**	**+1.5**
CASY	**Casey**	**58.76**	**187**	IAMs_20	IAMs_20	21 58 49.8	
	comp=Z,2µm,19.0s						
UGL	**Uglegorsk**	**59.05**	**13**	*e*P	**P**	**21 35 02.8**	**+1.7**
UGL				*e*S	**S**	**21 43 10.5**	**+5.1**
UGL				pmax	pmax		
	comp=Z,800nm,1.2s						
UGL				smax	smax		
	comp=E,2µm,6.6s						
UGL				smax	smax		
	comp=N,1µm,4.6s						
GRNR	**Gornyy**	**59.64**	**8**	⇑*i*P	**P**	**21 35 06.8**	**+1.7**
GRNR				pmax	pmax		
	comp=N,20nm,1.2s						
GRNR				pmax	pmax		
	comp=Z,40nm,1.2s						
SMLA	**Simla**	**60.24**	**313**	*e*P	**P**	**21 35 08.9**	**-0.8**
CIT	**Chita**	**60.86**	**352**	*e*P	**P**	**21 35 13.9**	**+0.4**
CIT				*e*		21 35 23.8	
CIT				*e*		21 35 56.7	
CIT				pmax	pmax		
	comp=Z,272nm,1.8s						
TYV	**Tymovskoe**	**60.86**	**13**	*e*P	**P**	**21 35 15.6**	**+2.1**
TYV				*e*S	**S**	**21 43 35.0**	**+6.4**
TYV				pmax	pmax		
	comp=Z,28nm,1.3s						
TYV				pmax	pmax		
	comp=Z,600nm,3.4s						
TYV				smax	smax		
	comp=N,500nm,4.4s						
TYV				smax	smax		
	comp=E,900nm,4.4s						
ZAK	**Zakamensk**	**61.39**	**344**	*e*P	**P**	**21 35 17.0**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,70nm,1.5s						
DHRM	**DHARAMSHALA**	**61.46**	**314**	*e*P	**P**	**21 35 17.5**	**-0.7**
DHRM				IAmb	IAmb	21 35 21.7	
	comp=Z,41nm,1.0s						
ZEA	**Zeya**	**61.81**	**2**	*e*P	**P**	**21 35 21.1**	**+1.3**
ZEA				*e*		21 37 45.0	
ZEA				*e*S	**S**	**21 43 46.9**	**+6.3**
ZEA				pmax	pmax		
	comp=E,10.0nm,1.7s						
ZEA				pmax	pmax		
	comp=N,40nm,1.3s						
ZEA				pmax	pmax		
	comp=Z,70nm,1.3s						
ZEA				pmax	pmax		
	comp=N,200nm,2.8s						
ZEA				pmax	pmax		
	comp=Z,300nm,3.1s						
ZEA				pmax	pmax		
	comp=Z,100nm,7.1s						
ZEA				smax	smax		
	comp=E,400nm,10.2s						
ZEA				smax	smax		
	comp=N,400nm,11.1s						
WMQ	**Urumqi**	**61.88**	**330**	⇓P	**P**	**21 35 21.0**	**+0.3**
WMQ				pP	pP	21 35 30.9	0.0
WMQ				PcP	**PcP**	**21 35 58.0**	**-3.3**
WMQ				S	**S**	**21 43 44.3**	**+2.2**
WMQ				sS	sS	21 43 59.3	+1.4
WMQ				pmax	pmax		
	comp=N,110nm,1.7s						
WMQ				pmax	pmax		
	comp=N,430nm,4.9s						
WMQ				LR	LR		

	comp=N,900nm,18.9s						
WMQ				LR	LR		
	comp=N,340nm,14.1s						
WMQ				LR	LR		
	comp=N,320nm,20.7s						
AFI	**Afiamalu**	**62.17**	**101**	P	**P**	**21 35 23.4**	**+0.3**
	comp=N,59nm,0.8s,baz=313,slow=9.4,SNR=4.0						
AFI	**Afiamalu**	**62.17**	**101**	P	**P**	**21 35 23.4**	**+0.3**
AFI	**Afiamalu**	**62.17**	**101**	P	**P**	**21 35 23.4**	**+0.3**
TLY	**Talaya**	**62.48**	**345**	P	**P**	**21 35 24.3**	**-0.2**
	comp=N,19nm,1.0s,baz=171,slow=6.4,SNR=24						
TLY	**Talaya**	**62.48**	**345**	*e*P	**P**	**21 35 24.7**	**+0.2**
TLY				*e*		21 36 05.6	
TLY				*e*S	**S**	**21 43 49.4**	**+0.2**
TLY				pmax	pmax		
	comp=Z,116nm,1.2s						
TLY	**Talaya**	**62.48**	**345**	P	**P**	**21 35 24.6**	**+0.2**
TLY				IAmb	IAmb	21 35 27.2	
	comp=Z,106nm,1.4s						
BHUJ	**Bhuj**	**62.50**	**301**	*e*P	**P**	**21 35 23.7**	**-1.4**
NKL	**Nikolayevsk**	**62.63**	**11**	*e*P	**P**	**21 35 25.8**	**+0.5**
NKL				*e*S	**S**	**21 43 47.9**	**-3.1**
NKL				pmax	pmax		
	comp=E,4.0nm,1.0s						
NKL				pmax	pmax		
	comp=N,1µm,1.3s						
NKL				pmax	pmax		
	comp=Z,76nm,1.3s						
NKL				MLR	MLR		
	comp=E,18nm,19.0s						
NKL				MLR	MLR		
	comp=N,9µm,10.0s						
NKL				MLR	MLR		
	comp=Z,496nm,22.0s						
IRK	**Irkutsk**	**62.84**	**346**	*e*P	**P**	**21 35 26.8**	**0.0**
IRK				pmax	pmax		
	comp=Z,187nm,2.1s						
MOY	**Mondy**	**63.18**	**344**	*e*P	**P**	**21 35 30.1**	**+0.9**
MOY				pmax	pmax		
	comp=Z,242nm,1.7s						
NIL	**Nilore**	**64.38**	**313**	P	**P**	**21 35 37.0**	**-0.4**
NIL				pmax	pmax		
	comp=Z,103nm,1.5s						
NIL				MLR	MLR		
	comp=Z,1µm,19.0s						
NIL	**Nilore**	**64.38**	**313**	P	**P**	**21 35 37.0**	**-0.4**
NIL				IAmb	IAmb	21 35 38.4	
	comp=Z,103nm,1.5s						
SKR	**Severo-Kuril’s**	**64.63**	**21**	*e*P	**P**	**21 35 42.8**	**+4.3**
SKR				*e*S	**S**	**21 44 20.4**	**+4.6**
SKR				pmax	pmax		
	comp=Z,100nm,4.0s						
SKR				MLR	MLR		
	comp=Z,200nm,18.0s						
KSH	**Kashi**	**65.70**	**320**	P	**P**	**21 35 45.7**	**-0.3**
KSH				pP	pP	21 35 55.3	-1.8
KSH				sP	sP	21 36 01.0	+1.1
KSH				S	**S**	**21 44 25.7**	**-4.1**
KSH				ScS	**SKSac**	**21 45 31.2**	**-8.0**
KSH				SS	**SS**	**21 48 43.0**	**-1.8**
KSH				pmax	pmax		
	comp=Z,51nm,1.3s						
KSH				LR	LR		
	comp=Z,2µm,18.9s						
KSH				LR	LR		
	comp=Z,980nm,18.0s						
KSH				LR	LR		
	comp=Z,2µm,21.6s						
TARG	**Taragay, Kyrgy**	**65.88**	**323**	P	**P**	**21 35 48.4**	**+0.9**
TARG				IAmb	IAmb	21 35 49.8	
	comp=Z,135nm,1.7s						
ZSN	**Zaisan**	**65.88**	**331**	⇓*i*P	**P**	**21 35 45.7**	**-1.1**
	comp=Z,48nm,1.6s,baz=331						
ZSN				*e*S	**S**	**21 44 30.9**	**-0.7**
	comp=Z,90nm,5.0s,baz=331						
ZSN	**Zaisan**	**65.88**	**331**	*d* *i*P	**P**	**21 35 45.7**	**-1.1**
ZSN				*e*S	**S**	**21 44 30.8**	**-0.7**
ZSN				pmax	pmax		
	comp=Z,48nm,1.6s						
ZSN				smax	smax		
	comp=E,90nm,5.0s						
PRZ	**Przheval'sk**	**65.99**	**324**	P	**P**	**21 35 49.0**	**+1.2**
PRZ				pmax	pmax		
	comp=Z,238nm,1.5s						
PRZ	**Przheval'sk**	**65.99**	**324**	P	**P**	**21 35 49.0**	**+1.2**
UZB	**Uzynbulak**	**66.04**	**325**	⇓*i*P	**P**	**21 35 47.6**	**-0.5**
	comp=Z,110nm,1.6s,baz=325						
UZB				*e*S	**S**	**21 44 34.8**	**+0.8**
	comp=Z,84nm,5.4s,baz=325						
UZB	**Uzynbulak**	**66.04**	**325**	*d* *i*P	**P**	**21 35 47.6**	**-0.5**
UZB				*e*S	**S**	**21 44 34.7**	**+0.8**
UZB				pmax	pmax		
	comp=Z,110nm,1.6s						
UZB				smax	smax		
	comp=E,84nm,5.4s						
SATY	**Saty**	**66.34**	**324**	⇓*i*P	**P**	**21 35 49.8**	**-0.2**
	comp=E,127nm,1.6s,baz=324						
SATY				*e*S	**S**	**21 44 37.9**	**+0.4**
	comp=E,113nm,5.3s,baz=324						
SATY	**Saty**	**66.34**	**324**	*d* *i*P	**P**	**21 35 49.8**	**-0.2**
SATY				*e*S	**S**	**21 44 37.8**	**+0.4**
SATY				pmax	pmax		
	comp=Z,127nm,1.6s						
SATY				smax	smax		
	comp=N,113nm,5.3s						
KPKS	**Kokpek**	**66.43**	**325**	⇓*i*P	**P**	**21 35 50.1**	**-0.5**
	comp=N,130nm,1.5s,baz=325						
KPKS				*e*S	**S**	**21 44 40.0**	**+1.5**
	comp=N,84nm,5.5s,baz=325						
KPKS	**Kokpek**	**66.43**	**325**	*d* *i*P	**P**	**21 35 50.0**	**-0.5**
KPKS				*e*S	**S**	**21 44 40.0**	**+1.5**
KPKS				pmax	pmax		
	comp=Z,130nm,1.5s						
KPKS				smax	smax		
	comp=E,84nm,5.5s						
BOD	**Bodaibo**	**66.48**	**354**	*e*P	**P**	**21 35 50.7**	**+0.3**
BOD				pmax	pmax		
	comp=Z,270nm,1.6s						
MK31	**Makanchi Array**	**66.68**	**330**	P	**P**	**21 35 52.4**	**+0.4**
MK31				pmax	pmax		
	comp=Z,242nm,1.4s						
MK31	**Makanchi Array**	**66.68**	**330**	P	**P**	**21 35 52.4**	**+0.4**
MKAR	**Makanchi Array**	**66.68**	**330**	P	**P**	**21 35 51.8**	**-0.2**
	comp=Z,100nm,1.1s,baz=132,slow=6.7,SNR=133						
MKAR				PP	**PP**	**21 38 17.2**	**-2.1**
	comp=Z,7.4nm,1.3s,baz=107,slow=7.7,SNR=1.4						
MKAR				PKP2bc		22 04 29.3	
	comp=Z,2.8nm,1.1s,baz=316,slow=5.1,SNR=4.7						
MKAR	**Makanchi Array**	**66.68**	**330**	P	**P**	**21 35 52.0**	**0.0**
MKAR	**Makanchi Array**	**66.68**	**330**	P	**P**	**21 35 52.0**	**0.0**
MAKZ	**Makanchi**	**66.85**	**329**	P	**P**	**21 35 52.2**	**-0.8**
MAKZ				pmax	pmax		
	comp=Z,192nm,1.4s						
MAKZ				MLR	MLR		
	comp=Z,600nm,19.0s						
MAKZ	**Makanchi**	**66.85**	**329**	P	**P**	**21 35 52.2**	**-0.8**
TNSS	**Tian-Shan**	**67.17**	**324**	*e*P	**P**	**21 35 55.7**	**+0.1**
	baz=324						
PEA0B	**Petropavlovsk-**	**67.18**	**21**	*e*P	**P**	**21 35 56.3**	**+1.3**
PEA0B	**Petropavlovsk-**	**67.18**	**21**	P	**P**	**21 35 56.3**	**+1.3**
PETK	**Petropavlovsk-**	**67.18**	**21**	P	**P**	**21 35 54.0**	**-1.0**
	comp=Z,14nm,0.7s,baz=210,slow=4.9,SNR=21						
PETK				LR	LR	22 04 20.5	
	comp=Z,305nm,20.5s,baz=219,slow=35						
PETK	**Petropavlovsk-**	**67.18**	**21**	P	**P**	**21 35 55.6**	**+0.6**
PETK	**Petropavlovsk-**	**67.18**	**21**	P	**P**	**21 35 55.6**	**+0.6**
MDOK	**Medeo**	**67.19**	**324**	*i* P	**P**	**21 35 54.9**	**-0.6**
	baz=324						
MDOK				*e*S	**S**	**21 44 46.1**	**-1.7**
	baz=324						
MDOK	**Medeo**	**67.19**	**324**	*i* P	**P**	**21 35 54.8**	**-0.6**
MDOK				*e*S	**S**	**21 44 46.1**	**-1.7**
AAA	**Alma-Ata**	**67.29**	**324**	*e*P	**P**	**21 35 54.7**	**-1.3**
	baz=324						
AAA				*e*S	**S**	**21 44 47.4**	**-1.6**
	baz=324						
AAA	**Alma-Ata**	**67.29**	**324**	*e*P	**P**	**21 35 54.6**	**-1.4**
AAA				*e*S	**S**	**21 44 47.3**	**-1.6**
PET	**Petropavlovsk**	**67.45**	**21**	*e*P	**P**	**21 35 56.4**	**-0.2**
PET				*e*S	**S**	**21 44 48.8**	**-1.3**
PET				*e*		21 45 55.4	
PET				*e*SS	**SS**	**21 49 12.3**	**+1.2**
PET				pmax	pmax		
	comp=Z,800nm,6.8s						
PET				pmax	pmax		
	comp=Z,91nm,1.5s						
PET				pmax	pmax		
	comp=Z,400nm,5.2s						
PET				MLR	MLR		
	comp=Z,500nm,19.0s						
PET				MLR	MLR		
	comp=Z,700nm,18.0s						
PET	**Petropavlovsk**	**67.45**	**21**	P	**P**	**21 35 57.3**	**+0.7**
PET				IAmb	IAmb	21 36 03.0	
	comp=Z,157nm,1.5s						
TDK	**Taldyqorghan**	**67.55**	**326**	*i* P	**P**	**21 35 56.8**	**-0.8**
	comp=Z,249nm,1.5s,baz=326						
TDK				*e*S	**S**	**21 44 52.3**	**+0.4**
	baz=326						
TDK	**Taldyqorghan**	**67.55**	**326**	*i* P	**P**	**21 35 56.7**	**-0.8**
TDK				*e*S	**S**	**21 44 52.2**	**+0.4**
TDK				pmax	pmax		
	comp=Z,249nm,1.5s						
CHKK	**Chushkaly**	**67.64**	**324**	⇓*e*P	**P**	**21 35 57.5**	**-0.7**
	baz=324						
RER	**Riviere de l’E**	**67.73**	**251**	P	**P**	**21 35 59.4**	**+0.1**
KBL	**Kabul**	**67.86**	**312**	P	**P**	**21 35 59.7**	**-0.3**
KBL				pmax	pmax		
	comp=Z,90nm,1.4s						
KBL	**Kabul**	**67.86**	**312**	P	**P**	**21 35 59.7**	**-0.3**
KBL				IAmb	IAmb	21 36 01.1	
	comp=Z,90nm,1.4s						
TKM2	**Tokmak 2**	**67.90**	**323**	P	**P**	**21 36 00.7**	**+0.6**
	SNR=39						
TKM2	**Tokmak 2**	**67.90**	**323**	*i* P	**P**	**21 35 59.1**	**-0.9**
TKM2				pmax	pmax		
	comp=Z,135nm,1.7s						
KUU	**Kurty**	**68.04**	**324**	⇓*i*P	**P**	**21 35 59.9**	**-0.8**
	comp=Z,368nm,1.9s,baz=324						
KUU				*e*S	**S**	**21 44 56.5**	**-1.2**
	comp=Z,132nm,3.6s,baz=324						
KUU	**Kurty**	**68.04**	**324**	*d* *i*P	**P**	**21 35 59.8**	**-0.8**
KUU				*e*S	**S**	**21 44 56.5**	**-1.2**
KUU				pmax	pmax		
	comp=Z,367nm,1.9s						
KUU				smax	smax		
	comp=N,132nm,3.6s						
KBK	**Karagaybulak**	**68.14**	**322**	P	**P**	**21 36 02.6**	**+1.1**
	SNR=29						
DRK	**Karamyk**	**68.38**	**318**	P	**P**	**21 36 03.2**	**0.0**
DRK				IAmb	IAmb	21 36 05.7	
	comp=Z,61nm,1.2s						
AAK	**Ala-Archa**	**68.40**	**322**	P	**P**	**21 36 02.8**	**-0.3**
	comp=Z,21nm,1.1s,baz=125,slow=5.6,SNR=48						
AAK	**Ala-Archa**	**68.40**	**322**	P	**P**	**21 36 03.6**	**+0.4**
	SNR=26						
AAK	**Ala-Archa**	**68.40**	**322**	*i* P	**P**	**21 36 03.0**	**-0.1**
	SNR=35						
AAK	**Ala-Archa**	**68.40**	**322**	*d* *i*P	**P**	**21 36 02.8**	**-0.3**
AAK				pmax	pmax		
	comp=Z,296nm,1.7s						
AAK	**Ala-Archa**	**68.40**	**322**	P	**P**	**21 36 03.1**	**0.0**
AAK	**Ala-Archa**	**68.40**	**322**	IAMs_20	IAMs_20	22 09 44.1	
	comp=Z,1µm,22.0s						
FRU1	**Bishkek**	**68.42**	**322**	P	**P**	**21 36 02.8**	**-0.3**
FRU1				pmax	pmax		
	comp=Z,138nm,1.7s						
FRU1	**Bishkek**	**68.42**	**322**	P	**P**	**21 36 02.8**	**-0.3**
FRU1				IAmb	IAmb	21 36 05.0	
	comp=Z,138nm,1.7s						
CHMS	**Chumysh**	**68.45**	**323**	P	**P**	**21 36 04.4**	**+1.2**
	SNR=12						
AML	**Almayashu**	**68.60**	**321**	P	**P**	**21 36 05.4**	**+0.8**
	SNR=22						
AML	**Almayashu**	**68.60**	**321**	*i* P	**P**	**21 36 05.1**	**+0.4**
	SNR=22						
USP	**Ospenovka**	**68.76**	**323**	P	**P**	**21 36 05.7**	**+0.6**
	SNR=36						
SGDS	**Sogindy**	**68.78**	**323**	⇓*i*P	**P**	**21 36 03.8**	**-1.6**
	comp=Z,62nm,1.8s,baz=323						
SGDS				*e*S	**S**	**21 45 08.0**	**+1.3**
	comp=Z,86nm,6.0s,baz=323						
EKS2	**Erkin-Say**	**68.85**	**322**	P	**P**	**21 36 07.8**	**+1.9**
	SNR=23						
MSEY	**Mahe Island**	**69.08**	**268**	P	**P**	**21 36 08.9**	**+1.1**
MSEY	**Mahe Island**	**69.08**	**268**	P	**P**	**21 36 06.9**	**-0.9**
MSEY				pmax	pmax		
	comp=Z,87nm,1.7s						
MSEY				MLR	MLR		
	comp=Z,2µm,20.0s						
MSEY	**Mahe Island**	**69.08**	**268**	P	**P**	**21 36 06.9**	**-0.9**
MSEY				IAmb	IAmb	21 36 10.9	
	comp=Z,87nm,1.6s						
MSEY	**Mahe Island**	**69.08**	**268**	P	**P**	**21 36 08.9**	**+1.1**
GAR	**Garm**	**69.12**	**317**	P	**P**	**21 36 07.5**	**-0.2**
GAR				IAmb	IAmb	21 36 08.9	
	comp=Z,101nm,1.4s						
BTK	**Batken**	**69.33**	**318**	P	**P**	**21 36 09.0**	**+0.2**
BTK				pmax	pmax		
	comp=Z,122nm,1.7s						
BTK	**Batken**	**69.33**	**318**	P	**P**	**21 36 09.0**	**+0.2**
BTK				IAmb	IAmb	21 36 11.3	
	comp=Z,122nm,1.6s						
CHGR	**Chuyangaron**	**69.74**	**316**	P	**P**	**21 36 11.1**	**-0.3**
BTLS	**Baital**	**70.04**	**324**	⇓*i*P	**P**	**21 36 11.6**	**-1.4**
	comp=Z,62nm,1.8s,baz=324						
BTLS				*i* S	**S**	**21 45 20.2**	**-1.1**
	baz=324						
BTLS	**Baital**	**70.04**	**324**	*d* *i*P	**P**	**21 36 11.6**	**-1.4**
BTLS				*i* S	**S**	**21 45 20.2**	**-1.1**
BTLS				pmax	pmax		
	comp=Z,62nm,1.8s						
SEM	**Semipalatinsk**	**70.13**	**331**	⇓*i*P	**P**	**21 36 12.1**	**-1.7**
	comp=Z,93nm,1.6s,baz=331						
SEM				*e*S	**S**	**21 45 19.8**	**-2.7**
	baz=331						
SEM	**Semipalatinsk**	**70.13**	**331**	*d* *i*P	**P**	**21 36 12.0**	**-1.7**
SEM				*e*S	**S**	**21 45 19.8**	**-2.7**
SEM				pmax	pmax		
	comp=Z,93nm,1.6s						
YAK	**Yakutsk**	**70.19**	**2**	P	**P**	**21 36 13.2**	**-0.4**
	comp=Z,29nm,0.8s,baz=209,slow=1.0,SNR=35						
YAK	**Yakutsk**	**70.19**	**2**	*e*P	**P**	**21 36 13.0**	**-0.5**
YAK				*e*		21 36 34.1	
YAK				*e*		21 38 48.3	
YAK				*e*PPP	PPP	21 40 30.6	
YAK				*e*S	**S**	**21 45 20.2**	**-2.1**
YAK				*e**SS	sS	21 45 46.3	+8.1
YAK				*e*		21 46 10.5	
YAK				*e*SS	**SS**	**21 49 52.0**	**-1.1**
YAK				pmax	pmax		
	comp=Z,154nm,1.4s						
YAK				pmax	pmax		
	comp=N,76nm,1.5s						
YAK				pmax	pmax		
	comp=E,32nm,1.3s						
YAK				pmax	pmax		
	comp=Z,44nm,1.5s						
YAK				pmax	pmax		
	comp=N,40nm,1.5s						
YAK				pmax	pmax		
	comp=E,140nm,3.3s						
YAK				smax	smax		
	comp=E,463nm,4.9s						
YAK				smax	smax		
	comp=N,849nm,5.4s						
YAK	**Yakutsk**	**70.19**	**2**	P	**P**	**21 36 13.4**	**-0.1**
YAK				IAmb	IAmb	21 36 16.0	
	comp=Z,95nm,0.9s						
DZA	**Taraz**	**70.48**	**321**	*e*P	**P**	**21 36 13.4**	**-2.4**
	baz=321						
DZA	**Taraz**	**70.48**	**321**	*e*P	**P**	**21 36 13.4**	**-2.4**
ZAA0	**Zalesovo Array**	**70.63**	**336**	P	**P**	**21 36 15.3**	**-1.0**
ZALV	**Zalesovo Beam**	**70.63**	**336**	P	**P**	**21 36 15.1**	**-1.3**
	comp=Z,178nm,1.2s,baz=116,slow=3.4,SNR=195						
ZALV				S	**S**	**21 45 24.8**	**-3.0**
	comp=Z,0.4nm,0.4s,baz=130,slow=53,SNR=2.3						
ZALV				PKP2bc		22 04 17.3	
	comp=Z,2.1nm,0.9s,baz=316,slow=6.2,SNR=8.7						
ZALV	**Zalesovo Beam**	**70.63**	**336**	P	**P**	**21 36 15.4**	**-1.0**
ZALV	**Zalesovo Beam**	**70.63**	**336**	P	**P**	**21 36 15.4**	**-1.0**
MA2	**Magadan**	**70.71**	**14**	⇑*e*P	**P**	**21 36 18.3**	**+1.5**
MA2				pmax	pmax		
	comp=Z,77nm,1.3s						
MA2	**Magadan**	**70.71**	**14**	P	**P**	**21 36 17.2**	**+0.5**
MA2				IAmb	IAmb	21 36 27.8	
	comp=Z,98nm,1.2s						
IUG	**Iuzhnay**	**70.91**	**320**	⇓*i*P	**P**	**21 36 17.2**	**-1.3**
	baz=320						
IUG	**Iuzhnay**	**70.91**	**320**	*d* *i*P	**P**	**21 36 17.2**	**-1.3**
TAS	**Tashkent**	**70.97**	**319**	P	**P**	**21 36 18.6**	**-0.2**
TAS				pmax	pmax		
	comp=Z,229nm,1.6s						
TAS	**Tashkent**	**70.97**	**319**	P	**P**	**21 36 18.6**	**-0.2**
JLN	**Jalan Bani Buh**	**70.98**	**297**	P	**P**	**21 36 19.7**	**+0.5**
	SNR=8.8						
KURBB	**Kurchatov Arra**	**71.09**	**331**	P	**P**	**21 36 18.8**	**-0.4**
	comp=Z,87nm,1.1s,baz=135,slow=5.3,SNR=187						
KURBB				S	**S**	**21 45 32.4**	**-0.9**
	comp=Z,1.2nm,0.4s,baz=347,slow=32,SNR=2.0						
KK31	**Karatay Array**	**71.10**	**321**	P	**P**	**21 36 19.3**	**-0.3**
KK31				pmax	pmax		
	comp=Z,92nm,1.7s						
KK31	**Karatay Array**	**71.10**	**321**	P	**P**	**21 36 19.3**	**-0.3**
KK31				IAmb	IAmb	21 36 21.6	
	comp=Z,92nm,1.7s						
KKAR	**Karatay Array**	**71.10**	**321**	P	**P**	**21 36 18.7**	**-0.9**
KKAR				pmax	pmax		
	comp=Z,92nm,1.7s						
KKAR	**Karatay Array**	**71.10**	**321**	P	**P**	**21 36 18.7**	**-0.9**
KKAR	**Karatay Array**	**71.10**	**321**	P	**P**	**21 36 19.2**	**-0.4**
KKAR				IAmb	IAmb	21 36 21.6	
	comp=Z,92nm,1.7s						
KURK	**Kurchatov**	**71.11**	**331**	*d* *i*P	**P**	**21 36 18.7**	**-0.7**
KURK				pmax	pmax		
	comp=Z,266nm,1.3s						
KURK	**Kurchatov**	**71.11**	**331**	P	**P**	**21 36 18.9**	**-0.5**
BRLS	**Borolday**	**71.49**	**321**	*e*P	**P**	**21 36 20.8**	**-1.2**
	baz=320						
BRLS				*e*S	**S**	**21 45 37.4**	**-0.9**
	baz=320						
BRLS	**Borolday**	**71.49**	**321**	*e*P	**P**	**21 36 20.7**	**-1.2**
BRLS				*e*S	**S**	**21 45 37.3**	**-0.9**
WBK	**Wadi Bani Khal**	**71.51**	**297**	P	**P**	**21 36 23.1**	**+0.6**
	SNR=10.0						
VNDA	**Vanda**	**71.83**	**172**	P	**P**	**21 36 24.0**	**+0.7**
	comp=Z,11nm,0.7s,baz=318,slow=7.0,SNR=43						
VNDA				S	**S**	**21 45 39.9**	**-1.2**
	comp=Z,0.7nm,1.1s,baz=105,slow=10,SNR=1.8						
VNDA				LR	LR	22 08 10.5	
	comp=Z,4µm,18.5s,baz=328,slow=36						
VNDA	**Vanda**	**71.83**	**172**	P	**P**	**21 36 23.7**	**+0.3**
VNDA				pmax	pmax		
	comp=Z,34nm,1.1s						
VNDA	**Vanda**	**71.83**	**172**	P	**P**	**21 36 23.7**	**+0.3**
MHTO	**MHTO**	**71.92**	**295**	P	**P**	**21 36 24.2**	**-0.7**
	SNR=12						
MAW	**Mawson**	**71.97**	**201**	P	**P**	**21 36 24.5**	**+0.2**
	comp=Z,27nm,1.2s,baz=62,slow=7.3,SNR=22						
MAW				S	**S**	**21 45 41.5**	**-1.4**
	comp=Z,0.7nm,0.5s,baz=60,slow=19,SNR=1.5						
MAW				LR	LR	22 05 41.8	
	comp=Z,783nm,18.7s,baz=58,slow=34						
MAW	**Mawson**	**71.97**	**201**	P	**P**	**21 36 26.3**	**+2.0**
	baz=72,SNR=17						
MAW	**Mawson**	**71.97**	**201**	P	**P**	**21 36 25.0**	**+0.7**
MAW	**Mawson**	**71.97**	**201**	P	**P**	**21 36 25.0**	**+0.7**
WSAR	**Wadi Sarin**	**72.00**	**298**	P	**P**	**21 36 24.8**	**-0.6**
	comp=Z,57nm,1.2s,baz=136,slow=5.6,SNR=28						
WSAR				S	**S**	**21 45 40.9**	**-3.9**
	comp=Z,1.7nm,0.7s,baz=70,slow=22,SNR=1.0						
WSAR	**Wadi Sarin**	**72.00**	**298**	P	**P**	**21 36 25.6**	**+0.3**
	SNR=20						
JMDO	**Jabal Madar**	**72.20**	**297**	P	**P**	**21 36 27.1**	**+0.5**
	SNR=16						
SMDO	**Samad**	**72.45**	**297**	P	**P**	**21 36 28.5**	**+0.3**
	SNR=11						
BIDO	**Bidbid**	**72.52**	**298**	P	**P**	**21 36 29.1**	**+0.7**
	SNR=22						
SBA	**Scott Base**	**72.77**	**172**	P	**P**	**21 36 31.2**	**+2.2**
SBA				pmax	pmax		
	comp=Z,69nm,1.4s						
SBA				MLR	MLR		
	comp=Z,2µm,18.0s						
SBA	**Scott Base**	**72.77**	**172**	P	**P**	**21 36 31.2**	**+2.2**
HRA	**Herat**	**72.87**	**310**	P	**P**	**21 36 30.0**	**-0.6**
BSY	**Bisya**	**73.11**	**297**	P	**P**	**21 36 32.3**	**+0.3**
	SNR=11						
HOQ	**Hoqain**	**73.25**	**298**	P	**P**	**21 36 33.3**	**+0.4**
	SNR=33						
SHAO	**Shalim**	**73.26**	**292**	*i* P	**P**	**21 36 32.6**	**-0.3**
	SNR=5.1						
SHAO	**Shalim**	**73.26**	**292**	P	**P**	**21 36 34.0**	**+1.0**
	SNR=5.4						
SOCY	**Socotra**	**73.43**	**285**	P	**P**	**21 36 33.2**	**-0.9**
SOCY				IAmb	IAmb	21 36 35.6	
	comp=Z,78nm,1.3s						
SOCY				IAMs_20	IAMs_20	22 07 28.0	
	comp=Z,2µm,19.0s						
BRZS	**Berezniki**	**73.65**	**328**	⇓*i*P	**P**	**21 36 33.8**	**-0.9**
	comp=Z,82nm,1.7s,baz=328						
BRZS	**Berezniki**	**73.65**	**328**	*d* *i*P	**P**	**21 36 33.7**	**-0.9**
BRZS				pmax	pmax		
	comp=Z,82nm,1.7s						
SBV	**Sambava**	**73.66**	**258**	P	**P**	**21 36 39.0**	**+3.6**
DMTO	**DMTO**	**73.81**	**291**	P	**P**	**21 36 37.1**	**+1.0**
	SNR=5.1						
SEY	**Seymchan**	**74.05**	**13**	P	**P**	**21 36 36.6**	**-0.1**
	comp=Z,25nm,1.0s						
SOHO	**SOHO**	**74.10**	**298**	*i* P	**P**	**21 36 36.6**	**-1.1**
	SNR=15						
RBK	**Rabkut**	**74.44**	**291**	P	**P**	**21 36 40.9**	**+0.9**
	SNR=7.6						
UOSS	**Minazif**	**74.62**	**299**	*i* P	**P**	**21 36 39.1**	**-1.7**
	SNR=8.3						
UOSS	**Minazif**	**74.62**	**299**	P	**P**	**21 36 40.0**	**-0.8**
MDH	**Madha**	**74.64**	**299**	P	**P**	**21 36 39.0**	**-1.9**
HATD	**Hatta, Dubai**	**74.65**	**299**	*i* P	**P**	**21 36 40.2**	**-0.8**
	SNR=13						
HATD	**Hatta, Dubai**	**74.65**	**299**	P	**P**	**21 36 41.7**	**+0.7**
	SNR=18						
ASHO	**Ashiyiah**	**74.67**	**298**	*i* P	**P**	**21 36 40.1**	**-1.0**
	SNR=9.9						
ASHO	**Ashiyiah**	**74.67**	**298**	P	**P**	**21 36 41.7**	**+0.5**
	SNR=17						
ALNE	**Al Ain**	**74.76**	**298**	*i* P	**P**	**21 36 41.1**	**-0.6**
	SNR=7.5						
ALNE	**Al Ain**	**74.76**	**298**	P	**P**	**21 36 42.3**	**+0.7**
	SNR=16						
MSFE	**Esma-Masafi**	**74.78**	**299**	*i* P	**P**	**21 36 41.5**	**-0.3**
	SNR=6.6						
MASF	**Masafi**	**74.78**	**299**	P	**P**	**21 36 42.6**	**+0.9**
	SNR=8.7						
DOK	**Doka**	**74.78**	**292**	P	**P**	**21 36 42.1**	**+0.3**
	SNR=6.5						
BANOM	**Banah**	**74.82**	**300**	P	**P**	**21 36 41.7**	**-0.3**
WHFO	**Wadi Hawf**	**74.94**	**291**	P	**P**	**21 36 43.6**	**+0.7**
	SNR=7.7						
SHME	**Shamm**	**74.99**	**300**	*i* P	**P**	**21 36 42.2**	**-0.7**
	SNR=6.6						
SHME	**Shamm**	**74.99**	**300**	P	**P**	**21 36 43.7**	**+0.8**
	SNR=6.1						
FAQ	**Al Faqa, Dubai**	**75.09**	**298**	*i* P	**P**	**21 36 42.3**	**-1.3**
	SNR=17						
FAQ	**Al Faqa, Dubai**	**75.09**	**298**	P	**P**	**21 36 43.8**	**+0.2**
	SNR=11						
NAZ	**Nazwa, Dubai**	**75.10**	**299**	P	**P**	**21 36 42.7**	**-0.9**
NAZ				*i* P	**P**	**21 36 42.7**	**-0.9**
	SNR=5.3						
NAZ	**Nazwa, Dubai**	**75.10**	**299**	P	**P**	**21 36 44.4**	**+0.8**
	SNR=9.9						
ABTO	**Aybut**	**75.25**	**290**	P	**P**	**21 36 45.5**	**+0.9**
	SNR=6.0						
ASUD	**Al Ashush, Dub**	**75.29**	**298**	*i* P	**P**	**21 36 44.3**	**-0.3**
	SNR=6.4						
ASUD	**Al Ashush, Dub**	**75.29**	**298**	P	**P**	**21 36 45.2**	**+0.6**
	SNR=7.2						
AJN	**Ajban**	**75.57**	**298**	P	**P**	**21 36 45.2**	**-1.0**
AJN	**Ajban**	**75.57**	**298**	P	**P**	**21 36 46.2**	**0.0**
	SNR=5.1						
VOI	**Vohitsoka**	**76.04**	**249**	P	**P**	**21 36 49.7**	**+0.5**
VOI				IAmb	IAmb	21 36 51.4	
	comp=Z,86nm,1.2s						
VOI	**Vohitsoka**	**76.04**	**249**	P	**P**	**21 36 50.7**	**+1.5**
BVAR	**Borovoye Array**	**76.56**	**330**	P	**P**	**21 36 51.3**	**0.0**
	comp=Z,13nm,0.9s,baz=187,slow=12,SNR=59						
BRVK	**Borovoye**	**76.64**	**330**	*d* *i*P	**P**	**21 36 51.0**	**-0.7**
BRVK				pmax	pmax		
	comp=Z,213nm,2.5s						
BRVK				MLR	MLR		
	comp=Z,451nm,20.0s						
BRVK	**Borovoye**	**76.64**	**330**	P	**P**	**21 36 51.6**	**-0.1**
GEYT	**Alibeck**	**77.29**	**312**	P	**P**	**21 36 55.6**	**-0.2**
	comp=Z,17nm,1.2s,baz=197,slow=5.4,SNR=13						
GEYT				LR	LR	22 18 34.6	
	comp=Z,542nm,18.2s,baz=95,slow=42						
GYA0B	**ALIBECK ARRAY**	**77.29**	**312**	P	**P**	**21 36 55.2**	**-0.7**
GYA0B				IAmb	IAmb	21 36 58.2	
	comp=Z,102nm,1.7s						

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TIXI  Tiksi            79.80   1   P       P        21 37 08.2 -0.6
      comp=Z,24nm,0.7s,baz=160,slow=4.2,SNR=54
TIXI                               S       S        21 47 06.9 -2.0
      comp=Z,0.2nm,0.2s,baz=95,slow=20,SNR=1.0
TIXI  Tiksi            79.80   1d iP       P        21 37 07.5 -1.3
TIXI  Tiksi            79.80   1   P       P        21 37 07.7 -1.1
ABKAR Akbulak array    80.47 323   P       P        21 37 11.5 -1.4
ABKAR                              IAmb    IAmb     21 37 14.7
      comp=Z,112nm,1.6s
ABKAR Akbulak array    80.47 323   P       P        21 37 12.4 -0.5
SYO   Syowa Base       80.67 201⇑ eX       P        21 37 12.9 -0.8
SYO   Syowa Base       80.67 201⇓ iX       P        21 37 15.0 +1.3
NRIK  Noril'sk         81.65 347   P       P        21 37 19.0 +0.2
      comp=Z,6.6nm,0.8s,baz=146,slow=5.2,SNR=18
NRIK                               S       S        21 47 26.2 -2.2
      comp=Z,1.3nm,0.3s,baz=117,slow=5.4,SNR=1.4
NRIK  Noril'sk         81.65 347d eP       P        21 37 18.8  0.0
NRIK                               pmax    pmax
      comp=Z,72nm,2.0s
NRIK  Noril'sk         81.65 347   P       P        21 37 18.8  0.0
NRIK                               IAmb    IAmb     21 37 21.8
      comp=Z,97nm,1.8s
QSPA  South Pole Qui   81.71 180   P       P        21 37 20.1 +0.7
      comp=Z,57nm,0.9s,baz=312,slow=1.3,SNR=37
QSPA  South Pole Qui   81.71 180   P       P        21 37 19.7 +0.3
QSPA                               IAmb    IAmb     21 37 25.8
      comp=Z,97nm,1.1s
AKTO  Aktyubinsk       82.09 324   P       P        21 37 20.7 -0.8
      comp=Z,36nm,1.1s,baz=114,slow=6.1,SNR=70
TBI   Tubuai           82.72 113  eS       S        21 47 36.4 -4.8
      comp=Z,543nm,41.0s
TBI   Tubuai           82.72 113  eLQ      LQ       21 59 53.6
      comp=Z,2µm,35.8s
TBI                               eLR      LR       22 03 26.0
      comp=Z,2µm,25.2s
QRN   Al-Qurain        82.75 300  eP       P        21 37 24.8 -0.7
QRN                               eP       P        21 37 24.8 -0.7
HMH   Humu‘ula Sheep   83.01  69   P       P        21 37 26.9 -0.5
UMR   Umm Al-Rimmam    83.11 301  eP       P        21 37 26.1 -1.2
PPT2  Papeete2         83.23 107  eLQ      LQ       22 00 07.8
      comp=Z,5µm,38.5s
PPT2                              eLR      LR       22 03 38.0
      comp=Z,2µm,29.5s
PPT   Papeete          83.23 107   LR      LR       22 09 23.6
      comp=Z,530nm,19.7s,baz=268,slow=32
SVE   Sverdlovsk       83.33 330⇓ eP       P        21 37 27.8  0.0
SVE                                pmax    pmax
      comp=Z,97nm,2.1s
ARU   Arti             84.20 329   P       P        21 37 31.5 -0.8
      comp=Z,4.3nm,0.9s,baz=109,slow=3.7,SNR=23
ARU   Arti             84.20 329d iP       P        21 37 31.1 -1.2
ARU                                S       S        21 47 51.4 -3.4
ARU                                SS      SS       21 53 27.6 +2.9
ARU                                pmax    pmax
      comp=Z,109nm,1.9s
ARU   Arti             84.20 329   P       P        21 37 31.7 -0.5
MAK   Makhachkala      86.54 314  eP       P        21 37 40.5 -3.7
MAK                               e                 21 48 02.3
MAK                                pmax    pmax
      comp=Z,230nm,1.5s
KIBK  Kibwezi          86.63 268   P       P        21 37 44.6 -0.9
KIBK  Kibwezi          86.63 268   P       P        21 37 46.0 +0.5
      SNR=6.7
KMBO  Kilima Mbogo     87.59 269   P       P        21 37 50.0 -0.4
      comp=Z,12nm,1.1s,baz=74,slow=5.7,SNR=16
KMBO  Kilima Mbogo     87.59 269  i P      P        21 37 50.3  0.0
      SNR=5.6
KMBO  Kilima Mbogo     87.59 269  i P      P        21 37 51.0 +0.7
KMBO                               pmax    pmax
      comp=Z,12nm,1.1s
KMBO  Kilima Mbogo     87.59 269   P       P        21 37 49.8 -0.5
KMBO  Kilima Mbogo     87.59 269   IAMs_20 IAMs_20  22 12 52.6
      comp=Z,1µm,20.0s
FURI  Furi             87.64 279   IAMs_20 IAMs_20  22 17 17.7
      comp=Z,1µm,20.0s
GROC  Groznyy          87.81 314  eP       P        21 37 50.5 +0.1
GROC                              e                 21 41 17.2
GROC                              eS       SKSac    21 48 15.7 -0.3
GROC                              eSS      SS       21 54 24.7 +6.4
GROC                               pmax    pmax
      comp=Z,118nm,1.3s
GNI   Garni            87.89 311   P       P        21 37 50.7 -0.3
      comp=Z,35nm,1.3s,baz=333,slow=1.8,SNR=11
GNI   Garni            87.89 311   P       P        21 37 51.0 -0.1
GNI   Garni            87.89 311d iP       P        21 37 50.8 -0.3
GNI                                pmax    pmax
      comp=Z,61nm,1.3s
GNI   Garni            87.89 311   P       P        21 37 51.1  0.0
GNI                                IAmb    IAmb     21 37 57.1
      comp=Z,78nm,1.4s
BELG  Belogornoye      88.87 323   P       P        21 37 53.6 -1.6
      comp=Z,33nm,1.1s,baz=328,slow=2.2,SNR=9.0
ZEI   Tsey             89.07 313  eP       P        21 37 56.4 -0.3
ZEI                                pmax    pmax
      comp=Z,23nm,1.4s
SIRT  Sirnak           89.11 308   P       P        21 37 56.4 -0.4
KARS  Kars             89.24 311   P       P        21 37 57.6 +0.2
KARS                               pmax    pmax
      comp=Z,490nm,1.9s
KARS  Kars             89.24 311   P       P        21 37 57.6 +0.2
ONI   Oni              89.36 313   P       P        21 37 58.0 +0.2
ONI                                pmax    pmax
      comp=Z,64nm,1.6s
ONI   Oni              89.36 313   P       P        21 37 58.0 +0.2
ONI                                IAmb    IAmb     21 37 59.7
      comp=Z,64nm,1.6s
NCK   Nalchik          89.44 314⇑ iP       P        21 37 58.4 +0.3
NCK                                pmax    pmax
      comp=Z,67nm,1.2s
KIRV  Kirov            89.58 330   P       P        21 37 56.8 -1.6
      comp=Z,2.2nm,0.3s,baz=76,slow=3.6,SNR=7.3
KIRV  Kirov            89.58 330d iP       P        21 37 57.9 -0.4
GURO  Guroymak-BITLI   89.63 309   P       P        21 37 59.3  0.0
GURO                               IAmb    IAmb     21 38 01.7
      comp=Z,66nm,1.3s
KBZ   Khabaz           89.98 314   P       P        21 37 59.2 -1.4
      comp=Z,11nm,0.9s,baz=85,slow=1.7,SNR=18
KBZ                                LR      LR       22 27 09.7
      comp=Z,490nm,19.3s,baz=110,slow=41
KBZ   Khabaz           89.98 314d iP       P        21 37 59.4 -1.2
KBZ                                pmax    pmax
      comp=Z,28nm,1.1s
LODK  Lodwar           90.11 273   P       P        21 38 01.8 -0.2
LODK                               IAMs_20 IAMs_20  22 19 30.9
      comp=Z,981nm,19.0s
LODK  Lodwar           90.11 273   P       P        21 38 02.9 +0.9
      SNR=5.9
GOF   Gofitskoye       90.14 315⇑ eP       P        21 38 02.0 +0.6
GOF                                pmax    pmax
      comp=Z,95nm,1.3s
KIV   Kislovodsk       90.18 314   P       P        21 38 00.7 -0.9
KIV   Kislovodsk       90.18 314  eP       P        21 38 01.5 -0.2
KIV                               e                 21 48 29.3
KIV                               eSS      SS       21 54 54.6 +1.7
KIV                                pmax    pmax
      comp=Z,13nm,1.0s
KIV   Kislovodsk       90.18 314   P       P        21 38 01.0 -0.7
VRH   Novokhopyorsk    92.18 321  eP       P        21 38 09.2 -1.4
VRH                                pmax    pmax
      comp=Z,60nm,1.4s
PRGR  Permogore        92.20 332  eP       P        21 38 07.0 -3.5
PRGR                               pmax    pmax
      comp=Z,73nm,1.5s
SOC   Sochi            92.23 314  eP       P        21 38 05.2 -5.9
SOC                               e                 21 41 49.3
SOC                               eS       SKSac    21 48 34.7 -7.1
SOC                               eSS      SS       21 55 30.7 +8.4
SOC                                MLR     MLR
      comp=Z,362nm,22.0s
ASF   Jabal al Asfar   92.73 302   P       P        21 38 13.9 +0.1
      comp=Z,18nm,1.2s,baz=144,slow=3.5,SNR=8.6
KDAK  Kodiak Island    92.92  32   LR      LR       22 15 13.2
      comp=Z,307nm,21.9s,baz=263,slow=32
GAZ   Gaziantep        93.17 307   P       P        21 38 14.3 -1.3
GAZ                                IAmb    IAmb     21 38 15.8
      comp=Z,65nm,1.7s
SNAA  Sanae            93.23 194   P       P        21 38 16.7 +1.5
SNAA  Sanae            93.23 194   P       P        21 38 15.7 +0.5
      comp=Z,34nm,1.0s,baz=218,slow=5.3,SNR=36
SNAA  Sanae            93.23 194⇓ eP       P        21 38 16.1 +0.9
SNAA                               pmax    pmax
      comp=Z,63nm,1.2s
SNAA  Sanae            93.23 194   P       P        21 38 16.2 +0.9
SNAA                               IAmb    IAmb     21 38 22.0
      comp=Z,43nm,0.9s
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VORD  Divnogorie       93.66 321  eP       P        21 38 16.3 -1.1
VORD                               pmax    pmax
      comp=Z,30nm,1.3s
VSR   Storozhevoye     93.77 321  eP       P        21 38 16.5 -1.5
VSR                                pmax    pmax
      comp=Z,40nm,1.4s
IMAR  Indian Mountai   93.96  24   P       P        21 38 18.2 -0.3
ANN   Anapa            94.03 315  eP       P        21 38 14.8 -4.5
ANN                               e*PP     pP       21 38 26.5 -4.2
ANN                               ePPP     PPP      21 44 04.8
ANN                               eS       SKSac    21 48 46.6 -5.0
ANN                                pmax    pmax
      comp=Z,46nm,1.0s
EIL   Elat             94.06 299   P       P        21 38 19.2 -0.6
      comp=Z,5.5nm,1.1s,baz=185,slow=9.5,SNR=4.1
MMAI  Mount Meron Ar   94.10 303   P       P        21 38 18.9 -1.1
      comp=Z,5.8nm,1.0s,baz=86,slow=12,SNR=5.3
MBAR  Mbarara          94.11 269⇑ eP       P        21 38 20.6 -0.1
MBAR  Mbarara          94.11 269   P       P        21 38 20.1 -0.6
MBAR  Mbarara          94.11 269   IAMs_20 IAMs_20  22 18 50.4
      comp=Z,1µm,19.0s
LPSR  Galich'ya Gora   94.12 322  eP       P        21 38 18.1 -1.4
LPSR                               pmax    pmax
      comp=Z,60nm,1.7s
LSZ   Lusaka           94.33 254   P       P        21 38 20.8 -0.8
LSZ                                pmax    pmax
      comp=Z,25nm,1.3s
LSZ   Lusaka           94.33 254   P       P        21 38 20.8 -0.8
BNN   Bunyan           94.46 308   P       P        21 38 21.4 -0.2
BNN                                IAmb    IAmb     21 38 22.9
      comp=Z,75nm,1.3s
BOSA  Boshof           94.52 240   P       P        21 38 21.5 -0.7
      comp=Z,6.4nm,1.0s,baz=95,slow=11,SNR=4.1
BOSA                               LR      LR       22 14 39.9
      comp=Z,1µm,21.4s,baz=108,slow=32
BOSA  Boshof           94.52 240   P       P        21 38 21.9 -0.3
BOSA                               pmax    pmax
      comp=Z,65nm,1.6s
BOSA  Boshof           94.52 240   P       P        21 38 21.9 -0.3
BOSA                               IAmb    IAmb     21 38 32.9
      comp=Z,65nm,1.6s
VNA2  Neumayer--Watz   94.83 194   P       P        21 38 23.9 +1.4
      baz=117,slow=4.6
LBTB  Lobatse          94.95 244   P       P        21 38 24.1 -0.1
LBTB                               pmax    pmax
      comp=Z,47nm,1.6s
LBTB  Lobatse          94.95 244   P       P        21 38 24.1 -0.1
LBTB                               IAmb    IAmb     21 38 27.6
      comp=Z,47nm,1.6s
VNA3  Neumayer Olymp   95.14 193   P       P        21 38 25.8 +1.8
VNA1  Neumayer--Stat   95.23 194   P       P        21 38 26.5 +2.2
MOS   Moscow           95.29 325  eP       P        21 38 22.9 -1.9
MOS                               e                 21 42 14.5
MOS                               e                 21 48 59.9
MOS                               e                 21 49 40.5
MOS                                pmax    pmax
      comp=Z,32nm,1.0s
I23K  Minto, Yukon-K   95.62  25   P       P        21 38 25.6 -0.5
OBN   Obninsk          95.82 325   P       P        21 38 26.3 -0.9
      comp=Z,2.5nm,0.5s,baz=26,slow=2.6,SNR=8.4
OBN   Obninsk          95.82 325d iP       P        21 38 27.3 +0.1
OBN                               e                 21 42 16.0
OBN                               eS       SKSac    21 48 57.1 -3.6
OBN                               eSS      SS       21 56 12.5 -0.3
OBN                                pmax    pmax
      comp=Z,61nm,1.4s
OBN                                MLR     MLR
      comp=Z,608nm,25.0s
OBN   Obninsk          95.82 325   P       P        21 38 26.4 -0.9
OBN                                IAmb    IAmb     21 38 28.7
      comp=Z,84nm,1.5s
BRTR  Keskin Array B   96.25 309   P       P        21 38 27.5 -2.3
      comp=Z,3.5nm,1.0s,baz=163,slow=4.5,SNR=8.7
BRTR                               LR      LR       22 30 10.9
      comp=Z,413nm,19.6s,baz=116,slow=41
BRTR  Keskin Array B   96.25 309   P       P        21 38 28.9 -0.9
BRTR  Keskin Array B   96.25 309   P       P        21 38 28.9 -0.9
H24K  Noodor Dome      96.32  24   P       P        21 38 28.7 -0.7
ILAR  Eielson Array    96.63  26   P       P        21 38 27.4 -3.4
      comp=Z,1.8nm,1.1s,baz=260,slow=3.9,SNR=7.0
ILAR                               PP      PP       21 42 24.0 -1.5
      comp=Z,4.4nm,1.1s,baz=269,slow=6.3,SNR=10
ILAR                               PKKPbc  PKKPbc   21 55 15.5 -1.4
      comp=Z,0.7nm,0.8s,baz=3.8,slow=0.6,SNR=5.3
ILAR                               LR      LR       22 18 43.3
      comp=Z,175nm,21.1s,baz=284,slow=33
AKASG Malin Array Be   99.99 320   P       Pdif     21 38 44.4 -1.7
      comp=Z,4.2nm,0.9s,baz=81,slow=4.0,SNR=24
AKASG                              PP      PP       21 42 50.2 -1.3
      comp=Z,0.3nm,0.4s,baz=83,slow=5.5,SNR=4.3
AKASG                              LR      LR       22 31 39.7
      comp=Z,625nm,20.0s,baz=95,slow=40
AKASG Malin Array Be   99.99 320  i P      Pdif     21 38 45.2 -0.9
AKASG                              pmax    pmax
      comp=Z,4.0nm,0.9s
AKASG Malin Array Be   99.99 320   Pdif    Pdif     21 38 44.9 -1.3
AKBB  Malin Array Si   99.99 320⇑ iP       Pdif     21 38 45.1 -1.0
AKBB                               pmax    pmax
      comp=Z,16nm,1.2s
MNK   Minsk           100.81 324  i P      Pdif     21 38 46.7 -3.0
MNK                               i                 21 42 52.9
MNK                               i S      SKSac    21 49 23.1 -2.9
MNK                               i PS     PS       21 51 54.2 -5.5
MNK                               i SS     SS       21 57 21.4 -1.5
MNK                               i SSS    SSS      22 01 13.3
MNK                                pmax    pmax
      comp=N,10.0nm,1.1s
MNK                                pmax    pmax
      comp=E,2.0nm,1.1s
MNK                                MLR     MLR
      comp=N,234nm,18.0s
MNK                                MLR     MLR
      comp=E,16nm,14.0s
MNK                                MLR     MLR
      comp=Z,232nm,17.0s
MNK   Minsk           100.81 324  i P      Pdif     21 38 46.7 -3.0
      comp=E,2.0nm,1.1s
MNK                               i P      Pdif     21 38 46.7 -3.0
      comp=N,10.0nm,1.1s,baz=89
MNK                               i PP     PP       21 42 53.0 -4.7
MNK                               i PPP    PPP      21 45 00.2
MNK                               i S      SKSac    21 49 23.1 -2.9
MNK                               i PS     PS       21 51 54.2 -5.4
MNK                               i SS     SS       21 57 21.5 -1.4
MNK                               i SSS    SSS      22 01 13.3
MNK                               i LQ     LQ       22 18 28.3
MNK                               i LR     LR       22 22 21.3
MNK                               i LRM    MLR      22 25 58.2
      comp=N,234nm,17.8s
MNK                               i LRM    MLR      22 25 59.4
      comp=E,16nm,14.0s
MNK                               i LRM    MLR      22 26 01.4
      comp=Z,232nm,17.2s
ARCES ARCESS Array B  101.02 339   PKKPbc  PKKPbc   21 55 04.0 -0.6
      comp=Z,1.9nm,0.7s,baz=316,slow=6.9,SNR=4.3
NACGM Naroch          101.44 324  i P      Pdif     21 38 49.2 -3.3
INK   Inuvik          101.90  22   PP      PP       21 43 05.8 +0.4
      comp=Z,4.6nm,1.1s,baz=281,slow=4.5,SNR=6.5
MLR   Muntele Rosu    102.18 315   P       Pdif     21 38 54.4 -1.8
      comp=Z,4.4nm,1.0s,baz=127,slow=2.0,SNR=6.8
MLR                                PP      PP       21 43 07.1 -1.4
      baz=82,slow=5.1
MLR                                PKKPbc  PKKPbc   21 54 59.9 -0.8
      baz=300,slow=20
MLR   Muntele Rosu    102.18 315   IAMs_20 IAMs_20  22 30 23.2
      comp=Z,786nm,21.0s
TRPA  Tarpa           104.42 318  eP       Pdif     21 39 05.3 -0.6
UZH   Uzhgorod        104.55 318  eP       Pdif     21 39 08.5 +2.0
CRVS  Cervenica-Dubn  105.08 318  eP       Pdif     21 39 08.9  0.0
CRVS  Cervenica-Dubn  105.08 318  ePDIFF   Pdif     21 39 08.9  0.0
TIR   Tirane          106.77 311   IAMs_20 IAMs_20  22 37 19.8
      comp=Z,759nm,21.0s
MORC  Moravsky Berou  107.53 320  ePP      PP       21 43 51.5 +3.6
JAVC  Velka Javorina  107.57 319  ePP      PP       21 43 52.3 +4.1
VRAC  Vranov          108.21 319  ePP      PP       21 43 56.0 +3.2
DPC   Dobruska-Polom  108.22 320  ePKKP             21 54 43.4
KRUC  Moravsky        108.38 319  ePP      PP       21 43 57.1 +3.1
RES   Resolute Bay    109.86  10   PP      PP       21 44 00.5 -3.4
      comp=Z,3.0nm,1.1s,baz=7.3,slow=6.1,SNR=3.3
CLL   Collm           110.11 322  ePKiKP   PKiKP    21 43 30.0 -2.6
CLL                               ePP      PP       21 44 04.0 -2.5
CLL                               i PPmax           21 44 09.2
      comp=Z,48nm,2.1s
CLL                               eSKSac   SKSac    21 50 06.0 -2.0
CLL                               eSdif    SKKSac   21 51 36.0 +29
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CLL                               ePS      PS       21 53 31.0 -5.3
CLL                               ePKKPbc  PKKPbc   21 54 38.0 +1.8
CLL                               ePPS     PPS      21 54 44.0
CLL                               ePKKPdf  PKKPdf   21 54 50.0 -2.9
CLL                               e                 21 56 30.0
CLL                               eSS      SS       21 59 30.0  0.0
CLL                               e                 22 05 06.0
CLL                               e                 22 08 30.0
GERES GERESS Array B  110.16 319   PKiKP   PKiKP    21 43 33.6 +0.7
      comp=Z,0.9nm,1.0s,baz=288,slow=1.3,SNR=3.9
GERES                              PP      PP       21 44 02.5 -4.6
      comp=Z,1.0nm,1.0s,baz=99,slow=4.2,SNR=5.5
GERES                              PKKPbc  PKKPbc   21 54 36.6 +0.5
      comp=Z,0.5nm,0.8s,baz=270,slow=1.3,SNR=4.5
GERES                              PKKPab  PKKPab   21 54 46.5 +1.1
      comp=Z,0.5nm,0.6s,baz=224,slow=5.4,SNR=4.9
AQU   L'Aquila        111.46 312   IAMs_20 IAMs_20  22 35 14.8
      comp=Z,784nm,22.0s
CLTB  Caltabellotta   112.24 307   IAMs_20 IAMs_20  22 34 38.8
      comp=Z,622nm,21.0s
VLC   Villacollemand  113.31 315   IAMs_20 IAMs_20  22 41 14.5
      comp=Z,632nm,21.0s
BNI   Bardonecchia    115.69 316   IAMs_20 IAMs_20  22 27 16.6
      comp=Z,515nm,20.0s
NVAR  Mina Array Bea  115.98  51   PP      PP       21 44 49.5 +0.5
      comp=Z,1.3nm,1.0s,baz=258,slow=7.4,SNR=3.7
HLID  Hailey          117.68  45   PKPdf   PKPdf    21 43 47.5 -0.2
BOZ   Bozeman (W)     118.97  42   PKIKP   PKiKP    21 43 50.7 +0.6
BOZ   Bozeman (W)     118.97  42           PKiKP    21 43 50.7 +0.6
EGMT  Eagleton        119.32  39   PKPdf   PKiKP    21 43 50.9 +0.3
TPAW  Teton Pass      120.11  44   PKPdf   PKiKP    21 43 53.4 +0.9
GCMT  Greycliff       120.19  41           PKPdf    21 43 52.3 -0.1
PD31  Pinedale Array  121.31  45           PKPdf    21 43 54.7  0.0
PDAR  Pinedale Array  121.31  45   PKP     PKPdf    21 43 54.0 -0.7
      comp=Z,1.2nm,0.8s,baz=273,slow=2.8,SNR=8.5
PDAR                               PKKPbc  PKKPbc   21 53 57.0 -0.2
      comp=Z,0.3nm,0.3s,baz=111,slow=6.5,SNR=3.9
PDAR  Pinedale Array  121.31  45   PKPdf   PKPdf    21 43 54.4 -0.3
O20A  White River Ci  123.10  47           PKiKP    21 43 58.9 +0.5
TORD  Torodi Ar. Bea  124.16 280   PKP     PKPdf    21 44 00.1 -0.5
      comp=Z,4.0nm,0.8s,baz=60,slow=1.5,SNR=16
TORD                               PKKPbc  PKKPab   21 53 45.0  0.0
      comp=Z,2.4nm,1.1s,baz=300,slow=4.9,SNR=6.2
TORD  Torodi Ar. Bea  124.16 280   PKPdf   PKPdf    21 43 59.9 -0.7
RSSD  Black Hills     124.52  41   PKIKP   PKPdf    21 44 00.5 -0.3
RSSD  Black Hills     124.52  41   PKPdf   PKPdf    21 44 00.5 -0.3
ESDC  Sonseca Array   124.83 313   PKP     PKPdf    21 44 00.2 -1.1
      comp=Z,2.3nm,1.1s,baz=66,slow=3.0,SNR=7.7
ESDC                               PP      PP       21 45 49.3 +0.1
      comp=Z,3.3nm,1.2s,baz=48,slow=5.6,SNR=6.0
ESDC  Sonseca Array   124.83 313   PKPdf   PKPdf    21 43 59.8 -1.5
ANMO  Albuquerque     126.05  53   PKP     PKPdf    21 44 04.0  0.0
      baz=294,slow=3.0
ULM   Lac du Bonnet   126.18  31   PKP     PKPdf    21 44 01.7 -1.8
      comp=Z,6.8nm,1.1s,baz=255,slow=0.8,SNR=6.1
ULM   Lac du Bonnet   126.18  31   PKIKP   PKPdf    21 44 02.6 -0.9
ULM   Lac du Bonnet   126.18  31   PKPdf   PKPdf    21 44 02.5 -0.9
OGNE  Ogallala        127.20  44   IAMs_20 IAMs_20  22 32 31.6
      comp=Z,450nm,20.0s
MDT   Midelt          127.46 305   PKP     PKPdf    21 44 05.0 -1.6
      comp=Z,3.4nm,1.1s,baz=98,slow=3.4,SNR=4.0
MNTX  Cornudas Mount  127.81  56   PKPdf   PKPdf    21 44 07.4 +0.2
MNTX                               IAMs_20 IAMs_20  22 33 49.5
      comp=Z,696nm,22.0s
PLCA  Paso Flores     129.17 165   PKP     PKPdf    21 44 10.0 +0.3
      comp=Z,11nm,1.0s,baz=205,slow=3.7,SNR=10.0
PLCA  Paso Flores     129.17 165  eP       PKiKP    21 44 11.4 +1.0
ECSD  EROS Data Cent  129.43  39   PKPdf   PKPdf    21 44 09.5 -0.5
ECSD  EROS Data Cent  129.43  39   IAMs_20 IAMs_20  22 38 32.9
      comp=Z,536nm,20.0s
CBKS  Cedar Bluff     129.70  46   IAMs_20 IAMs_20  22 34 38.8
      comp=Z,648nm,22.0s
KOWA  Kowa            129.70 282   PKP     PKPdf    21 44 10.9 -0.2
      comp=Z,2.3nm,0.8s,baz=79,slow=4.9,SNR=4.9
AMTX  Amarillo        129.78  51   IAMs_20 IAMs_20  22 34 08.7
      comp=Z,534nm,22.0s
TXAR  Lajitas Array   129.84  59   PKP     PKPdf    21 44 09.3 -2.0
      comp=Z,0.7nm,0.7s,baz=254,slow=0.9,SNR=5.7
TXAR                               PP      PP       21 46 23.2 +0.4
      comp=Z,0.6nm,1.0s,baz=251,slow=3.8,SNR=4.3
F36A  Milaca          130.06  35   PKPdf   PKPdf    21 44 10.8 -0.2
DBIC  Dimbokro        130.26 272   PKP     PKPdf    21 44 10.0 -2.3
      comp=Z,2.2nm,0.7s,baz=238,slow=7.8,SNR=2.3
DBIC                               SKPbc   SKPab    21 47 31.9 -0.9
      comp=Z,4.7nm,0.9s,baz=63,slow=2.3,SNR=3.6
DBIC  Dimbokro        130.26 272   PKIKP   PKPdf    21 44 12.6 +0.3
DBIC  Dimbokro        130.26 272           PKPdf    21 44 12.6 +0.3
COWI  Conover         132.29  32   IAMs_20 IAMs_20  22 49 27.0
      comp=Z,433nm,20.0s
SCHQ  Schefferville   132.62   9   PKP     PKPdf    21 44 14.1 -1.5
      comp=Z,2.1nm,0.4s,baz=359,slow=6.0,SNR=4.6
TRQA  Tornquist       133.45 172  eP       PKiKP    21 44 19.1 +0.1
JFWS  Jewell Farm     133.71  36   IAMs_20 IAMs_20  22 35 33.0
      comp=Z,457nm,21.0s
TUL1  Leonard         133.79  47   IAMs_20 IAMs_20  22 41 31.3
      comp=Z,514nm,20.0s
U40A  Yellville       135.68  45   IAMs_20 IAMs_20  22 38 50.1
      comp=Z,631nm,22.0s
CCM   Cathedral Cave  135.90  42   IAMs_20 IAMs_20  22 40 50.6
      comp=Z,497nm,18.0s
MIAR  Mount Ida       136.02  48   IAMs_20 IAMs_20  22 42 07.5
      comp=Z,648nm,22.0s
VA03  San Esteban     136.58 161           PKPdf    21 44 23.5 -0.4
X40A  Basin Creek Fa  136.59  47   IAMs_20 IAMs_20  22 43 04.6
      comp=Z,399nm,20.0s
LCAR  Lake Charles    137.01  44           PKPdf    21 44 24.2 -0.1
L48A  N Adams         137.60  33           PKPdf    21 44 26.0 +0.7
SADO  Sadowa          138.06  26   PKP     PKPdf    21 44 23.8 -2.3
      comp=Z,9.4nm,1.0s,baz=95,slow=11,SNR=5.1
SADO  Sadowa          138.06  26           PKPdf    21 44 25.5 -0.5
LMQ   La Malbaie      138.76  16   PKPdf   PKPdf    21 44 27.5 +0.2
OXF   Oxford          139.04  45   IAMs_20 IAMs_20  22 37 39.1
      comp=Z,431nm,22.0s
P49A  Miami Univ. Ec  139.07  36           PKPdf    21 44 28.3 +0.2
WVT   Waverly         139.24  42   IAMs_20 IAMs_20  22 42 57.0
      comp=Z,395nm,20.0s
VBMS  Vicksburg       139.37  49   IAMs_20 IAMs_20  22 39 05.2
      comp=Z,534nm,21.0s
PLAL  Pickwick Lake   139.71  44   IAMs_20 IAMs_20  22 40 10.7
      comp=Z,518nm,22.0s
ERPA  Erie            139.74  29   IAMs_20 IAMs_20  22 57 42.9
      comp=Z,606nm,21.0s
M53A  WI Miller and   139.92  30   IAMs_20 IAMs_20  22 50 52.6
      comp=Z,388nm,18.0s
PLTB  Pedras Altas    140.16 182  eP       PKPdf    21 44 31.5 +1.1
CMIG  Matias Romero   140.21  73   PKP     PKPdf    21 44 28.0 -2.7
      comp=Z,3.2nm,0.8s,baz=223,slow=19,SNR=2.9
MOQ   Mont Orford     140.21  19           PKPdf    21 44 29.6 -0.5
NCB   Newcomb         140.70  22           PKPdf    21 44 30.4 -0.5
J58A  Remsen          140.81  24   PKPdf   PKPdf    21 44 31.1  0.0
L56A  Greenwood       140.85  27           PKPdf    21 44 31.3  0.0
J59A  Piesco          141.03  23           PKPdf    21 44 30.8 -0.8
GO03  Copiap          141.42 158           PKPdf    21 44 31.7 -1.1
BINY  Binghamton      141.49  25   IAMs_20 IAMs_20  22 56 32.2
      comp=Z,590nm,21.0s
CPSB  Cacapava Do Su  141.51 182  eP       PKiKP    21 44 34.4 -1.2
TZTN  Tazewell        141.73  38   IAMs_20 IAMs_20  22 46 09.5
      comp=Z,619nm,21.0s
SSPA  Standing Stone  141.89  29   IAMs_20 IAMs_20  23 01 31.7
      comp=Z,433nm,20.0s
TKL   Tuckaleechee C  142.15  40   PKhKP   PKPpre   21 44 30.2
      comp=Z,2.7nm,0.6s,baz=336,slow=5.4,SNR=2.7
ITQB  Itaqui          142.24 178   PKPdf   PKPdf    21 44 32.4 -1.7
BRAL  Brewton         142.46  48   IAMs_20 IAMs_20  22 43 20.9
      comp=Z,622nm,21.0s
AC02  Maricunga       142.51 159   PKPdf   PKPdf    21 44 32.8 -2.5
N59A  State Game Lan  142.63  26   IAMs_20 IAMs_20  22 59 37.6
      comp=Z,541nm,21.0s
BLA   Blacksburg      143.12  35   IAMs_20 IAMs_20  22 52 29.0
      comp=Z,469nm,19.0s
BRYW  Bryant College  143.46  21   IAMs_20 IAMs_20  23 03 07.0
      comp=Z,513nm,20.0s
YLE   Yale            143.46  23   IAMs_20 IAMs_20  22 49 05.4
      comp=Z,502nm,20.0s
P60A  Greenville      143.59  27   PKPdf   PKPdf    21 44 37.2 +1.1
P60A                               IAMs_20 IAMs_20  22 53 11.5
      comp=Z,491nm,21.0s
GOGA  Godfrey         143.74  42   IAMs_20 IAMs_20  22 48 24.1
      comp=Z,436nm,21.0s
PB14  IPOC Station P  144.02 156   PKPdf   PKPbc    21 44 36.4 +0.7
CBN   Corbin Frederi  144.02  31   IAMs_20 IAMs_20  22 57 49.4
      comp=Z,526nm,19.0s
W57A  Gilead          144.80  37   PKPdf   PKPab    21 44 36.7 -0.7
TIGA  Tifton          144.81  45           PKPab    21 44 36.9 -0.6
T60A  Surry           145.16  31           PKPbc    21 44 37.7 -0.8
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CPUP	Villa Florida	145.52	176	PKPbc	PKPab	21 44 40.2	0.0
	comp=Z,74nm,1.0s,baz=183,slow=2.7,SNR=41						
CPUP				PP	PP	21 48 00.7	+2.2
	comp=Z,4.3nm,1.1s,baz=163,slow=9.0,SNR=1.4						
CPUP				SKPbc	SKiKP	21 48 17.6	0.0
	comp=Z,4.2nm,1.0s,baz=198,slow=3.2,SNR=2.4						
CPUP	Villa Florida	145.52	176	PKP2	PKPdf	21 44 39.9	-0.1
CPUP	Villa Florida	145.52	176		PKPdf	21 44 39.9	-0.1
CPUP	Villa Florida	145.52	176	eP	PKPab	21 44 40.6	+0.4
TIJ01	Guaruva-PR	146.09	190	eP	PKPbc	21 44 41.8	-0.2
LVC	Limon Verde	146.42	156	PKPbc	PKPab	21 44 44.0	-0.1
	comp=Z,55nm,1.0s,baz=252,slow=3.4,SNR=21						
LVC	Limon Verde	146.42	156	PKP2	PKPbc	21 44 43.3	0.0
LVC	Limon Verde	146.42	156		PKPbc	21 44 43.3	0.0
LVC	Limon Verde	146.42	156	eP	PKPab	21 44 44.1	0.0
PET01	Itanhaem-SP	146.76	193	eP	PKPab	21 44 45.0	+0.1
PTGB	Pitanga	147.08	185	eP	PKPbc	21 44 44.7	-0.1
MAN01	Angra dos Reis	147.21	199	eP	PKPbc	21 44 45.0	-0.2
PARB	Paraibuna	147.26	196	eP	PKPbc	21 44 45.0	-0.3
CAM01	Campos-RJ	147.33	203	eP	PKPbc	21 44 44.7	-0.7
DUB01	Friburgo-RJ	147.38	202	eP	PKPbc	21 44 45.3	-0.3
PB01	IPOC Station P	147.58	154		PKPdf	21 44 44.3	+0.7
VAS01	Vassouras-RJ	147.58	200	eP	PKPbc	21 44 46.2	0.0
TA01	Diego Aracena	147.69	153		PKPbc	21 44 46.6	+0.2
TGUH	Tegucigalpa,Un	147.87	77	IAMs_20	IAMs_20	22 42 03.7	
	comp=Z,377nm,21.0s						
TA02	Huaiquique	147.97	153		PKPbc	21 44 47.8	+0.6
ALF01	Guarapari-ES	148.03	206	eP	PKPbc	21 44 46.5	-0.9
CRIN	San Cristobal	148.22	79		PKPbc	21 44 48.0	-0.2
DWPF	Disney Wildern	148.22	48	IAMs_20	IAMs_20	22 58 31.5	
	comp=Z,406nm,20.0s						
PB08	IPOC Station P	148.52	154		PKPbc	21 44 47.9	-1.3
PSGCX	Pisagua	148.56	152		PKPbc	21 44 48.8	-0.1
RCLB	Rio Claro- Sao	148.62	193	eP	PKPbc	21 44 48.0	-1.0
PB11	IPOC Station P	148.63	153	PKPdf	PKPdf	21 44 45.8	+0.3
RIB01	Linhares ES	149.02	208	eP	PKPbc	21 44 49.0	-1.0
TRCB	Terra Rica	149.03	184		PKPdf	21 44 46.1	+0.2
TRCB	Terra Rica	149.03	184	eP	PKPbc	21 44 48.3	-1.7
BSCB	Bom Sucesso	149.21	199	eP	PKiKP	21 44 51.2	-0.6
BSFB	Barra de Sao F	149.65	207	eP	PKPdf	21 44 48.6	+1.6
ORTG	Ortega, Santa	149.90	84	PKPdf	PKPdf	21 44 47.5	-0.1
SJMB	Sao Joao De Ma	149.91	207	eP	PKPbc	21 44 50.0	-2.2
PCMB	Pacaembu	150.07	187	eP	PKPdf	21 44 49.5	+1.8
BB19B	Bebedouro	150.15	192	eP	PKPdf	21 44 49.1	+1.4
JTS	Las Juntas de	150.40	84	PKIKP	PKPdf	21 44 48.9	+0.6
JTS				MLR	MLR		
	comp=Z,500nm,20.0s						
JTS	Las Juntas de	150.40	84	PKPdf	PKPdf	21 44 48.9	+0.6
JTS	Las Juntas de	150.40	84	IAMs_20	IAMs_20	22 48 59.5	
	comp=Z,492nm,20.0s						
GUA01	Guaratinga, BA	151.07	211	eP	PKPdf	21 44 49.8	+0.6
DIAM	Diamantina, MG	151.31	203	eP	PKPdf	21 44 51.2	+1.5
AQDB	Aquidauana	151.42	179	eP	PKPdf	21 44 51.7	+2.0
CVTR	Volcan Turrial	151.58	84		PKPdf	21 44 48.2	-2.4
CVTR				PKPbc	PKiKP	21 44 58.2	+1.0
ITRB	Iturama	151.82	189	eP	PKPdf	21 44 52.5	+2.2
CMC01	Camacan, BA	151.94	213	eP	PKPdf	21 44 52.4	+1.8
NBIT	Itapeh - BA	152.24	214	eP	PKPdf	21 44 53.4	+2.4
LPAZ	La Paz	152.35	152	PKP	PKPdf	21 44 51.5	-0.5
	comp=Z,5.5nm,1.0s,baz=306,slow=0.2,SNR=13						
LPAZ				PKPab	pPKPbc	21 45 09.7	-0.9
	comp=Z,28nm,0.9s,baz=5.1,slow=4.7,SNR=13						
LPAZ				PP	PP	21 48 42.3	+2.7
	comp=Z,1.7nm,1.0s,baz=199,slow=4.7,SNR=2.5						
LPAZ	La Paz	152.35	152	eP	PKPdf	21 44 53.3	+1.3
MC01	Montes Claros	152.86	204	eP	PKPdf	21 44 54.0	+2.0
IPMB	Ipameri, GO	153.05	194	eP	PKPdf	21 44 53.9	+1.6
GDU01	Guandu, BA	153.30	215	eP	PKPdf	21 44 53.7	+1.1
NBRF	Rio Formoso -	153.99	230	eP	PKPdf	21 44 55.8	+2.2
NBAN	Anadia - AL	154.18	227	eP	PKPdf	21 44 56.4	+2.5
PP1B	Ponte de Pedra	154.28	180	eP	PKPdf	21 44 55.8	+1.8
NBLA	Lagarto - SE	154.30	222	eP	PKPdf	21 44 57.0	+2.9
JANB	Januaria	154.50	205	eP	PKPdf	21 44 56.1	+1.7
SIV	San Ignacio	155.15	166	PKP	PKPdf	21 44 55.5	+0.2
	comp=Z,5.8nm,1.0s,baz=217,slow=1.7,SNR=13						
SIV				PKPab	PKPab	21 45 20.8	+1.1
	comp=Z,17nm,0.8s,baz=190,slow=3.2,SNR=15						
BDFB	Brasilia	155.24	196	PKP	PKPdf	21 44 55.4	-0.1
	comp=Z,9.9nm,1.1s,baz=140,slow=8.2,SNR=4.9						
BDFB				PKPab	PKPab	21 45 20.9	+0.7
	comp=Z,22nm,1.2s,baz=152,slow=2.2,SNR=5.2						
BDFB				PP	PP	21 48 57.4	+2.6
	comp=Z,5.8nm,1.0s,baz=188,slow=8.6,SNR=3.1						
BDFB	Brasilia	155.24	196	PKIKP	PKPdf	21 44 55.3	-0.1
BDFB						21 45 05.2	
BDFB	Brasilia	155.24	196		PKPdf	21 44 55.3	-0.1
BDFB					pPKPdf	21 45 05.2	-2.1
BDFB					PKPab	21 45 21.6	+1.4
OTAV	Otavalo	155.32	108	eP	PKPdf	21 44 57.9	+1.8
BCIP	Isla Barro Col	155.46	86	IAMs_20	IAMs_20	23 05 04.5	
	comp=Z,388nm,20.0s						
NBPV	Pedro Velho	155.50	234	eP	PKPdf	21 44 58.4	+2.7
ARAG	Araguaiana, MT	155.96	188	eP	PKPdf	21 44 58.3	+2.0
SALV	Santo Antonio	155.97	178	eP	PKPdf	21 44 57.9	+1.6
MTDJ	Mount Denham	155.99	63	IAMs_20	IAMs_20	23 08 11.0	
	comp=Z,559nm,22.0s						
PTLB	Pontes e Lacer	156.07	170	eP	PKPdf	21 44 58.1	+1.8
NBLV	Livramento - P	156.19	230	eP	PKPdf	21 44 58.7	+2.0
CZSB	Cruzeiro do Su	156.26	132	eP	PKPdf	21 44 58.3	+1.6
SDBA	SAO DESIDERIO	157.12	206	eP	PKPdf	21 44 59.6	+1.7
NBPA	Parau_RN	157.34	233	eP	PKPdf	21 45 00.8	+2.7
GTBY	Guantanamo Bay	157.37	57	IAMs_20	IAMs_20	23 03 41.9	
	comp=Z,495nm,19.0s						
NBMA	Muriti-CE	157.55	227	eP	PKPdf	21 45 01.8	+3.4
VILB	Vilhena	158.29	166	eP	PKPdf	21 45 02.0	+2.7
PEXB	Peixe	158.67	198	eP	PKPdf	21 45 02.3	+2.5
ETMB	Extrema	158.85	148	eP	PKPdf	21 45 01.4	+1.5
NBCL	Cascavel-CE	159.20	234	eP	PKPdf	21 45 02.1	+1.8
SNDB	Serra Nova Dou	159.54	190	eP	PKPdf	21 45 02.3	+1.5
PDRB	Porto dos Gac	160.16	175	eP	PKPdf	21 45 02.7	+1.2
ROSC	El Rosal	160.53	99	PKPab	PKPab	21 45 45.5	+1.7
	comp=Z,8.4nm,0.4s,baz=57,slow=4.4,SNR=5.2						
ROSC				PP	PP	21 49 28.9	+2.4
	comp=Z,6.4nm,0.4s,baz=121,slow=14,SNR=3.6						
TBTG	Tabatinga, AM	160.66	129	eP	PKPdf	21 45 03.5	+1.4
CLDB	Colider	160.96	178	eP	PKPdf	21 45 03.6	+1.3
SAML	Samuel	161.05	154	eP	PKPdf	21 45 04.0	+1.6
NBMO	Morrinhos-CE	161.14	233	eP	PKPdf	21 45 06.7	+4.1
SDV	Santo Domingo	164.55	87	eP	PKPdf	21 45 08.2	+2.1
PRPB	Parauapebas	164.73	200	eP	PKPdf	21 45 07.1	+1.1
NPGB	Novo Progresso	164.77	179	eP	PKPdf	21 45 07.0	+0.9
MACA	Manacapuru-AM	167.31	153	eP	PKPdf	21 45 08.8	+0.7
TMAB	Tom-Au,PA,Br	167.37	213	eP	PKPdf	21 45 09.2	+1.1
ITTB	Itaituba	167.42	177	eP	PKPdf	21 45 08.9	+0.7
MALB	Monte Alegre	169.91	184	eP	PKPdf	21 45 10.7	+0.9

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*SJA **03** 21:30:16.0, 30°.81S×71°.61W, h10^{km}, ML4.2*

*GUC **03** 21:30:17.9±0.8, 30°.80S×71°.41W, h50^{km}±2^{km}, ML4.0*

*NEIC **03** 21:30:17.3±2.9, 30°.81S±0°.04×71°.56W±0°.06, h36^{km}±6^{km}, Error ellipse: s-maj=8.0km s-min=5.3km az=80.0*

*IDC **03** 21:30:18.0±1.1, 30°.82S×71°.30W, h44^{km}±7^{km}, mb3.9/6, mb1 3.9/10, mb1mx3.7/41, mbtmp4.0/10, ML3.6/4, MS3.3/4, Ms1 3.3/4, ms1mx3.1/25, Error ellipse: s-maj=28.2km s-min=27.0km az=12.0*

ISC 03 21:30:17.6±0.6**, 30°.78S**±0°.04×**71°.53W**±0°.05**, h49**^{km}±5^{km}**, n109,** σ1^{s}**48**/109**, mb4.1**/7**, 3C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	Fray Jorge	0.14	320		Pn	21 30 26.1	+0.7
CO06					Sn	21 30 32.0	+0.9
CO06	Fray Jorge	0.14	320	⇑iP	Pn	21 30 26.2	+0.7
CO06				iS	Sn	21 30 31.7	+0.6
CO06				IAML		21 30 35.3	
	comp=E,23μm,0.2s						
CO03	El Pedregal	0.72	95		Pn	21 30 30.8	-0.9
CO03				Sn	Sn	21 30 40.3	-1.6
CO03	El Pedregal	0.72	95	eP	Pn	21 30 30.4	-1.3
CO03				iS	Sn	21 30 40.3	-1.6
CO03				IAML		21 30 40.9	
	comp=N,8μm,0.1s						
CO03	El Pedregal	0.72	95	iP	Pn	21 30 30.0	-1.7
GO04	Tololo Observa	0.88	46		Pn	21 30 33.8	-0.1
GO04				Sn	Sn	21 30 45.7	0.0
GO04	Tololo Observa	0.88	46	⇓iP	Pn	21 30 33.8	-0.1
GO04				iS	Sn	21 30 45.4	-0.3
GO04	Tololo Observa	0.88	46	iP	Pn	21 30 33.0	-0.8
CO05	La Serena	0.90	16		Pn	21 30 34.7	+0.8
CO05				Sn	Sn	21 30 45.3	-0.5
CO05	La Serena	0.90	16	⇓iP	Pn	21 30 34.7	+0.8
CO05				iS	Sn	21 30 47.0	+1.1
CO05				IAML		21 30 52.6	
	comp=E,5μm,0.4s						
VA06	Catapilco	1.78	174	eP	Pn	21 30 46.5	+0.5
VA06				IAML		21 31 19.6	
	comp=N,3μm,0.5s						
AROD	Rodeo	1.88	71	iP	Pn	21 30 49.0	+1.5
LCO	Las Campanas	1.91	22		Pn	21 30 49.0	+1.1
LCO	Las Campanas	1.91	22	⇓iP	Pn	21 30 48.4	+0.5
LCO				iS	Sn	21 31 12.5	+1.7
LCO	Las Campanas	1.91	22	iP	Pn	21 30 49.0	+1.1
ACCO	Cerro Coronel	2.13	85	iP	Pn	21 30 53.0	+2.0
VA03	San Esteban	2.14	157		Pn	21 30 51.8	+0.8
VA03	San Esteban	2.14	157	⇑iP	Pn	21 30 51.8	+0.8
VA03				IAML		21 31 23.2	
	comp=E,2μm,0.1s						
VA03	San Esteban	2.14	157	iP	Pn	21 30 52.0	+1.0
ACDV	Cuesta del Vie	2.17	74	iP	Pn	21 30 54.0	+2.6
ROC1	El Roble	2.23	169	iP	Pn	21 30 53.0	+0.7
VA01	Torpederas	2.24	183		Pn	21 30 52.0	-0.1
VA01	Torpederas	2.24	183	IAML		21 31 30.0	
	comp=E,650nm,0.7s						
AUSP	Uspallata	2.33	129	iP	Pn	21 30 56.0	+2.4
PEL	Peldehue	2.46	163	⇑iP	Pn	21 30 56.2	+1.0
PEL				iS	Sn	21 31 25.9	+1.7
PEL				IAML		21 31 37.2	
	comp=N,1μm,0.5s						
PEL	Peldehue	2.46	163	iP	Pn	21 30 57.0	+1.7
MT02	Curacav	2.49	172		Pn	21 30 55.8	+0.1
MT02	Curacav	2.49	172	eP	Pn	21 30 55.9	+0.2
MT02				IAML		21 31 43.1	
	comp=E,681nm,0.6s						
MT02	Curacav	2.49	172	iP	Pn	21 30 56.0	+0.4
ZON	Zonda	2.56	108		Pn	21 30 58.7	+2.1
ZON	Zonda	2.56	108	iP	Pn	21 30 59.0	+2.4
AC04	Llanos de Chal	2.60	9	Pn	Pn	21 30 58.4	+1.2
AC04	Llanos de Chal	2.60	9	iP	Pn	21 30 59.0	+1.9
MT05	Renca	2.69	166		Pn	21 30 59.1	+0.7
MT05	Renca	2.69	166	iP	Pn	21 31 01.0	+2.6
RTCV	Cerro Valdivia	2.77	114	iP	Pn	21 31 02.0	+2.4
VA05	Santo Domingo	2.87	181		Pn	21 31 00.2	-0.5
VA05	Santo Domingo	2.87	181	IAML		21 31 53.6	
	comp=E,802nm,0.3s						
ASAL	Salagasta	2.92	129	iP	Pn	21 31 04.0	+2.4
AGUA	GUANDACOL	2.93	65	iP	Pn	21 31 06.0	+4.2
ARCO	CERRO ARCO	3.02	134	iP	Pn	21 31 07.0	+4.0
MT09	Talagante	3.02	171		Pn	21 31 04.0	+1.0
MT09	Talagante	3.02	171	IAML		21 31 54.2	
	comp=N,974nm,0.1s						
MT01	Popeta	3.08	176		Pn	21 31 04.0	+0.3
MT01	Popeta	3.08	176	eP	Pn	21 31 04.0	+0.3
MT01				IAML		21 31 58.0	
	comp=E,477nm,0.4s						
MT01	Popeta	3.08	176	iP	Pn	21 31 04.0	+0.3
AAGR	Agrelo	3.25	136	iP	Pn	21 31 09.0	+2.9
LMEL	Las Melosas	3.26	160	IAML		21 32 05.4	
	comp=N,560nm,0.4s						
GO03	Copiap	3.37	20	Pn	Pn	21 31 09.1	+1.3
GO03	Copiap	3.37	20	iP	Pn	21 31 10.0	+2.2
AVFE	Valle Fertil	3.51	89	iP	Pn	21 31 11.0	+1.3
VCA	Vinchina	3.54	56	iP	Pn	21 31 14.0	+3.9
BO01	Tunca	3.62	174		Pn	21 31 11.6	+0.5
BO01	Tunca	3.62	174	iP	Pn	21 31 13.0	+1.9
BO02	Sierra Bellavi	4.05	171		Pn	21 31 17.4	+0.4
BO02	Sierra Bellavi	4.05	171	iP	Pn	21 31 18.0	+0.9
ACLC	CERRO LA CRUZ	4.19	72	iP	Pn	21 31 21.0	+1.9
ACHE	Chepes	4.20	96	iP	Pn	21 31 20.0	+0.8
GO05	Huala	4.23	184		Pn	21 31 18.6	-0.8
GO05	Huala	4.23	184	iP	Pn	21 31 19.0	-0.5
APLL	PUNTA DE LOS L	4.33	86	iP	Pn	21 31 22.0	+1.1
AC02	Maricunga	4.46	29	Pn	Pn	21 31 24.3	+1.2
AC02	Maricunga	4.46	29	iP	Pn	21 31 25.0	+1.9
ML02	Panimavida	4.97	179		Pn	21 31 30.7	+1.1
MRA	San Martin	5.22	110	iP	Pn	21 31 33.0	-0.2
AHML	Horco Molle	6.74	55	iP	Pn	21 31 56.0	+2.0
FSA	Cafayete	6.75	48	iP	Pn	21 31 56.0	+1.8
H03N1	Juan Fernandez	6.80	245	T	T	21 38 46.4	
	baz=72,slow=72,SNR=1970						
VA04	Juan Fernndez	6.81	243	Pn	Pn	21 31 55.0	+0.1
H03N3	Juan Fernandez	6.81	245	T	T	21 38 49.0	
	baz=72,slow=72,SNR=1416						
H03N2	Juan Fernandez	6.82	245	T	T	21 38 47.4	
	baz=72,slow=72,SNR=1575						
PB15	IPOC Station P	7.76	14	Pn	Pn	21 32 07.8	-0.4
LC01	Cunco	8.10	182	Pn	Pn	21 32 11.8	-0.7
LC01	Cunco	8.10	182	iP	Pn	21 32 13.0	+0.4
PB06	IPOC Station P	8.23	13	Pn	Pn	21 32 12.8	-1.7
LVC	Limon Verde	8.47	17	P	Pn	21 32 17.0	-1.0
	comp=N,0.4nm,0.3s,baz=158,slow=12,SNR=1.4						
LVC				S	Sn	21 33 47.2	-5.2
	comp=N,0.8nm,0.3s,baz=234,slow=15,SNR=1.7						
LVC				LR	LR	21 34 59.8	
	comp=N,70nm,21.1s,baz=206,slow=33						
PB04	IPOC Station P	8.51	9	Pn	Pn	21 32 17.4	-0.9
PB01	IPOC Station P	9.87	11	Pn	Pn	21 32 35.9	-1.1
PLCA	Paso Flores	9.96	176	LR	LR	21 35 49.4	
	comp=N,89nm,21.9s,baz=211,slow=33						
LL04	Puerto Octay	10.13	184	Pn	Pn	21 32 40.3	0.0
TRQA	Tornquist	10.71	135	Pn	Pn	21 32 47.2	-1.1
PSGCX	Pisagua	11.21	7	Pn	Pn	21 32 54.2	-1.0
ITQB	Itaqui	12.94	89	Pn	Pn	21 33 16.3	-2.4
CPUP	Villa Florida	13.24	74	P	Pn	21 33 21.8	-1.1
	comp=N,0.1nm,0.3s,baz=178,slow=18,SNR=1.3						
CPUP				LR	LR	21 39 04.3	
	comp=N,91nm,21.9s,baz=217,slow=40						
CPUP	Villa Florida	13.24	74	Pn	Pn	21 33 24.1	+1.2
LPAZ	La Paz	14.76	13	P	Pn	21 33 44.8	+0.9
	comp=N,0.1nm,0.3s,baz=162,slow=6.3,SNR=6.5						
PLTB	Pedras Altas	15.36	98	Pn	Pn	21 33 47.7	-3.4
PLTB				IAmb	IAmb	21 33 59.2	
	comp=Z,10nm,1.3s						
SIV	San Ignacio	17.56	35	P	Pn	21 34 18.2	-0.7
	comp=Z,0.4nm,0.3s,baz=210,slow=9.7,SNR=16						
SAML	Samuel	23.08	21	P	P	21 35 17.9	-1.1
BDFB	Brasilia	26.27	60	P	P	21 35 48.2	-0.3
	comp=Z,4.2nm,0.7s,baz=222,slow=10,SNR=5.9						
BDFB	Brasilia	26.27	60	P	P	21 35 47.3	-1.2
BDFB				IAmb	IAmb	21 35 50.3	
	comp=Z,4.8nm,0.7s						
SNAA	Sanae	54.41	159	P	P	21 39 39.3	+0.1
SNAA				IAmb	IAmb	21 40 00.4	
	comp=Z,10nm,1.2s						
V58A	Windy Hill, Pi	66.61	353	P	P	21 41 03.2	+0.6
TXAR	Lajitas Array	67.16	330	P	P	21 41 08.7	+2.2
	comp=Z,0.5nm,0.7s,baz=148,slow=12,SNR=4.8						
TXAR				pP	pP	21 41 21.6	+1.1
	comp=Z,0.4nm,0.7s,baz=139,slow=9.8,SNR=3.9						
DBIC	Dimbokro	73.75	72	P	P	21 41 47.1	+0.2
	comp=Z,3.8nm,0.6s,baz=244,slow=3.2,SNR=8.8						
DBIC	Dimbokro	73.75	72	P	P	21 41 47.0	+0.2
DBIC				IAmb	IAmb	21 41 48.0	
	comp=Z,4.1nm,0.7s						
MAW	Mawson	76.14	164	P	P	21 42 00.3	+0.6
	comp=Z,1.5nm,0.8s,baz=10,slow=16,SNR=2.1						
MAW	Mawson	76.14	164	P	P	21 42 00.6	+0.8
KOWA	Kowa	78.92	66	P	P	21 42 16.6	+0.4
	comp=Z,1.5nm,0.6s,baz=203,slow=8.4,SNR=3.8						
TORD	Torodi Ar. Bea	82.71	70	P	P	21 42 36.6	+0.2
	comp=Z,1.1nm,0.7s,baz=279,slow=6.0,SNR=22						
TORD				pP	pP	21 42 49.9	-1.0
	comp=Z,0.7nm,0.7s,baz=268,slow=5.3,SNR=4.2						
TORD	Torodi Ar. Bea	82.71	70	P	P	21 42 37.0	+0.6
TORD				IAmb	IAmb	21 42 37.6	
	comp=Z,2.9nm,1.3s						
LBTB	Lobatse	83.27	115	P	P	21 42 39.1	-0.3
YKA	Yellowknife Ar	99.16	341	LR	LR	22 29 08.1	
	comp=Z,105nm,21.5s,baz=0.0,slow=36						
H11S2	WAKE ISLAND Hy	126.19	271	T	T	00 08 05.9	
	baz=115,slow=75,SNR=60						
H11S1	WAKE ISLAND Hy	126.20	271	T	T	00 08 04.6	
	baz=115,slow=75,SNR=60						
H11S3	WAKE ISLAND Hy	126.21	271	T	T	00 08 07.3	
	baz=115,slow=75,SNR=64						
BVAR	Borovoye Array	144.59	40	PKP	PKPbc	21 49 47.6	+0.6
	comp=Z,0.8nm,0.5s,baz=238,slow=8.3,SNR=6.1						
ZALV	Zalesovo Beam	151.25	30	PKPbc	PKPbc	21 50 05.3	+0.3
	comp=Z,2.7nm,0.7s,baz=294,slow=3.3,SNR=10						
ZALV				pPKPbc	sPKPdf	21 50 19.1	-0.4
	comp=Z,1.6nm,0.7s,baz=301,slow=2.4,SNR=4.2						
ZALV	Zalesovo Beam	151.25	30		PKPbc	21 50 04.8	-0.2

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*IDC **03** 21:30:55.5±1.9, 16°.36S×176°.19W, h361^{km}±18^{km}, mb3.5/6, mb1 3.7/8, mb1mx3.4/51, mbtmp4.2/8, Error ellipse: s-maj=95.1km s-min=13.9km az=151.0*

*NEIC **03** 21:30:55.9±2.6, 16°.2S±0°.2×176°.1W±0°.1, h361^{km}±9^{km}, mb4.4/8, Error ellipse: s-maj=34.9km s-min=12.2km az=149.0*

ISC 03 21:30:55.0±0.8**, 16°.2S**±0°.2×**176°.2W**±0°.1**, h350**^{km}**, n24,** σ**1**^{s}**27**/24**, mb4.0**/9**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	4.82	62	P	Pn	21 32 13.9	+1.1
	7.5nm,0.3s,baz=167,slow=1.3,SNR=6.6						
MSVF	Nonsavu	5.73	254	P	Pn	21 32 24.3	+1.4
	1.5nm,0.3s,baz=134,slow=22,SNR=2.2						
MSVF	Nonsavu	5.73	254		Pn	21 32 24.9	+2.0
DZM	Mont Dzumac	17.42	248	P	P	21 34 36.3	+0.3
	0.2nm,0.3s,baz=303,slow=12,SNR=0.8						
DZM	Mont Dzumac	17.42	248	P	P	21 34 36.8	+0.8
DZM				IAmb	IAmb	21 34 47.1	
	comp=Z,26nm,1.3s						
THZ	Tophouse	27.15	198	P	P	21 36 06.2	-1.2
WHZ	Wether Hill Ro	32.44	201	P	P	21 36 53.9	+0.3
WHZ				IAmb	IAmb	21 36 54.9	
	comp=Z,21nm,0.8s						
ARMA	Armidale	32.64	239	P	P	21 36 55.5	-0.2
ARMA				IAmb	IAmb	21 37 04.4	
	comp=Z,18nm,1.4s						
WB0	Warramunga Arr	47.02	258	P	P	21 38 51.9	-1.0
WB0				IAmb	IAmb	21 39 07.1	
	comp=Z,40nm,1.4s						
WRA	Warramunga Arr	47.06	258	P	P	21 38 51.2	-1.9
	comp=Z,1.0nm,0.4s,baz=96,slow=7.8,SNR=14						
WRA	Warramunga Arr	47.06	258	P	P	21 38 51.3	-1.9
AS31	Alice Springs	47.32	253	P	P	21 38 53.8	-1.4
ASAR	Alice Springs	47.32	253	P	P	21 38 54.0	-1.2
	comp=Z,6.0nm,0.5s,baz=89,slow=7.7,SNR=30						
ASAR	Alice Springs	47.32	253	P	P	21 38 53.9	-1.3
YBH	Yreka Blue Hor	75.87	38	P	P	21 42 04.5	+0.7
	comp=Z,0.7nm,0.5s,baz=317,slow=2.6,SNR=3.5						
NVAR	Mina Array Bea	76.73	43	P	P	21 42 09.4	+0.5
	comp=Z,1.0nm,0.7s,baz=227,slow=9.1,SNR=8.9						
NVAR	Mina Array Bea	76.73	43	P	P	21 42 09.1	+0.2
IL31		83.77	12	P	P	21 42 43.3	-1.9
ILAR	Eielson Array	83.77	12	P	P	21 42 43.9	-1.4
	comp=Z,1.1nm,0.4s,baz=215,slow=5.0,SNR=15						
ILAR	Eielson Array	83.77	12	P	P	21 42 43.6	-1.6
SONM	Songino Array	93.68	319	P	P	21 43 33.5	+0.9
	comp=Z,0.3nm,0.7s,baz=98,slow=6.0,SNR=1.3						
ARCES	ARCESS Array B	125.01	351	PKP	PKPdf	21 49 12.3	-1.1
	comp=Z,2.7nm,0.8s,baz=2.9,slow=1.8,SNR=6.2						
MLR	Muntele Rosu	145.41	332	PKPbc	PKPbc	21 49 52.7	+0.1
	comp=Z,0.6nm,0.4s,baz=328,slow=16,SNR=3.8						
GERES	GERESS Array B	146.46	348	PKPbc	PKPdf	21 49 54.1	+0.5
	comp=Z,0.3nm,0.5s,baz=354,slow=3.0,SNR=4.2						

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*NOU **03** 21:39:27.6, 38°.48S×175°.67E, h193^{km}, MLv4.0/6, North Island, New Zealand*

WEL 03 21:39:35.2, 39°S±5°×**17°6E**±°**, h128**^{km}±8^{km}**, M3.4**/61**,** **MLv3.4**/61**, Error ellipse: s-maj=0.0km s-min=0.0km az=100.6, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WATZ	Wairara	0.07	200	P	Pn	21 39 53.4	+0.7
WHTZ	Whakaora	0.15	100	P	Pn	21 39 53.7	+0.9
KUTZ	Kaahu Road	0.16	17	P	Pn	21 39 53.4	+0.6
RATZ	Rangitukua	0.23	179	P	Pn	21 39 53.4	+0.4
WPRZ	Whakapapatarin	0.33	69	P	Pn	21 39 53.6	+0.4
KATZ	Kakaramea	0.34	189	P	Pn	21 39 53.9	+0.5
RITZ	Rihia Road	0.34	168	P	Pn	21 39 54.1	+0.8
HATZ	Hinemaiaia	0.36	134	P	Pn	21 39 53.7	+0.3
HATZ				S	Sn	21 40 09.4	+2.3
TLZ	Tolley Road	0.36	330	P	Pn	21 39 53.6	+0.2
NTVZ	North Tongarir	0.46	189	P	Pn	21 39 54.5	+0.5
KRVZ	Karewarewa	0.46	192	P	Pn	21 39 53.0	-1.0
TMVZ	Te Maari	0.48	186	P	Pn	21 39 54.5	+0.4
HRRZ	Handcock Road	0.48	59	P	Pn	21 39 54.3	+0.3
WTVZ	West Tongariro	0.49	196	P	Pn	21 39 54.6	+0.5
ETVZ	East Tongariro	0.50	185	P	Pn	21 39 54.8	+0.6
HSRZ	Hossack Road	0.50	49	P	Pn	21 39 54.4	+0.3
HSRZ				S	Sn	21 40 11.7	+3.4
TWVZ	Taurewa	0.50	211	P	Pn	21 39 54.5	+0.3
NNVZ	North Ngauruho	0.50	193	P	Pn	21 39 54.7	+0.4
OTVZ	Oturere	0.53	188	P	Pn	21 39 54.7	+0.3
MRHZ	Matea Rd	0.55	111	P	Pn	21 39 54.4	+0.1
MRHZ				S	Sn	21 40 10.7	+1.8
NGZ	Ngauruhoe	0.55	193	P	Pn	21 39 54.8	+0.2
SNVZ	South Ngauruho	0.55	190	P	Pn	21 39 54.9	+0.4
HLRZ	Highlands Stat	0.60	50	P	Pn	21 39 55.4	+0.6
TUVZ	Tukino	0.63	188	P	Pn	21 39 55.6	+0.5
TUVZ				S	Sn	21 40 12.9	+2.7
FWVZ	Far West T-bar	0.64	195	P	Pn	21 39 55.3	+0.1
FWVZ				S	Sn	21 40 12.9	+2.5
WHVZ	Whangaehu Hut	0.66	192	P	Pn	21 39 55.6	+0.2
RRRZ	Republican Roa	0.66	63	P	Pn	21 39 55.1	0.0
TRVZ	Turoa	0.68	194	P	Pn	21 39 55.8	+0.3
TRVZ				S	Sn	21 40 13.8	+2.9
WNVZ	Wahianoa	0.70	191	P	Pn	21 39 55.9	+0.4
TARZ	Mount Tarawera	0.71	55	P	Pn	21 39 55.6	0.0
OMRZ	Omania	0.72	42	P	Pn	21 39 55.3	-0.2
HIZ	Hauiti	0.72	280	P	Pn	21 39 55.2	-0.3
HIZ	Hauiti	0.72	280	P	Pn	21 39 55.3	-0.2
KARZ	Kaharoa	0.72	31	P	Pn	21 39 55.4	-0.2
PKVZ	Pokaka	0.72	207	P	Pn	21 39 55.8	+0.2
PKVZ				S	Sn	21 40 13.6	+2.4
MKRZ	Makatiti	0.75	48	P	Pn	21 39 56.1	+0.3
MOVZ	Moawhango	0.77	181	P	Pn	21 39 55.9	0.0
MOVZ				S	Sn	21 40 12.9	+1.1
BKZ	Black Stump Fm	0.77	133	P	Pn	21 39 56.2	+0.2
BKZ				S	Sn	21 40 13.3	+1.5
BKZ	Black Stump Fm	0.77	133	P	Pn	21 39 55.9	-0.1
MTVZ	Mangateitei	0.78	197	P	Pn	21 39 56.3	+0.3
KMRZ	Kaimai	0.81	10	P	Pn	21 39 55.9	-0.3
MTHZ	Maungataniwha	0.87	104	P	Pn	21 39 56.8	+0.1
MTHZ				S	Sn	21 40 14.9	+1.8
BHHZ	Black Hill Sta	0.88	165	P	Pn	21 39 56.9	0.0
BHHZ				S	Sn	21 40 14.2	+0.8
VRZ	Vera Road	0.92	238	P	Pn	21 39 57.0	-0.2
NMHZ	Naumai	0.93	120	P	Pn	21 39 58.5	+1.2
TOZ	Tahuroa Road	0.93	347	P	Pn	21 39 56.8	-0.5
KWHZ	Kaweka Forest	0.94	147	P	Pn	21 39 57.7	+0.3
KWHZ				S	Sn	21 40 16.4	+2.1
RTZ	Ruatahuna	0.95	89	P	Pn	21 39 57.2	-0.3
OPRZ	Ohinepanea	1.01	38	P	Pn	21 39 57.2	-0.8
RAHZ	Arahi	1.07	105	P	Pn	21 39 59.0	+0.4
MCHZ	McNeill Hill	1.08	138	P	Pn	21 39 59.6	+0.9
KRHZ	Kereru	1.11	155	P	Pn	21 39 59.1	+0.1
URZ	Urewera	1.12	71	P	Pn	21 39 58.0	-1.1
URZ	Urewera	1.12	71	P	Pn	21 39 57.8	-1.3
ARHZ	Aropaoanui	1.14	123	P	Pn	21 39 59.9	+0.6
MHEZ	Mangahewa	1.21	248	P	Pn	21 39 59.8	-0.1
WHHZ	Waihua	1.23	111	P	Pn	21 40 00.4	+0.3
SNGZ	Shannon Statio	1.24	97	P	Pn	21 40 00.3	0.0
WAZ	Wanganui	1.27	208	P	Pn	21 40 00.1	-0.5
RAGZ	Rawiri	1.30	84	P	Pn	21 40 00.4	-0.6
PNHZ	Pukenui	1.31	165	P	Pn	21 40 00.8	-0.3
DREZ	Durham Road	1.34	245	P	Pn	21 40 00.9	-0.4
LREZ	Lake Rotokare	1.34	232	P	Pn	21 40 01.2	-0.1
MWZ	Matawai	1.42	78	P	Pn	21 40 01.1	-1.1
TSZ	Takapari Road	1.42	174	P	Pn	21 40 01.8	-0.5
PREZ	Palmer Road	1.43	240	P	Pn	21 40 02.0	-0.4
CKHZ	Cape Kidnapper	1.44	135	P	Pn	21 40 02.6	+0.2
KAHZ	Kahuranaki	1.44	143	P	Pn	21 40 02.5	0.0
NEZ	North Egmont	1.45	244	P	Pn	21 40 02.1	-0.5
PKE	Pukeiti	1.49	248	P	Pn	21 40 02.2	-0.9
KHEZ	Kahui Hut	1.51	244	P	Pn	21 40 02.6	-0.8
WPHZ	Waipukurau	1.52	160	P	Pn	21 40 02.8	-0.5
KNZ	Kokohu	1.54	105	P	Pn	21 40 02.9	-0.6
RIGZ	Rimuhau	1.56	93	P	Pn	21 40 03.3	-0.6
OHWZ	Ohakea	1.60	192	P	Pn	21 40 03.9	-0.4
NBEZ	Newall Road No	1.61	246	P	Pn	21 40 03.2	-1.1
PXZ	Pawanui	1.63	149	P	Pn	21 40 04.0	-0.6
TKGZ	Te Karaka	1.65	84	P	Pn	21 40 04.1	-0.7
RUGZ	Raukumara Rang	1.65	66	P	Pn	21 40 02.6	-2.4
PRGZ	Paritu Road	1.68	100	P	Pn	21 40 04.4	-0.8
DVHZ	Dannevirke	1.69	169	P	Pn	21 40 04.1	-1.2
MHGZ	Mahia Peninsul	1.75	108	P	Pn	21 40 05.5	-0.5
POWZ	Post Office Ro	1.75	180	P	Pn	21 40 04.7	-1.3
PRHZ	Porangahau	1.76	158	P	Pn	21 40 05.4	-0.7

TWGZ	Tauwhareparae	1.80	76	P	Pn	21 40 05.7	-1.0
AWAZ	Awhitu Peninsu	1.81	330	P	Pn	21 40 05.5	-1.2
HAZ	Te Kaha	1.82	62	P	Pn	21 40 04.4	-2.4
KUZ	Kuaotunu	1.89	359	P	Pn	21 40 05.7	-2.0
ANWZ	Angora Road	1.90	163	P	Pn	21 40 06.8	-0.9
PRWZ	Pori Road	1.92	175	P	Pn	21 40 06.8	-1.2
CNGZ	Carnagh Statio	1.92	86	P	Pn	21 40 07.2	-0.8
PKGZ	Pakihiroa	1.97	68	P	Pn	21 40 07.0	-1.7
MBAZ	Motutapu North	1.99	340	P	Pn	21 40 07.0	-1.9
MRZ	Mangatainoka R	2.02	184	P	Pn	21 40 07.3	-2.0
PUZ	Puketiti	2.04	75	P	Pn	21 40 07.6	-1.9
BFZ	Birch Farm	2.07	170	P	Pn	21 40 08.1	-1.8
BFZ	Birch Farm	2.07	170	P	Pn	21 40 08.3	-1.6
TIWZ	Tintock	2.13	178	P	Pn	21 40 08.8	-1.9
OGWZ	Otaki Gorge	2.22	192	P	Pn	21 40 09.6	-2.2
WMGZ	Waiomatatini S	2.24	69	P	Pn	21 40 09.9	-2.1
HOWZ	Holdsworth Sta	2.26	185	P	Pn	21 40 09.8	-2.5
MXZ	Matakaoa Point	2.28	63	P	Pn	21 40 10.5	-1.9
CPWZ	Castlepoint	2.29	172	P	Pn	21 40 11.1	-1.5
KIW	Kapiti Island	2.31	196	P	Pn	21 40 10.3	-2.6
TMWZ	Te Maipa	2.46	178	P	Pn	21 40 12.3	-2.5
CAW	Cannon Point	2.52	192	P	Pn	21 40 12.7	-2.8
MTW	Mount Morrison	2.52	185	P	Pn	21 40 12.5	-3.0
DUWZ	D’Urville Isla	2.58	213	P	Pn	21 40 13.1	-3.2
WEL	Wellington	2.75	196	P	Pn	21 40 15.1	-3.3
PAWZ	Paruwai Farm	2.75	185	P	Pn	21 40 15.1	-3.4
TRWZ	Traveller	2.75	181	P	Pn	21 40 15.4	-3.1
MSWZ	Moikau Station	2.80	188	P	Pn	21 40 15.6	-3.5
TCW	Tory Channel	2.81	204	P	Pn	21 40 15.8	-3.4
BHW	Baring Head	2.85	194	P	Pn	21 40 16.2	-3.5
PLWZ	Palliser	2.95	187	P	Pn	21 40 17.4	-3.7
TUWZ	Tuamarina	3.12	206	P	Pn	21 40 19.1	-4.0
NNZ	Nelson	3.16	215	P	Pn	21 40 19.5	-4.2
QRZ	Quartz Range	3.31	228	P	Pn	21 40 21.2	-4.6
QRZ	Quartz Range	3.31	228	P	Pn	21 40 21.4	-4.4
BSWZ	Blackbirch Sta	3.40	205	P	Pn	21 40 22.8	-4.1
THZ	Tophouse	3.81	214	P	Pn	21 40 27.7	-4.7
KHZ	Kahutara	4.13	204	P	Pn	21 40 32.0	-4.6
KHZ	Kahutara	4.13	204	P	Pn	21 40 32.0	-4.6
GVZ	Greta Valley S	4.79	205	P	Pn	21 40 40.0	-5.4
LTZ	Lake Taylor	4.92	212	P	Pn	21 40 41.1	-5.9
AMCZ	Amberley	5.11	207	P	Pn	21 40 43.8	-5.8
OXZ	Oxford	5.46	210	P	Pn	21 40 47.9	-6.5
OKCZ	Okains Bay	5.47	201	P	Pn	21 40 48.5	-6.0
RPZ	Rata Peaks	6.19	214	P	Pn	21 40 58.1	-6.0
GCSZ	Gaunt Creek Bo	6.22	220	P	Pn	21 40 59.1	-5.5
ARCZ	Arundel	6.33	212	P	Pn	21 40 59.9	-6.1
FOZ	Fox Glacier	6.64	221	P	Pn	21 41 03.5	-6.7
TMZ	Timaru	6.76	210	P	Pn	21 41 05.2	-6.6
LBZ	Lake Benmore	7.10	214	P	Pn	21 41 09.9	-6.5
ODZ	Otahua Downs	7.45	209	P	Pn	21 41 14.5	-6.6

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*NEIC **03** 21:43:41.7±1.9, 7°.95S±0°.06×107°.08E±0°.06, h53^{km}±5^{km}, mb4.7/60, Error ellipse: s-maj=11.0km s-min=6.3km az=138.0*

*KLM **03** 21:43:43, 7°.96S×107°.11E, h63^{km}, mb4.8*

*DJA **03** 21:43:43.3±0.2, 8°S±2°×10°7E±°, h56^{km}±3^{km}, M4.9/43, mB5.4/5, mb4.9/43, MLv4.9/37, Mw(mB)4.8/5, MwMwp5.8/1, Mwp5.9/1*

*IDC **03** 21:43:47.1±1.2, 7°.67S×107°.42E, h91^{km}±10^{km}, mb4.1/27, mb1 4.2/29, mb1mx4.1/50, mbtmp4.5/29, Error ellipse: s-maj=16.1km s-min=9.6km az=57.0*

ISC 03 21:43:42.3±0.6**, 8°.04S**±0°.04×**107°.19E**±0°.04**, h59**^{km}±5^{km}**, n280, σ1^{s}.60**/288**, mb4.6**/66**, MS4.7**/3**, 13C-4D, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNJI	Cibinong	0.73	355	P	Pn	21 43 58.2	+1.3
CNJI				S	Sn	21 44 08.7	+1.2
CISI	Cisompet, Garu	0.79	52		Pn	21 43 57.6	-0.1
CISI				Sn	Sn	21 44 08.1	-0.8
CISI	Cisompet, Garu	0.79	52	P	Pn	21 43 57.6	-0.1
CISI				S	Sn	21 44 08.0	-0.8
CISI	Cisompet, Garu	0.79	52	P	Pn	21 43 57.8	+0.1
CMJI	Cimerak	1.27	79	P	Pn	21 44 03.8	-0.2
CMJI				S	Sn	21 44 18.4	-1.7
LEM	Lembang	1.28	19	P	Pn	21 44 06.3	+2.1
	776nm,0.3s,baz=323,slow=4.4,SNR=224						
LEM				S	Sn	21 44 23.1	+2.5
	2µm,0.3s,baz=127,slow=23,SNR=17						
LEM	Lembang	1.28	19	P	Pn	21 44 06.0	+1.8
LEM				S	Sn	21 44 23.3	+2.8
DBJI	Dramaga	1.54	344	P	Pn	21 44 10.5	+2.9
KPJI	Karang Pucung	1.86	68	P	Pn	21 44 13.0	+1.0
TNG	Tangerang	1.93	344	P	Pn	21 44 15.5	+2.6
CGJI	Cibinong	2.05	314	P	Pn	21 44 16.7	+2.2
SBJI	Serang	2.18	331	P	Pn	21 44 19.5	+3.3
XMI	Christmas Isla	2.81	212	P	Pn	21 44 24.9	-0.1
XMIS	Christmas Isla	2.86	212	Pn	Pn	21 44 25.4	-0.2
XMIS				Sn	Sn	21 44 55.1	-3.7
XMIS	Christmas Isla	2.86	212	P	Pn	21 44 25.2	-0.4
YOGI	Yogyakarta	3.08	86	P	Pn	21 44 28.3	-0.3
BLSI	Bandar Lampung	3.28	324	P	Pn	21 44 33.9	+2.5
UGM	Wanagama	3.31	88	Pn	Pn	21 44 31.8	+0.2
UGM	Wanagama	3.31	88	P	Pn	21 44 31.9	+0.2
UGM	Wanagama	3.31	88	P	Pn	21 44 32.1	+0.4
SMRI	Semarang	3.37	73		Pn	21 44 34.5	+1.9
SMRI	Semarang	3.37	73	P	Pn	21 44 34.5	+1.9
SMRI	Semarang	3.37	73	P	Pn	21 44 34.8	+2.2
KASI	Kota Agung	3.66	313	P	Pn	21 44 39.1	+2.6
KLI	Kotabumi	3.92	324	P	Pn	21 44 44.1	+4.1
PCJI	Pacitan	3.95	93	P	Pn	21 44 41.2	+0.7
KLSI		4.13	324	P	Pn	21 44 46.6	+3.6
NGJI	Ngawi	4.29	81	P	Pn	21 44 46.8	+1.7
LWLI	Liwa	4.32	314	P	Pn	21 44 48.5	+2.8
PWJI	Pagerwojo	4.57	90	P	Pn	21 44 49.4	+0.4
MDSI	Maura Dua	4.63	320	P	Pn	21 44 52.8	+3.0
TBJI	Tambak Boyo	4.78	76	P	Pn	21 44 52.2	+0.4
GRJI	Gresik	5.36	78	P	Pn	21 45 00.6	+0.7
	0.7nm2µm169nm,0.5s						
LHSI	Lahat	5.55	319	P	Pn	21 45 06.6	+4.2
	0.5nm92nm,0.8s						
MNAI	Manna	5.57	311	Pn	Pn	21 45 04.8	+2.1
MNAI	Manna	5.57	311	P	Pn	21 45 05.2	+2.4
	1.7nm351nm,1.1s						
BWJI	Bawean	5.85	69	P	Pn	21 45 07.2	+0.7
	1.0nm186nm,0.9s						
PPBI	Pangkal Pinang	5.93	350	P	Pn	21 45 11.7	+4.0
	0.6nm37nm,0.9s						
GMJI	Gumukmas	6.20	93	P	Pn	21 45 12.8	+1.5
	0.6nm56µm170nm,0.6s						
KSI	Kapahiang	6.32	313	P	Pn	21 45 16.3	+3.3
	139nm,0.5s						
BLJI	Banyuglugur	6.35	88	P	Pn	21 45 14.6	+1.2
	0.4nm2µm78nm,0.4s						
KMMI	Kalianget	6.79	82	P	Pn	21 45 19.2	-0.2
	0.3nm43nm,0.6s						
JAGI	Jajag, Banyuwa	6.91	94	Pn	Pn	21 45 22.0	+1.0
JAGI	Jajag, Banyuwa	6.91	94	P	Pn	21 45 21.7	+0.7
	0.9nm171nm,0.9s						
JAGI	Jajag, Banyuwa	6.91	94	P	Pn	21 45 22.3	+1.3
MASI	Maura Aman, Be	6.92	314	P	Pn	21 45 23.1	+1.8
	0.7nm107nm,0.8s						
PBKI	Pangkalan Bun	6.93	40	P	Pn	21 45 22.8	+1.5
	0.4nm87nm,0.7s						
ABJI	Asem Bagus	6.98	88	P	Pn	21 45 23.7	+1.6
	1.1nm270nm,0.5s						
IGBI	Denpasar	7.91	96	P	Pn	21 45 33.7	-1.1
	0.7nm3µm68nm,0.5s						
SRBI	Singaraja	7.95	91	P	Pn	21 45 36.8	+1.6
	0.5nm155nm,0.7s						
DSRI	Dabo	7.95	341	P	Pn	21 45 38.9	+3.6
	12nm,0.7s						
DNP	Denpasar	7.96	95	P	Pn	21 45 38.0	+2.5
	3.0nm205nm,0.6s						
PPSI	Pulau Pagai	8.86	306	P	Pn	21 45 48.2	+0.4
	322nm,0.6s						
STKI	Sintang	9.12	28	P	Pn	21 45 54.7	+3.4
	17nm,0.8s						
TWSI	Taliwang, Sumb	9.62	95	P	Pn	21 45 58.1	0.0
	37nm,0.6s						
PDSI	Padang	9.75	316	P	Pn	21 46 00.9	+0.9
	17nm,0.5s						
PLAI	Plampang	10.50	95	P	Pn	21 46 10.3	0.0
	73nm,0.8s						
PLAI	Plampang	10.50	95	P	Pn	21 46 11.4	+1.1
WBSI	Waikabubak, Su	12.16	98	P	Pn	21 46 29.3	-3.7
	33nm,1.0s						
KAPI	Kappang	12.84	77	P	Pn	21 46 42.0	-0.2
	4.2nm,0.3s,baz=332,slow=21,SNR=4.8						
KAPI	Kappang	12.84	77	P	Pn	21 46 44.5	+2.3
BKSI	Bulukumba	13.13	79	P	Pn	21 46 47.7	+1.6
	53nm,0.8s						
BSSI	Bau Bau, Buton	13.33	83	P	Pn	21 46 49.1	+0.2
	26nm,0.8s						
GSI	Gunungsitoli	13.34	314	Pn	Pn	21 46 45.0	-4.0
GSI	Gunungsitoli	13.34	314	P	Pn	21 46 48.3	-0.8
TTSI	Tana Toraja	13.51	69	P	P	21 46 55.1	-3.5
	25nm,1.3s						
EDFI	Ende, Flores	14.36	94	P	Pn	21 46 59.7	-3.1
	15nm,0.6s						
MMRI	Maumere	14.90	93	Pn	Pn	21 47 10.8	+1.1
MMRI				IAmb	IAmb	21 47 22.6	
	comp=Z,54nm,0.7s						
MMRI	Maumere	14.90	93	P	Pn	21 47 09.1	-0.6
	comp=Z,83nm,0.7s						
MPSI	Mapaga	15.16	57	P	P	21 47 15.4	-1.5
	comp=Z,33nm,1.1s						
SPMM	Sapulut	15.69	36	P	P	21 47 22.0	-0.8
GIRL	Giralia	16.02	156	Pn	Pn	21 47 22.2	-1.8
APSI	Ampana	16.05	65	P	Pn	21 47 25.4	+0.9
	comp=Z,61nm,1.1s						
TOLI2	Tolitoli	16.32	57		P	21 47 28.8	-1.0
TOLI2	Tolitoli	16.32	57	P	P	21 47 30.3	+0.5
BATI	Baumata	16.41	99	P	Pn	21 47 28.8	-0.2
	comp=Z,6.2nm,0.3s,baz=288,slow=4.0,SNR=2.9						
BATI				S	Sn	21 50 15.8	-15
	comp=Z,5.2nm,0.3s,baz=80,slow=13,SNR=2.9						
BATI	Baumata	16.41	99	P	Pn	21 47 27.6	-1.4
	comp=Z,42nm,0.7s						
SOEI	Soe	16.96	97	P	P	21 47 37.5	+0.4
MRSI	Marisa	16.97	61	P	Pn	21 47 36.0	+0.1
	comp=Z,89nm,0.7s						
LUWI	Luwuk	17.01	67	P	Pn	21 47 36.7	+0.3
LUWI				IAmb	IAmb	21 47 45.3	
	comp=Z,58nm,0.9s						
LUWI	Luwuk	17.01	67	P	P	21 47 37.5	0.0
	comp=Z,53nm,0.8s						
GTOI	Gorontalo	17.98	62	P	P	21 47 45.9	-2.2
	comp=Z,15nm,0.8s						
PSA00	Pilbara Seismi	18.17	139	P	Pn	21 47 50.4	-0.2
PSA00	Pilbara Seismi	18.17	139	P	P	21 47 49.8	-0.4
PSA00				IAmb	IAmb	21 48 00.0	
	comp=Z,4.0nm,0.8s						
SANI	Sanana	19.64	73	P	P	21 48 06.0	-0.4
	comp=Z,82nm,0.9s						
SANI	Sanana	19.64	73	P	P	21 48 06.4	0.0
FITZ	Fitzroy Crossi	20.55	121	P	P	21 48 16.8	+0.6
	comp=Z,20nm,0.7s,baz=296,slow=6.9,SNR=65						
FITZ				S	S	21 51 50.5	-12
	comp=Z,2.6nm,0.8s,baz=355,slow=10,SNR=2.1						
FITZ	Fitzroy Crossi	20.55	121	P	P	21 48 16.4	+0.2
FITZ				IAmb	IAmb	21 48 18.6	
	comp=Z,19nm,0.8s						
FITZ	Fitzroy Crossi	20.55	121	P	Pn	21 48 17.9	-1.0
	comp=Z,29nm,0.8s						
LBMI	Labuha	21.53	71	P	P	21 48 27.8	+0.9
	comp=Z,60nm,0.8s						
TNTI	Ternate	21.94	67	P	P	21 48 29.4	-1.8
TNTI				IAmb	IAmb	21 48 50.5	
	comp=Z,21nm,0.8s						
TNTI	Ternate	21.94	67	P	P	21 48 30.2	-1.0
	comp=Z,28nm,0.7s						
KNRA	Kununurra	22.42	112	P	P	21 48 36.1	-0.3
KNRA				IAmb	IAmb	21 48 38.6	
	comp=Z,18nm,0.8s						
KNRA	Kununurra	22.42	112	P	P	21 48 37.2	+0.8
	comp=Z,28nm,0.7s						
DRS	Darwin Rock St	23.73	103	P	P	21 48 50.4	+1.0
	comp=Z,22nm,0.4s						
MTN	Manton Dam	24.02	103	P	P	21 48 51.5	-0.5
MTN				IAmb	IAmb	21 49 01.8	
	comp=Z,42nm,1.3s						
SWI	Sorong	25.02	75	P	P	21 49 00.0	-1.1
	comp=Z,25nm,0.9s						
SIJI	Sorong	25.02	75	P	P	21 48 53.9	-7.3
	comp=Z,3.9nm,0.4s,baz=238,slow=22,SNR=2.0						
KDU	Kakadu	25.29	103	P	P	21 49 03.3	-0.2
	comp=Z,25nm,1.2s						
FAKI	Fak Fak	25.45	80	P	P	21 49 03.5	-1.5
FAKI				IAmb	IAmb	21 49 06.6	
	comp=Z,16nm,0.6s						
FAKI	Fak Fak	25.45	80	P	P	21 49 03.7	-1.3
	comp=Z,22nm,0.7s						
FAKI	Fak Fak	25.45	80	P	P	21 49 06.2	+1.2
	comp=Z,23nm,0.8s						
H01W3	Cape Leeuwin H	27.47	168	T	T	22 19 08.2	
	baz=344,slow=78,SNR=11						
H01W1	Cape Leeuwin H	27.48	168	T	T	22 19 13.4	
	baz=344,slow=78,SNR=13						
H01W2	Cape Leeuwin H	27.48	168	T	T	22 19 09.3	
	baz=344,slow=78,SNR=13						
CMAR	Chiang Mai Arr	27.56	343	P	P	21 49 22.0	-1.9
	comp=Z,0.5nm,0.3s,baz=179,slow=8.5,SNR=8.5						
CMAR				PcP	PcP	21 52 42.5	+1.7
	comp=Z,0.8nm,0.3s,baz=210,slow=2.6,SNR=6.8						
CMAR	Chiang Mai Arr	27.56	343	P	P	21 49 21.8	-2.1
WB0	Warramunga Arr	28.81	117	P	P	21 49 35.1	0.0
WRA	Warramunga Arr	28.82	117	P	P	21 49 35.9	+0.6
	comp=Z,3.7nm,0.5s,baz=293,slow=10,SNR=13						
WRA				PcP	PcP	21 52 44.6	+0.6
	comp=Z,1.4nm,0.6s,baz=302,slow=2.1,SNR=5.0						
WRA	Warramunga Arr	28.82	117	P	P	21 49 35.3	0.0
ASAR	Alice Springs	29.94	124	PcP	PcP	21 52 47.7	+0.9
	comp=Z,1.0nm,0.5s,baz=290,slow=1.5,SNR=4.8						
ASAR	Alice Springs	29.94	124	P	P	21 49 45.9	+0.7
AS31	Alice Springs	29.94	124	P	P	21 49 46.0	+0.8
H08S2	Diego Garcia H	34.37	268	T	T	22 27 30.7	
	baz=92,slow=76,SNR=93						
SSLB	Suanglung	34.37	23	P	P	21 50 23.9	-0.1
SSLB				IAmb	IAmb	21 50 41.8	
	comp=Z,17nm,1.0s						
H08S3	Diego Garcia H	34.38	268	T	T	22 27 32.9	
	baz=92,slow=76,SNR=181						
H08S1	Diego Carcia H	34.39	268	T	T	22 27 28.9	
	baz=92,slow=76,SNR=7.8						
COEN	Coen	35.78	103	P	P	21 50 36.0	-0.2
BBOO	Buckleboo	36.37	137	P	P	21 50 40.3	-0.7
BBOO				IAmb	IAmb	21 51 05.6	
	comp=Z,13nm,1.1s						
PMG	Port Moresby	39.52	95	P	P	21 51 08.4	+0.6
	comp=Z,6.2nm,0.3s,baz=262,slow=14,SNR=2.0						
CTA	Charters Tower	39.63	112	P	P	21 51 10.6	+1.9
	comp=Z,12nm,0.8s,baz=297,slow=10,SNR=14						
CTAO	Charters Tower	39.63	112	P	P	21 51 08.9	+0.2
CTAO				IAmb	IAmb	21 51 11.5	
	comp=Z,19nm,0.9s						
ODAN	Odare	39.65	332	*e*P	P	21 51 06.9	-2.1
	comp=Z,6.0nm,0.4s						
STKA	Stephens Creek	39.81	131	P	P	21 51 12.0	+2.0
	comp=Z,24nm,0.6s,baz=304,slow=7.8,SNR=40						
STKA				PcP	PcP	21 53 16.4	+1.1
	comp=Z,3.6nm,0.5s,baz=151,slow=23,SNR=2.9						
STKA	Stephens Creek	39.81	131	P	P	21 51 11.5	+1.5
TAPN	Taplejung	39.92	332	*e*P	P	21 51 08.8	-2.5
JIRN	Jiri	40.90	331	*e*P	P	21 51 16.8	-2.6
	comp=Z,8.2nm,0.4s						
PKIN	Phulchoki	41.22	330	*e*P	P	21 51 19.9	-2.0
	comp=Z,4.5nm,0.6s						
GUN	Gumba	41.26	331	*e*P	P	21 51 20.5	-1.8
NJ2	Nanjing	41.39	15	*e*P	P	21 51 25.3	+2.4
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
KKN	Kakani	41.45	330	*e*P	P	21 51 21.9	-1.9
GKN	Gorkha	41.95	330	*e*P	P	21 51 25.5	-2.2
	comp=Z,9.3nm,0.4s						
KOLN	Koldanda	42.29	328	*e*P	P	21 51 28.8	-1.8
	comp=Z,12nm,0.6s						
DANN	Dangsing	42.67	329	*e*P	P	21 51 31.6	-2.2
	comp=Z,18nm,0.6s						
PYUN	Piuthan	42.87	328	*e*P	P	21 51 34.0	-1.3
	comp=Z,7.9nm,0.5s						
CAN	Canberra	46.88	132	P	P	21 52 07.1	+0.2
ARMA	Armidale	47.10	124	P	P	21 52 08.7	-0.1
ARMA				IAmb	IAmb	21 52 21.5	
	comp=Z,16nm,1.3s						
GTA	Gaotai	47.70	352	*e*P	P	21 52 14.1	+0.8
GTA				pP	pP	21 52 18.3	-10
GTA				sP	pwP	21 52 21.5	-9.1
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
HHC	Hu-ho-hao-te	48.81	4	*e*P	P	21 52 24.5	+2.7
HHC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,700nm,6.6s						
KSRS	Korea Array	49.24	22	P	P	21 52 22.7	-2.3
	comp=Z,0.9nm,0.6s,baz=196,slow=8.5,SNR=2.5						
KSRS				PcP	PcP	21 53 48.0	+0.7
	comp=Z,1.8nm,1.1s,baz=186,slow=2.9,SNR=6.6						
JHS	Saijyo	49.32	28	P	P	21 52 24.4	-1.3
JWT	Wachi	50.65	30	P	P	21 52 33.8	-1.9
NIL	Nilore	52.51	324	P	P	21 52 48.1	-1.6
MAT	Matsushiro	53.05	31	P	P	21 52 50.7	-3.0
MJAR	Matsushiro Arr	53.05	31	P	P	21 52 51.2	-2.4
	comp=Z,1.8nm,0.4s,baz=189,slow=9.2,SNR=5.5						
MJAR				PcP	PcP	21 54 01.9	+0.3
	comp=Z,3.5nm,0.8s,baz=197,slow=4.7,SNR=7.4						
MJAR	Matsushiro Arr	53.05	31	LR	LR	21 54 01.5	
	comp=Z,782nm,19.4s,baz=195,slow=38						
JSD	Sado	54.23	30	P	P	21 53 00.2	-2.0
WMQ	Urumqi	54.56	343	*e*P	P	21 53 06.2	+1.6
WMQ				LR	LR		
	comp=N,670nm,20.7s						
WMQ				LR	LR		
	comp=E,600nm,16.3s						
WMQ				LR	LR		
	comp=Z,490nm,18.5s						
KSH	Kashi	55.45	331	P	P	21 53 09.5	-1.7
KSH				pP	pP	21 53 24.2	-2.0
KSH				sP	sP	21 53 31.4	-1.2
KSH				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KBL	Kabul	55.63	322	P	P	21 53 11.2	-1.5
KBL				IAmb	IAmb	21 53 15.0	
	comp=Z,6.7nm,0.6s						
SONM	Songino Array	55.63	359	P	P	21 53 11.6	-0.8
	comp=Z,3.4nm,0.7s,baz=174,slow=8.5,SNR=22						
SONM				PcP	PcP	21 54 11.6	+0.3
	comp=Z,5.4nm,0.5s,baz=178,slow=4.1,SNR=35						
SONM				ScP	ScP	21 58 01.0	-4.4
	comp=Z,0.5nm,0.7s,baz=189,slow=5.4,SNR=3.7						
SONM	Songino Array	55.63	359	P	P	21 53 11.8	-0.6
ULN	Ulaanbaatar	55.66	360	P	P	21 53 11.3	-1.3
ULN				IAmb	IAmb	21 53 12.6	
	comp=Z,5.6nm,0.9s						
USA0B	Ussuriysk Arra	56.63	21	P	P	21 53 18.3	-1.0
USA0B				IAmb	IAmb	21 53 29.4	
	comp=Z,3.5nm,0.7s						
USRK	Ussuriysk Ar.	56.63	21	P	P	21 53 17.3	-2.1
	comp=Z,1.7nm,0.4s,baz=184,slow=6.5,SNR=10						
USRK	Ussuriysk Ar.	56.63	21	P	P	21 53 18.4	-1.0
WSAR	Wadi Sarin	56.74	304	P	P	21 53 22.6	+2.1
	comp=Z,2.8nm,0.6s,baz=136,slow=3.7,SNR=6.1						
GAR	Garm	57.98	327	P	P	21 53 27.5	-1.7
GAR				IAmb	IAmb	21 53 32.7	
	comp=Z,7.2nm,1.0s						
CHGR	Chuyangaron	58.38	325	P	P	21 53 29.9	-2.0
CHGR				IAmb	IAmb	21 53 30.8	
	comp=Z,13nm,1.2s						
BTK	Batken	58.47	328	P	P	21 53 30.9	-1.6
BTK				IAmb	IAmb	21 53 33.1	
	comp=Z,3.8nm,0.8s						
DZM	Mont Dzumac	58.57	111	P	P	21 53 34.9	+1.4
	comp=Z,3.3nm,0.9s,baz=269,slow=18,SNR=2.4						
DZM	Mont Dzumac	58.57	111	P	P	21 53 34.4	+0.8
DZM				IAmb	IAmb	21 53 59.3	
	comp=Z,4.2nm,0.8s						
MK31	Makanchi Array	58.92	340	P	P	21 53 33.7	-1.8
MKAR	Makanchi Array	58.92	340	P	P	21 53 33.6	-1.9
	comp=Z,1.5nm,0.5s,baz=156,slow=8.2,SNR=24						
OUENC	Ouen Island, N	58.96	111	P	P	21 53 36.7	+0.6
OUENC				IAmb	IAmb	21 53 38.6	
	comp=Z,7.9nm,0.8s						
MAKZ	Makanchi	59.04	340	P	P	21 53 34.9	-1.3
MAKZ				IAmb	IAmb	21 53 38.0	
	comp=Z,7.8nm,1.1s						
UOSS	Minazif	59.49	305	P	P	21 53 39.4	-0.4
UOSS				IAmb	IAmb	21 53 43.3	
	comp=Z,12nm,1.2s						
KKAR	Karatay Array	60.85	330	P	P	21 53 47.4	-1.3
ASAJ	Asahikawa	60.99	29	P	P	21 53 47.9	-1.8
	comp=Z,7.4nm,0.7s,baz=237,slow=17,SNR=4.5						
KURK	Kurchatov	63.54	340	P	P	21 54 05.5	-1.0
KURK				IAmb	IAmb	21 54 08.0	
	comp=Z,8.8nm,1.1s						
ZAA0	Zalesovo Array	64.58	346	P	P	21 54 12.2	-1.1
ZALV	Zalesovo Beam	64.58	346	P	P	21 54 11.3	-2.0
	comp=Z,1.5nm,0.4s,baz=148,slow=5.8,SNR=12						
ZALV	Zalesovo Beam	64.58	346	P	P	21 54 11.5	-1.8
GEYT	Alibeck	64.66	319	P	P	21 54 14.1	-0.1
	comp=Z,3.6nm,0.6s,baz=193,slow=19,SNR=5.1						
GYA0B	ALIBECK ARRAY	64.66	319	P	P	21 54 13.5	-0.8
GYA0B				IAmb	IAmb	21 54 16.0	
	comp=Z,6.8nm,0.8s						
MAW	Mawson	66.43	197	P	P	21 54 28.4	+3.4
	comp=Z,0.9nm,0.6s,baz=23,slow=5.7,SNR=2.7						
MAW	Mawson	66.43	197	P	P	21 54 27.3	+2.2
BRVK	Borovoye	68.46	337	P	P	21 54 37.6	-0.4
BRVK				IAmb	IAmb	21 54 38.8	
	comp=Z,6.3nm,1.0s						
BKZ	Black Stump Fm	68.93	129	P	P	21 54 42.5	+1.0
ABKAR	Akbulak array	70.40	329	P	P	21 54 49.8	-0.3
ABKAR	Akbulak array	70.40	329	P	P	21 54 49.9	-0.2
YAK	Yakutsk	72.01	11	P	P	21 54 57.9	-1.7
YAK				IAmb	IAmb	21 54 59.4	
	comp=Z,16nm,1.0s						
PEA0B	Petropavlovsk-	74.41	29	P	P	21 55 12.6	-1.3
PETK	Petropavlovsk-	74.41	29	P	P	21 55 11.8	-2.1
	comp=Z,3.9nm,0.6s,baz=56,slow=2.5,SNR=8.1						
PETK	Petropavlovsk-	74.41	29	P	P	21 55 12.2	-1.8
SYO	Syowa Base	74.60	200	⇓*e*P	P	21 55 15.4	+0.6
VNDA	Vanda	74.92	169	P	P	21 55 18.4	+1.9
	comp=Z,0.7nm,0.7s,baz=312,slow=6.1,SNR=6.2						
VNDA	Vanda	74.92	169	P	P	21 55 18.2	+1.7
SIRT	Sirnak	75.42	312	P	P	21 55 19.7	-0.5
SIRT				IAmb	IAmb	21 55 42.4	
	comp=Z,11nm,1.0s						
ARU	Arti	75.64	335	P	P	21 55 21.0	+0.1
GURO	Guroymak-BITLI	76.11	313	P	P	21 55 24.9	+0.6
KBZ	Khabaz	77.54	318	P	P	21 55 33.4	+1.4
	comp=Z,7.3nm,0.9s,baz=170,slow=3.8,SNR=13						
NRIK	Noril'sk	78.40	353	P	P	21 55 34.5	-1.7
	comp=Z,3.6nm,0.5s,baz=138,slow=4.1,SNR=6.3						
NRIK	Noril'sk	78.40	353	P	P	21 55 35.1	-1.1
NRIK				IAmb	IAmb	21 55 36.4	
	comp=Z,13nm,1.2s						
TIXI	Tiksi	80.81	7	P	P	21 55 47.7	-1.5
TIXI				IAmb	IAmb	21 55 48.9	
	comp=Z,10nm,0.8s						
QSPA	South Pole Qui	81.95	180	P	P	21 55 57.6	+2.0
	comp=Z,2.6nm,0.7s,baz=266,slow=2.6,SNR=7.9						
QSPA	South Pole Qui	81.95	180	P	P	21 55 57.0	+1.3
BRTR	Keskin Array B	82.66	312	P	P	21 56 00.7	+0.8
	comp=Z,3.6nm,0.7s,baz=140,slow=6.4,SNR=11						
BRTR	Keskin Array B	82.66	312	P	P	21 56 00.0	+0.2
PURM	Purcari	87.16	318	⇑P	P	21 56 23.3	+1.2
JURR	Jurilovca	87.40	316	⇓P	P	21 56 24.9	+1.6
TLCR		87.54	316	⇑P	P	21 56 25.0	+1.1
TIRR	Tirgusor	87.65	315	⇑P	P	21 56 25.8	+1.3
TIRR	Tirgusor	87.65	315	P	P	21 56 25.4	+0.9
TLBR	Topalu	87.92	315	⇓P	P	21 56 27.5	+1.7
CFR	Carcaliu	88.01	316	⇑P	P	21 56 27.6	+1.4
HARR	Harsova	88.04	315	⇑P	P	21 56 27.9	+1.6
VLDR	Vladesti	88.20	317	⇑P	P	21 56 28.8	+1.7
SORM	Soroca	88.55	319	⇑P	P	21 56 28.7	0.0
SNAA	Sanae	88.59	197	P	P	21 56 31.8	+3.2
SNAA	Sanae	88.59	197	P	P	21 56 32.1	+3.5
	comp=Z,2.3nm,0.8s,baz=149,slow=6.0,SNR=11						
SNAA	Sanae	88.59	197	P	P	21 56 31.1	+2.5
SNAA				IAmb	IAmb	21 56 33.0	
	comp=Z,4.1nm,1.0s						
AKASG	Malin Array Be	88.62	322	P	P	21 56 28.6	-0.4
	comp=Z,1.6nm,0.6s,baz=85,slow=4.9,SNR=8.0						
VRI	Vrincioaia	89.12	316	⇑P	P	21 56 32.1	+0.6
PLOR	Plostina	89.17	316	⇑P	P	21 56 34.1	+2.4
TESR	Tescani	89.32	317	⇑P	P	21 56 33.9	+1.5
MLR	Muntele Rosu	89.58	316	⇑P	P	21 56 35.9	+2.1
MLR	Muntele Rosu	89.58	316	P	P	21 56 34.1	+0.3
VOIR		90.19	316	⇑P	P	21 56 36.1	-0.4
VNA2	Neumayer--Watz	90.24	197	P	P	21 56 39.6	+3.3
	baz=104,slow=4.8						
MNK	Minsk	90.33	325	*i* P	P	21 56 35.2	-1.6
	comp=E,3.0nm,1.1s						
MNK				*i* P	P	21 56 35.2	-1.6
	comp=N,7.0nm,0.9s						
MNK				*i* P	P	21 56 35.2	-1.6
	comp=Z,2.0nm,1.1s,baz=103						
MNK				*i* pP	pP	21 56 52.2	-0.7
MNK				*i* sP	sP	21 56 59.0	0.0
MNK				*i* PP	PP	22 00 09.1	-2.6

MNK				*i* PPP	PPP	22 02 06.5	
MNK				*i* SKS	SKSac	22 06 46.0	-17
MNK				*i* S	SKKSac	22 07 00.3	-17
MNK				*i* sS	ScS	22 07 30.7	+0.5
MNK				*i* SS	SS	22 13 26.6	-1.1
MNK				*i* SSS	SSS	22 17 02.0	
MNK				*i* LQ	LQ	22 30 56.2	
MNK				*i* LR	LR	22 36 53.7	
MNK	comp=E,28nm,15.2s			*i* LRM	MLR	22 39 39.0	
MNK	comp=N,227nm,17.8s			*i* LRM	MLR	22 39 44.1	
MNK	comp=Z,180nm,15.2s			*i* LRM	MLR	22 39 44.1	
ARR	Arges	90.46	316	⇑P	P	21 56 39.0	+1.2
BURAR	Bucovina Array	90.50	318	⇓P	P	21 56 39.8	+1.8
BUR08	Bucovina Ar. S	90.52	318	P	P	21 56 39.2	+1.1
BUR08	comp=Z,6.8nm,1.5s			IAmb	IAmb	21 57 00.4	
VNA1	Neumayer--Stat	90.62	198	P	P	21 56 41.5	+3.5
VNA3	Neumayer Olymp	90.76	197	P	P	21 56 41.5	+2.8
FINES	FINESS Array B comp=Z,1.3nm,0.6s,baz=284,slow=7.7,SNR=8.0	92.77	332	P	P	21 56 48.3	+0.3
ARCES	ARCESS Array B comp=Z,2.3nm,0.8s,baz=83,slow=3.8,SNR=8.3	94.57	340	P	P	21 56 55.7	-0.5
J20K	Nowinta River baz=274	100.97	26	P	Pdif	21 57 24.8	-0.3
TOLK	Toolik Lake Re baz=280	102.26	21	P	Pdif	21 57 30.6	-0.2
MLY	Manley baz=278	102.34	25	P	Pdif	21 57 31.6	+0.3
CAPN	Captain Cook N baz=276	102.67	30	P	Pdif	21 57 33.1	+0.4
BRSE	Bradley Lake S baz=276	102.98	31	P	Pdif	21 57 34.8	+0.6
TORD	Torodi Ar. Bea comp=Z,0.4nm,0.8s,baz=304,slow=1.7,SNR=2.2	106.81	281	PKiKP	PKiKP	22 02 02.7	+0.4
PDAR	Pinedale Array comp=Z,0.3nm,0.5s,baz=132,slow=2.2,SNR=2.4	132.72	37	PKP	PKiKP	22 02 52.9	+0.5
SCHQ	Schefferville comp=Z,1.8nm,0.5s,baz=299,slow=2.9,SNR=6.2	133.09	355	PKP	PKiKP	22 02 52.7	+0.2
SCHQ	Schefferville	133.09	355		PKiKP	22 02 52.9	+0.4
MNTX	Cornudas Mount baz=301	141.63	48	P	PKPdf	22 03 05.3	-2.5
LONY	Lake Ozonia baz=357	143.53	2	P	PKPbc	22 03 09.0	+0.9
LBNH	Lisbon baz=1.5	143.93	359	P	PKPbc	22 03 09.5	+0.3
TXAR	Lajitas Array comp=Z,1.7nm,0.7s,baz=294,slow=1.3,SNR=20	144.10	50	PKP	PKPbc	22 03 11.2	+0.9
TXAR	Lajitas Array	144.10	50	PKPdf	PKPdf	22 03 11.6	-0.7
WMOK	Wichita Mounta baz=312,SNR=13	144.29	38	P	PKPbc	22 03 10.9	+0.2
ABTX	Abilene, Hawle baz=309	145.11	42	P	PKPbc	22 03 12.6	-0.8
TUL1	Leonard baz=318,SNR=5.4	145.21	34	P	PKPdf	22 03 13.8	-0.1
SFIN	Lafayette baz=335,SNR=8.1	145.36	19	P	PKPab	22 03 14.1	+0.1
ERPA	Erie baz=348	145.47	9	P	PKPdf	22 03 14.0	-0.2
HRV	Adam Dziewonsk baz=2.2	145.66	358	P	PKPab	22 03 15.7	+0.7
L61B	Northampton baz=0.3	145.73	360	P	PKPbc	22 03 15.1	+0.1
CCM	Cathedral Cave baz=326	145.79	26	P	PKPbc	22 03 15.3	0.0
BINY	Binghamton baz=354	145.86	4	P	PKPbc	22 03 15.4	0.0
BDFB	Brasilia comp=Z,3.0nm,0.4s,baz=158,slow=9.5,SNR=4.3	145.99	226	PKPbc	PKPab	22 03 18.5	+1.3
M53A	WI Miller and baz=346	146.01	11	P	PKPbc	22 03 16.0	+0.1
M54A	Oil Creek Stat baz=348,SNR=6.0	146.12	9	P	PKPbc	22 03 16.1	-0.1
JCT	Junction City baz=306	146.30	45	P	PKPab	22 03 17.8	-0.2
U40A	Yellville baz=322,SNR=12	146.41	30	P	PKPbc	22 03 17.3	0.0
N54A	Moraine State baz=347	146.60	10	P	PKPbc	22 03 17.7	+0.1
ACSO	Alum Creek Sta baz=342	146.68	14	P	PKPbc	22 03 18.1	+0.2
W39A	Magazine baz=320	146.83	32	P	PKPab	22 03 19.4	-0.4
P49A	Miami Univ. Ec baz=338,SNR=6.5	146.87	17	P	PKPbc	22 03 18.5	0.0
WHTX	Lake Whitney, baz=311	146.94	41	P	PKPab	22 03 20.0	-0.4
O53A	New Philadelph baz=345	147.06	12	P	PKPbc	22 03 19.0	0.0
N59A	State Game Lan baz=355	147.16	4	P	PKPbc	22 03 19.8	+0.5
PAL	Palisades baz=358	147.16	2	P	PKiKP	22 03 21.3	-0.3
SSPA	Standing Stone baz=351	147.23	7	P	PKPbc	22 03 19.8	+0.3
MIAR	Mount Ida baz=320,SNR=7.1	147.44	33	P	PKPbc	22 03 20.9	+0.7
P52A	Corning baz=343	147.45	13	P	PKPbc	22 03 19.9	-0.2
O56A	Blue Knob Stat baz=350	147.50	8	P	PKPbc	22 03 20.7	+0.5
WCI	Wyandotte Cave baz=335	147.57	20	P	PKPbc	22 03 20.9	+0.4
W41B	Gary Mavity, V baz=322	147.64	31	P	PKPbc	22 03 20.7	0.0
833A	Chaparral WMA, baz=304	147.82	48	P	PKiKP	22 03 23.2	-0.2
X40A	Basin Creek Fa baz=321	147.87	32	P	PKiKP	22 03 22.6	-0.7
MCWV	Mont Chateau baz=347	147.89	10	P	PKPbc	22 03 21.9	+0.7
P60A	Greenville baz=355	148.26	4	P	PKPbc	22 03 22.2	0.0
WVT	Waverly baz=330	148.86	24	P	PKiKP	22 03 24.6	-0.7
OXF	Oxford baz=326	149.55	28	P	PKPbc	22 03 26.1	+0.4
TZTN	Tazewell baz=338	149.99	17	P	PKiKP	22 03 27.4	-0.3
KMSC	Kings Mountain baz=342	151.91	15	P	PKiKP	22 03 31.5	-0.1
NHSC	New Hope baz=343	154.14	14	P	PKPbc	22 03 35.5	-0.7
LPAZ	La Paz comp=Z,0.7nm,0.6s,baz=206,slow=16,SNR=3.8	155.39	191	PKPab	PKPab	22 03 59.2	+3.0

IDC 03 21:43:51.0±10.0**, 0°.75N×126°.97E, h0^{km}, mb3.7**/3**, mb1 3.9**/4**, mb1mx3.6**/46**, mbtmp3.7**/4**, ML3.3**/1**, Error ellipse: s-maj=167.5km s-min=46.0km az=169.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong 1.4nm,0.3s,baz=343,slow=20,SNR=3.8	4.59	111	Pn	Pn	21 45 03.0	+1.3
SIJI	0.3nm,0.3s,baz=217,slow=22,SNR=1.1			Sn	Sn	21 45 54.2	-1.6
WRA	Warramunga Arr 1.0nm,0.3s,baz=340,slow=11,SNR=34	21.80	161	P	P	21 48 46.2	+1.3
ASAR	Alice Springs 0.4nm,0.5s,baz=342,slow=7.1,SNR=5.4	25.19	165	P	P	21 49 18.0	-0.6
STKA	Stephens Creek 4.0nm,0.8s,baz=337,slow=8.6,SNR=7.6	35.29	158	P	P	21 50 47.1	-0.7

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*IDC **03** 21:45:17.5±3.4, 6°.84S×145°.52E, h48^{km}±37^{km}, mb3.8/6, mb1 4.1/9, mb1mx3.7/41, mbtmp4.1/9, ML3.9/2, MS4.5/1, Ms1 4.5/1, ms1mx3.3/31, Error ellipse: s-maj=31.4km s-min=25.9km az=43.0*

ISC 03 21:45:17.9±0.8**, 6°.95S**±0°.09×**145°.3E**±0°.1**, h50^{km}, n11, σ1ˢ.76**/12**, mb3.9**/5**, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby 5.1nm,0.3s,baz=15,slow=5.9,SNR=6.5	3.06	143	P	Pn	21 46 03.4	-0.4
PMG	8.4nm,0.3s,baz=252,slow=16,SNR=5.4			S	Sn	21 46 38.2	-1.0
CTA	Charters Tower 0.4nm,0.3s,baz=32,slow=19,SNR=1.9	13.09	176	P	Pn	21 48 23.6	+2.3
WRA	Warramunga Arr 0.5nm,0.3s,baz=45,slow=12,SNR=20	16.72	218	P	P	21 49 11.3	+0.8
ASAR	Alice Springs 3.5nm,0.9s,baz=40,slow=9.3,SNR=18	19.90	212	P	Pn	21 49 47.1	-0.2
ASAR	0.9nm,0.8s,baz=24,slow=25,SNR=3.9			S	S	21 53 22.8	-4.0
CMAR	Chiang Mai Arr 2.6nm,0.8s,baz=123,slow=5.8,SNR=15	52.22	300	P	P	21 54 25.5	+1.2
USRK	Ussuriysk Ar. comp=Z,492nm,19.5s,baz=220,slow=34	52.31	348	LR	LR	22 14 40.8	
SONM	Songino Array 0.8nm,1.0s,baz=163,slow=5.4,SNR=2.1	64.42	332	P	P	21 55 48.6	-0.5
ZALV	Zalesovo Beam 0.8nm,0.6s,baz=101,slow=7.5,SNR=2.4	78.92	328	P	P	21 57 15.6	-0.3
QSPA	South Pole Qui 2.4nm,0.6s,baz=318,slow=1.6,SNR=5.8	83.02	180	P	P	21 57 38.8	+1.0
ILAR	Eielson Array 0.8nm,1.0s,baz=229,slow=6.0,SNR=4.2	87.02	23	P	P	21 57 57.0	-0.7
TORD	Torodi Ar. Bea 0.2nm,0.5s,baz=54,slow=3.2,SNR=2.0	143.66	283	PKP	PKPdf	22 04 47.2	-1.2

ATH 03 21:54:02.9, 37°.86N×23°.85E, h9^{km}±4^{km}, ML1.1/1**, Error ellipse: s-maj=4.7km s-min=1.4km az=253.0, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLY	Voula,Athens	0.04	267	P	Pg	21 54 04.7	0.0
VLY				S	Sg	21 54 05.9	0.0
VLY	comp=E,618µm,0.5s			AML	AML	21 54 07.5	
VLY	comp=N,395µm,0.5s			AML	AML	21 54 08.3	
ATHU	Athens Univers	0.12	335	P	Pg	21 54 05.5	-0.3
ATHU				S	Sg	21 54 07.5	-0.2
ATH	Athens Observa	0.16	318	P	Pg	21 54 06.5	+0.2
ATH				S	Sg	21 54 09.0	+0.4
PTL	Penteli	0.19	3	P	Pg	21 54 06.7	-0.2
PTL				S	Sg	21 54 09.8	0.0
DION	Dionisos Attik	0.23	16	P	Pg	21 54 07.6	-0.1
DION				S	Sg	21 54 11.2	+0.3
KARY	Karystos	0.50	69	P	Pg	21 54 12.5	0.0

IDC 03 22:18:08.3±3.9**, 5°.04S×150°.71E, h0^{km}, mb3.3**/3**, mb1 3.5**/3**, mb1mx3.2**/28**, mbtmp3.3**/3**, Error ellipse: s-maj=125.4km s-min=54.5km az=117.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr 0.5nm,0.8s,baz=52,slow=10,SNR=5.2	21.76	226	P	P	22 23 03.2	+1.5
ASAR	Alice Springs 0.7nm,0.7s,baz=48,slow=9.7,SNR=7.6	24.60	220	P	P	22 23 29.6	-1.0
FITZ	Fitzroy Crossi 0.3nm,0.5s,baz=43,slow=8.4,SNR=1.1	27.73	240	P	P	22 23 58.8	0.0
TORD	Torodi Ar. Bea 0.4nm,0.8s,baz=64,slow=3.4,SNR=2.1	148.39	287	PKPbc	PKPbc	22 37 57.3	-0.6

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*TAP **03** 22:37:29.8, 24°.82N×121°.96E, h10^{km}, ML3.0, B*

*JMA **03** 22:37:30.1±0.1, 24°.87N×121°.97E, h14^{km}, M2.5*

ISC 03 22:37:30.2±0.8**, 24°.83N**±0°.02×**121°.98E**±0°.02**, h15^{km}**±5^{km}**, n65, σ0ˢ.44**/110**, 5C-1D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NTC	Toucheng baz=287	0.14	280	⇑*i*P	Pg	22 37 34.0	+0.1
NTC	baz=287			S	Sg	22 37 36.1	-0.2
TWB1	Santiao Chiao baz=9.0	0.18	3	P	Pg	22 37 34.1	-0.3
TWB1	baz=9.0			S	Sg	22 37 36.8	-0.5
TIPB	Shuangxi baz=321	0.20	315	⇑*i*P	Pg	22 37 34.9	+0.1
TIPB	baz=321			*i* S	Sg	22 37 38.2	+0.4
ILA	Ilan baz=254	0.22	253	*e*P	Pg	22 37 35.1	+0.1
ILA	baz=254			*e*S	Sg	22 37 38.6	+0.2
TWC	Suao baz=204	0.25	208	⇑*i*P	Pg	22 37 35.3	-0.3
TWC	baz=204			*i* S	Sg	22 37 38.6	-0.6
NWF	Wu-fen Shan baz=326	0.30	323	⇑*i*P	Pg	22 37 37.0	+0.5
NWF	baz=326			*i* S	Sb	22 37 41.9	-0.2
WFSB	Wu-fen Shan baz=326	0.30	323	P	Pb	22 37 37.0	-0.3
WFSB	baz=326			S	Sb	22 37 41.9	-0.1
TWE	Neicheng baz=249	0.30	249	⇓*i*P	Pg	22 37 36.6	+0.1
TWE	baz=249			*i* S	Sg	22 37 41.0	+0.2
NDS	Dongshan baz=231	0.31	230	P	Pg	22 37 36.7	+0.1
NDS	baz=231			S	Sg	22 37 40.9	-0.1
TWA	Mucha baz=295	0.39	293	*i* P	Pb	22 37 38.6	-0.2
TWA	baz=295			*i* S	Sb	22 37 44.2	-0.4
ENTT	Nioudou baz=243	0.42	243	P	Pg	22 37 38.8	+0.1
ENTT	baz=243			S	Sb	22 37 45.0	-0.5
EWUT	Wuta baz=204	0.42	205	P	Pg	22 37 38.4	-0.3
EWUT	baz=204			S	Sb	22 37 45.3	-0.3
NHDH	Xindian Distri baz=290	0.43	288	*e*P	Pg	22 37 39.0	+0.2
NHDH	baz=290			*e*S	Sb	22 37 45.4	-0.4
NWLT	Wulai baz=264	0.43	263	P	Pb	22 37 39.4	-0.2
NWLT	baz=264			S	Sb	22 37 46.2	+0.2
ENA	Nanau baz=206	0.46	208	P	Pg	22 37 39.5	+0.3
ENA	baz=206			S	Sg	22 37 45.6	+0.2
TAP	Taipei baz=298	0.47	296	S	Sb	22 37 47.8	+0.6
NDT	Datong Townshi baz=242	0.48	242	P	Pg	22 37 39.9	+0.1
NDT	baz=242			S	Sb	22 37 47.0	-0.3
YM01	YM01 baz=312	0.48	310	⇑P	Pb	22 37 40.8	+0.4
YM01	baz=312			S	Sg	22 37 46.8	+0.5
ANP	Anpu baz=312	0.55	310	*e*S	Sb	22 37 49.1	-0.2
EHP	Heping Village baz=201	0.56	203	*e*S	Sb	22 37 49.9	+0.3
YHNB	Yeheng baz=254	0.57	254	P	Pg	22 37 41.6	+0.1
YHNB	baz=254			S	Sg	22 37 49.2	+0.1
TWS1	Kuangyinshan baz=300	0.57	298	*e*P	Pg	22 37 41.5	0.0
TWS1	baz=300			*e*S	Sb	22 37 50.0	0.0
NTST	Danshui baz=306	0.58	305	*i* P	Pn	22 37 43.2	-0.8
NTST	baz=306			*i* S	Sb	22 37 50.8	+0.6
NSK	Sanguang baz=255	0.58	255	P	Pg	22 37 41.6	-0.1
NSK	baz=255			S	Sb	22 37 49.9	-0.5
NNS	Nan Shan baz=234	0.67	235	P	Pg	22 37 43.6	+0.2
NNS	baz=234			S	Sb	22 37 52.9	-0.1
NNSB	Datong baz=233	0.67	234	P	Pg	22 37 43.0	-0.3
NNSB	baz=233			S	Sb	22 37 53.5	+0.6
NCU	National Centr baz=282	0.73	281	*e*P	Pg	22 37 44.1	-0.3
NCU	baz=282			*e*S	Sb	22 37 55.1	+0.6
NCUH	Zhongli baz=282	0.73	281	*e*S	Sb	22 37 55.4	+0.9
NACB	Ninganchiao baz=207	0.74	208	P	Pg	22 37 44.8	+0.1
NACB	baz=207			S	Sg	22 37 54.6	+0.2
ETL	Fush Village baz=205	0.74	206	P	Pg	22 37 44.8	+0.1
ETL	baz=205			S	Sb	22 37 54.9	0.0
ETLH	Xiulin Townshi baz=215	0.77	216	P	Pg	22 37 44.4	-0.7
ETLH	baz=215			S	Sb	22 37 56.5	+0.8
PCYT	Pengchaiyu baz=7.0	0.80	6	*i* P	Pb	22 37 46.2	+0.4
PCYT	baz=7.0			*e*S	Sn	22 37 57.9	-0.7
TWD	Chiawan baz=204	0.82	205	*i* P	Pg	22 37 46.3	+0.1
TWD	baz=204			*i* S	Sb	22 37 57.3	+0.1
FUSS	Fushou baz=229	0.89	229	P	Pg	22 37 47.4	-0.1
FUSS	baz=229			S	Sg	22 37 58.9	-0.2
LIOB	Emei baz=258	0.89	258	P	Pb	22 37 47.7	+0.3
LIOB	baz=258			S	Sb	22 37 59.9	+0.7
NSTT	Nanjuang baz=257	0.91	258	P	Pb	22 37 47.4	-0.4
NSTT	baz=257			*e*S	Sb	22 38 00.4	+0.8
HSN	Hsinchu baz=270	0.92	268	*e*S	Sb	22 37 59.6	-0.3
TWT	Tachien baz=232	0.93	232	P	Pn	22 37 48.9	0.0
TWT	baz=232			S	Sn	22 38 01.4	-0.7
TDCB	Techi baz=232	0.94	232	P	Pn	22 37 48.9	-0.2
TDCB	baz=232			S	Sg	22 38 00.6	-0.2
WHF	Hehuan Shan baz=223	0.94	224	P	Pn	22 37 49.1	-0.3
WHF	baz=223			S	Sb	22 38 01.1	+0.1
JYNG	Yonagunijimaku	0.96	113	P	Pb	22 37 48.3	-0.2
JYNG				S	Sb	22 38 00.8	-0.2
YOJ	Yonaguni jima baz=110	1.01	111	P	Pb	22 37 48.5	-0.8
YOJ	baz=110			S	Sb	22 38 02.3	-0.2
YOJ	Yonaguni jima	1.01	111	P	Pb	22 37 49.2	-0.2
YOJ				S	Sb	22 38 02.3	-0.2
CHGB	Renai baz=223	1.06	224	*e*P	Pn	22 37 51.0	+0.2
CHGB	baz=223			*e*S	Sg	22 38 04.7	+0.1
WHP	Taichung City baz=239	1.09	240	*e*P	Pg	22 37 51.3	+0.1
WHP	baz=239			*e*S	Sb	22 38 05.1	+0.2
ESL	Shilin baz=205	1.13	206	*e*P	Pb	22 37 51.1	-0.3
ESL	baz=205			*e*S	Sg	22 38 06.8	+0.1
OWD	Renai baz=219	1.14	220	*e*P	Pb	22 37 51.8	+0.1
OWD	baz=219			*e*S	Sb	22 38 06.3	-0.1
WCS	Beigang Elemen baz=231	1.24	232	*e*P	Pb	22 37 53.5	+0.2
EGFH	Guangfu baz=203	1.26	204	*e*S	Sn	22 38 10.6	+0.5
SMLT	Sun Moon Lake baz=225	1.36	226	*e*P	Pn	22 37 55.1	+0.3
SMLT	baz=225			*e*S	Sb	22 38 12.8	0.0
TYC	Yuchr baz=227	1.38	228	*e*P	Pb	22 37 56.0	+0.3
SSLB	Suanglung baz=221	1.40	222	*e*P	Pb	22 37 56.0	-0.1
HGSD	Ruisui baz=200	1.43	201	*e*P	Pn	22 37 56.1	+0.5
YULB	Yu-li baz=203	1.56	204	*e*P	Pb	22 37 58.4	-0.5
IRIF	Iriomote-Funau	1.67	107	P	Pb	22 38 01.9	+1.2
IRIF				S	Sb	22 38 22.6	+1.1
ALS	Alishan baz=218	1.70	219	*e*P	Pb	22 38 01.1	-0.2
CHN5	Tsauling baz=224	1.71	224	*e*P	Pb	22 38 02.1	+0.8
ELDTW	Lidau baz=207	1.86	208	*e*P	Pb	22 38 04.0	+0.1
CHN4	Tsaushan baz=220	1.94	221	*e*P	Pb	22 38 04.4	-0.9
JKRS	Kuro-shima	1.94	107	*e*S	Sn	22 38 26.1	-0.7
WTP	Ta-pu baz=218	2.01	219	*e*P	Pb	22 38 05.8	-0.8
JIJ	Ishigaki jima	2.02	103	P	Pn	22 38 04.0	+0.2
JIJ				S	Sn	22 38 28.6	-0.3
TWK	Hsinying baz=220	2.07	221	*e*P	Pb	22 38 06.6	-0.9
CHN1	Nanshi baz=218	2.11	219	*e*P	Pb	22 38 08.3	+0.2
SLGT	Liugui baz=213	2.20	214	*e*P	Pn	22 38 07.5	+1.2

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*IDC **03** 23:09:04.2±2.0, 8°.14S×125°.57E, h0^{km}, mb3.6/1, mb1 3.7/5, mb1mx3.5/27, mbtmp3.5/5, ML3.4/4, Error ellipse: s-maj=40.0km s-min=27.5km az=87.0*

*DJA **03** 23:09:05.8±0.7, 8°S±5°×12°5E±°, h10^{km}, M3.9/7, mb4.4/1, MLv3.6/7*

ISC 03 23:09:04.8±1.3**, 8°.35S**±0°.08×**125°.37E**±0°.07**, h10^{km}, n9, σ2ˢ.06**/15**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.78	218	P	Pb	23 09 38.4	+0.9
SOEI				S	Sg	23 10 03.2	+1.2
BATI	Baumata 7.3nm,0.3s,baz=63,slow=7.2,SNR=6.9	2.50	222	Pn	Pb	23 09 50.5	+0.6
BATI	9.6nm,0.3s,baz=125,slow=23,SNR=5.5			Sn	Sg	23 10 25.4	+0.1
BATI	Baumata	2.50	222	P	Pn	23 09 47.6	+2.0
BATI				S	Sb	23 10 20.6	-0.2
MMRI	Maumere	3.12	264	P	Pn	23 09 51.7	-2.3
EDFI	Ende, Flores	3.67	263	P	Pn	23 09 59.4	-2.3
FITZ	Fitzroy Crossi 0.1nm,0.3s,baz=4.3,slow=12,SNR=2.6	9.70	178	Pn	Pn	23 11 26.4	+1.9
FITZ	0.2nm,0.3s,baz=20,slow=12,SNR=2.2			Sn	Sn	23 13 10.0	-3.5
WRA	Warramunga Arr 0.2nm,0.3s,baz=319,slow=12,SNR=13	14.43	144	Pn	Pn	23 12 29.4	+0.2
WRA	0.1nm,0.3s,baz=326,slow=22,SNR=2.8			Sn	Sn	23 15 09.6	+0.1
ASAR	Alice Springs 0.1nm,0.3s,baz=331,slow=12,SNR=7.1	17.29	153	P	P	23 13 10.4	+2.5
ASAR	0.1nm,0.3s,baz=313,slow=22,SNR=1.9			S	Sn	23 16 15.6	-3.4
MKAR	Makanchi Array 0.6nm,0.9s,baz=130,slow=7.0,SNR=1.7	66.93	329	P	P	23 19 58.1	+0.6

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*IDC **03** 23:21:42.0±2.0, 8°.20S×125°.30E, h0^{km}, mb3.5/1, mb1 3.7/5, mb1mx3.5/34, mbtmp3.5/5, ML3.1/4, Error ellipse: s-maj=41.5km s-min=27.1km az=86.0*

ISC 03 23:21:43.3±1.5**, 8°.2S**±0°.1×**125°.4E**±0°.1**, h10^{km}, n5, σ0ˢ.88**/6**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata 2.4nm,0.3s,baz=64,slow=6.1,SNR=1.5	2.59	220	Pn	Pn	23 22 24.9	-0.4
BATI	6.7nm,0.3s,baz=232,slow=2.4,SNR=1.8			Sn	Sn	23 22 57.2	+0.3
FITZ	Fitzroy Crossi 0.1nm,0.3s,baz=359,slow=12,SNR=2.5	9.82	178	Pn	Pn	23 24 04.0	-0.6
FITZ	0.1nm,0.3s,baz=9.9,slow=21,SNR=1.5			Sn	Sn	23 25 46.1	-8.9
WRA	Warramunga Arr 0.2nm,0.3s,baz=320,slow=12,SNR=13	14.53	144	Pn	Pn	23 25 08.6	-0.6
ASAR	Alice Springs 0.1nm,0.3s,baz=335,slow=12,SNR=7.9	17.40	153	P	P	23 25 48.8	+1.2

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	66.83	329	P	P	23 32 35.3	0.0
	0.4nm,0.8s,baz=134,slow=8.7,SNR=1.7						

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*IDC **03** 23:24:51.5±1.9, 8°.26S×125°.33E, h0km, mb3.8/1, mb1 3.8/5, mb1mx3.6/33, mbtmp3.7/5, ML3.3/4, MS2.7/1, Ms1 2.7/1, ms1mx2.3/37, Error ellipse: s-maj=40.2km s-min=26.4km az=87.0*

ISC 03 23:24:53.1±1.5**, 8°.53S**±0°.10×**125°.27E**±0°.09**, h10km, n5, σ2s.58**/9**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	2.29	223	Pn	Pb	23 25 34.4	-0.2
	8.2nm,0.3s,baz=93,slow=2.1,SNR=4.9						
BATI				Sn	Sg	23 26 06.8	0.0
	9.9nm,0.3s,baz=332,slow=23,SNR=3.6						
BATI				LR	LR	23 26 33.5	
	comp=Z,147nm,20.2s,baz=62,slow=40						
FITZ	Fitzroy Crossi	9.52	178	Pn	Pn	23 27 12.4	+2.1
	0.1nm,0.3s,baz=4.5,slow=11,SNR=2.9						
FITZ				Sn	Sn	23 28 57.1	-0.3
	0.9nm,0.3s,baz=309,slow=22,SNR=9.3						
WRA	Warramunga Arr	14.34	143	Pn	Pn	23 28 18.1	+1.7
	0.2nm,0.3s,baz=317,slow=13,SNR=10						
WRA				Sn	Sn	23 30 55.2	-0.5
	0.1nm,0.3s,baz=317,slow=25,SNR=4.8						
ASAR	Alice Springs	17.17	152	P	P	23 28 56.4	+1.5
	0.1nm,0.3s,baz=324,slow=11,SNR=8.5						
ASAR				S	Sn	23 31 59.2	-5.3
	0.0nm,0.3s,baz=316,slow=22,SNR=2.5						
MKAR	Makanchi Array	67.04	329	P	P	23 35 45.2	-1.3
	1.1nm,0.9s,baz=134,slow=8.2,SNR=3.6						

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*IDC **03** 23:27:06.9±2.4, 15°.26S×176°.10W, h358km±54km, mb3.3/5, mb1 3.5/6, mb1mx3.1/43, mbtmp4.1/6, Error ellipse: s-maj=140.5km s-min=26.0km az=142.0*

ISC 03 23:27:06.6±1.1**, 15°.2S**±0°.4×**176°.2W**±0°.2**, h350km, n6, σ0s.28**/6**, mb3.4**/5**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	4.46	74	P	Pn	23 28 20.5	+0.1
	6.1nm,0.3s,baz=56,slow=6.5,SNR=7.8						
CTA	Charters Tower	36.07	257	P	P	23 33 36.7	+0.3
	1.1nm,0.5s,baz=81,slow=13,SNR=1.9						
STKA	Stephens Creek	41.83	239	P	P	23 34 23.3	-0.3
	2.1nm,0.8s,baz=90,slow=8.1,SNR=3.9						
WRA	Warramunga Arr	47.27	257	P	P	23 35 06.2	-0.2
	0.4nm,0.4s,baz=88,slow=7.7,SNR=14						
ASAR	Alice Springs	47.62	252	P	P	23 35 09.2	+0.2
	7.7nm,0.4s,baz=85,slow=8.1,SNR=151						
ILAR	Eielson Array	82.76	12	P	P	23 38 51.6	-0.1
	0.1nm,0.4s,baz=214,slow=5.6,SNR=1.6						

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*IDC **03** 23:56:23.0±0.9, 35°.71N×140°.90E, h0km, mb3.7/10, mb1 3.8/13, mb1mx3.7/46, mbtmp3.8/13, ML3.6/3, MS3.0/1, Ms1 3.0/1, ms1mx2.4/43, Error ellipse: s-maj=26.2km s-min=17.8km az=77.0*

*NIED **03** 23:56:24.2, 35°.92N×141°.09E, h21km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}1.01; $M_{\theta\theta}$0.21; $M_{\phi\phi}$-1.22; $M_{r\theta}$1.22; $M_{\theta\phi}$6.87; $M_{\phi r}$-1.64; Fault plane solution: $M_0$7.14000×10^{14} NP1:ϕ_s4.00000°, δ82.00000°, λ-169.00000°. NP2:ϕ_s272.00000°, δ79.00000°, λ-8.00000°.*

*JMA **03** 23:56:24.2±0.2, 35°.92N×141°.09E, h21km±2km, M4.2*

JMA Felt II J1.

*NEIC **03** 23:56:24.2±1.7, 35°.94N±0°.05×141°.06E±0°.04, h8km±3km, mb4.4/14, Error ellipse: s-maj=7.8km s-min=4.5km az=204.0*

ISC 03 23:56:23.9±0.6**, 35°.93N**±0°.04×**141°.09E**±0°.06**, h10km, n72, σ1s.39**/63**, mb4.0**/18**, 5C-2D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.30	220	⇓P	Pg	23 56 30.6	+0.7
JIHU	Itakohorinouch	0.46	274	⇑P	Pb	23 56 34.1	0.0
JHYU	Hitachinakayam	0.58	315	⇑P	Pg	23 56 35.8	+0.7
JSMT	Sammumatsuo	0.60	241	⇓P	Pb	23 56 36.5	0.0
JYT	Yasato	0.79	292	P	Pg	23 56 38.4	-0.7
JYT	Yasato	0.79	292		Pg	23 56 38.4	-0.7
JYT					Sg	23 56 49.1	-0.2
JHO	Hitachi	0.80	328	⇑P	Pg	23 56 38.7	-0.6
ONAJ	Iwakimizuishiy	1.19	349	⇑P	Pb	23 56 44.2	-2.4
BSO3	Boso 3	1.23	203	P	Pn	23 56 45.8	-1.1
JMM	Marumori	1.94	353	Pn	Pn	23 56 55.2	-1.8
MJAR	Matsushiro Arr	2.41	285	Pn	Pn	23 57 01.6	-1.9
	4.1nm,0.3s,baz=84,slow=19,SNR=54						
MJAR	Matsushiro Arr	2.41	285	Pn	Pn	23 57 01.8	-1.7
MAJO	Matsushiro	2.41	285	Pn	Pn	23 57 02.7	-0.8
MAT	Matsushiro	2.41	285	P	Pn	23 57 02.6	-0.9
MAT				S	Sn	23 57 32.0	-1.1
MJB9	Matsu-Tunnel	2.42	285	Pn	Pn	23 57 02.5	-1.0
JHJ	Hachijo jima 2	3.01	201	Pn	Pn	23 57 11.6	-0.1
	7.2nm,0.3s,baz=70,slow=9.8,SNR=1.7						
JHJ				Sn	Sn	23 57 46.2	-1.6
	23nm,0.3s,baz=69,slow=6.3,SNR=1.6						
JGF	Kuroka	3.06	265	Pn	Pn	23 57 12.8	+0.5
JSD	Sado	3.09	314	Pn	Pn	23 57 12.9	+0.1
INU	Inuyama	3.37	261	Pn	Pn	23 57 18.1	+1.5
JWT	Wachi	4.68	264	Pn	Pn	23 57 35.6	+0.9
JTM	Tenmabayashi	4.84	360	Pn	Pn	23 57 37.7	+0.8
ERM	Erimo	6.28	14	Pn	Pn	23 57 56.1	-0.4
JHS	Saijyo	6.58	264	Pn	Pn	23 58 02.0	+1.3
ASAJ	Asahikawa	8.25	8	Pn	Pn	23 58 22.1	-1.5
	0.7nm,0.3s,baz=110,slow=19,SNR=1.3						
JCJ	Chichijima	8.86	174	Pn	Pn	23 58 27.4	-4.6
	4.6nm,0.3s,baz=278,slow=23,SNR=6.0						
JNU	Nakatsue	8.88	255	Pn	Pn	23 58 27.7	-4.7
	0.6nm,0.3s,baz=221,slow=14,SNR=2.1						
JTU	Tsushima	9.67	265	Pn	Pn	23 58 41.9	-1.2
KS19	Wonju Array Si	10.73	282	Pn	Pn	23 58 57.3	-0.4
USRK	Ussuriysk Ar.	10.80	323	Pn	Pn	23 59 03.9	+5.4
	baz=133,slow=12,SNR=1.6						
JOW	Kunigami	14.21	234	LR	LR	00 04 32.8	
	comp=Z,62nm,18.8s,baz=164,slow=35						
HHC	Hu-ho-hao-te	23.60	291	*e*P	P	00 01 34.2	-0.8
HHC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,81nm,6.6s						
H11N2	WAKE ISLAND Hy	27.83	119	T	T	00 31 11.4	
	baz=311,slow=75,SNR=154						
H11N1	WAKE ISLAND Hy	27.84	119	T	T	00 31 11.9	
	baz=311,slow=75,SNR=224						
H11N3	WAKE ISLAND Hy	27.85	119	T	T	00 31 12.7	
	baz=311,slow=75,SNR=212						
SONM	Songino Array	28.20	306	P	P	00 02 17.6	+0.8
	comp=Z,0.4nm,0.6s,baz=94,slow=9.9,SNR=2.7						
H11S3	WAKE ISLAND Hy	28.50	121	T	T	00 32 02.2	
	baz=314,slow=76,SNR=188						
H11S1	WAKE ISLAND Hy	28.50	121	T	T	00 32 03.5	
	baz=314,slow=76,SNR=266						
H11S2	WAKE ISLAND Hy	28.52	121	T	T	00 32 06.8	
	baz=314,slow=76,SNR=196						
LZH	Lanzhou	30.02	281	⇑P	P	00 02 30.1	-3.0
LZH				pP	pP	00 02 35.2	-0.8
LZH				sP	sP	00 02 37.2	0.0
LZH				pmax	pmax		
	comp=Z,19nm,1.2s						
WMQ	Urumqi	41.12	298	*e*P	P	00 04 10.1	+2.0
ZALV	Zalesovo Beam	42.47	313	P	P	00 04 19.9	+0.9
	comp=Z,0.6nm,0.5s,baz=105,slow=9.3,SNR=2.6						
ZALV	Zalesovo Beam	42.47	313	P	P	00 04 19.2	+0.2
NRIK	Noril'sk	44.16	336	P	P	00 04 33.0	+0.7
	comp=Z,1.9nm,0.6s,baz=64,slow=16,SNR=6.7						
NRIK	Noril'sk	44.16	336	P	P	00 04 33.7	+1.3
NRIK				IAmb	IAmb	00 04 52.5	
	comp=Z,2.4nm,0.5s						
MK31	Makanchi Array	44.49	303	P	P	00 04 35.7	+0.3
MKAR	Makanchi Array	44.49	303	P	P	00 04 35.3	-0.1
	comp=Z,0.8nm,0.6s,baz=85,slow=8.4,SNR=7.0						
MKAR	Makanchi Array	44.49	303	P	P	00 04 35.5	+0.1
MAKZ	Makanchi	44.70	303	P	P	00 04 37.4	+0.3
MAKZ				IAmb	IAmb	00 04 40.1	
	comp=Z,3.9nm,1.0s						
KURK	Kurchatov	46.41	309	P	P	00 04 49.8	-0.7
KURK				IAmb	IAmb	00 04 59.8	
	comp=Z,2.6nm,0.7s						
ILAR	Eielson Array	50.56	32	P	P	00 05 23.7	+1.5
	comp=Z,0.4nm,0.8s,baz=273,slow=6.6,SNR=3.0						
ILAR	Eielson Array	50.56	32	P	P	00 05 24.1	+1.8
KSH	Kashi	50.62	295	P	P	00 05 25.8	+2.5
BRVK	Borovoye	51.18	313	P	P	00 05 29.0	+1.9
BMAR	Burnt Mountain	51.42	28	P	P	00 05 28.6	-0.2
KKAR	Karatay Array	53.46	301	P	P	00 05 44.0	-0.2
INK	Inuvik	55.48	27	P	P	00 06 00.4	+1.9
	comp=Z,0.5nm,0.6s,baz=179,slow=13,SNR=1.5						
FITZ	Fitzroy Crossi	55.70	198	P	P	00 06 00.8	+0.3
FITZ				IAmb	IAmb	00 06 23.1	
	comp=Z,4.3nm,1.4s						
WB0	Warramunga Arr	55.76	188	P	P	00 06 00.6	-0.4
WB0				IAmb	IAmb	00 06 23.7	
	comp=Z,3.5nm,1.1s						
CHGR	Chuyangaron	55.91	296	P	P	00 06 01.5	-0.6
WR0	Warramunga Arr	55.93	187	P	P	00 06 02.0	-0.2
WB2	Warramunga Arr	55.94	188	P	P	00 06 02.0	-0.3
WB2				IAmb	IAmb	00 06 02.9	
	comp=Z,5.8nm,1.4s						
WRA	Warramunga Arr	55.94	188	P	P	00 06 01.2	-1.1
	comp=Z,0.7nm,0.7s,baz=2.5,slow=7.6,SNR=13						
WRA	Warramunga Arr	55.94	188	P	P	00 06 02.5	+0.2
ARU	Arti	57.02	319	P	P	00 06 09.0	-0.6
ARU				IAmb	IAmb	00 06 27.9	
	comp=Z,4.9nm,1.1s						
ABKAR	Akbulak array	58.45	311	P	P	00 06 19.0	-0.8
ASAR	Alice Springs	59.67	188	P	P	00 06 28.2	-0.2
	comp=Z,0.3nm,0.6s,baz=10.0,slow=7.0,SNR=5.1						
FIA1	FINESS Array S	69.67	332	P	P	00 07 34.4	+1.2
AKASG	Malin Array Be	75.01	322	P	P	00 08 08.4	+3.0
	comp=Z,0.3nm,0.3s,baz=46,slow=6.3,SNR=2.3						
NOA	NORSAR Array B	75.10	337	P	P	00 08 08.9	+3.1
	comp=Z,0.6nm,0.7s,baz=40,slow=6.0,SNR=2.8						
H03N2	Juan Fernandez	147.15	98	T	T	03 00 33.3	
	baz=290,slow=76,SNR=26						
H03N3	Juan Fernandez	147.16	98	T	T	03 00 34.9	
	baz=290,slow=76,SNR=30						
H03N1	Juan Fernandez	147.17	98	T	T	03 00 36.6	
	baz=290,slow=76,SNR=36						

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*IDC **03** 23:57:30.9±1.1, 55°.08N×35°.50W, h0km, mb3.7/7, mb1 3.8/9, mb1mx3.6/44, mbtmp3.7/9, ML2.8/2, MS3.4/18, Ms1 3.4/18, ms1mx3.2/57, Error ellipse: s-maj=34.5km s-min=22.4km az=8.0*

ISC 03 23:57:31.8±0.9**, 55°.1N**±0°.2×**35°.6W**±0°.1**, h10km, n24, σ0s.90**/11**, mb3.6**/7**, MS3.4**/15**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BORG	Borgarnes	12.02	31	LR	LR	00 03 43.2	
	comp=Z,249nm,19.4s,baz=247,slow=31						
SCHQ	Schefferville	17.86	282	P	P	00 01 39.7	-1.1
	0.1nm,0.3s,baz=208,slow=17,SNR=2.1						
SCHQ				LR	LR	00 06 29.9	
	comp=Z,39nm,19.7s,baz=264,slow=30						
EKA	Eskdalemuir Ar	18.43	76	P	Pn	00 01 47.4	+0.3
	baz=276,slow=8.8,SNR=6.1						
FRB	Frobisher Bay	18.67	311	LR	LR	00 07 56.5	
	comp=Z,60nm,18.8s,baz=6.5,slow=33						
NOA	NORSAR Array B	25.01	57	LR	LR	00 10 23.2	
	comp=Z,56nm,19.9s,baz=240,slow=31						
ESDC	Sonseca Array	26.10	113	P	P	00 03 05.9	+0.4
	0.8nm,0.8s,baz=314,slow=10.0,SNR=4.5						
ESDC				LR	LR	00 11 05.2	
	comp=Z,59nm,19.8s,baz=310,slow=31						
HFS	Hagfors	26.37	59	P	P	00 03 07.0	-0.7
	2.0nm,0.8s,baz=265,slow=8.7,SNR=2.0						
HFS				LR	LR	00 11 13.3	
	comp=Z,95nm,19.2s,baz=294,slow=31						
DAVOX	Davos/Dischmat	29.38	87	LR	LR	00 13 05.3	
	comp=Z,110nm,18.9s,baz=280,slow=32						
SADO	Sadowa	29.41	268	LR	LR	00 14 28.3	
	comp=Z,61nm,19.2s,baz=22,slow=34						
ARCES	ARCESS Array B	30.28	38	P	P	00 03 42.4	-0.1
	3.3nm,1.0s,baz=253,slow=9.1,SNR=4.4						
ARCES				LR	LR	00 12 22.0	
	comp=Z,46nm,18.7s,baz=155,slow=30						
GERES	GERESS Array B	30.47	81	LR	LR	00 13 57.6	
	comp=Z,56nm,20.0s,baz=300,slow=32						
FINES	FINESS Array B	31.94	53	LR	LR	00 14 50.8	
	comp=Z,80nm,19.4s,baz=300,slow=33						
ULM	Lac du Bonnet	35.87	288	LR	LR	00 17 18.2	
	comp=Z,64nm,19.2s,baz=66,slow=33						
AKASG	Malin Array Be	38.10	69	P	P	00 04 50.4	0.0
	0.5nm,0.4s,baz=299,slow=7.3,SNR=2.5						
YKA	Yellowknife Ar	39.14	314	LR	LR	00 19 38.8	
	comp=Z,55nm,18.3s,baz=0.0,slow=34						
PDAR	Pinedale Array	47.89	287	P	P	00 06 11.5	+1.5
	0.2nm,0.4s,baz=83,slow=7.4,SNR=1.9						
PDAR				LR	LR	00 25 09.0	
	comp=Z,75nm,18.7s,baz=69,slow=35						
NEW	Newport	48.29	298	LR	LR	00 25 54.4	
	comp=Z,51nm,18.8s,baz=50,slow=35						
KBZ	Khabaz	49.71	69	LR	LR	00 27 20.2	
	comp=Z,40nm,19.3s,baz=348,slow=36						
TORD	Torodi Ar. Bea	50.91	130	P	P	00 06 33.0	-0.1
	0.7nm,0.7s,baz=333,slow=7.2,SNR=5.6						
BBB	Bella Bella	51.01	308	LR	LR	00 26 34.5	
	comp=Z,22nm,18.2s,baz=63,slow=34						
TXAR	Lajitas Array	54.10	271	LR	LR	00 29 48.1	
	comp=Z,51nm,18.0s,baz=0.0,slow=36						
MKAR	Makanchi Array	65.82	42	P	P	00 08 17.5	+0.7
	0.3nm,0.6s,baz=319,slow=6.1,SNR=1.5						
WRA	Warramunga Arr	144.10	16	PKP	PKPdf	00 17 06.5	-1.0
	0.4nm,0.7s,baz=339,slow=1.0,SNR=2.7						
ASAR	Alice Springs	147.67	18	PKPbc	PKiKP	00 17 17.5	-0.8
	2.4nm,0.7s,baz=350,slow=2.3,SNR=22						

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*IDC **04** 00:13:55.4±12.0, 56°.07S×27°.30W, h170km±112km, mb3.2/2, mb1 3.4/3, mb1mx3.2/20, mbtmp3.9/3, Error ellipse: s-maj=71.1km s-min=29.0km az=112.0*

ISC 04 00:13:48.6±1.2**, 56°.0S**±0°.2×**27°.7W**±0°.4**, h112km, n10, σ0s.78**/10**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	16.99	158	P	P	00 17 39.5	+0.5
VNA3	Neumayer Olymp	17.18	160	P	P	00 17 40.8	-0.3
VNA2	Neumayer--Watz	17.39	158	P	P	00 17 43.4	0.0
	baz=315,slow=13						
SNAA	Sanae	18.95	156	P	P	00 18 00.2	-0.4
SNAA	Sanae	18.95	156	P	P	00 18 00.1	-0.4
	0.9nm,0.3s,baz=310,slow=9.5,SNR=86						
VNDA	Vanda	46.66	183	P	P	00 22 05.7	+0.6
	0.6nm,0.6s,baz=192,slow=6.3,SNR=12						
TORD	Torodi Ar. Bea	73.10	30	P	P	00 25 07.3	+0.8
	0.4nm,0.5s,baz=196,slow=6.3,SNR=9.3						
INK	Inuvik	145.55	321	PKPbc	PKPdf	00 33 12.0	+0.2
	1.1nm,0.6s,baz=112,slow=3.4,SNR=5.2						
ILAR	Eielson Array	149.84	312	PKPbc	PKPbc	00 33 23.1	-0.8
	1.2nm,0.8s,baz=103,slow=1.7,SNR=10						
SONM	Songino Array	151.00	87	PKPbc	PKPbc	00 33 26.0	-1.4
	0.7nm,0.5s,baz=227,slow=4.6,SNR=5.7						

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*NEIC **04** 00:17:45.0±2.0, 53°.4N±0°.2×169°.6W±0°.2, h203km±12km, mb3.2/11, ML3.1(AEIC), Error ellipse: s-maj=37.3km s-min=7.0km az=162.0*

*AEIC **04** 00:17:46±2.1, 53°.4N±0°.2×169°.66W±0°.09, h199km±8km, Error ellipse: s-maj=29.6km s-min=4.5km az=167.0*

*IDC **04** 00:17:57.4±10.0, 54°.21N×168°.49W, h242km±80km, mb2.9/2, mb1 3.3/4, mb1mx2.8/48, mbtmp3.6/4, Error ellipse: s-maj=90.5km s-min=73.6km az=50.0*

ISC 04 00:17:46.4±1.0**, 53°.6N**±0°.2×**169°.72W**±0°.09**, h200km, n46, σ1s.38**/46**, mb3.3**/3**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	Nikolski High	0.78	138		Pn	00 18 13.5	-1.3
OKFG	Magazine Ridge	1.09	97		Pn	00 18 15.7	-1.0
MSW	Makushin Switc	1.78	77		Pn	00 18 22.1	-0.6
UNV	Unalaska Valle	1.94	80		Pn	00 18 23.2	-1.0
AKUT	Akutan	2.41	74	Pn	Pn	00 18 28.1	-1.1
WESP	Westdahl Peak	3.10	70		Pn	00 18 37.6	+0.4
ISLZ	Isanotski Laza	3.73	69		Pn	00 18 44.6	-0.1
FALS	False Pass	3.92	68	Pn	Pn	00 18 45.8	-1.3
GSTR	Great Sitkin T	4.11	252	Pn	Pn	00 18 48.6	-0.9
ADK	Adak	4.55	251	Pn	Pn	00 18 53.7	-1.3
KIWB	Kanaga Island	4.83	252	Pn	Pn	00 18 56.9	-1.7
SDPT	Sand Point	5.69	68		Pn	00 19 08.0	-1.4
CNBA	Chernabura Isl	6.08	74	Pn	Pn	00 19 13.2	-1.4
AMKA	Amchitka	7.05	256	Pn	Pn	00 19 25.3	-1.9
CHGN	Chignik	7.07	63	Pn	Pn	00 19 25.2	-2.2
KDAK	Kodiak Island	10.56	59	P	Pn	00 20 10.0	-2.6
	0.8nm,0.3s,baz=228,slow=2.9,SNR=59						
KDAK				S	Sn	00 21 58.4	-12
	0.3nm,0.3s,baz=29,slow=18,SNR=2.4						
KDAK	Kodiak Island	10.56	59	Pn	Pn	00 20 09.6	-3.0
N19K	Bonanza Creek	10.99	43	Pn	Pn	00 20 19.0	+0.8
M19K	Big River Lodg	11.68	38	Pn	Pn	00 20 28.0	+1.0
CNPM	China Poot	11.80	52	Pn	Pn	00 20 26.2	-2.3
SKT	Skwentna	12.82	42		Pn	00 20 42.9	+1.5
PPLA	Purkeypile	13.10	37	P	P	00 20 47.8	-0.3
GHO	Glory Hole Cre	13.79	45	P	Pn	00 20 53.6	+0.1
KTH	Kantishna Hill	13.96	37	P	P	00 20 58.0	+0.5
SML	Sawmill	14.05	45	P	Pn	00 20 54.3	-2.5
BPAW	Bear Paw Mtn.	14.28	35	P	P	00 21 01.0	0.0
FID	Port Fidalgo	14.47	51	P	Pn	00 20 59.3	-2.5
SCM	Sheep Creek Mo	14.50	46	P	Pn	00 21 01.2	-1.0
H21K	Melozitna Rive	14.78	28	P	Pn	00 21 06.0	+0.4
M24K	Tolsona, Glenn	15.11	46	P	P	00 21 10.2	0.0
I23K	Minto, Yukon-K	15.48	33	P	Pn	00 21 15.3	+1.2
I23K				IAmb	IAmb	00 21 19.0	
	comp=Z,1.4nm,0.9s						
MDM	Murphy Dome	15.75	35	P	P	00 21 16.2	-1.0
HDA	Harding Lake	15.89	38	P	P	00 21 18.5	-0.2
HDA				IAmb	IAmb	00 21 36.0	
	comp=Z,1.1nm,1.2s						
IL31		16.11	37	P	P	00 21 20.4	-0.7
IL31				IAmb	IAmb	00 21 34.4	
	comp=Z,0.4nm,0.6s						
ILAR	Eielson Array	16.11	37	P	P	00 21 19.7	-1.5
	comp=Z,0.2nm,0.3s,baz=229,slow=8.7,SNR=16						
ILAR	Eielson Array	16.11	37	P	P	00 21 20.3	-0.9
RIDG	Independent Ri	16.36	42	P	P	00 21 24.1	+0.1
H24K	Noodor Dome	16.40	33	P	Pn	00 21 25.0	-0.2
H24K				IAmb	IAmb	00 21 34.4	
	comp=Z,0.6nm,0.9s						
DOT	Dot Lake	16.63	42	P	P	00 21 26.1	-0.8
SCRK	Sand Creek	16.81	41	P	P	00 21 27.9	-1.1
PRP	Porcupine Dome	17.00	36	P	P	00 21 30.1	-1.0
PRP				IAmb	IAmb	00 21 32.6	
	comp=Z,0.5nm,0.6s						
EGAK	Eagle	18.26	41	P	P	00 21 44.9	+0.2
EGAK				IAmb	IAmb	00 22 02.1	
	comp=Z,1.3nm,1.0s						
INK	Inuvik	22.48	35	P	P	00 22 27.3	-1.3
INK				IAmb	IAmb	00 22 46.6	
	comp=Z,1.0nm,1.0s						
MCMT	McKenzie Canyo	37.26	80	P	P	00 24 40.1	+1.2
NVAR	Mina Array Bea	37.91	92	P	P	00 24 46.6	+2.2
	comp=Z,0.4nm,0.7s,baz=298,slow=6.8,SNR=3.1						
TXAR	Lajitas Array	52.94	90	P	P	00 26 43.2	+1.0
	comp=Z,0.3nm,0.3s,baz=304,slow=6.4,SNR=12						

IDC 04 00:41:17.0±4.0**, 5°.52S**×**152°.06E, h0km, mb3.2**/2**, mb1 3.7**/3**, mb1mx3.4**/39**, mbtmp3.5**/3**, ML4.1**/1**, MS3.3**/1**, Ms1 3.2**/1**, ms1mx2.4**/13**, Error ellipse: s-maj=148.8km s-min=50.0km az=114.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	15.54	201	Pn	Pn	00 44 56.1	-1.6
	0.5nm,0.3s,baz=18,slow=6.4,SNR=2.3						
WRA	Warramunga Arr	22.41	229	P	P	00 46 16.9	-0.6
	0.6nm,0.9s,baz=54,slow=10,SNR=3.5						
ASAR	Alice Springs	25.12	222	P	P	00 46 44.6	+0.8
	0.4nm,0.5s,baz=56,slow=9.4,SNR=6.2						
STKA	Stephens Creek	27.99	199	LR	LR	00 59 11.9	
	comp=Z,59nm,18.9s,baz=191,slow=38						
TORD	Torodi Ar. Bea	149.81	287	PKPbc	PKPbc	01 01 09.7	-0.5
	0.5nm,0.8s,baz=77,slow=3.2,SNR=3.3						

IDC 04 00:50:13.7±2.2**, 0°.81S**×**128°.03E, h0km, mb3.4**/2**, mb1 3.5**/3**, mb1mx3.3**/31**, mbtmp3.3**/3**, ML3.3**/1**, MS2.7**/1**, Ms1 2.7**/1**, ms1mx2.2**/13**, Error ellipse: s-maj=160.4km s-min=27.2km az=67.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.99	162	P	P	00 54 48.5	+0.6
	0.1nm,0.3s,baz=341,slow=12,SNR=6.2						
GUMO	Guam	21.98	49	LR	LR	01 03 15.6	
	comp=Z,22nm,20.9s,baz=72,slow=36						
ASAR	Alice Springs	23.42	166	P	P	00 55 24.2	-0.4
	0.5nm,0.7s,baz=346,slow=10,SNR=7.5						
MKAR	Makanchi Array	62.02	326	P	P	01 00 35.9	0.0
	0.3nm,0.4s,baz=114,slow=8.1,SNR=4.6						

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*NEIC **04** 00:54:27.6±1.2, 61°.21N±0°.03×147°.73W±0°.05, h40km±9km, Error ellipse: s-maj=4.2km s-min=3.2km az=208.0*

*AEIC **04** 00:54:28±1.3, 61°.20N±0°.03×147°.72W±0°.05, h39km±6km, ML3.2, ML3.5/172(NEIC), Error ellipse: s-maj=4.1km s-min=3.2km az=205.0*

ISC 04 00:54:27.5±1.9**, 61°.20N**±0°.02×**147°.74W**±0°.02**, h39km**±4km**, n220, σ0s.76**/255**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNK	Knik Glacier	0.41	302		Pn	00 54 36.8	-0.1
KNK					Sn	00 54 44.0	+0.4
KNK	Knik Glacier	0.41	302	P	Pn	00 54 36.8	-0.1
	baz=124,SNR=1000						
KNK				S	Sn	00 54 44.1	+0.4
	baz=124						
PWL	Port Wells	0.45	221		Pn	00 54 37.2	-0.1
PWL					Sn	00 54 45.1	+0.7
PWL	Port Wells	0.45	221	P	Pn	00 54 37.4	0.0
	baz=40,SNR=30						
PWL				S	Sn	00 54 45.0	+0.6
	baz=40						
GLI	Glacier Island	0.45	135		Pn	00 54 37.2	-0.1
GLI					Sn	00 54 45.2	+0.8
GLI				IAML		00 54 46.6	
	comp=E,7µm,0.5s						
GLI	Glacier Island	0.45	135	P	Pn	00 54 37.2	-0.1
	baz=314,SNR=74						
GLI				S	Sn	00 54 45.2	+0.8
	baz=314						
JPK	Jack Peak	0.57	104		Pn	00 54 38.8	-0.4
SCM	Sheep Creek Mo	0.67	17		Pn	00 54 39.6	-0.9
SCM				IAML		00 54 50.4	
	comp=E,2µm,0.6s						
SCM	Sheep Creek Mo	0.67	17	P	Pn	00 54 39.9	-0.7
	baz=198,SNR=54						
SCM				S	Sn	00 54 49.9	0.0
	baz=198						
SML	Sawmill	0.68	335		Pn	00 54 40.0	-0.6
SML					Sn	00 54 49.8	-0.2
SML	Sawmill	0.68	335	P	Pn	00 54 40.0	-0.6
	baz=156,SNR=148						
SML				S	Sn	00 54 49.9	-0.1
	baz=156						
VMT	TAPS TI Valdez	0.68	99		Pn	00 54 40.1	-0.4
VMT					Sn	00 54 50.5	+0.7
FID	Port Fidalgo	0.76	125		Pn	00 54 41.0	-0.7
FID				IAML		00 54 55.3	
	comp=N,3µm,0.3s						
PMR	Palmer	0.78	301	Pn	Pn	00 54 41.4	-0.5
PMR				Sn	Sn	00 54 52.1	-0.3
PMR	Palmer	0.78	301	P	Pn	00 54 41.4	-0.5
	baz=121,SNR=98						
PMR				S	Sn	00 54 52.2	-0.1
	baz=121						
GHO	Glory Hole Cre	0.81	316		Pn	00 54 42.1	-0.4
GHO					Sn	00 54 53.1	-0.3
GHO				IAML		00 54 54.4	
	comp=E,2µm,0.6s						
GHO				IAML		00 54 54.0	
	comp=N,1µm,0.2s						
KLU	Klutina	0.93	70	Pn	Pn	00 54 43.4	-0.6
KLU				Sn	Sn	00 54 55.8	-0.3
KLU				IAML		00 54 57.2	
	comp=E,2µm,0.3s						
KLU				IAML		00 54 58.1	
	comp=N,2µm,0.4s						
KLU	Klutina	0.93	70	P	Pn	00 54 43.5	-0.6
	baz=252,SNR=65						
KLU				S	Sn	00 54 56.1	-0.1
	baz=252						
DIV	Divide	0.96	93		Pn	00 54 44.0	-0.5
DIV	Divide	0.96	93		Sn	00 54 57.1	+0.3
RC01	Rabbit Creek A	0.97	265	Pn	Pn	00 54 44.7	0.0
RC01				Sn	Sn	00 54 57.6	+0.4

RC01	Rabbit Creek A	0.97	265	P	Pn	00 54 44.6	0.0
	baz=84,SNR=43						
RC01				S	Sn	00 54 57.7	+0.5
	baz=84						
HIN	Hinchinbrook I	1.01	142	Pn	Pn	00 54 45.5	+0.4
HIN				IAML		00 55 02.2	
	comp=E,2µm,0.5s						
HIN				IAML		00 55 06.0	
	comp=N,788nm,0.8s						
EYAK	Cordova Ski Ar	1.17	123		Pn	00 54 47.6	+0.3
EYAK	Cordova Ski Ar	1.17	123	P	Pn	00 54 47.7	+0.4
	baz=304,SNR=50						
EYAK				S	Sn	00 55 04.3	+2.4
	baz=304						
M24K	Tolsona, Glenn	1.18	39	Pn	Pn	00 54 47.3	-0.2
M24K				IAML		00 55 05.0	
	comp=E,715nm,2.6s						
M24K	Tolsona, Glenn	1.18	39	P	Pn	00 54 47.8	+0.2
	baz=220,SNR=40						
M24K				S	Sn	00 55 04.2	+1.8
	baz=220						
FIS	Fire Island	1.20	269	Pn	Pn	00 54 48.5	+0.8
O22K	Cooper Landing	1.21	234		Pn	00 54 47.6	-0.2
O22K	Cooper Landing	1.21	234		Sn	00 55 04.2	+1.3
O22K	Cooper Landing	1.21	234	IAML		00 55 08.7	
	comp=N,4µm,0.5s						
O22K				IAML		00 55 13.2	
	comp=E,3µm,0.7s						
O22K	Cooper Landing	1.21	234	P	Pn	00 54 47.7	-0.1
	baz=53						
O22K				S	Sn	00 55 04.1	+1.3
	baz=53						
M22K	Willow	1.27	297		Pn	00 54 48.8	+0.2
M22K					Sn	00 55 06.5	+2.0
M22K	Willow	1.27	297	P	Pn	00 54 48.8	+0.2
	baz=116,SNR=64						
M22K				S	Sn	00 55 06.1	+1.6
	baz=116						
SEW	Seward	1.38	218	Pn	Pn	00 54 49.7	-0.4
SEW	Seward	1.38	218	P	Pn	00 54 49.8	-0.3
	baz=37						
SEW				S	Sn	00 55 07.7	+0.6
	baz=37						
SLKM	Skilak Lake	1.40	241		Pn	00 54 50.5	+0.1
SUA	Susitna One	1.47	282		Pn	00 54 51.6	+0.1
SUA	Susitna One	1.47	282	IAML		00 55 11.8	
	comp=E,613nm,0.5s						
SUA				IAML		00 55 12.1	
	comp=N,673nm,0.9s						
SUA	Susitna One	1.47	282	P	Pn	00 54 51.7	+0.1
	baz=100,SNR=43						
SUA				S	Sn	00 55 10.4	+0.7
	baz=100						
BMRM	Bremner River	1.54	97		Pn	00 54 52.4	0.0
BMRM				IAML		00 55 15.2	
	comp=N,803nm,0.4s						
BMRM				IAML		00 55 15.8	
	comp=E,703nm,0.4s						
BMRM	Bremner River	1.54	97	P	Pn	00 54 52.2	-0.3
	baz=279,SNR=34						
BMRM				S	Sn	00 55 12.8	+1.6
	baz=279						
N25K	Chitina, Valde	1.57	73		Pn	00 54 52.8	0.0
N25K				Sn	Sn	00 55 12.5	+0.6
N25K				IAML		00 55 13.9	
	comp=N,445nm,0.8s						
N25K				IAML		00 55 14.2	
	comp=E,450nm,0.7s						
N25K	Chitina, Valde	1.57	73	P	Pn	00 54 53.0	+0.2
	baz=256,SNR=18						
N25K				S	Sn	00 55 12.8	+0.9
	baz=256						
CUT	Chulitna	1.71	316	Pn	Pn	00 54 55.4	+0.8
CUT	Chulitna	1.71	316	P	Pn	00 54 55.5	+0.8
	baz=135,SNR=157						
CUT				S	Sn	00 55 17.3	+2.2
	baz=135						
RAGM	Ragged Mountai	1.71	117	Pn	Pn	00 54 55.1	+0.4
CAPN	Captain Cook N	1.72	257	Pn	Pn	00 54 56.2	+1.5
CAPN	Captain Cook N	1.72	257	P	Pn	00 54 56.1	+1.3
	baz=74						
CAPN				S	Sn	00 55 18.3	+2.9
	baz=74						
HARP	HAARP	1.72	44		Pn	00 54 55.9	+1.0
HARP	HAARP	1.72	44	P	Pn	00 54 55.9	+1.0
	baz=226,SNR=23						
HARP				S	Sn	00 55 18.2	+2.6
	baz=226						
Q23K	Middleton Isla	1.90	158	Pn	Pn	00 54 59.7	+2.4
MID	Middleton Isla	1.91	158	Pn	Pn	00 54 59.7	+2.3
MID				IAML		00 55 16.7	
	comp=E,642nm,3.6s						
GLB	Gilahina Butte	1.91	81		Pn	00 54 57.9	+0.3
GLB				IAML		00 55 25.8	
	comp=N,310nm,0.4s						
HMT	Hamilton	1.91	115	Pn	Pn	00 54 57.3	-0.2
SKT	Skwentna	1.98	295		Pn	00 54 58.1	-0.2
SKT				Sn	Sn	00 55 21.9	0.0
SKT				IAML		00 55 25.6	
	comp=E,464nm,0.4s						
SKT	Skwentna	1.98	295	P	Pn	00 54 58.2	-0.2
	baz=112,SNR=44						
SKT				S	Sn	00 55 22.5	+0.6
	baz=112						
STLK	Strandline Lak	2.00	281		Pn	00 54 59.3	+0.6
SPCG	Spurr Capps Gl	2.07	275		Pn	00 55 00.3	+0.5
VRDI	Verde Repeater	2.08	87	Pn	Pn	00 55 00.0	+0.1
VRDI				IAML		00 55 33.6	
	comp=N,304nm,0.8s						
KAIM	Kayak Island	2.08	126	Pn	Pn	00 54 59.1	-0.7
KAIM				IAML		00 56 20.6	
	comp=N,489nm,3.8s						
KAIM	Kayak Island	2.08	126	P	Pn	00 54 59.0	-0.7
	baz=309						
PAX	Paxson	2.08	30		Pn	00 55 01.1	+1.3
PAX	Paxson	2.08	30	P	Pn	00 55 00.7	+0.9
	baz=212,SNR=17						
PAX				S	Sn	00 55 26.0	+1.6
	baz=212						
BRSE	Bradley Lake S	2.08	227		Pn	00 54 59.9	0.0
BRSE	Bradley Lake S	2.08	227	P	Pn	00 54 59.8	0.0
	baz=44,SNR=6.5						
BRSE				S	Sn	00 55 24.2	-0.3
	baz=44						
SPU	Mount Spurr	2.09	271	Pn	Pn	00 54 59.7	-0.3
NICHA	Nichawak Mount	2.09	116		Pn	00 55 00.1	+0.1
BRLK	Bradley Lake	2.12	229	Pn	Pn	00 55 00.4	+0.1
BERG	Berg Lake	2.14	110	Pn	Pn	00 55 00.2	-0.4
BERG				IAML		00 55 37.1	
	comp=N,527nm,0.5s						
SPCN	Chakachatna No	2.15	273		Pn	00 55 01.3	+0.5
SPCR	Spurr Chakacha	2.16	272		Pn	00 55 01.0	0.0
SPCR	Spurr Chakacha	2.16	272	P	Pn	00 55 00.4	-0.6
	baz=88						
SPCR				S	Sn	00 55 26.8	+0.2
	baz=88						
SPBG	Spurr Blockage	2.24	274		Pn	00 55 02.3	+0.2
SUCK	Suckling Hills	2.25	118	Pn	Pn	00 55 01.8	-0.4
SUCK				IAML		00 55 59.1	
	comp=E,361nm,3.1s						
SUCK				IAML		00 56 21.6	
	comp=N,293nm,4.4s						
RND	Reindeer	2.28	347	Pn	Pn	00 55 03.4	+0.8
MCARA	McCarthy VSAT	2.29	83	Pn	Pn	00 55 03.1	+0.5
MCARA				IAML		00 55 44.2	
	comp=N,292nm,0.5s						
MCARA	McCarthy VSAT	2.29	83	P	Pn	00 55 02.8	+0.2
	baz=267						
CRQM	Cirque	2.29	99	Pn	Pn	00 55 03.3	+0.5
CRQM				IAML		00 55 44.5	
	comp=E,407nm,0.9s						
CRQM				IAML		00 55 45.9	
	comp=N,364nm,0.6s						
CRQE	Cirque	2.31	99	P	Pn	00 55 02.9	-0.2
	baz=283,SNR=9.0						
KHIT	Khitrov Hills	2.33	107		Pn	00 55 03.0	-0.3
CNPM	China Poot	2.41	228	Pn	Pn	00 55 04.9	+0.5
CNPM				IAML		00 55 49.6	
	comp=E,181nm,2.9s						
TGL	Tana Glacier	2.44	98	Pn	Pn	00 55 05.0	+0.2
TGL				IAML		00 55 40.7	
	comp=N,336nm,0.5s						
TGL				IAML		00 55 42.0	
	comp=E,293nm,0.5s						
BGLC	Bering Glacier	2.44	114	P	Pn	00 55 05.0	+0.3
	baz=298						
HOM	Homer	2.48	233	Pn	Pn	00 55 05.9	+0.7
HOM				IAML		00 56 33.6	
	comp=N,296nm,2.5s						
WAX	Waxell Ridge	2.51	105	Pn	Pn	00 55 05.5	-0.3
PTPK	Patty Peak	2.56	88		Pn	00 55 07.0	+0.6
PTPK					Sn	00 55 37.7	+1.3
TRF	Thorofare Moun	2.56	333		Pn	00 55 07.3	+0.8
TRF				IAML		00 55 47.1	
	comp=E,129nm,0.7s						
TRF				IAML		00 55 51.7	
	comp=N,128nm,0.8s						
TRF	Thorofare Moun	2.56	333	P	Pn	00 55 07.1	+0.6
	baz=152,SNR=21						
M26K	Nabesna, AK	2.56	60	Pn	Pn	00 55 07.5	+1.1
M26K	Nabesna, AK	2.56	60	P	Pn	00 55 07.0	+0.6
	baz=244						
RSO	Redoubt South	2.56	256	Pn	Pn	00 55 06.5	-0.1
MENT	Mentasta	2.58	46	Pn	Pn	00 55 08.9	+2.3
MENT				IAML		00 55 57.0	
	comp=N,138nm,0.5s						
RDWB	Redoubt West	2.60	256		Pn	00 55 06.7	-0.3
MCK	McKinley	2.61	348		Pn	00 55 08.0	+0.9
MCK				IAML		00 55 42.6	
	comp=E,117nm,0.4s						
MCK				IAML		00 55 53.1	
	comp=N,116nm,0.5s						
MCK	McKinley	2.61	348	P	Pn	00 55 07.9	+0.9
	baz=167,SNR=21						
MCK				S	Sn	00 55 39.0	+1.6
	baz=167						
SNH	Sunshine Point	2.62	111	Pn	Pn	00 55 07.7	+0.5
SNH				IAML		00 55 26.1	
	comp=N,285nm,3.6s						
SNH				IAML		00 55 51.7	
	comp=E,260nm,3.4s						
BALM	Baldy	2.62	91		Pn	00 55 07.5	+0.1
KIAG	Kiagna River	2.63	94		Pn	00 55 07.5	0.0
O20K	Slope Mountain	2.65	247		Pn	00 55 07.9	+0.2
O20K	Slope Mountain	2.65	247	P	Pn	00 55 07.6	-0.1
	baz=63						
BARK	Barkley Ridge	2.69	105		Pn	00 55 08.4	+0.1
PPLA	Purkeypile	2.70	311	Pn	Pn	00 55 08.8	+0.4
PPLA	Purkeypile	2.70	311	P	Pn	00 55 08.3	-0.2
	baz=128,SNR=35						
ISLE	Juniper Island	2.71	100	Pn	Pn	00 55 08.5	0.0
ISLE				IAML		00 55 51.6	
	comp=N,308nm,0.7s						
ISLE				IAML		00 55 58.2	
	comp=E,250nm,0.8s						
L26K	Log Cabin Wild	2.76	46	Pn	Pn	00 55 09.3	+0.1
KTH	Kantishna Hill	2.79	329		Pn	00 55 10.4	+0.8
KTH				IAML		00 55 57.2	
	comp=E,116nm,0.8s						
KTH				IAML		00 56 01.5	
	comp=N,111nm,0.9s						
IVE	Iliamna Volcan	2.86	248		Pn	00 55 10.1	-0.5
RIDG	Independent Ri	2.89	27	Pn	Pn	00 55 11.9	+1.0
RIDG				IAML		00 56 00.5	
	comp=E,87nm,0.7s						
RIDG	Independent Ri	2.89	27	P	Pn	00 55 11.7	+0.8
	baz=209,SNR=9.7						
ILS	Iliamna Low So	2.91	247		Pn	00 55 10.9	-0.3
BARN	Barnard Glacie	2.95	90	Pn	Pn	00 55 12.5	+0.5
BARN				IAML		00 55 57.1	
	comp=E,169nm,0.5s						
BARN				IAML		00 55 57.7	
	comp=N,192nm,0.6s						
GRNC	Granite Creek	2.96	96	Pn	Pn	00 55 12.1	0.0
GRNC				IAML		00 55 58.6	
	comp=E,103nm,0.7s						
GRNC				IAML		00 56 03.0	
	comp=N,117nm,0.6s						
DOT	Dot Lake	3.00	33	Pn	Pn	00 55 14.2	+1.8
CAST	Castle Rocks	3.02	320	Pn	Pn	00 55 13.7	+1.1
CAST	Castle Rocks	3.02	320	P	Pn	00 55 13.2	+0.6
	baz=136,SNR=26						
M27K	Edge Creek, AK	3.02	65	Pn	Pn	00 55 14.2	+1.3
M27K	Edge Creek, AK	3.02	65	P	Pn	00 55 13.8	+0.9
	baz=250						
MESA	MESA	3.02	107	Pn	Pn	00 55 13.3	+0.3
MESA				IAML		00 55 59.3	
	comp=N,234nm,1.7s						
MESA	MESA	3.02	107	P	Pn	00 55 13.1	+0.2
	baz=292						
YAH	Yahtse	3.06	103	Pn	Pn	00 55 13.2	-0.2
YAH				IAML		00 56 07.0	
	comp=E,148nm,0.7s						
YAH				IAML		00 56 28.8	
	comp=N,191nm,3.7s						
BWN	Browne	3.09	346	Pn	Pn	00 55 14.0	+0.4
CTG	Chitna Glacier	3.12	91	P	Pn	00 55 14.5	+0.3
	baz=277						
CTGM	Chitina Glacie	3.12	91	Pn	Pn	00 55 14.6	+0.4
CTGM				IAML		00 56 04.2	
	comp=N,76nm,0.7s						
P19K	Oil Pt	3.13	243	Pn	Pn	00 55 14.3	0.0
P19K				IAML		00 56 02.1	
	comp=N,161nm,2.9s						
P19K				IAML		00 56 04.5	
	comp=E,146nm,0.5s						
P19K	Oil Pt	3.13	243	P	Pn	00 55 14.1	-0.2
	baz=58						
L20K	Farewell, AK	3.18	297		Pn	00 55 14.1	-0.8
L20K	Farewell, AK	3.18	297	P	Pn	00 55 14.0	-1.0
	baz=111,SNR=10						
HDA	Harding Lake	3.25	6		Pn	00 55 16.4	+0.6
HDA				IAML		00 56 02.3	
	comp=E,105nm,0.6s						
HDA				IAML		00 56 07.9	
	comp=N,91nm,0.7s						
HDA	Harding Lake	3.25	6	P	Pn	00 55 16.2	+0.5
	baz=187,SNR=22						
M19K	Big River Lodg	3.26	285		Pn	00 55 15.0	-1.0
M19K				IAML		00 56 05.5	
	comp=E,91nm,0.3s						
M19K				IAML		00 56 05.7	
	comp=N,72nm,0.6s						
M19K	Big River Lodg	3.26	285	P	Pn	00 55 15.3	-0.8
	baz=100						
RKAV	Rock Avalanche	3.27	103		Pn	00 55 16.6	+0.3
BPAW	Bear Paw Mtn.	3.28	334		Pn	00 55 16.3	0.0
BPAW				IAML		00 56 08.9	
	comp=N,82nm,1.2s						
BPAW	Bear Paw Mtn.	3.28	334	P	Pn	00 55 16.1	-0.1
	baz=152,SNR=13						
SCRK	Sand Creek	3.29	30	Pn	Pn	00 55 16.7	+0.2
SCRK	Sand Creek	3.29	30	P	Pn	00 55 16.6	+0.2
	baz=214,SNR=12						
WRH	Wood River Hil	3.29	357		Pn	00 55 16.6	+0.2
WRH				IAML		00 56 10.8	
	comp=E,84nm,0.6s						
LOGN	Logan Glacier	3.30	94	Pn	Pn	00 55 17.1	+0.4
LOGN				IAML		00 56 14.1	
	comp=E,89nm,0.7s						
LOGN				IAML		00 56 16.4	
	comp=N,75nm,0.8s						
N19K	Bonanza Creek	3.31	266	Pn	Pn	00 55 16.1	-0.6
N19K	Bonanza Creek	3.31	266	P	Pn	00 55 15.8	-0.9
	baz=81						
TABL	Table Mountain	3.32	100	Pn	Pn	00 55 16.8	-0.2
TABL				IAML		00 56 08.4	
	comp=N,104nm,2.6s						
TABL				IAML		00 57 19.7	
	comp=E,112nm,3.4s						
L27K	Beaver Creek,	3.35	53	Pn	Pn	00 55 18.5	+1.2
YUK2	White River	3.36	77		Pn	00 55 18.0	+0.5
BCAR	Beaver Creek A	3.37	54	Pn	Pn	00 55 18.4	+0.9
AUQ	Augustine Qik’	3.38	239		Pn	00 55 18.2	+0.6
CHUM	Lake Minchumin	3.43	324		Pn	00 55 18.6	+0.3
CHUM	Lake Minchumin	3.43	324	P	Pn	00 55 18.4	+0.1
	baz=140,SNR=13						
CCB	Clear Creek Bu	3.46	360		Pn	00 55 18.6	-0.2
CCB				IAML		00 56 13.7	
	comp=E,58nm,1.2s						
NEA2	Nenana	3.46	350		Pn	00 55 18.2	-0.6
NEA2	Nenana	3.46	350	P	Pn	00 55 18.4	-0.4
	baz=170,SNR=8.0						
L19K	White Mountain	3.53	289		Pn	00 55 19.1	-0.6
L19K	White Mountain	3.53	289	P	Pn	00 55 19.0	-0.7
	baz=103,SNR=8.6						
YUK3	Moose Creek	3.54	77		Pn	00 55 20.6	+0.5
YUK3	Moose Creek	3.54	77	P	Pn	00 55 20.5	+0.5
	baz=264						
YUK1	Sand Pete Hill	3.57	71		Pn	00 55 21.3	+0.9
IL31		3.61	6		Pn	00 55 20.8	0.0
ILAR	Eielson Array	3.61	6	Pn	Pn	00 55 20.7	-0.1
COLA	College	3.69	359		Pn	00 55 21.4	-0.4
COLA	College	3.69	359	P	Pn	00 55 22.1	+0.2
	baz=179						
TCOL	CIGO, UAF Yank	3.69	359	Pn	Pn	00 55 21.6	-0.3
TCOL	CIGO, UAF Yank	3.69	359	P	Pn	00 55 22.0	+0.1
	baz=179						
Q19K	Cape Douglas,	3.73	235	Pn	Pn	00 55 22.6	+0.1
Q19K	Cape Douglas,	3.73	235	P	Pn	00 55 22.3	-0.2
	baz=50						
MDM	Murphy Dome	3.78	357	Pn	Pn	00 55 23.4	+0.2
MDM				IAML		00 56 26.6	
	comp=E,71nm,0.9s						
SVW2	Sparrevohn	3.80	272		Pn	00 55 22.6	-0.8
SVW2				IAML		00 56 33.9	
	comp=N,41nm,0.8s						
J26L	Joseph Creek	3.83	28	P	Pn	00 55 24.2	+0.3
	baz=212,SNR=6.6						
PCA	Pinnacle	3.85	103	Pn	Pn	00 55 24.6	+0.4
PINM	Pinnacle	3.85	103	P	Pn	00 55 23.7	-0.4
	baz=290						
POKR	Poker Plat Res	3.94	2	Pn	Pn	00 55 25.3	0.0
POKR				IAML		00 56 27.5	
	comp=E,38nm,0.8s						
POKR	Poker Plat Res	3.94	2	P	Pn	00 55 25.4	0.0
	baz=182						
I23K	Minto, Yukon-K	4.04	350	Pn	Pn	00 55 26.6	0.0
I23K				IAML		00 56 31.5	
	comp=N,57nm,0.8s						
I23K				IAML		00 56 32.5	
	comp=E,52nm,1.4s						
I23K	Minto, Yukon-K	4.04	350	P	Pn	00 55 26.8	+0.2
	baz=169,SNR=9.1						
MLY	Manley	4.08	342	Pn	Pn	00 55 27.5	+0.2
MLY	Manley	4.08	342	P	Pn	00 55 27.3	0.0
	baz=159,SNR=10						
P18K	Big Mountain,	4.14	247	Pn	Pn	00 55 27.3	-0.9
P18K				IAML		00 57 24.4	
	comp=N,54nm,3.7s						
P18K				IAML		00 57 49.4	
	comp=E,54nm,4.3s						
P18K	Big Mountain,	4.14	247	P	Pn	00 55 27.2	-0.9
	baz=61						
J20K	Nowinta River	4.20	318	Pn	Pn	00 55 28.7	-0.2
J20K				IAML		00 56 40.8	
	comp=N,42nm,0.5s						
J20K				IAML		00 56 42.2	
	comp=E,35nm,0.6s						
J20K	Nowinta River	4.20	318	P	Pn	00 55 28.6	-0.3
	baz=133						
KDAK	Kodiak Island	4.22	218	Pn	Pn	00 55 28.6	-0.6
KDAK	Kodiak Island	4.22	218	P	Pn	00 55 28.5	-0.6
	baz=34						
TTA	Tatalina	4.26	298	Pn	Pn	00 55 28.4	-1.4
TTA	Tatalina	4.26	298	P	Pn	00 55 28.4	-1.4
	baz=111						
YUK4	Talbot Arm	4.39	84	P	Pn	00 55 32.5	+0.8
	baz=271						
I21K	Tanana	4.44	336		Pn	00 55 32.2	+0.1
I21K				IAML		00 56 29.6	
	comp=N,30nm,3.5s						
I21K				IAML		00 57 22.5	
	comp=E,28nm,4.2s						
I21K	Tanana	4.44	336	P	Pn	00 55 32.2	+0.1
	baz=153,SNR=5.5						
PRP	Porcupine Dome	4.45	12	Pn	Pn	00 55 33.0	+0.6
PRP				IAML		00 56 30.4	
	comp=E,33nm,0.6s						
PRP				IAML		00 56 47.7	
	comp=N,46nm,0.7s						
PRP	Porcupine Dome	4.45	12	P	Pn	00 55 32.4	-0.1
	baz=194,SNR=12						
YUK6	Outpost Mounta	4.56	89	P	Pn	00 55 34.6	+0.5
	baz=277						
H24K	Noodor Dome	4.66	359	Pn	Pn	00 55 35.5	+0.2
H24K				IAML		00 56 57.1	
	comp=E,31nm,1.2s						
H24K	Noodor Dome	4.66	359	P	Pn	00 55 35.2	-0.1
	baz=179						
EGAK	Eagle	4.68	37	Pn	Pn	00 55 36.1	+0.7
EGAK				IAML		00 57 02.8	
	comp=E,42nm,0.9s						
EGAK				IAML		00 57 06.2	
	comp=E,29nm,1.0s						
EGAK	Eagle	4.68	37	P	Pn	00 55 36.1	+0.7
	baz=223						
H23K	Yukon River	4.72	351	Pn	Pn	00 55 36.1	+0.1
H23K				IAML		00 57 07.1	
	comp=E,26nm,3.1s						
H23K				IAML		00 57 53.9	
	comp=N,25nm,4.3s						
H23K	Yukon River	4.72	351	P	Pn	00 55 36.2	+0.2
	baz=170						
OHAK	Old Harbor	4.90	218	Pn	Pn	00 55 37.0	-1.5
OHAK	Old Harbor	4.90	218	P	Pn	00 55 37.3	-1.2
	baz=33						
HYT	Haines Junctio	5.00	90	Pn	Pn	00 55 41.0	+1.1
HYT				IAML		00 57 47.5	
	comp=N,45nm,4.1s						
HYT				IAML		00 58 21.8	
	comp=E,30nm,3.8s						
HYT	Haines Junctio	5.00	90	P	Pn	00 55 40.6	+0.7
	baz=279						
H21K	Melozitna Rive	5.02	335	Pn	Pn	00 55 40.1	0.0
H21K				IAML		00 56 39.0	
	comp=N,20nm,4.0s						
H21K				IAML		00 57 10.3	
	comp=E,25nm,2.2s						
H21K	Melozitna Rive	5.02	335	P	Pn	00 55 39.9	-0.3
	baz=151,SNR=9.3						
M30M	Minto, Yukon	5.36	70	P	Pn	00 55 44.7	-0.1
	baz=260						
IMAR	Indian Mountai	5.50	333	Pn	Pn	00 55 47.0	+0.3
FYU	Fort Yukon	5.50	11	Pn	Pn	00 55 46.5	-0.3
SII	Sitkinak Islan	5.72	219	Pn	Pn	00 55 48.4	-1.4
COLD	Coldfoot	6.15	351		Pn	00 55 56.1	+0.5
COLD	Coldfoot	6.15	351	P	Pn	00 55 55.8	+0.2
	baz=169						
WHY	Whitehorse	6.29	89	Pn	Pn	00 55 57.7	0.0
WHY	Whitehorse	6.29	89	P	Pn	00 55 57.9	+0.2
	baz=280						
SKAG	Skagway	6.41	100	Pn	Pn	00 56 00.1	+0.9
BMAR	Burnt Mountain	6.41	11	Pn	Pn	00 55 58.9	-0.3
JIS	Juneau Island	7.36	108	Pn	Pn	00 56 11.9	-0.2
P33M	Teslin, Yukon	7.39	91	P	Pn	00 56 12.5	-0.2
	baz=284						
CHGN	Chignik	7.41	233	Pn	Pn	00 56 13.5	+0.7
SIT	Sitka	7.61	118	Pn	Pn	00 56 15.1	-0.6
SDPT	Sand Point	8.90	234	Pn	Pn	00 56 33.2	-0.1
CNBA	Chernabura Isl	8.96	230	Pn	Pn	00 56 33.2	-0.9
DLBC	Dease Lake	9.34	99	Pn	Pn	00 56 38.6	-0.8
GRNB	Grenville Isla	12.03	120	Pn	Pn	00 57 15.2	-1.0
UNV	Unalaska Valle	12.45	242	Pn	Pn	00 57 20.0	-1.8

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*IDC **04** 01:06:26.1±3.3, 8°.97S×111°.05E, h0^{km}, mb3.4/4, mb1 3.5/4, mb1mx3.4/23, mbtmp3.4/4, Error ellipse: s-maj=156.3km s-min=25.4km az=50.0*

*DJA **04** 01:06:32.6±0.4, 9°S±3°×11°1E±°, h10^{km}, M4.2/15, mb4.7/1, MLv4.0/15*

ISC 04 01:06:34.3±1.1, **9°.03S**±0°.09×**111°.22E**±0°.06, **h58^{km}, n28,** σ**1^{s}.35**/28, **mb3.4**/4, **South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCJI	Pacitan	0.83	357	P	Pn	01 06 49.3	-0.8
PCJI				S	Sn	01 06 59.6	-2.1
PWJI	Pagerwojo	1.16	30	P	Pn	01 06 53.7	-0.7
PWJI				S	Sn	01 07 07.6	-1.7
UGM	Wanagama	1.31	328	P	Pn	01 06 57.2	+0.8
UGM				S	Sn	01 07 14.3	+1.4
UGM	Wanagama	1.31	328	P	Pn	01 06 57.2	+0.8
YOGI	Yogyakarta	1.51	323	P	Pn	01 06 59.8	+0.6
NGJI	Ngawi	1.67	8	P	Pn	01 07 04.4	+3.1
SMRI	Semarang	2.11	339	P	Pn	01 07 08.9	+1.6
SMRI	Semarang	2.11	339	P	Pn	01 07 09.9	+2.6
TBJI	Tambak Boyo	2.29	16	P	Pn	01 07 10.6	+0.9
GMJI	Gumukmas	2.33	71	P	Pn	01 07 09.6	-0.6
GRJI	Gresik	2.45	31	P	Pn	01 07 12.8	+0.9
BLJI	Banyuglugur	2.68	62	P	Pn	01 07 15.2	+0.2
KPJI	Karang Pucung	2.82	307	P	Pn	01 07 18.6	+1.6
CMJI	Cimerak	3.01	294	P	Pn	01 07 20.2	+0.7
ABJI	Asem Bagus	3.23	68	P	Pn	01 07 22.9	+0.4
CISI	Cisompet, Garu	3.67	293	P	Pn	01 07 29.6	+0.9

CISI	Cisompet, Garu	3.67	293	P	Pn	01 07 29.8	+1.1
SRBI	Singaraja	4.06	77	P	Pn	01 07 34.8	+0.8
XMIS	Christmas Isla	5.67	255	P	Pn	01 07 57.1	+1.0
	64nm,1.8s						
PLAI	Plampang	6.49	89	P	Pn	01 08 08.9	+1.7
MNAI	Manna	9.42	299	P	Pn	01 08 47.4	-0.1
	233nm,1.3s						
WRA	Warramunga Arr	24.84	118	P	P	01 11 51.9	+0.4
	0.2nm,0.6s,baz=303,slow=11,SNR=2.7						
ASAR	Alice Springs	26.12	127	P	P	01 12 03.9	+0.7
	0.3nm,0.5s,baz=300,slow=8.4,SNR=2.4						
H08S2	Diego Garcia H	38.33	269	T	T	01 54 50.6	
	baz=92,slow=74						
H08S3	Diego Garcia H	38.34	269	T	T	01 54 51.5	
	baz=92,slow=74						
H08S1	Diego Carcia H	38.34	269	T	T	01 54 52.7	
	baz=92						
SONM	Songino Array	56.78	356	P	P	01 16 11.6	-0.9
	0.4nm,0.6s,baz=192,slow=6.5,SNR=2.8						
MKAR	Makanchi Array	61.27	338	P	P	01 16 42.4	-1.1
	0.6nm,0.5s,baz=149,slow=7.4,SNR=11						

IDC 04 01:13:05.4±7.1**, 23°.44N**×**107°.71W, h0**^{km}**, mb1 3.4**/3**, mb1mx3.3**/29**, mbtmp2.9**/3**, ML3.6**/3**, Error ellipse: s-maj=94.9km s-min=37.0km az=146.0, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TXAR	Lajitas Array	6.90	31	Pn	Pn	01 14 48.3	+0.4
	0.1nm,0.3s,baz=201,slow=12,SNR=4.8						
TXAR				Lg	Lg	01 16 42.9	
	0.1nm,0.3s,baz=213,slow=31,SNR=4.6						
NVAR	Mina Array Bea	17.47	331	P	Pn	01 17 10.8	+0.2
	0.1nm,0.3s,baz=150,slow=11,SNR=5.2						
PDAR	Pinedale Array	19.34	356	P	P	01 17 33.0	+0.5
	0.1nm,0.3s,baz=172,slow=14,SNR=2.2						

*IDC **04** 01:22:08.1±1.1, 30°.64S×71°.96W, h0^{km}, mb3.7/3, mb1 3.9/6, mb1mx3.7/25, mbtmp3.7/6, ML3.6/3, MS3.2/1, Ms1 3.2/1, ms1mx2.7/21, Error ellipse: s-maj=37.0km s-min=25.1km az=109.0*

*GUC **04** 01:22:10.4±0.7, 30°.37S×71°.89W, h29^{km}±3^{km}, ML4.0*

*NEIC **04** 01:22:11.1±1.9, 30°.34S±0°.04×71°.93W±0°.08, h19^{km}±6^{km}, mb4.0/3, ML4.0(GUC), Error ellipse: s-maj=10.5km s-min=5.5km az=77.0*

ISC 04 01:22:08.6±1.6**, 30°.36S**±0°.03×**72°.08W**±0°.05**, h4**^{km}±10^{km}**, n54, σ1^{s}.49**/66**, mb3.9**/4**, 4C-1D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.49	130	Pg	Pg	01 22 19.2	+1.1
CO06				Sg	Sg	01 22 25.2	+0.7
CO06	Fray Jorge	0.49	130	eP	Pb	01 22 19.3	-0.6
CO06				eS	Sg	01 22 25.6	+1.1
CO06				IAML		01 22 28.6	
	comp=N,15µm,0.2s						
CO05	La Serena	0.85	59		Pb	01 22 25.9	0.0
CO05					Sg	01 22 34.3	-1.6
CO05	La Serena	0.85	59	⇑eP	Pg	01 22 24.9	0.0
CO05				eS	Sg	01 22 35.2	-0.7
CO05				IAML		01 22 39.2	
	comp=E,7µm,0.4s						
GO04	Tololo Observa	1.12	81		Pb	01 22 30.0	-0.7
GO04	Tololo Observa	1.12	81	eP	Pb	01 22 29.8	-0.9
GO04				eS	Sb	01 22 43.8	-2.0
GO04				IAML		01 22 48.2	
	comp=N,24µm,0.5s						
CO03	El Pedregal	1.29	112		Pn	01 22 32.1	-1.4
CO03	El Pedregal	1.29	112	eP	Pn	01 22 32.1	-1.4
CO03				eS	Sb	01 22 48.1	-2.4
CO03				IAML		01 22 52.0	
	comp=N,5µm,0.2s						
LCO	Las Campanas	1.80	42		Pn	01 22 40.8	+0.1
LCO	Las Campanas	1.80	42	eP	Pn	01 22 40.7	+0.1
LCO				eS	Sb	01 23 04.9	-0.4
VA06	Catapilco	2.29	163	⇑eP	Pn	01 22 46.5	-0.7
VA06				⇓eS	Sn	01 23 14.4	-1.5
VA06				IAML		01 23 29.2	
	comp=E,1µm,0.6s						
AC04	Llanos de Chal	2.32	22	Pn	Pn	01 22 47.2	-0.4
AC04	Llanos de Chal	2.32	22	eP	Pn	01 22 47.1	-0.5
AC04				eS	Sb	01 23 18.0	-2.0
VA01	Torpederas	2.68	172		Pb	01 22 55.0	-2.2
VA03	San Esteban	2.73	152		Pn	01 22 53.9	+0.6
VA03	San Esteban	2.73	152	⇑eP	Pn	01 22 54.0	+0.7
VA03				eS	Sn	01 23 27.7	+0.9
VA03				IAML		01 23 38.8	
	comp=N,786nm,0.8s						
ROCH	El Roble	2.76	161	eP	Pn	01 22 53.4	-0.5
ROCH				eS	Sn	01 23 28.4	+0.7
ROCH				IAML		01 23 42.0	
	comp=E,679nm,0.4s						
MT02	Curacav	3.00	165	Pn	Pn	01 22 56.4	-0.5
MT02	Curacav	3.00	165	eP	Pn	01 22 57.3	+0.4
MT02				i S	Sb	01 23 41.8	+2.2
MT02				IAML		01 23 51.5	
	comp=N,207nm,0.4s						
GO03	Copiap	3.19	31	Pn	Pn	01 22 59.6	-0.1
MT05	Renca	3.23	160	Pn	Pn	01 23 00.2	0.0
MT05	Renca	3.23	160	eP	Pb	01 23 06.5	-0.1
MT05				eS	Sb	01 23 43.1	-3.3
MT05				IAML		01 23 55.9	
	comp=E,926nm,0.3s						
VA05	Santo Domingo	3.31	173	Pn	Pn	01 23 02.9	+1.7
MT09	Talagante	3.53	165		Pn	01 23 04.7	+0.3
MT09	Talagante	3.53	165	eP	Pn	01 23 05.0	+0.7
MT09				eS	Sn	01 23 48.6	+1.9
MT01	Popeta	3.56	169		Pn	01 23 03.9	-0.8
MT01	Popeta	3.56	169	⇑iP	Pn	01 23 04.5	-0.3
MT01				eS	Sb	01 23 57.5	+1.7
MT01				IAML		01 24 11.2	
	comp=N,165nm,0.6s						
BO04	La Punta	3.83	161	eP	Pn	01 23 09.1	+0.7
BO04				eS	Sb	01 24 02.9	-0.6
BO01	Tunca	4.11	168	Pn	Pn	01 23 11.6	-0.6
AC02	Maricunga	4.36	37	Pn	Pn	01 23 16.0	-0.2
BO02	Sierra Bellavi	4.55	166	Pn	Pn	01 23 18.2	-0.1
GO05	Huala	4.64	179	Pn	Pn	01 23 17.6	-1.9
H03N1	Juan Fernandez	6.57	240	Pn	Pn	01 23 44.0	-1.8
	baz=111,slow=18,SNR=25						
H03N1				T	T	01 30 52.1	
	baz=70,slow=72,SNR=2135						
H03N2	Juan Fernandez	6.59	240	Pn	Pn	01 23 44.7	-1.3
	baz=111,slow=18,SNR=22						
H03N2				T	T	01 30 48.9	
	baz=70,slow=72,SNR=1506						
H03N3	Juan Fernandez	6.59	240	Pn	Pn	01 23 43.7	-2.4
	baz=111,slow=18,SNR=33						
H03N3				T	T	01 30 47.7	
	baz=70,slow=72,SNR=2123						
H03S3	Juan Fernandez	6.75	237	Pn	Pn	01 23 44.9	-3.3
	baz=106						
H03S1	Juan Fernandez	6.75	237	Pn	Pn	01 23 45.4	-2.9
	baz=106,slow=74						
H03S2	Juan Fernandez	6.77	237	Pn	Pn	01 23 45.8	-2.7
	baz=106,slow=74						
LVC	Limon Verde	8.22	21	Pn	Pn	01 24 12.7	+3.7
	comp=N,0.8nm,0.3s,baz=193,slow=14,SNR=3.2						
LVC				Sn	Sn	01 25 42.9	+0.2
	comp=N,0.4nm,0.3s,baz=173,slow=18,SNR=1.2						
TRQA	Tornquist	11.34	135	Pn	Pn	01 24 52.2	+0.8
ITQB	Itaqui	13.41	91	Pn	Pn	01 25 18.9	-0.9
CPUP	Villa Florida	13.59	76	LR	LR	01 30 46.0	
	comp=N,97nm,19.0s,baz=228,slow=38						
LPAZ	La Paz	14.47	15	Pn	Pn	01 25 37.2	+2.4
	comp=N,0.1nm,0.3s,baz=191,slow=10,SNR=2.0						
LPAZ	La Paz	14.47	15	Pn	Pn	01 25 36.3	+1.5
SIV	San Ignacio	17.50	38	P	P	01 26 15.0	+0.2
	comp=N,0.4nm,0.3s,baz=207,slow=11,SNR=14						
GO09	Cerro Castillo	20.89	180	P	Pn	01 26 52.8	-1.4
GO09				IAmb	IAmb	01 27 04.0	
	comp=Z,32nm,1.4s						
OTAV	Otavalo	31.03	348	P	P	01 28 27.6	-0.5
OTAV				IAmb	IAmb	01 28 34.7	
	comp=Z,2.6nm,1.2s						
SNAA	Sanae	54.97	159	P	P	01 31 38.9	-1.6
	comp=Z,0.9nm,0.8s,baz=282,slow=8.8,SNR=6.1						
TXAR	Lajitas Array	66.56	330	P	P	01 33 02.7	+2.7
	comp=Z,0.9nm,1.2s,baz=149,slow=9.0,SNR=1.7						
TORD	Torodi Ar. Bea	83.01	70	P	P	01 34 34.8	-0.8
	comp=Z,0.7nm,1.0s,baz=250,slow=4.2,SNR=3.1						
H11S2	WAKE ISLAND Hy	125.71	272	T	T	03 59 52.6	
	baz=114,slow=75,SNR=36						
H11S1	WAKE ISLAND Hy	125.72	272	T	T	03 59 55.7	
	baz=114,slow=75,SNR=46						
H11S3	WAKE ISLAND Hy	125.73	272	T	T	03 59 55.3	
	baz=114,slow=75,SNR=38						
ZALV	Zalesovo Beam	151.11	29	PKPbc	PKiKP	01 42 03.1	0.0
	comp=Z,1.8nm,0.6s,baz=300,slow=3.4,SNR=9.5						

IDC 04 01:30:10.9±73.0**, 14°.49S**×**166°.20E, h0**^{km}**, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.6**/23**, mbtmp3.7**/3**, Error ellipse: s-maj=1223.0km s-min=118.4km az=64.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	28.37	228	P	P	01 36 06.8	-0.2
	0.9nm,0.4s,baz=41,slow=9.3,SNR=4.4						
WRA	Warramunga Arr	30.88	255	P	P	01 36 29.2	-0.2
	0.3nm,0.7s,baz=87,slow=9.2,SNR=2.0						
ASAR	Alice Springs	31.80	248	P	P	01 36 37.6	+0.2
	0.4nm,0.4s,baz=74,slow=9.3,SNR=8.4						

*IDC **04** 01:41:18.1±1.9, 8°.20S×125°.35E, h0^{km}, mb3.8/1, mb1 3.7/5, mb1mx3.5/33, mbtmp3.5/5, ML3.4/4, Error ellipse: s-maj=41.0km s-min=26.2km az=87.0*

ISC 04 01:41:23.1±1.5**, 8°.4S**±0°.1×**125°.6E**±0°.1**, h35**^{km}**, n5, σ2^{s}.45**/8**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	2.58	226	Pn	Pn	01 42 01.7	-0.9
	9.3nm,0.3s,baz=226,slow=1.5,SNR=4.1						
BATI				Sn	Sn	01 42 34.1	+1.4
	5.4nm,0.3s,baz=135,slow=22,SNR=6.6						
FITZ	Fitzroy Crossi	9.64	179	Pn	Pn	01 43 40.3	+0.8
	0.1nm,0.3s,baz=5.3,slow=8.2,SNR=8.3						
FITZ				Sn	Sn	01 45 24.3	-2.3
	0.5nm,0.3s,baz=121,slow=6.6,SNR=9.3						
WRA	Warramunga Arr	14.29	144	Pn	Pn	01 44 45.3	+2.2
	0.2nm,0.3s,baz=319,slow=13,SNR=11						
WRA				Sn	Sn	01 47 17.3	-3.2
	0.0nm,0.3s,baz=323,slow=22,SNR=2.5						
ASAR	Alice Springs	17.17	153	P	P	01 45 23.9	+2.2
	0.2nm,0.3s,baz=335,slow=13,SNR=4.2						
MKAR	Makanchi Array	67.06	329	P	P	01 52 11.6	-1.3
	0.9nm,0.9s,baz=129,slow=5.7,SNR=3.8						

*GRAL **04** 01:56:47.5±0.2, 33°.57N×35°.51E, h9^{km}±1^{km}, MD3.1*

*JSO **04** 01:56:47.3±0.0, 33°N±7°×3°6E±°, h3^{km}±4^{km}, Mc3.1/7*

*GII **04** 01:56:47.1±0.0, 33°.53N×35°.54E, h1^{km}, MD1.5/4, Mm1.8/3*

ISC 04 01:56:47.3±0.9**, 33°.57N**±0°.03×**35°.55E**±0°.05**, h10**^{km}±8^{km}**, n22, σ0^{s}.75**/34**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DQRL	Deir Qamar	0.13	7	eP	Pg	01 56 50.5	-0.1
DQRL				eS	Sg	01 56 52.7	-0.1
RCY	Rachaya	0.25	108	eP	Pg	01 56 52.7	+0.2
RCY				eS	Sg	01 56 56.6	+0.7
BEYL	Beirut	0.30	351	eP	Pg	01 56 53.1	-0.3
BHL	Bhannes	0.34	14	eP	Pg	01 56 54.0	-0.2
BHL				eS	Sg	01 56 58.8	0.0
NATI	Neve Ativ	0.35	153	Pg	Pg	01 56 54.0	-0.2
NATI				Sg	Sb	01 57 00.1	-1.0
NATI	Neve Ativ	0.35	153	P	Pb	01 56 54.5	-1.1
GEM	Giv'at Ha'Em	0.37	165	Pg	Pg	01 56 54.7	0.0
GEM				Sg	Sb	01 57 00.7	-1.2
GEM	Giv'at Ha'Em	0.37	165	P	Pb	01 56 54.9	-1.1
MMA0B	Mount Meron ar	0.57	193	Pg	Pg	01 56 58.2	-0.2
MMA0B				Sg	Sb	01 57 08.0	+0.4
HWQ	Hawqa	0.78	25	eP	Pg	01 57 01.7	-0.6
BLGI	Bet Lehem HaGe	0.89	200	Pg	Pb	01 57 04.2	-0.6
BLGI				Sg	Sb	01 57 17.6	+0.9
OFRI	\`Ofer	1.06	207	Pg	Pg	01 57 07.1	-0.7
OFRI				Sg	Sn	01 57 22.6	-0.5
OFRI	\`Ofer	1.06	207	P	Pg	01 57 06.8	-1.0
MMLI	Mount Malkishu	1.14	186	Pg	Pb	01 57 08.7	-0.4
MMLI				Sg	Sn	01 57 24.7	-0.3
HMDT	Nahal Hemdat	1.32	181	Pg	Pb	01 57 11.9	-0.2
HMDT				Sg	Sn	01 57 30.1	+0.8
HMDT	Nahal Hemdat	1.32	181	P	Pg	01 57 11.8	-0.8
SLTI	Sal'it	1.40	198	Pn	Pb	01 57 13.8	+0.3
SLTI				Sn	Sn	01 57 32.6	+1.3
DSI	Dead Sea	2.00	184	Pn	Pn	01 57 22.0	+0.8
DSI	Dead Sea	2.00	184	P	Pn	01 57 22.4	+1.2
AMAZ	Amatzia	2.10	195	Pn	Pn	01 57 23.4	+0.8
AMAZ	Amatzia	2.10	195	P	Pn	01 57 23.4	+0.8
YTIR	Yattir	2.23	190	Pn	Pn	01 57 25.3	+0.8
YTIR				Sn	Sb	01 57 54.8	-0.7

*IDC **04** 02:01:30.4±0.7, 3°.45S×28°.24E, h0^{km}, mb4.0/12, mb1 4.1/17, mb1mx4.0/46, mbtmp4.1/17, ML3.1/4, MS3.6/6, Ms1 3.6/6, ms1mx3.1/37, Error ellipse: s-maj=19.9km s-min=14.9km az=97.0*

*NEIC **04** 02:01:32.0±1.8, 3°.47S±0°.06×28°.31E±0°.06, h10^{km}±1^{km}, mb4.5/18, Error ellipse: s-maj=14.7km s-min=3.8km az=223.0*

ISC 04 02:01:30.7±0.5**, 3°.61S**±0°.05×**28°.41E**±0°.07**, h10**^{km}**, n52, σ2^{s}.39**/53**, mb4.4**/20**, MS3.6**/6**, Lake Tanganyika region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBAR	Mbarara	3.79	38	Pn	Pn	02 02 30.8	+1.3
	7.5nm,0.3s,baz=209,slow=23,SNR=23						
MBAR				Lg	Lg	02 03 26.0	
	192nm,0.3s,baz=282,slow=23,SNR=9.4						
MBAR	Mbarara	3.79	38		Pn	02 02 30.4	+0.9
MBAR	Mbarara	3.79	38	eP	Pn	02 02 30.7	+1.2
MBAR				eS	Pg	02 02 41.0	-2.4
KOND	Kondoa	7.48	100	i S	Sg	02 05 29.8	-1.1
KMBO	Kilima Mbogo	9.18	75	Pn	Pn	02 03 45.3	+1.8
	0.6nm,0.3s,baz=237,slow=15,SNR=21						
KMBO				Lg	Lg	02 06 19.5	
	2.2nm,0.3s,baz=336,slow=22,SNR=9.4						
KMBO	Kilima Mbogo	9.18	75	Pn	Pn	02 03 44.9	+1.4
KIBK	Kibwezi	9.71	83		Pn	02 03 52.6	+1.9
LODK	Lodwar	9.86	45		Pn	02 03 52.4	-0.3
LSZ	Lusaka	11.59	181	Pn	Pn	02 04 20.2	+3.7
	3.1nm,0.3s,baz=357,slow=11,SNR=25						
LSZ				Sn	Sn	02 06 22.4	-3.7
	2.5nm,0.3s,baz=337,slow=8.3,SNR=6.8						
LSZ				Lg	Lg	02 07 39.2	
	1.4nm,0.3s,baz=112,slow=20,SNR=8.0						
LSZ	Lusaka	11.59	181	Pn	Pn	02 04 18.7	+2.2
MATP	Matopo	16.71	180	Pn	P	02 05 28.7	+1.1
	0.6nm,0.3s,baz=358,slow=19,SNR=19						
MATP				Sn	Sn	02 08 25.0	-6.1
	0.3nm,0.3s,baz=291,slow=23,SNR=4.5						
MATP				Lg	Lg	02 10 21.9	
	0.1nm,0.3s,baz=266,slow=23,SNR=4.3						
MATP	Matopo	16.71	180	eP	P	02 05 28.8	+1.2
MATP				eS	Sn	02 08 22.8	-8.2
MATP	Matopo	16.71	180	eP	P	02 05 28.8	+1.2
MATP				eS	Sn	02 08 22.8	-8.2
TSUM	Tsumeb	18.76	213	P	Pn	02 05 52.0	+1.4
	0.3nm,0.3s,baz=16,slow=15,SNR=1.5						
TSUM				Lg	Lg	02 11 22.2	
	0.4nm,0.3s,baz=54,slow=13,SNR=3.5						
ATD	Arta Tunnel	20.80	43	LR	LR	02 14 30.6	
	comp=Z,84nm,19.2s,baz=62,slow=38						
LBTB	Lobatse	21.45	187	P	P	02 06 20.8	+1.3
	4.2nm,0.9s,baz=27,slow=20,SNR=2.0						
LBTB				LR	LR	02 14 57.3	
	comp=Z,92nm,20.7s,baz=12,slow=37						
LBTB	Lobatse	21.45	187	P	P	02 06 21.0	+1.5
BOSA	Boshof	25.04	187	P	P	02 06 57.5	+2.1
	8.2nm,1.2s,baz=61,slow=7.4,SNR=3.7						
BOSA	Boshof	25.04	187	P	P	02 06 58.6	+3.2
BOSA				IAmb	IAmb	02 07 05.2	
	comp=Z,12nm,1.2s						
TORD	Torodi Ar. Bea	31.32	303	P	P	02 07 49.6	-1.9
	comp=Z,2.7nm,0.8s,baz=109,slow=7.6,SNR=19						
TORD				LR	LR	02 21 00.9	
	comp=Z,179nm,18.9s,baz=120,slow=38						
TORD	Torodi Ar. Bea	31.32	303	P	P	02 07 49.5	-2.1
KIC	Kosan Boka	34.55	287	ePKP1	P	02 08 20.5	+0.6
	comp=Z,20nm,1.2s						
DBIC	Dimbokro	34.74	287	P	P	02 08 22.1	+0.6
	comp=Z,3.6nm,0.5s,baz=118,slow=8.5,SNR=11						
DBIC	Dimbokro	34.74	287	P	P	02 08 22.1	+0.6
LIC	Lamto	34.78	286	ePKP1	P	02 08 21.1	-0.8
	comp=Z,48nm,1.4s						
TIC	Toumodi	34.89	287	ePKP1	P	02 08 21.1	-1.7
KOWA	Kowa	36.83	300	P	P	02 08 38.8	-0.6
	comp=Z,0.7nm,0.4s,baz=110,slow=6.5,SNR=4.1						
KOWA	Kowa	36.83	300	P	P	02 08 38.3	-1.2
KOWA				IAmb	IAmb	02 08 46.7	
	comp=Z,7.4nm,1.4s						
BRTR	Keskin Array B	43.39	6	P	P	02 09 34.1	+0.4
	comp=Z,1.5nm,0.7s,baz=180,slow=9.9,SNR=4.4						
ESDC	Sonseca Array	52.35	329	P	P	02 10 42.4	-0.7
	comp=Z,0.5nm,0.8s,baz=151,slow=8.3,SNR=4.5						
ESDC	Sonseca Array	52.35	329	P	P	02 10 43.0	-0.1
GERES	GERESS Array B	53.79	348	P	P	02 10 52.9	-0.8
	comp=Z,0.4nm,0.6s,baz=179,slow=14,SNR=2.7						
GRFO	Grafenberg	55.14	346	P	P	02 11 02.7	-0.6
GRFO				IAmb	IAmb	02 11 03.4	
	comp=Z,10nm,1.3s						
NIL	Nilore	56.24	45	P	P	02 11 13.1	+1.6
NIL				IAmb	IAmb	02 11 15.0	
	comp=Z,5.9nm,1.0s						
CHGR	Chuyangaron	56.43	38	P	P	02 11 13.7	+0.8
GAR	Garm	57.35	38	P	P	02 11 19.6	+0.1
GAR				IAmb	IAmb	02 11 25.1	
	comp=Z,6.7nm,1.0s						
ABKAR	Akbulak array	59.34	23	P	P	02 11 31.3	-1.6
ABKAR				IAmb	IAmb	02 11 32.1	
	comp=Z,4.3nm,1.5s						
KK31	Karatay Array	60.02	35	P	P	02 11 38.5	+0.6
KK31				IAmb	IAmb	02 11 40.2	
	comp=Z,3.3nm,0.9s						
KKAR	Karatay Array	60.02	35	P	P	02 11 38.9	+1.0
NOA	NORSAR Array B	65.84	351	P	P	02 12 15.8	-0.5
	comp=Z,1.1nm,0.9s,baz=163,slow=6.1,SNR=4.3						
MAW	Mawson	68.09	166	P	P	02 12 33.3	+3.0
	comp=Z,1.6nm,0.9s,baz=300,slow=6.0,SNR=2.7						
MAKZ	Makanchi	68.80	36	P	P	02 12 35.9	+0.6
MK31	Makanchi Array	68.98	36	P	P	02 12 36.6	+0.2
MK31				IAmb	IAmb	02 12 38.5	
	comp=Z,2.2nm,0.8s						
MKAR	Makanchi Array	68.98	36	P	P	02 12 37.7	+1.3
	comp=Z,2.6nm,0.7s,baz=240,slow=5.4,SNR=13						
MKAR	Makanchi Array	68.98	36	P	P	02 12 36.0	-0.4
KURK	Kurchatov	69.04	32	P	P	02 12 37.6	+1.0
PSI	Prapat	70.77	86	LR	LR	02 43 06.0	
	comp=Z,33nm,18.1s,baz=329,slow=35						
ZAA0	Zalesovo Array	73.99	31	P	P	02 13 05.7	-0.7
ZALV	Zalesovo Beam	73.99	31	P	P	02 13 07.2	+0.8
	comp=Z,1.5nm,0.7s,baz=238,slow=5.1,SNR=7.3						
ZALV	Zalesovo Beam	73.99	31	P	P	02 13 06.3	-0.1
SONM	Songino Array	84.63	41	LR	LR	02 57 27.6	
	comp=Z,19nm,20.0s,baz=15,slow=40						
VNDA	Vanda	95.06	171	LR	LR	02 57 24.0	
	comp=Z,46nm,18.1s,baz=164,slow=35						

*IDC **04** 02:07:54.9±55.0, 41°.95N×146°.58E, h0^{km}, mb3.8/3, mb1 3.8/3, mb1mx3.4/40, mbtmp3.8/3, Error ellipse: s-maj=1254.0km s-min=79.6km az=158.0*

*MOS **04** 02:08:13.5±0.2, 42°.95N×145°.59E, h104^{km}, mb4.5/1, Error ellipse: s-maj=47.3km s-min=17.0km az=94.2*

*SKHL **04** 02:08:17.8±0.3, 43°.30N×145°.50E, h105^{km}±3^{km}, mb4.7/4, msha5.7/4*

*JMA **04** 02:08:17.2±0.1, 43°.23N×145°.60E, h97^{km}±1^{km}, M3.3*

ISC 04 02:08:17.1±1.1**, 43°.22N**±0°.06×**145°.55E**±0°.06**, h96**^{km}±6^{km}**, n24, σ0^{s}.68**/45**, mb3.6**/3**, 2C-2D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NMR	Nemuro--Hokkai	0.20	40	⇓iPN	Pn	02 08 30.9	+0.1
NMR				i S	Sn	02 08 40.9	-0.1
NMR	Nemuro--Hokkai	0.20	40	i P	Pn	02 08 30.9	+0.1
NMR				i S	Sn	02 08 40.9	-0.1
NEM2	Nemuro 2	0.20	43	P	Pn	02 08 30.9	+0.1
NEM2				eS	Sn	02 08 40.9	-0.1
JKHN	Kushirohamanak	0.32	245	P	Pn	02 08 31.9	+0.6
JKHN				eS	Sn	02 08 42.7	+0.9
GLVR	Golovnino	0.52	357	⇑iPN	Pn	02 08 33.0	+0.4
GLVR				i S	Sn	02 08 45.3	+1.1
GLVR				pmax	pmax		
	comp=Z,379nm,0.1s						
GLVR				smax	smax		
	comp=N,5µm,0.2s						
GLVR				smax	smax		
	comp=E,2µm,0.2s						
GLVR	Golovnino	0.52	357	i P	Pn	02 08 33.0	+0.4
GLVR				AMB	AMB	02 08 33.0	
	comp=E,380nm,0.2s						
GLVR				i S	Sn	02 08 44.7	+0.5
GLVR				A	A	02 08 46.0	
	comp=E,5µm,0.2s						
GLVR				A	A	02 08 46.0	
	comp=E,2µm,0.2s						
AKK	Akkeshi	0.56	249	eP	Pn	02 08 33.3	+0.4
AKK				eS	Sn	02 08 45.1	+0.4
JAK	Akkeshi	0.67	251	P	Pn	02 08 34.2	+0.4
JAK				eS	Sn	02 08 47.2	+0.9
JNSB	Nemuroshibetsu	0.69	325	P	Pn	02 08 34.2	+0.2
JNSB				eS	Sn	02 08 47.1	+0.4
JNK	Nakash	0.71	301	P	Pn	02 08 34.2	0.0
JNK				eS	Sn	02 08 46.9	-0.2
JRA	Rausu	0.79	337	P	Pn	02 08 35.3	+0.4
JRA				eS	Sn	02 08 49.0	+0.7
GRPR	Tuman	0.79	11	⇓iPN	Pn	02 08 34.8	-0.2
GRPR				i S	Sn	02 08 47.9	-0.5
GRPR				pmax	pmax		
	comp=Z,129nm,0.2s						
GRPR				smax	smax		
	comp=N,2µm,0.3s						
GRPR				smax	smax		
	comp=E,2µm,0.3s						
GRPR	Tuman	0.79	11	i P	Pn	02 08 34.9	-0.1
GRPR				AMB	AMB	02 08 35.0	
	comp=E,130nm,0.2s						
GRPR				i S	Sn	02 08 47.9	-0.5
GRPR				A	A	02 08 49.0	
	comp=E,2µm,0.3s						
GRPR				A	A	02 08 49.0	
	comp=E,2µm,0.3s						
YUK	Yuzh-Kuril'sk	0.85	15	c iPN	Pn	02 08 36.0	+0.4
YUK				i S	Sn	02 08 49.6	+0.2
YUK				pmax	pmax		
	comp=Z,289nm,0.2s						
YUK				pmax	pmax		
	comp=N,41nm,0.1s						
YUK				pmax	pmax		
	comp=E,41nm,0.1s						
YUK				smax	smax		
	comp=N,1µm,0.5s						
YUK				smax	smax		
	comp=E,2µm,0.5s						
YUK	Yuzh-Kuril'sk	0.85	15	i P	Pn	02 08 36.0	+0.4
YUK				AMB	AMB	02 08 36.0	
	comp=E,290nm,0.2s						
YUK				i S	Sn	02 08 49.6	+0.2
YUK				A	A	02 08 50.0	
	comp=E,1µm,0.3s						
YUK				A	A	02 08 50.0	
	comp=E,2µm,0.3s						
RUSJ	Misakicho	0.91	346	ePN	Pn	02 08 36.8	+0.5
RUSJ				S	Sn	02 08 51.7	+1.0
JOB	Onbets	1.30	257	P	Pn	02 08 41.4	+0.8
JOB				eS	Sn	02 08 59.5	+1.1
JAR	Ashorobuto	1.31	274	P	Pn	02 08 41.4	+0.6
JAR				eS	Sn	02 08 59.4	+0.8
JTKR	Abashiri--Toko	1.41	303	P	Pn	02 08 42.7	+0.7
JTKR				eS	Sn	02 09 01.4	+0.5
JCH	Churui	1.72	250	P	Pn	02 08 46.3	+0.4
JCH				eS	Sn	02 09 08.0	+0.2
KUR	Kuril'sk	2.61	39	eP	Pn	02 08 59.7	+2.2
KUR				AMB	AMB	02 09 08.3	
	comp=E,50nm,0.4s						
KUR				eS	Sn	02 09 29.6	+1.0
KUR				A	A	02 09 32.1	
	comp=E,100nm,0.3s						
KUR				A	A	02 09 32.1	
	comp=E,90nm,0.3s						
SONM	Songino Array	27.61	293	P	P	02 13 54.3	-1.1
	comp=E,1.3nm,0.7s,baz=81,slow=9.2,SNR=6.5						
MKAR	Makanchi Array	43.80	298	P	P	02 16 12.9	-0.3
	comp=E,0.3nm,0.5s,baz=83,slow=10,SNR=1.7						
FINES	FINESS Array B	64.81	332	P	P	02 18 44.4	-0.8
	comp=E,3.0nm,1.1s,baz=61,slow=4.8,SNR=7.5						

*IDC **04** 02:24:55.7±0.6, 58°.26S×29°.85W, h0^{km}, mb4.3/8, mb1 4.3/10, mb1mx4.2/21, mbtmp4.3/10, ML3.2/1, MS3.9/9, Ms1 3.9/9, ms1mx3.7/17, Error ellipse: s-maj=25.5km s-min=17.7km az=63.0*

*NEIC **04** 02:24:57.9±1.6, 58°.3S±0°.1×29°.9W±0°.2, h10^{km}±1^{km}, mb4.9/43, Error ellipse: s-maj=19.1km s-min=15.2km az=227.0*

ISC 04 02:24:57.5±0.4, **58°.31S**±0°.07×**29°.82W**±0°.09, **h10^{km}, n131, σ0^{s}.91**/126, **mb4.8**/25, **MS3.9**/7, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	5.48	315	Pn	Pn	02 26 21.0	+1.9
VNA1	Neumayer--Stat	15.34	152	P	Pn	02 28 34.6	+0.9
VNA3	Neumayer Olymp	15.43	155	P	Pn	02 28 36.4	+1.5
VNA2	Neumayer--Watz	15.73	152	P	Pn	02 28 39.7	+0.8
	baz=308,slow=14						
SNAA	Sanae	17.35	151	P	P	02 29 01.1	+0.3
SNAA	Sanae	17.35	151	P	Pn	02 28 59.8	+0.4
	0.1nm,0.3s,baz=304,slow=13,SNR=8.4						
SNAA				LR	LR	02 34 07.7	
	comp=Z,409nm,21.3s,baz=321,slow=32						
SNAA	Sanae	17.35	151		Pn	02 29 00.3	+0.9
PMSA	Palmer Station	17.36	234	P	Pn	02 28 59.4	-0.1
	baz=76,slow=14,SNR=1.0						
PMSA				LR	LR	02 34 44.0	
	comp=Z,439nm,18.5s,baz=85,slow=34						
PMSA	Palmer Station	17.36	234	Pn	Pn	02 28 59.1	-0.5
PMSA	Palmer Station	17.36	234	eP	P	02 29 01.2	+0.2
TRQA	Tornquist	29.05	300	eP	P	02 30 56.6	-1.2
PLCA	Paso Flores	31.12	286	P	P	02 31 15.3	-0.8
	3.0nm,0.9s,baz=136,slow=9.4,SNR=4.0						
PLCA				LR	LR	02 44 03.6	
	comp=Z,223nm,18.6s,baz=146,slow=37						
PLCA	Paso Flores	31.12	286	P	P	02 31 15.8	-0.3
PLCA				IAmb	IAmb	02 31 19.0	
	comp=Z,15nm,1.4s						
PLCA	Paso Flores	31.12	286	eP	P	02 31 15.9	-0.1
QSPA	South Pole Qui	31.93	180	P	P	02 31 24.1	+1.0
CPSB	Cacapava Do Su	32.27	320	eP	P	02 31 27.1	+1.0
TER01	Tubaro-SC	32.66	327	eP	P	02 31 28.2	-1.4
ITQB	Itaqui	34.07	316	eP	P	02 31 40.4	-1.4
BO02	Sierra Bellavi	35.85	293	P	P	02 31 57.7	+0.4
BO02				IAmb	IAmb	02 32 17.1	
	comp=Z,21nm,1.3s						
GO05	Huala	36.24	291	P	P	02 32 00.7	+0.2
GO05				IAmb	IAmb	02 32 02.6	
	comp=Z,50nm,1.5s						
PARB	Paraibuna	36.73	335	eP	P	02 32 04.8	-0.1
MT09	Talagante	36.78	294	P	P	02 32 05.6	+0.3
MT09				IAmb	IAmb	02 32 06.4	
	comp=Z,15nm,1.0s						
MT01	Popeta	36.83	293	P	P	02 32 05.2	-0.4
MT01				IAmb	IAmb	02 32 07.4	
	comp=Z,29nm,1.3s						
MAN01	Angra dos Reis	36.84	338	eP	P	02 32 06.2	+0.4
SPB	Sao Paulo	36.91	332	eP	P	02 32 06.8	+0.5
MT05	Renca	36.97	294	P	P	02 32 06.6	-0.2
PTGB	Pitanga	37.11	325	eP	P	02 32 07.3	-0.8
VA05	Santo Domingo	37.17	293	P	P	02 32 08.6	+0.2
MT02	Curacav	37.27	294	P	P	02 32 09.4	+0.1
MT02				IAmb	IAmb	02 32 10.4	
	comp=Z,38nm,1.1s						
CPUP	Villa Florida	37.36	317	P	P	02 32 09.2	-0.8
	comp=Z,2.1nm,0.9s,baz=186,slow=8.1,SNR=2.8						
CPUP	Villa Florida	37.36	317	P	P	02 32 08.3	-1.7
CPUP	Villa Florida	37.36	317	eP	P	02 32 09.1	-0.9
VA03	San Esteban	37.39	295	P	P	02 32 09.1	-1.3
VA03				IAmb	IAmb	02 32 12.4	
	comp=Z,29nm,1.1s						
ZON	Zonda	37.52	298	P	P	02 32 10.4	-1.1
ZON				IAmb	IAmb	02 32 30.8	
	comp=Z,27nm,1.4s						
FRTB	Fartura	37.69	329	eP	P	02 32 12.1	-0.9
CO03	El Pedregal	39.05	297	P	P	02 32 24.2	-0.2
CO03				IAmb	IAmb	02 32 27.1	
	comp=Z,21nm,1.2s						
TRCB	Terra Rica	39.08	325	eP	P	02 32 26.2	+1.5
MAW	Mawson	39.20	143	P	P	02 32 25.9	+0.8
	comp=Z,1.8nm,0.7s,baz=226,slow=13,SNR=5.3						
MAW				LR	LR	02 46 57.7	
	comp=Z,181nm,19.5s,baz=243,slow=34						
MAW	Mawson	39.20	143	P	P	02 32 25.7	+0.6
BSFB	Barra de Sao F	40.25	344	eP	P	02 32 36.7	+2.4
SJMB	Sao Joao De Ma	40.43	343	eP	P	02 32 37.5	+1.6
LCO	Las Campanas	40.59	298	P	P	02 32 38.4	+1.0
LCO				IAmb	IAmb	02 32 39.6	
	comp=Z,44nm,1.4s						
NAN01	Guarapari, ES	41.12	345	eP	P	02 32 42.8	+1.3
DIAM	Diamantina, MG	41.24	340	eP	P	02 32 44.1	+1.4
AC04	Llanos de Chal	41.45	298	P	P	02 32 44.2	0.0
GO03	Copiap	41.58	300	P	P	02 32 45.5	+0.1
GO03				IAmb	IAmb	02 32 47.1	
	comp=Z,30nm,1.1s						
AC02	Maricunga	41.73	302	P	P	02 32 47.9	+0.9
AQDB	Aquidauana	42.21	322	eP	P	02 32 48.8	-1.7
MC01	Montes Claros	42.84	340	eP	P	02 32 56.9	+1.2
VNDA	Vanda	44.23	184	P	P	02 33 06.9	+0.7
	comp=Z,4.5nm,0.9s,baz=182,slow=7.2,SNR=20						
VNDA	Vanda	44.23	184	P	P	02 33 06.8	+0.7
JANB	Januaria	44.52	340	eP	P	02 33 10.4	+1.2
GDU01	Guandu, BA	45.11	347	eP	P	02 33 15.4	+1.6
LVC	Limon Verde	45.31	305	eP	P	02 33 15.0	-0.9
ARAG	Araguaiana, MT	45.58	330	eP	P	02 33 17.5	-0.1
SALV	Santo Antonio	46.51	325	eP	P	02 33 25.4	+0.6
PB01	IPOC Station P	46.94	305	P	P	02 33 28.4	+0.1
SDBA	SAO DESIDERIO	47.21	340	eP	P	02 33 30.6	+0.2
NBLA	Lagarto - SE	47.61	349	eP	P	02 33 33.7	+0.2
BOSA	Boshof	47.91	76	LR	LR	02 49 15.5	
	comp=Z,221nm,21.8s,baz=191,slow=30						
NBPN	Ponto Novo - B	48.02	346	eP	P	02 33 37.8	+1.1
PTLB	Pontes e Lacer	48.03	321	eP	P	02 33 36.6	-0.1
SNDB	Serra Nova Dou	49.02	332	eP	P	02 33 44.8	+0.4
LPAZ	La Paz	50.62	310	P	P	02 33 57.0	-0.3
	comp=Z,3.9nm,0.8s,baz=148,slow=7.6,SNR=12						
LPAZ				LR	LR	02 57 34.8	
	comp=Z,85nm,19.6s,baz=156,slow=39						
LPAZ	La Paz	50.62	310	P	P	02 33 57.2	0.0
LPAZ	La Paz	50.62	310	eP	P	02 33 58.0	+0.7
VILB	Vilhena	50.72	320	eP	P	02 33 57.2	-0.1
PDRB	Porto dos Gac	50.87	325	eP	P	02 33 57.6	-0.9
LBTB	Lobatse	51.02	74	P	P	02 33 59.1	-0.5
LBTB				IAmb	IAmb	02 34 06.0	
	comp=Z,20nm,1.3s						
SMTB	Santa Maria do	51.19	337	eP	P	02 34 02.0	+1.2
CLDB	Colider	51.29	327	eP	P	02 34 00.7	-0.9
H10N1	ASCENSION HYDR	51.72	20	T	T	03 30 04.3	
	baz=199						
H10N3	ASCENSION HYDR	51.72	19	T	T	03 30 04.6	
	baz=199,SNR=3.9						
H10N2	ASCENSION HYDR	51.73	19	T	T	03 30 04.0	
	baz=199						
NBPB	Pedra_Branca-C	53.18	348	eP	P	02 34 17.2	+1.6
PRPB	Parauapebas	54.27	335	eP	P	02 34 24.3	+0.6
NBPS	Pedro II - PI	54.54	346	eP	P	02 34 26.7	+1.0
NPGB	Novo Progresso	54.81	328	eP	P	02 34 27.2	-0.4
NBMO	Morrinhos-CE	55.43	348	eP	P	02 34 34.5	+2.4
SAML	Samuel	55.47	319	P	P	02 34 31.6	-0.7
SAML				IAmb	IAmb	02 34 32.6	
	comp=Z,8.2nm,1.1s						
SAML	Samuel	55.47	319	eP	P	02 34 32.0	-0.3
ETMB	Extrema	55.76	315	eP	P	02 34 34.1	-0.3
TMAB	Tom-Au,PA,Br	57.61	338	eP	P	02 34 49.3	+1.8
CZSB	Cruzeiro do Su	60.21	309	eP	P	02 35 04.7	-1.0
MCPB	Macapa, AP	60.40	334	eP	P	02 35 07.8	+0.9
BOAV	Boa Vista	65.28	326	eP	P	02 35 38.1	-1.3
DBIC	Dimbokro	67.83	27	P	P	02 35 55.6	0.0
	comp=Z,6.4nm,1.1s,baz=164,slow=5.9,SNR=3.0						
DBIC				LR	LR	02 57 35.1	
	comp=Z,57nm,21.4s,baz=184,slow=29						
DBIC	Dimbokro	67.83	27	P	P	02 35 56.4	+0.8
DBIC				IAmb	IAmb	02 35 57.1	
	comp=Z,16nm,1.2s						
OTAV	Otavalo	69.79	307	P	P	02 36 08.7	+0.2
OTAV	Otavalo	69.79	307	eP	P	02 36 09.3	+0.8
ROSC	El Rosal	72.30	313	LR	LR	03 08 26.8	
	comp=Z,121nm,21.4s,baz=159,slow=36						
MBAR	Mbarara	74.44	65	P	P	02 36 37.0	+1.1
MBAR				IAmb	IAmb	02 36 45.9	
	comp=Z,13nm,1.3s						
SDV	Santo Domingo	74.67	318	P	P	02 36 36.7	-0.5
SDV	Santo Domingo	74.67	318	eP	P	02 36 37.8	+0.6
ZARC	Zaragoza, Cauc	74.94	313	P	P	02 36 36.2	-2.4
KOWA	Kowa	75.58	26	P	P	02 36 41.8	-0.4
KOWA				IAmb	IAmb	02 36 50.0	
	comp=Z,19nm,1.4s						
TORD	Torodi Ar. Bea	75.73	32	P	P	02 36 43.2	+0.1
	comp=Z,4.6nm,0.7s,baz=200,slow=6.4,SNR=28						
TORD	Torodi Ar. Bea	75.73	32	P	P	02 36 42.7	-0.4
TORD				IAmb	IAmb	02 36 50.6	
	comp=Z,9.9nm,1.1s						
MOTC	Monteria, Cord	76.42	313	P	P	02 36 46.3	-0.8
MOTC				IAmb	IAmb	02 37 01.1	
	comp=Z,19nm,1.5s						
SJCC	San Jacinto, C	77.26	314	P	P	02 36 52.1	+0.2
SRBA	San Rafael, Bu	79.96	306	P	P	02 37 06.8	0.0
SRBA				IAmb	IAmb	02 37 09.2	
	comp=Z,19nm,1.3s						
LODK	Lodwar	80.17	67	P	P	02 37 08.2	+0.2
STKA	Stephens Creek	89.87	173	P	P	02 37 56.0	-0.5
	comp=Z,1.6nm,0.8s,baz=142,slow=16,SNR=2.1						
STKA				LR	LR	03 15 50.1	
	comp=Z,103nm,20.8s,baz=204,slow=34						
ASAR	Alice Springs	97.22	165	P	P	02 38 29.0	-1.4
	comp=Z,14nm,0.4s,baz=183,slow=3.8,SNR=8.9						
MSO	Missoula	125.47	303	PKPdf	PKPdf	02 43 57.8	-0.1
CMAR	Chiang Mai Arr	125.52	115	PKP	PKPdf	02 43 58.6	0.0
	comp=Z,0.7nm,0.3s,baz=232,slow=4.2,SNR=4.7						
CMAR	Chiang Mai Arr	125.52	115	PKPdf	PKPdf	02 43 57.5	-1.2
G08A	Pilot Rock	126.58	298	PKPdf	PKPdf	02 44 00.5	+0.5
FINES	FINESS Array B	127.06	30	PKP	PKPdf	02 43 58.6	-1.6
	comp=Z,2.6nm,0.9s,baz=323,slow=2.1,SNR=3.8						
GAR	Garm	127.21	74	PKPdf	PKPdf	02 44 00.9	-0.5
BTK	Batken	128.26	74	PKPdf	PKPdf	02 44 02.8	-0.6
ABKAR	Akbulak array	129.81	59	PKPdf	PKPdf	02 44 04.8	-1.1
KSH	Kashi	130.50	78	PKP	PKPdf	02 44 07.3	-0.4
YKA	Yellowknife Ar	136.88	317	PKPdf	PKPdf	02 44 18.0	-0.7
MKAR	Makanchi Array	138.91	76	PKPdf	PKPdf	02 44 23.2	+0.2
RES	Resolute Bay	139.44	338	PKPdf	PKPdf	02 44 23.9	+0.8
ZALV	Zalesovo Beam	144.60	68	PKP	PKPab	02 44 30.7	-0.9
	comp=Z,2.5nm,0.6s,baz=240,slow=3.7,SNR=14						
ZALV	Zalesovo Beam	144.60	68	PKPdf	PKPab	02 44 30.5	-1.0
HYT	Haines Junctio	144.98	306	PKPdf	PKPbc	02 44 33.5	+0.6
A36M	Sachs Harbour	145.36	327	PKPbc	PKPbc	02 44 33.3	-0.4
INK	Inuvik	146.61	319		PKPbc	02 44 37.1	-0.4
EPYK	Eagle Plains	147.05	315		PKPdf	02 44 37.9	+1.1
BCAR	Beaver Creek A	147.78	308	PKPbc	PKPbc	02 44 41.3	+0.2
L26K	Log Cabin Wild	148.43	307	PKPbc	PKPbc	02 44 42.2	-0.6
DOT	Dot Lake	148.96	308	PKPbc	PKPbc	02 44 43.9	-0.2
RIDG	Independent Ri	149.31	308	PKPbc	PKPbc	02 44 45.7	+0.7
ILAR	Eielson Array	150.49	309	PKPbc	PKPbc	02 44 47.8	0.0
	comp=Z,23nm,1.0s,baz=143,slow=1.6,SNR=115						
ILAR	Eielson Array	150.49	309		PKPbc	02 44 47.5	-0.2
SONM	Songino Array	152.18	93	PKPbc	PKPbc	02 44 51.6	-0.8
	comp=Z,2.3nm,0.8s,baz=238,slow=2.2,SNR=12						
SONM	Songino Array	152.18	93	PKPdf	PKPdf	02 44 45.6	-0.1
SONM				PKPbc	PKPbc	02 44 51.0	-1.3
KSRS	Korea Array	154.57	135	PKPab	PKPab	02 45 11.9	-0.4
	comp=Z,0.8nm,0.5s,baz=186,slow=1.3,SNR=5.7						

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*IDC **04** 02:28:36.0±0.7, 58°.28S×29°.91W, h0^{km}, mb4.2/7, mb1 4.3/9, mb1mx4.1/20, mbtmp4.1/9, ML3.2/2, Error ellipse: s-maj=29.0km s-min=19.3km az=60.0*

*NEIC **04** 02:28:37.8±1.5, 58°.3S±0°.1×29°.6W±0°.2, h10^{km}±1^{km}, mb4.7/19, Error ellipse: s-maj=23.5km s-min=19.1km az=220.0*

ISC 04 02:28:37.3±0.6, **58°.3S**±0°.1×**29°.7W**±0°.1, **h10^{km}, n40, σ0^{s}.94**/37, **mb4.5**/15, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNAA	Sanae	17.35	151	P	P	02 32 41.6	+1.0
	0.1nm,0.3s,baz=313,slow=12,SNR=5.5						
SNAA	Sanae	17.35	151		P	02 32 40.8	+0.2
PMSA	Palmer Station	17.46	234	P	Pn	02 32 40.9	+0.3
	0.1nm,0.3s,baz=74,slow=11,SNR=2.3						
PMSA	Palmer Station	17.46	234	P	Pn	02 32 41.1	+0.5
TRQA	Tornquist	29.11	300		P	02 34 39.4	+1.4
TRQA				IAmb	IAmb	02 34 44.4	
	comp=Z,12nm,1.4s						
PLCA	Paso Flores	31.19	286	P	P	02 34 56.1	-0.4
	comp=Z,2.7nm,0.9s,baz=51,slow=4.3,SNR=2.8						
QSPA	South Pole Qui	31.98	180	P	P	02 35 03.0	-0.4
QSPA				IAmb	IAmb	02 35 05.8	
	comp=Z,28nm,1.4s						
LC01	Cunco	33.24	287	P	P	02 35 15.5	+1.1
LC01				IAmb	IAmb	02 35 42.0	
	comp=Z,8.0nm,1.1s						
CPUP	Villa Florida	37.38	317	P	P	02 35 47.8	-2.2
	comp=Z,1.2nm,0.6s,baz=34,slow=2.6,SNR=3.0						
VA03	San Esteban	37.45	295	P	P	02 35 50.1	-0.6
ZON	Zonda	37.57	298	P	P	02 35 51.9	+0.2
ZON				IAmb	IAmb	02 36 10.4	
	comp=Z,12nm,0.5s						
MAW	Mawson	39.18	143	P	P	02 36 05.5	+0.7
	comp=Z,1.8nm,0.6s,baz=276,slow=9.5,SNR=4.1						
MAW	Mawson	39.18	143	P	P	02 36 05.5	+0.7
AC04	Llanos de Chal	41.50	298	P	P	02 36 25.4	+1.0
GO03	Copiap	41.63	300	P	P	02 36 25.3	-0.3
GO03				IAmb	IAmb	02 36 28.0	
	comp=Z,21nm,1.1s						
AC02	Maricunga	41.77	302	P	P	02 36 28.3	+1.0
AC02				IAmb	IAmb	02 36 30.8	
	comp=Z,34nm,1.1s						
VNDA	Vanda	44.28	184	P	P	02 36 46.5	+0.1
	comp=Z,3.4nm,0.7s,baz=183,slow=5.3,SNR=25						
VNDA	Vanda	44.28	184	P	P	02 36 46.5	+0.1
PB01	IPOC Station P	46.98	305	P	P	02 37 08.9	+0.4
PB08	IPOC Station P	47.64	306	P	P	02 37 14.6	+0.6
PB08				IAmb	IAmb	02 37 16.6	
	comp=Z,14nm,1.2s						
PSGCX	Pisagua	48.53	305	P	P	02 37 20.9	+0.4
LPAZ	La Paz	50.65	309	P	P	02 37 36.8	-0.5
	comp=Z,2.3nm,0.8s,baz=150,slow=4.4,SNR=6.3						
LPAZ	La Paz	50.65	309	P	P	02 37 38.0	+0.7
LPAZ				IAmb	IAmb	02 37 49.7	
	comp=Z,5.8nm,1.1s						
H10N1	ASCENSION HYDR	51.64	19	T	T	03 33 53.3	
	baz=195						
H10N3	ASCENSION HYDR	51.65	19	T	T	03 33 50.1	
	baz=195,SNR=5.0						
H10N2	ASCENSION HYDR	51.66	19	T	T	03 33 50.3	
	baz=195						
OTAV	Otavalo	69.83	307	P	P	02 39 49.6	+1.0
OTAV				IAmb	IAmb	02 39 52.1	
	comp=Z,17nm,1.3s						
TORD	Torodi Ar. Bea	75.65	32	P	P	02 40 24.1	+1.7
	comp=Z,3.3nm,0.8s,baz=200,slow=6.2,SNR=15						
TORD	Torodi Ar. Bea	75.65	32	P	P	02 40 22.7	+0.3
TORD				IAmb	IAmb	02 40 25.3	
	comp=Z,5.0nm,1.0s						
ASAR	Alice Springs	97.24	165	P	P	02 42 08.8	-1.5
	comp=Z,0.9nm,0.9s,baz=184,slow=3.8,SNR=8.5						
ASAR	Alice Springs	97.24	165	P	P	02 42 08.0	-2.3
PDAR	Pinedale Array	120.40	303	PKP	PKPdf	02 47 27.5	-0.7
	comp=Z,0.3nm,0.7s,baz=107,slow=5.8,SNR=2.4						
PDAR	Pinedale Array	120.40	303		PKPdf	02 47 27.3	-0.9
NVAR	Mina Array Bea	121.04	294	PKP	PKiKP	02 47 30.4	+0.8
	comp=Z,0.2nm,0.5s,baz=101,slow=4.7,SNR=2.2						
ZALV	Zalesovo Beam	144.50	68	PKP	PKPab	02 48 10.9	-0.1
	comp=Z,2.2nm,0.6s,baz=253,slow=4.0,SNR=9.4						
ZALV	Zalesovo Beam	144.50	68	PKPdf	PKPab	02 48 10.1	-1.0
ILAR	Eielson Array	150.53	309	PKPbc	PKPbc	02 48 28.0	+0.4
	comp=Z,8.3nm,0.8s,baz=142,slow=1.2,SNR=50						
ILAR	Eielson Array	150.53	309		PKPbc	02 48 27.9	+0.3
SONM	Songino Array	152.09	93	PKPbc	PKPbc	02 48 32.0	0.0
	comp=Z,1.4nm,0.6s,baz=212,slow=3.4,SNR=7.5						
SONM	Songino Array	152.09	93	PKPbc	PKPbc	02 48 31.4	-0.6

NNC 04 02:36:10.4±8.0, 36°.93N×70°.67E, h0^{km}, mb4.0, mpv3.6, 2C-2D, Error ellipse: s-maj=62.2km s-min=55.3km az=162.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.17	359	⇑P	Pn	02 37 42.1	-0.7
	0.6nm,0.3s,baz=173,slow=12,SNR=30						
KK31				⇓S	Sn	02 38 53.9	-0.2
	0.9nm,0.3s,baz=174,slow=20,SNR=5.8						
AAK	Ala-Archa	6.42	26	P	Pn	02 37 46.5	+0.2
	1.6nm,0.3s						
AAK				S	Sn	02 39 02.8	+2.4
	7.0nm,0.9s						
TKM2	Tokmak 2	7.08	31	⇑P	Pn	02 37 55.2	-0.2
	5.6nm,0.5s						
TKM2				⇓S	Sn	02 39 19.1	+2.3
	1.6nm,0.6s						

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*DJA **04** 02:42:39.5±0.4, 8°S±4°×11°9E±°, h10^{km}, M3.4/7, MLv3.4/7*

*IDC **04** 02:42:45.7±2.0, 7°.65S×120°.47E, h0^{km}, mb3.2/2, mb1 3.6/5, mb1mx3.4/46, mbtmp3.4/5, ML3.1/3, Error ellipse: s-maj=122.7km s-min=20.0km az=63.0*

ISC 04 02:42:38.4±0.9, **7°.88S**±0°.04×**119°.08E**±0°.06, **h10^{km}, n12, σ2^{s}.15**/14, **Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	1.60	234	P	Pb	02 43 07.5	-0.6
WBSI	Waikabubak, Su	1.78	170	P	Pb	02 43 11.2	0.0
BSSI	Bau Bau, Buton	2.22	39	P	Pn	02 43 15.8	+0.5
BSSI				S	Sn	02 43 41.1	-1.7
TWSI	Taliwang, Sumb	2.34	248	P	Pn	02 43 17.8	+0.9
EDFI	Ende, Flores	2.73	109	P	Pn	02 43 24.2	+1.8
BKSI	Bulukumba	2.74	22	P	Pn	02 43 23.4	+0.9
KAPI	Kappang	2.92	13	Pn	Pb	02 43 30.3	-0.3
	4.0nm,0.3s,baz=202,slow=16,SNR=3.5						
KAPI				Sn	Sb	02 44 06.7	+0.3
	5.7nm,0.3s,baz=178,slow=22,SNR=9.2						
MMRI	Maumere	3.21	104	P	Pn	02 43 30.4	+1.4
FITZ	Fitzroy Crossi	12.00	148	Pn	Pn	02 45 32.0	+2.3
	0.0nm,0.3s,baz=342,slow=16,SNR=2.3						
FITZ				Sn	Sn	02 47 38.0	-5.7
	0.1nm,0.3s,baz=312,slow=22,SNR=2.0						
WRA	Warramunga Arr	19.04	131	P	P	02 46 59.9	-0.9
	0.1nm,0.3s,baz=312,slow=12,SNR=6.0						
ASAR	Alice Springs	21.18	140	P	P	02 47 25.2	+1.1
	0.6nm,0.7s,baz=319,slow=11,SNR=8.7						
MKAR	Makanchi Array	63.50	333	P	P	02 53 20.5	+12
	0.3nm,0.6s,baz=145,slow=5.3,SNR=2.0						

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*NEIC **04** 02:48:06.5±0.9, 36°.30N±0°.01×97°.19W±0°.02, h5^{km}±7^{km}, Error ellipse: s-maj=2.5km s-min=1.6km az=74.0*

*ANF **04** 02:48:06.9±0.4, 36°.28N×97°.16W, h10^{km}, ML3.2/10, Error ellipse: s-maj=4.5km s-min=3.8km az=134.0*

*TUL **04** 02:48:06.4±1.6, 36°.298N±0°.006×97°.18W±0°.02, h10^{km}±7^{km}, ML3.0, mb_Lg2.7/50(NEIC), Error ellipse: s-maj=2.7km s-min=0.5km az=74.0*

ISC 04 02:48:06.1±1.3, **36°.30N**±0°.03×**97°.19W**±0°.03, **h1^{km}**±13^{km}, **n58, σ0^{s}.65**/56, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK001	Jones High Sch	0.74	186	Pg	Pg	02 48 20.7	+0.4
OK001				Sg	Sg	02 48 30.7	+0.8
T35A	Sooner Cattle	0.82	41	Pg	Pg	02 48 22.0	+0.1
T35A				Sg	Sg	02 48 32.7	+0.1
T35B	Sooner Cattle	0.82	41	P	Pg	02 48 21.8	-0.1
	baz=221,SNR=78						
T35B				S	Sg	02 48 32.8	+0.2
	baz=221						
OKCFA	Oklahoma City	0.91	194		Pg	02 48 23.4	0.0
OKCFA				Sg	Sg	02 48 36.0	+0.8
OKCFA	Oklahoma City	0.91	194	P	Pg	02 48 23.5	0.0
	baz=14,SNR=17						
OKCFA				S	Sg	02 48 36.0	+0.8
	baz=14						
OKCSW	OKLAHOMA CITY	0.91	193	Pg	Pg	02 48 23.3	-0.3
FNO	Franklin	1.05	189	Pg	Pg	02 48 26.0	-0.3
FNO				Sg	Sg	02 48 40.4	+0.4
TUL1	Leonard	1.20	108	Pn	Pg	02 48 28.5	-0.6
TUL1	Leonard	1.20	108	P	Pg	02 48 28.1	-0.9
	baz=290,SNR=44						
TUL1				S	Sg	02 48 43.9	-0.7
	baz=290						
U32A	Winter Ranch,	1.46	274		Pn	02 48 33.1	-0.6
U32A	Winter Ranch,	1.46	274	P	Pn	02 48 33.4	-0.3
	baz=93						
U32A				S	Sg	02 48 53.6	+0.5
	baz=93						
WMOK	Wichita Mounta	2.03	220	P	Pn	02 48 41.7	+0.2
	baz=40,SNR=32						
X37A	Clayton	2.26	138	Pn	Pn	02 48 44.5	-0.1
X37A				IAmb_Lg		02 49 22.0	
	comp=Z,35nm,0.8s						
X37A	Clayton	2.26	138	P	Pn	02 48 44.8	+0.1
	baz=320,SNR=54						
U38A	Gravette	2.27	86	P	Pn	02 48 46.0	+1.3
	baz=267,SNR=48						
R32A	Long Quarter,	2.44	331	Pn	Pn	02 48 47.2	0.0
R32A	Long Quarter,	2.44	331	P	Pn	02 48 47.7	+0.5
	baz=150,SNR=6.6						
R32A				S	Sn	02 49 18.1	+0.4
	baz=150						
HHAR	Hobbs	2.63	89	Pn	Pn	02 48 50.0	+0.3
KSU1	Kansas State U	2.83	9	Pn	Pn	02 48 53.5	+0.9
KSU1					LR	02 49 37.5	
Z35A	Perchaven, San	2.96	181	Pn	Pn	02 48 54.3	0.0
W39A	Magazine	2.98	111	Pn	Pn	02 48 54.9	+0.3
W39A				IAmb_Lg		02 49 44.2	
	comp=Z,20nm,0.8s						
CBKS	Cedar Bluff	3.22	322	Pn	Pn	02 48 57.6	-0.3
S39A	Bolivar	3.39	65	Pn	Pn	02 48 60.0	-0.3
S39A	Bolivar	3.39	65	P	Pn	02 49 00.6	+0.4
	baz=247,SNR=27						
MIAR	Mount Ida	3.43	120	Pn	Pn	02 49 00.6	-0.1
MIAR	Mount Ida	3.43	120	P	Pn	02 49 01.3	+0.5
	baz=302,SNR=12						
U40A	Yellville	3.50	88		Pn	02 49 02.5	+0.7
Z38A	Mt. Pleasant	3.53	148	Pn	Pn	02 49 00.9	-1.3
Z38A				IAmb_Lg		02 50 00.4	
	comp=Z,20nm,0.9s						
AMTX	Amarillo	3.92	250	Pn	Pn	02 49 07.5	-0.1
AMTX				IAmb_Lg		02 50 18.4	
	comp=Z,15nm,0.7s						
X40A	Basin Creek Fa	3.99	116	Pn	Pn	02 49 09.0	+0.5
X40A				IAmb_Lg		02 50 19.2	
	comp=Z,20nm,0.8s						
MGMO	Mountain Grove	4.04	76	Pn	Pn	02 49 09.7	+0.4
WHAR	Wooly Hollow	4.11	103	Pn	Pn	02 49 11.8	+1.7
WHAR				IAmb_Lg		02 50 21.7	
	comp=Z,23nm,0.7s						
FCAR	Ozark Folk Cen	4.12	94	Pn	Pn	02 49 10.8	+0.5
FCAR				IAmb_Lg		02 50 19.9	
	comp=Z,15nm,1.0s						
ABTX	Abilene, Hawle	4.19	210	IAmb_Lg		02 50 25.1	
	comp=Z,14nm,0.9s						
WLAR	White Oak Lake	4.24	127	Pn	Pn	02 49 11.0	-0.9
WLAR				IAmb_Lg		02 50 23.5	
	comp=Z,22nm,0.8s						
WHTX	Lake Whitney,	4.30	183	Pn	Pn	02 49 12.7	-0.1
R40A	Maddies Statio	4.40	62	Pn	Pn	02 49 13.6	-0.5
R40A	Maddies Statio	4.40	62	P	Pn	02 49 14.3	+0.2
	baz=244,SNR=15						
P38A	Dawn	4.40	40	Pn	Pn	02 49 14.4	+0.2
237A	Washetta, Mont	4.44	165	Pn	Pn	02 49 14.1	-0.5
N35A	Tabor	4.71	14	Pn	Pn	02 49 18.3	-0.1
N35A				IAmb_Lg		02 50 35.4	
	comp=Z,18nm,0.9s						
LCAR	Lake Charles	4.89	91	Pn	Pn	02 49 20.4	-0.4
LCAR				IAmb_Lg		02 50 40.7	
	comp=Z,12nm,0.9s						
T42A	Van Buren	4.96	80	Pn	Pn	02 49 21.4	-0.4
T42A				IAmb_Lg		02 50 52.7	
	comp=Z,11nm,0.9s						
CCM	Cathedral Cave	5.06	68	Pn	Pn	02 49 23.3	+0.1
CCM				IAmb_Lg		02 50 46.9	
	comp=Z,12nm,0.8s						
KSCO	Kaye Shedlock’	5.09	304	Pn	Pn	02 49 22.2	-1.5
KSCO				IAmb_Lg		02 50 56.3	
	comp=Z,11nm,0.8s						
MSTX	Muleshoe	5.13	245	Pn	Pn	02 49 23.5	-0.7
BGNE	Belgrade	5.16	352	Pn	Pn	02 49 23.0	-1.5
BGNE				IAmb_Lg		02 51 04.4	
	comp=Z,16nm,0.7s						
P40A	Paris	5.19	50	Pn	Pn	02 49 24.2	-0.7
P40A				IAmb_Lg		02 50 55.7	
	comp=Z,18nm,0.8s						
PBMO	Poplar Bluff	5.46	83	IAmb_Lg		02 50 56.2	
	comp=Z,16nm,0.8s						
FVM	French Village	5.66	71	IAmb_Lg		02 51 07.5	
	comp=Z,11nm,1.0s						
T25A	Trinidad	5.86	280	IAmb_Lg		02 51 22.7	
	comp=Z,11nm,0.8s						
143A	Socs Landing,	5.97	125	IAmb_Lg		02 51 29.8	
	comp=Z,13nm,0.7s						

OGNE	Ogallala comp=Z,11nm,0.7s	5.99	322	IAmb_Lg		02 51 26.8	
JCT	Junction City comp=Z,12nm,0.9s	6.20	201	IAmb_Lg		02 51 39.8	
S44A	Carbondale comp=Z,11nm,0.8s	6.50	75	IAmb_Lg		02 51 40.2	
OXF	Oxford comp=Z,12nm,0.9s	6.60	103	IAmb_Lg		02 51 51.1	
L40A	Anamosa comp=Z,7.1nm,0.8s	7.39	37	IAmb_Lg		02 52 01.7	
O44A	Mansfield comp=Z,10nm,0.8s	7.87	58	IAmb_Lg		02 52 20.1	

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*NEIC **04** 02:52:01.1±1.5,51°.5N±0°.1×178°.13W±0°.05,h20^{km}±12^{km}, Error ellipse: s-maj=15.5km s-min=4.4km az=171.0*

AEIC 04 02:52:00±1.9,**51°.5N**±0°.2×**178°.17W**±0°.07,**h18**^{km}±8^{km}, **ML3.4,mb4.0**/9(NEIC),**Error ellipse: s-maj=24.2km s-min=4.0km az=168.0,Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TASE	Tanaga Southea	0.38	12		Pb	02 52 09.4	+1.1
TAFP	Tanaga Falls P	0.46	15		Pb	02 52 10.4	+0.8
GALAA	Gareloi Lava P	0.48	309		Pn	02 52 11.1	-0.9
GAEA	Gareloi East	0.48	312		Pn	02 52 11.2	-0.9
KIMD	Kanaga Island	0.66	62		Pg	02 52 13.2	+0.3
KIWB	Kanaga Island	0.75	58		Pb	02 52 14.5	0.0
KIKV	Kanaga Island	0.75	56		Pg	02 52 14.8	+0.1
KICM	Kanaga Island	0.76	53		Pg	02 52 15.3	+0.4
ADK	Adak	1.02	65		Pb	02 52 18.8	-0.3
ADK				Sg	Sb	02 52 31.7	-0.4
GSTD	Great Sitkin T	1.39	64		Pb	02 52 25.3	-0.2
GSMY	Great Sitkin M	1.44	65		Pb	02 52 26.0	-0.2
GSTR	Great Sitkin T	1.46	63	Pn	Pb	02 52 26.2	-0.3
CESW	Semis' Southwe	1.48	288		Pb	02 52 26.7	-0.2
AMKA	Amchitka	1.58	268		Pn	02 52 27.0	-0.1
LSPA	Little Sitkin	2.09	285		Pn	02 52 35.5	+1.5
OHAK	Old Harbor	15.56	59	P	P	02 55 41.1	-1.3
KDAK	Kodiak Island	16.05	57	P	Pn	02 55 45.4	+0.9
CNPM	China Poot	17.16	51	P	P	02 56 01.8	+1.7
CNPM	comp=Z,19nm,1.4s			IAmb	IAmb	02 56 23.9	
SKT	Skwentna	17.87	44	P	P	02 56 10.5	+2.6
PPLA	Purkeypile	18.00	41	P	P	02 56 09.5	+0.1
PPLA	comp=Z,16nm,1.3s			IAmb	IAmb	02 56 17.3	
SEW	Seward	18.19	50	P	P	02 56 12.1	+0.7
KTH	Kantishna Hill	18.81	39	P	Pn	02 56 20.7	+1.8
KTH	comp=Z,15nm,1.5s			IAmb	IAmb	02 56 34.3	
RND	Reindeer	19.58	41	P	Pn	02 56 27.9	-0.3
RND	comp=Z,13nm,1.4s			IAmb	IAmb	02 56 42.7	
MLY	Manley	19.60	36	P	Pn	02 56 28.9	+0.6
I23K	Minto, Yukon-K	20.16	36	P	Pn	02 56 34.8	-0.1
M27K	Edge Creek, AK	22.29	47	P	P	02 56 58.5	+2.4
EGAK	Eagle	23.23	41	P	P	02 57 07.1	+1.4
EGAK	comp=Z,5.8nm,1.3s			IAmb	IAmb	02 57 26.8	

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*IDC **04** 02:52:07.8±4.2,36°.28N×70°.73E,h192^{km}±38^{km},mb3.4/9, mb1 3.5/14,mb1mx3.2/58,mbtmp4.0/14,Error ellipse: s-maj=31.8km s-min=15.0km az=37.0*

*NNC **04** 02:52:13.0±3.4,36°.73N×70°.78E,h203^{km}±27^{km},mb3.3, mpv4.7,Error ellipse: s-maj=28.7km s-min=18.6km az=26.0*

ISC 04 02:52:08.9±0.8,**36°.44N**±0°.07×**70°.71E**±0°.09,**h200**^{km},**n44**, σ**1^{s}.16**/50,**mb3.6**/8,**10C-7D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu SNR=385	6.14	21	P	Pn	02 53 39.5	+1.3
UCH	Uchtor SNR=13	6.49	26	P	Pn	02 53 44.3	+1.5
EKS2	Erkin-Say SNR=32	6.65	20	P	Pn	02 53 45.9	+1.3
KK31	Karatay Array 11nm,0.3s,baz=186,slow=12,SNR=296	6.66	359	⇓P	Pn	02 53 46.0	+1.4
KK31	34nm,0.5s,baz=185,slow=22,SNR=7.7			⇑S	Sn	02 54 56.7	-3.8
AAK	Ala-Archa 14nm,0.3s,baz=192,slow=7.2,SNR=102	6.85	24	P	Pn	02 53 48.6	+1.5
AAK	2.1nm,0.3s,baz=344,slow=17,SNR=2.0			S	Sn	02 55 05.0	-0.2
AAK	Ala-Archa SNR=60	6.85	24	P	Pn	02 53 48.7	+1.5
AAK	Ala-Archa 22nm,0.4s	6.85	24	⇓P	Pn	02 53 48.7	+1.5
AAK	16nm,0.8s			⇑S	Sn	02 55 03.3	-1.9
KBK	Karagaybulak SNR=24	7.02	27	P	Pn	02 53 51.1	+1.7
ULHL	Ulahol SNR=6.2	7.21	35	P	Pn	02 53 53.3	+1.3
CHMS	Chumysh SNR=14	7.25	24	P	Pn	02 53 53.4	+1.1
USP	Ospenovka SNR=45	7.42	22	P	Pn	02 53 54.9	+0.4
TKM2	Tokmak 2 SNR=24	7.49	29	P	Pn	02 53 56.8	+1.2
TKM2	Tokmak 2 63nm,0.8s	7.49	29	⇑P	Pn	02 53 56.1	+0.5
TKM2	4.1nm,0.7s			⇑S	Sn	02 55 19.3	-1.1
MDOK	Medeo 27nm,0.6s	8.30	34	⇓P	Pn	02 54 07.1	+1.0
OTUK	Ortayu 3.1nm,0.6s	11.86	5	⇓P	Pn	02 54 52.2	+0.4
PYUN	Piuthan 15nm,0.3s	13.30	125	*e*P	Pn	02 55 10.4	0.0
MAKZ	Makanchi 10nm,1.0s	13.34	36	⇓P	Pn	02 55 09.8	-0.7
MK31	Makanchi Array 1.5nm,0.6s,baz=219,slow=15,SNR=13	13.48	36	⇑P	Pn	02 55 11.6	-0.6
MKAR	Makanchi Array 0.3nm,0.3s,baz=222,slow=17,SNR=11	13.48	36	P	Pn	02 55 12.9	+0.7
DANN	Dangsing 12nm,0.3s	13.65	123	*e*P	Pn	02 55 14.8	0.0
KOLN	Koldanda	13.92	125	*e*P	Pn	02 55 17.7	-0.4
AB31	Akbulak array 1.5nm,0.7s,baz=142,slow=12,SNR=21	15.02	332	⇑P	Pn	02 55 31.5	+0.3
AB31	1.3nm,0.6s,baz=154,slow=23,SNR=2.9			⇓S	S	02 58 16.1	-1.8
KKN	Kakani 25nm,0.5s	15.05	121	*e*P	P	02 55 31.9	-0.7
KURBB	Kurchatov Arra 0.2nm,0.3s,baz=210,slow=11,SNR=9.4	15.26	19	P	Pn	02 55 34.0	0.0
KURBB	Kurchatov Arra 3.0nm,0.5s	15.26	19	⇑P	Pn	02 55 32.9	-1.1
PKIN	Phulchoki 21nm,0.5s	15.26	121	*e*P	Pn	02 55 34.0	-0.6
JIRN	Jiri 44nm,0.6s	15.76	119	*e*P	Pn	02 55 40.8	0.0
RAMN	Ramite	16.49	121	*e*P	Pn	02 55 48.8	-0.5
BVAR	Borovoye Array 1.7nm,0.3s,baz=189,slow=16,SNR=16	16.59	359	P	Pn	02 55 51.0	+1.0
BRVK	Borovoye 6.8nm,1.0s	16.62	359	⇑P	P	02 55 50.5	+1.1
AKTO	Aktyubinsk 0.6nm,0.3s,baz=156,slow=13,SNR=15	16.72	331	P	Pn	02 55 52.5	+1.0
AKTO	Aktyubinsk 3.7nm,0.8s	16.72	331	⇓P	Pn	02 55 52.2	+0.7
AKTO	3.4nm,1.2s			⇑S	Sn	02 58 59.4	-0.2
TAPN	Taplejung 11nm,0.4s	17.03	117	*e*P	P	02 55 54.2	-0.2
ODAN	Odare 22nm,0.6s	17.09	119	*e*P	Pn	02 55 55.9	-0.6
ZAA0	Zalesovo Array 0.4nm,0.7s	20.07	25	⇑P	P	02 56 26.7	0.0
ZALV	Zalesovo Beam 2.6nm,0.5s,baz=217,slow=10,SNR=10	20.07	25	P	P	02 56 27.7	+1.0
CMAR	Chiang Mai Arr 0.6nm,0.3s,baz=300,slow=7.5,SNR=4.1	30.63	118	P	P	02 58 05.0	+0.4
FINES	FINESS Array B 5.9nm,1.1s,baz=126,slow=9.8,SNR=6.8	37.40	326	P	P	02 59 03.6	+1.4
ARCES	ARCESS Array B 4.7nm,1.2s,baz=108,slow=7.8,SNR=4.3	41.11	338	P	P	02 59 34.2	+1.4
NOA	NORSAR Array B 0.9nm,0.8s,baz=97,slow=7.9,SNR=3.8	44.29	323	P	P	02 59 58.6	+0.2
TORD	Torodi Ar. Bea 0.4nm,0.7s,baz=50,slow=6.0,SNR=5.3	65.48	268	P	P	03 02 30.0	-0.9
INK	Inuvik 0.6nm,0.6s,baz=305,slow=7.0,SNR=1.8	74.00	9	P	P	03 03 22.9	+0.9
WRA	Warramunga Arr 0.7nm,0.4s,baz=323,slow=4.9,SNR=14	82.16	122	P	P	03 04 06.3	-1.2
ASAR	Alice Springs 0.6nm,0.5s,baz=309,slow=5.1,SNR=11	84.41	125	P	P	03 04 17.9	-1.1

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*MAN **04** 02:58:40.9,7°.73N×126°.80E,h44^{km},mb4.4,ML3.3,MS3.1*

*IDC **04** 02:58:41.1±2.6,7°.19N×127°.25E,h0^{km},mb3.6/3, mb1 3.8/3,mb1mx3.4/35,mbtmp3.6/3,MS3.8/1,Ms1 3.8/1, ms1mx2.6/32,Error ellipse: s-maj=220.9km s-min=11.8km az=67.0*

ISC 04 02:58:47.0±1.7,**7°.0N**±0°.2×**126°.8E**±0°.2,**h35**^{km},**n4**,σ**0^{s}.38**/5, **mb3.4**/3,**1C,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DMPH	Davao City--Mi	1.24	276	⇑*i*P	Pn	02 59 07.5	-0.3
DMPH				*e*S	Sn	02 59 23.7	+0.3
WRA	Warramunga Arr 0.1nm,0.3s,baz=346,slow=10,SNR=1.6	27.76	165	P	P	03 04 32.5	-0.2
ASAR	Alice Springs 0.4nm,0.6s,baz=344,slow=7.2,SNR=6.8	31.23	167	P	P	03 05 03.6	+0.2
ASAR	comp=Z,158nm,18.0s,baz=212,slow=42			LR	LR	03 20 33.8	
MKAR	Makanchi Array 0.9nm,0.5s,baz=118,slow=7.4,SNR=7.8	54.95	324	P	P	03 08 14.7	+0.1

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*IDC **04** 03:26:52.9±1.7,22°.64N×121°.52E,h0^{km},mb3.7/3, mb1 3.8/4,mb1mx3.5/39,mbtmp3.8/4,ML3.4/1,MS3.6/2, Ms1 3.6/2,ms1mx2.8/59,Error ellipse: s-maj=76.1km s-min=28.6km az=66.0*

*JMA **04** 03:26:55.0±0.1,22°.72N×121°.60E,h35^{km},M3.4*

*TAP **04** 03:26:56.4,22°.76N×121°.57E,h16^{km},ML3.8,C*

ISC 04 03:26:54.7±1.1,**22°.73N**±0°.02×**121°.62E**±0°.02,**h13**^{km}±8^{km}, **n121**,σ**0^{s}.97**/229,**mb3.7**/3,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LDUT	Ludao baz=226	0.15	247	*i* P	Pb	03 27 00.4	+1.0
LDUT	baz=226			S	Sb	03 27 03.1	+0.6
EDH	Donghe baz=311	0.38	309	*i* P	Pb	03 27 03.3	0.0
EDH	baz=311			*i* S	Sb	03 27 08.1	-1.0
CHKT	Chengkung baz=339	0.43	327	*i* P	Pb	03 27 04.2	-0.1
CHKT	baz=339			*i* S	Sg	03 27 09.5	+0.3
LONT	Longtian baz=289	0.48	291	P	Pb	03 27 05.1	0.0
LONT	baz=289			*e*S	Sb	03 27 11.7	-0.5
TWGBT	Beinan baz=277	0.51	280	*i* P	Pb	03 27 05.3	-0.2
TWGBT	baz=277			*i* S	Sb	03 27 12.1	-0.7
FULB	Fuli baz=329	0.55	327	P	Pb	03 27 06.1	-0.2
FULB	baz=329			*i* S	Sg	03 27 12.8	-0.2
ECL	Taimali baz=254	0.63	258	*i* P	Pb	03 27 07.5	0.0
ECL	baz=254			*i* S	Sb	03 27 15.6	-0.7
EYUL	Yuli baz=350	0.67	336	P	Pb	03 27 08.4	+0.1
EYUL	baz=350			*e*S	Sb	03 27 17.4	-0.1
LAY	Lan-yu baz=181	0.69	185	*i* P	Pb	03 27 08.7	0.0
LAY	baz=181			*e*S	Sb	03 27 18.1	-0.1
ELDTW	Lidau baz=310	0.72	309	P	Pg	03 27 08.4	-0.3
ELDTW	baz=310			*e*S	Sg	03 27 17.2	-1.0
YULB	Yu-li baz=349	0.72	336	P	Pb	03 27 09.1	-0.1
YULB	baz=349			S	Sg	03 27 17.9	-0.3
TAW	Tawu baz=237	0.77	241	P	Pb	03 27 09.8	-0.1
TAW	baz=237			S	Sb	03 27 19.9	-0.3
HGSD	Ruisui baz=1.0	0.78	347	P	Pg	03 27 09.5	-0.3
HGSD	baz=1.0			*e*S	Sb	03 27 20.8	+0.2
EAST	Anshuo baz=240	0.79	244	P	Pn	03 27 10.4	-1.2
EAST	baz=240			S	Sb	03 27 20.5	-0.6
EHY	Hungye baz=325	0.82	340	P	Pb	03 27 10.7	-0.1
EHY	baz=325			S	Sg	03 27 21.0	-0.3
STYH	Taoyuan baz=308	0.89	299	P	Pg	03 27 11.9	-0.1
TSMG	Majia baz=259	0.90	268	P	Pg	03 27 11.8	-0.3
TSMG	baz=259			S	Sb	03 27 22.1	-2.0
SSD	Sandimen baz=274	0.91	271	P	Pg	03 27 11.9	-0.4
SSD	baz=274			S	Sb	03 27 23.1	-1.4
SLIU	Shizi baz=233	0.92	236	P	Pg	03 27 12.2	-0.3
SLIU	baz=233			S	Sb	03 27 23.2	-1.4
MASBT	Mashibuluo baz=253	0.92	263	P	Pg	03 27 12.3	-0.2
MASBT	baz=253			S	Sb	03 27 22.6	-2.1
SLGT	Liugui baz=285	0.94	286	P	Pn	03 27 12.9	-0.7
SLGT	baz=285			*e*S	Sg	03 27 24.6	-0.5
EGFH	Guangfu baz=332	0.95	349	*e*P	Pn	03 27 14.1	+0.3
EGFH	baz=332			*e*S	Sn	03 27 27.2	0.0
YUS	Yu-Shan baz=322	0.97	321	P	Pb	03 27 13.2	-0.5
YUS	baz=322			S	Sg	03 27 26.7	+0.3
SCZT	Fangliau baz=252	0.99	249	P	Pn	03 27 13.5	-0.9
SCZT	baz=252			*e*S	Sg	03 27 25.8	-1.1
SSPT	Xinbi baz=247	1.00	256	P	Pn	03 27 14.5	0.0
SSPT	baz=247			*e*S	Sb	03 27 25.3	-1.7
SGST	Jiashian baz=289	1.02	290	P	Pn	03 27 14.3	-0.5
SGST	baz=289			S	Sn	03 27 27.9	-1.1
SGLT	Jiouru baz=269	1.04	270	*e*P	Pn	03 27 15.5	+0.4
SGLT	baz=269			*e*S	Sn	03 27 29.6	+0.1
SCST	Cishan baz=277	1.05	279	*e*S	Sn	03 27 30.0	+0.3
WTP	Ta-pu baz=306	1.06	299	P	Pg	03 27 15.0	-0.1
WTP	baz=306			S	Sn	03 27 29.7	-0.3
TSEB	Hengchuen, Pin baz=218	1.06	219	*e*P	Pg	03 27 15.7	+0.5
TSEB	baz=218			*e*S	Sn	03 27 30.9	+0.9
TPUB	Ta-pu baz=309	1.07	302	P	Pg	03 27 15.3	-0.1
TPUB	baz=309			S	Sn	03 27 29.9	-0.5
ALS	Alishan baz=316	1.08	316	P	Pb	03 27 15.1	-0.3
ALS	baz=316			S	Sn	03 27 30.0	-0.9
TWKBT	Hengchun baz=221	1.09	224	P	Pn	03 27 14.9	-0.7
TWKBT	baz=221			S	Sn	03 27 29.8	-0.8
TWK1	Hengchun baz=221	1.09	224	P	Pn	03 27 15.1	-0.6
TWK1	baz=221			S	Sn	03 27 29.6	-1.0
ESL	Shilin baz=338	1.09	351	P	Pb	03 27 15.3	-0.2
ESL	baz=338			S	Sb	03 27 28.0	-1.6
HEN	Hengchun baz=238	1.09	229	*e*P	Pg	03 27 17.2	+1.4
HEN	baz=238			*e*S	Sn	03 27 31.6	+0.9
CHN1	Nanshi baz=299	1.10	294	P	Pg	03 27 16.7	+0.7
CHN1	baz=299			S	Sn	03 27 30.6	-0.5
TWM1	Shoushan baz=276	1.11	275	*e*P	Pg	03 27 17.0	+0.9
TWM1	baz=276			*e*S	Sn	03 27 33.1	+1.9
CHN4	Tsaushan baz=310	1.13	303	P	Pb	03 27 15.0	-1.1
CHN4	baz=310			S	Sn	03 27 31.5	-0.1
SNST	Tainan City baz=301	1.14	295	P	Pg	03 27 17.4	+0.7
SNST	baz=301			S	Sn	03 27 32.6	+0.6
TWK	Hsinying baz=296	1.17	297	P	Pg	03 27 17.4	+0.1
TWK	baz=296			S	Sg	03 27 33.3	+0.7
WLCH	Liuqiu baz=245	1.21	252	*e*P	Pg	03 27 19.3	+1.3
WLCH	baz=245			*e*S	Sg	03 27 34.3	+0.6
SSLB	Suanglung baz=342	1.22	330	P	Pn	03 27 17.4	-0.1
SSLB	baz=342			*e*S	Sb	03 27 32.6	-0.7
CHN5	Tsauling baz=321	1.22	315	P	Pg	03 27 18.6	+0.3
CHN5	baz=321			S	Sg	03 27 35.3	+1.1
KAU	Kaohsiung baz=260	1.22	263	*e*P	Pg	03 27 18.3	0.0
KAU	baz=260			*e*S	Sg	03 27 37.0	+2.8
HWA	Hwalien baz=14	1.24	359	*e*P	Pb	03 27 18.4	+0.4
HWA	baz=14			*e*S	Sb	03 27 34.2	+0.3
OWD	Renai baz=342	1.28	342	*e*P	Pn	03 27 18.3	-0.3
OWD	baz=342			*e*S	Sn	03 27 35.4	-0.3
CHN2	Minshiung baz=306	1.32	307	*e*P	Pb	03 27 19.3	0.0
CHN2	baz=306			*e*S	Sg	03 27 36.6	-0.7
SMLT	Sun Moon Lake baz=341	1.32	330	P	Pb	03 27 19.7	+0.2
SMLT	baz=341			*e*S	Sn	03 27 36.2	-0.4
CHY	Chiayi baz=304	1.34	305	P	Pg	03 27 19.9	-0.6
CHY	baz=304			*e*S	Sg	03 27 37.0	-0.9
TWD	Chiawan baz=13	1.34	359	*e*P	Pn	03 27 18.5	-0.7
TWD	baz=13			*e*S	Sn	03 27 36.4	-0.5
WJS	Zhushan baz=340	1.36	323	*e*P	Pg	03 27 20.8	-0.1
WJS	baz=340			*e*S	Sg	03 27 39.4	+0.9
TYC	Yuchr baz=341	1.36	329	P	Pg	03 27 20.9	0.0
TYC	baz=341			S	Sg	03 27 37.8	-0.8
WDLH	Douliu baz=313	1.38	314	P	Pb	03 27 20.5	+0.1
WDLH	baz=313			S	Sg	03 27 38.5	-0.6
CHGB	Renai baz=357	1.38	343	P	Pn	03 27 20.1	+0.1
CHGB	baz=357			S	Sn	03 27 37.3	-1.0
ICHU	Yijhu baz=296	1.38	297	P	Pg	03 27 21.2	-0.2
ICHU	baz=296			S	Sg	03 27 38.6	-0.8
ETL	Fush Village baz=14	1.42	0	*e*P	Pn	03 27 19.4	-0.9
ETL	baz=14			*e*S	Sn	03 27 38.1	-0.7
WNT	Mingjian baz=323	1.43	323	*e*P	Pb	03 27 21.1	-0.1
WNT	baz=323			*e*S	Sb	03 27 39.2	-0.1
CHN8	Yiju baz=294	1.43	295	*e*P	Pb	03 27 20.9	-0.4
CHN8	baz=294			*e*S	Sg	03 27 40.7	-0.3
NACB	Ninganchiao baz=13	1.44	359	P	Pn	03 27 19.3	-1.1
NACB	baz=13			*e*S	Sn	03 27 37.4	-1.8
WHF	Hehuan Shan baz=348	1.44	347	P	Pn	03 27 20.1	-0.9
WHF	baz=348			S	Sn	03 27 38.6	-1.4
WCS	Beigang Elemen baz=344	1.47	334	P	Pb	03 27 21.8	-0.1
WCS	baz=344			S	Sb	03 27 40.5	0.0
ETLH	Xiulin Townshi baz=356	1.47	355	P	Pn	03 27 20.0	-1.1
ETLH	baz=356			*e*S	Sn	03 27 38.8	-1.5
WTK	Tuku baz=309	1.48	310	*e*P	Pb	03 27 21.9	-0.2
WTK	baz=309			*e*S	Sb	03 27 40.9	+0.1
FUSS	Fushou baz=348	1.55	347	*e*P	Pn	03 27 22.5	+0.2
FUSS	baz=348			*e*S	Sn	03 27 42.4	+0.1
TWT	Tachien baz=345	1.57	345	P	Pb	03 27 23.1	-0.6
TWT	baz=345			S	Sn	03 27 42.6	-0.2
WSF	Szhu baz=304	1.57	305	*e*P	Pb	03 27 23.1	-0.5
WSF	baz=304			*e*S	Sb	03 27 42.7	-0.8
TDCB	Techi baz=345	1.57	344	P	Pn	03 27 22.7	+0.2
TDCB	baz=345			*e*S	Sn	03 27 42.3	-0.5
WRL	Guolierlin Hig baz=315	1.63	316	*e*P	Pb	03 27 24.2	-0.5
WRL	baz=315			*e*S	Sb	03 27 44.4	-0.8
TCU	Taichung baz=329	1.65	329	*e*P	Pb	03 27 24.4	-0.7
TCU	baz=329			*e*S	Sb	03 27 46.1	+0.2
WCHH	Zhanghua baz=339	1.66	324	*e*P	Pb	03 27 24.4	-0.7
WCHH	baz=339			*e*S	Sb	03 27 45.9	0.0
WHP	Taichung City baz=349	1.66	338	*e*P	Pn	03 27 23.5	-0.1
WHP	baz=349			*e*S	Sb	03 27 45.6	-0.5
ENA	Nanau baz=17	1.69	4	*e*P	Pb	03 27 25.4	-0.3
ENA	baz=17			*e*S	Sn	03 27 46.2	+0.6
NNSB	Datong baz=7.0	1.70	353	*e*P	Pn	03 27 24.1	-0.1
NNSB	baz=7.0			*e*S	Sn	03 27 45.6	-0.4
EWUT	Wuta baz=19	1.71	5	*e*P	Pn	03 27 24.3	+0.1

EWUT				*e*S	Sn	03 27 44.8	-1.3
	baz=19						
NNS	**Nan Shan**	1.71	352	*e*P	Pn	03 27 25.4	+0.9
	baz=6.0						
NNS				*e*S	Sn	03 27 46.4	+0.1
	baz=6.0						
TWQ1	**Liyutan**	1.79	334	*e*P	Pb	03 27 27.6	+0.2
	baz=335						
TWQ1				*e*S	Sb	03 27 50.5	+0.8
	baz=335						
WDJ	**Dajia District**	1.84	331	*e*P	Pn	03 27 26.8	+0.7
	baz=331						
WDJ				*e*S	Sb	03 27 50.3	-1.0
	baz=331						
NSY	**Sanyi**	1.85	335	*e*P	Pb	03 27 28.8	+0.3
	baz=335						
NSY				*e*S	Sb	03 27 52.7	+1.1
	baz=335						
NDT	**Datong Townshi**	1.86	357	*e*P	Pn	03 27 26.2	-0.2
	baz=358						
NDT				*e*S	Sn	03 27 49.0	-0.8
	baz=358						
TWC	**Suao**	1.88	6	*e*P	Pn	03 27 26.8	+0.2
	baz=20						
TWC				*e*S	Sn	03 27 49.9	-0.3
	baz=20						
NDS	**Dongshan**	1.89	3	*e*P	Pn	03 27 28.1	+1.3
	baz=15						
NDS				*e*S	Sn	03 27 51.2	+0.6
	baz=15						
ENTT	**Nioudou**	1.90	359	*e*P	Pn	03 27 27.0	+0.1
	baz=360						
ENTT				*e*S	Sn	03 27 50.5	-0.2
	baz=360						
YHNB	**Yeheng**	1.94	353	P	Pn	03 27 28.3	+0.8
	baz=6.0						
YHNB				*e*S	Sn	03 27 50.9	-0.9
	baz=6.0						
NSK	**Sanguang**	1.95	353	P	Pn	03 27 28.3	+0.7
	baz=6.0						
NSK				S	Sn	03 27 50.6	-1.4
	baz=6.0						
NMLH	**Miaoli**	1.95	337	*e*P	Pn	03 27 28.7	+1.1
	baz=337						
NMLH				*e*S	Sn	03 27 52.5	+0.5
	baz=337						
NSTT	**Nanjuang**	1.97	343	*e*P	Pn	03 27 28.8	+0.9
	baz=344						
NSTT				*e*S	Sn	03 27 53.5	+1.0
	baz=344						
TWE	**Neicheng**	1.98	1	*e*P	Pn	03 27 29.3	+1.3
	baz=351						
TWE				*e*S	Sn	03 27 53.1	+0.4
	baz=351						
LIOB	**Emei**	1.98	344	*e*P	Pb	03 27 29.4	-1.3
	baz=344						
LIOB				*e*S	Sn	03 27 53.4	+0.7
	baz=344						
NWLT	**Wulai**	2.04	357	*e*P	Pn	03 27 29.4	+0.6
	baz=358						
NWLT				*e*S	Sn	03 27 53.3	-0.8
	baz=358						
PHUB	**P'eng-hu**	2.04	293	*e*P	Pb	03 27 29.7	-1.9
	baz=291						
PHUB				S	Sn	03 27 53.1	-1.0
	baz=291						
PNG	**Penghu**	2.07	294	P	Pn	03 27 30.1	+0.9
	baz=293						
PNG				*e*S	Sn	03 27 54.6	-0.4
	baz=293						
VCHM	**Qimei**	2.07	284	*e*P	Pb	03 27 30.5	-1.8
	baz=282						
VCHM				*e*S	Sn	03 27 54.4	-0.6
	baz=282						
JYNG	**Yonagunijimaku**	2.10	35	P	Pn	03 27 30.3	+0.7
JYNG				*e*S	Sn	03 27 54.0	-1.6
YOJ	**Yonaguni jima**	2.14	36	*e*P	Pn	03 27 32.4	+2.2
	baz=50						
YOJ				*e*S	Sn	03 27 58.0	+1.3
	baz=50						
YOJ	**Yonaguni jima**	2.14	36	P	Pn	03 27 31.4	+1.2
YOJ				*e*S	Sn	03 27 55.8	-0.9
TIPB	**Shuangxi**	2.24	5	*e*P	Pn	03 27 33.2	+1.7
	baz=353						
TIPB				*e*S	Sn	03 28 00.1	+1.0
	baz=353						
TWA	**Mucha**	2.24	359	*e*P	Pb	03 27 33.5	-1.5
TWA				*e*S	Sn	03 28 00.3	+1.2
NWF	**Wu-fen Shan**	2.33	4	*e*P	Pn	03 27 34.7	+1.8
	baz=354						
NWF				*e*S	Sn	03 28 01.5	0.0
	baz=354						
HATJ	**Hateruma jima**	2.40	56	S	Sn	03 28 00.9	-2.1
IRIF	**Iriomote-Funau**	2.51	50	P	Pn	03 27 36.1	+0.9
IRIF				*e*S	Sn	03 28 05.5	-0.2
JKRS	**Kuro-shima**	2.66	55	P	Pn	03 27 37.5	+0.2
JIJ	**Ishigaki jima**	2.83	54	P	Pn	03 27 40.0	+0.4
JIJ				S	Sn	03 28 11.4	-2.2
JISG	**Ishigakijimahi**	3.08	53	P	Pn	03 27 43.4	+0.3
JISG				*e*S	Sn	03 28 17.1	-2.7
PTMZ	**Houxiangcun**	3.24	316	*e*P	Pn	03 27 47.4	+2.1
	baz=315						
PTMZ				*e*S	Sn	03 28 23.0	-0.8
	baz=315						
KNM	**Kinmen**	3.37	300	*e*P	Pb	03 27 50.7	-3.7
	baz=298						
KNM				*e*S	Sn	03 28 29.9	+2.9
	baz=298						
JTJ	**Tarama**	3.40	55	P	Pn	03 27 48.9	+1.4
JTJ				*e*S	Sn	03 28 26.2	-1.6
KNMB	**Chin-men Tao**	3.43	301	*e*P	Pn	03 27 49.4	+1.6
	baz=300						
KNMB				*e*S	Sn	03 28 28.3	-0.2
	baz=300						
MATB	**Ma-tsu**	3.73	336	*e*P	Pn	03 27 53.5	+1.5
	baz=336						
MATB				*e*S	Sn	03 28 35.4	-0.4
	baz=336						
JIRB	**Irabujima**	3.87	57	P	Pn	03 27 54.7	+0.8
JMJ2	**Miyako jima3**	3.94	59	P	Pn	03 27 55.6	+0.7
JMJ2				S	Sn	03 28 40.9	-0.2
AXDP	**Jialang**	3.98	304	*e*P	Pn	03 27 57.2	+1.8
	baz=303						
AXDP				*e*S	Sn	03 28 42.6	+0.6
	baz=303						
MHZQ	**Yeshan**	4.10	325	*e*P	Pn	03 27 59.2	+2.1
	baz=325						
MHZQ				*e*S	Sn	03 28 44.2	-0.8
	baz=325						
LYJJ	**Jianjiangzhen**	4.16	336	*e*P	Pn	03 27 59.7	+1.7
	baz=337						
LYJJ				*e*S	Sn	03 28 45.8	-0.6
	baz=337						
XPSS	**Dashiqiu**	4.38	343	*e*P	Pn	03 28 03.1	+2.2
	baz=343						
XPSS				*e*S	Sn	03 28 51.1	-0.6
	baz=343						
KSRS	**Korea Array**	15.64	19	Pn	Pn	03 30 36.9	+1.9
	0.2nm,0.3s,baz=201,slow=13,SNR=6.4						
CMAR	**Chiang Mai Arr**	21.64	263	LR	LR	03 40 45.7	
	comp=Z,17nm,20.1s,baz=155,slow=39						
MKAR	**Makanchi Array**	39.66	317	P	P	03 34 27.3	+0.9
	1.3nm,0.8s,baz=108,slow=8.6,SNR=8.8						
ZALV	**Zalesovo Beam**	41.68	328	P	P	03 34 42.2	-0.7
	1.8nm,0.6s,baz=110,slow=7.7,SNR=8.6						
WRA	**Warramunga Arr**	44.20	163	P	P	03 35 03.2	-0.4
	0.3nm,0.8s,baz=347,slow=7.8,SNR=2.5						
AKTO	**Aktyubinsk**	56.09	316	LR	LR	04 01 19.4	
	comp=Z,549nm,20.6s,baz=355,slow=37						

MOS ***04*** *03:44:11.8±0.9, 8°.25S×124°.84E, h13^{km}, mb6.3/88, MS6.1/37, Error ellipse: s-maj=7.0km s-min=4.1km az=117.4*

IDC ***04*** *03:44:11.8±0.3, 8°.20S×124°.87E, h0^{km}, mb5.6/41, mb1 5.5/48, mb1mx5.5/53, mbtmp5.6/48, ML4.9/7, MS6.2/34, Ms1 6.2/34, ms1mx6.1/43, Error ellipse: s-maj=11.6km s-min=9.3km az=63.0*

BJI ***04*** *03:44:12.0±0.0, 8°.30S×124°.90E, h15^{km}, mB6.4/79, mb5.9/87, Ms6.5/99, Ms7 6.2/94*

NEIC ***04*** *03:44:14.5, 8°.36S×124°.88E, h9^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-1.24; $M_{\theta\theta}$-1.51; $M_{\phi\phi}$2.75; $M_{r\theta}$-0.68; $M_{\theta\phi}$-3.06; $M_{\phi r}$-2.10; Fault plane solution: $M_0$4.46000×10^{18} NP1:ϕ_s12.75000°, δ79.38000°, λ-34.28000°. NP2:ϕ_s109.91000°, δ56.39000°, λ-167.22000°. Principal axes: T 4.7707, Plg15.0000°, Azm65.0000°; N -0.6955, Plg54.0000°, Azm178.0000°; P -4.0752, Plg31.0000°, Azm326.0000°;*

NEIC ***04*** *03:44:15.2±1.7, 8°.34S±0°.05×124°.88E±0°.05, h20^{km}±1^{km}, mb6.2/198, Ms_20 6.3/382, Mwb6.4/64, Mww6.5, Mwc6.5(GCMT) Error ellipse: s-maj=8.6km s-min=8.0km az=97.0*

DJA ***04*** *03:44:16.5±0.4, 8°S±1°×12°5E±°, h23^{km}±3^{km}, M6.3/138, mB6.6/133, mb6.0/138, MLv6.4/16, Mw6.4/33, Mw(mB)6.5/133, MwMwp6.2/120, Mwp6.2/120*

KLM ***04*** *03:44:17, 8°.29S×124°.88E, h10^{km}, mb6.4*

NEIC ***04*** *03:44:19, 8°.45S×124°.90E, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-2.61; $M_{\theta\theta}$-2.13; $M_{\phi\phi}$4.74; $M_{r\theta}$-3.16; $M_{\theta\phi}$-4.80; $M_{\phi r}$-2.31; Fault plane solution: $M_0$7.44000×10^{18} NP1:ϕ_s114.00000°, δ61.00000°, λ-154.00000°. NP2:ϕ_s11.00000°, δ67.00000°, λ-31.00000°. Principal axes: T 7.2527, Plg4.0000°, Azm64.0000°; N 0.3534, Plg52.0000°, Azm159.0000°; P -7.6060, Plg38.0000°, Azm331.0000°;*

GCMT ***04*** *03:44:21.2±0.0, 8°.20S×124°.95E, h12^{km}, MW6.5/164, Moment Tensor Solution. s164,c428; s160,c657; Duration: 4^s6 Moment tensor: Scale 10^{18}Nm; M_{rr}-2.33±.02; $M_{\theta\theta}$-2.22±.02; $M_{\phi\phi}$4.55±.03; $M_{r\theta}$-3.39±.07; $M_{\theta\phi}$-5.21±.02; $M_{\phi r}$-3.61±.07; Best double couple: $M_0$8.15500×10^{18} NP1:ϕ_s113.00000°, δ56.00000°, λ-159.00000°. NP2:ϕ_s11.00000°, δ73.00000°, λ-36.00000°. Principal axes: T 7.6710, Plg11.0000°, Azm65.0000°; N 0.9670, Plg51.0000°, Azm169.0000°; P -8.6380, Plg37.0000°, Azm327.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***04*** *03:44:21, 8°.18S×124°.98E, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-2.36; $M_{\theta\theta}$-2.14; $M_{\phi\phi}$4.50; $M_{r\theta}$-2.64; $M_{\theta\phi}$-5.37; $M_{\phi r}$-4.01; Fault plane solution: $M_0$8.19000×10^{18} NP1:ϕ_s112.00000°, δ54.00000°, λ-162.00000°. NP2:ϕ_s11.00000°, δ75.00000°, λ-38.00000°. Principal axes: T 8.0383, Plg14.0000°, Azm65.0000°; N 0.2965, Plg50.0000°, Azm172.0000°; P -8.3349, Plg37.0000°, Azm325.0000°;*

ISC 04 03:44:15.7±0.3**, 8°.30S**±0°.02×**124°.92E**±0°.03**, h25**^{km}±2^{km}**, h25**^{km}**:pP-P, n1606,** σ**1**^{s}**90**/1544**, mb6.1**/254**, MS6.3**/284**, 105C-213D, Fault plane solution: NP1:**ϕ_s7.87109°**,** δ73.68006°**,** λ-27.59195°. **NP2:**ϕ_s106.22546°**,** δ63.60806°**,** λ-161.71790°. **Principal axes:** T Plg6.6393°**,** Azm58.7532°**;** N Plg58.2725°**,** Azm159.6047°**;** P Plg30.8647°**,** Azm324.7642°**; Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	1.58	204		Pn	03 44 41.5	-0.8
SOEI				Sn	Sn	03 45 01.3	-0.8
SOEI	**Soe**	1.58	204	⇑P	Pn	03 44 41.5	-0.8
SOEI	**Soe**	1.58	204	P	Pb	03 44 44.9	+0.5
SOEI	**Soe**	1.58	204	P	Pn	03 44 42.6	+0.2
BATI	**Baumata**	2.26	213	Pn	Pn	03 44 53.2	+1.5
	565nm,0.3s,baz=72,slow=2.1,SNR=475						
BATI				Sn	Sb	03 45 27.3	+3.7
	2μm,0.3s,baz=338,slow=24,SNR=12						
BATI				LR	LR	03 46 02.6	
	comp=Z,1900μm,21.2s,baz=54,slow=48						
BATI	**Baumata**	2.26	213	P	Pb	03 44 55.0	-1.0
MMRI	**Maumere**	2.68	263		Pn	03 44 57.3	0.0
MMRI				Sn	Sn	03 45 29.2	+0.2
MMRI	**Maumere**	2.68	263	⇑P	Pn	03 44 59.4	+2.1
MMRI	**Maumere**	2.68	263	P	Pn	03 44 59.4	+2.1
MMRI	**Maumere**	2.68	263	P	Pb	03 45 00.8	-2.2
EDFI	**Ende, Flores**	3.23	262	P	Pn	03 45 06.7	+1.7
BASI	**Baing, Sumba**	4.69	246	P	Pn	03 45 28.0	+2.9
WSI	**Waingapu**	4.77	253	P	Pn	03 45 28.2	+2.1
KDI	**Kendari**	4.89	332	P	Pn	03 45 26.7	-1.1
BSSI	**Bau Bau, Buton**	4.89	296	P	Pn	03 45 27.8	0.0
BKSI	**Bulukumba**	5.61	302	P	Pn	03 45 36.8	-0.9
	16nm333μm42μm2μm,0.9s						
WBSI	**Waikabubak, Su**	5.62	256	P	Pn	03 45 40.0	+2.1
KAPI	**Kappang**	6.09	302	Pn	Pn	03 45 43.8	-0.5
	7.5nm,0.3s,baz=141,slow=13,SNR=46						
KAPI				Sn	Sn	03 46 55.6	+2.4
	42nm,0.3s,baz=69,slow=22,SNR=6.3						
KAPI				LR	LR	03 48 09.9	
	comp=Z,595μm,19.9s,baz=154,slow=40						
KAPI	**Kappang**	6.09	302	Pn	Pn	03 45 44.4	+0.1
KAPI	**Kappang**	6.09	302	P	Pn	03 45 47.5	+3.3
KAPI				P	Pn	03 45 47.5	+3.3
KAPI				S	Sn	03 46 57.1	+3.9
KAPI				S	Sn	03 46 57.1	+3.9
KAPI	**Kappang**	6.09	302	⇑P	Pn	03 45 43.8	-0.5
KAPI	**Kappang**	6.09	302	P	Pn	03 45 47.1	+2.8
BNDI	**Bandanaira**	6.21	53	⇑P	Pn	03 45 43.3	-2.6
BNDI	**Bandanaira**	6.21	53	P	Pn	03 45 48.2	+2.2
	27nm677μm113μm3μm,1.3s						
BNDI	**Bandanaira**	6.21	53	P	Pn	03 45 49.7	+3.7
SANI	**Sanana**	6.30	10	⇑P	Pn	03 45 46.4	-0.8
SANI	**Sanana**	6.30	10	P	Pn	03 45 47.4	+0.2
	15nm142μm41μm2μm,1.8s						
SANI	**Sanana**	6.30	10	P	Pn	03 45 48.2	+1.0
SAUI	**Saumlaki**	6.32	88	Pn	Pn	03 45 47.8	+0.4
SAUI	**Saumlaki**	6.32	88	⇑P	Pn	03 45 45.6	-1.8
SAUI	**Saumlaki**	6.32	88	P	Pn	03 45 48.4	+1.0
	45nm872μm157μm4μm,1.0s						
SAUI	**Saumlaki**	6.32	88	P	Pn	03 45 50.6	+3.2
MSAI	**Masohi**	6.33	39	P	Pn	03 45 48.8	+1.2
	0.9nm1μm3μm312nm,1.0s						
PLAI	**Plampang**	7.09	265	P	Pn	03 46 02.3	+4.3
	34nm626μm188μm8μm,0.8s						
PLAI	**Plampang**	7.09	265	P	Pn	03 46 02.0	+4.0
DRS	**Darwin Rock St**	7.17	125	P	Pn	03 45 58.9	-0.2
	1μm,0.8s						
TTSI	**Tana Toraja**	7.29	316	P	Pn	03 46 02.8	+2.1
	9.1nm300μm39μm2μm,0.8s						
LUWI	**Luwuk**	7.53	343		Pn	03 46 04.0	0.0
LUWI	**Luwuk**	7.53	343	⇓P	Pn	03 46 03.8	-0.2
LUWI	**Luwuk**	7.53	343	P	Pn	03 46 04.0	0.0
	26nm316μm114μm6μm,1.3s						
LUWI	**Luwuk**	7.53	343	P	Pn	03 46 04.9	+0.9
MTN	**Manton Dam**	7.59	127	P	Pn	03 46 05.0	+0.1
	baz=7.6,SNR=173						
MTN				S	Sn	03 47 29.0	-1.2
	baz=7.6						
MTN	**Manton Dam**	7.59	127	Pn	Pn	03 46 04.7	-0.2
MTN	**Manton Dam**	7.59	127	⇑P	Pn	03 46 03.4	-1.5
MTN	**Manton Dam**	7.59	127	P	Pn	03 46 05.2	+0.3
	3μm,0.6s						
TWSI	**Taliwang, Sumb**	7.97	266	P	Pn	03 46 12.7	+2.7
	7.6nm271μm41μm2μm,0.8s						
APSI	**Ampana**	8.04	336	P	Pn	03 46 11.3	+0.3
	3μm,1.2s						
LBMI	**Labuha**	8.04	19	P	Pn	03 46 14.4	+3.4
	126μm29μm1μm,1.5s						
KNRA	**Kununurra**	8.23	153	P	Pn	03 46 12.9	-0.8
	baz=8.3,SNR=298						
KNRA	**Kununurra**	8.23	153	Pn	Pn	03 46 13.0	-0.7
KNRA	**Kununurra**	8.23	153	P	Pn	03 46 12.7	-1.0
	5μm,0.8s						
KDU	**Kakadu**	8.61	121	P	Pn	03 46 17.3	-1.4
	baz=8.6,SNR=728						
KDU	**Kakadu**	8.61	121	⇑P	Pn	03 46 17.4	-1.4
KDU	**Kakadu**	8.61	121	P	Pn	03 46 17.4	-1.4
	1μm,0.7s						
KMSI	**Cibinong**	8.87	354	P	Pn	03 46 24.3	+1.8
	2μm14μm1μm,1.2s						
FAKI	**Fak Fak**	9.04	54	Pn	Pn	03 46 25.1	+0.3
FAKI	**Fak Fak**	9.04	54	⇑P	Pn	03 46 24.5	-0.3
FAKI	**Fak Fak**	9.04	54	P	Pn	03 46 25.3	+0.5
	507μm120μm2μm,1.2s						
GTOI	**Gorontalo**	9.08	348	P	Pn	03 46 27.5	+2.1
	85μm8μm304nm,0.9s						
MRSI	**Marisa**	9.22	341	P	Pn	03 46 27.3	+0.1
	219μm24μm1μm,1.3s						
TNTI	**Ternate**	9.34	15	Pn	Pn	03 46 29.7	+0.8
TNTI	**Ternate**	9.34	15	⇓P	Pn	03 46 31.3	+2.4
TNTI	**Ternate**	9.34	15	P	Pn	03 46 30.2	+1.3
	69μm25μm1μm,1.4s						
DNP	**Denpasar**	9.62	267	P	Pn	03 46 34.9	+2.2
	344μm97μm3μm,1.1s						
SRBI	**Singaraja**	9.62	271	P	Pn	03 46 34.7	+2.0
	281μm35μm1μm,1.0s						
IGBI	**Denpasar**	9.68	266	P	Pn	03 46 35.7	+2.1
	177μm40μm1μm,1.1s						
SIJI	**Sorong**	9.72	41	Pn	Pn	03 46 33.3	-0.8
	3.4nm,0.3s,baz=217,slow=9.8,SNR=115						
SIJI				LR	LR	03 50 16.2	
	comp=Z,321μm,21.4s,baz=244,slow=38						
SWI	**Sorong**	9.72	41	P	Pn	03 46 35.1	+1.0
	257μm61μm1μm,1.5s						
FITZ	**Fitzroy Crossi**	9.76	176	Pn	Pn	03 46 33.2	-1.4
	8.9nm,0.3s,baz=3.6,slow=10,SNR=160						
FITZ				Sn	Sn	03 48 20.9	-2.6
	88nm,0.3s,baz=252,slow=5.4,SNR=9.1						
FITZ				LR	LR	03 50 48.9	
	comp=Z,57μm,20.1s,baz=4.5,slow=40						
FITZ	**Fitzroy Crossi**	9.76	176	P	Pn	03 46 32.4	-2.3
	baz=9.8,SNR=1000						
FITZ	**Fitzroy Crossi**	9.76	176	⇑P	Pn	03 46 32.2	-2.4
FITZ				⇑S	Sn	03 48 22.2	-1.4
MPSI	**Mapaga**	9.94	330	P	Pn	03 46 37.4	+0.3
	361μm16μm832nm,1.7s						
KBKI	**Kotabaru**	10.03	299	P	Pn	03 46 41.1	+2.7
	2μm7μm354nm,1.3s						
TOLI2	**Tolitoli**	10.22	336	Pn	Pn	03 46 41.2	+0.2
TOLI2	**Tolitoli**	10.22	336	P	Pn	03 46 42.3	+1.3
ABJI	**Asem Bagus**	10.60	272	P	Pn	03 46 49.6	+3.5
	259μm87μm3μm,2.9s						
JAGI	**Jajag, Banyuwa**	10.66	268		Pn	03 46 46.4	-0.6
JAGI	**Jajag, Banyuwa**	10.66	268	P	Pn	03 46 47.0	0.0
	268μm39μm1μm,1.5s						
JAGI	**Jajag, Banyuwa**	10.66	268	P	Pn	03 46 50.8	+3.8
KMMI	**Kalianget**	10.93	276	P	Pn	03 46 52.7	+2.0
	171μm119μm3μm,2.4s						
SMKI	**Samarinda**	10.96	315	P	Pn	03 46 53.2	+2.1
	238μm25μm502nm,1.3s						
BBKI	**Banjar Baru**	11.12	295	P	Pn	03 46 56.8	+3.5
	57μm35μm987nm,1.1s						
BLJI	**Banyuglugur**	11.23	272	P	Pn	03 46 58.2	+3.4
	142μm27μm997nm,2.0s						
GMJI	**Gumukmas**	11.36	269	P	Pn	03 46 58.1	+1.5
	252μm19μm696nm,1.6s						
MTKI	**Muara Teweh, K**	12.38	306	P	Pn	03 47 12.4	+1.8
	61μm15μm666nm,0.9s						
GRJI	**Gresik**	12.41	276	P	Pn	03 47 13.6	+2.6
	5μm22μm1μm,1.0s						
BWJI	**Bawean**	12.41	281	P	Pn	03 47 13.5	+2.5
	79μm27μm1μm,1.2s						
SRPI	**Serui, Papua**	12.95	61	P	Pn	03 47 17.0	-1.4
	129μm36μm802nm,1.6s						
PWJI	**Pagerwojo**	12.99	270	P	Pn	03 47 20.9	+2.0
	25μm788nm,1.1s						
TBJI	**Tambak Boyo**	13.05	276	P	Pn	03 47 20.8	+1.1
	104μm54μm2μm,2.4s						
BAKI	**Biak**	13.19	58	P	Pn	03 47 22.3	+0.7
NGJI	**Ngawi**	13.37	273	P	Pn	03 47 27.3	+3.2
	6μm13μm474nm,1.0s						
PCJI	**Pacitan**	13.61	269	P	Pn	03 47 27.8	+0.5
	183μm25μm2μm,0.9s						
MBWA	**Marble Bar**	13.73	201	P	Pn	03 47 31.1	+2.2
MBWA				P	Pn	03 47 31.1	+2.2
MBWA	**Marble Bar**	13.73	201	⇑P	Pn	03 47 27.2	-1.8
MBWA	**Marble Bar**	13.73	201	P	Pn	03 47 30.3	+1.4
PSA00	**Pilbara Seismi**	14.07	200		Pn	03 47 32.1	-1.6
PSA00	**Pilbara Seismi**	14.07	200		Pn	03 47 31.9	-1.7
PSA00	**Pilbara Seismi**	14.07	200	P	Pn	03 47 34.8	+1.2
	888nm,1.7s						
UGM	**Wanagama**	14.26	271	P	Pn	03 47 36.8	+0.5
	198μm30μm2μm,1.8s						
UGM	**Wanagama**	14.26	271	P	Pn	03 47 37.3	+1.0
GSPH	**General Santos**	14.30	0	⇑*i*P	P	03 47 45.2	+1.3
PBKI	**Pangkalan Bun**	14.31	292	P	Pn	03 47 40.1	+3.1
	98μm37μm1μm,1.1s						
WAMI	**Wamena**	14.39	73	P	P	03 47 41.7	-3.1
SMRI	**Semarang**	14.41	274	P	Pn	03 47 38.5	+0.2
SMRI	**Semarang**	14.41	274	⇑P	Pn	03 47 40.7	+2.4
SMRI	**Semarang**	14.41	274	P	Pn	03 47 40.7	+2.4
	174μm56μm2μm,1.0s						
YOGI	**Yogyakarta**	14.49	271	P	Pn	03 47 41.8	+2.3
	83μm20μm778nm,0.8s						
WB0	**Warramunga Arr**	14.63	142	Pn	Pn	03 47 36.0	-5.3
WRA	**Warramunga Arr**	14.73	143	Pn	Pn	03 47 37.9	-4.8
	10nm,0.3s,baz=317,slow=13,SNR=186						
WRA				Sn	Sn	03 50 22.1	-3.1
	28nm,0.3s,baz=316,slow=23,SNR=8.0						
WRA				LR	LR	03 54 48.0	
	comp=Z,188μm,19.7s,baz=325,slow=43						
WRA	**Warramunga Arr**	14.73	143	P	Pn	03 47 37.6	-5.1
WRA	**Warramunga Arr**	14.73	143	Pn	Pn	03 47 37.6	-5.1
WRAB	**Tennant Creek**	14.73	143	*d i*P	Pn	03 47 36.8	-5.8
WRAB				pmax	pmax		
	comp=Z,2μm,1.0s						
WRAB	**Tennant Creek**	14.73	143		Pn	03 47 34.6	-8.0
WC3	**Warramunga Arr**	14.76	143	P	Pn	03 47 37.5	-5.6
	baz=15						
WR0	**Warramunga Arr**	14.86	142	Pn	Pn	03 47 39.0	-5.5
SMPI	**Sarmi**	15.09	66	P	Pn	03 47 45.5	-2.0
	comp=Z,120μmcomp=Z,22μmcomp=Z,422nm,1.7s						
DAV	**Davao City (W)**	15.29	2	Pn	Pn	03 47 47.8	-2.3
	comp=Z,17nm,0.3s,baz=159,slow=10,SNR=1.1						
DAV				LR	LR	03 54 32.1	
	comp=Z,70μm,21.7s,baz=191,slow=41						
DAV	**Davao City (W)**	15.29	2		Pn	03 47 49.6	-0.5
MMPI	**Merauke**	15.30	92	P	Pn	03 47 51.3	+1.1
	comp=Z,129μmcomp=Z,73μmcomp=Z,2μm,0.9s						
DMPH	**Davao City--Mi**	15.30	2	⇑*e*P	Pn	03 47 52.1	+1.9
SPMM	**Sapulut**	15.44	327	P	P	03 47 55.0	-1.4
STKI	**Sintang**	15.77	301	P	Pn	03 47 58.0	+1.6
	comp=Z,64μmcomp=Z,35μmcomp=Z,556nm,1.2s						
KPJI	**Karang Pucung**	15.87	272	P	Pn	03 47 59.0	+1.3
	comp=Z,149μmcomp=Z,18μmcomp=Z,625nm,2.2s						
BUKP	**Musuan**	16.08	0	⇑*e*P	P	03 48 02.9	-0.7
PAGZ	**Pagadian**	16.12	354	⇓*i*P	Pn	03 48 01.4	+0.5
CMJI	**Cimerak**	16.32	271	P	Pn	03 48 02.9	-0.6
	comp=Z,94μmcomp=Z,13μmcomp=Z,530nm,0.9s						
SBUM	**Sibu**	16.57	310	P	P	03 48 09.0	0.0
JCJI	**Jatiwangi**	16.61	275	P	Pn	03 48 07.7	+0.5
	comp=Z,153μmcomp=Z,30μmcomp=Z,992nm,0.8s						
JAY	**Jayapura**	16.72	71	Pn	Pn	03 48 06.1	-2.5
	comp=Z,2.4nm,0.3s,baz=222,slow=9.9,SNR=33						
DCPH	**Dipolog City**	16.85	355	⇑*e*P	P	03 48 13.9	+1.8
WRKA	**Warakurna**	16.95	169	P	Pn	03 48 09.7	-1.7
	baz=17,SNR=745						
WRKA	**Warakurna**	16.95	169	⇓P	Pn	03 48 08.7	-2.7
WRKA				⇑S	Sn	03 51 17.9	-1.3
CISI	**Cisompet, Garu**	16.96	271	⇑P	Pn	03 48 09.9	-1.8
CISI	**Cisompet, Garu**	16.96	271	P	Pn	03 48 09.7	-1.9
	comp=Z,74μmcomp=Z,13μmcomp=Z,632nm,0.9s						
LEM	**Lembang**	17.22	274	P	Pn	03 48 14.4	-0.5
	comp=Z,9.6nm,0.3s,baz=64,slow=5.5,SNR=50						
LEM				LR	LR	03 56 13.6	
	comp=Z,243μm,18.9s,baz=95,slow=42						
LEM	**Lembang**	17.22	274	P	P	03 48 15.8	-0.6
	comp=Z,74μmcomp=Z,27μmcomp=Z,526nm,1.4s						
KSM	**Kuching**	17.51	303	P	P	03 48 21.0	+1.6
AS31	**Alice Springs**	17.53	152	Pn	Pn	03 48 15.4	-3.3
ASAR	**Alice Springs**	17.53	152	P	Pn	03 48 15.0	-3.7
	comp=Z,2.7nm,0.3s,baz=314,slow=10,SNR=128						
ASAR				S	Sn	03 51 33.6	+0.2
	comp=Z,18nm,0.3s,baz=308,slow=22,SNR=6.0						
ASAR				LR	LR	03 56 21.0	
	comp=Z,155μm,19.3s,baz=326,slow=41						
ASAR	**Alice Springs**	17.53	152	P	Pn	03 48 15.7	-3.0
ASAR	**Alice Springs**	17.53	152	Pn	Pn	03 48 15.7	-3.0
GIRL	**Giralia**	17.57	215	P	P	03 48 20.6	+0.6
	baz=18,SNR=9.0						
GIRL	**Giralia**	17.57	215		Pn	03 48 18.2	-0.9
GIRL				IAmb	IAmb	03 48 44.6	
	comp=Z,1μm,1.1s						
GIRL	**Giralia**	17.57	215	⇑P	Pn	03 48 17.0	-2.1
GIRL	**Giralia**	17.57	215	P	P	03 48 20.9	+0.9
	comp=Z,1μm,1.0s						
CNJI	**Cibinong**	17.66	272	P	Pn	03 48 18.7	-1.5
	comp=Z,121μmcomp=Z,43μmcomp=Z,2μm,1.0s						
CBJI	**Citeko**	18.02	275	P	Pn	03 48 24.3	-0.4
	comp=Z,125μmcomp=Z,48μmcomp=Z,2μm,1.0s						
DBJI	**Dramaga**	18.11	274	P	Pn	03 48 25.4	-0.4
	comp=Z,117μmcomp=Z,55μmcomp=Z,2μm,1.6s						
CNOP	**Candoni, Negro**	18.16	353	⇓*i*P	P	03 48 27.3	+0.8
TNG	**Tangerang**	18.25	275	P	Pn	03 48 29.8	+2.2
	comp=Z,64μmcomp=Z,38μmcomp=Z,2μm,1.9s						
TNG				P	P	03 48 29.0	+1.4
	comp=Z,58μmcomp=Z,2μm,1.9s						
MSLP	**Maasin**	18.32	360	⇑*e*P	Pn	03 48 29.0	+0.7
I39PW	**PALAU INFRASON**	18.43	32	*i*		05 28 50.0	
	baz=211,slow=314,SNR=3.0						
QIS	**Mount Isa**	18.70	132	P	P	03 48 30.3	-2.2
	baz=19,SNR=81						
QIS	**Mount Isa**	18.70	132	P	P	03 48 32.0	-0.5
	comp=Z,971nm,1.3s						
COEN	**Coen**	18.76	109	P	P	03 48 31.0	-2.2

COEN				IAmb	IAmb	03 48 42.6	
	comp=Z,1µm,1.1s						
COEN	Coen	18.76	109	⇑P	P	03 48 30.1	-3.2
COEN	Coen	18.76	109	P	P	03 48 32.9	-0.3
	comp=Z,1µm,2.3s						
SBJI	Serang	18.77	275	P	P	03 48 33.0	-0.3
	comp=Z,113µmcomp=Z,32µmcomp=Z,1µm,1.4s						
XMI	Christmas Isla	19.10	262	P	Pn	03 48 40.7	+2.9
	comp=Z,2µm,1.9s						
XMIS	Christmas Isla	19.14	262	P	P	03 48 35.5	-1.8
XMIS				IAmb	IAmb	03 48 47.5	
	comp=Z,1µm,1.1s						
XMIS	Christmas Isla	19.14	262	P	Pn	03 48 38.0	-0.3
	comp=Z,2µm,1.1s						
CGJI	Cibinong	19.14	274	P	P	03 48 36.4	-1.0
	comp=Z,102µmcomp=Z,33µmcomp=Z,1µm,1.1s						
JAP	San Jose, Anti	19.16	351	⇑eP	Pn	03 48 40.7	+2.2
MEEK	Meekatharra	19.19	197	P	Pn	03 48 38.4	-0.5
	baz=19,SNR=138						
MEEK	Meekatharra	19.19	197	P	Pn	03 48 39.1	+0.2
	comp=Z,645nm,0.9s						
PPBI	Pangkal Pinang	19.67	287	P	Pn	03 48 44.9	+0.2
	comp=Z,77µmcomp=Z,29µmcomp=Z,2µm,1.3s						
BLSI	Bandar Lampung	19.75	277	P	P	03 48 42.9	-1.2
	comp=Z,79µmcomp=Z,15µmcomp=Z,394nm,1.0s						
RCP	Roxas	19.85	354	⇑eP	Pn	03 48 48.6	+1.8
KLI	Kotabumi	20.22	278	P	P	03 48 47.6	-1.6
	comp=Z,79µmcomp=Z,17µmcomp=Z,727nm,1.2s						
KLSI		20.38	279	P	P	03 48 51.4	+0.5
	comp=Z,26µmcomp=Z,9µmcomp=Z,279nm,1.2s						
KASI	Kota Agung	20.46	276	P	P	03 48 49.6	-2.2
	comp=Z,84µmcomp=Z,22µmcomp=Z,633nm,0.9s						
PMBI	Palembang	20.75	284	P	P	03 48 54.8	-0.1
PMBI				IAmb	IAmb	03 49 01.6	
	comp=Z,2µm,1.1s						
PMBI	Palembang	20.75	284	P	P	03 48 56.1	+1.2
	comp=Z,55µmcomp=Z,2µm,1.1s						
MDSI	Maura Dua	20.96	279	P	P	03 48 56.5	-0.7
	comp=Z,38µmcomp=Z,11µmcomp=Z,107nm,1.1s						
LWLI	Liwa	20.98	278	P	P	03 48 57.9	+0.4
	comp=Z,19µmcomp=Z,406nm,1.4s						
MTSU	Mount Surprise	21.24	119	P	P	03 49 00.9	+0.7
	baz=21,SNR=295						
MTSU	Mount Surprise	21.24	119	P	P	03 49 01.0	+0.8
	comp=Z,509nm,1.3s						
DSRI	Dabo	21.71	290	P	P	03 49 07.3	+2.0
	comp=Z,34µmcomp=Z,22µmcomp=Z,732nm,1.7s						
LHSI	Lahat	21.73	281	P	P	03 49 04.3	-1.2
	comp=Z,64µmcomp=Z,13µmcomp=Z,643nm,1.1s						
OOD	Oodnadatta	21.89	154	P	P	03 49 07.9	+0.8
	comp=Z,2µm,1.7s						
PMG	Port Moresby	22.00	95	P	P	03 49 07.7	-0.6
	comp=Z,790nm,0.8s,baz=295,slow=4.0,SNR=26						
PMG				LR	LR	04 00 11.4	
	comp=Z,166µm,18.4s,baz=261,slow=44						
PMG	Port Moresby	22.00	95	P	P	03 49 05.6	-2.7
PMG				pmax	pmax		
	comp=Z,2µm,0.9s						
PMG				MLR	MLR		
	comp=Z,161µm,20.0s						
PMG	Port Moresby	22.00	95	P	P	03 49 05.6	-2.7
PMG	Port Moresby	22.00	95	IAMs_20	IAMs_20	03 58 57.7	
	comp=Z,161µm,20.0s						
PMG	Port Moresby	22.00	95	⇑P	P	03 49 04.7	-3.6
PMG	Port Moresby	22.00	95	P	P	03 49 11.4	+3.1
PMG	Port Moresby	22.00	95	P	P	03 49 11.9	+3.6
PGP	Puerto Galera	22.02	350	⇓eP	P	03 49 09.8	+1.3
MNAI	Manna	22.18	279	P	P	03 49 08.0	-2.4
MNAI				IAmb	IAmb	03 49 26.9	
	comp=Z,591nm,0.9s						
MNAI				IAMs_20	IAMs_20	03 58 20.0	
	comp=Z,150µm,22.0s						
MNAI	Manna	22.18	279	⇑P	P	03 49 12.2	+1.8
MNAI	Manna	22.18	279	P	P	03 49 11.2	+0.9
	comp=Z,62µmcomp=Z,34µmcomp=Z,762nm,0.9s						
MNAI	Manna	22.18	279	P	P	03 49 13.5	+3.2
	comp=Z,770nm,0.9s						
JMBI	JAMBI	22.20	286	P	P	03 49 11.6	+1.0
	comp=Z,21µmcomp=Z,809nm,2.0s						
MORW	Morawa	22.28	201	P	P	03 49 11.3	+0.1
	baz=22,SNR=31						
MORW	Morawa	22.28	201	P	P	03 49 10.2	-1.0
MORW				IAmb	IAmb	03 49 24.1	
	comp=Z,890nm,1.3s						
MORW	Morawa	22.28	201	⇑P	P	03 49 11.1	-0.2
MORW	Morawa	22.28	201	P	P	03 49 11.1	-0.2
	comp=Z,548nm,1.7s						
LUBP	Lubang	22.38	348	⇓iP	P	03 49 13.3	+0.9
LQP	Lukban	22.52	351	⇑iP	P	03 49 15.8	+1.6
FORT	Forrest	22.55	173	P	P	03 49 15.9	+1.8
	baz=23,SNR=60						
FORT	Forrest	22.55	173	P	P	03 49 13.1	-1.0
FORT	Forrest	22.55	173	⇑P	P	03 49 14.7	+0.5
FORT	Forrest	22.55	173	P	P	03 49 14.4	+0.3
	comp=Z,2µm,1.4s						
JCNP	Jose Panganiba	22.55	354	⇓eP	P	03 49 14.2	-0.1
TGY	Tagaytay City	22.61	350	eP	P	03 49 19.0	+4.1
KSI	Kapahiang	22.68	280	P	P	03 49 12.8	-2.9
	comp=Z,439nm,1.1s						
MASI	Maura Aman, Be	23.14	281	P	P	03 49 19.3	-1.2
	comp=Z,35µmcomp=Z,37µmcomp=Z,690nm,1.2s						
MANU	Manus Island	23.19	76	P	P	03 49 19.0	-2.0
MANU	Manus Island	23.19	76	⇑P	P	03 49 18.9	-2.1
MULG	Mulgathing	23.48	160	P	P	03 49 24.6	+1.0
	comp=Z,1µm,1.4s						
BLDU	Ballidu	23.49	198	P	P	03 49 23.2	-0.5
	baz=24,SNR=34						
BLDU	Ballidu	23.49	198	P	P	03 49 22.9	-0.8
	comp=Z,670nm,0.9s						
CTA	Charters Tower	23.73	122	P	P	03 49 26.7	+0.5
	comp=Z,510nm,1.1s,baz=298,slow=12,SNR=110						
CTA	Charters Tower	23.73	122	P	P	03 49 31.1	+4.9
	comp=Z,2µm,1.6s						
CTAO	Charters Tower	23.73	122	P	P	03 49 26.5	+0.3
CTAO				pmax	pmax		
	comp=Z,3µm,1.4s						
CTAO				MLR	MLR		
	comp=Z,58µm,20.0s						
CTAO	Charters Tower	23.73	122	P	P	03 49 26.5	+0.3
CTAO	Charters Tower	23.73	122	⇑P	P	03 49 26.8	+0.5
CTAO	Charters Tower	23.73	122	P	P	03 49 27.6	+1.4
RGRI	Rengat	23.86	288	P	P	03 49 28.4	+1.0
	comp=Z,1µmcomp=Z,23µmcomp=Z,428nm,2.2s						
INKA	Innaminka	24.44	144	P	P	03 49 37.2	+4.5
	comp=Z,3µm,1.9s						
MUN	Mundaring	24.91	198	P	P	03 49 37.3	+0.4
	baz=25,SNR=15						
MUN	Mundaring	24.91	198	P	P	03 49 38.8	+1.9
	comp=Z,452nm,1.6s						
LCRK	Leigh Creek	25.30	152	P	P	03 49 41.5	+1.1
	comp=Z,2µm,1.3s						
BKNI	Bangkinang	25.30	289	P	P	03 49 40.2	-0.4
BKNI				IAmb	IAmb	03 49 46.5	
	comp=Z,1µm,1.3s						
BKNI	Bangkinang	25.30	289	⇓P	P	03 49 40.0	-0.7
BKNI	Bangkinang	25.30	289	P	P	03 49 42.1	+1.5
	comp=Z,44µmcomp=Z,16µmcomp=Z,933nm,1.3s						
PDSI	Padang	25.45	286	P	P	03 49 38.9	-3.1
	comp=Z,23µmcomp=Z,7µmcomp=Z,124nm,1.2s						
JRMM	Jerantut	25.45	298	P	P	03 49 44.0	+2.0
NWAO	Narrogin (SRO)	25.52	195	P	P	03 49 43.0	+0.6
	comp=Z,100nm,1.0s,baz=35,slow=8.3,SNR=21						
NWAO	Narrogin (SRO)	25.52	195	P	P	03 49 42.5	+0.1
	baz=26,SNR=26						
NWAO				P	P	03 49 42.5	+0.1
	baz=26,SNR=26						
NWAO	Narrogin (SRO)	25.52	195	P	P	03 49 39.4	-3.0
NWAO				pmax	pmax		
	comp=Z,429nm,1.1s						
NWAO	Narrogin (SRO)	25.52	195	P	P	03 49 39.4	-3.0
NWAO				IAmb	IAmb	03 49 59.1	
	comp=Z,429nm,1.1s						
NWAO	Narrogin (SRO)	25.52	195	IAMs_20	IAMs_20	04 01 15.9	
	comp=Z,109µm,18.0s						
NWAO	Narrogin (SRO)	25.52	195	P	P	03 49 43.8	+1.4
NWAO				P	P	03 49 43.8	+1.4
NWAO				P	P	03 49 43.8	+1.4
NWAO	Narrogin (SRO)	25.52	195	P	P	03 49 43.3	+0.9
	comp=Z,372nm,1.4s						
NWAO	Narrogin (SRO)	25.52	195	P	P	03 49 43.6	+1.2
	comp=Z,372nm,1.4s						
PPI	Padang Panjang	25.65	286	P	P	03 49 43.4	-0.4
	comp=Z,2µmcomp=Z,183nm,1.4s						
QLP	Quilpie	25.81	137	P	P	03 49 47.1	+1.9
	baz=26,SNR=87						
QLP	Quilpie	25.81	137	⇑P	P	03 49 46.5	+1.3
QLP	Quilpie	25.81	137	P	P	03 49 47.8	+2.6
	comp=Z,2µm,1.6s						
DLV	T Lat	25.92	321	P	P	03 49 46.1	-0.3
DLV				IAmb	IAmb	03 50 03.5	
	comp=Z,535nm,1.5s						
APYP	Conner	26.25	352	⇓eP	P	03 49 50.7	+1.5
BBOO	Buckleboo	26.48	159	P	P	03 49 51.9	+0.8
	baz=27,SNR=62						
BBOO	Buckleboo	26.48	159	P	P	03 49 50.6	-0.5
BBOO				IAmb	IAmb	03 50 36.7	
	comp=Z,1µm,1.6s						
BBOO	Buckleboo	26.48	159	P	P	03 49 51.5	+0.4
	comp=Z,459nm,1.1s						
SISI	Saibi	26.64	284	P	P	03 49 51.2	-1.6
	comp=Z,3µmcomp=Z,130nm,1.5s						
MNSI	Mandailing Nat	26.83	289	P	P	03 49 53.6	-0.9
	comp=Z,31µmcomp=Z,8µmcomp=Z,188nm,0.8s						
IPM	Ipoh	27.01	297	P	P	03 49 57.0	+0.9
KULM	Kulim	27.72	298	P	P	03 50 03.0	+0.5
COCO	West Island	27.90	260	P	P	03 50 01.5	-2.6
COCO				pmax	pmax		
	comp=Z,530nm,1.1s						
COCO				MLR	MLR		
	comp=Z,82µm,21.0s						
COCO	West Island	27.90	260	P	P	03 50 01.5	-2.6
COCO				IAmb	IAmb	03 50 30.1	
	comp=Z,530nm,1.1s						
COCO				IAMs_20	IAMs_20	04 00 13.5	
	comp=Z,82µm,21.0s						
STKA	Stephens Creek	28.12	149	P	P	03 50 06.8	+0.9
	comp=Z,61nm,0.8s,baz=320,slow=9.2,SNR=36						
STKA				LR	LR	04 02 19.8	
	comp=Z,126µm,20.0s,baz=318,slow=38						
STKA	Stephens Creek	28.12	149	P	P	03 50 06.8	+0.9
	baz=28,SNR=31						
STKA	Stephens Creek	28.12	149	P	P	03 50 04.9	-0.9
STKA	Stephens Creek	28.12	149	P	P	03 50 08.1	+2.2
	comp=Z,88nm,2.5s						
HTT	Hallett	28.15	155	P	P	03 50 07.4	+1.2
	baz=28,SNR=52						
HTT	Hallett	28.15	155	⇓P	P	03 50 07.7	+1.5
HTT	Hallett	28.15	155	P	P	03 50 07.8	+1.6
	comp=Z,381nm,2.9s						
PSI	Prapat	28.18	292	P	P	03 50 05.3	-1.4
	comp=Z,186nm,1.0s,baz=127,slow=7.4,SNR=89						
PSI				LR	LR	04 02 21.3	
	comp=Z,306µm,18.1s,baz=120,slow=39						
RK1H	Rockhampton Ha	28.73	124	P	P	03 50 16.5	+5.1
	comp=Z,88nm,1.0s						
TSI	Tuntungan	28.79	293	P	P	03 50 12.6	+0.6
	comp=Z,35µmcomp=Z,599nm,1.4s						
GSI	Gunungsitoli	28.89	288	P	P	03 50 09.3	-3.6
GSI	Gunungsitoli	28.89	288	⇑P	P	03 50 11.6	-1.4
GSI	Gunungsitoli	28.89	288	P	P	03 50 11.5	-1.4
	comp=Z,31µmcomp=Z,11µmcomp=Z,216nm,1.1s						
GSI	Gunungsitoli	28.89	288	P	P	03 50 12.0	-0.9
RMQ	Roma	28.96	132	P	P	03 50 14.8	+1.3
	baz=29,SNR=47						
RMQ	Roma	28.96	132	P	P	03 50 16.3	+2.9
	comp=Z,116nm,0.9s						
GUMO	Guam	29.41	42	LR	LR	04 01 11.7	
	comp=Z,29µm,21.3s,baz=221,slow=35						
TPTI		29.96	291	P	P	03 50 21.8	-0.6
	comp=Z,11µmcomp=Z,2µmcomp=Z,120nm,1.2s						
CMSA	Cobar Meteorol	30.14	143	P	P	03 50 25.6	+1.8
	baz=30,SNR=85						
CMSA	Cobar Meteorol	30.14	143	P	P	03 50 25.4	+1.6
	comp=Z,307nm,1.1s						
EIDS	Eidsvold	30.14	127	P	P	03 50 25.9	+2.0
	baz=30,SNR=4.3						
EIDS	Eidsvold	30.14	127	P	P	03 50 23.6	-0.4
EIDS	Eidsvold	30.14	127	⇑P	P	03 50 26.4	+2.5
UBPT	Khong Chiam	30.34	320	P	P	03 50 25.8	0.0
UBPT				IAmb	IAmb	03 50 32.1	
	comp=Z,988nm,1.9s						
UBPT	Khong Chiam	30.34	320	⇑P	P	03 50 26.5	+0.7
QIZ	Qiongzhong	30.96	331	P	P	03 50 30.4	-0.8
QIZ				S	S	03 55 39.8	+5.3
QIZ				pmax	pmax		
	comp=Z,49nm,1.9s						
QIZ				pmax	pmax		
	comp=Z,5µm,11.0s						
QIZ				LR	LR		
	comp=Z,24µm,17.7s						
QIZ				LR	LR		
	comp=Z,32µm,16.2s						
QIZ				LR	LR		
	comp=Z,43µm,33.3s						
QIZ	Qiongzhong	30.96	331	P	P	03 50 31.0	-0.2
LHMI	Lhok Sumawe	30.97	295	P	P	03 50 30.7	-0.7
LHMI	Lhok Sumawe	30.97	295	P	P	03 50 31.6	+0.2
	comp=Z,44µmcomp=Z,9µmcomp=Z,701nm,1.0s						
TWG	Pinlang	31.16	353	P	P	03 50 31.8	-1.1
TWG				IAmb	IAmb	03 51 08.1	
	comp=Z,520nm,1.7s						
TPUB	Ta-pu	31.69	352	P	P	03 50 37.4	-0.2
TPUB				IAmb	IAmb	03 50 47.8	
	comp=Z,346nm,0.9s						
HKC	Hong Kong Obse	32.19	341	⇑P	P	03 50 43.0	+1.1
ARPS	Mount Arapiles	32.24	154	P	P	03 50 44.3	+2.0
	baz=32,SNR=42						
ARPS	Mount Arapiles	32.24	154	P	P	03 50 44.1	+1.8
	comp=Z,724nm,1.0s						
NACB	Ninganchiao	32.44	354	P	P	03 50 42.2	-1.9
NACB				IAmb	IAmb	03 50 58.7	
	comp=Z,414nm,1.6s						
YHNB	Yeheng	32.96	354	P	P	03 50 47.9	-0.8
YHNB				IAmb	IAmb	03 51 01.8	
	comp=Z,260nm,1.1s						
YHNB	Yeheng	32.96	354	P	P	03 50 50.9	+2.2
GZH	Guangzhou	33.19	340	P	P	03 50 55.4	+4.7
GZH				PP	PP	03 52 09.0	+2.9
GZH				S	S	03 56 17.2	+8.0
GZH				LR	LR		
	comp=Z,20µm,16.5s						
GZH				LR	LR		
	comp=Z,33µm,16.1s						
ARMA	Armidale	33.28	135	P	P	03 50 54.8	+3.1
	baz=33,SNR=21						
ARMA	Armidale	33.28	135	P	P	03 50 52.5	+0.9
ARMA				IAmb	IAmb	03 51 04.2	
	comp=Z,316nm,1.2s						
ARMA	Armidale	33.28	135	⇑P	P	03 50 54.0	+2.4
ARMA	Armidale	33.28	135	P	P	03 50 55.2	+3.6
	comp=Z,258nm,2.9s						
QZH	Quanzhou	33.62	350	⇓iP	P	03 50 56.4	+2.0
QZH				S	S	03 56 17.7	+2.0
QZH				pmax	pmax		
	comp=Z,150nm,2.5s						
QZH				pmax	pmax		
	comp=Z,6µm,5.9s						
QZH				LR	LR		
	comp=Z,10µm,17.0s						
QZH				LR	LR		
	comp=Z,16µm,22.3s						
QZH				LR	LR		
	comp=Z,22µm,19.9s						
YNG	Young	33.70	144	P	P	03 50 57.8	+2.7
	baz=34,SNR=32						
YNG	Young	33.70	144	P	P	03 50 59.1	+4.0
	comp=Z,347nm,2.0s						
PBKT	Sadao Pong	34.24	316	P	P	03 50 59.5	-0.4
JMZ	Minamidaito 2	34.47	10	P	P	03 51 02.0	+0.3
JMZ				IAmb	IAmb	03 51 08.2	
	comp=Z,525nm,1.0s						
JMZ	Minamidaito 2	34.47	10	⇓P	P	03 51 01.4	-0.4
TOO	Toolangi	34.58	151	P	P	03 51 05.9	+3.2
	baz=35,SNR=27						
TOO	Toolangi	34.58	151	P	P	03 51 02.2	-0.5
TOO				pmax	pmax		
	comp=Z,763nm,1.5s						
TOO	Toolangi	34.58	151	P	P	03 51 02.2	-0.5
TOO				IAmb	IAmb	03 51 17.4	
	comp=Z,763nm,1.4s						
TOO	Toolangi	34.58	151	⇓P	P	03 51 06.3	+3.6
TOO	Toolangi	34.58	151	P	P	03 51 06.7	+4.0
	comp=Z,496nm,1.4s						
HNR	Honiara	34.61	95	P	P	03 51 01.8	-1.5
	comp=Z,83nm,0.4s,baz=184,slow=4.2,SNR=1.9						
HNR				LR	LR	04 08 01.8	
	comp=Z,28µm,18.5s,baz=270,slow=41						
HNR	Honiara	34.61	95	P	P	03 51 01.6	-1.7
HNR				pmax	pmax		
	comp=Z,7µm,1.8s						
HNR				MLR	MLR		
	comp=Z,42µm,18.0s						
HNR	Honiara	34.61	95	P	P	03 51 01.6	-1.7
MGCD	Mangrove Creek	34.64	139	P	P	03 51 06.4	+3.2
	baz=35,SNR=13						
CAN	Canberra	34.77	144	P	P	03 51 04.1	-0.3
CAN				pmax	pmax		
	comp=Z,1µm,1.9s						
CAN				MLR	MLR		
	comp=Z,53µm,18.0s						
CAN	Canberra	34.77	144	P	P	03 51 04.1	-0.3
CAN				IAMs_20	IAMs_20	04 05 31.1	
	comp=Z,53µm,18.0s						
CAN	Canberra	34.77	144	⇑P	P	03 51 08.1	+3.7
CAN	Canberra	34.77	144	P	P	03 51 07.9	+3.5
CNB	Canberra Magne	34.98	144	P	P	03 51 08.9	+2.7
	baz=35,SNR=21						
CNB	Canberra Magne	34.98	144	P	P	03 51 10.9	+4.7
	comp=Z,367nm,1.9s						
RIV	Riverview	35.07	140	P	P	03 51 10.8	+3.9
	baz=35,SNR=8.5						
JOW	Kunigami	35.08	5	P	P	03 51 06.5	-0.5
JOW				IAmb	IAmb	03 51 20.8	
	comp=Z,303nm,1.1s						
JOW	Kunigami	35.08	5	⇓P	P	03 51 07.1	+0.1
SLVN	Son La	35.97	325	P	P	03 51 14.7	-0.2
SLVN				IAmb	IAmb	03 51 28.6	
	comp=Z,498nm,1.5s						
MILA	Mila	36.09	146	P	P	03 51 20.5	+4.7
	baz=36,SNR=3.1						
PATS	Pohnpei	36.53	67	IAMs_20	IAMs_20	04 07 06.6	
	comp=Z,43µm,19.0s						
PATS	Pohnpei	36.53	67	P	P	03 51 23.3	+3.6
CM31	Chiang Mai Arr	36.94	316	P	P	03 51 22.7	-0.4
CM31				IAmb	IAmb	03 51 25.7	
	comp=Z,530nm,1.3s						
CM31	Chiang Mai Arr	36.94	316	P	P	03 51 24.3	+1.2
	SNR=108						
CM31				P	P	03 51 24.3	+1.2
	SNR=108						
CMAR	Chiang Mai Arr	36.94	316	P	P	03 51 23.1	0.0
	comp=Z,129nm,0.9s,baz=142,slow=6.7,SNR=350						
CMAR				PcP	PcP	03 53 44.4	+0.1
	comp=Z,26nm,1.0s,baz=167,slow=4.1,SNR=2.1						
CMAR				LR	LR	04 07 52.1	
	comp=Z,82µm,20.9s,baz=195,slow=39						
CMAR	Chiang Mai Arr	36.94	316	P	P	03 51 23.0	-0.1
CMAR					PcP	03 53 43.5	-0.8
CHTO	Chiang Mai	37.18	317	P	P	03 51 25.0	-0.2
CHTO				pmax	pmax		
	comp=Z,703nm,1.3s						
CHTO				MLR	MLR		
	comp=Z,74µm,20.0s						
CHTO	Chiang Mai	37.18	317	P	P	03 51 25.0	-0.2
CHTO				IAmb	IAmb	03 51 27.7	
	comp=Z,703nm,1.3s						
CHTO	Chiang Mai	37.18	317	P	P	03 51 25.4	+0.2
CHTO				P	P	03 51 25.4	+0.2
CHTO				P	P	03 51 25.4	+0.2
CHTO	Chiang Mai	37.18	317	⇓P	P	03 51 25.9	+0.8
CHTO	Chiang Mai	37.18	317	P	P	03 51 26.2	+1.0
PBA	Port Blair	37.65	301	P	P	03 51 29.0	-0.2
PBA				IAmb	IAmb	03 51 36.7	
	comp=Z,581nm,1.4s						
PBA	Port Blair	37.65	301	eP	P	03 51 28.7	-0.5
DGPR	DIGLIPUR	38.28	304	eP	P	03 51 32.4	-2.1
CORO	Coronation Par	38.44	153	P	P	03 51 39.5	+4.0
	comp=Z,65nm,0.9s						
GYA	Guiyang	38.84	333	⇓iP	P	03 51 39.8	+0.6
GYA				S	S	03 57 37.1	+1.2
GYA				pmax	pmax		
	comp=Z,190nm,1.5s						
GYA				pmax	pmax		
	comp=Z,7µm,6.1s						
GYA				LR	LR		
	comp=Z,17µm,21.2s						
GYA				LR	LR		
	comp=Z,9µm,16.6s						
GYA				LR	LR		
	comp=Z,35µm,26.2s						
JCJ	Chichijima	38.97	25	P	P	03 51 39.8	-0.3
	comp=Z,156nm,0.7s,baz=280,slow=22,SNR=9.9						
JCJ	Chichijima	38.97	25	P	P	03 51 40.4	+0.3
JCJ				IAmb	IAmb	03 51 52.8	
	comp=Z,870nm,1.1s						
JCJ	Chichijima	38.97	25	P	P	03 51 44.1	+4.0
SSE	Sheshan	39.34	355	P	P	03 51 42.8	-0.3
SSE				pP	pP	03 51 49.9	-0.8
SSE				PP	PP	03 53 13.7	0.0
SSE				S	S	03 57 42.3	-0.7
SSE				sS	sS	03 57 55.7	+1.6
SSE				pmax	pmax		
	comp=Z,32nm,1.5s						
SSE				pmax	pmax		
	comp=Z,2µm,3.3s						
KMI	Kunming	39.64	328	⇓P	P	03 51 47.6	+1.6
KMI				pP	pP	03 51 55.0	+1.4
KMI				sP	sP	03 51 58.5	+1.9
KMI				PP	PnPn	03 53 24.2	+3.8
KMI				S	S	03 57 39.6	-8.5
KMI				pmax	pmax		
	comp=Z,330nm,1.6s						
KMI				pmax	pmax		
	comp=Z,5µm,3.6s						
KMI				LR	LR		
	comp=Z,26µm,14.5s						
KMI				LR	LR		
	comp=Z,33µm,18.4s						
KMI				LR	LR		
	comp=Z,49µm,20.4s						
TAU	Tasmania Unive	39.68	154	P	P	03 51 51.4	+5.5
KOUNC	Koumac, New Ca	39.90	112	⇑P	P	03 51 48.3	+0.2
JSU	Suzuyama	39.94	7	P	P	03 51 46.7	-1.4
JSU				IAmb	IAmb	03 52 02.8	
	comp=Z,959nm,1.9s						
JSU	Suzuyama	39.94	7	⇓P	P	03 51 47.6	-0.5
WHN	Wuhan	39.94	346	⇓iP	P	03 51 48.9	+0.8
WHN				sP	sP	03 51 59.3	+0.5
WHN				PP	PnPn	03 53 27.2	+3.5
WHN				S	S	03 57 54.6	+2.6
WHN				SS	SS	04 00 44.2	-5.2
WHN				pmax	pmax		
	comp=Z,10µm,3.8s						
WHN				LR	LR		
	comp=Z,44µm,17.7s						
WHN				LR	LR		
	comp=Z,17µm,13.0s						
WHN				LR	LR		
	comp=Z,72µm,19.2s						
NJ2	Nanjing	40.55	352	⇓iP	P	03 51 54.0	+0.9
NJ2				pP	pP	03 51 58.7	-2.1
NJ2				sP	sP	03 52 04.2	+0.4
NJ2				S	S	03 58 01.6	+0.6
NJ2				pmax	pmax		
	comp=Z,120nm,1.2s						
NJ2				pmax	pmax		
	comp=Z,7µm,5.3s						
NJ2				LR	LR		
	comp=Z,9µm,20.8s						
NJ2				LR	LR		
	comp=Z,20µm,22.3s						
NJ2				LR	LR		
	comp=Z,14µm,24.6s						
ENH	Enshi	41.12	340	P	P	03 51 57.8	-0.2
ENH				IAmb	IAmb	03 52 12.0	
	comp=Z,368nm,1.3s						
JNU	Nakatsue	41.58	8	P	P	03 52 01.0	-0.7
	comp=Z,64nm,1.1s,baz=173,slow=7.3,SNR=15						
JNU	Nakatsue	41.58	8	P	P	03 52 01.2	-0.5
JNU	Nakatsue	41.58	8	⇓P	P	03 52 01.1	-0.7
SANVU	Saraoutou	41.92	104	P	P	03 52 04.4	-0.3
SANVU				IAMs_20	IAMs_20	04 09 42.3	
	comp=Z,53µm,21.0s						
SANVU	Saraoutou	41.92	104	⇑P	P	03 52 05.2	+0.5
SANVU	Saraoutou	41.92	104	P	P	03 52 06.4	+1.7
NOUC	Port Laguerre	42.07	114	P	P	03 52 07.2	+1.3
DZM	Mont Dzumac	42.19	114	eP	P	03 52 07.9	+0.9
	comp=Z,2µm,1.6s						
DZM				eS	S	03 58 25.1	-1.0
	comp=Z,17µm,30.3s						
DZM				eLR	LR	04 03 47.4	
	comp=Z,98µm,25.6s						
DZM	Mont Dzumac	42.19	114	P	P	03 52 07.6	+0.6
	comp=Z,166nm,1.1s,baz=295,slow=6.9,SNR=46						
DZM				LR	LR	04 09 28.7	
	comp=Z,42µm,20.8s,baz=293,slow=36						
DZM	Mont Dzumac	42.19	114	P	P	03 52 06.7	-0.3

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DZM    Mont Dzumac      42.19 114  ⇑P        P        03 52 07.5 +0.6
DZM    Mont Dzumac      42.19 114   P        P        03 52 07.7 +0.7
ONTNC  Ouen Toro        42.25 114   P        P        03 52 07.7 +0.4
ONTNC                               IAmb     IAmb     03 52 19.2
       comp=Z,1µm,1.3s
YATNC  Mamie plateau,   42.59 114   P        P        03 52 12.4 +2.2
OUENC  Ouen Island, N   42.62 114   P        P        03 52 09.9 -0.5
OUENC  Ouen Island, N   42.62 114   P        P        03 52 12.5 +2.1
JMN    Monobe           42.66  11   P        P        03 52 10.2 -0.3
JMN                                 IAmb     IAmb     03 52 24.1
       comp=Z,672nm,1.1s
JMN    Monobe           42.66  11  ⇓P        P        03 52 11.0 +0.5
LIFNC  LIFOU            42.66 112   P        P        03 52 10.5 -0.3
LIFNC  LIFOU            42.66 112   P        P        03 52 12.7 +2.0
JTU    Tsushima         42.80   5   P        P        03 52 11.3 -0.3
JTU                                 IAmb     IAmb     03 52 26.7
       comp=Z,941nm,1.9s
JTU    Tsushima         42.80   5  ⇓P        P        03 52 11.5 -0.1
PINNC  Pines Island,    43.21 114   P        P        03 52 16.0 +0.9
PINNC                               IAmb     IAmb     03 52 37.9
       comp=Z,1µm,1.5s
MARNC  Mare, Loyalty    43.52 112   P        P        03 52 16.9 -0.7
MARNC  Mare, Loyalty    43.52 112  ⇑P        P        03 52 18.6 +0.9
JHS    Saijyo           43.76  10   P        P        03 52 19.8 +0.4
JHS    Saijyo           43.76  10  ⇓P        P        03 52 19.8 +0.4
CD2    Chengdu          43.96 333 ⇓iP        P        03 52 21.1  0.0
CD2                                 pP       pP       03 52 25.1 -3.6
CD2                                 sP       sP       03 52 28.4 -3.3
CD2                                 PP       PcP      03 54 05.8 -1.0
CD2                                 S        S        03 58 54.5 +2.9
CD2                                 pmax     pmax
       comp=Z,380nm,1.5s
CD2                                 pmax     pmax
       comp=Z,9µm,10.8s
CD2                                 LR       LR
       comp=Z,53µm,18.0s
CD2                                 LR       LR
       comp=Z,90µm,16.3s
CD2                                 LR       LR
       comp=Z,48µm,23.5s
JWT    Wachi            44.47  12   P        P        03 52 25.4 +0.4
JWT                                 IAmb     IAmb     03 52 38.2
       comp=Z,786nm,1.3s
JWT    Wachi            44.47  12  ⇓P        P        03 52 25.4 +0.4
TJN    Taejon           44.50   3d iP        P        03 52 24.9 -0.3
IMP    Imphal           44.68 318  eP        P        03 52 26.0 -1.0
XAN    Xi'an            44.77 341 ⇓iP        P        03 52 26.5 -1.0
XAN                                 pP       pP       03 52 31.3 -3.8
XAN                                 sP       sP       03 52 33.8 -4.4
XAN                                 PP       PP       03 54 16.7 +4.3
XAN                                 S        S        03 59 09.3 +6.1
XAN                                 sS       sS       03 59 15.5 +1.5
XAN                                 pmax     pmax
       comp=Z,78nm,1.3s
XAN                                 pmax     pmax
       comp=Z,4µm,13.1s
XAN                                 LR       LR
       comp=Z,23µm,20.1s
XAN                                 LR       LR
       comp=Z,35µm,17.9s
XAN                                 LR       LR
       comp=Z,23µm,16.5s
TIA    Tai'an           44.88 351  ⇓P        P        03 52 27.2 -1.1
TIA                                 S        S        03 59 01.0 -3.8
TIA                                 pmax     pmax
       comp=Z,86nm,1.9s
TIA                                 pmax     pmax
       comp=Z,5µm,8.2s
TIA                                 LR       LR
       comp=Z,17µm,15.7s
TIA                                 LR       LR
       comp=Z,25µm,15.7s
TIA                                 LR       LR
       comp=Z,27µm,17.2s
INU    Inuyama          44.89  14   P        P        03 52 28.3 -0.1
INU                                 IAmb     IAmb     03 52 39.0
       comp=Z,259nm,1.1s
INU    Inuyama          44.89  14  ⇑P        P        03 52 28.6 +0.2
INU    Inuyama          44.89  14   P        P        03 52 31.6 +3.2
KOHI   KOHIMA           45.19 319  eP        P        03 52 29.4 -1.8
JGF    Kuroka           45.22  14   P        P        03 52 30.7 -0.3
JGF    Kuroka           45.22  14  ⇓P        P        03 52 30.8 -0.3
LKP    Lekhapani        45.26 323  eP        P        03 52 30.5 -1.0
MOKO   MOKOCHONG        45.35 320  eP        P        03 52 32.3 -0.1
SILR   SILCHAR          45.41 317  eP        P        03 52 32.7 +0.1
INCN   Inchon           45.58   2   P        P        03 52 33.3 -0.5
INCN                                pmax     pmax
       comp=Z,142nm,1.2s
INCN   Inchon           45.58   2   P        P        03 52 33.3 -0.5
KSAR   Wonju Array Be   45.59   3   P        P        03 52 34.1 +0.2
KSAR   Wonju Array Be   45.59   3   P        P        03 52 34.1 +0.2
KSRS   Korea Array      45.60   3   P        P        03 52 34.1 +0.1
       comp=Z,29nm,1.0s,baz=179,slow=9.8,SNR=51
KSRS                                PcP      PcP      03 54 12.3 +0.2
       comp=Z,22nm,1.1s,baz=184,slow=3.3,SNR=5.2
KSRS                                LR       LR       04 10 12.3
       comp=Z,16µm,21.8s,baz=188,slow=34
KSRS                                PKPPKP   P'P'df   04 24 11.0 +7.9
       comp=Z,0.5nm,0.3s,baz=20,slow=1.7,SNR=5.0
KS19   Wonju Array Si   45.65   3   P        P        03 52 34.1 -0.3
KS19                                IAmb     IAmb     03 52 45.9
       comp=Z,266nm,1.3s
JORH   JORHAT           45.82 320  eP        P        03 52 35.7 -0.2
MAJO   Matsushiro       46.32  15d iP        P        03 52 38.9 -0.8
MAJO                                pmax     pmax
       comp=Z,648nm,1.3s
MAJO                                MLR      MLR
       comp=Z,16µm,19.0s
MAJO   Matsushiro       46.32  15   P        P        03 52 38.0 -1.7
MAJO   Matsushiro       46.32  15  ⇓P        P        03 52 38.9 -0.8
MAJO   Matsushiro       46.32  15   P        P        03 52 39.8 +0.1
MAT    Matsushiro       46.32  15   P        P        03 52 38.9 -0.8
MAT                                 S        S        03 59 21.7 -3.9
MJAR   Matsushiro Arr   46.32  15   P        P        03 52 39.0 -0.7
       comp=Z,97nm,0.9s,baz=185,slow=8.8,SNR=120
MJAR                                LR       LR       04 13 36.8
       comp=Z,9µm,18.9s,baz=195,slow=38
MJAR   Matsushiro Arr   46.32  15   P        P        03 52 39.0 -0.7
MJAR   Matsushiro Arr   46.32  15   P        P        03 52 39.0 -0.7
MJAR                                IAmb     IAmb     03 52 50.3
       comp=Z,747nm,1.4s
MJB9   Matsu-Tunnel     46.32  15   P        P        03 52 39.1 -0.7
SHL    Shillong         46.55 317   P        P        03 52 41.3 -0.6
SHL                                 pmax     pmax
       comp=Z,346nm,1.1s
SHL    Shillong         46.55 317   P        P        03 52 41.3 -0.6
SHL                                 IAmb     IAmb     03 52 48.4
       comp=Z,346nm,1.1s
SHL    Shillong         46.55 317  eP        P        03 52 41.3 -0.6
SHL                                 IAmb     IAmb     03 52 42.5
       comp=Z,167nm,0.5s
SHL    Shillong         46.55 317   P        P        03 52 41.8 -0.2
       SNR=157
JYT    Yasato           46.57  17   P        P        03 52 40.6 -1.0
JYT                                 IAmb     IAmb     03 52 48.2
       comp=Z,235nm,0.8s
PALK   Pallekele        46.72 288   P        P        03 52 41.7 -1.7
       comp=Z,83nm,1.1s,baz=204,slow=7.0,SNR=26
PALK                                PcP      PcP      03 54 17.4 +0.7
       comp=Z,29nm,0.9s,baz=278,slow=2.5,SNR=4.7
PALK   Pallekele        46.72 288   P        P        03 52 41.3 -2.0
PALK                                IAmb     IAmb     03 52 48.4
       comp=Z,367nm,1.6s
PALK                                PcP      PcP      03 54 15.5 -1.3
PALK   Pallekele        46.72 288   P        P        03 52 42.1 -1.2
PALK   Pallekele        46.72 288  ⇓P        P        03 52 41.6 -1.7
DL2    Dalian           47.07 356   P        P        03 52 44.6 -0.9
DL2                                 S        S        03 59 28.3 -7.7
DL2                                 pmax     pmax
       comp=Z,170nm,1.5s
DL2                                 pmax     pmax
       comp=Z,3µm,8.6s
DL2                                 LR       LR
       comp=Z,13µm,15.7s
DL2                                 LR       LR
       comp=Z,14µm,18.7s
DL2                                 LR       LR
       comp=Z,18µm,20.5s
TIY    Taiyuan          47.24 346  ⇑P        P        03 52 46.5 -0.5
TIY                                 S        S        03 59 43.0 +4.2
TIY                                 pmax     pmax
       comp=Z,140nm,1.5s
TIY                                 pmax     pmax
       comp=Z,2µm,3.8s
TIY                                 LR       LR
       comp=Z,26µm,17.2s
TIY                                 LR       LR
       comp=Z,12µm,15.3s
TIY                                 LR       LR
       comp=Z,27µm,17.3s
JSD    Sado             47.75  14   P        P        03 52 50.2 -0.6
JSD    Sado             47.75  14  ⇓P        P        03 52 50.5 -0.3
JMM    Marumori         48.26  17   P        P        03 52 55.1 +0.3
JMM    Marumori         48.26  17  ⇓P        P        03 52 55.2 +0.5
LZH    Lanzhou          48.41 337  ⇓P        P        03 52 56.6 +0.4
LZH                                 pP       pP       03 53 02.1 -1.8
LZH                                 sP       sP       03 53 04.0 -2.9
LZH                                 PP       PP       03 54 50.5 +1.5
LZH                                 S        S        03 59 59.5 +3.9
LZH                                 sS       sS       04 00 11.1 +4.5
LZH                                 pmax     pmax
       comp=Z,410nm,1.3s
LZH                                 pmax     pmax
       comp=Z,6µm,6.0s
LZH                                 LR       LR
       comp=Z,43µm,16.4s
LZH                                 LR       LR
       comp=Z,59µm,15.9s
LZH                                 LR       LR
       comp=Z,30µm,17.4s
VIS    Vishakhapatnam   48.55 302  eP        P        03 52 52.8 -4.5
VIS                                 IAmb     IAmb     03 52 58.6
       comp=Z,4µm,3.2s
BJT    Baijiatuau       48.76 351   P        P        03 52 57.6 -0.9
BJT                                 pmax     pmax
       comp=Z,321nm,1.6s
BJT                                 MLR      MLR
       comp=Z,12µm,21.0s
BJT    Baijiatuau       48.76 351   P        P        03 52 57.6 -0.9
BJT                                 IAmb     IAmb     03 53 09.0
       comp=Z,321nm,1.6s
BJI    Beijing          48.78 351   P        P        03 52 57.7 -1.0
BJI                                 pP       pP       03 53 02.3 -4.1
BJI                                 PP       PP       03 54 51.8 -0.3
BJI                                 ScP      ScP      03 58 16.0 -0.9
BJI                                 S        S        03 59 59.2 -1.1
BJI                                 SS       SS       04 03 27.3 -3.9
BJI                                 pmax     pmax
       comp=Z,140nm,1.6s
BJI                                 pmax     pmax
       comp=Z,5µm,6.9s
BJI                                 LR       LR
       comp=Z,15µm,20.4s
BJI                                 LR       LR
       comp=Z,18µm,17.9s
BJI                                 LR       LR
       comp=Z,19µm,18.2s
TARA   Tarawa           48.80  81   P        P        03 52 58.7 -0.7
TARA   Tarawa           48.80  81   IAMs_20  IAMs_20  04 13 32.5
       comp=Z,41µm,22.0s
MDRS   Chennai          49.20 295  eP        P        03 53 01.4 -0.9
MDRS                                IAmb     IAmb     03 53 07.3
       comp=Z,1µm,2.1s
BOK    Bokaro           49.72 311  eP        P        03 53 05.5 -0.8
LSA    Lhasa            49.83 321   P        P        03 53 08.5 +0.9
LSA                                 S        S        04 00 12.4 -4.0
LSA                                 pmax     pmax
       comp=Z,2µm,1.4s
LSA                                 LR       LR
       comp=Z,63µm,24.2s
LSA                                 LR       LR
       comp=Z,42µm,19.9s
LSA                                 LR       LR
       comp=Z,44µm,24.2s
LSA    Lhasa            49.83 321   P        P        03 53 09.0 +1.5
LSA    Lhasa            49.83 321   P        P        03 53 06.5 -1.1
LSA                                 pmax     pmax
       comp=Z,622nm,1.0s
LSA    Lhasa            49.83 321   P        P        03 53 06.5 -1.1
SNY    Shenyang         49.90 359  ⇓P        P        03 53 06.2 -1.0
SNY                                 S        S        04 00 13.5 -2.5
SNY                                 pmax     pmax
       comp=Z,140nm,2.5s
SNY                                 pmax     pmax
       comp=Z,5µm,7.3s
SNY                                 LR       LR
       comp=Z,28µm,24.1s
SNY                                 LR       LR
       comp=Z,30µm,26.5s
GTK    Tadong           49.91 316  eP        P        03 53 07.3 -0.5
HHC    Hu-ho-hao-te     50.44 347  eP        P        03 53 10.9 -0.6
HHC                                 sP       pP       03 53 20.2 +1.0
HHC                                 S        S        04 00 31.3 +7.6
HHC                                 pmax     pmax
       comp=Z,76nm,1.2s
HHC                                 pmax     pmax
       comp=Z,3µm,4.7s
HHC                                 LR       LR
       comp=Z,19µm,15.2s
HHC                                 LR       LR
       comp=Z,33µm,17.0s
HHC                                 LR       LR
       comp=Z,16µm,15.1s
ODAN   Odare            50.46 315 ⇓iP        P        03 53 11.5 -0.6
TAPN   Taplejung        50.55 316 ⇓iP        P        03 53 12.6 -0.2
       comp=Z,934nm,1.1s
BTO    Baotou           50.57 345  eP        P        03 53 11.5 -1.0
BTO                                 PP       PP       03 55 10.7 +2.1
BTO                                 S        S        04 00 26.7 +1.1
BTO                                 LR       LR
       comp=Z,38µm,19.4s
BTO                                 LR       LR
       comp=Z,26µm,17.1s
TRD    Trivandrum       50.63 288  eP        P        03 53 11.8 -1.5
TRD                                 IAmb     IAmb     03 53 18.3
       comp=Z,69nm,0.5s
MSHR   Mys Shultsa      50.96   6d iP        P        03 53 15.5 +0.3
MSHR                                pmax     pmax
       comp=Z,419nm,2.5s
MSHR                                MLR      MLR
       comp=Z,5µm,17.0s
JTM    Tenmabayashi     51.06  16   P        P        03 53 14.6 -1.5
JTM    Tenmabayashi     51.06  16  ⇓P        P        03 53 16.4 +0.4
RAMN   Ramite           51.07 315 ⇓iP        P        03 53 16.8 +0.1
       comp=Z,265nm,0.7s
VLA    Vladivostok      51.57   7d iP        P        03 53 20.0 +0.2
VLA                                 pmax     pmax
       comp=Z,764nm,1.6s
VLA                                 MLR      MLR
       comp=Z,11µm,18.0s
JIRN   Jiri             51.79 315 ⇓iP        P        03 53 21.8 -0.5
       comp=Z,1µm,1.3s
DCZ    Deep Cove        51.86 143   IAMs_20  IAMs_20  04 15 22.5
       comp=Z,28µm,19.0s
CN2    Changchun        51.86   0  eP        P        03 53 20.7 -1.3
CN2                                 pP       pP       03 53 25.2 -4.6
CN2                                 S        S        04 00 42.6 -0.5
CN2                                 SS       SS       04 04 17.5 -2.8
CN2                                 pmax     pmax
       comp=Z,90nm,1.1s
CN2                                 pmax     pmax
       comp=Z,5µm,5.0s
CN2                                 LR       LR
       comp=Z,12µm,21.0s
CN2                                 LR       LR
       comp=Z,10µm,21.0s
CN2                                 LR       LR
       comp=Z,11µm,23.0s
OUZ    Omahuta          51.87 129   P        P        03 53 25.4 +3.1
DGAR   Diego Garcia     51.96 267 ⇑eP        P        03 53 23.1 -0.2
DGAR                                pmax     pmax
       comp=Z,443nm,1.0s
DGAR                                MLR      MLR
       comp=Z,20µm,18.0s
DGAR   Diego Garcia     51.96 267   P        P        03 53 25.1 +1.9
PYZ    Puysegur Point   51.96 144   IAMs_20  IAMs_20  04 16 06.2
       comp=Z,36µm,19.0s
GUN    Gumba            52.16 315 ⇓iP        P        03 53 24.8 -0.2
       comp=Z,4µm,1.8s
PKI    Pulchoki         52.29 314 ⇓iP        P        03 53 25.3 -0.6
PKIN   Phulchoki        52.30 314 ⇓iP        P        03 53 25.3 -0.6
MLZ    Mavora Lakes     52.38 142   P        P        03 53 25.3 -0.8
MLZ                                 IAmb     IAmb     03 53 36.7
       comp=Z,296nm,1.2s
MLZ                                 IAMs_20  IAMs_20  04 14 23.0
       comp=Z,32µm,22.0s
MSVF   Nonsavu          52.45 106 ⇓eP        P        03 53 26.1 -0.9
MSVF                                MLR      MLR
       comp=Z,26µm,17.0s
MSVF   Nonsavu          52.45 106   P        P        03 53 25.6 -1.4
MSVF   Nonsavu          52.45 106  ⇑P        P        03 53 28.5 +1.5
MSVF                               ⇑P        P        03 53 28.6 +1.5
MSVF   Nonsavu          52.45 106   P        P        03 53 31.0 +4.0
HYB    Hyderabad        52.47 299  i P       P        03 53 25.0 -2.0
       comp=Z,220nm,1.0s
HYB                                esP       pP       03 53 36.0 +1.2
HYB                                ePcP      PcP      03 54 36.0 -1.6
HYB                                eS        S        04 00 56.0 +3.7
HYB    Hyderabad        52.47 299  eP        P        03 53 25.6 -1.4
KAAM   Kaadhehdhoo      52.48 277   P        P        03 53 26.1 -1.1
KAAM                                IAmb     IAmb     03 53 29.7
       comp=Z,277nm,1.1s
KAAM   Kaadhehdhoo      52.48 277   P        P        03 53 28.0 +0.8
KKN    Kakani           52.51 315 ⇓iP        P        03 53 26.8 -0.6
       comp=Z,1µm,1.5s
DMN    Daman            52.53 314 ⇓iP        P        03 53 26.9 -0.7
       comp=Z,415nm,1.1s
WHZ    Wether Hill Ro   52.55 143   P        P        03 53 27.1 -0.2
WHZ                                 IAmb     IAmb     03 53 34.3
       comp=Z,272nm,1.0s
USA0B  Ussuriysk Arra   52.65   6   P        P        03 53 28.0 +0.2
USA0B                               pmax     pmax
       comp=Z,451nm,1.2s
USA0B  Ussuriysk Arra   52.65   6   P        P        03 53 27.9 +0.2
USA0B                               IAmb     IAmb     03 53 39.4
       comp=Z,451nm,1.2s
USRK   Ussuriysk Ar.    52.65   6   P        P        03 53 27.9  0.0
       comp=Z,94nm,0.9s,baz=191,slow=5.8,SNR=78
WKZ    Wanaka           52.66 141   P        P        03 53 27.6 -0.4
WKZ                                 IAmb     IAmb     03 53 39.8
       comp=Z,876nm,1.7s
ERM    Erimo            52.79  17   P        P        03 53 29.1 +0.2
ERM                                 pmax     pmax
       comp=Z,361nm,1.1s
ERM    Erimo            52.79  17   P        P        03 53 29.1 +0.2
ERM                                 IAmb     IAmb     03 53 40.9
       comp=Z,361nm,1.1s
ERM    Erimo            52.79  17  ⇓P        P        03 53 29.9 +1.0
ERM    Erimo            52.79  17   P        P        03 53 32.4 +3.5
MDJ    Mudanjiang       52.84   4   P        P        03 53 29.6 +0.3
MDJ                                 pP       pP       03 53 34.0 -3.1
MDJ                                 sP       sP       03 53 36.2 -3.9
MDJ                                 S        S        04 00 54.4 -2.1
MDJ                                 pmax     pmax
       comp=Z,390nm,1.4s
MDJ                                 pmax     pmax
       comp=Z,7µm,3.6s
MDJ                                 LR       LR
       comp=Z,11µm,24.6s
MDJ                                 LR       LR
       comp=Z,11µm,25.0s
MDJ                                 LR       LR
       comp=Z,23µm,24.7s
MDJ    Mudanjiang       52.84   4   P        P        03 53 29.4 +0.1
MDJ    Mudanjiang       52.84   4   P        P        03 53 30.1 +0.8
GTA    Gaotai           52.88 336  ⇓P        P        03 53 29.8  0.0
GTA                                 pP       pP       03 53 36.0 -1.6
GTA                                 sP       sP       03 53 40.3 -0.3
GTA                                 PcS      PcS      03 58 36.4 -1.1
GTA                                 S        S        04 00 55.2 -2.3
GTA                                 sS       pS       04 01 04.4 -1.1
GTA                                 pmax     pmax
       comp=Z,170nm,1.4s
GTA                                 pmax     pmax
       comp=Z,4µm,10.0s
GTA                                 LR       LR
       comp=Z,16µm,19.5s
GTA                                 LR       LR
       comp=Z,34µm,20.7s
GTA                                 LR       LR
       comp=Z,24µm,23.1s
JEW    Eniwo            53.09  15   P        P        03 53 31.5 +0.4
GKN    Gorkha           53.09 314 ⇓iP        P        03 53 31.1 -0.6
       comp=Z,1µm,1.5s
QRZ    Quartz Range     53.14 136   P        P        03 53 36.2 +4.5
LBZ    Lake Benmore     53.17 140   P        P        03 53 32.1 +0.3
LBZ                                 IAmb     IAmb     03 53 42.0
       comp=Z,331nm,1.2s
RPZ    Rata Peaks       53.41 139   P        P        03 53 33.8 +0.2
RPZ    Rata Peaks       53.41 139   P        P        03 53 38.1 +4.5
FUNA   Funafuti         53.65  94   P        P        03 53 36.0 +0.2
FUNA                                IAMs_20  IAMs_20  04 15 39.5
       comp=Z,29µm,21.0s
KOLN   Koldanda         53.70 313 ⇓iP        P        03 53 35.7 -0.4
       comp=Z,988nm,1.3s
ODZ    Otahua Downs     53.77 141   P        P        03 53 36.1 -0.1
ODZ                                 IAmb     IAmb     03 53 46.4
       comp=Z,204nm,1.2s
ODZ    Otahua Downs     53.77 141  ⇓P        P        03 53 39.1 +2.9
ODZ    Otahua Downs     53.77 141   P        P        03 53 38.9 +2.7
THZ    Tophouse         53.79 136   P        P        03 53 35.4 -1.1
LTZ    Lake Taylor      53.79 138   P        P        03 53 34.8 -1.6
LTZ                                 IAmb     IAmb     03 53 54.8
       comp=Z,342nm,1.3s
OXZ    Oxford           53.87 139   P        P        03 53 37.0  0.0
OXZ                                 IAmb     IAmb     03 53 47.0
       comp=Z,338nm,0.9s
DANN   Dangsing         53.92 314 ⇓iP        P        03 53 37.4 -0.5
TEY    Ternei           54.13  10 ⇓eP        P        03 53 39.2 +0.5
TEY                                e                  03 53 49.1
TEY                                eS        S        04 01 13.6 -0.3
TEY                                 pmax     pmax
       comp=E,20nm,1.5s
TEY                                 pmax     pmax
       comp=N,100nm,1.4s
TEY                                 pmax     pmax
       comp=Z,190nm,1.3s
TEY                                 pmax     pmax
       comp=Z,1µm,2.3s
TEY                                 pmax     pmax
       comp=E,400nm,4.5s
TEY                                 pmax     pmax
       comp=N,800nm,2.3s
TEY                                 pmax     pmax
       comp=E,40nm,1.7s
TEY                                 pmax     pmax
       comp=N,280nm,1.0s
TEY                                 pmax     pmax
       comp=Z,480nm,1.2s
TEY                                 MLR      MLR
       comp=N,5µm,17.0s
TEY                                 MLR      MLR
       comp=Z,6µm,18.0s
PYUN   Piuthan          54.33 313 ⇓iP        P        03 53 40.3 -0.5
       comp=Z,1µm,1.2s
TUWZ   Tuamarina        54.36 136   P        P        03 53 40.8 +0.2
KHZ    Kahutara         54.48 137   P        P        03 53 41.0 -0.5
KHZ    Kahutara         54.48 137  ⇑P        P        03 53 44.3 +2.9
KHZ    Kahutara         54.48 137   P        P        03 53 44.2 +2.8
ASAJ   Asahikawa        54.58  16   P        P        03 53 42.1 +0.1
ASAJ                                pmax     pmax
       comp=Z,1µm,1.6s
JKA    Kamikawa-asahi   54.58  16   P        P        03 53 42.1 +0.1
SNZO   South Karori     54.85 135   P        P        03 53 42.7 -1.4
SNZO   South Karori     54.85 135   P        P        03 53 46.9 +2.8
BHW    Baring Head      55.00 135   P        P        03 53 45.0 -0.2
BKZ    Black Stump Fm   55.36 132   P        P        03 53 47.3 -0.6
BKZ    Black Stump Fm   55.36 132   P        P        03 53 53.6 +5.7
YUK    Yuzh-Kuril'sk    55.44  18d iP        P        03 53 50.0 +1.8
YUK                                i                  03 55 51.2
YUK                                i PPP     PPP      03 57 06.1
YUK                                i S       S        04 01 33.0 +1.4
YUK                                i SS      SS       04 05 13.8 -3.0
YUK                                 pmax     pmax
       comp=Z,626nm,1.2s
YUK                                 pmax     pmax
       comp=N,379nm,1.1s
YUK                                 pmax     pmax
       comp=E,350nm,1.1s
YUK                                 pmax     pmax
       comp=Z,1µm,2.2s
URZ    Urewera          55.52 131   P        P        03 53 47.9 -1.1
URZ                                 IAmb     IAmb     03 53 58.1
       comp=Z,198nm,1.0s
URZ    Urewera          55.52 131  ⇑P        P        03 53 51.1 +2.1
URZ    Urewera          55.52 131   P        P        03 53 51.5 +2.5
GOA    Goa              55.87 295  eP        P        03 53 50.5 -1.3
GOA                                 IAmb     IAmb     03 53 58.9
       comp=Z,159nm,1.1s
BHPL   Bhopal           56.03 305  eP        P        03 53 50.5 -2.4
BHPL                                IAmb     IAmb     03 54 03.8
       comp=Z,56nm,0.5s
POO    Poona            57.00 298  eP        P        03 53 58.4 -1.6
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POO	**Poona**	**57.00**	**298**	⇑*i*P	**P**	**03 53 58.0**	**-1.9**
	comp=Z,200nm,1.0s						
KUR	**Kuril'sk**	**57.15**	**19**	*d* *i*P	**P**	**03 54 00.6**	**+0.2**
KUR				*e*S	**S**	**04 01 51.9**	**-2.3**
KUR				pmax	pmax		
	comp=Z,792nm,1.5s						
KUR				pmax	pmax		
	comp=N,347nm,1.7s						
KUR				pmax	pmax		
	comp=E,147nm,1.6s						
KUR				pmax	pmax		
	comp=Z,12µm,5.0s						
KUR				pmax	pmax		
	comp=N,7µm,4.7s						
KUR				pmax	pmax		
	comp=E,4µm,3.3s						
KUR				MLR	MLR		
	comp=E,8µm,19.0s						
KUR				MLR	MLR		
	comp=Z,10µm,19.0s						
KUR				MLR	MLR		
	comp=N,4µm,15.0s						
YSS	**Yuzh-Sakhalins**	**57.26**	**14**	⇑*e*P	**P**	**03 54 01.6**	**+0.5**
YSS				*e**SP	**sP**	**03 54 10.7**	**-1.3**
YSS				*e*		03 54 53.1	
YSS				*e*		03 56 13.9	
YSS				*e*S	**S**	**04 01 54.0**	**-1.6**
YSS				*e*		04 02 08.4	
YSS				pmax	pmax		
	comp=Z,130nm,1.2s						
YSS				pmax	pmax		
	comp=Z,4µm,3.8s						
YSS				pmax	pmax		
	comp=N,2µm,4.0s						
YSS				pmax	pmax		
	comp=Z,3µm,4.9s						
YSS				pmax	pmax		
	comp=N,1µm,4.8s						
YSS				MLR	MLR		
	comp=Z,8µm,18.0s						
YSS				MLR	MLR		
	comp=E,8µm,20.0s						
YSS	**Yuzh-Sakhalins**	**57.26**	**14**	P	**P**	**03 54 01.4**	**+0.3**
YSS				IAmb	IAmb	03 54 12.8	
	comp=Z,490nm,1.4s						
RAO	**Raoul Island**	**57.40**	**119**	IAMs_20	IAMs_20	04 20 49.3	
	comp=Z,25µm,18.0s						
HIA	**Hailar**	**57.51**	**356**	P	**P**	**03 54 02.9**	**0.0**
HIA				pmax	pmax		
	comp=Z,303nm,1.2s						
HIA	**Hailar**	**57.51**	**356**	P	**P**	**03 54 02.9**	**0.0**
HIA				IAmb	IAmb	03 54 08.4	
	comp=Z,302nm,1.2s						
KLR	**Kul'dur**	**57.60**	**5**	*d* *i*P	**P**	**03 54 03.2**	**-0.3**
KLR				pmax	pmax		
	comp=Z,255nm,2.3s						
KLR				MLR	MLR		
	comp=Z,9µm,17.0s						
ULN	**Ulaanbaatar**	**58.12**	**346**	*d* *i*P	**P**	**03 54 07.0**	**-0.4**
ULN				pmax	pmax		
	comp=Z,301nm,1.3s						
ULN				MLR	MLR		
	comp=Z,10µm,19.0s						
ULN	**Ulaanbaatar**	**58.12**	**346**	P	**P**	**03 54 07.2**	**-0.2**
ULN				IAmb	IAmb	03 54 11.1	
	comp=Z,391nm,1.4s						
ULN	**Ulaanbaatar**	**58.12**	**346**	P	**P**	**03 54 07.7**	**+0.3**
ULN				P	**P**	**03 54 07.7**	**+0.3**
ULN	**Ulaanbaatar**	**58.12**	**346**	⇓P	**P**	**03 54 07.1**	**-0.3**
SONM	**Songino Array**	**58.25**	**345**	P	**P**	**03 54 07.9**	**-0.4**
	comp=Z,141nm,1.1s,baz=167,slow=5.9,SNR=164						
SONM				LR	LR	04 20 31.7	
	comp=Z,18µm,21.3s,baz=174,slow=38						
SONM				PKPPKP		04 23 53.1	
	comp=Z,8.7nm,1.2s,baz=287,slow=2.7,SNR=8.3						
SONM	**Songino Array**	**58.25**	**345**	P	**P**	**03 54 07.9**	**-0.4**
SONM				IAmb	IAmb	03 54 11.9	
	comp=Z,246nm,1.2s						
CASY	**Casey**	**58.73**	**187**	P	**P**	**03 54 10.1**	**-1.1**
CASY	**Casey**	**58.73**	**187**	⇑P	**P**	**03 54 12.5**	**+1.3**
NDI	**New Delhi**	**58.89**	**311**	*e*P	**P**	**03 54 11.0**	**-2.0**
UGL	**Uglegorsk**	**59.09**	**13**	⇓*i*P	**P**	**03 54 13.5**	**-0.4**
UGL				*e*S	**S**	**04 02 22.0**	**+2.6**
UGL				pmax	pmax		
	comp=Z,400nm,1.1s						
UGL				pmax	pmax		
	comp=Z,8µm,4.3s						
UGL				smax	smax		
	comp=N,9µm,9.5s						
UGL				smax	smax		
	comp=E,13µm,9.5s						
DDI	**Dehra Dun**	**59.14**	**313**	*e*P	**P**	**03 54 13.2**	**-1.5**
GRNR	**Gornyy**	**59.67**	**8**	⇓*i*P	**P**	**03 54 18.4**	**+0.5**
GRNR				*e*S	**S**	**04 02 30.7**	**+3.7**
GRNR				pmax	pmax		
	comp=N,30nm,1.2s						
GRNR				pmax	pmax		
	comp=Z,40nm,1.0s						
GRNR				smax	smax		
	comp=N,4.0nm,0.7s						
SMLA	**Simla**	**60.22**	**313**	*e*P	**P**	**03 54 22.2**	**+0.2**
CIT	**Chita**	**60.87**	**352**	*e*P	**P**	**03 54 26.3**	**+0.1**
CIT				*e*		03 54 36.5	
CIT				*e*		03 55 10.3	
CIT				pmax	pmax		
	comp=Z,747nm,2.8s						
TYV	**Tymovskoe**	**60.90**	**13**	*e*P	**P**	**03 54 28.1**	**+1.8**
TYV				*e*S	**S**	**04 02 47.2**	**+4.6**
TYV				pmax	pmax		
	comp=Z,8µm,4.6s						
TYV				pmax	pmax		
	comp=Z,174nm,1.3s						
TYV				smax	smax		
	comp=E,27nm,1.6s						
TYV				smax	smax		
	comp=N,6µm,6.2s						
TYV				smax	smax		
	comp=E,3µm,6.2s						
BHK	**Bhakra**	**60.91**	**313**	*e*S	**PcP**	**03 55 10.2**	**-0.1**
BHK				*e*P	**P**	**03 54 23.8**	**-3.0**
ZAK	**Zakamensk**	**61.40**	**344**	*e*P	**P**	**03 54 29.0**	**-0.9**
ZAK				pmax	pmax		
	comp=Z,128nm,1.3s						
DHRM	**DHARAMSHALA**	**61.44**	**314**	*e*P	**P**	**03 54 29.3**	**-1.4**
DHRM				IAmb	IAmb	03 54 35.2	
	comp=Z,1µm,1.6s						
ZEA	**Zeya**	**61.84**	**2**	*e*P	**P**	**03 54 33.0**	**+0.4**
ZEA				*e*		03 56 51.9	
ZEA				*e*S	**S**	**04 02 54.1**	**-0.4**
ZEA				pmax	pmax		
	comp=N,60nm,1.2s						
ZEA				pmax	pmax		
	comp=E,10.0nm,1.3s						
ZEA				pmax	pmax		
	comp=Z,120nm,1.3s						
ZEA				pmax	pmax		
	comp=E,300nm,4.1s						
ZEA				pmax	pmax		
	comp=N,2µm,7.3s						
ZEA				pmax	pmax		
	comp=Z,4µm,6.3s						
ZEA				pmax	pmax		
	comp=E,400nm,6.3s						
ZEA				pmax	pmax		
	comp=N,1µm,5.0s						
ZEA				pmax	pmax		
	comp=Z,2µm,4.6s						
ZEA				smax	smax		
	comp=N,3µm,9.1s						
ZEA				smax	smax		
	comp=E,5µm,15.9s						
WMQ	**Urumqi**	**61.88**	**330**	⇓P	**P**	**03 54 33.5**	**+0.3**
WMQ				PP	**PP**	**03 56 54.0**	**+4.3**
WMQ				S	**S**	**04 02 56.5**	**+0.9**
WMQ				sS	pS	04 03 04.6	-0.3
WMQ				pmax	pmax		
	comp=E,230nm,1.1s						
WMQ				pmax	pmax		
	comp=E,5µm,3.9s						
WMQ				LR	LR		
	comp=E,20µm,17.5s						
WMQ				LR	LR		
	comp=E,15µm,16.3s						
WMQ				LR	LR		
	comp=E,16µm,20.9s						
BHUJ	**Bhuj**	**62.47**	**302**	*e*P	**P**	**03 54 36.3**	**-1.1**
BHUJ				IAmb	IAmb	03 54 44.9	
	comp=Z,901nm,2.1s						
TLY	**Talaya**	**62.49**	**345**	*d* *i*P	**P**	**03 54 36.7**	**-0.4**
TLY				*e*S	**S**	**04 03 03.3**	**+0.4**
TLY				pmax	pmax		
	comp=Z,234nm,0.9s						
TLY	**Talaya**	**62.49**	**345**	P	**P**	**03 54 36.5**	**-0.6**
TLY	**Talaya**	**62.49**	**345**	P	**P**	**03 54 37.2**	**+0.2**
TLY				P	**P**	**03 54 37.2**	**+0.2**
NKL	**Nikolayevsk**	**62.67**	**11**	*e*P	**P**	**03 54 37.9**	**-0.2**
NKL				*e*		03 55 16.9	
NKL				*e*		03 56 58.5	
NKL				*e*S	**S**	**04 03 05.0**	**+0.1**
NKL				pmax	pmax		
	comp=E,4.0nm,0.6s						
NKL				pmax	pmax		
	comp=N,578nm,1.0s						
NKL				pmax	pmax		
	comp=Z,333nm,1.2s						
NKL				pmax	pmax		
	comp=Z,319nm,2.9s						
IRK	**Irkutsk**	**62.85**	**346**	*e*P	**P**	**03 54 38.3**	**-1.2**
IRK				pmax	pmax		
	comp=Z,565nm,3.0s						
MOY	**Mondy**	**63.19**	**344**	*e*P	**P**	**03 54 41.8**	**0.0**
MOY				pmax	pmax		
	comp=Z,711nm,3.3s						
KNTN	**Kanton**	**63.24**	**89**	P	**P**	**03 54 42.8**	**0.0**
KNTN	**Kanton**	**63.24**	**89**	⇓P	**P**	**03 54 43.5**	**+0.7**
KNTN				⇑P	**pP**	**03 54 43.8**	**-6.9**
KNTN	**Kanton**	**63.24**	**89**	P	**P**	**03 54 45.0**	**+2.2**
NIUE	**Niue**	**63.90**	**107**	P	**P**	**03 54 46.9**	**-0.1**
NIL	**Nilore**	**64.35**	**313**	P	**P**	**03 54 48.7**	**-1.1**
NIL				pmax	pmax		
	comp=Z,511nm,1.4s						
NIL				MLR	MLR		
	comp=Z,28µm,21.0s						
NIL	**Nilore**	**64.35**	**313**	P	**P**	**03 54 48.7**	**-1.1**
NIL	**Nilore**	**64.35**	**313**	IAMs_20	IAMs_20	04 24 12.6	
	comp=Z,28µm,21.0s						
SKR	**Severo-Kuril's**	**64.67**	**21**	*e*P	**P**	**03 54 52.7**	**+1.3**
SKR				*e*		03 55 24.7	
SKR				*e*S	**S**	**04 03 29.5**	**-0.4**
SKR				pmax	pmax		
	comp=Z,3µm,4.4s						
SKR				MLR	MLR		
	comp=Z,3µm,22.0s						
KSH	**Kashi**	**65.68**	**320**	P	**P**	**03 54 58.1**	**-0.3**
KSH				pP	pP	03 55 03.0	-3.3
KSH				sP	sP	03 55 04.6	-4.6
KSH				S	**S**	**04 03 39.5**	**-3.7**
KSH				ScS	**SKSac**	**04 04 45.4**	**-7.4**
KSH				SS	**SS**	**04 07 56.7**	**-1.2**
KSH				pmax	pmax		
	comp=Z,96nm,1.3s						
KSH				pmax	pmax		
	comp=Z,4µm,5.7s						
KSH				LR	LR		
	comp=Z,33µm,20.8s						
KSH				LR	LR		
	comp=Z,21µm,19.4s						
KSH				LR	LR		
	comp=Z,44µm,22.0s						
TARG	**Taragay, Kyrgy**	**65.86**	**323**	P	**P**	**03 54 59.4**	**-0.5**
TARG				IAmb	IAmb	03 55 12.0	
	comp=Z,385nm,1.5s						
ZSN	**Zaisan**	**65.88**	**331**	⇓*i*P	**P**	**03 54 58.6**	**-0.8**
	baz=331						
ZSN				*e*S	**S**	**04 03 43.7**	**-1.3**
	baz=331						
ZSN	**Zaisan**	**65.88**	**331**	*d* *i*P	**P**	**03 54 58.6**	**-0.8**
ZSN				*e*S	**S**	**04 03 43.7**	**-1.3**
PRZ	**Przheval'sk**	**65.97**	**324**	P	**P**	**03 54 59.4**	**-0.9**
PRZ				pmax	pmax		
	comp=Z,1µm,1.9s						
PRZ	**Przheval'sk**	**65.97**	**324**	P	**P**	**03 54 59.4**	**-0.9**
UZB	**Uzynbulak**	**66.03**	**325**	⇓*i*P	**P**	**03 55 00.4**	**-0.2**
	comp=Z,516nm,2.3s,baz=325						
UZB				*e*S	**S**	**04 03 47.1**	**-0.3**
	baz=325						
UZB	**Uzynbulak**	**66.03**	**325**	*d* *i*P	**P**	**03 55 00.4**	**-0.2**
UZB				*e*S	**S**	**04 03 47.0**	**-0.3**
UZB				pmax	pmax		
	comp=Z,516nm,2.3s						
SATY	**Saty**	**66.33**	**325**	⇓*i*P	**P**	**03 55 02.3**	**-0.2**
	comp=Z,847nm,2.7s,baz=324						
SATY				*e*S	**S**	**04 03 52.8**	**+1.8**
	baz=324						
SATY	**Saty**	**66.33**	**325**	*d* *i*P	**P**	**03 55 02.3**	**-0.2**
SATY				*e*S	**S**	**04 03 52.7**	**+1.8**
SATY				pmax	pmax		
	comp=Z,847nm,2.7s						
KPKS	**Kokpek**	**66.42**	**325**	⇓*i*P	**P**	**03 55 02.8**	**-0.3**
	comp=Z,411nm,1.7s,baz=325						
KPKS				*e*S	**S**	**04 03 52.5**	**+0.5**
	baz=325						
KPKS	**Kokpek**	**66.42**	**325**	*d* *i*P	**P**	**03 55 02.8**	**-0.3**
KPKS				*e*S	**S**	**04 03 52.4**	**+0.5**
KPKS				pmax	pmax		
	comp=Z,411nm,1.7s						
BOD	**Bodaibo**	**66.50**	**354**	*e*P	**P**	**03 55 02.8**	**-0.3**
BOD				pmax	pmax		
	comp=Z,571nm,2.0s						
MK31	**Makanchi Array**	**66.67**	**330**	*d* *i*P	**P**	**03 55 04.0**	**-0.5**
MK31	**Makanchi Array**	**66.67**	**330**	P	**P**	**03 55 04.5**	**-0.1**
MK31				IAmb	IAmb	03 55 13.2	
	comp=Z,434nm,1.2s						
MKAR	**Makanchi Array**	**66.67**	**330**	P	**P**	**03 55 04.1**	**-0.4**
	comp=Z,252nm,1.0s,baz=126,slow=6.2,SNR=398						
MKAR				PKPPKP		04 23 43.9	
	comp=Z,2.8nm,1.0s,baz=270,slow=1.2,SNR=6.5						
MAKZ	**Makanchi**	**66.84**	**329**	P	**P**	**03 55 05.2**	**-0.4**
MAKZ				pmax	pmax		
	comp=Z,264nm,1.2s						
MAKZ				MLR	MLR		
	comp=Z,11µm,21.0s						
MAKZ	**Makanchi**	**66.84**	**329**	P	**P**	**03 55 05.2**	**-0.4**
MAKZ				IAmb	IAmb	03 55 14.1	
	comp=Z,264nm,1.1s						
ULHL	**Ulahol**	**67.11**	**323**	P	**P**	**03 55 07.8**	**+0.2**
	SNR=6.4						
TNSS	**Tian-Shan**	**67.16**	**324**	*e*P	**P**	**03 55 08.0**	**-0.2**
	baz=324						
MDOK	**Medeo**	**67.18**	**324**	*i* P	**P**	**03 55 07.6**	**-0.4**
	baz=324						
MDOK				*i* S	**S**	**04 03 58.1**	**-3.1**
	baz=324						
MDOK				*i* S	S	04 03 59.6	-1.7
	baz=324						
MDOK				*e*LR	LR	04 24 13.5	
	comp=Z,10µm,23.3s,baz=324						
MDOK	**Medeo**	**67.18**	**324**	*i* P	**P**	**03 55 07.6**	**-0.4**
MDOK				*i* S	**S**	**04 03 58.1**	**-3.1**
MDOK				*i* S	S	04 03 59.5	-1.7
MDOK				MLR	MLR		
	comp=Z,10µm,23.0s						
PEA0B	**Petropavlovsk-**	**67.22**	**21**	⇑*e*P	**P**	**03 55 08.7**	**+0.9**
PEA0B	**Petropavlovsk-**	**67.22**	**21**	P	**P**	**03 55 08.3**	**+0.5**
PEA0B				IAmb	IAmb	03 55 32.2	
	comp=Z,364nm,1.2s						
PETK	**Petropavlovsk-**	**67.22**	**21**	P	**P**	**03 55 07.6**	**-0.2**
	comp=Z,41nm,0.8s,baz=202,slow=11,SNR=25						
PETK				LR	LR	04 21 36.7	
	comp=Z,7µm,21.8s,baz=220,slow=33						
PETK	**Petropavlovsk-**	**67.22**	**21**	P	**P**	**03 55 08.3**	**+0.5**
AAA	**Alma-Ata**	**67.28**	**324**	*e*P	**P**	**03 55 07.4**	**-1.1**
	baz=324						
AAA				*e*S	**S**	**04 04 02.4**	**0.0**
	baz=324						
AAA				*e*LR	LR	04 27 44.8	
	comp=Z,18µm,22.3s,baz=324						
AAA	**Alma-Ata**	**67.28**	**324**	*e*P	**P**	**03 55 07.4**	**-1.1**
AAA				*e*S	**S**	**04 04 02.3**	**0.0**
AAA				MLR	MLR		
	comp=Z,18µm,22.0s						
ARXS	**Arharly**	**67.37**	**325**	*e*P	**P**	**03 55 08.5**	**-0.6**
PET	**Petropavlovsk**	**67.49**	**21**	*d* *e*P	**P**	**03 55 11.6**	**+2.1**
PET				*i* S	**S**	**04 04 04.8**	**+0.6**
PET				*e*SS	**SS**	**04 08 26.4**	**+1.3**
PET				pmax	pmax		
	comp=Z,323nm,1.3s						
PET				pmax	pmax		
	comp=Z,3µm,15.9s						
PET				pmax	pmax		
	comp=Z,3µm,15.0s						
PET				smax	smax		
	comp=N,10µm,18.8s						
PET				smax	smax		
	comp=E,10µm,15.1s						
PET				smax	smax		
	comp=E,13µm,20.6s						
PET	**Petropavlovsk**	**67.49**	**21**	P	**P**	**03 55 10.0**	**+0.5**
PET				IAmb	IAmb	03 55 22.6	
	comp=Z,458nm,1.4s						
TDK	**Taldyqorghan**	**67.54**	**326**	*i* P	**P**	**03 55 09.6**	**-0.5**
	comp=Z,10µm,19.1s,baz=326						
TDK				*e*S	**S**	**04 04 04.5**	**-0.8**
	baz=326						
TDK				*e*LR	LR	04 29 33.4	
	comp=Z,15µm,23.3s,baz=326						
TDK	**Taldyqorghan**	**67.54**	**326**	*i* P	**P**	**03 55 09.5**	**-0.5**
TDK				*e*S	**S**	**04 04 04.5**	**-0.8**
TDK				pmax	pmax		
	comp=Z,10µm,19.1s						
CHKK	**Chushkaly**	**67.63**	**324**	⇓*i*P	**P**	**03 55 09.6**	**-1.1**
	baz=324						
RER	**Riviere de l'E**	**67.68**	**251**	P	**P**	**03 55 11.1**	**-0.4**
RER				IAMs_20	IAMs_20	04 20 59.3	
	comp=Z,19µm,20.0s						
KBL	**Kabul**	**67.84**	**312**	P	**P**	**03 55 11.5**	**-0.9**
KBL				pmax	pmax		
	comp=Z,201nm,1.0s						
KBL	**Kabul**	**67.84**	**312**	P	**P**	**03 55 11.5**	**-0.9**
KBL				IAmb	IAmb	03 55 18.8	
	comp=Z,201nm,1.0s						
KBL	**Kabul**	**67.84**	**312**	P	**P**	**03 55 12.4**	**0.0**
	SNR=128						
KBL				P	**P**	**03 55 12.4**	**0.0**
	SNR=128						
TKM2	**Tokmak 2**	**67.89**	**323**	P	**P**	**03 55 11.8**	**-0.7**
	SNR=50						
TKM2	**Tokmak 2**	**67.89**	**323**	P	**P**	**03 55 11.1**	**-1.4**
KUU	**Kurty**	**68.03**	**324**	⇓*i*P	**P**	**03 55 12.4**	**-0.8**
	comp=Z,2µm,2.7s,baz=324						
KUU				*e*S	**S**	**04 04 08.9**	**-2.3**
	baz=324						
KUU	**Kurty**	**68.03**	**324**	*d* *i*P	**P**	**03 55 12.4**	**-0.8**
KUU				*e*S	**S**	**04 04 08.8**	**-2.3**
KUU				pmax	pmax		
	comp=Z,2µm,2.7s						
KBK	**Karagaybulak**	**68.12**	**323**	P	**P**	**03 55 14.1**	**+0.2**
	SNR=39						
UCH	**Uchtor**	**68.14**	**322**	P	**P**	**03 55 14.8**	**+0.4**
	SNR=8.0						
DRK	**Karamyk**	**68.36**	**318**	P	**P**	**03 55 14.3**	**-1.4**
DRK				IAmb	IAmb	03 55 25.3	
	comp=Z,489nm,1.6s						
AAK	**Ala-Archa**	**68.39**	**322**	P	**P**	**03 55 15.6**	**0.0**
	comp=Z,53nm,1.0s,baz=140,slow=4.9,SNR=105						
AAK	**Ala-Archa**	**68.39**	**322**	P	**P**	**03 55 15.4**	**-0.2**
	SNR=56						
AAK	**Ala-Archa**	**68.39**	**322**	*i* P	**P**	**03 55 15.4**	**-0.2**
	SNR=74						
AAK	**Ala-Archa**	**68.39**	**322**	*d* *i*P	**P**	**03 55 15.4**	**-0.2**
AAK				pmax	pmax		
	comp=Z,915nm,2.5s						
AAK				MLR	MLR		
	comp=Z,74µm,21.0s						
AAK	**Ala-Archa**	**68.39**	**322**	P	**P**	**03 55 15.5**	**0.0**
AAK				IAmb	IAmb	03 55 23.5	
	comp=Z,144nm,0.9s						
AAK	**Ala-Archa**	**68.39**	**322**	IAMs_20	IAMs_20	04 28 58.7	
	comp=Z,27µm,22.0s						
CHMS	**Chumysh**	**68.44**	**323**	P	**P**	**03 55 15.9**	**+0.1**
	SNR=16						
AML	**Almayashu**	**68.59**	**321**	P	**P**	**03 55 17.0**	**-0.1**
	SNR=78						
AML	**Almayashu**	**68.59**	**321**	*i* P	**P**	**03 55 17.1**	**-0.1**
	SNR=79						
AML	**Almayashu**	**68.59**	**321**	P	**P**	**03 55 17.4**	**+0.2**
USP	**Ospenovka**	**68.74**	**323**	P	**P**	**03 55 17.2**	**-0.4**
	SNR=79						
SGDS	**Sogindy**	**68.77**	**323**	⇓*i*P	**P**	**03 55 16.8**	**-1.1**
	comp=Z,324nm,2.3s,baz=323						
SGDS				*e*S	**S**	**04 04 18.3**	**-1.8**
	baz=323						
SGDS	**Sogindy**	**68.77**	**323**	*e*P	**P**	**03 55 17.1**	**-0.8**
EKS2	**Erkin-Say**	**68.83**	**322**	P	**P**	**03 55 18.5**	**+0.1**
	SNR=77						
MSEY	**Mahe Island**	**69.03**	**268**	*i* P	**P**	**03 55 19.0**	**-1.0**
	SNR=12						
MSEY	**Mahe Island**	**69.03**	**268**	P	**P**	**03 55 18.9**	**-1.2**
MSEY				pmax	pmax		
	comp=Z,196nm,1.4s						
MSEY	**Mahe Island**	**69.03**	**268**	P	**P**	**03 55 18.9**	**-1.2**
MSEY				IAmb	IAmb	03 55 27.8	
	comp=Z,196nm,1.4s						
MSEY	**Mahe Island**	**69.03**	**268**	P	**P**	**03 55 20.8**	**+0.7**
GAR	**Garm**	**69.10**	**317**	P	**P**	**03 55 19.1**	**-1.0**
BTK	**Batken**	**69.31**	**318**	P	**P**	**03 55 20.4**	**-0.9**
BTK				pmax	pmax		
	comp=Z,257nm,1.4s						
BTK	**Batken**	**69.31**	**318**	P	**P**	**03 55 20.4**	**-0.9**
BTK				IAmb	IAmb	03 55 39.8	
	comp=Z,257nm,1.4s						
KRAR	**Krasnoyarsk**	**69.37**	**341**	⇑*i*P	**P**	**03 55 21.1**	**-0.1**
JOHN	**Johnston Islan**	**69.42**	**69**	IAMs_20	IAMs_20	04 23 19.2	
	comp=Z,19µm,21.0s						
CHGR	**Chuyangaron**	**69.72**	**316**	P	**P**	**03 55 22.5**	**-1.3**
CHGR				IAmb	IAmb	03 55 30.1	
	comp=Z,363nm,1.2s						
BTLS	**Baital**	**70.03**	**324**	⇓*i*P	**P**	**03 55 24.4**	**-1.1**
	comp=Z,308nm,2.6s,baz=324						
BTLS				*e*S	**S**	**04 04 33.9**	**-0.9**
	baz=324						
BTLS	**Baital**	**70.03**	**324**	*d* *i*P	**P**	**03 55 24.4**	**-1.1**
BTLS				*e*S	**S**	**04 04 33.8**	**-0.9**
BTLS				pmax	pmax		
	comp=Z,308nm,2.6s						
SEM	**Semipalatinsk**	**70.12**	**331**	⇓*i*P	**P**	**03 55 24.7**	**-1.6**
	comp=Z,286nm,2.0s,baz=331						
SEM				*e*S	**S**	**04 04 33.9**	**-2.2**
	baz=331						
SEM	**Semipalatinsk**	**70.12**	**331**	*d* *i*P	**P**	**03 55 24.6**	**-1.6**
SEM				*e*S	**S**	**04 04 33.8**	**-2.3**
SEM				pmax	pmax		
	comp=Z,287nm,2.0s						
YAK	**Yakutsk**	**70.22**	**2**	LR	LR	04 30 57.3	
	comp=Z,7µm,18.0s,baz=180,slow=40						
YAK	**Yakutsk**	**70.22**	**2**	*d* *i*P	**P**	**03 55 25.6**	**-0.7**
YAK				*e**PP	**pP**	**03 55 32.9**	**-1.4**
YAK				*e*		03 55 47.5	
YAK				*e*		03 58 02.9	
YAK				*e*PPP	PPP	03 59 39.3	
YAK				*e*S	**S**	**04 04 37.3**	**+1.1**
YAK				*e*		04 05 30.7	
YAK				*e*SS	**SS**	**04 09 09.8**	**+2.9**
YAK				pmax	pmax		
	comp=Z,246nm,1.1s						
YAK				pmax	pmax		
	comp=E,29nm,1.1s						
YAK				pmax	pmax		
	comp=N,82nm,1.0s						
YAK				pmax	pmax		
	comp=Z,1µm,4.8s						
YAK				pmax	pmax		
	comp=E,505nm,4.0s						
YAK				pmax	pmax		
	comp=N,802nm,4.6s						
YAK				smax	smax		
	comp=N,5µm,6.9s						
YAK				smax	smax		
	comp=E,2µm,4.1s						
YAK				MLR	MLR		
	comp=Z,13µm,21.0s						
YAK				MLR	MLR		
	comp=N,9µm,21.0s						
YAK				MLR	MLR		
	comp=E,3µm,21.0s						
YAK	**Yakutsk**	**70.22**	**2**	P	**P**	**03 55 25.9**	**-0.4**
YAK				IAmb	IAmb	03 55 43.3	
	comp=Z,252nm,1.0s						
DZA	**Taraz**	**70.47**	**321**	*e*P	**P**	**03 55 26.4**	**-1.9**
	baz=321						
DZA	**Taraz**	**70.47**	**321**	*e*P	**P**	**03 55 26.4**	**-1.9**
ZAA0	**Zalesovo Array**	**70.63**	**336**	P	**P**	**03 55 27.9**	**-1.1**
ZAA0				IAmb	IAmb	03 55 37.0	
	comp=Z,329nm,0.9s						
ZALV	**Zalesovo Beam**	**70.63**	**336**	P	**P**	**03 55 27.6**	**-1.4**
	comp=Z,248nm,1.0s,baz=126,slow=4.2,SNR=351						
ZALV				PKPPKP	**P'P'df**	**04 23 27.7**	**+1.5**

	comp=Z,4.2nm,0.9s,baz=321,slow=1.9,SNR=5.3						
MA2	Magadan	70.74	14⇓	iP	P	03 55 30.7	+1.1
MA2				pmax	pmax		
	comp=Z,203nm,1.3s						
MA2				MLR	MLR		
	comp=Z,5µm,19.0s						
MA2	Magadan	70.74	14	P	P	03 55 30.5	+0.9
MA2				IAmb	IAmb	03 55 43.2	
	comp=Z,331nm,1.2s						
IUG	Iuzhnay	70.89	320⇓	iP	P	03 55 30.4	-0.6
	baz=320						
IUG				eS	S	04 04 43.2	-2.0
	baz=320						
IUG	Iuzhnay	70.89	320d	iP	P	03 55 30.4	-0.6
IUG				eS	S	04 04 43.2	-2.0
JLN	Jalan Bani Buh	70.94	297	P	P	03 55 31.5	-0.1
	SNR=30						
TAS	Tashkent	70.95	319	P	P	03 55 31.2	0.0
TAS	Tashkent	70.95	319	P	P	03 55 31.2	0.0
KURBB	Kurchatov Arra	71.08	331	P	P	03 55 31.2	-0.6
	comp=Z,178nm,1.1s,baz=138,slow=5.1,SNR=355						
KURBB	Kurchatov Arra	71.08	331	P	P	03 55 30.9	-0.9
KK31	Karatay Array	71.09	321	iP	P	03 55 31.0	-1.1
KK31	Karatay Array	71.09	321	P	P	03 55 30.9	-1.1
KK31				IAmb	IAmb	03 55 50.1	
	comp=Z,196nm,1.5s						
KKAR	Karatay Array	71.09	321	P	P	03 55 31.1	-1.0
KKAR				pmax	pmax		
	comp=Z,196nm,1.5s						
KKAR	Karatay Array	71.09	321	P	P	03 55 31.1	-1.0
KKAR				IAmb	IAmb	03 55 50.1	
	comp=Z,196nm,1.5s						
KKAR	Karatay Array	71.09	321	P	P	03 55 31.3	-0.8
KURK	Kurchatov	71.10	331	P	P	03 55 31.1	-0.8
KURK				pmax	pmax		
	comp=Z,493nm,1.2s						
KURK	Kurchatov	71.10	331	P	P	03 55 31.1	-0.8
KURK	Kurchatov	71.10	331	IAMs_20	IAMs_20	04 32 48.5	
	comp=Z,19µm,21.0s						
KURK	Kurchatov	71.10	331	P	P	03 55 32.0	+0.1
WBK	Wadi Bani Khal	71.47	297	P	P	03 55 35.0	+0.2
	SNR=30						
BRLS	Borolday	71.47	321	iP	P	03 55 32.9	-1.5
	baz=320						
BRLS	Borolday	71.47	321	iP	P	03 55 32.9	-1.5
VNDA	Vanda	71.81	172	P	P	03 55 36.5	+0.7
	comp=Z,17nm,0.8s,baz=324,slow=5.9,SNR=47						
VNDA				PKPPKP	P'P'df	04 23 26.4	-0.9
	comp=Z,0.6nm,0.9s,baz=316,slow=4.4,SNR=3.6						
VNDA				LR	LR	04 27 17.8	
	comp=Z,46µm,18.9s,baz=327,slow=36						
VNDA	Vanda	71.81	172	P	P	03 55 35.9	0.0
VNDA				pmax	pmax		
	comp=Z,347nm,1.6s						
VNDA	Vanda	71.81	172	P	P	03 55 35.9	0.0
VNDA				IAmb	IAmb	03 55 52.5	
	comp=Z,347nm,1.6s						
MHTO	MHTO	71.89	295	P	P	03 55 37.0	-0.3
	SNR=37						
MAW	Mawson	71.92	201	P	P	03 55 37.0	+0.4
	comp=Z,31nm,0.9s,baz=66,slow=7.2,SNR=51						
MAW				PKPPKP	P'P'df	04 23 26.5	-0.9
	comp=Z,1.2nm,0.7s,baz=298,slow=12,SNR=3.8						
MAW				LR	LR	04 23 26.8	
	comp=Z,33µm,21.8s,baz=58,slow=33						
MAW	Mawson	71.92	201	P	P	03 55 37.8	+1.1
	baz=72,SNR=54						
MAW	Mawson	71.92	201	P	P	03 55 36.4	-0.2
MAW				pmax	pmax		
	comp=Z,48nm,1.4s						
MAW	Mawson	71.92	201	P	P	03 55 36.4	-0.2
WSAR	Wadi Sarin	71.96	298	P	P	03 55 37.1	-0.6
	comp=Z,136nm,1.1s,baz=136,slow=6.0,SNR=53						
WSAR	Wadi Sarin	71.96	298	P	P	03 55 37.7	0.0
	SNR=43						
DQM	DQM	71.97	294	P	P	03 55 38.0	+0.2
	SNR=23						
JMDO	Jabal Madar	72.17	297	P	P	03 55 39.0	0.0
	SNR=40						
SMDO	Samad	72.42	297	P	P	03 55 40.5	-0.1
	SNR=37						
BIDO	Bidbid	72.48	298	P	P	03 55 41.0	+0.1
	SNR=50						
SBA	Scott Base	72.76	171	P	P	03 55 41.5	0.0
SBA				pmax	pmax		
	comp=Z,1µm,1.9s						
SBA				MLR	MLR		
	comp=Z,27µm,18.0s						
SBA	Scott Base	72.76	171	P	P	03 55 41.5	0.0
OTUK	Ortayu	72.83	326	P	P	03 55 41.0	-1.4
HRA	Herat	72.84	310	P	P	03 55 41.6	-1.4
BSY	Bisya	73.07	297	P	P	03 55 44.3	-0.1
	SNR=40						
SHAO	Shalim	73.22	292	iP	P	03 55 44.7	-0.6
	SNR=13						
SHAO	Shalim	73.22	292	P	P	03 55 45.6	+0.3
	SNR=12						
HOQ	Hoqain	73.22	298	P	P	03 55 45.3	+0.1
	SNR=74						
SOCY	Socotra	73.38	285	P	P	03 55 44.9	-1.6
SOCY				IAmb	IAmb	03 55 51.8	
	comp=Z,428nm,1.3s						
SOCY	Socotra	73.38	285	P	P	03 55 46.3	-0.2
	SNR=16						
SBV	Sambava	73.60	258	P	P	03 55 48.5	+0.9
	SNR=9.5						
SBV	Sambava	73.60	258	P	P	03 55 49.6	+2.0
BRZS	Berezniki	73.64	328⇓	iP	P	03 55 46.2	-1.0
	comp=Z,464nm,2.6s,baz=328						
BRZS	Berezniki	73.64	328d	iP	P	03 55 46.1	-1.0
BRZS				pmax	pmax		
	comp=Z,464nm,2.6s						
DMTO	DMTO	73.76	291	P	P	03 55 49.0	+0.5
	SNR=11						
ARQ	Araqi	73.84	297	P	P	03 55 49.0	+0.1
	SNR=26						
SOHO	SOHO	74.06	298	iP	P	03 55 49.1	-1.0
	SNR=32						
SOHO	SOHO	74.06	298	P	P	03 55 50.0	-0.2
SEY	Seymchan	74.09	13	LR	LR	04 27 14.7	
	comp=Z,5µm,21.1s,baz=210,slow=35						
RBK	Rabkut	74.40	291	P	P	03 55 53.0	+0.7
	SNR=19						
UOSS	Minazif	74.58	299	iP	P	03 55 51.3	-1.8
	SNR=19						
UOSS	Minazif	74.58	299	P	P	03 55 51.8	-1.4
UOSS				IAmb	IAmb	03 55 58.9	
	comp=Z,249nm,1.5s						
UOSS	Minazif	74.58	299	P	P	03 55 53.0	-0.2
MDH	Madha	74.60	299	iP	P	03 55 52.1	-1.2
	SNR=12						
MDH	Madha	74.60	299	P	P	03 55 53.5	+0.2
	SNR=9.5						
HATD	Hatta, Dubai	74.61	299	iP	P	03 55 53.1	-0.3
	SNR=20						
HATD	Hatta, Dubai	74.61	299	P	P	03 55 54.0	+0.6
	SNR=37						
ASHO	Ashiyiah	74.63	298	iP	P	03 55 52.8	-0.7
	SNR=24						
ASHO	Ashiyiah	74.63	298	P	P	03 55 54.0	+0.5
	SNR=27						
ALNE	Al Ain	74.72	298	iP	P	03 55 53.7	-0.3
	SNR=38						
ALNE	Al Ain	74.72	298	P	P	03 55 54.2	+0.2
	SNR=33						
MSFE	Esma-Masafi	74.74	299	iP	P	03 55 53.8	-0.3
	SNR=23						
DOK	Doka	74.74	292	P	P	03 55 53.6	-0.6
	SNR=23						
MASF	Masafi	74.74	299	P	P	03 55 54.8	+0.6
	SNR=20						
BANOM	Banah	74.78	300	iP	P	03 55 54.2	-0.2
	SNR=29						
BANOM	Banah	74.78	300	P	P	03 55 55.0	+0.6
	SNR=17						
UMZA	Um Al Zommool	74.87	296	P	P	03 55 54.5	-0.3
WHFO	Wadi Hawf	74.90	291	P	P	03 55 55.1	-0.1
	SNR=20						
SHME	Shamm	74.96	300	iP	P	03 55 55.5	+0.2
	SNR=9.9						
SHME	Shamm	74.96	300	P	P	03 55 55.9	+0.6
	SNR=7.3						
FAQ	Al Faqa, Dubai	75.06	298	iP	P	03 55 55.3	-0.6
	SNR=35						
FAQ	Al Faqa, Dubai	75.06	298	P	P	03 55 56.0	+0.1
	SNR=26						
NAZ	Nazwa, Dubai	75.06	299	iP	P	03 55 54.5	-1.5
	SNR=18						
NAZ	Nazwa, Dubai	75.06	299	P	P	03 55 56.0	0.0
	SNR=15						
ABTO	Aybut	75.20	290	P	P	03 55 57.0	0.0
	SNR=16						
ASUD	Al Ashush, Dub	75.25	298	iP	P	03 55 55.9	-1.1
	SNR=18						
ASUD	Al Ashush, Dub	75.25	298	P	P	03 55 58.0	+0.9
	SNR=15						
AJN	Ajban	75.53	298	iP	P	03 55 57.5	-1.1
	SNR=11						
AJN	Ajban	75.53	298	P	P	03 55 58.4	-0.2
	SNR=6.6						
ABPO	Ambohimpanom	75.76	252	iP	P	03 56 04.5	+4.2
OPO	Ambohidratompo	75.83	253	LR	LR	04 25 22.9	
	comp=Z,6µm,19.1s,baz=193,slow=33						
VOI	Vohitsoka	75.98	250	P	P	03 56 00.9	-0.5
VOI				IAmb	IAmb	03 56 09.0	
	comp=Z,314nm,1.2s						
VOI	Vohitsoka	75.98	250	P	P	03 56 03.1	+1.6
	SNR=9.8						
VOI	Vohitsoka	75.98	250	P	P	03 56 02.5	+1.0
BVAR	Borovoye Array	76.56	330	P	P	03 56 03.1	-0.7
	comp=Z,26nm,0.9s,baz=185,slow=13,SNR=100						
BRVK	Borovoye	76.63	330c	iP	P	03 56 03.4	-0.9
BRVK				pmax	pmax		
	comp=Z,368nm,2.5s						
BRVK	Borovoye	76.63	330	P	P	03 56 03.6	-0.6
BRVK				IAmb	IAmb	03 56 18.6	
	comp=Z,672nm,1.9s						
BRVK	Borovoye	76.63	330	IAMs_20	IAMs_20	04 35 51.7	
	comp=Z,15µm,18.0s						
BRVK	Borovoye	76.63	330	P	P	03 56 03.8	-0.5
GEYT	Alibeck	77.27	312	P	P	03 56 07.9	-0.4
	comp=Z,84nm,1.1s,baz=206,slow=23,SNR=23						
GEYT				PP	PP	03 59 04.6	+1.9
	comp=Z,14nm,1.0s,baz=169,slow=5.1,SNR=3.7						
GEYT				LR	LR	04 37 40.7	
	comp=Z,11µm,18.4s,baz=85,slow=42						
GYA0B	ALIBECK ARRAY	77.27	312	P	P	03 56 07.7	-0.6
KIWB	Kanaga Island	77.68	33	P	P	03 56 10.4	+0.3
ADK	Adak	77.94	33	P	P	03 56 12.1	+0.5
ADK				pmax	pmax		
	comp=Z,833nm,1.9s						
ADK	Adak	77.94	33	P	P	03 56 12.1	+0.5
ADK				IAmb	IAmb	03 56 22.2	
	comp=Z,833nm,1.9s						
XMAS	Kiritimati	78.07	86	P	P	03 56 12.9	-0.3
TRNA	Turayna	78.89	297	P	P	03 56 17.2	-0.2
SHMA	Al-Shehemyia	79.39	298	P	P	03 56 19.6	-0.6
TIXI	Tiksi	79.83	1	LR	LR	04 34 08.1	
	comp=Z,7µm,20.3s,baz=220,slow=38						
TIXI	Tiksi	79.83	1d	iP	P	03 56 19.8	-1.8
AB31	Akbulak array	80.45	323	iP	P	03 56 24.2	-1.3
ABKAR	Akbulak array	80.45	323	P	P	03 56 24.7	-0.8
ABKAR	Akbulak array	80.45	323	P	P	03 56 24.6	-0.9
KIP	Kipapa	81.12	67⇑	eP	P	03 56 30.8	+1.2
KIP				pmax	pmax		
	comp=Z,448nm,2.3s						
KIP				MLR	MLR		
	comp=Z,6µm,18.0s						
KIP	Kipapa	81.12	67	P	P	03 56 29.7	+0.1
KIP				IAmb	IAmb	03 56 40.6	
	comp=Z,476nm,1.6s						
NRIK	Noril'sk	81.66	347	P	P	03 56 31.0	-0.5
	comp=Z,21nm,0.9s,baz=141,slow=4.8,SNR=33						
NRIK	Noril'sk	81.66	347d	iP	P	03 56 29.9	-1.6
NRIK				pmax	pmax		
	comp=Z,345nm,2.5s						
NRIK	Noril'sk	81.66	347	P	P	03 56 31.1	-0.3
NRIK				IAmb	IAmb	03 56 45.2	
	comp=Z,248nm,1.5s						
QSPA	South Pole Qui	81.68	180	P	P	03 56 31.8	-0.2
AKTO	Aktyubinsk	82.07	324	P	P	03 56 33.1	-0.9
	comp=Z,50nm,0.7s,baz=109,slow=6.0,SNR=104						
AKTO	Aktyubinsk	82.07	324	P	P	03 56 32.9	-1.1
NIKH	Nikolski High	82.70	34	P	P	03 56 37.4	+0.1
	baz=246						
QRN	Al-Qurain	82.72	300	eP	P	03 56 36.6	-1.3
TBI	Tubuai	82.76	113	eP	P	03 56 39.0	+0.8
	comp=Z,460nm,1.4s						
TBI	Tubuai	82.76	113	eS	S	04 06 52.6	-2.7
	comp=Z,9µm,34.5s						
TBI	Tubuai	82.76	113	eLQ	LQ	04 19 09.9	
	comp=Z,42µm,36.2s						
TBI				eLR	LR	04 22 41.5	
	comp=Z,31µm,27.2s						
HPAH	Hawaii Prepara	82.95	69	P	P	03 56 38.9	-0.5
POHA	Pohakuloa	83.05	69	IAMs_20	IAMs_20	04 36 16.4	
	comp=Z,11µm,20.0s						
HMH	Humu'ula Sheep	83.07	69	P	P	03 56 40.0	-0.3
RDF	Al-Radifah	83.07	300	eP	P	03 56 37.6	-2.1
UMR	Umm Al-Rimmam	83.08	301	eP	P	03 56 37.6	-2.1
MLH	Mauna Loa	83.14	69	P	P	03 56 40.5	-0.1
PAE	Paea	83.26	107	eP	P	03 56 42.0	+1.1
	comp=Z,61nm,1.2s						
PPT2	Papeete2	83.27	107	eP	P	03 56 42.3	+1.2
PPT2	Papeete2	83.27	107	eS	S	04 06 59.0	-1.8
	comp=Z,6µm,24.8s						
PPT2	Papeete2	83.27	107	eLQ	LQ	04 19 23.6	
	comp=Z,107µm,38.2s						
PPT2				eLR	LR	04 22 57.0	
	comp=Z,58µm,31.2s						
PPT	Papeete	83.27	107	LR	LR	04 30 32.4	
	comp=Z,5µm,21.6s,baz=262,slow=33						
SVE	Sverdlovsk	83.33	330c	eP	P	03 56 39.6	-0.8
SVE				eS	S	04 07 00.2	+0.6
SVE				e		04 12 28.1	
SVE				pmax	pmax		
	comp=Z,351nm,2.0s						
TIAR	Tiarei	83.49	107	eP	P	03 56 43.3	+1.1
	comp=Z,24nm,1.0s						
SPIA	Saint Paul Isl	83.75	30	P	P	03 56 42.3	-0.2
	baz=244						
ATD	Arta Tunnel	83.96	283	P	P	03 56 44.5	-0.2
	SNR=5.3						
ARU	Arti	84.19	329	P	P	03 56 43.7	-1.1
	comp=Z,4.0nm,0.5s,baz=127,slow=3.5,SNR=30						
ARU	Arti	84.19	329d	iP	P	03 56 43.4	-1.5
ARU				S	S	04 07 03.6	-4.8
ARU				SS	SS	04 12 36.5	-1.6
ARU				SSS	SSS	04 16 12.1	
ARU				pmax	pmax		
	comp=Z,337nm,2.8s						
ARU				pmax	pmax		
	comp=Z,916nm,7.1s						
ARU				smax	smax		
	comp=N,4µm,12.6s						
ARU	Arti	84.19	329	P	P	03 56 43.1	-1.7
ARU				IAmb	IAmb	03 56 58.2	
	comp=Z,432nm,1.5s						
UNV	Unalaska Valle	84.34	34	P	P	03 56 45.6	0.0
	baz=248						
MEH	Mehetia	84.67	107	eP	P	03 56 48.9	+0.7
	comp=Z,72nm,1.1s						
AKUT	Akutan	84.85	34	P	P	03 56 48.4	+0.3
AKUT				IAmb	IAmb	03 56 57.8	
	comp=Z,418nm,1.4s						
PMOR	Pomariorio Ree	85.19	104	eP	P	03 56 51.6	+0.9
	comp=Z,374nm,1.3s						
GINR	Hospital, Gini	85.33	278	iP	P	03 56 51.7	-0.1
VAH	Vaihoa	85.41	105	eP	P	03 56 52.7	+0.8
	comp=Z,272nm,1.4s						
GAMB	Gambell	86.07	23	P	P	03 56 54.8	+0.8
	baz=242						
NGLE	Hospital, Nege	86.18	276	iP	P	03 56 55.0	-1.0
FALS	False Pass	86.39	33	P	P	03 56 56.0	+0.1
	baz=250						
MAK	Makhachkala	86.51	314	eP	P	03 56 53.8	-2.9
MAK				e		04 00 12.1	
MAK				ePPP	PPP	04 02 09.2	
MAK				e		04 07 16.7	
MAK				eSS	SS	04 13 12.6	-0.2
MAK				pmax	pmax		
	comp=Z,462nm,1.4s						
MAK				MLR	MLR		
	comp=Z,12µm,21.0s						
KIBK	Kibwezi	86.58	268	P	P	03 56 56.7	-1.2
KIBK				IAMs_20	IAMs_20	04 30 59.7	
	comp=Z,16µm,22.0s						
KIBK	Kibwezi	86.58	268	P	P	03 56 58.2	+0.3
	SNR=15						
ZOMB	Zomba	87.42	255	iP	P	03 57 02.8	+0.9
KMBO	Kilima Mbogo	87.53	269	P	P	03 57 02.6	-0.1
	comp=Z,17nm,1.0s,baz=54,slow=6.1,SNR=36						
KMBO				LR	LR	04 32 09.3	
	comp=Z,22µm,20.3s,baz=86,slow=33						
KMBO	Kilima Mbogo	87.53	269	iP	P	03 57 01.9	-0.8
	SNR=28						
KMBO	Kilima Mbogo	87.53	269	P	P	03 57 02.1	-0.6
KMBO				pmax	pmax		
	comp=Z,45nm,1.2s						
KMBO	Kilima Mbogo	87.53	269	P	P	03 57 02.1	-0.6
KMBO	Kilima Mbogo	87.53	269	iP	P	03 57 01.9	-0.8
FURI	Furi	87.59	279	iP	P	03 57 03.5	+0.5
GROC	Groznyy	87.79	314	eP	P	03 57 01.8	-1.1
GROC				e		04 00 30.3	
GROC				eS	SKSac	04 07 26.0	-3.7
GROC				pmax	pmax		
	comp=Z,307nm,1.2s						
GNI	Garni	87.87	311	P	P	03 57 03.3	-0.3
	comp=Z,40nm,1.1s,baz=178,slow=1.8,SNR=14						
GNI	Garni	87.87	311d	iP	P	03 57 02.9	-0.7
GNI				pmax	pmax		
	comp=Z,298nm,2.5s						
GNI				MLR	MLR		
	comp=Z,10µm,22.0s						
GNI	Garni	87.87	311	P	P	03 57 03.3	-0.3
SDPT	Sand Point	88.15	33	P	P	03 57 04.4	+0.1
	baz=253						
MERTO	Secondary Scho	88.29	281	iP	P	03 57 06.4	+0.1
DODT	Dodoma, Tanzan	88.31	264	iP	P	03 57 10.4	+4.1
KOND	Kondoa	88.45	265	iS	pP	03 57 16.0	+0.7
KOND				iP	P	03 57 06.9	0.0
CHNA	Chernabura Isl	88.48	34	P	P	03 57 06.6	+0.7
	baz=253						
SILA	Clinic, Silare	88.84	283	iP	P	03 57 09.1	+0.3
BELG	Belogornoye	88.86	323	P	P	03 57 06.3	-1.5
	comp=Z,60nm,0.9s,baz=223,slow=0.9,SNR=20						
BELG				PP	PP	04 00 39.6	+2.4
	comp=Z,103nm,1.2s,baz=145,slow=9.7,SNR=4.2						
ZEI	Tsey	89.05	313	eP	P	03 57 04.9	-4.3
ZEI				pmax	pmax		
	comp=Z,63nm,1.3s						
AKH	Akhalkalaki	89.06	312⇓	P	P	03 57 09.3	0.0
SIRT	Sirnak	89.08	308	P	P	03 57 08.0	-1.3
KARS	Kars	89.21	311	P	P	03 57 09.2	-0.7
KARS				pmax	pmax		
	comp=Z,1µm,1.5s						
KARS	Kars	89.21	311	P	P	03 57 09.2	-0.7
BAHR	High School, B	89.25	282	iP	P	03 57 14.9	+4.2
ONI	Oni	89.33	313	P	P	03 57 09.9	-0.5
ONI				pmax	pmax		
	comp=Z,81nm,1.2s						
ONI	Oni	89.33	313	P	P	03 57 09.9	-0.5
GOND	University, Go	89.34	283	iP	P	03 57 11.1	-0.1
NCK	Nalchik	89.42	314d	eP	P	03 57 10.1	-0.6
NCK				pmax	pmax		
	comp=Z,191nm,1.3s						
NCK				MLR	MLR		
	comp=Z,14µm,23.0s						
KIRV	Kirov	89.57	330	P	P	03 57 10.6	-0.3
	comp=Z,6.6nm,0.5s,baz=124,slow=6.4,SNR=8.7						
KIRV	Kirov	89.57	330d	iP	P	03 57 10.1	-0.8
SHAW	Medical Clinic	89.80	282	iP	P	03 57 14.3	+0.9
KBZ	Khabaz	89.96	314	P	P	03 57 12.2	-0.9
	comp=Z,32nm,0.8s,baz=120,slow=2.1,SNR=48						
KBZ				PKKPbc	PKKPbc	04 14 51.0	+4.8
	comp=Z,2.1nm,0.8s,baz=303,slow=1.5,SNR=4.6						
KBZ				LR	LR	04 46 25.3	
	comp=Z,11µm,19.9s,baz=110,slow=42						
KBZ	Khabaz	89.96	314d	iP	P	03 57 12.1	-1.0
KBZ				pmax	pmax		
	comp=Z,60nm,0.9s						
KBZ				MLR	MLR		
	comp=Z,11µm,23.0s						
NEY	Neytrino	89.99	314d	eP	P	03 57 13.2	-0.4
NEY				pmax	pmax		
	comp=Z,45nm,1.2s						
CHGE	School, Chagni	90.00	281	iP	P	03 57 18.4	+4.1
HARO	School, Haroo	90.05	280	iP	P	03 57 15.1	+0.6
LODK	Lodwar	90.06	273	P	P	03 57 13.2	-1.2
LODK	Lodwar	90.06	273	P	P	03 57 14.6	+0.2
	SNR=15						
GOF	Gofitskoye	90.12	315⇑	iP	P	03 57 13.5	-0.4
GOF				eS	SKSac	04 07 45.0	+1.5
GOF				pmax	pmax		
	comp=Z,158nm,1.0s						
KIV	Kislovodsk	90.16	314⇓	P	P	03 57 12.6	-1.6
KIV	Kislovodsk	90.16	314	iP	P	03 57 12.2	-2.0
	SNR=20						
KIV	Kislovodsk	90.16	314	eP	P	03 57 12.9	-1.3
KIV				e		04 00 47.0	
KIV				ePPP	PPP	04 02 44.3	
KIV				e		04 07 40.5	
KIV				eSS	SS	04 14 04.2	-1.9
KIV				eSSS	SSS	04 17 39.9	
KIV				pmax	pmax		
	comp=Z,38nm,1.1s						
KIV				pmax	pmax		
	comp=Z,171nm,4.7s						
KIV	Kislovodsk	90.16	314	P	P	03 57 13.3	-0.9
MUKA	Police Camp, M	90.30	282	iP	P	03 57 16.2	+0.7
BCA	Borcka	90.45	312⇑	P	P	03 57 14.6	-0.9
MELAE	School, Dubaba	90.75	282	iP	P	03 57 16.6	-1.0
DEBR	School, Debre	90.79	281	iP	P	03 57 20.6	+2.6
ABMD	Abulta/Almeha	91.04	282	iP	P	03 57 20.2	+1.3
RDOG	Red Dog Mine	91.09	21	P	P	03 57 18.6	+0.7
	baz=250						
GUBA	Police Station	91.24	281	iP	P	03 57 21.4	+1.6
GIDAE	Health Center,	91.58	279	iP	P	03 57 22.7	+1.1
SHERE	Police Station	91.64	280	iP	P	03 57 20.9	-0.8
KTUT	Trabzon	91.75	311⇓	P	P	03 57 20.3	-1.2
SII	Sitkinak Islan	91.88	33	P	P	03 57 22.0	+0.2
	baz=258						
VRH	Novokhopyorsk	92.17	321	eP	P	03 57 21.1	-2.1
VRH				eS	S	04 08 19.8	-4.5
VRH				pmax	pmax		
	comp=Z,100nm,1.3s						
VRH				smax	smax		
	comp=N,4µm,15.6s						
VRH				MLR	MLR		
	comp=Z,19µm,25.0s						
PRGR	Permogore	92.19	332	eP	P	03 57 20.3	-2.8
PRGR				e		04 01 05.3	
PRGR				eS	SKSac	04 07 49.8	-4.7
PRGR				e		04 14 38.0	
PRGR				pmax	pmax		
	comp=Z,64nm,1.5s						
SOC	Sochi	92.20	314	eP	P	03 57 20.4	-3.2
SOC				ePPP	PPP	04 03 00.1	
SOC				eS	SKSac	04 07 50.5	-4.9
SOC				eSSS	SSS	04 18 09.0	
SOC				pmax	pmax		
	comp=Z,38nm,0.9s						
TTA	Tatalina	92.39	27	P	P	03 57 23.1	-1.0
TTA				pmax	pmax		
	comp=Z,97nm,1.7s						
TTA	Tatalina	92.39	27	P	P	03 57 23.1	-1.0
TTA	Tatalina	92.39	27	P	P	03 57 24.4	+0.3
	baz=256						
GCSA	Galena City Sc	92.45	25	P	P	03 57 25.0	+0.8
	baz=256						
OHAK	Old Harbor	92.49	33	P	P	03 57 24.5	0.0
	baz=259						
N19K	Bonanza Creek	92.62	29	P	P	03 57 24.8	-0.5
N19K	Bonanza Creek	92.62	29	P	P	03 57 26.1	+0.8
	baz=258						
ASF	Jabal al Asfar	92.70	302	P	P	03 57 25.4	-0.8
	comp=Z,28nm,1.2s,baz=102,slow=1.4,SNR=13						
L19K	White Mountain	92.74	28	P	P	03 57 25.4	-0.3
L19K				IAmb	IAmb	03 57 48.0	
	comp=Z,133nm,2.0s						
L19K				IAMs_20	IAMs_20	04 35 30.4	
	comp=Z,11µm,22.0s						
L19K	White Mountain	92.74	28	P	P	03 57 26.1	+0.4
	baz=258						
M19K	Big River Lodg	92.90	28	P	P	03 57 25.7	-0.7
M19K	Big River Lodg	92.90	28	P	P	03 57 26.8	+0.4
	baz=258						
KDAK	Kodiak Island	92.97	32	LR	LR	04 34 40.9	
	comp=Z,8µm,21.9s,baz=267,slow=33						
KDAK	Kodiak Island	92.97	32	P	P	03 57 26.9	+0.2
	baz=259						
P19K	Oil Pt	93.00	30	IAMs_20	IAMs_20	04 36 00.3	
	comp=Z,13µm,22.0s						
GAZ	Gaziantep	93.14	307	P	P	03 57 25.6	-2.6
GAZ				IAmb	IAmb	03 57 33.4	
	comp=Z,119nm,1.6s						
SNAA	Sanae	93.19	195	P	P	03 57 29.3	+1.6
SNAA	Sanae	93.19	195	PKKPdf	PKKPdf	04 14 34.5	-1.7

SNAA	Sanae	93.19	195	sP	sP	03 57 34.7	-3.5
SNAA	Sanae	93.19	195	c iP	P	03 57 28.5	+0.8
SNAA				pmax	pmax		
	comp=Z,184nm,1.0s						
SNAA				MLR	MLR		
	comp=Z,21µm,18.0s						
SNAA	Sanae	93.19	195	P	P	03 57 27.5	-0.2
SNAA				IAmb	IAmb	03 57 35.5	
	comp=Z,166nm,1.0s						
L20K	Farewell, AK	93.25	27	P	P	03 57 28.5	+0.4
	baz=258						
J20K	Nowinta River	93.48	26	P	P	03 57 28.5	-0.5
J20K				IAmb	IAmb	03 57 38.6	
	comp=Z,172nm,1.9s						
J20K	Nowinta River	93.48	26	P	P	03 57 29.5	+0.5
	baz=258						
TAOE	Nuku Hiva Isla	93.56	99	eLR	LR	04 27 41.5	
	comp=Z,22µm,26.1s						
VORD	Divnogorie	93.64	321	eP	P	03 57 28.2	-1.8
VORD				pmax	pmax		
	comp=Z,50nm,0.4s						
VSR	Storozhevoye	93.76	321	eP	P	03 57 28.5	-2.0
VSR				e		04 01 20.2	
VSR				eS	S	04 08 25.5	-13
VSR				pmax	pmax		
	comp=Z,80nm,1.2s						
VSR				smax	smax		
	comp=N,2µm,13.0s						
VORR	Voronezh	93.80	322	eP	P	03 57 29.0	-1.7
VORR				pmax	pmax		
	comp=Z,250nm,1.2s						
CNPM	China Poot	93.97	31	IAMs_20	IAMs_20	04 36 42.1	
	comp=Z,11µm,22.0s						
IMAR	Indian Mountai	94.00	24	P	P	03 57 29.9	-1.5
ANN	Anapa	94.01	315	eP	P	03 57 29.8	-2.0
ANN				e*PP	pP	03 57 38.3	-1.8
ANN				e		04 01 21.6	
ANN				pmax	pmax		
	comp=Z,73nm,0.9s						
ANN				pmax	pmax		
	comp=E,29nm,1.0s						
EIL	Elat	94.03	299	P	P	03 57 31.0	-1.3
	comp=E,8.2nm,1.2s,baz=121,slow=2.6,SNR=7.1						
MBAR	Mbarara	94.06	269	ceP	P	03 57 32.9	-0.1
MBAR	Mbarara	94.06	269	P	P	03 57 32.0	-1.0
MBAR	Mbarara	94.06	269	P	P	03 57 32.2	-0.9
MBAR	Mbarara	94.06	269	i P	P	03 57 29.5	-3.5
MMAI	Mount Meron Ar	94.06	303	P	P	03 57 31.3	-1.2
	comp=E,19nm,1.0s,baz=144,slow=5.8,SNR=11						
PPLA	Purkeypile	94.09	27	P	P	03 57 30.6	-1.5
PPLA				IAmb	IAmb	03 57 41.8	
	comp=Z,103nm,1.6s						
PPLA	Purkeypile	94.09	27	P	P	03 57 32.8	+0.7
	baz=260						
LPSR	Galich'ya Gora	94.10	322	eP	P	03 57 30.3	-1.8
LPSR				e		04 01 12.6	
LPSR				pmax	pmax		
	comp=Z,100nm,0.9s						
A21K	Barrow	94.13	18	P	P	03 57 32.5	+0.7
	baz=256						
BRLK	Bradley Lake	94.19	30	IAMs_20	IAMs_20	04 36 36.5	
	comp=Z,11µm,22.0s						
CHUM	Lake Minchumin	94.21	26	P	P	03 57 32.3	0.0
	baz=260						
SKT	Skwentna	94.24	28	P	P	03 57 32.4	-0.2
	baz=260						
LSZ	Lusaka	94.27	254	P	P	03 57 32.9	-1.0
LSZ	Lusaka	94.27	254	P	P	03 57 32.9	-1.0
H21K	Melozitna Rive	94.33	24	P	P	03 57 32.3	-0.6
H21K	Melozitna Rive	94.33	24	P	P	03 57 32.4	-0.5
	baz=260,SNR=6.3						
BNN	Bunyan	94.43	308	P	P	03 57 32.9	-1.2
BNN				IAmb	IAmb	03 57 37.9	
	comp=Z,294nm,1.6s						
BOSA	Boshof	94.46	240	P	P	03 57 34.2	-0.3
	comp=Z,76nm,1.3s,baz=107,slow=4.1,SNR=18						
BOSA				LR	LR	04 33 54.6	
	comp=Z,24µm,21.5s,baz=106,slow=32						
BOSA	Boshof	94.46	240	P	P	03 57 32.4	-2.1
BOSA				pmax	pmax		
	comp=Z,143nm,1.5s						
BOSA	Boshof	94.46	240	P	P	03 57 32.4	-2.1
BOSA				IAmb	IAmb	03 57 43.3	
	comp=Z,143nm,1.5s						
SUA	Susitna One	94.53	29	P	P	03 57 32.6	-1.4
SUA	Susitna One	94.53	29	P	P	03 57 32.8	-1.3
	baz=261						
I21K	Tanana	94.58	25	P	P	03 57 33.4	-0.7
I21K	Tanana	94.58	25	P	P	03 57 33.5	-0.5
	baz=260						
VNA2	Neumayer--Watz	94.79	194	P	P	03 57 36.8	+1.8
	baz=131,slow=4.7						
VNA2	Neumayer--Watz	94.79	194	PKKPdf	PKKPdf	04 14 32.4	-0.8
VNA2	Neumayer--Watz	94.79	194	sP	sP	03 57 41.9	-3.6
BPAW	Bear Paw Mtn.	94.83	26	P	P	03 57 34.7	-0.6
BPAW	Bear Paw Mtn.	94.83	26	P	P	03 57 35.2	-0.1
	baz=261						
M22K	Willow	94.86	28	P	P	03 57 35.3	0.0
	baz=262						
O22K	Cooper Landing	94.87	30	IAMs_20	IAMs_20	04 37 00.8	
	comp=Z,12µm,22.0s						
O22K	Cooper Landing	94.87	30	P	P	03 57 35.3	-0.2
	baz=262						
LBTB	Lobatse	94.89	244	P	P	03 57 35.2	-1.3
LBTB				pmax	pmax		
	comp=Z,106nm,1.4s						
LBTB	Lobatse	94.89	244	P	P	03 57 35.2	-1.3
LBTB				IAmb	IAmb	03 57 53.2	
	comp=Z,106nm,1.4s						
LBTB	Lobatse	94.89	244	i P	P	03 57 37.8	+1.2
RC01	Rabbit Creek A	94.95	29	P	P	03 57 35.2	-0.6
	baz=262						
SEW	Seward	94.95	30	P	P	03 57 35.2	-0.7
	baz=262						
MLY	Manley	95.08	25	P	P	03 57 34.6	-1.8
MLY	Manley	95.08	25	P	P	03 57 35.8	-0.6
	baz=261,SNR=7.7						
VNA3	Neumayer Olymp	95.11	193	P	P	03 57 38.1	+1.6
VNA3	Neumayer Olymp	95.11	193	PKKPdf	PKKPdf	04 14 32.3	-0.4
VNA3	Neumayer Olymp	95.11	193	sP	sP	03 57 43.0	-4.0
VNA1	Neumayer--Stat	95.19	194	P	P	03 57 38.6	+1.9
VNA1	Neumayer--Stat	95.19	194	PKKPdf	PKKPdf	04 14 32.4	-0.1
VNA1	Neumayer--Stat	95.19	194	sP	sP	03 57 43.8	-3.6
MOS	Moscow	95.28	325	eP	P	03 57 34.1	-3.3
MOS				e		04 01 23.6	
MOS				ePPP	PPP	04 03 27.9	
MOS				e		04 08 12.3	
MOS				eS	S	04 08 47.1	-4.4
MOS				pmax	pmax		
	comp=Z,99nm,1.6s						
MOS				pmax	pmax		
	comp=Z,700nm,3.0s						
PMR	Palmer	95.31	29	P	P	03 57 36.9	-0.5
	baz=262						
BWN	Browne	95.50	26	P	P	03 57 36.1	-2.1
BWN				IAmb	IAmb	03 58 00.1	
	comp=Z,150nm,1.6s						
PWL	Port Wells	95.60	29	IAMs_20	IAMs_20	04 37 35.0	
	comp=Z,11µm,22.0s						
KNK	Knik Glacier	95.61	29	IAMs_20	IAMs_20	04 37 03.8	
	comp=Z,11µm,22.0s						
KNK	Knik Glacier	95.61	29	P	P	03 57 38.6	-0.2
	baz=263						
COLD	Coldfoot	95.61	23	P	P	03 57 37.1	-1.7
COLD	Coldfoot	95.61	23	P	P	03 57 38.2	-0.5
	baz=262						
I23K	Minto, Yukon-K	95.67	25	P	P	03 57 38.4	-0.6
I23K				IAmb	IAmb	03 57 49.0	
	comp=Z,93nm,1.4s						
I23K	Minto, Yukon-K	95.67	25	P	P	03 57 38.6	-0.4
	baz=263,SNR=21						
RND	Reindeer	95.67	27	P	P	03 57 36.6	-2.6
RND				pmax	pmax		
	comp=Z,138nm,1.9s						
RND	Reindeer	95.67	27	P	P	03 57 36.6	-2.6
RND				IAmb	IAmb	03 57 47.2	
	comp=Z,138nm,1.9s						
MCK	McKinley	95.67	26	P	P	03 57 38.8	-0.3
MCK				pmax	pmax		
	comp=Z,79nm,1.4s						
MCK				MLR	MLR		
	comp=Z,10µm,22.0s						
MCK	McKinley	95.67	26	P	P	03 57 38.8	-0.3
MCK				IAmb	IAmb	03 57 48.4	
	comp=Z,79nm,1.4s						
MCK	McKinley	95.67	26	P	P	03 57 38.5	-0.7
	baz=263						
H23K	Yukon River	95.68	24	P	P	03 57 37.8	-1.4
H23K	Yukon River	95.68	24	P	P	03 57 38.7	-0.4
	baz=262,SNR=7.2						
SML	Sawmill	95.72	28	IAMs_20	IAMs_20	04 37 06.6	
	comp=Z,11µm,22.0s						
SML	Sawmill	95.72	28	P	P	03 57 38.5	-0.9
	baz=263						
NEA2	Nenana	95.72	26	P	P	03 57 39.0	-0.3
NEA2	Nenana	95.72	26	P	P	03 57 38.3	-1.0
	baz=263						
OBN	Obninsk	95.80	325	P	P	03 57 37.9	-1.9
	comp=Z,3.0nm,0.4s,baz=89,slow=4.6,SNR=14						
OBN	Obninsk	95.80	325	d iP	P	03 57 37.9	-1.9
OBN				e		03 57 41.4	
OBN				e		04 01 29.2	
OBN				ePPP	PPP	04 03 31.5	
OBN				eS	SKSac	04 08 16.1	+1.7
OBN				e		04 08 55.3	
OBN				ePS	PS	04 10 15.4	-2.3
OBN				pmax	pmax		
	comp=Z,87nm,1.2s						
OBN	Obninsk	95.80	325	P	P	03 57 38.6	-1.2
OBN				IAmb	IAmb	03 57 51.2	
	comp=Z,184nm,1.6s						
CSS	Mathiatis	96.00	304	P	P	03 57 39.5	-1.7
TOLK	Toolik Lake Re	96.03	22	P	P	03 57 40.9	+0.2
TOLK	Toolik Lake Re	96.03	22	P	P	03 57 40.6	-0.1
	baz=263						
MDM	Murphy Dome	96.12	25	P	P	03 57 40.8	-0.3
WRH	Wood River Hil	96.13	26	P	P	03 57 38.4	-2.8
BR131	Keskin Array S	96.23	309	P	P	03 57 40.7	-1.7
BR131				pmax	pmax		
	comp=Z,41nm,1.2s						
BR131	Keskin Array S	96.23	309	P	P	03 57 40.7	-1.7
BR131	Keskin Array S	96.23	309	P	P	03 57 41.0	-1.4
	SNR=10						
BRTR	Keskin Array B	96.23	309	P	P	03 57 39.9	-2.5
	comp=Z,8.8nm,0.9s,baz=116,slow=5.6,SNR=23						
BRTR				LR	LR	04 49 06.5	
	comp=Z,8µm,19.9s,baz=116,slow=40						
BRTR	Keskin Array B	96.23	309	P	P	03 57 40.6	-1.7
CCB	Clear Creek Bu	96.27	26	P	P	03 57 38.6	-3.2
COLA	College	96.28	25	⇓eP	P	03 57 42.2	+0.5
COLA				pmax	pmax		
	comp=Z,23nm,1.8s						
H24K	Noodor Dome	96.36	24	P	P	03 57 41.2	-1.0
H24K				IAmb	IAmb	03 57 52.5	
	comp=Z,72nm,1.4s						
H24K	Noodor Dome	96.36	24	P	P	03 57 41.7	-0.5
	baz=264,SNR=13						
SIM	Simferopol'	96.37	314	c iP	P	03 57 40.4	-2.3
SIM				pmax	pmax		
	comp=Z,47nm,1.1s						
HIN	Hinchinbrook I	96.45	30	IAMs_20	IAMs_20	04 35 25.5	
	comp=Z,11µm,22.0s						
POKR	Poker Plat Res	96.48	25	P	P	03 57 42.7	0.0
	baz=264						
FID	Port Fidalgo	96.49	30	IAMs_20	IAMs_20	04 38 00.1	
	comp=Z,13µm,22.0s						
HDA	Harding Lake	96.61	26	P	P	03 57 40.8	-2.6
HDA	Harding Lake	96.61	26	P	P	03 57 43.3	0.0
	baz=265						
ILAR	Eielson Array	96.67	26	P	P	03 57 41.4	-2.3
	comp=Z,4.3nm,0.9s,baz=279,slow=4.2,SNR=15						
ILAR				PP	PP	04 01 37.1	-1.2
	comp=Z,0.3nm,0.4s,baz=257,slow=3.9,SNR=5.2						
ILAR				PKKPbc	PKKPbc	04 14 29.9	+0.4
	comp=Z,2.4nm,0.9s,baz=88,slow=1.8,SNR=8.4						
ILAR				PKPPKP		04 22 50.9	
	comp=Z,1.2nm,1.1s,baz=113,slow=0.8,SNR=5.3						
ILAR				LR	LR	04 39 36.0	
	comp=Z,1µm,20.5s,baz=288,slow=34						
ILAR	Eielson Array	96.67	26	P	P	03 57 40.6	-3.0
ILAR	Eielson Array	96.67	26	P	P	03 57 40.6	-3.0
M24K	Tolsona, Glenn	96.76	28	IAMs_20	IAMs_20	04 37 48.6	
	comp=Z,11µm,22.0s						
KLU	Klutina	96.83	29	IAMs_20	IAMs_20	04 37 54.4	
	comp=Z,14µm,22.0s						
ANTO	Ankara	96.89	309	IAMs_20	IAMs_20	04 47 11.2	
	comp=Z,11µm,21.0s						
PAX	Paxson	97.15	27	P	P	03 57 44.7	-1.2
PAX				pmax	pmax		
	comp=Z,54nm,1.6s						
PAX	Paxson	97.15	27	P	P	03 57 44.7	-1.2
PAX	Paxson	97.15	27	P	P	03 57 45.5	-0.4
	baz=266						
HARP	HAARP	97.26	28	P	P	03 57 46.0	-0.4
	baz=266						
PRP	Porcupine Dome	97.31	25	P	P	03 57 46.3	-0.4
	baz=266						
SUR	Sutherland	97.34	236	P	P	03 57 47.2	-0.5
SUR				IAmb	IAmb	03 58 05.7	
	comp=Z,80nm,1.2s						
RAGM	Ragged Mountai	97.35	30	IAMs_20	IAMs_20	04 39 03.4	
	comp=Z,10µm,22.0s						
BMRM	Bremner River	97.42	29	IAMs_20	IAMs_20	04 39 06.3	
	comp=Z,10µm,22.0s						
N25K	Chitina, Valde	97.47	29	IAMs_20	IAMs_20	04 38 24.9	
	comp=Z,13µm,22.0s						
N25K	Chitina, Valde	97.47	29	P	P	03 57 47.0	-0.4
	baz=266						
RIDG	Independent Ri	97.48	27	IAMs_20	IAMs_20	04 42 25.3	
	comp=Z,14µm,21.0s						
RIDG	Independent Ri	97.48	27	P	P	03 57 46.3	-1.1
	baz=266						
FYU	Fort Yukon	97.50	24	IAmb	IAmb	03 58 06.0	
	comp=Z,89nm,1.4s						
HMT	Hamilton	97.56	30	IAMs_20	IAMs_20	04 38 56.7	
	comp=Z,11µm,21.0s						
SUCK	Suckling Hills	97.78	30	IAMs_20	IAMs_20	04 35 51.7	
	comp=Z,14µm,22.0s						
BMAR	Burnt Mountain	97.80	23	P	P	03 57 48.0	-0.7
BERG	Berg Lake	97.84	30	IAMs_20	IAMs_20	04 36 06.2	
	comp=Z,10µm,22.0s						
GLB	Gilahina Butte	97.84	29	IAMs_20	IAMs_20	04 38 47.1	
	comp=Z,12µm,21.0s						
SCRK	Sand Creek	97.88	26	IAMs_20	IAMs_20	04 42 37.0	
	comp=Z,10µm,21.0s						
SCRK	Sand Creek	97.88	26	P	P	03 57 48.0	-1.2
	baz=267						
J26L	Joseph Creek	98.09	26	P	P	03 57 49.3	-0.8
	baz=268,SNR=6.1						
CRQE	Cirque	98.15	30	P	P	03 57 49.6	-0.9
	baz=268						
MDUB	Mudurnu	98.15	310	IAmb	IAmb	03 58 14.1	
	comp=Z,85nm,1.0s						
APA	Apatity	98.20	337	⇓iP	Pdif	03 57 56.4	+6.0
APA				i		04 01 57.0	
APA				i		04 08 33.0	
APA				i S	S	04 09 21.0	+4.9
APA				i PS	PS	04 10 44.0	+0.6
APA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MCARA	McCarthy VSAT	98.21	29	IAMs_20	IAMs_20	04 39 09.6	
	comp=Z,10µm,22.0s						
SNH	Sunshine Point	98.26	30	IAMs_20	IAMs_20	04 36 17.3	
	comp=Z,12µm,22.0s						
WAX	Waxell Ridge	98.26	30	IAMs_20	IAMs_20	04 36 21.4	
	comp=Z,10µm,22.0s						
ISP	Isparta	98.50	307	IAMs_20	IAMs_20	04 45 59.2	
	comp=Z,10µm,19.0s						
MESA	MESA	98.70	30	IAMs_20	IAMs_20	04 36 20.0	
	comp=Z,9µm,22.0s						
GRNC	Granite Creek	98.81	30	IAMs_20	IAMs_20	04 36 41.4	
	comp=Z,11µm,22.0s						
L27K	Beaver Creek,	98.82	27	IAMs_20	IAMs_20	04 39 02.0	
	comp=Z,11µm,22.0s						
L27K	Beaver Creek,	98.82	27	P	Pdif	03 57 53.4	+0.1
	baz=269						
BCAR	Beaver Creek A	98.84	27		P	03 57 51.1	-2.3
CTGM	Chitina Glacie	99.02	30	IAMs_20	IAMs_20	04 36 48.3	
	comp=Z,11µm,22.0s						
EGAK	Eagle	99.13	26	P	Pdif	03 57 54.3	-0.3
	baz=270						
LOGN	Logan Glacier	99.18	30	IAMs_20	IAMs_20	04 37 03.2	
	comp=Z,11µm,22.0s						
PURM	Purcari	99.44	316	⇓P	Pdif	03 57 54.4	-2.0
PTCN	Pitcairn Islan	99.88	117	IAMs_20	IAMs_20	04 40 48.7	
	comp=Z,10µm,20.0s						
DAWY	Dawson	99.90	26	P	Pdif	03 57 57.7	-0.4
	baz=271						
AKASG	Malin Array Be	99.98	320	P	Pdif	03 57 56.9	-1.8
	comp=Z,15nm,0.9s,baz=76,slow=4.5,SNR=51						
AKASG				PP	PP	04 02 03.6	-0.4
	comp=Z,12nm,1.1s,baz=75,slow=6.6,SNR=4.6						
AKASG				LR	LR	04 50 54.6	
	comp=Z,13µm,20.1s,baz=85,slow=40						
AKASG	Malin Array Be	99.98	320	Pdif	Pdif	03 57 56.6	-2.1
AKBB	Malin Array Si	99.98	320	⇓eP	Pdif	03 57 56.5	-2.2
AKBB				pmax	pmax		
	comp=Z,28nm,1.0s						
AKBB				MLR	MLR		
	comp=Z,13µm,28.0s						
TLCR		100.13	314	⇑P	Pdif	03 57 59.3	-0.2
TLCR		100.13	314	⇑P	Pdif	03 57 59.3	-0.2
KIS	Kishinev	100.17	316	eP	Pdif	03 57 59.0	-0.7
KIS	Kishinev	100.17	316	ePP	PP	04 02 08.0	+2.4
KIS	Kishinev	100.17	316	ePS	PS	04 11 02.0	-3.5
KIS				eLR	LR	04 42 54.0	
	comp=Z,3µm,20.0s						
KIS	Kishinev	100.17	316	eP	Pdif	03 57 59.0	-0.7
KIS				e		04 02 08.0	
KIS				ePS	PS	04 11 02.0	-3.5
MILM	Milestii Mici	100.18	316	⇑P	Pdif	03 57 57.5	-2.2
MILM	Milestii Mici	100.18	316	eP	Pdif	03 57 58.5	-1.2
MILM				e		04 02 01.0	
MILM				eS	Sdif	04 09 27.0	-6.6
MILM				ePS	PS	04 11 03.0	-2.6
MFTR	Murfatlar	100.39	313	⇓P	Pdif	03 57 59.3	-1.4
TIRR	Tirgusor	100.40	314	⇑P	Pdif	03 57 59.1	-1.6
TIRR	Tirgusor	100.40	314	⇑P	Pdif	03 57 59.1	-1.6
KEV	Kevo	100.48	339	IAMs_20	IAMs_20	04 51 36.2	
	comp=Z,10µm,19.0s						
SORM	Soroca	100.51	317	⇓P	Pdif	03 57 59.0	-2.1
SORM	Soroca	100.51	317	⇓P	Pdif	03 57 59.0	-2.1
CFR	Carcaliu	100.61	314	⇓P	Pdif	03 58 01.8	+0.1
CFR	Carcaliu	100.61	314	⇓P	Pdif	03 58 01.8	+0.1
TLBR	Topalu	100.66	314	⇑P	Pdif	03 57 59.6	-2.3
VLDR	Vladesti	100.66	315	⇑P	Pdif	03 58 01.9	0.0
SCTR	Scanteiesti	100.72	315	⇓P	Pdif	03 58 01.0	-1.1
HARR	Harsova	100.75	314	⇓P	Pdif	03 58 01.5	-0.8
HARR	Harsova	100.75	314	⇓P	Pdif	03 58 01.5	-0.8
MNK	Minsk	100.80	324	i P	Pdif	03 57 59.1	-3.2
MNK				i		04 02 06.8	
MNK				i PPP	PPP	04 04 15.4	
MNK				i S	SKSac	04 08 35.5	-4.3
MNK				i PS	PS	04 11 10.0	-1.9
MNK				i SS	SS	04 16 31.1	-5.1
MNK				pmax	pmax		
	comp=N,10.0nm,1.0s						
MNK				pmax	pmax		
	comp=E,3.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,13nm,0.9s						
MNK				MLR	MLR		
	comp=Z,14µm,26.0s						
MNK				MLR	MLR		
	comp=N,9µm,23.0s						
MNK				MLR	MLR		
	comp=E,961nm,26.0s						
MNK	Minsk	100.80	324	i P	Pdif	03 57 59.2	-3.1
	comp=E,3.0nm,0.9s						
MNK				i P	Pdif	03 57 59.2	-3.1
	comp=N,10.0nm,1.0s						
MNK				i P	Pdif	03 57 59.2	-3.1
	comp=Z,13nm,0.9s,baz=89						
MNK				i PP	PP	04 02 06.9	-3.2
MNK				i PPP	PPP	04 04 15.5	
MNK				i S	SKSac	04 08 35.6	-4.2
MNK				i PS	PS	04 11 10.1	-1.8
MNK				i SS	SS	04 16 31.1	-5.1
MNK				i SSS	SSS	04 20 07.7	
MNK				i LQ	LQ	04 33 59.0	
MNK				i LR	LR	04 39 33.5	
MNK				i LRM	MLR	04 45 53.8	
	comp=Z,14µm,25.7s						
MNK				i LRM	MLR	04 45 58.8	
	comp=N,9µm,23.0s						
MNK				i LRM	MLR	04 46 20.7	
	comp=E,961nm,25.7s						
VARL	Varlezi	100.83	315	⇓P	Pdif	03 58 02.4	-0.2
EPYK	Eagle Plains	100.91	24	P	Pdif	03 58 02.2	-0.4
	baz=274						
ARCES	ARCESS Array B	101.03	339	P	Pdif	03 58 01.7	-1.3
	comp=E,5.3nm,1.0s,baz=91,slow=5.7,SNR=2.5						
ARCES				PKKPbc	PKKPbc	04 14 19.1	+1.9
	comp=E,8.8nm,1.1s,baz=262,slow=2.5,SNR=6.4						
VSU	Vasula	101.31	328	eP	Pdif	03 58 03.9	-0.6
VSU	Vasula	101.31	328	⇓eP	Pdif	03 58 04.8	+0.3
VSU				pmax	pmax		
	comp=Z,47nm,0.9s						
VSU				MLR	MLR		
	comp=Z,22µm,21.0s						
ODBI	Odobesti	101.38	315	⇑P	Pdif	03 58 05.0	-0.1
NACGM	Naroch	101.42	324	i P	Pdif	03 57 59.0	-6.0
FINES	FINESS Array B	101.48	331	P	Pdif	03 58 02.9	-2.2
	comp=Z,4.4nm,1.0s,baz=322,slow=6.0,SNR=3.3						
FINES				PP	PP	04 02 18.1	+3.1
	comp=Z,11nm,1.0s,baz=127,slow=5.0,SNR=4.9						
FINES	FINESS Array B	101.48	331	Pdif	Pdif	03 58 05.5	+0.3
VRI	Vrincioaia	101.61	315	⇓P	Pdif	03 58 05.1	-1.1
VRI	Vrincioaia	101.61	315	⇓P	Pdif	03 58 05.1	-1.1
BISRR	Bisoca	101.62	315	⇓P	Pdif	03 58 06.3	+0.1
TESR	Tescani	101.66	316	⇓P	Pdif	03 58 04.6	-1.8
PLOR	Plostina	101.66	315	⇑P	Pdif	03 58 05.6	-0.8
PLOR	Plostina	101.66	315	⇑P	Pdif	03 58 05.6	-0.8
NEHR	Nehoiu	101.91	315	⇓P	Pdif	03 58 06.9	-0.6
INK	Inuvik	101.94	22	P	Pdif	03 58 05.7	-1.4
	comp=Z,2.8nm,1.1s,baz=336,slow=4.3,SNR=4.5						
INK				PP	PP	04 02 18.4	+0.2
	comp=Z,7.2nm,1.2s,baz=278,slow=2.3,SNR=5.4						
INK	Inuvik	101.94	22	P	Pdif	03 58 06.7	-0.3
	baz=278						
COVR	Voineasa-Covas	101.97	315	⇑P	Pdif	03 58 06.1	-1.7
MLR	Muntele Rosu	102.16	315	⇓P	Pdif	03 58 07.1	-1.7
MLR	Muntele Rosu	102.16	315	P	Pdif	03 58 07.1	-1.7
	comp=Z,10nm,1.0s,baz=52,slow=3.8						
MLR				PP	PP	04 02 20.2	-0.6
	comp=Z,20nm,1.1s,baz=31,slow=4.0,SNR=5.2						
MLR	Muntele Rosu	102.16	315	IAMs_20	IAMs_20	04 51 07.5	
	comp=Z,13µm,21.0s						
KBS	Kingsbay	102.44	349	IAMs_20	IAMs_20	04 51 16.8	
	comp=Z,9µm,21.0s						
DOPR	Dopca	102.54	315	⇓P	Pdif	03 58 08.9	-1.4
BURAR	Bucovina Array	102.62	317	⇓P	Pdif	03 58 10.2	-0.5
BURAR	Bucovina Array	102.62	317	⇓P	Pdif	03 58 10.2	-0.5
BURAR	Bucovina Array	102.62	317	Pdif	Pdif	03 58 09.9	-0.8
VOIR		102.79	315	⇑P	Pdif	03 58 12.0	+0.5
VOIR		102.79	315	⇑P	Pdif	03 58 12.0	+0.5
PABE	Paberze	103.00	325	eP	Pdif	03 58 10.4	-1.6
LVV	L'vov	103.32	319	eP	Pdif	03 58 12.3	-1.4
LVV				e		04 02 26.3	
LVV				e		04 04 49.9	
LVV				e		04 08 45.0	
LVV				eS	Sdif	04 09 58.3	-1.5
LVV				e		04 11 38.5	
SUW	Suwalki	103.57	324	ePdif	Pdif	03 58 12.9	-1.7
SUW				ePP	PP	04 02 25.5	-5.4
SUW				eSP	SP	04 11 38.4	+0.8
SUW				eL	L	04 48 02.0	
	comp=Z,17µm,24.4s						
SUW	Suwalki	103.57	324	eP	Pdif	03 58 13.5	-1.2
SUW	Suwalki	103.57	324	IAMs_20	IAMs_20	04 55 07.5	
	comp=Z,10µm,20.0s						
MMPY	Sheldon Lake,	103.68	28	P	Pdif	03 58 14.3	-0.7
	baz=278						
A36M	Sachs Harbour	103.93	18	P	Pdif	03 58 15.0	-0.8
	baz=286						
KWP	Kalwaria Pacla	104.19	319	ePdif	Pdif	03 58 16.1	-1.5
KWP				ePP	PP	04 02 36.7	+1.0
KWP				eSP	SP	04 11 43.9	-0.5
DRGR		104.36	316	⇓P	Pdif	03 58 17.9	-0.6
DRGR		104.36	316	⇓P	Pdif	03 58 17.9	-0.6
KOLS	Kolonicke sedl	104.52	318	eP	Pdif	03 58 20.1	+1.1
KOLS	Kolonicke sedl	104.52	318	ePDIFF	Pdif	03 58 20.1	+1.1
UZH	Uzhgorod	104.53	318	eP	Pdif	03 58 17.0	-2.0
UZH				e		04 02 35.4	
UZH				e		04 08 55.2	
UZH				eS	Sdif	04 10 03.0	-6.9
UZH				ePS	PS	04 11 48.2	-3.4
UZH				eSS	SKKPbc	04 17 41.6	-6.4
HERR	Herculane	104.67	314	⇑P	Pdif	03 58 18.9	-0.8
CRVS	Cervenica-Dubn	105.06	318	eP	Pdif	03 58 22.9	+1.5
CRVS	Cervenica-Dubn	105.06	318	ePDIFF	Pdif	03 58 22.9	+1.5
BOVS	Bovan	105.25	313	⇓P	Pdif	03 58 20.8	-1.6
NIE	Niedzica	105.77	319	ePdif	Pdif	03 58 25.3	+0.7
NIE				ePP	PP	04 02 52.6	+5.2

NIE				*e*SP	SP	04 12 02.5	+1.6
NIE				*e*SP	**SP**	**04 12 08.5**	**+7.6**
NIE				*e*L	L	04 48 59.6	
	comp=Z,7µm,25.2s						
OJC	**Ojcow**	**106.01**	**320**	*e*Pdif	**Pdif**	**03 58 25.2**	**-0.4**
OJC				*e*PP	**PP**	**04 02 51.5**	**+2.3**
OJC				*e*SP	SP	04 12 02.2	-1.1
OJC				*e*SP	**SP**	**04 12 05.1**	**+1.8**
PSZ	**Piszkesteto**	**106.19**	**317**	*e*P	**Pdif**	**03 58 25.3**	**-1.3**
PSZ	**Piszkesteto**	**106.19**	**317**	IAMs_20	IAMs_20	04 56 23.0	
	comp=Z,8µm,21.0s						
OKC	**Ostrava-Krasne**	**107.12**	**320**	*e*SP	SP	04 12 19.2	+4.5
OKC				AMS	AMS	04 56 20.0	
	comp=Z,7µm,19.0s						
PDG	**Podgorica**	**107.12**	**312**	IAMs_20	IAMs_20	04 55 01.7	
	comp=Z,12µm,22.0s						
MORC	**Moravsky Berou**	**107.51**	**320**	*e*PDIFF	**Pdif**	**03 58 32.3**	**-0.1**
MORC				*e*		04 01 54.8	
MORC				*e*PP	**PP**	**04 03 01.3**	**+1.0**
MORC				*e*SP	SP	04 12 23.4	+4.6
JAVC	**Velka Javorina**	**107.55**	**319**	*e*PDIFF	**Pdif**	**03 58 34.3**	**+1.7**
JAVC				*e*PP	**PP**	**04 03 00.4**	**-0.2**
JAVC				*e*SP	SP	04 12 25.0	+5.7
KRLC	**Kraliky**	**107.96**	**320**	*e*PP	**PP**	**04 03 04.8**	**+1.3**
KRLC				*e*SP	SP	04 12 29.2	+5.9
KRLC				AMS	AMS	04 57 20.0	
	comp=Z,8µm,20.2s						
KSP	**Ksiaz**	**108.14**	**321**	*e*Pdif	**Pdif**	**03 58 33.9**	**-1.2**
KSP				*e*PP	PKiKP	04 02 33.8	-7.9
KSP				*e*SP	SP	04 12 24.2	-0.9
KSP				*e*L	L	04 44 46.8	
	comp=Z,16µm,33.2s						
VRAC	**Vranov**	**108.19**	**319**	PP	**PP**	**04 03 06.7**	**+1.5**
	comp=Z,9.6nm,1.1s,baz=90,slow=6.3,SNR=5.9						
VRAC	**Vranov**	**108.19**	**319**	*e*PDIFF	**Pdif**	**03 58 35.1**	**-0.2**
VRAC				*e*		04 02 01.4	
VRAC				*e*PP	**PP**	**04 03 03.9**	**-1.3**
VRAC				*e*SP	SP	04 12 25.9	+0.2
DPC	**Dobruska-Polom**	**108.20**	**320**	*e*PP	**PP**	**04 03 03.5**	**-1.8**
DPC				*e*SP	SP	04 12 31.8	+6.0
DPC				AMS	AMS	04 57 10.0	
	comp=Z,10µm,19.5s						
OSTC	**Ostas**	**108.24**	**320**	*e*PP	**PP**	**04 03 02.5**	**-3.0**
OSTC				*e*SP	SP	04 12 30.5	+4.4
OSTC				AMS	AMS	04 57 10.0	
	comp=Z,10µm,20.0s						
CHVC	**Chvalec**	**108.33**	**321**	*e*SP	SP	04 12 31.7	+4.6
CHVC				AMS	AMS	04 54 30.0	
	comp=Z,10µm,19.6s						
KRUC	**Moravsky**	**108.36**	**319**	*e*PDIFF	**Pdif**	**03 58 35.8**	**-0.3**
KRUC				*e*		04 02 01.9	
KRUC				*e*PP	**PP**	**04 03 03.2**	**-3.2**
KRUC				*e*SP	SP	04 12 27.7	+0.3
UPC	**Upice**	**108.38**	**320**	*e*PP	**PP**	**04 03 01.4**	**-5.1**
UPC				*e*SP	SP	04 12 32.6	+5.1
UPC				AMS	AMS	04 54 40.0	
	comp=Z,11µm,19.9s						
NB2	**NORSAR Subarra**	**108.60**	**332**	PKPdf	**PKiKP**	**04 02 43.7**	**+1.4**
	comp=Z,2.7nm,0.9s,baz=68,slow=1.9						
NOA	**NORSAR Array B**	**108.60**	**332**	Pdiff	**Pdif**	**03 58 34.1**	**-2.8**
	comp=Z,0.6nm,0.9s,baz=61,slow=11,SNR=1.3						
NOA				PP	**PP**	**04 03 05.6**	**-2.2**
	comp=Z,6.6nm,1.1s,baz=76,slow=8.2,SNR=4.6						
NOA				PKKPbc	**PKKPbc**	**04 13 57.6**	**+3.5**
	comp=Z,0.7nm,0.8s,baz=72,slow=3.0,SNR=3.5						
KOGS	**Kog**	**108.83**	**316**	*e*SP	SP	04 12 29.2	-3.1
CONA	**Conrad Observa**	**108.88**	**318**	*e*P	**PKiKP**	**04 02 45.3**	**+2.1**
	comp=Z,8.4nm,1.3s						
CONA				*e*P	**PP**	**04 03 13.3**	**+3.0**
	comp=Z,65nm,1.7s						
CONA				P	**PKKPbc**	**04 13 48.3**	**-4.5**
	comp=Z,9.4nm,1.2s						
TREC	**Trest**	**108.91**	**319**	*e*SP	SP	04 12 38.6	+5.6
TREC				AMS	AMS	04 51 30.0	
	comp=Z,11µm,24.1s						
TIP	**Timpagrande**	**109.27**	**309**	IAMs_20	IAMs_20	04 52 44.1	
	comp=Z,9µm,22.0s						
PRU	**Pruhonice**	**109.39**	**320**	*e*PP	**PP**	**04 03 19.7**	**+5.8**
PRU				*e*SP	SP	04 12 37.3	-0.6
PRU				AMS	AMS	04 57 40.0	
	comp=Z,12µm,20.4s						
PRA	**Prague**	**109.45**	**320**	*e*SP	SP	04 12 44.7	+6.3
PRA				AMS	AMS	04 57 50.0	
	comp=Z,11µm,21.8s						
BRG	**Berggiesshubel**	**109.60**	**321**⇓	*e*Pif		03 58 41.5	
BRG				Amp		03 58 43.4	
	comp=Z,5.4nm,1.2s						
BRG	**Berggiesshubel**	**109.60**	**321**	SS	SS	04 18 49.0	+12
BRG				Amp		04 52 04.0	
	comp=E,9.4nm,26.1s						
BRG				Amp		04 52 10.0	
	comp=Z,13nm,22.4s						
BRG				Amp		04 52 18.0	
	comp=N,7.4nm,22.4s						
CKRC	**Cesky Krumlov**	**109.75**	**319**	*e*SP	SP	04 12 48.4	+6.8
CKRC				AMS	AMS	04 52 10.0	
	comp=N,14µm,23.5s						
KONO	**Kongsberg**	**109.79**	**331**	IAMs_20	IAMs_20	04 58 52.5	
	comp=Z,10µm,20.0s						
MOA	**Molln**	**109.95**	**318**	*e*P	**PKiKP**	**04 02 44.9**	**-0.3**
	comp=Z,9.6nm,1.3s						
MOA				*e*P	**PP**	**04 03 21.4**	**+3.3**
	comp=Z,23nm,1.8s						
MOA				P	**PKKPbc**	**04 13 46.3**	**-3.0**
	comp=Z,12nm,1.7s						
CEL	**Celeste**	**110.03**	**308**	IAMs_20	IAMs_20	04 57 10.2	
	comp=Z,9µm,20.0s						
LJU	**Ljubljana**	**110.07**	**316**	*e*Pdiff	**Pdif**	**03 58 42.0**	**-1.7**
LJU				*e*SP	SP	04 12 42.1	-2.8
LJU				*e*		04 28 10.5	
LJU				*e*		04 35 11.5	
LJU				*e*		04 39 03.9	
CLL	**Collm**	**110.10**	**322**	*e*P	**Pdif**	**03 58 46.0**	**+2.3**
CLL	**Collm**	**110.10**	**322**	*e*Pdif	**Pdif**	**03 58 46.0**	**+2.3**
CLL				*e*		04 02 13.0	
CLL				*e*PKiKP	**PKiKP**	**04 02 44.0**	**-1.3**
CLL				*e*		04 03 13.0	
CLL				*e*PP	**PP**	**04 03 24.0**	**+5.1**
CLL				*e*PPP	PPP	04 05 36.0	
CLL				*e*SKSac	**SKSac**	**04 09 18.0**	**-3.7**
CLL				*e*Sdif	**Sdif**	**04 11 00.0**	**+3.8**
CLL				*e*PS	PS	04 12 45.0	-3.6
CLL				*e*PKKPbc	**PKKPbc**	**04 13 49.0**	**+0.1**
CLL				*e*PPS	PPS	04 13 54.0	
CLL				*e*PKKPdf	**PKKPdf**	**04 14 05.0**	**-0.7**
	comp=Z,130nm,2.2s						
CLL				*e*SKKPdf	**SKKPdf**	**04 17 40.0**	**+0.6**
CLL				*e*SS	**SS**	**04 18 54.0**	**+11**
CLL				*e*SSS	SSS	04 22 54.0	
CLL				*e*		04 24 06.0	
CLL				*e*		04 27 42.0	
CLL				Lmax		04 51 00.0	
GERES	**GERESS Array B**	**110.14**	**319**	Pdiff	**Pdif**	**03 58 41.1**	**-3.0**
	comp=Z,0.1nm,0.3s,baz=97,slow=2.3,SNR=2.2						
GERES				PP	**PP**	**04 03 19.4**	**-0.1**
	comp=Z,2.9nm,1.0s,baz=100,slow=5.5,SNR=4.2						
GERES				PKKPbc	**PKKPbc**	**04 13 51.5**	**+2.7**
	comp=Z,1.2nm,0.9s,baz=147,slow=2.7,SNR=4.0						
KHC	**Kasperske Hory**	**110.17**	**319**	*e*PP	**PP**	**04 03 23.5**	**+3.9**
KHC				*e*SP	SP	04 12 53.2	+7.5
KHC				*e*PKKP	**PKKPbc**	**04 13 53.0**	**+4.3**
KHC				AMS	AMS	05 01 30.0	
	comp=Z,10µm,18.7s						
CRNS	**Crni Vrh**	**110.25**	**316**	*e*SP	SP	04 12 44.7	-1.9
NKC	**Novy Kostel**	**110.67**	**321**	*e*SP	SP	04 12 42.5	-7.7
NKC				AMS	AMS	04 58 40.0	
	comp=Z,11µm,20.0s						
KBA	**Koelnbreinsper**	**110.70**	**317**	*e*P	**PKiKP**	**04 02 49.1**	**+2.3**
	comp=Z,8.9nm,1.2s						
KBA				P	**PKKPdf**	**04 14 02.1**	**-2.6**
	comp=Z,5.5nm,1.3s						
A04D	**Lummi Island**	**110.91**	**41**	P	**PKiKP**	**04 02 45.5**	**-1.3**
	baz=282						
DBG	**Daneborg**	**111.05**	**350**	*e*P	**PKiKP**	**04 02 48.8**	**+2.3**
YKA	**Yellowknife Ar**	**111.11**	**25**	PKKPbc	PKKPbc	04 13 44.4	-1.6
	comp=Z,2.1nm,0.8s,baz=94,slow=4.5,SNR=5.0						
COR	**Corvallis**	**111.27**	**45**	IAMs_20	IAMs_20	04 46 54.4	
	comp=Z,10µm,21.0s						
ABTA	**Abfaltersbach**	**111.32**	**317**	*e*P	**PKiKP**	**04 02 49.4**	**+1.5**
	comp=Z,8.1nm,1.0s						
ABTA				*e*P	**PKKPbc**	**04 13 40.7**	**-4.2**
	comp=Z,31nm,1.4s						
B05A	**Bryant**	**111.40**	**41**	P	**PKiKP**	**04 02 46.7**	**-1.1**
	baz=282						
WTTA	**Wattenberg**	**111.81**	**318**	*e*P	**PKiKP**	**04 02 51.9**	**+3.0**
	comp=Z,25nm,1.4s						
WTTA				P	**PKKPbc**	**04 13 39.4**	**-4.0**
	comp=Z,49nm,1.4s						
HUMO	**Hull Mountain**	**111.83**	**47**	IAMs_20	IAMs_20	04 40 01.6	
	comp=Z,8µm,22.0s						
WATA	**Walderalm**	**111.84**	**318**	*e*P	**PKiKP**	**04 02 50.1**	**+1.2**
	comp=Z,15nm,1.6s						
WATA				P	**PP**	**04 03 34.9**	**+3.2**
	comp=Z,27nm,1.7s						
WATA				P	**PKKPbc**	**04 13 42.5**	**-0.8**
	comp=Z,31nm,1.5s						
M02C	**Callahan**	**112.09**	**49**	P	**PKiKP**	**04 02 48.1**	**-1.4**
	baz=279						
YBH	**Yreka Blue Hor**	**112.15**	**48**	PP	**PP**	**04 03 36.6**	**+2.5**
	comp=Z,3.0nm,1.0s,baz=273,slow=5.6,SNR=4.3						
YBH	**Yreka Blue Hor**	**112.15**	**48**	IAMs_20	IAMs_20	04 45 47.1	
	comp=Z,9µm,22.0s						
CLTB	**Caltabellotta**	**112.21**	**307**	IAMs_20	IAMs_20	04 53 38.8	
	comp=Z,8µm,22.0s						
HOPS	**Hopland Field**	**112.26**	**51**	IAMs_20	IAMs_20	04 48 35.3	
	comp=Z,8µm,20.0s						
N02D	**Trinity Center**	**112.27**	**49**	P	**PKiKP**	**04 02 49.4**	**-0.5**
	baz=279						
J04D	**Umpqua Nationa**	**112.34**	**47**	P	**PKiKP**	**04 02 48.8**	**-1.3**
	baz=280						
RETA	**Reutte**	**112.34**	**318**	*e*P	**PKiKP**	**04 02 53.9**	**+4.1**
	comp=Z,4.8nm,1.0s						
RETA				P	**PP**	**04 03 34.7**	**-0.6**
	comp=Z,32nm,1.6s						
RETA				P	**PKKPbc**	**04 13 36.7**	**-4.8**
	comp=Z,21nm,1.5s						
L04D	**Klamath Falls**	**112.37**	**48**	P	**PKiKP**	**04 02 49.0**	**-1.1**
	baz=279						
WDC	**Whiskeytown Da**	**112.45**	**50**	IAMs_20	IAMs_20	04 44 39.1	
	comp=Z,8µm,22.0s						
FETA	**Feichten**	**112.47**	**318**	*e*P	**PKiKP**	**04 02 52.6**	**+2.4**
	comp=Z,18nm,1.8s						
FETA				*e*P	**PKKPbc**	**04 13 34.7**	**-6.5**
	comp=Z,32nm,1.4s						
J05D	**Fort Rock, OR**	**112.96**	**47**	P	**PKiKP**	**04 02 51.8**	**+0.6**
	baz=281						
DAVA	**Damuels**	**112.97**	**318**	*e*P	**PKiKP**	**04 02 54.1**	**+3.0**
	comp=Z,13nm,1.4s						
DAVA				P	**PP**	**04 03 42.8**	**+2.9**
	comp=Z,31nm,2.2s						
DAVA				P	**PKKPbc**	**04 13 34.1**	**-5.4**
	comp=Z,13nm,1.8s						
DAVOX	**Davos/Dischmat**	**113.09**	**317**	PP	**PP**	**04 03 44.0**	**+3.2**
	comp=Z,9.5nm,1.1s,baz=117,slow=9.8,SNR=4.3						
DAVOX				PKKPbc	**PKKPbc**	**04 13 40.9**	**+1.7**
	comp=Z,3.3nm,0.8s,baz=111,slow=2.3,SNR=6.1						
ORV	**Oroville**	**113.39**	**51**	IAMs_20	IAMs_20	04 45 46.1	
	comp=Z,8µm,22.0s						
TUE	**Stuetta**	**113.52**	**317**	IAMs_20	IAMs_20	04 57 33.8	
	comp=Z,10µm,20.0s						
SAO	**San Andreas Ge**	**113.83**	**54**	IAMs_20	IAMs_20	04 44 27.0	
	comp=Z,9µm,21.0s						
MOD	**Modoc Plateau**	**113.89**	**48**	IAMs_20	IAMs_20	04 47 08.2	
	comp=Z,7µm,21.0s						
SCO	**Scoresbysund**	**114.44**	**348**	IAMs_20	IAMs_20	05 01 24.6	
	comp=Z,10µm,22.0s						
BTNL	**Ternell**	**114.48**	**322**	*d*PP	**PP**	**04 03 51.3**	**+1.1**
CMB	**Columbia Colle**	**114.48**	**52**	IAMs_20	IAMs_20	04 45 31.2	
	comp=Z,7µm,21.0s						
ECH	**Echery**	**114.52**	**319**	IAMs_20	IAMs_20	05 01 36.2	
	comp=Z,8µm,20.0s						
MEM	**Membach**	**114.55**	**322**	*d*PKiKP	PKPdf	04 02 53.9	+0.1
MEM				*d*PP	**PP**	**04 03 51.5**	**+0.8**
NEW	**Newport**	**114.63**	**40**	PKP	PKPdf	04 02 55.0	+0.9
	comp=Z,3.9nm,0.8s,baz=116,slow=2.0,SNR=9.4						
NEW				PP	**PP**	**04 03 54.7**	**+3.3**
	comp=Z,7.7nm,1.2s,baz=305,slow=6.8,SNR=4.1						
NEW	**Newport**	**114.63**	**40**	PKIKP	PKPdf	04 02 55.0	+0.9
NEW	**Newport**	**114.63**	**40**	P	PKPdf	04 02 54.4	+0.3
	baz=286						
BHOU	**Houvegnez**	**114.63**	**322**	*d*PKiKP	**PKiKP**	**04 02 53.5**	**-0.5**
BHOU				*d*PP	**PP**	**04 03 53.0**	**+1.7**
WLF	**Walferdange**	**114.75**	**321**	*d*PP	**PP**	**04 03 54.1**	**+2.0**
SENIN	**Lac Senin/Sane**	**114.92**	**317**	IAMs_20	IAMs_20	05 02 55.9	
	comp=Z,8µm,21.0s						
SUMG	**Summit**	**114.99**	**355**	*e*P	**PKPdf**	**04 02 55.4**	**+0.8**
SUMG	**Summit**	**114.99**	**355**	IAMs_20	IAMs_20	05 02 14.3	
	comp=Z,9µm,22.0s						
WVOR	**Wild Horse Val**	**115.00**	**47**	IAMs_20	IAMs_20	04 47 31.5	
	comp=Z,7µm,20.0s						
BCLA	**Clavier**	**115.04**	**322**	*d*PKPdf	**PKiKP**	**04 02 53.8**	**-0.9**
BCLA				*d*PP	**PP**	**04 03 54.5**	**+0.3**
RCHB	**Rochefort**	**115.17**	**322**	*d*PP	**PP**	**04 03 54.8**	**-0.2**
BGES	**Gesves**	**115.18**	**322**	*d*PP	**PP**	**04 03 55.4**	**+0.3**
BMO	**Blue Mountains**	**115.39**	**44**	IAMs_20	IAMs_20	04 43 02.3	
	comp=Z,8µm,22.0s						
PKM	**Mcpherson Peak**	**115.40**	**55**	P	**PKiKP**	**04 02 56.1**	**-0.1**
	baz=278						
BMRD	**Maredsous**	**115.40**	**322**	*d*PP	PP	04 03 57.6	+0.9
KEST	**Kesra**	**115.53**	**306**	PKP	**PKiKP**	**04 02 56.3**	**0.0**
	comp=Z,6.4nm,1.0s,baz=253,slow=3.2,SNR=4.1						
KEST				PP	**PP**	**04 04 03.2**	**+4.9**
	comp=Z,34nm,1.2s,baz=42,slow=3.7,SNR=5.1						
DOU	**Dourbes**	**115.57**	**322**	*d*PKPdf	**PKPdf**	**04 02 56.8**	**+1.0**
DOU				*d*PP	**PP**	**04 03 58.2**	**+0.3**
SNF	**Seneffe**	**115.62**	**322**	*d*PP	PP	04 04 01.8	+3.5
BNI	**Bardonecchia**	**115.67**	**316**	IAMs_20	IAMs_20	05 00 58.9	
	comp=Z,11µm,22.0s						
VES	**Vestal, Richgr**	**115.85**	**54**	P	**PKPdf**	**04 02 55.5**	**-1.3**
	baz=279						
NVAR	**Mina Array Bea**	**116.04**	**51**	PKP	**PKiKP**	**04 02 57.8**	**+0.5**
	comp=Z,2.7nm,0.8s,baz=265,slow=1.8,SNR=10						
NVAR				PKKPbc	**PKKPbc**	**04 13 29.5**	**+0.7**
	comp=Z,1.4nm,0.8s,baz=139,slow=5.0,SNR=6.1						
NVAR	**Mina Array Bea**	**116.04**	**51**		**PKPdf**	**04 02 56.8**	**-0.5**
PLID	**Pearl Lake**	**116.23**	**44**	IAMs_20	IAMs_20	04 45 49.7	
	comp=Z,9µm,22.0s						
ISA	**Isabella, Lake**	**116.37**	**54**	P	**PKiKP**	**04 02 58.2**	**+0.3**
	baz=279						
CWC	**Cottonwood Cre**	**116.56**	**53**	P	**PKPdf**	**04 02 58.1**	**-0.3**
	baz=280						
RPN	**Rapa Nui**	**116.75**	**126**	IAMs_20	IAMs_20	04 49 53.7	
	comp=Z,10µm,20.0s						
PASC	**Pasadena Art C**	**116.83**	**56**	IAMs_20	IAMs_20	04 47 05.3	
	comp=Z,10µm,22.0s						
EDW2	**Edwards Air Fo**	**116.88**	**55**	P	**PKiKP**	**04 02 58.8**	**-0.1**
	baz=279						
GRAC	**Grapevine Rang**	**117.03**	**53**	P	**PKiKP**	**04 03 00.1**	**+1.0**
	baz=280						
LRMC	**Laurel Mtn Rad**	**117.04**	**54**	P	**PKPdf**	**04 02 58.2**	**-1.0**
	baz=279						
SSB	**Saint Sauveur**	**117.06**	**317**	IAMs_20	IAMs_20	04 56 47.9	
	comp=Z,7µm,22.0s						
MSO	**Missoula**	**117.11**	**41**	IAMs_20	IAMs_20	04 46 05.7	
	comp=Z,7µm,22.0s						
MSO	**Missoula**	**117.11**	**41**	P	**PKiKP**	**04 02 59.2**	**+0.2**
	baz=288						
FURC	**Furnace Creek,**	**117.52**	**53**	P	**PKiKP**	**04 03 00.1**	**+0.1**
	baz=280						
HLID	**Hailey**	**117.74**	**45**	P	**PKiKP**	**04 03 01.4**	**+1.0**
	baz=286						
GSC	**Goldstone, Bar**	**117.77**	**55**	P	**PKPdf**	**04 03 00.2**	**-0.5**
	baz=280						
ESK	**Eskdalemuir**	**117.84**	**329**	IAMs_20	IAMs_20	05 00 43.4	
	comp=Z,9µm,21.0s						
SHOC	**Shoshone, Teco**	**118.09**	**54**	P	**PKPdf**	**04 03 00.8**	**-0.4**
	baz=281						
R11A	**Troy Canyon, C**	**118.15**	**51**	P	**PKPdf**	**04 03 00.1**	**-1.3**
	baz=282						
HEC	**Hector,Ludlow**	**118.23**	**55**	P	**PKPdf**	**04 02 59.5**	**-2.0**
	baz=280						
PFO	**Pinyon Flats O**	**118.33**	**56**	PKP	**PKiKP**	**04 03 02.4**	**+0.6**
	comp=Z,6.3nm,0.7s,baz=158,slow=2.3,SNR=7.5						
PFO	**Pinyon Flats O**	**118.33**	**56**	P	**PKPdf**	**04 02 60.0**	**-1.8**
	baz=279						
TPFO	**Pinon Flats**	**118.34**	**56**	P	**PKPdf**	**04 03 00.7**	**-1.1**
	baz=279						
ICESG	**Greenland Ices**	**118.45**	**354**	*e*P	**PKiKP**	**04 03 01.5**	**+0.2**
TUQ	**Turquoise Moun**	**118.46**	**54**	P	**PKiKP**	**04 03 02.2**	**+0.2**
	baz=281						
MONP2	**Monument Peak**	**118.48**	**57**	P	**PKPdf**	**04 03 01.9**	**-0.3**
	baz=279						
BELC	**Belle Mtn. Jos**	**118.65**	**56**	P	**PKPdf**	**04 03 02.2**	**-0.2**
	baz=280						
IKP	**In-Ko-Pah, Jac**	**118.78**	**57**	P	**PKPdf**	**04 03 02.3**	**-0.3**
	baz=279						
GMRC	**Granite Mounta**	**118.79**	**55**	P	**PKPdf**	**04 03 01.4**	**-1.3**
	baz=280,SNR=5.6						
SWSC	**Sam W. Stewart**	**118.99**	**57**	P	**PKPdf**	**04 03 02.5**	**-0.4**
	baz=279						
BOZ	**Bozeman (W)**	**119.02**	**42**	IAMs_20	IAMs_20	04 47 15.4	
	comp=Z,8µm,22.0s						
BOZ	**Bozeman (W)**	**119.02**	**42**	P	**PKPdf**	**04 03 01.3**	**-1.5**
	baz=289						
ILULI	**Ilulissat**	**119.11**	**358**	IAMs_20	IAMs_20	05 04 03.0	
	comp=Z,8µm,21.0s						
BC3	**Big Chuckawall**	**119.15**	**56**	P	**PKPdf**	**04 03 02.8**	**-0.6**
	baz=280						
IRM	**Iron Mountain**	**119.32**	**56**	P	**PKPdf**	**04 03 02.9**	**-0.7**
	baz=280						
EGMT	**Eagleton**	**119.37**	**39**	P	**PKPdf**	**04 03 02.4**	**-0.9**
	baz=292						
DUG	**Dugway, Tooele**	**119.80**	**48**	P	**PKPdf**	**04 03 02.5**	**-1.9**
	baz=285						
HWUT	**Hardware Ranch**	**120.31**	**46**	IAMs_20	IAMs_20	04 48 15.9	
	comp=Z,7µm,21.0s						
LOHW	**Long Hollow**	**120.36**	**44**	IAMs_20	IAMs_20	04 44 40.1	
	comp=Z,9µm,22.0s						
FFC	**Flin Flon**	**120.61**	**29**	PKIKP	**PKPdf**	**04 03 04.5**	**-0.9**
FFC	**Flin Flon**	**120.61**	**29**	PKPdf	**PKPdf**	**04 03 04.5**	**-0.9**
RLMT	**Red Lodge**	**120.75**	**42**	P	**PKPdf**	**04 03 05.8**	**-0.4**
	baz=291						
BW06	**Boulder Array**	**121.36**	**45**	IAMs_20	IAMs_20	04 53 20.6	
	comp=Z,6µm,20.0s						
BW06	**Boulder Array**	**121.36**	**45**	P	**PKPdf**	**04 03 05.7**	**-1.8**
	baz=289						
PDAR	**Pinedale Array**	**121.36**	**45**	PKP	**PKPdf**	**04 03 07.0**	**-0.5**
	comp=Z,4.6nm,0.7s,baz=208,slow=0.3,SNR=21						
PDAR				PKKPbc	**PKKPbc**	**04 13 11.6**	**+2.0**
	comp=Z,2.3nm,0.8s,baz=111,slow=5.3,SNR=9.3						
PDAR				SKKPbc	SKKPbc	04 17 05.1	+7.5
	comp=Z,2.4nm,1.0s,baz=130,slow=4.4,SNR=5.9						
ANGG	**Ammassalik, Gr**	**121.50**	**352**	IAMs_20	IAMs_20	05 01 10.2	
	comp=Z,8µm,21.0s						
DY2G	**Dye2**	**121.60**	**356**	*e*P	**PKPdf**	**04 03 04.5**	**-2.7**
214A	**Organ Pipe Nat**	**121.64**	**58**	P	**PKPdf**	**04 03 07.1**	**-1.0**
	baz=281						
WUAZ	**Wupatki**	**122.07**	**53**	P	**PKiKP**	**04 03 10.2**	**+1.1**
	baz=284						
LAO	**LASA Array**	**122.10**	**39**	IAMs_20	IAMs_20	04 52 19.7	
	comp=Z,8µm,22.0s						
LAO	**LASA Array**	**122.10**	**39**	P	**PKiKP**	**04 03 08.9**	**+0.1**
	baz=295						
DGMT	**Dagmar**	**122.56**	**37**	IAMs_20	IAMs_20	04 47 40.4	
	comp=Z,8µm,22.0s						
DGMT	**Dagmar**	**122.56**	**37**	P	**PKiKP**	**04 03 10.1**	**+0.6**
	baz=298						
O20A	**White River Ci**	**123.16**	**47**	P	**PKiKP**	**04 03 11.8**	**+0.6**
	baz=289						
TUC	**Tucson**	**123.26**	**57**	PKIKP	**PKPdf**	**04 03 11.0**	**-0.3**
TUC	**Tucson**	**123.26**	**57**	PKPdf	**PKPdf**	**04 03 11.0**	**-0.3**
TUC	**Tucson**	**123.26**	**57**	IAMs_20	IAMs_20	04 48 14.9	
	comp=Z,9µm,22.0s						
TUC	**Tucson**	**123.26**	**57**	P	**PKPdf**	**04 03 10.0**	**-1.2**
	baz=282						
RWWY	**Rawlins**	**123.37**	**45**	IAMs_20	IAMs_20	04 47 49.5	
	comp=Z,6µm,21.0s						
K22A	**Casper**	**123.50**	**44**	P	**PKPdf**	**04 03 11.0**	**-0.5**
	baz=292						
MVCO	**Mesa Verde**	**123.86**	**51**	IAMs_20	IAMs_20	04 51 58.4	
	comp=Z,9µm,22.0s						
MVCO	**Mesa Verde**	**123.86**	**51**	P	**PKPdf**	**04 03 11.9**	**-0.5**
	baz=287,SNR=12						
TORD	**Torodi Ar. Bea**	**124.11**	**280**	PKP	**PKPdf**	**04 03 11.8**	**-1.4**
	comp=Z,20nm,0.8s,baz=63,slow=2.0,SNR=48						
TORD				PKKPbc	**PKKPbc**	**04 13 01.2**	**+3.2**
	comp=Z,2.3nm,0.8s,baz=289,slow=7.0,SNR=7.0						
TORD	**Torodi Ar. Bea**	**124.11**	**280**	PKPdf	**PKPdf**	**04 03 12.0**	**-1.2**
COYC	**Coyhaique**	**124.24**	**166**		**PKPdf**	**04 03 11.9**	**-0.7**
SMCO	**Snowmass**	**124.40**	**48**	IAMs_20	IAMs_20	04 52 38.2	
	comp=Z,7µm,20.0s						
N23A	**Red Feather La**	**124.55**	**46**	P	**PKPdf**	**04 03 11.8**	**-1.9**
	baz=291						
RSSD	**Black Hills**	**124.58**	**41**	PKIKP	**PKPdf**	**04 03 12.1**	**-1.5**
RSSD	**Black Hills**	**124.58**	**41**	PKPdf	**PKPdf**	**04 03 12.1**	**-1.5**
RSSD	**Black Hills**	**124.58**	**41**	IAMs_20	IAMs_20	04 50 41.3	
	comp=Z,7µm,22.0s						
RSSD	**Black Hills**	**124.58**	**41**	P	**PKPdf**	**04 03 13.0**	**-0.6**
	baz=295						
PHWY	**Pilot Hill**	**124.74**	**45**	IAMs_20	IAMs_20	04 55 09.9	
	comp=Z,7µm,22.0s						
ESDC	**Sonseca Array**	**124.80**	**313**	PKP	**PKPdf**	**04 03 13.0**	**-1.0**
	comp=Z,9.3nm,1.1s,baz=22,slow=2.4,SNR=9.1						
ESDC				PP	**PP**	**04 05 03.2**	**+1.6**
	comp=Z,10nm,1.2s,baz=73,slow=7.0,SNR=4.3						
ESDC				SKKPbc	SKKPbc	04 16 55.1	+9.3
	comp=Z,1.4nm,1.1s,baz=252,slow=3.0,SNR=4.2						
ESDC	**Sonseca Array**	**124.80**	**313**	PKPdf	**PKPdf**	**04 03 12.2**	**-1.7**
S22A	**4UR Ranch, Cre**	**124.97**	**49**	P	**PKiKP**	**04 03 14.8**	**-0.2**
	baz=288,SNR=20						
PAB	**San Pablo**	**125.13**	**313**	IAMs_20	IAMs_20	05 09 54.4	
	comp=Z,7µm,19.0s						
TAF	**Taforalt**	**125.13**	**307**	P	**PKiKP**	**04 03 20.0**	**+4.9**
ISCO	**Idaho Springs**	**125.17**	**47**	IAMs_20	IAMs_20	04 59 06.6	
	comp=Z,7µm,19.0s						
ISCO	**Idaho Springs**	**125.17**	**47**	P	**PKPdf**	**04 03 14.9**	**-0.1**
	baz=291,SNR=16						
JBK	**JBK**	**125.38**	**306**	P	**PKiKP**	**04 03 20.0**	**+4.2**
MDND	**Maddock**	**125.54**	**35**	P	**PKPdf**	**04 03 14.8**	**-0.3**
	baz=302						
121A	**Cookes Peak, D**	**125.68**	**56**	P	**PKPdf**	**04 03 14.5**	**-1.5**
	baz=284						
Q24A	**Divide**	**125.81**	**47**	P	**PKPdf**	**04 03 15.4**	**-0.8**
	baz=291						
PBRG	**Braganca**	**125.96**	**316**	*e*PP	PP	04 05 10.9	+1.7
SDCO	**Great Sand Dun**	**125.96**	**49**	IAMs_20	IAMs_20	04 53 28.8	
	comp=Z,7µm,22.0s						
SDCO	**Great Sand Dun**	**125.96**	**49**	P	**PKPdf**	**04 03 16.2**	**-0.4**
	baz=290,SNR=20						
Y22D	**IRIS PASSCAL I**	**125.98**	**54**	IAMs_20	IAMs_20	04 53 12.7	
	comp=Z,7µm,21.0s						
ANMO	**Albuquerque**	**126.10**	**53**	PKP	**PKPdf**	**04 03 15.7**	**-1.1**
	comp=Z,6.8nm,0.9s,baz=233,slow=0.6,SNR=14						
ANMO				PP	**PP**	**04 05 16.8**	**+6.2**
	comp=Z,5.9nm,1.1s,baz=298,slow=3.4,SNR=5.1						
ANMO	**Albuquerque**	**126.10**	**53** *c*	*i*PKIKP	**PKiKP**	**04 03 17.0**	**-0.2**
ANMO				MLR	MLR		
	comp=Z,4µm,18.0s						
ANMO	**Albuquerque**	**126.10**	**53**	PKPdf	**PKPdf**	**04 03 16.4**	**-0.3**
ANMO	**Albuquerque**	**126.10**	**53**	IAMs_20	IAMs_20	04 52 52.8	
	comp=Z,6µm,21.0s						
ANMO	**Albuquerque**	**126.10**	**53**	P	**PKPdf**	**04 03 15.9**	**-0.9**
	baz=287						
ULM	**Lac du Bonnet**	**126.23**	**31**	PKP	**PKPdf**	**04 03 14.6**	**-1.7**
	comp=Z,12nm,0.8s,baz=329,slow=2.3,SNR=8.5						
ULM				PP	**PP**	**04 05 15.9**	**+5.5**
	comp=Z,8.3nm,1.1s,baz=315,slow=5.1,SNR=4.0						
AKLM	**AKL**	**126.36**	**307**	P	**PKiKP**	**04 03 21.1**	**+3.5**
MVO	**Moncorvo**	**126.41**	**316**	*e*PP	PP	04 05 21.9	+10
MVO	**Moncorvo**	**126.41**	**316**	*e*LQ	LQ	04 17 01.7	
MVO	**Moncorvo**	**126.41**	**316**	*e*LQ	LQ	04 37 29.0	
MVO				*e*LR	LR	04 46 57.5	
	comp=Z,5µm,20.0s						
POLO	**Lamas de Olo**	**126.85**	**316**	*e*PP	PP	04 05 20.0	+4.8
EPT	**El Paso**	**126.92**	**56**	IAMs_20	IAMs_20	04 52 02.4	
	comp=Z,10µm,22.0s						
PGAV	**Gavieira, Arco**	**126.92**	**317**	*e*PP	PP	04 05 24.8	+9.2
PGAV	**Gavieira, Arco**	**126.92**	**317**	*e*LQ	LQ	04 17 03.4	
PGAV	**Gavieira, Arco**	**126.92**	**317**	*e*LQ	LQ	04 38 24.5	
PGAV				*e*LR	LR	04 45 22.8	
	comp=Z,5µm,22.0s						
IVI	**Ivigtut**	**126.96**	**356**	IAMs_20	IAMs_20	05 08 48.4	
	comp=Z,8µm,22.0s						
T25A	**Trinidad**	**126.98**	**49**	IAMs_20	IAMs_20	04 53 55.9	
	comp=Z,6µm,20.0s						
T25A	**Trinidad**	**126.98**	**49**	P	**PKPdf**	**04 03 17.7**	**-0.7**
	baz=290,SNR=7.0						
MTE	**Manteigas**	**127.08**	**315**	*e*PP	PP	04 05 27.3	+11
MTE	**Manteigas**	**127.08**	**315**	*e*LQ	LQ	04 17 03.5	
MTE	**Manteigas**	**127.08**	**315**	*e*LQ	LQ	04 37 38.6	
MTE				*e*LR	LR	04 47 14.0	
	comp=Z,6µm,20.0s						
MTE	**Manteigas**	**127.08**	**315**	IAMs_20	IAMs_20	05 07 10.9	
	comp=Z,7µm,21.0s						
OGNE	**Ogallala**	**127.25**	**44**	P	**PKPdf**	**04 03 17.7**	**-1.0**
	baz=295						
PMRV	**Marv??o**	**127.36**	**314**	*e*PP	PP	04 05 23.4	+4.9
PMRV	**Marv??o**	**127.36**	**314**	*e*LQ	LQ	04 17 08.3	
PMRV				*e*SS	SS	04 22 32.0	+5.0
PMRV	**Marv??o**	**127.36**	**314**	*e*LQ	LQ	04 36 58.7	
PMRV	**Marv??o**	**127.36**	**314**	*e*LR	LR	04 48 51.5	
	comp=Z,6µm,20.0s						
AGMN	**Agassiz Nation**	**127.39**	**33**	IAMs_20	IAMs_20	04 51 47.8	
	comp=Z,8µm,22.0s						
AGMN	**Agassiz Nation**	**127.39**	**33**	P	**PKPdf**	**04 03 18.1**	**-0.4**
	baz=306						
PBAR	**Barrancos**	**127.58**	**312**	*e*PP	PP	04 05 22.4	+2.4
PESTR	**Estremoz**	**127.72**	**313**	*e*PP	PP	04 05 23.5	+2.6

COI	**Coimbra**	**127.76**	**315**	*e*PP	PP	04 05 24.7	+3.6
COI	**Coimbra**	**127.76**	**315**	IAMs_20	IAMs_20	05 08 34.0	
	comp=Z,7μm,22.0s						
MNTX	**Cornudas Mount**	**127.86**	**56**	IAMs_20	IAMs_20	04 52 31.8	
	comp=Z,8μm,22.0s						
MNTX	**Cornudas Mount**	**127.86**	**56**	P	**PKPdf**	**04 03 18.4**	**-1.6**
	baz=285						
PCAS	**Casmilo, Conde**	**127.89**	**315**	*e*PP	PP	04 05 25.0	+3.1
GOLM	**Goulmima**	**128.01**	**304**	P	**PKiKP**	**04 03 25.0**	**+4.0**
PMTG	**Montargil**	**128.09**	**314**	*e*PP	PP	04 05 28.5	+5.2
PSBE	**So Bento**	**128.32**	**315**	*e*PP	PP	04 05 30.0	+5.2
PVAQ	**Vaqueiros**	**128.36**	**312**	*e*PKPdf	**PKiKP**	**04 03 24.3**	**+2.9**
PVAQ	**Vaqueiros**	**128.36**	**312**	*e*PP	PP	04 05 29.9	+4.7
PVAQ	**Vaqueiros**	**128.36**	**312**	*e*LQ	LQ	04 17 07.3	
PVAQ				*e*SS	SS	04 23 10.0	+30
PVAQ	**Vaqueiros**	**128.36**	**312**	*e*LQ	LQ	04 37 14.8	
PVAQ				*e*LR	LR	04 46 48.7	
	comp=Z,9μm,20.0s						
PCVE	**Castro Verde**	**128.51**	**312**	*e*PP	PP	04 05 24.9	-1.3
MESJ	**Messejana**	**128.57**	**312**	*e*PP	PP	04 05 27.5	+1.0
MESJ				IAMs_20	IAMs_20	05 02 16.1	
	comp=N,8μm,22.0s						
PBDV	**Barranco-do-Ve**	**128.58**	**312**	*e*PP	PP	04 05 34.2	+7.5
PNCL	**Nicolau / Gran**	**128.69**	**313**	*e*PP	PP	04 05 32.3	+5.0
TZRR	**Tazzarine**	**128.76**	**303**	P	**PKiKP**	**04 03 26.0**	**+3.5**
PMAFR	**Mafra**	**128.89**	**314**	*e*PP	PP	04 05 30.7	+2.1
LIS	**Lisbon**	**128.90**	**314**	*e*PP	PP	04 05 29.6	+1.0
LIS				IAMs_20	IAMs_20	04 57 24.4	
	comp=N,14μm,23.8s						
ZGR	**Zagora**	**128.98**	**302**	P	**PKiKP**	**04 03 27.0**	**+4.0**
MORF	**Marmelete**	**129.09**	**312**	*e*PP	PP	04 05 31.0	+1.0
MORF				IAMs_20	IAMs_20	04 56 15.6	
	comp=N,12μm,28.3s						
MORF	**Marmelete**	**129.09**	**312**	*e*PP	PP	04 05 36.3	+6.3
PLCA	**Paso Flores**	**129.16**	**165**	PKP	**PKPdf**	**04 03 21.8**	**-0.6**
	comp=N,35nm,1.2s,baz=220,slow=3.7,SNR=10						
PLCA	**Paso Flores**	**129.16**	**165**	*e*P	**PKiKP**	**04 03 23.6**	**+0.5**
PFVI	**Vila Bisbo**	**129.28**	**312**	*e*PP	PP	04 05 38.9	+7.7
MSTX	**Muleshoe**	**129.30**	**53**	P	**PKPdf**	**04 03 22.3**	**-0.5**
	baz=289						
ECSD	**EROS Data Cent**	**129.48**	**39**	IAMs_20	IAMs_20	04 57 48.8	
	comp=Z,7μm,21.0s						
ECSD	**EROS Data Cent**	**129.48**	**39**	P	**PKPdf**	**04 03 21.6**	**-1.1**
	baz=302,SNR=15						
KOWA	**Kowa**	**129.65**	**282**	P	**PKiKP**	**04 03 29.0**	**+4.5**
BGNE	**Belgrade**	**129.67**	**42**	P	**PKPdf**	**04 03 22.0**	**-1.2**
	baz=299						
CBKS	**Cedar Bluff**	**129.75**	**46**	IAMs_20	IAMs_20	04 54 21.8	
	comp=Z,7μm,22.0s						
AMTX	**Amarillo**	**129.84**	**51**	IAMs_20	IAMs_20	04 55 05.6	
	comp=Z,8μm,22.0s						
AMTX	**Amarillo**	**129.84**	**51**	P	**PKPdf**	**04 03 23.1**	**-0.7**
	baz=291						
TXAR	**Lajitas Array**	**129.90**	**59**	PKhKP	PKPpre	04 03 13.3	
	comp=Z,0.7nm,0.8s,baz=234,slow=1.2,SNR=6.0						
TXAR				PKP	**PKiKP**	**04 03 24.4**	**-0.4**
	comp=Z,1.7nm,0.7s,baz=224,slow=1.7,SNR=11						
TXAR				PP	**PP**	**04 05 43.2**	**+7.4**
	comp=Z,1.1nm,0.8s,baz=263,slow=4.9,SNR=3.8						
TXAR				SKPbc	SKPbc	04 06 45.2	0.0
	comp=Z,2.7nm,0.8s,baz=248,slow=3.4,SNR=3.6						
TXAR				SKKPbc	**SKKPbc**	**04 16 31.6**	**+3.8**
	comp=Z,4.6nm,1.2s,baz=108,slow=5.8,SNR=4.8						
EYMN	**Ely**	**129.91**	**31**	IAMs_20	IAMs_20	04 58 12.5	
	comp=Z,8μm,22.0s						
EYMN	**Ely**	**129.91**	**31**	P	**PKPdf**	**04 03 23.5**	**+0.1**
	baz=310						
KIC	**Kosan Boka**	**130.06**	**271**	*e*PKIKP	**PKiKP**	**04 03 25.1**	**-0.3**
	comp=Z,53nm,1.1s						
DBIC	**Dimbokro**	**130.21**	**272**	PKP	**PKiKP**	**04 03 25.2**	**-0.5**
	comp=Z,16nm,0.9s,baz=58,slow=0.8,SNR=9.9						
DBIC				SKPbc	**SKPbc**	**04 06 47.2**	**+0.7**
	comp=Z,25nm,1.0s,baz=100,slow=6.2,SNR=5.4						
LIC	**Lamto**	**130.34**	**271**	*e*PKIKP	**PKPdf**	**04 03 25.0**	**-0.1**
	comp=Z,143nm,1.5s						
TIC	**Toumodi**	**130.37**	**272**	*e*PKIKP	**PKPdf**	**04 03 24.4**	**-0.8**
OUK	**Oukaimeden**	**130.54**	**304**	P	**PKiKP**	**04 03 28.0**	**+1.6**
SPMN	**Marine on St.**	**130.90**	**35**	P	**PKiKP**	**04 03 25.9**	**-0.4**
	baz=307						
U32A	**Winter Ranch,**	**131.30**	**48**	IAMs_20	IAMs_20	05 00 51.9	
	comp=Z,6μm,20.0s						
KSU1	**Kansas State U**	**131.80**	**44**	IAMs_20	IAMs_20	04 52 18.8	
	comp=Z,9μm,22.0s						
KSU1	**Kansas State U**	**131.80**	**44**	P	**PKPdf**	**04 03 27.6**	**+0.4**
	baz=298						
WMOK	**Wichita Mounta**	**132.11**	**50**	IAMs_20	IAMs_20	05 04 50.7	
	comp=Z,7μm,20.0s						
WMOK	**Wichita Mounta**	**132.11**	**50**	P	**PKPdf**	**04 03 27.6**	**-0.4**
	baz=293						
ABTX	**Abilene, Hawle**	**132.22**	**53**	P	**PKPdf**	**04 03 28.4**	**+0.2**
	baz=290						
COWI	**Conover**	**132.34**	**32**	IAMs_20	IAMs_20	04 59 45.8	
	comp=Z,8μm,22.0s						
SCIA	**State Center**	**132.57**	**39**	IAMs_20	IAMs_20	04 51 06.6	
	comp=Z,7μm,22.0s						
SCHQ	**Schefferville**	**132.66**	**9**	PKP	**PKPdf**	**04 03 28.1**	**-0.3**
	comp=Z,14nm,0.8s,baz=331,slow=4.0,SNR=7.5						
SCHQ	**Schefferville**	**132.66**	**9**		**PKPdf**	**04 03 28.4**	**0.0**
JCT	**Junction City**	**132.80**	**56**	P	**PKPdf**	**04 03 28.9**	**-0.5**
	baz=288						
TRQA	**Tornquist**	**133.43**	**172**	*e*P	**PKiKP**	**04 03 33.6**	**+2.0**
JFWS	**Jewell Farm**	**133.76**	**36**	IAMs_20	IAMs_20	04 55 00.8	
	comp=Z,7μm,22.0s						
JFWS	**Jewell Farm**	**133.76**	**36**	P	**PKPdf**	**04 03 30.3**	**-0.5**
	baz=308						
833A	**Chaparral WMA,**	**133.79**	**59**	P	**PKPdf**	**04 03 30.5**	**-0.8**
	baz=287						
TUL1	**Leonard**	**133.85**	**47**	IAMs_20	IAMs_20	05 00 41.3	
	comp=Z,8μm,21.0s						
TUL1	**Leonard**	**133.85**	**47**	P	**PKPdf**	**04 03 30.9**	**-0.3**
	baz=297						
X37A	**Clayton**	**134.74**	**49**	IAMs_20	IAMs_20	04 58 33.0	
	comp=Z,8μm,21.0s						
GLMI	**Grayling**	**135.52**	**30**	P	**PKPdf**	**04 03 31.8**	**-2.2**
	baz=316						
L44A	**Lake County Fo**	**135.57**	**35**	IAMs_20	IAMs_20	05 01 28.5	
	comp=Z,7μm,20.0s						
W39A	**Magazine**	**135.63**	**47**	P	**PKPdf**	**04 03 32.6**	**-1.9**
	baz=298						
U40A	**Yellville**	**135.74**	**45**	IAMs_20	IAMs_20	05 06 17.1	
	comp=Z,7μm,21.0s						
U40A	**Yellville**	**135.74**	**45**	P	**PKPdf**	**04 03 32.8**	**-1.9**
	baz=300						
HDIL	**Hopedale**	**135.76**	**38**	IAMs_20	IAMs_20	04 54 60.0	
	comp=Z,6μm,20.0s						
HDIL	**Hopedale**	**135.76**	**38**	P	**PKPdf**	**04 03 32.5**	**-2.1**
	baz=307						
UNM	**Universidad Na**	**135.92**	**71**	IAMs_20	IAMs_20	04 59 08.8	
	comp=Z,7μm,20.0s						
CCM	**Cathedral Cave**	**135.95**	**42**	IAMs_20	IAMs_20	05 00 10.5	
	comp=Z,8μm,21.0s						
CCM	**Cathedral Cave**	**135.95**	**42**	P	**PKPdf**	**04 03 32.8**	**-2.2**
	baz=303						
VA01	**Torpederas**	**135.98**	**160**		**PKPdf**	**04 03 33.8**	**-1.5**
MIAR	**Mount Ida**	**136.08**	**48**	IAMs_20	IAMs_20	04 58 57.5	
	comp=Z,7μm,22.0s						
MIAR	**Mount Ida**	**136.08**	**48**	P	**PKPdf**	**04 03 33.2**	**-2.2**
	baz=297						
HKT	**Hockley**	**136.21**	**55***c*	*i*PKIKP	**PKiKP**	**04 03 37.8**	**+0.5**
PMPST	**Porto Santo, M**	**136.55**	**310**	*e*PP	PP	04 06 19.2	+1.4
X40A	**Basin Creek Fa**	**136.65**	**47**	IAMs_20	IAMs_20	05 04 09.5	
	comp=Z,8μm,20.0s						
W41B	**Gary Mavity, V**	**136.75**	**46**	P	**PKPdf**	**04 03 33.3**	**-3.3**
	baz=299						
LPA	**La Plata**	**136.94**	**177**	PKIKP	**PKiKP**	**04 03 38.6**	**-0.2**
LPA				PP	**PP**	**04 06 13.6**	**-5.1**
LPA				pPP		04 06 23.1	
LPA				PKS	**PKSdf**	**04 07 09.0**	**-4.3**
LPA				pSKP		04 07 24.1	
LPA				PPP	PPP	04 09 20.6	
LPA				SKIKS		04 10 33.0	
LPA				SKIKS		04 10 51.3	
LPA				SDIFF		04 14 59.1	
LPA				PS	**PS**	**04 16 40.0**	**-5.5**
LPA				PSP	PSP	04 18 33.4	
LPA				SS	**SS**	**04 24 22.8**	**+1.7**
LPA				SSS	SSS	04 29 21.0	
PMAR	**Madeira**	**137.15**	**310**	*e*PKPdf	**PKiKP**	**04 03 39.2**	**-0.3**
PMAR	**Madeira**	**137.15**	**310**	*e*PP	PP	04 06 25.1	+3.3
PMOZ	**Porto Moniz, M**	**137.32**	**310**	*e*PP	PP	04 06 23.7	+1.0
PMOZ	**Porto Moniz, M**	**137.32**	**310**	*e*SS	SS	04 24 32.8	+4.2
PMOZ	**Porto Moniz, M**	**137.32**	**310**	*e*LQ	LQ	04 42 23.5	
PMOZ	**Porto Moniz, M**	**137.32**	**310**	*e*LR	LR	04 53 47.5	
	comp=Z,6μm,18.0s						
AAM	**Ann Arbor**	**137.81**	**32**	IAMs_20	IAMs_20	04 58 00.6	
	comp=Z,7μm,22.0s						
WCI	**Wyandotte Cave**	**139.02**	**38**	PKHKP	PKPpre	04 03 32.0	
WCI	**Wyandotte Cave**	**139.02**	**38**		PKPpre	04 03 32.0	
WCI	**Wyandotte Cave**	**139.02**	**38**	IAMs_20	IAMs_20	04 58 43.4	
	comp=Z,7μm,21.0s						
OXF	**Oxford**	**139.09**	**45**	IAMs_20	IAMs_20	05 07 45.0	
	comp=Z,6μm,20.0s						
P49A	**Miami Univ. Ec**	**139.13**	**36**	IAMs_20	IAMs_20	05 03 14.8	
	comp=Z,8μm,22.0s						
P49A	**Miami Univ. Ec**	**139.13**	**36**	P	**PKPdf**	**04 03 37.7**	**-3.2**
	baz=312						
WVT	**Waverly**	**139.29**	**42**	PKHKP	PKPpre	04 03 32.0	
WVT				MLR	MLR		
	comp=Z,6μm,22.0s						
WVT	**Waverly**	**139.29**	**42**		PKPpre	04 03 32.0	
WVT	**Waverly**	**139.29**	**42**	IAMs_20	IAMs_20	05 01 52.9	
	comp=Z,6μm,22.0s						
WVT	**Waverly**	**139.29**	**42**	P	**PKPdf**	**04 03 40.3**	**-1.0**
	baz=305						
VBMS	**Vicksburg**	**139.43**	**49**	IAMs_20	IAMs_20	05 00 21.2	
	comp=Z,7μm,22.0s						
VBMS	**Vicksburg**	**139.43**	**49**	P	**PKPdf**	**04 03 39.3**	**-2.3**
	baz=298						
ACSO	**Alum Creek Sta**	**139.63**	**34**	IAMs_20	IAMs_20	04 58 23.8	
	comp=Z,8μm,22.0s						
ACSO	**Alum Creek Sta**	**139.63**	**34**	P	**PKPdf**	**04 03 39.8**	**-1.9**
	baz=314						
PLAL	**Pickwick Lake**	**139.77**	**44**	IAMs_20	IAMs_20	05 10 42.7	
	comp=Z,7μm,20.0s						
ERPA	**Erie**	**139.79**	**29**	IAMs_20	IAMs_20	05 16 49.6	
	comp=Z,7μm,20.0s						
LCO	**Las Campanas**	**139.96**	**158**	PKIKP	**PKPdf**	**04 03 36.5**	**-6.6**
LCO				MLR	MLR		
	comp=Z,11μm,22.0s						
LCO	**Las Campanas**	**139.96**	**158**		PKPpre	04 03 36.5	
M53A	**WI Miller and**	**139.96**	**30**	IAMs_20	IAMs_20	05 03 56.4	
	comp=Z,7μm,22.0s						
M53A	**WI Miller and**	**139.96**	**30**	P	**PKPdf**	**04 03 40.7**	**-1.7**
	baz=318						
LONY	**Lake Ozonia**	**140.05**	**22**	IAMs_20	IAMs_20	05 18 55.9	
	comp=Z,7μm,22.0s						
LONY	**Lake Ozonia**	**140.05**	**22**	P	**PKPdf**	**04 03 40.7**	**-1.7**
	baz=329						
PQI	**Presque Isle**	**140.19**	**14**	IAMs_20	IAMs_20	05 13 35.1	
	comp=Z,6μm,22.0s						
M54A	**Oil Creek Stat**	**140.41**	**29**	IAMs_20	IAMs_20	05 07 58.1	
	comp=Z,7μm,21.0s						
M54A	**Oil Creek Stat**	**140.41**	**29**	P	**PKPdf**	**04 03 41.4**	**-1.8**
	baz=320						
P52A	**Corning**	**140.51**	**34**	IAMs_20	IAMs_20	05 19 36.2	
	comp=Z,6μm,22.0s						
P52A	**Corning**	**140.51**	**34**	P	**PKPdf**	**04 03 40.9**	**-2.5**
	baz=315						
O53A	**New Philadelph**	**140.56**	**32**	IAMs_20	IAMs_20	04 59 09.5	
	comp=Z,7μm,22.0s						
O53A	**New Philadelph**	**140.56**	**32**	P	**PKPdf**	**04 03 41.2**	**-2.3**
	baz=317						
N54A	**Moraine State**	**140.66**	**30**	IAMs_20	IAMs_20	05 05 21.9	
	comp=Z,7μm,21.0s						
N54A	**Moraine State**	**140.66**	**30**	P	**PKPdf**	**04 03 40.9**	**-2.7**
	baz=319						
VT1	**Waterbury**	**140.95**	**20**	IAMs_20	IAMs_20	05 18 58.8	
	comp=Z,5μm,20.0s						
PKME	**Peaks-Kenny Pk**	**141.18**	**16**	IAMs_20	IAMs_20	05 20 49.2	
	comp=Z,8μm,22.0s						
PKME	**Peaks-Kenny Pk**	**141.18**	**16**	P	**PKPdf**	**04 03 42.0**	**-2.4**
	baz=337						
LBNH	**Lisbon**	**141.31**	**19**	P	**PKPdf**	**04 03 43.4**	**-1.3**
	baz=333						
BINY	**Binghamton**	**141.53**	**25**	IAMs_20	IAMs_20	05 02 33.4	
	comp=Z,6μm,22.0s						
BINY	**Binghamton**	**141.53**	**25**	P	**PKPdf**	**04 03 42.8**	**-2.3**
	baz=326						
HNH	**Hanover**	**141.66**	**20**	IAMs_20	IAMs_20	05 03 10.4	
	comp=Z,7μm,22.0s						
MCWV	**Mont Chateau**	**141.71**	**31**	IAMs_20	IAMs_20	05 05 32.7	
	comp=Z,7μm,21.0s						
MCWV	**Mont Chateau**	**141.71**	**31**	P	**PKPdf**	**04 03 43.2**	**-2.4**
	baz=318						
WVL	**Waterville**	**141.72**	**17**	IAMs_20	IAMs_20	05 14 10.5	
	comp=Z,6μm,21.0s						
TZTN	**Tazewell**	**141.78**	**38**	P	**PKPdf**	**04 03 42.8**	**-2.9**
	baz=310						
O56A	**Blue Knob Stat**	**141.89**	**30**	IAMs_20	IAMs_20	05 16 49.4	
	comp=Z,8μm,21.0s						
O56A	**Blue Knob Stat**	**141.89**	**30**	P	**PKPdf**	**04 03 43.6**	**-2.3**
	baz=320						
SSPA	**Standing Stone**	**141.94**	**29**		PKPpre	04 03 39.7	
SSPA	**Standing Stone**	**141.94**	**29**	IAMs_20	IAMs_20	05 10 44.4	
	comp=Z,6μm,20.0s						
SSPA	**Standing Stone**	**141.94**	**29**	P	**PKPdf**	**04 03 43.2**	**-2.8**
	baz=322						
TRY	**Troy**	**142.01**	**22**	IAMs_20	IAMs_20	05 15 33.8	
	comp=Z,7μm,22.0s						
FFD	**Franklin Falls**	**142.09**	**20**	IAMs_20	IAMs_20	05 03 21.5	
	comp=Z,5μm,21.0s						
EMMW	**East Machias**	**142.17**	**14**	IAMs_20	IAMs_20	05 16 14.4	
	comp=Z,7μm,21.0s						
ITQB	**Itaqui**	**142.22**	**178**	PKPdf	**PKPdf**	**04 03 43.9**	**-2.9**
ITQB	**Itaqui**	**142.22**	**178**	*e*P	**PKPdf**	**04 03 47.3**	**+0.5**
BRAL	**Brewton**	**142.51**	**48**	P	**PKPdf**	**04 03 45.7**	**-1.5**
	baz=301						
L61B	**Northampton**	**142.62**	**22**	P	**PKPdf**	**04 03 46.1**	**-1.0**
	baz=331						
N59A	**State Game Lan**	**142.68**	**26**	P	**PKPdf**	**04 03 43.9**	**-3.4**
	baz=325						
QUA2	**Belchertown**	**142.89**	**21**	IAMs_20	IAMs_20	05 22 01.9	
	comp=Z,6μm,22.0s						
TER01	**Tubaro-SC**	**142.93**	**189**	*e*P	**PKPdf**	**04 03 49.4**	**+1.3**
HRV	**Adam Dziewonsk**	**142.97**	**20**	PKIKP	**PKPdf**	**04 03 45.1**	**-2.6**
HRV	**Adam Dziewonsk**	**142.97**	**20**	PKPdf	**PKPdf**	**04 03 45.1**	**-2.6**
HRV	**Adam Dziewonsk**	**142.97**	**20**	P	**PKPdf**	**04 03 45.9**	**-1.8**
	baz=332						
WES	**Weston**	**143.16**	**20**	IAMs_20	IAMs_20	05 15 59.0	
	comp=Z,7μm,20.0s						
BLA	**Blacksburg**	**143.17**	**35**	IAMs_20	IAMs_20	05 10 07.8	
	comp=Z,6μm,20.0s						
BLA	**Blacksburg**	**143.17**	**35**	P	PKPbc	04 03 45.8	+0.6
	baz=315						
BCX	**Boston College**	**143.25**	**20**	IAMs_20	IAMs_20	05 22 10.5	
	comp=Z,7μm,22.0s						
PAL	**Palisades**	**143.39**	**24**	IAMs_20	IAMs_20	05 22 24.3	
	comp=Z,7μm,22.0s						
PAL	**Palisades**	**143.39**	**24**	P	**PKPdf**	**04 03 47.4**	**-1.0**
	baz=328						
WSPT	**Westport, CT**	**143.48**	**23**	IAMs_20	IAMs_20	05 06 30.7	
	comp=Z,6μm,22.0s						
BRYW	**Bryant College**	**143.50**	**21**	IAMs_20	IAMs_20	05 22 24.0	
	comp=Z,7μm,21.0s						
YLE	**Yale**	**143.51**	**23**	IAMs_20	IAMs_20	05 10 41.4	
	comp=Z,8μm,21.0s						
P60A	**Greenville**	**143.63**	**27**	P	PKPbc	04 03 46.0	-0.3
	baz=324						
GOGA	**Godfrey**	**143.79**	**42**	IAMs_20	IAMs_20	05 19 47.0	
	comp=Z,7μm,21.0s						
GOGA	**Godfrey**	**143.79**	**42**	P	PKPbc	04 03 47.4	+0.4
	baz=307						
PAYG	**Puerto Ayora**	**143.79**	**103**	IAMs_20	IAMs_20	05 04 21.0	
	comp=Z,5μm,20.0s						
PB14	**IPOC Station P**	**144.02**	**156**	IAMs_20	IAMs_20	04 59 56.6	
	comp=Z,7μm,21.0s						
KMSC	**Kings Mountain**	**144.06**	**38**	P	**PKPab**	**04 03 47.3**	**0.0**
	baz=312						
CBN	**Corbin Frederi**	**144.07**	**31**	P	PKPbc	04 03 47.6	0.0
	baz=320						
M65A	**Busby, Falmout**	**144.12**	**20**	IAMs_20	IAMs_20	05 10 51.4	
	comp=Z,7μm,22.0s						
Q61A	**Milford**	**144.53**	**28**	P	PKPbc	04 03 49.6	+0.5
	baz=324						
TIGA	**Tifton**	**144.86**	**45**	P	PKPbc	04 03 50.5	+0.1
	baz=305						
PB10	**IPOC Station P**	**144.94**	**155**	IAMs_20	IAMs_20	05 01 32.3	
	comp=Z,7μm,22.0s						
CPUP	**Villa Florida**	**145.50**	**176**	PKPbc	**PKPab**	**04 03 53.8**	**+1.0**
	comp=Z,160nm,1.0s,baz=193,slow=2.7,SNR=59						
CPUP	**Villa Florida**	**145.50**	**176**	*e*P	**PKPab**	**04 03 53.5**	**+0.7**
CNNC	**Cliffs of the**	**146.01**	**35**	IAMs_20	IAMs_20	05 12 35.9	
	comp=Z,7μm,21.0s						
CNNC	**Cliffs of the**	**146.01**	**35**	P	**PKPdf**	**04 03 52.1**	**-1.1**
	baz=317						
TIJ01	**Guaruva-PR**	**146.06**	**190**	*e*P	**PKPdf**	**04 03 53.7**	**-0.1**
PB06	**IPOC Station P**	**146.07**	**156**	IAMs_20	IAMs_20	05 13 59.0	
	comp=Z,7μm,20.0s						
SNET	**Serv Nac Est T**	**146.07**	**78**	IAMs_20	IAMs_20	05 00 18.2	
	comp=Z,5μm,22.0s						
NHSC	**New Hope**	**146.12**	**40**	P	**PKPbc**	**04 03 54.3**	**0.0**
	baz=311						
PB04	**IPOC Station P**	**146.16**	**154**	IAMs_20	IAMs_20	05 02 17.5	
	comp=Z,6μm,21.0s						
LVC	**Limon Verde**	**146.42**	**156**	IAMs_20	IAMs_20	05 09 30.1	
	comp=Z,7μm,22.0s						
LVC	**Limon Verde**	**146.42**	**156**	*e*P	**PKPbc**	**04 03 56.1**	**+0.1**
PET01	**Itanhaem-SP**	**146.72**	**193**	*e*P	**PKPab**	**04 03 57.9**	**+0.5**
PB07	**IPOC Station P**	**146.81**	**154**	IAMs_20	IAMs_20	05 06 19.6	
	comp=Z,6μm,21.0s						
PTGB	**Pitanga**	**147.05**	**185**	*e*P	**PKPbc**	**04 03 56.9**	**-0.5**
MAN01	**Angra dos Reis**	**147.17**	**199**	*e*P	**PKPbc**	**04 03 56.9**	**-0.9**
PARB	**Paraibuna**	**147.22**	**196**	*e*P	**PKPbc**	**04 03 58.5**	**+0.6**
DUB01	**Friburgo-RJ**	**147.34**	**202**	*e*P	**PKPbc**	**04 03 57.5**	**-0.8**
SPB	**Sao Paulo**	**147.43**	**193**	IAMs_20	IAMs_20	04 59 43.0	
	comp=Z,7μm,21.0s						
SPB	**Sao Paulo**	**147.43**	**193**	*e*P	**PKPbc**	**04 03 57.3**	**-1.0**
VAS01	**Vassouras-RJ**	**147.54**	**200**	*e*P	**PKPbc**	**04 03 57.5**	**-1.3**
TGUH	**Tegucigalpa,Un**	**147.92**	**77**	IAMs_20	IAMs_20	05 03 49.3	
	comp=Z,5μm,21.0s						
TGUH	**Tegucigalpa,Un**	**147.92**	**77**	*e*P	**PKPbc**	**04 03 59.2**	**-0.9**
ALF01	**Guarapari-ES**	**147.98**	**206**	*e*P	**PKPbc**	**04 03 59.1**	**-0.8**
DWPF	**Disney Wildern**	**148.28**	**48**		**PKPdf**	**04 03 57.1**	**0.0**
DWPF	**Disney Wildern**	**148.28**	**48**	IAMs_20	IAMs_20	05 10 48.5	
	comp=Z,6μm,22.0s						
DWPF	**Disney Wildern**	**148.28**	**48**	P	**PKPdf**	**04 03 57.8**	**+0.6**
	baz=303						
PSGCX	**Pisagua**	**148.56**	**152**	IAMs_20	IAMs_20	05 04 22.4	
	comp=Z,7μm,22.0s						
RCLB	**Rio Claro- Sao**	**148.58**	**193**	*e*P	**PKPbc**	**04 04 00.8**	**-0.8**
PB11	**IPOC Station P**	**148.63**	**153**	IAMs_20	IAMs_20	05 09 41.2	
	comp=Z,7μm,21.0s						
RIB01	**Linhares ES**	**148.97**	**208**	*e*P	**PKPdf**	**04 04 00.2**	**+1.6**
SJMB	**Sao Joao De Ma**	**149.87**	**207**	*e*P	**PKPbc**	**04 04 02.5**	**-2.3**
PCMB	**Pacaembu**	**150.04**	**187**	*e*P	**PKPdf**	**04 04 01.7**	**+1.5**
BB19B	**Bebedouro**	**150.11**	**192**	*e*P	**PKPdf**	**04 04 02.3**	**+1.9**
NAN01	**Guarapari, ES**	**150.12**	**210**	*e*P	**PKPdf**	**04 04 01.7**	**+1.3**
JTS	**Las Juntas de**	**150.46**	**84**	IAMs_20	IAMs_20	05 03 00.6	
	comp=Z,5μm,21.0s						
JTS	**Las Juntas de**	**150.46**	**84**	*e*P	**PKiKP**	**04 04 07.9**	**+0.7**
GUA01	**Guaratinga, BA**	**151.02**	**211**	*e*P	**PKPdf**	**04 04 04.2**	**+2.3**
DIAM	**Diamantina, MG**	**151.27**	**203**	*e*P	**PKPdf**	**04 04 04.2**	**+1.8**
HDC	**Heredia**	**151.29**	**84**	IAMs_20	IAMs_20	05 07 52.5	
	comp=Z,5μm,20.0s						
AQDB	**Aquidauana**	**151.39**	**179**	*e*P	**PKPdf**	**04 04 03.4**	**+1.1**
ITRB	**Iturama**	**151.78**	**189**	*e*P	**PKPdf**	**04 04 04.8**	**+1.8**
CMC01	**Camacan, BA**	**151.88**	**213**	*e*P	**PKPdf**	**04 04 04.8**	**+1.6**
NBIT	**Itapeh - BA**	**152.19**	**214**	*e*P	**PKPdf**	**04 04 05.1**	**+1.4**
LPAZ	**La Paz**	**152.36**	**152**	PKP	**PKPdf**	**04 04 05.8**	**+1.1**
	comp=Z,17nm,1.1s,baz=51,slow=3.2,SNR=17						
LPAZ				PKPbc	**pPKPdf**	**04 04 13.6**	**+0.4**
	comp=Z,62nm,1.0s,baz=233,slow=3.4,SNR=21						
LPAZ	**La Paz**	**152.36**	**152**	*e*P	**PKPbc**	**04 04 11.0**	**-0.4**
LPAZ	**La Paz**	**152.36**	**152**	*e*P	**PKPdf**	**04 04 06.4**	**+1.8**
BRU2	**Volcan**	**152.69**	**87**	*e*P	**PKPdf**	**04 04 07.4**	**+2.8**
MC01	**Montes Claros**	**152.82**	**204**	*e*P	**PKPdf**	**04 04 06.6**	**+2.0**
IPMB	**Ipameri, GO**	**153.01**	**195**	*e*P	**PKPdf**	**04 04 05.8**	**+0.9**
GDU01	**Guandu, BA**	**153.25**	**215**	*e*P	**PKPdf**	**04 04 06.7**	**+1.5**
MAPC	**Malpelo**	**153.29**	**98**	*e*P	**PKiKP**	**04 04 16.2**	**+3.2**
NBRF	**Rio Formoso -**	**153.93**	**230**	*e*P	**PKPdf**	**04 04 08.0**	**+1.7**
NBLA	**Lagarto - SE**	**154.24**	**222**	*e*P	**PKPdf**	**04 04 08.1**	**+1.4**
PP1B	**Ponte de Pedra**	**154.26**	**180**	*e*P	**PKPdf**	**04 04 07.8**	**+1.2**
BBSR	**BB Station**	**154.44**	**19**	IAMs_20	IAMs_20	05 13 10.5	
	comp=Z,7μm,22.0s						
JANB	**Januaria**	**154.45**	**205**	*e*P	**PKPdf**	**04 04 10.4**	**+3.4**
BDFB	**Brasilia**	**155.20**	**196**	PKP	**PKPdf**	**04 04 08.9**	**+0.8**
	comp=Z,16nm,1.0s,baz=237,slow=1.6,SNR=13						
OTAV	**Otavalo**	**155.37**	**108**	IAMs_20	IAMs_20	05 07 31.4	
	comp=Z,6μm,20.0s						
OTAV	**Otavalo**	**155.37**	**108**	*e*P	**PKPdf**	**04 04 11.0**	**+2.2**
OTAV	**Otavalo**	**155.37**	**108**	*e*P	**PKPdf**	**04 04 09.9**	**+1.1**
CUSE	**Cuicocha Este**	**155.44**	**108**	*e*P	**PKPdf**	**04 04 12.4**	**+3.5**
NBPV	**Pedro Velho**	**155.44**	**234**	*e*P	**PKPdf**	**04 04 11.0**	**+2.7**
BCIP	**Isla Barro Col**	**155.51**	**86**	IAMs_20	IAMs_20	05 24 20.6	
	comp=Z,6μm,20.0s						
BCIP	**Isla Barro Col**	**155.51**	**86**	*e*P	**PKPdf**	**04 04 08.9**	**+0.5**
TUMC	**Tumaco**	**155.59**	**104**	*e*P	**PKPab**	**04 04 38.4**	**+3.8**
NBPN	**Ponto Novo - B**	**155.89**	**218**	*e*P	**PKPdf**	**04 04 10.4**	**+1.4**
ARAG	**Araguaiana, MT**	**155.93**	**188**	*e*P	**PKPdf**	**04 04 11.8**	**+2.8**
SALV	**Santo Antonio**	**155.94**	**179**	*e*P	**PKPdf**	**04 04 10.5**	**+1.6**
MTDJ	**Mount Denham**	**156.05**	**63**	IAMs_20	IAMs_20	05 28 08.7	
	comp=Z,6μm,21.0s						
MTDJ	**Mount Denham**	**156.05**	**63**	*e*P	**PKPdf**	**04 04 11.0**	**+1.9**
NBLV	**Livramento - P**	**156.13**	**230**	*e*P	**PKPdf**	**04 04 11.6**	**+2.3**
TULM	**Tulcn-Chalpat**	**156.15**	**107**	*e*P	**PKPdf**	**04 04 12.3**	**+2.3**
GCUF	**Volcan Galeras**	**156.73**	**106**	*e*P	**PKPdf**	**04 04 14.2**	**+3.5**
SDBA	**SAO DESIDERIO**	**157.07**	**206**	*e*P	**PKPdf**	**04 04 11.0**	**+0.5**
NBPA	**Parau_RN**	**157.29**	**233**	*e*P	**PKPdf**	**04 04 13.4**	**+2.7**
PTAC	**Punta Ardita,**	**157.44**	**91**	*e*P	**PKPdf**	**04 04 13.4**	**+2.5**
SOTA	**Rioblanco**	**157.71**	**105**	*e*P	**PKPdf**	**04 04 15.2**	**+3.2**
SOLC	**Bahia Solano**	**157.75**	**94**	*e*P	**PKPdf**	**04 04 10.8**	**-0.5**
PCON	**Cinco Dias**	**157.97**	**104**	*e*P	**PKPdf**	**04 04 14.6**	**+2.3**
VILB	**Vilhena**	**158.28**	**166**	*e*P	**PKPdf**	**04 04 13.3**	**+1.3**
YOTC	**Yotoco, Valle**	**158.43**	**100**	*e*P	**PKPdf**	**04 04 14.7**	**+2.4**
MARP	**Paez Belalcaza**	**158.53**	**103**	*e*P	**PKPdf**	**04 04 15.0**	**+2.3**
PLMC	**San Jos del P**	**158.67**	**98**	*e*P	**PKPdf**	**04 04 12.6**	**+0.1**
PTLC	**Puerto Leguiza**	**158.75**	**111**	*e*P	**PKPdf**	**04 04 15.4**	**+2.8**
GARC	**Garzon, Huila**	**158.79**	**106**	*e*P	**PKPdf**	**04 04 16.2**	**+3.3**
BETC	**Betania**	**158.98**	**104**	*e*P	**PKPab**	**04 04 52.6**	**+3.4**
CBOC	**Ciudad Bolivar**	**159.08**	**95**	*e*P	**PKPdf**	**04 04 14.0**	**+0.8**
NBPB	**Pedra_Branca-C**	**159.31**	**229**	*e*P	**PKPdf**	**04 04 16.0**	**+2.8**
HELC	**Santa Helena**	**159.60**	**95**	*e*P	**PKPdf**	**04 04 15.4**	**+1.4**
GUY2C	**Guyana, Caldas**	**159.62**	**97**	*e*P	**PKPdf**	**04 04 15.8**	**+1.6**
MOTC	**Monteria, Cord**	**159.63**	**87**	PKPdf	**PKPdf**	**04 04 12.8**	**-0.8**
MOTC	**Monteria, Cord**	**159.63**	**87**	*e*P	**PKPdf**	**04 04 10.6**	**-2.9**
UREC	**San Jos de Ur**	**159.74**	**90**	*e*P	**PKPdf**	**04 04 13.7**	**0.0**
SJCC	**San Jacinto, C**	**160.09**	**84**	*e*P	**PKPdf**	**04 04 15.4**	**+1.3**
PDRB	**Porto dos Gac**	**160.15**	**175**	*e*P	**PKPdf**	**04 04 14.8**	**+0.6**
NORC	**Norcasia**	**160.16**	**97**	*e*P	**PKPdf**	**04 04 15.0**	**+0.8**
MACC	**Macarena, Meta**	**160.34**	**107**	*e*P	**PKPdf**	**04 04 14.6**	**+0.2**
ZARC	**Zaragoza, Cauc**	**160.39**	**91**	*e*P	**PKPdf**	**04 04 16.1**	**+1.7**
ROSC	**El Rosal**	**160.58**	**99**	PKP	**PKPdf**	**04 04 15.2**	**+0.1**
	comp=Z,14nm,0.7s,baz=337,slow=3.3,SNR=7.7						
ROSC	**El Rosal**	**160.58**	**99**	*e*P	**PKPdf**	**04 04 17.8**	**+2.6**
TBTG	**Tabatinga, AM**	**160.69**	**129**	*e*P	**PKPdf**	**04 04 15.2**	**+0.4**
TBTG	**Tabatinga, AM**	**160.69**	**129**	*e*P	**PKPdf**	**04 04 14.8**	**0.0**
SMRC	**Santa Marta, M**	**160.92**	**80**	*e*P	**PKPdf**	**04 04 14.2**	**-0.8**
SPBC	**San Pablo de B**	**160.96**	**97**	*e*P	**PKPdf**	**04 04 14.2**	**-1.0**
ARGC	**Ariguani, Magd**	**161.01**	**84**	*e*P	**PKPdf**	**04 04 16.5**	**+1.4**
VILC	**Villavicencio,**	**161.03**	**102**	*e*P	**PKPdf**	**04 04 17.1**	**+1.8**
SAML	**Samuel**	**161.05**	**155**	*e*P	**PKPdf**	**04 04 16.6**	**+1.5**
SAML	**Samuel**	**161.05**	**155**	*e*P	**PKPdf**	**04 04 15.4**	**+0.3**
NBMO	**Morrinhos-CE**	**161.08**	**233**	*e*P	**PKPdf**	**04 04 18.3**	**+3.1**
CHIC	**Chingaza**	**161.11**	**100**	*e*P	**PKPdf**	**04 04 15.0**	**-0.8**
SMLC	**San Martn de**	**161.21**	**87**	*e*P	**PKPdf**	**04 04 15.2**	**-0.1**
SMTB	**Santa Maria do**	**161.39**	**204**	*e*P	**PKPdf**	**04 04 16.0**	**+0.5**
NBPS	**Pedro II - PI**	**161.45**	**228**	*e*P	**PKPdf**	**04 04 18.6**	**+2.9**
BRRC	**Barranca, Sant**	**161.49**	**92**	*e*P	**PKPdf**	**04 04 15.0**	**-0.6**
OCAC	**Ocana**	**161.95**	**89**	*e*P	**PKPdf**	**04 04 13.8**	**-2.4**
BARC	**Barichara**	**161.97**	**94**	*e*P	**PKPdf**	**04 04 17.5**	**+1.1**
RUSC	**La Rusia**	**161.97**	**96**	*e*P	**PKPdf**	**04 04 14.9**	**-1.8**
LL6C	**La Loma 6 Bece**	**161.97**	**84**	*e*P	**PKPdf**	**04 04 13.8**	**-2.3**
PAMC	**Pamplona, Colo**	**162.51**	**92**	*e*P	**PKPdf**	**04 04 15.0**	**-2.2**
PTGC	**Puerto Gaitan,**	**162.56**	**102**	*e*P	**PKPdf**	**04 04 14.6**	**-2.1**
URIC	**Uribia, Colomb**	**163.00**	**77**	*e*P	**PKPdf**	**04 04 15.6**	**-1.4**
SDV	**Santo Domingo**	**164.61**	**87**	*e*P	**PKPdf**	**04 04 19.0**	**+0.1**
PRPB	**Parauapebas**	**164.69**	**200**	*e*P	**PKPdf**	**04 04 19.0**	**+0.3**
NPGB	**Novo Progresso**	**164.75**	**179**	*e*P	**PKPdf**	**04 04 19.4**	**+0.6**
BAUV	**El Baul**	**167.16**	**86**	*e*P	**PKPdf**	**04 04 19.5**	**-1.2**
SMRT	**St. Maarten**	**167.57**	**38**	*e*P	**PKPdf**	**04 04 23.6**	**+2.8**
SEUS	**St. Eustatius**	**168.06**	**39**	*e*P	**PKPdf**	**04 04 28.4**	**+7.2**
ANWB	**Willy Bob**	**168.63**	**34**	*e*P	**PKPdf**	**04 04 22.6**	**+1.0**
ANBD	**Bethesda, Anti**	**169.13**	**36**	*e*P	**PKPdf**	**04 04 21.1**	**-0.8**
MALB	**Monte Alegre**	**169.88**	**185**	*e*P	**PKPdf**	**04 04 25.4**	**+3.0**
CBE	**Ff, Capester**	**169.99**	**39**	*e*P	**PKPdf**	**04 04 23.6**	**+1.1**
TDBA	**Terre de Bas,**	**170.13**	**40**	*e*P	**PKPdf**	**04 04 25.5**	**+3.0**
MAGL	**Barre de l'ile**	**170.28**	**38**	*e*P	**PKPdf**	**04 04 22.1**	**-0.5**
DSLB	**Salisbury**	**170.58**	**41**	*e*P	**PKPdf**	**04 04 23.1**	**+0.3**
MDN	**Morne-Daniel**	**170.68**	**41**	*e*P	**PKPdf**	**04 04 26.3**	**+3.5**
FDF	**Fort de France**	**171.27**	**42**	*e*P	**PKPdf**	**04 04 25.0**	**+1.8**
ILAM	**Ilet Lapin Mar**	**171.42**	**41**	*e*P	**PKPdf**	**04 04 25.2**	**+2.0**
BIM	**Bigot**	**171.48**	**43**	*e*P	**PKPdf**	**04 04 20.8**	**-2.4**
MPOM	**Morne Pois Mar**	**171.67**	**42**	*e*P	**PKPdf**	**04 04 19.2**	**-4.1**
SLBI	**Saint Lucia, B**	**171.89**	**45**	*e*P	**PKPdf**	**04 04 26.4**	**+3.0**
BOAV	**Boa Vista**	**172.01**	**137**	*e*P	**PKPdf**	**04 04 26.5**	**+2.9**
MCLT	**Moule a Chique**	**172.13**	**46**	*e*P	PKPdf	04 04 32.2	+8.6
SVB	**Belmont**	**172.18**	**50**	*e*P	**PKPdf**	**04 04 23.0**	**-0.6**
GRGR	**Grenville**	**172.49**	**59**	*e*P	**PKPdf**	**04 04 23.1**	**-0.6**
GRGR	**Grenville**	**172.49**	**59**	*e*P	**PKPdf**	**04 04 27.3**	**+3.6**
GCMP	**Grenada, Carri**	**172.50**	**56**	*e*P	**PKPdf**	**04 04 23.1**	**-0.6**
TRN	**Trinidad (W)**	**173.34**	**69**	*e*P	**PKPdf**	**04 04 27.4**	**+3.3**
TOSP	**Speyside**	**173.85**	**61**	*e*P	**PKPdf**	**04 04 26.5**	**+2.2**

IDC ***04*** *03:51:00.5±0.5, 8°.07S×124°.88E, h0*^{km}*, mb4.8/19,* *mb1 5.0/21, mb1mx4.7/46, mbtmp4.9/21, ML5.1/2 Error ellipse: s-maj=20.2km s-min=13.2km az=73.0*

*NEIC **04** 03:51:02.6±1.7, 8°.20S±0°.07×124°.86E±0°.07, h10^{km}±1^{km}, mb5.3/40, Error ellipse: s-maj=13.4km s-min=10.4km az=42.0*

ISC 04 03:51:03.7±0.3, **8°.26S**±0°.05×**124°.95E**±0°.05, **h24**^{km}, **n92**, σ**1^{s}72**/97, **mb5.1**/42, **Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**1.63**	**204**	Pn	**Pb**	**03 51 33.5**	**+0.4**
BATI	**Baumata**	**2.31**	**213**	Pn	**Pb**	**03 51 43.3**	**-1.4**
	445nm,0.3s,baz=48,slow=2.3,SNR=18						
BATI				Sn	**Sb**	**03 52 18.0**	**+5.2**
	376nm,0.3s,baz=278,slow=23,SNR=8.4						
MMRI	**Maumere**	**2.71**	**262**	Pn	**Pn**	**03 51 46.5**	**+0.8**
KAPI	**Kappang**	**6.09**	**302**	Sn	**Sn**	**03 53 41.1**	**-0.1**
	baz=240,slow=24,SNR=1.4						
MTN	**Manton Dam**	**7.59**	**127**	Pn	**Pn**	**03 52 55.3**	**+2.4**
KNRA	**Kununurra**	**8.26**	**154**	Pn	**Pn**	**03 53 03.8**	**+1.7**
FITZ	**Fitzroy Crossi**	**9.80**	**176**	Pn	**Pn**	**03 53 23.7**	**+0.5**
	14nm,0.3s,baz=352,slow=23,SNR=1.5						
FITZ				Sn	**Sn**	**03 55 09.4**	**-3.1**
	30nm,0.3s,baz=135,slow=4.5,SNR=11						
FITZ	**Fitzroy Crossi**	**9.80**	**176**	Pn	**Pn**	**03 53 23.9**	**+0.7**
UGM	**Wanagama**	**14.29**	**270**	Pn	**Pn**	**03 54 25.2**	**+0.5**
WB0	**Warramunga Arr**	**14.64**	**142**	Pn	**Pn**	**03 54 31.9**	**+2.4**
WRA	**Warramunga Arr**	**14.75**	**143**	Pn	**Pn**	**03 54 27.8**	**-3.1**
	8.6nm,0.3s,baz=319,slow=12,SNR=5.0						
WRA				Sn	**Sn**	**03 57 06.8**	**-6.8**
	12nm,0.3s,baz=322,slow=24,SNR=6.4						
AS31	**Alice Springs**	**17.56**	**152**	Pn	**P**	**03 55 07.4**	**-0.5**
ASAR	**Alice Springs**	**17.56**	**152**	P	**Pn**	**03 55 06.7**	**-0.3**
	9.9nm,0.3s,baz=329,slow=12,SNR=11						
ASAR				S	**Sn**	**03 58 14.8**	**-7.1**
	5.8nm,0.3s,baz=312,slow=20,SNR=8.0						
COEN	**Coen**	**18.75**	**109**	P	**Pn**	**03 55 21.8**	**+0.1**
XMIS	**Christmas Isla**	**19.17**	**262**		**Pn**	**03 55 25.4**	**-1.3**
XMIS				IAmb	IAmb	03 55 34.4	
	comp=Z,147nm,1.1s						
PMG	**Port Moresby**	**21.98**	**95**	P	**P**	**03 55 58.4**	**+2.3**
	comp=Z,38nm,0.8s,baz=64,slow=22,SNR=2.4						
FORT	**Forrest**	**22.59**	**173**	P	**P**	**03 56 02.5**	**0.0**
PSI	**Prapat**	**28.19**	**292**	P	**P**	**03 56 54.0**	**-0.9**
	comp=Z,26nm,0.8s,baz=133,slow=5.1,SNR=12						
CM31	**Chiang Mai Arr**	**36.93**	**316**	P	**P**	**03 58 09.3**	**-1.7**
CM31				IAmb	IAmb	03 58 12.8	
	comp=Z,70nm,1.1s						
CMAR	**Chiang Mai Arr**	**36.93**	**316**	P	**P**	**03 58 11.0**	**0.0**
	comp=Z,25nm,0.9s,baz=142,slow=6.6,SNR=24						
CMAR	**Chiang Mai Arr**	**36.93**	**316**	P	**P**	**03 58 10.5**	**-0.5**
CHTO	**Chiang Mai**	**37.17**	**317**	P	**P**	**03 58 12.8**	**-0.3**
CHTO				IAmb	IAmb	03 58 14.8	
	comp=Z,69nm,1.1s						
ENH	**Enshi**	**41.09**	**339**	P	**P**	**03 58 45.3**	**-0.5**
ENH				IAmb	IAmb	03 58 55.7	
	comp=Z,52nm,1.3s						
SANVU	**Saraoutou**	**41.91**	**104**	P	**P**	**03 58 53.9**	**+1.2**
DZM	**Mont Dzumac**	**42.18**	**114**	P	**P**	**03 58 57.1**	**+2.1**
	comp=Z,33nm,1.0s,baz=306,slow=5.9,SNR=7.8						
DZM	**Mont Dzumac**	**42.18**	**114**	P	**P**	**03 58 56.6**	**+1.6**
DZM				IAmb	IAmb	03 59 02.3	
	comp=Z,71nm,1.2s						
ONTNC	**Ouen Toro**	**42.24**	**114**	P	**P**	**03 58 56.7**	**+1.4**
JMN	**Monobe**	**42.61**	**11**	P	**P**	**03 58 59.2**	**+1.0**
JHS	**Saijyo**	**43.71**	**10**	P	**P**	**03 59 07.0**	**0.0**
JWT	**Wachi**	**44.42**	**12**	P	**P**	**03 59 13.8**	**+1.2**
KSRS	**Korea Array**	**45.56**	**3**	P	**P**	**03 59 20.0**	**-1.7**
	comp=Z,1.9nm,0.8s,baz=188,slow=6.1,SNR=2.5						
MJAR	**Matsushiro Arr**	**46.28**	**15**	P	**P**	**03 59 26.2**	**-1.2**
	comp=Z,16nm,0.9s,baz=184,slow=8.6,SNR=14						
SHL	**Shillong**	**46.54**	**317**	P	**P**	**03 59 29.0**	**-0.8**
SHL				IAmb	IAmb	03 59 29.9	
	comp=Z,39nm,1.0s						
JSD	**Sado**	**47.71**	**14**	P	**P**	**03 59 39.1**	**+0.6**
JSD				IAmb	IAmb	03 59 40.9	
	comp=Z,52nm,1.3s						
JMM	**Marumori**	**48.22**	**17**	P	**P**	**03 59 43.1**	**+0.7**
LSA	**Lhasa**	**49.82**	**321**	P	**P**	**03 59 54.8**	**-0.6**
ODAN	**Odare**	**50.45**	**315**	*e*P	**P**	**03 59 59.3**	**-0.7**
	comp=Z,121nm,1.4s						
TAPN	**Taplejung**	**50.53**	**316**	*e*P	**P**	**04 00 00.3**	**-0.4**
	comp=Z,193nm,1.2s						
JTM	**Tenmabayashi**	**51.02**	**16**	P	**P**	**04 00 04.6**	**+0.9**
JTM				IAmb	IAmb	04 00 05.7	
	comp=Z,54nm,1.0s						
RAMN	**Ramite**	**51.06**	**315**	*e*P	**P**	**04 00 04.6**	**0.0**
	comp=Z,38nm,0.7s						
JIRN	**Jiri**	**51.78**	**315**	*e*P	**P**	**04 00 09.6**	**-0.6**
GUN	**Gumba**	**52.15**	**315**	*e*P	**P**	**04 00 12.4**	**-0.5**
	comp=Z,96nm,1.0s						
PKI	**Pulchoki**	**52.28**	**314**	*e*P	**P**	**04 00 13.0**	**-0.8**
KKN	**Kakani**	**52.50**	**315**	*e*P	**P**	**04 00 14.7**	**-0.7**
	comp=Z,47nm,0.9s						
DMN	**Daman**	**52.52**	**314**	*e*P	**P**	**04 00 14.3**	**-1.2**
	comp=Z,44nm,0.9s						
USA0B	**Ussuriysk Arra**	**52.60**	**6**	P	**P**	**04 00 16.0**	**+0.5**
USRK	**Ussuriysk Ar.**	**52.60**	**6**	P	**P**	**04 00 14.7**	**-0.8**
	comp=Z,7.5nm,0.6s,baz=192,slow=7.4,SNR=9.7						
USRK	**Ussuriysk Ar.**	**52.60**	**6**	P	**P**	**04 00 16.2**	**+0.7**
MDJ	**Mudanjiang**	**52.80**	**4**	P	**P**	**04 00 17.2**	**+0.3**
MDJ				IAmb	IAmb	04 00 18.7	
	comp=Z,37nm,1.0s						
GKN	**Gorkha**	**53.08**	**314**	*e*P	**P**	**04 00 19.0**	**-0.6**
	comp=Z,45nm,0.9s						
LBZ	**Lake Benmore**	**53.18**	**141**	P	**P**	**04 00 21.9**	**+2.0**
LBZ				IAmb	IAmb	04 00 28.9	
	comp=Z,29nm,1.2s						
RPZ	**Rata Peaks**	**53.42**	**139**	P	**P**	**04 00 22.6**	**+0.9**
RPZ				IAmb	IAmb	04 00 28.4	
	comp=Z,49nm,1.0s						
DANN	**Dangsing**	**53.91**	**314**	*e*P	**P**	**04 00 24.8**	**-1.0**
	comp=Z,59nm,0.8s						
SONM	**Songino Array**	**58.22**	**345**	P	**P**	**04 00 55.5**	**-0.6**
	comp=Z,5.6nm,0.9s,baz=162,slow=5.7,SNR=5.4						
SONM	**Songino Array**	**58.22**	**345**	P	**P**	**04 00 56.2**	**+0.2**
SONM				IAmb	IAmb	04 00 58.0	
	comp=Z,24nm,1.5s						
CASY	**Casey**	**58.78**	**187**	P	**P**	**04 00 58.7**	**-0.8**
CASY				IAmb	IAmb	04 01 01.9	
	comp=Z,25nm,1.1s						
MK31	**Makanchi Array**	**66.65**	**330**	P	**P**	**04 01 52.5**	**+0.1**
MK31				IAmb	IAmb	04 01 53.1	
	comp=Z,34nm,1.1s						
MKAR	**Makanchi Array**	**66.65**	**330**	P	**P**	**04 01 51.7**	**-0.7**
	comp=Z,28nm,0.9s,baz=132,slow=8.0,SNR=18						
MKAR	**Makanchi Array**	**66.65**	**330**	P	**P**	**04 01 52.3**	**-0.1**
MAKZ	**Makanchi**	**66.82**	**329**	P	**P**	**04 01 52.3**	**-1.1**
MAKZ				IAmb	IAmb	04 01 53.5	
	comp=Z,26nm,1.1s						
KBL	**Kabul**	**67.83**	**312**	P	**P**	**04 01 59.7**	**-0.6**
KBL				IAmb	IAmb	04 02 02.4	
	comp=Z,20nm,1.0s						
AAK	**Ala-Archa**	**68.37**	**322**	P	**P**	**04 02 03.8**	**+0.3**
	comp=Z,8.4nm,0.8s,baz=296,slow=1.6,SNR=5.2						
AAK	**Ala-Archa**	**68.37**	**322**	P	**P**	**04 02 03.0**	**-0.5**
AAK				IAmb	IAmb	04 02 04.6	
	comp=Z,16nm,1.1s						
ZAA0	**Zalesovo Array**	**70.60**	**336**	P	**P**	**04 02 16.0**	**-0.9**
ZALV	**Zalesovo Beam**	**70.60**	**336**	P	**P**	**04 02 15.6**	**-1.2**
	comp=Z,20nm,0.8s,baz=126,slow=4.9,SNR=18						
KURBB	**Kurchatov Arra**	**71.06**	**331**	P	**P**	**04 02 19.1**	**-0.6**
	comp=Z,21nm,1.0s,baz=133,slow=5.0,SNR=16						
KURK	**Kurchatov**	**71.08**	**331**	P	**P**	**04 02 18.3**	**-1.5**
VNDA	**Vanda**	**71.85**	**172**	P	**P**	**04 02 26.0**	**+1.9**
	comp=Z,5.5nm,0.7s,baz=320,slow=7.2,SNR=12						
VNDA	**Vanda**	**71.85**	**172**	P	**P**	**04 02 25.5**	**+1.4**
MAW	**Mawson**	**71.97**	**201**	P	**P**	**04 02 26.8**	**+1.9**
	comp=Z,11nm,0.7s,baz=68,slow=6.5,SNR=17						
MAW	**Mawson**	**71.97**	**201**	P	**P**	**04 02 24.8**	**-0.1**
VOI	**Vohitsoka**	**76.02**	**249**	P	**P**	**04 02 48.5**	**-1.2**
VOI				IAmb	IAmb	04 02 56.0	
	comp=Z,37nm,1.5s						
BVAR	**Borovoye Array**	**76.53**	**330**	P	**P**	**04 02 51.2**	**-0.5**
	comp=Z,5.7nm,1.0s,baz=168,slow=18,SNR=4.1						
GEYT	**Alibeck**	**77.26**	**312**	P	**P**	**04 02 56.3**	**0.0**
	comp=Z,2.6nm,0.5s,baz=120,slow=5.7,SNR=2.3						
TIXI	**Tiksi**	**79.78**	**1**	P	**P**	**04 03 08.9**	**-0.4**
ABKAR	**Akbulak array**	**80.44**	**323**	P	**P**	**04 03 11.8**	**-1.6**
QSPA	**South Pole Qui**	**81.72**	**180**	P	**P**	**04 03 21.3**	**+1.2**
AKTO	**Aktyubinsk**	**82.05**	**324**	P	**P**	**04 03 21.6**	**-0.3**
	comp=Z,12nm,0.9s,baz=96,slow=4.0,SNR=6.8						
KIBK	**Kibwezi**	**86.61**	**268**	P	**P**	**04 03 44.5**	**-1.5**
KIBK				IAmb	IAmb	04 03 47.4	
	comp=Z,17nm,1.4s						
KMBO	**Kilima Mbogo**	**87.56**	**269**	P	**P**	**04 03 50.0**	**-0.8**
	comp=Z,4.6nm,1.0s,baz=51,slow=6.1,SNR=5.3						
KMBO	**Kilima Mbogo**	**87.56**	**269**	P	**P**	**04 03 49.3**	**-1.5**
KBZ	**Khabaz**	**89.95**	**314**	P	**P**	**04 04 00.6**	**-0.5**
	comp=Z,5.7nm,1.0s,baz=195,slow=7.5,SNR=3.6						
SNAA	**Sanae**	**93.23**	**195**	P	**P**	**04 04 15.8**	**-0.1**
AKASG	**Malin Array Be**	**99.96**	**320**	PP	**PP**	**04 08 55.5**	**+3.6**
	comp=Z,0.3nm,0.3s,baz=70,slow=8.4,SNR=6.5						
TORD	**Torodi Ar. Bea**	**124.12**	**280**	PKP	**PKPdf**	**04 09 59.9**	**-1.4**
	comp=Z,0.7nm,0.8s,baz=11,slow=1.5,SNR=1.2						
TORD				PKKPbc	**PKKPbc**	**04 19 50.3**	**+4.4**
	comp=Z,1.1nm,1.1s,baz=328,slow=1.9,SNR=3.5						
PB14	**IPOC Station P**	**144.04**	**156**		**PKPdf**	**04 10 37.5**	**-1.1**
CPUP	**Villa Florida**	**145.54**	**176**	PKPbc	**PKPab**	**04 10 41.9**	**+0.9**
	comp=Z,17nm,1.0s,baz=192,slow=2.1,SNR=5.5						
CPUP	**Villa Florida**	**145.54**	**176**		**PKPdf**	**04 10 39.5**	**-1.2**
PB01	**IPOC Station P**	**147.61**	**154**		**PKPdf**	**04 10 42.5**	**-1.9**
PB08	**IPOC Station P**	**148.55**	**154**		**PKPdf**	**04 10 45.1**	**-1.3**
PB11	**IPOC Station P**	**148.66**	**153**	PKPbc	**PKPbc**	**04 10 48.9**	**-1.1**
LPAZ	**La Paz**	**152.38**	**152**	PKPbc	**PKiKP**	**04 10 59.8**	**0.0**
	comp=Z,5.4nm,0.8s,baz=252,slow=2.0,SNR=6.1						

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*OSPL **04** 03:54:51.6±0.9, 19°.15N×64°.32W, h0^{km}±150^{km}, ML3.0*

*NEIC **04** 03:54:54.3±1.4, 19°.28N±0°.10×64°.44W±0°.09, h37^{km}±54^{km}, Error ellipse: s-maj=15.2km s-min=11.1km az=207.0*

*RSPR **04** 03:54:54.9, 19°.16N×64°.38W, h61^{km}±6^{km}, MD3.7/13*

ISC 04 03:54:56.5±3.1, **19°.2N**±0°.1×**64°.5W**±0°.1, **h42**^{km}, **n51**, σ**1^{s}02**/54, **13C-2D**, **Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TBVI	**Tortola**	**0.78**	**186**	⇑*e*P	**Pn**	**03 55 09.4**	**-1.7**
TBVI	**Tortola**	**0.78**	**186**	*e*S	**Sn**	**03 55 21.1**	**-0.5**
STVI	**Saint Thomas**	**0.93**	**205**	⇑*e*P	**Pn**	**03 55 11.6**	**-1.5**
STVI	**Saint Thomas**	**0.93**	**205**	*e*S	**Sn**	**03 55 24.7**	**-0.5**
STVI	**Saint Thomas**	**0.93**	**205**		**Pn**	**03 55 11.6**	**-1.5**
STVI					**Sn**	**03 55 24.7**	**-0.5**
STVI	**Saint Thomas**	**0.93**	**205**	IAML		03 55 28.2	
	comp=N,283nm,0.2s						
CUPR	**Culebra, Puert**	**1.13**	**219**	⇑*e*P	**Pn**	**03 55 14.8**	**-1.1**
CUPR	**Culebra, Puert**	**1.13**	**219**	*e*S	**Sn**	**03 55 30.3**	**+0.1**
CUPR	**Culebra, Puert**	**1.13**	**219**		**Pn**	**03 55 14.8**	**-1.1**
CUPR					**Sn**	**03 55 30.3**	**+0.1**
CDVI	**St. Croix**	**1.45**	**189**	⇑*e*P	**Pn**	**03 55 21.1**	**+0.8**
CDVI	**St. Croix**	**1.45**	**189**	*e*S	**Sn**	**03 55 40.5**	**+2.3**
CDVI	**St. Croix**	**1.45**	**189**		**Pn**	**03 55 21.1**	**+0.8**
CDVI					**Sn**	**03 55 40.5**	**+2.3**
MTP	**Monte Pirata**	**1.46**	**222**	⇑*e*P	**Pn**	**03 55 19.5**	**-0.9**
MTP	**Monte Pirata**	**1.46**	**222**	*e*S	**Sn**	**03 55 38.1**	**-0.1**
MTP	**Monte Pirata**	**1.46**	**222**		**Pn**	**03 55 19.5**	**-0.9**
MTP					**Sn**	**03 55 38.1**	**-0.1**
MTP	**Monte Pirata**	**1.46**	**222**	IAML		03 55 40.6	
	comp=E,166nm,0.2s						
MTP				IAML		03 55 44.3	
	comp=N,183nm,0.2s						
CBYP	**Canovanas**	**1.55**	**234**	⇑*e*P	**Pn**	**03 55 20.6**	**-1.1**
CBYP	**Canovanas**	**1.55**	**234**	*e*S	**Sn**	**03 55 41.6**	**+0.9**
CBYP	**Canovanas**	**1.55**	**234**		**Pn**	**03 55 20.6**	**-1.1**
CBYP					**Sn**	**03 55 41.6**	**+0.9**
HUMP	**Col San Antoni**	**1.63**	**230**	⇑*e*P	**Pn**	**03 55 21.9**	**-0.8**
HUMP	**Col San Antoni**	**1.63**	**230**	*e*S	**Sn**	**03 55 42.7**	**+0.3**
HUMP	**Col San Antoni**	**1.63**	**230**		**Pn**	**03 55 21.9**	**-0.8**
HUMP					**Sn**	**03 55 42.7**	**+0.3**
HUMP	**Col San Antoni**	**1.63**	**230**	IAML		03 55 48.8	
	comp=N,110nm,0.2s						
GCPR	**Guaynabo City**	**1.71**	**239**	⇑*e*P	**Pn**	**03 55 22.4**	**-1.5**
GCPR	**Guaynabo City**	**1.71**	**239**	*e*S	**Sn**	**03 55 45.8**	**+1.3**
GCPR	**Guaynabo City**	**1.71**	**239**		**Pn**	**03 55 22.4**	**-1.5**
GCPR					**Sn**	**03 55 45.8**	**+1.3**
PDPR	**Patillas Dam,**	**1.83**	**230**		**Pn**	**03 55 25.0**	**-0.5**
PDPR				IAML		03 55 56.2	
	comp=E,100nm,1.4s						
SJG	**San Juan**	**1.87**	**235**		**Pn**	**03 55 25.2**	**-0.9**
SJG				IAML		03 55 58.4	
	comp=E,68nm,0.3s						
IGPR	**InterUniversit**	**1.93**	**231**	⇑*e*P	**Pn**	**03 55 26.8**	**0.0**
IGPR	**InterUniversit**	**1.93**	**231**	*e*S	**Sn**	**03 55 50.2**	**+0.3**
EMPR	**Esperanza - Ma**	**2.02**	**250**	⇓*e*P	**Pn**	**03 55 27.4**	**-0.7**
EMPR	**Esperanza - Ma**	**2.02**	**250**	*e*S	**Sn**	**03 55 53.4**	**+1.4**
EMPR	**Esperanza - Ma**	**2.02**	**250**		**Pn**	**03 55 27.4**	**-0.7**
EMPR					**Sn**	**03 55 53.4**	**+1.4**
EMPR	**Esperanza - Ma**	**2.02**	**250**	IAML		03 56 02.1	
	comp=E,168nm,1.1s						
EMPR				IAML		03 56 02.5	
	comp=N,111nm,1.0s						
CELP	**Cerrillos**	**2.23**	**240**	⇓*e*P	**Pn**	**03 55 30.7**	**-0.4**
CELP	**Cerrillos**	**2.23**	**240**		**Pn**	**03 55 30.7**	**-0.4**
AOPR	**Arecibo Observ**	**2.26**	**248**	⇑*e*P	**Pn**	**03 55 30.9**	**-0.6**
AOPR	**Arecibo Observ**	**2.26**	**248**	*e*S	**Sn**	**03 55 59.4**	**+1.2**
AOPR	**Arecibo Observ**	**2.26**	**248**		**Pn**	**03 55 30.9**	**-0.6**
AOPR					**Sn**	**03 55 59.4**	**+1.2**
AOPR	**Arecibo Observ**	**2.26**	**248**	IAML		03 56 09.7	
	comp=N,141nm,0.4s						
OBIP	**Obispado Ponce**	**2.27**	**240**		**Pn**	**03 55 30.9**	**-0.7**
AGPR	**Aguadilla, PR**	**2.54**	**254**	⇑*e*P	**Pn**	**03 55 34.4**	**-0.9**
AGPR	**Aguadilla, PR**	**2.54**	**254**		**Pn**	**03 55 34.4**	**-0.9**
AGPR	**Aguadilla, PR**	**2.54**	**254**	IAML		03 56 19.1	
	comp=E,92nm,2.3s						
AGPR				IAML		03 57 09.8	
	comp=N,78nm,2.0s						
AGPR	**Aguadilla, PR**	**2.54**	**254**	*i* P	**Pn**	**03 55 34.3**	**-1.0**
AGPR				IAML		03 56 13.9	
	comp=Z,64nm,1.7s						
LSP	**Las Mesas**	**2.62**	**248**	⇑*e*P	**Pn**	**03 55 36.1**	**-0.3**
CRPR	**Cabo Rojo, PR**	**2.71**	**245**	⇑*e*P	**Pn**	**03 55 37.4**	**-0.2**
CRPR	**Cabo Rojo, PR**	**2.71**	**245**		**Pn**	**03 55 37.4**	**-0.2**
CRPR	**Cabo Rojo, PR**	**2.71**	**245**	IAML		03 56 27.3	
	comp=E,50nm,1.8s						
CRPR				IAML		03 56 30.7	
	comp=N,45nm,1.8s						
CRPR	**Cabo Rojo, PR**	**2.71**	**245**	*i* P	**Pn**	**03 55 37.3**	**-0.3**
CRPR				*e*S	**Sn**	**03 56 10.5**	**+1.4**
CRPR				IAML		03 56 34.9	
	comp=Z,44nm,2.2s						
SDDR	**Presa de Saban**	**6.39**	**269**	*i* P	**Pn**	**03 56 27.6**	**-0.6**
SDDR				IAML		03 57 41.4	
	comp=Z,8.4nm,1.4s						

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*IDC **04** 03:59:24.8±0.8, 8°.22S×125°.09E, h0^{km}, mb3.8/3, mb1 4.1/5, mb1mx3.8/36, mbtmp4.0/5, ML3.9/2, Error ellipse: s-maj=54.2km s-min=11.3km az=68.0*

ISC 04 03:59:28.0±1.3, **8°.1S**±0°.2×**125°.7E**±0°.3, **h26**^{km}, **n6**, σ**2^{s}01**/6, **mb3.8**/3, **Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**9.90**	**180**	Pn	**Pn**	**04 01 47.5**	**-1.3**
	0.8nm,0.3s,baz=15,slow=8.4,SNR=1.9						
WRA	**Warramunga Arr**	**14.43**	**145**	Pn	**Pn**	**04 02 49.3**	**-1.4**
	0.4nm,0.3s,baz=318,slow=13,SNR=1.5						
ASAR	**Alice Springs**	**17.34**	**154**	P	**P**	**04 03 30.6**	**+1.0**
	0.5nm,0.3s,baz=321,slow=11,SNR=5.1						
MKAR	**Makanchi Array**	**66.91**	**329**	P	**P**	**04 10 16.2**	**-1.9**
	0.7nm,0.7s,baz=135,slow=7.2,SNR=4.1						
KURBB	**Kurchatov Arra**	**71.30**	**330**	P	**P**	**04 10 46.0**	**+0.8**
	0.3nm,0.5s,baz=141,slow=6.0,SNR=4.2						
VNDA	**Vanda**	**71.88**	**172**	P	**P**	**04 10 50.2**	**+1.9**
	0.9nm,0.9s,baz=314,slow=5.0,SNR=3.0						

IDC 04 04:05:54.6±2.1, **8°.21S**×**125°.43E**, **h0**^{km}, **mb3.6**/1, **mb1 3.8**/4, **mb1mx3.5**/38, **mbtmp3.6**/4, **ML3.5**/3, **Error ellipse: s-maj=52.8km s-min=32.3km az=72.0**, **Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**2.64**	**221**	Pn	Pn	04 06 39.0	+0.4
	5.8nm,0.3s,baz=87,slow=12,SNR=2.0						
WRA	**Warramunga Arr**	**14.50**	**144**	Pn	Pn	04 09 20.7	-0.7
	0.3nm,0.3s,baz=316,slow=14,SNR=5.6						
ASAR	**Alice Springs**	**17.38**	**153**	P	Pn	04 09 59.0	+0.1
	0.2nm,0.3s,baz=328,slow=11,SNR=4.9						
MKAR	**Makanchi Array**	**66.85**	**329**	P	P	04 16 48.4	-0.1
	0.5nm,0.8s,baz=125,slow=7.2,SNR=2.0						

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*IDC **04** 04:06:26.0±0.7, 8°.12S×124°.94E, h0^{km}, mb4.1/9, mb1 4.2/11, mb1mx4.0/40, mbtmp4.1/11, ML3.9/2, Error ellipse: s-maj=33.1km s-min=15.5km az=72.0*

ISC 04 04:06:29.2±0.6, **8°.33S**±0°.06×**125°.04E**±0°.07, **h24**^{km}, **n19**, σ**2^{s}46**/22, **mb4.2**/9, **Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**2.31**	**216**	Pn	**Pb**	**04 07 07.7**	**-2.6**
	19nm,0.3s,baz=27,slow=3.2,SNR=9.7						
BATI				Sn	**Sb**	**04 07 40.8**	**+2.4**
	24nm,0.3s,baz=329,slow=22,SNR=4.6						
KAPI	**Kappang**	**6.20**	**302**	Sn	**Sn**	**04 09 05.9**	**-3.6**
	0.4nm,0.3s,baz=234,slow=22,SNR=1.6						
PLAI	**Plampang**	**7.20**	**266**	P	**Pn**	**04 08 16.2**	**+3.1**
KNRA	**Kununurra**	**8.16**	**154**	P	**Pn**	**04 08 27.1**	**+0.9**
	50nm,1.5s						
FITZ	**Fitzroy Crossi**	**9.73**	**177**	Pn	**Pn**	**04 08 48.1**	**+0.4**
	1.0nm,0.3s,baz=6.0,slow=7.0,SNR=3.1						
FITZ				Sn	**Sn**	**04 10 32.8**	**-3.5**
	3.3nm,0.3s,baz=110,slow=5.7,SNR=9.9						
WRA	**Warramunga Arr**	**14.64**	**143**	Pn	**Pn**	**04 09 52.4**	**-2.6**
	1.5nm,0.3s,baz=318,slow=13,SNR=11						
ASAR	**Alice Springs**	**17.46**	**152**	P	**Pn**	**04 10 30.1**	**-1.1**
	1.4nm,0.3s,baz=320,slow=10,SNR=15						
ASAR				S	**Sn**	**04 13 40.3**	**-4.7**
	0.6nm,0.3s,baz=313,slow=18,SNR=5.6						
CTA	**Charters Tower**	**23.62**	**122**	P	**P**	**04 11 40.6**	**+2.0**
	1.0nm,0.3s,baz=315,slow=9.5,SNR=4.1						
STKA	**Stephens Creek**	**28.04**	**149**	P	**P**	**04 12 21.1**	**+2.4**
	2.0nm,0.6s,baz=316,slow=9.4,SNR=4.5						
CMAR	**Chiang Mai Arr**	**37.04**	**316**	P	**P**	**04 13 36.0**	**-1.5**
	1.2nm,0.3s,baz=145,slow=6.7,SNR=6.4						
MJAR	**Matsushiro Arr**	**46.31**	**15**	P	**P**	**04 14 52.2**	**-1.0**
	2.3nm,0.8s,baz=173,slow=15,SNR=1.8						
SONM	**Songino Array**	**58.30**	**345**	P	**P**	**04 16 22.1**	**-0.1**
	0.5nm,0.5s,baz=153,slow=7.7,SNR=2.9						
MKAR	**Makanchi Array**	**66.75**	**329**	P	**P**	**04 17 17.6**	**-1.0**
	1.2nm,0.6s,baz=138,slow=7.5,SNR=7.1						
ZALV	**Zalesovo Beam**	**70.70**	**336**	P	**P**	**04 17 40.8**	**-2.2**
	1.1nm,0.6s,baz=74,slow=2.2,SNR=4.8						
VNDA	**Vanda**	**71.77**	**172**	P	**P**	**04 17 51.1**	**+2.0**
	0.6nm,0.5s,baz=316,slow=6.6,SNR=12						
QSPA	**South Pole Qui**	**81.66**	**180**	P	**P**	**04 18 46.7**	**+1.4**
	2.8nm,0.6s,baz=261,slow=2.5,SNR=6.7						
TORD	**Torodi Ar. Bea**	**124.22**	**280**	PKP	**PKiKP**	**04 25 28.0**	**+0.7**
	0.5nm,1.1s,baz=88,slow=1.9,SNR=2.1						
LPAZ	**La Paz**	**152.28**	**152**	PKPbc	**PKiKP**	**04 26 27.9**	**+2.8**
	0.9nm,0.9s,baz=207,slow=2.3,SNR=2.4						
SIV	**San Ignacio**	**155.09**	**166**	PKPab	**PKPab**	**04 26 47.3**	**+1.7**
	1.0nm,0.7s,baz=152,slow=7.4,SNR=5.3						

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*IDC **04** 04:08:33.1±0.7, 8°.02S×124°.87E, h0^{km}, mb4.1/8, mb1 4.2/9, mb1mx3.9/41, mbtmp4.1/9, ML3.8/1, MS5.5/1, Ms1 5.5/1, ms1mx4.6/43, Error ellipse: s-maj=34.6km s-min=17.4km az=85.0*

ISC 04 04:08:36.2±0.7, **8°.29S**±0°.07×**125°.1E**±0°.1, **h24**^{km}, **n16**, σ**2^{s}20**/18, **mb4.1**/8, **Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**2.39**	**217**	Pn	**Pb**	**04 09 16.4**	**-2.1**
	23nm,0.3s,baz=239,slow=2.2,SNR=2.5						
BATI				Sn	**Sb**	**04 09 50.7**	**+3.1**
	14nm,0.3s,baz=332,slow=23,SNR=5.9						
FITZ	**Fitzroy Crossi**	**9.76**	**177**	Sn	**Sn**	**04 12 40.4**	**-3.7**
	0.7nm,0.3s,baz=203,slow=6.8,SNR=3.9						
WRA	**Warramunga Arr**	**14.62**	**143**	Pn	**Pn**	**04 12 00.7**	**-1.1**
	0.8nm,0.3s,baz=317,slow=13,SNR=12						
ASAR	**Alice Springs**	**17.45**	**152**	P	**P**	**04 12 39.5**	**+0.3**
	0.2nm,0.3s,baz=316,slow=10,SNR=3.5						
ASAR				S	**Sn**	**04 15 49.5**	**-2.4**
	baz=319,slow=20,SNR=4.4						
CTA	**Charters Tower**	**23.57**	**122**	P	**P**	**04 13 49.5**	**+4.3**
	5.7nm,0.8s,baz=286,slow=12,SNR=6.3						
JOW	**Kunigami**	**35.05**	**5**	LR	LR	04 29 56.2	
	comp=Z,9μm,21.6s,baz=248,slow=37						
MJAR	**Matsushiro Arr**	**46.26**	**15**	P	**P**	**04 16 58.7**	**-1.1**
	2.4nm,0.7s,baz=180,slow=11,SNR=4.7						
KLR	**Kul'dur**	**57.57**	**5**	P	**P**	**04 18 22.4**	**-1.5**
	0.8nm,0.4s,baz=236,slow=3.6,SNR=3.9						
MKAR	**Makanchi Array**	**66.76**	**329**	P	**P**	**04 19 24.5**	**-1.1**
	1.0nm,0.5s,baz=124,slow=8.7,SNR=8.5						
ZALV	**Zalesovo Beam**	**70.69**	**336**	P	**P**	**04 19 48.2**	**-1.7**
	1.1nm,0.5s,baz=107,slow=5.0,SNR=5.0						
VNDA	**Vanda**	**71.80**	**172**	P	**P**	**04 19 58.5**	**+2.2**
	0.6nm,0.6s,baz=319,slow=8.4,SNR=5.7						
MAW	**Mawson**	**72.01**	**201**	P	**P**	**04 19 58.8**	**+1.1**
	0.5nm,0.3s,baz=80,slow=11,SNR=4.2						
SEY	**Seymchan**	**74.03**	**13**	P	**P**	**04 20 09.8**	**+0.1**
	1.2nm,0.7s,baz=197,slow=19,SNR=1.9						
CPUP	**Villa Florida**	**145.50**	**176**	PKPbc	**PKPab**	**04 28 14.1**	**+0.7**
	1.5nm,0.6s,baz=202,slow=1.8,SNR=3.8						
LPAZ	**La Paz**	**152.28**	**152**	PKPbc	**PKiKP**	**04 28 32.8**	**+0.6**
	0.5nm,0.8s,baz=63,slow=2.3,SNR=1.6						
LPAZ				PKPab	**sPKPbc**	**04 28 44.2**	**+1.6**
	2.6nm,0.9s,baz=172,slow=5.9,SNR=8.4						
SIV	**San Ignacio**	**155.11**	**166**	PKPab	**PKPab**	**04 28 54.0**	**+1.3**
	1.9nm,0.6s,baz=154,slow=2.8,SNR=11						

IDC 04 04:09:47.3±25.0, **12°.43S**×**169°.92E**, **h402**^{km}±219^{km}, **mb3.4**/3, **mb1 3.7**/3, **mb1mx3.0**/48, **mbtmp4.2**/3, **Error ellipse: s-maj=302.1km s-min=61.5km az=132.0**, **Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**34.92**	**253**	P	P	04 16 02.8	-0.5
	1.7nm,0.4s,baz=86,slow=8.7,SNR=2.6						
ASAR	**Alice Springs**	**35.92**	**247**	P	P	04 16 11.8	+0.1
	3.5nm,0.6s,baz=75,slow=9.8,SNR=6.2						
ILAR	**Eielson Array**	**83.57**	**17**	P	P	04 21 31.2	0.0
	0.8nm,0.9s,baz=236,slow=5.7,SNR=5.0						
ARCES	**ARCESS Array B**	**118.66**	**347**	PKP	PKPdf	04 27 47.4	-0.3
	6.8nm,1.0s,baz=46,slow=2.6,SNR=19						

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*IDC **04** 04:18:46.0±1.2, 8°.03S×124°.93E, h0^{km}, mb3.8/3, mb1 3.9/4, mb1mx3.6/43, mbtmp3.9/4, ML3.7/1, Error ellipse: s-maj=42.1km s-min=29.8km az=65.0*

*NEIC **04** 04:19:00.4±0.9, 9°.7S±0°.1×124°.6E±0°.1, h43^{km}±5^{km}, mb4.4/4, Error ellipse: s-maj=19.4km s-min=14.7km az=54.0*

ISC 04 04:18:52.0±1.3, **8°.7S**±0°.1×**124°.95E**±0°.09, **h24**^{km}, **n19**, σ**1^{s}68**/21, **mb4.0**/5, **Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**1.99**	**220**	Pn	**Pb**	**04 19 28.2**	**+0.7**
	15nm,0.3s,baz=167,slow=19,SNR=4.8						
BATI				Sn	Sb	04 20 03.4	+12
	19nm,0.3s,baz=152,slow=23,SNR=7.4						
MTN	**Manton Dam**	**7.36**	**125**	Pn	**Pn**	**04 20 41.7**	**+3.7**
MTN				Sn	**Sn**	**04 22 02.6**	**+1.8**
FITZ	**Fitzroy Crossi**	**9.40**	**176**	Pn	**Pn**	**04 21 08.4**	**+2.3**
	0.7nm,0.3s,baz=350,slow=13,SNR=2.7						
FITZ				Sn	**Sn**	**04 22 52.8**	**+1.8**
	1.3nm,0.3s,baz=289,slow=4.0,SNR=6.1						
FITZ	**Fitzroy Crossi**	**9.40**	**176**		Pn	04 20 59.1	-7.0
WRA	**Warramunga Arr**	**14.43**	**142**	Pn	**Pn**	**04 22 13.4**	**-1.5**
	0.6nm,0.3s,baz=318,slow=13,SNR=12						
WRA				Sn	**Sn**	**04 24 52.1**	**-2.1**
	0.4nm,0.3s,baz=313,slow=24,SNR=4.9						
WRAB	**Tennant Creek**	**14.43**	**142**		**Pn**	**04 22 13.8**	**-1.1**
WB2	**Warramunga Arr**	**14.43**	**142**		**Pn**	**04 22 13.6**	**-1.4**
WR0	**Warramunga Arr**	**14.56**	**141**		**Pn**	**04 22 14.5**	**-2.2**
ASAR	**Alice Springs**	**17.20**	**151**	P	**Pn**	**04 22 50.6**	**-0.3**
	0.2nm,0.3s,baz=322,slow=11,SNR=2.8						
ASAR				S	**Sn**	**04 26 01.1**	**-0.7**
	0.1nm,0.3s,baz=314,slow=21,SNR=5.1						
ASAR	**Alice Springs**	**17.20**	**151**	Pn	**Pn**	**04 22 48.3**	**-2.6**
CTA	**Charters Tower**	**23.52**	**121**	P	**P**	**04 24 01.0**	**+0.5**
	4.0nm,0.8s,baz=297,slow=11,SNR=5.2						
TAU	**Tasmania Unive**	**39.35**	**154**	P	**P**	**04 26 18.6**	**-0.9**
ENH	**Enshi**	**41.47**	**340**	P	P	04 26 49.7	+12
ENH				IAmb	IAmb	04 26 50.7	
	comp=Z,4.2nm,0.4s						
MKAR	**Makanchi Array**	**67.00**	**330**	P	P	04 29 36.9	-6.1
	comp=Z,0.9nm,0.7s,baz=134,slow=7.5,SNR=5.0						
VNDA	**Vanda**	**71.45**	**172**	P	**P**	**04 30 10.3**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=324,slow=7.1,SNR=2.1						
VNDA	**Vanda**	**71.45**	**172**	P	**P**	**04 30 10.2**	**+0.2**
QSPA	**South Pole Qui**	**81.32**	**180**	P	**P**	**04 31 05.8**	**-0.6**
QSPA				IAmb	IAmb	04 31 10.3	
	comp=Z,3.6nm,0.9s						
LPAZ	**La Paz**	**152.03**	**152**	PKPbc	**PKiKP**	**04 38 46.9**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=162,slow=3.2,SNR=2.3						
LPAZ				PKPab	**sPKPbc**	**04 38 57.8**	**+0.7**
	comp=Z,0.7nm,0.5s,baz=218,slow=2.6,SNR=5.0						

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
LPAZ	La Paz	152.03	152		PKPab	04 38 57.1	+0.8

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*IDC **04** 04:25:07.7±1.9, 8°.15S×125°.30E, h0km, mb3.9/1, mb1 4.1/4, mb1mx3.7/41, mbtmp4.0/4, ML4.0/3, Error ellipse: s-maj=41.7km s-min=26.9km az=90.0*

ISC 04 04:25:11.2±1.5**, 8°.3S**±0°.1×**125°.19E**±0°.10**, h24**km**, n10,** σ2ˢ.**28**/11**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	Soe	1.69	213	P	Pb	04 25 44.8	+3.1
BATI	Baumata	2.41	219	Pn	Pb	04 25 51.4	-2.4
	28nm,0.3s,baz=67,slow=0.3,SNR=9.7						
BATI				Sn	Sb	04 26 23.7	+0.6
	9.9nm,0.3s,baz=141,slow=19,SNR=6.0						
MTN	Manton Dam	7.37	128	P	Pn	04 27 04.6	+7.3
	19nm,0.4s						
KNRA	Kununurra	8.10	155	P	Pn	04 27 10.7	+3.3
KDU	Kakadu	8.37	122	P	Pn	04 27 17.8	+6.7
	8.0nm,1.2s						
FITZ	Fitzroy Crossi	9.73	177	Pn	Pn	04 27 27.5	-2.2
	0.3nm,0.3s,baz=102,slow=2.1,SNR=3.7						
FITZ				Sn	Sn	04 29 16.7	-1.6
	0.8nm,0.3s,baz=45,slow=5.0,SNR=4.8						
FITZ	Fitzroy Crossi	9.73	177	P	Pn	04 27 31.4	+1.7
	11nm,0.7s						
WRA	Warramunga Arr	14.56	143	Pn	Pn	04 28 35.2	-0.6
	0.6nm,0.3s,baz=325,slow=14,SNR=7.5						
WRA				Sn	Sn	04 31 14.4	-2.1
	0.4nm,0.3s,baz=318,slow=25,SNR=4.8						
ASAR	Alice Springs	17.39	152	P	P	04 29 13.8	+0.2
	1.1nm,0.3s,baz=324,slow=11,SNR=14						
MKAR	Makanchi Array	66.82	329	P	P	04 36 00.8	-0.2
	1.3nm,0.9s,baz=126,slow=6.8,SNR=5.6						

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*DJA **04** 04:31:47.3±0.9, 2°N±2°×12°6E±°, h11km±7km, M4.4/9, mb5.0/3, mB6.9/1, MLv4.1/9, Mw(mB)6.8/1*

*NEIC **04** 04:31:48.2±1.2, 1°.74N±0°.06×126°.59E±0°.03, h66km±10km, mb4.6/9, Error ellipse: s-maj=9.6km s-min=4.0km az=163.0*

*IDC **04** 04:31:50.0±3.1, 1°.58N×126°.41E, h74km±31km, mb3.9/9, mb1 4.1/11, mb1mx3.7/48, mbtmp4.2/11, Error ellipse: s-maj=31.6km s-min=15.0km az=72.0*

ISC 04 04:31:47.7±0.6**, 1°.68N**±0°.06×**126°.52E**±0°.07**, h47**km**, n41,** σ1ˢ.**97**/44**, mb4.3**/13**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.24	137		Pn	04 32 09.4	+0.9
TNTI				Sn	Sn	04 32 26.0	+1.9
TNTI	Ternate	1.24	137	P	Pn	04 32 10.1	+1.5
TNTI	Ternate	1.24	137	P	Pn	04 32 10.1	+1.5
SGSI	Sangihe	2.23	333	P	Pn	04 32 23.5	+1.4
SGSI				S	Sn	04 32 52.8	+4.4
LBMI	Labuha	2.50	157	P	Pn	04 32 28.0	+2.1
LBMI				S	Sn	04 32 59.0	+3.7
KMSI	Cibinong	2.77	247	P	Pn	04 32 31.0	+1.4
GTOI	Gorontalo	3.66	254	P	Pn	04 32 43.7	+1.8
SANI	Sanana	3.75	188	P	Pn	04 32 42.2	-0.8
SANI	Sanana	3.75	188	P	Pn	04 32 45.3	+2.3
LUWI	Luwuk	4.63	234		Pn	04 32 58.0	+2.9
LUWI	Luwuk	4.63	234	P	Pn	04 32 57.9	+2.8
SIJI	Sorong	5.38	118	P	Pn	04 33 08.7	+3.2
	1.3nm,0.3s,baz=311,slow=8.9,SNR=3.9						
DAV	Davao City (W)	5.43	350	Pn	Pn	04 33 05.9	-0.3
TOLI2	Tolitoli	5.77	264		Pn	04 33 11.2	+0.4
TOLI2	Tolitoli	5.77	264	P	Pn	04 33 11.3	+0.5
MPSI	Mapaga	6.76	259	P	Pn	04 33 25.7	+1.3
	0.1nm25nm,1.0s						
KAPI	Kappang	9.49	225	P	Pn	04 34 02.7	+0.9
	1.0nm,0.3s,baz=341,slow=2.8,SNR=4.5						
SOEI	Soe	11.58	191	Pn	Pn	04 34 34.3	+3.7
SOEI	Soe	11.58	191	P	Pn	04 34 33.8	+3.2
SOEI	Soe	11.58	191	P	Pn	04 34 33.3	+2.7
KNRA	Kununurra	17.39	173		Pn	04 35 46.1	-1.0
WB0	Warramunga Arr	22.67	160	P	P	04 36 43.6	-1.7
WB0				IAmb	IAmb	04 36 45.2	
	comp=Z,19nm,0.5s						
WRAB	Tennant Creek	22.81	161	P	P	04 36 45.3	-1.5
WRAB				IAmb	IAmb	04 36 47.1	
	comp=Z,23nm,0.6s						
WRA	Warramunga Arr	22.82	161	P	P	04 36 45.3	-1.5
	comp=Z,22nm,0.4s,baz=340,slow=11,SNR=111						
WRA	Warramunga Arr	22.82	161	P	P	04 36 44.0	-2.8
WB2	Warramunga Arr	22.82	161	P	P	04 36 45.3	-1.6
WR0	Warramunga Arr	22.90	160	P	P	04 36 46.1	-1.6
WR0				IAmb	IAmb	04 36 48.0	
	comp=Z,20nm,0.6s						
AS31	Alice Springs	26.20	165	P	P	04 37 17.6	-0.6
AS31				IAmb	IAmb	04 37 20.8	
	comp=Z,3.0nm,0.4s						
ASAR	Alice Springs	26.20	165	P	P	04 37 18.1	0.0
	comp=Z,4.5nm,0.5s,baz=351,slow=15,SNR=37						
ASAR	Alice Springs	26.20	165	P	P	04 37 17.1	-1.1
STKA	Stephens Creek	36.31	158	P	P	04 38 45.1	-1.9
	comp=Z,1.5nm,0.3s,baz=326,slow=9.1,SNR=5.8						
SONM	Songino Array	49.17	342	P	P	04 40 31.1	+0.1
	comp=Z,0.6nm,0.5s,baz=152,slow=9.0,SNR=4.3						
PETK	Petropavlovsk-	57.39	22	P	P	04 41 32.5	+1.2
	comp=Z,1.2nm,0.4s,baz=183,slow=6.0,SNR=7.2						
MKAR	Makanchi Array	59.12	326	P	P	04 41 43.1	-0.4
	comp=Z,1.2nm,0.5s,baz=120,slow=8.2,SNR=21						
MKAR	Makanchi Array	59.12	326	P	P	04 41 42.1	-1.4
ZALV	Zalesovo Beam	62.31	334	P	P	04 42 03.7	-1.3
	comp=Z,0.7nm,0.5s,baz=131,slow=7.1,SNR=2.5						
ZALV	Zalesovo Beam	62.31	334	P	P	04 42 03.1	-1.9
NRIK	Noril'sk	72.36	346	P	P	04 43 07.5	-0.8
	comp=Z,2.8nm,0.5s,baz=140,slow=3.6,SNR=5.4						
ABKAR	Akbulak array	73.60	321	P	P	04 43 15.1	-1.0
VNDA	Vanda	81.44	173	P	P	04 43 58.9	-0.3
	comp=Z,0.8nm,0.6s,baz=322,slow=6.2,SNR=8.2						
VNDA	Vanda	81.44	173	P	P	04 43 57.8	-1.5
VNDA				IAmb	IAmb	04 44 01.0	
	comp=Z,4.6nm,1.4s						

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*IDC **04** 04:34:02.5±0.6, 8°.21S×124°.98E, h0km, mb4.3/12, mb1 4.3/15, mb1mx4.1/42, mbtmp4.2/15, ML3.6/3, Error ellipse: s-maj=22.5km s-min=13.9km az=74.0*

*NEIC **04** 04:34:03.0±1.8, 8°.38S±0°.07×125°.07E±0°.07, h10km±1km, mb4.7/19, Error ellipse: s-maj=13.2km s-min=11.4km az=41.0*

*DJA **04** 04:34:05.0±0.3, 8°S±3°×12°5E±°, h10km, M4.7/9, mb4.8/9, mB5.5/2, MLv4.7/9, Mw(mB)5.0/2*

ISC 04 04:34:05.1±0.4**, 8°.28S**±0°.04×**125°.14E**±0°.06**, h24**km**, n91,** σ2ˢ.**12**/101**, mb4.6**/31**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	Soe	1.70	211	P	Pb	04 34 36.7	+0.9
SOEI	Soe	1.70	211	P	Pb	04 34 36.6	+0.8
BATI	Baumata	2.41	217	Pn	Pn	04 34 43.9	+0.9
	22nm,0.3s,baz=126,slow=1.2,SNR=14						
BATI				Sn	Sb	04 35 20.7	+3.7
	29nm,0.3s,baz=335,slow=18,SNR=6.3						
BATI	Baumata	2.41	217	P	Pn	04 34 44.7	+1.7
MMRI	Maumere	2.90	263		Pn	04 34 48.5	-1.3
MMRI	Maumere	2.90	263	P	Pn	04 34 51.8	+2.0
MMRI	Maumere	2.90	263	P	Pn	04 34 52.7	+2.9
EDFI	Ende, Flores	3.45	262	P	Pn	04 34 59.4	+2.0
BSSI	Bau Bau, Buton	5.08	294	P	Pn	04 35 22.7	+2.8
	0.2nm60nm,0.7s						
SANI	Sanana	6.25	8	P	Pn	04 35 36.3	+0.4
	0.2nm31nm,0.5s						
SANI	Sanana	6.25	8	P	Pn	04 35 36.6	+0.7
KAPI	Kappang	6.26	301	Pn	Pn	04 35 35.7	-0.4
	0.4nm,0.3s,baz=122,slow=19,SNR=1.6						
KAPI	Kappang	6.26	301	Pn	Pn	04 35 35.9	-0.2
BNSI	Bone	6.32	307	P	Pn	04 35 38.8	+1.9
	0.4nm84nm,0.9s						
PLAI	Plampang	7.31	265	P	Pn	04 35 53.5	+3.1
	0.4nm98nm,0.9s						
PLAI	Plampang	7.31	265	P	Pn	04 35 53.6	+3.1
MTN	Manton Dam	7.43	128		Pn	04 35 52.4	+0.3
MTN	Manton Dam	7.43	128	P	Pn	04 35 56.6	+4.5
	70nm,0.6s						
LUWI	Luwuk	7.57	342	P	Pn	04 35 55.1	+1.0
	0.5nm4μm151nm,1.1s						
KNRA	Kununurra	8.15	155		Pn	04 36 00.5	-1.6
KNRA	Kununurra	8.15	155	P	Pn	04 36 04.2	+2.1
	79nm,0.9s						
TWSI	Taliwang, Sumb	8.18	266	P	Pn	04 36 04.9	+2.4
	2μm36nm,0.9s						
KDU	Kakadu	8.43	122	P	Pn	04 36 08.9	+3.1
	27nm,0.7s						
SIJI	Sorong	9.56	40	Pn	Pn	04 36 23.5	+2.0
	1.1nm,0.3s,baz=293,slow=9.2,SNR=5.4						
FITZ	Fitzroy Crossi	9.77	177	Pn	Pn	04 36 23.3	-0.9
	1.3nm,0.3s,baz=5.5,slow=8.5,SNR=21						
FITZ				Sn	Sn	04 38 06.5	-6.7
	2.5nm,0.3s,baz=132,slow=4.6,SNR=11						
FITZ	Fitzroy Crossi	9.77	177	Pn	Pn	04 36 23.1	-1.1
FITZ	Fitzroy Crossi	9.77	177	P	Pn	04 36 24.4	+0.2
	22nm,0.8s						
TOLI2	Tolitoli	10.30	335	P	Pn	04 36 34.4	+2.9
WB0	Warramunga Arr	14.51	143	Pn	Pn	04 37 28.5	-0.6
WRA	Warramunga Arr	14.61	143	Pn	Pn	04 37 27.5	-3.0
	1.7nm,0.3s,baz=317,slow=13,SNR=23						
WRA				Sn	Sn	04 40 07.0	-4.9
	0.9nm,0.3s,baz=319,slow=23,SNR=6.2						
WRA	Warramunga Arr	14.61	143	Pn	Pn	04 37 29.0	-1.6
WRAB	Tennant Creek	14.61	143		Pn	04 37 28.9	-1.7
WB2	Warramunga Arr	14.62	143	Pn	Pn	04 37 27.6	-3.0
WRKA	Warakurna	16.93	170	P	Pn	04 38 01.0	+0.4
	35nm,0.8s						
ASAR	Alice Springs	17.45	152	P	Pn	04 38 05.8	-1.2
	0.8nm,0.3s,baz=324,slow=13,SNR=14						
ASAR				S	Sn	04 41 15.2	-5.6
	0.4nm,0.3s,baz=318,slow=20,SNR=6.7						
ASAR	Alice Springs	17.45	152	P	Pn	04 38 06.2	-0.9
QIS	Mount Isa	18.55	133	P	Pn	04 38 22.4	+1.7
	18nm,0.7s						
MTSU	Mount Surprise	21.06	120	P	P	04 38 52.4	+4.7
	11nm,0.8s						
OOD	Oodnadatta	21.82	154	P	P	04 39 01.5	+5.8
	23nm,0.7s						
CTA	Charters Tower	23.56	122	P	P	04 39 16.7	+2.7
	3.2nm,0.7s,baz=287,slow=13,SNR=4.7						
INKA	Innaminka	24.33	145	P	P	04 39 25.6	+4.4
	36nm,1.9s						
QLP	Quilpie	25.68	137	P	P	04 39 38.3	+4.9
	33nm,1.0s						
STKA	Stephens Creek	28.02	149	P	P	04 39 56.5	+2.0
	2.9nm,0.7s,baz=307,slow=4.9,SNR=3.4						
RPSI	Rantau Prapat	28.33	292	P	P	04 39 57.3	-0.1
PSI	Prapat	28.37	292	P	P	04 39 57.3	-0.7
	1.8nm,0.4s,baz=163,slow=18,SNR=2.4						
CM31	Chiang Mai Arr	37.08	316	P	P	04 41 12.7	-1.1
CM31				IAmb	IAmb	04 41 15.9	
	comp=Z,8.9nm,1.0s						
CMAR	Chiang Mai Arr	37.08	316	P	P	04 41 14.4	+0.7
	comp=Z,4.6nm,0.9s,baz=140,slow=6.7,SNR=19						
CMAR	Chiang Mai Arr	37.08	316	P	P	04 41 13.1	-0.6
CHTO	Chiang Mai	37.32	316	P	P	04 41 14.9	-0.9
CHTO				IAmb	IAmb	04 41 18.0	
	comp=Z,15nm,1.1s						
KSAR	Wonju Array Be	45.56	3	P	P	04 42 23.5	+0.4
KSRS	Korea Array	45.57	3	P	P	04 42 25.4	+2.2
	comp=Z,1.1nm,0.7s,baz=179,slow=9.7,SNR=6.6						
MJAR	Matsushiro Arr	46.25	15	P	P	04 42 29.4	+0.8
	comp=Z,3.0nm,0.9s,baz=189,slow=8.3,SNR=5.1						
MJAR	Matsushiro Arr	46.25	15	P	P	04 42 28.9	+0.3
SHL	Shillong	46.68	317	P	P	04 42 30.6	-1.8
LSA	Lhasa	49.96	321	P	P	04 42 57.8	-0.1
TAPN	Taplejung	50.68	316	*e*P	P	04 43 03.3	0.0
	comp=Z,41nm,1.1s						
RAMN	Ramite	51.21	314	*e*P	P	04 43 07.5	+0.3
	comp=Z,11nm,0.5s						
JIRN	Jiri	51.93	315	*e*P	P	04 43 12.4	-0.4
GUN	Gumba	52.30	315	*e*P	P	04 43 15.2	-0.3
PKIN	Phulchoki	52.44	314	*e*P	P	04 43 15.8	-0.6
	comp=Z,9.5nm,0.5s						
USRK	Ussuriysk Ar.	52.60	6	P	P	04 43 17.1	+0.1
	comp=Z,1.9nm,0.7s,baz=183,slow=14,SNR=4.1						
KOLN	Koldanda	53.84	313	*e*P	P	04 43 26.0	-0.7
DANN	Dangsing	54.06	314	*e*P	P	04 43 27.8	-0.6
	comp=Z,20nm,0.7s						
PYUN	Piuthan	54.47	313	*e*P	P	04 43 30.7	-0.6
HIA	Hailar	57.50	356	P	P	04 43 52.0	-0.3
HIA				IAmb	IAmb	04 43 57.9	
	comp=Z,6.5nm,0.5s						
ULN	Ulaanbaatar	58.15	346	P	P	04 43 56.2	-0.9
ULN				IAmb	IAmb	04 43 58.7	
	comp=Z,11nm,1.2s						
SONM	Songino Array	58.29	345	P	P	04 43 57.4	-0.6
	comp=Z,3.7nm,1.0s,baz=165,slow=7.7,SNR=13						
SONM	Songino Array	58.29	345	P	P	04 43 58.5	+0.5
SONM				IAmb	IAmb	04 43 59.5	
	comp=Z,7.6nm,1.3s						
KSH	Kashi	65.81	320	P	P	04 44 51.1	+2.4
KSH				pmax	pmax		
	comp=Z,3.0nm,0.3s						
MK31	Makanchi Array	66.77	329	P	P	04 44 54.7	+0.1
MKAR	Makanchi Array	66.77	329	P	P	04 44 54.5	0.0
	comp=Z,9.0nm,0.7s,baz=133,slow=8.0,SNR=46						
MAKZ	Makanchi	66.93	329	P	P	04 44 54.5	-1.2
MAKZ				IAmb	IAmb	04 44 56.0	
	comp=Z,8.0nm,0.8s						
AAK	Ala-Archa	68.50	322	P	P	04 45 04.9	-0.9
AAK				IAmb	IAmb	04 45 06.6	
	comp=Z,4.1nm,0.8s						
ZAA0	Zalesovo Array	70.70	336	P	P	04 45 17.9	-1.0
ZAA0				IAmb	IAmb	04 45 18.9	
	comp=Z,9.0nm,0.9s						
ZALV	Zalesovo Beam	70.70	336	P	P	04 45 17.7	-1.2
	comp=Z,7.9nm,0.9s,baz=114,slow=3.6,SNR=25						
KURK	Kurchatov	71.19	331	P	P	04 45 21.1	-0.8
KK31	Karatay Array	71.21	321	P	P	04 45 22.1	-0.2
KKAR	Karatay Array	71.21	321	P	P	04 45 21.4	-0.9
KKAR	Karatay Array	71.21	321	P	P	04 45 20.8	-1.5
VNDA	Vanda	71.80	172	P	P	04 45 26.2	+1.0
	comp=Z,0.7nm,0.6s,baz=310,slow=7.2,SNR=6.5						
MAW	Mawson	72.02	201	P	P	04 45 27.0	+0.3
	comp=Z,1.3nm,0.7s,baz=31,slow=2.5,SNR=4.2						
MAW	Mawson	72.02	201	P	P	04 45 25.5	-1.1
HRA	Herat	73.00	310	P	P	04 45 31.8	-1.7
HRA				IAmb	IAmb	04 45 33.2	
	comp=Z,3.0nm,0.5s						
ABKAR	Akbulak array	80.57	323	P	P	04 46 14.1	-1.4
QSPA	South Pole Qui	81.70	180	P	P	04 46 22.1	+0.6
QSPA				IAmb	IAmb	04 46 26.2	
	comp=Z,4.3nm,0.9s						
SNAA	Sanae	93.26	194	P	P	04 47 18.4	+0.8
SNAA				IAmb	IAmb	04 47 19.3	
	comp=Z,3.7nm,1.0s						
MNK	Minsk	100.91	324	*i* P	Pdif	04 47 49.7	-2.6
	comp=E,1.0nm,0.9s						
MNK				*i* P	Pdif	04 47 49.7	-2.6
	comp=N,5.0nm,0.9s						
MNK				*i* P	Pdif	04 47 49.7	-2.6
	comp=Z,6.0nm,0.9s,baz=89						
MNK				*i* PP	PP	04 51 58.0	-2.4
MNK				*i* PPP	PPP	04 54 06.4	
MNK				*i* S	SKSac	04 58 26.1	-3.7
MNK				*i* PS	PS	05 01 01.2	-1.3
MNK				*i* SS	SS	05 06 25.8	-1.5
MNK				*i* SSS	SSS	05 10 17.5	
MNK				*i* LQ	LQ	05 24 21.9	
MNK				*i* LR	LR	05 29 27.2	
MNK				*i* LRM	MLR	05 34 21.1	
	comp=N,748nm,17.7s						
MNK				*i* LRM	MLR	05 34 21.1	
	comp=Z,847nm,17.7s						
MNK				*i* LRM	MLR	05 34 23.0	
	comp=E,90nm,17.7s						
TORD	Torodi Ar. Bea	124.32	280	PKP	PKPdf	04 53 02.5	-0.6
	comp=E,0.4nm,0.7s,baz=10,slow=1.6,SNR=2.3						
TORD	Torodi Ar. Bea	124.32	280	PKPdf	PKPdf	04 53 01.6	-1.4
CPUP	Villa Florida	145.51	176	PKPbc	PKiKP	04 53 44.4	-1.6
	comp=E,3.5nm,0.9s,baz=47,slow=3.1,SNR=6.5						
LPAZ	La Paz	152.27	152	PKPbc	PKiKP	04 54 03.2	+2.2
	comp=E,1.2nm,0.8s,baz=70,slow=1.3,SNR=4.6						
LPAZ				PKPab	sPKPbc	04 54 13.7	+2.0
	comp=E,1.0nm,0.7s,baz=228,slow=19,SNR=2.4						

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*GII **04** 04:40:31.9±0.6, 33°.52N×35°.53E, h1km±1km, MD2.2/3, Mm2.4/3*

*GRAL **04** 04:40:32.1±0.3, 33°.57N×35°.52E, h6km±3km, MD3.2*

*JSO **04** 04:40:32.1±0.0, 34°N±14°×3°5E±1°4, h2km±16km, MLv3.3/6*

ISC 04 04:40:32.1±1.1**, 33°.58N**±0°.03×**35°.52E**±0°.06**, h5**km±11km**, n18,** σ0ˢ.**55**/30**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DQRL	Deir Qamar	0.13	18	*e*P	Pg	04 40 34.9	0.0
DQRL				*e*S	Sg	04 40 37.0	+0.2
RCY	Rachaya	0.28	107	*e*P	Pg	04 40 37.1	-0.4
RCY				*e*S	Sg	04 40 41.0	-0.2
BEYL	Beirut	0.29	355	*e*P	Pg	04 40 37.7	-0.1
BHL	Bhannes	0.34	19	*e*P	Pg	04 40 38.4	-0.4
BHL				*e*S	Sg	04 40 43.2	-0.1
NATI	Neve Ativ	0.36	150	Pg	Pg	04 40 39.0	-0.1
NATI				Sg	Sg	04 40 44.4	+0.5
GEM	Giv'at Ha'Em	0.39	162	Pg	Pg	04 40 39.3	-0.3
GEM				Sg	Sg	04 40 45.6	+0.9
MMC7	Mount Meron ar	0.57	191	Pg	Pg	04 40 43.1	+0.1
MMA0B	Mount Meron ar	0.57	190	Pg	Pg	04 40 43.0	-0.1
MMA0B				Sg	Sb	04 40 52.3	-0.7
HWQ	Hawqa	0.78	27	*e*P	Pg	04 40 46.4	-0.7
BLGI	Bet Lehem HaGe	0.89	198	Pg	Pg	04 40 48.7	-0.4
BLGI				Sg	Sb	04 41 01.8	-0.3
OFRI	\`Ofer	1.06	205	Pg	Pg	04 40 51.6	-0.8
OFRI				Sg	Sb	04 41 07.4	+0.4
OFRI	\`Ofer	1.06	205	P	Pg	04 40 51.5	-0.8
MMLI	Mount Malkishu	1.14	184	Pg	Pg	04 40 53.3	-0.7
MMLI				Sg	Sb	04 41 09.3	-0.1
HMDT	Nahal Hemdat	1.32	180	Pg	Pg	04 40 56.1	-1.4
HMDT				Sg	Sb	04 41 15.1	+0.5
SLTI	Sal'it	1.40	197	Pn	Pn	04 40 58.1	-0.1
SLTI				Sn	Sn	04 41 17.1	+0.2
DSI	Dead Sea	2.01	183	Pn	Pn	04 41 06.7	+0.1
AMAZ	Amatzia	2.10	194	Pn	Pn	04 41 08.0	+0.1
AMAZ				Sn	Sn	04 41 35.2	+0.7
YTIR	Yattir	2.24	189	Pn	Pn	04 41 10.3	+0.5

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*DJA **04** 04:44:23.1±0.5, 8°S±4°×12°5E±°, h10km, M4.2/7, mb4.3/7, mB3.7/1, MLv4.2/7, Mw(mB)2.6/1*

*IDC **04** 04:44:23.5±1.0, 8°.06S×125°.25E, h0km, mb4.1/5, mb1 4.2/9, mb1mx3.9/40, mbtmp4.0/9, ML3.7/4, Error ellipse: s-maj=35.8km s-min=17.1km az=74.0*

ISC 04 04:44:27.4±0.8**, 8°.23S**±0°.05×**125°.11E**±0°.07**, h27**km**, n25,** σ2ˢ.**22**/29**, mb4.1**/5**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	Soe	1.73	209	P	Pn	04 44 56.6	+0.8
SOEI	Soe	1.73	209	P	Pb	04 44 59.4	+0.9
BATI	Baumata	2.42	216	Pn	Pn	04 45 07.3	+2.0
	35nm,0.3s,baz=59,slow=1.2,SNR=13						
BATI				Sn	Sb	04 45 41.1	+1.2
	18nm,0.3s,baz=143,slow=18,SNR=10						
BATI	Baumata	2.42	216	P	Pn	04 45 06.4	+1.1
BATI				S	Sb	04 45 39.3	-0.6
MMRI	Maumere	2.87	262	P	Pn	04 45 12.5	+1.1
MMRI	Maumere	2.87	262	P	Pb	04 45 15.9	-2.0
EDFI	Ende, Flores	3.42	261	P	Pn	04 45 19.0	-0.1
BASI	Baing, Sumba	4.89	246	P	Pn	04 45 40.1	+0.9
	108nm,1.2s						
BSSI	Bau Bau, Buton	5.03	294	P	Pn	04 45 40.1	-1.0
	0.2nm28nm,1.4s						
BKSI	Bulukumba	5.73	300	P	Pn	04 45 49.9	-0.9
	0.1nm12nm,0.7s						
WBSI	Waikabubak, Su	5.82	256	P	Pn	04 45 52.3	+0.3
	48nm,0.8s						
SANI	Sanana	6.21	8	P	Pn	04 45 59.8	+2.5
KAPI	Kappang	6.21	301	Sn	Sn	04 47 08.7	+1.2
	1.2nm,0.3s,baz=231,slow=22,SNR=5.2						
BNSI	Bone	6.26	307	P	Pn	04 45 58.3	+0.2
PLAI	Plampang	7.28	265	P	Pn	04 46 15.9	+3.9
KNRA	Kununurra	8.22	155	P	Pn	04 46 28.6	+3.7
	20nm,0.8s						
KDU	Kakadu	8.49	122	P	Pn	04 46 33.7	+5.0
	9.4nm,1.3s						
FITZ	Fitzroy Crossi	9.82	177	Pn	Pn	04 46 47.6	+0.7
	0.4nm,0.3s,baz=8.4,slow=12,SNR=3.2						
FITZ				Sn	Sn	04 48 34.0	-2.4
	0.6nm,0.3s,baz=310,slow=2.4,SNR=8.4						
WRA	Warramunga Arr	14.68	143	Pn	Pn	04 47 52.1	-1.2
	0.3nm,0.3s,baz=316,slow=13,SNR=10.0						
WRA				Sn	Sn	04 50 35.4	+0.1
	0.3nm,0.3s,baz=315,slow=24,SNR=5.7						
ASAR	Alice Springs	17.51	152	P	P	04 48 31.9	+1.2
	0.2nm,0.3s,baz=334,slow=12,SNR=12						
ASAR				S	Sn	04 51 36.2	-7.9
	0.1nm,0.3s,baz=321,slow=20,SNR=4.1						
STKA	Stephens Creek	28.09	149	P	P	04 50 17.5	+0.6
	1.3nm,0.7s,baz=357,slow=18,SNR=1.6						
CMAR	Chiang Mai Arr	37.01	316	P	P	04 51 35.2	+0.1
	1.0nm,0.3s,baz=142,slow=7.1,SNR=7.9						
MKAR	Makanchi Array	66.70	329	P	P	04 55 16.3	+0.2
	1.7nm,0.8s,baz=124,slow=7.8,SNR=8.6						
ZALV	Zalesovo Beam	70.64	336	P	P	04 55 39.4	-1.0
	1.2nm,0.5s,baz=104,slow=4.7,SNR=7.4						
QSPA	South Pole Qui	81.75	180	P	P	04 56 45.2	+1.6
	1.7nm,0.8s,baz=289,slow=1.6,SNR=7.6						

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*THE **04** 04:48:50.4, 37°.82N×19°.92E, h8km±4km, ML2.8/3, Error ellipse: s-maj=4.4km s-min=1.0km az=90.0*

*ATH **04** 04:48:50.6, 37°.85N×19°.91E, h8km±3km, ML2.7/5, Error ellipse: s-maj=3.6km s-min=1.5km az=49.0*

ISC 04 04:48:51.2±1.8**, 37°.87N**±0°.05×**19°.97E**±0°.06**, h10**km±10km**, n41,** σ0ˢ.**57**/56**, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEF3	Kipouria, Keph	0.45	41	P	Pb	04 49 00.6	-0.6
KEF3				S	Sb	04 49 07.6	-0.3
KEF3	Kipouria, Keph	0.45	41	P	Pb	04 49 00.6	-0.6
KEF3				S	Sb	04 49 07.3	-0.7
DMLN	Damoulianata-K	0.49	40	P	Pg	04 49 00.8	+0.1
DMLN	Damoulianata-K	0.49	40	P	Pg	04 49 00.9	+0.1
DMLN				S	Sg	04 49 07.9	+0.7
LXRA	Lixouri, Kepha	0.49	48	P	Pg	04 49 01.1	+0.2
LXRA				S	Sb	04 49 08.6	-0.7
ARGA	Argostoli. Kep	0.51	52	P	Pg	04 49 01.4	+0.3
ARGA				S	Sb	04 49 08.9	-0.7
KEF4	Livadi, Kephal	0.53	42	P	Pg	04 49 01.4	-0.1
KEF4	Livadi, Kephal	0.53	42	P	Pg	04 49 01.5	0.0
PSDA	Pessada-Kefalo	0.54	63	P	Pg	04 49 01.5	-0.2
PSDA				S	Sb	04 49 10.5	-0.1
PSDA	Pessada-Kefalo	0.54	63	P	Pg	04 49 01.6	-0.2
VLS	Valsamata	0.58	57	P	Pg	04 49 02.1	-0.4
VLS	Valsamata	0.58	57	P	Pg	04 49 02.1	-0.4
VLS				S	Sg	04 49 10.7	+0.7
VLS				AML	AML	04 49 14.9	
	comp=E,1737μm,0.3s						
VLS				AML	AML	04 49 15.0	
	comp=N,2024μm,0.4s						
LTHK	Lithakia	0.70	103	P	Pg	04 49 04.7	-0.1
LTHK	Lithakia	0.70	103	P	Pg	04 49 04.7	-0.1
LTHK				S	Sb	04 49 15.0	-0.2
FSK	Fiskardo	0.75	38	P	Pg	04 49 05.3	-0.5
FSK				S	Sb	04 49 17.9	+1.2
	comp=N,335nm,0.3s						
FSK	Fiskardo	0.75	38	P	Pg	04 49 05.3	-0.5
FSK				S	Sb	04 49 16.7	0.0
FSK				AML	AML	04 49 24.1	
	comp=E,851μm,0.4s						
FSK				AML	AML	04 49 24.3	
	comp=N,580μm,0.4s						
EVGI	Lefkada island	0.92	35	P	Pg	04 49 08.6	-0.4
EVGI				S	Sn	04 49 23.4	-0.2
	comp=N,662nm,0.4s						
EVGI	Lefkada island	0.92	35	P	Pg	04 49 08.3	-0.8
DRAG	Dragano-Lefkad	0.94	30	P	Pb	04 49 09.6	-0.1
DRAG				S	Sn	04 49 24.2	+0.1
DRAG	Dragano-Lefkad	0.94	30	P	Pg	04 49 08.6	-0.7
VTN	Vitineika	0.96	87	P	Pb	04 49 10.0	0.0
NYDR	Nydri-Lefkada	1.02	34	P	Pg	04 49 10.4	-0.4
NYDR				S	Sn	04 49 26.7	+0.8
NYDR	Nydri-Lefkada	1.02	34	P	Pg	04 49 10.2	-0.7
LKD2	Lefkada island	1.06	30	P	Pb	04 49 11.5	-0.3
LKD2				S	Sb	04 49 26.4	+0.6
LKD2				AML	AML	04 49 31.4	
	comp=E,883μm,0.4s						
LKD2				AML	AML	04 49 32.2	
	comp=N,1423μm,0.3s						
TSLK	Tsoukalades, L	1.10	29	P	Pn	04 49 12.5	-0.1
TSLK				S	Sn	04 49 28.9	+1.1
	comp=N,720nm,0.5s						
TSLK	Tsoukalades, L	1.10	29	P	Pb	04 49 12.2	-0.1
RLS	Riolos of Patr	1.20	80	P	Pb	04 49 13.2	-0.8
RLS	Riolos of Patr	1.20	80	P	Pb	04 49 13.8	-0.1
RLS				AML	AML	04 49 38.8	
	comp=E,232μm,0.7s						

RLS				AML	AML	04 49 39.9	
	comp=N,243µm,0.5s						
DRO	Drossia	1.38	86	P	Pn	04 49 16.6	0.0
PVO	Paravola	1.43	58	P	Pb	04 49 17.8	-0.2
PVO				AML	AML	04 49 44.5	
	comp=E,570µm,0.3s						
PVO				AML	AML	04 49 45.5	
	comp=N,587µm,0.4s						
LAKA	Lakka	1.63	76	P	Pb	04 49 21.0	-0.4
IGT	Igoumenitsa	1.69	9	P	Pb	04 49 21.6	-0.8
KLV	Kalavryta, Ach	1.73	84	P	Pb	04 49 22.6	-0.5
EVR	Evrytania	1.78	53	P	Pb	04 49 23.3	-0.8
MAKR	Makrakomi, Fth	2.04	55	P	Pb	04 49 28.3	-0.2
STON	Ston	5.29	342	*e*Pn	Pn	04 50 09.5	-0.8
HVAR	Hvar	5.95	334	*e*Pn	Pn	04 50 18.8	-0.5
ZIRJ	Zirje	6.65	332	*e*Pn	Pn	04 50 28.7	-0.3
KIJV	Kijevo	6.70	337	*e*Pn	Pn	04 50 30.7	+1.0
MORI	Morici	6.81	333	*e*Pn	Pn	04 50 31.6	+0.5
UDBI	Udbina	7.37	336	*e*Pn	Pn	04 50 40.5	+1.6

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*IDC **04** 04:51:21.5±5.5, 24°.45S×179°.89E, h500^{km}±61^{km}, mb3.3/8, mb1 3.5/9, mb1mx3.2/42, mbtmp4.2/9, Error ellipse: s-maj=39.0km s-min=21.8km az=38.0*

ISC 04 04:51:23.1±1.3**, 24°.6S**±0°.2×**179°.9E**±0°.2**, h517^{km}, n9, σ0^{s}.66**/9**, mb3.8**/8**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	13.86	189	P	P	04 54 20.2	-0.8
	1.7nm,0.3s,baz=302,slow=21,SNR=6.7						
CTA	Charters Tower	31.36	271	P	P	04 57 01.6	+0.2
	8.3nm,0.6s,baz=96,slow=11,SNR=11						
STKA	Stephens Creek	34.37	249	P	P	04 57 27.0	+0.3
	2.8nm,0.6s,baz=89,slow=11,SNR=8.4						
ASAR	Alice Springs	41.81	261	P	P	04 58 27.0	-0.5
	0.8nm,0.4s,baz=96,slow=7.3,SNR=15						
WRA	Warramunga Arr	42.25	267	P	P	04 58 30.0	-1.0
	2.7nm,0.5s,baz=103,slow=8.1,SNR=25						
FITZ	Fitzroy Crossi	50.66	266	P	P	04 59 34.8	0.0
	3.2nm,0.8s,baz=124,slow=9.6,SNR=3.9						
QSPA	South Pole Qui	65.53	180	P	P	05 01 15.5	+0.5
	1.7nm,0.6s,baz=72,slow=0.9,SNR=10						
MAW	Mawson	77.09	201	P	P	05 02 23.0	+0.6
	0.7nm,0.4s,baz=127,slow=5.1,SNR=2.0						
TXAR	Lajitas Array	90.88	58	P	P	05 03 31.4	-0.3
	0.2nm,0.7s,baz=201,slow=4.6,SNR=4.0						

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*IDC **04** 05:02:59.8±1.9, 8°.18S×125°.61E, h0^{km}, mb3.6/1, mb1 3.7/5, mb1mx3.5/34, mbtmp3.5/5, ML3.4/4, Error ellipse: s-maj=50.3km s-min=27.6km az=75.0*

ISC 04 05:03:03.5±1.5**, 8°.4S**±0°.1×**125°.8E**±0°.1**, h35^{km}, n5, σ2^{s}.42**/7**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	2.75	229	Pn	Pn	05 03 46.7	+1.5
	6.0nm,0.3s,baz=334,slow=6.3,SNR=3.5						
BATI				Sn	Sn	05 04 15.2	-2.1
	5.4nm,0.3s,baz=128,slow=8.0,SNR=1.8						
FITZ	Fitzroy Crossi	9.64	181	Pn	Pn	05 05 21.2	+1.4
	0.3nm,0.3s,baz=357,slow=13,SNR=6.2						
FITZ				Sn	Sn	05 07 06.4	-0.5
	0.2nm,0.3s,baz=84,slow=19,SNR=3.5						
WRA	Warramunga Arr	14.15	145	Pn	P	05 06 26.1	-2.5
	0.2nm,0.3s,baz=319,slow=13,SNR=12						
ASAR	Alice Springs	17.06	154	P	P	05 07 03.8	+2.9
	0.1nm,0.3s,baz=321,slow=11,SNR=5.5						
MKAR	Makanchi Array	67.19	329	P	P	05 13 53.9	-0.1
	0.3nm,0.5s,baz=142,slow=7.2,SNR=4.1						

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*IDC **04** 05:10:56.0±1.1, 6°.83S×144°.17E, h0^{km}, mb3.8/6, mb1 4.1/9, mb1mx3.9/31, mbtmp3.9/9, ML3.8/1, Error ellipse: s-maj=29.0km s-min=21.2km az=73.0*

ISC 04 05:11:01.1±0.8**, 6°.9S**±0°.1×**144°.1E**±0°.1**, h35^{km}, n9, σ1^{s}.12**/10**, mb3.8**/6**, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.90	130	Pn	Pn	05 11 58.2	-0.4
	4.2nm,0.3s,baz=286,slow=7.4,SNR=2.4						
PMG				Sn	Sn	05 12 43.3	+0.1
	10nm,0.3s,baz=49,slow=22,SNR=6.3						
WRA	Warramunga Arr	16.07	215	Pn	Pn	05 14 42.7	-1.9
	0.4nm,0.3s,baz=29,slow=14,SNR=12						
ASAR	Alice Springs	19.35	209	P	P	05 15 25.6	+1.7
	1.9nm,0.3s,baz=39,slow=9.9,SNR=188						
FITZ	Fitzroy Crossi	21.18	237	P	P	05 15 43.3	-0.4
	4.0nm,0.7s,baz=56,slow=12,SNR=7.1						
KSRS	Korea Array	46.65	342	P	P	05 19 26.0	-0.2
	0.4nm,0.3s,baz=155,slow=9.0,SNR=1.5						
CMAR	Chiang Mai Arr	51.20	300	P	P	05 20 02.2	+0.8
	1.0nm,0.3s,baz=118,slow=5.8,SNR=6.5						
VNDA	Vanda	71.20	176	P	P	05 22 16.9	+0.9
	0.6nm,0.8s,baz=338,slow=5.4,SNR=4.2						
MKAR	Makanchi Array	76.39	321	P	P	05 22 46.6	-0.5
	0.8nm,0.9s,baz=103,slow=5.0,SNR=2.4						
ILAR	Eielson Array	87.44	24	P	P	05 23 44.5	-0.2
	0.4nm,0.8s,baz=240,slow=5.1,SNR=2.5						

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*DJA **04** 05:16:56.9±0.8, 9°S±8°×12°5E±°, h30^{km}±9^{km}, M4.2/5, mb4.8/2, mB6.5/1, MLv4.0/5, Mw(mB)6.2/1*
*IDC **04** 05:17:23.1±1.3, 8°.22S×125°.58E, h0^{km}, mb3.9/4, mb1 4.1/8, mb1mx3.8/43, mbtmp4.0/8, ML3.8/4, MS4.4/1, Ms1 4.4/1, ms1mx3.5/38, Error ellipse: s-maj=45.6km s-min=21.3km az=79.0*

ISC 04 05:17:27.5±0.9**, 8°.37S**±0°.08×**125°.6E**±0°.1**, h35^{km}, n9, σ1^{s}.56**/12**, mb4.0**/4**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	2.66	227	Pn	Pn	05 18 07.8	-0.1
	9.9nm,0.3s,baz=346,slow=2.7,SNR=8.7						
BATI				Sn	Sn	05 18 38.9	-0.1
	29nm,0.3s,baz=146,slow=23,SNR=9.1						
FITZ	Fitzroy Crossi	9.67	180	Pn	Pn	05 19 46.1	+1.9
	1.0nm,0.3s,baz=357,slow=11,SNR=7.5						
FITZ				Sn	Sn	05 21 31.9	+0.3
	1.7nm,0.3s,baz=175,slow=8.5,SNR=5.1						
WRA	Warramunga Arr	14.26	145	Pn	Pn	05 20 47.9	+0.7
	0.5nm,0.3s,baz=317,slow=13,SNR=6.2						
WRA				Sn	Sn	05 23 24.2	0.0
	0.2nm,0.3s,baz=315,slow=26,SNR=2.6						
ASAR	Alice Springs	17.15	153	P	P	05 21 27.1	+1.2
	0.4nm,0.3s,baz=322,slow=10,SNR=6.1						
ASAR				S	S	05 24 39.0	-3.9
	0.2nm,0.3s,baz=316,slow=21,SNR=5.1						
LEM	Lembang	17.92	274	LR	LR	05 28 14.9	
	comp=Z,1µm,21.2s,baz=220,slow=36						
CMAR	Chiang Mai Arr	37.47	316	P	P	05 24 38.1	+0.2
	0.7nm,0.3s,baz=142,slow=5.1,SNR=5.0						
SONM	Songino Array	58.49	345	P	P	05 27 20.6	+0.3
	1.6nm,1.1s,baz=160,slow=4.6,SNR=4.7						
MKAR	Makanchi Array	67.08	329	P	P	05 28 17.5	+0.1
	1.0nm,0.7s,baz=127,slow=7.0,SNR=9.1						
ZALV	Zalesovo Beam	70.97	336	P	P	05 28 40.4	-1.0
	0.7nm,0.5s,baz=116,slow=3.4,SNR=5.0						

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*IDC **04** 05:21:23.8±1.2, 8°.19S×125°.45E, h0^{km}, mb3.8/5, mb1 4.1/9, mb1mx3.8/42, mbtmp3.9/9, ML3.7/4, Error ellipse: s-maj=46.6km s-min=19.3km az=74.0*
*DJA **04** 05:21:26.4±0.5, 8°S±3°×12°5E±°, h10^{km}, M4.1/6, mb4.4/2, MLv3.9/6*

ISC 04 05:21:26.9±0.8**, 8°.40S**±0°.06×**125°.23E**±0°.08**, h24^{km}, n20, σ2^{s}.00**/22**, mb4.0**/5**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.65	215	P	Pn	05 21 55.0	+0.5
SOEI	Soe	1.65	215	P	Pb	05 22 01.2	+4.5
BATI	Baumata	2.37	221	Pn	Pb	05 22 07.5	-1.4
	14nm,0.3s,baz=105,slow=6.2,SNR=4.5						
BATI				Sn	Sb	05 22 38.8	+1.0
	15nm,0.3s,baz=355,slow=24,SNR=12						
BATI	Baumata	2.37	221	P	Pn	05 22 04.9	+0.6
MMRI	Maumere	2.97	265	P	Pn	05 22 09.7	-2.9
MMRI	Maumere	2.97	265	P	Pn	05 22 13.5	+0.9
EDFI	Ende, Flores	3.52	264	P	Pn	05 22 17.4	-2.8
BASI	Baing, Sumba	4.94	248	P	Pn	05 22 37.9	-1.7
BSSI	Bau Bau, Buton	5.21	295	P	Pn	05 22 39.7	-3.7
SANI	Sanana	6.35	7	P	Pn	05 22 59.7	+0.6
	0.1nm14nm,0.8s						
PLAI	Plampang	7.38	266	P	Pn	05 23 15.2	+1.9
KNRA	Kununurra	8.01	155	P	Pn	05 23 30.5	+8.6
	34nm,0.9s						
FITZ	Fitzroy Crossi	9.65	178	Pn	Pn	05 23 46.3	+1.9
	0.4nm,0.3s,baz=2.4,slow=8.6,SNR=2.0						
FITZ				Sn	Sn	05 25 30.7	-1.4
	1.1nm,0.3s,baz=224,slow=3.9,SNR=7.3						
WRA	Warramunga Arr	14.47	143	Pn	Pn	05 24 50.2	-0.2
	0.3nm,0.3s,baz=316,slow=13,SNR=13						
WRA				Sn	Sn	05 27 29.9	-0.2
	0.4nm,0.3s,baz=319,slow=26,SNR=5.2						
ASAR	Alice Springs	17.30	152	P	P	05 25 28.9	+0.6
	0.5nm,0.3s,baz=331,slow=12,SNR=18						
ASAR				S	Sn	05 28 35.2	-3.8
	0.2nm,0.3s,baz=309,slow=19,SNR=7.3						
CMAR	Chiang Mai Arr	37.22	316	P	P	05 28 38.8	+2.1
	1.1nm,0.4s,baz=141,slow=7.0,SNR=5.8						
SONM	Songino Array	58.42	345	P	P	05 31 21.7	+0.9
	0.7nm,0.9s,baz=169,slow=8.5,SNR=3.1						
MKAR	Makanchi Array	66.91	329	P	P	05 32 16.4	-0.8
	1.2nm,0.7s,baz=118,slow=7.0,SNR=5.2						
ZALV	Zalesovo Beam	70.84	336	P	P	05 32 40.0	-1.5
	1.0nm,0.7s,baz=129,slow=5.9,SNR=5.1						
VNDA	Vanda	71.67	172	P	P	05 32 48.8	+2.5
	0.4nm,0.6s,baz=314,slow=6.8,SNR=2.1						

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*HLW **04** 05:23:06.0, 32°.49N×31°.47E, h25^{km}±16^{km}, Md3.2, Ml4.0*
*NIC **04** 05:23:06.8±0.0, 32°.43N×31°.56E, h34^{km}±26^{km}, Ml3.8/4*

ISC 04 05:23:06.4±1.5**, 32°.44N**±0°.04×**31°.46E**±0°.07**, h35^{km}, n24, σ0^{s}.63**/29**, 4C-1D, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OSC2	CSNet OBS 4	0.93	47	⇑*e*P	Pn	05 23 22.4	-0.5
OSC2				S	Sn	05 23 35.9	+0.8
NATA	Nata	2.51	21	P	Pn	05 23 45.3	+0.5
NATA				AML	AML	05 24 15.7	
	0.9nm,0.4s						
NATA				AML	AML	05 24 16.6	
	1.6nm,0.3s						
KOT	Kottamia	2.52	173	P	Pn	05 23 45.1	+0.2
	baz=172						
KOT				S	Sn	05 24 13.5	-1.0
	baz=172						
HHAG	Hagoal	2.54	167	P	Pn	05 23 45.3	+0.1
	baz=167						
HHAG				AMP		05 24 00.0	
	baz=167						
AKMS	Akamas	2.67	16	P	Pn	05 23 45.8	-1.2
AKMS				AML	AML	05 24 15.1	
	0.7nm,0.2s						
AKMS				AML	AML	05 24 15.9	
	0.9nm,0.2s						
HMYD	Mayadein	2.70	192	P	Pn	05 23 47.5	+0.2
	baz=193						
ASGA	Asgata	2.77	32	⇑*e*P	Pn	05 23 48.9	+0.6
ASGA				S	Sn	05 24 21.1	+0.4
ASGA				AML	AML	05 24 21.3	
	0.9nm,0.4s						
ASGA				AML	AML	05 24 21.3	
	0.9nm,0.4s						
ASGA				AML	AML	05 24 21.4	
	0.9nm,0.3s						
ASGA				AML	AML	05 24 21.4	
	0.9nm,0.3s						
HSAF	As Saff	2.81	178	P	Pn	05 23 49.1	+0.2
	baz=178						
SUZ	Suez	2.85	155	P	Pn	05 23 49.6	+0.3
	baz=155						
GLL	Jalalah	2.86	176	P	Pn	05 23 49.8	+0.2
	baz=175						
ALFC	Alefka	2.87	19	P	Pn	05 23 48.9	-0.8
ALFC				AML	AML	05 24 21.7	
	0.9nm,0.2s						
ALFC				AML	AML	05 24 22.5	
	0.9nm,0.3s						
HNAT	Natroun	2.89	195	P	Pn	05 23 50.2	+0.2
	baz=195						
KZIT	Kziot	2.93	121	⇑P	Pn	05 23 50.6	0.0
KZIT				S	Sn	05 24 24.6	0.0
CSS	Mathiatis	2.96	31	⇓*e*P	Pn	05 23 51.2	+0.3
AMAZ	Amatzia	3.07	106	⇑P	Pn	05 23 52.5	+0.1
MVOU	Mavrovouni	3.14	35	P	Pn	05 23 54.3	+0.8
ZAF	Zafarana	3.28	163	P	Pn	05 23 55.3	-0.1
	baz=163						
MMLI	Mount Malkishu	3.35	89	P	Pn	05 23 55.6	-0.7
MMLI				S	Sn	05 24 34.4	-0.5
NBNS	Bani Suef	3.81	182	P	Pn	05 24 02.7	+0.1
	baz=183						
HBST	Basata	4.27	138	P	Pn	05 24 09.0	0.0
	baz=138						
HKAT	Jabal Katrina	4.47	150	P	Pn	05 24 11.8	-0.1
	baz=150						
TR2	Tor 2	4.49	154	P	Pn	05 24 11.5	-0.4
	baz=153						
TAMRE	El Minia	4.76	186	P	Pn	05 24 15.2	-0.5
	baz=186						
HHRG	Al Ghardaqah	5.52	160	P	Pn	05 24 27.9	+1.8
	baz=160						

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*IDC **04** 05:23:28.4±1.4, 8°.06S×125°.61E, h0^{km}, mb3.9/4, mb1 4.0/7, mb1mx3.8/40, mbtmp3.9/7, ML3.4/3, Error ellipse: s-maj=49.1km s-min=25.7km az=75.0*

ISC 04 05:23:32.0±1.0**, 8°.23S**±0°.10×**125°.5E**±0°.1**, h26^{km}, n7, σ1^{s}.52**/8**, mb4.0**/4**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	2.70	223	Pn	Pn	05 24 15.4	+1.6
	2.8nm,0.3s,baz=305,slow=21,SNR=1.6						
BATI				Sn	Sn	05 24 43.9	-1.8
	6.9nm,0.3s,baz=177,slow=16,SNR=2.7						
WRA	Warramunga Arr	14.43	145	Pn	Pn	05 26 53.6	-1.0
	0.2nm,0.3s,baz=316,slow=13,SNR=7.1						
ASAR	Alice Springs	17.32	153	P	P	05 27 34.8	+1.5
	0.2nm,0.3s,baz=322,slow=11,SNR=4.3						
CMAR	Chiang Mai Arr	37.31	315	P	P	05 30 42.4	0.0
	0.6nm,0.3s,baz=135,slow=6.4,SNR=4.1						
SONM	Songino Array	58.34	345	P	P	05 33 25.5	+0.6
	0.8nm,0.8s,baz=157,slow=7.8,SNR=4.5						
MKAR	Makanchi Array	66.92	329	P	P	05 34 21.7	-0.4
	1.6nm,0.9s,baz=122,slow=9.1,SNR=4.4						
ZALV	Zalesovo Beam	70.81	336	P	P	05 34 44.8	-1.4
	0.7nm,0.5s,baz=127,slow=6.5,SNR=4.6						

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*NEIC **04** 05:29:27.9±1.8, 8°.27S±0°.08×125°.48E±0°.08, h11^{km}±3^{km}, mb4.4/4, Error ellipse: s-maj=13.2km s-min=10.1km az=221.0*
*IDC **04** 05:29:27.0±0.9, 8°.16S×125°.37E, h0^{km}, mb4.2/6, mb1 4.2/9, mb1mx3.9/30, mbtmp4.1/9, ML3.8/3, Error ellipse: s-maj=45.4km s-min=18.1km az=76.0*
*DJA **04** 05:29:28.0±1.3, 8°S±14°×12°5E±°, h10^{km}, M4.3/5, mb4.6/2, MLv4.1/5*

ISC 04 05:29:28.0±0.7**, 8°.32S**±0°.07×**125°.54E**±0°.07**, h10^{km}, n33, σ1^{s}.78**/37**, mb4.2**/7**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.90	221	Pn	Pn	05 30 01.6	+1.0
SOEI	Soe	1.90	221	P	Pn	05 30 02.7	+2.1
BATI	Baumata	2.64	225	Pn	Pn	05 30 12.1	+1.4
	9.7nm,0.3s,baz=276,slow=2.2,SNR=4.1						
BATI				Sn	Sn	05 30 41.8	-0.9
	10nm,0.3s,baz=166,slow=22,SNR=8.5						
BATI	Baumata	2.64	225	P	Pn	05 30 12.5	+1.9
MMRI	Maumere	3.28	264		Pn	05 30 20.3	+0.8
MMRI	Maumere	3.28	264	P	Pg	05 30 32.9	+2.0
EDFI	Ende, Flores	3.83	263	P	Pn	05 30 25.9	-1.3
MTN	Manton Dam	7.10	130	Pn	Pn	05 31 14.3	+2.3
PLAI	Plampang	7.70	266	P	Pn	05 31 22.8	+2.6
KNRA	Kununurra	7.96	157		Pn	05 31 27.1	+3.3
FITZ	Fitzroy Crossi	9.72	179	Pn	Pn	05 31 48.5	+0.6
	0.9nm,0.3s,baz=346,slow=8.5,SNR=4.2						
FITZ				Sn	Sn	05 33 31.6	-5.7
	1.8nm,0.3s,baz=138,slow=5.3,SNR=9.3						
FITZ	Fitzroy Crossi	9.72	179	Pn	Pn	05 31 48.4	+0.4
WB0	Warramunga Arr	14.25	144		Pn	05 32 49.7	-0.3
WRA	Warramunga Arr	14.35	145	Pn	Pn	05 32 51.7	+0.3
	0.8nm,0.3s,baz=316,slow=13,SNR=28						
WRA				Sn	Sn	05 35 29.5	-1.3
	0.3nm,0.3s,baz=317,slow=23,SNR=5.1						
WRA	Warramunga Arr	14.35	145		Pn	05 32 51.8	+0.4
WB2	Warramunga Arr	14.36	144		Pn	05 32 51.0	-0.6
WR0	Warramunga Arr	14.48	144		Pn	05 32 53.2	0.0
WR0					Sn	05 35 35.1	+1.1
AS31	Alice Springs	17.23	153		P	05 33 30.1	-0.4
ASAR	Alice Springs	17.23	153	P	P	05 33 30.5	0.0
	0.4nm,0.3s,baz=321,slow=10,SNR=12						
ASAR				S	Sn	05 36 39.9	-1.0
	0.2nm,0.3s,baz=313,slow=20,SNR=8.4						
CMAR	Chiang Mai Arr	37.38	316	P	P	05 36 40.0	-1.3
	0.9nm,0.3s,baz=134,slow=6.8,SNR=7.6						
SONM	Songino Array	58.42	345	P	P	05 39 24.2	+0.2
	2.0nm,0.9s,baz=165,slow=7.8,SNR=7.9						
SONM	Songino Array	58.42	345	IAmb	IAmb	05 39 26.1	
	comp=Z,3.1nm,1.2s						
MK31	Makanchi Array	67.00	329	P	P	05 40 20.4	-0.7
MK31				IAmb	IAmb	05 40 23.1	
	comp=Z,3.9nm,0.9s						
MKAR	Makanchi Array	67.00	329	P	P	05 40 20.6	-0.5
	comp=Z,5.0nm,0.8s,baz=127,slow=7.7,SNR=18						
MKAR	Makanchi Array	67.00	329	P	P	05 40 20.2	-0.9
ZAA0	Zalesovo Array	70.89	336	P	P	05 40 42.5	-2.6
ZALV	Zalesovo Beam	70.89	336	P	P	05 40 43.5	-1.7
	comp=Z,3.5nm,0.9s,baz=106,slow=5.3,SNR=12						
ZALV	Zalesovo Beam	70.89	336	P	P	05 40 43.3	-1.8
VNDA	Vanda	71.71	172	P	P	05 40 52.4	+2.6
	comp=Z,0.7nm,0.9s,baz=342,slow=3.4,SNR=5.1						
AKTO	Aktyubinsk	82.45	323	P	P	05 41 49.2	-1.4
	comp=Z,1.4nm,0.7s,baz=84,slow=11,SNR=4.1						
TORD	Torodi Ar. Bea	124.71	280	PKP	PKPdf	05 48 27.6	-1.4
	comp=Z,0.6nm,0.8s,baz=22,slow=1.7,SNR=3.7						
TXAR	Lajitas Array	129.39	59	PKP	PKiKP	05 48 39.1	+0.6
	comp=Z,0.4nm,0.9s,baz=250,slow=2.5,SNR=3.5						
CPUP	Villa Florida	145.44	175	PKPbc	PKPab	05 49 08.7	+1.5
	comp=Z,3.9nm,1.1s,baz=108,slow=2.9,SNR=4.2						

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*DJA **04** 05:38:29.2±0.6, 8°S±6°×12°4E±°, h10^{km}, M3.9/6, mb4.1/2, MLv3.8/6*
*IDC **04** 05:38:32.8±2.0, 8°.40S×125°.19E, h0^{km}, mb3.5/1, mb1 3.7/5, mb1mx3.5/36, mbtmp3.6/5, ML3.4/4, Error ellipse: s-maj=50.4km s-min=28.5km az=75.0*

ISC 04 05:38:26.3±1.8**, 7°.8S**±0°.1×**123°.93E**±0°.08**, h10^{km}, n12, σ2^{s}.48**/13**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMRI	Maumere	1.86	244	P	Pg	05 39 01.1	-0.9
MMRI				S	Sb	05 39 22.6	-1.2
SOEI	Soe	1.95	170	P	Pg	05 39 03.9	+0.3
SOEI				Pg	Pb	05 39 04.1	+2.2
BATI	Baumata	2.38	186	Pn	Pg	05 39 12.5	+0.6
	9.2nm,0.3s,baz=207,slow=4.8,SNR=3.3						
BATI				Sn	Sn	05 39 36.9	+2.1
	17nm,0.3s,baz=294,slow=23,SNR=6.1						
BATI	Baumata	2.38	186	P	Pb	05 39 07.2	-2.1
EDFI	Ende, Flores	2.40	247	P	Pb	05 39 09.3	-0.4
BSSI	Bau Bau, Buton	3.80	296	P	Pn	05 39 27.1	+2.1
PLAI	Plampang	6.17	260	P	Pn	05 40 01.0	+3.4
	0.1nm18nm,0.7s						
TWSI	Taliwang, Sumb	7.04	262	P	Pn	05 40 12.4	+3.0
FITZ	Fitzroy Crossi	10.35	171	Pn	Pn	05 40 53.4	-1.5
	0.2nm,0.3s,baz=14,slow=17,SNR=2.0						
FITZ				Sn	Sn	05 42 34.6	-16
	0.6nm,0.3s,baz=172,slow=7.7,SNR=4.7						
WRA	Warramunga Arr	15.71	141	Pn	Pn	05 41 57.4	-10
	0.2nm,0.3s,baz=317,slow=13,SNR=8.1						
WRA				Sn	Sn	05 44 32.3	-30
	0.1nm,0.3s,baz=319,slow=25,SNR=4.4						
ASAR	Alice Springs	18.43	150	P	P	05 42 37.8	-4.2
	0.1nm,0.3s,baz=326,slow=12,SNR=8.9						
MKAR	Makanchi Array	65.77	330	P	P	05 49 26.9	+15
	0.5nm,0.8s,baz=126,slow=7.4,SNR=1.8						

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*ANF **04** 05:38:35.7±0.1, 64°.28N×148°.53W, h10^{km}±1^{km}, ML3.5/43, Error ellipse: s-maj=1.2km s-min=1.0km az=125.0*
*NEIC **04** 05:38:36.0±1.7, 64°.29N±0°.02×148°.53W±0°.07, h8^{km}±5^{km}, Error ellipse: s-maj=5.2km s-min=1.8km az=125.0*
*AEIC **04** 05:38:36±1.6, 64°.29N±0°.02×148°.47W±0°.05, h11^{km}±7^{km}, ML3.2, ML3.3/84(NEIC), Error ellipse: s-maj=4.7km s-min=1.2km az=135.0*

ISC 04 05:38:35.9±1.0**, 64°.29N**±0°.02×**148°.53W**±0°.02**, h8^{km}**±10^{km}**, n145, σ0^{s}.95**/144**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRH	Wood River Hil	0.26	47		Pg	05 38 41.4	+0.2
WRH					Sg	05 38 44.6	0.0
WRH	Wood River Hil	0.26	47	IAML		05 38 44.9	
	comp=E,4µm,0.4s						
WRH				IAML		05 38 45.7	
	comp=N,3µm,0.2s						
NEA2	Nenana	0.38	323		Pg	05 38 43.9	+0.5
NEA2	Nenana	0.38	323	IAML		05 38 49.5	
	comp=N,2µm,0.6s						
NEA2				IAML		05 38 49.7	
	comp=E,3µm,0.2s						
NEA2	Nenana	0.38	323	P	Pg	05 38 43.9	+0.5
	baz=140,SNR=291						
NEA2				S	Sg	05 38 48.9	+0.5
	baz=140						
BWN	Browne	0.42	254		Pg	05 38 43.7	-0.5
BWN	Browne	0.42	254	IAML		05 38 44.8	
	comp=E,3µm,0.2s						
CCB	Clear Creek Bu	0.48	41		Pg	05 38 45.0	-0.1
CCB					Sg	05 38 51.3	0.0
CCB	Clear Creek Bu	0.48	41	IAML		05 38 51.8	
	comp=N,2µm,0.1s						
CCB				IAML		05 38 51.8	
	comp=E,2µm,0.2s						
MCK	McKinley	0.59	198		Pg	05 38 47.4	+0.1
MCK					Sg	05 38 54.8	-0.2
MCK	McKinley	0.59	198	IAML		05 38 56.2	
	comp=N,946nm,0.4s						
MCK				IAML		05 38 56.7	
	comp=E,1µm,0.2s						
MCK	McKinley	0.59	198	P	Pg	05 38 47.4	+0.1
	baz=20,SNR=135						
MCK				S	Sg	05 38 54.6	-0.3
	baz=20						
TCOL	CIGO, UAF Yank	0.65	26		Pg	05 38 48.7	+0.2
TCOL					Sg	05 38 57.2	+0.3
TCOL	CIGO, UAF Yank	0.65	26	P	Pg	05 38 48.6	+0.2
	baz=204,SNR=139						
TCOL				S	Sg	05 38 57.2	+0.3
	baz=204						
COLA	College	0.65	26		Pg	05 38 48.5	0.0
COLA	College	0.65	26	P	Pg	05 38 48.6	+0.1
	baz=204						
COLA				S	Sg	05 38 57.5	+0.5
	baz=204						
MDM	Murphy Dome	0.68	11		Pg	05 38 49.2	+0.2
HDA	Harding Lake	0.70	80		Pg	05 38 49.0	-0.4
HDA	Harding Lake	0.70	80	IAML		05 38 59.8	
	comp=N,2µm,0.3s						
HDA				IAML		05 38 59.9	
	comp=E,2µm,0.2s						
HDA	Harding Lake	0.70	80	P	Pg	05 38 49.0	-0.4
	baz=260,SNR=537						
HDA				S	Sg	05 38 58.6	+0.1
	baz=260						
HDA				S	Sg	05 38 58.6	+0.1
	baz=260						
PS08	TAPS Pump Stn8	0.79	71		Pg	05 38 50.5	-0.5
IL31		0.86	55		Pg	05 38 51.9	-0.6
ILAR	Eielson Array	0.86	55		Pg	05 38 52.0	-0.4
RND	Reindeer	0.90	189		Pg	05 38 53.1	-0.1
RND	Reindeer	0.90	189	IAML		05 39 05.5	
	comp=E,939nm,0.2s						
RND				IAML		05 39 08.1	
	comp=N,1µm,0.3s						
I23K	Minto, Yukon-K	0.93	338		Pb	05 38 54.5	+0.2
I23K	Minto, Yukon-K	0.93	338	IAML		05 39 08.4	
	comp=E,1µm,0.7s						
I23K				IAML		05 39 10.2	
	comp=N,1µm,0.6s						
I23K	Minto, Yukon-K	0.93	338	P	Pb	05 38 54.5	+0.2
	baz=156,SNR=451						
I23K				S	Sb	05 39 06.9	+0.1
	baz=156						
POKR	Poker Plat Res	0.95	29		Pg	05 38 54.1	-0.1
POKR	Poker Plat Res	0.95	29	IAML		05 39 08.4	
	comp=E,876nm,0.5s						
POKR				IAML		05 39 09.3	

	comp=N,968nm,0.3s						
POKR	Poker Plat Res	0.95	29	P	Pg	05 38 54.1	-0.1
	baz=209,SNR=57						
POKR				S	Sb	05 39 07.2	-0.2
	baz=209						
BPAW	Bear Paw Mtn.	1.09	261		Pg	05 38 56.7	-0.1
BPAW	Bear Paw Mtn.	1.09	261	P	Pg	05 38 56.7	-0.1
	baz=79,SNR=331						
BPAW				S	Sb	05 39 11.5	+0.1
	baz=79						
TRF	Thorofare Moun	1.15	223		Pg	05 38 57.3	-0.6
TRF	Thorofare Moun	1.15	223	IAML		05 39 15.9	
	comp=E,552nm,0.2s						
TRF				IAML		05 39 16.2	
	comp=N,524nm,0.3s						
TRF	Thorofare Moun	1.15	223	P	Pg	05 38 57.4	-0.6
	baz=43,SNR=76						
TRF				S	Sb	05 39 13.0	-0.3
	baz=43						
MLY	Manley	1.20	309		Pb	05 38 58.8	-0.2
MLY	Manley	1.20	309	IAML		05 39 16.4	
	comp=N,540nm,0.5s						
MLY	Manley	1.20	309	P	Pb	05 38 58.8	-0.2
	baz=126,SNR=172						
MLY				S	Sb	05 39 14.4	-0.3
	baz=126						
KTH	Kantishna Hill	1.29	236		Pn	05 38 59.6	-0.7
KTH	Kantishna Hill	1.29	236	IAML		05 39 18.3	
	comp=N,479nm,0.4s						
KTH				IAML		05 39 20.5	
	comp=E,542nm,0.4s						
H24K	Noodor Dome	1.58	10		Pn	05 39 04.2	0.0
H24K	Noodor Dome	1.58	10	IAML		05 39 27.1	
	comp=E,440nm,0.8s						
H24K	Noodor Dome	1.58	10	P	Pn	05 39 04.2	0.0
	baz=189,SNR=179						
H24K				Sb	Sg	05 39 26.1	-0.4
	baz=189						
H23K	Yukon River	1.60	345		Pn	05 39 04.6	+0.1
H23K	Yukon River	1.60	345	P	Pn	05 39 04.6	+0.1
	baz=163,SNR=116						
PS06	TAPS Pump Stn6	1.65	343		Pn	05 39 05.4	+0.2
CHUM	Lake Minchumin	1.71	258		Pn	05 39 05.4	-0.6
CHUM	Lake Minchumin	1.71	258	P	Pn	05 39 05.4	-0.6
	baz=75,SNR=306						
RIDG	Independent Ri	1.72	107		Pn	05 39 05.2	-1.0
RIDG	Independent Ri	1.72	107	IAML		05 39 30.5	
	comp=N,483nm,0.8s						
RIDG				IAML		05 39 35.1	
	comp=E,361nm,0.6s						
RIDG	Independent Ri	1.72	107	P	Pn	05 39 05.1	-1.0
	baz=291,SNR=79						
RIDG				Sb	Sb	05 39 29.9	+0.4
	baz=291						
I21K	Tanana	1.73	303		Pn	05 39 06.2	-0.1
I21K	Tanana	1.73	303	IAML		05 39 32.0	
	comp=N,463nm,0.7s						
I21K	Tanana	1.73	303	P	Pn	05 39 06.1	-0.1
	baz=119,SNR=43						
I21K				Sb	Sg	05 39 30.7	-0.6
	baz=119						
PRP	Porcupine Dome	1.78	45		Pn	05 39 07.0	-0.1
PRP	Porcupine Dome	1.78	45	IAML		05 39 32.3	
	comp=N,487nm,0.5s						
PRP	Porcupine Dome	1.78	45	P	Pn	05 39 07.0	-0.1
	baz=227,SNR=75						
PRP				Sb	Sb	05 39 31.8	+0.5
	baz=227						
CAST	Castle Rocks	1.80	242		Pn	05 39 06.5	-0.8
CAST				IAML		05 39 35.3	
	comp=N,328nm,0.5s						
CAST				IAML		05 39 36.6	
	comp=E,304nm,0.3s						
CAST	Castle Rocks	1.80	242	P	Pn	05 39 06.1	-1.2
	baz=60,SNR=146						
PAX	Paxson	1.91	133	Pn	Pb	05 39 09.6	-1.3
PAX	Paxson	1.91	133	P	Pn	05 39 09.1	+0.3
	baz=316,SNR=28						
PAX				Sb	Sb	05 39 35.5	+0.6
	baz=316						
SCRK	Sand Creek	2.02	97		Pn	05 39 09.2	-1.1
SCRK	Sand Creek	2.02	97	P	Pn	05 39 09.3	-1.1
	baz=281,SNR=89						
SCRK				Sb	Sb	05 39 39.0	+0.8
	baz=281						
CUT	Chulitna	2.05	203	Sb	Sb	05 39 39.9	+1.0
	baz=22						
DOT	Dot Lake	2.08	106		Pn	05 39 09.8	-1.3
PPLA	Purkeypile	2.15	231		Pn	05 39 11.5	-0.7
PPLA	Purkeypile	2.15	231	P	Pn	05 39 11.5	-0.7
	baz=48,SNR=36						
J26L	Joseph Creek	2.17	82	P	Pn	05 39 12.0	-0.4
	baz=266,SNR=53						
H21K	Melozitna Rive	2.27	309		Pn	05 39 13.6	-0.2
H21K	Melozitna Rive	2.27	309	P	Pn	05 39 13.6	-0.2
	baz=125,SNR=23						
H21K				Sb	Sb	05 39 46.6	+1.2
	baz=125						
HARP	HAARP	2.44	140		Pn	05 39 17.3	+1.3
HARP	HAARP	2.44	140	P	Pn	05 39 16.7	+0.7
	baz=323,SNR=33						
M24K	Tolsona, Glenn	2.44	153		Pn	05 39 17.8	+1.7
M24K	Tolsona, Glenn	2.44	153	IAML		05 39 55.2	
	comp=E,200nm,0.8s						
M24K				IAML		05 40 07.4	
	comp=N,196nm,0.8s						
M24K	Tolsona, Glenn	2.44	153	P	Pn	05 39 17.6	+1.5
	baz=336,SNR=26						
J20K	Nowinta River	2.46	270		Pn	05 39 15.3	-0.9
J20K	Nowinta River	2.46	270	IAML		05 39 57.0	
	comp=E,187nm,0.5s						
J20K	Nowinta River	2.46	270	P	Pn	05 39 15.5	-0.7
	baz=85,SNR=30						
SML	Sawmill	2.50	178		Pn	05 39 17.0	+0.1
SML	Sawmill	2.50	178	P	Pn	05 39 16.6	-0.3
	baz=359,SNR=18						
SCM	Sheep Creek Mo	2.53	167		Pn	05 39 17.9	+0.6
SCM	Sheep Creek Mo	2.53	167	IAML		05 39 55.1	
	comp=N,136nm,1.1s						
SCM				IAML		05 40 01.6	
	comp=E,121nm,0.6s						
SCM	Sheep Creek Mo	2.53	167	Pb	Pb	05 39 21.6	0.0
	baz=349						
SCM				Sb	Sb	05 39 54.4	+1.6
	baz=349						
GHO	Glory Hole Cre	2.54	184		Pn	05 39 17.8	+0.3
GHO	Glory Hole Cre	2.54	184	IAML		05 39 57.7	
	comp=N,114nm,1.7s						
MENT	Mentasta	2.54	120		Pn	05 39 17.8	+0.3
PS11	TAPS Pump St11	2.62	147		Pb	05 39 20.9	-2.1
L26K	Log Cabin Wild	2.64	116		Pn	05 39 18.4	-0.4
M22K	Willow	2.65	197		Pn	05 39 20.5	+1.7
M22K	Willow	2.65	197	P	Pn	05 39 19.2	+0.3
	baz=16,SNR=8.1						
FYU	Fort Yukon	2.67	30		Pn	05 39 19.2	+0.1
SKT	Skwentna	2.69	212		Pn	05 39 20.1	+0.6
SKT	Skwentna	2.69	212	IAML		05 40 03.2	
	comp=E,135nm,0.4s						
SKT				IAML		05 40 04.3	
	comp=N,131nm,0.8s						
SKT	Skwentna	2.69	212	P	Pn	05 39 19.9	+0.4
	baz=30						
PMR	Palmer	2.72	186		Pn	05 39 20.6	+0.7
PMR	Palmer	2.72	186	IAML		05 40 09.2	
	comp=N,108nm,0.9s						
PMR	Palmer	2.72	186	P	Pn	05 39 20.3	+0.4
	baz=6.0,SNR=21						
PMR				Sb	Sb	05 39 60.0	+1.6
	baz=6.0						
IMAR	Indian Mountai	2.78	310		Pn	05 39 21.2	+0.5
KNK	Knik Glacier	2.89	179		Pn	05 39 23.8	+1.5
KNK	Knik Glacier	2.89	179	IAML		05 40 12.3	
	comp=E,116nm,0.5s						
KNK				IAML		05 40 13.3	
	comp=N,91nm,0.7s						
KNK	Knik Glacier	2.89	179	P	Pn	05 39 22.6	+0.3
	baz=360,SNR=11						
SUA	Susitna One	3.02	201		Pn	05 39 25.3	+1.3
SUA	Susitna One	3.02	201	P	Pn	05 39 24.6	+0.5
	baz=19,SNR=18						
L20K	Farewell, AK	3.02	235		Pn	05 39 22.7	-1.3
L20K	Farewell, AK	3.02	235	P	Pn	05 39 23.0	-1.0
	baz=51,SNR=27						
COLD	Coldfoot	3.03	348		Pn	05 39 24.6	+0.5
COLD	Coldfoot	3.03	348	P	Pn	05 39 24.4	+0.3
	baz=166,SNR=14						
KLU	Klutina	3.05	156		Pn	05 39 26.6	+2.1
KLU	Klutina	3.05	156	IAML		05 40 15.8	
	comp=E,89nm,0.6s						
KLU	Klutina	3.05	156	P	Pn	05 39 26.3	+1.7
	baz=339,SNR=11						
M26K	Nabesna, AK	3.13	125	Pn	Pn	05 39 28.1	+2.5
EGAK	Eagle	3.22	78		Pn	05 39 25.9	-0.8
EGAK	Eagle	3.22	78	P	Pn	05 39 26.2	-0.6
	baz=264,SNR=38						
L27K	Beaver Creek,	3.23	109		Pn	05 39 25.6	-1.4
L27K	Beaver Creek,	3.23	109	IAML		05 40 19.4	
	comp=N,77nm,0.6s						
L27K				IAML		05 40 21.8	
	comp=E,74nm,0.5s						
L27K	Beaver Creek,	3.23	109	P	Pn	05 39 25.6	-1.4
	baz=296,SNR=12						
N25K	Chitina, Valde	3.24	145	Pn	Pn	05 39 29.0	+1.9
BCAR	Beaver Creek A	3.25	109	Pn	Pn	05 39 25.5	-1.7
RC01	Rabbit Creek A	3.26	190		Pn	05 39 28.3	+0.9
RC01				IAML		05 40 19.9	
	comp=N,87nm,1.8s						
RC01				IAML		05 40 26.0	
	comp=E,79nm,3.4s						
DIV	Divide	3.42	157	Pn	Pn	05 39 32.0	+2.5
PWL	Port Wells	3.45	178	Pn	Pn	05 39 31.7	+1.8
SPU	Mount Spurr	3.52	209		Pn	05 39 31.6	+0.7
BMAR	Burnt Mountain	3.54	26	Pn	Pn	05 39 30.2	-1.0
L19K	White Mountain	3.56	236		Pn	05 39 30.7	-0.8
L19K	White Mountain	3.56	236	P	Pn	05 39 30.4	-1.0
	baz=51,SNR=11						
M27K	Edge Creek, AK	3.57	120	Pn	Pn	05 39 33.3	+1.6
M19K	Big River Lodg	3.58	231		Pn	05 39 31.8	0.0
M19K	Big River Lodg	3.58	231	P	Pn	05 39 31.5	-0.3
	baz=46						
GLB	Gilahina Butte	3.59	141	Pn	Pn	05 39 34.5	+2.7
TTA	Tatalina	3.61	251		Pn	05 39 30.1	-2.0
TTA	Tatalina	3.61	251	P	Pn	05 39 30.7	-1.5
	baz=65,SNR=11						
FID	Port Fidalgo	3.68	164		Pn	05 39 34.8	+1.7
BMRM	Bremner River	3.80	150		Pn	05 39 35.5	+0.7
MCARA	McCarthy VSAT	3.86	137		Pn	05 39 37.5	+2.0
VRDI	Verde Repeater	3.86	140		Pn	05 39 38.1	+2.4
BVCY	Beaver Creek	3.94	115	P	Pn	05 39 36.0	-0.6
	baz=302,SNR=6.3						
DAWY	Dawson	4.01	89	Pn	Pn	05 39 37.6	0.0
DAWY				IAML		05 40 54.9	
	comp=N,66nm,0.8s						
DAWY	Dawson	4.01	89	P	Pn	05 39 36.6	-1.0
	baz=277,SNR=5.7						
TOLK	Toolik Lake Re	4.39	355	Pn	Pn	05 39 44.5	+1.6
TOLK	Toolik Lake Re	4.39	355	P	Pn	05 39 44.4	+1.6
	baz=174,SNR=38						
EPYK	Eagle Plains	5.37	62		Pn	05 39 55.8	-0.5
EPYK	Eagle Plains	5.37	62	P	Pn	05 39 55.9	-0.4
	baz=252						
M30M	Minto, Yukon	5.54	103	P	Pn	05 39 57.9	-0.8
	baz=293						
ANM	Nome	7.29	280	P	Pn	05 40 22.6	0.0
	baz=84						

IDC 04 05:41:30.9±2.0, 8°.05S×125°.69E, h0^{km}, mb3.7/1, mb1 3.7/4, mb1mx3.5/34, mbtmp3.6/4, ML3.5/3, Error ellipse: s-maj=42.0km s-min=29.6km az=90.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	2.93	223	Pn	Pn	05 42 20.5	+1.6
	8.5nm,0.3s,baz=306,slow=8.4,SNR=2.1						
BATI				Sn	Sn	05 42 54.1	-0.8
	4.2nm,0.3s,baz=331,slow=18,SNR=3.6						
WRA	Warramunga Arr	14.49	146	Pn	Pn	05 44 56.9	-0.6
	0.2nm,0.3s,baz=318,slow=13,SNR=7.2						
ASAR	Alice Springs	17.41	154	P	Pn	05 45 34.9	-0.6
	0.1nm,0.3s,baz=322,slow=10.0,SNR=2.4						
MKAR	Makanchi Array	66.84	329	P	P	05 52 24.6	-0.1
	0.7nm,0.8s,baz=128,slow=7.9,SNR=4.0						

*NEIC **04** 05:43:11.4±2.8, 3°.37S±0°.07×149°.81E±0°.05, h10^{km}±1^{km}, mb5.1/56, Error ellipse: s-maj=13.9km s-min=4.3km az=216.0*

*BJI **04** 05:43:11.6±0.0, 3°.14S×150°.02E, h5^{km}, mB5.3/24, mb4.8/53, Ms5.3/13, Ms7 5.1/13*

*MOS **04** 05:43:11.5±1.7, 3°.52S×149°.65E, h17^{km}, mb5.1/23, Error ellipse: s-maj=15.5km s-min=7.3km az=86.3*

*IDC **04** 05:43:11.2±0.6, 3°.82S×149°.88E, h0^{km}, mb4.7/21, mb1 4.7/24, mb1mx4.6/40, mbtmp4.6/24, ML2.8/2, MS4.6/6, Ms1 4.6/6, ms1mx4.2/52, Error ellipse: s-maj=18.9km s-min=11.7km az=99.0*

*DJA **04** 05:43:12.6±0.3, 4°S±4°×15°0E±°, h10^{km}, M4.8/33, mB5.4/12, mb4.9/33, MLv4.8/3, Mw(mB)4.8/12*

*GCMT **04** 05:43:16.4±0.4, 3°.61S±0°.02×149°.76E±0°.03, h12^{km}, MW5.4/75, Moment Tensor Solution. s9,c9; s75,c99; Duration: 1^{s}2 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.33±.07; M$_{\theta\theta}$1.01±.05; M$_{\phi\phi}$-0.67±.06; M$_{r\theta}$-0.30±.17; M$_{\theta\phi}$0.73±.05; M$_{\phi r}$0.93±.18; Best double couple: M$_0$1.47600×10^{17} NP1:φ$_s$108.00000°, δ64.00000°, λ-26.00000°. NP2:φ$_s$210.00000°, δ67.00000°, λ-151.00000°. Principal axes: T 1.2850, Plg2.0000°, Azm339.0000°; N 0.3860, Plg54.0000°, Azm246.0000°; P -1.6670, Plg36.0000°, Azm70.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 05:43:14.1±0.4, 3°.60S±0°.05×149°.80E±0°.06, h19^{km}, n251, σ1^{s}89/245, mb5.1/94, 6C-11D, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	2.44	104	Pn	Pn	05 43 50.2	-2.7
RABL	Rabaul	2.44	104	P	Pn	05 43 53.2	+0.3
MANU	Manus Island	2.88	302	Pn	Pn	05 43 54.3	-4.6
PMG	Port Moresby	6.34	204	Pn	Pn	05 44 44.7	-1.9
	2.2nm,0.3s,baz=198,slow=22,SNR=3.4						
PMG				LR	LR	05 47 21.5	
	comp=Z,3µm,18.8s,baz=48,slow=40						
PMG	Port Moresby	6.34	204	P	Pn	05 44 47.5	+0.9
PMG	Port Moresby	6.34	204	Pn	Pn	05 44 47.5	+0.9
PMG	Port Moresby	6.34	204	P	Pn	05 44 49.7	+3.1
PMG	Port Moresby	6.34	204	P	Pn	05 44 49.5	+2.9
JAY	Jayapura	9.14	276	Pn	Pn	05 45 26.6	+1.5
	baz=270,slow=20						
JAY				LR	LR	05 48 21.2	
	comp=Z,5µm,19.5s,slow=34						
SMPI	Sarmi	11.19	278	P	Pn	05 45 52.0	-1.1
	3µm76nm,1.2s						
HNR	Honiara	11.63	120	LR	LR	05 50 28.6	
	comp=Z,3µm,19.6s,baz=296,slow=38						
COEN	Coen	12.20	212	P	Pn	05 46 09.1	+2.1
	baz=12						
COEN	Coen	12.20	212	Pn	Pn	05 46 07.8	+0.9
MTSU	Mount Surprise	15.41	200	P	Pn	05 46 51.6	+0.9
	baz=16,SNR=15						
MTSU	Mount Surprise	15.41	200	P	P	05 46 54.3	-0.9
	16nm,1.1s						
CTA	Charters Tower	16.75	192	Pn	Pn	05 47 05.8	-2.1
	0.2nm,0.3s,baz=5.9,slow=11,SNR=6.5						
CTA				LR	LR	05 53 38.0	
	comp=Z,1µm,19.1s,baz=7.0,slow=38						
CTA	Charters Tower	16.75	192	P	P	05 47 10.5	+0.5
	44nm,1.4s						
CTAO	Charters Tower	16.75	192	P	Pn	05 47 08.3	+0.4
CTAO				pmax	pmax		
	comp=Z,94nm,1.4s						
CTAO	Charters Tower	16.75	192	Pn	Pn	05 47 08.3	+0.4
CTAO	Charters Tower	16.75	192	P	P	05 47 08.7	-1.3
FAKI	Fak Fak	17.53	272		Pn	05 47 14.9	-2.8
FAKI				IAmb	IAmb	05 47 21.8	
	comp=Z,196nm,1.3s						
FAKI	Fak Fak	17.53	272	P	Pn	05 47 15.3	-2.4
	comp=Z,2µmcomp=Z,135nm,1.3s						
FAKI	Fak Fak	17.53	272	P	Pn	05 47 16.1	-1.6
SIJI	Sorong	18.71	278	P	Pn	05 47 32.6	+0.5
	comp=Z,1.1nm,0.3s,baz=99,slow=7.4,SNR=9.9						
SWI	Sorong	18.72	278	P	P	05 47 28.8	-3.0
	comp=Z,1µmcomp=Z,60nm,1.0s						
SAUI	Saumlaki	18.91	256	P	Pn	05 47 34.2	-0.4
SAUI	Saumlaki	18.91	256	P	P	05 47 33.6	-0.3
	comp=Z,10µmcomp=Z,366nm,1.2s						
KDU	Kakadu	19.37	241	P	P	05 47 37.6	-1.3
	baz=19,SNR=8.1						
KDU	Kakadu	19.37	241	P	P	05 47 37.9	-1.0
	comp=Z,104nm,1.0s						
QIS	Mount Isa	19.57	210	P	P	05 47 41.1	0.0
	baz=20,SNR=20						
QIS	Mount Isa	19.57	210	P	Pn	05 47 41.9	-0.5
	comp=Z,85nm,1.1s						
RK1H	Rockhampton Ha	19.69	178	P	Pn	05 47 45.0	+1.2
	comp=Z,60nm,1.2s						
BNDI	Bandanaira	19.86	267	P	P	05 47 44.7	+0.4
	comp=Z,307nm,1.2s						
MTN	Manton Dam	20.61	242	P	P	05 47 51.7	-0.8
	baz=21,SNR=6.2						
MTN	Manton Dam	20.61	242	P	P	05 47 50.1	-2.4
MTN				IAmb	IAmb	05 47 57.7	
	comp=Z,85nm,0.9s						
MTN	Manton Dam	20.61	242	P	P	05 47 52.6	+0.1
	comp=Z,99nm,1.1s						
DRS	Darwin Rock St	20.65	244	P	P	05 47 52.7	-0.2
	comp=Z,112nm,1.0s						
SANVU	Saraoutou	20.79	126	P	P	05 47 53.6	-0.8
SANVU				IAmb	IAmb	05 47 59.9	
	comp=Z,227nm,1.6s						
EIDS	Eidsvold	21.68	177	P	P	05 48 04.3	+0.3
	baz=22,SNR=13						
EIDS	Eidsvold	21.68	177	P	P	05 48 03.4	-0.5
EIDS				IAmb	IAmb	05 48 11.1	
	comp=Z,102nm,1.1s						
EIDS	Eidsvold	21.68	177	P	P	05 48 05.1	+1.2
	comp=Z,89nm,1.2s						
WB0	Warramunga Arr	22.01	222	P	P	05 48 05.5	-1.9
WB0				IAmb	IAmb	05 48 13.9	
	comp=Z,132nm,1.2s						
WR0	Warramunga Arr	22.04	221	P	P	05 48 06.0	-1.9
WR0				IAmb	IAmb	05 48 23.6	
	comp=Z,71nm,1.1s						
WRAB	Tennant Creek	22.15	222	⇑eP	P	05 48 07.3	-1.7
WRAB	Tennant Creek	22.15	222	P	P	05 48 07.2	-1.9
WRAB				IAmb	IAmb	05 48 16.3	
	comp=Z,64nm,1.0s						
WRAB	Tennant Creek	22.15	222	P	P	05 48 09.5	+0.5
	comp=Z,89nm,2.0s						
WC3	Warramunga Arr	22.16	222	P	P	05 48 09.7	+0.6
	baz=22						
WB2	Warramunga Arr	22.16	222	P	P	05 48 07.2	-1.9
WB2				IAmb	IAmb	05 48 18.7	
	comp=Z,62nm,1.0s						
WRA	Warramunga Arr	22.16	222	P	P	05 48 06.7	-2.5
	comp=Z,20nm,0.9s,baz=46,slow=9.7,SNR=26						
WRA				PcP	PcP	05 52 06.5	+0.5
	comp=Z,1.7nm,0.7s,baz=28,slow=1.8,SNR=6.0						
WRA	Warramunga Arr	22.16	222	i P	P	05 48 10.1	+0.9
WRA				pmax	pmax		
	comp=Z,20nm,0.9s						
WRA	Warramunga Arr	22.16	222	P	P	05 48 07.3	-1.9
LBMI	Labuha	22.47	277	P	P	05 48 11.7	-0.8
	comp=Z,68nm,1.5s						
RMQ	Roma	22.78	182	P	P	05 48 16.1	+0.4
	baz=23,SNR=24						
RMQ	Roma	22.78	182	P	P	05 48 17.1	+1.4
	comp=Z,31nm,1.0s						
QLP	Quilpie	23.47	193	P	P	05 48 23.8	+1.2
	baz=24,SNR=7.7						
QLP	Quilpie	23.47	193	P	P	05 48 23.5	+0.8
	comp=Z,146nm,1.8s						
SANI	Sanana	23.83	273	P	P	05 48 34.6	+8.3
KNRA	Kununurra	23.93	238	P	P	05 48 24.4	-2.8
KNRA				IAmb	IAmb	05 48 40.8	
	comp=Z,44nm,1.1s						
KNRA	Kununurra	23.93	238	P	P	05 48 30.4	+3.2
	comp=Z,44nm,2.1s						
LIFNC	LIFOU	24.08	137	P	P	05 48 26.8	-1.8
LIFNC	LIFOU	24.08	137	P	P	05 48 28.9	+0.3
	comp=Z,264nm,1.7s						
NOUC	Port Laguerre	24.39	140	P	P	05 48 31.8	+0.4
	comp=Z,58nm,1.6s						
DZM	Mont Dzumac	24.46	140	eP	P	05 48 30.8	-1.4
	comp=Z,218nm,1.3s						
DZM				eLR	LR	05 54 35.4	
	comp=Z,4µm,28.9s						
DZM	Mont Dzumac	24.46	140	P	P	05 48 31.0	-1.2
	comp=Z,45nm,1.0s,baz=352,slow=9.9,SNR=21						
DZM	Mont Dzumac	24.46	140	P	P	05 48 30.1	-2.0
DZM	Mont Dzumac	24.46	140	P	P	05 48 32.0	-0.2
	comp=Z,83nm,1.4s						
ONTNC	Ouen Toro	24.64	140	P	P	05 48 31.2	-2.4
YATNC	Mamie plateau,	24.74	139	P	P	05 48 35.6	+1.0
	comp=Z,70nm,1.4s						
OUENC	Ouen Island, N	24.96	140	P	P	05 48 34.3	-2.3
OUENC				IAmb	IAmb	05 48 54.5	
	comp=Z,55nm,1.3s						
OUENC	Ouen Island, N	24.96	140	P	P	05 48 39.7	+3.1
	comp=Z,33nm,1.7s						
AS31	Alice Springs	25.18	216	P	P	05 48 37.9	-0.7
ASAR	Alice Springs	25.18	216	P	P	05 48 37.8	-0.8
	comp=Z,12nm,0.9s,baz=53,slow=8.2,SNR=44						
ASAR	Alice Springs	25.18	216	P	P	05 48 36.9	-1.7
ASAR	Alice Springs	25.18	216	P	P	05 48 36.9	-1.7
ASPA	Alice Springs	25.18	216	P	P	05 48 39.2	+0.6
	baz=25						
PINNC	Pines Island,	25.49	139	P	P	05 48 40.2	-1.2
PINNC				IAmb	IAmb	05 48 56.0	
	comp=Z,68nm,1.3s						
INKA	Innaminka	25.52	199	P	P	05 48 42.7	+1.1
	comp=Z,113nm,1.2s						
ARMA	Armidale	26.73	176	P	P	05 48 54.0	+1.3
	baz=27,SNR=5.6						
ARMA	Armidale	26.73	176	P	P	05 48 52.6	-0.1
ARMA				IAmb	IAmb	05 48 58.6	
	comp=Z,84nm,1.1s						
ARMA	Armidale	26.73	176	P	P	05 48 54.6	+1.9
	comp=Z,65nm,1.3s						
BATI	Baumata	26.75	254	P	P	05 48 53.8	+0.9
	comp=Z,18nm,0.4s,baz=297,slow=22,SNR=4.4						
LUWI	Luwuk	27.12	275	P	P	05 48 53.6	-2.7
OOD	Oodnadatta	27.57	208	P	P	05 49 01.0	+0.9
	comp=Z,38nm,0.9s						
FITZ	Fitzroy Crossi	27.70	237	P	P	05 49 00.8	-0.5
	comp=Z,28nm,0.8s,baz=73,slow=7.4,SNR=20						
FITZ	Fitzroy Crossi	27.70	237	P	P	05 49 00.1	-1.3
	baz=28,SNR=13						
FITZ	Fitzroy Crossi	27.70	237	P	P	05 48 58.4	-3.0
FITZ	Fitzroy Crossi	27.70	237	P	P	05 49 02.5	+1.1
	comp=Z,70nm,0.9s						
CMSA	Cobar Meteorol	28.06	187	P	P	05 49 05.6	+1.1
	baz=28,SNR=13						
CMSA	Cobar Meteorol	28.06	187	P	P	05 49 05.4	+0.9
	comp=Z,37nm,1.8s						
EDFI	Ende, Flores	28.40	258	P	P	05 49 15.0	+7.2
LCRK	Leigh Creek	28.86	201	P	P	05 49 14.8	+3.2
	comp=Z,54nm,0.9s						
STKA	Stephens Creek	29.17	194	P	P	05 49 13.3	-1.1
	comp=Z,3.1nm,1.0s,baz=358,slow=8.8,SNR=4.3						
STKA	Stephens Creek	29.17	194	⇓eP	P	05 49 13.5	-0.8
STKA	Stephens Creek	29.17	194	P	P	05 49 14.3	-0.1
STKA	Stephens Creek	29.17	194	P	P	05 49 18.1	+3.8
	comp=Z,3.3nm,2.7s						
WRKA	Warakurna	29.71	222	P	P	05 49 17.5	-1.8
	baz=30,SNR=6.6						
MPSI	Mapaga	30.13	277	P	P	05 49 20.7	-2.4
	comp=Z,1µmcomp=Z,16nm,0.9s						
MULG	Mulgathing	30.43	208	P	P	05 49 25.8	+0.3
	comp=Z,68nm,0.9s						
YNG	Young	30.57	182	P	P	05 49 28.1	+1.3
	baz=31,SNR=5.1						
YNG	Young	30.57	182	P	P	05 49 28.5	+1.7
	comp=Z,64nm,1.5s						
CNB	Canberra Magne	31.56	181	P	P	05 49 37.3	+1.7
	baz=32,SNR=6.0						
CNB	Canberra Magne	31.56	181	P	P	05 49 38.6	+3.1
	comp=Z,80nm,1.1s						
CAN	Canberra	31.58	181	P	P	05 49 36.5	+0.9
CAN				pmax	pmax		
	comp=Z,113nm,1.7s						
CAN	Canberra	31.58	181	P	P	05 49 36.5	+0.9
BBOO	Buckleboo	31.78	202	P	P	05 49 37.7	+0.3
	baz=32						
BBOO	Buckleboo	31.78	202	P	P	05 49 37.7	+0.3
BBOO				IAmb	IAmb	05 49 41.3	
	comp=Z,21nm,0.9s						
BBOO	Buckleboo	31.78	202	P	P	05 49 40.9	+3.5
	comp=Z,28nm,1.2s						
ARPS	Mount Arapiles	33.82	192	P	P	05 49 55.5	+0.3
	baz=34						
ARPS	Mount Arapiles	33.82	192	P	P	05 49 56.9	+1.7
	comp=Z,39nm,1.0s						
FORT	Forrest	33.94	215	P	P	05 50 00.4	+4.1
	comp=Z,61nm,0.9s						

TOO	Toolangi	34.04	186	P	P	05 49 58.8	+1.6
	baz=34,SNR=6.7						
TOO	Toolangi	34.04	186	P	P	05 49 57.0	-0.2
TOO				pmax	pmax		
	comp=Z,50nm,1.1s						
TOO	Toolangi	34.04	186	P	P	05 49 57.0	-0.2
TOO				IAmb	IAmb	05 50 02.6	
	comp=Z,50nm,1.1s						
TOO	Toolangi	34.04	186	P	P	05 49 59.3	+2.1
	comp=Z,44nm,1.6s						
MBWA	Marble Bar	34.05	237	P	P	05 49 58.5	+1.1
	comp=Z,21nm,1.0s						
PSA00	Pilbara Seismi	34.14	236	P	P	05 49 55.8	-2.4
PSA00				IAmb	IAmb	05 50 02.0	
	comp=Z,27nm,0.9s						
PSA00	Pilbara Seismi	34.14	236	P	P	05 49 56.3	-1.8
PSA00				IAmb	IAmb	05 50 02.1	
	comp=Z,10nm,0.9s						
PSA00	Pilbara Seismi	34.14	236	P	P	05 50 01.3	+3.1
	comp=Z,34nm,0.9s						
JOW	Kunigami	36.71	327	LR	LR	06 02 53.8	
	comp=Z,1µm,21.4s,baz=156,slow=32						
MEEK	Meekatharra	37.62	229	P	P	05 50 26.3	-1.8
	baz=38,SNR=13						
OUZ	Omahuta	38.42	148	P	P	05 50 35.4	+0.8
GIRL	Giralia	39.29	238	P	P	05 50 42.4	+0.2
MORW	Morawa	40.84	228	P	P	05 50 53.1	-1.8
MORW				IAmb	IAmb	05 50 58.5	
	comp=Z,80nm,1.8s						
MJAR	Matsushiro Arr	41.37	346	P	P	05 51 02.4	+3.3
	comp=Z,0.7nm,0.4s,baz=165,slow=6.5,SNR=5.2						
MJAR	Matsushiro Arr	41.37	346	P	P	05 50 55.7	-3.4
MJAR				pmax	pmax		
	comp=Z,4.0nm,1.1s						
MJAR	Matsushiro Arr	41.37	346	P	P	05 50 55.7	-3.4
JHS	Saijyo	41.47	339	P	P	05 50 57.5	-2.4
JHS				IAmb	IAmb	05 51 17.3	
	comp=Z,53nm,1.4s						
BFZ	Birch Farm	43.94	151	P	P	05 51 19.4	-0.6
MDSI	Maura Dua	45.51	267	P	P	05 51 33.5	+0.6
	comp=Z,960nmcomp=Z,8.1nm,1.2s						
KSRS	Korea Array	45.62	335	P	P	05 51 35.3	+2.0
	comp=Z,3.1nm,0.8s,baz=158,slow=7.9,SNR=9.5						
KSAR	Wonju Array Be	45.63	335	P	P	05 51 28.8	-4.6
KSAR	Wonju Array Be	45.63	335	P	P	05 51 28.8	-4.6
NJ2	Nanjing	46.05	323	*e*P	P	05 51 35.2	-1.6
NJ2				pmax	pmax		
	comp=Z,18nm,0.5s						
INCN	Inchon	46.20	334	P	P	05 51 35.2	-2.7
INCN				pmax	pmax		
	comp=Z,55nm,1.4s						
INCN	Inchon	46.20	334	P	P	05 51 35.2	-2.7
WHN	Wuhan	47.94	318	P	P	05 51 56.7	+5.1
PPI	Padang Panjang	49.46	272	P	P	05 52 10.9	+7.3
USRK	Ussuriysk Ar.	50.20	343	P	P	05 52 11.8	+3.2
	comp=Z,13nm,0.8s,baz=189,slow=7.5,SNR=18						
GYA	Guiyang	51.29	308	⇓P	P	05 52 19.5	+2.1
GYA				pmax	pmax		
	comp=Z,12nm,1.5s						
MDJ	Mudanjiang	51.29	342	P	P	05 52 14.1	-2.8
MDJ				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,120nm,3.6s						
CN2	Changchun	52.02	338	*e*P	P	05 52 25.3	+2.9
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
XAN	Xi'an	53.70	318	P	P	05 52 39.2	+4.1
XAN				pmax	pmax		
	comp=Z,28nm,0.9s						
KMI	Kunming	53.84	305	⇑P	P	05 52 39.7	+3.2
KMI				pP	pP	05 52 42.2	+0.5
KMI				pmax	pmax		
	comp=Z,16nm,1.4s						
CM31	Chiang Mai Arr	54.66	296	P	P	05 52 38.8	-3.5
CM31				IAmb	IAmb	05 52 48.9	
	comp=Z,16nm,1.0s						
CMAR	Chiang Mai Arr	54.66	296	P	P	05 52 42.6	+0.4
	comp=Z,0.8nm,0.3s,baz=121,slow=5.6,SNR=14						
CMAR	Chiang Mai Arr	54.66	296	*i* P	P	05 52 46.4	+4.1
CMAR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CHTO	Chiang Mai	54.77	296	P	P	05 52 39.2	-3.9
CHTO				pmax	pmax		
	comp=Z,18nm,1.6s						
CHTO	Chiang Mai	54.77	296	P	P	05 52 39.2	-3.9
KLR	Kul'dur	54.90	346	⇓*e*P	P	05 52 44.3	+0.9
KLR				pmax	pmax		
	comp=Z,22nm,1.0s						
CD2	Chengdu	55.69	311	P	P	05 52 50.6	+1.0
CD2				pP	pP	05 52 54.5	-0.4
CD2				pmax	pmax		
	comp=Z,90nm,0.9s						
HHC	Hu-ho-hao-te	56.35	326	*e*P	P	05 52 54.2	0.0
HHC				pmax	pmax		
	comp=Z,17nm,0.8s						
HHC				pmax	pmax		
	comp=Z,190nm,6.6s						
HHC				LR	LR		
	comp=Z,2µm,17.9s						
HHC				LR	LR		
	comp=Z,1µm,16.2s						
HHC				LR	LR		
	comp=Z,4µm,17.9s						
PEA0B	Petropavlovsk-	56.89	6	⇓*e*P	P	05 52 57.9	+0.3
PETK	Petropavlovsk-	56.89	6	P	P	05 52 59.5	+1.9
	comp=Z,14nm,0.9s,baz=199,slow=13,SNR=7.7						
PETK	Petropavlovsk-	56.89	6	P	P	05 52 54.0	-3.6
PETK	Petropavlovsk-	56.89	6	P	P	05 52 54.0	-3.6
LZH	Lanzhou	58.30	317	⇑P	P	05 53 09.7	+1.6
LZH				pP	pP	05 53 14.2	+0.8
LZH				sP	pwP	05 53 18.1	+1.4
LZH				pmax	pmax		
	comp=Z,32nm,1.3s						
HIA	Hailar	58.75	337	⇑*e*P	P	05 53 11.9	+1.1
HIA				pmax	pmax		
	comp=Z,21nm,1.4s						
ZEA	Zeya	60.17	345	*e*P	P	05 53 22.5	+2.0
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
GTA	Gaotai	62.76	318	*e*P	P	05 53 39.6	+1.1
GTA				pP	pP	05 53 44.0	+0.1
GTA				sP	pwP	05 53 46.7	-0.3
GTA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,150nm,6.0s						
GTA				LR	LR		
	comp=Z,730nm,19.9s						
GTA				LR	LR		
	comp=Z,960nm,21.5s						
GTA				LR	LR		
	comp=Z,1µm,23.5s						
ULN	Ulaanbaatar	63.42	329	⇓*e*P	P	05 53 40.4	-2.3
ULN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ULN	Ulaanbaatar	63.42	329	P	P	05 53 38.0	-4.8
ULN				IAmb	IAmb	05 53 48.8	
	comp=Z,8.2nm,1.0s						
SONM	Songino Array	63.73	329	P	P	05 53 45.2	+0.4
	comp=Z,3.8nm,1.0s,baz=148,slow=4.5,SNR=17						
SONM	Songino Array	63.73	329	P	P	05 53 42.5	-2.3
SONM				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SONM	Songino Array	63.73	329	P	P	05 53 42.5	-2.3
SEY	Seymchan	66.38	1	P	P	05 54 02.5	+1.1
	comp=Z,6.0nm,0.6s,baz=171,slow=6.7,SNR=8.9						
ZAK	Zakamensk	66.93	330	*e*P	P	05 54 05.4	0.0
ZAK				pmax	pmax		
	comp=Z,20nm,1.2s						
TAPN	Taplejung	67.22	302	*e*P	P	05 54 08.4	+0.4
YAK	Yakutsk	67.24	350	⇓*e*P	P	05 54 08.9	+2.0
ODAN	Odare	67.36	301	*e*P	P	05 54 09.7	+0.9
TLY	Talaya	67.56	331	*e*P	P	05 54 14.4	+5.1
TLY				pmax	pmax		
	comp=Z,18nm,1.0s						
JIRN	Jiri	68.61	301	*e*P	P	05 54 17.0	+0.2
	comp=Z,62nm,1.2s						
GUN	Gumba	68.94	302	*e*P	P	05 54 19.0	+0.2
PKI	Pulchoki	69.25	301	*e*P	P	05 54 20.6	-0.1
PKIN	Phulchoki	69.26	301	*e*P	P	05 54 21.2	+0.5
	comp=Z,76nm,1.4s						
KKN	Kakani	69.42	301	*e*P	P	05 54 21.5	-0.1
	comp=Z,33nm,0.9s						
DMN	Daman	69.52	301	*e*P	P	05 54 22.4	+0.1
	comp=Z,80nm,1.0s						
GKN	Gorkha	70.02	301	*e*P	P	05 54 25.6	+0.3
	comp=Z,67nm,1.2s						
KOLN	Koldanda	70.85	301	*e*P	P	05 54 30.2	-0.2
	comp=Z,54nm,1.0s						
DANN	Dangsing	70.86	302	*e*P	P	05 54 30.1	-0.5
	comp=Z,59nm,1.1s						
WMQ	Urumqi	72.84	318	*e*P	P	05 54 44.5	+2.6
WMQ				pP	pP	05 54 47.0	-0.3
WMQ				pmax	pmax		
	comp=Z,18nm,1.3s						
VNDA	Vanda	74.15	177	P	P	05 54 47.5	-1.3
	comp=Z,2.0nm,0.9s,baz=328,slow=9.1,SNR=10						
VNDA	Vanda	74.15	177	P	P	05 54 48.8	-0.1
VNDA				pmax	pmax		
	comp=Z,8.0nm,1.3s						
VNDA	Vanda	74.15	177	P	P	05 54 48.8	-0.1
TIXI	Tiksi	76.34	353	⇓*e*P	P	05 55 02.5	+1.0
MKAR	Makanchi Array	77.46	319	P	P	05 55 10.4	+2.0
	comp=Z,4.9nm,1.0s,baz=98,slow=7.5,SNR=13						
MKAR	Makanchi Array	77.46	319	*i* P	P	05 55 13.1	+4.7
MKAR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MKAR	Makanchi Array	77.46	319	P	P	05 55 06.7	-1.7
TTA	Tatalina	77.78	22	P	P	05 55 11.6	+1.8
	baz=236						
L19K	White Mountain	77.81	23	P	P	05 55 09.1	-0.9
L19K				IAmb	IAmb	05 55 16.7	
	comp=Z,19nm,0.9s						
L19K	White Mountain	77.81	23	P	P	05 55 11.6	+1.6
	baz=237						
L20K	Farewell, AK	78.35	23	P	P	05 55 14.7	+1.7
	baz=238						
ZAA0	Zalesovo Array	78.50	327	P	P	05 55 12.2	-1.8
ZALV	Zalesovo Beam	78.50	327	P	P	05 55 16.5	+2.5
	comp=Z,6.4nm,0.8s,baz=107,slow=5.3,SNR=24						
ZALV	Zalesovo Beam	78.50	327	*i* P	P	05 55 17.7	+3.7
ZALV				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ZALV	Zalesovo Beam	78.50	327	P	P	05 55 11.9	-2.1
J20K	Nowinta River	79.16	22	P	P	05 55 19.5	+2.1
	baz=238						
CHUM	Lake Minchumin	79.69	22	P	P	05 55 21.8	+1.5
	baz=239						
KSH	Kashi	79.89	311	P	P	05 55 23.6	+1.5
KSH				pP	pP	05 55 28.3	+0.7
KSH				pmax	pmax		
	comp=Z,4.0nm,0.4s						
KSH				LR	LR		
	comp=Z,520nm,21.1s						
KSH				LR	LR		
	comp=Z,600nm,21.6s						
KSH				LR	LR		
	comp=Z,940nm,21.0s						
I21K	Tanana	80.48	21	P	P	05 55 26.4	+1.9
	baz=239						
RND	Reindeer	80.81	24	P	P	05 55 24.2	-2.2
RND				pmax	pmax		
	comp=Z,20nm,0.8s						
RND	Reindeer	80.81	24	P	P	05 55 24.2	-2.2
RND				IAmb	IAmb	05 55 31.4	
	comp=Z,20nm,0.8s						
NIL	Nilore	80.83	305	P	P	05 55 24.2	-2.9
NIL				pmax	pmax		
	comp=Z,36nm,1.1s						
NIL	Nilore	80.83	305	P	P	05 55 24.2	-2.9
NIL				IAmb	IAmb	05 55 33.2	
	comp=Z,36nm,1.1s						
MLY	Manley	80.86	22	P	P	05 55 27.4	+0.7
	baz=241						
MCK	McKinley	80.93	23	P	P	05 55 25.4	-1.6
MCK				pmax	pmax		
	comp=Z,21nm,0.9s						
MCK	McKinley	80.93	23	P	P	05 55 25.4	-1.6
MCK				IAmb	IAmb	05 55 32.1	
	comp=Z,21nm,0.9s						
MCK	McKinley	80.93	23	P	P	05 55 27.1	+0.1
	baz=242						
KURK	Kurchatov	80.99	322	⇓*e*P	P	05 55 27.5	0.0
KURK				pmax	pmax		
	comp=Z,12nm,1.0s						
KURK	Kurchatov	80.99	322	P	P	05 55 25.9	-1.6
NEA2	Nenana	81.28	22	P	P	05 55 28.9	+0.1
	baz=242						
WRH	Wood River Hil	81.60	23	P	P	05 55 28.6	-1.8
WRH				IAmb	IAmb	05 55 36.6	
	comp=Z,11nm,1.0s						
CCB	Clear Creek Bu	81.79	23	P	P	05 55 30.6	-0.8
TCOL	CIGO, UAF Yank	81.87	22	P	P	05 55 31.9	0.0
	baz=243						
COLA	College	81.87	22	⇓*e*P	P	05 55 32.6	+0.7
COLA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
IL31		82.20	23	P	P	05 55 32.1	-1.4
IL31				IAmb	IAmb	05 55 37.5	
	comp=Z,8.8nm,0.8s						
ILAR	Eielson Array	82.20	23	P	P	05 55 33.0	-0.7
	comp=Z,8.4nm,0.7s,baz=249,slow=4.9,SNR=20						
ILAR	Eielson Array	82.20	23	P	P	05 55 32.5	-1.1
ILAR	Eielson Array	82.20	23	P	P	05 55 32.5	-1.1
DOT	Dot Lake	82.85	24	P	P	05 55 36.2	-0.9
DOT				IAmb	IAmb	05 55 42.8	
	comp=Z,13nm,1.0s						
M27K	Edge Creek, AK	83.29	26	P	P	05 55 41.8	+2.2
	baz=249						
NRIK	Noril'sk	83.87	342	P	P	05 55 42.5	+0.3
	comp=Z,24nm,0.9s,baz=110,slow=6.8,SNR=17						
NRIK	Noril'sk	83.87	342	*ce*P	P	05 55 42.1	-0.1
NRIK				pmax	pmax		
	comp=Z,36nm,1.0s						
NRIK	Noril'sk	83.87	342	P	P	05 55 40.9	-1.4
BTK	Batken	83.89	311	P	P	05 55 41.5	-1.6
BTK				pmax	pmax		
	comp=Z,17nm,1.4s						
BTK	Batken	83.89	311	P	P	05 55 41.5	-1.6
BTK				IAmb	IAmb	05 56 15.7	
	comp=Z,17nm,1.4s						
KK31	Karatay Array	84.64	314	P	P	05 55 46.0	-0.7
KK31				pmax	pmax		
	comp=Z,29nm,1.1s						
KK31	Karatay Array	84.64	314	P	P	05 55 46.0	-0.7
KKAR	Karatay Array	84.64	314	P	P	05 55 45.7	-1.0
KKAR	Karatay Array	84.64	314	P	P	05 55 45.7	-1.0
KKAR	Karatay Array	84.64	314	P	P	05 55 45.5	-1.2
KKAR				IAmb	IAmb	05 55 53.1	
	comp=Z,29nm,1.1s						
DAWY	Dawson	84.94	25	P	P	05 55 48.9	+1.1
	baz=251						
MAW	Mawson	85.52	203	P	P	05 55 48.6	-2.0
	comp=Z,3.9nm,1.1s,baz=92,slow=8.4,SNR=5.9						
MAW	Mawson	85.52	203	P	P	05 55 49.6	-1.0
	baz=86,SNR=5.8						
MAW	Mawson	85.52	203	P	P	05 55 50.9	+0.3
MAW				pmax	pmax		
	comp=Z,3.0nm,1.1s						
MAW	Mawson	85.52	203	P	P	05 55 50.9	+0.3
I29M	Ogilvie Camp,	85.79	24	P	P	05 55 53.0	+1.0
	baz=252						
QSPA	South Pole Qui	86.36	180	P	P	05 55 54.3	-0.6
BRVK	Borovoye	86.56	324	⇑*e*P	P	05 55 57.6	+1.6
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
EPYK	Eagle Plains	86.71	23	P	P	05 55 57.8	+1.2
	baz=254						
FARO	Faro, Yukon	87.06	27	P	P	05 55 59.4	+1.0
	baz=257						
INK	Inuvik	88.42	21	P	P	05 56 05.9	+1.3
	comp=Z,4.5nm,0.9s,baz=223,slow=11,SNR=7.9						
INK	Inuvik	88.42	21	P	P	05 56 02.8	-1.8
INK				pmax	pmax		
	comp=Z,11nm,1.4s						
INK	Inuvik	88.42	21	P	P	05 56 02.8	-1.8
INK				IAmb	IAmb	05 56 33.4	
	comp=Z,11nm,1.4s						
INK	Inuvik	88.42	21	P	P	05 56 05.3	+0.8
	baz=256						
ARU	Arti	93.66	326	LR	LR	06 38 28.6	
	comp=Z,765nm,21.7s,baz=352,slow=35						
ARU	Arti	93.66	326	*d i*P	P	05 56 31.9	+2.7
ARU						06 00 18.3	
ARU				S	SKSac	06 07 06.4	+3.6
ARU				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SYO	Syowa Base	93.79	200	⇓*e*P	P	05 56 30.0	+0.4
YKA	Yellowknife Ar	95.76	28	P	P	05 56 40.4	+1.7
	comp=Z,3.3nm,0.8s,baz=267,slow=3.1,SNR=7.9						
GERES	GERESS Array B	121.45	328	PKP	PKiKP	06 02 07.6	+0.9
	comp=Z,0.2nm,0.4s,baz=38,slow=5.0,SNR=2.2						
TORD	Torodi Ar. Bea	147.09	289	PKPbc	PKPbc	06 02 56.2	-0.7
	comp=Z,5.1nm,0.9s,baz=47,slow=2.8,SNR=23						
TORD	Torodi Ar. Bea	147.09	289		PKPdf	06 02 52.6	-2.2

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*IDC **04** 05:50:14.7±2.0, 8.°04S×125.°32E, h0^{km}, mb3.7/1, mb1 3.9/5, mb1mx3.6/47, mbtmp3.7/5, ML3.6/4, Error ellipse: s-maj=42.8km s-min=26.9km az=85.0*

ISC 04 05:50:19.6±1.5**, 8.°2S**±0.°1×**125.°5E**±0.°1**, h35^{km}, n5,** σ**2.^{s}91**/8**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	2.66	222	Pn	Pn	05 50 59.5	-0.6
	8.2nm,0.3s,baz=74,slow=18,SNR=2.2						
BATI				Sn	Sn	05 51 33.1	+1.9
	8.7nm,0.3s,baz=329,slow=23,SNR=3.6						
FITZ	Fitzroy Crossi	9.81	179	Pn	Pn	05 52 40.0	+1.7
	0.3nm,0.3s,baz=3.3,slow=12,SNR=1.2						
FITZ				Sn	Sn	05 54 21.9	-5.3
	0.7nm,0.3s,baz=183,slow=5.7,SNR=6.2						
WRA	Warramunga Arr	14.46	145	Pn	Pn	05 53 42.8	+1.0
	0.3nm,0.3s,baz=319,slow=13,SNR=5.5						
ASAR	Alice Springs	17.34	153	P	P	05 54 21.9	+1.8
	0.2nm,0.3s,baz=325,slow=10,SNR=12						
ASAR				S	Sn	05 57 32.5	+1.4
	0.1nm,0.3s,baz=323,slow=22,SNR=5.2						
MKAR	Makanchi Array	66.89	329	P	P	06 01 07.3	-1.1
	0.6nm,0.7s,baz=148,slow=5.9,SNR=2.2						

IDC 04 05:51:12.1±2.1**, 8.°30S**×**125.°18E, h0^{km}, mb3.5**/1**, mb1 3.7**/3**, mb1mx3.5**/44**, mbtmp3.5**/3**, ML3.5**/2**, Error ellipse: s-maj=173.4km s-min=34.0km az=59.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.59	143	Pn	Pn	05 54 38.1	-1.9
	0.3nm,0.3s,baz=317,slow=13,SNR=5.0						
ASAR	Alice Springs	17.42	152	P	P	05 55 18.0	-0.2
	0.1nm,0.3s,baz=322,slow=11,SNR=1.6						
MKAR	Makanchi Array	66.79	329	P	P	06 02 05.6	0.0
	0.3nm,0.5s,baz=126,slow=6.8,SNR=1.7						

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*BJI **04** 05:52:25.9±0.0, 3.°28S×150.°08E, h5^{km}, mB5.4/40, mb5.0/67, Ms5.3/60, Ms7 5.2/57*

*IDC **04** 05:52:26.1±0.4, 3.°62S×149.°69E, h0^{km}, mb4.8/28, mb1 4.8/33, mb1mx4.7/49, mbtmp4.8/33, ML4.2/2, MS5.0/35, Ms1 5.0/35, ms1mx4.9/46, Error ellipse: s-maj=14.7km s-min=10.3km az=97.0*

*MOS **04** 05:52:26.9±0.9, 3.°61S×149.°66E, h15^{km}, mb5.4/38, MS5.2/11, Error ellipse: s-maj=10.8km s-min=6.0km az=103.4*

*DJA **04** 05:52:27.0±0.2, 4°S±3°×15°0E±°, h10^{km}, M5.2/52, mB5.7/26, mb5.2/52, MLv5.2/3, Mw(mB)5.2/26*

*NEIC **04** 05:52:28.4±2.1, 3.°55S±0.°07×149.°71E±0.°06, h10^{km}±1^{km}, mb5.3/131, Ms_20 5.3/95, Mww5.6, Mwc5.6(GCMT), Error ellipse: s-maj=11.8km s-min=8.7km az=204.0*

*GCMT **04** 05:52:32.4±0.1, 3.°51S±0.°01×149.°73E±0.°01, h14^{km}±1^{km}, MW5.6/149, Moment Tensor Solution. s58,c77; s149,c284; Duration: 1.^{s}5 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.68±.07; $M_{\theta\theta}$2.46±.07; $M_{\phi\phi}$-1.77±.06; $M_{r\theta}$0.50±.13; $M_{\theta\phi}$2.19±.05; $M_{\phi r}$0.35±.13; Best double couple: $M_0$3.09200×10^{17} NP1:ϕ_s112.00000°, δ82.00000°, λ3.00000°. NP2:ϕ_s22.00000°, δ87.00000°, λ171.00000°. Principal axes: T 3.4760, Plg8.0000°, Azm337.0000°; N -0.7620, Plg81.0000°, Azm182.0000°; P -2.7080, Plg4.0000°, Azm67.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **04** 05:52:32, 3.°51S×149.°74E, h16^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.68; $M_{\theta\theta}$2.70; $M_{\phi\phi}$-2.02; $M_{r\theta}$0.40; $M_{\theta\phi}$2.39; $M_{\phi r}$0.45; Fault plane solution: $M_0$3.46000×10^{17} NP1:ϕ_s112.00000°, δ81.00000°, λ0.00000°. NP2:ϕ_s22.00000°, δ90.00000°, λ171.00000°. Principal axes: T 3.7644, Plg7.0000°, Azm337.0000°; N -0.7157, Plg81.0000°, Azm200.0000°; P -3.0488, Plg6.0000°, Azm68.0000°;*

*NEIC **04** 05:52:33, 3.°48S×149.°78E, h16^{km}, Moment Tensor Solution. Duration: 10.^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.72; $M_{\theta\theta}$2.84; $M_{\phi\phi}$-2.12; $M_{r\theta}$-0.39; $M_{\theta\phi}$1.90; $M_{\phi r}$0.59; Fault plane solution: $M_0$3.26000×10^{17} NP1: ϕ_s207.00000°, δ76.00000°, λ-169.00000°. NP2: ϕ_s115.00000°, δ80.00000°, λ-13.00000°. Principal axes: T 3.4870, Plg3.0000°, Azm162.0000°; N -0.5172, Plg73.0000°, Azm260.0000°; P -2.9698, Plg17.0000°, Azm71.0000°;*

ISC 04 05:52:30.0±0.3**, 3.°67S**±0.°04×**149.°68E**±0.°04**, h20^{km}, n489,** σ**1.^{s}83**/430**, mb5.2**/172**, MS5.2**/103**, 9C-5D, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	2.53	102		Pn	05 53 07.5	-2.5
MANU	Manus Island	2.82	305		Pn	05 53 09.8	-4.2
PMG	Port Moresby	6.23	204	Pn	Pn	05 54 01.7	+0.9
	2.9nm,0.3s,baz=35,slow=19,SNR=4.2						
PMG				LR	LR	05 56 28.5	
	comp=Z,12µm,18.5s,baz=26,slow=39						
PMG	Port Moresby	6.23	204	P	Pn	05 54 02.1	+1.2
PMG	Port Moresby	6.23	204	Pn	Pn	05 54 02.1	+1.2
PMG	Port Moresby	6.23	204	P	Pn	05 54 02.1	+1.2
PMG	Port Moresby	6.23	204	P	Pn	05 54 02.1	+1.2
JAY	Jayapura	9.04	277	LR	LR	05 57 46.4	
	comp=Z,16µm,18.9s,slow=35						
SMPI	Sarmi	11.09	278	P	Pn	05 55 07.3	-0.3
	4µm170nm,1.2s						
HNR	Honiara	11.69	120	Pn	Pn	05 55 16.5	+0.7
	19nm,0.3s,baz=160,slow=12,SNR=4.8						
HNR				LR	LR	05 59 45.5	
	comp=Z,10µm,20.5s,baz=296,slow=38						
COEN	Coen	12.07	212	P	Pn	05 55 20.9	-0.2
	baz=12						
COEN	Coen	12.07	212	Pn	Pn	05 55 20.5	-0.6
PATS	Pohnpei	13.53	40	P	Pn	05 55 38.6	-2.4
	baz=14						
PATS	Pohnpei	13.53	40		Pn	05 55 37.2	-3.7
PATS	Pohnpei	13.53	40	P	Pn	05 55 44.1	+3.1
SRPI	Serui, Papua	13.55	277	P	Pn	05 55 41.4	+0.2
MTSU	Mount Surprise	15.31	200	P	Pn	05 56 07.2	+2.1
	baz=16,SNR=6.3						
MTSU	Mount Surprise	15.31	200	P	P	05 56 07.9	-1.9
	32nm,1.3s						
CTA	Charters Tower	16.66	191	Pn	P	05 56 23.6	-1.1
	0.5nm,0.3s,baz=16,slow=13,SNR=20						
CTA				LR	LR	06 02 55.1	
	comp=Z,3µm,18.0s,baz=11,slow=38						
CTA	Charters Tower	16.66	191	P	P	05 56 25.1	+0.3
	76nm,1.4s						
CTAO	Charters Tower	16.66	191	P	Pn	05 56 23.4	+0.9
CTAO				pmax	pmax		
	comp=Z,91nm,1.2s						
CTAO	Charters Tower	16.66	191	Pn	Pn	05 56 23.4	+0.9
CTAO	Charters Tower	16.66	191	P	P	05 56 24.3	-0.5
FAKI	Fak Fak	17.42	272	Pn	Pn	05 56 30.1	-2.0
FAKI	Fak Fak	17.42	272	P	Pn	05 56 32.4	+0.3
	comp=Z,5µmcomp=Z,336nm,1.5s						
FAKI	Fak Fak	17.42	272	P	Pn	05 56 31.3	-0.8
GUMO	Guam	17.80	345	P	Pn	05 56 36.4	-0.3
	comp=Z,3.7nm,0.3s,baz=194,slow=5.2,SNR=5.2						
GUMO				LR	LR	06 01 54.7	
	comp=Z,8µm,22.0s,baz=157,slow=32						
GUMO	Guam	17.80	345	P	Pn	05 56 36.1	-0.6
GUMO				pmax	pmax		
	comp=Z,600nm,1.2s						
GUMO	Guam	17.80	345		Pn	05 56 36.0	-0.6
GUMO	Guam	17.80	345	P	P	05 56 39.8	+2.4
SIJI	Sorong	18.61	278	P	P	05 56 45.9	-0.6
	comp=Z,1.0nm,0.3s,baz=77,slow=9.6,SNR=18						
SWI	Sorong	18.62	278	P	Pn	05 56 47.2	+0.4
	comp=Z,2µmcomp=Z,114nm,0.9s						
SAUI	Saumlaki	18.78	256	P	Pn	05 56 50.0	+1.2
SAUI	Saumlaki	18.78	256	P	P	05 56 48.5	+0.2
	comp=Z,16µmcomp=Z,408nm,1.1s						
SAUI	Saumlaki	18.78	256	P	Pn	05 56 50.5	+1.7
KDU	Kakadu	19.23	241	P	P	05 56 53.2	0.0

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      baz=19,SNR=13
KDU   Kakadu           19.23 241   P        P        05 56 52.9 -0.3
      comp=Z,252nm,1.0s
QIS   Mount Isa        19.45 210   P        Pn       05 56 56.8 +0.1
      baz=20,SNR=12
QIS   Mount Isa        19.45 210   P        Pn       05 56 57.4 +0.6
      comp=Z,131nm,1.2s
RK1H  Rockhampton Ha   19.62 178   P        Pn       05 56 59.0 +0.2
      comp=Z,93nm,0.9s
BNDI  Bandanaira       19.75 267   P        P        05 56 59.6 +0.8
      comp=Z,10µmcomp=Z,639nm,1.3s
BNDI  Bandanaira       19.75 267   P        Pn       05 57 00.4  0.0
MTN   Manton Dam       20.48 242   P        P        05 57 07.1 +0.3
      baz=21,SNR=8.5
MTN   Manton Dam       20.48 242   P        P        05 57 05.7 -1.1
MTN                                IAmb     IAmb     05 57 08.0
      comp=Z,156nm,0.9s
MTN   Manton Dam       20.48 242   P        P        05 57 06.9 +0.1
      comp=Z,200nm,1.2s
DRS   Darwin Rock St   20.52 244   P        P        05 57 07.5 +0.3
      comp=Z,183nm,1.0s
MSAI  Masohi           20.72 270   P        P        05 57 09.3 -0.1
      comp=Z,607nmcomp=Z,12nm,1.0s
SANVU Saraoutou        20.84 125   P        P        05 57 08.6 -2.1
SANVU                              IAmb     IAmb     05 57 34.2
      comp=Z,184nm,1.3s
SANVU Saraoutou        20.84 125   P        Pn       05 57 14.2 +1.0
EIDS  Eidsvold         21.62 177   P        P        05 57 19.7 +0.7
      baz=22,SNR=18
EIDS  Eidsvold         21.62 177   P        P        05 57 19.3 +0.4
EIDS  Eidsvold         21.62 177   P        P        05 57 19.7 +0.7
      comp=Z,89nm,1.0s
KWAJ  Kwajalein Atol   21.75  55   P        P        05 57 14.2 -6.3
KWAJ                               pmax     pmax
      comp=Z,435nm,1.1s
KWAJ                               MLR      MLR
      comp=Z,5µm,21.0s
KWAJ  Kwajalein Atol   21.75  55   P        P        05 57 14.2 -6.3
KWAJ  Kwajalein Atol   21.75  55   P        P        05 57 24.2 +3.7
WB0   Warramunga Arr   21.88 222   P        P        05 57 20.8 -1.1
WB0                                IAmb     IAmb     05 57 45.6
      comp=Z,169nm,1.2s
WR0   Warramunga Arr   21.92 221   P        P        05 57 21.3 -1.0
WR0                                IAmb     IAmb     05 57 42.3
      comp=Z,193nm,1.3s
KOUNC Koumac, New Ca   22.00 141   P        P        05 57 27.0 +3.9
WRAB  Tennant Creek    22.02 222ceP         P        05 57 22.6 -0.8
WRAB                               pmax     pmax
      comp=Z,225nm,2.5s
WRAB  Tennant Creek    22.02 222   P        P        05 57 23.1 -0.4
WRAB                               IAmb     IAmb     05 57 40.0
      comp=Z,114nm,0.9s
WC3   Warramunga Arr   22.03 221   P        P        05 57 23.3 -0.2
      baz=22
WB2   Warramunga Arr   22.03 222   P        P        05 57 22.9 -0.6
WB2                                IAmb     IAmb     05 57 40.1
      comp=Z,100nm,0.8s
WRA   Warramunga Arr   22.04 222   P        P        05 57 23.1 -0.5
      comp=Z,28nm,0.9s,baz=40,slow=11,SNR=36
WRA                                PcP      PcP      06 01 22.7 +1.2
      comp=Z,0.9nm,0.5s,baz=26,slow=1.8,SNR=4.9
WRA                                LR       LR       06 06 35.6
      comp=Z,5µm,20.9s,baz=30,slow=38
WRA   Warramunga Arr   22.04 222   P        P        05 57 22.1 -1.5
WRA                                                  06 01 22.7
WRA                                pmax     pmax
      comp=Z,13nm,0.9s
WRA   Warramunga Arr   22.04 222   P        P        05 57 22.1 -1.5
LBMI  Labuha           22.37 277   P        P        05 57 27.4 +0.2
      comp=Z,2µmcomp=Z,160nm,1.5s
RMQ   Roma             22.71 182   P        P        05 57 31.4 +0.8
      baz=23,SNR=27
RMQ   Roma             22.71 182   P        P        05 57 31.2 +0.5
      comp=Z,91nm,1.0s
QLP   Quilpie          23.38 192   P        P        05 57 38.6 +1.1
      baz=24,SNR=15
QLP   Quilpie          23.38 192   P        P        05 57 38.3 +0.8
      comp=Z,263nm,1.5s
SANI  Sanana           23.72 273   P        P        05 57 40.5 -0.5
      comp=Z,2µmcomp=Z,95nm,2.1s
SANI  Sanana           23.72 273   P        P        05 57 40.6 -0.4
KNRA  Kununurra        23.79 238   P        P        05 57 41.3 -0.4
      baz=24,SNR=3.7
KNRA  Kununurra        23.79 238   P        P        05 57 40.0 -1.7
KNRA                               IAmb     IAmb     05 58 07.2
      comp=Z,68nm,1.1s
KNRA  Kununurra        23.79 238   P        P        05 57 41.2 -0.5
      comp=Z,77nm,1.9s
LIFNC LIFOU            24.11 136   P        P        05 57 42.4 -2.2
LIFNC LIFOU            24.11 136   P        P        05 57 43.7 -0.9
NOUC  Port Laguerre    24.41 140   P        P        05 57 47.2 -0.1
DZM   Mont Dzumac      24.48 140  eP        P        05 57 47.2 -0.9
      comp=Z,346nm,1.8s
DZM                               eLQ       LQ       06 02 48.2
      comp=Z,11µm,28.5s
DZM                               eLR       LR       06 03 50.8
      comp=Z,16µm,25.1s
DZM   Mont Dzumac      24.48 140   P        P        05 57 47.3 -0.8
      comp=Z,32nm,0.7s,baz=320,slow=8.9,SNR=23
DZM                                LR       LR       06 06 21.4
      comp=Z,10µm,20.1s,baz=310,slow=34
DZM   Mont Dzumac      24.48 140   IAmb     IAmb     05 57 53.0
      comp=Z,113nm,1.1s
DZM   Mont Dzumac      24.48 140   P        P        05 57 47.8 -0.3
ONTNC Ouen Toro        24.65 140   P        P        05 57 47.9 -1.6
ONTNC                              IAmb     IAmb     05 57 56.5
      comp=Z,91nm,1.3s
ONTNC Ouen Toro        24.65 140   P        P        05 57 51.6 +2.0
YATNC Mamie plateau,   24.76 139   P        P        05 57 51.6 +1.1
OUENC Ouen Island, N   24.98 140   P        P        05 57 51.9 -0.6
OUENC                              IAmb     IAmb     05 58 00.1
      comp=Z,56nm,1.0s
OUENC Ouen Island, N   24.98 140   P        P        05 57 54.1 +1.6
AS31  Alice Springs    25.05 216   P        P        05 57 52.9 -0.3
ASAR  Alice Springs    25.05 216   P        P        05 57 53.1 -0.1
      comp=Z,35nm,1.0s,baz=52,slow=8.3,SNR=62
ASAR                               LR       LR       06 08 54.4
      comp=Z,6µm,18.3s,baz=46,slow=39
INKA  Innaminka        25.41 199   P        P        05 57 58.0 +1.6
      comp=Z,156nm,1.7s
PINNC Pines Island,    25.51 139   P        P        05 57 57.2 -0.1
PINNC                              IAmb     IAmb     05 58 03.0
      comp=Z,88nm,1.3s
KMSI  Cibinong         26.03 279   P        P        05 58 06.8 +4.6
DAV   Davao City (W)   26.32 294   LR       LR       06 08 14.1
      comp=Z,2µm,18.8s,baz=104,slow=36
BATI  Baumata          26.62 255   P        P        05 58 07.2 -0.3
      comp=Z,89nm,0.8s,baz=183,slow=3.3,SNR=7.5
BATI                               LR       LR       06 11 05.0
      comp=Z,10µm,20.0s,baz=94,slow=42
BATI  Baumata          26.62 255   P        P        05 58 24.4  +17
ARMA  Armidale         26.67 176   P        P        05 58 08.6 +0.7
      baz=27,SNR=22
ARMA  Armidale         26.67 176   P        P        05 58 08.0 +0.1
ARMA  Armidale         26.67 176   P        P        05 58 08.9 +1.0
      comp=Z,119nm,1.3s
LUWI  Luwuk            27.01 275   P        P        05 58 17.1 +6.0
LUWI  Luwuk            27.01 275   P        P        05 58 12.0 +0.9
OOD   Oodnadatta       27.46 208   P        P        05 58 15.8 +0.9
      comp=Z,77nm,1.7s
FITZ  Fitzroy Crossi   27.57 237   P        P        05 58 14.8 -1.1
      comp=Z,145nm,0.8s,baz=55,slow=8.8,SNR=14
FITZ                               LR       LR       06 10 17.6
      comp=Z,5µm,18.4s,baz=62,slow=39
FITZ  Fitzroy Crossi   27.57 237   P        P        05 58 15.2 -0.7
      baz=28,SNR=50
FITZ  Fitzroy Crossi   27.57 237   P        P        05 58 15.0 -0.9
FITZ  Fitzroy Crossi   27.57 237   P        P        05 58 15.3 -0.7
      comp=Z,187nm,0.9s
CMSA  Cobar Meteorol   27.98 187   P        P        05 58 19.3 -0.2
      baz=28,SNR=16
CMSA  Cobar Meteorol   27.98 187   P        P        05 58 19.7 +0.2
      comp=Z,43nm,1.1s
MRSI  Marisa           28.03 278   P        P        05 58 18.4 -1.8
      comp=Z,48nm,1.4s
APSI  Ampana           28.14 275   P        P        05 58 20.0 -1.2
      comp=Z,960nmcomp=Z,84nm,1.3s
EDFI  Ende, Flores     28.27 258   P        P        05 58 19.7 -2.8
      comp=Z,29nm,1.3s
LCRK  Leigh Creek      28.76 201   P        P        05 58 27.3 +0.9
      comp=Z,47nm,1.1s
STKA  Stephens Creek   29.07 194   P        P        05 58 28.5 -0.7
      comp=Z,2.0nm,0.7s,baz=37,slow=15,SNR=4.2
STKA                               LR       LR       06 11 06.1
      comp=Z,5µm,18.5s,baz=12,slow=38
STKA  Stephens Creek   29.07 194 i P        P        05 58 28.3 -0.9
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BSSI  Bau Bau, Buton   29.19 264   P        P        05 58 28.7 -1.8
      comp=Z,1µmcomp=Z,43nm,0.6s
TOLI2 Tolitoli         29.27 279   P        P        05 58 28.1 -3.2
BKSI  Bulukumba        29.51 266   P        P        05 58 32.1 -1.3
      comp=Z,23nm,1.4s
WRKA  Warakurna        29.58 222   P        P        05 58 33.0 -0.9
      baz=30,SNR=15
TTSI  Tana Toraja      29.82 270   P        P        05 58 36.9 +0.8
      comp=Z,28nm,1.2s
KAPI  Kappang          29.88 266   P        P        05 58 34.8 -1.7
      comp=Z,10nm,0.7s,baz=138,slow=7.2,SNR=7.1
KAPI                               LR       LR       06 10 21.7
      comp=Z,822nm,21.0s,baz=107,slow=36
KAPI  Kappang          29.88 266   P        P        05 58 35.9 -0.7
KAPI                               pmax     pmax
      comp=Z,39nm,1.2s
KAPI  Kappang          29.88 266   P        P        05 58 35.9 -0.7
KAPI                               IAmb     IAmb     05 58 57.3
      comp=Z,39nm,1.1s
MPSI  Mapaga           30.03 277   P        P        05 58 36.1 -1.9
      comp=Z,3µmcomp=Z,43nm,0.9s
MULG  Mulgathing       30.32 207   P        P        05 58 41.0 +0.7
      comp=Z,52nm,1.0s
YNG   Young            30.50 182   P        P        05 58 42.7 +0.9
      baz=31,SNR=7.5
YNG   Young            30.50 182   P        P        05 58 43.9 +2.0
      comp=Z,76nm,1.6s
MSVF  Nonsavu          31.11 119   LR       LR       06 10 23.7
      comp=Z,3µm,18.9s,baz=288,slow=35
MSVF  Nonsavu          31.11 119 i P        P        05 58 47.6 +0.1
MSVF                               pmax     pmax
      comp=Z,21nm,1.1s
HTT   Hallett          31.27 198   P        P        05 58 49.9 +1.2
      baz=32,SNR=5.2
HTT   Hallett          31.27 198   P        P        05 58 50.6 +1.9
      comp=Z,26nm,1.3s
CNB   Canberra Magne   31.49 181   P        P        05 58 51.5 +0.9
      baz=32,SNR=7.5
CNB   Canberra Magne   31.49 181   P        P        05 58 52.2 +1.5
      comp=Z,97nm,1.1s
CAN   Canberra         31.50 181   P        P        05 58 50.5 -0.2
CAN                                pmax     pmax
      comp=Z,66nm,1.2s
CAN                                MLR      MLR
      comp=Z,8µm,19.0s
CAN   Canberra         31.50 181   P        P        05 58 50.5 -0.2
CAN                                IAmb     IAmb     05 58 53.6
      comp=Z,66nm,1.2s
CAN   Canberra         31.50 181   P        P        05 58 51.6 +0.9
BBOO  Buckleboo        31.68 202   P        P        05 58 52.2  0.0
      baz=32,SNR=5.6
BBOO  Buckleboo        31.68 202   P        P        05 58 52.1 -0.2
BBOO                               IAmb     IAmb     05 58 53.6
      comp=Z,55nm,1.3s
LQP   Lukban           33.03 303  eP        P        05 59 01.8 -2.8
ARPS  Mount Arapiles   33.72 191   P        P        05 59 10.7 +0.6
      baz=34,SNR=5.4
ARPS  Mount Arapiles   33.72 191   P        P        05 59 12.2 +2.1
      comp=Z,40nm,1.1s
FORT  Forrest          33.82 215   P        P        05 59 10.1 -1.0
MBWA  Marble Bar       33.91 237   IAMs_20  IAMs_20  06 14 09.3
      comp=Z,6µm,18.0s
MBWA  Marble Bar       33.91 237   P        P        05 59 11.2 -0.8
      comp=Z,48nm,1.2s
TOO   Toolangi         33.96 186   P        P        05 59 13.0 +0.8
      baz=34,SNR=7.9
TOO   Toolangi         33.96 186   P        P        05 59 11.8 -0.4
TOO                                pmax     pmax
      comp=Z,45nm,1.0s
TOO   Toolangi         33.96 186   P        P        05 59 11.8 -0.4
TOO                                IAmb     IAmb     05 59 15.6
      comp=Z,45nm,1.0s
TOO   Toolangi         33.96 186   P        P        05 59 14.4 +2.2
      comp=Z,58nm,1.2s
PSA00 Pilbara Seismi   34.00 236   P        P        05 59 10.8 -2.0
PSA00                              IAmb     IAmb     05 59 12.8
      comp=Z,52nm,0.9s
PSA00 Pilbara Seismi   34.00 236   P        P        05 59 11.9 -0.9
      comp=Z,68nm,1.3s
BRAT  Ballarat         34.13 188   P        P        05 59 16.9 +3.3
      comp=Z,13nm,1.0s
SPMM  Sapulut          34.22 284   P        P        05 59 15.0 +0.3
BBKI  Banjar Baru      34.77 269   P        P        05 59 19.6  0.0
      comp=Z,21nm,0.5s
MEEK  Meekatharra      37.49 229   P        P        05 59 41.8 -0.9
      baz=38,SNR=25
MEEK  Meekatharra      37.49 229   P        P        05 59 41.9 -0.8
      comp=Z,92nm,1.0s
PWJI  Pagerwojo        37.92 262   P        P        06 00 02.3  +16
SBUM  Sibu             37.93 279   P        P        05 59 47.0 +0.4
TWG   Pinlang          38.39 315   IAMs_20  IAMs_20  06 12 22.7
      comp=Z,4µm,21.0s
OUZ   Omahuta          38.42 148   IAMs_20  IAMs_20  06 12 08.6
      comp=Z,4µm,21.0s
PCJI  Pacitan          38.55 262   P        P        06 00 05.3  +14
YULB  Yu-li            38.59 316   IAMs_20  IAMs_20  06 12 19.4
      comp=Z,5µm,21.0s
MOO   Moorlands        38.67 183   P        P        05 59 53.1 +0.8
      baz=39
NACB  Ninganchiao      38.90 317   IAMs_20  IAMs_20  06 11 45.4
      comp=Z,4µm,21.0s
TPUB  Ta-pu            39.01 315   IAMs_20  IAMs_20  06 12 23.3
      comp=Z,5µm,21.0s
SSLB  Suanglung        39.09 316   IAMs_20  IAMs_20  06 12 45.5
      comp=Z,5µm,20.0s
GIRL  Giralia          39.16 238   P        P        05 59 57.0 +0.3
      baz=39,SNR=4.8
GIRL  Giralia          39.16 238   P        P        05 59 56.5 -0.2
SMRI  Semarang         39.20 263   IAMs_20  IAMs_20  06 16 52.5
      comp=Z,3µm,20.0s
YHNB  Yeheng           39.38 317   IAMs_20  IAMs_20  06 12 36.0
      comp=Z,4µm,20.0s
TATO  Taipei           39.51 318   IAMs_20  IAMs_20  06 12 41.2
      comp=Z,4µm,21.0s
KSM   Kuching          39.69 277   P        P        06 00 01.0 -0.3
RAO   Raoul Island     39.89 133   LR       LR       06 13 44.6
      comp=Z,3µm,21.2s,baz=302,slow=32
JMN   Monobe           40.08 339   P        P        06 00 02.7 -1.6
JMN                                IAmb     IAmb     06 00 09.3
      comp=Z,70nm,1.0s
INU   Inuyama          40.59 344   P        P        06 00 11.5 +3.1
      comp=Z,28nm,1.5s
JNU   Nakatsue         40.69 335   P        P        06 00 06.0 -3.4
JNU                                IAmb     IAmb     06 00 11.6
      comp=Z,67nm,1.1s
JNU   Nakatsue         40.69 335   P        P        06 00 11.0 +1.6
MORW  Morawa           40.71 228   P        P        06 00 08.4 -1.2
      baz=41,SNR=4.2
MORW  Morawa           40.71 228   P        P        06 00 08.4 -1.2
MORW                               IAmb     IAmb     06 00 31.0
      comp=Z,69nm,1.5s
MORW  Morawa           40.71 228   P        P        06 00 09.6  0.0
      comp=Z,32nm,1.5s
KPJI  Karang Pucung    40.72 263   P        P        06 00 22.9  +13
JWT   Wachi            41.00 342   P        P        06 00 09.4 -2.3
BLDU  Ballidu          41.06 226   P        P        06 00 11.4 -1.0
      baz=41,SNR=4.8
MJAR  Matsushiro Arr   41.41 346   P        P        06 00 12.3 -2.9
      comp=Z,6.0nm,1.0s,baz=157,slow=9.4,SNR=11
MJAR                               PcP      PcP      06 02 14.0 +0.9
      comp=Z,1.9nm,0.7s,baz=163,slow=3.5,SNR=2.2
MJAR                               LR       LR       06 16 47.3
      comp=Z,2µm,19.0s,baz=175,slow=35
MJAR  Matsushiro Arr   41.41 346   P        P        06 00 12.8 -2.4
MJAR                                                 06 02 14.0
MJAR                               pmax     pmax
      comp=Z,16nm,1.4s
MJAR  Matsushiro Arr   41.41 346   P        P        06 00 12.8 -2.4
MAJO  Matsushiro       41.41 346 i P        P        06 00 12.5 -2.7
MAJO                               pmax     pmax
      comp=Z,46nm,2.0s
MAJO  Matsushiro       41.41 346   P        P        06 00 12.3 -2.9
MAJO  Matsushiro       41.41 346   P        P        06 00 14.7 -0.5
      comp=Z,10nm,1.2s
MAT   Matsushiro       41.41 346   P        P        06 00 10.5 -4.7
JHS   Saijyo           41.49 339   P        P        06 00 14.9 -1.0
JHS                                IAmb     IAmb     06 00 33.2
      comp=Z,76nm,1.2s
CISI  Cisompet, Garu   41.83 263   P        P        06 00 17.3 -1.8
LEM   Lembang          42.00 264   P        P        06 00 19.1 -1.5
      comp=Z,18nm,0.4s,baz=162,slow=19,SNR=2.0
NWAO  Narrogin (SRO)   42.04 222   LR       LR       06 18 12.5
      comp=Z,4µm,21.4s,baz=66,slow=37
NWAO  Narrogin (SRO)   42.04 222   IAMs_20  IAMs_20  06 17 59.9
      comp=Z,4µm,21.0s
URZ   Urewera          42.56 148   LR       LR       06 17 03.6
      comp=Z,3µm,19.3s,baz=31,slow=35
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DLV   T  Lat           43.80 291   P        P        06 00 33.6 -1.5
DLV   T  Lat           43.80 291   P        P        06 00 36.1 +1.0
      comp=Z,89nm,1.2s
SSE   Sheshan          43.97 324   P        P        06 00 34.6 -1.4
SSE                                S        S        06 07 08.6 +1.6
SSE                                pmax     pmax
      comp=Z,15nm,0.7s
SSE                                pmax     pmax
      comp=Z,150nm,4.2s
SSE                                LR       LR
      comp=Z,730nm,19.0s
SSE                                LR       LR
      comp=Z,820nm,18.2s
PMBI  Palembang        44.84 270   IAMs_20  IAMs_20  06 19 19.4
      comp=Z,3µm,19.0s
TJN   Taejon           44.97 334ceP         P        06 00 42.6 -1.3
MDSI  Maura Dua        45.39 267   P        P        06 00 46.6 -1.1
      comp=Z,21nm,2.0s
KSRS  Korea Array      45.64 336   P        P        06 00 47.7 -1.5
      comp=Z,3.0nm,0.8s,baz=156,slow=9.1,SNR=11
KSRS                               PP       PP       06 02 40.6 +4.2
      comp=Z,4.5nm,1.0s,baz=154,slow=5.7,SNR=4.5
KSRS                               LR       LR       06 19 28.1
      comp=Z,1µm,19.1s,baz=114,slow=36
KSAR  Wonju Array Be   45.65 336   P        P        06 00 47.2 -2.1
KSAR  Wonju Array Be   45.65 336   P        P        06 00 47.2 -2.1
ERM   Erimo            45.85 353   P        P        06 00 49.2 -1.6
ERM                                pmax     pmax
      comp=Z,47nm,1.0s
ERM   Erimo            45.85 353   P        P        06 00 49.2 -1.6
ERM                                IAmb     IAmb     06 01 06.7
      comp=Z,47nm,1.0s
ERM   Erimo            45.85 353   IAMs_20  IAMs_20  06 18 09.1
      comp=Z,3µm,21.0s
NJ2   Nanjing          46.04 323  eP        P        06 00 53.0 +0.5
NJ2                                S        S        06 07 35.3 -1.7
NJ2                                pmax     pmax
      comp=Z,11nm,0.5s
NJ2                                LR       LR
      comp=Z,2µm,18.5s
NJ2                                LR       LR
      comp=Z,2µm,18.9s
NJ2                                LR       LR
      comp=Z,3µm,19.4s
LHSI  Lahat            46.06 268   P        P        06 00 51.7 -1.3
      comp=Z,34nm,1.2s
INCN  Inchon           46.21 334   P        P        06 00 51.3 -2.5
INCN                               pmax     pmax
      comp=Z,114nm,1.4s
INCN  Inchon           46.21 334   P        P        06 00 51.3 -2.5
INCN  Inchon           46.21 334   P        P        06 00 56.8 +3.0
      comp=Z,53nm,1.3s
KSI   Kapahiang        46.99 268   P        P        06 01 12.4  +12
JRMM  Jerantut         47.77 279   P        P        06 01 06.0 -0.3
WHN   Wuhan            47.91 318  ⇓P        P        06 01 09.8 +2.6
WHN                                S        S        06 08 10.0 +6.2
WHN                                LR       LR
      comp=Z,6µm,19.8s
WHN                                LR       LR
      comp=Z,5µm,20.5s
WHN                                LR       LR
      comp=Z,6µm,20.1s
ASAJ  Asahikawa        47.99 353   P        P        06 01 07.1 -0.4
      comp=Z,26nm,1.0s,baz=230,slow=23,SNR=6.4
IPM   Ipoh             49.28 279   P        P        06 01 17.0 -1.1
PPI   Padang Panjang   49.35 273   P        P        06 01 30.6  +12
TIA   Tai'an           49.99 325  eP        P        06 01 21.7 -1.4
TIA                                S        S        06 08 28.2 -4.7
TIA                                pmax     pmax
      comp=Z,16nm,1.6s
TIA                                LR       LR
      comp=Z,1µm,19.6s
TIA                                LR       LR
      comp=Z,2µm,20.6s
TIA                                LR       LR
      comp=Z,2µm,20.0s
USA0B Ussuriysk Arra   50.23 343   P        P        06 01 24.2 -0.5
USA0B                              pmax     pmax
      comp=Z,59nm,1.4s
USA0B Ussuriysk Arra   50.23 343   P        P        06 01 24.1 -0.5
USA0B                              IAmb     IAmb     06 01 26.7
      comp=Z,59nm,1.4s
USRK  Ussuriysk Ar.    50.23 343   P        P        06 01 24.3 -0.4
      comp=Z,12nm,1.0s,baz=157,slow=7.4,SNR=16
USRK                               LR       LR       06 22 20.6
      comp=Z,852nm,18.1s,baz=89,slow=36
USRK  Ussuriysk Ar.    50.23 343   P        P        06 01 22.6 -2.1
USRK  Ussuriysk Ar.    50.23 343   P        P        06 01 22.6 -2.1
MNSI  Mandailing Nat   50.27 274   P        P        06 01 26.3 +0.8
      comp=Z,10µmcomp=Z,25nm,0.8s
YSS   Yuzh-Sakhalins   50.78 354  eP        P        06 01 29.5 +0.8
YSS                               e                  06 01 36.9
YSS                               e                  06 08 44.8
YSS                                pmax     pmax
      comp=Z,40nm,0.8s
YSS                                MLR      MLR
      comp=Z,2µm,14.0s
ENH   Enshi            51.13 314   P        P        06 01 30.9 -0.9
PSI   Prapat           51.14 277   P        P        06 01 31.1 -1.2
      comp=Z,5.1nm,0.5s,baz=114,slow=5.2,SNR=11
PSI                                LR       LR       06 25 46.7
      comp=Z,1µm,18.5s,baz=146,slow=39
GYA   Guiyang          51.25 308  ⇓P        P        06 01 34.3 +1.4
GYA                                S        S        06 08 55.8 +4.9
GYA                                pmax     pmax
      comp=Z,14nm,0.9s
GYA                                LR       LR
      comp=Z,790nm,19.2s
GYA                                LR       LR
      comp=Z,1µm,16.4s
GYA                                LR       LR
      comp=Z,2µm,18.2s
SLVN  Son La           51.25 301   P        P        06 01 31.2 -1.6
SLVN                               IAmb     IAmb     06 01 39.2
      comp=Z,34nm,1.4s
MDJ   Mudanjiang       51.33 342   P        P        06 01 33.4 +0.4
MDJ                                pP       pP       06 01 38.0 -0.6
MDJ                                sP       sP       06 01 39.7 -1.1
MDJ                                S        S        06 08 53.9 +2.8
MDJ                                pmax     pmax
      comp=Z,6.0nm,0.6s
MDJ                                pmax     pmax
      comp=Z,390nm,5.1s
MDJ                                LR       LR
      comp=Z,1µm,25.0s
MDJ                                LR       LR
      comp=Z,1µm,19.2s
MDJ                                LR       LR
      comp=Z,3µm,25.0s
MDJ   Mudanjiang       51.33 342   P        P        06 01 32.6 -0.4
MDJ                                IAmb     IAmb     06 01 35.5
      comp=Z,53nm,1.3s
MDJ   Mudanjiang       51.33 342   P        P        06 01 34.7 +1.7
      comp=Z,28nm,1.0s
CN2   Changchun        52.04 338  eP        P        06 01 36.8 -1.5
CN2                                pmax     pmax
      comp=Z,20nm,0.7s
CN2                                LR       LR
      comp=Z,1µm,16.0s
CN2                                LR       LR
      comp=Z,1µm,16.0s
CN2                                LR       LR
      comp=Z,1µm,16.0s
GSI   Gunungsitoli     52.31 274   P        P        06 01 38.5 -2.4
GSI   Gunungsitoli     52.31 274   P        P        06 01 40.3 -0.6
      comp=Z,47nm,0.9s
GSI   Gunungsitoli     52.31 274   P        P        06 01 42.7 +1.8
BJT   Baijiatuau       53.25 328   P        P        06 01 46.4 -0.9
BJT                                pmax     pmax
      comp=Z,24nm,1.2s
BJT                                MLR      MLR
      comp=Z,2µm,19.0s
BJT   Baijiatuau       53.25 328   P        P        06 01 46.4 -0.9
BJT   Baijiatuau       53.25 328   IAMs_20  IAMs_20  06 26 10.9
      comp=Z,2µm,19.0s
BJI   Beijing          53.27 328   P        P        06 01 46.2 -1.2
BJI                                S        S        06 09 16.5 -1.3
BJI                                pmax     pmax
      comp=Z,21nm,1.9s
BJI                                pmax     pmax
      comp=Z,320nm,5.5s
BJI                                LR       LR
      comp=Z,2µm,17.7s
BJI                                LR       LR
      comp=Z,1µm,16.7s
BJI                                LR       LR
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	comp=Z,3µm,17.9s						
LHMI	**Lhok Sumawe**	**53.41**	**279**	P	**P**	**06 01 48.0**	**-1.0**
XAN	**Xi'an**	**53.68**	**318**	P	**P**	**06 01 50.0**	**-0.7**
XAN				pP	pwP	06 01 59.0	-0.4
XAN				sP	sP	06 02 03.7	+5.2
XAN				pmax	pmax		
	comp=Z,27nm,1.3s						
XAN				pmax	pmax		
	comp=Z,390nm,6.1s						
XAN				LR	LR		
	comp=Z,890nm,21.3s						
XAN				LR	LR		
	comp=Z,1µm,17.9s						
XAN				LR	LR		
	comp=Z,2µm,19.9s						
TIY	**Taiyuan**	**53.75**	**323**	*e*P	P	06 02 02.3	+11
TIY				S	**S**	**06 09 23.1**	**-1.6**
TIY				pmax	pmax		
	comp=Z,220nm,5.0s						
TIY				LR	LR		
	comp=N,3µm,22.2s						
TIY				LR	LR		
	comp=E,760nm,12.2s						
TIY				LR	LR		
	comp=Z,2µm,21.2s						
KMI	**Kunming**	**53.79**	**305**	⇑P	**P**	**06 01 53.4**	**+1.6**
KMI				pP	pP	06 01 55.3	-2.2
KMI				S	**S**	**06 09 29.4**	**+3.5**
KMI				pmax	pmax		
	comp=Z,23nm,1.1s						
KMI				pmax	pmax		
	comp=Z,350nm,12.4s						
KMI				LR	LR		
	comp=Z,620nm,19.7s						
KMI				LR	LR		
	comp=Z,640nm,18.2s						
KMI				LR	LR		
	comp=Z,1µm,20.4s						
CM31	**Chiang Mai Arr**	**54.59**	**296**	P	**P**	**06 01 57.0**	**-0.5**
CM31				IAmb	IAmb	06 02 04.9	
	comp=Z,26nm,0.9s						
CMAR	**Chiang Mai Arr**	**54.59**	**296**	P	**P**	**06 01 57.2**	**-0.3**
	comp=Z,14nm,1.0s,baz=108,slow=5.5,SNR=46						
CMAR				LR	LR	06 25 43.9	
	comp=Z,485nm,19.6s,baz=140,slow=37						
TYV	**Tymovskoe**	**54.65**	**355**	*e*P	**P**	**06 01 56.3**	**-1.1**
TYV				*e*S	**S**	**06 09 36.6**	**+0.4**
TYV				pmax	pmax		
	comp=Z,27nm,1.2s						
TYV				pmax	pmax		
	comp=Z,400nm,3.7s						
TYV				smax	smax		
	comp=N,9.0nm,1.4s						
TYV				smax	smax		
	comp=E,16nm,1.4s						
TYV				smax	smax		
	comp=N,700nm,6.6s						
TYV				smax	smax		
	comp=E,700nm,6.6s						
CHTO	**Chiang Mai**	**54.70**	**296**	P	**P**	**06 01 56.7**	**-1.7**
CHTO				pmax	pmax		
	comp=Z,17nm,1.1s						
CHTO				MLR	MLR		
	comp=Z,1µm,22.0s						
CHTO	**Chiang Mai**	**54.70**	**296**	P	**P**	**06 01 56.7**	**-1.7**
CHTO	**Chiang Mai**	**54.70**	**296**	P	**P**	**06 01 59.9**	**+1.6**
KLR	**Kul'dur**	**54.94**	**346**	*ce*P	**P**	**06 01 58.5**	**-1.0**
KLR				pmax	pmax		
	comp=Z,26nm,1.0s						
CD2	**Chengdu**	**55.66**	**312**	P	**P**	**06 02 05.3**	**+0.2**
CD2				S	**S**	**06 09 52.6**	**+2.1**
CD2				pmax	pmax		
	comp=Z,60nm,0.8s						
CD2				pmax	pmax		
	comp=Z,500nm,9.8s						
CD2				LR	LR		
	comp=Z,2µm,16.9s						
CD2				LR	LR		
	comp=Z,2µm,22.0s						
CD2				LR	LR		
	comp=Z,3µm,21.1s						
HHC	**Hu-ho-hao-te**	**56.34**	**326**	*e*P	**P**	**06 02 10.7**	**+0.8**
HHC				S	**S**	**06 10 06.5**	**+7.0**
HHC				pmax	pmax		
	comp=Z,32nm,1.2s						
HHC				pmax	pmax		
	comp=Z,150nm,6.6s						
HHC				LR	LR		
	comp=Z,2µm,18.4s						
HHC				LR	LR		
	comp=Z,990nm,17.0s						
HHC				LR	LR		
	comp=Z,4µm,17.5s						
PEA0B	**Petropavlovsk-**	**56.97**	**6**	*ce*P	**P**	**06 02 14.0**	**0.0**
PEA0B	**Petropavlovsk-**	**56.97**	**6**	P	**P**	**06 02 13.1**	**-0.8**
PETK	**Petropavlovsk-**	**56.97**	**6**	P	**P**	**06 02 12.2**	**-1.8**
	comp=Z,42nm,1.0s,baz=167,slow=7.3,SNR=16						
PETK				LR	LR	06 24 29.0	
	comp=Z,960nm,19.3s,baz=112,slow=34						
PETK	**Petropavlovsk-**	**56.97**	**6**	P	**P**	**06 02 12.7**	**-1.3**
PETK	**Petropavlovsk-**	**56.97**	**6**	P	**P**	**06 02 12.7**	**-1.3**
BTO	**Baotou**	**57.06**	**325**	*e*P	**P**	**06 02 15.9**	**+0.9**
LZH	**Lanzhou**	**58.27**	**317**	⇓P	**P**	**06 02 25.2**	**+1.5**
LZH				pP	pP	06 02 30.0	+0.6
LZH				sP	pwP	06 02 34.0	+1.5
LZH				PcP	**PcP**	**06 03 17.5**	**+2.7**
LZH				PP	**PP**	**06 04 39.7**	**+6.8**
LZH				S	**S**	**06 10 25.0**	**-0.1**
LZH				sS	sS	06 10 35.8	+1.3
LZH				SS	**SS**	**06 14 20.5**	**+3.1**
LZH				pmax	pmax		
	comp=Z,65nm,1.3s						
LZH				pmax	pmax		
	comp=Z,380nm,6.0s						
LZH				LR	LR		
	comp=Z,1µm,21.7s						
LZH				LR	LR		
	comp=Z,2µm,18.4s						
LZH				LR	LR		
	comp=Z,2µm,20.6s						
HIA	**Hailar**	**58.77**	**338**	*i* P	**P**	**06 02 26.8**	**+0.1**
HIA				pmax	pmax		
	comp=Z,17nm,1.2s						
HIA	**Hailar**	**58.77**	**338**	P	**P**	**06 02 25.6**	**-1.1**
HIA				IAmb	IAmb	06 02 51.6	
	comp=Z,32nm,1.1s						
ZEA	**Zeya**	**60.21**	**345**	*e*P	**P**	**06 02 36.9**	**+0.4**
ZEA				pmax	pmax		
	comp=Z,30nm,1.7s						
ZEA				MLR	MLR		
	comp=E,400nm,20.0s						
ZEA				MLR	MLR		
	comp=N,500nm,15.0s						
ZEA				MLR	MLR		
	comp=Z,700nm,18.0s						
PPT	**Papeete**	**61.03**	**108**	LR	LR	06 23 09.1	
	comp=Z,860nm,21.8s,baz=48,slow=30						
PPT2	**Papeete2**	**61.03**	**108**	*e*LQ	LQ	06 18 04.8	
	comp=Z,4µm,30.2s						
PPT2				*e*LR	LR	06 20 48.9	
	comp=Z,3µm,24.5s						
TBI	**Tubuai**	**61.85**	**114**	*e*LQ	LQ	06 18 28.4	
	comp=Z,2µm,41.0s						
TBI				*e*LR	LR	06 21 08.6	
	comp=Z,2µm,30.8s						
GTA	**Gaotai**	**62.73**	**318**	*e*P	**P**	**06 02 54.6**	**+0.5**
GTA				pP	pP	06 02 58.8	-1.0
GTA				sP	sP	06 03 02.0	+0.1
GTA				sS	S	06 11 26.7	+4.6
GTA				pmax	pmax		
	comp=Z,19nm,1.9s						
GTA				pmax	pmax		
	comp=Z,200nm,6.4s						
GTA				LR	LR		
	comp=Z,880nm,20.7s						
GTA				LR	LR		
	comp=Z,900nm,19.9s						
GTA				LR	LR		
	comp=Z,2µm,21.5s						
MA2	**Magadan**	**63.06**	**1**	*i* P	**P**	**06 02 55.3**	**-0.3**
MA2				pmax	pmax		
	comp=Z,60nm,1.2s						
MA2	**Magadan**	**63.06**	**1**	IAMs_20	IAMs_20	06 21 46.0	
	comp=Z,3µm,22.0s						
ULN	**Ulaanbaatar**	**63.42**	**329**	*ce*P	**P**	**06 02 58.6**	**+0.1**
ULN				pmax	pmax		
	comp=Z,30nm,1.7s						
ULN	**Ulaanbaatar**	**63.42**	**329**	P	**P**	**06 02 57.1**	**-1.4**
ULN				IAmb	IAmb	06 03 19.0	
	comp=Z,28nm,1.5s						
SONM	**Songino Array**	**63.74**	**329**	P	**P**	**06 02 59.7**	**-0.8**
	comp=Z,3.8nm,0.8s,baz=150,slow=6.1,SNR=17						
SONM				LR	LR	06 31 00.7	
	comp=Z,575nm,20.3s,baz=40,slow=36						
SONM	**Songino Array**	**63.74**	**329**	P	**P**	**06 02 59.9**	**-0.6**
SONM				pmax	pmax		
	comp=Z,12nm,1.1s						
SONM	**Songino Array**	**63.74**	**329**	P	**P**	**06 02 59.9**	**-0.6**
LSA	**Lhasa**	**65.04**	**305**	P	**P**	**06 03 11.4**	**+1.5**
LSA				pmax	pmax		
	comp=Z,100nm,1.2s						
SEY	**Seymchan**	**66.45**	**1**	P	**P**	**06 03 17.7**	**0.0**
	comp=Z,19nm,1.0s,baz=172,slow=5.5,SNR=15						
SEY				LR	LR	06 32 48.0	
	comp=Z,687nm,18.2s,baz=160,slow=36						
ZAK	**Zakamensk**	**66.94**	**330**	*e*P	**P**	**06 03 21.2**	**0.0**
ZAK				pmax	pmax		
	comp=Z,29nm,1.2s						
TAPN	**Taplejung**	**67.17**	**302**	*e*P	**P**	**06 03 24.0**	**+0.6**
	comp=Z,131nm,1.1s						
YAK	**Yakutsk**	**67.29**	**350**	P	**P**	**06 03 22.7**	**-0.3**
	comp=Z,6.8nm,0.4s,baz=156,slow=9.7,SNR=6.2						
YAK	**Yakutsk**	**67.29**	**350**	*e*P	**P**	**06 03 23.2**	**+0.2**
YAK				*e*		06 03 50.4	
YAK				*e*		06 05 55.7	
YAK				*e*S	**S**	**06 12 18.7**	**+1.8**
YAK				*e*		06 13 20.0	
YAK				pmax	pmax		
	comp=Z,44nm,1.3s						
YAK				pmax	pmax		
	comp=E,12nm,1.5s						
YAK				pmax	pmax		
	comp=N,14nm,1.3s						
YAK				pmax	pmax		
	comp=Z,225nm,3.9s						
YAK				pmax	pmax		
	comp=E,118nm,4.3s						
YAK				smax	smax		
	comp=N,242nm,4.2s						
YAK				smax	smax		
	comp=E,99nm,3.5s						
YAK				MLR	MLR		
	comp=Z,1µm,19.0s						
YAK				MLR	MLR		
	comp=N,622nm,19.0s						
YAK				MLR	MLR		
	comp=E,648nm,19.0s						
YAK	**Yakutsk**	**67.29**	**350**	P	**P**	**06 03 22.9**	**-0.1**
ODAN	**Odare**	**67.30**	**301**	*e*P	**P**	**06 03 24.5**	**+0.4**
	comp=E,112nm,1.0s						
TLY	**Talaya**	**67.57**	**331**	P	**P**	**06 03 25.2**	**+0.1**
	comp=E,2.5nm,0.4s,baz=177,slow=5.2,SNR=4.4						
TLY	**Talaya**	**67.57**	**331**	*e*P	**P**	**06 03 26.1**	**+1.0**
TLY				pmax	pmax		
	comp=Z,43nm,1.6s						
BOD	**Bodaibo**	**67.66**	**340**	*e*P	**P**	**06 03 24.9**	**-0.6**
BOD				pmax	pmax		
	comp=Z,33nm,1.7s						
RAMN	**Ramite**	**68.00**	**301**	*e*P	**P**	**06 03 28.9**	**+0.3**
	comp=Z,16nm,0.7s						
JIRN	**Jiri**	**68.55**	**301**	*e*P	**P**	**06 03 32.4**	**+0.2**
	comp=Z,40nm,0.7s						
MOY	**Mondy**	**68.86**	**330**	*e*P	**P**	**06 03 33.5**	**+0.2**
MOY				pmax	pmax		
	comp=Z,53nm,1.9s						
GUN	**Gumba**	**68.88**	**302**	*e*P	**P**	**06 03 34.6**	**+0.4**
	comp=Z,135nm,0.9s						
PKI	**Pulchoki**	**69.19**	**301**	*e*P	**P**	**06 03 35.9**	**-0.2**
	comp=Z,143nm,1.2s						
PKIN	**Phulchoki**	**69.20**	**301**	*e*P	**P**	**06 03 35.8**	**-0.3**
	comp=Z,181nm,1.6s						
KKN	**Kakani**	**69.36**	**301**	*e*P	**P**	**06 03 36.9**	**-0.1**
	comp=Z,93nm,1.0s						
DMN	**Daman**	**69.46**	**301**	*e*P	**P**	**06 03 38.1**	**+0.4**
	comp=Z,94nm,0.9s						
PALK	**Pallekele**	**69.69**	**279**	P	**P**	**06 03 39.4**	**+0.3**
PALK				IAmb	IAmb	06 03 53.2	
	comp=Z,21nm,1.1s						
PALK	**Pallekele**	**69.69**	**279**	IAMs_20	IAMs_20	06 30 29.6	
	comp=Z,1µm,19.0s						
GKN	**Gorkha**	**69.97**	**301**	*e*P	**P**	**06 03 40.6**	**-0.1**
	comp=Z,115nm,1.1s						
KOLN	**Koldanda**	**70.79**	**301**	*e*P	**P**	**06 03 45.6**	**-0.2**
	comp=Z,130nm,1.0s						
DANN	**Dangsing**	**70.80**	**302**	*e*P	**P**	**06 03 45.5**	**-0.5**
	comp=Z,95nm,1.0s						
PYUN	**Piuthan**	**71.39**	**301**	*e*P	**P**	**06 03 48.9**	**-0.6**
	comp=Z,137nm,0.9s						
WMQ	**Urumqi**	**72.82**	**318**	*e*P	**P**	**06 03 59.5**	**+2.0**
WMQ				PcP	**PcP**	**06 04 15.1**	**+0.5**
WMQ				S	**SKiKP**	**06 13 28.8**	**-1.6**
WMQ				SS	**SS**	**06 18 00.4**	**-2.6**
WMQ				pmax	pmax		
	comp=Z,29nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,260nm,3.7s						
WMQ				LR	LR		
	comp=Z,1µm,19.5s						
WMQ				LR	LR		
	comp=Z,920nm,16.9s						
WMQ				LR	LR		
	comp=Z,1µm,18.9s						
HYB	**Hyderabad**	**73.19**	**289**	*i* P	**P**	**06 03 59.0**	**-1.1**
VNDA	**Vanda**	**74.08**	**177**	P	**P**	**06 04 04.0**	**-0.3**
	comp=Z,5.5nm,0.9s,baz=336,slow=6.7,SNR=15						
VNDA				LR	LR	06 32 45.8	
	comp=Z,926nm,21.5s,baz=105,slow=33						
VNDA	**Vanda**	**74.08**	**177**	P	**P**	**06 04 04.9**	**+0.7**
VNDA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
VNDA	**Vanda**	**74.08**	**177**	P	**P**	**06 04 04.9**	**+0.7**
DGZ	**Jazzator, Alta**	**75.32**	**324**	*i* P	**P**	**06 04 11.5**	**-0.6**
DGZ				pmax	pmax		
	comp=Z,15nm,1.0s						
TIXI	**Tiksi**	**76.40**	**353**	P	**P**	**06 04 18.2**	**+0.6**
TIXI				pmax	pmax		
	comp=Z,10.0nm,1.1s						
TIXI	**Tiksi**	**76.40**	**353**	P	**P**	**06 04 18.2**	**+0.6**
SVW2	**Sparrevohn**	**77.03**	**24**	IAmb	IAmb	06 04 28.0	
	comp=Z,38nm,1.2s						
O19K	**Port Alsworth**	**77.07**	**25**	P	**P**	**06 04 21.2**	**-0.4**
	baz=238						
P19K	**Oil Pt**	**77.25**	**26**	P	**P**	**06 04 22.0**	**-0.7**
	baz=239						
N19K	**Bonanza Creek**	**77.33**	**25**	IAmb	IAmb	06 04 45.6	
	comp=Z,28nm,1.1s						
MK31	**Makanchi Array**	**77.44**	**319**	*i* P	**P**	**06 04 24.5**	**+0.4**
MKAR	**Makanchi Array**	**77.44**	**319**	P	**P**	**06 04 23.5**	**-0.5**
	comp=Z,1.5nm,0.8s,baz=103,slow=6.5,SNR=4.8						
MKAR				LR	LR	06 38 17.6	
	comp=Z,1µm,19.9s,baz=352,slow=36						
MKAR	**Makanchi Array**	**77.44**	**319**	P	**P**	**06 04 24.0**	**-0.1**
MKAR	**Makanchi Array**	**77.44**	**319**	P	**P**	**06 04 24.0**	**-0.1**
MAKZ	**Makanchi**	**77.65**	**319**	P	**P**	**06 04 25.0**	**-0.2**
MAKZ				pmax	pmax		
	comp=Z,30nm,1.4s						
MAKZ	**Makanchi**	**77.65**	**319**	P	**P**	**06 04 25.0**	**-0.2**
MAKZ				IAmb	IAmb	06 04 32.4	
	comp=Z,30nm,1.4s						
POO	**Poona**	**77.78**	**290**	*e*P	**P**	**06 04 25.0**	**-1.5**
TTA	**Tatalina**	**77.88**	**22**	IAmb	IAmb	06 04 29.4	
	comp=Z,36nm,1.4s						
TTA	**Tatalina**	**77.88**	**22**	P	**P**	**06 04 26.1**	**-0.1**
	baz=236						
L19K	**White Mountain**	**77.92**	**23**	P	**P**	**06 04 26.3**	**-0.1**
L19K	**White Mountain**	**77.92**	**23**	P	**P**	**06 04 27.3**	**+0.9**
	baz=237						
M19K	**Big River Lodg**	**77.95**	**24**	IAmb	IAmb	06 04 34.6	
	comp=Z,41nm,1.2s						
M19K	**Big River Lodg**	**77.95**	**24**	P	**P**	**06 04 28.1**	**+1.6**
	baz=238						
L20K	**Farewell, AK**	**78.46**	**23**	P	**P**	**06 04 30.3**	**+0.9**
	baz=238						
ZALV	**Zalesovo Beam**	**78.50**	**327**	P	**P**	**06 04 27.9**	**-1.8**
	comp=Z,5.1nm,0.8s,baz=113,slow=3.6,SNR=15						
ZALV				LR	LR	06 39 21.1	
	comp=Z,1µm,20.1s,baz=60,slow=36						
ZALV	**Zalesovo Beam**	**78.50**	**327**	P	**P**	**06 04 28.9**	**-0.8**
ZALV	**Zalesovo Beam**	**78.50**	**327**	P	**P**	**06 04 28.9**	**-0.8**
GCSA	**Galena City Sc**	**78.60**	**21**	P	**P**	**06 04 31.1**	**+1.1**
	baz=235						
RDOG	**Red Dog Mine**	**78.76**	**16**	IAMs_20	IAMs_20	06 32 46.1	
	comp=Z,2µm,21.0s						
RDOG	**Red Dog Mine**	**78.76**	**16**	P	P	06 04 36.6	+5.8
	baz=228						
J20K	**Nowinta River**	**79.27**	**22**	IAmb	IAmb	06 04 42.6	
	comp=Z,54nm,1.3s						
J20K	**Nowinta River**	**79.27**	**22**	P	**P**	**06 04 34.1**	**+0.3**
	baz=238						
PPLA	**Purkeypile**	**79.35**	**23**	IAmb	IAmb	06 04 45.7	
	comp=Z,37nm,1.4s						
RC01	**Rabbit Creek A**	**79.47**	**26**	P	**P**	**06 04 34.2**	**-0.7**
RC01				IAmb	IAmb	06 04 41.9	
	comp=Z,56nm,1.3s						
CAST	**Castle Rocks**	**79.65**	**23**	IAmb	IAmb	06 04 53.2	
	comp=Z,34nm,1.3s						
CHUM	**Lake Minchumin**	**79.80**	**22**	P	**P**	**06 04 36.7**	**+0.1**
	baz=239						
GHO	**Glory Hole Cre**	**80.14**	**25**	IAmb	IAmb	06 04 43.4	
	comp=Z,48nm,1.3s						
KTH	**Kantishna Hill**	**80.17**	**23**	P	**P**	**06 04 37.6**	**-1.2**
KTH				IAmb	IAmb	06 05 06.1	
	comp=Z,55nm,1.4s						
TRF	**Thorofare Moun**	**80.37**	**23**	P	**P**	**06 04 39.0**	**-1.0**
	baz=241						
SML	**Sawmill**	**80.41**	**25**	P	**P**	**06 04 39.7**	**-0.3**
SML				IAmb	IAmb	06 05 05.1	
	comp=Z,46nm,1.0s						
SML	**Sawmill**	**80.41**	**25**	P	**P**	**06 04 40.4**	**+0.4**
	baz=243						
BPAW	**Bear Paw Mtn.**	**80.42**	**23**	IAmb	IAmb	06 04 57.8	
	comp=Z,26nm,1.3s						
H21K	**Melozitna Rive**	**80.54**	**21**	P	**P**	**06 04 41.0**	**+0.4**
	baz=239						
I21K	**Tanana**	**80.59**	**21**	IAmb	IAmb	06 04 59.3	
	comp=Z,40nm,1.2s						
I21K	**Tanana**	**80.59**	**21**	P	**P**	**06 04 41.4**	**+0.6**
	baz=239						
NIL	**Nilore**	**80.78**	**305**	P	**P**	**06 04 42.5**	**-0.1**
NIL				pmax	pmax		
	comp=Z,60nm,1.0s						
NIL				MLR	MLR		
	comp=Z,1µm,21.0s						
NIL	**Nilore**	**80.78**	**305**	P	**P**	**06 04 42.5**	**-0.1**
NIL	**Nilore**	**80.78**	**305**	IAMs_20	IAMs_20	06 40 24.9	
	comp=Z,1µm,21.0s						
RND	**Reindeer**	**80.92**	**24**	IAmb	IAmb	06 05 04.7	
	comp=Z,36nm,1.1s						
MLY	**Manley**	**80.97**	**22**	IAmb	IAmb	06 04 49.4	
	comp=Z,18nm,0.8s						
MLY	**Manley**	**80.97**	**22**	P	**P**	**06 04 42.4**	**-0.6**
	baz=241						
KURK	**Kurchatov**	**80.98**	**322**	*ce*P	**P**	**06 04 42.1**	**-1.1**
KURK				pmax	pmax		
	comp=Z,26nm,1.7s						
KURK	**Kurchatov**	**80.98**	**322**	P	**P**	**06 04 43.3**	**+0.1**
MCK	**McKinley**	**81.04**	**23**	IAmb	IAmb	06 04 48.1	
	comp=Z,39nm,1.0s						
MCK	**McKinley**	**81.04**	**23**	P	**P**	**06 04 42.4**	**-0.9**
	baz=242						
KLU	**Klutina**	**81.31**	**26**	P	**P**	**06 04 44.9**	**0.0**
KLU				IAmb	IAmb	06 05 10.4	
	comp=Z,36nm,1.1s						
KLU	**Klutina**	**81.31**	**26**	P	**P**	**06 04 45.7**	**+0.8**
	baz=246						
NEA2	**Nenana**	**81.39**	**22**	IAmb	IAmb	06 05 12.4	
	comp=Z,23nm,1.2s						
NEA2	**Nenana**	**81.39**	**22**	P	**P**	**06 04 44.0**	**-1.2**
	baz=242						
I23K	**Minto, Yukon-K**	**81.54**	**22**	P	**P**	**06 04 45.9**	**+0.1**
	baz=242						
AAK	**Ala-Archa**	**81.64**	**314**	P	**P**	**06 04 45.1**	**-2.1**
AAK				pmax	pmax		
	comp=Z,25nm,1.1s						
WRH	**Wood River Hil**	**81.71**	**23**	IAmb	IAmb	06 05 00.9	
	comp=Z,19nm,1.0s						
H23K	**Yukon River**	**81.79**	**21**	P	**P**	**06 04 48.0**	**+0.7**
	baz=242						
MDM	**Murphy Dome**	**81.88**	**22**	P	**P**	**06 04 46.0**	**-1.7**
CCB	**Clear Creek Bu**	**81.90**	**23**	IAmb	IAmb	06 05 15.1	
	comp=Z,25nm,1.2s						
N25K	**Chitina, Valde**	**81.93**	**26**	P	**P**	**06 04 48.6**	**+0.5**
	baz=247						
TCOL	**CIGO, UAF Yank**	**81.98**	**22**	IAmb	IAmb	06 04 57.4	
	comp=Z,22nm,0.8s						
COLA	**College**	**81.98**	**22**	*i* P	**P**	**06 04 47.3**	**-0.9**
COLA				pmax	pmax		
	comp=Z,17nm,0.8s						
COLA	**College**	**81.98**	**22**	P	**P**	**06 04 47.1**	**-1.1**
COLA				IAmb	IAmb	06 04 57.4	
	comp=Z,22nm,0.8s						
PAX	**Paxson**	**82.11**	**25**	P	**P**	**06 04 48.1**	**-1.0**
PAX				pmax	pmax		
	comp=Z,15nm,1.2s						
PAX	**Paxson**	**82.11**	**25**	P	**P**	**06 04 48.1**	**-1.0**
COLD	**Coldfoot**	**82.24**	**20**	IAmb	IAmb	06 04 54.5	
	comp=Z,28nm,1.4s						
COLD	**Coldfoot**	**82.24**	**20**	P	**P**	**06 04 50.8**	**+1.2**
	baz=241						
IL31		**82.31**	**23**	P	**P**	**06 04 47.4**	**-2.5**
IL31				IAmb	IAmb	06 04 53.9	
	comp=Z,14nm,0.8s						
ILAR	**Eielson Array**	**82.31**	**23**	P	**P**	**06 04 47.6**	**-2.3**
	comp=Z,3.8nm,0.8s,baz=247,slow=5.2,SNR=42						
ILAR				LR	LR	06 42 46.0	
	comp=Z,290nm,18.1s,baz=224,slow=37						
H24K	**Noodor Dome**	**82.41**	**22**	P	**P**	**06 04 50.3**	**-0.2**
	baz=243						
A21K	**Barrow**	**82.52**	**15**	IAMs_20	IAMs_20	06 38 14.5	
	comp=Z,1µm,20.0s						
DOT	**Dot Lake**	**82.97**	**24**	P	**P**	**06 04 52.2**	**-1.3**
DOT				IAmb	IAmb	06 04 55.9	
	comp=Z,44nm,1.4s						
L26K	**Log Cabin Wild**	**83.02**	**25**	IAmb	IAmb	06 04 58.9	
	comp=Z,13nm,1.1s						
L26K	**Log Cabin Wild**	**83.02**	**25**	P	**P**	**06 04 53.4**	**-0.4**
	baz=248						
SCRK	**Sand Creek**	**83.12**	**24**	P	**P**	**06 04 53.8**	**-0.6**
	baz=247						
TOLK	**Toolik Lake Re**	**83.14**	**19**	P	**P**	**06 04 55.4**	**+1.1**
	baz=241						
PRP	**Porcupine Dome**	**83.14**	**22**	IAMs_20	IAMs_20	06 36 40.4	
	comp=Z,1µm,20.0s						
CTGM	**Chitina Glacie**	**83.16**	**27**	IAMs_20	IAMs_20	06 36 41.9	
	comp=Z,909nm,20.0s						
M27K	**Edge Creek, AK**	**83.41**	**26**	P	**P**	**06 04 56.0**	**+0.1**
	baz=249						
J26L	**Joseph Creek**	**83.50**	**24**	P	**P**	**06 04 55.5**	**-0.8**
	baz=247						
L27K	**Beaver Creek,**	**83.68**	**25**	P	**P**	**06 04 56.8**	**-0.4**
	baz=249						
FYU	**Fort Yukon**	**83.69**	**21**	IAmb	IAmb	06 05 02.5	
	comp=Z,17nm,1.0s						
BCAR	**Beaver Creek A**	**83.70**	**25**	P	**P**	**06 04 56.4**	**-0.9**
BTK	**Batken**	**83.85**	**311**	IAmb	IAmb	06 05 14.1	
	comp=Z,38nm,1.4s						
BVCY	**Beaver Creek**	**83.87**	**26**	P	**P**	**06 04 59.3**	**+1.1**
	baz=250						
NRIK	**Noril'sk**	**83.91**	**342**	P	**P**	**06 04 57.2**	**-1.0**
	comp=Z,17nm,1.0s,baz=126,slow=4.6,SNR=27						
NRIK				LR	LR	06 39 48.1	
	comp=Z,1µm,21.4s,baz=106,slow=34						
NRIK	**Noril'sk**	**83.91**	**342**	*ce*P	**P**	**06 04 57.1**	**-1.0**
NRIK				pmax	pmax		
	comp=Z,72nm,1.1s						
GAR	**Garm**	**84.05**	**310**	IAmb	IAmb	06 05 13.0	
	comp=Z,26nm,1.0s						
BMAR	**Burnt Mountain**	**84.28**	**21**	P	**P**	**06 04 59.9**	**-0.3**
EGAK	**Eagle**	**84.56**	**24**	IAmb	IAmb	06 05 30.3	
	comp=Z,27nm,1.2s						
EGAK	**Eagle**	**84.56**	**24**	P	**P**	**06 05 02.6**	**+1.0**
	baz=250						
KK31	**Karatay Array**	**84.60**	**314**	P	**P**	**06 05 02.5**	**+0.2**
KK31				pmax	pmax		
	comp=Z,78nm,1.4s						
KK31	**Karatay Array**	**84.60**	**314**	P	**P**	**06 05 02.5**	**+0.2**
KKAR	**Karatay Array**	**84.60**	**314**	P	**P**	**06 05 02.0**	**-0.3**
KKAR	**Karatay Array**	**84.60**	**314**	P	**P**	**06 05 02.0**	**-0.3**
HYT	**Haines Junctio**	**84.89**	**28**	IAmb	IAmb	06 05 06.8	
	comp=Z,23nm,1.2s						
DAWY	**Dawson**	**85.05**	**25**	P	**P**	**06 05 03.9**	**-0.2**
DAWY				IAmb	IAmb	06 05 09.6	
	comp=Z,25nm,1.1s						
DAWY	**Dawson**	**85.05**	**25**	P	**P**	**06 05 05.0**	**+0.9**
	baz=251						
MAW	**Mawson**	**85.41**	**203**	P	**P**	**06 05 04.6**	**-1.2**
	comp=Z,10nm,1.0s,baz=82,slow=5.2,SNR=11						
MAW				LR	LR	06 40 44.5	
	comp=Z,2µm,21.4s,baz=110,slow=34						
MAW	**Mawson**	**85.41**	**203**	P	**P**	**06 05 05.8**	**-0.1**

	baz=86,SNR=14						
MAW	Mawson	85.41	203	P	P	06 05 05.7	-0.1
MAW				pmax	pmax		
	comp=Z,5.0nm,1.1s						
MAW	Mawson	85.41	203	P	P	06 05 05.7	-0.1
I29M	Ogilvie Camp,	85.90	24	P	P	06 05 08.3	0.0
	baz=252						
QSPA	South Pole Qui	86.28	180	P	P	06 05 09.3	-1.1
	comp=Z,3.1nm,0.8s,baz=317,slow=2.1,SNR=7.9						
QSPA	South Pole Qui	86.28	180	P	P	06 05 09.8	-0.6
QSPA				IAmb	IAmb	06 05 16.6	
	comp=Z,17nm,1.4s						
MAYO	Mayo, Yukon	86.39	26	P	P	06 05 11.7	+1.0
	baz=254						
BRVK	Borovoye	86.55	324	*ce*P	P	06 05 09.6	-2.1
BRVK				pmax	pmax		
	comp=Z,26nm,2.5s						
BRVK	Borovoye	86.55	324	P	P	06 05 11.2	-0.5
EPYK	Eagle Plains	86.82	23	P	P	06 05 12.7	-0.1
	baz=254						
FARO	Faro, Yukon	87.18	27	P	P	06 05 14.8	+0.1
	baz=257						
INK	Inuvik	88.52	21	P	P	06 05 19.6	-1.3
	comp=Z,7.8nm,1.0s,baz=231,slow=4.5,SNR=9.1						
INK	Inuvik	88.52	21	IAmb	IAmb	06 05 48.8	
	comp=Z,28nm,1.4s						
INK	Inuvik	88.52	21	P	P	06 05 20.7	-0.1
	baz=256						
B05A	Bryant	91.52	42	P	P	06 05 38.7	+3.4
	baz=266						
I05D	Terrebonne, OR	91.80	46	P	P	06 05 41.4	+4.6
	baz=267						
J05D	Fort Rock, OR	91.82	47	P	P	06 05 41.0	+4.0
	baz=267						
MOD	Modoc Plateau	92.43	48	IAMs_20	IAMs_20	06 39 37.1	
	comp=Z,996nm,20.0s						
SVE	Sverdlovsk	92.52	327	*e*P	P	06 05 39.4	-0.3
SVE				pmax	pmax		
	comp=Z,20nm,1.8s						
ABKAR	Akbulak array	92.58	319	P	P	06 05 38.4	-1.8
I07A	Izee	93.11	46	P	P	06 05 43.2	+0.3
I07A				IAmb	IAmb	06 06 09.7	
	comp=Z,16nm,1.5s						
B08A	Colville Reser	93.37	42	IAmb	IAmb	06 06 09.3	
	comp=Z,13nm,1.5s						
GEYT	Alibeck	93.47	308	LR	LR	06 50 27.5	
	comp=Z,794nm,20.0s,baz=300,slow=37						
ARU	Arti	93.65	326	*d i*P	P	06 05 44.0	-1.0
ARU						06 09 28.0	
ARU				S	SKSac	06 16 18.0	-0.4
ARU				pmax	pmax		
	comp=Z,8.0nm,1.1s						
SYO	Syowa Base	93.68	200	⇓*e*P	P	06 05 46.6	+1.7
NVAR	Mina Array Bea	93.83	52	P	P	06 05 45.9	-0.6
	comp=Z,2.0nm,1.1s,baz=260,slow=5.6,SNR=7.3						
NVAR				PP	PP	06 09 38.7	+6.5
	comp=Z,0.9nm,0.9s,baz=246,slow=6.3,SNR=4.4						
NVAR				LR	LR	06 43 20.1	
	comp=Z,686nm,19.0s,baz=273,slow=32						
NVAR	Mina Array Bea	93.83	52	P	P	06 05 47.3	+0.7
BMO	Blue Mountains	94.70	45	P	P	06 05 49.2	-1.0
BMO				pmax	pmax		
	comp=Z,14nm,1.5s						
BMO	Blue Mountains	94.70	45	P	P	06 05 49.2	-1.0
BMO				IAmb	IAmb	06 06 14.3	
	comp=Z,14nm,1.4s						
NEW	Newport	94.84	42	P	P	06 05 48.2	-2.5
NEW				pmax	pmax		
	comp=Z,11nm,1.2s						
NEW	Newport	94.84	42	P	P	06 05 48.2	-2.5
NEW				IAmb	IAmb	06 06 07.0	
	comp=Z,11nm,1.1s						
PLID	Pearl Lake	95.63	45	IAMs_20	IAMs_20	06 50 54.3	
	comp=Z,969nm,18.0s						
YKA	Yellowknife Ar	95.88	28	P	P	06 05 54.5	-0.6
	comp=Z,5.6nm,0.7s,baz=274,slow=3.5,SNR=13						
YKA				LR	LR	06 46 27.3	
	comp=Z,445nm,20.5s,baz=0.0,slow=34						
ELK	Elko	96.22	50	IAMs_20	IAMs_20	06 47 08.6	
	comp=Z,975nm,20.0s						
BOZ	Bozeman (W)	98.69	45	P	Pdif	06 06 08.8	+0.4
	baz=274						
HWUT	Hardware Ranch	98.97	49	IAMs_20	IAMs_20	06 48 16.1	
	comp=Z,709nm,19.0s						
AHID	Auburn Hatcher	99.25	47	IAMs_20	IAMs_20	06 40 45.3	
	comp=Z,1μm,22.0s						
PDAR	Pinedale Array	100.38	47	P	Pdif	06 06 16.3	+0.2
	comp=Z,0.4nm,0.6s,baz=172,slow=1.0,SNR=5.4						
PDAR				PP	PP	06 10 24.1	+1.6
	comp=Z,0.8nm,0.8s,baz=250,slow=4.3,SNR=3.7						
SNAA	Sanae	102.70	189	Pdiff	Pdif	06 06 25.2	-0.3
EPT	El Paso	103.66	58	IAMs_20	IAMs_20	06 43 56.5	
	comp=Z,831nm,21.0s						
VNA3	Neumayer Olymp	104.00	187	Pdiff	Pdif	06 06 31.4	+0.1
TXAR	Lajitas Array	106.30	61	PP	PP	06 11 12.8	+5.8
	comp=Z,0.9nm,1.0s,baz=261,slow=6.2,SNR=5.3						
MNK	Minsk	111.00	328	*i* P	Pdif	06 07 04.7	+2.0
MNK				*i*		06 18 08.5	
MNK				*i* PS	PS	06 21 06.3	-5.2
MNK				*i* SS	SS	06 27 07.2	-3.0
MNK				pmax	pmax		
	comp=N,14nm,0.9s						
MNK				pmax	pmax		
	comp=E,2.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MNK				MLR	MLR		
	comp=N,108nm,16.0s						
MNK				MLR	MLR		
	comp=E,97nm,16.0s						
MNK				MLR	MLR		
	comp=Z,886nm,16.0s						
MNK	Minsk	111.00	328	*i* P	Pdif	06 07 04.8	+2.1
	comp=E,2.0nm,0.9s						
MNK				*i* P	Pdif	06 07 04.8	+2.1
	comp=N,14nm,0.9s						
MNK				*i* P	Pdif	06 07 04.8	+2.1
	comp=Z,6.0nm,0.9s,baz=65						
MNK				*i* PP	PP	06 11 34.4	-5.7
MNK				*i* PPP	PPP	06 13 54.6	
MNK				*i* SKP	SKPdf	06 14 31.8	-4.7
MNK				*i* PKS	PKSdf	06 14 33.0	-5.3
MNK				*i* SKS	SKSdf	06 18 08.5	-4.4
MNK				*i* PS	PS	06 21 06.3	-5.2
MNK				*i* SS	SS	06 27 07.3	-2.9
MNK				*i* LQ	LQ	06 48 24.6	
MNK				*i* LR	LR	06 52 39.5	
MNK				*i* LRM	MLR	06 58 08.2	
	comp=N,108nm,16.1s						
MNK				*i* LRM	MLR	06 58 11.5	
	comp=E,97nm,16.1s						
MNK				*i* LRM	MLR	06 58 12.8	
	comp=Z,886nm,16.1s						
FURI	Furi	111.30	278	IAMs_20	IAMs_20	06 56 09.4	
	comp=Z,799nm,20.0s						
X40A	Basin Creek Fa	114.60	54	IAMs_20	IAMs_20	06 54 16.4	
	comp=Z,924nm,20.0s						
CCM	Cathedral Cave	114.95	50	IAMs_20	IAMs_20	06 55 30.2	
	comp=Z,680nm,20.0s						
MLR	Muntele Rosu	115.79	319	IAMs_20	IAMs_20	07 02 31.0	
	comp=Z,759nm,20.0s						
PSZ	Piszkesteto	118.47	324	IAMs_20	IAMs_20	07 07 12.2	
	comp=Z,869nm,19.0s						
BRAL	Brewton	120.13	56	IAMs_20	IAMs_20	07 02 00.2	
	comp=Z,778nm,21.0s						
DIVS	Divibare	120.22	320	IAMs_20	IAMs_20	07 06 57.1	
	comp=Z,627nm,20.0s						
CLL	Collm	120.35	330	*e*PKIKP	PKiKP	06 11 20.0	-0.1
CLL				MLR	MLR		
	comp=Z,900nm,20.4s						
CLL	Collm	120.35	330	*e*PKPdf	PKiKP	06 11 20.0	-0.1
CLL				*e*SS	SS	06 29 18.0	+5.5
CLL				*e*SSS	SSS	06 33 54.0	
CLL				Lm	MLR	07 03 00.0	
	comp=N,500nm,20.0s						
CLL				Lm	MLR	07 03 00.0	
	comp=E,600nm,21.0s						
CLL				Lm	MLR	07 03 00.0	
	comp=Z,900nm,20.4s						
CONA	Conrad Observa	120.78	326	*e*P	PKiKP	06 11 24.1	+2.9
	comp=Z,3.1nm,1.3s						
KHC	Kasperske Hory	121.35	328	*e*PKIKP	PKiKP	06 11 23.0	+0.8
KHC				MLR	MLR		
	comp=Z,1μm,19.9s						
KHC	Kasperske Hory	121.35	328	*e*PKP	PKiKP	06 11 23.0	+0.8
KHC				AMS	AMS	07 04 00.0	
	comp=Z,1μm,19.9s						
M53A	WI Miller and	121.37	43	IAMs_20	IAMs_20	07 02 06.2	
	comp=Z,637nm,20.0s						
GERES	GERESS Array B	121.45	327	PKP	PKPdf	06 11 21.6	-0.7
	comp=Z,1.1nm,0.6s,baz=90,slow=3.0,SNR=2.3						
PDG	Podgorica	121.46	319	IAMs_20	IAMs_20	07 08 45.0	
	comp=Z,578nm,20.0s						
SOKA	Soboth	121.94	325	*e*P	PKiKP	06 11 26.6	+3.1
	comp=Z,2.6nm,0.9s						
M54A	Oil Creek Stat	122.02	42	IAMs_20	IAMs_20	07 05 15.4	
	comp=Z,770nm,20.0s						
OBKA	Obir	122.31	325	*e*P	PKiKP	06 11 27.6	+3.4
	comp=Z,3.3nm,0.9s						
TGUH	Tegucigalpa,Un	122.92	76	IAMs_20	IAMs_20	06 56 20.5	
	comp=Z,723nm,20.0s						
ABTA	Abfaltersbach	123.33	326	*e*P	PKPdf	06 11 24.6	-1.4
	comp=Z,1.9nm,0.6s						
WTTA	Wattenberg	123.51	327	*e*P	PKiKP	06 11 29.8	+3.1
	comp=Z,2.1nm,0.6s						
MOTA	Moosalm	123.75	327	*e*P	PKiKP	06 11 31.4	+4.3
	comp=Z,4.0nm,0.7s						
STU	Stuttgart	123.85	330	IAMs_20	IAMs_20	07 05 44.8	
	comp=Z,841nm,21.0s						
BINY	Binghamton	124.11	40	IAMs_20	IAMs_20	07 03 56.2	
	comp=Z,832nm,20.0s						
NHSC	New Hope	125.07	52	IAMs_20	IAMs_20	06 57 38.3	
	comp=Z,913nm,22.0s						
AQU	L'Aquila	125.26	321	IAMs_20	IAMs_20	07 07 31.3	
	comp=Z,742nm,22.0s						
CNNC	Cliffs of the	125.99	48	IAMs_20	IAMs_20	07 04 17.2	
	comp=Z,784nm,21.0s						
OTAV	Otavalo	131.78	93	IAMs_20	IAMs_20	06 59 10.7	
	comp=Z,616nm,20.0s						
ROSC	El Rosal	136.11	87	PKP	PKiKP	06 11 52.4	-0.8
	comp=Z,6.0nm,0.7s,baz=90,slow=11,SNR=5.7						
LPAZ	La Paz	137.68	119	PKhKP	PKPpre	06 11 47.2	
	comp=Z,0.9nm,0.7s,baz=236,slow=3.0,SNR=5.1						
LPAZ				PKP	PKPdf	06 11 55.2	+0.6
	comp=Z,1.3nm,0.8s,baz=87,slow=4.5,SNR=4.5						
SAML	Samuel	144.92	111	IAMs_20	IAMs_20	07 10 35.9	
	comp=Z,356nm,19.0s						
SEUS	St. Eustatius	145.16	64	IAMs_20	IAMs_20	07 20 40.5	
	comp=Z,687nm,22.0s						
AQDB	Aquidauana	145.41	135	PKPdf	PKPbc	06 12 06.5	-1.0
TORD	Torodi Ar. Bea	147.00	289	PKPbc	PKPbc	06 12 11.8	-0.6
	comp=Z,13nm,0.9s,baz=53,slow=2.2,SNR=27						
TORD	Torodi Ar. Bea	147.00	289		PKPdf	06 12 11.0	+0.6
BDFB	Brasilia	154.02	138	PKPab	PKPab	06 12 40.6	-2.2
	comp=Z,4.5nm,0.8s,baz=207,slow=1.6,SNR=5.2						
KIC	Kosan Boka	154.38	277	*e*PKIKP	PKiKP	06 12 35.8	+5.5
	comp=Z,32nm,1.2s						
DBIC	Dimbokro	154.47	278	PKPab	PKPab	06 12 43.7	-1.1
	comp=Z,6.7nm,0.8s,baz=85,slow=5.1,SNR=5.4						
TIC	Toumodi	154.64	278	*e*PKIKP	PKiKP	06 12 36.1	+5.3
LIC	Lamto	154.68	277	*e*PKIKP	PKiKP	06 12 35.4	+4.5
	comp=Z,46nm,1.5s						

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*IDC **04** 05:52:33.5±1.9, 8°.19S×125°.51E, h0^{km}, mb4.0/1, mb1 4.0/4, mb1mx3.7/45, mbtmp3.9/4, ML3.6/3, Error ellipse: s-maj=51.4km s-min=30.9km az=74.0*

ISC 04 05:52:38.5±1.5**, 8°.4S**±0°.1×**125°.6E**±0°.1**, h35^{km}, n5,** σ**1^{s}38**/6**,**
Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	2.60	226	Pn	Pn	05 53 18.4	+0.3
	9.8nm,0.3s,baz=45,slow=7.1,SNR=2.0						
BATI				Sn	Sn	05 53 48.6	+0.1
	11nm,0.3s,baz=336,slow=20,SNR=1.9						
FITZ	Fitzroy Crossi	9.65	180	Sn	Sn	05 56 40.4	-1.7
	0.9nm,0.3s,baz=246,slow=8.9,SNR=2.8						
WRA	Warramunga Arr	14.28	144	Pn	Pn	05 55 58.5	+0.2
	0.4nm,0.3s,baz=319,slow=12,SNR=7.7						
ASAR	Alice Springs	17.16	153	P	P	05 56 38.4	+1.4
	0.2nm,0.3s,baz=320,slow=11,SNR=3.0						
MKAR	Makanchi Array	67.07	329	P	P	06 03 27.5	-0.8
	1.2nm,0.7s,baz=132,slow=8.2,SNR=5.3						

IDC 04 05:57:35.5±2.0**, 3°.66S**×**149°.54E, h0^{km}, mb4.0**/4**,**
mb1 4.3/4**, mb1mx3.8**/40**, mbtmp4.1**/4**, Error ellipse:**
s-maj=124.0km s-min=28.1km az=125.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.95	221	P	P	06 02 30.6	-0.4
	3.8nm,0.9s,baz=42,slow=11,SNR=2.1						
ASAR	Alice Springs	24.98	216	P	P	06 03 00.1	-1.0
	1.6nm,0.7s,baz=50,slow=8.1,SNR=4.3						
FITZ	Fitzroy Crossi	27.45	237	P	P	06 03 25.3	+1.8
	7.8nm,0.8s,baz=65,slow=12,SNR=2.6						
ILAR	Eielson Array	82.35	23	P	P	06 09 59.3	+0.3
	0.8nm,0.7s,baz=249,slow=5.4,SNR=5.7						
TORD	Torodi Ar. Bea	146.87	288	PKPbc	PKPdf	06 17 19.4	+0.3
	1.2nm,0.8s,baz=76,slow=4.0,SNR=3.7						

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*IDC **04** 06:02:24.0±2.0, 8°.27S×125°.38E, h0^{km}, mb3.7/1, mb1 4.0/5, mb1mx3.7/39, mbtmp3.8/5, ML3.8/4, Error ellipse: s-maj=39.7km s-min=27.2km az=88.0*

ISC 04 06:02:29.3±1.5**, 8°.4S**±0°.1×**125°.5E**±0°.1**, h35^{km}, n5,** σ**2^{s}08**/7**,**
Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	2.55	226	Pn	Pn	06 03 07.3	-0.9
	29nm,0.3s,baz=5.3,slow=5.0,SNR=8.1						
BATI				Sn	Sn	06 03 40.1	+2.1
	9.1nm,0.3s,baz=216,slow=20,SNR=3.7						
FITZ	Fitzroy Crossi	9.60	179	Pn	Pn	06 04 44.4	-0.7
	0.4nm,0.3s,baz=2.3,slow=12,SNR=1.4						
FITZ				Sn	Sn	06 06 29.3	-2.5
	1.0nm,0.3s,baz=228,slow=3.5,SNR=6.1						
WRA	Warramunga Arr	14.26	144	Pn	Pn	06 05 50.5	+1.6
	0.3nm,0.3s,baz=320,slow=14,SNR=3.8						
ASAR	Alice Springs	17.14	153	P	P	06 06 28.7	+1.2
	0.4nm,0.3s,baz=321,slow=11,SNR=11						
MKAR	Makanchi Array	67.09	329	P	P	06 13 18.0	-1.2
	0.4nm,0.5s,baz=130,slow=6.9,SNR=2.3						

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*IDC **04** 06:07:26.8±1.2, 8°.04S×125°.39E, h0^{km}, mb4.1/4, mb1 4.3/8, mb1mx3.9/45, mbtmp4.2/8, ML4.1/4, Error ellipse: s-maj=46.6km s-min=19.0km az=73.0*

*DJA **04** 06:07:28.7±0.4, 8°S±4°×12°5E±°, h68^{km}±25^{km}, M4.4/7, mB5.3/2, mb4.7/6, MLv4.3/7, Mw(mB)4.7/2*

ISC 04 06:07:31.1±0.9**, 8°.00S**±0°.06×**125°.09E**±0°.09**, h27^{km}, n19,**
σ**1^{s}78**/19**, mb4.1**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.93	205	P	Pn	06 08 01.7	-0.5
BATI	Baumata	2.61	213	Pn	Pn	06 08 11.9	+0.4
	23nm,0.3s,baz=10,slow=1.4,SNR=11						
BATI				Sn	Sn	06 08 42.8	+0.4
	29nm,0.3s,baz=175,slow=20,SNR=6.6						
BATI	Baumata	2.61	213	P	Pn	06 08 11.1	-0.5
BATI				S	Sn	06 08 44.7	+2.3
MMRI	Maumere	2.90	257	P	Pn	06 08 14.8	-0.7
KDI	Kendari	4.71	328	P	Pn	06 08 37.2	-3.2
BSSI	Bau Bau, Buton	4.92	292	P	Pn	06 08 42.5	-0.9
	0.2nm61nm,0.8s						
BSSI				S	Sn	06 09 40.3	+0.8
	0.2nm61nm,0.8s						
BKSI	Bulukumba	5.61	298	P	Pn	06 08 51.1	-1.7
	0.1nm15nm,1.0s						
SANI	Sanana	5.98	9	P	Pn	06 09 03.1	+5.2
BNSI	Bone	6.11	306	P	Pn	06 08 58.2	-1.5
	0.2nm28nm,0.9s						
KNRA	Kununurra	8.43	155	P	Pn	06 09 30.8	-0.8
	59nm,0.7s						
KDU	Kakadu	8.63	123	P	Pn	06 09 35.7	+1.5
	28nm,0.6s						
MPSI	Mapaga	9.77	328	P	Pn	06 09 44.9	-5.0
FITZ	Fitzroy Crossi	10.05	177	Pn	Pn	06 09 50.7	-3.1
	1.2nm,0.3s,baz=4.5,slow=12,SNR=7.6						
FITZ				Sn	Sn	06 11 35.8	-10
	1.9nm,0.3s,baz=123,slow=20,SNR=7.2						
WRA	Warramunga Arr	14.87	144	Pn	Pn	06 10 55.2	-4.5
	1.0nm,0.3s,baz=318,slow=13,SNR=19						
ASAR	Alice Springs	17.72	153	P	Pn	06 11 33.0	-3.2
	1.0nm,0.3s,baz=324,slow=11,SNR=34						
ASAR				S	Sn	06 14 41.0	-12
	0.3nm,0.3s,baz=324,slow=25,SNR=5.7						
CMAR	Chiang Mai Arr	36.84	316	P	P	06 14 39.1	+1.9
	1.2nm,0.4s,baz=142,slow=6.6,SNR=8.2						
MKAR	Makanchi Array	66.50	329	P	P	06 18 19.5	+1.1
	1.4nm,0.8s,baz=140,slow=9.6,SNR=6.9						
ZALV	Zalesovo Beam	70.42	336	P	P	06 18 43.0	+0.3
	0.4nm,0.3s,baz=119,slow=5.1,SNR=5.7						
QSPA	South Pole Qui	81.99	180	P	P	06 19 49.0	+0.5
	1.5nm,0.6s,baz=347,slow=3.1,SNR=14						

IDC 04 06:08:26.5±2.0**, 3°.64S**×**150°.04E, h0^{km}, mb3.9**/4**,**
mb1 4.2/4**, mb1mx3.7**/47**, mbtmp4.0**/4**, Error ellipse:**
s-maj=124.5km s-min=27.4km az=124.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.30	222	P	P	06 13 25.7	0.0
	3.0nm,0.9s,baz=46,slow=10,SNR=5.8						
ASAR	Alice Springs	25.29	217	P	P	06 13 54.8	-0.1
	1.5nm,0.7s,baz=56,slow=8.5,SNR=7.5						
FITZ	Fitzroy Crossi	27.88	237	P	P	06 14 18.4	0.0
	4.4nm,0.7s,baz=75,slow=10,SNR=2.6						
ILAR	Eielson Array	82.14	23	P	P	06 20 49.0	0.0
	0.8nm,0.9s,baz=246,slow=5.2,SNR=5.0						
TORD	Torodi Ar. Bea	147.33	289	PKPbc	PKPbc	06 28 12.6	-0.7
	1.5nm,0.9s,baz=53,slow=2.3,SNR=7.2						

IDC 04 06:10:57.2±2.0**, 3°.82S**×**150°.34E, h0^{km}, mb4.1**/4**,**
mb1 4.3/4**, mb1mx3.8**/50**, mbtmp4.1**/4**, MS4.5**/1**, Ms1 4.5**/1**,**
ms1mx3.7/41**, Error ellipse: s-maj=118.0km**
s-min=27.4km az=126.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.37	223	P	P	06 15 56.0	-1.2
	2.6nm,0.8s,baz=47,slow=10,SNR=4.2						
ASAR	Alice Springs	25.33	217	P	P	06 16 25.9	-0.1
	2.2nm,0.7s,baz=49,slow=7.7,SNR=5.6						
FITZ	Fitzroy Crossi	28.04	238	P	P	06 16 51.0	+0.6
	9.7nm,0.9s,baz=44,slow=11,SNR=5.1						
FITZ				LR	LR	06 28 37.9	
	comp=Z,1μm,21.5s,baz=302,slow=38						
ILAR	Eielson Array	82.19	23	P	P	06 23 19.6	-0.2
	0.7nm,0.8s,baz=241,slow=5.5,SNR=5.2						
TORD	Torodi Ar. Bea	147.67	289	PKPbc	PKPbc	06 30 44.6	-0.3
	1.7nm,0.8s,baz=73,slow=2.8,SNR=8.7						

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*NEIC **04** 06:11:27.5±2.3, 32°.88S±0°.07×179°.1W±0°.1, h71^{km}±2^{km}, mb4.6/32, Error ellipse: s-maj=15.6km s-min=9.0km az=114.0*

*WEL **04** 06:11:31.4±0.8, 34°S±9°×17°9W±1°4, h251^{km}±21^{km}, M4.7/34, mB5.1/24, ML5.7/24, MLv5.7/34, Mw(mB)4.4/24, Error ellipse: s-maj=0.0km s-min=0.0km az=111.2*

*IDC **04** 06:11:31.3±1.9, 32°.55S×179°.20W, h105^{km}±18^{km}, mb4.5/14, mb1 4.6/16, mb1mx4.3/41, mbtmp4.9/16, MS4.6/1, Ms1 4.6/1, ms1mx3.8/40, Error ellipse: s-maj=14.7km s-min=13.0km az=146.0*

*NOU **04** 06:11:44.5, 34°.15S×179°.78W, h221^{km}, mb4.4/10, South of Kermadec Islands*

ISC 04 06:11:30.2±0.4**, 32°.74S**±0°.05×**179°.16W**±0°.08**, h100^{km},**
n147, σ**1^{s}72**/91**, mb4.7**/17**, 1C-1D, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	3.64	17	P	Pn	06 12 22.7	-1.8
	277nm,0.3s,baz=187,slow=3.7,SNR=23						
RAO				S	Sn	06 13 03.9	-2.7
	1μm,0.3s,baz=258,slow=23,SNR=17						
RAO	Raoul Island	3.64	17		Pn	06 12 22.4	-2.2
MXZ	Matakaoa Point	5.24	203	Pn	Pn	06 12 41.7	-4.4
HAZ	Te Kaha	5.59	206	P	Pn	06 12 49.1	-1.9
HAZ				S	Sn	06 13 51.3	-2.5
PKGZ	Pakihiroa	5.61	203	P	Pn	06 12 48.2	-3.0
PKGZ				S	Sn	06 13 49.2	-5.1
GRZ	Great Barrier	5.66	230	P	Pn	06 12 54.5	+2.7
PUZ	Puketiti	5.72	201	P	Pn	06 12 49.4	-3.3
PUZ				S	Sn	06 13 52.1	-4.9
KUZ	Kuaotunu	5.80	225	P	Pn	06 12 54.5	+0.7
RUGZ	Raukumara Rang	5.82	205	P	Pn	06 12 51.2	-2.9
RUGZ				S	Sn	06 13 55.8	-3.7
TWGZ	Tauwhareparae	5.90	202	P	Pn	06 12 52.2	-3.0
TWGZ				S	Sn	06 13 58.1	-3.4
WHRZ	Whale Island	6.00	211	P	Pn	06 12 55.6	-0.9
WHRZ				S	Sn	06 14 01.7	-2.1
CNGZ	Carnagh Statio	6.12	200	P	Pn	06 12 55.4	-2.7
OPRZ	Ohinepanea	6.18	213	P	Pn	06 12 57.3	-1.5
TKGZ	Te Karaka	6.18	202	P	Pn	06 12 55.0	-3.9
TKGZ				S	Sn	06 14 03.7	-4.6
MWZ	Matawai	6.20	205	P	Pn	06 12 55.4	-3.8
MWZ				S	Sn	06 14 04.8	-3.8
TGRZ	Tauranga	6.23	216	P	Pn	06 12 60.0	+0.4
MARZ	Manawahe	6.24	212	P	Pn	06 12 58.0	-1.7
MARZ				S	Sn	06 14 06.2	-3.4
URZ	Urewera	6.29	208	P	Pn	06 12 57.7	-2.6
	17nm,0.3s,baz=299,slow=23,SNR=60						
URZ				S	Sn	06 14 04.0	-6.8
	72nm,0.3s,baz=151,slow=19,SNR=5.1						
URZ	Urewera	6.29	208	Pn	Pn	06 12 56.8	-3.5
URZ	Urewera	6.29	208	P	Pn	06 12 57.0	-3.3
URZ				S	Sn	06 14 04.9	-5.8
URZ	Urewera	6.29	208	P	Pn	06 12 57.3	-3.1
EDRZ	Edgecumbe	6.31	211	P	Pn	06 12 59.5	-1.2
RAGZ	Rawiri	6.38	205	P	Pn	06 12 59.0	-2.7
RAGZ				S	Sn	06 14 08.1	-5.1
RIGZ	Rimuhau	6.46	202	P	Pn	06 12 58.7	-4.0
RIGZ				S	Sn	06 14 08.3	-6.6
OUZ	Omahuta	6.50	246	Pn	Pn	06 13 00.8	-2.5
OUZ	Omahuta	6.50	246	P	Pn	06 13 06.2	+2.9
RRRZ	Republican Roa	6.60	211	P	Pn	06 13 04.2	-0.5
RRRZ				S	Sn	06 14 18.1	-0.4
WTAZ	Waiatarua	6.63	229	P	Pn	06 13 08.1	+3.0
SNGZ	Shannon Statio	6.66	204	P	Pn	06 13 01.3	-4.2
SNGZ				S	Sn	06 14 14.7	-5.3
KNZ	Kokohu	6.77	201	P	Pn	06 13 02.3	-4.6
PRRZ	Plateau Road	6.79	211	P	Pn	06 13 04.2	-3.0
PRRZ				S	Sn	06 14 15.7	-7.3
MHGZ	Mahia Peninsul	6.82	200	P	Pn	06 13 03.1	-4.6
ALRZ	Allen Road	6.86	211	P	Pn	06 13 05.3	-2.9
RAHZ	Arahi	6.87	205	P	Pn	06 13 04.9	-3.5
RAHZ				S	Sn	06 14 21.1	-4.0
MTHZ	Maungataniwha	6.91	207	P	Pn	06 13 05.3	-3.5
WHHZ	Waihua	6.96	204	P	Pn	06 13 06.1	-3.5
WHHZ				S	Sn	06 14 21.3	-5.9
TLZ	Tolley Road	7.05	216	P	Pn	06 13 10.1	-0.7
NMHZ	Naumai	7.13	206	P	Pn	06 13 08.2	-3.7
NMHZ				S	Sn	06 14 27.0	-4.5
ARHZ	Aropaoanui	7.21	204	P	Pn	06 13 08.9	-4.1
ARHZ				S	Sn	06 14 30.0	-3.3
BKZ	Black Stump Fm	7.31	208		Pn	06 13 09.7	-4.7
BKZ	Black Stump Fm	7.31	208	P	Pn	06 13 09.8	-4.6
BKZ				S	Sn	06 14 28.3	-7.5
BKZ	Black Stump Fm	7.31	208	P	Pn	06 13 09.9	-4.5
MCHZ	McNeill Hill	7.48	205	P	Pn	06 13 12.2	-4.4
MCHZ				S	Sn	06 14 33.9	-5.9
CKHZ	Cape Kidnapper	7.54	203	P	Pn	06 13 12.7	-4.7
CKHZ				S	Sn	06 14 33.9	-7.4
HIZ	Hauiti	7.54	219	Pn	Pn	06 13 15.7	-1.7
HIZ	Hauiti	7.54	219	P	Pn	06 13 15.4	-2.0
KWHZ	Kaweka Forest	7.56	207	P	Pn	06 13 12.8	-5.0
KWHZ				S	Sn	06 14 34.9	-7.0
SNVZ	South Ngauruho	7.69	212	P	Pn	06 13 15.8	-3.8
KAHZ	Kahuranaki	7.73	203	P	Pn	06 13 15.2	-4.8
KAHZ				S	Sn	06 14 41.4	-4.6
BHHZ	Black Hill Sta	7.76	208	P	Pn	06 13 15.6	-4.8
KRHZ	Kereru	7.78	206	P	Pn	06 13 14.7	-5.9
FWVZ	Far West T-bar	7.78	212	P	Pn	06 13 17.6	-3.3
WHVZ	Whangaehu Hut	7.79	212	P	Pn	06 13 16.9	-4.1
TRVZ	Turoa	7.82	212	P	Pn	06 13 19.7	-1.7
MOVZ	Moawhango	7.82	210	P	Pn	06 13 16.5	-4.8
WNVZ	Wahianoa	7.82	211	P	Pn	06 13 16.8	-4.6
PXZ	Pawanui	7.95	203	P	Pn	06 13 17.1	-5.9
PNHZ	Pukenui	8.07	206	P	Pn	06 13 18.4	-6.3
WPHZ	Waipukurau	8.12	205	P	Pn	06 13 20.0	-5.3
PRHZ	Porangahau	8.24	203	P	Pn	06 13 20.6	-6.2
DVHZ	Dannevirke	8.43	205	P	Pn	06 13 23.0	-6.5
BFZ	Birch Farm	8.74	204	Pn	Pn	06 13 27.9	-5.8
BFZ	Birch Farm	8.74	204	P	Pn	06 13 27.6	-6.1
SNZO	South Karori	9.86	208	P	Pn	06 13 41.8	-7.0
TUWZ	Tuamarina	10.27	210		Pn	06 13 48.0	-6.5

NNZ	Nelson	10.35	213	Pn	Pn	06 13 48.5	-7.0
QRZ	Quartz Range	10.46	217		Sn	06 15 45.0	-7.2
QRZ	Quartz Range	10.46	217	P	Pn	06 13 49.7	-7.4
THZ	Tophouse	11.00	213	Pn	Pn	06 13 59.7	-4.7
KHZ	Kahutara	11.26	209	P	Pn	06 14 00.1	-7.7
RPZ	Rata Peaks	13.37	212	P	Pn	06 14 27.9	-8.0
ODZ	Otahua Downs	14.61	210	P	Pn	06 14 44.0	-7.8
MSVF	Nonsavu	15.15	350	P	P	06 14 59.8	-2.0
	2.5nm,0.3s,baz=166,slow=9.1,SNR=14						
MSVF	Nonsavu	15.15	350	Pn	P	06 14 59.6	-2.2
MSVF				IAmb	IAmb	06 15 03.2	
	comp=Z,64nm,0.8s						
MLZ	Mavora Lakes	15.99	214	Pn	Pn	06 15 03.7	-5.6
OUENC	Ouen Island, N	16.10	306	P	P	06 15 12.7	+0.6
OUENC				IAmb	IAmb	06 15 17.1	
	comp=Z,46nm,1.1s						
DZM	Mont Dzumac	16.61	306	P	P	06 15 20.4	+2.5
	comp=Z,0.3nm,0.3s,baz=119,slow=13,SNR=9.5						
DZM	Mont Dzumac	16.61	306	P	P	06 15 17.2	-0.6
DZM				IAmb	IAmb	06 15 21.8	
	comp=Z,40nm,1.2s						
AFI	Afiamalu	19.92	21	P	P	06 15 51.4	-2.7
	comp=Z,3.2nm,0.3s,baz=151,slow=10,SNR=3.0						
AFI				S	S	06 19 14.9	-18
	comp=Z,3.5nm,0.3s,baz=329,slow=17,SNR=1.9						
RAR	Rarotonga	20.71	61	P	P	06 16 04.2	+1.7
	comp=Z,88nm,1.1s,baz=259,slow=5.2,SNR=3.6						
RAR	Rarotonga	20.71	61	P	P	06 16 03.2	+0.7
SANVU	Saraoutou	21.21	321	P	P	06 16 09.9	+2.0
EIDS	Eidsvold	26.97	278	P	P	06 17 03.4	+0.9
EIDS				IAmb	IAmb	06 17 05.0	
	comp=Z,12nm,1.1s						
STKA	Stephens Creek	33.05	261	P	P	06 17 57.6	+1.3
	comp=Z,1.9nm,0.4s,baz=87,slow=9.9,SNR=6.9						
STKA	Stephens Creek	33.05	261	IAmb	IAmb	06 17 59.1	
	comp=Z,1.5nm,1.0s						
CTA	Charters Tower	33.29	284	P	P	06 17 59.8	+1.4
	comp=Z,9.7nm,0.4s,baz=117,slow=9.6,SNR=24						
CTAO	Charters Tower	33.29	284	P	P	06 17 59.6	+1.2
BBOO	Buckleboo	37.43	257	P	P	06 18 34.0	+0.1
PMG	Port Moresby	38.79	299	P	P	06 18 45.9	+0.6
	comp=Z,22nm,0.8s,baz=174,slow=18,SNR=3.2						
PMG	Port Moresby	38.79	299	IAmb	IAmb	06 18 47.3	
	comp=Z,32nm,1.0s						
COEN	Coen	39.04	290	P	P	06 18 48.7	+1.3
AS31	Alice Springs	42.05	270	P	P	06 19 12.1	-0.2
AS31				IAmb	IAmb	06 19 13.5	
	comp=Z,8.8nm,0.9s						
ASAR	Alice Springs	42.06	270	P	P	06 19 12.1	-0.2
	comp=Z,12nm,0.3s,baz=114,slow=8.0,SNR=72						
ASAR				LR	LR	06 34 42.9	
	comp=Z,801nm,20.6s,baz=50,slow=33						
ASAR	Alice Springs	42.06	270	P	P	06 19 10.5	-1.8
WR0	Warramunga Arr	43.08	275	P	P	06 19 20.3	-0.3
WB2	Warramunga Arr	43.25	275	P	P	06 19 21.6	-0.3
WRAB	Tennant Creek	43.25	275	P	P	06 19 21.2	-0.8
WRA	Warramunga Arr	43.26	275	P	P	06 19 21.7	-0.3
	comp=Z,24nm,0.4s,baz=113,slow=7.9,SNR=91						
WB0	Warramunga Arr	43.29	276	P	P	06 19 22.0	-0.3
FORT	Forrest	44.53	258	P	P	06 19 31.7	-0.4
VNDA	Vanda	45.67	186	P	P	06 19 42.9	+2.4
	comp=Z,1.4nm,0.6s,baz=1.6,slow=7.8,SNR=17						
VNDA	Vanda	45.67	186	P	P	06 19 40.7	+0.3
JAY	Jayapura	48.15	300	P	P	06 20 00.9	+0.4
	comp=Z,55nm,1.1s,baz=176,slow=13,SNR=7.5						
FITZ	Fitzroy Crossi	51.41	272	P	P	06 20 25.6	+0.3
	comp=Z,39nm,1.2s,baz=149,slow=5.9,SNR=4.9						
CASY	Casey	52.61	209	P	P	06 20 32.6	-0.8
QSPA	South Pole Qui	57.37	180	P	P	06 21 10.2	+2.3
	comp=Z,29nm,0.5s,baz=264,slow=1.0,SNR=53						
QSPA	South Pole Qui	57.37	180	P	P	06 21 10.3	+2.3
MAW	Mawson	69.77	201	P	P	06 22 29.5	+0.4
	comp=Z,6.1nm,0.5s,baz=140,slow=8.0,SNR=19						
MAW	Mawson	69.77	201	P	P	06 22 27.4	-1.7
MAW				IAmb	IAmb	06 22 32.7	
	comp=Z,10nm,1.4s						
SYO	Syowa Base	74.61	194	eP	P	06 22 57.4	-0.6
SYO	Syowa Base	74.61	194	eP	P	06 23 00.3	+2.3
SNAA	Sanae	75.84	179	P	P	06 23 06.4	+1.3
SNAA	Sanae	75.84	179	P	P	06 23 05.7	+0.6
VNA3	Neumayer Olymp	76.04	177	P	P	06 23 07.3	+1.2
VNA2	Neumayer--Watz	76.46	177	P	P	06 23 10.1	+1.6
	baz=174,slow=5.7						
VNA1	Neumayer--Stat	76.69	177	P	P	06 23 10.8	+1.0
H03S2	Juan Fernandez	80.00	124	T	T	07 52 12.7	
	baz=236,slow=74,SNR=65						
H03S1	Juan Fernandez	80.01	124	T	T	07 52 14.0	
	baz=236,slow=74,SNR=54						
H03S3	Juan Fernandez	80.02	124	T	T	07 52 14.6	
	baz=236,slow=74,SNR=85						
H03N3	Juan Fernandez	80.20	123	T	T	07 52 22.3	
	baz=240,slow=72,SNR=132						
H03N2	Juan Fernandez	80.21	123	T	T	07 52 22.0	
	baz=240,slow=72,SNR=75						
H03N1	Juan Fernandez	80.22	123	T	T	07 52 21.5	
	baz=240,slow=72,SNR=214						
PLCA	Paso Flores	81.63	133	P	P	06 23 39.2	+1.8
	comp=Z,1.2nm,0.5s,baz=184,slow=5.9,SNR=5.5						
PLCA	Paso Flores	81.63	133	IAmb	IAmb	06 23 41.1	
	comp=Z,15nm,1.5s						
ISA	Isabella, Lake	88.65	45	P	P	06 24 13.8	+1.6
ISA				IAmb	IAmb	06 24 15.6	
	comp=Z,9.5nm,1.1s						
NVAR	Mina Array Bea	90.62	43	P	P	06 24 23.3	+1.8
	comp=Z,2.6nm,1.0s,baz=223,slow=7.9,SNR=11						
NVAR	Mina Array Bea	90.62	43	P	P	06 24 22.8	+1.2
KVN	Kaiserville	91.16	43	P	P	06 24 24.6	+0.6
KVN				IAmb	IAmb	06 24 27.9	
	comp=Z,5.5nm,1.2s						
TUC	Tucson	91.34	52	P	P	06 24 24.8	-0.1
PINE	Pine Mountain	92.85	38	P	P	06 24 33.1	+1.4
CM31	Chiang Mai Arr	93.25	290	P	P	06 24 31.6	-2.2
TXAR	Lajitas Array	94.48	58	P	P	06 24 41.2	+1.8
	comp=Z,1.3nm,1.1s,baz=216,slow=6.2,SNR=6.7						
BOSA	Boshof	114.72	204	PKP	PKiKP	06 29 59.7	+0.2
	comp=Z,3.5nm,1.0s,baz=49,slow=2.2,SNR=3.8						
MKAR	Makanchi Array	118.50	309	PKP	PKPdf	06 30 05.5	-0.4
	comp=Z,0.3nm,0.4s,baz=206,slow=1.2,SNR=6.1						
ZALV	Zalesovo Beam	119.11	318	PKP	PKPdf	06 30 05.7	-1.1
	comp=Z,0.7nm,0.3s,baz=155,slow=2.1,SNR=4.1						
KURK	Kurchatov	121.93	313		PKPdf	06 30 11.7	-0.6
KURBB	Kurchatov Arra	121.96	313	PKP	PKPdf	06 30 11.7	-0.7
	comp=Z,0.8nm,0.4s,baz=108,slow=2.1,SNR=7.3						
BVAR	Borovoye Array	127.36	315	PKP	PKPdf	06 30 20.7	-2.0
	comp=Z,1.2nm,0.4s,baz=212,slow=8.2,SNR=5.3						
ARCES	ARCESS Array B	140.65	347	PKhKP	PKPpre	06 30 40.2	
	comp=Z,3.7nm,1.0s,baz=47,slow=5.3,SNR=1.6						
BELG	Belogornoye	141.17	315	PKP	PKiKP	06 30 51.2	+0.1
	comp=Z,6.3nm,0.7s,baz=36,slow=1.9,SNR=3.5						
KBZ	Khabaz	145.53	301	PKPbc	PKPdf	06 30 57.0	+0.6
	comp=Z,7.0nm,0.9s,baz=214,slow=3.0,SNR=6.7						
FINES	FINESS Array B	146.97	338	PKPbc	PKPbc	06 31 00.1	-0.3
	comp=Z,4.9nm,0.5s,baz=46,slow=4.2,SNR=16						
NB2	NORSAR Subarra	150.89	350	PKP	PKPbc	06 31 10.0	-0.4
	comp=Z,0.5nm,0.4s,baz=12,slow=2.5						
NOA	NORSAR Array B	150.89	350	PKPbc	PKPbc	06 31 10.1	-0.3
	comp=Z,1.7nm,0.7s,baz=15,slow=4.1,SNR=6.6						
AKASG	Malin Array Be	152.49	319	PKPbc	PKPbc	06 31 12.2	-2.2
	comp=Z,0.9nm,0.3s,baz=58,slow=2.5,SNR=9.2						
AKASG	Malin Array Be	152.49	319		PKPbc	06 31 14.1	-0.3
TORD	Torodi Ar. Bea	160.48	182	PKP	PKPdf	06 31 18.5	-0.2
	comp=Z,1.1nm,0.9s,baz=188,slow=0.2,SNR=4.1						
TORD				PKPab	PKPab	06 32 00.5	+0.4
	comp=Z,7.0nm,0.6s,baz=176,slow=3.3,SNR=15						

IDC ***04*** *06:12:50.5±1.1, 8°.04S×125°.30E, h0^{km}, mb4.1/4, mb1 4.2/8, mb1mx3.8/56, mbtmp4.1/8, ML3.8/4, Error ellipse: s-maj=37.0km s-min=19.1km az=78.0*

ISC 04 06:12:54.3±1.2, **8°.1S**±0°.1×**125°.4E**±0°.1, **h26**^{km}, **n8,** σ1^{s}.**22**/9, **mb4.1**/4, **Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	2.70	219	Pn	Pn	06 13 35.6	-0.5
	17nm,0.3s,baz=23,slow=3.0,SNR=6.5						
BATI				Sn	Sn	06 14 08.4	+0.5
	13nm,0.3s,baz=130,slow=19,SNR=11						
FITZ	Fitzroy Crossi	9.95	179	Pn	Pn	06 15 13.8	-1.8
	0.5nm,0.3s,baz=14,slow=13,SNR=7.5						
WRA	Warramunga Arr	14.63	145	Pn	Pn	06 16 18.8	-1.0
	0.5nm,0.3s,baz=320,slow=13,SNR=4.4						
ASAR	Alice Springs	17.51	153	P	P	06 16 58.4	+0.6
	0.5nm,0.3s,baz=337,slow=13,SNR=15						
STKA	Stephens Creek	28.07	150	P	P	06 18 45.3	+1.5
	1.4nm,0.7s,baz=342,slow=9.6,SNR=3.1						
MKAR	Makanchi Array	66.72	329	P	P	06 23 43.6	+0.4
	1.4nm,0.8s,baz=128,slow=7.0,SNR=6.3						
ZALV	Zalesovo Beam	70.62	336	P	P	06 24 06.2	-1.1
	0.7nm,0.4s,baz=122,slow=7.1,SNR=2.1						
KURBB	Kurchatov Arra	71.12	331	P	P	06 24 10.1	-0.3
	0.6nm,0.4s,baz=134,slow=5.2,SNR=1.8						

MOS ***04*** *06:14:30.3±1.3, 6°.52S×105°.11E, h5^{km}, mb5.0/28, Error ellipse: s-maj=10.5km s-min=5.9km az=124.3*

IDC ***04*** *06:14:31.4±0.4, 6°.63S×105°.07E, h0^{km}, mb4.6/40, mb1 4.6/42, mb1mx4.5/59, mbtmp4.6/42, ML4.6/3, MS4.6/5, Ms1 4.6/5, ms1mx4.0/50, Error ellipse: s-maj=14.1km s-min=8.1km az=37.0*

NEIC ***04*** *06:14:32.8±2.8, 6°.75S±0°.06×105°.05E±0°.06, h10^{km}±1^{km}, mb5.1/52, Error ellipse: s-maj=10.7km s-min=8.7km az=213.0*

KLM ***04*** *06:14:33, 7°.07S×104°.94E, h10^{km}, mb4.9*

DJA ***04*** *06:14:35.6±0.2, 7°S±3°×10°5E±°, h40^{km}±3^{km}, M5.0/36, mb5.2/36, mB5.5/21, MLv5.4/30, Mw(mB)4.9/21*

ISC 04 06:14:32.2±0.3, **6°.71S**±0°.04×**104°.99E**±0°.03, **h10**^{km}, **n317,** σ**1**^{s}.**68**/313, **mb4.8**/84, **MS4.8**/6, **3C-19D, Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CGJI	Cibinong	0.71	82	P	Pb	06 14 46.6	-0.1
KASI	Kota Agung	1.28	338	P	Pn	06 14 56.4	+0.3
SBJI	Serang	1.28	63	P	Pb	06 14 56.5	+0.1
SBJI				S	Sn	06 15 15.4	+2.0
BLSI	Bandar Lampung	1.36	11	P	Pn	06 14 58.4	+1.1
TNG	Tangerang	1.73	72	P	Pb	06 15 04.0	-0.2
TNG				P	Pn	06 15 05.7	+3.3
DBJI	Dramaga	1.76	85	P	Pb	06 15 03.5	-1.1
KLI	Kotabumi	1.84	356	P	Pn	06 15 05.9	+2.0
CBJI	Citeko	1.87	81	P	Pb	06 15 06.3	-0.3
LWLI	Liwa	1.92	331	P	Pn	06 15 07.6	+2.5
KLSI		2.02	353	P	Pn	06 15 08.5	+2.1
CNJI	Cibinong	2.21	106	P	Pn	06 15 08.5	-0.5
MDSI	Maura Dua	2.35	340	P	Pn	06 15 13.3	+2.3
LEM	Lembang	2.62	93	Pn	Pn	06 15 16.2	+1.5
	105nm,0.3s,baz=280,slow=4.2,SNR=90						
LEM				Sn	Sg	06 15 54.9	-1.5
	280nm,0.3s,baz=18,slow=20,SNR=2.8						
LEM	Lembang	2.62	93	P	Pb	06 15 16.7	-2.6
CISI	Cisompet, Garu	2.93	107		Pn	06 15 18.4	-0.5
CISI	Cisompet, Garu	2.93	107	P	Pn	06 15 18.9	-0.1
CISI	Cisompet, Garu	2.93	107	P	Pn	06 15 18.9	-0.1
MNAI	Manna	3.09	319	Pn	Pn	06 15 23.5	+2.3
MNAI	Manna	3.09	319	P	Pn	06 15 23.4	+2.3
MNAI	Manna	3.09	319	P	Pn	06 15 24.2	+3.1
LHSI	Lahat	3.21	333	P	Pn	06 15 26.6	+3.8
JCJI	Jatiwangi	3.27	86	P	Pn	06 15 25.0	+1.4
CMJI	Cimerak	3.60	107	P	Pn	06 15 28.0	-0.1
PMBI	Palembang	3.77	357	P	Pb	06 15 36.0	-2.9
PMBI	Palembang	3.77	357	P	Pb	06 15 36.1	-2.8
XMI	Christmas Isla	3.78	169	P	Pn	06 15 27.8	-2.8
XMIS	Christmas Isla	3.80	170	Pn	Pn	06 15 27.6	-3.3
XMIS	Christmas Isla	3.80	170	P	Pn	06 15 27.7	-3.2
KSI	Kapahiang	3.86	322	P	Pn	06 15 34.4	+2.6
KPJI	Karang Pucung	3.96	99	P	Pn	06 15 35.1	+2.0
MASI	Maura Aman, Be	4.48	322	P	Pn	06 15 44.2	+3.9
PPBI	Pangkal Pinang	4.66	14	P	Pn	06 15 45.4	+2.6
JMBI	JAMBI	5.22	345	P	Pn	06 15 56.5	+6.1
YOGI	Yogyakarta	5.38	102	P	Pn	06 15 54.2	+1.6
	1.9nm4μm281nm,0.8s						
SMRI	Semarang	5.42	94		Pn	06 15 51.5	-1.8
SMRI	Semarang	5.42	94	P	Pn	06 15 56.3	+3.0
	4.5nm11μm1μm,1.1s						
SMRI	Semarang	5.42	94	P	Pn	06 15 58.0	+4.7
UGM	Wanagama	5.62	103		Pn	06 15 55.4	-0.6
UGM	Wanagama	5.62	103	P	Pn	06 15 57.4	+1.4
	2.4nm501nm,0.8s						
UGM	Wanagama	5.62	103	P	Pn	06 15 57.8	+1.9
DSRI	Dabo	6.20	356	P	Pn	06 16 08.4	+4.4
	1.0nm3μm66nm,1.0s						
PCJI	Pacitan	6.31	104	P	Pn	06 16 06.7	+1.3
	1.7nm3μm270nm,0.9s						
PPSI	Pulau Pagai	6.32	308	P	Pn	06 16 07.8	+2.2
	4.8nm7μm599nm,0.6s						
PWJI	Pagerwojo	6.89	101	P	Pn	06 16 14.3	+1.0
	1.4nm3μm319nm,1.0s						
PDSI	Padang	7.32	322	P	Pn	06 16 20.5	+1.2
	0.3nm5μm53nm,0.6s						
GRJI	Gresik	7.44	92	P	Pn	06 16 23.0	+2.0
	0.7nm2μm157nm,0.9s						
PPI	Padang Panjang	7.72	323	P	Pn	06 16 27.3	+2.5
	32nm,0.7s						
SISI	Saibi	7.95	312	P	Pn	06 16 28.6	+0.7
	2μm154nm,0.9s						
BKNI	Bangkinang	8.02	330	Pn	Pn	06 16 29.1	+0.1
KMMI	Kalianget	8.92	93	P	Pn	06 16 42.4	+1.1
	80nm,0.9s						
ABJI	Asem Bagus	9.24	97	P	Pn	06 16 51.4	+5.8
JAGI	Jajag, Banyuwa	9.25	101	Pn	Pn	06 16 45.5	-0.3
JAGI	Jajag, Banyuwa	9.25	101	P	Pn	06 16 47.5	+1.7
	3μm318nm,0.9s						
JAGI	Jajag, Banyuwa	9.25	101	P	Pn	06 16 48.1	+2.3
STKI	Sintang	9.34	44	P	Pn	06 16 47.1	+0.1
COCO	West Island	9.71	235	P	Pn	06 16 52.6	+0.5
COCO	West Island	9.71	235		Pn	06 16 52.6	+0.5
SRBI	Singaraja	10.23	98	P	Pn	06 17 00.2	+0.9
	3μm225nm,0.7s						
IGBI	Denpasar	10.28	102	P	Pn	06 17 01.2	+1.3
	142nm,1.0s						
DNP	Denpasar	10.32	102	P	Pn	06 17 00.7	+0.3
	23μm613nm,0.8s						
BBKI	Banjar Baru	10.33	72	P	Pn	06 17 02.6	+2.0
	36nm,1.3s						
JRMM	Jerantut	10.82	347	P	Pn	06 17 11.0	+3.7
GSI	Gunungsitoli	10.87	317	Pn	Pn	06 17 07.6	-0.4
GSI	Gunungsitoli	10.87	317	P	Pn	06 17 07.9	-0.1
	57nm,1.0s						
RPSI	Rantau Prapat	11.13	327		Pn	06 17 13.6	+2.0
PSI	Prapat	11.22	327	Pn	Pn	06 17 13.6	+0.6
	0.5nm,0.3s,baz=146,slow=16,SNR=1.8						
TWSI	Taliwang, Sumb	11.96	100	P	Pn	06 17 20.8	-2.1
	68nm,0.8s						
PLAI	Plampang	12.85	100	P	Pn	06 17 33.4	-1.7
	1μm117nm,0.7s						
WBSI	Waikabubak, Su	14.55	102	P	Pn	06 17 55.0	-3.4
KAPI	Kappang	14.78	84	Pn	Pn	06 18 03.6	+2.0
	1.2nm,0.3s,baz=274,slow=10,SNR=6.9						
KAPI				LR	LR	06 24 16.8	
	comp=Z,1μm,20.2s,baz=272,slow=40						
KAPI	Kappang	14.78	84	P	Pn	06 18 00.1	-1.5
KAPI	Kappang	14.78	84	Pn	Pn	06 18 00.1	-1.5
BKSI	Bulukumba	15.12	86	P	Pn	06 18 08.1	+2.1
	1μm76nm,1.0s						
BNSI	Bone	15.22	82	P	Pn	06 18 09.0	+1.6
	2μm114nm,1.4s						
BSSI	Bau Bau, Buton	15.42	89	P	Pn	06 18 11.2	+1.2
	942nm58nm,1.0s						
BASI	Baing, Sumba	15.81	104	P	Pn	06 18 15.0	-0.1
SPMM	Sapulut	16.12	46	P	P	06 18 24.0	+1.5
MPSI	Mapaga	16.44	65	P	P	06 18 26.3	+0.3
	63nm,0.8s						
MMRI	Maumere	17.20	97	Pn	Pn	06 18 30.6	-2.3
MMRI	Maumere	17.20	97	P	Pn	06 18 33.1	+0.2
	250nm,1.2s						
TOLI2	Tolitoli	17.57	64	Pn	Pn	06 18 36.3	-1.2
GIRL	Giralia	18.18	152	P	Pn	06 18 44.0	-0.8
	baz=18,SNR=17						
MRSI	Marisa	18.36	68	P	P	06 18 48.3	+1.0
	76nm,0.6s						
LUWI	Luwuk	18.61	73	P	P	06 18 48.8	-1.2
LUWI				IAmb	IAmb	06 19 37.0	
	comp=Z,194nm,1.2s						
LUWI	Luwuk	18.61	73	P	Pn	06 18 51.3	+1.1
	comp=Z,5μmcomp=Z,96nm,1.1s						
BATI	Baumata	18.80	102	P	Pn	06 18 52.5	0.0
	comp=Z,16nm,0.3s,baz=136,slow=1.9,SNR=10						
BATI				S	S	06 22 23.7	-2.4
	comp=Z,4.2nm,0.3s,baz=336,slow=20,SNR=1.5						
BATI	Baumata	18.80	102	P	Pn	06 18 52.7	+0.2
	comp=Z,2μmcomp=Z,110nm,0.9s						
SOEI	Soe	19.32	100	P	P	06 18 57.2	-0.7
SOEI	Soe	19.32	100	P	P	06 18 57.5	-0.4
	comp=Z,4μmcomp=Z,386nm,1.0s						
GTOI	Gorontalo	19.41	69	P	P	06 18 56.1	-2.7
	comp=Z,443nmcomp=Z,37nm,1.0s						
PSA00	Pilbara Seismi	20.61	137	P	P	06 19 11.7	0.0
PSA00				IAmb	IAmb	06 19 15.6	
	comp=Z,80nm,1.3s						
PSA00	Pilbara Seismi	20.61	137	P	P	06 19 09.1	-2.6
PSA00				IAmb	IAmb	06 19 15.6	
	comp=Z,51nm,1.4s						
FITZ	Fitzroy Crossi	23.10	121	P	P	06 19 39.0	+0.6
	comp=Z,19nm,0.9s,baz=328,slow=10,SNR=10						
FITZ				S	S	06 23 50.3	+0.4
	comp=Z,4.4nm,0.8s,baz=124,slow=11,SNR=2.9						
FITZ	Fitzroy Crossi	23.10	121	P	P	06 19 39.0	+0.6
	baz=23,SNR=8.0						
FITZ	Fitzroy Crossi	23.10	121	P	P	06 19 37.1	-1.3
FITZ				IAmb	IAmb	06 20 26.7	
	comp=Z,37nm,1.1s						
LBMI	Labuha	23.25	76	P	P	06 19 39.7	-0.4
	comp=Z,1μmcomp=Z,80nm,0.9s						
MEEK	Meekatharra	23.69	148	P	P	06 19 45.6	+1.3
	baz=23,SNR=5.1						
MORW	Morawa	24.57	156	P	P	06 19 53.3	+0.9
	baz=24,SNR=5.4						
MORW	Morawa	24.57	156	P	P	06 19 51.7	-0.8
KNRA	Kununurra	24.94	113	P	P	06 19 55.9	-0.1
	baz=25,SNR=22						
KNRA	Kununurra	24.94	113	P	P	06 19 54.8	-1.2
CMAR	Chiang Mai Arr	25.71	347	P	P	06 20 04.1	+1.2
	comp=Z,2.8nm,0.3s,baz=184,slow=9.6,SNR=14						
CHTO	Chiang Mai	26.05	347	P	P	06 20 04.4	-1.6
CHTO				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CHTO	Chiang Mai	26.05	347	P	P	06 20 04.4	-1.6
MTN	Manton Dam	26.46	105	P	P	06 20 09.6	-0.2
	baz=26,SNR=18						
MTN	Manton Dam	26.46	105	P	P	06 20 08.3	-1.5
SIJI	Sorong	26.84	79	P	P	06 20 14.9	+1.6
	comp=Z,32nm,0.8s,baz=256,slow=8.3,SNR=5.4						
FAKI	Fak Fak	27.42	83	P	P	06 20 17.2	-1.3
FAKI				IAmb	IAmb	06 20 46.6	
	comp=Z,35nm,0.9s						
PALK	Pallekele	27.93	299	P	P	06 20 24.7	+1.7
	comp=Z,5.8nm,0.9s,baz=117,slow=6.8,SNR=3.3						
PALK				LR	LR	06 30 40.1	
	comp=Z,1μm,20.9s,baz=231,slow=35						
NWAO	Narrogin (SRO)	28.46	158	P	P	06 20 30.5	+2.9
	comp=Z,5.9nm,0.7s,baz=346,slow=4.2,SNR=2.4						
H01W3	Cape Leeuwin H	29.28	164	T	T	06 51 02.8	
	baz=344,slow=76,SNR=3336						
H01W1	Cape Leeuwin H	29.29	164	T	T	06 51 00.9	
	baz=344,slow=76,SNR=3355						
H01W2	Cape Leeuwin H	29.29	165	T	T	06 51 04.2	
	baz=344,slow=76,SNR=5239						
WRA	Warramunga Arr	31.37	118	P	P	06 20 52.9	-0.6
	comp=Z,14nm,0.8s,baz=290,slow=10,SNR=17						
WRA	Warramunga Arr	31.37	118	P	P	06 20 52.4	-1.1
WRAB	Tennant Creek	31.38	118	*i* P	P	06 20 53.0	-0.6
WRAB				pmax	pmax		
	comp=Z,27nm,1.1s						
WRAB	Tennant Creek	31.38	118	P	P	06 20 52.9	-0.6
WRAB				IAmb	IAmb	06 20 54.4	
	comp=Z,52nm,1.4s						
WB2	Warramunga Arr	31.38	118	P	P	06 20 53.3	-0.2
	baz=31						
WB2	Warramunga Arr	31.38	118	P	P	06 20 52.8	-0.8
WB2				IAmb	IAmb	06 20 54.3	
	comp=Z,55nm,1.4s						
WR0	Warramunga Arr	31.55	118	P	P	06 20 55.0	-0.2
H08S2	Diego Garcia H	32.25	266	T	T	06 55 02.8	
	baz=90,slow=76,SNR=1108						
H08S3	Diego Garcia H	32.26	266	T	T	06 55 05.1	
	baz=90,slow=76,SNR=1588						
FORT	Forrest	32.27	141	P	P	06 21 01.6	+0.4
	baz=32						
H08S1	Diego Carcia H	32.27	266	T	T	06 55 06.3	
	baz=90,slow=76,SNR=662						
ASAR	Alice Springs	32.49	124	P	P	06 21 03.5	+0.2
	comp=Z,9.3nm,0.9s,baz=298,slow=8.4,SNR=18						
ASAR				PcP	PcP	06 23 50.3	-0.1
	comp=Z,1.5nm,0.6s,baz=304,slow=2.6,SNR=3.9						
ASAR				S	S	06 26 15.9	-2.6
	comp=Z,3.9nm,1.1s,baz=291,slow=16,SNR=5.2						
ASAR	Alice Springs	32.49	124	P	P	06 21 00.0	-3.3
SHL	Shillong	34.52	339	P	P	06 21 19.4	-1.7
SHL				pmax	pmax		
	comp=Z,12nm,0.7s						
SHL	Shillong	34.52	339	P	P	06 21 19.4	-1.7
SHL				IAmb	IAmb	06 21 28.5	
	comp=Z,12nm,0.7s						
HYB	Hyderabad	35.45	313	*i* P	P	06 21 29.0	-0.1
QIS	Mount Isa	36.24	116	P	P	06 21 36.6	+0.7
	baz=36,SNR=5.5						
ODAN	Odare	37.48	334	*e*P	P	06 21 46.7	+0.2
TAPN	Taplejung	37.76	334	*e*P	P	06 21 49.0	0.0
	comp=Z,68nm,0.9s						
RAMN	Ramite	37.91	333	*e*P	P	06 21 50.8	+0.6
COEN	Coen	38.21	104	P	P	06 21 53.4	+0.7
	baz=38						
COEN	Coen	38.21	104	P	P	06 21 52.4	-0.3
COEN				IAmb	IAmb	06 22 00.9	
	comp=Z,20nm,0.8s						
JIRN	Jiri	38.70	333	*e*P	P	06 21 56.7	-0.3
PKI	Pulchoki	38.99	332	*e*P	P	06 21 59.1	-0.2
PKIN	Phulchoki	39.00	332	*e*P	P	06 21 58.8	-0.6
DMN	Daman	39.16	331	*e*P	P	06 22 00.6	-0.1
KKN	Kakani	39.23	332	*e*P	P	06 22 01.2	-0.1
POO	Poona	39.65	310	*e*P	P	06 22 05.0	+0.3
GKN	Gorkha	39.72	331	*e*P	P	06 22 04.8	-0.4
MTSU	Mount Surprise	39.96	110	P	P	06 22 08.1	+0.9
	baz=40,SNR=6.1						
KOLN	Koldanda	40.03	330	*e*P	P	06 22 07.7	-0.2
	comp=Z,53nm,0.8s						
DANN	Dangsing	40.43	331	*e*P	P	06 22 11.3	0.0
	comp=Z,55nm,0.7s						
PYUN	Piuthan	40.61	329	*e*P	P	06 22 11.9	-0.8
	comp=Z,47nm,0.5s						
NJ2	Nanjing	40.75	18	*e*P	P	06 22 18.1	+4.6
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HTT	Hallett	41.17	135	P	P	06 22 18.1	+1.0
	baz=41,SNR=8.4						
PMG	Port Moresby	41.82	97	P	P	06 22 21.7	-1.0
	comp=Z,55nm,0.8s,baz=331,slow=5.2,SNR=9.4						
PMG	Port Moresby	41.82	97	P	P	06 22 22.6	-0.1
PMG				pmax	pmax		
	comp=Z,85nm,0.9s						
PMG	Port Moresby	41.82	97	P	P	06 22 22.6	-0.1
CTA	Charters Tower	42.16	113	P	P	06 22 25.0	-0.3
	comp=Z,8.2nm,0.8s,baz=277,slow=8.1,SNR=5.3						
CTAO	Charters Tower	42.16	113	P	P	06 22 23.4	-1.9
CTAO				pmax	pmax		
	comp=Z,20nm,1.2s						
CTAO	Charters Tower	42.16	113	P	P	06 22 23.4	-1.9
STKA	Stephens Creek	42.33	131	P	P	06 22 27.2	+0.6
	comp=Z,30nm,0.8s,baz=306,slow=8.1,SNR=38						
STKA	Stephens Creek	42.33	131	P	P	06 22 27.5	+0.9
	baz=42,SNR=28						
STKA	Stephens Creek	42.33	131	*i* P	P	06 22 25.9	-0.7
STKA	Stephens Creek	42.33	131	P	P	06 22 26.3	-0.3
JSU	Suzuyama	45.13	31	P	P	06 22 51.0	+1.9
CMSA	Cobar Meteorol	45.30	128	P	P	06 22 51.7	+1.2
	baz=45,SNR=16						
RMQ	Roma	46.03	121	P	P	06 22 57.9	+1.6
	baz=46,SNR=9.0						
JNU	Nakatsue	46.63	30	P	P	06 23 02.3	+1.4
	comp=Z,13nm,1.0s,baz=171,slow=3.6,SNR=3.6						
HHC	Hu-ho-hao-te	47.71	7	*e*P	P	06 23 12.4	+3.1
HHC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,750nm,7.6s						
EIDS	Eidsvold	47.73	118	P	P	06 23 09.6	-0.1
EIDS				IAmb	IAmb	06 23 14.6	
	comp=Z,32nm,1.4s						
YNG	Young	48.51	131	P	P	06 23 17.3	+1.6
	baz=48,SNR=8.1						
KSRS	Korea Array	48.88	24	P	P	06 23 19.9	+1.6
	comp=Z,2.0nm,0.9s,baz=197,slow=8.6,SNR=7.0						
JHS	Saijyo	49.25	31	P	P	06 23 23.4	+2.2
JHS				IAmb	IAmb	06 23 32.0	
	comp=Z,22nm,0.7s						
NIL	Nilore	50.16	325	P	P	06 23 27.3	-0.9
NIL				pmax	pmax		
	comp=Z,28nm,0.9s						
NIL	Nilore	50.16	325	P	P	06 23 27.3	-0.9
NIL				IAmb	IAmb	06 23 38.6	
	comp=Z,28nm,0.8s						
MGCD	Mangrove Creek	50.17	128	P	P	06 23 30.3	+1.9
	baz=50,SNR=5.4						
WMQ	Urumqi	52.67	344	*e*P	P	06 23 49.7	+2.8
WMQ				pmax	pmax		

	comp=Z,24nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,340nm,4.1s						
KSH	Kashi	53.25	332	P	P	06 23 48.8	-2.5
KSH				pP	pP	06 23 53.6	-0.4
KSH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KSH				LR	LR		
	comp=N,560nm,19.2s						
KSH				LR	LR		
	comp=E,580nm,17.3s						
KSH				LR	LR		
	comp=Z,660nm,19.9s						
CN2	Changchun	53.58	18	eP	P	06 24 02.1	+8.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
WSAR	Wadi Sarin	54.20	305	P	P	06 24 00.6	+2.2
	comp=Z,5.0nm,0.7s,baz=173,slow=9.4,SNR=4.1						
SONM	Songino Array	54.32	1	P	P	06 24 00.9	+1.9
	comp=Z,0.7nm,0.4s,baz=176,slow=8.0,SNR=4.5						
ULN	Ulaanbaatar	54.37	2	i P	P	06 23 58.5	-0.9
ULN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GAR	Garm	55.68	328	P	P	06 24 06.8	-2.2
GAR				IAmb	IAmb	06 24 18.3	
	comp=Z,27nm,1.0s						
BTK	Batken	56.20	329	P	P	06 24 12.7	+0.1
BTK				pmax	pmax		
	comp=Z,20nm,1.1s						
BTK	Batken	56.20	329	P	P	06 24 12.7	+0.1
BTK				IAmb	IAmb	06 24 24.2	
	comp=Z,20nm,1.1s						
USRK	Ussuriysk Ar.	56.23	23	P	P	06 24 12.5	-0.1
	comp=Z,3.5nm,0.5s,baz=200,slow=5.7,SNR=8.3						
AAK	Ala-Archa	56.41	333	P	P	06 24 14.6	+0.4
	comp=Z,0.8nm,0.3s,baz=224,slow=7.4,SNR=3.8						
AAK	Ala-Archa	56.41	333	i P	P	06 24 10.9	-3.3
AAK				pmax	pmax		
	comp=Z,13nm,1.0s						
MK31	Makanchi Array	56.96	342	i P	P	06 24 17.1	-0.7
MK31	Makanchi Array	56.96	342	P	P	06 24 18.3	+0.5
MKAR	Makanchi Array	56.96	342	P	P	06 24 18.6	+0.8
	comp=Z,2.2nm,0.5s,baz=152,slow=8.4,SNR=15						
MKAR	Makanchi Array	56.96	342	P	P	06 24 16.1	-1.7
HRA	Herat	57.45	318	P	P	06 24 20.8	-1.1
HRA				IAmb	IAmb	06 25 26.1	
	comp=Z,18nm,1.7s						
TLY	Talaya	58.17	359	i P	P	06 24 24.8	-1.5
TLY				pmax	pmax		
	comp=Z,8.0nm,0.7s						
DGZ	Jazzator, Alta	58.23	347	i P	P	06 24 26.6	-0.3
DGZ				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KLR	Kul'dur	60.42	20	P	P	06 24 41.1	-0.7
	comp=Z,2.2nm,0.7s,baz=276,slow=7.5,SNR=5.6						
KLR	Kul'dur	60.42	20	i P	P	06 24 40.0	-1.8
KLR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
DZM	Mont Dzumac	61.08	111	P	P	06 24 47.0	-0.1
	comp=Z,6.8nm,1.0s,baz=247,slow=7.7,SNR=4.0						
DZM	Mont Dzumac	61.08	111	IAmb	IAmb	06 26 11.1	
	comp=Z,24nm,1.4s						
KURBB	Kurchatov Arra	61.52	341	P	P	06 24 49.2	-0.1
	comp=Z,1.1nm,0.5s,baz=158,slow=6.0,SNR=4.7						
KURK	Kurchatov	61.57	341	i P	P	06 24 47.1	-2.5
KURK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KURK	Kurchatov	61.57	341	P	P	06 24 49.2	-0.4
KURK	Kurchatov	61.57	341	IAmb	IAmb	06 25 39.0	
	comp=Z,7.7nm,0.8s						
GEYT	Alibeck	62.23	319	P	P	06 24 55.0	+0.6
	comp=Z,3.6nm,0.6s,baz=108,slow=17,SNR=4.4						
ZAA0	Zalesovo Array	62.78	347	P	P	06 24 57.2	-0.4
ZAA0				IAmb	IAmb	06 25 41.2	
	comp=Z,16nm,1.4s						
ZALV	Zalesovo Beam	62.78	347	P	P	06 24 56.0	-1.6
	comp=Z,2.6nm,0.4s,baz=154,slow=4.7,SNR=7.6						
ZALV	Zalesovo Beam	62.78	347	P	P	06 24 56.5	-1.1
ZALV	Zalesovo Beam	62.78	347	P	P	06 24 56.5	-1.1
BVAR	Borovoye Array	66.34	338	P	P	06 25 21.2	+0.2
	comp=Z,3.1nm,0.7s,baz=184,slow=17,SNR=6.6						
BRVK	Borovoye	66.40	338	i P	P	06 25 20.0	-1.4
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MAW	Mawson	67.07	196	P	P	06 25 26.9	+1.5
	comp=Z,5.7nm,0.8s,baz=2.4,slow=5.2,SNR=7.1						
MAW	Mawson	67.07	196	P	P	06 25 26.0	+0.5
KMBO	Kilima Mbogo	67.76	272	P	P	06 25 32.7	+1.5
	comp=Z,1.7nm,0.7s,baz=174,slow=1.2,SNR=4.0						
KMBO				LR	LR	06 50 38.7	
	comp=Z,553nm,19.8s,baz=92,slow=32						
KMBO	Kilima Mbogo	67.76	272	P	P	06 25 30.6	-0.5
ABKAR	Akbulak array	68.16	330	P	P	06 25 31.4	-1.1
AKTO	Aktyubinsk	69.87	330	P	P	06 25 43.3	0.0
	comp=Z,2.7nm,0.7s,baz=132,slow=6.5,SNR=8.0						
YAK	Yakutsk	71.15	12	i P	P	06 25 47.9	-2.9
YAK				pmax	pmax		
	comp=Z,12nm,0.9s						
GNI	Garni	72.35	316	i P	P	06 25 56.2	-2.5
GNI				pmax	pmax		
	comp=Z,14nm,1.2s						
SVE	Sverdlovsk	72.93	336	eP	P	06 26 01.3	-0.3
SVE				pmax	pmax		
	comp=Z,24nm,1.3s						
ARU	Arti	73.51	335	P	P	06 26 05.7	+0.6
	comp=Z,2.2nm,0.7s,baz=134,slow=5.8,SNR=11						
ARU	Arti	73.51	335	d iP	P	06 26 05.3	+0.3
ARU				S	SKiKP	06 35 36.9	+0.9
ARU				pmax	pmax		
	comp=Z,19nm,1.2s						
ARU	Arti	73.51	335	P	P	06 26 05.0	0.0
ARU				IAmb	IAmb	06 26 13.3	
	comp=Z,12nm,0.8s						
ZEI	Tsey	74.04	318	eP	P	06 26 09.2	+0.5
ZEI				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MBAR	Mbarara	74.29	271	i P	P	06 26 07.7	-3.0
PETK	Petropavlovsk-	74.33	30	P	P	06 26 09.8	-0.1
	comp=Z,4.2nm,0.8s,baz=241,slow=8.1,SNR=2.5						
NEY	Neytrino	75.02	318	i P	P	06 26 13.5	-0.9
NEY				pmax	pmax		
	comp=Z,9.0nm,2.2s						
KBZ	Khabaz	75.10	318	P	P	06 26 15.9	+1.3
	comp=Z,6.7nm,0.9s,baz=123,slow=6.0,SNR=8.4						
SHA1	Shidzhatmaz	75.27	318	i P	P	06 26 14.5	-1.3
KIV	Kislovodsk	75.34	319	eP	P	06 26 14.1	-2.0
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
BELG	Belogornoye	76.32	328	P	P	06 26 21.4	+0.1
	comp=Z,7.5nm,0.9s,baz=3.1,slow=10.0,SNR=3.9						
VNDA	Vanda	76.62	169	P	P	06 26 24.3	+1.6
	comp=Z,2.3nm,0.8s,baz=299,slow=6.7,SNR=8.2						
VNDA	Vanda	76.62	169	P	P	06 26 24.1	+1.4
VNDA				pmax	pmax		
	comp=Z,19nm,1.7s						
VNDA	Vanda	76.62	169	P	P	06 26 24.1	+1.4
VNDA				IAmb	IAmb	06 26 50.1	
	comp=Z,19nm,1.7s						
NRIK	Noril'sk	76.83	354	P	P	06 26 24.6	+0.7
	comp=Z,2.0nm,0.3s,baz=156,slow=2.3,SNR=4.1						
NRIK	Noril'sk	76.83	354	ceP	P	06 26 22.8	-1.1
NRIK				pmax	pmax		
	comp=Z,13nm,1.2s						
NRIK	Noril'sk	76.83	354	P	P	06 26 24.0	+0.1
NRIK				IAmb	IAmb	06 26 40.5	
	comp=Z,14nm,1.2s						
BOSA	Boshof	77.82	242	P	P	06 26 32.4	+1.8
	comp=Z,2.8nm,1.0s,baz=87,slow=4.2,SNR=5.7						
BOSA				LR	LR	06 56 40.6	
	comp=Z,282nm,18.8s,baz=118,slow=32						
BOSA	Boshof	77.82	242	IAmb	IAmb	06 26 40.6	
	comp=Z,47nm,1.8s						
SEY	Seymchan	78.21	20	P	P	06 26 32.2	+0.5
	comp=Z,2.2nm,0.4s,baz=251,slow=4.7,SNR=7.0						
KIRV	Kirov	78.74	334	P	P	06 26 36.1	+1.4
	comp=Z,15nm,0.5s,baz=133,slow=6.4,SNR=6.4						
KIRV	Kirov	78.74	334	i P	P	06 26 34.9	+0.2
VRH	Novokhopyorsk	79.00	325	eP	P	06 26 36.2	-0.1
VRH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TIXI	Tiksi	79.77	7	P	P	06 26 39.1	-1.1
	comp=Z,5.2nm,0.7s,baz=170,slow=3.9,SNR=11						
TIXI	Tiksi	79.77	7	ceP	P	06 26 38.9	-1.2
TIXI	Tiksi	79.77	7	P	P	06 26 37.3	-2.8
BR131	Keskin Array S	80.15	312	P	P	06 26 42.7	-0.4
BR131				pmax	pmax		
	comp=Z,13nm,0.8s						
BR131	Keskin Array S	80.15	312	P	P	06 26 42.7	-0.4
BR131				IAmb	IAmb	06 26 53.8	
	comp=Z,13nm,0.8s						
BRTR	Keskin Array B	80.15	312	P	P	06 26 43.0	-0.1
	comp=Z,5.6nm,0.8s,baz=129,slow=7.1,SNR=16						
BRTR				LR	LR	07 03 34.3	
	comp=Z,527nm,19.9s,baz=46,slow=37						
BRTR	Keskin Array B	80.15	312	P	P	06 26 42.0	-1.1
VORD	Divnogorie	80.30	324	eP	P	06 26 42.0	-1.4
VORD				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VSR	Storozhevoye	80.47	324	eP	P	06 26 43.7	-0.6
VSR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
LPSR	Galich'ya Gora	81.15	326	eP	P	06 26 47.2	-0.7
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PRGR	Permogore	81.97	335	eP	P	06 26 52.1	+0.1
PRGR				eS	S	06 37 02.1	-3.8
PRGR				pmax	pmax		
	comp=Z,43nm,1.3s						
MOS	Moscow	83.08	328	eP	P	06 26 57.3	-0.7
OBN	Obninsk	83.40	327	⇑eP	P	06 27 00.0	+0.4
OBN				e		06 27 03.6	
OBN				PPP	PPP	06 32 08.0	
OBN				S	SKSac	06 37 11.0	-11
OBN				SS	SS	06 42 45.0	-1.4
OBN				SSS	SSS	06 46 14.0	
OBN				pmax	pmax		
	comp=Z,17nm,1.0s						
SORM	Soroca	86.12	319	⇓P	P	06 27 13.8	+0.3
SORM	Soroca	86.12	319	⇓P	P	06 27 13.8	+0.3
AKASG	Malin Array Be	86.23	322	P	P	06 27 13.3	-0.7
	comp=Z,0.5nm,0.3s,baz=84,slow=5.2,SNR=7.8						
AKASG	Malin Array Be	86.23	322	i P	P	06 27 14.6	+0.6
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
VRI	Vrincioaia	86.67	317	⇓P	P	06 27 18.3	+2.0
VRI	Vrincioaia	86.67	317	⇓P	P	06 27 18.3	+2.0
PLOR	Plostina	86.72	317	⇓P	P	06 27 18.2	+1.6
PLOR	Plostina	86.72	317	⇓P	P	06 27 18.2	+1.6
TESR	Tescani	86.86	317	⇓P	P	06 27 18.5	+1.3
MLR	Muntele Rosu	87.12	316	⇓P	P	06 27 20.3	+1.6
MLR	Muntele Rosu	87.12	316	⇓P	P	06 27 20.3	+1.6
MLR	Muntele Rosu	87.12	316	P	P	06 27 19.7	+1.0
VOIR		87.72	316	⇓P	P	06 27 26.6	+5.1
VOIR		87.72	316	⇓P	P	06 27 26.6	+5.1
MNK	Minsk	88.00	325	i P	P	06 27 17.6	-4.9
MNK				i S	SKSac	06 37 45.2	-5.8
MNK				i SS	SS	06 43 49.0	-5.0
MNK				i SSS	SSS	06 47 22.6	
MNK				pmax	pmax		
	comp=E,1.0nm,0.5s						
MNK				pmax	pmax		
	comp=Z,5.0nm,0.5s						
MNK				pmax	pmax		
	comp=N,6.0nm,0.5s						
MNK	Minsk	88.00	325	i P	P	06 27 17.6	-4.9
	comp=E,1.0nm,0.5s						
MNK				i P	P	06 27 17.6	-4.9
	comp=N,6.0nm,0.5s						
MNK				i P	P	06 27 17.6	-4.9
	comp=Z,5.0nm,0.5s,baz=104						
MNK				i PP	PP	06 30 43.3	-5.7
MNK				i PPP	PPP	06 32 38.4	
MNK				i S	SKSac	06 37 45.2	-5.7
MNK				i SS	SS	06 43 49.0	-5.0
MNK				i SSS	SSS	06 47 22.6	
MNK				i LQ	LQ	06 52 58.9	
MNK				i LR	LR	06 56 46.2	
MNK				i LRM	MLR	06 59 49.4	
	comp=E,89nm,14.9s						
MNK				i LRM	MLR	06 59 54.8	
	comp=N,192nm,14.9s						
MNK				i LRM	MLR	07 00 03.0	
	comp=Z,681nm,14.9s						
BURAR	Bucovina Array	88.06	318	⇓P	P	06 27 25.3	+2.2
BURAR	Bucovina Array	88.06	318	⇓P	P	06 27 25.3	+2.2
BURAR	Bucovina Array	88.06	318	P	P	06 27 23.9	+0.7
BURAR				IAmb	IAmb	06 27 34.5	
	comp=Z,8.0nm,0.8s						
BUR08	Bucovina Ar. S	88.08	318	P	P	06 27 23.9	+0.7
BUR08				IAmb	IAmb	06 27 37.2	
	comp=Z,9.6nm,0.8s						
NACGM	Naroch	88.71	326	i P	P	06 27 33.1	+7.2
SNAA	Sanae	89.20	198	P	P	06 27 30.4	+2.4
SNAA	Sanae	89.20	198	i P	P	06 27 28.7	+0.7
SNAA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SNAA	Sanae	89.20	198	P	P	06 27 28.0	0.0
SNAA				IAmb	IAmb	06 27 49.8	
	comp=Z,6.9nm,1.0s						
GZR	Gura Zlata	89.28	316	⇓P	P	06 27 29.0	+0.1
GZR	Gura Zlata	89.28	316	⇓P	P	06 27 29.0	+0.1
HERR	Herculane	89.45	315	⇓P	P	06 27 30.8	+1.2
DRGR		89.58	317	⇓P	P	06 27 30.4	+0.1
DRGR		89.58	317	⇓P	P	06 27 30.4	+0.1
KOLS	Kolonicke sedl	90.24	319	eP	P	06 27 39.6	+6.4
KOLS	Kolonicke sedl	90.24	319	eP	P	06 27 39.6	+6.4
FINES	FINESS Array B	90.57	332	P	P	06 27 34.9	+0.4
	comp=Z,3.3nm,0.9s,baz=140,slow=11,SNR=2.2						
VNA2	Neumayer--Watz	90.84	198	P	P	06 27 32.6	-3.1
ARCES	ARCESS Array B	92.57	340	P	P	06 27 44.5	+0.9
	comp=Z,4.0nm,0.9s,baz=106,slow=5.1,SNR=9.0						
NVAR	Mina Array Bea	129.77	44	PKP	PKPdf	06 33 40.7	-1.9
	comp=Z,0.4nm,0.7s,baz=284,slow=3.6,SNR=2.7						
PDAR	Pinedale Array	132.92	35	PKP	PKiKP	06 33 50.5	+0.9
	comp=Z,0.2nm,0.6s,baz=338,slow=1.0,SNR=2.3						
PDAR				SKPbc	SKPbc	06 37 14.5	-1.8
	comp=Z,0.5nm,0.9s,baz=290,slow=5.6,SNR=2.7						
ULM	Lac du Bonnet	133.22	18	PKP	PKiKP	06 33 54.3	+4.6
	comp=Z,2.5nm,0.7s,baz=207,slow=4.5,SNR=3.1						
ERPA	Erie	144.47	6		PKPdf	06 34 09.7	+0.5
WMOK	Wichita Mounta	144.53	35	P	PKPbc	06 34 09.4	+1.2
	baz=316						
TX32	Lajitas Array	144.85	47		PKPab	06 34 09.5	+0.1
TXAR	Lajitas Array	144.85	47	PKP	PKPab	06 34 09.7	+0.3
	comp=Z,2.9nm,0.6s,baz=348,slow=0.6,SNR=22						
TXAR	Lajitas Array	144.85	47	PKPdf	PKPab	06 34 08.8	-0.6
M53A	WI Miller and	145.05	7	P	PKPbc	06 34 10.1	+0.5
	baz=350						
M54A	Oil Creek Stat	145.10	6	P	PKPbc	06 34 10.4	+0.6
	baz=352						
BDFB	Brasilia	145.24	230	PKPbc	PKPdf	06 34 12.9	+1.4
	comp=Z,3.3nm,0.6s,baz=72,slow=4.1,SNR=5.8						
BDFB	Brasilia	145.24	230		PKPdf	06 34 13.1	+1.7
TUL1	Leonard	145.25	30	P	PKPbc	06 34 11.0	+0.5
	baz=322						
CCM	Cathedral Cave	145.50	23	PKIKP	PKPdf	06 34 11.0	-0.2
CCM	Cathedral Cave	145.50	23		PKPdf	06 34 11.0	-0.2
CCM	Cathedral Cave	145.50	23	P	PKPdf	06 34 11.6	+0.4
	baz=331						
U38A	Gravette	145.51	28		PKPdf	06 34 11.0	-0.3
N54A	Moraine State	145.61	7	P	PKPab	06 34 12.5	+0.8
	baz=351						
ACSO	Alum Creek Sta	145.87	11		PKPdf	06 34 10.2	-1.5
ACSO	Alum Creek Sta	145.87	11	P	PKPdf	06 34 12.4	+0.7
	baz=346						
N58A	Sunbury	145.98	2		PKPdf	06 34 11.3	-0.6
SSPA	Standing Stone	146.12	4	P	PKPab	06 34 14.6	+1.0
	baz=355						
P49A	Miami Univ. Ec	146.17	14	P	PKPbc	06 34 13.8	+0.6
	baz=342						
U40A	Yellville	146.28	26	P	PKPbc	06 34 13.8	+0.2
	baz=327						
O56A	Blue Knob Stat	146.44	5	P	PKPbc	06 34 14.8	+0.8
	baz=354						
JCT	Junction City	146.83	41	PKP2	PKPbc	06 34 15.6	+0.1
JCT	Junction City	146.83	41	PKPbc	PKPbc	06 34 15.6	+0.1
JCT	Junction City	146.83	41	P	PKPbc	06 34 16.6	+1.1
	baz=310						
LCAR	Lake Charles	147.25	25	PKPbc	PKPbc	06 34 16.5	+0.1
WVT	Waverly	148.45	20	PKP2	PKPbc	06 34 20.0	+0.3
WVT	Waverly	148.45	20		PKPbc	06 34 20.0	+0.3
WVT	Waverly	148.45	20	P	PKPbc	06 34 20.3	+0.6
	baz=335						
833A	Chaparral WMA,	148.47	44	P	PKPbc	06 34 20.6	+0.7
	baz=308						
LPAZ	La Paz	156.16	197	PKP	PKPdf	06 34 29.5	+0.6
	comp=Z,0.5nm,0.6s,baz=270,slow=2.0,SNR=1.7						
LPAZ				PKPbc	sPKPdf	06 34 38.2	+5.4
	comp=Z,1.9nm,0.9s,baz=166,slow=3.7,SNR=5.3						

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*SKO **04** 06:25:57.1, 41°.91N×20°.14E, h11^{km}*

*PDG **04** 06:25:57.4±0.1, 42°.01N×20°.12E, h3^{km}, ML2.4/12, Error ellipse: s-maj=0.1km s-min=0.2km az=0.0*

*BEO **04** 06:25:58.2±0.3, 42°.00N×20°.19E, h10^{km}±4^{km}, ML2.2/10*

TIR 04 06:25:55.4, 42°.06N×20°.23E, h12^{km}±2^{km}, Md2.6, Ml2.3, 3C-7D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUK	Puka	0.26	265	P	Pb	06 26 01.8	-0.2
	baz=266						
PUK				S	Sb	06 26 05.7	-0.7
	baz=266						
PHP	Peshkopia	0.41	158	P	Pb	06 26 04.3	-0.3
	baz=157						
PHP				S	Sb	06 26 10.7	-0.1
	baz=157						
PHP				AMP			
	comp=N,1.9nm,0.2s,baz=157						
PVY	Plav	0.57	339	⇓iPg	Pn	06 26 08.7	-0.7
PVY				i Sg	Sn	06 26 17.8	-1.0
ULC	Ulcinj	0.74	263	i Pg	Pg	06 26 10.0	+0.2
ULC	Ulcinj	0.74	263	⇓iPg	Pg	06 26 09.6	-0.2
ULC				i Sg	Sg	06 26 19.8	+0.2
TIR	Tirane	0.77	201	ePg	Pg	06 26 10.4	+0.1
TIR				eSg	Sb	06 26 21.8	+0.8
TIR	Tirane	0.77	201	i Pg	Pg	06 26 07.6	-2.7
TIR	Tirane	0.77	201	P	Pb	06 26 10.8	+0.1
	baz=202						
TIR				S	Sb	06 26 22.1	+1.1
	baz=202						
TIR				AMP			
	comp=N,0.3nm,0.3s,baz=202						
DRME	Dracevica, Mon	0.79	279	ePg	Pg	06 26 10.5	-0.2
DRME	Dracevica, Mon	0.79	279	⇓iPg	Pg	06 26 10.7	0.0
DRME				i Sg	Sb	06 26 22.0	+0.3
PDG	Podgorica	0.81	297	ePg	Pb	06 26 11.4	0.0
PDG				eSg	Sn	06 26 24.1	-0.5
PDG	Podgorica	0.81	297	ePg	Pb	06 26 11.4	0.0
PDG	Podgorica	0.81	297	i Pg	Pb	06 26 11.6	+0.1
PDG				i Sg	Sn	06 26 24.3	-0.3
TTG	Podgorica	0.81	297	⇑iPg	Pb	06 26 11.4	0.0
TTG				eSg	Sn	06 26 23.7	-0.9
IVA	Berane	0.85	343	⇓iPg	Pn	06 26 13.5	+0.3
IVA				eSg	Sn	06 26 27.5	+1.9
KOME	Kolasin	0.95	326	⇓iPg	Pn	06 26 15.0	+0.4
KOME				i Sg	Sn	06 26 30.0	+1.9
BUM	Brajici-Budva	1.02	284	ePg	Pb	06 26 15.0	-0.1
BUM				eSg	Sn	06 26 30.3	+0.4
OHR	Ohrid	1.04	156	ePg	Pn	06 26 15.7	-0.1
OHR				eSg	Sn	06 26 30.5	+0.2
OHR	Ohrid	1.04	156	i Pg	Pb	06 26 14.2	-1.2
OHR				i Sg	Sn	06 26 30.6	+0.3
OHR				eLg	Lg	06 26 31.1	
	comp=N,31nm,0.4s						
OHR				eLg	Lg	06 26 31.8	
	comp=E,41nm,0.4s						
CEME	Cevo	1.09	297	⇓iPg	Pn	06 26 16.6	+0.1
CEME				eSg	Sn	06 26 33.1	+1.6
NKME	Niksic	1.18	307	⇓iPg	Pg	06 26 18.5	+0.4
NKME				i Sg	Sn	06 26 36.7	+3.0
NKY	Niksic	1.19	310	ePg	Pg	06 26 18.7	+0.5
NKY				i Sg	Sn	06 26 37.0	+3.1
SJES	Sjenica	1.21	351	ePg	Pg	06 26 21.3	+2.6
SJES				eSg	Sn	06 26 39.3	+4.7
SELS	Selova	1.33	29	ePg	Pg	06 26 23.8	+2.9
SELS				eSg	Sg	06 26 41.2	+3.0
HCY	Herceg Novi	1.35	287	ePn	Pg	06 26 21.0	-0.3
HCY	Herceg Novi	1.35	287	⇑iPg	Pg	06 26 21.0	-0.3
HCY				i Sg	Sg	06 26 41.4	+2.6
BARS	Barje	1.39	57	ePg	Pg	06 26 24.8	+2.7
BARS				eSg	Sg	06 26 44.4	+4.2
BARS	Barje	1.39	57	i Pg	Pg	06 26 24.6	+2.4
UPM	Unac-Piva	1.50	320	ePn	Pg	06 26 25.3	+1.0
UPM	Unac-Piva	1.50	320	ePg	Pg	06 26 25.0	+0.7
UPM				i Sg	Sg	06 26 48.4	+4.6
STIP	Stip	1.50	104	i Pn	Pg	06 26 26.7	+2.5
BRY	Bratogost	1.51	304	ePn	Pb	06 26 23.1	-0.3
BRY	Bratogost	1.51	304	⇑iPg	Pg	06 26 24.5	+0.1
BRY				eSg	Sg	06 26 47.8	+3.8
FNA	Florina	1.54	146	P	Pb	06 26 24.3	+0.4
	baz=145						
FNA				S	Sg	06 26 46.1	+1.1
	baz=145						
TREB	Trebinje	1.54	296	ePg	Pg	06 26 25.1	+0.1
TREB				eSg	Sg	06 26 49.0	+4.0
TREB	Trebinje	1.54	296	ePn	Pb	06 26 24.4	+0.6
DBRK	Dubrovnik	1.66	292	ePn	Pb	06 26 26.3	+0.4
RUDO	Rudo	1.68	338	ePn	Pb	06 26 25.9	-0.3
BOSS	Bosilegrad	1.72	75	ePg	Pg	06 26 30.5	+2.1
BBLS	Lazići	1.90	342	ePn	Pn	06 26 28.6	+0.9
DIVS	Divibare	2.04	355	ePn	Pb	06 26 32.3	-0.1
DIVS				eSn	Sg	06 27 00.0	-1.0
DIVS	Divibare	2.04	355	ePn	Pb	06 26 31.8	-0.6
STON	Ston	2.04	294	ePn	Pb	06 26 32.7	+0.3
STON	Ston	2.04	294	ePn	Pb	06 26 32.4	0.0
STON	Ston	2.04	294	ePn	Pb	06 26 32.8	+0.5
HAPS	Han Pijesak,BI	2.23	335	ePn	Pg	06 26 37.2	-0.9
RICI	Ricice	2.69	303	ePn	Pb	06 26 42.2	-1.3
KIJV	Kijevo	3.41	306	ePn	Pb	06 26 52.8	-3.0
ZIRJ	Zirje	3.73	297	ePn	Pn	06 26 55.1	+2.4

IDC 04 06:31:51.2±4.2, 4°.17S×150°.99E, h0^{km}, mb3.7/3, mb1 3.9/3, mb1mx3.5/35, mbtmp3.7/3, Error ellipse: s-maj=151.8km s-min=53.3km az=118.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.57	225	P	P	06 36 53.7	+0.3
	1.3nm,0.9s,baz=51,slow=9.6,SNR=6.2						
ASAR	Alice Springs	25.45	219	P	P	06 37 21.4	+0.2
	0.6nm,0.8s,baz=48,slow=9.4,SNR=5.4						
FITZ	Fitzroy Crossi	28.41	239	P	P	06 37 47.0	-0.7
	2.4nm,0.7s,baz=89,slow=7.5,SNR=4.0						
TORD	Torodi Ar. Bea	148.40	288	PKPbc	PKPbc	06 51 40.4	-0.4
	0.3nm,0.8s,baz=102,slow=3.7,SNR=1.9						

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*ISK **04** 06:37:15.6, 40°.69N×36°.74E, h11^{km}, ML3.0/11*

*DDA **04** 06:37:15.8, 40°.68N×36°.68E, h13^{km}, ML2.0*

ISC 04 06:37:16.1±0.9, 40°.68N±0°.03×36°.70E±0°.03, h14^{km}±6^{km}, n19, σ0^{s}.69/31, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERBA	Erbaa	0.04	83	i P	Pg	06 37 18.9	+0.1
ERBA				IAML		06 37 20.0	
	comp=N,1µm,0.3s						
ERBA				IAML		06 37 20.0	
	comp=E,593nm,0.3s						
ERBA				i S	Sg	06 37 20.4	-0.1
TOKT	Tokat	0.38	199	PG	Pb	06 37 24.0	-0.6
TOKT				SG	Sb	06 37 30.1	-0.2
KUPE	Kupecik-Ladik(	0.54	292	PG	Pb	06 37 26.9	-0.4
KUPE				SG	Sb	06 37 35.1	+0.2
RSDY	Resadiye-TOKAT	0.55	120	PG	Pg	06 37 26.5	-0.4
RSDY				SG	Sb	06 37 34.6	-0.7
HKOY	Hamitkoy-Ladik	0.58	292	PG	Pb	06 37 27.9	-0.2
HKOY				SG	Sb	06 37 36.9	+0.6
KIZO	Buyukkizoglu-L	0.63	291	PG	Pb	06 37 28.6	-0.2
KVT	Kavak	0.64	309	PG	Pb	06 37 28.7	-0.4
YARM	Yarimca-Ladik(	0.71	291	PG	Pb	06 37 30.2	-0.1
SAMS	Samsun-Alacam	0.79	330	i P	Pb	06 37 31.8	+0.3
SAMS				i S	Sb	06 37 42.0	-0.1
SAMS				IAML		06 37 42.0	
	comp=N,52nm,0.2s						
SAMS				IAML		06 37 45.0	
	comp=E,69nm,0.2s						
SVSK	Karacayir	0.79	163	PG	Pb	06 37 31.4	-0.2
ORDU	Ordu-Boztepe	0.93	70	i P	Pn	06 37 34.2	-0.6
ORDU				IAML		06 37 47.0	
	comp=E,269nm,0.4s						
ORDU				i S	Sn	06 37 47.1	-0.8
ORDU				IAML		06 37 48.0	
	comp=N,104nm,0.3s						
HACI	Hacifakili, Ak	1.23	218	i P	Pg	06 37 39.2	-0.4
HACI				i S	Sg	06 37 55.9	+0.2
HACI				IAML		06 37 56.0	
	comp=E,19nm,0.3s						
HACI				IAML		06 37 57.0	

	comp=N,31nm,0.5s						
SUSE	**Susehri**	**1.24**	**112**	*i* P	**Pg**	**06 37 40.8**	**+0.9**
SUSE				*i* S	**Sn**	**06 37 57.4**	**+1.7**
SUSE				IAML		06 37 58.0	
	comp=N,56nm,0.6s						
SUSE				IAML		06 37 58.0	
	comp=E,58nm,0.5s						
CTAK	**Corum_Osmancik**	**1.45**	**269**	*i* P	**Pb**	**06 37 42.8**	**-0.3**
CTAK				*i* S	**Sg**	**06 38 02.9**	**-0.1**
CTAK				IAML		06 38 18.0	
	comp=N,37nm,0.6s						
CTAK				IAML		06 38 18.0	
	comp=E,62nm,0.9s						
DIKM	**Dikmen**	**1.46**	**312**	PN	**Pb**	**06 37 42.5**	**-0.5**
CUKAN	**kangal_SIVAS**	**1.48**	**156**	*i* P	**Pg**	**06 37 44.0**	**-0.5**
CUKAN				*i* S	**Sg**	**06 38 05.0**	**+1.2**
CUKAN				IAML		06 38 06.0	
	comp=N,18nm,0.8s						
CUKAN				IAML		06 38 08.0	
	comp=E,12nm,0.3s						
YOZ	**Yozgat**	**1.48**	**226**	PN	**Pb**	**06 37 43.4**	**-0.1**
SNOP	**Sinop**	**1.75**	**320**	PN	**Pn**	**06 37 46.6**	**+0.6**
KELT	**Kelkit**	**2.02**	**104**	*i* P	**Pg**	**06 37 53.4**	**-1.4**
KELT				*i* S	**Sb**	**06 38 18.9**	**+1.2**
KELT				IAML		06 38 21.0	
	comp=N,9.7nm,0.3s						
KELT				IAML		06 38 24.0	
	comp=E,10nm,0.4s						

IDC 04 06:41:33.7±5.1, 3°.99S×149°.09E, h0^{km}, mb3.2/2, mb1 3.5/2, mb1mx3.3/37, mbtmp3.3/2, Error ellipse: s-maj=206.2km s-min=55.1km az=110.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.41**	**221**	P	P	06 46 23.7	+0.4
	1.0nm,0.9s,baz=45,slow=10,SNR=5.2						
ASAR	**Alice Springs**	**24.45**	**215**	P	P	06 46 54.1	-0.4
	0.5nm,0.8s,baz=51,slow=7.7,SNR=4.4						
TORD	**Torodi Ar. Bea**	**146.54**	**288**	PKPbc	PKPbc	07 01 17.5	-0.7
	0.4nm,0.9s,baz=93,slow=4.4,SNR=2.6						

IDC 04 06:42:17.0±4.5, 4°.04S×150°.47E, h0^{km}, mb3.8/3, mb1 4.1/3, mb1mx3.6/39, mbtmp3.8/3, Error ellipse: s-maj=163.4km s-min=53.2km az=117.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.30**	**224**	P	P	06 47 15.5	-0.7
	1.4nm,0.8s,baz=42,slow=10,SNR=8.2						
ASAR	**Alice Springs**	**25.23**	**218**	P	P	06 47 45.0	+0.1
	1.0nm,0.8s,baz=50,slow=8.4,SNR=6.6						
FITZ	**Fitzroy Crossi**	**28.03**	**238**	P	P	06 48 10.6	+0.4
	3.5nm,0.7s,baz=78,slow=7.5,SNR=5.9						
TORD	**Torodi Ar. Bea**	**147.86**	**288**	PKPbc	PKPbc	07 02 04.4	-0.8
	0.1nm,0.3s,baz=61,slow=5.3,SNR=2.3						

IDC 04 06:44:03.8±2.0, 3°.38S×149°.90E, h0^{km}, mb3.8/4, mb1 4.1/4, mb1mx3.7/39, mbtmp3.9/4, MS4.3/1, Ms1 4.3/1, ms1mx3.4/45, Error ellipse: s-maj=115.1km s-min=27.5km az=125.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.39**	**221**	P	P	06 49 03.4	-0.6
	2.6nm,0.9s,baz=43,slow=10,SNR=9.4						
ASAR	**Alice Springs**	**25.41**	**216**	P	P	06 49 32.1	-1.1
	0.6nm,0.7s,baz=47,slow=8.3,SNR=5.4						
FITZ	**Fitzroy Crossi**	**27.90**	**237**	P	P	06 49 56.9	+1.2
	4.6nm,0.7s,baz=63,slow=6.9,SNR=9.4						
KSRS	**Korea Array**	**45.48**	**335**	LR	LR	07 09 57.0	
	comp=Z,314nm,20.0s,baz=118,slow=34						
ILAR	**Eielson Array**	**81.96**	**23**	P	P	06 56 24.9	-0.3
	0.5nm,0.8s,baz=252,slow=4.6,SNR=4.3						
TORD	**Torodi Ar. Bea**	**147.12**	**289**	PKPbc	PKPbc	07 03 49.9	0.0
	0.4nm,0.7s,baz=96,slow=3.9,SNR=2.7						

IDC 04 06:50:49.0±2.0, 8°.27S×125°.44E, h0^{km}, mb3.7/1, mb1 3.8/4, mb1mx3.5/33, mbtmp3.6/4, ML3.4/3, Error ellipse: s-maj=103.3km s-min=29.3km az=67.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**9.77**	**179**	Pn	Pn	06 53 10.5	-0.4
	0.3nm,0.3s,baz=359,slow=9.8,SNR=2.2						
FITZ				Sn	Sn	06 54 56.3	-5.1
	0.5nm,0.3s,baz=118,slow=15,SNR=3.8						
WRA	**Warramunga Arr**	**14.45**	**144**	Pn	Pn	06 54 13.9	-1.1
	0.2nm,0.3s,baz=319,slow=12,SNR=7.8						
ASAR	**Alice Springs**	**17.32**	**153**	P	P	06 54 53.5	-0.4
	0.1nm,0.3s,baz=324,slow=11,SNR=4.6						
MKAR	**Makanchi Array**	**66.91**	**329**	P	P	07 01 43.3	0.0
	0.6nm,0.7s,baz=138,slow=7.4,SNR=3.2						

IDC 04 06:51:33.3±6.6, 3°.84S×149°.98E, h0^{km}, mb3.4/2, mb1 3.7/2, mb1mx3.4/31, mbtmp3.5/2, Error ellipse: s-maj=308.4km s-min=53.9km az=113.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.11**	**222**	P	P	06 56 30.6	+0.1
	1.3nm,0.8s,baz=41,slow=10,SNR=6.6						
ASAR	**Alice Springs**	**25.10**	**217**	P	P	06 56 59.9	-0.1
	0.8nm,0.8s,baz=53,slow=8.2,SNR=7.1						
TORD	**Torodi Ar. Bea**	**147.34**	**288**	PKPbc	PKPbc	07 11 19.3	-0.8
	0.2nm,0.6s,baz=88,slow=3.7,SNR=2.0						

*IDC **04** 06:53:48.0±2.0, 8°.19S×125°.31E, h0^{km}, mb3.6/1, mb1 3.9/5, mb1mx3.6/34, mbtmp3.7/5, ML3.7/4, Error ellipse: s-maj=41.1km s-min=27.0km az=87.0*

ISC 04 06:53:51.5±1.5, 8°.3S±0°.1×125°.6E±0°.1, h35^{km}, n5, σ2^{s}.81/8, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	**2.67**	**225**	Pn	**Pn**	**06 54 31.6**	**-0.4**
	18nm,0.3s,baz=75,slow=3.8,SNR=5.0						
BATI				Sn	**Sn**	**06 55 04.1**	**+0.9**
	16nm,0.3s,baz=178,slow=13,SNR=3.9						
FITZ	**Fitzroy Crossi**	**9.71**	**180**	Pn	**Pn**	**06 56 10.3**	**+1.5**
	0.5nm,0.3s,baz=14,slow=13,SNR=1.8						
FITZ				Sn	**Sn**	**06 57 53.9**	**-2.9**
	1.0nm,0.3s,baz=298,slow=20,SNR=6.5						
WRA	**Warramunga Arr**	**14.32**	**145**	Pn	**P**	**06 57 14.9**	**-3.5**
	0.4nm,0.3s,baz=319,slow=13,SNR=8.3						
WRA				Sn	**Sn**	**06 59 51.2**	**+1.7**
	0.2nm,0.3s,baz=318,slow=25,SNR=4.2						
ASAR	**Alice Springs**	**17.20**	**153**	P	**P**	**06 57 54.1**	**+3.5**
	0.1nm,0.3s,baz=321,slow=11,SNR=6.2						
MKAR	**Makanchi Array**	**67.03**	**329**	P	**P**	**07 04 41.3**	**+0.2**
	0.5nm,0.8s,baz=147,slow=3.4,SNR=2.3						

*IDC **04** 06:57:15.0±1.3, 8°.16S×125°.63E, h0^{km}, mb3.9/4, mb1 4.1/8, mb1mx3.8/39, mbtmp3.9/8, ML3.7/4, MS3.9/2, Ms1 3.9/2, ms1mx3.3/42, Error ellipse: s-maj=46.5km s-min=21.6km az=77.0*

ISC 04 06:57:18.7±0.9, 8°.40S±0°.08×125°.8E±0°.1, h35^{km}, n9, σ2^{s}.88/12, mb4.0/4, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	**2.77**	**229**	Pn	**Pn**	**06 58 02.6**	**+2.0**
	15nm,0.3s,baz=125,slow=5.3,SNR=6.3						
BATI				Sn	**Sn**	**06 58 32.8**	**-0.1**
	14nm,0.3s,baz=356,slow=19,SNR=2.1						
FITZ	**Fitzroy Crossi**	**9.64**	**181**	Pn	**Pn**	**06 59 36.2**	**+1.2**
	0.4nm,0.3s,baz=3.0,slow=12,SNR=2.0						
FITZ				Sn	**Sn**	**07 01 19.3**	**-3.0**
	0.7nm,0.3s,baz=145,slow=20,SNR=6.3						
FITZ				LR	LR	07 03 03.4	
	comp=Z,665nm,21.8s,baz=134,slow=35						
WRA	**Warramunga Arr**	**14.14**	**145**	Pn	**P**	**07 00 40.6**	**-3.2**
	0.4nm,0.3s,baz=317,slow=13,SNR=9.4						
WRA				Sn	**Sn**	**07 03 17.4**	**+4.9**
	0.2nm,0.3s,baz=320,slow=25,SNR=6.9						
ASAR	**Alice Springs**	**17.05**	**154**	P	**P**	**07 01 19.7**	**+3.6**
	0.2nm,0.3s,baz=329,slow=12,SNR=7.9						
ASAR				S	**Sn**	**07 04 20.6**	**-2.6**
	0.1nm,0.3s,baz=314,slow=20,SNR=1.6						
CMAR	**Chiang Mai Arr**	**37.61**	**315**	P	**P**	**07 04 28.8**	**-1.6**
	0.6nm,0.3s,baz=135,slow=7.6,SNR=5.8						
PALK	**Pallekele**	**47.57**	**288**	LR	LR	07 27 29.7	
	comp=Z,181nm,19.7s,baz=267,slow=38						
SONM	**Songino Array**	**58.56**	**345**	P	**P**	**07 07 13.5**	**+1.5**
	0.3nm,0.4s,baz=153,slow=9.7,SNR=1.9						
MKAR	**Makanchi Array**	**67.19**	**329**	P	**P**	**07 08 09.0**	**-0.3**
	2.1nm,0.7s,baz=136,slow=7.5,SNR=12						
ZALV	**Zalesovo Beam**	**71.06**	**336**	P	**P**	**07 08 32.1**	**-1.0**
	1.2nm,0.8s,baz=134,slow=10,SNR=3.7						

IDC 04 07:03:47.5±3.8, 3°.41S×149°.25E, h0^{km}, mb3.7/3, mb1 4.0/3, mb1mx3.6/33, mbtmp3.7/3, Error ellipse: s-maj=91.2km s-min=52.5km az=108.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.95**	**220**	P	P	07 08 43.6	+0.6
	0.7nm,0.7s,baz=45,slow=10,SNR=4.9						
ASAR	**Alice Springs**	**25.01**	**215**	P	P	07 09 13.2	-0.2
	0.6nm,0.8s,baz=52,slow=7.8,SNR=5.1						
BATI	**Baumata**	**26.27**	**254**	P	P	07 09 24.9	-0.1
	21nm,0.3s,baz=58,slow=9.5,SNR=2.2						
FITZ	**Fitzroy Crossi**	**27.35**	**236**	P	P	07 09 34.3	-0.2
	4.3nm,0.7s,baz=65,slow=9.0,SNR=8.4						
TORD	**Torodi Ar. Bea**	**146.51**	**289**	PKPbc	PKPdf	07 23 31.1	+0.6
	0.6nm,0.9s,baz=73,slow=4.5,SNR=3.3						

*MOS **04** 07:06:29.0±1.6, 3°.46S×149°.72E, h11^{km}, mb5.0/15, Error ellipse: s-maj=13.1km s-min=8.6km az=82.5*

*IDC **04** 07:06:29.5±0.6, 3°.66S×149°.87E, h0^{km}, mb4.3/19, mb1 4.4/22, mb1mx4.3/41, mbtmp4.3/22, ML2.4/2, MS4.5/12, Ms1 4.5/12, ms1mx4.1/26, Error ellipse: s-maj=22.6km s-min=12.5km az=97.0*

*NEIC **04** 07:06:32.0±2.3, 3°.58S±0°.08×149°.79E±0°.06, h10^{km}±1^{km}, mb5.0/40, Error ellipse: s-maj=14.1km s-min=9.1km az=202.0*

*DJA **04** 07:06:33.3±0.4, 4°S±5°×15°0E±°, h10^{km}, M4.6/12, mb4.8/12, mB5.2/7, MLv4.6/2, Mw(mB)4.6/7*

*GCMT **04** 07:06:37.0±0.2, 3°.52S±0°.01×149°.71E±0°.01, h14^{km}±1^{km}, MW5.2/120, Moment Tensor Solution. s32,c40; s120,c181; Duration: 1^{s}.0 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.36±.04; M$_{\theta\theta}$0.92±.03; M$_{\phi\phi}$-0.56±.03; M$_{r\theta}$0.07±.05; M$_{\theta\phi}$0.47±.02; M$_{\phi r}$-0.01±.06; Best double couple: M$_0$0.87600×10^{17} NP1:φ$_s$29.00000°, δ85.00000°, λ-179.00000°. NP2:φ$_s$299.00000°, δ89.00000°, λ-5.00000°. Principal axes: T 1.0560, Plg3.0000°, Azm344.0000°; N -0.3590, Plg85.0000°, Azm106.0000°; P -0.6970, Plg4.0000°, Azm254.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 07:06:32.5±0.4, 3°.59S±0°.05×149°.83E±0°.06, h19^{km}, n168, σ1^{s}.54/149, mb4.8/63, MS4.5/15, 2C-2D, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	**Rabaul**	**2.40**	**104**		**Pn**	**07 07 10.5**	**-0.4**
RABL	**Rabaul**	**2.40**	**104**	P	**Pn**	**07 07 11.4**	**+0.6**
MANU	**Manus Island**	**2.91**	**302**		**Pn**	**07 07 14.5**	**-3.3**
PMG	**Port Moresby**	**6.36**	**205**	Pn	**Pn**	**07 08 04.7**	**-0.5**
	1.2nm,0.3s,baz=358,slow=9.7,SNR=2.4						
PMG	**Port Moresby**	**6.36**	**205**	P	**Pn**	**07 08 06.0**	**+0.8**
PMG	**Port Moresby**	**6.36**	**205**	Pn	**Pn**	**07 08 06.0**	**+0.8**
PMG	**Port Moresby**	**6.36**	**205**	P	Pn	07 08 12.9	+7.7
PMG	**Port Moresby**	**6.36**	**205**	P	Pb	07 08 13.6	-9.0
JAY	**Jayapura**	**9.18**	**276**	Pn	**Pn**	**07 08 44.5**	**+0.5**
	0.3nm,0.3s,baz=111,slow=9.8,SNR=6.5						
JAY				LR	LR	07 11 40.3	
	comp=Z,4µm,20.9s,baz=70,slow=34						
SMPI	**Sarmi**	**11.22**	**278**	P	Pn	07 09 19.5	+7.5
HNR	**Honiara**	**11.60**	**120**	LR	LR	07 13 52.0	
	comp=Z,2µm,21.8s,baz=295,slow=38						
COEN	**Coen**	**12.21**	**212**	Pn	**Pn**	**07 09 27.3**	**+1.7**
MTSU	**Mount Surprise**	**15.43**	**200**	P	**P**	**07 10 12.1**	**-1.6**
	baz=16,SNR=14						
MTSU	**Mount Surprise**	**15.43**	**200**	P	**P**	**07 10 12.3**	**-1.5**
	13nm,1.1s						
CTA	**Charters Tower**	**16.76**	**192**	Pn	**Pn**	**07 10 26.8**	**+0.4**
	0.5nm,0.3s,baz=14,slow=17,SNR=6.6						
CTA				LR	LR	07 16 51.1	
	comp=Z,924nm,19.2s,baz=10.0,slow=37						
CTA	**Charters Tower**	**16.76**	**192**	P	**P**	**07 10 30.1**	**+1.6**
	60nm,1.7s						
CTAO	**Charters Tower**	**16.76**	**192**	P	**P**	**07 10 27.7**	**-0.9**
CTAO				pmax	pmax		
	comp=Z,138nm,1.5s						
CTAO	**Charters Tower**	**16.76**	**192**		**P**	**07 10 27.7**	**-0.9**
CTAO				IAmb	IAmb	07 10 53.9	
	comp=Z,138nm,1.5s						
CTAO	**Charters Tower**	**16.76**	**192**	P	**P**	**07 10 28.4**	**-0.1**
FAKI	**Fak Fak**	**17.57**	**272**	Pn	**Pn**	**07 10 34.2**	**-2.3**
FAKI	**Fak Fak**	**17.57**	**272**	P	**Pn**	**07 10 35.4**	**-1.1**
	comp=Z,2µmcomp=Z,108nm,1.8s						
FAKI	**Fak Fak**	**17.57**	**272**	P	**Pn**	**07 10 34.6**	**-1.9**
GUMO	**Guam**	**17.77**	**344**	LR	LR	07 15 58.5	
	comp=Z,2µm,20.8s,baz=150,slow=32						
SAUI	**Saumlaki**	**18.94**	**256**	P	**Pn**	**07 10 53.6**	**+0.2**
KDU	**Kakadu**	**19.40**	**241**	P	**P**	**07 10 57.1**	**-0.5**
	comp=Z,57nm,1.4s						
QIS	**Mount Isa**	**19.58**	**210**	P	**Pn**	**07 11 00.9**	**-0.2**
	baz=20,SNR=14						
QIS	**Mount Isa**	**19.58**	**210**	P	**Pn**	**07 11 01.2**	**+0.2**
	comp=Z,40nm,1.0s						
RK1H	**Rockhampton Ha**	**19.69**	**178**	P	**Pn**	**07 11 04.2**	**+2.0**
	comp=Z,54nm,1.0s						
MTN	**Manton Dam**	**20.64**	**242**	P	**P**	**07 11 08.1**	**-3.2**
MTN				IAmb	IAmb	07 11 35.4	
	comp=Z,58nm,1.2s						
MTN	**Manton Dam**	**20.64**	**242**	P	**P**	**07 11 11.4**	**+0.2**
	comp=Z,36nm,0.8s						
DRS	**Darwin Rock St**	**20.68**	**244**	P	**P**	**07 11 11.6**	**-0.1**
	comp=Z,29nm,1.1s						
SANVU	**Saraoutou**	**20.76**	**126**	P	**P**	**07 11 11.5**	**-1.0**
SANVU				IAmb	IAmb	07 11 34.8	
	comp=Z,92nm,1.2s						
EIDS	**Eidsvold**	**21.68**	**177**	P	**P**	**07 11 23.7**	**+1.4**
	baz=22,SNR=3.9						
EIDS	**Eidsvold**	**21.68**	**177**	P	**P**	**07 11 22.9**	**+0.6**
EIDS				IAmb	IAmb	07 11 37.7	
	comp=Z,82nm,1.1s						
EIDS	**Eidsvold**	**21.68**	**177**	P	**P**	**07 11 24.2**	**+1.9**
	comp=Z,73nm,1.2s						
WB0	**Warramunga Arr**	**22.03**	**222**	P	**P**	**07 11 25.4**	**-0.8**
WB0				IAmb	IAmb	07 11 34.6	
	comp=Z,87nm,1.2s						
WR0	**Warramunga Arr**	**22.07**	**221**	P	**P**	**07 11 26.6**	**+0.1**
WR0				IAmb	IAmb	07 11 35.0	
	comp=Z,88nm,1.2s						
WRAB	**Tennant Creek**	**22.18**	**222**	*i* P	**P**	**07 11 26.4**	**-1.3**
WRAB				pmax	pmax		
	comp=Z,59nm,1.0s						
WRAB	**Tennant Creek**	**22.18**	**222**	P	**P**	**07 11 25.4**	**-2.4**
WRAB	**Tennant Creek**	**22.18**	**222**	P	**P**	**07 11 27.9**	**+0.2**
WC3	**Warramunga Arr**	**22.18**	**222**	P	**P**	**07 11 28.5**	**+0.8**
	baz=22						
WB2	**Warramunga Arr**	**22.18**	**222**	P	**P**	**07 11 26.9**	**-0.9**
WB2				IAmb	IAmb	07 11 38.3	
	comp=Z,73nm,0.9s						
WRA	**Warramunga Arr**	**22.19**	**222**	P	**P**	**07 11 27.3**	**-0.6**
	comp=Z,16nm,0.9s,baz=44,slow=10,SNR=31						
WRA				LR	LR	07 20 40.0	
	comp=Z,973nm,19.7s,baz=10.0,slow=38						
WRA	**Warramunga Arr**	**22.19**	**222**	P	**P**	**07 11 28.4**	**+0.5**
WRA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
WRA	**Warramunga Arr**	**22.19**	**222**	P	**P**	**07 11 28.4**	**+0.5**
LBMI	**Labuha**	**22.51**	**277**	P	P	07 11 42.4	+11
RMQ	**Roma**	**22.79**	**182**	P	**P**	**07 11 35.3**	**+1.2**
	baz=23,SNR=15						
RMQ	**Roma**	**22.79**	**182**	P	**P**	**07 11 35.9**	**+1.8**
	comp=Z,32nm,1.2s						
QLP	**Quilpie**	**23.48**	**193**	P	**P**	**07 11 42.7**	**+1.6**
	baz=24,SNR=5.3						
QLP	**Quilpie**	**23.48**	**193**	P	**P**	**07 11 42.3**	**+1.1**
	comp=Z,128nm,1.8s						
SANI	**Sanana**	**23.86**	**273**	P	P	07 11 57.9	+13
KNRA	**Kununurra**	**23.96**	**239**	P	**P**	**07 11 44.2**	**-1.7**
LIFNC	**LIFOU**	**24.06**	**137**	P	**P**	**07 11 45.3**	**-1.5**
LIFNC	**LIFOU**	**24.06**	**137**	P	**P**	**07 11 47.2**	**+0.4**
NOUC	**Port Laguerre**	**24.37**	**140**	P	**P**	**07 11 50.7**	**+1.1**
DZM	**Mont Dzumac**	**24.44**	**140**	*e*P	**P**	**07 11 51.2**	**+0.8**
DZM				*e*LQ	LQ	07 16 56.0	
	comp=Z,3µm,30.6s						
DZM				*e*LR	LR	07 18 00.4	
	comp=Z,3µm,27.5s						
DZM	**Mont Dzumac**	**24.44**	**140**	P	**P**	**07 11 50.7**	**+0.3**
	comp=Z,14nm,1.0s,baz=274,slow=4.1,SNR=13						
DZM	**Mont Dzumac**	**24.44**	**140**	P	**P**	**07 11 50.0**	**-0.4**
DZM	**Mont Dzumac**	**24.44**	**140**	P	**P**	**07 11 51.8**	**+1.4**
YATNC	**Mamie plateau,**	**24.72**	**139**	P	**P**	**07 11 55.2**	**+2.4**
AS31	**Alice Springs**	**25.20**	**216**	P	**P**	**07 11 57.5**	**+0.3**
ASAR	**Alice Springs**	**25.20**	**216**	P	**P**	**07 11 56.9**	**-0.4**
	comp=Z,8.7nm,1.0s,baz=52,slow=8.5,SNR=25						
ASAR				LR	LR	07 22 38.9	
	comp=Z,952nm,21.7s,baz=43,slow=38						
ASAR	**Alice Springs**	**25.20**	**216**	P	**P**	**07 11 57.2**	**0.0**
ASAR	**Alice Springs**	**25.20**	**216**	P	**P**	**07 11 57.2**	**0.0**
INKA	**Innaminka**	**25.53**	**199**	P	**P**	**07 12 01.7**	**+1.6**
	comp=Z,87nm,1.7s						
ARMA	**Armidale**	**26.73**	**177**	P	**P**	**07 12 12.3**	**+1.2**
	baz=27,SNR=7.1						
ARMA	**Armidale**	**26.73**	**177**	P	**P**	**07 12 11.7**	**+0.6**
ARMA	**Armidale**	**26.73**	**177**	P	**P**	**07 12 13.4**	**+2.3**
	comp=Z,46nm,1.7s						
BATI	**Baumata**	**26.78**	**254**	LR	LR	07 25 09.4	
	comp=Z,2µm,20.0s,baz=94,slow=42						
GTOI	**Gorontalo**	**27.13**	**278**	P	**P**	**07 12 18.6**	**+3.8**
	comp=Z,280nmcomp=Z,14nm,1.4s						
OOD	**Oodnadatta**	**27.59**	**208**	P	**P**	**07 12 21.3**	**+2.6**
	comp=Z,36nm,1.9s						
FITZ	**Fitzroy Crossi**	**27.73**	**237**	P	**P**	**07 12 19.7**	**-0.4**
	comp=Z,12nm,0.6s,baz=62,slow=9.6,SNR=18						
FITZ				LR	LR	07 24 12.1	
	comp=Z,1µm,18.4s,baz=58,slow=38						
FITZ	**Fitzroy Crossi**	**27.73**	**237**	P	**P**	**07 12 17.1**	**-2.9**
	baz=28,SNR=23						
FITZ	**Fitzroy Crossi**	**27.73**	**237**	P	**P**	**07 12 19.1**	**-1.0**
FITZ	**Fitzroy Crossi**	**27.73**	**237**	P	**P**	**07 12 21.9**	**+1.8**
	comp=Z,60nm,1.1s						
CMSA	**Cobar Meteorol**	**28.07**	**188**	P	**P**	**07 12 23.5**	**+0.5**
	baz=28,SNR=5.6						
CMSA	**Cobar Meteorol**	**28.07**	**188**	P	**P**	**07 12 24.2**	**+1.3**
	comp=Z,17nm,1.3s						
STKA	**Stephens Creek**	**29.18**	**194**	P	**P**	**07 12 32.8**	**-0.1**
	comp=Z,1.8nm,0.9s,baz=40,slow=7.9,SNR=2.2						
STKA				LR	LR	07 25 10.7	
	comp=Z,1µm,18.7s,baz=14,slow=38						
WRKA	**Warakurna**	**29.73**	**222**	P	**P**	**07 12 36.4**	**-1.5**
	baz=30,SNR=21						
WRKA	**Warakurna**	**29.73**	**222**	P	**P**	**07 12 38.6**	**+0.7**
	comp=Z,34nm,1.2s						
MULG	**Mulgathing**	**30.45**	**208**	P	**P**	**07 12 45.1**	**+1.0**
	comp=Z,24nm,1.0s						
MSVF	**Nonsavu**	**31.02**	**119**	LR	LR	07 26 02.7	
	comp=Z,281nm,19.2s,baz=268,slow=38						
PSA00	**Pilbara Seismi**	**34.17**	**236**	P	**P**	**07 13 15.7**	**-1.1**
PSA00	**Pilbara Seismi**	**34.17**	**236**	IAmb	IAmb	07 13 22.2	
	comp=Z,12nm,0.8s						
MEEK	**Meekatharra**	**37.65**	**229**	P	**P**	**07 13 45.8**	**-0.9**
	baz=38,SNR=7.3						
MEEK	**Meekatharra**	**37.65**	**229**	P	**P**	**07 13 47.2**	**+0.5**
	comp=Z,33nm,1.2s						
MJAR	**Matsushiro Arr**	**41.38**	**346**	P	**P**	**07 14 18.9**	**+1.4**
	comp=Z,1.2nm,0.7s,baz=162,slow=8.4,SNR=1.7						
NWAO	**Narrogin (SRO)**	**42.20**	**222**	LR	LR	07 31 51.6	
	comp=Z,785nm,19.9s,baz=80,slow=36						
PMBI	**Palembang**	**44.99**	**269**	P	P	07 14 56.3	+9.2
MDSI	**Maura Dua**	**45.54**	**267**	P	P	07 15 01.2	+10
KSRS	**Korea Array**	**45.64**	**335**	P	**P**	**07 14 52.6**	**+0.8**
	comp=Z,0.8nm,0.3s,baz=164,slow=9.7,SNR=1.9						
NJ2	**Nanjing**	**46.07**	**323**	*e*P	**P**	**07 14 54.1**	**-1.3**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
NJ2				LR	LR		
	comp=N,1µm,19.9s						
NJ2				LR	LR		
	comp=E,940nm,20.8s						
NJ2				LR	LR		
	comp=Z,2µm,22.1s						
USRK	**Ussuriysk Ar.**	**50.20**	**343**	P	**P**	**07 15 28.6**	**+1.5**
	comp=Z,2.1nm,0.7s,baz=161,slow=9.2,SNR=4.0						
USRK				LR	LR	07 36 25.7	
	comp=Z,247nm,18.3s,baz=144,slow=36						
CMAR	**Chiang Mai Arr**	**54.69**	**296**	P	**P**	**07 16 01.7**	**+0.8**
	comp=Z,4.4nm,0.9s,baz=113,slow=5.7,SNR=12						
CMAR	**Chiang Mai Arr**	**54.69**	**296**	P	**P**	**07 16 00.5**	**-0.4**
CMAR	**Chiang Mai Arr**	**54.69**	**296**	P	**P**	**07 16 00.5**	**-0.4**
KLR	**Kul'dur**	**54.91**	**346**	P	**P**	**07 16 03.4**	**+1.5**
	comp=Z,2.6nm,0.8s,baz=145,slow=8.4,SNR=6.1						
KLR	**Kul'dur**	**54.91**	**346**	*i* P	**P**	**07 15 59.0**	**-2.9**
KLR				pmax	pmax		
	comp=Z,11nm,1.4s						
CD2	**Chengdu**	**55.72**	**311**	P	**P**	**07 16 09.1**	**+0.9**
CD2				pmax	pmax		
	comp=Z,20nm,1.3s						
CD2				LR	LR		
	comp=N,430nm,18.9s						
CD2				LR	LR		
	comp=E,390nm,18.0s						
CD2				LR	LR		
	comp=Z,500nm,23.3s						
HHC	**Hu-ho-hao-te**	**56.37**	**326**	*e*P	**P**	**07 16 10.8**	**-1.9**
HHC				pmax	pmax		
	comp=Z,25nm,0.7s						
HHC				pmax	pmax		
	comp=Z,240nm,6.6s						
PETK	**Petropavlovsk-**	**56.88**	**6**	P	**P**	**07 16 17.0**	**+1.0**
	comp=Z,4.6nm,0.9s,baz=191,slow=14,SNR=3.6						
LZH	**Lanzhou**	**58.32**	**317**	⇓P	**P**	**07 16 29.3**	**+2.6**
LZH				pP	pwP	07 16 35.2	0.0
LZH				sP	sP	07 16 36.9	+2.9
LZH				S	**S**	**07 24 32.0**	**+3.5**
LZH				sS	sS	07 24 41.2	+3.7
HIA	**Hailar**	**58.76**	**337**	*i* P	**P**	**07 16 27.1**	**-2.2**
HIA				pmax	pmax		
	comp=Z,18nm,1.4s						
ZEA	**Zeya**	**60.17**	**345**	*e*P	P	07 16 47.2	+8.3
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.5s						
ZEA				MLR	MLR		
	comp=Z,200nm,20.0s						
PPT2	**Papeete2**	**60.91**	**108**	*e*LQ	LQ	07 32 09.4	
	comp=Z,1µm,37.0s						
PPT2				*e*LR	LR	07 34 45.9	
	comp=Z,581nm,27.8s						
GTA	**Gaotai**	**62.78**	**318**	*e*P	**P**	**07 16 58.0**	**+1.0**
GTA				pP	pP	07 17 02.3	-0.1
GTA				sP	pwP	07 17 05.6	0.0
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
SHL	**Shillong**	**63.15**	**301**	P	**P**	**07 17 00.8**	**+1.0**
SHL				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SHL	**Shillong**	**63.15**	**301**	P	**P**	**07 17 00.8**	**+1.0**
SHL				IAmb	IAmb	07 17 02.9	
	comp=Z,10.0nm,0.8s						
ULN	**Ulaanbaatar**	**63.43**	**329**	*i* P	**P**	**07 16 58.1**	**-3.1**
ULN				pmax	pmax		
	comp=Z,4.0nm,1.1s						
SONM	**Songino Array**	**63.75**	**329**	P	**P**	**07 17 03.4**	**+0.1**
	comp=Z,1.0nm,0.8s,baz=134,slow=6.4,SNR=3.7						
SEY	**Seymchan**	**66.38**	**1**	P	**P**	**07 17 21.1**	**+1.2**
	comp=Z,2.8nm,0.8s,baz=322,slow=3.3,SNR=3.9						
ZAK	**Zakamensk**	**66.95**	**330**	*e*P	**P**	**07 17 23.0**	**-0.9**
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.4s						
TAPN	**Taplejung**	**67.25**	**302**	*e*P	**P**	**07 17 28.9**	**+2.3**
RAMN	**Ramite**	**68.09**	**301**	*e*P	**P**	**07 17 33.6**	**+1.8**
JIRN	**Jiri**	**68.64**	**301**	*e*P	**P**	**07 17 36.9**	**+1.5**
GUN	**Gumba**	**68.97**	**302**	*e*P	**P**	**07 17 39.4**	**+2.0**
PKIN	**Phulchoki**	**69.29**	**301**	*e*P	**P**	**07 17 40.4**	**+1.1**
KKN	**Kakani**	**69.45**	**301**	*e*P	**P**	**07 17 41.9**	**+1.7**
DMN	**Daman**	**69.55**	**301**	*e*P	**P**	**07 17 42.4**	**+1.5**
	comp=Z,56nm,1.1s						
TAOE	**Nuku Hiva Isla**	**69.72**	**98**	*e*LR	LR	07 38 51.6	
	comp=Z,352nm,24.8s						
GKN	**Gorkha**	**70.05**	**301**	*e*P	**P**	**07 17 45.3**	**+1.4**
	comp=Z,75nm,1.2s						
KOLN	**Koldanda**	**70.88**	**301**	*e*P	**P**	**07 17 49.4**	**+0.4**
	comp=Z,30nm,0.9s						
DANN	**Dangsing**	**70.89**	**302**	*e*P	**P**	**07 17 50.2**	**+1.0**
	comp=Z,43nm,1.3s						
WMQ	**Urumqi**	**72.86**	**318**	*e*P	**P**	**07 17 59.0**	**-1.4**
WMQ				pmax	pmax		
	comp=Z,22nm,0.9s						

VNDA	Vanda	74.15	177	P	P	07 18 06.0	-1.3
	comp=Z,1.1nm,0.8s,baz=2.3,slow=6.6,SNR=3.8						
DGZ	Jazzator, Alta	75.35	324	i P	P	07 18 12.0	-2.9
DGZ				pmax	pmax		
	comp=Z,7.0nm,1.3s						
TIXI	Tiksi	76.34	353	ceP	P	07 18 18.1	-1.8
MKAR	Makanchi Array	77.48	319	P	P	07 18 28.3	+1.4
MKAR	Makanchi Array	77.48	319	P	P	07 18 28.3	+1.4
L19K	White Mountain	77.79	23	P	P	07 18 29.9	+1.6
ZALV	Zalesovo Beam	78.52	327	P	P	07 18 31.9	-0.6
	comp=Z,0.8nm,0.4s,baz=104,slow=6.3,SNR=6.3						
ZALV	Zalesovo Beam	78.52	327	P	P	07 18 31.2	-1.3
ZALV	Zalesovo Beam	78.52	327	P	P	07 18 31.2	-1.3
J20K	Nowinta River	79.14	22	P	P	07 18 37.3	+1.6
J20K				IAmb	IAmb	07 18 53.6	
	comp=Z,16nm,1.1s						
KSH	Kashi	79.91	311	P	P	07 18 42.8	+2.2
KSH				sP	pwP	07 18 48.7	-0.6
KSH				pmax	pmax		
	comp=Z,2.0nm,0.4s						
KSH				LR	LR		
	comp=N,630nm,16.7s						
KSH				LR	LR		
	comp=E,390nm,16.5s						
KSH				LR	LR		
	comp=Z,250nm,21.0s						
IMAR	Indian Mountai	80.26	20	P	P	07 18 43.3	+1.6
RND	Reindeer	80.79	24	IAmb	IAmb	07 19 01.3	
	comp=Z,17nm,1.0s						
MLY	Manley	80.85	22	P	P	07 18 45.6	+0.7
KURK	Kurchatov	81.01	322	i P	P	07 18 42.0	-4.0
KURK				pmax	pmax		
	comp=Z,8.0nm,1.2s						
KURK	Kurchatov	81.01	322	P	P	07 18 45.8	-0.3
KURK				IAmb	IAmb	07 19 11.8	
	comp=Z,12nm,1.4s						
WRH	Wood River Hil	81.58	23	P	P	07 18 49.1	+0.3
WRH				IAmb	IAmb	07 19 05.2	
	comp=Z,18nm,1.2s						
AAK	Ala-Archa	81.70	314	i P	P	07 18 47.0	-3.1
AAK				pmax	pmax		
	comp=Z,11nm,1.2s						
COLA	College	81.86	22	i P	P	07 18 47.2	-3.0
COLA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
IL31		82.18	23	P	P	07 18 51.1	-0.8
IL31				IAmb	IAmb	07 19 07.8	
	comp=Z,9.4nm,0.9s						
ILAR	Eielson Array	82.18	23	P	P	07 18 51.9	-0.1
	comp=Z,3.5nm,0.9s,baz=253,slow=5.1,SNR=16						
ILAR	Eielson Array	82.18	23	P	P	07 18 51.3	-0.7
ILAR	Eielson Array	82.18	23	P	P	07 18 51.3	-0.7
DOT	Dot Lake	82.84	24	IAmb	IAmb	07 19 09.6	
	comp=Z,15nm,1.1s						
NRIK	Noril'sk	83.88	342	P	P	07 18 59.5	-1.2
	comp=Z,1.6nm,0.5s,baz=127,slow=5.1,SNR=2.4						
NRIK	Noril'sk	83.88	342	i P	P	07 18 57.7	-3.0
NRIK				pmax	pmax		
	comp=Z,20nm,1.4s						
EGAK	Eagle	84.44	24	P	P	07 19 05.5	+1.9
EGAK				IAmb	IAmb	07 19 18.1	
	comp=Z,15nm,1.2s						
KK31	Karatay Array	84.66	314	P	P	07 19 05.8	+0.5
KK31				pmax	pmax		
	comp=Z,15nm,1.3s						
KK31	Karatay Array	84.66	314	P	P	07 19 05.8	+0.5
KK31				IAmb	IAmb	07 19 19.1	
	comp=Z,15nm,1.2s						
KKAR	Karatay Array	84.66	314	P	P	07 19 07.2	+1.9
KKAR	Karatay Array	84.66	314	P	P	07 19 07.2	+1.9
KKAR	Karatay Array	84.66	314	IAmb	IAmb	07 19 19.1	
	comp=Z,15nm,1.2s						
MAW	Mawson	85.54	203	P	P	07 19 08.2	-0.9
	comp=Z,3.1nm,0.9s,baz=95,slow=9.7,SNR=4.8						
MAW	Mawson	85.54	203	P	P	07 19 08.2	-0.9
MAW				pmax	pmax		
	comp=Z,2.0nm,1.3s						
BRVK	Borovoye	86.58	324	i P	P	07 19 11.6	-2.9
BRVK				pmax	pmax		
	comp=Z,14nm,3.3s						
INK	Inuvik	88.40	21	P	P	07 19 24.1	+1.2
INK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
INK	Inuvik	88.40	21	P	P	07 19 24.1	+1.2
INK				IAmb	IAmb	07 19 29.7	
	comp=Z,10.0nm,1.3s						
SYO	Syowa Base	93.80	200	⇓eP	P	07 19 49.1	+1.0
SYO	Syowa Base	93.80	200	⇑esP	sP	07 19 55.4	-0.2
NEW	Newport	94.69	42	P	P	07 19 54.0	+1.3
NEW				pmax	pmax		
	comp=Z,7.0nm,1.2s						
NEW	Newport	94.69	42	P	P	07 19 54.0	+1.3
NEW				IAmb	IAmb	07 20 06.5	
	comp=Z,7.1nm,1.2s						
YKA	Yellowknife Ar	95.74	28	P	P	07 19 56.1	-0.9
	comp=Z,1.8nm,0.9s,baz=278,slow=4.3,SNR=2.6						
GERES	GERESS Array B	121.47	328	PKP	PKiKP	07 25 25.9	+0.8
	comp=Z,0.2nm,0.2s,baz=24,slow=5.4,SNR=1.8						
TORD	Torodi Ar. Bea	147.12	289	PKPbc	PKPbc	07 26 14.4	-1.0
	comp=Z,4.8nm,0.8s,baz=51,slow=2.4,SNR=25						

NNC 04 07:07:15.2±3.9**, 37°.00N**×**70°.65E, h0**^{km}**, mb3.6, mpv3.3, 3C-1D, Error ellipse: s-maj=31.2km s-min=29.1km az=128.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.10	359	⇑P	Pn	07 08 46.6	-0.1
	0.4nm,0.2s,baz=181,slow=12,SNR=11						
KK31				⇓S	Sn	07 09 58.4	+1.2
	2.4nm,0.5s,baz=189,slow=23,SNR=7.9						
AAK	Ala-Archa	6.37	27	P	Pn	07 08 50.6	+0.2
	1.1nm,0.5s						
AAK				S	Sn	07 10 06.3	+2.3
	5.5nm,0.5s						
TKM2	Tokmak 2	7.03	31	⇑P	Pn	07 08 59.6	0.0
	1.8nm,0.5s						
TKM2				⇑S	Sn	07 10 20.2	-0.2
	1.8nm,0.8s						

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*GCG **04** 07:09:19.4±0.3, 13°.74N×91°.65W, h3^{km}, MD3.4*

*MEX **04** 07:09:22.5±0.4, 14°.65N×93°.27W, h125^{km}±9^{km}, MD4.0*

ISC 04 07:08:58.8±4.5**, 12°.8N**±0°.3×**92°.5W**±0°.2**, h10**^{km}**, n8, σ1.^{s}20**/8**, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG3	Santiaguito 3,	2.06	25	eP	Pg	07 09 38.4	-0.1
THIG		2.07	6	i P	Pg	07 09 43.3	+4.7
THIG				i S	Sn	07 09 59.7	+0.1
FUG	Fuego 3	2.26	45	eP	Pb	07 09 39.7	-0.2
PCG	Pacaya	2.39	49	eP	Pb	07 09 42.3	+0.2
NBG	Las Nubes	2.71	50	eP	Pb	07 09 47.8	+0.2
PCIG		2.94	346	eP	Pn	07 09 44.2	-1.5
PCIG				eS	Sn	07 09 59.1	-22
CCIG	Comitan	3.44	6	eP	Pn	07 09 52.0	-0.7
TGIG		3.97	351	eP	Pn	07 10 01.9	+2.1
TGIG				eS	Sn	07 10 21.5	-25

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*IDC **04** 07:15:03.9±1.7, 8°.18S×125°.20E, h0^{km}, mb3.9/2, mb1 3.9/6, mb1mx3.6/42, mbtmp3.7/6, ML3.5/4, Error ellipse: s-maj=51.1km s-min=22.9km az=72.0*

ISC 04 07:15:06.7±1.2**, 8°.23S**±0°.09×**125°.5E**±0°.1**, h26**^{km}**, n6, σ2.^{s}70**/10**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	2.68	223	Pn	Pn	07 15 47.4	-0.8
	5.1nm,0.3s,baz=75,slow=12,SNR=2.0						
BATI				Sn	Sn	07 16 22.6	+2.7
	12nm,0.3s,baz=158,slow=19,SNR=4.3						
FITZ	Fitzroy Crossi	9.81	179	Pn	Pn	07 17 27.2	+1.0
	0.3nm,0.3s,baz=21,slow=12,SNR=1.1						
FITZ				Sn	Sn	07 19 09.9	-5.7
	0.4nm,0.3s,baz=297,slow=2.3,SNR=3.6						
WRA	Warramunga Arr	14.44	145	Pn	Pn	07 18 31.3	+1.7
	0.3nm,0.3s,baz=315,slow=13,SNR=9.6						
WRA				Sn	Sn	07 21 07.8	-1.3
	0.2nm,0.3s,baz=308,slow=23,SNR=4.6						
ASAR	Alice Springs	17.33	153	P	P	07 19 09.3	+1.2
	0.2nm,0.3s,baz=317,slow=10.0,SNR=9.3						
ASAR				S	Sn	07 22 21.0	+1.8
	0.1nm,0.3s,baz=320,slow=18,SNR=4.2						
CMAR	Chiang Mai Arr	37.29	316	P	P	07 22 16.2	-0.7
	0.8nm,0.3s,baz=134,slow=7.7,SNR=4.8						
MKAR	Makanchi Array	66.91	329	P	P	07 25 56.2	-0.5
	0.5nm,0.5s,baz=141,slow=6.6,SNR=5.6						

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*KRSC **04** 07:19:35.8±0.6, 55°.53N×162°.13E, h70^{km}±15^{km}, ML4.7*

*MOS **04** 07:19:36.9±0.7, 55°.58N×162°.06E, h71^{km}, mb4.3/6, Error ellipse: s-maj=9.7km s-min=4.9km az=76.8*

*IDC **04** 07:19:41.6±2.7, 55°.63N×161°.63E, h94^{km}±30^{km}, mb3.5/10, mb1 3.8/12, mb1mx3.5/60, mbtmp3.9/12, MS3.6/2, Ms1 3.6/2, ms1mx3.1/47, Error ellipse: s-maj=23.7km s-min=18.7km az=164.0*

ISC 04 07:19:38.0±0.8**, 55°.54N**±0°.03×**162°.08E**±0°.03**, h60**^{km}±8^{km}**, n98, σ1.^{s}16**/141**, mb4.0**/16**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.79	32	PN	Pn	07 19 53.4	+0.1
KBTR				S	Sn	07 20 06.5	+2.0
KBTR	Krutoberegovo	0.79	32	eP	Pn	07 19 53.4	+0.1
KBTR				eS	Sn	07 20 06.5	+2.0
KBG	Krutoberegovo	0.80	26	PN	Pn	07 19 53.4	0.0
KBG				S	Sn	07 20 05.9	+1.2
KBG	Krutoberegovo	0.80	26	eP	Pn	07 19 53.4	0.0
KBG				eS	Sn	07 20 05.9	+1.2
BZGR	Bezymyannyi-Gr	0.88	297	PN	Pn	07 19 54.2	-0.3
BZGR				S	Sn	07 20 07.9	+1.2
BZGR	Bezymyannyi-Gr	0.88	297	eP	Pn	07 19 54.2	-0.3
BZGR				eS	Sn	07 20 07.9	+1.2
CIRR	Tsirk	0.94	308	PN	Pn	07 19 55.1	-0.3
CIRR	Tsirk	0.94	308	eP	Pn	07 19 55.1	-0.3
LGNR	Loginova	0.95	305	PN	Pn	07 19 55.9	+0.2
LGNR				S	Sn	07 20 09.5	+0.8
LGNR	Loginova	0.95	305	eP	Pn	07 19 55.9	+0.2
LGNR				eS	Sn	07 20 09.5	+0.8
BZWR	Bezymyannyi-We	0.99	296	PN	Pn	07 19 55.8	-0.2
BZWR				S	Sn	07 20 11.1	+1.8
BZWR	Bezymyannyi-We	0.99	296	eP	Pn	07 19 55.8	-0.2
BZWR				eS	Sn	07 20 11.1	+1.8
MKZ	Mys Kozlova	1.01	192	PN	Pn	07 19 55.2	-0.9
MKZ				S	Sn	07 20 09.6	+0.1
MKZ	Mys Kozlova	1.01	192	eP	Pn	07 19 55.2	-0.9
MKZ				eS	Sn	07 20 09.6	+0.1
KIRR	Kirishev	1.06	293	PN	Pn	07 19 56.6	-0.4
KIRR				S	Sn	07 20 13.0	+1.9
KIRR	Kirishev	1.06	293	eP	Pn	07 19 56.6	-0.4
KIRR				eS	Sn	07 20 13.0	+1.9
KMNR	Kamenistaya	1.06	282	PN	Pn	07 19 56.2	-0.8
KMNR				S	Sn	07 20 10.8	-0.2
KMNR	Kamenistaya	1.06	282	eP	Pn	07 19 56.2	-0.8
KMNR				eS	Sn	07 20 10.8	-0.2
KRSR	Krestovskiy	1.09	309	PN	Pn	07 19 56.6	-0.6
KRSR				S	Sn	07 20 11.1	-0.4
KRSR	Krestovskiy	1.09	309	eP	Pn	07 19 56.6	-0.6
KRSR				eS	Sn	07 20 11.1	-0.4
SMKR	Semkarok	1.09	342	PN	Pn	07 19 57.3	0.0
SMKR				S	Sn	07 20 12.8	+1.1
SMKR	Semkarok	1.09	342	eP	Pn	07 19 57.3	0.0
SMKR				eS	Sn	07 20 12.8	+1.1
KLY	Klyuchi	1.11	314	PN	Pn	07 19 56.0	-1.5
KLY				S	Sn	07 20 10.7	-1.2
KLY	Klyuchi	1.11	314	eP	Pn	07 19 56.0	-1.5
KLY				eS	Sn	07 20 10.7	-1.2
KPT	Kopyto	1.13	293	PN	Pn	07 19 57.5	-0.3
KPT	Kopyto	1.13	293	eP	Pn	07 19 57.5	-0.3
TUMR	Tumrok	1.13	257	PN	Pn	07 19 57.5	-0.4
TUMR				S	Sn	07 20 12.9	+0.3
TUMR	Tumrok	1.13	257	eP	Pn	07 19 57.5	-0.4
TUMR				eS	Sn	07 20 12.9	+0.3
BDR	Baidarnaya	1.14	335	PN	Pn	07 19 58.1	+0.2
BDR	Baidarnaya	1.14	335	eP	Pn	07 19 58.1	+0.2
SRKR	Sorokina	1.22	336	PN	Pn	07 19 59.0	0.0
SRKR	Sorokina	1.22	336	eP	Pn	07 19 59.0	0.0
KOZ	Kozyrevsk	1.35	293	PN	Pn	07 20 00.9	+0.3
KOZ				S	Sn	07 20 19.3	+1.7
KOZ	Kozyrevsk	1.35	293	eP	Pn	07 20 00.9	+0.3
KOZ				eS	Sn	07 20 19.3	+1.7
ESO	Esso	1.95	283	PN	Pn	07 20 10.3	+1.6
ESO	Esso	1.95	283	eP	Pn	07 20 10.3	+1.6
KII	Karymskiy	2.15	226	PN	Pn	07 20 11.6	+0.1
KII				S	Sn	07 20 37.8	+0.8
KII	Karymskiy	2.15	226	eP	Pn	07 20 11.6	+0.1
KII				eS	Sn	07 20 37.8	+0.8
BKI	Bering	2.25	97	PN	Pn	07 20 12.9	+0.2
BKI				S	Sn	07 20 38.7	-0.6
BKI	Bering	2.25	97	eP	Pn	07 20 12.9	+0.2
BKI				eS	Sn	07 20 38.7	-0.6
NLC	Nalytchevo	2.87	215	PN	Pn	07 20 21.2	0.0
NLC				S	Sn	07 20 54.6	+0.2
NLC	Nalytchevo	2.87	215	eP	Pn	07 20 21.2	0.0
NLC				eS	Sn	07 20 54.6	+0.2
SDLR	Sedlovina	2.94	221	PN	Pn	07 20 22.6	+0.3
SDLR				S	Sn	07 20 56.8	+0.3
SDLR	Sedlovina	2.94	221	eP	Pn	07 20 22.6	+0.3
SDLR				eS	Sn	07 20 56.8	+0.3
KRER	Koryakskii	2.97	222	PN	Pn	07 20 23.4	+0.6
KRER	Koryakskii	2.97	222	eP	Pn	07 20 23.4	+0.6
SMAR	Somma	2.98	221	PN	Pn	07 20 23.2	+0.2
SMAR				S	Sn	07 20 57.9	+0.3
SMAR	Somma	2.98	221	eP	Pn	07 20 23.2	+0.2
SMAR				eS	Sn	07 20 57.9	+0.3
AVH	Avacha	3.00	222	PN	Pn	07 20 24.1	+0.9
AVH				S	Sn	07 20 59.4	+1.4
AVH	Avacha	3.00	222	eP	Pn	07 20 24.1	+0.9
AVH				eS	Sn	07 20 59.4	+1.4
UGLR	Uglovaya	3.02	220	PN	Pn	07 20 24.0	+0.6
UGLR				S	Sn	07 20 59.3	+1.0
UGLR	Uglovaya	3.02	220	eP	Pn	07 20 24.0	+0.6
UGLR				eS	Sn	07 20 59.3	+1.0
KOK	Koryaka	3.02	223	PN	Pn	07 20 24.3	+0.9
KOK	Koryaka	3.02	223	eP	Pn	07 20 24.3	+0.9
GNL	Ganaly	3.04	234	PN	Pn	07 20 24.2	+0.6
GNL	Ganaly	3.04	234	eP	Pn	07 20 24.2	+0.6
DALK	Dalny	3.18	219	PN	Pn	07 20 25.7	+0.2
DALK				S	Sn	07 21 02.1	-0.1
DALK	Dalny	3.18	219	eP	Pn	07 20 25.7	+0.2
DALK				eS	Sn	07 21 02.1	-0.1
PET	Petropavlovsk	3.23	220	ePN	Pn	07 20 27.0	+0.9
PET				eS	Sn	07 21 04.6	+1.3
PET				smax	smax		
	comp=N,1µm,0.6s						
PET				smax	smax		
	comp=E,1µm,0.4s						
PET				MLR	MLR		
	comp=Z,200nm,16.0s						
PET	Petropavlovsk	3.23	220	eP	Pn	07 20 27.4	+1.3
PET				eS	Sn	07 21 05.0	+1.7
PEA0B	Petropavlovsk-	3.54	228	i PN	Pn	07 20 31.1	+0.7
PETK	Petropavlovsk-	3.54	228	P	Pn	07 20 31.1	+0.6
	comp=Z,6.0nm,0.3s,baz=71,slow=14,SNR=66						
PETK				S	Sn	07 21 13.4	+2.4
	comp=Z,8.2nm,0.3s,baz=81,slow=20,SNR=6.5						
PETK				LR	LR	07 22 20.3	
	comp=Z,230nm,19.7s,baz=72,slow=46						
PALN	Palana	3.73	343	PN	Pn	07 20 33.2	+0.2
PALN	Palana	3.73	343	eP	Pn	07 20 33.2	+0.2
OSSR	Ossora	3.75	8	PN	Pn	07 20 33.3	0.0
OSSR	Ossora	3.75	8	eP	Pn	07 20 33.3	0.0
RUS	Russkaya	3.76	215	PN	Pn	07 20 33.3	-0.1
RUS				S	Sn	07 21 15.2	-1.2
RUS	Russkaya	3.76	215	eP	Pn	07 20 33.3	-0.1
RUS				eS	Sn	07 21 15.2	-1.2
GRL	Gorelyy	3.82	220	PN	Pn	07 20 36.2	+1.9
GRL				S	Sn	07 21 20.7	+2.8
GRL	Gorelyy	3.82	220	eP	Pn	07 20 36.2	+1.9
GRL				eS	Sn	07 21 20.7	+2.8
MTVR	Mutnovka	3.83	218	PN	Pn	07 20 35.6	+1.1
MTVR				S	Sn	07 21 19.3	+0.9
MTVR	Mutnovka	3.83	218	eP	Pn	07 20 35.6	+1.1
MTVR				eS	Sn	07 21 19.3	+0.9
SKR	Severo-Kuril's	6.05	219	ePN	Pn	07 21 07.2	+2.5
SKR				eS	Sn	07 22 16.2	+3.7
SKR				pmax	pmax		
	comp=Z,78nm,0.7s						
SKR				smax	smax		
	comp=E,201nm,0.8s						
SKR				smax	smax		
	comp=N,311nm,1.0s						
ASAJ	Asahikawa	16.92	236	P	Pn	07 23 31.2	+0.6
	comp=N,0.6nm,0.3s,baz=84,slow=10,SNR=1.6						
ERM	Erimo	18.32	230	i P	P	07 23 44.1	-3.0
TIXI	Tiksi	21.40	332	P	P	07 24 19.4	-0.8
	comp=N,2.3nm,0.6s,baz=113,slow=11,SNR=5.0						
TIXI	Tiksi	21.40	332	i P	P	07 24 18.5	-1.7
MAJO	Matsushiro	25.00	230	i P	P	07 24 51.7	-4.2
MAJO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MAT	Matsushiro	25.00	230	P	P	07 24 54.7	-1.2
MJAR	Matsushiro Arr	25.00	230	P	P	07 24 54.6	-1.3
	comp=Z,4.7nm,0.6s,baz=35,slow=7.6,SNR=12						
ILAR	Eielson Array	26.29	49	P	P	07 25 08.8	+1.4
	comp=Z,0.5nm,0.7s,baz=271,slow=8.1,SNR=5.6						
TLY	Talaya	33.99	288	i P	P	07 26 10.7	-4.9
TLY				pmax	pmax		
	comp=Z,3.0nm,0.8s						
H11N2	WAKE ISLAND Hy	35.94	172	T	T	08 04 01.4	
	baz=355,slow=76,SNR=40						
H11N3	WAKE ISLAND Hy	35.95	172	T	T	08 04 01.8	
	baz=355,slow=76,SNR=34						
H11N1	WAKE ISLAND Hy	35.96	172	T	T	08 04 01.4	
	baz=355,slow=76,SNR=54						
DGZ	Jazzator, Alta	43.66	295	i P	P	07 27 31.8	-4.7
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KURK	Kurchatov	47.45	301	i P	P	07 27 59.5	-6.7
KURK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	Makanchi Array	48.16	295	P	P	07 28 09.6	-2.3
	comp=Z,0.5nm,0.5s,baz=57,slow=7.7,SNR=5.3						
BRVK	Borovoye	49.81	308	i P	P	07 28 19.7	-4.6
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARCES	ARCESS Array B	51.31	342	P	P	07 28 34.1	-1.3
	comp=Z,7.1nm,1.1s,baz=24,slow=9.7,SNR=7.4						
ARU	Arti	52.39	317	i P	P	07 28 39.4	-4.1
ARU				pmax	pmax		
	comp=Z,3.0nm,1.1s						
NVAR	Mina Array Bea	53.86	73	P	P	07 28 57.1	+2.2
	comp=Z,0.4nm,0.6s,baz=301,slow=7.0,SNR=2.4						
PDAR	Pinedale Array	55.35	63	P	P	07 29 06.7	+1.0
	comp=Z,0.4nm,0.6s,baz=335,slow=4.0,SNR=2.9						
FINES	FINESS Array B	58.32	337	P	P	07 29 25.1	-1.0
	comp=Z,2.4nm,0.6s,baz=30,slow=7.8,SNR=10						
NB2	NORSAR Subarra	61.50	344	P	P	07 29 46.4	-1.5
	comp=Z,1.2nm,0.6s,baz=19,slow=6.9						
NOA	NORSAR Array B	61.50	344	P	P	07 29 47.0	-1.0
	comp=Z,1.4nm,0.5s,baz=19,slow=6.9,SNR=10.0						
NOA	NORSAR Array B	61.50	344	P	P	07 29 47.0	-1.0
TXAR	Lajitas Array	68.64	69	P	P	07 30 36.3	+1.5
	comp=Z,0.3nm,0.6s,baz=308,slow=6.1,SNR=3.7						
TXAR				LR	LR	08 00 03.0	
	comp=Z,141nm,20.1s,baz=0.0,slow=35						

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*NEIC **04** 07:26:07.7±0.6, 36°.63N±0°.01×97°.68W±0°.01, h4^{km}±7^{km}, Error ellipse: s-maj=1.6km s-min=1.5km az=120.0*

TUL 04 07:26:07.4±1.2**, 36°.64N**±0°.01×**97°.70W**±0°.01**, h3**^{km}±7^{km}**, ML2.6, mb_Lg2.3**/25(NEIC)**, Error ellipse: s-maj=1.8km s-min=1.4km az=47.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T35A	Sooner Cattle	0.99	73	Pg	Pg	07 26 26.4	0.0
T35A				Sg	Sg	07 26 39.3	0.0
U32A	Winter Ranch,	1.08	257	Pg	Pg	07 26 27.7	-0.5
OKCFA	Oklahoma City	1.23	171		Pg	07 26 30.5	-0.6
OKCSW	OKLAHOMA CITY	1.25	170		Pg	07 26 30.8	-0.5
FNO	Franklin	1.40	170		Pn	07 26 33.4	-0.4
TUL1	Leonard	1.70	115	Pn	Pn	07 26 38.0	0.0
TUL1				IAmb_Lg		07 27 04.5	
	comp=Z,16nm,0.9s						
R32A	Long Quarter,	1.96	336	Pn	Pb	07 26 42.8	-0.9
X34A	Smith Ranch, M	2.04	183		Pn	07 26 42.9	+0.3
WMOK	Wichita Mounta	2.09	205	Pn	Pn	07 26 43.6	+0.3
KSU1	Kansas State U	2.61	19		Pn	07 26 50.6	+0.3
U38A	Gravette	2.67	93		Pn	07 26 51.6	+0.3
CBKS	Cedar Bluff	2.71	324	IAmb_Lg		07 27 38.5	
	comp=Z,9.6nm,0.8s						
X37A	Clayton	2.79	136	Pn	Pn	07 26 53.9	+1.0
HHAR	Hobbs	3.05	96	Pn	Pn	07 26 56.3	-0.2
AMTX	Amarillo	3.68	243	IAmb_Lg		07 28 06.2	
	comp=Z,6.1nm,0.8s						
MIAR	Mount Ida	3.95	121	IAmb_Lg		07 28 13.2	
	comp=Z,5.7nm,0.8s						
MGMO	Mountain Grove	4.38	82	IAmb_Lg		07 28 26.4	
	comp=Z,7.5nm,0.8s						
P38A	Dawn	4.44	46	IAmb_Lg		07 28 30.7	
	comp=Z,6.1nm,0.8s						
X40A	Basin Creek Fa	4.51	117	IAmb_Lg		07 28 30.0	
	comp=Z,5.2nm,1.1s						
FCAR	Ozark Folk Cen	4.56	98	IAmb_Lg		07 28 35.6	
	comp=Z,4.7nm,1.0s						
KSCO	Kaye Shedlock'	4.57	303	IAmb_Lg		07 28 40.6	
	comp=Z,5.2nm,0.7s						
WHAR	Wooly Hollow	4.59	105	IAmb_Lg		07 28 34.9	
	comp=Z,7.5nm,1.1s						
CCM	Cathedral Cave	5.33	73	IAmb_Lg		07 29 04.0	
	comp=Z,7.3nm,1.0s						
L34A	Svendsen Farm,	5.42	10	IAmb_Lg		07 29 00.0	
	comp=Z,7.5nm,0.7s						
WVT	Waverly	7.97	91	IAmb_Lg		07 30 18.6	
	comp=Z,2.4nm,1.1s						

IDC 04 07:27:10.1±26.0**, 17°.49S**×**178°.08W, h582**^{km}±29^{km}**, mb3.2**/4**, mb1 3.4**/5**, mb1mx2.9**/44**, mbtmp4.2**/5**, Error ellipse: s-maj=493.1km s-min=117.4km az=85.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.70	266	P	P	07 28 32.3	0.0
	3.8nm,0.3s,baz=84,slow=3.2,SNR=20						
STKA	Stephens Creek	39.10	241	P	P	07 33 48.9	+0.4
	1.3nm,0.4s,baz=106,slow=7.4,SNR=4.0						
WRA	Warramunga Arr	45.02	259	P	P	07 34 34.5	-0.6
	1.0nm,0.5s,baz=98,slow=6.8,SNR=7.0						
ASAR	Alice Springs	45.20	254	P	P	07 34 36.1	-0.4
	8.4nm,0.6s,baz=88,slow=8.1,SNR=85						
FITZ	Fitzroy Crossi	53.41	260	P	P	07 35 37.2	+0.5
	1.2nm,0.6s,baz=76,slow=8.1,SNR=1.2						

IDC 04 07:27:45.1±2.0**, 8°.12S**×**125°.28E, h0**^{km}**, mb3.5**/1**, mb1 3.9**/4**, mb1mx3.5**/50**, mbtmp3.7**/4**, ML3.5**/3**, Error ellipse: s-maj=110.3km s-min=29.3km az=66.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	9.92	178	Pn	Pn	07 30 09.3	+0.2
	0.2nm,0.3s,baz=41,slow=11,SNR=1.5						
WRA	Warramunga Arr	14.67	144	Pn	Pn	07 31 12.3	-1.8
	0.2nm,0.3s,baz=317,slow=13,SNR=9.1						
ASAR	Alice Springs	17.53	153	P	P	07 31 52.1	-0.2
	0.2nm,0.3s,baz=327,slow=12,SNR=6.8						
MKAR	Makanchi Array	66.69	329	P	P	07 38 38.0	0.0
	0.3nm,0.5s,baz=150,slow=6.3,SNR=1.4						

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*IDC **04** 07:29:33.3±1.4, 8°.15S×125°.40E, h0^{km}, mb3.8/3, mb1 3.9/7, mb1mx3.6/51, mbtmp3.7/7, ML3.4/4, Error ellipse: s-maj=41.7km s-min=21.4km az=87.0*

ISC 04 07:29:36.8±1.3**, 8°.3S**±0°.1×**125°.7E**±0°.1**, h35**^{km}**, n7, σ2.^{s}45**/9**, mb3.9**/3**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	2.77	228	Pn	Pn	07 30 19.0	+0.3
	3.9nm,0.3s,baz=90,slow=1.0,SNR=1.3						
BATI				Sn	Sn	07 30 50.4	-0.5
	6.4nm,0.3s,baz=139,slow=19,SNR=3.2						
FITZ	Fitzroy Crossi	9.70	181	Pn	Pn	07 31 56.1	+2.2
	0.4nm,0.3s,baz=335,slow=17,SNR=4.6						
FITZ				Sn	Sn	07 33 39.8	-2.0
	0.6nm,0.3s,baz=142,slow=19,SNR=4.5						
WRA	Warramunga Arr	14.23	145	Pn	P	07 32 59.9	-2.9
	0.2nm,0.3s,baz=318,slow=13,SNR=6.5						
ASAR	Alice Springs	17.13	154	P	P	07 33 39.2	+4.1
	0.1nm,0.3s,baz=312,slow=11,SNR=2.9						
MKAR	Makanchi Array	67.11	329	P	P	07 40 27.2	+0.4
	0.9nm,0.6s,baz=137,slow=8.0,SNR=5.3						
ZALV	Zalesovo Beam	70.98	336	P	P	07 40 51.2	+0.5

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	0.6nm,0.6s,baz=128,slow=9.3,SNR=3.9						
KURBB	Kurchatov Arra	71.51	330	P	P	07 40 52.8	-1.2
	0.3nm,0.2s,baz=135,slow=5.4,SNR=4.2						

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*NEIC **04** 07:34:21.3±0.8,29°.42N±0°.06×130°.7E±0°.1,h21^{km}±7^{km}, mb4.4/4,Error ellipse: s-maj=17.0km s-min=7.8km az=108.0*

*JMA **04** 07:34:21.3±0.1,29°.39N×130°.89E,h57^{km}±3^{km},M3.7*

*NIED **04** 07:34:21.3,29°.39N×130°.89E,h57^{km},MW4.1,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.29; M$_{θθ}$0.02; M$_{φφ}$-1.31; M$_{rθ}$0.56; M$_{θφ}$-0.70; M$_{φr}$0.85; Fault plane solution: M$_0$1.78000×10^{15} NP1:φ$_s$30.00000°, δ63.00000°,λ98.00000°. NP2:φ$_s$194.00000°,δ28.00000°, λ76.00000°.*

*IDC **04** 07:34:23.0±1.8,29°.47N×130°.66E,h32^{km}±5^{km},mb3.8/13, mb1 3.9/16,mb1mx3.7/57,mbtmp4.0/16,ML3.7/3 Error ellipse: s-maj=36.3km s-min=20.0km az=128.0*

ISC 04 07:34:21.2±0.8,**29°.39N**±0°.06×**130°.79E**±0°.08,**h25**^{km}±3^{km}, **n43**,σ**0^s.87**/56,**mb4.2**/14,**Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYAK	Yakushimahirau	0.88	344	P	Pn	07 34 37.9	-0.1
JYAK				*e*S	Sn	07 34 51.3	+1.4
JNN	Nakanoshima	0.91	300	P	Pn	07 34 39.3	+0.8
JMTN	Minamitane	1.01	6	P	Pn	07 34 39.4	-0.4
JMTN				S	Sn	07 34 53.0	-0.1
JKC	Kuchinoerabu	1.18	334	P	Pb	07 34 42.5	-0.5
JTN	Tanegashima 3	1.27	8	P	Pn	07 34 42.9	-0.5
JTN				S	Sn	07 34 59.4	-0.2
JTAJ	Takarajima	1.41	261	P	Pb	07 34 46.6	-0.2
JAM	Amami Oshima	1.43	227	P	Pn	07 34 46.3	+0.8
JTSR	Tashiro 2	1.77	4	P	Pn	07 34 50.6	+0.3
JTSR				S	Sn	07 35 12.5	+0.4
JAMN	Amaminishikomi	1.82	231	P	Pn	07 34 52.1	+1.2
JAMN				S	Sb	07 35 15.7	-0.5
JSU	Suzuyama	2.13	352	P	Pn	07 34 55.1	-0.1
JSU	Suzuyama	2.13	352		Pn	07 34 55.2	0.0
JNAR	Kushima--Naru	2.17	11	P	Pn	07 34 56.3	+0.6
JTK	Tokunoshima	2.27	226	P	Pn	07 34 58.4	+1.2
JNKG	Nichinankitago	2.32	13	P	Pn	07 34 58.3	+0.5
JNKG				*e*S	Sn	07 35 25.4	-0.1
JSJ	Shimokoshiki	2.46	338	P	Pn	07 34 59.2	-0.5
JTZ	Takazaki	2.51	6	P	Pn	07 35 01.1	+0.6
JOW	Kunigami	3.38	222	Pn	Pn	07 35 12.7	+0.2
	6.9nm,0.3s,baz=109,slow=18,SNR=3.1						
JOW				Sn	Sn	07 35 51.6	-0.1
	9.2nm,0.3s,baz=181,slow=17,SNR=2.0						
JMZ	Minamidaito 2	3.58	174	Pn	Pn	07 35 16.0	+0.9
JNU	Nakatsue	3.72	1	Pn	Pn	07 35 17.7	+0.6
	7.2nm,0.3s,baz=198,slow=2.9,SNR=29						
JNU				Sn	Sn	07 35 58.5	-1.6
	4.6nm,0.3s,baz=0.0,slow=19,SNR=1.5						
JNU	Nakatsue	3.72	1		Pn	07 35 17.8	+0.7
JHS	Saijyo	5.93	19		Pn	07 35 47.7	+0.3
JWT	Wachi	7.05	32		Pn	07 36 02.2	-0.6
KSRS	Korea Array	8.39	344	Pn	Pn	07 36 24.0	+2.8
	0.5nm,0.3s,baz=161,slow=14,SNR=3.6						
USRK	Ussuriysk Ar.	14.81	3	Pn	P	07 37 56.1	+1.5
	baz=182,slow=11,SNR=6.8						
KLR	Kul'dur	19.82	2	P	P	07 38 49.7	-0.3
	1.1nm,0.3s,baz=186,slow=8.2,SNR=21						
KLR				pP	sP	07 38 59.3	+0.1
	0.3nm,0.3s,baz=207,slow=7.7,SNR=3.4						
SONM	Songino Array	26.32	321	P	P	07 39 53.9	-1.2
	0.7nm,0.5s,baz=118,slow=8.9,SNR=3.9						
SONM				pP	pP	07 40 03.4	+1.6
	1.4nm,0.8s,baz=134,slow=9.8,SNR=3.3						
MKAR	Makanchi Array	41.23	309	P	P	07 42 04.0	0.0
	0.6nm,0.5s,baz=90,slow=10,SNR=11						
MKAR				pP	sP	07 42 13.9	+0.2
	1.4nm,0.6s,baz=89,slow=11,SNR=7.3						
KURBB	Kurchatov Arra	44.22	314	P	P	07 42 27.8	-0.4
	1.1nm,0.5s,baz=96,slow=8.5,SNR=9.2						
KURBB				pP	sP	07 42 37.9	0.0
	1.5nm,0.4s,baz=96,slow=8.6,SNR=7.2						
NRIK	Noril'sk	46.99	341	P	P	07 42 48.8	-1.0
	2.0nm,0.5s,baz=126,slow=9.2,SNR=6.0						
NRIK	Noril'sk	46.99	341	P	P	07 42 48.6	-1.2
NRIK				IAmb	IAmb	07 42 51.2	
	comp=Z,2.4nm,0.6s						
BRVK	Borovoye	49.56	316	P	P	07 43 09.6	-0.3
ABKAR	Akbulak array	56.19	312	P	P	07 43 58.6	-0.3
ABKAR				IAmb	IAmb	07 44 00.5	
	comp=Z,1.8nm,0.5s						
ARU	Arti	56.36	321	P	P	07 43 59.8	-0.2
	comp=Z,2.4nm,0.2s,baz=152,slow=3.6,SNR=6.5						
ARU				pP	sP	07 44 09.2	-0.8
	comp=Z,1.6nm,0.2s,baz=47,slow=1.8,SNR=1.2						
ILAR	Eielson Array	60.59	29	P	P	07 44 31.1	+1.7
	comp=Z,0.1nm,0.6s,baz=238,slow=3.1,SNR=1.5						
INK	Inuvik	65.09	24	P	P	07 44 59.4	+0.2
	comp=Z,0.9nm,0.8s,baz=313,slow=6.7,SNR=5.3						
INK	Inuvik	65.09	24	IAmb	IAmb	07 45 19.0	
	comp=Z,5.8nm,1.5s						
ARCES	ARCESS Array B	67.90	339	P	P	07 45 17.4	+0.1
	comp=Z,2.7nm,0.8s,baz=52,slow=12,SNR=1.7						
KBZ	Khabaz	68.92	309	P	P	07 45 23.9	-0.1
	comp=Z,1.1nm,0.3s,baz=118,slow=6.2,SNR=3.6						
FINES	FINESS Array B	71.23	331	P	P	07 45 37.2	-0.6
	comp=Z,0.7nm,0.4s,baz=79,slow=4.1,SNR=6.5						
FINES				pP	pwP	07 45 47.1	-0.5
	comp=Z,2.2nm,0.9s,baz=82,slow=4.0,SNR=1.9						
FINES	FINESS Array B	71.23	331	P	P	07 45 37.6	-0.2
AKASG	Malin Array Be	74.60	320	P	P	07 45 58.2	+0.2
	comp=Z,0.3nm,0.3s,baz=57,slow=5.6,SNR=3.5						
BRTR	Keskin Array B	76.88	308	P	P	07 46 12.9	+1.5
	comp=Z,0.9nm,0.6s,baz=88,slow=5.8,SNR=2.2						
NOA	NORSAR Array B	77.47	334	P	P	07 46 12.9	-1.3
	comp=Z,0.4nm,0.6s,baz=49,slow=5.5,SNR=2.8						

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*IDC **04** 07:35:53.2±1.2,8°.04S×125°.43E,h0^{km},mb4.0/5, mb1 4.2/10,mb1mx3.9/41,mbtmp4.0/10,ML3.8/5,MS3.1/1, Ms1 3.1/1,ms1mx2.8/41,Error ellipse: s-maj=42.4km s-min=18.0km az=71.0*

*NEIC **04** 07:35:54.7±2.0,8°.02S±0°.07×125°.39E±0°.09,h10^{km}±1^{km}, mb4.5/5,Error ellipse: s-maj=15.1km s-min=11.5km az=59.0*

ISC 04 07:35:56.8±0.7,**8°.10S**±0°.06×**125°.35E**±0°.07,**h26**^{km},**n32**, σ**1^s.86**/33,**mb4.2**/7,**Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.97	213		Pn	07 36 29.5	+1.0
SOEI	Soe	1.97	213	P	Pb	07 36 33.3	+1.3
BATI	Baumata	2.68	218	Pn	Pn	07 36 38.4	+0.1
	18nm,0.3s,baz=320,slow=1.7,SNR=7.0						
BATI				Sn	Sn	07 37 10.0	0.0
	22nm,0.3s,baz=330,slow=11,SNR=4.5						
MMRI	Maumere	3.13	260	Pn	Pn	07 36 44.0	-0.4
MMRI	Maumere	3.13	260	P	Pn	07 36 44.8	+0.3
KAPI	Kappang	6.35	298	Pn	Pn	07 37 29.5	+0.7
	1.1nm,0.3s,baz=184,slow=16,SNR=1.8						
KAPI				Sn	Sn	07 38 36.3	-4.2
	0.6nm,0.3s,baz=84,slow=18,SNR=1.4						
KAPI				LR	LR	07 40 04.9	
	comp=Z,165nm,18.2s,baz=144,slow=39						
MTN	Manton Dam	7.39	130	Pn	Pn	07 37 44.0	+1.1
KNRA	Kununurra	8.24	156	Pn	Pn	07 37 54.9	+0.2
KNRA	Kununurra	8.24	156	P	Pn	07 38 00.0	+5.3
KDU	Kakadu	8.36	124	P	Pn	07 38 05.4	+9.1
	11nm,0.6s						
FITZ	Fitzroy Crossi	9.95	178	Pn	Pn	07 38 17.2	-0.9
	0.7nm,0.3s,baz=26,slow=7.6,SNR=9.0						
FITZ				Sn	Sn	07 40 02.2	-6.7
	1.0nm,0.3s,baz=242,slow=4.8,SNR=9.1						
FITZ	Fitzroy Crossi	9.95	178	Pn	Pn	07 38 17.6	-0.5
FITZ	Fitzroy Crossi	9.95	178	P	Pn	07 38 21.3	+3.2
TOLI2	Tolitoli	10.22	333	Pn	Pn	07 38 20.5	-1.4
WB0	Warramunga Arr	14.54	144	Pn	Pn	07 39 19.9	-1.1
WRAB	Tennant Creek	14.64	144	Pn	Pn	07 39 20.8	-1.6
WRA	Warramunga Arr	14.64	144	Pn	Pn	07 39 21.2	-1.2
	0.6nm,0.3s,baz=315,slow=13,SNR=18						
WRA				Sn	Sn	07 42 01.7	-2.3
	0.4nm,0.3s,baz=322,slow=24,SNR=4.0						
WRA	Warramunga Arr	14.64	144	Pn	Pn	07 39 22.6	+0.2
WB2	Warramunga Arr	14.65	144	Pn	Pn	07 39 21.6	-0.9
WR0	Warramunga Arr	14.77	144	Pn	Pn	07 39 22.9	-1.2
AS31	Alice Springs	17.52	153	Pn	Pn	07 39 58.8	-0.6
ASAR	Alice Springs	17.52	153	P	P	07 40 00.1	-0.2
	0.4nm,0.3s,baz=323,slow=11,SNR=22						
ASAR	Alice Springs	17.52	153		Pn	07 39 59.3	-0.1
FORT	Forrest	22.71	174	P	P	07 40 57.4	+0.8
CTAO	Charters Tower	23.48	123	P	P	07 41 03.4	-1.3
CTAO				IAmb	IAmb	07 41 23.4	
	comp=Z,20nm,1.4s						
CMAR	Chiang Mai Arr	37.09	316	P	P	07 43 05.9	+0.7
	comp=Z,1.6nm,0.4s,baz=140,slow=7.1,SNR=1.9						
MKAR	Makanchi Array	66.71	329	P	P	07 46 46.4	+0.8
	comp=Z,1.1nm,0.7s,baz=134,slow=7.2,SNR=7.3						
ZALV	Zalesovo Beam	70.61	336	P	P	07 47 09.4	-0.3
	comp=Z,1.0nm,0.5s,baz=99,slow=4.7,SNR=6.1						
VNDA	Vanda	71.96	172	P	P	07 47 18.9	+1.3
	comp=Z,0.6nm,0.8s,baz=318,slow=5.8,SNR=6.9						
VNDA	Vanda	71.96	172	IAmb	IAmb	07 47 32.8	
	comp=Z,6.2nm,1.6s						
MAW	Mawson	72.27	201	P	P	07 47 20.6	+1.0
	comp=Z,1.2nm,0.7s,baz=50,slow=7.9,SNR=2.1						
QSPA	South Pole Qui	81.89	180	P	P	07 48 16.0	+2.2
QSPA				IAmb	IAmb	07 48 16.6	
	comp=Z,3.8nm,0.9s						

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*IDC **04** 07:37:25.0±1.3,8°.05S×125°.31E,h0^{km},mb3.7/3, mb1 4.1/7,mb1mx3.8/39,mbtmp3.9/7,ML3.8/4,Error ellipse: s-maj=41.9km s-min=21.7km az=83.0*

ISC 04 07:37:30.4±1.2,**8°.3S**±0°.1×**125°.5E**±0°.1,**h35**^{km},**n7**,σ**2^s.39**/9, **mb3.7**/3,**Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	2.64	223	Pn	Pn	07 38 10.1	-0.4
	17nm,0.3s,baz=56,slow=4.3,SNR=1.5						
BATI				Sn	Sn	07 38 42.5	+1.2
	14nm,0.3s,baz=315,slow=20,SNR=1.6						
FITZ	Fitzroy Crossi	9.78	179	Pn	Pn	07 39 48.1	-0.4
	0.5nm,0.3s,baz=4.1,slow=14,SNR=2.0						
FITZ				Sn	Sn	07 41 33.2	-4.0
	0.7nm,0.3s,baz=258,slow=20,SNR=1.9						
WRA	Warramunga Arr	14.44	144	Pn	Pn	07 40 53.0	+0.6
	0.5nm,0.3s,baz=320,slow=13,SNR=4.1						
ASAR	Alice Springs	17.31	153	P	P	07 41 31.9	+1.3
	0.4nm,0.3s,baz=331,slow=12,SNR=6.4						
MKAR	Makanchi Array	66.92	329	P	P	07 48 17.7	-1.6
	0.4nm,0.6s,baz=125,slow=7.2,SNR=4.9						
ZALV	Zalesovo Beam	70.81	336	P	P	07 48 41.1	-2.1
	0.6nm,0.5s,baz=134,slow=4.2,SNR=2.0						
VNDA	Vanda	71.78	172	P	P	07 48 51.5	+2.7
	0.3nm,0.5s,baz=310,slow=8.3,SNR=2.3						

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*IDC **04** 07:41:57.7±1.4,8°.06S×125°.22E,h0^{km},mb3.8/3, mb1 4.0/7,mb1mx3.8/33,mbtmp3.8/7,ML3.8/4,Error ellipse: s-maj=39.9km s-min=20.9km az=76.0*

ISC 04 07:42:01.4±1.1,**8°.23S**±0°.09×**125°.4E**±0°.1,**h26**^{km},**n7**, σ**2^s.39**/11,**mb3.9**/3,**Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	2.60	221	Pn	Pn	07 42 42.4	+0.6
	19nm,0.3s,baz=75,slow=1.6,SNR=5.7						
BATI				Sn	Sn	07 43 13.4	+0.8
	25nm,0.3s,baz=320,slow=23,SNR=4.3						
FITZ	Fitzroy Crossi	9.81	179	Pn	Pn	07 44 21.2	+0.3
	0.3nm,0.3s,baz=2.5,slow=11,SNR=2.0						
FITZ				Sn	Sn	07 46 05.3	-5.0
	2.1nm,0.3s,baz=98,slow=5.6,SNR=13						
WRA	Warramunga Arr	14.51	144	Pn	Pn	07 45 26.5	+1.3
	0.5nm,0.3s,baz=318,slow=13,SNR=6.6						
WRA				Sn	Sn	07 48 05.0	-0.3
	0.5nm,0.3s,baz=322,slow=25,SNR=6.0						
ASAR	Alice Springs	17.38	153	P	P	07 46 05.7	+2.3
	0.4nm,0.3s,baz=325,slow=11,SNR=9.4						
ASAR				S	Sn	07 49 13.2	-2.0
	0.3nm,0.3s,baz=312,slow=19,SNR=6.2						
CMAR	Chiang Mai Arr	37.21	316	P	P	07 49 09.2	-1.6
	1.6nm,0.3s,baz=135,slow=5.7,SNR=4.6						
MKAR	Makanchi Array	66.84	329	P	P	07 52 49.5	-1.5
	0.8nm,0.8s,baz=124,slow=7.5,SNR=4.5						
VNDA	Vanda	71.82	172	P	P	07 53 23.4	+2.1
	0.2nm,0.5s,baz=311,slow=9.3,SNR=1.4						

IDC 04 07:47:56.5±11.0,**7°.72S**×**125°.17E**,**h0**^{km},**mb4.1**/1, **mb1 3.7**/4,**mb1mx3.4**/28,**mbtmp3.5**/4,**ML3.2**/3,**Error ellipse: s-maj=164.7km s-min=100.6km az=129.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	10.32	177	Pn	Pn	07 50 25.0	-0.9
	0.1nm,0.3s,baz=355,slow=17,SNR=1.4						
FITZ				Sn	Sn	07 52 09.6	-13
	0.3nm,0.3s,baz=160,slow=23,SNR=5.7						
WRA	Warramunga Arr	15.05	145	Pn	Pn	07 51 30.6	0.0
	0.2nm,0.3s,baz=318,slow=12,SNR=3.3						
ASAR	Alice Springs	17.93	153	P	P	07 52 09.2	+1.1
	0.1nm,0.3s,baz=340,slow=13,SNR=2.7						
STKA	Stephens Creek	28.49	150	P	P	07 53 53.3	-0.3
	0.9nm,0.4s,baz=319,slow=9.3,SNR=5.2						

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*IDC **04** 07:57:58.4±1.8,8°.14S×125°.55E,h0^{km},mb4.0/1, mb1 3.9/5,mb1mx3.6/33,mbtmp3.7/5,ML3.5/4,Error ellipse: s-maj=50.2km s-min=25.7km az=76.0*

ISC 04 07:58:00.2±1.6,**8°.5S**±0°.1×**125°.3E**±0°.1,**h10**^{km},**n5**,σ**2^s.74**/7, **Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	2.35	223	Pn	Pg	07 58 45.5	+0.3
	9.1nm,0.3s,baz=84,slow=6.5,SNR=3.8						
BATI				Sn	Sg	07 59 14.3	-1.4
	6.6nm,0.3s,baz=104,slow=9.0,SNR=3.8						
FITZ	Fitzroy Crossi	9.55	178	Pn	Pn	08 00 20.8	+2.9
	0.3nm,0.3s,baz=4.3,slow=10,SNR=9.1						
FITZ				Sn	Sn	08 02 01.9	-3.5
	0.8nm,0.3s,baz=50,slow=7.1,SNR=8.4						
WRA	Warramunga Arr	14.36	143	Pn	Pn	08 01 23.1	-0.6
	0.2nm,0.3s,baz=318,slow=13,SNR=15						
ASAR	Alice Springs	17.19	152	P	Pn	08 02 03.0	+2.3
	0.2nm,0.3s,baz=316,slow=10,SNR=12						
MKAR	Makanchi Array	67.02	329	P	P	08 08 52.2	-1.2
	1.2nm,0.7s,baz=140,slow=7.9,SNR=7.4						

IDC 04 08:02:44.1±2.1,**3°.85S**×**150°.40E**,**h0**^{km},**mb3.7**/4, **mb1 4.0**/4,**mb1mx3.6**/31,**mbtmp3.8**/4,**MS3.0**/1,**Ms1 3.0**/1, **ms1mx2.7**/39,**Error ellipse: s-maj=123.4km s-min=28.7km az=125.0,New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	10.98	121	LR	LR	08 09 36.5	
	comp=Z,74nm,18.4s,baz=286,slow=38						
WRA	Warramunga Arr	22.39	223	P	P	08 07 43.3	-1.0
	1.4nm,0.8s,baz=46,slow=11,SNR=6.7						
ASAR	Alice Springs	25.34	217	P	P	08 08 12.7	-0.3
	0.9nm,0.8s,baz=52,slow=8.2,SNR=8.2						
FITZ	Fitzroy Crossi	28.07	238	P	P	08 08 38.5	+0.9
	2.6nm,0.6s,baz=54,slow=8.5,SNR=5.9						
ILAR	Eielson Array	82.19	23	P	P	08 15 06.5	-0.2
	0.5nm,0.9s,baz=241,slow=5.0,SNR=3.2						
TORD	Torodi Ar. Bea	147.74	289	PKPbc	PKPbc	08 22 31.6	-0.3
	0.5nm,0.7s,baz=52,slow=3.0,SNR=3.5						

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*NEIC **04** 08:03:06.2±0.9,36°.63N±0°.01×97°.69W±0°.02,h3^{km}±2^{km}, Error ellipse: s-maj=2.0km s-min=1.8km az=148.0*

TUL 04 08:03:05.9±1.1,**36°.64N**±0°.01×**97°.70W**±0°.02,**h6**^{km}±6^{km}, **ML2.5**,**mb_Lg2.1**/10(NEIC),**Error ellipse: s-maj=1.8km s-min=1.8km az=175.0,Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T35A	Sooner Cattle	0.99	73	Pg	Pg	08 03 24.6	-0.3
FNO	Franklin	1.40	170	Pn	Pn	08 03 31.9	-0.1
TUL1	Leonard	1.70	115		Pn	08 03 36.4	+0.3
X34A	Smith Ranch, M	2.04	183	Pn	Pb	08 03 43.1	-0.1
WMOK	Wichita Mounta	2.09	205	Pn	Pn	08 03 41.7	+0.2
WMOK				IAmb_Lg		08 04 13.3	
	comp=Z,6.1nm,0.7s						
X37A	Clayton	2.79	137	IAmb_Lg		08 04 38.1	
	comp=Z,8.3nm,0.7s						
AMTX	Amarillo	3.68	243	IAmb_Lg		08 05 10.7	
	comp=Z,4.7nm,0.7s						
MGMO	Mountain Grove	4.38	82	IAmb_Lg		08 05 22.7	
	comp=Z,4.9nm,1.0s						
SIUC	Southern Illin	6.85	78	IAmb_Lg		08 06 46.3	
	comp=Z,4.8nm,0.9s						
PLAL	Pickwick Lake	7.99	99	IAmb_Lg		08 07 28.2	
	comp=Z,1.6nm,1.1s						

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*IDC **04** 08:12:08.2±0.3,0°.50N×98°.03E,h0^{km},mb4.9/45, mb1 4.9/49,mb1mx4.8/66,mbtmp4.9/49,ML4.4/4,MS4.6/29, Ms1 4.6/29,ms1mx4.5/44,Error ellipse: s-maj=11.9km s-min=8.6km az=65.0*

*BJI **04** 08:12:09.2±0.0,0°.35N×97°.98E,h20^{km},mB5.1/55, mb5.0/66,Ms5.4/74,Ms7 5.1/71*

*DJA **04** 08:12:09.4±0.2,0°N±2°×9°8E±°,h10^{km},M5.2/38,mB5.6/23, mb5.3/38,MLv5.6/15,Mw5.2/13,Mw(mB)5.0/23, MwMwp4.9/3,Mwp5.2/3*

*GCMT **04** 08:12:10.9±0.2,0°.55N±0°.01×98°.00E±0°.01,h13^{km}, MW5.3/111,Moment Tensor Solution. s75,c117; s111,c200; Duration: 1^s.1 Moment tensor: Scale 10^{17} Nm; M$_{rr}$0.65±.03; M$_{θθ}$-0.95±.02; M$_{φφ}$0.30±.02; M$_{rθ}$-0.61±.06; M$_{θφ}$-0.28±.01; M$_{φr}$0.40±.06; Best double couple: M$_0$1.15100×10^{17} NP1:φ$_s$47.00000°,δ38.00000°, λ36.00000°. NP2:φ$_s$288.00000°,δ69.00000°,λ123.00000°. Principal axes: T 1.1280, Plg54.0000°, Azm238.0000°; N 0.0480, Plg30.0000°, Azm95.0000°; P -1.1750, Plg17.0000°, Azm354.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MOS **04** 08:12:12.2±1.1,0°.55N×98°.04E,h40^{km},mb5.4/57, MS5.0/7 Error ellipse: s-maj=9.3km s-min=4.6km az=106.7*

*NEIC **04** 08:12:13.9±2.5,0°.58N±0°.06×98°.04E±0°.06,h29^{km}±3^{km}, mb5.3/106,Error ellipse: s-maj=10.2km s-min=6.6km az=47.0*

*KLM **04** 08:12:19,0°.43N×98°.11E,h63^{km},mb5.4*

*BGR **04** 08:12:22.5±0.0,1°.31N×97°.62E,h69^{km},mb4.8*

ISC 04 08:12:14.3±0.3,**0°.46N**±0°.03×**97°.91E**±0°.04,**h38**^{km}±1^{km}, **h38**^{km}**:pP-P**,**n594**,σ**1^s.82**/601,**mb5.2**/183,**MS4.8**/56, **32C-25D**,**Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSI	Gunungsitoli	0.91	338		Pn	08 12 28.4	-2.1
GSI	Gunungsitoli	0.91	338	P	Pn	08 12 28.4	-2.1
GSI				S	Sn	08 12 42.7	+0.3
MNSI	Mandailing Nat	1.70	79	P	Pn	08 12 39.0	-2.4
MNSI				S	Sn	08 13 01.1	-0.8
SISI	Saibi	2.12	146	P	Pn	08 12 44.5	-2.7
RPSI	Rantau Prapat	2.44	24		Pn	08 12 49.8	-1.8
RPSI	Rantau Prapat	2.44	24		Pn	08 12 50.0	-1.6
SNSI	Sinabang, Aceh	2.51	321	P	Pn	08 12 51.1	-1.4
PSI	Prapat	2.54	23	Pn	Pn	08 12 49.8	-3.2
	16nm,0.3s,baz=198,slow=5.9,SNR=68						
PSI				LR	LR	08 13 35.4	
	comp=Z,6μm,20.9s,baz=358,slow=37						
PSI	Prapat	2.54	23	P	Pn	08 12 50.0	-3.0
PPI	Padang Panjang	2.64	110	P	Pn	08 12 51.6	-2.8
PDSI	Padang	2.89	118	P	Pn	08 12 55.0	-2.7
TSI	Tuntungan	3.09	12	P	Pn	08 12 59.9	-0.7
BKNI	Bangkinang	3.13	92		Pn	08 13 01.8	+0.8
BKNI	Bangkinang	3.13	92	P	Pn	08 12 58.7	-2.3
PPSI	Pulau Pagai	3.82	147	P	Pn	08 13 07.0	-3.6
LHMI	Lhok Sumawe	4.84	349	Pn	Pn	08 13 24.0	-0.6
LHMI	Lhok Sumawe	4.84	349	P	Pn	08 13 23.5	-1.1
IPM	Ipoh	5.06	38	P	Pn	08 13 29.0	+1.3
KULM	Kulim	5.53	30	P	Pn	08 13 34.0	0.0
MASI	Maura Aman, Be	5.61	130	P	Pn	08 13 32.4	-2.8
	13nm15μm1μm,1.0s						
JRMM	Jerantut	5.69	53	P	Pn	08 13 37.0	+0.7
JMBI	JAMBI	6.09	110	P	Pn	08 13 45.3	+3.5
DSRI	Dabo	6.73	98	P	Pn	08 13 46.0	-4.5
	1.4nm2μm66nm,0.8s						
MNAI	Manna	6.95	134		Pn	08 13 52.2	-1.4
MNAI	Manna	6.95	134	P	Pn	08 13 51.6	-2.0
	5.3nm10μm774nm,0.8s						
LHSI	Lahat	7.04	127	P	Pn	08 13 52.5	-2.3
	2.0nm6μm627nm,0.9s						
MDSI	Maura Dua	7.96	128	P	Pn	08 14 05.2	-2.2
	0.9nm3μm3μm290nm,0.9s						
LWLI	Liwa	8.20	132	P	Pn	08 14 06.6	-4.3
	7μm611nm,0.7s						
KLSI		8.52	127	P	Pn	08 14 12.9	-2.2
	1μm124nm,0.7s						
PPBI	Pangkal Pinang	8.62	108	P	Pn	08 14 19.8	+3.2
KLI	Kotabumi	8.72	127	P	Pn	08 14 21.2	+3.3
KASI	Kota Agung	8.86	132	P	Pn	08 14 15.7	-4.1
	3μm275nm,0.6s						
BLSI	Bandar Lampung	9.33	128	P	Pn	08 14 37.5	+11
CGJI	Cibinong	10.47	132	P	Pn	08 14 35.7	-6.2
	126nm,0.7s						
DBJI	Dramaga	11.24	128	P	Pn	08 14 50.1	-2.3
	9μm158nm,0.9s						
CNJI	Cibinong	12.00	130	P	Pn	08 14 59.7	-3.1
	3μm228nm,1.0s						
LEM	Lembang	12.09	127	Pn	Pn	08 15 02.9	-1.2
	6.6nm,0.3s,baz=198,slow=11,SNR=3.8						
LEM				Sn	Sn	08 17 18.7	+0.8
	6.0nm,0.3s,baz=291,slow=20,SNR=1.3						
CISI	Cisompet, Garu	12.68	129		Pn	08 15 07.8	-4.4
CISI	Cisompet, Garu	12.68	129	P	Pn	08 15 07.3	-4.9
	2μm982nm107nm,0.7s						
CMJI	Cimerak	13.32	128	P	Pn	08 15 17.4	-3.4
	80nm,1.0s						
KPJI	Karang Pucung	13.44	125	P	Pn	08 15 19.2	-3.3
	90nm,0.8s						
STKI	Sintang	13.57	92	P	Pn	08 15 26.0	+1.7
	62nm,1.5s						
SBUM	Sibu	14.44	82	P	Pn	08 15 38.0	+1.9
UGM	Wanagama	15.07	124	P	Pn	08 15 40.1	-4.6
	216nm,1.1s						
DLV	T Lat	15.50	42	P	Pn	08 15 51.5	+1.1
PCJI	Pacitan	15.77	123	P	Pn	08 15 48.0	-5.7
	60nm,0.8s						
PWJI	Pagerwojo	16.21	122	P	Pn	08 15 55.2	-4.1
	48nm,0.7s						
UBPT	Khong Chiam	16.51	27	P	P	08 16 04.5	-0.9
BBKI	Banjar Baru	17.36	103	P	P	08 16 16.9	+2.1
BLJI	Banyuglugur	17.63	118	P	P	08 16 24.5	+6.7
KMMI	Kalianget	17.67	115	P	Pn	08 16 13.1	-4.5
	2μm124nm,1.0s						
CMAR	Chiang Mai Arr	17.92	3	P	Pn	08 16 18.6	-2.1
	1.2nm,0.3s,baz=194,slow=12,SNR=41						
CMAR				S	Sn	08 19 40.8	+1.2
	0.6nm,0.3s,baz=134,slow=29,SNR=1.2						
CMAR				LR	LR	08 23 01.2	
	comp=Z,2μm,19.4s,baz=226,slow=36						
CMAR	Chiang Mai Arr	17.92	3	*i* P	Pn	08 16 18.6	-2.1
CMAR				pmax	pmax		
	comp=Z,13nm,0.7s						
CMAR	Chiang Mai Arr	17.92	3		Pn	08 16 18.1	-2.5
ABJI	Asem Bagus	18.22	117	P	Pn	08 16 30.2	+5.8
CHTO	Chiang Mai	18.27	3	P	P	08 16 23.6	-1.3
CHTO				pmax	pmax		
	comp=Z,59nm,1.5s						
CHTO	Chiang Mai	18.27	3	P	P	08 16 23.6	-1.3
CHTO	Chiang Mai	18.27	3	P	P	08 16 24.6	-0.2
PALK	Pallekele	18.45	292	P	Pn	08 16 28.4	+1.1
	comp=Z,1.0nm,0.3s,baz=207,slow=11,SNR=34						
PALK				S	Sn	08 19 37.7	-15
	comp=Z,1.1nm,0.3s,baz=297,slow=12,SNR=4.8						
PALK				LR	LR	08 22 37.2	
	comp=Z,2μm,21.0s,baz=217,slow=34						
PALK	Pallekele	18.45	292	P	Pn	08 16 28.7	+1.4
PALK				pmax	pmax		
	comp=Z,83nm,1.0s						
PALK	Pallekele	18.45	292		Pn	08 16 28.7	+1.4
KBKI	Kotabaru	18.62	102	P	Pn	08 16 37.6	+8.3
SPMM	Sapulut	19.00	77	P	Pn	08 16 35.0	+1.1
TWSI	Taliwang, Sumb	20.99	116	P	P	08 16 51.9	-2.7
	comp=Z,949nmcomp=Z,79nm,1.0s						
SLVN	Son La	21.56	15	P	P	08 16 58.9	-1.8
QIZ	Qiongzhong	21.86	32	P	P	08 17 03.8	0.0
QIZ				S	S	08 21 05.8	+2.3
QIZ				LR	LR		
	comp=Z,2μm,25.0s						
QIZ				LR	LR		
	comp=Z,4μm,17.2s						
QIZ				LR	LR		
	comp=Z,3μm,10.2s						
MPSI	Mapaga	21.98	90	P	P	08 17 02.9	-2.4
	comp=Z,884nmcomp=Z,76nm,1.0s						

TRD	Trivandrum	22.35	292	eP	P	08 17 05.4	-3.8
VIS	Vishakhapatnam	22.36	321	eP	P	08 17 05.6	-3.7
KAPI	Kappang	22.48	104	P	P	08 17 08.2	-2.4
KAPI				IAmb	IAmb	08 17 25.3	
	comp=Z,135nm,1.1s						
TOLI2	Tolitoli	22.88	88	P	P	08 17 12.0	-2.8
BKSI	Bulukumba	22.91	105	P	P	08 17 27.0	+12
APSI	Ampana	23.77	93	P	P	08 17 28.7	+5.1
IMP	Imphal	24.53	351	eP	P	08 17 29.1	-1.4
LUWI	Luwuk	24.90	93	P	P	08 17 33.4	-0.5
LUWI	Luwuk	24.90	93	P	P	08 17 40.5	+6.6
KAAM	Kaadhehdhoo	24.92	270	P	P	08 17 37.0	+2.9
KMI	Kunming	24.96	10	⇓P	P	08 17 35.8	+1.2
KMI				pP	pP	08 17 41.1	-4.0
KMI				S	S	08 21 57.4	+1.3
KMI				sS	sS	08 22 06.1	-4.7
KMI				pmax	pmax		
	comp=Z,19nm,0.6s						
KMI				pmax	pmax		
	comp=Z,290nm,4.7s						
KMI				LR	LR		
	comp=Z,3µm,18.5s						
KMI				LR	LR		
	comp=Z,8µm,18.5s						
KMI				LR	LR		
	comp=Z,3µm,15.5s						
KOHI	KOHIMA	25.38	352	eP	P	08 17 37.2	-1.1
HYB	Hyderabad	25.44	313	i P	P	08 17 39.0	+0.2
HYB	Hyderabad	25.44	313	eP	P	08 17 37.5	-1.2
SHL	Shillong	25.63	347	P	P	08 17 40.2	-0.4
SHL				pmax	pmax		
	comp=Z,146nm,1.0s						
SHL	Shillong	25.63	347	P	P	08 17 40.2	-0.4
SHL				IAmb	IAmb	08 17 53.4	
	comp=Z,146nm,1.0s						
SHL	Shillong	25.63	347	eP	P	08 17 40.3	-0.4
SHL				IAmb	IAmb	08 17 42.7	
	comp=Z,72nm,1.4s						
MOKO	MOKOCHONG	25.92	353	eP	P	08 17 42.6	-0.6
MOKO				IAmb	IAmb	08 17 45.5	
	comp=Z,177nm,0.5s						
BOK	Bokaro	25.97	334	eP	P	08 17 42.4	-1.1
DHUB	DHUBRI	26.54	344	eP	P	08 17 49.6	+1.1
DHUB				IAmb	IAmb	08 17 52.9	
	comp=Z,62nm,0.5s						
H08S2	Diego Garcia H	26.60	252	T	T	08 45 13.8	
	baz=73,slow=75						
H08S3	Diego Garcia H	26.60	252	T	T	08 45 17.8	
	baz=73,slow=75						
H08S1	Diego Carcia H	26.61	252	T	T	08 45 15.5	
	baz=73,slow=75,SNR=5205						
ITAN	ITANAGAR	26.84	352	eP	P	08 17 51.9	+0.6
DIBR	DIBRUGARH	27.01	354	eP	P	08 17 53.0	+0.2
GYA	Guiyang	27.19	17	⇓P	P	08 17 54.6	0.0
GYA				sP	sP	08 18 08.1	-1.6
GYA				S	S	08 22 37.2	+6.1
GYA				SS	SnSn	08 23 46.2	+5.3
GYA				pmax	pmax		
	comp=Z,270nm,6.8s						
GYA				LR	LR		
	comp=Z,2µm,15.6s						
GYA				LR	LR		
	comp=Z,2µm,16.0s						
GYA				LR	LR		
	comp=Z,3µm,11.6s						
ODAN	Odare	28.14	340	eP	P	08 18 04.6	+1.4
GTK	Tadong	28.17	342	eP	P	08 18 04.3	+0.9
GTK				IAmb	IAmb	08 18 15.7	
	comp=Z,43nm,1.4s						
DAV	Davao City (W)	28.36	76	LR	LR	08 31 28.3	
	comp=Z,708nm,19.4s,baz=203,slow=41						
RAMN	Ramite	28.50	338	eP	P	08 18 08.1	+1.6
	comp=Z,27nm,0.5s						
JIRN	Jiri	29.30	338	eP	P	08 18 14.8	+1.1
	comp=Z,90nm,0.8s						
PKIN	Phulchoki	29.52	337	eP	P	08 18 17.2	+1.6
GUN	Gumba	29.64	338	eP	P	08 18 17.3	+0.6
	comp=Z,186nm,0.9s						
DMN	Daman	29.66	337	eP	P	08 18 18.9	+2.1
KKN	Kakani	29.76	337	eP	P	08 18 18.8	+1.2
LSA	Lhasa	29.79	348	P	P	08 18 18.6	+0.5
LSA				pmax	pmax		
	comp=Z,62nm,1.1s						
LSA	Lhasa	29.79	348	P	P	08 18 18.6	+0.5
LSA				IAmb	IAmb	08 18 23.4	
	comp=Z,62nm,1.1s						
BHPL	Bhopal	30.15	320	eP	P	08 18 21.1	+0.2
KOLN	Koldanda	30.43	334	eP	P	08 18 25.1	+1.6
	comp=Z,185nm,1.0s						
CD2	Chengdu	30.79	10	P	P	08 18 25.0	-1.5
CD2				S	S	08 23 29.2	+1.7
CD2				pmax	pmax		
	comp=Z,30nm,0.7s						
CD2				pmax	pmax		
	comp=Z,190nm,9.3s						
CD2				LR	LR		
	comp=Z,5µm,15.2s						
CD2				LR	LR		
	comp=Z,11µm,16.7s						
CD2				LR	LR		
	comp=Z,5µm,12.4s						
DANN	Dangsing	30.87	335	eP	P	08 18 28.9	+1.4
	comp=Z,215nm,1.1s						
MEEK	Meekatharra	33.52	145	P	P	08 18 50.4	-0.1
	baz=34,SNR=11						
WHN	Wuhan	33.75	26	⇓P	P	08 18 53.5	+1.1
MORW	Morawa	34.09	151	P	P	08 18 56.5	+1.1
	baz=34,SNR=6.2						
MORW	Morawa	34.09	151	P	P	08 18 56.4	+0.9
MORW				IAmb	IAmb	08 19 59.3	
	comp=Z,52nm,1.4s						
XAN	Xi'an	34.97	16	P	P	08 19 01.7	-1.2
XAN				pP	pP	08 19 12.9	-0.7
XAN				S	S	08 24 30.8	-1.5
XAN				SS	SnSn	08 26 54.2	+4.5
XAN				pmax	pmax		
	comp=Z,31nm,0.8s						
XAN				LR	LR		
	comp=Z,2µm,15.8s						
XAN				LR	LR		
	comp=Z,5µm,17.2s						
XAN				LR	LR		
	comp=Z,3µm,12.4s						
XAN	Xi'an	34.97	16	P	P	08 19 02.0	-0.9
XAN	Xi'an	34.97	16	P	P	08 19 02.0	-0.9
BLDU	Ballidu	35.70	152	P	P	08 19 10.9	+1.7
	baz=36,SNR=4.5						
LZH	Lanzhou	35.88	8	⇑P	P	08 19 12.5	+1.6
LZH				pP	pP	08 19 17.4	-4.2
LZH				sP	sP	08 19 22.7	-3.2
LZH				S	S	08 24 44.3	-2.2
LZH				sS	sS	08 25 05.5	+3.7
LZH				pmax	pmax		
	comp=Z,49nm,1.3s						
LZH				pmax	pmax		
	comp=Z,310nm,4.3s						
LZH				LR	LR		
	comp=Z,3µm,13.8s						
LZH				LR	LR		
	comp=Z,8µm,15.0s						
LZH				LR	LR		
	comp=Z,2µm,16.3s						
SMLA	Simla	36.30	329	eP	P	08 19 14.0	-0.3
MUN	Mundaring	36.61	153	P	P	08 19 18.8	+1.7
	baz=37,SNR=6.2						
NJ2	Nanjing	37.13	30	eP	P	08 19 21.6	+0.2
NJ2				S	S	08 25 07.3	+1.9
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
NJ2				LR	LR		
	comp=Z,3µm,14.4s						
NJ2				LR	LR		
	comp=Z,2µm,14.0s						
NJ2				LR	LR		
	comp=Z,2µm,15.6s						
SSE	Sheshan	37.62	34	P	P	08 19 26.0	+0.4
SSE				S	S	08 25 18.2	+5.4
SSE				pmax	pmax		
	comp=Z,19nm,0.7s						
SSE				pmax	pmax		
	comp=Z,100nm,3.0s						
SSE				LR	LR		
	comp=Z,2µm,17.8s						
SSE				LR	LR		
	comp=Z,3µm,17.5s						
DHRM	DHARAMSHALA	37.63	329	eP	P	08 19 25.0	-1.0
NWAO	Narrogin (SRO)	37.87	153	P	P	08 19 27.2	-0.5
	comp=Z,30nm,0.8s,baz=336,slow=8.5,SNR=12						
NWAO	Narrogin (SRO)	37.87	153	P	P	08 19 28.5	+0.8
	baz=38,SNR=5.9						
NWAO				P	P	08 19 28.5	+0.8
	baz=38,SNR=5.9						
NWAO	Narrogin (SRO)	37.87	153	P	P	08 19 26.2	-1.5
NWAO				pmax	pmax		
	comp=Z,36nm,1.0s						
NWAO	Narrogin (SRO)	37.87	153	P	P	08 19 26.2	-1.5
NWAO				IAmb	IAmb	08 19 30.6	
	comp=Z,36nm,0.9s						
H01W3	Cape Leeuwin H	38.29	158	T	T	08 59 47.2	
	baz=334,slow=76,SNR=94						
H01W2	Cape Leeuwin H	38.30	158	T	T	08 59 47.7	
	baz=334,slow=76,SNR=92						
H01W1	Cape Leeuwin H	38.31	158	T	T	08 59 47.7	
	baz=334,slow=76,SNR=42						
GTA	Gaotai	38.81	2	eP	P	08 19 36.5	+0.9
GTA				pP	pP	08 19 43.5	-2.9
GTA				sP	sP	08 19 47.5	-3.2
GTA				PP	PnPn	08 21 10.3	+2.8
GTA				S	S	08 25 30.3	-0.6
GTA				sS	sS	08 25 44.3	-2.9
GTA				pmax	pmax		
	comp=Z,16nm,1.3s						
GTA				pmax	pmax		
	comp=Z,160nm,6.0s						
GTA				LR	LR		
	comp=Z,1µm,12.3s						
GTA				LR	LR		
	comp=Z,2µm,17.5s						
GTA				LR	LR		
	comp=Z,2µm,12.7s						
TIA	Tai'an	39.80	25	eP	P	08 19 41.0	-2.8
TIA				S	S	08 25 47.2	+1.6
TIA				pmax	pmax		
	comp=Z,11nm,1.0s						
TIA				pmax	pmax		
	comp=Z,230nm,7.8s						
TIA				LR	LR		
	comp=Z,2µm,15.5s						
TIA				LR	LR		
	comp=Z,5µm,15.9s						
TIA				LR	LR		
	comp=Z,3µm,13.1s						
NIL	Nilore	40.32	327	P	P	08 19 47.5	-0.8
NIL				pmax	pmax		
	comp=Z,85nm,0.5s						
NIL	Nilore	40.32	327	P	P	08 19 47.5	-0.8
WRA	Warramunga Arr	41.04	122	P	P	08 19 52.9	-1.5
	comp=Z,5.6nm,0.7s,baz=302,slow=9.0,SNR=2.1						
WRA				LR	LR	08 40 12.8	
	comp=Z,1µm,19.8s,baz=310,slow=41						
BTO	Baotou	41.45	14	eP	P	08 19 57.5	0.0
HHC	Hu-ho-hao-te	42.07	15	eP	P	08 20 04.6	+2.0
HHC				S	S	08 26 20.4	+0.9
HHC				pmax	pmax		
	comp=Z,38nm,0.8s						
HHC				pmax	pmax		
	comp=Z,350nm,7.6s						
HHC				LR	LR		
	comp=Z,3µm,13.5s						
HHC				LR	LR		
	comp=Z,1µm,17.1s						
HHC				LR	LR		
	comp=Z,3µm,13.3s						
FORT	Forrest	42.25	140	P	P	08 20 02.1	-2.0
ASAR	Alice Springs	42.38	127	P	P	08 20 03.9	-1.4
	comp=Z,6.5nm,0.7s,baz=297,slow=7.7,SNR=6.0						
ASAR				PcP	PcP	08 21 56.9	-1.4
	comp=Z,4.7nm,0.8s,baz=316,slow=4.2,SNR=4.3						
ASAR				LR	LR	08 40 21.3	
	comp=Z,1µm,20.0s,baz=301,slow=40						
MSEY	Mahe Island	42.70	263	i P	P	08 20 08.9	+0.9
	SNR=5.8						
MSEY	Mahe Island	42.70	263	P	P	08 20 08.2	+0.2
MSEY				pmax	pmax		
	comp=Z,61nm,1.2s						
MSEY	Mahe Island	42.70	263	P	P	08 20 08.2	+0.2
MSEY				IAmb	IAmb	08 20 11.0	
	comp=Z,61nm,1.1s						
BJT	Baijiatuau	42.75	21	IAmb	IAmb	08 20 15.6	
	comp=Z,60nm,0.8s						
BJI	Beijing	42.77	21	P	P	08 20 10.2	+2.1
BJI				sP	pP	08 20 20.4	+1.4
BJI				PcP	PcP	08 22 01.6	+2.5
BJI				S	S	08 26 32.6	+3.1
BJI				ScS	ScS	08 30 08.1	+1.8
BJI				pmax	pmax		
	comp=Z,62nm,0.8s						
BJI				pmax	pmax		
	comp=Z,480nm,7.8s						
BJI				LR	LR		
	comp=Z,2µm,16.1s						
BJI				LR	LR		
	comp=Z,2µm,15.7s						
BJI				LR	LR		
	comp=Z,3µm,16.4s						
KSH	Kashi	43.74	335	P	P	08 20 16.1	-0.1
KSH				pP	pP	08 20 24.7	-2.4
KSH				sP	sP	08 20 26.9	-4.7
KSH				S	S	08 26 41.1	-3.0
KSH				pmax	pmax		
	comp=Z,3.0nm,0.4s						
KSH				LR	LR		
	comp=Z,900nm,23.0s						
KSH				LR	LR		
	comp=Z,710nm,23.7s						
KSH				LR	LR		
	comp=Z,1µm,24.4s						
DQM	DQM	43.99	299	P	P	08 20 19.5	+1.2
DL2	Dalian	44.01	27	P	P	08 20 19.6	+1.5
DL2				S	S	08 26 50.0	+2.3
DL2				pmax	pmax		
	comp=Z,57nm,1.0s						
DL2				LR	LR		
	comp=Z,2µm,19.4s						
DL2				LR	LR		
	comp=Z,1µm,13.5s						
DL2				LR	LR		
	comp=Z,2µm,20.2s						
MHTO	MHTO	44.01	300	P	P	08 20 19.2	+0.8
MHTO				P	P	08 20 19.2	+0.8
WMQ	Urumqi	44.13	349	eP	P	08 20 21.1	+2.0
WMQ				pP	pP	08 20 26.6	-3.5
WMQ				sP	sP	08 20 32.8	-1.6
WMQ				S	S	08 26 52.0	+2.5
WMQ				sS	sS	08 27 06.3	-0.7
WMQ				pmax	pmax		
	comp=Z,32nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,270nm,3.9s						
WMQ				LR	LR		
	comp=Z,850nm,16.7s						
WMQ				LR	LR		
	comp=Z,1µm,15.9s						
WMQ				LR	LR		
	comp=Z,840nm,22.5s						
WSAR	Wadi Sarin	44.35	304	P	P	08 20 21.7	+0.5
	comp=Z,23nm,1.1s,baz=137,slow=8.9,SNR=6.0						
WSAR				LR	LR	08 37 12.5	
	comp=Z,437nm,21.6s,baz=122,slow=34						
WSAR	Wadi Sarin	44.35	304	P	P	08 20 22.7	+1.5
JMDO	Jabal Madar	44.44	302	P	P	08 20 22.9	+1.0
JMDO				P	P	08 20 22.9	+1.0
JNU	Nakatsue	44.90	40	P	P	08 20 24.2	-1.3
	comp=Z,10nm,0.9s,baz=186,slow=8.0,SNR=4.6						
JNU	Nakatsue	44.90	40	P	P	08 20 23.4	-2.1
JNU				IAmb	IAmb	08 20 32.5	
	comp=Z,40nm,0.9s						
TARG	Taragay, Kyrgy	44.92	339	IAmb	IAmb	08 20 38.3	
	comp=Z,27nm,0.9s						
TJN	Taejon	44.98	34	i P	P	08 20 23.4	-2.5
SHAO	Shalim	45.06	295	P	P	08 20 27.8	+0.9
SOCY	Socotra	45.10	287	P	P	08 20 28.1	+0.7
SOCY				IAmb	IAmb	08 20 30.0	
	comp=Z,56nm,1.1s						
UZB	Uzynbulak	45.75	341	eP	P	08 20 32.0	-0.2
	baz=340						
UZB	Uzynbulak	45.75	341	eP	P	08 20 31.9	-0.2
SATY	Saty	45.88	340	eP	P	08 20 31.7	-1.5
	baz=340						
SATY				eS	S	08 27 14.1	-0.9
	baz=340						
SATY	Saty	45.88	340	eP	P	08 20 31.6	-1.5
SATY				eS	S	08 27 14.0	-0.9
KSAR	Wonju Array Be	46.03	34	P	P	08 20 32.8	-1.5
KSAR	Wonju Array Be	46.03	34	P	P	08 20 32.8	-1.5
KSRS	Korea Array	46.06	34	P	P	08 20 33.0	-1.5
	comp=Z,35nm,0.7s,baz=222,slow=8.4,SNR=100						
KSRS				LR	LR	08 40 50.0	
	comp=Z,742nm,18.2s,baz=214,slow=38						
KS19	Wonju Array Si	46.06	33	IAmb	IAmb	08 20 42.3	
	comp=Z,62nm,0.8s						
KPKS	Kokpek	46.14	341	eP	P	08 20 36.0	+0.8
	comp=Z,16nm,1.3s,baz=340						
KPKS				eS	S	08 27 20.0	+1.3
	baz=340						
KPKS	Kokpek	46.14	341	eP	P	08 20 35.9	+0.8
KPKS				eS	S	08 27 20.0	+1.3
KPKS				pmax	pmax		
	comp=Z,16nm,1.3s						
TNSS	Tian-Shan	46.37	339	eP	P	08 20 35.8	-1.5
	baz=339						
MDOK	Medeo	46.44	339	eP	P	08 20 35.5	-2.1
	baz=339						
MDOK				eS	S	08 27 23.3	+0.1
	baz=339						
MDOK	Medeo	46.44	339	eP	P	08 20 35.5	-2.1
MDOK				eS	S	08 27 23.2	+0.1
SOHO	SOHO	46.47	304	i P	P	08 20 38.4	+0.5
	SNR=6.3						
AAA	Alma-Ata	46.53	339	eP	P	08 20 35.3	-3.0
	baz=339						
AAA	Alma-Ata	46.53	339	eP	P	08 20 35.2	-3.0
AML	Almayashu	46.87	335	i P	P	08 20 41.8	+0.5
	SNR=7.4						
AAK	Ala-Archa	46.97	336	P	P	08 20 42.2	+0.5
	comp=Z,0.9nm,0.4s,baz=146,slow=11,SNR=9.7						
AAK	Ala-Archa	46.97	336	i P	P	08 20 43.8	+2.1
	SNR=8.2						
AAK	Ala-Archa	46.97	336	i P	P	08 20 42.0	+0.3
AAK				pmax	pmax		
	comp=Z,59nm,1.3s						
AAK	Ala-Archa	46.97	336	P	P	08 20 42.2	+0.5
AAK				IAmb	IAmb	08 20 59.3	
	comp=Z,75nm,1.6s						
CHKK	Chushkaly	47.07	339	eP	P	08 20 40.5	-1.8
	baz=339						
UOSS	Minazif	47.08	304	P	P	08 20 44.1	+1.4
UOSS	Minazif	47.08	304	P	P	08 20 42.5	-0.2
HATD	Hatta, Dubai	47.09	304	P	P	08 20 44.0	+1.2
ARXS	Arharly	47.09	340	eP	P	08 20 43.3	+0.7
ALNE	Al Ain	47.09	303	i P	P	08 20 44.8	+1.9
	SNR=9.5						
MSFE	Esma-Masafi	47.29	305	P	P	08 20 46.0	+1.6
KUU	Kurty	47.33	339	eP	P	08 20 43.2	-1.2
	comp=Z,64nm,1.6s,baz=339						
KUU	Kurty	47.33	339	eP	P	08 20 43.2	-1.2
KUU				pmax	pmax		
	comp=Z,64nm,1.6s						
HRA	Herat	47.45	319	P	P	08 20 44.4	-1.3
JHS	Saijyo	47.52	40	IAmb	IAmb	08 20 53.5	
	comp=Z,40nm,0.8s						
SGDS	Sogindy	47.60	337	eP	P	08 20 46.1	-0.4
	baz=337						
SGDS	Sogindy	47.60	337	eP	P	08 20 47.9	+1.4
ASUD	Al Ashush, Dub	47.67	304	P	P	08 20 48.9	+1.6
SONM	Songino Array	47.76	8	P	P	08 20 47.7	-0.1
	comp=Z,27nm,0.8s,baz=191,slow=7.9,SNR=90						
SONM				PcP	PcP	08 22 15.3	-1.1
	comp=Z,7.2nm,0.8s,baz=189,slow=5.3,SNR=1.7						
SONM				LR	LR	08 42 36.3	
	comp=Z,1µm,19.2s,baz=188,slow=38						
SONM	Songino Array	47.76	8	IAmb	IAmb	08 20 50.3	
	comp=Z,27nm,0.9s						
ULN	Ulaanbaatar	47.88	8	c eP	P	08 20 47.1	-1.7
ULN				pmax	pmax		
	comp=Z,18nm,0.8s						
ULN	Ulaanbaatar	47.88	8	P	P	08 20 47.9	-0.8
ULN				IAmb	IAmb	08 20 56.2	
	comp=Z,22nm,0.9s						
MK31	Makanchi Array	48.13	346	i P	P	08 20 50.4	-0.2
MK31	Makanchi Array	48.13	346	IAmb	IAmb	08 20 53.1	
	comp=Z,25nm,0.8s						
MKAR	Makanchi Array	48.13	346	P	P	08 20 50.5	-0.1
	comp=Z,28nm,0.7s,baz=156,slow=7.0,SNR=104						
MKAR				LR	LR	08 43 48.3	
	comp=Z,495nm,20.3s,baz=158,slow=40						
ZSN	Zaisan	48.17	348	eP	P	08 20 50.0	-0.8
	comp=Z,14nm,0.9s,baz=348						
ZSN				eS	S	08 27 49.4	+2.1
	baz=348						
ZSN	Zaisan	48.17	348	eP	P	08 20 50.0	-0.8
ZSN				eS	S	08 27 49.4	+2.1
ZSN				pmax	pmax		
	comp=Z,14nm,0.9s						
MAKZ	Makanchi	48.23	345	P	P	08 20 50.7	-0.5
MAKZ				pmax	pmax		
	comp=Z,24nm,0.8s						
MAKZ	Makanchi	48.23	345	P	P	08 20 50.7	-0.5
MAKZ				IAmb	IAmb	08 20 53.7	
	comp=Z,24nm,0.8s						
IUG	Iuzhnay	48.50	332	eP	P	08 20 53.9	+0.3
	baz=332						
IUG	Iuzhnay	48.50	332	eP	P	08 20 53.8	+0.3
DZA	Taraz	48.50	334	eP	P	08 20 52.2	-1.4
	baz=334						
DZA	Taraz	48.50	334	eP	P	08 20 52.1	-1.4
MZR	Muzera	48.62	301	P	P	08 20 56.1	+1.4
BBOO	Buckleboo	48.85	136	P	P	08 20 55.8	-0.5
	baz=49,SNR=7.1						
BBOO	Buckleboo	48.85	136	P	P	08 20 55.2	-1.1
BBOO				IAmb	IAmb	08 21 03.4	
	comp=Z,26nm,0.7s						
BTLS	Baital	49.16	338	eP	P	08 20 57.4	-1.1
	baz=338						
BTLS	Baital	49.16	338	eP	P	08 20 57.3	-1.1
JWT	Wachi	49.18	41	P	P	08 20 58.7	-0.1
CN2	Changchun	49.65	26	eP	P	08 21 01.6	-0.6
CN2				pP	pP	08 21 09.4	-3.8
CN2				sP	sP	08 21 15.0	-2.5
CN2				S	S	08 28 06.1	-2.1
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,2µm,16.0s						
CN2				LR	LR		
	comp=Z,3µm,16.0s						
CN2				LR	LR		
	comp=Z,2µm,17.0s						
DGZ	Jazzator, Alta	49.88	351 c	i P	P	08 21 04.2	+0.2
DGZ				pmax	pmax		
	comp=Z,16nm,0.8s						
ZAK	Zakamensk	49.95	4	eP	P	08 21 03.8	-0.7
ZAK				pmax	pmax		
	comp=Z,21nm,1.4s						
ZAK				pmax	pmax		
	comp=Z,12nm,1.1s						
JHJ	Hachijo jima 2	51.01	46	LR	LR	08 41 04.0	
	comp=Z,245nm,21.4s,baz=265,slow=34						
MOY	Mondy	51.09	2	eP	P	08 21 12.7	-0.4
MOY				pmax	pmax		
	comp=Z,37nm,2.3s						
HTT	Hallett	51.19	135	P	P	08 21 14.1	0.0
	baz=51,SNR=4.7						
TLY	Talaya	51.27	5	P	P	08 21 14.5	+0.1
	comp=Z,12nm,0.7s,baz=279,slow=3.7,SNR=11						
TLY	Talaya	51.27	5	eP	P	08 21 14.8	+0.5
TLY				e		08 23 17.8	
TLY				eS	S	08 28 36.3	+5.8
TLY				pmax	pmax		
	comp=Z,34nm,0.8s						
TLY				MLR	MLR		
	comp=Z,2µm,13.0s						
TLY	Talaya	51.27	5	P	P	08 21 14.3	0.0
CTA	Charters Tower	51.53	116	P	P	08 21 15.2	-1.7
	comp=Z,7.8nm,0.7s,baz=303,slow=9.1,SNR=6.1						
CTA				LR	LR	08 47 07.0	
	comp=Z,885nm,18.4s,baz=286,slow=41						
MAT	Matsushiro	51.76	42	P	P	08 21 18.9	+0.6
MAT				S	S	08 28 35.6	-2.2
MJAR	Matsushiro Arr	51.76	42	P	P	08 21 16.5	-1.8
	comp=Z,3.4nm,0.9s,baz=213,slow=36,SNR=5.1						
MJAR	Matsushiro Arr	51.76	42	P	P	08 21 17.4	-0.9
MJAR				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MJAR	Matsushiro Arr	51.76	42	P	P	08 21 17.4	-0.9

IRK	**Irkutsk**	**51.88**	**5**	eP	**P**	**08 21 19.6**	**+0.7**
IRK				pmax	pmax		
	comp=Z,55nm,2.2s						
SEM	**Semipalatinsk**	**51.99**	**346**	eP	**P**	**08 21 18.1**	**-2.0**
	baz=346						
SEM	**Semipalatinsk**	**51.99**	**346**	eP	**P**	**08 21 18.0**	**-2.0**
HIA	**Hailar**	**52.12**	**18**	i P	**P**	**08 21 19.9**	**-0.8**
HIA				pmax	pmax		
	comp=Z,15nm,1.0s						
MDJ	**Mudanjiang**	**52.17**	**28**	P	**P**	**08 21 23.5**	**+2.3**
MDJ				pP	pP	08 21 31.2	-1.1
MDJ				sP	sP	08 21 34.2	-2.3
MDJ				S	**S**	**08 28 46.1**	**+3.0**
MDJ				pmax	pmax		
	comp=Z,12nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,430nm,7.2s						
MDJ				LR	LR		
	comp=Z,2μm,18.8s						
MDJ				LR	LR		
	comp=Z,2μm,16.3s						
MDJ				LR	LR		
	comp=Z,640nm,19.9s						
GEYT	**Alibeck**	**52.24**	**320**	P	**P**	**08 21 21.1**	**-0.8**
	comp=Z,6.0nm,0.7s,baz=67,slow=26,SNR=6.9						
GEYT				LR	LR	08 45 30.3	
	comp=Z,338nm,20.1s,baz=205,slow=38						
STKA	**Stephens Creek**	**52.33**	**132**	P	**P**	**08 21 21.6**	**-1.0**
	comp=Z,15nm,0.7s,baz=319,slow=9.1,SNR=10						
STKA				LR	LR	08 47 01.8	
	comp=Z,610nm,19.8s,baz=298,slow=40						
STKA	**Stephens Creek**	**52.33**	**132**	P	**P**	**08 21 22.4**	**-0.2**
	baz=52,SNR=6.8						
STKA	**Stephens Creek**	**52.33**	**132**	i P	**P**	**08 21 20.4**	**-2.2**
STKA	**Stephens Creek**	**52.33**	**132**	P	**P**	**08 21 20.9**	**-1.7**
KURBB	**Kurchatov Arra**	**52.63**	**345**	P	**P**	**08 21 23.9**	**-0.5**
	comp=Z,16nm,0.7s,baz=168,slow=7.4,SNR=90						
KURBB	**Kurchatov Arra**	**52.63**	**345**	P	**P**	**08 21 23.6**	**-0.8**
KURK	**Kurchatov**	**52.69**	**345**	ceP	**P**	**08 21 24.9**	**0.0**
KURK				pmax	pmax		
	comp=Z,33nm,0.8s						
KURK	**Kurchatov**	**52.69**	**345**	P	**P**	**08 21 24.5**	**-0.4**
KURK				IAmb	IAmb	08 21 28.1	
	comp=Z,37nm,1.0s						
USA0B	**Ussuriysk Arra**	**53.04**	**30**	IAmb	IAmb	08 21 52.2	
	comp=Z,48nm,0.9s						
USRK	**Ussuriysk Ar.**	**53.04**	**30**	P	**P**	**08 21 26.9**	**-0.6**
	comp=Z,20nm,0.7s,baz=236,slow=5.4,SNR=28						
USRK				LR	LR	08 44 43.3	
	comp=Z,1μm,18.3s,baz=215,slow=37						
USRK	**Ussuriysk Ar.**	**53.04**	**30**	P	**P**	**08 21 26.4**	**-1.2**
USRK	**Ussuriysk Ar.**	**53.04**	**30**	P	**P**	**08 21 26.4**	**-1.2**
BRZS	**Berezniki**	**53.84**	**340**	eP	**P**	**08 21 31.2**	**-2.2**
	baz=340						
BRZS	**Berezniki**	**53.84**	**340**	eP	**P**	**08 21 31.2**	**-2.2**
ZALV	**Zalesovo Beam**	**54.40**	**351**	P	**P**	**08 21 37.2**	**-0.2**
	comp=Z,58nm,0.7s,baz=179,slow=6.2,SNR=148						
ZALV				LR	LR	08 50 32.3	
	comp=Z,773nm,18.3s,baz=180,slow=42						
CMSA	**Cobar Meteorol**	**55.27**	**130**	P	**P**	**08 21 43.6**	**-0.5**
	baz=55,SNR=13						
RDF	**Al-Radifah**	**55.74**	**305**	eP	**P**	**08 21 47.3**	**-0.2**
MIB	**Mutribah**	**56.23**	**306**	eP	**P**	**08 21 50.8**	**-0.2**
KLR	**Kul'dur**	**56.60**	**26**	ceP	**P**	**08 21 52.2**	**-1.1**
KLR				pmax	pmax		
	comp=Z,34nm,0.8s						
BVAR	**Borovoye Array**	**57.18**	**341**	P	**P**	**08 21 56.6**	**-0.7**
	comp=Z,27nm,0.7s,baz=185,slow=13,SNR=73						
BRVK	**Borovoye**	**57.25**	**341**	P	**P**	**08 21 56.8**	**-1.0**
BRVK				pmax	pmax		
	comp=Z,22nm,0.7s						
BRVK	**Borovoye**	**57.25**	**341**	P	**P**	**08 21 56.8**	**-1.0**
BRVK				IAmb	IAmb	08 21 59.5	
	comp=Z,22nm,0.7s						
EIDS	**Eidsvold**	**57.39**	**121**	P	**P**	**08 21 58.6**	**-0.7**
	baz=57,SNR=9.4						
ZEA	**Zeya**	**58.38**	**20**	eP	P	08 22 10.9	+5.2
ZEA				e		08 22 18.2	
ZEA				eS	**S**	**08 30 11.5**	**+5.6**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=N,10.0nm,0.5s						
ZEA				smax	smax		
	comp=Z,100nm,10.7s						
ZEA				smax	smax		
	comp=E,200nm,10.6s						
ZEA				MLR	MLR		
	comp=E,700nm,13.0s						
ZEA				MLR	MLR		
	comp=N,600nm,16.0s						
ZEA				MLR	MLR		
	comp=Z,800nm,14.0s						
AB31	**Akbulak array**	**58.50**	**332**	i P	**P**	**08 22 05.9**	**-0.8**
ABKAR	**Akbulak array**	**58.50**	**332**	IAmb	IAmb	08 22 14.2	
	comp=Z,39nm,1.1s						
BOD	**Bodaibo**	**58.61**	**10**	eP	**P**	**08 22 07.1**	**-0.1**
BOD				pmax	pmax		
	comp=Z,64nm,1.0s						
ARMA	**Armidale**	**59.52**	**126**	IAmb	IAmb	08 22 17.9	
	comp=Z,78nm,1.7s						
GRNR	**Gornyy**	**59.80**	**27**	⇓iP	**P**	**08 22 15.3**	**-0.4**
GRNR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KIBK	**Kibwezi**	**59.92**	**267**	IAmb	IAmb	08 22 20.3	
	comp=Z,21nm,1.0s						
AKTO	**Aktyubinsk**	**60.22**	**332**	P	**P**	**08 22 17.0**	**-1.5**
	comp=Z,10nm,0.9s,baz=132,slow=6.7,SNR=20						
YSS	**Yuzh-Sakhalins**	**60.56**	**34**	eP	**P**	**08 22 20.2**	**-0.7**
YSS				e		08 22 41.2	
YSS				pmax	pmax		
	comp=Z,40nm,0.8s						
YSS				MLR	MLR		
	comp=Z,1μm,16.0s						
YSS				MLR	MLR		
	comp=E,1μm,18.0s						
YSS	**Yuzh-Sakhalins**	**60.56**	**34**	P	**P**	**08 22 19.7**	**-1.2**
KMBO	**Kilima Mbogo**	**60.68**	**268**	P	**P**	**08 22 23.2**	**+0.6**
	comp=E,13nm,0.9s,baz=67,slow=8.7,SNR=26						
KMBO				LR	LR	08 45 46.5	
	comp=E,614nm,18.8s,baz=94,slow=33						
KMBO	**Kilima Mbogo**	**60.68**	**268**	i P	**P**	**08 22 24.3**	**+1.7**
	SNR=18						
KMBO	**Kilima Mbogo**	**60.68**	**268**	P	**P**	**08 22 23.6**	**+1.0**
KMBO				pmax	pmax		
	comp=Z,21nm,1.1s						
KMBO	**Kilima Mbogo**	**60.68**	**268**	P	**P**	**08 22 23.6**	**+1.0**
KMBO				IAmb	IAmb	08 22 25.4	
	comp=Z,21nm,1.1s						
GNI	**Garni**	**62.32**	**316**	P	**P**	**08 22 33.1**	**0.0**
	comp=Z,7.1nm,0.4s,baz=197,slow=4.1,SNR=9.4						
GNI	**Garni**	**62.32**	**316**	P	**P**	**08 22 33.9**	**+0.8**
GNI	**Garni**	**62.32**	**316**	ceP	**P**	**08 22 33.3**	**+0.1**
GNI				pmax	pmax		
	comp=Z,71nm,1.7s						
GNI	**Garni**	**62.32**	**316**	P	**P**	**08 22 32.8**	**-0.3**
LODK	**Lodwar**	**62.58**	**274**	P	**P**	**08 22 37.3**	**+2.1**
LODK				IAmb	IAmb	08 22 39.0	
	comp=Z,33nm,1.0s						
GROC	**Groznyy**	**62.98**	**320**	eP	**P**	**08 22 37.3**	**+0.1**
GROC				e		08 23 17.4	
GROC				e		08 24 56.8	
GROC				pmax	pmax		
	comp=Z,37nm,0.6s						
SVE	**Sverdlovsk**	**63.64**	**338**	deP	**P**	**08 22 40.9**	**-0.5**
SVE				pmax	pmax		
	comp=Z,69nm,1.2s						
SVE				MLR	MLR		
	comp=Z,873nm,21.0s						
ZEI	**Tsey**	**64.03**	**319**	eP	**P**	**08 22 43.7**	**-0.8**
ZEI				pmax	pmax		
	comp=Z,14nm,1.5s						
ARU	**Arti**	**64.14**	**337**	P	**P**	**08 22 43.7**	**-1.0**
	comp=Z,3.7nm,0.8s,baz=137,slow=4.6,SNR=14						
ARU	**Arti**	**64.14**	**337**	c iP	**P**	**08 22 43.6**	**-1.1**
ARU						08 23 18.2	
ARU						08 25 05.4	
ARU				PPP	PPP	08 26 35.5	
ARU				S	**S**	**08 31 21.0**	**+2.0**
ARU				SS	**SS**	**08 35 31.2**	**+2.5**
ARU				pmax	pmax		
	comp=Z,43nm,1.5s						
ARU				MLR	MLR		
	comp=Z,726nm,18.0s						
ARU	**Arti**	**64.14**	**337**	P	**P**	**08 22 43.3**	**-1.3**
ARU				IAmb	IAmb	08 22 52.0	
	comp=Z,47nm,1.2s						
ONI	**Oni**	**64.24**	**318**	IAmb	IAmb	08 22 56.1	
	comp=Z,61nm,1.7s						
NCK	**Nalchik**	**64.54**	**319**	i P	**P**	**08 22 47.1**	**-0.5**
NCK				pmax	pmax		
	comp=Z,19nm,0.9s						
NEY	**Neytrino**	**65.01**	**319**	i P	**P**	**08 22 50.4**	**-0.5**
NEY				pmax	pmax		
	comp=Z,2.0nm,1.1s						
KBZ	**Khabaz**	**65.10**	**319**	P	**P**	**08 22 51.0**	**-0.2**
	comp=Z,20nm,1.0s,baz=137,slow=5.2,SNR=22						
KBZ	**Khabaz**	**65.10**	**319**	ceP	**P**	**08 22 50.4**	**-0.7**
KBZ				pmax	pmax		
	comp=Z,26nm,1.0s						
PYA1	**Pyatigorsk**	**65.11**	**319**	i P	**P**	**08 22 50.1**	**-1.2**
PYA1				pmax	pmax		
	comp=Z,1.0nm,1.0s						
SHA1	**Shidzhatmaz**	**65.26**	**319**	c iP	**P**	**08 22 51.9**	**-0.6**
KIV	**Kislovodsk**	**65.33**	**319**	P	**P**	**08 22 52.3**	**-0.6**
KIV	**Kislovodsk**	**65.33**	**319**	eP	**P**	**08 22 51.1**	**-1.7**
KIV				eS	**S**	**08 31 33.5**	**-0.8**
KIV				eSS	**SS**	**08 35 48.9**	**+0.9**
KIV				pmax	pmax		
	comp=Z,29nm,1.0s						
KIV				MLR	MLR		
	comp=Z,119nm,17.0s						
KIV	**Kislovodsk**	**65.33**	**319**	P	**P**	**08 22 52.7**	**-0.1**
KIV				IAmb	IAmb	08 22 54.3	
	comp=Z,31nm,1.1s						
ASF	**Jabal al Asfar**	**65.47**	**305**	P	**P**	**08 22 54.8**	**+0.8**
	comp=Z,14nm,1.0s,baz=130,slow=2.3,SNR=9.3						
YAK	**Yakutsk**	**65.94**	**16**	P	**P**	**08 22 54.8**	**-1.4**
	comp=Z,9.3nm,0.4s,baz=291,slow=0.4,SNR=2.2						
YAK	**Yakutsk**	**65.94**	**16**	eP	**P**	**08 22 53.0**	**-3.2**
YAK				e*PP	**pP**	**08 23 01.9**	**-5.6**
YAK				e		08 23 27.3	
YAK				eS	**S**	**08 31 37.9**	**-2.8**
YAK				e*SS	**pS**	**08 31 53.6**	**-1.0**
YAK				e		08 32 48.2	
YAK				eSS	**SS**	**08 35 49.4**	**-6.9**
YAK				pmax	pmax		
	comp=Z,18nm,0.9s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.4s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,96nm,3.4s						
YAK				pmax	pmax		
	comp=E,79nm,2.8s						
YAK				pmax	pmax		
	comp=N,46nm,2.7s						
YAK				smax	smax		
	comp=E,42nm,2.3s						
YAK				smax	smax		
	comp=N,30nm,2.6s						
YAK				MLR	MLR		
	comp=Z,2μm,14.0s						
YAK				MLR	MLR		
	comp=N,752nm,12.0s						
YAK				MLR	MLR		
	comp=E,747nm,13.0s						
EIL	**Elat**	**66.45**	**302**	P	**P**	**08 23 00.4**	**+0.2**
	comp=E,29nm,1.0s,baz=80,slow=3.3,SNR=12						
BELG	**Belogornoye**	**66.56**	**329**	P	**P**	**08 22 59.1**	**-1.2**
	comp=E,33nm,0.9s,baz=138,slow=1.9,SNR=13						
MMAI	**Mount Meron Ar**	**66.92**	**306**	P	**P**	**08 23 03.7**	**+0.5**
	comp=E,9.5nm,0.8s,baz=89,slow=8.5,SNR=6.3						
SOC	**Sochi**	**67.15**	**318**	eP	**P**	**08 23 02.5**	**-1.8**
SOC				ePPP	PPP	08 27 10.3	
SOC				eS	**S**	**08 31 56.0**	**-0.1**
SOC				eSS	**SS**	**08 36 16.6**	**+0.7**
SOC				pmax	pmax		
	comp=Z,30nm,0.9s						
SOC				MLR	MLR		
	comp=Z,193nm,18.0s						
MBAR	**Mbarara**	**67.18**	**269**	P	**P**	**08 23 06.5**	**+1.2**
MBAR				pmax	pmax		
	comp=Z,37nm,1.1s						
MBAR	**Mbarara**	**67.18**	**269**	P	**P**	**08 23 06.5**	**+1.2**
MBAR				IAmb	IAmb	08 23 08.1	
	comp=Z,37nm,1.1s						
CASY	**Casey**	**67.20**	**174**	P	**P**	**08 23 04.3**	**+0.1**
CASY				IAmb	IAmb	08 23 08.0	
	comp=Z,55nm,1.6s						
NRIK	**Noril'sk**	**69.11**	**356**	P	**P**	**08 23 15.3**	**-0.8**
	comp=Z,7.8nm,0.7s,baz=159,slow=5.9,SNR=14						
NRIK				LR	LR	08 56 35.2	
	comp=Z,740nm,18.0s,baz=165,slow=39						
NRIK	**Noril'sk**	**69.11**	**356**	ceP	**P**	**08 23 14.9**	**-1.2**
NRIK				pmax	pmax		
	comp=Z,28nm,1.1s						
NRIK	**Noril'sk**	**69.11**	**356**	P	**P**	**08 23 15.0**	**-1.2**
NRIK				IAmb	IAmb	08 23 23.0	
	comp=Z,45nm,1.2s						
ANN	**Anapa**	**69.12**	**318**	eP	P	08 23 09.1	-7.6
ANN				e		08 25 47.3	
ANN				pmax	pmax		
	comp=Z,49nm,1.0s						
VRH	**Novokhopyorsk**	**69.13**	**326**	eP	**P**	**08 23 15.0**	**-1.6**
VRH				pmax	pmax		
	comp=Z,30nm,0.7s						
KIRV	**Kirov**	**69.28**	**335**	P	**P**	**08 23 16.4**	**-0.9**
	comp=Z,21nm,0.8s,baz=152,slow=3.5,SNR=7.5						
KIRV	**Kirov**	**69.28**	**335**	ceP	**P**	**08 23 16.7**	**-0.6**
BR131	**Keskin Array S**	**70.14**	**312**	IAmb	IAmb	08 23 23.4	
	comp=Z,20nm,0.8s						
BR131	**Keskin Array S**	**70.14**	**312**	P	**P**	**08 23 22.7**	**-0.6**
	SNR=5.1						
BR131				P	**P**	**08 23 22.7**	**-0.6**
	SNR=5.1						
BRTR	**Keskin Array B**	**70.14**	**312**	P	**P**	**08 23 22.3**	**-1.0**
	comp=Z,9.9nm,0.8s,baz=120,slow=7.3,SNR=29						
BRTR				LR	LR	08 57 36.5	
	comp=Z,277nm,18.3s,baz=118,slow=39						
DZM	**Mont Dzumac**	**70.33**	**114**	eP	**P**	**08 23 25.5**	**+0.8**
	comp=Z,48nm,1.4s						
DZM	**Mont Dzumac**	**70.33**	**114**	P	**P**	**08 23 23.0**	**-1.8**
	comp=Z,4.1nm,0.8s,baz=279,slow=23,SNR=2.0						
VORD	**Divnogorie**	**70.41**	**325**	eP	**P**	**08 23 22.6**	**-1.8**
VORD				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BZK	**Bozkurt**	**70.53**	**315**	⇑P	**P**	**08 23 26.5**	**+1.1**
VSR	**Storozhevoye**	**70.58**	**325**	eP	**P**	**08 23 23.6**	**-1.9**
VSR				pmax	pmax		
	comp=Z,20nm,1.1s						
LSZ	**Lusaka**	**70.59**	**254**	P	**P**	**08 23 27.3**	**+0.8**
LSZ	**Lusaka**	**70.59**	**254**	P	**P**	**08 23 27.3**	**+0.8**
ANTO	**Ankara**	**70.80**	**312**	P	**P**	**08 23 26.8**	**-0.5**
ANTO				pmax	pmax		
	comp=Z,35nm,1.1s						
ANTO	**Ankara**	**70.80**	**312**	P	**P**	**08 23 26.8**	**-0.5**
ANTO				IAmb	IAmb	08 23 34.3	
	comp=Z,35nm,1.1s						
LPSR	**Galich'ya Gora**	**71.31**	**327**	eP	**P**	**08 23 27.5**	**-2.4**
LPSR				pmax	pmax		
	comp=Z,30nm,0.9s						
PETK	**Petropavlovsk-**	**71.96**	**33**	P	**P**	**08 23 31.5**	**-2.4**
	comp=Z,4.3nm,0.8s,baz=224,slow=10,SNR=3.8						
MAW	**Mawson**	**72.16**	**193**	P	**P**	**08 23 36.0**	**+1.3**
	comp=Z,14nm,1.0s,baz=27,slow=6.3,SNR=22						
MAW				LR	LR	08 49 40.5	
	comp=Z,209nm,19.1s,baz=45,slow=31						
MAW	**Mawson**	**72.16**	**193**	P	**P**	**08 23 36.1**	**+1.4**
	baz=72,SNR=16						
MAW	**Mawson**	**72.16**	**193**	P	**P**	**08 23 35.6**	**+0.9**
MAW				pmax	pmax		
	comp=Z,9.0nm,1.4s						
MAW	**Mawson**	**72.16**	**193**	P	**P**	**08 23 35.6**	**+0.9**
PET	**Petropavlovsk**	**72.45**	**34**	i P	**P**	**08 23 36.0**	**-0.7**
PET				pmax	pmax		
	comp=Z,49nm,1.0s						
PRGR	**Permogore**	**72.60**	**337**	eP	**P**	**08 23 36.0**	**-1.5**
PRGR				e*PP	**pP**	**08 23 49.3**	**+0.4**
PRGR				pmax	pmax		
	comp=Z,32nm,0.8s						
MOS	**Moscow**	**73.33**	**329**	eP	**P**	**08 23 38.0**	**-3.9**
MOS				pmax	pmax		
	comp=Z,50nm,0.8s						
MOS				MLR	MLR		
	comp=Z,800nm,21.0s						
OBN	**Obninsk**	**73.62**	**328**	⇓iP	**P**	**08 23 42.2**	**-1.4**
OBN				e*PP	**pP**	**08 23 54.8**	**-0.3**
OBN				*SP	**PcP**	**08 23 58.0**	**-1.3**
OBN				e		08 24 00.6	
OBN				PPP	PPP	08 28 08.0	
OBN				S	**S**	**08 33 13.0**	**+1.8**
OBN				e		08 33 45.7	
OBN				SS	**SS**	**08 38 02.0**	**+7.1**
OBN				pmax	pmax		
	comp=Z,76nm,1.7s						
OBN				MLR	MLR		
	comp=Z,438nm,20.0s						
TIXI	**Tiksi**	**73.79**	**10**	ceP	**P**	**08 23 42.9**	**-1.4**
TIXI	**Tiksi**	**73.79**	**10**	P	**P**	**08 23 42.6**	**-1.8**
TIXI				IAmb	IAmb	08 23 58.2	
	comp=Z,29nm,1.0s						
SEY	**Seymchan**	**74.17**	**23**	P	**P**	**08 23 45.9**	**-0.8**
	comp=Z,8.0nm,0.9s,baz=242,slow=5.7,SNR=11						
LBTB	**Lobatse**	**74.20**	**244**	IAmb	IAmb	08 23 49.8	
	comp=Z,30nm,1.0s						
BOSA	**Boshof**	**75.03**	**240**	P	**P**	**08 23 53.2**	**+0.6**
	comp=Z,20nm,0.8s,baz=93,slow=6.2,SNR=27						
BOSA				LR	LR	08 52 28.4	
	comp=Z,256nm,18.8s,baz=80,slow=32						
BOSA	**Boshof**	**75.03**	**240**	IAmb	IAmb	08 23 54.2	
	comp=Z,39nm,1.0s						
TIRR	**Tirgusor**	**75.15**	**316**	IAmb	IAmb	08 23 53.4	
	comp=Z,52nm,0.9s						
CFR	**Carcaliu**	**75.52**	**317**	⇑P	**P**	**08 23 54.9**	**0.0**
HARR	**Harsova**	**75.54**	**316**	⇑P	**P**	**08 23 54.9**	**-0.1**
SORM	**Soroca**	**76.13**	**320**	⇑P	**P**	**08 23 58.0**	**-0.3**
AKASG	**Malin Array Be**	**76.28**	**322**	P	**P**	**08 23 58.0**	**-1.1**
	comp=Z,5.1nm,0.8s,baz=88,slow=4.6,SNR=29						
AKASG				LR	LR	09 00 45.6	
	comp=Z,304nm,21.4s,baz=100,slow=38						
AKASG	**Malin Array Be**	**76.28**	**322**	i P	**P**	**08 23 58.0**	**-1.1**
AKASG				pmax	pmax		
	comp=Z,7.0nm,0.6s						
AKBB	**Malin Array Si**	**76.28**	**322**	ceP	**P**	**08 23 57.7**	**-1.4**
VRI	**Vrincioaia**	**76.64**	**317**	⇑P	**P**	**08 24 01.8**	**+0.5**
PLOR	**Plostina**	**76.69**	**317**	⇑P	**P**	**08 24 02.0**	**+0.4**
TESR	**Tescani**	**76.85**	**318**	⇓P	**P**	**08 24 02.3**	**-0.2**
MLR	**Muntele Rosu**	**77.09**	**317**	⇑P	**P**	**08 24 04.2**	**+0.2**
DOPR	**Dopca**	**77.58**	**317**	⇑P	**P**	**08 24 07.1**	**+0.5**
VOIR		**77.70**	**316**	⇓P	**P**	**08 24 06.7**	**-0.6**
ARR	**Arges**	**77.97**	**316**	⇑P	**P**	**08 24 08.4**	**-0.4**
BURAR	**Bucovina Array**	**78.05**	**319**	⇑P	**P**	**08 24 10.1**	**+0.8**
BURAR	**Bucovina Array**	**78.05**	**319**	IAmb	IAmb	08 24 11.3	
	comp=Z,26nm,0.8s						
BUR08	**Bucovina Ar. S**	**78.07**	**319**	IAmb	IAmb	08 24 17.8	
	comp=Z,27nm,0.9s						
MNK	**Minsk**	**78.14**	**326**	i P	**P**	**08 24 09.1**	**-0.3**
MNK				i		08 24 15.2	
MNK				i		08 27 02.6	
MNK				i PPP	PPP	08 28 50.7	
MNK				i S	**S**	**08 34 03.0**	**+1.9**
MNK				i SS	**SS**	**08 39 02.0**	**-1.3**
MNK				i SSS	SSS	08 42 27.0	
MNK				pmax	pmax		
	comp=Z,28nm,0.8s						
MNK				pmax	pmax		
	comp=N,25nm,0.8s						
MNK				pmax	pmax		
	comp=E,3.0nm,0.9s						
MNK	**Minsk**	**78.14**	**326**	i P	**P**	**08 24 09.1**	**-0.3**
	comp=E,3.0nm,0.9s						
MNK				i P	**P**	**08 24 09.1**	**-0.3**
	comp=N,25nm,0.8s						
MNK				i P	**P**	**08 24 09.1**	**-0.3**
	comp=Z,28nm,0.8s,baz=106						
MNK				i PP	**PP**	**08 27 02.6**	**-3.6**
MNK				i PPP	PPP	08 28 50.7	
MNK				i S	**S**	**08 34 03.0**	**+2.0**
MNK				i SS	**SS**	**08 39 02.0**	**-1.3**
MNK				i SSS	SSS	08 42 27.1	
MNK				i LQ	LQ	08 53 46.7	
MNK				i LR	LR	08 58 31.3	
MNK				i LRM	MLR	09 04 04.2	
	comp=N,208nm,20.6s						
MNK				i LRM	MLR	09 04 09.3	
	comp=E,37nm,20.6s						
MNK				i LRM	MLR	09 04 11.9	
	comp=Z,362nm,20.6s						
RPZ	**Rata Peaks**	**78.18**	**135**	P	**P**	**08 24 08.9**	**-1.1**
VTS	**Vitosha**	**78.44**	**313**	⇓P	**P**	**08 24 11.6**	**0.0**
NACGM	**Naroch**	**78.86**	**326**	i P	**P**	**08 24 11.5**	**-1.9**
GZR	**Gura Zlata**	**79.26**	**316**	⇑P	**P**	**08 24 15.8**	**-0.1**
LVV	**L'vov**	**79.29**	**321**	eP	**P**	**08 24 15.7**	**-0.2**
SUR	**Sutherland**	**79.36**	**237**	P	**P**	**08 24 19.0**	**+2.1**
SYO	**Syowa Base**	**79.52**	**198**	⇑eP	**P**	**08 24 18.8**	**+2.1**
SYO	**Syowa Base**	**79.52**	**198**	⇓ePcP	**PcP**	**08 24 26.4**	**+1.8**
DRGR		**79.56**	**318**	⇑P	**P**	**08 24 18.1**	**+0.6**
BOVS	**Bovan**	**79.72**	**314**	⇓P	**P**	**08 24 17.5**	**-0.8**
MDVR	**Moldovita**	**79.90**	**315**	⇓P	**P**	**08 24 19.5**	**+0.1**
KWP	**Kalwaria Pacla**	**80.09**	**320**	eP	**P**	**08 24 20.7**	**+0.4**
KWP				ePP	**PP**	**08 27 30.3**	**+7.6**
BZS	**Buzias**	**80.10**	**316**	⇑P	**P**	**08 24 20.7**	**+0.3**
UZH	**Uzhgorod**	**80.17**	**319**	eP	P	08 24 27.2	+6.5
UZH				e		08 24 36.0	
UZH				e		08 24 41.4	
SIRR	**Siria**	**80.18**	**317**	⇑P	**P**	**08 24 21.0**	**+0.2**
KOLS	**Kolonicke sedl**	**80.24**	**320**	eP	**P**	**08 24 22.0**	**+0.9**
KOLS				pmax	pmax		
	comp=Z,36nm,1.1s						
KOLS	**Kolonicke sedl**	**80.24**	**320**	eP	**P**	**08 24 22.0**	**+0.9**
PABE	**Paberze**	**80.57**	**326**	eP	**P**	**08 24 22.5**	**-0.2**
SUW	**Suwalki**	**80.69**	**325**	eP	**P**	**08 24 22.7**	**-0.7**
SUW				epP	**PcP**	**08 24 29.6**	**-0.4**
SUW	**Suwalki**	**80.69**	**325**	eP	**P**	**08 24 23.4**	**+0.1**
CRVS	**Cervenica-Dubn**	**80.76**	**319**	eP	**P**	**08 24 25.5**	**+1.6**
CRVS				pmax	pmax		
	comp=Z,27nm,1.2s						
CRVS	**Cervenica-Dubn**	**80.76**	**319**	eP	**P**	**08 24 25.5**	**+1.6**
FINES	**FINESS Array B**	**80.98**	**332**	P	**P**	**08 24 24.1**	**-0.6**
	comp=Z,6.1nm,0.6s,baz=108,slow=5.6,SNR=35						
FINES				LR	LR	09 04 34.4	
	comp=Z,311nm,19.3s,baz=112,slow=39						
FINES	**FINESS Array B**	**80.98**	**332**	i P	**P**	**08 24 24.5**	**-0.3**
FINES				pmax	pmax		
	comp=Z,6.0nm,0.6s						
DIVS	**Divibare**	**81.01**	**314**	IAmb	IAmb	08 24 29.3	
	comp=Z,30nm,1.3s						
TSUM	**Tsumeb**	**81.02**	**251**	P	**P**	**08 24 26.5**	**+0.5**
PDG	**Podgorica**	**81.32**	**313**	⇑P	**P**	**08 24 26.2**	**-0.8**
PDG	**Podgorica**	**81.32**	**313**	IAmb	IAmb	08 24 27.1	
	comp=Z,22nm,0.6s						
MTSE	**Matsula**	**81.39**	**329**	eP	**P**	**08 24 27.0**	**+0.1**
BKZ	**Black Stump Fm**	**81.43**	**130**	P	**P**	**08 24 26.8**	**-0.9**
NIE	**Niedzica**	**81.60**	**320**	eP	**P**	**08 24 29.4**	**+1.0**
PSZ	**Piszkesteto**	**81.64**	**318**	⇓P	**P**	**08 24 29.0**	**+0.3**
PSZ	**Piszkesteto**	**81.64**	**318**	eP	**P**	**08 24 28.1**	**-0.6**
URZ	**Urewera**	**81.80**	**129**	P	**P**	**08 24 28.2**	**-1.4**
	comp=Z,11nm,0.8s,baz=122,slow=23,SNR=1.9						
OJC	**Ojcow**	**82.05**	**321**	eP	**P**	**08 24 31.0**	**+0.4**
OJC	**Ojcow**	**82.05**	**321**	P	**P**	**08 24 30.7**	**0.0**
OJC				pmax	pmax		
	comp=Z,15nm,1.0s						
OJC	**Ojcow**	**82.05**	**321**	P	**P**	**08 24 30.7**	**0.0**
MORH	**Mrgy, Hungar**	**82.24**	**316**	eP	**P**	**08 24 29.8**	**-1.9**
VYHS	**Vyhne**	**82.42**	**319**	eP	**P**	**08 24 32.0**	**-0.7**
VYHS	**Vyhne**	**82.42**	**319**	eP	**P**	**08 24 32.0**	**-0.7**
KOVH	**Kovagotottos**	**82.60**	**316**	eP	**P**	**08 24 32.6**	**-1.1**
TIP	**Timpagrande**	**82.85**	**309**	⇓P	**P**	**08 24 34.0**	**-1.2**
MPLH	**Magyarpolny**	**83.12**	**317**	eP	**P**	**08 24 35.6**	**-0.7**
JAVC	**Velka Javorina**	**83.23**	**319**	eP	**P**	**08 24 37.4**	**+0.5**
MORC	**Moravsky Berou**	**83.43**	**320**	⇑P	**P**	**08 24 37.1**	**-0.8**
MORC	**Moravsky Berou**	**83.43**	**320**	eP	**P**	**08 24 37.8**	**-0.1**
MODS	**Modra-Piesok**	**83.43**	**319**	eP	**P**	**08 24 36.9**	**-1.0**
MODS				pmax	pmax		
	comp=Z,43nm,1.8s						
MODS	**Modra-Piesok**	**83.43**	**319**	eP	**P**	**08 24 36.9**	**-1.0**
ARCES	**ARCESS Array B**	**83.47**	**340**	P	**P**	**08 24 37.7**	**0.0**
	comp=Z,7.8nm,0.8s,baz=101,slow=7.1,SNR=23						
ARCES				LR	LR	09 07 02.9	
	comp=Z,330nm,18.5s,baz=70,slow=40						
ZST	**Bratislava**	**83.53**	**318**	eP	**P**	**08 24 38.5**	**+0.1**
ZST	**Bratislava**	**83.53**	**318**	eP	**P**	**08 24 38.5**	**+0.1**
KRLC	**Kraliky**	**83.95**	**320**	eP	**P**	**08 24 40.8**	**+0.2**
KRLC	**Kraliky**	**83.95**	**320**	eP	**P**	**08 24 40.8**	**+0.2**
DPC	**Dobruska-Polom**	**84.28**	**320**	eP	**P**	**08 24 42.6**	**+0.4**
DPC	**Dobruska-Polom**	**84.28**	**320**	eP	**P**	**08 24 42.6**	**+0.4**
DPC				ex	x	08 24 48.1	
CONA	**Conrad Observa**	**84.33**	**318**	eP	**P**	**08 24 41.8**	**-0.8**
	comp=Z,2.9nm,0.9s						
KSP	**Ksiaz**	**84.35**	**321**	eP	**P**	**08 24 43.2**	**+0.7**
CHVC	**Chvalec**	**84.47**	**321**	eP	**P**	**08 24 43.6**	**+0.4**
ARSA	**Arzberg**	**84.49**	**317**	eP	**P**	**08 24 43.2**	**-0.2**
	comp=Z,12nm,1.1s,SNR=5.7						

UPP	Uppsala	84.72	330	*e*P	P	08 24 44.5	+0.3
SOKA	Soboth	84.78	317	*e*P	P	08 24 45.1	+0.2
	comp=Z,14nm,1.0s,SNR=9.1						
VNDA	Vanda	84.96	169	P	P	08 24 45.2	+0.2
	comp=Z,8.6nm,1.1s,baz=296,slow=4.3,SNR=16						
VNDA	Vanda	84.96	169	IAmb	IAmb	08 25 01.8	
	comp=Z,15nm,1.1s						
OBKA	Obir	85.09	316	*e*P	P	08 24 46.5	0.0
	comp=Z,7.1nm,1.1s						
MOA	Molln	85.39	318	*e*P	P	08 24 47.3	-0.6
	comp=Z,9.7nm,1.2s						
CKRC	Cesky Krumlov	85.44	319	*e*P	P	08 24 48.3	+0.2
MYKA	Terra Mystica	85.73	317	*e*P	P	08 24 50.4	+0.8
	comp=Z,10nm,1.1s						
BRG	Berggiesshubel	85.83	321	*e*P	P	08 24 50.0	0.0
	comp=Z,3.8nm,0.8s,baz=92,slow=4.9						
BRG	Berggiesshubel	85.83	321	*e*P	P	08 24 50.5	+0.5
BRG				Amp		08 24 54.5	
	comp=Z,5.5nm,0.8s						
GEC2	GERESS Array S	85.84	319	IAmb	IAmb	08 24 52.7	
	comp=Z,20nm,1.2s						
GEC2	GERESS Array S	85.84	319	*e*P	P	08 24 50.1	-0.1
	comp=Z,8.8nm,1.0s,baz=92,slow=4.9						
GERES	GERESS Array B	85.84	319	P	P	08 24 50.2	0.0
	comp=Z,5.3nm,0.9s,baz=98,slow=5.5,SNR=36						
GERES				LR	LR	09 07 39.5	
	comp=Z,93nm,20.6s,baz=94,slow=39						
KHC	Kasperske Hory	85.94	319	*e*P	P	08 24 50.5	-0.1
KHC	Kasperske Hory	85.94	319	*e*P	P	08 24 50.5	-0.1
KHC				*e*x	x	08 24 57.3	
KBA	Koelnbreinsper	85.96	317	*e*P	P	08 24 50.6	-0.3
	comp=Z,5.2nm,1.0s						
SBA	Scott Base	86.06	169	P	P	08 24 52.2	+1.7
SBA				pmax	pmax		
	comp=Z,26nm,1.2s						
SBA	Scott Base	86.06	169	P	P	08 24 52.2	+1.7
SBA				IAmb	IAmb	08 25 09.8	
	comp=Z,26nm,1.2s						
FBE	Freiberg	86.21	321	*e*P	P	08 24 51.8	0.0
	comp=Z,5.9nm,0.8s,baz=92,slow=4.9						
STAL	STALIGIAL	86.35	316	IAmb	IAmb	08 25 00.2	
	comp=Z,36nm,1.4s						
RJOB	Jochberg	86.37	318	*e*P	P	08 24 52.8	0.0
	baz=92,slow=4.9						
WET	Wettzell	86.40	319	*e*P	P	08 24 52.9	0.0
	comp=Z,6.8nm,0.9s,baz=92,slow=4.9						
CLL	Collm	86.45	321	*e*P	P	08 24 53.0	0.0
CLL				*e*S	S	08 35 25.0	-1.5
CLL	Collm	86.45	321	*e*P	P	08 24 53.0	0.0
CLL				*e*S	S	08 35 25.0	-1.5
CLL				*e*SS	SS	08 41 00.0	-7.1
CLL				*e*SSS	SSS	08 44 36.0	
CLL				*e*		08 46 12.0	
CLL	Collm	86.45	321	*e*P	P	08 24 53.0	0.0
	comp=Z,3.4nm,0.8s,baz=92,slow=4.9						
ABTA	Abfaltersbach	86.51	317	*e*P	P	08 24 52.6	-0.9
	comp=Z,5.6nm,1.2s						
WERN	Wernitzgruen	86.79	320	*e*P	P	08 24 55.0	+0.2
	comp=Z,3.3nm,0.9s,baz=92,slow=4.9						
GUNZ	Gunzen	86.82	320	*e*P	P	08 24 55.2	+0.3
	comp=Z,3.2nm,0.9s,baz=92,slow=4.9						
WERD	Werda	86.84	320	*e*P	P	08 24 55.1	+0.1
	baz=92,slow=4.9						
ROTZ	Rotzenmuhle	86.87	320	*e*P	P	08 24 55.1	0.0
	comp=Z,0.8nm,0.8s,baz=92,slow=4.9						
MANZ	Manzenberg	86.95	320	*e*P	P	08 24 55.5	0.0
	comp=Z,2.3nm,0.9s,baz=92,slow=4.9						
CTI	Castel Tesino	87.07	316	IAmb	IAmb	08 24 58.9	
	comp=Z,20nm,1.1s						
WTTA	Wattenberg	87.13	317	*e*P	P	08 24 55.8	-0.8
	comp=Z,3.4nm,0.6s						
WATA	Walderalm	87.18	317	*e*P	P	08 24 55.7	-1.2
	comp=Z,2.9nm,0.6s						
NEUB	Neuenburg	87.22	321	*e*P	P	08 24 56.8	0.0
	comp=Z,7.6nm,0.8s,baz=92,slow=4.9						
MOX	Moxa	87.29	321	*e*P	P	08 24 57.5	+0.3
	baz=92,slow=4.9						
SQTA	Sankt Quirin	87.42	317	*e*P	P	08 24 57.1	-0.9
	comp=Z,8.5nm,0.8s						
MOTA	Moosalm	87.50	317	*e*P	P	08 24 57.2	-1.2
	comp=Z,8.6nm,1.4s						
GRF	Grafenberg Arr	87.51	320	*e*P	P	08 24 58.6	+0.4
	comp=Z,6.3nm,0.8s,baz=92,slow=4.9						
FLTG	Flechtingen	87.60	322	*e*P	P	08 24 58.6	+0.1
	comp=Z,6.6nm,1.1s,baz=92,slow=4.9						
RETA	Reutte	87.73	317	*e*P	P	08 24 58.7	-0.8
	comp=Z,6.1nm,0.9s						
ASSE	Asse, Remlinge	87.94	322	*e*P	P	08 25 00.3	+0.3
	comp=Z,5.6nm,0.9s,baz=92,slow=4.9						
NB2	NORSAR Subarra	88.00	331	P	P	08 24 59.6	-0.7
	comp=Z,30nm,1.7s,baz=96,slow=4.8						
NB2	NORSAR Subarra	88.00	331	P	P	08 24 59.6	-0.7
	baz=96,slow=4.8						
NOA	NORSAR Array B	88.00	331	P	P	08 24 59.0	-1.3
	comp=Z,5.9nm,1.0s,baz=94,slow=4.8,SNR=11						
NOA				PP	PP	08 28 22.5	-4.4
	comp=Z,0.5nm,0.8s,baz=94,slow=8.5,SNR=3.3						
NOA				LR	LR	09 09 02.7	
	comp=Z,308nm,19.9s,baz=95,slow=39						
CLZ	Clausthal	88.12	322	*e*P	P	08 25 01.7	+0.6
	comp=Z,12nm,1.1s,baz=92,slow=4.9						
BSEG	Bad Segeberg	88.21	324	*e*P	P	08 25 01.9	+0.5
	comp=Z,15nm,0.9s,baz=92,slow=4.9						
NRDL	Niedersach Rie	88.30	322	*e*P	P	08 25 02.2	+0.4
	comp=Z,18nm,1.0s,baz=92,slow=4.9						
UBBA	Unterbreizbach	88.33	321	*e*P	P	08 25 02.9	+1.0
	baz=92,slow=4.9						
DAVA	Damuels	88.33	317	*e*P	P	08 25 01.9	-0.4
	comp=Z,11nm,1.1s						
GTTG	Gottingen	88.36	321	*e*P	P	08 25 02.9	+0.6
	comp=Z,12nm,1.0s,baz=92,slow=4.9						
KEST	Kesra	88.57	306	P	P	08 25 04.8	+1.2
	comp=Z,14nm,0.8s,baz=291,slow=2.0,SNR=16						
KEST				LR	LR	09 09 26.9	
	comp=Z,252nm,18.3s,baz=359,slow=39						
KEST	Kesra	88.57	306	IAmb	IAmb	08 25 12.6	
	comp=Z,16nm,0.8s						
TUE	Stuetta	88.68	316	IAmb	IAmb	08 25 06.4	
	comp=Z,23nm,1.5s						
KONO	Kongsberg	88.75	329	P	P	08 25 04.2	+0.4
KONO				pmax	pmax		
	comp=Z,79nm,1.8s						
KONO	Kongsberg	88.75	329	P	P	08 25 04.2	+0.4
TNS	Taunus Mts	89.31	320	*e*P	P	08 25 07.2	+0.4
	comp=Z,10nm,0.8s,baz=92,slow=4.9						
BFO	Black Forest	89.39	318	*e*P	P	08 25 06.9	-0.2
	comp=Z,5.0nm,1.0s,baz=92,slow=4.9						
HLG	Helgoland	89.65	324	*e*P	P	08 25 08.7	+0.6
	baz=92,slow=4.9						
BUG	Bochum--Univer	90.05	321	*e*P	P	08 25 10.6	+0.6
	comp=Z,12nm,0.8s,baz=92,slow=4.9						
ECH	Echery	90.17	318	IAmb	IAmb	08 25 12.2	
	comp=Z,12nm,1.0s						
AHRW	Bad Neuenahr-A	90.19	320	*e*P	P	08 25 11.5	+0.7
	comp=Z,8.4nm,0.8s,baz=92,slow=4.9						
QSPA	South Pole Qui	90.40	180	P	P	08 25 11.1	-0.5
QSPA				IAmb	IAmb	08 25 14.6	
	comp=Z,49nm,1.7s						
BTNL	Ternell	90.79	320	*d*P	P	08 25 13.6	0.0
WLF	Walferdange	90.80	319	*d*P	P	08 25 14.2	+0.6
WLF	Walferdange	90.80	319	*e*P	P	08 25 14.3	+0.6
	comp=Z,8.1nm,0.9s,baz=92,slow=4.9						
MEM	Membach	90.87	320	*d*P	P	08 25 14.0	0.0
MEM				*d*PcP	PcP	08 25 15.0	+0.1
BCLA	Clavier	91.32	320	*d*P	P	08 25 16.1	+0.1
	comp=Z,4.6nm,1.1s						
BCLA				*d*pP	pP	08 25 24.3	-3.6
BGES	Gesves	91.46	320	*d*P	P	08 25 16.9	+0.2
	comp=Z,5.6nm,0.9s						
BMRD	Maredsous	91.67	320	*d*P	P	08 25 17.5	-0.2
BMRD				*d*PcP	PcP	08 25 18.4	-0.1
BMRD				*d*pP	pP	08 25 25.6	-3.8
DOU	Dourbes	91.79	320	*d*P	P	08 25 18.5	+0.3
	comp=Z,8.5nm,0.9s						
SNAA	Sanae	93.81	198	P	P	08 25 28.2	+1.0
SNAA	Sanae	93.81	198	*ce*P	P	08 25 28.0	+0.8
SNAA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
VNA2	Neumayer--Watz	95.41	199	P	P	08 25 37.7	+3.2
TORD	Torodi Ar. Bea	95.95	283	P	P	08 25 37.8	-0.3
	comp=Z,1.9nm,1.0s,baz=82,slow=3.5,SNR=7.8						
TORD				PP	PP	08 29 33.0	+2.0
	comp=Z,0.8nm,0.9s,baz=84,slow=6.0,SNR=5.0						
TORD				LR	LR	09 07 22.7	
	comp=Z,338nm,19.9s,baz=85,slow=34						
TORD	Torodi Ar. Bea	95.95	283	IAmb	IAmb	08 27 55.0	
	comp=Z,6.5nm,0.8s						
IMAR	Indian Mountai	96.98	23	P	P	08 25 41.3	-0.4
J20K	Nowinta River	97.34	25	P	Pdif	08 25 43.7	+0.2
	baz=286						
H21K	Melozitna Rive	97.45	23	IAmb	IAmb	08 25 46.3	
	comp=Z,8.2nm,1.0s						
H21K	Melozitna Rive	97.45	23	P	Pdif	08 25 44.3	+0.4
	baz=288						
L19K	White Mountain	97.58	27	P	Pdif	08 25 44.9	+0.3
	baz=286						
TOLK	Toolik Lake Re	97.64	20	P	P	08 25 44.6	0.0
	baz=291						
I21K	Tanana	97.93	24	P	Pdif	08 25 46.0	0.0
	baz=288						
L20K	Farewell, AK	97.94	26	P	Pdif	08 25 46.4	+0.2
	baz=286						
ESDC	Sonseca Array	98.85	310	LR	LR	09 12 18.1	
	comp=Z,136nm,21.9s,baz=325,slow=36						
ILAR	Eielson Array	100.10	23	PP	PP	08 29 59.4	-1.7
	comp=Z,1.4nm,1.0s,baz=287,slow=7.9,SNR=6.8						
ILAR				PKKPbc	PKKPbc	08 42 12.9	-3.6
	comp=Z,0.8nm,0.9s,baz=147,slow=2.9,SNR=4.8						
INK	Inuvik	102.97	17	PKKPbc	PKKPbc	08 42 03.9	-4.3
	comp=Z,1.9nm,1.1s,baz=112,slow=4.7,SNR=3.1						
TBI	Tubuai	110.90	115	*e*LR	LR	09 03 37.4	
	comp=Z,346nm,24.2s						
PPT2	Papeete2	111.56	109	*e*LR	LR	09 03 57.9	
	comp=Z,450nm,27.0s						
B05A	Bryant	120.39	30	P	PKiKP	08 31 02.3	+0.4
	baz=312						
H04D	Lebanon	122.49	34	P	PKiKP	08 31 06.3	+0.2
	baz=310						
NEW	Newport	122.77	27	PKP	PKPdf	08 31 05.8	-0.7
	comp=Z,1.8nm,0.6s,baz=36,slow=3.6,SNR=5.4						
NEW	Newport	122.77	27	P	PKiKP	08 31 07.1	+0.5
	baz=317						
HUMO	Hull Mountain	123.57	35	PKPdf	PKiKP	08 31 08.8	+0.4
J04D	Umpqua Nationa	123.66	34	P	PKPdf	08 31 08.6	+0.1
	baz=310						
J05D	Fort Rock, OR	124.12	34	P	PKiKP	08 31 10.0	+0.4
	baz=310						
L04D	Klamath Falls	124.19	35	P	PKiKP	08 31 09.7	-0.1
	baz=309						
M02C	Callahan	124.38	37	P	PKiKP	08 31 10.9	+0.8
	baz=308						
MSO	Missoula	125.27	26	P	PKPdf	08 31 11.1	-0.3
	baz=320						
EGMT	Eagleton	126.06	23	P	PKPdf	08 31 12.7	-0.1
	baz=325						
BOZ	Bozeman (W)	127.24	26	P	PKPdf	08 31 15.1	-0.1
	baz=322						
HLID	Hailey	127.50	29	PKPdf	PKPdf	08 31 15.4	-0.4
HLID	Hailey	127.50	29	P	PKiKP	08 31 16.6	+0.3
	baz=318						
ULM	Lac du Bonnet	128.13	11	PKP	PKPdf	08 31 15.6	-1.0
	comp=Z,2.5nm,0.7s,baz=318,slow=3.7,SNR=4.5						
LAO	LASA Array	128.50	21	P	PKiKP	08 31 18.9	+0.8
	baz=328						
H17A	Grant Village	128.65	26	P	PKiKP	08 31 20.2	+1.5
	baz=322						
NVAR	Mina Array Bea	128.96	37	PKP	PKiKP	08 31 19.3	-0.2
	comp=Z,2.3nm,0.8s,baz=264,slow=2.3,SNR=16						
PDAR	Pinedale Array	130.39	26	PKhKP	PKPpre	08 31 17.9	
	comp=Z,1.0nm,0.7s,baz=90,slow=1.5,SNR=9.6						
R11A	Troy Canyon, C	130.60	35	P	PKiKP	08 31 23.2	+0.4
	baz=313						
DUG	Dugway, Tooele	130.79	31	P	PKiKP	08 31 23.7	+0.6
	baz=318						
RSSD	Black Hills	131.49	21	PKIKP	PKPdf	08 31 20.5	-2.9
RSSD	Black Hills	131.49	21		PKPdf	08 31 20.5	-2.9
GSC	Goldstone, Bar	131.89	39	P	PKiKP	08 31 26.3	+0.9
	baz=310						
O20A	White River Ci	133.08	28	P	PKPdf	08 31 26.2	-0.4
	baz=323						
NBAN	Anadia - AL	133.51	257	*e*P	PKiKP	08 31 32.2	+3.1
ECSD	EROS Data Cent	134.13	15	P	PKPdf	08 31 28.6	+0.5
	baz=340						
NBLA	Lagarto - SE	134.77	255	*e*P	PKiKP	08 31 34.7	+3.2
ALF01	Guarapari-ES	134.90	241	*e*P	PKiKP	08 31 34.9	+3.3
MVCO	Mesa Verde	135.26	30	P	PKPdf	08 31 31.0	+0.2
	baz=321						
BGNE	Belgrade	135.86	17	P	PKiKP	08 31 32.4	-0.7
	baz=336						
W18A	Petrified Fore	136.19	33	P	PKiKP	08 31 33.6	-0.5
	baz=318						
NBMA	Muriti-CE	136.27	260	*e*P	PKiKP	08 31 38.0	+3.4
MAN01	Angra dos Reis	136.77	236	*e*P	PKiKP	08 31 37.9	+2.5
NBPN	Ponto Novo - B	137.12	255	*e*P	PKiKP	08 31 37.6	+1.3
NBPB	Pedra_Branca-C	137.27	262	*e*P	PKiKP	08 31 38.8	+2.1
TER01	Tubaro-SC	137.90	226	*e*P	PKiKP	08 31 41.0	+3.4
ANMO	Albuquerque	138.05	30	*c i*PKIKP	PKPdf	08 31 35.2	-0.8
ANMO				pmax	pmax		
	comp=Z,8.0nm,1.7s						
TRQA	Tornquist	138.25	204	*e*P	PKiKP	08 31 41.6	+3.5
PLCA	Paso Flores	138.56	193	PKhKP	PKPpre	08 31 33.4	
	comp=Z,8.2nm,1.1s,baz=198,slow=8.0,SNR=3.4						
NBPS	Pedro II - PI	139.22	264	*e*P	PKiKP	08 31 42.8	+2.0
SPB	Sao Paulo	139.27	233	*e*P	PKiKP	08 31 43.7	+3.2
O56A	Blue Knob Stat	139.34	356	P	PKiKP	08 31 39.6	-0.7
	baz=5.2						
RCLB	Rio Claro- Sao	139.91	235	*e*P	PKiKP	08 31 44.6	+2.7
FRTB	Fartura	141.08	232	*e*P	PKiKP	08 31 46.4	+2.1
MNTX	Cornudas Mount	141.15	33	P	PKPdf	08 31 42.6	+1.2
	baz=321						
SDBA	SAO DESIDERIO	141.26	251	*e*P	PKiKP	08 31 48.8	+3.9
BB19B	Bebedouro	141.36	236	*e*P	PKiKP	08 31 47.6	+2.7
U38A	Gravette	141.55	16		PKPpre	08 31 36.6	
WMOK	Wichita Mounta	141.66	22	P	PKPdf	08 31 37.1	-5.2
	baz=332						
U40A	Yellville	142.03	14	P	PKPdf	08 31 38.1	-4.8
	baz=342						
W39A	Magazine	142.89	16	P	PKPdf	08 31 41.6	-2.8
	baz=340						
BDFB	Brasilia	143.14	244	PKhKP	PKPpre	08 31 41.5	
	comp=Z,5.4nm,0.6s,baz=108,slow=5.0,SNR=9.4						
BDFB	Brasilia	143.14	244	PKIKP	PKPbc	08 31 43.1	+0.7
BDFB	Brasilia	143.14	244		PKPbc	08 31 43.1	+0.6
WVT	Waverly	143.21	8	PKIKP	PKPbc	08 31 41.4	-0.5
WVT	Waverly	143.21	8	PKPdf	PKPbc	08 31 41.4	-0.4
WVT	Waverly	143.21	8	P	PKPbc	08 31 41.4	-0.5
	baz=350						
ML02	Panimavida	143.50	195	PKPdf	PKPbc	08 31 43.1	+0.4
MIAR	Mount Ida	143.55	16	P	PKPbc	08 31 42.9	0.0
	baz=340						
X40A	Basin Creek Fa	143.81	15	P	PKPbc	08 31 43.8	+0.1
	baz=342						
TXAR	Lajitas Array	143.91	33	PKP	PKPbc	08 31 44.3	+0.1
	comp=Z,5.1nm,0.8s,baz=165,slow=0.3,SNR=72						
TXAR				SKP		08 35 23.3	
	comp=Z,1.8nm,1.1s,baz=322,slow=2.6,SNR=3.9						
TXAR	Lajitas Array	143.91	33	PKIKP	PKPbc	08 31 44.0	-0.3
TXAR	Lajitas Array	143.91	33	PKPdf	PKPbc	08 31 44.0	-0.2
BO02	Sierra Bellavi	144.24	196		PKPbc	08 31 45.7	+0.6
OXF	Oxford	144.54	10	P	PKPab	08 31 45.2	-0.5
	baz=347						
KMSC	Kings Mountain	144.58	359	PKPdf	PKPab	08 31 45.2	-0.7
KMSC	Kings Mountain	144.58	359	P	PKPab	08 31 45.1	-0.7
	baz=1.1						
PAULI	Pauline	144.91	360		PKPab	08 31 46.5	-0.5
JCT	Junction City	144.92	27	P	PKPbc	08 31 47.3	0.0
	baz=328						
CPUP	Villa Florida	144.93	221	PKPbc	PKPbc	08 31 47.5	+0.1
	comp=Z,33nm,1.1s,baz=103,slow=4.1,SNR=28						
Z41A	Richland Creek	144.98	16	P	PKPbc	08 31 47.7	+0.3
	baz=341						
NATX	Nacogdoches	145.82	19	P	PKPab	08 31 50.8	+0.4
	baz=337						
TMAB	Tom-Au,PA,Br	145.97	266	*e*P	PKiKP	08 31 53.6	-0.9
GOGA	Godfrey	146.29	2	P	PKPbc	08 31 51.2	-0.2
	baz=357						
ARAG	Araguaiana, MT	146.50	242	*e*P	PKiKP	08 31 55.7	+0.2
VBMS	Vicksburg	146.54	13	P	PKPbc	08 31 52.5	+0.3
	baz=344						
833A	Chaparral WMA,	146.92	29	P	PKPbc	08 31 52.8	-0.7
	baz=327						
PRPB	Parauapebas	147.30	259	*e*P	PKiKP	08 31 57.9	+0.6
TIGA	Tifton	148.25	2	P	PKPbc	08 31 56.9	-0.1
	baz=357						
SALV	Santo Antonio	149.77	238	*e*P	PKPbc	08 32 00.6	-0.7
AC04	Llanos de Chal	150.46	200		PKPbc	08 32 02.9	+0.2
LVC	Limon Verde	154.52	209	P	PKiKP	08 32 13.4	+1.0
LVC	Limon Verde	154.52	209		PKiKP	08 32 13.4	+1.0
LPAZ	La Paz	159.10	220	PKP	PKPdf	08 32 09.8	-0.4
	comp=Z,3.5nm,0.9s,baz=114,slow=1.3,SNR=13						
SAML	Samuel	159.37	245	PKP2	PKPab	08 32 48.0	+0.5
SAML	Samuel	159.37	245		PKPab	08 32 48.0	+0.5
OCAC	Ocana	167.71	315		PKPdf	08 32 17.5	-0.3
ZARC	Zaragoza, Cauc	169.31	318		PKPdf	08 32 18.0	-0.7
ZARC					PKPab	08 33 31.3	+0.2
ROSC	El Rosal	170.63	304	PKP	PKPdf	08 32 19.8	-0.2
	comp=Z,4.0nm,0.3s,baz=221,slow=9.6,SNR=4.7						
OTAV	Otavalo	176.30	281	*e*P	PKPdf	08 32 29.2	+7.0

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*NEIC **04** 08:14:57.8±2.8, 8°.35S±0°.05×125°.01E±0°.07, h10^{km}±1^{km}, mb5.1/27, Error ellipse: s-maj=11.6km s-min=9.0km az=87.0*

*MOS **04** 08:14:58.8±1.1, 8°.15S×125°.19E, h27^{km}, mb5.2/33, Error ellipse: s-maj=16.5km s-min=6.9km az=119.3*

*DJA **04** 08:15:00.3±0.7, 8°S±4°×12°5E±°, h10^{km}, M4.8/7, mb5.0/6, mB5.3/5, MLv4.7/7, Mw(mB)4.7/5*

*IDC **04** 08:15:03.7±2.4, 8°.31S×125°.07E, h54^{km}±22^{km}, mb4.4/26, mb1 4.4/28, mb1mx4.2/57, mbtmp4.7/28, ML3.9/2, MS4.1/7, Ms1 4.1/7, ms1mx3.7/36, Error ellipse: s-maj=19.1km s-min=13.3km az=61.0*

ISC 04 08:14:59.7±0.3**, 8°.37S**±0°.04×**125°.05E**±0°.05**, h24^{km}, n182, σ1^s.92**/183**, mb5.0**/69**, 13C-1D, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.58	209		Pb	08 15 29.5	+1.2
SOEI	Soe	1.58	209	P	Pb	08 15 29.9	+1.6
SOEI	Soe	1.58	209	P	Pb	08 15 30.5	+2.2
BATI	Baumata	2.28	217	P	Pb	08 15 39.6	-0.6
	36nm,0.3s,baz=178,slow=2.2,SNR=21						
BATI				S	Sn	08 16 01.8	-1.5
	58nm,0.3s,baz=100,slow=20,SNR=15						
BATI	Baumata	2.28	217	P	Pb	08 15 39.8	-0.4
MMRI	Maumere	2.80	264	Pn	Pn	08 15 43.1	+0.1
MMRI	Maumere	2.80	264	P	Pb	08 15 46.5	-2.5
MMRI	Maumere	2.80	264	P	Pb	08 15 49.8	+0.8
BSSI	Bau Bau, Buton	5.04	296	P	Pn	08 16 17.0	+3.2
	0.4nm5µm119nm,1.4s						
KAPI	Kappang	6.23	302	P	Pn	08 16 33.7	+3.4
	1.9nm,0.3s,baz=161,slow=4.4,SNR=6.3						
KAPI	Kappang	6.23	302	P	Pn	08 16 30.1	-0.2
KAPI	Kappang	6.23	302	Pn	Pn	08 16 30.1	-0.2
BNSI	Bone	6.30	308	P	Pn	08 16 33.1	+1.9
	0.5nm1µm139nm,1.1s						
SANI	Sanana	6.35	8	P	Pn	08 16 32.0	+0.1
	0.2nm1µm47nm,0.7s						
SANI	Sanana	6.35	8	P	Pn	08 16 32.0	+0.1
DRS	Darwin Rock St	7.02	126	P	Pn	08 16 43.5	+2.4
	37nm,0.6s						
PLAI	Plampang	7.21	266	P	Pn	08 16 48.0	+4.3
PLAI	Plampang	7.21	266	P	Pn	08 16 48.2	+4.5
MTN	Manton Dam	7.45	127	P	Pn	08 16 48.9	+2.0
	baz=7.7,SNR=53						
MTN	Manton Dam	7.45	127		Pn	08 16 48.7	+1.8
MTN	Manton Dam	7.45	127	P	Pn	08 16 48.4	+1.5
	106nm,0.5s						
LUWI	Luwuk	7.63	343	Pn	Pn	08 16 50.2	+0.8
KNRA	Kununurra	8.12	154	P	Pn	08 16 57.0	+0.9
	baz=8.3,SNR=58						
KNRA	Kununurra	8.12	154	Pn	Pn	08 16 56.8	+0.7
KDU	Kakadu	8.46	121	P	Pn	08 17 01.9	+1.0
	baz=8.8,SNR=21						
KDU	Kakadu	8.46	121	P	Pn	08 17 01.6	+0.8
	36nm,0.7s						
FAKI	Fak Fak	8.98	53		Pn	08 17 09.3	+1.3
MRSI	Marisa	9.32	340	P	Pn	08 17 10.4	-2.3
FITZ	Fitzroy Crossi	9.68	177	P	Pn	08 17 17.4	-0.3
	2.1nm,0.3s,baz=2.0,slow=8.5,SNR=21						
FITZ				S	Sn	08 19 01.9	-3.8
	3.4nm,0.3s,baz=78,slow=17,SNR=9.6						
FITZ				LR	LR	08 21 41.0	
	comp=Z,450nm,18.8s,baz=2.5,slow=41						
FITZ	Fitzroy Crossi	9.68	177	P	Pn	08 17 17.3	-0.3
	baz=9.7,SNR=35						
FITZ	Fitzroy Crossi	9.68	177	Pn	Pn	08 17 17.1	-0.5
SIJI	Sorong	9.69	40	LR	LR	08 20 54.7	
	comp=Z,1µm,21.5s,baz=192,slow=36						
MBWA	Marble Bar	13.71	201	P	P	08 18 18.0	-3.2
PSA00	Pilbara Seismi	14.05	200		Pn	08 18 16.6	-0.7
PSA00	Pilbara Seismi	14.05	200	Pn	Pn	08 18 16.6	-0.7
WB0	Warramunga Arr	14.49	142		Pn	08 18 20.4	-3.1
WRAB	Tennant Creek	14.60	143	P	Pn	08 18 22.0	-2.9
WRAB	Tennant Creek	14.60	143	Pn	Pn	08 18 22.0	-2.9
WRA	Warramunga Arr	14.60	143	P	Pn	08 18 20.4	-4.5
	1.8nm,0.3s,baz=317,slow=12,SNR=74						
WRA				S	Sn	08 21 00.6	-5.5
	0.9nm,0.3s,baz=320,slow=24,SNR=3.8						
WRA	Warramunga Arr	14.60	143	P	Pn	08 18 21.1	-3.8
WRA	Warramunga Arr	14.60	143	Pn	Pn	08 18 21.1	-3.8
WB2	Warramunga Arr	14.61	143	Pn	Pn	08 18 21.2	-3.8
WR0	Warramunga Arr	14.73	142	Pn	Pn	08 18 24.1	-2.6
JAY	Jayapura	16.63	70	LR	LR	08 26 24.7	
	comp=Z,138nm,19.9s,baz=195,slow=41						
WRKA	Warakurna	16.86	170	P	Pn	08 18 53.8	-0.4
	baz=17,SNR=33						
AS31	Alice Springs	17.41	152	Pn	Pn	08 18 60.0	-1.2
ASAR	Alice Springs	17.41	152	P	Pn	08 19 00.3	-0.9
	1.1nm,0.3s,baz=315,slow=10,SNR=40						
ASAR				S	Sn	08 22 06.2	-8.2
	0.3nm,0.3s,baz=318,slow=20,SNR=2.6						
ASAR	Alice Springs	17.41	152	P	P	08 19 02.0	-0.3
ASAR	Alice Springs	17.41	152		P	08 19 02.0	-0.3
QIS	Mount Isa	18.56	132	P	Pn	08 19 16.0	+0.7
	baz=19,SNR=12						
QIS	Mount Isa	18.56	132	P	Pn	08 19 17.1	+1.8
	24nm,0.9s						
COEN	Coen	18.62	109	P	Pn	08 19 16.5	+0.4
COEN	Coen	18.62	109	P	Pn	08 19 17.2	+1.1
	16nm,1.2s						
MTSU	Mount Surprise	21.09	119	P	P	08 19 44.1	+1.5
	baz=21,SNR=22						
OOD	Oodnadatta	21.78	154	P	P	08 19 54.1	+4.2
	53nm,1.4s						
PMG	Port Moresby	21.86	94	P	P	08 19 51.0	+0.1
	16nm,0.8s,baz=329,slow=15,SNR=2.1						
MORW	Morawa	22.26	201	P	P	08 19 56.3	+1.2
MORW				IAmb	IAmb	08 20 13.1	
	comp=Z,45nm,1.2s						
FORT	Forrest	22.47	173	P	P	08 20 00.8	+3.5
	comp=Z,140nm,1.2s						
MULG	Mulgathing	23.37	160	P	P	08 20 09.9	+3.3
	comp=Z,63nm,1.3s						
BLDU	Ballidu	23.46	198	P	P	08 20 12.5	+5.0
	comp=Z,30nm,1.2s						
CTA	Charters Tower	23.59	122	P	P	08 20 09.4	+0.6
	comp=Z,6.6nm,0.6s,baz=306,slow=13,SNR=10						
CTAO	Charters Tower	23.59	122	P	P	08 20 09.2	+0.3
CTAO				pmax	pmax		
	comp=Z,26nm,1.3s						
CTAO	Charters Tower	23.59	122	P	P	08 20 09.2	+0.3
QLP	Quilpie	25.68	137	P	P	08 20 29.7	+1.8
	baz=26,SNR=6.0						
BBOO	Buckleboo	26.37	159	P	P	08 20 37.1	+2.9
	comp=Z,36nm,0.9s						
STKA	Stephens Creek	27.99	149	P	P	08 20 49.7	+0.9
	comp=Z,4.2nm,0.7s,baz=305,slow=7.5,SNR=5.7						
STKA	Stephens Creek	27.99	149	*i* P	P	08 20 48.4	-0.4
HTT	Hallett	28.04	155	P	P	08 20 50.3	+1.1
	baz=28,SNR=5.9						
HTT	Hallett	28.04	155	P	P	08 20 53.9	+4.7
	comp=Z,27nm,0.7s						
PSI	Prapat	28.32	292	LR	LR	08 32 18.5	
	comp=Z,590nm,19.6s,baz=269,slow=37						
ARPS	Mount Arapiles	32.12	154	P	P	08 21 29.8	+4.5
	baz=55,SNR=4.8						
ARPS	Mount Arapiles	32.12	154	P	P	08 21 29.7	+4.4
	comp=Z,31nm,0.9s						
CMAR	Chiang Mai Arr	37.08	316	P	P	08 22 09.6	+1.3
	comp=Z,13nm,0.7s,baz=142,slow=6.6,SNR=26						
CMAR	Chiang Mai Arr	37.08	316	*i* P	P	08 22 10.0	+1.7
CMAR				pmax	pmax		
	comp=Z,13nm,0.7s						
CMAR	Chiang Mai Arr	37.08	316	P	P	08 22 08.1	-0.3
CHTO	Chiang Mai	37.32	317	P	P	08 22 10.4	0.0
CHTO				pmax	pmax		
	comp=Z,45nm,1.1s						
CHTO	Chiang Mai	37.32	317	P	P	08 22 10.4	0.0
CHTO				IAmb	IAmb	08 22 12.6	
	comp=Z,46nm,1.1s						
GYA	Guiyang	38.96	333	⇑P	P	08 22 25.3	+1.1
GYA				pmax	pmax		
	comp=Z,20nm,1.2s						
KMI	Kunming	39.76	327	⇑P	P	08 22 33.4	+2.3
KMI				pP	sP	08 22 47.3	+5.8
KMI				sP	pP	08 22 53.6	+15
KMI				pmax	pmax		

	comp=Z,31nm,1.4s						
NJ2	Nanjing	40.63	352	*e*P	P	08 22 40.2	+2.3
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
CD2	Chengdu	44.08	333	P	P	08 23 06.5	+0.5
CD2				pmax	pmax		
	comp=Z,30nm,1.1s						
JWT	Wachi	44.51	12	P	P	08 23 09.7	+0.3
JWT				IAmb	IAmb	08 23 13.7	
	comp=Z,19nm,0.8s						
KSRS	Korea Array	45.67	3	P	P	08 23 18.3	-0.2
	comp=Z,2.3nm,0.9s,baz=191,slow=5.8,SNR=2.5						
MAJO	Matsushiro	46.36	15	*i* P	P	08 23 21.9	-2.1
MAJO				pmax	pmax		
	comp=Z,17nm,1.3s						
MAT	Matsushiro	46.36	15	P	P	08 23 23.5	-0.5
MJAR	Matsushiro Arr	46.36	15	P	P	08 23 23.9	-0.2
	comp=Z,5.4nm,0.7s,baz=187,slow=8.7,SNR=8.1						
MJAR				LR	LR	08 43 05.6	
	comp=Z,192nm,19.4s,baz=230,slow=36						
PALK	Pallekele	46.86	288	LR	LR	08 42 52.2	
	comp=Z,463nm,19.7s,baz=191,slow=36						
TIY	Taiyuan	47.34	346	*e*P	P	08 23 29.9	-1.9
TIY				S	S	08 30 23.7	-0.6
TIY				pmax	pmax		
	comp=Z,140nm,5.4s						
TIY				LR	LR		
	comp=N,2µm,11.7s						
TIY				LR	LR		
	comp=E,2µm,13.5s						
TIY				LR	LR		
	comp=Z,2µm,15.6s						
LZH	Lanzhou	48.52	337	*e*P	P	08 23 42.2	+1.1
LZH				pP	sP	08 23 55.3	+3.7
LZH				sP	pP	08 23 59.4	+11
LZH				pmax	pmax		
	comp=Z,37nm,1.3s						
LSA	Lhasa	49.97	321	P	P	08 23 53.1	+0.5
LSA				pmax	pmax		
	comp=Z,35nm,0.9s						
LSA	Lhasa	49.97	321	P	P	08 23 53.1	+0.5
HHC	Hu-ho-hao-te	50.53	347	*e*P	P	08 23 59.9	+3.6
HHC				pmax	pmax		
	comp=Z,17nm,0.9s						
HHC				pmax	pmax		
	comp=Z,62nm,5.7s						
MSHR	Mys Shultsa	51.01	6	*ce*P	P	08 23 58.4	-1.3
MSHR				pmax	pmax		
	comp=Z,65nm,1.7s						
CN2	Changchun	51.93	0	*e*P	P	08 24 02.9	-3.6
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
USRK	Ussuriysk Ar.	52.70	6	P	P	08 24 12.5	+0.2
	comp=Z,6.0nm,0.8s,baz=188,slow=7.3,SNR=4.4						
MDJ	Mudanjiang	52.90	4	P	P	08 24 14.8	+1.1
MDJ				pmax	pmax		
	comp=Z,31nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,150nm,5.0s						
MDJ	Mudanjiang	52.90	4	P	P	08 24 14.2	+0.4
MDJ				IAmb	IAmb	08 24 18.4	
	comp=Z,35nm,0.9s						
GTA	Gaotai	52.99	336	⇑P	P	08 24 15.6	+0.9
GTA				pP	pP	08 24 20.2	-2.1
GTA				sP	sP	08 24 23.4	-1.9
GTA				pmax	pmax		
	comp=Z,10.0nm,1.5s						
QRZ	Quartz Range	53.01	136	P	P	08 24 12.4	-2.3
THZ	Tophouse	53.65	136	P	P	08 24 15.9	-3.6
HIA	Hailar	57.58	356	*i* P	P	08 24 47.3	-0.2
HIA				pmax	pmax		
	comp=Z,18nm,0.9s						
KLR	Kul'dur	57.66	5	P	P	08 24 48.5	+0.5
	comp=Z,4.1nm,0.9s,baz=206,slow=5.4,SNR=3.5						
KLR	Kul'dur	57.66	5	*ce*P	P	08 24 47.2	-0.8
KLR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ULN	Ulaanbaatar	58.22	346	*ce*P	P	08 24 51.2	-0.9
ULN				pmax	pmax		
	comp=Z,19nm,1.0s						
ULN	Ulaanbaatar	58.22	346	P	P	08 24 51.9	-0.2
ULN				IAmb	IAmb	08 24 55.7	
	comp=Z,15nm,0.9s						
SONM	Songino Array	58.35	345	P	P	08 24 53.4	+0.4
	comp=Z,6.9nm,0.8s,baz=165,slow=9.3,SNR=8.3						
SONM	Songino Array	58.35	345	P	P	08 24 51.7	-1.3
SONM				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SONM	Songino Array	58.35	345	P	P	08 24 51.7	-1.3
SONM				IAmb	IAmb	08 24 56.5	
	comp=Z,10nm,1.0s						
ZEA	Zeya	61.90	1	*e*P	P	08 25 14.5	-2.6
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
WMQ	Urumqi	62.00	330	*e*P	P	08 25 18.9	+0.9
WMQ				pP	sP	08 25 29.5	+0.7
WMQ				sP	pP	08 25 37.4	+12
WMQ				S	S	08 33 39.7	-1.5
WMQ				pmax	pmax		
	comp=Z,26nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,170nm,4.5s						
WMQ				LR	LR		
	comp=N,790nm,15.1s						
WMQ				LR	LR		
	comp=E,770nm,18.5s						
WMQ				LR	LR		
	comp=Z,540nm,20.3s						
TLY	Talaya	62.59	345	P	P	08 25 21.7	0.0
	comp=Z,3.8nm,0.5s,baz=343,slow=12,SNR=1.8						
TLY	Talaya	62.59	345	*e*P	P	08 25 21.8	0.0
TLY				pmax	pmax		
	comp=Z,29nm,1.1s						
TLY	Talaya	62.59	345	IAmb	IAmb	08 25 25.4	
	comp=Z,8.1nm,0.8s						
MOY	Mondy	63.29	343	*e*P	P	08 25 27.1	+0.6
MOY				pmax	pmax		
	comp=Z,33nm,1.5s						
KSH	Kashi	65.82	320	P	P	08 25 43.7	+0.4
KSH				sP	sP	08 26 02.0	+7.9
KSH				pmax	pmax		
	comp=Z,12nm,0.8s						
DGZ	Jazzator, Alta	66.49	334	*i* P	P	08 25 47.0	-0.5
DGZ				pmax	pmax		
	comp=Z,23nm,1.0s						
BOD	Bodaibo	66.58	354	*e*P	P	08 25 47.7	+0.1
BOD				pmax	pmax		
	comp=Z,23nm,1.6s						
MK31	Makanchi Array	66.80	330	*c i*P	P	08 25 49.5	+0.2
MKAR	Makanchi Array	66.80	330	P	P	08 25 49.8	+0.4
	comp=Z,23nm,0.8s,baz=132,slow=7.7,SNR=25						
MAKZ	Makanchi	66.96	329	P	P	08 25 48.9	-1.5
MAKZ				pmax	pmax		
	comp=Z,17nm,0.9s						
MAKZ	Makanchi	66.96	329	P	P	08 25 48.9	-1.5
MAKZ				IAmb	IAmb	08 25 51.3	
	comp=Z,17nm,0.8s						
PETK	Petropavlovsk-	67.24	21	P	P	08 25 52.6	+0.6
	comp=Z,4.4nm,0.9s,baz=209,slow=8.3,SNR=3.0						
KBL	Kabul	67.98	312	P	P	08 25 56.2	-1.1
KBL				pmax	pmax		
	comp=Z,17nm,0.9s						
KBL	Kabul	67.98	312	P	P	08 25 56.2	-1.1
KBL				IAmb	IAmb	08 26 00.0	
	comp=Z,17nm,0.8s						
AAK	Ala-Archa	68.52	322	P	P	08 26 00.9	+0.4
	comp=Z,8.1nm,0.9s,baz=152,slow=6.1,SNR=6.9						
AAK	Ala-Archa	68.52	322	*ce*P	P	08 26 00.6	+0.1
AAK				pmax	pmax		
	comp=Z,25nm,0.8s						
AAK	Ala-Archa	68.52	322		P	08 26 00.6	+0.1
AAK				IAmb	IAmb	08 26 04.0	
	comp=Z,9.9nm,1.0s						
GAR	Garm	69.24	317	IAmb	IAmb	08 26 07.2	
	comp=Z,21nm,1.0s						
CHGR	Chuyangaron	69.86	316	P	P	08 26 07.5	-1.3
YAK	Yakutsk	70.28	2	P	P	08 26 10.3	-0.4
	comp=Z,10nm,0.5s,baz=151,slow=1.7,SNR=1.7						
YAK	Yakutsk	70.28	2	*e*P	P	08 26 10.1	-0.6
YAK				*e**PP	pP	08 26 17.8	-0.8
YAK				*e*		08 26 33.0	
YAK				*e*S	S	08 35 20.1	-1.0
YAK				*e**SS	sS	08 35 37.7	+3.7
YAK				*e*		08 36 12.4	
YAK				pmax	pmax		
	comp=Z,25nm,0.9s						
YAK				pmax	pmax		
	comp=N,13nm,1.2s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.5s						
YAK				smax	smax		
	comp=N,36nm,2.7s						
YAK				smax	smax		
	comp=E,48nm,2.8s						
ZAA0	Zalesovo Array	70.74	336	IAmb	IAmb	08 26 13.7	
	comp=Z,22nm,1.0s						
ZALV	Zalesovo Beam	70.74	336	P	P	08 26 12.9	-0.8
	comp=Z,16nm,0.9s,baz=125,slow=4.2,SNR=16						
KURBB	Kurchatov Arra	71.21	331	P	P	08 26 16.6	0.0
	comp=Z,12nm,0.9s,baz=133,slow=5.1,SNR=26						
KKAR	Karatay Array	71.22	321	P	P	08 26 16.0	-0.9
KKAR	Karatay Array	71.22	321	P	P	08 26 16.0	-0.9
KURK	Kurchatov	71.22	331	*ce*P	P	08 26 16.3	-0.4
KURK				pmax	pmax		
	comp=Z,31nm,0.8s						
KURK	Kurchatov	71.22	331	P	P	08 26 16.1	-0.6
MAW	Mawson	71.91	201	P	P	08 26 21.3	+0.7
	comp=Z,2.5nm,0.7s,baz=46,slow=23,SNR=3.1						
WSAR	Wadi Sarin	72.10	298	P	P	08 26 21.9	-0.7
	comp=Z,6.8nm,1.0s,baz=336,slow=7.1,SNR=3.9						
SEY	Seymchan	74.13	13	P	P	08 26 34.1	+0.4
	comp=Z,4.9nm,0.8s,baz=196,slow=5.4,SNR=5.8						
BVAR	Borovoye Array	76.68	330	P	P	08 26 48.3	-0.3
	comp=Z,4.0nm,0.8s,baz=198,slow=17,SNR=6.0						
BRVK	Borovoye	76.75	330	*ce*P	P	08 26 48.6	-0.4
BRVK				pmax	pmax		
	comp=Z,16nm,1.7s						
BRVK	Borovoye	76.75	330	P	P	08 26 48.2	-0.8
TIXI	Tiksi	79.89	1	P	P	08 27 04.9	-1.1
	comp=Z,7.5nm,0.8s,baz=251,slow=1.9,SNR=7.1						
TIXI	Tiksi	79.89	1	*ce*P	P	08 27 07.1	+1.1
TIXI	Tiksi	79.89	1	P	P	08 27 05.2	-0.8
SYO	Syowa Base	80.61	201	⇓*e*P	P	08 27 10.6	+0.6
NRIK	Noril'sk	81.76	347	P	P	08 27 15.5	-0.5
	comp=Z,1.9nm,0.4s,baz=228,slow=6.1,SNR=3.0						
NRIK	Noril'sk	81.76	347	P	P	08 27 15.5	-0.5
NRIK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
NRIK	Noril'sk	81.76	347	IAmb	IAmb	08 27 18.9	
	comp=Z,6.0nm,1.1s						
AKTO	Aktyubinsk	82.20	324	P	P	08 27 17.9	-0.8
	comp=Z,9.5nm,1.0s,baz=86,slow=6.4,SNR=8.5						
ARU	Arti	84.32	329	*c i*P	P	08 27 29.6	+0.1
ARU						08 30 40.1	
ARU				S	S	08 37 48.6	-5.1
ARU				SS	SS	08 43 19.0	-5.0
ARU				pmax	pmax		
	comp=Z,16nm,1.6s						
KMBO	Kilima Mbogo	87.66	269	*i* P	P	08 27 50.2	+2.8
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.4s						
GNI	Garni	88.01	311	*i* P	P	08 27 49.2	+0.9
GNI				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BELG	Belogornoye	88.99	323	P	P	08 27 50.6	-1.8
	comp=Z,15nm,1.0s,baz=48,slow=2.0,SNR=3.6						
ZEI	Tsey	89.19	313	*e*P	P	08 27 55.1	+1.2
ZEI				pmax	pmax		
	comp=Z,8.0nm,1.3s						
NCK	Nalchik	89.56	314	*i* P	P	08 27 56.3	+0.9
NCK				pmax	pmax		
	comp=Z,13nm,1.1s						
KIRV	Kirov	89.69	330	*i* P	P	08 27 55.3	-0.3
GURO	Guroymak-BITLI	89.74	309	P	P	08 27 55.7	-0.8
GURO				IAmb	IAmb	08 28 00.5	
	comp=Z,14nm,1.1s						
KBZ	Khabaz	90.10	314	P	P	08 27 57.7	-0.1
	comp=Z,7.0nm,0.8s,baz=157,slow=3.8,SNR=6.3						
KBZ	Khabaz	90.10	314	*i* P	P	08 27 57.6	-0.2
KBZ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NEY	Neytrino	90.13	314	P	P	08 27 58.8	+0.5
NEY				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SHA1	Shidzhatmaz	90.27	314	*i* P	P	08 27 58.0	-1.0
KIV	Kislovodsk	90.29	314	*e*P	P	08 27 58.9	0.0
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SOC	Sochi	92.34	314	*e*P	P	08 28 07.3	-1.0
SOC				*e*		08 31 47.0	
SOC				*e*PPP	PPP	08 33 47.8	
SOC				*e*S	SKSac	08 38 37.1	-3.2
SOC				*e*SS	SS	08 45 19.7	-1.8
SOC				*e*SSS	SSS	08 48 57.5	
SOC				pmax	pmax		
	comp=Z,8.0nm,0.5s						
SNAA	Sanae	93.15	194	P	P	08 28 13.3	+1.7
SNAA	Sanae	93.15	194	*ce*P	P	08 28 12.6	+1.0
SNAA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SNAA	Sanae	93.15	194	P	P	08 28 11.7	+0.1
SNAA				IAmb	IAmb	08 28 19.8	
	comp=Z,6.4nm,1.0s						
VNA2	Neumayer--Watz	94.76	194	P	P	08 28 19.8	+0.9
BRTR	Keskin Array B	96.37	309	P	P	08 28 25.5	-1.5
	comp=Z,1.7nm,0.8s,baz=90,slow=7.4,SNR=3.9						
BRTR	Keskin Array B	96.37	309	*i* P	P	08 28 28.2	+1.2
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ILAR	Eielson Array	96.68	26	LR	LR	09 13 29.3	
	comp=Z,169nm,18.8s,baz=312,slow=36						
AKASG	Malin Array Be	100.11	320	P	Pdif	08 28 42.0	-1.3
	comp=Z,2.4nm,0.8s,baz=79,slow=4.1,SNR=4.5						
AKASG	Malin Array Be	100.11	320	*i* P	Pdif	08 28 43.2	-0.2
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
TORD	Torodi Ar. Bea	124.24	280	PKP	PKiKP	08 33 57.6	-0.2
	comp=Z,2.5nm,0.9s,baz=40,slow=1.6,SNR=11						
SDCO	Great Sand Dun	125.91	49		PKPpre	08 33 51.4	
CPUP	Villa Florida	145.43	176	PKPbc	PKPab	08 34 36.9	+0.3
	comp=Z,8.3nm,1.0s,baz=170,slow=2.3,SNR=5.2						
TRCB	Terra Rica	148.94	184		PKPbc	08 34 46.4	-0.1
LPAZ	La Paz	152.24	152	PKPbc	PKiKP	08 34 56.5	+1.0
	comp=Z,4.2nm,0.8s,baz=140,slow=4.0,SNR=7.5						
LPAZ	La Paz	152.24	152	PKIKP	PKiKP	08 34 55.2	-0.3
LPAZ	La Paz	152.24	152		PKiKP	08 34 55.2	-0.3

IDC ***04*** *08:16:57.6±1.5, 0°.14N×97°.82E, h0^{km}, mb4.1/9, mb1 4.2/10, mb1mx3.8/62, mbtmp4.1/10, ML3.1/1, Error ellipse: s-maj=45.8km s-min=23.6km az=60.0*

ISC 04 08:17:02.7±1.4, **0°.3N**±0°.2×**98°.0E**±0°.3, **h29**^{km}**, n11, σ0^{s}.89**/10, **mb4.2**/9, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	2.68	20	Pn	Pn	08 17 43.5	-0.7
	2.9nm,0.3s,baz=90,slow=17,SNR=1.3						
WRA	Warramunga Arr	40.87	122	P	P	08 24 42.6	+0.1
	0.6nm,0.4s,baz=303,slow=8.8,SNR=1.4						
ASAR	Alice Springs	42.20	127	P	P	08 24 52.7	-0.7
	0.7nm,0.5s,baz=3.6,slow=40,SNR=1.4						
KSRS	Korea Array	46.17	33	P	P	08 25 24.4	-0.5
	2.5nm,0.8s,baz=219,slow=8.3,SNR=5.2						
SONM	Songino Array	47.94	8	P	P	08 25 38.8	+0.1
	0.9nm,0.6s,baz=201,slow=7.7,SNR=1.2						
MKAR	Makanchi Array	48.34	346	P	P	08 25 41.5	-0.2
	0.9nm,0.5s,baz=157,slow=7.8,SNR=3.4						
ZALV	Zalesovo Beam	54.60	350	P	P	08 26 28.0	-0.4
	5.5nm,0.7s,baz=163,slow=6.0,SNR=2.6						
KLR	Kul'dur	56.73	26	P	P	08 26 45.9	+2.0
	2.8nm,0.7s,baz=245,slow=6.7,SNR=4.2						
FINES	FINESS Array B	81.19	332	P	P	08 29 15.3	-0.2
	2.4nm,0.7s,baz=113,slow=5.0,SNR=5.2						
ARCES	ARCESS Array B	83.68	340	P	P	08 29 28.5	+0.1
	2.2nm,1.0s,baz=108,slow=5.8,SNR=1.3						
TXAR	Lajitas Array	144.02	33	PKP	PKPbc	08 36 34.9	+0.6
	0.5nm,0.6s,baz=33,slow=0.4,SNR=6.2						

IDC ***04*** *08:19:37.7±3.9, 36°.28N×70°.95E, h181^{km}±34^{km}, mb3.4/12, mb1 3.5/15, mb1mx3.3/71, mbtmp4.0/15, Error ellipse: s-maj=26.9km s-min=19.0km az=26.0*

NNC ***04*** *08:19:41.4±9.8, 36°.99N×70°.72E, h0^{km}, mb4.6, mpv4.2, Error ellipse: s-maj=75.8km s-min=65.9km az=166.0*

ISC 04 08:19:40.6±0.7, **36°.59N**±0°.06×**71°.18E**±0°.09, **h200**^{km}**, n29, σ2^{s}.04**/35, **mb3.6**/11, **4C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	2.82	168	P	Pn	08 20 29.0	+0.7
CEP				S	Sn	08 21 05.0	-0.6
CHCP	Chirah Chowk	3.38	149	P	Pn	08 20 37.1	+2.2
THW	Thamme Wali	3.81	173	P	Pn	08 20 40.2	+0.1
KSH	Kashi	4.78	51	Pn	Pn	08 20 49.9	-2.4
KSH				Sn	Sn	08 21 40.5	-8.2
KSH				pmax	pmax		
	comp=Z,48nm,0.4s						
KSH				smax	smax		
	comp=N,93nm,0.4s						
KSH				smax	smax		
	comp=E,82nm,0.7s						
AML	Almayashu	5.87	19	P	Pn	08 21 07.6	+1.1
	SNR=161						
UCH	Uchtor	6.20	24	P	Sn	08 22 21.6	-0.4
	SNR=5.1						
EKS2	Erkin-Say	6.39	17	P	Pn	08 21 14.3	+1.4
	SNR=44						
KK31	Karatay Array	6.53	356	⇓P	Pn	08 21 14.4	-0.2
	comp=E,3.3nm,0.2s,baz=177,slow=13,SNR=43						
KK31				⇑S	Sn	08 22 25.2	-4.0
	comp=E,16nm,0.4s,baz=186,slow=21,SNR=11						
AAK	Ala-Archa	6.56	22	P	Pn	08 21 16.7	+1.6
	comp=E,5.8nm,0.3s,baz=171,slow=4.7,SNR=36						
AAK				S	Sn	08 22 30.3	+0.1
	comp=E,2.1nm,0.3s,baz=332,slow=23,SNR=7.9						
AAK	Ala-Archa	6.56	22	P	Pn	08 21 16.9	+1.7
	SNR=15						
AAK	Ala-Archa	6.56	22	⇑P	Pn	08 21 16.7	+1.6
	comp=E,6.3nm,0.3s						
AAK				⇑S	Sn	08 22 30.8	+0.7
	comp=E,8.6nm,0.8s						
USP	Ospenovka	7.14	20	P	Pn	08 21 23.6	+1.0
	SNR=14						
TKM2	Tokmak 2	7.18	27	P	Pn	08 21 25.1	+1.8
	SNR=5.6						
TKM2	Tokmak 2	7.18	27	⇓P	Pn	08 21 23.8	+0.5
	comp=E,28nm,0.7s						
TKM2				⇑S	Sn	08 22 45.0	+0.1
	comp=E,16nm,1.2s						
MKAR	Makanchi Array	13.13	36	P	P	08 22 42.6	-0.1
	baz=214,slow=9.8,SNR=1.4						
AKTO	Aktyubinsk	16.78	330	P	P	08 23 21.3	-1.5
	comp=E,0.8nm,0.3s,baz=120,slow=13,SNR=4.3						
ZALV	Zalesovo Beam	19.77	24	P	P	08 23 56.5	+1.2
	comp=E,1.3nm,0.3s,baz=210,slow=11,SNR=1.3						
AKASG	Malin Array Be	33.00	309	P	P	08 25 57.0	+0.4
	comp=E,0.6nm,0.5s,baz=100,slow=9.3,SNR=1.5						
NRIK	Noril'sk	34.01	10	P	P	08 26 07.3	+2.3
	comp=E,1.7nm,0.4s,baz=174,slow=9.2,SNR=2.0						
FINES	FINESS Array B	37.49	326	P	P	08 26 34.9	+0.3
	comp=E,1.8nm,0.8s,baz=107,slow=9.3,SNR=1.5						
ARCES	ARCESS Array B	41.12	338	P	P	08 27 05.5	+0.9
	comp=E,1.8nm,0.6s,baz=117,slow=8.4,SNR=7.2						
NB2	NORSAR Subarra	44.40	323	P	P	08 27 30.3	-0.7
	comp=Z,0.5nm,0.5s,baz=97,slow=7.9						
NOA	NORSAR Array B	44.40	323	P	P	08 27 30.6	-0.4
	comp=Z,1.0nm,0.8s,baz=96,slow=7.8,SNR=4.4						
TIXI	Tiksi	45.64	22	P	P	08 27 41.9	+1.3
	comp=Z,1.3nm,0.3s,baz=301,slow=4.4,SNR=1.9						
TORD	Torodi Ar. Bea	65.86	269	P	P	08 30 02.2	-2.8
	comp=Z,0.4nm,0.4s,baz=44,slow=5.9,SNR=5.1						
INK	Inuvik	73.80	9	P	P	08 30 53.3	+0.8
	comp=Z,0.8nm,0.6s,baz=326,slow=5.1,SNR=6.2						
YKA	Yellowknife Ar	81.15	3	P	P	08 31 33.6	+0.3
	comp=Z,1.0nm,0.7s,baz=59,slow=6.3,SNR=4.5						
WRA	Warramunga Arr	81.91	122	P	P	08 31 37.2	-0.7
	comp=Z,0.2nm,0.3s,baz=325,slow=4.9,SNR=7.4						
ASAR	Alice Springs	84.19	125	P	P	08 31 49.0	-0.6
	comp=Z,0.4nm,0.8s,baz=326,slow=5.0,SNR=2.4						

IDC ***04*** *08:28:49.5±1.7, 0°.17N×97°.87E, h0^{km}, mb3.7/7, mb1 3.8/9, mb1mx3.6/52, mbtmp3.7/9, ML3.9/2, Error ellipse: s-maj=52.9km s-min=22.6km az=67.0*

DJA ***04*** *08:28:53.3±0.8, 0°N±5°×9°8E±°, h10^{km}, M4.1/6, MLv4.1/6*

ISC 04 08:28:53.8±1.1, **0°.30N**±0°.10×**97°.8E**±0°.1, **h29**^{km}**, n19, σ1^{s}.03**/17, **mb3.9**/7, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSI	Gunungsitoli	1.03	347	P	Pn	08 29 11.6	-0.7
GSI				S	Sb	08 29 26.0	-0.2
MNSI	Mandailing Nat	1.83	74	P	Pn	08 29 23.1	-0.3
SISI	Saibi	2.06	142	P	Pb	08 29 29.0	-1.5
PPI	Padang Panjang	2.69	106	P	Pn	08 29 35.3	+0.2
PSI	Prapat	2.73	24	Pn	Pn	08 29 34.3	-1.5
	3.0nm,0.3s,baz=151,slow=7.4,SNR=9.9						
PDSI	Padang	2.91	114	P	Pn	08 29 38.8	+0.6
CMAR	Chiang Mai Arr	18.08	3	P	Pn	08 33 02.4	-0.6
	0.7nm,0.3s,baz=189,slow=12,SNR=1.3						
H08S2	Diego Garcia H	26.45	252	T	T	09 01 51.0	
	baz=73,slow=75,SNR=171						
H08S3	Diego Garcia H	26.46	252	T	T	09 01 48.7	
	baz=73,slow=75,SNR=183						
H08S1	Diego Carcia H	26.47	252	T	T	09 01 48.5	
	baz=73,slow=75,SNR=97						
WRA	Warramunga Arr	41.04	121	P	P	08 36 34.1	-0.9
	0.3nm,0.6s,baz=304,slow=9.2,SNR=1.7						
ASAR	Alice Springs	42.37	127	P	P	08 36 44.3	-1.6
	0.2nm,0.7s,baz=300,slow=8.4,SNR=1.2						
KSRS	Korea Array	46.25	34	P	P	08 37 17.3	+0.7
	1.1nm,0.7s,baz=221,slow=8.8,SNR=4.6						
SONM	Songino Array	47.93	8	P	P	08 37 31.1	+1.3
	0.8nm,0.6s,baz=190,slow=8.2,SNR=4.7						
MKAR	Makanchi Array	48.26	346	P	P	08 37 32.8	+0.6
	0.8nm,0.6s,baz=156,slow=10,SNR=6.4						
ZALV	Zalesovo Beam	54.54	351	P	P	08 38 20.2	+1.2
	1.4nm,0.5s,baz=181,slow=6.2,SNR=5.4						
KLR	Kul'dur	56.79	26	P	P	08 38 36.4	+1.1
	1.6nm,0.7s,baz=219,slow=6.5,SNR=3.0						
ULM	Lac du Bonnet	128.30	11	PKP	PKiKP	08 47 58.8	+0.5
	1.4nm,0.5s,baz=34,slow=3.6,SNR=2.1						
TXAR	Lajitas Array	144.10	33	PKP	PKPdf	08 48 27.0	-0.6
	0.1nm,0.5s,baz=207,slow=1.6,SNR=4.5						

RSNC 04 08:32:53.4±0.6, **5°.26N**×**73°.73W, h142**^{km}±8^{km}**, ML1.7, 1D, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPBC	San Pablo de B	0.52	318	*e*P	Pn	08 33 13.8	-0.2
SPBC				*e*S	Sn	08 33 30.2	+0.5
SPBC				*i*		08 33 32.4	
	comp=Z,24nm,0.1s						
CHIC	Chingaza	0.63	181	*e*P	Pn	08 33 15.1	0.0
CHIC				*e*S	Sn	08 33 31.9	+0.4
CHIC				*i*		08 33 33.5	
	comp=Z,10nm,0.4s						
ROSC	El Rosal	0.72	235	*e*P	Pn	08 33 16.6	+0.9
ROSC				*e*S	Sn	08 33 34.6	+2.1
ROSC				*i*		08 33 38.1	
	comp=Z,14nm,0.5s						
RUSC	La Rusia	0.90	45	*e*P	Pn	08 33 17.2	+0.1
RUSC				*e*S	Sn	08 33 36.0	+0.9
VILC	Villavicencio,	1.14	178	*e*P	Pn	08 33 18.4	-0.5
VILC				*e*S	Sn	08 33 38.4	0.0
NORC	Norcasia	1.18	285	*e*P	Pn	08 33 18.6	-0.6
NORC				*e*S	Sn	08 33 38.5	-0.2
NORC				*i*		08 33 39.8	
	comp=Z,17nm,0.2s						
BARC	Barichara	1.43	22	*e*P	Pn	08 33 20.6	-1.2
BARC				*e*S	Sn	08 33 42.7	-0.9
BARC				*i*		08 33 44.8	
	comp=Z,7.1nm,0.3s						
GUY2C	Guyana, Caldas	1.63	269	*e*P	Pn	08 33 23.8	-0.5
GUY2C				*e*S	Sn	08 33 47.7	-0.1
GUY2C				*i*		08 33 51.0	
	comp=Z,2.9nm,0.7s						
BRRC	Barranca, Sant	1.83	0	*e*S	Sn	08 33 50.3	-1.0
HELC	Santa Helena	2.02	297	*e*P	Pn	08 33 28.5	-0.1
HELC				*e*S	Sn	08 33 55.1	-0.6
HELC				*i*		08 33 56.9	
	comp=Z,6.8nm,0.3s						
CBOC	Ciudad Bolivar	2.35	285	⇓*i*P	Pn	08 33 32.2	-0.3
CBOC				*e*S	Sn	08 34 02.5	0.0
CBOC				*i*		08 34 03.5	
	comp=Z,1.6nm,0.7s						
ZARC	Zaragoza, Cauc	2.49	333	*e*S	Sn	08 34 03.2	-2.0

IDC ***04*** *08:34:04.4±1.4, 8°.16S×125°.37E, h0^{km}, mb4.1/3,* *mb1 4.1/7, mb1mx3.8/34, mbtmp4.0/7, ML3.7/4, Error ellipse: s-maj=39.6km s-min=20.4km az=82.0*

*NEIC **04** 08:34:05.8±1.3, 8°.17S±0°.06×125°.41E±0°.09, h10^{km}±1^{km}, mb4.3/1, Error ellipse: s-maj=18.5km s-min=4.4km az=55.0*

ISC 04 08:34:07.7±1.0**, 8°.35S**±0°.08×**125°.63E**±0°.09**, h35^{km}, n17, σ2^{s}.59**/20**, mb4.2**/4**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	Soe	1.94	224	Pn	Pn	08 34 39.0	+0.6
BATI	Baumata	2.68	226	Pn	Pn	08 34 49.2	+0.7
	13nm,0.3s,baz=69,slow=1.4,SNR=2.7						
BATI				Sn	Sn	08 35 20.7	+1.0
	10nm,0.3s,baz=23,slow=22,SNR=2.1						
MTN	Manton Dam	7.01	130	Pn	Pn	08 35 53.7	+5.7
KNRA	Kununurra	7.90	157		Pn	08 36 04.3	+4.1
FITZ	Fitzroy Crossi	9.69	180	Pn	Pn	08 36 26.8	+2.1
	0.8nm,0.3s,baz=2.3,slow=13,SNR=9.6						
FITZ				Sn	Sn	08 38 09.6	-2.8
	0.4nm,0.3s,baz=196,slow=4.4,SNR=7.7						
FITZ	Fitzroy Crossi	9.69	180		Sn	08 38 10.5	-2.0
WB0	Warramunga Arr	14.17	144		P	08 37 29.9	-3.2
WRAB	Tennant Creek	14.28	145	Pn	Pn	08 37 30.8	+3.3
WRA	Warramunga Arr	14.28	145	Pn	Pn	08 37 30.9	+3.3
	0.2nm,0.3s,baz=318,slow=13,SNR=6.0						
WRA				Sn	Sn	08 40 05.3	+0.6
	0.1nm,0.3s,baz=326,slow=24,SNR=4.2						
WB2	Warramunga Arr	14.29	145		P	08 37 31.5	-2.9
WR0	Warramunga Arr	14.41	144	Pn	P	08 37 32.9	-2.8
ASAR	Alice Springs	17.17	153	P	P	08 38 11.1	+4.7
	0.2nm,0.3s,baz=321,slow=12,SNR=11						
ASAR				S	Sn	08 41 12.5	-2.6
	0.0nm,0.3s,baz=314,slow=19,SNR=2.6						
CMAR	Chiang Mai Arr	37.46	315	P	P	08 41 17.4	-0.8
	0.5nm,0.3s,baz=136,slow=5.3,SNR=6.0						
MK31	Makanchi Array	67.07	329	P	P	08 44 57.2	-0.4
MK31				IAmb	IAmb	08 44 58.6	
	comp=Z,1.9nm,0.8s						
MKAR	Makanchi Array	67.07	329	P	P	08 44 58.2	+0.6
	comp=Z,1.8nm,0.7s,baz=135,slow=8.2,SNR=14						
MKAR	Makanchi Array	67.07	329	P	P	08 44 56.8	-0.8
ZALV	Zalesovo Beam	70.95	336	P	P	08 45 21.0	-0.5
	comp=Z,0.7nm,0.3s,baz=126,slow=7.3,SNR=4.7						

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*IDC **04** 08:39:19.5±1.7, 8°.22S×125°.41E, h0^{km}, mb4.0/1, mb1 3.8/5, mb1mx3.6/38, mbtmp3.7/5, ML3.4/4, Error ellipse: s-maj=51.2km s-min=25.9km az=76.0*

ISC 04 08:39:23.0±1.5**, 8°.5S**±0°.1×**125°.2E**±0°.1**, h24^{km}, n5, σ1^{s}.37**/7**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	2.27	221	Pn	Pb	08 40 03.9	+0.6
	7.7nm,0.3s,baz=6.2,slow=5.1,SNR=2.9						
BATI				Sn	Sb	08 40 29.4	-1.5
	4.6nm,0.3s,baz=26,slow=6.1,SNR=4.6						
FITZ	Fitzroy Crossi	9.56	177	Pn	Pn	08 41 41.1	+1.8
	0.3nm,0.3s,baz=355,slow=12,SNR=2.1						
FITZ				Sn	Sn	08 43 25.1	-1.0
	0.5nm,0.3s,baz=197,slow=6.5,SNR=6.9						
WRA	Warramunga Arr	14.44	143	Pn	Pn	08 42 45.5	-0.5
	0.2nm,0.3s,baz=316,slow=13,SNR=13						
ASAR	Alice Springs	17.26	152	P	P	08 43 24.5	+0.5
	0.1nm,0.3s,baz=322,slow=11,SNR=3.7						
MKAR	Makanchi Array	66.95	329	P	P	08 50 13.2	-0.5
	1.1nm,0.7s,baz=136,slow=7.7,SNR=8.7						

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*IDC **04** 08:41:45.5±2.0, 8°.23S×125°.38E, h0^{km}, mb3.6/1, mb1 3.7/5, mb1mx3.5/38, mbtmp3.5/5, ML3.4/4, Error ellipse: s-maj=51.6km s-min=28.8km az=75.0*

ISC 04 08:41:50.5±1.5**, 8°.5S**±0°.1×**125°.5E**±0°.1**, h35^{km}, n5, σ1^{s}.92**/9**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	2.47	226	Pn	Pn	08 42 28.9	+0.6
	9.2nm,0.3s,baz=340,slow=4.7,SNR=2.9						
BATI				Sn	Sn	08 42 57.2	0.0
	14nm,0.3s,baz=184,slow=5.6,SNR=2.2						
FITZ	Fitzroy Crossi	9.56	179	Pn	Pn	08 44 07.5	+1.7
	0.3nm,0.3s,baz=318,slow=14,SNR=0.9						
FITZ				Sn	Sn	08 45 49.6	-2.5
	0.7nm,0.3s,baz=331,slow=16,SNR=3.3						
WRA	Warramunga Arr	14.27	144	Pn	Pn	08 45 10.5	+0.3
	0.2nm,0.3s,baz=318,slow=12,SNR=5.9						
WRA				Sn	Sn	08 47 47.0	-0.4
	0.1nm,0.3s,baz=320,slow=25,SNR=2.3						
ASAR	Alice Springs	17.13	153	P	P	08 45 51.3	+2.6
	0.1nm,0.3s,baz=325,slow=11,SNR=5.1						
ASAR				S	Sn	08 48 54.8	-2.1
	0.1nm,0.3s,baz=313,slow=20,SNR=2.0						
MKAR	Makanchi Array	67.09	329	P	P	08 52 39.2	-1.2
	0.3nm,0.5s,baz=136,slow=7.9,SNR=2.2						

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*DJA **04** 08:43:43.9±0.5, 13°N±10°×14°4E±°, h135^{km}±6^{km}, M4.7/10, mB5.4/2, mb4.7/10, MLv4.7/1, Mw(mB)4.8/2*

*IDC **04** 08:43:44.2±0.4, 13°.28N×144°.13E, h140^{km}±4^{km}, mb4.1/24, mb1 4.2/24, mb1mx4.1/42, mbtmp4.5/24, Error ellipse: s-maj=13.3km s-min=8.9km az=83.0*

*NEIC **04** 08:43:44.8±1.3, 13°.28N±0°.09×144°.1E±0°.1, h138^{km}±5^{km}, mb4.8/139, Error ellipse: s-maj=14.8km s-min=13.3km az=115.0*

ISC 04 08:43:44.1±0.3**, 13°.23N**±0°.05×**144°.08E**±0°.06**, h138^{km}, n254, σ0^{s}.89**/212**, mb4.8**/119**, 3D, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	0.85	65	P	Pn	08 44 07.3	+0.8
	555nm,0.3s,baz=296,slow=9.2,SNR=305						
GUMO				S	Sn	08 44 23.7	+0.3
	2µm,0.3s,baz=184,slow=5.5,SNR=20						
GUMO				LR	LR	08 44 29.2	
	comp=Z,413nm,19.1s,baz=120,slow=58						
PATS	Pohnpei	15.39	113	P	P	08 47 16.5	+0.9
PATS	Pohnpei	15.39	113	P	P	08 47 16.3	+0.7
MANU	Manus Island	15.52	168	P	P	08 47 16.3	-0.8
MANU				IAmb	IAmb	08 47 19.9	
	comp=Z,32nm,0.8s						
SMPI	Sarmi	16.03	200	P	P	08 47 23.6	+0.9
	comp=Z,31nm,1.4s						
RABL	Rabaul	19.08	155	P	Pn	08 47 57.8	-0.7
FAKI	Fak Fak	19.88	217	P	P	08 48 05.4	+0.5
FAKI				IAmb	IAmb	08 48 10.9	
	comp=Z,26nm,0.7s						
FAKI	Fak Fak	19.88	217	P	Pn	08 48 08.1	+0.2
	comp=Z,44nm,0.8s						
JOW	Kunigami	20.06	315	P	Pn	08 48 08.5	-1.3
	comp=Z,68nm,0.7s,baz=144,slow=10,SNR=8.0						
JOW	Kunigami	20.06	315	P	P	08 48 07.6	+1.0
JOW	Kunigami	20.06	315	P	Pn	08 48 08.7	-1.1
JSU	Suzuyama	22.08	328	P	P	08 48 28.2	0.0
H11S3	WAKE ISLAND Hy	22.36	74	T	T	09 11 30.1	
	baz=260,slow=70,SNR=10						
H11S1	WAKE ISLAND Hy	22.38	74	T	T	09 11 31.3	
	baz=260,slow=70,SNR=8.2						
H11S2	WAKE ISLAND Hy	22.38	74	T	T	09 11 31.9	
	baz=260,slow=70,SNR=7.3						
JMN	Monobe	22.42	337	P	P	08 48 32.4	+0.9
JMN				IAmb	IAmb	08 48 33.8	
	comp=Z,31nm,1.0s						
H11N1	WAKE ISLAND Hy	22.80	71	T	T	09 12 03.6	
	baz=256,slow=75,SNR=20						
H11N2	WAKE ISLAND Hy	22.80	71	T	T	09 12 04.0	
	baz=256,slow=75,SNR=7.8						
H11N3	WAKE ISLAND Hy	22.81	71	T	T	09 12 05.0	
	baz=256,slow=75,SNR=20						
JYT	Yasato	23.16	352	P	P	08 48 37.8	-0.6
JYT				IAmb	IAmb	08 48 56.0	
	comp=Z,24nm,0.7s						
JNU	Nakatsue	23.18	331	P	P	08 48 38.9	+0.3
	comp=Z,65nm,0.7s,baz=128,slow=3.1,SNR=36						
JNU	Nakatsue	23.18	331	P	P	08 48 37.5	-1.1
JNU	Nakatsue	23.18	331	P	P	08 48 39.3	+0.6
JWT	Wachi	23.31	342	P	P	08 48 37.7	-2.1
MJAR	Matsushiro Arr	23.80	348	P	P	08 48 42.4	-1.9
	comp=Z,9.5nm,0.8s,baz=165,slow=9.9,SNR=19						
MJAR				pP	pP	08 49 12.6	+1.9
	comp=Z,4.6nm,0.9s,baz=158,slow=11,SNR=3.0						
MJAR				PcP	PcP	08 52 23.8	-0.2
	comp=Z,1.9nm,0.6s,baz=162,slow=5.1,SNR=4.7						
MJAR	Matsushiro Arr	23.80	348	P	P	08 48 42.8	-1.5
MAJO	Matsushiro	23.80	348	P	P	08 48 42.5	-1.8
MAJO				IAmb	IAmb	08 48 46.0	
	comp=Z,21nm,0.8s						
MAJO	Matsushiro	23.80	348	P	P	08 48 44.9	+0.6
MAT	Matsushiro	23.80	348	P	P	08 48 42.6	-1.7
JHS	Saijyo	23.83	337	P	P	08 48 43.7	-0.9
JHS				IAmb	IAmb	08 48 46.4	
	comp=Z,30nm,1.1s						
TWG	Pinlang	23.83	297	P	P	08 48 44.1	-0.6
TWG				IAmb	IAmb	08 48 45.6	
	comp=Z,36nm,0.7s						
YULB	Yu-li	23.84	298	P	P	08 48 44.2	-0.5
SSLB	Suanglung	24.27	299	P	P	08 48 48.5	-0.3
SSLB	Suanglung	24.27	299	P	P	08 48 49.4	+0.7
GTOI	Gorontalo	24.33	241	P	P	08 48 49.7	+0.4
	comp=Z,8.1nm,0.7s						
TPUB	Ta-pu	24.38	298	P	P	08 48 48.6	-1.1
JSD	Sado	25.24	349	P	P	08 48 55.9	-1.4
JSD				IAmb	IAmb	08 49 00.2	
	comp=Z,32nm,0.7s						
MRSI	Marisa	25.33	242	P	P	08 48 58.9	+0.5
	comp=Z,50nm,1.0s						
COEN	Coen	27.03	182	P	P	08 49 13.8	+0.2
	comp=Z,7.9nm,0.8s						
MPSI	Mapaga	27.17	244	P	P	08 49 14.9	0.0
	comp=Z,16nm,1.2s						
KSRS	Korea Array	28.11	332	P	P	08 49 22.5	-0.5
	comp=Z,18nm,0.8s,baz=140,slow=9.7,SNR=56						
KSRS				PcP	PcP	08 52 33.5	-0.4
	comp=Z,0.4nm,0.3s,baz=172,slow=2.5,SNR=4.3						
KSAR	Wonju Array Be	28.11	332	P	P	08 49 22.4	-0.7
KS19	Wonju Array Si	28.17	332	P	P	08 49 22.2	-1.4
KS19				IAmb	IAmb	08 49 25.3	
	comp=Z,16nm,0.8s						
NJ2	Nanjing	29.75	313	*e*P	P	08 49 37.0	-0.6
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
KAPI	Kappang	30.20	235	P	P	08 49 39.4	-2.4
	comp=Z,2.0nm,0.3s,baz=84,slow=11,SNR=3.8						
KAPI	Kappang	30.20	235	IAmb	IAmb	08 49 41.6	
	comp=Z,16nm,1.1s						
WHN	Wuhan	32.37	307	⇓P	P	08 50 02.0	+1.3
USRK	Ussuriysk Ar.	32.55	344	P	P	08 50 02.3	+0.2
	comp=Z,2.8nm,0.7s,baz=133,slow=9.3,SNR=4.6						
CTA	Charters Tower	33.18	176	P	P	08 50 08.2	+0.4
	comp=Z,5.8nm,0.7s,baz=355,slow=10.0,SNR=10						
CTAO	Charters Tower	33.18	176	P	P	08 50 08.3	+0.5
SBUM	Sibu	33.28	254	P	P	08 50 10.0	+1.2
YSS	Yuzh-Sakhalins	33.63	358	P	P	08 50 14.9	+3.5
QIS	Mount Isa	33.86	188	P	P	08 50 14.7	+1.0
	comp=Z,15nm,0.9s						
WB0	Warramunga Arr	34.15	196	IAmb	IAmb	08 50 16.3	
	comp=Z,9.2nm,0.6s						
WR0	Warramunga Arr	34.29	196	IAmb	IAmb	08 50 18.0	
	comp=Z,12nm,1.1s						
WRAB	Tennant Creek	34.32	196	P	P	08 50 17.3	-0.4
WRAB				IAmb	IAmb	08 50 18.2	
	comp=Z,15nm,0.8s						
WRAB	Tennant Creek	34.32	196	P	P	08 50 17.3	-0.4
WB2	Warramunga Arr	34.33	196	IAmb	IAmb	08 50 18.4	
	comp=Z,17nm,0.8s						
WRA	Warramunga Arr	34.33	196	P	P	08 50 17.5	-0.2
	comp=Z,11nm,0.7s,baz=18,slow=9.4,SNR=73						
WRA				PcP	PcP	08 52 51.3	+0.4
	comp=Z,1.4nm,0.7s,baz=7.9,slow=3.2,SNR=6.1						
WRA				ScP	ScP	08 56 20.8	-2.5
	comp=Z,0.9nm,0.7s,baz=13,slow=3.6,SNR=7.8						
WRA				PKiKP	PKiKP	09 00 12.5	-1.8
	comp=Z,0.3nm,0.8s,baz=326,slow=1.4,SNR=5.0						
WRA	Warramunga Arr	34.33	196	P	P	08 50 16.6	-1.2
FITZ	Fitzroy Crossi	36.05	211	P	P	08 50 32.2	-0.4
	comp=Z,2.5nm,0.8s,baz=350,slow=14,SNR=3.4						
BJI	Beijing	36.25	323	P	P	08 50 34.4	+0.4
BJI				S	S	08 56 05.3	+1.1
BJI				pmax	pmax		
	comp=Z,37nm,0.8s						
BJI				pmax	pmax		
	comp=Z,460nm,10.8s						
BJI				LR	LR		
	comp=N,180nm,14.7s						
BJI				LR	LR		
	comp=E,190nm,13.7s						
BJI				LR	LR		
	comp=Z,240nm,20.5s						
ASAR	Alice Springs	38.00	195	P	P	08 50 48.4	-0.6
	comp=Z,1.6nm,0.7s,baz=12,slow=12,SNR=19						
ASAR				pP	pP	08 51 17.9	-0.2
	comp=Z,0.9nm,0.6s,baz=26,slow=8.8,SNR=2.9						
ASAR				PP	PP	08 52 17.8	-0.9
	comp=Z,1.1nm,0.7s,baz=16,slow=9.9,SNR=2.9						
ASAR				PcP	PcP	08 53 02.2	+0.4
	comp=Z,1.0nm,0.6s,baz=45,slow=3.0,SNR=4.9						
ASAR				ScP	ScP	08 56 34.5	-2.3
	comp=Z,0.4nm,0.7s,baz=15,slow=3.8,SNR=6.2						
EIDS	Eidsvold	38.97	170	P	P	08 50 56.8	-0.2
EIDS	Eidsvold	38.97	170	P	P	08 50 56.7	-0.3
	comp=Z,7.2nm,1.3s						
HHC	Hu-ho-hao-te	39.55	320	*e*P	P	08 51 03.1	+1.3
HHC				pmax	pmax		
	comp=Z,30nm,0.9s						
HHC				pmax	pmax		
	comp=Z,280nm,7.6s						
KMI	Kunming	40.64	293	smax	smax		
	comp=N,110nm,0.7s						
KMI				smax	smax		
	comp=E,120nm,0.5s						
CD2	Chengdu	41.03	302	P	P	08 51 14.4	+0.3
CD2				pmax	pmax		
	comp=Z,20nm,0.7s						
WRKA	Warakurna	41.03	202	P	P	08 51 13.6	-0.5
	comp=Z,16nm,0.7s						
PETK	Petropavlovsk-	41.23	12	PcP	PcP	08 53 10.7	-0.9
	comp=Z,3.2nm,0.7s,baz=191,slow=2.9,SNR=4.6						
DZM	Mont Dzumac	41.38	148	P	P	08 51 17.8	+0.8
OOD	Oodnadatta	41.59	191	P	P	08 51 19.4	+0.9
	comp=Z,8.7nm,0.9s						
JRMM	Jerantut	42.11	261	P	P	08 51 24.0	+1.0
LZH	Lanzhou	42.65	309	⇓P	P	08 51 28.9	+1.6
LZH				pP	pP	08 51 58.5	+1.5
LZH				sP	sP	08 52 14.0	+1.8
LZH				pmax	pmax		
	comp=Z,24nm,1.2s						
KULM	Kulim	43.52	264	P	P	08 51 35.0	+0.5
CMAR	Chiang Mai Arr	43.64	283	P	P	08 51 36.2	+0.9
	comp=Z,3.9nm,0.7s,baz=82,slow=6.1,SNR=21						
CMAR				PcP	PcP	08 53 21.4	+1.0
	comp=Z,4.3nm,0.7s,baz=95,slow=1.5,SNR=17						
CMAR	Chiang Mai Arr	43.64	283	P	P	08 51 35.7	+0.3
LCRK	Leigh Creek	43.79	187	P	P	08 51 36.9	+0.7
	comp=Z,19nm,0.9s						
ARMA	Armidale	44.00	171	P	P	08 51 38.7	+0.7
ARMA				IAmb	IAmb	08 51 38.9	
	comp=Z,21nm,1.2s						
MULG	Mulgathing	44.32	192	P	P	08 51 39.8	-0.7
STKA	Stephens Creek	44.91	183	P	P	08 51 44.4	-0.8
	comp=Z,5.4nm,0.7s,baz=359,slow=8.3,SNR=14						
STKA	Stephens Creek	44.91	183	P	P	08 51 45.1	-0.1
STKA	Stephens Creek	44.91	183	P	P	08 51 44.4	-0.8
	comp=Z,1.7nm,1.1s						
PSI	Prapat	45.81	261	P	P	08 51 52.2	-0.6
	comp=Z,9.3nm,0.8s,baz=80,slow=6.7,SNR=12						
PSI				PcP	PcP	08 53 26.4	-1.7
	comp=Z,3.8nm,0.6s,baz=133,slow=5.9,SNR=5.0						
RPSI	Rantau Prapat	45.84	261	P	P	08 51 52.2	-0.7
ULN	Ulaanbaatar	46.24	326	P	P	08 51 55.4	-0.2
ULN				IAmb	IAmb	08 51 57.3	
	comp=Z,11nm,0.8s						
FORT	Forrest	46.39	199	P	P	08 51 57.1	+0.3
	comp=Z,37nm,2.5s						
BBOO	Buckleboo	46.42	189	P	P	08 51 56.1	-0.9
	comp=Z,15nm,1.4s						
SONM	Songino Array	46.58	325	P	P	08 51 58.8	+0.5
	comp=Z,4.7nm,0.7s,baz=143,slow=8.7,SNR=23						
SONM				PcP	PcP	08 53 29.9	-0.2
	comp=Z,0.8nm,0.5s,baz=138,slow=3.4,SNR=2.1						
SONM	Songino Array	46.58	325	P	P	08 51 58.4	+0.1
GTA	Gaotai	46.84	312	⇓P	P	08 52 01.3	+0.9
GTA				pP	pwP	08 52 33.2	-2.3
GTA				sP	sP	08 52 48.4	+2.7
GTA				pmax	pmax		
	comp=Z,13nm,1.0s						
ARPS	Mount Arapiles	49.78	182	P	P	08 52 23.1	+0.4
	comp=Z,33nm,0.7s						
SHL	Shillong	50.45	292	P	P	08 52 27.7	-0.6
TOO	Toolangi	50.55	179	P	P	08 52 29.3	+0.8
TOO	Toolangi	50.55	179	P	P	08 52 29.6	+1.0
	comp=Z,16nm,0.9s						
TAPN	Taplejung	54.29	294	*e*P	P	08 52 57.1	+0.3
ODAN	Odare	54.55	294	*e*P	P	08 52 58.4	-0.2
	comp=Z,23nm,0.8s						
RAMN	Ramite	55.26	294	*e*P	P	08 53 03.9	+0.2
	comp=Z,14nm,0.6s						
JIRN	Jiri	55.65	295	*e*P	P	08 53 06.7	0.0
	comp=Z,19nm,0.6s						
OUZ	Omahuta	55.72	151	P	P	08 53 09.0	+2.6
GUN	Gumba	55.94	295	*e*P	P	08 53 08.7	0.0
	comp=Z,19nm,0.4s						
PKI	Pulchoki	56.34	294	*e*P	P	08 53 11.0	-0.5
PKIN	Phulchoki	56.35	294	*e*P	P	08 53 10.9	-0.6
	comp=Z,11nm,0.4s						
KKN	Kakani	56.47	295	*e*P	P	08 53 12.1	-0.1
DMN	Daman	56.61	294	*e*P	P	08 53 13.1	-0.2
	comp=Z,33nm,0.8s						
WMQ	Urumqi	56.83	314	*e*P	P	08 53 16.0	+1.7
WMQ				pmax	pmax		
	comp=Z,15nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,120nm,4.1s						
GKN	Gorkha	57.04	295	*e*P	P	08 53 15.9	-0.3
	comp=Z,20nm,0.5s						
DANN	Dangsing	57.83	295	*e*P	P	08 53 21.5	-0.4
	comp=Z,44nm,0.5s						
KOLN	Koldanda	57.95	295	*e*P	P	08 53 21.9	-0.8
	comp=Z,21nm,0.7s						
MK31	Makanchi Array	61.21	316	P	P	08 53 44.7	+0.2
MKAR	Makanchi Array	61.21	316	P	P	08 53 44.8	+0.3
	comp=Z,4.4nm,0.5s,baz=89,slow=8.6,SNR=65						
MAKZ	Makanchi	61.43	316	P	P	08 53 46.3	+0.3
MAKZ				IAmb	IAmb	08 53 48.1	
	comp=Z,7.9nm,0.6s						
ZALV	Zalesovo Beam	61.47	325	P	P	08 53 45.3	-0.7
	comp=Z,3.3nm,0.6s,baz=108,slow=6.6,SNR=11						
ZALV				PcP	PcP	08 54 25.0	-1.7
	comp=Z,2.5nm,0.5s,baz=116,slow=3.4,SNR=6.6						
KURK	Kurchatov	64.36	320	P	P	08 54 04.8	-0.3
KURK				IAmb	IAmb	08 54 05.3	
	comp=Z,11nm,0.7s						
KSH	Kashi	64.85	308	P	P	08 54 11.2	+2.5
KSH				pP	pwP	08 54 45.8	+0.2
KSH				pmax	pmax		
	comp=Z,11nm,0.8s						
NRIK	Noril'sk	66.22	341	P	P	08 54 14.4	-2.4
	comp=Z,2.7nm,0.6s,baz=115,slow=6.8,SNR=4.7						
NIL	Nilore	66.91	301	P	P	08 54 22.2	+0.3
MLY	Manley	67.70	25	P	P	08 54 25.9	-0.5
	baz=253						
KLU	Klutina	68.94	29	P	P	08 54 33.9	-0.3
	baz=259						
H24K	Noodor Dome	69.08	24	P	P	08 54 34.6	-0.3
	baz=255						
ILAR	Eielson Array	69.22	25	P	P	08 54 33.4	-2.3
	comp=Z,1.1nm,0.5s,baz=244,slow=5.7,SNR=11						
TOLK	Toolik Lake Re	69.22	21	P	P	08 54 35.1	-0.7
	baz=253						
PAX	Paxson	69.44	27	P	P	08 54 36.4	-0.8
	baz=259						
BRVK	Borovoye	69.80	322	P	P	08 54 39.4	-0.1
BRVK				IAmb	IAmb	08 54 41.1	
	comp=Z,10.0nm,0.7s						
RIDG	Independent Ri	69.87	27	P	P	08 54 39.0	-0.8
	baz=259						
KBL	Kabul	70.37	302	P	P	08 54 43.4	-0.2
L26K	Log Cabin Wild	70.41	28	P	P	08 54 43.1	0.0
	baz=260						
INK	Inuvik	74.99	22	P	P	08 55 08.9	-1.1
	comp=Z,2.6nm,0.9s,baz=334,slow=5.3,SNR=7.1						
INK	Inuvik	74.99	22	P	P	08 55 09.1	-0.9
	baz=268						
ABKAR	Akbulak array	76.29	318	IAmb	IAmb	08 55 18.2	
	comp=Z,7.8nm,0.7s						
ARU	Arti	76.62	325	P	P	08 55 18.9	-0.5
A36M	Sachs Harbour	77.73	19	P	P	08 55 24.4	-0.9
A36M				IAmb	IAmb	08 55 26.4	
	comp=Z,13nm,0.8s						
A36M	Sachs Harbour	77.73	19	P	P	08 55 25.2	-0.1
	baz=275						
GEYT	Alibeck	78.84	306	P	P	08 55 32.4	+0.1
	comp=Z,4.3nm,0.7s,baz=44,slow=6.6,SNR=4.7						
G03D	McMinnville, O	82.59	45	P	P	08 55 51.3	-0.7
	baz=281						
I03D	Drain, OR	82.83	47	P	P	08 55 53.8	+0.5
	baz=281						
L02E	Cave Junction	82.95	48	P	P	08 55 54.6	+0.7
	baz=281						
I04A	Tendick Farm,	83.47	47	P	P	08 55 57.1	+0.4
	baz=282						
YKA	Yellowknife Ar	83.53	27	P	P	08 55 55.8	-0.6
	comp=Z,1.3nm,0.5s,baz=288,slow=14,SNR=8.6						
M02C	Callahan	83.65	49	P	P	08 55 58.0	+0.4
	baz=282						
YBH	Yreka Blue Hor	83.69	49	P	P	08 55 58.6	+0.8
YBH				IAmb	IAmb	08 55 59.4	
	comp=Z,8.0nm,0.8s						
F05D	White Salmon	83.70	44	P	P	08 55 57.8	+0.1
	baz=282						
J04D	Umpqua Nationa	83.81	47	P	P	08 55 58.2	-0.4
	baz=282						
N02D	Trinity Center	83.85	49	P	P	08 55 59.4	+0.8
	baz=282						
L04D	Klamath Falls	83.88	48	P	P	08 55 59.0	+0.2
	baz=282						
G05D	Wamic, OR	83.93	45	P	P	08 55 59.0	+0.1
	baz=283						
O02D	Mt. Diablo Mer	83.95	50	P	P	08 55 59.9	+0.7
	baz=282						
I05D	Terrebonne, OR	84.11	46	P	P	08 55 59.9	0.0
	baz=283						
K04D	Chiloquin, OR	84.19	48	P	P	08 56 00.3	-0.1
	baz=283						
M04C	Macdoel	84.31	49	P	P	08 56 01.5	+0.5
	baz=283						
J05D	Fort Rock, OR	84.42	47	P	P	08 56 02.0	+0.5
	baz=283						
PINE	Pine Mountain	84.52	46	IAmb	IAmb	08 56 03.6	
	comp=Z,16nm,0.9s						
B08A	Colville Reser	84.55	42	IAmb	IAmb	08 56 03.6	
	comp=Z,10nm,1.0s						
O03E	Paynes Creek	84.67	50	P	P	08 56 02.7	-0.1
	baz=283						
K05A	Summer Lake	84.79	47	IAmb	IAmb	08 56 04.9	
	comp=Z,13nm,1.0s						
RES	Resolute Bay	85.07	13	P	P	08 56 04.4	+0.4
RES				IAmb	IAmb	08 56 05.2	
	comp=Z,6.8nm,0.8s						
D08A	Wollman Farm,	85.14	43	IAmb	IAmb	08 56 06.1	
	comp=Z,12nm,1.1s						
E08A	Dider Farm, El	85.18	44	IAmb	IAmb	08 56 07.0	
	comp=Z,24nm,1.5s						
C09A	Chrisman Ranch	85.38	42	IAmb	IAmb	08 56 07.6	
	comp=Z,8.3nm,0.9s						
G08A	Pilot Rock	85.54	45	P	P	08 56 07.3	+0.2
NEW	Newport	86.01	41	IAmb	IAmb	08 56 10.6	
	comp=Z,13nm,0.9s						
NEW	Newport	86.01	41	P	P	08 56 09.2	0.0
	baz=285,SNR=13						
J08A	Circle Bar Ran	86.36	46	IAmb	IAmb	08 56 12.4	
	comp=Z,8.4nm,0.9s						
WVOR	Wild Horse Val	86.48	47	IAmb	IAmb	08 56 13.0	
	comp=Z,7.8nm,0.9s						
EDM	Edmonton	86.89	36	P	P	08 56 13.3	-0.1
EDM				IAmb	IAmb	08 56 14.7	
	comp=Z,13nm,1.2s						
YERR	Yerington	86.89	51	IAmb	IAmb	08 56 15.3	
	comp=Z,11nm,1.1s						
ARCES	ARCESS Array B	87.19	342	P	P	08 56 13.9	-0.6
	comp=Z,4.1nm,0.9s,baz=69,slow=6.6,SNR=9.4						
MDPB	Devils Postpil	87.36	52	IAmb	IAmb	08 56 17.7	
	comp=Z,7.5nm,1.1s						
RYN	Ryan	87.53	51	IAmb	IAmb	08 56 18.4	
	comp=Z,14nm,1.1s						
LHV	Little Huntoon	87.64	51	IAmb	IAmb	08 56 19.8	
	comp=Z,10nm,0.9s						
KVN	Kaiserville	87.74	51	IAmb	IAmb	08 56 19.3	
	comp=Z,13nm,1.0s						
NVAR	Mina Array Bea	87.75	51	P	P	08 56 18.6	+0.5
	comp=Z,18nm,0.9s,baz=262,slow=6.2,SNR=75						
VES	Vestal, Richgr	87.80	54	P	P	08 56 17.5	-0.6
	baz=285						
NV11	Mina Array Sit	87.86	51	IAmb	IAmb	08 56 20.0	
	comp=Z,14nm,0.9s						
BMN	Battle Mountai	88.03	49	IAmb	IAmb	08 56 20.7	
	comp=Z,7.9nm,0.8s						
ARVC	Arvin	88.18	54	P	P	08 56 19.6	-0.4

	baz=285						
ISA	Isabella, Lake	88.33	54	P	P	08 56 20.5	-0.2
	baz=285						
CWC	Cottonwood Cre	88.43	53	P	P	08 56 22.2	+0.9
	baz=285						
GRAC	Grapevine Rang	88.84	52	P	P	08 56 23.1	+0.1
	baz=286						
EDW2	Edwards Air Fo	88.91	55	P	P	08 56 23.9	+0.4
	baz=285						
LRMC	Laurel Mtn Rad	89.00	54	P	P	08 56 24.3	+0.4
	baz=286,SNR=7.1						
HLID	Hailey	89.14	45	P	P	08 56 24.9	+0.4
HLID				IAmb	IAmb	08 56 26.4	
	comp=Z,10nm,0.9s						
HLID	Hailey	89.14	45	P	P	08 56 24.6	+0.1
	baz=288,SNR=23						
FURC	Furnace Creek,	89.37	53	P	P	08 56 26.0	+0.5
	baz=286,SNR=7.7						
ELK	Elko	89.39	48	IAmb	IAmb	08 56 27.2	
	comp=Z,12nm,0.8s						
GWY	Greenwater Val	89.60	53	IAmb	IAmb	08 56 28.1	
	comp=Z,10nm,0.9s						
GSC	Goldstone, Bar	89.74	54	P	P	08 56 27.8	+0.5
	baz=286,SNR=5.9						
R11A	Troy Canyon, C	89.82	51	IAmb	IAmb	08 56 29.4	
	comp=Z,7.9nm,1.2s						
R11A	Troy Canyon, C	89.82	51	P	P	08 56 28.1	+0.4
	baz=287,SNR=7.4						
SHOC	Shoshone, Teco	89.99	53	P	P	08 56 27.7	-0.7
	baz=286						
109C	Camp Elliot, M	90.16	56	P	P	08 56 28.3	-0.9
	baz=286						
HEC	Hector,Ludlow	90.24	54	P	P	08 56 30.0	+0.3
	baz=286,SNR=5.0						
TUQ	Turquoise Moun	90.39	54	P	P	08 56 30.9	+0.4
	baz=287,SNR=7.6						
PFO	Pinyon Flats O	90.48	55	P	P	08 56 29.4	-1.5
	baz=286						
TPFO	Pinon Flats	90.48	55	P	P	08 56 29.4	-1.5
	baz=286						
PRN	Pahroc Range	90.50	51	IAmb	IAmb	08 56 32.6	
	comp=Z,8.1nm,1.1s						
SHPR	Sheep Range	90.68	52	IAmb	IAmb	08 56 33.6	
	comp=Z,7.5nm,0.8s						
MONP2	Monument Peak	90.71	56	P	P	08 56 31.5	-0.6
	baz=286						
BELC	Belle Mtn. Jos	90.74	55	P	P	08 56 31.4	-0.7
	baz=286						
GMRC	Granite Mounta	90.78	54	P	P	08 56 32.6	+0.4
	baz=287,SNR=9.6						
HVU	Hansel Valley	90.84	47	IAmb	IAmb	08 56 33.9	
	comp=Z,8.2nm,0.9s						
IKP	In-Ko-Pah, Jac	91.03	56	P	P	08 56 33.3	0.0
	baz=286						
PSUT	Pine Spring	91.06	50	IAmb	IAmb	08 56 34.9	
	comp=Z,5.5nm,0.9s						
FINES	FINESS Array B	91.16	335	P	P	08 56 31.2	-2.0
	comp=Z,1.4nm,0.4s,baz=76,slow=5.1,SNR=15						
VNDA	Vanda	91.16	176	P	P	08 56 33.0	+0.2
	comp=Z,0.6nm,0.8s,baz=330,slow=6.0,SNR=3.7						
YHH	Holmes Hill	91.18	43	IAmb	IAmb	08 56 36.0	
	comp=Z,6.3nm,0.9s						
SWSC	Sam W. Stewart	91.19	56	P	P	08 56 33.7	-0.3
	baz=287						
BC3	Big Chuckawall	91.27	55	P	P	08 56 34.2	-0.3
	baz=287						
DUG	Dugway, Tooele	91.32	48	IAmb	IAmb	08 56 35.8	
	comp=Z,6.4nm,0.9s						
DUG	Dugway, Tooele	91.32	48	P	P	08 56 34.8	+0.1
	baz=289,SNR=5.7						
IRM	Iron Mountain	91.37	55	P	P	08 56 35.4	+0.6
	baz=287,SNR=5.5						
FXWY	Fox Creek	91.45	45	IAmb	IAmb	08 56 36.8	
	comp=Z,5.0nm,0.8s						
H17A	Grant Village	91.50	44	P	P	08 56 36.9	+1.3
	baz=290,SNR=12						
TPAW	Teton Pass	91.56	45	IAmb	IAmb	08 56 37.2	
	comp=Z,4.9nm,0.7s						
MOOW	Moose Ponds	91.61	44	IAmb	IAmb	08 56 37.3	
	comp=Z,5.2nm,0.8s						
REDW	Red Top Meadow	91.67	45	IAmb	IAmb	08 56 37.6	
	comp=Z,4.8nm,0.9s						
HWUT	Hardware Ranch	91.76	47	IAmb	IAmb	08 56 37.7	
	comp=Z,7.6nm,0.8s						
CTU	Camp Tracy	91.93	48	IAmb	IAmb	08 56 38.4	
	comp=Z,5.1nm,0.8s						
NLU	North Lily Min	91.93	48	IAmb	IAmb	08 56 38.7	
	comp=Z,4.1nm,0.9s						
GLA	Glamis	91.95	56	P	P	08 56 37.8	+0.2
	baz=287						
LCMT	Little Creek M	91.99	51	IAmb	IAmb	08 56 39.4	
	comp=Z,3.8nm,0.9s						
W13A	Hualapai Mount	92.08	53	IAmb	IAmb	08 56 40.0	
	comp=Z,6.9nm,0.9s						
RLMT	Red Lodge	92.12	43	IAmb	IAmb	08 56 41.9	
	comp=Z,6.4nm,0.7s						
RLMT	Red Lodge	92.12	43	P	P	08 56 39.0	+0.6
	baz=291						
PDMCI	Parker Dam,Lak	92.12	54	P	P	08 56 39.1	+0.9
	baz=288						
JLU	Jordanelle	92.17	48	IAmb	IAmb	08 56 39.7	
	comp=Z,5.8nm,0.9s						
KNB	Kanab	92.31	51	IAmb	IAmb	08 56 41.2	
	comp=Z,6.7nm,0.9s						
BW06	Boulder Array	92.76	45	P	P	08 56 40.8	-0.6
	baz=291						
PDAR	Pinedale Array	92.76	45	P	P	08 56 41.0	-0.4
	comp=Z,1.7nm,0.6s,baz=237,slow=2.4,SNR=20						
U15A	North Rim	92.90	52	IAmb	IAmb	08 56 43.8	
	comp=Z,5.3nm,0.9s						
Q16A	Castle Valley	92.93	49	IAmb	IAmb	08 56 44.1	
	comp=Z,8.0nm,1.2s						
SRU	San Rafael Swe	93.34	49	IAmb	IAmb	08 56 44.7	
	comp=Z,3.5nm,0.8s						
LAO	LASA Array	93.50	40	P	P	08 56 44.7	+0.2
	baz=293						
RDMU	Red Mountain	93.53	47	IAmb	IAmb	08 56 47.2	
	comp=Z,9.2nm,1.3s						
214A	Organ Pipe Nat	93.90	56	P	P	08 56 46.5	-0.1
	baz=288						
WUAZ	Wupatki	93.90	52	IAmb	IAmb	08 56 48.4	
	comp=Z,6.3nm,0.9s						
WUAZ	Wupatki	93.90	52	P	P	08 56 46.7	0.0
	baz=289						
O20A	White River Ci	94.63	47	P	P	08 56 49.7	-0.3
	baz=292						
K22A	Casper	94.88	44	P	P	08 56 50.6	-0.4
	baz=293						
TUC	Tucson	95.42	55	P	P	08 56 54.0	+0.4
	baz=289						
RSSD	Black Hills	95.95	42	P	P	08 56 55.0	-0.9
	baz=295						
N23A	Red Feather La	95.97	46	P	P	08 56 56.1	0.0
	baz=293						
S22A	4UR Ranch, Cre	96.54	49	P	P	08 56 58.8	-0.1
	baz=292						
TXAR	Lajitas Array	102.19	56	P	Pdif	08 57 23.6	-0.4
	comp=Z,0.7nm,0.9s,baz=266,slow=3.6,SNR=6.9						
ESDC	Sonseca Array	119.54	332	PKP	PKPdf	09 02 17.8	-0.2
	comp=Z,0.4nm,0.5s,baz=60,slow=3.1,SNR=2.0						
BOSA	Boshof	121.41	244	PKP	PKPdf	09 02 21.2	-0.7
	comp=Z,2.1nm,0.7s,baz=180,slow=1.8,SNR=4.0						
TORD	Torodi Ar. Bea	134.43	304	PKP	PKiKP	09 02 47.6	-0.7
	comp=Z,2.4nm,0.6s,baz=34,slow=2.9,SNR=15						
PLCA	Paso Flores	139.18	139	PKP	PKPdf	09 02 54.9	-0.2
	comp=Z,2.0nm,0.8s,baz=353,slow=18,SNR=5.3						
DBIC	Dimbokro	143.35	301	PKhKP	PKPpre	09 02 59.7	
	comp=Z,6.6nm,0.7s,baz=60,slow=2.5,SNR=12						
KIC	Kosan Boka	143.42	300	*e*PKP1	PKPab	09 02 59.4	-0.4
	comp=Z,11nm,0.6s						
TIC	Toumodi	143.50	301	*e*PKP1	PKPab	09 02 59.7	-0.4
LIC	Lamto	143.73	300	*e*PKP1	PKPab	09 03 00.4	-0.6
	comp=Z,80nm,0.8s						
LPAZ	La Paz	148.73	100	PKP	PKPdf	09 03 13.5	+0.5
	comp=Z,4.4nm,0.7s,baz=49,slow=4.1,SNR=3.8						
LPAZ				PKPbc	PKiKP	09 03 17.5	-0.8
	comp=Z,4.4nm,0.7s,baz=292,slow=3.2,SNR=17						
CPUP	Villa Florida	156.06	126	PKP	PKPdf	09 03 24.0	+1.2
	comp=Z,1.4nm,0.8s,baz=50,slow=6.6,SNR=2.3						
CPUP				PKPab	PKPab	09 03 51.8	+1.0
	comp=Z,1.0nm,0.5s,baz=298,slow=3.8,SNR=3.8						

NNC 04 08:55:17.3±5.1, 37.°02N×70.°51E, h0^{km}, mb3.6, mpv3.2, 4C-2D, Error ellipse: s-maj=39.9km s-min=35.3km az=166.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.08	0	⇑P	Pn	08 56 48.5	+0.1
	0.3nm,0.3s,baz=174,slow=13,SNR=3.9						
KK31				⇓S	Sn	08 57 59.4	+0.8
	0.9nm,0.5s,baz=182,slow=19,SNR=4.8						
AAK	Ala-Archa	6.39	27	⇑P	Pn	08 56 53.5	+0.6
	1.0nm,0.4s						
AAK				⇑S	Sn	08 58 08.7	+2.0
	4.5nm,0.6s						
TKM2	Tokmak 2	7.07	32	⇓P	Pn	08 57 01.4	-0.8
	1.9nm,0.6s						
TKM2				⇑S	Sn	08 58 24.2	+0.8
	2.3nm,0.7s						

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*IDC **04** 08:57:28.0±1.7, 8.°23S×125.°34E, h0^{km}, mb4.0/1, mb1 3.8/5, mb1mx3.6/31, mbtmp3.7/5, ML3.4/4, Error ellipse: s-maj=40.8km s-min=24.4km az=85.0*

ISC 04 08:57:32.8±1.5, 8.°4S±0.°1×125.°5E±0.°1, h35^{km}, n5, σ2ˢ53/7, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	2.57	226	Pn	Pn	08 58 11.1	-0.9
	5.6nm,0.3s,baz=94,slow=22,SNR=1.8						
BATI				Sn	Sn	08 58 44.2	+2.1
	4.6nm,0.3s,baz=331,slow=17,SNR=2.1						
FITZ	Fitzroy Crossi	9.64	179	Pn	Pn	08 59 50.2	+1.1
	0.4nm,0.3s,baz=6.9,slow=13,SNR=8.5						
FITZ				Sn	Sn	09 01 32.5	-3.7
	0.6nm,0.3s,baz=304,slow=11,SNR=8.5						
WRA	Warramunga Arr	14.29	144	Pn	Pn	09 00 54.3	+1.5
	0.2nm,0.3s,baz=317,slow=13,SNR=14						
ASAR	Alice Springs	17.17	153	P	P	09 01 32.9	+1.5
	0.1nm,0.3s,baz=321,slow=10,SNR=11						
MKAR	Makanchi Array	67.06	329	P	P	09 08 21.6	-1.0
	1.2nm,0.7s,baz=145,slow=7.9,SNR=7.2						

IDC 04 08:59:18.6±2.1, 8.°08S×125.°51E, h0^{km}, mb3.8/1, mb1 4.0/4, mb1mx3.6/30, mbtmp3.8/4, ML3.5/3, Error ellipse: s-maj=52.5km s-min=31.8km az=72.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	2.79	221	Pn	Pn	09 00 04.5	-0.2
	8.6nm,0.3s,baz=72,slow=3.0,SNR=1.8						
BATI				Sn	Sn	09 00 34.2	-4.9
	10nm,0.3s,baz=330,slow=22,SNR=3.6						
WRA	Warramunga Arr	14.57	145	Pn	Pn	09 02 44.5	-1.7
	0.3nm,0.3s,baz=318,slow=13,SNR=13						
ASAR	Alice Springs	17.46	154	P	P	09 03 25.1	0.0
	0.1nm,0.3s,baz=333,slow=12,SNR=11						
MKAR	Makanchi Array	66.78	329	P	P	09 10 12.0	0.0
	0.6nm,0.6s,baz=134,slow=6.2,SNR=1.4						

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*IDC **04** 09:00:57.2±0.9, 8.°15S×125.°37E, h0^{km}, mb4.0/6, mb1 4.1/10, mb1mx3.9/31, mbtmp4.0/10, ML3.8/4, Error ellipse: s-maj=33.3km s-min=18.0km az=69.0*

*NEIC **04** 09:00:58.9±1.6, 8.°17S±0.°07×125.°34E±0.°09, h10^{km}±1^{km}, mb4.2/10, Error ellipse: s-maj=18.1km s-min=7.4km az=56.0*

ISC 04 09:01:02.2±0.7, 8.°26S±0.°08×125.°39E±0.°08, h35^{km}, n31, σ1ˢ48/33, mb4.2/10, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.85	217	Pn	Pn	09 01 31.9	+0.4
BATI	Baumata	2.57	221	Pn	Pn	09 01 41.8	+0.3
	15nm,0.3s,baz=55,slow=18,SNR=4.6						
BATI				Sn	Sn	09 02 12.4	+0.9
	15nm,0.3s,baz=160,slow=21,SNR=4.1						
MMRI	Maumere	3.14	263		Pn	09 01 48.2	-1.0
KNRA	Kununurra	8.07	156		Pn	09 02 56.7	-0.3
FITZ	Fitzroy Crossi	9.78	179	Pn	Pn	09 03 19.2	-1.2
	0.6nm,0.3s,baz=346,slow=11,SNR=4.9						
FITZ	Fitzroy Crossi	9.78	179		Pn	09 03 20.1	-0.3
JAGI	Jajag, Banyuwa	11.12	268	Pn	Pn	09 03 36.4	-2.4
PSA00	Pilbara Seismi	14.27	201	Pn	Pn	09 04 21.4	-0.4
WB0	Warramunga Arr	14.38	144		Pn	09 04 22.6	-0.9
WRAB	Tennant Creek	14.49	144		Pn	09 04 23.7	-1.2
WRA	Warramunga Arr	14.49	144	Pn	Pn	09 04 23.0	-1.9
	0.6nm,0.3s,baz=318,slow=13,SNR=16						
WB2	Warramunga Arr	14.50	144		Pn	09 04 24.9	0.0
WR0	Warramunga Arr	14.62	144		Pn	09 04 26.4	-0.2
AS31	Alice Springs	17.36	153	P	P	09 05 03.2	+0.3
ASAR	Alice Springs	17.36	153	P	P	09 05 02.8	-0.2
	0.2nm,0.3s,baz=326,slow=10,SNR=9.4						
ASAR				S	Sn	09 08 09.2	-4.9
	baz=314,slow=21,SNR=1.9						
PMG	Port Moresby	21.55	95	P	P	09 05 49.4	+0.7
	4.4nm,0.4s,baz=258,slow=9.3,SNR=1.3						
STKA	Stephens Creek	27.92	150	P	P	09 06 49.6	+0.4
	1.7nm,0.9s,baz=305,slow=12,SNR=2.0						
SONM	Songino Array	58.33	345	P	P	09 10 53.0	-0.9
	0.4nm,0.3s,baz=144,slow=5.2,SNR=2.9						
CASY	Casey	58.83	187	P	P	09 10 57.0	+0.2
PAF	Port-aux-Franc	61.47	218	P	P	09 11 15.8	+0.6
KNTN	Kanton	62.79	89	P	P	09 11 24.6	-0.2
MK31	Makanchi Array	66.87	329	P	P	09 11 50.7	0.0
MK31				IAmb	IAmb	09 11 51.4	
	comp=Z,1.8nm,0.8s						
MKAR	Makanchi Array	66.87	329	P	P	09 11 50.8	+0.1
	comp=Z,2.1nm,0.8s,baz=146,slow=7.9,SNR=7.1						
MAKZ	Makanchi	67.04	329	P	P	09 11 51.5	-0.3
MAKZ				IAmb	IAmb	09 11 52.3	
	comp=Z,2.0nm,0.9s						
ZAA0	Zalesovo Array	70.78	336	P	P	09 12 13.1	-1.7
ZAA0				IAmb	IAmb	09 12 20.8	
	comp=Z,1.6nm,0.8s						
ZALV	Zalesovo Beam	70.78	336	P	P	09 12 14.1	-0.7
	comp=Z,1.9nm,0.8s,baz=111,slow=3.3,SNR=5.9						
ZALV	Zalesovo Beam	70.78	336	P	P	09 12 13.7	-1.2
KURK	Kurchatov	71.29	331	P	P	09 12 17.6	-0.4
VNDA	Vanda	71.79	172	P	P	09 12 22.7	+2.0
	comp=Z,0.5nm,0.6s,baz=317,slow=8.1,SNR=5.7						
VNDA	Vanda	71.79	172	P	P	09 12 23.2	+2.5
QSPA	South Pole Qui	81.72	180	P	P	09 13 20.1	+3.0
QSPA				IAmb	IAmb	09 13 37.2	
	comp=Z,2.4nm,1.1s						

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*IDC **04** 09:02:44.7±1.9, 8.°33S×125.°43E, h0^{km}, mb3.8/1, mb1 4.1/5, mb1mx3.7/31, mbtmp3.9/5, ML3.9/4, Error ellipse: s-maj=39.9km s-min=27.0km az=87.0*

*NEIC **04** 09:02:44.1±1.1, 8.°20S±0.°07×125.°45E±0.°05, h10^{km}±1^{km}, mb4.2/14, Error ellipse: s-maj=12.8km s-min=4.1km az=147.0*

ISC 04 09:02:46.8±0.5, 8.°27S±0.°05×125.°50E±0.°06, h35^{km}, n31, σ1ˢ52/35, mb4.0/4, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.91	219	Pn	Pn	09 03 17.8	+0.8
BATI	Baumata	2.64	223	Pn	Pn	09 03 28.1	+1.1
	23nm,0.3s,baz=90,slow=2.1,SNR=2.3						
BATI				Sn	Sn	09 04 00.7	+2.9
	18nm,0.3s,baz=10,slow=20,SNR=1.9						
MMRI	Maumere	3.24	263	Pn	Pn	09 03 34.8	-0.4
SAUI	Saumlaki	5.75	88	Pn	Pn	09 04 10.3	+0.5
TNTI	Ternate	9.18	12	Pn	Pn	09 04 55.0	-1.8
FITZ	Fitzroy Crossi	9.77	179	Pn	Pn	09 05 04.2	-0.8
	0.7nm,0.3s,baz=340,slow=15,SNR=3.8						
FITZ				Sn	Sn	09 06 51.8	-1.6
	1.2nm,0.3s,baz=20,slow=23,SNR=4.1						
FITZ	Fitzroy Crossi	9.77	179		Pn	09 05 03.8	-1.1
WB0	Warramunga Arr	14.31	144	Pn	Pn	09 06 08.9	+1.8
WRAB	Tennant Creek	14.42	144	Pn	Pn	09 06 09.0	+0.5
WRA	Warramunga Arr	14.42	144	Pn	Pn	09 06 10.4	+1.8
	0.6nm,0.3s,baz=319,slow=12,SNR=8.2						
WRA				Sn	Sn	09 08 47.2	-0.2
	0.2nm,0.3s,baz=331,slow=24,SNR=2.1						
WRA	Warramunga Arr	14.42	144		Pn	09 06 08.8	+0.2
WB2	Warramunga Arr	14.43	144	Pn	Pn	09 06 09.1	+0.4
WR0	Warramunga Arr	14.55	144	Pn	Pn	09 06 13.6	+3.2
AS31	Alice Springs	17.30	153		Pn	09 06 45.7	-0.1
ASAR	Alice Springs	17.30	153	P	P	09 06 48.4	+1.4
	0.3nm,0.3s,baz=320,slow=11,SNR=4.5						
ASAR				S	Sn	09 09 53.0	-4.4
	baz=316,slow=20,SNR=2.1						
ASAR	Alice Springs	17.30	153		Pn	09 06 46.3	+0.5
CISI	Cisompet, Garu	17.53	271		Pn	09 06 47.2	-1.5
CISI				IAmb	IAmb	09 07 16.5	
	comp=Z,25nm,1.0s						
GIRL	Giralia	17.93	216	P	Pn	09 06 53.2	-0.2
COEN	Coen	18.24	110	P	P	09 06 57.0	-0.3
GUMO	Guam	29.01	42	P	P	09 08 43.1	-0.6
JMN	Monobe	42.52	10	P	P	09 10 38.4	-0.7
INU	Inuyama	44.73	13	P	P	09 10 56.7	-0.1
KWAJ	Kwajalein Atol	45.26	69	P	P	09 11 01.2	-0.2
MAJO	Matsushiro	46.15	14	P	P	09 11 07.1	-0.9
MAJO				IAmb	IAmb	09 11 10.1	
	comp=Z,5.3nm,0.9s						
DGAR	Diego Garcia	52.52	267	P	P	09 11 56.5	-0.6
MDJ	Mudanjiang	52.77	4	P	P	09 11 57.9	-0.5
SONM	Songino Array	58.37	345	P	P	09 12 38.4	-0.4
SONM				IAmb	IAmb	09 12 45.4	
	comp=Z,2.5nm,1.4s						
MKAR	Makanchi Array	66.93	329	P	P	09 13 39.1	+3.3
	comp=Z,0.2nm,0.4s,baz=141,slow=5.9,SNR=3.6						
KKAR	Karatay Array	71.42	321	P	P	09 14 03.2	-0.5
KKAR	Karatay Array	71.42	321	P	P	09 14 03.6	0.0
KKAR				IAmb	IAmb	09 14 22.6	
	comp=Z,0.9nm,0.8s						
SMY	Shemya	73.47	28	P	P	09 14 16.6	+1.0

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*IDC **04** 09:10:08.7±2.0, 8.°07S×125.°54E, h0^{km}, mb3.7/1, mb1 3.7/5, mb1mx3.5/41, mbtmp3.5/5, ML3.2/4, MS2.9/1, Ms1 2.9/1, ms1mx2.2/36, Error ellipse: s-maj=52.4km s-min=28.8km az=75.0*

ISC 04 09:10:20.1±2.7, 8.°8S±0.°2×125.°60E±0.°10, h35^{km}, n5, σ1ˢ28/8, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	2.36	234	Pn	Pn	09 10 56.4	-0.1
	8.1nm,0.3s,baz=203,slow=1.1,SNR=2.0						
BATI				Sn	Sn	09 11 24.1	-0.1
	4.8nm,0.3s,baz=52,slow=23,SNR=1.5						
BATI				LR	LR	09 12 09.6	
	comp=Z,190nm,19.5s,baz=74,slow=43						
FITZ	Fitzroy Crossi	9.23	180	Pn	Pn	09 12 31.9	+1.1
	0.1nm,0.3s,baz=356,slow=15,SNR=2.2						
FITZ				Sn	Sn	09 14 14.2	+0.7
	0.3nm,0.3s,baz=324,slow=14,SNR=6.5						
WRA	Warramunga Arr	13.93	144	Pn	Pn	09 13 35.7	+0.7
	0.1nm,0.3s,baz=316,slow=13,SNR=11						
WRA				Sn	Sn	09 16 08.4	-0.1
	0.1nm,0.3s,baz=325,slow=27,SNR=3.2						
ASAR	Alice Springs	16.78	153	P	P	09 14 14.3	-0.1
	0.1nm,0.3s,baz=321,slow=10,SNR=3.3						
ASAR				S	Sn	09 17 15.4	-2.5
	baz=323,slow=21,SNR=2.1						
MKAR	Makanchi Array	67.44	329	P	P	09 21 02.0	-10
	0.7nm,0.7s,baz=152,slow=6.5,SNR=2.8						

NNC 04 09:17:46.6±3.0, 36.°85N×70.°56E, h0^{km}, mb3.7, mpv3.4, 3C-3D, Error ellipse: s-maj=23.2km s-min=20.6km az=160.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.25	360	⇑P	Pn	09 19 20.4	+0.3
	1.6nm,0.4s,baz=182,slow=13,SNR=14						
KK31				⇓S	Sn	09 20 33.1	+0.9
	1.9nm,0.5s,baz=178,slow=21						
AAK	Ala-Archa	6.53	26	⇑P	Pn	09 19 24.3	+0.2
	0.8nm,0.5s						
AAK				⇓S	Sn	09 20 40.4	+1.1
	1.7nm,0.6s						
TKM2	Tokmak 2	7.19	31	⇑P	Pn	09 19 32.6	-0.7
	2.1nm,0.6s						
TKM2				⇓S	Sn	09 20 57.5	+1.7
	2.4nm,0.8s						

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*IDC **04** 09:27:14.2±1.4, 8.°25S×125.°50E, h0^{km}, mb3.9/2, mb1 3.8/6, mb1mx3.6/31, mbtmp3.7/6, ML3.7/4, Error ellipse: s-maj=39.4km s-min=21.6km az=88.0*

*NEIC **04** 09:27:17.0±2.1, 8.°27S±0.°06×125.°17E±0.°07, h10^{km}±1^{km}, mb4.2/8, Error ellipse: s-maj=12.3km s-min=8.8km az=122.0*

ISC 04 09:27:19.6±0.7, 8.°38S±0.°07×125.°39E±0.°08, h35^{km}, n33, σ2ˢ11/33, mb4.2/4, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.76	219		Pn	09 27 47.0	-0.7
SOEI	Soe	1.76	219	P	Pn	09 27 48.5	+0.8
BATI	Baumata	2.49	223	Pn	Pn	09 27 59.4	+1.8
	13nm,0.3s,baz=338,slow=1.9,SNR=5.3						
BATI				Sn	Sn	09 28 31.7	+4.8
	16nm,0.3s,baz=9.4,slow=12,SNR=3.2						
MMRI	Maumere	3.13	265	Pn	Pn	09 28 03.9	-2.6
DRS	Darwin Rock St	6.75	127	P	Pn	09 29 03.1	+6.9
	13nm,1.2s						
MTN	Manton Dam	7.18	129		Pn	09 29 06.2	+4.1
MTN	Manton Dam	7.18	129	P	Pn	09 29 09.0	+6.9
	16nm,0.4s						
PLAI	Plampang	7.54	266	P	Pn	09 29 09.7	+2.5
KNRA	Kununurra	7.96	156		Pn	09 29 15.1	+2.1
KNRA	Kununurra	7.96	156	P	Pn	09 29 15.5	+2.6
	16nm,0.6s						
KDU	Kakadu	8.17	122	P	Pn	09 29 23.5	+7.7
	7.3nm,1.6s						
FITZ	Fitzroy Crossi	9.66	179	Pn	Pn	09 29 36.8	+0.6
	0.6nm,0.3s,baz=7.2,slow=12,SNR=15						
FITZ				Sn	Sn	09 31 19.7	-3.8
	0.8nm,0.3s,baz=23,slow=11,SNR=1.5						
FITZ	Fitzroy Crossi	9.66	179		Pn	09 29 38.2	+2.0
FITZ	Fitzroy Crossi	9.66	179	P	Pn	09 29 36.6	+0.4
	4.7nm,0.8s						
WB0	Warramunga Arr	14.29	143	Pn	Pn	09 30 39.0	-0.5
WRAB	Tennant Creek	14.39	144	Pn	Pn	09 30 39.4	-1.5
WRA	Warramunga Arr	14.39	144	Pn	Pn	09 30 39.3	-1.7
	0.4nm,0.3s,baz=315,slow=14,SNR=17						
WRA				Sn	Sn	09 33 09.5	-10
	baz=328,slow=28,SNR=1.2						
WB2	Warramunga Arr	14.40	144	Pn	Pn	09 30 40.5	-0.5
WR0	Warramunga Arr	14.52	143		Pn	09 30 42.9	+0.2
ASAR	Alice Springs	17.25	153	P	Pn	09 31 17.1	-0.8
	0.2nm,0.3s,baz=320,slow=11,SNR=11						
ASAR				S	Sn	09 34 24.5	-4.4
	baz=320,slow=21,SNR=3.4						
ASAR	Alice Springs	17.25	153		P	09 31 19.7	+0.5
TOO	Toolangi	34.28	151	P	P	09 34 04.7	+2.1
CAN	Canberra	34.43	145	P	P	09 34 05.1	+1.1
CMAR	Chiang Mai Arr	37.31	316	P	P	09 34 27.2	-1.6
JMM	Marumori	48.21	16	P	P	09 35 58.1	+1.3
SONM	Songino Array	58.45	345	P	P	09 37 11.6	-0.4
	0.5nm,0.7s,baz=161,slow=6.1,SNR=3.5						
SONM	Songino Array	58.45	345	P	P	09 37 11.8	-0.3
MK31	Makanchi Array	66.97	329	P	P	09 38 08.6	-0.3
MK31				IAmb	IAmb	09 38 14.0	
	comp=Z,2.3nm,1.1s						
MKAR	Makanchi Array	66.97	329	P	P	09 38 08.1	-0.7
	comp=Z,1.3nm,0.7s,baz=136,slow=6.8,SNR=8.6						
MSEY	Mahe Island	69.48	268	P	P	09 38 23.9	-1.4
ZALV	Zalesovo Beam	70.89	336	P	P	09 38 31.6	-1.4
KURK	Kurchatov	71.40	331	P	P	09 38 34.9	-1.2
QSPA	South Pole Qui	81.60	180	P	P	09 39 36.1	+2.2
QSPA				IAmb	IAmb	09 39 51.8	
	comp=Z,3.1nm,1.2s						

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*IDC **04** 09:28:10.2±0.7, 8.°27S×125.°50E, h0^{km}, mb4.1/9, mb1 4.3/13, mb1mx4.1/31, mbtmp4.2/13, ML4.0/4, MS2.9/1, Ms1 3.1/1, ms1mx2.4/39, Error ellipse: s-maj=24.4km s-min=14.9km az=77.0*

*NEIC **04** 09:28:11.9±1.2, 8.°21S±0.°07×125.°38E±0.°08, h10^{km}±1^{km}, mb4.3/17, Error ellipse: s-maj=14.0km s-min=11.4km az=61.0*

ISC 04 09:28:14.6±0.5, 8.°33S±0.°05×125.°50E±0.°07, h35^{km}, n49, σ1ˢ60/53, mb4.3/15, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.87	221	Pn	Pn	09 28 45.3	+1.0
BATI	Baumata	2.60	224	Pn	Pn	09 28 55.0	+0.7
	25nm,0.3s,baz=61,slow=16,SNR=5.5						
BATI				Sn	Sn	09 29 27.1	+2.5
	12nm,0.3s,baz=22,slow=20,SNR=2.3						
MMRI	Maumere	3.25	264	Pn	Pn	09 29 00.8	-2.3

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KAPI  Kappang           6.60 300  Pn     Pn      09 29 47.3  -1.9
MTN   Manton Dam        7.12 129         Pn      09 29 58.4  +2.0
KNRA  Kununurra         7.96 157  Pn     Pn      09 30 09.9  +1.9
FITZ  Fitzroy Crossi    9.71 179  Pn     Pn      09 30 32.4  +0.5
      1.0nm,0.3s,baz=350,slow=8.8,SNR=7.1
FITZ                              Sn     Sn      09 32 14.9  -4.9
      2.1nm,0.3s,baz=100,slow=18,SNR=6.7
FITZ  Fitzroy Crossi    9.71 179         Pn      09 30 32.8  +0.9
PSA00 Pilbara Seismi   14.25 202  Pn     Pn      09 31 32.2  -1.8
WB0   Warramunga Arr   14.26 144         Pn      09 31 35.8  +1.6
WRAB  Tennant Creek    14.37 144         Pn      09 31 35.8  +0.2
WRA   Warramunga Arr   14.37 144  Pn     Pn      09 31 35.3  -0.3
      0.8nm,0.3s,baz=316,slow=13,SNR=14
WRA                               Sn     Sn      09 34 09.9  -3.9
      0.3nm,0.3s,baz=312,slow=26,SNR=3.3
WRA   Warramunga Arr   14.37 144         Pn      09 31 36.5  +0.9
WB2   Warramunga Arr   14.37 144         Pn      09 31 35.2  -0.6
WR0   Warramunga Arr   14.50 144         Pn      09 31 38.9  +1.5
AS31  Alice Springs    17.24 153  P      P       09 32 15.3  +1.2
ASAR  Alice Springs    17.24 153  P      Pn      09 32 14.3  +1.4
      0.5nm,0.3s,baz=317,slow=10,SNR=8.4
ASAR                              S      Sn      09 35 20.1  -3.6
      0.1nm,0.3s,baz=316,slow=20,SNR=3.1
ASAR  Alice Springs    17.24 153  P      Pn      09 32 14.5  +1.6
COEN  Coen             18.21 109  P      P       09 32 25.1  +0.3
PMG   Port Moresby     21.42  94  P      P       09 32 58.4  -1.4
      3.1nm,0.3s,baz=254,slow=9.8,SNR=1.7
NWAO  Narrogin (SRO)   25.64 196  P      P       09 33 41.9  +0.8
STKA  Stephens Creek   27.80 150  P      P       09 34 01.1  +0.6
      0.8nm,0.7s,baz=325,slow=12,SNR=1.3
JOW   Kunigami         35.06   4  P      P       09 35 03.6  -0.8
CMAR  Chiang Mai Arr   37.36 316  P      P       09 35 24.6  +0.4
      3.7nm,0.8s,baz=140,slow=6.8,SNR=12
CMAR                              LR     LR      09 51 55.2
      comp=Z,17nm,18.5s,baz=40,slow=38
CMAR  Chiang Mai Arr   37.36 316  P      P       09 35 23.1  -1.1
CHTO  Chiang Mai       37.60 316  P      P       09 35 24.2  -2.0
CHTO                              IAmb   IAmb    09 35 27.2
      comp=Z,5.7nm,0.9s
MJAR  Matsushiro Arr   46.20  14  P      P       09 36 37.6  +1.4
      comp=Z,2.6nm,0.8s,baz=195,slow=8.8,SNR=6.4
MJAR  Matsushiro Arr   46.20  14  P      P       09 36 35.9  -0.4
MJAR                              IAmb   IAmb    09 36 41.8
      comp=Z,4.1nm,1.3s
USRK  Ussuriysk Ar.    52.61   6  P      P       09 37 26.6  +1.6
      comp=Z,2.8nm,0.7s,baz=178,slow=7.1,SNR=4.8
SONM  Songino Array    58.43 345  P      P       09 38 07.9  +0.9
      comp=Z,3.0nm,0.9s,baz=163,slow=6.6,SNR=11
SONM  Songino Array    58.43 345  P      P       09 38 07.0  +0.1
SONM                              IAmb   IAmb    09 38 08.8
      comp=Z,2.9nm,0.9s
CASY  Casey            58.77 187  P      P       09 38 10.4  +1.5
TLY   Talaya           62.67 345  P      P       09 38 35.2  -0.5
TLY                               IAmb   IAmb    09 38 35.7
      comp=Z,2.4nm,0.9s
MK31  Makanchi Array   66.99 329  P      P       09 39 04.3  +0.3
MK31                              IAmb   IAmb    09 39 05.3
      comp=Z,4.1nm,1.1s
MKAR  Makanchi Array   66.99 329  P      P       09 39 04.1  +0.1
      comp=Z,2.6nm,0.6s,baz=132,slow=7.5,SNR=15
MKAR  Makanchi Array   66.99 329  P      P       09 39 03.7  -0.2
ZAA0  Zalesovo Array   70.89 336  P      P       09 39 27.3  -0.7
ZAA0                              IAmb   IAmb    09 39 29.0
      comp=Z,4.5nm,1.2s
ZALV  Zalesovo Beam    70.89 336  P      P       09 39 27.0  -1.0
      comp=Z,2.9nm,0.9s,baz=108,slow=4.8,SNR=7.3
ZALV  Zalesovo Beam    70.89 336  P      P       09 39 27.3  -0.7
KURK  Kurchatov        71.41 331  P      P       09 39 30.6  -0.5
KK31  Karatay Array    71.47 321  P      P       09 39 31.6  -0.2
KKAR  Karatay Array    71.47 321  P      P       09 39 31.5  -0.3
KKAR  Karatay Array    71.47 321  P      P       09 39 31.9  +0.1
KKAR                              IAmb   IAmb    09 39 33.6
      comp=Z,2.7nm,1.5s
VNDA  Vanda            71.70 172  P      P       09 39 35.2  +2.7
      comp=Z,0.4nm,0.6s,baz=310,slow=5.6,SNR=2.0
VNDA  Vanda            71.70 172  P      P       09 39 35.3  +2.7
VNDA                              IAmb   IAmb    09 40 03.5
      comp=Z,3.0nm,1.4s
TIXI  Tiksi            79.84   1  P      P       09 40 19.0  -0.1
TIXI                              IAmb   IAmb    09 40 20.5
      comp=Z,4.6nm,1.1s
ABKAR Akbulak array    80.82 323  P      P       09 40 24.0  -0.8
TORD  Torodi Ar. Bea  124.67 280  PKP    PKPdf   09 47 10.9  -0.7
      comp=Z,0.4nm,0.7s,baz=100,slow=0.6,SNR=2.3
CPUP  Villa Florida   145.44 176  PKPbc  PKPab   09 47 51.0  +1.2
      comp=Z,2.1nm,0.7s,baz=236,slow=3.6,SNR=4.5
```

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*IDC **04** 09:40:42.5±1.7, 8°.16S×125°.29E, h0^{km}, mb3.8/2, mb1 3.9/6, mb1mx3.6/32, mbtmp3.7/6, ML3.5/4, Error ellipse: s-maj=51.4km s-min=23.5km az=72.0*

*NEIC **04** 09:40:44.5±1.6, 8°.32S±0°.04×125°.10E±0°.06, h10^{km}±1^{km}, mb4.2/8, Error ellipse: s-maj=11.6km s-min=4.0km az=126.0*

ISC 04 09:40:47.6±0.6**, 8°.37S**±0°.06×**125°.28E**±0°.07**, h35^{km}, n34, σ1^s.95**/36**, mb4.0**/4**, Timor region**

```
Code  Station Name       Δ°  AZ°   Phase ID        Time       Res
                                  Op     ISC      h  m  s    ISC
SOEI  Soe               1.71 216         Pn      09 41 13.6  -1.4
SOEI  Soe               1.71 216  P      Pn      09 41 19.2  +4.3
BATI  Baumata           2.43 221  Pn     Pn      09 41 26.9  +2.1
      10nm,0.3s,baz=330,slow=7.3,SNR=2.5
BATI                              Sn     Sn      09 41 56.5  +3.2
      4.3nm,0.3s,baz=126,slow=16,SNR=2.1
MMRI  Maumere           3.02 265  Pn     Pn      09 41 31.1  -1.9
SANI  Sanana            6.31   6  P      Pn      09 42 20.6  +2.4
      7.0nm,1.0s
MTN   Manton Dam        7.27 128  Pn     Pn      09 42 33.5  +2.1
PLAI  Plampang          7.43 266  P      Pn      09 42 35.8  +2.2
LUWI  Luwuk             7.69 341  Pn     Pn      09 42 34.6  -2.6
KNRA  Kununurra         8.03 155         Pn      09 42 43.7  +1.9
KNRA  Kununurra         8.03 155  P      Pn      09 42 46.5  +4.8
      9.7nm,0.5s
KDU   Kakadu            8.28 122  P      Pn      09 42 51.2  +6.1
      7.5nm,1.4s
FAKI  Fak Fak           8.79  52  Pn     Pn      09 42 53.9  +1.6
FITZ  Fitzroy Crossi    9.68 178  Pn     Pn      09 43 05.4  +1.0
      0.3nm,0.3s,baz=1.9,slow=11,SNR=6.3
FITZ                              Sn     Sn      09 44 49.2  -2.8
      0.4nm,0.3s,baz=352,slow=11,SNR=2.9
FITZ  Fitzroy Crossi    9.68 178         Pn      09 43 04.7  +0.2
FITZ  Fitzroy Crossi    9.68 178  P      Pn      09 43 08.2  +3.8
      5.9nm,1.4s
WB0   Warramunga Arr   14.37 143  Pn     Pn      09 44 09.2  +0.6
WRAB  Tennant Creek    14.47 144  Pn     Pn      09 44 10.7  +0.7
WRA   Warramunga Arr   14.47 144  Pn     Pn      09 44 09.8  -0.1
      0.3nm,0.3s,baz=317,slow=13,SNR=15
WRA                               Sn     Sn      09 46 46.4  -2.9
      0.1nm,0.3s,baz=318,slow=25,SNR=3.9
WRA   Warramunga Arr   14.47 144         Pn      09 44 09.4  -0.6
WB2   Warramunga Arr   14.48 144         Pn      09 44 10.4  +0.3
WR0   Warramunga Arr   14.60 143         Pn      09 44 12.8  +1.0
ASAR  Alice Springs    17.32 152  P      P       09 44 48.3  +0.5
      0.1nm,0.3s,baz=318,slow=11,SNR=5.3
ASAR                              S      Sn      09 47 55.0  -3.4
      0.0nm,0.3s,baz=313,slow=19,SNR=2.9
COEN  Coen             18.41 109  P      P       09 44 59.7  -0.2
MORW  Morawa           22.35 202  P      P       09 45 42.2  -0.4
MORW                              IAmb   IAmb    09 45 55.0
      comp=Z,8.6nm,1.2s
RABL  Rabaul           27.04  83  P      P       09 46 28.0  +1.1
CMAR  Chiang Mai Arr   37.23 316  P      P       09 47 53.6  -2.4
      comp=Z,0.6nm,0.3s,baz=116,slow=6.3,SNR=1.8
LBZ   Lake Benmore     52.90 141  P      P       09 49 59.9  -0.3
MKAR  Makanchi Array   66.90 329  P      P       09 51 36.4  +0.1
      comp=Z,0.5nm,0.6s,baz=115,slow=7.1,SNR=4.4
MKAR  Makanchi Array   66.90 329  P      P       09 51 36.6  +0.3
MAKZ  Makanchi         67.07 329  P      P       09 51 35.5  -1.9
MSEY  Mahe Island      69.37 268  P      P       09 51 52.4  -0.2
ZAA0  Zalesovo Array   70.83 336  P      P       09 51 59.8  -0.7
ZAA0                              IAmb   IAmb    09 52 20.5
      comp=Z,3.7nm,1.3s
ZALV  Zalesovo Beam    70.83 336  P      P       09 51 59.9  -0.6
ATKA  Atka Island      79.30  33  P      P       09 52 50.6  +1.2
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*IDC **04** 09:47:30.8±2.0, 8°.17S×125°.87E, h0^{km}, mb3.5/1, mb1 3.5/5, mb1mx3.3/39, mbtmp3.3/5, ML3.1/4, Error ellipse: s-maj=51.5km s-min=28.9km az=75.0*

ISC 04 09:47:35.8±1.6**, 8°.4S**±0°.1×**125°.6E**±0°.1**, h35^{km}, n5, σ0^s.84**/8**, Timor region**

```
Code  Station Name       Δ°  AZ°   Phase ID        Time       Res
                                  Op     ISC      h  m  s    ISC
BATI  Baumata           2.59 227  Pn     Pn      09 48 20.5  +5.3
      5.1nm,0.3s,baz=142,slow=6.6,SNR=2.3
BATI                              Sn     Sn      09 48 45.8  +0.3
      3.4nm,0.3s,baz=157,slow=16,SNR=1.9
FITZ  Fitzroy Crossi    9.60 180  Pn     Pn      09 49 51.9  +0.3
      0.1nm,0.3s,baz=5.2,slow=11,SNR=1.8
FITZ                              Sn     Sn      09 51 36.8  -1.5
      0.3nm,0.3s,baz=302,slow=11,SNR=3.5
WRA   Warramunga Arr   14.23 144  Pn     Pn      09 50 54.7  -0.2
      0.1nm,0.3s,baz=317,slow=12,SNR=6.7
WRA                               Sn     Sn      09 53 32.5  +0.8
      0.0nm,0.3s,baz=317,slow=25,SNR=1.1
ASAR  Alice Springs    17.11 153  Pn     P       09 51 34.2  +0.5
      0.1nm,0.3s,baz=326,slow=11,SNR=2.0
ASAR                              Sn     Sn      09 54 41.7  +0.1
      0.0nm,0.3s,baz=314,slow=20,SNR=2.5
MKAR  Makanchi Array   67.12 329  P      P       09 58 25.6  -0.4
      0.4nm,0.8s,baz=138,slow=7.6,SNR=3.7
```

NNC 04 09:48:36.7±8.7**, 37°.04N**×**70°.32E, h0^{km}, mb3.7, mpv3.3, 4C-2D, Error ellipse: s-maj=67.6km s-min=59.1km az=168.0, Afghanistan-Tajikistan border region**

```
Code  Station Name       Δ°  AZ°   Phase ID        Time       Res
                                  Op     ISC      h  m  s    ISC
KK31  Karatay Array     6.06   1 ⇑P      Pn      09 50 09.6  +2.0
      0.3nm,0.3s,baz=179,slow=13,SNR=13
KK31                             ⇓S      Sn      09 51 18.9  +1.3
      1.6nm,0.5s,baz=187,slow=22,SNR=10
AAK   Ala-Archa         6.45  29 ⇑P      Pn      09 50 13.1  +0.1
      1.4nm,0.6s
AAK                              ⇑S      Sn      09 51 29.0  +1.7
      4.5nm,0.5s
TKM2  Tokmak 2          7.13  33 ⇓P      Pn      09 50 20.7  -1.8
      3.3nm,0.5s
TKM2                             ⇑S      Sn      09 51 44.1  -0.3
      2.8nm,1.1s
```

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*NOU **04** 09:49:11.1, 41°.89S×171°.72E, h3^{km}, MLv3.9/8, South Island, New Zealand*

WEL 04 09:49:11.3±0.5**, 42˚S**±2˚×**17˚2E**±˚**, h5^{km}, M3.3**/9**, ML3.5**/10**, MLv3.3**/9**, Error ellipse: s-maj=0.0km s-min=0.0km az=106.0, South Island**

```
Code  Station Name       Δ°  AZ°   Phase ID        Time       Res
                                  Op     ISC      h  m  s    ISC
DSZ   Denniston Nort    0.18 355  P      Pg      09 49 15.4  +0.5
DSZ                               S      Sg      09 49 18.3  +1.0
THZ   Tophouse          0.82  79  P      Pg      09 49 26.3  -0.8
INZ   Inchbonnie        0.85 199  P      Pg      09 49 27.6  +0.1
INZ                               S      Sg      09 49 39.0  +0.5
LTZ   Lake Taylor       0.92 159  P      Pg      09 49 28.8  -0.1
LTZ                               S      Sg      09 49 40.7  -0.1
QRZ   Quartz Range      1.22  26  P      Pg      09 49 33.5  -1.2
QRZ                               S      Sg      09 49 50.1  -0.4
QRZ   Quartz Range      1.22  26  P      Pg      09 49 34.0  -0.7
KHZ   Kahutara          1.36 112  P      Pn      09 49 37.0   0.0
KHZ   Kahutara          1.36 112  P      Pb      09 49 37.2  -0.1
NNZ   Nelson            1.36  59  P      Pn      09 49 36.0  -0.9
NNZ                               S      Sb      09 49 54.7  -0.4
GVZ   Greta Valley S    1.37 140  P      Pn      09 49 37.0  -0.1
AMCZ  Amberley          1.39 154  P      Pn      09 49 37.5  +0.1
WVZ   Waitaha Valley    1.40 215  P      Pn      09 49 37.0  -0.5
WVZ                               S      Sb      09 49 56.0  -0.1
OXZ   Oxford            1.41 174  P      Pn      09 49 37.3  -0.3
BSWZ  Blackbirch Sta    1.55  83  P      Pb      09 49 40.1  -0.3
BSWZ                              S      Sg      09 50 01.1  +0.1
MHCZ  Mount Hutt        1.61 187  P      Pn      09 49 40.6  +0.1
TUWZ  Tuamarina         1.66  73  P      Pn      09 49 41.4  +0.3
TUWZ                              S      Sn      09 50 03.1  +0.4
GCSZ  Gaunt Creek Bo    1.77 218  P      Pb      09 49 44.0  -0.3
RACZ  Rakaia            1.81 173  P      Pn      09 49 43.1  -0.1
RACZ                              S      Sn      09 50 05.3  -1.3
RPZ   Rata Peaks        1.88 197  P      Pn      09 49 43.8  -0.2
RPZ   Rata Peaks        1.88 197  P      Pb      09 49 45.4  -0.6
MQZ   McQueen's Vall    1.88 161  P      Pn      09 49 43.1  -0.9
MQZ                               S      Sn      09 50 05.9  -2.2
DUWZ  D'Urville Isla    1.94  55  P      Pn      09 49 45.7  +0.8
TCW   Tory Channel      1.97  70  P      Pn      09 49 46.4  +1.1
OKCZ  Okains Bay        2.01 154  P      Pn      09 49 45.5  -0.5
WACZ  Wakanui South     2.02 180  P      Pn      09 49 46.3  +0.4
ARCZ  Arundel           2.08 193  P      Pn      09 49 46.0  -0.8
AKCZ  Akaroa Harbour    2.10 158  P      Pn      09 49 47.0  -0.1
AKCZ                              S      Sn      09 50 11.9  -1.8
FOZ   Fox Glacier       2.18 222  P      Pn      09 49 48.5  +0.3
SNZO  South Karori      2.25  75  P      Pn      09 49 50.3  +1.2
TMZ   Timaru            2.53 193  P      Pn      09 49 51.8  -1.2
KIW   Kapiti Island     2.55  66  P      Pn      09 49 54.2  +0.8
CAW   Cannon Point      2.57  72  P      Pn      09 49 53.8  +0.2
LBZ   Lake Benmore      2.73 205  P      Pn      09 49 57.7  +1.8
OGWZ  Otaki Gorge       2.75  67  P      Pn      09 49 57.3  +1.2
MTW   Mount Morrison    2.86  76  P      Pn      09 49 56.8  -0.8
HOWZ  Holdsworth Sta    2.96  71  P      Pb      09 50 02.0  -2.5
JCZ   Jackson Bay       3.09 225  P      Pn      09 50 00.2  -0.7
MRZ   Mangatainoka R    3.10  67  P      Pb      09 50 03.9  -3.0
PREZ  Palmer Road       3.13  35  P      Pn      09 50 02.5  +1.2
PKE   Pukeiti           3.19  32  P      Pn      09 50 02.6  +0.6
ODZ   Otahua Downs      3.23 195  P      Pn      09 50 01.3  -1.4
ODZ   Otahua Downs      3.23 195  P      Pn      09 50 01.5  -1.2
VRZ   Vera Road         3.58  40  P      Pn      09 50 08.7  +1.3
EAZ   Earnscleugh       3.78 208  P      Pn      09 50 10.8  +0.6
WNVZ  Wahianoa          3.87  49  P      Pn      09 50 13.3  +1.7
MSZ   Milford Sound     3.95 225  P      Pn      09 50 14.4  +1.9
HIZ   Hauiti            4.12  35  P      Pn      09 50 14.3  -0.6
HIZ   Hauiti            4.12  35  P      Pn      09 50 14.3  -0.6
BKZ   Black Stump Fm    4.50  54  P      Pn      09 50 21.4  +1.3
PKGZ  Pakihiroa         6.27  52  P      Pn      09 50 43.4  -1.1
OUZ   Omahuta           6.84  12  P      Pn      09 50 52.4  +0.2
OUZ   Omahuta           6.84  12  P      Pn      09 50 52.2   0.0
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*IDC **04** 09:53:07.3±1.9, 25°.79S×177°.13W, h150^{km}±20^{km}, mb3.3/3, mb1 3.7/5, mb1mx3.4/41, mbtmp4.1/5, Error ellipse: s-maj=38.0km s-min=18.9km az=102.0*

ISC 04 09:53:03.5±1.1**, 25°.73S**±0°.09×**176°.5W**±0°.2**, h150^{km}, n9, σ1^s.04**/10**, mb3.5**/3**, South of Fiji Islands**

```
Code  Station Name       Δ°  AZ°   Phase ID        Time       Res
                                  Op     ISC      h  m  s    ISC
RAO   Raoul Island      3.71 199  P      Pn      09 54 01.1  +1.1
      212nm,0.3s,baz=358,slow=22,SNR=5.3
RAO                               S      Sn      09 54 43.9  -0.1
      76nm,0.3s,baz=97,slow=20,SNR=1.7
MSVF  Nonsavu           9.42 327  P      Pn      09 55 17.7  +1.7
      0.3nm,0.3s,baz=145,slow=18,SNR=6.8
AFI   Afiamalu         12.58  22  P      P       09 56 03.0  -0.1
      3.5nm,0.3s,baz=225,slow=8.6,SNR=4.8
AFI                               S      Sn      09 58 16.3  -0.5
      1.8nm,0.3s,baz=125,slow=20,SNR=1.3
URZ   Urewera          13.60 202  S      Sn      09 58 25.8   -15
      1.0nm,0.3s,baz=302,slow=23,SNR=1.9
CTA   Charters Tower   34.65 272  P      P       09 59 37.7  -1.1
      2.0nm,0.6s,baz=104,slow=8.4,SNR=2.6
ASAR  Alice Springs    44.86 262  P      P       10 01 02.1  -1.1
      0.2nm,0.4s,baz=94,slow=7.7,SNR=5.2
WRA   Warramunga Arr   45.44 267  P      P       10 01 07.0  -0.7
      1.4nm,1.0s,baz=104,slow=7.9,SNR=5.1
NOA   NORSAR Array B  144.31 354  PKP    PKiKP   10 12 25.2  +0.4
      0.6nm,0.5s,baz=4.4,slow=2.2,SNR=3.5
AKASG Malin Array Be  148.19 328  PKPbc  PKPab   10 12 34.4  -0.4
      0.3nm,0.3s,baz=46,slow=4.3,SNR=1.9
```

DJA 04 09:53:37.6±0.7**, 0˚N**±5˚×**9˚8E**±˚**, h10^{km}, M3.5**/4**, MLv3.5**/4**, Northern Sumatera**

```
Code  Station Name       Δ°  AZ°   Phase ID        Time       Res
                                  Op     ISC      h  m  s    ISC
GSI   Gunungsitoli      0.89 336  P      Pg      09 53 54.8  +0.1
MNSI  Mandailing Nat    1.67  80  P      Pn      09 54 06.6  -0.3
SISI  Saibi             2.14 148  P      Pn      09 54 13.5  +0.1
PPI   Padang Panjang    2.63 111  P      Pn      09 54 20.2   0.0
PDSI  Padang            2.88 119  P      Pg      09 54 33.9  +1.0
BKNI  Bangkinang        3.10  93  P      Pn      09 54 21.4  -5.3
PPBI  Pangkal Pinang    8.61 108  P      Pn      09 55 48.1  +5.7
PBKI  Pangkalan Bun    14.09 103  P      Pn      09 57 00.0  +2.6
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*IDC **04** 09:58:15.8±1.3, 8°.16S×125°.69E, h0^{km}, mb4.1/4, mb1 4.2/8, mb1mx3.8/51, mbtmp4.0/8, ML3.6/4, MS3.2/4, Ms1 3.2/4, ms1mx2.7/38, Error ellipse: s-maj=47.3km s-min=21.3km az=76.0*

*NEIC **04** 09:58:16.6±1.6, 8°.34S±0°.05×125°.54E±0°.09, h10^{km}±1^{km}, mb4.5/9, Error ellipse: s-maj=16.9km s-min=3.4km az=64.0*

ISC 04 09:58:19.3±0.6**, 8°.42S**±0°.06×**125°.61E**±0°.08**, h35^{km}, n31, σ2^s.26**/31**, mb4.3**/8**, Timor region**

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Code  Station Name       Δ°  AZ°   Phase ID        Time       Res
                                  Op     ISC      h  m  s    ISC
SOEI  Soe               1.88 225         Pn      09 58 48.6  -0.5
BATI  Baumata           2.62 227  Pn     Pn      09 59 03.0  +3.8
      6.9nm,0.3s,baz=91,slow=5.7,SNR=3.3
BATI                              Sn     Sn      09 59 31.8  +2.0
      6.3nm,0.3s,baz=317,slow=24,SNR=11
BATI                              LR     LR      09 59 47.5
      comp=Z,201nm,19.0s,baz=14,slow=32
MMRI  Maumere           3.34 266  Pn     Pn      09 59 06.7  -2.4
KNRA  Kununurra         7.85 157         Pn      10 00 10.7  -0.4
FITZ  Fitzroy Crossi    9.62 180  Pn     Pn      10 00 38.6  +3.2
      0.4nm,0.3s,baz=354,slow=9.3,SNR=7.4
FITZ                              Sn     Sn      10 02 22.7  +0.3
      0.7nm,0.3s,baz=243,slow=5.9,SNR=7.2
FITZ  Fitzroy Crossi    9.62 180  Pn     Pn      10 00 35.3  -0.1
WB0   Warramunga Arr   14.13 144         P       10 01 39.7  -4.5
WRAB  Tennant Creek    14.23 144         Pn      10 01 40.2  +1.7
WRA   Warramunga Arr   14.24 145  Pn     P       10 01 40.7  -4.7
      0.3nm,0.3s,baz=317,slow=13,SNR=26
WRA                               Sn     Sn      10 04 19.9  +4.6
      0.1nm,0.3s,baz=313,slow=20,SNR=2.5
WRA                               LR     LR      10 08 06.2
      comp=Z,40nm,21.5s,baz=340,slow=41
WB2   Warramunga Arr   14.24 144         P       10 01 41.2  -4.2
WR0   Warramunga Arr   14.37 144         P       10 01 42.8  -4.0
ASAR  Alice Springs    17.12 153  P      P       10 02 20.4  +3.0
      0.1nm,0.3s,baz=321,slow=11,SNR=18
ASAR                              S      S       10 05 30.1  -4.0
      0.1nm,0.3s,baz=329,slow=12,SNR=4.7
ASAR  Alice Springs    17.12 153  P      P       10 02 18.1  +0.7
CMAR  Chiang Mai Arr   37.49 316  P      P       10 05 30.8  +0.8
      0.8nm,0.3s,baz=135,slow=6.5,SNR=6.0
CMAR  Chiang Mai Arr   37.49 316  P      P       10 05 29.3  -0.7
DZM   Mont Dzumac      41.52 114  LR     LR      10 23 00.8
      comp=Z,63nm,21.2s,baz=128,slow=36
MJAR  Matsushiro Arr   46.26  14  P      P       10 06 41.7  +0.3
PYZ   Puysegur Point   51.47 144  P      P       10 07 22.5  +1.2
MSVF  Nonsavu          51.77 106  LR     LR      10 28 20.1
      comp=Z,62nm,20.9s,baz=268,slow=35
JEW   Eniwo            53.02  15  P      P       10 07 32.4  -0.3
SONM  Songino Array    58.53 345  P      P       10 08 13.7  +1.3
      0.9nm,0.7s,baz=157,slow=7.8,SNR=2.4
CASY  Casey            58.70 187  P      P       10 08 13.7  +0.6
CASY                              IAmb   IAmb    10 08 13.8
      comp=Z,9.6nm,1.5s
TLY   Talaya           62.78 345  P      P       10 08 40.8  -0.3
PETK  Petropavlovsk-   67.09  20  P      P       10 09 09.8  +0.7
MK31  Makanchi Array   67.11 329  P      P       10 09 09.8  +0.4
MK31                              IAmb   IAmb    10 09 12.3
      comp=Z,2.5nm,0.8s
MKAR  Makanchi Array   67.11 329  P      P       10 09 10.3  +0.9
      comp=Z,3.7nm,0.9s,baz=134,slow=5.2,SNR=20
MKAR  Makanchi Array   67.11 329  P      P       10 09 09.7  +0.3
ZAA0  Zalesovo Array   71.01 336  P      P       10 09 32.6  -0.7
ZAA0                              IAmb   IAmb    10 09 35.6
      comp=Z,4.4nm,1.2s
ZALV  Zalesovo Beam    71.01 336  P      P       10 09 33.0  -0.3
      comp=Z,0.8nm,0.4s,baz=123,slow=5.5,SNR=7.6
KURK  Kurchatov        71.53 331  P      P       10 09 36.9  +0.3
KURK                              IAmb   IAmb    10 09 38.9
      comp=Z,3.0nm,0.8s
AKUT  Akutan           84.57  33  P      P       10 10 48.9  +0.1
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*NEIC **04** 09:58:56.3±0.7, 35°.93N±0°.01×97°.35W±0°.01, h9^{km}±3^{km}, Error ellipse: s-maj=1.8km s-min=1.4km az=144.0*

TUL 04 09:58:56.1±1.5**, 35°.91N**±0°.01×**97°.33W**±0°.01**, h6^{km}**±6^{km}**, ML2.5, mb_Lg2.1**/11(NEIC)**, Error ellipse: s-maj=1.7km s-min=1.4km az=141.0, Oklahoma**

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Code  Station Name       Δ°  AZ°   Phase ID        Time       Res
                                  Op     ISC      h  m  s    ISC
OKCFA Oklahoma City     0.50 191         Pg      09 59 06.1  +0.3
OKCFA                             Sg     Sg      09 59 13.4  +1.1
OKCSW OKLAHOMA CITY     0.51 190  Pg     Pg      09 59 06.3  +0.4
FNO   Franklin          0.65 185  Pg     Pg      09 59 08.8  +0.1
FNO                               IAmb_Lg        09 59 18.0
      comp=Z,27nm,1.1s
FNO                               Sg     Sg      09 59 18.1  +1.0
T35A  Sooner Cattle     1.20  33         Pg      09 59 18.7  -0.5
TUL1  Leonard           1.25  90         Pg      09 59 19.0  -1.1
X34A  Smith Ranch, M    1.37 198         Pn      09 59 21.9  +0.2
U32A  Winter Ranch,     1.43 290  Pn     Pn      09 59 22.5  -0.1
WMOK  Wichita Mounta    1.66 226  Pn     Pb      09 59 26.6  -0.6
X37A  Clayton           2.08 129  Pn     Pn      09 59 32.4  +0.9
X37A                              IAmb_Lg        10 00 05.7
      comp=Z,12nm,0.8s
U38A  Gravette          2.44  77         Pn      09 59 37.5  +1.0
KSU1  Kansas State U    3.24  10  IAmb_Lg        10 00 39.1
      comp=Z,8.2nm,0.8s
U40A  Yellville         3.65  82  Pn     Pn      09 59 52.8  -0.4
U40A                              IAmb_Lg        10 01 02.3
      comp=Z,1.7nm,0.8s
S39A  Bolivar           3.68  60  Pn     Pn      09 59 54.0  +0.5
S39A                              IAmb_Lg        10 00 53.0
      comp=Z,4.0nm,0.7s
X40A  Basin Creek Fa    3.95 110  IAmb_Lg        10 01 07.0
      comp=Z,5.6nm,0.7s
FCAR  Ozark Folk Cen    4.23  89  IAmb_Lg        10 01 21.1
      comp=Z,3.4nm,0.8s
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*NEIC **04** 10:07:03.6±1.4, 8°.31S±0°.08×125°.37E±0°.07, h10^{km}±1^{km}, mb4.3/7, Error ellipse: s-maj=14.6km s-min=11.0km az=155.0*

*DJA **04** 10:07:04.2±2.7, 8˚S±13˚×12˚5E±2˚1, h10^{km}±5^{km}, M3.5/3, MLv3.5/3*

*IDC **04** 10:07:09.8±2.6, 8°.38S×125°.70E, h65^{km}±31^{km}, mb3.5/3, mb1 3.7/8, mb1mx3.5/45, mbtmp3.8/8, ML3.7/5, MS3.1/1, Ms1 3.1/1, ms1mx2.2/28, Error ellipse: s-maj=31.4km s-min=21.7km az=70.0*

ISC 04 10:07:06.5±0.7**, 8°.37S**±0°.06×**125°.40E**±0°.08**, h35^{km}, n33, σ1^s.78**/33**, mb4.0**/5**, Timor region**

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Code  Station Name       Δ°  AZ°   Phase ID        Time       Res
                                  Op     ISC      h  m  s    ISC
SOEI  Soe               1.77 219         Pn      10 07 34.6  -0.2
SOEI  Soe               1.77 219  P      Pn      10 07 30.7  -4.1
BATI  Baumata           2.50 223  P      Pn      10 07 51.6  +6.9
      6.4nm,0.3s,baz=117,slow=9.1,SNR=2.4
BATI                              S      Sn      10 08 18.7  +4.6
      15nm,0.3s,baz=129,slow=22,SNR=6.3
BATI  Baumata           2.50 223  P      Pn      10 07 41.8  -2.9
MMRI  Maumere           3.13 265  Pn     Pn      10 07 52.5  -0.9
MMRI  Maumere           3.13 265  P      Pn      10 07 47.6  -5.8
EDFI  Ende, Flores      3.68 264  P      Pn      10 07 58.5  -2.6
KNRA  Kununurra         7.97 156         Pn      10 09 03.4  +3.4
SIJI  Sorong            9.47  38  P      Pn      10 09 20.1  -0.4
      1.3nm,0.3s,baz=229,slow=19,SNR=1.7
FITZ  Fitzroy Crossi    9.67 179  P      Pn      10 09 24.6  +1.3
      0.6nm,0.3s,baz=359,slow=11,SNR=19
FITZ                              S      Sn      10 11 07.1  -3.7
      1.0nm,0.3s,baz=346,slow=20,SNR=9.8
FITZ  Fitzroy Crossi    9.67 179         Pn      10 09 24.3  +1.0
TOLI2 Tolitoli         10.48 334  Pn     Pn      10 09 29.0  -5.3
WB0   Warramunga Arr   14.29 143  Pn     Pn      10 10 26.5   0.0
WRAB  Tennant Creek    14.40 144  Pn     Pn      10 10 27.6  -0.3
WRA   Warramunga Arr   14.40 144  P      Pn      10 10 27.0  -1.0
      0.4nm,0.3s,baz=319,slow=12,SNR=22
WRA                               S      Sn      10 13 06.6  +0.2
      0.2nm,0.3s,baz=322,slow=30,SNR=2.8
WB2   Warramunga Arr   14.40 144  Pn     Pn      10 10 27.9  -0.2
WR0   Warramunga Arr   14.53 143         Pn      10 10 28.9  -0.8
AS31  Alice Springs    17.26 153  P      P       10 11 07.0  +0.8
ASAR  Alice Springs    17.26 153  P      P       10 11 06.3  +0.2
      0.2nm,0.3s,baz=320,slow=11,SNR=13
ASAR                              S      Sn      10 14 14.9  -1.1
      0.1nm,0.3s,baz=339,slow=15,SNR=2.7
ASAR  Alice Springs    17.26 153  P      P       10 11 06.4  +0.3
CISI  Cisompet, Garu   17.43 271  P      Pn      10 11 07.5  +0.4
CISI                              IAmb   IAmb    10 11 25.4
      comp=Z,63nm,1.5s
LEM   Lembang          17.69 274  LR     LR      10 20 23.8
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	comp=Z,56nm,20.7s,baz=171,slow=44						
SONM	Songino Array	58.44	345	P	P	10 17 00.2	+1.3
	comp=Z,0.5nm,0.6s,baz=164,slow=7.0,SNR=2.3						
TLY	Talaya	62.68	345	P	P	10 17 26.0	-1.6
MK31	Makanchi Array	66.97	329	P	P	10 17 55.7	+0.1
MK31				IAmb	IAmb	10 18 09.1	
	comp=Z,1.8nm,1.1s						
MKAR	Makanchi Array	66.97	329	P	P	10 17 56.4	+0.8
	comp=Z,1.1nm,0.7s,baz=116,slow=8.2,SNR=9.4						
MKAR	Makanchi Array	66.97	329	P	P	10 17 56.1	+0.5
PETK	Petropavlovsk-	67.12	20	P	P	10 17 57.7	+1.2
PET	Petropavlovsk	67.38	21	P	P	10 17 57.7	-0.4
ZALV	Zalesovo Beam	70.88	336	P	P	10 18 20.8	+1.0
	comp=Z,0.4nm,0.3s,baz=142,slow=7.3,SNR=3.8						
ZALV	Zalesovo Beam	70.88	336	P	P	10 18 19.8	0.0
KURK	Kurchatov	71.39	331	P	P	10 18 23.4	+0.5
KURK				IAmb	IAmb	10 18 25.2	
	comp=Z,1.8nm,0.8s						
CRZF	Crozet Islands	72.64	224	P	P	10 18 31.7	+1.1

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*IDC **04** 10:11:20.8±4.7, 5°.37S×153°.65E, h52^{km}±39^{km}, mb3.7/9, mb1 3.9/10, mb1mx3.7/46, mbtmp4.1/10, ML2.5/1, MS3.1/7, Ms1 3.1/7, ms1mx2.9/37, Error ellipse: s-maj=26.5km s-min=24.2km az=48.0*

*NEIC **04** 10:11:21.5±1.8, 5°.4S±0°.1×153°.8E±0°.1, h51^{km}±6^{km}, mb4.1/19, Error ellipse: s-maj=19.6km s-min=13.9km az=59.0*

ISC 04 10:11:20.4±0.8, 5°.3S±0°.1×153°.74E±0°.10, h50^{km}, n41, σ0^{s}.95/36, mb4.0/13, MS3.0/5, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	7.38	124	LR	LR	10 15 53.6	
	comp=Z,118nm,21.8s,baz=224,slow=37						
PMG	Port Moresby	7.67	238	P	Pn	10 13 10.4	+0.7
	4.4nm,0.3s,baz=67,slow=7.8,SNR=6.5						
PMG				S	Sn	10 14 34.3	-1.1
	3.5nm,0.3s,baz=16,slow=19,SNR=4.1						
PMG				LR	LR	10 16 10.2	
	comp=Z,102nm,20.0s,baz=52,slow=38						
PMG	Port Moresby	7.67	238		Pn	10 13 10.3	+0.6
LIFNC	LIFOU	20.19	141	P	P	10 15 50.3	-0.8
DZM	Mont Dzumac	20.69	145	P	P	10 15 57.0	+0.4
	11nm,0.5s,baz=262,slow=5.4,SNR=23						
DZM	Mont Dzumac	20.69	145	P	P	10 15 56.8	+0.2
DZM				IAmb	IAmb	10 16 00.7	
	comp=Z,25nm,1.1s						
GUMO	Guam	20.76	335	LR	LR	10 22 42.7	
	comp=Z,30nm,21.7s,baz=116,slow=33						
OUENC	Ouen Island, N	21.19	145	P	P	10 16 00.4	-1.5
MARNC	Mare, Loyalty	21.20	141	P	P	10 16 00.1	-1.9
WR0	Warramunga Arr	23.67	230	P	P	10 16 26.2	-1.4
WR0				IAmb	IAmb	10 16 37.5	
	comp=Z,5.2nm,0.9s						
WB0	Warramunga Arr	23.67	231	P	P	10 16 29.5	+1.8
WRAB	Tennant Creek	23.80	231	P	P	10 16 28.1	-0.8
WRAB				IAmb	IAmb	10 16 28.6	
	comp=Z,6.3nm,1.1s						
WB2	Warramunga Arr	23.80	231	P	P	10 16 28.2	-0.7
WB2				IAmb	IAmb	10 16 52.4	
	comp=Z,12nm,1.4s						
WRA	Warramunga Arr	23.81	231	P	P	10 16 27.9	-1.1
	comp=Z,2.3nm,1.0s,baz=54,slow=9.7,SNR=6.8						
WRA				PcP	PcP	10 20 10.9	-0.6
	comp=Z,1.4nm,0.7s,baz=60,slow=2.2,SNR=10						
WRA	Warramunga Arr	23.81	231	P	P	10 16 28.7	-0.3
ARMA	Armidale	25.03	184	P	P	10 16 40.1	0.0
ARMA				IAmb	IAmb	10 16 42.3	
	comp=Z,11nm,1.1s						
AS31	Alice Springs	26.40	224	P	P	10 16 53.6	+1.1
ASAR	Alice Springs	26.41	224	P	P	10 16 51.4	-1.2
	comp=Z,0.8nm,0.5s,baz=59,slow=9.1,SNR=11						
ASAR				PcP	PcP	10 20 17.6	+0.4
	comp=Z,1.1nm,0.7s,baz=64,slow=2.6,SNR=12						
ASAR				LR	LR	10 26 50.2	
	comp=Z,64nm,20.9s,baz=336,slow=35						
KNRA	Kununurra	26.59	245	P	P	10 16 54.8	+0.6
H11S3	WAKE ISLAND Hy	26.90	28	T	T	10 45 22.8	
	baz=208,slow=73,SNR=20						
H11S2	WAKE ISLAND Hy	26.91	28	T	T	10 45 21.9	
	baz=208,slow=73,SNR=46						
H11S1	WAKE ISLAND Hy	26.92	28	T	T	10 45 18.6	
	baz=208,slow=73,SNR=34						
STKA	Stephens Creek	28.75	202	LR	LR	10 27 57.7	
	comp=Z,44nm,21.5s,baz=222,slow=35						
FITZ	Fitzroy Crossi	30.23	243	P	P	10 17 25.4	-1.3
	comp=Z,1.9nm,0.5s,baz=53,slow=8.8,SNR=11						
FITZ	Fitzroy Crossi	30.23	243	P	P	10 17 25.3	-1.4
FITZ				IAmb	IAmb	10 17 50.0	
	comp=Z,6.6nm,1.1s						
DAV	Davao City (W)	30.68	293	LR	LR	10 29 34.7	
	comp=Z,29nm,18.2s,baz=106,slow=36						
URZ	Urewera	39.06	150	P	P	10 18 43.1	+0.6
BKZ	Black Stump Fm	39.48	152	P	P	10 18 46.2	0.0
JHJ	Hachijo jima 2	40.47	342	LR	LR	10 34 18.7	
	comp=Z,44nm,18.7s,baz=315,slow=34						
RPZ	Rata Peaks	41.16	161	P	P	10 19 01.6	+1.6
VNDA	Vanda	72.27	178	P	P	10 22 40.5	+0.4
	comp=Z,0.7nm,0.7s,baz=320,slow=5.9,SNR=6.4						
VNDA	Vanda	72.27	178	P	P	10 22 40.5	+0.4
VNDA				IAmb	IAmb	10 22 56.3	
	comp=Z,3.5nm,1.4s						
MK31	Makanchi Array	81.34	319	P	P	10 23 32.6	+0.9
MK31				IAmb	IAmb	10 23 57.0	
	comp=Z,2.1nm,1.1s						
MKAR	Makanchi Array	81.34	319	P	P	10 23 32.5	+0.7
	comp=Z,1.3nm,0.7s,baz=92,slow=6.4,SNR=10						
MKAR	Makanchi Array	81.34	319	P	P	10 23 32.6	+0.9
ZALV	Zalesovo Beam	82.11	326	P	P	10 23 36.2	+0.6
	comp=Z,0.7nm,0.4s,baz=96,slow=6.6,SNR=3.8						
ILAR	Eielson Array	82.30	22	P	P	10 23 35.5	-0.9
	comp=Z,0.4nm,0.8s,baz=258,slow=6.8,SNR=4.4						
QSPA	South Pole Qui	84.63	180	P	P	10 23 48.5	-0.1
MAW	Mawson	85.44	203	P	P	10 23 52.7	+0.3
	comp=Z,0.6nm,0.3s,baz=63,slow=6.8,SNR=1.6						
MAW	Mawson	85.44	203	P	P	10 23 52.8	+0.5
MAW				IAmb	IAmb	10 24 17.9	
	comp=Z,2.0nm,1.5s						
TORD	Torodi Ar. Bea	151.36	288	PKPbc	PKPbc	10 31 09.4	-0.3
	comp=Z,0.7nm,0.3s,baz=50,slow=2.2,SNR=8.7						

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*IDC **04** 10:14:08.7±2.1, 17°.24S×178°.68W, h578^{km}±20^{km}, mb3.1/6, mb1 3.3/7, mb1mx3.0/45, mbtmp4.0/7, Error ellipse: s-maj=104.5km s-min=21.4km az=154.0*

ISC 04 10:14:05.3±1.4, 18°.2S±0°.6×178°.1W±0°.3, h550^{km}, n7, σ1^{s}.76/7, mb3.4/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.75	277	P	P	10 15 27.1	+1.6
	2.4nm,0.3s,baz=0.0,slow=4.0,SNR=28						
STKA	Stephens Creek	38.78	242	P	P	10 20 44.1	+0.9
	1.9nm,0.5s,baz=76,slow=8.7,SNR=7.2						
WRA	Warramunga Arr	44.91	260	P	P	10 21 29.5	-2.2
	1.0nm,0.5s,baz=94,slow=7.2,SNR=27						
ASAR	Alice Springs	45.03	255	P	P	10 21 31.4	-1.2
	6.7nm,0.4s,baz=88,slow=7.7,SNR=169						
FITZ	Fitzroy Crossi	53.31	261	P	P	10 22 32.5	-1.2
	0.4nm,0.3s,baz=101,slow=4.8,SNR=1.7						
TXAR	Lajitas Array	85.88	57	P	P	10 25 48.4	+0.7
	0.3nm,0.7s,baz=206,slow=6.0,SNR=4.6						
PDAR	Pinedale Array	87.35	43	P	P	10 25 53.6	-0.9
	0.1nm,0.3s,baz=241,slow=0.9,SNR=2.1						

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*CRAAG **04** 10:19:29.1, 36°.59N×1°.19E, Ml2.8*

*MDD **04** 10:19:31.6±0.7, 36°.52N×1°.28E, h27^{km}±15^{km}, mb3.8/4, Error ellipse: s-maj=14.9km s-min=7.5km az=121.0, PRXIMO*

ISC 04 10:19:29.3±0.9, 36°.55N±0°.04×1°.15E±0°.05, h16^{km}, n22, σ1^{s}.46/29, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EBNR	Beni Rached	0.40	130	P	Pg	10 19 38.9	+1.4
ECHF	Ech Chlef	0.42	158	P	Pg	10 19 38.6	+0.7
ECHA	Ech Chlef	0.44	156	P	Pg	10 19 38.6	+0.5
EANR	'Ain N'Sour	0.60	184	P	Pn	10 19 43.5	+0.3
EANR	'Ain N'Sour	0.60	184	P	Pn	10 19 43.5	+0.3
OKGL	Djebel Kef Gue	0.66	219	P	Pn	10 19 46.0	+2.0
OKGL	Djebel Kef Gue	0.66	219	P	Pn	10 19 46.0	+2.0
OJGS	Djebel Guires	1.09	197	P	Pb	10 19 49.0	-0.9
OJGS	Djebel Guires	1.09	197	P	Pb	10 19 49.0	-0.9
OJBR	Djebel Berber	1.17	214	P	Pn	10 19 45.0	-6.0
ODJA	Bouhanifia	1.61	221	P	Pn	10 19 52.0	-5.1
CART	Cartagena	2.00	302	P	Pb	10 20 04.9	-0.4
CART				S	Sn	10 20 24.1	-3.1
EBEN2	Beniarda presa	2.37	334	S	Sn	10 20 35.8	-0.6
	7.7nm,0.1s,SNR=7.9						
EIBI	Ibiza	2.48	4	P	Pn	10 20 10.1	+1.1
	3.2nm,0.1s,SNR=7.2						
EIBI				S	Sn	10 20 36.8	-2.1
	20nm,0.2s,SNR=6.9						
ETOB	Tobarra	2.99	315	P	Pn	10 20 17.3	+1.2
	1.7nm,0.1s,SNR=14						
ETOB				S	Sn	10 20 51.7	0.0
	3.7nm,0.4s,SNR=7.9						
EBER	Berja	3.26	277	P	Pn	10 20 20.2	+0.3
	1.3nm,0.2s,SNR=7.5						
EBER				S	Sn	10 20 57.0	-1.5
	3.6nm,0.3s,SNR=7.9						
SESP	Santiago Espad	3.33	299	S	Sn	10 20 59.0	-1.3
	8.4nm,0.5s,SNR=7.9						
ECHE	Chera	3.46	332	P	Pn	10 20 24.0	+1.4
	0.4nm,0.2s,SNR=7.9						
ECHE				S	Sn	10 21 03.2	-0.1
	0.6nm,0.2s,SNR=7.9						
ETOS	Mallorca	3.47	22	P	Pn	10 20 23.0	+0.3
	0.3nm,0.2s,SNR=7.9						
ETOS				S	Sn	10 21 02.1	-1.3
	0.4nm,0.2s,SNR=7.9						
ELGU	Los Guajares,	3.85	276	P	Pn	10 20 29.9	+1.9
	0.4nm,0.2s,SNR=7.9						
ELGU				S	Sn	10 21 10.8	-2.1
	2.8nm,0.4s,SNR=7.9						
EMOS	Mosqueruela	4.01	342	P	Pn	10 20 32.1	+1.8
	0.8nm,0.1s,SNR=12						
EMOS				S	Sn	10 21 15.5	-1.6
	1.6nm,0.3s,SNR=7.9						
EPOB	Poblet	4.79	359	P	Pn	10 20 42.0	+1.1
	1.2nm,0.3s,SNR=7.9						
EPOB				S	Sn	10 21 34.3	-1.9
	0.9nm,0.3s,SNR=7.9						

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*IDC **04** 10:24:03.9±0.8, 8°.23S×125°.44E, h0^{km}, mb4.2/7, mb1 4.3/12, mb1mx4.1/34, mbtmp4.2/12, ML3.8/5, MS3.2/4, Ms1 3.2/4, ms1mx2.7/34, Error ellipse: s-maj=31.6km s-min=16.6km az=79.0*

*NEIC **04** 10:24:05.4±1.6, 8°.21S±0°.06×125°.28E±0°.07, h10^{km}±1^{km}, mb4.7/19, Error ellipse: s-maj=11.3km s-min=10.6km az=268.0*

*DJA **04** 10:24:07.3±0.5, 8°S±5°×12°5E±°, h10^{km}, M4.4/6, mb4.5/6, mB4.7/1, MLv4.3/6, Mw(mB)4.0/1*

ISC 04 10:24:08.1±0.5, 8°.30S±0°.05×125°.34E±0°.06, h35^{km}, n63, σ1^{s}.87/63, mb4.6/17, 1D, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.79	216		Pn	10 24 36.4	-0.3
SOEI	Soe	1.79	216	P	Pn	10 24 37.1	+0.4
SOEI	Soe	1.79	216	P	Pn	10 24 38.8	+2.1
BATI	Baumata	2.51	221	Pn	Pn	10 24 47.9	+1.3
	25nm,0.3s,baz=16,slow=4.1,SNR=8.0						
BATI				Sn	Sn	10 25 19.3	+3.3
	52nm,0.3s,baz=144,slow=22,SNR=9.1						
BATI				LR	LR	10 25 51.3	
	comp=Z,357nm,21.8s,baz=38,slow=41						
BATI	Baumata	2.51	221	P	Pn	10 24 48.7	+2.2
MMRI	Maumere	3.08	264		Pn	10 24 52.9	-1.5
EDFI	Ende, Flores	3.63	263	P	Pn	10 25 00.8	-1.2
BSSI	Bau Bau, Buton	5.27	294	P	Pn	10 25 24.2	-0.2
	0.2nm42nm,0.6s						
KAPI	Kappang	6.44	300	Pn	Pn	10 25 41.5	+1.0
	1.1nm,0.3s,baz=127,slow=20,SNR=1.9						
KAPI				Sn	Sn	10 26 47.5	-5.3
	0.8nm,0.3s,baz=139,slow=20,SNR=1.2						
KAPI	Kappang	6.44	300		Pn	10 25 38.4	-2.1
DRS	Darwin Rock St	6.84	127	P	Pn	10 25 51.9	+5.9
	12nm,0.9s						
MTN	Manton Dam	7.27	129		Pn	10 25 53.1	+1.2
MTN	Manton Dam	7.27	129	P	Pn	10 25 57.0	+5.1
	48nm,0.5s						
PLAI	Plampang	7.50	265	P	Pn	10 25 56.3	+1.3
	0.2nm57nm,0.8s						
KNRA	Kununurra	8.06	156	Pn	Pn	10 26 03.9	+1.1
KNRA	Kununurra	8.06	156	P	Pn	10 26 04.8	+2.0
	40nm,0.8s						
FAKI	Fak Fak	8.71	53	Pn	Pn	10 26 10.3	-1.4
SIJI	Sorong	9.45	39	LR	LR	10 30 12.8	
	comp=Z,116nm,18.8s,baz=297,slow=40						
FITZ	Fitzroy Crossi	9.74	178	Pn	Pn	10 26 25.5	-0.4
	1.0nm,0.3s,baz=16,slow=12,SNR=17						
FITZ				Sn	Sn	10 28 08.5	-5.6
	3.0nm,0.3s,baz=277,slow=19,SNR=10						
FITZ	Fitzroy Crossi	9.74	178	Pn	Pn	10 26 25.9	0.0
FITZ	Fitzroy Crossi	9.74	178	P	Pn	10 26 25.7	-0.2
	11nm,0.9s						
PSA00	Pilbara Seismi	14.22	201	Pn	Pn	10 27 25.7	-1.4
WB0	Warramunga Arr	14.38	143		Pn	10 27 28.5	-0.8
WRAB	Tennant Creek	14.49	144		Pn	10 27 28.6	-2.1
WRA	Warramunga Arr	14.49	144	Pn	Pn	10 27 28.5	-2.2
	0.5nm,0.3s,baz=317,slow=13,SNR=39						
WRA				Sn	Sn	10 30 07.3	-2.9
	0.5nm,0.3s,baz=319,slow=26,SNR=5.3						
WRA	Warramunga Arr	14.49	144		Pn	10 27 28.9	-1.8
WB2	Warramunga Arr	14.49	144	Pn	Pn	10 27 29.2	-1.7
WR0	Warramunga Arr	14.62	143	Pn	Pn	10 27 30.7	-1.8
AS31	Alice Springs	17.34	153	P	P	10 28 08.8	+0.1
ASAR	Alice Springs	17.34	153	P	Pn	10 28 07.8	+0.2
	0.3nm,0.3s,baz=328,slow=12,SNR=19						
ASAR				S	Sn	10 31 12.9	-6.8
	0.2nm,0.3s,baz=319,slow=16,SNR=4.6						
LEM	Lembang	17.63	274	LR	LR	10 36 49.3	
	comp=Z,120nm,19.1s,baz=155,slow=43						
CMAR	Chiang Mai Arr	37.22	316	P	P	10 31 17.8	+1.3
	2.5nm,0.8s,baz=142,slow=6.6,SNR=15						
CMAR	Chiang Mai Arr	37.22	316	P	P	10 31 15.9	-0.6
CHTO	Chiang Mai	37.46	316	P	P	10 31 18.0	-0.6
TAU	Tasmania Unive	39.51	154	P	P	10 31 36.4	+1.0
TAU				IAmb	IAmb	10 32 05.3	
	comp=Z,27nm,1.1s						
SANVU	Saraoutou	41.52	104	P	P	10 31 53.6	+1.1
INCN	Inchon	45.56	1	P	P	10 32 24.1	-0.6
INCN				IAmb	IAmb	10 32 48.1	
	comp=Z,13nm,1.0s						
KS19	Wonju Array Si	45.62	3	P	P	10 32 25.2	0.0
KS19				IAmb	IAmb	10 32 43.1	
	comp=Z,18nm,1.4s						
MJAR	Matsushiro Arr	46.22	14	P	P	10 32 30.7	+0.9
	comp=Z,2.9nm,0.9s,baz=194,slow=8.2,SNR=6.0						
SHL	Shillong	46.83	317	P	P	10 32 35.3	+0.2
SHL				IAmb	IAmb	10 32 38.3	
	comp=Z,5.3nm,0.6s						
USRK	Ussuriysk Ar.	52.60	6	P	P	10 33 18.5	+0.1
	comp=Z,1.7nm,0.7s,baz=234,slow=5.0,SNR=3.8						
MDJ	Mudanjiang	52.81	4	P	P	10 33 20.0	0.0
MDJ				IAmb	IAmb	10 33 25.4	
	comp=Z,15nm,1.1s						
JEW	Eniwo	52.98	15	P	P	10 33 21.1	-0.2
TUWZ	Tuamarina	54.08	136	P	P	10 33 30.4	+0.9
SONM	Songino Array	58.35	345	P	P	10 34 01.4	+1.4
	comp=Z,2.5nm,0.8s,baz=160,slow=7.7,SNR=11						
SONM	Songino Array	58.35	345	P	P	10 34 00.8	+0.9
TLY	Talaya	62.59	345	P	P	10 34 28.1	-0.6
TLY				IAmb	IAmb	10 34 47.1	
	comp=Z,2.5nm,0.8s						
MIDW	Midway	66.14	54	P	P	10 34 52.1	-0.3
MK31	Makanchi Array	66.88	329	P	P	10 34 57.3	+0.6
MK31				IAmb	IAmb	10 34 58.7	
	comp=Z,6.3nm,0.9s						
MKAR	Makanchi Array	66.88	329	P	P	10 34 57.5	+0.8
	comp=Z,6.1nm,0.8s,baz=136,slow=8.2,SNR=37						
MKAR	Makanchi Array	66.88	329	P	P	10 34 57.3	+0.6
MAKZ	Makanchi	67.05	329	P	P	10 34 57.7	-0.1
MAKZ				IAmb	IAmb	10 34 59.1	
	comp=Z,3.4nm,0.8s						
ZAA0	Zalesovo Array	70.79	336	P	P	10 35 20.6	-0.2
ZAA0				IAmb	IAmb	10 35 21.9	
	comp=Z,4.9nm,0.9s						
ZALV	Zalesovo Beam	70.79	336	P	P	10 35 20.8	0.0
	comp=Z,4.2nm,0.8s,baz=132,slow=4.4,SNR=13						
ZALV	Zalesovo Beam	70.79	336	P	P	10 35 20.2	-0.6
KURK	Kurchatov	71.30	331	P	P	10 35 24.1	+0.1
KURK				IAmb	IAmb	10 35 25.7	
	comp=Z,6.7nm,0.9s						
VNDA	Vanda	71.76	172	P	P	10 35 29.1	+2.7
	comp=Z,0.5nm,0.8s,baz=316,slow=6.1,SNR=5.4						
VNDA	Vanda	71.76	172	P	P	10 35 28.4	+1.9
ABKAR	Akbulak array	80.70	323	P	P	10 36 17.4	-0.3
KIP	Kipapa	80.74	67	P	P	10 36 19.9	+1.5
SYO	Syowa Base	80.78	201⇓	eP	P	10 36 20.4	+2.7
MMAI	Mount Meron Ar	94.41	303	LR	LR	11 25 17.6	
	comp=Z,9.1nm,19.4s,baz=55,slow=39						
TORD	Torodi Ar. Bea	124.51	280	PKP	PKiKP	10 43 05.3	+0.2
	comp=Z,0.2nm,0.6s,baz=50,slow=1.6,SNR=3.5						

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*IDC **04** 10:28:49.7±2.8, 60°.54S×26°.73W, h0^{km}, mb3.9/2, mb1 3.9/2, mb1mx3.5/17, mbtmp3.9/2, MS3.6/2, Ms1 3.5/2, ms1mx3.1/22, Error ellipse: s-maj=133.7km s-min=50.7km az=169.0*

*NEIC **04** 10:28:50.5±1.1, 60°.7S±0°.2×27°.8W±0°.2, h10^{km}±1^{km}, mb4.6/13, Error ellipse: s-maj=26.5km s-min=19.1km az=192.0*

ISC 04 10:28:50.0±0.9, 60°.7S±0°.2×27°.7W±0°.1, h10^{km}, n20, σ0^{s}.90/20, mb4.4/7, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	7.95	320	Pn	Pn	10 30 45.2	-0.2
PMSA	Palmer Station	17.01	240		Pn	10 32 47.1	-0.5
MG02	Cerro Sombrero	23.76	271	P	P	10 34 01.4	-0.7
PLCA	Paso Flores	32.86	288	P	P	10 35 23.5	-0.2
PLCA				IAmb	IAmb	10 35 50.1	
	comp=Z,7.3nm,1.4s						
CO03	El Pedregal	41.09	297	P	P	10 36 33.8	+0.1
CO03				IAmb	IAmb	10 36 56.4	
	comp=Z,5.0nm,1.2s						
CO06	Fray Jorge	41.64	296	P	P	10 36 38.8	+0.6
BDFB	Brasilia	47.30	333	P	P	10 37 23.7	+0.1
BDFB				IAmb	IAmb	10 37 48.4	
	comp=Z,9.0nm,1.4s						
BOSA	Boshof	47.49	72	P	P	10 37 22.6	-2.5
	comp=Z,0.9nm,0.5s,baz=221,slow=14,SNR=4.6						
BOSA				LR	LR	10 53 46.2	
	comp=Z,53nm,18.9s,baz=184,slow=32						
BOSA	Boshof	47.49	72	P	P	10 37 26.0	+1.0
BOSA				IAmb	IAmb	10 37 36.7	
	comp=Z,27nm,1.5s						
OTAV	Otavalo	72.06	305	P	P	10 40 14.3	-0.4
KMBO	Kilima Mbogo	76.96	68	P	P	10 40 43.2	+0.4
KMBO				IAmb	IAmb	10 40 46.8	
	comp=Z,3.1nm,1.2s						
TORD	Torodi Ar. Bea	77.20	29	P	P	10 40 43.3	-0.5
	comp=Z,0.7nm,0.7s,baz=194,slow=6.4,SNR=4.9						
TORD	Torodi Ar. Bea	77.20	29	P	P	10 40 43.7	-0.1
CBYP	Canovanas	84.45	324	P	P	10 41 22.4	-0.1
ACON	Acoyapa	85.43	304	P	P	10 41 27.5	0.0
ACON				IAmb	IAmb	10 41 49.0	
	comp=Z,7.2nm,0.9s						
SDD	Santo Domingo	85.85	320	P	P	10 41 30.2	+0.8
MDT	Midelt	95.03	19	LR	LR	11 18 13.5	
	comp=Z,32nm,19.2s,baz=250,slow=31						
A36M	Sachs Harbour	147.91	325		PKPbc	10 48 33.6	+0.1
ILAR	Eielson Array	152.78	305	PKPbc	PKiKP	10 48 47.5	+1.9
	comp=Z,1.6nm,0.7s,baz=125,slow=0.5,SNR=16						
ILAR	Eielson Array	152.78	305	PKPdf	PKPdf	10 48 38.8	+0.6
ILAR					pPKPbc	10 48 47.7	-0.4

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*NEIC **04** 10:48:14.0±1.4, 10°.00S±0°.07×75°.42W±0°.07, h47^{km}±6^{km}, mb4.7/104, ML4.6(ARE), Error ellipse: s-maj=11.9km s-min=9.0km az=223.0*

*VAO **04** 10:48:15.8±0.4, 9°.91S×75°.26W, h53^{km}, mb4.5*

*IDC **04** 10:48:16.6±1.9, 9°.93S×75°.44W, h75^{km}±17^{km}, mb3.8/14, mb1 4.0/19, mb1mx4.0/32, mbtmp4.2/19, MS3.7/14, Ms1 3.7/14, ms1mx3.5/33, Error ellipse: s-maj=20.8km s-min=10.9km az=54.0*

ISC 04 10:48:12.9±0.4, 10°.00S±0°.05×75°.41W±0°.06, h41^{km}, n233, σ1^{s}.19/226, mb4.7/52, MS3.8/10, 1D, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CZSB	Cruzeiro do Su	3.49	50	eP	Pn	10 49 05.7	+0.8
ATAH	Atahualpa	4.10	314	P	Pn	10 49 14.5	+1.0
	17nm,0.3s,baz=180,slow=5.1,SNR=69						
ATAH				S	Sn	10 50 04.8	+4.3
	13nm,0.3s,baz=210,slow=13,SNR=1.9						
ATAH				LR	LR	10 51 08.9	
	comp=Z,423nm,21.1s,baz=131,slow=43						
TBTG	Tabatinga, AM	7.94	44	eP	Pn	10 50 07.2	+1.2
TBTG	Tabatinga, AM	7.94	44	eP	Pn	10 50 06.0	+0.1
ETMB	Extrema	9.06	90	eP	Pn	10 50 20.8	-0.4
LPAZ	La Paz	9.45	132	P	Pn	10 50 30.4	+3.2
	0.3nm,0.3s,baz=319,slow=9.9,SNR=6.3						
LPAZ				LR	LR	10 53 51.5	
	comp=Z,97nm,22.0s,baz=354,slow=35						
LPAZ	La Paz	9.45	132	Pn	Pn	10 50 28.5	+1.3
LPAZ	La Paz	9.45	132	eP	Pn	10 50 28.8	+1.7
LPAZ	La Paz	9.45	132	eP	Pn	10 50 28.9	+1.7
PTLC	Puerto Leguiza	10.12	3	eP	Pn	10 50 29.3	-6.5
OTAV	Otavalo	10.61	343		Pn	10 50 43.6	+0.8
OTAV	Otavalo	10.61	343	eP	Pn	10 50 46.6	+3.7
OTAV	Otavalo	10.61	343	eP	Pn	10 50 44.0	+1.1
PAC1	Pacto, Paraso	10.74	342	eP	Pn	10 50 44.0	-0.4
TULM	Tulcn-Chalpat	10.90	347	eP	Pn	10 50 48.2	+1.3
PB11	IPOC Station P	11.18	151	Pn	Pn	10 50 48.6	-1.9
GCUF	Volcan Galeras	11.31	350	eP	Pn	10 50 50.8	-1.8
PB08	IPOC Station P	11.75	150	Pn	Pn	10 50 56.8	-1.7
GARC	Garzon, Huila	12.10	360	eP	Pn	10 51 02.0	-1.2
SAML	Samuel	12.10	86		Pn	10 51 01.7	-1.3
SOTA	Rioblanco	12.11	354	eP	Pn	10 51 02.0	-1.4
MACC	Macarena, Meta	12.16	7	eP	Pn	10 51 03.6	-0.2
PCON	Cinco Dias	12.28	355	eP	Pn	10 51 06.3	+0.4
BETC	Betania	12.59	360	eP	Pn	10 51 09.2	-0.5
MARP	Paez Belalcaza	12.77	358	eP	Pn	10 51 10.9	-1.4
ORTC	Ortega, Tolima	13.81	1	eP	Pn	10 51 24.9	-1.5
YOTC	Yotoco, Valle	13.92	356	eP	Pn	10 51 25.7	-2.2
LVC	Limon Verde	14.00	154	P	P	10 51 34.4	-1.9
	0.2nm,0.3s,baz=315,slow=13,SNR=5.2						
VILC	Villavicencio,	14.12	7	eP	Pn	10 51 26.9	-3.7
ANIL	Santa Ana	14.39	0	eP	P	10 51 43.8	+3.1
CHIC	Chingaza	14.62	7	eP	Pn	10 51 37.1	-0.6
ROSC	El Rosal	14.78	4	P	Pn	10 51 42.2	+2.6
	4.0nm,0.3s,baz=71,slow=22,SNR=3.0						
ROSC				LR	LR	10 58 15.6	
	comp=Z,360nm,21.3s,baz=213,slow=41						
ROSC	El Rosal	14.78	4		Pn	10 51 38.1	-1.6
PLMC	San Jos del P	14.83	357	eP	Pn	10 51 40.0	-0.1
GUY2C	Guyana, Caldas	15.12	0	eP	P	10 51 47.7	-1.2
SIV	San Ignacio	15.18	115	P	Pn	10 51 43.8	-0.9
	0.9nm,0.3s,baz=287,slow=10,SNR=14						
SIV				LR	LR	10 58 32.1	
	comp=Z,200nm,19.9s,baz=78,slow=40						
PB14	IPOC Station P	15.31	163	Pn	Pn	10 51 47.2	+0.6
SPBC	San Pablo de B	15.60	5	eP	P	10 51 55.3	+1.5
CBOC	Ciudad Bolivar	15.77	358	eP	P	10 51 54.7	-1.1
RUSC	La Rusia	15.95	8	eP	Pn	10 51 54.9	-0.1
HELC	Santa Helena	16.08	360	eP	P	10 51 58.5	-0.9
MACA	Manacapuru-AM	16.12	66	eP	Pn	10 51 57.7	+0.9
BARC	Barichara	16.63	8⇓	eP	P	10 52 07.6	+2.2
TAMC	Tame, Arauca	16.72	13	eP	Pn	10 52 00.2	-4.1
PTLB	Pontes e Lacer	16.77	111	eP	P	10 52 06.0	-0.7
ZARC	Zaragoza, Cauc	17.38	2		Pn	10 52 10.8	-1.8
ZARC	Zaragoza, Cauc	17.38	2	eP	P	10 52 13.4	-0.1
PAMC	Pamplona, Colo	17.43	9	eP	P	10 52 14.4	-0.1
UREC	San Jos de Ur	17.63	360	eP	P	10 52 17.5	+1.3
AC02	Maricunga	17.77	161		P	10 52 19.8	+1.5
GO03	Copiap	18.17	165	P	Pn	10 52 22.2	-0.1
OCAC	Ocana	18.23	7	P	P	10 52 22.2	-0.9
OCAC	Ocana	18.23	7	eP	P	10 52 22.5	-0.5
PDRB	Porto dos Gac	18.42	97	eP	P	10 52 25.3	+0.3
AC04	Llanos de Chal	18.57	168	P	Pn	10 52 27.4	+0.3
MOTC	Monteria, Cord	18.65	359	eP	Pn	10 52 31.2	+3.1
SMLC	San Martn de	18.72	4	eP	P	10 52 27.5	-0.7
BOAV	Boa Vista	19.27	51	eP	P	10 52 35.1	+0.8
CLDB	Colider	19.31	94	eP	P	10 52 35.1	+0.4
SDV	Santo Domingo	19.35	14	P	P	10 52 36.2	+0.9
	3.7nm,0.3s,baz=204,slow=4.9,SNR=3.0						
SDV	Santo Domingo	19.35	14	P	P	10 52 35.7	+0.3
SDV				IAmb	IAmb	10 52 58.3	
	comp=Z,23nm,1.1s						
SDV	Santo Domingo	19.35	14	eP	Pn	10 52 36.6	-0.1
BCIP	Isla Barro Col	19.54	347	P	P	10 52 37.8	+0.6
BCIP				IAmb	IAmb	10 53 15.9	
	comp=Z,63nm,1.9s						
SJCC	San Jacinto, C	19.76	1	P	P	10 52 40.2	+0.5
SJCC				IAmb	IAmb	10 52 45.5	

	comp=Z,63nm,0.9s						
SJCC	**San Jacinto, C**	**19.76**	**1**	*e*P	**P**	**10 52 38.2**	**-1.5**
BRU2	**Volcan**	**20.02**	**339**	P	**P**	**10 52 42.5**	**-0.2**
BRU2				IAmb	IAmb	10 52 48.2	
	comp=Z,23nm,0.9s						
NPGB	**Novo Progresso**	**20.04**	**83**	*e*P	**P**	**10 52 42.2**	**-0.6**
SALV	**Santo Antonio**	**20.08**	**109**	*e*P	Pn	10 52 45.3	+0.1
BAUV	**El Baul**	**20.19**	**22**	P	**P**	**10 52 45.1**	**+0.8**
BAUV				IAmb	IAmb	10 53 01.7	
	comp=Z,55nm,1.1s						
RIOS	**Rincon, Osa**	**20.25**	**336**	P	**P**	**10 52 44.8**	**-0.2**
RIOS				IAmb	IAmb	10 53 11.1	
	comp=Z,50nm,1.2s						
ITTB	**Itaituba**	**20.30**	**75**	*e*P	**P**	**10 52 45.6**	**+0.1**
GO04	**Tololo Observa**	**20.53**	**169**	P	**P**	**10 52 48.2**	**0.0**
GO04				IAmb	IAmb	10 53 00.2	
	comp=Z,22nm,0.4s						
SRBA	**San Rafael, Bu**	**20.68**	**337**	P	**P**	**10 52 49.8**	**+0.1**
PP1B	**Ponte de Pedra**	**21.31**	**113**	*e*P	**P**	**10 52 57.4**	**+1.0**
RIMA	**Rio Macho**	**21.36**	**337**	P	**P**	**10 52 56.8**	**-0.4**
BATAN	**Batan**	**21.48**	**338**	P	**P**	**10 52 57.9**	**-0.3**
AQDB	**Aquidauana**	**21.66**	**121**	P	**P**	**10 53 00.9**	**+0.8**
AQDB	**Aquidauana**	**21.66**	**121**	*e*P	**P**	**10 53 00.8**	**+0.7**
URIC	**Uribia, Colomb**	**21.82**	**9**	*e*P	**P**	**10 52 55.4**	**-6.5**
BIRV	**Birongo**	**22.28**	**24**	P	**P**	**10 53 06.4**	**-0.4**
BIRV				IAmb	IAmb	10 53 13.8	
	comp=Z,20nm,0.9s						
JTS	**Las Juntas de**	**22.28**	**335**	P	**P**	**10 53 06.3**	**-0.5**
	comp=Z,6.7nm,0.9s,baz=184,slow=8.3,SNR=5.2						
JTS	**Las Juntas de**	**22.28**	**335**	P	**P**	**10 53 06.0**	**-0.8**
MALB	**Monte Alegre**	**22.52**	**70**	*e*P	**P**	**10 53 09.7**	**+0.3**
PCRV	**Puerto La Cruz**	**22.73**	**28**	P	**P**	**10 53 12.8**	**+1.2**
	comp=Z,8.9nm,0.9s,baz=141,slow=13,SNR=2.4						
CPUP	**Villa Florida**	**23.59**	**136**	P	**P**	**10 53 20.9**	**+0.8**
	comp=Z,4.4nm,1.0s,baz=323,slow=10.0,SNR=5.4						
CPUP				LR	LR	11 04 23.9	
	comp=Z,126nm,19.3s,baz=320,slow=41						
CPUP	**Villa Florida**	**23.59**	**136**	P	**P**	**10 53 21.0**	**+0.9**
CPUP				IAmb	IAmb	10 53 25.5	
	comp=Z,28nm,1.5s						
CPUP	**Villa Florida**	**23.59**	**136**	*e*P	**P**	**10 53 21.2**	**+1.1**
ARAG	**Araguaiana, MT**	**23.68**	**106**	*e*P	**P**	**10 53 22.9**	**+1.8**
SNDB	**Serra Nova Dou**	**23.75**	**97**	*e*P	**P**	**10 53 24.0**	**+2.2**
BO01	**Tunca**	**24.60**	**171**	P	**P**	**10 53 29.6**	**+0.2**
MCPB	**Macapa, AP**	**25.12**	**69**	*e*P	**P**	**10 53 34.3**	**0.0**
PRPB	**Parauapebas**	**25.62**	**83**	*e*P	**P**	**10 53 38.6**	**-0.2**
PCMB	**Pacaembu**	**25.90**	**119**	*e*P	**P**	**10 53 41.4**	**+0.1**
ITRB	**Iturama**	**26.03**	**115**	*e*P	**P**	**10 53 43.3**	**+0.8**
ITQB	**Itaqui**	**26.29**	**141**	P	**P**	**10 53 45.2**	**+0.5**
ITQB				IAmb	IAmb	10 53 47.8	
	comp=Z,39nm,1.4s						
ITQB	**Itaqui**	**26.29**	**141**	*e*P	**P**	**10 53 47.1**	**+2.3**
PTGB	**Pitanga**	**26.59**	**126**	*e*P	**P**	**10 53 49.9**	**+2.3**
TGUH	**Tegucigalpa,Un**	**26.64**	**334**	P	**P**	**10 53 47.9**	**-0.3**
SVB	**Belmont**	**27.05**	**32**	P	**P**	**10 53 51.7**	**0.0**
BDFB	**Brasilia**	**27.28**	**105**	P	**P**	**10 53 54.6**	**+0.7**
	comp=Z,2.0nm,0.4s,baz=200,slow=14,SNR=2.2						
BDFB				LR	LR	11 05 49.9	
	comp=Z,222nm,19.3s,baz=296,slow=39						
BDFB	**Brasilia**	**27.28**	**105**	P	**P**	**10 53 53.6**	**-0.3**
SMTB	**Santa Maria do**	**27.46**	**90**	*e*P	**P**	**10 53 56.0**	**+0.5**
IPMB	**Ipameri, GO**	**27.53**	**110**	*e*P	**P**	**10 53 56.3**	**+0.2**
MTO3	**Montecristo**	**27.91**	**330**	P	**P**	**10 53 58.0**	**-1.6**
FRTB	**Fartura**	**28.03**	**121**	*e*P	**P**	**10 54 00.7**	**+0.3**
BB19B	**Bebedouro**	**28.09**	**116**	*e*P	**P**	**10 54 01.3**	**+0.3**
SDD	**Santo Domingo**	**28.79**	**11**	P	**P**	**10 54 07.1**	**-0.1**
OBIP	**Obispado Ponce**	**29.18**	**17**	P	**P**	**10 54 10.0**	**-0.6**
OBIP				IAmb	IAmb	10 54 18.9	
	comp=Z,29nm,1.1s						
PDPR	**Patillas Dam,**	**29.34**	**18**	P	**P**	**10 54 12.2**	**+0.2**
PDPR				IAmb	IAmb	10 54 14.9	
	comp=Z,19nm,0.9s						
CBYP	**Canovanas**	**29.63**	**19**	P	**P**	**10 54 15.5**	**+0.8**
JANB	**Januaria**	**30.75**	**103**	*e*P	**P**	**10 54 25.0**	**+0.3**
PLCA	**Paso Flores**	**30.91**	**173**	P	**P**	**10 54 27.4**	**+1.5**
	comp=Z,1.5nm,0.8s,baz=329,slow=8.0,SNR=3.1						
PLCA	**Paso Flores**	**30.91**	**173**	P	**P**	**10 54 25.5**	**-0.3**
PLCA				IAmb	IAmb	10 55 08.7	
	comp=Z,17nm,1.6s						
PARB	**Paraibuna**	**31.38**	**119**	*e*P	**P**	**10 54 30.6**	**+0.3**
BSCB	**Bom Sucesso**	**31.42**	**114**	*e*P	**P**	**10 54 30.8**	**+0.2**
DIAM	**Diamantina, MG**	**31.82**	**109**	*e*P	**P**	**10 54 35.6**	**+1.4**
ROSB	**Rosrio**	**31.85**	**79**	*e*P	**P**	**10 54 34.1**	**-0.3**
MAN01	**Angra dos Reis**	**32.67**	**117**	*e*P	**P**	**10 54 41.1**	**-0.5**
VAS01	**Vassouras-RJ**	**32.96**	**116**	*e*P	**P**	**10 54 44.7**	**+0.7**
DUB01	**Friburgo-RJ**	**33.86**	**115**	*e*P	**P**	**10 54 53.6**	**+1.7**
CAM01	**Campos-RJ**	**34.44**	**114**	*e*P	**P**	**10 54 58.9**	**+2.1**
BSFB	**Barra de Sao F**	**34.55**	**109**	*e*P	**P**	**10 54 58.2**	**+0.3**
NBPN	**Ponto Novo - B**	**34.63**	**95**	*e*P	**P**	**10 54 59.0**	**+0.3**
ALF01	**Guarapari-ES**	**35.00**	**112**	*e*P	**P**	**10 55 02.1**	**+0.4**
RIB01	**Linhares ES**	**35.05**	**109**	*e*P	**P**	**10 55 03.1**	**+0.8**
NAN01	**Guarapari, ES**	**35.07**	**107**	*e*P	**P**	**10 55 02.9**	**+0.5**
GUA01	**Guaratinga, BA**	**35.22**	**105**	*e*P	**P**	**10 55 04.1**	**+0.4**
GDU01	**Guandu, BA**	**35.24**	**100**	*e*P	**P**	**10 55 04.3**	**+0.4**
CMC01	**Camacan, BA**	**35.39**	**102**	*e*P	**P**	**10 55 05.5**	**+0.4**
NBIT	**Itapeh - BA**	**35.44**	**102**	*e*P	**P**	**10 55 06.4**	**+0.8**
TLIG	**Tlapa**	**35.69**	**320**	P	**P**	**10 55 06.7**	**-1.1**
TLIG				IAmb	IAmb	10 55 21.3	
	comp=Z,20nm,1.9s						
NBPB	**Pedra_Branca-C**	**35.75**	**86**	*e*P	**P**	**10 55 09.0**	**+0.6**
NBMA	**Muriti-CE**	**36.31**	**89**	*e*P	**P**	**10 55 13.6**	**+0.5**
NBLA	**Lagarto - SE**	**36.99**	**95**	*e*P	**P**	**10 55 19.2**	**+0.3**
NBLV	**Livramento - P**	**38.12**	**89**	*e*P	**P**	**10 55 28.5**	**0.0**
DWPF	**Disney Wildern**	**38.33**	**351**	P	**P**	**10 55 29.2**	**-0.6**
NBAN	**Anadia - AL**	**38.55**	**93**	*e*P	**P**	**10 55 32.0**	**0.0**
ZAIG	**Zacatecas**	**42.05**	**321**	P	**P**	**10 56 01.4**	**+0.2**
342A	**Flagon Creek P**	**44.22**	**339**	P	**P**	**10 56 18.2**	**0.0**
342A				IAmb	IAmb	10 56 41.1	
	comp=Z,12nm,0.8s						
Z47A	**Carrollton**	**44.62**	**345**	P	**P**	**10 56 21.1**	**-0.2**
Z47A				IAmb	IAmb	10 56 31.2	
	comp=Z,7.5nm,0.9s						
NATX	**Nacogdoches**	**45.43**	**337**	P	**P**	**10 56 28.4**	**+0.5**
NATX				IAmb	IAmb	10 56 31.7	
	comp=Z,11nm,0.9s						
PLAL	**Pickwick Lake**	**46.31**	**346**	P	**P**	**10 56 33.5**	**-1.3**
PLAL				IAmb	IAmb	10 56 38.5	
	comp=Z,9.5nm,1.0s						
V51A	**Loudon**	**46.33**	**350**	P	**P**	**10 56 34.5**	**-0.3**
V51A				IAmb	IAmb	10 56 41.2	
	comp=Z,23nm,1.6s						
V48A	**Smith Brothers**	**46.75**	**347**	P	**P**	**10 56 37.1**	**-1.1**
V48A				IAmb	IAmb	10 56 42.2	
	comp=Z,7.9nm,0.7s						
T57A	**Hurt**	**46.88**	**356**	P	**P**	**10 56 39.2**	**0.0**
CLTN	**Cedars of Leba**	**46.98**	**348**	P	**P**	**10 56 40.1**	**+0.1**
CLTN				IAmb	IAmb	10 57 07.3	
	comp=Z,14nm,1.6s						
LPAR	**Lepanto**	**47.48**	**343**	P	**P**	**10 56 43.3**	**-0.7**
MIAR	**Mount Ida**	**47.53**	**340**	P	**P**	**10 56 43.5**	**-0.8**
SLBS	**Sierra La Lagu**	**47.55**	**315**	P	**P**	**10 56 44.1**	**-0.7**
SLBS				IAmb	IAmb	10 56 48.6	
	comp=Z,9.4nm,1.0s						
S57A	**Dark Hollow, R**	**47.62**	**356**	P	**P**	**10 56 45.8**	**+0.8**
TX32	**Lajitas Array**	**47.66**	**326**	P	**P**	**10 56 45.2**	**-0.4**
TXAR	**Lajitas Array**	**47.66**	**326**	P	**P**	**10 56 44.9**	**-0.6**
	comp=Z,1.3nm,0.6s,baz=151,slow=8.6,SNR=37						
TXAR	**Lajitas Array**	**47.66**	**326**	P	**P**	**10 56 45.4**	**-0.2**
TX31	**Lajitas Ar. Si**	**47.66**	**326**	P	**P**	**10 56 45.2**	**-0.4**
TX31				IAmb	IAmb	10 56 50.8	
	comp=Z,10nm,1.1s						
Z35A	**Perchaven, San**	**47.85**	**335**	P	**P**	**10 56 46.7**	**-0.1**
LCAR	**Lake Charles**	**48.16**	**343**	P	**P**	**10 56 49.2**	**0.0**
LCAR				IAmb	IAmb	10 56 52.9	
	comp=Z,8.1nm,1.1s						
FCAR	**Ozark Folk Cen**	**48.29**	**342**	P	**P**	**10 56 49.5**	**-0.7**
PBMO	**Poplar Bluff**	**48.62**	**344**	P	**P**	**10 56 51.2**	**-1.5**
PBMO				IAmb	IAmb	10 56 56.2	
	comp=Z,6.2nm,0.8s						
WCI	**Wyandotte Cave**	**49.04**	**349**	P	**P**	**10 56 55.8**	**-0.1**
WCI				IAmb	IAmb	10 58 41.4	
	comp=Z,15nm,1.6s						
T42A	**Van Buren**	**49.04**	**343**	P	**P**	**10 56 53.9**	**-2.0**
T42A				IAmb	IAmb	10 56 59.6	
	comp=Z,4.1nm,0.8s						
MGMO	**Mountain Grove**	**49.50**	**342**	P	**P**	**10 56 57.8**	**-1.7**
MGMO				IAmb	IAmb	10 57 03.6	
	comp=Z,5.4nm,0.8s						
FVM	**French Village**	**49.76**	**344**	P	**P**	**10 57 00.1**	**-1.2**
FVM				IAmb	IAmb	10 57 05.5	
	comp=Z,8.6nm,0.8s						
MNTX	**Cornudas Mount**	**50.42**	**326**	P	**P**	**10 57 06.1**	**-0.5**
MNTX				IAmb	IAmb	10 57 15.6	
	comp=Z,6.4nm,1.2s						
SSPA	**Standing Stone**	**50.43**	**358**	P	**P**	**10 57 05.9**	**-0.5**
SSPA				IAmb	IAmb	10 57 15.4	
	comp=Z,6.4nm,0.9s						
O49A	**Covington**	**50.61**	**351**	P	**P**	**10 57 07.6**	**-0.2**
P43A	**Skaggs, Pawnee**	**51.09**	**346**	P	**P**	**10 57 09.7**	**-1.7**
J58A	**Remsen**	**53.10**	**0**	P	**P**	**10 57 26.5**	**+0.2**
N38A	**Joes South For**	**53.15**	**343**	P	**P**	**10 57 25.5**	**-1.2**
N38A				IAmb	IAmb	10 57 30.5	
	comp=Z,14nm,1.1s						
ANMO	**Albuquerque**	**53.49**	**328**	P	**P**	**10 57 29.4**	**-0.3**
DELO	**Deloro Mine**	**54.29**	**358**	P	**P**	**10 57 35.2**	**+0.2**
DELO				IAmb	IAmb	10 57 39.6	
	comp=Z,7.0nm,0.7s						
FRNY	**Flat Rock**	**54.60**	**2**	P	**P**	**10 57 38.0**	**+0.8**
FRNY				IAmb	IAmb	10 57 42.7	
	comp=Z,19nm,1.4s						
SADO	**Sadowa**	**54.61**	**357**	P	**P**	**10 57 36.8**	**-0.6**
SADO				IAmb	IAmb	10 57 41.4	
	comp=Z,14nm,1.2s						
WUAZ	**Wupatki**	**56.59**	**325**	P	**P**	**10 57 51.6**	**-0.4**
WUAZ				IAmb	IAmb	10 58 01.4	
	comp=Z,15nm,1.5s						
SMCO	**Snowmass**	**57.05**	**331**	P	**P**	**10 57 54.7**	**-0.7**
CBX	**Cerro Bola**	**57.64**	**319**	P	**P**	**10 57 58.4**	**-0.9**
CBX				IAmb	IAmb	10 58 41.5	
	comp=Z,7.3nm,1.0s						
SUSD	**Miller**	**58.23**	**340**	P	**P**	**10 58 01.9**	**-1.2**
KNB	**Kanab**	**58.48**	**325**	P	**P**	**10 58 05.4**	**+0.2**
KNB				IAmb	IAmb	10 58 08.6	
	comp=Z,14nm,1.4s						
LCMT	**Little Creek M**	**58.71**	**325**	P	**P**	**10 58 06.8**	**-0.1**
RWWY	**Rawlins**	**59.15**	**333**	P	**P**	**10 58 09.2**	**-0.8**
PSUT	**Pine Spring**	**60.13**	**326**	P	**P**	**10 58 15.7**	**-0.9**
PSUT				IAmb	IAmb	10 58 23.8	
	comp=Z,4.8nm,1.2s						
DUG	**Dugway, Tooele**	**60.76**	**328**	P	**P**	**10 58 20.4**	**-0.4**
R11A	**Troy Canyon, C**	**60.98**	**325**	P	**P**	**10 58 22.5**	**+0.1**
R11A				IAmb	IAmb	10 58 32.6	
	comp=Z,5.5nm,1.4s						
PDAR	**Pinedale Array**	**61.08**	**332**	P	**P**	**10 58 21.9**	**-1.2**
	comp=Z,0.4nm,0.5s,baz=114,slow=9.5,SNR=6.1						
PDAR	**Pinedale Array**	**61.08**	**332**	P	**P**	**10 58 21.8**	**-1.3**
ULM	**Lac du Bonnet**	**62.60**	**345**	P	**P**	**10 58 31.6**	**-1.2**
	comp=Z,5.6nm,0.5s,baz=161,slow=6.3,SNR=14						
ULM	**Lac du Bonnet**	**62.60**	**345**	P	**P**	**10 58 32.2**	**-0.6**
ULM				IAmb	IAmb	10 58 36.9	
	comp=Z,7.7nm,0.9s						
NVAR	**Mina Array Bea**	**62.61**	**323**	P	**P**	**10 58 33.2**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=158,slow=7.1,SNR=6.1						
YHL	**Hebgen Lake**	**63.43**	**332**	P	**P**	**10 58 38.4**	**-0.5**
YHL				IAmb	IAmb	10 58 44.8	
	comp=Z,9.6nm,1.3s						
GCMT	**Greycliff**	**63.49**	**334**	P	**P**	**10 58 38.9**	**-0.2**
MFID	**Camas Ranch**	**64.64**	**328**	P	**P**	**10 58 45.7**	**-0.9**
MFID				IAmb	IAmb	10 58 50.3	
	comp=Z,17nm,1.8s						
ORV	**Oroville**	**65.25**	**322**	P	**P**	**10 58 50.9**	**+0.4**
ORV				IAmb	IAmb	10 58 56.5	
	comp=Z,10nm,1.0s						
MOD	**Modoc Plateau**	**66.04**	**325**	P	**P**	**10 58 55.5**	**-0.2**
MOD				IAmb	IAmb	10 59 07.3	
	comp=Z,14nm,1.4s						
K05A	**Summer Lake**	**66.90**	**325**	P	**P**	**10 59 01.9**	**+0.6**
I07A	**Izee**	**67.03**	**327**	P	**P**	**10 59 02.9**	**+0.9**
C09A	**Chrisman Ranch**	**68.94**	**331**	P	**P**	**10 59 14.2**	**+0.4**
C09A				IAmb	IAmb	11 00 10.8	
	comp=Z,21nm,2.0s						
PPT	**Papeete**	**72.06**	**255**	LR	LR	11 23 58.1	
	comp=Z,121nm,18.2s,baz=135,slow=30						
DBIC	**Dimbokro**	**72.19**	**80**	P	**P**	**10 59 34.5**	**+0.3**
	comp=Z,3.4nm,0.8s,baz=213,slow=3.8,SNR=4.3						
DBIC				LR	LR	11 29 39.3	
	comp=Z,109nm,18.8s,baz=219,slow=34						
DBIC	**Dimbokro**	**72.19**	**80**	P	**P**	**10 59 33.6**	**-0.7**
DBIC				IAmb	IAmb	11 00 40.8	
	comp=Z,13nm,1.2s						
VNA3	**Neumayer Olymp**	**72.89**	**162**	P	**P**	**10 59 39.2**	**+1.7**
SNAA	**Sanae**	**75.11**	**162**	P	**P**	**10 59 50.5**	**0.0**
SNAA	**Sanae**	**75.11**	**162**	P	**P**	**10 59 50.1**	**-0.4**
SNAA				IAmb	IAmb	10 59 58.5	
	comp=Z,11nm,1.4s						
YKA	**Yellowknife Ar**	**78.36**	**343**	P	**P**	**11 00 08.0**	**-0.8**
	comp=Z,0.5nm,0.5s,baz=100,slow=11,SNR=5.8						
DIB	**Dawson Inlet,**	**79.38**	**329**	P	**P**	**11 00 14.1**	**-0.4**
TORD	**Torodi Ar. Bea**	**79.91**	**75**	P	**P**	**11 00 18.8**	**+0.5**
	comp=Z,4.1nm,1.0s,baz=297,slow=7.8,SNR=7.4						
TORD				LR	LR	11 35 27.4	
	comp=Z,40nm,18.5s,baz=265,slow=35						
TORD	**Torodi Ar. Bea**	**79.91**	**75**	P	**P**	**11 00 18.4**	**+0.2**
QSPA	**South Pole Qui**	**80.12**	**180**	P	**P**	**11 00 18.7**	**+0.1**
	comp=Z,2.0nm,0.6s,baz=161,slow=1.5,SNR=19						
QSPA	**South Pole Qui**	**80.12**	**180**	P	**P**	**11 00 18.7**	**+0.1**
ESDC	**Sonseca Array**	**82.40**	**48**	LR	LR	11 33 04.3	
	comp=Z,35nm,21.6s,baz=265,slow=33						
SUMG	**Summit**	**85.83**	**10**	*i*P	**P**	**11 00 48.7**	**+0.5**
DAWY	**Dawson**	**87.99**	**337**	P	**P**	**11 00 58.0**	**-0.4**
A36M	**Sachs Harbour**	**88.07**	**346**	P	**P**	**11 00 58.1**	**-0.4**
INK	**Inuvik**	**88.09**	**342**	P	**P**	**11 00 58.6**	**-0.1**
NEEM	**North Greenlan**	**88.39**	**5**	*i*P	**P**	**11 01 01.2**	**+0.8**
BCAR	**Beaver Creek A**	**88.50**	**335**	P	**P**	**11 01 00.9**	**+0.1**
L27K	**Beaver Creek,**	**88.51**	**335**	P	**P**	**11 01 00.9**	**0.0**
L27K				IAmb	IAmb	11 01 09.5	
	comp=Z,5.8nm,1.0s						
EGAK	**Eagle**	**89.00**	**337**	P	**P**	**11 01 03.3**	**+0.2**
DOT	**Dot Lake**	**89.67**	**335**	P	**P**	**11 01 06.2**	**-0.1**
ILAR	**Eielson Array**	**91.24**	**336**	P	**P**	**11 01 12.4**	**-1.2**
	comp=Z,0.8nm,1.1s,baz=114,slow=2.2,SNR=4.4						
KEST	**Kesra**	**91.55**	**54**	LR	LR	11 41 08.7	
	comp=Z,35nm,19.6s,baz=238,slow=35						
BOSA	**Boshof**	**94.48**	**120**	LR	LR	11 42 17.9	
	comp=Z,71nm,18.5s,baz=194,slow=34						
GERES	**GERESS Array B**	**96.86**	**42**	LR	LR	11 42 27.0	
	comp=Z,15nm,18.5s,baz=293,slow=34						
NOA	**NORSAR Array B**	**97.03**	**29**	LR	LR	11 42 34.9	
	comp=Z,19nm,20.0s,baz=115,slow=34						
STKA	**Stephens Creek**	**125.35**	**219**	PKP	**PKPdf**	**11 07 09.6**	**-0.5**
	comp=Z,1.1nm,0.5s,baz=153,slow=2.3,SNR=3.1						
STKA	**Stephens Creek**	**125.35**	**219**	PKPdf	**PKPdf**	**11 07 09.7**	**-0.4**
ZALV	**Zalesovo Beam**	**133.40**	**16**	PKP	**PKPdf**	**11 07 23.8**	**-0.8**
	comp=Z,0.5nm,0.3s,baz=318,slow=1.9,SNR=4.2						
ZALV	**Zalesovo Beam**	**133.40**	**16**		**PKPdf**	**11 07 23.4**	**-1.2**
ASAR	**Alice Springs**	**135.94**	**220**	PKP	**PKPdf**	**11 07 29.4**	**-0.9**
	comp=Z,1.1nm,0.7s,baz=117,slow=2.1,SNR=14						
ASAR	**Alice Springs**	**135.94**	**220**		**PKPdf**	**11 07 29.4**	**-1.0**
WRA	**Warramunga Arr**	**138.25**	**225**	PKP	**PKPdf**	**11 07 33.9**	**-0.8**
	comp=Z,1.3nm,0.5s,baz=128,slow=2.0,SNR=25						
WRA	**Warramunga Arr**	**138.25**	**225**		**PKPdf**	**11 07 33.8**	**-1.0**
SONM	**Songino Array**	**142.26**	**358**	PKP	**PKPdf**	**11 07 40.2**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=357,slow=3.3,SNR=2.8						
FITZ	**Fitzroy Crossi**	**145.20**	**217**	PKPbc	**PKPbc**	**11 07 45.6**	**-1.1**
	baz=101,slow=3.0						
KSRS	**Korea Array**	**145.51**	**326**	PKPbc	**PKPdf**	**11 07 46.9**	**-0.2**
	comp=Z,2.6nm,0.7s,baz=50,slow=3.9,SNR=13						

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*IDC **04** 11:19:41.5±1.1, 8°.16S×125°.50E, h0^{km}, mb3.8/5, mb1 3.9/8, mb1mx3.7/45, mbtmp3.8/8, ML3.6/3, MS3.1/1, Ms1 3.3/1, ms1mx2.4/33, Error ellipse: s-maj=105.5km s-min=19.9km az=70.0*

*NEIC **04** 11:19:42.8±1.6, 8°.4S±0°.1×125°.26E±0°.10, h10^{km}±1^{km}, mb4.4/11, Error ellipse: s-maj=17.9km s-min=15.7km az=32.0*

ISC 04 11:19:45.5±0.8**, 8°.38S**±0°.07×**125°.43E**±0°.08**, h35^{km}, n30, σ1ˢ.23**/31**, mb4.2**/12**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	**Soe**	**1.79**	**220**		**Pn**	**11 20 12.4**	**-1.6**
BATI	**Baumata**	**2.52**	**224**	Pn	Pn	11 20 30.0	+6.1
	12nm,0.3s,baz=311,slow=5.0,SNR=4.1						
BATI				Sn	**Sn**	**11 20 56.3**	**+2.8**
	12nm,0.3s,baz=130,slow=20,SNR=7.0						
MTN	**Manton Dam**	**7.15**	**129**		**Pn**	**11 21 29.4**	**+1.8**
KNRA	**Kununurra**	**7.95**	**156**		**Pn**	**11 21 39.7**	**+1.1**
FITZ	**Fitzroy Crossi**	**9.66**	**179**	Pn	**Pn**	**11 22 03.3**	**+1.2**
	0.4nm,0.3s,baz=7.4,slow=9.6,SNR=12						
FITZ				Sn	**Sn**	**11 23 48.0**	**-1.5**
	0.7nm,0.3s,baz=184,slow=7.1,SNR=11						
FITZ	**Fitzroy Crossi**	**9.66**	**179**	Pn	**Pn**	**11 22 02.6**	**+0.5**
WB0	**Warramunga Arr**	**14.26**	**143**		**Pn**	**11 23 05.1**	**0.0**
WRA	**Warramunga Arr**	**14.37**	**144**	Pn	**Pn**	**11 23 06.3**	**-0.2**
	0.3nm,0.3s,baz=319,slow=12,SNR=24						
WRA				Sn	**Sn**	**11 25 45.1**	**+0.3**
	0.1nm,0.3s,baz=319,slow=28,SNR=2.3						
WB2	**Warramunga Arr**	**14.38**	**144**		**Pn**	**11 23 07.1**	**+0.5**
WR0	**Warramunga Arr**	**14.50**	**144**		**Pn**	**11 23 08.7**	**+0.4**
AS31	**Alice Springs**	**17.23**	**153**	P	**P**	**11 23 45.8**	**+0.9**
ASAR	**Alice Springs**	**17.23**	**153**	P	**P**	**11 23 44.8**	**-0.1**
	0.2nm,0.3s,baz=322,slow=11,SNR=16						
ASAR				S	**Sn**	**11 26 52.1**	**-2.2**
	0.1nm,0.3s,baz=310,slow=22,SNR=3.6						
CTAO	**Charters Tower**	**23.26**	**122**	P	**P**	**11 24 49.4**	**-0.7**
CTAO				IAmb	IAmb	11 25 04.7	
	comp=Z,14nm,1.5s						
BBOO	**Buckleboo**	**26.23**	**159**	P	**P**	**11 25 17.9**	**+0.7**
BBOO				IAmb	IAmb	11 25 22.3	
	comp=Z,19nm,1.4s						
GSI	**Gunungsitoli**	**29.39**	**288**	P	**P**	**11 25 43.5**	**-2.3**
GSI				IAmb	IAmb	11 25 53.2	
	comp=Z,30nm,1.4s						
SRIT	**Nakonsritamara**	**30.77**	**303**	P	**P**	**11 25 55.5**	**-2.4**
ARMA	**Armidale**	**32.87**	**135**	P	**P**	**11 26 16.2**	**-0.2**
CMAR	**Chiang Mai Arr**	**37.34**	**316**	LR	LR	11 45 58.0	
	comp=Z,29nm,19.1s,baz=217,slow=42						
SONM	**Songino Array**	**58.45**	**345**	P	**P**	**11 29 39.0**	**+1.1**
	comp=Z,0.9nm,0.9s,baz=152,slow=6.7,SNR=4.1						
SONM	**Songino Array**	**58.45**	**345**	P	**P**	**11 29 39.6**	**+1.6**
MK31	**Makanchi Array**	**66.99**	**329**	P	**P**	**11 30 34.9**	**0.0**
MK31				IAmb	IAmb	11 30 37.5	
	comp=Z,1.9nm,0.9s						
MKAR	**Makanchi Array**	**66.99**	**329**	P	**P**	**11 30 35.0**	**+0.2**
	comp=Z,1.6nm,0.8s,baz=130,slow=7.7,SNR=11						
MKAR	**Makanchi Array**	**66.99**	**329**	P	**P**	**11 30 35.0**	**+0.2**
MAKZ	**Makanchi**	**67.16**	**329**	P	**P**	**11 30 36.5**	**+0.6**
MAKZ				IAmb	IAmb	11 30 38.7	
	comp=Z,2.2nm,1.1s						
ZAA0	**Zalesovo Array**	**70.90**	**336**	P	**P**	**11 30 59.5**	**+0.6**
ZAA0				IAmb	IAmb	11 31 01.2	
	comp=Z,2.0nm,0.8s						
ZALV	**Zalesovo Beam**	**70.90**	**336**	P	**P**	**11 30 58.6**	**-0.3**
	comp=Z,0.7nm,0.4s,baz=106,slow=2.2,SNR=5.6						
ZALV	**Zalesovo Beam**	**70.90**	**336**	P	**P**	**11 30 58.4**	**-0.5**
KURBB	**Kurchatov Arra**	**71.40**	**331**	P	**P**	**11 31 02.2**	**+0.3**
	comp=Z,1.1nm,0.8s,baz=138,slow=4.6,SNR=8.0						
KURK	**Kurchatov**	**71.41**	**331**	P	**P**	**11 31 02.7**	**+0.6**
KURK				IAmb	IAmb	11 31 07.9	
	comp=Z,2.8nm,1.1s						
VNDA	**Vanda**	**71.67**	**172**	P	P	11 31 07.9	+4.6
	comp=Z,0.5nm,0.8s,baz=330,slow=3.3,SNR=1.7						

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*IDC **04** 11:43:37.7±1.2, 7°.94S×125°.48E, h0^{km}, mb3.8/4, mb1 4.1/8, mb1mx3.8/28, mbtmp3.9/8, ML3.8/4, MS3.4/2, Ms1 3.4/2, ms1mx2.5/33, Error ellipse: s-maj=49.2km s-min=20.1km az=72.0*

ISC 04 11:43:41.3±1.0**, 8°.16S**±0°.08×**125°.6E**±0°.1**, h26^{km}, n11, σ2ˢ.21**/13**, mb3.8**/4**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	**2.79**	**223**	Pn	**Pn**	**11 44 24.7**	**+0.4**
	15nm,0.3s,baz=360,slow=3.9,SNR=9.5						
BATI				Sn	**Sn**	**11 44 57.6**	**+0.4**
	22nm,0.3s,baz=143,slow=23,SNR=12						
FITZ	**Fitzroy Crossi**	**9.88**	**180**	Pn	**Pn**	**11 46 03.0**	**+1.2**
	0.5nm,0.3s,baz=354,slow=7.8,SNR=9.6						
FITZ				Sn	**Sn**	**11 47 47.8**	**-4.1**
	1.1nm,0.3s,baz=156,slow=4.9,SNR=9.8						
WRA	**Warramunga Arr**	**14.46**	**145**	Pn	**Pn**	**11 47 05.8**	**+1.4**
	0.5nm,0.3s,baz=318,slow=13,SNR=15						
WRA				Sn	**Sn**	**11 49 41.6**	**-2.3**
	0.1nm,0.3s,baz=321,slow=24,SNR=1.9						
ASAR	**Alice Springs**	**17.36**	**154**	P	**P**	**11 47 45.4**	**+2.3**
	0.3nm,0.3s,baz=336,slow=13,SNR=18						
ASAR				Sn	**Sn**	**11 50 52.2**	**-2.3**
	0.1nm,0.3s,baz=317,slow=20,SNR=6.9						
PSI	**Prapat**	**28.74**	**291**	LR	LR	12 03 47.6	
	comp=Z,75nm,18.8s,baz=84,slow=42						
CMAR	**Chiang Mai Arr**	**37.29**	**315**	P	**P**	**11 50 50.2**	**-1.3**
	0.9nm,0.3s,baz=146,slow=6.7,SNR=4.9						
PALK	**Pallekele**	**47.30**	**288**	LR	LR	12 10 20.1	
	comp=Z,36nm,20.9s,baz=322,slow=34						
MKAR	**Makanchi Array**	**66.88**	**329**	P	**P**	**11 54 29.6**	**-1.6**
	0.4nm,0.6s,baz=144,slow=6.9,SNR=4.2						
ZALV	**Zalesovo Beam**	**70.76**	**336**	P	**P**	**11 54 53.9**	**-1.3**
	0.4nm,0.4s,baz=121,slow=7.2,SNR=3.6						
VNDA	**Vanda**	**71.87**	**172**	P	**P**	**11 55 04.0**	**+2.5**
	0.3nm,0.6s,baz=307,slow=8.4,SNR=1.9						
TORD	**Torodi Ar. Bea**	**124.73**	**280**	PKP	**PKiKP**	**12 02 40.3**	**+0.2**
	0.3nm,0.8s,baz=82,slow=2.9,SNR=1.8						

NNC 04 11:54:22.7±5.4**, 37°.03N**×**70°.37E, h0^{km}, mb3.9, mpv3.5, 1C-4D, Error ellipse: s-maj=42.0km s-min=36.4km az=168.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.07**	**1**	⇓P	Pn	11 55 55.0	+1.3
	1.5nm,0.2s,baz=178,slow=13,SNR=68						
KK31				⇓S	Sn	11 57 04.9	+0.9
	8.1nm,0.6s,baz=184,slow=23,SNR=9.0						
AAK	**Ala-Archa**	**6.44**	**28**	⇓P	Pn	11 55 58.8	-0.2
	1.7nm,0.6s						
AAK				S	Sn	11 57 15.4	+2.1
	15nm,0.7s						
TKM2	**Tokmak 2**	**7.12**	**33**	⇓P	Pn	11 56 07.4	-1.0
	2.4nm,0.7s						
TKM2				⇑S	Sn	11 57 30.3	+0.2
	7.1nm,1.0s						

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*IDC **04** 11:57:04.0±1.6, 5°.84S×147°.93E, h129^{km}±15^{km}, mb3.6/8, mb1 3.9/10, mb1mx3.5/47, mbtmp4.1/10, Error ellipse: s-maj=32.7km s-min=10.2km az=113.0*

*NEIC **04** 11:57:05.8±1.5, 5°.87S±0°.07×147°.90E±0°.06, h129^{km}±7^{km}, mb4.5/15, Error ellipse: s-maj=11.5km s-min=6.8km az=143.0*

ISC 04 11:57:06.7±0.6**, 5°.91S**±0°.06×**147°.91E**±0°.09**, h150^{km}, n41, σ1ˢ.44**/45**, mb4.1**/11**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.55**	**192**	P	**Pn**	**11 58 00.3**	**-0.9**
	66nm,0.3s,baz=352,slow=5.4,SNR=58						
PMG				S	**Sn**	**11 58 40.4**	**-3.1**
	34nm,0.3s,baz=359,slow=17,SNR=12						
PMG	**Port Moresby**	**3.55**	**192**	Pn	**Pn**	**11 58 00.6**	**-0.6**
PMG				Sn	**Sn**	**11 58 40.8**	**-2.7**
PMG	**Port Moresby**	**3.55**	**192**	P	**Pn**	**11 58 00.3**	**-0.9**
PMG	**Port Moresby**	**3.55**	**192**	P	**Pn**	**11 58 00.3**	**-0.9**
MANU	**Manus Island**	**3.88**	**352**	Pn	**Pn**	**11 58 03.5**	**-1.9**
RABL	**Rabaul**	**4.57**	**68**	Pn	**Pn**	**11 58 13.0**	**-1.5**
RABL	**Rabaul**	**4.57**	**68**	P	**Pn**	**11 58 13.9**	**-0.6**
COEN	**Coen**	**9.26**	**210**		**Pn**	**11 59 16.6**	**-0.2**
CTA	**Charters Tower**	**14.19**	**186**	P	**P**	**12 00 26.6**	**+2.6**
	0.3nm,0.3s,baz=21,slow=14,SNR=2.0						
CTAO	**Charters Tower**	**14.19**	**186**		**P**	**12 00 25.0**	**+1.1**
WB0	**Warramunga Arr**	**19.04**	**222**	P	**P**	**12 01 17.2**	**-0.2**
WB0				IAmb	IAmb	12 01 20.8	
	comp=Z,9.6nm,0.7s						
WR0	**Warramunga Arr**	**19.07**	**222**	P	**P**	**12 01 18.0**	**+0.2**
WR0				IAmb	IAmb	12 01 19.0	
	comp=Z,18nm,0.5s						
WRAB	**Tennant Creek**	**19.18**	**222**	P	**P**	**12 01 19.1**	**+0.1**
WRAB				IAmb	IAmb	12 01 20.5	
	comp=Z,22nm,0.6s						
WB2	**Warramunga Arr**	**19.19**	**222**	P	**P**	**12 01 19.5**	**+0.5**
WB2				IAmb	IAmb	12 01 20.6	
	comp=Z,25nm,0.5s						
WRA	**Warramunga Arr**	**19.20**	**222**	P	**Pn**	**12 01 19.9**	**-1.8**
	comp=Z,2.6nm,0.3s,baz=48,slow=11,SNR=235						
WRA				S	**S**	**12 04 49.9**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=47,slow=21,SNR=2.8						
WRA	**Warramunga Arr**	**19.20**	**222**	P	**P**	**12 01 18.5**	**-0.6**
EIDS	**Eidsvold**	**19.59**	**171**	P	**P**	**12 01 21.9**	**-1.3**
EIDS				IAmb	IAmb	12 01 57.9	
	comp=Z,35nm,2.0s						
GUMO	**Guam**	**19.61**	**351**	P	**P**	**12 01 22.4**	**-1.1**
KNRA	**Kununurra**	**21.14**	**241**	P	**P**	**12 01 39.2**	**-0.8**
KNRA				IAmb	IAmb	12 01 41.8	
	comp=Z,25nm,1.5s						
AS31	**Alice Springs**	**22.21**	**216**	P	**P**	**12 01 50.2**	**-0.9**
ASAR	**Alice Springs**	**22.21**	**216**	P	**P**	**12 01 52.0**	**+0.9**
	comp=Z,5.7nm,0.4s,baz=47,slow=8.8,SNR=185						
ASAR				S	**S**	**12 05 47.3**	**+2.2**
	comp=Z,2.7nm,1.0s,baz=24,slow=23,SNR=13						
ASAR	**Alice Springs**	**22.21**	**216**	P	**P**	**12 01 51.6**	**+0.4**

FITZ	Fitzroy Crossi	24.88	239	P	P	12 02 16.4	+0.6
	comp=Z,3.2nm,0.4s,baz=60,slow=11,SNR=31						
FITZ	Fitzroy Crossi	24.88	239	P	P	12 02 16.5	+0.8
FITZ				IAmb	IAmb	12 02 49.5	
	comp=Z,4.2nm,0.7s						
DCZ	Deep Cove	42.81	160	P	P	12 04 50.3	+0.7
DCZ				IAmb	IAmb	12 05 27.3	
	comp=Z,50nm,1.3s						
MJAR	Matsushiro Arr	43.20	349	P	P	12 04 51.0	-1.8
	comp=Z,2.3nm,0.9s,baz=174,slow=7.5,SNR=4.6						
HHC	Hu-ho-hao-te	57.23	328	*e*P	P	12 06 42.0	+3.5
HHC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,69nm,5.7s						
PETK	Petropavlovsk-	59.38	7	P	P	12 06 52.9	-0.1
	comp=Z,2.8nm,0.7s,baz=180,slow=8.6,SNR=2.4						
PETK	Petropavlovsk-	59.38	7	P	P	12 06 53.5	+0.5
SONM	Songino Array	64.77	330	P	P	12 07 28.3	-1.0
	comp=Z,0.4nm,0.4s,baz=136,slow=4.5,SNR=2.2						
VNDA	Vanda	71.95	177	P	P	12 08 14.3	+1.0
	comp=Z,0.6nm,0.8s,baz=343,slow=6.4,SNR=5.2						
VNDA	Vanda	71.95	177	P	P	12 08 14.4	+1.1
VNDA				IAmb	IAmb	12 09 23.3	
	comp=Z,17nm,1.9s						
WMQ	Urumqi	73.31	319	*e*P	P	12 08 24.0	+2.0
MK31	Makanchi Array	78.00	320	P	P	12 08 49.4	+0.8
MKAR	Makanchi Array	78.00	320	P	P	12 08 46.6	-2.0
	comp=Z,0.2nm,0.6s,baz=99,slow=8.2,SNR=2.0						
MKAR	Makanchi Array	78.00	320	P	P	12 08 49.8	+1.2
ILAR	Eielson Array	85.05	23	P	P	12 09 23.5	-1.6
	comp=Z,1.0nm,0.7s,baz=249,slow=5.1,SNR=9.8						
YAH	Yahtse	85.55	28	P	P	12 09 29.8	+1.7
M27K	Edge Creek, AK	86.18	26	P	P	12 09 31.1	+0.1
BMAR	Burnt Mountain	86.99	21	P	P	12 09 35.6	+0.9
TORD	Torodi Ar. Bea	145.94	285	PKPbc	PKPbc	12 16 28.7	-1.0
	comp=Z,0.6nm,0.4s,baz=57,slow=3.6,SNR=9.5						

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*UPP **04** 12:00:37.3±0.1, 58°.99N×18°.20E, h0^{km}, ML2.5, Explosion*
*DNK **04** 12:00:37.6±0.4, 58°.99N×18°.20E, h0^{km}, ML2.6(UPP), Explosion*
*IDC **04** 12:00:41.4±2.9, 59°.22N×18°.14E, h0^{km}, mb1 3.1/3, mb1mx2.9/49, mbtmp2.9/3, ML1.9/3, Error ellipse: s-maj=35.9km s-min=9.7km az=179.0*
ISC 04 12:00:36.8±0.9**, 58°.98N**±0°.03×**18°.23E**±0°.03**, h0^{km}, n30, σ0^{s}.71**/37**, Baltic Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NYNU	Nynaeshamn	0.12	280	P	Pg	12 00 39.5	+0.4
NYNU				S	Sg	12 00 40.8	+0.2
NYNU	Nynaeshamn	0.12	280	P	Pg	12 00 39.5	+0.4
NYNU				S	Sg	12 00 40.8	+0.2
NRTU	Norrtaelje	0.72	16	P	Pg	12 00 50.9	+0.2
NRTU				S	Sg	12 01 00.5	+0.4
NRTU	Norrtaelje	0.72	16	P	Pg	12 00 50.9	+0.2
NRTU				S	Sg	12 01 00.5	+0.4
VIKU	Vikbolandet	0.93	239	P	Pg	12 00 54.7	0.0
VIKU	Vikbolandet	0.93	239	P	Pg	12 00 54.7	0.0
ESKU	Eskilstuna	0.98	285	P	Pg	12 00 55.0	-0.6
ESKU	Eskilstuna	0.98	285	P	Pg	12 00 55.0	-0.6
FIBU	Brunna	1.02	334	P	Pg	12 00 56.2	-0.3
FIBU				S	Sg	12 01 09.7	0.0
FIBU	Brunna	1.02	334	P	Pg	12 00 56.2	-0.3
FIBU				S	Sg	12 01 09.7	0.0
BACU	Backbrunna	1.04	327	P	Pg	12 00 56.4	-0.4
BACU	Backbrunna	1.04	327	P	Pg	12 00 56.4	-0.4
FLYU	Flymyra	1.16	351	P	Pg	12 00 58.7	-0.4
FLYU	Flymyra	1.16	351	P	Pg	12 00 58.7	-0.4
GOTU	Gotland	1.31	172	P	Pg	12 01 01.4	-0.5
GOTU	Gotland	1.31	172	P	Pg	12 01 01.4	-0.5
GRAU	Graesoe	1.36	6	P	Pg	12 01 02.6	-0.4
GRAU	Graesoe	1.36	6	P	Pg	12 01 02.6	-0.4
OSTU	Oestervaala	1.37	336	P	Pg	12 01 02.4	-0.7
OSTU	Oestervaala	1.37	336	P	Pg	12 01 02.4	-0.7
FORU	Forsmark	1.41	359	P	Pn	12 01 03.2	-0.5
FORU	Forsmark	1.41	359	P	Pn	12 01 03.2	-0.5
AAL	Aland	1.50	36	P	Pn	12 01 04.9	0.0
LNKU	Linkoeping	1.62	243	P	Pn	12 01 06.7	+0.1
LNKU	Linkoeping	1.62	243	P	Pn	12 01 06.7	+0.1
NRAU	Nora	1.74	291	P	Pb	12 01 08.9	-0.7
NRAU	Nora	1.74	291	P	Pb	12 01 08.9	-0.7
NOA	NORSAR Array B	4.08	303	Pn	Pn	12 01 41.5	+1.0
	0.0nm,0.3s,baz=143,slow=23,SNR=4.7						
NOA				Lg	Lg	12 02 42.8	
	0.1nm,0.3s,baz=186,slow=2.7,SNR=5.5						
FINES	FINESS Array B	4.63	54	Pn	Pn	12 01 50.4	+2.5
	0.2nm,0.3s,baz=248,slow=12,SNR=7.0						
FINES				Sn	Sn	12 02 43.4	+1.1
	0.7nm,0.3s,baz=243,slow=22,SNR=11						
FINES				Lg	Lg	12 03 02.8	
	0.9nm,0.3s,baz=244,slow=25,SNR=8.9						
ARCES	ARCESS Array B	11.04	13	Pn	Pn	12 03 14.1	-1.8
	baz=195,slow=14,SNR=7.2						

NNC 04 12:17:13.1±4.8**, 36°.93N×70°.58E, h0^{km}, mb3.9, mpv3.5, 1C-4D, Error ellipse: s-maj=37.4km s-min=32.6km az=166.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.17	360	⇓P	Pn	12 18 45.7	+0.3
	0.7nm,0.2s,baz=176,slow=12,SNR=27						
KK31				⇑S	Sn	12 19 57.9	+1.2
	1.3nm,0.4s,baz=182,slow=22						
AAK	Ala-Archa	6.45	27	P	Pn	12 18 49.7	+0.3
	2.2nm,0.7s						
AAK				⇓S	Sn	12 20 05.8	+2.0
	2.4nm,0.7s						
TKM2	Tokmak 2	7.12	31	⇓P	Pn	12 18 58.2	-0.5
	3.9nm,0.5s						
TKM2				⇓S	Sn	12 20 20.2	-0.1
	0.8nm,0.7s						

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*IDC **04** 12:27:47.4±1.2, 7°.96S×125°.43E, h0^{km}, mb4.0/4, mb1 4.2/8, mb1mx3.8/41, mbtmp4.1/8, ML4.0/4, MS3.2/2, Ms1 3.2/2, ms1mx2.6/35, Error ellipse: s-maj=47.8km s-min=19.1km az=73.0*
*NEIC **04** 12:27:48.4±0.8, 8°.00S±0°.05×125°.31E±0°.08, h10^{km}±1^{km}, mb4.4/7, Error ellipse: s-maj=15.5km s-min=5.2km az=61.0*
*DJA **04** 12:27:48.6±1.2, 8°S±8°×12°5E±°, h10^{km}, M3.9/4, mb4.2/1, MLv3.8/4*
ISC 04 12:27:50.0±0.6**, 8°.11S**±0°.06×**125°.40E**±0°.08**, h26^{km}, n43, σ1^{s}.94**/41**, mb4.1**/8**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.98	214	Pn	Pn	12 28 22.5	+0.5
SOEI	Soe	1.98	214	P	Pn	12 28 20.1	-1.9
SOEI	Soe	1.98	214	P	Pn	12 28 23.0	+1.0
BATI	Baumata	2.70	219	Pn	Pn	12 28 33.4	+1.6
	22nm,0.3s,baz=32,slow=0.8,SNR=6.9						
BATI				Sn	Sn	12 29 05.0	+1.4
	26nm,0.3s,baz=247,slow=21,SNR=4.1						
BATI	Baumata	2.70	219	P	Pn	12 28 30.0	-1.8
MMRI	Maumere	3.17	260	Pn	Pn	12 28 36.0	-2.2
MMRI				Sn	Sn	12 29 14.7	-0.5
EDFI	Ende, Flores	3.72	260	P	Pn	12 28 43.4	-2.5
BSSI	Bau Bau, Buton	5.25	292	P	Pn	12 29 04.7	-2.1
DRS	Darwin Rock St	6.91	129	P	Pn	12 29 38.3	+8.6
	12nm,1.0s						
MTN	Manton Dam	7.34	130		Pn	12 29 30.5	-5.1
MTN	Manton Dam	7.34	130	P	Pn	12 29 44.4	+8.7
	37nm,0.5s						
PLAI	Plampang	7.57	264	P	Pn	12 29 40.8	+2.0
KNRA	Kununurra	8.21	157		Pn	12 29 48.9	+1.3
KNRA	Kununurra	8.21	157	P	Pn	12 29 52.6	+5.1
	30nm,0.6s						
KDU	Kakadu	8.31	124	P	Pn	12 29 57.5	+8.5
	16nm,0.9s						
FITZ	Fitzroy Crossi	9.93	179	Pn	Pn	12 30 12.4	+1.3
	0.7nm,0.3s,baz=14,slow=12,SNR=9.0						
FITZ				Sn	Sn	12 31 58.1	-3.7
	1.7nm,0.3s,baz=59,slow=2.9,SNR=7.8						
FITZ	Fitzroy Crossi	9.93	179		Pn	12 30 11.5	+0.4
FITZ	Fitzroy Crossi	9.93	179	P	Pn	12 30 12.2	+1.0
	7.8nm,0.8s						
WB0	Warramunga Arr	14.50	144		Pn	12 31 14.8	+1.1
WRAB	Tennant Creek	14.61	145		Pn	12 31 16.4	+1.3
WRA	Warramunga Arr	14.61	145	Pn	Pn	12 31 16.2	+1.1
	0.9nm,0.3s,baz=324,slow=14,SNR=19						
WRA				Sn	Sn	12 33 52.1	-4.3
	0.2nm,0.3s,baz=318,slow=25,SNR=2.6						
WRA	Warramunga Arr	14.61	145		Pn	12 31 16.6	+1.5
WB2	Warramunga Arr	14.62	145		Pn	12 31 17.0	+1.7
WR0	Warramunga Arr	14.74	144		Pn	12 31 18.5	+1.6
AS31	Alice Springs	17.49	153	P	P	12 31 54.8	+1.5
ASAR	Alice Springs	17.49	153	P	P	12 31 56.2	+2.9
	0.8nm,0.3s,baz=330,slow=12,SNR=24						
ASAR				S	Sn	12 35 01.1	-5.2
	0.1nm,0.3s,baz=318,slow=20,SNR=4.2						
ASAR	Alice Springs	17.49	153	P	P	12 31 55.6	+2.3
LEM	Lembang	17.67	273	LR	LR	12 39 21.5	
	comp=Z,92nm,20.1s,baz=170,slow=39						
PMG	Port Moresby	21.55	95	LR	LR	12 43 41.5	
	comp=Z,45nm,18.1s,baz=246,slow=44						
FORT	Forrest	22.69	174	P	P	12 32 50.7	+1.0
CMAR	Chiang Mai Arr	37.12	316	P	P	12 35 00.1	+1.3
	1.0nm,0.8s,baz=145,slow=6.2,SNR=7.0						
CMAR	Chiang Mai Arr	37.12	316	P	P	12 34 57.0	-1.8
USA0B	Ussuriysk Arra	52.41	6	P	P	12 36 59.7	-0.4
USA0B				IAmb	IAmb	12 37 04.5	
	comp=Z,6.9nm,0.9s						
WHZ	Wether Hill Ro	52.43	143	P	P	12 37 01.4	+1.0
MKAR	Makanchi Array	66.74	329	P	P	12 38 40.2	+1.2
	comp=Z,1.0nm,0.6s,baz=129,slow=7.9,SNR=10.0						
MKAR	Makanchi Array	66.74	329	P	P	12 38 39.4	+0.4
PETK	Petropavlovsk-	66.88	21		P	12 38 38.4	-1.3
KBL	Kabul	68.05	312	P	P	12 38 47.5	-0.3
KBL				IAmb	IAmb	12 38 50.4	
	comp=Z,3.3nm,0.7s						
ZAA0	Zalesovo Array	70.64	336	P	P	12 39 02.0	-1.1
ZAA0				IAmb	IAmb	12 39 05.0	
	comp=Z,1.3nm,0.8s						
ZALV	Zalesovo Beam	70.64	336	P	P	12 39 02.9	-0.3
	comp=Z,1.2nm,0.7s,baz=127,slow=6.4,SNR=5.6						
ZALV	Zalesovo Beam	70.64	336	P	P	12 39 02.7	-0.4
KURK	Kurchatov	71.16	331	P	P	12 39 06.1	-0.3
KURK				IAmb	IAmb	12 39 08.4	
	comp=Z,2.1nm,0.8s						
QSPA	South Pole Qui	81.88	180	P	P	12 40 09.6	+2.6
	comp=Z,1.1nm,0.7s,baz=328,slow=0.5,SNR=8.2						

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*IDC **04** 12:32:37.2±1.7, 7°.97S×125°.43E, h0^{km}, mb3.7/2, mb1 3.9/6, mb1mx3.6/41, mbtmp3.7/6, ML3.6/4, Error ellipse: s-maj=53.0km s-min=26.9km az=74.0*
ISC 04 12:32:43.0±1.4**, 8°.3S**±0°.1×**125°.5E**±0°.1**, h35^{km}, n6, σ2^{s}.84**/9**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	2.63	223	Pn	Pn	12 33 24.0	+0.9
	5.3nm,0.3s,baz=105,slow=2.3,SNR=2.6						
FITZ	Fitzroy Crossi	9.77	179	Pn	Pn	12 35 04.3	+3.2
	0.3nm,0.3s,baz=354,slow=10,SNR=2.4						
FITZ				Sn	Sn	12 36 46.5	-3.2
	0.7nm,0.3s,baz=162,slow=16,SNR=4.5						
WRA	Warramunga Arr	14.43	144	Pn	Pn	12 36 06.2	+1.4
	0.5nm,0.3s,baz=318,slow=13,SNR=8.3						
WRA				Sn	Sn	12 38 40.9	-2.8
	0.1nm,0.3s,baz=310,slow=19,SNR=1.9						
ASAR	Alice Springs	17.31	153	P	P	12 36 46.1	+3.0
	0.1nm,0.3s,baz=323,slow=11,SNR=3.5						
ASAR				S	Sn	12 39 51.3	-2.3
	0.1nm,0.3s,baz=321,slow=21,SNR=2.7						
MKAR	Makanchi Array	66.92	329	P	P	12 43 30.1	-1.8
	0.6nm,0.8s,baz=116,slow=6.6,SNR=4.0						
VNDA	Vanda	71.77	172	P	P	12 44 01.6	+0.3
	0.3nm,0.3s,baz=346,slow=4.2,SNR=2.8						

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*NEIC **04** 12:36:16.6±1.1, 52°.7N±0°.1×175°.2E±0°.1, h113^{km}±6^{km}, mb4.4/51, Error ellipse: s-maj=20.4km s-min=11.6km az=179.0*
*IDC **04** 12:36:19.2±1.2, 52°.79N×175°.17E, h136^{km}±8^{km}, mb3.9/20, mb1 3.9/23, mb1mx3.7/54, mbtmp4.3/23, Error ellipse: s-maj=22.5km s-min=11.3km az=159.0*
ISC 04 12:36:15.4±0.7**, 52°.8N**±0°.1×**175°.28E**±0°.05**, h100^{km}, n105, σ1^{s}.02**/103**, mb4.3**/50**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMY	Shemya	0.72	268	Pn	Pn	12 36 35.2	+2.3
SMY				Sn	Sn	12 36 48.5	+2.4
ADK	Adak	5.01	97	Pn	Pn	12 37 30.2	+2.1
PEA0B	Petropavlovsk-	10.62	279	Pn	Pn	12 38 45.5	+1.1
PETK	Petropavlovsk-	10.62	279	P	Pn	12 38 46.2	+1.8
	0.7nm,0.3s,baz=81,slow=18,SNR=19						
PETK				S	Sn	12 40 40.6	-0.6
	1.2nm,0.3s,baz=281,slow=27,SNR=9.2						
PETK	Petropavlovsk-	10.62	279	Pn	Pn	12 38 44.3	-0.1
SEY	Seymchan	15.79	319	P	P	12 39 54.7	+1.2
	0.4nm,0.3s,baz=9.9,slow=23,SNR=19						
Q19K	Cape Douglas,	18.39	58	P	P	12 40 22.5	+0.3
L19K	White Mountain	18.45	48	P	P	12 40 23.3	+0.3
L19K				IAmb	IAmb	12 41 12.3	
	comp=Z,30nm,1.7s						
OHAK	Old Harbor	18.48	64	P	P	12 40 23.7	+0.5
KDAK	Kodiak Island	18.87	62	P	P	12 40 27.6	+0.1
	comp=Z,0.5nm,0.3s,baz=288,slow=2.4,SNR=21						
KDAK	Kodiak Island	18.87	62	P	P	12 40 28.0	+0.5
J20K	Nowinta River	19.42	42	P	Pn	12 40 35.2	-0.3
J20K				IAmb	IAmb	12 40 36.3	
	comp=Z,10nm,0.8s						
BRLK	Bradley Lake	19.88	56	P	P	12 40 39.2	+0.8
IMAR	Indian Mountai	20.31	37	P	P	12 40 44.1	+1.1
H21K	Melozitna Rive	20.52	39	P	P	12 40 47.2	+1.9
KTH	Kantishna Hill	20.57	45	P	P	12 40 47.1	+1.2
KTH				IAmb	IAmb	12 41 13.9	
	comp=Z,29nm,1.6s						
TRF	Thorofare Moun	20.82	46	P	P	12 40 50.1	+1.4
TRF				IAmb	IAmb	12 41 21.2	
	comp=Z,22nm,1.4s						
MLY	Manley	21.10	41	P	P	12 40 52.9	+1.3
KNK	Knik Glacier	21.26	52	P	P	12 40 54.8	+1.5
KNK				IAmb	IAmb	12 41 14.9	
	comp=Z,31nm,1.4s						
BWN	Browne	21.36	44	P	P	12 40 57.0	+2.7
BWN				IAmb	IAmb	12 41 28.3	
	comp=Z,62nm,1.6s						
SML	Sawmill	21.38	51	P	P	12 40 56.1	+1.6
SML				IAmb	IAmb	12 41 37.3	
	comp=Z,20nm,1.2s						
RND	Reindeer	21.44	46	P	P	12 40 55.9	+0.7
RND				IAmb	IAmb	12 41 48.5	
	comp=Z,26nm,1.9s						
I23K	Minto, Yukon-K	21.69	41	P	P	12 40 58.4	+0.6
H23K	Yukon River	21.84	40	P	P	12 40 59.8	+0.4
SCM	Sheep Creek Mo	21.85	51	P	P	12 40 59.8	+0.3
SCM				IAmb	IAmb	12 41 40.3	
	comp=Z,36nm,1.4s						
WRH	Wood River Hil	22.02	44	P	P	12 41 02.1	+0.8
WRH				IAmb	IAmb	12 41 33.8	
	comp=Z,44nm,1.8s						
MDM	Murphy Dome	22.09	42	P	P	12 41 02.7	+0.7
CCB	Clear Creek Bu	22.18	43	P	P	12 41 03.8	+0.8
H24K	Noodor Dome	22.49	40	P	P	12 41 07.5	+1.2
IL31		22.60	43	P	P	12 41 08.1	+0.8
IL31				IAmb	IAmb	12 41 51.1	
	comp=Z,22nm,1.9s						
ILAR	Eielson Array	22.60	43	P	P	12 41 07.2	-0.1
	comp=Z,0.9nm,0.4s,baz=251,slow=7.8,SNR=18						
ILAR				pP	sP	12 41 34.9	-2.7
	comp=Z,1.9nm,1.1s,baz=256,slow=10,SNR=3.5						
PAX	Paxson	22.86	48	P	P	12 41 10.6	+0.6
PAX				IAmb	IAmb	12 41 57.3	
	comp=Z,20nm,1.6s						
TOLK	Toolik Lake Re	22.93	33	P	P	12 41 11.8	+1.2
TOLK				IAmb	IAmb	12 41 12.8	
	comp=Z,18nm,0.6s						
PRP	Porcupine Dome	23.34	42	P	P	12 41 15.7	+1.1
DOT	Dot Lake	23.59	47	P	P	12 41 17.1	+0.3
SCRK	Sand Creek	23.68	46	P	P	12 41 17.8	+0.2
SCRK				IAmb	IAmb	12 41 31.9	
	comp=Z,28nm,2.0s						
FYU	Fort Yukon	23.73	39	P	P	12 41 19.4	+1.5
FYU				IAmb	IAmb	12 41 21.7	
	comp=Z,8.0nm,0.8s						
BMAR	Burnt Mountain	24.23	37	P	P	12 41 23.2	+0.8
L27K	Beaver Creek,	24.52	48	P	P	12 41 25.7	+0.5
L27K				IAmb	IAmb	12 41 26.2	
	comp=Z,14nm,1.6s						
BCAR	Beaver Creek A	24.54	48	P	P	12 41 25.8	+0.4
DAWY	Dawson	25.69	46	P	P	12 41 37.3	+1.5
DAWY				IAmb	IAmb	12 41 38.2	
	comp=Z,16nm,1.7s						
YAK	Yakutsk	25.73	309	P	P	12 41 35.4	-0.7
	comp=Z,5.8nm,0.6s,baz=330,slow=1.3,SNR=6.6						
KLR	Kul'dur	27.31	280	P	P	12 41 50.1	-0.3
	comp=Z,1.0nm,0.4s,baz=78,slow=8.8,SNR=6.0						
TIXI	Tiksi	27.63	330	P	P	12 41 51.9	-1.1
	comp=Z,1.3nm,0.4s,baz=107,slow=19,SNR=6.3						
TIXI	Tiksi	27.63	330	IAmb	IAmb	12 41 54.8	
	comp=Z,2.0nm,0.8s						
INK	Inuvik	28.50	37	P	P	12 42 01.4	+0.6
	comp=Z,1.9nm,1.1s,baz=274,slow=2.7,SNR=3.9						
USRK	Ussuriysk Ar.	29.55	271	P	P	12 42 09.6	-0.7
	comp=Z,1.6nm,0.6s,baz=67,slow=11,SNR=2.2						
A36M	Sachs Harbour	31.70	31	P	P	12 42 30.5	+1.5
A36M				IAmb	IAmb	12 42 31.7	
	comp=Z,6.1nm,0.9s						
JWT	Wachi	33.05	254	P	P	12 42 40.2	-0.9
JWT				IAmb	IAmb	12 43 19.6	
	comp=Z,13nm,1.2s						
H11N2	WAKE ISLAND Hy	33.60	194	T	T	13 18 25.5	
	baz=11,slow=76,SNR=25						
H11N3	WAKE ISLAND Hy	33.62	194	T	T	13 18 15.3	
	baz=11,slow=76,SNR=27						
H11N1	WAKE ISLAND Hy	33.62	194	T	T	13 18 26.9	
	baz=11,slow=76,SNR=26						
H11S1	WAKE ISLAND Hy	34.83	194	T	T	13 19 47.2	
	baz=9.4,slow=76,SNR=9.8						
H11S3	WAKE ISLAND Hy	34.85	194	T	T	13 19 56.7	
	baz=9.4,slow=76,SNR=7.6						
H11S2	WAKE ISLAND Hy	34.85	194	T	T	13 19 38.2	
	baz=9.4,slow=76,SNR=4.2						
KSRS	Korea Array	36.05	264	P	P	12 43 07.8	+0.9
	comp=Z,1.7nm,0.8s,baz=48,slow=9.0,SNR=7.8						
EUNU	Eureka	39.93	16	P	P	12 43 40.4	+1.2
EUNU				IAmb	IAmb	12 44 39.5	
	comp=Z,5.9nm,1.4s						
NRIK	Noril'sk	41.32	328	P	P	12 43 50.6	0.0
	comp=Z,2.7nm,0.5s,baz=91,slow=6.8,SNR=7.5						
SONM	Songino Array	42.75	292	P	P	12 44 02.8	+0.1
	comp=Z,4.4nm,0.5s,baz=62,slow=8.0,SNR=33						
SONM	Songino Array	42.75	292	P	P	12 44 02.9	+0.2
SONM				IAmb	IAmb	12 44 03.1	
	comp=Z,3.2nm,0.5s						
HHC	Hu-ho-hao-te	43.81	281	*e*P	P	12 44 10.8	-0.5
HHC				pmax	pmax		
	comp=Z,21nm,0.8s						
HHC				pmax	pmax		
	comp=Z,68nm,6.6s						
SPITS	Spitsbergen Ar	48.69	354	P	P	12 44 48.7	-0.1
	comp=Z,3.5nm,0.5s,baz=41,slow=5.5,SNR=24						
ZALV	Zalesovo Beam	50.38	310	P	P	12 45 00.6	-1.3
	comp=Z,1.1nm,0.4s,baz=50,slow=7.2,SNR=5.6						
GTA	Gaotai	51.66	287	*e*P	P	12 45 12.2	+0.3
GTA				pP	pP	12 45 19.9	-15
GTA				sP	pwP	12 45 22.8	-16
GTA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
SUMG	Summit	52.77	12	P	P	12 45 20.4	+0.5
KURK	Kurchatov	55.38	310	P	P	12 45 38.2	-0.5
WMQ	Urumqi	55.49	299	*e*P	P	12 45 42.5	+2.8
ARCES	ARCESS Array B	56.03	348	P	P	12 45 42.3	-0.8
	comp=Z,6.8nm,1.0s,baz=31,slow=7.4,SNR=13						
ARCES	ARCESS Array B	56.03	348	P	P	12 45 42.7	-0.4
MK31	Makanchi Array	56.27	304	P	P	12 45 44.2	-1.0
MK31				IAmb	IAmb	12 45 44.7	
	comp=Z,4.1nm,0.6s						
MKAR	Makanchi Array	56.27	304	P	P	12 45 44.0	-1.2
	comp=Z,4.0nm,0.4s,baz=54,slow=6.1,SNR=72						
MKAR	Makanchi Array	56.27	304	P	P	12 45 44.3	-0.9
MAKZ	Makanchi	56.42	305	P	P	12 45 45.5	-0.7
LENM	Lemitar	56.57	76	P	P	12 45 47.6	-0.1
BRVK	Borovoye	57.44	316	P	P	12 45 53.0	-0.2
ARU	Arti	59.44	325	P	P	12 46 07.3	+0.3
SCHQ	Schefferville	61.10	36	P	P	12 46 19.2	+0.8
	comp=Z,5.4nm,1.1s,baz=341,slow=6.1,SNR=5.7						
SCHQ				pP	sP	12 46 50.6	-1.8
	comp=Z,4.0nm,0.7s,baz=307,slow=6.1,SNR=2.7						
AAK	Ala-Archa	63.13	306	P	P	12 46 32.3	-0.1
AAK				IAmb	IAmb	12 46 33.1	
	comp=Z,3.6nm,0.8s						
FINES	FINESS Array B	63.54	344	P	P	12 46 33.8	-0.8
	comp=Z,2.8nm,0.8s,baz=17,slow=8.0,SNR=8.5						
ABKAR	Akbulak array	64.56	319	P	P	12 46 41.5	+0.1
ABKAR	Akbulak array	64.56	319	P	P	12 46 41.6	+0.1
ABKAR				IAmb	IAmb	12 46 42.0	
	comp=Z,4.9nm,0.6s						
KKAR	Karatay Array	64.71	308	P	P	12 46 42.2	-0.3
NB201	NORSAR Array S	65.82	352	P	P	12 46 49.4	-0.1
NB2	NORSAR Subarra	65.84	352	P	P	12 46 49.1	-0.5
	comp=Z,2.7nm,0.6s,baz=9.2,slow=6.5						
NOA	NORSAR Array B	65.84	352	P	P	12 46 49.3	-0.3
	comp=Z,2.3nm,0.7s,baz=11,slow=6.4,SNR=9.9						
NOA				pP	sP	12 47 22.2	-1.6
	comp=Z,1.8nm,0.7s,baz=11,slow=6.4,SNR=5.2						
BTK	Batken	66.89	306	P	P	12 46 56.2	-0.5
BTK				IAmb	IAmb	12 46 57.3	
	comp=Z,6.4nm,0.7s						
CHTO	Chiang Mai	67.01	271	P	P	12 46 56.3	-1.3
CHTO				IAmb	IAmb	12 46 58.3	
	comp=Z,5.9nm,1.2s						
CMAR	Chiang Mai Arr	67.28	271	P	P	12 46 59.0	-0.4
	comp=Z,2.1nm,0.3s,baz=23,slow=7.1,SNR=7.8						
TAPN	Taplejung	67.31	286	*e*P	P	12 46 59.5	-0.3
	comp=Z,10.0nm,0.6s						
GAR	Garm	67.95	306	P	P	12 47 02.7	-0.7
GUN	Gumba	67.95	287	*e*P	P	12 47 03.5	-0.4
	comp=Z,17nm,0.5s						
JIRN	Jiri	67.96	287	*e*P	P	12 47 04.0	0.0
	comp=Z,20nm,0.7s						
RAMN	Ramite	68.25	286	*e*P	P	12 47 05.3	-0.4
	comp=Z,20nm,0.4s						
PKI	Pulchoki	68.48	287	*e*P	P	12 47 06.7	-0.5
PKIN	Phulchoki	68.48	287	*e*P	P	12 47 06.5	-0.6
	comp=Z,10nm,0.5s						
DANN	Dangsing	68.84	289	*e*P	P	12 47 08.6	-0.8
	comp=Z,14nm,0.9s						
KOLN	Koldanda	69.37	289	*e*P	P	12 47 11.9	-0.6
PYUN	Piuthan	69.47	290	*e*P	P	12 47 12.7	-0.5
AKASG	Malin Array Be	73.00	338	P	P	12 47 33.4	-0.4
	comp=Z,0.6nm,0.4s,baz=23,slow=6.0,SNR=4.1						
AKASG	Malin Array Be	73.00	338	P	P	12 47 33.8	+0.1
AKBB	Malin Array Si	73.00	338	P	P	12 47 33.8	0.0
AKBB				IAmb	IAmb	12 47 34.2	
	comp=Z,6.5nm,0.6s						
LANS	Liptovska Anna	76.41	344	*e*P	P	12 47 54.2	+0.7
WRA	Warramunga Arr	80.64	219	P	P	12 48 15.5	-1.4
	comp=Z,0.9nm,0.8s,baz=30,slow=5.9,SNR=4.5						
BRTR	Keskin Array B	82.07	331	P	P	12 48 24.3	-0.3
	comp=Z,2.3nm,0.7s,baz=51,slow=4.6,SNR=9.7						
BOSA	Boshof	147.27	306	PKPbc	PKPbc	12 55 46.5	-0.4
	comp=Z,2.6nm,0.5s,baz=74,slow=1.3,SNR=9.3						

IDC 04 12:36:15.8±1.4**, 57°.72S×148°.40W, h0^{km}, mb3.8**/3**, mb1 4.0**/3**, mb1mx3.7**/30**, mbtmp3.8**/3**, Error ellipse: s-maj=50.3km s-min=37.5km az=36.0, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QSPA	South Pole Qui	32.42	180	P	P	12 42 47.8	+0.6
	1.2nm,0.8s,baz=40,slow=0.6,SNR=5.6						
H03S2	Juan Fernandez	51.37	94	T	T	13 40 04.2	
	baz=219,slow=74,SNR=13						
H03S1	Juan Fernandez	51.38	94	T	T	13 40 06.0	
	baz=219,slow=74,SNR=13						
H03S3	Juan Fernandez	51.39	94	T	T	13 40 05.1	
	baz=219,slow=74,SNR=12						
H03N3	Juan Fernandez	51.66	93	T	T	13 40 27.9	
	baz=221,slow=72,SNR=33						
H03N2	Juan Fernandez	51.67	93	T	T	13 40 30.4	
	baz=221,slow=72,SNR=32						
H03N1	Juan Fernandez	51.68	93	T	T	13 40 28.1	
	baz=221,slow=72,SNR=37						
ASAR	Alice Springs	63.79	267	P	P	12 46 49.5	-0.1
	1.1nm,0.9s,baz=142,slow=7.2,SNR=8.2						
H01W1	Cape Leeuwin H	64.95	244	T	T	13 58 51.0	
	baz=143,slow=76,SNR=6.0						
H01W2	Cape Leeuwin H	64.96	244	T	T	13 58 50.1	
	baz=143,slow=76,SNR=5.8						
H01W3	Cape Leeuwin H	64.97	244	T	T	13 58 50.6	
	baz=143,slow=76,SNR=5.6						
WRA	Warramunga Arr	66.58	270	P	P	12 47 07.2	-0.5

	0.7nm,0.8s,baz=146,slow=5.8,SNR=4.7						
H10S3	ASCENSION HYDR	103.65	133	T	T	14 46 16.4	
	SNR=3.8						
H10S2	ASCENSION HYDR	103.66	133	T	T	14 46 17.0	
H10N3	ASCENSION HYDR	104.73	132	T	T	14 47 34.6	
	baz=204,slow=74,SNR=5.9						
H10N1	ASCENSION HYDR	104.73	132	T	T	14 47 35.2	
	baz=204,slow=74,SNR=7.9						
H10N2	ASCENSION HYDR	104.75	132	T	T	14 47 34.6	
	baz=204,slow=74,SNR=7.1						
ILAR	Eielson Array	122.18	1	PKP	PKiKP	12 55 12.4	+1.4
	0.3nm,0.7s,baz=222,slow=1.2,SNR=4.3						
MKAR	Makanchi Array	147.85	272	PKPbc	PKPbc	12 56 01.2	-0.5
	1.5nm,0.7s,baz=102,slow=3.4,SNR=8.5						
ESDC	Sonseca Array	150.87	113	PKPbc	PKPbc	12 56 07.4	-2.2
	1.0nm,0.8s,baz=265,slow=2.0,SNR=4.5						

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*IPEC **04** 12:54:07.7±0.3, 51°.61N×16°.21E, h0^{km}±1^{km}, ML2.8/3, Error ellipse: s-maj=3.5km s-min=1.8km az=60.0*

*DNK **04** 12:54:07.8±2.6, 51°.43N×16°.04E, h29^{km}±114^{km}, ML1.9*

*PRU **04** 12:54:08.9±0.0, 51°.57N×16°.09E, h0^{km}*

*IDC **04** 12:54:09.6±0.8, 51°.53N×15°.96E, h0^{km}, mb1 3.6/6, mb1mx3.3/44, mbtmp3.5/6, ML3.0/6, Error ellipse: s-maj=13.4km s-min=7.3km az=108.0*

*BGR **04** 12:54:10.1±0.7, 51°.54N×16°.07E, h1^{km}, ML3.1/12, Error ellipse: s-maj=13.3km s-min=3.3km az=11.0*

ISC 04 12:54:06.8±0.7**, 51°.64N**±0°.03×**16°.14E**±0°.02**, h0^{km}, n60,** σ**1^{s}20**/108**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.81	173	*e*Pg	Pg	12 54 22.8	+0.6
KSP				*e*Sg	Sg	12 54 32.5	-0.1
KSP	Ksiaz	0.81	173	*e*Pg	Pg	12 54 22.8	+0.6
CHVC	Chvalec	1.06	183	*e*PG	Pb	12 54 27.6	-0.3
CHVC				*e*SG	Sg	12 54 40.5	-0.1
	comp=Z,116nm,0.5s						
OSTC	Ostas	1.09	177	*e*PG	Pb	12 54 28.2	-0.3
OSTC				*e*SG	Sg	12 54 41.6	-0.1
	comp=Z,101nm,0.3s						
UPC	Upice	1.14	184	*e*PG	Pg	12 54 28.8	+0.2
UPC				*e*SG	Sg	12 54 42.9	-0.4
DPC	Dobruska-Polom	1.30	175	*e*PG	Pg	12 54 31.5	-0.1
DPC				*e*SG	Sg	12 54 47.0	-1.4
	comp=Z,78nm,0.4s						
DPC	Dobruska-Polom	1.30	175	*e*Pg	Pg	12 54 31.5	-0.1
PVCC	Panska Ves	1.49	222	*e*PG	Pn	12 54 35.0	+0.2
PVCC				*e*SG	Sg	12 54 54.6	0.0
	comp=Z,388nm,0.5s						
BRG	Berggiesshubel	1.58	242	*e*Pn	Pg	12 54 37.2	+0.2
BRG				*e*Sg	Sg	12 54 57.8	+0.3
BRG	Berggiesshubel	1.58	242	Pn	Pb	12 54 36.6	-0.2
BRG				Pg	Pg	12 54 37.8	+0.7
BRG				Sg	Sg	12 54 57.8	+0.3
BRG				Amp		12 54 59.2	
	comp=Z,186nm,0.4s						
KRLC	Kraliky	1.62	165	*e*PG	Pn	12 54 36.8	+0.2
KRLC				*e*SG	Sn	12 54 57.4	-0.8
	comp=Z,58nm,0.4s						
FBE	Freiberg	1.89	249	*e*Pg	Pg	12 54 43.4	+0.4
FBE				*e*Sg	Sg	12 55 07.3	-0.2
PRA	Prague	1.91	215	*e*PG	Pb	12 54 42.4	0.0
PRU	Pruhonice	1.94	212	*e*PN	Pn	12 54 40.9	-0.1
PRU				*e*PG	Pb	12 54 42.8	-0.2
PRU				*e*SG	Sb	12 55 07.1	-0.6
	comp=Z,87nm,0.3s						
CLL	Collm	1.99	262	*i* Pn	Pn	12 54 41.7	+0.1
CLL				*e*Pg	Pg	12 54 45.0	+0.1
CLL				*i*		12 54 48.6	
CLL				*e*Sg	Sg	12 55 10.0	-0.6
	comp=Z,61nm,0.7s						
CLL	Collm	1.99	262	*e*Pn	Pn	12 54 41.9	+0.2
CLL				*e*Sg	Sg	12 55 11.6	+0.9
MORC	Moravsky Berou	2.07	154	*e*Pn	Pn	12 54 42.8	0.0
	baz=336						
MORC				*e*Sg	Sb	12 55 11.1	-0.4
	comp=Z,74nm,0.6s,baz=336						
MORC	Moravsky Berou	2.07	154	*e*PN	Pn	12 54 42.9	+0.1
MORC				*e*SG	Sb	12 55 11.2	-0.3
MORC	Moravsky Berou	2.07	154	*e*Pn	Pn	12 54 43.0	+0.2
OKC	Ostrava-Krasne	2.21	144	*e*PG	Pg	12 54 48.9	-0.2
OKC	Ostrava-Krasne	2.21	144	*e*Pn	Pg	12 54 49.3	+0.2
OKC				*e*Sg	Sg	12 55 18.6	+0.9
VRAC	Vranov	2.35	173	Pn	Pn	12 54 47.6	+0.9
	comp=Z,5.7nm,0.3s,baz=349,slow=16,SNR=16						
VRAC				Pg	Pg	12 54 51.0	-0.9
	comp=Z,9.1nm,0.3s,baz=352,slow=16,SNR=11						
VRAC				Lg	Lg	12 55 21.1	
	comp=Z,12nm,0.3s,baz=260,slow=23,SNR=8.0						
VRAC	Vranov	2.35	173	*e*Pn	Pn	12 54 46.8	+0.1
	baz=354						
VRAC				*e*Sg	Sb	12 55 20.0	+0.4
	comp=Z,36nm,0.4s,baz=354						
VRAC	Vranov	2.35	173	*e*PN	Pn	12 54 46.9	+0.2
VRAC				*e*SG	Sb	12 55 20.1	+0.4
TREC	Trest	2.39	190	*e*PG	Pb	12 54 51.4	+0.8
KRUC	Moravsky	2.59	176	*e*Pn	Pn	12 54 50.4	+0.5
	baz=357						
KRUC				*e*Sg	Sb	12 55 27.6	+1.3
	comp=Z,37nm,0.7s,baz=357						
TANN	Tannenbergstha	2.63	244	*e*Pn	Pn	12 54 51.3	+0.8
TANN				*e*Sg	Sg	12 55 31.2	+0.1
WERD	Werda	2.70	245	*e*Pn	Pn	12 54 52.3	+0.9
OJC	Ojcow	2.72	120	*e*Pg	Pg	12 54 58.9	0.0
OJC				*e*Sg	Sg	12 55 34.7	+0.7
OJC	Ojcow	2.72	120	*e*Sg	Sg	12 55 35.4	+1.4
NKC	Novy Kostel	2.73	240	*e*PN	Pn	12 54 52.6	+0.8
NKC				*e*PG	Pg	12 54 59.1	+0.1
NKC				*e*SG	Sg	12 55 35.5	+1.2
	comp=Z,154nm,0.6s						
JAVC	Velka Javorina	2.95	160	*e*Pn	Pn	12 54 55.4	+0.5
	baz=342						
JAVC	Velka Javorina	2.95	160	*e*PN	Pn	12 54 55.5	+0.5
KHC	Kasperske Hory	3.00	214	*e*PN	Pn	12 54 55.7	+0.1
KHC				*e*PG	Pb	12 55 02.1	+1.0
KHC				*e*SN	Sn	12 55 31.1	-1.2
KHC				*e*SG	Sg	12 55 41.4	-1.7
	comp=Z,35nm,0.5s						
MOX	Moxa	3.02	252	*e*Sg	Sg	12 55 43.9	+0.3
CKRC	Cesky Krumlov	3.06	203	*e*PN	Pn	12 54 57.3	+0.9
CKRC				*e*PG	Pb	12 55 02.9	+0.8
CKRC				*e*SG	Sb	12 55 42.3	+2.4
	comp=Z,32nm,0.3s						
GEC2	GERESS Array S	3.21	210	*e*Pn	Pn	12 54 59.8	+1.3
GERES	GERESS Array B	3.21	210	Pn	Pn	12 54 58.9	+0.4
	comp=Z,2.9nm,0.3s,baz=31,slow=13,SNR=43						
GERES				Pg	Pb	12 55 05.7	+1.1
	comp=Z,5.0nm,0.3s,baz=29,slow=17,SNR=31						
GERES				Lg	Lg	12 55 47.1	
	comp=Z,5.0nm,0.3s,baz=38,slow=22,SNR=4.8						
SMOL	Smolenice	3.24	165	*e*PG	Pg	12 55 08.1	-0.7
SMOL				*e*SG	Sg	12 55 50.8	0.0
WET	Wettzell	3.26	221	*e*Pn	Pn	12 54 59.9	+0.8
LANS	Liptovska Anna	3.28	138	*e*SG	Sg	12 55 51.6	-0.5
MODS	Modra-Piesok	3.35	167	*e*PN	Pn	12 55 01.0	+0.6
MODS				*e*PG	Pg	12 55 09.7	-1.3
MODS				*e*SG	Sg	12 55 54.9	+0.5
ZST	Bratislava	3.50	169	*e*SG	Sg	12 56 00.0	+0.7
BSD	Bornholm Skovb	3.56	349	*i* S	Sn	12 55 45.6	-0.2
VYHS	Vyhne	3.60	150	*e*PN	Pn	12 55 04.2	+0.4
VYHS				*e*PG	Pg	12 55 17.8	+2.1
CONA	Conrad Observa	3.72	183	*i* Pn	Pn	12 55 06.6	+1.1
	comp=Z,6.8nm,0.4s,SNR=6.2						
CONA				*e*Sg	Sg	12 56 05.5	-0.7
	comp=Z,41nm,0.5s						
MOA	Molln	3.98	198	*i* Pn	Pn	12 55 10.0	+0.9
	comp=Z,9.9nm,0.3s,SNR=17						
MOA				*i* Sg	Sg	12 56 14.1	-0.6
	comp=Z,16nm,0.3s						
ARSA	Arzberg	4.41	185	*i* Pn	Pn	12 55 17.6	+2.6
	comp=Z,4.6nm,0.3s						
ARSA				*e*Pg	Pg	12 55 30.3	-1.0
	comp=Z,8.0nm,0.5s						
ARSA				*e*Sg	Sg	12 56 29.0	+0.5
	comp=Z,16nm,0.6s						
BLEU	Blekinge	4.68	358	*i* P	Pn	12 55 20.2	+1.7
BLEU				*i* S	Sn	12 56 13.6	+0.2
BLEU				IAML		12 56 17.8	
	comp=Z,0.4nm,0.3s						
BJUU	Bjuv	4.81	339	*i*	Pn	12 55 24.6	+4.3
BJUU				*i* S	Sn	12 56 14.5	-2.2
KBA	Koelnbreinsper	4.92	203	*i* Pn	Pn	12 55 23.0	+1.0
	comp=Z,7.6nm,0.4s,SNR=14						
KBA				*e*Sg	Sg	12 56 42.4	-2.3
	comp=Z,18nm,0.6s						
DEL	Delary	5.02	345	*e*	Pn	12 55 22.5	-0.7
	baz=152,slow=12						
DEL				*i* P	Pn	12 55 24.5	+1.3
DEL				*i* S	Sn	12 56 19.2	-2.7
DEL				IAML		12 56 24.9	
	comp=Z,1.3nm,0.3s						
SOKA	Soboth	5.02	189	*i* Pn	Pn	12 55 24.4	+1.1
	comp=Z,1.3nm,0.3s						
WTTA	Wattenberg	5.27	216	Sg	Sg	12 56 57.7	+1.6
	comp=Z,11nm,0.5s						
RETA	Reutte	5.43	222	Sg	Sg	12 57 01.3	+0.1
	comp=Z,6.1nm,0.4s						
FABU	Falkenberg	5.73	341	*e*P	Pn	12 55 32.9	-0.1
FABU				*i* S	Sn	12 56 36.3	-3.1
AKASG	Malin Array Be	8.28	91	Pn	Pn	12 56 10.0	+2.0
	comp=Z,1.4nm,0.3s,baz=279,slow=12,SNR=6.7						
HFS	Hagfors	8.62	352	Pn	Pn	12 56 13.6	+0.9
	comp=Z,0.1nm,0.3s,baz=91,slow=29,SNR=2.5						
FINES	FINESS Array B	11.24	25	Pn	Pn	12 56 49.5	+1.1
	comp=Z,0.1nm,0.3s,baz=215,slow=12,SNR=1.7						
FINES				Sn	Sn	12 58 48.8	-5.8
	comp=Z,0.2nm,0.3s,baz=207,slow=25,SNR=1.3						
ARCES	ARCESS Array B	18.49	10	Pn	P	12 58 23.0	-1.0
	baz=188,slow=13,SNR=2.4						

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*IDC **04** 13:08:20.0±3.4, 13°.15S×166°.84E, h209^{km}±27^{km}, mb3.5/5, mb1 3.6/6, mb1mx3.2/47, mbtmp4.0/6, MS3.9/1, Ms1 3.9/1, ms1mx2.7/31, Error ellipse: s-maj=41.5km s-min=28.4km az=143.0*

ISC 04 13:08:18.1±1.6**, 13°.4S**±0°.1×**167°.1E**±0°.2**, h200^{km}, n7,** σ**0^{s}37**/7**, mb3.9**/5**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	8.69	184	P	Pn	13 10 25.4	+4.9
	0.2nm,0.3s,baz=343,slow=19,SNR=2.2						
DZM				S	Sn	13 11 58.1	-0.1
	baz=48,slow=20,SNR=1.4						
CTA	Charters Tower	21.02	249	P	P	13 12 46.6	+0.2
	3.5nm,0.8s,baz=74,slow=13,SNR=5.3						
STKA	Stephens Creek	29.76	228	P	P	13 14 06.4	+0.4
	2.8nm,0.5s,baz=50,slow=9.6,SNR=14						
WRA	Warramunga Arr	32.00	254	P	P	13 14 25.7	-0.2
	1.0nm,0.6s,baz=86,slow=9.3,SNR=19						
ASAR	Alice Springs	33.01	247	P	P	13 14 34.2	-0.4
	2.1nm,0.5s,baz=75,slow=9.3,SNR=91						
ASAR				ScP	ScP	13 20 38.6	-0.4
	0.8nm,0.8s,baz=86,slow=2.9,SNR=6.4						
FITZ	Fitzroy Crossi	40.10	258	LR	LR	13 31 57.9	
	comp=Z,172nm,19.4s,baz=358,slow=36						
ILAR	Eielson Array	85.28	18	P	P	13 20 32.0	+0.1
	0.3nm,0.6s,baz=238,slow=5.0,SNR=5.1						

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*IDC **04** 13:13:06.4±1.5, 8°.24S×125°.38E, h0^{km}, mb4.2/2, mb1 4.0/6, mb1mx3.6/48, mbtmp3.9/6, ML3.3/4, MS2.4/1, Ms1 2.4/1, ms1mx2.1/47, Error ellipse: s-maj=50.4km s-min=23.5km az=77.0*

ISC 04 13:13:11.3±1.3**, 8°.5S**±0°.1×**125°.4E**±0°.1**, h35^{km}, n6,** σ**1^{s}80**/9**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	2.44	225	Pn	Pn	13 13 50.0	+1.2
	3.4nm,0.3s,baz=108,slow=20,SNR=2.2						
BATI				Sn	Sn	13 14 16.9	-0.5
	4.5nm,0.3s,baz=357,slow=15,SNR=4.3						
BATI				LR	LR	13 14 24.2	
	comp=Z,69nm,18.5s,baz=86,slow=30						
FITZ	Fitzroy Crossi	9.58	179	Pn	Pn	13 15 28.9	+2.1
	0.2nm,0.3s,baz=356,slow=12,SNR=7.2						
FITZ				Sn	Sn	13 17 10.0	-3.3
	0.2nm,0.3s,baz=3.9,slow=2.6,SNR=2.9						
WRA	Warramunga Arr	14.32	144	Pn	Pn	13 16 32.1	+0.5
	0.2nm,0.3s,baz=316,slow=13,SNR=18						
WRA				Sn	Sn	13 19 08.9	-0.4
	0.1nm,0.3s,baz=319,slow=26,SNR=1.9						
ASAR	Alice Springs	17.17	153	P	P	13 17 10.8	+0.8
	0.1nm,0.3s,baz=322,slow=11,SNR=12						
MKAR	Makanchi Array	67.05	329	P	P	13 24 00.6	-0.4
	0.8nm,0.6s,baz=123,slow=7.4,SNR=8.2						
KURBB	Kurchatov Arra	71.45	331	P	P	13 24 26.9	-1.2
	1.3nm,0.2s,baz=135,slow=4.9,SNR=1.8						

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*IDC **04** 13:17:38.4±1.7, 23°.00S×171°.26E, h0^{km}, mb3.9/7, mb1 4.2/9, mb1mx3.9/39, mbtmp4.1/9, ML4.7/2, MS3.4/2, Ms1 3.4/2, ms1mx2.8/40, Error ellipse: s-maj=64.4km s-min=25.5km az=162.0*

*NEIC **04** 13:17:47.3±1.7, 22°.7S±0°.2×170°.92E±0°.09, h40^{km}±8^{km}, mb4.2/5, Error ellipse: s-maj=23.1km s-min=11.9km az=168.0*

ISC 04 13:17:45.3±0.8**, 22°.8S**±0°.2×**171°.03E**±0°.07**, h35^{km}, n43,** σ**1^{s}36**/42**, mb4.0**/9**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	3.08	295	Pn	Pn	13 18 30.3	-1.2
PINNC	Pines Island,	3.32	273	Pn	Pn	13 18 35.1	+0.4
OUENC	Ouen Island, N	3.89	275	Pn	Pn	13 18 43.3	+0.7
ONTNC	Ouen Toro	4.26	276	Pn	Pn	13 18 48.7	+1.0
DZM	Mont Dzumac	4.31	279	*e*Pn	Pn	13 18 48.7	+0.3
	31nm,0.1s						
DZM				*e*Sn	Sn	13 19 39.0	+1.4
	42nm,0.2s						
DZM				*e*LR	LR	13 19 56.6	
	comp=Z,349nm,24.6s						
DZM	Mont Dzumac	4.31	279	Pn	Pn	13 18 48.5	+0.1
	11nm,0.3s,baz=109,slow=11,SNR=243						
DZM				Sn	Sn	13 19 37.6	0.0
	13nm,0.3s,baz=196,slow=20,SNR=13						
DZM	Mont Dzumac	4.31	279	Pn	Pn	13 18 48.8	+0.3
MSVF	Nonsavu	8.30	54	Pn	Pn	13 19 44.6	+1.3
	0.7nm,0.3s,baz=183,slow=22,SNR=15						
MSVF	Nonsavu	8.30	54		Pn	13 19 45.0	+1.7
HNR	Honiara	17.03	320	P	Pn	13 21 41.0	+0.3
	7.2nm,0.3s,baz=171,slow=13,SNR=5.7						
RAR	Rarotonga	27.09	92	LR	LR	13 31 59.8	
	comp=Z,46nm,18.4s,baz=74,slow=32						
ASAR	Alice Springs	34.07	261	P	P	13 24 26.9	+0.3
	1.3nm,0.9s,baz=89,slow=9.5,SNR=12						
WB2	Warramunga Arr	34.22	268	P	P	13 24 26.4	-1.5
WB2				IAmb	IAmb	13 24 47.6	
	comp=Z,2.3nm,0.9s						
WRA	Warramunga Arr	34.23	268	P	P	13 24 26.9	-1.1
	comp=Z,0.2nm,0.4s,baz=96,slow=8.6,SNR=8.5						
FITZ	Fitzroy Crossi	42.66	268	P	P	13 25 38.2	-0.6
	comp=Z,3.0nm,0.8s,baz=95,slow=5.2,SNR=6.2						
FITZ	Fitzroy Crossi	42.66	268	IAmb	IAmb	13 25 40.5	
	comp=Z,5.2nm,1.1s						
QSPA	South Pole Qui	67.26	180	LR	LR	13 55 12.1	
	comp=Z,42nm,20.5s,baz=123,slow=34						
QSPA	South Pole Qui	67.26	180	P	P	13 28 36.0	-0.1
QSPA				IAmb	IAmb	13 28 52.1	
	comp=Z,3.4nm,1.1s						
CMAR	Chiang Mai Arr	81.49	294	P	P	13 30 00.8	+1.3
	comp=Z,0.9nm,0.6s,baz=138,slow=4.7,SNR=9.1						
NVAR	Mina Array Bea	89.92	48	P	P	13 30 39.1	-2.1
	comp=Z,0.7nm,0.6s,baz=225,slow=8.4,SNR=4.7						
SONM	Songino Array	91.06	322	P	P	13 30 44.9	-1.2
	comp=Z,0.3nm,0.4s,baz=134,slow=6.2,SNR=2.5						
ILAR	Eielson Array	93.14	17	P	P	13 30 55.6	+0.4
	comp=Z,0.4nm,0.8s,baz=209,slow=7.2,SNR=2.6						
MORC	Moravsky Berou	145.98	329	PKPdf	PKPdf	13 37 20.5	+0.1
MORC	Moravsky Berou	145.98	329	*e*P	PKPdf	13 37 19.9	-0.5
DPC	Dobruska-Polom	146.15	331	*e*PKP	PKPdf	13 37 20.4	-0.3
JAVC	Velka Javorina	146.53	328	*e*P	PKPbc	13 37 23.2	+0.3
CLL	Collm	146.85	335	*i* PKPbc	PKPdf	13 37 22.1	+0.4
	comp=Z,4.0nm,0.6s						
KRUC	Moravsky	147.01	329	*e*P	PKPdf	13 37 23.0	+0.9
CONA	Conrad Observa	148.05	328	*e*P	PKPbc	13 37 26.6	-0.6
	comp=Z,2.0nm,0.7s						
CKRC	Cesky Krumlov	148.16	330	*e*PKP	PKPbc	13 37 26.3	-1.0
KHC	Kasperske Hory	148.26	331	*e*PKP	PKPbc	13 37 26.5	-1.1
GERES	GERESS Array B	148.41	331	PKPbc	PKPdf	13 37 26.6	+2.0
	comp=Z,2.4nm,0.7s,baz=58,slow=3.3,SNR=18						
MOA	Molln	148.87	329	*e*P	PKPdf	13 37 27.6	+2.3
	comp=Z,2.8nm,0.6s						
SOKA	Soboth	149.31	327	*e*P	PKPbc	13 37 28.8	-1.6
	comp=Z,2.5nm,0.7s						
OBKA	Obir	149.67	327	*e*P	PKPdf	13 37 28.9	+2.2
	comp=Z,5.1nm,1.1s						
MYKA	Terra Mystica	150.04	328	*e*P	PKPdf	13 37 29.9	+2.7
	comp=Z,5.2nm,0.6s						
ABTA	Abfaltersbach	150.50	329	*e*P	PKPdf	13 37 30.8	+2.9
	comp=Z,4.5nm,0.6s						
WTTA	Wattenberg	150.52	331	*e*P	PKPbc	13 37 31.5	-2.0
	comp=Z,4.0nm,0.5s						
MOTA	Moosalm	150.69	332	*e*P	PKPbc	13 37 32.3	-1.6
	comp=Z,4.0nm,0.6s						
RETA	Reutte	150.73	332	*e*P	PKPbc	13 37 32.4	-1.4
	comp=Z,1.5nm,0.5s						
SQTA	Sankt Quirin	150.74	331	*e*P	PKPbc	13 37 32.5	-1.5
	comp=Z,4.3nm,0.4s						
FETA	Feichten	151.10	331	*e*P	PKPbc	13 37 33.1	-1.8
	comp=Z,5.3nm,0.8s						
TUE	Stuetta	152.13	332	PKPbc	PKPbc	13 37 36.5	-0.7

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*IDC **04** 13:22:46.6±2.0, 8°.05S×125°.36E, h0^{km}, mb3.5/1, mb1 3.6/5, mb1mx3.4/39, mbtmp3.4/5, ML3.2/4, Error ellipse: s-maj=53.2km s-min=28.3km az=74.0*

ISC 04 13:22:51.6±1.5**, 8°.2S**±0°.1×**125°.3E**±0°.1**, h35^{km}, n5,** σ**0^{s}75**/6**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	2.59	219	Pn	Pn	13 23 31.6	+0.6
	3.2nm,0.3s,baz=92,slow=19,SNR=2.8						
BATI				Sn	Sn	13 24 00.7	-0.7
	2.2nm,0.3s,baz=61,slow=24,SNR=1.6						
FITZ	Fitzroy Crossi	9.85	178	Pn	Pn	13 25 10.7	-0.1
	0.1nm,0.3s,baz=160,slow=17,SNR=2.4						
WRA	Warramunga Arr	14.59	144	Pn	Pn	13 26 15.1	-0.5
	0.2nm,0.3s,baz=319,slow=13,SNR=13						
ASAR	Alice Springs	17.45	153	P	P	13 26 54.1	+0.8
	0.1nm,0.3s,baz=334,slow=12,SNR=14						
MKAR	Makanchi Array	66.78	329	P	P	13 33 39.3	-0.3
	0.3nm,0.6s,baz=148,slow=6.2,SNR=2.6						

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*IDC **04** 13:23:57.1±0.5, 8°.19S×124°.86E, h0^{km}, mb4.5/13, mb1 4.5/15, mb1mx4.3/31, mbtmp4.5/15, ML4.0/2, MS3.6/7, Ms1 3.6/7, ms1mx3.1/40, Error ellipse: s-maj=20.7km s-min=13.0km az=74.0*

*DJA **04** 13:23:59.1±0.2, 8°S±2°×12°5E±°, h10^{km}, M4.5/33, mb4.6/33, mB5.1/12, MLv4.6/13, Mw(mB)4.5/12, MwMwp4.3/1, Mwp4.8/1*

*NEIC **04** 13:23:59.4±2.4, 8°.25S±0°.05×125°.02E±0°.06, h9^{km}, mb4.8/35, Error ellipse: s-maj=9.0km s-min=8.0km az=88.0*

ISC 04 13:24:01.1±0.3**, 8°.33S**±0°.04×**125°.02E**±0°.05**, h24^{km}, n143,** σ**2^{s}08**/145**, mb4.7**/40**, MS3.9**/6**, 3C-9D, Fault plane solution: NP1:**φ$_s$192.43599°**,** δ84.58081°**,** λ19.92861°. **NP2:**φ$_s$100.47491°**,** δ70.16421°**,** λ174.23789°. **Principal axes:** T Plg17.8617°**,** Azm58.1350°**;** N Plg69.3766°**,** Azm207.0363°**;** P Plg9.9715°**,** Azm324.8870°**; Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.60	208	Pn	Pn	13 24 29.9	+1.9
SOEI	Soe	1.60	208	P	Pn	13 24 28.2	+0.3
BATI	Baumata	2.29	216	Pn	Pb	13 24 40.9	-0.9
	65nm,0.3s,baz=57,slow=0.7,SNR=29						
BATI				Sn	Sn	13 25 04.5	-0.5
	36nm,0.3s,baz=90,slow=21,SNR=6.0						
BATI				LR	LR	13 25 15.1	
	comp=Z,294nm,18.3s,baz=47,slow=34						
BATI	Baumata	2.29	216	P	Pn	13 24 38.4	+1.0
MMRI	Maumere	2.77	264	Pn	Pn	13 24 45.4	+1.5
MMRI	Maumere	2.77	264	P	Pn	13 24 43.9	0.0
EDFI	Ende, Flores	3.32	263	P	Pn	13 24 51.7	+0.1
BSSI	Bau Bau, Buton	4.99	296	P	Pn	13 25 12.8	-1.7
BKSI	Bulukumba	5.71	301	P	Pn	13 25 22.0	-2.4
	0.2nm40nm,0.6s						
WBSI	Waikabubak, Su	5.71	256	P	Pn	13 25 24.9	+0.4
KAPI	Kappang	6.18	302	Pn	Pn	13 25 31.5	+0.5
MSAI	Masohi	6.30	38	P	Pn	13 25 31.6	-0.9
SANI	Sanana	6.32	9	P	Pn	13 25 30.3	-2.5
	0.3nm998nm67nm,0.5s						
PLAI	Plampang	7.18	266	P	Pn	13 25 44.3	-0.3
	0.5nm3μm182nm,1.1s						
TTSI	Tana Toraja	7.37	315	P	Pn	13 25 51.3	+4.0
MTN	Manton Dam	7.50	127	P	Pn	13 25 51.6	+2.6
	baz=7.5,SNR=15						
MTN				S	Sn	13 27 12.1	-1.2
	baz=7.5						
MTN	Manton Dam	7.50	127	Pn	Pn	13 25 50.1	+1.1
LUWI	Luwuk	7.58	343	Pn	Pn	13 25 48.9	-1.2
LBMI	Labuha	8.03	18	P	Pn	13 25 54.6	-1.8
	0.2nm769nm22nm,1.2s						
TWSI	Taliwang, Sumb	8.06	267	P	Pn	13 25 56.5	-0.2
	842nm36nm,0.8s						
KNRA	Kununurra	8.17	154	P	Pn	13 25 59.5	+1.4
	baz=8.2,SNR=30						
KNRA				S	Sn	13 27 31.1	+1.3
	baz=8.2						
KNRA	Kununurra	8.17	154	Pn	Pn	13 25 59.6	+1.4
KDU	Kakadu	8.51	121	P	Pn	13 26 05.7	+2.8
	baz=8.5,SNR=6.3						
KDU				S	Sn	13 27 33.5	-4.8
	baz=8.5						
FAKI	Fak Fak	8.98	54	P	Pn	13 26 17.9	+8.5
TNTI	Ternate	9.34	15	Pn	Pn	13 26 12.9	-1.5
TNTI	Ternate	9.34	15	P	Pn	13 26 22.3	+8.0
SIJI	Sorong	9.68	40	Pn	Pn	13 26 17.6	-1.4
	0.9nm,0.3s,baz=143,slow=2.4,SNR=5.6						
SIJI				LR	LR	13 30 24.0	
	comp=Z,144nm,20.5s,baz=112,slow=40						
SWI	Sorong	9.68	40	P	Pn	13 26 16.9	-2.1
	21nm,1.2s						
FITZ	Fitzroy Crossi	9.73	176	Pn	Pn	13 26 18.6	-0.9
	1.2nm,0.3s,baz=10,slow=9.6,SNR=19						
FITZ				Sn	Sn	13 28 02.0	-6.1
	3.8nm,0.3s,baz=88,slow=24,SNR=17						
FITZ	Fitzroy Crossi	9.73	176	S	Sn	13 28 02.5	-5.7
	baz=9.7						
FITZ	Fitzroy Crossi	9.73	176	Pn	Pn	13 26 21.0	+1.4
MPSI	Mapaga	10.01	329	P	Pn	13 26 19.0	-4.5
	16nm,1.7s						
TOLI2	Tolitoli	10.29	336	Pn	Pn	13 26 26.6	-0.7
JAGI	Jajag, Banyuwa	10.75	268	P	Pn	13 26 33.1	-0.6
	2μm15nm,0.6s						
BBKI	Banjar Baru	11.22	295	P	Pn	13 26 37.2	-2.8
	2μm25nm,1.0s						
PCJI	Pacitan	13.70	270	P	Pn	13 27 13.1	-0.9
	77nm,1.6s						
PSA00	Pilbara Seismi	14.08	200		Pn	13 27 19.6	+0.5
UGM	Wanagama	14.36	271	Pn	Pn	13 27 22.6	-0.4
WB0	Warramunga Arr	14.55	142		Pn	13 27 23.3	-2.3
WRA	Warramunga Arr	14.65	143	Pn	Pn	13 27 23.4	-3.5
	1.9nm,0.3s,baz=318,slow=13,SNR=41						
WRA				Sn	Sn	13 30 02.3	-6.4
	1.2nm,0.3s,baz=319,slow=23,SNR=6.8						
WRA				LR	LR	13 33 52.1	
	comp=Z,558nm,20.9s,baz=325,slow=40						
WRA	Warramunga Arr	14.65	143		Pn	13 27 24.4	-2.6
WRAB	Tennant Creek	14.65	143		Pn	13 27 24.0	-2.9
STKI	Sintang	15.87	301	P	P	13 27 51.7	+5.1
AS31	Alice Springs	17.46	152	P	Pn	13 28 03.9	+0.6
ASAR	Alice Springs	17.46	152	P	Pn	13 28 02.1	-1.1
	0.8nm,0.3s,baz=322,slow=11,SNR=34						
ASAR				S	Sn	13 31 09.1	-7.9
	0.5nm,0.3s,baz=317,slow=19,SNR=9.8						
ASAR				LR	LR	13 33 52.4	
	comp=Z,166nm,21.5s,baz=324,slow=34						
ASAR				ScP	ScP	13 36 19.7	+2.2
	baz=343,slow=2.9,SNR=3.9						
ASAR	Alice Springs	17.46	152	P	Pn	13 28 04.6	+1.4
CBJI	Citeko	18.12	275	P	Pn	13 28 10.0	-1.3
	54nm,0.7s						
QIS	Mount Isa	18.61	132	P	P	13 28 17.4	+0.5
	baz=19,SNR=15						
COEN	Coen	18.66	109	P	P	13 28 16.8	-0.7
MEEK	Meekatharra	19.19	198	P	P	13 28 24.9	+1.6
	baz=19,SNR=6.7						
PPBI	Pangkal Pinang	19.77	287	P	Pn	13 28 35.8	+4.6
MTSU	Mount Surprise	21.14	119	P	P	13 28 47.0	+2.5
	baz=21,SNR=28						
DSRI	Dabo	21.81	290	P	P	13 28 50.8	-0.9
	676nm22nm,1.6s						
PMG	Port Moresby	21.90	94	P	P	13 28 54.9	+2.2
	13nm,0.8s,baz=246,slow=5.8,SNR=3.7						
PMG				LR	LR	13 38 50.6	

	comp=Z,316nm,20.0s,baz=259,slow=40						
MORW	Morawa	22.29	201	P	P	13 28 57.1	+0.4
	baz=22,SNR=5.1						
MORW	Morawa	22.29	201	P	P	13 28 56.3	-0.4
MORW				IAmb	IAmb	13 29 00.2	
	comp=Z,41nm,1.4s						
BLDU	Ballidu	23.49	198	P	P	13 29 09.6	+0.4
	baz=24,SNR=15						
CTA	Charters Tower	23.64	122	P	P	13 29 12.7	+2.0
	comp=Z,23nm,1.0s,baz=303,slow=12,SNR=8.8						
CTAO	Charters Tower	23.64	122	P	P	13 29 13.4	+2.7
CTAO				IAmb	IAmb	13 29 16.2	
	comp=Z,80nm,1.6s						
MUN	Mundaring	24.91	198	P	P	13 29 22.7	+0.3
	baz=25,SNR=3.8						
NWAO	Narrogin (SRO)	25.51	195	P	P	13 29 26.7	-1.1
	comp=Z,3.8nm,0.5s,baz=33,slow=8.2,SNR=6.6						
NWAO	Narrogin (SRO)	25.51	195	P	P	13 29 28.4	+0.6
NWAO				IAmb	IAmb	13 29 41.3	
	comp=Z,57nm,1.6s						
STKA	Stephens Creek	28.05	149	P	P	13 29 51.9	+1.2
	comp=Z,2.1nm,0.8s,baz=333,slow=6.8,SNR=3.2						
STKA				PcP	PcP	13 33 04.5	-0.6
	comp=Z,2.0nm,0.7s,baz=316,slow=2.9,SNR=2.9						
STKA				LR	LR	13 42 52.3	
	comp=Z,428nm,20.1s,baz=323,slow=40						
STKA	Stephens Creek	28.05	149	P	P	13 29 53.6	+3.0
	baz=28,SNR=5.5						
HTT	Hallett	28.09	155	P	P	13 29 53.7	+2.7
	baz=28,SNR=3.4						
RPSI	Rantau Prapat	28.23	292	P	P	13 29 51.5	-0.9
PSI	Prapat	28.27	292	P	P	13 29 51.5	-1.5
	comp=Z,6.0nm,0.6s,baz=106,slow=7.9,SNR=5.8						
CMSA	Cobar Meteorol	30.06	143	P	P	13 30 10.7	+2.2
	baz=30,SNR=7.8						
ARPS	Mount Arapiles	32.18	154	P	P	13 30 28.1	+1.0
	baz=32,SNR=4.8						
CM31	Chiang Mai Arr	37.02	316	P	P	13 31 08.0	-1.2
CMAR	Chiang Mai Arr	37.02	316	P	P	13 31 08.6	-0.6
	comp=Z,4.5nm,0.9s,baz=143,slow=7.0,SNR=22						
CMAR	Chiang Mai Arr	37.02	316	P	P	13 31 08.0	-1.2
CHTO	Chiang Mai	37.27	317	P	P	13 31 09.9	-1.4
CHTO				IAmb	IAmb	13 31 14.9	
	comp=Z,14nm,1.1s						
PBA	Port Blair	37.74	301	P	P	13 31 15.2	-0.2
KMI	Kunming	39.71	327	⇓P	P	13 31 35.8	+3.8
KMI				pmax	pmax		
	comp=Z,15nm,1.6s						
NJ2	Nanjing	40.59	352	*e*P	P	13 31 39.4	+0.5
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
SANVU	Saraoutou	41.82	104	P	P	13 31 50.3	+1.0
DZM	Mont Dzumac	42.09	114	*e*P	P	13 31 54.6	+3.0
	comp=Z,53nm,1.2s						
DZM	Mont Dzumac	42.09	114	*e*LR	LR	13 43 39.3	
	comp=Z,205nm,24.1s						
DZM	Mont Dzumac	42.09	114	P	P	13 31 51.8	+0.2
DZM				IAmb	IAmb	13 31 57.5	
	comp=Z,25nm,1.1s						
ONTNC	Ouen Toro	42.15	114	P	P	13 31 52.7	+0.7
ONTNC				IAmb	IAmb	13 31 57.0	
	comp=Z,33nm,1.0s						
OUENC	Ouen Island, N	42.53	114	P	P	13 31 57.2	+2.2
OUENC				IAmb	IAmb	13 32 00.6	
	comp=Z,17nm,0.9s						
PINNC	Pines Island,	43.12	114	P	P	13 32 02.2	+2.4
JHS	Saijyo	43.77	10	P	P	13 32 05.3	+0.4
CD2	Chengdu	44.02	333	P	P	13 32 08.5	+1.5
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
JWT	Wachi	44.47	12	P	P	13 32 09.6	-0.9
JWT				IAmb	IAmb	13 32 58.8	
	comp=Z,29nm,1.6s						
MJAR	Matsushiro Arr	46.33	15	P	P	13 32 23.8	-1.4
	comp=Z,11nm,1.1s,baz=181,slow=9.0,SNR=14						
MJAR	Matsushiro Arr	46.33	15	P	P	13 32 23.1	-2.1
MAJO	Matsushiro	46.33	15	P	P	13 32 23.1	-2.0
MAJO				IAmb	IAmb	13 32 35.1	
	comp=Z,9.8nm,0.9s						
MAT	Matsushiro	46.33	15	P	P	13 32 23.4	-1.8
JSD	Sado	47.76	14	P	P	13 32 34.7	-1.6
JSD				IAmb	IAmb	13 32 43.3	
	comp=Z,10nm,1.0s						
JMM	Marumori	48.26	17	P	P	13 32 39.6	-0.6
LSA	Lhasa	49.91	321	P	P	13 32 53.0	-0.6
LSA				IAmb	IAmb	13 32 57.2	
	comp=Z,15nm,1.1s						
HHC	Hu-ho-hao-te	50.48	347	*e*P	P	13 32 59.7	+2.4
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						
HHC				pmax	pmax		
	comp=Z,89nm,5.7s						
TAPN	Taplejung	50.63	316	*e*P	P	13 32 57.3	-1.6
JTM	Tenmabayashi	51.07	16	P	P	13 33 01.6	+0.1
RAMN	Ramite	51.16	315	*e*P	P	13 33 01.7	-1.1
	comp=Z,10nm,0.5s						
JIRN	Jiri	51.88	315	*e*P	P	13 33 07.0	-1.3
GUN	Gumba	52.25	315	*e*P	P	13 33 09.2	-1.8
PKI	Pulchoki	52.38	314	*e*P	P	13 33 10.5	-1.5
PKIN	Phulchoki	52.39	314	*e*P	P	13 33 10.1	-1.9
	comp=Z,6.2nm,0.6s						
KKN	Kakani	52.60	315	*e*P	P	13 33 11.5	-2.0
GTA	Gaotai	52.94	336	*e*P	P	13 33 14.3	-1.4
GTA				pP	sP	13 33 25.0	-1.3
GTA				sP	pP	13 33 28.0	+4.7
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GKN	Gorkha	53.18	314	*e*P	P	13 33 15.9	-1.8
KOLN	Koldanda	53.78	313	*e*P	P	13 33 20.4	-1.8
	comp=Z,12nm,0.9s						
DANN	Dangsing	54.01	314	*e*P	P	13 33 22.1	-1.8
	comp=Z,15nm,0.5s						
KLR	Kul'dur	57.62	5	LR	LR	13 58 07.1	
	comp=Z,21nm,22.0s,baz=118,slow=36						
ULN	Ulaanbaatar	58.17	346	P	P	13 33 52.4	-0.7
ULN				IAmb	IAmb	13 33 56.3	
	comp=Z,8.7nm,1.1s						
SONM	Songino Array	58.30	345	P	P	13 33 51.8	-2.3
	comp=Z,3.2nm,1.1s,baz=164,slow=7.9,SNR=13						
SONM	Songino Array	58.30	345	P	P	13 33 52.8	-1.3
SONM				IAmb	IAmb	13 33 57.1	
	comp=Z,7.7nm,1.3s						
WMQ	Urumqi	61.95	330	*e*P	P	13 34 20.9	+1.8
KSH	Kashi	65.76	320	P	P	13 34 43.2	-1.2
KSH				pmax	pmax		
	comp=Z,3.0nm,0.4s						
MK31	Makanchi Array	66.74	330	P	P	13 34 48.6	-1.8
MK31				IAmb	IAmb	13 34 53.1	
	comp=Z,6.3nm,0.9s						
MKAR	Makanchi Array	66.74	330	P	P	13 34 49.0	-1.4
	comp=Z,3.7nm,0.7s,baz=128,slow=7.7,SNR=30						
MKAR	Makanchi Array	66.74	330	P	P	13 34 48.6	-1.8
PEA0B	Petropavlovsk-	67.21	21	P	P	13 34 53.9	+0.7
PETK	Petropavlovsk-	67.21	21	P	P	13 34 53.1	-0.1
	comp=Z,3.4nm,0.8s,baz=193,slow=4.7,SNR=7.3						
PETK	Petropavlovsk-	67.21	21	P	P	13 34 53.5	+0.3
CHGR	Chuyangaron	69.80	316	P	P	13 35 09.9	+0.1
CHGR				IAmb	IAmb	13 35 11.5	
	comp=Z,15nm,1.2s						
ZAA0	Zalesovo Array	70.69	336	P	P	13 35 12.1	-2.7
ZAA0				IAmb	IAmb	13 35 17.2	
	comp=Z,13nm,1.4s						
ZALV	Zalesovo Beam	70.69	336	P	P	13 35 12.3	-2.4
	comp=Z,3.3nm,0.5s,baz=120,slow=4.4,SNR=18						
ZALV	Zalesovo Beam	70.69	336	P	P	13 35 12.2	-2.6
KK31	Karatay Array	71.17	321	P	P	13 35 16.2	-1.8
KKAR	Karatay Array	71.17	321	P	P	13 35 16.6	-1.3
KURK	Kurchatov	71.17	331	P	P	13 35 15.5	-2.3
KURK				IAmb	IAmb	13 35 20.1	
	comp=Z,12nm,1.2s						
VNDA	Vanda	71.77	172	P	P	13 35 22.6	+1.6
	comp=Z,2.4nm,0.8s,baz=320,slow=6.4,SNR=24						
VNDA	Vanda	71.77	172	P	P	13 35 22.1	+1.1
MAW	Mawson	71.93	201	P	P	13 35 23.3	+1.2
	comp=Z,2.9nm,0.6s,baz=80,slow=5.8,SNR=19						
MAW	Mawson	71.93	201	P	P	13 35 23.5	+1.4
	baz=72,SNR=9.7						
MAW	Mawson	71.93	201	P	P	13 35 23.6	+1.5
SBA	Scott Base	72.72	172	P	P	13 35 29.4	+2.7
SBA				IAmb	IAmb	13 35 33.4	
	comp=Z,6.1nm,1.1s						
VOI	Vohitsoka	76.06	250	P	P	13 35 47.4	+0.1
ABKAR	Akbulak array	80.53	323	P	P	13 36 10.0	-1.3
SYO	Syowa Base	80.63	201	⇑*e*X	P	13 36 10.2	-1.3
SYO	Syowa Base	80.63	201	⇓*e*PcP	PcP	13 36 19.2	+0.9
QSPA	South Pole Qui	81.65	180	P	P	13 36 18.7	+1.5
TBI	Tubuai	82.66	113	*e*LR	LR	14 02 29.6	
	comp=Z,71nm,30.5s						
PPT2	Papeete2	83.17	107	*e*LR	LR	14 02 42.0	
	comp=Z,211nm,36.0s						
SNAA	Sanae	93.19	194	P	P	13 37 14.5	+1.4
SNAA	Sanae	93.19	194	P	P	13 37 14.7	+1.6
SNAA				IAmb	IAmb	13 37 15.3	
	comp=Z,7.5nm,1.0s						
TORD	Torodi Ar. Bea	124.20	280	PKP	PKPdf	13 42 56.9	-1.9
	comp=Z,0.7nm,0.6s,baz=88,slow=2.0,SNR=4.4						
CPUP	Villa Florida	145.47	176	PKPbc	PKPdf	13 43 38.4	+0.4
	comp=Z,5.3nm,0.7s,baz=176,slow=3.2,SNR=6.7						
LPAZ	La Paz	152.29	152	PKPbc	PKPbc	13 43 57.1	+0.4
	comp=Z,4.4nm,1.0s,baz=16,slow=1.1,SNR=6.4						

DJA 04 13:24:08.8±0.3, 1°S±4°×12°2E±°, h12km±4km, M2.8/7, MLv2.8/7, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APSI	Ampana	0.41	253	P	Pb	13 24 18.3	+0.3
APSI				S	Sb	13 24 24.0	-0.2
LUWI	Luwuk	0.77	109	P	Pb	13 24 24.6	+0.4
LUWI				S	Sb	13 24 34.7	0.0
LUWI	Luwuk	0.77	109	S	Sb	13 24 35.5	+0.8
LUWI	Luwuk	0.77	109	P	Pb	13 24 24.4	+0.2
MRSI	Marisa	1.26	355	P	Pn	13 24 32.4	+0.1
MRSI	Marisa	1.26	355	P	Pg	13 24 42.9	+10
GTOI	Gorontalo	1.72	34	P	Pn	13 24 38.0	-0.5
GTOI	Gorontalo	1.72	34	P	Pn	13 24 36.9	-1.6
MPSI	Mapaga	2.42	298	P	Pn	13 24 47.2	-1.0
BKSI	Bulukumba	4.89	203	P	Pn	13 25 22.7	+0.5

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*IDC **04** 13:39:30.2±1.7, 0°.97N×98°.06E, h0km, mb3.7/5, mb1 3.7/6, mb1mx3.5/53, mbtmp3.6/6, ML3.3/1, Error ellipse: s-maj=44.2km s-min=21.8km az=72.0*

*DJA **04** 13:39:35.3±0.4, 1°N±4°×9°8E±°, h11km±6km, M4.0/8, MLv4.0/8*

ISC 04 13:39:36.2±0.8, 1°.18N±0°.05×98°.11E±0°.05, h32km, n19, σ1s.55/19, mb3.9/5, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSI	Gunungsitoli	0.55	284	P	Pb	13 39 47.3	-0.2
GSI				S	Sb	13 39 55.2	0.0
MNSI	Mandailing Nat	1.52	104	P	Pn	13 40 01.0	-0.2
MNSI				S	Sb	13 40 22.5	-0.3
PSI	Prapat	1.81	27	Pn	Pn	13 40 05.2	-0.1
	4.5nm,0.3s,baz=175,slow=10.0,SNR=25						
PSI				Sn	Sb	13 40 28.9	-2.3
	10nm,0.3s,baz=329,slow=22,SNR=4.0						
TPTI		2.27	336	P	Pn	13 40 12.7	+1.2
TSI	Tuntungan	2.35	11	P	Pb	13 40 21.6	+3.6
SISI	Saibi	2.67	158	P	Pn	13 40 18.9	+1.8
PPI	Padang Panjang	2.81	125	P	Pn	13 40 19.0	+0.1
BKNI	Bangkinang	3.05	106	P	Pn	13 40 23.3	+1.0
PDSI	Padang	3.14	131	P	Pn	13 40 25.0	+1.5
PPSI	Pulau Pagai	4.35	154	P	Pn	13 40 42.0	+1.8
CMAR	Chiang Mai Arr	17.19	3	P	P	13 43 35.5	0.0
	0.0nm,0.3s,baz=188,slow=10.0,SNR=1.8						
H08S2	Diego Garcia H	27.01	251	T	T	14 12 47.2	
	baz=72,slow=74,SNR=34						
H08S3	Diego Garcia H	27.01	251	T	T	14 12 48.1	
	baz=72,slow=74,SNR=33						
H08S1	Diego Carcia H	27.02	251	T	T	14 12 49.1	
	baz=72,slow=74,SNR=19						
WRA	Warramunga Arr	41.26	123	P	P	13 47 16.7	-2.1
	0.3nm,0.3s,baz=304,slow=9.0,SNR=2.6						
ASAR	Alice Springs	42.66	128	P	P	13 47 28.3	-1.9
	0.2nm,0.5s,baz=303,slow=8.5,SNR=2.3						
SONM	Songino Array	47.03	8	P	P	13 48 04.0	-0.8
	0.9nm,0.6s,baz=193,slow=7.9,SNR=6.6						
MKAR	Makanchi Array	47.49	345	P	P	13 48 08.6	+0.3
	1.0nm,0.7s,baz=158,slow=7.5,SNR=9.2						
ZALV	Zalesovo Beam	53.73	350	P	P	13 48 55.5	+0.3
	0.8nm,0.4s,baz=170,slow=8.3,SNR=5.2						

NEIC 04 13:40:37.6±0.6, 36°.327N±0°.007×97°.55W±0°.02, h5km±7km, mb_Lg2.0/6, Error ellipse: s-maj=2.1km s-min=0.3km az=62.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T35A	Sooner Cattle	1.02	54	Pg	Pg	13 40 56.9	-0.2
T35A				Sg	Sg	13 41 10.4	0.0
FNO	Franklin	1.07	174	Pg	Pg	13 40 57.8	-0.4
FNO				Sg	Sg	13 41 12.1	0.0
U32A	Winter Ranch,	1.18	273	Pg	Pg	13 40 59.4	-0.7
U32A				Sg	Sg	13 41 15.5	+0.2
TUL1	Leonard	1.48	106	Pn	Pn	13 41 04.3	-0.5
X34A	Smith Ranch, M	1.74	188	IAmb_Lg		13 41 36.1	
	comp=Z,9.8nm,0.7s						
WMOK	Wichita Mounta	1.88	213	Pn	Pn	13 41 10.9	+0.6
WMOK				IAmb_Lg		13 41 40.0	
	comp=Z,6.1nm,0.8s						
U40A	Yellville	3.79	88	IAmb_Lg		13 42 46.8	
	comp=Z,5.6nm,1.2s						
MGMO	Mountain Grove	4.32	77	IAmb_Lg		13 43 06.4	
	comp=Z,2.8nm,0.7s						

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*BGR **04** 13:47:40.3±0.0, 42°.92N×147°.12E, h33km, mb5.1*

*BJI **04** 13:47:45.7±0.0, 43°.58N×146°.36E, h90km, mB4.9/30, mb4.9/61*

*IDC **04** 13:47:48.4±1.9, 43°.42N×146°.06E, h80km±17km, mb4.4/43, mb1 4.5/51, mb1mx4.4/73, mbtmp4.7/51, MS3.2/13, Ms1 3.2/13, ms1mx3.0/55, Error ellipse: s-maj=10.7km s-min=9.0km az=113.0*

*MOS **04** 13:47:49.1±0.9, 43°.40N×146°.00E, h102km, mb5.2/37, Error ellipse: s-maj=6.9km s-min=4.5km az=114.2*

*NIED **04** 13:47:50.6, 43°.34N×146°.05E, h92km, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.17; $M_{\theta\theta}$0.74; $M_{\phi\phi}$-1.91; $M_{r\theta}$8.04; $M_{\theta\phi}$-2.06; $M_{\phi r}$5.04; Fault plane solution: $M_0$9.83000×10^{15} NP1:ϕ_s58.00000°, δ86.00000°, λ102.00000°. NP2:ϕ_s168.00000°, δ13.00000°, λ20.00000°.*

*NEIC **04** 13:47:50.3±1.6, 43°.34N±0°.05×146°.1E±0°.1, h96km±6km, mb5.0/85 Error ellipse: s-maj=11.4km s-min=7.9km az=90.0*

*JMA **04** 13:47:50.6±0.1, 43°.34N×146°.05E, h92km±1km, M4.6*

JMA Felt II J1.

*SKHL **04** 13:47:50.4±0.2, 43°.40N×146°.00E, h104km±3km, mb5.4/8, mbv5.5/2, msh5.1/2, msha6.1/7*

ISC 04 13:47:50.1±0.4, 43°.40N±0°.04×146°.02E±0°.04, h97km±3km, h97km:pP-P, n539, σ1s.14/580, mb4.9/166, 118C-35D, Fault plane solution: NP1:ϕ_s193.30037°**,** δ23.91870°**,** λ41.55135°. **NP2:**ϕ_s64.28570°**,** δ74.39971°**,** λ108.36206°. **Principal axes:** T Plg56.7765°**,** Azm358.2742°**;** N Plg17.6629°**,** Azm239.1849°**;** P Plg27.1437°**,** Azm139.7891°**; Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	0.20	259	⇓P	Pn	13 48 04.0	+0.1
NEM2				*e*S	Sn	13 48 13.8	-0.4
NMR	Nemuro--Hokkai	0.21	261	⇓*i*PN	Pn	13 48 04.0	+0.1
NMR				*i* S	Sn	13 48 13.8	-0.5
NMR	Nemuro--Hokkai	0.21	261	*i* P	Pn	13 48 04.0	+0.1
NMR				*i* S	Sn	13 48 14.3	0.0
GLVR	Golovnino	0.49	313	⇓*i*PN	Pn	13 48 06.1	+0.6
GLVR				*i* S	Sn	13 48 18.1	+1.1
GLVR				pmax	pmax		
	comp=Z,20μm,0.4s						
GLVR				pmax	pmax		
	comp=E,967nm,0.5s						
GLVR				pmax	pmax		
	comp=N,1μm,0.3s						
GLVR				smax	smax		
	comp=N,70μm,0.9s						
GLVR				smax	smax		
	comp=E,70μm,1.0s						
GLVR				smax	smax		
	comp=N,30μm,0.2s						
GLVR				smax	smax		
	comp=E,48μm,0.3s						
GLVR	Golovnino	0.49	313	*i* P	Pn	13 48 05.9	+0.4
GLVR				AMB	AMB	13 48 06.7	
	comp=E,20μm,0.4s						
GLVR				*i* S	Sn	13 48 17.5	+0.5
GLVR				A	A	13 48 19.0	
	comp=E,70μm,1.0s						
GLVR				A	A	13 48 19.0	
	comp=E,70μm,1.0s						
GLVR				A	A	13 48 21.0	
	comp=E,30μm,0.4s						
GLVR				A	A	13 48 21.0	
	comp=E,48μm,0.4s						
GRPR	Tuman	0.61	343*c*	*i*PN	Pn	13 48 06.1	-0.4
GRPR				*i* S	Sn	13 48 18.3	-0.4
GRPR				pmax	pmax		
	comp=Z,10μm,0.4s						
GRPR				pmax	pmax		
	comp=N,5μm,0.3s						
GRPR				pmax	pmax		
	comp=E,959nm,0.2s						
GRPR				smax	smax		
	comp=N,17μm,0.2s						
GRPR				smax	smax		
	comp=E,25μm,0.3s						
GRPR	Tuman	0.61	343	*i* P	Pn	13 48 06.6	+0.1
GRPR				AMB	AMB	13 48 07.0	
	comp=E,10μm,0.4s						
GRPR				*i* S	Sn	13 48 18.9	+0.2
GRPR				A	A	13 48 21.0	
	comp=E,17μm,0.3s						
GRPR				A	A	13 48 21.0	
	comp=E,25μm,0.3s						
YUK	Yuzh-Kuril'sk	0.64	350*d*	*i*PN	Pn	13 48 07.2	+0.6
YUK				*i* S	Sn	13 48 18.9	-0.2
YUK				pmax	pmax		
	comp=N,1μm,0.1s						
YUK				pmax	pmax		
	comp=E,2μm,0.1s						
YUK				pmax	pmax		
	comp=Z,11μm,0.1s						
YUK				smax	smax		
	comp=E,20μm,0.4s						
YUK				smax	smax		
	comp=N,5μm,0.2s						
YUK	Yuzh-Kuril'sk	0.64	350	*i* P	Pn	13 48 07.3	+0.6
YUK				AMB	AMB	13 48 08.0	
	comp=N,11μm,0.3s						
YUK				*i* S	Sn	13 48 19.8	+0.7
YUK				A	A	13 48 21.0	
	comp=N,6μm,0.4s						
YUK				A	A	13 48 21.0	
	comp=N,20μm,0.4s						
JKHN	Kushirohamanak	0.70	243	⇓P	Pn	13 48 07.5	+0.3
JKHN				*e*S	Sn	13 48 19.9	-0.2
JNSB	Nemuroshibetsu	0.82	297	⇓P	Pn	13 48 09.1	+0.7
JNSB				*e*S	Sn	13 48 23.2	+1.0
JRA	Rausu	0.84	310	⇓P	Pn	13 48 09.5	+0.9
JRA				*e*S	Sn	13 48 23.9	+1.5
RUSJ	Misakicho	0.90	322	*e*PN	Pn	13 48 08.6	-0.5
RUSJ				*e*S	Sn	13 48 25.7	+2.3
JNK	Nakash	0.96	281	⇓P	Pn	13 48 10.1	+0.3
JNK				*e*S	Sn	13 48 24.2	-0.5
JAK	Akkeshi	1.05	248	⇓P	Pn	13 48 10.9	+0.1
JAK				*e*S	Sn	13 48 26.1	-0.3
JTKR	Abashiri--Toko	1.63	291	⇓P	Pn	13 48 18.9	+1.1
JTKR				*e*S	Sn	13 48 40.5	+1.7
JAR	Ashorobuto	1.64	267	⇓P	Pn	13 48 18.8	+0.9
JAR				*e*S	Sn	13 48 40.3	+1.2
JOB	Onbets	1.67	253	⇓P	Pn	13 48 19.1	+0.8
JOB				*e*S	Sn	13 48 40.0	+0.2
JMP	Maruseppu	2.02	288	⇓P	Pn	13 48 24.0	+1.2
JMP				*e*S	Sn	13 48 49.3	+1.6
JCH	Churui	2.10	249	⇓P	Pn	13 48 24.1	+0.3
JCH				*e*S	Sn	13 48 48.5	-1.1
KUR	Kuril'sk	2.26	35*c*	*i*PN	Pn	13 48 27.0	+1.1
KUR				*i* S	Sn	13 48 54.3	+1.0
KUR				pmax	pmax		
	comp=N,146nm,0.6s						
KUR				pmax	pmax		
	comp=Z,886nm,0.6s						
KUR				pmax	pmax		
	comp=E,121nm,0.3s						
KUR				smax	smax		
	comp=N,2μm,0.3s						
KUR				smax	smax		
	comp=E,1μm,0.2s						
KUR	Kuril'sk	2.26	35	*i* P	Pn	13 48 27.0	+1.1
KUR				AMB	AMB	13 48 27.0	
	comp=E,890nm,0.3s						
KUR				*i* S	Sn	13 48 54.3	+1.0
KUR				A	A	13 48 55.0	
	comp=E,2μm,0.3s						
KUR				A	A	13 48 55.0	
	comp=E,2μm,0.3s						
JEM	Erimo	2.52	238		Pn	13 48 31.3	+2.0
ERM	Erimo	2.52	238*c*	*e*PN	Pn	13 48 30.8	+1.5
ERM				pmax	pmax		
	comp=Z,1μm,1.0s						
ERM	Erimo	2.52	238		Pn	13 48 30.8	+1.5
JKA	Kamikawa-asahi	2.58	287		Pn	13 48 32.0	+2.0
JKA	Kamikawa-asahi	2.58	287	*e*P	Pn	13 48 32.0	+2.0
ASAJ	Asahikawa	2.58	287	P	Pn	13 48 32.0	+2.0
	comp=Z,291nm,0.3s,baz=116,slow=12,SNR=3327						
ASAJ				S	Sn	13 48 59.9	-1.0
	comp=Z,96nm,0.3s,baz=128,slow=12,SNR=12						
ASAJ				LR	LR	13 49 20.5	
	comp=Z,754nm,19.0s,baz=118,slow=35						
JEW	Eniwo	3.39	262		Pn	13 48 42.5	+1.6
YSS	Yuzh-Sakhalins	4.23	328	*e*PN	Pn	13 48 54.3	+2.0
YSS				*e*S	Sn	13 49 41.2	+0.7
YSS				pmax	pmax		
	comp=Z,70nm,0.5s						
YSS				smax	smax		
	comp=N,290nm,1.1s						
YSS				smax	smax		
	comp=N,900nm,3.5s						
YSS	Yuzh-Sakhalins	4.23	328	Pn	Pn	13 48 54.4	+2.2
YSS	Yuzh-Sakhalins	4.23	328	*e*P	Pn	13 48 53.5	+1.2
YSS				AMB	AMB	13 48 57.9	
	comp=N,70nm,0.5s						
YSS				*e*S	Sn	13 49 41.0	+0.5
YSS				A	A	13 49 43.8	
	comp=N,290nm,1.1s						
YSS				A	A	13 49 48.5	
	comp=N,900nm,3.5s						
JTM	Tenmabayashi	4.51	236	Pn	Pn	13 48 55.5	-0.6
UGL	Uglegorsk	6.30	336	*e*PN	Pn	13 49 19.7	-0.6
UGL				*e*S	Sn	13 50 35.2	+4.4
UGL				pmax	pmax		
	comp=Z,800nm,2.6s						
UGL				pmax	pmax		
	comp=Z,195nm,1.1s						
UGL				smax	smax		
	comp=N,2μm,4.5s						
UGL				smax	smax		
	comp=E,1μm,4.5s						
UGL				smax	smax		
	comp=Z,2μm,4.6s						
UGL				smax	smax		
	comp=N,99nm,1.0s						
UGL				smax	smax		
	comp=E,133nm,0.9s						
UGL	Uglegorsk	6.30	336	*e*P	Pn	13 49 20.3	0.0
UGL				AMB	AMB	13 49 21.0	
	comp=E,800nm,2.6s						
UGL				AMB	AMB	13 49 23.0	
	comp=E,195nm,1.1s						
UGL				*e*S	Sn	13 50 31.1	+0.3
UGL				A	A	13 50 40.0	
	comp=E,2μm,4.5s						
UGL				A	A	13 50 40.0	
	comp=E,1μm,4.5s						
UGL				A	A	13 50 42.0	
	comp=E,99nm,1.0s						
UGL				A	A	13 50 42.0	
	comp=E,133nm,1.0s						
UGL				*e*rx	rx	13 51 00.9	
JMM	Marumori	6.81	217		Pn	13 49 25.4	-1.9
TYV	Tymovskoe	7.80	344	*e*PN	Pn	13 49 41.6	+0.8
TYV				*e*S	Sn	13 51 05.4	-2.0
TYV				pmax	pmax		
	comp=Z,19nm,1.3s						
TYV				pmax	pmax		
	comp=Z,400nm,3.6s						
TYV				smax	smax		
	comp=N,18nm,1.4s						
TYV				smax	smax		

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       comp=E,18nm,1.4s
TYV                                 smax   smax
       comp=N,300nm,5.2s
TYV                                 smax   smax
       comp=E,400nm,5.2s
TYV    Tymovskoe        7.80 344   eP      Pn      13 49 41.6 +0.8
TYV                                 AMB    AMB     13 49 41.9
       comp=E,19nm,1.0s
TYV                                 AMB    AMB     13 49 42.8
       comp=E,400nm,3.6s
TYV                                eS      Sn      13 51 05.4 -2.0
TYV                                 A      A       13 51 06.6
       comp=E,17nm,1.0s
TYV                                 A      A       13 51 06.6
       comp=E,17nm,1.0s
JSD    Sado             7.96 230    Pn     Pn      13 49 42.6 -0.4
JYT    Yasato           8.45 214           Pn      13 49 47.2 -2.4
MAJO   Matsushiro       9.10 224    PN     Pn      13 49 58.2 -0.3
MAJO   Matsushiro       9.10 224    Pn     Pn      13 49 58.2 -0.3
MAT    Matsushiro       9.10 224    P      Pn      13 49 57.0 -1.5
MAT                                eS      Sn      13 51 35.4 -3.7
MJAR   Matsushiro Arr   9.10 224    P      Pn      13 49 57.5 -1.0
       comp=E,0.5nm,0.3s,baz=30,slow=13,SNR=35
MJAR                                LR     LR      13 53 46.1
       comp=E,148nm,21.2s,baz=50,slow=39
MJAR   Matsushiro Arr   9.10 224    PN     Pn      13 49 58.2 -0.3
MJAR   Matsushiro Arr   9.10 224    Pn     Pn      13 49 58.2 -0.3
GRNR   Gornyy           9.85 322⇓iPN     Pn      13 50 09.6 +1.1
GRNR                                pmax   pmax
       comp=Z,2.0nm,0.6s
GRNR                                MLR    MLR
       comp=E,160nm,19.0s
GRNR                                MLR    MLR
       comp=N,80nm,20.0s
GRNR                                MLR    MLR
       comp=Z,200nm,13.0s
GRNR   Gornyy           9.85 322   eP      Pn      13 50 09.6 +1.1
GRNR                                AMB    AMB     13 50 10.8
       comp=Z,2.0nm,0.6s
USA0B  Ussuriysk Arra  10.18 279    PN     Pn      13 50 14.1 +1.1
USA0B  Ussuriysk Arra  10.18 279    Pn     Pn      13 50 14.1 +1.1
USRK   Ussuriysk Ar.   10.18 279    P      Pn      13 50 13.3 +0.3
       baz=87,slow=14,SNR=10
USRK   Ussuriysk Ar.   10.18 279    PN     Pn      13 50 13.8 +0.8
USRK   Ussuriysk Ar.   10.18 279    Pn     Pn      13 50 13.8 +0.8
JGF    Kuroka          10.26 224    Pn     Pn      13 50 12.6 -1.8
OKH    Okha            10.36 350   eP      Pn      13 50 18.1 +2.7
INU    Inuyama         10.63 224    Pn     Pn      13 50 18.5 -0.9
JHJ    Hachijo jima 2  11.37 208    P      Pn      13 50 26.8 -2.5
       comp=Z,9.5nm,0.3s,baz=66,slow=22,SNR=5.1
JHJ                                 S      Sn      13 52 24.5  -10
       comp=Z,55nm,0.3s,baz=255,slow=20,SNR=10.0
JHJ                                 LR     LR      13 55 31.1
       comp=Z,47nm,18.2s,baz=282,slow=41
KLR    Kul'dur         11.45 306    P      Pn      13 50 30.9 +0.6
       comp=Z,0.2nm,0.3s,baz=100,slow=16,SNR=5.3
KLR    Kul'dur         11.45 306   eP      Pn      13 50 30.1 -0.2
JWT    Wachi           11.54 229           Pn      13 50 32.1 +0.6
MDJ    Mudanjiang      11.89 282    Pn     Pn      13 50 35.8 -0.4
PEA0B  Petropavlovsk-  12.43  35    PN     Pn      13 50 42.0 -1.3
PEA0B  Petropavlovsk-  12.43  35    Pn     Pn      13 50 42.0 -1.3
PETK   Petropavlovsk-  12.43  35    P      Pn      13 50 40.8 -2.5
       comp=Z,0.8nm,0.3s,baz=185,slow=12,SNR=18
PETK   Petropavlovsk-  12.43  35    PN     Pn      13 50 41.5 -1.8
PETK   Petropavlovsk-  12.43  35    Pn     Pn      13 50 41.5 -1.8
PET    Petropavlovsk   12.77  37    Pn     Pn      13 50 48.1 +0.3
CN2    Changchun       14.91 279   eP      Pn      13 51 13.7 -1.9
CN2                                 pmax   pmax
       comp=Z,10.0nm,0.6s
KSRS   Korea Array     14.99 253    P      Pn      13 51 16.1 -0.7
       comp=Z,0.2nm,0.3s,baz=57,slow=13,SNR=8.9
KSRS                                LR     LR      13 56 53.9
       comp=Z,34nm,19.1s,baz=110,slow=36
JCJ    Chichijima      16.57 192    P      Pn      13 51 34.7 -1.7
       comp=Z,2.6nm,0.3s,baz=252,slow=19,SNR=1.8
JCJ                                 S      Sn      13 54 27.1  -13
       comp=Z,12nm,0.3s,baz=293,slow=22,SNR=6.1
SNY    Shenyang        16.59 272 ⇑P      P       13 51 38.3 +0.9
SNY                                 pmax   pmax
       comp=Z,44nm,0.6s
HIA    Hailar          19.01 297  i P      P       13 52 03.1 -0.9
SEY    Seymchan        19.91   9    P      P       13 52 11.2 -2.4
       comp=Z,1.2nm,0.3s,baz=202,slow=12,SNR=18
YAK    Yakutsk         21.00 338    P      P       13 52 21.1 -4.2
       comp=Z,4.8nm,0.3s,baz=354,slow=1.3,SNR=8.5
YAK    Yakutsk         21.00 338   eP      P       13 52 21.2 -4.2
YAK                                eS      S       13 56 09.2 -4.3
YAK                                e               13 56 23.0
YAK                                e               14 03 35.9
YAK                                 pmax   pmax
       comp=Z,15nm,0.8s
YAK                                 pmax   pmax
       comp=N,3.0nm,1.0s
YAK                                 pmax   pmax
       comp=E,3.0nm,1.0s
YAK                                 smax   smax
       comp=N,84nm,2.3s
YAK                                 smax   smax
       comp=E,17nm,1.9s
BJI    Beijing         22.47 272    P      P       13 52 41.0 -0.1
BJI                                 S      S       13 56 44.3 +3.5
BJI                                 pmax   pmax
       comp=E,23nm,0.8s
BJI                                 pmax   pmax
       comp=E,68nm,3.8s
BJT    Baijiatuau      22.48 272    P      P       13 52 40.9 -0.3
BJT                                 pmax   pmax
       comp=Z,18nm,1.0s
BJT    Baijiatuau      22.48 272    P      P       13 52 40.9 -0.3
TIA    Tai'an          23.25 262    P      P       13 52 48.2 -0.7
TIA                                 pmax   pmax
       comp=Z,35nm,1.0s
NJ2    Nanjing         24.18 251   eP      P       13 53 00.6 +3.4
NJ2                                 pmax   pmax
       comp=Z,15nm,0.5s
BOD    Bodaibo         24.61 317   eP      P       13 52 58.0 -2.9
BOD                                 pmax   pmax
       comp=Z,9.0nm,1.4s
HHC    Hu-ho-hao-te    25.57 276   eP      P       13 53 11.6 +1.6
HHC                                 pmax   pmax
       comp=Z,28nm,0.9s
HHC                                 pmax   pmax
       comp=Z,77nm,6.6s
ULN    Ulaanbaatar     27.40 293ceP      P       13 53 26.3 -0.1
ULN                                 pmax   pmax
       comp=Z,60nm,1.3s
ULN    Ulaanbaatar     27.40 293    P      P       13 53 27.1 +0.7
ULN                                 IAmb   IAmb    13 53 28.3
       comp=Z,36nm,0.8s
ULN    Ulaanbaatar     27.40 293   eP      P       13 53 26.3 -0.1
SONM   Songino Array   27.85 293    P      P       13 53 31.2 +0.9
       comp=Z,44nm,0.8s,baz=89,slow=8.5,SNR=214
SONM   Songino Array   27.85 293    P      P       13 53 31.5 +1.2
SONM                                pmax   pmax
       comp=Z,50nm,0.8s
SONM   Songino Array   27.85 293    P      P       13 53 31.5 +1.2
SONM                                IAmb   IAmb    13 53 32.2
       comp=Z,50nm,0.8s
H11N2  WAKE ISLAND Hy  29.39 137    T      T       14 24 54.4
       baz=328,slow=75,SNR=1146
H11N1  WAKE ISLAND Hy  29.41 137    T      T       14 24 56.1
       baz=328,slow=75,SNR=186
H11N3  WAKE ISLAND Hy  29.41 137    T      T       14 24 57.6
       baz=328,slow=75,SNR=219
TLY    Talaya          29.42 301    LR     LR      14 05 09.5
       comp=Z,96nm,21.8s,baz=112,slow=35
TIXI   Tiksi           29.54 349    P      P       13 53 40.4 -4.5
       comp=Z,0.6nm,0.3s,baz=145,slow=8.6,SNR=8.2
TIXI   Tiksi           29.54 349ceP      P       13 53 39.9 -5.0
ZAK    Zakamensk       29.69 299   eP      P       13 53 46.9 +0.3
ZAK                                 pmax   pmax
       comp=Z,20nm,1.3s
ZAK    Zakamensk       29.69 299   eP      P       13 53 46.9 +0.3
GUMO   Guam            29.73 182    LR     LR      14 07 45.8
       comp=Z,8.9nm,18.1s,baz=21,slow=40
H11S1  WAKE ISLAND Hy  30.34 138    T      T       14 25 57.9
       baz=329,slow=76,SNR=530
H11S3  WAKE ISLAND Hy  30.34 138    T      T       14 25 57.2
       baz=329,slow=76,SNR=344
H11S2  WAKE ISLAND Hy  30.36 138    T      T       14 25 55.5
       baz=329,slow=76,SNR=233
LZH    Lanzhou         32.96 272 ⇑P      P       13 54 17.2 +1.6
LZH                                 pP     pP      13 54 38.7 +1.1
LZH                                 sP     sP      13 54 45.6 -4.2
LZH                                 S      S       13 59 20.9 -5.8
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LZH                                 pmax   pmax
       comp=Z,25nm,1.3s
LZH                                 pmax   pmax
       comp=Z,160nm,6.0s
GTA    Gaotai          34.54 280 ⇓P      P       13 54 29.9 +0.7
GTA                                 pP     pP      13 54 48.8 -2.5
GTA                                 sP     sP      13 54 57.0 -5.5
GTA                                 pmax   pmax
       comp=Z,6.0nm,1.0s
CD2    Chengdu         35.55 264    P      P       13 54 37.9 +0.1
CD2                                 pmax   pmax
       comp=Z,50nm,0.8s
GCSA   Galena City Sc  37.97  36    P      P       13 54 58.5 +0.6
       baz=264
O18K   Koktuh Hills    38.58  44    P      P       13 55 04.2 +1.1
       baz=272
P18K   Big Mountain,   38.58  45    P      P       13 55 03.7 +0.6
       baz=272
CHIR   Chirikof Islan  38.65  50    P      P       13 55 03.6  0.0
       baz=276
N19K   Bonanza Creek   38.91  42    P      P       13 55 06.1 +0.1
       baz=271
O19K   Port Alsworth   39.01  43    P      P       13 55 07.0 +0.4
       baz=272
J20K   Nowinta River   39.11  37    P      P       13 55 08.3 +0.9
J20K   Nowinta River   39.11  37    P      P       13 55 08.4 +0.9
       baz=267,SNR=13
NRIK   Noril'sk        39.16 331  i P      P       13 55 08.1 +0.4
NRIK                                pmax   pmax
       comp=Z,4.0nm,1.0s
L20K   Farewell, AK    39.19  40    P      P       13 55 09.1 +0.9
       baz=270
IMAR   Indian Mountai  39.39  34    P      P       13 55 10.8 +1.0
Q19K   Cape Douglas,   39.42  45    P      P       13 55 10.4 +0.3
Q19K   Cape Douglas,   39.42  45    P      P       13 55 10.5 +0.3
       baz=274
KMI    Kunming         39.64 257 ⇓P      P       13 55 13.6 +1.1
KMI                                 pmax   pmax
       comp=Z,15nm,0.6s
H21K   Melozitna Rive  39.76  35    P      P       13 55 12.8  0.0
H21K                                IAmb   IAmb    13 55 15.0
       comp=Z,23nm,0.9s
H21K   Melozitna Rive  39.76  35    P      P       13 55 13.9 +1.1
       baz=267,SNR=17
RSO    Redoubt South   39.78  43    P      P       13 55 14.8 +1.5
DGZ    Jazzator, Alta  39.88 300c iP      P       13 55 15.4 +1.2
DGZ                                 pmax   pmax
       comp=Z,31nm,1.3s
PPLA   Purkeypile      39.97  39    P      P       13 55 14.4 -0.3
PPLA                                IAmb   IAmb    13 55 22.9
       comp=Z,25nm,1.2s
CAST   Castle Rocks    40.01  38    P      P       13 55 15.5 +0.6
CAST                                IAmb   IAmb    13 55 17.3
       comp=Z,12nm,0.8s
CAST   Castle Rocks    40.01  38    P      P       13 55 16.4 +1.5
       baz=270,SNR=8.7
I21K   Tanana          40.08  35    P      P       13 55 16.0 +0.5
I21K                                IAmb   IAmb    13 55 18.6
       comp=Z,18nm,0.9s
I21K   Tanana          40.08  35    P      P       13 55 16.8 +1.3
       baz=268,SNR=13
KDAK   Kodiak Island   40.09  47    P      P       13 55 14.9 -0.7
       comp=Z,17nm,0.8s,baz=302,slow=5.3,SNR=8.7
KDAK   Kodiak Island   40.09  47    IAmb   IAmb    13 55 22.9
       comp=Z,44nm,1.2s
KDAK   Kodiak Island   40.09  47    P      P       13 55 15.7 +0.1
       baz=276
BPAW   Bear Paw Mtn.   40.49  37    P      P       13 55 19.3 +0.4
BPAW   Bear Paw Mtn.   40.49  37    P      P       13 55 19.9 +1.0
       baz=270,SNR=6.0
KTH    Kantishna Hill  40.53  38    P      P       13 55 20.0 +0.7
KTH                                 IAmb   IAmb    13 55 21.6
       comp=Z,16nm,0.8s
ZAA0   Zalesovo Array  40.55 307    P      P       13 55 18.9 -0.5
ZAA0                                IAmb   IAmb    13 55 20.3
       comp=Z,22nm,1.2s
ZALV   Zalesovo Beam   40.55 307    P      P       13 55 18.6 -0.8
       comp=Z,4.7nm,0.4s,baz=91,slow=7.9,SNR=33
ZALV                                PcP    PcP     13 57 20.2 +0.4
       comp=Z,7.1nm,0.8s,baz=80,slow=3.0,SNR=9.6
ZALV   Zalesovo Beam   40.55 307    P      P       13 55 18.4 -1.1
MLY    Manley          40.60  36    P      P       13 55 20.9 +1.1
MLY                                 IAmb   IAmb    13 55 23.0
       comp=Z,21nm,1.0s
MLY    Manley          40.60  36    P      P       13 55 21.1 +1.2
       baz=269,SNR=19
SUA    Susitna One     40.70  41    P      P       13 55 20.6 -0.2
       baz=273
TRF    Thorofare Moun  40.82  38    P      P       13 55 23.5 +1.8
TRF                                 IAmb   IAmb    13 56 05.6
       comp=Z,33nm,1.7s
TRF    Thorofare Moun  40.82  38    P      P       13 55 21.8 +0.1
       baz=272
BRSE   Bradley Lake S  40.84  44    P      P       13 55 21.6 -0.2
       baz=276
COLD   Coldfoot        40.88  32    P      P       13 55 21.8 -0.3
COLD   Coldfoot        40.88  32    P      P       13 55 22.8 +0.7
       baz=267,SNR=13
H23K   Yukon River     41.11  34    P      P       13 55 24.5 +0.5
H23K                                IAmb   IAmb    13 55 26.7
       comp=Z,33nm,0.8s
H23K   Yukon River     41.11  34    P      P       13 55 25.4 +1.4
       baz=270,SNR=30
I23K   Minto, Yukon-K  41.19  35    P      P       13 55 25.3 +0.8
I23K                                IAmb   IAmb    13 55 27.1
       comp=Z,28nm,1.0s
I23K   Minto, Yukon-K  41.19  35    P      P       13 55 25.8 +1.2
       baz=270,SNR=15
TOLK   Toolik Lake Re  41.20  30    P      P       13 55 25.4 +0.7
TOLK   Toolik Lake Re  41.20  30    P      P       13 55 25.2 +0.5
       baz=266,SNR=5.4
RC01   Rabbit Creek A  41.21  42    P      P       13 55 25.2 +0.4
       baz=275
NEA2   Nenana          41.32  36    P      P       13 55 26.9 +1.2
NEA2                                IAmb   IAmb    13 55 28.1
       comp=Z,26nm,0.8s
NEA2   Nenana          41.32  36    P      P       13 55 26.4 +0.7
       baz=271,SNR=22
MCK    McKinley        41.41  38    P      P       13 55 27.2 +0.7
MCK                                 pmax   pmax
       comp=Z,28nm,1.4s
MCK    McKinley        41.41  38    P      P       13 55 27.2 +0.7
MCK                                 IAmb   IAmb    13 55 28.8
       comp=Z,28nm,1.4s
MCK    McKinley        41.41  38    P      P       13 55 26.8 +0.4
       baz=272,SNR=5.7
SEW    Seward          41.45  43    P      P       13 55 27.2 +0.5
       baz=276
WMQ    Urumqi          41.45 291   eP      P       13 55 27.9 +0.8
WMQ                                 pP     pP      13 55 50.3 +0.5
WMQ                                 sP     sP      13 56 00.6 -0.3
WMQ                                 pmax   pmax
       comp=Z,27nm,0.9s
WMQ                                 pmax   pmax
       comp=Z,150nm,5.5s
PMR    Palmer          41.46  41    P      P       13 55 27.4 +0.6
       baz=275
RND    Reindeer        41.46  38    P      P       13 55 27.0  0.0
RND                                 pmax   pmax
       comp=Z,9.0nm,1.0s
RND    Reindeer        41.46  38    P      P       13 55 27.0  0.0
MDM    Murphy Dome     41.67  36    P      P       13 55 29.9 +1.3
MDM                                 IAmb   IAmb    13 55 31.0
       comp=Z,25nm,0.9s
WRH    Wood River Hil  41.75  36    P      P       13 55 30.4 +1.2
KNK    Knik Glacier    41.80  41    P      P       13 55 29.9 +0.3
       baz=275
H24K   Noodor Dome     41.80  34    P      P       13 55 30.9 +1.3
       baz=271,SNR=17
SML    Sawmill         41.82  40    P      P       13 55 30.3 +0.5
SML                                 IAmb   IAmb    13 55 32.8
       comp=Z,16nm,0.8s
SML    Sawmill         41.82  40    P      P       13 55 29.9  0.0
       baz=275
TCOL   CIGO, UAF Yank  41.83  36    P      P       13 55 30.9 +1.0
TCOL   CIGO, UAF Yank  41.83  36    P      P       13 55 30.8 +1.0
       baz=272,SNR=17
COLA   College         41.84  36  i P      P       13 55 30.6 +0.8
COLA                                pmax   pmax
       comp=Z,41nm,1.0s
COLA   College         41.84  36    P      P       13 55 30.3 +0.5
COLA   College         41.84  36    P      P       13 55 30.6 +0.8
       baz=272
CCB    Clear Creek Bu  41.87  36    P      P       13 55 30.1  0.0
POKR   Poker Plat Res  42.00  35    P      P       13 55 32.4 +1.1
       baz=272,SNR=7.8
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ZSN    Zaisan          42.14 298   eP      P       13 55 31.4 -1.2
       baz=298
ZSN    Zaisan          42.14 298   eP      P       13 55 31.3 -1.2
HDA    Harding Lake    42.25  36    P      P       13 55 33.0 -0.3
       baz=273
IL31                   42.25  36    P      P       13 55 33.3 +0.1
IL31                                IAmb   IAmb    13 55 36.3
       comp=Z,18nm,0.8s
ILAR   Eielson Array   42.25  36    P      P       13 55 33.4 +0.1
       comp=Z,21nm,1.0s,baz=256,slow=5.9,SNR=79
ILAR   Eielson Array   42.25  36    P      P       13 55 33.5 +0.2
ILAR   Eielson Array   42.25  36    P      P       13 55 33.5 +0.2
SCM    Sheep Creek Mo  42.29  40    P      P       13 55 34.3 +0.7
       baz=276
PRP    Porcupine Dome  42.78  35    P      P       13 55 38.7 +1.0
PRP                                 IAmb   IAmb    13 55 40.8
       comp=Z,39nm,1.0s
PRP    Porcupine Dome  42.78  35    P      P       13 55 38.3 +0.6
       baz=273,SNR=13
FYU    Fort Yukon      42.85  33    P      P       13 55 38.9 +0.9
KLU    Klutina         43.00  41    P      P       13 55 40.2 +0.7
       baz=277
PAX    Paxson          43.03  39    P      P       13 55 39.1 -0.6
       baz=276
BMAR   Burnt Mountain  43.06  32    P      P       13 55 41.0 +1.1
RIDG   Independent Ri  43.22  37    P      P       13 55 41.1 -0.1
RIDG                                IAmb   IAmb    13 55 43.7
       comp=Z,20nm,1.2s
RIDG   Independent Ri  43.22  37    P      P       13 55 41.5 +0.3
       baz=276
HARP   HAARP           43.24  39    P      P       13 55 41.8 +0.5
       baz=277
SCRK   Sand Creek      43.58  37    P      P       13 55 43.9 -0.2
SCRK   Sand Creek      43.58  37    P      P       13 55 44.3 +0.2
       baz=276,SNR=14
DOT    Dot Lake        43.58  37    P      P       13 55 43.9 -0.1
DOT                                 IAmb   IAmb    13 56 14.2
       comp=Z,30nm,1.8s
N25K   Chitina, Valde  43.61  40    P      P       13 55 43.6 -0.8
       baz=278
J26L   Joseph Creek    43.70  36    P      P       13 55 45.1  0.0
       baz=276
BMRM   Bremner River   43.70  41    P      P       13 55 44.3 -0.7
       baz=279
MENT   Mentasta        43.83  38    P      P       13 55 47.1 +1.1
L26K   Log Cabin Wild  43.98  38    P      P       13 55 49.0 +1.7
L26K   Log Cabin Wild  43.98  38    P      P       13 55 48.3 +1.1
       baz=278,SNR=12
MK31   Makanchi Array  44.01 298c iP      P       13 55 48.0 +0.3
MK31   Makanchi Array  44.01 298    P      P       13 55 48.4 +0.7
MK31                                IAmb   IAmb    13 55 49.2
       comp=Z,30nm,0.8s
MKAR   Makanchi Array  44.01 298    P      P       13 55 48.2 +0.5
       comp=Z,25nm,0.7s,baz=80,slow=8.9,SNR=177
MKAR                                LR     LR      14 15 14.9
       comp=Z,57nm,18.3s,baz=104,slow=37
MKAR   Makanchi Array  44.01 298    P      P       13 55 48.6 +0.9
MKAR   Makanchi Array  44.01 298    P      P       13 55 48.5 +0.9
MKAR   Makanchi Array  44.01 298   eP      P       13 55 48.6 +0.9
MAKZ   Makanchi        44.21 298    P      P       13 55 49.7 +0.4
MAKZ                                pmax   pmax
       comp=Z,33nm,0.9s
MAKZ   Makanchi        44.21 298    P      P       13 55 49.7 +0.4
MAKZ                                IAmb   IAmb    13 55 50.8
       comp=Z,33nm,0.8s
VRDI   Verde Repeater  44.21  41    P      P       13 55 50.5 +1.2
VRDI                                IAmb   IAmb    13 56 16.1
       comp=Z,43nm,1.7s
M26K   Nabesna, AK     44.23  39    P      P       13 55 50.8 +1.5
       baz=279,SNR=6.5
MCARA  McCarthy VSAT   44.39  41    P      P       13 55 51.3 +0.8
       baz=280
CRQE   Cirque          44.47  41    P      P       13 55 51.7 +0.4
       baz=280
L27K   Beaver Creek,   44.66  38    P      P       13 55 54.5 +1.8
L27K                                IAmb   IAmb    13 55 55.2
       comp=Z,18nm,0.9s
L27K   Beaver Creek,   44.66  38    P      P       13 55 54.0 +1.4
       baz=279,SNR=15
BCAR   Beaver Creek A  44.68  38    P      P       13 55 54.6 +1.8
EGAK   Eagle           44.70  36    P      P       13 55 53.4 +0.6
EGAK                                IAmb   IAmb    13 55 55.4
       comp=Z,56nm,1.4s
EGAK   Eagle           44.70  36    P      P       13 55 52.9 +0.1
       baz=278,SNR=14
M27K   Edge Creek, AK  44.76  39    P      P       13 55 54.8 +1.2
       baz=280,SNR=8.0
ISLE   Juniper Island  44.86  42    P      P       13 55 55.0 +0.6
ISLE                                IAmb   IAmb    13 57 07.8
       comp=Z,53nm,1.4s
KURK   Kurchatov       45.04 304ceP      P       13 55 55.8 +0.1
KURK                                pmax   pmax
       comp=Z,74nm,1.7s
KURK   Kurchatov       45.04 304    P      P       13 55 55.8 +0.1
KURK   Kurchatov       45.04 304   eP      P       13 55 55.8 +0.1
KURBB  Kurchatov Arra  45.12 304    P      P       13 55 56.7 +0.3
       comp=Z,27nm,0.6s,baz=75,slow=8.4,SNR=81
KURBB                               PcP    PcP     13 57 35.9 +0.7
       comp=Z,1.0nm,0.4s,baz=72,slow=3.3,SNR=2.6
KURBB  Kurchatov Arra  45.12 304    P      P       13 55 56.3 -0.1
BVCY   Beaver Creek    45.21  39    P      P       13 55 57.9 +0.9
       baz=281
CTG    Chitna Glacier  45.27  41    P      P       13 55 58.0 +0.4
       baz=282
CTGM   Chitina Glacie  45.27  41    P      P       13 55 58.8 +1.1
CTGM                                IAmb   IAmb    13 57 36.0
       comp=Z,47nm,1.6s
YUK3   Moose Creek     45.52  40    P      P       13 55 59.8 +0.1
       baz=282
DAWY   Dawson          45.57  36    P      P       13 56 00.2 +0.4
DAWY   Dawson          45.57  36    P      P       13 56 00.5 +0.7
       baz=280
I29M   Ogilvie Camp,   45.80  35    P      P       13 56 02.6 +1.0
       baz=280,SNR=17
SIJI   Sorong          46.02 201    P      P       13 56 03.3 -0.6
       comp=Z,9.5nm,0.5s,baz=57,slow=8.9,SNR=6.2
EPYK   Eagle Plains    46.26  33    P      P       13 56 06.2 +1.0
CMAR   Chiang Mai Arr  46.64 253    P      P       13 56 09.8 +1.1
       comp=Z,1.3nm,0.7s,baz=40,slow=7.3,SNR=12
M30M   Minto, Yukon    47.02  38    P      P       13 56 12.0 +0.8
       baz=284
INK    Inuvik          47.12  30    P      P       13 56 12.6 +0.8
       comp=Z,7.8nm,0.4s,baz=282,slow=5.8,SNR=76
INK                                 LR     LR      14 16 54.4
       comp=Z,29nm,18.5s,baz=60,slow=37
INK    Inuvik          47.12  30    P      P       13 56 12.2 +0.4
INK                                 IAmb   IAmb    13 56 13.6
       comp=Z,20nm,0.9s
INK    Inuvik          47.12  30    P      P       13 56 12.3 +0.6
       baz=281,SNR=20
HYT    Haines Junctio  47.13  41    P      P       13 56 13.5 +1.4
HYT                                 IAmb   IAmb    13 56 15.2
       comp=Z,37nm,1.0s
HYT    Haines Junctio  47.13  41    P      P       13 56 13.1 +1.0
       baz=285
TDK    Taldyqorghan    47.20 297   eP      P       13 56 12.8  0.0
       baz=297
TDK    Taldyqorghan    47.20 297   eP      P       13 56 12.7  0.0
UZB    Uzynbulak       47.54 294   eP      P       13 56 14.4 -1.3
       baz=294
UZB    Uzynbulak       47.54 294   eP      P       13 56 14.4 -1.3
KPKS   Kokpek          47.63 295   eP      P       13 56 15.7 -0.7
       comp=Z,10nm,0.7s,baz=294
KPKS   Kokpek          47.63 295   eP      P       13 56 15.6 -0.7
KPKS                                pmax   pmax
       comp=Z,10.0nm,0.7s
N31M   Braeburn, Yuko  47.76  39    P      P       13 56 17.6 +0.6
       baz=285
SATY   Saty            47.99 294   eP      P       13 56 18.2 -0.9
       baz=294
SATY   Saty            47.99 294   eP      P       13 56 18.2 -0.9
M31M   Drury Creek, Y  48.20  38    P      P       13 56 20.6 +0.3
       baz=286
WHY    Whitehorse      48.41  40    P      P       13 56 22.3 +0.3
       baz=287
CHKK   Chushkaly       48.59 296   eP      P       13 56 22.3 -1.2
       baz=296
SANI   Sanana          48.70 207    P      P       13 56 23.1 -1.5
       comp=Z,6.9nm,1.0s
MDOK   Medeo           48.84 295   eP      P       13 56 24.4 -1.3
       baz=295
MDOK   Medeo           48.84 295    P      P       13 56 25.6 -0.1
BRZS   Berezniki       48.87 305   eP      P       13 56 25.2 -0.4
       comp=Z,21nm,0.6s,baz=305
BRZS   Berezniki       48.87 305   eP      P       13 56 25.1 -0.4
BRZS                                pmax   pmax
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      comp=Z,21nm,0.6s
TARG  Taragay, Kyrgy   48.96 293    P      P      13 56 28.1 +1.1
TNSS  Tian-Shan        48.97 295   eP      P      13 56 27.1 +0.1
      baz=295
KUU   Kurty            49.00 296   eP      P      13 56 25.6 -1.1
      comp=Z,24nm,0.8s,baz=296
KUU   Kurty            49.00 296   eP      P      13 56 25.6 -1.1
KUU                                 pmax   pmax
      comp=Z,24nm,0.8s
A36M  Sachs Harbour    49.03  24    P      P      13 56 27.3 +0.9
A36M                                IAmb   IAmb   13 56 28.0
      comp=Z,15nm,0.9s
A36M  Sachs Harbour    49.03  24    P      P      13 56 26.7 +0.3
      baz=285,SNR=12
BRVK  Borovoye         49.13 309    P      P      13 56 28.4 +0.9
BRVK                                pmax   pmax
      comp=Z,24nm,1.1s
BRVK  Borovoye         49.13 309    P      P      13 56 28.4 +0.9
BRVK                                IAmb   IAmb   13 56 29.0
      comp=Z,24nm,1.1s
BRVK  Borovoye         49.13 309   eP      P      13 56 28.4 +0.9
TAPN  Taplejung        49.19 271⇑iP      P      13 56 29.4 +0.7
P33M  Teslin, Yukon    49.52  40    P      P      13 56 30.9 +0.4
      baz=289
ODAN  Odare            49.71 271⇑iP      P      13 56 33.3 +0.7
ULHL  Ulahol           49.78 294    P      P      13 56 33.6 +0.7
      SNR=6.2
TKM2  Tokmak 2         49.91 295    P      P      13 56 34.6 +0.7
      SNR=33
BTLS  Baital           50.00 298   eP      P      13 56 32.9 -1.3
      baz=298
BTLS  Baital           50.00 298   eP      P      13 56 32.9 -1.3
JIRN  Jiri             50.12 272⇑iP      P      13 56 36.4 +0.5
      comp=Z,39nm,0.9s
GUN   Gumba            50.21 273⇑iP      P      13 56 36.8 +0.3
RAMN  Ramite           50.23 271⇑iP      P      13 56 36.9 +0.4
      comp=Z,38nm,0.5s
SGDS  Sogindy          50.31 296   eP      P      13 56 36.2 -0.5
      comp=Z,9.1nm,1.0s,baz=296
KBK   Karagaybulak     50.45 295    P      P      13 56 38.8 +0.9
      SNR=19
USP   Ospenovka        50.48 296    P      P      13 56 38.6 +0.7
      SNR=20
KKN   Kakani           50.71 273⇑iP      P      13 56 40.6 +0.5
      comp=Z,44nm,0.9s
PKI   Pulchoki         50.74 273⇑iP      P      13 56 40.6 +0.1
      comp=Z,63nm,1.1s
PKIN  Phulchoki        50.75 273⇑iP      P      13 56 40.4  0.0
      comp=Z,41nm,1.1s
AAK   Ala-Archa        50.76 295ceP      P      13 56 40.7 +0.5
AAK                                 pmax   pmax
      comp=Z,40nm,1.3s
AAK   Ala-Archa        50.76 295    P      P      13 56 40.9 +0.7
AAK                                 IAmb   IAmb   13 56 41.8
      comp=Z,27nm,1.6s
AAK   Ala-Archa        50.76 295   eP      P      13 56 40.7 +0.5
DMN   Daman            50.94 273⇑iP      P      13 56 42.4 +0.5
      comp=Z,61nm,1.0s
GKN   Gorkha           51.06 274⇑iP      P      13 56 43.0 +0.4
      comp=Z,18nm,0.6s
KSH   Kashi            51.22 291    P      P      13 56 47.4 +3.8
KSH                                 pmax   pmax
      comp=Z,11nm,0.8s
EKS2  Erkin-Say        51.22 296    P      P      13 56 44.3 +0.7
      SNR=13
DLBC  Dease Lake       51.49  42    P      P      13 56 44.3 -1.0
      comp=Z,1.4nm,0.6s,baz=277,slow=8.1,SNR=1.7
DLBC  Dease Lake       51.49  42    IAmb   IAmb   13 57 22.4
      comp=Z,32nm,1.6s
DANN  Dangsing         51.50 275⇑iP      P      13 56 46.9 +0.8
      comp=Z,156nm,0.9s
AML   Almayashu        51.52 295    P      P      13 56 47.1 +1.0
      SNR=12
KOLN  Koldanda         51.95 274⇑iP      P      13 56 49.9 +0.6
      comp=Z,63nm,0.9s
PYUN  Piuthan          52.20 275⇑iP      P      13 56 51.8 +0.6
      comp=Z,64nm,1.0s
WRGLY Wrigley          52.60  35    P      P      13 56 54.3 +1.1
      baz=293
DZA   Taraz            52.71 297   eP      P      13 56 54.1 -0.4
      baz=297
DZA   Taraz            52.71 297   eP      P      13 56 54.1 -0.4
SVE   Sverdlovsk       52.83 317   eP      P      13 56 55.5 +0.4
SVE                                 pmax   pmax
      comp=Z,69nm,1.1s
KK31  Karatay Array    53.14 298   i P     P      13 56 57.3 -0.4
KKAR  Karatay Array    53.14 298    P      P      13 56 58.2 +0.5
KKAR  Karatay Array    53.14 298    P      P      13 56 58.2 +0.5
EUNU  Eureka           53.34  10    P      P      13 56 58.9 +0.2
BRLS  Borolday         53.62 298   eP      P      13 57 01.3 +0.1
      baz=298
BRLS  Borolday         53.62 298   eP      P      13 57 01.2 +0.1
IUG   Iuzhnay          53.91 297   eP      P      13 57 02.6 -0.9
      baz=297
IUG   Iuzhnay          53.91 297   eP      P      13 57 02.5 -0.9
ARU   Arti             54.03 317    P      P      13 57 04.0  0.0
      baz=72,slow=7.0
ARU   Arti             54.03 317c iP     P      13 57 03.6 -0.4
ARU                                               13 58 06.8
ARU                                               13 59 04.4
ARU                                 S      S      14 04 33.1 +0.8
ARU                                 SS     SS     14 08 14.8 +0.5
ARU                                 pmax   pmax
      comp=Z,68nm,1.0s
ARU   Arti             54.03 317    P      P      13 57 04.1 +0.1
ARU   Arti             54.03 317   eP      P      13 57 03.5 -0.4
BTK   Batken           54.42 294    P      P      13 57 07.4 +0.3
BTK                                 pmax   pmax
      comp=Z,10.0nm,0.9s
BTK   Batken           54.42 294    P      P      13 57 07.4 +0.3
BTK                                 IAmb   IAmb   13 57 08.3
      comp=Z,9.7nm,0.9s
NOR   Nord             54.91 357   i P     P      13 57 09.1 -0.8
NOR                                 IAmb   IAmb   13 57 09.6
      comp=Z,7.1nm,0.8s
RES   Resolute Bay     55.53  16    P      P      13 57 14.8 +0.3
      comp=Z,43nm,0.4s,baz=338,slow=5.1,SNR=122
RES   Resolute Bay     55.53  16    P      P      13 57 15.1 +0.6
RES                                 pmax   pmax
      comp=Z,92nm,1.0s
RES   Resolute Bay     55.53  16    P      P      13 57 15.1 +0.6
HSPB  Hornsund (broa   55.96 348   eP      P      13 57 17.2 -0.2
NIL   Nilore           56.10 286    P      P      13 57 20.0 +0.8
NIL                                 pmax   pmax
      comp=Z,34nm,1.0s
NIL   Nilore           56.10 286    P      P      13 57 20.0 +0.8
YKA   Yellowknife Ar   56.55  33    P      P      13 57 22.1 +0.3
      comp=Z,3.5nm,0.9s,baz=308,slow=5.3,SNR=13
AB31  Akbulak array    56.64 308   i P     P      13 57 23.0 +0.3
ABKAR Akbulak array    56.64 308    P      P      13 57 23.4 +0.7
ABKAR Akbulak array    56.64 308    P      P      13 57 23.5 +0.7
ABKAR                               IAmb   IAmb   13 57 23.8
      comp=Z,39nm,0.6s
AKTO  Aktyubinsk       57.13 310    P      P      13 57 26.6 +0.4
      comp=Z,14nm,0.6s,baz=67,slow=12
KIRV  Kirov            57.36 322    P      P      13 57 27.6 -0.1
      comp=Z,36nm,0.7s,baz=55,slow=3.1,SNR=18
KIRV  Kirov            57.36 322ceP      P      13 57 27.0 -0.6
PRGR  Permogore        57.40 326   eP      P      13 57 28.0 +0.1
PRGR                                pmax   pmax
      comp=Z,64nm,0.7s
TULEG Thule            58.30   9⇑iP      P      13 57 33.1 -0.9
TULEG                               IAmb   IAmb   13 57 33.9
      comp=Z,32nm,0.9s
APA   Apatity          58.35 335⇓iP      P      13 57 33.8 -0.6
APA                                i                13 58 08.8
APA                                 pmax   pmax
      comp=Z,13nm,0.8s
APA                                 MLR    MLR
      comp=Z,1µm,14.0s
NEEM  North Greenlan   58.96   4   i P     P      13 57 37.7 -1.2
NEEM                                IAmb   IAmb   13 57 40.6
      comp=Z,22nm,0.8s
ARA0  ARCESS Array S   59.28 339   eP      P      13 57 40.9  0.0
ARCES ARCESS Array B   59.28 339    P      P      13 57 40.8 -0.1
      comp=Z,21nm,1.0s,baz=41,slow=7.6,SNR=33
ARCES ARCESS Array B   59.28 339    P      P      13 57 40.9  0.0
DAG   Danmarks Havn    59.71 356   i P     P      13 57 42.5 -1.2
DAG                                 IAmb   IAmb   13 57 43.9
      comp=Z,11nm,0.7s
KTK1  Kautokeino       60.23 340   eP      P      13 57 47.7 +0.3
D03D  Eldon            60.28  51    P      P      13 57 48.1 +0.1
      baz=303
JETT  Jettan, Norway   60.53 341   eP      P      13 57 50.8 +1.3
TRO   Tromso           60.82 341   eP      P      13 57 51.3 -0.1
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D05A  Enumclaw         61.09  51    P      P      13 57 55.8 +2.2
D05A                                IAmb   IAmb   13 58 58.6
      comp=Z,37nm,1.7s
BELG  Belogornoye      61.58 316    P      P      13 57 57.2 +0.4
      comp=Z,74nm,0.6s,baz=334,slow=1.2,SNR=22
DBG   Daneborg         62.21 356   i P     P      13 57 59.8 -0.9
DBG                                 IAmb   IAmb   13 58 01.3
      comp=Z,9.4nm,0.8s
UPNV  Upernavik        63.09   7   i P     P      13 58 05.7 -0.8
UPNV                                IAmb   IAmb   13 58 07.1
      comp=Z,24nm,0.6s
CTA   Charters Tower   63.18 180    P      P      13 58 08.1 +0.4
      comp=Z,1.3nm,0.6s,baz=21,slow=9.8,SNR=3.8
FAUS  Fauske           63.42 341   eP      P      13 58 08.5 -0.3
WB0   Warramunga Arr   63.76 192    P      P      13 58 10.9 -0.6
GEYT  Alibeck          63.88 298    P      P      13 58 11.9 -0.5
      comp=Z,5.8nm,0.8s,baz=255,slow=4.5,SNR=6.9
GYA0B ALIBECK ARRAY    63.88 298    P      P      13 58 13.1 +0.8
WR0   Warramunga Arr   63.93 192    P      P      13 58 12.5 -0.1
WR0                                 IAmb   IAmb   13 59 14.8
      comp=Z,24nm,1.9s
WRAB  Tennant Creek    63.93 192ceP      P      13 58 12.5 -0.1
WRAB                                pmax   pmax
      comp=Z,21nm,2.5s
WRAB  Tennant Creek    63.93 192    P      P      13 58 13.2 +0.6
WB2   Warramunga Arr   63.94 192    P      P      13 58 13.2 +0.5
WRA   Warramunga Arr   63.94 192    P      P      13 58 12.4 -0.3
      comp=Z,3.8nm,0.9s,baz=12,slow=6.8,SNR=16
WRA   Warramunga Arr   63.94 192    P      P      13 58 12.6 -0.1
FITZ  Fitzroy Crossi   64.00 202    P      P      13 58 13.4 +0.3
      comp=Z,3.3nm,0.8s,baz=318,slow=1.8,SNR=7.6
MOS   Moscow           64.24 323   eP      P      13 58 12.5 -1.8
MOS                                 pmax   pmax
      comp=Z,68nm,1.3s
SUMG  Summit           64.28   1    P      P      13 58 15.7 +0.9
SUMG                                pmax   pmax
      comp=Z,53nm,0.8s
SUMG  Summit           64.28   1   i P     P      13 58 15.0 +0.2
SUMG                                IAmb   IAmb   13 58 16.4
      comp=Z,56nm,0.8s
SUMG  Summit           64.28   1    P      P      13 58 15.7 +0.9
MOR8  Moi Rana         64.59 340   eP      P      13 58 15.2 -1.3
FIA1  FINESS Array S   64.80 333    P      P      13 58 18.1 +0.2
FINES FINESS Array B   64.81 333    P      P      13 58 17.9 -0.1
      comp=Z,40nm,0.7s,baz=42,slow=8.6,SNR=110
FINES FINESS Array B   64.81 333    P      P      13 58 18.1 +0.2
FINES FINESS Array B   64.81 333    P      P      13 58 18.1 +0.2
OBN   Obninsk          65.10 323    P      P      13 58 19.8 -0.1
      comp=Z,5.0nm,0.4s,baz=56,slow=6.4,SNR=7.0
OBN   Obninsk          65.10 323c iP     P      13 58 19.6 -0.4
OBN                                 pmax   pmax
      comp=Z,62nm,1.7s
OBN                                 MLR    MLR
      comp=Z,55nm,17.0s
OBN   Obninsk          65.10 323   eP      P      13 58 19.5 -0.4
O03E  Paynes Creek     65.17  57    P      P      13 58 21.3 +0.5
      baz=307
VRH   Novokhopyorsk    65.23 318   eP      P      13 58 19.9 -0.9
VRH                                 pmax   pmax
      comp=Z,60nm,0.8s
LPSR  Galich'ya Gora   65.67 320   eP      P      13 58 23.6  0.0
LPSR                                pmax   pmax
      comp=Z,60nm,0.7s
SCO   Scoresbysund     66.09 356   i P     P      13 58 26.3 +0.2
SCO                                 IAmb   IAmb   13 58 27.7
      comp=Z,19nm,0.9s
VSR   Storozhevoye     66.46 319   eP      P      13 58 28.5 -0.2
VSR                                 pmax   pmax
      comp=Z,60nm,0.8s
NSS   Namsos           66.53 340   eP      P      13 58 28.6 -0.3
VORD  Divnogorie       66.56 319   eP      P      13 58 29.3  0.0
VORD                                pmax   pmax
      comp=Z,30nm,0.7s
VSU   Vasula           66.73 330   eP      P      13 58 31.0 +0.7
VSU   Vasula           66.73 330c iP     P      13 58 30.5 +0.2
VSU                                 pmax   pmax
      comp=Z,91nm,1.1s
EGMT  Eagleton         67.22  45    P      P      13 58 34.1 +0.3
      baz=310
MTSE  Matsula          67.58 331   eP      P      13 58 36.3 +0.6
ASAR  Alice Springs    67.66 192    P      P      13 58 37.1 +0.5
      comp=Z,2.1nm,0.7s,baz=8.7,slow=5.8,SNR=35
ASAR  Alice Springs    67.66 192    P      P      13 58 36.7 +0.1
AAL   Aland            67.74 334   eP      P      13 58 36.5 -0.2
ICESG Greenland Ices   67.75   2   i P     P      13 58 36.8 -0.2
ICESG                               IAmb   IAmb   13 58 39.1
      comp=Z,50nm,1.0s
BOZ   Bozeman (W)      67.79  48    P      P      13 58 38.4 +0.9
BOZ                                 pmax   pmax
      comp=Z,3.0nm,0.7s
BOZ   Bozeman (W)      67.79  48    P      P      13 58 38.4 +0.9
BOZ   Bozeman (W)      67.79  48    P      P      13 58 37.7 +0.2
      baz=310
NVAR  Mina Array Bea   68.46  57    P      P      13 58 43.1 +1.2
      comp=Z,2.3nm,0.7s,baz=291,slow=6.0,SNR=8.3
NVAR  Mina Array Bea   68.46  57    P      P      13 58 42.1 +0.2
GOF   Gofitskoye       68.47 312⇑iP      P      13 58 42.2 +0.7
GOF                                 pmax   pmax
      comp=Z,59nm,0.7s
UPP   Uppsala          68.73 335   eP      P      13 58 43.0 +0.2
PSA00 Pilbara Seismi   68.99 206    P      P      13 58 45.4 +0.5
MNK   Minsk            69.16 327   i P     P      13 58 46.7 +1.1
MNK                                i                13 59 09.8
MNK                                i *PP   pP     13 59 11.9 +1.7
MNK                                i *SP   sP     13 59 23.1 +2.2
MNK                                i                14 01 20.4
MNK                                i PPP   PPP    14 03 01.8
MNK                                i S     S      14 07 45.4 +2.1
MNK                                i *SS   SKiKP  14 08 28.6 +2.8
MNK                                i SS    SS     14 12 12.4 +2.1
MNK                                 pmax   pmax
      comp=E,3.0nm,0.9s
MNK                                 pmax   pmax
      comp=N,28nm,0.9s
MNK                                 pmax   pmax
      comp=Z,71nm,0.9s
MNK   Minsk            69.16 327   i P     P      13 58 46.8 +1.1
      comp=E,3.0nm,0.8s
MNK                                i P     P      13 58 46.8 +1.1
      comp=N,28nm,0.8s
MNK                                i P     P      13 58 46.8 +1.1
      comp=Z,71nm,0.8s,baz=43
MNK                                i pP    pP     13 59 12.0 +1.7
MNK                                i sP    sP     13 59 23.2 +2.3
MNK                                i PP    PP     14 01 20.4 +1.5
MNK                                i PPP   PPP    14 03 01.9
MNK                                i S     S      14 07 45.4 +2.1
MNK                                i sS    SKiKP  14 08 28.6 +2.9
MNK                                i SS    SS     14 12 12.5 +2.2
MNK                                i SSS   SSS    14 15 31.5
MNK                                i LQ    LQ     14 17 33.2
MNK                                i LR    LR     14 20 51.1
MNK                                i LRM   MLR    14 27 13.0
      comp=Z,165nm,20.6s
MNK                                i LRM   MLR    14 27 13.6
      comp=E,15nm,16.1s
MNK                                i LRM   MLR    14 27 14.9
      comp=N,154nm,18.7s
NCK   Nalchik          69.17 311   i P     P      13 58 46.8 +0.9
NCK                                 pmax   pmax
      comp=Z,13nm,0.8s
SFJD  Kangerlussuaq    69.20   7    LR     LR     14 28 36.2
      comp=Z,16nm,19.2s,baz=344,slow=35
SFJD  Kangerlussuaq    69.20   7   i P     P      13 58 45.4 -0.2
NACGM Naroch           69.31 327   i P     P      13 58 47.2 +0.8
DOMB  Dombas           69.34 340   eP      P      13 58 46.9 +0.2
KVAR  Kislovodsk Arr   69.37 311    P      P      13 58 47.9 +0.6
      comp=Z,9.6nm,0.7s,baz=23,slow=7.7,SNR=4.8
KIV   Kislovodsk       69.38 311   ⇑P      P      13 58 49.4 +2.1
KIV   Kislovodsk       69.38 311   eP      P      13 58 48.2 +0.9
KIV                                 pmax   pmax
      comp=Z,50nm,1.1s
KIV                                 MLR    MLR
      comp=Z,35nm,17.0s
KIV   Kislovodsk       69.38 311   eP      P      13 58 48.2 +0.9
KBZ   Khabaz           69.41 311    P      P      13 58 48.4 +1.0
      comp=Z,20nm,0.8s,baz=47,slow=4.4,SNR=34
KBZ   Khabaz           69.41 311ceP      P      13 58 48.3 +1.0
KBZ                                 pmax   pmax
      comp=Z,23nm,0.9s
ZEI   Tsey             69.46 310   eP      P      13 58 47.4 -0.6
ZEI                                 pmax   pmax
      comp=Z,7.0nm,1.0s
SHA1  Shidzhatmaz      69.53 311c iP     P      13 58 49.4 +1.0
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NB201 NORSAR Array S   69.59 338    P      P      13 58 48.5 +0.3
NB2   NORSAR Subarra   69.62 338    P      P      13 58 48.1 -0.3
      comp=Z,8.1nm,0.4s,baz=32,slow=6.5
NB2   NORSAR Subarra   69.62 338    P      P      13 58 48.1 -0.3
      baz=32,slow=6.5
NOA   NORSAR Array B   69.62 338    P      P      13 58 47.9 -0.5
      comp=Z,4.3nm,0.4s,baz=36,slow=5.8,SNR=71
HFS   Hagfors          69.69 337    P      P      13 58 48.6 -0.2
      comp=Z,18nm,0.4s,baz=43,slow=6.7,SNR=146
AKN   Aaknes           69.73 341   eP      P      13 58 49.6 +0.6
NEY   Neytrino         69.82 311   i P     P      13 58 51.0 +0.9
NEY                                 pmax   pmax
      comp=Z,3.0nm,0.9s
NAO01 NORSAR Array S   69.88 338   eP      P      13 58 49.9  0.0
PABE  Paberze          69.94 329   eP      P      13 58 51.0 +0.7
PABE  Paberze          69.94 329    P      P      13 58 51.2 +0.9
DY2G  Dye2             70.05   5   i P     P      13 58 51.1  0.0
DY2G                                IAmb   IAmb   13 58 53.3
      comp=Z,37nm,1.1s
SKAR  Skarslia         70.69 339   eP      P      13 58 55.5 +0.5
GNI   Garni            70.70 307    P      P      13 58 56.8 +1.3
      comp=Z,4.6nm,0.4s,baz=285,slow=3.2,SNR=5.1
GNI   Garni            70.70 307ceP      P      13 58 57.4 +1.9
GNI                                 pmax   pmax
      comp=Z,19nm,1.3s
PDAR  Pinedale Array   70.76  49    P      P      13 58 56.2 +0.3
      comp=Z,1.5nm,0.9s,baz=273,slow=2.7,SNR=8.2
HYA   Hoyanger         70.80 341   eP      P      13 58 56.0 +0.6
KONO  Kongsberg        71.23 338ceP      P      13 58 56.8 -1.4
KONO                                pmax   pmax
      comp=Z,31nm,2.5s
SOC   Sochi            71.23 313   eP      P      13 58 55.1 -3.3
SOC                                e                14 01 34.1
SOC                                ePPP    PPP    14 03 18.2
SOC                                eS      S      14 08 03.5 -4.3
SOC                                 MLR    MLR
      comp=Z,41nm,15.0s
AKASG Malin Array Be   71.37 323    P      P      13 58 59.1 -0.1
      comp=Z,21nm,0.6s,baz=41,slow=5.9,SNR=57
AKASG Malin Array Be   71.37 323   i P     P      13 58 59.0 -0.1
AKASG                               pmax   pmax
      comp=Z,20nm,0.5s
AKASG Malin Array Be   71.37 323    P      P      13 58 59.9 +0.8
AKBB  Malin Array Si   71.37 323ceP      P      13 58 58.8 -0.3
AKBB  Malin Array Si   71.37 323    P      P      13 58 59.5 +0.3
AKBB                                IAmb   IAmb   13 59 00.0
      comp=Z,29nm,0.8s
SUW   Suwalki          71.37 328   eP      P      13 58 59.4 +0.3
SUW   Suwalki          71.37 328   eP      P      13 59 00.1 +1.0
ASK   Askoy            71.63 341   eP      P      13 59 01.4 +0.9
BER   Bergen           71.69 341   eP      P      13 59 01.7 +0.9
BORG  Borgarnes        71.73 354    LR     LR     14 28 40.5
      comp=Z,8.5nm,18.4s,baz=4.6,slow=34
ODD1  Odda             71.78 340   eP      P      13 59 02.0 +0.5
BLS5  Blasjo           72.25 340   eP      P      13 59 05.1 +0.8
KMY   Karmoy           72.74 340   eP      P      13 59 07.9 +0.8
SNART Snartemo         73.00 339   eP      P      13 59 09.3 +0.7
UOSS  Minazif          73.18 288    P      P      13 59 10.8 +0.4
UOSS                                IAmb   IAmb   13 59 11.2
      comp=Z,22nm,1.2s
SIM   Simferopol'      73.20 317   eP      P      13 59 09.6 -0.5
SIM                                 pmax   pmax
      comp=Z,24nm,1.0s
BSD   Bornholm Skovb   73.43 333   eP      P      13 59 11.4 +0.1
BSD   Bornholm Skovb   73.43 333   i P     P      13 59 11.4 +0.1
BSD                                 IAmb   IAmb   13 59 11.9
      comp=Z,15nm,0.8s
SORM  Soroca           73.64 322   ⇓P      P      13 59 12.8 +0.2
BEL   Belsk            73.97 328   eP      P      13 59 14.2 -0.3
BEL                                esP     sP     13 59 49.6 -0.3
LVV   L'vov            74.24 325   eP      P      13 59 16.7 +0.5
KWP   Kalwaria Pacla   74.93 326   eP      P      13 59 21.1 +0.9
KWP   Kalwaria Pacla   74.93 326    P      P      13 59 21.4 +1.2
KWP                                 pmax   pmax
      comp=Z,492nm,1.0s
KWP   Kalwaria Pacla   74.93 326    P      P      13 59 21.4 +1.2
STKA  Stephens Creek   75.03 184    P      P      13 59 21.3 +0.6
      comp=Z,2.3nm,0.7s,baz=351,slow=11,SNR=3.7
BUR08 Bucovina Ar. S   75.41 323    P      P      13 59 23.9 +0.9
BUR08                               IAmb   IAmb   13 59 24.7
      comp=Z,16nm,0.8s
BURAR Bucovina Array   75.42 323   ⇓P      P      13 59 23.6 +0.5
BURAR Bucovina Array   75.42 323    P      P      13 59 24.3 +1.2
BURAR                               IAmb   IAmb   13 59 25.1
      comp=Z,23nm,0.8s
TESR  Tescani          75.62 322   ⇑P      P      13 59 23.7 -0.4
OJC   Ojcow            75.63 328   eP      P      13 59 25.0 +0.8
OJC                                epP     pP     13 59 49.7 +0.6
JURR  Jurilovca        75.89 319   ⇑P      P      13 59 26.5 +0.8
CFR   Carcaliu         75.94 320   ⇑P      P      13 59 25.9  0.0
TPGR  Topolog          76.04 319   ⇑P      P      13 59 26.8 +0.2
NIE   Niedzica         76.07 327   eP      P      13 59 28.2 +1.5
NIE                                epP     pP     13 59 53.8 +2.0
KSP   Ksiaz            76.46 330   eP      P      13 59 28.8  0.0
KSP                                epP     pP     13 59 54.1 +0.3
LANS  Liptovska Anna   76.62 327   eP      P      13 59 31.4 +1.6
LANS                                pmax   pmax
      comp=Z,11nm,1.0s
LANS  Liptovska Anna   76.62 327   eP      P      13 59 31.4 +1.6
MLR   Muntele Rosu     76.72 321    P      P      13 59 31.6 +1.1
      comp=Z,5.5nm,0.7s,baz=50,slow=3.3,SNR=8.0
CHVC  Chvalec          76.75 330   eP      P      13 59 31.5 +1.0
ECSD  EROS Data Cent   76.77  41    P      P      13 59 30.8  0.0
      baz=318
DPC   Dobruska-Polom   76.85 330   eP      P      13 59 32.1 +1.0
DPC   Dobruska-Polom   76.85 330   eP      P      13 59 32.1 +1.0
MORC  Moravsky Berou   76.86 329   ⇑P      P      13 59 31.2  0.0
MORC  Moravsky Berou   76.86 329   eP      P      13 59 31.9 +0.7
KRLC  Kraliky          76.90 329   eP      P      13 59 32.3 +0.9
KRLC  Kraliky          76.90 329   eP      P      13 59 32.3 +0.9
DRGR                   77.14 324   ⇑P      P      13 59 32.4 -0.5
VOIR                   77.16 322   ⇑P      P      13 59 33.7 +0.7
BRTR  Keskin Array B   77.18 313    P      P      13 59 34.0 +0.8
      comp=Z,2.3nm,0.7s,baz=75,slow=5.2,SNR=10
CLL   Collm            77.24 332⇑iP      P      13 59 33.2  0.0
CLL                                i *PP   pP     13 59 57.8 -0.4
CLL                                 pmax   pmax
      comp=Z,27nm,1.1s
CLL   Collm            77.24 332⇑iP      P      13 59 33.2  0.0
      comp=Z,27nm,1.1s
CLL                                i pP    pP     13 59 57.8 -0.4
BRG   Berggiesshubel   77.27 331   eP      P      13 59 33.9 +0.5
BRG                                 Amp           13 59 34.8
      comp=Z,4.9nm,0.9s
BRG   Berggiesshubel   77.27 331    P      P      13 59 42.9  +10
BRG                                 Amp           13 59 43.7
      comp=Z,4.1nm,0.9s
VYHS  Vyhne            77.39 327   eP      P      13 59 33.7 -0.4
VYHS                                pmax   pmax
      comp=Z,13nm,1.3s
VYHS  Vyhne            77.39 327   eP      P      13 59 33.7 -0.4
PSZ   Piszkesteto      77.43 326   ⇑P      P      13 59 34.4 -0.1
PSZ   Piszkesteto      77.43 326   eP      P      13 59 35.5 +1.1
JAVC  Velka Javorina   77.55 328   eP      P      13 59 36.7 +1.6
VRAC  Vranov           77.60 329    P      P      13 59 35.6 +0.3
      comp=Z,7.9nm,0.8s,baz=27,slow=5.6,SNR=10
VRAC  Vranov           77.60 329   eP      P      13 59 36.2 +0.9
PRU   Pruhonice        77.80 330   eP      P      13 59 37.6 +1.3
PRU   Pruhonice        77.80 330   eP      P      13 59 37.6 +1.3
KRUC  Moravsky         77.88 329   eP      P      13 59 37.6 +0.8
SMOL  Smolenice        77.93 328   eP      P      13 59 38.5 +1.4
SMOL                                pmax   pmax
      comp=Z,8.0nm,1.1s
SMOL  Smolenice        77.93 328   eP      P      13 59 38.5 +1.4
MODS  Modra-Piesok     78.10 328   eP      P      13 59 38.1  0.0
MODS                                pmax   pmax
      comp=Z,17nm,1.2s
MODS  Modra-Piesok     78.10 328   eP      P      13 59 38.1  0.0
EKA   Eskdalemuir Ar   78.21 343    P      P      13 59 38.6 +0.1
      comp=Z,5.9nm,0.7s,baz=26,slow=4.5,SNR=6.3
SCHQ  Schefferville    78.22  19    P      P      13 59 38.3 -0.3
      comp=Z,2.2nm,0.5s,baz=310,slow=10,SNR=7.4
SCHQ  Schefferville    78.22  19    P      P      13 59 38.4 -0.1
SCHQ                                IAmb   IAmb   14 01 24.6
      comp=Z,75nm,1.9s
CKRC  Cesky Krumlov    78.85 330   eP      P      13 59 42.9 +0.7
KHC   Kasperske Hory   78.86 330   eP      P      13 59 43.1 +0.8
KHC                                e                14 00 08.3
KHC   Kasperske Hory   78.86 330   eP      P      13 59 43.1 +0.8
KHC                                epP     pP     14 00 08.3 +0.9
MPLH  Magyarpolny      78.98 327   eP      P      13 59 43.8 +0.9
CONA  Conrad Observa   79.01 328   i P     P      13 59 44.2 +1.0
      comp=Z,9.5nm,1.2s,SNR=5.7
```

GERESS	**GERESS Array B**	**79.05**	**330**	P	**P**	**13 59 43.0**	**-0.4**
	comp=Z,1.0nm,0.5s,baz=52,slow=5.2,SNR=12						
GERESS	**GERESS Array B**	**79.05**	**330**	P	**P**	**13 59 43.0**	**-0.4**
GRF	**Grafenberg Arr**	**79.21**	**332**	*e*P	**P**	**13 59 45.1**	**+0.9**
	comp=Z,23nm,0.9s,baz=30,slow=4.6						
BOVS	**Bovan**	**80.06**	**322**	⇑P	**P**	**13 59 48.8**	**0.0**
VTS	**Vitosha**	**80.17**	**321**	⇑P	**P**	**13 59 50.6**	**+1.0**
SOKA	**Soboth**	**80.36**	**328**	*i* P	**P**	**13 59 50.9**	**+0.4**
	comp=Z,9.9nm,1.0s,SNR=10						
PERS	**Pernice**	**80.36**	**328**	*i* P	**P**	**13 59 50.9**	**+0.4**
BCLA	**Clavier**	**80.48**	**336**	*d*P	**P**	**13 59 50.6**	**-0.3**
BGES	**Gesves**	**80.57**	**336**	*d*P	**P**	**13 59 51.2**	**-0.3**
BMRD	**Maredsous**	**80.74**	**336**	*d*P	**P**	**13 59 52.4**	**+0.1**
MNTX	**Cornudas Mount**	**80.80**	**55**	P	**P**	**13 59 53.3**	**+0.3**
	baz=316						
LEGS	**Legarje**	**80.86**	**328**	*i* P	**P**	**13 59 53.0**	**-0.1**
MYKA	**Terra Mystica**	**80.93**	**329**	*e*P	**P**	**13 59 54.2**	**+0.7**
	comp=Z,7.0nm,1.2s						
DOU	**Dourbes**	**80.98**	**336**	*d*P	**P**	**13 59 53.8**	**+0.2**
MMAI	**Mount Meron Ar**	**81.04**	**307**	P	**P**	**13 59 54.6**	**+0.3**
	comp=Z,15nm,0.8s,baz=52,slow=5.4,SNR=7.7						
WATA	**Walderalm**	**81.09**	**331**	*e*P	**P**	**13 59 56.0**	**+1.5**
	comp=Z,5.9nm,0.7s						
WTTA	**Wattenberg**	**81.13**	**330**	*e*P	**P**	**13 59 56.1**	**+1.4**
	comp=Z,14nm,1.1s						
VISS	**Visnje**	**81.16**	**328**	*i* P	**P**	**13 59 54.4**	**-0.3**
ABTA	**Abfaltersbach**	**81.25**	**330**	*e*P	**P**	**13 59 55.6**	**+0.4**
	comp=Z,3.4nm,0.7s						
RETA	**Reutte**	**81.25**	**331**	*e*P	**P**	**13 59 56.1**	**+0.9**
	comp=Z,9.1nm,1.1s						
MOTA	**Moosalm**	**81.25**	**331**	*e*P	**P**	**13 59 55.7**	**+0.4**
	comp=Z,13nm,1.1s						
SQTA	**Sankt Quirin**	**81.32**	**331**	*e*P	**P**	**13 59 56.5**	**+0.9**
	comp=Z,12nm,1.2s						
FETA	**Feichten**	**81.66**	**331**	*e*P	**P**	**13 59 57.9**	**+0.4**
	comp=Z,4.3nm,0.9s						
DAVA	**Damuels**	**81.73**	**332**	*e*P	**P**	**13 59 58.0**	**+0.1**
	comp=Z,7.8nm,1.1s						
DAVOX	**Davos/Dischmat**	**82.17**	**331**	P	**P**	**14 00 00.4**	**+0.2**
	comp=Z,1.8nm,0.5s,baz=252,slow=7.8,SNR=3.5						
TX32	**Lajitas Array**	**83.53**	**55**	P	**P**	**14 00 08.0**	**+0.6**
TXAR	**Lajitas Array**	**83.53**	**55**	P	**P**	**14 00 07.7**	**+0.3**
	comp=Z,2.5nm,1.0s,baz=297,slow=3.9,SNR=14						
TXAR				LR	LR	14 37 16.3	
	comp=Z,18nm,18.4s,baz=0.0,slow=36						
TXAR	**Lajitas Array**	**83.53**	**55**	P	**P**	**14 00 08.0**	**+0.6**
EIL	**Elat**	**83.73**	**305**	P	**P**	**14 00 09.1**	**+0.8**
	comp=Z,4.4nm,0.8s,baz=98,slow=6.9,SNR=4.0						
ITM	**Ithomi**	**85.08**	**318**	P	**P**	**14 00 14.5**	**-0.5**
IDI	**Anoyia**	**85.09**	**315**	P	**P**	**14 00 14.9**	**-0.3**
	comp=Z,4.1nm,0.4s,baz=357,slow=6.3,SNR=7.3						
URZ	**Urewera**	**86.04**	**156**	LR	LR	14 33 47.6	
	comp=Z,83nm,21.4s,baz=31,slow=32						
WVT	**Waverly**	**86.91**	**41**	P	**P**	**14 00 24.4**	**+0.4**
	baz=324						
O56A	**Blue Knob Stat**	**87.50**	**33**	P	**P**	**14 00 27.0**	**+0.1**
	baz=329						
N59A	**State Game Lan**	**88.00**	**30**	P	**P**	**14 00 29.6**	**+0.4**
	baz=331						
TZTN	**Tazewell**	**88.55**	**38**	P	**P**	**14 00 32.0**	**+0.2**
	baz=326						
ESDC	**Sonseca Array**	**92.96**	**337**	P	**P**	**14 00 51.9**	**-0.5**
	comp=Z,1.3nm,0.8s,baz=354,slow=2.7,SNR=6.7						
ESDC				LR	LR	14 52 20.4	
	comp=Z,12nm,19.8s,baz=305,slow=42						
TORD	**Torodi Ar. Bea**	**114.96**	**321**	PP	PP	14 07 10.9	-8.3
	comp=Z,5.9nm,1.2s,baz=27,slow=9.2,SNR=6.3						
KOWA	**Kowa**	**116.18**	**327**	PP	**PP**	**14 07 20.2**	**-7.4**
	comp=Z,0.9nm,0.3s,baz=22,slow=14,SNR=4.4						
DBIC	**Dimbokro**	**123.60**	**325**	PP	PP	14 08 17.4	-1.2
	comp=Z,3.9nm,0.9s,baz=356,slow=7.1,SNR=3.2						
SNAA	**Sanae**	**147.87**	**198**	PKPdf	**PKPbc**	**14 07 21.5**	**-1.1**
VNA2	**Neumayer--Watz**	**149.42**	**197**	PKPab	**PKPab**	**14 07 35.6**	**+4.0**

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*IDC **04** 13:57:27.9±1.3, 8°.20S×125°.43E, h0^{km}, mb3.6/4, mb1 3.7/8, mb1mx3.5/54, mbtmp3.5/8, ML3.3/4, MS3.3/1, Ms1 3.3/1, ms1mx2.4/31 Error ellipse: s-maj=39.2km s-min=20.5km az=85.0*

ISC 04 13:57:32.5±0.9**, 8°.33S**±0°.08×**125°.5E**±0°.1**, h35^{km}, n9, σ1^s.53**/11**, mb3.7**/4**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**2.63**	**225**	Pn	**Pn**	**13 58 12.7**	**+0.2**
	3.4nm,0.3s,baz=79,slow=9.3,SNR=3.3						
BATI				Sn	**Sn**	**13 58 44.5**	**+1.3**
	3.1nm,0.3s,baz=353,slow=23,SNR=2.2						
FITZ	**Fitzroy Crossi**	**9.71**	**179**	Pn	**Pn**	**13 59 49.6**	**-0.1**
	0.2nm,0.3s,baz=64,slow=9.4,SNR=2.0						
FITZ				Sn	**Sn**	**14 01 34.5**	**-3.1**
	0.3nm,0.3s,baz=274,slow=13,SNR=3.4						
WRA	**Warramunga Arr**	**14.35**	**144**	Pn	**Pn**	**14 00 54.2**	**+1.0**
	0.2nm,0.3s,baz=319,slow=13,SNR=5.6						
ASAR	**Alice Springs**	**17.23**	**153**	P	**P**	**14 01 33.7**	**+1.9**
	0.1nm,0.3s,baz=316,slow=11,SNR=5.7						
CMAR	**Chiang Mai Arr**	**37.38**	**316**	P	**P**	**14 04 41.8**	**-0.5**
	0.5nm,0.8s,baz=150,slow=6.5,SNR=5.3						
CMAR				PcP	**PcP**	**14 07 01.1**	**+0.2**
	0.3nm,0.4s,baz=126,slow=4.4,SNR=4.4						
PALK	**Pallekele**	**47.31**	**288**	LR	LR	14 27 07.2	
	comp=Z,34nm,18.7s,baz=352,slow=38						
SONM	**Songino Array**	**58.43**	**345**	P	**P**	**14 07 25.1**	**+0.2**
	0.2nm,0.4s,baz=152,slow=6.5,SNR=1.4						
MKAR	**Makanchi Array**	**67.01**	**329**	P	**P**	**14 08 21.6**	**-0.4**
	0.8nm,0.7s,baz=132,slow=7.4,SNR=7.0						
ZALV	**Zalesovo Beam**	**70.90**	**336**	P	**P**	**14 08 44.4**	**-1.5**
	0.3nm,0.3s,baz=120,slow=8.7,SNR=3.5						

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*NEIC **04** 13:58:05.9±0.7, 35°.87N±0°.01×97°.37W±0°.01, h8^{km}±3^{km}, Error ellipse: s-maj=1.8km s-min=1.1km az=193.0*

TUL 04 13:58:05.7±1.0**, 35°.86N**±0°.01×**97°.35W**±0°.01**, h5^{km}**±4^{km}**, ML2.7, mb_Lg2.4**/19(NEIC)**, Error ellipse: s-maj=1.9km s-min=1.3km az=128.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FNO	**Franklin**	**0.60**	**184**	Pg	Pg	13 58 17.5	+0.4
T35A	**Sooner Cattle**	**1.26**	**32**		Pg	13 58 29.3	-0.5
X34A	**Smith Ranch, M**	**1.31**	**198**		Pb	13 58 30.7	-0.1
X37A	**Clayton**	**2.06**	**127**		Pn	13 58 41.2	+0.3
X37A				IAmb_Lg		13 59 16.1	
	comp=Z,13nm,0.7s						
U38A	**Gravette**	**2.47**	**75**		Pn	13 58 45.8	-0.8
W39A	**Magazine**	**2.98**	**102**		Pn	13 58 53.5	-0.2
W39A				IAmb_Lg		13 59 45.0	
	comp=Z,11nm,0.8s						
KSU1	**Kansas State U**	**3.29**	**10**	IAmb_Lg		13 59 57.4	
	comp=Z,13nm,0.8s						
AMTX	**Amarillo**	**3.67**	**256**	IAmb_Lg		14 00 04.8	
	comp=Z,9.6nm,0.8s						
S39A	**Bolivar**	**3.72**	**59**	IAmb_Lg		14 00 02.8	
	comp=Z,9.1nm,0.9s						
X40A	**Basin Creek Fa**	**3.94**	**109**	IAmb_Lg		14 00 15.7	
	comp=Z,10nm,0.8s						
WLAR	**White Oak Lake**	**4.11**	**121**	IAmb_Lg		14 00 25.9	
	comp=Z,8.4nm,0.8s						
FCAR	**Ozark Folk Cen**	**4.25**	**88**	IAmb_Lg		14 00 26.7	
	comp=Z,8.9nm,0.7s						
MGMO	**Mountain Grove**	**4.30**	**71**	IAmb_Lg		14 00 33.4	
	comp=Z,8.4nm,0.9s						
T25A	**Trinidad**	**5.83**	**285**	IAmb_Lg		14 01 16.4	
	comp=Z,5.6nm,0.7s						
ECSD	**EROS Data Cent**	**7.89**	**4**	IAmb_Lg		14 02 19.7	
	comp=Z,2.8nm,0.9s						

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*IDC **04** 13:59:48.6±1.6, 8°.15S×125°.51E, h0^{km}, mb3.7/2, mb1 3.8/6, mb1mx3.5/55, mbtmp3.7/6, ML3.6/4, MS2.7/1, Ms1 2.7/1, ms1mx2.3/34, Error ellipse: s-maj=49.5km s-min=24.1km az=77.0*

ISC 04 13:59:53.8±1.4**, 8°.44S**±0°.10×**125°.5E**±0°.1**, h35^{km}, n7, σ2^s.03**/9**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**2.50**	**225**	Pn	Pn	14 00 34.5	+2.5
	9.1nm,0.3s,baz=68,slow=1.9,SNR=5.6						
BATI				Sn	**Sn**	**14 01 02.3**	**+1.0**
	9.8nm,0.3s,baz=340,slow=23,SNR=5.8						
FITZ	**Fitzroy Crossi**	**9.60**	**179**	Pn	**Pn**	**14 02 10.5**	**+1.0**
	0.3nm,0.3s,baz=356,slow=12,SNR=2.4						
FITZ				Sn	**Sn**	**14 03 52.6**	**-3.6**
	0.3nm,0.3s,baz=343,slow=17,SNR=3.3						
WRA	**Warramunga Arr**	**14.30**	**144**	Pn	**Pn**	**14 03 15.2**	**+1.4**
	0.4nm,0.3s,baz=320,slow=13,SNR=16						
WRA				Sn	**Sn**	**14 05 51.7**	**+0.5**
	0.1nm,0.3s,baz=319,slow=23,SNR=4.3						
DAV	**Davao City (W)**	**15.41**	**0**	LR	LR	14 10 50.3	
	comp=Z,27nm,18.5s,baz=310,slow=44						
ASAR	**Alice Springs**	**17.16**	**153**	P	**P**	**14 03 54.0**	**+1.8**
	0.2nm,0.3s,baz=322,slow=11,SNR=10						
ASAR				S	**Sn**	**14 06 59.5**	**-1.3**
	0.0nm,0.3s,baz=321,slow=19,SNR=3.0						
MKAR	**Makanchi Array**	**67.07**	**329**	P	**P**	**14 10 42.7**	**-0.9**
	0.6nm,0.6s,baz=129,slow=8.3,SNR=5.4						
KURBB	**Kurchatov Arra**	**71.47**	**331**	P	**P**	**14 11 09.2**	**-1.5**
	0.3nm,0.5s,baz=146,slow=4.5,SNR=1.9						

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*IDC **04** 14:01:55.0±1.1, 35°.69N×141°.10E, h0^{km}, mb3.6/6, mb1 3.8/10, mb1mx3.5/77, mbtmp3.8/10, ML3.1/3, MS2.9/2, Ms1 2.9/2, ms1mx2.4/42, Error ellipse: s-maj=31.7km s-min=17.6km az=78.0*

*JMA **04** 14:01:58.8±0.2, 35°.78N×141°.06E, h28^{km}±1^{km}, M3.6*

JMA Felt I J1.

*NIED **04** 14:01:58.9, 35°.78N×141°.06E, h28^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-1.98; M$_{\theta\theta}$1.06; M$_{\phi\phi}$0.92; M$_{r\theta}$3.39; M$_{\theta\phi}$-1.53; M$_{\phi r}$0.02; Fault plane solution: M$_0$4.08000×10^{14} NP1: ϕ_s280.00000°, δ76.00000°, λ-112.00000°. NP2: ϕ_s158.00000°, δ26.00000°, λ-35.00000°.*

ISC 04 14:01:58.4±1.2**, 35°.78N**±0°.05×**141°.11E**±0°.07**, h26^{km}**±8^{km}**, n27, σ0^s.98**/28**, mb3.7**/6**, 1C-5D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	**Chosi**	**0.22**	**250**	⇓P	**Pb**	**14 02 04.4**	**+0.1**
CHOJ				S	**Sb**	**14 02 08.1**	**-0.2**
JIHU	**Itakohorinouch**	**0.51**	**292**	⇓P	**Pb**	**14 02 09.1**	**+0.4**
JIHU				S	**Sb**	**14 02 16.6**	**+0.8**
JSMT	**Sammumatsuo**	**0.55**	**256**	P	**Pb**	**14 02 09.5**	**0.0**
JSMT				S	**Sb**	**14 02 17.9**	**+0.9**
JHYU	**Hitachinakayam**	**0.70**	**323**	⇓P	**Pn**	**14 02 12.0**	**-0.7**
JHYU				S	**Sb**	**14 02 21.4**	**+0.1**
JCN	**Nagara**	**0.82**	**244**	⇑P	**Pb**	**14 02 14.5**	**+0.5**
JYT	**Yasato**	**0.87**	**302**	⇓P	**Pn**	**14 02 13.6**	**-1.3**
JYT				S	**Sn**	**14 02 24.0**	**-2.7**
JHO	**Hitachi**	**0.94**	**333**	⇓P	**Pn**	**14 02 15.3**	**-0.6**
BSO3	**Boso 3**	**1.09**	**207**	P	**Pn**	**14 02 17.5**	**-0.2**
MJAR	**Matsushiro Arr**	**2.47**	**289**	Pn	**Pn**	**14 02 36.1**	**-0.9**
	0.8nm,0.3s,baz=98,slow=16,SNR=20						
MJAR				Sn	**Sb**	**14 03 11.7**	**-0.3**
	1.0nm,0.3s,baz=79,slow=23,SNR=7.9						
MAT	**Matsushiro**	**2.47**	**289**	P	**Pn**	**14 02 37.1**	**+0.1**
MAT				S	**Sn**	**14 03 06.7**	**+0.4**
JHJ	**Hachijo jima 2**	**2.87**	**203**	Pn	**Pn**	**14 02 41.1**	**-1.3**
	9.4nm,0.3s,baz=38,slow=5.3,SNR=2.3						
JHJ				Sn	**Sn**	**14 03 16.2**	**+0.1**
	12nm,0.3s,baz=90,slow=20,SNR=2.2						
ASAJ	**Asahikawa**	**8.41**	**7**	Pn	**Pn**	**14 03 58.4**	**-0.1**
	0.6nm,0.3s,baz=194,slow=15,SNR=7.6						
ASAJ				Sn	**Sn**	**14 05 31.5**	**-1.1**
	0.2nm,0.3s,baz=38,slow=19,SNR=1.5						
JCJ	**Chichijima**	**8.70**	**174**	Pn	**Pn**	**14 04 01.3**	**-1.4**
	5.0nm,0.3s,baz=342,slow=20,SNR=2.0						
KSRS	**Korea Array**	**10.73**	**283**	LR	LR	14 08 20.1	
	comp=Z,61nm,18.2s,baz=134,slow=36						
KLR	**Kul'dur**	**15.09**	**336**	LR	LR	14 11 03.9	
	comp=Z,47nm,19.5s,baz=208,slow=36						
H11N2	**WAKE ISLAND Hy**	**27.74**	**118**	T	T	14 36 42.0	
	baz=311,slow=75						
H11N1	**WAKE ISLAND Hy**	**27.75**	**118**	T	T	14 36 42.0	
	baz=311,slow=75						
H11N3	**WAKE ISLAND Hy**	**27.76**	**118**	T	T	14 36 44.5	
	baz=311,slow=75						
H11S1	**WAKE ISLAND Hy**	**28.41**	**121**	T	T	14 37 36.1	
	baz=312,slow=75						
H11S3	**WAKE ISLAND Hy**	**28.41**	**121**	T	T	14 37 35.7	
	baz=312,slow=75						
H11S2	**WAKE ISLAND Hy**	**28.43**	**121**	T	T	14 37 43.0	
	baz=312,slow=75						
ZALV	**Zalesovo Beam**	**42.59**	**313**	P	**P**	**14 09 53.6**	**+1.6**
	0.7nm,0.6s,baz=87,slow=10,SNR=3.8						
MKAR	**Makanchi Array**	**44.59**	**303**	P	**P**	**14 10 09.0**	**+0.7**
	1.0nm,0.7s,baz=88,slow=9.7,SNR=7.7						
KURBB	**Kurchatov Arra**	**46.59**	**309**	P	**P**	**14 10 24.2**	**+0.2**
	0.6nm,0.6s,baz=83,slow=8.0,SNR=5.2						
ILAR	**Eielson Array**	**50.69**	**32**	P	**P**	**14 10 56.6**	**+1.3**
	0.4nm,0.8s,baz=268,slow=6.8,SNR=2.6						
WRA	**Warramunga Arr**	**55.78**	**188**	P	**P**	**14 11 32.7**	**-0.6**
	1.0nm,0.8s,baz=1.6,slow=6.7,SNR=9.6						
ASAR	**Alice Springs**	**59.51**	**188**	P	**P**	**14 11 59.5**	**+0.1**
	0.4nm,0.9s,baz=18,slow=10,SNR=6.5						

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*IDC **04** 14:08:20.4±2.6, 52°.45N×176°.12W, h0^{km}, mb3.3/4, mb1 3.6/6, mb1mx3.3/77, mbtmp3.4/6, ML3.3/2, Error ellipse: s-maj=67.5km s-min=26.7km az=176.0*

*AEIC **04** 14:08:21±1.5, 51°.54N±0°.04×175°.70W±0°.05, h32^{km}±6^{km}, ML3.1, Error ellipse: s-maj=6.1km s-min=4.6km az=185.0*

*NEIC **04** 14:08:22.2±1.1, 51°.59N±0°.06×175°.80W±0°.03, h32^{km}±6^{km}, Error ellipse: s-maj=8.3km s-min=2.6km az=191.0*

ISC 04 14:08:22.3±1.4**, 51°.6N**±0°.1×**175°.74W**±0°.07**, h47^{km}, n25, σ1^s.30**/22**, mb3.3**/4**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSIG	**Igitkin Island**	**0.38**	**343**		**Pn**	**14 08 31.5**	**-0.5**
GSMY	**Great Sitkin M**	**0.46**	**335**		**Pn**	**14 08 32.9**	**-0.1**
GSTD	**Great Sitkin T**	**0.50**	**330**		**Pn**	**14 08 33.5**	**+0.1**
GSTD					**Sn**	**14 08 41.3**	**-0.1**
ADK	**Adak**	**0.64**	**294**		**Pn**	**14 08 34.0**	**-1.1**
ADK					**Sn**	**14 08 44.7**	**+0.4**
ADK	**Adak**	**0.64**	**294**		**Pn**	**14 08 34.3**	**-0.8**
KIWB	**Kanaga Island**	**0.90**	**285**		**Pn**	**14 08 38.2**	**-0.4**
KIKV	**Kanaga Island**	**0.92**	**286**		**Pn**	**14 08 38.6**	**-0.3**
KIMD	**Kanaga Island**	**0.94**	**279**		**Pn**	**14 08 38.4**	**-0.7**
KICM	**Kanaga Island**	**0.95**	**288**		**Pn**	**14 08 39.1**	**-0.1**
TAFP	**Tanaga Falls P**	**1.42**	**282**		**Pn**	**14 08 45.8**	**+0.1**
TAFP					**Sn**	**14 09 05.0**	**+1.8**
TASE	**Tanaga Southea**	**1.44**	**279**		**Pn**	**14 08 46.2**	**+0.2**
GAEA	**Gareloi East**	**1.88**	**276**		**Pn**	**14 08 53.1**	**+1.2**
KDAK	**Kodiak Island**	**14.69**	**56**	Pn	**Pn**	**14 11 43.7**	**-3.2**
	0.1nm,0.3s,baz=302,slow=2.9,SNR=1.7						
KDAK				Sn	**Sn**	**14 14 31.4**	**+3.2**
	0.1nm,0.3s,baz=298,slow=15,SNR=1.5						
KDAK	**Kodiak Island**	**14.69**	**56**	Pn	**Pn**	**14 11 48.5**	**+1.5**
ILAR	**Eielson Array**	**19.87**	**37**	P	**P**	**14 12 48.5**	**-0.6**
	0.2nm,0.3s,baz=230,slow=8.5,SNR=13						
INK	**Inuvik**	**26.16**	**35**	P	**P**	**14 13 51.2**	**-0.6**
	0.2nm,0.3s,baz=238,slow=6.5,SNR=1.4						
H11N2	**WAKE ISLAND Hy**	**34.63**	**210**	T	T	14 51 52.3	
	baz=20,slow=76						
H11N3	**WAKE ISLAND Hy**	**34.64**	**210**	T	T	14 51 57.0	
	baz=20,slow=76						
H11N1	**WAKE ISLAND Hy**	**34.65**	**210**	T	T	14 51 55.6	
	baz=20,slow=76						
H11S1	**WAKE ISLAND Hy**	**35.84**	**209**	T	T	14 53 33.9	
	baz=18,slow=76						
H11S2	**WAKE ISLAND Hy**	**35.85**	**209**	T	T	14 53 43.3	
	baz=18,slow=76						
H11S3	**WAKE ISLAND Hy**	**35.86**	**209**	T	T	14 53 49.4	
	baz=18,slow=76						
TXAR	**Lajitas Array**	**56.73**	**84**	P	P	14 18 07.3	+6.1
	0.1nm,0.4s,baz=297,slow=4.0,SNR=1.7						
KURBB	**Kurchatov Arra**	**60.32**	**315**	P	**P**	**14 18 25.6**	**-0.2**
	0.3nm,0.4s,baz=44,slow=6.6,SNR=4.2						
MKAR	**Makanchi Array**	**61.36**	**310**	P	**P**	**14 18 32.2**	**-0.7**
	0.2nm,0.7s,baz=53,slow=7.5,SNR=1.2						

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*NEIC **04** 14:08:37.2±0.6, 35°.87N±0°.01×97°.37W±0°.01, h6^{km}±4^{km}, Error ellipse: s-maj=2.2km s-min=1.6km az=154.0*

TUL 04 14:08:37.1±1.0**, 35°.86N**±0°.01×**97°.36W**±0°.01**, h6^{km}**±4^{km}**, ML2.5, mb_Lg2.3**/17(NEIC)**, Error ellipse: s-maj=2.2km s-min=1.2km az=148.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FNO	**Franklin**	**0.60**	**183**	Pg	Pg	14 08 48.9	+0.2
FNO				IAmb_Lg		14 08 56.9	
	comp=Z,32nm,1.2s						
WMOK	**Wichita Mounta**	**1.61**	**227**		Pn	14 09 06.5	+0.3
X37A	**Clayton**	**2.06**	**127**	IAmb_Lg		14 09 47.5	
	comp=Z,8.6nm,0.7s						
W39A	**Magazine**	**2.99**	**102**	IAmb_Lg		14 10 13.4	
	comp=Z,9.5nm,0.7s						
AMTX	**Amarillo**	**3.66**	**256**	IAmb_Lg		14 10 43.6	
	comp=Z,8.1nm,0.9s						
S39A	**Bolivar**	**3.72**	**59**	IAmb_Lg		14 10 34.2	
	comp=Z,6.1nm,0.8s						
X40A	**Basin Creek Fa**	**3.95**	**109**	IAmb_Lg		14 10 46.0	
	comp=Z,8.1nm,0.7s						
N35A	**Tabor**	**5.17**	**15**	IAmb_Lg		14 11 26.5	
	comp=Z,11nm,0.7s						
N38A	**Joes South For**	**5.90**	**32**	IAmb_Lg		14 11 48.8	
	comp=Z,13nm,0.8s						

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*DJA **04** 14:18:00.3±0.2, 3°S±2°×12°8E±°, h51^{km}±4^{km}, M4.5/17, mB5.0/6, mb4.5/17, MLv4.5/14, Mw(mB)4.3/6*

*IDC **04** 14:18:00.3±1.6, 3°.37S×128°.08E, h67^{km}±14^{km}, mb4.2/16, mb1 4.3/20, mb1mx4.2/43, mbtmp4.5/20, MS3.1/6, Ms1 3.1/6, ms1mx2.8/33, Error ellipse: s-maj=15.0km s-min=8.0km az=84.0*

*NEIC **04** 14:18:01±1.6, 3°.37S±0°.07×127°.91E±0°.07, h64^{km}±7^{km}, mb4.7/38, Error ellipse: s-maj=10.5km s-min=9.0km az=125.0*

ISC 04 14:17:59.2±0.3**, 3°.33S**±0°.05×**127°.91E**±0°.05**, h50^{km}, n125, σ1^s.35**/130**, mb4.7**/51**, MS3.0**/5**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**1.01**	**91**	P	**Pn**	**14 18 19.5**	**+2.3**
MSAI				S	**Sn**	**14 18 32.6**	**+2.2**
SANI	**Sanana**	**2.30**	**303**	P	**Pn**	**14 18 35.3**	**+0.5**
BNDI	**Bandanaira**	**2.31**	**121**	P	**Pn**	**14 18 36.6**	**+1.7**
BNDI	**Bandanaira**	**2.31**	**121**	P	**Pn**	**14 18 38.0**	**+3.1**
LBMI	**Labuha**	**2.70**	**351**	P	**Pn**	**14 18 42.3**	**+2.0**
TNTI	**Ternate**	**4.11**	**352**	Pn	**Pn**	**14 19 01.2**	**+1.6**
TNTI	**Ternate**	**4.11**	**352**	P	**Pn**	**14 19 00.5**	**+0.9**
SWI	**Sorong**	**4.15**	**54**	P	**Pn**	**14 19 01.8**	**+1.8**
SIJI	**Sorong**	**4.15**	**54**	P	**Pn**	**14 19 00.9**	**+0.8**
	68nm,0.3s,baz=233,slow=15,SNR=297						
SIJI				S	**Sn**	**14 19 45.8**	**-1.6**
	54nm,0.3s,baz=156,slow=22,SNR=21						
SIJI				LR	LR	14 20 35.8	
	comp=Z,106nm,21.4s,baz=244,slow=38						
FAKI	**Fak Fak**	**4.35**	**85**		**Pn**	**14 19 04.7**	**+1.8**
FAKI	**Fak Fak**	**4.35**	**85**	P	**Pn**	**14 19 04.7**	**+1.8**
FAKI	**Fak Fak**	**4.35**	**85**	P	**Pn**	**14 19 04.7**	**+1.8**
KMSI	**Cibinong**	**5.52**	**315**	P	**Pn**	**14 19 19.7**	**+0.8**
	0.8nm3μm168nm,0.6s						
LUWI	**Luwuk**	**5.62**	**294**	Pn	**Pn**	**14 19 22.0**	**+1.8**
LUWI	**Luwuk**	**5.62**	**294**	P	**Pn**	**14 19 22.0**	**+1.8**
	0.5nm2μm117nm,0.9s						
LUWI	**Luwuk**	**5.62**	**294**	P	**Pn**	**14 19 23.3**	**+3.1**
MRSI	**Marisa**	**7.07**	**302**	P	**Pn**	**14 19 41.5**	**+1.4**
	0.2nm821nm58nm,1.0s						
SOEI	**Soe**	**7.34**	**209**	P	Pn	14 19 27.5	-17
SGSI	**Sangihe**	**7.36**	**341**	P	**Pn**	**14 19 45.0**	**+0.8**
	0.8nm165nm,0.5s						
BKSI	**Bulukumba**	**8.02**	**255**	P	**Pn**	**14 19 55.7**	**+2.5**
	25nm,0.9s						
TTSI	**Tana Toraja**	**8.09**	**272**	P	**Pn**	**14 19 56.3**	**+2.2**
	14nm,0.9s						
KAPI	**Kappang**	**8.31**	**258**	P	**Pn**	**14 20 00.2**	**+3.0**
	3.8nm,0.3s,baz=104,slow=19,SNR=2.0						
TOLI2	**Tolitoli**	**8.38**	**302**		**Pn**	**14 20 00.1**	**+1.9**
TOLI2	**Tolitoli**	**8.38**	**302**	P	**Pn**	**14 20 01.1**	**+2.9**
BAKI	**Biak**	**8.46**	**76**	P	**Pn**	**14 20 00.5**	**+1.2**
	51nm,0.7s						
MPSI	**Mapaga**	**8.80**	**294**	P	**Pn**	**14 20 03.7**	**-0.2**
	15nm,0.6s						
DRS	**Darwin Rock St**	**9.52**	**162**	P	**Pn**	**14 20 18.4**	**+4.7**
	115nm,0.8s						
KNRA	**Kununurra**	**12.30**	**176**	Pn	**Pn**	**14 20 52.7**	**+0.9**
KNRA	**Kununurra**	**12.30**	**176**	P	**Pn**	**14 20 53.7**	**+1.9**
	79nm,0.8s						
JAGI	**Jajag, Banyuwa**	**14.61**	**249**	P	**Pn**	**14 21 25.6**	**+2.5**
FITZ	**Fitzroy Crossi**	**14.85**	**188**	P	**Pn**	**14 21 26.3**	**+0.1**
	0.4nm,0.3s,baz=44,slow=13,SNR=8.5						
FITZ	**Fitzroy Crossi**	**14.85**	**188**	Pn	**Pn**	**14 21 24.7**	**-1.5**
WB0	**Warramunga Arr**	**17.52**	**159**	P	**Pn**	**14 22 00.0**	**-0.1**
WRAB	**Tennant Creek**	**17.66**	**160**	P	**Pn**	**14 22 01.6**	**-0.2**
WRAB	**Tennant Creek**	**17.66**	**160**	P	**Pn**	**14 22 01.5**	**-0.3**
WRA	**Warramunga Arr**	**17.66**	**160**	P	**Pn**	**14 22 00.8**	**-1.0**
	1.9nm,0.3s,baz=342,slow=12,SNR=11						
WRA				S	**Sn**	**14 25 16.5**	**-1.4**
	0.3nm,0.3s,baz=335,slow=21,SNR=4.5						
WRA				ScP	**ScP**	**14 30 06.3**	**-3.6**
	0.0nm,0.3s,baz=312,slow=2.6,SNR=2.3						
WRA	**Warramunga Arr**	**17.66**	**160**	P	**Pn**	**14 22 01.0**	**-0.8**
WB2	**Warramunga Arr**	**17.67**	**160**		**Pn**	**14 22 01.6**	**-0.3**
WB2				IAmb	IAmb	14 22 05.9	
	comp=Z,20nm,0.9s						
COEN	**Coen**	**18.40**	**126**	P	**P**	**14 22 10.4**	**0.0**
COEN	**Coen**	**18.40**	**126**	P	**P**	**14 22 10.3**	**-0.1**
	comp=Z,17nm,1.1s						
KPJI	**Karang Pucung**	**19.31**	**257**	P	**P**	**14 22 22.2**	**+1.8**
	comp=Z,57nm,0.5s						
MBWA	**Marble Bar**	**19.43**	**204**	P	**P**	**14 22 22.8**	**+1.2**
PSA00	**Pilbara Seismi**	**19.76**	**203**	P	**P**	**14 22 25.1**	**-0.1**
CISI	**Cisompet, Garu**	**20.44**	**257**	P	**P**	**14 22 32.9**	**+0.2**
QIS	**Mount Isa**	**20.57**	**147**	P	**P**	**14 22 35.0**	**+1.0**
	comp=Z,20nm,0.7s						
AS31	**Alice Springs**	**21.03**	**165**	P	**P**	**14 22 40.1**	**+1.1**
AS31				IAmb	IAmb	14 22 40.6	
	comp=Z,15nm,0.2s						
ASAR	**Alice Springs**	**21.03**	**165**	P	**P**	**14 22 39.6**	**+0.6**
	comp=Z,11nm,0.3s,baz=343,slow=12,SNR=202						
ASAR				S	**S**	**14 26 27.7**	**-2.9**
	comp=Z,5.5nm,0.8s,baz=345,slow=20,SNR=16						
ASAR				ScP	**ScP**	**14 30 15.0**	**-2.5**
	comp=Z,0.3nm,0.6s,baz=1.5,slow=2.1,SNR=4.4						
WRKA	**Warakurna**	**21.59**	**179**	P	**P**	**14 22 46.8**	**+1.9**
	comp=Z,14nm,2.0s						
DSRI	**Dabo**	**23.49**	**276**	P	**P**	**14 23 07.5**	**+2.7**
MEEK	**Meekatharra**	**24.83**	**200**	P	**P**	**14 23 16.5**	**-0.5**
	comp=Z,15nm,0.7s						
OOD	**Oodnadatta**	**25.44**	**164**	P	**P**	**14 23 21.1**	**-1.3**
	comp=Z,16nm,1.1s						
INKA	**Innaminka**	**27.19**	**154**	P	**P**	**14 23 39.1**	**+0.8**
	comp=Z,13nm,0.9s						
FORT	**Forrest**	**27.30**	**180**	P	**P**	**14 23 38.9**	**-0.3**
FORT				IAmb	IAmb	14 24 08.3	
	comp=Z,26nm,0.9s						
FORT	**Forrest**	**27.30**	**180**	P	**P**	**14 23 38.9**	**-0.4**
	comp=Z,35nm,1.6s						
MULG	**Mulgathing**	**27.43**	**168**	P	**P**	**14 23 39.9**	**-0.5**
	comp=Z,15nm,2.1s						
BBOO	**Buckleboo**	**30.31**	**166**	P	**P**	**14 24 05.4**	**-0.6**
BBOO				IAmb	IAmb	14 24 42.4	
	comp=Z,56nm,1.7s						
BBOO	**Buckleboo**	**30.31**	**166**	P	**P**	**14 24 04.8**	**-1.2**
	comp=Z,10nm,1.3s						
NWAO	**Narrogin (SRO)**	**31.10**	**198**	P	**P**	**14 24 12.7**	**-0.2**
	comp=Z,2.9nm,0.5s,baz=21,slow=8.6,SNR=2.0						
NWAO	**Narrogin (SRO)**	**31.10**	**198**	P	**P**	**14 24 12.7**	**-0.2**
STKA	**Stephens Creek**	**31.18**	**157**	P	**P**	**14 24 12.9**	**-0.7**
	comp=Z,4.9nm,0.5s,baz=328,slow=9.7,SNR=22						
STKA				LR	LR	14 36 44.8	
	comp=Z,64nm,18.3s,baz=215,slow=36						
STKA	**Stephens Creek**	**31.18**	**157**	P	**P**	**14 24 13.5**	**-0.2**
STKA	**Stephens Creek**	**31.18**	**157**	P	**P**	**14 24 13.6**	**-0.1**
	comp=Z,2.0nm,1.4s						
HTT	**Hallett**	**31.67**	**162**	P	**P**	**14 24 18.3**	**+0.3**
ARPS	**Mount Arapiles**	**35.66**	**161**	P	**P**	**14 24 52.4**	**-0.3**
	comp=Z,20nm,1.0s						
CMAR	**Chiang Mai Arr**	**35.82**	**308**	P	**P**	**14 24 54.6**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=135,slow=7.4,SNR=2.5						
CMAR				PcP	**PcP**	**14 27 21.1**	**0.0**
	comp=Z,1.2nm,0.8s,baz=158,slow=2.6,SNR=7.2						
CMAR				LR	LR	14 40 26.3	
	comp=Z,24nm,20.0s,baz=225,slow=37						
JMN	**Monobe**	**37.28**	**8**	P	**P**	**14 25 07.8**	**+1.3**
JMN				IAmb	IAmb	14 25 36.4	
	comp=Z,32nm,1.2s						
CAN	**Canberra**	**37.35**	**151**	P	**P**	**14 25 07.7**	**+0.6**
CAN	**Canberra**	**37.35**	**151**	P	**P**	**14 25 08.4**	**+1.3**
JWT	**Wachi**	**39.05**	**10**	P	**P**	**14 25 22.5**	**+1.3**
JWT				IAmb	IAmb	14 25 23.2	
	comp=Z,16nm,0.6s						
INU	**Inuyama**	**39.41**	**12**	P	**P**	**14 25 25.3**	**+1.0**
INU				IAmb	IAmb	14 25 26.1	
	comp=Z,15nm,0.5s						
KSRS	**Korea Array**	**40.58**	**0**	P	**P**	**14 25 33.7**	**-0.2**
	comp=Z,2.0nm,0.7s,baz=178,slow=9.3,SNR=11						
KSRS				LR	LR	14 41 36.4	
	comp=Z,16nm,20.1s,baz=172,slow=35						
MAJO	**Matsushiro**	**40.81**	**13**	P	**P**	**14 25 36.1**	**+0.1**

MAJO				IAmb	IAmb	14 25 37.7	
	comp=Z,6.6nm,0.8s						
MAT	**Matsushiro**	40.81	13	P	P	14 25 35.5	-0.5
MJAR	**Matsushiro Arr**	40.81	13	P	P	14 25 34.9	-1.0
	comp=Z,3.7nm,0.5s,baz=187,slow=9.2,SNR=15						
MJAR				LR	LR	14 41 09.4	
	comp=Z,17nm,21.8s,baz=115,slow=34						
MJAR	**Matsushiro Arr**	40.81	13	IAmb	IAmb	14 25 38.5	
	comp=Z,2.3nm,1.0s						
JSD	**Sado**	42.26	12	P	P	14 25 48.2	+0.4
JSD				IAmb	IAmb	14 25 48.7	
	comp=Z,9.2nm,0.8s						
JTM	**Tenmabayashi**	45.52	14	P	P	14 26 15.4	+1.5
USRK	**Ussuriysk Ar.**	47.45	4	P	P	14 26 28.3	-0.7
	comp=Z,1.8nm,0.4s,baz=184,slow=6.9,SNR=7.6						
USRK	**Ussuriysk Ar.**	47.45	4	P	P	14 26 29.5	+0.5
ODAN	**Odare**	49.30	310	*e*P	P	14 26 44.5	+0.6
	comp=Z,17nm,0.7s						
TAPN	**Taplejung**	49.32	311	*e*P	P	14 26 44.8	+0.8
	comp=Z,16nm,0.4s						
GTA	**Gaotai**	49.77	331	*e*P	P	14 26 47.6	+0.5
GTA				pP	pP	14 26 52.9	-7.7
GTA				sP	sP	14 26 56.4	-10
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
RAMN	**Ramite**	49.96	310	*e*P	P	14 26 49.8	+1.0
	comp=Z,35nm,0.4s						
JIRN	**Jiri**	50.63	310	*e*P	P	14 26 54.5	+0.4
	comp=Z,10nm,0.5s						
GUN	**Gumba**	51.00	310	*e*P	P	14 26 57.4	+0.6
	comp=Z,18nm,0.4s						
KKN	**Kakani**	51.39	310	*e*P	P	14 27 00.0	+0.4
	comp=Z,4.3nm,0.2s						
DMN	**Daman**	51.44	310	*e*P	P	14 27 00.4	+0.4
GKN	**Gorkha**	51.99	310	*e*P	P	14 27 04.2	+0.2
	comp=Z,13nm,0.5s						
KOLN	**Koldanda**	52.68	309	*e*P	P	14 27 09.9	+0.7
DANN	**Dangsing**	52.84	310	*e*P	P	14 27 10.9	+0.5
	comp=Z,33nm,0.7s						
PYUN	**Piuthan**	53.31	309	*e*P	P	14 27 14.4	+0.6
SONM	**Songino Array**	54.33	342	P	P	14 27 20.7	-0.1
	comp=Z,2.0nm,0.9s,baz=167,slow=8.8,SNR=9.3						
SONM				PcP	PcP	14 28 24.4	+0.1
	comp=Z,0.9nm,0.6s,baz=161,slow=4.0,SNR=4.2						
SONM	**Songino Array**	54.33	342	IAmb	IAmb	14 27 22.4	
	comp=Z,3.6nm,1.2s						
BKZ	**Black Stump Fm**	56.65	136	P	P	14 27 37.1	-0.5
KSH	**Kashi**	63.92	317	P	P	14 28 27.9	+0.5
KSH				pmax	pmax		
	comp=Z,6.0nm,0.5s						
MK31	**Makanchi Array**	64.03	327	P	P	14 28 27.7	-0.2
MK31				IAmb	IAmb	14 28 28.8	
	comp=Z,5.5nm,0.9s						
MKAR	**Makanchi Array**	64.03	327	P	P	14 28 28.0	+0.1
	comp=Z,5.4nm,0.7s,baz=127,slow=7.8,SNR=46						
MAKZ	**Makanchi**	64.21	327	P	P	14 28 29.0	0.0
MAKZ				IAmb	IAmb	14 28 29.8	
	comp=Z,6.9nm,1.0s						
ZALV	**Zalesovo Beam**	67.39	334	P	P	14 28 48.7	-0.5
	comp=Z,2.6nm,0.8s,baz=118,slow=5.4,SNR=10						
ZALV	**Zalesovo Beam**	67.39	334	P	P	14 28 48.5	-0.8
GAR	**Garm**	67.62	315	P	P	14 28 50.9	-0.3
GAR				IAmb	IAmb	14 28 51.7	
	comp=Z,11nm,1.1s						
KURK	**Kurchatov**	68.32	329	P	P	14 28 54.9	-0.3
KURK				IAmb	IAmb	14 28 55.9	
	comp=Z,13nm,0.8s						
BRVK	**Borovoye**	73.94	328	P	P	14 29 28.6	-0.5
BRVK				IAmb	IAmb	14 29 29.8	
	comp=Z,4.6nm,1.1s						
TIXI	**Tiksi**	74.84	0	P	P	14 29 34.0	0.0
TIXI				IAmb	IAmb	14 29 35.4	
	comp=Z,12nm,1.5s						
SOCY	**Socotra**	75.04	283	P	P	14 29 35.2	-1.2
VNDA	**Vanda**	76.32	173	P	P	14 29 41.1	-1.3
	comp=Z,0.6nm,0.8s,baz=308,slow=9.2,SNR=7.0						
VNDA				LR	LR	15 02 21.4	
	comp=Z,26nm,18.8s,baz=319,slow=35						
VNDA	**Vanda**	76.32	173	P	P	14 29 41.4	-1.1
VNDA				IAmb	IAmb	14 31 04.9	
	comp=Z,17nm,1.9s						
NRIK	**Noril'sk**	77.52	346	P	P	14 29 48.4	-0.8
	comp=Z,3.0nm,0.5s,baz=132,slow=8.3,SNR=4.1						
MAW	**Mawson**	77.60	201	P	P	14 29 48.2	-1.6
	comp=Z,0.9nm,0.5s,baz=97,slow=5.8,SNR=6.4						
MAW	**Mawson**	77.60	201	P	P	14 29 48.7	-1.1
ABKAR	**Akbulak array**	78.36	322	P	P	14 29 53.8	-0.5
ABKAR	**Akbulak array**	78.36	322	P	P	14 29 53.6	-0.7
ABKAR				IAmb	IAmb	14 29 59.5	
	comp=Z,3.0nm,0.8s						
SDPT	**Sand Point**	82.38	33	P	P	14 30 16.4	+0.6
QSPA	**South Pole Qui**	86.62	180	P	P	14 30 35.8	-1.5
QSPA				IAmb	IAmb	14 32 47.5	
	comp=Z,24nm,2.0s						
BELG	**Belogornoye**	86.70	323	P	P	14 30 37.8	+0.1
	comp=Z,16nm,0.9s,baz=186,slow=2.0,SNR=5.1						
OHAK	**Old Harbor**	86.73	32	P	P	14 30 38.7	+1.0
M19K	**Big River Lodg**	87.14	28	P	P	14 30 41.0	+1.3
RND	**Reindeer**	89.92	27	P	P	14 30 52.6	-0.3
RND				IAmb	IAmb	14 30 52.8	
	comp=Z,5.7nm,0.7s						
I23K	**Minto, Yukon-K**	89.94	25	P	P	14 30 53.5	+0.7
CCB	**Clear Creek Bu**	90.53	25	P	P	14 30 54.5	-1.0
CCB				IAmb	IAmb	14 30 55.4	
	comp=Z,3.4nm,0.8s						
ILAR	**Eielson Array**	90.94	25	P	P	14 30 56.4	-1.1
	comp=Z,1.5nm,0.6s,baz=247,slow=4.6,SNR=25						
BRTR	**Keskin Array B**	95.40	309	P	P	14 31 17.6	-1.2
	comp=Z,2.2nm,0.6s,baz=190,slow=9.8,SNR=5.4						
ARCES	**ARCESS Array B**	97.44	340	P	P	14 31 25.5	-1.7
	comp=Z,5.2nm,0.9s,baz=74,slow=6.7,SNR=8.3						
TXAR	**Lajitas Array**	124.74	56	PKP	PKPdf	14 36 53.5	-0.8
	comp=Z,0.4nm,0.7s,baz=225,slow=2.3,SNR=4.8						
TORD	**Torodi Ar. Bea**	125.99	284	PKP	PKPdf	14 36 56.1	-0.8
	comp=Z,1.2nm,0.8s,baz=44,slow=2.1,SNR=7.0						

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*EAF **04** 14:33:07.3±1.3, 25°.86S×29°.71E, h10^{km}, MD3.5*

BUL 04 14:33:08.4±1.4**, 25°.82S×29°.62E, h10**^{km}**, MD3.7, 2D, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOPA	**Mopani**	2.81	36	*e*P	Pn	14 33 52.4	-0.9
MOPA				*e*S	Sn	14 34 23.2	-4.1
MOPA	**Mopani**	2.81	36	*e*P	Pn	14 33 52.4	-0.9
MOPA				*e*S	Sn	14 34 23.2	-4.1
MSNA	**Messina**	3.48	6	*e*P	Pn	14 34 01.4	-1.3
MSNA				*e*S	Sn	14 34 41.5	-2.4
MSNA	**Messina**	3.48	6	*e*P	Pn	14 34 01.4	-1.3
MSNA				*e*S	Sn	14 34 41.5	-2.4
LBTB	**Lobatse**	3.72	282	*e*P	Pn	14 34 05.2	-0.8
LBTB				*e*S	Sn	14 34 47.7	-2.3
LBTB	**Lobatse**	3.72	282	*e*P	Pn	14 34 05.2	-0.8
LBTB				*e*S	Sn	14 34 47.7	-2.3
BOSA	**Boshof**	4.78	233	*e*P	Pn	14 34 19.9	-0.7
BOSA				*e*S	Sn	14 35 13.0	-3.1
BOSA	**Boshof**	4.78	233	*e*P	Pn	14 34 19.9	-0.7
BOSA				*e*S	Sn	14 35 13.0	-3.1
MATP	**Matopo**	5.46	349	⇓*e*P	Pn	14 34 27.8	-2.3
MATP				*e*S	Sn	14 35 29.3	-3.8
MATP	**Matopo**	5.46	349	⇓*e*P	Pn	14 34 27.8	-2.3
MATP				*e*S	Sn	14 35 29.3	-3.8
BLWY	**Bulawayo**	5.73	350	*e*P	Pn	14 34 32.9	-0.8
BLWY				*e*S	Sn	14 35 35.5	-4.1
BLWY	**Bulawayo**	5.73	350	*e*P	Pn	14 34 32.9	-0.8
BLWY				*e*S	Sn	14 35 35.5	-4.1
KRI	**Karoi**	8.94	360	*e*P	Pn	14 35 07.6	-10
KRI				*e*S	Sn	14 36 36.3	-22
KRI	**Karoi**	8.94	360	*e*P	Pn	14 35 07.6	-10
KRI				*e*S	Sn	14 36 36.3	-22

IDC 04 14:40:23.5±2.2**, 1°.75N×126°.25E, h0**^{km}**, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.3**/30**, mbtmp3.4**/3**, MS2.8**/1**, Ms1 2.8**/1**, ms1mx2.1**/22**, Error ellipse: s-maj=182.4km s-min=28.3km az=65.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	22.97	160	P	P	14 45 29.8	0.0
	0.7nm,0.3s,baz=339,slow=11,SNR=15						
ASAR	**Alice Springs**	26.34	164	P	P	14 46 01.2	-0.1
	0.3nm,0.7s,baz=348,slow=12,SNR=3.0						
USRK	**Ussuriysk Ar.**	42.58	6	LR	LR	15 04 30.3	
	comp=Z,13nm,21.4s,baz=179,slow=34						
MKAR	**Makanchi Array**	58.91	326	P	P	14 50 24.5	+0.1
	0.3nm,0.6s,baz=134,slow=6.9,SNR=2.7						

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*GII **04** 14:41:05.3±0.3, 33°.58N×35°.56E, h4^{km}±1^{km}, MD1.9/3, Mm2.2/6*

*GRAL **04** 14:41:06.8±0.3, 33°.59N×35°.56E, h6^{km}±2^{km}, MD2.8*

ISC 04 14:41:05.5±0.9**, 33°.60N**±0°.03×**35°.60E**±0°.05**, h15**^{km}±8^{km}**, n13, σ0^s.30**/24**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DQRL	**Deir Qamar**	0.11	349	*e*P	Pg	14 41 09.2	+0.2
DQRL				*e*S	Sg	14 41 11.0	-0.4
RCY	**Rachaya**	0.23	117	*e*P	Pb	14 41 11.5	+0.1
RCY				*e*S	Sb	14 41 14.9	-0.4
BHL	**Bhannes**	0.31	9	*e*P	Pb	14 41 12.7	-0.2
NATI	**Neve Ativ**	0.36	160	Pg	Pg	14 41 12.6	-0.2
NATI				Sg	Sb	14 41 18.8	-0.1
GEM	**Giv'at Ha'Em**	0.39	172	Pg	Pg	14 41 13.6	+0.2
GEM				Sg	Sb	14 41 20.1	+0.2
MMA0B	**Mount Meron ar**	0.60	195	Pg	Pg	14 41 17.1	-0.3
MMA0B				Sg	Sg	14 41 25.9	+0.5
HNTI	**Hanita**	0.62	215	Pg	Pg	14 41 17.5	-0.2
HNTI				Sg	Sg	14 41 26.4	+0.4
HWQ	**Hawqa**	0.74	23	*e*P	Pb	14 41 20.5	+0.3
BLGI	**Bet Lehem HaGe**	0.93	202	Pg	Pb	14 41 23.1	-0.2
BLGI				Sg	Sg	14 41 35.9	+0.3
OFRI	**`Ofer**	1.10	208	Pg	Pb	14 41 26.0	-0.3
OFRI				Sg	Sb	14 41 40.9	+0.5
MMLI	**Mount Malkishu**	1.17	187	Pg	Pb	14 41 27.5	+0.1
MMLI				Sg	Sn	14 41 43.2	+0.2
HMDT	**Nahal Hemdat**	1.34	182	Pn	Pb	14 41 30.2	-0.2
HMDT				Sn	Sg	14 41 49.1	+0.3
SLTI	**Sal'it**	1.43	199	Pn	Pn	14 41 30.7	-0.2
SLTI				Sn	Sg	14 41 51.4	-0.3

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*IDC **04** 14:44:28.6±1.2, 8°.41S×125°.48E, h0^{km}, mb3.7/3, mb1 3.7/7, mb1mx3.6/29, mbtmp3.6/7, ML3.5/4, Error ellipse: s-maj=32.8km s-min=17.1km az=75.0*

ISC 04 14:44:34.0±1.1**, 8°.41S**±0°.08×**125°.46E**±0°.10**, h35**^{km}**, n12, σ1^s.48**/14**, mb4.0**/3**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	1.78	221	P	Pn	14 45 02.9	+0.5
BATI	**Baumata**	2.51	225	Pn	Pn	14 45 11.7	-0.7
	2.5nm,0.3s,baz=61,slow=5.2,SNR=3.4						
BATI				Sn	Sn	14 45 43.9	+2.1
	8.0nm,0.3s,baz=162,slow=19,SNR=3.5						
DRS	**Darwin Rock St**	6.68	127	P	Pn	14 46 17.0	+7.4
	8.2nm,0.9s						
MTN	**Manton Dam**	7.11	129	P	Pn	14 46 20.8	+5.3
	9.8nm,1.1s						
KNRA	**Kununurra**	7.91	156	P	Pn	14 46 28.8	+2.2
	10nm,0.9s						
FITZ	**Fitzroy Crossi**	9.63	179	Pn	Pn	14 46 48.9	-1.2
	0.4nm,0.3s,baz=5.2,slow=11,SNR=15						
FITZ				Sn	Sn	14 48 35.0	-2.1
	0.5nm,0.3s,baz=121,slow=23,SNR=6.5						
FITZ	**Fitzroy Crossi**	9.63	179	P	Pn	14 46 49.5	-0.6
	4.8nm,3.0s						
WRA	**Warramunga Arr**	14.33	144	Pn	Pn	14 47 53.2	-1.3
	0.4nm,0.3s,baz=319,slow=13,SNR=20						
WRA				Sn	Sn	14 50 34.4	+2.2
	0.1nm,0.3s,baz=319,slow=24,SNR=4.8						
ASAR	**Alice Springs**	17.19	153	P	Pn	14 48 31.5	0.0
	0.1nm,0.3s,baz=322,slow=11,SNR=10						
ASAR				S	Sn	14 51 41.3	-0.5
	0.1nm,0.3s,baz=323,slow=24,SNR=3.4						
SONM	**Songino Array**	58.49	345	P	P	14 54 26.0	-0.8
	0.2nm,0.3s,baz=158,slow=9.9,SNR=2.5						
MKAR	**Makanchi Array**	67.03	329	P	P	14 55 23.9	+0.3
	1.0nm,0.8s,baz=134,slow=7.4,SNR=6.7						
ZALV	**Zalesovo Beam**	70.94	336	P	P	14 55 47.4	-0.2
	0.9nm,0.7s,baz=120,slow=8.5,SNR=3.7						

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*ATH **04** 14:55:37.5, 40°.12N×19°.93E, h9^{km}±3^{km}, ML2.6/3, Error ellipse: s-maj=3.5km s-min=1.1km az=157.0*

*BEO **04** 14:55:38.2±1.7, 39°.94N×20°.09E, h11^{km}±8^{km}, ML2.7/5*

*THE **04** 14:55:39.0, 40°.07N×20°.03E, h4^{km}±2^{km}, ML2.5/11, Error ellipse: s-maj=2.2km s-min=0.9km az=159.0*

ISC 04 14:55:38.2±1.0**, 40°.07N**±0°.02×**19°.98E**±0°.03**, h10**^{km}±8^{km}**, n46, σ1^s.27**/62**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRN	**Sarande**	0.19	176	P	Pg	14 55 42.0	-0.2
SRN				S	Sg	14 55 46.5	+1.6
	3µm,0.3s						
KASA	**Kassiopi**	0.33	187	P	Pg	14 55 44.5	-0.2
KASA				S	Sg	14 55 50.1	+1.2
KASA				AML	AML	14 55 51.7	
	comp=E,5041µm,0.2s						
KASA				AML	AML	14 55 51.9	
	comp=N,3656µm,0.2s						
KEK	**Kerkira**	0.38	202	P	Pg	14 55 45.2	-0.6
KEK				S	Sg	14 55 51.9	+1.1
	comp=N,1µm,0.2s						
KEK	**Kerkira**	0.38	202	P	Pg	14 55 45.4	-0.4
KEK				S	Sg	14 55 50.7	-0.1
KEK				AML	AML	14 55 53.8	
	comp=N,1602µm,0.3s						
KEK				AML	AML	14 55 54.5	
	comp=E,2476µm,0.2s						
LSK	**Leskovik**	0.48	80	P	Pg	14 55 46.3	-1.3
LSK				S	Sb	14 55 54.8	-1.2
	comp=E,738nm,0.5s						
VLO	**Vlora**	0.55	317	P	Pb	14 55 49.9	0.0
VLO				S	Sb	14 55 59.1	+1.3
	comp=E,1µm,0.4s						
IGT	**Igoumenitsa**	0.60	153	P	Pg	14 55 50.0	+0.2
IGT				S	Sb	14 55 59.4	0.0
	comp=E,475nm,0.4s						
IGT	**Igoumenitsa**	0.60	153	P	Pg	14 55 49.8	0.0
IGT				S	Sb	14 55 58.8	-0.6
IGT				AML	AML	14 56 02.0	
	comp=E,817µm,0.5s						
IGT				AML	AML	14 56 03.5	
	comp=N,689µm,0.3s						
JAN	**Janina**	0.78	121	P	Pb	14 55 54.1	+0.1
JAN				S	Sb	14 56 03.4	-1.3
	comp=N,800nm,0.3s						
JAN	**Janina**	0.78	121	P	Pb	14 55 53.8	-0.2
JAN				S	Sb	14 56 05.0	+0.3
KBN	**Korca**	0.83	48	P	Pg	14 55 52.3	-1.8
NEST	**Nestorio**	0.89	67	P	Pg	14 55 54.0	-1.3
NEST				S	Sb	14 56 07.5	-0.2
	comp=N,188nm,0.5s						
NEST	**Nestorio**	0.89	67	P	Pg	14 55 54.4	-0.9
PENT	**Pentalofos**	0.89	82	P	Pg	14 55 55.0	-0.4
PENT				S	Sb	14 56 07.8	-0.1
	comp=N,242nm,0.5s						
PENT	**Pentalofos**	0.89	82	P	Pb	14 55 55.2	-0.7
KPRO	**Kipourio**	1.06	96	P	Pb	14 55 58.4	-0.4
KPRO				S	Sn	14 56 13.3	-1.0
	comp=N,340nm,0.5s						
KPRO	**Kipourio**	1.06	96	P	Pb	14 55 58.2	-0.7
SCTE	**Santa Cesarea**	1.16	271	P	Pb	14 55 58.8	-1.6
OHR	**Ohrid**	1.21	31	*e*Pg	Pb	14 56 00.7	-0.6
OHR				*e*Sg	Sn	14 56 18.9	+1.0
OHR	**Ohrid**	1.21	31	*i* Pn	Pb	14 56 00.2	-1.1
FNA	**Florina**	1.28	56	P	Pn	14 56 01.1	-1.2
FNA				S	Sn	14 56 20.4	+0.9
	comp=N,638nm,0.6s						
FNA	**Florina**	1.28	56	P	Pn	14 56 01.0	-1.3
TIR	**Tirane**	1.28	356	*e*Pg	Pg	14 56 04.1	+1.3
TIR				*e*Sg	Sn	14 56 24.0	+4.5
TIR	**Tirane**	1.28	356	P	Pg	14 56 03.3	+0.5
TIR				S	Sn	14 56 21.0	+1.5
	comp=N,145nm,0.5s						
TSLK	**Tsoukalades, L**	1.35	157	P	Pg	14 56 03.7	-0.4
TSLK	**Tsoukalades, L**	1.35	157	P	Pn	14 56 03.2	+0.1
LKD2	**Lefkada island**	1.38	158	P	Pg	14 56 04.6	-0.1
LKD2	**Lefkada island**	1.38	158	P	Pn	14 56 03.7	+0.1
NYDR	**Nydri-Lefkada**	1.46	158	P	Pb	14 56 05.2	-0.3
NYDR	**Nydri-Lefkada**	1.46	158	P	Pb	14 56 05.3	-0.2
EVGI	**Lefkada island**	1.54	160	P	Pb	14 56 06.9	+0.1
PHP	**Peshkopia**	1.65	12	P	Pb	14 56 08.4	-0.4
VAY	**Valandovo**	2.33	57	*e*Pn	Pn	14 56 17.6	+1.0
DBRK	**Dubrovnik**	2.94	333	*e*Pn	Pn	14 56 22.6	-2.5
BOSS	**Bosilegrad**	3.07	37	*e*Pn	Pn	14 56 28.0	+1.2
BARS	**Barje**	3.07	26	*e*Pn	Pn	14 56 27.0	+0.2
SJES	**Sjenica**	3.19	360	*e*Pn	Pn	14 56 29.6	+1.0
SELS	**Selova**	3.26	15	*e*Pn	Pn	14 56 29.9	+0.4
STON	**Ston**	3.28	329	*e*Pn	Pn	14 56 26.8	-2.9
ZAPS	**Zavoj**	3.77	31	*e*Pn	Pn	14 56 38.0	+1.6
BOVS	**Bovan**	3.79	19	*e*Pn	Pn	14 56 37.0	+0.3
DIVS	**Divibare**	4.03	0	*e*Pn	Pn	14 56 41.4	+1.4
HVAR	**Hvar**	4.08	321	*e*Pn	Pn	14 56 29.4	-11
KIJV	**Kijevo**	4.75	327	*e*Pn	Pn	14 56 48.0	-1.9
ZIRJ	**Zirje**	4.83	319	*e*Pn	Pn	14 56 48.5	-2.4
DUGI	**Dugi Otok**	5.37	319	*e*Pn	Pn	14 56 55.7	-2.7

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*IDC **04** 14:56:35.9±2.4, 38°.95N×142°.93E, h0^{km}, mb3.5/3, mb1 3.5/4, mb1mx3.3/38, mbtmp3.4/4, ML2.3/1, Error ellipse: s-maj=48.7km s-min=30.8km az=77.0*

*JMA **04** 14:56:45.9±0.1, 38°.86N×142°.05E, h46^{km}±1^{km}, M3.5*

JMA Felt I J1.

ISC 04 14:56:45.4±1.8**, 38°.87N**±0°.05×**142°.1E**±0°.1**, h43**^{km}±13^{km}**, n15, σ1^s.17**/24**, mb3.4**/3**, 8D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	0.40	302	⇓P	Pn	14 56 55.5	+0.4
OFUJ				S	Sn	14 57 02.1	+0.2
JKMT	**Kesennumamotoy**	0.50	264	⇓P	Pn	14 56 56.3	+0.1
JKMT				S	Sn	14 57 03.5	-0.4
JMK	**Ichinoseki**	0.70	277	⇓P	Pn	14 56 59.0	+0.1
JMK				S	Sn	14 57 08.1	-0.5
JIO	**Ouri**	0.72	236	⇓P	Pn	14 56 59.0	-0.2
JIO				S	Sn	14 57 07.9	-1.2
JOM	**Ohasama**	0.88	314	⇓P	Pn	14 57 01.7	+0.4
JOM				S	Sn	14 57 13.1	+0.2
JTH	**Tanohata**	1.09	350	P	Pn	14 57 04.7	+0.5
JTH				*e*S	Sn	14 57 18.8	+0.7
JOU	**Okura**	1.24	247	⇓P	Pn	14 57 06.2	0.0
JOU				S	Sn	14 57 21.6	-0.2
JRG	**Rokugo**	1.26	295	⇓P	Pn	14 57 06.8	+0.2
JYK	**Kaneyama**	1.37	273	⇓P	Pn	14 57 08.2	+0.2
JMM	**Marumori**	1.44	226	P	Pn	14 57 08.6	-0.4
JMM				*e*S	Sn	14 57 25.7	-0.9
MJAR	**Matsushiro Arr**	3.87	234	Pn	Pn	14 57 44.6	+2.3
	0.2nm,0.3s,baz=32,slow=13,SNR=10.0						
MJAR				Sn	Sn	14 58 36.6	+10
	0.1nm,0.3s,baz=63,slow=39,SNR=1.7						
MAT	**Matsushiro**	3.87	234	P	Pn	14 57 45.1	+2.7
MAT				*e*S	Sn	14 58 29.5	+3.0
ZALV	**Zalesovo Beam**	41.11	311	P	P	15 04 24.1	-0.8
	0.4nm,0.3s,baz=90,slow=8.6,SNR=2.2						
MKAR	**Makanchi Array**	43.64	301	P	P	15 04 45.3	-0.3
	0.3nm,0.4s,baz=84,slow=8.2,SNR=6.0						
WRA	**Warramunga Arr**	58.95	189	P	P	15 06 39.6	-0.8
	0.2nm,0.6s,baz=6.6,slow=7.0,SNR=1.9						

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*NEIC **04** 15:04:25.4±1.1, 47°.00N±0°.03×66°.60W±0°.02, h7^{km}±6^{km}, Error ellipse: s-maj=4.9km s-min=1.1km az=198.0*

*OTT **04** 15:04:26.3±0.0, 47°.02N×66°.63W, h5^{km}, MN3.7/26, 59km east from Plaster Rock, Nb Northern Appalachians Seismic Zone.*

ISC 04 15:04:25.4±1.2**, 47°.01N**±0°.02×**66°.62W**±0°.02**, h8**^{km}±9^{km}**, n108, σ0^s.77**/134**, 1D, New Brunswick**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATG	**Bathurst New B**	0.47	55		Pg	15 04 34.4	-0.1
BATG				Sg	Sg	15 04 40.5	-0.2
BATG	**Bathurst New B**	0.47	55	⇓PG	Pg	15 04 34.5	-0.1
BATG				SG	Sg	15 04 40.5	-0.2
BATG				Trac		15 04 41.2	
	comp=Z,1µm,0.1s						
PQI	**Presque Isle**	1.02	251		Pg	15 04 44.6	-0.3
PQI				Sg	Sg	15 04 58.5	+0.3
PQI				IAmb_Lg		15 04 59.8	
	comp=Z,336nm,0.8s						
HANN	**Hanwell**	1.13	185	Pg	Pg	15 04 46.7	-0.4
HANN				Sg	Sg	15 05 02.2	+0.3
HANN	**Hanwell**	1.13	185	PG	Pg	15 04 46.7	-0.4
HANN				SG	Sg	15 05 02.2	+0.3
HANN				Trac		15 05 04.8	
	comp=Z,204nm,0.1s						
HKNB	**Havelock Quarr**	1.34	140		Pn	15 04 50.3	-0.1
HKNB				Sg	Sb	15 05 08.5	+0.4
HKNB	**Havelock Quarr**	1.34	140	PG	Pn	15 04 50.3	-0.1
HKNB				SG	Sb	15 05 08.5	+0.4
HKNB				Trac		15 05 09.8	
	comp=Z,296nm,0.1s						
SRNB	**Snider Mountai**	1.36	150		Pn	15 04 50.5	-0.2
SRNB				Sg	Sb	15 05 08.9	+0.2
SRNB	**Snider Mountai**	1.36	150	PG	Pn	15 04 50.5	-0.2
SRNB				SG	Sb	15 05 08.9	+0.2
SRNB				Trac		15 05 09.5	
	comp=Z,266nm,0.1s						
SVNB	**Stilesville Qu**	1.47	124		Pn	15 04 53.1	+0.9
SVNB					Sn	15 05 12.4	+0.8
SVNB	**Stilesville Qu**	1.47	124	PG	Pn	15 04 53.1	+0.9
SVNB				SG	Sn	15 05 12.4	+0.8
SVNB				Trac		15 05 13.6	
	comp=Z,535nm,0.1s						
ELNB	**Elgin, New Bru**	1.54	138	Pn	Pn	15 04 53.9	+0.7
ELNB					Sb	15 05 14.5	+0.8
ELNB	**Elgin, New Bru**	1.54	138	PN	Pn	15 04 53.9	+0.7
ELNB				SG	Sb	15 05 14.5	+0.8
ELNB				Trac		15 05 15.5	
	comp=Z,48nm,0.2s						
WCNB	**Wards Creek**	1.57	150	Pn	Pn	15 04 53.4	-0.1
WCNB					Sb	15 05 15.4	+0.9
WCNB	**Wards Creek**	1.57	150	PN	Pn	15 04 53.4	-0.1
WCNB				SG	Sb	15 05 15.4	+0.9
WCNB				Trac		15 05 18.5	
	comp=Z,142nm,0.1s						
F64A	**Sherman**	1.66	227	Pn	Pn	15 04 55.8	+1.0
D62A	**Allapoint, All**	1.66	273	Pn	Pn	15 04 54.7	-0.2
D62A				IAmb_Lg		15 05 18.2	
	comp=Z,171nm,1.1s						
LMN	**Caledonia Moun**	1.71	132	Pn	Pn	15 04 55.1	-0.4
LMN	**Caledonia Moun**	1.71	132	IAmb_Lg		15 05 23.4	
	comp=Z,341nm,0.9s						
LMN	**Caledonia Moun**	1.71	132	PN	Pn	15 04 55.1	-0.4
LMN				SN	Sn	15 05 18.6	+1.2
LMN				Trac		15 05 21.1	
	comp=Z,254nm,0.3s						
GGN	**Saint George**	1.90	185		Pn	15 04 57.2	-0.8
GGN	**Saint George**	1.90	185	IAmb_Lg		15 05 28.8	
	comp=Z,125nm,1.0s						
GGN	**Saint George**	1.90	185	PN	Pn	15 04 57.7	-0.3
GGN				SN	Sb	15 05 23.9	-0.1
GGN				Trac		15 05 26.6	
	comp=Z,162nm,0.1s						
G65A	**Princeton**	1.92	200		Pn	15 04 57.8	-0.7
GSQ	**Grosses Roches**	1.93	350	Pn	Pn	15 04 59.2	+0.6
GSQ				Sn	Sn	15 05 23.9	+0.9
GSQ	**Grosses Roches**	1.93	350	PN	Pn	15 04 59.2	+0.6
GSQ				SN	Sn	15 05 23.9	+0.9
GSQ				Trac		15 05 34.5	
	comp=Z,58nm,0.2s						
E62A	**Clayton Lake**	2.03	260		Pn	15 04 59.6	-0.3
F63A	**Nahmakanta, Br**	2.16	234		Pn	15 05 00.7	-1.0
F63A				IAmb_Lg		15 05 39.3	
	comp=Z,137nm,0.7s						
A21	**Saint Andre**	2.20	290	Pn	Pn	15 05 02.7	+0.5
A21				Sn	Sn	15 05 30.2	+0.7
A21	**Saint Andre**	2.20	290	PN	Pn	15 05 02.7	+0.5
A21				SN	Sn	15 05 30.2	+0.7
A21				Trac		15 05 44.1	
	comp=Z,250nm,0.3s						
A16	**Riviere Ouelle**	2.35	283	Pn	Pn	15 05 04.9	+0.6
A16				Sn	Sn	15 05 34.3	+1.0
A16	**Riviere Ouelle**	2.35	283	PN	Pn	15 05 04.9	+0.6
A16				SN	Sn	15 05 34.3	+1.0
A16				Trac		15 05 44.8	
	comp=Z,204nm,0.3s						
A64	**Saint Simeon**	2.37	291	Pn	Pn	15 05 04.9	+0.4
A64				Sn	Sn	15 05 33.8	0.0
A64	**Saint Simeon**	2.37	291	PN	Pn	15 05 04.9	+0.4
A64				SN	Sn	15 05 33.8	0.0
A64				Trac		15 05 48.5	
	comp=Z,50nm,0.2s						
EMMW	**East Machias**	2.38	195		Pn	15 05 05.0	+0.4

A11	Saint Roch-des	2.45	277	Pn	Pn	15 05 06.8	+1.1
A11				Sn	Sn	15 05 36.5	+0.7
A11				Lg	Lg	15 05 43.1	
A11	Saint Roch-des	2.45	277	PN	Pn	15 05 06.8	+1.1
A11				SN	Sn	15 05 36.5	+0.7
A11				LG	Lg	15 05 43.1	
A11				Trac		15 05 51.5	
	comp=Z,105nm,0.3s						
A61	Sainte Mathild	2.46	287	Pn	Pn	15 05 06.3	+0.5
A61				Sn	Sn	15 05 37.2	+1.2
A61				Lg	Lg	15 05 41.9	
A61	Sainte Mathild	2.46	287	PN	Pn	15 05 06.3	+0.5
A61				SN	Sn	15 05 37.2	+1.2
A61				LG	Lg	15 05 41.9	
A61				Trac		15 05 48.4	
	comp=Z,112nm,0.2s						
CNQ	Baie Comeau	2.49	338	Pn	Pn	15 05 06.4	+0.2
CNQ				Sn	Sn	15 05 36.7	-0.1
CNQ	Baie Comeau	2.49	338	PN	Pn	15 05 06.4	+0.2
CNQ				SN	Sn	15 05 36.7	-0.1
CNQ				Trac		15 05 43.8	
	comp=Z,79nm,0.2s						
PKME	Peaks-Kenny Pk	2.55	228		Pn	15 05 06.7	-0.3
PKME	Peaks-Kenny Pk	2.55	228	PN	Pn	15 05 07.7	+0.7
PKME				SN	Sn	15 05 37.2	-1.0
PKME				LG	Lg	15 05 45.6	
PKME				Trac		15 05 49.0	
	comp=Z,115nm,0.1s						
ICQ	Pointe Anglais	2.55	350	Pn	Pn	15 05 07.6	+0.6
ICQ				Sn	Sn	15 05 38.8	+0.5
ICQ				Lg	Lg	15 05 45.2	
ICQ	Pointe Anglais	2.55	350	PN	Pn	15 05 07.6	+0.6
ICQ				SN	Sn	15 05 38.8	+0.5
ICQ				LG	Lg	15 05 45.2	
ICQ				Trac		15 05 53.2	
	comp=Z,205nm,0.3s						
F62A	Pittston Farm,	2.57	246		Pn	15 05 07.5	+0.2
LMQ	La Malbaie	2.58	283		Pn	15 05 06.7	-0.7
LMQ	La Malbaie	2.58	283	PN	Pn	15 05 08.0	+0.5
LMQ				SN	Sn	15 05 39.3	+0.3
LMQ				LG	Lg	15 05 45.5	
LMQ				Trac		15 05 47.0	
	comp=Z,181nm,0.2s						
A54	Misere	2.62	281	Pn	Pn	15 05 08.4	+0.4
A54				Sn	Sn	15 05 41.0	+0.9
A54				Lg	Lg	15 05 46.7	
A54	Misere	2.62	281	PN	Pn	15 05 08.4	+0.4
A54				SN	Sn	15 05 41.0	+0.9
A54				LG	Lg	15 05 46.7	
A54				Trac		15 05 47.2	
	comp=Z,34nm,0.1s						
BCLQ	Boischatel	3.12	270	Pn	Pn	15 05 15.2	+0.3
BCLQ	Boischatel	3.12	270	PN	Pn	15 05 15.2	+0.3
BCLQ				Trac		15 06 13.6	
	comp=Z,109nm,0.3s						
QCQ	Quebec	3.20	268	Sn	Sn	15 05 55.2	+1.0
QCQ	Quebec	3.20	268	SN	Sn	15 05 55.2	+1.0
SMQ	Clarke City	3.22	359	Pn	Pn	15 05 16.4	+0.1
SMQ				Sn	Sn	15 05 54.5	-0.2
SMQ	Clarke City	3.22	359	PN	Pn	15 05 16.4	+0.1
SMQ				SN	Sn	15 05 54.5	-0.2
SMQ				Trac		15 06 13.3	
	comp=Z,92nm,0.3s						
WVL	Waterville	3.24	222		Pn	15 05 16.4	0.0
G62A	West of Eustis	3.26	238	Pn	Pn	15 05 16.8	0.0
G62A				IAmb_Lg		15 06 18.4	
	comp=Z,101nm,0.7s						
PCAQ	Pointe Carleto	3.67	41	Pn	Pn	15 05 22.4	0.0
PCAQ				Sn	Sn	15 06 04.4	-1.3
PCAQ				Lg	Lg	15 06 17.8	
PCAQ	Pointe Carleto	3.67	41	PN	Pn	15 05 22.4	0.0
PCAQ				SN	Sn	15 06 04.4	-1.3
PCAQ				LG	Lg	15 06 17.8	
PCAQ				Trac		15 06 22.7	
	comp=Z,220nm,0.6s						
GBN	Guysborough	3.89	112		Pn	15 05 24.8	-0.6
GBN				IAmb_Lg		15 06 28.7	
	comp=Z,93nm,0.8s						
GBN	Guysborough	3.89	112	PN	Pn	15 05 26.1	+0.6
GBN				SN	Sn	15 06 10.6	-0.7
GBN				LG	Lg	15 06 27.1	
GBN				Trac		15 06 32.3	
	comp=Z,135nm,0.5s						
I63A	Otisfield	4.06	225		Pn	15 05 27.4	-0.5
NATG	Natashquan Que	4.14	36	Pn	Pn	15 05 28.7	-0.2
NATG				Sn	Sn	15 06 15.6	-1.8
NATG	Natashquan Que	4.14	36	PN	Pn	15 05 28.7	-0.2
NATG				SN	Sn	15 06 15.6	-1.8
NATG				Trac		15 06 16.6	
	comp=Z,46nm,0.3s						
DMCQ	Dolbeau-Mistas	4.15	300	Pn	Pn	15 05 29.4	+0.4
DMCQ				Sn	Sn	15 06 16.1	-1.5
DMCQ				Lg	Lg	15 06 35.4	
DMCQ	Dolbeau-Mistas	4.15	300	PN	Pn	15 05 29.4	+0.4
DMCQ				SN	Sn	15 06 16.1	-1.5
DMCQ				LG	Lg	15 06 35.4	
DMCQ				Trac		15 06 39.6	
	comp=Z,78nm,0.3s						
DPQ	Saint Jean	4.24	268	Pn	Pn	15 05 30.2	0.0
DPQ				Sn	Sn	15 06 18.3	-1.5
DPQ	Saint Jean	4.24	268	PN	Pn	15 05 30.2	0.0
DPQ				SN	Sn	15 06 18.3	-1.5
DPQ				Trac		15 06 48.6	
	comp=Z,74nm,0.4s						
MOQ	Mont Orford	4.27	249		Pn	15 05 30.7	0.0
MOQ	Mont Orford	4.27	249	PN	Pn	15 05 30.9	+0.2
MOQ				SN	Sn	15 06 18.6	-2.0
MOQ				Trac		15 06 52.6	
	comp=Z,62nm,0.3s						
I62A	Tamworth	4.56	228		Pn	15 05 35.7	+1.0
LBNH	Lisbon	4.64	235		Pn	15 05 35.5	-0.2
HNH	Hanover	5.18	232	IAmb_Lg		15 07 21.8	
	comp=Z,76nm,0.7s						
FRNY	Flat Rock	5.33	248		Pn	15 05 45.2	+0.1
FRNY				IAmb_Lg		15 07 28.9	
	comp=Z,54nm,0.8s						
TRQ	Mont Tremblant	5.52	265	Pn	Pn	15 05 47.3	-0.7
TRQ	Mont Tremblant	5.52	265	PN	Pn	15 05 48.0	+0.1
TRQ				SN	Sn	15 06 49.0	-2.6
TRQ				Trac		15 07 31.7	
	comp=Z,30nm,0.3s						
J61A	Chester	5.57	231		Pn	15 05 47.5	-1.0
J61A				IAmb_Lg		15 07 23.0	
	comp=Z,80nm,0.8s						
WES	Weston	5.71	218	Pn	Pn	15 05 50.1	-0.3
HRV	Adam Dziewonsk	5.71	220	IAmb_Lg		15 07 41.2	
	comp=Z,49nm,0.7s						
K62A	Royalston	5.90	225	IAmb_Lg		15 07 43.8	
	comp=Z,76nm,0.8s						
L64A	Middleborough	5.90	212	IAmb_Lg		15 07 47.0	
	comp=Z,48nm,0.8s						
LONY	Lake Ozonia	6.06	250	Pn	Pn	15 05 54.4	-0.8
NCB	Newcomb	6.15	243	Pn	Pn	15 05 55.4	-1.1
NCB				IAmb_Lg		15 07 51.0	
	comp=Z,54nm,0.9s						
ACCN	Adirondack Com	6.16	236	IAmb_Lg		15 07 42.4	
	comp=Z,47nm,0.9s						
BRYW	Bryant College	6.19	216	IAmb_Lg		15 07 42.3	
	comp=Z,48nm,0.8s						
QUA2	Belchertown	6.25	223	IAmb_Lg		15 07 51.3	
	comp=Z,61nm,0.8s						
DRLN	Deer Lake	6.50	66	Pn	Pn	15 06 00.5	-0.8
DRLN				IAmb_Lg		15 07 58.7	
	comp=Z,57nm,1.1s						
UCCT	U. Connecticut	6.58	220	IAmb_Lg		15 08 08.9	
	comp=Z,51nm,0.7s						
TRY	Troy	6.58	232	IAmb_Lg		15 08 01.7	
	comp=Z,64nm,0.7s						
J59A	Piesco	6.60	240	Pn	Pn	15 06 03.5	+0.8
M63A	Gales Ferry	6.83	217	IAmb_Lg		15 08 10.9	
	comp=Z,50nm,0.9s						
J58A	Remsen	7.12	242	Pn	Pn	15 06 11.0	+1.1
KSCT	Kent School, K	7.21	225	IAmb_Lg		15 08 32.7	
	comp=Z,42nm,0.8s						
PLVO	Plevna	7.54	259	Pn	Pn	15 06 15.8	+0.2
L59A	Walton	7.70	234	IAmb_Lg		15 08 30.7	
	comp=Z,41nm,0.8s						
SCHQ	Schefferville	7.83	359	Pn	Pn	15 06 17.8	-1.8
PECO	Prince Edward	7.91	251	Pn	Pn	15 06 21.1	+0.4
PAL	Palisades	7.97	224	IAmb_Lg		15 08 49.0	
	comp=Z,45nm,0.8s						
TRNY	Table Rock, Ra	8.02	226	IAmb_Lg		15 08 48.2	
	comp=Z,31nm,0.8s						
CPNY	Central Park	8.16	223	IAmb_Lg		15 08 48.0	
	comp=Z,32nm,0.8s						
K57A	Scipio Center	8.22	242	IAmb_Lg		15 09 03.6	
	comp=Z,37nm,0.8s						
BINY	Binghamton	8.23	238	IAmb_Lg		15 08 47.6	
	comp=Z,44nm,0.8s						
ODNJ	Ogdensburg	8.25	227	IAmb_Lg		15 08 55.3	
	comp=Z,45nm,1.0s						
KSPA	Keystone Colle	8.53	234	IAmb_Lg		15 08 53.2	
	comp=Z,30nm,0.8s						
BRNJ	Basking Ridge	8.54	225	IAmb_Lg		15 09 17.1	
	comp=Z,36nm,0.9s						
LUPA	Lehigh Univers	9.00	228	IAmb_Lg		15 09 11.9	
	comp=Z,34nm,0.9s						
P60A	Greenville	9.73	226	IAmb_Lg		15 09 39.8	
	comp=Z,29nm,0.8s						

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*NNC **04** 15:11:46.6±2.8, 38°.79N×70°.56E, h0^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=21.4km s-min=14.2km az=7.0*

*KRNET **04** 15:11:47.4±0.1, 39°.04N×70°.80E, h11^{km}, mb3.5*

ISC 04 15:11:47.9±1.0**, 39°.04N**±0°.05×**70°.84E**±0°.03**, h10^{km}, n26, σ2^{s}48**/44**, 29C-17D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAR	Garm	0.41	265	⇑*i*P	Pg	15 11 54.8	-1.2
	baz=64						
GAR				⇑*i*S	Sg	15 11 59.9	-1.5
	baz=64						
DRK	Karamyk	0.87	59	⇑*i*P	Pg	15 12 04.3	-0.4
	baz=60						
DRK				⇑*i*S	Sb	15 12 16.8	-0.3
	baz=60						
BTK	Batken	1.02	359	⇑*i*P	Pg	15 12 06.7	-0.9
	baz=1.0						
BTK				⇑*i*S	Sb	15 12 20.6	-0.7
	baz=1.0						
CHGR	Chuyangaron	1.36	254	⇑*i*P	Pb	15 12 12.4	-1.2
	baz=54						
CHGR				⇑*i*S	Sg	15 12 30.5	-1.4
	baz=54						
OHH	Osh	2.11	45	⇑*i*P	Pb	15 12 25.4	-1.0
	baz=45						
OHH				⇑*i*S	Sb	15 12 53.0	+0.3
	baz=45						
SFK	Sufi-Kurgan	2.28	64	⇓*i*P	Pb	15 12 28.2	-1.2
	baz=64						
SFK				⇓*i*S	Sb	15 12 58.0	+0.3
	baz=64						
TRKS	Terek-Say	2.50	5	⇑*i*P	Pn	15 12 29.9	+1.0
	baz=7.0						
TRKS				⇑*i*S	Sn	15 13 00.8	+1.3
	baz=7.0						
TAS	Tashkent	2.57	333	⇓*i*P	Pb	15 12 31.5	-2.7
	baz=34						
TAS				⇓*i*S	Sb	15 13 03.8	-2.1
	baz=34						
SALK	Salom-Alik	2.94	50	⇑*e*P	Pn	15 12 36.8	+1.9
	baz=51						
SALK				⇑*e*S	Sb	15 13 13.5	-3.1
	baz=51						
MNAS	Manas	3.67	20	⇑*e*P	Pn	15 12 47.2	+2.3
	baz=20						
MNAS				⇑*i*S	Sn	15 13 30.8	+2.4
	baz=20						
AML	Almayashu	3.78	34	P	Pb	15 12 53.3	-1.7
	SNR=26						
AML	Almayashu	3.78	34	⇑*i*P	Pn	15 12 48.8	+2.2
	baz=35						
AML				⇑*i*S	Sn	15 13 33.8	+2.4
	baz=35						
KK31	Karatay Array	4.07	357	⇓Pn	Pb	15 12 54.7	-5.0
	6.9nm,0.7s,baz=179,slow=13,SNR=46						
KK31				⇑Pg	Pg	15 13 05.7	-0.3
	9.4nm,0.7s,baz=175,slow=12,SNR=12						
KK31				⇓Sn	Sb	15 13 45.6	-3.4
	2.9nm,0.3s,baz=188,slow=24,SNR=4.2						
KK31				⇑Lg	Lg	15 14 01.8	
	2.9nm,0.3s,baz=180,slow=28,SNR=4.5						
EKS2	Erkin-Say	4.25	31	⇑*e*P	Pn	15 12 55.4	+2.5
	baz=31						
EKS2				⇑*i*S	Sn	15 13 44.5	+1.8
	baz=31						
AAK	Ala-Archa	4.54	36	P	Pb	15 13 02.1	-5.8
	SNR=9.4						
FRU1	Bishkek	4.74	36	⇑*i*P	Pn	15 13 02.1	+2.6
	baz=36						
FRU1				⇑*e*S	Sn	15 13 56.6	+2.0
	baz=36						
KBK	Karagaybulak	4.78	39	P	Pb	15 13 07.5	-4.3
	SNR=16						
KBK	Karagaybulak	4.78	39	⇓*e*P	Pn	15 13 02.6	+2.5
	baz=40						
KBK				⇓*e*S	Sn	15 13 57.5	+1.9
	baz=40						
CHMS	Chumysh	4.94	36	⇓*e*P	Pn	15 13 04.6	+2.3
	baz=36						
CHMS				⇓*e*S	Sn	15 14 01.1	+1.6
	baz=36						
USP	Ospenovka	5.05	32	P	Pb	15 13 09.9	-6.5
	SNR=12						
USP	Ospenovka	5.05	32	⇓*i*P	Pn	15 13 06.0	+2.2
	baz=32						
USP				⇓*i*S	Sn	15 14 03.5	+1.3
	baz=32						
TKM2	Tokmak 2	5.29	41	P	Pn	15 13 12.9	+5.6
	SNR=13						
TKM2	Tokmak 2	5.29	41	⇑Pn	Pn	15 13 12.1	+4.9
	2.9nm,0.4s						
TKM2				⇓Pg	Pg	15 13 25.8	-3.5
	4.1nm,0.6s						
TKM2				⇓Sn	Sb	15 14 18.7	-5.6
	5.2nm,0.8s						
TKM2				⇓Lg	Lg	15 14 45.8	
	3.7nm,0.7s						
TKM2	Tokmak 2	5.29	41	⇑*e*P	Pn	15 13 09.6	+2.3
	baz=42						
TKM2				⇑*i*S	Sn	15 14 09.7	+1.3
	baz=42						
AB31	Akbulak array	12.85	326	⇑Pn	Pn	15 14 50.0	-0.6
	0.8nm,0.4s,baz=142,slow=12,SNR=51						
AB31				⇓Sn	Sn	15 17 16.7	+3.1
	0.8nm,0.4s,baz=154,slow=23,SNR=13						
AKTO	Aktyubinsk	14.56	326	⇑Pn	Pn	15 15 13.5	-0.5
	1.8nm,0.8s						
AKTO				⇓Sn	Sn	15 18 02.7	+7.3
	3.5nm,1.0s						

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*NEIC **04** 15:16:39.5±0.9, 36°.92N±0°.01×97°.83W±0°.02, h3^{km}±7^{km}, Error ellipse: s-maj=2.0km s-min=1.9km az=105.0*

TUL 04 15:16:39.2±1.1**, 36°.94N**±0°.01×**97°.85W**±0°.02**, h3^{km}**±1^{km}**, ML3.2, mb_Lg2.8**/44(NEIC)**, ML2.8**/24(NEIC)**, Error ellipse: s-maj=2.0km s-min=1.8km az=115.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T35A	Sooner Cattle	1.07	91		Pg	15 16 59.3	-0.4
T35A				Sg	Sg	15 17 13.6	+0.1
U32A	Winter Ranch,	1.09	239	Pg	Pg	15 16 59.5	-0.6
U32A				Sg	Sg	15 17 13.6	-0.5
OKCFA	Oklahoma City	1.56	168	Pn	Pn	15 17 07.7	-0.2
OKCFA				IAmb_Lg		15 17 31.6	
	comp=Z,78nm,0.8s						
OKCSW	OKLAHOMA CITY	1.57	168	Pn	Pn	15 17 08.0	0.0
R32A	Long Quarter,	1.63	335	Pn	Pn	15 17 09.2	+0.4
FNO	Franklin	1.72	168	Pn	Pn	15 17 10.0	-0.1
TUL1	Leonard	1.95	121	Pn	Pn	15 17 13.4	+0.2
WMOK	Wichita Mounta	2.33	199	Pn	Pn	15 17 18.3	-0.1
WMOK				IAmb_Lg		15 17 55.9	
	comp=Z,28nm,0.7s						
X34A	Smith Ranch, M	2.34	180	Pn	Pn	15 17 19.5	+1.0
X34A				IAmb_Lg		15 17 53.9	
	comp=Z,32nm,0.7s						
KSU1	Kansas State U	2.37	24	Pn	Pn	15 17 19.3	+0.4
U38A	Gravette	2.83	99	Pn	Pn	15 17 25.0	-0.2
X37A	Clayton	3.09	139	Pn	Pn	15 17 28.9	0.0
HHAR	Hobbs	3.21	101	Pn	Pn	15 17 31.0	+0.4
Z35A	Perchaven, San	3.64	172	Pn	Pn	15 17 36.4	0.0
S39A	Bolivar	3.68	77	Pn	Pn	15 17 37.2	+0.2
W39A	Magazine	3.72	117	Pn	Pn	15 17 38.8	+1.2
W39A				IAmb_Lg		15 18 42.8	
	comp=Z,27nm,0.8s						
AMTX	Amarillo	3.73	238	Pn	Pn	15 17 39.1	+1.3
AMTX				IAmb_Lg		15 18 47.9	
	comp=Z,24nm,0.9s						
U40A	Yellville	4.06	97	Pn	Pn	15 17 43.3	+1.1
U40A				IAmb_Lg		15 18 52.4	
	comp=Z,15nm,0.7s						
MIAR	Mount Ida	4.22	123	Pn	Pn	15 17 44.6	+0.2
KSCO	Kaye Shedlock'	4.30	300	Pn	Pn	15 17 46.1	+0.4
P38A	Dawn	4.32	50	Pn	Pn	15 17 46.2	+0.3
P38A				IAmb_Lg		15 19 03.5	
	comp=Z,17nm,0.9s						
Z38A	Mt. Pleasant	4.36	147	Pn	Pn	15 17 44.8	-1.6
Z38A				IAmb_Lg		15 18 59.1	
	comp=Z,23nm,0.8s						
BGNE	Belgrade	4.46	357	Pn	Pn	15 17 47.7	-0.1
MGMO	Mountain Grove	4.47	86	Pn	Pn	15 17 48.9	+1.0
R40A	Maddies Statio	4.63	71	Pn	Pn	15 17 49.4	-0.6
FCAR	Ozark Folk Cen	4.73	101	Pn	Pn	15 17 52.6	+1.2
X40A	Basin Creek Fa	4.76	120	Pn	Pn	15 17 51.7	-0.1
X40A				IAmb_Lg		15 19 16.6	
	comp=Z,18nm,1.1s						
WHAR	Wooly Hollow	4.79	108	Pn	Pn	15 17 53.5	+1.2
WHAR				IAmb_Lg		15 19 24.2	
	comp=Z,15nm,0.8s						
WHTX	Lake Whitney,	4.95	176	Pn	Pn	15 17 53.9	-0.6
WLAR	White Oak Lake	5.05	129	IAmb_Lg		15 19 27.9	
	comp=Z,20nm,0.9s						
OGNE	Ogallala	5.16	322	Pn	Pn	15 17 58.9	+1.5
OGNE				IAmb_Lg		15 19 32.7	
	comp=Z,15nm,0.8s						
P40A	Paris	5.24	59	Pn	Pn	15 17 59.1	+0.6
N38A	Joes South For	5.26	42	IAmb_Lg		15 19 37.1	
	comp=Z,15nm,0.9s						
CCM	Cathedral Cave	5.37	76	IAmb_Lg		15 19 32.2	
	comp=Z,11nm,0.8s						
T42A	Van Buren	5.41	87	Pn	Pn	15 18 02.3	+1.6
LCAR	Lake Charles	5.46	97	Pn	Pn	15 18 04.2	+2.7
PBMO	Poplar Bluff	5.95	89	IAmb_Lg		15 19 48.3	
	comp=Z,12nm,0.8s						
FVM	French Village	5.99	78	IAmb_Lg		15 19 53.2	
	comp=Z,11nm,1.2s						
435B	Jarrell	6.15	178	IAmb_Lg		15 20 03.1	
	comp=Z,15nm,0.9s						
JCT	Junction City	6.65	195	IAmb_Lg		15 20 12.2	
	comp=Z,9.4nm,0.8s						
ECSD	EROS Data Cent	6.85	8	Pn	Pn	15 18 20.2	-0.3
SIUC	Southern Illin	6.92	81	IAmb_Lg		15 20 19.4	
	comp=Z,12nm,0.8s						
L40A	Anamosa	7.23	43	IAmb_Lg		15 20 29.6	
	comp=Z,12nm,1.0s						
PHWY	Pilot Hill	7.34	309	IAmb_Lg		15 20 35.3	
	comp=Z,11nm,1.1s						
L42A	Oliver, Polo	8.09	49	IAmb_Lg		15 20 57.4	
	comp=Z,10nm,0.8s						
MNTX	Cornudas Mount	8.14	232	Pn	Pn	15 18 39.0	+0.8

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*NEIC **04** 15:18:30.8±0.7, 35°.88N±0°.01×97°.37W±0°.01, h8^{km}±5^{km}, Error ellipse: s-maj=1.8km s-min=1.5km az=146.0*

TUL 04 15:18:30.8±1.5**, 35°.86N**±0°.01×**97°.35W**±0°.01**, h6^{km}**±3^{km}**, ML2.7, mb_Lg2.7**/3(NEIC)**, Error ellipse: s-maj=1.8km s-min=1.6km az=222.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKCFA	Oklahoma City	0.45	190	Pg	Pg	15 18 39.5	+0.1
OKCFA				Sg	Sg	15 18 46.1	+0.9
FNO	Franklin	0.60	184	Pg	Pg	15 18 42.3	+0.1
FNO				IAmb_Lg		15 18 50.5	
	comp=Z,49nm,1.1s						
FNO				Sg	Sg	15 18 50.9	+0.9
T35A	Sooner Cattle	1.26	32	Pg	Pg	15 18 53.8	-1.1
TUL1	Leonard	1.27	87	Pn	Pn	15 18 54.6	-0.5
X34A	Smith Ranch, M	1.31	198	Pn	Pn	15 18 55.1	-0.6
WMOK	Wichita Mounta	1.61	227	Pn	Pn	15 18 59.7	-0.2
KSU1	Kansas State U	3.29	10	IAmb_Lg		15 20 21.1	
	comp=Z,18nm,0.8s						

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*IDC **04** 15:39:29.7±1.8, 26°.96N×126°.84E, h111^{km}±21^{km}, mb3.5/9, mb1 3.6/10, mb1mx3.4/34, mbtmp3.9/10, MS2.5/1, Ms1 2.5/1, ms1mx2.0/47, Error ellipse: s-maj=34.3km s-min=13.2km az=69.0*

*JMA **04** 15:39:30.4±0.2, 26°.96N×126°.83E, h111^{km}±3^{km}, M3.7*

ISC 04 15:39:29.9±0.8**, 26°.97N**±0°.08×**126°.81E**±0°.07**, h114^{km}**±8^{km}**, n26, σ0^{s}76**/39**, mb3.7**/9**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAGN	Aguni-jima	0.54	134	P	Pn	15 39 47.7	+0.2
JAGN				S	Sn	15 40 00.6	-0.1
JKE	Kume jima 2	0.64	182	P	Pn	15 39 48.4	+0.1
JKE				S	Sn	15 40 01.9	-0.1
JIH	Iheya	1.04	86	P	Pn	15 39 52.3	+0.5
JIH				S	Sn	15 40 08.0	-0.3
JNTH	Nagotoyohara	1.18	112	P	Pn	15 39 53.6	+0.3
JNTH				S	Sn	15 40 10.0	-1.0
JJT3	Tamagusuku3	1.20	133	P	Pn	15 39 54.4	+0.8
JJT3				S	Sn	15 40 12.2	+0.7
JOW	Kunigami	1.32	96	P	Pn	15 39 55.0	+0.2
	241nm,0.3s,baz=260,slow=6.1,SNR=368						
JOW				S	Sn	15 40 12.5	-1.3
	724nm,0.3s,baz=130,slow=26,SNR=72						
JOW	Kunigami	1.32	96	P	Pn	15 39 55.2	+0.4
JOW				S	Sn	15 40 12.7	-1.1
JYRO	Yoronjima	1.47	88	P	Pn	15 39 56.8	+0.3
JYRO				S	Sn	15 40 15.2	-1.6
JOKE	Okinoerabujima	1.62	76	P	Pn	15 39 58.6	+0.2
JOKE				*e*S	Sn	15 40 18.7	-1.3
JTK	Tokunoshima	2.07	66	P	Pn	15 40 04.0	0.0
JTK				*e*S	Sn	15 40 29.1	-0.9
JAMN	Amaminishikomi	2.45	58	P	Pn	15 40 08.7	-0.1
JIKM	Ikemajima	2.48	215	P	Pn	15 40 09.5	+0.3
JIKM				*e*S	Sn	15 40 39.3	0.0
JOGS	Gusukube	2.54	210	P	Pn	15 40 10.2	+0.2
JMJ2	Miyako jima3	2.59	211	P	Pn	15 40 10.8	+0.1
JMJ2				*e*S	Sn	15 40 41.1	-0.9
JIRB	Irabujima	2.59	215	P	Pn	15 40 10.4	-0.3
JIRB				*e*S	Sn	15 40 40.1	-1.9
JNU	Nakatsue	7.07	29	P	Pn	15 41 12.5	+1.7
	2.4nm,0.3s,baz=264,slow=4.5,SNR=17						
KSRS	Korea Array	10.49	5	LR	LR	15 47 05.0	
	comp=Z,22nm,18.6s,baz=18,slow=43						
SONM	Songino Array	26.25	328	P	P	15 44 55.2	+0.8
	3.3nm,0.7s,baz=145,slow=11,SNR=17						
MKAR	Makanchi Array	40.09	312	P	P	15 46 54.1	-0.1
	2.1nm,0.5s,baz=99,slow=11,SNR=39						
MKAR				PcP	PcP	15 48 56.9	+0.2
	0.6nm,0.6s,baz=72,slow=4.0,SNR=5.0						
ZALV	Zalesovo Beam	40.89	323	P	P	15 47 00.5	-0.1
	3.4nm,0.5s,baz=114,slow=9.1,SNR=17						
FITZ	Fitzroy Crossi	44.82	182	P	P	15 47 32.1	-0.5
	1.2nm,0.9s,baz=0.0,slow=10,SNR=1.9						
WRA	Warramunga Arr	47.20	170	P	P	15 47 51.2	-0.1
	0.7nm,0.6s,baz=352,slow=8.5,SNR=9.5						
ASAR	Alice Springs	50.81	172	P	P	15 48 19.2	+0.5
	0.4nm,0.5s,baz=358,slow=13,SNR=18						
ILAR	Eielson Array	64.39	28	P	P	15 49 53.5	+0.2
	0.1nm,0.5s,baz=296,slow=9.2,SNR=4.2						
FINES	FINESS Array B	71.59	330	P	P	15 50 38.3	-0.2
	1.5nm,0.9s,baz=90,slow=4.2,SNR=4.0						
AKASG	Malin Array Be	74.14	319	P	P	15 50 53.8	+0.1
	0.2nm,0.3s,baz=62,slow=6.4,SNR=1.7						

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*IDC **04** 15:50:26.6±1.7, 8°.30S×125°.24E, h0^{km}, mb3.5/2, mb1 3.7/6, mb1mx3.5/38, mbtmp3.5/6, ML3.3/4, MS3.1/1, Ms1 3.1/1, ms1mx2.2/29, Error ellipse: s-maj=47.6km s-min=22.5km az=73.0*

ISC 04 15:50:30.9±1.2**, 8°.43S**±0°.09×**125°.4E**±0°.1**, h35^{km}, n7, σ1^{s}55**/10**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	2.46	224	Pn	Pn	15 51 08.2	-0.3
	3.1nm,0.3s,baz=32,slow=9.5,SNR=8.9						
BATI				Sn	Sn	15 51 38.2	+0.9
	5.2nm,0.3s,baz=284,slow=24,SNR=3.7						
FITZ	Fitzroy Crossi	9.61	179	Pn	Pn	15 52 47.8	+1.0
	0.3nm,0.3s,baz=6.1,slow=13,SNR=11						
FITZ				Sn	Sn	15 54 32.1	-1.5
	0.3nm,0.3s,baz=116,slow=13,SNR=5.6						
WRA	Warramunga Arr	14.35	144	Pn	Pn	15 53 53.1	+1.5
	0.2nm,0.3s,baz=316,slow=13,SNR=11						
WRA				Sn	Sn	15 56 28.0	-1.6
	0.1nm,0.3s,baz=325,slow=23,SNR=4.5						
ASAR	Alice Springs	17.20	153	P	P	15 54 31.6	+1.7

	0.1nm,0.3s,baz=321,slow=11,SNR=12						
ASAR				S	Sn	15 57 36.9	-2.1
	0.0nm,0.3s,baz=310,slow=20,SNR=3.0						
PSI	Prapat	28.66	292	LR	LR	16 09 59.8	
	comp=Z,34nm,18.6s,baz=254,slow=41						
CMAR	Chiang Mai Arr	37.35	316	P	P	15 57 39.7	-0.7
	0.4nm,0.7s,baz=138,slow=6.9,SNR=6.3						
MKAR	Makanchi Array	67.02	329	P	P	16 01 20.0	-0.3
	0.4nm,0.9s,baz=128,slow=7.9,SNR=5.0						

OMAN 04 15:52:30.9±0.3, 27.°49N×53.°82E, h30^{km}, mb4.8/2, ml2.9/11, Error ellipse: s-maj=8.6km s-min=5.9km az=24.0, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHME	Shamm	2.53	124	P	Pn	15 53 09.5	-0.4
SHME				S	Sn	15 53 40.5	+0.8
BANOM	Banah	2.72	125	P	Pn	15 53 12.0	-0.5
BANOM				S	Sn	15 53 46.4	+2.0
MASF	Masafi	2.98	135	P	Pn	15 53 16.9	+0.7
MASF				S	Sn	15 53 53.8	+3.0
NAZ	Nazwa, Dubai	2.99	146	P	Pn	15 53 17.7	+1.4
MDH	Madha	3.12	134	P	Pn	15 53 18.6	+0.6
ASUD	Al Ashush, Dub	3.16	154	P	Pn	15 53 20.6	+2.0
	SNR=5.4						
UOSS	Minazif	3.32	139	P	Pn	15 53 21.2	+0.4
UOSS				S	Sn	15 54 01.1	+1.8
HATD	Hatta, Dubai	3.37	141	P	Pn	15 53 21.8	+0.3
HATD				S	Sn	15 54 03.9	+3.4
ASHO	Ashiyiah	3.45	144	P	Pn	15 53 23.4	+0.8
	SNR=16						
ASHO				S	Sn	15 54 05.0	+2.6
SOHO	SOHO	4.14	143	P	Pn	15 53 32.0	-0.1
SOHO				S	Sn	15 54 22.0	+2.4
UMZA	Um Al Zommool	4.91	165	P	Pn	15 53 42.9	+0.3
HOQ	Hoqain	5.01	140	P	Pn	15 53 44.3	+0.3
	SNR=7.1						
BSY	Bisya	5.63	146	P	Pn	15 53 52.2	-0.4
BSY				S	Sn	15 54 56.6	+0.3
SMDO	Samad	5.84	138	P	Pn	15 53 55.4	-0.2
	SNR=5.8						
SMDO				S	Sn	15 55 01.5	-0.1
WSAR	Wadi Sarin	6.07	133	P	Pn	15 53 56.7	-2.0
	SNR=8.6						
WSAR				S	Sn	15 55 03.7	-3.5
JMDO	Jabal Madar	6.41	142	P	Pn	15 54 01.1	-2.2
MHTO	MHTO	7.50	149	P	Pn	15 54 17.2	-1.1
WHFO	Wadi Hawf	9.53	180	P	Pn	15 54 44.7	-1.4
	SNR=5.7						

*IDC **04** 16:11:56.8±5.9, 36.°81N×71.°16E, h168^{km}±31^{km}, mb3.3/4, mb1 3.2/9, mb1mx2.9/54, mbtmp3.7/9, Error ellipse: s-maj=77.4km s-min=24.0km az=151.0*

*NNC **04** 16:11:56.8±14.0, 36.°89N×70.°94E, h118^{km}±238^{km}, mb2.9, mpv3.5, Error ellipse: s-maj=115.8km s-min=82.5km az=24.0*

ISC 04 16:11:50.1±1.0, 36.°54N±0.°08×70.°92E±0.°10, h100^{km}, n24, σ1^{s}.50/28, mb3.8/4, 5C-3D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.56	357	⇑P	Pn	16 13 28.0	+4.1
	2.8nm,0.5s,baz=0.0,slow=0.1,SNR=37						
KK31				⇑S	Sn	16 14 36.6	-0.7
	16nm,0.8s,baz=0.0,slow=0.1,SNR=24						
AAK	Ala-Archa	6.69	23	P	Pn	16 13 29.3	+3.5
	0.7nm,0.3s,baz=204,slow=7.2,SNR=6.6						
AAK				S	Sn	16 14 40.7	+0.1
	0.5nm,0.3s,baz=132,slow=23,SNR=7.7						
TKM2	Tokmak 2	7.32	28	⇑P	Pn	16 13 36.1	+1.6
	1.2nm,0.5s						
TKM2				⇑S	Sn	16 14 54.1	-2.0
	4.8nm,1.2s						
GEYT	Alibeck	10.30	282	P	Pn	16 14 21.6	+6.7
	0.5nm,0.3s,baz=108,slow=12,SNR=2.0						
PYUN	Piuthan	13.22	126	eP	Pn	16 14 53.6	-0.4
	11nm,0.3s						
MKAR	Makanchi Array	13.30	36	P	Pn	16 14 55.4	+0.6
	0.2nm,0.3s,baz=214,slow=11,SNR=6.1						
DANN	Dangsing	13.56	123	eP	Pn	16 14 58.4	-0.2
KOLN	Koldanda	13.84	126	eP	Pn	16 15 02.0	-0.1
	4.3nm,0.3s						
GKN	Gorkha	14.38	122	eP	Pn	16 15 09.6	+0.6
	8.7nm,0.3s						
KKN	Kakani	14.95	122	eP	Pn	16 15 16.5	+0.1
AB31	Akbulak array	15.02	331	⇓P	P	16 15 20.1	+0.3
	0.1nm,0.2s,baz=156,slow=11,SNR=23						
AB31				⇑S	Sn	16 18 01.3	-1.2
	1.6nm,0.8s,baz=151,slow=22,SNR=5.1						
PKIN	Phulchoki	15.17	122	eP	Pn	16 15 19.6	+0.4
	11nm,0.4s						
GUN	Gumba	15.29	120	eP	Pn	16 15 21.3	+0.5
	8.2nm,0.4s						
JIRN	Jiri	15.66	120	eP	Pn	16 15 25.0	-0.5
	16nm,0.4s						
RAMN	Ramite	16.39	121	eP	Pn	16 15 33.3	-1.1
	7.3nm,0.4s						
BVAR	Borovoye Array	16.49	359	P	P	16 15 36.3	+0.2
	0.2nm,0.3s,baz=192,slow=13,SNR=2.7						
AKTO	Aktyubinsk	16.71	330	⇓P	P	16 15 40.1	+1.5
	1.0nm,0.7s						
AKTO				⇓S	Sn	16 18 41.6	-1.8
	1.2nm,0.8s						
TAPN	Taplejung	16.92	118	eP	P	16 15 41.5	+0.1
	4.9nm,0.3s						
ODAN	Odare	17.00	120	eP	Pn	16 15 41.6	-0.2
	5.9nm,0.5s						
ZALV	Zalesovo Beam	19.91	25	P	P	16 16 10.9	-2.6
	0.7nm,0.3s,baz=220,slow=11,SNR=8.3						
AKASG	Malin Array Be	32.87	309	P	P	16 18 14.6	+0.4
	0.5nm,0.5s,baz=98,slow=7.6,SNR=2.1						
FINES	FINESS Array B	37.41	326	P	P	16 18 52.0	-1.0
	1.7nm,0.8s,baz=114,slow=8.5,SNR=4.7						
ARCES	ARCESS Array B	41.08	338	P	P	16 19 22.1	-1.4
	2.8nm,0.9s,baz=112,slow=8.8,SNR=4.2						
NOA	NORSAR Array B	44.31	323	P	P	16 19 48.7	-1.0
	0.2nm,0.3s,baz=97,slow=7.7,SNR=3.4						

*TEH **04** 16:12:42.9, 32.°75N×47.°26E, h8^{km}, ML3.0*

*ISN **04** 16:12:43.6±0.8, 32.°68N×47.°24E, h14^{km}±4^{km}, ML2.8*

ISC 04 16:12:43.2±0.9, 32.°73N±0.°04×47.°25E±0.°03, h10^{km}, n25, σ1^{s}.53/30, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DHL1	Dehloran	0.05	151	ePg	Pg	16 12 44.9	-0.4
DHL1				eSg	Sg	16 12 47.2	+0.5
IKFM	Kafar-mosalman	0.94	32	ePg	Pg	16 13 00.3	-1.0
IKFM				e		16 13 22.9	
	comp=Z,4μm,0.8s						
IBDR	Badra	1.17	289	ePg	Pg	16 13 06.0	+0.2
IBDR				eSg	Sg	16 13 21.0	-0.1
IBDR				AML	AML	16 13 27.5	
	comp=E,162nm,0.8s						
IBDR				AML	AML	16 13 39.8	
	comp=N,154nm,0.6s						
IDOB	Doab	1.31	36	ePg	Pg	16 13 08.0	-0.5
KCHF	Cheshme Sefid,	1.55	354	ePg	Pg	16 13 12.6	-0.5
KCHF				eSg	Sg	16 13 34.5	+1.2
KCHF				e		16 13 36.6	
	comp=Z,3μm,0.4s						
BMDN	Meydan	1.62	54	ePg	Pg	16 13 13.8	-0.6
BMDN				e		16 13 46.2	
	comp=Z,2μm,0.9s						
KER	Kermanshah	1.66	357	ePg	Pg	16 13 14.4	-0.6
IGHG	Ghaleghazi	1.70	341	ePg	Pg	16 13 15.0	-0.8
IGHG				e		16 13 43.6	
	comp=Z,3μm,0.8s						
IBZA	Bozab	1.81	16	ePg	Pb	16 13 16.2	-0.5
IBZA				e		16 13 46.7	
	comp=Z,877nm,0.8s						
HSAM	Samen	1.86	37	ePg	Pb	16 13 17.2	-0.3
HSAM				e		16 13 20.6	
	comp=Z,898nm,0.3s						
AMIS	Naft Sefid	2.02	121	ePg	Pg	16 13 21.0	-1.1
IDHR	Dehrash	2.10	340	ePn	Pb	16 13 19.7	-1.8
IDHR				e		16 13 59.3	
	comp=Z,1μm,0.6s						
ILIN	Lien	2.20	354	ePn	Pb	16 13 21.3	-2.0
ILIN				e		16 14 00.4	
	comp=Z,500nm,0.5s						
IALM	Almabolaq	2.26	20	ePn	Pb	16 13 22.5	-1.8
BHD	Baghdad	2.47	283	ePn	Pn	16 13 25.0	+1.4
BHD				eSn	Sb	16 13 56.0	-2.2
HAGD	Aghdareh	2.62	36	ePn	Pb	16 13 27.7	-2.7
HAGD				e		16 14 03.2	
	comp=Z,641nm,0.4s						
IPIR	Pirpir	3.07	90	ePn	Pn	16 13 34.2	+2.1
IRAZ	Razeghan	3.48	39	ePn	Pn	16 13 38.8	+1.2
IKRK	Kirkuk	3.60	319	ePn	Pn	16 13 41.0	+1.9
IKRK				eSn	Sn	16 14 23.5	+1.9
IKRK				AML	AML	16 14 30.5	
	comp=N,45nm,0.2s						
IKRK				AML	AML	16 14 35.6	
	comp=E,51nm,0.4s						
IKLH	Kolahrood	3.68	80	ePn	Pn	16 13 43.0	+2.5
KLNJ	Kolanjah	4.07	114	ePn	Pn	16 13 46.9	+1.0
KRSH	Karshahi	4.27	72	ePn	Pn	16 13 50.1	+1.6
IZEF	Zefreh	4.28	86	ePn	Pn	16 13 50.5	+1.8
ISFB	Sefidab	4.47	67	ePn	Pn	16 13 52.9	+1.7
QALM	Alamut, Qazvin	4.64	36	ePn	Pn	16 13 55.4	+1.8

*SSNC **04** 16:13:04.1±1.3, 19.°49N×78.°10W, h8^{km}±23^{km}, MD3.3, ML2.9, MW2.8*

*JSN **04** 16:13:07.3±0.3, 19.°61N×77.°37W, h15^{km}, MD3.5*

ISC 04 16:13:00.1±2.5, 19.°45N±0.°04×78.°12W±0.°04, h8^{km}±17^{km}, n12, σ2^{s}.06/21, Cuba region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LMGC	Las Mercedes	1.21	59	eP	Pb	16 13 23.5	+0.2
LMGC				eS	Sg	16 13 37.1	-2.1
LMGC				IAML		16 13 37.8	
	comp=E,332nm,0.2s						
LMGC				IAML		16 13 38.5	
	comp=N,282nm,0.2s						
MTDJ	Mount Denham	1.33	155	i P	Pn	16 13 27.4	+2.2
MTDJ				eS	Sb	16 13 43.0	+0.2
CCCC	Cccc	1.77	11	eP	Pn	16 13 33.4	+2.3
CCCC				eS	Sn	16 13 54.4	+0.6
CCCC				IAML		16 14 05.7	
	comp=E,41nm,0.6s						
CCCC				IAML		16 14 09.7	
	comp=N,28nm,0.9s						
STH	Stony Hill	1.84	138	i P	Pn	16 13 33.9	+1.8
STH				i S	Sn	16 13 53.9	-1.7
GWJ	Greenwich	1.90	136	i P	Pn	16 13 34.4	+1.4
HOJ	Hope	1.93	138	i P	Pn	16 13 35.3	+2.0
RCC	Rio Carpintero	2.34	76	eP	Pn	16 13 39.3	+0.4
RCC				eS	Sn	16 14 05.2	-2.7
RCC				IAML		16 14 07.2	
	comp=E,22nm,0.6s						
RCC				IAML		16 14 07.8	
	comp=N,17nm,0.2s						
GTBY	Guantanamo Bay	2.87	80	eP	Pn	16 13 47.0	+0.8
GTBY				eS	Sn	16 14 18.2	-2.7
GTMO	Guantanamo	2.87	77	eP	Pn	16 13 48.2	+2.0
GTMO				eS	Sn	16 14 21.3	+0.4
GTMO				IAML		16 14 24.3	
	comp=N,2μm,0.4s						
GTMO				IAML		16 14 25.4	
	comp=E,754nm,0.4s						
FSCY	Frank Sound, G	2.90	268	eP	Pn	16 13 48.1	+1.5
FSCY				eS	Sn	16 14 18.0	-3.6
MGV	Manicaragua	3.17	327	eP	Pn	16 13 51.6	+1.3
MGV				eS	Sn	16 14 27.3	-1.1
MGV				IAML		16 14 33.1	
	comp=E,7.1nm,0.3s						
MGV				IAML		16 14 34.0	
	comp=N,8.1nm,0.3s						
SDDR	Presa de Saban	6.47	93	eP	Pn	16 14 38.4	+2.7

*IDC **04** 16:25:15.1±1.4, 9.°06S×125.°35E, h0^{km}, mb4.0/2, mb1 4.1/6, mb1mx3.7/40, mbtmp4.0/6, ML4.0/4, MS2.2/1, Ms1 2.2/1, ms1mx2.0/37, Error ellipse: s-maj=32.2km s-min=22.8km az=92.0*

*DJA **04** 16:25:20.1±1.7, 9°S±4°×12°5E±°, h17^{km}±16^{km}, M4.1/7, mb4.2/7, mB5.0/1, MLv4.1/7, Mw(mB)4.3/1*

*NEIC **04** 16:25:21.4±0.8, 9.°20S±0.°07×124.°99E±0.°04, h52^{km}±12^{km}, mb4.0/5, Error ellipse: s-maj=10.9km s-min=6.3km az=181.0*

ISC 04 16:25:20.3±0.7, 9.°31S±0.°06×125.°16E±0.°05, h33^{km}, n44, σ1^{s}.91/47, mb4.1/4, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	0.99	243	Pn	Pn	16 25 38.3	+0.4
SOEI	Soe	0.99	243	P	Pb	16 25 39.7	+0.7
SOEI	Soe	0.99	243	P	Pb	16 25 39.9	+0.9
BATI	Baumata	1.72	239	Pn	Pb	16 25 50.6	-0.7
	41nm,0.3s,baz=116,slow=2.5,SNR=98						
BATI				Sn	Sb	16 26 17.2	+4.5
	31nm,0.3s,baz=43,slow=15,SNR=7.1						
BATI				LR	LR	16 26 31.0	
	comp=Z,55nm,20.1s,baz=80,slow=38						
BATI	Baumata	1.72	239	P	Pb	16 25 50.2	-1.2
BATI				S	Sb	16 26 12.8	+0.1
MMRI	Maumere	2.96	283	Pn	Pn	16 26 02.9	-2.1
MMRI	Maumere	2.96	283	P	Pn	16 26 05.9	+0.9
BSSI	Bau Bau, Buton	5.59	304	P	Pn	16 26 42.7	+1.5
	0.1nm9.5nm,0.6s						
BKSI	Bulukumba	6.38	308	P	Pn	16 26 52.2	+0.3
	0.0nm10nm,1.0s						
DRS	Darwin Rock St	6.44	119	P	Pn	16 26 55.9	+3.1
	26nm,0.7s						
MTN	Manton Dam	6.83	121	Pn	Pn	16 27 01.5	+3.3
MTN	Manton Dam	6.83	121	P	Pn	16 27 01.1	+2.8
KNRA	Kununurra	7.24	151	Pn	Pn	16 27 06.6	+2.8
KNRA	Kununurra	7.24	151	P	Pn	16 27 05.9	+2.0
	17nm,0.5s						
SANI	Sanana	7.26	7	P	Pn	16 27 06.7	+2.6
PLAI	Plampang	7.31	273	P	Pn	16 27 03.2	-1.6
	0.1nm27nm,0.9s						
PLAI	Plampang	7.31	273	P	Pn	16 27 05.0	+0.2
KDU	Kakadu	7.93	116	P	Pn	16 27 15.3	+2.0
	12nm,0.8s						
LUWI	Luwuk	8.55	344	Pn	Pn	16 27 20.3	-1.5
LUWI	Luwuk	8.55	344	P	Pn	16 27 21.5	-0.3
	30nm,1.3s						
LUWI	Luwuk	8.55	344	P	Pn	16 27 24.1	+2.3
FITZ	Fitzroy Crossi	8.75	177	Pn	Pn	16 27 26.4	+1.8
	0.8nm,0.3s,baz=1.2,slow=9.3,SNR=40						
FITZ				Sn	Sn	16 29 02.9	+0.8
	1.9nm,0.3s,baz=130,slow=5.8,SNR=12						
FITZ	Fitzroy Crossi	8.75	177	P	Pn	16 27 26.1	+1.5
	11nm,2.4s						
FAKI	Fak Fak	9.48	48	Pn	Pn	16 27 35.7	+1.0
FAKI	Fak Fak	9.48	48	P	Pn	16 27 38.9	+4.3
WB0	Warramunga Arr	13.70	140	Pn	Pn	16 28 31.8	-0.6
WRA	Warramunga Arr	13.80	141	Pn	Pn	16 28 33.0	-0.7
	1.0nm,0.3s,baz=324,slow=14,SNR=65						
WRA				Sn	Sn	16 31 01.6	-4.4
	0.8nm,0.3s,baz=318,slow=26,SNR=7.1						
WRA	Warramunga Arr	13.80	141	Pn	Pn	16 28 32.4	-1.3
WRAB	Tennant Creek	13.80	141	Pn	Pn	16 28 33.0	-0.7
WB2	Warramunga Arr	13.81	141	Pn	Pn	16 28 33.1	-0.8
WR0	Warramunga Arr	13.94	140	Pn	Pn	16 28 34.4	-1.2
UGM	Wanagama	14.54	274	Pn	Pn	16 28 41.7	-2.1
AS31	Alice Springs	16.55	151	Pn	Pn	16 29 10.3	+0.3
ASAR	Alice Springs	16.55	151	Pn	Pn	16 29 10.2	+0.2
	0.5nm,0.3s,baz=320,slow=11,SNR=37						
ASAR				Sn	Sn	16 32 08.7	-4.1
	0.4nm,0.3s,baz=326,slow=23,SNR=6.6						
ASAR	Alice Springs	16.55	151		Pn	16 29 10.5	+0.5
CISI	Cisompet, Garu	17.25	274		Pn	16 29 17.1	-1.7
COEN	Coen	18.24	106	P	Pn	16 29 31.1	+0.1
COEN				IAmb	IAmb	16 29 57.1	
	comp=Z,7.2nm,1.1s						
MORW	Morawa	21.44	202	P	P	16 30 06.1	+0.3
MORW				IAmb	IAmb	16 30 12.6	
	comp=Z,9.0nm,1.1s						
CTAO	Charters Tower	23.02	120	P	P	16 30 24.1	+1.4
CTAO				IAmb	IAmb	16 30 39.0	
	comp=Z,14nm,1.4s						
MNSI	Mandailing Nat	27.38	290	P	P	16 31 13.4	+11
MKAR	Makanchi Array	67.65	330	P	P	16 36 12.2	-1.8
	comp=Z,1.3nm,0.7s,baz=132,slow=6.9,SNR=9.3						
MKAR	Makanchi Array	67.65	330	P	P	16 36 11.6	-2.5
ZALV	Zalesovo Beam	71.63	336	P	P	16 36 38.9	+0.5
	comp=Z,0.9nm,0.6s,baz=132,slow=6.0,SNR=4.5						
ZALV	Zalesovo Beam	71.63	336	P	P	16 36 38.3	-0.1

*IDC **04** 16:29:22.0±1.8, 21.°65N×143.°28E, h317^{km}±17^{km}, mb3.2/12, mb1 3.4/14, mb1mx3.2/53, mbtmp4.0/14, Error ellipse: s-maj=28.7km s-min=12.4km az=86.0*

ISC 04 16:29:20.2±1.1, 21.°55N±0.°10×143.°3E±0.°2, h300^{km}, n14, σ0^{s}.74/17, mb3.4/11, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	5.62	350	P	Pn	16 30 45.8	+0.8
	9.1nm,0.3s,baz=314,slow=22,SNR=10						
JCJ				S	S	16 31 54.4	+1.3
	10.0nm,0.3s,baz=301,slow=23,SNR=5.5						
MJAR	Matsushiro Arr	15.59	345	P	P	16 32 43.6	0.0
	0.1nm,0.3s,baz=170,slow=11,SNR=2.4						
KSRS	Korea Array	20.70	323	P	P	16 33 37.9	-0.1
	2.3nm,0.6s,baz=147,slow=8.7,SNR=18						
KLR	Kul'dur	29.11	344	P	P	16 34 53.7	0.0
	2.9nm,0.7s,baz=163,slow=8.2,SNR=7.8						
SONM	Songino Array	39.52	321	P	P	16 36 22.4	-0.2
	0.3nm,0.4s,baz=104,slow=5.6,SNR=2.2						
CMAR	Chiang Mai Arr	41.68	274	P	P	16 36 40.6	+0.2
	0.9nm,0.3s,baz=84,slow=6.5,SNR=7.2						
WRA	Warramunga Arr	42.15	193	P	P	16 36 45.1	+1.0
	0.6nm,0.3s,baz=16,slow=9.1,SNR=16						
ASAR	Alice Springs	45.86	192	P	P	16 37 14.3	+1.0
	0.3nm,0.4s,baz=13,slow=6.8,SNR=8.4						
ZALV	Zalesovo Beam	54.39	322	P	P	16 38 16.0	-0.6
	0.7nm,0.4s,baz=102,slow=8.9,SNR=3.6						
ZALV				PcP	PcP	16 39 15.3	-0.9
	0.6nm,0.4s,baz=130,slow=4.5,SNR=2.5						
MKAR	Makanchi Array	54.87	313	P	P	16 38 19.7	-0.5
	0.6nm,0.5s,baz=87,slow=8.9,SNR=6.3						
MKAR				PcP	PcP	16 39 17.7	-0.6
	0.2nm,0.4s,baz=74,slow=3.5,SNR=1.4						
ILAR	Eielson Array	62.13	27	P	P	16 39 09.2	-0.4
	0.4nm,0.8s,baz=266,slow=6.0,SNR=2.2						
ARCES	ARCESS Array B	79.10	342	P	P	16 40 51.3	0.0
	7.1nm,1.1s,baz=38,slow=6.1,SNR=6.9						
KBZ	Khabaz	82.55	314	P	P	16 41 09.8	-0.1
	2.1nm,1.0s,baz=141,slow=6.5,SNR=2.8						
FINES	FINESS Array B	83.36	335	P	P	16 41 12.5	-1.2
	1.3nm,0.4s,baz=64,slow=4.9,SNR=13						

IDC 04 16:36:12.4±6.1, 5.°02S×141.°66E, h92^{km}±34^{km}, mb3.1/1, mb1 3.4/4, mb1mx3.0/46, mbtmp3.5/4, Error ellipse: s-maj=139.7km s-min=20.7km az=87.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	2.66	339	P	Pn	16 36 53.5	0.0
	4.4nm,0.3s,baz=206,slow=9.9,SNR=19						
JAY				S	Sn	16 37 25.8	+0.6
	5.0nm,0.3s,baz=30,slow=9.8,SNR=6.5						
WRA	Warramunga Arr	16.45	205	P	Pn	16 39 57.0	-0.7
	0.3nm,0.3s,baz=27,slow=12,SNR=15						
ASAR	Alice Springs	19.99	201	P	P	16 40 38.0	+0.3
	0.1nm,0.3s,baz=29,slow=10,SNR=19						
MKAR	Makanchi Array	73.41	322	P	P	16 47 34.5	0.0
	0.2nm,0.6s,baz=107,slow=6.8,SNR=2.0						

*IDC **04** 16:36:53.2±1.0, 8.°27S×125.°42E, h0^{km}, mb4.0/7, mb1 4.2/11, mb1mx3.8/53, mbtmp4.0/11, ML4.0/4, Error ellipse: s-maj=32.0km s-min=18.4km az=92.0*

*NEIC **04** 16:36:57.5±2.0, 8.°38S±0.°04×125.°12E±0.°08, h24^{km}±7^{km}, mb4.2/8, Error ellipse: s-maj=11.4km s-min=4.7km az=74.0*

*DJA **04** 16:36:58.7±0.3, 8°S±3°×12°5E±°, h76^{km}±28^{km}, M4.1/10, mb4.3/10, mB4.8/1, MLv4.1/10, Mw(mB)4.0/1*

ISC 04 16:36:56.7±0.6, 8.°42S±0.°05×125.°20E±0.°06, h24^{km}, n52, σ1^{s}.66/56, mb4.2/9, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.61	215		Pn	16 37 23.6	-0.2
SOEI	Soe	1.61	215	P	Pb	16 37 26.2	+0.3
SOEI				S	Sb	16 37 44.7	-1.2
SOEI	Soe	1.61	215	P	Pb	16 37 28.2	+2.3
BATI	Baumata	2.33	220	Pn	Pb	16 37 37.2	-0.9
	16nm,0.3s,baz=41,slow=2.8,SNR=13						
BATI				Sn	Sb	16 38 09.7	+3.2
	31nm,0.3s,baz=334,slow=22,SNR=7.6						
BATI	Baumata	2.33	220	P	Pb	16 37 36.1	-2.0
MMRI	Maumere	2.94	266	Pn	Pn	16 37 42.0	+0.1
MMRI	Maumere	2.94	266	P	Pn	16 37 42.6	+0.7
MMRI	Maumere	2.94	266	P	Pn	16 37 44.8	+2.9
WSI	Waingapu	5.00	255	P	Pn	16 38 11.4	+1.1
BSSI	Bau Bau, Buton	5.19	296	P	Pn	16 38 11.6	-1.3
	0.1nm22nm,1.1s						
BSSI				S	Sn	16 39 07.9	-4.2
	0.1nm22nm,1.1s						
BKSI	Bulukumba	5.91	301	P	Pn	16 38 22.6	-0.2
	0.0nm10nm,0.7s						
SANI	Sanana	6.38	7	P	Pn	16 38 29.2	0.0
	0.0nm8.5nm,0.6s						
SANI	Sanana	6.38	7	P	Pn	16 38 29.6	+0.4
MTN	Manton Dam	7.30	128	Pn	Pn	16 38 43.0	+1.1
PLAI	Plampang	7.35	266	P	Pn	16 38 43.8	+1.2
	0.2nm58nm,0.7s						
PLAI	Plampang	7.35	266	P	Pn	16 38 46.2	+3.6
KNRA	Kununurra	8.01	155	Pn	Pn	16 38 54.0	+2.4
KNRA	Kununurra	8.01	155	P	Pn	16 38 57.6	+6.0
	30nm,0.9s						
TWSI	Taliwang, Sumb	8.23	267	P	Pn	16 38 54.7	0.0
	18nm,1.3s						
TNTI	Ternate	9.38	13	Pn	Pn	16 39 11.5	+1.0
TNTI	Ternate	9.38	13	P	Pn	16 39 09.8	-0.7
	12nm,0.6s						
FITZ	Fitzroy Crossi	9.63	177	Pn	Pn	16 39 14.6	+0.8
	0.9nm,0.3s,baz=10,slow=12,SNR=27						
FITZ				Sn	Sn	16 40 59.5	-1.9
	1.2nm,0.3s,baz=88,slow=10,SNR=6.4						
FITZ	Fitzroy Crossi	9.63	177	Pn	Pn	16 39 14.8	+1.0
FITZ	Fitzroy Crossi	9.63	177	P	Pn	16 39 19.2	+5.3
	6.5nm,0.7s						
TOLI2	Tolitoli	10.44	335	Pn	Pn	16 39 24.7	-0.3
PSA00	Pilbara Seismi	14.06	201	Pn	Pn	16 40 14.2	-0.2
WB0	Warramunga Arr	14.37	143	Pn	Pn	16 40 19.3	+0.6
WRAB	Tennant Creek	14.47	143	Pn	Pn	16 40 21.5	+1.4
WRA	Warramunga Arr	14.47	143	Pn	Pn	16 40 18.8	-1.3
	1.3nm,0.3s,baz=319,slow=12,SNR=13						
WRA				Sn	Sn	16 42 56.3	-3.6
	0.4nm,0.3s,baz=312,slow=22,SNR=5.2						
WRA	Warramunga Arr	14.47	143	Pn	Pn	16 40 22.0	+1.8
WB2	Warramunga Arr	14.48	143	Pn	Pn	16 40 21.2	+1.0
WR0	Warramunga Arr	14.61	143	Pn	Pn	16 40 21.5	-0.4
AS31	Alice Springs	17.30	152	Pn	P	16 40 57.9	-0.2
ASAR	Alice Springs	17.30	152	P	Pn	16 40 56.9	+0.1
	0.5nm,0.3s,baz=325,slow=11,SNR=16						
ASAR				S	Sn	16 44 04.1	-4.7
	0.1nm,0.3s,baz=319,slow=19,SNR=5.9						
BBOO	Buckleboo	26.27	159	P	P	16 42 32.4	+2.1
STKA	Stephens Creek	27.88	149	P	P	16 42 47.7	+3.0
CMAR	Chiang Mai Arr	37.21	316	P	P	16 44 06.9	+0.4
	1.0nm,0.9s,baz=144,slow=6.6,SNR=8.0						
CMAR	Chiang Mai Arr	37.21	316	P	P	16 44 06.7	+0.3
JWT	Wachi	44.52	12	P	P	16 45 08.1	+1.7
KSAR	Wonju Array Be	45.69	3	P	P	16 45 16.7	+1.0
MJAR	Matsushiro Arr	46.37	15	P	P	16 45 19.6	-1.5
	2.0nm,0.8s,baz=188,slow=9.3,SNR=4.8						
SONM	Songino Array	58.43	345	P	P	16 46 50.6	0.0
	0.6nm,0.6s,baz=132,slow=8.7,SNR=5.2						
SONM	Songino Array	58.43	345	P	P	16 46 50.7	+0.1
SONM				IAmb	IAmb	16 46 53.3	
	comp=Z,1.4nm,1.1s						
MK31	Makanchi Array	66.91	329	P	P	16 47 47.0	-0.1
MK31				IAmb	IAmb	16 47 49.3	
	comp=Z,2.1nm,0.9s						
MKAR	Makanchi Array	66.91	329	P	P	16 47 47.3	+0.3
	comp=Z,1.3nm,0.5s,baz=130,slow=6.2,SNR=16						
MKAR	Makanchi Array	66.91	329	P	P	16 47 46.8	-0.3
ZALV	Zalesovo Beam	70.84	336	P	P	16 48 10.6	-0.8
	comp=Z,1.3nm,0.8s,baz=190,slow=2.6,SNR=6.5						
ZALV	Zalesovo Beam	70.84	336	P	P	16 48 09.8	-1.6
KURBB	Kurchatov Arra	71.32	331	P	P	16 48 14.1	-0.2
	comp=Z,1.0nm,0.8s,baz=140,slow=5.0,SNR=11						
KURK	Kurchatov	71.34	331	P	P	16 48 13.7	-0.7
KURK				IAmb	IAmb	16 48 15.8	
	comp=Z,2.7nm,0.8s						
TIXI	Tiksi	79.94	1	P	P	16 49 03.2	0.0
	comp=Z,2.3nm,0.3s,baz=150,slow=1.6,SNR=16						
TIXI	Tiksi	79.94	1	P	P	16 49 03.6	+0.4
TIXI				IAmb	IAmb	16 49 05.8	

	comp=Z,2.5nm,1.1s						

*NEIC **04** 16:38:49.1±0.7, 36°.921N±0°.009×97°.84W±0°.01, h5^{km}±3^{km}, Error ellipse: s-maj=1.6km s-min=1.1km az=128.0*

TUL 04 16:38:48.8±1.1**, 36°.944N**±0°.009×**97°.84W**±0°.01**, h3**^{km}±6^{km}**, ML3.2, mb_Lg2.6**/39(NEIC)**, ML2.7**/22(NEIC)**, Error ellipse: s-maj=1.6km s-min=1.2km az=111.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T35A	**Sooner Cattle**	**1.06**	**91**	Pg	Pg	16 39 09.1	-0.2
T35A				Sg	Sg	16 39 23.1	+0.1
U32A	**Winter Ranch,**	**1.09**	**239**	Pg	Pg	16 39 09.2	-0.5
U32A				Sg	Sg	16 39 23.3	-0.6
OKCFA	**Oklahoma City**	**1.56**	**168**	Pn	Pn	16 39 17.2	-0.2
OKCFA				IAmb_Lg		16 39 40.7	
	comp=Z,51nm,0.8s						
OKCSW	**OKLAHOMA CITY**	**1.57**	**168**	Pn	Pn	16 39 17.8	+0.1
R32A	**Long Quarter,**	**1.63**	**335**	Pn	Pn	16 39 18.8	+0.3
FNO	**Franklin**	**1.72**	**168**	Pn	Pn	16 39 19.7	0.0
WMOK	**Wichita Mounta**	**2.33**	**199**	Pn	Pn	16 39 28.0	-0.1
KSU1	**Kansas State U**	**2.36**	**24**	Pn	Pn	16 39 29.1	+0.6
CBKS	**Cedar Bluff**	**2.40**	**322**	Pn	Pn	16 39 29.9	+0.9
U38A	**Gravette**	**2.82**	**99**	Pn	Pn	16 39 34.9	0.0
X37A	**Clayton**	**3.09**	**139**	Pn	Pn	16 39 39.2	+0.7
X37A				IAmb_Lg		16 40 31.7	
	comp=Z,27nm,0.8s						
HHAR	**Hobbs**	**3.21**	**101**	Pn	Pn	16 39 40.3	+0.1
HHAR				IAmb_Lg		16 40 30.5	
	comp=Z,13nm,0.9s						
S39A	**Bolivar**	**3.68**	**77**	Pn	Pn	16 39 46.2	-0.4
W39A	**Magazine**	**3.72**	**117**	Pn	Pn	16 39 48.4	+1.2
W39A				IAmb_Lg		16 40 52.3	
	comp=Z,17nm,0.7s						
AMTX	**Amarillo**	**3.73**	**238**	Pn	Pn	16 39 48.8	+1.3
AMTX				IAmb_Lg		16 40 57.5	
	comp=Z,16nm,0.9s						
U40A	**Yellville**	**4.05**	**97**	Pn	Pn	16 39 52.6	+0.8
MIAR	**Mount Ida**	**4.21**	**123**	Pn	Pn	16 39 53.2	-0.8
KSCO	**Kaye Shedlock’**	**4.31**	**300**	IAmb_Lg		16 41 15.1	
	comp=Z,14nm,0.8s						
P38A	**Dawn**	**4.32**	**50**	Pn	Pn	16 39 55.3	-0.1
P38A				IAmb_Lg		16 41 08.1	
	comp=Z,15nm,0.7s						
MGMO	**Mountain Grove**	**4.46**	**86**	Pn	Pn	16 39 58.1	+0.7
MGMO				IAmb_Lg		16 41 11.1	
	comp=Z,8.4nm,0.7s						
R40A	**Maddies Statio**	**4.62**	**71**	Pn	Pn	16 39 59.8	+0.2
FCAR	**Ozark Folk Cen**	**4.73**	**101**	IAmb_Lg		16 41 21.5	
	comp=Z,9.1nm,1.0s						
X40A	**Basin Creek Fa**	**4.75**	**120**	Pn	Pn	16 40 02.3	+0.9
X40A				IAmb_Lg		16 41 20.4	
	comp=Z,8.4nm,0.8s						
WHAR	**Wooly Hollow**	**4.79**	**109**	IAmb_Lg		16 41 20.4	
	comp=Z,12nm,0.9s						
WHTX	**Lake Whitney,**	**4.95**	**176**	Pn	Pn	16 40 03.6	-0.5
P40A	**Paris**	**5.24**	**59**	IAmb_Lg		16 41 37.8	
	comp=Z,8.9nm,0.7s						
T25A	**Trinidad**	**5.26**	**274**	IAmb_Lg		16 41 47.4	
	comp=Z,7.1nm,0.7s						
N38A	**Joes South For**	**5.26**	**42**	IAmb_Lg		16 41 36.6	
	comp=Z,10nm,0.8s						
CCM	**Cathedral Cave**	**5.36**	**76**	IAmb_Lg		16 41 45.5	
	comp=Z,8.8nm,0.7s						
LCAR	**Lake Charles**	**5.46**	**97**	Pn	Pn	16 40 11.0	-0.1
LCAR				IAmb_Lg		16 41 44.9	
	comp=Z,6.5nm,0.7s						
PBMO	**Poplar Bluff**	**5.94**	**89**	IAmb_Lg		16 41 57.9	
	comp=Z,10nm,0.8s						
FVM	**French Village**	**5.99**	**78**	Pn	Pn	16 40 18.1	-0.2
SCIA	**State Center**	**6.11**	**34**	IAmb_Lg		16 42 15.7	
	comp=Z,14nm,0.9s						
JCT	**Junction City**	**6.65**	**195**	IAmb_Lg		16 42 22.8	
	comp=Z,8.3nm,0.9s						
S44A	**Carbondale**	**6.88**	**81**	IAmb_Lg		16 42 25.8	
	comp=Z,12nm,1.1s						
PHWY	**Pilot Hill**	**7.35**	**309**	IAmb_Lg		16 42 55.1	
	comp=Z,4.9nm,0.8s						

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*IDC **04** 16:41:18.1±2.1, 4°.55S×151°.67E, h0^{km}, mb3.7/4, mb1 4.0/5, mb1mx3.5/52, mbtmp3.8/5, ML1.5/1, Error ellipse: s-maj=136.7km s-min=23.1km az=128.0*

ISC 04 16:41:19.7±2.3**, 4°.5S**±0°.6×**151°.6E**±0°.8**, h10**^{km}**, n6, σ0^{s}.24**/7**, mb3.7**/4**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.58**	**222**	Pn	**Pn**	**16 42 56.6**	**0.0**
	0.5nm,0.3s,baz=135,slow=16,SNR=1.6						
PMG				Sn	**Sn**	**16 44 11.5**	**-0.1**
	3.0nm,0.3s,baz=335,slow=24,SNR=7.3						
WRA	**Warramunga Arr**	**22.77**	**226**	P	**P**	**16 46 22.3**	**-0.2**
	1.2nm,0.8s,baz=52,slow=10.0,SNR=3.0						
ASAR	**Alice Springs**	**25.59**	**220**	P	**P**	**16 46 49.4**	**+0.1**
	1.1nm,0.8s,baz=56,slow=11,SNR=4.8						
FITZ	**Fitzroy Crossi**	**28.78**	**240**	P	**P**	**16 47 18.2**	**+0.2**
	1.1nm,0.6s,baz=57,slow=8.5,SNR=1.8						
ILAR	**Eielson Array**	**82.35**	**22**	P	**P**	**16 53 41.5**	**0.0**
	0.7nm,0.8s,baz=247,slow=5.5,SNR=8.5						
TORD	**Torodi Ar. Bea**	**149.13**	**288**	PKPbc	**PKPbc**	**17 01 09.1**	**-0.3**
	0.5nm,0.9s,baz=67,slow=2.8,SNR=2.2						

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*IDC **04** 16:48:28.3±1.1, 8°.12S×125°.28E, h0^{km}, mb4.0/5, mb1 4.2/10, mb1mx3.9/43, mbtmp4.0/10, ML3.8/5, MS3.1/4, Ms1 3.1/4, ms1mx2.7/31, Error ellipse: s-maj=30.9km s-min=18.3km az=87.0*

*NEIC **04** 16:48:30.7±2.7, 8°.15S±0°.07×124°.97E±0°.08, h10^{km}±1^{km}, mb4.3/6, Error ellipse: s-maj=15.1km s-min=10.5km az=60.0*

*DJA **04** 16:48:31.8±0.2, 8°S±3°×12°5E±°, h10^{km}, M4.3/15, mB4.8/5, mb4.4/15, MLv4.3/10, Mw(mB)4.1/5*

ISC 04 16:48:31.6±0.6**, 8°.28S**±0°.05×**125°.07E**±0°.06**, h24**^{km}**, n52, σ2^{s}.04**/56**, mb4.2**/8**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**1.67**	**208**	Pn	**Pb**	**16 49 02.4**	**+0.7**
SOEI	**Soe**	**1.67**	**208**	P	**Pb**	**16 49 02.9**	**+1.1**
SOEI	**Soe**	**1.67**	**208**	P	**Pb**	**16 49 03.3**	**+1.5**
BATI	**Baumata**	**2.37**	**216**	Pn	**Pb**	**16 49 13.2**	**-0.4**
	29nm,0.3s,baz=17,slow=1.8,SNR=33						
BATI				Sn	**Sb**	**16 49 45.1**	**+2.6**
	17nm,0.3s,baz=106,slow=20,SNR=5.7						
BATI				LR	LR	16 49 51.1	
	comp=Z,60nm,21.4s,baz=40,slow=32						
BATI	**Baumata**	**2.37**	**216**	P	**Pb**	**16 49 12.4**	**-1.2**
MMRI	**Maumere**	**2.83**	**263**	Pn	**Pn**	**16 49 16.0**	**+0.7**
MMRI	**Maumere**	**2.83**	**263**	P	**Pn**	**16 49 17.5**	**+2.2**
WSI	**Waingapu**	**4.92**	**253**	P	**Pn**	**16 49 46.3**	**+2.2**
BSSI	**Bau Bau, Buton**	**5.02**	**295**	P	**Pn**	**16 49 45.1**	**-0.4**
BKSI	**Bulukumba**	**5.73**	**301**	P	**Pn**	**16 49 54.9**	**-0.3**
	0.1nm14nm,0.7s						
WBSI	**Waikabubak, Su**	**5.77**	**256**	P	**Pn**	**16 49 57.6**	**+1.7**
	73nm,1.1s						
KAPI	**Kappang**	**6.20**	**301**	Pn	**Pn**	**16 50 02.3**	**+0.5**
	0.9nm,0.3s,baz=159,slow=7.9,SNR=2.1						
KAPI				Sn	**Sn**	**16 51 11.4**	**-0.6**
	0.6nm,0.3s,baz=121,slow=12,SNR=1.6						
KAPI	**Kappang**	**6.20**	**301**	Pn	**Pn**	**16 49 59.1**	**-2.7**
SANI	**Sanana**	**6.26**	**8**	P	**Pn**	**16 50 04.2**	**+1.7**
DRS	**Darwin Rock St**	**7.06**	**126**	P	**Pn**	**16 50 17.4**	**+3.8**
	20nm,0.6s						
PLAI	**Plampang**	**7.24**	**265**	P	**Pn**	**16 50 17.9**	**+1.9**
	0.2nm46nm,0.7s						
PLAI	**Plampang**	**7.24**	**265**	P	**Pn**	**16 50 18.8**	**+2.8**
TTSI	**Tana Toraja**	**7.37**	**315**	P	**Pn**	**16 50 17.6**	**-0.2**
	0.1nm2μm26nm,1.3s						
MTN	**Manton Dam**	**7.49**	**128**	Pn	**Pn**	**16 50 22.8**	**+3.4**
MTN	**Manton Dam**	**7.49**	**128**	P	**Pn**	**16 50 22.9**	**+3.5**
	33nm,0.5s						
LUWI	**Luwuk**	**7.55**	**342**	Pn	**Pn**	**16 50 19.2**	**-1.0**
LUWI	**Luwuk**	**7.55**	**342**	P	**Pn**	**16 50 19.4**	**-0.8**
	0.2nm919nm61nm,0.9s						
KNRA	**Kununurra**	**8.19**	**154**	Pn	**Pn**	**16 50 31.2**	**+2.1**
KNRA	**Kununurra**	**8.19**	**154**	P	**Pn**	**16 50 31.2**	**+2.2**
	49nm,0.7s						
KDU	**Kakadu**	**8.49**	**122**	P	**Pn**	**16 50 36.5**	**+3.3**
	18nm,0.5s						
FITZ	**Fitzroy Crossi**	**9.78**	**177**	Pn	**Pn**	**16 50 51.7**	**+0.9**
	0.8nm,0.3s,baz=17,slow=10,SNR=26						
FITZ				Sn	**Sn**	**16 52 37.3**	**-2.6**
	1.2nm,0.3s,baz=273,slow=22,SNR=10						
FITZ	**Fitzroy Crossi**	**9.78**	**177**	Pn	**Pn**	**16 50 51.6**	**+0.8**
FITZ	**Fitzroy Crossi**	**9.78**	**177**	P	**Pn**	**16 50 51.2**	**+0.4**
	13nm,1.9s						
TOLI2	**Tolitoli**	**10.26**	**335**	Pn	**Pn**	**16 50 54.6**	**-2.9**
WB0	**Warramunga Arr**	**14.56**	**143**	Pn	**Pn**	**16 51 54.2**	**-2.1**
WRAB	**Tennant Creek**	**14.66**	**143**	Pn	**Pn**	**16 51 55.2**	**-2.4**
WRA	**Warramunga Arr**	**14.66**	**143**	Pn	**Pn**	**16 51 56.1**	**-1.5**
	0.6nm,0.3s,baz=317,slow=13,SNR=31						
WRA				Sn	**Sn**	**16 54 35.7**	**-3.8**
	0.7nm,0.3s,baz=316,slow=23,SNR=6.6						
WRA				LR	LR	16 58 34.3	
	comp=Z,145nm,21.2s,baz=315,slow=41						
WRA	**Warramunga Arr**	**14.66**	**143**	Pn	**Pn**	**16 51 56.0**	**-1.7**
WB2	**Warramunga Arr**	**14.67**	**143**	Pn	**Pn**	**16 51 56.0**	**-1.7**
WR0	**Warramunga Arr**	**14.79**	**143**	Pn	**Pn**	**16 51 57.8**	**-1.7**
AS31	**Alice Springs**	**17.48**	**152**	P	**P**	**16 52 36.3**	**+1.2**
ASAR	**Alice Springs**	**17.48**	**152**	P	**P**	**16 52 34.7**	**-0.4**
	0.3nm,0.3s,baz=320,slow=11,SNR=42						
ASAR				S	**Sn**	**16 55 41.7**	**-6.4**
	0.2nm,0.3s,baz=318,slow=19,SNR=5.7						
ASAR	**Alice Springs**	**17.48**	**152**	Pn	**P**	**16 52 35.3**	**+0.2**
COEN	**Coen**	**18.63**	**109**	P	**Pn**	**16 52 49.8**	**+1.6**
COEN				IAmb	IAmb	16 53 02.5	
	comp=Z,8.6nm,0.9s						
CTAO	**Charters Tower**	**23.62**	**122**	P	**P**	**16 53 44.0**	**+2.9**
CTAO				IAmb	IAmb	16 53 55.1	
	comp=Z,19nm,1.2s						
STKA	**Stephens Creek**	**28.06**	**149**	LR	LR	17 07 15.7	
	comp=Z,125nm,20.9s,baz=219,slow=40						
CM31	**Chiang Mai Arr**	**37.02**	**316**	P	**P**	**16 55 40.2**	**+0.4**
CM31				IAmb	IAmb	16 55 41.7	
	comp=Z,3.6nm,0.9s						
CMAR	**Chiang Mai Arr**	**37.02**	**316**	P	**P**	**16 55 40.2**	**+0.4**
	comp=Z,1.5nm,0.7s,baz=139,slow=6.8,SNR=14						
CMAR				LR	LR	17 12 03.0	
	comp=Z,28nm,19.6s,baz=189,slow=38						
MJAR	**Matsushiro Arr**	**46.26**	**15**	P	**P**	**16 56 54.8**	**-0.4**
	comp=Z,2.4nm,0.8s,baz=182,slow=8.7,SNR=5.9						
SONM	**Songino Array**	**58.27**	**345**	P	**P**	**16 58 23.9**	**-0.5**
	comp=Z,0.7nm,0.8s,baz=152,slow=6.4,SNR=3.6						
MKAR	**Makanchi Array**	**66.73**	**329**	P	**P**	**16 59 21.2**	**+0.3**
	comp=Z,1.3nm,0.7s,baz=130,slow=7.5,SNR=8.4						
MKAR	**Makanchi Array**	**66.73**	**329**	P	**P**	**16 59 20.5**	**-0.3**
ZAA0	**Zalesovo Array**	**70.67**	**336**	P	**P**	**16 59 43.5**	**-1.7**
ZALV	**Zalesovo Beam**	**70.67**	**336**	P	**P**	**16 59 44.7**	**-0.5**
	comp=Z,1.0nm,0.5s,baz=120,slow=5.2,SNR=8.2						
ZALV	**Zalesovo Beam**	**70.67**	**336**	P	**P**	**16 59 44.2**	**-1.0**
KURK	**Kurchatov**	**71.15**	**331**	P	**P**	**16 59 48.2**	**0.0**
KURK				IAmb	IAmb	16 59 49.0	
	comp=Z,5.5nm,1.1s						
ABKAR	**Akbulak array**	**80.52**	**323**	P	**P**	**17 00 40.9**	**-0.9**

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*IDC **04** 16:50:45.8±0.7, 28°.57S×178°.17W, h198^{km}±5^{km}, mb3.4/7, mb1 3.7/8, mb1mx3.5/28, mbtmp4.0/8, Error ellipse: s-maj=24.8km s-min=18.7km az=86.0*

ISC 04 16:50:41.9±0.8**, 28°.62S**±0°.07×**179°.77W**±0°.10**, h150**^{km}**, n41, σ2^{s}.79**/54**, mb3.7**/7**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RIZ	**Raoul Island**	**1.73**	**112**	P	**Pn**	**16 51 14.3**	**+0.4**
RIZ				S	**Sn**	**16 51 38.0**	**-0.5**
RAO	**Raoul Island**	**1.74**	**112**	P	**Pn**	**16 51 14.0**	**0.0**
	413nm,0.3s,baz=68,slow=22,SNR=21						
RAO				S	**Sn**	**16 51 36.0**	**-2.7**
	473nm,0.3s,baz=83,slow=22,SNR=8.0						
GLKZ	**Green Lake**	**1.74**	**112**	P	**Pn**	**16 51 13.5**	**-0.5**
GLKZ				S	**Sn**	**16 51 37.6**	**-1.1**
MXZ	**Matakaoa Point**	**9.06**	**190**	S	**Sn**	**16 54 32.8**	**+2.9**
WMGZ	**Waiomatatini S**	**9.30**	**189**	S	**Sn**	**16 54 34.9**	**-0.7**
HAZ	**Te Kaha**	**9.34**	**192**	P	**Pn**	**16 52 54.4**	**+1.4**
HAZ				S	**Sn**	**16 54 33.6**	**-2.9**
PKGZ	**Pakihiroa**	**9.42**	**190**	S	**Sn**	**16 54 41.2**	**+2.7**
RUGZ	**Raukumara Rang**	**9.56**	**192**	P	**Pn**	**16 52 57.8**	**+1.6**
RUGZ				S	**Sn**	**16 54 43.3**	**+1.2**
PUZ	**Puketiti**	**9.57**	**189**	S	**Sn**	**16 54 43.8**	**+1.6**
TWGZ	**Tauwhareparae**	**9.71**	**191**	P	Pn	16 53 06.6	+8.5
TWGZ				S	**Sn**	**16 54 51.4**	**+5.7**
MWZ	**Matawai**	**9.95**	**192**	S	**Sn**	**16 54 55.2**	**+3.9**
URZ	**Urewera**	**9.96**	**194**	S	**Sn**	**16 54 56.7**	**+5.2**
	5.6nm,0.3s,baz=300,slow=20,SNR=3.2						
URZ	**Urewera**	**9.96**	**194**	P	**Pn**	**16 53 05.4**	**+4.1**
URZ				S	**Sn**	**16 54 56.9**	**+5.3**
TKGZ	**Te Karaka**	**9.99**	**191**	S	**Sn**	**16 54 55.2**	**+2.9**
PRGZ	**Paritu Road**	**10.46**	**190**	S	**Sn**	**16 55 06.6**	**+2.9**
RAHZ	**Arahi**	**10.60**	**193**	S	**Sn**	**16 55 08.7**	**+1.8**
BKZ	**Black Stump Fm**	**10.97**	**195**	P	**Pn**	**16 53 16.4**	**+1.7**
BKZ				S	**Sn**	**16 55 18.4**	**+2.5**
MSVF	**Nonsavu**	**11.02**	**349**	P	**P**	**16 53 22.9**	**-1.2**
	2.9nm,0.3s,baz=158,slow=10,SNR=33						
PXZ	**Pawanui**	**11.72**	**193**	P	**P**	**16 53 28.2**	**-3.3**
PXZ				P	**Sn**	**16 55 31.5**	**-2.3**
PNHZ	**Pukenui**	**11.75**	**195**	P	**P**	**16 53 28.2**	**-3.8**
PNHZ				S	**Sn**	**16 55 33.6**	**-1.1**
WPHZ	**Waipukurau**	**11.84**	**194**	P	**P**	**16 53 35.0**	**+2.1**
WPHZ				S	**Sn**	**16 55 35.8**	**-1.0**
PRHZ	**Porangahau**	**11.99**	**193**	S	**Sn**	**16 55 40.8**	**+0.4**
DVHZ	**Dannevirke**	**12.12**	**195**	S	**Sn**	**16 55 42.1**	**-1.5**
BFZ	**Birch Farm**	**12.47**	**194**	P	**Pn**	**16 53 32.8**	**-1.4**
BFZ				S	**Sn**	**16 55 48.3**	**-3.7**
MRZ	**Mangatainoka R**	**12.61**	**196**	P	**Pn**	**16 53 34.9**	**-1.0**
MRZ				P	**Sn**	**16 55 48.7**	**-6.5**
TIWZ	**Tintock**	**12.64**	**195**	P	**P**	**16 53 39.1**	**-2.8**
TIWZ				P	**Sn**	**16 55 56.3**	**+0.2**
HOWZ	**Holdsworth Sta**	**12.84**	**196**	P	**Pn**	**16 53 37.5**	**-1.5**
HOWZ				P	**Sn**	**16 55 58.1**	**-2.9**
KIW	**Kapiti Island**	**12.97**	**198**	P	**Pn**	**16 53 41.2**	**+0.6**
KIW				P	**Sn**	**16 56 03.1**	**-0.9**
MTW	**Mount Morrison**	**13.09**	**196**	P	**P**	**16 53 45.3**	**-1.5**
MTW				P	**Sn**	**16 55 60.0**	**-7.0**
CAW	**Cannon Point**	**13.16**	**197**	P	**Pn**	**16 53 40.8**	**-2.2**
CAW				P	**Sn**	**16 56 06.9**	**-1.6**
PAWZ	**Paruwai Farm**	**13.32**	**196**	P	**Pn**	**16 53 45.7**	**+0.5**
PAWZ				P	**Sn**	**16 56 08.8**	**-3.7**
STKA	**Stephens Creek**	**33.42**	**255**	P	P	16 57 17.8	+11
	1.2nm,0.7s,baz=106,slow=7.4,SNR=1.8						
ASAR	**Alice Springs**	**41.68**	**266**	P	P	16 58 26.4	+10
	0.5nm,0.6s,baz=101,slow=6.8,SNR=2.3						
WRA	**Warramunga Arr**	**42.51**	**271**	P	P	16 58 32.8	+10
	0.5nm,0.4s,baz=108,slow=6.2,SNR=6.0						
VNDA	**Vanda**	**49.71**	**185**	P	**P**	**16 59 18.5**	**+0.3**
	0.5nm,0.3s,baz=334,slow=8.8,SNR=12						
MAW	**Mawson**	**73.42**	**201**	P	**P**	**17 01 59.4**	**+2.2**
	1.4nm,0.6s,baz=150,slow=8.1,SNR=2.7						
MJAR	**Matsushiro Arr**	**75.91**	**326**	P	**P**	**17 02 14.7**	**+2.7**
	0.8nm,0.7s,baz=162,slow=8.6,SNR=2.1						
NVAR	**Mina Array Bea**	**88.00**	**44**	P	P	17 03 09.2	-6.0
	1.0nm,0.8s,baz=222,slow=8.7,SNR=5.2						
FINES	**FINESS Array B**	**142.95**	**340**	PKhKP	PKPpre	17 09 52.2	
	0.6nm,0.7s,baz=57,slow=5.1,SNR=3.4						
NOA	**NORSAR Array B**	**146.75**	**350**	PKPbc	**PKPdf**	**17 10 02.4**	**-1.3**
	1.2nm,1.0s,baz=16,slow=4.6,SNR=3.5						
AKASG	**Malin Array Be**	**148.96**	**323**	PKPbc	**PKPbc**	**17 10 11.2**	**-0.5**
	1.5nm,0.5s,baz=44,slow=2.8,SNR=8.6						

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*NEIC **04** 16:58:31.0±1.5, 17°.8S±0°.2×178°.6W±0°.1, h594^{km}±9^{km}, mb4.2/43, Error ellipse: s-maj=27.0km s-min=15.1km az=150.0*

*IDC **04** 16:58:32.4±1.6, 17°.74S×178°.69W, h609^{km}±17^{km}, mb3.5/8, mb1 3.8/10, mb1mx3.4/24, mbtmp4.4/10, Error ellipse: s-maj=46.6km s-min=12.8km az=149.0*

ISC 04 16:58:31.0±0.7**, 17°.9S**±0°.1×**178°.5W**±0°.1**, h600**^{km}**, n67, σ0^{s}.75**/68**, mb4.2**/31**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.25**	**272**	P	**P**	**16 59 53.0**	**+1.3**
	4.0nm,0.3s,baz=116,slow=2.6,SNR=37						
MSVF	**Nonsavu**	**3.25**	**272**	P	**P**	**16 59 52.9**	**+1.2**
AFI	**Afiamalu**	**7.60**	**60**	P	**P**	**17 00 24.8**	**-1.9**
	4.3nm,0.3s,baz=244,slow=3.1,SNR=5.0						
FUNA	**Funafuti**	**9.54**	**346**	P	**P**	**17 00 44.0**	**-1.3**
MARNC	**Mare, Loyalty**	**13.15**	**252**	P	**P**	**17 01 20.1**	**-1.3**
SANVU	**Saraoutou**	**13.87**	**278**	P	**P**	**17 01 28.8**	**+0.1**
PINNC	**Pines Island,**	**13.97**	**248**	P	**P**	**17 01 29.2**	**-0.4**
OUENC	**Ouen Island, N**	**14.46**	**249**	P	**P**	**17 01 33.3**	**-0.9**
DZM	**Mont Dzumac**	**14.72**	**251**	P	**P**	**17 01 36.4**	**-0.3**
	0.7nm,0.3s,baz=121,slow=22,SNR=15						
DZM	**Mont Dzumac**	**14.72**	**251**	P	**P**	**17 01 36.0**	**-0.8**
KNTN	**Kanton**	**16.42**	**25**	P	**P**	**17 01 51.3**	**-0.9**
EIDS	**Eidsvold**	**29.17**	**250**	P	**P**	**17 03 45.7**	**+0.1**
EIDS				IAmb	IAmb	17 03 45.8	
	comp=Z,7.2nm,1.0s						
ARMA	**Armidale**	**29.86**	**240**	P	**P**	**17 03 51.8**	**+0.1**
CTAO	**Charters Tower**	**33.33**	**260**	P	**P**	**17 04 21.3**	**+0.2**
CAN	**Canberra**	**33.63**	**232**	P	**P**	**17 04 23.6**	**+0.1**
CAN				IAmb	IAmb	17 04 36.0	
	comp=Z,8.3nm,1.0s						
PMG	**Port Moresby**	**34.33**	**280**	P	**P**	**17 04 30.8**	**+1.3**
COEN	**Coen**	**36.98**	**270**	P	**P**	**17 04 51.9**	**+0.6**
TOO	**Toolangi**	**37.10**	**231**	P	**P**	**17 04 52.5**	**+0.4**
TOO				IAmb	IAmb	17 04 52.9	
	comp=Z,8.1nm,0.8s						
STKA	**Stephens Creek**	**38.54**	**241**	P	**P**	**17 05 04.3**	**+0.5**
	comp=Z,5.2nm,0.6s,baz=93,slow=9.9,SNR=14						
STKA	**Stephens Creek**	**38.54**	**241**	P	**P**	**17 05 04.0**	**+0.1**
BBOO	**Buckleboo**	**43.32**	**241**	P	**P**	**17 05 41.1**	**-0.4**
BBOO				IAmb	IAmb	17 05 42.0	
	comp=Z,12nm,1.0s						
WR0	**Warramunga Arr**	**44.33**	**259**	P	**P**	**17 05 49.0**	**-0.5**
WR0				IAmb	IAmb	17 05 56.6	
	comp=Z,4.8nm,1.1s						
WB0	**Warramunga Arr**	**44.48**	**260**	P	**P**	**17 05 50.1**	**-0.6**
WB2	**Warramunga Arr**	**44.51**	**259**		**P**	**17 05 50.4**	**-0.5**
WRAB	**Tennant Creek**	**44.51**	**260**	P	**P**	**17 05 50.4**	**-0.4**
WRAB				IAmb	IAmb	17 05 51.1	
	comp=Z,7.3nm,0.7s						
WRA	**Warramunga Arr**	**44.52**	**259**	P	**P**	**17 05 50.6**	**-0.3**
	comp=Z,5.0nm,0.5s,baz=96,slow=7.0,SNR=101						
WRA	**Warramunga Arr**	**44.52**	**259**		**P**	**17 05 50.4**	**-0.6**
AS31	**Alice Springs**	**44.68**	**254**	P	**P**	**17 05 52.3**	**+0.1**
ASAR	**Alice Springs**	**44.68**	**254**	P	**P**	**17 05 52.3**	**+0.1**
	comp=Z,25nm,0.6s,baz=87,slow=8.8,SNR=349						
ASAR				S	**S**	**17 11 45.4**	**-1.1**
	comp=Z,0.3nm,0.8s,baz=84,slow=17,SNR=2.6						
MTN	**Manton Dam**	**48.67**	**268**	P	**P**	**17 06 22.1**	**-0.1**
MTN				IAmb	IAmb	17 06 22.5	
	comp=Z,6.8nm,0.8s						
FORT	**Forrest**	**49.92**	**245**	P	**P**	**17 06 30.0**	**-1.1**
KNRA	**Kununurra**	**50.37**	**264**	P	**P**	**17 06 34.4**	**-0.2**
KNRA				IAmb	IAmb	17 06 35.2	
	comp=Z,7.8nm,0.7s						
FAKI	**Fak Fak**	**50.45**	**281**	P	**P**	**17 06 35.5**	**+0.3**
FAKI				IAmb	IAmb	17 06 41.6	
	comp=Z,4.4nm,0.9s						
FITZ	**Fitzroy Crossi**	**52.91**	**261**	P	**P**	**17 06 53.0**	**+0.2**
PSA00	**Pilbara Seismi**	**57.80**	**255**	P	**P**	**17 07 26.1**	**-0.5**
UGM	**Wanagama**	**69.52**	**268**	P	**P**	**17 08 40.7**	**-0.6**
PETK	**Petropavlovsk-**	**73.60**	**345**	P	**P**	**17 09 04.5**	**+0.5**
	comp=Z,1.9nm,0.6s,baz=115,slow=6.4,SNR=6.5						
OHAK	**Old Harbor**	**77.71**	**14**	P	**P**	**17 09 26.8**	**+0.2**
OHAK				IAmb	IAmb	17 09 38.5	
	comp=Z,12nm,1.0s						
YBH	**Yreka Blue Hor**	**78.56**	**39**	P	**P**	**17 09 32.9**	**+1.2**
HUMO	**Hull Mountain**	**78.94**	**38**	P	**P**	**17 09 35.0**	**+1.4**
NVAR	**Mina Array Bea**	**79.47**	**44**	P	**P**	**17 09 37.3**	**+0.6**
	comp=Z,1.7nm,0.7s,baz=222,slow=8.6,SNR=9.1						
NVAR	**Mina Array Bea**	**79.47**	**44**	P	**P**	**17 09 37.9**	**+1.2**
KVN	**Kaiserville**	**79.94**	**43**	P	**P**	**17 09 39.6**	**+0.5**
K05A	**Summer Lake**	**80.24**	**39**	P	**P**	**17 09 41.5**	**+1.0**
K05A				IAmb	IAmb	17 09 42.1	
	comp=Z,5.1nm,0.8s						
CNPM	**China Poot**	**80.27**	**14**	P	**P**	**17 09 40.5**	**+0.4**
BRLK	**Bradley Lake**	**80.56**	**14**	P	**P**	**17 09 41.2**	**-0.4**
BRLK				IAmb	IAmb	17 10 00.8	
	comp=Z,12nm,1.2s						
H04A	**Detroit Lake**	**80.63**	**37**	P	**P**	**17 09 42.8**	**+0.5**
M19K	**Big River Lodg**	**81.78**	**11**	P	**P**	**17 09 48.1**	**+0.4**
M19K				IAmb	IAmb	17 09 48.3	
	comp=Z,3.5nm,0.8s						
I07A	**Izee**	**81.85**	**39**	P	**P**	**17 09 49.3**	**+0.6**
I07A				IAmb	IAmb	17 09 50.8	
	comp=Z,4.4nm,0.9s						
J08A	**Circle Bar Ran**	**82.06**	**40**	P	**P**	**17 09 50.7**	**+1.0**
J08A				IAmb	IAmb	17 09 51.4	
	comp=Z,5.9nm,1.2s						
SUA	**Susitna One**	**82.11**	**13**	P	**P**	**17 09 49.4**	**-0.2**
SUA				IAmb	IAmb	17 09 49.9	
	comp=Z,6.0nm,0.8s						
PSUT	**Pine Spring**	**82.51**	**46**	P	**P**	**17 09 52.3**	**0.0**
U15A	**North Rim**	**82.58**	**48**	P	**P**	**17 09 54.1**	**+1.4**
U15A				IAmb	IAmb	17 09 54.8	
	comp=Z,3.4nm,0.8s						
GHO	**Glory Hole Cre**	**82.79**	**14**	P	**P**	**17 09 52.6**	**-0.3**
GHO				IAmb	IAmb	17 09 53.6	
	comp=Z,6.8nm,0.6s						
G08A	**Pilot Rock**	**82.85**	**38**	P	**P**	**17 09 54.8**	**+1.1**
SCM	**Sheep Creek Mo**	**83.21**	**14**	P	**P**	**17 09 54.4**	**-0.6**
SCM				IAmb	IAmb	17 09 55.6	
	comp=Z,6.5nm,0.6s						
N25K	**Chitina, Valde**	**83.69**	**16**	P	**P**	**17 09 57.2**	**-0.2**
N25K				IAmb	IAmb	17 09 58.4	
	comp=Z,5.9nm,0.8s						
GLB	**Gilahina Butte**	**83.75**	**16**	P	**P**	**17 09 57.5**	**-0.2**
GLB				IAmb	IAmb	17 10 11.5	
	comp=Z,4.9nm,1.0s						
J20K	**Nowinta River**	**83.92**	**10**	P	**P**	**17 09 58.4**	**0.0**
TRF	**Thorofare Moun**	**83.99**	**12**	P	**P**	**17 09 58.2**	**-0.8**
TRF				IAmb	IAmb	17 09 59.0	
	comp=Z,9.0nm,0.9s						
RND	**Reindeer**	**84.25**	**13**	P	**P**	**17 10 00.1**	**0.0**
RND				IAmb	IAmb	17 10 00.7	
	comp=Z,4.8nm,0.8s						
ILAR	**Eielson Array**	**85.87**	**13**	P	**P**	**17 10 07.1**	**-0.7**
	comp=Z,0.9nm,0.4s,baz=220,slow=5.0,SNR=36						
TXAR	**Lajitas Array**	**86.07**	**58**	P	**P**	**17 10 11.0**	**+1.3**
	comp=Z,2.1nm,0.8s,baz=219,slow=6.0,SNR=16						
TXAR	**Lajitas Array**	**86.07**	**58**	P	**P**	**17 10 10.9**	**+1.2**
PDAR	**Pinedale Array**	**87.40**	**43**	P	**P**	**17 10 16.1**	**+0.3**
	comp=Z,1.2nm,0.6s,baz=211,slow=3.1,SNR=11						
CLL	**Collm**	**145.39**	**347**		**PKPbc**	**17 17 03.5**	**+0.8**
GERES	**GERESS Array B**	**147.53**	**345**	PKPbc	**PKPbc**	**17 17 08.8**	**0.0**
	comp=Z,1.4nm,0.5s,baz=20,slow=3.1,SNR=15						

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*ISK **04** 17:07:05.4, 37°.51N×38°.70E, h6^{km}, ML2.8/18*

*DDA **04** 17:07:05.5, 37°.52N×38°.72E, h13^{km}±2^{km}, ML2.6*

ISC 04 17:07:05.7±1.2**, 37°.53N**±0°.03×**38°.67E**±0°.02**, h3**^{km}±10^{km}**, n38, σ0^{s}.90**/53**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URFA	**Urfa**	**0.15**	**127**	PG	**Pg**	**17 07 08.5**	**-0.1**
URFA				SG	**Sg**	**17 07 10.5**	**0.0**
SURC	**SANLIURFA_SURC**	**0.65**	**184**	*i* P	**Pg**	**17 07 18.4**	**+0.2**
MALT	**Malatya**	**0.81**	**346**	PG	**Pg**	**17 07 21.4**	**+0.2**
MALT				SG	**Sb**	**17 07 33.9**	**+0.1**
GZT	**Gaziantep**	**0.90**	**259**	*i* P	**Pg**	**17 07 23.4**	**+0.5**
GZT				*i* S	**Sb**	**17 07 37.4**	**+0.9**
GZT				IAML		17 07 39.0	
	comp=E,188nm,0.3s						
GZT				IAML		17 07 42.0	
	comp=N,308nm,0.4s						
AKCD	**Akcadag**	**0.97**	**322**	*i* P	**Pb**	**17 07 24.9**	**-0.3**
SVRC	**Sivrice-ELAZID**	**0.98**	**30**	PG	**Pg**	**17 07 24.9**	**+0.3**
ELZG	**Elazig**	**1.00**	**14**	*i* P	**Pg**	**17 07 24.5**	**-0.3**
ELZG				*i* S	**Sb**	**17 07 39.3**	**-0.1**
ELZG				IAML		17 07 42.0	
	comp=E,224nm,0.5s						
ELZG				IAML		17 07 43.0	
	comp=N,279nm,0.5s						
DIYA	**Diyarbakir**	**1.21**	**71**	*i* P	**Pg**	**17 07 29.5**	**+0.6**
DIYA				*i* S	**Sg**	**17 07 45.2**	**+0.5**
GAZ	**Gaziantep**	**1.22**	**253**	PN	**Pg**	**17 07 28.6**	**-0.4**
DYBB	**Diyarbakir**	**1.24**	**70**	PN	**Pg**	**17 07 29.2**	**-0.2**
KAHM	**Kahramanmaras,**	**1.34**	**270**	*i* P	**Pn**	**17 07 30.4**	**-0.9**
KAHM				*i* S	**Sg**	**17 07 47.9**	**-0.9**
DARE	**Darende-Malaty**	**1.40**	**318**	PN	**Pg**	**17 07 32.6**	**+0.1**
MAZI	**Mazidag**	**1.41**	**92**	PN	**Pn**	**17 07 31.6**	**-0.8**
HCB	**Kahramanmara**	**1.42**	**263**	*i* P	**Pn**	**17 07 31.2**	**-1.2**
HCB				*i* S	**Sb**	**17 07 49.7**	**-1.6**
ELBS	**KAHRAMANMARAS_**	**1.45**	**304**	*i* P	**Pg**	**17 07 34.6**	**+1.1**
HEKM	**Malatya_Hekimh**	**1.46**	**338**	*i* P	**Pg**	**17 07 34.1**	**+0.5**
HEKM				*i* S	**Sn**	**17 07 54.1**	**+1.2**
HEKM				IAML		17 07 59.0	
	comp=N,63nm,0.2s						
HEKM				IAML		17 08 01.0	
	comp=E,93nm,0.6s						
KOVA	**Elazig, Kovanc**	**1.48**	**37**	*i* P	**Pb**	**17 07 33.7**	**-0.2**
KOVA				*i* S	**Sb**	**17 07 50.1**	**-3.0**
KUZU	**Kuzuini**	**1.48**	**240**	*i* P	**Pg**	**17 07 35.2**	**+1.1**
KUZU				*i* S	**Sn**	**17 07 53.0**	**-0.3**
ARPR	**Arapgir-MALATY**	**1.58**	**350**	PN	**Pn**	**17 07 34.9**	**+0.1**
KAMA	**Osmaniye**	**1.63**	**259**	*i* P	**Pb**	**17 07 36.6**	**+0.1**

KAMA				*i*S	Sn	17 07 55.8	-1.2
TNCL	Tunceli-Merkez	1.73	23	*i*P	Pg	17 07 38.8	+0.1
TNCL				*i*S	Sg	17 08 00.5	-0.7
ANDN	Andirin	1.85	272	*i*P	Pn	17 07 36.5	-1.9
SARI	SarD1z-Kayseri	1.99	297	PN	Pn	17 07 41.0	+0.6
CUKAN	kangal_SIVAS	2.02	332	*i*P	Pn	17 07 41.6	+0.8
BTMN	Batman	2.09	79	*i*P	Pn	17 07 43.0	+1.2
BTMN				*i*S	Sb	17 08 10.4	-0.3
BTMN				IAML		17 08 21.0	
	comp=E,34nm,0.6s						
BTMN				IAML		17 08 23.0	
	comp=N,26nm,0.3s						
SVAN	Silvan-Diyarba	2.09	72	*i*P	Pn	17 07 40.9	-0.9
SVAN				*i*S	Sn	17 08 09.2	+0.8
SVAN	Silvan-Diyarba	2.09	72	PN	Pn	17 07 40.9	-0.9
BNGB	Bingl	2.15	47	PN	Pn	17 07 42.5	-0.1
KOZT	Kozan	2.26	270	PN	Pn	17 07 44.9	+0.9
TAHT	Tahtakopru-Hat	2.30	241	PN	Pn	17 07 45.2	+0.7
CEYT	Ceyhan	2.39	258	PN	Pn	17 07 46.7	+1.0
YEDI	Yedisu-Bingol	2.41	37	PN	Pn	17 07 46.3	+0.2
MUSM	Mu-Merkez	2.54	61	*i*P	Pn	17 07 49.3	+1.4
YAYL	Yayladag	2.54	235	PN	Pn	17 07 48.7	+0.7
KARO	Karliova-Bingo	2.58	46	PN	Pn	17 07 48.6	+0.1
SRTM	Siirt_Merkez	2.62	79	*i*P	Pn	17 07 48.8	-0.2
SRTM				*i*S	Sb	17 08 27.1	+1.2
SRTM				IAML		17 08 38.0	
	comp=E,55nm,0.5s						
SRTM				IAML		17 08 39.0	
	comp=N,56nm,0.5s						
SVSK	Karacayir	2.72	332	PN	Pn	17 07 51.2	+0.9
SIRT	Sirnak	3.00	89	PN	Pn	17 07 54.5	+0.3

DJA 04 17:15:40.1±0.5**,5°S**±4°×**13°1E**±°**,h107**^{km}±8^{km}**,M3.8**/7**,mb4.1**/2**,MLv3.6**/7**,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.96	309	P	Pn	17 16 03.0	+2.3
BNDI				S	Sn	17 16 16.2	0.0
MSAI	Masohi	2.47	316	P	Pn	17 16 20.8	+1.7
MSAI				S	Sn	17 16 45.3	-3.8
FAKI	Fak Fak	2.71	36	P	Pn	17 16 25.6	+3.4
SWI	Sorong	4.28	8	P	Pn	17 16 44.8	+1.6

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*NEIC **04** 17:17:50.1±2.0,5°.51S±0°.08×152°.8E±0°.1,h33^{km}±8^{km},mb4.2/10,Error ellipse: s-maj=19.4km s-min=11.7km az=95.0*

*DJA **04** 17:17:53.5±0.9,5°S±5°×15°3E±1°1,h46^{km}±8^{km},M4.6/9,mB4.5/1,mb4.3/9,MLv4.7/2,Mw(mB)3.7/1*

*IDC **04** 17:17:54.7±4.4,5°.52S×152°.60E,h68^{km}±41^{km},mb3.6/11,mb1 3.8/13,mb1mx3.6/40,mbtmp3.9/13,ML2.8/2,MS3.3/7,Ms1 3.3/7,ms1mx3.0/33,Error ellipse: s-maj=24.7km s-min=23.9km az=1.0*

ISC 04 17:17:51.3±0.7**,5°.43S**±0°.07×**152°.70E**±0°.10**,h40**^{km}**,n36,**σ**1^{s}.34**/33**,mb4.0**/16**,MS3.3**/7**,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	1.34	337		Pn	17 18 13.7	+0.1
RABL	Rabaul	1.34	337	P	Pn	17 18 14.5	+0.9
MANU	Manus Island	6.30	302	Pn	Pn	17 19 21.1	-0.6
PMG	Port Moresby	6.76	234	P	Pn	17 19 29.3	+1.2
	2.3nm,0.3s,baz=91,slow=6.3,SNR=15						
PMG				S	Sn	17 20 43.9	0.0
	9.9nm,0.3s,baz=353,slow=15,SNR=8.8						
PMG	Port Moresby	6.76	234		Pn	17 19 27.7	-0.3
PMG				Sn	Sn	17 20 41.7	-2.2
PMG	Port Moresby	6.76	234	P	Pn	17 19 30.7	+2.6
PMG	Port Moresby	6.76	234	P	Pn	17 19 30.7	+2.6
CTA	Charters Tower	15.86	203	P	P	17 21 34.2	-0.8
	0.1nm,0.3s,baz=24,slow=12,SNR=3.9						
GUMO	Guam	20.44	338	LR	LR	17 29 49.2	
	comp=Z,30nm,20.1s,baz=133,slow=35						
DZM	Mont Dzumac	21.22	142	P	P	17 22 36.2	+2.3
	3.9nm,0.7s,baz=305,slow=19,SNR=5.0						
DZM				LR	LR	17 29 48.5	
	comp=Z,130nm,21.2s,baz=266,slow=34						
SIJI	Sorong	21.87	281	P	P	17 22 43.1	+2.2
	2.5nm,0.6s,baz=66,slow=9.9,SNR=4.6						
SWI	Sorong	21.88	281	P	P	17 22 41.1	+0.2
	8.3nm,1.3s						
MTN	Manton Dam	22.52	249	P	P	17 22 46.8	-1.0
MTN				IAmb	IAmb	17 22 52.8	
	comp=Z,12nm,0.9s						
WR0	Warramunga Arr	22.81	229	P	P	17 22 51.7	+0.8
WR0				IAmb	IAmb	17 22 56.1	
	comp=Z,5.5nm,1.0s						
WRAB	Tennant Creek	22.94	229	P	P	17 22 51.8	-0.5
WRAB				IAmb	IAmb	17 23 08.6	
	comp=Z,6.4nm,0.8s						
WB2	Warramunga Arr	22.95	229	P	P	17 22 51.1	-1.2
WB2				IAmb	IAmb	17 23 08.7	
	comp=Z,6.9nm,0.9s						
WRA	Warramunga Arr	22.95	229	P	P	17 22 51.4	-1.0
	comp=Z,1.8nm,0.5s,baz=55,slow=10,SNR=15						
KNRA	Kununurra	25.61	245	P	P	17 23 17.5	+0.4
AS31	Alice Springs	25.62	223	P	P	17 23 15.7	-1.5
ASAR	Alice Springs	25.62	223	P	P	17 23 16.9	-0.3
	comp=Z,3.8nm,0.9s,baz=55,slow=9.3,SNR=28						
STKA	Stephens Creek	28.29	200	LR	LR	17 35 47.7	
	comp=Z,108nm,18.3s,baz=210,slow=38						
FITZ	Fitzroy Crossi	29.27	242	P	P	17 23 49.1	-0.8
	comp=Z,2.1nm,0.6s,baz=78,slow=7.7,SNR=6.3						
FITZ	Fitzroy Crossi	29.27	242		P	17 23 49.0	-1.0
FITZ				IAmb	IAmb	17 24 05.6	
	comp=Z,11nm,1.5s						
HIZ	Hauiti	38.59	152	P	P	17 25 07.4	-3.0
PWJI	Pagerwojo	40.68	264	P	P	17 25 28.3	+0.1
NWAO	Narrogin (SRO)	42.88	226	LR	LR	17 43 58.6	
	comp=Z,86nm,20.4s,baz=107,slow=37						
MJAR	Matsushiro Arr	43.91	343	LR	LR	17 41 50.3	
	comp=Z,19nm,21.6s,baz=260,slow=33						
CMAR	Chiang Mai Arr	58.06	296	P	P	17 27 41.6	+0.7
	comp=Z,0.2nm,0.3s,baz=114,slow=3.2,SNR=4.2						
CMAR	Chiang Mai Arr	58.06	296	P	P	17 27 39.3	-1.6
PETK	Petropavlovsk-	58.48	4	P	P	17 27 43.6	+0.5
	comp=Z,2.1nm,0.9s,baz=126,slow=14,SNR=1.2						
PETK				LR	LR	17 48 17.9	
	comp=Z,28nm,19.6s,baz=119,slow=31						
SONM	Songino Array	66.81	328	P	P	17 28 39.5	+0.5
	comp=Z,0.8nm,0.9s,baz=145,slow=5.4,SNR=4.7						
SONM				LR	LR	17 59 08.4	
	comp=Z,17nm,18.2s,baz=102,slow=37						
SONM	Songino Array	66.81	328	IAmb	IAmb	17 29 07.1	
	comp=Z,2.6nm,1.5s						
MKAR	Makanchi Array	80.73	319	P	P	17 30 01.4	+0.8
	comp=Z,0.9nm,0.8s,baz=98,slow=6.2,SNR=5.1						
ZALV	Zalesovo Beam	81.62	326	P	P	17 30 05.0	0.0
	comp=Z,1.0nm,0.8s,baz=100,slow=6.6,SNR=4.7						
ILAR	Eielson Array	82.78	22	P	P	17 30 11.2	+0.3
	comp=Z,0.7nm,0.8s,baz=250,slow=4.9,SNR=6.7						
TORD	Torodi Ar. Bea	150.40	287	PKPbc	PKPbc	17 37 39.5	0.0
	comp=Z,0.2nm,0.3s,baz=79,slow=2.7,SNR=2.4						

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*MDD **04** 17:39:43.7±1.6,36°.09N×1°.48E,h21^{km}±5^{km},mb3.6/4,Error ellipse: s-maj=18.6km s-min=8.2km az=119.0,PRXIMO*

*CRAAG **04** 17:39:43.9,36°.15N×1°.21E,Ml2.5*

ISC 04 17:39:44.0±1.8**,36°.29N**±0°.08×**1°.15E**±0°.06**,h3**^{km}±19^{km}**,n20,**σ**1^{s}.39**/26**,Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ECHF	Ech Chlef	0.20	131	P	Pg	17 39 47.5	-0.4
ECHA	Ech Chlef	0.22	129	P	Pg	17 39 47.5	-0.7
EBNR	Beni Rached	0.30	89	P	Pg	17 39 50.7	+0.8
EANR	'Ain N'Sour	0.34	187	P	Pg	17 39 49.3	-1.2
EANR	'Ain N'Sour	0.34	187	P	Pg	17 39 49.3	-1.2
OKGL	Djebel Kef Gue	0.48	239	P	Pn	17 40 00.0	+2.2
OKGL	Djebel Kef Gue	0.48	239	P	Pn	17 40 00.0	+2.2
OJGS	Djebel Guires	0.85	203	P	Pn	17 40 10.0	+7.1
OJBR	Djebel Berber	0.96	223	P	Pg	17 40 02.0	-0.4
OJBR	Djebel Berber	0.96	223	P	Pg	17 40 02.0	-0.4
EBEN2	Beniarda presa	2.61	336	S	Sn	17 40 57.9	-1.4
	7.0nm,0.1s,SNR=7.9						
EIBI	Ibiza	2.74	3	P	Pn	17 40 29.5	+0.7
	1.0nm,0.1s,SNR=7.1						
EIBI				S	Sn	17 41 00.2	-2.2
	12nm,0.3s,SNR=8.1						
ETOB	Tobarra	3.19	318	P	Pn	17 40 36.6	+1.6
	0.7nm,0.2s,SNR=7.9						
ETOB				S	Sn	17 41 12.3	-1.3
	2.2nm,0.3s,SNR=7.9						
EBER	Berja	3.31	282	P	Pn	17 40 36.7	-0.2
	0.8nm,0.2s,SNR=7.9						
EBER				S	Sn	17 41 15.8	-1.0
	0.9nm,0.2s,SNR=7.9						
SESP	Santiago Espad	3.47	303	P	Pn	17 40 40.7	+1.7
	1.4nm,0.2s,SNR=7.9						
SESP				S	Sn	17 41 21.6	+0.8
	4.1nm,0.2s,SNR=7.9						
ECHE	Chera	3.70	334	S	Sn	17 41 26.0	-0.1
	2.1nm,0.4s,SNR=7.9						
EQES	Quesada	3.70	295	P	Pn	17 40 44.0	+1.9
	1.4nm,0.2s,SNR=7.9						
EQES				S	Sn	17 41 26.0	-0.4
	3.7nm,0.4s,SNR=7.9						
ETOS	Mallorca	3.71	20	S	Sn	17 41 24.5	-2.0
	0.7nm,0.2s,SNR=7.9						
EQUE	Quentar	3.80	285	P	Pn	17 40 44.2	+0.7
	1.3nm,0.3s,SNR=7.6						
EQUE				S	Sn	17 41 27.9	-0.9
	1.8nm,0.4s,SNR=4.0						
EMOS	Mosqueruela	4.27	343	P	Pn	17 40 51.0	+1.1
	0.2nm,0.1s,SNR=7.9						
EMOS				S	Sn	17 41 38.9	-1.4
	4.2nm,0.5s,SNR=7.9						

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*MAN **04** 17:44:17.4,5°.88N×127°.01E,h65^{km},mb4.5,ML3.3,MS3.1*

*DJA **04** 17:44:19.6±1.1,6°N±8°×12°7E±°,h122^{km}±18^{km},M4.0/8,mb3.9/6,mB4.7/5,MLv4.1/8,Mw(mB)3.9/5*

*IDC **04** 17:44:21.2±1.9,6°.12N×127°.00E,h106^{km}±16^{km},mb3.4/12,mb1 3.5/13,mb1mx3.3/64,mbtmp3.8/13,Error ellipse: s-maj=39.1km s-min=10.5km az=62.0*

ISC 04 17:44:20.3±0.7**,6°.03N**±0°.08×**126°.9E**±0°.1**,h100**^{km}**,n22,**σ**1^{s}.73**/25**,mb3.7**/12**,2C,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	1.68	308	P	Pn	17 44 48.5	-0.3
	75nm,0.3s,baz=104,slow=2.0,SNR=13						
DAV				S	Sn	17 45 12.8	+2.4
	62nm,0.3s,baz=88,slow=23,SNR=5.6						
DMPH	Davao City--Mi	1.75	307	⇑*e*P	Pn	17 44 48.7	-0.9
DMPH				*e*S	Sn	17 45 12.0	+0.1
GSPH	General Santos	1.96	272	⇑*i*P	Pn	17 44 49.5	-2.9
SGSI	Sangihe	2.71	211	P	Pn	17 45 03.4	+1.2
TNTI	Ternate	5.25	175	P	Pn	17 45 37.7	+1.3
	0.2nm660nm34nm,0.6s						
GTOI	Gorontalo	6.63	216	P	Pn	17 45 55.6	+0.5
	0.0nm5.3nm,0.8s						
LBMI	Labuha	6.65	175	P	Pn	17 45 56.2	+0.7
	0.1nm8.2nm,1.1s						
MRSI	Marisa	7.42	222	P	Pn	17 46 06.5	+0.5
	0.1nm17nm,0.6s						
SANI	Sanana	8.08	187	P	Pn	17 46 12.7	-2.2
	733nm10nm,0.4s						
SIJI	Sorong	8.12	148	P	Pn	17 46 15.9	+0.5
	1.8nm,0.3s,baz=333,slow=17,SNR=7.0						
SIJI				S	Sn	17 47 40.0	-5.5
	0.6nm,0.3s,baz=1.9,slow=12,SNR=2.5						
FITZ	Fitzroy Crossi	24.01	183	P	P	17 49 27.7	+1.8
	0.8nm,0.6s,baz=341,slow=7.6,SNR=6.8						
WRA	Warramunga Arr	26.82	164	P	P	17 49 52.3	+0.8
	0.6nm,0.5s,baz=346,slow=10,SNR=13						
CMAR	Chiang Mai Arr	29.94	297	P	P	17 50 18.5	-0.7
	0.2nm,0.3s,baz=106,slow=9.5,SNR=1.8						
ASAR	Alice Springs	30.30	167	P	P	17 50 23.1	+0.8
	0.1nm,0.4s,baz=343,slow=7.7,SNR=8.6						
STKA	Stephens Creek	40.21	160	P	P	17 51 48.5	+1.4
	1.3nm,0.5s,baz=325,slow=7.6,SNR=3.7						
SONM	Songino Array	45.20	341	P	P	17 52 25.7	-1.7
	0.3nm,0.9s,baz=72,slow=4.7,SNR=1.8						
MKAR	Makanchi Array	55.79	324	P	P	17 53 47.7	+0.6
	0.7nm,0.4s,baz=115,slow=7.5,SNR=18						
ZALV	Zalesovo Beam	58.64	332	P	P	17 54 06.6	-0.3
	0.4nm,0.3s,baz=139,slow=5.9,SNR=2.4						
KURBB	Kurchatov Arra	59.92	327	P	P	17 54 15.7	-0.1
	1.4nm,0.5s,baz=124,slow=5.9,SNR=9.3						
BVAR	Borovoye Array	65.51	326	P	P	17 54 53.1	+0.3
	1.5nm,0.8s,baz=177,slow=9.6,SNR=6.6						
ARU	Arti	73.11	327	P	P	17 55 39.4	-0.3
	0.7nm,0.3s,baz=45,slow=4.3,SNR=4.1						
ILAR	Eielson Array	82.96	26	P	P	17 56 34.7	+0.8
	0.2nm,0.5s,baz=239,slow=4.9,SNR=5.2						

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*BGR **04** 18:10:18.0±0.0,17°.15S×179°.00E,h33^{km}*

*NOU **04** 18:10:20.5,15°.12S×174°.51W,h0^{km},MLv5.3/7,Tonga Islands*

*NEIC **04** 18:10:26.3±1.3,15°.00S±0°.03×174°.14W±0°.09,h84^{km}±6^{km},mb4.5/41,Error ellipse: s-maj=12.0km s-min=4.2km az=84.0*

*IDC **04** 18:10:26.1±2.2,15°.01S×174°.15W,h85^{km}±20^{km},mb3.9/12,mb1 4.1/14,mb1mx3.9/35,mbtmp4.2/14,MS3.3/12,Ms1 3.3/12,ms1mx3.1/49,Error ellipse: s-maj=24.9km s-min=13.4km az=146.0*

ISC 04 18:10:24.8±0.4**,15°.09S**±0°.06×**174°.13W**±0°.07**,h73**^{km}**,n100,**σ**1^{s}.40**/82**,mb4.5**/33**,5C-5D,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.57	63	P	Pn	18 11 06.2	+1.9
	165nm,0.3s,baz=206,slow=1.1,SNR=132						
AFI				S	Sn	18 11 32.7	-1.8
	442nm,0.3s,baz=254,slow=22,SNR=26						
AFI				LR	LR	18 12 10.2	
	comp=Z,262nm,21.4s,baz=136,slow=41						
NIUE	Niue	5.64	135		Pn	18 11 48.1	+1.9
NIUE				Sn	Sn	18 12 46.2	-3.4
NIUE	Niue	5.64	135	P	Pn	18 11 48.7	+2.5
MSVF	Nonsavu	7.95	250	P	Pn	18 12 19.0	+1.3
	2.1nm,0.3s,baz=161,slow=3.9,SNR=6.6						
KNTN	Kanton	12.47	11		Pn	18 13 21.9	+2.4
DZM	Mont Dzumac	19.66	246	P	P	18 14 43.6	-4.5
	0.4nm,0.3s,baz=150,slow=21,SNR=37						
DZM				LR	LR	18 21 32.0	
	comp=Z,50nm,19.9s,baz=88,slow=34						
DZM	Mont Dzumac	19.66	246	P	P	18 14 45.3	-2.8
DZM	Mont Dzumac	19.66	246	P	P	18 14 46.6	-1.5
URZ	Urewera	24.34	197	P	P	18 15 36.1	+0.3
	8.3nm,0.5s,baz=301,slow=23,SNR=2.5						
URZ	Urewera	24.34	197	P	P	18 15 36.3	+0.6
URZ	Urewera	24.34	197	P	P	18 15 39.7	+4.0
HNR	Honiara	25.93	280	LR	LR	18 26 08.3	
	comp=Z,62nm,18.4s,baz=32,slow=36						
LTZ	Lake Taylor	29.96	200	P	P	18 16 26.7	+0.4
LTZ				IAmb	IAmb	18 16 43.9	
	comp=Z,16nm,1.2s						
MLZ	Mavora Lakes	33.69	203	P	P	18 16 59.0	+0.1
MLZ				IAmb	IAmb	18 17 00.9	
	comp=Z,12nm,1.0s						
WHZ	Wether Hill Ro	34.20	202	P	P	18 17 05.3	+2.1
PMG	Port Moresby	38.21	274	P	P	18 17 38.9	+1.0
	comp=Z,6.1nm,0.8s,baz=178,slow=20,SNR=2.4						
H11N3	WAKE ISLAND Hy	39.30	331	T	T	19 00 21.2	
	baz=150						
H11N1	WAKE ISLAND Hy	39.30	331	T	T	19 00 10.0	
	baz=150						
H11N2	WAKE ISLAND Hy	39.32	331	T	T	19 00 22.6	
	baz=150						
COEN	Coen	41.30	266	P	P	18 18 04.4	+0.9
COEN				IAmb	IAmb	18 18 07.1	
	comp=Z,8.4nm,1.2s						
STKA	Stephens Creek	43.58	239	P	P	18 18 22.7	+0.8
	comp=Z,0.8nm,0.5s,baz=59,slow=5.9,SNR=2.3						
WR0	Warramunga Arr	49.04	257	P	P	18 19 05.1	+0.3
WB0	Warramunga Arr	49.18	257	P	P	18 19 05.6	-0.4
WB0				IAmb	IAmb	18 19 05.9	
	comp=Z,3.3nm,0.8s						
WB2	Warramunga Arr	49.21	257	P	P	18 19 05.2	-1.0
WRAB	Tennant Creek	49.22	257	P	P	18 19 05.5	-0.7
WRAB				IAmb	IAmb	18 19 10.1	
	comp=Z,6.0nm,1.4s						
WRA	Warramunga Arr	49.23	257	P	P	18 19 05.3	-1.0
	comp=Z,0.9nm,0.7s,baz=92,slow=7.7,SNR=8.9						
WRA	Warramunga Arr	49.23	257	IAmb	IAmb	18 19 14.5	
	comp=Z,0.3nm,1.2s						
AS31	Alice Springs	49.53	252	P	P	18 19 08.7	+0.1
AS31				IAmb	IAmb	18 19 09.6	
	comp=Z,3.0nm,0.7s						
ASAR	Alice Springs	49.53	252	P	P	18 19 07.7	-1.0
	comp=Z,8.7nm,0.6s,baz=88,slow=7.5,SNR=154						
ASAR	Alice Springs	49.53	252	P	P	18 19 08.6	-0.1
SIJI	Sorong	55.71	279	P	P	18 19 54.4	0.0
	comp=Z,12nm,0.7s,baz=77,slow=4.6,SNR=16						
PSA00	Pilbara Seismi	62.61	253	P	P	18 20 41.2	-0.8
PSA00	Pilbara Seismi	62.61	253	P	P	18 20 41.3	-0.6
PSA00				IAmb	IAmb	18 20 53.7	
	comp=Z,17nm,1.4s						
VNDA	Vanda	63.61	186	P	P	18 20 48.6	+1.0
	comp=Z,1.9nm,0.9s,baz=8.6,slow=6.7,SNR=9.0						
VNDA	Vanda	63.61	186	IAmb	IAmb	18 20 50.0	
	comp=Z,3.7nm,1.1s						
MJAR	Matsushiro Arr	68.25	320	LR	LR	18 45 57.4	
	comp=Z,14nm,21.6s,baz=165,slow=31						
PETK	Petropavlovsk-	72.13	343	P	P	18 21 40.8	-0.5
	comp=Z,2.3nm,0.8s,baz=130,slow=9.7,SNR=2.5						
JCC	Jacoby Creek,	72.44	38	P	P	18 21 41.3	-2.1
YBH	Yreka Blue Hor	73.79	38	LR	LR	18 51 17.9	
	comp=Z,23nm,19.0s,baz=234,slow=33						
NVAR	Mina Array Bea	74.58	42	P	P	18 21 55.0	-1.4
	comp=Z,1.5nm,0.8s,baz=227,slow=9.8,SNR=7.8						
PAHR	Pah Rah Range	74.61	41	P	P	18 21 55.9	-0.5
NV11	Mina Array Sit	74.68	42	P	P	18 21 56.8	0.0
NV11				IAmb	IAmb	18 21 58.2	
	comp=Z,5.4nm,1.2s						
QSPA	South Pole Qui	74.95	180	P	P	18 21 58.5	+0.5
QSPA				IAmb	IAmb	18 22 00.2	
	comp=Z,14nm,1.2s						
KSRS	Korea Array	75.45	316	LR	LR	18 50 00.0	
	comp=Z,6.7nm,21.5s,baz=250,slow=32						
O19K	Port Alsworth	76.71	10	P	P	18 22 07.4	-0.3
O19K				IAmb	IAmb	18 22 07.8	
	comp=Z,10nm,1.0s						
U15A	North Rim	77.61	47	P	P	18 22 13.3	-0.3
U15A				IAmb	IAmb	18 22 15.5	
	comp=Z,5.0nm,1.2s						
ELK	Elko	77.82	42	LR	LR	18 49 56.1	
	comp=Z,33nm,18.8s,baz=250,slow=30						
MVU	Marysvale	78.68	45	P	P	18 22 20.0	+0.5
TMUT	Trail Mountain	79.75	45	P	P	18 22 25.7	+0.3
HLID	Hailey	79.84	40	P	P	18 22 25.6	-0.1
HLID				IAmb	IAmb	18 22 27.0	
	comp=Z,7.5nm,1.4s						
N25K	Chitina, Valde	79.95	14	P	P	18 22 25.4	-0.3
N25K				IAmb	IAmb	18 22 26.1	
	comp=Z,8.5nm,0.8s						
GLB	Gilahina Butte	80.00	14	P	P	18 22 25.5	-0.4
GLB				IAmb	IAmb	18 22 35.8	
	comp=Z,12nm,1.2s						
J20K	Nowinta River	80.51	9	P	P	18 22 28.7	+0.2
J20K				IAmb	IAmb	18 22 29.8	
	comp=Z,15nm,1.4s						
RND	Reindeer	80.68	11	P	P	18 22 29.9	+0.3
NEW	Newport	80.86	35	LR	LR	18 52 26.6	
	comp=Z,32nm,19.8s,baz=270,slow=31						
MCK	McKinley	80.96	11	P	P	18 22 30.3	-0.7
TXAR	Lajitas Array	81.03	56	P	P	18 22 32.5	+0.2
	comp=Z,0.5nm,0.8s,baz=212,slow=6.9,SNR=6.0						
ANMO	Albuquerque	81.15	50	LR	LR	18 51 20.1	
	comp=Z,32nm,19.9s,baz=178,slow=30						
DLBC	Dease Lake	81.68	22	LR	LR	18 48 55.6	
	comp=Z,19nm,21.5s,baz=298,slow=28						
WRH	Wood River Hil	81.79	11	P	P	18 22 34.5	-0.8
DOT	Dot Lake	81.87	13	P	P	18 22 35.5	-0.3
DOT				IAmb	IAmb	18 22 36.5	
	comp=Z,4.7nm,0.8s						
HDA	Harding Lake	81.95	12	P	P	18 22 35.5	-0.6
HDA				IAmb	IAmb	18 22 37.5	
	comp=Z,7.2nm,0.9s						
CCB	Clear Creek Bu	82.00	11	P	P	18 22 35.4	-1.0
CCB				IAmb	IAmb	18 22 36.7	
	comp=Z,8.2nm,0.9s						
SCRK	Sand Creek	82.17	13	P	P	18 22 36.9	-0.5
SCRK				IAmb	IAmb	18 22 38.3	
	comp=Z,3.9nm,0.8s						
MDM	Murphy Dome	82.20	11	P	P	18 22 36.7	-0.8
MDM				IAmb	IAmb	18 22 37.5	
	comp=Z,5.5nm,1.1s						
IL31		82.28	11	P	P	18 22 37.0	-0.8
IL31				IAmb	IAmb	18 22 38.4	
	comp=Z,13nm,1.4s						
ILAR	Eielson Array	82.28	11	P	P	18 22 37.0	-0.9
	comp=Z,2.7nm,1.1s,baz=231,slow=5.4,SNR=11						
ILAR	Eielson Array	82.28	11	P	P	18 22 36.7	-1.2
POKR	Poker Plat Res	82.49	11	P	P	18 22 38.8	-0.2
YHL	Hebgen Lake	82.50	40	P	P	18 22 40.6	+0.8
PDAR	Pinedale Array	82.51	42	P	P	18 22 39.1	-0.8
	comp=Z,1.0nm,0.9s,baz=207,slow=3.0,SNR=5.7						
PDAR	Pinedale Array	82.51	42	P	P	18 22 39.4	-0.6
YHH	Holmes Hill	82.67	40	P	P	18 22 41.3	+0.5
DAWY	Dawson	83.30	15	P	P	18 22 43.4	+0.1
DAWY				IAmb	IAmb	18 22 44.0	
	comp=Z,6.3nm,1.0s						
BMAR	Burnt Mountain	85.09	11	P	P	18 22 53.0	+0.7
A36M	Sachs Harbour	92.77	14	P	P	18 23 27.9	-0.6
SONM	Songino Array	94.15	318	LR	LR	19 00 28.3	
	comp=Z,17nm,21.5s,baz=346,slow=32						
TKL	Tuckaleechee C	98.92	56	LR	LR	19 03 59.0	
	comp=Z,28nm,18.1s,baz=168,slow=32						
DPC	Dobruska-Polom	143.83	349	*e*PKP	PKPbc	18 29 49.9	+0.4
KRLC	Kraliky	144.00	348	*e*PKP	PKPbc	18 29 50.1	+0.1
MORC	Moravsky Berou	144.12	347	*e*PKP	PKPbc	18 29 50.0	-0.4
TRPA	Tarpa	144.29	341	⇑P	PKPbc	18 29 50.8	-0.1
TPGR	Topolog	144.72	332	⇓P	PKPbc	18 29 52.6	+0.1
VRAC	Vranov	144.77	348	⇓P	PKPdf	18 29 52.6	-0.7
VRAC	Vranov	144.77	348	*e*PKP	PKPbc	18 29 52.5	+0.1
JAVC	Velka Javorina	144.96	346	*e*PKP	PKPdf	18 29 54.2	+0.5
TIRR	Tirgusor	145.03	331	⇑P	PKPdf	18 29 53.4	-0.4
KRUC	Moravsky	145.04	348	*e*PKP	PKPbc	18 29 53.0	-0.3
HARR	Harsova	145.07	332	⇓P	PKPbc	18 29 52.7	-0.8
DOPR	Dopca	145.13	336	⇑P	PKPbc	18 29 52.9	-0.8
TLBR	Topalu	145.13	332	⇑P	PKPbc	18 29 53.1	-0.6
GRF	Grafenberg Arr	145.22	354	*e*PKPbc	PKPdf	18 29 53.9	-0.2
	baz=15,slow=2.9						
MLR	Muntele Rosu	145.29	335	⇓P	PKPab	18 29 54.7	+0.1
KHC	Kasperske Hory	145.47	351	*e*PKP	PKPdf	18 29 49.0	-5.6
KHC				*e*x	PKPdf	18 29 54.3	-0.3
BRTR	Keskin Array B	145.47	321	PKPbc	PKPab	18 29 55.4	-0.1
	comp=Z,1.2nm,0.8s,baz=50,slow=13,SNR=4.7						
BRTR	Keskin Array B	145.47	321		PKPdf	18 29 52.0	-3.0
CKRC	Cesky Krumlov	145.66	350	*e*PKP	PKPab	18 29 55.6	0.0
VOIR		145.70	336	⇓P	PKPab	18 29 56.1	+0.1
GERES	GERESS Array B	145.73	351	PKPbc	PKPbc	18 29 55.4	-0.2
	comp=Z,1.7nm,0.8s,baz=42,slow=2.2,SNR=14						
HERR	Herculane	147.17	338	⇑P	PKPbc	18 29 59.7	-0.1

MAN 04 18:11:47.0,7°.35N×125°.68E,h33^{km},mb4.0,ML2.8,MS2.4,Mindanao

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*IDC **04** 18:12:05.8±2.0,8°.04S×125°.23E,h0^{km},mb3.3/1,mb1 3.4/5,mb1mx3.3/34,mbtmp3.3/5,ML3.3/4,Error ellipse: s-maj=43.0km s-min=26.5km az=86.0*

ISC 04 18:12:11.2±1.5**,8°.3S**±0°.1×**125°.4E**±0°.1**,h35**^{km}**,n5,**σ**3^{s}.14**/8**,Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	2.60	222	Pn	Pn	18 12 51.1	+0.3
	7.9nm,0.3s,baz=20,slow=2.5,SNR=12						
BATI				Sn	Sn	18 13 23.0	+1.9
	3.8nm,0.3s,baz=337,slow=21,SNR=1.6						
FITZ	Fitzroy Crossi	9.78	179	Pn	Pn	18 14 29.7	+0.3
	0.1nm,0.3s,baz=354,slow=12,SNR=1.4						
FITZ				Sn	Sn	18 16 12.2	-5.8
	0.1nm,0.3s,baz=309,slow=23,SNR=2.5						
WRA	Warramunga Arr	14.47	144	Pn	Pn	18 15 34.9	+1.3
	0.1nm,0.3s,baz=315,slow=15,SNR=5.8						
WRA				Sn	Sn	18 18 12.7	-0.2
	0.1nm,0.3s,baz=309,slow=25,SNR=2.0						
ASAR	Alice Springs	17.34	153	P	P	18 16 14.1	+2.3
	0.1nm,0.3s,baz=328,slow=12,SNR=14						
MKAR	Makanchi Array	66.89	329	P	P	18 22 57.8	-2.1
	0.2nm,0.5s,baz=128,slow=6.3,SNR=1.4						

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*IDC **04** 18:17:58.4±2.0,8°.09S×125°.50E,h0^{km},mb3.5/1,mb1 3.6/5,mb1mx3.4/31,mbtmp3.4/5,ML3.1/4,MS2.7/1,Ms1 2.7/1,ms1mx2.2/29,Error ellipse: s-maj=52.6km s-min=28.7km az=75.0*

ISC 04 18:18:04.0±1.5**,8°.4S**±0°.1×**125°.6E**±0°.1**,h35**^{km}**,n6,**σ**2^{s}.24**/9**,Timor region**

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

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BATI  Baumata            2.60 226  Pn      Pn      18 18 44.5 +1.0
      3.1nm,0.3s,baz=38,slow=5.0,SNR=2.5
BATI                               Sn      Sn      18 19 14.5 +0.6
      0.7nm,0.3s,baz=137,slow=22,SNR=1.2
FITZ  Fitzroy Crossi     9.66 179  Pn      Pn      18 20 21.4 +0.8
      0.1nm,0.3s,baz=8.1,slow=14,SNR=2.9
FITZ                               Sn      Sn      18 22 04.1  -3.9
      0.2nm,0.3s,baz=246,slow=22,SNR=2.5
WRA   Warramunga Arr    14.30 144  Pn      Pn      18 21 24.9 +0.7
      0.1nm,0.3s,baz=319,slow=13,SNR=6.8
WRA                                Sn      Sn      18 24 02.1 +0.5
      0.1nm,0.3s,baz=315,slow=24,SNR=1.7
ASAR  Alice Springs     17.18 153  P       P       18 22 05.2 +2.4
      0.1nm,0.3s,baz=330,slow=12,SNR=5.2
ASAR                               S       Sn      18 25 09.9  -1.7
      0.0nm,0.3s,baz=323,slow=20,SNR=1.7
GUMO  Guam              29.06  41  LR      LR      18 37 12.7
      comp=Z,13nm,18.3s,baz=77,slow=40
MKAR  Makanchi Array    67.05 329  P       P       18 28 51.8  -1.9
      0.4nm,0.6s,baz=124,slow=7.2,SNR=2.8
```

IDC ***04*** *18:26:52.0±2.0, 8°.15S×125°.29E, h0^{km}, mb3.4/1, mb1 3.5/5, mb1mx3.4/27, mbtmp3.3/5, ML3.1/4, Error ellipse: s-maj=41.9km s-min=26.9km az=87.0*

ISC 04 18:26:56.9±1.5**, 8°.2S**±0°.1×**125°.4E**±0°.1**, h35^{km}, n5,** σ**1^{s}59**/8**,**
Timor region

```
Code  Station Name        Δ°   AZ°    Phase ID           Time      Res
                                   Op      ISC      h  m  s     ISC
BATI  Baumata            2.59 220  Pn      Pn      18 27 35.8  -0.6
      4.7nm,0.3s,baz=126,slow=6.3,SNR=5.0
BATI                               Sn      Sn      18 28 08.2 +1.5
      2.6nm,0.3s,baz=291,slow=24,SNR=1.5
FITZ  Fitzroy Crossi     9.83 178  Pn      Pn      18 29 14.7  -1.0
      0.1nm,0.3s,baz=355,slow=11,SNR=1.6
FITZ                               Sn      Sn      18 31 03.2  -1.7
      0.1nm,0.3s,baz=293,slow=7.5,SNR=3.6
WRA   Warramunga Arr    14.54 144  Pn      Pn      18 30 19.1  -1.1
      0.1nm,0.3s,baz=318,slow=13,SNR=3.7
WRA                                Sn      Sn      18 33 02.2 +1.9
      baz=319,slow=26,SNR=1.9
ASAR  Alice Springs     17.41 153  P       P       18 30 59.3 +1.1
      0.1nm,0.3s,baz=328,slow=11,SNR=11
MKAR  Makanchi Array    66.82 329  P       P       18 37 45.0  -0.1
      0.4nm,0.8s,baz=129,slow=6.5,SNR=1.3
```

MOS ***04*** *18:42:59.6±1.6, 52°.49N×99°.87E, h10^{km}, mb3.9/1, Error ellipse: s-maj=13.5km s-min=9.5km az=27.1*

MOS Felt (III-IV) at Orlik.

BYKL ***04*** *18:42:59.1±0.2, 52°.41N×99°.91E, FELT I=IV MSK at Orlik*

IDC ***04*** *18:43:00.5±1.5, 52°.26N×100°.10E, h0^{km}, mb1 3.3/3, mb1mx3.1/71, mbtmp3.3/3, ML2.2/3, Error ellipse: s-maj=43.1km s-min=9.7km az=9.0*

ISC 04 18:43:00.4±0.6**, 52°.44N**±0°.03×**99°.90E**±0°.02**, h10^{km}, n61,** σ**2^{s}59**/140**, 6C-2D, Tuva-Buryatia-Mongolia border region**

```
Code  Station Name        Δ°   AZ°    Phase ID           Time      Res
                                   Op      ISC      h  m  s     ISC
ORL   Orlik              0.12 333⇑iPg      Pg      18 43 01.9  -1.5
      12µm,0.3s
ORL                               ⇓iPg      Pg      18 43 01.9  -1.5
      6µm,0.3s
ORL                               ⇑iPg      Pg      18 43 01.9  -1.5
      18µm,0.3s
ORL                                 Pmax           18 43 02.0
      13µm,0.2s
ORL                                eSg     Sg      18 43 03.8  -1.7
ORL                                 Smax           18 43 05.6
      13µm,0.7s
ORL   Orlik              0.12 333⇑iPG      Pg      18 43 01.9  -1.5
ORL                                eS      Sg      18 43 03.8  -1.7
MOY   Mondy              1.02 138⇓iPg      Pg      18 43 17.5  -2.6
      74nm,0.7s
MOY                               ⇑iPg      Pg      18 43 17.5  -2.6
      71nm,0.7s
MOY                               ⇑iPg      Pg      18 43 17.5  -2.6
      192nm,0.7s
MOY                                 Pmax           18 43 27.6
      454nm,0.4s
MOY                                eSg     Sg      18 43 30.8  -2.7
MOY                                 Smax           18 43 32.5
      2µm,0.7s
MOY   Mondy              1.02 138⇑iPG      Pg      18 43 17.4  -2.6
MOY                                e       Sg      18 43 30.7  -2.7
MOY                                 pmax   pmax
      comp=Z,319nm,0.4s
MOY                                 smax   smax
      comp=N,2µm,0.7s
ARS   Arshan             1.64 107  ePg     Pn      18 43 28.6  -0.7
ARS                                ePb     Pb      18 43 29.6  -1.1
ARS                                 max            18 43 36.2
      comp=N,574nm,0.3s
ARS                                eSg     Sn      18 43 50.0  -0.5
ARS                                 Smax           18 43 55.8
      comp=N,7µm,0.7s
ARS   Arshan             1.64 107  ePN     Pn      18 43 28.7  -0.6
ARS                                e       Sn      18 43 50.0  -0.5
ARS                                 pmax   pmax
      comp=Z,565nm,0.2s
ARS                                 smax   smax
      comp=E,7µm,0.8s
KNGR  Kungurtug, Tuv     2.36 220   Pg     Pn      18 43 41.2 +1.9
KNGR                                Sg     Sb      18 44 12.5 +0.3
KNGR  Kungurtug, Tuv     2.36 220  ePg     Pn      18 43 41.0 +1.7
KNGR                               ePgPg   Pb      18 43 44.7 +1.7
KNGR                               eSg     Sb      18 44 12.4 +0.2
TLY   Talaya             2.43 107   Pg     Pn      18 43 42.0 +1.8
      comp=E,0.2nm,0.3s,baz=264,slow=2.7,SNR=86
TLY                                 Lg     Lg      18 44 13.8
      comp=E,1.8nm,0.3s,baz=184,slow=16,SNR=25
TLY   Talaya             2.43 107   Pg     Pn      18 43 42.2 +2.0
TLY                                 Sg     Sb      18 44 13.9  -0.4
TLY   Talaya             2.43 107  ePg     Pn      18 43 42.0 +1.8
TLY                                ePgPg   Pg      18 43 46.7  -0.3
TLY                                 max            18 43 47.5
      comp=E,270nm,0.4s
TLY                                eSg     Sb      18 44 14.3   0.0
TLY                                 Smax           18 44 19.6
      comp=E,629nm,0.4s
TLY   Talaya             2.43 107  ePN     Pn      18 43 41.4 +1.2
TLY                                e               18 43 42.7
TLY                                e               18 44 14.2
TLY                                 pmax   pmax
      comp=Z,703nm,0.3s
TLY                                 smax   smax
      comp=N,1.0nm,0.4s
IRK   Irkutsk            2.69  92   Pg     Pn      18 43 46.1 +2.4
IRK                                 Sg     Sb      18 44 21.9 +0.3
IRK   Irkutsk            2.69  92  ePn     Pn      18 43 44.4 +0.7
IRK                                ePg     Pb      18 43 47.3  -1.3
IRK                                 Pmax           18 43 48.9
      comp=N,370nm,0.3s
IRK                                eSg     Sb      18 44 21.8 +0.1
IRK                                 Smax           18 44 25.7
      comp=N,2µm,0.5s
IRK   Irkutsk            2.69  92  ePN     Pn      18 43 45.1 +1.4
IRK                                e               18 43 47.1
IRK                                e               18 44 21.9
IRK                                 pmax   pmax
      comp=Z,370nm,0.3s
IRK                                 smax   smax
      comp=N,2µm,0.6s
IVK   Ivanovka           2.86 101  ePg     Pn      18 43 49.1 +3.0
IVK                                 Pmax           18 43 49.7
      comp=N,117nm,0.4s
IVK                                eSg     Sb      18 44 26.3  -0.1
IVK                                 Smax           18 44 27.4
      comp=N,567nm,0.8s
IVK   Ivanovka           2.86 101  ePN     Pn      18 43 49.0 +3.0
IVK                                e               18 43 50.3
IVK                                e               18 44 26.2
IVK                                 pmax   pmax
      comp=Z,118nm,0.3s
IVK                                 smax   smax
      comp=N,566nm,0.5s
ZAK   Zakamensk          2.95 133   Pg     Pb      18 43 51.7  -1.4
ZAK                                 Sg     Sb      18 44 31.4 +2.1
ZAK   Zakamensk          2.95 133  ePn     Pn      18 43 47.8 +0.4
ZAK                                e               18 43 51.1
ZAK                                ePg     Pb      18 43 51.8  -1.4
ZAK                                 Pmax           18 43 55.1
      comp=N,112nm,0.5s
ZAK                                eSg     Sb      18 44 30.9 +1.6
ZAK                                 Smax           18 44 33.5
      comp=N,1µm,0.9s
ZAK   Zakamensk          2.95 133  ePN     Pb      18 43 51.1  -2.0
ZAK                                e               18 43 52.2
ZAK                                e               18 44 29.8
ZAK                                 pmax   pmax
      comp=Z,116nm,0.3s
ZAK                                 smax   smax
      comp=N,795nm,0.5s
LSTR  Listvyanka         3.09  99  ePn     Pn      18 43 51.1 +1.8
LSTR                               ePg     Pb      18 43 54.1  -1.4
LSTR                                Pmax           18 43 55.2
      comp=N,67nm,0.3s
LSTR                               eSg     Sb      18 44 33.0  -0.2
LSTR                                Smax           18 44 35.6
      comp=N,548nm,0.6s
LSTR  Listvyanka         3.09  99  ePN     Pn      18 43 51.4 +2.1
LSTR                               e       Pb      18 43 54.1  -1.4
LSTR                               e       Sb      18 44 33.0  -0.2
LSTR                                pmax   pmax
      comp=Z,67nm,0.2s
LSTR                                smax   smax
      comp=N,544nm,0.7s
BGT   Bolshoye Golou     3.41  94  ePn     Pn      18 43 54.9 +1.3
BGT                                ePg     Pb      18 43 59.6  -1.3
BGT                                 Pmax           18 44 07.0
      comp=N,108nm,0.3s
BGT                                e               18 44 39.7
BGT                                eSg     Sb      18 44 43.3 +0.9
BGT                                 Smax           18 44 47.3
      comp=N,747nm,0.4s
BGT   Bolshoye Golou     3.41  94  ePN     Pn      18 43 55.4 +1.8
BGT                                e               18 43 59.6
BGT                                e               18 44 42.9
BGT                                 pmax   pmax
      comp=Z,97nm,0.3s
BGT                                 smax   smax
      comp=E,864nm,0.9s
KZLR  Kyzyl              3.44 260   Pg     Pb      18 43 59.7  -1.6
KZLR                                Sg     Sb      18 44 45.1 +1.9
KZLR  Kyzyl              3.44 260  ePn     Pn      18 43 55.4 +1.4
KZLR                               ePg     Pb      18 43 59.6  -1.7
KZLR                               eSg     Sb      18 44 44.1 +1.0
TRG   Tyrgan             3.95  83  ePn     Pn      18 44 01.7 +0.7
TRG                                ePg     Pb      18 44 09.5  -0.5
TRG                                 Pmax           18 44 11.5
      comp=E,208nm,0.6s
TRG                                eSn     Sn      18 44 48.7 +1.3
TRG                                eSg     Sb      18 45 01.1 +3.3
TRG                                 Smax           18 45 06.0
      comp=E,365nm,0.5s
TRG   Tyrgan             3.95  83  ePN     Pn      18 44 01.2 +0.2
TRG                                e       Pb      18 44 09.7  -0.3
TRG                                eS      Sn      18 44 50.1 +2.7
TRG                                e       Sg      18 45 00.0  -7.1
TRG                                 pmax   pmax
      comp=Z,208nm,0.7s
TRG                                 smax   smax
      comp=N,366nm,0.6s
STDB  Stepnoy Dvoret     3.98  91  ePn     Pn      18 44 02.5 +1.1
STDB                               ePg     Pb      18 44 10.8 +0.2
STDB                               e               18 44 53.2
STDB                               eSg     Sb      18 45 03.0 +4.2
FFNB  Fofonovo           4.24  93  ePn     Pn      18 44 06.3 +1.3
FFNB                               ePg     Pb      18 44 14.3  -0.7
FFNB                               eSg     Sb      18 45 09.7 +3.5
HRMR  Khuramsha          4.43  98  ePn     Pn      18 44 09.5 +1.8
HRMR                                max            18 44 10.5
      comp=N,125nm,0.5s
HRMR                               ePg     Pb      18 44 17.9  -0.4
HRMR                               eSn     Sn      18 44 59.6 +0.3
HRMR                               eSg     Sb      18 45 15.3 +3.5
HRMR                                Smax           18 45 17.3
      comp=N,1µm,0.5s
OGRR  Ongureny           4.80  72  ePn     Pn      18 44 14.7 +2.0
OGRR                               ePg     Pb      18 44 26.0 +1.4
OGRR                               e       Pg      18 44 28.8  -3.5
OGRR                                max            18 44 29.9
      comp=N,72nm,0.3s
OGRR                               eSn     Sn      18 45 08.2  -0.2
OGRR                               eSg     Sb      18 45 28.3 +5.9
OGRR                                Smax           18 45 32.5
      comp=N,367nm,0.5s
OGRR  Ongureny           4.80  72  ePN     Pn      18 44 14.8 +2.0
OGRR                               e       Pb      18 44 27.6 +3.0
OGRR                               eS      Sn      18 45 08.5 +0.1
OGRR                               e       Sg      18 45 28.0  -6.4
OGRR                                pmax   pmax
      comp=Z,74nm,0.4s
OGRR                                smax   smax
      comp=E,365nm,0.7s
UUDB  Ulan-Yde           4.82  94  ePn     Pn      18 44 14.7 +1.7
UUDB                               ePg     Pb      18 44 25.0 +0.2
UUDB                                Pmax           18 44 30.3
      comp=E,77nm,1.2s
UUDB                               eSg     Sb      18 45 26.7 +3.9
UUDB                                Smax           18 45 36.3
      comp=E,353nm,1.4s
KELR  Kotokel            5.00  83  ePn     Pn      18 44 16.9 +1.5
KELR                               ePg     Pb      18 44 28.4 +0.5
KELR                               eSn     Sn      18 45 13.2  -0.1
KELR                               eSg     Sb      18 45 33.4 +5.3
CERR  Cheremushki        5.18 278   Pg     Pb      18 44 31.1 +0.1
CERR                                Sg     Sg      18 45 41.8  -4.8
DJO   Djoy, Khakassi     5.30 277   Pg     Pb      18 44 33.5 +0.4
DJO                                 Sg     Sg      18 45 47.1  -3.4
SONM  Songino Array      6.22 135   Pg     Pb      18 44 48.9 +0.1
      comp=E,3.3nm,0.3s,baz=318,slow=18,SNR=41
SONM                                Lg     Lg      18 46 12.0
      comp=E,16nm,0.3s,baz=317,slow=29,SNR=16
SYVR  Suvo               6.22  75  ePn     Pn      18 44 33.0 +0.9
SYVR                               ePg     Pb      18 44 50.3 +1.7
SYVR                                Pmax           18 44 57.0
      comp=E,25nm,0.5s
SYVR                               eSg     Sb      18 46 10.3 +7.3
SYVR                                Smax           18 46 22.6
      comp=E,109nm,1.0s
ULN   Ulaanbaatar        6.49 132  ePg     Pb      18 44 55.4 +2.1
ULN                                eSg     Sb      18 46 19.4 +8.5
NIZ   Nizh Angarsk       6.58  56  ePn     Pn      18 44 37.9 +0.7
NIZ                                 max            18 44 41.1
      comp=E,43nm,0.8s
NIZ                                ePg     Pb      18 44 57.3 +2.4
NIZ                                eSn     Sn      18 45 51.4  -0.8
NIZ                                eSg     Sg      18 46 23.6  -8.0
NIZ                                 Smax           18 46 28.4
      comp=E,648nm,1.5s
NIZ   Nizh Angarsk       6.58  56  ePN     Pn      18 44 37.4 +0.2
NIZ                                e       Pb      18 44 58.6 +3.7
NIZ                                e       Sg      18 46 24.0  -7.6
NIZ                                 pmax   pmax
      comp=Z,33nm,0.3s
NIZ                                 smax   smax
      comp=N,647nm,1.2s
YLYR  Ulyunkhan          7.13  65  ePn     Pn      18 44 45.6 +0.9
YLYR                                max            18 44 46.3
      comp=N,30nm,0.5s
YLYR                               ePg     Pb      18 45 07.5 +3.3
YLYR                               eSn     Sn      18 46 05.0  -0.6
YLYR                               eSg     Sg      18 46 39.8  -9.2
YLYR                                Smax           18 46 50.8
      comp=N,136nm,1.2s
KMO   Kumora             7.48  58  ePn     Pn      18 44 50.5 +1.0
KMO                                 max            18 45 07.0
      comp=N,35nm,0.5s
KMO                                eSn     Sn      18 46 13.4  -0.9
KMO                                eSg     Sg      18 46 51.7  -8.6
KMO                                 Smax           18 46 58.9
      comp=N,259nm,1.3s
YOA   Uoyan              7.85  57  ePn     Pn      18 44 56.2 +1.7
YOA                                ePg     Pb      18 45 20.5 +4.1
YOA                                 Pmax           18 45 47.8
      comp=N,170nm,1.7s
YOA                                eSn     Sn      18 46 21.5  -1.8
YOA                                eSg     Sb      18 47 01.2  +11
YOA                                 Smax           18 47 21.9
      comp=N,652nm,1.4s
DGZ   Jazzator, Alta     8.31 256  i PN    Pn      18 45 01.5 +0.4
KPC   Khapcheranga       8.32 104  ePn     Pn      18 45 02.4 +1.3
KPC                                ePg     Pb      18 45 29.0 +4.4
KPC                                 Pmax           18 45 40.5
      comp=N,9.0nm,1.0s
KPC                                eSn     Sn      18 46 33.4  -1.8
KPC                                eSg     Sg      18 47 16.8   -11
KPC                                 Smax           18 47 21.4
      comp=N,59nm,1.7s
KPC   Khapcheranga       8.32 104  ePN     Pn      18 45 02.5 +1.3
KPC                                e               18 45 30.5
KPC                                 pmax   pmax
      comp=Z,10.0nm,0.5s
CIT   Chita              8.40  87  eSg     Sg      18 47 19.2   -10
CIT                                 Smax           18 47 30.1
      comp=Z,59nm,1.1s
UKT   Uakit              8.65  64  ePn     Pn      18 45 06.4 +0.8
UKT                                 max            18 46 12.1
      comp=Z,15nm,1.6s
UKT                                eSn     Sn      18 46 41.5  -1.7
UKT                                eSg     Sg      18 47 26.1   -12
UKT                                 Smax           18 47 42.2
      comp=Z,44nm,1.6s
SVKR  Severomuysk        8.80  60  ePn     Pn      18 45 09.9 +2.3
SVKR                               eSn     Sn      18 46 44.4  -2.4
SVKR                               eSg     Sg      18 47 30.9   -12
SVKR                                Smax           18 47 43.4
      comp=Z,280nm,1.4s
ZALV  Zalesovo Beam      9.18 285   Pn     Pn      18 45 17.5 +4.7
      comp=Z,0.1nm,0.3s,baz=80,slow=16,SNR=1.6
ZALV                                Lg     Lg      18 47 38.7
      comp=Z,0.4nm,0.3s,baz=102,slow=28,SNR=3.8
BOD   Bodaibo            9.71  51  ePn     Pn      18 45 20.9 +1.0
BOD                                 max            18 46 03.9
      comp=Z,16nm,1.0s
BOD                                eSn     Sn      18 47 06.8  -2.1
BOD                                eSg             18 47 59.2
BOD                                 Smax           18 48 05.8
      comp=Z,83nm,1.7s
NLYR  Nelyaty           10.05  60  ePn     Pn      18 45 27.2 +2.5
NLYR                                max            18 46 04.3
      comp=Z,7.0nm,0.8s
NLYR                               eSn     Sn      18 47 15.6  -1.9
NLYR                               eSg             18 48 10.8
NLYR                                Smax           18 48 31.6
      comp=Z,85nm,1.2s
CRS   Chara             11.53  60  eSn     Sn      18 47 50.6  -3.0
CRS                                eSg             18 48 55.8
CRS                                 Smax           18 49 16.6
      comp=Z,92nm,1.9s
TUP   Tupik             12.12  73  ePn     Pn      18 45 54.3 +1.2
TUP                                 max            18 46 06.1
      comp=Z,4.0nm,0.8s
TUP                                eSn     Sn      18 48 05.3  -2.9
TUP                                e               18 48 43.8
TUP                                eSg             18 49 14.3
TUP                                 Smax           18 49 52.5
      comp=Z,54nm,2.8s
MKAR  Makanchi Array    12.72 251   Pn     Pn      18 46 04.5 +3.2
      comp=Z,0.0nm,0.3s,baz=61,slow=12,SNR=2.4
MKAR                                Lg     Lg      18 49 34.1
      comp=Z,0.1nm,0.3s,baz=75,slow=28,SNR=2.0
KURK  Kurchatov         13.34 271   P      Pn      18 46 12.6 +3.0
KURBB Kurchatov Arra    13.42 271   Pn     Pn      18 46 12.6 +1.9
      comp=Z,0.0nm,0.3s,baz=71,slow=13,SNR=5.8
KURBB                               Lg     Lg      18 49 53.8
      comp=Z,0.0nm,0.3s,baz=80,slow=32,SNR=5.4
TIXI  Tiksi             23.13  23  i P     P       18 48 05.4  -0.8
NACGM Naroch            41.57 304  i P     P       18 50 52.3 +4.5
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IDC ***04*** *18:47:36.1±0.7, 8°.27S×125°.34E, h0^{km}, mb4.2/13, mb1 4.4/18, mb1mx4.1/44, mbtmp4.2/18, ML4.0/5, MS3.3/10, Ms1 3.3/10, ms1mx3.0/42, Error ellipse: s-maj=24.9km s-min=14.7km az=81.0*

NEIC ***04*** *18:47:36.4±2.1, 8°.57S±0°.03×125°.05E±0°.08, h10^{km}±1^{km}, mb4.4/21, Error ellipse: s-maj=13.0km s-min=2.9km az=104.0*

DJA ***04*** *18:47:42.0±0.7, 8°S±2°×12°5E±°, h33^{km}±10^{km}, M4.2/15, mB4.8/7, mb4.5/15, MLv4.3/10, Mw(mB)4.0/7*

ISC 04 18:47:39.1±0.4**, 8°.50S**±0°.04×**125°.20E**±0°.05**, h24^{km}, n112,** σ**2^{s}34**/101**, mb4.5**/26**, MS3.3**/4**, 1C, Timor region**

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Code  Station Name        Δ°   AZ°    Phase ID           Time      Res
                                   Op      ISC      h  m  s     ISC
SOEI  Soe                1.55 216  Pn      Pn      18 48 03.6  -1.8
SOEI  Soe                1.55 216  P       Pb      18 48 09.7 +2.5
SOEI  Soe                1.55 216  P       Pb      18 48 11.0 +3.8
BATI  Baumata            2.27 222  Pn      Pb      18 48 19.9 +0.4
      38nm,0.3s,baz=36,slow=1.0,SNR=26
BATI                               Sn      Sb      18 48 51.6 +4.3
      25nm,0.3s,baz=147,slow=22,SNR=7.4
BATI                               LR      LR      18 49 24.0
      comp=Z,614nm,18.8s,baz=42,slow=42
BATI  Baumata            2.27 222  P       Pb      18 48 18.3  -1.2
MMRI  Maumere            2.93 267          Pn      18 48 26.3 +2.1
MMRI  Maumere            2.93 267  P       Pn      18 48 26.8 +2.5
MMRI  Maumere            2.93 267  P       Pn      18 48 27.3 +3.0
EDFI  Ende, Flores       3.48 266  P       Pn      18 48 33.7 +1.8
BASI  Baing, Sumba       4.87 249  P       Pb      18 49 00.2  -3.6
WSI   Waingapu           4.98 256  P       Pn      18 48 54.5 +2.1
BSSI  Bau Bau, Buton     5.22 296  P       Pn      18 48 56.6 +0.8
      0.1nm421nm34nm,0.8s
WBSI  Waikabubak, Su     5.85 258  P       Pn      18 49 05.8 +1.4
BKSI  Bulukumba          5.95 302  P       Pn      18 49 04.7  -1.0
      0.1nm11nm,0.6s
MSAI  Masohi             6.32  36  P       Pn      18 49 12.9 +2.0
KAPI  Kappang            6.42 302  Pn      Pn      18 49 13.2 +0.9
      0.9nm,0.3s,baz=213,slow=4.8,SNR=3.0
KAPI                               Sn      Sn      18 50 24.9   0.0
      baz=234,slow=22,SNR=1.1
KAPI  Kappang            6.42 302          Pn      18 49 10.8  -1.5
SANI  Sanana             6.46   7  P       Pn      18 49 11.8  -0.9
      0.1nm518nm25nm,0.5s
MTN   Manton Dam         7.25 127  Pn      Pn      18 49 26.6 +2.9
MTN   Manton Dam         7.25 127  P       Pn      18 49 29.6 +5.9
PLAI  Plampang           7.35 267  P       Pn      18 49 27.3 +2.3
      0.3nm66nm,0.7s
PLAI  Plampang           7.35 267  P       Pn      18 49 29.0 +4.0
TTSI  Tana Toraja        7.62 315  P       Pn      18 49 29.3 +0.6
      0.1nm646nm24nm,1.1s
LUWI  Luwuk              7.79 342  Pn      Pn      18 49 23.3  -7.8
LUWI  Luwuk              7.79 342  P       Pn      18 49 29.7  -1.4
      0.2nm768nm39nm,1.1s
KNRA  Kununurra          7.94 154  Pn      Pn      18 49 32.7  -0.4
KNRA  Kununurra          7.94 154  P       Pn      18 49 37.4 +4.3
      55nm,0.7s
LBMI  Labuha             8.14  16  P       Pn      18 49 36.8 +0.9
      13nm,1.2s
TWSI  Taliwang, Sumb     8.23 268  P       Pn      18 49 38.7 +1.6
      24nm,1.2s
KDU   Kakadu             8.27 121  P       Pn      18 49 43.5 +5.8
      20nm,0.5s
APSI  Ampana             8.33 335  P       Pn      18 49 38.5 +0.1
      415nm31nm,0.8s
FAKI  Fak Fak            8.94  52  Pn      Pn      18 49 49.4 +2.6
FAKI  Fak Fak            8.94  52  P       Pn      18 49 48.8 +2.0
      17nm,1.2s
FAKI  Fak Fak            8.94  52  P       Pn      18 49 52.2 +5.4
FITZ  Fitzroy Crossi     9.55 177  Pn      Pn      18 49 57.2 +2.0
      1.9nm,0.3s,baz=13,slow=10,SNR=47
FITZ                               Sn      Sn      18 51 41.1  -0.8
      2.3nm,0.3s,baz=94,slow=8.9,SNR=10.0
FITZ                               LR      LR      18 54 29.0
      comp=Z,88nm,19.2s,baz=2.0,slow=42
FITZ  Fitzroy Crossi     9.55 177  Pn      Pn      18 49 54.4  -0.8
SIJI  Sorong             9.69  39  LR      LR      18 53 35.2
      comp=Z,206nm,20.5s,baz=340,slow=38
TOLI2 Tolitoli          10.51 335  Pn      Pn      18 50 07.2  -1.2
TOLI2 Tolitoli          10.51 335  P       Pn      18 50 12.1 +3.7
JAGI  Jajag, Banyuwa    10.93 269  Pn      Pn      18 50 09.6  -4.5
MTKI  Muara Teweh, K    12.71 306  P       P       18 50 55.1 +5.5
PSA00 Pilbara Seismi    13.98 201  Pn      Pn      18 50 53.4  -2.5
PSA00 Pilbara Seismi    13.98 201  Pn      Pn      18 50 51.4  -4.5
WB0   Warramunga Arr    14.31 142          Pn      18 50 58.7  -1.6
WRA   Warramunga Arr    14.41 143  Pn      Pn      18 51 00.7  -1.0
      1.0nm,0.3s,baz=319,slow=13,SNR=45
WRA                                Sn      Sn      18 53 37.2  -3.7
      1.1nm,0.3s,baz=320,slow=25,SNR=7.0
WRA   Warramunga Arr    14.41 143  Pn      Pn      18 51 00.1  -1.6
WRAB  Tennant Creek     14.41 143  Pn      Pn      18 51 00.0  -1.7
WB2   Warramunga Arr    14.42 143  Pn      Pn      18 51 00.1  -1.8
WR0   Warramunga Arr    14.54 143  Pn      Pn      18 51 02.2  -1.4
DAV   Davao City (W)    15.47   1  LR      LR      18 57 01.9
      comp=Z,44nm,19.1s,baz=156,slow=37
AS31  Alice Springs     17.23 152          P       18 51 38.8  -0.9
ASAR  Alice Springs     17.23 152  P       P       18 51 39.3  -0.4
      0.5nm,0.3s,baz=316,slow=10,SNR=44
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ASAR				S	Sn	18 54 45.7	-3.9
	0.5nm,0.3s,baz=320,slow=19,SNR=10.0						
ASAR	Alice Springs	17.23	152		Pn	18 51 38.4	+0.1
LEM	Lembang	17.50	274	LR	LR	19 00 21.1	
	comp=Z,210nm,18.3s,baz=86,slow=43						
QIS	Mount Isa	18.37	132	P	Pn	18 51 57.5	+5.1
	7.7nm,0.7s						
COEN	Coen	18.44	109	P	Pn	18 51 52.8	-0.5
MTSU	Mount Surprise	20.90	119	P	Pn	18 52 26.2	+3.6
	5.7nm,0.9s						
OOD	Oodnadatta	21.60	154	P	P	18 52 33.1	+5.7
	17nm,1.0s						
PMG	Port Moresby	21.71	94	LR	LR	19 02 36.1	
	comp=Z,83nm,20.7s,baz=248,slow=42						
PMG	Port Moresby	21.71	94	P	P	18 52 25.5	-3.2
PMG	Port Moresby	21.71	94	P	P	18 52 34.1	+5.4
PMG	Port Moresby	21.71	94	P	P	18 52 34.3	+5.6
DSRI	Dabo	22.03	290	P	P	18 52 38.1	+5.9
FORT	Forrest	22.33	174	P	P	18 52 32.7	-2.5
FORT				IAmb	IAmb	18 52 49.5	
	comp=Z,17nm,0.9s						
STKA	Stephens Creek	27.81	149	P	P	18 53 29.5	+3.0
	comp=Z,1.5nm,0.6s,baz=322,slow=7.1,SNR=3.2						
STKA	Stephens Creek	27.81	149	P	P	18 53 23.5	-3.1
CMAR	Chiang Mai Arr	37.27	316	P	P	18 54 49.9	+0.6
	comp=Z,2.0nm,0.9s,baz=144,slow=6.8,SNR=19						
CMAR	Chiang Mai Arr	37.27	316	P	P	18 54 46.5	-2.8
CHTO	Chiang Mai	37.51	317	P	P	18 54 48.8	-2.7
CHTO				IAmb	IAmb	18 54 54.7	
	comp=Z,10nm,1.2s						
KMI	Kunming	39.95	327	⇑P	P	18 55 14.1	+2.1
KMI				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KSRS	Korea Array	45.78	3	LR	LR	19 17 46.6	
	comp=Z,9.5nm,18.2s,baz=155,slow=40						
MJAR	Matsushiro Arr	46.44	14	P	P	18 56 03.0	-1.1
	comp=Z,2.0nm,0.7s,baz=189,slow=8.7,SNR=5.5						
MJAR	Matsushiro Arr	46.44	14	IAmb	IAmb	18 56 27.9	
	comp=Z,4.6nm,1.5s						
PALK	Pallekele	47.04	288	LR	LR	19 16 55.6	
	comp=Z,47nm,18.2s,baz=235,slow=37						
LSA	Lhasa	50.16	321	P	P	18 56 33.7	+0.2
LSA				pmax	pmax		
	comp=Z,16nm,0.8s						
LSA	Lhasa	50.16	321	P	P	18 56 32.3	-1.1
HHC	Hu-ho-hao-te	50.69	347	*e*P	P	18 56 39.8	+3.0
HHC				pmax	pmax		
	comp=Z,11nm,0.8s						
HHC				pmax	pmax		
	comp=Z,94nm,6.6s						
USA0B	Ussuriysk Arra	52.81	6	P	P	18 56 52.6	+0.1
USA0B				IAmb	IAmb	18 57 10.8	
	comp=Z,8.1nm,1.1s						
USRK	Ussuriysk Ar.	52.81	6	P	P	18 56 52.7	+0.2
	comp=Z,2.5nm,0.6s,baz=194,slow=6.3,SNR=5.5						
KLR	Kul'dur	57.77	5	P	P	18 57 27.7	-0.4
	comp=Z,0.9nm,0.6s,baz=6.3,slow=17,SNR=2.1						
ULN	Ulaanbaatar	58.37	346	P	P	18 57 32.7	+0.1
ULN				IAmb	IAmb	18 57 33.3	
	comp=Z,3.1nm,0.7s						
SONM	Songino Array	58.51	345	P	P	18 57 33.5	-0.1
	comp=Z,1.8nm,0.6s,baz=160,slow=7.2,SNR=12						
SONM	Songino Array	58.51	345	P	P	18 57 33.4	-0.1
SONM				IAmb	IAmb	18 57 34.1	
	comp=Z,1.7nm,0.8s						
WMQ	Urumqi	62.18	330	*e*P	P	18 58 01.0	+2.3
WMQ				pmax	pmax		
	comp=Z,12nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,62nm,4.7s						
KSH	Kashi	66.01	320	P	P	18 58 23.8	-0.2
KSH				pP	pwP	18 58 38.7	+4.0
KSH				sP	PcP	18 58 45.6	-8.9
KSH				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MK31	Makanchi Array	66.98	329	P	P	18 58 29.5	-0.4
MKAR	Makanchi Array	66.98	329	P	P	18 58 29.5	-0.4
	comp=Z,5.8nm,0.7s,baz=132,slow=7.0,SNR=42						
MKAR	Makanchi Array	66.98	329	P	P	18 58 29.2	-0.7
KBL	Kabul	68.17	312	P	P	18 58 34.8	-3.1
AAK	Ala-Archa	68.70	322	P	P	18 58 41.1	+0.1
	comp=Z,0.8nm,0.4s,baz=325,slow=23,SNR=4.6						
AAK	Ala-Archa	68.70	322	IAmb	IAmb	18 58 43.8	
	comp=Z,2.0nm,0.9s						
ZAA0	Zalesovo Array	70.92	336	P	P	18 58 52.5	-1.6
ZAA0				IAmb	IAmb	18 58 53.8	
	comp=Z,3.3nm,0.9s						
ZALV	Zalesovo Beam	70.92	336	P	P	18 58 52.8	-1.4
	comp=Z,4.2nm,0.9s,baz=132,slow=4.4,SNR=9.3						
ZALV	Zalesovo Beam	70.92	336	P	P	18 58 52.5	-1.6
KURK	Kurchatov	71.40	331	P	P	18 58 56.4	-0.8
KURK				IAmb	IAmb	18 58 59.4	
	comp=Z,4.9nm,0.8s						
VNDA	Vanda	71.58	172	LR	LR	19 30 37.9	
	comp=Z,34nm,18.2s,baz=332,slow=36						
BRVK	Borovoye	76.93	330	P	P	18 59 28.6	-0.8
BRVK				IAmb	IAmb	18 59 31.1	
	comp=Z,2.1nm,0.9s						
TIXI	Tiksi	80.01	1	P	P	18 59 45.2	-0.9
	comp=Z,1.5nm,0.5s,baz=171,slow=4.0,SNR=12						
TIXI	Tiksi	80.01	1	P	P	18 59 45.0	-1.0
ABKAR	Akbulak array	80.77	323	P	P	18 59 49.3	-1.3
NRIK	Noril'sk	81.91	347	P	P	18 59 55.8	-0.4
	comp=Z,3.4nm,0.8s,baz=349,slow=14,SNR=4.7						
NRIK	Noril'sk	81.91	347	P	P	18 59 54.8	-1.4
NRIK				IAmb	IAmb	18 59 57.7	
	comp=Z,4.4nm,0.9s						
AKTO	Aktyubinsk	82.39	324	P	P	18 59 59.7	+0.5
	comp=Z,1.3nm,0.6s,baz=118,slow=7.7,SNR=6.0						
KHU	Kahuku	82.69	69	P	P	19 00 01.4	-0.3
CHGN	Chignik	89.55	33	P	P	19 00 32.4	-1.9
KBZ	Khabaz	90.29	314	P	P	19 00 38.2	+0.1
	comp=Z,1.5nm,0.8s,baz=155,slow=1.7,SNR=4.0						
SNAA	Sanae	93.07	194	P	P	19 00 53.4	+2.8
VNA2	Neumayer--Watz	94.67	194	P	P	19 01 00.9	+2.9
TORD	Torodi Ar. Bea	124.41	280	PKP	PKPdf	19 06 36.6	-0.6
	comp=Z,0.5nm,0.8s,baz=70,slow=1.8,SNR=3.1						
CPUP	Villa Florida	145.29	176	PKPbc	PKPdf	19 07 16.6	+0.9
	comp=Z,1.4nm,0.6s,baz=264,slow=1.5,SNR=4.7						
CPUP	Villa Florida	145.29	176		PKPbc	19 07 12.0	-3.4
LPAZ	La Paz	152.06	152	PKPbc	PKiKP	19 07 36.1	+1.5
	comp=Z,0.8nm,0.3s,baz=327,slow=3.0,SNR=2.2						

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*IDC **04** 18:55:50.5±3.3, 5°.87S×129°.42E, h339^{km}±47^{km}, mb2.7/1, mb1 2.8/4, mb1mx2.6/36, mbtmp3.5/4, Error ellipse: s-maj=85.6km s-min=14.2km az=74.0*

ISC 04 18:55:51.3±1.3**, 5°.84S**±0°.08×**129°.6E**±0°.3**, h350**^{km}**, n4,** σ**0**^{s}**.55**/7**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	5.21	19	P	Pn	18 57 13.5	+0.2
	1.3nm,0.3s,baz=248,slow=23,SNR=16						
SIJI				S	S	18 58 19.6	-0.1
	2.5nm,0.3s,baz=76,slow=23,SNR=17						
WRA	Warramunga Arr	14.76	162	P	P	18 59 03.4	-0.1
	0.2nm,0.3s,baz=339,slow=12,SNR=7.0						
WRA				S	S	19 01 42.0	-0.7
	0.1nm,0.3s,baz=339,slow=20,SNR=5.2						
ASAR	Alice Springs	18.21	167	P	P	18 59 41.0	+0.5
	0.3nm,0.3s,baz=345,slow=12,SNR=10						
ASAR				S	S	19 02 51.4	+0.7
	0.1nm,0.3s,baz=341,slow=20,SNR=14						
MKAR	Makanchi Array	67.04	327	P	P	19 06 07.5	-0.2
	0.2nm,0.5s,baz=120,slow=8.1,SNR=4.2						

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*MOS **04** 19:06:20.9±1.6, 43°.15N×149°.22E, h59^{km}, mb4.3/1, Error ellipse: s-maj=14.1km s-min=12.2km az=50.3*

*NEIC **04** 19:06:31.5±1.4, 44°.98N±0°.07×146°.4E±0°.1, h191^{km}±8^{km}, mb4.2/28, Error ellipse: s-maj=16.5km s-min=5.4km az=122.0*

*IDC **04** 19:06:31.1±1.6, 44°.98N×146°.37E, h192^{km}±14^{km}, mb3.3/13, mb1 3.4/19, mb1mx3.3/58, mbtmp3.8/19, Error ellipse: s-maj=16.6km s-min=11.9km az=109.0*

*JMA **04** 19:06:31.6±0.4, 44°.70N×146°.46E, h197^{km}±3^{km}, M4.0*

*NIED **04** 19:06:31.7, 44°.70N×146°.46E, h197^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-5.90; $M_{\theta\theta}$5.54; $M_{\phi\phi}$0.36; $M_{r\theta}$1.87; $M_{\theta\phi}$-2.36; $M_{\phi r}$-4.98; Fault plane solution: $M_0$8.10000×10^{14} NP1: ϕ_s318.00000°, δ65.00000°, λ-65.00000°. NP2: ϕ_s90.00000°, δ34.00000°, λ-132.00000°.*

*SKHL **04** 19:06:31.1±0.9, 43°.60N×148°.00E, h123^{km}±9^{km}, mb4.9/5, msha5.5/4*

ISC 04 19:06:30.6±0.6**, 44°.80N**±0°.07×**146°.43E**±0°.06**, h197**^{km}±6^{km}**, n104,** σ**1**^{s}**.12**/112**, mb4.0**/27**, 5C-1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK	Yuzh-Kuril'sk	0.86	208	*c i*PN	Pn	19 07 00.1	+1.0
YUK				pmax	pmax		
	comp=N,35nm,0.2s						
YUK				pmax	pmax		
	comp=E,66nm,0.2s						
YUK				pmax	pmax		
	comp=Z,223nm,0.2s						
YUK	Yuzh-Kuril'sk	0.86	208	*i* P	Pn	19 07 00.1	+1.0
YUK				AMB	AMB	19 07 01.0	
	comp=Z,170nm,0.2s						
YUK				*i* S	Sn	19 07 22.2	+1.1
YUK				A	A	19 07 23.0	
	comp=Z,2μm,0.8s						
YUK				A	A	19 07 23.0	
	comp=Z,3μm,0.8s						
GRPR	Tuman	0.93	211	⇑*i*PN	Pn	19 07 00.4	+0.8
GRPR				pmax	pmax		
	comp=Z,428nm,0.4s						
GRPR				pmax	pmax		
	comp=N,29nm,0.3s						
GRPR				pmax	pmax		
	comp=E,53nm,0.3s						
GRPR	Tuman	0.93	211	*i* P	Pn	19 07 00.4	+0.8
GRPR				AMB	AMB	19 07 00.9	
	comp=E,430nm,0.4s						
GRPR				*i* S	Sn	19 07 22.7	+0.8
GRPR				A	A	19 07 27.0	
	comp=E,762nm,0.5s						
GRPR				A	A	19 07 27.0	
	comp=E,1μm,0.5s						
RUSJ	Misakicho	1.09	231	⇑*i*PN	Pn	19 07 01.5	+0.8
KUR	Kuril'sk	1.11	66	*d i*PN	Pn	19 07 01.1	+0.3
KUR				*e*S	Sn	19 07 24.2	0.0
KUR				pmax	pmax		
	comp=Z,573nm,0.4s						
KUR				pmax	pmax		
	comp=E,135nm,0.2s						
KUR				pmax	pmax		
	comp=N,119nm,0.3s						
KUR				smax	smax		
	comp=E,225nm,0.6s						
KUR				smax	smax		
	comp=N,215nm,0.5s						
KUR	Kuril'sk	1.11	66	*i* P	Pn	19 07 00.8	0.0
KUR				AMB	AMB	19 07 01.8	
	comp=N,710nm,0.5s						
KUR				*e*S	Sn	19 07 21.8	-2.4
KUR				A	A	19 07 25.0	
	comp=N,310nm,0.6s						
KUR				A	A	19 07 25.0	
	comp=N,310nm,0.6s						
GLVR	Golovnino	1.24	212	⇑*i*PN	Pn	19 07 02.9	+1.1
GLVR				pmax	pmax		
	comp=Z,852nm,0.5s						
GLVR				pmax	pmax		
	comp=E,60nm,0.3s						
GLVR	Golovnino	1.24	212	*i* P	Pn	19 07 02.9	+1.1
GLVR				AMB	AMB	19 07 03.0	
	comp=E,850nm,0.5s						
GLVR				*i* S	Sn	19 07 27.3	+1.4
GLVR				A	A	19 07 28.9	
	comp=E,2μm,0.4s						
GLVR				A	A	19 07 28.9	
	comp=E,2μm,0.4s						
JRA	Rausu	1.27	228	P	Pn	19 07 02.7	+0.7
NEM2	Nemuro 2	1.51	199	P	Pn	19 07 04.1	0.0
NEM2				*e*S	Sn	19 07 29.0	-1.1
NMR	Nemuro--Hokkai	1.51	200	⇑*i*PN	Pn	19 07 04.1	0.0
NMR				*i* S	Sn	19 07 29.1	-1.0
NMR	Nemuro--Hokkai	1.51	200	*e*P	Pn	19 07 03.4	-0.7
NMR				*e*S	Sn	19 07 27.9	-2.2
JNK	Nakash	1.72	226	P	Pn	19 07 07.0	+0.9
JKHN	Kushirohamanak	1.94	209	P	Pn	19 07 08.6	+0.3
JKHN				*e*S	Sn	19 07 36.0	-1.5
JTKR	Abashiri--Toko	1.98	246	P	Pn	19 07 09.5	+0.8
JTKR				*e*S	Sn	19 07 39.2	+0.9
AKK	Akkeshi	2.12	213	*e*P	Pn	19 07 10.0	-0.1
AKK				*e*S	Sn	19 07 39.3	-1.4
JAK	Akkeshi	2.19	215	P	Pn	19 07 11.3	+0.4
JAK				*e*S	Sn	19 07 41.2	-1.0
JMP	Maruseppu	2.33	251	P	Pn	19 07 13.3	+0.8
JAR	Ashorobuto	2.43	233	P	Pn	19 07 14.9	+1.4
JSE	Soyaes	2.74	275	P	Pn	19 07 17.7	+0.8
JKK2	Kamakawa 2	2.80	252	P	Pn	19 07 18.8	+1.1
JKA	Kamikawa-asahi	2.82	257		Pn	19 07 19.4	+1.5
ASAJ	Asahikawa	2.83	257	P	Pn	19 07 19.6	+1.6
	comp=E,38nm,0.3s,baz=67,slow=9.6,SNR=342						
JCH	Churui	3.11	227	P	Pn	19 07 21.8	+0.4
JCH				*e*S	Sn	19 07 59.0	-2.1
JFR	Furan	3.21	241	P	Pn	19 07 24.3	+1.7
JWK2	Keihoku	3.25	281	P	Pn	19 07 25.0	+2.0
YSS	Yuzh-Sakhalins	3.35	311	Pn	Pn	19 07 22.7	-1.5
ERM	Erimo	3.66	222	PN	Pn	19 07 28.9	+0.9
ERM	Erimo	3.66	222	Pn	Pn	19 07 28.9	+0.9
JNBK	Urakawa-nobuka	3.67	228	P	Pn	19 07 27.8	-0.3
JRBN	Rebuntou	3.85	281	P	Pn	19 07 31.2	+0.9
JEW	Eniwo	4.10	243	P	Pn	19 07 35.0	+1.5
JEW	Eniwo	4.10	243		Pn	19 07 34.6	+1.1
JKB	Kayabe	4.89	235	P	Pn	19 07 43.0	-0.5
JKB				*e*S	Sn	19 08 37.1	-3.8
JTM	Tenmabayashi	5.62	226	Pn	Pn	19 07 51.4	-1.5
JMM	Marumori	8.12	213	Pn	Pn	19 08 24.2	-1.1
SKR	Severo-Kuril's	8.79	44	*e*P	Pn	19 08 34.4	+0.5
SKR				AMB	AMB	19 08 40.4	
	comp=E,20nm,0.6s						
JSD	Sado	9.12	225		Pn	19 08 37.6	-0.8
PAU	Pauzhetka	9.62	42	*e*P	Pn	19 08 43.2	-1.6
MAJO	Matsushiro	10.34	220	PN	Pn	19 08 52.8	-1.4
MAJO	Matsushiro	10.34	220		Pn	19 08 52.8	-1.4
MJAR	Matsushiro Arr	10.34	220	P	Pn	19 08 54.6	+0.4
	comp=E,0.1nm,0.3s,baz=30,slow=13,SNR=11						
MJAR	Matsushiro Arr	10.34	220	Pn	Pn	19 08 53.8	-0.4
USRK	Ussuriysk Ar.	10.34	272	P	Pn	19 08 54.4	+0.3
	baz=85,slow=13,SNR=5.5						
PEA0B	Petropavlovsk-	11.13	38	PN	Pn	19 09 03.1	-1.1
PEA0B	Petropavlovsk-	11.13	38	Pn	Pn	19 09 03.1	-1.1
PETK	Petropavlovsk-	11.13	38	P	Pn	19 09 02.9	-1.3
	comp=E,0.8nm,0.3s,baz=216,slow=13,SNR=23						
INU	Inuyama	11.86	221	P	Pn	19 09 14.6	+0.8
JWT	Wachi	12.70	225	P	P	19 09 27.6	-0.5
KSRS	Korea Array	15.73	249	P	Pn	19 10 01.6	-0.2
	comp=E,0.1nm,0.3s,baz=57,slow=13,SNR=4.2						
SEY	Seymchan	18.49	9	P	P	19 10 30.4	-1.3
	comp=E,0.3nm,0.3s,baz=171,slow=14,SNR=5.4						
SONM	Songino Array	27.60	291	P	P	19 11 59.4	-0.2
	comp=E,0.3nm,0.3s,baz=86,slow=8.2,SNR=2.2						
H11N2	WAKE ISLAND Hy	30.23	139	T	T	19 43 53.9	
	baz=330,slow=75,SNR=43						
H11N1	WAKE ISLAND Hy	30.24	139	T	T	19 43 49.5	
	baz=330,slow=75,SNR=43						
H11N3	WAKE ISLAND Hy	30.25	139	T	T	19 43 53.3	
	baz=330,slow=75,SNR=35						
H11S1	WAKE ISLAND Hy	31.20	141	T	T	19 45 10.0	
	baz=330,slow=76,SNR=68						
H11S3	WAKE ISLAND Hy	31.21	141	T	T	19 45 11.5	
	baz=330,slow=76,SNR=58						
H11S2	WAKE ISLAND Hy	31.22	141	T	T	19 45 13.9	
	baz=330,slow=76,SNR=52						
J20K	Nowinta River	37.83	38	P	P	19 13 27.2	-0.5
J20K				IAmb	IAmb	19 13 30.1	
	comp=Z,5.8nm,1.2s						
IMAR	Indian Mountai	38.08	35	P	P	19 13 29.3	-0.5
H21K	Melozitna Rive	38.45	36	P	P	19 13 33.2	+0.3
H21K				IAmb	IAmb	19 13 48.0	
	comp=Z,3.5nm,1.2s						
OHAK	Old Harbor	38.63	49	P	P	19 13 35.0	+0.5
KDAK	Kodiak Island	38.93	48	P	P	19 13 37.8	+0.9
KDAK	Kodiak Island	38.93	48	P	P	19 13 37.8	+0.9
CNPM	China Poot	39.41	45	P	P	19 13 41.8	+0.8
SUA	Susitna One	39.46	42	P	P	19 13 42.2	+0.8
TRF	Thorofare Moun	39.54	39	P	P	19 13 43.3	+1.2
TRF				IAmb	IAmb	19 14 02.0	
	comp=Z,13nm,1.4s						
BRLK	Bradley Lake	39.56	45	P	P	19 13 42.7	+0.5
I23K	Minto, Yukon-K	39.89	36	P	P	19 13 45.3	+0.6
I23K				IAmb	IAmb	19 13 59.9	
	comp=Z,9.3nm,1.5s						
ZALV	Zalesovo Beam	39.96	306	P	P	19 13 43.5	-2.0
	comp=Z,0.3nm,0.4s,baz=69,slow=7.7,SNR=2.3						
ZALV				PcP	PcP	19 15 47.3	+0.8
	comp=Z,1.4nm,0.6s,baz=70,slow=3.1,SNR=6.2						
GHO	Glory Hole Cre	40.30	42	P	P	19 13 49.2	+0.9
GHO				IAmb	IAmb	19 14 11.4	
	comp=Z,15nm,1.4s						
KNK	Knik Glacier	40.56	42	P	P	19 13 51.2	+0.9
KNK				IAmb	IAmb	19 14 12.8	
	comp=Z,15nm,1.2s						
SML	Sawmill	40.58	42	P	P	19 13 51.9	+1.4
SML				IAmb	IAmb	19 13 52.7	
	comp=Z,6.0nm,0.8s						
HDA	Harding Lake	40.96	37	P	P	19 13 53.8	+0.2
HDA				IAmb	IAmb	19 13 55.2	
	comp=Z,5.1nm,1.3s						
ILAR	Eielson Array	40.96	37	P	P	19 13 53.5	-0.1
	comp=Z,1.0nm,0.7s,baz=273,slow=8.4,SNR=14						
BMAR	Burnt Mountain	41.73	33	P	P	19 14 00.6	+0.8
KLU	Klutina	41.76	42	P	P	19 14 01.0	+0.8
KLU				IAmb	IAmb	19 14 03.8	
	comp=Z,13nm,1.5s						
RIDG	Independent Ri	41.94	38	P	P	19 14 02.0	+0.4
RIDG				IAmb	IAmb	19 14 02.6	
	comp=Z,7.9nm,1.3s						
SCRK	Sand Creek	42.29	38	P	P	19 14 04.2	-0.4
VRDI	Verde Repeater	42.97	42	P	P	19 14 08.5	-1.6
VRDI				IAmb	IAmb	19 14 30.4	
	comp=Z,18nm,1.5s						
L27K	Beaver Creek,	43.39	39	P	P	19 14 14.9	+1.6
L27K				IAmb	IAmb	19 14 27.9	
	comp=Z,6.5nm,1.5s						
EGAK	Eagle	43.40	36	P	P	19 14 13.3	+0.1
BCAR	Beaver Creek A	43.41	39	P	P	19 14 14.8	+1.4
M27K	Edge Creek, AK	43.49	40	P	P	19 14 16.2	+2.0
M27K				IAmb	IAmb	19 14 23.1	
	comp=Z,8.2nm,1.2s						
ISLE	Juniper Island	43.63	43	P	P	19 14 16.0	+0.7
MK31	Makanchi Array	43.65	296	P	P	19 14 15.8	+0.3
MKAR	Makanchi Array	43.65	296	P	P	19 14 15.6	0.0
	comp=Z,0.5nm,0.6s,baz=72,slow=7.8,SNR=4.3						
GRNC	Granite Creek	43.89	42	P	P	19 14 17.1	-0.3
GRNC				IAmb	IAmb	19 14 31.2	
	comp=Z,17nm,1.4s						
CTGM	Chitina Glacie	44.03	42	P	P	19 14 20.2	+1.7
KURK	Kurchatov	44.52	303	P	P	19 14 22.9	+0.5
KURK	Kurchatov	44.52	303		PcP	19 16 03.1	+1.2
KURK	Kurchatov	44.52	303	IAmb	IAmb	19 14 22.9	
	comp=Z,3.2nm,1.3s						
KURBB	Kurchatov Arra	44.61	303	P	P	19 14 22.9	-0.1
	comp=Z,0.5nm,0.4s,baz=73,slow=8.0,SNR=7.4						
KURBB				PcP	PcP	19 16 03.1	+0.9
	comp=Z,0.4nm,0.4s,baz=85,slow=3.4,SNR=5.8						
CMAR	Chiang Mai Arr	47.34	252	P	P	19 14 46.1	+1.4
	comp=Z,0.3nm,0.3s,baz=38,slow=6.2,SNR=6.1						
CMAR	Chiang Mai Arr	47.34	252	LR	LR	19 14 46.0	
	comp=Z,25nm,18.0s,baz=165,slow=44						
BVAR	Borovoye Array	48.44	308	P	P	19 14 53.1	+0.3
	comp=Z,0.2nm,0.3s,baz=134,slow=6.4,SNR=2.5						
BELG	Belogornoye	60.78	316	P	P	19 16 21.0	-0.3
	comp=Z,3.7nm,0.7s,baz=334,slow=0.8,SNR=4.1						
FINES	FINESS Array B	63.71	332	P	P	19 16 40.0	-0.5
	comp=Z,2.4nm,0.9s,baz=36,slow=10.0,SNR=4.7						
WRA	Warramunga Arr	65.36	193	P	P	19 16 53.4	+1.6
	comp=Z,1.0nm,0.4s,baz=8.9,slow=6.8,SNR=17						
WRA	Warramunga Arr	65.36	193	IAmb	IAmb	19 16 54.0	
	comp=Z,0.2nm,1.1s						
NB2	NORSAR Subarra	68.44	338	P	P	19 17 10.3	-0.5
	comp=Z,0.2nm,0.4s,baz=30,slow=6.2						
NOA	NORSAR Array B	68.44	338	P	P	19 17 10.6	-0.2
	comp=Z,0.4nm,0.5s,baz=31,slow=6.6,SNR=4.6						
ASAR	Alice Springs	69.08	192	P	P	19 17 17.5	+2.4
	comp=Z,0.3nm,0.5s,baz=10.0,slow=6.6,SNR=14						
AKASG	Malin Array Be	70.43	323	P	P	19 17 22.8	-0.3
	comp=Z,0.2nm,0.3s,baz=44,slow=6.4,SNR=1.8						

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*NNC **04** 19:11:48.7±3.4, 37°.60N×71°.48E, h130^{km}±71^{km}, mb3.3, mpv4.0, Error ellipse: s-maj=30.9km s-min=19.8km az=159.0*

*IDC **04** 19:11:49.3±5.3, 37°.74N×71°.03E, h102^{km}±28^{km}, mb3.7/2, mb1 3.4/8, mb1mx3.0/54, mbtmp3.7/8, Error ellipse: s-maj=72.2km s-min=18.0km az=151.0*

ISC 04 19:11:42.5±0.8**, 37°.23N**±0°.07×**71°.52E**±0°.06**, h106**^{km}**, n32,** σ**2**^{s}**.26**/39**, 5C-5D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	Almayashu	5.17	18	P	Pn	19 12 60.0	+2.0
	SNR=150						
UCH	Uchtor	5.50	24	P	Sn	19 14 02.9	-1.6
	SNR=9.6						
EKS2	Erkin-Say	5.70	17	P	Pn	19 13 07.2	+2.4
	SNR=12						
AAK	Ala-Archa	5.87	22	P	Pn	19 13 09.6	+2.6
	4.7nm,0.3s,baz=191,slow=6.2,SNR=33						
AAK				S	Sn	19 14 12.5	-0.5
	2.3nm,0.3s,baz=351,slow=22,SNR=17						
KK31	Karatay Array	5.92	353	⇑P	Pn	19 13 09.7	+2.0
	16nm,0.5s,baz=177,slow=12,SNR=444						
KK31				⇓S	Sn	19 14 13.3	-0.8
	16nm,0.5s,baz=168,slow=22,SNR=10						
KBK	Karagaybulak	6.03	25	P	Pn	19 13 12.3	+3.0
	SNR=6.1						
CHMS	Chumysh	6.27	22	P	Pn	19 13 14.7	+2.3
	SNR=7.9						
USP	Ospenovka	6.45	20	P	Pn	19 13 16.8	+1.9
	SNR=9.6						
TKM2	Tokmak 2	6.49	28	P	Pn	19 13 16.5	+1.0
	SNR=8.9						
TKM2	Tokmak 2	6.49	28	⇑P	Pn	19 13 16.9	+1.4
	3.6nm,0.6s						
TKM2				⇑S	Sn	19 14 27.1	-1.1
	1.8nm,0.5s						
GEYT	Alibeck	10.66	278	P	Pn	19 14 12.4	+0.3
	0.9nm,0.3s,baz=112,slow=11,SNR=9.2						
GEYT				S	Sn	19 16 06.1	-3.4
	1.8nm,0.3s,baz=108,slow=28,SNR=8.2						
GYA0B	ALIBECK ARRAY	10.66	278	⇓P	Pn	19 14 19.3	+7.2
GYA0B				⇓S	Sn	19 16 10.9	+1.4
MKAR	Makanchi Array	12.46	37	P	P	19 14 42.5	-0.9
	0.1nm,0.3s,baz=223,slow=12,SNR=2.1						
PYUN	Piuthan	13.26	130	*e*P	Pn	19 14 44.3	-2.5
	12nm,0.2s						
DANN	Dangsing	13.57	127	*e*P	Pn	19 14 49.2	-1.6
	5.7nm,0.2s						
KOLN	Koldanda	13.87	129	*e*P	Pn	19 14 53.0	-1.7
	7.1nm,0.3s						
KURBB	Kurchatov Arra	14.30	18	P	P	19 15 04.2	+0.4
	0.0nm,0.3s,baz=206,slow=10,SNR=4.9						
GKN	Gorkha	14.37	126	*e*P	Pn	19 14 59.3	-1.7
	6.4nm,0.3s						
AB31	Akbulak array	14.67	329	⇓P	Pn	19 15 04.8	+0.3
	0.4nm,0.3s,baz=167,slow=9.8,SNR=60						
AB31				⇑S	Sn	19 17 41.7	-4.4
	3.4nm,0.5s,baz=153,slow=23,SNR=9.3						
KKN	Kakani	14.93	125	*e*P	Pn	19 15 06.0	-2.2
	4.4nm,0.3s						
PKIN	Phulchoki	15.15	125	*e*P	Pn	19 15 09.4	-1.6
	4.7nm,0.2s						
JIRN	Jiri	15.61	123	*e*P	Pn	19 15 15.9	-1.1
BVAR	Borovoye Array	15.82	357	P	P	19 15 20.3	-0.3
	0.2nm,0.3s,baz=186,slow=12,SNR=4.5						
RAMN	Ramite	16.36	124	*e*P	Pn	19 15 25.5	-0.6
AKTO	Aktyubinsk	16.37	328	P	P	19 15 28.5	+1.7
	1.0nm,0.3s,baz=126,slow=9.1,SNR=14						
AKTO				S	Sn	19 18 19.8	-7.6
	0.1nm,0.3s,baz=318,slow=16,SNR=2.8						
AKTO	Aktyubinsk	16.37	328	⇑P	P	19 15 28.2	+1.4
	2.4nm,0.5s						
AKTO				⇓S	Sn	19 18 25.2	-2.1
	3.2nm,0.7s						
TAPN	Taplejung	16.84	121	*e*P	P	19 15 32.0	-0.5
ODAN	Odare	16.94	123	*e*P	P	19 15 33.1	-0.4
ZALV	Zalesovo Beam	19.08	25	P	Pn	19 15 58.4	0.0
	0.3nm,0.3s,baz=213,slow=8.0,SNR=4.6						
ARCES	ARCESS Array B	40.64	337	P	P	19 19 14.0	+2.4
	6.2nm,0.9s,baz=122,slow=6.7,SNR=4.4						
NB2	NORSAR Subarra	44.05	323	P	P	19 19 41.4	+1.9
	comp=Z,0.3nm,0.5s,baz=94,slow=8.6						
NOA	NORSAR Array B	44.05	323	P	P	19 19 41.2	+1.8
	comp=Z,0.1nm,0.3s,baz=105,slow=6.9,SNR=4.1						

IDC 04 19:24:18.1±3.7**, 4°.60S**×**137°.26E, h0**^{km}**, mb3.5**/1**,**

mb1 3.6/4, mb1mx3.3/40, mbtmp3.4/4, ML3.3/3, Error ellipse: s-maj=126.9km s-min=31.3km az=89.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.52	190	Pn	Pn	19 27 56.5	-2.0
	0.1nm,0.3s,baz=14,slow=15,SNR=5.9						
WRA				Sn	Sn	19 30 42.0	-9.3
	0.1nm,0.3s,baz=16,slow=24,SNR=1.9						
WRA				Lg	Lg	19 32 27.0	
	0.2nm,0.3s,baz=23,slow=24,SNR=3.3						
FITZ	Fitzroy Crossi	17.59	219	P	Pn	19 28 24.8	-0.1
	0.1nm,0.3s,baz=36,slow=17,SNR=2.4						
ASAR	Alice Springs	19.23	189	P	Pn	19 28 45.1	0.0
	0.1nm,0.3s,baz=5.9,slow=12,SNR=14						
MKAR	Makanchi Array	70.41	323	P	P	19 35 34.2	0.0
	0.3nm,0.5s,baz=123,slow=5.3,SNR=4.1						

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*DJA **04** 19:28:02.6±1.2, 0°N±5°×9°8E±°, h11^{km}±11^{km}, M3.9/9, mb3.8/3, MLv4.0/9*

*IDC **04** 19:28:25.3±8.7, 1$\overset{\circ}{.}$55N×98$\overset{\circ}{.}$41E, h134^{km}±20^{km}, mb3.3/6, mb1 3.2/7, mb1mx3.0/59, mbtmp3.6/7, Error ellipse: s-maj=143.2km s-min=53.8km az=4.0*

ISC 04 19:28:05.3±1.1, **0$\overset{\circ}{.}$40N**±0$\overset{\circ}{.}$08×**97$\overset{\circ}{.}$8E**±0$\overset{\circ}{.}$1, **h29^{km}, n22, σ1$\overset{s}{.}$88**/20, **mb3.7**/6, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSI	Gunungsitoli	0.93	346	P	Pn	19 28 21.7	-0.7
GSI				S	Sb	19 28 35.9	+1.1
MNSI	Mandailing Nat	1.83	78	P	Pn	19 28 32.5	-2.3
SISI	Saibi	2.15	143	P	Pn	19 28 36.7	-2.5
SNSI	Sinabang, Aceh	2.48	324	P	Pn	19 28 44.1	+0.4
PSI	Prapat	2.64	25	P	Pb	19 28 50.9	-1.1
	2.7nm,0.3s,baz=351,slow=8.0,SNR=9.2						
PPI	Padang Panjang	2.74	108	P	Pn	19 28 45.5	-1.8
TPTI		2.91	348	P	Pn	19 28 49.7	0.0
PDSI	Padang	2.97	116	P	Pn	19 28 49.5	-1.0
BKNI	Bangkinang	3.24	91	P	Pb	19 29 05.6	+3.4
MASI	Maura Aman, Be	5.67	128	P	Pn	19 29 25.1	-2.5
	0.3nm47nm,1.4s						
MDSI	Maura Dua	8.01	127	P	Pn	19 29 58.2	-1.6
	0.1nm5.5nm,1.2s						
KLSI		8.57	126	P	Pn	19 30 05.6	-2.0
CMAR	Chiang Mai Arr	17.98	4	P	Pn	19 32 12.5	-0.8
	baz=191,slow=9.2,SNR=1.7						
H08S2	Diego Garcia H	26.47	252	T	T	20 01 04.6	
	baz=72,slow=76,SNR=40						
H08S3	Diego Garcia H	26.47	252	T	T	20 01 07.9	
	baz=72,slow=76,SNR=50						
H08S1	Diego Carcia H	26.48	252	T	T	20 01 07.6	
	baz=72,slow=76,SNR=14						
KSRS	Korea Array	46.17	34	P	P	19 36 25.9	-1.6
	0.6nm,0.5s,baz=223,slow=8.3,SNR=4.5						
SONM	Songino Array	47.84	8	P	P	19 36 40.5	0.0
	0.4nm,0.5s,baz=188,slow=14,SNR=2.9						
MKAR	Makanchi Array	48.16	346	P	P	19 36 43.9	+0.9
	0.3nm,0.5s,baz=162,slow=8.6,SNR=4.4						
KURBB	Kurchatov Arra	52.66	345	P	P	19 37 19.5	+2.7
	0.3nm,0.4s,baz=159,slow=6.9,SNR=2.9						
ZALV	Zalesovo Beam	54.44	351	P	P	19 37 30.5	+0.7
	0.9nm,0.4s,baz=180,slow=5.8,SNR=4.8						
BVAR	Borovoye Array	57.20	341	P	P	19 37 52.0	+2.4
	0.4nm,0.4s,baz=178,slow=14,SNR=3.6						

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*IDC **04** 19:30:23.3±1.4, 8$\overset{\circ}{.}$03S×125$\overset{\circ}{.}$38E, h0^{km}, mb3.6/4, mb1 3.8/7, mb1mx3.5/55, mbtmp3.7/7, ML3.6/3, MS3.0/3, Ms1 3.0/3, ms1mx2.6/27, Error ellipse: s-maj=39.9km s-min=22.4km az=86.0*

*DJA **04** 19:30:28.5±1.9, 8°S±4°×12°5E±°, h16^{km}±18^{km}, M3.9/7, mb4.2/5, mB4.9/1, MLv3.8/7, Mw(mB)4.2/1*

ISC 04 19:30:26.3±0.8, **8$\overset{\circ}{.}$29S**±0$\overset{\circ}{.}$06×**125$\overset{\circ}{.}$18E**±0$\overset{\circ}{.}$07, **h24^{km}, n17, σ1$\overset{s}{.}$76**/20, **mb3.8**/4, **Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.71	212	P	Pb	19 30 58.0	+0.8
BATI	Baumata	2.42	218	Pn	Pb	19 31 08.4	-0.8
	9.5nm,0.3s,baz=219,slow=0.5,SNR=16						
BATI				Sn	Sb	19 31 43.2	+4.5
	6.7nm,0.3s,baz=153,slow=23,SNR=9.1						
BATI				LR	LR	19 32 18.7	
	comp=Z,144nm,18.4s,baz=67,slow=42						
BATI	Baumata	2.42	218	P	Pb	19 31 08.0	-1.2
MMRI	Maumere	2.93	263	P	Pn	19 31 12.6	+1.2
KDI	Kendari	5.00	329	P	Pn	19 31 39.4	-0.5
BSSI	Bau Bau, Buton	5.11	294	P	Pn	19 31 41.0	-0.5
BSSI				S	Sn	19 32 37.8	-2.0
BKSI	Bulukumba	5.82	300	P	Pn	19 31 50.4	-0.8
	0.0nm8.5nm,0.9s						
SANI	Sanana	6.25	7	P	Pn	19 31 59.1	+2.0
	0.1nm860nm6.4nm,0.4s						
FITZ	Fitzroy Crossi	9.76	177	Pn	Pn	19 32 44.2	-1.1
	0.1nm,0.3s,baz=3.8,slow=15,SNR=1.2						
FITZ				Sn	Sn	19 34 32.3	-1.9
	0.4nm,0.3s,baz=77,slow=23,SNR=6.5						
WRA	Warramunga Arr	14.59	144	Pn	Pn	19 33 51.1	-0.3
	0.3nm,0.3s,baz=320,slow=13,SNR=8.8						
WRA				Sn	Sn	19 36 30.7	-1.9
	0.2nm,0.3s,baz=322,slow=24,SNR=5.3						
ASAR	Alice Springs	17.43	152	P	P	19 34 31.0	+1.9
	0.3nm,0.3s,baz=324,slow=11,SNR=22						
ASAR				S	Sn	19 37 39.1	-2.4
	0.1nm,0.3s,baz=319,slow=21,SNR=5.9						
PMG	Port Moresby	21.75	95	LR	LR	19 45 37.3	
	comp=Z,56nm,20.5s,baz=314,slow=42						
CMAR	Chiang Mai Arr	37.10	316	P	P	19 37 35.9	+0.7
	0.3nm,0.6s,baz=148,slow=6.8,SNR=4.8						
MKAR	Makanchi Array	66.78	329	P	P	19 41 16.0	+0.1
	0.7nm,0.8s,baz=123,slow=7.2,SNR=5.5						
ZALV	Zalesovo Beam	70.71	336	P	P	19 41 39.7	-0.5
	0.6nm,0.6s,baz=148,slow=12,SNR=2.2						
KURBB	Kurchatov Arra	71.19	331	P	P	19 41 43.1	-0.1
	0.5nm,0.8s,baz=136,slow=4.4,SNR=3.4						
TIXI	Tiksi	79.81	1	LR	LR	20 19 43.6	
	comp=Z,13nm,21.1s,baz=296,slow=37						

IDC 04 19:32:27.9±2.1, **8$\overset{\circ}{.}$21S**×**125$\overset{\circ}{.}$53E, h0^{km}, mb3.5**/1, **mb1 3.5**/4, **mb1mx3.3**/55, **mbtmp3.3**/4, **ML3.1**/3, **Error ellipse: s-maj=41.9km s-min=30.5km az=92.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	2.71	223	Pn	Pn	19 33 13.4	+0.7
	1.9nm,0.3s,baz=253,slow=19,SNR=0.8						
BATI				Sn	Sn	19 33 45.3	-1.0
	2.3nm,0.3s,baz=352,slow=22,SNR=1.4						
WRA	Warramunga Arr	14.45	145	Pn	Pn	19 35 52.5	-1.3
	0.1nm,0.3s,baz=321,slow=12,SNR=3.4						
ASAR	Alice Springs	17.33	153	P	P	19 36 32.4	-0.5
	0.0nm,0.3s,baz=326,slow=11,SNR=2.2						
MKAR	Makanchi Array	66.90	329	P	P	19 43 22.0	0.0
	0.4nm,0.8s,baz=149,slow=6.7,SNR=2.0						

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*IDC **04** 19:35:24.5±1.8, 20$\overset{\circ}{.}$63S×173$\overset{\circ}{.}$39W, h0^{km}, mb3.9/4, mb1 4.2/5, mb1mx3.8/41, mbtmp4.0/5, ML5.3/1, MS3.0/3, Ms1 3.0/3, ms1mx2.7/34, Error ellipse: s-maj=92.8km s-min=30.3km az=166.0*

*NEIC **04** 19:35:25.7±0.6, 20$\overset{\circ}{.}$6S±0$\overset{\circ}{.}$2×173$\overset{\circ}{.}$41W±0$\overset{\circ}{.}$09, h10^{km}±1^{km}, mb4.5/8, Error ellipse: s-maj=34.2km s-min=13.3km az=172.0*

ISC 04 19:35:25.1±0.8, **20$\overset{\circ}{.}$6S**±0$\overset{\circ}{.}$2×**173$\overset{\circ}{.}$36W**±0$\overset{\circ}{.}$09, **h10^{km}, n25, σ1$\overset{s}{.}$49**/17, **mb4.2**/8, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	3.58	65		Pn	19 36 21.8	+1.1
NIUE				Pg	Pb	19 36 27.2	-1.4
NIUE					Sn	19 37 04.0	+1.0
MSVF	Nonsavu	8.61	288	Pn	Pn	19 37 31.9	+1.9
	1.1nm,0.3s,baz=118,slow=15,SNR=19						
MSVF	Nonsavu	8.61	288		Pn	19 37 29.5	-0.4
RAR	Rarotonga	12.71	95	LR	LR	19 41 58.5	
	comp=Z,22nm,20.6s,baz=268,slow=31						
CTA	Charters Tower	37.80	264	P	P	19 42 41.9	-0.1
	1.9nm,0.6s,baz=90,slow=11,SNR=1.7						
WR0	Warramunga Arr	48.69	261	P	P	19 44 09.3	-0.7
WR0				IAmb	IAmb	19 44 24.3	
	comp=Z,4.4nm,1.4s						
ASAR	Alice Springs	48.72	256	P	P	19 44 12.3	+2.1
	comp=Z,1.4nm,0.7s,baz=87,slow=8.2,SNR=18						
ASAR	Alice Springs	48.72	256	P	P	19 44 08.4	-1.8
WB0	Warramunga Arr	48.87	261	P	P	19 44 10.9	-0.5
WB0				IAmb	IAmb	19 44 16.8	
	comp=Z,9.8nm,1.5s						
WB2	Warramunga Arr	48.87	261	P	P	19 44 10.7	-0.7
WB2				IAmb	IAmb	19 44 34.8	
	comp=Z,8.0nm,1.5s						
WRAB	Tennant Creek	48.88	261	P	P	19 44 09.5	-1.9
WRAB				IAmb	IAmb	19 44 35.6	
	comp=Z,5.1nm,1.4s						
WRA	Warramunga Arr	48.88	261	P	P	19 44 10.7	-0.8
	comp=Z,0.9nm,0.8s,baz=97,slow=8.1,SNR=16						
WRA	Warramunga Arr	48.88	261	IAmb	IAmb	19 44 17.5	
	comp=Z,0.3nm,1.4s						
KNRA	Kununurra	54.98	265	P	P	19 44 54.7	-2.3
FITZ	Fitzroy Crossi	57.31	261	LR	LR	20 10 23.4	
	comp=Z,57nm,21.6s,baz=152,slow=37						
SBA	Scott Base	58.07	185	P	P	19 45 18.7	+0.6
SLBS	Sierra La Lagu	75.85	58	P	P	19 47 10.4	-1.7
KSRS	Korea Array	79.92	316	LR	LR	20 19 38.8	
	comp=Z,6.4nm,19.0s,baz=90,slow=33						
H03S2	Juan Fernandez	82.31	123	T	T	21 20 42.4	
	baz=250,slow=75,SNR=21						
H03S1	Juan Fernandez	82.32	123	T	T	21 20 43.4	
	baz=250,slow=75,SNR=20						
H03S3	Juan Fernandez	82.33	123	T	T	21 20 42.1	
	baz=250,slow=75,SNR=20						
H03N2	Juan Fernandez	82.44	123	T	T	21 20 47.6	
	baz=248,slow=73,SNR=10						
H03N3	Juan Fernandez	82.44	123	T	T	21 20 49.8	
	baz=248,slow=73,SNR=8.4						
H03N1	Juan Fernandez	82.45	123	T	T	21 20 46.8	
	baz=248,slow=73,SNR=4.2						
TXAR	Lajitas Array	83.50	56	P	P	19 47 54.9	+1.3
	comp=Z,1.0nm,1.1s,baz=208,slow=9.1,SNR=4.5						

IDC 04 19:38:52.8±2.1, **41$\overset{\circ}{.}$96N**×**121$\overset{\circ}{.}$68E, h0^{km}, mb3.5**/1, **mb1 3.3**/3, **mb1mx3.1**/48, **mbtmp3.3**/3, **ML2.3**/2, **Error ellipse: s-maj=36.0km s-min=20.8km az=22.0, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSRS	Korea Array	6.59	131	Pn	Pn	19 40 31.5	+0.6
	0.2nm,0.3s,baz=317,slow=14,SNR=1.8						
KSRS				Pg	Pg	19 40 54.0	-5.0
	0.4nm,0.3s,baz=314,slow=17,SNR=5.6						
KSRS				Lg	Lg	19 42 19.9	
	1.8nm,0.3s,baz=310,slow=29,SNR=14						
USRK	Ussuriysk Ar.	7.88	70	Pn	Pn	19 40 48.8	+0.3
	baz=259,slow=13,SNR=2.6						
USRK				Lg	Lg	19 43 01.2	
	baz=260,slow=25,SNR=7.8						
KLR	Kul'dur	10.13	41	Lg	Lg	19 44 15.6	
	0.2nm,0.3s,baz=322,slow=12,SNR=4.3						
SONM	Songino Array	12.32	304	Lg	Lg	19 45 31.9	
	0.2nm,0.3s,baz=109,slow=22,SNR=6.5						
MKAR	Makanchi Array	28.35	293	P	P	19 44 48.2	-0.2
	0.4nm,0.6s,baz=86,slow=8.2,SNR=2.1						

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*TAP **04** 19:44:49.3, 23$\overset{\circ}{.}$92N×122$\overset{\circ}{.}$55E, h15^{km}±1^{km}, ML2.5, D*

*JMA **04** 19:44:49.5±0.3, 24$\overset{\circ}{.}$00N×122$\overset{\circ}{.}$59E, h24^{km}±5^{km}, M1.8*

ISC 04 19:44:48.8±1.2, **23$\overset{\circ}{.}$95N**±0$\overset{\circ}{.}$03×**122$\overset{\circ}{.}$60E**±0$\overset{\circ}{.}$02, **h18^{km}**±5^{km}, **n42, σ0$\overset{s}{.}$59**/78, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.59	32	P	Pb	19 45 00.4	-0.2
JYNG				S	Sb	19 45 07.7	-0.9
YOJ	Yonaguni jima	0.63	36	*e*P	Pb	19 45 01.2	-0.1
	baz=36						
YOJ	Yonaguni jima	0.63	36	P	Pb	19 45 01.2	-0.1
YOJ				*e*S	Sb	19 45 09.6	-0.2
EHP	Heping Village	0.86	295	*e*P	Pn	19 45 07.0	+0.9
	baz=297						
EWUT	Wuta	0.90	303	*e*P	Pb	19 45 05.8	-0.1
	baz=306						
EWUT				S	Sn	19 45 19.1	0.0
	baz=306						
ETL	Fush Village	0.92	283	*e*P	Pn	19 45 07.6	+0.7
	baz=285						
ETL				*e*S	Sn	19 45 21.9	+2.3
	baz=285						
ENA	Nanau	0.92	301	P	Pg	19 45 06.7	0.0
	baz=304						
ENA				S	Sn	19 45 20.1	+0.5
	baz=304						
TWD	Chiawan	0.93	278	*e*P	Pg	19 45 07.7	+0.9
	baz=280						
TWD				*e*S	Sg	19 45 18.8	-0.3
	baz=280						
NACB	Ninganchiao	0.95	284	P	Pb	19 45 06.7	0.0
	baz=286						
NACB				*e*S	Sn	19 45 19.7	-0.6
	baz=286						
TWC	Suao	0.95	314	*i* P	Pn	19 45 07.1	-0.2
	baz=317						
TWC				*e*S	Sg	19 45 19.4	-0.5
	baz=317						
ETM	Tongmen	1.01	271	*e*P	Pb	19 45 07.2	-0.6
	baz=272						
ETM				*e*S	Sn	19 45 21.1	-0.9
	baz=272						
ETLH	Xiulin Townshi	1.05	284	*e*P	Pb	19 45 08.1	-0.5
	baz=286						
ETLH				*e*S	Sn	19 45 22.6	-0.5
	baz=286						
NDS	Dongshan	1.06	310	P	Pn	19 45 08.9	+0.2
	baz=313						
NDS				*e*S	Sn	19 45 22.4	-0.6
	baz=313						
ESL	Shilin	1.08	263	P	Pg	19 45 09.8	+0.1
	baz=264						
ESL				*e*S	Sn	19 45 23.4	-0.2
	baz=264						
IRIF	Iriomote-Funau	1.10	69	P	Pn	19 45 09.3	0.0
IRIF				*e*S	Sb	19 45 23.6	+0.3
EGFH	Guangfu	1.11	256	*i* P	Pb	19 45 09.9	+0.4
	baz=256						
EGFH				S	Sn	19 45 24.4	0.0
	baz=256						
ILA	Ilan	1.12	316	P	Pg	19 45 11.0	+0.3
	baz=319						
NTC	Toucheng	1.14	322	P	Pg	19 45 11.2	+0.3
	baz=324						
NTC				S	Sg	19 45 26.4	+0.5
	baz=324						
TWE	Neicheng	1.15	312	*i* P	Pb	19 45 10.1	-0.1
	baz=315						
TWE				S	Sg	19 45 26.4	+0.4
	baz=315						
ENTT	Nioudou	1.17	306	P	Pg	19 45 11.5	0.0
	baz=308						
ENTT				S	Sg	19 45 27.0	+0.2
	baz=308						
HGSD	Ruisui	1.17	247	P	Pb	19 45 11.1	+0.6
	baz=247						
NDT	Datong Townshi	1.19	303	*i* P	Pg	19 45 12.0	+0.2
	baz=305						
NDT				*e*S	Sg	19 45 28.4	+1.0
	baz=305						
NNSB	Datong	1.21	293	P	Pb	19 45 11.2	-0.1
	baz=295						
NNSB				S	Sn	19 45 26.7	-0.3
	baz=295						
NNS	Nan Shan	1.22	294	*i* P	Pb	19 45 11.5	0.0
	baz=295						
NNS				*i* S	Sg	19 45 27.7	-0.8
	baz=295						
WHF	Hehuan Shan	1.24	279	*i* P	Pn	19 45 11.2	-0.4
	baz=280						
WHF				*i* S	Sn	19 45 27.6	-0.5
	baz=280						
TIPB	Shuangxi	1.24	325	*i* P	Pb	19 45 12.3	+0.5
	baz=327						
TIPB				S	Sg	19 45 28.2	-0.8
	baz=327						
FUSS	Fushou	1.27	284	*i* P	Pn	19 45 12.0	0.0
	baz=285						
FUSS				S	Sg	19 45 29.5	-0.7
	baz=285						
NWLT	Wulai	1.30	310	P	Pg	19 45 13.5	-0.4
	baz=311						
NWLT				S	Sg	19 45 30.2	-0.6
	baz=311						
OWD	Renai	1.30	271	*i* P	Pn	19 45 12.3	0.0
	baz=271						
OWD				*e*S	Sb	19 45 29.8	+0.5
	baz=271						
CHGB	Renai	1.31	275	P	Pn	19 45 12.5	+0.1
	baz=276						
CHGB				S	Sn	19 45 29.4	-0.2
	baz=276						
JKRS	Kuro-shima	1.32	77	P	Pb	19 45 14.0	+1.0
JKRS				*e*S	Sb	19 45 30.7	+1.1
EYUL	Yuli	1.32	243	P	Pn	19 45 12.0	-0.4
	baz=243						
EYUL				S	Sb	19 45 29.5	-0.1
	baz=243						
YHNB	Yeheng	1.33	303	P	Pb	19 45 12.9	-0.4
	baz=304						
YHNB				*e*S	Sn	19 45 29.4	-0.4
	baz=304						
TDCB	Techi	1.35	283	P	Pn	19 45 13.2	+0.3
	baz=284						
TDCB				*e*S	Sb	19 45 31.0	+0.2
	baz=284						
FULB	Fuli	1.41	238	P	Pn	19 45 13.8	+0.1
	baz=238						
FULB				*e*S	Sn	19 45 31.7	-0.1
	baz=238						
JIJ	Ishigaki jima	1.47	73	P	Pn	19 45 13.8	-0.6
JIJ				*e*S	Sn	19 45 32.5	-0.6
DPDB	Guoxing	1.53	273	P	Pb	19 45 16.3	-0.4
	baz=274						
DPDB				*e*S	Sg	19 45 37.7	-0.7
	baz=274						
EDH	Donghe	1.54	231	*e*P	Pn	19 45 15.6	+0.3
	baz=230						
EDH				*e*S	Sn	19 45 33.2	-1.7
	baz=230						
WHP	Taichung City	1.55	283	*e*P	Pb	19 45 17.3	+0.3
	baz=283						
WHP				S	Sb	19 45 36.0	-0.3
	baz=283						
JISG	Ishigakijimahi	1.68	68	P	Pn	19 45 17.1	-0.3
JISG				*e*S	Sn	19 45 37.9	-0.6
PCYT	Pengchaiyu	1.74	344	*e*P	Pn	19 45 19.2	+1.1
	baz=345						
LAY	Lan-yu	2.13	207	*e*S	Sn	19 45 49.9	+0.3
	baz=206						

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*DJA **04** 20:01:32.1±0.3, 8°S±3°×12°5E±°, h10^{km}, M3.9/9, mb4.2/5, mB5.3/1, MLv3.8/9, Mw(mB)4.7/1*

ISC 04 20:01:33.0±1.2, **8$\overset{\circ}{.}$21S**±0$\overset{\circ}{.}$07×**124$\overset{\circ}{.}$88E**±0$\overset{\circ}{.}$07, **h24^{km}, n20, σ1$\overset{s}{.}$71**/20, **Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.65	201	P	Pn	20 01 59.6	-1.0
SOEI	Soe	1.65	201	P	Pb	20 02 02.1	-0.8
	4µm259nm,0.6s						
SOEI	Soe	1.65	201	P	Pb	20 02 02.3	-0.6
BATI	Baumata	2.32	211	P	Pn	20 02 10.7	+1.0
BATI	Baumata	2.32	211	P	Pb	20 02 12.2	-2.0
	2µm131nm,0.5s						
MMRI	Maumere	2.65	261	P	Pn	20 02 14.9	+0.7
MMRI	Maumere	2.65	261	P	Pb	20 02 17.6	-2.1
	1µm146nm,1.1s						
MMRI	Maumere	2.65	261	P	Pb	20 02 18.2	-1.5
EDFI	Ende, Flores	3.20	260	P	Pn	20 02 22.8	+0.9
EDFI	Ende, Flores	3.20	260	P	Pn	20 02 24.6	+2.7
	30nm,0.7s						
BSSI	Bau Bau, Buton	4.81	295	P	Pn	20 02 44.7	+0.7
BKSI	Bulukumba	5.53	301	P	Pn	20 02 54.5	+0.7
	0.0nm8.7nm,0.7s						
BNDI	Bandanaira	6.19	54	P	Pn	20 03 04.1	+1.1
SANI	Sanana	6.22	10	P	Pn	20 03 05.1	+1.8
	0.1nm11nm,0.4s						
SANI	Sanana	6.22	10	P	Pn	20 03 05.1	+1.8
MSAI	Masohi	6.29	40	P	Pn	20 03 05.7	+1.4
	0.2nm2µm3.4nm,0.7s						
PLAI	Plampang	7.05	264	P	Pn	20 03 18.8	+4.0
DRS	Darwin Rock St	7.26	126	P	Pn	20 03 18.2	+0.6
	6.6nm,0.6s						
MTN	Manton Dam	7.68	127	P	Pn	20 03 23.6	+0.1
	22nm,0.5s						
KDU	Kakadu	8.69	121	P	Pn	20 03 37.4	+0.1
	5.3nm,1.1s						

KRSC 04 20:26:03.6±2.5, **49$\overset{\circ}{.}$44N**×**156$\overset{\circ}{.}$70E, h47^{km}**±25^{km}, **ML4.3, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.30	343	*e*P	Pn	20 26 25.1	-0.3
SKR				*e*S	Sn	20 26 41.8	+0.2
PAU	Pauzhetka	2.04	2	*e*P	Pn	20 26 37.4	+2.0
PAU				*e*S	Sn	20 27 02.8	+3.2
KDTR	Khodutka, Kamc	2.53	20	*e*P	Pn	20 26 45.5	+3.3
KDTR				*e*S	Sn	20 27 16.8	+5.0
MIPR	Malaya Ipel'ka	2.84	1	*e*P	Pn	20 26 48.2	+1.7
MTVR	Mutnovka	3.19	16	*e*P	Pn	20 26 55.3	+3.9
MTVR				*e*S	Sn	20 27 33.5	+5.3
RUS	Russkaya	3.21	20	*e*P	Pn	20 26 54.8	+3.3
RUS				*e*S	Sn	20 27 32.4	+3.9
GRL	Gorelyy	3.24	15	*e*P	Pn	20 26 56.1	+4.1
GRL				*e*S	Sn	20 27 34.9	+5.6
APC	Apacha	3.51	5	*e*P	Pn	20 26 58.4	+2.9
DALK	Dalny	3.82	19	*e*P	Pn	20 27 04.0	+4.1
DALK				*e*S	Sn	20 27 49.6	+6.1
UGLR	Uglovaya	4.01	19	*e*P	Pn	20 27 07.4	+4.9
AVH	Avacha	4.04	18	*e*P	Pn	20 27 08.1	+5.1
KOK	Koryaka	4.05	17	*e*P	Pn	20 27 08.3	+5.2
SMAR	Somma	4.05	18	*e*P	Pn	20 27 07.9	+4.7
KRER	Koryakskii	4.08	18	*e*P	Pn	20 27 08.5	+4.9
SDLR	Sedlovina	4.08	19	*e*P	Pn	20 27 07.5	+3.9
NLC	Nalytchevo	4.09	23	*e*S	Sn	20 27 54.0	+3.9
SPN	Mys Shipunski	4.22	28	*e*P	Pn	20 27 09.9	+4.6
GNL	Ganaly	4.33	10	*e*P	Pn	20 27 10.9	+3.9
MKZ	Mys Kozlova	5.99	29	*e*P	Pn	20 27 32.5	+2.9
MKZ				*e*S	Sn	20 28 38.2	+1.4
TUMD	Tumrok D	6.21	20	*e*P	Pn	20 27 37.8	+5.2
TUMR	Tumrok	6.22	18	*e*P	Pn	20 27 37.3	+4.4
KBTR	Krutoberegovo	7.73	26	*e*P	Pn	20 27 56.3	+2.9

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*NOU **04** 20:28:50.9, 32$\overset{\circ}{.}$81S×138$\overset{\circ}{.}$03E, h0^{km}, MLv2.5/4, Near Coast of South Australia*

*AUST **04** 20:28:52.4±2.8, 32$\overset{\circ}{.}$91S×138$\overset{\circ}{.}$02E, h7^{km}±37^{km}, Error ellipse: s-maj=37.9km s-min=12.2km az=6.0*

ISC 04 20:28:52.1±0.9, **32$\overset{\circ}{.}$88S**±0$\overset{\circ}{.}$05×**138$\overset{\circ}{.}$02E**±0$\overset{\circ}{.}$04, **h10^{km}, n10, σ1$\overset{s}{.}$64**/14, **Near coast of South Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTPS	Port Pirie	0.29	185	P	Pg	20 28 58.5	+0.5
WHYH	Whyalla	0.41	248	P	Pg	20 28 58.8	-1.3
AUJCS	Jamestown Cent	0.59	123	P	Pg	20 29 04.1	+0.6
	baz=0.6						
HTT	Hallett	0.93	126	P	Pg	20 29 09.8	-0.3
	baz=0.9						
HTT				S	Sg	20 29 22.7	+0.5
	baz=0.9						
HTT	Hallett	0.93	126	P	Pg	20 29 09.2	-0.9
BBOO	Buckleboo	1.66	272	P	Pn	20 29 21.7	+0.6
	baz=1.6						
BBOO				S	Sn	20 29 42.4	-0.1
	baz=1.6						
BBOO	Buckleboo	1.66	272	P	Pn	20 29 21.2	0.0
LCRK	Leigh Creek	2.43	4	P	Pb	20 29 36.9	+1.0
	baz=2.5						
LCRK				S	Sg	20 30 10.2	0.0
	baz=2.5						
STKA	Stephens Creek	3.18	73	P	Pn	20 29 42.9	+0.7
	baz=3.2						
STKA				S	Sn	20 30 15.5	-4.7
	baz=3.2						
INKA	Innaminka	5.64	25	P	Pn	20 30 17.5	+1.6
	baz=5.7						

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*NEIC **04** 20:44:50.6±1.9, 9$\overset{\circ}{.}$13S±0$\overset{\circ}{.}$05×119$\overset{\circ}{.}$09E±0$\overset{\circ}{.}$07, h109^{km}±8^{km}, mb4.3/29, Error ellipse: s-maj=10.8km s-min=6.6km az=67.0*

*DJA **04** 20:44:51.8±0.2, 9°S±2°×11°9E±°, h81^{km}±5^{km}, M4.5/21, mB5.0/12, mb4.8/20, MLv4.8/21, Mw(mB)4.4/12*

*IDC **04** 20:44:52.1±1.6, 8°.91S×119°.32E, h112^{km}±14^{km}, mb3.8/8, mb1 3.9/13, mb1mx3.7/32, mbtmp4.3/13, MS3.0/3, Ms1 3.0/3, ms1mx2.6/29, Error ellipse: s-maj=20.6km s-min=8.5km az=55.0*

ISC 04 20:44:50.3±0.4**, 9°.11S**±0°.05×**119°.19E**±0°.05**, h102**^{km}**, n136, σ1ˢ.71**/137**, mb4.4**/36**, 1C, Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WSI	Waingapu	1.23	117	P	Pn	20 45 14.7	+1.3
WSI				S	Sn	20 45 31.2	+0.3
PLAI	Plampang	1.42	281	P	Pn	20 45 16.5	+0.8
PLAI	Plampang	1.42	281	P	Pn	20 45 16.9	+1.2
BASI	Baing, Sumba	1.76	129	P	Pn	20 45 21.3	+1.4
BASI				S	Sn	20 45 44.1	+1.6
TWSI	Taliwang, Sumb	2.31	279	P	Pn	20 45 28.3	+1.4
MMRI	Maumere	3.05	81		Pn	20 45 38.4	+1.6
MMRI	Maumere	3.05	81	P	Pn	20 45 38.4	+1.6
MMRI				S	Sn	20 46 14.7	+2.1
MMRI	Maumere	3.05	81	P	Pn	20 45 38.9	+2.1
BSSI	Bau Bau, Buton	3.22	24	P	Pn	20 45 39.5	+0.5
BKSI	Bulukumba	3.87	14	P	Pn	20 45 48.2	+0.4
DNP	Denpasar	3.95	276	P	Pn	20 46 00.5	+12
IGBI	Denpasar	4.00	274	P	Pn	20 45 51.0	+1.5
SRBI	Singaraja	4.06	284	P	Pn	20 45 51.1	+0.8
KAPI	Kappang	4.10	8	P	Pn	20 45 51.8	+0.9
	24nm,0.3s,baz=213,slow=5.8,SNR=57						
KAPI				S	Sn	20 46 35.8	-2.1
	78nm,0.3s,baz=153,slow=21,SNR=15						
KAPI				LR	LR	20 47 56.3	
	comp=Z,37nm,19.1s,baz=274,slow=47						
KAPI	Kappang	4.10	8	Pn	Pn	20 45 51.7	+0.8
KAPI	Kappang	4.10	8	P	Pn	20 45 51.9	+0.9
BATI	Baumata	4.55	104	P	Pn	20 45 58.9	+2.0
	26nm,0.3s,baz=258,slow=1.0,SNR=28						
BATI				S	Sn	20 46 48.7	0.0
	68nm,0.3s,baz=240,slow=19,SNR=12						
BATI	Baumata	4.55	104	P	Pn	20 45 59.0	+2.0
JAGI	Jajag, Banyuwa	5.01	277	Pn	Pn	20 46 02.5	-0.8
JAGI	Jajag, Banyuwa	5.01	277	P	Pn	20 46 03.0	-0.2
JAGI	Jajag, Banyuwa	5.01	277	P	Pn	20 46 03.2	-0.1
SOEI	Soe	5.05	98		Pn	20 46 05.4	+1.5
SOEI	Soe	5.05	98	P	Pn	20 46 05.9	+2.0
	1.0nm2μm105nm,0.6s						
SOEI	Soe	5.05	98	P	Pn	20 46 05.4	+1.5
ABJI	Asem Bagus	5.07	285	P	Pn	20 46 05.6	+1.6
	0.7nm68nm,0.5s						
KMMI	Kalianget	5.56	291	P	Pn	20 46 12.5	+1.9
	0.3nm47nm,0.8s						
BLJI	Banyuglugur	5.69	283	P	Pn	20 46 13.2	+0.8
	0.6nm3μm127nm,0.4s						
GMJI	Gumukmas	5.74	278	P	Pn	20 46 12.4	-0.6
	0.6nm2μm97nm,0.7s						
TTSI	Tana Toraja	6.05	6	P	Pn	20 46 19.8	+2.4
KBKI	Kotabaru	6.50	332	P	Pn	20 46 24.8	+1.4
	0.2nm701nm51nm,0.6s						
BBKI	Banjar Baru	7.08	322	P	Pn	20 46 33.1	+1.8
	0.3nm1μm92nm,1.0s						
PCJI	Pacitan	7.97	276	P	Pn	20 46 42.5	-0.9
	0.5nm64nm,1.1s						
APSI	Ampana	8.50	17	P	Pn	20 46 52.2	+1.5
	24nm,0.8s						
UGM	Wanagama	8.65	277	Pn	Pn	20 46 51.4	-1.3
UGM	Wanagama	8.65	277	P	Pn	20 46 54.3	+1.6
	193nm,1.7s						
UGM	Wanagama	8.65	277	P	Pn	20 46 54.7	+2.0
LUWI	Luwuk	8.77	24	Pn	Pn	20 46 54.9	+0.6
LUWI	Luwuk	8.77	24	P	Pn	20 46 56.8	+2.5
	2μm36nm,0.8s						
MTKI	Muara Teweh, K	9.17	332	P	Pn	20 46 59.7	0.0
	23nm,1.1s						
SANI	Sanana	9.74	44	P	Pn	20 47 09.3	+1.8
	28nm,1.2s						
SANI	Sanana	9.74	44	P	Pn	20 47 09.9	+2.4
	27nm,1.2s						
MRSI	Marisa	9.91	16	P	Pn	20 47 12.3	+2.5
	495nm40nm,1.0s						
FITZ	Fitzroy Crossi	10.92	146	P	Pn	20 47 23.1	-0.4
	0.5nm,0.3s,baz=340,slow=9.5,SNR=16						
FITZ				S	Sn	20 49 18.8	-4.9
	2.8nm,0.3s,baz=216,slow=20,SNR=12						
FITZ	Fitzroy Crossi	10.92	146	Pn	Pn	20 47 22.9	-0.6
CISI	Cisompet, Garu	11.36	277	Pn	Pn	20 47 26.8	-2.7
CISI	Cisompet, Garu	11.36	277	P	Pn	20 47 29.0	-0.5
KNRA	Kununurra	11.40	126	Pn	Pn	20 47 29.1	-1.0
LEM	Lembang	11.68	280	P	Pn	20 47 35.1	+1.2
	5.3nm,0.3s,baz=84,slow=8.6,SNR=7.0						
LBMI	Labuha	11.80	45	P	P	20 47 43.5	-0.7
DRS	Darwin Rock St	11.97	107	P	Pn	20 47 38.7	+1.1
	14nm,0.5s						
MBWA	Marble Bar	11.99	178	P	Pn	20 47 41.3	+3.4
MTN	Manton Dam	12.30	109	Pn	Pn	20 47 40.6	-1.4
PSA00	Pilbara Seismi	12.41	177	Pn	Pn	20 47 43.0	-0.4
PSA00	Pilbara Seismi	12.41	177	Pn	Pn	20 47 44.6	+1.2
PSA00	Pilbara Seismi	12.41	177	P	Pn	20 47 45.2	+1.8
	18nm,2.4s						
CBJI	Citeko	12.51	281	P	P	20 47 53.8	+1.5
GIRL	Giralia	14.28	199	P	P	20 48 11.2	-0.6
	159nm,1.6s						
FAKI	Fak Fak	14.37	65	Pn	Pn	20 48 06.3	-2.6
FAKI	Fak Fak	14.37	65	P	Pn	20 48 10.5	+1.5
	17nm,0.6s						
SWI	Sorong	14.54	56	P	P	20 48 14.5	-0.4
	23nm,0.8s						
SIJI	Sorong	14.54	56	P	Pn	20 48 09.0	-2.3
	0.5nm,0.3s,baz=184,slow=22,SNR=2.1						
KLSI		15.00	286	P	Pn	20 48 16.6	-0.5
	12nm,0.8s						
LWLI	Liwa	15.55	284	P	P	20 48 42.0	+16
LHSI	Lahat	16.42	288	P	P	20 48 38.0	+2.3
	27nm,0.9s						
MNAI	Manna	16.79	285		Pn	20 48 38.0	-1.3
MNAI	Manna	16.79	285	P	Pn	20 48 39.3	0.0
DSRI	Dabo	16.88	300	P	P	20 48 46.1	+5.3
KSI	Kapahiang	17.35	287	P	Pn	20 48 47.2	+0.9
	60nm,0.8s						
MASI	Maura Aman, Be	17.85	288	P	Pn	20 48 55.1	+2.8
WRKA	Warakurna	18.06	152	P	Pn	20 48 57.1	+2.3
	8.6nm,0.8s						
WB0	Warramunga Arr	18.13	127	P	Pn	20 48 55.5	0.0
WRA	Warramunga Arr	18.18	128	P	Pn	20 48 56.5	+0.3
	0.5nm,0.3s,baz=295,slow=12,SNR=20						
WRA				S	S	20 52 10.8	-7.4
	0.9nm,0.3s,baz=302,slow=21,SNR=6.6						
WRA				ScP	ScP	20 56 50.2	-0.2
	0.0nm,0.3s,baz=217,slow=2.0,SNR=2.0						
WRA				LR	LR	20 56 55.7	
	comp=Z,60nm,21.2s,baz=225,slow=40						
WRA	Warramunga Arr	18.18	128	P	Pn	20 48 57.5	+1.3
WRAB	Tennant Creek	18.18	128	P	P	20 48 55.4	+0.2
WRAB	Tennant Creek	18.18	128	P	Pn	20 48 57.7	+1.5
WB2	Warramunga Arr	18.19	128		Pn	20 48 56.2	-0.1
WR0	Warramunga Arr	18.35	128		Pn	20 48 58.5	+0.3
MORW	Morawa	20.08	188	P	P	20 49 13.2	-2.4
AS31	Alice Springs	20.19	138	P	Pn	20 49 18.8	-1.0
ASAR	Alice Springs	20.19	138	P	Pn	20 49 19.4	-0.5
	1.8nm,0.5s,baz=314,slow=10,SNR=35						
ASAR				S	S	20 52 59.2	+0.9
	2.0nm,0.7s,baz=309,slow=22,SNR=1.9						
ASAR				ScP	ScP	20 56 55.2	+0.3
	1.6nm,0.7s,baz=346,slow=2.2,SNR=11						
ASAR	Alice Springs	20.19	138	P	Pn	20 49 19.2	-0.6
RPSI	Rantau Prapat	23.35	299	P	P	20 49 48.8	-1.1
PSI	Prapat	23.40	299	P	P	20 49 48.8	-1.8
	5.8nm,0.7s,baz=107,slow=6.0,SNR=7.4						
GSI	Gunungsitoli	23.89	295	P	P	20 49 53.5	-1.2
GSI				IAmb	IAmb	20 50 19.7	
	comp=Z,12nm,1.0s						
COEN	Coen	23.99	104	P	P	20 49 56.5	+0.8
COEN				IAmb	IAmb	20 50 20.5	
	comp=Z,6.8nm,0.8s						
COEN	Coen	23.99	104	P	P	20 49 58.2	+2.6
	comp=Z,11nm,0.6s						
OOD	Oodnadatta	24.25	142	P	P	20 49 59.7	+1.9
	comp=Z,15nm,0.8s						
STKA	Stephens Creek	30.75	141	P	P	20 51 03.3	+7.3
	comp=Z,1.1nm,0.4s,baz=310,slow=12,SNR=3.1						
CM31	Chiang Mai Arr	33.90	324	P	P	20 51 22.9	-0.8
CM31				IAmb	IAmb	20 51 24.8	
	comp=Z,3.1nm,0.6s						
CMAR	Chiang Mai Arr	33.90	324	P	P	20 51 23.3	-0.4
	comp=Z,1.6nm,0.6s,baz=154,slow=6.8,SNR=20						
CMAR				PcP	PcP	20 54 00.9	+0.8
	comp=Z,0.3nm,0.6s,baz=178,slow=3.1,SNR=4.0						
CMAR	Chiang Mai Arr	33.90	324	P	P	20 51 23.4	-0.2
CHTO	Chiang Mai	34.18	324	P	P	20 51 26.0	-0.1
CHTO				IAmb	IAmb	20 51 28.0	
	comp=Z,2.4nm,0.7s						
SHL	Shillong	43.52	323	P	P	20 52 42.9	-1.3
H08S2	Diego Garcia H	46.19	268	T	T	21 42 51.6	
	baz=95,slow=76,SNR=10						
H08S3	Diego Garcia H	46.20	268	T	T	21 42 52.3	
	baz=95,slow=76,SNR=11						
H08S1	Diego Carcia H	46.21	268	T	T	21 42 46.0	
	baz=95,slow=76,SNR=3.2						
KSRS	Korea Array	47.03	10	P	P	20 53 11.6	+0.1
	comp=Z,0.6nm,0.6s,baz=187,slow=7.5,SNR=2.1						
LSA	Lhasa	47.09	326	P	P	20 53 12.2	-0.4
LSA				IAmb	IAmb	20 53 13.6	
	comp=Z,5.0nm,0.7s						
ODAN	Odare	47.22	320	*e*P	P	20 53 12.8	-0.6
	comp=Z,11nm,0.8s						
TAPN	Taplejung	47.37	321	*e*P	P	20 53 14.5	-0.1
	comp=Z,22nm,0.7s						
RAMN	Ramite	47.79	320	*e*P	P	20 53 17.8	0.0
	comp=Z,5.6nm,0.5s						
JIRN	Jiri	48.54	320	*e*P	P	20 53 23.0	-0.8
	comp=Z,5.8nm,0.4s						
GUN	Gumba	48.91	320	*e*P	P	20 53 26.1	-0.5
	comp=Z,25nm,0.9s						
PKIN	Phulchoki	48.99	319	*e*P	P	20 53 25.9	-1.2
	comp=Z,5.2nm,0.5s						
KKN	Kakani	49.21	319	*e*P	P	20 53 28.2	-0.5
GKN	Gorkha	49.77	319	*e*P	P	20 53 31.5	-1.4
	comp=Z,5.1nm,0.3s						
HHC	Hu-ho-hao-te	50.20	352	*e*P	P	20 53 38.0	+2.2
HHC				pmax	pmax		
	comp=Z,21nm,0.8s						
HHC				pmax	pmax		
	comp=Z,89nm,6.6s						
KOLN	Koldanda	50.30	318	*e*P	P	20 53 35.5	-1.4
	comp=Z,6.5nm,0.6s						
DANN	Dangsing	50.58	319	*e*P	P	20 53 37.9	-1.3
	comp=Z,20nm,0.8s						
PYUN	Piuthan	50.92	318	*e*P	P	20 53 40.3	-1.3
	comp=Z,6.1nm,0.4s						
GTA	Gaotai	51.51	341	⇑P	P	20 53 45.9	+0.2
GTA				pP	pP	20 53 50.1	-20
GTA				sP	sP	20 53 53.0	-29
GTA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ULN	Ulaanbaatar	57.73	350	P	P	20 54 30.1	-0.5
ULN				IAmb	IAmb	20 54 31.2	
	comp=Z,2.2nm,0.6s						
SONM	Songino Array	57.81	350	P	P	20 54 30.9	-0.2
	comp=Z,4.5nm,0.7s,baz=167,slow=8.4,SNR=38						
SONM	Songino Array	57.81	350	P	P	20 54 30.6	-0.5
SONM				IAmb	IAmb	20 54 31.8	
	comp=Z,3.7nm,0.8s						
WMQ	Urumqi	59.93	334	*e*P	P	20 54 47.9	+2.1
KSH	Kashi	62.80	323	P	P	20 55 03.4	-1.9
KSH				pmax	pmax		
	comp=Z,12nm,0.7s						
KBL	Kabul	64.30	315	P	P	20 55 13.2	-2.1
KBL				IAmb	IAmb	20 55 14.3	
	comp=Z,4.8nm,0.8s						
MK31	Makanchi Array	64.63	333	P	P	20 55 15.6	-1.4
MK31				IAmb	IAmb	20 55 17.1	
	comp=Z,3.2nm,0.8s						
MKAR	Makanchi Array	64.63	333	P	P	20 55 16.2	-0.8
	comp=Z,3.6nm,0.6s,baz=154,slow=5.6,SNR=28						
MKAR	Makanchi Array	64.63	333	P	P	20 55 15.4	-1.7
AAK	Ala-Archa	65.67	325	P	P	20 55 22.8	-1.2
AAK				IAmb	IAmb	20 55 24.3	
	comp=Z,4.1nm,0.8s						
GAR	Garm	65.94	320	P	P	20 55 24.5	-1.3
CHGR	Chuyangaron	66.49	319	P	P	20 55 27.2	-2.1
KK31	Karatay Array	68.25	324	P	P	20 55 38.9	-1.3
KK31				IAmb	IAmb	20 55 40.5	
	comp=Z,2.0nm,0.9s						
KKAR	Karatay Array	68.25	324	P	P	20 55 38.9	-1.3
KKAR	Karatay Array	68.25	324	P	P	20 55 38.7	-1.4
KKAR				IAmb	IAmb	20 55 40.4	
	comp=Z,2.0nm,0.9s						
KURK	Kurchatov	69.17	334	P	P	20 55 44.2	-1.5
KURK				IAmb	IAmb	20 55 44.7	
	comp=Z,2.4nm,1.1s						
ZAA0	Zalesovo Array	69.20	339	P	P	20 55 43.8	-2.0
ZALV	Zalesovo Beam	69.20	339	P	P	20 55 44.4	-1.4
	comp=Z,2.9nm,0.4s,baz=141,slow=4.9,SNR=17						
ZALV	Zalesovo Beam	69.20	339	P	P	20 55 43.6	-2.2
VNDA	Vanda	71.86	171	P	P	20 56 04.7	+3.0
	comp=Z,0.4nm,0.5s,baz=312,slow=7.7,SNR=7.5						
ABKAR	Akbulak array	77.75	325	P	P	20 56 34.7	-1.3
ABKAR				IAmb	IAmb	20 56 35.7	
	comp=Z,8.0nm,1.4s						
ABKAR	Akbulak array	77.75	325	P	P	20 56 34.5	-1.6
KMBO	Kilima Mbogo	81.86	270	LR	LR	21 30 14.0	
	comp=Z,30nm,18.6s,baz=96,slow=33						
BOSA	Boshof	89.12	241	P	P	20 57 37.7	+2.8
	comp=Z,2.1nm,1.0s,baz=90,slow=5.1,SNR=1.3						
TORD	Torodi Ar. Bea	118.66	280	PKP	PKiKP	21 03 27.8	+0.4
	comp=Z,0.8nm,0.5s,baz=66,slow=1.9,SNR=13						

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*NOU **04** 20:46:19.8, 37°.03S×177°.54E, h274^{km}, MLv4.1/5, Off E. Coast of N. Island, N.Z.*

WEL 04 20:46:28.4±1.0**, 37°S**±10°×**17°7E**±°**, h194**^{km}±10^{km}**, M2.9**/7**, ML3.2**/9**, MLv2.9**/7**, Error ellipse: s-maj=0.0km s-min=0.0km az=144.6, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HAZ	Te Kaha	0.97	133	P	Pn	20 46 57.0	-0.3
HAZ				S	Sn	20 47 20.3	+0.5
RUGZ	Raukumara Rang	1.08	144	P	Pn	20 46 57.6	-0.6
RUGZ				S	Sn	20 47 21.3	-0.1
URZ	Urewera	1.18	171	P	Pn	20 46 58.8	0.0
URZ				S	Sn	20 47 22.5	-0.1
URZ	Urewera	1.18	171	P	Pn	20 46 58.9	+0.1
MXZ	Matakaoa Point	1.23	113	P	Pn	20 46 58.9	-0.3
MXZ				S	Sn	20 47 24.0	+0.9
PKGZ	Pakihiroa	1.24	130	P	Pn	20 46 59.5	+0.2
PKGZ				S	Sn	20 47 24.6	+1.1
TOZ	Tahuroa Road	1.27	239	P	Pn	20 47 00.2	+0.6
MWZ	Matawai	1.34	158	P	Pn	20 47 00.6	+0.4
MWZ				S	Sn	20 47 24.8	-0.3
MUGZ	Murupara	1.39	184	P	Pn	20 47 00.8	+0.3
MUGZ				S	Sn	20 47 25.9	+0.2
TWGZ	Tauwhareparae	1.39	142	P	Pn	20 47 01.2	+0.6
TWGZ				S	Sn	20 47 26.3	+0.5
WMGZ	Waiomatatini S	1.42	121	P	Pn	20 47 00.3	-0.4
WMGZ				S	Sn	20 47 26.3	+0.3
PUZ	Puketiti	1.47	132	P	Pn	20 47 01.1	-0.1
PUZ				S	Sn	20 47 26.6	-0.2
RTZ	Ruatahuna	1.52	177	P	Pn	20 47 01.8	0.0
RTZ				S	Sn	20 47 28.2	+0.2
SNGZ	Shannon Statio	1.73	168	P	Pn	20 47 03.9	+0.3
SNGZ				S	Sn	20 47 31.2	-0.1
CNGZ	Carnagh Statio	1.74	143	P	Pn	20 47 04.3	+0.5
RIGZ	Rimuhau	1.75	157	P	Pn	20 47 04.3	+0.4
RIGZ				S	Sn	20 47 33.0	+1.2
MTHZ	Maungataniwha	1.76	181	P	Pn	20 47 03.9	-0.1
MTHZ				S	Sn	20 47 32.1	+0.2
KNZ	Kokohu	2.03	162	P	Pn	20 47 06.3	-0.4
BKZ	Black Stump Fm	2.10	188	P	Pn	20 47 06.8	-0.7
BKZ	Black Stump Fm	2.10	188	P	Pn	20 47 07.1	-0.4
WTVZ	West Tongariro	2.27	206	P	Pn	20 47 09.7	+0.3
OTVZ	Oturere	2.28	205	P	Pn	20 47 09.8	+0.3
SNVZ	South Ngauruho	2.31	205	P	Pn	20 47 10.2	+0.2
KWHZ	Kaweka Forest	2.36	189	P	Pn	20 47 10.0	-0.3
FWVZ	Far West T-bar	2.40	206	P	Pn	20 47 11.1	+0.1
MOVZ	Moawhango	2.48	201	P	Pn	20 47 10.8	-0.9
BHHZ	Black Hill Sta	2.48	195	P	Pn	20 47 10.8	-0.9
KRHZ	Kereru	2.58	189	P	Pn	20 47 12.0	-0.8
KAHZ	Kahuranaki	2.70	180	P	Pn	20 47 13.6	-0.6
PNHZ	Pukenui	2.87	191	P	Pn	20 47 14.8	-1.3
PXZ	Pawanui	2.94	180	P	Pn	20 47 15.8	-1.1
TSZ	Takapari Road	3.05	193	P	Pn	20 47 17.1	-1.2
DVHZ	Dannevirke	3.25	190	P	Pn	20 47 18.7	-1.9
POWZ	Post Office Ro	3.41	195	P	Pn	20 47 20.9	-1.7
PRWZ	Pori Road	3.53	191	P	Pn	20 47 22.6	-1.5
BFZ	Birch Farm	3.62	188	P	Pn	20 47 23.1	-2.1
BFZ	Birch Farm	3.62	188	P	Pn	20 47 22.2	-3.0
MRZ	Mangatainoka R	3.71	196	P	Pn	20 47 23.8	-2.4
TIWZ	Tintock	3.76	192	P	Pn	20 47 24.9	-2.0
HOWZ	Holdsworth Sta	3.95	195	P	Pn	20 47 26.4	-2.8
OGWZ	Otaki Gorge	3.95	199	P	Pn	20 47 26.7	-2.6
KIW	Kapiti Island	4.07	202	P	Pn	20 47 27.9	-2.9
CAW	Cannon Point	4.25	199	P	Pn	20 47 30.0	-3.0
SNZO	South Karori	4.54	201	P	Pn	20 47 33.5	-3.2
TCW	Tory Channel	4.59	205	P	Pn	20 47 34.0	-3.3
PLWZ	Palliser	4.65	195	P	Pn	20 47 34.4	-3.7
TUWZ	Tuamarina	4.90	207	P	Pn	20 47 37.2	-4.0
KHZ	Kahutara	5.91	205	P	Pn	20 47 50.4	-3.8
KHZ	Kahutara	5.91	205	P	Pn	20 47 51.0	-3.2
LTZ	Lake Taylor	6.70	211	P	Pn	20 48 00.9	-3.6
WVZ	Waitaha Valley	7.61	216	P	Pn	20 48 15.4	-0.9

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*IDC **04** 21:15:58.9±5.2, 36°.29N×70°.31E, h180^{km}±48^{km}, mb3.3/7, mb1 3.4/12, mb1mx3.1/60, mbtmp3.9/12, Error ellipse: s-maj=36.8km s-min=18.7km az=27.0*

*NNC **04** 21:16:05.1±5.4, 36°.84N×70°.13E, h171^{km}±75^{km}, mb3.3, mpv4.3, Error ellipse: s-maj=45.6km s-min=29.6km az=25.0*

ISC 04 21:16:01.8±0.7**, 36°.58N**±0°.06×**70°.29E**±0°.09**, h200**^{km}**, n40, σ1ˢ.20**/47**, mb3.4**/6**, 4C-4D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	Cherat	3.05	154	P	Pn	21 16 52.4	+0.2
CEP				S	Sn	21 17 30.0	-1.5
CHCP	Chirah Chowk	3.79	139	P	Pn	21 17 01.8	+0.7
THW	Thamme Wali	3.96	162	P	Pn	21 17 02.7	-0.4
SARP	Sargodha	5.04	156	P	Pn	21 17 15.7	-1.1
AML	Almayashu	6.14	24	P	Pn	21 17 32.0	+0.9
	SNR=142						
UCH	Uchtor	6.52	29	P	Pn	21 17 37.3	+1.1
	SNR=9.4						
KK31	Karatay Array	6.52	1	⇓P	Pn	21 17 36.7	+1.0
	3.6nm,0.3s,baz=180,slow=12,SNR=45						
KK31				⇑S	Sn	21 18 47.8	-2.4
	5.2nm,0.3s,baz=188,slow=25,SNR=4.6						
EKS2	Erkin-Say	6.65	23	P	Pn	21 17 38.5	+1.1
	SNR=33						
AAK	Ala-Archa	6.87	27	P	Pn	21 17 41.3	+1.0
	3.5nm,0.3s,baz=202,slow=8.0,SNR=60						
AAK				S	Sn	21 18 56.3	-2.3
	2.8nm,0.3s,baz=14,slow=20,SNR=21						
AAK	Ala-Archa	6.87	27	P	Pn	21 17 41.4	+1.0
	SNR=24						
AAK	Ala-Archa	6.87	27	P	Pn	21 17 41.3	+1.0
	12nm,0.6s						
AAK				S	Sn	21 18 57.4	-1.2
	34nm,0.7s						
KBK	Karagaybulak	7.05	29	P	Pn	21 17 44.0	+1.2
	SNR=18						
CHMS	Chumysh	7.27	27	P	Pn	21 17 46.7	+1.2
	SNR=11						
ULHL	Ulahol	7.30	37	P	Pn	21 17 46.5	+0.5
	SNR=10						
USP	Ospenovka	7.42	24	P	Pn	21 17 48.0	+0.6
	SNR=12						
TKM2	Tokmak 2	7.54	31	P	Pn	21 17 49.8	+0.7
	SNR=17						
TKM2	Tokmak 2	7.54	31	⇑P	Pn	21 17 49.6	+0.5
	23nm,0.5s						
TKM2				⇓S	Sn	21 19 12.4	-2.1
	9.7nm,0.8s						
MKAR	Makanchi Array	13.57	37	P	Pn	21 19 06.0	-0.2
	0.2nm,0.3s,baz=215,slow=11,SNR=9.9						
PYUN	Piuthan	13.65	125	*e*P	P	21 19 10.5	+0.6
DANN	Dangsing	14.01	122	*e*P	P	21 19 15.0	+1.0
KOLN	Koldanda	14.27	124	*e*P	P	21 19 17.6	+0.8
	3.0nm,0.3s						
AB31	Akbulak array	14.75	332	⇑P	P	21 19 21.7	0.0
	0.4nm,0.3s,baz=148,slow=12,SNR=47						
AB31				⇓S	S	21 22 02.6	-1.8
	0.4nm,0.5s,baz=149,slow=24,SNR=2.7						
GKN	Gorkha	14.83	121	*e*P	P	21 19 24.6	+1.7
	12nm,0.5s						
KURBB	Kurchatov Arra	15.24	20	P	Pn	21 19 26.1	-0.6
	0.1nm,0.3s,baz=216,slow=9.2,SNR=1.9						
KKN	Kakani	15.40	120	*e*P	P	21 19 31.1	+1.7
	11nm,0.5s						
PKIN	Phulchoki	15.62	121	*e*P	Pn	21 19 33.6	+1.8
	6.0nm,0.4s						
JIRN	Jiri	16.12	119	*e*P	Pn	21 19 39.5	+1.6
	12nm,0.2s						
AKTO	Aktyubinsk	16.44	331	P	Pn	21 19 41.3	+0.2
	0.6nm,0.3s,baz=140,slow=12,SNR=13						
AKTO	Aktyubinsk	16.44	331	⇓P	Pn	21 19 42.2	+1.0
	6.7nm,0.9s						
AKTO				⇑S	S	21 22 42.6	+0.6
	3.0nm,1.2s						
BVAR	Borovoye Array	16.45	0	P	Pn	21 19 42.7	+1.5
	1.0nm,0.3s,baz=186,slow=16,SNR=15						
RAMN	Ramite	16.84	120	*e*P	Pn	21 19 46.3	-0.2
	8.3nm,0.4s						
TAPN	Taplejung	17.39	117	*e*P	Pn	21 19 52.2	-0.7
	6.3nm,0.5s						
ODAN	Odare	17.45	119	*e*P	P	21 19 52.4	+0.5
	6.6nm,0.5s						
ZALV	Zalesovo Beam	20.09	26	P	P	21 20 20.9	+1.1
	1.9nm,0.3s,baz=218,slow=12,SNR=18						
FINES	FINESS Array B	37.10	326	P	P	21 22 53.2	+0.6
	2.0nm,1.0s,baz=145,slow=7.0,SNR=3.9						
ARCES	ARCESS Array B	40.86	338	P	P	21 23 25.3	+1.7
	8.3nm,1.2s,baz=112,slow=6.9,SNR=1.3						
NOA	NORSAR Array B	43.98	323	P	P	21 23 49.7	+0.8
	0.2nm,0.5s,baz=98,slow=7.8,SNR=1.8						
TORD	Torodi Ar. Bea	65.15	268	P	P	21 26 20.8	-0.9
	0.2nm,0.4s,baz=46,slow=5.8,SNR=8.1						
WRA	Warramunga Arr	82.51	121	P	P	21 28 00.7	-1.5
	0.9nm,1.0s,baz=320,slow=5.0,SNR=8.8						
ASAR	Alice Springs	84.76	124	P	P	21 28 12.3	-1.3
	0.5nm,0.6s,baz=312,slow=5.3,SNR=9.0						

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*NEIC **04** 21:55:15.6±0.5, 35°.89N±0°.01×97°.37W±0°.02, h5^{km}±6^{km}, Error ellipse: s-maj=2.1km s-min=1.8km az=131.0*

TUL 04 21:55:15.5±1.0**, 35°.86N**±0°.02×**97°.35W**±0°.02**, h5**^{km}**, ML2.6, mb_Lg2.2**/20(NEIC)**, Error ellipse: s-maj=2.4km s-min=1.7km az=139.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK005	Luther M Schoo	0.24	147	Pg	Pg	21 55 20.7	+0.6
OKCFA	Oklahoma City	0.45	190	Pg	Pg	21 55 24.5	+0.4
OKCFA				Sg	Sg	21 55 30.9	+1.0
OKCSW	OKLAHOMA CITY	0.45	189	Pg	Pg	21 55 24.6	+0.4
FNO	Franklin	0.60	184		Pg	21 55 27.2	+0.2
FNO				Sg	Sg	21 55 35.8	+1.1
T35A	Sooner Cattle	1.26	32		Pg	21 55 38.7	-0.9
TUL1	Leonard	1.27	87	Pg	Pg	21 55 38.6	-1.3
X34A	Smith Ranch, M	1.31	198		Pn	21 55 40.5	0.0
U32A	Winter Ranch,	1.43	292	Pn	Pn	21 55 41.7	-0.5
WMOK	Wichita Mounta	1.61	227		Pn	21 55 44.8	+0.1
X37A	Clayton	2.06	127		Pn	21 55 50.1	-0.6
U38A	Gravette	2.47	75	Pn	Pn	21 55 57.4	+0.9
HHAR	Hobbs	2.80	80	Pn	Pn	21 56 02.2	+1.2
W39A	Magazine	2.98	102	Pn	Pn	21 56 03.6	+0.1
W39A				IAmb_Lg		21 56 54.7	
	comp=Z,8.0nm,0.8s						
MIAR	Mount Ida	3.36	112	Pn	Pn	21 56 09.1	+0.5
U40A	Yellville	3.68	81	Pn	Pn	21 56 14.2	+1.1
U40A				IAmb_Lg		21 57 15.6	
	comp=Z,7.9nm,0.8s						
S39A	Bolivar	3.72	59	Pn	Pn	21 56 13.8	+0.3
S39A				IAmb_Lg		21 57 12.4	
	comp=Z,6.2nm,0.8s						
X40A	Basin Creek Fa	3.94	109	Pn	Pn	21 56 16.7	0.0
X40A				IAmb_Lg		21 57 28.5	
	comp=Z,6.0nm,0.8s						
WHAR	Wooly Hollow	4.17	96	Pn	Pn	21 56 19.7	0.0
FCAR	Ozark Folk Cen	4.25	88	IAmb_Lg		21 57 36.4	
	comp=Z,6.1nm,0.7s						
MGMO	Mountain Grove	4.30	71	IAmb_Lg		21 57 37.9	
	comp=Z,4.6nm,0.8s						
R40A	Maddies Statio	4.74	58	IAmb_Lg		21 57 50.6	
	comp=Z,3.9nm,0.8s						
P38A	Dawn	4.83	38	IAmb_Lg		21 57 58.6	
	comp=Z,4.3nm,0.7s						
LCAR	Lake Charles	5.03	86	IAmb_Lg		21 57 57.4	
	comp=Z,4.8nm,0.7s						
T42A	Van Buren	5.18	75	IAmb_Lg		21 58 06.9	
	comp=Z,4.3nm,0.8s						

*NEIC **04** 22:21:19.7±0.7, 36°.89N±0°.01×97°.486W±0°.008, h6^{km}±6^{km}, Error ellipse: s-maj=1.8km s-min=0.9km az=184.0*

TUL 04 22:21:19.5±1.4, **36°.90N**±0°.01×**97°.50W**±0°.01, **h5**^{km}±6^{km}, **ML2.5, mb_Lg2.3**/8(NEIC), **Error ellipse: s-maj=1.5km s-min=1.2km az=178.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T35A	Sooner Cattle	0.79	88	Pg	Pg	22 21 34.3	-0.3
T35A				Sg	Sg	22 21 44.8	-0.1
U32A	Winter Ranch,	1.31	247	Pn	Pn	22 21 44.1	-0.5
FNO	Franklin	1.64	177	Pn	Pn	22 21 49.3	+0.3
TUL1	Leonard	1.69	125	Pn	Pn	22 21 50.2	+0.5
X34A	Smith Ranch, M	2.31	187	IAmb_Lg		22 22 37.2	
	comp=Z,11nm,1.1s						
WMOK	Wichita Mounta	2.40	206	Pn	Pn	22 21 59.9	+0.4
U38A	Gravette	2.54	99	Pn	Pn	22 22 02.3	+0.8
S39A	Bolivar	3.42	75	Pn	Pn	22 22 13.0	-0.5
U40A	Yellville	3.77	97	Pn	Pn	22 22 18.6	+0.2
MIAR	Mount Ida	3.96	125	IAmb_Lg		22 23 26.9	
	comp=Z,8.0nm,0.8s						
R40A	Maddies Statio	4.38	70	Pn	Pn	22 22 28.0	+1.3
FCAR	Ozark Folk Cen	4.45	101	IAmb_Lg		22 23 40.3	
	comp=Z,5.8nm,0.9s						
WHAR	Wooly Hollow	4.51	109	IAmb_Lg		22 23 49.7	
	comp=Z,6.8nm,1.0s						

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*IDC **04** 22:25:36.6±1.3, 8°.19S×125°.55E, h0^{km}, mb3.9/4, mb1 3.9/8, mb1mx3.7/44, mbtmp3.7/8, ML3.4/4, Error ellipse: s-maj=38.7km s-min=20.4km az=84.0*

ISC 04 22:25:41.3±0.9, **8°.31S**±0°.08×**125°.7E**±0°.1, **h35**^{km}, **n9, σ1ˢ76**/12, **mb3.9**/4, **Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	2.72	226	Pn	Pn	22 26 22.1	-0.5
	4.7nm,0.3s,baz=104,slow=10,SNR=2.4						
BATI				Sn	Sn	22 26 56.7	+2.4
	7.6nm,0.3s,baz=52,slow=19,SNR=2.0						
FITZ	Fitzroy Crossi	9.73	180	Pn	Pn	22 27 58.2	-0.6
	0.3nm,0.3s,baz=357,slow=11,SNR=12						
FITZ				Sn	Sn	22 29 42.8	-4.1
	0.2nm,0.3s,baz=24,slow=13,SNR=2.6						
WRA	Warramunga Arr	14.30	145	Pn	Pn	22 29 02.5	+1.1
	0.2nm,0.3s,baz=316,slow=13,SNR=16						
WRA				Sn	Sn	22 31 39.0	+0.2
	0.1nm,0.3s,baz=320,slow=24,SNR=1.7						
ASAR	Alice Springs	17.19	154	P	P	22 29 41.9	+1.6
	0.1nm,0.3s,baz=316,slow=11,SNR=8.2						
CMAR	Chiang Mai Arr	37.45	315	P	P	22 32 51.0	-0.6
	1.7nm,0.3s,baz=175,slow=7.0,SNR=4.9						
SONM	Songino Array	58.45	345	P	P	22 35 33.5	-0.2
	0.4nm,0.8s,baz=176,slow=5.8,SNR=2.2						
MKAR	Makanchi Array	67.05	329	P	P	22 36 30.4	-0.6
	1.1nm,0.8s,baz=134,slow=6.9,SNR=5.8						
ZALV	Zalesovo Beam	70.93	336	P	P	22 36 54.5	-0.3
	0.4nm,0.3s,baz=113,slow=3.3,SNR=2.2						
TORD	Torodi Ar. Bea	124.82	280	PKP	PKiKP	22 44 39.0	+0.1
	0.6nm,1.0s,baz=113,slow=1.5,SNR=2.6						

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*IDC **04** 22:31:09.0±0.8, 49°.96N×155°.74E, h73^{km}±7^{km}, mb3.3/10, mb1 3.6/12, mb1mx3.4/48, mbtmp3.6/12, MS3.2/2, Ms1 3.2/2, ms1mx2.5/23, Error ellipse: s-maj=22.0km s-min=11.2km az=122.0*

*KRSC **04** 22:31:09.8±2.6, 50°.01N×156°.81E, h17^{km}±35^{km}, ML4.3*

ISC 04 22:31:08.9±0.8, **49°.91N**±0°.09×**156°.0E**±0°.1, **h69**^{km}±7^{km}, **n42, σ1ˢ63**/41, **mb3.6**/10, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.78	5	eP	Pn	22 31 24.0	-0.6
SKR				eS	Sn	22 31 35.1	-1.0
PAU	Pauzhetka	1.64	18	eP	Pn	22 31 35.3	-0.3
PAU				eS	Sn	22 31 55.4	-0.4
KDTR	Khodutka, Kamc	2.31	34	eP	Pn	22 31 43.8	-0.8
KDTR				eS	Sn	22 32 09.5	-2.5
MIPR	Malaya Ipel'ka	2.42	11	eP	Pn	22 31 46.2	+0.1
MIPR				eS	Sn	22 32 14.7	+0.1
MTVR	Mutnovka	2.92	27	eP	Pn	22 31 54.4	+1.4
MTVR				eS	Sn	22 32 27.0	0.0
GRL	Gorelyy	2.95	25	eP	Pn	22 31 55.3	+1.9
GRL				eS	Sn	22 32 28.4	+0.7
RUS	Russkaya	2.98	31	eP	Pn	22 31 53.8	+0.1
RUS				eS	Sn	22 32 25.4	-2.8
PETK	Petropavlovsk-	3.37	18	P	Pn	22 31 59.5	+0.5
	2.8nm,0.3s,baz=215,slow=18,SNR=24						
PETK				S	Sn	22 32 39.5	+1.6
	1.4nm,0.3s,baz=239,slow=22,SNR=3.6						
PET	Petropavlovsk	3.53	27	eS	Sn	22 32 41.9	+0.2
DALK	Dalny	3.56	28	eP	Pn	22 32 02.8	+1.1
DALK				eS	Sn	22 32 42.6	+0.1
UGLR	Uglovaya	3.74	27	eP	Pn	22 32 07.0	+2.8
KOK	Koryaka	3.76	25	eP	Pn	22 32 07.6	+3.1
AVH	Avacha	3.77	26	eP	Pn	22 32 07.3	+2.8
SMAR	Somma	3.78	26	eP	Pn	22 32 07.2	+2.3
KRER	Koryakskii	3.80	26	eP	Pn	22 32 08.0	+2.9
SDLR	Sedlovina	3.82	27	eP	Pn	22 32 06.9	+1.6
NLC	Nalytchevo	3.87	31	eP	Pn	22 32 04.9	-1.0
NLC				eS	Sn	22 32 45.8	-4.3
SPN	Mys Shipunski	4.06	37	eP	Pn	22 32 08.3	-0.1
TUMD	Tumrok D	5.94	25	eP	Pn	22 32 39.4	+5.3
TUMR	Tumrok	5.94	24	eP	Pn	22 32 39.2	+5.0
ASAJ	Asahikawa	10.83	243	P	Pn	22 33 40.9	0.0
	0.9nm,0.3s,baz=85,slow=12,SNR=2.4						
H11N2	WAKE ISLAND Hy	31.34	160	T	T	23 11 12.3	
	baz=348,slow=76,SNR=12						
H11N1	WAKE ISLAND Hy	31.36	160	T	T	23 11 19.7	
	baz=348,slow=76,SNR=7.9						
H11N3	WAKE ISLAND Hy	31.36	160	T	T	23 11 15.0	
	baz=348,slow=76,SNR=19						
SONM	Songino Array	32.22	286	P	P	22 37 27.4	-3.0
	0.3nm,0.7s,baz=20,slow=4.6,SNR=2.5						
H11S1	WAKE ISLAND Hy	32.48	161	T	T	23 11 47.6	
	baz=347,slow=76,SNR=14						
H11S3	WAKE ISLAND Hy	32.49	161	T	T	23 11 56.3	
	baz=347,slow=76,SNR=58						
H11S2	WAKE ISLAND Hy	32.50	161	T	T	23 11 54.7	
	baz=347,slow=76,SNR=25						
ILAR	Eielson Array	32.88	42	P	P	22 37 35.2	-0.6
	0.3nm,0.6s,baz=250,slow=7.5,SNR=4.3						
INK	Inuvik	37.95	35	P	P	22 38 19.0	-0.1
	0.3nm,0.3s,baz=278,slow=7.1,SNR=2.0						
ZALV	Zalesovo Beam	42.39	304	P	P	22 38 54.3	-1.7
	0.4nm,0.3s,baz=77,slow=6.2,SNR=2.2						
MKAR	Makanchi Array	47.24	296	P	P	22 39 33.3	-1.5
	0.4nm,0.8s,baz=62,slow=6.5,SNR=2.2						
ARCES	ARCESS Array B	55.49	341	LR	LR	23 06 57.7	
	comp=Z,26nm,19.4s,baz=5.0,slow=39						
NVAR	Mina Array Bea	59.31	66	P	P	22 41 03.5	-0.1
	0.3nm,0.5s,baz=320,slow=8.3,SNR=2.5						
PDAR	Pinedale Array	61.36	57	P	P	22 41 19.1	+1.5
	0.3nm,0.3s,baz=277,slow=2.4,SNR=1.5						
AKASG	Malin Array Be	69.96	327	LR	LR	23 13 58.7	
	comp=Z,12nm,18.5s,baz=225,slow=37						
WRA	Warramunga Arr	72.15	201	P	P	22 42 25.4	-0.5
	0.5nm,0.7s,baz=20,slow=6.4,SNR=9.2						
WRA				pP	pP	22 42 44.5	+0.1
	0.7nm,0.9s,baz=14,slow=5.8,SNR=2.9						
TXAR	Lajitas Array	74.30	63	P	P	22 42 39.4	+0.6
	0.5nm,0.6s,baz=297,slow=4.5,SNR=5.0						
TXAR				pP	pP	22 42 58.5	+1.2
	0.3nm,0.5s,baz=297,slow=6.0,SNR=3.5						
ASAR	Alice Springs	75.84	201	P	P	22 42 48.0	+0.6
	0.4nm,0.5s,baz=10,slow=5.7,SNR=2.7						
ASAR				pP	pP	22 43 06.7	+0.7
	0.4nm,0.6s,baz=23,slow=5.0,SNR=2.8						
H03N2	Juan Fernandez	136.80	89	T	T	01 22 29.9	
	baz=313,slow=77,SNR=3.6						
H03N1	Juan Fernandez	136.82	89	T	T	01 22 28.1	
	baz=313,slow=77,SNR=3.5						
H03N3	Juan Fernandez	136.82	89	T	T	01 22 34.3	
	baz=313,slow=77,SNR=3.4						

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*NEIC **04** 22:54:54.5, 37°.78N×121°.97W, h8^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{13}Nm; M_{rr}0.79; $M_{\theta\theta}$-5.39; $M_{\phi\phi}$4.59; $M_{r\theta}$-0.42; $M_{\theta\phi}$2.12; $M_{\phi r}$-0.82; Fault plane solution: $M_0$5.54000×10^{13} NP1:ϕ_s237.11000°, δ83.52000°, λ9.59000°. NP2:ϕ_s146.01000°, δ80.47000°, λ173.43000°. Principal axes: T 5.2035, Plg11.0000°, Azm102.0000°; N 0.6245, Plg78.0000°, Azm271.0000°; P -5.8280, Plg2.0000°, Azm11.0000°;*

*NCEDC **04** 22:54:54.5±1.0, 37°.78N±0°.03×121°.96W±0°.04, h9^{km}±5^{km}, Mwr3.1/4, ML2.7/40(NEIC) Error ellipse: s-maj=5.7km s-min=1.8km az=53.0*

NEIC 04 22:54:55.0±1.1, **37°.79N**±0°.02×**121°.98W**±0°.03, **h16**^{km}±1^{km}, **Error ellipse: s-maj=4.1km s-min=2.6km az=45.0, Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMCB	Saint Mary's C	0.12	297		Pg	22 54 58.1	-0.5
CMCM	Mills College	0.16	269		Pg	22 54 58.8	-0.3
BDM	Black Diamond	0.19	27		Pg	22 54 59.5	0.0
C055	Cottonwood Ave	0.19	219		Pg	22 54 58.8	-0.7
BKS	Berkeley--Byer	0.23	294		Pg	22 55 00.2	+0.2
VAK	Adit at Lawren	0.23	293		Pg	22 55 00.4	+0.2
BL67	Building 67, L	0.24	292		Pg	22 55 00.3	0.0
WENL	Wente Vineyard	0.24	133		Pg	22 55 00.4	+0.2
BL88	Building 88, L	0.24	293		Pg	22 55 00.5	+0.1
BRK	Berkeley--Havi	0.24	291		Pg	22 55 00.4	+0.1
HERB	Hercules	0.32	315		Pb	22 55 02.0	-0.3
JRSC	Jasper Ridge	0.43	209		Pg	22 55 03.6	0.0
MHC	Mount Hamilton	0.52	149		Pg	22 55 05.3	+0.1
COSM	Mount Oso	0.55	120		Pg	22 55 05.8	-0.1
CVS	Carmenet Viney	0.68	326		Pb	22 55 08.4	-0.1
MCCM	Marconi Confer	0.80	297	Pg	Pb	22 55 10.2	-0.3
MCCM				IAML		22 55 23.1	
	comp=N,329nm,0.8s						
MCCM				IAML		22 55 24.6	
	comp=E,339nm,0.8s						
GHS	Gilroy Hot Spr	0.81	148		Pb	22 55 10.4	-0.3
FARB	Farallon Islan	0.82	264		Pb	22 55 10.6	-0.2
HCOM	Corn Cob Canyo	0.92	167		Pg	22 55 12.8	+0.1
HFEM	San Felipe	0.92	150		Pb	22 55 12.1	-0.5
PACP	Pacheco Peak	0.95	145		Pb	22 55 12.8	-0.3
HSFM	Saint Francis	1.04	158		Pg	22 55 15.2	+0.1
SAO	San Andreas Ge	1.10	157		Pb	22 55 15.3	-0.3
MNRC	McLaughlin Min	1.15	342		Pn	22 55 14.2	-2.4
FTR	Fort Ross	1.19	309		Pn	22 55 15.0	-2.0
GDXM	Geysers	1.21	328		Pn	22 55 16.6	-0.8
SCZ	Santa Cruz	1.27	159		Pn	22 55 17.2	-0.8
CMB	Columbia Colle	1.28	78		Pn	22 55 17.3	-1.0
CMB	Columbia Colle	1.28	78	IAML		22 55 36.3	
	comp=N,83nm,0.6s						
BJCM	Johnson Can.	1.32	159		Pn	22 55 17.8	-0.9
HAST	Hastings Reser	1.43	166		Pn	22 55 19.4	-1.0
BBNM	San Benito	1.46	150		Pn	22 55 18.3	-2.5
BSMM	Soledad Missio	1.47	162		Pn	22 55 20.7	-0.2
HOPS	Hopland Field	1.48	325	Pn	Pb	22 55 22.1	-0.1
ORV	Oroville	1.81	12		Pn	22 55 23.7	-1.8
PMPB	Monarch Peak	1.83	149	Pn	Pn	22 55 25.8	0.0
PMPB				IAML		22 56 07.7	
	comp=N,88nm,1.1s						
EMB	Emerald Bay	1.89	51		Pn	22 55 27.8	+1.0
RUBR	Rubicon Trail	1.91	48		Pn	22 55 27.9	+0.8
MPK	Martis Peak	2.15	45		Pn	22 55 31.1	+0.7
MPK				IAML		22 56 06.4	
	comp=E,78nm,1.1s						
KCC	Kaiser Creek	2.16	101		Pn	22 55 30.8	+0.4
PNTR	Pine Nut	2.27	54		Pn	22 55 33.3	+1.2
PNTR				IAML		22 56 14.7	
	comp=N,69nm,1.0s						
MDPB	Devils Postpil	2.30	93		Pn	22 55 33.4	+0.8
MDPB				IAML		22 56 03.9	
	comp=E,40nm,0.4s						
MDPB				IAML		22 56 15.9	
	comp=N,48nm,0.8s						
MDCM	Deadman Creek	2.33	91		Pn	22 55 34.1	+1.2
VCNR	Virginia City	2.37	50		Pn	22 55 35.1	+1.7
VCNR				IAML		22 56 17.7	
	comp=E,49nm,0.7s						
VCNR				IAML		22 56 19.7	
	comp=N,74nm,0.9s						
YERR	Yerington	2.46	60		Pb	22 55 36.9	-2.1
YERR				IAML		22 56 11.9	
	comp=N,48nm,0.9s						
PAHR	Pah Rah Range	2.79	46		Pn	22 55 40.6	+1.5
PAHR				IAML		22 56 30.7	
	comp=E,18nm,1.1s						
PAHR				IAML		22 56 34.3	
	comp=N,18nm,0.9s						
RYN	Ryan	2.85	72		Pn	22 55 40.2	+0.3
NVAR	Mina Array Bea	2.97	76	Pn	Pn	22 55 42.3	+0.7
NV11	Mina Array Sit	3.08	77		Pn	22 55 44.5	+1.3
NV11				IAML		22 56 52.2	
	comp=N,14nm,2.5s						
NV11				IAML		22 56 57.8	
	comp=E,12nm,3.9s						
KVN	Kaiserville	3.30	66	Pn	Pn	22 55 46.1	0.0
KVN				IAML		22 57 00.9	
	comp=N,11nm,3.8s						
LCH	Last Change Ra	3.49	98		Pn	22 55 50.5	+1.8
LCH				IAML		22 56 51.3	
	comp=N,10nm,1.7s						
LCH				IAML		22 56 52.2	
	comp=E,11nm,0.9s						
ISA	Isabella, Lake	3.52	126	Pn	Pn	22 55 50.2	+1.1
ISA				IAML		22 56 57.9	
	comp=E,12nm,1.4s						
ISA				IAML		22 57 02.7	
	comp=N,9.2nm,3.2s						

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*ANF **04** 22:57:35.0±0.7, 32°.09N×115°.09W, h8^{km}±3^{km}, ML3.4/18, Error ellipse: s-maj=5.5km s-min=2.2km az=19.0*

*NEIC **04** 22:57:37.0±3.5, 32°.11N±0°.04×115°.03W±0°.05, h13^{km}±8^{km}, Error ellipse: s-maj=6.4km s-min=5.1km az=218.0*

*PAS **04** 22:57:37.7±2.8, 32°.12N±0°.06×115°.06W±0°.04, h21^{km}±8^{km}, Error ellipse: s-maj=8.9km s-min=5.5km az=185.0*

*MEX **04** 22:57:38.3±0.5, 32°.20N×114°.90W, h33^{km}±57^{km}, MD3.9*

*ECX **04** 22:57:38.3±0.5, 32°.09N×115°.12W, h10^{km}±6^{km}, MD3.4, ML3.6*

ISC 04 22:57:37.2±0.9, **32°.08N**±0°.03×**115°.12W**±0°.02, **h17**^{km}±6^{km}, **n76, σ1ˢ25**/96, **3C-5D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RITX	Riito Sonora	0.17	57	⇑iP	Pg	22 57 41.1	-0.5
RITX				iS	Sg	22 57 44.2	-0.3
GUVIX	Guadalupe Vict	0.23	10		Pg	22 57 42.5	0.0
GUVIX	Guadalupe Vict	0.23	10	iP	Pg	22 57 42.6	0.0
MBIG	Mexicali	0.34	349	iP	Pg	22 57 44.8	+0.5
MBIG				iS	Sg	22 57 46.9	-2.2
CPBX	Cerro Prieto	0.38	336		Pg	22 57 45.2	+0.2
CPBX	Cerro Prieto	0.38	336	eP	Pg	22 57 45.2	+0.2
CPBX				IAML		22 57 54.7	
	comp=N,17µm,0.4s						
CPBX				IAML		22 58 03.1	
	comp=E,19µm,0.3s						
CPBX				⇓e		22 58 03.1	
CTLX	Tlaxcala, TLX	0.40	357	⇓iP	Pg	22 57 45.0	-0.4
CTLX				eS	Sg	22 57 49.7	-1.2
SLRCX	San Luis Rio C	0.52	43	eP	Pg	22 57 47.2	-0.4
SLRCX				iS	Sg	22 57 54.6	-0.1
UABX	UABC, Campus M	0.62	334		Pg	22 57 49.8	+0.4
EMSC	East Mesa	0.67	10	⇓iP	Pg	22 57 49.8	-0.6
YMD	Yuma Desert	0.68	46	iP	Pg	22 57 49.7	-1.0
CEA0	Mexicali	0.74	321	eP	Pg	22 57 51.5	-0.1
SGL	Mount Signal	0.77	319	⇓iP	Pg	22 57 51.8	-0.4
DREC	Desert Rsrch C	0.78	340	eP	Pg	22 57 51.8	-0.6
COA	Coachella	0.79	0	⇓iP	Pg	22 57 51.4	-1.2
WESC	Westside Schoo	0.85	323	eP	Pg	22 57 53.1	-0.7
YUH2	Yuha Desert	0.89	310	eP	Pg	22 57 53.6	-0.8
YUH2				eS	Sg	22 58 05.6	-0.5
RMX	La Rumorosa	0.96	303		Pg	22 57 54.2	-1.8
RMX				IAML		22 58 07.5	
	comp=N,1µm,1.1s						
RMX				IAML		22 58 07.5	
	comp=E,891nm,0.9s						
RMX	La Rumorosa	0.96	303	eP	Pg	22 57 54.2	-1.8
RMX				iS	Sg	22 58 06.3	-2.4
GLA	Glamis	1.00	14		Pg	22 57 54.3	-2.4
GLA				IAML		22 58 08.9	
	comp=N,1µm,0.3s						
GLA	Glamis	1.00	14	P	Pg	22 57 54.3	-2.4
	baz=192						
GLA				S	Sg	22 58 07.7	-2.3
	baz=192						
GLA	Glamis	1.00	14	eP	Pg	22 57 55.2	-1.5
IKP	In-Ko-Pah, Jac	1.01	305	P	Pg	22 57 55.1	-1.7
	baz=121,SNR=18						
IKP				S	Sg	22 58 09.1	-1.0
	baz=121						
IKP	In-Ko-Pah, Jac	1.01	305	eP	Pg	22 57 55.6	-1.2
IKP				eS	Sg	22 58 09.6	-0.6
SWSC	Sam W. Stewart	1.04	327	P	Pg	22 57 54.8	-2.5
	baz=143,SNR=11						
SWSC				S	Sg	22 58 09.3	-1.7
	baz=143						
SFX	San Felipe	1.06	167		Pg	22 57 57.0	-0.7
SFX				IAML		22 58 13.2	
	comp=N,827nm,0.3s						
SFX	San Felipe	1.06	167	eP	Pg	22 57 57.1	-0.7
SFX				eS	Sg	22 58 11.7	+0.1
SFX				IAML		22 58 12.7	
	comp=E,1000nm,0.3s						
SFX				⇑e		22 58 12.7	
SVX	San Vicente	1.22	232	eP	Pn	22 57 58.5	-0.9
CCX	Cicese	1.33	261		Pn	22 58 01.1	+0.2
CCX				IAML		22 58 21.2	
	comp=N,1µm,0.5s						
CCX				IAML		22 58 21.2	
	comp=E,856nm,0.4s						
CCX	Cicese	1.33	261	eP	Pn	22 58 01.1	+0.2
CCX				eS	Sb	22 58 19.1	+0.8
CBX	Cerro Bola	1.33	281		Pn	22 58 00.9	-0.2
CBX				IAML		22 58 21.1	
	comp=E,844nm,0.5s						
CBX	Cerro Bola	1.33	281	eP	Pn	22 58 00.9	-0.2
CBX				eS	Sb	22 58 18.8	+0.3
CBX				IAML		22 58 21.2	
	comp=E,2µm,0.4s						
CBX				⇑e		22 58 21.2	
CBX	Cerro Bola	1.33	281	iP	Pn	22 58 00.7	-0.4
CBX				iS	Sb	22 58 18.8	+0.3
113A	Mohawk Valley,	1.34	59	Pn	Pn	22 57 59.5	-1.6
113A				IAML		22 58 17.3	
	comp=N,404nm,0.6s						
TKX	Tecate	1.35	292		Pn	22 58 01.4	+0.1
TKX				IAML		22 58 20.5	
	comp=E,582nm,0.4s						
TJIG	Tijuana	1.36	286	iP	Pn	22 58 01.6	+0.1
TJIG				iS	Sb	22 58 19.1	-0.3
MONP2	Monument Peak	1.37	307	P	Pn	22 58 00.7	-1.0
	baz=124,SNR=14						
MONP2				S	Sb	22 58 20.0	+0.3
	baz=124						
MONP2	Monument Peak	1.37	307	eP	Pn	22 58 02.1	+0.4
BAR	Barrett	1.44	295	Pn	Pn	22 58 02.6	0.0
BAR				IAML		22 58 23.4	
	comp=E,635nm,0.5s						
BAR				IAML		22 58 25.9	
	comp=N,778nm,0.8s						
BAR	Barrett	1.44	295	eP	Pn	22 58 02.3	-0.3
BAR				eS	Sn	22 58 20.6	-0.5
BC3	Big Chuckawall	1.60	350	P	Pn	22 58 03.3	-1.5
	baz=168						
SDRC	San Diego Road	1.67	294	eP	Pn	22 58 07.8	+2.1
TJX	Tijuana	1.69	285	Pn	Pn	22 58 06.7	+0.8
109C	Camp Elliot, M	1.86	296	Pn	Pn	22 58 08.8	+0.5
109C				IAML		22 58 35.6	
	comp=N,545nm,0.6s						
109C				IAML		22 58 36.9	
	comp=E,465nm,0.6s						
109C	Camp Elliot, M	1.86	296	Sb	Sb	22 58 34.7	+1.0
	baz=114						
PFO	Pinyon Flats O	1.90	324	Pn	Pn	22 58 07.7	-1.3
PFO	Pinyon Flats O	1.90	324	P	Pn	22 58 07.5	-1.5
	baz=141						
PFO				Sb	Sb	22 58 36.6	+1.6
	baz=141						
214A	Organ Pipe Nat	1.97	93	Pn	Pn	22 58 08.2	-1.6
214A				IAML		22 58 50.3	
	comp=N,227nm,0.5s						
214A				IAML		22 58 57.9	
	comp=E,207nm,0.8s						
214A	Organ Pipe Nat	1.97	93	P	Pn	22 58 08.1	-1.7
	baz=275						
MURC	Murrieta	2.31	312	Pg	Pb	22 58 19.6	+1.2
	baz=129,SNR=9.7						
MURC				Sb	Sb	22 58 48.6	+1.8
	baz=129						
PDMCI	Parker Dam,Lak	2.37	20	Sb	Sb	22 58 49.2	+0.8
	baz=200						
Y14A	Wickenburg	2.57	43		Pn	22 58 17.9	-0.2
Y14A				IAML		22 59 10.6	
	comp=E,227nm,0.5s						
Y14A				IAML		22 59 17.4	
	comp=N,174nm,0.6s						
CIS	Catalina Islan	3.07	296	Sb	Sb	22 59 10.7	+2.1
	baz=114						
FMP	Fort Macarthur	3.13	302	Sb	Sb	22 59 11.9	+1.8
	baz=120						
W13A	Hualapai Mount	3.19	19	Pn	Pn	22 58 26.0	-0.7
DECC	Green Verdugo	3.46	310	Sb	Sb	22 59 22.2	+2.5
	baz=127						
EDW2	Edwards Air Fo	3.69	320	Sb	Sb	22 59 30.0	+3.7
	baz=138						
TUC	Tucson	3.69	85		Pn	22 58 31.9	-1.6
TUC	Tucson	3.69	85	P	Pn	22 58 32.0	-1.5
	baz=268						
TUC				Sb	Sb	22 59 29.9	+3.6
	baz=268						
X16A	Lo Mia Camp, P	3.87	52		Pn	22 58 36.3	+0.2
X16A				IAML		23 00 01.3	
	comp=E,42nm,0.9s						
X16A				IAML		23 00 05.9	
	comp=N,38nm,1.0s						
SHPR	Sheep Range	4.42	360	Pn	Pn	22 58 43.2	-0.4
ISA	Isabella, Lake	4.54	323		Pn	22 58 44.8	-0.3
ISA	Isabella, Lake	4.54	323	P	Pn	22 58 44.7	-0.4
	baz=140						
WUAZ	Wupatki	4.64	41	Pn	Pn	22 58 47.6	+0.9
WUAZ				IAML		23 00 11.4	
	comp=N,45nm,0.8s						
WUAZ				IAML		23 00 17.1	
	comp=N,49nm,1.1s						
WUAZ	Wupatki	4.64	41	P	Pn	22 58 47.7	+1.0
	baz=223,SNR=5.9						
U15A	North Rim	4.94	28		Pn	22 58 51.3	+0.5
U15A				IAML		23 00 19.9	
	comp=E,44nm,1.3s						
U15A				IAML		23 00 35.4	
	comp=N,26nm,1.0s						
X18A	Snowflake	4.97	59		Pn	22 58 51.6	+0.4
X18A				IAML		23 00 33.1	
	comp=N,20nm,1.0s						
319A	Douglas	5.03	96		Pn	22 58 51.5	-0.4
LCMT	Little Creek M	5.16	17		Pn	22 58 54.3	+0.5
KNB	Kanab	5.28	20		Pn	22 58 56.5	+1.0
KNB				IAML		23 00 30.8	
	comp=E,23nm,1.5s						
KNB				IAML		23 00 47.7	
	comp=N,24nm,1.2s						
PRN	Pahroc Range	5.32	1	Pn	Pn	22 58 56.8	+0.8
PRN				IAML		23 00 38.2	
	comp=E,18nm,1.1s						
PRN				IAML		23 01 02.1	
	comp=N,21nm,1.4s						
W18A	Petrified Fore	5.42	55		Pn	22 58 58.4	+1.0
W18A	Petrified Fore	5.42	55	P	Pn	22 58 58.1	+0.7
	baz=237,SNR=6.4						
CCUT	Cedar City	5.65	14		Pn	22 59 01.3	+0.7
PKCU	Pink Cliffs	5.83	23		Pn	22 59 04.2	+1.0
121A	Cookes Peak, D	6.23	84	P	Pn	22 59 07.9	-0.6
	baz=268,SNR=6.6						

SSNC 04 23:06:19.6±1.6, **23°.69N**×**79°.52W**, **h5**^{km}±15^{km}, **MD3.8, ML3.4, MW3.2, 1D, Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MGV	Manicaragua	1.63	195	⇓iP	Pn	23 06 46.4	-2.5
MGV				eS	Sn	23 07 05.3	-4.9
MGV				IAML		23 07 11.7	
	comp=E,374nm,0.3s						
MGV				IAML		23 07 13.8	
	comp=N,290nm,0.6s						
CCCC	Cccc	2.96	146	eP	Pn	23 07 07.8	+0.5
CCCC				eS	Sn	23 07 44.7	+1.5
CCCC				IAML		23 07 59.5	
	comp=N,76nm,0.4s						
CCCC				IAML		23 08 02.4	
	comp=E,67nm,0.6s						
SOR	Soroa	3.33	255	eP	Pn	23 07 10.6	-1.7
SOR				eS	Sn	23 07 46.8	-5.5

SOR				IAML		23 07 54.9	
	comp=E,84nm,0.3s						
SOR				IAML		23 07 55.4	
	comp=N,70nm,0.4s						
LMGC	**Las Mercedes**	**4.30**	**147**	*e*P	Pn	23 07 24.2	-1.4
LMGC				*e*S	Sn	23 08 11.2	-5.1
LMGC				IAML		23 08 41.7	
	comp=N,29nm,0.4s						
LMGC				IAML		23 08 44.6	
	comp=E,20nm,0.5s						
RCC	**Rio Carpintero**	**5.12**	**135**	*e*P	Pn	23 07 33.4	-3.5
RCC				*e*S	Sn	23 08 30.9	-5.5
RCC				IAML		23 08 36.6	
	comp=N,19nm,0.5s						
RCC				IAML		23 08 43.9	
	comp=E,8.1nm,0.5s						
GTMO	**Guantanamo**	**5.43**	**131**	*e*P	Pn	23 07 40.6	-0.6
GTMO				*e*S	Sn	23 08 32.1	-12

*ANF **04** 23:11:09.6±0.3, 35°.89N×97°.36W, h2^{km}±3^{km}, ML3.1/7, Error ellipse: s-maj=2.4km s-min=1.9km az=138.0*
*NEIC **04** 23:11:10.6±0.8, 35°.881N±0°.007×97°.37W±0°.02, h6^{km}±7^{km}, Error ellipse: s-maj=2.5km s-min=1.1km az=90.0*
*TUL **04** 23:11:10.4±1.3, 35°.86N±0°.01×97°.36W±0°.02, h3^{km}±7^{km}, ML2.7, mb_Lg2.5/40(NEIC), Error ellipse: s-maj=2.4km s-min=1.6km az=95.0*
ISC 04 23:11:10.3±1.3, **35°.88N**±0°.03×**97°.37W**±0°.03, **h4**^{km}±14^{km}, **n42**, σ**0^{s}64**/39, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK009	**Oakdale Elemen**	**0.30**	**189**		**Pg**	**23 11 15.9**	**-0.3**
OKCFA	**Oklahoma City**	**0.47**	**189**	Pg	**Pg**	**23 11 19.4**	**0.0**
OKCFA				Sg	**Sg**	**23 11 25.8**	**+0.4**
OKCFA	**Oklahoma City**	**0.47**	**189**	P	**Pg**	**23 11 19.3**	**0.0**
	baz=7.7						
OKCFA				S	**Sg**	**23 11 25.9**	**+0.4**
	baz=7.7						
OKCSW	**OKLAHOMA CITY**	**0.48**	**187**	Pg	**Pg**	**23 11 19.6**	**+0.1**
OKCSW				Sg	**Sg**	**23 11 26.2**	**+0.4**
FNO	**Franklin**	**0.62**	**183**	Pg	**Pg**	**23 11 22.1**	**-0.2**
FNO				Sg	**Sg**	**23 11 30.7**	**+0.3**
T35A	**Sooner Cattle**	**1.24**	**33**		**Pg**	**23 11 33.6**	**-0.5**
T35B	**Sooner Cattle**	**1.24**	**33**	P	**Pg**	**23 11 33.6**	**-0.5**
	baz=214						
T35B				S	**Sb**	**23 11 50.7**	**+0.1**
	baz=214						
TUL1	**Leonard**	**1.28**	**88**		**Pn**	**23 11 33.3**	**-1.6**
TUL1	**Leonard**	**1.28**	**88**	P	**Pn**	**23 11 33.3**	**-1.6**
	baz=269						
TUL1				S	**Sg**	**23 11 50.8**	**-0.5**
	baz=269						
X34A	**Smith Ranch, M**	**1.33**	**197**		**Pn**	**23 11 35.2**	**-0.5**
U32A	**Winter Ranch,**	**1.41**	**291**	Pn	**Pn**	**23 11 36.5**	**-0.4**
U32A	**Winter Ranch,**	**1.41**	**291**	P	**Pn**	**23 11 36.6**	**-0.2**
	baz=110						
U32A				S	**Sg**	**23 11 55.9**	**+0.2**
	baz=110						
WMOK	**Wichita Mounta**	**1.63**	**226**		**Pn**	**23 11 39.6**	**0.0**
WMOK	**Wichita Mounta**	**1.63**	**226**	P	**Pn**	**23 11 39.7**	**0.0**
	baz=45						
WMOK				S	**Sb**	**23 12 01.5**	**-0.2**
	baz=45						
X37A	**Clayton**	**2.08**	**128**		**Pn**	**23 11 46.0**	**+0.1**
X37A	**Clayton**	**2.08**	**128**	P	**Pn**	**23 11 45.9**	**0.0**
	baz=309						
U38A	**Gravette**	**2.47**	**76**		**Pn**	**23 11 51.9**	**+0.5**
Z35A	**Perchaven, San**	**2.55**	**178**	IAmb_Lg		23 12 31.4	
	comp=Z,22nm,1.1s						
HHAR	**Hobbs**	**2.80**	**81**		**Pn**	**23 11 56.9**	**+1.1**
W39A	**Magazine**	**3.00**	**102**		**Pn**	**23 11 58.5**	**-0.1**
W39A				IAmb_Lg		23 12 50.5	
	comp=Z,15nm,0.7s						
W39A	**Magazine**	**3.00**	**102**	P	**Pn**	**23 11 58.5**	**-0.1**
	baz=284						
KSU1	**Kansas State U**	**3.27**	**10**	IAmb_Lg		23 13 02.0	
	comp=Z,16nm,0.8s						
Z38A	**Mt. Pleasant**	**3.27**	**142**	IAmb_Lg		23 12 51.2	
	comp=Z,13nm,0.9s						
MIAR	**Mount Ida**	**3.38**	**112**		**Pn**	**23 12 04.3**	**+0.6**
CBKS	**Cedar Bluff**	**3.48**	**328**	IAmb_Lg		23 13 00.3	
	comp=Z,13nm,0.7s						
AMTX	**Amarillo**	**3.66**	**255**	IAmb_Lg		23 13 15.6	
	comp=Z,13nm,0.7s						
U40A	**Yellville**	**3.68**	**81**		**Pn**	**23 12 08.2**	**+0.3**
S39A	**Bolivar**	**3.71**	**60**		**Pn**	**23 12 09.1**	**+0.7**
S39A				IAmb_Lg		23 13 09.2	
	comp=Z,12nm,0.9s						
ABTX	**Abilene, Hawle**	**3.76**	**211**	IAmb_Lg		23 13 12.3	
	comp=Z,12nm,1.0s						
WHTX	**Lake Whitney,**	**3.88**	**181**	Pn	**Pn**	**23 12 10.0**	**-0.7**
X40A	**Basin Creek Fa**	**3.96**	**109**		**Pn**	**23 12 12.1**	**+0.3**
X40A				IAmb_Lg		23 13 22.0	
	comp=Z,11nm,0.7s						
WLAR	**White Oak Lake**	**4.13**	**121**	IAmb_Lg		23 13 26.3	
	comp=Z,14nm,1.0s						
WHAR	**Wooly Hollow**	**4.18**	**97**	Pn	**Pn**	**23 12 14.8**	**+0.1**
WHAR				IAmb_Lg		23 13 29.8	
	comp=Z,16nm,1.1s						
W41B	**Gary Mavity, V**	**4.23**	**98**	P	**Pn**	**23 12 15.4**	**-0.1**
	baz=281						
FCAR	**Ozark Folk Cen**	**4.26**	**88**		**Pn**	**23 12 17.1**	**+1.3**
FCAR				IAmb_Lg		23 13 29.1	
	comp=Z,15nm,1.0s						
MGMO	**Mountain Grove**	**4.30**	**71**	IAmb_Lg		23 13 31.7	
	comp=Z,10nm,0.8s						
P38A	**Dawn**	**4.81**	**38**		**Pn**	**23 12 24.0**	**+0.5**
P38A				IAmb_Lg		23 13 50.8	
	comp=Z,9.6nm,0.9s						
LCAR	**Lake Charles**	**5.04**	**86**	Pn	**Pn**	**23 12 26.7**	**+0.1**
LCAR				IAmb_Lg		23 13 52.3	
	comp=Z,9.1nm,0.7s						
CCM	**Cathedral Cave**	**5.36**	**64**	Pn	**Pn**	**23 12 32.6**	**+1.6**
P40A	**Paris**	**5.57**	**48**	IAmb_Lg		23 14 12.9	
	comp=Z,11nm,0.8s						
T25A	**Trinidad**	**5.81**	**285**	IAmb_Lg		23 14 23.0	
	comp=Z,9.6nm,0.9s						
FVM	**French Village**	**5.94**	**67**	IAmb_Lg		23 14 18.5	
	comp=Z,6.4nm,0.7s						

IDC 04 23:19:07.9±9.5, **31°.31S**×**179°.11W, h0**^{km}, **mb3.7**/3, **mb1 3.9**/3, **mb1mx3.7**/26, **mbtmp3.6**/3, **Error ellipse: s-maj=378.1km s-min=51.8km az=155.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**42.12**	**268**	P	P	23 27 01.8	-0.3
	0.4nm,0.7s,baz=110,slow=6.4,SNR=4.2						
WRA	**Warramunga Arr**	**43.19**	**274**	P	P	23 27 10.9	+0.1
	0.2nm,0.3s,baz=112,slow=8.4,SNR=4.7						
ILAR	**Eielson Array**	**99.03**	**13**	P	Pdif	23 32 49.6	-0.3
	0.2nm,0.4s,baz=209,slow=5.3,SNR=4.7						

*BEO **04** 23:28:45.0±0.4, 41°.41N×20°.11E, h0^{km}, ML1.8/4*
TIR 04 23:28:43.3, 41°.40N×**20°.12E, h2**^{km}±2^{km}, **Md2.8, Ml1.8, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.20**	**255**	*e*Pg	Pg	23 28 48.1	+1.0
TIR				*e*Sg	Sg	23 28 50.8	+1.2
TIR	**Tirane**	**0.20**	**255**	P	Pg	23 28 48.1	+1.1
	baz=256						
TIR				S	Sg	23 28 51.8	+2.1
	baz=256						
TIR				AMP			
	comp=N,0.8nm,0.4s,baz=256						
PHP	**Peshkopia**	**0.38**	**40**	P	Pb	23 28 52.0	-0.8
	baz=40						
PHP				S	Sb	23 28 58.7	-0.4
	baz=40						
PHP				AMP			
	comp=N,0.3nm,0.3s,baz=40						
OHR	**Ohrid**	**0.59**	**119**	*e*Pg	Pb	23 28 56.5	+0.2
OHR				*e*Sg	Sb	23 29 03.7	-1.5
PUK	**Puka**	**0.67**	**345**	P	Pg	23 28 56.7	+0.7
	baz=346						
PUK				S	Sb	23 29 07.2	-0.2
	baz=346						
PUK				AMP			
	comp=E,0.2nm,0.4s,baz=346						
KBN	**Korca**	**0.93**	**147**	P	Pb	23 29 02.2	+0.1
	baz=146						
KBN				S	Sn	23 29 16.2	-1.1
	baz=146						
FNA	**Florina**	**1.13**	**122**	P	Pb	23 29 05.8	+0.2
	baz=122						
FNA				S	Sn	23 29 23.8	+1.4
	baz=122						
PDG	**Podgorica**	**1.22**	**328**	*e*Pg	Pn	23 29 07.5	+0.2
PDG				*e*Sg	Sb	23 29 23.7	+0.6
STIP	**Stip**	**1.58**	**79**	*i* Pn	Pg	23 29 14.0	+0.4
SJES	**Sjenica**	**1.86**	**357**	*e*Pg	Pb	23 29 17.8	-0.3
SJES				*e*Sg	Sg	23 29 42.8	-0.4
DBRK	**Dubrovnik**	**1.94**	**312**	*e*Pn	Pn	23 29 17.5	+0.2
DBRK				Sn	Sn	23 29 38.5	-3.7
STON	**Ston**	**2.32**	**310**	*e*Pn	Pn	23 29 20.9	-1.6
MAKA	**Makarska**	**2.97**	**310**	*e*Pn	Pn	23 29 30.2	-1.3
MAKA				Sn	Sn	23 30 03.8	-3.8
RICI	**Ricice**	**3.04**	**314**	*e*Pn	Pn	23 29 31.8	-0.6
ZIRJ	**Zirje**	**4.00**	**306**	*e*Pn	Pn	23 29 43.9	-1.7

*ATH **04** 23:29:26.2, 37°.57N×21°.56E, h52^{km}±4^{km}, ML2.8/14, Error ellipse: s-maj=4.1km s-min=1.2km az=230.0*
*THE **04** 23:29:28.1, 37°.56N×21°.56E, h18^{km}±2^{km}, ML2.8/17, Error ellipse: s-maj=2.5km s-min=0.8km az=151.0*
ISC 04 23:29:27.8±0.9, **37°.58N**±0°.02×**21°.53E**±0°.02, **h32**^{km}±8^{km}, **n66**, σ**1^{s}68**/93, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRO	**Drossia**	**0.40**	**22**	P	**Pb**	**23 29 36.3**	**-0.5**
DRO				S	**Sb**	**23 29 43.3**	**+0.3**
	2µm,0.3s						
DRO	**Drossia**	**0.40**	**22**	P	**Pb**	**23 29 36.3**	**-0.5**
DRO				S	**Sn**	**23 29 44.4**	**+0.7**
DRO				AML	AML	23 29 44.7	
	comp=E,3505µm,0.5s						
DRO				AML	AML	23 29 45.2	
	comp=N,4400µm,0.2s						
VTN	**Vitineika**	**0.43**	**321**	P	**Pn**	**23 29 37.9**	**+0.2**
VTN	**Vitineika**	**0.43**	**321**	P	**Pb**	**23 29 37.8**	**+0.5**
RLS	**Riolos of Patr**	**0.48**	**354**	P	**Pb**	**23 29 37.8**	**-0.2**
RLS				S	**Sn**	**23 29 46.2**	**+0.6**
	comp=N,872nm,0.4s						
RLS	**Riolos of Patr**	**0.48**	**354**	P	**Pb**	**23 29 37.8**	**-0.2**
RLS				S	**Sn**	**23 29 46.7**	**+1.1**
RLS				AML	AML	23 29 47.6	
	comp=N,1706µm,0.3s						
RLS				AML	AML	23 29 48.3	
	comp=E,1816µm,0.6s						
ITM	**Ithomi**	**0.51**	**141**	P	**Pb**	**23 29 38.0**	**-0.5**
ITM				S	**Sb**	**23 29 46.0**	**+0.1**
	comp=E,905nm,0.4s						
ITM	**Ithomi**	**0.51**	**141**	P	**Pb**	**23 29 37.9**	**-0.6**
ITM				S	**Sn**	**23 29 47.2**	**+0.7**
ITM				AML	AML	23 29 49.7	
	comp=N,1698µm,0.4s						
ITM				AML	AML	23 29 50.2	
	comp=E,1872µm,0.4s						
LTHK	**Lithakia**	**0.56**	**283**	P	**Pb**	**23 29 39.0**	**-0.3**
LTHK				S	**Sn**	**23 29 49.4**	**+1.7**
	comp=E,1µm,0.5s						
LTHK	**Lithakia**	**0.56**	**283**	P	**Pb**	**23 29 39.0**	**-0.3**
LTHK				S	**Sn**	**23 29 49.6**	**+1.9**
LTHK				AML	AML	23 29 51.5	
	comp=N,3064µm,0.5s						
LTHK				AML	AML	23 29 55.7	
	comp=E,2722µm,0.4s						
KLV	**Kalavryta, Ach**	**0.68**	**47**	P	**Pb**	**23 29 39.8**	**-1.4**
KLV				S	**Sn**	**23 29 51.6**	**+1.0**
	comp=E,235nm,0.5s						
KLV	**Kalavryta, Ach**	**0.68**	**47**	P	**Pb**	**23 29 39.8**	**-1.4**
KLV				AML	AML	23 29 52.1	
	comp=N,460µm,0.4s						
KLV				AML	AML	23 29 53.9	
	comp=E,473µm,0.5s						
PYL	**PYLOS**	**0.71**	**166**	P	**Pb**	**23 29 40.7**	**-1.0**
PYL				S	**Sb**	**23 29 51.2**	**0.0**
	comp=E,545nm,0.4s						
PYL	**PYLOS**	**0.71**	**166**	P	**Pb**	**23 29 40.7**	**-1.0**
PYL				AML	AML	23 29 53.8	
	comp=E,877µm,0.5s						
PYL				AML	AML	23 29 55.1	
	comp=N,1228µm,0.4s						
LAKA	**Lakka**	**0.75**	**28**	P	**Pb**	**23 29 41.5**	**-0.9**
LAKA				S	**Sn**	**23 29 54.1**	**+1.7**
	comp=N,1µm,0.4s						
LAKA	**Lakka**	**0.75**	**28**	P	**Pb**	**23 29 41.5**	**-0.9**
LAKA				AML	AML	23 29 54.5	
	comp=N,2465µm,0.5s						
LAKA				AML	AML	23 29 54.7	
	comp=E,2904µm,0.4s						
ALIK	**Aliki, Aigiali**	**0.82**	**34**	P	**Pb**	**23 29 42.8**	**-0.8**
ALIK				S	**Sb**	**23 29 54.2**	**-0.1**
TRIZ	**Trizonia**	**0.89**	**29**	P	**Pb**	**23 29 43.8**	**-1.0**
TRIZ	**Trizonia**	**0.89**	**29**	P	**Pb**	**23 29 43.8**	**-1.0**
EFP	**Efpalio**	**0.90**	**19**	P	**Pb**	**23 29 44.1**	**-0.7**
EFP				S	**Sn**	**23 29 57.4**	**+1.5**
	comp=E,252nm,0.8s						
EFP	**Efpalio**	**0.90**	**19**	P	**Pb**	**23 29 44.1**	**-0.7**
EFP				AML	AML	23 30 00.5	
	comp=E,544µm,0.9s						
EFP				AML	AML	23 30 01.3	
	comp=N,394µm,0.4s						
PSDA	**Pessada-Kefalo**	**0.92**	**306**	P	**Pb**	**23 29 44.8**	**-0.4**
PSDA				S	**Sn**	**23 30 00.0**	**+3.6**
PSDA	**Pessada-Kefalo**	**0.92**	**306**	P	**Pb**	**23 29 44.7**	**-0.5**
SERG	**Sergoula**	**0.93**	**27**	P	**Pb**	**23 29 44.5**	**-0.9**
SERG				S	**Sn**	**23 29 59.1**	**+2.2**
	comp=N,380nm,0.5s						
SERG	**Sergoula**	**0.93**	**27**	P	**Pb**	**23 29 44.5**	**-0.9**
SERG				AML	AML	23 30 04.3	
	comp=N,1085µm,0.6s						
SERG				AML	AML	23 30 05.9	
	comp=E,844µm,0.4s						
VLS	**Valsamata**	**0.95**	**309**	P	**Pb**	**23 29 45.2**	**-0.6**
VLS				S	**Sn**	**23 30 00.5**	**+3.2**
	comp=E,298nm,0.5s						
VLS	**Valsamata**	**0.95**	**309**	P	**Pb**	**23 29 45.0**	**-0.8**
VLS				AML	AML	23 30 04.8	
	comp=N,736µm,0.6s						
VLS				AML	AML	23 30 05.5	
	comp=E,444µm,0.5s						
THAL	**Thalero**	**1.01**	**63**	P	**Pb**	**23 29 46.1**	**-0.6**
THAL				S	**Sn**	**23 30 01.2**	**+2.5**
	comp=E,1µm,0.5s						
THAL	**Thalero**	**1.01**	**63**	P	**Pb**	**23 29 45.9**	**-0.8**
THAL				AML	AML	23 30 04.7	
	comp=N,1364µm,0.5s						
THAL				AML	AML	23 30 10.0	
	comp=E,2096µm,0.4s						
PVO	**Paravola**	**1.03**	**0**	P	**Pb**	**23 29 47.0**	**-0.2**
PVO				S	**Sn**	**23 30 01.9**	**+2.6**
	comp=E,550nm,0.3s						
PVO	**Paravola**	**1.03**	**0**	P	**Pb**	**23 29 46.9**	**-0.2**
PVO				AML	AML	23 30 06.8	
	comp=N,1001µm,0.3s						
PVO				AML	AML	23 30 07.2	
	comp=E,1191µm,0.3s						
ANX	**Ano Chora**	**1.06**	**17**	P	**Pb**	**23 29 46.9**	**-0.7**
ANX				S	**Sn**	**23 30 02.4**	**+2.3**
	comp=E,548nm,0.5s						
ANX	**Ano Chora**	**1.06**	**17**	P	**Pb**	**23 29 47.0**	**-0.7**
ANX				S	**Sn**	**23 30 01.8**	**+1.7**
ANX				AML	AML	23 30 08.5	
	comp=E,1034µm,0.6s						
ANX				AML	AML	23 30 08.7	
	comp=N,1204µm,0.5s						
KEF4	**Livadi, Kephal**	**1.10**	**308**	P	**Pn**	**23 29 47.6**	**+0.7**
KEF4				S	**Sn**	**23 30 04.4**	**+3.4**
	comp=N,2µm,0.6s						
KEF4	**Livadi, Kephal**	**1.10**	**308**	P	**Pn**	**23 29 47.5**	**+0.6**
KEF3	**Kipouria, Keph**	**1.12**	**304**	P	**Pn**	**23 29 47.5**	**+0.3**
KEF3				S	**Sn**	**23 30 03.5**	**+2.1**
	comp=N,918nm,0.5s						
KEF3	**Kipouria, Keph**	**1.12**	**304**	P	**Pn**	**23 29 47.2**	**0.0**
DMLN	**Damoulianata-K**	**1.12**	**306**	P	**Pn**	**23 29 48.5**	**+1.3**
DMLN				S	**Sn**	**23 30 05.1**	**+3.5**
	comp=N,558nm,0.6s						
DMLN	**Damoulianata-K**	**1.12**	**306**	P	**Pn**	**23 29 47.7**	**+0.5**
LTK	**Loutraki**	**1.22**	**68**	P	**Pn**	**23 29 49.6**	**+0.9**
LTK				S	**Sn**	**23 30 06.6**	**+2.5**
	comp=N,255nm,0.5s						
LTK	**Loutraki**	**1.22**	**68**	P	**Pn**	**23 29 49.5**	**+0.9**
LTK				AML	AML	23 30 07.3	
	comp=E,479µm,0.7s						
LTK				AML	AML	23 30 07.5	
	comp=N,409µm,0.6s						
EVGI	**Lefkada island**	**1.24**	**327**	P	**Pn**	**23 29 50.4**	**+1.5**
EVGI				S	**Sb**	**23 30 07.7**	**+1.3**
EVGI	**Lefkada island**	**1.24**	**327**	P	**Pn**	**23 29 50.4**	**+1.5**
EPID	**Epidavros**	**1.27**	**88**	P	**Pn**	**23 29 50.0**	**+0.8**
NYDR	**Nydri-Lefkada**	**1.30**	**330**	P	**Pn**	**23 29 50.6**	**+0.9**
KRND	**KRANIDI**	**1.31**	**98**	P	**Pn**	**23 29 50.3**	**+0.6**
DRAG	**Dragano-Lefkad**	**1.33**	**326**	P	**Pn**	**23 29 51.6**	**+1.5**
EVR	**Evrytania**	**1.35**	**9**	P	**Pb**	**23 29 52.3**	**-0.3**
LKD2	**Lefkada island**	**1.39**	**331**	P	**Pn**	**23 29 51.3**	**+0.4**
TSLK	**Tsoukalades, L**	**1.42**	**331**	P	**Pn**	**23 29 52.9**	**+1.6**
VLI	**Veliai**	**1.42**	**127**	P	**Pb**	**23 29 52.7**	**-0.9**
MAKR	**Makrakomi, Fth**	**1.51**	**18**	P	**Pb**	**23 29 55.0**	**-0.1**
VIL2	**Platees**	**1.52**	**65**	P	**Pn**	**23 29 53.6**	**+1.0**
LKR	**Lokris**	**1.58**	**47**	P	**Pn**	**23 29 54.4**	**+0.9**
ATH	**Athens Observa**	**1.78**	**77**	P	**Pn**	**23 29 56.9**	**+0.7**
VLY	**Voula,Athens**	**1.82**	**81**	P	**Pn**	**23 29 57.3**	**+0.5**
ATHU	**Athens Univers**	**1.83**	**77**	P	**Pn**	**23 29 57.6**	**+0.6**
PTL	**Penteli**	**1.91**	**75**	P	**Pn**	**23 29 58.7**	**+0.7**
DION	**Dionisos Attik**	**1.97**	**75**	P	**Pn**	**23 29 59.6**	**+0.7**
THL	**Klokotos Trika**	**2.02**	**11**	P	**Pn**	**23 30 01.2**	**+1.7**
DBRK	**Dubrovnik**	**5.70**	**334**	*e*Pn	**Pn**	**23 30 48.8**	**-1.4**
DBRK				Sn	**Sn**	**23 31 48.0**	**-6.5**
STON	**Ston**	**6.04**	**332**	*e*Pn	**Pn**	**23 30 52.3**	**-2.5**
STON				Sn	**Sn**	**23 31 56.2**	**-6.5**
MAKA	**Makarska**	**6.65**	**330**	*e*Pn	**Pn**	**23 31 02.2**	**-1.0**
RICI	**Ricice**	**6.79**	**332**	*e*Pn	**Pn**	**23 31 02.1**	**-3.0**
KIJV	**Kijevo**	**7.50**	**330**	*e*Pn	**Pn**	**23 31 13.5**	**-1.4**
MORI	**Morici**	**7.67**	**327**	*e*Pn	**Pn**	**23 31 15.2**	**-2.0**

*NEIC **04** 23:51:10.7±1.3, 19°.12N±0°.03×67°.78W±0°.03, h26^{km}±10^{km}, Error ellipse: s-maj=5.9km s-min=2.6km az=223.0*
*RSPR **04** 23:51:11.3, 19°.18N×67°.80W, h55^{km}±7^{km}, MD3.3/13*
*OSPL **04** 23:51:12.0±0.4, 19°.20N×67°.20W, h21^{km}±2^{km}, ML2.8*
ISC 04 23:51:11.3±1.2, **19°.06N**±0°.07×**67°.73W**±0°.03, **h27**^{km}, **n56**, σ**1^{s}21**/63, **13C-1D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDE	**Isla Desecheo**	**0.71**	**160**	⇑*e*P	**Pb**	**23 51 23.4**	**-1.7**
PCDR	**Punta Cana, DR**	**0.82**	**229**	⇑*e*P	**Pn**	**23 51 27.2**	**+0.1**
PCDR	**Punta Cana, DR**	**0.82**	**229**	*e*S	**Sb**	**23 51 38.0**	**+0.4**
PCDR	**Punta Cana, DR**	**0.82**	**229**		**Pn**	**23 51 27.2**	**+0.1**
PCDR					**Sb**	**23 51 38.5**	**+0.9**
PCDR				IAML		23 51 43.0	
	comp=E,235nm,0.4s						
AGPR	**Aguadilla, PR**	**0.83**	**135**	⇓*e*P	**Pn**	**23 51 25.4**	**-1.9**
AGPR	**Aguadilla, PR**	**0.83**	**135**		**Pn**	**23 51 25.4**	**-1.9**
AGPR	**Aguadilla, PR**	**0.83**	**135**	*i* P	**Pn**	**23 51 25.3**	**-1.9**
AGPR				*e*S	**Sb**	**23 51 34.7**	**-3.3**
PRSN	**Puerto Rico Se**	**1.01**	**146**	Pn	**Pn**	**23 51 30.0**	**+0.4**
AOPR	**Arecibo Observ**	**1.17**	**127**	⇑*e*P	**Pn**	**23 51 30.6**	**-1.3**
AOPR	**Arecibo Observ**	**1.17**	**127**	*e*S	**Sb**	**23 51 47.9**	**+0.3**
AOPR	**Arecibo Observ**	**1.17**	**127**		**Pn**	**23 51 30.6**	**-1.3**
AOPR					**Sb**	**23 51 47.9**	**+0.3**
CRPR	**Cabo Rojo, PR**	**1.20**	**151**	⇑*e*P	**Pn**	**23 51 32.8**	**+0.5**
CRPR	**Cabo Rojo, PR**	**1.20**	**151**	*e*S	**Sb**	**23 51 49.9**	**+1.3**
CRPR	**Cabo Rojo, PR**	**1.20**	**151**		**Pn**	**23 51 31.4**	**-0.9**
CRPR	**Cabo Rojo, PR**	**1.20**	**151**		**Sb**	**23 51 49.9**	**+1.3**
CRPR	**Cabo Rojo, PR**	**1.20**	**151**	*i* P	**Pn**	**23 51 31.7**	**-0.6**
CRPR				*e*S	**Sn**	**23 51 46.6**	**-1.1**
CRPR				IAML		23 51 53.3	
	comp=Z,198nm,0.3s						
MLPR	**Magueyes Islan**	**1.27**	**149**	⇑*e*P	**Pn**	**23 51 33.8**	**+0.6**
MLPR	**Magueyes Islan**	**1.27**	**149**	*e*S	**Sb**	**23 51 51.3**	**+0.9**
MLPR	**Magueyes Islan**	**1.27**	**149**	IAML		23 51 51.1	
	comp=N,163nm,0.6s						
MLPR	**Magueyes Islan**	**1.27**	**149**		**Pn**	**23 51 33.8**	**+0.6**
MLPR	**Magueyes Islan**	**1.27**	**149**		**Sb**	**23 51 51.3**	**+0.9**
EMPR	**Esperanza - Ma**	**1.28**	**117**	⇑*e*P	**Pn**	**23 51 33.8**	**+0.4**
EMPR	**Esperanza - Ma**	**1.28**	**117**	*e*S	**Sb**	**23 51 51.1**	**+0.4**
EMPR	**Esperanza - Ma**	**1.28**	**117**		**Sb**	**23 51 51.1**	**+0.4**
EMPR	**Esperanza - Ma**	**1.28**	**117**		**Pn**	**23 51 32.6**	**-0.8**
CELP	**Cerrillos**	**1.47**	**132**	⇑*e*P	**Pn**	**23 51 35.5**	**-0.5**
CELP	**Cerrillos**	**1.47**	**132**	*e*S	**Sn**	**23 51 55.6**	**+1.2**
CELP	**Cerrillos**	**1.47**	**132**		**Pn**	**23 51 35.5**	**-0.5**
CELP					**Sn**	**23 51 55.6**	**+1.2**
CELP	**Cerrillos**	**1.47**	**132**	IAML		23 51 56.7	
	comp=E,116nm,0.4s						
OBIP	**Obispado Ponce**	**1.47**	**133**	⇑*e*P	**Pn**	**23 51 36.0**	**-0.1**
OBIP	**Obispado Ponce**	**1.47**	**133**	*e*S	**Sb**	**23 51 56.0**	**-0.2**
OBIP	**Obispado Ponce**	**1.47**	**133**		**Pn**	**23 51 36.0**	**-0.1**
OBIP					**Sb**	**23 51 56.0**	**-0.2**
OBIP	**Obispado Ponce**	**1.47**	**133**	IAML		23 51 58.7	
	comp=N,128nm,0.4s						
DR12	**Loma Pena Alta**	**1.58**	**260**	Pn	**Pb**	**23 51 40.8**	**+0.8**
ICMP	**Isla Caja de M**	**1.64**	**135**	Pn	**Pb**	**23 51 40.4**	**-0.3**
ICMP				IAML		23 52 05.0	
	comp=N,102nm,0.4s						
ICMP				IAML		23 52 05.8	
	comp=E,146nm,0.7s						
GCPR	**Guaynabo City**	**1.73**	**115**	⇑*e*P	**Pn**	**23 51 39.5**	**-0.1**
GCPR	**Guaynabo City**	**1.73**	**115**	*e*S	**Sn**	**23 52 02.1**	**+1.3**
GCPR	**Guaynabo City**	**1.73**	**115**		**Pn**	**23 51 39.5**	**-0.1**
GCPR					**Sn**	**23 52 02.1**	**+1.3**
SJG	**San Juan**	**1.77**	**122**		**Pn**	**23 51 39.5**	**-0.6**
SJG				IAML		23 52 05.6	
	comp=E,117nm,0.4s						
SJG				IAML		23 52 06.2	
	comp=E,127nm,0.2s						
IGPR	**InterUniversit**	**1.89**	**125**	⇑*e*P	**Pn**	**23 51 42.1**	**+0.4**
IGPR	**InterUniversit**	**1.89**	**125**	*e*S	**Sn**	**23 52 06.3**	**+1.6**
PDPR	**Patillas Dam,**	**1.93**	**122**		**Pn**	**23 51 41.5**	**-0.8**
CBYP	**Canovanas**	**1.94**	**114**	⇑*e*P	**Pn**	**23 51 42.6**	**0.0**
CBYP	**Canovanas**	**1.94**	**114**	*e*S	**Sn**	**23 52 07.1**	**+1.0**
CBYP	**Canovanas**	**1.94**	**114**		**Pn**	**23 51 42.6**	**0.0**
CBYP					**Sn**	**23 52 07.1**	**+1.0**
HUMP	**Col San Antoni**	**2.00**	**117**	⇑*e*P	**Pn**	**23 51 43.6**	**+0.3**
HUMP	**Col San Antoni**	**2.00**	**117**	*e*S	**Sn**	**23 52 08.9**	**+1.3**
HUMP	**Col San Antoni**	**2.00**	**117**		**Pn**	**23 51 43.6**	**+0.3**
HUMP					**Sn**	**23 52 08.9**	**+1.3**
MTP	**Monte Pirata**	**2.28**	**115**	⇑*e*P	**Pn**	**23 51 47.4**	**+0.2**
MTP	**Monte Pirata**	**2.28**	**115**	*e*S	**Sn**	**23 52 15.5**	**+1.1**
MTP	**Monte Pirata**	**2.28**	**115**		**Pn**	**23 51 47.4**	**+0.2**
MTP					**Sn**	**23 52 15.5**	**+1.1**
CUPR	**Culebra, Puert**	**2.44**	**107**	Pn	**Pn**	**23 51 49.2**	**-0.1**
BANI	**BANI**	**2.58**	**255**	Pn	**Pb**	**23 51 58.3**	**+1.4**
STVI	**Saint Thomas**	**2.73**	**105**	Pn	**Pn**	**23 51 55.7**	**+2.4**
STVI				IAML		23 52 40.3	
	comp=N,25nm,0.5s						
SDDR	**Presa de Saban**	**3.37**	**269**	Pn	**Pb**	**23 52 06.1**	**-4.2**
SDDR				IAML		23 53 04.6	
	comp=N,29nm,0.8s						
SDDR				IAML		23 53 23.7	
	comp=N,30nm,2.6s						
LONE2	**Loma La Sidra**	**3.58**	**263**	*i* P	**Pb**	**23 52 12.0**	**-2.0**
LONE2				IAML		23 52 48.7	
	comp=Z,49nm,16.4s						

*IDC **04** 23:57:17.7±1.1, 8°.13S×125°.32E, h0^{km}, mb3.9/5, mb1 4.1/10, mb1mx3.9/33, mbtmp4.0/10, ML3.9/5, MS3.2/6, Ms1 3.3/6, ms1mx2.8/31, Error ellipse: s-maj=31.5km s-min=18.5km az=86.0*
*NEIC **04** 23:57:21.4±2.1, 8°.3S±0°.1×125°.0E±0°.1, h10^{km}±1^{km}, mb4.2/4, Error ellipse: s-maj=23.6km s-min=8.7km az=222.0*
*DJA **04** 23:57:24.2±0.4, 8°S±5°×12°5E±°, h88^{km}±28^{km}, M4.2/7, mb4.5/6, mB4.6/2, MLv4.1/7, Mw(mB)3.8/2*
ISC 04 23:57:21.8±0.6, **8°.29S**±0°.05×**125°.05E**±0°.05, **h24**^{km}, **n44**, σ**2^{s}38**/47, **mb4.1**/6, **MS3.1**/3, **Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**1.65**	**208**		**Pb**	**23 57 51.3**	**-0.3**
SOEI	**Soe**	**1.65**	**208**	P	**Pb**	**23 57 52.1**	**+0.5**
SOEI	**Soe**	**1.65**	**208**	P	**Pb**	**23 57 55.0**	**+3.4**
BATI	**Baumata**	**2.35**	**216**	Pn	**Pb**	**23 58 03.2**	**-0.1**
	28nm,0.3s,baz=76,slow=19,SNR=13						
BATI				Sn	**Sb**	**23 58 33.8**	**+1.9**
	15nm,0.3s,baz=344,slow=23,SNR=9.7						
BATI				LR	LR	23 59 21.3	
	comp=Z,397nm,18.3s,baz=64,slow=47						
BATI	**Baumata**	**2.35**	**216**	P	**Pn**	**23 58 01.0**	**+2.1**
MMRI	**Maumere**	**2.80**	**263**		**Pn**	**23 58 06.4**	**+1.3**
MMRI	**Maumere**	**2.80**	**263**	P	**Pn**	**23 58 06.5**	**+1.3**

WSI	Waingapu	4.89	253	P	Pb	23 58 45.0	-1.8
BSSI	Bau Bau, Buton	5.00	295	P	Pn	23 58 35.2	-0.2
BSSI				S	Sn	23 59 31.4	-1.1
BKSI	Bulukumba	5.71	301	P	Pn	23 58 46.0	+0.9
	0.1nm16nm,1.0s						
KAPI	Kappang	6.19	301	Pn	Pn	23 58 53.7	+2.0
	1.0nm,0.3s,baz=90,slow=14,SNR=1.5						
KAPI				Sn	Sn	00 00 00.6	-1.1
	baz=66,slow=20,SNR=1.0						
SANI	Sanana	6.27	9	P	Pn	23 58 54.4	+1.6
	0.1nm574nm14nm,0.4s						
SANI	Sanana	6.27	9	P	Pn	23 58 55.2	+2.4
PLAI	Plampang	7.21	265	P	Pn	23 59 07.8	+2.0
	0.2nm53nm,0.7s						
PLAI	Plampang	7.21	265	P	Pn	23 59 10.5	+4.7
MTN	Manton Dam	7.50	128		Pn	23 59 12.9	+3.2
MTN	Manton Dam	7.50	128	P	Pn	23 59 13.1	+3.4
	36nm,0.8s						
KNRA	Kununurra	8.19	154		Pn	23 59 21.4	+2.2
KNRA	Kununurra	8.19	154	P	Pn	23 59 21.7	+2.5
	48nm,0.8s						
KDU	Kakadu	8.51	122	P	Pn	23 59 27.6	+4.1
	12nm,0.5s						
FITZ	Fitzroy Crossi	9.77	177	Pn	Pn	23 59 40.3	-0.5
	0.8nm,0.3s,baz=17,slow=10,SNR=13						
FITZ				Sn	Sn	00 01 26.6	-3.2
	1.5nm,0.3s,baz=90,slow=10,SNR=12						
FITZ	Fitzroy Crossi	9.77	177		Pn	23 59 41.7	+0.8
FITZ	Fitzroy Crossi	9.77	177	P	Pn	23 59 42.0	+1.2
	10.0nm,0.6s						
WB0	Warramunga Arr	14.56	143		Pn	00 00 45.2	-1.2
WRA	Warramunga Arr	14.67	143	Pn	Pn	00 00 45.5	-2.4
	0.7nm,0.3s,baz=319,slow=13,SNR=32						
WRA				Sn	Sn	00 03 22.5	-7.3
	0.3nm,0.3s,baz=317,slow=22,SNR=6.8						
WRA	Warramunga Arr	14.67	143		Pn	00 00 45.9	-2.0
LEM	Lembang	17.34	274	LR	LR	00 09 09.0	
	comp=Z,146nm,18.5s,baz=164,slow=40						
AS31	Alice Springs	17.49	152		P	00 01 24.9	-0.3
ASAR	Alice Springs	17.49	152	P	Pn	00 01 24.1	-0.1
	0.4nm,0.3s,baz=326,slow=11,SNR=22						
ASAR				S	Sn	00 04 32.6	-5.8
	0.2nm,0.3s,baz=314,slow=20,SNR=7.3						
ASAR				LR	LR	00 07 30.5	
	comp=Z,52nm,19.2s,baz=246,slow=35						
ASAR	Alice Springs	17.49	152	P	P	00 01 26.8	+1.5
COEN	Coen	18.65	109	P	Pn	00 01 40.0	+1.5
COEN				IAmb	IAmb	00 02 03.7	
	comp=Z,10nm,1.1s						
PMG	Port Moresby	21.87	95	LR	LR	00 12 12.6	
	comp=Z,71nm,20.4s,baz=254,slow=41						
CMAR	Chiang Mai Arr	37.01	316	P	P	00 04 30.1	+0.3
	comp=Z,1.3nm,0.4s,baz=148,slow=7.6,SNR=7.4						
CMAR				LR	LR	00 21 18.3	
	comp=Z,25nm,19.2s,baz=190,slow=39						
CMAR	Chiang Mai Arr	37.01	316	P	P	00 04 29.4	-0.5
MJAR	Matsushiro Arr	46.27	15	P	P	00 05 45.0	-0.5
	comp=Z,0.9nm,0.3s,baz=188,slow=9.0,SNR=1.8						
PALK	Pallekele	46.84	288	LR	LR	00 25 51.3	
	comp=Z,38nm,19.2s,baz=228,slow=36						
SONM	Songino Array	58.27	345	P	P	00 07 13.8	-0.7
	comp=Z,0.3nm,0.6s,baz=142,slow=4.9,SNR=2.4						
MK31	Makanchi Array	66.72	329	P	P	00 08 12.8	+1.9
MKAR	Makanchi Array	66.72	329	P	P	00 08 10.6	-0.3
	comp=Z,0.8nm,0.6s,baz=133,slow=6.8,SNR=10						
MKAR	Makanchi Array	66.72	329	P	P	00 08 12.0	+1.0
ZALV	Zalesovo Beam	70.67	336	P	P	00 08 33.0	-2.3
	comp=Z,0.8nm,0.6s,baz=123,slow=5.5,SNR=4.8						
ZALV	Zalesovo Beam	70.67	336	P	P	00 08 34.2	-1.1
QSPA	South Pole Qui	81.70	180	P	P	00 09 40.0	+1.9
QSPA				IAmb	IAmb	00 09 45.6	
	comp=Z,4.3nm,0.9s						
TORD	Torodi Ar. Bea	124.23	280	PKP	PKiKP	00 16 20.2	+0.4
	comp=Z,0.6nm,1.1s,baz=32,slow=2.6,SNR=1.6						

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*INET **05** 00:01:22.8, 9°.53N×84°.22W, h54^{km}, ML3.8*

UCR 05 00:01:25.9±1.4**, 9°.38N×84°.23W, h37**^{km}±2^{km}**, MW3.7, 1C-1D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDDO	Dominical	0.38	110	⇑iP	Pn	00 01 34.7	+0.1
EDDO				eS	Sn	00 01 41.9	+0.5
LCR2	La Lucha 2	0.42	32	eP	Pn	00 01 35.3	-0.1
LCR2				eS	Sn	00 01 42.7	+0.2
CDM	Cerro de Muert	0.49	70	eP	Pn	00 01 36.6	-0.1
CDM				eS	Sn	00 01 45.2	+0.9
RIMA	Rio Macho	0.52	43	eP	Pn	00 01 36.6	-0.5
SJS	Escuela Geolog	0.58	17	eP	Pn	00 01 37.6	-0.3
HDC	Heredia	0.62	10	eP	Pn	00 01 38.4	-0.2
HDC				eS	Sn	00 01 48.3	+1.0
HDC3	Heredia 3	0.62	11	eP	Pn	00 01 38.5	-0.1
RAFA	San Farael, Vo	0.70	36	eS	Sn	00 01 51.3	+1.9
SRA1	San Ramn	0.74	340	eP	Pn	00 01 39.5	-0.4
VTRT	Volcan Turrial	0.75	35	eP	Pn	00 01 40.1	-0.1
VTCV	VTCV, Calle Va	0.77	40	eP	Pn	00 01 40.5	0.0
VTUC	Crater, Volcan	0.79	36	eP	Pn	00 01 40.8	0.0
LAFE	Finca La Fe, P	0.79	302	eP	Pn	00 01 40.1	-0.5
CRPO	Crater poas	0.81	0	eP	Pn	00 01 41.0	-0.1
CRPO				eS	Sn	00 01 52.5	+0.5
EDPN	Palmar Norte	0.87	119	eP	Pn	00 01 41.8	+0.2
EDPN				eS	Sn	00 01 54.2	+1.2
SRBA	San Rafael, Bu	0.87	100	eP	Pn	00 01 41.9	+0.2
BATAN	Batan	1.10	50	eP	Pn	00 01 45.6	+0.9
POTG	Potrero Grande	1.14	107	eP	Pn	00 01 46.0	+0.6
JTS	Las Juntas de	1.15	322	eP	Pn	00 01 45.0	-0.5
CASO	Castillo	1.16	334	i P	Pn	00 01 46.4	+0.8
FORC	Fortuna	1.16	338	i P	Pn	00 01 46.4	+0.7
ARE1	Arenal 1	1.17	336	eP	Pn	00 01 46.6	+0.8
CEDE	Laguna Cedeo	1.19	337	eP	Pn	00 01 47.0	+0.9
COVE	Coope Vega, Sa	1.34	353	eP	Pn	00 01 48.7	+0.6
PLVR	Palo Verde	1.46	311	eP	Pn	00 01 49.3	-0.6
ACAL	Aguas Claras	1.48	327	⇓iP	Pn	00 01 50.7	+0.7
GRZA	Playa Garza	1.48	291	eP	Pn	00 01 48.6	-1.4
GUAI	GUAI	1.54	305	i P	Pn	00 01 50.4	-0.5
GUAI				i S	Sn	00 02 10.3	+0.8
CUI	Cuipilapa	1.57	324	i P	Pn	00 01 51.6	+0.4
CUI				i S	Sn	00 02 12.2	+1.9
COLC	Colonia	1.59	323	i P	Pn	00 01 52.1	+0.5
HORNC	Hornillas	1.62	325	i P	Pn	00 01 52.2	+0.2
LIM1	Limonal	1.65	322	i P	Pn	00 01 52.7	+0.3
VMAR	Armenia, Volca	1.67	328	eP	Pn	00 01 53.0	+0.3
VRLE	La Escondida,	1.79	321	eP	Pn	00 01 54.5	+0.2
LAPC	Finca la Perla	1.82	319	i P	Pn	00 01 54.9	+0.2
BUEV	Buena Vista	1.82	321	eP	Pn	00 01 55.1	+0.3
GB1A	Borinquen Arri	1.83	321	i P	Pn	00 01 55.2	+0.3

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*BEO **05** 00:04:03.2±0.8, 39°.87N×19°.91E, h0^{km}, ML2.6/3*

*TIR **05** 00:04:03.6, 40°.13N×19°.98E, h2^{km}±1^{km}, Md2.9, Ml2.5*

*ATH **05** 00:04:05.3, 40°.11N×19°.91E, h10^{km}±4^{km}, ML2.3/5, Error ellipse: s-maj=4.5km s-min=1.6km az=174.0*

*THE **05** 00:04:05.4, 40°.11N×19°.87E, h0^{km}±2^{km}, ML2.5/8, Error ellipse: s-maj=3.0km s-min=1.2km az=309.0*

ISC 05 00:04:04.1±1.0**, 40°.12N**±0°.02×**19°.88E**±0°.03**, h10**^{km}±8^{km}**, n59, σ1^{s}.53**/88**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRN	Sarande	0.25	158	P	Pg	00 04 09.2	-0.1
SRN				S	Sg	00 04 13.5	+0.8
	7µm,0.2s						
SRN	Sarande	0.25	158	P	Pg	00 04 09.3	+0.1
	baz=176						
SRN				S	Sg	00 04 13.6	+0.8
	baz=176						
SRN				AMP			
	comp=E,7.3nm,0.2s,baz=176						
KASA	Kassiopi	0.37	173	P	Pb	00 04 11.4	-1.4
KASA				S	Sb	00 04 18.1	-0.5
KASA				AML	AML	00 04 18.8	
	comp=E,2931µm,0.5s						
KASA				AML	AML	00 04 19.0	
	comp=N,1901µm,0.2s						
KEK	Kerkira	0.41	188	P	Pb	00 04 12.4	-1.0
KEK				S	Sb	00 04 19.7	0.0
	comp=N,685nm,0.2s						
KEK	Kerkira	0.41	188	P	Pb	00 04 12.4	-1.0
KEK				S	Sb	00 04 18.8	-0.9
KEK				AML	AML	00 04 20.9	
	comp=N,1003µm,0.2s						
KEK				AML	AML	00 04 21.7	
	comp=E,1706µm,0.2s						
VLO	Vlora	0.46	321	P	Pb	00 04 14.6	+0.3
LSK	Leskovik	0.56	86	P	Pg	00 04 13.5	-1.4
	baz=87						
LSK				S	Sg	00 04 21.5	-0.8
	baz=87						
LSK				AMP			
	comp=N,1.8nm,0.5s,baz=87						
IGT	Igoumenitsa	0.68	149	P	Pb	00 04 17.0	-1.1
IGT				S	Sn	00 04 28.4	-2.1
	comp=N,222nm,0.4s						
IGT	Igoumenitsa	0.68	149	P	Pb	00 04 17.1	-1.1
IGT				S	Sb	00 04 27.7	+0.1
IGT				AML	AML	00 04 29.1	
	comp=E,380µm,0.5s						
IGT				AML	AML	00 04 30.7	
	comp=N,314µm,0.3s						
IGT	Igoumenitsa	0.68	149	P	Pb	00 04 17.3	-0.8
	baz=155						
IGT				S	Sb	00 04 28.2	+0.6
	baz=155						
KBN	Korca	0.86	54	P	Pg	00 04 20.2	-0.6
	baz=51						
KBN				S	Sb	00 04 32.4	-0.5
	baz=51						
KBN				AMP			
	comp=N,0.7nm,0.4s,baz=51						
JAN	Janina	0.88	121	P	Pb	00 04 21.2	-0.3
JAN				S	Sn	00 04 35.2	-0.3
	comp=N,422nm,0.3s						
JAN	Janina	0.88	121	P	Pb	00 04 21.2	-0.3
NEST	Nestorio	0.95	71	P	Pg	00 04 21.1	-1.2
PENT	Pentalofos	0.97	85	P	Pb	00 04 22.2	-0.9
SCTE	Santa Cesarea	1.08	268	P	Pn	00 04 25.8	+0.4
SCTE				S	Sn	00 04 41.8	+1.4
SCTE				AML	AML	00 04 44.3	
	comp=N,128µm,0.2s						
SCTE				AML	AML	00 04 45.0	
	comp=E,170µm,0.2s						
KPRO	Kipourio	1.15	98	P	Pn	00 04 26.0	-0.5
OHR	Ohrid	1.22	35	ePg	Pn	00 04 27.7	+0.4
OHR				eSg	Sn	00 04 47.8	+3.9
OHR	Ohrid	1.22	35	i Pn	Pn	00 04 27.5	+0.2
TIR	Tirane	1.23	360	ePg	Pn	00 04 29.1	+1.7
TIR				eSg	Sn	00 04 50.8	+6.6
TIR	Tirane	1.23	360	P	Pn	00 04 28.0	+0.5
TIR	Tirane	1.23	360	P	Pn	00 04 28.5	+1.0
	baz=356						
TIR				S	Sn	00 04 46.6	+2.4
	baz=356						
FNA	Florina	1.33	59	P	Pn	00 04 28.4	-0.4
FNA				AML	AML	00 04 52.6	
	comp=E,852µm,0.7s						
FNA				AML	AML	00 04 54.4	
	comp=N,509µm,0.6s						
TSLK	Tsoukalades, L	1.42	155	P	Pg	00 04 32.2	+0.8
TSLK				S	Sg	00 04 52.9	+3.0
	comp=N,188nm,0.5s						
TSLK	Tsoukalades, L	1.42	155	P	Pg	00 04 31.4	0.0
KZN	Kozani	1.46	82	P	Pg	00 04 31.8	-0.4
DRAG	Dragano-Lefkad	1.53	159	P	Pg	00 04 33.3	-0.1
DRAG				S	Sg	00 04 55.6	+2.3
	comp=N,365nm,0.3s						
NYDR	Nydri-Lefkada	1.54	155	P	Pg	00 04 32.6	-1.0
NYDR				S	Sg	00 04 54.9	+1.3
	comp=N,85nm,0.5s						
NYDR	Nydri-Lefkada	1.54	155	P	Pg	00 04 32.6	-1.0
PHP	Peshkopia	1.62	15	P	Pg	00 04 34.9	-0.4
PHP	Peshkopia	1.62	15	P	Pg	00 04 35.0	-0.4
	baz=12						
PHP				S	Sg	00 04 58.2	+1.8
	baz=12						
THL	Klokotos Trika	1.74	108	P	Pg	00 04 36.7	-0.8
THL				S	Sg	00 05 00.6	+0.7
	comp=N,65nm,0.6s						
THL	Klokotos Trika	1.74	108	P	Pg	00 04 36.6	-0.8
FSK	Fiskardo	1.74	162	P	Pb	00 04 35.4	-0.7
FSK				S	Sg	00 05 00.2	+0.2
EVR	Evrytania	1.92	128	P	Pg	00 04 39.5	-1.4
PUK	Puka	1.93	0	P	Pg	00 04 40.3	-0.8
	baz=359						
PUK				S	Sg	00 05 08.4	+2.4
	baz=359						
PVO	Paravola	1.97	139	P	Pb	00 04 39.7	-0.4
PVO	Paravola	1.97	139	P	Pb	00 04 39.6	-0.5
VLS	Valsamata	2.01	164	P	Pn	00 04 38.9	+0.7
GRG	Griva	2.10	66	P	Pb	00 04 40.9	-1.4
STIP	Stip	2.36	47	i Pn	Pg	00 04 47.5	-1.8
PDG	Podgorica	2.36	349	ePn	Pb	00 04 46.4	-0.3
PDG				eSn	Sg	00 05 18.3	-1.6
VAY	Valandovo	2.38	59	ePn	Pb	00 04 45.3	-1.7
DBRK	Dubrovnik	2.86	334	ePn	Pn	00 04 49.8	-0.1
BARS	Barje	3.07	28	ePn	Pb	00 04 55.8	-3.0
BOSS	Bosilegrad	3.08	39	ePn	Pn	00 04 55.5	+2.6
SJES	Sjenica	3.14	1	ePn	Pb	00 04 57.9	-2.3
SELS	Selova	3.24	16	ePn	Pn	00 04 57.7	+2.6
ZAPS	Zavoj	3.77	32	ePn	Pn	00 05 05.6	+3.2
MAKA	Makarska	3.82	327	ePn	Pn	00 05 03.7	+0.7
MAKA				Sn	Sn	00 05 47.1	-0.9
RICI	Ricice	3.95	330	ePn	Pn	00 05 05.4	+0.6
HVAR	Hvar	3.99	321	ePn	Pn	00 05 03.5	-1.9
HVAR				Sn	Sn	00 05 51.0	-1.3
KIJV	Kijevo	4.67	328	ePn	Pn	00 05 15.8	+1.1
ZIRJ	Zirje	4.74	320	ePn	Pn	00 05 15.4	-0.3
ZIRJ				Sn	Sn	00 06 08.7	-1.9
MORI	Morici	4.87	322	ePn	Pn	00 05 18.1	+0.7
MORI				Sn	Sn	00 06 12.5	-1.3
DUGI	Dugi Otok	5.28	319	ePn	Pn	00 05 23.8	+0.7
DUGI				Sn	Sn	00 06 22.6	-1.3
UDBI	Udbina	5.36	327	ePn	Pn	00 05 25.6	+1.3
NVLJ	Novalja	5.79	322	ePn	Pn	00 05 30.9	+0.9
NVLJ				Sn	Sn	00 06 34.9	-1.5
RABC	Rab	5.97	323	ePn	Pn	00 05 33.6	+1.1

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*FUNV **05** 00:05:04.8, 10°.28N×70°.46W, h5^{km}, MW3.1*

ISC 05 00:05:03.4±1.7**, 10°.33N**±0°.03×**70°.45W**±0°.03**, h15**^{km}±14^{km}**, n44, σ1^{s}.55**/59**, 3C-2D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DABV	Dabajuro	0.61	342	eP	Pn	00 05 17.6	-0.1
DABV	Dabajuro	0.61	342	⇑iP	Pn	00 05 17.8	+0.2
DABV				eS	Sn	00 05 27.5	+0.1
SIQV	Siquisique	0.70	63	⇓eP	Pb	00 05 17.9	+0.5
SIQV				eS	Sn	00 05 28.9	-0.6
SDV	Santo Domingo	1.45	187	⇑eP	Pn	00 05 29.4	+0.1
MONV	Montecano	1.68	16	⇓iP	Pb	00 05 34.1	0.0
MONV				eS	Sg	00 05 57.5	0.0
JACV	Jacura	1.76	65	eP	Pb	00 05 35.9	+0.5
JACV				eS	Sg	00 05 59.3	-0.7
URIC	Uribia, Colomb	2.04	312	eP	Pb	00 05 38.9	-1.3
URIC				eS	Sg	00 06 09.8	+0.7
MCQV	Machiques	2.08	262	eP	Pb	00 05 40.0	-0.8
MCQV				eS	Sb	00 06 05.8	-0.8
SOCV	Socops	2.08	191	eP	Pn	00 05 38.5	+0.7
SOCV	Socops	2.08	191	eP	Pn	00 05 38.9	+1.1
SOCV				eS	Sn	00 06 05.0	+1.5
TURV	Turiamo	2.57	87	eS	Sn	00 06 17.7	+2.2
BAUV	El Baul	2.74	120	eP	Pn	00 05 48.2	+1.2
BAUV				eS	Sn	00 06 20.7	+0.8
BENV	Beln	2.83	97	⇑iP	Pn	00 05 50.1	+2.0
BENV				eS	Sn	00 06 23.8	+1.7
LL6C	La Loma 6 Bece	2.84	258	eP	Pn	00 05 51.2	+2.8
CAPV	Capacho	3.07	217	eP	Pn	00 05 52.9	+1.2
CAPV				eS	Sn	00 06 28.0	-0.3
TACV	Tcata	3.37	93	eP	Pn	00 05 57.5	+1.8
TACV				eS	Sn	00 06 36.4	+0.9
ELOV	Elorza	3.44	164	eP	Pn	00 05 58.3	+1.6
ELOV	Elorza	3.44	164	eP	Pn	00 05 57.6	+0.9
ELOV				eS	Sn	00 06 36.6	-0.6
OCAC	Ocana	3.52	234	eP	Pn	00 05 57.0	-0.7
PAMC	Pamplona, Colo	3.72	217	eP	Pn	00 06 02.2	+1.4
SMRC	Santa Marta, M	3.80	283	eP	Pn	00 06 00.6	-1.0
SMLC	San Martn de	3.89	247	eP	Pn	00 06 04.5	+1.8
TAMC	Tame, Arauca	4.09	199	eP	Pb	00 06 16.2	+0.9
BIRV	Birongo	4.11	88	eP	Pn	00 06 06.3	+0.5
BIRV				eS	Sn	00 06 54.0	+0.3
MERV	Las Mercedes	4.23	104	eP	Pn	00 06 08.3	+0.9
MERV				eS	Sn	00 06 56.0	-0.6
BARC	Barichara	4.60	216	eP	Pn	00 06 13.5	+0.8
SJCC	San Jacinto, C	4.68	265	eP	Pn	00 06 15.4	+1.7
CACV	CAICARA DEL OR	4.74	125	eP	Pb	00 06 21.0	-5.3
CACV				eS	Sb	00 07 19.0	-4.2
RUSC	La Rusia	5.13	211	eP	Pn	00 06 20.3	+0.1
ZARC	Zaragoza, Cauc	5.19	237	eP	Pn	00 06 21.2	+0.5
MOTC	Monteria, Cord	5.38	254	eP	Pn	00 06 24.2	+1.0
PAYV	Puerto Ayacuch	5.61	150	eP	Pn	00 06 26.0	-0.4
PAYV				eS	Sn	00 07 27.3	-3.3
UREC	San Jos de Ur	5.64	243	eP	Pn	00 06 29.4	+2.5
PCRV	Puerto La Cruz	5.72	91	eP	Pn	00 06 29.2	+1.2
PRGV	PARIAGUAN	5.93	105	eP	Pn	00 06 31.0	+0.2
PTGC	Puerto Gaitan,	6.32	195	eP	Pn	00 06 40.9	+4.7
NORC	Norcasia	6.45	223	eP	Pn	00 06 37.6	-0.5
HELC	Santa Helena	6.50	231	eP	Pn	00 06 40.1	+1.1
CHIC	Chingaza	6.54	210	eP	Pn	00 06 40.1	+0.6
GUY2C	Guyana, Caldas	7.04	224	eP	Pn	00 06 48.3	+1.9
CBOC	Ciudad Bolivar	7.08	232	eP	Pn	00 06 44.2	-2.5
PLMC	San Jos del P	7.91	227	eP	Pn	00 07 00.7	+2.6
ORTC	Ortega, Tolima	7.96	217	eP	Pn	00 06 59.0	+0.2
MACC	Macarena, Meta	8.81	203	eP	Pn	00 07 10.5	+0.1

DJA 05 00:05:35.0±0.4**, 9°S**±7°×**11°8E**±°**, h100**^{km}±8^{km}**, M4.1**/12**, mb4.3**/1**, MLv4.0**/12**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	0.60	257	P	Pn	00 05 53.0	+1.4
TWSI	Taliwang, Sumb	1.47	268	P	Pn	00 06 01.7	+0.8
TWSI				S	Sn	00 06 21.4	+0.8
SRBI	Singaraja	3.18	281	P	Pn	00 06 23.3	+0.1
IGBI	Denpasar	3.19	267	P	Pn	00 06 24.5	+1.2
EDFI	Ende, Flores	3.28	91	P	Pn	00 06 24.5	-0.2
BSSI	Bau Bau, Buton	3.29	40	P	Pn	00 06 24.9	+0.2
BKSI	Bulukumba	3.77	28	P	Pn	00 06 31.1	0.0
MMRI	Maumere	3.82	89	P	Pn	00 06 32.1	+0.3
JAGI	Jajag, Banyuwa	4.18	273	P	Pn	00 06 35.1	-1.5
BLJI	Banyuglugur	4.82	281	P	Pn	00 06 45.3	0.0
GMJI	Gumukmas	4.89	274	P	Pn	00 06 45.7	-0.6
BATI	Baumata	5.43	107	P	Pn	00 06 53.4	-0.3
PCJI	Pacitan	7.13	273	P	Pn	00 07 17.2	+0.5

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*IDC **05** 00:11:05.6±2.0, 8°.04S×125°.41E, h0^{km}, mb3.9/1, mb1 3.7/5, mb1mx3.5/55, mbtmp3.6/5, ML3.5/4, Error ellipse: s-maj=41.2km s-min=26.8km az=87.0*

ISC 05 00:11:09.6±1.5**, 8°.2S**±0°.1×**125°.5E**±0°.1**, h26**^{km}**, n5, σ1^{s}.27**/8**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	2.75	222	Pn	Pn	00 11 52.0	0.0
	13nm,0.3s,baz=84,slow=2.6,SNR=10						
BATI				Sn	Sn	00 12 24.8	+0.4
	5.0nm,0.3s,baz=118,slow=20,SNR=1.6						
FITZ	Fitzroy Crossi	9.88	179	Pn	Pn	00 13 28.5	-1.6
	0.1nm,0.3s,baz=0.7,slow=11,SNR=2.0						
WRA	Warramunga Arr	14.49	145	Pn	Pn	00 14 34.1	+0.9
	0.3nm,0.3s,baz=319,slow=13,SNR=8.2						
WRA				Sn	Sn	00 17 12.2	-1.0
	0.1nm,0.3s,baz=318,slow=27,SNR=3.1						
ASAR	Alice Springs	17.39	153	P	P	00 15 13.2	+1.4
	0.2nm,0.3s,baz=331,slow=12,SNR=21						
ASAR				S	Sn	00 18 22.7	-0.8
	0.0nm,0.3s,baz=332,slow=24,SNR=5.4						
MKAR	Makanchi Array	66.85	329	P	P	00 21 58.3	-1.0
	1.6nm,1.2s,baz=148,slow=8.2,SNR=1.6						

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*IDC **05** 00:12:18.5±3.8, 36°.20N×70°.42E, h165^{km}±26^{km}, mb3.7/8, mb1 3.6/14, mb1mx3.2/66, mbtmp4.1/14, Error ellipse: s-maj=40.8km s-min=17.3km az=153.0*

*NNC **05** 00:12:22.9±4.3, 37°.13N×69°.81E, h0^{km}, mb4.4, mpv4.1, Error ellipse: s-maj=35.5km s-min=23.9km az=171.0*

*MOS **05** 00:12:22.6±1.0, 36°.54N×70°.43E, h199^{km}, mb4.5/6, Error ellipse: s-maj=15.4km s-min=6.0km az=86.7*

*BJI **05** 00:12:23.0±0.0, 36°.50N×70°.40E, h190^{km}, mB4.7/4, mb4.3/7*

*NEIC **05** 00:12:23.5±1.8, 36°.52N±0°.07×70°.31E±0°.07, h195^{km}±6^{km}, mb4.0/13, Error ellipse: s-maj=10.0km s-min=8.8km az=174.0*

*SOME **05** 00:12:27.9, 37°.30N×70°.58E, h0^{km}*

ISC 05 00:12:23.3±0.5**, 36°.52N**±0°.05×**70°.51E**±0°.05**, h198**^{km}±4^{km}**, h198**^{km}**:pP-P, n109, σ1^{s}.91**/136**, mb4.1**/14**, 10C-3D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	2.31	212	PN	Pn	00 13 04.6	-0.6
KBL	Kabul	2.31	212	Pn	Pn	00 13 04.6	-0.6
CHGR	Chuyangaron	2.39	334	Pn	Pn	00 13 05.2	-0.7
GAR	Garm	2.48	357		Pn	00 13 06.8	-0.1
CEP	Cherat	2.92	156	P	Pn	00 13 12.5	+0.4
CEP				S	Sn	00 13 49.0	-1.2
DRK	Karamyk	3.13	19		Pn	00 13 15.2	+0.6
BTK	Batken	3.54	4	PN	Pn	00 13 20.2	+0.8
BTK	Batken	3.54	4	Pn	Pn	00 13 20.2	+0.8
CHCP	Chirah Chowk	3.64	141	P	Pn	00 13 21.8	+1.2
NIL	Nilore	3.64	141	PN	Pn	00 13 21.9	+1.3
NIL	Nilore	3.64	141		Pn	00 13 21.9	+1.3
THW	Thamme Wali	3.85	164	P	Pn	00 13 23.2	0.0
TAS	Tashkent	4.89	349	PN	Pn	00 13 36.4	+0.2
TAS	Tashkent	4.89	349	Pn	Pn	00 13 36.4	+0.2
KSH	Kashi	5.25	54	P	Pn	00 13 38.3	-2.6
KSH				S	Sn	00 14 31.9	-10
KSH				pmax	pmax		
	comp=Z,15nm,0.4s						
KSH				smax	smax		
	comp=N,87nm,0.7s						
KSH				smax	smax		
	comp=E,81nm,0.7s						
AML	Almayashu	6.13	23	P	Pn	00 13 52.1	-0.3
	SNR=148						
DZA	Taraz	6.40	5	eP	Pn	00 13 55.6	0.0
	102nm,0.3s						
DZA				eS	Sn	00 15 04.8	-4.0
	129nm,0.3s						
DHRM	DHARAMSHALA	6.41	130	eP	Pn	00 13 51.6	-4.5
DHRM				i x	x	00 13 55.8	
DHRM				eS	Sn	00 15 06.5	-2.9
DHRM				IAML		00 15 08.2	
	comp=N,469nm,0.3s						
DHRM				IAML		00 15 09.9	
	comp=E,395nm,0.1s						
UCH	Uchtor	6.49	27	P	Sn	00 15 08.5	-3.1
	SNR=19						
BRLS	Borolday	6.53	356	eP	Pn	00 13 53.3	-4.0
	comp=E,10.0nm,0.1s						
BRLS				eS	Sn	00 15 00.9	-11
	comp=E,57nm,0.3s						
MRKS	Merke	6.56	18	eP	Pn	00 13 57.4	-0.4
	comp=E,16nm,0.4s						
MRKS				eS	Sn	00 15 08.5	-4.3
	comp=E,100nm,0.4s						
KK31	Karatay Array	6.58	0	PN	Pn	00 13 57.3	-0.6
KK31	Karatay Array	6.58	0	⇑P	Pn	00 13 54.3	-3.6
	comp=E,2.9nm,0.2s,baz=187,slow=12,SNR=91						
KK31				⇑S	Sn	00 15 04.8	-8.2
	comp=E,12nm,0.4s,baz=188,slow=25,SNR=8.8						
KK31	Karatay Array	6.58	0	Pn	Pn	00 13 57.3	-0.6
KKAR	Karatay Array	6.58	0	PN	Pn	00 13 57.2	-0.7
KKAR	Karatay Array	6.58	0	Pn	Pn	00 13 57.0	-0.9
KKAR	Karatay Array	6.58	0		Pn	00 13 57.1	-0.7
EKS2	Erkin-Say	6.63	21	P	Pn	00 13 58.9	+0.1
	SNR=33						
AAK	Ala-Archa	6.84	26	P	Pn	00 14 01.6	+0.1
	comp=E,4.2nm,0.3s,baz=178,slow=4.6,SNR=45						
AAK				S	Sn	00 15 16.6	-2.9
	comp=E,3.4nm,0.3s,baz=324,slow=20,SNR=32						
AAK	Ala-Archa	6.84	26	P	Pn	00 14 01.8	+0.3
	SNR=14						
AAK	Ala-Archa	6.84	26	⇑P	Pn	00 14 01.4	-0.1
	comp=E,4.3nm,0.3s						
AAK				⇓S	Sn	00 15 16.4	-3.1
	comp=E,41nm,0.5s						
KBK	Karagaybulak	7.02	28	P	Pn	00 14 04.3	+0.4
	SNR=9.8						
CHMS	Chumysh	7.25	25	P	Pn	00 14 06.5	-0.1
	SNR=6.5						
USP	Ospenovka	7.41	23	P	Pn	00 14 08.6	-0.1
	SNR=19						
TKM2	Tokmak 2	7.50	30	P	Pn	00 14 10.2	+0.1
	SNR=11						
TKM2	Tokmak 2	7.50	30	⇑P	Pn	00 14 10.0	-0.2
	comp=E,10nm,0.4s						

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TKM2                              ⇑S     Sn     00 15 34.8  -0.2
      comp=E,14nm,0.8s
SMLA  Simla              7.72 132  eP     Pn     00 14 12.0  -0.8
SMLA                               i x    x      00 14 12.0
SMLA                               eS     Sn     00 15 34.5  -5.4
SMLA                                IAML         00 15 39.0
      comp=N,132nm,0.4s
SMLA                                IAML         00 15 39.1
      comp=E,88nm,0.2s
KST   Kastek             7.75  31  eP     Pn     00 14 14.1  +0.8
      comp=E,8.2nm,0.5s
KST                                eS     Sn     00 15 38.2  -2.6
      comp=E,28nm,0.7s
DGS   Degeres            7.84  29  eP     Pn     00 14 13.9  -0.5
      comp=E,2.6nm,0.6s
DGS                                eS     Sn     00 15 38.1  -4.8
      comp=E,7.6nm,0.6s
TNSS  Tian-Shan          8.18  35  eP     Pn     00 14 18.4  -0.8
KRBS  Karabastau         8.19  27  eP     Pn     00 14 18.8  -0.1
KOTS  Kotyrbulak         8.41  35  eP     Pn     00 14 22.1  +0.2
KTBS  Karatobe           8.60  31  eP     Pn     00 14 25.7  +1.4
KUU   Kurty              8.61  29  eP     Pn     00 14 23.8  -0.6
BTLS  Baital             8.93  16  eP     Pn     00 14 27.8  -0.7
      comp=E,1.6nm,0.3s
BTLS                               eS     Sn     00 16 02.8  -5.7
      comp=E,5.4nm,0.8s
GEYT  Alibeck            9.98 282   P     Pn     00 14 39.2  -3.1
      comp=E,0.2nm,0.3s,baz=97,slow=12,SNR=1.4
GEYT                                S     Sn     00 16 27.6  -6.2
      comp=E,1.1nm,0.3s,baz=127,slow=17,SNR=4.7
MAKZ  Makanchi          13.37  36   P     Pn     00 15 25.7  +0.3
MAKZ  Makanchi          13.37  36         Pn     00 15 25.6  +0.3
PYUN  Piuthan           13.48 125  eP     Pn     00 15 26.1  -0.9
      comp=E,37nm,0.5s
MK31  Makanchi Array    13.51  37   P     Pn     00 15 27.8  +0.7
MK31  Makanchi Array    13.51  37         Pn     00 15 27.8  +0.7
MKAR  Makanchi Array    13.51  37   P     Pn     00 15 27.8  +0.7
      comp=E,0.4nm,0.3s,baz=215,slow=8.1,SNR=12
DANN  Dangsing          13.83 122  eP     Pn     00 15 31.8  +0.3
      comp=E,31nm,0.8s
BHPL  Bhopal            14.52 154  eP     P      00 15 42.9  +1.8
BHPL                               eS     S      00 18 10.6   -11
GKN   Gorkha            14.65 121  eP     Pn     00 15 41.5  +0.1
AB31  Akbulak array     14.88 332 ⇓P      Pn     00 15 42.3  -1.6
      comp=E,1.0nm,0.3s
AB31                              ⇑S      S      00 18 19.9  -9.2
      comp=E,1.1nm,0.6s
ABKAR Akbulak array     14.88 332   P     Pn     00 15 42.6  -1.2
ABKAR Akbulak array     14.88 332         Pn     00 15 41.8  -2.1
WMQ   Urumqi            15.01  56  eP     P      00 15 47.7  +1.3
KKN   Kakani            15.23 121  eP     Pn     00 15 48.2  -0.4
KURBB Kurchatov Arra    15.24  20   P     Pn     00 15 47.4  -0.8
      comp=E,0.1nm,0.3s,baz=207,slow=10,SNR=5.1
KURK  Kurchatov         15.35  20   P     P      00 15 50.1  +0.3
KURK                                pmax  pmax
      comp=Z,2.0nm,1.1s
KURK  Kurchatov         15.35  20         P      00 15 50.1  +0.3
PKIN  Phulchoki         15.44 121  eP     Pn     00 15 51.2   0.0
PKI   Pulchoki          15.45 121  eP     P      00 15 51.9  +0.3
      comp=Z,47nm,0.7s
JIRN  Jiri              15.94 119  eP     Pn     00 15 57.4   0.0
      comp=Z,31nm,0.4s
BVAR  Borovoye Array    16.51 360   P     P      00 16 02.0  -0.6
      comp=Z,0.8nm,0.3s,baz=190,slow=15,SNR=11
BVAR  Borovoye Array    16.51 360   P     P      00 16 02.0  -0.6
BRVK  Borovoye          16.54 360   P     Pn     00 16 03.5  -0.4
BRVK                                pmax  pmax
      comp=Z,3.0nm,0.6s
BRVK  Borovoye          16.54 360   P     Pn     00 16 03.5  -0.4
BRVK                                IAmb  IAmb   00 16 04.5
      comp=Z,2.6nm,0.6s
AKTO  Aktyubinsk        16.57 331   P     Pn     00 16 04.0  -0.3
      comp=Z,1.0nm,0.3s,baz=150,slow=12,SNR=25
AKTO  Aktyubinsk        16.57 331 ⇑P      Pn     00 16 06.8  +2.5
      comp=Z,8.5nm,0.7s
RAMN  Ramite            16.67 120  eP     Pn     00 16 05.6  -0.3
      comp=Z,22nm,0.5s
TAPN  Taplejung         17.21 117  eP     Pn     00 16 13.3  +0.9
ODAN  Odare             17.27 119  eP     Pn     00 16 13.7  +0.6
      comp=Z,22nm,0.6s
DGZ   Jazzator, Alta    18.01  38  i P    P      00 16 19.4  +0.2
ZAA0  Zalesovo Array    20.07  25   P     P      00 16 41.6  +0.5
ZAA0                                IAmb  IAmb   00 16 42.6
      comp=Z,4.7nm,0.8s
ZALV  Zalesovo Beam     20.07  25   P     P      00 16 41.7  +0.5
      comp=Z,5.0nm,0.3s,baz=223,slow=11,SNR=26
ZALV  Zalesovo Beam     20.07  25   P     P      00 16 41.8  +0.7
ARU   Arti              21.49 342   P     P      00 16 55.5  -0.6
      comp=Z,1.0nm,0.3s,baz=68,slow=4.1,SNR=7.8
ARU   Arti              21.49 342 d iP    P      00 16 57.1  +0.9
ARU                                 S     S      00 20 44.4  +3.2
ARU                                 pmax  pmax
      comp=Z,6.0nm,0.7s
ARU   Arti              21.49 342   P     P      00 16 57.5  +1.3
ARU                                 IAmb  IAmb   00 16 59.2
      comp=Z,6.4nm,0.9s
BELG  Belogornoye       22.63 322   P     P      00 17 07.9  +0.8
      comp=Z,9.2nm,0.6s,baz=12,slow=4.9,SNR=6.4
OBN   Obninsk           29.67 320 ⇑eP     P      00 18 11.5  +1.4
OBN                                e*PP   pP     00 18 53.7  +3.0
OBN                                e             00 19 19.4
OBN                                i SS   SS     00 24 49.7   -16
OBN                                 pmax  pmax
      comp=Z,5.0nm,0.8s
HHC   Hu-ho-hao-te      32.13  70  eP     P      00 18 34.3  +2.2
HHC                                 pmax  pmax
      comp=Z,12nm,0.8s
HHC                                 pmax  pmax
      comp=Z,75nm,4.1s
NRIK  Noril'sk          34.18  11   P     P      00 18 50.7  +1.4
      comp=Z,1.1nm,0.5s,baz=158,slow=3.2,SNR=5.3
MNK   Minsk             34.21 315  i P    P      00 18 48.9  -0.8
MNK                                i *PP  pP     00 19 32.1  +1.1
MNK                                i *SP  sP     00 19 56.5  +2.6
MNK                                i             00 20 11.4
MNK                                i             00 21 19.6
MNK                                i S    S      00 24 00.9  -0.3
MNK                                i *SS  sS     00 25 18.7  +2.8
MNK                                i             00 28 45.5
MNK                                 pmax  pmax
      comp=N,7.0nm,0.9s
MNK                                 pmax  pmax
      comp=Z,5.0nm,0.9s
MNK                                 pmax  pmax
      comp=E,2.0nm,0.8s
MNK                                 MLR   MLR
      comp=E,15nm,22.0s
MNK                                 MLR   MLR
      comp=N,147nm,25.0s
MNK                                 MLR   MLR
      comp=Z,70nm,17.0s
MNK   Minsk             34.21 315  i P    P      00 18 49.0  -0.7
      comp=E,2.0nm,0.8s
MNK                                i P    P      00 18 49.0  -0.7
      comp=N,7.0nm,0.9s
MNK                                i P    P      00 18 49.0  -0.7
      comp=Z,5.0nm,0.9s,baz=283
MNK                                i pP   pP     00 19 32.1  +1.1
MNK                                i sP   sP     00 19 56.5  +2.6
MNK                                i PP   PnPn   00 20 11.4   0.0
MNK                                i S    S      00 24 01.0  -0.2
MNK                                i sS   sS     00 25 18.7  +2.8
MNK                                i SS   SnSn   00 26 38.3  +2.7
MNK                                i LRM  MLR    00 34 53.6
      comp=E,15nm,22.4s
MNK                                i LRM  MLR    00 35 09.5
      comp=N,147nm,25.3s
MNK                                i LRM  MLR    00 35 38.4
      comp=Z,70nm,17.4s
FIA1  FINESS Array S    37.25 326         P      00 19 15.8  +0.4
FINES FINESS Array B    37.25 326   P     P      00 19 16.1  +0.6
      comp=Z,1.8nm,0.4s,baz=117,slow=9.2,SNR=22
FINES FINESS Array B    37.25 326   P     P      00 19 15.9  +0.5
ARCES ARCESS Array B    40.98 338   P     P      00 19 46.9  +0.7
      comp=Z,3.7nm,0.7s,baz=106,slow=7.7,SNR=14
ARCES ARCESS Array B    40.98 338   P     P      00 19 47.0  +0.7
ARCES                               pmax  pmax
      comp=Z,16nm,1.3s
ARCES ARCESS Array B    40.98 338   P     P      00 19 47.0  +0.8
ARCES                               IAmb  IAmb   00 19 55.8
      comp=Z,16nm,1.3s
NC405 NORSAR Array S    43.89 323   P     P      00 20 08.9  -0.9
NB2   NORSAR Subarra    44.13 323   P     P      00 20 11.5  -0.2
      comp=Z,1.2nm,0.5s,baz=96,slow=7.9
NOA   NORSAR Array B    44.13 323   P     P      00 20 11.8  +0.1
      comp=Z,1.6nm,0.5s,baz=98,slow=7.8,SNR=13
TIXI  Tiksi             45.91  22 ceP     P      00 20 23.9  -1.6
TIXI  Tiksi             45.91  22   P     P      00 20 26.5  +1.0
SPITS Spitsbergen Ar    47.38 347   P     P      00 20 38.3  +1.4
SPITS                               pmax  pmax
      comp=Z,85nm,1.5s
YSS   Yuzh-Sakhalins    53.14  55  i P    P      00 21 20.2  -0.2
YSS                                 pmax  pmax
      comp=Z,18nm,1.0s
PEA0B Petropavlovsk-    60.23  44 ceP     P      00 22 08.0  -2.3
SUMG  Summit            60.92 341   P     P      00 22 16.5  +1.4
SUMG                                pmax  pmax
      comp=Z,15nm,1.4s
SUMG  Summit            60.92 341   P     P      00 22 16.5  +1.4
TORD  Torodi Ar. Bea    65.32 268   P     P      00 22 42.3  -2.1
      comp=Z,0.3nm,0.5s,baz=47,slow=5.8,SNR=9.1
TORD  Torodi Ar. Bea    65.32 268   P     P      00 22 43.1  -1.3
KOWA  Kowa              69.17 273   P     P      00 23 07.4  -1.2
KOWA                                IAmb  IAmb   00 23 35.2
      comp=Z,4.1nm,1.5s
TOLK  Toolik Lake Re    71.00  14   P     P      00 23 20.5  +1.6
TOLK                                IAmb  IAmb   00 23 39.2
      comp=Z,2.8nm,1.3s
IMAR  Indian Mountai    72.28  17   P     P      00 23 27.5  +1.0
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*ISK **05** 00:13:10.9, 38°.84N×25°.94E, h13km, ML2.9/29*
*THE **05** 00:13:11.7, 38°.84N×25°.95E, h16km±1km, ML2.6/8, Error ellipse: s-maj=1.5km s-min=0.6km az=258.0*
*DDA **05** 00:13:11.2, 38°.85N×26°.03E, h11km±3km, ML2.7*
*ATH **05** 00:13:12.0, 38°.83N×25°.99E, h18km±3km, ML2.7/5, Error ellipse: s-maj=3.2km s-min=1.4km az=104.0*
ISC 05 00:13:11.6±0.9**, 38°.85N**±0°.02×**25°.98E**±0°.02**, h17**km±7km**, n71, σ0ˢ.53**/101**, Aegean Sea**

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Code  Station Name       Δ°   AZ°  Phase ID          Time      Res
                                   Op     ISC     h  m  s     ISC
SIGR  SIGRI              0.38 345   P     Pg     00 13 19.2  -0.2
SIGR                                S     Sg     00 13 25.0  +0.4
      908nm,0.3s
SIGR  SIGRI              0.38 345   P     Pg     00 13 19.2  -0.2
SIGR                                S     Sg     00 13 25.0  +0.4
SIGR                                AML   AML    00 13 25.3
      comp=E,1908µm,0.4s
SIGR                                AML   AML    00 13 27.1
      comp=N,1691µm,0.2s
SIGR  SIGRI              0.38 345   PG    Pg     00 13 18.9  -0.5
SIGR                                SG    Sg     00 13 24.6   0.0
PSRA  Psara              0.45 227   P     Pb     00 13 21.3  +0.2
PSRA                                S     Sg     00 13 26.9  +0.1
PSRA                                AML   AML    00 13 27.6
      comp=N,6942µm,0.2s
PSRA                                AML   AML    00 13 27.6
      comp=E,9094µm,0.2s
PRK   Paraskevi          0.46  29   P     Pb     00 13 21.8  +0.6
PRK                                 S     Sb     00 13 28.6  +0.8
      comp=E,868nm,0.3s
PRK   Paraskevi          0.46  29   P     Pb     00 13 21.8  +0.6
PRK                                 S     Sb     00 13 28.6  +0.8
PRK                                 AML   AML    00 13 29.3
      comp=N,1056µm,0.5s
PRK                                 AML   AML    00 13 33.2
      comp=E,2074µm,0.3s
CHOS  Chios island       0.46 173   P     Pg     00 13 20.8  -0.2
CHOS                                S     Sg     00 13 27.5  +0.2
      comp=E,2µm,0.2s
CHOS  Chios island       0.46 173   P     Pg     00 13 20.8  -0.2
CHOS                                S     Sg     00 13 27.5  +0.2
CHOS                                AML   AML    00 13 28.7
      comp=N,1969µm,0.2s
CHOS                                AML   AML    00 13 28.9
      comp=E,4217µm,0.2s
CHOS  Chios island       0.46 173   PG    Pg     00 13 20.7  -0.2
CHOS                                SG    Sb     00 13 27.7  -0.3
KRBN  Karaburun          0.51 119   PG    Pg     00 13 22.0  +0.1
CESE  eme                0.57 154   PG    Pg     00 13 22.9  -0.1
FOCM  Foa                0.60 103   PG    Pb     00 13 23.7   0.0
GPNR  Gulpinar-Canak     0.62  11   PG    Pg     00 13 23.6  -0.2
GPNR                                SG    Sb     00 13 32.9  +0.5
CAND  Candarli           0.65  80   PG    Pb     00 13 24.6  +0.1
KOCA  Canakkale, Ayv     0.67  10  i P    Pg     00 13 24.4  -0.3
KOCA                               i S    Sg     00 13 33.3  -0.3
KOCA                                IAML         00 13 37.0
      comp=N,760nm,0.3s
KOCA                                IAML         00 13 38.0
      comp=E,615nm,0.5s
AYVA  Ayvalik            0.72  50  i P    Pb     00 13 25.8  +0.2
AYVA                               i S    Sg     00 13 34.7  -0.5
ZEYE  Izmir, Urla-Ze     0.73 146  i P    Pg     00 13 25.7  -0.3
ZEYE                               i S    Sg     00 13 35.2  -0.4
ZEYE                                IAML         00 13 38.0
      comp=N,556nm,0.8s
ZEYE                                IAML         00 13 38.0
      comp=E,817nm,0.5s
DKL   Dikili             0.75  72   PG    Pb     00 13 26.6  +0.3
ZEDA  zmir-Bergama       0.86  82  i P    Pn     00 13 28.9  -0.1
ZEDA                               i S    Sb     00 13 38.0  -1.4
BLCB  Balcova            0.95 119   P     Pb     00 13 29.8  +0.2
BLCB                                S     Sg     00 13 42.7  +0.2
BLCB  Balcova            0.95 119   PG    Pg     00 13 30.1  +0.1
BOZC  Bozcaada           0.99   3  i P    Pb     00 13 29.6  -0.9
BOZC                               i P    Pb     00 13 30.1  -0.2
BOZC                                IAML         00 13 38.0
      comp=E,628nm,1.8s
BOZC                               i S    Sb     00 13 42.1  -1.1
BOZC                               i S    Sg     00 13 44.2  +0.3
BOZC                                IAML         00 13 46.0
      comp=N,209nm,0.4s
BOZC                                IAML         00 13 48.0
      comp=E,173nm,0.5s
BOZC                                IAML         00 13 52.0
      comp=N,104nm,0.8s
BOZC  Bozcaada           0.99   3   PG    Pb     00 13 30.2  -0.2
EZN   Ezine              1.01  15   P     Pb     00 13 30.4  -0.3
EZN                                 S     Sg     00 13 44.3  -0.2
      comp=N,535nm,0.4s
EZN   Ezine              1.01  15   PG    Pb     00 13 30.6  -0.1
EFSA  Agios Efstrati     1.04 312   P     Pg     00 13 32.1  +0.4
DGB   zmir               1.06 138  i P    Pg     00 13 32.7  +0.5
DGB                                i S    Sb     00 13 45.2  +0.1
DGB                                 IAML         00 13 48.0
      comp=E,96nm,0.2s
DGB                                 IAML         00 13 49.0
      comp=N,94nm,0.2s
BUHA  Balikesir, Bur     1.07  52  i P    Pb     00 13 31.9  +0.2
BUHA                               i S    Sg     00 13 46.2  -0.2
BUHA                                IAML         00 13 50.0
      comp=N,203nm,0.4s
BUHA                                IAML         00 13 50.0
      comp=E,229nm,0.5s
ECEA  Canakkale, Ece     1.20   7  i P    Pn     00 13 33.6  -0.1
ECEA                               i S    Sb     00 13 49.6  +0.3
ECEA                                IAML         00 13 52.0
      comp=E,210nm,0.4s
ECEA                                IAML         00 13 52.0
      comp=N,224nm,0.5s
LIA   Limnos Island      1.22 330   P     Pn     00 13 33.8  -0.1
LIA                                 S     Sb     00 13 49.6   0.0
      comp=N,220nm,0.4s
LIA   Limnos Island      1.22 330   P     Pn     00 13 33.8  -0.1
LIA                                 S     Sb     00 13 49.6   0.0
LIA                                 AML   AML    00 13 52.5
      comp=N,337µm,0.4s
LIA                                 AML   AML    00 13 52.7
      comp=E,474µm,0.3s
SMG   Samos              1.32 149   P     Pn     00 13 35.1  -0.2
SMG                                 S     Sn     00 13 51.9  -0.7
      comp=E,460nm,0.3s
SMG   Samos              1.32 149   P     Pn     00 13 35.1  -0.2
GOKA  anakkale-Gk        1.34 358  i P    Pn     00 13 35.0  -0.6
GOKA                               i S    Sb     00 13 53.5  +0.3
GOKA                                IAML         00 13 58.0
      comp=E,199nm,0.3s
GADA  Gvkgeada           1.34 357   P     Pn     00 13 35.9  +0.3
GADA                                S     Sn     00 13 52.8  -0.3
      comp=E,178nm,0.4s
GADA  Gvkgeada           1.34 357   PN    Pn     00 13 35.8  +0.2
GOKC  Gokceada-Canak     1.35 358   PN    Pn     00 13 35.9  +0.2
STEP  BALIKESIR_Sava     1.45  68  i P    Pn     00 13 35.5  -1.6
GCAM  G?zelcaml?         1.51 139  i P    Pb     00 13 39.8  +0.6
GCAM                               i S    Sg     00 13 59.5  -0.9
GCAM                                IAML         00 14 03.0
      comp=N,125nm,0.3s
GCAM                                IAML         00 14 07.0
      comp=E,52nm,0.5s
GCAM  G?zelcaml?         1.51 139   PN    Pn     00 13 38.3  +0.4
BALY  Balya              1.55  54  i P    Pn     00 13 39.1  +0.6
GELI  Tayfur-Gelibol     1.59  14   PN    Pn     00 13 39.5  +0.4
LPK   Lapseki            1.64  21   PN    Pn     00 13 40.1  +0.4
BALB  Balikesir          1.67  61   PN    Pn     00 13 40.8  +0.7
AYDB  Zeytinkoy-Aydi     1.75 120   PN    Pn     00 13 41.8  +0.5
GONE  Gonen-Balikesi     1.78  47   PN    Pn     00 13 42.4  +0.8
CAVK  Edirne/Enez-Ca     1.85   4  i P    Pn     00 13 43.0  +0.4
KRBG  Karabiga-Canak     1.85  33   PN    Pn     00 13 43.1  +0.6
KNL   Balıkesir          1.86  40  i P    Pg     00 13 47.6  +0.3
KNL                                i S    Sg     00 14 10.6  -0.7
ERIK  Erikli-Kesan       1.87  13   PN    Pn     00 13 43.5  +0.7
ENEZ  Enez               1.89   4   PN    Pn     00 13 43.8  +0.7
ALN   Alexandroupoli     2.05   1   P     Pn     00 13 45.5  +0.3
ALN                                 S     Sn     00 14 10.0  -0.5
      comp=E,32nm,0.4s
ALN   Alexandroupoli     2.05   1   PN    Pn     00 13 45.6  +0.3
KESN  Edirne-Kesan       2.05  15  i P    Pb     00 13 48.0  -0.6
MANT  Manisa             2.05  99  i P    Pn     00 13 45.2  -0.3
RKY   Sarkoy-Tekirda     2.06  26   PN    Pn     00 13 46.3  +0.8
BODT  Bodrum             2.07 149   PN    Pn     00 13 45.7  +0.1
DURS  Dursunbey          2.08  68  i P    Pn     00 13 45.3  -0.4
EDC   Edincik            2.09  44   PN    Pn     00 13 46.6  +0.8
MLSB  Milas              2.10 137   PN    Pn     00 13 47.1  +1.1
MAR6  Marsite Statio     2.10  28   PN    Pn     00 13 46.9  +0.8
KULA  Kula-Manisa        2.12  98   PN    Pn     00 13 47.2  +0.8
MAR2  Marsite Statio     2.13  28   PN    Pn     00 13 47.3  +0.9
OUR   Ouranopolis        2.14 314   PN    Pn     00 13 46.7  +0.1
MAR3  Marsite Statio     2.15  28   PN    Pn     00 13 47.4  +0.7
GZKV  Gazikoy-Tekird     2.16  28   PN    Pn     00 13 47.7  +0.8
MAR4  Marsite Statio     2.19  27   PN    Pn     00 13 47.7  +0.4
KCTX  Karacabey (Bur     2.32  52   PN    Pn     00 13 49.5  +0.5
RDO   Rodhopi            2.32 352   PN    Pn     00 13 49.5  +0.5
UKOP  Uzunkopru-Edir     2.33  12   PN    Pn     00 13 50.2  +1.0
SIMA  Simav-Kutahya      2.35  83   PN    Pn     00 13 50.4  +0.8
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*IDC **05** 00:15:17.2±1.9, 32°.45S×177°.77W, h0km, mb4.1/3, mb1 4.2/4, mb1mx3.8/35, mbtmp4.1/4, ML3.8/1, Error ellipse: s-maj=41.9km s-min=35.5km az=113.0*
ISC 05 00:15:20.2±1.9**, 32°.5S**±0°.2×**177°.7W**±0°.3**, h21**km**, n6, σ0ˢ.27**/7**, mb4.1**/3**, South of Kermadec Islands**

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Code  Station Name       Δ°   AZ°  Phase ID          Time      Res
                                   Op     ISC     h  m  s     ISC
URZ   Urewera            7.14 215   Pn    Pn     00 17 03.5  +0.2
      1.6nm,0.3s,baz=300,slow=24,SNR=12
URZ                                 Sn    Sn     00 18 23.4  -0.3
      3.2nm,0.3s,baz=126,slow=23,SNR=3.2
CTA   Charters Tower    34.40 282   P     P      00 22 06.1   0.0
      1.5nm,0.4s,baz=117,slow=9.0,SNR=4.4
ASAR  Alice Springs     43.26 269   P     P      00 23 20.6  +0.2
      1.1nm,0.7s,baz=107,slow=7.9,SNR=16
WRA   Warramunga Arr    44.44 274   P     P      00 23 29.8   0.0
      1.3nm,0.5s,baz=113,slow=7.8,SNR=30
FINES FINESS Array B   147.17 339   PKPbc PKPbc  00 35 00.6  -0.3
      0.6nm,0.4s,baz=35,slow=5.1,SNR=11
TORD  Torodi Ar. Bea   160.75 178   PKPab PKPab  00 36 01.1  +0.1
      0.5nm,1.0s,baz=175,slow=4.9,SNR=2.6
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*TIR **05** 00:21:53.0, 41°.90N×20°.23E, h20km±2km, Md2.6, Ml2.0*
*BEO **05** 00:21:54.8±0.3, 41°.90N×20°.30E, h0km, ML1.8/5*
*PDG **05** 00:21:54.4±0.1, 41°.91N×20°.17E, h3km, ML2.0/13, Error ellipse: s-maj=0.1km s-min=0.1km az=0.0*
*SKO **05** 00:21:54.3, 40°.67N×19°.70E, h0km*
ISC 05 00:21:54.0±1.1**, 41°.88N**±0°.02×**20°.21E**±0°.03**, h11**km±9km**, n41, σ1ˢ.32**/65**, 7C-1D, Albania**

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Code  Station Name       Δ°   AZ°  Phase ID          Time      Res
                                   Op     ISC     h  m  s     ISC
PHP   Peshkopia          0.26 138   P     Pb     00 21 59.4  -1.3
      baz=143
PHP                                 S     Sb     00 22 03.7  -1.5
      baz=143
PHP                                 AMP
      comp=N,0.9nm,0.1s,baz=143
PUK   Puka               0.29 305   P     Pg     00 21 59.4  -0.4
      baz=301
PUK                                 S     Sb     00 22 04.9  -1.2
      baz=301
PUK                                 AMP
      comp=N,1.9nm,0.2s,baz=301
TIR   Tirane             0.59 206  ePg    Pb     00 22 06.8  +0.5
TIR                                eSg    Sb     00 22 14.6  -0.1
TIR   Tirane             0.59 206  i Pg   Pb     00 22 06.8  +0.5
TIR   Tirane             0.59 206   P     Pb     00 22 05.9  -0.4
      baz=207
TIR                                 S     Sb     00 22 14.6  -0.1
      baz=207
TIR                                 AMP
      comp=N,0.1nm,0.3s,baz=207
ULC   Ulcinj             0.72 277  ePg    Pg     00 22 07.3  -0.7
ULC                                i Sg   Sb     00 22 18.1  -0.5
PVY   Plav               0.74 345 ⇑iPg    Pg     00 22 07.2  -1.1
PVY                                eSg    Sg     00 22 18.2  +0.2
DRME  Dracevica, Mon     0.82 292  ePg    Pg     00 22 08.7  -1.2
DRME  Dracevica, Mon     0.82 292  ePg    Pg     00 22 08.9  -1.0
DRME                               eSg    Sb     00 22 21.1  -0.3
OHR   Ohrid              0.89 150  ePg    Pg     00 22 10.5  -0.6
OHR                                eSg    Sb     00 22 22.6  -0.6
OHR   Ohrid              0.89 150  i Pg   Pg     00 22 10.5  -0.6
OHR                                i Sg   Sb     00 22 24.4  +1.2
PDG   Podgorica          0.90 308  ePg    Pg     00 22 10.3  -1.0
PDG                                eSg    Sb     00 22 24.7  +1.2
PDG   Podgorica          0.90 308  ePg    Pg     00 22 09.7  -1.6
TTG   Podgorica          0.90 308 ⇑iPg    Pg     00 22 10.1  -1.2
TTG                                i Sg   Sb     00 22 23.6  +0.1
IVA   Berane             1.02 347 ⇑iPg    Pg     00 22 12.4  -1.2
IVA                                eSg    Sb     00 22 27.9  +0.8
BUM   Brajici-Budva      1.07 294 ⇑iPg    Pg     00 22 13.4  -1.1
BUM                                eSg    Sn     00 22 29.5  -0.3
KOME  Kolasin            1.10 332  ePg    Pg     00 22 13.8  -1.3
KOME                               i Sg   Sb     00 22 30.4  +1.0
CEME  Cevo               1.17 305 ⇑iPg    Pg     00 22 15.1  -1.4
CEME                               eSg    Sn     00 22 32.8  +0.5
NKME  Niksic             1.29 314  ePg    Pg     00 22 17.2  -1.5
NKME                               eSg    Sn     00 22 36.7  +1.5
NKY   Niksic             1.30 316 ⇓iPg    Pg     00 22 17.5  -1.4
NKY                                i Sg   Sn     00 22 37.2  +1.7
SJES  Sjenica            1.39 353  ePg    Pb     00 22 20.5  +0.4
SJES                               eSg    Sn     00 22 38.7  +0.8
HCY   Herceg Novi        1.40 295  ePn    Pn     00 22 19.0  -0.3
HCY   Herceg Novi        1.40 295 ⇑iPg    Pn     00 22 19.1  -0.3
HCY                                eSg    Sn     00 22 40.8  +3.0
FNA   Florina            1.40 141  i Pn   Pn     00 22 19.5   0.0
FNA   Florina            1.40 141   P     Pg     00 22 20.0  -0.9
      baz=141
FNA                                 S     Sn     00 22 40.1  +2.1
      baz=141
SELS  Selova             1.50  26  ePg    Pn     00 22 20.8   0.0
BARS  Barje              1.52  51  ePg    Pn     00 22 21.4  +0.4
PLE   Pljevlja           1.57 338  ePg    Pb     00 22 22.6  -0.5
BRY   Bratogost          1.60 310  ePn    Pg     00 22 23.6  -1.2
BRY   Bratogost          1.60 310 ⇑iPg    Pb     00 22 23.2  -0.5
BRY                                eSg    Sg     00 22 47.6  +2.0
TREB  Trebinje           1.61 302  ePg    Pg     00 22 24.6  -0.3
TREB                               eSg    Sg     00 22 48.2  +2.3
TREB  Trebinje           1.61 302  ePn    Pg     00 22 23.6  -1.3
UPM   Unac-Piva          1.64 324  ePn    Pg     00 22 24.7  -0.7
UPM   Unac-Piva          1.64 324  ePn    Pb     00 22 23.8  -0.5
UPM                                i Sn   Sg     00 22 48.4  +1.7
IVAS  Ivanjica           1.70 359  ePg    Pb     00 22 25.0  -0.2
IVAS                               eSg    Sb     00 22 46.9  +0.3
RUDO  Rudo               1.84 341  ePn    Pn     00 22 24.7  -0.9
BBLS  Lazi&#263;i        2.07 344  ePn    Pb     00 22 31.8  +0.2
STON  Ston               2.11 299  ePn    Pb     00 22 32.1  -0.1
DIVS  Divibare           2.22 356  ePn    Pb     00 22 34.2   0.0
HAPS  Han Pijesak,Bl     2.39 338  ePn    Pn     00 22 33.8  +0.6
NVLJ  Novalja            4.73 306   Sg    Sn     00 23 54.1  -6.0
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IDC 05 00:31:18.5±2.1**, 8°.57S×125°.00E, h0**km**, mb3.6**/1**, mb1 3.5**/3**, mb1mx3.3**/21**, mbtmp3.3**/3**, ML3.1**/2**, Error ellipse: s-maj=183.8km s-min=34.1km az=58.0, Timor region**

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Code  Station Name       Δ°   AZ°  Phase ID          Time      Res
                                   Op     ISC     h  m  s     ISC
WRA   Warramunga Arr    14.47 142   Pn    Pn     00 34 43.8  -1.0
```

	0.1nm,0.3s,baz=316,slow=13,SNR=8.8						
WRA				Sn	Sn	00 37 19.2	-7.0
	0.0nm,0.3s,baz=322,slow=24,SNR=2.2						
ASAR	Alice Springs	17.27	151	P	Pn	00 35 21.9	+0.7
	0.1nm,0.3s,baz=323,slow=11,SNR=1.8						
MKAR	Makanchi Array	66.94	330	P	P	00 42 12.9	0.0
	0.5nm,0.7s,baz=145,slow=5.3,SNR=2.2						

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*DRS **05** 00:45:39.8±0.0, 41°.54N×52°.24E, h21^{km}*
*AZER **05** 00:45:52.4±0.3, 41°.64N×50°.95E, h58^{km}±21^{km}, ml3.0/28, Error ellipse: s-maj=6.0km s-min=4.3km az=260.0*
ISC 05 00:45:56.2±1.6**, 41°.49N**±0°.04×**50°.53E**±0°.05**, h9**^{km}±10^{km}**, n35,** σ1^s.**40**/65**, 3C-1D, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NDR	Nardaran	0.99	205	P	Pg	00 46 15.2	0.0
GOBA	Gobu	1.24	209	P	Pn	00 46 22.0	+2.3
SIZA	Siyzn	1.30	252	Pn	Pb	00 46 20.6	-0.2
	SNR=18						
SIZA				Sn	Sn	00 46 42.7	+4.5
ATGJ	Altiaghaj	1.36	243	Pn	Pg	00 46 22.4	+0.2
	SNR=7.3						
ATGJ				Sn	Sn	00 46 44.8	+5.2
GBS	Qobustan	1.53	232	Pn	Pg	00 46 25.9	+0.3
	SNR=4.2						
QUBA	Quba, Azerbaij	1.54	266	Pn	Pn	00 46 23.7	-0.2
	SNR=6.3						
QUBA				Sn	Sg	00 46 46.6	+0.9
PQL	Pirkuli	1.62	245	Pn	Pb	00 46 26.5	+0.1
	SNR=5.8						
PQL				Sn	Sg	00 46 50.0	+1.6
QSAR	Qusar	1.70	272	Pn	Pn	00 46 25.6	-0.5
	SNR=22						
QSAR				Sn	Sg	00 46 50.4	-0.5
KSMR	Kasumkent	1.81	274	*e*Pn	Pn	00 46 27.3	-0.3
	1.0nm,0.5s						
KSMR				*e*Sn	Sg	00 46 55.0	+0.7
	196nm,0.4s						
XNQ	Khinaliq	1.83	261	Pn	Pn	00 46 28.1	+0.1
	SNR=45						
XNQ				Sn	Sg	00 46 53.9	-1.1
IML	Ismayilli	1.91	249	Pn	Pn	00 46 29.1	+0.2
	SNR=6.2						
IML				Sn	Sg	00 46 57.3	-0.1
QBL	Gabala	2.10	256	Pn	Pn	00 46 32.0	+0.4
	SNR=5.2						
QBL				Sn	Sb	00 47 00.7	-0.1
AKT	Akhty	2.10	271	*e*Pn	Pn	00 46 31.7	-0.1
	35nm,0.2s						
AKT				*e*Sn	Sb	00 47 01.2	+0.3
URKR	Urkarakh	2.27	288	*e*Pn	Pn	00 46 34.5	+0.5
	26nm,0.3s						
URKR				*e*Sn	Sb	00 47 05.4	-0.2
	48nm,0.2s						
SGKR	Sergokala	2.35	295	*e*Pn	Pn	00 46 34.1	-0.9
	43nm,0.6s						
SGKR				*e*Sn	Sn	00 47 05.2	+1.2
	64nm,0.5s						
ZRD	Zardab	2.47	242	Pn	Pn	00 46 36.8	+0.2
ZRD				Sn	Sb	00 47 10.2	-1.1
SEKA	Sheki	2.52	265	Pn	Pn	00 46 37.9	+0.5
	SNR=7.6						
SEKA				Sn	Sn	00 47 08.4	0.0
KMKR	Kumukh	2.65	285	*e*Pn	Pn	00 46 40.2	+1.0
	14nm,0.3s						
KMKR				*e*Sn	Sb	00 47 15.3	-1.3
GLBA	Clilabad	2.77	217	Pn	Pn	00 46 40.5	-0.4
GLBA				Sn	Sb	00 47 16.5	-3.5
BRDA	Brd	2.82	245	Pn	Pn	00 46 42.4	+1.0
BRDA				Sn	Sb	00 47 19.6	-1.7
BLQ	Beylaqan	2.87	233	Pn	Pn	00 46 41.6	-0.5
BLQ				Sn	Sn	00 47 17.4	+0.6
ZKTA	Zakatala	2.94	274	Pn	Pn	00 46 42.9	-0.2
	SNR=4.9						
ZKTA				Sn	Sn	00 47 18.4	-0.1
AGDM	Agdam	2.94	243	Pn	Pn	00 46 42.4	-0.7
AGDM				Sn	Sn	00 47 20.4	+1.8
LKRN	Lenkeran, Azer	3.08	206	Pn	Pn	00 46 43.3	-1.8
LKRN				Sn	Sn	00 47 22.5	+0.5
YRD	Yardimli	3.11	215	Pn	Pn	00 46 44.2	-1.4
YRD				Sn	Sn	00 47 22.5	-0.5
QRD	Qoradiz	3.18	231	Pn	Pn	00 46 45.7	-0.7
QRD				Sn	Sn	00 47 24.5	+0.1
ASTR	Astara	3.21	205	Pn	Pn	00 46 47.0	+0.1
ASTR				Sn	Sn	00 47 26.4	+1.1
GANJ	Ganja	3.29	257	Pn	Pn	00 46 46.5	-1.5
	SNR=3.8						
GANJ				Sn	Sn	00 47 26.3	-1.0
LRK	Lerik	3.30	211	Pn	Pn	00 46 48.3	0.0
LRK				Sn	Sn	00 47 28.6	+0.9
GDB	GEDABAY	3.69	260	Pn	Pn	00 46 51.9	-1.7
GDB				Sn	Sn	00 47 35.2	-2.1
QZX	Qazax, Azerbai	3.91	265	Pn	Pn	00 46 55.4	-1.1
QZX				Sn	Sn	00 47 41.1	-1.4
ORD	Ordubad	4.31	235	Pn	Pn	00 47 01.5	-0.5
ORD				Sn	Sn	00 47 51.3	-1.2
SBZ	Shahbuz	4.33	243	Pn	Pn	00 47 04.0	+1.6
SBZ				Sn	Sn	00 47 55.4	+2.3
AB31	Akbulak array	10.20	37	⇑P	Pn	00 48 23.4	+0.8
	0.2nm,0.5s,baz=230,slow=13,SNR=5.2						
AB31				⇑S	Sn	00 50 01.6	-16
	0.5nm,0.6s,baz=224,slow=24,SNR=2.7						
AKTO	Aktyubinsk	10.35	28	⇑P	Pn	00 48 24.3	-0.5
	2.6nm,0.9s						
AKTO				⇓S	Sn	00 50 03.8	-17
	1.0nm,0.6s						

IDC 05 01:02:08.4±2.1**, 7°.94S**×**125°.65E, h0**^{km}**, mb3.4**/1**, mb1 3.9**/3**, mb1mx3.5**/21**, mbtmp3.7**/3**, ML3.6**/2**, Error ellipse: s-maj=183.7km s-min=32.8km az=60.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	14.60	146	Pn	Pn	01 05 36.0	-0.5
	0.2nm,0.3s,baz=319,slow=13,SNR=17						
WRA				Sn	Sn	01 08 10.8	-8.4
	0.1nm,0.3s,baz=322,slow=23,SNR=3.7						
ASAR	Alice Springs	17.53	154	P	Pn	01 06 14.6	+0.3
	0.2nm,0.3s,baz=328,slow=11,SNR=23						
ASAR				S	Sn	01 09 23.9	-6.4
	0.1nm,0.3s,baz=314,slow=17,SNR=7.6						
MKAR	Makanchi Array	66.73	329	P	P	01 13 01.5	0.0
	0.3nm,0.6s,baz=125,slow=6.6,SNR=1.4						

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*NEIC **05** 01:13:26.3±2.0, 8°.03S±0°.06×125°.20E±0°.07, h10^{km}±1^{km}, mb4.7/7, Error ellipse: s-maj=13.4km s-min=8.3km az=59.0*
*IDC **05** 01:13:26.7±1.2, 8°.03S×125°.24E, h0^{km}, mb3.9/5, mb1 4.0/9, mb1mx3.8/40, mbtmp3.9/9, ML3.7/4, MS3.0/2, Ms1 3.0/2, ms1mx2.5/39, Error ellipse: s-maj=48.3km s-min=19.5km az=74.0*
*DJA **05** 01:13:31.0±0.4, 8°S±4°×12°5E±°, h10^{km}, M4.1/7, mb4.3/4, MLv4.0/7*
ISC 05 01:13:27.9±0.6**, 8°.09S**±0°.05×**125°.30E**±0°.07**, h26**^{km}**, n45,** σ**2**^{s}.**28**/45**, mb4.0**/9**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	Soe	1.94	212	P	Pn	01 13 59.9	+0.5
SOEI	Soe	1.94	212	Pn	Pn	01 13 59.7	+0.3
SOEI				Sn	Sn	01 14 23.6	+0.5
SOEI	Soe	1.94	212	P	Pb	01 14 01.9	-0.9
BATI	Baumata	2.65	218	Pn	Pn	01 14 10.9	+1.8
	19nm,0.3s,baz=109,slow=0.6,SNR=12						
BATI				Sn	Sn	01 14 41.5	+1.1
	23nm,0.3s,baz=342,slow=23,SNR=16						
BATI				LR	LR	01 15 13.1	
	comp=Z,346nm,20.8s,baz=77,slow=40						
BATI	Baumata	2.65	218	P	Pn	01 14 09.4	+0.3
MMRI	Maumere	3.08	260	P	Pn	01 14 14.1	-0.8
MMRI	Maumere	3.08	260	Pn	Pn	01 14 13.9	-1.1
MMRI	Maumere	3.08	260	P	Pn	01 14 16.9	+2.0
EDFI	Ende, Flores	3.63	259	P	Pn	01 14 22.1	-0.5
BSSI	Bau Bau, Buton	5.16	292	P	Pn	01 14 43.1	-0.4
SANI	Sanana	6.04	7	P	Pn	01 15 03.4	+7.8
	0.1nm8.4nm,0.6s						
DRS	Darwin Rock St	6.99	129	P	Pb	01 15 21.9	-6.8
	9.9nm,0.8s						
MTN	Manton Dam	7.43	130	Pn	Pn	01 15 16.6	+1.9
KNRA	Kununurra	8.26	156	Pn	Pn	01 15 28.0	+1.9
KNRA	Kununurra	8.26	156	P	Pn	01 15 32.2	+6.1
	31nm,0.7s						
KDU	Kakadu	8.40	124	P	Pn	01 15 39.9	+12
	7.9nm,0.6s						
FITZ	Fitzroy Crossi	9.95	178	Pn	Pn	01 15 50.6	+1.3
	0.5nm,0.3s,baz=9.6,slow=10,SNR=18						
FITZ				Sn	Sn	01 17 33.3	-6.9
	0.6nm,0.3s,baz=331,slow=14,SNR=5.8						
FITZ	Fitzroy Crossi	9.95	178	Pn	Pn	01 15 50.2	+0.9
FITZ	Fitzroy Crossi	9.95	178	P	Pn	01 15 53.8	+4.5
	5.0nm,1.7s						
WB0	Warramunga Arr	14.57	144		Pn	01 16 55.5	+2.9
WRAB	Tennant Creek	14.67	144		Pn	01 16 55.6	+1.6
WRA	Warramunga Arr	14.68	144	Pn	Pn	01 16 56.3	+2.3
	0.4nm,0.3s,baz=318,slow=13,SNR=36						
WRA				Sn	Sn	01 19 30.8	-5.1
	0.2nm,0.3s,baz=318,slow=24,SNR=7.2						
WRA	Warramunga Arr	14.68	144		Pn	01 16 55.9	+2.0
WB2	Warramunga Arr	14.68	144	Pn	Pn	01 16 54.6	+0.5
WR0	Warramunga Arr	14.81	144	Pn	Pn	01 16 57.3	+1.6
AS31	Alice Springs	17.54	153		Pn	01 17 31.2	+0.4
AS31				Sn	Sn	01 20 45.0	-0.5
ASAR	Alice Springs	17.54	153	P	P	01 17 32.9	+1.1
	0.2nm,0.3s,baz=321,slow=11,SNR=12						
ASAR				S	Sn	01 20 33.3	-12
	baz=323,slow=21,SNR=2.8						
ASAR	Alice Springs	17.54	153	P	Pn	01 17 29.8	-1.0
LEM	Lembang	17.58	273	LR	LR	01 25 01.3	
	comp=Z,45nm,20.2s,baz=178,slow=40						
LWLI	Liwa	21.32	277	P	P	01 18 08.4	-4.8
CMAR	Chiang Mai Arr	37.05	316	P	P	01 20 37.4	+1.4
	0.5nm,0.3s,baz=139,slow=7.0,SNR=1.6						
CMAR	Chiang Mai Arr	37.05	316	P	P	01 20 34.9	-1.1
JCJ	Chichijima	38.62	25	P	P	01 20 47.7	-1.4
OUENC	Ouen Island, N	42.37	114	P	P	01 21 20.0	-0.3
OUENC				IAmb	IAmb	01 21 27.7	
	comp=Z,22nm,0.9s						
INCN	Inchon	45.35	1	P	P	01 21 42.5	-1.5
INCN				IAmb	IAmb	01 21 47.3	
	comp=Z,22nm,0.5s						
LSA	Lhasa	49.91	320	P	P	01 22 18.4	-1.8
LSA				IAmb	IAmb	01 22 25.0	
	comp=Z,4.2nm,0.6s						
MKAR	Makanchi Array	66.68	329	P	P	01 24 18.8	+2.3
	comp=Z,0.9nm,0.8s,baz=126,slow=7.7,SNR=2.9						
MKAR	Makanchi Array	66.68	329	P	P	01 24 15.9	-0.7
PETK	Petropavlovsk-	66.89	21	P	P	01 24 18.6	+0.9
ZALV	Zalesovo Beam	70.59	336	P	P	01 24 43.1	+2.4
	comp=Z,0.7nm,0.6s,baz=123,slow=5.5,SNR=4.2						
ZALV	Zalesovo Beam	70.59	336	P	P	01 24 41.7	+1.0
VNDA	Vanda	71.97	172	P	P	01 24 53.0	+4.2
	comp=Z,0.6nm,0.7s,baz=322,slow=6.7,SNR=6.1						
VNDA	Vanda	71.97	172	P	P	01 24 49.9	+1.2
VNDA				IAmb	IAmb	01 25 04.3	
	comp=Z,1.6nm,1.1s						
MAW	Mawson	72.26	201	P	P	01 24 53.9	+3.4
	comp=Z,1.0nm,0.7s,baz=17,slow=8.6,SNR=1.7						
QSPA	South Pole Qui	81.89	180	P	P	01 25 44.6	-0.4
QSPA				IAmb	IAmb	01 25 50.5	
	comp=Z,5.3nm,0.8s						

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*SKHL **05** 01:23:29.5±0.0, 47°.60N×146°.40E, h438^{km}±13^{km}, mb4.9/9, mbv5.0/1, msh5.0/2, msha5.1/5*
*MOS **05** 01:23:29.5±0.9, 47°.77N×146°.19E, h445^{km}, mb4.3/13, Error ellipse: s-maj=11.5km s-min=7.4km az=71.8*
*JMA **05** 01:23:30.5±0.5, 47°.14N×146°.59E, h467^{km}, M4.3*
*IDC **05** 01:23:30.2±0.9, 47°.85N×146°.19E, h438^{km}±10^{km}, mb3.5/20, mb1 3.6/29, mb1mx3.5/57, mbtmp4.3/29, Error ellipse: s-maj=13.1km s-min=8.7km az=158.0*
*NEIC **05** 01:23:30.5±1.0, 47°.9N±0°.1×146°.3E±0°.2, h431^{km}±9^{km}, mb4.3/120, Error ellipse: s-maj=18.6km s-min=16.8km az=145.0*
ISC 05 01:23:30.1±0.4**, 47°.63N**±0°.05×**146°.36E**±0°.05**, h450**^{km}**, n254,** σ1^s.**66**/281**, mb4.2**/87**, 3C-3D, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YSS	Yuzh-Sakhalins	2.54	256α	*i*PN	P	01 24 34.1	+0.3
YSS				*e*S	S	01 25 22.8	-2.9
YSS				pmax	pmax		
	comp=Z,6μm,0.9s						
YSS				pmax	pmax		
	comp=E,170nm,0.7s						
YSS				smax	smax		
	comp=N,140nm,0.8s						
YSS	Yuzh-Sakhalins	2.54	256	*i* P	P	01 24 33.6	-0.2
YSS				AMB	AMB	01 24 34.5	
	comp=N,540nm,0.4s						
YSS				*e*S	S	01 25 23.6	-2.1
YSS				A	A	01 25 24.0	
	comp=N,140nm,0.8s						
YSS				A	A	01 25 24.0	
	comp=N,35nm,0.8s						
YSS	Yuzh-Sakhalins	2.54	256		P	01 24 33.9	+0.1
KUR	Kuril'sk	2.61	156	*i* PN	P	01 24 32.3	-2.1
KUR	Kuril'sk	2.61	156	*e*P	P	01 24 34.7	+0.3
KUR				AMB	AMB	01 24 41.0	
	comp=N,70nm,0.5s						
UGL	Uglegorsk	3.21	298	⇓PN	P	01 24 32.9	-5.6
UGL				*e*S	S	01 25 29.7	-4.6
UGL				smax	smax		
	comp=N,1μm,2.0s						
UGL				smax	smax		
	comp=E,1μm,0.9s						
UGL				smax	smax		
	comp=N,283nm,0.9s						
UGL				smax	smax		
	comp=E,851nm,0.7s						
UGL				smax	smax		
	comp=Z,108nm,0.5s						
UGL	Uglegorsk	3.21	298	*e*P	P	01 24 38.2	-0.3
UGL				AMB	AMB	01 24 39.6	
	comp=Z,70nm,0.8s						
UGL				*e*S	S	01 25 31.8	-2.5
UGL				A	A	01 25 32.5	
	comp=Z,190nm,0.8s						
UGL				A	A	01 25 32.5	
	comp=Z,850nm,0.8s						
UGL				A	A	01 25 32.5	
	comp=Z,1μm,2.0s						
UGL				A	A	01 25 32.5	
	comp=Z,1μm,2.0s						
YUK	Yuzh-Kuril'sk	3.61	186	*i* PN	P	01 24 39.1	-2.8
YUK	Yuzh-Kuril'sk	3.61	186	*e*P	P	01 24 41.3	-0.6
YUK				AMB	AMB	01 24 43.6	
	comp=Z,330nm,0.4s						
YUK				*e*S	S	01 25 39.0	-1.3
YUK				A	A	01 25 41.4	
	comp=Z,400nm,0.6s						
YUK				A	A	01 25 41.4	
	comp=Z,1μm,0.6s						
JSE	Soyaes	3.74	226	P	P	01 24 43.2	+0.2
JRA	Rausu	3.79	194	P	P	01 24 42.3	-1.1
JWK2	Keihoku	3.85	235	P	P	01 24 44.9	+1.0
JTKR	Abashiri--Toko	4.04	206	P	P	01 24 44.8	-0.8
TYV	Tymovskoe	4.05	325	*e*PN	P	01 24 44.3	-1.1
TYV				*e*S	S	01 25 44.1	-2.8
TYV				pmax	pmax		
	comp=Z,60nm,0.7s						
TYV				pmax	pmax		
	comp=Z,400nm,2.2s						
TYV				smax	smax		
	comp=N,21nm,1.0s						
TYV				smax	smax		
	comp=E,53nm,1.0s						
TYV				smax	smax		
	comp=N,300nm,2.3s						
TYV				smax	smax		
	comp=E,400nm,2.3s						
TYV	Tymovskoe	4.05	325	*e*P	P	01 24 44.4	-1.0
TYV				AMB	AMB	01 24 44.6	
	comp=E,60nm,0.7s						
TYV				AMB	AMB	01 24 46.3	
	comp=E,400nm,2.0s						
TYV				*e*S	S	01 25 44.1	-2.8
TYV				A	A	01 25 44.3	
	comp=E,21nm,1.0s						
TYV				A	A	01 25 44.3	
	comp=E,53nm,1.0s						
TYV				A	A	01 25 45.2	
	comp=E,300nm,2.0s						
TYV				A	A	01 25 45.2	
	comp=E,400nm,2.0s						
NMR	Nemuro--Hokkai	4.28	186	*e*P	P	01 24 44.7	-3.0
NEM2	Nemuro 2	4.29	186	P	P	01 24 44.8	-3.0
NEM2				*e*S	S	01 25 44.6	-6.4
JKA	Kamikawa-asahi	4.38	218	*e*P	P	01 24 48.6	-0.1
JKA	Kamikawa-asahi	4.38	218		P	01 24 48.6	-0.1
ASAJ	Asahikawa	4.39	218	P	P	01 24 48.8	+0.1
	comp=E,9.9nm,0.3s,baz=46,slow=4.5,SNR=36						
ASAJ				S	S	01 25 53.1	+0.4
	baz=334,slow=32,SNR=0.7						
ASAJ	Asahikawa	4.39	218	PN	P	01 24 48.6	-0.1
JKK2	Kamakawa 2	4.53	215	P	P	01 24 49.9	-0.1
JAR	Ashorobuto	4.70	204	P	P	01 24 51.0	-0.6
AKK	Akkeshi	4.73	194	*e*P	P	01 24 49.2	-2.7
JAK	Akkeshi	4.78	195	P	P	01 24 49.8	-2.5
JAK				*e*S	S	01 25 53.5	-5.8
JCH	Churui	5.44	204	P	P	01 24 56.8	-2.0
JCH				*e*S	S	01 26 04.9	-6.3
JEW	Eniwo	5.91	218	P	P	01 25 03.5	0.0
JEW				*e*S	S	01 26 16.2	-3.6
JEW	Eniwo	5.91	218		P	01 25 03.5	0.0
JNBK	Urakawa-nobuka	5.93	207	P	P	01 25 01.6	-2.1
JNBK				*e*S	S	01 26 13.9	-6.2
ERM	Erimo	6.06	203	*i* PN	P	01 25 03.9	-1.1
ERM	Erimo	6.06	203		P	01 25 04.3	-0.7
OKH	Okha	6.32	341	*e*P	P	01 25 06.2	-1.2
NKL	Nikolayevsk	6.61	329	*e*P	P	01 25 09.8	-0.6
NKL				AMB	AMB	01 25 10.5	
	comp=E,130nm,0.5s						
JKB	Kayabe	6.88	215	P	P	01 25 11.6	-1.9
JKB				*e*S	S	01 26 31.5	-6.6
SKR	Severo-Kuril’s	7.09	61	*e*PN	P	01 25 15.2	-0.3
SKR				*e*S	S	01 26 36.9	-5.1
SKR				pmax	pmax		
	comp=Z,86nm,0.6s						
SKR				smax	smax		
	comp=N,130nm,0.8s						
SKR				smax	smax		
	comp=E,93nm,0.8s						
SKR				MLR	MLR		
	comp=Z,700nm,13.0s						
SKR				MLR	MLR		
	comp=Z,300nm,11.0s						
SKR	Severo-Kuril’s	7.09	61	*e*P	P	01 25 15.7	+0.2
SKR				AMB	AMB	01 25 17.0	
	comp=Z,86nm,0.6s						
SKR				*e*S	S	01 26 38.2	-3.8
SKR				A	A	01 26 48.0	
	comp=Z,130nm,0.8s						
SKR				A	A	01 26 48.0	
	comp=Z,97nm,0.8s						
JOT	Ohata	7.31	213	P	P	01 25 16.3	-1.8
JOSM	Okushiri--Mats	7.39	224	P	P	01 25 17.4	-1.5
PAU	Pauzhetka	7.81	57	*e*P	P	01 25 23.0	-0.2
PAU				AMB	AMB	01 25 23.7	
	comp=Z,20nm,0.6s						
PAU				*e*S	S	01 26 54.4	-1.6
JTM	Tenmabayashi	7.82	211		P	01 25 21.8	-1.8
JANG	Nango	8.05	207	P	P	01 25 24.3	-1.7
JANG				*e*S	S	01 26 54.9	-6.2
JOM	Ohasama	8.94	206	P	P	01 25 34.9	-0.8
JOM				*e*S	S	01 27 14.7	-4.2
PETK	Petropavlovsk-	9.08	49	P	P	01 25 35.1	-1.9
	comp=Z,0.7nm,0.3s,baz=238,slow=7.8,SNR=13						
JMK	Ichinoseki	9.44	205	P	P	01 25 42.3	+1.1
JYK	Kaneyama	9.74	209	P	P	01 25 45.4	+1.0
KLR	Kul'dur	9.85	285	P	P	01 25 45.8	+0.5
	comp=Z,2.6nm,0.3s,baz=82,slow=10,SNR=46						
KLR	Kul'dur	9.85	285*d*	*i*PN	P	01 25 46.0	+0.6
KLR	Kul'dur	9.85	285	*e*P	P	01 25 46.0	+0.6
JMM	Marumori	10.58	205	P	P	01 25 55.0	+1.5
USRK	Ussuriysk Ar.	10.59	256	P	P	01 25 53.6	+0.1
	baz=58,slow=14,SNR=2.7						
JSD	Sado	11.27	215	P	P	01 26 02.0	+1.0
MSHR	Mys Shultsa	11.87	250	*i* PN	P	01 26 07.5	+0.1
MSHR				pmax	pmax		
	comp=Z,18nm,1.9s						
MA2	Magadan	12.25	11	P	P	01 26 10.0	-1.3
	comp=Z,0.4nm,0.3s,baz=179,slow=23,SNR=3.8						
MA2	Magadan	12.25	11	*i* PN	P	01 26 11.1	-0.2
MA2	Magadan	12.25	11	*e*P	P	01 26 11.1	-0.2
MAJO	Matsushiro	12.61	212	*i* PN	P	01 26 16.8	+1.2
MAJO	Matsushiro	12.61	212	P	P	01 26 16.7	+1.1
MJAR	Matsushiro Arr	12.61	212	P	P	01 26 16.3	+0.7
	comp=Z,0.4nm,0.3s,baz=18,slow=11,SNR=15						
MJAR	Matsushiro Arr	12.61	212	PN	P	01 26 17.9	+2.3
MJAR	Matsushiro Arr	12.61	212	P	P	01 26 17.9	+2.3
ZEA	Zeya	13.55	304	*e*PN	P	01 26 24.3	-1.1
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ZEA	Zeya	13.55	304	*e*P	P	01 26 25.2	-0.2
INU	Inuyama	14.11	213	P	P	01 26 32.9	+1.2
CN2	Changchun	15.09	263	*e*P	P	01 26 40.2	-1.9
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
SEY	Seymchan	15.71	10	P	P	01 26 48.4	+0.1
	comp=Z,1.7nm,0.3s,baz=174,slow=9.4,SNR=15						
SEY	Seymchan	15.71	10	*i* P	P	01 26 45.1	-3.2
KSRS	Korea Array	16.93	240	P	P	01 27 02.7	+1.1
	comp=Z,0.2nm,0.3s,baz=41,slow=11,SNR=5.4						
YAK	Yakutsk	17.25	333	P	P	01 27 02.6	-1.9
	comp=Z,0.3nm,0.3s,baz=118,slow=2.5,SNR=9.5						
YAK	Yakutsk	17.25	333	*e*P	P	01 27 02.4	-2.2
YAK				*e*S	S	01 29 58.7	-2.9
YAK				pmax	pmax		
	comp=Z,20nm,0.9s						
YAK				pmax	pmax		
	comp=N,9.0nm,1.1s						
YAK				smax	smax		
	comp=E,28nm,1.0s						
YAK				smax	smax		
	comp=N,31nm,1.1s						
YAK	Yakutsk	17.25	333	*e*P	P	01 27 02.4	-2.2
YAK	Yakutsk	17.25	333	P	P	01 27 02.3	-2.2
HIA	Hailar	17.71	285	*i* P	P	01 27 08.4	-1.2
HIA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ULN	Ulaanbaatar	26.24	285*c*	*i*P	P	01 28 27.5	0.0
ULN				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ULN	Ulaanbaatar	26.24	285	*e*P	P	01 28 27.5	0.0
ULN	Ulaanbaatar	26.24	285	P	P	01 28 27.4	0.0
SONM	Songino Array	26.68	285	P	P	01 28 31.3	0.0
	comp=Z,0.9nm,0.5s,baz=76,slow=10,SNR=4.3						
GUMO	Guam	33.96	183	P	P	01 29 38.5	+4.0
GUMO				pmax	pmax		
	comp=Z,108nm,1.0s						
GUMO	Guam	33.96	183	P	P	01 29 38.5	+4.0
J20K	Nowinta River	35.66	40	P	P	01 29 47.9	-0.3
IMAR	Indian Mountai	35.82	37	P	P	01 29 49.3	-0.2
H21K	Melozitna Rive	36.20	38	P	P	01 29 52.7	-0.1
H21K				IAmb	IAmb	01 29 53.2	
	comp=Z,5.4nm,0.4s						
CAST	Castle Rocks	36.61	42	P	P	01 29 56.8	+0.6
CAST				IAmb	IAmb	01 29 57.8	
	comp=Z,8.3nm,0.6s						
SPU	Mount Spurr	36.85	45	P	P	01 29 59.0	+0.9
MLY	Manley	37.09	39	P	P	01 30 00.5	+0.4
KTH	Kantishna Hill	37.12	41	P	P	01 30 01.0	+0.6
KTH				IAmb	IAmb	01 30 02.1	
	comp=Z,8.7nm,0.9s						
KDAK	Kodiak Island	37.13	51	P	P	01 30 00.6	+0.2
	comp=Z,9.3nm,0.8s,baz=332,slow=0.4,SNR=96						
KDAK				PcP	PcP	01 32 10.8	+1.7
	comp=Z,6.9nm,1.0s,baz=90,slow=1.1,SNR=4.9						
KDAK	Kodiak Island	37.13	51	P	P	01 30 00.7	+0.2
KDAK				IAmb	IAmb	01 30 02.0	
	comp=Z,9.7nm,0.9s						
COLD	Coldfoot	37.23	35	P	P	01 30 00.6	-0.6
TRF	Thorofare Moun	37.41	41	P	P	01 30 03.6	+0.7
TOLK	Toolik Lake Re	37.47	33	P	P	01 30 03.1	-0.1
TOLK				IAmb	IAmb	01 30 03.8	
	comp=Z,6.3nm,0.7s						
H23K	Yukon River	37.55	37	P	P	01 30 04.7	+0.9
H23K				IAmb	IAmb	01 30 05.0	
	comp=Z,7.4nm,0.5s						
I23K	Minto, Yukon-K	37.67	39	P	P	01 30 05.3	+0.5
BWN	Browne	37.70	40	P	P	01 30 06.6	+1.4
MCK	McKinley	37.98	41	P	P	01 30 08.1	+0.6
RND	Reindeer	38.06	41	P	P	01 30 08.2	+0.1
RND				IAmb	IAmb	01 30 09.3	
	comp=Z,6.2nm,0.4s						

H24K	Noodor Dome	38.23	37	P	P	01 30 10.3	+0.8
GHO	Glory Hole Cre	38.25	44	P	P	01 30 10.4	+0.7
WRH	Wood River Hil	38.27	40	P	P	01 30 10.1	+0.4
ZALV	Zalesovo Beam	38.32	303	P	P	01 30 09.2	-1.0
	comp=Z,1.8nm,0.4s,baz=64,slow=7.2,SNR=13						
ZALV				PcP	PcP	01 32 13.8	+0.9
	comp=Z,1.2nm,0.6s,baz=64,slow=2.0,SNR=5.7						
ZALV				ScP	ScP	01 35 17.1	-0.1
	comp=Z,0.5nm,0.5s,baz=64,slow=3.4,SNR=2.0						
CCB	Clear Creek Bu	38.37	39	P	P	01 30 10.8	+0.2
CCB				IAmb	IAmb	01 30 10.9	
	comp=Z,4.6nm,0.4s						
SML	Sawmill	38.52	44	P	P	01 30 12.8	+0.8
SML				IAmb	IAmb	01 30 12.8	
	comp=Z,8.2nm,0.6s						
KNK	Knik Glacier	38.53	44	P	P	01 30 12.6	+0.6
PWL	Port Wells	38.69	45	P	P	01 30 13.3	+0.1
PWL				IAmb	IAmb	01 30 16.6	
	comp=Z,8.7nm,0.6s						
IL31		38.75	39	P	P	01 30 13.6	-0.1
ILAR	Eielson Array	38.75	39	P	P	01 30 13.3	-0.4
	comp=Z,6.5nm,0.5s,baz=250,slow=6.0,SNR=105						
HDA	Harding Lake	38.77	40	P	P	01 30 13.6	-0.2
FYU	Fort Yukon	39.23	36	P	P	01 30 18.4	+0.8
PRP	Porcupine Dome	39.23	38	P	P	01 30 18.3	+0.5
KLU	Klutina	39.71	44	P	P	01 30 22.5	+0.8
KLU				IAmb	IAmb	01 30 22.7	
	comp=Z,8.0nm,0.5s						
DIV	Divide	39.86	45	P	P	01 30 23.8	+1.0
DIV				IAmb	IAmb	01 30 24.2	
	comp=Z,10nm,0.6s						
SCRK	Sand Creek	40.12	40	P	P	01 30 24.5	-0.4
SCRK				IAmb	IAmb	01 30 25.1	
	comp=Z,11nm,0.8s						
DOT	Dot Lake	40.14	40	P	P	01 30 24.4	-0.6
M26K	Nabesna, AK	40.87	42	P	P	01 30 31.8	+0.8
EGAK	Eagle	41.17	38	P	P	01 30 33.1	-0.1
L27K	Beaver Creek,	41.25	41	P	P	01 30 34.9	+1.0
L27K				IAmb	IAmb	01 30 36.0	
	comp=Z,11nm,1.1s						
BCAR	Beaver Creek A	41.27	41	P	P	01 30 35.5	+1.4
M27K	Edge Creek, AK	41.39	42	P	P	01 30 36.4	+1.2
M27K				IAmb	IAmb	01 30 36.8	
	comp=Z,8.2nm,0.6s						
MKAR	Makanchi Array	42.41	294	P	P	01 30 43.3	-0.1
	comp=Z,1.6nm,0.5s,baz=69,slow=7.3,SNR=23						
MKAR				PcP	PcP	01 32 27.5	+1.0
	comp=Z,0.6nm,0.7s,baz=60,slow=5.3,SNR=2.0						
MKAR				ScP	ScP	01 35 33.7	+0.1
	comp=Z,0.5nm,0.7s,baz=55,slow=2.3,SNR=1.8						
MKAR	Makanchi Array	42.41	294	P	P	01 30 43.5	+0.1
EPYK	Eagle Plains	42.63	35	P	P	01 30 45.5	+0.6
EPYK				IAmb	IAmb	01 30 45.6	
	comp=Z,9.7nm,0.6s						
KURK	Kurchatov	42.99	300	P	P	01 30 47.6	-0.3
KURK				pmax	pmax		
	comp=Z,9.0nm,0.5s						
KURK	Kurchatov	42.99	300	*e*P	P	01 30 47.6	-0.3
KURK	Kurchatov	42.99	300	P	P	01 30 47.6	-0.3
KURK				IAmb	IAmb	01 30 48.1	
	comp=Z,9.4nm,0.5s						
INK	Inuvik	43.37	32	P	P	01 30 50.5	0.0
	comp=Z,9.7nm,0.3s,baz=293,slow=9.2,SNR=189						
INK	Inuvik	43.37	32	P	P	01 30 50.6	0.0
HYT	Haines Junctio	43.82	43	P	P	01 30 55.9	+1.5
HYT				IAmb	IAmb	01 30 56.7	
	comp=Z,7.7nm,0.6s						
A36M	Sachs Harbour	45.10	26	P	P	01 31 04.0	0.0
EUNU	Eureka	49.14	11	P	P	01 31 34.3	-0.3
JIRN	Jiri	50.32	269	*e*P	P	01 31 45.8	+1.4
RAMN	Ramite	50.50	268	*e*P	P	01 31 46.5	+0.9
	comp=Z,8.4nm,0.4s						
GKN	Gorkha	51.15	271	*e*P	P	01 31 51.5	+1.3
	comp=Z,5.6nm,0.3s						
ARU	Arti	51.18	315	*d* *i*P	P	01 31 48.8	-1.1
ARU					PcP	01 32 55.6	-2.1
ARU				S	S	01 38 34.2	+1.1
ARU				SS	SS	01 42 13.0	-2.0
ARU				pmax	pmax		
	comp=Z,20nm,2.5s						
ARU	Arti	51.18	315	*e*P	P	01 31 48.8	-1.1
RES	Resolute Bay	51.42	17	P	P	01 31 50.7	-0.6
RES				pmax	pmax		
	comp=Z,19nm,0.5s						
RES	Resolute Bay	51.42	17	P	P	01 31 50.6	-0.6
DANN	Dangsing	51.52	272	*e*P	P	01 31 54.6	+1.5
	comp=Z,17nm,0.4s						
KOLN	Koldanda	52.00	271	*e*P	P	01 31 58.1	+1.6
PYUN	Piuthan	52.20	272	*e*P	P	01 31 59.9	+2.0
YKA	Yellowknife Ar	52.91	35	P	P	01 32 02.4	+0.2
	comp=Z,1.0nm,0.4s,baz=298,slow=14,SNR=17						
GAR	Garm	53.93	291	P	P	01 32 10.7	+0.6
GAR				IAmb	IAmb	01 32 11.3	
	comp=Z,8.3nm,0.7s						
ABKAR	Akbulak array	54.26	306	P	P	01 32 12.2	+0.1
ABKAR	Akbulak array	54.26	306	P	P	01 32 12.0	-0.1
CHGR	Chuyangaron	54.87	291	P	P	01 32 17.4	+0.7
NIL	Nilore	55.24	284	P	P	01 32 20.2	+0.9
NIL				pmax	pmax		
	comp=Z,9.0nm,0.8s						
NIL	Nilore	55.24	284	P	P	01 32 20.2	+0.9
NIL				IAmb	IAmb	01 32 21.3	
	comp=Z,8.6nm,0.8s						
B08A	Colville Reser	59.01	51	P	P	01 32 45.9	+0.9
H04A	Detroit Lake	59.74	56	P	P	01 32 51.5	+1.5
H04A				IAmb	IAmb	01 32 53.1	
	comp=Z,8.3nm,0.8s						
C09A	Chrisman Ranch	59.91	51	P	P	01 32 52.1	+1.0
SUMG	Summit	60.05	2	*i* P	P	01 32 52.2	+0.2
SUMG				IAmb	IAmb	01 32 53.1	
	comp=Z,3.3nm,0.4s						
E09A	Wood Farm, Sta	60.79	52	P	P	01 32 58.3	+1.3
PINE	Pine Mountain	61.00	56	P	P	01 32 59.9	+1.3
FINES	FINESS Array B	61.18	332	P	P	01 32 58.6	-0.6
	comp=Z,2.6nm,0.5s,baz=41,slow=7.6,SNR=37						
FINES	FINESS Array B	61.18	332	P	P	01 32 59.2	0.0
FINES	FINESS Array B	61.18	332	P	P	01 32 59.1	0.0
K05A	Summer Lake	61.70	57	P	P	01 33 05.9	+2.6
K05A				IAmb	IAmb	01 33 06.9	
	comp=Z,10nm,1.0s						
GEYT	Alibeck	62.15	297	P	P	01 33 05.2	-0.8
	comp=Z,2.6nm,0.5s,baz=42,slow=8.3,SNR=3.5						
BMO	Blue Mountains	62.31	53	P	P	01 33 08.6	+1.5
BMO				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BMO	Blue Mountains	62.31	53	P	P	01 33 08.6	+1.5
MOD	Modoc Plateau	62.57	57	P	P	01 33 09.5	+0.7
MOD				IAmb	IAmb	01 33 11.7	
	comp=Z,4.3nm,0.6s						
FFC	Flin Flon	62.93	37	P	P	01 33 11.7	+0.9
FFC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
FFC	Flin Flon	62.93	37	P	P	01 33 11.7	+0.9
FFC				IAmb	IAmb	01 33 12.1	
	comp=Z,6.1nm,0.8s						
HRY	Holter Researc	63.95	49	P	P	01 33 18.5	+0.8
EGMT	Eagleton	64.09	46	P	P	01 33 19.0	+0.5
EGMT				IAmb	IAmb	01 33 20.6	
	comp=Z,8.7nm,0.8s						
LRM	Limekiln Ridge	64.23	50	P	P	01 33 20.7	+1.1
DLMT	Dillon	64.47	50	P	P	01 33 22.4	+1.4
DLMT				IAmb	IAmb	01 33 23.7	
	comp=Z,8.1nm,0.9s						
PAHR	Pah Rah Range	64.54	58	P	P	01 33 22.5	+0.9
PAHR				IAmb	IAmb	01 33 24.0	
	comp=Z,5.4nm,0.7s						
BOZ	Bozeman (W)	64.81	49	P	P	01 33 24.8	+1.6
BOZ				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BOZ	Bozeman (W)	64.81	49	P	P	01 33 24.8	+1.6
BOZ				IAmb	IAmb	01 33 25.3	
	comp=Z,6.0nm,0.6s						
CMB	Columbia Colle	65.06	60	P	P	01 33 26.3	+1.5
CMB				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CMB	Columbia Colle	65.06	60	P	P	01 33 26.2	+1.5
CMB				IAmb	IAmb	01 33 27.7	
	comp=Z,5.1nm,0.9s						
YERR	Yerington	65.10	59	P	P	01 33 26.4	+1.2
BMN	Battle Mountai	65.29	57	P	P	01 33 27.6	+1.3
BMN				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BMN	Battle Mountai	65.29	57	P	P	01 33 27.6	+1.3
BMN				IAmb	IAmb	01 33 29.4	
	comp=Z,5.7nm,0.6s						
YHL	Hebgen Lake	65.55	50	P	P	01 33 29.1	+1.1
YHL				IAmb	IAmb	01 33 30.8	
	comp=Z,6.3nm,1.0s						
KVN	Kaiserville	65.71	58	P	P	01 33 30.9	+1.8
KVN				pmax	pmax		
	comp=Z,11nm,0.6s						
KVN	Kaiserville	65.71	58	P	P	01 33 30.9	+1.8
RYN	Ryan	65.75	59	P	P	01 33 30.8	+1.6
RYN				IAmb	IAmb	01 33 32.2	
	comp=Z,4.3nm,0.7s						
YHH	Holmes Hill	65.76	50	P	P	01 33 30.5	+1.0
YMR	Madison River	65.79	50	P	P	01 33 29.8	+0.3
YMR				IAmb	IAmb	01 33 32.2	
	comp=Z,4.3nm,0.8s						
NB2	NORSAR Subarra	65.79	338	P	P	01 33 28.7	-0.3
	comp=Z,1.3nm,0.4s,baz=30,slow=6.5						
NOA	NORSAR Array B	65.79	338	P	P	01 33 27.9	-1.0
	comp=Z,1.4nm,0.5s,baz=31,slow=6.6,SNR=50						
NVAR	Mina Array Bea	66.02	59	P	P	01 33 32.8	+1.8
	comp=Z,4.7nm,0.7s,baz=298,slow=6.2,SNR=33						
NVAR	Mina Array Bea	66.02	59	P	P	01 33 32.5	+1.5
LHV	Little Huntoon	66.02	59	P	P	01 33 32.8	+2.1
LHV				IAmb	IAmb	01 33 34.4	
	comp=Z,9.5nm,1.0s						
ELK	Elko	66.19	55	P	P	01 33 33.4	+1.4
ELK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ELK	Elko	66.19	55	P	P	01 33 33.4	+1.4
RLMT	Red Lodge	66.34	48	P	P	01 33 34.5	+1.6
RLMT				IAmb	IAmb	01 33 35.5	
	comp=Z,4.3nm,0.6s						
DGMT	Dagmar	66.43	43	P	P	01 33 34.2	+1.1
FXWY	Fox Creek	66.47	51	P	P	01 33 35.0	+1.3
TPAW	Teton Pass	66.61	51	P	P	01 33 35.8	+1.1
TPAW				IAmb	IAmb	01 33 38.0	
	comp=Z,5.2nm,1.0s						
REDW	Red Top Meadow	66.75	51	P	P	01 33 36.7	+1.1
REDW				IAmb	IAmb	01 33 38.7	
	comp=Z,5.2nm,0.9s						
KBZ	Khabaz	66.85	310	P	P	01 33 35.8	+0.1
	comp=Z,1.3nm,0.6s,baz=51,slow=4.1,SNR=10						
HWUT	Hardware Ranch	67.60	52	P	P	01 33 42.3	+1.6
HWUT				IAmb	IAmb	01 33 43.5	
	comp=Z,4.1nm,0.8s						
R11A	Troy Canyon, C	67.63	57	P	P	01 33 42.0	+1.1
BW06	Boulder Array	67.84	50	P	P	01 33 43.7	+1.4
BW06				IAmb	IAmb	01 33 44.4	
	comp=Z,7.7nm,1.1s						
PD31	Pinedale Array	67.84	50	P	P	01 33 43.5	+1.2
PD31				IAmb	IAmb	01 33 44.4	
	comp=Z,7.7nm,1.1s						
PDAR	Pinedale Array	67.84	50	P	P	01 33 43.6	+1.4
	comp=Z,4.1nm,0.4s,baz=14,slow=0.7,SNR=62						
SPR3	Spring Creek 3	67.89	56	P	P	01 33 44.5	+1.8
DUG	Dugway, Tooele	67.90	54	P	P	01 33 44.6	+2.0
DUG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
DUG	Dugway, Tooele	67.90	54	P	P	01 33 44.6	+2.0
DUG				IAmb	IAmb	01 33 45.5	
	comp=Z,4.3nm,0.9s						
WRA	Warramunga Arr	68.12	192	P	P	01 33 45.7	+1.9
	comp=Z,0.5nm,0.9s,baz=6.1,slow=6.8,SNR=3.0						
AKASG	Malin Array Be	68.15	322	P	P	01 33 42.6	-1.1
	comp=Z,0.6nm,0.4s,baz=34,slow=6.5,SNR=4.4						
AKASG	Malin Array Be	68.15	322	*i* P	P	01 33 43.4	-0.2
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NLU	North Lily Min	68.48	54	P	P	01 33 46.4	+0.2
PSUT	Pine Spring	68.48	56	P	P	01 33 47.7	+1.5
GWY	Greenwater Val	68.50	60	P	P	01 33 48.2	+1.9
GWY				IAmb	IAmb	01 33 49.0	
	comp=Z,5.2nm,0.8s						
QSM	Queen of Sheba	68.53	60	P	P	01 33 47.6	+1.3
QSM				IAmb	IAmb	01 33 49.2	
	comp=Z,6.1nm,0.9s						
PRN	Pahroc Range	68.59	58	P	P	01 33 48.5	+1.8
ULM	Lac du Bonnet	68.75	38	P	P	01 33 47.1	-0.2
	comp=Z,2.7nm,0.5s,baz=310,slow=6.3,SNR=7.1						
SHPR	Sheep Range	69.15	59	P	P	01 33 51.2	+0.9
SHPR				IAmb	IAmb	01 33 53.4	
	comp=Z,4.1nm,0.8s						
RDMU	Red Mountain	69.40	52	P	P	01 33 53.0	+1.3
TMUT	Trail Mountain	69.42	54	P	P	01 33 52.1	+0.1
TMUT				IAmb	IAmb	01 33 54.6	
	comp=Z,5.1nm,0.7s						
P17A	Butcher Ranch,	69.55	54	P	P	01 33 53.8	+1.2
RSSD	Black Hills	69.66	46	P	P	01 33 54.1	+0.8
RSSD				pmax	pmax		
	comp=Z,4.0nm,0.7s						
RSSD	Black Hills	69.66	46	P	P	01 33 54.1	+0.8
RSSD				IAmb	IAmb	01 33 54.7	
	comp=Z,4.2nm,0.7s						
P18A	Preston Nutter	69.70	53	P	P	01 33 55.4	+1.7
MTPU	Mount Pierson	69.76	56	P	P	01 33 55.8	+1.6
SRU	San Rafael Swe	69.92	54	P	P	01 33 56.5	+1.6
SRU				pmax	pmax		
	comp=Z,6.0nm,0.6s						
SRU	San Rafael Swe	69.92	54	P	P	01 33 56.5	+1.6
SRU				IAmb	IAmb	01 33 57.4	
	comp=Z,6.2nm,0.6s						
B35A	Bob, Littlefor	71.11	38	P	P	01 34 01.2	-0.3
SMCO	Snowmass	71.78	52	P	P	01 34 06.8	+0.6
SMCO				IAmb	IAmb	01 34 08.5	
	comp=Z,3.8nm,0.7s						
ASAR	Alice Springs	71.84	192	P	P	01 34 08.6	+2.5
	comp=Z,0.3nm,0.6s,baz=350,slow=4.7,SNR=2.7						
Y14A	Wickenburg	72.21	59	P	P	01 34 09.6	+1.3
Y14A				IAmb	IAmb	01 34 11.1	
	comp=Z,7.6nm,1.2s						
EYMN	Ely	72.35	37	P	P	01 34 08.7	-0.1
MVCO	Mesa Verde	72.39	54	P	P	01 34 10.3	+0.8
MVCO				IAmb	IAmb	01 34 12.1	
	comp=Z,4.6nm,0.7s						
X16A	Lo Mia Camp, P	72.77	58	P	P	01 34 13.7	+2.0
ECSD	EROS Data Cent	73.47	42	P	P	01 34 16.1	+0.7
ECSD				IAmb	IAmb	01 34 16.7	
	comp=Z,6.1nm,0.7s						
SDCO	Great Sand Dun	73.62	52	P	P	01 34 17.7	+1.0
CLL	Collm	73.63	332	*i* P	P	01 34 15.9	-0.2
CLL	Collm	73.63	332	*i* P	P	01 34 15.9	-0.2
SCHQ	Schefferville	74.14	19	P	P	01 34 18.8	-0.2
	comp=Z,4.1nm,0.9s,baz=297,slow=4.8,SNR=8.2						
T25A	Trinidad	74.65	51	P	P	01 34 23.3	+0.9
T25A				IAmb	IAmb	01 34 24.7	
	comp=Z,6.0nm,1.0s						
GERES	GERESS Array B	75.51	330	P	P	01 34 26.8	-0.2
	comp=Z,0.5nm,0.6s,baz=27,slow=6.3,SNR=3.8						
I40A	Norwalk	75.97	39	P	P	01 34 29.9	+0.4
T35A	Sooner Cattle	78.85	47	P	P	01 34 46.7	+1.3
P40A	Paris	78.88	42	P	P	01 34 46.6	+1.2
S39A	Bolivar	79.77	44	P	P	01 34 49.5	-0.7
S39A				IAmb	IAmb	01 34 51.6	
	comp=Z,5.3nm,1.1s						
R40A	Maddies Statio	79.78	43	P	P	01 34 50.5	+0.3
R40A				IAmb	IAmb	01 34 51.1	
	comp=Z,4.2nm,0.6s						
TRQ	Mont Tremblant	79.91	28	P	P	01 34 51.1	+0.2
TRQ				IAmb	IAmb	01 34 51.6	
	comp=Z,7.4nm,0.8s						
TX31	Lajitas Ar. Si	80.95	56	P	P	01 34 58.3	+1.6
TX32	Lajitas Array	80.95	56	P	P	01 34 58.0	+1.4
TX32				IAmb	IAmb	01 34 59.3	
	comp=Z,6.4nm,1.1s						
TXAR	Lajitas Array	80.95	56	P	P	01 34 58.5	+1.9
	comp=Z,2.8nm,0.4s,baz=290,slow=4.0,SNR=72						
TXAR	Lajitas Array	80.95	56	P	P	01 34 58.2	+1.6
TXAR	Lajitas Array	80.95	56	P	P	01 34 58.2	+1.6
U40A	Yellville	81.07	45	P	P	01 34 57.8	+0.8
T42A	Van Buren	81.35	43	P	P	01 34 59.3	+0.9
T42A				IAmb	IAmb	01 34 59.5	
	comp=Z,3.7nm,0.6s						
SIUC	Southern Illin	81.64	41	P	P	01 35 00.6	+0.7
FCAR	Ozark Folk Cen	81.79	44	P	P	01 35 01.2	+0.5
FCAR				IAmb	IAmb	01 35 02.1	
	comp=Z,7.9nm,1.0s						
WHAR	Wooly Hollow	82.20	45	P	P	01 35 03.4	+0.6
WHAR				IAmb	IAmb	01 35 04.5	
	comp=Z,8.3nm,1.0s						
L59A	Walton	83.35	30	P	P	01 35 08.5	-0.1
BDFB	Brasilia	145.96	25	PKPbc	PKPbc	01 42 18.8	+0.1
	comp=Z,2.7nm,0.8s,baz=336,slow=2.6,SNR=6.1						
PLCA	Paso Flores	152.84	89	PKPbc	PKiKP	01 42 36.4	+1.5
	comp=Z,1.3nm,0.9s,baz=34,slow=11,SNR=3.0						
PLCA	Paso Flores	152.84	89	PKIKP	PKiKP	01 42 35.6	+0.7
PLCA	Paso Flores	152.84	89		PKiKP	01 42 35.6	+0.7

IDC ***05*** *01:28:39.0±0.7, 30°.73S×71°.39W, h0^{km}, mb4.2/10, mb1 4.2/15, mb1mx4.1/28, mbtmp4.0/15, ML3.6/5, MS3.0/3, Ms1 3.0/3, ms1mx2.9/19, Error ellipse: s-maj=24.3km s-min=18.1km az=85.0*

NEIC ***05*** *01:28:45.0±1.6, 30°.75S±0°.04×71°.51W±0°.06, h38^{km}±2^{km}, mb4.2/10, Mwr4.0/15, ML4.3(GUC), Error ellipse: s-maj=8.1km s-min=5.6km az=69.0*

GUC ***05*** *01:28:45.4±0.5, 30°.68S×71°.39W, h41^{km}±2^{km}, ML4.3*

NEIC ***05*** *01:28:45, 30°.68S×71°.39W, h39^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$0.84; M$_{\theta\theta}$0.09; M$_{\phi\phi}$-0.92; M$_{r\theta}$0.16; M$_{\theta\phi}$0.02; M$_{\phi r}$-0.88; Fault plane solution: M$_0$1.26000×10^{15} NP1:φ$_s$171.83000°, δ67.94000°, λ84.20000°. NP2:φ$_s$6.95000°, δ22.78000°, λ103.99000°. Principal axes: T 1.2209, Plg67.0000°, Azm71.0000°; N 0.0755, Plg5.0000°, Azm174.0000°; P -1.2964, Plg23.0000°, Azm266.0000°;*

ISC 05 01:28:44.2±0.7**, 30°.76S**±0°.04×**71°.54W**±0°.04**, h43**^{km}±6^{km}**, n96,** σ1^{s}.**74**/101**, mb4.2**/11**, 1C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.12	313	⇑ *i*P	Pn	01 28 52.8	+1.5
CO06	Fray Jorge	0.12	313		Pn	01 28 52.4	+1.1
CO06					Sn	01 28 58.9	+2.7
CO03	El Pedregal	0.73	97	⇓ *i*P	Pn	01 28 58.4	+0.1
CO03				*e*S	Sn	01 29 07.8	-0.6
CO03	El Pedregal	0.73	97		Pn	01 28 58.4	+0.1
CO03				Sn	Sn	01 29 08.1	-0.3
GO04	Tololo Observa	0.86	48	⇓ *i*P	Pn	01 28 60.0	-0.2
GO04				*e*S	Sn	01 29 11.0	-0.7
GO04	Tololo Observa	0.86	48		Pn	01 28 60.0	-0.2
CO05	La Serena	0.87	17	*e*P	Pn	01 29 00.3	+0.2
CO05	La Serena	0.87	17		Pn	01 29 00.3	+0.2
CO05				Sn	Sn	01 29 11.9	+0.3
VA06	Catapilco	1.81	174	*e*P	Pn	01 29 15.1	+2.2
VA06				IAML		01 29 46.4	
	comp=E,4μm,0.5s						
LCO	Las Campanas	1.88	23	⇓ *i*P	Pn	01 29 14.7	+0.5
LCO				*e*S	Sn	01 29 37.1	+0.2
LCO	Las Campanas	1.88	23	Pn	Pn	01 29 14.8	+0.5
LCO				Sn	Sn	01 29 37.4	+0.5
VA03	San Esteban	2.17	158	*e*P	Pn	01 29 19.7	+1.7
VA03				IAML		01 29 56.7	
	comp=E,3μm,0.4s						
VA03	San Esteban	2.17	158		Pn	01 29 19.5	+1.5
ROCH	El Roble	2.25	169	*e*P	Pn	01 29 21.5	+2.3
ROCH				IAML		01 29 56.4	
	comp=E,3μm,0.6s						
VA01	Torpederas	2.26	182	*e*P	Pn	01 29 20.9	+1.8
VA01				IAML		01 29 58.0	
	comp=N,831nm,0.5s						
VA01	Torpederas	2.26	182	Pn	Pn	01 29 19.7	+0.6
PEL	Peldehue	2.49	163	*e*P	Pn	01 29 25.0	+2.7
PEL				IAML		01 30 08.0	
	comp=E,1μm,0.1s						
MT02	Curacav	2.52	172	*e*P	Pn	01 29 24.7	+2.1
MT02	Curacav	2.52	172		Pn	01 29 24.5	+1.8
ZON	Zonda	2.57	109	Pn	Pn	01 29 24.7	+1.3
AC04	Llanos de Chal	2.57	9	*e*P	Pn	01 29 24.4	+0.9
AC04				IAML		01 30 09.6	
	comp=E,1μm,0.4s						
AC04	Llanos de Chal	2.57	9	Pn	Pn	01 29 24.3	+0.9
MT05	Renca	2.71	166	*e*P	Pn	01 29 27.0	+1.6
MT05				IAML		01 30 16.1	
	comp=E,2μm,0.3s						
MT05	Renca	2.71	166	Pn	Pn	01 29 27.0	+1.6
FCH	Farellones	2.77	158	*e*P	Pn	01 29 29.5	+3.1
FCH				IAML		01 30 09.9	
	comp=E,784nm,0.3s						
VA05	Santo Domingo	2.89	181	*e*P	Pn	01 29 30.2	+2.4
VA05				IAML		01 30 14.2	
	comp=E,1μm,0.3s						
VA05	Santo Domingo	2.89	181		Pn	01 29 28.5	+0.7
MT09	Talagante	3.05	171	*e*P	Pn	01 29 32.9	+2.8
MT09				IAML		01 30 21.1	
	comp=N,897nm,0.2s						
MT09	Talagante	3.05	171		Pn	01 29 31.0	+0.9
MT01	Popeta	3.11	176	*e*P	Pn	01 29 33.0	+2.2
MT01				IAML		01 30 24.6	
	comp=N,554nm,0.2s						
MT01	Popeta	3.11	176		Pn	01 29 32.4	+1.7
LMEL	Las Melosas	3.28	160	*e*P	Pn	01 29 36.1	+2.8
LMEL				IAML		01 30 24.1	
	comp=N,776nm,0.1s						
BO04	La Punta	3.32	167	*e*P	Pn	01 29 36.4	+2.7
GO03	Copiap	3.35	20	*e*P	Pn	01 29 35.2	+1.0
GO03				IAML		01 30 27.4	
	comp=E,1μm,0.6s						
GO03	Copiap	3.35	20	Pn	Pn	01 29 35.0	+0.8
BO01	Tunca	3.65	174	*e*P	Pn	01 29 40.3	+2.1
BO01	Tunca	3.65	174		Pn	01 29 40.2	+2.1
BO02	Sierra Bellavi	4.08	171	*e*P	Pn	01 29 46.2	+2.2
BO02	Sierra Bellavi	4.08	171		Pn	01 29 46.3	+2.2
GO05	Huala	4.25	184	Pn	Pn	01 29 47.4	+0.8
AC02	Maricunga	4.44	29	Pn	Pn	01 29 50.9	+1.4
ML02	Panimavida	4.99	179	Pn	Pn	01 29 58.2	+1.6
H03N1	Juan Fernandez	6.81	245	Pn	Pn	01 30 21.3	+0.1
	baz=114,slow=19,SNR=105						
H03N1				Sn	Sn	01 31 33.0	-4.4
	baz=198						
H03N1				T	T	01 37 12.9	
	baz=73,slow=72,SNR=2204						
VA04	Juan Fernndez	6.82	243	Pn	Pn	01 30 22.4	+0.7
H03N3	Juan Fernandez	6.82	245	Pn	Pn	01 30 21.9	+0.4
	baz=114,slow=19,SNR=81						
H03N3				Sn	Sn	01 31 31.7	-6.1
	baz=198						
H03N3				T	T	01 37 12.3	
	baz=73,slow=72,SNR=2914						
H03N2	Juan Fernandez	6.82	245	Pn	Pn	01 30 22.1	+0.7
	baz=114,slow=19,SNR=95						
H03N2				Sn	Sn	01 31 33.4	-4.3
	baz=198						
H03N2				T	T	01 37 14.5	
	baz=73,slow=72,SNR=2904						
H03S3	Juan Fernandez	6.95	242	Pn	Pn	01 30 23.1	-0.2
	baz=317,slow=23,SNR=9.6						
H03S3				Sn	Sn	01 31 35.8	-5.1
	baz=22						
H03S1	Juan Fernandez	6.96	242	Pn	Pn	01 30 22.5	-0.8
	baz=317,slow=23,SNR=9.4						
H03S1				Sn	Sn	01 31 34.1	-6.9
	baz=22						
H03S2	Juan Fernandez	6.97	242	Pn	Pn	01 30 24.3	+0.7
	baz=317,slow=23,SNR=8.1						
H03S2				Sn	Sn	01 31 35.8	-5.6
	baz=22						
LC01	Cunco	8.13	182		Pn	01 30 39.6	0.0
LVC	Limon Verde	8.45	17	Pn	Pn	01 30 42.6	-1.7
	comp=E,0.5nm,0.3s,baz=183,slow=12,SNR=1.8						
LVC				Sn	Sn	01 32 27.4	+8.8
	comp=E,2.7nm,0.3s,baz=10.0,slow=16,SNR=1.6						
LVC				LR	LR	01 33 24.2	
	comp=E,60nm,18.3s,baz=203,slow=34						
LVC	Limon Verde	8.45	17		Pn	01 30 42.9	-1.5
PLCA	Paso Flores	9.99	176	Pn	Pn	01 31 04.0	-1.2
	comp=E,0.1nm,0.3s,baz=260,slow=20,SNR=2.3						
PLCA				LR	LR	01 35 18.5	
	comp=E,115nm,18.9s,baz=316,slow=40						
TRQA	Tornquist	10.73	135	Pn	Pn	01 31 15.4	+0.1
ITQB	Itaqui	12.94	89		Pn	01 31 43.8	-1.7
CPUP	Villa Florida	13.24	74	Pn	Pn	01 31 46.6	-3.0
	comp=E,0.2nm,0.3s,baz=233,slow=12,SNR=2.0						
CPUP				Sn	Sn	01 34 09.6	-5.9
	comp=E,0.2nm,0.3s,baz=209,slow=12,SNR=2.9						
CPUP				LR	LR	01 37 31.7	
	comp=E,85nm,19.8s,baz=229,slow=41						
CPUP	Villa Florida	13.24	74	Pn	Pn	01 31 48.3	-1.3
LPAZ	La Paz	14.73	13	Pn	Pn	01 32 07.0	-3.4
	comp=E,0.0nm,0.3s,baz=121,slow=11,SNR=1.4						
LPAZ	La Paz	14.73	13	Pn	Pn	01 32 10.6	+0.1
SIV	San Ignacio	17.54	35	P	Pn	01 32 43.0	-2.7
	comp=E,0.6nm,0.3s,baz=201,slow=6.9,SNR=14						
PTLB	Pontes e Lacer	19.00	39	P	P	01 33 01.3	-1.2
VILB	Vilhena	20.58	33	P	P	01 33 19.2	-0.4
VILB				IAmb	IAmb	01 33 38.1	
	comp=Z,12nm,1.1s						
SAML	Samuel	23.05	21	P	P	01 33 45.0	-1.0

EFI	East Falkland	23.15	158	P	P	01 33 46.7	0.0
USHA	Ushuaia	24.17	176	P	P	01 33 57.4	+1.1
	comp=Z,6.2nm,0.6s,baz=59,slow=3.1,SNR=1.8						
BDFB	Brasilia	26.26	60	P	P	01 34 15.4	-0.3
	comp=Z,1.7nm,0.5s,baz=240,slow=6.6,SNR=5.4						
BDFB	Brasilia	26.26	60	P	P	01 34 15.7	0.0
BDFB				IAmb	IAmb	01 34 16.1	
	comp=Z,4.5nm,0.7s						
MACA	Manacapuru-AM	29.30	23	P	P	01 34 43.0	+0.2
MACA				IAmb	IAmb	01 34 43.7	
	comp=Z,6.1nm,1.1s						
VNA2	Neumayer--Watz	52.84	158	P	P	01 37 56.6	+1.5
	baz=294,slow=7.8						
SNAA	Sanae	54.43	159	P	P	01 38 08.2	+1.4
TXAR	Lajitas Array	67.14	330	P	P	01 39 35.6	+1.9
	comp=Z,0.7nm,0.5s,baz=153,slow=8.4,SNR=13						
TXAR	Lajitas Array	67.14	330	P	P	01 39 34.9	+1.2
DBIC	Dimbokro	73.75	72	P	P	01 40 14.8	+0.5
	comp=Z,4.1nm,0.5s,baz=228,slow=6.8,SNR=16						
DBIC	Dimbokro	73.75	72	P	P	01 40 14.3	0.0
MAW	Mawson	76.16	164	P	P	01 40 28.7	+1.3
	comp=Z,1.7nm,0.5s,baz=199,slow=6.5,SNR=11						
MAW	Mawson	76.16	164	P	P	01 40 28.2	+0.8
MAW				IAmb	IAmb	01 40 30.1	
	comp=Z,2.5nm,1.4s						
PDAR	Pinedale Array	81.08	333	P	P	01 40 55.9	+1.0
	comp=Z,0.2nm,0.5s,baz=138,slow=8.5,SNR=2.8						
BOSA	Boshof	81.20	118	P	P	01 40 56.6	+0.6
	comp=Z,3.1nm,0.9s,baz=256,slow=0.6,SNR=3.8						
NVAR	Mina Array Bea	81.48	325	P	P	01 40 59.3	+2.2
	comp=Z,0.3nm,0.5s,baz=134,slow=5.2,SNR=2.5						
TORD	Torodi Ar. Bea	82.71	70	P	P	01 41 04.7	+0.9
	comp=Z,1.3nm,0.5s,baz=278,slow=6.3,SNR=47						
TORD	Torodi Ar. Bea	82.71	70	P	P	01 41 03.6	-0.2
TORD				IAmb	IAmb	01 41 05.9	
	comp=Z,5.5nm,1.4s						
ULM	Lac du Bonnet	83.49	345	P	P	01 41 07.6	+0.6
	comp=Z,3.1nm,0.8s,baz=138,slow=5.3,SNR=4.9						
ULM	Lac du Bonnet	83.49	345	P	P	01 41 07.8	+0.8
ULM				IAmb	IAmb	01 41 08.8	
	comp=Z,2.9nm,0.8s						
WRA	Warramunga Arr	123.79	210	PKP	PKPdf	01 47 37.9	-0.1
	comp=Z,0.3nm,0.8s,baz=171,slow=1.6,SNR=1.9						
H11S2	WAKE ISLAND Hy	126.19	271	T	T	04 06 32.0	
	baz=115,slow=75,SNR=26						
H11S1	WAKE ISLAND Hy	126.20	271	T	T	04 06 32.3	
	baz=115,slow=75,SNR=24						
H11S3	WAKE ISLAND Hy	126.20	271	T	T	04 06 33.1	
	baz=115,slow=75,SNR=22						
H11N3	WAKE ISLAND Hy	126.52	273	T	T	04 06 57.3	
	baz=116,slow=75,SNR=14						
H11N1	WAKE ISLAND Hy	126.53	273	T	T	04 06 57.6	
	baz=116,slow=75,SNR=6.4						
H11N2	WAKE ISLAND Hy	126.53	273	T	T	04 06 57.4	
	baz=116,slow=75,SNR=15						
BVAR	Borovoye Array	144.57	40	PKP	PKPdf	01 48 15.6	0.0
	comp=Z,1.5nm,0.5s,baz=243,slow=9.8,SNR=8.9						
KURBB	Kurchatov Arra	150.16	40	PKPbc	PKPbc	01 48 30.8	+0.8
	comp=Z,1.2nm,0.5s,baz=305,slow=3.2,SNR=19						
KURK	Kurchatov	150.17	39		PKPbc	01 48 30.7	+0.7
ZALV	Zalesovo Beam	151.23	30	PKPbc	PKiKP	01 48 33.1	+0.2
	comp=Z,5.5nm,0.5s,baz=298,slow=3.4,SNR=27						
ZALV	Zalesovo Beam	151.23	30		PKiKP	01 48 33.2	+0.3
MKAR	Makanchi Array	154.23	44	PKPbc	PKPbc	01 48 39.4	0.0
	comp=Z,0.5nm,0.7s,baz=316,slow=4.0,SNR=1.7						

IDC 05 01:35:39.4±1.8**, 1°.05N×126°.23E, h0^{km}, mb3.3**/4**, mb1 3.5**/4**, mb1mx3.3**/53**, mbtmp3.4**/4**, Error ellipse: s-maj=179.5km s-min=22.9km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.33	160	P	P	01 40 39.6	+0.7
	0.9nm,0.6s,baz=338,slow=11,SNR=12						
ASAR	Alice Springs	25.68	164	P	P	01 41 10.6	-0.7
	0.4nm,0.8s,baz=340,slow=7.7,SNR=4.2						
MKAR	Makanchi Array	59.48	326	P	P	01 45 44.2	-0.2
	0.2nm,0.5s,baz=134,slow=8.3,SNR=1.3						
KURBB	Kurchatov Arra	63.73	328	P	P	01 46 13.1	+0.2
	0.2nm,0.4s,baz=134,slow=6.9,SNR=4.9						

*TAP **05** 01:37:27.8, 24°.11N×122°.29E, h36^{km}, ML3.2, D*
*JMA **05** 01:37:27.0±0.1, 23°.97N×122°.29E, h23^{km}±3^{km}, M2.4*
ISC 05 01:37:25.7±1.0**, 24°.02N**±0°.02×**122°.31E**±0°.02**, h15**^{km}±9^{km}**, n86, σ0ˢ.62**/133**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EHP	Heping Village	0.59	299	eP	Pn	01 37 39.1	-0.5
	baz=292						
EWUT	Wuta	0.64	311	P	Pn	01 37 39.5	-0.8
	baz=313						
EWUT				eS	Sg	01 37 46.8	+0.1
	baz=313						
TWD	Chiawan	0.65	275	eP	Pn	01 37 40.0	-0.4
	baz=268						
ENA	Nanau	0.65	308	eP	Pb	01 37 38.8	0.0
	baz=310						
ENA				eS	Sb	01 37 47.8	0.0
	baz=310						
TEYL	Yanliau Villag	0.67	257	eP	Pn	01 37 40.6	0.0
	baz=242						
TEYL				eS	Sn	01 37 50.4	-0.4
	baz=242						
NACB	Ninganchiao	0.67	283	P	Pb	01 37 39.7	+0.7
	baz=264						
NACB				S	Sb	01 37 48.9	+0.8
	baz=264						
TWC	Suao	0.72	325	eP	Pg	01 37 39.3	-0.4
	baz=321						
TWC				eS	Sg	01 37 47.4	-1.7
	baz=321						
JYNG	Yonagunijimaku	0.72	54	P	Pn	01 37 41.5	+0.1
JYNG				eS	Sb	01 37 50.9	+1.2
ETM	Tongmen	0.74	266	eP	Pb	01 37 40.9	+0.5
	baz=259						
ETM				eS	Sn	01 37 51.7	-1.1
	baz=259						
ETLH	Xiulin Townshi	0.77	284	eP	Pb	01 37 41.5	+0.6
	baz=277						
ETLH				eS	Sb	01 37 51.8	+0.5
	baz=277						
YOJ	Yonaguni jima	0.78	56	i P	Pn	01 37 42.2	0.0
	baz=61						
YOJ				S	Sn	01 37 54.0	+0.4
	baz=61						
YOJ	Yonaguni jima	0.78	56	P	Pn	01 37 42.1	0.0
YOJ				eS	Sn	01 37 53.5	-0.1
NDS	Dongshan	0.81	319	eP	Pg	01 37 41.3	-0.1
	baz=318						
NDS				eS	Sg	01 37 51.6	-0.5
	baz=318						
ESL	Shilin	0.82	256	eP	Pb	01 37 41.9	+0.1
	baz=240						
ESL				eS	Sn	01 37 54.4	-0.3
	baz=240						
TWE	Neicheng	0.91	320	P	Pn	01 37 43.8	-0.1
	baz=317						
TWE				eS	Sg	01 37 55.1	0.0
	baz=317						
ENTT	Nioudou	0.91	312	P	Pg	01 37 43.7	+0.3
	baz=297						
ENTT				eS	Sb	01 37 54.9	-0.3
	baz=297						
NDT	Datong Townshi	0.92	309	eP	Pn	01 37 44.4	+0.2
	baz=304						
NDT				eS	Sb	01 37 55.3	-0.3
	baz=304						
NNSB	Datong	0.93	296	P	Pn	01 37 44.2	-0.2
	baz=291						
NNSB				eS	Sg	01 37 56.3	+0.2
	baz=291						
NTC	Toucheng	0.93	332	P	Pg	01 37 44.0	+0.2
	baz=339						
NTC				eS	Sb	01 37 55.3	-0.5
	baz=339						
NNS	Nan Shan	0.95	296	P	Pn	01 37 44.6	0.0
	baz=291						
NNS				S	Sg	01 37 56.5	0.0
	baz=291						
WHF	Hehuan Shan	0.96	277	eP	Pn	01 37 45.2	+0.2
	baz=262						
WHF				S	Sb	01 37 57.5	+0.6
	baz=262						
HGSD	Ruisui	0.96	237	P	Pn	01 37 44.9	+0.2
	baz=232						
FUSS	Fushou	0.99	283	eP	Pn	01 37 45.6	+0.3
	baz=278						
TWB1	Santiao Chiao	1.02	344	eS	Sb	01 37 57.7	-0.7
	baz=342						
CHGB	Renai	1.03	272	P	Pg	01 37 45.8	0.0
	baz=258						
CHGB				eS	Sg	01 37 59.6	+0.3
	baz=258						
OWD	Renai	1.03	266	P	Pg	01 37 45.7	0.0
	baz=253						
EHY	Hungye	1.04	240	eP	Pn	01 37 47.5	+1.8
	baz=249						
TIPB	Shuangxi	1.04	335	eP	Pb	01 37 45.6	+0.2
	baz=332						
TIPB				eS	Sb	01 37 58.1	-0.8
	baz=332						
NWLT	Wulai	1.05	316	eP	Pg	01 37 46.1	+0.2
	baz=312						
NWLT				eS	Sb	01 37 58.8	-0.4
	baz=312						
ECBN	Changbin	1.05	228	eP	Pn	01 37 46.0	+0.1
	baz=214						
ECBN				eS	Sg	01 38 00.0	+0.2
	baz=214						
TWT	Tachien	1.06	283	eP	Pn	01 37 47.0	+0.8
	baz=268						
YHNB	Yeheng	1.06	307	eP	Pn	01 37 46.2	+0.1
	baz=292						
YHNB				S	Sb	01 37 59.1	-0.5
	baz=292						
TDCB	Techi	1.07	283	eP	Pg	01 37 47.1	+0.7
	baz=268						
NSK	Sanguang	1.08	307	P	Pn	01 37 46.4	0.0
	baz=291						
NSK				eS	Sb	01 37 59.4	-0.7
	baz=291						
YULB	Yu-li	1.12	236	P	Pb	01 37 46.6	-0.1
	baz=225						
EYUL	Yuli	1.13	234	P	Pg	01 37 47.5	0.0
	baz=221						
EYUL				eS	Sn	01 38 02.5	+0.3
	baz=221						
TWF1	Yuli	1.14	234	eP	Pb	01 37 47.1	0.0
	baz=223						
NWF	Wu-fen Shan	1.15	336	P	Pb	01 37 47.1	-0.2
	baz=346						
NWF				eS	Sb	01 38 01.9	-0.2
	baz=346						
WFSB	Wu-fen Shan	1.15	336	eP	Pb	01 37 47.2	-0.1
	baz=346						
WFSB				eS	Sb	01 38 01.7	-0.3
	baz=346						
TWA	Mucha	1.16	326	eP	Pg	01 37 48.8	+0.7
	baz=322						
TWA				eS	Sb	01 38 02.0	-0.3
	baz=322						
TATO	Taipei	1.21	322	eP	Pn	01 37 48.1	+0.1
	baz=318						
TATO				eS	Sb	01 38 03.3	-0.3
	baz=318						
FULB	Fuli	1.24	229	eP	Pn	01 37 48.4	-0.1
	baz=215						
FULB				eS	Sb	01 38 04.4	-0.2
	baz=215						
SSLB	Suanglung	1.26	260	P	Pb	01 37 49.2	0.0
	baz=247						
DPDB	Guoxing	1.26	271	eP	Pb	01 37 49.5	+0.3
	baz=260						
DPDB				eS	Sg	01 38 06.1	-0.3
	baz=260						
CHKT	Chengkung	1.26	223	eP	Pn	01 37 48.3	-0.4
	baz=212						
CHKT				eS	Sb	01 38 03.8	-1.4
	baz=212						
WHP	Taichung City	1.27	282	eP	Pg	01 37 50.7	+0.6
	baz=270						
WCS	Beigang Elemen	1.27	272	eP	Pb	01 37 49.6	+0.2
	baz=268						
SMLT	Sun Moon Lake	1.29	264	eP	Pb	01 37 49.8	0.0
	baz=260						
YM01	YM01	1.30	329	eP	Pb	01 37 49.9	-0.1
	baz=341						
LIOB	Emei	1.33	298	eP	Pb	01 37 50.6	+0.2
	baz=295						
TYC	Yuchr	1.33	265	eP	Pb	01 37 50.3	-0.1
	baz=261						
YM08	YM08	1.33	331	eP	Pb	01 37 50.8	+0.5
	baz=342						
NSTT	Nanjuang	1.33	297	P	Pg	01 37 51.0	-0.3
	baz=294						
IRIF	Iriomote-Funau	1.34	76	P	Pg	01 37 51.4	0.0
IRIF				eS	Sg	01 38 09.4	+0.5
YUS	Yu-Shan	1.35	247	eS	Sb	01 38 08.2	-0.1
	baz=243						
EDH	Donghe	1.39	221	eP	Pn	01 37 50.1	-0.5
	baz=212						
EDH				eS	Sn	01 38 07.3	-1.4
	baz=212						
ELDTW	Lidau	1.44	235	eP	Pn	01 37 51.4	0.0
	baz=221						
ALS	Alishan	1.47	250	eP	Pb	01 37 53.0	+0.1
	baz=246						
ALS				eS	Sb	01 38 11.8	+0.4
	baz=246						
WNT	Mingjian	1.49	265	eP	Pg	01 37 54.2	-0.1
	baz=261						
WNT				eS	Sg	01 38 13.0	-0.7
	baz=261						
LDUT	Ludao	1.55	210	eP	Pn	01 37 52.4	-0.3
	baz=209						
LDUT				eS	Sn	01 38 10.9	-1.6
	baz=209						
CHN5	Tsauling	1.55	254	P	Pb	01 37 54.6	+0.4
	baz=251						
CHN5				eS	Sg	01 38 14.8	-0.8
	baz=251						
LONT	Longtian	1.55	224	eP	Pn	01 37 52.8	0.0
	baz=232						
JKRS	Kuro-shima	1.57	82	P	Pg	01 37 55.7	-0.2
STYH	Taoyuan	1.64	239	eP	Pb	01 37 55.0	-0.6
	baz=227						
TWGBT	Beinan	1.65	223	eP	Pn	01 37 54.0	-0.1
	baz=231						
WDLH	Douliu	1.65	259	eP	Pb	01 37 56.0	+0.1
	baz=243						
TPUB	Ta-pu	1.70	245	eP	Pb	01 37 56.8	+0.2
	baz=243						
CHN4	Tsaushan	1.71	247	eP	Pb	01 37 56.0	-0.7
	baz=244						
CHN4				eS	Sb	01 38 18.2	+0.2
	baz=244						
JIJ	Ishigaki jima	1.71	78	P	Pn	01 37 55.9	+0.9
JIJ				eS	Sb	01 38 17.7	-0.5
WTP	Ta-pu	1.73	244	eP	Pb	01 37 57.3	0.0
	baz=241						
WTP				eS	Sb	01 38 19.9	+1.0
	baz=241						
WRL	Guolierlin Hig	1.77	266	eS	Sb	01 38 20.2	+0.4
	baz=263						
TWK	Hsinying	1.83	246	eP	Pb	01 37 58.9	+0.1
	baz=243						
TWK				eS	Sb	01 38 21.6	0.0
	baz=243						
CHN1	Nanshi	1.83	243	eP	Pb	01 37 59.2	+0.2
	baz=241						
CHN1				eS	Sb	01 38 22.2	+0.5
	baz=241						
SLGT	Liugui	1.83	236	eP	Pb	01 37 58.9	-0.1
	baz=226						
SLGT				eS	Sb	01 38 21.8	0.0
	baz=226						
SGST	Jiashian	1.84	240	eP	Pb	01 37 58.6	-0.4
	baz=237						
SGST				eS	Sb	01 38 22.1	+0.2
	baz=237						
JISG	Ishigakijimahi	1.91	73	S	Sb	01 38 24.1	+0.1
SSD	Sandimen	2.00	231	eP	Pb	01 38 01.8	+0.1
	baz=222						
MASBT	Mashibuluo	2.08	228	eP	Pb	01 38 02.0	-1.2
	baz=219						
LAY	Lan-yu	2.09	200	eP	Pn	01 37 60.0	-0.3
	baz=199						
EAST	Anshuo	2.11	220	eP	Pn	01 38 02.0	+1.4
	baz=218						
SCZT	Fangliau	2.26	224	eP	Pb	01 38 05.5	-0.7
	baz=218						
SLIU	Shizi	2.27	218	eP	Pn	01 38 04.6	+1.9
	baz=217						
TWKBT	Hengchun	2.49	214	eP	Pn	01 38 06.7	+1.0
	baz=213						
TWK1	Hengchun	2.49	214	eP	Pn	01 38 06.7	+1.0
	baz=213						
PHUB	P'eng-hu	2.56	259	eP	Pn	01 38 08.1	+1.5
	baz=270						
PHUB				eS	Sn	01 38 38.0	+0.6
	baz=270						
PNG	Penghu	2.56	260	eP	Pn	01 38 08.8	+2.2
	baz=258						

*IDC **05** 01:45:25.8±1.6, 35°.97N×53°.53E, h0^{km}, mb3.5/8, mb1 3.7/13, mb1mx3.5/45, mbtmp3.6/13, ML3.4/3, MS3.0/10, Ms1 3.0/10, ms1mx2.7/44, Error ellipse: s-maj=25.9km s-min=16.0km az=10.0*
*TEH **05** 01:45:25.8, 36°.01N×53°.61E, h8^{km}, ML3.9*
*THR **05** 01:45:26.2±0.8, 36°.08N×53°.57E, h14^{km}±8^{km}, ML3.7*
ISC 05 01:45:26.4±0.6**, 36°.07N**±0°.03×**53°.58E**±0°.03**, h10**^{km}**, n118, σ2ˢ.14**/118**, mb3.5**/6**, MS2.8**/5**, 2C-2D, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ISHM	Shahmirzad	0.35	222	ePg	Pg	01 45 32.9	-0.5
ISHM				eSg	Sb	01 45 38.9	-1.6
ISHM				e		01 45 39.7	
	comp=Z,87μm,0.4s						
IGLO	Ghaloghah	0.48	25	ePg	Pg	01 45 35.6	-0.2
IGLO				eSg	Sb	01 45 44.5	+0.2
IGLO				e		01 45 48.2	
	comp=Z,47μm,0.3s						
IANJ	Anjilo	0.66	155	ePg	Pg	01 45 37.3	-1.8
IFIR	Firoozkooh	0.79	238	ePg	Pg	01 45 40.5	-1.2
IFIR				eSg	Sb	01 45 52.5	-0.8
IFIR				e		01 45 53.4	
	comp=Z,70μm,0.4s						
ILAS	Lasjerd	0.85	217	ePg	Pg	01 45 42.0	-0.7
IPRN	Peran	1.02	280	ePg	Pg	01 45 45.1	-0.9
IPRN				e		01 46 23.3	
	comp=Z,19μm,0.6s						
IDMV	Damavand	1.35	249	ePn	Pn	01 45 50.5	-1.0
IDMV				e		01 46 18.0	
	comp=Z,19μm,0.3s						
DAMV	Damavand	1.38	252	ePg	Pn	01 45 51.0	-0.9
DAMV				IAML		01 46 18.5	
	comp=N,814nm,0.3s						
DAMV				IAML		01 46 19.3	
	comp=E,1μm,0.4s						
DAMV	Damavand	1.38	252	ePg	Pn	01 45 51.0	-0.9
TEHA	Amirabad Tehra	1.81	261	ePn	Pg	01 46 00.2	-0.8
TEH	Tehran	1.81	260	ePn	Pg	01 46 00.3	-0.8
IVRN	Varamin	1.85	235	ePn	Pb	01 45 59.6	-0.7
IVRN				e		01 46 01.8	
	comp=Z,15μm,0.3s						
IMND	Minoodasht	1.89	50	ePn	Pb	01 45 59.8	-1.2
IHSB	Hasanabad	1.97	252	e		01 46 04.8	
	comp=Z,6μm,0.2s						
IHSB				ePn	Pb	01 46 02.0	-0.5
CHTH	Charan	2.00	266	ePn	Pb	01 46 01.7	-1.2
CHTH	Charan	2.00	266	ePn	Pb	01 46 01.7	-1.2
ISFB	Sefidab	2.03	213	ePn	Pb	01 46 01.3	-2.1
ISFB				e		01 46 32.0	
	comp=Z,6μm,0.3s						
THKV	Tehran--Karaj	2.19	267	ePn	Pn	01 46 04.3	+1.2
THKV				IAML		01 46 45.7	
	comp=N,451nm,0.4s						
THKV	Tehran--Karaj	2.19	267	ePn	Pn	01 46 04.3	+1.2
IQOM	Qom	2.38	240	e		01 46 46.9	
	comp=Z,10μm,0.3s						
IQOM				ePn	Pb	01 46 07.1	-2.4
IMHD	Mahdasht	2.39	262	e		01 46 51.2	
	comp=Z,4μm,0.4s						
IMHD				ePn	Pb	01 46 08.8	-0.8
QALM	Alamut, Qazvin	2.40	280	ePn	Pb	01 46 08.9	-0.9
KRSH	Karshahi	2.40	210	e		01 46 44.7	
	comp=Z,11μm,0.5s						
KRSH				ePn	Pn	01 46 06.8	+0.9
GHVR	GHOM	2.45	230	ePn	Pb	01 46 08.4	-2.1
GHVR				eSg	Sg	01 46 44.6	-0.4
GHVR				IAML		01 46 53.0	
	comp=E,624nm,0.3s						
GHVR				IAML		01 46 56.4	
	comp=N,358nm,0.5s						
GHVR	GHOM	2.45	230	ePn	Pb	01 46 08.4	-2.1
MRVT	Maraveh tapeh	2.57	51	ePn	Pn	01 46 09.6	+1.5
MRVT				IAML		01 46 54.9	
	comp=N,213nm,0.7s						
MRVT				IAML		01 46 55.7	
	comp=E,251nm,0.6s						
MRVT	Maraveh tapeh	2.57	51	ePn	Pn	01 46 09.6	+1.5
IGZV	Ghazvin	2.73	278	ePn	Pb	01 46 14.7	-0.8
IGZV				e		01 46 59.3	
	comp=Z,8μm,0.9s						
ANAR	Anarak	2.87	177	ePn	Pn	01 46 13.2	+0.9
QCNT	Qazvin	2.90	276	ePn	Pn	01 46 15.3	+2.6
QAMS	Qamsar	2.94	218	ePn	Pn	01 46 14.4	+1.1
IRAZ	Razeghan	3.04	259	ePn	Pn	01 46 17.2	+2.5
JIR1	Jirandeh	3.11	283	ePn	Pb	01 46 18.9	-3.0
JIR1				e		01 47 06.9	
	comp=Z,5μm,0.4s						
IKLH	Kolahrood	3.20	212	ePn	Pn	01 46 18.7	+1.8
TNSJ	Nastanj	3.25	129	ePn	Pn	01 46 18.3	+0.7
QABG	Abgarm-Qazvin	3.26	265	ePn	Pn	01 46 20.0	+2.2
ASAO	Ashtian	3.28	244	ePn	Pn	01 46 19.5	+1.5
ASAO	Ashtian	3.28	244	ePn	Pn	01 46 19.5	+1.5
SBZV	Sabzevar	3.28	83	ePn	Pn	01 46 20.0	+2.0
NASN	Na'in	3.32	191	ePn	Pn	01 46 19.9	+1.2
NASN	Na'in	3.32	191	ePn	Pn	01 46 19.9	+1.2
IZEF	Zefreh	3.33	198	ePn	Pn	01 46 20.6	+1.9
ISFR	Sfrayin	3.69	73	ePn	Pn	01 46 25.8	+2.0
ISFR				e		01 47 38.0	
	comp=Z,3μm,1.1s						
YZKH	Yazd	3.76	167	ePn	Pn	01 46 26.1	+1.6
YZKH	Yazd	3.76	167	ePn	Pn	01 46 26.1	+1.6
TABS	Tabas	3.78	129	ePn	Pn	01 46 26.4	+1.6
TABS				IAML		01 47 48.0	
	comp=N,111nm,0.6s						
TABS	Tabas	3.78	129	ePn	Pn	01 46 26.4	+1.6
TKDS	Koohdasht(Taba	3.81	129	ePn	Pn	01 46 26.0	+0.8
HAGD	Aghdareh	3.83	252	ePn	Pn	01 46 28.1	+2.5
IGAR	Gharneh	3.87	200	ePn	Pn	01 46 27.4	+1.3
ICHK	Chekchek	3.87	170	ePn	Pn	01 46 27.3	+1.1
TPRV	Parvadeh(Tabas	3.97	139	ePn	Pn	01 46 28.3	+0.9
ZNJK	Zanjan	4.00	280	ePn	Pn	01 46 31.8	+3.9
ZNJK				IAML		01 47 39.0	
	comp=N,47nm,0.7s						
ZNJK	Zanjan	4.00	280	ePn	Pn	01 46 31.8	+3.9
IPIR	Pirpir	4.04	214	ePn	Pn	01 46 30.5	+2.0
IPIR				e		01 46 46.4	
	comp=Z,917nm,0.5s						
GEYT	Alibeck	4.08	62	Pn	Pn	01 46 31.7	+2.8
	comp=Z,4.2nm,0.3s,baz=242,slow=18,SNR=50						
GEYT				Sn	Sb	01 47 22.5	-5.3
	comp=Z,3.5nm,0.3s,baz=252,slow=12,SNR=1.9						
GEYT				Lg	Lg	01 47 39.1	
	comp=Z,3.1nm,0.3s,baz=248,slow=26,SNR=1.8						
ISAD	Sadrabad	4.14	179	ePn	Pn	01 46 30.7	+0.8
IAKL	Akhelmad	4.21	81	ePn	Pn	01 46 32.7	+1.7
SHK1	Shahrekord	4.34	212	ePn	Pn	01 46 34.7	+2.0
IRAM	Ramesheh	4.36	194	ePn	Pn	01 46 34.3	+1.4
IPAY	Payeh	4.40	83	ePn	Pn	01 46 35.0	+1.6
IPAY				e		01 46 58.9	
	comp=Z,488nm,0.7s						
HSAM	Samen	4.48	247	ePn	Pn	01 46 37.2	+2.7
IALM	Almabolaq	4.58	256	ePn	Pn	01 46 38.5	+2.6
IMOG	Moghan	4.67	88	ePn	Pn	01 46 39.6	+2.4
IMEH	Mehriz	4.74	169	ePn	Pn	01 46 39.4	+1.2
IKRD	Kardeh	4.84	80	ePn	Pn	01 46 40.5	+1.0
IBZA	Bozab	4.94	253	ePn	Pn	01 46 43.6	+2.7
IDOB	Doab	4.98	244	ePn	Pn	01 46 44.2	+2.7
ISRB	Sarab	5.05	292	ePn	Pn	01 46 45.1	+2.7
AFRZ	Afriz	5.19	119	ePn	Pn	01 46 45.4	+1.1
IMYA	Miami	5.28	85	ePn	Pn	01 46 47.2	+1.7
GRMI	Germi	5.29	303	ePn	Pn	01 46 46.8	+1.3
GRMI				IAML		01 47 55.1	
	comp=E,34nm,0.5s						
GRMI	Germi	5.29	303	ePn	Pn	01 46 46.8	+1.3
KLNJ	Kolanjah	5.31	199	ePn	Pn	01 46 48.0	+2.0
ITEG	Tejag	5.31	125	ePn	Pn	01 46 47.2	+1.3
IKFM	Kafar-mosalman	5.35	243	ePn	Pn	01 46 49.0	+2.7

JRKH	**Jarkhoshk**	5.49	90	*e*Pn	Pn	01 46 49.7	+1.3
TBJM	**Torbat-e-JAM**	5.55	96	*e*Pn	Pn	01 46 50.6	+1.3
AMIS	**Naft Sefid**	5.66	220	*e*Pn	Pn	01 46 52.8	+2.3
IHRS	**Heris**	5.68	295	*e*Pn	Pn	01 46 53.5	+2.5
IKOO	**Kooshah**	5.78	127	*e*Pn	Pn	01 46 53.5	+1.1
IGHG	**Ghaleghazi**	5.99	255	*e*Pn	Pn	01 46 58.2	+2.8
SHRT	**Shahrakht**	6.02	112	*e*Pn	Pn	01 46 57.6	+2.0
SHRT	**Shahrakht**	6.02	112	*e*Pn	Pn	01 46 57.6	+2.0
IDHR	**Dehrash**	6.03	259	*e*Pn	Pn	01 46 59.0	+3.2
BSRN	**Basiran**	6.16	130	*e*Pn	Pn	01 46 59.1	+1.6
BSRN	**Basiran**	6.16	130	*e*Pn	Pn	01 46 59.1	+1.6
IDAH	**Dahanechah**	6.17	121	*e*Pn	Pn	01 46 59.1	+1.3
KHGB	**Koh Gabri**	6.17	156	*e*Pn	Pn	01 46 58.5	+0.7
ISHB	**Shabestar**	6.73	292	*e*Pn	Pn	01 47 08.3	+2.8
IMRD	**Marand**	6.80	295	*e*Pn	Pn	01 47 09.9	+3.5
CHMN	**Cheshme madani**	7.03	151	*e*Pn	Pn	01 47 10.9	+1.3
NHDN	**Nehbandan**	7.12	129	*e*Pn	Pn	01 47 12.2	+1.4
GNI	**Garni**	8.07	303	Pn	Pn	01 47 28.7	+4.9
	comp=E,0.4nm,0.3s,baz=297,slow=4.5,SNR=2.9						
GNI				Sn	Sn	01 49 00.7	+5.5
	comp=E,0.2nm,0.3s,baz=214,slow=23,SNR=1.4						
ZHSF	**Zahedan**	8.83	135	*e*Pn	Pn	01 47 36.6	+2.3
ZHSF	**Zahedan**	8.83	135	*e*Pn	Pn	01 47 36.6	+2.3
KBZ	**Khabaz**	11.21	316	Pn	Pn	01 48 09.3	+2.7
	comp=E,0.1nm,0.3s,baz=84,slow=16,SNR=1.0						
KBZ				Sn	Sn	01 50 08.1	-3.9
	comp=E,0.1nm,0.3s,baz=146,slow=17,SNR=1.7						
KVAR	**Kislovodsk Arr**	11.47	317	Pn	Pn	01 48 10.6	+0.3
	baz=139,slow=23,SNR=1.0						
KVAR				Sn	Sn	01 50 14.1	-4.3
	baz=65,slow=16,SNR=2.0						
AB31	**Akbulak array**	13.98	17	⇑P	Pn	01 48 45.6	+1.1
	comp=E,1.5nm,0.8s,baz=197,slow=13,SNR=13						
AB31				⇑S	Sn	01 51 10.7	-9.0
	comp=E,0.7nm,0.4s,baz=195,slow=24,SNR=8.8						
AKTO	**Aktyubinsk**	14.72	11	Pn	Pn	01 48 52.3	-2.2
	comp=E,0.2nm,0.3s,baz=167,slow=11,SNR=7.2						
AKTO				Sn	Sn	01 51 31.4	-6.2
	comp=E,0.1nm,0.3s,baz=86,slow=15,SNR=2.7						
AKTO				LR	LR	01 56 15.4	
	comp=E,73nm,18.0s,baz=187,slow=44						
AKTO	**Aktyubinsk**	14.72	11	⇓P	Pn	01 48 56.8	+2.3
	comp=E,3.7nm,0.9s						
AKTO				⇓S	Sn	01 51 32.1	-5.5
	comp=E,3.9nm,1.1s						
MMAI	**Mount Meron Ar**	15.29	264	LR	LR	01 55 35.9	
	comp=E,59nm,18.2s,baz=80,slow=40						
BRTR	**Keskin Array B**	16.16	289	LR	LR	01 56 05.1	
	comp=E,42nm,19.8s,baz=115,slow=40						
BELG	**Belogornoye**	16.86	347	Pn	Pn	01 49 21.2	-1.1
	comp=E,0.3nm,0.3s,baz=122,slow=2.3,SNR=4.2						
BELG				Sn	Sn	01 52 17.1	-13
	comp=E,0.1nm,0.3s,baz=291,slow=22,SNR=1.3						
EIL	**Elat**	16.89	253	LR	LR	01 56 58.2	
	comp=E,41nm,19.8s,baz=116,slow=41						
AAK	**Ala-Archa**	17.44	62	P	Pn	01 49 29.7	-0.1
	baz=264,slow=10,SNR=2.2						
AAK				LR	LR	01 56 51.6	
	comp=E,45nm,21.3s,baz=268,slow=39						
ARU	**Arti**	20.65	8	P	Pn	01 50 08.2	-0.1
	comp=E,0.5nm,0.5s,baz=167,slow=9.0,SNR=3.5						
ARU				LR	LR	01 58 27.9	
	comp=E,39nm,19.0s,baz=166,slow=38						
BVAR	**Borovoye Array**	20.67	30	P	Pn	01 50 08.3	-0.3
	comp=E,3.8nm,0.9s,baz=216,slow=20,SNR=8.5						
OBN	**Obninsk**	22.35	334	LR	LR	02 01 13.7	
	comp=E,11nm,20.7s,baz=353,slow=42						
KIRV	**Kirov**	22.70	354	LR	LR	02 02 00.3	
	comp=E,34nm,18.7s,baz=168,slow=44						
AKASG	**Malin Array Be**	22.82	317	P	P	01 50 30.5	+1.3
	comp=E,0.5nm,0.4s,baz=117,slow=11,SNR=2.0						
MLR	**Muntele Rosu**	22.85	303	LR	LR	02 00 42.4	
	comp=E,20nm,19.9s,baz=116,slow=40						
KURBB	**Kurchatov Arra**	23.11	43	P	P	01 50 35.0	+2.7
	comp=E,0.7nm,0.9s,baz=243,slow=12,SNR=8.7						
MKAR	**Makanchi Array**	23.92	54	P	P	01 50 42.3	+1.8
	comp=E,1.7nm,0.9s,baz=242,slow=7.5,SNR=4.8						
ZALV	**Zalesovo Beam**	28.09	41	P	P	01 51 19.9	+1.9
	comp=E,0.4nm,0.4s,baz=265,slow=6.9,SNR=2.0						
SONM	**Songino Array**	40.27	56	P	P	01 53 05.4	+1.9
	comp=E,0.2nm,0.4s,baz=328,slow=5.1,SNR=3.9						
CMAR	**Chiang Mai Arr**	43.55	101	P	P	01 53 31.2	+0.7
	comp=E,1.2nm,0.3s,baz=304,slow=8.5,SNR=10						
LBTB	**Lobatse**	66.25	208	LR	LR	02 28 11.9	
	comp=E,55nm,19.1s,baz=84,slow=39						

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*EAF **05** 01:56:43.7±11.0, 15.°29N×40.°66E, h0^{km}±999^{km}*

ISC 05 01:56:45.3±3.3**, 15.°1N**±0.°2×**40.°8E**±0.°1**, h10**^{km}**, n19, σ3^s.95**/24**, Ethiopia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TEND	**Ethiopian Broa**	3.33	176	*e*P	Pn	01 57 36.3	-1.3
TEND				*e*S	Sn	01 58 17.0	-0.3
SILA	**Clinic, Silare**	3.59	229	*i* P	Pn	01 57 43.3	+2.0
SILA				*i* S	Sn	01 58 11.2	-13
GOND	**University, Go**	4.10	232	*i* P	Pb	01 57 53.0	-4.8
GOND				*i* S	Sn	01 58 29.0	-7.6
DESE	**Dese**	4.14	196	*e*P	Pn	01 57 43.3	-5.7
DESE				*e*S	Sn	01 58 29.5	-8.2
BAHR	**High School, B**	4.84	223	*i* P	Pn	01 58 01.0	+2.5
BAHR				*i* S	Sn	01 58 46.8	-8.1
MERTO	**Secondary Scho**	4.88	210	*i* P	Pn	01 58 04.2	+5.0
MERTO				*i* S	Sn	01 58 47.0	-9.0
SHAW	**Medical Clinic**	4.95	230	*i* P	Pn	01 58 02.0	+2.0
SHAW				*i* S	Sn	01 58 51.6	-5.9
MUKA	**Police Camp, M**	5.25	235	*i* P	Pn	01 58 05.7	+1.8
MUKA				*i* S	Sn	01 59 02.8	-1.9
MELAE	**School, Dubaba**	5.40	240	*i* P	Pb	01 58 18.2	-1.7
MELAE				*i* S	Sn	01 59 09.7	+1.2
ANKE	**Ethiopia-Afar**	5.60	190	*e*P	Pn	01 58 08.8	-0.2
ANKE				*e*S	Sn	01 59 17.3	+3.6
CHGE	**School, Chagni**	5.86	225	*i* P	Pb	01 58 22.0	-5.7
CHGE				*i* S	Sn	01 59 17.5	-2.4
ABMD	**Abulta/Almeha**	6.02	238	*i* P	Pn	01 58 16.4	+1.9
ABMD				*i* S	Sn	01 59 26.2	+2.7
HARA	**HARA**	6.31	157	*e*P	Pn	01 58 25.1	+6.4
AAE	**Adis Abeba**	6.38	198	*e*P	Pn	01 58 25.1	+5.5
AAE				*e*S	Sn	01 59 38.2	+5.5
KIRE	**School, Kiremu**	6.40	217	*i* P	Pn	01 58 21.4	+1.4
KIRE				*i* S	Sn	01 59 31.8	-1.4
GUBA	**Police Station**	6.57	235	*i* P	Pb	01 58 33.5	-6.3
GUBA				*i* S	Sn	01 59 43.0	+5.8
DEBR	**School, Debre**	6.69	229	*i* P	Pn	01 58 30.4	+6.4
HARO	**School, Haroo**	6.82	220	*i* P	Pn	01 58 29.5	+3.8
SHERE	**Police Station**	7.37	233	*i* P	Pn	01 58 36.4	+3.2

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*KRSC **05** 01:59:17.1±1.1, 56.°19N×162.°86E, h36^{km}±9^{km}, ML5.9*
*MOS **05** 01:59:19.5±1.2, 56.°24N×162.°57E, h49^{km}, mb5.6/91, MS4.8/25, Error ellipse: s-maj=5.2km s-min=3.1km az=82.6*
*IDC **05** 01:59:20.9±1.4, 56.°18N×162.°46E, h44^{km}±12^{km}, mb4.8/33, mb1 5.0/38, mb1mx5.0/45, mbtmp5.1/38, ML5.2/4, MS4.6/38, Ms1 4.6/38, ms1mx4.5/46, Error ellipse: s-maj=11.3km s-min=8.5km az=148.0*
*BJI **05** 01:59:20.2±0.0, 56.°12N×162.°20E, h56^{km}, mB5.1/43, mb5.3/60, Ms5.1/66, Ms7 5.0/66*
*GCMT **05** 01:59:21.4±0.1, 56.°19N±0.°01×162.°76E±0.°02, h31^{km}, MW5.2/124, Moment Tensor Solution. s97,c152; s124,c208; Duration: 1^{s}0 Moment tensor: Scale 10^{16} Nm; M_{rr}5.44±.15; $M_{\theta\theta}$-6.16±.11; $M_{\phi\phi}$0.71±.11; $M_{r\theta}$-0.11±.17; $M_{\theta\phi}$-3.02±.09; $M_{\phi r}$4.09±.18; Best double couple: $M_0$7.72500×10^{16} NP1:ϕ_s277.00000°, δ47.00000°, λ136.00000°. NP2:ϕ_s41.00000°, δ59.00000°, λ52.00000°. Principal axes: T 7.9920, Plg58.0000°, Azm257.0000°; N -0.5390, Plg32.0000°, Azm62.0000°; P -7.4570, Plg7.0000°, Azm157.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **05** 01:59:22.4±1.3, 56.°20N±0.°07×162.°4E±0.°1, h61^{km}±4^{km}, mb5.2/650 Error ellipse: s-maj=12.7km s-min=9.7km az=126.0*
*BGR **05** 01:59:25.4±0.0, 56.°18N×162.°37E, h72^{km}±1^{km}, mb5.3*

ISC 05 01:59:19.7±0.4**, 56.°21N**±0.°03×**162.°65E**±0.°02**, h42**^{km}±3^{km}**, h42**^{km}**:pP-P, n1698, σ1^s.56**/1512**, mb5.3**/565**, MS4.8**/85**, 127C-47D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBG	**Krutoberegovo**	0.06	34	PN	Pn	01 59 23.8	-2.6
KBG	**Krutoberegovo**	0.06	34	*e*P	Pn	01 59 23.8	-2.6
KBG				*e*S	Sn	01 59 28.0	-3.1
KBTR	**Krutoberegovo**	0.10	89	PN	Pn	01 59 23.9	-2.7
KBTR	**Krutoberegovo**	0.10	89	*e*P	Pn	01 59 23.9	-2.7
SMKR	**Semkarok**	0.76	300	PN	Pn	01 59 33.3	-0.7
SMKR	**Semkarok**	0.76	300	*e*P	Pn	01 59 33.3	-0.7
BDR	**Baidarnaya**	0.88	295	PN	Pn	01 59 35.7	0.0
BDR	**Baidarnaya**	0.88	295	*e*P	Pn	01 59 35.7	0.0
SRKR	**Sorokina**	0.94	299	PN	Pn	01 59 36.4	-0.1
SRKR	**Sorokina**	0.94	299	*i* P	Pn	01 59 36.4	-0.1
ZLN	**Zelenaya**	1.05	260	PN	Pn	01 59 38.7	+0.7
ZLN	**Zelenaya**	1.05	260	*i* P	Pn	01 59 38.7	+0.7
CIRR	**Tsirk**	1.07	266	PN	Pn	01 59 38.8	+0.5
CIRR	**Tsirk**	1.07	266	*i* P	Pn	01 59 38.8	+0.5
LGNR	**Loginova**	1.10	264	PN	Pn	01 59 39.8	+0.9
LGNR	**Loginova**	1.10	264	*e*P	Pn	01 59 39.8	+0.9
KLY	**Klyuchi**	1.12	276	PN	Pn	01 59 37.5	-1.4
KLY	**Klyuchi**	1.12	276	*i* P	Pn	01 59 37.5	-1.4
BZGR	**Bezymyannyi-Gr**	1.12	257	*e*S	Sn	01 59 55.2	+1.8
KRSR	**Krestovskiy**	1.16	271	PN	Pn	01 59 39.7	+0.1
KRSR	**Krestovskiy**	1.16	271	*e*P	Pn	01 59 39.7	+0.1
BZWR	**Bezymyannyi-We**	1.23	260	PN	Pn	01 59 41.5	+0.9
BZWR	**Bezymyannyi-We**	1.23	260	*e*P	Pn	01 59 41.5	+0.9
KIRR	**Kirishev**	1.32	260	PN	Pn	01 59 42.7	+1.0
KIRR	**Kirishev**	1.32	260	*i* P	Pn	01 59 42.7	+1.0
KPT	**Kopyto**	1.38	261	PN	Pn	01 59 43.6	+1.0
KPT	**Kopyto**	1.38	261	*i* P	Pn	01 59 43.6	+1.0
KMNR	**Kamenistaya**	1.43	253	PN	Pn	01 59 44.6	+1.4
KMNR	**Kamenistaya**	1.43	253	*e*P	Pn	01 59 44.6	+1.4
KOZ	**Kozyrevsk**	1.56	266	PN	Pn	01 59 47.1	+2.1
KOZ				S	Sn	02 00 08.4	+4.5
KOZ	**Kozyrevsk**	1.56	266	*i* P	Pn	01 59 47.1	+2.1
KOZ				*i* S	Sn	02 00 08.4	+4.5
TUMD	**Tumrok D**	1.62	233	*e*P	Pn	01 59 47.0	+1.2
TUMD				*e*S	Sn	02 00 10.1	+4.6
TUMR	**Tumrok**	1.69	238	PN	Pn	01 59 47.0	+0.2
TUMR				S	Sn	02 00 10.1	+2.8
TUMR	**Tumrok**	1.69	238	*e*P	Pn	01 59 48.3	+1.5
MKZ	**Mys Kozlova**	1.73	198	PN	Pn	01 59 48.3	+1.0
MKZ	**Mys Kozlova**	1.73	198	*e*P	Pn	01 59 48.3	+1.0
BKI	**Bering**	2.13	117	PN	Pn	01 59 52.3	-0.5
BKI				S	Sn	02 00 18.2	+0.2
BKI	**Bering**	2.13	117	*e*P	Pn	01 59 52.3	-0.5
BKI				*e*S	Sn	02 00 18.2	+0.2
ESO	**Esso**	2.23	264	PN	Pn	01 59 58.9	+4.7
ESO	**Esso**	2.23	264	*i* P	Pn	01 59 58.9	+4.7
KII	**Karymskiy**	2.85	221	PN	Pn	02 00 04.9	+2.2
KII				S	Sn	02 00 40.4	+4.7
KII	**Karymskiy**	2.85	221	*e*P	Pn	02 00 04.9	+2.2
KII				*e*S	Sn	02 00 40.4	+4.7
OSSR	**Ossora**	3.06	4	PN	Pn	02 00 06.3	+0.8
OSSR				S	Sn	02 00 41.0	+0.2
OSSR	**Ossora**	3.06	4	*e*P	Pn	02 00 06.3	+0.8
OSSR				*e*S	Sn	02 00 41.0	+0.2
PALN	**Palana**	3.23	335	PN	Pn	02 00 09.7	+1.9
PALN	**Palana**	3.23	335	*e*P	Pn	02 00 09.7	+1.9
SPN	**Mys Shipunski**	3.47	207	PN	Pn	02 00 11.7	+0.6
SPN				S	Sn	02 00 49.9	-1.0
SPN	**Mys Shipunski**	3.47	207	*e*P	Pn	02 00 11.7	+0.6
SPN				*e*S	Sn	02 00 49.9	-1.0
NLC	**Nalytchevo**	3.59	214	PN	Pn	02 00 14.7	+1.9
NLC				S	Sn	02 00 56.9	+2.9
NLC	**Nalytchevo**	3.59	214	*e*P	Pn	02 00 14.7	+1.9
NLC				*e*S	Sn	02 00 56.9	+2.9
SDLR	**Sedlovina**	3.66	218	PN	Pn	02 00 16.1	+2.3
SDLR	**Sedlovina**	3.66	218	*e*P	Pn	02 00 16.1	+2.3
KRER	**Koryakskii**	3.68	219	PN	Pn	02 00 17.0	+2.7
KRER	**Koryakskii**	3.68	219	*e*P	Pn	02 00 17.0	+2.7
SMAR	**Somma**	3.70	219	PN	Pn	02 00 16.8	+2.3
SMAR				S	Sn	02 00 59.4	+2.6
SMAR	**Somma**	3.70	219	*e*P	Pn	02 00 16.8	+2.3
SMAR				*e*S	Sn	02 00 59.4	+2.6
GNL	**Ganaly**	3.70	229	PN	Pn	02 00 16.8	+2.4
GNL	**Ganaly**	3.70	229	*i* P	Pn	02 00 16.8	+2.4
AVH	**Avacha**	3.72	219	PN	Pn	02 00 17.6	+3.0
AVH	**Avacha**	3.72	219	*e*P	Pn	02 00 17.6	+3.0
KOK	**Koryaka**	3.73	220	PN	Pn	02 00 18.2	+3.4
KOK	**Koryaka**	3.73	220	*e*P	Pn	02 00 18.2	+3.4
UGLR	**Uglovaya**	3.73	218	PN	Pn	02 00 17.3	+2.4
UGLR	**Uglovaya**	3.73	218	*e*P	Pn	02 00 17.3	+2.4
DALK	**Dalny**	3.90	217	PN	Pn	02 00 19.3	+2.2
DALK				S	Sn	02 01 04.8	+3.2
DALK	**Dalny**	3.90	217	*i* P	Pn	02 00 19.3	+2.2
DALK				*i* S	Sn	02 01 04.8	+3.2
PET	**Petropavlovsk**	3.94	218α	*i*PN	Pn	02 00 20.0	+2.4
PET				*e*S	Sn	02 01 06.1	+3.5
PET				pmax	pmax		
	comp=Z,4μm,1.5s						
PET				pmax	pmax		
	comp=Z,900nm,2.0s						
PET				pmax	pmax		
	comp=Z,1μm,0.6s						
PET				smax	smax		
	comp=E,10μm,0.8s						
PET				smax	smax		
	comp=N,8μm,0.7s						
PET				MLR	MLR		
	comp=Z,13μm,16.0s						
PET				MLR	MLR		
	comp=Z,16μm,12.0s						
PET	**Petropavlovsk**	3.94	218	*e*P	Pn	02 00 20.5	+2.9
PET				*e*S	Sn	02 01 05.8	+3.2
PET	**Petropavlovsk**	3.94	218		Pn	02 00 19.5	+1.8
PET				Sn	Sn	02 01 05.0	+2.4
PET	**Petropavlovsk**	3.94	218	P	Pn	02 00 20.0	+2.4
PEA0B	**Petropavlovsk-**	4.23	225c	*e*PN	Pn	02 00 24.0	+2.4
PEA0B	**Petropavlovsk-**	4.23	225	Pn	Pn	02 00 23.8	+2.2
PEA0B				Sn	Sn	02 01 09.2	-0.5
PETK	**Petropavlovsk-**	4.23	225	P	Pn	02 00 22.9	+1.4
	comp=Z,29nm,0.3s,baz=70,slow=15,SNR=330						
PETK				S	Sn	02 01 20.5	+11
	comp=Z,30nm,0.3s,baz=261,slow=32,SNR=6.6						
PETK				LR	LR	02 02 13.1	
	comp=Z,10μm,20.8s,baz=10,slow=42						
PETK	**Petropavlovsk-**	4.23	225	PN	Pn	02 00 23.1	+1.5
PETK	**Petropavlovsk-**	4.23	225	Pn	Pn	02 00 23.1	+1.5
RUS	**Russkaya**	4.49	214	PN	Pn	02 00 27.5	+2.4
RUS				S	Sn	02 01 18.2	+2.2
RUS	**Russkaya**	4.49	214	*e*P	Pn	02 00 27.5	+2.4
RUS				*e*S	Sn	02 01 18.2	+2.2
GRL	**Gorelyy**	4.53	218	PN	Pn	02 00 29.4	+3.5
GRL				S	Sn	02 01 23.4	+6.1
GRL	**Gorelyy**	4.53	218	*e*P	Pn	02 00 29.4	+3.5
GRL				*i* S	Sn	02 01 23.4	+6.1
MTVR	**Mutnovka**	4.55	217	PN	Pn	02 00 29.2	+3.0
MTVR				S	Sn	02 01 21.7	+3.9
MTVR	**Mutnovka**	4.55	217	*e*P	Pn	02 00 29.2	+3.0
MTVR				*e*S	Sn	02 01 21.7	+3.9
APC	**Apacha**	4.58	226	PN	Pn	02 00 29.4	+3.0
APC				S	Sn	02 01 23.8	+5.5
APC	**Apacha**	4.58	226	*e*P	Pn	02 00 29.4	+3.0
APC				*e*S	Sn	02 01 23.8	+5.5
TILK	**Tilichiki**	4.63	22	PN	Pn	02 00 29.3	+2.2
TILK	**Tilichiki**	4.63	22	*i* P	Pn	02 00 29.3	+2.2
KDTR	**Khodutka, Kamc**	5.16	213	PN	Pn	02 00 35.9	+1.5
KDTR				S	Sn	02 01 36.1	+3.5
KDTR	**Khodutka, Kamc**	5.16	213	*e*P	Pn	02 00 35.9	+1.5
KDTR				*e*S	Sn	02 01 36.1	+3.5
MIPR	**Malaya Ipel'ka**	5.24	224	PN	Pn	02 00 38.8	+3.4
MIPR	**Malaya Ipel'ka**	5.24	224	*e*P	Pn	02 00 38.8	+3.4
PAU	**Pauzhetka**	5.87	218	PN	Pn	02 00 46.8	+2.7
PAU	**Pauzhetka**	5.87	218	*e*P	Pn	02 00 46.8	+2.7
KMSK	**Kamenskaya**	6.54	15	PN	Pn	02 00 55.4	+2.2
KMSK	**Kamenskaya**	6.54	15	*e*P	Pn	02 00 55.4	+2.2
KMSK				*e*S	Sn	02 02 08.7	+2.4
SKR	**Severo-Kuril’s**	6.77	218	*e*PN	Pn	02 00 58.4	+2.0
SKR				pmax	pmax		
	comp=Z,1μm,2.9s						
SKR				pmax	pmax		
	comp=Z,300nm,3.9s						
SKR				pmax	pmax		
	comp=Z,601nm,0.9s						
SKR				MLR	MLR		
	comp=Z,5μm,15.0s						
SKR				MLR	MLR		
	comp=Z,4μm,11.0s						
SKR	**Severo-Kuril’s**	6.77	218	*e*P	Pn	02 00 58.3	+1.9
MA2	**Magadan**	7.17	303	P	Pn	02 01 03.9	+1.9
	comp=Z,2.8nm,0.3s,baz=7.6,slow=21,SNR=9.0						
MA2				LR	LR	02 04 02.2	
	comp=Z,8μm,19.1s,baz=93,slow=40						
MA2	**Magadan**	7.17	303	P	Pn	02 01 13.1	+11
SEY	**Seymchan**	8.51	327	P	Pn	02 01 22.5	+2.2
	comp=Z,0.5nm,0.3s,baz=130,slow=12,SNR=8.4						
SEY				LR	LR	02 04 55.2	
	comp=Z,7μm,19.9s,baz=114,slow=39						
SEY	**Seymchan**	8.51	327	*i* PN	Pn	02 01 23.3	+3.0
OKH	**Okha**	11.66	265c	*i*PN	Pn	02 02 10.1	+6.9
OKH				*e*S	Sn	02 04 22.1	+10
OKH				pmax	pmax		
	comp=Z,200nm,9.6s						
OKH				smax	smax		
	comp=E,400nm,16.6s						
OKH				MLR	MLR		
	comp=E,3μm,14.0s						
OKH				MLR	MLR		
	comp=Z,3μm,14.0s						
OKH				MLR	MLR		
	comp=N,1μm,13.0s						
ADK	**Adak**	12.88	101	P	P	02 02 26.7	-3.1
	comp=N,182nm,1.5s						
TYV	**Tymovskoe**	13.02	254	*e*PN	P	02 02 26.7	-4.7
TYV				*e*S	Sn	02 04 53.4	+8.3
TYV				pmax	pmax		
	comp=Z,1μm,2.1s						
TYV				pmax	pmax		
	comp=Z,251nm,1.3s						
TYV				smax	smax		
	comp=N,40nm,1.9s						
TYV				smax	smax		
	comp=E,27nm,1.9s						
TYV				smax	smax		
	comp=N,1μm,4.5s						
TYV				smax	smax		
	comp=E,1μm,4.5s						
TYV				MLR	MLR		
	comp=Z,2μm,19.0s						
NKL	**Nikolayevsk**	13.06	266	*e*PN	Pn	02 02 25.0	+2.6
NKL				*e*S	Sn	02 04 57.3	+11
NKL				pmax	pmax		
	comp=E,4.0nm,1.0s						
NKL				pmax	pmax		
	comp=N,392nm,1.1s						
NKL				pmax	pmax		
	comp=Z,491nm,1.1s						
NKL				smax	smax		
	comp=E,4.0nm,3.5s						
NKL				smax	smax		
	comp=N,1μm,3.9s						
NKL				MLR	MLR		
	comp=N,11μm,12.0s						
NKL				MLR	MLR		
	comp=Z,2μm,14.0s						
UGL	**Uglegorsk**	14.35	249	*e*P	P	02 02 44.2	-2.0
UGL				S	Sn	02 05 20.9	+3.3
UGL				pmax	pmax		
	comp=Z,236nm,1.0s						
UGL				pmax	pmax		
	comp=Z,1μm,2.9s						
GAMB	**Gambell**	14.81	49	P	P	02 02 49.4	-1.8
	baz=252						
SPIA	**Saint Paul Isl**	14.89	75	P	P	02 02 50.4	-1.7
	baz=278						
YSS	**Yuzh-Sakhalins**	15.40	241c	*e*P	P	02 02 56.4	-1.4
YSS				*e*S	Sn	02 05 44.4	+1.4
YSS				pmax	pmax		
	comp=Z,1μm,5.2s						
YSS				pmax	pmax		
	comp=Z,120nm,1.0s						
YSS				MLR	MLR		
	comp=Z,4μm,16.0s						
YSS				MLR	MLR		
	comp=E,2μm,12.0s						
YSS	**Yuzh-Sakhalins**	15.40	241	Pn	Pn	02 02 53.3	-0.5
YSS				IAmb	IAmb	02 02 57.8	
	comp=Z,130nm,1.0s						
YSS	**Yuzh-Sakhalins**	15.40	241	P	P	02 02 57.5	-0.3
YUK	**Yuzh-Kuril'sk**	16.20	228c	*i*P	Pn	02 03 03.2	-0.9
YUK				*e*S	Sn	02 05 52.7	-10
YUK				pmax	pmax		
	comp=E,146nm,0.5s						
YUK				pmax	pmax		
	comp=N,423nm,0.9s						
YUK				pmax	pmax		
	comp=Z,385nm,0.9s						
YUK				pmax	pmax		
	comp=Z,622nm,1.5s						
YUK				MLR	MLR		
	comp=N,1μm,16.0s						
YUK				MLR	MLR		
	comp=Z,2μm,17.0s						
GRNR	**Gornyy**	16.47	262	⇓*i*P	P	02 03 12.1	+2.4
GRNR				*e*S	S	02 06 17.2	-2.5
GRNR				pmax	pmax		
	comp=N,40nm,0.8s						
GRNR				pmax	pmax		
	comp=E,60nm,0.8s						
GRNR				pmax	pmax		
	comp=Z,110nm,0.8s						
GRNR				smax	smax		
	comp=N,4.0nm,0.9s						
GRNR				MLR	MLR		
	comp=E,900nm,19.0s						
GRNR				MLR	MLR		
	comp=N,880nm,20.0s						
GRNR				MLR	MLR		
	comp=Z,1μm,18.0s						
NIKH	**Nikolski High**	16.77	89	P	P	02 03 14.6	+1.6
	baz=292						
TNA	**Tin City**	16.94	45	P	P	02 03 15.4	+0.6
	baz=251						
JKA	**Kamikawa-asahi**	17.56	235		P	02 03 21.1	-0.8
ASAJ	**Asahikawa**	17.56	235	P	P	02 03 22.3	+0.5
	comp=Z,9.9nm,0.3s,baz=50,slow=6.9,SNR=96						
ASAJ				LR	LR	02 10 27.0	
	comp=Z,4μm,18.4s,baz=28,slow=38						
ANM	**Nome**	17.70	49	P	P	02 03 25.5	+2.4
	baz=257						
YAK	**Yakutsk**	17.75	303	P	P	02 03 23.9	+0.2
	comp=Z,1.1nm,0.3s,baz=254,slow=0.5,SNR=16						
YAK				LR	LR	02 10 26.3	
	comp=Z,3μm,20.2s,baz=98,slow=38						
YAK	**Yakutsk**	17.75	303c	*e*P	P	02 03 24.4	+0.7
YAK				*e*S	Sn	02 06 42.7	+2.8
YAK				pmax	pmax		
	comp=Z,143nm,1.0s						
YAK				pmax	pmax		
	comp=E,55nm,0.9s						
YAK				pmax	pmax		
	comp=N,7.0nm,0.9s						
YAK				smax	smax		
	comp=E,204nm,2.6s						
YAK				smax	smax		
	comp=N,63nm,1.5s						
YAK				MLR	MLR		
	comp=N,572nm,16.0s						
YAK				MLR	MLR		
	comp=Z,3μm,15.0s						
YAK				MLR	MLR		
	comp=E,2μm,13.0s						
YAK	**Yakutsk**	17.75	303		P	02 03 23.6	-0.2
YAK				IAmb	IAmb	02 03 28.3	
	comp=Z,206nm,0.9s						
ERM	**Erimo**	18.99	230c	*e*P	Pn	02 03 37.0	-1.4
ERM				pmax	pmax		
	comp=Z,306nm,1.0s						
ERM	**Erimo**	18.99	230	P	Pn	02 03 37.1	-1.4
ERM				IAmb	IAmb	02 03 41.2	
	comp=Z,167nm,0.9s						
ERM	**Erimo**	18.99	230	P	Pn	02 03 38.7	+0.2
JEW	**Eniwo**	19.08	234	P	P	02 03 36.8	-1.7
FALS	**False Pass**	19.15	80	P	Pn	02 03 40.4	+0.1
	baz=288						
RDOG	**Red Dog Mine**	19.66	39	P	Pn	02 03 46.9	+0.6
	baz=250,SNR=19						
RDOG	**Red Dog Mine**	19.66	39	P	Pn	02 03 47.1	+0.8
RDOG				IAmb	IAmb	02 04 02.8	
	comp=Z,203nm,1.4s						
TEY	**Ternei**	19.82	247	⇑*e*P	P	02 03 45.3	-1.2
TEY				pmax	pmax		
	comp=N,10.0nm,1.0s						
TEY				pmax	pmax		
	comp=E,10.0nm,1.0s						
TEY				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TEY				pmax	pmax		
	comp=N,100nm,2.8s						

TEY				pmax	pmax		
	comp=E,100nm,2.8s						
TEY				pmax	pmax		
	comp=Z,100nm,2.8s						
KLR	**Kul'dur**	**19.85**	**262**	P	**Pn**	**02 03 47.2**	**-1.4**
	comp=Z,1.3nm,0.3s,baz=57,slow=11,SNR=136						
KLR				PcP	**PcP**	**02 08 01.8**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=353,slow=6.5,SNR=3.6						
KLR				LR	LR	02 12 22.5	
	comp=Z,2µm,19.2s,baz=57,slow=40						
KLR	**Kul'dur**	**19.85**	**262**	*ce*P	**Pn**	**02 03 47.3**	**-1.4**
KLR				pmax	pmax		
	comp=Z,159nm,1.1s						
ZEA	**Zeya**	**20.33**	**278**	*e*P	**P**	**02 03 51.7**	**-0.3**
ZEA				*e*S	S	02 07 23.5	-14
ZEA				pmax	pmax		
	comp=N,40nm,1.3s						
ZEA				pmax	pmax		
	comp=N,20nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,70nm,0.8s						
ZEA				pmax	pmax		
	comp=E,200nm,3.9s						
ZEA				pmax	pmax		
	comp=N,200nm,3.1s						
ZEA				pmax	pmax		
	comp=Z,300nm,3.0s						
ZEA				smax	smax		
	comp=E,300nm,7.0s						
ZEA				smax	smax		
	comp=N,400nm,8.8s						
ZEA				MLR	MLR		
	comp=E,800nm,11.0s						
ZEA				MLR	MLR		
	comp=N,400nm,14.0s						
ZEA				MLR	MLR		
	comp=Z,800nm,13.0s						
SDPT	**Sand Point**	**20.61**	**77**	P	Pn	02 03 57.6	+0.2
	baz=288						
JTM	**Tenmabayashi**	**20.90**	**232**	P	**P**	**02 03 56.8**	**-1.4**
JTM				IAmb	IAmb	02 03 59.6	
	comp=Z,144nm,0.8s						
TIXI	**Tiksi**	**20.98**	**331**	P	**P**	**02 04 00.8**	**+1.9**
	comp=Z,36nm,0.5s,baz=117,slow=12,SNR=68						
TIXI				PcP	**PcP**	**02 08 05.1**	**+0.7**
	comp=Z,10nm,0.8s,baz=346,slow=2.6,SNR=4.5						
TIXI				LR	LR	02 12 53.1	
	comp=Z,2µm,21.5s,baz=118,slow=39						
TIXI	**Tiksi**	**20.98**	**331**	*ce*P	**P**	**02 04 01.0**	**+2.2**
TIXI	**Tiksi**	**20.98**	**331**	P	**P**	**02 03 59.7**	**+0.9**
TIXI				IAmb	IAmb	02 04 17.6	
	comp=Z,92nm,0.8s						
CHNA	**Chernabura Isl**	**21.25**	**78**	P	**P**	**02 04 05.5**	**+3.6**
	baz=289						
GCSA	**Galena City Sc**	**21.34**	**50**	P	**P**	**02 04 04.7**	**+1.9**
	baz=266						
CHGN	**Chignik**	**21.44**	**73**	P	**P**	**02 04 05.4**	**+1.5**
	baz=286						
TTA	**Tatalina**	**21.66**	**55**	P	**P**	**02 04 09.3**	**+2.9**
TTA				pmax	pmax		
	comp=Z,89nm,1.1s						
TTA	**Tatalina**	**21.66**	**55**	P	**P**	**02 04 08.2**	**+1.9**
	baz=271,SNR=16						
TTA	**Tatalina**	**21.66**	**55**	P	**P**	**02 04 09.3**	**+2.9**
TTA				IAmb	IAmb	02 04 19.7	
	comp=Z,89nm,1.1s						
SVW2	**Sparrevohn**	**21.98**	**60**	P	**P**	**02 04 11.5**	**+1.8**
L19K	**White Mountain**	**22.23**	**57**	P	**P**	**02 04 14.3**	**+1.8**
	baz=274,SNR=6.3						
L19K	**White Mountain**	**22.23**	**57**	P	**P**	**02 04 13.1**	**+0.7**
L19K					**PcP**	**02 08 06.5**	**-0.6**
O18K	**Koktuh Hills**	**22.33**	**63**	P	**P**	**02 04 15.3**	**+1.8**
	baz=279,SNR=7.4						
O18K	**Koktuh Hills**	**22.33**	**63**	P	**P**	**02 04 14.8**	**+1.3**
O18K				IAmb	IAmb	02 04 26.2	
	comp=Z,101nm,1.0s						
P18K	**Big Mountain,**	**22.39**	**64**	P	**P**	**02 04 15.5**	**+1.3**
	baz=280,SNR=5.7						
P18K	**Big Mountain,**	**22.39**	**64**		**P**	**02 04 14.7**	**+0.5**
P18K				IAmb	IAmb	02 04 25.0	
	comp=Z,84nm,1.1s						
M19K	**Big River Lodg**	**22.47**	**58**	P	**P**	**02 04 17.5**	**+2.5**
	baz=275						
M19K	**Big River Lodg**	**22.47**	**58**	P	**P**	**02 04 17.4**	**+2.5**
J20K	**Nowinta River**	**22.49**	**52**	P	**P**	**02 04 17.6**	**+2.4**
	baz=270,SNR=33						
J20K	**Nowinta River**	**22.49**	**52**	P	**P**	**02 04 17.1**	**+1.9**
J20K				IAmb	IAmb	02 04 26.9	
	comp=Z,155nm,1.1s						
J20K					**PcP**	**02 08 08.1**	**+0.5**
N19K	**Bonanza Creek**	**22.54**	**60**	P	**P**	**02 04 17.5**	**+1.6**
	baz=278						
N19K	**Bonanza Creek**	**22.54**	**60**	P	**P**	**02 04 16.9**	**+1.1**
L20K	**Farewell, AK**	**22.67**	**56**	P	**P**	**02 04 18.8**	**+1.8**
	baz=274,SNR=5.3						
IMAR	**Indian Mountai**	**22.74**	**47**	P	**P**	**02 04 19.0**	**+1.2**
IMAR					**PcP**	**02 08 09.6**	**+1.6**
USA0B	**Ussuriysk Arra**	**22.79**	**251**	P	**P**	**02 04 16.8**	**-1.7**
USA0B				pmax	pmax		
	comp=Z,42nm,0.9s						
USA0B	**Ussuriysk Arra**	**22.79**	**251**	P	**P**	**02 04 16.8**	**-1.7**
USRK	**Ussuriysk Ar.**	**22.79**	**251**	P	**P**	**02 04 19.1**	**+0.6**
	comp=Z,23nm,0.8s,baz=53,slow=10,SNR=16						
USRK				PcP	**PcP**	**02 08 08.3**	**-0.2**
	comp=Z,5.7nm,0.8s,baz=332,slow=1.0,SNR=5.2						
USRK				ScP	**ScP**	**02 11 43.9**	**+1.3**
	comp=Z,3.9nm,0.9s,baz=40,slow=3.9,SNR=6.3						
USRK				LR	LR	02 13 35.3	
	comp=Z,1µm,20.7s,baz=50,slow=38						
USRK	**Ussuriysk Ar.**	**22.79**	**251**	P	**P**	**02 04 17.1**	**-1.5**
USRK					**PcP**	**02 08 06.2**	**-2.3**
A21K	**Barrow**	**22.85**	**33**	P	**P**	**02 04 20.1**	**+1.3**
	baz=250						
A21K	**Barrow**	**22.85**	**33**	P	**P**	**02 04 20.7**	**+1.8**
A21K				IAmb	IAmb	02 04 30.0	
	comp=Z,103nm,0.9s						
CHIR	**Chirikof Islan**	**23.08**	**73**	P	**P**	**02 04 23.3**	**+1.9**
	baz=288						
H21K	**Melozitna Rive**	**23.11**	**48**	P	**P**	**02 04 23.1**	**+1.6**
	baz=268,SNR=43						
H21K	**Melozitna Rive**	**23.11**	**48**	P	**P**	**02 04 23.5**	**+1.9**
H21K				IAmb	IAmb	02 04 33.5	
	comp=Z,87nm,1.1s						
Q19K	**Cape Douglas,**	**23.29**	**65**	P	**P**	**02 04 24.7**	**+1.3**
	baz=282						
Q19K	**Cape Douglas,**	**23.29**	**65**	P	**P**	**02 04 24.9**	**+1.5**
Q19K				IAmb	IAmb	02 04 33.6	
	comp=Z,103nm,0.8s						
CHUM	**Lake Minchumin**	**23.30**	**52**	P	**P**	**02 04 25.8**	**+2.4**
	baz=272,SNR=21						
P19K	**Oil Pt**	**23.35**	**63**	P	**P**	**02 04 25.3**	**+1.3**
	baz=281						
PPLA	**Purkeypile**	**23.41**	**55**	P	**P**	**02 04 27.0**	**+2.2**
	baz=274,SNR=10						
PPLA	**Purkeypile**	**23.41**	**55**	P	**P**	**02 04 25.6**	**+0.9**
CAST	**Castle Rocks**	**23.43**	**54**	P	**P**	**02 04 26.8**	**+2.1**
	baz=273,SNR=24						
CAST	**Castle Rocks**	**23.43**	**54**	P	**P**	**02 04 26.1**	**+1.4**
CAST				IAmb	IAmb	02 04 36.5	
	comp=Z,169nm,1.5s						
CAST					**PcP**	**02 08 11.1**	**+1.5**
I21K	**Tanana**	**23.44**	**49**	P	**P**	**02 04 26.9**	**+2.1**
	baz=269,SNR=28						
I21K	**Tanana**	**23.44**	**49**	P	**P**	**02 04 26.7**	**+1.9**
I21K				IAmb	IAmb	02 04 36.8	
	comp=Z,85nm,1.2s						
I21K					**PcP**	**02 08 09.9**	**+0.4**
RSO	**Redoubt South**	**23.44**	**61**	P	**P**	**02 04 26.3**	**+1.2**
JMM	**Marumori**	**23.45**	**228**	P	**P**	**02 04 24.2**	**-0.9**
O20K	**Slope Mountain**	**23.57**	**62**	P	**P**	**02 04 27.6**	**+1.4**
	baz=281						
SPCR	**Spurr Chakacha**	**23.59**	**59**	P	**P**	**02 04 28.3**	**+1.9**
	baz=278						
SII	**Sitkinak Islan**	**23.62**	**71**	P	**P**	**02 04 29.5**	**+2.9**
	baz=288						
SPU	**Mount Spurr**	**23.67**	**59**	P	**P**	**02 04 28.6**	**+1.6**
MDJ	**Mudanjiang**	**23.80**	**255**	P	**P**	**02 04 25.3**	**-3.0**
MDJ				sP	sP	02 04 48.7	+4.2
MDJ				S	**S**	**02 08 40.0**	**-0.9**
MDJ				pmax	pmax		
	comp=Z,38nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,170nm,5.1s						
MDJ				LR	LR		
	comp=Z,1µm,16.4s						
MDJ				LR	LR		
	comp=Z,2µm,16.4s						
MDJ				LR	LR		
	comp=Z,2µm,14.9s						
MDJ	**Mudanjiang**	**23.80**	**255**	P	**P**	**02 04 24.9**	**-3.4**
MDJ	**Mudanjiang**	**23.80**	**255**	P	**P**	**02 04 29.2**	**+0.9**
SKT	**Skwentna**	**23.81**	**57**	P	**P**	**02 04 30.4**	**+2.1**
	baz=277,SNR=8.9						
SKT	**Skwentna**	**23.81**	**57**	P	**P**	**02 04 29.0**	**+0.7**
SKT				IAmb	IAmb	02 04 40.2	
	comp=Z,104nm,1.1s						
BPAW	**Bear Paw Mtn.**	**23.88**	**52**	P	**P**	**02 04 30.7**	**+1.7**
	baz=273,SNR=36						
BPAW	**Bear Paw Mtn.**	**23.88**	**52**	P	**P**	**02 04 30.7**	**+1.7**
OHAK	**Old Harbor**	**23.89**	**69**	P	**P**	**02 04 31.1**	**+2.0**
	baz=286						
OHAK	**Old Harbor**	**23.89**	**69**	P	**P**	**02 04 30.4**	**+1.3**
KTH	**Kantishna Hill**	**23.94**	**53**	P	**P**	**02 04 31.6**	**+2.0**
KTH				IAmb	IAmb	02 04 41.5	
	comp=Z,140nm,1.2s						
MLY	**Manley**	**23.96**	**49**	P	**P**	**02 04 31.5**	**+1.8**
	baz=271						
MLY	**Manley**	**23.96**	**49**	P	**P**	**02 04 31.0**	**+1.2**
MLY				IAmb	IAmb	02 04 42.5	
	comp=Z,63nm,1.0s						
MLY					**PcP**	**02 08 11.7**	**+1.0**
KDAK	**Kodiak Island**	**24.11**	**67**	P	**P**	**02 04 31.7**	**+0.6**
	comp=Z,25nm,0.9s,baz=297,slow=5.5,SNR=7.5						
KDAK				PcP	**PcP**	**02 08 10.1**	**-0.9**
	comp=Z,7.4nm,0.7s,baz=178,slow=2.4,SNR=4.8						
KDAK				LR	LR	02 13 34.4	
	comp=Z,2µm,20.8s,baz=297,slow=35						
KDAK	**Kodiak Island**	**24.11**	**67**	P	**P**	**02 04 32.9**	**+1.8**
	baz=286						
KDAK	**Kodiak Island**	**24.11**	**67**	P	**P**	**02 04 33.3**	**+2.2**
HOM	**Homer**	**24.14**	**63**	P	**P**	**02 04 33.7**	**+2.4**
	baz=282						
TRF	**Thorofare Moun**	**24.23**	**53**	P	**P**	**02 04 34.2**	**+1.8**
	baz=275,SNR=67						
TRF	**Thorofare Moun**	**24.23**	**53**	P	**P**	**02 04 34.2**	**+1.8**
COLD	**Coldfoot**	**24.24**	**44**	P	**P**	**02 04 33.7**	**+1.5**
	baz=266,SNR=42						
COLD	**Coldfoot**	**24.24**	**44**	P	**P**	**02 04 34.0**	**+1.7**
COLD				IAmb	IAmb	02 04 43.9	
	comp=Z,79nm,1.0s						
SUA	**Susitna One**	**24.25**	**58**	P	**P**	**02 04 33.5**	**+1.0**
	baz=279						
CUT	**Chulitna**	**24.34**	**56**	P	**P**	**02 04 33.9**	**+0.7**
	baz=277,SNR=12						
CUT	**Chulitna**	**24.34**	**56**	IAmb	IAmb	02 04 48.9	
	comp=Z,136nm,1.1s						
CNPM	**China Poot**	**24.37**	**63**	IAmb	IAmb	02 04 47.3	
	comp=Z,104nm,1.0s						
JSD	**Sado**	**24.39**	**232**	P	**P**	**02 04 33.5**	**-0.4**
H23K	**Yukon River**	**24.46**	**47**	P	**P**	**02 04 36.4**	**+2.1**
	baz=270,SNR=107						
BRLK	**Bradley Lake**	**24.49**	**62**	IAmb	IAmb	02 04 45.9	
	comp=Z,60nm,1.0s						
M22K	**Willow**	**24.50**	**57**	P	**P**	**02 04 35.9**	**+1.2**
	baz=279						
I23K	**Minto, Yukon-K**	**24.54**	**49**	P	**P**	**02 04 36.9**	**+1.9**
	baz=272,SNR=53						
I23K	**Minto, Yukon-K**	**24.54**	**49**	IAmb	IAmb	02 04 47.5	
	comp=Z,120nm,0.9s						
BRSE	**Bradley Lake S**	**24.57**	**62**	P	**P**	**02 04 37.2**	**+1.9**
	baz=282						
TOLK	**Toolik Lake Re**	**24.60**	**41**	P	**P**	**02 04 37.7**	**+2.1**
	baz=264,SNR=84						
TOLK	**Toolik Lake Re**	**24.60**	**41**	P	**P**	**02 04 38.0**	**+2.4**
NEA2	**Nenana**	**24.69**	**50**	P	**P**	**02 04 37.9**	**+1.5**
	baz=273,SNR=25						
NEA2	**Nenana**	**24.69**	**50**	IAmb	IAmb	02 04 48.3	
	comp=Z,59nm,0.9s						
RC01	**Rabbit Creek A**	**24.79**	**59**	P	**P**	**02 04 38.7**	**+1.4**
	baz=280						
MCK	**McKinley**	**24.81**	**52**	P	**P**	**02 04 39.1**	**+1.6**
	baz=275,SNR=28						
MCK	**McKinley**	**24.81**	**52**	P	**P**	**02 04 39.0**	**+1.5**
MCK				IAmb	IAmb	02 04 49.6	
	comp=Z,126nm,1.2s						
MCK					**PcP**	**02 08 12.9**	**+0.4**
RND	**Reindeer**	**24.88**	**53**	P	**P**	**02 04 39.1**	**+1.0**
RND				pmax	pmax		
	comp=Z,46nm,0.8s						
RND	**Reindeer**	**24.88**	**53**	P	**P**	**02 04 39.1**	**+1.0**
RND				IAmb	IAmb	02 04 49.1	
	comp=Z,46nm,0.8s						
O22K	**Cooper Landing**	**24.91**	**60**	P	**P**	**02 04 38.9**	**+0.6**
	baz=282						
O22K	**Cooper Landing**	**24.91**	**60**	IAmb	IAmb	02 04 55.7	
	comp=Z,56nm,0.6s						
PMR	**Palmer**	**24.99**	**58**	P	**P**	**02 04 40.5**	**+1.5**
	baz=280						
PMR	**Palmer**	**24.99**	**58**	P	**P**	**02 04 40.7**	**+1.6**
PMR					**PcP**	**02 08 14.1**	**+1.2**
MDM	**Murphy Dome**	**25.03**	**50**	IAmb	IAmb	02 04 51.8	
	comp=Z,62nm,1.0s						
GHO	**Glory Hole Cre**	**25.06**	**57**	IAmb	IAmb	02 04 54.2	
	comp=Z,59nm,1.0s						
JYT	**Yasato**	**25.10**	**227**	IAmb	IAmb	02 04 41.9	
	comp=Z,97nm,0.8s						
WRH	**Wood River Hil**	**25.12**	**51**	P	**P**	**02 04 41.9**	**+1.7**
WRH				IAmb	IAmb	02 05 00.3	
	comp=Z,112nm,1.0s						
WRH					**PcP**	**02 08 13.3**	**+0.1**
SEW	**Seward**	**25.12**	**61**	P	**P**	**02 04 40.8**	**+0.6**
	baz=283						
SEW	**Seward**	**25.12**	**61**	IAmb	IAmb	02 04 54.6	
	comp=Z,78nm,0.9s						
H24K	**Noodor Dome**	**25.14**	**47**	P	**P**	**02 04 42.5**	**+2.0**
	baz=272,SNR=15						
TCOL	**CIGO, UAF Yank**	**25.19**	**50**	P	**P**	**02 04 42.2**	**+1.4**
	baz=274						
TCOL	**CIGO, UAF Yank**	**25.19**	**50**	IAmb	IAmb	02 04 53.5	
	comp=Z,78nm,0.9s						
COLA	**College**	**25.20**	**50**	*c i*P	**P**	**02 04 41.8**	**+0.9**
COLA				pmax	pmax		
	comp=Z,71nm,1.0s						
COLA	**College**	**25.20**	**50**	P	**P**	**02 04 42.6**	**+1.7**
	baz=274						
COLA	**College**	**25.20**	**50**	P	**P**	**02 04 42.5**	**+1.7**
COLA				IAmb	IAmb	02 04 53.5	
	comp=Z,78nm,0.9s						
CCB	**Clear Creek Bu**	**25.23**	**50**	IAmb	IAmb	02 04 53.8	
	comp=Z,111nm,1.0s						
SML	**Sawmill**	**25.33**	**57**	P	**P**	**02 04 43.5**	**+1.3**
	baz=280,SNR=14						
KNK	**Knik Glacier**	**25.34**	**58**	P	**P**	**02 04 43.5**	**+1.2**
	baz=280,SNR=17						
KNK	**Knik Glacier**	**25.34**	**58**	IAmb	IAmb	02 04 54.9	
	comp=Z,80nm,1.0s						
POKR	**Poker Plat Res**	**25.36**	**49**	P	**P**	**02 04 44.2**	**+1.8**
	baz=274,SNR=13						
POKR	**Poker Plat Res**	**25.36**	**49**	IAmb	IAmb	02 04 55.9	
	comp=Z,48nm,0.8s						
PWL	**Port Wells**	**25.50**	**59**	P	**P**	**02 04 44.5**	**+0.7**
	baz=282,SNR=20						
PWL	**Port Wells**	**25.50**	**59**	P	**P**	**02 04 44.2**	**+0.4**
PWL					**PcP**	**02 08 14.1**	**-0.1**
IL31		**25.61**	**50**	IAmb	IAmb	02 04 56.9	
	comp=Z,57nm,0.8s						
ILAR	**Eielson Array**	**25.61**	**50**	P	**P**	**02 04 45.9**	**+1.2**
	comp=Z,37nm,0.9s,baz=259,slow=7.0,SNR=179						
ILAR				PcP	**PcP**	**02 08 14.7**	**+0.4**
	comp=Z,4.5nm,0.8s,baz=270,slow=3.5,SNR=11						
ILAR				ScP	**ScP**	**02 11 50.7**	**+0.8**
	comp=Z,0.8nm,0.9s,baz=305,slow=3.9,SNR=4.2						
ILAR				PKiKP	**PKiKP**	**02 15 53.1**	**-0.7**
	comp=Z,0.5nm,0.8s,baz=286,slow=1.7,SNR=4.4						
ILAR				LR	LR	02 15 53.7	
	comp=Z,1µm,18.2s,baz=267,slow=39						
ILAR	**Eielson Array**	**25.61**	**50**	P	**P**	**02 04 45.9**	**+1.2**
ILAR					**ScP**	**02 11 49.5**	**-0.5**
HDA	**Harding Lake**	**25.62**	**51**	P	**P**	**02 04 45.2**	**+0.4**
	baz=275,SNR=26						
HDA	**Harding Lake**	**25.62**	**51**	IAmb	IAmb	02 04 56.4	
	comp=Z,55nm,0.8s						
MAJO	**Matsushiro**	**25.67**	**230**	*c i*P	**P**	**02 04 44.2**	**-1.2**
MAJO				pmax	pmax		
	comp=Z,179nm,0.8s						
MAJO	**Matsushiro**	**25.67**	**230**	P	**P**	**02 04 45.0**	**-0.5**
MAJO	**Matsushiro**	**25.67**	**230**	P	**P**	**02 04 46.2**	**+0.8**
MAT	**Matsushiro**	**25.67**	**230**	P	**P**	**02 04 45.2**	**-0.2**
MAT				S	**S**	**02 09 12.4**	**+1.5**
MJAR	**Matsushiro Arr**	**25.67**	**230**	P	**P**	**02 04 45.2**	**-0.2**
	comp=Z,98nm,0.8s,baz=20,slow=8.5,SNR=138						
MJAR				PcP	**PcP**	**02 08 15.2**	**+0.3**
	comp=Z,2.8nm,0.6s,baz=100,slow=3.1,SNR=4.1						
MJAR				LR	LR	02 16 05.3	
	comp=Z,2µm,19.6s,baz=30,slow=39						
MJAR	**Matsushiro Arr**	**25.67**	**230**	P	**P**	**02 04 44.6**	**-0.8**
MJAR				IAmb	IAmb	02 04 47.0	
	comp=Z,100nm,0.8s						
MJAR				PcP	**PcP**	**02 08 15.6**	**+0.7**
SCM	**Sheep Creek Mo**	**25.80**	**57**	P	**P**	**02 04 48.0**	**+1.5**
	baz=280,SNR=17						
BOD	**Bodaibo**	**26.08**	**294**	*e*P	**P**	**02 04 49.0**	**0.0**
BOD				pmax	pmax		
	comp=Z,82nm,1.7s						
GLI	**Glacier Island**	**26.09**	**59**	P	**P**	**02 04 49.9**	**+0.8**
	baz=282						
GLI	**Glacier Island**	**26.09**	**59**	IAmb	IAmb	02 05 02.1	
	comp=Z,110nm,1.4s						
PRP	**Porcupine Dome**	**26.13**	**48**	P	**P**	**02 04 51.3**	**+1.7**
	baz=274,SNR=21						
PRP	**Porcupine Dome**	**26.13**	**48**	IAmb	IAmb	02 04 52.5	
	comp=Z,58nm,1.0s						
FYU	**Fort Yukon**	**26.19**	**46**	IAmb	IAmb	02 05 00.9	
	comp=Z,54nm,0.8s						
M24K	**Tolsona, Glenn**	**26.28**	**56**	P	**P**	**02 04 52.7**	**+1.8**
	baz=281,SNR=7.5						
FID	**Port Fidalgo**	**26.42**	**59**	IAmb	IAmb	02 05 05.7	
	comp=Z,63nm,1.1s						
BMAR	**Burnt Mountain**	**26.42**	**44**	P	**P**	**02 04 54.1**	**+2.0**
PAX	**Paxson**	**26.46**	**54**	P	**P**	**02 04 54.7**	**+2.3**
PAX					**PcP**	**02 08 16.7**	**+0.3**
PAX				pmax	pmax		
	comp=Z,30nm,1.0s						
PAX	**Paxson**	**26.46**	**54**	P	**P**	**02 04 53.7**	**+1.2**
	baz=280,SNR=12						
PAX	**Paxson**	**26.46**	**54**	P	**P**	**02 04 54.7**	**+2.3**
PAX				PcP	**PcP**	**02 08 16.7**	**+0.3**
KLU	**Klutina**	**26.52**	**57**	P	**P**	**02 04 54.4**	**+1.3**
	baz=282,SNR=8.7						
KLU	**Klutina**	**26.52**	**57**	IAmb	IAmb	02 05 08.7	
	comp=Z,50nm,0.9s						
CN2	**Changchun**	**26.58**	**258**	*e*P	**P**	**02 04 51.3**	**-2.3**
CN2				sP	sP	02 05 14.2	+4.3
CN2				S	**S**	**02 09 17.6**	**-7.6**
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
CN2				LR	LR		
	comp=Z,1µm,14.0s						
CN2				LR	LR		
	comp=Z,1µm,14.0s						
CN2				LR	LR		
	comp=Z,1µm,13.0s						
RIDG	**Independent Ri**	**26.62**	**52**	P	**P**	**02 04 54.3**	**+0.4**
	baz=278,SNR=16						
DIV	**Divide**	**26.67**	**58**	IAmb	IAmb	02 05 05.3	
	comp=Z,77nm,1.3s						
HARP	**HAARP**	**26.70**	**55**	P	**P**	**02 04 56.1**	**+1.5**
	baz=281,SNR=5.8						
Q23K	**Middleton Isla**	**26.81**	**62**	P	**P**	**02 04 56.4**	**+0.9**
	baz=286						
EYAK	**Cordova Ski Ar**	**26.81**	**59**	P	**P**	**02 04 56.4**	**+0.8**
	baz=284						
JGF	**Kuroka**	**26.83**	**230**	IAmb	IAmb	02 05 00.2	
	comp=Z,57nm,0.8s						
SCRK	**Sand Creek**	**26.96**	**51**	P	**P**	**02 04 57.4**	**+0.4**
	baz=279,SNR=54						
SCRK	**Sand Creek**	**26.96**	**51**	P	**P**	**02 04 57.3**	**+0.3**
SCRK				IAmb	IAmb	02 05 07.6	
	comp=Z,65nm,0.8s						
SCRK				PcP	**PcP**	**02 08 19.1**	**+1.5**
J26L	**Joseph Creek**	**27.07**	**50**	P	**P**	**02 04 58.3**	**+0.3**
	baz=278,SNR=8.7						
N25K	**Chitina, Valde**	**27.12**	**57**	P	**P**	**02 05 00.1**	**+1.7**
	baz=283,SNR=11						
INU	**Inuyama**	**27.19**	**231**	IAmb	IAmb	02 05 03.9	
	comp=Z,57nm,1.0s						
INU	**Inuyama**	**27.19**	**231**	P	**P**	**02 05 00.4**	**+1.3**
BMRM	**Bremner River**	**27.26**	**58**	P	**P**	**02 05 01.3**	**+1.7**
	baz=284,SNR=6.8						
BMRM	**Bremner River**	**27.26**	**58**	P	**P**	**02 05 01.2**	**+1.6**
BMRM				IAmb	IAmb	02 05 19.8	
	comp=Z,89nm,1.0s						
BMRM				PcP	**PcP**	**02 08 18.7**	**+0.5**
RAGM	**Ragged Mountai**	**27.37**	**59**	IAmb	IAmb	02 05 12.2	
	comp=Z,54nm,1.0s						
L26K	**Log Cabin Wild**	**27.40**	**53**	P	**P**	**02 05 02.6**	**+1.8**
	baz=281						
GLB	**Gilahina Butte**	**27.52**	**57**	IAmb	IAmb	02 05 14.1	
	comp=Z,56nm,1.2s						
KAIM	**Kayak Island**	**27.62**	**60**	P	**P**	**02 05 04.3**	**+1.6**
	baz=286						
M26K	**Nabesna, AK**	**27.68**	**55**	P	**P**	**02 05 05.7**	**+2.3**
	baz=282,SNR=18						
M26K	**Nabesna, AK**	**27.68**	**55**	P	**P**	**02 05 05.4**	**+2.0**
M26K				IAmb	IAmb	02 05 18.2	
	comp=Z,61nm,1.1s						
M26K					**PcP**	**02 08 19.6**	**+0.4**
VRDI	**Verde Repeater**	**27.74**	**57**	P	**P**	**02 05 05.1**	**+1.0**
VRDI				PcP	**PcP**	**02 08 19.5**	**-0.1**
MCARA	**McCarthy VSAT**	**27.90**	**57**	P	**P**	**02 05 07.8**	**+2.4**
	baz=284,SNR=5.1						
MCARA	**McCarthy VSAT**	**27.90**	**57**	P	**P**	**02 05 06.1**	**+0.8**
MCARA					**PcP**	**02 08 19.4**	**-0.3**
CRQM	**Cirque**	**28.01**	**58**	IAmb	IAmb	02 05 18.2	
	comp=Z,91nm,1.1s						
CRQE	**Cirque**	**28.03**	**58**	P	**P**	**02 05 08.0**	**+1.4**
	baz=285						
EGAK	**Eagle**	**28.05**	**49**	P	**P**	**02 05 07.2**	**+0.6**
	baz=279,SNR=29						
EGAK	**Eagle**	**28.05**	**49**	IAmb	IAmb	02 05 08.2	
	comp=Z,40nm,0.8s						
L27K	**Beaver Creek,**	**28.07**	**53**	P	**P**	**02 05 09.0**	**+2.1**
	baz=282,SNR=27						
L27K	**Beaver Creek,**	**28.07**	**53**	P	**P**	**02 05 08.4**	**+1.6**
L27K				IAmb	IAmb	02 05 10.1	
	comp=Z,37nm,0.8s						
L27K				PcP	**PcP**	**02 08 21.7**	**+1.5**
BCAR	**Beaver Creek A**	**28.09**	**53**	P	**P**	**02 05 09.0**	**+2.0**
BCAR				PcP	**PcP**	**02 08 21.0**	**+0.8**
M27K	**Edge Creek, AK**	**28.20**	**54**	P	P	02 05 10.7	+2.5
	baz=283,SNR=21						
M27K	**Edge Creek, AK**	**28.20**	**54**	P	**P**	**02 05 09.9**	**+1.7**
M27K				IAmb	IAmb	02 05 11.7	
	comp=Z,40nm,0.8s						
M27K					**PcP**	**02 08 21.7**	**+1.0**
ISLE	**Juniper Island**	**28.43**	**58**	P	**P**	**02 05 10.1**	**-0.1**
BARN	**Barnard Glacie**	**28.62**	**57**	IAmb	IAmb	02 05 28.6	
	comp=Z,60nm,1.0s						
BVCY	**Beaver Creek**	**28.65**	**54**	P	P	02 05 14.4	+2.4
	baz=284,SNR=5.9						
GRNC	**Granite Creek**	**28.67**	**58**	P	**P**	**02 05 12.3**	**-0.1**
GRNC				IAmb	IAmb	02 05 28.7	
	comp=Z,54nm,1.1s						
GRNC					**PcP**	**02 08 23.4**	**+1.5**
MESA	**MESA**	**28.73**	**59**	P	P	02 05 15.1	+2.2
	baz=287						
CTG	**Chitna Glacier**	**28.80**	**57**	P	**P**	**02 05 15.0**	**+1.5**
	baz=286						
DAWY	**Dawson**	**28.93**	**50**	P	**P**	**02 05 15.8**	**+1.3**
	baz=282,SNR=8.5						
DAWY	**Dawson**	**28.93**	**50**	P	**P**	**02 05 16.0**	**+1.4**
YUK3	**Moose Creek**	**28.99**	**55**	P	**P**	**02 05 17.2**	**+1.9**
	baz=285,SNR=5.7						
I29M	**Ogilvie Camp,**	**29.14**	**48**	P	**P**	**02 05 18.0**	**+1.7**
	baz=280,SNR=7.3						
PCA	**Pinnacle**	**29.57**	**58**	IAmb	IAmb	02 05 40.1	
	comp=Z,73nm,1.0s						
PINM	**Pinnacle**	**29.57**	**58**	P	**P**	**02 05 21.5**	**+1.2**
	baz=288						
EPYK	**Eagle Plains**	**29.61**	**45**	P	**P**	**02 05 22.2**	**+1.8**
	baz=280,SNR=7.2						
EPYK	**Eagle Plains**	**29.61**	**45**	IAmb	IAmb	02 05 32.5	
	comp=Z,32nm,0.8s						
KS19	**Wonju Array Si**	**29.80**	**246**	P	**P**	**02 05 21.9**	**-0.5**
KS19					**PcP**	**02 08 23.3**	**-1.6**
KSRS	**Korea Array**	**29.81**	**246**	P	**P**	**02 05 21.0**	**-1.4**
	comp=Z,8.9nm,0.8s,baz=38,slow=8.9,SNR=31						
KSRS				PcP	**PcP**	**02 08 26.9**	**+2.0**
	comp=Z,11nm,0.7s,baz=20,slow=2.6,SNR=26						
KSRS				LR	LR	02 18 55.9	
	comp=Z,1µm,18.8s,baz=56,slow=40						
KSAR	**Wonju Array Be**	**29.84**	**246**	P	**P**	**02 05 21.7**	**-1.0**
KSAR	**Wonju Array Be**	**29.84**	**246**	P	**P**	**02 05 21.7**	**-1.0**
KSAR				PcP	**PcP**	**02 08 26.1**	**+1.1**
BCPM	**Bancas Point**	**29.91**	**59**	IAmb	IAmb	02 05 25.9	
	comp=Z,56nm,0.7s						
JMN	**Monobe**	**29.94**	**233**	IAmb	IAmb	02 05 30.9	
	comp=Z,100nm,1.5s						
YUK4	**Talbot Arm**	**29.95**	**56**	P	**P**	**02 05 25.6**	**+1.9**

	baz=287,SNR=5.1						
PNL	**Peninsula**	**30.11**	**59**	P	**P**	**02 05 26.5**	**+1.5**
	baz=289						
YUK6	**Outpost Mounta**	**30.20**	**56**	P	**P**	**02 05 27.5**	**+1.6**
	baz=288						
M30M	**Minto, Yukon**	**30.43**	**53**	P	P	02 05 30.3	+2.5
	baz=286,SNR=6.3						
INK	**Inuvik**	**30.52**	**41**	P	**P**	**02 05 29.9**	**+1.5**
	comp=Z,8.3nm,0.6s,baz=297,slow=6.7,SNR=30						
INK				PcP	**PcP**	**02 08 27.9**	**+1.7**
	comp=Z,4.9nm,0.5s,baz=314,slow=2.9,SNR=7.2						
INK	**Inuvik**	**30.52**	**41**	P	**P**	**02 05 30.3**	**+2.0**
	baz=279,SNR=12						
INK	**Inuvik**	**30.52**	**41**	P	**P**	**02 05 30.1**	**+1.8**
INK					**PcP**	**02 08 26.5**	**+0.3**
HYT	**Haines Junctio**	**30.63**	**56**	P	P	02 05 31.9	+2.3
	baz=289,SNR=11						
HYT	**Haines Junctio**	**30.63**	**56**	IAmb	IAmb	02 05 33.1	
	comp=Z,27nm,0.8s						
N31M	**Braeburn, Yuko**	**31.21**	**55**	P	**P**	**02 05 36.6**	**+2.0**
	baz=289						
M31M	**Drury Creek, Y**	**31.61**	**53**	P	P	02 05 40.9	+2.7
	baz=288,SNR=14						
WHY	**Whitehorse**	**31.90**	**56**	P	P	02 05 43.6	+2.8
	baz=290,SNR=13						
WHY	**Whitehorse**	**31.90**	**56**	IAmb	IAmb	02 05 53.4	
	comp=Z,42nm,1.1s						
SKAG	**Skagway**	**32.13**	**58**	IAmb	IAmb	02 05 55.4	
	comp=Z,64nm,1.4s						
A36M	**Sachs Harbour**	**32.69**	**33**	P	**P**	**02 05 49.6**	**+2.1**
	baz=280,SNR=44						
A36M	**Sachs Harbour**	**32.69**	**33**	P	**P**	**02 05 48.7**	**+1.2**
A36M				IAmb	IAmb	02 06 04.0	
	comp=Z,56nm,1.0s						
P33M	**Teslin, Yukon**	**33.02**	**56**	P	**P**	**02 05 52.0**	**+1.5**
	baz=292						
JIS	**Juneau Island**	**33.04**	**60**	IAmb	IAmb	02 06 04.1	
	comp=Z,60nm,1.0s						
SIT	**Sitka**	**33.09**	**62**	P	**P**	**02 05 52.3**	**+1.2**
	baz=296						
TLY	**Talaya**	**34.09**	**288**	*e*P	**P**	**02 05 59.3**	**-0.6**
TLY				*e*		02 07 34.9	
TLY				*e*S	S	02 11 11.5	-11
TLY				*e*SS	**SnSn**	**02 13 30.1**	**-2.2**
TLY				pmax	pmax		
	comp=Z,25nm,0.8s						
TLY				MLR	MLR		
	comp=Z,4µm,18.0s						
TLY	**Talaya**	**34.09**	**288**	P	**P**	**02 05 59.9**	**0.0**
TLY	**Talaya**	**34.09**	**288**	P	**P**	**02 05 59.1**	**-0.8**
BJI	**Beijing**	**34.22**	**262**	P	**P**	**02 06 02.1**	**+1.0**
BJI				pP	**sP**	**02 06 14.6**	**-2.9**
BJI				sP	pP	02 06 19.8	+7.3
BJI				PcP	**PcP**	**02 08 37.9**	**+1.0**
BJI				S	**S**	**02 11 21.4**	**-3.3**
BJI				pmax	pmax		
	comp=Z,35nm,0.8s						
BJI				LR	LR		
	comp=Z,1µm,13.6s						
BJI				LR	LR		
	comp=Z,2µm,15.0s						
BJI				LR	LR		
	comp=Z,3µm,15.0s						
BJT	**Baijiatuau**	**34.24**	**262**	P	**P**	**02 05 59.6**	**-1.7**
BJT				pmax	pmax		
	comp=Z,27nm,1.0s						
BJT	**Baijiatuau**	**34.24**	**262**	P	**P**	**02 05 59.6**	**-1.7**
BJT				IAmb	IAmb	02 06 02.6	
	comp=Z,27nm,1.0s						
NRIK	**Noril'sk**	**34.27**	**322**	P	**P**	**02 06 01.7**	**+0.4**
	comp=Z,42nm,1.0s,baz=82,slow=8.4,SNR=50						
NRIK				PcP	**PcP**	**02 08 37.3**	**+0.8**
	comp=Z,7.5nm,0.6s,baz=80,slow=3.3,SNR=5.4						
NRIK				LR	LR	02 21 12.9	
	comp=Z,1µm,20.4s,baz=77,slow=38						
NRIK	**Noril'sk**	**34.27**	**322**	*ce*P	**P**	**02 06 02.0**	**+0.7**
NRIK				pmax	pmax		
	comp=Z,57nm,1.0s						
NRIK	**Noril'sk**	**34.27**	**322**	P	**P**	**02 06 01.2**	**-0.1**
ULN	**Ulaanbaatar**	**34.34**	**280**	*ce*P	**P**	**02 06 01.9**	**-0.3**
ULN				pmax	pmax		
	comp=Z,64nm,1.7s						
ULN	**Ulaanbaatar**	**34.34**	**280**	P	**P**	**02 06 02.2**	**0.0**
ULN	**Ulaanbaatar**	**34.34**	**280**	P	**P**	**02 06 01.3**	**-0.9**
ULN				IAmb	IAmb	02 06 03.4	
	comp=Z,42nm,1.1s						
SONM	**Songino Array**	**34.72**	**280**	P	**P**	**02 06 05.5**	**0.0**
	comp=Z,28nm,0.7s,baz=64,slow=7.1,SNR=114						
SONM				PcP	**PcP**	**02 08 38.8**	**+0.4**
	comp=Z,12nm,0.8s,baz=67,slow=0.9,SNR=10						
SONM				ScP	**ScP**	**02 12 20.9**	**+0.9**
	comp=Z,5.5nm,1.0s,baz=57,slow=1.1,SNR=9.3						
SONM				LR	LR	02 21 18.0	
	comp=Z,1µm,18.8s,baz=52,slow=38						
SONM	**Songino Array**	**34.72**	**280**	P	**P**	**02 06 05.2**	**-0.2**
SONM				IAmb	IAmb	02 06 08.1	
	comp=Z,32nm,0.8s						
WRAK	**Wrangell Islan**	**34.85**	**62**	P	P	02 06 09.4	+3.1
	baz=298						
CRAG	**Craig**	**34.91**	**64**	P	**P**	**02 06 08.3**	**+1.5**
	baz=299						
ZAK	**Zakamensk**	**34.98**	**286**	*e*P	**P**	**02 06 06.9**	**-0.8**
ZAK				pmax	pmax		
	comp=Z,18nm,1.3s						
DLBC	**Dease Lake**	**35.05**	**58**	IAmb	IAmb	02 06 21.7	
	comp=Z,35nm,1.1s						
WRGLY	**Wrigley**	**35.94**	**48**	P	**P**	**02 06 17.4**	**+1.8**
	baz=294						
HHC	**Hu-ho-hao-te**	**36.23**	**267**	*e*P	**P**	**02 06 19.4**	**+0.9**
HHC				sP	sP	02 06 41.9	+6.9
HHC				S	S	02 11 44.0	-12
HHC				PcS	**PcS**	**02 12 30.5**	**-0.1**
HHC				pmax	pmax		
	comp=Z,26nm,0.9s						
HHC				pmax	pmax		
	comp=Z,83nm,4.2s						
HHC				LR	LR		
	comp=Z,1µm,14.8s						
HHC				LR	LR		
	comp=Z,1µm,14.7s						
HHC				LR	LR		
	comp=Z,2µm,13.0s						
TIA	**Tai'an**	**36.45**	**256**	P	**P**	**02 06 17.0**	**-3.3**
TIA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
TIA				pmax	pmax		
	comp=Z,200nm,4.4s						
TIA				LR	LR		
	comp=Z,700nm,15.0s						
TIA				LR	LR		
	comp=Z,1µm,13.5s						
TIA				LR	LR		
	comp=Z,600nm,13.5s						
H11N2	**WAKE ISLAND Hy**	**36.56**	**173**	T	T	02 45 15.6	
	baz=357,slow=76,SNR=4988						
H11N3	**WAKE ISLAND Hy**	**36.57**	**173**	T	T	02 45 14.3	
	baz=357,slow=76,SNR=4803						
H11N1	**WAKE ISLAND Hy**	**36.58**	**173**	T	T	02 45 16.6	
	baz=357,slow=76,SNR=6155						
BTO	**Baotou**	**37.26**	**268**	*e*P	**P**	**02 06 26.9**	**-0.4**
BTO				S	**S**	**02 12 10.6**	**-0.9**
BTO				LR	LR		
	comp=Z,4µm,21.0s						
BTO				LR	LR		
	comp=Z,3µm,23.3s						
TIY	**Taiyuan**	**37.93**	**262**	⇑P	**P**	**02 06 35.6**	**+2.7**
TIY				pmax	pmax		
	comp=Z,150nm,3.9s						
TIY				LR	LR		
	comp=Z,890nm,13.2s						
TIY				LR	LR		
	comp=Z,2µm,15.3s						
TIY				LR	LR		
	comp=Z,2µm,13.9s						
JOW	**Kunigami**	**38.33**	**234**	P	**P**	**02 06 37.9**	**+1.6**
	comp=Z,85nm,1.3s						
EUNU	**Eureka**	**38.56**	**15**	P	**P**	**02 06 37.0**	**-0.7**
EUNU				IAmb	IAmb	02 06 40.9	
	comp=Z,28nm,0.7s						
NJ2	**Nanjing**	**38.69**	**250**	*e*P	**P**	**02 06 37.8**	**-1.5**
NJ2				pmax	pmax		
	comp=Z,14nm,0.7s						
NJ2				LR	LR		
	comp=Z,380nm,20.4s						
NJ2				LR	LR		
	comp=Z,1µm,17.9s						
NJ2				LR	LR		
	comp=Z,2µm,14.7s						
RES	**Resolute Bay**	**39.87**	**24**	P	**P**	**02 06 49.8**	**+1.2**
RES				pmax	pmax		
	comp=Z,11nm,0.9s						
RES	**Resolute Bay**	**39.87**	**24**	P	**P**	**02 06 49.8**	**+1.2**
YKA	**Yellowknife Ar**	**39.89**	**46**	P	**P**	**02 06 50.8**	**+1.8**
	comp=Z,12nm,0.8s,baz=306,slow=6.6,SNR=21						
YKA				PcP	**PcP**	**02 08 53.9**	**+0.2**
	comp=Z,7.0nm,0.8s,baz=325,slow=2.7,SNR=9.5						
YKA	**Yellowknife Ar**	**39.89**	**46**	P	**P**	**02 06 50.2**	**+1.3**
WHN	**Wuhan**	**42.26**	**253**	⇑P	**P**	**02 07 06.8**	**-2.0**
WHN				S	**S**	**02 13 24.0**	**-2.3**
WHN				LR	LR		
	comp=Z,790nm,10.7s						
WHN				LR	LR		
	comp=Z,3µm,16.8s						
WHN				LR	LR		
	comp=Z,3µm,16.1s						
ZALV	**Zalesovo Beam**	**42.39**	**301**	P	**P**	**02 07 09.2**	**-0.4**
	comp=Z,6.0nm,0.7s,baz=51,slow=7.4,SNR=27						
ZALV				PcP	**PcP**	**02 09 02.2**	**+0.2**
	comp=Z,30nm,0.9s,baz=31,slow=4.0,SNR=14						
ZALV				ScP	**ScP**	**02 12 50.5**	**+1.5**
	comp=Z,2.5nm,0.9s,baz=64,slow=3.4,SNR=3.3						
ZALV				LR	LR	02 26 43.9	
	comp=Z,953nm,18.2s,baz=48,slow=39						
ZALV	**Zalesovo Beam**	**42.39**	**301**	P	**P**	**02 07 09.0**	**-0.5**
LLLB	**Lillooet**	**43.24**	**64**	IAmb	IAmb	02 07 20.7	
	comp=Z,28nm,0.9s						
TULEG	**Thule**	**43.56**	**15**	*i* P	**P**	**02 07 19.0**	**+0.3**
TULEG				*i* P	**P**	**02 07 19.1**	**+0.3**
TULEG				IAmb	IAmb	02 07 20.3	
	comp=Z,14nm,0.6s						
TULEG	**Thule**	**43.56**	**15**	P	**P**	**02 07 17.6**	**-1.1**
PGC	**Sidney**	**43.66**	**67**	P	**P**	**02 07 20.1**	**+0.3**
DGZ	**Jazzator, Alta**	**43.67**	**295**	*c i*P	**P**	**02 07 20.2**	**0.0**
DGZ				pmax	pmax		
	comp=Z,42nm,0.8s						
GTA	**Gaotai**	**43.77**	**275**	⇑P	**P**	**02 07 21.9**	**+0.8**
GTA				pP	sP	02 07 34.1	-3.6
GTA				sP	pP	02 07 39.8	+7.0
GTA				S	**S**	**02 13 47.3**	**-1.3**
GTA				sS	sS	02 14 08.8	+0.8
GTA				pmax	pmax		
	comp=Z,430nm,9.6s						
GTA				LR	LR		
	comp=Z,1µm,17.5s						
GTA				LR	LR		
	comp=Z,1µm,17.5s						
GTA				LR	LR		
	comp=Z,3µm,16.3s						
LZH	**Lanzhou**	**43.88**	**268**	⇓P	**P**	**02 07 23.4**	**+1.4**
LZH				PP	**PP**	**02 09 03.6**	**-0.9**
LZH				pmax	pmax		
	comp=Z,77nm,1.2s						
LZH				pmax	pmax		
	comp=Z,190nm,5.4s						
LZH				LR	LR		
	comp=Z,2µm,15.7s						
LZH				LR	LR		
	comp=Z,2µm,14.6s						
LZH				LR	LR		
	comp=Z,2µm,15.2s						
A04D	**Lummi Island**	**44.00**	**67**	P	**P**	**02 07 23.5**	**+0.9**
	baz=309						
NLWA	**Neilton Lookou**	**44.24**	**69**	IAmb	IAmb	02 07 28.8	
	comp=Z,28nm,0.9s						
SPITS	**Spitsbergen Ar**	**44.30**	**351**	P	**P**	**02 07 24.0**	**-0.7**
SPITS				pmax	pmax		
	comp=Z,141nm,1.0s						
SPB2	**Spitsbergen Ar**	**44.30**	**351**	P	**P**	**02 07 24.1**	**-0.6**
WISH	**Wishkah**	**44.47**	**69**	IAmb	IAmb	02 07 47.9	
	comp=Z,38nm,0.9s						
D03D	**Eldon**	**44.55**	**68**	P	P	02 07 29.3	+2.3
	baz=310,SNR=9.9						
B05A	**Bryant**	**44.60**	**67**	P	P	02 07 30.1	+2.7
	baz=310,SNR=16						
B06A	**Marblemount**	**44.75**	**66**	IAmb	IAmb	02 07 31.9	
	comp=Z,26nm,0.8s						
E03A	**Lebam**	**44.95**	**70**	IAmb	IAmb	02 07 34.2	
	comp=Z,57nm,0.9s						
D04E	**Lakebay**	**44.95**	**69**	P	P	02 07 32.3	+2.1
	baz=310						
NEEM	**North Greenlan**	**44.97**	**10**	*i* P	**P**	**02 07 30.9**	**+0.6**
NEEM				*i* P	**P**	**02 07 30.9**	**+0.6**
NEEM				IAmb	IAmb	02 07 32.1	
	comp=Z,20nm,0.8s						
KIP	**Kipapa**	**45.27**	**124**	*i* P	**P**	**02 07 33.5**	**+0.5**
KIP				pmax	pmax		
	comp=Z,47nm,0.9s						
D05A	**Enumclaw**	**45.35**	**68**	IAmb	IAmb	02 07 37.6	
	comp=Z,41nm,0.9s						
C06D	**Leavenworth**	**45.44**	**67**	P	**P**	**02 07 36.1**	**+2.0**
	baz=310						
E04D	**Cinebar**	**45.46**	**69**	P	P	02 07 37.4	+3.1
	baz=311,SNR=10						
F04D	**Rainier, OR**	**45.54**	**70**	P	**P**	**02 07 36.2**	**+1.3**
	baz=311						
F04A	**Amboy**	**45.95**	**70**	IAmb	IAmb	02 07 41.6	
	comp=Z,24nm,1.0s						
B08A	**Colville Reser**	**45.95**	**65**	IAmb	IAmb	02 07 41.5	
	comp=Z,25nm,0.9s						
G03D	**McMinnville, O**	**45.98**	**71**	P	**P**	**02 07 39.3**	**+0.9**
	baz=312						
I02E	**Swisshome, OR**	**46.41**	**72**	P	P	02 07 43.7	+2.0
	baz=312						
ZSN	**Zaisan**	**46.42**	**294**	*e*P	**P**	**02 07 41.2**	**-0.7**
	baz=294						
ZSN	**Zaisan**	**46.42**	**294**	*e*P	**P**	**02 07 41.1**	**-0.7**
F05D	**White Salmon**	**46.48**	**69**	P	**P**	**02 07 44.2**	**+1.9**
	baz=312						
H04D	**Lebanon**	**46.72**	**71**	P	P	02 07 46.6	+2.4
	baz=312						
SEM	**Semipalatinsk**	**46.79**	**300**	*e*P	**P**	**02 07 42.6**	**-2.4**
	baz=299						
SEM	**Semipalatinsk**	**46.79**	**300**	*e*P	**P**	**02 07 42.5**	**-2.4**
BUCK	**Buck Mountain**	**46.81**	**72**	IAmb	IAmb	02 07 49.2	
	comp=Z,36nm,1.1s						
C09A	**Chrisman Ranch**	**46.85**	**65**	IAmb	IAmb	02 08 00.5	
	comp=Z,18nm,0.8s						
E07A	**Sunnyside**	**46.87**	**67**	IAmb	IAmb	02 07 48.9	
	comp=Z,23nm,1.0s						
H04A	**Detroit Lake**	**46.90**	**71**	IAmb	IAmb	02 08 06.6	
	comp=Z,25nm,1.1s						
I03D	**Drain, OR**	**46.95**	**73**	P	P	02 07 49.1	+3.0
	baz=313						
G05D	**Wamic, OR**	**46.99**	**70**	P	P	02 07 48.3	+2.0
	baz=312						
J01E	**Myrtle Point**	**47.01**	**73**	P	P	02 07 49.2	+2.8
	baz=313						
NEW	**Newport**	**47.13**	**64**	P	**P**	**02 07 49.3**	**+1.9**
	baz=311,SNR=8.7						
F07A	**Phinny Hill Vi**	**47.27**	**68**	IAmb	IAmb	02 07 52.1	
	comp=Z,34nm,0.8s						
DAG	**Danmarks Havn**	**47.28**	**0**	*i* P	**P**	**02 07 48.2**	**0.0**
DAG				*i* P	**P**	**02 07 49.0**	**+0.8**
DAG				IAmb	IAmb	02 07 51.1	
	comp=Z,10.0nm,0.7s						
DAG				*i*	**PcP**	**02 09 18.4**	**-0.2**
WMQ	**Urumqi**	**47.37**	**288**	⇓P	**P**	**02 07 50.5**	**+1.1**
WMQ				sP	sP	02 08 10.8	+4.7
WMQ				pmax	pmax		
	comp=Z,170nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,210nm,4.7s						
WMQ				LR	LR		
	comp=Z,3µm,18.9s						
WMQ				LR	LR		
	comp=Z,2µm,17.9s						
WMQ				LR	LR		
	comp=Z,720nm,21.7s						
KURK	**Kurchatov**	**47.38**	**301**	*ce*P	**P**	**02 07 48.1**	**-1.1**
KURK				pmax	pmax		
	comp=Z,222nm,1.3s						
KURK	**Kurchatov**	**47.38**	**301**	P	**P**	**02 07 48.7**	**-0.6**
KURK				S	S	02 14 56.6	+17
KURK	**Kurchatov**	**47.38**	**301**	P	**P**	**02 07 48.2**	**-1.0**
I04A	**Tendick Farm,**	**47.39**	**72**	P	P	02 07 51.9	+2.4
	baz=313,SNR=9.3						
K02D	**Willamette Mer**	**47.47**	**74**	P	P	02 07 52.9	+2.7
	baz=313						
KURBB	**Kurchatov Arra**	**47.48**	**301**	P	**P**	**02 07 49.4**	**-0.7**
I05D	**Terrebonne, OR**	**47.58**	**71**	P	P	02 07 53.4	+2.3
	baz=313,SNR=6.9						
CD2	**Chengdu**	**47.77**	**264**	P	**P**	**02 07 51.6**	**-1.0**
CD2				pmax	pmax		
	comp=Z,50nm,0.8s						
CD2				pmax	pmax		
	comp=Z,190nm,11.8s						
CD2				LR	LR		
	comp=Z,1µm,14.5s						
CD2				LR	LR		
	comp=Z,1µm,17.8s						
CD2				LR	LR		
	comp=Z,2µm,17.2s						
E09A	**Wood Farm, Sta**	**47.78**	**66**	IAmb	IAmb	02 07 55.5	
	comp=Z,33nm,0.9s						
L02E	**Cave Junction**	**47.87**	**74**	P	**P**	**02 07 54.9**	**+1.7**
	baz=314						
J04D	**Umpqua Nationa**	**47.92**	**72**	P	P	02 07 56.7	+2.8
	baz=313,SNR=11						
PINE	**Pine Mountain**	**48.17**	**71**	IAmb	IAmb	02 07 59.7	
	comp=Z,29nm,0.9s						
MK31	**Makanchi Array**	**48.17**	**295**	*c i*P	**P**	**02 07 54.1**	**-1.4**
MK31	**Makanchi Array**	**48.17**	**295**	P	**P**	**02 07 54.3**	**-1.2**
MK31				IAmb	IAmb	02 07 56.1	
	comp=Z,23nm,0.8s						
MKAR	**Makanchi Array**	**48.17**	**295**	P	**P**	**02 07 54.9**	**-0.6**
	comp=Z,29nm,0.8s,baz=58,slow=7.2,SNR=106						
MKAR				LR	LR	02 29 04.4	
	comp=Z,1µm,18.6s,baz=33,slow=37						
MKAR	**Makanchi Array**	**48.17**	**295**	P	**P**	**02 07 54.0**	**-1.5**
MAKZ	**Makanchi**	**48.32**	**295**	P	**P**	**02 07 55.9**	**-0.7**
MAKZ				pmax	pmax		
	comp=Z,61nm,1.3s						
MAKZ	**Makanchi**	**48.32**	**295**	P	**P**	**02 07 55.9**	**-0.7**
J05D	**Fort Rock, OR**	**48.36**	**72**	P	P	02 08 00.0	+2.9
	baz=314,SNR=22						
L04D	**Klamath Falls**	**48.52**	**73**	P	P	02 08 01.2	+2.8
	baz=314,SNR=13						
K04D	**Chiloquin, OR**	**48.54**	**73**	P	P	02 08 00.8	+2.3
	baz=314						
UPNV	**Upernavik**	**48.55**	**14**	*i* P	**P**	**02 07 58.4**	**+0.4**
UPNV				*i* P	**P**	**02 07 58.7**	**+0.7**
UPNV				AMP		02 07 59.2	
	comp=Z,18nm,0.7s						
F10A	**Beach Ranch, E**	**48.61**	**66**	IAmb	IAmb	02 08 16.4	
	comp=Z,19nm,0.9s						
KHMM	**Horse Mountain**	**48.69**	**76**	IAmb	IAmb	02 08 04.2	
	comp=Z,35nm,1.1s						
M02C	**Callahan**	**48.80**	**74**	P	P	02 08 03.9	+3.4
	baz=314,SNR=8.3						
K05A	**Summer Lake**	**48.93**	**72**	IAmb	IAmb	02 08 05.8	
	comp=Z,26nm,1.1s						
M04C	**Macdoel**	**49.08**	**73**	P	P	02 08 05.5	+2.9
	baz=314,SNR=10						
KMRM	**Mail Ridge**	**49.16**	**76**	IAmb	IAmb	02 08 07.9	
	comp=Z,31nm,1.0s						
N02D	**Trinity Center**	**49.18**	**75**	P	P	02 08 06.6	+3.2
	baz=315,SNR=8.1						
GYA	**Guiyang**	**49.63**	**257**	⇑P	**P**	**02 08 07.4**	**+0.4**
GYA				pP	sP	02 08 20.5	-3.2
GYA				pmax	pmax		
	comp=Z,14nm,0.9s						
GYA				LR	LR		
	comp=Z,930nm,22.2s						
BRVK	**Borovoye**	**49.66**	**308**	P	**P**	**02 08 06.4**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,46nm,0.7s						
BRVK	**Borovoye**	**49.66**	**308**	P	**P**	**02 08 06.5**	**-0.3**
BRVK	**Borovoye**	**49.66**	**308**	P	**P**	**02 08 06.4**	**-0.3**
MSO	**Missoula**	**49.69**	**63**	P	**P**	**02 08 09.1**	**+1.9**
	baz=313,SNR=12						
MSO	**Missoula**	**49.69**	**63**	IAmb	IAmb	02 08 22.5	
	comp=Z,16nm,0.9s						
O02D	**Mt. Diablo Mer**	**49.69**	**76**	P	P	02 08 10.5	+3.2
	baz=315,SNR=6.8						
DBG	**Daneborg**	**49.75**	**1**	*i* P	**P**	**02 08 07.4**	**+0.2**
DBG				*i* P	**P**	**02 08 07.6**	**+0.4**
DBG				IAmb	IAmb	02 08 12.8	
	comp=Z,7.5nm,0.7s						
DBG				*i*	**PcP**	**02 09 27.4**	**-0.1**
MOD	**Modoc Plateau**	**49.81**	**72**	IAmb	IAmb	02 08 24.8	
	comp=Z,20nm,0.8s						
FFC	**Flin Flon**	**49.82**	**49**	P	**P**	**02 08 09.3**	**+1.3**
FFC				pmax	pmax		
	comp=Z,25nm,1.2s						
FFC	**Flin Flon**	**49.82**	**49**	P	**P**	**02 08 09.2**	**+1.3**
FFC				IAmb	IAmb	02 08 21.0	
	comp=Z,25nm,1.2s						
PLID	**Pearl Lake**	**49.85**	**66**	IAmb	IAmb	02 08 24.5	
	comp=Z,16nm,0.8s						
O03E	**Paynes Creek**	**50.14**	**75**	P	P	02 08 13.0	+2.3
	baz=315,SNR=15						
WVOR	**Wild Horse Val**	**50.32**	**71**	IAmb	IAmb	02 08 28.6	
	comp=Z,19nm,1.1s						
LVZ	**Lovozero**	**50.40**	**337**	*i* P	**P**	**02 08 13.1**	**+0.9**
LVZ				pmax	pmax		
	comp=Z,75nm,1.3s						
SUMG	**Summit**	**50.67**	**8**	P	**P**	**02 08 16.2**	**+1.5**
SUMG				pmax	pmax		
	comp=Z,48nm,1.0s						
SUMG	**Summit**	**50.67**	**8**	*i* P	**P**	**02 08 15.3**	**+0.6**
SUMG				*i* P	**P**	**02 08 15.6**	**+1.0**
SUMG				IAmb	IAmb	02 08 21.9	
	comp=Z,11nm,0.8s						
SUMG	**Summit**	**50.67**	**8**	P	**P**	**02 08 16.2**	**+1.5**
BRZS	**Berezniki**	**50.69**	**303**	*e*P	**P**	**02 08 13.2**	**-1.5**
	comp=Z,24nm,1.1s,baz=303						
BRZS	**Berezniki**	**50.69**	**303**	*e*P	**P**	**02 08 13.1**	**-1.5**
BRZS				pmax	pmax		
	comp=Z,24nm,1.1s						
ARCES	**ARCESS Array B**	**50.78**	**342**	P	**P**	**02 08 14.6**	**-0.4**
	comp=Z,20nm,1.0s,baz=32,slow=9.4,SNR=18						
ARCES				PcP	**PcP**	**02 09 32.2**	**+0.9**
	comp=Z,18nm,0.9s,baz=52,slow=4.8,SNR=6.1						
ARCES				LR	LR	02 33 40.4	
	comp=Z,273nm,18.1s,baz=90,slow=41						
ARCES	**ARCESS Array B**	**50.78**	**342**	P	**P**	**02 08 16.2**	**+1.2**
ARCES				pmax	pmax		
	comp=Z,67nm,1.3s						
ARCES	**ARCESS Array B**	**50.78**	**342**	P	**P**	**02 08 16.2**	**+1.2**
ORV	**Oroville**	**50.83**	**75**	P	**P**	**02 08 16.3**	**+0.5**
ORV				pmax	pmax		
	comp=Z,18nm,1.3s						
ORV	**Oroville**	**50.83**	**75**	P	**P**	**02 08 16.3**	**+0.5**
EGMT	**Eagleton**	**50.92**	**60**	P	**P**	**02 08 17.9**	**+1.4**
	baz=314						
EGMT	**Eagleton**	**50.92**	**60**	IAmb	IAmb	02 08 32.0	
	comp=Z,23nm,0.8s						
SVE	**Sverdlovsk**	**51.04**	**316**	*de*P	**P**	**02 08 17.9**	**+0.8**
SVE				pmax	pmax		
	comp=Z,59nm,0.8s						
SVE				MLR	MLR		
	comp=Z,2µm,16.0s						
MFID	**Camas Ranch**	**51.10**	**68**	IAmb	IAmb	02 08 34.0	
	comp=Z,16nm,0.9s						
TDK	**Taldyqorghan**	**51.37**	**295**	*e*P	**P**	**02 08 18.7**	**-1.2**
	comp=Z,57nm,0.6s,baz=295						
TDK	**Taldyqorghan**	**51.37**	**295**	*e*P	**P**	**02 08 18.6**	**-1.2**
TDK				pmax	pmax		
	comp=Z,57nm,0.6s						
DLMT	**Dillon**	**51.38**	**64**	P	**P**	**02 08 21.9**	**+1.9**
DLMT				IAmb	IAmb	02 08 35.5	
	comp=Z,37nm,1.5s						
JETT	**Jettan, Norway**	**51.59**	**344**	*e*P	**P**	**02 08 23.6**	**+2.4**
KTK1	**Kautokeino**	**51.63**	**343**	*e*P	**P**	**02 08 22.3**	**+0.9**
BOZ	**Bozeman (W)**	**51.70**	**63**	P	**P**	**02 08 24.1**	**+1.7**
BOZ				pmax	pmax		
	comp=Z,13nm,1.0s						
BOZ	**Bozeman (W)**	**51.70**	**63**	P	P	02 08 24.6	+2.2
	baz=315,SNR=16						
BOZ	**Bozeman (W)**	**51.70**	**63**	P	**P**	**02 08 24.1**	**+1.7**
HLID	**Hailey**	**51.73**	**67**	P	P	02 08 24.8	+2.1
	baz=315,SNR=11						
TRO	**Tromso**	**51.75**	**345**	*e*P	**P**	**02 08 23.4**	**+1.2**
MPK	**Martis Peak**	**51.81**	**74**	IAmb	IAmb	02 08 27.5	
	comp=Z,39nm,1.1s						
PAHR	**Pah Rah Range**	**51.86**	**74**	IAmb	IAmb	02 08 39.5	
	comp=Z,29nm,1.4s						
ARU	**Arti**	**52.12**	**317**	*c i*P	**P**	**02 08 25.4**	**+0.2**
ARU					**PcP**	**02 09 35.8**	**-0.7**
ARU					**PP**	**02 10 23.2**	**-0.1**
ARU				S	**S**	**02 15 45.9**	**0.0**
ARU				SS	**SS**	**02 19 21.5**	**-1.3**
ARU				pmax	pmax		
	comp=Z,88nm,0.7s						
ARU				MLR	MLR		
	comp=Z,1µm,17.0s						
ARU	**Arti**	**52.12**	**317**	P	**P**	**02 08 25.6**	**+0.4**
SHLS	**Shalkode**	**52.14**	**293**	*e*P	**P**	**02 08 23.2**	**-2.5**
	comp=Z,76nm,0.6s,baz=293						

SHLS	**Shalkode**	**52.14**	**293**	eP	**P**	**02 08 23.1**	**-2.6**
SHLS				pmax	pmax		
	comp=Z,76nm,0.6s						
PNTR	**Pine Nut**	**52.19**	**74**	IAmb	IAmb	02 08 48.0	
	comp=Z,24nm,0.9s						
KPKS	**Kokpek**	**52.32**	**294**	⇑eP	**P**	**02 08 25.8**	**-1.2**
	comp=Z,18nm,0.6s,baz=294						
KPKS	**Kokpek**	**52.32**	**294**	ceP	**P**	**02 08 25.8**	**-1.2**
KPKS				pmax	pmax		
	comp=Z,18nm,0.6s						
UZB	**Uzynbulak**	**52.37**	**293**	⇑iP	**P**	**02 08 26.1**	**-1.4**
	comp=Z,15nm,0.8s,baz=293						
UZB	**Uzynbulak**	**52.37**	**293**	c iP	**P**	**02 08 26.1**	**-1.4**
UZB				pmax	pmax		
	comp=Z,15nm,0.8s						
YHL	**Hebgen Lake**	**52.45**	**64**	IAmb	IAmb	02 08 44.0	
	comp=Z,18nm,1.1s						
LQP	**Lukban**	**52.45**	**234**	eP	**P**	**02 08 28.8**	**+0.4**
ILULI	**Ilulissat**	**52.50**	**14**	i P	**P**	**02 08 27.8**	**0.0**
PRGR	**Permogore**	**52.60**	**328**	eP	**P**	**02 08 29.1**	**+0.5**
PRGR				pmax	pmax		
	comp=Z,179nm,0.8s						
YHH	**Holmes Hill**	**52.66**	**63**	IAmb	IAmb	02 08 46.5	
	comp=Z,22nm,1.1s						
YMR	**Madison River**	**52.69**	**64**	IAmb	IAmb	02 08 46.3	
	comp=Z,19nm,0.9s						
SATY	**Saty**	**52.75**	**294**	⇑iP	**P**	**02 08 29.5**	**-0.8**
	comp=Z,34nm,1.3s,baz=294						
SATY	**Saty**	**52.75**	**294**	c iP	**P**	**02 08 29.4**	**-0.8**
SATY				pmax	pmax		
	comp=Z,34nm,1.3s						
YNR	**Norris Junctio**	**52.80**	**63**	IAmb	IAmb	02 08 47.6	
	comp=Z,23nm,1.2s						
KMI	**Kunming**	**52.83**	**260**	⇑P	P	02 08 34.9	+3.8
KMI				pmax	pmax		
	comp=Z,21nm,0.7s						
KMI				LR	LR		
	comp=Z,600nm,15.7s						
KMI				LR	LR		
	comp=Z,630nm,16.5s						
KMI				LR	LR		
	comp=Z,920nm,15.7s						
CHKK	**Chushkaly**	**52.90**	**295**	eP	**P**	**02 08 29.6**	**-1.7**
	baz=295						
YMP	**Mirror Lake Pl**	**53.04**	**63**	IAmb	IAmb	02 08 49.2	
	comp=Z,32nm,1.1s						
H17A	**Grant Village**	**53.08**	**64**	P	P	02 08 36.4	+3.6
	baz=316,SNR=6.7						
H17A	**Grant Village**	**53.08**	**64**	IAmb	IAmb	02 08 50.6	
	comp=Z,28nm,1.1s						
KUU	**Kurty**	**53.20**	**296**	⇑iP	**P**	**02 08 31.7**	**-1.8**
	comp=Z,61nm,0.7s,baz=296						
KUU	**Kurty**	**53.20**	**296**	c iP	**P**	**02 08 31.6**	**-1.8**
KUU				pmax	pmax		
	comp=Z,61nm,0.7s						
RLMT	**Red Lodge**	**53.21**	**62**	P	P	02 08 36.0	+2.3
	baz=316						
RLMT	**Red Lodge**	**53.21**	**62**	IAmb	IAmb	02 08 50.2	
	comp=Z,28nm,0.9s						
DGMT	**Dagmar**	**53.24**	**56**	P	**P**	**02 08 35.5**	**+1.9**
	baz=316						
DGMT	**Dagmar**	**53.24**	**56**	IAmb	IAmb	02 08 48.0	
	comp=Z,22nm,1.0s						
FLWY	**Flagg Ranch**	**53.24**	**64**	IAmb	IAmb	02 08 50.4	
	comp=Z,24nm,1.0s						
NVAR	**Mina Array Bea**	**53.37**	**74**	P	P	02 08 37.5	+2.6
	comp=Z,8.6nm,0.7s,baz=301,slow=7.4,SNR=48						
NVAR				PcP	**PcP**	**02 09 44.1**	**+2.3**
	comp=Z,1.6nm,0.6s,baz=292,slow=4.8,SNR=4.2						
NVAR				LR	LR	02 29 36.7	
	comp=Z,357nm,20.4s,baz=276,slow=34						
NVAR	**Mina Array Bea**	**53.37**	**74**	P	P	02 08 37.9	+3.0
MDOK	**Medeo**	**53.37**	**295**	eP	**P**	**02 08 33.5**	**-1.3**
	baz=294						
MDOK	**Medeo**	**53.37**	**295**	eP	**P**	**02 08 33.5**	**-1.3**
LHV	**Little Huntoon**	**53.39**	**74**	IAmb	IAmb	02 08 39.7	
	comp=Z,39nm,1.3s						
FXWY	**Fox Creek**	**53.40**	**64**	IAmb	IAmb	02 08 51.6	
	comp=Z,18nm,1.1s						
AAA	**Alma-Ata**	**53.40**	**295**	eP	**P**	**02 08 33.9**	**-1.1**
	baz=295						
AAA	**Alma-Ata**	**53.40**	**295**	eP	**P**	**02 08 33.8**	**-1.1**
NV11	**Mina Array Sit**	**53.44**	**74**	IAmb	IAmb	02 08 54.9	
	comp=Z,20nm,1.1s						
TNSS	**Tian-Shan**	**53.51**	**295**	eP	**P**	**02 08 35.2**	**-1.0**
	baz=294						
BTLS	**Baital**	**53.52**	**298**	⇑iP	**P**	**02 08 34.6**	**-1.2**
	comp=Z,28nm,0.7s,baz=298						
BTLS	**Baital**	**53.52**	**298**	c iP	**P**	**02 08 34.5**	**-1.2**
BTLS				pmax	pmax		
	comp=Z,28nm,0.7s						
MDPB	**Devils Postpil**	**53.53**	**75**	IAmb	IAmb	02 08 53.5	
	comp=Z,29nm,1.2s						
LAO	**LASA Array**	**53.56**	**59**	P	P	02 08 38.5	+2.4
	baz=316,SNR=5.4						
LAO	**LASA Array**	**53.56**	**59**	IAmb	IAmb	02 08 51.1	
	comp=Z,41nm,1.1s						
LOHW	**Long Hollow**	**53.63**	**64**	IAmb	IAmb	02 08 53.5	
	comp=Z,21nm,1.1s						
KIRV	**Kirov**	**53.77**	**323**	ceP	**P**	**02 08 38.4**	**+1.1**
STEI	**Steigen**	**53.85**	**345**	eP	**P**	**02 08 39.2**	**+1.5**
LOF	**Lofoten**	**53.90**	**346**	eP	**P**	**02 08 39.5**	**+1.4**
ICESG	**Greenland Ices**	**53.95**	**10**	i P	**P**	**02 08 39.3**	**+0.4**
ICESG				i P	**P**	**02 08 39.3**	**+0.4**
ICESG				IAmb	IAmb	02 08 40.4	
	comp=Z,18nm,0.7s						
QIZ	**Qiongzhong**	**53.96**	**249**	P	**P**	**02 08 37.2**	**-2.0**
QIZ				LR	LR		
	comp=Z,620nm,14.1s						
QIZ				LR	LR		
	comp=Z,610nm,17.3s						
QIZ				LR	LR		
	comp=Z,670nm,12.6s						
TARG	**Taragay, Kyrgy**	**54.02**	**293**	IAmb	IAmb	02 08 53.1	
	comp=Z,24nm,1.0s						
TKM2	**Tokmak 2**	**54.28**	**295**	P	**P**	**02 08 41.1**	**-0.4**
	SNR=55						
FAUS	**Fauske**	**54.35**	**345**	eP	**P**	**02 08 42.5**	**+1.1**
SGDS	**Sogindy**	**54.38**	**296**	⇑iP	**P**	**02 08 41.4**	**-0.7**
	comp=Z,32nm,0.9s,baz=296						
SGDS	**Sogindy**	**54.38**	**296**	eP	**P**	**02 08 41.9**	**-0.2**
TIN	**Tinemaha, Big**	**54.41**	**75**	P	**P**	**02 08 44.3**	**+1.8**
	baz=318						
ULHL	**Ulahol**	**54.44**	**294**	P	**P**	**02 08 42.6**	**-0.1**
	SNR=32						
USP	**Ospenovka**	**54.58**	**296**	P	**P**	**02 08 43.4**	**-0.1**
	SNR=177						
LCH	**Last Change Ra**	**54.60**	**74**	IAmb	IAmb	02 09 03.7	
	comp=Z,32nm,1.3s						
CHMS	**Chumysh**	**54.65**	**296**	P	**P**	**02 08 44.1**	**+0.2**
	SNR=37						
SMMC	**Simmler**	**54.74**	**78**	P	P	02 08 48.1	+3.4
	baz=318						
BW06	**Boulder Array**	**54.77**	**64**	P	P	02 08 47.3	+2.2
	baz=317,SNR=12						
PDAR	**Pinedale Array**	**54.77**	**64**	P	P	02 08 47.4	+2.3
	comp=Z,5.0nm,0.7s,baz=326,slow=3.0,SNR=52						
PDAR				PcP	**PcP**	**02 09 48.7**	**+1.5**
	comp=Z,6.9nm,0.7s,baz=51,slow=1.0,SNR=5.4						
PDAR				LR	LR	02 33 01.8	
	comp=Z,428nm,19.9s,baz=329,slow=37						
KBK	**Karagaybulak**	**54.80**	**296**	P	**P**	**02 08 45.1**	**-0.2**
	SNR=79						
VES	**Vestal, Richgr**	**54.85**	**77**	P	P	02 08 47.7	+2.2
	baz=318,SNR=7.3						
R11A	**Troy Canyon, C**	**54.88**	**72**	P	P	02 08 48.4	+2.5
	baz=318,SNR=14						
GRAC	**Grapevine Rang**	**54.92**	**74**	P	P	02 08 49.4	+3.4
	baz=318,SNR=5.1						
CWC	**Cottonwood Cre**	**54.95**	**75**	P	P	02 08 49.3	+2.9
	baz=318						
DUG	**Dugway, Tooele**	**54.98**	**69**	P	**P**	**02 08 47.7**	**+1.1**
DUG				pmax	pmax		
	comp=Z,15nm,0.9s						
DUG	**Dugway, Tooele**	**54.98**	**69**	P	P	02 08 49.4	+2.8
	baz=317,SNR=11						
DUG	**Dugway, Tooele**	**54.98**	**69**	P	**P**	**02 08 47.7**	**+1.1**
TCUT	**Toone Canyon**	**55.03**	**67**	IAmb	IAmb	02 09 03.3	
	comp=Z,33nm,1.3s						
AAK	**Ala-Archa**	**55.04**	**296**	P	**P**	**02 08 46.9**	**-0.1**
	SNR=126						
AAK	**Ala-Archa**	**55.04**	**296**	i P	**P**	**02 08 47.3**	**+0.3**
	SNR=7.0						
AAK	**Ala-Archa**	**55.04**	**296**	P	**P**	**02 08 47.0**	**0.0**
AAK				pmax	pmax		
	comp=Z,136nm,0.9s						
AAK	**Ala-Archa**	**55.04**	**296**	P	**P**	**02 08 46.9**	**-0.1**
AAK				S	S	02 16 01.7	-25
AAK	**Ala-Archa**	**55.04**	**296**	P	**P**	**02 08 47.0**	**0.0**
PKM	**Mcpherson Peak**	**55.16**	**78**	P	P	02 08 50.9	+3.0
	baz=318						
SLVN	**Son La**	**55.23**	**256**	P	**P**	**02 08 48.8**	**+0.3**
ISA	**Isabella, Lake**	**55.31**	**76**	P	P	02 08 51.1	+2.2
	baz=318,SNR=6.8						
ISA	**Isabella, Lake**	**55.31**	**76**	IAmb	IAmb	02 09 05.1	
	comp=Z,21nm,1.0s						
UCH	**Uchtor**	**55.33**	**296**	P	**P**	**02 08 49.9**	**+0.4**
	SNR=8.1						
EKS2	**Erkin-Say**	**55.38**	**296**	P	**P**	**02 08 49.8**	**+0.4**
	SNR=11						
ARVC	**Arvin**	**55.52**	**77**	P	P	02 08 53.0	+2.7
	baz=318						
NLU	**North Lily Min**	**55.54**	**68**	IAmb	IAmb	02 09 07.5	
	comp=Z,18nm,1.0s						
FURC	**Furnace Creek,**	**55.59**	**75**	P	P	02 08 53.9	+3.2
	baz=318,SNR=12						
MOR8	**Moi Rana**	**55.61**	**345**	eP	**P**	**02 08 50.2**	**-0.4**
ULM	**Lac du Bonnet**	**55.63**	**50**	P	**P**	**02 08 52.9**	**+2.0**
	comp=Z,7.6nm,0.7s,baz=318,slow=8.8,SNR=15						
ULM				PcP	**PcP**	**02 09 50.4**	**+0.3**
	comp=Z,9.9nm,0.5s,baz=305,slow=4.8,SNR=9.8						
ULM	**Lac du Bonnet**	**55.63**	**50**	IAmb	IAmb	02 09 03.6	
	comp=Z,27nm,1.0s						
PSUT	**Pine Spring**	**55.66**	**71**	IAmb	IAmb	02 09 12.8	
	comp=Z,31nm,1.1s						
DY2G	**Dye2**	**55.72**	**14**	i P	**P**	**02 08 51.2**	**-0.4**
DY2G				i P	**P**	**02 08 51.5**	**-0.2**
DY2G				IAmb	IAmb	02 09 00.8	
	comp=Z,18nm,0.8s						
MPU	**Maple Canyon**	**55.73**	**68**	IAmb	IAmb	02 09 09.0	
	comp=Z,23nm,1.1s						
LSA	**Lhasa**	**55.73**	**273**	P	**P**	**02 08 52.6**	**+0.1**
LSA	**Lhasa**	**55.73**	**273**	P	**P**	**02 08 53.5**	**+1.0**
LSA	**Lhasa**	**55.73**	**273**	P	**P**	**02 08 52.3**	**-0.2**
LSA				pmax	pmax		
	comp=Z,30nm,0.6s						
LSA	**Lhasa**	**55.73**	**273**	P	**P**	**02 08 52.5**	**+0.1**
LSA	**Lhasa**	**55.73**	**273**	P	**P**	**02 08 52.3**	**-0.2**
MDND	**Maddock**	**55.79**	**54**	P	**P**	**02 08 54.2**	**+2.1**
	baz=318						
AML	**Almayashu**	**55.81**	**296**	P	**P**	**02 08 53.3**	**+0.5**
	SNR=9.3						
AML	**Almayashu**	**55.81**	**296**	i P	**P**	**02 08 52.8**	**0.0**
	SNR=60						
AML	**Almayashu**	**55.81**	**296**	P	**P**	**02 08 53.0**	**+0.2**
PRN	**Pahroc Range**	**55.86**	**72**	IAmb	IAmb	02 08 57.2	
	comp=Z,26nm,0.8s						
LRMC	**Laurel Mtn Rad**	**55.88**	**76**	P	P	02 08 55.8	+2.7
	baz=318,SNR=5.8						
GWY	**Greenwater Val**	**55.90**	**75**	IAmb	IAmb	02 08 57.2	
	comp=Z,25nm,0.8s						
QSM	**Queen of Sheba**	**55.96**	**75**	IAmb	IAmb	02 09 10.6	
	comp=Z,18nm,0.8s						
EDW2	**Edwards Air Fo**	**56.16**	**77**	P	P	02 08 57.7	+2.7
	baz=319,SNR=10						
SHOC	**Shoshone, Teco**	**56.32**	**75**	P	P	02 08 58.7	+2.6
	baz=319						
TCRU	**Three Creeks R**	**56.34**	**70**	IAmb	IAmb	02 09 19.7	
	comp=Z,15nm,0.6s						
K22A	**Casper**	**56.37**	**62**	P	P	02 08 58.7	+2.2
	baz=318						
K22A	**Casper**	**56.37**	**62**	IAmb	IAmb	02 09 11.2	
	comp=Z,32nm,1.4s						
RDMU	**Red Mountain**	**56.38**	**66**	IAmb	IAmb	02 09 13.6	
	comp=Z,28nm,1.0s						
DZA	**Taraz**	**56.43**	**298**	eP	**P**	**02 08 55.6**	**-1.2**
	baz=298						
DZA	**Taraz**	**56.43**	**298**	eP	**P**	**02 08 55.6**	**-1.2**
DECC	**Green Verdugo**	**56.44**	**77**	P	P	02 08 59.5	+2.6
	baz=319						
TMUT	**Trail Mountain**	**56.48**	**68**	IAmb	IAmb	02 09 01.6	
	comp=Z,21nm,0.9s						
GSC	**Goldstone, Bar**	**56.48**	**75**	P	P	02 09 00.2	+2.8
	baz=319,SNR=14						
GSC	**Goldstone, Bar**	**56.48**	**75**	IAmb	IAmb	02 09 01.4	
	comp=Z,29nm,0.8s						
RSSD	**Black Hills**	**56.49**	**60**	P	**P**	**02 08 58.5**	**+1.0**
RSSD				pmax	pmax		
	comp=Z,27nm,1.2s						
RSSD	**Black Hills**	**56.49**	**60**	P	**P**	**02 08 59.4**	**+1.9**
	baz=318						
RSSD	**Black Hills**	**56.49**	**60**	P	**P**	**02 08 58.5**	**+1.0**
RSSD				IAmb	IAmb	02 09 12.1	
	comp=Z,27nm,1.1s						
SNCC	**San Nicolas Is**	**56.55**	**79**	P	P	02 09 00.2	+2.5
	baz=319						
PASC	**Pasadena Art C**	**56.58**	**77**	IAmb	IAmb	02 09 01.6	
	comp=Z,30nm,0.9s						
KSH	**Kashi**	**56.59**	**292**	P	**P**	**02 09 01.0**	**+2.9**
KSH				pP	sP	02 09 17.3	+2.4
KSH				sP	pP	02 09 23.6	+14
KSH				pmax	pmax		
	comp=Z,74nm,1.1s						
KSH				LR	LR		
	comp=Z,830nm,18.9s						
KSH				LR	LR		
	comp=Z,690nm,17.9s						
KSH				LR	LR		
	comp=Z,1µm,18.5s						
P17A	**Butcher Ranch,**	**56.59**	**68**	IAmb	IAmb	02 09 15.0	
	comp=Z,19nm,0.9s						
MWC	**Mount Wilson**	**56.61**	**77**	IAmb	IAmb	02 09 02.3	
	comp=Z,34nm,1.1s						
KK31	**Karatay Array**	**56.67**	**299**	P	**P**	**02 08 58.3**	**-0.2**
KK31				pmax	pmax		
	comp=Z,181nm,0.8s						
KK31	**Karatay Array**	**56.67**	**299**	P	**P**	**02 08 58.3**	**-0.2**
KKAR	**Karatay Array**	**56.67**	**299**	P	**P**	**02 08 58.1**	**-0.4**
KKAR				pmax	pmax		
	comp=Z,181nm,0.8s						
KKAR	**Karatay Array**	**56.67**	**299**	P	**P**	**02 08 58.1**	**-0.4**
KKAR	**Karatay Array**	**56.67**	**299**	P	**P**	**02 08 58.4**	**-0.1**
KKAR				IAmb	IAmb	02 08 59.5	
	comp=Z,181nm,0.8s						
P18A	**Preston Nutter**	**56.73**	**67**	IAmb	IAmb	02 09 10.2	
	comp=Z,26nm,1.1s						
SZCU	**Shurtz Canyon**	**56.76**	**71**	IAmb	IAmb	02 09 16.4	
	comp=Z,17nm,1.0s						
AKTO	**Aktyubinsk**	**56.82**	**312**	P	**P**	**02 08 58.9**	**-0.5**
BFSC	**Mount Baldy Ra**	**56.82**	**77**	P	P	02 09 02.5	+2.8
	baz=319,SNR=5.5						
TUQ	**Turquoise Moun**	**56.86**	**75**	P	P	02 09 02.9	+2.9
	baz=319,SNR=7.9						
AB31	**Akbulak array**	**56.91**	**310**	i P	**P**	**02 08 59.7**	**-0.3**
ABKAR	**Akbulak array**	**56.91**	**310**	P	**P**	**02 08 59.8**	**-0.2**
ABKAR	**Akbulak array**	**56.91**	**310**	P	**P**	**02 09 00.2**	**+0.2**
ABKAR				IAmb	IAmb	02 09 01.1	
	comp=Z,32nm,0.7s						
CIS	**Catalina Islan**	**57.04**	**78**	P	P	02 09 03.5	+2.2
	baz=319						
BRLS	**Borolday**	**57.06**	**299**	eP	**P**	**02 09 01.3**	**+0.1**
	baz=299						
BRLS	**Borolday**	**57.06**	**299**	eP	**P**	**02 09 01.3**	**+0.1**
HEC	**Hector,Ludlow**	**57.09**	**75**	P	P	02 09 04.6	+2.9
	baz=319,SNR=13						
AGMN	**Agassiz Nation**	**57.11**	**51**	P	**P**	**02 09 03.3**	**+1.8**
	baz=320,SNR=9.6						
AGMN	**Agassiz Nation**	**57.11**	**51**	IAmb	IAmb	02 09 13.1	
	comp=Z,16nm,0.9s						
BBRC	**Big Bear Solar**	**57.20**	**76**	P	P	02 09 05.0	+2.4
	baz=319						
SCI2	**San Clemente I**	**57.28**	**79**	P	P	02 09 05.2	+2.3
	baz=320						
O20A	**White River Ci**	**57.38**	**66**	P	P	02 09 06.4	+2.6
	baz=319,SNR=34						
GMRC	**Granite Mounta**	**57.49**	**75**	P	P	02 09 07.2	+2.7
	baz=319,SNR=18						
NSS	**Namsos**	**57.51**	**345**	eP	**P**	**02 09 05.2**	**+1.1**
MURC	**Murrieta**	**57.55**	**77**	P	P	02 09 07.1	+2.2
	baz=319						
FIA1	**FINESS Array S**	**57.84**	**337**	P	**P**	**02 09 07.3**	**+0.9**
FINES	**FINESS Array B**	**57.84**	**337**	P	**P**	**02 09 07.2**	**+0.9**
	comp=Z,51nm,0.8s,baz=42,slow=8.8,SNR=98						
FINES				LR	LR	02 36 24.4	
	comp=Z,580nm,21.8s,baz=32,slow=38						
FINES	**FINESS Array B**	**57.84**	**337**	i P	**P**	**02 09 07.1**	**+0.7**
FINES				pmax	pmax		
	comp=Z,51nm,0.8s						
BELC	**Belle Mtn. Jos**	**57.90**	**76**	P	P	02 09 09.8	+2.4
	baz=319,SNR=6.4						
PFO	**Pinyon Flats O**	**57.95**	**76**	P	**P**	**02 09 08.4**	**+0.7**
PFO				pmax	pmax		
	comp=Z,15nm,1.0s						
PFO	**Pinyon Flats O**	**57.95**	**76**	P	P	02 09 10.1	+2.4
	baz=320,SNR=5.3						
PFO	**Pinyon Flats O**	**57.95**	**76**	P	**P**	**02 09 08.4**	**+0.7**
PFO				IAmb	IAmb	02 09 11.2	
	comp=Z,15nm,1.0s						
TPFO	**Pinon Flats**	**57.95**	**76**	P	P	02 09 10.1	+2.3
	baz=320						
N23A	**Red Feather La**	**57.97**	**63**	P	P	02 09 10.6	+2.6
	baz=319,SNR=19						
B35A	**Bob, Littlefor**	**57.99**	**50**	IAmb	IAmb	02 09 19.0	
	comp=Z,11nm,0.8s						
U15A	**North Rim**	**58.05**	**71**	IAmb	IAmb	02 09 14.4	
	comp=Z,18nm,1.1s						
109C	**Camp Elliot, M**	**58.14**	**78**	P	P	02 09 11.3	+2.4
	baz=320						
W13A	**Hualapai Mount**	**58.21**	**73**	IAmb	IAmb	02 09 26.0	
	comp=Z,18nm,1.2s						
IRM	**Iron Mountain**	**58.24**	**75**	P	P	02 09 12.8	+3.1
	baz=320,SNR=17						
PUL	**Pulkovo**	**58.33**	**334**	eP	**P**	**02 09 11.4**	**+1.5**
PUL	**Pulkovo**	**58.33**	**334**	ceP	**P**	**02 09 11.5**	**+1.6**
PUL				pmax	pmax		
	comp=Z,138nm,0.7s						
BC3	**Big Chuckawall**	**58.46**	**76**	P	P	02 09 13.6	+2.3
	baz=320,SNR=7.5						
SHL	**Shillong**	**58.52**	**270**	P	**P**	**02 09 09.6**	**-2.3**
SHL				pmax	pmax		
	comp=Z,26nm,1.0s						
SHL	**Shillong**	**58.52**	**270**	P	**P**	**02 09 09.6**	**-2.3**
SHL				IAmb	IAmb	02 09 13.5	
	comp=Z,26nm,1.0s						
TAS	**Tashkent**	**58.60**	**298**	P	**P**	**02 09 11.5**	**-0.6**
TAS				pmax	pmax		
	comp=Z,138nm,0.8s						
TAS	**Tashkent**	**58.60**	**298**	P	**P**	**02 09 11.5**	**-0.6**
SUSD	**Miller**	**58.65**	**56**	P	**P**	**02 09 13.8**	**+1.4**
	baz=320						
PDMCI	**Parker Dam,Lak**	**58.67**	**74**	P	P	02 09 15.4	+2.8
	baz=320,SNR=13						
SMCO	**Snowmass**	**58.74**	**65**	IAmb	IAmb	02 09 30.7	
	comp=Z,26nm,1.0s						
SWSC	**Sam W. Stewart**	**58.81**	**76**	P	**P**	**02 09 15.5**	**+1.9**
	baz=320						
CBX	**Cerro Bola**	**58.82**	**78**	P	**P**	**02 09 14.1**	**+0.2**
IKP	**In-Ko-Pah, Jac**	**58.87**	**77**	P	P	02 09 16.6	+2.5
	baz=320						
ISCO	**Idaho Springs**	**58.96**	**64**	P	P	02 09 18.1	+3.2
	baz=320,SNR=30						
ISCO	**Idaho Springs**	**58.96**	**64**	IAmb	IAmb	02 09 32.2	
	comp=Z,21nm,0.9s						
WUAZ	**Wupatki**	**59.23**	**71**	P	P	02 09 19.8	+3.1
	baz=320,SNR=15						
WUAZ	**Wupatki**	**59.23**	**71**	IAmb	IAmb	02 09 37.3	
	comp=Z,28nm,1.2s						
EYMN	**Ely**	**59.25**	**49**	P	**P**	**02 09 18.1**	**+1.6**
	baz=322,SNR=11						
GLA	**Glamis**	**59.26**	**76**	P	P	02 09 19.9	+3.1
	baz=320,SNR=14						
MVCO	**Mesa Verde**	**59.45**	**68**	P	P	02 09 20.9	+2.6
	baz=320,SNR=6.3						
MVCO	**Mesa Verde**	**59.45**	**68**	P	**P**	**02 09 19.2**	**+0.9**
TAPN	**Taplejung**	**59.46**	**274**	eP	**P**	**02 09 17.6**	**-0.9**
	comp=Z,154nm,1.1s						
Y14A	**Wickenburg**	**59.56**	**74**	IAmb	IAmb	02 09 24.3	
	comp=Z,18nm,1.0s						
Q24A	**Divide**	**59.83**	**64**	P	P	02 09 23.7	+2.8
	baz=320,SNR=6.2						
MOS	**Moscow**	**59.83**	**328**	eP	**P**	**02 09 20.2**	**-0.1**
MOS				e		02 09 29.8	
MOS				pmax	pmax		
	comp=Z,145nm,0.8s						
MOS				pmax	pmax		
	comp=Z,200nm,0.9s						
MOS				MLR	MLR		
	comp=Z,800nm,18.0s						
OGNE	**Ogallala**	**59.86**	**61**	P	**P**	**02 09 22.7**	**+1.9**
	baz=320						
OGNE	**Ogallala**	**59.86**	**61**	P	**P**	**02 09 20.9**	**+0.1**
OGNE				IAmb	IAmb	02 09 36.8	
	comp=Z,23nm,1.1s						
S22A	**4UR Ranch, Cre**	**59.90**	**66**	P	P	02 09 24.6	+3.2
	baz=320,SNR=25						
CHTO	**Chiang Mai**	**59.98**	**259**	P	**P**	**02 09 21.0**	**-0.8**
CHTO				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CHTO	**Chiang Mai**	**59.98**	**259**	P	**P**	**02 09 21.0**	**-0.8**
CHTO	**Chiang Mai**	**59.98**	**259**	P	**P**	**02 09 23.7**	**+1.9**
MOL	**Molde**	**59.98**	**347**	eP	**P**	**02 09 22.6**	**+1.4**
ODAN	**Odare**	**60.02**	**274**	eP	**P**	**02 09 21.1**	**-1.2**
	comp=Z,82nm,0.9s						
X16A	**Lo Mia Camp, P**	**60.03**	**72**	IAmb	IAmb	02 09 28.0	
	comp=Z,15nm,0.8s						
GUN	**Gumba**	**60.04**	**276**	eP	**P**	**02 09 22.2**	**-0.4**
	comp=Z,124nm,0.7s						
113A	**Mohawk Valley,**	**60.05**	**75**	IAmb	IAmb	02 09 25.9	
	comp=Z,18nm,1.0s						
JIRN	**Jiri**	**60.06**	**276**	eP	**P**	**02 09 22.5**	**-0.3**
	comp=Z,32nm,0.7s						
AAL	**Aland**	**60.25**	**340**	eP	**P**	**02 09 24.4**	**+1.4**
CMAR	**Chiang Mai Arr**	**60.27**	**259**	P	**P**	**02 09 24.0**	**+0.3**
	comp=Z,5.1nm,0.6s,baz=18,slow=7.0,SNR=18						
CMAR				PcP	**PcP**	**02 10 09.7**	**+0.9**
	comp=Z,16nm,0.7s,baz=8.9,slow=3.3,SNR=14						
CMAR				LR	LR	02 36 58.1	
	comp=Z,569nm,20.6s,baz=82,slow=38						
CMAR	**Chiang Mai Arr**	**60.27**	**259**	P	**P**	**02 09 23.4**	**-0.4**
E38A	**The Farm, Brul**	**60.28**	**50**	IAmb	IAmb	02 09 34.5	
	comp=Z,20nm,0.8s						
ECSD	**EROS Data Cent**	**60.28**	**55**	P	**P**	**02 09 25.2**	**+1.6**
	baz=321,SNR=12						
ECSD	**EROS Data Cent**	**60.28**	**55**	P	**P**	**02 09 23.3**	**-0.2**
ECSD				IAmb	IAmb	02 09 37.9	
	comp=Z,13nm,0.9s						
DOMB	**Dombas**	**60.29**	**346**	eP	**P**	**02 09 23.5**	**+0.1**
VSU	**Vasula**	**60.36**	**335**	eP	**P**	**02 09 25.7**	**+1.8**
VSU	**Vasula**	**60.36**	**335**	c iP	**P**	**02 09 25.1**	**+1.3**
RAMN	**Ramite**	**60.39**	**275**	eP	**P**	**02 09 24.3**	**-0.5**
	comp=Z,79nm,0.5s						
W18A	**Petrified Fore**	**60.40**	**70**	P	P	02 09 27.8	+3.1
	baz=320,SNR=8.3						
W18A	**Petrified Fore**	**60.40**	**70**	IAmb	IAmb	02 09 42.1	
	comp=Z,18nm,0.9s						
AKN	**Aaknes**	**60.43**	**347**	eP	**P**	**02 09 25.6**	**+1.3**
KKN	**Kakani**	**60.47**	**276**	eP	**P**	**02 09 24.7**	**-0.6**
	comp=Z,55nm,0.6s						
PKI	**Pulchoki**	**60.57**	**276**	eP	**P**	**02 09 25.1**	**-1.1**
	comp=Z,210nm,1.2s						
PKIN	**Phulchoki**	**60.57**	**276**	eP	**P**	**02 09 25.1**	**-1.0**
	comp=Z,170nm,1.1s						
SDCO	**Great Sand Dun**	**60.58**	**65**	P	P	02 09 28.8	+2.8
	baz=320						
SDCO	**Great Sand Dun**	**60.58**	**65**	P	**P**	**02 09 27.1**	**+1.0**
SDCO				IAmb	IAmb	02 09 43.0	
	comp=Z,12nm,0.8s						
GKN	**Gorkha**	**60.66**	**277**	eP	**P**	**02 09 25.7**	**-0.9**
	comp=Z,240nm,1.3s						
OBN	**Obninsk**	**60.68**	**328**	c iP	**P**	**02 09 26.8**	**+0.7**
OBN				e	**PcP**	**02 10 09.9**	**+0.1**
OBN				e	**PP**	**02 11 43.9**	**+4.4**
OBN				i S	**S**	**02 17 37.1**	**-2.0**
OBN				i SS	**SS**	**02 21 36.7**	**-0.4**
OBN				pmax	pmax		
	comp=Z,203nm,1.7s						
OBN				MLR	MLR		
	comp=Z,618nm,18.0s						
OBN	**Obninsk**	**60.68**	**328**	P	**P**	**02 09 26.0**	**-0.1**
DMN	**Daman**	**60.71**	**277**	eP	**P**	**02 09 26.4**	**-0.6**
	comp=Z,123nm,1.1s						
NC303	**NORSAR Array S**	**60.75**	**345**	IAmb	IAmb	02 09 28.7	
	comp=Z,27nm,0.9s						
MTSE	**Matsula**	**60.80**	**337**	eP	**P**	**02 09 28.8**	**+2.0**
SPMN	**Marine on St.**	**60.82**	**52**	P	**P**	**02 09 28.8**	**+1.5**
	baz=322,SNR=6.5						
SPMN	**Marine on St.**	**60.82**	**52**	IAmb	IAmb	02 09 38.6	
	comp=Z,20nm,0.8s						
DANN	**Dangsing**	**60.88**	**278**	eP	**P**	**02 09 27.6**	**-0.6**
	comp=Z,92nm,0.7s						
NB201	**NORSAR Array S**	**60.93**	**345**	P	**P**	**02 09 27.7**	**-0.1**
NB2	**NORSAR Subarra**	**60.95**	**345**	P	**P**	**02 09 28.8**	**+0.9**
	comp=Z,23nm,0.7s,baz=18,slow=6.9						
NB2	**NORSAR Subarra**	**60.95**	**345**	P	**P**	**02 09 28.8**	**+0.9**
	baz=18,slow=6.9						
NOA	**NORSAR Array B**	**60.95**	**345**	P	**P**	**02 09 28.6**	**+0.7**
	comp=Z,18nm,0.8s,baz=19,slow=6.8,SNR=62						
NOA				PcP	**PcP**	**02 10 11.5**	**+0.5**
	comp=Z,8.6nm,0.9s,baz=18,slow=3.1,SNR=8.5						
NOA				LR	LR	02 37 24.5	
	comp=Z,324nm,18.6s,baz=15,slow=38						

UPP	Uppsala	60.99	341	eP	P	02 09 29.2	+1.1
NBO00	NORSAR Array S	61.02	345	P	P	02 09 28.1	-0.3
KSCO	Kaye Shedlock'	61.05	63	P	P	02 09 31.3	+2.2
	baz=321						
KSCO	Kaye Shedlock'	61.05	63	IAmb	IAmb	02 09 48.0	
	comp=Z,27nm,0.8s						
BAKI	Biak	61.14	211	P	P	02 09 30.3	+0.6
	comp=Z,109nm,1.5s						
NAO01	NORSAR Array S	61.18	345	P	P	02 09 30.1	+0.6
214A	Organ Pipe Nat	61.19	75	P	P	02 09 32.7	+2.8
	baz=321,SNR=12						
NC602	NORSAR Array S	61.19	344	eP	P	02 09 29.0	-0.5
NC602	NORSAR Array S	61.19	344	P	P	02 09 29.6	+0.1
BGNE	Belgrade	61.37	58	P	P	02 09 32.6	+1.5
	baz=321						
KOLN	Koldanda	61.42	278	eP	P	02 09 30.7	-1.1
PYUN	Piuthan	61.50	279	eP	P	02 09 31.6	-0.7
	comp=Z,412nm,1.1s						
T25A	Trinidad	61.60	65	P	P	02 09 35.4	+2.5
	baz=321,SNR=7.0						
T25A	Trinidad	61.60	65	IAmb	IAmb	02 09 49.5	
	comp=Z,37nm,1.5s						
COWI	Conover	61.70	49	IAmb	IAmb	02 09 36.2	
	comp=Z,11nm,0.8s						
SKAR	Skarslia	61.70	346	eP	P	02 09 34.3	+1.3
TUC	Tucson	62.00	73	P	P	02 09 35.9	+0.4
TUC				pmax	pmax		
	comp=Z,11nm,1.0s						
TUC	Tucson	62.00	73	P	P	02 09 38.1	+2.6
	baz=321						
TUC	Tucson	62.00	73	P	P	02 09 35.9	+0.4
OSL	Oslo	62.08	344	eP	P	02 09 36.5	+1.1
LPSR	Galich'ya Gora	62.10	325	eP	P	02 09 35.9	+0.2
LPSR				pmax	pmax		
	comp=Z,210nm,0.7s						
SLIT	Slitere, Latvi	62.12	337	eP	P	02 09 37.1	+1.3
SCHQ	Schefferville	62.20	30	P	P	02 09 37.3	+0.9
	comp=Z,12nm,0.7s,baz=352,slow=7.5,SNR=16						
SCHQ				LR	LR	02 38 49.4	
	comp=Z,316nm,20.3s,baz=304,slow=38						
SCHQ	Schefferville	62.20	30	P	P	02 09 37.4	+0.9
SCHQ				IAmb	IAmb	02 09 50.3	
	comp=Z,22nm,1.0s						
ANMO	Albuquerque	62.24	68c	iP	P	02 09 39.0	+1.8
ANMO				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ANMO	Albuquerque	62.24	68	P	P	02 09 39.8	+2.6
	baz=321						
ANMO	Albuquerque	62.24	68	P	P	02 09 38.3	+1.1
ASK	Askoy	62.29	348	eP	P	02 09 38.4	+1.5
SWI	Sorong	62.32	216	P	P	02 09 38.5	+0.9
	comp=Z,1µmcomp=Z,83nm,1.5s						
SIJI	Sorong	62.32	216	LR	LR	02 32 40.5	
	comp=Z,265nm,21.5s,baz=332,slow=32						
VRH	Novokhopyorsk	62.36	322	eP	P	02 09 37.4	-0.1
BER	Bergen	62.37	348	eP	P	02 09 38.9	+1.5
NIL	Nilore	62.46	290	P	P	02 09 37.3	-1.2
NIL				pmax	pmax		
	comp=Z,186nm,1.4s						
NIL	Nilore	62.46	290	P	P	02 09 38.3	-0.2
NIL	Nilore	62.46	290	P	P	02 09 37.3	-1.2
KONO	Kongsberg	62.52	345c	eP	P	02 09 39.3	+0.8
KONO				pmax	pmax		
	comp=Z,31nm,1.3s						
KONO	Kongsberg	62.52	345	eP	P	02 09 39.7	+1.3
KONO	Kongsberg	62.52	345	P	P	02 09 39.2	+0.8
KONO				IAmb	IAmb	02 09 40.9	
	comp=Z,26nm,1.0s						
CBKS	Cedar Bluff	62.62	61	P	P	02 09 41.1	+1.6
	baz=322						
ODD1	Odda	62.67	347	eP	P	02 09 40.8	+1.3
Y22D	IRIS PASSCAL I	62.68	69	P	P	02 09 43.0	+2.9
	baz=321						
I40A	Norwalk	62.83	51	IAmb	IAmb	02 09 43.0	
	comp=Z,24nm,1.2s						
STRU	Stroemstad	62.87	344	iP	P	02 09 41.0	+0.3
SPMM	Sapulut	63.05	234	P	P	02 09 43.0	+0.4
ISAL	Salakas	63.11	334	eP	P	02 09 44.7	+2.3
VSR	Storozhevoye	63.20	324	eP	P	02 09 43.7	+0.6
VSR				pmax	pmax		
	comp=Z,130nm,0.7s						
SCIA	State Center	63.26	54	P	P	02 09 44.6	+0.9
	baz=323						
VORD	Divnogorie	63.37	324	eP	P	02 09 44.5	+0.3
VORD				pmax	pmax		
	comp=Z,80nm,0.7s						
LBMI	Labuha	63.40	220	P	P	02 09 45.3	+0.5
	comp=Z,53nm,1.0s						
121A	Cookes Peak, D	63.42	71	P	P	02 09 48.3	+3.3
	baz=322,SNR=16						
121A	Cookes Peak, D	63.42	71	IAmb	IAmb	02 10 05.1	
	comp=Z,32nm,1.1s						
E46A	Sault Ste Mari	63.46	45	IAmb	IAmb	02 09 58.0	
	comp=Z,16nm,0.9s						
NACGM	Naroch	63.55	333	iP	P	02 09 45.9	+0.6
MNK	Minsk	63.63	332	iP	P	02 09 47.7	+1.8
MNK				i*PP	sP	02 10 03.9	+1.1
MNK				i	PcP	02 10 23.7	+1.8
MNK				i	PP	02 12 07.9	+2.4
MNK				iPPP	PPP	02 13 37.7	
MNK				iS	S	02 18 17.4	+1.0
MNK				i*SS	sS	02 18 45.0	+8.1
MNK				i		02 19 35.4	
MNK				iSS	SS	02 22 26.3	+3.0
MNK				pmax	pmax		
	comp=Z,134nm,0.9s						
MNK				pmax	pmax		
	comp=N,84nm,0.9s						
MNK				MLR	MLR		
	comp=Z,472nm,21.0s						
MNK				MLR	MLR		
	comp=N,301nm,17.0s						
MNK	Minsk	63.63	332	iP	P	02 09 47.8	+1.9
	comp=E,47nm,17.4s						
MNK				iP	P	02 09 47.8	+1.9
	comp=N,84nm,0.9s						
MNK				iP	P	02 09 47.8	+1.9
	comp=Z,134nm,0.9s,baz=206						
MNK				ipP	sP	02 10 04.0	+1.1
MNK				iPP	PP	02 12 08.0	+2.5
MNK				iPPP	PPP	02 13 37.8	
MNK				iS	S	02 18 17.4	+1.0
MNK				isS	sS	02 18 45.1	+8.2
MNK				iSS	SS	02 22 26.4	+3.0
MNK				iSSS	SSS	02 25 25.4	
MNK				iLQ	LQ	02 33 01.7	
MNK				iLR	LR	02 36 26.2	
MNK				iLRM	MLR	02 40 33.0	
	comp=E,47nm,17.4s						
MNK				iLRM	MLR	02 40 47.4	
	comp=Z,472nm,21.0s						
MNK				iLRM	MLR	02 41 04.1	
	comp=N,301nm,17.4s						
PBUR	Paburge	63.68	337	eP	P	02 09 47.9	+1.8
PABE	Paberze	63.69	335	eP	P	02 09 48.2	+2.0
PABE	Paberze	63.69	335	P	P	02 09 47.2	+1.0
TJOU	Tjoern	63.76	343	iP	P	02 09 47.0	+0.4
JFWS	Jewell Farm	63.77	52	P	P	02 09 47.9	+0.9
	baz=324						
KSU1	Kansas State U	63.91	58	P	P	02 09 48.9	+0.9
	baz=322,SNR=5.6						
KSU1	Kansas State U	63.91	58	IAmb	IAmb	02 10 01.9	
	comp=Z,33nm,0.9s						
GTOI	Gorontalo	63.93	225	P	P	02 09 48.4	+0.1
	comp=Z,194nmcomp=Z,15nm,1.6s						
FAKI	Fak Fak	63.93	214	P	P	02 09 48.8	+0.5
	comp=Z,75nm,1.2s						
FAKI	Fak Fak	63.93	214	P	P	02 09 47.0	-1.3
FAKI	Fak Fak	63.93	214	P	P	02 09 49.6	+1.3
BORU	Boraas	63.95	343	iP	P	02 09 48.0	+0.1
KBL	Kabul	63.95	294	P	P	02 09 46.6	-2.0
KBL				pmax	pmax		
	comp=Z,48nm,0.8s						
KBL	Kabul	63.95	294	P	P	02 09 46.7	-1.9
KBL	Kabul	63.95	294	P	P	02 09 46.6	-1.9
G45A	Suttons Bay	64.00	47	IAmb	IAmb	02 10 02.0	
	comp=Z,31nm,0.7s						
L40A	Anamosa	64.03	53	IAmb	IAmb	02 09 50.4	
	comp=Z,14nm,0.7s						
N38A	Joes South For	64.14	55	IAmb	IAmb	02 09 51.7	
	comp=Z,20nm,0.7s						
ONAU	Onsala	64.32	343	iP	P	02 09 50.4	+0.1
TOLI2	Tolitoli	64.40	228	P	P	02 09 51.2	-0.2
TOLI2	Tolitoli	64.40	228	P	P	02 09 52.1	+0.7
HSIG		64.47	76	IAmb	IAmb	02 10 08.8	
	comp=Z,48nm,1.3s						
MRSI	Marisa	64.50	226	P	P	02 09 52.2	+0.1
	comp=Z,1µmcomp=Z,156nm,1.1s						
FABU	Falkenberg	64.56	342	iP	P	02 09 51.9	0.0
GLMI	Grayling	64.60	47	P	P	02 09 53.2	+0.7
	baz=325						
OVD	Ostervraa, Den	64.67	344	eP	P	02 09 53.4	+0.8
BLEU	Blekinge	64.67	340	iP	P	02 09 52.4	-0.2
AMTX	Amarillo	64.74	65	P	P	02 09 55.4	+1.8
	baz=322						
DEL	Delary	64.87	341	iP	P	02 09 54.1	+0.1
MSTX	Muleshoe	64.90	66	P	P	02 09 56.6	+1.9
	baz=322,SNR=9.4						
MSTX	Muleshoe	64.90	66	P	P	02 09 53.9	-0.8
MSTX				IAmb	IAmb	02 10 10.1	
	comp=Z,50nm,1.3s						
P38A	Dawn	64.93	56	IAmb	IAmb	02 09 57.1	
	comp=Z,25nm,0.8s						
SUW	Suwalki	65.24	335	eP	P	02 09 57.2	+0.9
SUW				eL	L	02 39 35.1	
	comp=Z,666nm,22.4s						
SUW	Suwalki	65.24	335	eP	P	02 09 57.6	+1.2
SUW	Suwalki	65.24	335	P	P	02 09 56.4	0.0
SUW				pmax	pmax		
	comp=Z,100nm,0.8s						
SUW	Suwalki	65.24	335	P	P	02 09 56.4	0.0
SANI	Sanana	65.26	221	P	P	02 09 56.8	-0.2
	comp=Z,884nmcomp=Z,87nm,1.1s						
SANI	Sanana	65.26	221	P	P	02 09 58.0	+1.0
N41A	Harden Midland	65.28	53	IAmb	IAmb	02 09 58.9	
	comp=Z,37nm,0.8s						
MNTX	Cornudas Mount	65.34	70	P	P	02 10 00.3	+2.8
	baz=322,SNR=39						
MNTX	Cornudas Mount	65.34	70	P	P	02 09 57.8	+0.4
MNTX				IAmb	IAmb	02 10 14.5	
	comp=Z,39nm,1.1s						
L44A	Lake County Fo	65.39	50	P	P	02 09 58.2	+0.6
	baz=325						
BJUU	Bjuv	65.39	342	iP	P	02 09 57.9	+0.5
MSAI	Masohi	65.42	218	P	P	02 09 58.5	+0.5
	comp=Z,702nmcomp=Z,8.5nm,0.7s						
MPSI	Mapaga	65.47	228	P	P	02 09 58.6	+0.3
	comp=Z,817nmcomp=Z,90nm,1.2s						
LUWI	Luwuk	65.56	225	P	P	02 09 58.2	-0.7
	comp=Z,10µmcomp=Z,120nm,1.4s						
LUWI	Luwuk	65.56	225	P	P	02 09 57.1	-1.8
LUWI	Luwuk	65.56	225	P	P	02 09 59.4	+0.5
MUD	Monsted U'grnd	65.66	344	iP	P	02 10 00.3	+1.3
P40A	Paris	65.69	55	IAmb	IAmb	02 10 01.9	
	comp=Z,24nm,0.7s						
LUNU	Lund	65.74	341	iP	P	02 10 00.2	+0.6
J47A	Sunmer	65.82	48	IAmb	IAmb	02 10 02.2	
	comp=Z,21nm,0.7s						
BSD	Bornholm Skovb	65.96	340	eP	P	02 10 02.8	+1.8
BSD	Bornholm Skovb	65.96	340	iP	P	02 10 01.7	+0.6
I49A	Point Hope	66.05	46	IAmb	IAmb	02 10 15.4	
	comp=Z,31nm,0.7s						
HDIL	Hopedale	66.10	52	P	P	02 10 03.3	+1.1
	baz=325,SNR=6.4						
MDO	Dochfour	66.22	352	eP	P	02 10 04.0	+1.3
WMOK	Wichita Mounta	66.31	63	P	P	02 10 04.7	+1.1
WMOK				pmax	pmax		
	comp=Z,30nm,0.8s						
WMOK	Wichita Mounta	66.31	63	P	P	02 10 05.5	+1.9
	baz=323,SNR=24						
WMOK	Wichita Mounta	66.31	63		P	02 10 04.7	+1.1
WMOK				IAmb	IAmb	02 10 06.7	
	comp=Z,30nm,0.8s						
OK025	Westminster Rd	66.35	61	IAmb	IAmb	02 10 05.9	
	comp=Z,19nm,1.0s						
FNO	Franklin	66.58	61	IAmb	IAmb	02 10 16.3	
	comp=Z,22nm,0.9s						
R40A	Maddies Statio	66.59	56	IAmb	IAmb	02 10 07.5	
	comp=Z,32nm,0.8s						
GEYT	Alibeck	66.62	303	P	P	02 10 05.8	+0.2
	comp=Z,44nm,0.6s,baz=45,slow=2.3,SNR=68						
GEYT				PP	PP	02 12 27.9	-4.3
	comp=Z,2.8nm,0.5s,baz=53,slow=7.9,SNR=2.6						
GEYT				LR	LR	02 42 26.4	
	comp=Z,830nm,18.3s,baz=45,slow=39						
GYA0B	ALIBECK ARRAY	66.62	303	P	P	02 10 04.5	-1.1
PMG	Port Moresby	66.63	197	P	P	02 10 06.1	+0.4
	comp=Z,13nm,0.6s,baz=344,slow=6.6,SNR=6.3						
PMG				LR	LR	02 35 45.1	
	comp=Z,263nm,20.2s,baz=28,slow=33						
AKASG	Malin Array Be	66.69	330	P	P	02 10 06.4	+0.7
	comp=Z,59nm,0.6s,baz=29,slow=6.4,SNR=137						
AKASG				LR	LR	02 43 08.9	
	comp=Z,878nm,18.3s,baz=10.0,slow=39						
AKASG	Malin Array Be	66.69	330	P	P	02 10 06.4	+0.7
AKBB	Malin Array Si	66.69	330c	eP	P	02 10 06.2	+0.5
AKBB	Malin Array Si	66.69	330	P	P	02 10 06.5	+0.8
P43A	Skaggs, Pawnee	66.74	53	IAmb	IAmb	02 10 08.3	
	comp=Z,25nm,0.9s						
O44A	Mansfield	66.80	52	IAmb	IAmb	02 10 08.3	
	comp=Z,17nm,0.7s						
TUL1	Leonard	66.84	60	P	P	02 10 08.3	+1.3
	baz=324,SNR=6.7						
TUL1	Leonard	66.84	60	IAmb	IAmb	02 10 18.1	
	comp=Z,48nm,1.5s						
X34A	Smith Ranch, M	66.89	62	IAmb	IAmb	02 10 23.7	
	comp=Z,33nm,1.1s						
L48A	N Adams	67.05	48	IAmb	IAmb	02 10 14.4	
	comp=Z,23nm,0.7s						
AAM	Ann Arbor	67.08	48	P	P	02 10 09.0	+0.7
	baz=326						
GOF	Gofitskoye	67.08	318	⇑iP	P	02 10 09.4	+1.0
GOF				eS	S	02 19 03.2	+4.2
GOF				pmax	pmax		
	comp=Z,159nm,0.8s						
MAK	Makhachkala	67.12	314	eP	P	02 10 06.6	-2.0
MAK				e*PP	sP	02 10 23.4	-2.2
MAK				e*SP	PcP	02 10 31.1	-5.4
MAK				e	PP	02 12 39.2	+3.0
MAK				eS	S	02 18 54.8	-4.6
MAK				e*SS	sS	02 19 26.0	+6.1
MAK				eSS	SS	02 23 13.7	-4.2
MAK				pmax	pmax		
	comp=Z,88nm,1.0s						
MAK				MLR	MLR		
	comp=Z,857nm,15.0s						
INVG	Invergeldie, C	67.20	352	eP	P	02 10 09.7	+0.7
SFIN	Lafayette	67.21	51	P	P	02 10 10.1	+0.9
	baz=326						
GKP	Gorka Klasztor	67.25	338	eP	P	02 10 10.8	+1.6
GKP				eL	L	02 41 37.1	
	comp=Z,683nm,20.9s						
GKP	Gorka Klasztor	67.25	338	eP	P	02 10 11.2	+2.0
TRQ	Mont Tremblant	67.25	39	P	P	02 10 09.6	+0.1
TRQ				IAmb	IAmb	02 10 23.4	
	comp=Z,27nm,1.0s						
CCM	Cathedral Cave	67.25	55	P	P	02 10 10.0	+0.4
CCM				pmax	pmax		
	comp=Z,29nm,1.1s						
CCM	Cathedral Cave	67.25	55	P	P	02 10 10.5	+1.0
	baz=325						
CCM	Cathedral Cave	67.25	55	P	P	02 10 10.0	+0.4
CCM				IAmb	IAmb	02 10 11.9	
	comp=Z,29nm,1.1s						
HHAR	Hobbs	67.43	58	IAmb	IAmb	02 10 24.4	
	comp=Z,28nm,0.9s						
HRA	Herat	67.49	298	IAmb	IAmb	02 10 12.4	
	comp=Z,33nm,0.9s						
MGMO	Mountain Grove	67.51	57	IAmb	IAmb	02 10 13.0	
	comp=Z,27nm,0.6s						
LMQ	La Malbaie	67.54	36	IAmb	IAmb	02 10 25.5	
	comp=Z,25nm,1.1s						
ABTX	Abilene, Hawle	67.56	65	P	P	02 10 13.4	+1.8
	baz=323,SNR=5.9						
ABTX	Abilene, Hawle	67.56	65	IAmb	IAmb	02 10 26.8	
	comp=Z,32nm,0.9s						
ESY	Stoneypath	67.59	351	eP	P	02 10 12.5	+1.1
GROC	Groznyy	67.59	315	eP	P	02 10 10.8	-0.8
GROC				e*PP	sP	02 10 27.8	-0.9
GROC				e	PcP	02 10 37.2	-1.3
GROC				e	PP	02 12 44.0	+3.6
GROC				eS	S	02 19 03.0	-2.1
GROC				e*SS	sS	02 19 32.5	+6.8
GROC				pmax	pmax		
	comp=Z,35nm,1.0s						
LOOK	Love County	67.70	62	IAmb	IAmb	02 10 27.7	
	comp=Z,44nm,1.1s						
P46A	Rosedale	67.79	52	IAmb	IAmb	02 10 14.8	
	comp=Z,33nm,0.8s						
BEL	Belsk	67.81	336	eP	P	02 10 14.9	+2.1
BEL				epP	sP	02 10 30.0	+0.1
BEL				eSS	SS	02 24 00.9	+33
BEL				eL	L	02 39 34.7	
	comp=Z,477nm,26.9s						
PGBU	Glenifferbraes	67.85	352	eP	P	02 10 14.1	+1.1
PGBU				IAmb	IAmb	02 10 15.6	
	comp=Z,88nm,1.1s						
U40A	Yellville	67.88	58	P	P	02 10 14.6	+1.0
	baz=324,SNR=22						
U40A	Yellville	67.88	58	IAmb	IAmb	02 10 15.6	
	comp=Z,26nm,0.9s						
BSEG	Bad Segeberg	67.90	343	eP	P	02 10 15.0	+1.6
	comp=Z,22nm,0.9s,baz=17,slow=6.1						
N49A	Columbus Grove	68.00	49	IAmb	IAmb	02 10 16.2	
	comp=Z,32nm,1.1s						
M50A	Fremont	68.08	48	IAmb	IAmb	02 10 33.3	
	comp=Z,22nm,1.1s						
TX31	Lajitas Ar. Si	68.11	70	P	P	02 10 16.4	+1.2
TX32	Lajitas Array	68.11	70	IAmb	IAmb	02 10 18.5	
	comp=Z,23nm,0.8s						
TXAR	Lajitas Array	68.11	70	P	P	02 10 17.7	+2.5
	comp=Z,17nm,0.6s,baz=299,slow=4.5,SNR=269						
TXAR				LR	LR	02 40 26.9	
	comp=Z,216nm,18.0s,baz=0.0,slow=36						
TXAR	Lajitas Array	68.11	70	P	P	02 10 17.6	+2.4
TXAR	Lajitas Array	68.11	70	P	P	02 10 17.6	+2.4
OLIL	Olney	68.12	53	IAmb	IAmb	02 10 17.1	
	comp=Z,40nm,1.3s						
KIV	Kislovodsk	68.16	318	⇑P	P	02 10 16.6	+1.3
KIV	Kislovodsk	68.16	318	iP	P	02 10 16.1	+0.8
	SNR=9.6						
KIV	Kislovodsk	68.16	318	eP	P	02 10 16.0	+0.8
KIV				pmax	pmax		
	comp=Z,31nm,1.1s						
KIV				MLR	MLR		
	comp=Z,599nm,17.0s						
KIV	Kislovodsk	68.16	318	P	P	02 10 16.1	+0.8
KIV	Kislovodsk	68.16	318	P	P	02 10 15.4	+0.2
KIV				IAmb	IAmb	02 10 28.4	
	comp=Z,27nm,0.8s						
NCK	Nalchik	68.20	317c	iP	P	02 10 16.4	+0.9
NCK				pmax	pmax		
	comp=Z,53nm,0.9s						
MNTQ	Montreal, Queb	68.20	39	IAmb	IAmb	02 10 16.9	
	comp=Z,17nm,0.8s						
ESK	Eskdalemuir	68.24	351	eP	P	02 10 16.7	+1.2
ESK				IAmb	IAmb	02 10 17.9	
	comp=Z,41nm,1.0s						
ESK	Eskdalemuir	68.24	351	P	P	02 10 15.8	+0.3
ESK				pmax	pmax		
	comp=Z,38nm,1.0s						
ESK	Eskdalemuir	68.24	351	P	P	02 10 15.8	+0.3
ESK				IAmb	IAmb	02 10 18.2	
	comp=Z,38nm,1.0s						
KBZ	Khabaz	68.27	317	P	P	02 10 17.0	+1.1
	comp=Z,60nm,0.9s,baz=52,slow=4.3,SNR=148						
KBZ				LR	LR	02 44 54.8	
	comp=Z,1µm,19.5s,baz=34,slow=40						
KBZ	Khabaz	68.27	317c	eP	P	02 10 16.9	+1.1
KBZ				pmax	pmax		
	comp=Z,74nm,0.9s						
SHA1	Shidzhatmaz	68.35	318c	iP	P	02 10 17.4	+0.7
D62A	Allapoint, All	68.36	35	IAmb	IAmb	02 10 18.4	
	comp=Z,19nm,0.7s						
W39A	Magazine	68.38	59	P	P	02 10 18.2	+1.5
	baz=324,SNR=14						
W39A	Magazine	68.38	59	IAmb	IAmb	02 10 27.4	
	comp=Z,47nm,1.4s						
MEDO	Medina	68.43	44	P	P	02 10 16.9	0.0
MEDO				IAmb	IAmb	02 10 29.7	
	comp=Z,49nm,1.1s						
S44A	Carbondale	68.45	54	IAmb	IAmb	02 10 18.9	
	comp=Z,21nm,0.7s						
SIUC	Southern Illin	68.45	54	IAmb	IAmb	02 10 19.3	
	comp=Z,64nm,1.4s						
NEWG	New Galloway	68.52	352	eP	P	02 10 18.3	+1.1
NEWG				IAmb	IAmb	02 10 19.6	
	comp=Z,26nm,0.9s						
O49A	Covington	68.55	49	IAmb	IAmb	02 10 19.7	
	comp=Z,27nm,1.1s						
TTSI	Tana Toraja	68.56	227	P	P	02 10 18.1	+0.1
	comp=Z,2µmcomp=Z,37nm,1.0s						
FCAR	Ozark Folk Cen	68.60	57	IAmb	IAmb	02 10 20.1	
	comp=Z,54nm,1.3s						
E62A	Clayton Lake	68.62	36	P	P	02 10 17.4	-0.5
LONY	Lake Ozonia	68.62	40	P	P	02 10 18.1	0.0
	baz=330						
M52A	Chesterland	68.65	46	IAmb	IAmb	02 10 20.3	
	comp=Z,32nm,1.1s						
PBMO	Poplar Bluff	68.67	56	IAmb	IAmb	02 10 20.9	
	comp=Z,20nm,0.8s						
RUE	Ruedersdorf	68.68	340	eP	P	02 10 20.2	+2.0
RUE	Ruedersdorf	68.68	340	eP	P	02 10 19.9	+1.7
	comp=Z,41nm,1.0s,baz=17,slow=6.1						
ZEI	Tsey	68.69	316	eP	P	02 10 17.9	-0.8
ZEI				pmax	pmax		
	comp=Z,20nm,0.9s						
CLGH	Cloghs, Cushen	68.69	353	eP	P	02 10 19.3	+1.0
CLGH				IAmb	IAmb	02 10 20.8	
	comp=Z,82nm,1.4s						
P48A	Milroy	68.69	50	IAmb	IAmb	02 10 20.0	
	comp=Z,53nm,1.3s						
ERPA	Erie	68.71	45	P	P	02 10 19.4	+0.8
	baz=328,SNR=8.3						
NEY	Neytrino	68.75	317	iP	P	02 10 18.8	-0.3
NEY				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KSM	Kuching	68.75	238	P	P	02 10 20.0	+0.8
N51A	Ashland	68.76	47	IAmb	IAmb	02 10 20.7	
	comp=Z,36nm,1.1s						
MOQ	Mont Orford	68.84	38	P	P	02 10 19.8	+0.3
LVV	L'vov	68.88	333	eP	P	02 10 20.7	+1.1
P49A	Miami Univ. Ec	68.93	50	P	P	02 10 20.6	+0.5
	baz=327						
P49A	Miami Univ. Ec	68.93	50	IAmb	IAmb	02 10 21.8	
	comp=Z,34nm,1.1s						
HPIG		68.96	73	P	P	02 10 20.8	+0.1
HPIG				IAmb	IAmb	02 10 36.9	
	comp=Z,38nm,1.5s						
MMNY	Mt. Morris Dam	69.00	43	IAmb	IAmb	02 10 34.0	
	comp=Z,27nm,1.0s						
MIAR	Mount Ida	69.01	59	P	P	02 10 22.2	+1.6
	baz=325,SNR=23						
MIAR	Mount Ida	69.01	59	IAmb	IAmb	02 10 23.6	
	comp=Z,66nm,1.4s						
M53A	WI Miller and	69.01	46	P	P	02 10 21.5	+1.0
	baz=328,SNR=14						
WVNY	West Valley, N	69.01	44	IAmb	IAmb	02 10 34.4	
	comp=Z,45nm,1.1s						
WHAR	Wooly Hollow	69.01	58	IAmb	IAmb	02 10 23.1	
	comp=Z,30nm,0.9s						
ONI	Oni	69.03	316	IAmb	IAmb	02 10 23.3	
	comp=Z,42nm,1.0s						
ACSO	Alum Creek Sta	69.08	48	P	P	02 10 21.8	+0.8
	baz=327,SNR=6.7						
ACSO	Alum Creek Sta	69.08	48	IAmb	IAmb	02 10 23.1	
	comp=Z,36nm,1.1s						
W41B	Gary Mavity, V	69.13	58	P	P	02 10 22.7	+1.4
	baz=325,SNR=23						
WHTX	Lake Whitney,	69.17	64	P	P	02 10 22.8	+1.2
	baz=324						
JCT	Junction City	69.20	66	P	P	02 10 23.4	+1.5
	baz=324,SNR=11						
JCT	Junction City	69.20	66	IAmb	IAmb	02 10 37.0	
	comp=Z,29nm,0.8s						
PBA	Port Blair	69.23	260	P	P	02 10 20.2	-2.0
FLTG	Flechtingen	69.29	342	eP	P	02 10 23.3	+1.3
	comp=Z,12nm,0.8s,baz=17,slow=6.1						
NRDL	Niedersach Rie	69.32	342	eP	P	02 10 23.9	+1.7
	comp=Z,14nm,0.8s,baz=17,slow=6.1						
ANN	Anapa	69.33	322	eP	P	02 10 21.5	-0.9
ANN				e*PP	sP	02 10 37.4	-2.1
ANN				e	PcP	02 10 43.2	-2.5
ANN				eS	S	02 19 27.0	+1.3
ANN				pmax	pmax		
	comp=Z,32nm,0.8s						
ANN				MLR	MLR		
	comp=N,443nm,15.0s						
ANN				MLR	MLR		
	comp=Z,587nm,17.0s						
WCI	Wyandotte Cave	69.33	52	P	P	02 10 22.8	+0.2
WCI				pmax	pmax		
	comp=Z,21nm,0.8s						
WCI	Wyandotte Cave	69.33	52	P	P	02 10 23.4	+0.9
	baz=326						
WCI	Wyandotte Cave	69.33	52	P	P	02 10 22.8	+0.2
WCI				IAmb	IAmb	02 10 28.7	
	comp=Z,21nm,0.8s						

M54A	Oil Creek Stat	69.36	45	P	P	02 10 23.3	+0.6
	baz=328,SNR=10						
M54A	Oil Creek Stat	69.36	45	IAmb	IAmb	02 10 36.7	
	comp=Z,36nm,0.9s						
Z38A	Mt. Pleasant	69.37	61	IAmb	IAmb	02 10 35.3	
	comp=Z,34nm,0.9s						
KWP	Kalwaria Pacla	69.39	333	eP	P	02 10 24.8	+2.0
KWP				eSS	SS	02 24 09.8	+17
KWP				eL	L	02 41 44.9	
	comp=Z,562nm,22.9s						
IOMK	Kirk Michael	69.40	352	eP	P	02 10 24.1	+1.4
X40A	Basin Creek Fa	69.41	59	P	P	02 10 24.6	+1.5
	baz=325,SNR=11						
X40A	Basin Creek Fa	69.41	59	IAmb	IAmb	02 10 25.8	
	comp=Z,27nm,1.1s						
STKI	Sintang	69.43	236	P	P	02 10 23.7	+0.3
HPK	Haverah Park	69.44	350	eP	P	02 10 23.9	+1.0
HPK				IAmb	IAmb	02 10 25.4	
	comp=Z,51nm,1.0s						
J58A	Remsen	69.45	41	IAmb	IAmb	02 10 24.5	
	comp=Z,39nm,1.4s						
N53A	Lisbon	69.48	46	IAmb	IAmb	02 10 37.6	
	comp=Z,22nm,1.0s						
G62A	West of Eustis	69.51	37	P	P	02 10 24.6	+1.0
WIM	Isle of Man	69.52	352	eP	P	02 10 25.0	+1.5
GNAR	Gosnell	69.52	56	P	P	02 10 24.7	+0.9
OJC	Ojcow	69.55	336	eP	P	02 10 25.5	+1.8
OJC				eS	S	02 19 36.4	+8.3
OJC				eSS	SS	02 23 48.9	-6.1
OJC				eL	L	02 39 57.8	
	comp=Z,497nm,26.1s						
SOC	Sochi	69.58	319	eP	P	02 10 23.6	-0.4
SOC				e	PP	02 12 55.9	-1.6
SOC				ePPP	PPP	02 14 35.9	
SOC				eS	S	02 19 28.0	-0.6
SOC				eSSS	SSS	02 27 03.6	
SOC				pmax	pmax		
	comp=Z,36nm,1.1s						
SOC				MLR	MLR		
	comp=Z,665nm,17.0s						
ASSE	Asse, Remlinge	69.58	342	eP	P	02 10 25.5	+1.7
	comp=Z,16nm,1.1s,baz=17,slow=6.1						
L56A	Greenwood	69.65	44	IAmb	IAmb	02 10 38.4	
	comp=Z,43nm,1.1s						
O52A	Adamsville	69.66	48	IAmb	IAmb	02 10 38.6	
	comp=Z,32nm,1.1s						
N54A	Moraine State	69.69	46	P	P	02 10 25.4	+0.7
	baz=328,SNR=6.0						
N54A	Moraine State	69.69	46	IAmb	IAmb	02 10 38.9	
	comp=Z,30nm,1.1s						
KSP	Ksiaz	69.73	338	eP	P	02 10 26.1	+1.2
KSP				eSS	SS	02 24 28.2	+30
KSP				eL	L	02 43 02.0	
	comp=Z,553nm,21.6s						
M55A	Ridgway	69.75	45	IAmb	IAmb	02 10 39.1	
	comp=Z,30nm,0.9s						
R49A	Shelbyville	69.77	51	IAmb	IAmb	02 10 27.7	
	comp=Z,31nm,1.3s						
O53A	New Philadelph	69.80	47	P	P	02 10 25.9	+0.5
	baz=328						
H62A	Milan	69.87	38	IAmb	IAmb	02 10 40.4	
	comp=Z,20nm,0.8s						
IBBN	Ibbenburen	69.89	344	eP	P	02 10 27.4	+1.7
	comp=Z,26nm,0.8s,baz=17,slow=6.1						
PKME	Peaks-Kenny Pk	69.89	36	P	P	02 10 26.7	+0.9
	baz=332						
PKME	Peaks-Kenny Pk	69.89	36	IAmb	IAmb	02 10 45.1	
	comp=Z,28nm,1.3s						
LBNH	Lisbon	69.89	39	P	P	02 10 27.2	+1.3
	baz=331,SNR=5.3						
CLZ	Clausthal	69.91	342	eP	P	02 10 27.2	+1.2
	comp=Z,32nm,1.0s,baz=17,slow=6.1						
P52A	Corning	69.94	48	P	P	02 10 26.6	+0.3
	baz=328						
CLL	Collm	69.94	340	⇑iP	P	02 10 27.2	+1.1
CLL				eS	S	02 19 30.0	-2.7
CLL				pmax	pmax		
	comp=Z,72nm,1.2s						
CLL				MLR	MLR		
	comp=Z,500nm,19.3s						
CLL	Collm	69.94	340	⇑iP	P	02 10 27.2	+1.1
	comp=Z,72nm,1.2s						
CLL				ePP	PP	02 13 00.0	-0.4
CLL				eS	S	02 19 30.0	-2.7
CLL				eSS	SS	02 23 54.0	-7.1
CLL				eSSS	SSS	02 27 24.0	
CLL				LmH		02 41 00.0	
	comp=N,300nm,21.2s						
CLL				LmH		02 41 00.0	
	comp=E,400nm,18.8s						
CLL				LmV		02 44 00.0	
	comp=Z,500nm,19.3s						
CLL	Collm	69.94	340	eP	P	02 10 27.4	+1.3
	comp=Z,38nm,1.0s,baz=17,slow=6.1						
STHS	Stebnicka Huta	69.95	334	eP	P	02 10 27.7	+1.5
STHS	Stebnicka Huta	69.95	334	eP	P	02 10 27.7	+1.5
LBWR	Ladybower, Pea	70.00	350	eP	P	02 10 28.0	+1.6
LBWR				IAmb	IAmb	02 10 28.7	
	comp=Z,75nm,1.0s						
T47A	Sharon Grove	70.00	53	IAmb	IAmb	02 10 29.3	
	comp=Z,45nm,1.1s						
AKH	Akhalkalaki	70.02	316	⇑P	P	02 10 28.4	+1.4
OSTC	Ostas	70.02	338	eP	P	02 10 28.4	+1.8
OSTC				AMS	AMS	02 45 20.0	
	comp=Z,600nm,20.4s						
CHVC	Chvalec	70.02	338	eP	P	02 10 28.2	+1.5
CHVC				AMS	AMS	02 44 50.0	
	comp=Z,700nm,16.8s						
435B	Jarrell	70.08	64	P	P	02 10 28.7	+1.4
	baz=324						
UPC	Upice	70.11	338	eP	P	02 10 28.7	+1.6
UPC				MLR	MLR		
	comp=Z,700nm,17.7s						
UPC	Upice	70.11	338	eP	P	02 10 28.7	+1.6
UPC				AMS	AMS	02 45 40.0	
	comp=Z,700nm,17.7s						
KIS	Kishinev	70.14	328	eP	P	02 10 28.0	+0.6
	comp=Z,140nm,1.4s						
KIS				eLR	LR	02 42 37.0	
	comp=Z,300nm,17.5s						
KIS	Kishinev	70.14	328	⇑P	P	02 10 28.7	+1.3
KIS	Kishinev	70.14	328	eP	P	02 10 28.0	+0.6
KIS				e	PcP	02 10 43.0	-6.1
KIS				pmax	pmax		
	comp=Z,140nm,1.4s						
KOLS	Kolonicke sedl	70.15	333	eP	P	02 10 29.2	+1.8
KOLS				pmax	pmax		
	comp=Z,96nm,1.6s						
KOLS	Kolonicke sedl	70.15	333	eP	P	02 10 29.2	+1.8
NIE	Niedzica	70.18	335	eP	P	02 10 30.3	+2.6
NIE				epP	PcP	02 10 45.5	-3.8
NIE				eL	L	02 44 55.3	
	comp=Z,416nm,19.3s						
BRG	Berggiesshubel	70.18	340	eP	P	02 10 29.1	+1.5
	comp=Z,18nm,0.9s,baz=17,slow=6.1						
BRG	Berggiesshubel	70.18	340	eP	P	02 10 28.9	+1.3
BRG				Amp		02 10 30.0	
	comp=Z,20nm,0.9s						
BRG				Amp		02 44 27.0	
	comp=Z,0.5nm,19.2s						
BRG				Amp		02 44 33.0	
	comp=E,0.4nm,18.0s						
BRG				Amp		02 44 38.0	
	comp=N,0.2nm,17.0s						
DPC	Dobruska-Polom	70.19	338	eP	P	02 10 29.6	+1.9
DPC				MLR	MLR		
	comp=Z,500nm,15.1s						
DPC	Dobruska-Polom	70.19	338	eP	P	02 10 29.6	+1.9
DPC				AMS	AMS	02 45 20.0	
	comp=Z,500nm,15.1s						
BINY	Binghamton	70.19	42	P	P	02 10 28.1	+0.3
	baz=330						
MILM	Milestii Mici	70.21	328	⇑P	P	02 10 28.5	+0.7
MILM	Milestii Mici	70.21	328	c iP	P	02 10 28.0	+0.2
MILM				e	PcP	02 10 43.0	-6.4
MILM				pmax	pmax		
	comp=Z,320nm,1.6s						
MILM				MLR	MLR		
	comp=N,800nm,14.0s						
MILM				MLR	MLR		
	comp=Z,900nm,14.0s						
MILM				MLR	MLR		
	comp=E,400nm,12.0s						
WME	Myndd Eilian	70.23	352	eP	P	02 10 28.4	+0.6
FBE	Freiberg	70.25	340	eP	P	02 10 29.8	+1.9
	comp=E,28nm,0.9s,baz=17,slow=6.1						
PURM	Purcari	70.25	327	⇑P	P	02 10 28.8	+0.8
GTTG	Gottingen	70.26	342	eP	P	02 10 29.6	+1.6
	comp=E,10nm,0.9s,baz=17,slow=6.1						
NEUB	Neuenburg	70.27	341	eP	P	02 10 29.6	+1.6
	comp=E,15nm,0.9s,baz=17,slow=6.1						
OKC	Ostrava-Krasne	70.28	336	eP	P	02 10 30.0	+1.8
OKC				MLR	MLR		
	comp=Z,500nm,15.7s						
OKC	Ostrava-Krasne	70.28	336	eP	P	02 10 30.0	+1.8
OKC				AMS	AMS	02 45 30.0	
	comp=Z,500nm,15.7s						
KULM	Kulim	70.29	249	P	P	02 10 29.0	+0.3
KBKI	Kotabaru	70.32	230	P	P	02 10 29.0	+0.2
	comp=Z,2μmcomp=Z,76nm,1.0s						
SIM	Simferopol'	70.32	324	c iP	P	02 10 28.3	-0.2
SIM				pmax	pmax		
	comp=Z,26nm,0.7s						
IAS	Iasi	70.33	329	⇑P	P	02 10 29.6	+1.1
KRLC	Kraliky	70.35	337	eP	P	02 10 30.3	+1.6
KRLC	Kraliky	70.35	337	eP	P	02 10 30.3	+1.6
P53A	Whipple	70.37	48	IAmb	IAmb	02 10 30.8	
	comp=Z,33nm,1.3s						
CRVS	Cervenica-Dubn	70.38	334	eP	P	02 10 30.6	+1.8
CRVS				pmax	pmax		
	comp=Z,44nm,0.9s						
CRVS	Cervenica-Dubn	70.38	334	eP	P	02 10 30.6	+1.8
KAPI	Kappang	70.38	226	LR	LR	02 40 59.2	
	comp=Z,46nm,19.8s,baz=38,slow=36						
KAPI	Kappang	70.38	226	P	P	02 10 28.3	-0.8
KAPI				pmax	pmax		
	comp=Z,64nm,1.2s						
KAPI	Kappang	70.38	226	P	P	02 10 29.8	+0.6
KAPI	Kappang	70.38	226	P	P	02 10 28.3	-0.8
KAPI	Kappang	70.38	226	P	P	02 10 30.6	+1.4
PVCC	Panska Ves	70.38	339	eP	P	02 10 30.1	+1.3
PVCC				MLR	MLR		
	comp=Z,500nm,16.2s						
PVCC	Panska Ves	70.38	339	eP	P	02 10 30.1	+1.3
PVCC				AMS	AMS	02 46 20.0	
	comp=Z,500nm,16.2s						
WVT	Waverly	70.39	54	P	P	02 10 30.4	+1.3
WVT				pmax	pmax		
	comp=Z,39nm,1.2s						
WVT	Waverly	70.39	54	P	P	02 10 30.5	+1.3
	baz=326						
WVT	Waverly	70.39	54	P	P	02 10 30.4	+1.3
WVT				IAmb	IAmb	02 10 31.9	
	comp=Z,39nm,1.2s						
UZH	Uzhgorod	70.42	333	eP	P	02 10 28.6	-0.5
UZH				e	PcP	02 10 52.8	+2.5
Z41A	Richland Creek	70.43	59	P	P	02 10 31.2	+1.9
	baz=325						
Q52A	Bidwell	70.45	49	IAmb	IAmb	02 10 43.5	
	comp=Z,45nm,1.3s						
MORC	Moravsky Berou	70.47	337	⇑P	P	02 10 31.3	+1.8
MORC	Moravsky Berou	70.47	337	P	P	02 10 30.8	+1.4
MORC				pmax	pmax		
	comp=Z,62nm,1.0s						
MORC	Moravsky Berou	70.47	337	eP	P	02 10 31.2	+1.8
MORC	Moravsky Berou	70.47	337	P	P	02 10 30.8	+1.4
M57A	Sunshine Farm,	70.50	44	IAmb	IAmb	02 10 43.5	
	comp=Z,36nm,1.1s						
BKSI	Bulukumba	70.51	226	P	P	02 10 29.9	0.0
	comp=Z,648nmcomp=Z,60nm,0.9s						
G65A	Princeton	70.51	35	IAmb	IAmb	02 10 31.4	
	comp=Z,20nm,0.8s						
I63A	Otisfield	70.53	38	IAmb	IAmb	02 10 44.8	
	comp=Z,22nm,0.9s						
JRMM	Jerantut	70.54	247	P	P	02 10 30.0	-0.2
L59A	Walton	70.55	42	IAmb	IAmb	02 10 31.5	
	comp=Z,23nm,0.9s						
BUR08	Bucovina Ar. S	70.57	331	P	P	02 10 30.4	+0.2
BURAR	Bucovina Array	70.59	331	⇓P	P	02 10 31.8	+1.5
BURAR	Bucovina Array	70.59	331	P	P	02 10 31.6	+1.3
GNI	Garni	70.60	314	P	P	02 10 32.1	+1.6
GNI	Garni	70.60	314	ceP	P	02 10 32.4	+1.9
GNI				pmax	pmax		
	comp=Z,127nm,1.7s						
GNI	Garni	70.60	314	P	P	02 10 32.3	+1.8
GNI	Garni	70.60	314	P	P	02 10 31.4	+0.9
CWF	Charnwood Fore	70.62	350	eP	P	02 10 31.6	+1.4
CWF				IAmb	IAmb	02 10 32.3	
	comp=Z,105nm,1.6s						
LANS	Liptovska Anna	70.62	335	eP	P	02 10 33.1	+2.7
LANS				pmax	pmax		
	comp=Z,47nm,0.7s						
LANS	Liptovska Anna	70.62	335	eP	P	02 10 33.1	+2.7
BCA	Borcka	70.71	317	⇑P	P	02 10 31.5	+0.5
NATX	Nacogdoches	70.74	62	P	P	02 10 32.9	+1.6
	baz=325						
NATX	Nacogdoches	70.74	62	P	P	02 10 32.5	+1.1
NATX				IAmb	IAmb	02 10 43.1	
	comp=Z,36nm,1.1s						
VASR	Vaslui	70.76	329	⇑P	P	02 10 32.2	+1.0
BUG	Bochum--Univer	70.80	344	eP	P	02 10 32.8	+1.5
	comp=Z,19nm,0.9s,baz=17,slow=6.1						
SSPA	Standing Stone	70.80	45	P	P	02 10 32.1	+0.6
	baz=329						
SSPA	Standing Stone	70.80	45	P	P	02 10 30.7	-0.9
GGN	Saint George	70.81	35	IAmb	IAmb	02 10 33.4	
	comp=Z,23nm,0.8s						
TRPA	Tarpa	70.82	333	⇓P	P	02 10 33.3	+1.8
TRPA	Tarpa	70.82	333	eP	P	02 10 33.1	+1.6
KSPA	Keystone Colle	70.83	43	P	P	02 10 31.6	0.0
MOX	Moxa	70.84	341	eP	P	02 10 33.2	+1.6
	comp=Z,24nm,0.9s,baz=17,slow=6.1						
PRA	Prague	70.85	339	eP	P	02 10 33.4	+1.8
PRA				MLR	MLR		
	comp=Z,700nm,16.5s						
PRA	Prague	70.85	339	eP	P	02 10 33.4	+1.8
PRA				AMS	AMS	02 46 30.0	
	comp=Z,700nm,16.5s						
O56A	Blue Knob Stat	70.85	45	P	P	02 10 32.3	+0.4
	baz=329						
MCWV	Mont Chateau	70.86	46	P	P	02 10 32.5	+0.6
	baz=329						
MCWV	Mont Chateau	70.86	46	IAmb	IAmb	02 10 50.4	
	comp=Z,37nm,1.4s						
WERD	Werda	70.90	340	eP	P	02 10 33.7	+1.7
	comp=Z,32nm,0.9s,baz=17,slow=6.1						
TANN	Tannenbergstha	70.90	340	eP	P	02 10 33.7	+1.7
	comp=Z,18nm,1.0s,baz=17,slow=6.1						
PRU	Pruhonice	70.90	339	eP	P	02 10 33.4	+1.4
PRU				MLR	MLR		
	comp=Z,600nm,14.9s						
PRU	Pruhonice	70.90	339	eP	P	02 10 33.4	+1.4
PRU				AMS	AMS	02 46 20.0	
	comp=Z,600nm,14.9s						
UBBA	Unterbreizbach	70.96	342	eP	P	02 10 33.7	+1.6
	comp=Z,7.9nm,0.8s,baz=17,slow=6.1						
GUNZ	Gunzen	70.97	340	eP	P	02 10 34.2	+1.7
	comp=Z,22nm,0.9s,baz=17,slow=6.1						
EMMW	East Machias	70.98	35	IAmb	IAmb	02 10 34.6	
	comp=Z,19nm,0.7s						
HLM1	Long Mynd	70.98	351	eP	P	02 10 33.2	+0.8
HLM1				IAmb	IAmb	02 10 34.8	
	comp=Z,48nm,1.0s						
BMR	Baia Mare	71.00	332	⇑P	P	02 10 34.5	+1.9
OXF	Oxford	71.00	56	P	P	02 10 34.1	+1.3
OXF				pmax	pmax		
	comp=Z,88nm,1.0s						
OXF	Oxford	71.00	56	P	P	02 10 34.4	+1.6
	baz=326,SNR=18						
OXF	Oxford	71.00	56	P	P	02 10 34.1	+1.3
KECS	Kecovo	71.00	334	eP	P	02 10 34.6	+2.0
KECS				pmax	pmax		
	comp=Z,15nm,0.8s						
KECS	Kecovo	71.00	334	eP	P	02 10 34.6	+2.0
ELMS	Elmsett, Ipswi	71.01	348	eP	P	02 10 34.0	+1.5
ELMS				IAmb	IAmb	02 10 34.7	
	comp=Z,48nm,0.7s						
WERN	Wernitzgruen	71.04	340	eP	P	02 10 34.6	+1.7
	comp=Z,36nm,0.8s,baz=17,slow=6.1						
BBKI	Banjar Baru	71.04	231	P	P	02 10 33.4	+0.2
	comp=Z,5μmcomp=Z,75nm,1.2s						
NKC	Novy Kostel	71.08	340	eP	P	02 10 34.4	+1.3
NKC				MLR	MLR		
	comp=Z,500nm,16.0s						
NKC	Novy Kostel	71.08	340	eP	P	02 10 34.4	+1.3
NKC				AMS	AMS	02 44 50.0	
	comp=Z,500nm,16.0s						
N58A	Sunbury	71.08	44	IAmb	IAmb	02 10 51.7	
	comp=Z,24nm,1.0s						
CLTN	Cedars of Leba	71.09	53	IAmb	IAmb	02 10 35.9	
	comp=Z,35nm,1.2s						
BSSI	Bau Bau, Buton	71.11	225	P	P	02 10 34.0	+0.4
	comp=Z,91nm,1.0s						
R53A	Hurricane	71.11	49	IAmb	IAmb	02 10 35.7	
	comp=Z,46nm,1.0s						
VRAC	Vranov	71.12	337	⇑P	P	02 10 35.4	+2.1
VRAC	Vranov	71.12	337	eP	P	02 10 35.3	+2.0
833A	Chaparral WMA,	71.14	67	P	P	02 10 35.5	+1.7
	baz=324						
BIR	Birlad	71.15	329	⇓P	P	02 10 35.9	+2.4
L61B	Northampton	71.19	40	P	P	02 10 33.0	-0.9
	baz=331						
TESR	Tescani	71.21	330	⇓P	P	02 10 34.9	+1.0
PLAL	Pickwick Lake	71.23	55	IAmb	IAmb	02 10 36.6	
	comp=Z,39nm,1.1s						
JAVC	Velka Javorina	71.31	336	eP	P	02 10 37.4	+2.9
ARCR	ARCALIA	71.31	331	⇑P	P	02 10 37.0	+2.5
TREC	Trest	71.37	338	eP	P	02 10 36.7	+1.9
TREC				MLR	MLR		
	comp=Z,500nm,16.5s						
TREC	Trest	71.37	338	eP	P	02 10 36.7	+1.9
TREC				AMS	AMS	02 46 20.0	
	comp=Z,500nm,16.5s						
MANZ	Manzenberg	71.38	340	eP	P	02 10 36.2	+1.3
	comp=Z,4.7nm,0.9s,baz=17,slow=6.1						
N59A	State Game Lan	71.38	43	P	P	02 10 35.3	+0.2
	baz=330,SNR=8.8						
VYHS	Vyhne	71.38	336	eP	P	02 10 37.1	+2.2
VYHS				pmax	pmax		
	comp=Z,73nm,1.6s						
VYHS	Vyhne	71.38	336	eP	P	02 10 37.1	+2.2
KRUC	Moravsky	71.39	337	eP	P	02 10 36.9	+1.9
VLDR	Vladesti	71.40	328	⇓P	P	02 10 36.8	+1.7
VARL	Varlezi	71.42	328	⇓P	P	02 10 37.0	+1.9
MCH1	Michaelchurch	71.51	351	eP	P	02 10 36.6	+1.0
MCH1				IAmb	IAmb	02 10 37.8	
	comp=Z,31nm,0.9s						
TSSL	Sulina	71.53	327	⇓P	P	02 10 37.4	+1.6
HRV	Adam Dziewonsk	71.54	39	P	P	02 10 37.0	+1.0
HRV				pmax	pmax		
	comp=Z,13nm,0.9s						
HRV	Adam Dziewonsk	71.54	39	P	P	02 10 36.8	+0.8
	baz=332						
HRV	Adam Dziewonsk	71.54	39	P	P	02 10 37.0	+1.0
ROTZ	Rotzenmuhle	71.57	340	eP	P	02 10 37.7	+1.7
	comp=Z,5.1nm,0.9s,baz=17,slow=6.1						
SCTR	Scanteiesti	71.58	328	⇓P	P	02 10 36.6	+0.5
PAGS	Pennsylvania G	71.61	44	P	P	02 10 36.4	0.0
MESR	Meseseni	71.62	332	⇑P	P	02 10 38.7	+2.3
TATR	Tatarca	71.63	328	⇑P	P	02 10 37.6	+1.2
HKT	Hockley	71.63	64	c iP	P	02 10 37.7	+1.1
HKT				pmax	pmax		
	comp=Z,8.0nm,1.2s						
HKT	Hockley	71.63	64	P	P	02 10 37.9	+1.3
STRD	Stroud	71.65	350	eP	P	02 10 37.9	+1.4
STRD				IAmb	IAmb	02 10 38.8	
	comp=Z,97nm,1.3s						
BEBN	Eben Emael	71.67	345	dP	P	02 10 37.4	+0.9
PSZ	Piszkesteto	71.67	335	⇑P	P	02 10 38.9	+2.1
PSZ	Piszkesteto	71.67	335	eP	P	02 10 38.2	+1.4
PSZ	Piszkesteto	71.67	335	IAmb	IAmb	02 10 40.1	
	comp=Z,40nm,1.1s						
SMOL	Smolenice	71.69	336	eP	P	02 10 39.3	+2.5
SMOL				pmax	pmax		
	comp=Z,46nm,1.5s						
SMOL	Smolenice	71.69	336	eP	P	02 10 39.2	+2.5
AHRW	Bad Neuenahr-A	71.70	344	eP	P	02 10 38.8	+2.0
	comp=Z,8.9nm,0.9s,baz=17,slow=6.1						
SLCR	Slobozia Conac	71.72	328	⇓P	P	02 10 38.5	+1.6
WES	Weston	71.73	39	IAmb	IAmb	02 10 38.2	
	comp=Z,17nm,0.8s						
IZVR	Izvoarele	71.77	328	⇑P	P	02 10 38.2	+1.0
ODBI	Odobesti	71.77	329	⇓P	P	02 10 39.8	+2.5
VRI	Vrincioaia	71.77	329	⇑P	P	02 10 38.5	+1.2
COEN	Coen	71.78	200	P	P	02 10 38.0	+0.4
COEN				IAmb	IAmb	02 10 39.7	
	comp=Z,29nm,1.0s						
COEN	Coen	71.78	200	P	P	02 10 38.8	+1.2
TLCR		71.78	328	⇑P	P	02 10 38.5	+1.2
SCHL	Schela	71.79	328	⇑P	P	02 10 38.3	+1.0
TNS	Taunus Mts	71.79	343	eP	P	02 10 38.9	+1.5
	comp=Z,13nm,0.9s,baz=17,slow=6.1						
MEM	Membach	71.80	345	dP	P	02 10 39.0	+1.6
	comp=Z,54nm,0.9s						
BTNL	Ternell	71.80	344	dP	P	02 10 38.7	+1.2
	comp=Z,46nm,0.9s						
PLOR	Plostina	71.81	329	⇑P	P	02 10 38.7	+1.1
CBBR	Cluj-Babes-Bol	71.82	332	⇑P	P	02 10 39.9	+2.4
GRF	Grafenberg Arr	71.82	341	eP	P	02 10 39.3	+1.7
	comp=Z,44nm,0.8s,baz=17,slow=6.1						
GRFO	Grafenberg	71.83	341	P	P	02 10 38.5	+0.9
GRFO				pmax	pmax		
	comp=Z,63nm,0.9s						
GRFO	Grafenberg	71.83	341	P	P	02 10 38.5	+0.9
OZUR		71.83	330	⇑P	P	02 10 39.7	+2.0
MODS	Modra-Piesok	71.85	336	eP	P	02 10 39.3	+1.5
MODS				pmax	pmax		
	comp=Z,81nm,1.5s						
MODS	Modra-Piesok	71.85	336	eP	P	02 10 39.3	+1.5
UCC	Uccle	71.85	346	dP	P	02 10 39.0	+1.3
	comp=Z,3.6nm,0.7s						
CJR	Cluj-Napoca	71.86	332	⇑P	P	02 10 40.0	+2.2
KHC	Kasperske Hory	71.91	339	eP	P	02 10 39.9	+1.8
KHC				e	PcP	02 10 51.3	-5.4
KHC				MLR	MLR		
	comp=Z,500nm,17.6s						
KHC	Kasperske Hory	71.91	339	eP	P	02 10 39.9	+1.8
KHC				ex	x	02 10 51.3	
KHC				AMS	AMS	02 47 20.0	
	comp=Z,500nm,17.6s						
TZTN	Tazewell	71.94	51	P	P	02 10 39.8	+1.3
	baz=328,SNR=5.6						
COVR	Voineasa-Covas	71.94	330	⇑P	P	02 10 40.4	+2.0
CFR	Carcaliu	71.99	328	⇑P	P	02 10 39.7	+1.2
SWET	Sewanee	72.00	53	IAmb	IAmb	02 10 44.8	
	comp=Z,22nm,0.7s						
PAL	Palisades	72.00	42	P	P	02 10 39.2	+0.5
	baz=331,SNR=5.8						
PAL	Palisades	72.00	42	IAmb	IAmb	02 10 40.2	
	comp=Z,25nm,0.8s						
DRGR		72.02	332	⇑P	P	02 10 40.3	+1.5
WET	Wettzell	72.04	340	eP	P	02 10 40.5	+1.6
	comp=Z,29nm,0.9s,baz=17,slow=6.1						
BHOU	Houvegnez	72.05	345	dP	P	02 10 40.8	+1.9
	comp=Z,16nm,1.0s						
ZST	Bratislava	72.06	337	eP	P	02 10 41.7	+2.7
ZST	Bratislava	72.06	337	eP	P	02 10 41.7	+2.7
DOPR	Dopca	72.06	330	⇑P	P	02 10 41.0	+1.9
CKRC	Cesky Krumlov	72.06	339	eP	P	02 10 40.1	+1.1
CKRC				ex	x	02 10 49.5	
BCLA	Clavier	72.09	345	κP	P	02 10 40.5	+1.3
	comp=Z,10nm,1.2s						
BCLA				dPcP	PcP	02 10 58.0	+0.6
X48A	Hartselle	72.14	55	IAmb	IAmb	02 10 41.9	
	comp=Z,26nm,1.1s						
JURR	Jurilovca	72.14	327	⇓P	P	02 10 40.9	+1.4
SRO	Srobarova	72.14	336	eP	P	02 10 42.0	+2.5
SRO				pmax	pmax		
	comp=Z,80nm,1.7s						
SRO	Srobarova	72.14	336	eP	P	02 10 42.0	+2.5
GRER		72.14	329	⇓P	P	02 10 41.2	+1.7
SNF	Seneffe	72.14	346	dP	P	02 10 40.8	+1.4
	comp=Z,20nm,0.8s						
SNF				dPcP	PcP	02 10 58.2	+0.6
BGES	Gesves	72.15	345	dP	P	02 10 40.4	+0.9
	comp=Z,9.8nm,1.2s						
GEC2	GERESS Array S	72.16	339	eP	P	02 10 41.3	+1.5
	comp=Z,19nm,0.8s,baz=17,slow=6.1						
GEC2	GERESS Array S	72.16	339	IAmb	IAmb	02 10 42.3	
	comp=Z,30nm,0.9s						
GERES	GERESS Array B	72.16	339	P	P	02 10 41.2	+1.5
	comp=Z,17nm,0.8s,baz=35,slow=4.9,SNR=136						
GERES				LR	LR	02 47 34.7	
	comp=Z,557nm,18.2s,baz=30,slow=40						
GERES	GERESS Array B	72.16	339	P	P	02 10 40.3	+0.6
GERES	GERESS Array B	72.16	339	P	P	02 10 40.3	+0.6
SRO2	Moca	72.17	336	eP	P	02 10 40.8	+1.2
SRO2				pmax	pmax		
	comp=Z,63nm,1.6s						
SRO2	Moca	72.17	336	eP	P	02 10 40.8	+1.2
MDB	Medias	72.17	331	⇑P	P	02 10 42.0	+2.2
TPGR	Topolog	72.20	328	⇑P	P	02 10 41.1	+1.2
342A	Flagon Creek P	72.20	60	IAmb	IAmb	02 10 43.1	
	comp=Z,25nm,0.8s						
V51A	Loudon	72.21	52	IAmb	IAmb	02 10 42.4	

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      comp=Z,41nm,1.2s
BMRD  Maredsous        72.28 345 dP     P      02 10 41.7 +1.5
      comp=Z,17nm,0.9s
BMRD                             dPcP   PcP    02 10 58.4 +0.3
BUD   Budapest         72.29 335 eP     P      02 10 42.2 +1.9
NEHR  Nehoiu           72.30 329 ⇑P     P      02 10 42.8 +2.3
MLR   Muntele Rosu     72.34 330 ⇑P     P      02 10 43.4 +2.5
RCHB  Rochefort        72.36 345 dP     P      02 10 40.9 +0.2
VBMS  Vicksburg        72.37  58  P     P      02 10 42.1 +1.0
      baz=326
VBMS  Vicksburg        72.37  58  P     P      02 10 42.1 +1.0
VBMS                              IAmb  IAmb   02 10 44.4
      comp=Z,33nm,0.9s
P60A  Greenville       72.39  43  P     P      02 10 41.1  0.0
      baz=330
CPCT  Cooper Cave      72.43  52  IAmb  IAmb   02 10 43.6
      comp=Z,28nm,1.2s
HYB   Hyderabad        72.44 275 i P    P      02 10 40.0 -1.8
HYB                              epP    PcP    02 10 58.5 -0.9
HARR  Harsova          72.49 328 ⇑P     P      02 10 42.8 +1.2
DOU   Dourbes          72.50 345 dP     P      02 10 43.0 +1.4
      comp=Z,15nm,1.0s
ISR   Istrita          72.51 329 ⇓P     P      02 10 43.3 +1.5
TIRR  Tirgusor         72.56 327 ⇓P     P      02 10 43.1 +1.1
TIRR  Tirgusor         72.56 327  P     P      02 10 42.7 +0.7
TIRR                              pmax  pmax
      comp=Z,118nm,0.9s
TIRR  Tirgusor         72.56 327  P     P      02 10 42.7 +0.7
CSKK  Cskako           72.58 335 eP     P      02 10 43.6 +1.5
CONA  Conrad Observa   72.58 337 i P    P      02 10 44.6 +2.3
      comp=Z,15nm,0.8s,SNR=31
TLBR  Topalu           72.59 328 ⇓P     P      02 10 43.7 +1.5
VOIR                   72.64 330 ⇑P     P      02 10 44.5 +1.9
SOP   Sopron           72.66 337 eP     P      02 10 44.3 +1.7
M65A  Busby, Falmout   72.69  39  P     P      02 10 43.2 +0.4
      baz=332
WLF   Walferdange      72.70 344 dP     P      02 10 45.0 +2.2
      comp=Z,9.8nm,1.2s
WLF   Walferdange      72.70 344 eP     P      02 10 45.2 +2.4
      baz=17,slow=6.1
U54A  Nelsons Funny    72.70  50  IAmb  IAmb   02 10 45.5
      comp=Z,21nm,0.9s
BLA   Blacksburg       72.70  48  P     P      02 10 43.7 +0.6
      baz=329
FPAL  Fort Paine       72.71  53  P     P      02 10 44.1 +0.9
FPAL                              IAmb  IAmb   02 10 45.4
      comp=Z,44nm,1.2s
MMRI  Maumere          72.72 222  P     P      02 10 43.8 +0.6
      comp=Z,113nm,1.1s
MMRI  Maumere          72.72 222  P     P      02 10 43.2 -0.1
MMRI  Maumere          72.72 222  P     P      02 10 43.5 +0.3
SECR                   72.72 329 ⇑P     P      02 10 44.8 +1.8
AMRR  Amara            72.74 328 ⇓P     P      02 10 44.7 +1.6
SIRR  Siria            72.78 333 ⇑P     P      02 10 44.8 +1.5
MFTR  Murfatlar        72.81 327 ⇓P     P      02 10 45.2 +1.7
ARR   Arges            72.82 330 ⇓P     P      02 10 46.2 +2.5
EFOR  EFORIE           72.84 327 ⇓P     P      02 10 45.2 +1.5
S57A  Dark Hollow, R   72.84  47  IAmb  IAmb   02 10 46.3
      comp=Z,21nm,0.9s
DIKM  Dikmen           72.86 321 ⇓P     P      02 10 43.6 -0.2
344A  Westbrook Farm   72.90  59  IAmb  IAmb   02 10 48.0
      comp=Z,36nm,1.1s
Y49A  Blount Mountai   72.92  54  IAmb  IAmb   02 10 46.6
      comp=Z,41nm,1.2s
MPLH  Magyarpolny      72.93 336 eP     P      02 10 46.0 +1.8
AMBH  Ambrzfalva       72.93 333 eP     P      02 10 44.8 +0.6
LOT   Lotru            72.98 331 ⇑P     P      02 10 45.3 +0.7
MOA   Molln            72.99 338 i P    P      02 10 46.4 +1.8
      comp=Z,8.9nm,0.9s,SNR=15
SULR                   72.99 329 ⇑P     P      02 10 45.5 +1.0
W52A  Murphy           73.00  52  IAmb  IAmb   02 10 47.2
      comp=Z,28nm,1.1s
SOEI  Soe              73.01 220  P     P      02 10 45.8 +0.7
      comp=Z,67nm,1.0s
SOEI  Soe              73.01 220  P     P      02 10 44.8 -0.3
SOEI  Soe              73.01 220  P     P      02 10 47.4 +2.3
LEHL  Lehliu           73.02 329 ⇑P     P      02 10 46.0 +1.3
X51A  Calhoun          73.03  53  IAmb  IAmb   02 10 47.3
      comp=Z,26nm,1.0s
STU   Stuttgart        73.07 342 eP     P      02 10 46.9 +1.9
      comp=Z,34nm,0.9s,baz=17,slow=6.1
MANR  Mangalia         73.09 327 ⇑P     P      02 10 46.5 +1.4
CBN   Corbin Frederi   73.09  45  P     P      02 10 45.4 +0.2
      baz=330
TIH   Tihany           73.10 336 eP     P      02 10 46.2 +1.1
TSMN  Mangalia Port-   73.10 327 ⇓P     P      02 10 46.7 +1.5
KDU   Kakadu           73.11 211  P     P      02 10 46.0 +0.5
RASA  Rasa             73.16 328 ⇓P     P      02 10 46.0 +0.5
DSRI  Dabo             73.22 242  P     P      02 10 46.9 +0.6
FUR   Furstenfeldbru   73.28 340 eP     P      02 10 47.8 +1.5
      comp=Z,27nm,0.8s,baz=17,slow=6.1
FUR                              epP    PcP    02 11 07.1 +4.6
GZR   Gura Zlata       73.30 332 ⇑P     P      02 10 47.8 +1.4
ARSA  Arzberg          73.30 337 i P    P      02 10 48.7 +2.3
      comp=Z,12nm,0.8s,SNR=18
Q61A  Milford          73.31  44  P     P      02 10 47.1 +0.6
      baz=331
DRS   Darwin Rock St   73.33 212  P     P      02 10 47.7 +0.9
BZS   Buzias           73.39 333 ⇑P     P      02 10 48.1 +1.2
RJOB  Jochberg         73.40 339 eP     P      02 10 49.0 +2.0
      comp=Z,38nm,0.8s,baz=17,slow=6.1
HUMR  Humele           73.49 330 ⇑P     P      02 10 48.3 +0.8
MORH  Mrgy, Hungar     73.57 335⇑iP     P      02 10 48.5 +0.6
BATI  Baumata          73.64 220  P     P      02 10 44.7 -4.0
BFO   Black Forest     73.64 342  P     P      02 10 49.5 +1.1
BFO                               pmax  pmax
      comp=Z,35nm,1.1s
BFO   Black Forest     73.64 342 eP     P      02 10 50.1 +1.7
      comp=Z,20nm,1.0s,baz=17,slow=6.1
BFO                              epP    PcP    02 11 08.9 +4.8
BFO   Black Forest     73.64 342  P     P      02 10 49.5 +1.1
BFO                               IAmb  IAmb   02 10 50.8
      comp=Z,35nm,1.1s
MTN   Manton Dam       73.65 212  P     P      02 10 48.7  0.0
MTN   Manton Dam       73.65 212  P     P      02 10 49.4 +0.7
BEHE  Becsehely        73.76 336 eP     P      02 10 50.4 +1.3
BEHE  Becsehely        73.76 336⇑iP     P      02 10 51.1 +2.0
SIRT  Sirnak           73.79 314  P     P      02 10 49.5 -0.1
KOVH  Kovagotottos     73.82 335 eP     P      02 10 49.8 +0.3
HERR  Herculane        73.87 332 ⇑P     P      02 10 50.7 +0.9
PPBI  Pangkal Pinang   73.92 240  P     P      02 10 50.8 +0.5
KBA   Koelnbreinsper   73.92 339 i P    P      02 10 52.6 +2.4
      comp=Z,45nm,1.0s,SNR=61
Z51A  Franklin         73.93  54  IAmb  IAmb   02 10 52.4
      comp=Z,34nm,1.1s
RAZG  Razgrad          73.94 328 ⇓P     P      02 10 51.3 +1.1
SOKA  Soboth           73.95 337 i P    P      02 10 52.2 +1.9
      comp=Z,9.8nm,0.6s,SNR=32
ECH   Echery           73.95 343  P     P      02 10 50.3 +0.1
ECH                               pmax  pmax
      comp=Z,36nm,1.0s
ECH   Echery           73.95 343  P     P      02 10 50.3 +0.1
ECH                               IAmb  IAmb   02 10 52.6
      comp=Z,36nm,1.0s
UBR   Ueberruh         73.96 341 eP     P      02 10 51.9 +1.6
      comp=Z,25nm,0.9s,baz=17,slow=6.1
PERS  Pernice          73.97 337 i P    P      02 10 52.2 +1.9
      comp=Z,156nm,1.9s
ZAIG  Zacatecas        73.97  73  P     P      02 10 51.5 +0.5
ZAIG                              IAmb  IAmb   02 11 07.5
      comp=Z,29nm,1.2s
WATA  Walderalm        74.02 340 i P    P      02 10 52.8 +2.0
      comp=Z,24nm,0.9s,SNR=20
RETA  Reutte           74.03 341 i P    P      02 10 52.2 +1.5
      comp=Z,16nm,0.9s,SNR=18
WTTA  Wattenberg       74.08 340 i P    P      02 10 53.2 +2.0
      comp=Z,33nm,0.9s,SNR=28
KMSC  Kings Mountain   74.08  50  P     P      02 10 52.0 +0.8
      baz=329,SNR=8.3
KMSC  Kings Mountain   74.08  50  IAmb  IAmb   02 10 53.2
      comp=Z,18nm,0.8s
MOTA  Moosalm          74.10 340 i P    P      02 10 52.9 +1.6
      comp=Z,31nm,0.9s,SNR=26
VLAD  Vladila          74.14 330 ⇑P     P      02 10 52.6 +1.2
MDVR  Moldovita        74.14 332 ⇑P     P      02 10 52.1 +0.7
PAULI Pauline          74.14  51  P     P      02 10 51.5  0.0
POO   Poona            74.15 280 eP     P      02 10 49.0 -2.8
KALN  Kalnik           74.15 336 i P    P      02 10 52.6 +1.2
ZIMR                   74.19 329 ⇓P     P      02 10 52.7 +1.1
SQTA  Sankt Quirin     74.20 340 i P    P      02 10 53.7 +1.9
      comp=Z,49nm,0.8s,SNR=43
OBKA  Obir             74.21 338 i P    P      02 10 53.9 +2.1
      comp=Z,39nm,0.8s,SNR=40
LOBO  Lobor            74.22 337 i P    P      02 10 53.0 +1.2
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T60A  Surry            74.27  46  IAmb  IAmb   02 10 54.5
      comp=Z,41nm,0.8s
FRGS  Fruska Gora      74.28 334 ⇑P     P      02 10 53.5 +1.4
FRGS  Fruska Gora      74.28 334⇑iP     P      02 10 53.2 +1.0
MYKA  Terra Mystica    74.29 338 i P    P      02 10 54.0 +1.7
      comp=Z,15nm,0.9s,SNR=14
PUNG  Punghina         74.29 331 ⇑P     P      02 10 53.4 +1.3
DAVA  Damuels          74.38 341 i P    P      02 10 54.5 +1.6
      comp=Z,4.5nm,0.7s,SNR=10.0
ABTA  Abfaltersbach    74.40 339 i P    P      02 10 54.6 +1.7
      comp=Z,31nm,0.9s,SNR=39
HODGE Hodges           74.45  51  P     P      02 10 54.4 +1.1
HODGE                             IAmb  IAmb   02 10 55.6
      comp=Z,21nm,0.9s
V58A  Windy Hill, Pi   74.46  48  P     P      02 10 54.3 +0.9
V58A                              IAmb  IAmb   02 10 55.8
      comp=Z,30nm,0.9s
PTJ   Puntijarka       74.47 337  P     P      02 10 54.4 +1.1
FETA  Feichten         74.48 340 i P    P      02 10 55.2 +1.7
      comp=Z,41nm,0.9s,SNR=50
ZOU   Zoufplan         74.49 339  P     P      02 10 54.2 +0.6
ZOU                               IAmb  IAmb   02 10 56.2
      comp=Z,30nm,1.2s
ZAG   Zagreb           74.55 337⇑iP     P      02 10 55.2 +1.5
ZAG   Zagreb           74.55 337  P     P      02 10 55.4 +1.7
MOSL  Moslavina        74.58 336 i P    P      02 10 55.0 +1.1
GOGA  Godfrey          74.62  52  P     P      02 10 55.4 +1.1
GOGA                              pmax  pmax
      comp=Z,14nm,1.3s
GOGA  Godfrey          74.62  52  P     P      02 10 55.2 +0.9
      baz=328
GOGA  Godfrey          74.62  52  P     P      02 10 55.4 +1.1
KMMI  Kalianget        74.63 231  P     P      02 10 54.5 +0.1
      comp=Z,3µmcomp=Z,158nm,1.0s
PLAI  Plampang         74.64 226  P     P      02 10 53.6 -0.9
      comp=Z,45nm,1.1s
PLAI  Plampang         74.64 226  P     P      02 10 54.4 -0.1
W57A  Gilead           74.64  49  P     P      02 10 55.3 +0.9
PLVB  Pleven           74.65 330 ⇑P     P      02 10 55.4 +1.1
CADS  Cadrg            74.65 338 i P    P      02 10 55.1 +0.8
      comp=Z,51nm,1.0s
LJU   Ljubljana        74.66 338⇑iP     P      02 10 55.6 +1.3
LJU   Ljubljana        74.66 338 i P    P      02 10 55.6 +1.3
CRES  Cresnjev         74.67 337⇑iP     P      02 10 55.7 +1.3
152A  Waverly Hall     74.69  54  P     P      02 10 55.3 +0.6
152A                              IAmb  IAmb   02 10 56.9
      comp=Z,26nm,1.1s
STAL  STALIGIAL        74.83 339  P     P      02 10 56.0 +0.6
CLF   Chambon-Foret    74.85 346  P     P      02 10 55.9 +0.6
OZLJ  Ozalj            74.86 337 i P    P      02 10 56.6 +1.2
BRAL  Brewton          74.88  56  P     P      02 10 56.2 +0.4
      baz=327
CEY   Cerknica         74.97 338⇑iP     P      02 10 57.2 +1.0
BOJS  Bojanci          75.02 337 i P    P      02 10 57.9 +1.5
      comp=Z,132nm,1.8s
MRAK  Mrakovica        75.11 336⇑iP     P      02 10 58.0 +1.0
BNN   Bunyan           75.12 320  P     P      02 10 56.5 -0.8
BR131 Keskin Array S   75.13 322  P     P      02 10 57.8 +0.5
BR131                             pmax  pmax
      comp=Z,35nm,0.8s
BR131 Keskin Array S   75.13 322  P     P      02 10 58.2 +0.9
      SNR=12
BR131 Keskin Array S   75.13 322  P     P      02 10 57.8 +0.5
BR131                             IAmb  IAmb   02 10 59.3
      comp=Z,35nm,0.8s
BRTR  Keskin Array B   75.13 322  P     P      02 10 58.2 +0.9
      comp=Z,22nm,0.7s,baz=60,slow=3.7,SNR=122
BRTR                              LR    LR     02 49 54.0
      comp=Z,629nm,19.1s,baz=36,slow=40
BRTR  Keskin Array B   75.13 322  P     P      02 10 58.1 +0.8
TRI   Trieste          75.14 338  P     P      02 10 56.8 -0.3
TRI                               pmax  pmax
      comp=Z,12nm,0.9s
TRI   Trieste          75.14 338  P     P      02 10 56.8 -0.3
DIVS  Divibare         75.22 333⇑iP     P      02 10 58.6 +0.9
DIVS  Divibare         75.22 333  P     P      02 10 57.1 -0.6
DIVS                              IAmb  IAmb   02 10 59.9
      comp=Z,36nm,1.1s
CTI   Castel Tesino    75.24 340  P     P      02 10 58.3 +0.4
CTI                               pmax  pmax
      comp=Z,36nm,0.9s
CTI   Castel Tesino    75.24 340  P     P      02 10 58.3 +0.4
CTI                               IAmb  IAmb   02 10 59.9
      comp=Z,36nm,0.9s
TUE   Stuetta          75.27 341  P     P      02 10 58.6 +0.5
TUE                               IAmb  IAmb   02 11 03.6
      comp=Z,32nm,0.7s
GSI   Gunungsitoli     75.27 250  P     P      02 10 58.9 +0.6
      comp=Z,14µmcomp=Z,63nm,1.5s
GSI   Gunungsitoli     75.27 250  P     P      02 10 57.7 -0.6
GSI   Gunungsitoli     75.27 250  P     P      02 10 59.7 +1.4
MDUB  Mudurnu          75.29 324  P     P      02 10 58.4 +0.2
ANTO  Ankara           75.29 322  P     P      02 10 58.0 -0.2
ANTO                              pmax  pmax
      comp=Z,44nm,0.9s
ANTO  Ankara           75.29 322  P     P      02 10 58.0 -0.2
BLY   Banja Luka       75.29 335⇑iP     P      02 10 58.7 +0.7
BR231 Keskin MP Arra   75.32 322  P     P      02 10 58.0 -0.5
BR231                             IAmb  IAmb   02 11 00.9
      comp=Z,43nm,0.9s
RIY   Rijeka           75.35 337⇑iP     P      02 10 59.2 +0.8
RIY   Rijeka           75.35 337  P     P      02 10 59.1 +0.8
CNNC  Cliffs of the    75.44  47  P     P      02 11 00.1 +1.1
      baz=330
CNNC  Cliffs of the    75.44  47  P     P      02 11 00.4 +1.4
CNNC                              IAmb  IAmb   02 11 01.7
      comp=Z,51nm,1.1s
EDRB  Edirne           75.44 328  P     P      02 10 59.8 +0.9
HAPS  Han Pijesak,Bl   75.50 334⇑iP     P      02 11 00.5 +1.2
PLIT  Plitvice         75.53 336 i P    P      02 11 00.1 +0.7
BBLS  Lazi&#263;i      75.59 333⇑iP     P      02 11 01.3 +1.5
352A  Blakely          75.59  55  IAmb  IAmb   02 11 15.6
      comp=Z,18nm,0.8s
MGRS  Mrkonjic Grad    75.63 335⇑iP     P      02 11 01.9 +1.9
MTSU  Mount Surprise   75.65 198  P     P      02 11 01.5 +1.3
SMRN  Sveta Marina     75.70 338 i P    P      02 11 00.2 -0.1
VTS   Vitosha          75.74 330 ⇑P     P      02 11 01.8 +0.9
VTS   Vitosha          75.74 330  P     P      02 11 01.6 +0.8
VTS                               pmax  pmax
      comp=Z,33nm,0.7s
VTS   Vitosha          75.74 330  P     P      02 11 01.6 +0.8
VTS                               IAmb  IAmb   02 11 02.8
      comp=Z,33nm,0.7s
UDBI  Udbina           75.83 336 i P    P      02 11 02.0 +0.9
RUDO  Rudo             75.83 333⇑iP     P      02 11 02.0 +0.9
RABC  Rab              75.83 337 i P    P      02 11 01.8 +0.7
Y58A  Scranton         75.85  49  IAmb  IAmb   02 11 03.6
      comp=Z,38nm,0.8s
SALO  Salr             75.87 340  P     P      02 11 01.6 +0.2
TEOL  Teolo            75.90 339  P     P      02 11 02.8 +1.3
NVLJ  Novalja          75.99 337 i P    P      02 11 02.5 +0.6
GAZ   Gaziantep        76.10 318  P     P      02 11 02.1 -0.7
Y59A  Loris            76.11  49  IAmb  IAmb   02 11 09.1
      comp=Z,37nm,0.8s
KIJV  Kijevo           76.18 336 i P    P      02 11 03.8 +0.7
TIGA  Tifton           76.23  54  P     P      02 11 05.3 +1.7
      baz=328,SNR=6.4
TIGA  Tifton           76.23  54  P     P      02 11 03.8 +0.3
NHSC  New Hope         76.31  50  P     P      02 11 05.2 +1.2
      baz=329
UPM   Unac-Piva        76.34 334 eP     P      02 11 05.0 +0.8
Y60A  Bolivia          76.37  48  P     P      02 11 05.3 +1.0
PWJI  Pagerwojo        76.44 232  P     P      02 11 03.4 -1.4
      comp=Z,112nm,1.0s
RDO   Rodhopi          76.44 328  P     P      02 11 05.8 +1.2
KOUNC Koumac, New Ca   76.47 178  P     P      02 11 06.8 +2.1
MORI  Morici           76.47 336 i P    P      02 11 05.4 +0.7
RICI  Ricice           76.49 335 i P    P      02 11 05.3 +0.4
DUGI  Dugi Otok        76.50 337 i P    P      02 11 05.8 +0.9
ALN   Alexandroupoli   76.52 328  P     P      02 11 06.1 +1.1
ALN   Alexandroupoli   76.52 328  IAmb  IAmb   02 11 07.2
      comp=Z,47nm,1.2s
LHSI  Lahat            76.63 242  P     P      02 11 05.4 -0.6
      comp=Z,60nm,0.9s
MASI  Maura Aman, Be   76.68 243  P     P      02 11 05.8 -0.5
      comp=Z,129nm,0.9s
ZIRJ  Zirje            76.69 336 i P    P      02 11 06.3 +0.4
BRY   Bratogost        76.71 334⇑iP     P      02 11 06.6 +0.3
MAKA  Makarska         76.71 335 i P    P      02 11 06.3 +0.2
PRMA  PARMA            76.73 340  P     P      02 11 06.8 +0.7
NVR   Nevrokopi        76.74 329  P     P      02 11 07.7 +1.3
KLSI                   76.79 240  P     P      02 11 06.4 -0.5
      comp=Z,7.8nm,0.9s
MDSI  Maura Dua        76.88 241  P     P      02 11 05.9 -1.5
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      comp=Z,11nm,1.0s
STIP  Stip             76.89 331 i P    P      02 11 07.3 +0.1
553A  Crawfordville    76.91  55  P     P      02 11 08.5 +1.1
TREB  Trebinje         76.93 334 eP     P      02 11 07.4  0.0
STON  Ston             76.94 334⇑iP     P      02 11 07.5 +0.1
STON  Ston             76.94 334 i P    P      02 11 07.6 +0.2
HVAR  Hvar             76.95 335 i P    P      02 11 07.8 +0.3
PDG   Podgorica        76.97 333 ⇑P     P      02 11 08.1 +0.5
PDG   Podgorica        76.97 333⇑iP     P      02 11 08.3 +0.7
PDG   Podgorica        76.97 333  P     P      02 11 08.2 +0.7
ZCCA  Zocca            77.00 340  P     P      02 11 09.2 +1.4
DBRK  Dubrovnik        77.03 334 i P    P      02 11 08.1 +0.3
SRS   Serrai           77.03 329  P     P      02 11 08.9 +0.9
KNRA  Kununurra        77.05 213  P     P      02 11 07.5 -0.7
KNRA  Kununurra        77.05 213  P     P      02 11 08.7 +0.6
BNI   Bardonecchia     77.10 343  P     P      02 11 10.1 +1.6
BNI                               pmax  pmax
      comp=Z,28nm,1.0s
BNI   Bardonecchia     77.10 343  P     P      02 11 10.1 +1.6
BNI                               IAmb  IAmb   02 11 11.9
      comp=Z,28nm,1.0s
BALB  Balikesir        77.11 326  P     P      02 11 08.9 +0.5
KPJI  Karang Pucung    77.12 235  P     P      02 11 07.7 -1.0
      comp=Z,26nm,1.0s
VAY   Valandovo        77.13 330 i P    P      02 11 10.1 +1.6
HCY   Herceg Novi      77.15 334⇑iP     P      02 11 08.3 -0.3
PUK   Puka             77.17 332  P     P      02 11 09.1 +0.2
PUK                               IAmb  IAmb   02 11 27.3
      comp=Z,26nm,1.2s
SSB   Saint Sauveur    77.22 344  P     P      02 11 10.2 +1.2
SSB                               pmax  pmax
      comp=Z,23nm,0.9s
SSB   Saint Sauveur    77.22 344  P     P      02 11 10.2 +1.2
SSB                               IAmb  IAmb   02 11 11.7
      comp=Z,23nm,0.9s
DRME  Dracevica, Mon   77.22 333⇑iP     P      02 11 09.6 +0.6
CTA   Charters Tower   77.25 196  P     P      02 11 09.9 +0.8
      comp=Z,26nm,0.8s,baz=6.2,slow=8.8,SNR=6.0
CTA                               LR    LR     02 42 00.8
      comp=Z,164nm,19.5s,baz=62,slow=33
CTA   Charters Tower   77.25 196  P     P      02 11 10.0 +0.8
CTA   Charters Tower   77.25 196  P     P      02 11 10.1 +0.9
CTAO  Charters Tower   77.25 196  P     P      02 11 10.0 +0.8
CTAO                              pmax  pmax
      comp=Z,36nm,0.9s
CTAO  Charters Tower   77.25 196  P     P      02 11 10.0 +0.8
CTAO                              IAmb  IAmb   02 11 11.2
      comp=Z,36nm,0.9s
CTAO  Charters Tower   77.25 196  P     P      02 11 10.5 +1.3
VLC   Villacollemand   77.30 340  P     P      02 11 10.2 +0.8
VLC                               IAmb  IAmb   02 11 12.8
      comp=Z,44nm,1.0s
MSSA  Maissana         77.32 341  P     P      02 11 10.2 +0.7
SHME  Shamm            77.33 298  P     P      02 11 09.4 -0.4
SHME  Shamm            77.33 298  P     P      02 11 09.5 -0.4
BANOM Banah            77.35 298 i P    P      02 11 09.9 -0.1
      SNR=5.9
BANOM Banah            77.35 298  P     P      02 11 09.9 -0.1
PHP   Peshkopia        77.37 332  P     P      02 11 10.3 +0.4
GRG   Griva            77.52 330  P     P      02 11 11.7 +1.0
MURB  Monte Urbino     77.74 338  P     P      02 11 12.6 +0.6
OSSC  Osservatorio P   77.75 339  P     P      02 11 12.8 +0.9
PLG   Polygyros        77.76 329  P     P      02 11 12.6 +0.5
OHR   Ohrid            77.81 331 i P    P      02 11 13.3 +0.9
TIR   Tirane           77.83 332 ⇑P     P      02 11 13.1 +0.7
TIR   Tirane           77.83 332  P     P      02 11 13.2 +0.7
TIR                               pmax  pmax
      comp=Z,53nm,0.8s
TIR   Tirane           77.83 332  P     P      02 11 13.2 +0.7
MDH   Madha            77.87 297  P     P      02 11 11.9 -0.9
MDH   Madha            77.87 297  P     P      02 11 13.7 +0.8
MASF  Masafi           77.88 297  P     P      02 11 12.9 -0.1
KULA  Kula-Manisa      77.89 325  P     P      02 11 13.4 +0.5
MSFE  Esma-Masafi      77.89 297  P     P      02 11 12.8 -0.2
FNA   Florina          77.96 331  P     P      02 11 13.7 +0.5
FNA   Florina          77.96 331  P     P      02 11 14.0 +0.8
FNA                               pmax  pmax
      comp=Z,36nm,1.0s
FNA   Florina          77.96 331  P     P      02 11 14.0 +0.8
FNA                               IAmb  IAmb   02 11 15.1
      comp=Z,36nm,1.0s
UMQ   Umm Al-Quwin     78.00 298  P     P      02 11 14.2 +0.7
NRCA  Norcia           78.02 338  P     P      02 11 15.5 +1.9
DZM   Mont Dzumac      78.03 176 eP     P      02 11 15.6 +2.0
      comp=Z,65nm,1.2s
DZM   Mont Dzumac      78.03 176 eLR    LR     02 35 43.9
      comp=Z,421nm,21.9s
DZM   Mont Dzumac      78.03 176  P     P      02 11 12.6 -1.0
DZM                               IAmb  IAmb   02 11 31.4
      comp=Z,33nm,1.2s
UOSS  Minazif          78.21 297 i P    P      02 11 13.9 -0.9
      SNR=7.3
UOSS  Minazif          78.21 297  P     P      02 11 13.9 -0.9
KBN   Korca            78.27 331  P     P      02 11 14.8 -0.1
KBN                               pmax  pmax
      comp=Z,27nm,1.0s
KBN   Korca            78.27 331  P     P      02 11 14.8 -0.1
KBN                               IAmb  IAmb   02 11 16.9
      comp=Z,27nm,1.0s
MIB   Mutribah         78.32 307⇓eP     P      02 11 13.8 -1.5
HATD  Hatta, Dubai     78.35 297 i P    P      02 11 15.1 -0.4
      SNR=11
HATD  Hatta, Dubai     78.35 297  P     P      02 11 16.0 +0.5
      SNR=5.2
AQU   L'Aquila         78.42 337  P     P      02 11 17.3 +1.6
AQU                               pmax  pmax
      comp=Z,44nm,0.9s
AQU   L'Aquila         78.42 337⇑iP     P      02 11 17.5 +1.8
AQU   L'Aquila         78.42 337  P     P      02 11 17.3 +1.6
BIDO  Bidbid           78.43 295  P     P      02 11 16.5 +0.5
NAZ   Nazwa, Dubai     78.45 298  P     P      02 11 15.1 -1.0
NAZ   Nazwa, Dubai     78.45 298  P     P      02 11 16.0  0.0
SGRT  San Giovanni R   78.47 335  P     P      02 11 16.6 +0.5
SGRT                              IAmb  IAmb   02 11 17.9
      comp=Z,26nm,0.7s
FAQ   Al Faqa, Dubai   78.68 298 i P    P      02 11 16.5 -0.9
      SNR=5.9
FAQ   Al Faqa, Dubai   78.68 298  P     P      02 11 17.1 -0.2
KBD   Kabd             78.69 306 eP     P      02 11 15.8 -1.6
SOHO  SOHO             78.72 296 i P    P      02 11 17.0 -0.6
      SNR=11
SOHO  SOHO             78.72 296  P     P      02 11 17.4 -0.2
KPRO  Kipourio         78.74 331  P     P      02 11 17.9 +0.4
VLO   Vlora            78.75 332  P     P      02 11 16.8 -0.7
VLO                               pmax  pmax
      comp=Z,65nm,0.8s
VLO   Vlora            78.75 332  P     P      02 11 16.8 -0.7
WBK   Wadi Bani Khal   78.76 294  P     P      02 11 19.0 +1.1
      SNR=7.5
XOR   Xorichti         78.77 329  P     P      02 11 18.9 +1.2
HOQ   Hoqain           78.80 296  P     P      02 11 18.0  0.0
      SNR=7.0
NEO   Neokhori         78.82 329  P     P      02 11 18.1 +0.2
SMDO  Samad            78.86 295  P     P      02 11 19.0 +0.5
      SNR=6.9
QIS   Mount Isa        78.91 202  P     P      02 11 18.7 +0.3
ASUD  Al Ashush, Dub   78.91 298  P     P      02 11 18.1 -0.5
ASUD  Al Ashush, Dub   78.91 298  P     P      02 11 18.9 +0.2
JLN   Jalan Bani Buh   78.91 293  P     P      02 11 20.0 +1.3
      SNR=7.4
QRN   Al-Qurain        78.96 306 eP     P      02 11 17.1 -1.7
ELL   Elmali           79.08 323  P     P      02 11 19.5 -0.1
ELL                               pmax  pmax
      comp=Z,101nm,1.0s
ELL   Elmali           79.08 323  P     P      02 11 19.4 -0.1
JAN   Janina           79.15 331  P     P      02 11 20.9 +1.1
ALNE  Al Ain           79.18 297  P     P      02 11 19.6 -0.6
ALNE  Al Ain           79.18 297  P     P      02 11 20.4 +0.3
MATE  Matera           79.29 334 ⇑P     P      02 11 21.6 +1.2
WB0   Warramunga Arr   79.35 207  P     P      02 11 21.3 +0.5
WB0                               IAmb  IAmb   02 11 31.4
      comp=Z,35nm,1.1s
SCTE  Santa Cesarea    79.39 333  P     P      02 11 22.1 +1.1
ARQ   Araqi            79.40 296  P     P      02 11 23.0 +1.7
      SNR=6.3
JMDO  Jabal Madar      79.40 294  P     P      02 11 22.0 +0.6
      SNR=16
IGT   Igoumenitsa      79.41 331  P     P      02 11 21.4 +0.3
PAOL  Paolisi          79.42 336  P     P      02 11 22.1 +0.8
CSS   Mathiatis        79.50 320  P     P      02 11 21.4 -0.3
WR0   Warramunga Arr   79.50 207  P     P      02 11 22.1 +0.4
PALK  Pallekele        79.52 267  P     P      02 11 21.9 -0.2
PALK                              pmax  pmax
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	comp=Z,28nm,1.1s						
PALK	Pallekele	79.52	267	P	P	02 11 21.9	-0.2
PALK				IAmb	IAmb	02 11 22.7	
	comp=Z,28nm,1.1s						
WRAB	Tennant Creek	79.52	207	P	P	02 11 22.5	+0.7
WRAB				pmax	pmax		
	comp=Z,35nm,1.1s						
WRAB	Tennant Creek	79.52	207	P	P	02 11 22.5	+0.7
WRAB				IAmb	IAmb	02 11 31.8	
	comp=Z,35nm,1.1s						
WRAB	Tennant Creek	79.52	207	P	P	02 11 23.3	+1.5
WB2	Warramunga Arr	79.53	207	P	P	02 11 22.3	+0.5
WB2				IAmb	IAmb	02 11 31.8	
	comp=Z,38nm,1.1s						
WRA	Warramunga Arr	79.53	207	P	P	02 11 22.3	+0.4
	comp=Z,9.1nm,0.7s,baz=19,slow=5.8,SNR=48						
WRA				PP	PP	02 14 23.4	+0.3
	comp=Z,5.5nm,1.1s,baz=11,slow=7.8,SNR=5.6						
WRA				LR	LR	02 44 33.8	
	comp=Z,229nm,21.9s,baz=35,slow=34						
WRA	Warramunga Arr	79.53	207	P	P	02 11 22.5	+0.6
BSY	Bisya	79.55	295	P	P	02 11 23.0	+0.8
	SNR=11						
BODT	Bodrum	79.64	325	P	P	02 11 26.4	+3.9
RK1H	Rockhampton Ha	79.95	191	P	P	02 11 25.8	+1.9
SHMA	Al-Shehemyia	80.00	302	P	P	02 11 24.6	+0.1
DWPF	Disney Wildern	80.04	54	P	P	02 11 26.3	+1.6
	baz=330						
NYDR	Nydri-Lefkada	80.08	331	P	P	02 11 25.0	+0.3
TAOE	Nuku Hiva Isla	80.08	123	*e*LR	LR	02 36 37.4	
	comp=Z,486nm,24.0s						
KLV	Kalavryta, Ach	80.30	329	P	P	02 11 25.7	-0.3
FITZ	Fitzroy Crossi	80.31	216	P	P	02 11 25.6	-0.5
FITZ				IAmb	IAmb	02 11 28.1	
	comp=Z,57nm,1.4s						
FITZ	Fitzroy Crossi	80.31	216	P	P	02 11 26.8	+0.8
MZWR	Madinat Zayed	80.35	298	P	P	02 11 26.0	-0.5
TLIG	Tlapa	80.37	73	P	P	02 11 27.2	+0.5
RLS	Riolos of Patr	80.48	330	P	P	02 11 27.6	+0.7
DRO	Drossia	80.51	330	P	P	02 11 27.6	+0.5
UMZA	Um Al Zommool	80.60	297	P	P	02 11 27.5	-0.2
MHTO	MHTO	80.62	294	P	P	02 11 28.0	+0.1
	SNR=39						
TIP	Timpagrande	80.67	334	⇑P	P	02 11 29.2	+1.2
TIP	Timpagrande	80.67	334	P	P	02 11 28.3	+0.3
TRNA	Turayna	80.83	301	P	P	02 11 28.2	-0.8
ITM	Ithomi	81.17	329	P	P	02 11 30.7	+0.1
ITM				IAmb	IAmb	02 11 31.0	
	comp=Z,22nm,0.8s						
MZR	Muzera	81.19	298	*i* P	P	02 11 30.6	-0.4
	SNR=34						
MZR	Muzera	81.19	298	P	P	02 11 31.1	+0.2
	SNR=5.2						
CEL	Celeste	81.75	334	P	P	02 11 34.3	+0.5
CEL				IAmb	IAmb	02 11 36.0	
	comp=Z,23nm,0.9s						
EIDS	Eidsvold	81.84	191	P	P	02 11 34.4	+0.3
EIDS				IAmb	IAmb	02 11 36.7	
	comp=Z,25nm,0.9s						
EIDS	Eidsvold	81.84	191	P	P	02 11 35.8	+1.8
PGAV	Gavieira, Arco	81.90	353	*e*P	P	02 11 36.6	+2.1
PGAV	Gavieira, Arco	81.90	353	*e*LR	LR	02 45 04.8	
	comp=Z,244nm,18.0s						
GHAJ	Ghor Haditha	81.93	316	P	P	02 11 34.9	+0.2
PBRG	Braganca	81.94	352	*e*P	P	02 11 36.8	+2.1
	comp=Z,40nm,1.6s						
VSL	Villasalto	82.00	339	P	P	02 11 35.7	+0.7
VSL				IAmb	IAmb	02 11 37.7	
	comp=Z,24nm,0.9s						
PMOR	Pomariorio Ree	82.09	132	*e*T	T	03 41 47.0	
	comp=Z,15nm,0.3s						
PCAB	Cabril	82.13	353	*e*P	P	02 11 38.0	+2.3
	comp=Z,55nm,1.5s						
POLO	Lamas de Olo	82.45	353	*e*P	P	02 11 39.4	+2.0
	comp=Z,20nm,1.9s						
PVRL	Vila Real	82.54	353	*e*P	P	02 11 40.1	+2.3
	comp=Z,76nm,1.0s						
MVO	Moncorvo	82.60	352	*e*P	P	02 11 40.2	+2.0
	comp=Z,62nm,1.0s						
MVO	Moncorvo	82.60	352	*e*LR	LR	02 43 59.3	
	comp=Z,258nm,20.0s						
CORL	Corleone	82.71	336	P	P	02 11 39.2	+0.5
RAFF	Raffo Rosso	83.10	335	P	P	02 11 41.2	+0.4
RAFF				IAmb	IAmb	02 11 44.6	
	comp=Z,23nm,1.0s						
PVIS	Viseu	83.11	353	*e*P	P	02 11 42.8	+2.0
RMQ	Roma	83.21	193	P	P	02 11 43.1	+2.0
AS31	Alice Springs	83.21	206	P	P	02 11 41.9	+0.7
ASAR	Alice Springs	83.21	206	P	P	02 11 42.2	+1.0
	comp=Z,15nm,0.9s,baz=13,slow=5.0,SNR=116						
ASAR				LR	LR	02 49 28.8	
	comp=Z,156nm,19.2s,baz=39,slow=36						
ASAR	Alice Springs	83.21	206	P	P	02 11 42.0	+0.7
ASAR	Alice Springs	83.21	206	P	P	02 11 42.0	+0.7
MTE	Manteigas	83.40	352	*e*P	P	02 11 44.3	+2.0
	comp=Z,53nm,1.3s						
MTE	Manteigas	83.40	352	*e*LR	LR	02 45 50.0	
	comp=Z,199nm,18.0s						
MTE	Manteigas	83.40	352	P	P	02 11 43.1	+0.8
MTE				IAmb	IAmb	02 12 00.2	
	comp=Z,24nm,1.1s						
COI	Coimbra	83.65	353	P	P	02 11 43.4	-0.1
COI				pmax	pmax		
	comp=Z,98nm,1.2s						
COI	Coimbra	83.65	353	P	P	02 11 43.4	-0.1
PPT	Papeete	83.72	135	LR	LR	02 42 41.7	
	comp=Z,136nm,18.8s,baz=324,slow=31						
PPT2	Papeete2	83.74	135	*e*S	S	02 22 03.0	-0.7
	comp=Z,107nm,30.8s						
PPT2	Papeete2	83.74	135	*e*LR	LR	02 38 19.2	
	comp=Z,214nm,22.8s,baz=330						
ESBB	Sonseca Array	83.81	350	P	P	02 11 44.6	+0.1
ESBB				IAmb	IAmb	02 11 48.4	
	comp=Z,26nm,0.9s						
ESDC	Sonseca Array	83.81	350	P	P	02 11 46.2	+1.7
	comp=Z,13nm,0.7s,baz=360,slow=5.2,SNR=130						
ESDC	Sonseca Array	83.81	350	P	P	02 11 44.9	+0.4
ESDC				IAmb	IAmb	02 11 48.4	
	comp=Z,22nm,0.9s						
PCAS	Casmilo, Conde	83.81	353	*e*P	P	02 11 46.3	+1.9
	comp=Z,84nm,1.8s						
QLP	Quilpie	83.93	197	P	P	02 11 46.8	+1.9
PCBR	Castelo Branco	83.95	352	*e*P	P	02 11 46.7	+1.6
	comp=Z,75nm,1.2s						
PAB	San Pablo	83.98	350	P	P	02 11 46.3	+1.0
PAB				pmax	pmax		
	comp=Z,77nm,1.5s						
PAB	San Pablo	83.98	350	P	P	02 11 46.3	+1.0
PAB	San Pablo	83.98	350	P	P	02 11 47.1	+1.8
SHAO	Shalim	84.30	294	*i* P	P	02 11 46.6	-0.6
	SNR=13						
SHAO	Shalim	84.30	294	P	P	02 11 46.7	-0.4
PMRV	Marv??o	84.36	352	*e*P	P	02 11 48.7	+1.5
	comp=Z,68nm,1.6s						
PMRV	Marv??o	84.36	352	*e*LR	LR	02 46 13.9	
	comp=Z,235nm,18.0s						
PSBE	So Bento	84.37	353	*e*P	P	02 11 49.3	+2.1
DOK	Doka	84.56	295	P	P	02 11 48.0	-0.5
	SNR=7.4						
PMTG	Montargil	84.77	353	*e*P	P	02 11 50.6	+1.4
	comp=Z,72nm,1.6s						
CCIG	Comitan	84.82	69	P	P	02 11 51.2	+1.2
DMTO	DMTO	84.90	294	P	P	02 11 49.1	-1.0
PESTR	Estremoz	84.93	352	*e*P	P	02 11 51.6	+1.6
	comp=Z,90nm,1.4s						
PESTR	Estremoz	84.93	352	P	P	02 11 50.9	+0.9
PESTR				IAmb	IAmb	02 11 52.7	
	comp=Z,34nm,1.0s						
PESTR	Estremoz	84.93	352	P	P	02 11 51.7	+1.6
PMAFR	Mafra	84.96	354	*e*P	P	02 11 52.3	+2.1
	comp=Z,176nm,1.3s						
MBWA	Marble Bar	85.16	220	P	P	02 11 52.0	+0.8
PMST	Lisbon--Monsan	85.17	354	*e*P	P	02 11 53.4	+2.2
	comp=Z,184nm,1.2s						
WHFO	Wadi Hawf	85.33	295	P	P	02 11 52.0	-0.4
	SNR=15						
RBK	Rabkut	85.46	295	P	P	02 11 52.1	-1.0
PSA00	Pilbara Seismi	85.50	219	P	P	02 11 52.5	-0.4
PSA00				IAmb	IAmb	02 11 54.9	
	comp=Z,33nm,1.4s						
PSA00	Pilbara Seismi	85.50	219	P	P	02 11 52.1	-0.7
PSA00				IAmb	IAmb	02 11 60.0	
	comp=Z,22nm,1.1s						
PSA00	Pilbara Seismi	85.50	219	P	P	02 11 53.9	+1.0
CART	Cartagena	85.54	347	P	P	02 11 53.5	+0.5
CART	Cartagena	85.54	347	P	P	02 11 55.1	+2.1
PBAR	Barrancos	85.58	352	*e*P	P	02 11 55.2	+1.9
	comp=Z,134nm,1.1s						
KEST	Kesra	85.64	338	P	P	02 11 54.4	+0.7
	comp=Z,9.3nm,0.5s,baz=314,slow=0.4,SNR=40						
KEST				LR	LR	02 54 58.2	
	comp=Z,350nm,20.4s,baz=289,slow=39						
KEST	Kesra	85.64	338	P	P	02 11 54.3	+0.5
KEST				IAmb	IAmb	02 11 56.4	
	comp=Z,20nm,1.0s						
INKA	Innaminka	85.67	199	P	P	02 11 55.4	+1.9
PNCL	Nicolau / Gran	85.75	353	*e*P	P	02 11 55.7	+1.6
	comp=Z,52nm,1.8s						
PBEJ	Beja	85.79	352	*e*P	P	02 11 56.4	+2.1
	comp=Z,80nm,1.5s						
MESJ	Messejana	86.00	353	*e*P	P	02 11 56.6	+1.2
MESJ				IAmb	IAmb	02 12 02.6	
	comp=Z,107nm,2.3s						
MESJ	Messejana	86.00	353	*e*P	P	02 11 56.5	+1.2
MESJ	Messejana	86.00	353	*e*P	P	02 11 56.8	+1.5
	comp=Z,44nm,2.0s						
WRKA	Warakurna	86.02	211	P	P	02 11 55.9	+0.5
ABTO	Aybut	86.04	295	P	P	02 11 55.3	-0.6
	SNR=7.7						
PCVE	Castro Verde	86.19	353	*e*P	P	02 11 58.3	+2.0
	comp=Z,77nm,1.6s						
PTEO	Sao Teotonio	86.32	353	*e*P	P	02 11 59.1	+2.1
	comp=Z,80nm,1.6s						
PVAQ	Vaqueiros	86.39	352	*e*P	P	02 11 59.3	+2.0
	comp=Z,74nm,1.3s						
PVAQ	Vaqueiros	86.39	352	*e*S	S	02 22 40.0	+10
PVAQ	Vaqueiros	86.39	352	*e*LR	LR	02 49 56.0	
	comp=Z,314nm,18.0s						
PVAQ	Vaqueiros	86.39	352	P	P	02 11 58.0	+0.7
PVAQ	Vaqueiros	86.39	352	P	P	02 11 59.5	+2.2
MORF	Marmelete	86.56	353	*e*P	P	02 11 59.4	+1.1
MORF				IAmb	IAmb	02 12 01.0	
	comp=Z,44nm,1.1s						
MORF	Marmelete	86.56	353	*e*P	P	02 11 59.3	+1.1
MORF	Marmelete	86.56	353	*e*P	P	02 12 00.6	+2.4
PBDV	Barranco-do-Ve	86.57	352	*e*P	P	02 12 00.6	+2.4
	comp=Z,74nm,1.8s						
PFVI	Vila Bisbo	86.74	353	*e*P	P	02 12 01.3	+2.3
OOD	Oodnadatta	86.76	204	P	P	02 12 00.2	+1.3
MTO3	Montecristo	87.84	67	P	P	02 12 05.9	+1.0
MTO3				IAmb	IAmb	02 12 07.8	
	comp=Z,14nm,0.8s						
SMIR	Smir Dam	87.91	350	P	P	02 12 06.0	+1.4
CHEFC	Chefchaouen	88.47	350	P	P	02 12 09.0	+1.5
CMSA	Cobar Meteorol	88.58	194	P	P	02 12 09.8	+2.2
LCRK	Leigh Creek	88.78	201	P	P	02 12 10.2	+1.7
AKLM	AKL	88.91	349	P	P	02 12 10.0	+0.5
JBK	JBK	88.94	348	P	P	02 12 11.0	+1.2
TBI	Tubuai	89.00	137	*e*S	S	02 22 52.8	-1.7
	comp=Z,101nm,31.8s						
TBI	Tubuai	89.00	137	*e*LR	LR	02 40 43.2	
	comp=Z,211nm,36.5s						
TGUH	Tegucigalpa,Un	89.20	66	P	P	02 12 11.9	+0.7
STKA	Stephens Creek	89.55	198	P	P	02 12 12.7	+0.6
	comp=Z,12nm,0.8s,baz=343,slow=9.5,SNR=16						
STKA				LR	LR	02 48 21.3	
	comp=Z,341nm,19.7s,baz=19,slow=33						
STKA	Stephens Creek	89.55	198	P	P	02 12 12.7	+0.6
STKA	Stephens Creek	89.55	198	P	P	02 12 13.8	+1.7
LCRM	LCR	89.83	350	P	P	02 12 15.0	+1.0
SOCY	Socotra	90.05	292	P	P	02 12 12.4	-2.7
TDRA	Tendrara	90.15	347	P	P	02 12 17.2	+1.7
ZHG	ZHG	90.24	351	P	P	02 12 18.0	+2.2
AVE	Averroes	90.45	352	P	P	02 12 18.9	+2.3
CZD	Col de Zad	90.50	350	P	P	02 12 20.0	+2.7
MEEK	Meekatharra	90.59	218	P	P	02 12 17.2	+0.1
MDT	Midelt	90.67	349	P	P	02 12 19.2	+1.4
SRHM	Skhour des Reh	91.31	352	P	P	02 12 24.0	+3.2
PMAR	Madeira	91.42	360	*e*P	P	02 12 23.4	+2.0
	comp=Z,92nm,1.4s						
FORT	Forrest	91.51	209	P	P	02 12 21.8	+0.5
FORT	Forrest	91.51	209	P	P	02 12 22.1	+0.9
HTT	Hallett	91.54	200	P	P	02 12 23.1	+1.7
GOLM	Goulmima	91.80	349	P	P	02 12 25.6	+2.5
ACON	Acoyapa	92.04	65	P	P	02 12 24.5	+0.3
OUK	Oukaimeden	92.56	352	P	P	02 12 29.0	+2.1
OUZM	OUZ	92.76	351	P	P	02 12 30.0	+2.4
TZRR	Tazzarine	92.77	350	P	P	02 12 29.1	+1.5
ZGR	Zagora	93.44	350	P	P	02 12 32.2	+1.5
MORW	Morawa	93.71	220	P	P	02 12 30.2	-1.3
MORW	Morawa	93.71	220	P	P	02 12 32.0	+0.5
TORD	Torodi Ar. Bea	109.09	340	Pdiff	Pdif	02 13 41.6	+0.7
	comp=Z,0.6nm,0.9s,baz=0.5,slow=6.6,SNR=2.6						
TORD				PKiKP	PKiKP	02 17 45.0	+0.1
	comp=Z,1.7nm,0.8s,baz=355,slow=2.8,SNR=8.3						
TORD				PP	PP	02 18 12.5	+0.1
	comp=Z,1.8nm,0.9s,baz=3.7,slow=7.9,SNR=4.3						
DBIC	Dimbokro	116.50	346	PKP	PKiKP	02 17 58.9	-0.1
	comp=Z,6.9nm,0.7s,baz=7.3,slow=3.4,SNR=7.8						
DBIC	Dimbokro	116.50	346	PKIKP	PKiKP	02 17 57.6	-1.4
DBIC	Dimbokro	116.50	346	PKPdf	PKiKP	02 17 57.6	-1.4
ETMB	Extrema	120.19	59	PKPdf	PKiKP	02 18 05.4	-0.7
PRPB	Parauapebas	123.87	40	*e*P	PKiKP	02 18 13.0	-0.4
LPAZ	La Paz	124.78	65	PKP	PKiKP	02 18 16.5	+0.6
	comp=Z,3.9nm,0.9s,baz=353,slow=3.8,SNR=13						
LPAZ	La Paz	124.78	65	*e*P	PKiKP	02 18 16.6	+0.7
VILB	Vilhena	125.74	55	*e*P	PKiKP	02 18 18.1	+1.0
BDFB	Brasilia	133.26	42	PKP	PKiKP	02 18 32.5	+0.2
	comp=Z,8.3nm,0.7s,baz=206,slow=2.6,SNR=10						
BDFB	Brasilia	133.26	42	PKIKP	PKPdf	02 18 28.2	-2.8
BDFB	Brasilia	133.26	42	PKPdf	PKPdf	02 18 28.2	-2.8
VNDA	Vanda	133.46	180	PKP	PKiKP	02 18 29.9	-0.8
	comp=Z,3.7nm,0.8s,baz=307,slow=4.2,SNR=21						
SBA	Scott Base	133.82	179	PKIKP	PKiKP	02 18 30.7	-0.7
SBA	Scott Base	133.82	179	PKPdf	PKiKP	02 18 30.7	-0.7
LBTB	Lobatse	136.04	297	PKIKP	PKPdf	02 18 35.1	-0.9
LBTB	Lobatse	136.04	297		PKPdf	02 18 35.1	-0.9
MT02	Curacav	136.83	81		PKiKP	02 18 37.9	-0.9
BO01	Tunca	137.70	82		PKiKP	02 18 39.3	-1.3
BO02	Sierra Bellavi	138.17	82		PKiKP	02 18 39.7	-1.9
CPUP	Villa Florida	138.60	61	PKP	PKiKP	02 18 41.2	-1.4
	comp=Z,4.3nm,0.8s,baz=344,slow=4.1,SNR=3.2						
CPUP	Villa Florida	138.60	61	PKIKP	PKiKP	02 18 40.4	-2.3
CPUP	Villa Florida	138.60	61	PKPdf	PKiKP	02 18 40.4	-2.3
BOSA	Boshof	139.17	294	PKhKP	PKPpre	02 18 31.5	
	comp=Z,2.2nm,0.8s,baz=215,slow=1.2,SNR=4.8						
BOSA				PKP	PKiKP	02 18 41.9	-2.0
	comp=Z,7.9nm,0.7s,baz=18,slow=1.8,SNR=15						
PLCA	Paso Flores	142.51	89	PKhKP	PKPpre	02 18 44.0	
	comp=Z,11nm,1.0s,baz=302,slow=4.2,SNR=18						
MAW	Mawson	143.36	219	PKP	PKPdf	02 18 46.1	-1.6
	comp=Z,6.0nm,0.9s,baz=89,slow=6.5,SNR=14						
MAW	Mawson	143.36	219	PKPdf	PKPdf	02 18 45.2	-2.5
SUR	Sutherland	144.46	296	PKPdf	PKPdf	02 18 50.4	-0.8
PLTB	Pedras Altas	144.91	61		PKiKP	02 18 52.0	-3.5
TRQA	Tornquist	145.39	78	PKIKP	PKiKP	02 18 53.9	-2.3
TRQA	Tornquist	145.39	78	PKPdf	PKiKP	02 18 53.9	-2.3
QSPA	South Pole Qui	145.96	180		PKiKP	02 18 53.5	-3.1
GO09	Cerro Castillo	147.85	105		PKPab	02 19 01.0	-0.6
SYO	Syowa Base	152.06	220	⇓*e*PKPbc	PKiKP	02 19 09.0	+0.1
SYO	Syowa Base	152.06	220	⇓*e*PKiKP	PKiKP	02 19 10.6	+1.7
SYO	Syowa Base	152.06	220	⇑*e*X	PKPab	02 19 17.8	-0.6
SNAA	Sanae	163.31	196	PKPab	PKPab	02 20 07.3	+0.3
SNAA	Sanae	163.31	196	PKP2	PKPab	02 20 06.5	-0.5
SNAA	Sanae	163.31	196		PKPab	02 20 06.5	-0.5
VNA3	Neumayer Olymp	164.55	189	PKPab	PKPab	02 20 12.5	0.0
VNA3	Neumayer Olymp	164.55	189	PKPdf	PKPdf	02 19 16.9	-0.1
VNA2	Neumayer--Watz	164.61	192	PKPab	PKPab	02 20 13.0	+0.3
VNA2	Neumayer--Watz	164.61	192	PKPdf	PKPdf	02 19 17.5	+0.4
VNA1	Neumayer--Stat	164.97	192	PKPab	PKPab	02 20 14.6	+0.3
VNA1	Neumayer--Stat	164.97	192	PKPdf	PKPdf	02 19 17.7	+0.4

IDC 05 02:00:48.7±2.1**, 8°.12S**×**125°.63E, h0**^{km}**, mb3.7**/1**, mb1 3.6**/3**, mb1mx3.4**/29**, mbtmp3.5**/3**, ML3.4**/2**, Error ellipse: s-maj=182.7km s-min=33.5km az=60.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.46	145	Pn	Pn	02 04 13.8	-1.1
	0.2nm,0.3s,baz=319,slow=12,SNR=9.6						
WRA				Sn	Sn	02 06 49.3	-6.8
	0.1nm,0.3s,baz=326,slow=26,SNR=2.8						
ASAR	Alice Springs	17.37	154	P	P	02 04 53.5	-0.6
	0.1nm,0.3s,baz=323,slow=12,SNR=5.6						
MKAR	Makanchi Array	66.88	329	P	P	02 11 42.7	0.0
	0.6nm,0.7s,baz=122,slow=6.4,SNR=0.9						

NNC ***05*** *02:05:09.9±0.3, 42°.81N×72°.80E, h0*^{km}*, mb2.9, mpv2.8, Error ellipse: s-maj=6.7km s-min=1.7km az=8.0*

KNET ***05*** *02:05:10.9±0.4, 42°.72N×72°.85E, h22*^{km}*±2*^{km}*, ml1.6, Error ellipse: s-maj=3.1km s-min=1.9km az=139.0*

SOME ***05*** *02:05:10.0, 42°.77N×72°.78E, h15*^{km}

KRNET ***05*** *02:05:11.1±0.1, 42°.66N×72°.88E, h15*^{km}*, mb2.5*

ISC 05 02:05:10.7±0.9**, 42°.73N**±0°.03×**72°.84E**±0°.02**, h13**^{km}±7^{km}**, n39,** σ**0**^{s}**.92**/71**, 30C-12D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRKS	Merke	0.28	87	*e*P	Pg	02 05 16.8	+0.1
	7.2nm,0.1s						
MRKS				*e*S	Sg	02 05 20.8	+0.1
	130nm,0.1s						
MRKS	Merke	0.28	87	P	Pg	02 05 16.8	+0.1
	7.2nm,0.1s						
MRKS				S	Sg	02 05 20.8	+0.1
	130nm,0.1s						
MRKS	Merke	0.28	87	*e*P	Pg	02 05 16.8	+0.1
	baz=72						
MRKS				*e*S	Sg	02 05 20.8	+0.1
	baz=72						
MNAS	Manas	0.35	226	⇓*i*P	Pg	02 05 17.2	-0.6
	baz=38						
MNAS				⇓*i*S	Sg	02 05 21.9	-0.7
	baz=38						
EKS2	Erkin-Say	0.69	95	⇓P	Pg	02 05 24.3	0.0
	1.7nm,0.1s,SNR=20						
EKS2				⇑S	Sb	02 05 34.9	+0.6
	19nm,0.2s						
EKS2	Erkin-Say	0.69	95	⇑*i*P	Pg	02 05 24.0	-0.2
	baz=90						
EKS2				⇑*i*S	Sg	02 05 33.3	-0.1
	baz=90						
AML	Almayashu	0.87	133	⇑P	Pg	02 05 27.6	0.0
	1.7nm,0.1s,SNR=5.9						
AML				⇓S	Sb	02 05 40.1	+0.5
	14nm,0.3s						
AML	Almayashu	0.87	133	⇑*i*P	Pg	02 05 26.5	-1.1
	baz=31						
AML				⇑*i*S	Sg	02 05 37.8	-1.2
	baz=31						
AAK	Ala-Archa	1.22	94	⇓P	Pb	02 05 33.8	0.0
	18nm,0.2s,SNR=16						
AAK				⇑S	Sg	02 05 50.8	+0.6
	8.0nm,0.4s						
AAK	Ala-Archa	1.22	94	⇓P	Pb	02 05 33.8	0.0
	4.6nm,0.2s						
AAK				⇓S	Sg	02 05 50.8	+0.6
	2.1nm,0.3s						
AAK	Ala-Archa	1.22	94	⇓*i*P	Pn	02 05 33.3	-0.4
	baz=91						
AAK				⇓*i*S	Sn	02 05 49.7	-0.4
	baz=91						
FRU1	Bishkek	1.32	86	⇑*i*P	Pn	02 05 34.9	0.0
	baz=82						
FRU1				⇑*i*S	Sg	02 05 52.7	-0.5
	baz=82						
USP	Ospenovka	1.33	66	⇑*i*P	Pb	02 05 35.4	-0.2
	baz=62						
USP				⇑*i*S	Sg	02 05 53.4	-0.2
	baz=62						
CHMS	Chumysh	1.43	78	⇓P	Pb	02 05 36.6	-0.6
	1.9nm,0.1s,SNR=7.6						
CHMS				⇑S	Sg	02 05 56.3	-0.5
	4.2nm,0.1s						
CHMS	Chumysh	1.43	78	⇑*i*P	Pb	02 05 37.3	+0.1
	baz=76						
CHMS				⇑*i*S	Sg	02 05 56.9	+0.1
	baz=76						
KBK	Karagaybulak	1.55	92	⇑P	Pb	02 05 39.6	+0.1
	3.0nm,0.1s,SNR=15						
KBK				⇑S	Sg	02 06 01.2	+0.4
	6.8nm,0.2s						
KBK	Karagaybulak	1.55	92	⇑*i*P	Pb	02 05 39.1	-0.4
	baz=89						
KBK				⇑*i*S	Sg	02 06 00.5	-0.3
	baz=89						
TRKS	Terek-Say	1.74	227	⇑*i*P	Pb	02 05 42.9	+0.2
	baz=27						
TRKS				⇑*i*S	Sb	02 06 06.5	+2.0
	baz=27						
KK31	Karatay Array	1.75	283	⇑P	Pn	02 05 40.6	-0.3
	0.4nm,0.2s,baz=105,slow=15,SNR=13						
KK31				⇑S	Sn	02 06 03.5	+0.5
	3.7nm,0.4s,baz=98,slow=29,SNR=21						
TKM2	Tokmak 2	2.04	84	⇓P	Pb	02 05 46.9	-0.8
	3.0nm,0.2s,SNR=8.3						
TKM2				⇑S	Sg	02 06 14.9	-1.3
	7.3nm,0.1s						
TKM2	Tokmak 2	2.04	84	⇑Pn	Pb	02 05 46.6	-1.1
	1.3nm,0.3s						
TKM2				⇓Lg	Lg	02 06 14.5	
	2.3nm,0.3s						
TKM2	Tokmak 2	2.04	84	⇑*i*P	Pb	02 05 46.7	-1.0
	baz=82						
TKM2				⇑*i*S	Sb	02 06 13.5	+0.5
	baz=82						
DGS	Degeres	2.21	76	*e*P	Pb	02 05 51.0	+0.4
	1.7nm,0.2s						
DGS				*e*S	Sg	02 06 20.0	-1.8
	7.2nm,0.4s						
DGS	Degeres	2.21	76	Pg	Pb	02 05 51.0	+0.4
DGS				Lg	Lg	02 06 19.9	
BRLS	Borolday	2.23	279	*e*P	Pb	02 05 51.8	+0.9
	3.3nm,0.1s						
BRLS				*e*S	Sg	02 06 20.9	-1.5
	16nm,0.8s						
BRLS	Borolday	2.23	279	*e*P	Pb	02 05 51.8	+0.9
	baz=74						
BRLS				*e*S	Sg	02 06 20.9	-1.5
	baz=74						
KRBS	Karabastau	2.29	64	*e*P	Pb	02 05 51.5	-0.3
	1.1nm,0.2s						
KRBS				*e*S	Sb	02 06 20.4	+0.3
	4.9nm,0.3s						
KRBS	Karabastau	2.29	64	Pg	Pb	02 05 51.5	-0.3
	1.1nm,0.2s						
KRBS				Lg	Lg	02 06 20.4	
	4.9nm,0.3s						
KRBS	Karabastau	2.29	64	*e*P	Pb	02 05 51.5	-0.3
	baz=62						
KRBS				*e*S	Sb	02 06 20.3	+0.3
	baz=62						
BOOM	Boomskoye usch	2.30	95	⇑*i*P	Pb	02 05 51.0	-1.2
	baz=93						
BOOM				⇑*i*S	Sb	02 06 20.0	-0.5
	baz=93						
KST	Kastek	2.31	81	*e*P	Pb	02 05 53.3	+0.9
	2.2nm,0.2s						
KST				*e*S	Sg	02 06 23.7	-1.4
	8.1nm,0.7s						
KST	Kastek	2.31	81	Pg	Pb	02 05 53.3	+0.9
	2.2nm,0.2s						
KST				Lg	Lg	02 06 23.7	
	8.1nm,0.7s						
BTLS	Baital	2.47	20	*e*P	Pb	02 05 54.5	-0.4
	0.7nm,0.2s						
BTLS				*e*S	Sb	02 06 25.6	+0.3
	3.3nm,0.3s						
BTLS	Baital	2.47	20	Pg	Pb	02 05 54.6	-0.4
	0.7nm,0.2s						
BTLS				Lg	Lg	02 06 25.6	
	3.3nm,0.3s						
ULHL	Ulahol	2.56	100	⇑*i*P	Pn	02 05 54.1	+2.0
	baz=98						
ULHL				⇑*i*S	Sb	02 06 26.1	-2.0
	baz=98						
KUU	Kurty	2.80	64	*e*P	Pb	02 06 01.8	+1.1
	1.1nm,0.2s						
KUU				*e*S	Sg	02 06 38.0	-2.8
	3.5nm,0.2s						
KUU	Kurty	2.80	64	Pg	Pb	02 06 01.8	+1.1
	1.1nm,0.2s						
KUU				Lg	Lg	02 06 38.0	
	3.5nm,0.2s						
KTBS	Karatobe	2.97	69	*e*P	Pb	02 06 04.1	+0.5
	0.6nm,0.1s						
KTBS				*e*S	Sb	02 06 42.2	+2.4
	8.5nm,0.8s						
KTBS	Karatobe	2.97	69	Pg	Pb	02 06 03.9	+0.4
	0.6nm,0.1s						
KTBS				Lg	Lg	02 06 42.5	
	8.5nm,0.8s						

IDC 05 02:12:25.1±4.9**,3°.59S×150°.44E,h0^{km},mb3.2**/2**,mb1 3.6**/2**,mb1mx3.3**/27**,mbtmp3.3**/2**,Error ellipse: s-maj=211.9km s-min=54.5km az=114.0,New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.60**	**223**	P	P	02 17 26.6	-0.9
	0.5nm,0.8s,baz=49,slow=10,SNR=2.8						
ASAR	**Alice Springs**	**25.57**	**217**	P	P	02 17 56.9	+0.9
	0.9nm,0.9s,baz=57,slow=6.8,SNR=3.2						
TORD	**Torodi Ar. Bea**	**147.70**	**289**	PKPbc	PKPbc	02 32 11.9	-0.9
	0.4nm,0.9s,baz=70,slow=5.1,SNR=1.6						

SOME ***05*** *02:31:44.4,39°.33N×72°.52E,h0^{km}*
KRNET ***05*** *02:31:45.3±0.1,39°.16N×71°.55E,h12^{km},mb3.2*
NNC ***05*** *02:31:46.5±1.1,39°.01N×71°.51E,h0^{km},mb3.8,mpv3.5, Error ellipse: s-maj=8.5km s-min=6.2km az=7.0*
ISC 05 02:31:47.1±1.2**,39°.10N**±0°.06×**71°.56E**±0°.04**,h10^{km},n26,**σ**2^{s}17**/44**,23C-10D,Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	**Karamyk**	**0.42**	**26**	⇑*i*P	**Pg**	**02 31 52.7**	**-2.9**
	baz=32						
DRK				⇑*i*S	**Sg**	**02 31 57.9**	**-3.3**
	baz=32						
GAR	**Garm**	**0.97**	**265**	⇑*i*P	**Pg**	**02 32 03.9**	**-1.9**
	baz=61						
GAR				⇑*i*S	**Sg**	**02 32 17.4**	**-1.0**
	baz=61						
BTK	**Batken**	**1.11**	**329**	⇑*i*P	**Pb**	**02 32 05.8**	**-2.7**
	baz=28						
BTK				⇑*i*S	**Sb**	**02 32 20.5**	**-2.7**
	baz=28						
OHH	**Osh**	**1.71**	**33**	⇑*i*P	**Pn**	**02 32 16.7**	**-0.3**
	baz=35						
OHH				⇑*i*S	**Sn**	**02 32 39.4**	**+0.4**
	baz=35						
SFK	**Sufi-Kurgan**	**1.76**	**58**	⇓*i*P	**Pn**	**02 32 17.9**	**0.0**
	baz=60						
SFK				⇓*i*S	**Sn**	**02 32 41.4**	**+0.9**
	baz=60						
CHGR	**Chuyangaron**	**1.92**	**257**	⇑*i*P	**Pb**	**02 32 21.4**	**-0.9**
	baz=56						
CHGR				⇑*i*S	**Sg**	**02 32 47.3**	**-1.6**
	baz=56						
TRKS	**Terek-Say**	**2.45**	**353**	⇑*i*P	**Pn**	**02 32 26.9**	**-0.4**
	baz=53						
TRKS				⇑*i*S	**Sn**	**02 32 57.1**	**-0.3**
	baz=53						
SALK	**Salom-Alik**	**2.49**	**44**	⇑*e*P	**Pn**	**02 32 28.5**	**+0.7**
	baz=45						
SALK				⇑*e*S	**Sn**	**02 33 00.5**	**+2.2**
	baz=45						
AML	**Almayashu**	**3.44**	**28**	P	**Pn**	**02 32 43.0**	**+2.0**
	SNR=7.9						
AML	**Almayashu**	**3.44**	**28**	⇑*e*P	**Pn**	**02 32 41.8**	**+0.7**
	baz=28						
AML				⇑*i*S	**Sn**	**02 33 22.5**	**+0.4**
	baz=28						
MNAS	**Manas**	**3.46**	**12**	⇑*e*P	**Pn**	**02 32 42.3**	**+1.1**
	baz=12						
MNAS				⇑*i*S	**Sn**	**02 33 23.4**	**+1.1**
	baz=12						
MRKS	**Merke**	**3.86**	**19**	*e*P	**Pn**	**02 32 49.0**	**+2.4**
	5.4nm,0.5s						
MRKS				*e*S	**Sn**	**02 33 35.9**	**+3.9**
	29nm,0.4s						
EKS2	**Erkin-Say**	**3.94**	**25**	P	**Pn**	**02 32 50.2**	**+2.5**
	SNR=9.1						
EKS2	**Erkin-Say**	**3.94**	**25**	⇓*i*P	**Pn**	**02 32 48.9**	**+1.2**
	baz=25						
EKS2				⇓*i*S	**Sn**	**02 33 34.9**	**+0.9**
	baz=25						
KK31	**Karatay Array**	**4.08**	**349**	⇓Pn	**Pn**	**02 32 51.5**	**+2.0**
	2.5nm,0.3s,baz=171,slow=11,SNR=60						
KK31				⇓Sn	**Sn**	**02 33 41.8**	**+4.5**
	3.2nm,0.3s,baz=172,slow=23,SNR=5.3						
KK31				⇓Lg	Lg	02 33 57.3	
	8.0nm,0.5s						
BRLS	**Borolday**	**4.14**	**342**	*e*P	**Pb**	**02 32 58.5**	**-1.5**
	3.0nm,0.1s						
BRLS				*e*S	**Sb**	**02 33 52.0**	**+2.0**
	21nm,0.3s						
AAK	**Ala-Archa**	**4.18**	**31**	P	**Pn**	**02 32 53.5**	**+2.5**
	SNR=13						
AAK	**Ala-Archa**	**4.18**	**31**	⇑Pn	**Pn**	**02 32 53.2**	**+2.2**
	5.8nm,0.5s						
AAK				⇑Sn	**Sn**	**02 33 44.4**	**+4.4**
	14nm,0.7s						
AAK				⇑Lg	Lg	02 34 03.3	
	17nm,0.6s						
KBK	**Karagaybulak**	**4.39**	**35**	P	**Pn**	**02 32 56.8**	**+2.9**
	SNR=9.0						
KBK	**Karagaybulak**	**4.39**	**35**	⇓*i*P	**Pn**	**02 32 55.3**	**+1.4**
	baz=35						
KBK				⇓*i*S	**Sn**	**02 33 46.1**	**+0.9**
	baz=35						
CHMS	**Chumysh**	**4.58**	**31**	P	**Pn**	**02 32 59.1**	**+2.6**
	SNR=12						
USP	**Ospenovka**	**4.72**	**27**	P	**Pn**	**02 33 00.6**	**+2.2**
	SNR=33						
TKM2	**Tokmak 2**	**4.89**	**37**	P	**Pn**	**02 33 03.1**	**+2.2**
	SNR=6.8						
TKM2	**Tokmak 2**	**4.89**	**37**	⇓Pn	**Pn**	**02 33 02.1**	**+1.2**
	2.2nm,0.4s						
TKM2				⇑Lg	Lg	02 34 25.4	
	5.6nm,0.6s						
KST	**Kastek**	**5.16**	**39**	*e*P	**Pn**	**02 33 06.9**	**+2.4**
	3.2nm,0.3s						
KST				*e*S	**Sn**	**02 34 05.9**	**+1.7**
	4.4nm,0.8s						
AB31	**Akbulak array**	**13.12**	**324**	Pn	**Pn**	**02 34 54.8**	**+1.4**
	0.4nm,0.5s,baz=131,slow=14,SNR=21						
AB31				⇑Sn	**Sn**	**02 37 21.9**	**+2.6**
	0.4nm,0.5s,baz=143,slow=23,SNR=4.1						

NEIC ***05*** *02:35:37.4±1.2,5°.53S±0°.07×129°.78E±0°.09,h191^{km}±8^{km}, mb4.5/28,Error ellipse: s-maj=13.8km s-min=10.2km az=77.0*
IDC ***05*** *02:35:37.3±1.4,5°.49S×129°.75E,h185^{km}±14^{km},mb3.8/13, mb1 4.0/18,mb1mx3.8/35,mbtmp4.5/18,Error ellipse: s-maj=15.2km s-min=9.4km az=80.0*
DJA ***05*** *02:35:38.3±0.2,6°S±2°×13°0E±°,h187^{km}±3^{km},M4.4/37, mB4.9/16,mb4.6/37,MLv4.8/13,Mw(mB)4.2/16*
KLM ***05*** *02:35:45,5°.51S×129°.69E,h245^{km},mb4.7*
ISC 05 02:35:37.8±0.4**,5°.52S**±0°.04×**129°.83E**±0°.05**,h200^{km},n139,**σ**1^{s}65**/147**,mb4.5**/34**,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**0.99**	**4**	P	**Pn**	**02 36 08.0**	**+0.5**
BNDI	**Bandanaira**	**0.99**	**4**	P	**Pn**	**02 36 07.5**	**0.0**
MSAI	**Masohi**	**2.34**	**337**	P	**Pn**	**02 36 19.4**	**-0.5**
MSAI				S	**Sn**	**02 36 49.2**	**-3.6**
SAUI	**Saumlaki**	**2.85**	**149**	P	**Pn**	**02 36 28.2**	**+2.5**
SAUI	**Saumlaki**	**2.85**	**149**	Pn	**Pn**	**02 36 27.5**	**+1.7**
SAUI				Sn	**Sn**	**02 37 01.7**	**-1.5**
FAKI	**Fak Fak**	**3.53**	**43**	P	**Pn**	**02 36 33.5**	**-0.4**
FAKI				S	**Sn**	**02 37 15.9**	**-1.9**
FAKI	**Fak Fak**	**3.53**	**43**	Pn	**Pn**	**02 36 33.2**	**-0.7**
FAKI	**Fak Fak**	**3.53**	**43**	P	**Pn**	**02 36 33.5**	**-0.4**
SIJI	**Sorong**	**4.83**	**17**	P	**Pn**	**02 36 48.3**	**-1.8**
	122nm,0.3s,baz=210,slow=8.5,SNR=108						
SIJI				S	**Sn**	**02 37 41.1**	**-6.1**
	49nm,0.3s,baz=98,slow=24,SNR=12						
SWI	**Sorong**	**4.84**	**17**	P	**Pn**	**02 36 49.3**	**-0.9**
SANI	**Sanana**	**5.15**	**312**	P	**Pn**	**02 36 53.7**	**-0.5**
	0.4nm1μm96nm,0.8s						
SANI	**Sanana**	**5.15**	**312**	P	**Pn**	**02 36 54.3**	**+0.1**
LBMI	**Labuha**	**5.38**	**334**	P	**Pn**	**02 36 57.5**	**+0.4**
	1.1nm4μm259nm,1.0s						
TNTI	**Ternate**	**6.71**	**338**	P	**Pn**	**02 37 15.0**	**+0.6**
	0.5nm60nm,0.6s						
TNTI	**Ternate**	**6.71**	**338**		**Pn**	**02 37 13.2**	**-1.2**
TNTI	**Ternate**	**6.71**	**338**	P	**Pn**	**02 37 14.7**	**+0.3**
SOEI	**Soe**	**6.94**	**232**	P	**Pn**	**02 37 17.4**	**0.0**
	0.7nm2μm95nm,0.8s						
SOEI	**Soe**	**6.94**	**232**	Pn	**Pn**	**02 37 16.9**	**-0.5**
DRS	**Darwin Rock St**	**6.95**	**171**	P	**Pn**	**02 37 17.4**	**0.0**
	190nm,0.8s						
MTN	**Manton Dam**	**7.39**	**170**	Pn	**Pn**	**02 37 21.9**	**-1.2**
MTN	**Manton Dam**	**7.39**	**170**	P	**Pn**	**02 37 22.9**	**-0.3**
	140nm,0.4s						
KDU	**Kakadu**	**7.59**	**160**	P	**Pn**	**02 37 25.1**	**-0.6**
	211nm,0.9s						
BAKI	**Biak**	**7.60**	**56**	P	**Pn**	**02 37 28.0**	**+2.1**
	2μm147nm,0.8s						
BATI	**Baumata**	**7.68**	**232**	P	**Pn**	**02 37 26.7**	**-0.3**
	22nm,0.3s,baz=246,slow=0.8,SNR=11						
BATI				S	**Sn**	**02 38 52.0**	**-1.9**
	15nm,0.3s,baz=78,slow=23,SNR=8.2						
BATI	**Baumata**	**7.68**	**232**	P	**Pn**	**02 37 27.4**	**+0.4**
	0.3nm962nm75nm,0.8s						
MMRI	**Maumere**	**8.15**	**247**	P	**Pn**	**02 37 34.7**	**+1.7**
	56nm,1.3s						
EDFI	**Ende, Flores**	**8.69**	**248**	P	**Pn**	**02 37 40.6**	**+0.4**
	382nm30nm,1.0s						
GTOI	**Gorontalo**	**9.15**	**312**	P	**Pn**	**02 37 49.4**	**+3.3**
	190nm11nm,0.8s						
BKSI	**Bulukumba**	**9.67**	**271**	P	**Pn**	**02 37 55.1**	**+2.3**
	364nm16nm,0.9s						
MRSI	**Marisa**	**9.88**	**307**	P	**Pn**	**02 37 55.9**	**+0.4**
	97nm,0.8s						
KNRA	**Kununurra**	**10.15**	**186**	Pn	**Pn**	**02 37 58.1**	**-0.9**
KNRA	**Kununurra**	**10.15**	**186**	P	**Pn**	**02 37 57.8**	**-1.2**
	62nm,0.7s						
TTSI	**Tana Toraja**	**10.28**	**283**	P	**Pn**	**02 38 03.5**	**+2.8**
	40nm,1.2s						
WBSI	**Waikabubak, Su**	**11.13**	**248**	P	**Pn**	**02 38 09.9**	**-1.8**
	55nm,0.8s						
TOLI2	**Tolitoli**	**11.18**	**306**	Pn	**Pn**	**02 38 09.1**	**-3.2**
TOLI2	**Tolitoli**	**11.18**	**306**	P	**Pn**	**02 38 10.2**	**-2.1**
MPSI	**Mapaga**	**11.50**	**300**	P	**Pn**	**02 38 17.2**	**+0.8**
	676nm16nm,1.0s						
PLAI	**Plampang**	**12.40**	**254**	P	**Pn**	**02 38 26.2**	**-1.7**
PLAI	**Plampang**	**12.40**	**254**	P	**Pn**	**02 38 27.7**	**-0.2**
FITZ	**Fitzroy Crossi**	**13.16**	**198**	P	**Pn**	**02 38 35.9**	**-1.4**
	1.2nm,0.3s,baz=22,slow=9.3,SNR=55						
FITZ				S	S	02 40 54.2	-10
	1.6nm,0.3s,baz=83,slow=20,SNR=6.9						
FITZ	**Fitzroy Crossi**	**13.16**	**198**		**Pn**	**02 38 35.2**	**-2.1**
FITZ	**Fitzroy Crossi**	**13.16**	**198**	P	**Pn**	**02 38 35.4**	**-1.9**
	61nm,1.1s						
TWSI	**Taliwang, Sumb**	**13.24**	**255**	P	**Pn**	**02 38 38.8**	**+0.4**
	28nm,0.8s						
KBKI	**Kotabaru**	**13.80**	**279**	P	**P**	**02 38 47.5**	**0.0**
	2μm74nm,0.8s						
WB0	**Warramunga Arr**	**14.85**	**163**	P	**Pn**	**02 38 57.2**	**-1.1**
WRAB	**Tennant Creek**	**14.99**	**163**	P	**Pn**	**02 38 59.4**	**-0.6**
WRA	**Warramunga Arr**	**14.99**	**163**	P	**Pn**	**02 38 59.2**	**-0.9**
	3.5nm,0.3s,baz=342,slow=12,SNR=76						
WRA				S	**S**	**02 41 38.6**	**-8.1**
	4.6nm,0.3s,baz=336,slow=21,SNR=6.6						
WRA	**Warramunga Arr**	**14.99**	**163**		**Pn**	**02 38 57.4**	**-2.6**
WB2	**Warramunga Arr**	**15.00**	**163**		**Pn**	**02 38 58.7**	**-1.4**
WR0	**Warramunga Arr**	**15.07**	**163**	P	**P**	**02 39 01.0**	**-0.6**
BBKI	**Banjar Baru**	**15.08**	**277**	P	**P**	**02 39 03.7**	**+2.0**
	108nm,1.1s						
COEN	**Coen**	**15.59**	**124**		**Pn**	**02 39 06.4**	**-0.9**
COEN				IAmb	IAmb	02 39 11.6	
	comp=Z,14nm,1.0s						
COEN	**Coen**	**15.59**	**124**	P	**P**	**02 39 10.8**	**+3.5**
	comp=Z,13nm,0.8s						
ABJI	**Asem Bagus**	**15.65**	**261**	P	**Pn**	**02 39 08.5**	**+0.4**
	comp=Z,82nm,0.9s						
JAGI	**Jajag, Banyuwa**	**15.84**	**258**	P	**P**	**02 39 09.6**	**-0.5**
JAGI				IAmb	IAmb	02 39 11.6	
	comp=Z,34nm,0.9s						
JAGI	**Jajag, Banyuwa**	**15.84**	**258**	P	**Pn**	**02 39 10.1**	**-0.2**
KMMI	**Kalianget**	**15.84**	**264**	P	**Pn**	**02 39 11.5**	**+1.1**
	comp=Z,2μmcomp=Z,119nm,1.3s						
BLJI	**Banyuglugur**	**16.28**	**261**	P	**Pn**	**02 39 17.4**	**+1.8**
	comp=Z,1μmcomp=Z,74nm,1.2s						
SPMM	**Sapulut**	**16.77**	**307**	P	**Pn**	**02 39 23.0**	**+1.4**
PMG	**Port Moresby**	**17.61**	**104**	P	**P**	**02 39 30.1**	**+0.6**
	comp=Z,1.6nm,0.3s,baz=313,slow=7.4,SNR=3.1						
PMG	**Port Moresby**	**17.61**	**104**	P	**P**	**02 39 29.1**	**-0.4**
PMG				IAmb	IAmb	02 39 39.6	
	comp=Z,17nm,0.9s						
PMG	**Port Moresby**	**17.61**	**104**	P	**Pn**	**02 39 32.3**	**+0.9**
PMG	**Port Moresby**	**17.61**	**104**	P	**Pn**	**02 39 32.4**	**+1.0**
QIS	**Mount Isa**	**17.71**	**148**	P	**Pn**	**02 39 33.2**	**+0.6**
	comp=Z,84nm,1.4s						
MBWA	**Marble Bar**	**18.38**	**211**	P	**P**	**02 39 38.4**	**+0.6**
AS31	**Alice Springs**	**18.47**	**168**	P	**P**	**02 39 37.5**	**-1.3**
ASAR	**Alice Springs**	**18.47**	**168**	P	**Pn**	**02 39 41.1**	**-0.3**
	comp=Z,13nm,0.3s,baz=345,slow=9.2,SNR=794						
ASAR				S	**S**	**02 42 54.8**	**-4.3**
	comp=Z,0.4nm,0.3s,baz=351,slow=22,SNR=8.5						
ASAR				ScP	**ScP**	**02 47 17.0**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=9.4,slow=1.8,SNR=5.4						
ASAR	**Alice Springs**	**18.47**	**168**	P	**P**	**02 39 39.1**	**+0.3**
PSA00	**Pilbara Seismi**	**18.66**	**210**	P	**P**	**02 39 40.0**	**-0.9**
PSA00	**Pilbara Seismi**	**18.66**	**210**	P	**P**	**02 39 40.8**	**-0.2**
PSA00				IAmb	IAmb	02 39 42.4	
	comp=Z,29nm,1.0s						
PSA00	**Pilbara Seismi**	**18.66**	**210**	P	**P**	**02 39 41.7**	**+0.8**
	comp=Z,61nm,0.9s						
MTSU	**Mount Surprise**	**18.91**	**133**	P	**Pn**	**02 39 47.4**	**+0.8**
	comp=Z,21nm,0.8s						
WRKA	**Warakurna**	**19.47**	**184**	P	**Pn**	**02 39 51.1**	**-2.1**
	comp=Z,82nm,0.6s						
KPJI	**Karang Pucung**	**20.84**	**264**	P	**P**	**02 40 05.8**	**+1.4**
	comp=Z,28nm,0.7s						
CTA	**Charters Tower**	**21.56**	**134**	P	**P**	**02 40 13.0**	**+1.2**
	comp=Z,1.5nm,0.5s,baz=312,slow=14,SNR=2.5						
OOD	**Oodnadatta**	**22.85**	**167**	P	**P**	**02 40 26.1**	**+2.3**
	comp=Z,50nm,0.6s						
MEEK	**Meekatharra**	**23.57**	**206**	P	**P**	**02 40 31.5**	**+1.0**
	comp=Z,21nm,2.5s						
INKA	**Innaminka**	**24.42**	**156**	P	**P**	**02 40 42.0**	**+3.9**
	comp=Z,50nm,0.9s						
FORT	**Forrest**	**25.18**	**184**	P	**P**	**02 40 43.1**	**-1.9**
LCRK	**Leigh Creek**	**26.03**	**163**	P	**P**	**02 40 55.5**	**+2.9**
	comp=Z,49nm,1.0s						
WHYH	**Whyalla**	**28.31**	**166**	P	**P**	**02 41 15.9**	**+3.0**
	comp=Z,21nm,0.9s						
STKA	**Stephens Creek**	**28.45**	**159**	P	**P**	**02 41 16.4**	**+2.3**
	comp=Z,6.9nm,0.7s,baz=332,slow=9.3,SNR=14						
STKA	**Stephens Creek**	**28.45**	**159**	P	**P**	**02 41 13.0**	**-1.1**
STKA	**Stephens Creek**	**28.45**	**159**	P	**P**	**02 41 16.8**	**+2.7**
	comp=Z,2.5nm,1.0s						
NWAO	**Narrogin (SRO)**	**29.69**	**202**	P	**P**	**02 41 25.9**	**+0.8**
	comp=Z,8.6nm,0.7s,baz=62,slow=8.7,SNR=9.7						
NWAO	**Narrogin (SRO)**	**29.69**	**202**	P	**P**	**02 41 24.5**	**-0.6**
NWAO				IAmb	IAmb	02 41 31.7	
	comp=Z,17nm,1.2s						
PPI	**Padang Panjang**	**29.81**	**279**	P	**P**	**02 41 25.7**	**-0.7**
	comp=Z,12nm,0.9s						
CMSA	**Cobar Meteorol**	**29.85**	**152**	P	**P**	**02 41 30.0**	**+3.4**
RPSI	**Rantau Prapat**	**31.93**	**284**	P	**P**	**02 41 43.4**	**-1.6**
PSI	**Prapat**	**31.96**	**284**	P	**P**	**02 41 43.4**	**-2.0**
	comp=Z,5.1nm,0.8s,baz=16,slow=7.4,SNR=5.6						
ARPS	**Mount Arapiles**	**32.99**	**162**	P	**P**	**02 41 57.3**	**+3.3**
	comp=Z,50nm,0.9s						
CMAR	**Chiang Mai Arr**	**38.67**	**309**	P	**P**	**02 42 43.3**	**+0.9**
	comp=Z,8.7nm,0.7s,baz=142,slow=7.7,SNR=36						
CMAR	**Chiang Mai Arr**	**38.67**	**309**	P	**P**	**02 42 40.5**	**-1.9**
CHTO	**Chiang Mai**	**38.87**	**309**	P	**P**	**02 42 43.5**	**-0.6**
MJAR	**Matsushiro Arr**	**42.57**	**10**	P	**P**	**02 43 14.7**	**+0.7**
	comp=Z,1.6nm,0.4s,baz=193,slow=9.4,SNR=5.1						
SHL	**Shillong**	**48.09**	**312**	P	**P**	**02 43 57.2**	**-0.6**
SHL				IAmb	IAmb	02 43 58.9	
	comp=Z,12nm,0.8s						
USRK	**Ussuriysk Ar.**	**49.53**	**2**	P	**P**	**02 44 08.8**	**+0.7**
	comp=Z,0.7nm,0.5s,baz=178,slow=8.3,SNR=5.5						
USRK	**Ussuriysk Ar.**	**49.53**	**2**	P	**P**	**02 44 09.0**	**+0.8**
ODAN	**Odare**	**52.17**	**310**	*e*P	**P**	**02 44 28.7**	**+0.2**
	comp=Z,54nm,0.8s						
TAPN	**Taplejung**	**52.19**	**311**	*e*P	**P**	**02 44 28.9**	**+0.2**
	comp=Z,29nm,0.5s						
RAMN	**Ramite**	**52.82**	**310**	*e*P	**P**	**02 44 33.9**	**+0.6**
	comp=Z,75nm,0.5s						
JIRN	**Jiri**	**53.50**	**310**	*e*P	**P**	**02 44 38.7**	**+0.3**
GUN	**Gumba**	**53.86**	**310**	*e*P	**P**	**02 44 41.3**	**+0.3**
	comp=Z,75nm,0.6s						
PKI	**Pulchoki**	**54.05**	**310**	*e*P	**P**	**02 44 42.2**	**-0.1**
PKIN	**Phulchoki**	**54.06**	**310**	*e*P	**P**	**02 44 42.2**	**-0.1**
KKN	**Kakani**	**54.26**	**310**	*e*P	**P**	**02 44 43.9**	**+0.2**
DMN	**Daman**	**54.30**	**310**	*e*P	**P**	**02 44 44.3**	**+0.3**
GKN	**Gorkha**	**54.85**	**310**	*e*P	**P**	**02 44 48.2**	**+0.3**
KOLN	**Koldanda**	**55.53**	**309**	*e*P	**P**	**02 44 53.3**	**+0.5**
	comp=Z,56nm,0.8s						
DANN	**Dangsing**	**55.70**	**310**	*e*P	**P**	**02 44 54.2**	**+0.1**
PYUN	**Piuthan**	**56.16**	**309**	*e*P	**P**	**02 44 57.7**	**+0.4**
	comp=Z,83nm,0.9s						
SONM	**Songino Array**	**56.99**	**341**	P	**P**	**02 45 03.6**	**+1.0**
	comp=Z,0.8nm,0.6s,baz=151,slow=8.3,SNR=7.6						
SONM	**Songino Array**	**56.99**	**341**	P	**P**	**02 45 03.2**	**+0.5**
NIL	**Nilore**	**66.13**	**310**	P	**P**	**02 46 04.3**	**+0.4**
NIL				IAmb	IAmb	02 46 05.3	
	comp=Z,11nm,0.7s						
KSH	**Kashi**	**66.82**	**317**	P	**P**	**02 46 10.1**	**+1.8**
KSH				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MK31	**Makanchi Array**	**66.90**	**327**	P	**P**	**02 46 09.0**	**+0.4**
MK31				IAmb	IAmb	02 46 10.8	
	comp=Z,7.5nm,0.9s						
MKAR	**Makanchi Array**	**66.90**	**327**	P	**P**	**02 46 09.7**	**+1.1**
	comp=Z,5.1nm,0.6s,baz=126,slow=8.1,SNR=25						
MKAR	**Makanchi Array**	**66.90**	**327**	P	**P**	**02 46 09.0**	**+0.5**
MAKZ	**Makanchi**	**67.08**	**326**	P	**P**	**02 46 09.6**	**-0.1**
MAKZ				IAmb	IAmb	02 46 11.4	
	comp=Z,16nm,1.1s						
AAK	**Ala-Archa**	**69.31**	**320**	P	**P**	**02 46 23.7**	**-0.1**
ZAA0	**Zalesovo Array**	**70.19**	**334**	P	**P**	**02 46 29.3**	**+0.6**
ZAA0				IAmb	IAmb	02 46 30.2	
	comp=Z,5.8nm,0.8s						
ZALV	**Zalesovo Beam**	**70.19**	**334**	P	**P**	**02 46 29.2**	**+0.5**
	comp=Z,3.6nm,0.7s,baz=119,slow=5.2,SNR=13						
GAR	**Garm**	**70.51**	**315**	P	**P**	**02 46 31.1**	**0.0**
KURK	**Kurchatov**	**71.17**	**328**	P	**P**	**02 46 35.0**	**+0.3**
KURK				IAmb	IAmb	02 46 36.9	
	comp=Z,17nm,1.0s						
CHGR	**Chuyangaron**	**71.20**	**314**	P	**P**	**02 46 35.1**	**-0.2**
KK31	**Karatay Array**	**72.12**	**319**	P	**P**	**02 46 40.5**	**-0.1**
KK31				IAmb	IAmb	02 46 42.8	
	comp=Z,6.1nm,0.9s						
KKAR	**Karatay Array**	**72.12**	**319**	P	**P**	**02 46 40.4**	**-0.2**
KKAR	**Karatay Array**	**72.12**	**319**	P	**P**	**02 46 40.6**	**0.0**
KKAR				IAmb	IAmb	02 46 42.8	
	comp=Z,6.1nm,0.9s						
VNDA	**Vanda**	**73.93**	**173**	P	**P**	**02 46 51.7**	**+1.2**
	comp=Z,1.4nm,0.8s,baz=314,slow=5.6,SNR=9.1						
VNDA	**Vanda**	**73.93**	**173**	P	**P**	**02 46 51.6**	**+1.0**
MAW	**Mawson**	**76.26**	**201**	P	**P**	**02 47 05.7**	**+1.8**
	comp=Z,0.9nm,0.7s,baz=67,slow=12,SNR=3.6						
BRVK	**Borovoye**	**76.80**	**328**	P	**P**	**02 47 07.5**	**+0.3**
NRIK	**Noril'sk**	**80.09**	**346**	P	**P**	**02 47 25.8**	**+0.8**
	comp=Z,3.3nm,0.6s,baz=135,slow=5.9,SNR=2.4						
NRIK	**Noril'sk**	**80.09**	**346**	P	**P**	**02 47 25.2**	**+0.2**
NRIK				IAmb	IAmb	02 47 29.3	
	comp=Z,9.8nm,1.4s						
ABKAR	**Akbulak array**	**81.25**	**322**	P	**P**	**02 47 31.8**	**+0.3**
ABKAR	**Akbulak array**	**81.25**	**322**	P	**P**	**02 47 31.5**	**0.0**
TORD	**Torodi Ar. Bea**	**128.34**	**282**	PKP	**PKiKP**	**02 54 22.9**	**+0.6**
	comp=Z,0.3nm,0.7s,baz=128,slow=1.9,SNR=4.7						
TORD				SKPab	SKPab	02 57 22.5	
	comp=Z,1.4nm,0.7s,baz=73,slow=3.5,SNR=9.4						
DBIC	**Dimbokro**	**134.94**	**274**	SKPbc	**SKPbc**	**02 57 45.2**	**-0.7**
	comp=Z,2.3nm,0.8s,baz=117,slow=4.3,SNR=1.5						
LPAZ	**La Paz**	**151.98**	**141**	PKPbc	**PKiKP**	**02 55 11.8**	**+0.6**
	comp=Z,0.3nm,0.4s,baz=333,slow=2.3,SNR=1.6						

IDC 05 02:43:55.8±2.3**,2°.16N×126°.59E,h0^{km},mb3.6**/3**,mb1 3.8**/3**,mb1mx3.5**/34**,mbtmp3.7**/3**,Error ellipse: s-maj=175.5km s-min=28.6km az=66.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.25**	**161**	P	P	02 49 04.5	-0.5
	1.5nm,0.7s,baz=340,slow=11,SNR=7.6						
ASAR	**Alice Springs**	**26.64**	**165**	P	P	02 49 37.1	+0.7
	0.5nm,0.7s,baz=341,slow=7.6,SNR=2.2						
MKAR	**Makanchi Array**	**58.76**	**326**	P	P	02 53 55.5	-0.2
	0.9nm,0.7s,baz=139,slow=6.2,SNR=2.2						

BJI ***05*** *02:50:15.7±0.0,43°.99N×148°.96E,h30^{km},mB4.9/12, mb4.7/27,Ms4.3/8,Ms7 4.1/8*
SKHL ***05*** *02:50:19.7±0.1,43°.90N×148°.60E,h39^{km}±4^{km},mb5.1/9*
MOS ***05*** *02:50:20.8±1.0,43°.97N×148°.36E,h44^{km},mb5.0/52, MS3.7/6,Error ellipse: s-maj=6.3km s-min=4.9km az=112.1*
JMA ***05*** *02:50:20.0±0.5,43°.85N×148°.12E,h0^{km},M4.7*
NIED ***05*** *02:50:20.0,43°.85N×148°.12E,h0^{km},MW4.6,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$3.68; M$_{\theta\theta}$-2.07; M$_{\phi\phi}$-1.61; M$_{r\theta}$6.09; M$_{\theta\phi}$-2.02; M$_{\phi r}$3.15; Fault plane solution: M$_0$7.83000×10^{15} NP1:ϕ_s61.00000°, δ76.00000°,λ97.00000°. NP2:ϕ_s216.00000°,δ16.00000°, λ66.00000°.*
IDC ***05*** *02:50:22.4±0.7,44°.10N×148°.35E,h38^{km}±5^{km},mb4.1/24, mb1 4.3/30,mb1mx4.2/42,mbtmp4.3/30,ML3.7/5,MS3.7/22, Ms1 3.8/22,ms1mx3.6/39 Error ellipse: s-maj=16.3km s-min=11.5km az=157.0*
NEIC ***05*** *02:50:24.4±1.4,44°.06N±0°.08×148°.2E±0°.1,h55^{km}±7^{km}, mb4.7/119,Error ellipse: s-maj=12.7km s-min=10.9km az=143.0*
ISC 05 02:50:22.0±0.6**,43°.93N**±0°.05×**148°.38E**±0°.05**,h42**^{km}±4^{km}**,h42^{km}:pP-P,n434,**σ**1^{s}16**/464**,mb4.7**/131**,MS3.9**/21**,37C-20D,East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**1.35**	**345**	*d i*PN	**Pn**	**02 50 42.6**	**-1.8**
KUR				*e*S	**Sn**	**02 50 59.4**	**-1.8**
KUR				pmax	pmax		
	comp=Z,3μm,0.7s						
KUR				pmax	pmax		
	comp=N,1μm,0.6s						
KUR				pmax	pmax		
	comp=E,571nm,0.5s						
KUR				smax	smax		
	comp=N,2μm,0.5s						
KUR				smax	smax		
	comp=E,1μm,0.6s						
KUR	**Kuril'sk**	**1.35**	**345**	*i* P	**Pn**	**02 50 42.0**	**-2.4**
KUR				AMB	AMB	02 50 48.0	
	comp=E,2μm,0.7s						
KUR				*e*S	**Sn**	**02 50 58.7**	**-2.5**
KUR				A	A	02 51 05.0	
	comp=E,3μm,0.6s						
KUR				A	A	02 51 05.0	
	comp=E,3μm,0.6s						
YUK	**Yuzh-Kuril'sk**	**1.82**	**274**	*d i*PN	**Pn**	**02 50 49.9**	**-0.8**
YUK				*i* S	**Sn**	**02 51 12.6**	**0.0**
YUK				pmax	pmax		
	comp=N,472nm,0.2s						
YUK				pmax	pmax		
	comp=E,567nm,0.2s						
YUK				pmax	pmax		
	comp=Z,1μm,0.2s						
YUK				smax	smax		
	comp=E,8μm,0.6s						
YUK				smax	smax		
	comp=N,3μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.82**	**274**	*i* P	**Pn**	**02 50 50.0**	**-0.8**
YUK				AMB	AMB	02 50 53.0	
	comp=N,1μm,0.4s						
YUK				*i* S	**Sn**	**02 51 12.6**	**0.0**
YUK				A	A	02 51 16.0	
	comp=N,3μm,0.6s						
YUK				A	A	02 51 16.0	
	comp=N,8μm,0.6s						
GRPR	**Tuman**	**1.88**	**273**	*d i*PN	**Pn**	**02 50 50.4**	**-1.3**
GRPR				*e*S	**Sn**	**02 51 13.4**	**-0.8**
GRPR				pmax	pmax		
	comp=N,331nm,0.2s						
GRPR				pmax	pmax		
	comp=E,431nm,0.2s						
GRPR				pmax	pmax		
	comp=Z,793nm,0.2s						
GRPR				smax	smax		
	comp=E,4μm,0.3s						
GRPR				smax	smax		
	comp=N,3μm,0.4s						
GRPR	**Tuman**	**1.88**	**273**	*i* P	**Pn**	**02 50 50.4**	**-1.3**
GRPR				AMB	AMB	02 50 56.0	
	comp=N,790nm,0.3s						
GRPR				*e*S	**Sn**	**02 51 13.4**	**-0.8**
GRPR				A	A	02 51 15.0	
	comp=N,3μm,0.4s						
GRPR				A	A	02 51 15.0	
	comp=N,4μm,0.4s						
NEM2	**Nemuro 2**	**1.99**	**254**	P	**Pn**	**02 50 52.1**	**-1.1**
NEM2				*e*S	**Sn**	**02 51 16.1**	**-0.8**
NMR	**Nemuro--Hokkai**	**2.00**	**255**	*e*PN	**Pn**	**02 50 52.0**	**-1.3**
NMR				*e*S	**Sn**	**02 51 17.2**	**+0.1**

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NMR   Nemuro--Hokkai     2.00 255  eP     Pn     02 50 52.5 -0.8
NMR                                eS     Sn     02 51 17.2 +0.1
GLVR  Golovnino          2.08 266c iPN    Pn     02 50 53.8 -0.5
GLVR                               eS     Sn     02 51 20.1 +1.2
GLVR                                pmax  pmax
      comp=Z,976nm,0.4s
GLVR                                pmax  pmax
      comp=N,200nm,0.2s
GLVR                                pmax  pmax
      comp=E,197nm,0.2s
GLVR                                smax  smax
      comp=N,7µm,0.7s
GLVR                                smax  smax
      comp=E,5µm,0.2s
GLVR  Golovnino          2.08 266  i P    Pn     02 50 54.2 -0.1
GLVR                                AMB   AMB    02 50 56.0
      comp=E,980nm,0.4s
GLVR                               eS     Sn     02 51 20.1 +1.2
GLVR                                A     A      02 51 28.0
      comp=E,7µm,0.7s
GLVR                                A     A      02 51 28.0
      comp=E,5µm,0.7s
RUSJ  Misakicho          2.26 275  ePN    Pn     02 50 56.9  0.0
RUSJ                               eS     Sn     02 51 25.5 +1.9
JRA   Rausu              2.35 271   P     Pn     02 50 57.8 -0.3
JNSB  Nemuroshibetsu     2.44 268   P     Pn     02 50 59.1 -0.3
JKHN  Kushirohamanak     2.49 251   P     Pn     02 51 00.0  0.0
JKHN                               eS     Sn     02 51 29.3 +0.2
JNK   Nakash             2.67 264   P     Pn     02 51 02.3 -0.2
JNK                                eS     Sn     02 51 34.1 +0.4
AKK   Akkeshi            2.73 252  eP     Pn     02 51 03.9 +0.6
AKK                                eS     Sn     02 51 35.2 +0.1
JAK   Akkeshi            2.84 252   P     Pn     02 51 04.7 -0.1
JTKR  Abashiri--Toko     3.23 272   P     Pn     02 51 10.5 +0.4
JAR   Ashorobuto         3.41 261   P     Pn     02 51 13.1 +0.5
JCH   Churui             3.89 252   P     Pn     02 51 20.6 +1.3
JCH                                eS     Sn     02 52 05.1 +1.4
JKK2  Kamakawa 2         4.07 271   P     Pn     02 51 24.0 +2.3
JKA   Kamikawa-asahi     4.17 275  eP     Pn     02 51 25.2 +2.1
JKA   Kamikawa-asahi     4.17 275   Pn    Pn     02 51 24.4 +1.2
ASAJ  Asahikawa          4.17 275   Pn    Pn     02 51 25.2 +2.0
      comp=E,12nm,0.3s,baz=96,slow=15,SNR=41
ASAJ                                Sn    Sn     02 52 21.9  +11
      comp=E,3.1nm,0.3s,baz=18,slow=19,SNR=1.8
ASAJ                                LR    LR     02 53 08.0
      comp=E,1µm,20.1s,baz=158,slow=40
ERM   Erimo              4.28 245cePN     Pn     02 51 27.0 +2.4
ERM                                 pmax  pmax
      comp=Z,102nm,0.6s
ERM   Erimo              4.28 245   Pn    Pn     02 51 27.2 +2.6
JEM   Erimo              4.28 245         Pn     02 51 27.1 +2.5
JEM                                 Sn    Sn     02 52 07.9 -5.4
JNBK  Urakawa-nobuka     4.43 250   P     Pn     02 51 27.8 +1.0
JWK2  Keihoku            4.83 289   P     Pn     02 51 36.0 +3.9
YSS   Yuzh-Sakhalins     4.98 309  ePN    Pn     02 51 34.3 +0.1
YSS                                 MLR   MLR
      comp=Z,1µm,17.0s
YSS   Yuzh-Sakhalins     4.98 309  eP     Pn     02 51 34.3 +0.1
YSS                                 AMB   AMB    02 51 38.0
YSS                                eS     Sn     02 52 29.6 -0.8
YSS   Yuzh-Sakhalins     4.98 309   Pn    Pn     02 51 34.1 -0.1
JEW   Eniwo              5.16 260   Pn    Pn     02 51 37.9 +1.1
JKB   Kayabe             5.77 252   P     Pn     02 51 45.9 +0.9
JKB                                eS     Sn     02 52 47.9 -1.9
JOT   Ohata              5.97 247   P     Pn     02 51 48.4 +0.5
JANG  Nango              6.21 237   P     Pn     02 51 50.4 -0.8
JANG                               eS     Sn     02 52 56.0 -4.9
TYV   Tymovskoe          7.95 333  ePN    Pn     02 52 17.5 +2.6
TYV                                eS     Sn     02 53 49.6 +6.3
TYV                                 pmax  pmax
      comp=Z,400nm,2.5s
TYV                                 pmax  pmax
      comp=Z,29nm,0.9s
TYV                                 smax  smax
      comp=N,23nm,1.6s
TYV                                 smax  smax
      comp=E,19nm,1.6s
TYV                                 smax  smax
      comp=N,300nm,2.7s
TYV                                 smax  smax
      comp=E,400nm,2.7s
TYV   Tymovskoe          7.95 333  eP     Pn     02 52 15.5 +0.6
TYV                                 AMB   AMB    02 52 19.9
      comp=E,80nm,0.9s
TYV                                 AMB   AMB    02 52 19.9
      comp=E,30nm,0.9s
TYV                                eS     Sn     02 53 42.5 -0.8
SKR   Severo-Kuril's     8.56  35  i PN   Pn     02 52 23.1 -0.1
SKR   Severo-Kuril's     8.56  35  eP     Pn     02 52 21.4 -1.8
SKR                                 AMB   AMB    02 52 27.0
      comp=E,50nm,0.6s
PAU   Pauzhetka          9.44  34  eP     Pn     02 52 34.2 -1.1
PAU                                 AMB   AMB    02 52 43.1
      comp=E,60nm,0.7s
JSD   Sado               9.65 236   Pn    Pn     02 52 38.7 +0.5
OKH   Okha              10.27 341  eP     Pn     02 52 46.7  0.0
OKH                                 AMB   AMB    02 52 48.2
      comp=E,20nm,0.6s
NKL   Nikolayevsk       10.54 334  eP     Pn     02 52 51.3 +1.0
NKL                                 AMB   AMB    02 52 54.0
      comp=E,20nm,0.6s
MAJO  Matsushiro        10.71 230   PN    Pn     02 52 53.1 +0.3
MAJO  Matsushiro        10.71 230   Pn    Pn     02 52 53.1 +0.3
MAT   Matsushiro        10.71 230   P     Pn     02 52 52.6 -0.2
MAT                                eS     Sn     02 54 44.8 -6.6
MJAR  Matsushiro Arr    10.71 230   Pn    Pn     02 52 53.0 +0.2
      comp=E,0.2nm,0.3s,baz=28,slow=13,SNR=13
MJAR                                LR    LR     02 57 21.0
      comp=E,128nm,18.8s,baz=20,slow=39
MJAR  Matsushiro Arr    10.71 230         Pn     02 52 52.9 +0.1
PEA0B Petropavlovsk-    11.06  31   PN    Pn     02 52 57.8 +0.3
PEA0B Petropavlovsk-    11.06  31   Pn    Pn     02 52 57.8 +0.3
PETK  Petropavlovsk-    11.06  31   Pn    Pn     02 52 57.6 +0.1
      comp=E,1.0nm,0.3s,baz=210,slow=15,SNR=17
PETK                                LR    LR     02 57 05.5
      comp=E,278nm,20.6s,baz=209,slow=37
PETK  Petropavlovsk-    11.06  31   Pn    Pn     02 52 57.4 -0.1
USA0B Ussuriysk Arra    11.80 277   PN    Pn     02 53 05.5 -2.1
USA0B Ussuriysk Arra    11.80 277   Pn    Pn     02 53 05.5 -2.1
USRK  Ussuriysk Ar.     11.80 277   Pn    Pn     02 53 08.9 +1.3
      baz=85,slow=13,SNR=12
USRK                                LR    LR     02 57 51.2
      comp=E,422nm,18.5s,baz=88,slow=38
USRK  Ussuriysk Ar.     11.80 277   Pn    Pn     02 53 07.2 -0.4
KLR   Kul'dur           12.60 301   Pn    Pn     02 53 22.7 +4.2
      comp=E,0.3nm,0.3s,baz=106,slow=15,SNR=24
KLR                                 LR    LR     02 57 49.0
      comp=E,276nm,21.8s,baz=110,slow=36
KLR   Kul'dur           12.60 301cePN     Pn     02 53 20.5 +2.0
KLR   Kul'dur           12.60 301  eP     Pn     02 53 19.0 +0.5
MSHR  Mys Shultsa       12.63 270cePN     Pn     02 53 21.1 +2.1
MSHR                                pmax  pmax
      comp=Z,22nm,1.7s
JHJ   Hachijo jima 2    12.71 215   LR    LR     02 58 58.7
      comp=Z,67nm,19.5s,baz=40,slow=40
JWT   Wachi             13.20 234         Pn     02 53 26.9 +0.1
CN2   Changchun         16.53 278  eP     P      02 54 14.2 +1.4
CN2                                 pmax  pmax
      comp=Z,10.0nm,0.5s
CN2                                 LR    LR
      comp=Z,200nm,13.0s
CN2                                 LR    LR
      comp=Z,300nm,13.0s
CN2                                 LR    LR
      comp=Z,300nm,17.0s
KSRS  Korea Array       16.79 254   Pn    Pn     02 54 14.6 +0.6
      comp=Z,0.2nm,0.3s,baz=63,slow=12,SNR=11
KSRS                                LR    LR     03 00 52.2
      comp=Z,126nm,18.7s,baz=73,slow=37
ZEA   Zeya              16.96 313  eP     P      02 54 17.8 +0.3
ZEA                                 pmax  pmax
      comp=Z,20nm,1.3s
ZEA                                 MLR   MLR
      comp=Z,200nm,17.0s
ZEA   Zeya              16.96 313  eP     Pn     02 54 13.8 -2.2
SEY   Seymchan          19.18   6   P     P      02 54 40.5 -1.2
      comp=Z,0.2nm,0.3s,baz=180,slow=10,SNR=13
SEY                                 LR    LR     03 02 02.9
      comp=Z,293nm,19.3s,baz=171,slow=37
SEY   Seymchan          19.18   6  i P    P      02 54 39.7 -2.1
SEY   Seymchan          19.18   6  eP     P      02 54 39.7 -2.1
YAK   Yakutsk           21.19 335  eP     P      02 55 07.3 +3.7
YAK                                 pmax  pmax
      comp=Z,25nm,0.9s
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YAK                                 pmax  pmax
      comp=N,9.0nm,1.0s
YAK                                 pmax  pmax
      comp=E,8.0nm,1.0s
YAK                                 MLR   MLR
      comp=Z,314nm,16.0s
YAK                                 MLR   MLR
      comp=E,99nm,11.0s
YAK                                 MLR   MLR
      comp=N,104nm,12.0s
YAK   Yakutsk           21.19 335  eP     P      02 55 07.3 +3.7
H11N2 WAKE ISLAND Hy    28.67 141   T     T      03 26 57.4
      baz=332,slow=76,SNR=125
H11N1 WAKE ISLAND Hy    28.68 141   T     T      03 26 57.8
      baz=332,slow=76,SNR=148
H11N3 WAKE ISLAND Hy    28.69 141   T     T      03 26 59.2
      baz=332,slow=76,SNR=128
ULN   Ulaanbaatar       28.78 293  i P    P      02 56 14.5 -1.3
ULN                                 pmax  pmax
      comp=Z,7.0nm,1.3s
ULN   Ulaanbaatar       28.78 293  eP     P      02 56 14.5 -1.3
SONM  Songino Array     29.22 293   P     P      02 56 20.1 +0.4
      comp=Z,1.6nm,0.6s,baz=75,slow=7.7,SNR=9.4
SONM                                LR    LR     03 09 03.0
      comp=Z,252nm,18.5s,baz=106,slow=38
TIK   Tiksi             29.36 348  eP     P      02 56 19.7 -0.8
TIXI  Tiksi             29.37 348ceP      P      02 56 19.7 -0.9
H11S1 WAKE ISLAND Hy    29.66 143   T     T      03 28 06.9
      baz=333,slow=76,SNR=657
H11S3 WAKE ISLAND Hy    29.67 143   T     T      03 28 11.0
      baz=333,slow=76,SNR=658
H11S2 WAKE ISLAND Hy    29.68 143   T     T      03 28 08.2
      baz=333,slow=76,SNR=501
TLY   Talaya            30.62 301   LR    LR     03 09 54.7
      comp=Z,198nm,18.9s,baz=81,slow=38
J20K  Nowinta River     37.66  37   P     P      02 57 33.9 +1.2
J20K                                IAmb  IAmb   02 57 36.5
      comp=Z,9.4nm,0.8s
IMAR  Indian Mountai    38.00  34   P     P      02 57 36.8 +1.3
H21K  Melozitna Rive    38.35  35   P     P      02 57 37.6 -0.9
H21K                                IAmb  IAmb   02 57 41.6
      comp=Z,16nm,1.2s
KDAK  Kodiak Island     38.47  48   P     P      02 57 38.4 -1.2
      comp=Z,16nm,0.9s,baz=294,slow=6.4,SNR=11
KDAK  Kodiak Island     38.47  48   P     P      02 57 40.0 +0.5
CAST  Castle Rocks      38.53  38   P     P      02 57 40.9 +0.8
CAST                                IAmb  IAmb   02 57 52.8
      comp=Z,6.3nm,0.9s
I21K  Tanana            38.66  36   P     P      02 57 41.4 +0.4
I21K                                IAmb  IAmb   02 57 44.6
      comp=Z,13nm,1.1s
BPAW  Bear Paw Mtn.     39.04  37   P     P      02 57 45.9 +1.6
KTH   Kantishna Hill    39.06  38   P     P      02 57 45.6 +1.1
KTH                                 IAmb  IAmb   02 57 57.2
      comp=Z,16nm,1.0s
MLY   Manley            39.18  36   P     P      02 57 46.6 +1.1
COLD  Coldfoot          39.52  32   P     P      02 57 49.4 +1.2
NRIK  Noril'sk          39.52 331   LR    LR     03 15 25.5
      comp=Z,148nm,18.0s,baz=88,slow=38
H23K  Yukon River       39.71  35   P     P      02 57 50.7 +0.8
H23K                                IAmb  IAmb   02 57 53.9
      comp=Z,13nm,0.8s
BWN   Browne            39.71  37   P     P      02 57 51.3 +1.4
I23K  Minto, Yukon-K    39.76  36   P     P      02 57 50.1 -0.1
I23K                                IAmb  IAmb   02 57 53.7
      comp=Z,8.4nm,0.9s
NEA2  Nenana            39.88  37   P     P      02 57 52.7 +1.4
NEA2                                IAmb  IAmb   02 57 56.5
      comp=Z,8.2nm,0.8s
TOLK  Toolik Lake Re    39.88  30   P     P      02 57 52.2 +0.9
MCK   McKinley          39.95  38   P     P      02 57 53.3 +1.4
MCK                                 pmax  pmax
      comp=Z,6.0nm,0.8s
MCK   McKinley          39.95  38   P     P      02 57 53.3 +1.4
MCK                                 IAmb  IAmb   02 57 55.0
      comp=Z,6.1nm,0.8s
RND   Reindeer          39.99  39   P     P      02 57 53.3 +1.0
RND                                 pmax  pmax
      comp=Z,7.0nm,0.9s
RND   Reindeer          39.99  39   P     P      02 57 53.3 +1.0
RND                                 IAmb  IAmb   02 58 00.8
      comp=Z,7.0nm,0.9s
MDM   Murphy Dome       40.24  36   P     P      02 57 55.5 +1.2
MDM                                 IAmb  IAmb   02 57 57.5
      comp=Z,9.7nm,0.8s
WRH   Wood River Hil    40.30  37   P     P      02 57 55.6 +0.8
WRH                                 IAmb  IAmb   02 57 59.3
      comp=Z,5.6nm,0.7s
H24K  Noodor Dome       40.39  35   P     P      02 57 56.7 +1.1
H24K                                IAmb  IAmb   02 57 59.6
      comp=Z,7.9nm,0.9s
TCOL  CIGO, UAF Yank    40.40  36   P     P      02 57 56.0 +0.5
TCOL                                IAmb  IAmb   02 57 59.2
      comp=Z,12nm,0.6s
COLA  College           40.40  36  i P    P      02 57 56.5 +1.0
COLA                                pmax  pmax
      comp=Z,13nm,1.0s
COLA  College           40.40  36   P     P      02 57 57.0 +1.5
COLA                                IAmb  IAmb   02 57 59.2
      comp=Z,13nm,0.7s
CCB   Clear Creek Bu    40.42  37   P     P      02 57 55.3 -0.5
POKR  Poker Plat Res    40.58  36   P     P      02 57 58.3 +1.3
HDA   Harding Lake      40.80  37   P     P      02 58 00.2 +1.3
HDA                                 IAmb  IAmb   02 58 02.0
      comp=Z,7.2nm,0.7s
IL31                    40.82  36   P     P      02 57 59.8 +0.9
IL31                                IAmb  IAmb   02 58 02.0
      comp=Z,12nm,1.1s
ILAR  Eielson Array     40.82  36   P     P      02 57 59.3 +0.3
      comp=Z,5.5nm,0.9s,baz=261,slow=7.0,SNR=35
ILAR  Eielson Array     40.82  36   P     P      02 57 59.9 +0.9
DGZ   Jazzator, Alta    41.09 300  i P    P      02 58 00.8 -0.9
DGZ                                 pmax  pmax
      comp=Z,2.0nm,0.7s
FYU   Fort Yukon        41.46  34   P     P      02 58 05.8 +1.6
FYU                                 IAmb  IAmb   02 58 08.0
      comp=Z,27nm,1.1s
KLU   Klutina           41.48  41   P     P      02 58 05.7 +1.2
KLU                                 IAmb  IAmb   02 58 17.2
      comp=Z,17nm,1.1s
ZALV  Zalesovo Beam     41.60 307   P     P      02 58 03.7 -1.8
      comp=Z,0.8nm,0.3s,baz=64,slow=6.6,SNR=3.9
ZALV                                PcP   PcP    03 00 02.9 +1.0
      comp=Z,3.0nm,0.7s,baz=69,slow=2.6,SNR=11
ZALV                                LR    LR     03 16 02.0
      comp=Z,71nm,20.8s,baz=59,slow=37
ZALV  Zalesovo Beam     41.60 307   P     P      02 58 05.2 -0.3
ZALV  Zalesovo Beam     41.60 307   P     P      02 58 05.2 -0.3
BMAR  Burnt Mountain    41.71  32   P     P      02 58 07.2 +0.9
DOT   Dot Lake          42.12  38   P     P      02 58 09.5 -0.2
SCRK  Sand Creek        42.12  37   P     P      02 58 10.0 +0.1
BCAR  Beaver Creek A    43.20  39   P     P      02 58 20.8 +2.2
EGAK  Eagle             43.27  36   P     P      02 58 19.7 +0.8
EGAK                                IAmb  IAmb   02 58 21.9
      comp=Z,10.0nm,0.8s
EPYK  Eagle Plains      44.88  33   P     P      02 58 33.0 +1.1
MK31  Makanchi Array    45.29 298  i P    P      02 58 34.6 -0.8
MK31  Makanchi Array    45.29 298   P     P      02 58 35.8 +0.4
MKAR  Makanchi Array    45.29 298   P     P      02 58 35.6 +0.2
      comp=Z,5.2nm,0.7s,baz=80,slow=8.6,SNR=20
MKAR                                PcP   PcP    03 00 15.3 +0.7
      comp=Z,1.8nm,0.7s,baz=73,slow=4.1,SNR=4.2
MKAR                                LR    LR     03 18 57.9
      comp=Z,245nm,18.4s,baz=39,slow=38
HYT   Haines Junctio    45.61  41   P     P      02 58 40.0 +2.1
INK   Inuvik            45.80  30   P     P      02 58 40.4 +1.4
INK                                 pmax  pmax
      comp=Z,13nm,1.1s
INK   Inuvik            45.80  30   P     P      02 58 40.4 +1.4
INK                                 IAmb  IAmb   02 58 41.3
      comp=Z,13nm,1.1s
KURK  Kurchatov         46.16 304ceP      P      02 58 41.7 -0.5
KURK                                pmax  pmax
      comp=Z,13nm,1.7s
KURK  Kurchatov         46.16 304  eP     P      02 58 41.7 -0.5
KURK  Kurchatov         46.16 304   P     P      02 58 41.7 -0.5
KURK                                IAmb  IAmb   02 58 43.2
      comp=Z,4.6nm,0.7s
KURK                                      PcP    03 00 18.6 +1.2
KURBB Kurchatov Arra    46.25 304   P     P      02 58 43.0 +0.2
      comp=Z,3.5nm,0.6s,baz=74,slow=8.7,SNR=13
KURBB                               PcP   PcP    03 00 18.7 +0.9
      comp=Z,2.5nm,0.7s,baz=75,slow=3.6,SNR=9.2
A36M  Sachs Harbour     47.84  25   P     P      02 58 55.4 +0.5
A36M                                IAmb  IAmb   02 58 56.6
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      comp=Z,8.2nm,0.8s
RABL  Rabaul            48.02 175   P     P      02 58 58.4 +1.3
CMAR  Chiang Mai Arr    48.43 255   P     P      02 59 01.8 +1.6
      comp=Z,1.3nm,0.4s,baz=45,slow=7.3,SNR=5.4
CMAR                                pP    pP     02 59 11.6 +0.4
      comp=Z,2.0nm,0.6s,baz=39,slow=7.6,SNR=2.6
CMAR                                LR    LR     03 21 39.2
      comp=Z,98nm,18.6s,baz=124,slow=39
BVAR  Borovoye Array    50.07 310   P     P      02 59 13.7 +1.3
      comp=Z,1.3nm,0.6s,baz=131,slow=6.7,SNR=7.5
BVAR                                PcP   PcP    03 00 30.5 -1.0
      comp=Z,1.8nm,0.7s,baz=222,slow=2.0,SNR=4.7
BRVK  Borovoye          50.12 310ceP      P      02 59 12.9 +0.2
BRVK                                pmax  pmax
      comp=Z,2.0nm,0.6s
BRVK  Borovoye          50.12 310  eP     P      02 59 12.9 +0.2
TAPN  Taplejung         50.89 272  eP     P      02 59 20.2 +0.9
TKM2  Tokmak 2          51.23 296   P     P      02 59 22.2 +0.8
      SNR=14
ODAN  Odare             51.41 272  eP     P      02 59 23.8 +0.7
KBK   Karagaybulak      51.77 296   P     P      02 59 26.4 +0.9
      SNR=6.7
USP   Ospenovka         51.78 297   P     P      02 59 26.1 +0.7
      SNR=10
JIRN  Jiri              51.81 273  eP     P      02 59 27.0 +0.8
      comp=Z,18nm,0.9s
GUN   Gumba             51.89 274  eP     P      02 59 27.4 +0.6
RAMN  Ramite            51.93 272  eP     P      02 59 27.3 +0.4
      comp=Z,20nm,0.5s
AAK   Ala-Archa         52.08 296   P     P      02 59 28.2 +0.5
      comp=Z,2.6nm,0.4s,baz=134,slow=7.9,SNR=4.1
AAK   Ala-Archa         52.08 296ceP      P      02 59 27.6 -0.2
AAK                                 pmax  pmax
      comp=Z,21nm,1.0s
AAK   Ala-Archa         52.08 296  eP     P      02 59 27.6 -0.2
AAK   Ala-Archa         52.08 296   P     P      02 59 28.3 +0.5
AAK                                 IAmb  IAmb   02 59 29.1
      comp=Z,12nm,1.3s
PKIN  Phulchoki         52.43 274  eP     P      02 59 31.0 +0.3
EKS2  Erkin-Say         52.53 296   P     P      02 59 31.9 +0.8
      SNR=8.0
KSH   Kashi             52.62 292   P     P      02 59 35.3 +3.5
KSH                                 pmax  pmax
      comp=Z,7.0nm,0.7s
DMN   Daman             52.62 274  eP     P      02 59 32.7 +0.6
AML   Almayashu         52.84 296   P     P      02 59 35.0 +1.3
      SNR=5.7
DANN  Dangsing          53.16 276  eP     P      02 59 37.1 +1.0
      comp=Z,40nm,0.6s
KOLN  Koldanda          53.61 275  eP     P      02 59 40.1 +0.8
      comp=Z,26nm,0.9s
PYUN  Piuthan           53.86 276  eP     P      02 59 41.9 +0.8
HNR   Honiara           54.14 166   LR    LR     03 19 38.3
      comp=Z,74nm,19.9s,baz=341,slow=32
KK31  Karatay Array     54.41 298   P     P      02 59 45.1 +0.3
KK31                                pmax  pmax
      comp=Z,10.0nm,0.7s
KK31  Karatay Array     54.41 298   P     P      02 59 45.0 +0.3
KK31                                IAmb  IAmb   02 59 45.8
      comp=Z,9.6nm,0.7s
KKAR  Karatay Array     54.41 298   P     P      02 59 44.7  0.0
KKAR  Karatay Array     54.41 298   P     P      02 59 45.3 +0.6
KKAR                                IAmb  IAmb   02 59 45.8
      comp=Z,9.6nm,0.7s
KKAR  Karatay Array     54.41 298   P     P      02 59 44.7  0.0
RES   Resolute Bay      54.54  17   P     P      02 59 44.5 -0.6
RES                                 pmax  pmax
      comp=Z,7.0nm,0.8s
RES   Resolute Bay      54.54  17   P     P      02 59 44.5 -0.6
RES                                 IAmb  IAmb   02 59 46.2
      comp=Z,7.3nm,0.8s
ARU   Arti              54.82 317d iP     P      02 59 47.1 -0.3
ARU                                       PP     03 01 46.1 -4.0
ARU                                 S     S      03 07 25.6 +0.5
ARU                                 SS    SS     03 11 08.0  0.0
ARU                                 pmax  pmax
      comp=Z,13nm,1.4s
ARU   Arti              54.82 317  eP     P      02 59 47.1 -0.3
YKA   Yellowknife Ar    55.16  34   P     P      02 59 49.5 -0.3
      comp=Z,2.2nm,0.8s,baz=307,slow=5.3,SNR=5.9
YKA                                 pP    pP     03 00 00.8 +0.1
      comp=Z,6.6nm,1.0s,baz=310,slow=6.5,SNR=6.1
BTK   Batken            55.76 295   P     P      02 59 54.2 -0.4
BTK                                 pmax  pmax
      comp=Z,8.0nm,0.8s
BTK   Batken            55.76 295   P     P      02 59 54.2 -0.4
BTK                                 IAmb  IAmb   02 59 58.7
      comp=Z,8.0nm,0.8s
GAR   Garm              56.65 294   P     P      03 00 00.4 -0.6
NIL   Nilore            57.59 287   P     P      03 00 07.6  0.0
NIL                                 pmax  pmax
      comp=Z,24nm,1.1s
NIL   Nilore            57.59 287   P     P      03 00 07.6  0.0
CHGR  Chuyangaron       57.59 294   P     P      03 00 07.4 -0.3
ABKAR Akbulak array     57.64 309   P     P      03 00 07.5 -0.1
ABKAR                               IAmb  IAmb   03 00 08.5
      comp=Z,7.5nm,0.7s
KIRV  Kirov             57.99 322  i P    P      03 00 09.2 -0.8
AKTO  Aktyubinsk        58.09 311   P     P      03 00 09.9 -0.9
      comp=Z,1.8nm,0.7s,baz=62,slow=10,SNR=3.7
WISH  Wishkah           58.43  53   P     P      03 00 15.0 +1.8
DAG   Danmarks Havn     59.29 357  i P    P      03 00 18.2 -0.5
ARCES ARCESS Array B    59.38 340   P     P      03 00 17.2 -2.3
      comp=Z,1.5nm,0.6s,baz=48,slow=7.2,SNR=4.1
KBL   Kabul             59.96 290   P     P      03 00 22.8 -1.5
KBL                                 pmax  pmax
      comp=Z,12nm,1.0s
KBL   Kabul             59.96 290   P     P      03 00 22.8 -1.5
KBL                                 IAmb  IAmb   03 00 25.2
      comp=Z,12nm,1.0s
HOOD  Mount Hood Mea    60.65  54   P     P      03 00 29.9 +1.2
EDM   Edmonton          60.67  43   P     P      03 00 29.6 +1.0
EDM                                 pmax  pmax
      comp=Z,12nm,0.9s
EDM   Edmonton          60.67  43   P     P      03 00 29.6 +1.0
SUMG  Summit            63.70   2⇑iP      P      03 00 48.9 -0.2
WB2   Warramunga Arr    64.85 195   P     P      03 00 57.7 +1.1
WRA   Warramunga Arr    64.85 195   P     P      03 00 57.8 +1.2
      comp=Z,0.4nm,0.6s,baz=11,slow=6.9,SNR=7.0
WRA   Warramunga Arr    64.85 195   P     P      03 00 57.3 +0.6
WRA   Warramunga Arr    64.85 195   P     P      03 00 57.3 +0.6
FFC   Flin Flon         65.02  37   P     P      03 00 57.9 +0.4
FFC                                 pmax  pmax
      comp=Z,15nm,1.1s
FFC   Flin Flon         65.02  37   P     P      03 00 57.9 +0.4
FFC                                 IAmb  IAmb   03 01 11.0
      comp=Z,15nm,1.1s
FINES FINESS Array B    65.11 333   P     P      03 00 56.2 -1.7
      comp=Z,3.8nm,0.5s,baz=38,slow=7.1,SNR=45
FINES                               LR    LR     03 33 13.9
      comp=Z,74nm,18.6s,baz=62,slow=40
FINES FINESS Array B    65.11 333  i P    P      03 00 56.7 -1.2
FINES                               pmax  pmax
      comp=Z,4.0nm,0.5s
FITZ  Fitzroy Crossi    65.14 204   P     P      03 01 00.4 +1.8
LRM   Limekiln Ridge    65.56  49   P     P      03 01 02.5 +1.0
OBN   Obninsk           65.69 324⇑eP      P      03 01 01.8 +0.1
OBN                                e      PcP    03 01 34.4 +1.6
OBN                                e      PP     03 03 26.1  0.0
OBN                                 pmax  pmax
      comp=Z,6.0nm,0.9s
OBN                                 MLR   MLR
      comp=Z,70nm,15.0s
OBN   Obninsk           65.69 324  eP     P      03 01 01.8 +0.1
VRH   Novokhopyorsk     65.98 319  eP     P      03 01 01.9 -1.8
VRH                                 pmax  pmax
      comp=Z,10.0nm,0.7s
BOZ   Bozeman (W)       66.16  49   P     P      03 01 05.9 +0.8
BOZ                                 pmax  pmax
      comp=Z,8.0nm,0.8s
BOZ   Bozeman (W)       66.16  49   P     P      03 01 05.9 +0.8
BOZ                                 IAmb  IAmb   03 01 19.4
      comp=Z,8.1nm,0.8s
LPSR  Galich'ya Gora    66.35 321  eP     P      03 01 05.1 -0.9
LPSR                                pmax  pmax
      comp=Z,7.0nm,0.7s
VSR   Storozhevoye      67.17 320  eP     P      03 01 10.8 -0.5
VSR                                 pmax  pmax
      comp=Z,10.0nm,0.6s
VORD  Divnogorie        67.28 320  eP     P      03 01 11.0 -1.0
VORD                                pmax  pmax
      comp=Z,10.0nm,0.8s
TPAW  Teton Pass        67.87  51   P     P      03 01 17.1 +0.9
TPAW                                IAmb  IAmb   03 01 31.4
      comp=Z,6.0nm,0.9s
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ASAR  Alice Springs    68.56 194   P      P       03 01 22.1 +1.8
      comp=Z,0.4nm,0.6s,baz=16,slow=5.9,SNR=5.2
BW06  Boulder Array    69.11  50   P      P       03 01 24.1 +0.1
PD31  Pinedale Array   69.11  50   P      P       03 01 24.4 +0.4
PDAR  Pinedale Array   69.11  50   P      P       03 01 24.7 +0.7
      comp=Z,1.3nm,0.7s,baz=268,slow=2.4,SNR=13
GWY   Greenwater Val   69.15  60   P      P       03 01 24.8 +0.6
DY2G  Dye2             69.35   6 i P      P       03 01 24.4 -0.7
GOF   Gofitskoye       69.37 313⇑eP      P       03 01 26.0 +0.8
GOF                                pmax   pmax
      comp=Z,35nm,0.6s
NC405 NORSAR Array S   69.56 339   P      P       03 01 24.7 -1.4
NC405                              IAmb   IAmb    03 01 33.8
      comp=Z,9.3nm,0.8s
MNK   Minsk            69.65 328 i P      P       03 01 27.6 +0.9
MNK                              i        PcP     03 01 50.6 +1.2
MNK                              i        PP      03 04 01.0 +0.6
MNK                              i PPP    PPP     03 05 42.0
MNK                              i S      S       03 10 30.1 -1.7
MNK                              i                03 11 24.6
MNK                              i SS     SS      03 15 00.0 +0.7
MNK                                pmax   pmax
      comp=N,7.0nm,0.6s
MNK                                pmax   pmax
      comp=Z,11nm,0.6s
MNK                                pmax   pmax
      comp=E,1.0nm,0.7s
MNK                                MLR    MLR
      comp=E,16nm,20.0s
MNK                                MLR    MLR
      comp=N,146nm,18.0s
MNK                                MLR    MLR
      comp=Z,76nm,16.0s
MNK   Minsk            69.65 328 i P      P       03 01 27.6 +0.9
      comp=E,1.0nm,0.7s
MNK                              i P      P       03 01 27.6 +0.9
      comp=N,7.0nm,0.6s
MNK                              i P      P       03 01 27.6 +0.9
      comp=Z,11nm,0.6s,baz=222
MNK                              i PcP    PcP     03 01 50.6 +1.2
MNK                              i PP     PP      03 04 01.0 +0.6
MNK                              i PPP    PPP     03 05 42.1
MNK                              i S      S       03 10 30.2 -1.6
MNK                              i SS     SS      03 15 00.1 +0.8
MNK                              i SSS    SSS     03 18 22.8
MNK                              i LR     LR      03 29 24.6
MNK                              i LRM    MLR     03 34 07.2
      comp=E,16nm,20.3s
MNK                              i LRM    MLR     03 34 31.1
      comp=N,146nm,18.1s
MNK                              i LRM    MLR     03 34 32.6
      comp=Z,76nm,15.9s
NB201 NORSAR Array S   69.72 339   P      P       03 01 26.8 -0.4
NB201                              IAmb   IAmb    03 01 28.3
      comp=Z,13nm,0.8s
NB2   NORSAR Subarra   69.75 339   P      P       03 01 26.8 -0.5
      comp=Z,4.8nm,0.7s,baz=32,slow=6.5
NOA   NORSAR Array B   69.75 339   P      P       03 01 26.9 -0.4
      comp=Z,2.2nm,0.6s,baz=31,slow=6.2,SNR=26
NOA                                LR     LR      03 35 02.5
      comp=Z,53nm,21.1s,baz=20,slow=38
NACGM Naroch           69.77 328 i P      P       03 01 27.6 +0.1
NCK   Nalchik          70.12 312 eP       P       03 01 30.7 +0.8
NCK                                pmax   pmax
      comp=Z,9.0nm,0.8s
KIV   Kislovodsk       70.30 312 ⇑P       P       03 01 31.8 +0.8
KIV   Kislovodsk       70.30 312 eP       P       03 01 32.0 +0.9
KIV                                pmax   pmax
      comp=Z,27nm,1.1s
KIV                                MLR    MLR
      comp=Z,88nm,17.0s
KIV   Kislovodsk       70.30 312 eP       P       03 01 32.0 +0.9
KIV   Kislovodsk       70.30 312   P      P       03 01 30.8 -0.3
CCUT  Cedar City       70.30  57   P      P       03 01 31.2 -0.1
KBZ   Khabaz           70.34 312   P      P       03 01 32.4 +1.2
      comp=Z,12nm,0.8s,baz=62,slow=3.8,SNR=32
KBZ                                LR     LR      03 36 50.0
      comp=Z,120nm,19.3s,baz=45,slow=40
KBZ   Khabaz           70.34 312ceP       P       03 01 32.0 +0.9
KBZ                                pmax   pmax
      comp=Z,13nm,0.9s
KBZ   Khabaz           70.34 312 eP       P       03 01 32.0 +0.9
ZEI   Tsey             70.43 311 eP       P       03 01 31.4 -0.6
ZEI                                pmax   pmax
      comp=Z,4.0nm,0.8s
SHA1  Shidzhatmaz      70.46 312 i P      P       03 01 32.9 +0.7
RDMU  Red Mountain     70.55  52   P      P       03 01 33.4 +0.6
RDMU                               IAmb   IAmb    03 01 36.4
      comp=Z,7.1nm,0.7s
LCMT  Little Creek M   70.72  57   P      P       03 01 34.1 +0.3
P18A  Preston Nutter   70.78  53   P      P       03 01 34.4  0.0
ONI   Oni              70.81 311   P      P       03 01 34.7 +0.6
ONI                                pmax   pmax
      comp=Z,11nm,0.8s
ONI   Oni              70.81 311   P      P       03 01 34.7 +0.6
ONI                                IAmb   IAmb    03 01 36.5
      comp=Z,11nm,0.8s
ULM   Lac du Bonnet    70.82  38   LR     LR      03 33 06.9
      comp=Z,50nm,20.7s,baz=1.0,slow=36
SRU   San Rafael Swe   70.97  54   P      P       03 01 35.1 -0.2
SRU                                pmax   pmax
      comp=Z,4.0nm,0.8s
SRU   San Rafael Swe   70.97  54   P      P       03 01 35.1 -0.2
U15A  North Rim        71.68  57   P      P       03 01 39.7 -0.1
GNI   Garni            71.73 308ceP       P       03 01 41.4 +1.5
GNI                                pmax   pmax
      comp=Z,16nm,1.3s
GNI   Garni            71.73 308   P      P       03 01 39.2 -0.7
GNI                                IAmb   IAmb    03 01 43.7
      comp=Z,25nm,1.5s
AKASG Malin Array Be   71.95 324   P      P       03 01 40.0 -0.8
      comp=Z,6.8nm,0.6s,baz=38,slow=6.1,SNR=31
AKASG Malin Array Be   71.95 324 i P      P       03 01 40.5 -0.3
AKASG                              pmax   pmax
      comp=Z,7.0nm,0.6s
AKASG Malin Array Be   71.95 324   P      P       03 01 41.0 +0.2
AKBB  Malin Array Si   71.95 324   P      P       03 01 39.9 -0.9
AKBB                               pmax   pmax
      comp=Z,11nm,0.8s
AKBB  Malin Array Si   71.95 324   P      P       03 01 39.9 -0.9
AKBB                               IAmb   IAmb    03 01 41.4
      comp=Z,11nm,0.8s
KARS  Kars             72.34 310   P      P       03 01 43.3 -0.2
KARS                               pmax   pmax
      comp=Z,38nm,0.8s
KARS  Kars             72.34 310   P      P       03 01 43.3 -0.2
SMCO  Snowmass         72.97  52   P      P       03 01 47.1 -0.4
SMCO                               IAmb   IAmb    03 01 52.6
      comp=Z,7.2nm,0.8s
ISCO  Idaho Springs    73.31  51   P      P       03 01 49.2 -0.3
ISCO                               pmax   pmax
      comp=Z,2.0nm,0.7s
ISCO  Idaho Springs    73.31  51   P      P       03 01 49.2 -0.3
X16A  Lo Mia Camp, P   73.54  58   P      P       03 01 50.4 -0.4
SORM  Soroca           74.27 323 ⇑P       P       03 01 54.8 +0.3
BEL   Belsk            74.41 329 ePP      PP      03 04 39.5 -1.6
GKP   Gorka Klasztor   74.50 332 eP       P       03 01 55.4 -0.3
LVV   L'vov            74.77 326 eP       P       03 01 55.9 -1.5
PURM  Purcari          74.81 321 ⇑P       P       03 01 58.1 +0.4
SIRT  Sirnak           74.85 308   P      P       03 01 57.2 -1.0
MILM  Milestii Mici    74.99 322 ⇓P       P       03 01 58.6 -0.1
KWP   Kalwaria Pacla   75.44 327 eP       P       03 02 02.4 +1.1
KWP   Kalwaria Pacla   75.44 327   P      P       03 02 01.4 +0.1
KWP   Kalwaria Pacla   75.44 327   P      P       03 02 01.4 +0.1
STKA  Stephens Creek   75.70 186   LR     LR      03 35 35.8
      comp=Z,75nm,20.1s,baz=216,slow=36
BUR08 Bucovina Ar. S   76.00 324   P      P       03 02 05.0 +0.3
BUR08                              IAmb   IAmb    03 02 06.0
      comp=Z,11nm,0.8s
BURAR Bucovina Array   76.01 324 ⇓P       P       03 02 05.3 +0.6
OJC   Ojcow            76.09 329 eP       P       03 02 05.4 +0.5
OJC   Ojcow            76.09 329   P      P       03 02 05.5 +0.5
OJC                                pmax   pmax
      comp=Z,27nm,1.3s
OJC   Ojcow            76.09 329   P      P       03 02 05.5 +0.5
KOLS  Kolonicke sedl   76.17 327 eP       P       03 02 05.8 +0.3
KOLS                               pmax   pmax
      comp=Z,13nm,0.9s
KOLS  Kolonicke sedl   76.17 327 eP       P       03 02 05.8 +0.3
ANMO  Albuquerque      76.18  55ceP       P       03 02 07.5 +1.5
ANMO                               pmax   pmax
      comp=Z,6.0nm,2.5s
ANMO  Albuquerque      76.18  55   P      P       03 02 06.3 +0.3
VARL  Varlezi          76.20 322 ⇑P       P       03 02 06.8 +1.2
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TESR  Tescani          76.26 323 ⇑P       P       03 02 06.3 +0.3
TLCR                   76.31 321 ⇓P       P       03 02 06.4 +0.2
UZH   Uzhgorod         76.41 327 eP       P       03 02 05.1 -1.7
UZH                              e        PcP     03 02 19.4 +1.0
CRVS  Cervenica-Dubn   76.52 327 eP       P       03 02 08.1 +0.7
CRVS  Cervenica-Dubn   76.52 327 eP       P       03 02 08.1 +0.7
NIE   Niedzica         76.55 328 eP       P       03 02 09.3 +1.7
JURR  Jurilovca        76.60 320 ⇑P       P       03 02 08.2 +0.3
CFR   Carcaliu         76.62 321 ⇑P       P       03 02 08.4 +0.3
TRPA  Tarpa            76.71 326 ⇓P       P       03 02 09.4 +0.9
VRI   Vrincioaia       76.72 322 ⇓P       P       03 02 09.7 +1.0
TPGR  Topolog          76.74 321 ⇓P       P       03 02 09.5 +0.8
PLOR  Plostina         76.77 322 ⇑P       P       03 02 08.8 -0.1
KSP   Ksiaz            76.84 331 eP       P       03 02 09.6 +0.4
OZUR                   76.95 323 ⇑P       P       03 02 11.2 +1.2
COVR  Voineasa-Covas   76.97 323 ⇑P       P       03 02 11.4 +1.3
TIRR  Tirgusor         77.05 320 ⇓P       P       03 02 10.8 +0.3
TIRR  Tirgusor         77.05 320   P      P       03 02 10.0 -0.4
TIRR                               pmax   pmax
      comp=Z,15nm,0.9s
TIRR  Tirgusor         77.05 320   P      P       03 02 10.0 -0.4
LANS  Liptovska Anna   77.08 328 eP       P       03 02 12.7 +2.0
LANS                               pmax   pmax
      comp=Z,10.0nm,0.9s
LANS  Liptovska Anna   77.08 328 eP       P       03 02 12.7 +2.0
HARR  Harsova          77.09 321 ⇑P       P       03 02 11.2 +0.5
OSTC  Ostas            77.11 331 eP       P       03 02 11.2 +0.5
CHVC  Chvalec          77.14 331 eP       P       03 02 10.9  0.0
TLBR  Topalu           77.15 321 ⇑P       P       03 02 10.5 -0.5
UPC   Upice            77.22 331 eP       P       03 02 12.0 +0.6
UPC   Upice            77.22 331 eP       P       03 02 12.0 +0.6
DOPR  Dopca            77.23 323 ⇑P       P       03 02 13.1 +1.6
DPC   Dobruska-Polom   77.24 331 eP       P       03 02 11.7 +0.2
DPC   Dobruska-Polom   77.24 331 eP       P       03 02 11.7 +0.2
MORC  Moravsky Berou   77.28 330 ⇓P       P       03 02 12.9 +1.2
MORC  Moravsky Berou   77.28 330   P      P       03 02 11.7 -0.1
MORC                               pmax   pmax
      comp=Z,13nm,0.9s
MORC  Moravsky Berou   77.28 330 eP       P       03 02 12.1 +0.3
MORC  Moravsky Berou   77.28 330   P      P       03 02 11.7 -0.1
MORC                               IAmb   IAmb    03 02 13.4
      comp=Z,12nm,0.9s
KRLC  Kraliky          77.31 330 eP       P       03 02 12.5 +0.6
KRLC  Kraliky          77.31 330 eP       P       03 02 12.5 +0.6
MLR   Muntele Rosu     77.36 323 ⇓P       P       03 02 13.3 +0.9
MLR   Muntele Rosu     77.36 323   P      P       03 02 12.1 -0.3
MLR                                pmax   pmax
      comp=Z,8.0nm,0.8s
MLR   Muntele Rosu     77.36 323   P      P       03 02 12.1 -0.3
MLR                                IAmb   IAmb    03 02 14.6
      comp=Z,8.4nm,0.8s
ISR   Istrita          77.38 322 ⇑P       P       03 02 13.5 +1.0
BNN   Bunyan           77.54 312   P      P       03 02 13.5 -0.1
CLL   Collm            77.56 333⇑iP       P       03 02 13.0 -0.2
CLL                                pmax   pmax
      comp=Z,20nm,0.8s
CLL   Collm            77.56 333⇑iP       P       03 02 13.0 -0.2
      comp=Z,20nm,0.8s
CLL   Collm            77.56 333   P      P       03 02 13.0 -0.2
BRG   Berggiesshubel   77.62 332 eP       P       03 02 13.9 +0.4
BRG                                Amp            03 02 18.0
      comp=Z,4.0nm,0.9s
PVCC  Panska Ves       77.70 332 eP       P       03 02 14.1 +0.1
PVCC  Panska Ves       77.70 332 eP       P       03 02 14.1 +0.1
DRGR                   77.71 325 ⇓P       P       03 02 14.8 +0.6
VOIR                   77.79 323 ⇓P       P       03 02 16.0 +1.3
VYHS  Vyhne            77.86 328 eP       P       03 02 15.7 +0.7
VYHS                               pmax   pmax
      comp=Z,28nm,1.8s
VYHS  Vyhne            77.86 328 eP       P       03 02 15.7 +0.7
PSZ   Piszkesteto      77.93 327 ⇑P       P       03 02 16.3 +0.9
PSZ   Piszkesteto      77.93 327   P      P       03 02 15.7 +0.2
PSZ                                pmax   pmax
      comp=Z,9.0nm,0.9s
PSZ   Piszkesteto      77.93 327   P      P       03 02 15.7 +0.2
PSZ                                IAmb   IAmb    03 02 17.3
      comp=Z,8.7nm,0.9s
JAVC  Velka Javorina   78.00 329 eP       P       03 02 17.3 +1.5
VRAC  Vranov           78.02 330 ⇑P       P       03 02 17.4 +1.5
VRAC  Vranov           78.02 330 eP       P       03 02 16.6 +0.8
ARR   Arges            78.03 323 ⇓P       P       03 02 17.0 +1.0
BRTR  Keskin Array B   78.06 314   P      P       03 02 17.1 +0.7
      comp=Z,1.7nm,0.7s,baz=83,slow=3.0,SNR=8.8
BRTR  Keskin Array B   78.06 314 i P      P       03 02 17.5 +1.1
BRTR                               pmax   pmax
      comp=Z,2.0nm,0.6s
BRTR  Keskin Array B   78.06 314   P      P       03 02 15.7 -0.7
PRA   Prague           78.14 332 eP       P       03 02 17.6 +1.2
PRA   Prague           78.14 332 eP       P       03 02 17.6 +1.2
PRU   Pruhonice        78.17 332 eP       P       03 02 17.0 +0.4
PRU   Pruhonice        78.17 332 eP       P       03 02 17.0 +0.4
KRUC  Moravsky         78.29 330 eP       P       03 02 17.8 +0.4
SMOL  Smolenice        78.37 329 eP       P       03 02 18.9 +1.1
SMOL                               pmax   pmax
      comp=Z,4.0nm,0.8s
SMOL  Smolenice        78.37 329 eP       P       03 02 18.9 +1.1
ANTO  Ankara           78.39 315   P      P       03 02 17.7 -0.4
ANTO                               pmax   pmax
      comp=Z,15nm,0.8s
ANTO  Ankara           78.39 315   P      P       03 02 17.7 -0.4
TREC  Trest            78.42 331 eP       P       03 02 18.4 +0.3
TREC  Trest            78.42 331 eP       P       03 02 18.4 +0.3
MODS  Modra-Piesok     78.55 329 eP       P       03 02 19.6 +0.8
MODS                               pmax   pmax
      comp=Z,17nm,1.3s
MODS  Modra-Piesok     78.55 329 eP       P       03 02 19.6 +0.8
SIRR  Siria            78.56 325 ⇑P       P       03 02 19.8 +0.9
SRO   Srobarova        78.62 328 eP       P       03 02 20.6 +1.4
SRO                                pmax   pmax
      comp=Z,15nm,1.0s
SRO   Srobarova        78.62 328 eP       P       03 02 20.6 +1.4
SRO2  Moca             78.63 328 eP       P       03 02 19.2  0.0
SRO2  Moca             78.63 328 eP       P       03 02 19.2  0.0
NKC   Novy Kostel      78.66 333 eP       P       03 02 20.1 +0.7
NKC   Novy Kostel      78.66 333 eP       P       03 02 20.1 +0.7
MDUB  Mudurnu          78.74 316   P      P       03 02 19.7 -0.4
COPA  Copaceanca       78.74 322 ⇓P       P       03 02 20.1 +0.2
GZR   Gura Zlata       78.80 324 ⇑P       P       03 02 21.0 +0.7
MNTX  Cornudas Mount   79.09  56   P      P       03 02 22.6 +0.5
BZS   Buzias           79.11 325 ⇓P       P       03 02 22.4 +0.5
KHC   Kasperske Hory   79.23 332 eP       P       03 02 22.8 +0.3
KHC                              e                03 02 40.0
KHC   Kasperske Hory   79.23 332 eP       P       03 02 22.8 +0.3
KHC                              epP      sP      03 02 40.0 +1.1
CKRC  Cesky Krumlov    79.24 331 eP       P       03 02 22.8 +0.2
HERR  Herculane        79.36 324 ⇑P       P       03 02 23.5 +0.2
GEC2  GERESS Array S   79.43 331   P      P       03 02 23.3 -0.4
GERES GERESS Array B   79.43 331   P      P       03 02 23.9 +0.2
      comp=Z,2.3nm,0.7s,baz=34,slow=5.2,SNR=22
GERES                              pP     pP      03 02 34.5 -1.1
      comp=Z,0.5nm,0.5s,baz=46,slow=5.8,SNR=3.9
CONA  Conrad Observa   79.44 330 i P      P       03 02 24.9 +1.1
      comp=Z,3.4nm,0.7s,SNR=5.9
GRA1  Grafenberg Arr   79.53 333   P      P       03 02 24.2 +0.1
GRF   Grafenberg Arr   79.53 333   P      P       03 02 24.2 +0.1
GRF                                pmax   pmax
      comp=Z,15nm,0.8s
GRFO  Grafenberg       79.53 333   P      P       03 02 24.2 +0.1
GRFO                               pmax   pmax
      comp=Z,15nm,0.9s
GRFO  Grafenberg       79.53 333   P      P       03 02 24.2 +0.1
GRFO                               IAmb   IAmb    03 02 26.4
      comp=Z,15nm,0.9s
MDVR  Moldovita        79.74 325 ⇓P       P       03 02 25.1 -0.3
MOA   Molln            80.08 331 eP       P       03 02 28.0 +0.8
      comp=Z,1.2nm,0.5s
FRGS  Fruska Gora      80.22 326 ⇑P       P       03 02 27.9  0.0
T35A  Sooner Cattle    80.34  47   P      P       03 02 29.4 +0.7
T35A                               IAmb   IAmb    03 02 30.4
      comp=Z,7.0nm,0.9s
P40A  Paris            80.65  43   P      P       03 02 31.2 +0.9
P40A                               IAmb   IAmb    03 02 44.0
      comp=Z,16nm,1.4s
SOKA  Soboth           80.80 330 i P      P       03 02 31.7 +0.6
      comp=Z,4.8nm,0.7s,SNR=9.7
VTS   Vitosha          80.83 322 ⇓P       P       03 02 32.4 +1.0
VTS   Vitosha          80.83 322   P      P       03 02 30.3 -1.1
VTS                                pmax   pmax
      comp=Z,10.0nm,0.9s
VTS   Vitosha          80.83 322   P      P       03 02 30.3 -1.1
VTS                                IAmb   IAmb    03 02 33.3
      comp=Z,10nm,0.9s
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KBA   Koelnbreinsper   81.06 331 i P      P       03 02 33.7 +1.1
      comp=Z,7.7nm,0.7s,SNR=8.0
OBKA  Obir             81.12 330 eP       P       03 02 33.1 +0.3
      comp=Z,2.4nm,0.6s
S39A  Bolivar          81.42  45   P      P       03 02 35.3 +0.8
WATA  Walderalm        81.45 332 i P      P       03 02 35.3 +0.6
      comp=Z,4.8nm,0.7s,SNR=6.1
R40A  Maddies Statio   81.49  44   P      P       03 02 34.6 -0.3
WTTA  Wattenberg       81.50 332 eP       P       03 02 35.4 +0.4
      comp=Z,5.9nm,0.5s,SNR=7.5
RETA  Reutte           81.60 332 eP       P       03 02 35.5 +0.1
      comp=Z,1.3nm,0.5s
MOTA  Moosalm          81.61 332 i P      P       03 02 36.1 +0.6
      comp=Z,7.4nm,0.8s,SNR=7.5
SQTA  Sankt Quirin     81.68 332 i P      P       03 02 36.7 +0.9
      comp=Z,4.3nm,0.6s,SNR=5.1
TX31  Lajitas Ar. Si   81.81  57   P      P       03 02 37.1 +0.3
TX31                               IAmb   IAmb    03 02 39.0
      comp=Z,11nm,0.8s
TX32  Lajitas Array    81.81  57   P      P       03 02 37.3 +0.5
TXAR  Lajitas Array    81.81  57   P      P       03 02 38.3 +1.5
      comp=Z,3.2nm,0.7s,baz=304,slow=3.9,SNR=50
TXAR  Lajitas Array    81.81  57   P      P       03 02 36.7 -0.1
TXAR  Lajitas Array    81.81  57   P      P       03 02 36.7 -0.1
STAL  STALIGIAL        81.99 331   P      P       03 02 36.7 -0.7
STAL                               IAmb   IAmb    03 02 39.2
      comp=Z,5.9nm,0.7s
DAVA  Damuels          82.06 333 eP       P       03 02 38.6 +0.7
      comp=Z,4.9nm,0.8s
HHAR  Hobbs            82.18  46   P      P       03 02 38.0 -0.5
CCM   Cathedral Cave   82.19  43   P      P       03 02 39.4 +0.9
CCM                                pmax   pmax
      comp=Z,6.0nm,1.0s
CCM   Cathedral Cave   82.19  43   P      P       03 02 39.4 +0.9
CCM                                IAmb   IAmb    03 02 41.6
      comp=Z,5.9nm,0.9s
PMOR  Pomariorio Ree   82.46 119 eT       T       04 33 42.9
      comp=Z,14nm,0.2s
CTI   Castel Tesino    82.55 331   P      P       03 02 39.9 -0.5
CTI                                pmax   pmax
      comp=Z,4.0nm,0.8s
CTI   Castel Tesino    82.55 331   P      P       03 02 39.9 -0.5
CTI                                IAmb   IAmb    03 02 40.5
      comp=Z,4.2nm,0.8s
U40A  Yellville        82.68  46   P      P       03 02 40.6 -0.5
U40A                               IAmb   IAmb    03 02 43.5
      comp=Z,5.2nm,0.8s
PDG   Podgorica        82.69 325 ⇑P       P       03 02 41.0  0.0
TUE   Stuetta          82.96 333   P      P       03 02 42.1 -0.5
TUE                                IAmb   IAmb    03 02 44.1
      comp=Z,7.6nm,0.8s
TAOE  Nuku Hiva Isla   83.04 109 eLR      LR      03 28 50.5
      comp=Z,85nm,25.3s
PPT2  Papeete2         83.38 122 eLR      LR      03 28 52.0
      comp=Z,75nm,25.5s
FCAR  Ozark Folk Cen   83.42  45   P      P       03 02 45.1 +0.2
FCAR                               IAmb   IAmb    03 02 46.8
      comp=Z,3.6nm,0.7s
MIAR  Mount Ida        83.69  47   P      P       03 02 46.4  0.0
MIAR                               pmax   pmax
      comp=Z,5.0nm,0.9s
MIAR  Mount Ida        83.69  47   P      P       03 02 46.4  0.0
MIAR                               IAmb   IAmb    03 02 49.7
      comp=Z,5.4nm,0.8s
SENIN Lac Senin/Sane   83.71 334   P      P       03 02 46.5 -0.1
SENIN                              IAmb   IAmb    03 02 47.7
      comp=Z,4.6nm,0.8s
NRCA  Norcia           84.79 329   P      P       03 02 51.4 -0.5
BNI   Bardonecchia     85.08 334   P      P       03 02 53.6 +0.2
BNI                                pmax   pmax
      comp=Z,5.0nm,1.1s
BNI   Bardonecchia     85.08 334   P      P       03 02 53.6 +0.2
BNI                                IAmb   IAmb    03 02 54.6
      comp=Z,5.2nm,1.1s
Q51A  Peebles          85.13  38   P      P       03 02 53.9 +0.3
L59A  Walton           85.84  31   P      P       03 02 56.1 -1.0
U49A  Red Boiling Sp   86.06  41   P      P       03 02 57.7 -0.5
U49A                               IAmb   IAmb    03 03 12.0
      comp=Z,6.3nm,1.0s
T50A  Nancy            86.09  40   P      P       03 02 58.1 -0.3
T50A                               IAmb   IAmb    03 03 12.1
      comp=Z,11nm,1.2s
Q54A  Coxs Mills       86.26  36   P      P       03 02 58.5 -0.7
KEST  Kesra            92.40 328   P      P       03 03 27.6 -0.7
      comp=Z,1.8nm,0.8s,baz=72,slow=6.4,SNR=1.9
KEST                               LR     LR      03 51 06.9
      comp=Z,107nm,18.3s,baz=317,slow=40
ESDC  Sonseca Array    93.11 339   P      P       03 03 31.9 +0.4
      comp=Z,0.7nm,0.7s,baz=18,slow=4.0,SNR=9.7
ESDC                               LR     LR      03 49 49.2
      comp=Z,48nm,21.4s,baz=355,slow=38
TORD  Torodi Ar. Bea  115.59 324   PKP    PKiKP   03 08 58.5 -1.4
      comp=Z,0.4nm,1.0s,baz=350,slow=1.2,SNR=1.8
H03N2 Juan Fernandez  142.08  90   T      T       05 48 48.5
      baz=304,slow=77,SNR=46
H03N3 Juan Fernandez  142.09  90   T      T       05 48 49.5
      baz=304,slow=77,SNR=46
H03N1 Juan Fernandez  142.09  90   T      T       05 48 49.8
      baz=304,slow=77,SNR=44
BDFB  Brasilia        148.54  31   PKPbc  PKiKP   03 10 05.9 -0.3
      comp=Z,2.3nm,0.6s,baz=90,slow=2.0,SNR=3.4
BDFB                               pPKPbc sPKPdf  03 10 17.5 +0.1
      comp=Z,4.5nm,0.9s,baz=186,slow=11,SNR=4.1
PLCA  Paso Flores     151.23  97   PKPbc  PKPbc   03 10 10.2 -0.3
      comp=Z,2.2nm,1.0s,baz=274,slow=6.4,SNR=3.9
```

IDC 05 02:52:51.3±196.0**, 14°.26S**×**166°.96E, h0km, mb3.6**/3**, mb1 3.8**/3**, mb1mx3.6**/24**, mbtmp3.6**/3**, Error ellipse: s-maj=3287.0km s-min=130.5km az=63.0, Vanuatu Islands**

```
Code  Station Name        Δ°   AZ°    Phase ID        Time       Res
                                   Op     ISC       h  m  s      ISC
STKA  Stephens Creek   29.08 229   P      P       02 58 53.5 -0.1
      1.0nm,0.3s,baz=38,slow=12,SNR=5.2
WRA   Warramunga Arr   31.66 255   P      P       02 59 16.6  0.0
      0.1nm,0.4s,baz=80,slow=6.3,SNR=1.8
ASAR  Alice Springs    32.57 248   P      P       02 59 24.7 +0.1
      0.3nm,0.5s,baz=74,slow=10.0,SNR=8.3
```

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*IDC **05** 03:19:27.0±6.1, 1°.11S×13°.61W, h0km, mb3.7/4, mb1 4.0/6, mb1mx3.7/39, mbtmp3.9/6, ML4.1/2, MS3.6/14, Ms1 3.6/14, ms1mx3.4/35, Error ellipse: s-maj=198.0km s-min=37.2km az=153.0*

*NEIC **05** 03:19:27.6±1.7, 1°.1S±0°.1×13°.4W±0°.2, h10km±1km, mb4.2/3, Error ellipse: s-maj=35.5km s-min=8.1km az=124.0*

ISC 05 03:19:27.7±0.8**, 1°.0S**±0°.1×**13°.4W**±0°.1**, h10km, n31,** σ1s.89/22**, mb3.9**/4**, MS3.6**/12**, North of Ascension Island**

```
Code  Station Name        Δ°   AZ°    Phase ID        Time       Res
                                   Op     ISC       h  m  s      ISC
H10N2 ASCENSION HYDR    6.83 189   Pn     Pn      03 21 07.6 -0.2
      baz=2.9,slow=13,SNR=24
H10N2                              T      T       03 28 11.6
      baz=5.4,slow=74,SNR=51
H10N3 ASCENSION HYDR    6.85 189   Pn     Pn      03 21 07.8 -0.2
      baz=2.9,slow=13,SNR=23
H10N3                              T      T       03 28 11.8
      baz=5.4,slow=74,SNR=56
H10N1 ASCENSION HYDR    6.85 189   Pn     Pn      03 21 07.8 -0.2
      baz=2.9,slow=13,SNR=34
H10N1                              T      T       03 28 13.6
      baz=5.4,slow=74,SNR=78
ASCN  Ascension         6.92 188   Pn     Pn      03 21 08.1 -1.1
H10S3 ASCENSION HYDR    7.96 189   Pn     Pn      03 21 23.5 +0.1
H10S3                              T      T       03 29 26.6
      baz=212,slow=74,SNR=34
H10S2 ASCENSION HYDR    7.97 189   Pn     Pn      03 21 23.8 +0.4
H10S2                              T      T       03 29 27.5
      baz=8.0,slow=74,SNR=13
LIC   Lamto            11.04  49 eP       Pn      03 22 11.0 +5.2
      77nm,1.6s
TIC   Toumodi          11.32  47 eP       Pn      03 22 11.2 +1.5
KIC   Kosan Boka       11.34  50 eP       Pn      03 22 12.6 +2.6
      15nm,0.8s
DBIC  Dimbokro         11.46  48   Pn     Pn      03 22 13.7 +2.2
      0.9nm,0.3s,baz=259,slow=11,SNR=18
DBIC                               Sn     Sn      03 24 15.6 -4.1
      0.5nm,0.3s,baz=181,slow=18,SNR=1.5
DBIC                               LR     LR      03 26 08.8
      comp=Z,238nm,18.1s,baz=217,slow=34
DBIC  Dimbokro         11.46  48          Pn      03 22 13.4 +1.9
```

DBIC					Sn	03 24 19.9	+0.2
KOWA	Kowa	18.01	31	P	P	03 23 39.4	+0.6
	0.9nm,0.3s,baz=207,slow=13,SNR=19						
KOWA				S	Sn	03 26 49.2	-10
	0.4nm,0.3s,baz=114,slow=12,SNR=1.8						
KOWA				LR	LR	03 30 09.0	
	comp=Z,238nm,18.5s,baz=256,slow=35						
KOWA	Kowa	18.01	31	P	P	03 23 39.5	+0.6
KOWA				IAmb	IAmb	03 23 43.8	
	comp=Z,13nm,0.8s						
TORD	Torodi Ar. Bea	20.56	46	P	Pn	03 24 10.2	+1.3
	comp=Z,4.0nm,0.5s,baz=226,slow=11,SNR=36						
TORD				S	S	03 27 53.4	-3.5
	comp=Z,1.6nm,0.6s,baz=226,slow=22,SNR=4.7						
TORD				LR	LR	03 31 35.1	
	comp=Z,178nm,18.5s,baz=180,slow=35						
TORD	Torodi Ar. Bea	20.56	46	P	P	03 24 06.0	-0.7
TORD				IAmb	IAmb	03 24 17.7	
	comp=Z,4.6nm,0.9s						
BOAV	Boa Vista	47.24	274	P	P	03 27 59.8	-1.7
BOAV				IAmb	IAmb	03 28 06.0	
	comp=Z,16nm,1.9s						
GERES	GERESS Array B	54.94	22	P	P	03 29 02.7	+3.8
	comp=Z,0.5nm,0.8s,baz=188,slow=5.9,SNR=6.7						
GERES	GERESS Array B	54.94	22	P	P	03 28 57.8	-1.1
LPAZ	La Paz	55.99	251	LR	LR	03 50 52.8	
	comp=Z,74nm,21.8s,baz=90,slow=34						
ROSC	El Rosal	61.14	276	LR	LR	03 52 48.3	
	comp=Z,97nm,20.2s,baz=110,slow=33						
AKASG	Malin Array Be	63.00	29	LR	LR	03 59 00.4	
	comp=Z,35nm,18.4s,baz=45,slow=38						
NOA	NORSAR Array B	64.74	13	LR	LR	03 58 22.5	
	comp=Z,14nm,19.3s,baz=300,slow=36						
PLCA	Paso Flores	64.93	225	LR	LR	03 52 59.8	
	comp=Z,38nm,21.9s,baz=75,slow=31						
FINES	FINESS Array B	69.20	19	P	P	03 30 34.5	+0.1
	comp=Z,1.6nm,0.9s,baz=208,slow=7.9,SNR=1.7						
FINES				LR	LR	04 02 04.3	
	comp=Z,34nm,19.0s,baz=259,slow=37						
FINES	FINESS Array B	69.20	19	P	P	03 30 34.8	+0.4
SNAA	Sanae	70.85	176	LR	LR	03 53 25.5	
	comp=Z,99nm,20.1s,baz=10.0,slow=29						
ARCES	ARCESS Array B	75.12	13	LR	LR	04 04 49.4	
	comp=Z,44nm,18.7s,baz=275,slow=36						
GEYT	Alibeck	76.13	51	LR	LR	04 07 06.3	
	comp=Z,48nm,19.0s,baz=90,slow=38						
TXAR	Lajitas Array	90.74	299	P	P	03 32 31.5	-0.1
	comp=Z,0.2nm,0.7s,baz=65,slow=4.3,SNR=1.6						
MKAR	Makanchi Array	94.65	43	LR	LR	04 19 33.2	
	comp=Z,20nm,19.4s,baz=312,slow=38						
ZALV	Zalesovo Beam	95.68	36	LR	LR	04 19 50.5	
	comp=Z,17nm,18.1s,baz=201,slow=38						

IDC 05 03:27:38.0±2.1**, 8°.41S**×**124°.96E, h0**^{km}**, mb3.7**/1**, mb1 3.8**/3**, mb1mx3.5**/22**, mbtmp3.6**/3**, ML3.2**/1**, Error ellipse: s-maj=187.6km s-min=33.7km az=58.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	9.65	176	Sn	Sn	03 31 43.5	-4.0
	baz=291,slow=14						
WRA	Warramunga Arr	14.62	143	Pn	Pn	03 31 05.1	-1.3
	0.1nm,0.3s,baz=316,slow=12,SNR=4.6						
ASAR	Alice Springs	17.42	152	P	P	03 31 43.4	-0.7
	baz=323,slow=11,SNR=5.1						
MKAR	Makanchi Array	66.78	330	P	P	03 38 31.4	0.0
	0.8nm,0.9s,baz=120,slow=8.5,SNR=2.2						

NEIC 05 03:34:09.0±0.8**, 37°.03N**±0°.02×**98°.87W**±0°.03**, h2**^{km}±2^{km}**, mb_Lg2.5**/41**, Error ellipse: s-maj=4.4km s-min=2.5km az=129.0, Kansas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK032	Salt Plains WL	0.58	113	Pg	Pg	03 34 19.4	-0.6
OK032				Sg	Sg	03 34 27.6	0.0
KAN10	Anthony SW Sta	0.63	82	Pg	Pg	03 34 21.5	+0.5
KAN10				Sg	Sg	03 34 29.6	+0.3
U32A	Winter Ranch,	0.66	189	Pg	Pg	03 34 20.7	-1.0
U32A				Sg	Sg	03 34 30.3	+0.1
KAN16	Harper SW Stat	0.68	73	Pg	Pg	03 34 22.0	+0.1
KAN16				Sg	Sg	03 34 30.6	-0.1
KAN14	Manchester OK	0.73	96		Pg	03 34 23.5	+0.5
KAN08	Anthony NE Sta	0.75	75		Pg	03 34 22.9	-0.4
KAN05	Bluff City Nor	0.81	84	IAmb_Lg		03 34 34.6	
	comp=Z,72nm,0.8s						
GC02	Grant County #	0.83	102	Pg	Pg	03 34 24.7	-0.2
KAN06	Argonia West S	0.84	75	Pg	Pg	03 34 25.0	-0.1
KAN09	Caldwell North	1.01	84	Pg	Pg	03 34 28.3	-0.1
KS20	Mayfield South	1.07	79	IAmb_Lg		03 34 43.8	
	comp=Z,33nm,0.7s						
BLOK	Blackwell	1.36	101	Pn	Pn	03 34 34.6	-0.4
R32A	Long Quarter,	1.39	5		Pn	03 34 34.9	-0.6
OK029	Liberty Lake	1.68	137	Pn	Pn	03 34 39.5	+0.1
BCOK	Bluff Creek, N	1.71	143	Pn	Pn	03 34 40.0	+0.2
T35A	Sooner Cattle	1.90	93	Pn	Pn	03 34 42.2	-0.1
CBKS	Cedar Bluff	1.90	339		Pn	03 34 42.6	0.0
CBKS				IAmb_Lg		03 35 11.0	
	comp=Z,18nm,0.8s						
QUOK	Quay	1.94	116	Pn	Pn	03 34 43.3	+0.3
OK031	S. Brethren Rd	1.96	123	Pn	Pn	03 34 43.1	-0.2
OK031				IAmb_Lg		03 35 13.9	
	comp=Z,17nm,0.9s						
OKCFA	Oklahoma City	1.98	144	IAmb_Lg		03 35 13.5	
	comp=Z,23nm,0.7s						
FNO	Franklin	2.14	146		Pn	03 34 45.6	0.0
WMOK	Wichita Mounta	2.29	178	Pn	Pn	03 34 48.1	+0.3
X34A	Smith Ranch, M	2.57	160	Pn	Pn	03 34 51.7	+0.1
X34A				IAmb_Lg		03 35 32.4	
	comp=Z,13nm,0.8s						
TUL1	Leonard	2.73	113	Pn	Pn	03 34 53.3	-0.5
KSU1	Kansas State U	2.73	40	IAmb_Lg		03 35 39.1	
	comp=Z,20nm,0.9s						
AMTX	Amarillo	3.13	228	Pn	Pn	03 34 59.4	0.0
LOOK	Love County	3.33	155	IAmb_Lg		03 36 03.2	
	comp=Z,18nm,1.0s						
X37A	Clayton	3.75	130	IAmb_Lg		03 36 10.6	
	comp=Z,15nm,0.8s						
T25A	Trinidad	4.43	273	IAmb_Lg		03 36 30.8	
	comp=Z,8.7nm,0.9s						
ABTX	Abilene, Hawle	4.45	188	IAmb_Lg		03 36 35.6	
	comp=Z,10nm,1.0s						
S39A	Bolivar	4.47	80	IAmb_Lg		03 36 32.0	
	comp=Z,10nm,0.8s						
W39A	Magazine	4.51	112	IAmb_Lg		03 36 38.2	
	comp=Z,10.0nm,0.8s						
P38A	Dawn	4.93	57	IAmb_Lg		03 36 55.7	
	comp=Z,10nm,1.0s						
MGMO	Mountain Grove	5.28	87	IAmb_Lg		03 37 00.7	
	comp=Z,6.6nm,0.8s						
X40A	Basin Creek Fa	5.53	116	IAmb_Lg		03 37 12.7	
	comp=Z,6.4nm,0.9s						
WHAR	Wooly Hollow	5.61	106	IAmb_Lg		03 37 12.0	
	comp=Z,5.8nm,0.8s						
CCM	Cathedral Cave	6.15	78	IAmb_Lg		03 37 28.4	
	comp=Z,6.7nm,0.7s						
SMCO	Snowmass	6.74	291	IAmb_Lg		03 38 01.8	
	comp=Z,5.3nm,0.8s						
PBMO	Poplar Bluff	6.77	90	IAmb_Lg		03 37 54.1	
	comp=Z,5.6nm,0.8s						
RSSD	Black Hills	8.09	333	IAmb_Lg		03 38 29.8	
	comp=Z,3.9nm,0.9s						

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*IDC **05** 03:34:27.3±0.8, 8°.09S×125°.29E, h0^{km}, mb4.1/7, mb1 4.2/12, mb1mx4.1/27, mbtmp4.1/12, ML3.9/5, MS3.1/3, Ms1 3.2/3, ms1mx2.8/28, Error ellipse: s-maj=28.2km s-min=15.2km az=71.0*

*DJA **05** 03:34:30.4±0.3, 8°S±2°×12°5E±°, h10^{km}, M4.4/12, mb4.7/12, mB5.0/5, MLv4.4/12, Mw(mB)4.3/5*

*NEIC **05** 03:34:30.4±1.6, 8°.25S±0°.10×125°.06E±0°.09, h17^{km}±6^{km}, mb4.0/7, Error ellipse: s-maj=17.3km s-min=9.2km az=222.0*

ISC 05 03:34:31.2±0.5**, 8°.30S**±0°.04×**125°.12E**±0°.05**, h24**^{km}**, n64,** σ**2**^{s}**06**/71**, mb4.1**/11**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.67	210	P	Pb	03 35 01.2	-0.2
BATI	Baumata	2.38	217	Pn	Pb	03 35 12.0	-1.3
	24nm,0.3s,baz=284,slow=12,SNR=3.5						
BATI				Sn	Sb	03 35 43.7	+1.4
	44nm,0.3s,baz=345,slow=22,SNR=13						
BATI	Baumata	2.38	217	P	Pb	03 35 11.3	-2.0
BATI				S	Sb	03 35 40.9	-1.4
MMRI	Maumere	2.87	263	P	Pn	03 35 16.6	+1.1
MMRI				S	Sn	03 35 52.8	+3.5
MMRI	Maumere	2.87	263		Pn	03 35 14.7	-0.8
MMRI	Maumere	2.87	263	P	Pn	03 35 17.7	+2.2
EDFI	Ende, Flores	3.42	262	P	Pn	03 35 24.5	+1.3
BASI	Baing, Sumba	4.87	247	P	Pn	03 35 43.7	+0.7
BSSI	Bau Bau, Buton	5.07	295	P	Pn	03 35 45.5	-0.3
BSSI				S	Sn	03 36 40.9	-2.7
BKSI	Bulukumba	5.78	301	P	Pn	03 35 51.4	-4.1
	0.1nm22nm,0.8s						
WBSI	Waikabubak, Su	5.81	256	P	Pn	03 35 56.4	+0.4
	0.3nm116nm,0.8s						
KAPI	Kappang	6.25	301	Pn	Pn	03 36 01.2	-0.8
	0.6nm,0.3s,baz=192,slow=17,SNR=2.3						
KAPI				Sn	Sn	03 37 11.7	-1.1
	0.7nm,0.3s,baz=270,slow=20,SNR=1.4						
KAPI	Kappang	6.25	301	Pn	Pn	03 36 01.4	-0.6
SANI	Sanana	6.27	8	P	Pn	03 36 02.6	+0.3
	0.1nm28nm,0.5s						
SANI	Sanana	6.27	8	P	Pn	03 36 03.1	+0.8
PLAI	Plampang	7.28	265	P	Pn	03 36 17.0	+0.8
	0.3nm849nm80nm,0.8s						
PLAI	Plampang	7.28	265	P	Pn	03 36 18.6	+2.4
TTSI	Tana Toraja	7.42	314	P	Pb	03 36 36.7	-2.7
MTN	Manton Dam	7.43	128	Pn	Pn	03 36 19.4	+1.1
LUWI	Luwuk	7.58	342	P	Pn	03 36 20.5	+0.2
	0.7nm11μm77nm,0.6s						
KNRA	Kununurra	8.15	154	Pn	Pn	03 36 28.6	+0.6
KNRA	Kununurra	8.15	154	P	Pn	03 36 30.5	+2.5
	65nm,0.9s						
TWSI	Taliwang, Sumb	8.16	266	P	Pn	03 36 29.0	+0.8
	27nm,1.2s						
KDU	Kakadu	8.44	122	P	Pn	03 36 35.6	+3.6
	16nm,0.6s						
FITZ	Fitzroy Crossi	9.75	177	Pn	Pn	03 36 50.4	+0.3
	1.1nm,0.3s,baz=356,slow=10,SNR=25						
FITZ				Sn	Sn	03 38 35.3	-3.5
	3.1nm,0.3s,baz=279,slow=20,SNR=10						
FITZ				LR	LR	03 41 28.0	
	comp=Z,80nm,19.3s,baz=340,slow=42						
FITZ	Fitzroy Crossi	9.75	177	Pn	Pn	03 36 50.2	+0.2
FITZ	Fitzroy Crossi	9.75	177	P	Pn	03 36 51.9	+1.9
	18nm,0.7s						
TOLI2	Tolitoli	10.30	335		Pn	03 36 57.3	-0.3
TOLI2	Tolitoli	10.30	335	P	Pn	03 36 59.0	+1.4
MTKI	Muara Teweh, K	12.54	305	P	Pn	03 37 18.3	-10
PBKI	Pangkalan Bun	14.49	292	P	Pn	03 37 54.9	-0.1
WB0	Warramunga Arr	14.51	143		Pn	03 37 54.1	-1.1
WRA	Warramunga Arr	14.61	143	Pn	Pn	03 37 54.3	-2.3
	0.9nm,0.3s,baz=319,slow=13,SNR=17						
WRA				Sn	Sn	03 40 33.0	-4.9
	1.1nm,0.3s,baz=322,slow=24,SNR=5.9						
WRA				LR	LR	03 44 32.6	
	comp=Z,83nm,19.5s,baz=280,slow=41						
WRA	Warramunga Arr	14.61	143	Pn	Pn	03 37 54.5	-2.1
WRAB	Tennant Creek	14.61	143		Pn	03 37 55.1	-1.5
WB2	Warramunga Arr	14.62	143	Pn	Pn	03 37 55.0	-1.7
WR0	Warramunga Arr	14.74	143		Pn	03 37 56.9	-1.5
WRKA	Warakurna	16.91	170	P	P	03 38 27.9	-0.4
	14nm,0.6s						
AS31	Alice Springs	17.44	152		P	03 38 33.8	-0.3
ASAR	Alice Springs	17.44	152	P	Pn	03 38 32.5	-0.5
	0.7nm,0.3s,baz=327,slow=11,SNR=21						
ASAR				S	Sn	03 41 41.3	-5.4
	0.4nm,0.3s,baz=310,slow=19,SNR=11						
ASAR	Alice Springs	17.44	152	Pn	Pn	03 38 32.4	-0.7
QIS	Mount Isa	18.56	133	P	Pn	03 38 50.4	+3.6
	12nm,0.9s						
COEN	Coen	18.58	109		Pn	03 38 47.1	0.0
COEN				IAmb	IAmb	03 38 52.0	
	comp=Z,12nm,1.2s						
MTSU	Mount Surprise	21.07	120	P	P	03 39 18.3	+4.4
	comp=Z,8.8nm,1.1s						
OOD	Oodnadatta	21.81	154	P	P	03 39 24.8	+3.1
	comp=Z,19nm,0.7s						
DSRI	Dabo	21.89	290	P	P	03 39 28.9	+6.2
FORT	Forrest	22.53	173	P	P	03 39 29.4	0.0
CTA	Charters Tower	23.57	122	P	P	03 39 40.0	-0.2
	comp=Z,2.2nm,0.7s,baz=323,slow=10,SNR=3.0						
CTAO	Charters Tower	23.57	122	P	P	03 39 40.9	+0.8
CTAO				IAmb	IAmb	03 39 47.5	
	comp=Z,9.5nm,1.0s						
STKA	Stephens Creek	28.02	149	P	P	03 40 23.2	+2.8
	comp=Z,3.8nm,0.8s,baz=331,slow=9.9,SNR=4.3						
STKA	Stephens Creek	28.02	149	P	P	03 40 20.7	+0.2
STKA				IAmb	IAmb	03 40 27.2	
	comp=Z,1.6nm,1.2s						
CMAR	Chiang Mai Arr	37.07	316	P	P	03 41 39.2	-0.6
	comp=Z,1.7nm,0.3s,baz=143,slow=6.5,SNR=9.1						
CMAR				LR	LR	03 58 19.8	
	comp=Z,39nm,19.1s,baz=201,slow=39						
CMAR	Chiang Mai Arr	37.07	316	P	P	03 41 38.4	-1.4
SONM	Songino Array	58.30	345	P	P	03 44 24.1	-0.1
	comp=Z,1.5nm,0.9s,baz=154,slow=8.2,SNR=6.7						
MKAR	Makanchi Array	66.77	329	P	P	03 45 19.7	-1.0
	comp=Z,2.5nm,0.8s,baz=130,slow=7.5,SNR=8.8						
MKAR	Makanchi Array	66.77	329	P	P	03 45 20.4	-0.2
ZALV	Zalesovo Beam	70.71	336	P	P	03 45 43.1	-1.9
	comp=Z,2.5nm,0.9s,baz=97,slow=7.4,SNR=7.7						
ZALV	Zalesovo Beam	70.71	336	P	P	03 45 43.4	-1.6
VNDA	Vanda	71.78	172	P	P	03 45 53.2	+2.0
	comp=Z,0.5nm,0.5s,baz=327,slow=7.5,SNR=3.7						
MAW	Mawson	72.00	201	P	P	03 45 54.6	+2.0
	comp=Z,1.3nm,0.6s,baz=73,slow=6.1,SNR=7.5						
MAW	Mawson	72.00	201	P	P	03 45 53.1	+0.5
MAW				IAmb	IAmb	03 45 57.4	
	comp=Z,1.1nm,1.4s						
QSPA	South Pole Qui	81.68	180	P	P	03 46 47.5	0.0
QSPA				IAmb	IAmb	03 46 50.6	
	comp=Z,4.6nm,0.8s						
CPUP	Villa Florida	145.49	176	PKPbc	PKPab	03 54 08.9	+0.6
	comp=Z,1.5nm,0.7s,baz=141,slow=5.3,SNR=3.4						
LPAZ	La Paz	152.27	152	PKPbc	PKPbc	03 54 26.4	-0.4
	comp=Z,1.0nm,0.8s,baz=224,slow=6.0,SNR=3.6						

IDC 05 03:55:06.2±4.2**, 3°.55S**×**150°.33E, h0**^{km}**, mb3.6**/2**, mb1 3.9**/2**, mb1mx3.4**/42**, mbtmp3.7**/2**, Error ellipse: s-maj=157.4km s-min=51.4km az=112.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.55	222	P	P	04 00 07.5	-0.6
	1.2nm,0.5s,baz=48,slow=10,SNR=15						
ASAR	Alice Springs	25.53	217	P	P	04 00 37.1	+0.3
	1.0nm,0.7s,baz=50,slow=9.2,SNR=11						
TORD	Torodi Ar. Bea	147.57	289	PKPbc	PKPbc	04 14 53.0	-0.6
	0.4nm,0.8s,baz=62,slow=2.4,SNR=2.3						

IDC 05 03:58:56.1±3.8**, 3°.64S**×**150°.48E, h0**^{km}**, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.5**/40**, mbtmp3.7**/3**, MS3.0**/1**, Ms1 3.0**/1**, ms1mx2.5**/34**, Error ellipse: s-maj=121.8km s-min=51.2km az=114.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	18.00	342	LR	LR	04 09 00.3	
	comp=Z,46nm,18.5s,baz=176,slow=34						
WRA	Warramunga Arr	22.60	223	P	P	04 03 57.9	-0.6
	1.5nm,0.5s,baz=47,slow=11,SNR=11						
ASAR	Alice Springs	25.55	217	P	P	04 04 26.3	-0.6
	1.0nm,0.7s,baz=47,slow=9.2,SNR=12						
FITZ	Fitzroy Crossi	28.25	238	P	P	04 04 53.0	+1.7
	0.8nm,0.8s,baz=85,slow=11,SNR=1.9						
TORD	Torodi Ar. Bea	147.75	289	PKPbc	PKPbc	04 18 43.1	-0.9
	0.3nm,0.7s,baz=72,slow=3.6,SNR=2.3						

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*IGQ **05** 04:13:48±1.0, 1°S±2°×8°1W±°, h13^{km}*

*NEIC **05** 04:13:54.9±1.7, 0°.81S±0°.09×80°.50W±0°.08, h39^{km}±7^{km}, mb4.3/13, Error ellipse: s-maj=13.7km s-min=10.9km az=149.0*

*IDC **05** 04:13:59.8±3.2, 0°.75S×80°.17W, h81^{km}±30^{km}, mb3.4/4, mb1 3.6/8, mb1mx3.4/31, mbtmp3.8/8, MS3.0/3, Ms1 3.1/3, ms1mx2.8/18, Error ellipse: s-maj=35.1km s-min=18.5km az=89.0*

ISC 05 04:13:50.6±1.6**, 0°.78S**±0°.03×**80°.40W**±0°.04**, h7**^{km}±11^{km}**, n107,** σ**1**^{s}**50**/110**, mb4.0**/7**, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APO2	Ecuador-Portov	0.29	190	P	Pb	04 13 58.0	-0.2
APO2				S	Sb	04 14 04.0	+0.8
CAB1	Cabo Pasado-Ma	0.39	356	P	Pb	04 14 00.0	+0.2
CAB1				S	Sb	04 14 07.0	+1.0
CABP	Cabo Pasado	0.39	356	P	Pb	04 14 00.0	+0.2
CABP				S	Sb	04 14 07.0	+1.0
JAMA	Jama	0.55	21	P	Pg	04 14 02.0	+0.8
FLF1	Flavio Alfaro-	0.70	54	P	Pn	04 14 07.0	+0.1
FLF1				S	Sn	04 14 22.0	+4.0
MAG1	Magdalena	0.94	42	P	Pn	04 14 11.0	+0.8
BV15	Puerto Quito-O	1.50	52	P	Pn	04 14 18.0	+0.1
APR2	Miler	1.67	60	P	Pn	04 14 21.0	+0.7
ILLI	Illinizas Sur	1.68	88	P	Pn	04 14 21.0	+0.2
CHSH	Refugio Sur-Vo	1.69	115	P	Pb	04 14 22.0	-0.4
PORT	Chimborazo Vol	1.77	113	P	Pb	04 14 23.0	-0.7
TAMH	Tambohuasha Ch	1.79	115	P	Pb	04 14 23.0	-1.1
SRAM	San Ramn-Vol	1.84	89	P	Pb	04 14 24.0	-0.8
HPAL	Hacienda Las P	1.84	72	P	Pn	04 14 23.0	+0.1
GGPT	Toaza - Volcan	1.86	73	P	Pn	04 14 24.0	+0.7
JUA2	San Juan 2	1.88	73	P	Pn	04 14 24.0	+0.4
TERV	Terraza Guagua	1.90	72	P	Pb	04 14 25.0	-0.8
CAMI	Rancho Maria	1.90	87	P	Pb	04 14 26.0	+0.1
GGPC	Guagua Pichinc	1.90	72	P	Pn	04 14 24.0	0.0
IGUA	Igualata	1.90	112	P	Pb	04 14 25.0	-1.0
SLOR	San Lorenzo -	1.91	89	P	Pb	04 14 26.0	0.0
SUCR	Mariscal Sucre	1.91	86	P	Pb	04 14 26.0	-0.1
PAC1	Pacto, Paraso	1.92	57	*e*P	Pn	04 14 23.2	-0.6
PAC1	Pacto, Paraso	1.92	57	P	Pn	04 14 23.0	-0.8
BNAS	Cotopaxi Volca	1.93	87	P	Pb	04 14 26.0	-0.3
BMOR	Cotopaxi Volca	1.94	89	P	Pb	04 14 26.0	-0.7
BREF	Cotopaxi Volca	1.96	87	P	Pb	04 14 27.0	-0.1
PITA	Cotopaxi Volc	1.98	84	P	Pb	04 14 27.0	-0.3
TOMA	Boca Toma-Volc	1.99	82	P	Pb	04 14 27.0	-0.3
BVC2	Cotopaxi Volca	2.00	87	P	Pb	04 14 27.0	-0.6
VC1	Cotopaxi 1	2.00	86	P	Pb	04 14 27.0	-0.7
BTAM	Cotopaxi Volca	2.01	87	P	Pb	04 14 27.0	-0.8
VCES	Cotopaxi	2.01	91	P	Pb	04 14 27.0	-0.8
BBIL	Ulba Tungurahu	2.03	109	P	Pb	04 14 28.0	0.0
COHC	Cochancay	2.04	146	P	Pn	04 14 25.0	-0.3
PIS1	Pisayambo	2.04	98	P	Pg	04 14 30.0	+0.3
TAMB	Tambo	2.04	88	P	Pg	04 14 29.0	-0.7
JUI6	Juive	2.04	108	P	Pb	04 14 27.0	-1.2
POND	Pondoa	2.05	108	P	Pb	04 14 28.0	-0.4
BMAS	Trigal station	2.06	111	P	Pb	04 14 28.0	-0.5
PULU	Pululahua	2.06	67	P	Pn	04 14 27.0	+1.0
BRUN	Tungurahua Vol	2.09	108	P	Pb	04 14 28.0	-1.1
RVRD	Rio Verde	2.09	29	P	Pn	04 14 26.0	-0.1
BPAT	Tungurahua Vol	2.10	110	P	Pb	04 14 29.0	-0.3
BULB	Ulba Tungurahu	2.10	108	P	Pn	04 14 26.0	-0.5
PIAT	Ana Tenorio	2.15	96	P	Pb	04 14 29.0	-1.1
ANTG	Antisana-Guama	2.17	83	P	Pb	04 14 29.0	-1.5
ANTM	Antisana-La Mi	2.19	84	P	Pb	04 14 30.0	-0.9
OTAV	Otavalo	2.20	63	*e*P	Pn	04 14 27.9	0.0
OTAV	Otavalo	2.20	63	P	Pn	04 14 28.0	0.0
OTAV	Otavalo	2.20	63		Pn	04 14 27.9	0.0
OTAV				Sn	Sb	04 14 57.5	-1.0
ANTS	Antisana-Sarah	2.25	83	P	Pb	04 14 31.0	-0.9
ANTI	Antisana	2.27	82	P	Pb	04 14 31.0	-1.2
CUSE	Cuicocha Este	2.27	62	*e*P	Pn	04 14 30.0	+1.0
CUSE	Cuicocha Este	2.27	62	P	Pn	04 14 30.0	+1.0
CUIC	Cuicocha-Domo	2.31	62	P	Pn	04 14 30.0	+0.6
CUSW	Cuicocha Oeste	2.31	63	P	Pn	04 14 31.0	+1.6
COTA	Cotacachi	2.34	62	P	Pn	04 14 31.0	+1.0
IMBA	Imbabura, San	2.44	65	P	Pb	04 14 34.0	-1.1
URCU	Urcuqui	2.46	61	P	Pb	04 14 34.0	-1.5
CAYR	Refugio Cayamb	2.52	72	P	Pb	04 14 36.0	-0.6
AIB2	Ibarra (Univer	2.55	64	P	Pb	04 14 37.0	+0.1
TULM	Tulcn-Chalpat	3.01	60	*e*P	Pb	04 14 43.3	-1.4
TUMC	Tumaco	3.08	33	Pn	Pn	04 14 41.7	+2.1
CCUFI	Cufio, Nario	3.65	57	*e*P	Pb	04 14 53.1	-2.6
CPAS1	Pasto	3.65	58	*e*P	Pb	04 14 53.1	-2.6
GCUF	Volcan Galeras	3.65	57	*e*P	Pn	04 14 51.7	+3.8
SOTA	Rioblanco	4.77	53	*e*P	Pn	04 15 06.5	+3.1
PCON	Cinco Dias	5.05	52	*e*P	Pn	04 15 10.6	+3.2
PTLC	Puerto Leguiza	5.68	81	*i* P	Pn	04 15 18.3	+2.8
MARP	Paez Belalcaza	5.72	51	*e*P	Pn	04 15 19.0	+2.8
GARC	Garzon, Huila	5.72	59	*e*P	Pn	04 15 20.0	+3.7
YOTC	Yotoco, Valle	6.23	41	*e*P	Pn	04 15 23.3	+0.2
ATAH	Atahualpa	6.63	162	P	Pn	04 15 33.5	+4.7
	1.4nm,0.3s,baz=11,slow=7.3,SNR=6.9						
ATAH				S	Sn	04 16 49.2	+4.3
	0.3nm,0.3s,baz=127,slow=17,SNR=2.9						
ATAH				LR	LR	04 18 22.3	
	comp=Z,160nm,19.6s,baz=347,slow=40						
ORTC	Ortega, Tolima	6.94	48	*e*P	Pn	04 15 34.9	+2.0
PLMC	San Jos del P	6.98	36	*e*P	Pn	04 15 32.4	-1.0
MACC	Macarena, Meta	7.17	66	*e*P	Pn	04 15 40.3	+4.4
ANIL	Santa Ana	7.23	44	*e*P	Pn	04 15 43.3	+6.2
CBOC	Ciudad Bolivar	7.92	34	*e*P	Pn	04 15 47.5	+1.1
ROSC	El Rosal	8.25	47	P	Pn	04 15 53.7	+2.6
	1.0nm,0.3s,baz=233,slow=20,SNR=1.7						
VILC	Villavicencio,	8.28	54	*e*P	Pn	04 15 54.5	+3.2
CHIC	Chingaza	8.56	51	*e*P	Pn	04 15 57.1	+1.7
PAYG	Puerto Ayora	9.88	271	Pn	Pn	04 16 12.2	-1.0
CZSB	Cruzeiro do Su	10.32	132		Pn	04 16 21.4	+2.2
JTS	Las Juntas de	11.89	338	LR	LR	04 20 18.5	
	comp=Z,64nm,18.3s,baz=205,slow=32						
ETMB	Extrema	16.73	123		Pn	04 17 43.5	-2.1
ETMB				IAmb	IAmb	04 17 51.8	
	comp=Z,16nm,1.5s						
BIRV	Birongo	17.96	51		P	04 18 01.4	-0.2
BIRV				IAmb	IAmb	04 18 29.9	
	comp=Z,43nm,1.3s						
SAML	Samuel	18.97	116	P	Pn	04 18 13.0	-0.3
PCRV	Puerto La Cruz	19.09	55	P	Pn	04 18 14.9	+0.1
	comp=Z,0.5nm,0.3s,baz=305,slow=7.3,SNR=2.6						
LPAZ	La Paz	19.60	143	P	Pn	04 18 21.4	-0.1
	comp=Z,0.1nm,0.3s,baz=298,slow=6.5,SNR=8.7						
LPAZ				LR	LR	04 28 17.7	
	comp=Z,48nm,19.2s,baz=346,slow=44						
LPAZ	La Paz	19.60	143	P	Pn	04 18 22.0	+0.5
MACA	Manacapuru-AM	19.85	97	P	Pn	04 18 23.6	-0.4
BOAV	Boa Vista	20.12	81	P	P	04 18 25.8	+0.5
PSGCX	Pisagua	21.25	152	P	P	04 18 37.8	+0.2
PSGCX				IAmb	IAmb	04 18 59.7	
	comp=Z,23nm,1.2s						
VILB	Vilhena	23.39	122	P	P	04 19 00.7	+0.4
VILB				IAmb	IAmb	04 19 11.9	
	comp=Z,8.5nm,0.8s						
SJG	San Juan	23.43	36	P	P	04 19 01.3	+0.7
	comp=Z,12nm,0.7s,baz=203,slow=12,SNR=6.1						
SJG	San Juan	23.43	36	P	P	04 19 01.6	+1.1
SJG				IAmb	IAmb	04 19 02.6	
	comp=Z,14nm,0.9s						
GCPR	Guaynabo City	23.62	36	P	P	04 19 03.2	+0.7
CBYP	Canovanas	23.73	36	P	P	04 19 02.4	-1.1
SIV	San Ignacio	24.33	129	P	P	04 19 09.6	+0.3
	comp=Z,0.6nm,0.4s,baz=312,slow=12,SNR=3.1						
TXAR	Lajitas Array	37.29	325	PcP	PcP	04 23 21.4	-1.7
	comp=Z,0.3nm,0.8s,baz=175,slow=4.5,SNR=3.6						
SDMD	Soldier’s Deli	40.12	4	P	P	04 21 26.3	-0.7
SDMD				IAmb	IAmb	04 21 42.0	
	comp=Z,4.7nm,1.4s						
NVAR	Mina Array Bea	52.31	322	P	P	04 23 04.8	+1.5
	comp=Z,0.3nm,0.7s,baz=134,slow=7.7,SNR=2.0						
TORD	Torodi Ar. Bea	82.48	77	P	P	04 26 12.1	-2.5
	comp=Z,0.2nm,0.4s,baz=286,slow=5.5,SNR=7.0						
TORD	Torodi Ar. Bea	82.48	77	P	P	04 26 12.9	-1.7
TORD				IAmb	IAmb	04 26 35.4	
	comp=Z,2.8nm,1.4s						
QSPA	South Pole Qui	89.28	180	P	P	04 26 46.9	-0.5
WRA	Warramunga Arr	140.21	237	PKP	PKPdf	04 33 18.1	-3.1
	comp=Z,0.3nm,0.7s,baz=126,slow=2.3,SNR=2.7						

IDC 05 04:31:32.6±5.9**, 17°.38S**×**179°.18E, h590**^{km}±35^{km}**, mb3.2**/4**, mb1 3.4**/5**, mb1mx2.9**/42**, mbtmp4.3**/5**, Error ellipse: s-maj=145.3km s-min=83.1km az=106.0, Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	1.13	252	P	P	04 32 43.2	0.0
	1.8nm,0.3s,baz=109,slow=9.5,SNR=5.4						
DZM	Mont Dzumac	12.86	247	P	P	04 34 21.0	+0.8
	0.4nm,0.3s,baz=77,slow=17,SNR=6.2						
STKA	Stephens Creek	36.88	240	P	P	04 37 52.3	-0.2
	2.3nm,0.4s,baz=61,slow=8.7,SNR=7.6						
WRA	Warramunga Arr	42.46	259	P	P	04 38 36.5	-0.8
	0.7nm,0.2s,baz=83,slow=7.0,SNR=36						
ASAR	Alice Springs	42.72	254	P	P	04 38 39.1	-0.1

	6.5nm,0.6s,baz=85,slow=8.4,SNR=91						
FITZ	Fitzroy Crossi	50.84	261	P	P	04 39 40.8	+0.5
	1.3nm,0.5s,baz=82,slow=6.5,SNR=11						

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*NOU **05** 04:34:08.1, 20°.20S×169°.24E, h0km, MLv4.4/10, Vanuatu Islands*

ISC 05 04:34:11.3±2.8**, 20°.21S**±0°.09×**169°.3E**±0°.2**, h35km, n15, σ0s.76**/16**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	1.74	223	P	Pn	04 34 38.7	-0.3
LIFNC	LIFOU	2.02	253	P	Pn	04 34 41.7	-1.2
RTV	Rentapao	2.55	341	P	Pn	04 34 50.3	+0.2
DVP	Devils Point	2.69	337	P	Pn	04 34 51.7	-0.4
YATNC	Mamie plateau,	2.91	230	P	Pn	04 34 54.8	-0.4
YATNC	Mamie plateau,	2.91	230	P	Pn	04 34 54.0	-1.2
PINNC	Pines Island,	2.95	216	P	Pn	04 34 54.5	-1.2
OUENC	Ouen Island, N	3.18	226	P	Pn	04 34 59.9	+1.0
OUENC	Ouen Island, N	3.18	226	P	Pn	04 34 59.7	+0.8
DZM	Mont Dzumac	3.25	235	*e*Pn	Pn	04 34 59.6	-0.3
	7.4nm,0.2s						
DZM				*e*Sn	Sn	04 35 38.3	+0.8
	112nm,0.3s						
DZM	Mont Dzumac	3.25	235	P	Pn	04 34 59.6	-0.3
NOUC	Port Laguerre	3.38	236	P	Pn	04 35 01.8	+0.2
NOUC	Port Laguerre	3.38	236	P	Pn	04 35 02.0	+0.4
ONTNC	Ouen Toro	3.38	231	P	Pn	04 35 01.7	+0.1
ONTNC	Ouen Toro	3.38	231	P	Pn	04 35 01.6	0.0

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*IDC **05** 04:41:20.6±2.9, 14°.69S×167°.12E, h0km, mb4.3/6, mb1 4.5/7, mb1mx4.0/47, mbtmp4.4/7, ML4.6/1, Error ellipse: s-maj=57.4km s-min=34.4km az=98.0*

*NEIC **05** 04:41:32.6±1.6, 15°.2S±0°.1×167°.5E±0°.1, h119km±5km, mb4.4/13, Error ellipse: s-maj=22.1km s-min=16.3km az=133.0*

*NOU **05** 04:41:35.8, 15°.31S×167°.52E, h84km, mb4.4/8, Vanuatu Islands*

ISC 05 04:41:32.6±1.5**, 15°.18S**±0°.09×**167°.5E**±0°.2**, h129km, n38, σ1s.22**/41**, mb4.5**/9**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.40	228		Pn	04 41 49.1	-2.0
SANVU				Sn	Sn	04 42 02.5	-2.5
SANVU	Saraoutou	0.40	228	P	Pn	04 41 50.0	-1.0
DVP	Devils Point	2.62	166	P	Pn	04 42 14.2	0.0
LIFNC	LIFOU	5.58	183	Pn	Pn	04 42 51.3	-2.1
YATNC	Mamie plateau,	6.87	185	P	Pn	04 43 10.5	-0.3
YATNC	Mamie plateau,	6.87	185	P	Pn	04 43 10.8	0.0
DZM	Mont Dzumac	6.93	188	Pn	Pn	04 43 11.0	-0.8
	9.0nm,0.3s,baz=14,slow=15,SNR=87						
DZM				Sn	Sn	04 44 26.8	-2.5
	6.8nm,0.3s,baz=303,slow=23,SNR=10						
DZM	Mont Dzumac	6.93	188	Pn	Pn	04 43 11.2	-0.6
DZM	Mont Dzumac	6.93	188	P	Pn	04 43 13.1	+1.4
DZM	Mont Dzumac	6.93	188	*e*Pn	Pn	04 43 12.5	+0.8
	23nm,0.2s						
DZM				*e*Sn	Sn	04 44 28.3	-1.0
	20nm,0.3s						
NOUC	Port Laguerre	6.98	189	P	Pn	04 43 14.1	+1.8
NOUC	Port Laguerre	6.98	189	P	Pn	04 43 14.4	+2.1
ONTNC	Ouen Toro	7.16	188		Pn	04 43 15.2	+0.4
ONTNC	Ouen Toro	7.16	188	P	Pn	04 43 16.5	+1.7
OUENC	Ouen Island, N	7.23	185		Pn	04 43 14.6	-1.1
OUENC	Ouen Island, N	7.23	185	P	Pn	04 43 18.0	+2.3
OUENC	Ouen Island, N	7.23	185	P	Pn	04 43 17.9	+2.3
PINNC	Pines Island,	7.40	180	Pn	Pn	04 43 17.5	-0.4
EIDS	Eidsvold	18.43	234		P	04 45 37.5	-0.6
EIDS				IAmb	IAmb	04 45 41.0	
	comp=Z,14nm,0.7s						
CTA	Charters Tower	20.83	253	P	P	04 46 03.1	-1.0
	comp=Z,4.3nm,0.8s,baz=75,slow=12,SNR=3.5						
CTAO	Charters Tower	20.83	253	P	P	04 46 05.2	+1.1
CTAO				IAmb	IAmb	04 46 07.9	
	comp=Z,6.0nm,0.9s						
COEN	Coen	23.58	270	P	P	04 46 32.1	+0.3
BKZ	Black Stump Fm	25.17	163	P	P	04 46 45.8	-0.2
BKZ				IAmb	IAmb	04 47 01.7	
	comp=Z,35nm,1.5s						
STKA	Stephens Creek	28.89	230	P	P	04 47 20.2	+0.9
	comp=Z,5.1nm,0.8s,baz=50,slow=7.9,SNR=9.9						
STKA	Stephens Creek	28.89	230	P	P	04 47 19.4	+0.1
WB0	Warramunga Arr	31.89	257	P	P	04 47 45.3	-0.6
WB0				IAmb	IAmb	04 47 46.0	
	comp=Z,5.6nm,0.7s						
WB2	Warramunga Arr	31.93	257	P	P	04 47 45.8	-0.6
WB2				IAmb	IAmb	04 47 46.2	
	comp=Z,3.5nm,0.8s						
WRA	Warramunga Arr	31.95	257	P	P	04 47 45.8	-0.6
	comp=Z,2.7nm,0.7s,baz=87,slow=9.1,SNR=15						
WRA	Warramunga Arr	31.95	257	P	P	04 47 45.5	-0.9
AS31	Alice Springs	32.73	250	P	P	04 47 52.8	-0.5
AS31				IAmb	IAmb	04 47 54.0	
	comp=Z,4.1nm,0.5s						
ASAR	Alice Springs	32.73	250	P	P	04 47 53.1	-0.2
	comp=Z,9.1nm,0.7s,baz=79,slow=8.9,SNR=24						
ASAR	Alice Springs	32.73	250	P	P	04 47 53.2	-0.1
BBOO	Buckleboo	33.49	233	P	P	04 48 00.2	+0.5
FORT	Forrest	39.27	240	P	P	04 48 49.2	+0.4
FITZ	Fitzroy Crossi	40.16	260	P	P	04 48 57.1	+0.7
	comp=Z,8.0nm,0.7s,baz=106,slow=7.5,SNR=5.8						
FITZ	Fitzroy Crossi	40.16	260	P	P	04 48 56.6	+0.2
FITZ				IAmb	IAmb	04 48 57.5	
	comp=Z,7.1nm,0.7s						
MORW	Morawa	49.29	245	P	P	04 50 09.0	+0.4
SONM	Songino Array	82.99	324	P	P	04 53 44.7	+1.2
	comp=Z,0.6nm,0.5s,baz=141,slow=7.1,SNR=5.8						

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*IDC **05** 04:43:31.2±2.0, 8°.52S×125°.32E, h0km, mb3.8/1, mb1 3.6/5, mb1mx3.5/41, mbtmp3.5/5, ML3.2/4, MS3.3/1, Ms1 3.5/1, ms1mx2.4/36, Error ellipse: s-maj=38.2km s-min=27.4km az=87.0*

ISC 05 04:43:35.6±1.5**, 8°.6S**±0°.1×**125°.5E**±0°.1**, h35km, n6, σ1s.98**/7**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	2.36	228	Pn	Pn	04 44 10.5	-1.5
	3.6nm,0.3s,baz=281,slow=5.2,SNR=1.3						
BATI				Sn	Sn	04 44 41.9	+2.1
	12nm,0.3s,baz=164,slow=23,SNR=6.7						
FITZ	Fitzroy Crossi	9.41	179	Pn	Pn	04 45 50.5	+1.7
	0.2nm,0.3s,baz=358,slow=9.2,SNR=12						
FITZ				Sn	Sn	04 47 31.2	-2.3
	0.2nm,0.3s,baz=328,slow=17,SNR=2.9						
WRA	Warramunga Arr	14.15	144	Pn	Pn	04 46 54.7	+1.0
	0.1nm,0.3s,baz=318,slow=13,SNR=10						
ASAR	Alice Springs	17.00	153	P	P	04 47 32.8	+0.4
	0.1nm,0.3s,baz=326,slow=12,SNR=12						
CMAR	Chiang Mai Arr	37.54	316	LR	LR	05 07 41.1	
	comp=Z,43nm,18.7s,baz=206,slow=39						
MKAR	Makanchi Array	67.22	329	P	P	04 54 26.4	0.0
	0.8nm,0.9s,baz=150,slow=6.1,SNR=2.8						

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*JMA **05** 04:47:51.4±0.2, 24°.78N×122°.10E, h121km±2km, M2.7*

*TAP **05** 04:47:51.9, 24°.92N×122°.11E, h119km, ML3.5, B*

ISC 05 04:47:50.6±1.4**, 24°.92N**±0°.04×**122°.13E**±0°.03**, h128km**±7km**, n87, σ0s.85**/164**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.15	305	P	Pn	04 48 08.3	+0.4
	baz=308						
TWB1				S	Sn	04 48 20.1	-1.0
	baz=308						
NTC	Toucheng	0.28	256	*i* P	Pn	04 48 08.7	+0.4
	baz=255						
NTC				S	Sn	04 48 21.2	-0.5
	baz=255						
TIPB	Shuangxi	0.28	281	P	Pn	04 48 08.7	+0.3
	baz=280						
TIPB				S	Sn	04 48 20.7	-1.1
	baz=280						
NWF	Wu-fen Shan	0.35	296	P	Pn	04 48 09.2	+0.5
	baz=296						
NWF				*i* S	Sn	04 48 21.8	-0.5
	baz=296						
WFSB	Wu-fen Shan	0.35	296	P	Pn	04 48 09.1	+0.5
	baz=296						
WFSB				S	Sn	04 48 21.4	-0.8
	baz=296						
TWC	Suao	0.40	219	P	Pn	04 48 08.9	+0.1
	baz=216						
TWC				*e*S	Sn	04 48 23.3	+0.7
	baz=216						
TWE	Neicheng	0.46	245	*i* P	Pn	04 48 09.4	+0.3
	baz=242						
TWE				S	Sn	04 48 22.8	-0.3
	baz=242						
NDS	Dongshan	0.47	233	P	Pn	04 48 10.6	+1.4
	baz=231						
NDS				S	Sn	04 48 23.3	+0.1
	baz=231						
NHDH	Xindian Distri	0.55	275	P	Pn	04 48 10.3	+0.7
	baz=274						
NHDH				S	Sn	04 48 23.3	-0.7
	baz=274						
YM01	YM01	0.55	294	P	Pn	04 48 10.0	+0.3
	baz=294						
YM01				S	Sn	04 48 23.1	-1.0
	baz=294						
YM08	YM08	0.55	299	P	Pn	04 48 10.1	+0.4
	baz=299						
YM08				*e*S	Sn	04 48 22.5	-1.7
	baz=299						
EWUT	Wuta	0.57	214	P	Pn	04 48 10.3	+0.5
	baz=212						
EWUT				S	Sn	04 48 23.8	-0.5
	baz=212						
ENTT	Nioudou	0.58	241	P	Pn	04 48 10.8	+1.0
	baz=239						
ENTT				S	Sn	04 48 24.5	+0.1
	baz=239						
TATO	Taipei	0.58	276	P	Pn	04 48 10.8	+1.0
	baz=275						
TATO				*e*S	Sn	04 48 22.8	-1.6
	baz=275						
NWLT	Wulai	0.58	256	*i* P	Pn	04 48 10.5	+0.6
	baz=255						
NWLT				S	Sn	04 48 24.0	-0.5
	baz=255						
ENA	Nanau	0.60	216	*e*P	Pn	04 48 11.6	+1.6
	baz=213						
ENA				S	Sn	04 48 24.4	-0.3
	baz=213						
NDT	Datong Townshi	0.64	240	*i* P	Pn	04 48 11.3	+1.0
	baz=239						
NDT				*i* S	Sn	04 48 25.0	-0.2
	baz=239						
NTST	Danshui	0.66	292	P	Pn	04 48 10.8	+0.4
	baz=291						
NTST				*i* S	Sn	04 48 24.5	-0.8
	baz=291						
TWS1	Kuangyinshan	0.67	286	P	Pn	04 48 11.1	+0.6
	baz=285						
TWS1				S	Sn	04 48 24.9	-0.6
	baz=285						
PCYT	Pengchaiyu	0.71	356	*i* P	Pn	04 48 11.9	+1.2
	baz=357						
PCYT				*e*S	Sn	04 48 25.3	-0.8
	baz=357						
YHNB	Yeheng	0.73	250	P	Pn	04 48 11.3	+0.3
	baz=249						
YHNB				S	Sn	04 48 25.3	-1.1
	baz=249						
NSK	Sanguang	0.74	251	P	Pn	04 48 11.4	+0.4
	baz=249						
NSK				S	Sn	04 48 25.5	-1.0
	baz=249						
NTY	Taoyuan	0.76	276	P	Pn	04 48 11.8	+0.7
	baz=275						
NTY				S	Sn	04 48 27.2	+0.6
	baz=275						
NNSB	Datong	0.83	234	P	Pn	04 48 12.7	+0.7
	baz=233						
NNSB				S	Sn	04 48 27.4	-0.6
	baz=233						
NNS	Nan Shan	0.83	235	P	Pn	04 48 12.9	+0.9
	baz=233						
NNS				S	Sn	04 48 27.4	-0.7
	baz=233						
NCUH	Zhongli	0.85	273	*i* P	Pn	04 48 12.9	+1.0
	baz=273						
NCUH				S	Sn	04 48 28.2	+0.1
	baz=273						
JYNG	Yonagunijimaku	0.88	122	P	Pn	04 48 12.3	+0.2
JYNG				S	Sn	04 48 27.4	-1.1
ETL	Fush Village	0.89	211	P	Pn	04 48 12.6	+0.3
	baz=210						
ETL				S	Sn	04 48 27.5	-1.2
	baz=210						
NACB	Ninganchiao	0.89	213	*e*P	Pn	04 48 11.9	-0.3
	baz=212						
NACB				*e*S	Sn	04 48 27.2	-1.4
	baz=212						
ETLH	Xiulin Townshi	0.92	220	P	Pn	04 48 12.8	+0.1
	baz=218						
ETLH				*e*S	Sn	04 48 27.9	-1.4
	baz=218						
YOJ	Yonaguni jima	0.93	119	P	Pn	04 48 13.3	+0.8
	baz=119						
YOJ				*e*S	Sn	04 48 28.8	-0.4
	baz=119						
YOJ	Yonaguni jima	0.93	119	P	Pn	04 48 12.9	+0.3
YOJ				*e*S	Sn	04 48 28.3	-0.9
NJD	Zhudong	0.96	259	S	Sn	04 48 29.7	-0.1
	baz=258						
TWD	Chiawan	0.97	210	P	Pn	04 48 12.7	-0.2
	baz=208						
TWD				*e*S	Sn	04 48 28.4	-1.5
	baz=208						
NHW	Xinwu Township	0.98	275	P	Pn	04 48 14.0	+0.9
	baz=274						
NHW				*e*S	Sn	04 48 31.0	+0.8
	baz=274						
HSN1	Hsinchu	1.02	262	S	Sn	04 48 30.5	-0.1
	baz=261						
SBCB	Hsinchu	1.04	263	P	Pn	04 48 15.2	+1.5
	baz=262						
SBCB				S	Sn	04 48 31.5	+0.4
	baz=262						
FUSS	Fushou	1.04	230	*i* P	Pn	04 48 14.9	+0.9
	baz=229						
FUSS				*i* S	Sn	04 48 31.5	-0.2
	baz=229						
LIOB	Emei	1.04	255	*i* P	Pn	04 48 14.6	+0.9
	baz=254						
LIOB				*i* S	Sn	04 48 31.0	-0.2
	baz=254						
HSN	Hsinchu	1.06	264	P	Pn	04 48 14.3	+0.5
	baz=264						
HSN				S	Sn	04 48 30.6	-0.7
	baz=264						
NSTT	Nanjuang	1.06	254	*i* P	Pn	04 48 14.6	+0.7
	baz=253						
NSTT				S	Sn	04 48 30.4	-1.1
	baz=253						
TWT	Tachien	1.09	233	P	Pn	04 48 15.9	+1.5
	baz=232						
TWT				S	Sn	04 48 32.3	-0.1
	baz=232						
WHF	Hehuan Shan	1.10	226	P	Pn	04 48 15.6	+0.8
	baz=224						
WHF				S	Sn	04 48 32.4	-0.6
	baz=224						
TDCB	Techi	1.10	233	P	Pn	04 48 15.4	+1.0
	baz=232						
TDCB				S	Sn	04 48 32.3	-0.2
	baz=232						
TEYL	Yanliau Villag	1.15	205	P	Pn	04 48 15.7	+0.9
	baz=204						
TEYL				S	Sn	04 48 32.8	-0.3
	baz=204						
CHGB	Renai	1.22	226	P	Pn	04 48 17.0	+1.3
	baz=224						
CHGB				S	Sn	04 48 34.5	-0.3
	baz=224						
WHP	Taichung City	1.25	239	*i* P	Pn	04 48 16.9	+1.1
	baz=238						
WHP				*i* S	Sn	04 48 34.3	-0.7
	baz=238						
NMLH	Miaoli	1.27	253	*i* P	Pn	04 48 17.2	+1.2
	baz=252						
NMLH				*i* S	Sn	04 48 34.8	-0.6
	baz=252						
OWD	Renai	1.29	222	*i* P	Pn	04 48 17.4	+1.0
	baz=221						
OWD				*i* S	Sn	04 48 35.0	-1.0
	baz=221						
NSY	Sanyi	1.34	248	P	Pn	04 48 17.8	+1.1
	baz=247						
NSY				S	Sn	04 48 36.9	+0.2
	baz=247						
TWQ1	Liyutan	1.36	245	P	Pn	04 48 17.5	+0.6
	baz=244						
TWQ1				S	Sn	04 48 36.7	-0.2
	baz=244						
WCS	Beigang Elemen	1.40	232	P	Pn	04 48 18.4	+1.1
	baz=231						
WCS				S	Sn	04 48 37.8	0.0
	baz=231						
DPDB	Guoxing	1.41	231	P	Pn	04 48 19.1	+1.5
	baz=230						
DPDB				S	Sn	04 48 38.5	+0.5
	baz=230						
WDJ	Dajia District	1.47	247	P	Pn	04 48 18.9	+0.8
	baz=246						
WDJ				S	Sn	04 48 39.1	0.0
	baz=246						
SMLT	Sun Moon Lake	1.52	227	*i* P	Pn	04 48 20.0	+1.1
	baz=226						
SMLT				S	Sn	04 48 40.9	+0.5
	baz=226						
TCU	Taichung	1.53	240	P	Pn	04 48 20.0	+1.2
	baz=239						
TCU				S	Sn	04 48 40.6	+0.3
	baz=239						
TYC	Yuchr	1.54	229	P	Pn	04 48 19.8	+0.9
	baz=228						
TYC				S	Sn	04 48 40.8	+0.4
	baz=228						
SSLB	Suanglung	1.55	224	P	Pn	04 48 20.4	+1.2
	baz=223						
SSLB				S	Sn	04 48 41.3	+0.3
	baz=223						
HGSD	Ruisui	1.56	204	P	Pn	04 48 19.6	+0.4
	baz=203						
HGSD				S	Sn	04 48 40.3	-0.7
	baz=203						
WWF	Wufeng	1.57	236	P	Pn	04 48 20.4	+1.2
	baz=235						
WWF				S	Sn	04 48 41.0	-0.1
	baz=235						
IRIF	Iriomote-Funau	1.57	111	P	Pn	04 48 20.0	+0.7
IRIF				S	Sn	04 48 40.7	-0.5
WNT	Mingjian	1.68	232	P	Pn	04 48 21.5	+1.0
	baz=231						
WNT				S	Sn	04 48 43.8	+0.5
	baz=231						
YULB	Yu-li	1.70	207	*e*P	Pn	04 48 20.1	-0.7
	baz=206						
YULB				*e*S	Sn	04 48 41.7	-2.2
	baz=206						
JKRS	Kuro-shima	1.84	111	*e*S	Sn	04 48 47.5	+0.6
ALS	Alishan	1.85	221	P	Pn	04 48 24.0	+1.1
	baz=220						
ALS				S	Sn	04 48 47.7	+0.1
	baz=220						
CHN5	Tsauling	1.87	225	P	Pn	04 48 24.0	+1.1
	baz=224						
CHN5				S	Sn	04 48 47.7	+0.2
	baz=224						
WRL	Guolierlin Hig	1.89	238	P	Pn	04 48 23.4	+0.3
	baz=237						
WRL				*e*S	Sn	04 48 46.5	-1.3
	baz=237						
JIJ	Ishigaki jima	1.92	106	P	Pn	04 48 24.1	+0.7
JIJ				S	Sn	04 48 47.5	-1.0
ELDTW	Lidau	2.00	211	*i* P	Pn	04 48 25.7	+1.2
	baz=209						
JISG	Ishigakijimahi	2.01	99	P	Pn	04 48 25.8	+1.2
JISG				*e*S	Sn	04 48 50.2	-0.4
EDH	Donghe	2.08	201	*e*P	Pn	04 48 25.1	-0.4
	baz=200						
EDH				*e*S	Sn	04 48 50.8	-1.3
	baz=200						
CHN4	Tsaushan	2.10	222	*e*P	Pn	04 48 24.9	-0.7
	baz=221						
CHN4				*e*S	Sn	04 48 51.4	-1.1
	baz=221						
CHY	Chiayi	2.10	228	P	Pn	04 48 26.3	+0.7
	baz=227						
CHY				S	Sn	04 48 52.7	+0.1
	baz=227						
TPUB	Ta-pu	2.11	221	P	Pn	04 48 26.6	+0.8
	baz=219						
TPUB				S	Sn	04 48 53.1	+0.2
	baz=219						
STYT	Tauyuan	2.15	216	P	Pn	04 48 27.2	+0.9
	baz=215						
WTP	Ta-pu	2.17	220	*i* P	Pn	04 48 26.9	+0.4
	baz=219						
WTP				S	Sn	04 48 54.1	0.0
	baz=219						
TWK	Hsinying	2.23	223	P	Pn	04 48 27.6	+0.4
	baz=221						
TWK				S	Sn	04 48 55.5	+0.1
	baz=221						
CHN1	Nanshi	2.26	221	*i* P	Pn	04 48 28.3	+0.5
	baz=219						
CHN1				S	Sn	04 48 56.1	-0.1
	baz=219						
MATB	Ma-tsu	2.32	302	*e*P	Pn	04 48 28.7	+0.3
	baz=301						
SLGT	Liugui	2.35	215	P	Pn	04 48 29.7	+0.9
	baz=214						
SLGT				S	Sn	04 48 58.3	+0.2
	baz=214						
JTJ	Tarama	2.36	96	*e*S	Sn	04 48 57.9	-0.3
XPSS	Dashiqiu	2.65	319	*e*P	Pn	04 48 32.6	0.0
	baz=319						
LYJJ	Jianjiangzhen	2.68	308	*e*P	Pn	04 48 33.2	+0.3
	baz=307						
PHUB	P'eng-hu	2.72	240	*e*P	Pn	04 48 33.1	-0.4
	baz=238						
PHUB				*e*S	Sn	04 49 03.9	-2.6
	baz=238						
PTMZ	Houxiangcun	2.73	273	P	Pn	04 48 34.3	+0.7
	baz=272						
PTMZ				S	Sn	04 49 05.8	-0.9
	baz=272						
EAST	Anshuo	2.78	205	P	Pn	04 48 35.4	+1.0
	baz=204						
VCHM	Qimei	3.00	236	*e*P	Pn	04 48 36.9	-0.2
	baz=235						
VCHM				*e*S	Sn	04 49 10.6	-2.3
	baz=235						

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*IDC **05** 05:15:43.3±1.4, 8°.07S×125°.30E, h0km, mb4.0/3, mb1 4.2/7, mb1mx3.9/31, mbtmp4.0/7, ML3.7/4, MS2.9/2, Ms1 2.9/2, ms1mx2.4/39, Error ellipse: s-maj=39.6km s-min=20.4km az=82.0*

*DJA **05** 05:15:46.8±0.5, 8°S±3°×12°5E±°, h10km, M4.2/6, mb4.5/6, mB4.8/2, MLv4.0/6, Mw(mB)4.1/2*

ISC 05 05:15:46.3±1.0**, 8°.31S**±0°.07×**125°.23E**±0°.08**, h24km, n21, σ1s.94**/21**, mb4.0**/3**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.73	213	P	Pb	05 16 18.3	+0.8
SOEI	Soe	1.73	213	P	Pb	05 16 18.8	+1.3
BATI	Baumata	2.44	219	Pn	Pb	05 16 28.1	-1.5
	28nm,0.3s,baz=48,slow=0.6,SNR=10						
BATI				Sn	Sb	05 16 59.7	+0.3
	21nm,0.3s,baz=153,slow=23,SNR=13						
BATI	Baumata	2.44	219	P	Pb	05 16 27.6	-2.0
BATI				S	Sb	05 16 58.8	-0.5
MMRI	Maumere	2.98	263	P	Pn	05 16 31.2	-0.9
MMRI	Maumere	2.98	263	P	Pn	05 16 33.7	+1.6
EDFI	Ende, Flores	3.53	263	P	Pn	05 16 40.2	+0.4
BSSI	Bau Bau, Buton	5.17	294	P	Pn	05 17 00.7	-1.6
MTN	Manton Dam	7.34	128	P	Pb	05 17 44.4	-8.7
	21nm,0.6s						
PLAI	Plampang	7.39	265	P	Pn	05 17 31.6	-1.2
	0.2nm45nm,0.8s						
PLAI	Plampang	7.39	265	P	Pn	05 17 35.9	+3.1
KNRA	Kununurra	8.10	155	P	Pn	05 17 49.8	+7.3
	25nm,0.8s						
FITZ	Fitzroy Crossi	9.74	178	Pn	Pn	05 18 07.0	+2.0
	0.3nm,0.3s,baz=356,slow=10.0,SNR=15						
FITZ				Sn	Sn	05 19 51.0	-2.7
	0.9nm,0.3s,baz=142,slow=7.4,SNR=13						
FITZ	Fitzroy Crossi	9.74	178	P	Pn	05 18 10.6	+5.6

	12nm,1.1s						
WRA	**Warramunga Arr**	**14.54**	**144**	Pn	**Pn**	**05 19 11.5**	**+0.8**
	0.4nm,0.3s,baz=317,slow=13,SNR=34						
WRA				Sn	**Sn**	**05 21 50.4**	**-0.9**
	0.4nm,0.3s,baz=316,slow=26,SNR=5.9						
ASAR	**Alice Springs**	**17.39**	**152**	P	**P**	**05 19 51.6**	**+3.0**
	0.3nm,0.3s,baz=334,slow=12,SNR=21						
ASAR				S	**Sn**	**05 22 56.2**	**-4.3**
	0.1nm,0.3s,baz=320,slow=20,SNR=4.9						
LEM	**Lembang**	**17.53**	**274**	LR	LR	05 26 54.5	
	comp=Z,57nm,20.5s,baz=62,slow=38						
CMAR	**Chiang Mai Arr**	**37.15**	**316**	P	**P**	**05 22 56.0**	**+0.4**
	1.6nm,0.3s,baz=128,slow=6.8,SNR=4.9						
KSRS	**Korea Array**	**45.59**	**3**	LR	LR	05 47 06.2	
	comp=Z,8.3nm,18.0s,baz=190,slow=42						
MKAR	**Makanchi Array**	**66.83**	**329**	P	**P**	**05 26 35.8**	**-0.3**
	0.4nm,0.5s,baz=115,slow=7.0,SNR=4.2						
ZALV	**Zalesovo Beam**	**70.75**	**336**	P	**P**	**05 26 59.2**	**-1.1**
	0.4nm,0.3s,baz=133,slow=10,SNR=1.7						

NOU ***05*** *05:27:56.1, 38°.29S×176°.03E, h208^{km}, mb3.8/7, North Island, New Zealand*

WEL 05 05:28:02.8±1.0**, 38°S**±8°×**17°6E**±°**, h148**^{km}±8^{km}**, M2.7**/26, **ML2.7**/6, **MLv2.7**/26**, Error ellipse: s-maj=0.0km s-min=0.0km az=173.3, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HSRZ	**Hossack Road**	**0.16**	**70**	P	Pn	05 28 23.8	+1.0
ALRZ	**Allen Road**	**0.30**	**131**	P	Pn	05 28 23.8	+0.7
TLZ	**Tolley Road**	**0.41**	**275**	P	Pn	05 28 24.5	+0.9
TLZ				S	Sn	05 28 42.4	+3.1
WATZ	**Wairara**	**0.42**	**216**	P	Pn	05 28 23.8	+0.3
LIRZ	**Lichensteins R**	**0.45**	**36**	P	Pn	05 28 29.7	+6.0
MRHZ	**Matea Rd**	**0.55**	**149**	P	Pn	05 28 22.3	-1.9
MRHZ				S	Sn	05 28 41.6	+1.0
RATZ	**Rangitukua**	**0.55**	**204**	P	Pn	05 28 24.6	+0.4
MUGZ	**Murupara**	**0.57**	**101**	P	Pn	05 28 24.7	+0.4
RITZ	**Rihia Road**	**0.63**	**194**	P	Pn	05 28 25.4	+0.7
OPRZ	**Ohinepanea**	**0.65**	**37**	P	Pn	05 28 21.4	-3.4
TGRZ	**Tauranga**	**0.66**	**14**	P	Pn	05 28 25.3	+0.5
KATZ	**Kakaramea**	**0.67**	**205**	P	Pn	05 28 25.5	+0.4
RTZ	**Ruatahuna**	**0.77**	**109**	P	Pn	05 28 25.9	+0.3
RTZ				S	Sn	05 28 44.7	+1.7
TOZ	**Tahuroa Road**	**0.77**	**325**	P	Pn	05 28 26.1	+0.6
MTHZ	**Maungataniwha**	**0.78**	**128**	P	Pn	05 28 26.2	+0.5
MTHZ				S	Sn	05 28 44.7	+1.5
NTVZ	**North Tongarir**	**0.79**	**202**	P	Pn	05 28 26.4	+0.6
KRVZ	**Karewarewa**	**0.80**	**204**	P	Pn	05 28 26.0	+0.2
TMVZ	**Te Maari**	**0.80**	**200**	P	Pn	05 28 26.4	+0.5
ETVZ	**East Tongariro**	**0.81**	**199**	P	Pn	05 28 26.4	+0.4
WTVZ	**West Tongariro**	**0.83**	**206**	P	Pn	05 28 26.4	+0.2
NNVZ	**North Ngauruho**	**0.84**	**204**	P	Pn	05 28 26.8	+0.6
URZ	**Urewera**	**0.84**	**83**	P	Pn	05 28 25.8	-0.2
URZ	**Urewera**	**0.84**	**83**	P	Pn	05 28 25.9	-0.1
OTVZ	**Oturere**	**0.85**	**201**	P	Pn	05 28 26.7	+0.4
BKZ	**Black Stump Fm**	**0.87**	**157**	P	Pn	05 28 26.5	+0.2
BKZ				S	Sn	05 28 45.1	+0.7
BKZ	**Black Stump Fm**	**0.87**	**157**	P	Pn	05 28 26.4	0.0
SNVZ	**South Ngauruho**	**0.88**	**201**	P	Pn	05 28 26.7	+0.1
NGZ	**Ngauruhoe**	**0.88**	**204**	P	Pn	05 28 26.7	+0.1
NMHZ	**Naumai**	**0.94**	**141**	P	Pn	05 28 28.0	+1.0
HIZ	**Hauiti**	**0.95**	**261**	P	Pn	05 28 27.2	+0.3
HIZ	**Hauiti**	**0.95**	**261**	P	Pn	05 28 27.1	+0.1
TUVZ	**Tukino**	**0.95**	**199**	P	Pn	05 28 27.3	+0.1
FWVZ	**Far West T-bar**	**0.97**	**204**	P	Pn	05 28 27.1	-0.2
RAHZ	**Arahi**	**0.98**	**125**	P	Pn	05 28 27.9	+0.7
WHVZ	**Whangaehu Hut**	**0.98**	**202**	P	Pn	05 28 27.5	0.0
DRZ	**Dome Shelter**	**0.98**	**203**	P	Pn	05 28 27.9	+0.3
TRVZ	**Turoa**	**1.01**	**203**	P	Pn	05 28 27.7	0.0
MOVZ	**Moawhango**	**1.06**	**193**	P	Pn	05 28 27.6	-0.4
PKVZ	**Pokaka**	**1.07**	**211**	P	Pn	05 28 27.9	-0.2
SNGZ	**Shannon Statio**	**1.09**	**113**	P	Pn	05 28 28.6	+0.5
KWHZ	**Kaweka Forest**	**1.09**	**165**	P	Pn	05 28 28.5	+0.2
MTVZ	**Mangateitei**	**1.11**	**204**	P	Pn	05 28 28.4	0.0
BHHZ	**Black Hill Sta**	**1.12**	**180**	P	Pn	05 28 28.2	-0.3
ARHZ	**Aropaoanui**	**1.16**	**141**	P	Pn	05 28 29.3	+0.6
MWZ	**Matawai**	**1.16**	**89**	P	Pn	05 28 28.8	0.0
MCHZ	**McNeill Hill**	**1.19**	**155**	P	Pn	05 28 29.7	+0.7
VRZ	**Vera Road**	**1.27**	**233**	P	Pn	05 28 29.7	0.0
KRHZ	**Kereru**	**1.30**	**169**	P	Pn	05 28 30.0	-0.1
RIGZ	**Rimuhau**	**1.38**	**105**	P	Pn	05 28 31.1	+0.1
KNZ	**Kokohu**	**1.43**	**118**	P	Pn	05 28 31.3	-0.1
HAZ	**Te Kaha**	**1.49**	**66**	P	Pn	05 28 31.1	-1.0
CKHZ	**Cape Kidnapper**	**1.52**	**149**	P	Pn	05 28 32.5	+0.1
PRGZ	**Paritu Road**	**1.54**	**112**	P	Pn	05 28 32.6	0.0
PNHZ	**Pukenui**	**1.55**	**176**	P	Pn	05 28 32.0	-0.8
KAHZ	**Kahuranaki**	**1.56**	**156**	P	Pn	05 28 32.9	0.0
WAZ	**Wanganui**	**1.62**	**211**	P	Pn	05 28 32.7	-0.8
KUZ	**Kuaotunu**	**1.64**	**351**	P	Pn	05 28 33.3	-0.5
MHGZ	**Mahia Peninsul**	**1.65**	**119**	P	Pn	05 28 33.8	+0.1
LREZ	**Lake Rotokare**	**1.69**	**229**	P	Pn	05 28 33.9	-0.3
TSZ	**Takapari Road**	**1.69**	**182**	P	Pn	05 28 33.4	-0.9
CNGZ	**Carnagh Statio**	**1.69**	**95**	P	Pn	05 28 34.4	+0.2
WPHZ	**Waipukurau**	**1.72**	**170**	P	Pn	05 28 33.8	-0.8
WIAZ	**Waiheke Island**	**1.73**	**335**	P	Pn	05 28 34.5	-0.3
PUZ	**Puketiti**	**1.76**	**81**	P	Pn	05 28 36.6	+1.5
NEZ	**North Egmont**	**1.78**	**239**	P	Pn	05 28 35.0	-0.3
PXZ	**Pawanui**	**1.78**	**160**	P	Pn	05 28 34.6	-0.6
PKE	**Pukeiti**	**1.81**	**242**	P	Pn	05 28 35.1	-0.6
MBAZ	**Motutapu North**	**1.84**	**330**	P	Pn	05 28 35.5	-0.5
KHEZ	**Kahui Hut**	**1.84**	**239**	P	Pn	05 28 35.6	-0.5
WTAZ	**Waiatarua**	**1.85**	**320**	P	Pn	05 28 35.9	-0.3
OHWZ	**Ohakea**	**1.92**	**197**	P	Pn	05 28 36.0	-0.9
DVHZ	**Dannevirke**	**1.93**	**177**	P	Pn	05 28 35.5	-1.5
PRHZ	**Porangahau**	**1.95**	**167**	P	Pn	05 28 36.1	-1.1
POWZ	**Post Office Ro**	**2.04**	**186**	P	Pn	05 28 36.5	-1.7
ANWZ	**Angora Road**	**2.12**	**171**	P	Pn	05 28 37.9	-1.2
GRZ	**Great Barrier**	**2.17**	**347**	P	Pn	05 28 39.0	-0.8
PRWZ	**Pori Road**	**2.19**	**182**	P	Pn	05 28 38.4	-1.6
BFZ	**Birch Farm**	**2.32**	**176**	P	Pn	05 28 39.4	-2.1
BFZ	**Birch Farm**	**2.32**	**176**	P	Pn	05 28 39.5	-2.0
MRZ	**Mangatainoka R**	**2.32**	**189**	P	Pn	05 28 39.3	-2.3
TIWZ	**Tintock**	**2.41**	**183**	P	Pn	05 28 40.5	-2.2
OGWZ	**Otaki Gorge**	**2.54**	**195**	P	Pn	05 28 41.8	-2.5
HOWZ	**Holdsworth Sta**	**2.56**	**189**	P	Pn	05 28 41.8	-2.8
KIW	**Kapiti Island**	**2.64**	**199**	P	Pn	05 28 42.6	-3.0
TMWZ	**Te Maipa**	**2.74**	**183**	P	Pn	05 28 43.9	-2.9
MTW	**Mount Morrison**	**2.82**	**189**	P	Pn	05 28 44.5	-3.3
CAW	**Cannon Point**	**2.84**	**195**	P	Pn	05 28 44.9	-3.1
DUWZ	**D'Urville Isla**	**2.94**	**213**	P	Pn	05 28 45.8	-3.5
TRWZ	**Traveller**	**3.04**	**185**	P	Pn	05 28 47.2	-3.3
PAWZ	**Paruwai Farm**	**3.05**	**189**	P	Pn	05 28 47.0	-3.7
WEL	**Wellington**	**3.08**	**198**	P	Pn	05 28 47.5	-3.5
MSWZ	**Moikau Station**	**3.11**	**191**	P	Pn	05 28 47.7	-3.8
TCW	**Tory Channel**	**3.15**	**205**	P	Pn	05 28 48.4	-3.6
BHW	**Baring Head**	**3.17**	**196**	P	Pn	05 28 47.6	-4.6
PLWZ	**Palliser**	**3.26**	**191**	P	Pn	05 28 49.3	-4.1
TUWZ	**Tuamarina**	**3.46**	**207**	P	Pn	05 28 51.9	-4.0
NNZ	**Nelson**	**3.51**	**215**	P	Pn	05 28 52.5	-4.1
QRZ	**Quartz Range**	**3.67**	**227**	P	Pn	05 28 53.8	-4.8
QRZ	**Quartz Range**	**3.67**	**227**	P	Pn	05 28 54.0	-4.6
BSWZ	**Blackbirch Sta**	**3.74**	**206**	P	Pn	05 28 55.5	-4.1
THZ	**Tophouse**	**4.16**	**214**	P	Pn	05 29 00.7	-4.5
KHZ	**Kahutara**	**4.48**	**205**	P	Pn	05 29 04.7	-4.5
KHZ	**Kahutara**	**4.48**	**205**	P	Pn	05 29 04.7	-4.5
DSZ	**Denniston Nort**	**4.69**	**223**	P	Pn	05 29 05.6	-6.5
GVZ	**Greta Valley S**	**5.14**	**206**	P	Pn	05 29 12.9	-5.1
LTZ	**Lake Taylor**	**5.27**	**212**	P	Pn	05 29 13.8	-5.9
AMCZ	**Amberley**	**5.46**	**207**	P	Pn	05 29 16.8	-5.3
OKCZ	**Okains Bay**	**5.81**	**202**	P	Pn	05 29 21.1	-5.8
MQZ	**McQueen's Vall**	**5.92**	**205**	P	Pn	05 29 21.9	-6.5
MHCZ	**Mount Hutt**	**6.18**	**212**	P	Pn	05 29 24.7	-7.1
RPZ	**Rata Peaks**	**6.54**	**214**	P	Pn	05 29 31.0	-5.7
ARCZ	**Arundel**	**6.68**	**212**	P	Pn	05 29 32.3	-6.1
TMZ	**Timaru**	**7.11**	**211**	P	Pn	05 29 37.8	-6.4
ODZ	**Otahua Downs**	**7.80**	**209**	P	Pn	05 29 47.2	-6.2
ODZ	**Otahua Downs**	**7.80**	**209**	P	Pn	05 29 47.6	-5.8

NOU ***05*** *05:30:09.9, 39°.42S×175°.98E, h40^{km}, MLv3.7/6, North Island, New Zealand*

WEL 05 05:30:10.4, 39°S±3°×**17°6E**±°**, h51**^{km}±3^{km}**, M3.6**/55**, ML3.9**/55**, MLv3.6**/55**, Error ellipse: s-maj=0.0km s-min=0.0km az=21.7, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BHHZ	**Black Hill Sta**	**0.13**	**141**	P	Pn	05 30 18.5	-0.2
BHHZ				S	Sn	05 30 24.6	+0.2
MOVZ	**Moawhango**	**0.16**	**264**	P	Pn	05 30 18.6	-0.2
MOVZ				S	Sn	05 30 24.8	0.0
TUVZ	**Tukino**	**0.27**	**297**	P	Pn	05 30 19.8	+0.2
TUVZ				S	Sn	05 30 26.8	+0.8
WNVZ	**Wahianoa**	**0.29**	**282**	P	Pn	05 30 19.7	0.0
WNVZ				S	Sn	05 30 26.8	+0.4
WHVZ	**Whangaehu Hut**	**0.31**	**290**	P	Pn	05 30 20.0	0.0
WHVZ				S	Sn	05 30 27.1	+0.3
ETVZ	**East Tongariro**	**0.32**	**323**	P	Pn	05 30 20.2	+0.2
ETVZ				S	Sn	05 30 27.6	+0.8
SNVZ	**South Ngauruho**	**0.32**	**309**	P	Pn	05 30 20.2	+0.2
SNVZ				S	Sn	05 30 27.6	+0.7
OTVZ	**Oturere**	**0.32**	**315**	P	Pn	05 30 20.3	+0.2
OTVZ				S	Sn	05 30 27.7	+0.8
DRZ	**Dome Shelter**	**0.33**	**290**	P	Pn	05 30 20.3	0.0
TRVZ	**Turoa**	**0.33**	**286**	P	Pn	05 30 20.2	0.0
TRVZ				S	Sn	05 30 27.4	+0.2
TMVZ	**Te Maari**	**0.34**	**324**	P	Pn	05 30 20.4	+0.2
TMVZ				S	Sn	05 30 27.5	+0.4
FWVZ	**Far West T-bar**	**0.34**	**293**	P	Pn	05 30 20.3	0.0
FWVZ				S	Sn	05 30 27.6	+0.2
NGZ	**Ngauruhoe**	**0.35**	**307**	P	Pn	05 30 20.5	+0.2
NGZ				S	Sn	05 30 28.4	+1.0
KWHZ	**Kaweka Forest**	**0.36**	**96**	P	Pn	05 30 20.7	+0.4
KWHZ				S	Sn	05 30 29.7	+2.3
NTVZ	**North Tongarir**	**0.36**	**323**	P	Pn	05 30 20.6	+0.2
NTVZ				S	Sn	05 30 28.1	+0.6
NNVZ	**North Ngauruho**	**0.37**	**314**	P	Pn	05 30 20.7	+0.2
MTVZ	**Mangateitei**	**0.38**	**271**	P	Pn	05 30 20.5	0.0
KRVZ	**Karewarewa**	**0.39**	**320**	P	Pn	05 30 20.8	+0.2
WTVZ	**West Tongariro**	**0.40**	**314**	P	Pn	05 30 20.8	0.0
KRHZ	**Kereru**	**0.41**	**129**	P	Pn	05 30 21.0	+0.2
KRHZ				S	Sn	05 30 29.9	+1.7
RITZ	**Rihia Road**	**0.42**	**349**	P	Pn	05 30 21.3	+0.4
KATZ	**Kakaramea**	**0.46**	**333**	P	Pn	05 30 21.7	+0.2
BKZ	**Black Stump Fm**	**0.47**	**62**	P	Pn	05 30 21.5	+0.1
BKZ	**Black Stump Fm**	**0.47**	**62**	P	Pn	05 30 21.6	+0.1
PKVZ	**Pokaka**	**0.49**	**282**	P	Pn	05 30 21.7	0.0
HATZ	**Hinemaiaia**	**0.51**	**12**	P	Pn	05 30 21.7	-0.1
HATZ				S	Sn	05 30 30.1	0.0
RATZ	**Rangitukua**	**0.54**	**344**	P	Pn	05 30 22.3	0.0
PNHZ	**Pukenui**	**0.56**	**161**	P	Pn	05 30 22.4	-0.1
MCHZ	**McNeill Hill**	**0.57**	**96**	P	Pn	05 30 23.8	+1.2
MRHZ	**Matea Rd**	**0.66**	**33**	P	Pn	05 30 23.6	-0.1
MRHZ				S	Sn	05 30 33.7	+0.3
TSZ	**Takapari Road**	**0.67**	**180**	P	Pn	05 30 24.0	+0.1
TSZ				S	Sn	05 30 34.7	+1.1
WATZ	**Wairara**	**0.70**	**345**	P	Pn	05 30 24.1	-0.2
NMHZ	**Naumai**	**0.72**	**66**	P	Pn	05 30 25.8	+1.2
WHTZ	**Whakaora**	**0.72**	**360**	P	Pn	05 30 24.8	+0.3
WPHZ	**Waipukurau**	**0.77**	**151**	P	Pn	05 30 24.9	-0.2
ARHZ	**Aropaoanui**	**0.81**	**81**	P	Pn	05 30 26.3	+0.6
KAHZ	**Kahuranaki**	**0.82**	**120**	P	Pn	05 30 25.8	0.0
WAZ	**Wanganui**	**0.84**	**244**	P	Pn	05 30 26.3	+0.2
MTHZ	**Maungataniwha**	**0.87**	**52**	P	Pn	05 30 26.8	+0.3
ALRZ	**Allen Road**	**0.88**	**20**	P	Pn	05 30 26.3	-0.3
WPRZ	**Whakapapatarin**	**0.88**	**10**	P	Pn	05 30 26.5	-0.1
CKHZ	**Cape Kidnapper**	**0.91**	**108**	P	Pn	05 30 27.0	+0.1
KUTZ	**Kaahu Road**	**0.91**	**353**	P	Pn	05 30 26.7	-0.2
DVHZ	**Dannevirke**	**0.92**	**170**	P	Pn	05 30 26.5	-0.6
PXZ	**Pawanui**	**0.95**	**133**	P	Pn	05 30 27.4	-0.1
PRRZ	**Plateau Road**	**0.95**	**21**	P	Pn	05 30 27.3	-0.2
OHWZ	**Ohakea**	**0.95**	**211**	P	Pn	05 30 28.2	+0.6
VRZ	**Vera Road**	**0.97**	**285**	P	Pn	05 30 27.4	-0.4
RAHZ	**Arahi**	**0.99**	**62**	P	Pn	05 30 28.8	+0.7
POWZ	**Post Office Ro**	**1.01**	**188**	P	Pn	05 30 28.0	-0.3
PRHZ	**Porangahau**	**1.02**	**150**	P	Pn	05 30 28.0	-0.5
HRRZ	**Handcock Road**	**1.03**	**14**	P	Pn	05 30 28.7	+0.1
WHHZ	**Waihua**	**1.04**	**73**	P	Pn	05 30 29.2	+0.5
GRRZ	**Galatos Road**	**1.04**	**6**	P	Pn	05 30 29.0	+0.2
HSRZ	**Hossack Road**	**1.10**	**12**	P	Pn	05 30 29.6	+0.1
TLZ	**Tolley Road**	**1.11**	**343**	P	Pn	05 30 29.1	-0.6
MUGZ	**Murupara**	**1.11**	**35**	P	Pn	05 30 29.2	-0.5
RTZ	**Ruatahuna**	**1.11**	**46**	P	Pn	05 30 29.6	-0.1
RRRZ	**Republican Roa**	**1.14**	**23**	P	Pn	05 30 29.8	-0.3
ANWZ	**Angora Road**	**1.14**	**160**	P	Pn	05 30 29.4	-0.6
PRWZ	**Pori Road**	**1.16**	**180**	P	Pn	05 30 29.9	-0.5
HLRZ	**Highlands Stat**	**1.18**	**15**	P	Pn	05 30 31.2	+0.7
LREZ	**Lake Rotokare**	**1.21**	**266**	P	Pn	05 30 31.0	+0.1
HIZ	**Hauiti**	**1.23**	**315**	P	Pn	05 30 31.0	-0.3
HIZ	**Hauiti**	**1.23**	**315**	P	Pn	05 30 31.0	-0.2
TARZ	**Mount Tarawera**	**1.23**	**20**	P	Pn	05 30 31.6	+0.3
SNGZ	**Shannon Statio**	**1.23**	**61**	P	Pn	05 30 31.7	+0.3
MRZ	**Mangatainoka R**	**1.30**	**193**	P	Pn	05 30 31.3	-0.9
BFZ	**Birch Farm**	**1.31**	**170**	P	Pn	05 30 31.2	-1.1
BFZ	**Birch Farm**	**1.31**	**170**	P	Pn	05 30 31.2	-1.2
MHEZ	**Mangahewa**	**1.31**	**283**	P	Pn	05 30 32.7	+0.3
OMRZ	**Omania**	**1.32**	**14**	P	Pn	05 30 32.4	-0.1
DREZ	**Durham Road**	**1.38**	**278**	P	Pn	05 30 33.8	+0.5
KNZ	**Kokohu**	**1.38**	**75**	P	Pn	05 30 32.9	-0.4
PREZ	**Palmer Road**	**1.40**	**271**	P	Pn	05 30 34.2	+0.6
URZ	**Urewera**	**1.44**	**39**	P	Pn	05 30 33.7	-0.4
URZ	**Urewera**	**1.44**	**39**	P	Pn	05 30 33.8	-0.3
NEZ	**North Egmont**	**1.45**	**274**	P	Pn	05 30 34.7	+0.4
KHEZ	**Kahui Hut**	**1.51**	**273**	P	Pn	05 30 35.5	+0.3
CPWZ	**Castlepoint**	**1.53**	**173**	P	Pn	05 30 34.7	-0.6
MHGZ	**Mahia Peninsul**	**1.53**	**82**	P	Pn	05 30 35.0	-0.4
PKE	**Pukeiti**	**1.54**	**277**	P	Pn	05 30 36.0	+0.4
HOWZ	**Holdsworth Sta**	**1.54**	**193**	P	Pn	05 30 34.1	-1.5
OGWZ	**Otaki Gorge**	**1.55**	**203**	P	Pn	05 30 34.6	-1.0
RIGZ	**Rimuhau**	**1.56**	**65**	P	Pn	05 30 35.5	-0.3
PRGZ	**Paritu Road**	**1.57**	**73**	P	Pn	05 30 35.4	-0.5
OPRZ	**Ohinepanea**	**1.61**	**17**	P	Pn	05 30 36.2	-0.2
NMEZ	**Namu Road**	**1.61**	**268**	P	Pn	05 30 37.0	+0.5
MWZ	**Matawai**	**1.61**	**50**	P	Pn	05 30 36.4	-0.1
NBEZ	**Newall Road No**	**1.63**	**274**	P	Pn	05 30 37.1	+0.5
TGRZ	**Tauranga**	**1.68**	**8**	P	Pn	05 30 37.4	+0.1
KIW	**Kapiti Island**	**1.68**	**208**	P	Pn	05 30 36.2	-1.1
TOZ	**Tahuroa Road**	**1.69**	**348**	P	Pn	05 30 37.2	-0.4
TMWZ	**Te Maipa**	**1.72**	**182**	P	Pn	05 30 36.3	-1.7
WHRZ	**Whale Island**	**1.73**	**28**	P	Pn	05 30 39.2	+1.1
TKGZ	**Te Karaka**	**1.75**	**58**	P	Pn	05 30 38.2	-0.1
MTW	**Mount Morrison**	**1.80**	**191**	P	Pn	05 30 37.0	-2.0
CAW	**Cannon Point**	**1.85**	**201**	P	Pn	05 30 37.9	-1.7
RUGZ	**Raukumara Rang**	**1.96**	**44**	P	Pn	05 30 41.2	-0.1
CNGZ	**Carnagh Statio**	**1.97**	**63**	P	Pn	05 30 41.3	-0.1
TWGZ	**Tauwhareparae**	**1.99**	**53**	P	Pn	05 30 42.1	+0.5
TRWZ	**Traveller**	**2.02**	**186**	P	Pn	05 30 40.1	-1.9
PAWZ	**Paruwai Farm**	**2.03**	**191**	P	Pn	05 30 39.8	-2.4
MSWZ	**Moikau Station**	**2.10**	**195**	P	Pn	05 30 40.5	-2.6
WEL	**Wellington**	**2.10**	**205**	P	Pn	05 30 41.1	-2.0
DUWZ	**D'Urville Isla**	**2.11**	**227**	P	Pn	05 30 42.0	-1.2
HAZ	**Te Kaha**	**2.17**	**42**	P	Pn	05 30 43.1	-1.0
PUZ	**Puketiti**	**2.23**	**55**	P	Pn	05 30 44.2	-0.7
TCW	**Tory Channel**	**2.23**	**215**	P	Pn	05 30 42.9	-2.0
PKGZ	**Pakihiroa**	**2.23**	**49**	P	Pn	05 30 44.9	-0.1
PLWZ	**Palliser**	**2.24**	**194**	P	Pn	05 30 42.4	-2.7
WMGZ	**Waiomatatini S**	**2.48**	**52**	P	Pn	05 30 47.6	-0.7
AWAZ	**Awhitu Peninsu**	**2.54**	**336**	P	Pn	05 30 49.3	+0.1
TUWZ	**Tuamarina**	**2.55**	**216**	P	Pn	05 30 50.8	+1.5
ETAZ	**East Tamaki Re**	**2.56**	**341**	P	Pn	05 30 49.2	-0.3
MXZ	**Matakaoa Point**	**2.59**	**46**	P	Pn	05 30 49.7	-0.2
KUZ	**Kuaotunu**	**2.65**	**356**	P	Pn	05 30 50.2	-0.4
WIAZ	**Waiheke Island**	**2.67**	**346**	P	Pn	05 30 50.5	-0.4
WTAZ	**Waiatarua**	**2.69**	**336**	P	Pn	05 30 51.5	+0.3
NNZ	**Nelson**	**2.69**	**226**	P	Pn	05 30 49.7	-1.4
MBAZ	**Motutapu North**	**2.75**	**342**	P	Pn	05 30 51.7	-0.3
BSWZ	**Blackbirch Sta**	**2.81**	**214**	P	Pn	05 30 50.3	-2.6
RVAZ	**Riverhead Bore**	**2.83**	**337**	P	Pn	05 30 53.6	+0.5
ABAZ	**Army Bay**	**2.92**	**342**	P	Pn	05 30 54.3	-0.1
QRZ	**Quartz Range**	**3.00**	**240**	P	Pn	05 30 54.7	-0.7
QRZ	**Quartz Range**	**3.00**	**240**	P	Pn	05 30 54.8	-0.6
GRZ	**Great Barrier**	**3.16**	**353**	P	Pn	05 30 58.1	+0.5
THZ	**Tophouse**	**3.32**	**223**	P	Pn	05 30 57.9	-2.0
KHZ	**Kahutara**	**3.54**	**210**	P	Pn	05 30 59.3	-3.4
WCZ	**Waipu Caves**	**3.67**	**339**	P	Pn	05 31 05.1	+0.4
DSZ	**Denniston Nort**	**3.94**	**232**	P	Pn	05 31 07.0	-1.4
OUZ	**Omahuta**	**4.57**	**335**	P	Pn	05 31 17.2	+0.3
OUZ	**Omahuta**	**4.57**	**335**	P	Pn	05 31 17.1	+0.1
INZ	**Inchbonnie**	**4.77**	**224**	P	Pn	05 31 22.2	+2.5
RPZ	**Rata Peaks**	**5.67**	**219**	P	Pn	05 31 34.4	+2.3
GCSZ	**Gaunt Creek Bo**	**5.78**	**225**	P	Pn	05 31 35.2	+1.7
FOZ	**Fox Glacier**	**6.20**	**226**	P	Pn	05 31 40.3	+1.0
CTZ	**Chatham Island**	**7.06**	**130**	P	Pn	05 31 48.5	-2.5
JCZ	**Jackson Bay**	**7.12**	**227**	P	Pn	05 31 52.7	+0.7

TAP ***05*** *05:49:38.2, 25°.28N×122°.54E, h191^{km}±1^{km}, ML3.3, D*
JMA ***05*** *05:49:39.3±0.3, 25°.24N×122°.57E, h174^{km}, M2.6*

ISC 05 05:49:38.9±2.5**, 25°.23N**±0°.09×**122°.57E**±0°.04**, h181**^{km}±14^{km}**, n50, σ0^{s}.76**/93**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.57**	**248**	*e*P	**Pn**	**05 50 05.1**	**+1.1**
	baz=241						
TWB1				*e*S	**Sn**	**05 50 23.6**	**+0.4**
	baz=241						
PCYT	**Pengchaiyu**	**0.60**	**312**	*e*P	**Pn**	**05 50 04.4**	**+0.2**
	baz=309						
PCYT				*e*S	**Sn**	**05 50 22.8**	**-0.9**
	baz=309						
TIPB	**Shuangxi**	**0.72**	**250**	P	**Pn**	**05 50 04.0**	**-0.8**
	baz=244						
TIPB				S	**Sn**	**05 50 25.4**	**+0.6**
	baz=244						
NWF	**Wu-fen Shan**	**0.73**	**258**	S	**Sn**	**05 50 26.2**	**+1.2**
	baz=253						
NTC	**Toucheng**	**0.77**	**241**	*e*S	**Sn**	**05 50 25.6**	**+0.4**
	baz=236						
YOJ	**Yonaguni jima**	**0.86**	**152**	*e*P	**Pn**	**05 50 06.1**	**+0.4**
	baz=152						
YOJ				S	**Sn**	**05 50 27.1**	**+0.8**
	baz=152						
ILA	**Ilan**	**0.88**	**239**	*e*P	**Pn**	**05 50 05.1**	**-0.7**
	baz=234						
ILA				*e*S	**Sn**	**05 50 26.6**	**+0.2**
	baz=234						
TWC	**Suao**	**0.90**	**227**	*e*P	**Pn**	**05 50 05.4**	**-0.5**
	baz=222						
TWC				*e*S	**Sn**	**05 50 27.3**	**+0.6**
	baz=222						
NDS	**Dongshan**	**0.97**	**233**	P	**Pn**	**05 50 06.5**	**0.0**
	baz=229						
NDS				S	**Sn**	**05 50 27.6**	**-0.1**
	baz=229						
TWS1	**Kuangyinshan**	**1.05**	**263**	*e*P	**Pn**	**05 50 07.1**	**+0.2**
	baz=260						
TWS1				*e*S	**Sn**	**05 50 27.9**	**-0.7**
	baz=260						
EWUT	**Wuta**	**1.06**	**223**	S	**Sn**	**05 50 29.1**	**+0.3**
	baz=219						
NWLT	**Wulai**	**1.07**	**245**	P	**Pn**	**05 50 06.8**	**-0.4**
	baz=242						
NWLT				S	**Sn**	**05 50 29.0**	**0.0**
	baz=242						
ENTT	**Nioudou**	**1.08**	**238**	P	**Pn**	**05 50 08.0**	**+0.7**
	baz=234						
ENTT				*e*S	**Sn**	**05 50 29.1**	**0.0**
	baz=234						
NDT	**Datong Townshi**	**1.14**	**237**	*e*P	**Pn**	**05 50 08.5**	**+0.8**
	baz=234						
NDT				*e*S	**Sn**	**05 50 29.3**	**-0.7**
	baz=234						
YHNB	**Yeheng**	**1.22**	**243**	S	**Sn**	**05 50 30.9**	**-0.3**
	baz=240						
NSK	**Sanguang**	**1.23**	**244**	P	**Pn**	**05 50 08.7**	**+0.2**
	baz=240						
NSK				S	**Sn**	**05 50 30.2**	**-1.2**
	baz=240						
NCUH	**Zhongli**	**1.28**	**259**	*e*P	**Pn**	**05 50 09.7**	**+0.8**
	baz=255						
NCUH				*e*S	**Sn**	**05 50 31.6**	**-0.5**
	baz=255						
NNSB	**Datong**	**1.34**	**234**	P	**Pn**	**05 50 09.9**	**+0.3**
	baz=231						
NNSB				S	**Sn**	**05 50 33.1**	**-0.1**
	baz=231						
ETL	**Fush Village**	**1.37**	**219**	*e*P	**Pn**	**05 50 09.7**	**0.0**
	baz=216						
ETL				S	**Sn**	**05 50 33.3**	**-0.3**
	baz=216						
NACB	**Ninganchiao**	**1.37**	**220**	P	**Pn**	**05 50 09.7**	**0.0**
	baz=218						
NACB				S	**Sn**	**05 50 32.6**	**-0.9**
	baz=218						
IRIF	**Iriomote-Funau**	**1.38**	**130**	P	**Pn**	**05 50 09.7**	**0.0**
IRIF				S	**Sn**	**05 50 33.4**	**-0.2**
ETLH	**Xiulin Townshi**	**1.42**	**224**	P	**Pn**	**05 50 09.7**	**-0.5**
	baz=222						
ETLH				S	**Sn**	**05 50 33.1**	**-1.3**
	baz=222						
TWD	**Chiawan**	**1.44**	**218**	*e*P	**Pn**	**05 50 10.9**	**+0.6**
	baz=215						
TWD				S	**Sn**	**05 50 34.0**	**-0.7**
	baz=215						
HSN	**Hsinchu**	**1.51**	**254**	*e*P	**Pn**	**05 50 10.9**	**0.0**
	baz=252						
HSN				*e*S	**Sn**	**05 50 33.3**	**-2.5**
	baz=252						
LIOB	**Emei**	**1.52**	**248**	*e*P	**Pn**	**05 50 11.8**	**+0.7**
	baz=245						
LIOB				*e*S	**Sn**	**05 50 36.2**	**+0.2**
	baz=245						
NSTT	**Nanjuang**	**1.54**	**248**	*e*P	**Pn**	**05 50 11.8**	**+0.5**
	baz=245						
NSTT				S	**Sn**	**05 50 35.5**	**-0.8**
	baz=245						
FUSS	**Fushou**	**1.55**	**231**	*e*P	**Pn**	**05 50 12.3**	**+0.6**
	baz=229						
FUSS				*e*S	**Sn**	**05 50 36.4**	**-0.6**
	baz=229						
TWT	**Tachien**	**1.59**	**233**	*e*P	**Pn**	**05 50 12.5**	**+0.5**
	baz=230						
TWT				*e*S	**Sn**	**05 50 37.6**	**0.0**
	baz=230						
WHF	**Hehuan Shan**	**1.60**	**228**	P	**Pn**	**05 50 12.8**	**+0.5**
	baz=225						
WHF				S	**Sn**	**05 50 37.8**	**-0.4**
	baz=225						
TDCB	**Techi**	**1.61**	**233**	*e*P	**Pn**	**05 50 12.8**	**+0.7**
	baz=230						
TDCB				S	**Sn**	**05 50 37.2**	**-0.5**
	baz=230						
JKRS	**Kuro-shima**	**1.64**	**127**	P	**Pn**	**05 50 12.8**	**+0.6**
JKRS				S	**Sn**	**05 50 37.6**	**-0.4**
JIJ	**Ishigaki jima**	**1.67**	**121**	P	**Pn**	**05 50 12.5**	**0.0**
JIJ				S	**Sn**	**05 50 37.0**	**-1.5**
JISG	**Ishigakijimahi**	**1.71**	**112**	P	**Pn**	**05 50 12.6**	**-0.3**
JISG				S	**Sn**	**05 50 38.7**	**-0.5**
CHGB	**Renai**	**1.72**	**228**	P	**Pn**	**05 50 14.4**	**+1.1**
	baz=225						
CHGB				S	**Sn**	**05 50 39.6**	**-0.3**
	baz=225						
ESL	**Shilin**	**1.75**	**217**	*e*P	**Pn**	**05 50 13.7**	**+0.3**
	baz=214						
ESL				*e*S	**Sn**	**05 50 38.3**	**-1.7**
	baz=214						
OWD	**Renai**	**1.79**	**225**	*e*P	**Pn**	**05 50 14.9**	**+0.9**
	baz=223						
OWD				S	**Sn**	**05 50 41.0**	**-0.1**
	baz=223						
EGFH	**Guangfu**	**1.87**	**214**	*e*P	**Pn**	**05 50 15.6**	**+1.0**
	baz=212						
EGFH				*e*S	**Sn**	**05 50 42.1**	**-0.2**
	baz=212						
WCS	**Beigang Elemen**	**1.91**	**233**	*e*P	**Pn**	**05 50 15.2**	**+0.3**
	baz=230						
WCS				S	**Sn**	**05 50 42.4**	**-0.5**
	baz=230						
HGSD	**Ruisui**	**2.02**	**211**	*e*P	**Pn**	**05 50 17.5**	**+1.3**
	baz=209						
HGSD				*e*S	**Sn**	**05 50 44.6**	**-0.5**
	baz=209						
JTJ	**Tarama**	**2.02**	**106**	P	**Pn**	**05 50 17.0**	**+0.8**
JTJ				S	**Sn**	**05 50 45.0**	**-0.1**
SMLT	**Sun Moon Lake**	**2.02**	**229**	*e*S	**Sn**	**05 50 45.2**	**-0.3**
	baz=226						
TYC	**Yuchr**	**2.04**	**230**	*e*P	**Pn**	**05 50 16.9**	**+0.5**
	baz=228						
TYC				*e*S	**Sn**	**05 50 46.0**	**+0.5**
	baz=228						
SSLB	**Suanglung**	**2.05**	**226**	*e*P	**Pn**	**05 50 16.8**	**+0.2**
	baz=224						
SSLB				*e*S	**Sn**	**05 50 45.9**	**0.0**
	baz=224						
EHY	**Hungye**	**2.06**	**214**	*e*P	**Pn**	**05 50 16.8**	**+0.2**
	baz=212						
EHY				*e*S	**Sn**	**05 50 46.9**	**+1.0**
	baz=212						
YULB	**Yu-li**	**2.16**	**213**	*e*P	**Pn**	**05 50 18.0**	**+0.2**
	baz=211						
YULB				*e*S	**Sn**	**05 50 46.5**	**-1.5**
	baz=211						
YUS	**Yu-Shan**	**2.27**	**221**	*e*S	**Sn**	**05 50 48.8**	**-2.2**
	baz=219						
ALS	**Alishan**	**2.35**	**224**	*e*P	**Pn**	**05 50 20.7**	**+0.6**

	baz=221						
ALS				*e*S	Sn	05 50 52.4	+0.2
	baz=221						
CHN5	Tsauling	2.37	227	*e*P	Pn	05 50 20.4	+0.2
	baz=225						
CHN5				*e*S	Sn	05 50 52.4	+0.1
	baz=225						
CHN4	Tsaushan	2.59	224	*e*S	Sn	05 50 56.2	-0.7
	baz=222						
TPUB	Ta-pu	2.61	223	*e*P	Pn	05 50 24.3	+1.4
	baz=221						
TPUB				*e*S	Sn	05 50 55.6	-1.5
	baz=221						

DJA 05 06:00:45.0±0.4,**1°N**±4°×**10°0E**±°,**h21**km±5km,**M3.1**/6, **MLv3.1**/6,**Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNSI	Mandailing Nat	0.20	228	P	Pb	06 00 51.4	+0.5
BKNI	Bangkinang	1.44	115	P	Pn	06 01 09.8	-0.1
BKNI				S	Sn	06 01 28.1	-0.1
PPI	Padang Panjang	1.53	154	P	Pn	06 01 11.6	+0.5
PPI				S	Sn	06 01 30.8	+0.4
PDSI	Padang	1.97	158	P	Pn	06 01 17.4	+0.2
PDSI				S	Sb	06 01 43.1	-1.2
GSI	Gunungsitoli	2.19	280	P	Pn	06 01 19.4	-0.7
MTKI	Muara Teweh, K	15.28	97	P	P	06 04 24.0	-0.3

NNC 05 06:08:52.0±4.2,**37°.02N**×**70°.29E,h0**km**,mb4.0,mpv3.7, 2C-3D,Error ellipse: s-maj=33.7km s-min=31.2km az=40.0,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.08	2	⇑Pn	Pn	06 10 23.9	+0.8
	1.2nm,0.3s,baz=180,slow=12,SNR=23						
KK31				⇓Sn	Sn	06 11 34.6	+1.3
	1.0nm,0.3s,baz=184,slow=24,SNR=5.3						
AAK	Ala-Archa	6.47	29	⇑Pn	Pn	06 10 28.6	-0.1
	2.0nm,0.5s						
AAK				⇓Sn	Sn	06 11 44.2	+0.9
	14nm,0.7s						
TKM2	Tokmak 2	7.16	33	⇓Pn	Pn	06 10 37.5	-0.7
	5.6nm,0.5s						

*NEIC **05** 06:50:22.3±0.5, 36°.939N±0°.010×97°.85W±0°.01, h4km±4km, Error ellipse: s-maj=1.7km s-min=1.4km az=61.0*

TUL 05 06:50:21.8±0.7,**36°.942N**±0°.010×**97°.849W**±0°.007, **h2**km±6km,**ML2.5,mb_Lg2.1**/11(NEIC),**Error ellipse: s-maj=1.4km s-min=0.7km az=166.0,Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.09	185	Pg	Pg	06 50 24.1	+0.6
GC02				Sg	Sg	06 50 25.7	+0.9
KAN14	Manchester OK	0.09	279	Pg	Pg	06 50 24.1	+0.5
KAN14				Sg	Sg	06 50 25.7	+0.8
KAN17	Caldwell West	0.12	33		Pg	06 50 24.8	+0.6
KAN17				Sg	Sg	06 50 26.9	+1.1
KAN05	Bluff City Nor	0.17	354	Pg	Pg	06 50 25.6	+0.6
KAN01	Argonia South	0.22	19	Pg	Pg	06 50 26.6	+0.5
KAN09	Caldwell North	0.27	44	Pg	Pg	06 50 27.5	+0.5
KAN09				Sg	Sg	06 50 31.3	+0.8
KAN10	Anthony SW Sta	0.27	313	Pg	Pg	06 50 27.4	+0.4
KAN10				Sg	Sg	06 50 31.2	+0.8
KAN08	Anthony NE Sta	0.30	341		Pg	06 50 28.1	+0.5
KAN06	Argonia West S	0.30	359		Pg	06 50 28.2	+0.5
KAN13	South Haven SW	0.30	77	Pg	Pg	06 50 28.3	+0.6
KAN13				Sg	Sg	06 50 32.5	+0.9
OK032	Salt Plains WL	0.32	245	Pg	Pg	06 50 28.3	+0.4
OK032				Sg	Sg	06 50 32.9	+0.8
KAN16	Harper SW Stat	0.33	329	Pg	Pg	06 50 28.6	+0.4
KAN12	Harper NE Stat	0.37	341	Pg	Pg	06 50 29.4	+0.4
CROK	Carrier	0.45	194	Pg	Pg	06 50 30.7	+0.3
CROK				Sg	Sg	06 50 37.0	+0.8
BLOK	Blackwell	0.54	109	Pg	Pg	06 50 32.4	+0.3
BLOK				Sg	Sg	06 50 39.9	+0.7
T35A	Sooner Cattle	1.07	91	Pg	Pg	06 50 42.1	-0.2
OK029	Liberty Lake	1.19	164		Pg	06 50 44.1	-0.4
QUOK	Quay	1.20	130		Pg	06 50 44.3	-0.4
OK031	S. Brethren Rd	1.28	140	Pn	Pg	06 50 45.8	-0.5
BCOK	Bluff Creek, N	1.30	171	Pn	Pg	06 50 46.1	-0.6
OK030	Cody Creek RV	1.33	139		Pg	06 50 46.8	-0.5
OK025	Westminster Rd	1.42	163		Pn	06 50 48.5	-0.1
OKCFA	Oklahoma City	1.56	168	IAmb_Lg		06 51 14.2	
	comp=Z,21nm,0.8s						
R32A	Long Quarter,	1.63	335	Pn	Pb	06 50 52.1	-0.5
FNO	Franklin	1.72	168	Pn	Pn	06 50 53.1	+0.3
FNO				IAmb_Lg		06 51 20.8	
	comp=Z,15nm,0.8s						
WMOK	Wichita Mounta	2.33	199	Pn	Pn	06 51 02.0	+0.9
KSU1	Kansas State U	2.37	24	IAmb_Lg		06 51 35.7	
	comp=Z,7.2nm,0.8s						
X37A	Clayton	3.09	139	IAmb_Lg		06 52 05.1	
	comp=Z,7.4nm,0.7s						
AMTX	Amarillo	3.73	238		Sg	06 52 19.8	-1.7
U40A	Yellville	4.06	97	IAmb_Lg		06 52 34.1	
	comp=Z,3.1nm,0.7s						

*NOU **05** 07:07:17.9, 39°.56S×178°.03E, h62km, MLv4.2/10, Off E. Coast of N. Island, N.Z.*

WEL 05 07:07:20.5,39°S±3°×**17°8E**±°,**h46**km±7km,**M3.8**/60, **ML4.0**/61,**MLv3.8**/60,**Error ellipse: s-maj=0.0km s-min=0.0km az=89.1,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MHGZ	Mahia Peninsul	0.26	12	P	Pn	07 07 29.3	+0.4
KNZ	Kokohu	0.40	341	P	Pn	07 07 30.4	+0.1
KNZ				S	Sn	07 07 38.4	+1.1
PRGZ	Paritu Road	0.48	4	P	Pn	07 07 31.4	+0.1
PRGZ				S	Sn	07 07 40.2	+1.2
WHHZ	Waihua	0.57	305	P	Pn	07 07 32.9	+0.5
WHHZ				S	Sn	07 07 42.3	+1.4
CKHZ	Cape Kidnapper	0.64	246	P	Pn	07 07 33.7	+0.4
CKHZ				S	Sn	07 07 44.4	+1.9
ARHZ	Aropaoanui	0.67	282	P	Pn	07 07 34.3	+0.7
ARHZ				S	Sn	07 07 44.8	+1.6
RIGZ	Rimuhau	0.70	355	P	Pn	07 07 34.2	0.0
RIGZ				S	Sn	07 07 44.8	+0.9
SNGZ	Shannon Statio	0.73	328	P	Pn	07 07 34.8	+0.3
SNGZ				S	Sn	07 07 45.2	+0.5
RAHZ	Arahi	0.76	310	P	Pn	07 07 35.3	+0.4
RAHZ				S	Sn	07 07 46.2	+0.8
KAHZ	Kahuranaki	0.84	242	P	Pn	07 07 36.2	+0.2
NMHZ	Naumai	0.86	291	P	Pn	07 07 36.9	+0.6
NMHZ				S	Sn	07 07 48.9	+1.1
MCHZ	McNeill Hill	0.89	267	P	Pn	07 07 37.2	+0.7
MCHZ				S	Sn	07 07 49.6	+1.3
MTHZ	Maungataniwha	0.95	305	P	Pn	07 07 37.7	+0.2
MTHZ				S	Sn	07 07 50.0	0.0
CNGZ	Carnagh Statio	0.96	17	P	Pn	07 07 37.5	-0.1
CNGZ				S	Sn	07 07 49.9	-0.2
TKGZ	Te Karaka	0.96	0	P	Pn	07 07 37.4	-0.2
TKGZ				S	Sn	07 07 50.0	-0.2
RAGZ	Rawiri	0.96	340	P	Pn	07 07 37.7	0.0
RAGZ				S	Sn	07 07 50.2	-0.2
PXZ	Pawanui	0.98	230	P	Pn	07 07 37.5	-0.3
PXZ				S	Sn	07 07 51.5	+0.9
RTZ	Ruatahuna	1.03	319	P	Pn	07 07 38.8	+0.1
RTZ				S	Sn	07 07 51.8	-0.2
BKZ	Black Stump Fm	1.07	282	P	Pn	07 07 39.4	+0.3
BKZ				S	Sn	07 07 53.0	+0.1
BKZ	Black Stump Fm	1.07	282	P	Pn	07 07 39.4	+0.3
MWZ	Matawai	1.10	347	P	Pn	07 07 39.2	-0.2
MWZ				S	Sn	07 07 52.8	-0.7
KWHZ	Kaweka Forest	1.10	269	P	Pn	07 07 39.8	+0.3
KWHZ				S	Sn	07 07 53.9	+0.3
KRHZ	Kereru	1.16	258	P	Pn	07 07 40.3	0.0
KRHZ				S	Sn	07 07 54.8	-0.3
TWGZ	Tauwhareparae	1.23	5	P	Pn	07 07 41.2	-0.1
TWGZ				S	Sn	07 07 57.0	+0.2
MRHZ	Matea Rd	1.24	297	P	Pn	07 07 42.1	+0.6
MUGZ	Murupara	1.25	318	P	Pn	07 07 41.7	+0.3
WPHZ	Waipukurau	1.26	238	P	Pn	07 07 41.5	-0.3
PRHZ	Porangahau	1.27	227	P	Pn	07 07 41.0	-0.7
URZ	Urewera	1.28	333	P	Pn	07 07 41.8	-0.1
URZ	Urewera	1.28	333	P	Pn	07 07 41.8	-0.1
PNHZ	Pukenui	1.36	248	P	Pn	07 07 42.9	-0.2
PUZ	Puketiti	1.37	14	P	Pn	07 07 42.2	-1.0
BHHZ	Black Hill Sta	1.38	266	P	Pn	07 07 43.5	+0.1
ALRZ	Allen Road	1.44	305	P	Pn	07 07 44.4	+0.3
RUGZ	Raukumara Rang	1.44	355	P	Pn	07 07 43.4	-0.9
PRRZ	Plateau Road	1.45	308	P	Pn	07 07 44.9	+0.7
HATZ	Hinemaiaia	1.45	290	P	Pn	07 07 45.0	+0.7
RRRZ	Republican Roa	1.48	315	P	Pn	07 07 45.2	+0.5
ANWZ	Angora Road	1.49	224	P	Pn	07 07 44.0	-0.8
EDRZ	Edgecumbe	1.56	326	P	Pn	07 07 45.5	-0.2
TARZ	Mount Tarawera	1.56	318	P	Pn	07 07 46.3	+0.4
DVHZ	Dannevirke	1.57	235	P	Pn	07 07 45.2	-0.7
WPRZ	Whakapapatarin	1.58	304	P	Pn	07 07 46.8	+0.8
HRRZ	Handcock Road	1.58	309	P	Pn	07 07 46.1	0.0
TSZ	Takapari Road	1.59	245	P	Pn	07 07 45.8	-0.4
MOVZ	Moawhango	1.62	269	P	Pn	07 07 47.4	+0.8
HLRZ	Highlands Stat	1.63	314	P	Pn	07 07 47.3	+0.5
WHTZ	Whakaora	1.64	296	P	Pn	07 07 47.6	+0.7
HAZ	Te Kaha	1.65	358	P	Pn	07 07 46.4	-0.5
WMGZ	Waiomatatini S	1.65	16	P	Pn	07 07 46.2	-0.8
HSRZ	Hossack Road	1.66	311	P	Pn	07 07 47.5	+0.4
ETVZ	East Tongariro	1.67	279	P	Pn	07 07 48.2	+0.8
TMVZ	Te Maari	1.68	279	P	Pn	07 07 48.2	+0.7
MARZ	Manawahe	1.68	327	P	Pn	07 07 48.0	+0.5
WHRZ	Whale Island	1.69	336	P	Pn	07 07 47.6	0.0
RATZ	Rangitukua	1.69	288	P	Pn	07 07 48.4	+0.7
TUVZ	Tukino	1.70	274	P	Pn	07 07 48.7	+0.9
OTVZ	Oturere	1.70	277	P	Pn	07 07 48.6	+0.8
NTVZ	North Tongarir	1.71	280	P	Pn	07 07 48.5	+0.6
KATZ	Kakaramea	1.72	284	P	Pn	07 07 48.7	+0.6
SNVZ	South Ngauruho	1.72	277	P	Pn	07 07 48.9	+0.8
OMRZ	Omania	1.73	318	P	Pn	07 07 48.1	0.0
KRVZ	Karewarewa	1.73	280	P	Pn	07 07 48.8	+0.6
WNVZ	Wahianoa	1.74	272	P	Pn	07 07 49.0	+0.7
NNVZ	North Ngauruho	1.75	278	P	Pn	07 07 49.2	+0.7
WHVZ	Whangaehu Hut	1.75	273	P	Pn	07 07 49.2	+0.7
NGZ	Ngauruhoe	1.75	277	P	Pn	07 07 49.3	+0.7
BFZ	Birch Farm	1.77	223	P	Pn	07 07 47.2	-1.4
BFZ	Birch Farm	1.77	223	P	Pn	07 07 47.3	-1.3
DRZ	Dome Shelter	1.77	273	P	Pn	07 07 49.5	+0.6
WTVZ	West Tongariro	1.77	279	P	Pn	07 07 49.4	+0.7
FWVZ	Far West T-bar	1.78	274	P	Pn	07 07 49.5	+0.6
TRVZ	Turoa	1.78	273	P	Pn	07 07 49.6	+0.6
WATZ	Wairara	1.78	292	P	Pn	07 07 49.0	+0.2
KUTZ	Kaahu Road	1.82	300	P	Pn	07 07 49.8	+0.4
MTVZ	Mangateitei	1.83	270	P	Pn	07 07 50.2	+0.6
PRWZ	Pori Road	1.84	231	P	Pn	07 07 49.1	-0.5
OPRZ	Ohinepanea	1.85	327	P	Pn	07 07 49.4	-0.4
POWZ	Post Office Ro	1.87	238	P	Pn	07 07 49.5	-0.6
MXZ	Matakaoa Point	1.88	11	P	Pn	07 07 49.6	-0.5
PKVZ	Pokaka	1.94	273	P	Pn	07 07 51.5	+0.6
CPWZ	Castlepoint	1.96	219	P	Pn	07 07 49.4	-1.8
TIWZ	Tintock	2.03	227	P	Pn	07 07 51.1	-1.2
TLZ	Tolley Road	2.09	300	P	Pn	07 07 53.3	+0.2
OHWZ	Ohakea	2.10	247	P	Pn	07 07 53.7	+0.6
MRZ	Mangatainoka R	2.14	233	P	Pn	07 07 52.5	-1.2
WAZ	Wanganui	2.23	260	P	Pn	07 07 56.2	+1.2
TMWZ	Te Maipa	2.26	221	P	Pn	07 07 53.2	-2.2
HOWZ	Holdsworth Sta	2.32	229	P	Pn	07 07 54.6	-1.7
VRZ	Vera Road	2.41	276	P	Pn	07 07 57.8	+0.5
OGWZ	Otaki Gorge	2.49	235	P	Pn	07 07 57.1	-1.4
HIZ	Hauiti	2.49	290	P	Pn	07 07 59.0	+0.5
HIZ	Hauiti	2.49	290	P	Pn	07 07 59.1	+0.6
MTW	Mount Morrison	2.50	225	P	Pn	07 07 56.3	-2.4
TRWZ	Traveller	2.58	219	P	Pn	07 07 56.9	-2.9
LREZ	Lake Rotokare	2.66	268	P	Pn	07 08 01.6	+0.7
KIW	Kapiti Island	2.68	236	P	Pn	07 07 59.7	-1.4
PAWZ	Paruwai Farm	2.70	222	P	Pn	07 07 58.9	-2.5
CAW	Cannon Point	2.72	230	P	Pn	07 07 59.7	-2.0
MHEZ	Mangahewa	2.75	276	P	Pn	07 08 03.5	+1.4
MSWZ	Moikau Station	2.82	224	P	Pn	07 08 00.2	-2.8
DREZ	Durham Road	2.83	273	P	Pn	07 08 04.4	+1.2
PREZ	Palmer Road	2.85	270	P	Pn	07 08 04.8	+1.3
NEZ	North Egmont	2.91	271	P	Pn	07 08 05.6	+1.3
PLWZ	Palliser	2.93	222	P	Pn	07 08 01.3	-3.2
KHEZ	Kahui Hut	2.97	271	P	Pn	07 08 06.7	+1.6
PKE	Pukeiti	3.00	273	P	Pn	07 08 06.8	+1.4
BHW	Baring Head	3.02	228	P	Pn	07 08 03.3	-2.5
SNZO	South Karori	3.06	231	P	Pn	07 08 04.2	-2.1
NMEZ	Namu Road	3.07	269	P	Pn	07 08 07.6	+1.2
NBEZ	Newall Road No	3.08	271	P	Pn	07 08 08.0	+1.4
KUZ	Kuaotunu	3.14	327	P	Pn	07 08 06.9	-0.5
TCW	Tory Channel	3.27	235	P	Pn	07 08 06.9	-2.2
DUWZ	D’Urville Isla	3.31	244	P	Pn	07 08 08.0	-1.9
WIAZ	Waiheke Island	3.37	320	P	Pn	07 08 10.8	+0.2
AWAZ	Awhitu Peninsu	3.43	312	P	Pn	07 08 12.0	+0.6
MBAZ	Motutapu North	3.51	318	P	Pn	07 08 13.4	+0.9
TUWZ	Tuamarina	3.60	235	P	Pn	07 08 10.9	-2.8
GRZ	Great Barrier	3.67	328	P	Pn	07 08 14.6	-0.1
BSWZ	Blackbirch Sta	3.80	231	P	Pn	07 08 13.6	-2.9
NNZ	Nelson	3.86	241	P	Pn	07 08 15.3	-2.0
QRZ	Quartz Range	4.31	249	P	Pn	07 08 21.2	-2.3
QRZ	Quartz Range	4.31	249	P	Pn	07 08 21.1	-2.4
WCZ	Waipu Caves	4.43	320	P	Pn	07 08 25.6	+0.5
KHZ	Kahutara	4.43	226	P	Pn	07 08 21.8	-3.4
THZ	Tophouse	4.43	236	P	Pn	07 08 22.3	-2.9
DSZ	Denniston Nort	5.16	241	P	Pn	07 08 32.2	-2.9
OUZ	Omahuta	5.37	320	P	Pn	07 08 39.2	+1.1
OUZ	Omahuta	5.37	320	P	Pn	07 08 39.3	+1.2
AKCZ	Akaroa Harbour	5.79	218	P	Pn	07 08 41.0	-2.8
CTZ	Chatham Island	6.00	138	P	Pn	07 08 46.3	-0.3
WVZ	Waitaha Valley	6.49	233	P	Pn	07 08 51.6	-1.7
RPZ	Rata Peaks	6.67	228	P	Pn	07 08 53.5	-2.3
GCSZ	Gaunt Creek Bo	6.87	233	P	Pn	07 08 56.8	-1.7
ODZ	Otahua Downs	7.76	221	P	Pn	07 09 07.8	-3.0

*IDC **05** 07:10:11.4±1.6, 5°.83N×125°.34E, h191km±20km, mb3.4/6, mb1 3.5/6, mb1mx3.2/39, mbtmp3.9/6, Error ellipse: s-maj=91.9km s-min=14.2km az=72.0*

*MAN **05** 07:10:18.1, 6°.43N×125°.68E, h1km, mb4.5, ML3.3, MS3.2*

ISC 05 07:10:06.8±0.9,**5°.88N**±0°.09×**125°.5E**±0°.2,**h150**km**,n11,** σ**1^{s}.50**/14,**mb3.8**/6,**3C,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	General Santos	0.60	290	⇑*i*P	Pn	07 10 28.0	-0.8
GSPH				*i* S	Sn	07 10 45.2	-0.4
DAV	Davao City (W)	1.18	3	P	Pn	07 10 42.0	+8.8
	154nm,0.3s,baz=259,slow=16,SNR=4.1						
DAV				S	Sn	07 10 52.0	-1.4
	207nm,0.3s,baz=320,slow=21,SNR=14						
DMPH	Davao City--Mi	1.19	359	⇑*e*P	Pn	07 10 32.1	-1.2
DMPH				*e*S	Sn	07 10 53.2	-0.5
BUKP	Musuan	2.03	347	⇑*i*P	Pn	07 10 42.7	+0.3
BUKP				*i* S	Sn	07 11 13.2	+3.4
FITZ	Fitzroy Crossi	23.83	180	P	P	07 15 05.6	-0.6
	1.0nm,0.5s,baz=9.2,slow=13,SNR=5.6						
WRA	Warramunga Arr	27.09	162	P	P	07 15 36.5	+0.8
	0.7nm,0.4s,baz=344,slow=10,SNR=13						
ASAR	Alice Springs	30.49	165	P	P	07 16 08.2	+2.4
	0.2nm,0.4s,baz=348,slow=7.7,SNR=2.2						
MKAR	Makanchi Array	55.11	325	P	P	07 19 23.7	+0.3
	1.2nm,0.5s,baz=117,slow=7.6,SNR=20						
NRIK	Noril'sk	68.06	346	P	P	07 20 49.5	-0.3
	1.7nm,0.5s,baz=110,slow=8.2,SNR=3.6						
FINES	FINESS Array B	89.38	332	P	P	07 22 45.0	-1.2
	1.5nm,0.8s,baz=57,slow=7.0,SNR=3.9						
TORD	Torodi Ar. Bea	121.09	289	PKP	PKPdf	07 28 42.3	-0.4
	0.3nm,0.3s,baz=80,slow=1.9,SNR=6.7						

KRSC 05 07:23:41.1±1.9,**49°.93N**×**156°.64E,h42**km±21km,**ML3.5, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril’s	0.83	336	*e*P	Pn	07 23 56.7	+0.4
SKR				*e*S	Sn	07 24 07.4	+0.1
PAU	Pauzhetka	1.54	4	*e*S	Sn	07 24 27.5	+2.5
KDTR	Khodutka, Kamc	2.09	25	*e*P	Pn	07 24 16.0	+2.4
KDTR				*e*S	Sn	07 24 41.5	+3.1
RUS	Russkaya	2.77	24	*e*P	Pn	07 24 25.9	+2.9
RUS				*e*S	Sn	07 24 57.7	+2.5
GRL	Gorelyy	2.78	18	*e*P	Pn	07 24 27.6	+4.4
GRL				*e*S	Sn	07 25 00.8	+5.3
AVH	Avacha	3.59	21	P	Pn	07 24 40.0	+5.7
MKZ	Mys Kozlova	5.59	32	P	Pn	07 25 04.8	+3.2

*IDC **05** 07:32:52.3±1.1, 8°.00S×125°.36E, h0km, mb3.9/5, mb1 4.2/10, mb1mx3.8/44, mbtmp4.0/10, ML3.8/5, MS3.3/7, Ms1 3.3/7, ms1mx3.0/30, Error ellipse: s-maj=33.6km s-min=17.7km az=71.0*

*DJA **05** 07:32:56.1±0.0, 8°S±3°×12°5E±°, h10km, M4.3/8, mb4.4/7, mB4.7/1, MLv4.2/8, Mw(mB)4.0/1*

ISC 05 07:32:55.4±0.8,**8°.21S**±0°.05×**125°.24E**±0°.07,**h24**km**,n30,** σ**2^{s}.58**/30,**mb4.0**/5,**Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.81	212	P	Pb	07 33 27.0	-1.1
SOEI				S	Sb	07 33 52.7	+2.3
SOEI	Soe	1.81	212	P	Pb	07 33 29.8	+1.7
BATI	Baumata	2.52	218	Pn	Pb	07 33 38.0	-2.1
	22nm,0.3s,baz=170,slow=0.9,SNR=11						
BATI				Sn	Sb	07 34 12.8	+2.0
	46nm,0.3s,baz=351,slow=19,SNR=8.4						
BATI				LR	LR	07 34 47.2	
	comp=Z,649nm,18.1s,baz=43,slow=42						
BATI	Baumata	2.52	218	P	Pn	07 33 35.4	+0.4
MMRI	Maumere	3.00	262	P	Pn	07 33 41.4	-0.1
MMRI	Maumere	3.00	262	P	Pn	07 33 43.9	+2.4
EDFI	Ende, Flores	3.55	261	P	Pn	07 33 48.9	-0.3
BSSI	Bau Bau, Buton	5.14	293	P	Pn	07 34 11.9	+1.0
BKSI	Bulukumba	5.83	299	P	Pn	07 34 20.8	+0.3
	0.1nm18nm,0.7s						
SANI	Sanana	6.16	7	P	Pn	07 34 28.4	+3.4
	0.1nm14nm,0.7s						
KAPI	Kappang	6.31	300	Pn	Pn	07 34 26.9	-0.1
	0.4nm,0.3s,baz=74,slow=23,SNR=1.2						
KAPI				Sn	Sn	07 35 34.3	-4.1
	2.1nm,0.3s,baz=247,slow=24,SNR=3.7						
BNSI	Bone	6.35	306	P	Pn	07 34 27.6	0.0
	0.1nm36nm,0.7s						
MTN	Manton Dam	7.40	129	P	Pn	07 34 49.6	+7.6
	28nm,0.5s						
PLAI	Plampang	7.41	265	P	Pn	07 34 41.2	-0.9
	0.2nm40nm,1.2s						
PLAI	Plampang	7.41	265	P	Pn	07 34 46.3	+4.2
KNRA	Kununurra	8.19	155	P	Pn	07 34 56.4	+3.6
	30nm,0.6s						
KDU	Kakadu	8.39	123	P	Pn	07 35 03.1	+7.5
	10nm,0.5s						
FITZ	Fitzroy Crossi	9.84	178	Pn	Pn	07 35 16.3	+0.8
	0.6nm,0.3s,baz=352,slow=9.8,SNR=16						
FITZ				Sn	Sn	07 37 00.8	-4.4
	3.3nm,0.3s,baz=204,slow=4.1,SNR=6.1						
FITZ				LR	LR	07 39 32.7	
	comp=Z,100nm,21.8s,baz=323,slow=40						
FITZ	Fitzroy Crossi	9.84	178	P	Pn	07 35 18.9	+3.4
	13nm,2.0s						
WRA	Warramunga Arr	14.62	144	Pn	Pn	07 36 20.1	-0.8
	0.7nm,0.3s,baz=317,slow=13,SNR=49						
WRA				Sn	Sn	07 38 58.0	-4.3
	0.4nm,0.3s,baz=309,slow=22,SNR=3.7						
WRA				LR	LR	07 42 38.0	
	comp=Z,42nm,21.6s,baz=305,slow=40						
DAV	Davao City (W)	15.18	1	LR	LR	07 42 44.9	
	comp=Z,58nm,19.2s,baz=164,slow=40						
ASAR	Alice Springs	17.47	153	P	P	07 36 59.6	+0.9
	0.4nm,0.3s,baz=326,slow=12,SNR=39						
ASAR				S	Sn	07 40 06.0	-5.7
	0.1nm,0.3s,baz=316,slow=19,SNR=4.3						
LEM	Lembang	17.53	273	LR	LR	07 44 38.7	
	comp=Z,137nm,18.8s,baz=156,slow=40						
PMG	Port Moresby	21.69	95	LR	LR	07 47 45.1	
	comp=Z,128nm,19.0s,baz=241,slow=41						
STKA	Stephens Creek	28.04	149	P	P	07 38 47.9	+3.0
	1.1nm,0.8s,baz=329,slow=13,SNR=1.8						
PSI	Prapat	28.43	292	LR	LR	07 49 56.0	
	comp=Z,113nm,19.8s,baz=199,slow=36						
CMAR	Chiang Mai Arr	37.09	316	P	P	07 40 04.8	+0.7
	1.3nm,0.3s,baz=138,slow=5.6,SNR=4.2						
MKAR	Makanchi Array	66.75	329	P	P	07 43 45.2	+0.4
	0.8nm,0.6s,baz=131,slow=8.3,SNR=4.5						
ZALV	Zalesovo Beam	70.67	336	P	P	07 44 08.1	-0.9
	0.9nm,0.6s,baz=116,slow=6.6,SNR=2.4						
KURBB	Kurchatov Arra	71.15	331	P	P	07 44 11.2	-0.8
	0.5nm,0.6s,baz=148,slow=5.5,SNR=2.9						

*KRNET **05** 08:10:08.3±0.1, 39°.13N×71°.56E, h10km, mb3.2*

*NNC **05** 08:10:11.0±2.4, 39°.04N×71°.55E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=18.3km s-min=12.4km az=6.0*

ISC 05 08:10:10.1±1.2,**39°.05N**±0°.06×**71°.57E**±0°.05,**h10**km**,n15,** σ**2^{s}.20**/31,**27C-4D,Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	0.47	22	⇓*i*P	Pg	08 10 15.9	-3.4
	baz=29						
DRK				⇓*i*S	Sg	08 10 21.6	-4.0
	baz=29						
GAR	Garm	0.98	268	⇑*i*P	Pg	08 10 27.1	-1.9
	baz=63						
GAR				⇑*i*S	Sb	08 10 40.7	-1.6
	baz=63						
BTK	Batken	1.17	330	⇑*i*P	Pb	08 10 29.5	-2.9
	baz=29						
BTK				⇑*i*S	Sg	08 10 44.7	-3.0
	baz=29						
OHH	Osh	1.75	32	⇑*i*P	Pn	08 10 40.3	-0.3
	baz=34						
OHH				⇑*i*S	Sn	08 11 03.4	+0.5
	baz=34						
SFK	Sufi-Kurgan	1.78	57	⇑*i*P	Pn	08 10 41.1	0.0
	baz=59						
SFK				⇑*i*S	Sn	08 11 05.5	+1.6
	baz=59						
CHGR	Chuyangaron	1.92	259	⇑*e*P	Pb	08 10 44.4	-0.9
	baz=57						
CHGR				⇑*i*S	Sg	08 11 10.4	-1.6
	baz=57						
TRKS	Terek-Say	2.50	353	⇑*i*P	Pn	08 10 50.8	-0.2
	baz=53						
TRKS				⇑*i*S	Sn	08 11 21.4	-0.3
	baz=53						
SALK	Salom-Alik	2.52	43	⇑*e*P	Pn	08 10 52.3	+1.1
	baz=44						
SALK				⇑*e*S	Sn	08 11 24.2	+2.1
	baz=44						
AML	Almayashu	3.48	27	⇑*i*P	Pn	08 11 05.2	+0.5
	baz=28						
AML				⇑*i*S	Sn	08 11 46.2	+0.1
	baz=28						
MNAS	Manas	3.51	11	⇑*i*P	Pn	08 11 05.7	+0.9
	baz=12						
MNAS				⇑*i*S	Sn	08 11 47.3	+0.8
	baz=12						
EKS2	Erkin-Say	3.98	24	⇑*i*P	Pn	08 11 12.3	+1.0
	baz=25						
EKS2				⇑*i*S	Sn	08 11 58.9	+0.8
	baz=25						
KK31	Karatay Array	4.13	349	⇑Pn	Pn	08 11 15.5	+2.2
	0.9nm,0.3s,baz=169,slow=12,SNR=41						
KK31				⇑Pg	Pb	08 11 25.0	+2.1
	5.3nm,0.7s,baz=166,slow=15,SNR=10.0						
KK31				⇑Sn	Sn	08 12 06.2	+4.6
	2.6nm,0.4s,baz=176,slow=22,SNR=6.2						
KK31				⇑Lg	Lg	08 12 20.7	
	7.3nm,0.5s,baz=157,slow=21,SNR=12						
AAK	Ala-Archa	4.22	31	Pn	Pn	08 11 16.9	+2.4
	2.8nm,0.5s						
AAK				⇑Sn	Sn	08 12 08.0	+4.0
	11nm,1.1s						
AAK	Ala-Archa	4.22	31	⇓*e*P	Pn	08 11 15.9	+1.3
	baz=31						
AAK				⇓*i*S	Sn	08 12 04.8	+0.8
	baz=31						
AB31	Akbulak array	13.17	325	⇑Pn	Pn	08 13 19.7	+2.6
	0.2nm,0.4s,baz=134,slow=14,SNR=3.5						
AB31				⇑Sn	Sn	08 15 46.3	+2.8
	0.1nm,0.3s,baz=130,slow=24,SNR=3.0						

*BJI **05** 08:22:56.9±0.0, 31°.94N×141°.50E, h64km, mB5.0/48, mb5.0/83, Ms4.5/82, Ms7 4.4/78*

*MOS **05** 08:23:00.4±1.0, 32°.10N×140°.81E, h42km, mb5.5/65, MS4.1/10, Error ellipse: s-maj=7.0km s-min=3.8km az=114.5*

*JMA **05** 08:23:03.6±0.1, 32°.29N×140°.98E, h37km, M5.1*

JMA Felt I J1.

*NEIC **05** 08:23:03.6, 32°.13N×140°.93E, h35km, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}2.25;*

$M_{\theta\theta}$-0.85; $M_{\phi\phi}$-1.40; $M_{r\theta}$0.04; $M_{\theta\phi}$-0.68; $M_{\phi r}$-1.44; Fault plane solution: $M_0 2.53000\times10^{16}$ NP1:ϕ_s196.49000°, δ61.96000°,λ76.44000°. NP2:ϕ_s43.65000°,δ30.91000°, λ113.75000°. Principal axes: T 2.7715, Plg70.0000°, Azm78.0000°; N -0.5744, Plg12.0000°, Azm203.0000°; P -2.1971, Plg16.0000°, Azm296.0000°;

*NEIC **05** 08:23:03.5±1.5,32°.12N±0°.05×140°.93E±0°.08,h51^{km}±5^{km}, mb5.3/147,Mwb4.9/35 Error ellipse: s-maj=10.1km s-min=7.5km az=75.0*

*IDC **05** 08:23:03.3±1.1,32°.11N×140°.85E,h51^{km}±8^{km},mb4.7/42, mb1 4.8/46,mb1mx4.7/54,mbtmp5.0/46,MS4.1/47, Ms1 4.1/47,ms1mx4.1/61,Error ellipse: s-maj=10.0km s-min=7.0km az=71.0*

*NIED **05** 08:23:03.7,32°.29N×140°.98E,h37^{km},MW5.1,Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}3.05; $M_{\theta\theta}$-0.08; $M_{\phi\phi}$-2.96; $M_{r\theta}$-0.03; $M_{\theta\phi}$-0.54; $M_{\phi r}$-3.12; Fault plane solution: $M_0 4.37000\times10^{16}$ NP1: ϕ_s183.00000°,δ68.00000°,λ85.00000°. NP2:ϕ_s17.00000°, δ23.00000°,λ102.00000°.*

*GCMT **05** 08:23:05.5±0.2,32°.20N±0°.01×140°.99E±0°.02,h43^{km}±1^{km}, MW5.1/121,Moment Tensor Solution. s65,c96; s121,c189; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.05±.15; $M_{\theta\theta}$0.33±.11; $M_{\phi\phi}$-3.37±.12; $M_{r\theta}$-0.92±.10; $M_{\theta\phi}$-1.00±.08; $M_{\phi r}$-4.13±.16; Best double couple: $M_0 5.38800\times10^{16}$ NP1:ϕ_s16.00000°,δ19.00000°, λ93.00000°. NP2:ϕ_s193.00000°,δ71.00000°,λ89.00000°. Principal axes: T 5.1030, Plg64.0000°, Azm101.0000°; N 0.5780, Plg1.0000°, Azm193.0000°; P -5.6730, Plg26.0000°, Azm284.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **05** 08:23:06.2±0.0,32°.16N×140°.76E,h62^{km},mb5.2*

ISC 05 08:23:03.7±0.3**,32°.14N**±0°.03×**140°.93E**±0°.03**,h60**^{km}±2^{km}**, h60**^{km}**:pP-P,n967,**$\sigma 1^{s}$**.46**/1025**,mb5.2**/230**,MS4.3**/72**, 32C-71D,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	1.04	288	⇓P	Pn	08 23 22.3	+0.1
JAOM				eS	Sn	08 23 35.5	-0.4
JHCJ	Hachijojimakas	1.33	315	⇓P	Pn	08 23 25.4	-0.7
JHCJ				eS	Sn	08 23 41.4	-1.5
JHJ2	Mitsune	1.35	316	⇓P	Pn	08 23 25.9	-0.4
JHJ2				eS	Sn	08 23 41.8	-1.4
JHJ2	Mitsune	1.35	316	Pn	Pn	08 23 26.1	-0.2
JHJ2	Mitsune	1.35	316	P	Pn	08 23 26.1	-0.2
JHJ	Hachijo jima 2	1.37	316	P	Pn	08 23 26.0	-0.7
	2µm,0.3s,baz=347,slow=18,SNR=1290						
JHJ				S	Sn	08 23 41.9	-2.0
	6µm,0.3s,baz=282,slow=22,SNR=31						
JMKN	Mikurajimanish	2.08	328	⇓P	Pn	08 23 35.9	-0.3
JMKN				eS	Sn	08 23 59.8	-1.1
BSO1	Boso 1	2.51	1	P	Pn	08 23 40.0	-1.5
JKO	Kozu shima	2.53	324	⇓P	Pn	08 23 42.8	+0.4
JSKK	Shikinejimakit	2.62	327	P	Pn	08 23 43.9	+0.4
JTHY	Toshimahigashi	2.74	330	P	Pn	08 23 45.5	+0.2
JIM2	Oshima 3	2.86	334	P	Pn	08 23 46.6	-0.2
JIZS	Izushimoda	3.09	327	⇓P	Pn	08 23 50.8	+0.8
TK02	Tokai 2	3.21	305	P	Pn	08 23 53.2	+1.7
JHTM	Izuhatsuma	3.23	331	⇓P	Pn	08 23 52.6	+0.6
AJI	Ajiro2	3.28	333	⇓P	Pn	08 23 52.8	+0.3
JSG	Sagara	3.41	319		Pn	08 23 55.9	+1.5
JOD2	Odawara 2	3.47	334	P	Pn	08 23 55.2	0.0
JOD2				eS	Sn	08 24 33.7	-1.4
JFNN	Fujinakano	3.57	329	P	Pn	08 23 57.9	+1.3
SHZ3	Shizuoka 3	3.69	323	P	Pn	08 24 00.1	+1.8
JSGW	Sagamiharawaka	3.74	338	P	Pn	08 23 58.8	0.0
JSGW				S	Sn	08 24 40.2	-1.4
TTO1	TONANKAI O.B.S	3.79	294	P	Pn	08 24 01.6	+2.4
JYN	Shimob	3.89	330	⇓P	Pn	08 24 02.5	+1.5
JYZW	Yoshizawa	3.90	318	P	Pn	08 24 02.5	+1.4
JAA	Atsumi	4.02	309	⇓P	Pn	08 24 04.1	+1.4
JNY	Yasuok	4.10	322	P	Pn	08 24 06.0	+2.1
JYT	Yasato	4.12	352	Pn	Pn	08 24 03.6	-0.4
JIE	Ise	4.19	304	⇓P	Pn	08 24 06.3	+1.3
JRY	Ryogami san	4.21	337	P	Pn	08 24 05.8	+0.4
JRY				eS	Sn	08 24 52.6	-0.8
JAO	Obara	4.37	317	P	Pn	08 24 09.3	+1.8
JKN2	Miekihoku	4.43	299	⇓P	Pn	08 24 09.7	+1.4
JAG	Ashikaga	4.44	344	P	Pn	08 24 07.7	-0.8
JAG				eS	Sn	08 24 57.1	-1.8
JGF	Kuroka	4.55	320	⇓P	Pn	08 24 12.4	+2.4
JGF	Kuroka	4.55	320		Pn	08 24 11.2	+1.2
INU	Inuyama	4.56	316	Pn	Pn	08 24 11.9	+1.7
INU	Inuyama	4.56	316	P	Pn	08 24 12.6	+2.4
JTNC	Tanabenakahech	4.77	292	⇓P	Pn	08 24 14.3	+1.3
JTNC				eS	Sn	08 25 07.8	+0.8
JNG	Nsakai	4.86	332	P	Pn	08 24 16.1	+1.9
JYTA	Yamagatataniai	4.90	316	P	Pn	08 24 17.0	+2.2
MJAR	Matsushiro Arr	4.93	334	P	Pn	08 24 15.5	+0.3
	8.7nm,0.3s,baz=161,slow=11,SNR=243						
MJAR				S	Sn	08 25 12.7	+1.7
	2.8nm,0.3s,baz=149,slow=23,SNR=7.2						
MJAR				LR	LR	08 26 03.0	
	comp=Z,2µm,21.6s,baz=150,slow=37						
MJAR	Matsushiro Arr	4.93	334	Pn	Pn	08 24 16.4	+1.2
MAJO	Matsushiro	4.93	334	deP	Pn	08 24 14.9	-0.3
MAJO	Matsushiro	4.93	334	Pn	Pn	08 24 16.6	+1.4
MAJO	Matsushiro	4.93	334	P	Pn	08 24 17.3	+2.1
MAT	Matsushiro	4.93	334	P	Pn	08 24 16.0	+0.8
MAT				S	Sn	08 25 12.4	+1.4
MAT	Matsushiro	4.93	334	P	Pn	08 24 16.3	+1.1
MAT				eS	Sn	08 25 11.5	+0.5
MJB9	Matsu-Tunnel	4.94	334		Pn	08 24 17.3	+2.0
JGN	Niukaw	5.05	325	P	Pn	08 24 19.3	+2.4
JCJ	Chichijima	5.15	167	P	Pn	08 24 15.8	-2.4
	189nm,0.3s,baz=77,slow=9.2,SNR=64						
JCJ				S	Sn	08 25 10.6	-5.7
	315nm,0.3s,baz=57,slow=23,SNR=11						
JCJ				LR	LR	08 26 04.2	
	comp=Z,1µm,21.6s,baz=333,slow=35						
JCJ	Chichijima	5.15	167	Pn	Pn	08 24 16.0	-2.2
JCJ	Chichijima	5.15	167	P	Pn	08 24 16.1	-2.1
JJN	Nakama	5.45	336	P	Pn	08 24 24.1	+1.8
JWT	Wachi	5.57	306	Pn	Pn	08 24 26.0	+2.0
JKG	Kaga	5.61	319	P	Pn	08 24 27.4	+2.9
JMM	Marumori	5.71	359		Pn	08 24 24.4	-1.4
JMN	Monobe	6.13	287	Pn	Pn	08 24 33.5	+1.8
JSD	Sado	6.28	340	Pn	Pn	08 24 33.1	-0.5
JHS	Saijyo	7.11	296		Pn	08 24 47.5	+2.4
JNU	Nakatsue	8.53	279	P	Pn	08 25 06.8	+2.3
	1.7nm,0.3s,baz=75,slow=7.2,SNR=7.2						
JSU	Suzuyama	8.93	269	Pn	Pn	08 25 10.8	+0.8
ERM	Erimo	10.02	10	ceP	Pn	08 25 21.8	-2.9
ERM	Erimo	10.02	10		Pn	08 25 25.7	+1.0
KSBUS	Busan	10.32	291	P	Pn	08 25 36.0	+7.1
	SNR=9.2						
KSBSA	Busan_acc	10.35	290	P	Pn	08 25 36.7	+7.4
	SNR=7.7						
KSPHA	Pohang	10.39	296	P	Pn	08 25 36.0	+6.1
	SNR=6.9						
KSULJ	Uljin	10.54	299	P	Pn	08 25 38.0	+6.0
	SNR=28						
KSDAG	Daegu	10.62	293	P	Pn	08 25 40.1	+7.0
	SNR=8.6						
KSYOC	YEONGCHEON	10.64	294	P	Pn	08 25 39.1	+5.8
	SNR=8.3						
UJN	ULJIN	10.65	300	P	Pn	08 25 39.2	+5.7
	SNR=15						
KSADO	Andong	10.78	297	P	Pn	08 25 42.0	+6.7
	SNR=12						
IMWB	Imwonan-gil	10.80	301	P	Pn	08 25 43.0	+7.4
	SNR=8.2						
KSEUS	ULSEONG	10.96	296	P	Pn	08 25 43.9	+6.2
	SNR=7.0						
KSEUS	ULSEONG	10.96	296	P	Pn	08 25 44.2	+6.5
	SNR=20						
EURB	Uiryeong-eup	10.99	290	P	Pn	08 25 46.0	+7.9
	SNR=6.7						
KSTBA	Taebaek	11.04	300	P	Pn	08 25 43.7	+4.8
	SNR=16						
KSTBA	Taebaek	11.04	300	P	Pn	08 25 45.9	+7.0
	SNR=14						
KSGWL	Sabuk	11.17	300	P	Pn	08 25 48.0	+7.5
	SNR=7.3						
KSNAH	Namhae	11.18	287	P	Pn	08 25 48.7	+8.1
	SNR=7.7						
OKEB	Okgye-meyeon	11.23	302	P	Pn	08 25 48.0	+6.6
	SNR=7.2						
KSGIC	Gimchen	11.33	294	P	Pn	08 25 50.8	+8.1
	SNR=6.4						
KSKCH	Geochang	11.35	291	P	Pn	08 25 48.7	+5.6
	SNR=6.6						
KSSAJ	Sangju	11.39	295	P	Pn	08 25 48.9	+5.4
	SNR=9.7						
GWYB	Gwangyang	11.39	288	P	Pn	08 25 51.0	+7.4
	SNR=9.4						
KSYOW	Yeongwol	11.43	299	P	Pn	08 25 49.7	+5.7
	SNR=23						
KSCPR	CHUPUNGNYEONG	11.47	294	P	Pn	08 25 50.9	+6.2
	SNR=8.4						
KSDGY	Daegwallycong	11.48	302	P	Pn	08 25 52.0	+7.2
	SNR=9.3						
KSMGY	Mungyeong	11.54	296	P	Pn	08 25 51.4	+5.8
	SNR=17						
OKCB	Cheongsan-myeo	11.65	295	P	Pn	08 25 55.0	+7.9
	SNR=6.3						
KSCHJ	Chungju	11.68	297	P	Pn	08 25 53.0	+5.5
	SNR=17						
KSCHJ	Chungju	11.68	297	P	Pn	08 25 55.0	+7.5
	SNR=14						
KSBON	Boeun	11.69	295	P	Pn	08 25 54.3	+6.7
	SNR=10.0						
KSBON	Boeun	11.69	295	P	Pn	08 25 55.0	+7.4
	SNR=8.2						
NAWB	Namwon	11.72	290	P	Pn	08 25 56.0	+7.9
	SNR=8.0						
KSWJU	Wonju	11.81	300	P	Pn	08 25 56.0	+6.6
	SNR=11						
SUCA	Sunchang	11.92	289	P	Pn	08 25 59.0	+8.2
	SNR=8.1						
KSJEO	Jeonju	11.93	292	P	Pn	08 25 58.0	+7.1
	SNR=12						
KSRS	Korea Array	11.93	300	P	Pn	08 25 56.0	+5.2
	0.5nm,0.3s,baz=116,slow=14,SNR=52						
KSRS				LR	LR	08 30 32.2	
	comp=Z,2µm,19.4s,baz=115,slow=38						
KSRS				ScP	ScP	08 35 02.4	+1.3
	0.1nm,0.3s,baz=162,slow=1.0,SNR=8.3						
KSAR	Wonju Array Be	11.95	300	P	Pn	08 25 55.1	+3.9
KSAR	Wonju Array Be	11.95	300	Pn	Pn	08 25 55.1	+3.9
EMSB	Eumseong	11.98	297	P	Pn	08 25 57.3	+5.7
	SNR=15						
KSIJA	INJE	12.01	303	P	P	08 25 59.7	-3.2
	SNR=11						
JKA	Kamikawa-asahi	12.03	6	Pn	Pn	08 25 49.5	-2.7
ASAJ	Asahikawa	12.03	6	P	Pn	08 25 49.2	-3.0
	3.8nm,0.3s,baz=215,slow=9.8,SNR=16						
ASAJ				LR	LR	08 31 28.1	
	comp=Z,973nm,21.7s,baz=186,slow=42						
ASAJ	Asahikawa	12.03	6	P	Pn	08 25 49.5	-2.7
SEHB	SEOHWA	12.03	304	P	P	08 25 59.7	-3.5
	SNR=8.4						
KSJEU	Jeongeup	12.11	290	P	P	08 26 00.9	-3.2
	SNR=12						
KOJ2	Gongju-si	12.18	295	P	P	08 26 02.0	-3.0
	SNR=18						
KSCEA	Cheonan	12.20	296	P	P	08 26 02.5	-2.7
	SNR=13						
JOW	Kunigami	12.22	248	P	Pn	08 25 50.7	-4.3
	baz=96,slow=10,SNR=1.3						
JOW				LR	LR	08 30 10.5	
	comp=Z,2µm,20.6s,baz=66,slow=35						
KSICN	Icheon	12.24	299	P	P	08 26 01.8	-3.8
	SNR=13						
GOCB	Gochang-gun	12.35	289	P	P	08 26 03.0	-3.8
	SNR=11						
GOCB	Gochang-gun	12.35	289	P	P	08 26 05.0	-1.8
	SNR=8.3						
PYTK	Pyeongtaek	12.37	297	P	P	08 26 04.3	-2.7
	SNR=6.7						
HALB	Hallimjungang-	12.40	280	P	P	08 26 06.0	-1.4
	SNR=5.9						
HWCB	Hwacheon	12.42	303	P	P	08 26 04.0	-3.6
	SNR=7.2						
KSJDO	Jindo	12.44	285	P	P	08 26 07.3	-0.5
	SNR=8.0						
SMKB	Mukjeong-gil	12.45	290	P	P	08 26 06.0	-1.9
	SNR=8.5						
YUK	Yuzh-Kuril'sk	12.49	17	eP	Pn	08 25 57.6	-0.9
YUK				pmax	pmax		
	comp=Z,104nm,0.3s						
YUK				pmax	pmax		
	comp=E,29nm,0.1s						
YUK				pmax	pmax		
	comp=N,54nm,0.3s						
YUK				MLR	MLR		
	comp=Z,262nm,12.0s						
KSSWO	Suwon	12.57	298	P	P	08 26 06.1	-3.2
	SNR=12						
HAWB	Hwaseong-si	12.65	297	P	P	08 26 08.0	-2.2
	SNR=7.8						
SHHB	Siheung-si	12.79	298	P	P	08 26 10.0	-1.7
	SNR=6.4						
KSSES	Seosan	12.81	295	P	P	08 26 10.0	-1.9
	SNR=15						
YNCB	YEONCHEON	12.88	301	P	P	08 26 09.5	-3.1
	SNR=7.5						
INCN	Inchon	12.89	298	P	Pn	08 26 04.4	+0.3
INCN	Inchon	12.89	298	Pn	Pn	08 26 04.3	+0.3
KSGAH	Ganghwa	13.11	299	P	P	08 26 15.1	-0.2
	SNR=6.8						
HUK2	Heuksan-myeon	13.18	285	P	P	08 26 15.0	-1.0
	SNR=11						
KSDEI	Deokjeokdo	13.22	297	P	P	08 26 16.4	0.0
	SNR=15						
KSGBI	Gyogryolbido	13.46	294	P	P	08 26 18.7	-0.4
	SNR=17						
USRK	Ussuriysk Ar.	13.93	332	P	Pn	08 26 17.0	-1.0
	baz=127,slow=12,SNR=6.8						
USRK				LR	LR	08 31 20.8	
	comp=Z,780nm,19.6s,baz=140,slow=36						
USRK	Ussuriysk Ar.	13.93	332	Pn	Pn	08 26 17.0	-1.0
KUR	Kuril'sk	14.14	20	eP	Pn	08 26 18.7	-2.1
KUR				pmax	pmax		
	comp=Z,53nm,0.8s						
YSS	Yuzh-Sakhalins	14.86	5	eP	Pn	08 26 26.7	-3.5
YSS				eS	Sn	08 29 06.6	-6.9
YSS				pmax	pmax		
	comp=Z,60nm,1.1s						
YSS				MLR	MLR		
	comp=Z,900nm,15.0s						
YSS	Yuzh-Sakhalins	14.86	5		Pn	08 26 30.1	-0.1
MDJ	Mudanjiang	15.28	328	P	Pn	08 26 36.1	+0.5
MDJ				S	Sn	08 29 25.5	+1.7
MDJ				pmax	pmax		
	comp=Z,28nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,260nm,8.8s						
MDJ				LR	LR		
	comp=Z,680nm,18.5s						
MDJ				LR	LR		
	comp=Z,790nm,17.1s						
MDJ				LR	LR		
	comp=Z,2µm,16.4s						
MDJ	Mudanjiang	15.28	328	Pn	Pn	08 26 35.6	0.0
CN2	Changchun	16.83	318	eP	P	08 26 56.4	-0.1
CN2				eS	Sn	08 29 54.0	-7.4
CN2				pmax	pmax		
	comp=Z,40nm,1.0s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,600nm,16.0s						
CN2				LR	LR		
	comp=Z,1µm,16.0s						
CN2				LR	LR		
	comp=Z,1µm,19.0s						
SSE	Sheshan	16.85	272	P	P	08 26 58.4	+1.6
SSE				S	S	08 30 11.6	+2.1
SSE				pmax	pmax		
	comp=Z,30nm,0.8s						
SSE				pmax	pmax		
	comp=Z,260nm,3.4s						
SSE				LR	LR		
	comp=Z,170nm,17.3s						
SSE				LR	LR		
	comp=Z,340nm,17.9s						
SNY	Shenyang	16.87	310	⇑P	P	08 26 57.2	+0.3
SNY				S	S	08 30 09.2	-0.6
SNY				pmax	pmax		
	comp=Z,70nm,1.4s						
SNY				LR	LR		
	comp=Z,570nm,14.2s						
SNY				LR	LR		
	comp=Z,780nm,17.3s						
SNY				LR	LR		
	comp=Z,1µm,17.8s						
DL2	Dalian	17.08	299	P	P	08 27 01.7	+2.4
DL2				sP	sP	08 27 22.2	+3.4
DL2				S	S	08 30 12.2	-1.9
DL2				pmax	pmax		
	comp=Z,61nm,1.7s						
DL2				pmax	pmax		
	comp=Z,980nm,3.7s						
DL2				LR	LR		
	comp=Z,780nm,18.0s						
DL2				LR	LR		
	comp=Z,1µm,19.4s						
DL2				LR	LR		
	comp=Z,1µm,18.1s						
YOJ	Yonaguni jima	17.52	249	P	P	08 27 05.3	+1.1
YOJ				pmax	pmax		
	comp=Z,294nm,1.1s						
YOJ	Yonaguni jima	17.52	249	P	P	08 27 05.3	+1.1
YOJ				IAmb	IAmb	08 27 24.3	
	comp=Z,294nm,1.1s						
KLR	Kul'dur	18.41	341	P	P	08 27 12.8	-1.1
	comp=Z,0.9nm,0.3s,baz=144,slow=11,SNR=14						
KLR				LR	LR	08 34 21.8	
	comp=Z,501nm,19.1s,baz=155,slow=37						
TATO	Taipei	18.49	252	P	Pn	08 27 16.5	+0.9
TATO				IAmb	IAmb	08 27 22.6	
	comp=Z,348nm,1.1s						
NJ2	Nanjing	18.70	276	⇑P	Pn	08 27 19.0	+0.9
NJ2				pP	pwP	08 27 32.4	+0.6
NJ2				sP	sP	08 27 41.9	+5.0
NJ2				S	S	08 30 49.4	+2.5
NJ2				sS	sS	08 31 09.4	+2.9
NJ2				pmax	pmax		
	comp=Z,57nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,330nm,4.0s						
NJ2				LR	LR		
	comp=Z,590nm,12.3s						
NJ2				LR	LR		
	comp=Z,570nm,14.0s						
NJ2				LR	LR		
	comp=Z,1µm,15.3s						
TYV	Tymovskoe	18.75	3	eP	Pn	08 27 20.8	+2.3
TYV				pmax	pmax		
	comp=Z,27nm,1.0s						
TYV				pmax	pmax		
	comp=Z,700nm,3.7s						
NACB	Ninganchiao	18.79	250	P	P	08 27 18.0	-0.2
GUMO	Guam	18.82	168	P	Pn	08 27 19.9	+0.3
	comp=Z,31nm,0.3s,baz=332,slow=5.0,SNR=21						
GUMO	Guam	18.82	168	P	Pn	08 27 20.0	+0.4
GUMO				pmax	pmax		
	comp=Z,2µm,1.2s						
GUMO	Guam	18.82	168	P	Pn	08 27 20.0	+0.4
GRNR	Gornyy	18.91	351	⇑iP	Pn	08 27 20.2	-0.3
GRNR				eS	Sn	08 30 52.7	+1.3
GRNR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GRNR				smax	smax		
	comp=N,5.0nm,0.8s						
GRNR				MLR	MLR		
	comp=N,430nm,19.0s						
GRNR				MLR	MLR		
	comp=E,290nm,19.0s						
GRNR				MLR	MLR		
	comp=Z,320nm,20.0s						
YULB	Yu-li	19.41	248	P	P	08 27 25.5	+0.5
YULB				IAmb	IAmb	08 27 32.0	
	comp=Z,137nm,1.0s						
SSLB	Suanglung	19.48	250	P	Pn	08 27 27.1	-0.4
TWG	Pinlang	19.89	247	P	P	08 27 30.6	+0.4
TWG				IAmb	IAmb	08 27 37.6	
	comp=Z,201nm,1.0s						
TPUB	Ta-pu	19.98	249	P	Pn	08 27 33.1	-0.3
TPUB				IAmb	IAmb	08 27 34.2	
	comp=Z,268nm,1.1s						
TIA	Tai'an	20.09	288	P	P	08 27 33.2	+0.8
TIA				pP	sP	08 27 50.3	-1.9
TIA				S	Sn	08 31 17.8	-2.3
TIA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
TIA				pmax	pmax		
	comp=Z,190nm,3.5s						
TIA				LR	LR		
	comp=Z,430nm,11.4s						
TIA				LR	LR		
	comp=Z,1µm,17.1s						
TIA				LR	LR		
	comp=Z,2µm,16.4s						
QZH	Quanzhou	20.87	256	P	Pn	08 27 48.2	+4.4
QZH				pP	sP	08 28 01.1	+0.5
QZH				S	S	08 31 30.2	0.0
QZH				pmax	pmax		
	comp=Z,63nm,1.5s						
QZH				LR	LR		
	comp=N,720nm,18.1s						
QZH				LR	LR		
	comp=E,610nm,20.1s						
QZH				LR	LR		
	comp=Z,890nm,19.2s						
NKL	Nikolayevsk	21.00	360	eP	P	08 27 41.8	-0.1
NKL				eS	S	08 31 32.7	+0.4
NKL				pmax	pmax		
	comp=E,4.0nm,1.0s						
NKL				pmax	pmax		
	comp=N,878nm,0.6s						
NKL				pmax	pmax		
	comp=Z,38nm,1.2s						
NKL				smax	smax		
	comp=E,10.0nm,2.2s						
NKL				smax	smax		
	comp=N,1µm,3.1s						
NKL				MLR	MLR		
	comp=N,14µm,12.0s						
NKL				MLR	MLR		
	comp=E,20nm,12.0s						
NKL				MLR	MLR		
	comp=Z,415nm,20.0s						
BJI	Beijing	21.45	298	P	P	08 27 46.3	-0.6
BJI				pP	pP	08 27 59.7	+0.2
BJI				sP	sP	08 28 07.1	+0.4
BJI				S	S	08 31 41.9	+0.3
BJI				pmax	pmax		
	comp=Z,16nm,1.0s						
BJI				LR	LR		
	comp=Z,640nm,15.5s						
BJI				LR	LR		
	comp=Z,1µm,20.8s						
BJI				LR	LR		
	comp=Z,1µm,19.8s						
BJT	Baijiatuau	21.45	298	P	P	08 27 46.1	-0.8
BJT				pmax	pmax		
	comp=Z,44nm,1.3s						
BJT	Baijiatuau	21.45	298	P	P	08 27 46.1	-0.8
WHN	Wuhan	22.74	273	⇓P	P	08 28 01.2	+0.4
WHN				S	S	08 32 02.5	-2.6
WHN				pmax	pmax		
	comp=Z,300nm,1.1s						
WHN				LR	LR		
	comp=Z,1µm,14.6s						
WHN				LR	LR		
	comp=Z,1µm,13.1s						
WHN				LR	LR		
	comp=Z,2µm,18.5s						
ZEA	Zeya	23.71	340	eP	P	08 28 11.5	+1.5
ZEA				eS	S	08 32 17.2	-3.3
ZEA				pmax	pmax		
	comp=E,100nm,2.2s						
ZEA				pmax	pmax		
	comp=N,400nm,1.3s						
ZEA				pmax	pmax		
	comp=Z,600nm,1.3s						
ZEA				pmax	pmax		
	comp=E,60nm,0.9s						
ZEA				pmax	pmax		
	comp=N,180nm,1.3s						
ZEA				pmax	pmax		
	comp=Z,320nm,1.4s						
ZEA				smax	smax		
	comp=E,200nm,4.2s						
ZEA				smax	smax		
	comp=N,300nm,8.7s						
ZEA				MLR	MLR		
	comp=Z,200nm,15.0s						
TIY	Taiyuan	23.96	291	⇑P	P	08 28 13.3	+0.8

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TIY                                   S      S       08 32 24.3  -0.8
TIY                                   pmax   pmax
      comp=Z,43nm,0.9s
TIY                                   pmax   pmax
      comp=Z,200nm,8.6s
TIY                                   LR     LR
      comp=Z,310nm,12.3s
TIY                                   LR     LR
      comp=Z,900nm,12.7s
TIY                                   LR     LR
      comp=Z,1µm,14.7s
PETK  Petropavlovsk-      24.20  25   P      P       08 28 15.2  +0.7
      comp=Z,7.3nm,0.9s,baz=307,slow=6.4,SNR=6.0
PETK                                  LR     LR      08 38 50.4
      comp=Z,280nm,20.6s,baz=215,slow=39
PETK  Petropavlovsk-      24.20  25   P      P       08 28 14.6  +0.1
PET   Petropavlovsk       24.49  26  eP      P       08 28 17.2  +0.2
PET                                  e*PP    pP      08 28 30.5  -0.4
PET                                  e               08 28 55.6
PET                                  eS      S       08 32 27.9  -5.1
PET                                   pmax   pmax
      comp=Z,27nm,1.5s
PET                                   MLR    MLR
      comp=Z,400nm,19.0s
HHC   Hu-ho-hao-te        25.06 299  eP      P       08 28 21.0  -1.5
HHC                                   sP     sP      08 28 47.0  +3.7
HHC                                   S      S       08 32 33.9  -8.8
HHC                                   sS     sS      08 33 08.6  +2.5
HHC                                   pmax   pmax
      comp=Z,39nm,0.9s
HHC                                   pmax   pmax
      comp=Z,340nm,4.7s
HHC                                   LR     LR
      comp=Z,810nm,12.3s
HHC                                   LR     LR
      comp=Z,990nm,13.2s
HHC                                   LR     LR
      comp=Z,2µm,14.6s
BTO   Baotou              26.18 298  eP      P       08 28 33.6  +1.0
BTO                                   S      S       08 33 04.1  +3.8
BTO                                   LR     LR
      comp=Z,3µm,15.1s
BTO                                   LR     LR
      comp=Z,5µm,22.2s
H11N2 WAKE ISLAND Hy      26.35 112   T      T       08 57 26.3
      baz=305,slow=75
H11N1 WAKE ISLAND Hy      26.35 112   T      T       08 57 36.6
      baz=305,slow=75
H11N3 WAKE ISLAND Hy      26.36 112   T      T       08 57 34.0
      baz=305,slow=75
XAN   Xi'an               26.83 283   P      P       08 28 37.4  -1.1
XAN                                   pP     pwP     08 28 53.9  -1.2
XAN                                   sP     sP      08 29 04.9  +5.5
XAN                                   S      S       08 33 18.4  +7.8
XAN                                   pmax   pmax
      comp=Z,86nm,1.0s
XAN                                   LR     LR
      comp=Z,320nm,13.1s
XAN                                   LR     LR
      comp=Z,470nm,16.5s
XAN                                   LR     LR
      comp=Z,470nm,14.4s
XAN   Xi'an               26.83 283   P      P       08 28 37.0  -1.5
XAN   Xi'an               26.83 283   P      P       08 28 37.0  -1.5
H11S3 WAKE ISLAND Hy      26.88 114   T      T       08 57 53.2
      baz=304,slow=75
H11S1 WAKE ISLAND Hy      26.88 114   T      T       08 57 47.9
      baz=304,slow=75
H11S2 WAKE ISLAND Hy      26.89 114   T      T       08 57 49.7
      baz=304,slow=75
ENH   Enshi               26.91 274   P      P       08 28 37.5  -1.7
ENH                                   IAmb   IAmb    08 28 39.4
      comp=Z,86nm,0.9s
CIT   Chita               28.14 323  eP      P       08 28 50.8  +0.8
CIT                                  e               08 29 05.0
CIT                                  e       PP      08 29 55.0  +0.6
CIT                                   pmax   pmax
      comp=Z,199nm,1.9s
MA2   Magadan             28.22  11⇑eP      P       08 28 51.8  +1.2
MA2                                   pmax   pmax
      comp=Z,64nm,1.7s
DAV   Davao City (W)      28.75 213   LR     LR      08 42 21.8
      comp=Z,204nm,18.6s,baz=22,slow=40
ULN   Ulaanbaatar         30.04 311d iP      P       08 29 07.7  +0.7
ULN                                   pmax   pmax
      comp=Z,61nm,1.7s
ULN   Ulaanbaatar         30.04 311   P      P       08 29 07.5  +0.5
GYA   Guiyang             30.33 268 ⇓P      P       08 29 08.7  -1.1
GYA                                   sP     sP      08 29 35.1  +4.3
GYA                                   S      S       08 34 02.2  -3.7
GYA                                   pmax   pmax
      comp=Z,21nm,0.8s
GYA                                   pmax   pmax
      comp=Z,150nm,4.3s
GYA                                   LR     LR
      comp=Z,630nm,20.5s
SONM  Songino Array       30.45 311   P      P       08 29 11.4  +0.7
      comp=Z,16nm,0.8s,baz=115,slow=8.9,SNR=78
SONM                                  ScP    ScP     08 35 46.3  +0.2
      comp=Z,2.6nm,1.0s,baz=124,slow=2.7,SNR=4.9
SONM                                  LR     LR      08 41 55.7
      comp=Z,873nm,18.2s,baz=106,slow=37
SONM  Songino Array       30.45 311   P      P       08 29 11.0  +0.4
YAK   Yakutsk             30.77 350   P      P       08 29 13.1  -0.1
      comp=Z,7.0nm,0.3s,baz=275,slow=1.2,SNR=8.4
YAK                                   LR     LR      08 43 18.2
      comp=Z,338nm,19.3s,baz=91,slow=40
YAK   Yakutsk             30.77 350  eP      P       08 29 13.0  -0.1
YAK                                  e*PP    sP      08 29 34.6  +0.8
YAK                                  e               08 30 10.7
YAK                                  eS      S       08 34 05.0  -6.9
YAK                                  eSS     SnSn    08 35 55.8  +0.4
YAK                                  e               08 39 40.2
YAK                                   pmax   pmax
      comp=Z,54nm,1.0s
YAK                                   pmax   pmax
      comp=E,4.0nm,0.9s
YAK                                   pmax   pmax
      comp=N,24nm,1.2s
YAK                                   pmax   pmax
      comp=Z,13nm,0.6s
YAK                                   smax   smax
      comp=N,69nm,2.0s
YAK                                   smax   smax
      comp=E,96nm,2.3s
YAK                                   MLR    MLR
      comp=N,336nm,15.0s
YAK                                   MLR    MLR
      comp=Z,453nm,18.0s
YAK                                   MLR    MLR
      comp=E,103nm,14.0s
YAK   Yakutsk             30.77 350   P      P       08 29 13.1  -0.1
YAK                                   IAmb   IAmb    08 29 14.3
      comp=Z,60nm,1.0s
QIZ   Qiongzhong          30.80 252   P      P       08 29 14.7  +0.8
QIZ                                   S      S       08 34 14.4  +1.1
QIZ                                   LR     LR
      comp=Z,370nm,15.9s
QIZ                                   LR     LR
      comp=Z,550nm,19.8s
QIZ                                   LR     LR
      comp=Z,610nm,26.8s
LZH   Lanzhou             30.83 288 ⇑P      P       08 29 12.9  -1.3
LZH                                   pP     pP      08 29 28.3   0.0
LZH                                   sP     sP      08 29 37.9  +2.8
LZH                                   S      S       08 34 07.6  -6.2
LZH                                   SS     SnSn    08 36 02.6  +4.9
LZH                                   pmax   pmax
      comp=Z,26nm,1.3s
LZH                                   pmax   pmax
      comp=Z,110nm,5.0s
LZH                                   LR     LR
      comp=Z,390nm,14.3s
LZH                                   LR     LR
      comp=Z,520nm,14.0s
LZH                                   LR     LR
      comp=Z,510nm,16.4s
BOD   Bodaibo             31.57 332  eP      P       08 29 20.3  +0.1
BOD                                   pmax   pmax
      comp=Z,58nm,1.4s
CD2   Chengdu             31.61 278   P      P       08 29 19.6  -1.3
CD2                                   S      S       08 34 24.1  -1.7
CD2                                   pmax   pmax
      comp=Z,100nm,1.3s
CD2                                   pmax   pmax
      comp=Z,100nm,5.2s
CD2                                   LR     LR
      comp=Z,890nm,16.1s
CD2                                   LR     LR
      comp=Z,890nm,18.4s
CD2                                   LR     LR
      comp=Z,1µm,16.6s
SEY   Seymchan            31.66  10   P      P       08 29 21.5  +0.6
      comp=Z,8.7nm,0.8s,baz=192,slow=6.4,SNR=14
SEY                                   LR     LR      08 44 37.1
      comp=Z,258nm,18.1s,baz=201,slow=41
SEY   Seymchan            31.66  10⇓eP      P       08 29 22.2  +1.3
SGSI  Sangihe             31.79 210   P      P       08 29 19.4  -3.1
      comp=Z,359nm,0.5s
ZAK   Zakamensk           33.20 314  eP      P       08 29 35.1  +0.4
ZAK                                  e       PcP     08 32 16.7  +0.5
ZAK                                   pmax   pmax
      comp=Z,26nm,1.7s
ZAK                                   pmax   pmax
      comp=Z,10.0nm,1.4s
IRK   Irkutsk             33.28 318  eP      P       08 29 35.1  -0.2
IRK                                   pmax   pmax
      comp=Z,64nm,1.6s
TLY   Talaya              33.43 317   P      P       08 29 38.2  +1.6
      comp=Z,25nm,0.8s,baz=141,slow=6.6,SNR=26
TLY                                   LR     LR      08 43 50.0
      comp=Z,665nm,18.8s,baz=116,slow=37
TLY   Talaya              33.43 317  eP      P       08 29 37.9  +1.3
TLY                                  e       PP      08 30 56.8  +3.8
TLY                                  eS      S       08 34 59.1  +5.5
TLY                                   pmax   pmax
      comp=Z,165nm,1.1s
TLY                                   MLR    MLR
      comp=Z,2µm,18.0s
TLY   Talaya              33.43 317   P      P       08 29 37.6  +1.0
TLY                                   IAmb   IAmb    08 29 39.1
      comp=Z,54nm,1.0s
GTA   Gaotai              33.91 294  eP      P       08 29 40.2  -0.8
GTA                                   pP     pP      08 29 54.8  -0.5
GTA                                   sP     sP      08 30 01.5  -0.5
GTA                                   pmax   pmax
      comp=Z,12nm,1.2s
GTA                                   pmax   pmax
      comp=Z,99nm,9.2s
GTA                                   LR     LR
      comp=Z,470nm,18.3s
GTA                                   LR     LR
      comp=Z,890nm,17.5s
GTA                                   LR     LR
      comp=Z,620nm,15.9s
SIJI  Sorong              34.08 197   P      P       08 29 39.9  -2.7
      comp=Z,20nm,0.8s,baz=102,slow=10,SNR=4.1
SIJI                                  LR     LR      08 41 07.1
      comp=Z,412nm,20.7s,baz=46,slow=32
KMI   Kunming             34.11 268 ⇓P      P       08 29 44.4  +1.4
KMI                                   pmax   pmax
      comp=Z,21nm,1.2s
KMI                                   LR     LR
      comp=Z,350nm,21.4s
KMI                                   LR     LR
      comp=Z,340nm,26.3s
KMI                                   LR     LR
      comp=Z,480nm,20.5s
MANU  Manus Island        34.54 169   P      P       08 29 46.4  -0.1
FAKI  Fak Fak             35.83 195   P      P       08 29 57.6   0.0
MRSI  Marisa              36.24 213   P      P       08 30 02.1  +1.0
      comp=Z,32nm,1.0s
UBPT  Khong Chiam         36.34 251   P      P       08 30 01.6  -0.4
UBPT                                  IAmb   IAmb    08 30 03.2
      comp=Z,51nm,1.2s
SANI  Sanana              36.84 205   P      P       08 30 05.8  -0.4
      comp=Z,28nm,0.8s
PBKT  Sadao Pong          39.31 256   P      P       08 30 26.6  -0.5
CHTO  Chiang Mai          39.91 261   P      P       08 30 31.4  -0.7
CHTO                                  pmax   pmax
      comp=Z,35nm,1.0s
CHTO  Chiang Mai          39.91 261   P      P       08 30 31.4  -0.7
CHTO                                  IAmb   IAmb    08 30 32.6
      comp=Z,35nm,1.0s
SBUM  Sibu                40.01 228   P      P       08 30 34.0  +1.1
CM31  Chiang Mai Arr      40.08 260   P      P       08 30 32.8  -0.7
CMAR  Chiang Mai Arr      40.08 260   P      P       08 30 32.8  -0.7
      comp=Z,9.2nm,0.9s,baz=50,slow=7.2,SNR=36
CMAR                                  PcP    PcP     08 32 39.4  +2.1
      comp=Z,1.6nm,0.4s,baz=52,slow=1.8,SNR=5.0
CMAR                                  ScP    ScP     08 36 22.8  +1.5
      comp=Z,1.1nm,0.3s,baz=64,slow=4.1,SNR=7.2
CMAR                                  LR     LR      08 48 14.2
      comp=Z,213nm,18.9s,baz=106,slow=38
CMAR  Chiang Mai Arr      40.08 260   P      P       08 30 32.2  -1.2
TIXI  Tiksi               40.10 354   P      P       08 30 32.6  -0.3
      comp=Z,7.8nm,0.6s,baz=139,slow=7.3,SNR=17
TIXI                                  P3KP           09 01 47.8
      comp=Z,2.0nm,0.3s,baz=160,slow=1.6,SNR=4.4
TIXI  Tiksi               40.10 354⇓eP      P       08 30 32.9   0.0
TIXI  Tiksi               40.10 354   P      P       08 30 32.9   0.0
BNSI  Bone                41.38 212   P      P       08 30 50.3  +6.2
PMG   Port Moresby        41.74 171   P      P       08 30 47.5  +0.5
      comp=Z,17nm,0.5s,baz=358,slow=11,SNR=6.3
PMG                                   LR     LR      08 47 39.2
      comp=Z,168nm,18.1s,baz=348,slow=35
PMG   Port Moresby        41.74 171   P      P       08 30 46.8  -0.2
PMG                                   IAmb   IAmb    08 30 52.0
      comp=Z,71nm,1.2s
KSM   Kuching             41.98 230   P      P       08 30 50.0  +0.9
KAPI  Kappang             42.09 212   P      P       08 30 49.4  -0.5
      comp=Z,11nm,0.9s,baz=79,slow=10,SNR=2.8
KAPI                                  LR     LR      08 49 40.8
      comp=Z,66nm,19.5s,baz=69,slow=38
KAPI  Kappang             42.09 212   P      P       08 30 50.4  +0.5
KAPI                                  pmax   pmax
      comp=Z,16nm,1.0s
KAPI  Kappang             42.09 212   P      P       08 30 50.4  +0.5
LSA   Lhasa               42.47 280   P      P       08 30 53.2  -0.3
LSA   Lhasa               42.47 280   P      P       08 30 53.4  -0.1
LSA                                   pmax   pmax
      comp=Z,18nm,1.0s
LSA   Lhasa               42.47 280   P      P       08 30 53.4  -0.1
WMQ   Urumqi              42.87 302  eP      P       08 30 56.9  +0.8
WMQ                                   pP     pwP     08 31 13.2  -0.7
WMQ                                   sP     sP      08 31 21.6  +4.3
WMQ                                   pmax   pmax
      comp=Z,53nm,1.1s
WMQ                                   pmax   pmax
      comp=Z,320nm,4.7s
WMQ                                   LR     LR
      comp=Z,390nm,14.3s
WMQ                                   LR     LR
      comp=Z,500nm,19.1s
WMQ                                   LR     LR
      comp=Z,500nm,19.1s
WMQ   Urumqi              42.87 302   P      P       08 30 57.5  +1.4
WMQ   Urumqi              42.87 302   P      P       08 30 57.5  +1.4
UNV   Unalaska Valle      42.94  44   P      P       08 30 58.3  +1.8
      baz=261
TARA  Tarawa              42.97 129   P      P       08 30 57.9  +0.8
TARA                                  IAmb   IAmb    08 30 59.7
      comp=Z,127nm,1.5s
DGZ   Jazzator, Alta      43.08 310d iP      P       08 30 58.7  +0.8
DGZ                                   pmax   pmax
      comp=Z,195nm,1.0s
GAMB  Gambell             43.15  29   P      P       08 30 57.5  -0.4
SHL   Shillong            43.16 274   P      P       08 30 56.7  -2.1
SHL                                   pmax   pmax
      comp=Z,37nm,1.2s
SHL   Shillong            43.16 274   P      P       08 30 58.2  -0.6
      SNR=9.5
SHL   Shillong            43.16 274   P      P       08 30 56.7  -2.1
BBKI  Banjar Baru         43.22 220   P      P       08 30 59.1   0.0
SOEI  Soe                 44.60 204   P      P       08 31 10.6  +0.3
SOEI                                  IAmb   IAmb    08 31 47.4
      comp=Z,46nm,1.1s
ZSN   Zaisan              44.74 307⇓iP      P       08 31 11.5  +0.5
      comp=Z,59nm,1.1s,baz=307
ZSN                                  eS      S       08 37 43.0  -0.6
      baz=307
ZSN   Zaisan              44.74 307d iP      P       08 31 11.5  +0.5
ZSN                                  eS      S       08 37 42.9  -0.6
ZSN                                   pmax   pmax
      comp=Z,59nm,1.1s
ZAA0  Zalesovo Array      45.03 316   P      P       08 31 13.1  -0.1
ZAA0                                  IAmb   IAmb    08 31 15.2
      comp=Z,53nm,1.1s
ZALV  Zalesovo Beam       45.03 316   P      P       08 31 13.5  +0.3
      comp=Z,44nm,1.1s,baz=100,slow=6.8,SNR=69
ZALV                                  PcP    PcP     08 32 53.8  +0.6
      comp=Z,8.6nm,0.6s,baz=110,slow=3.0,SNR=8.2
ZALV                                  ScP    ScP     08 36 40.0  -0.5
      comp=Z,0.8nm,0.4s,baz=96,slow=2.9,SNR=3.1
ZALV                                  LR     LR      08 50 42.5
      comp=Z,470nm,19.1s,baz=83,slow=37
ZALV  Zalesovo Beam       45.03 316   P      P       08 31 13.2   0.0
HNR   Honiara             45.16 153   LR     LR      08 49 07.1
      comp=Z,322nm,21.0s,baz=329,slow=35
JRMM  Jerantut            45.69 240   P      P       08 31 18.0  -0.9
MTN   Manton Dam          45.70 193   P      P       08 31 17.6  -1.3
COEN  Coen                45.89 177   P      P       08 31 21.1  +0.8
COEN                                  IAmb   IAmb    08 31 22.2
      comp=Z,78nm,1.2s
ANM   Nome                46.02  29   P      P       08 31 22.1  +1.3
      baz=252
TAPN  Taplejung           46.07 278  eP      P       08 31 20.8  -1.3
      comp=Z,32nm,0.4s
KULM  Kulim               46.13 243   P      P       08 31 22.0  -0.3
IPM   Ipoh                46.38 242   P      P       08 31 24.0  -0.3
ODAN  Odare               46.50 278  eP      P       08 31 24.6  -0.9
      comp=Z,106nm,0.5s
MK31  Makanchi Array      46.52 306d iP      P       08 31 25.2  +0.1
MK31                                  pmax   pmax
      comp=Z,74nm,0.8s
MK31  Makanchi Array      46.52 306   P      P       08 31 25.0  -0.1
MK31                                  IAmb   IAmb    08 31 26.6
      comp=Z,53nm,0.8s
MKAR  Makanchi Array      46.52 306   P      P       08 31 25.3  +0.2
      comp=Z,34nm,0.5s,baz=86,slow=9.6,SNR=246
MKAR                                  PcP    PcP     08 32 59.6  +1.0
      comp=Z,6.0nm,0.7s,baz=76,slow=10,SNR=2.7
MKAR                                  ScP    ScP     08 36 46.8  -0.2
      comp=Z,2.1nm,0.8s,baz=79,slow=5.5,SNR=5.1
MKAR                                  S      S       08 38 01.2  -8.0
      comp=Z,0.5nm,0.8s,baz=102,slow=14,SNR=1.4
MKAR                                  LR     LR      08 51 57.7
      comp=Z,330nm,18.4s,baz=82,slow=37
MKAR  Makanchi Array      46.52 306   P      P       08 31 25.4  +0.3
SDPT  Sand Point          46.60  42   P      P       08 31 25.9  +0.4
      baz=265
MAKZ  Makanchi            46.74 306   P      P       08 31 26.8   0.0
MAKZ                                  pmax   pmax
      comp=Z,55nm,0.6s
MAKZ  Makanchi            46.74 306   P      P       08 31 26.8   0.0
SRBI  Singaraja           46.93 216   P      P       08 31 32.8  +4.3
      comp=Z,35nm,0.6s
CHNA  Chernabura Isl      47.07  43   P      P       08 31 30.7  +1.5
      baz=266
RAMN  Ramite              47.13 278  eP      P       08 31 29.7  -0.7
      comp=Z,93nm,0.5s
JIRN  Jiri                47.24 279  eP      P       08 31 30.8  -0.6
      comp=Z,249nm,0.7s
GUN   Gumba               47.42 280  eP      P       08 31 31.6  -1.1
      comp=Z,136nm,0.7s
NRIK  Noril'sk            47.58 337   P      P       08 31 33.1  +0.2
      comp=Z,27nm,1.0s,baz=112,slow=9.6,SNR=28
NRIK                                  PcP    PcP     08 33 02.3  +0.5
      comp=Z,6.0nm,0.8s,baz=71,slow=5.7,SNR=3.7
NRIK                                  LR     LR      08 51 58.1
      comp=Z,382nm,21.0s,baz=112,slow=36
NRIK  Noril'sk            47.58 337d iP      P       08 31 33.0  +0.1
NRIK                                  pmax   pmax
      comp=Z,50nm,1.2s
NRIK  Noril'sk            47.58 337   P      P       08 31 33.1  +0.2
NRIK                                  IAmb   IAmb    08 31 34.4
      comp=Z,46nm,1.1s
SEM   Semipalatinsk       47.72 311⇓eP      P       08 31 33.4  -1.2
      comp=Z,64nm,1.3s,baz=311
SEM                                  eS      S       08 38 25.4  -1.2
      baz=311
SEM   Semipalatinsk       47.72 311deP      P       08 31 33.4  -1.2
SEM                                  eS      S       08 38 25.3  -1.2
SEM                                   pmax   pmax
      comp=Z,64nm,1.3s
CHGN  Chignik             47.83  41   P      P       08 31 35.9  +0.8
      baz=266
PKI   Pulchoki            47.92 280  eP      P       08 31 35.6  -1.0
      comp=Z,91nm,1.0s
PKIN  Phulchoki           47.93 280  eP      P       08 31 35.6  -1.0
      comp=Z,91nm,1.0s
KKN   Kakani              47.96 280  eP      P       08 31 35.9  -0.9
      comp=Z,110nm,0.8s
RDOG  Red Dog Mine        48.07  25   P      P       08 31 37.9  +1.1
      baz=251,SNR=6.3
DMN   Daman               48.16 280  eP      P       08 31 37.3  -1.1
      comp=Z,213nm,1.4s
GKN   Gorkha              48.42 281  eP      P       08 31 39.1  -1.2
      comp=Z,130nm,0.9s
KURK  Kurchatov           48.75 312   P      P       08 31 42.6  +0.4
KURK                                         PcP     08 33 06.8  +0.4
KURK  Kurchatov           48.75 312   P      P       08 31 42.2   0.0
KURBB Kurchatov Arra      48.81 311   P      P       08 31 42.6  -0.1
      comp=Z,59nm,0.8s,baz=87,slow=7.1,SNR=251
KURBB                                 PcP    PcP     08 33 06.8  +0.1
      comp=Z,4.3nm,0.7s,baz=92,slow=4.0,SNR=4.0
KURBB                                 S      S       08 38 38.8  -2.6
      comp=Z,0.3nm,0.5s,baz=82,slow=13,SNR=2.8
KURBB Kurchatov Arra      48.81 311   P      P       08 31 42.8  +0.1
PDGK  Podgornoye          48.85 302   P      P       08 31 42.4  -0.9
SHLS  Shalkode            48.90 301  eP      P       08 31 40.2  -3.5
      baz=301
SHLS  Shalkode            48.90 301  eP      P       08 31 40.1  -3.5
KNRA  Kununurra           48.95 196   P      P       08 31 44.0   0.0
DANN  Dangsing            49.04 281  eP      P       08 31 44.2  -1.0
      comp=Z,219nm,1.0s
PSI   Prapat              49.05 242   LR     LR      08 51 48.2
      comp=Z,162nm,20.9s,baz=78,slow=35
PSI   Prapat              49.05 242   P      P       08 31 44.2  -0.9
PSI                                   pmax   pmax
      comp=Z,37nm,1.0s
RPSI  Rantau Prapat       49.12 242   P      P       08 31 44.2  -1.3
RPSI                                  IAmb   IAmb    08 33 27.3
      comp=Z,37nm,1.0s
BKNI  Bangkinang          49.16 238   P      P       08 31 45.8   0.0
UZB   Uzynbulak           49.22 301⇓iP      P       08 31 44.9  -1.2
      comp=Z,26nm,1.3s,baz=302
UZB   Uzynbulak           49.22 301d iP      P       08 31 44.9  -1.2
UZB                                   pmax   pmax
      comp=Z,26nm,1.3s
KOLN  Koldanda            49.37 281  eP      P       08 31 46.7  -0.9
CHIR  Chirikof Islan      49.38  42   P      P       08 31 47.2  +0.3
      baz=269
TDK   Taldyqorghan        49.40 304  eP      P       08 31 45.6  -1.7
      baz=304
TDK   Taldyqorghan        49.40 304  eP      P       08 31 45.6  -1.7
KPKS  Kokpek              49.41 302⇓iP      P       08 31 46.9  -0.7
      comp=Z,18nm,1.2s,baz=302
KPKS  Kokpek              49.41 302d iP      P       08 31 46.8  -0.7
KPKS                                  pmax   pmax
      comp=Z,19nm,1.2s
GCSA  Galena City Sc      49.61  30   P      P       08 31 49.3  +0.8
      baz=260
SATY  Saty                49.68 301⇓iP      P       08 31 48.9  -0.7
      comp=Z,15nm,1.2s,baz=302
SATY  Saty                49.68 301d iP      P       08 31 48.9  -0.7
SATY                                  pmax   pmax
      comp=Z,15nm,1.2s
TTA   Tatalina            49.71  32   P      P       08 31 50.8  +1.3
TTA                                   pmax   pmax
      comp=Z,20nm,1.1s
TTA   Tatalina            49.71  32   P      P       08 31 50.6  +1.1
      baz=262
TTA   Tatalina            49.71  32   P      P       08 31 50.8  +1.3
TTA                                   IAmb   IAmb    08 31 52.2
      comp=Z,20nm,1.1s
KPJI  Karang Pucung       49.72 224   P      P       08 31 49.8  -0.2
      comp=Z,42nm,1.1s
P18K  Big Mountain,       49.74  37   P      P       08 31 51.2  +1.5
      baz=266
PYUN  Piuthan             49.77 281  eP      P       08 31 49.9  -0.7
PRZ   Przheval'sk         49.78 301   P      P       08 31 50.8  +0.3
PRZ                                   pmax   pmax
      comp=Z,50nm,0.8s
PRZ   Przheval'sk         49.78 301   P      P       08 31 50.8  +0.3
O18K  Koktuh Hills        49.78  36   P      P       08 31 51.4  +1.4
      baz=266
ARXS  Arharly             49.91 303  eP      P       08 31 51.1  -0.2
LEM   Lembang             50.10 225   P      P       08 31 52.5  -0.6
      comp=Z,43nm,0.7s,baz=68,slow=6.4,SNR=6.1
LEM                                   LR     LR      08 52 39.9
      comp=Z,143nm,20.9s,baz=84,slow=36
L19K  White Mountain      50.16  33   P      P       08 31 54.5  +1.6
      baz=264,SNR=6.4
L19K  White Mountain      50.16  33   P      P       08 31 54.1  +1.3
L19K                                  IAmb   IAmb    08 31 56.5
      comp=Z,37nm,1.2s
PPI   Padang Panjang      50.16 238   P      P       08 31 56.2  +2.8
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         comp=Z,11nm,0.5s
N19K  Bonanza Creek    50.22  35   P       P       08 31 55.3 +1.9
         baz=266
O19K  Port Alsworth    50.25  36   P       P       08 31 55.0 +1.5
         baz=266
KLSI                   50.26 230   P       P       08 31 53.9 -0.2
         comp=Z,19nm,0.9s
TARG  Taragay, Kyrgy   50.34 300   P       P       08 31 55.1  0.0
TARG                               IAmb    IAmb    08 31 56.8
         comp=Z,49nm,1.1s
M19K  Big River Lodg   50.35  34   P       P       08 31 55.9 +1.7
         baz=265
M19K  Big River Lodg   50.35  34   P       P       08 31 55.8 +1.5
M19K                               IAmb    IAmb    08 31 56.8
         comp=Z,32nm,1.2s
LHSI  Lahat            50.41 232   P       P       08 31 58.5 +3.3
         comp=Z,47nm,0.9s
MDSI  Maura Dua        50.46 231   P       P       08 31 54.5 -1.2
         comp=Z,36nm,1.2s
Q19K  Cape Douglas,    50.53  38   P       P       08 31 55.7  0.0
         baz=268
CHKK  Chushkaly        50.57 303  eP       P       08 31 55.2 -1.0
         baz=303
L20K  Farewell, AK     50.64  33   P       P       08 31 57.9 +1.4
         baz=265
MDOK  Medeo            50.64 302  i P      P       08 31 56.8 -0.1
         baz=302
MDOK  Medeo            50.64 302   P       P       08 31 56.9  0.0
OHAK  Old Harbor       50.69  40   P       P       08 31 56.9 +0.1
         baz=270
J20K  Nowinta River    50.70  31   P       P       08 31 58.7 +1.9
         baz=263,SNR=19
J20K  Nowinta River    50.70  31   P       P       08 31 58.5 +1.7
J20K                               IAmb    IAmb    08 32 00.0
         comp=Z,42nm,1.1s
AAA   Alma-Ata         50.73 302  eP       P       08 31 56.6 -0.9
         baz=302
AAA   Alma-Ata         50.73 302  eP       P       08 31 56.6 -0.9
TNSS  Tian-Shan        50.73 302  eP       P       08 31 57.6 -0.4
         baz=302
P19K  Oil Pt           50.77  37   P       P       08 31 59.1 +1.6
         baz=268
MASI  Maura Aman, Be   50.77 234   P       P       08 32 00.4 +2.3
         comp=Z,89nm,0.9s
KUU   Kurty            51.02 303⇓iP      P       08 31 58.3 -1.4
         comp=Z,111nm,1.3s,baz=303
KUU   Kurty            51.02 303d iP      P       08 31 58.2 -1.4
KUU                                pmax    pmax
         comp=Z,111nm,1.3s
RSO   Redoubt South    51.05  36   P       P       08 31 59.7 -0.1
GSI   Gunungsitoli     51.05 242   P       P       08 31 59.1 -1.0
         comp=Z,145nm,0.9s
GSI   Gunungsitoli     51.05 242   P       P       08 31 58.6 -1.5
KDAK  Kodiak Island    51.07  39   P       P       08 32 00.4 +0.6
         comp=Z,36nm,0.9s,baz=243,slow=0.7,SNR=19
KDAK  Kodiak Island    51.07  39   P       P       08 32 00.3 +0.6
         baz=270
IMAR  Indian Mountai   51.09  29   P       P       08 32 00.7 +0.8
A21K  Barrow           51.13  22   P       P       08 32 01.4 +1.5
         baz=255,SNR=5.6
A21K  Barrow           51.13  22   P       P       08 32 01.4 +1.5
SPCR  Spurr Chakacha   51.34  35   P       P       08 32 03.4 +1.6
         baz=267,SNR=10
ULHL  Ulahol           51.39 301   P       P       08 32 03.3 +0.6
         SNR=6.5
SPU   Mount Spurr      51.42  35   P       P       08 32 00.3 -2.1
H21K  Melozitna Rive   51.44  29   P       P       08 32 04.1 +1.7
         baz=263,SNR=16
H21K  Melozitna Rive   51.44  29   P       P       08 32 03.8 +1.4
H21K                               IAmb    IAmb    08 32 05.3
         comp=Z,32nm,1.1s
PPLA  Purkeypile       51.45  33   P       P       08 32 04.7 +2.0
         baz=266,SNR=6.8
CHUM  Lake Minchumin   51.47  31   P       P       08 32 04.6 +2.0
         baz=265,SNR=11
CAST  Castle Rocks     51.53  32   P       P       08 32 04.9 +1.7
         baz=266,SNR=18
CAST  Castle Rocks     51.53  32   P       P       08 32 04.8 +1.6
CAST                               IAmb    IAmb    08 32 06.2
         comp=Z,39nm,1.0s
SKT   Skwentna         51.70  34   P       P       08 32 05.5 +1.0
         baz=267,SNR=13
SKT   Skwentna         51.70  34   P       P       08 32 05.6 +1.2
SKT                                IAmb    IAmb    08 32 06.6
         comp=Z,31nm,1.0s
I21K  Tanana           51.73  30   P       P       08 32 06.4 +1.9
         baz=264,SNR=13
TKM2  Tokmak 2         51.73 302   P       P       08 32 05.5 +0.3
         SNR=11
TKM2  Tokmak 2         51.73 302   P       P       08 32 05.1 -0.1
WB0   Warramunga Arr   51.99 188   P       P       08 32 05.6 -1.3
WB0                                IAmb    IAmb    08 32 08.1
         comp=Z,44nm,1.2s
BRSE  Bradley Lake S   52.04  37   P       P       08 32 07.6 +0.7
         baz=270
FITZ  Fitzroy Crossi   52.06 199   P       P       08 32 07.3 -0.1
         comp=Z,6.4nm,0.7s,baz=21,slow=8.2,SNR=16
FITZ  Fitzroy Crossi   52.06 199   P       P       08 32 07.4 -0.1
SUA   Susitna One      52.06  34   P       P       08 32 07.8 +0.6
         baz=268,SNR=7.2
SUA   Susitna One      52.06  34   P       P       08 32 07.1 -0.1
SUA                                IAmb    IAmb    08 32 08.8
         comp=Z,33nm,0.8s
BPAW  Bear Paw Mtn.    52.07  31   P       P       08 32 08.7 +1.6
         baz=266,SNR=7.8
BPAW  Bear Paw Mtn.    52.07  31   P       P       08 32 07.8 +0.6
WRAB  Tennant Creek    52.16 188ceP       P       08 32 07.4 -0.8
WRAB                               pmax    pmax
         comp=Z,26nm,1.3s
KSH   Kashi            52.17 297   P       P       08 32 11.1 +2.7
KSH                                pP      pwP     08 32 26.4 -0.1
KSH                                sP      sP      08 32 34.3 +4.4
KSH                                pmax    pmax
         comp=Z,50nm,1.1s
KSH                                LR      LR
         comp=Z,200nm,16.8s
KSH                                LR      LR
         comp=Z,540nm,17.4s
KSH                                LR      LR
         comp=Z,830nm,19.6s
WB2   Warramunga Arr   52.17 188   P       P       08 32 07.2 -1.1
WB2                                IAmb    IAmb    08 32 35.2
         comp=Z,20nm,0.8s
WRA   Warramunga Arr   52.17 188   P       P       08 32 07.2 -1.1
         comp=Z,13nm,0.4s,baz=4.7,slow=7.6,SNR=218
WRA                                ScP     ScP     08 37 11.3 +0.2
         comp=Z,2.2nm,0.9s,baz=5.1,slow=5.2,SNR=6.7
WRA                                S       S       08 39 20.7 -7.8
         comp=Z,1.1nm,0.7s,baz=5.8,slow=13,SNR=7.9
WRA   Warramunga Arr   52.17 188   P       P       08 32 07.9 -0.4
WRA                                pmax    pmax
         comp=Z,3.0nm,1.3s
WRA   Warramunga Arr   52.17 188   P       P       08 32 07.8 -0.4
CTA   Charters Tower   52.18 174   P       P       08 32 09.2 +0.7
         comp=Z,3.7nm,0.5s,baz=355,slow=8.2,SNR=10
CTAO  Charters Tower   52.18 174   P       P       08 32 09.1 +0.7
CTAO                               pmax    pmax
         comp=Z,36nm,1.4s
CTAO  Charters Tower   52.18 174   P       P       08 32 09.1 +0.7
CTAO                               IAmb    IAmb    08 32 10.8
         comp=Z,36nm,1.4s
MLY   Manley           52.24  30   P       P       08 32 10.0 +1.6
         baz=266
MLY   Manley           52.24  30   P       P       08 32 09.8 +1.4
MLY                                IAmb    IAmb    08 32 11.3
         comp=Z,25nm,0.9s
KBK   Karagaybulak     52.25 302   P       P       08 32 09.8 +0.8
         SNR=14
SGDS  Sogindy          52.32 303⇓iP      P       08 32 08.4 -1.0
         comp=Z,20nm,1.2s,baz=303
SGDS  Sogindy          52.32 303  eP       P       08 32 09.3 -0.1
CHMS  Chumysh          52.33 302   P       P       08 32 09.5 +0.2
         SNR=9.4
TRF   Thorofare Moun   52.34  32   P       P       08 32 10.3 +1.0
         baz=267
M22K  Willow           52.36  34   P       P       08 32 10.1 +0.9
         baz=269,SNR=6.4
BTLS  Baital           52.44 305⇓iP      P       08 32 09.8 -0.3
         comp=Z,39nm,1.2s,baz=305
BTLS  Baital           52.44 305d iP      P       08 32 09.8 -0.3
BTLS                               pmax    pmax
         comp=Z,39nm,1.2s
RC01  Rabbit Creek A   52.54  35   P       P       08 32 10.9 +0.2
         baz=270
RC01  Rabbit Creek A   52.54  35   P       P       08 32 11.1 +0.5
RC01                               IAmb    IAmb    08 32 12.4
         comp=Z,37nm,1.0s
AAK   Ala-Archa        52.58 302   P       P       08 32 11.5  0.0
         comp=Z,23nm,0.9s,baz=124,slow=4.0,SNR=42
AAK                                LR      LR      08 55 16.9
         comp=Z,312nm,20.8s,baz=80,slow=37
AAK   Ala-Archa        52.58 302   P       P       08 32 11.4  0.0
         SNR=24
AAK   Ala-Archa        52.58 302  i P      P       08 32 11.5  0.0
         SNR=25
AAK   Ala-Archa        52.58 302d iP      P       08 32 11.2 -0.3
AAK                                pmax    pmax
         comp=Z,82nm,0.8s
AAK   Ala-Archa        52.58 302   P       P       08 32 11.5  0.0
AAK                                IAmb    IAmb    08 32 12.7
         comp=Z,26nm,0.8s
BRZS  Berezniki        52.61 311⇓iP      P       08 32 10.8 -0.5
         comp=Z,54nm,1.1s,baz=311
BRZS  Berezniki        52.61 311d iP      P       08 32 10.8 -0.5
BRZS                               pmax    pmax
         comp=Z,54nm,1.1s
COLD  Coldfoot         52.65  27   P       P       08 32 12.8 +1.5
         baz=264
COLD  Coldfoot         52.65  27   P       P       08 32 11.6 +0.3
SEW   Seward           52.68  36   P       P       08 32 12.3 +0.6
         baz=271
H23K  Yukon River      52.80  29   P       P       08 32 14.6 +2.1
         baz=266,SNR=13
H23K  Yukon River      52.80  29   P       P       08 32 13.2 +0.7
H23K                               IAmb    IAmb    08 32 15.7
         comp=Z,24nm,0.9s
I23K  Minto, Yukon-K   52.83  30   P       P       08 32 14.2 +1.5
         baz=267,SNR=9.5
I23K  Minto, Yukon-K   52.83  30   P       P       08 32 13.4 +0.7
I23K                               IAmb    IAmb    08 32 34.6
         comp=Z,20nm,1.1s
PMR   Palmer           52.84  34   P       P       08 32 13.3 +0.5
PMR                                pmax    pmax
         comp=Z,48nm,1.0s
PMR   Palmer           52.84  34   P       P       08 32 13.1 +0.4
         baz=270,SNR=17
PMR   Palmer           52.84  34   P       P       08 32 13.3 +0.5
PMR                                IAmb    IAmb    08 32 14.4
         comp=Z,48nm,1.0s
NEA2  Nenana           52.93  31   P       P       08 32 14.9 +1.4
         baz=268,SNR=31
NEA2  Nenana           52.93  31   P       P       08 32 14.3 +0.8
GHO   Glory Hole Cre   52.93  34   P       P       08 32 14.4 +0.8
GHO                                IAmb    IAmb    08 32 15.7
         comp=Z,44nm,1.0s
MCK   McKinley         52.96  32   P       P       08 32 14.7 +0.9
         baz=268,SNR=16
RND   Reindeer         52.99  32   P       P       08 32 14.5 +0.5
RND                                pmax    pmax
         comp=Z,38nm,1.0s
RND   Reindeer         52.99  32   P       P       08 32 14.5 +0.5
RND                                IAmb    IAmb    08 32 15.7
         comp=Z,38nm,1.0s
TOLK  Toolik Lake Re   53.02  25   P       P       08 32 15.8 +1.6
         baz=264,SNR=16
EKS2  Erkin-Say        53.09 302   P       P       08 32 15.4 +0.2
         SNR=16
KNK   Knik Glacier     53.16  35   P       P       08 32 16.1 +0.9
         baz=270,SNR=18
KNK   Knik Glacier     53.16  35   P       P       08 32 16.2 +1.0
SML   Sawmill          53.22  34   P       P       08 32 16.6 +0.9
         baz=270,SNR=15
PWL   Port Wells       53.23  35   P       P       08 32 16.3 +0.6
         baz=271,SNR=11
AML   Almayashu        53.27 301   P       P       08 32 17.7 +0.9
         SNR=48
AML   Almayashu        53.27 301  i P      P       08 32 17.6 +0.9
         SNR=49
AML   Almayashu        53.27 301   P       P       08 32 16.2 -0.6
TCOL  CIGO, UAF Yank   53.46  30   P       P       08 32 17.8 +0.5
         baz=268
COLA  College          53.46  30deP       P       08 32 18.7 +1.4
COLA                               pmax    pmax
         comp=Z,12nm,0.8s
COLA  College          53.46  30   P       P       08 32 18.1 +0.7
         baz=268
H24K  Noodor Dome      53.48  29   P       P       08 32 19.4 +1.8
         baz=268,SNR=16
SANVU Saraoutou        53.60 148   P       P       08 32 19.6 +0.8
POKR  Poker Plat Res   53.65  30   P       P       08 32 20.1 +1.4
         baz=269,SNR=7.4
BVAR  Borovoye Array   53.65 315   P       P       08 32 19.4 +0.4
         comp=Z,35nm,0.8s,baz=160,slow=4.7,SNR=136
SCM   Sheep Creek Mo   53.69  34   P       P       08 32 20.1 +0.9
         baz=271,SNR=18
BRVK  Borovoye         53.71 315   P       P       08 32 19.8 +0.4
BRVK                               pmax    pmax
         comp=Z,78nm,1.0s
BRVK  Borovoye         53.71 315   P       P       08 32 19.8 +0.4
GLI   Glacier Island   53.83  35   P       P       08 32 20.9 +0.8
         baz=272
HDA   Harding Lake     53.84  31   P       P       08 32 20.5 +0.3
         baz=270,SNR=19
IL31                   53.87  30   P       P       08 32 20.5 +0.2
IL31                               IAmb    IAmb    08 32 21.8
         comp=Z,26nm,0.8s
ILAR  Eielson Array    53.87  30   P       P       08 32 20.6 +0.2
         comp=Z,22nm,0.9s,baz=269,slow=6.0,SNR=142
ILAR                               LR      LR      08 58 18.1
         comp=Z,83nm,20.0s,baz=287,slow=39
M24K  Tolsona, Glenn   54.23  34   P       P       08 32 23.8 +0.7
         baz=272,SNR=6.4
Q23K  Middleton Isla   54.28  37   P       P       08 32 25.1 +1.8
         baz=274
KLU   Klutina          54.37  34   P       P       08 32 25.5 +1.3
         baz=273,SNR=12
PRP   Porcupine Dome   54.45  29   P       P       08 32 25.7 +1.0
         baz=270,SNR=12
EYAK  Cordova Ski Ar   54.51  36   P       P       08 32 26.3 +1.3
         baz=274
PAX   Paxson           54.52  33   P       P       08 32 26.3 +1.1
         baz=272,SNR=16
HARP  HAARP            54.69  33   P       P       08 32 28.0 +1.6
         baz=273,SNR=8.7
RIDG  Independent Ri   54.78  32   P       P       08 32 27.5 +0.5
         baz=272
DZA   Taraz            54.80 303  eP       P       08 32 26.3 -1.3
         baz=302
DZA   Taraz            54.80 303  eP       P       08 32 26.2 -1.3
BMAR  Burnt Mountain   54.83  27   P       P       08 32 29.9 +2.6
N25K  Chitina, Valde   55.00  34   P       P       08 32 29.0 +0.3
         baz=274
BMRM  Bremner River    55.04  35   P       P       08 32 30.2 +1.2
         baz=274,SNR=9.6
DOT   Dot Lake         55.13  32   P       P       08 32 29.9 +0.3
DOT                                IAmb    IAmb    08 32 31.3
         comp=Z,26nm,0.9s
SCRK  Sand Creek       55.15  31   P       P       08 32 30.4 +0.7
         baz=273,SNR=36
KAIM  Kayak Island     55.22  36   P       P       08 32 31.1 +1.0
         baz=275
J26L  Joseph Creek     55.31  31   P       P       08 32 31.2 +0.3
         baz=273,SNR=26
KK31  Karatay Array    55.34 303   P       P       08 32 31.6 +0.2
KK31                               pmax    pmax
         comp=Z,96nm,0.9s
KK31  Karatay Array    55.34 303   P       P       08 32 31.6 +0.2
KKAR  Karatay Array    55.34 303   P       P       08 32 31.5 +0.1
KKAR  Karatay Array    55.34 303   P       P       08 32 31.4 +0.1
L26K  Log Cabin Wild   55.49  32   P       P       08 32 33.6 +1.5
         baz=274,SNR=22
L26K  Log Cabin Wild   55.49  32   P       P       08 32 33.3 +1.2
L26K                               IAmb    IAmb    08 32 35.0
         comp=Z,36nm,1.0s
M26K  Nabesna, AK      55.70  33   P       P       08 32 35.2 +1.5
         baz=275,SNR=11
MCARA McCarthy VSAT    55.77  34   P       P       08 32 35.7 +1.6
         baz=275,SNR=16
MCARA McCarthy VSAT    55.77  34   P       P       08 32 34.9 +0.8
CRQE  Cirque           55.80  35   P       P       08 32 35.9 +1.4
         baz=276,SNR=10
BTK   Batken           55.88 299   P       P       08 32 35.3 -0.1
BTK                                pmax    pmax
         comp=Z,35nm,1.0s
BTK   Batken           55.88 299   P       P       08 32 35.3 -0.1
BTK                                IAmb    IAmb    08 32 36.4
         comp=Z,35nm,1.0s
AS31  Alice Springs    55.90 188   P       P       08 32 34.7 -0.8
ASAR  Alice Springs    55.90 188   P       P       08 32 34.6 -0.8
         comp=Z,4.1nm,0.4s,baz=9.3,slow=7.7,SNR=85
ASAR                               S       S       08 40 12.3 -6.5
         comp=Z,0.7nm,1.1s,baz=21,slow=16,SNR=4.2
IUG   Iuzhnay          55.91 302⇓iP      P       08 32 35.6 -0.1
         baz=302
IUG   Iuzhnay          55.91 302d iP      P       08 32 35.5 -0.1
L27K  Beaver Creek,    56.18  32   P       P       08 32 38.7 +1.7
         baz=275,SNR=24
BCAR  Beaver Creek A   56.20  32   P       P       08 32 38.2 +1.0
M27K  Edge Creek, AK   56.22  33   P       P       08 32 39.1 +1.6
         baz=276,SNR=22
M27K  Edge Creek, AK   56.22  33   P       P       08 32 38.8 +1.3
M27K                               IAmb    IAmb    08 32 40.3
         comp=Z,36nm,1.1s
EGAK  Eagle            56.33  30   P       P       08 32 38.5 +0.5
         baz=275,SNR=11
MESA  MESA             56.42  36   P       P       08 32 39.5 +0.5
         baz=277
GAR   Garm             56.54 298   P       P       08 32 40.0 -0.2
CTG   Chitna Glacier   56.63  35   P       P       08 32 41.9 +1.5
         baz=277,SNR=6.0
BVCY  Beaver Creek     56.68  33   P       P       08 32 41.9 +1.3
         baz=276
YUK3  Moose Creek      56.95  34   P       P       08 32 44.0 +1.2
         baz=277,SNR=15
PSA00 Pilbara Seismi   57.09 204   P       P       08 32 43.8 -0.1
PSA00                              IAmb    IAmb    08 33 11.1
         comp=Z,35nm,1.9s
DAWY  Dawson           57.16  31   P       P       08 32 45.3 +1.3
         baz=277,SNR=7.6
PINM  Pinnacle         57.28  36   P       P       08 32 45.9 +0.9
         baz=278
I29M  Ogilvie Camp,    57.47  29   P       P       08 32 47.5 +1.4
         baz=277,SNR=34
CHGR  Chuyangaron      57.51 298   P       P       08 32 46.6 -0.3
J29M  Klondike Camp    57.62  30   P       P       08 32 48.4 +1.1
         baz=277
PNL   Peninsula        57.77  36   P       P       08 32 49.1 +0.8
         baz=279
HYB   Hyderabad        57.79 271  i P      P       08 32 47.0 -2.1
YUK4  Talbot Arm       57.87  34   P       P       08 32 51.4 +2.2
         baz=279,SNR=23
EPYK  Eagle Plains     57.99  28   P       P       08 32 51.5 +1.7
         baz=277,SNR=46
EIDS  Eidsvold         58.01 169   P       P       08 32 49.7 -0.6
EIDS                               IAmb    IAmb    08 33 05.1
         comp=Z,15nm,1.1s
YUK6  Outpost Mounta   58.07  35   P       P       08 32 52.9 +2.2
         baz=279,SNR=12
HYT   Haines Junctio   58.50  35   P       P       08 32 55.9 +2.3
         baz=280,SNR=16
M30M  Minto, Yukon     58.53  33   P       P       08 32 55.5 +1.9
         baz=280,SNR=19
SVE   Sverdlovsk       58.60 321⇓eP      P       08 32 55.2 +1.0
SVE                                pmax    pmax
         comp=Z,37nm,1.1s
KBL   Kabul            58.90 294   P       P       08 32 56.5 -0.4
         SNR=11
KBL                                P       P       08 32 56.6 -0.3
         SNR=20
INK   Inuvik           58.94  26   P       P       08 32 57.2 +0.9
         comp=Z,7.5nm,0.3s,baz=285,slow=5.9,SNR=93
INK   Inuvik           58.94  26   P       P       08 32 57.2 +0.9
         baz=279,SNR=14
DZM   Mont Dzumac      59.18 152  eP       P       08 33 00.6 +2.0
         comp=Z,72nm,1.3s
DZM   Mont Dzumac      59.18 152  eLR      LR      08 50 36.6
         comp=Z,650nm,24.2s
N31M  Braeburn, Yuko   59.20  34   P       P       08 32 59.9 +1.7
         baz=281
M31M  Drury Creek, Y   59.70  33   P       P       08 33 03.5 +1.7
         baz=282,SNR=20
WHY   Whitehorse       59.80  35   P       P       08 33 04.3 +1.8
         baz=282,SNR=16
ARU   Arti             59.81 320   P       P       08 33 02.6 +0.1
         comp=Z,4.4nm,0.3s,baz=76,slow=4.8,SNR=32
ARU                                LR      LR      09 01 13.6
         comp=Z,305nm,19.2s,baz=77,slow=38
ARU   Arti             59.81 320d iP      P       08 33 02.6 +0.1
ARU                                *PP     pP      08 33 17.6  0.0
ARU                                        PP      08 35 12.1 -2.6
ARU                                S       S       08 41 11.4 +2.1
ARU                                SS      SS      08 45 03.3 -2.3
ARU                                pmax    pmax
         comp=Z,69nm,1.3s
ARU                                MLR     MLR
         comp=Z,340nm,21.0s
ARU   Arti             59.81 320   P       P       08 33 02.6 +0.1
SKAG  Skagway          59.84  36   P       P       08 33 04.7 +2.0
         baz=283,SNR=6.1
SIT   Sitka            60.40  39   P       P       08 33 08.1 +1.6
         baz=284
JIS   Juneau Island    60.59  37   P       P       08 33 09.7 +1.9
JIS                                IAmb    IAmb    08 34 48.8
         comp=Z,45nm,1.3s
AB31  Akbulak array    60.85 312  i P      P       08 33 09.9 +0.2
ABKAR Akbulak array    60.85 312   P       P       08 33 10.0 +0.2
ABKAR Akbulak array    60.85 312   P       P       08 33 09.8 +0.1
ABKAR                              pwP     pwP     08 33 26.7 -1.7
P33M  Teslin, Yukon    60.90  35   P       P       08 33 11.7 +1.7
         baz=284,SNR=11
A36M  Sachs Harbour    60.95  21   P       P       08 33 11.1 +1.1
         baz=284,SNR=31
A36M  Sachs Harbour    60.95  21   P       P       08 33 11.2 +1.1
A36M                               IAmb    IAmb    08 33 12.8
         comp=Z,31nm,0.9s
PALK  Pallekele        61.02 260   P       P       08 33 10.9 -0.5
PALK                               pmax    pmax
         comp=Z,19nm,0.9s
PALK  Pallekele        61.02 260   P       P       08 33 10.9 -0.5
PALK                               IAmb    IAmb    08 33 11.9
         comp=Z,19nm,0.8s
MSVF  Nonsavu          61.03 139⇑eP      P       08 33 13.2 +1.9
MSVF                               pmax    pmax
         comp=Z,29nm,1.3s
POO   Poona            61.27 275  eP       P       08 33 11.0 -2.1
AKTO  Aktyubinsk       61.71 314   LR      LR      09 00 58.6
         comp=Z,283nm,20.7s,baz=77,slow=37
WRAK  Wrangell Islan   62.15  39   P       P       08 33 19.8 +1.4
         baz=287
STKA  Stephens Creek   63.68 179   P       P       08 33 29.1 +0.4
         comp=Z,18nm,1.0s,baz=334,slow=8.7,SNR=12
STKA                               LR      LR      09 02 56.5
         comp=Z,141nm,19.2s,baz=18,slow=38
KIRV  Kirov            63.94 324   LR      LR      09 03 23.5
         comp=Z,273nm,21.2s,baz=27,slow=38
KIRV  Kirov            63.94 324deP       P       08 33 31.1 +0.9
HRA   Herat            64.19 296   P       P       08 33 33.1 +0.6
HRA                                IAmb    IAmb    08 33 34.4
         comp=Z,41nm,1.0s
WRGLY Wrigley          64.25  30   P       P       08 33 33.5 +1.4
         baz=290,SNR=7.4
PRGR  Permogore        64.67 328  eP       P       08 33 34.2 -0.7
PRGR                              e*PP     pP      08 33 49.7 -0.4
PRGR                               pmax    pmax
         comp=Z,119nm,1.3s
SPITS Spitsbergen Ar   65.24 349   P       P       08 33 39.6 +1.2
         comp=Z,6.3nm,0.7s,baz=107,slow=5.7,SNR=6.6
KBS   Kingsbay         65.40 350⇑eP      P       08 33 41.7 +2.3
KBS                                pmax    pmax
         comp=Z,48nm,1.7s
NOR   Nord             65.90 356  i P      P       08 33 42.5 -0.1
GEYT  Alibeck          65.92 301   P       P       08 33 44.1 +0.6
         comp=Z,23nm,0.9s,baz=83,slow=3.4,SNR=20
GEYT                               LR      LR      09 04 06.1
         comp=Z,184nm,21.1s,baz=215,slow=37
GYA0B ALIBECK ARRAY    65.92 301   P       P       08 33 44.2 +0.7
GYA0B                              IAmb    IAmb    08 33 45.3
         comp=Z,45nm,1.1s
APA   Apatity          66.99 337⇓iP      P       08 33 48.6 -1.1
APA                               i                08 34 08.9
APA                               i PS     S       08 42 37.0 -1.3
APA                                pmax    pmax
         comp=Z,16nm,0.9s
BELG  Belogornoye      67.14 318   LR      LR      09 05 04.2
         comp=Z,259nm,18.1s,baz=155,slow=38
RES   Resolute Bay     67.43  14   P       P       08 33 53.0 +0.6
         comp=Z,19nm,0.7s,baz=327,slow=6.3,SNR=47
RES   Resolute Bay     67.43  14   P       P       08 33 52.9 +0.4
RES                                IAmb    IAmb    08 33 53.9
         comp=Z,20nm,0.8s
YKA   Yellowknife Ar   68.25  29   P       P       08 33 58.0 +0.2
         comp=Z,4.6nm,1.0s,baz=290,slow=8.2,SNR=10
YKA                                LR      LR      09 04 21.0
         comp=Z,34nm,21.9s,baz=0.0,slow=36
YKA   Yellowknife Ar   68.25  29   P       P       08 33 58.2 +0.4
YKA   Yellowknife Ar   68.25  29   P       P       08 33 58.2 +0.4
ARCES ARCESS Array B   68.44 340   P       P       08 33 59.4 +0.6
         comp=Z,14nm,0.9s,baz=65,slow=6.8,SNR=8.8
ARCES                              LR      LR      09 08 22.7
         comp=Z,267nm,20.4s,baz=10.0,slow=40
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TULEG	Thule	69.99	7	⇑iP	P	08 34 08.6	+0.3
TULEG				IAmb	IAmb	08 34 09.4	
	comp=Z,14nm,0.7s						
NEEM	North Greenlan	70.42	3	i P	P	08 34 11.9	+0.6
NEEM				IAmb	IAmb	08 34 12.9	
	comp=Z,18nm,0.8s						
A04D	Lummi Island	70.46	44	P	P	08 34 13.2	+1.5
	baz=297						
DAG	Danmarks Havn	70.60	355	⇑iP	P	08 34 12.5	+0.5
DAG				IAmb	IAmb	08 34 13.8	
	comp=Z,17nm,0.8s						
D03D	Eldon	70.77	46	P	P	08 34 15.8	+2.3
	baz=297,SNR=8.9						
MOS	Moscow	70.96	324	eP	P	08 34 13.1	-1.4
MOS				pmax	pmax		
	comp=Z,61nm,1.0s						
VRH	Novokhopyorsk	70.96	319	eP	P	08 34 14.4	-0.2
VRH				pmax	pmax		
	comp=Z,30nm,0.6s						
B05A	Bryant	71.03	45	P	P	08 34 16.9	+1.8
	baz=297,SNR=5.7						
D04E	Lakebay	71.12	46	P	P	08 34 17.4	+1.8
	baz=297						
F04D	Rainier, OR	71.47	47	P	P	08 34 19.0	+1.1
	baz=297						
E04D	Cinebar	71.53	46	P	P	08 34 19.5	+1.4
	baz=297						
JLN	Jalan Bani Buh	71.67	285	P	P	08 34 20.4	+1.0
G03D	McMinnville, O	71.71	48	P	P	08 34 20.8	+1.5
	baz=297						
OBN	Obninsk	71.79	324	LR	LR	09 08 28.7	
	comp=Z,99nm,18.6s,baz=90,slow=38						
WBK	Wadi Bani Khal	71.82	286	P	P	08 34 21.3	+1.0
LPSR	Galich'ya Gora	71.82	321	eP	P	08 34 20.1	+0.3
LPSR				pmax	pmax		
	comp=Z,40nm,0.9s						
I02E	Swisshome, OR	71.85	49	P	P	08 34 22.0	+1.8
	baz=297						
C06D	Leavenworth	71.90	44	P	P	08 34 21.5	+1.1
	baz=298						
BIDO	Bidbid	72.08	287	P	P	08 34 22.9	+1.0
GROC	Groznyy	72.20	310	eP	P	08 34 20.5	-1.8
GROC				e		08 34 38.3	
GROC				e*SP	PcP	08 34 40.5	+0.3
GROC				eS	S	08 43 38.6	-1.7
GROC				pmax	pmax		
	comp=Z,40nm,1.0s						
J01E	Myrtle Point	72.23	50	P	P	08 34 24.2	+1.8
	baz=298						
LTY	Liberty	72.35	45	P	P	08 34 23.1	-0.1
I03D	Drain, OR	72.36	49	P	P	08 34 25.3	+2.2
	baz=298,SNR=7.9						
SMDO	Samad	72.36	286	P	P	08 34 24.6	+0.9
H04D	Lebanon	72.36	48	P	P	08 34 25.2	+2.0
	baz=298						
VSR	Storozhevoye	72.37	320	eP	P	08 34 23.2	+0.1
VSR				pmax	pmax		
	comp=Z,50nm,1.1s						
BANOM	Banah	72.44	290	i P	P	08 34 23.7	-0.3
	SNR=6.4						
BANOM	Banah	72.44	290	P	P	08 34 25.3	+1.3
SHME	Shamm	72.51	290	P	P	08 34 25.8	+1.4
SHME	Shamm	72.51	290	P	P	08 34 25.9	+1.6
	SNR=5.8						
F05D	White Salmon	72.52	47	P	P	08 34 25.8	+1.7
	baz=298						
K02D	Willamette Mer	72.62	50	P	P	08 34 26.4	+1.5
	baz=298,SNR=8.4						
H04A	Detroit Lake	72.63	48	P	P	08 34 26.2	+1.3
H04A				IAmb	IAmb	08 34 27.5	
	comp=Z,32nm,0.9s						
HOQ	Hoqain	72.71	287	P	P	08 34 27.0	+1.3
	SNR=9.4						
MDH	Madha	72.73	289	P	P	08 34 26.6	+0.9
MASF	Masafi	72.81	289	P	P	08 34 26.7	+0.5
	SNR=5.8						
MSFE	Esma-Masafi	72.81	289	i P	P	08 34 25.1	-1.2
	SNR=5.8						
L02E	Cave Junction	72.91	51	P	P	08 34 28.2	+1.7
	baz=298						
I04A	Tendick Farm,	72.91	49	P	P	08 34 27.9	+1.4
	baz=298,SNR=14						
G05D	Wamic, OR	72.91	47	P	P	08 34 28.2	+1.6
	baz=298						
FINES	FINESS Array B	72.96	333	P	P	08 34 27.3	+0.9
	comp=Z,17nm,0.8s,baz=84,slow=5.9,SNR=34						
FINES				LR	LR	09 08 47.7	
	comp=Z,167nm,19.1s,baz=58,slow=38						
FINES	FINESS Array B	72.96	333	P	P	08 34 26.7	+0.3
UOSS	Minazif	72.97	289	i P	P	08 34 26.4	-0.8
	SNR=6.1						
GOF	Gofitskoye	73.08	313	⇑eP	P	08 34 28.7	+1.2
GOF				pmax	pmax		
	comp=Z,35nm,0.9s						
HATD	Hatta, Dubai	73.08	289	i P	P	08 34 27.8	-0.1
	SNR=12						
HATD	Hatta, Dubai	73.08	289	P	P	08 34 29.0	+1.1
	SNR=12						
HATD				P	P	08 34 29.2	+1.4
	SNR=5.2						
SOHO	SOHO	73.08	288	i P	P	08 34 27.9	+0.1
	SNR=14						
SOHO	SOHO	73.08	288	P	P	08 34 28.9	+1.1
DBG	Daneborg	73.08	355	i P	P	08 34 27.6	+0.6
DBG				IAmb	IAmb	08 34 28.6	
	comp=Z,3.7nm,0.8s						
BSY	Bisya	73.20	287	P	P	08 34 32.0	+3.4
	SNR=6.3						
ASHO	Ashiyiah	73.21	289	i P	P	08 34 29.1	+0.4
	SNR=9.5						
ASHO	Ashiyiah	73.21	289	P	P	08 34 29.4	+0.8
	SNR=9.5						
I05D	Terrebonne, OR	73.33	48	P	P	08 34 30.5	+1.4
	baz=299,SNR=7.4						
J04D	Umpqua Nationa	73.37	49	P	P	08 34 31.1	+1.6
	baz=299,SNR=10						
NAZ	Nazwa, Dubai	73.38	289	P	P	08 34 29.6	0.0
MHTO	MHTO	73.40	285	P	P	08 34 31.0	+1.3
	SNR=6.1						
F07A	Phinny Hill Vi	73.45	46	P	P	08 34 31.2	+1.5
F07A				IAmb	IAmb	08 34 32.4	
	comp=Z,25nm,1.1s						
ARQ	Araqi	73.47	287	P	P	08 34 32.0	+1.9
	SNR=8.0						
FAQ	Al Faqa, Dubai	73.55	289	P	P	08 34 31.4	+0.8
ZEI	Tsey	73.62	310	eP	P	08 34 29.3	-1.7
ZEI				pmax	pmax		
	comp=Z,10.0nm,1.3s						
YBH	Yreka Blue Hor	73.70	51	P	P	08 34 33.2	+1.9
	comp=Z,8.9nm,0.8s,baz=348,slow=5.2,SNR=21						
L04D	Klamath Falls	73.73	50	P	P	08 34 32.8	+1.3
	baz=299,SNR=9.0						
ALNE	Al Ain	73.75	288	P	P	08 34 33.2	+1.4
	SNR=5.7						
M02C	Callahan	73.76	51	P	P	08 34 33.7	+2.0
	baz=299,SNR=8.6						
KBZ	Khabaz	73.81	312	P	P	08 34 32.7	+1.0
	comp=Z,24nm,0.8s,baz=66,slow=4.4,SNR=26						
KBZ				LR	LR	09 10 54.2	
	comp=Z,200nm,18.3s,baz=64,slow=39						
ASUD	Al Ashush, Dub	73.82	289	P	P	08 34 33.1	+1.0
KIV	Kislovodsk	73.83	312	⇓P	P	08 34 34.9	+2.9
KIV	Kislovodsk	73.83	312	i P	P	08 34 33.6	+1.5
	SNR=10						
KIV	Kislovodsk	73.83	312	eP	P	08 34 32.4	+0.4
KIV				eS	S	08 44 00.4	+1.4
KIV				pmax	pmax		
	comp=Z,43nm,1.1s						
KIV				MLR	MLR		
	comp=Z,164nm,18.0s						
K04D	Chiloquin, OR	73.89	50	P	P	08 34 34.1	+1.7
	baz=299,SNR=6.2						
J05D	Fort Rock, OR	73.91	49	P	P	08 34 34.5	+2.0
	baz=299,SNR=18						
NEW	Newport	73.95	43	P	P	08 34 33.8	+1.3
	comp=Z,12nm,1.1s,baz=298,slow=4.9,SNR=13						
NEW	Newport	73.95	43	P	P	08 34 34.0	+1.4
	baz=300,SNR=13						
N02D	Trinity Center	74.06	51	P	P	08 34 35.3	+1.9
	baz=299,SNR=7.5						
NEY	Neytrino	74.16	311	⇓eP	P	08 34 36.4	+2.4
NEY				pmax	pmax		
	comp=Z,4.0nm,1.0s						
M04C	Macdoel	74.24	50	P	P	08 34 36.2	+1.6
	baz=299,SNR=14						
DQM	DQM	74.26	284	P	P	08 34 35.5	+0.7
GNI	Garni	74.34	308	P	P	08 34 37.1	+1.9
GNI	Garni	74.34	308	d iP	P	08 34 36.7	+1.6
GNI				pmax	pmax		
	comp=Z,44nm,1.7s						
GNI	Garni	74.34	308	P	P	08 34 36.5	+1.4
GNI				IAmb	IAmb	08 34 54.1	
	comp=Z,49nm,1.1s						
O02D	Mt. Diablo Mer	74.39	52	P	P	08 34 37.0	+1.7
	baz=299,SNR=8.0						
K05A	Summer Lake	74.40	49	P	P	08 34 36.8	+1.3
K05A				IAmb	IAmb	08 34 38.6	
	comp=Z,59nm,1.0s						
VSU	Vasula	74.47	330	eP	P	08 34 36.2	+0.9
AKH	Akhalkalaki	74.56	309	⇑P	P	08 34 37.1	+0.7
UMZA	Um Al Zommool	74.86	287	P	P	08 34 38.9	+0.7
O03E	Paynes Creek	74.99	52	P	P	08 34 39.6	+0.8
	baz=300,SNR=9.4						
WALA	Waterton Lakes	75.36	41	P	P	08 34 41.5	+0.7
MZWR	Madinat Zayed	75.39	289	P	P	08 34 41.9	+0.7
MTSE	Matsula	75.53	331	eP	P	08 34 42.4	+1.0
SUMG	Summit	75.56	360	P	P	08 34 43.4	+1.5
SUMG				pmax	pmax		
	comp=Z,30nm,1.0s						
SUMG	Summit	75.56	360	i P	P	08 34 43.4	+1.5
SUMG				IAmb	IAmb	08 34 44.2	
	comp=Z,17nm,1.0s						
SUMG	Summit	75.56	360	P	P	08 34 43.4	+1.5
SUMG				IAmb	IAmb	08 35 01.0	
	comp=Z,30nm,1.0s						
BCA	Borcka	75.76	310	⇑P	P	08 34 45.1	+1.9
SOC	Sochi	75.89	313	eP	P	08 34 42.4	-1.3
SOC				e	PP	08 37 32.0	-2.2
SOC				ePPP	PPP	08 39 20.0	
SOC				eS	S	08 44 21.3	-0.3
SOC				eSS	SS	08 49 14.5	+0.4
SOC				pmax	pmax		
	comp=Z,10.0nm,0.5s						
SOC				MLR	MLR		
	comp=Z,117nm,17.0s						
AAL	Aland	76.08	334	eP	P	08 34 45.3	+0.8
MZR	Muzera	76.08	288	i P	P	08 34 43.3	-2.0
	SNR=14						
MZR	Muzera	76.08	288	P	P	08 34 46.0	+0.8
	SNR=5.1						
GHWR	Ruwais	76.10	290	P	P	08 34 45.9	+0.6
MNK	Minsk	76.33	326	i P	P	08 34 46.7	+0.7
MNK				i		08 34 58.2	
MNK				i *PP	pP	08 35 01.1	-0.6
MNK				i	PP	08 37 38.4	+0.9
MNK				i PPP	PPP	08 39 25.1	
MNK				i S	S	08 44 27.1	+1.0
MNK				i *SS	sS	08 44 52.9	-0.2
MNK				i		08 45 05.0	
MNK				i SS	SS	08 49 24.0	+3.8
MNK				pmax	pmax		
	comp=E,6.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,71nm,1.0s						
MNK				pmax	pmax		
	comp=N,20nm,0.8s						
MNK				MLR	MLR		
	comp=E,35nm,20.0s						
MNK				MLR	MLR		
	comp=N,138nm,15.0s						
MNK				MLR	MLR		
	comp=Z,280nm,20.0s						
MNK	Minsk	76.33	326	i P	P	08 34 46.8	+0.8
	comp=E,6.0nm,0.9s						
MNK				i P	P	08 34 46.8	+0.8
	comp=N,20nm,0.8s						
MNK				i P	P	08 34 46.8	+0.8
	comp=Z,71nm,1.0s,baz=234						
MNK				i PcP	PcP	08 34 58.2	+0.5
MNK				i pP	pP	08 35 01.1	-0.5
MNK				i PP	PP	08 37 38.4	+0.9
MNK				i PPP	PPP	08 39 25.1	
MNK				i S	S	08 44 27.1	+1.1
MNK				i sS	sS	08 44 53.0	-0.2
MNK				i SS	SS	08 49 24.0	+3.9
MNK				i SSS	SSS	08 52 47.4	
MNK				i LQ	LQ	09 03 28.0	
MNK				i LR	LR	09 08 06.2	
MNK				i LRM	MLR	09 10 56.2	
	comp=E,35nm,20.2s						
MNK				i LRM	MLR	09 11 07.8	
	comp=N,138nm,15.2s						
MNK				i LRM	MLR	09 11 25.9	
	comp=Z,280nm,19.5s						
ISAL	Salakas	76.49	328	eP	P	08 34 48.7	+1.8
MSO	Missoula	76.53	43	P	P	08 34 48.3	+0.8
	baz=303						
NACGM	Naroch	76.60	327	i P	P	08 34 48.3	+0.8
ANN	Anapa	76.65	315	eP	P	08 34 46.3	-1.7
ANN				pmax	pmax		
	comp=Z,77nm,1.1s						
ANN				MLR	MLR		
	comp=Z,259nm,16.0s						
SHMA	Al-Shehemyia	76.69	292	P	P	08 34 48.9	+0.2
SHAO	Shalim	76.77	283	P	P	08 34 49.1	0.0
SHAO	Shalim	76.77	283	P	P	08 34 50.0	+0.8
SLIT	Slitere, Latvi	76.84	331	eP	P	08 34 49.2	+0.4
TRNA	Turayna	77.05	291	P	P	08 34 50.9	+0.3
UPP	Uppsala	77.17	334	eP	P	08 34 51.1	+0.4
UMR	Umm Al-Rimmam	77.39	297	eP	P	08 34 51.5	-1.0
DMTO	DMTO	77.48	283	P	P	08 34 53.5	+0.4
PABE	Paberze	77.49	329	eP	P	08 34 53.7	+1.2
PABE	Paberze	77.49	329	P	P	08 34 53.2	+0.7
MIB	Mutribah	77.55	297	eP	P	08 34 52.1	-1.2
KBD	Kabd	77.59	297	eP	P	08 34 51.7	-1.9
QRN	Al-Qurain	77.63	296	eP	P	08 34 52.3	-1.5
DOK	Doka	77.70	284	P	P	08 34 55.0	+0.6
	SNR=5.0						
RDF	Al-Radifah	77.82	296	eP	P	08 34 53.5	-1.5
AKASG	Malin Array Be	77.93	323	P	P	08 34 55.2	+0.1
	comp=Z,20nm,0.6s,baz=49,slow=6.1,SNR=84						
AKASG				LR	LR	09 12 01.5	
	comp=Z,382nm,18.8s,baz=50,slow=38						
AKASG	Malin Array Be	77.93	323	P	P	08 34 55.7	+0.6
AKASG				pwP	pwP	08 35 13.6	-1.0
AKBB	Malin Array Si	77.93	323	d iP	P	08 34 55.2	+0.1
BMN	Battle Mountai	77.93	50	P	P	08 34 56.7	+1.2
BMN				pmax	pmax		
	comp=Z,29nm,1.3s						
BMN	Battle Mountai	77.93	50	P	P	08 34 56.7	+1.2
BMN				IAmb	IAmb	08 34 58.3	
	comp=Z,29nm,1.3s						
HLID	Hailey	78.02	46	P	P	08 34 57.4	+1.4
	baz=303,SNR=16						
RBK	Rabkut	78.20	283	P	P	08 34 57.8	+0.6
EGMT	Eagleton	78.23	40	P	P	08 34 57.9	+0.9
	baz=305,SNR=8.4						
NVAR	Mina Array Bea	78.28	52	P	P	08 34 58.8	+1.2
	comp=Z,11nm,0.9s,baz=282,slow=5.8,SNR=72						
NVAR				LR	LR	09 03 02.9	
	comp=Z,193nm,21.1s,baz=278,slow=31						
NVAR	Mina Array Bea	78.28	52	P	P	08 34 58.8	+1.2
NVAR				pwP	pwP	08 35 16.1	-1.8
MLAC	Mammoth, Mammo	78.33	53	P	P	08 34 58.4	+0.4
	baz=302						
WHFO	Wadi Hawf	78.35	284	P	P	08 34 58.3	+0.3
NV11	Mina Array Sit	78.37	52	P	P	08 34 58.5	+0.5
NB201	NORSAR Array S	78.51	338	P	P	08 34 58.5	+0.4
NB201				IAmb	IAmb	08 35 11.4	
	comp=Z,60nm,1.1s						
NB2	NORSAR Subarra	78.54	338	P	P	08 34 58.5	+0.2
	comp=Z,11nm,0.7s,baz=41,slow=5.3						
NB2	NORSAR Subarra	78.54	338	P	P	08 34 58.5	+0.2
	baz=41,slow=5.3						
NOA	NORSAR Array B	78.54	338	P	P	08 34 58.5	+0.2
	comp=Z,7.3nm,0.6s,baz=42,slow=5.4,SNR=33						
NOA				LR	LR	09 14 15.1	
	comp=Z,141nm,19.7s,baz=25,slow=39						
BOZ	Bozeman (W)	78.55	43	P	P	08 34 59.9	+1.1
	baz=304,SNR=16						
SMMC	Simmler	78.74	55	P	P	08 35 01.3	+1.4
	baz=301						
SUW	Suwalki	78.80	328	eP	P	08 35 00.3	+0.5
SUW	Suwalki	78.80	328	eP	P	08 35 00.6	+0.8
ABTO	Aybut	79.02	284	P	P	08 35 02.2	+0.5
	SNR=6.3						
ICESG	Greenland Ices	79.07	0	i P	P	08 35 02.4	+1.0
ICESG				IAmb	IAmb	08 35 03.4	
	comp=Z,16nm,0.9s						
VES	Vestal, Richgr	79.10	55	P	P	08 35 02.3	+0.4
	baz=302,SNR=11						
YHL	Hebgen Lake	79.24	44	P	P	08 35 03.8	+1.0
LCH	Last Change Ra	79.35	53	P	P	08 35 04.1	+0.7
CWC	Cottonwood Cre	79.47	54	P	P	08 35 05.0	+0.9
	baz=302						
ISA	Isabella, Lake	79.62	54	P	P	08 35 05.0	+0.2
	baz=302						
ARVC	Arvin	79.65	55	P	P	08 35 05.4	+0.5
	baz=302						
GRAC	Grapevine Rang	79.66	53	P	P	08 35 06.0	+1.0
	baz=302,SNR=5.7						
DIKM	Dikmen	79.70	313	⇑P	P	08 35 06.0	+1.0
H17A	Grant Village	79.85	44	P	P	08 35 08.7	+2.6
	baz=305,SNR=17						
SORM	Soroca	79.92	321	⇓P	P	08 35 06.4	+0.3
OSI	Osito Audit: C	80.00	55	P	P	08 35 07.8	+1.0
	baz=302						
R11A	Troy Canyon, C	80.12	51	P	P	08 35 08.8	+1.2
	baz=303,SNR=18						
SNCC	San Nicolas Is	80.16	57	P	P	08 35 08.6	+1.0
	baz=302						
RLMT	Red Lodge	80.19	43	P	P	08 35 08.7	+0.8
	baz=306						
RLMT	Red Lodge	80.19	43	P	P	08 35 08.5	+0.6
FURC	Furnace Creek,	80.29	53	P	P	08 35 09.5	+1.3
	baz=303,SNR=12						
EDW2	Edwards Air Fo	80.36	55	P	P	08 35 10.0	+1.2
	baz=302,SNR=7.1						
DECC	Green Verdugo	80.46	56	P	P	08 35 10.1	+0.8
	baz=302						
QSM	Queen of Sheba	80.56	53	P	P	08 35 10.2	+0.4
QSM				IAmb	IAmb	08 35 29.3	
	comp=Z,34nm,1.0s						
GWY	Greenwater Val	80.57	53	P	P	08 35 10.4	+0.4
GWY				IAmb	IAmb	08 35 12.1	
	comp=Z,36nm,1.1s						
FMP	Fort Macarthur	80.78	56	P	P	08 35 11.6	+0.7
	baz=302						
CIS	Catalina Islan	80.86	56	P	P	08 35 12.0	+0.6
	baz=302						
DUG	Dugway, Tooele	80.89	48	P	P	08 35 13.0	+1.3
	baz=304,SNR=21						
DGMT	Dagmar	80.93	38	P	P	08 35 11.9	+0.4
	baz=309,SNR=6.2						
BFSC	Mount Baldy Ra	80.94	55	P	P	08 35 12.2	+0.2
	baz=303						
LAO	LASA Array	80.95	40	P	P	08 35 12.9	+1.1
	baz=308,SNR=12						
GSC	Goldstone, Bar	80.96	54	P	P	08 35 13.0	+1.0
	baz=303,SNR=7.7						
SHOC	Shoshone, Teco	81.00	53	P	P	08 35 12.2	+0.1
	baz=303						
LVV	L'vov	81.09	324	eP	P	08 35 13.5	+1.2
CTU	Camp Tracy	81.27	47	P	P	08 35 14.3	+0.6
BEL	Belsk	81.32	327	eP	P	08 35 14.7	+1.3
BEL				eL	L	09 13 27.8	
	comp=Z,195nm,23.3s						
BW06	Boulder Array	81.40	45	P	P	08 35 15.0	+0.6
	baz=306,SNR=8.5						
PDAR	Pinedale Array	81.40	45	P	P	08 35 15.3	+0.9
	comp=Z,3.9nm,0.8s,baz=274,slow=3.5,SNR=24						
PDAR				LR	LR	09 09 31.2	
	comp=Z,24nm,19.3s,baz=306,slow=34						
PDAR	Pinedale Array	81.40	45	P	P	08 35 14.7	+0.3
TUQ	Turquoise Moun	81.49	54	P	P	08 35 15.4	+0.5
	baz=303						
HEC	Hector,Ludlow	81.54	54	P	P	08 35 16.0	+0.9
	baz=303,SNR=6.3						
DY2G	Dye2	81.54	3	i P	P	08 35 15.8	+1.1
MURC	Murrieta	81.61	56	P	P	08 35 16.0	+0.6
	baz=303						
BR131	Keskin Array S	81.80	312	P	P	08 35 16.6	+0.1
BR131				pmax	pmax		
	comp=Z,29nm,0.9s						
BR131	Keskin Array S	81.80	312	P	P	08 35 17.8	+1.3
	SNR=14						
BR131	Keskin Array S	81.80	312	P	P	08 35 16.6	+0.1
BR131				IAmb	IAmb	08 35 21.9	
	comp=Z,29nm,0.9s						
BRTR	Keskin Array B	81.80	312	P	P	08 35 17.4	+1.0
	comp=Z,17nm,0.8s,baz=108,slow=4.0,SNR=43						
BRTR				LR	LR	09 17 02.2	
	comp=Z,111nm,18.3s,baz=76,slow=40						
BRTR	Keskin Array B	81.80	312	P	P	08 35 17.1	+0.7
BRTR				pwP	pwP	08 35 37.1	+1.0
TESR	Tescani	81.84	321	⇓P	P	08 35 17.2	+0.9
CFR	Carcaliu	81.84	319	⇑P	P	08 35 17.2	+0.8
KWP	Kalwaria Pacla	81.87	325	eP	P	08 35 17.5	+1.1
KWP				eL	L	09 14 37.0	
	comp=Z,378nm,18.6s						
KWP	Kalwaria Pacla	81.87	325	P	P	08 35 16.9	+0.5
KWP				pmax	pmax		
	comp=Z,914nm,1.1s						
KWP	Kalwaria Pacla	81.87	325	P	P	08 35 16.9	+0.5
TPGR	Topolog	81.88	318	⇓P	P	08 35 17.5	+0.9
BUR08	Bucovina Ar. S	81.89	322	P	P	08 35 17.7	+1.0
BURAR	Bucovina Array	81.90	322	P	P	08 35 17.4	+0.6
BURAR				pwP	pP	08 35 34.4	+1.8
TCRU	Three Creeks R	82.02	49	P	P	08 35 18.0	+0.2
GMRC	Granite Mounta	82.03	54	P	P	08 35 18.7	+1.0
	baz=304,SNR=7.4						
109C	Camp Elliot, M	82.06	56	P	P	08 35 18.6	+0.9
	baz=303						
PFO	Pinyon Flats O	82.12	55	P	P	08 35 18.6	+0.4
PFO				pmax	pmax		
	comp=Z,18nm,1.0s						
PFO	Pinyon Flats O	82.12	55	P	P	08 35 19.0	+0.8
	baz=303,SNR=5.1						
PFO	Pinyon Flats O	82.12	55	P	P	08 35 18.6	+0.4
PFO				IAmb	IAmb	08 35 38.1	
	comp=Z,18nm,0.9s						
TPFO	Pinon Flats	82.13	55	P	P	08 35 19.1	+0.9
	baz=303,SNR=6.5						
VRI	Vrincioaia	82.20	320	⇑P	P	08 35 20.0	+1.8
BELC	Belle Mtn. Jos	82.23	55	P	P	08 35 18.9	+0.1
	baz=304						
PLOR	Plostina	82.25	320	⇓P	P	08 35 19.7	+1.2
ANTO	Ankara	82.25	312	P	P	08 35 19.3	+0.6
ANTO				pmax	pmax		
	comp=Z,19nm,0.7s						
ANTO	Ankara	82.25	312	P	P	08 35 19.3	+0.6
ANTO				IAmb	IAmb	08 35 21.3	
	comp=Z,19nm,0.7s						
HARR	Harsova	82.26	318	⇓P	P	08 35 20.0	+1.5
COVR	Voineasa-Covas	82.50	320	⇑P	P	08 35 21.9	+2.1
MONP2	Monument Peak	82.54	56	P	P	08 35 20.5	0.0
	baz=304						
KOLS	Kolonicke sedl	82.54	324	eP	P	08 35 20.7	+0.7
KOLS				pmax	pmax		
	comp=Z,27nm,1.1s						
KOLS	Kolonicke sedl	82.54	324	eP	P	08 35 20.7	+0.7
OZUR		82.56	321	⇑P	P	08 35 22.0	+1.8
P17A	Butcher Ranch,	82.61	48	P	P	08 35 21.7	+1.0
P17A				IAmb	IAmb	08 35 23.3	
	comp=Z,52nm,1.4s						
PMOR	Pomariorio Ree	82.63	113	eT	T	10 06 07.3	
	comp=Z,4.3nm,0.2s						
KNB	Kanab	82.68	51	P	P	08 35 22.5	+1.4
KNB				pmax	pmax		
	comp=Z,27nm,1.2s						
KNB	Kanab	82.68	51	P	P	08 35 22.5	+1.4
KNB				IAmb	IAmb	08 35 24.1	
	comp=Z,27nm,1.2s						
IRM	Iron Mountain	82.73	54	P	P	08 35 22.2	+0.9
	baz=304,SNR=6.8						
UZH	Uzhgorod	82.73	324	c iP	P	08 35 21.2	+0.3
UZH				e		08 35 28.8	
NEE2	Needles Airpor	82.75	53	P	P	08 35 21.3	0.0
	baz=304						
BMR	Baia Mare	82.75	323	⇑P	P	08 35 22.5	+1.4
ISR	Istrita	82.77	319	⇓P	P	08 35 21.2	-0.1
BC3	Big Chuckawall	82.80	55	P	P	08 35 22.5	+0.8
	baz=304,SNR=5.5						
PPT	Papeete	82.84	116	LR	LR	09 04 41.9	
	comp=Z,108nm,21.4s,baz=311,slow=30						
PPT2	Papeete2	82.85	116	eLR	LR	09 01 18.8	
	comp=Z,672nm,27.2s,baz=308						
MLR	Muntele Rosu	82.86	320	⇓P	P	08 35 23.4	+1.6
OJC	Ojcow	82.88	326	eP	P	08 35 22.4	+0.8
MDUB	Mudurnu	82.89	314	P	P	08 35 22.8	+0.7
IKP	In-Ko-Pah, Jac	82.89	56	P	P	08 35 23.0	+0.8
	baz=304						
TRPA	Tarpa	82.94	324	⇓P	P	08 35 23.3	+1.3
TRPA	Tarpa	82.94	324	eP	P	08 35 23.3	+1.3
SWSC	Sam W. Stewart	82.95	56	P	P	08 35 22.9	+0.5
	baz=304						

CRVS	Cervenica-Dubn	82.97	325	eP	P	08 35 23.3	+1.1
CRVS				pmax	pmax		
	comp=Z,85nm,1.7s						
CRVS	Cervenica-Dubn	82.97	325	eP	P	08 35 23.3	+1.1
W13A	Hualapai Mount	83.06	53	P	P	08 35 23.8	+0.6
NIE	Niedzica	83.18	326	eP	P	08 35 25.3	+2.0
K22A	Casper	83.26	43	P	P	08 35 24.7	+0.7
	baz=308,SNR=11						
PDMCI	Parker Dam,Lak	83.33	54	P	P	08 35 24.8	+0.5
	baz=304						
VOIR		83.38	320	⇑P	P	08 35 25.3	+0.8
GLA	Glamis	83.57	55	P	P	08 35 26.6	+1.0
	baz=304						
ARR	Arges	83.65	321	⇑P	P	08 35 27.8	+2.0
MDND	Maddock	83.67	36	P	P	08 35 26.2	+0.4
	baz=312						
DRGR		83.74	322	⇑P	P	08 35 27.6	+1.4
RSSD	Black Hills	83.76	41	P	P	08 35 26.8	+0.2
	baz=309						
LANS	Liptovska Anna	83.76	326	eP	P	08 35 28.3	+2.0
LANS				pmax	pmax		
	comp=Z,13nm,1.0s						
LANS	Liptovska Anna	83.76	326	eP	P	08 35 28.3	+2.0
O20A	White River Ci	83.76	46	P	P	08 35 27.6	+0.9
	baz=307,SNR=16						
ULM	Lac du Bonnet	83.81	33	P	P	08 35 26.0	-0.5
	comp=Z,5.0nm,1.0s,baz=293,slow=7.2,SNR=3.6						
ULM				LR	LR	09 11 56.8	
	comp=Z,68nm,21.9s,baz=306,slow=35						
OKC	Ostrava-Krasne	83.91	327	eP	P	08 35 28.0	+1.0
OKC	Ostrava-Krasne	83.91	327	eP	P	08 35 28.0	+1.0
KSP	Ksiaz	84.04	328	eP	P	08 35 28.5	+0.9
KSP				eL	L	09 14 30.9	
	comp=Z,198nm,23.5s						
LOT	Lotru	84.06	321	⇑P	P	08 35 29.1	+1.1
MORC	Moravsky Berou	84.23	327	⇓P	P	08 35 29.9	+1.2
MORC	Moravsky Berou	84.23	327	eP	P	08 35 29.5	+0.8
BSEG	Bad Segeberg	84.23	333	eP	P	08 35 29.2	+0.7
	comp=Z,34nm,1.1s,baz=41,slow=5.0						
OSTC	Ostas	84.28	328	eP	P	08 35 29.9	+1.0
CHVC	Chvalec	84.33	328	eP	P	08 35 30.1	+0.9
KRLC	Kraliky	84.37	328	eP	P	08 35 30.0	+0.6
KRLC	Kraliky	84.37	328	eP	P	08 35 30.0	+0.6
DPC	Dobruska-Polom	84.38	328	eP	P	08 35 29.8	+0.4
DPC				e		08 35 47.1	
DPC	Dobruska-Polom	84.38	328	eP	P	08 35 29.8	+0.4
DPC				epP	pP	08 35 47.1	+1.8
PSZ	Piszkesteto	84.40	325	⇓P	P	08 35 31.4	+1.8
PSZ	Piszkesteto	84.40	325	eP	P	08 35 30.8	+1.2
WUAZ	Wupatki	84.50	51	P	P	08 35 31.5	+1.0
	baz=306,SNR=8.4						
WUAZ	Wupatki	84.50	51	P	P	08 35 31.3	+0.8
VYHS	Vyhne	84.52	326	eP	P	08 35 31.7	+1.6
VYHS				pmax	pmax		
	comp=Z,40nm,1.2s						
VYHS	Vyhne	84.52	326	eP	P	08 35 31.7	+1.6
GZR	Gura Zlata	84.62	321	⇑P	P	08 35 31.6	+0.8
N23A	Red Feather La	84.68	44	P	P	08 35 32.9	+1.4
	baz=308,SNR=28						
JAVC	Velka Javorina	84.82	326	eP	P	08 35 33.6	+1.9
VRAC	Vranov	85.00	327	⇓P	P	08 35 33.8	+1.2
VRAC	Vranov	85.00	327	eP	P	08 35 33.5	+1.0
BRG	Berggiesshubel	85.05	329	eP	P	08 35 33.2	+0.5
	comp=Z,20nm,1.0s,baz=41,slow=5.0						
BRG	Berggiesshubel	85.05	329	iP	P	08 35 33.7	+1.0
BRG				Amp		08 35 34.5	
	comp=Z,18nm,0.9s						
BRG				pP	pP	08 35 50.3	+1.7
BRG				Amp		08 35 51.1	
	comp=Z,9.5nm,0.8s						
BRG				Amp		09 17 32.0	
	comp=N,0.1nm,18.5s						
BRG				Amp		09 17 43.0	
	comp=Z,0.2nm,13.7s						
BRG				Amp		09 17 46.0	
	comp=E,0.1nm,17.4s						
BZS	Buzias	85.09	322	⇑P	P	08 35 33.8	+0.8
FLTG	Flechtingen	85.09	332	eP	P	08 35 33.1	+0.2
	comp=E,31nm,0.9s,baz=41,slow=5.0						
X16A	Lo Mia Camp, P	85.10	52	P	P	08 35 34.6	+1.1
CLL	Collm	85.13	330	⇓iP	P	08 35 33.5	+0.4
CLL				e*PP	pP	08 35 50.0	+1.0
CLL				eS	S	08 45 58.0	0.0
CLL				pmax	pmax		
	comp=Z,46nm,0.9s						
CLL	Collm	85.13	330	⇓iP	P	08 35 33.5	+0.4
	comp=Z,46nm,0.9s						
CLL				epP	pP	08 35 50.0	+1.0
CLL				eS	S	08 45 58.0	0.0
CLL				e		08 46 36.0	
CLL				eSS	SS	08 51 30.0	-1.4
CLL				eSSS	SSS	08 55 06.0	
CLL				e		08 56 30.0	
CLL				eSSSS		08 58 09.0	
CLL				Lm	MLR	09 18 00.0	
	comp=Z,100nm,21.0s						
CLL	Collm	85.13	330	eP	P	08 35 33.5	+0.4
	comp=Z,46nm,0.9s,baz=41,slow=5.0						
CLL	Collm	85.13	330	P	P	08 35 33.2	+0.1
HERR	Herculane	85.16	321	⇑P	P	08 35 34.2	+0.8
SMOL	Smolenice	85.17	326	eP	P	08 35 35.3	+1.8
SMOL				pmax	pmax		
	comp=Z,14nm,1.0s						
SMOL	Smolenice	85.17	326	eP	P	08 35 35.2	+1.8
AGMN	Agassiz Nation	85.19	34	P	P	08 35 33.5	0.0
	baz=315						
FBE	Freiberg	85.27	330	eP	P	08 35 34.5	+0.7
	comp=Z,41nm,1.0s,baz=41,slow=5.0						
KRUC	Moravsky	85.27	327	eP	P	08 35 34.5	+0.7
MODS	Modra-Piesok	85.34	326	eP	P	08 35 34.9	+0.6
MODS				pmax	pmax		
	comp=Z,30nm,1.3s						
MODS	Modra-Piesok	85.34	326	eP	P	08 35 34.9	+0.6
MVCO	Mesa Verde	85.37	49	P	P	08 35 35.6	+0.7
	baz=307,SNR=8.1						
TAOE	Nuku Hiva Isla	85.41	103	eLR	LR	09 02 33.1	
	comp=Z,799nm,26.6s						
NRDL	Niedersach Rie	85.42	332	eP	P	08 35 35.1	+0.7
	baz=41,slow=5.0						
PRU	Pruhonice	85.44	329	eP	P	08 35 35.3	+0.6
PRU				e		08 35 52.5	
PRU	Pruhonice	85.44	329	eP	P	08 35 35.3	+0.6
PRU				epP	pwP	08 35 52.5	-1.8
ASSE	Asse, Remlinge	85.47	332	eP	P	08 35 35.1	+0.5
	baz=41,slow=5.0						
ISCO	Idaho Springs	85.56	45	P	P	08 35 35.9	0.0
ISCO				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ISCO	Idaho Springs	85.56	45	P	P	08 35 37.2	+1.3
	baz=309,SNR=14						
ISCO	Idaho Springs	85.56	45	P	P	08 35 35.9	0.0
214A	Organ Pipe Nat	85.59	55	P	P	08 35 36.9	+1.1
	baz=305						
MDVR	Moldovita	85.59	321	⇑P	P	08 35 35.9	+0.3
NEUB	Neuenburg	85.72	331	eP	P	08 35 36.8	+0.8
	comp=Z,38nm,0.8s,baz=41,slow=5.0						
CLZ	Clausthal	85.81	332	eP	P	08 35 37.3	+0.7
	comp=Z,39nm,1.2s,baz=41,slow=5.0						
W18A	Petrified Fore	85.82	51	P	P	08 35 37.5	+0.4
	baz=307						
TANN	Tannenbergstha	86.03	330	eP	P	08 35 38.0	+0.3
	baz=41,slow=5.0						
WERD	Werda	86.07	330	eP	P	08 35 38.4	+0.5
	comp=Z,16nm,1.4s,baz=41,slow=5.0						
MPLH	Magyarpolny	86.07	325	eP	P	08 35 37.0	-0.8
S22A	4UR Ranch, Cre	86.09	47	P	P	08 35 39.8	+1.3
	baz=308,SNR=14						
GUNZ	Gunzen	86.12	330	eP	P	08 35 38.8	+0.7
	comp=Z,16nm,1.3s,baz=41,slow=5.0						
WERN	Wernitzgruen	86.16	330	eP	P	08 35 38.9	+0.6
	comp=Z,17nm,1.2s,baz=41,slow=5.0						
GTTG	Gottingen	86.20	332	eP	P	08 35 39.1	+0.7
	comp=Z,30nm,1.0s,baz=41,slow=5.0						
MOX	Moxa	86.21	330	eP	P	08 35 39.0	+0.5
	comp=Z,19nm,1.3s,baz=41,slow=5.0						
SUSD	Miller	86.30	38	P	P	08 35 39.2	+0.1
	baz=313,SNR=5.6						
SUSD	Miller	86.30	38	P	P	08 35 39.0	-0.1
CONA	Conrad Observa	86.33	327	iP	P	08 35 40.3	+1.0
	comp=Z,15nm,1.4s,SNR=7.0						
FRGS	Fruska Gora	86.33	323	⇑P	P	08 35 39.4	+0.2
Q24A	Divide	86.37	46	P	P	08 35 40.7	+0.8
	baz=309,SNR=5.3						
TBI	Tubuai	86.39	120	eLR	LR	09 03 02.5	
	comp=Z,354nm,27.0s						
CKRC	Cesky Krumlov	86.39	328	eP	P	08 35 39.9	+0.4
IBBN	Ibbenburen	86.47	333	eP	P	08 35 40.2	+0.5
	comp=Z,50nm,1.3s,baz=41,slow=5.0						
KHC	Kasperske Hory	86.49	328	eP	P	08 35 40.4	+0.4
KHC				e		08 35 58.2	
KHC	Kasperske Hory	86.49	328	eP	P	08 35 40.4	+0.4
KHC				epP	pwP	08 35 58.2	-1.4
MANZ	Manzenberg	86.50	330	eP	P	08 35 40.6	+0.7
	comp=Z,2.4nm,1.4s,baz=41,slow=5.0						
KOVH	Kovagotottos	86.55	324	eP	P	08 35 40.2	-0.1
ROTZ	Rotzenmuhle	86.62	330	eP	P	08 35 41.2	+0.6
	comp=Z,3.8nm,1.6s,baz=41,slow=5.0						
GEC2	GERESS Array S	86.65	328	eP	P	08 35 40.8	0.0
	comp=Z,8.5nm,1.1s,baz=41,slow=5.0						
GERES	GERESS Array B	86.65	328	P	P	08 35 40.9	+0.1
	comp=Z,1.8nm,0.6s,baz=51,slow=5.3,SNR=21						
GERES				PP	PP	08 39 03.2	+0.4
	comp=Z,0.5nm,0.6s,baz=35,slow=5.3,SNR=5.8						
GERES				LR	LR	09 18 53.8	
	comp=Z,171nm,18.4s,baz=51,slow=39						
GERES	GERESS Array B	86.65	328	P	P	08 35 41.1	+0.3
GERES	GERESS Array B	86.65	328	P	P	08 35 41.1	+0.3
F33A	5 Mile Ranch,	86.70	36	P	P	08 35 41.1	+0.1
F33A				IAmb	IAmb	08 35 42.5	
	comp=Z,23nm,1.0s						
UBBA	Unterbreizbach	86.75	331	eP	P	08 35 41.5	+0.6
	baz=41,slow=5.0						
TUC	Tucson	86.78	54	P	P	08 35 42.9	+1.1
	baz=306						
SDCO	Great Sand Dun	86.92	47	P	P	08 35 42.2	-0.3
	baz=309						
SDCO	Great Sand Dun	86.92	47	P	P	08 35 43.5	+1.0
SDCO				IAmb	IAmb	08 37 40.5	
	comp=Z,19nm,1.4s						
OGNE	Ogallala	86.93	43	P	P	08 35 42.9	+0.6
	baz=311						
ARSA	Arzberg	86.97	326	eP	P	08 35 43.2	+0.8
	comp=Z,11nm,1.4s						
GRF	Grafenberg Arr	87.10	330	eP	P	08 35 43.6	+0.8
	comp=Z,29nm,1.2s,baz=41,slow=5.0						
MOA	Molln	87.12	327	eP	P	08 35 43.8	+0.8
	comp=Z,4.9nm,0.9s						
BUG	Bochum--Univer	87.34	333	eP	P	08 35 45.0	+1.0
	baz=41,slow=5.0						
EYMN	Ely	87.47	32	P	P	08 35 44.4	-0.3
	baz=318						
PERS	Pernice	87.61	326	iP	P	08 35 45.5	+0.1
SOKA	Soboth	87.62	326	iP	P	08 35 45.8	+0.3
	comp=Z,19nm,1.6s,SNR=8.4						
K31A	O'Neill	87.64	40	P	P	08 35 45.5	-0.1
KSCO	Kaye Shedlock'	87.85	44	P	P	08 35 47.2	+0.4
	baz=311						
KSCO	Kaye Shedlock'	87.85	44	P	P	08 35 47.1	+0.2
KSCO				IAmb	IAmb	08 35 48.7	
	comp=Z,24nm,1.3s						
RJOB	Jochberg	87.88	328	eP	P	08 35 47.1	+0.4
	baz=41,slow=5.0						
T25A	Trinidad	87.97	47	P	P	08 35 48.3	+0.7
	baz=310						
OBKA	Obir	87.97	326	eP	P	08 35 46.8	-0.4
	comp=Z,5.8nm,0.9s						
ECSD	EROS Data Cent	88.01	38	P	P	08 35 47.5	+0.2
	baz=314,SNR=18						
ECSD	EROS Data Cent	88.01	38	P	P	08 35 47.6	+0.2
ECSD				IAmb	IAmb	08 35 49.2	
	comp=Z,22nm,1.1s						
ANMO	Albuquerque	88.06	49	⇑eP	P	08 35 48.6	+0.6
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ANMO	Albuquerque	88.06	49	P	P	08 35 48.2	+0.2
	baz=308						
ANMO	Albuquerque	88.06	49	P	P	08 35 47.9	-0.1
KBA	Koelnbreinsper	88.12	327	eP	P	08 35 49.0	+1.1
	comp=Z,5.3nm,0.6s						
Y22D	IRIS PASSCAL I	88.30	50	P	P	08 35 49.7	+0.6
	baz=308						
MYKA	Terra Mystica	88.31	327	eP	P	08 35 48.5	-0.3
	comp=Z,3.8nm,0.5s						
GBAS	Gorenja Brezov	88.44	326	iP	P	08 35 48.9	-0.5
PDG	Podgorica	88.50	321	⇓P	P	08 35 50.3	+0.6
121A	Cookes Peak, D	88.67	52	P	P	08 35 52.0	+1.1
	baz=308						
ZOU	Zoufplan	88.67	327	P	P	08 35 49.7	-1.0
ZOU				IAmb	IAmb	08 35 50.8	
	comp=Z,23nm,1.6s						
WATA	Walderalm	88.72	328	eP	P	08 35 51.7	+0.9
	comp=Z,3.0nm,0.5s						
ABTA	Abfaltersbach	88.74	327	eP	P	08 35 50.5	-0.4
	comp=Z,8.1nm,1.0s						
WTTA	Wattenberg	88.75	328	eP	P	08 35 51.5	+0.5
	comp=Z,6.1nm,0.9s						
BGNE	Belgrade	88.80	40	P	P	08 35 50.7	-0.4
	baz=313						
SPMN	Marine on St.	88.86	35	P	P	08 35 51.5	+0.2
	baz=317						
BCLA	Clavier	88.91	333	dpP	pP	08 36 09.5	+2.2
MOTA	Moosalm	88.93	329	eP	P	08 35 52.1	+0.3
	comp=Z,6.9nm,1.2s						
RETA	Reutte	88.97	329	eP	P	08 35 52.6	+0.7
	comp=Z,9.0nm,1.0s						
SQTA	Sankt Quirin	88.97	328	eP	P	08 35 52.6	+0.6
	comp=Z,5.0nm,0.7s						
BMRD	Maredsous	89.20	334	dPcP	PcP	08 35 53.8	-0.4
BMRD				dpP	pP	08 36 10.4	+1.7
FETA	Feichten	89.34	328	eP	P	08 35 54.2	+0.5
	comp=Z,8.5nm,0.9s						
BFO	Black Forest	89.36	331	eP	P	08 35 54.2	+0.6
	comp=Z,7.1nm,0.9s,baz=41,slow=5.0						
DOU	Dourbes	89.44	334	dPcP	PcP	08 35 55.4	+0.2
I37A	Lemond, Waseca	89.45	36	P	P	08 35 54.5	+0.4
DAVA	Damuels	89.51	329	iP	P	08 35 55.1	+0.6
	comp=Z,15nm,0.9s,SNR=5.7						
CTI	Castel Tesino	89.66	327	P	P	08 35 54.3	-0.9
CTI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CTI	Castel Tesino	89.66	327	P	P	08 35 54.3	-0.9
CBKS	Cedar Bluff	89.67	43	P	P	08 35 55.2	-0.1
	baz=312						
SCHQ	Schefferville	90.14	16	LR	LR	09 21 02.1	
	comp=Z,46nm,19.4s,baz=314,slow=39						
TUE	Stuetta	90.37	329	P	P	08 35 58.6	0.0
TUE				IAmb	IAmb	08 35 60.0	
	comp=Z,15nm,1.0s						
MNTX	Cornudas Mount	90.79	51	P	P	08 36 01.2	+0.6
	baz=309,SNR=6.2						
MNTX	Cornudas Mount	90.79	51	P	P	08 36 01.5	+0.9
MNTX				IAmb	IAmb	08 36 02.7	
	comp=Z,12nm,1.6s						
MSTX	Muleshoe	91.03	48	P	P	08 36 01.9	+0.1
	baz=311						
SCIA	State Center	91.07	37	P	P	08 36 01.7	0.0
	baz=317						
AMTX	Amarillo	91.11	47	P	P	08 36 01.9	-0.2
	baz=311						
AMTX	Amarillo	91.11	47	P	P	08 36 01.9	-0.2
AMTX				IAmb	IAmb	08 36 04.8	
	comp=Z,18nm,1.1s						
KSU1	Kansas State U	91.25	41	P	P	08 36 02.3	-0.3
	baz=314						
NRCA	Norcia	91.37	324	P	P	08 36 03.2	+0.1
NRCA				IAmb	IAmb	08 36 05.4	
	comp=Z,25nm,1.4s						
GLMI	Grayling	92.92	31	P	P	08 36 09.9	-0.3
	baz=323						
WMOK	Wichita Mounta	92.99	45	P	P	08 36 11.2	+0.4
	baz=313,SNR=5.9						
OK029	Liberty Lake	93.05	44		P	08 36 11.3	+0.3
TX31	Lajitas Ar. Si	93.42	52	P	P	08 36 13.7	+0.8
TX32	Lajitas Array	93.42	52	P	P	08 36 13.7	+0.8
TXAR	Lajitas Array	93.43	52	P	P	08 36 14.0	+1.1
	comp=Z,12nm,0.8s,baz=295,slow=3.1,SNR=134						
TXAR				LR	LR	09 11 14.9	
	comp=Z,142nm,21.9s,baz=0.0,slow=31						
TXAR	Lajitas Array	93.43	52	P	P	08 36 14.1	+1.1
TXAR				pP	pP	08 36 26.7	-2.1
TXAR				pwP	pwP	08 36 32.1	-1.2
ABTX	Abilene, Hawle	93.88	47	P	P	08 36 14.5	-0.4
	baz=312						
TUL1	Leonard	93.94	43	P	P	08 36 15.4	+0.3
	baz=315						
HDIL	Hopedale	94.05	36	P	P	08 36 15.3	-0.2
	baz=319						
Z35A	Perchaven, San	94.87	46	P	P	08 36 19.4	0.0
CCM	Cathedral Cave	94.92	39	P	P	08 36 19.3	-0.2
	baz=318						
JCT	Junction City	95.21	49	P	P	08 36 20.8	-0.3
	baz=312						
U40A	Yellville	95.29	41	P	P	08 36 20.7	-0.5
	baz=317						
W39A	Magazine	95.60	42	P	P	08 36 21.7	-1.0
	baz=316						
MIAR	Mount Ida	96.19	43	P	P	08 36 25.4	0.0
	baz=316,SNR=7.6						
W41B	Gary Mavity, V	96.48	41	P	P	08 36 25.6	-1.1
	baz=317						
X40A	Basin Creek Fa	96.65	42	P	P	08 36 26.2	-1.2
	baz=317						
833A	Chaparral WMA,	96.92	50	P	P	08 36 27.6	-1.2
	baz=312						
LONY	Lake Ozonia	97.04	25	P	P	08 36 28.1	-0.9
	baz=330						
P49A	Miami Univ. Ec	97.06	34	P	P	08 36 28.4	-0.9
	baz=322						
WCI	Wyandotte Cave	97.33	36	P	P	08 36 29.1	-1.3
	baz=321						
KEST	Kesra	98.64	322	LR	LR	09 26 13.5	
	comp=Z,132nm,18.6s,baz=300,slow=38						
TORD	Torodi Ar. Bea	120.41	312	PKP	PKPdf	08 41 48.8	-0.2
	comp=Z,1.5nm,0.5s,baz=57,slow=2.2,SNR=13						
TORD				PP	PP	08 43 05.4	-10
	comp=Z,2.2nm,1.1s,baz=5.7,slow=4.3,SNR=3.8						
BOSA	Boshof	125.12	256	PKP	PKiKP	08 41 59.0	+0.9
	comp=Z,1.3nm,0.7s,baz=350,slow=12,SNR=1.8						
BOSA	Boshof	125.12	256	PKIKP	PKiKP	08 41 59.0	+0.9
SDV	Santo Domingo	129.28	42	eP	PKiKP	08 42 06.9	0.0
SNAA	Sanae	135.95	196	PKiKP	PKiKP	08 42 20.7	+2.2
SNAA	Sanae	135.95	196	SKPbc	SKPbc	08 45 43.8	+0.4
VNA2	Neumayer--Watz	137.51	195	PKPdf	PKiKP	08 42 22.3	+0.7
VNA2	Neumayer--Watz	137.51	195	SKPdf	SKPdf	08 45 48.8	-0.7
VNA3	Neumayer Olymp	137.74	194	PKPdf	PKiKP	08 42 22.1	0.0
VNA3	Neumayer Olymp	137.74	194	SKPdf	SKPbc	08 45 48.3	-0.3
VNA1	Neumayer--Stat	137.91	195	PKiKP	PKiKP	08 42 23.9	+1.5
VNA1	Neumayer--Stat	137.91	195	SKPdf	SKPdf	08 45 49.9	-0.2
SAML	Samuel	147.87	49	eP	PKPdf	08 42 40.3	+0.6
LPAZ	La Paz	149.29	66	PKPbc	PKPbc	08 42 47.5	+0.5
	comp=Z,15nm,0.8s,baz=344,slow=3.9,SNR=48						
LPAZ	La Paz	149.29	66		PKPdf	08 42 44.4	+1.7
LVC	Limon Verde	151.93	78	eP	PKPdf	08 42 46.2	-0.1
PLCA	Paso Flores	153.38	118	PKPbc	PKiKP	08 42 56.5	+1.3
	comp=Z,4.5nm,0.8s,baz=203,slow=4.4,SNR=10.0						
PLCA				PKPab	sPKPdf	08 43 09.3	-0.8
	comp=Z,4.4nm,0.8s,baz=253,slow=4.5,SNR=8.0						
PLCA	Paso Flores	153.38	118	eP	PKPdf	08 42 46.3	-1.2

IDC 05 08:23:04.3±2.4**, 0°.33S**×**132°.88E, h0^{km}, mb3.5**/2**, mb1 3.5**/4**, mb1mx3.4**/45**, mbtmp3.4**/4**, ML3.4**/2**, Error ellipse: s-maj=108.1km s-min=28.3km az=81.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	19.04	202	P	P	08 27 27.6	-0.6
	0.1nm,0.3s,baz=37,slow=12,SNR=1.7						
WRA	Warramunga Arr	19.55	176	P	P	08 27 33.5	-0.3
	0.1nm,0.3s,baz=356,slow=11,SNR=6.1						
ASAR	Alice Springs	23.22	178	P	P	08 28 13.6	+0.3
	0.3nm,0.6s,baz=358,slow=7.3,SNR=5.6						
ZALV	Zalesovo Beam	67.01	331	P	P	08 33 59.3	+0.2
	1.5nm,0.6s,baz=123,slow=5.3,SNR=0.9						

IDC 05 08:35:51.1±1.3**, 6°.31N**×**127°.40E, h0^{km}, mb4.0**/5**, mb1 4.1**/5**, mb1mx3.5**/54**, mbtmp4.0**/5**, Error ellipse: s-maj=127.1km s-min=23.5km az=78.0, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	24.31	184	P	P	08 41 10.8	+0.2
	1.9nm,0.9s,baz=23,slow=7.7,SNR=4.1						
WRA	Warramunga Arr	26.96	165	P	P	08 41 33.2	-1.5
	1.3nm,1.0s,baz=346,slow=9.7,SNR=4.9						
ASAR	Alice Springs	30.46	168	P	P	08 42 05.9	+0.1
	0.5nm,0.6s,baz=354,slow=8.2,SNR=6.0						
STKA	Stephens Creek	40.31	161	P	P	08 43 31.3	+0.9
	1.9nm,0.6s,baz=333,slow=6.7,SNR=5.3						
NRIK	Noril'sk	68.11	346	P	P	08 46 52.5	0.0
	8.3nm,0.8s,baz=117,slow=4.5,SNR=7.6						

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*DJA **05** 08:40:30.9±0.3, 4°S±3°×13°9E±°, h129^{km}±4^{km}, M4.7/9, mB5.0/2, mb4.4/9, MLv4.9/5, Mw(mB)4.3/2*

*NEIC **05** 08:40:31.4±2.3, 4°.23S±0°.09×139°.04E±0°.09, h99^{km}±5^{km}, mb4.1/11, Error ellipse: s-maj=13.6km s-min=11.2km az=46.0*

*IDC **05** 08:40:31.6±1.2, 4°.09S×139°.14E, h123^{km}±13^{km}, mb3.6/5, mb1 3.8/10, mb1mx3.5/48, mbtmp4.2/10, Error ellipse: s-maj=16.1km s-min=14.2km az=147.0*

ISC 05 08:40:30.7±0.6**, 4°.21S**±0°.05×**139°.06E**±0°.05**, h100^{km}, n47, σ1^{s}43**/53**, mb3.7**/6**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SMPI	Sarmi	2.23	351	P	Pn	08 41 07.7	+1.4
SMPI				S	Sn	08 41 33.0	-0.5
JAY	Jayapura	2.35	44	P	Pn	08 41 08.7	+0.8
	39nm,0.3s,baz=218,slow=14,SNR=157						
JAY				S	Sn	08 41 36.0	-0.4
	133nm,0.3s,baz=58,slow=10,SNR=10						
SRPI	Serui, Papua	3.65	309	P	Pn	08 41 25.5	+0.3
SRPI				S	Sn	08 42 06.6	-0.7
BAKI	Biak	4.20	315	P	Pn	08 41 33.1	+0.5
MMPI	Merauke	4.43	163	P	Pn	08 41 36.6	+0.8
FAKI	Fak Fak	6.91	280	P	Pn	08 42 10.4	+0.9
	2.5nm749nm48nm,0.7s						
FAKI				S	Sn	08 43 27.1	+0.4
	2.5nm749nm48nm,0.7s						
FAKI	Fak Fak	6.91	280	Pn	Pn	08 42 10.3	+0.8
FAKI	Fak Fak	6.91	280	P	Pn	08 42 11.0	+1.5
SIJI	Sorong	8.46	293	P	Pn	08 42 31.4	+0.8
	15nm,0.3s,baz=106,slow=14,SNR=19						
SIJI				S	Sn	08 44 05.7	+1.4
	2.0nm,0.3s,baz=127,slow=23,SNR=3.6						
SWI	Sorong	8.46	293	P	Pn	08 42 32.1	+1.5
	86nm,0.6s						
PMG	Port Moresby	9.56	123	P	Pn	08 42 48.0	+2.5
	2.9nm,0.3s,baz=306,slow=12,SNR=9.8						
PMG	Port Moresby	9.56	123	Pn	Pn	08 42 48.1	+2.5
COEN	Coen	10.51	158	Pn	Pn	08 42 59.0	+0.5
KDU	Kakadu	10.65	217	P	Pn	08 42 59.4	-0.9
	67nm,0.4s						
DRS	Darwin Rock St	11.48	224	P	Pn	08 43 12.2	+0.6
	23nm,0.5s						
MTN	Manton Dam	11.62	222	Pn	Pn	08 43 12.1	-1.3
MTSU	Mount Surprise	14.77	160	P	P	08 43 58.2	+0.2
	4.4nm,0.7s						
KNRA	Kununurra	15.24	221	Pn	Pn	08 44 00.1	-0.6
KNRA	Kununurra	15.24	221	P	Pn	08 44 00.9	+0.2
	41nm,0.5s						
WB0	Warramunga Arr	16.12	196	P	Pn	08 44 09.6	-2.0
WB0				IAmb	IAmb	08 44 24.7	
	comp=Z,12nm,0.7s						
QIS	Mount Isa	16.26	178	P	Pn	08 44 13.8	+0.4
	comp=Z,20nm,0.7s						
WRAB	Tennant Creek	16.29	196		Pn	08 44 12.7	-1.0
WRAB	Tennant Creek	16.29	196	P	Pn	08 44 12.3	-1.4
WRA	Warramunga Arr	16.30	196	P	Pn	08 44 12.4	-1.4
	comp=Z,1.2nm,0.3s,baz=18,slow=13,SNR=42						
WRA				S	Sn	08 47 01.7	-13
	comp=Z,0.3nm,0.3s,baz=12,slow=22,SNR=3.3						
WRA	Warramunga Arr	16.30	196	Pn	Pn	08 44 12.1	-1.8
LUWI	Luwuk	16.57	280	P	P	08 44 19.7	+1.7
CTA	Charters Tower	17.28	157	P	P	08 44 26.4	+0.7
	comp=Z,0.2nm,0.3s,baz=309,slow=13,SNR=4.6						
CTAO	Charters Tower	17.28	157	P	Pn	08 44 28.4	+2.6
CTAO				IAmb	IAmb	08 44 50.4	
	comp=Z,6.7nm,1.0s						
BNSI	Bone	18.90	269	P	Pn	08 44 46.8	+1.5
TOLI2	Tolitoli	19.01	286	P	P	08 44 44.9	0.0
TOLI2				IAmb	IAmb	08 44 46.4	
	comp=Z,14nm,0.9s						
TOLI2	Tolitoli	19.01	286	P	P	08 44 46.1	+1.3
FITZ	Fitzroy Crossi	19.05	223	P	P	08 44 44.7	-0.6
	comp=Z,0.7nm,0.3s,baz=44,slow=9.3,SNR=20						
FITZ				S	S	08 48 07.1	-9.2
	comp=Z,0.9nm,0.3s,baz=205,slow=13,SNR=4.4						
FITZ	Fitzroy Crossi	19.05	223	P	P	08 44 45.0	-0.3
FITZ				IAmb	IAmb	08 45 03.3	
	comp=Z,6.2nm,0.8s						
TTSI	Tana Toraja	19.23	273	P	Pn	08 44 50.6	+1.3

MPSI	Mapaga	19.67	283	P	P	08 44 52.0	0.0
AS31	Alice Springs	19.98	194	P	P	08 44 55.3	0.0
AS31				IAmb	IAmb	08 45 23.5	
	comp=Z,5.5nm,0.7s						
ASAR	Alice Springs	19.98	194	P	P	08 44 56.2	+0.9
	comp=Z,5.2nm,0.7s,baz=24,slow=9.4,SNR=91						
ASAR				S	S	08 48 31.6	-3.1
	comp=Z,2.1nm,0.7s,baz=13,slow=18,SNR=5.0						
ASAR	Alice Springs	19.98	194	P	P	08 44 56.0	+0.7
EIDS	Eidsvold	24.01	152	P	P	08 45 37.3	+1.0
EIDS				IAmb	IAmb	08 45 49.0	
	comp=Z,12nm,1.3s						
STKA	Stephens Creek	27.63	175	P	P	08 46 08.8	-0.2
CMAR	Chiang Mai Arr	45.49	301	P	P	08 48 39.9	-0.6
	comp=Z,1.9nm,0.3s,baz=108,slow=4.9,SNR=6.1						
SONM	Songino Array	59.21	335	P	P	08 50 23.8	+2.3
SONM				IAmb	IAmb	08 50 35.5	
	comp=Z,0.9nm,1.3s						
MKAR	Makanchi Array	71.18	323	P	P	08 51 37.7	-1.1
	comp=Z,0.4nm,0.5s,baz=116,slow=7.8,SNR=2.6						
BVAR	Borovoye Array	80.73	325	P	P	08 52 31.1	-1.9
	comp=Z,0.5nm,0.5s,baz=102,slow=6.1,SNR=2.7						
ILAR	Eielson Array	87.04	24	P	P	08 53 01.9	-2.8
	comp=Z,0.3nm,0.6s,baz=270,slow=5.4,SNR=4.5						
LPAZ	La Paz	146.27	128	PKPbc	PKPdf	08 59 57.7	-2.6
	comp=Z,2.0nm,0.3s,baz=207,slow=4.5,SNR=19						
LPAZ	La Paz	146.27	128		PKPdf	08 59 57.5	-2.8

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*IDC **05** 08:45:39.2±1.5, 5.°97S×130.°03E, h146km±15km, mb3.6/6, mb1 3.9/12, mb1mx3.5/51, mbtmp4.3/12, MS3.6/2, Ms1 3.6/2, ms1mx2.8/37, Error ellipse: s-maj=22.6km s-min=11.4km az=105.0*

*NEIC **05** 08:45:41.1±1.4, 5.°89S±0.°06×129.°93E±0.°04, h164km±7km, mb4.4/15, Error ellipse: s-maj=10.7km s-min=3.5km az=147.0*

*DJA **05** 08:45:42.1±0.3, 6°S±4°×13°0E±°, h160km±11km, M4.6/11, mb4.6/8, mB5.2/6, MLv4.5/11, Mw(mB)4.6/6*

ISC 05 08:45:39.5±0.5, **6.°02S**±0.°05×**130.°01E**±0.°06, **h146**km, **n63**, σ**1.s51**/63, **mb4.2**/16, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.49	356	P	Pn	08 46 14.0	+5.3
BNDI	Bandanaira	1.49	356	P	Pn	08 46 14.1	+5.4
SAUI	Saumlaki	2.34	147	Pn	Pn	08 46 24.4	+6.0
MSAI	Masohi	2.86	338	P	Pn	08 46 27.8	+2.8
MSAI				S	Sn	08 47 02.2	+2.0
FAKI	Fak Fak	3.80	36	P	Pn	08 46 39.5	+2.4
FAKI				S	Sn	08 47 21.5	-0.3
FAKI	Fak Fak	3.80	36		Pn	08 46 39.5	+2.4
FAKI	Fak Fak	3.80	36	P	Pn	08 46 39.8	+2.7
SIJI	Sorong	5.26	14	P	Pn	08 46 56.7	+0.3
	22nm,0.3s,baz=302,slow=23,SNR=33						
SIJI				S	Sn	08 47 54.3	-2.2
	45nm,0.3s,baz=280,slow=23,SNR=30						
SWI	Sorong	5.27	14	P	Pn	08 46 57.7	+1.2
	1.9nm6μm89nm,0.5s						
SANI	Sanana	5.62	314	P	Pn	08 47 03.9	+2.7
	0.1nm15nm,0.5s						
LBMI	Labuha	5.90	335	P	Pn	08 47 07.6	+2.7
	0.5nm805nm70nm,0.8s						
DRS	Darwin Rock St	6.44	172	P	Pn	08 47 14.7	+2.6
	80nm,0.5s						
SOEI	Soe	6.80	236	P	Pn	08 47 21.5	+4.5
	0.2nm44nm,0.8s						
SOEI	Soe	6.80	236	Pn	Pn	08 47 18.4	+1.4
MTN	Manton Dam	6.88	171	Pn	Pn	08 47 20.6	+2.7
KDU	Kakadu	7.06	160	P	Pn	08 47 22.4	+2.0
BATI	Baumata	7.54	236	P	Pn	08 47 27.7	+0.9
	8.0nm,0.3s,baz=53,slow=10,SNR=4.5						
BATI				S	Sn	08 48 52.1	+1.0
	7.7nm,0.3s,baz=119,slow=23,SNR=1.7						
BATI	Baumata	7.54	236	P	Pn	08 47 27.4	+0.5
	0.1nm24nm,0.8s						
BAKI	Biak	7.74	52	P	Pn	08 47 33.7	+4.1
	3μm362nm,0.6s						
EDFI	Ende, Flores	8.69	251	P	Pn	08 47 44.1	+1.8
	19nm,1.0s						
KNRA	Kununurra	9.68	187	Pn	Pn	08 47 55.5	+0.1
KNRA	Kununurra	9.68	187	P	Pn	08 47 55.3	-0.1
	79nm,0.7s						
FITZ	Fitzroy Crossi	12.75	199	P	Pn	08 48 34.9	-0.8
	2.2nm,0.3s,baz=10,slow=17,SNR=5.9						
FITZ				S	Sn	08 50 46.4	-10
	2.7nm,0.3s,baz=65,slow=20,SNR=6.0						
FITZ	Fitzroy Crossi	12.75	199	P	Pn	08 48 35.8	+0.1
	16nm,0.6s						
WRAB	Tennant Creek	14.46	163	Pn	P	08 48 59.1	-1.1
WRA	Warramunga Arr	14.47	163	P	Pn	08 48 57.6	-0.1
	0.9nm,0.3s,baz=333,slow=13,SNR=4.6						
WRA				S	Sn	08 51 28.8	-9.3
	4.2nm,0.3s,baz=343,slow=22,SNR=9.1						
COEN	Coen	15.17	122	P	P	08 49 09.5	+1.5
COEN				IAmb	IAmb	08 49 11.9	
	comp=Z,18nm,0.3s						
PMG	Port Moresby	17.32	102	P	P	08 49 32.2	+0.4
	comp=Z,0.6nm,0.3s,baz=270,slow=13,SNR=1.5						
PMG	Port Moresby	17.32	102	IAmb	IAmb	08 49 38.3	
	comp=Z,26nm,0.8s						
AS31	Alice Springs	17.95	168	P	Pn	08 49 40.0	-0.1
AS31				IAmb	IAmb	08 49 43.6	
	comp=Z,7.3nm,0.8s						
ASAR	Alice Springs	17.95	168	P	Pn	08 49 40.6	+0.5
	comp=Z,3.3nm,0.3s,baz=344,slow=9.4,SNR=44						
ASAR				S	S	08 52 55.6	-1.6
	comp=Z,1.1nm,0.3s,baz=347,slow=25,SNR=6.6						
ASAR				LR	LR	08 55 57.7	
	comp=Z,355nm,21.5s,baz=11,slow=34						
ASAR	Alice Springs	17.95	168	P	Pn	08 49 41.1	+1.0
MBWA	Marble Bar	18.05	213	P	P	08 49 39.0	-0.8
PSA00	Pilbara Seismi	18.33	211	P	P	08 49 42.6	-0.2
PSA00				IAmb	IAmb	08 49 44.3	
	comp=Z,11nm,0.7s						
PSA00	Pilbara Seismi	18.33	211	P	P	08 49 42.9	+0.1
	comp=Z,64nm,1.1s						
WRKA	Warakurna	18.99	185	P	Pn	08 49 51.2	-1.1
	comp=Z,42nm,1.1s						
OOD	Oodnadatta	22.32	167	P	P	08 50 25.7	+0.4
	comp=Z,24nm,0.6s						
MEEK	Meekatharra	23.21	207	P	P	08 50 33.6	-0.1
	comp=Z,13nm,1.0s						
MULG	Mulgathing	24.44	172	P	P	08 50 45.9	+1.1
	comp=Z,14nm,1.1s						
FORT	Forrest	24.70	184		P	08 50 47.7	+0.5
FORT				IAmb	IAmb	08 50 48.6	
	comp=Z,21nm,0.7s						
FORT	Forrest	24.70	184	P	P	08 50 47.6	+0.4
	comp=Z,32nm,0.7s						
MORW	Morawa	26.46	208	P	P	08 51 02.5	-0.6
MORW				IAmb	IAmb	08 51 15.6	
	comp=Z,10nm,1.1s						
MORW	Morawa	26.46	208	P	P	08 51 03.7	+0.6
	comp=Z,13nm,2.9s						
BBOO	Buckleboo	27.25	169	P	P	08 51 10.0	-0.1
BBOO				IAmb	IAmb	08 51 20.2	
	comp=Z,17nm,1.4s						
BBOO	Buckleboo	27.25	169	P	P	08 51 10.5	+0.4
	comp=Z,17nm,2.3s						
BLDU	Ballidu	27.48	205	P	P	08 51 11.6	-0.6
	comp=Z,12nm,1.5s						
STKA	Stephens Creek	27.92	159	P	P	08 51 15.1	-1.0
	comp=Z,1.4nm,0.7s,baz=7.5,slow=13,SNR=3.1						
NWAO	Narrogin (SRO)	29.30	202	P	P	08 51 28.5	+0.2
NWAO	Narrogin (SRO)	29.30	202	P	P	08 51 28.8	+0.4
	comp=Z,18nm,2.8s						
NWAO	Narrogin (SRO)	29.30	202	P	P	08 51 28.7	+0.4
	comp=Z,18nm,2.8s						
TAU	Tasmania Unive	39.80	160	P	P	08 52 58.7	+0.3
PALK	Pallekele	50.94	284	LR	LR	09 15 30.7	
	comp=Z,32nm,20.2s,baz=205,slow=35						
PETK	Petropavlovsk-	63.39	18	P	P	08 55 52.2	-1.1
MKAR	Makanchi Array	67.41	327	P	P	08 56 18.9	-0.4
	comp=Z,0.3nm,0.3s,baz=112,slow=8.6,SNR=6.9						
SEY	Seymchan	70.84	11	P	P	08 56 40.2	+0.1
	comp=Z,2.7nm,0.7s,baz=174,slow=14,SNR=5.1						
GAR	Garm	70.98	315	P	P	08 56 40.0	-1.6
GAR				IAmb	IAmb	08 56 51.0	
	comp=Z,3.5nm,1.0s						
VNDA	Vanda	73.42	173	P	P	08 56 55.0	-0.3
	comp=Z,0.6nm,0.5s,baz=339,slow=5.3,SNR=4.1						
VNDA	Vanda	73.42	173	P	P	08 56 55.7	+0.4
MAW	Mawson	75.87	201	P	P	08 57 09.4	0.0
	comp=Z,1.6nm,0.7s,baz=19,slow=11,SNR=2.8						
RSD	Rainshed	77.70	69	P	P	08 57 20.4	-0.5
QSPA	South Pole Qui	83.95	180	P	P	08 57 52.5	-0.6
QSPA				IAmb	IAmb	08 57 53.5	
	comp=Z,1.9nm,0.8s						
ILAR	Eielson Array	92.46	25	P	P	08 58 32.2	-1.3
	comp=Z,0.2nm,0.5s,baz=239,slow=5.1,SNR=4.2						
RAGM	Ragged Mountai	92.86	30	P	P	08 58 34.1	-1.5

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*GUC **05** 09:02:08.4±0.7, 21.°98S×68.°59W, h113km±4km, ML3.8*

*VAO **05** 09:02:30.8±1.5, 21.°52S×67.°39W, h301km±11km, mb4.0*

ISC 05 09:02:06.8±0.7, **21.°97S**±0.°04×**68.°63W**±0.°06, **h128**km±8km, **n48**, σ**0.s99**/61, **5C-1D**, **Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	0.69	202	⇑eP	Pn	09 02 27.1	-0.3
LVC				eS	Sn	09 02 41.8	-1.2
PB03	IPOC Station P	1.05	265	⇑eP	Pn	09 02 30.5	+0.3
PB03				eS	Sn	09 02 47.7	-0.2
PB03				IAML		09 02 51.8	
	comp=N,1μm,0.2s						
AF01	San Pedro de A	1.06	157	eP	Pn	09 02 30.6	+0.1
AF01				eS	Sn	09 02 47.2	-1.4
AF01				IAML		09 03 03.7	
	comp=N,2μm,0.5s						
PB06	IPOC Station P	1.14	230	⇑eP	Pn	09 02 31.8	+0.6
PB06				eS	Sn	09 02 49.5	-0.1
PB06				IAML		09 02 50.9	
	comp=N,3μm,0.8s						
PB07	IPOC Station P	1.19	281	⇑eP	Pn	09 02 32.4	+0.7
PB07				i S	Sn	09 02 50.1	-0.4
PB07				IAML		09 02 52.3	
	comp=N,2μm,0.4s						
PB01	IPOC Station P	1.22	319	eP	Pn	09 02 32.1	+0.2
PB01				eS	Sn	09 02 50.6	-0.2
PB01				IAML		09 02 52.4	
	comp=E,3μm,0.2s						
PB02	IPOC Station P	1.34	298	eP	Pn	09 02 33.4	+0.2
PB02				eS	Sn	09 02 52.7	-0.6
PB02				IAML		09 02 54.0	
	comp=N,3μm,0.3s						
PB04	IPOC Station P	1.46	255	⇑eP	Pn	09 02 34.8	+0.4
PB04				eS	Sn	09 02 55.2	-0.4
PB04				IAML		09 02 57.0	
	comp=E,1μm,0.3s						
PB15	IPOC Station P	1.46	212	eP	Pn	09 02 35.0	+0.5
PB15				i S	Sn	09 02 56.0	+0.3
PB05	IPOC Station P	1.70	239	⇓eP	Pn	09 02 37.5	+0.3
PB05				eS	Sn	09 03 00.1	-0.4
PB05				IAML		09 03 01.3	
	comp=N,655nm,0.4s						
PB08	IPOC Station P	1.88	345	eP	Pn	09 02 40.9	+1.2
PB08				i S	Sn	09 03 05.4	+0.6
PB08				IAML		09 03 07.8	
	comp=E,896nm,0.3s						
TA01	Diego Aracena	2.01	314	eP	Pn	09 02 40.8	0.0
TA01				eS	Sn	09 03 06.6	-0.3
TA01				IAML		09 03 08.8	
	comp=E,906nm,0.3s						
PB10	IPOC Station P	2.35	229	eP	Pn	09 02 45.4	+0.3
PB10				eS	Sn	09 03 13.1	-1.3
PB10				IAML		09 03 18.9	
	comp=E,208nm,0.2s						
PB11	IPOC Station P	2.40	336	eP	Pn	09 02 45.9	0.0
PB11				eS	Sn	09 03 15.4	-0.4
PB11				IAML		09 03 17.3	
	comp=E,996nm,0.2s						
PSGC	Pisagua	2.74	329	eP	Pn	09 02 49.1	-1.1
PSGC				eS	Sn	09 03 22.2	-1.3
PSGC				IAML		09 03 25.2	
	comp=N,238nm,0.4s						
CPUP	Villa Florida	11.19	115	eP	P	09 04 53.4	+1.2
ITQB	Itaqui	13.25	128	eP	P	09 05 22.1	+7.0
SALV	Santo Antonio	13.64	66	eP	P	09 05 18.7	-0.8
SAML	Samuel	13.96	23	eP	P	09 05 28.1	+5.0
TRCB	Terra Rica	14.82	96	eP	P	09 05 33.9	+1.2
PDRB	Porto dos Gac	15.34	50	eP	P	09 05 38.7	+0.2
PTGB	Pitanga	15.46	103	eP	P	09 05 41.7	+1.9
PCMB	Pacaembu	16.14	92	eP	P	09 05 48.2	+1.0
CLDB	Colider	16.51	50	eP	P	09 05 52.2	+0.8
ARAG	Araguaiana, MT	17.09	72	eP	Pn	09 05 58.2	+0.2
ITRB	Iturama	17.23	86	eP	Pn	09 05 59.9	+0.2
FRTB	Fartura	17.65	98	eP	P	09 06 04.0	+0.1
BB19B	Bebedouro	18.72	91	eP	P	09 06 15.5	-0.2
TER01	Tubaro-SC	18.80	114	eP	Pn	09 06 20.0	+1.7
SNDB	Serra Nova Dou	19.31	62	eP	P	09 06 21.2	-0.8
RCLB	Rio Claro- Sao	19.54	95	eP	P	09 06 24.1	-0.4
IPMB	Ipameri, GO	19.59	82	eP	P	09 06 24.7	-0.4
PET01	Itanhaem-SP	19.77	101	eP	P	09 06 27.1	+0.1
ITTB	Itaituba	21.50	37	eP	P	09 06 44.3	-1.3
PEXB	Peixe	21.74	67	eP	P	09 06 46.7	-1.5
BSCB	Bom Sucesso	22.21	92	eP	P	09 06 53.3	+0.1
MC01	Montes Claros	23.86	82	eP	P	09 07 06.6	-2.0
PRPB	Parauapebas	24.02	52	eP	P	09 07 09.2	-0.9
JANB	Januaria	24.04	78	eP	P	09 07 07.8	-2.4
SMTB	Santa Maria do	24.06	60	eP	P	09 07 09.0	-1.4
DUB01	Friburgo-RJ	24.33	95	eP	P	09 07 11.8	-1.0
MALB	Monte Alegre	24.39	37	eP	P	09 07 13.6	+0.3
SDBA	SAO DESIDERIO	24.55	71	eP	P	09 07 13.1	-1.7
BOAV	Boa Vista	25.48	19	eP	P	09 07 24.4	+1.2
SJMB	Sao Joao De Ma	25.92	88	eP	P	09 07 25.9	-1.3
GUA01	Guaratinga, BA	27.70	84	eP	P	09 07 41.6	-1.5
GDU01	Guandu, BA	28.80	78	eP	P	09 07 51.6	-1.4
NBLA	Lagarto - SE	31.45	75	eP	P	09 08 15.3	-1.1

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*ASIES **05** 09:06:26.5, 23.°91N×121.°92E, h34km, MW4.0*

*TAP **05** 09:06:27.0, 23.°93N×121.°83E, h48km, ML5.0, B*

*NIED **05** 09:06:26.5, 23.°88N×121.°82E, h45km, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}2.18; $M_{\theta\theta}$-1.81; $M_{\phi\phi}$-0.36; $M_{r\theta}$0.94; $M_{\theta\phi}$-1.45; $M_{\phi r}$2.42; Fault plane solution: $M_0$3.60000×10^{15} NP1:ϕ_s33.00000°, δ70.00000°, λ68.00000°. NP2:ϕ_s263.00000°, δ30.00000°, λ136.00000°.*

*JMA **05** 09:06:26.4, 23.°88N×121.°81E, h45km±1km, M4.3*

*IDC **05** 09:06:26.6±3.3, 23.°96N×121.°96E, h51km±32km, mb3.8/16, mb1 4.0/17, mb1mx3.7/51, mbtmp4.1/17, ML4.0/1, MS3.3/12, Ms1 3.3/12, ms1mx3.1/48, Error ellipse: s-maj=18.3km s-min=14.2km az=57.0*

*NEIC **05** 09:06:27.1±2.5, 23.°90N±0.°05×121.°88E±0.°05, h49km±7km, mb4.5/42, ML4.8(TAP), Error ellipse: s-maj=7.4km s-min=5.9km az=130.0*

*BJI **05** 09:06:27.3±0.0, 24.°00N×121.°78E, h35km, mB4.4/8, mb4.3/16, ML4.3/6, Ms4.2/5*

ISC 05 09:06:26.2±0.7, **23.°90N**±0.°02×**121.°87E**±0.°02, **h42**km±6km, **n225**, σ**1.s76**/327, **mb4.4**/37, **MS3.2**/9, **1C-50D**, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	Hwalien	0.26	288	⇓iP	Pn	09 06 35.5	+1.2
	baz=276						
HWA				S	Sn	09 06 42.0	+2.1
	baz=276						
TWD	Chiawan	0.31	306	⇓iP	Pn	09 06 35.5	+0.6
	baz=306						
TWD				i S	Sn	09 06 41.8	+0.9
	baz=306						
ETL	Fush Village	0.34	319	⇓iP	Pn	09 06 35.8	+0.5
	baz=320						
ETL				S	Sn	09 06 42.0	+0.5
	baz=320						
NACB	Ninganchiao	0.37	317	⇓iP	Pn	09 06 36.0	+0.4
	baz=318						
NACB				S	Sn	09 06 42.4	+0.3
	baz=318						
NACB	Ninganchiao	0.37	317		Pn	09 06 35.9	+0.4
ESL	Shilin	0.41	258	⇓iP	Pn	09 06 36.5	+0.5
	baz=263						
ESL				i S	Sn	09 06 43.5	+0.7
	baz=263						
EHP	Heping Village	0.43	344	eP	Pn	09 06 37.0	+0.8
	baz=342						
EHP				S	Sn	09 06 44.0	+0.8
	baz=342						
EGFH	Guangfu	0.47	241	⇓iP	Pn	09 06 37.5	+0.8
	baz=245						
EGFH				eS	Sn	09 06 45.4	+1.4
	baz=245						
ETLH	Xiulin Townshi	0.47	311	⇓iP	Pn	09 06 37.3	+0.4
	baz=311						
ETLH				S	Sn	09 06 44.6	+0.3
	baz=311						
ENA	Nanau	0.54	347	⇓iP	Pn	09 06 38.2	+0.5
	baz=346						
ENA				eS	Sn	09 06 46.2	+0.5
	baz=346						
EWUT	Wuta	0.55	351	⇓P	Pn	09 06 38.5	+0.7
	baz=349						
EWUT				S	Sn	09 06 46.8	+0.9
	baz=349						
HGSD	Ruisui	0.58	226	⇓iP	Pn	09 06 39.0	+0.9
	baz=215						
HGSD				eS	Sn	09 06 48.1	+1.5
	baz=215						
WHF	Hehuan Shan	0.61	294	⇓iP	Pn	09 06 39.2	+0.3
	baz=285						
WHF				S	Sn	09 06 49.2	+1.3
	baz=285						
EHY	Hungye	0.64	232	⇓iP	Pn	09 06 39.1	+0.2
	baz=227						
EHY				eS	Sn	09 06 47.2	-0.8
	baz=227						
OWD	Renai	0.64	275	⇓iP	Pn	09 06 39.7	+0.6
	baz=272						
OWD				eS	Sn	09 06 48.2	0.0
	baz=272						
CHGB	Renai	0.66	284	⇓iP	Pn	09 06 40.0	+0.6
	baz=277						
CHGB				eS	Sn	09 06 48.5	-0.3
	baz=277						
FUSS	Fushou	0.67	301	⇓iP	Pn	09 06 40.3	+0.7
	baz=300						
FUSS				eS	Sn	09 06 49.0	-0.2
	baz=300						
NNSB	Datong	0.69	320	⇓iP	Pn	09 06 40.2	+0.5
	baz=320						
NNSB				eS	Sn	09 06 48.8	-0.7
	baz=320						
NNS	Nan Shan	0.71	320	⇓iP	Pn	09 06 40.4	+0.4
	baz=321						
NNS				eS	Sn	09 06 49.9	0.0
	baz=321						
TWT	Tachien	0.73	299	⇓iP	Pn	09 06 41.2	+0.9
	baz=293						
TWT				eS	Sn	09 06 50.2	-0.2
	baz=293						
YULB	Yu-li	0.73	226	⇓iP	Pn	09 06 40.4	+0.2
	baz=231						
YULB				eS	Sn	09 06 50.0	-0.2
	baz=231						
YULB	Yu-li	0.73	226		Pn	09 06 40.4	+0.2
NDS	Dongshan	0.75	349	⇓iP	Pn	09 06 41.2	+0.8
	baz=345						
NDS				eS	Sn	09 06 51.5	+1.0
	baz=345						
EYUL	Yuli	0.75	223	⇓P	Pn	09 06 41.0	+0.6
	baz=229						
EYUL				eS	Sn	09 06 51.4	+0.8
	baz=229						
NDT	Datong Townshi	0.77	335	⇓iP	Pn	09 06 41.4	+0.6
	baz=336						
NDT				eS	Sn	09 06 51.9	+0.6
	baz=336						
ENTT	Nioudou	0.79	339	⇓iP	Pn	09 06 41.6	+0.6
	baz=334						
ENTT				eS	Sn	09 06 52.3	+0.7
	baz=334						
TWE	Neicheng	0.84	347	⇓iP	Pn	09 06 42.5	+0.9
	baz=341						
TWE				eS	Sn	09 06 53.9	+1.1
	baz=341						
SSLB	Suanglung	0.85	263	⇓iP	Pn	09 06 42.4	+0.6
	baz=260						
SSLB				eS	Sn	09 06 52.9	-0.2
	baz=260						
SSLB	Suanglung	0.85	263	Pn	Pn	09 06 42.3	+0.5
SSLB	Suanglung	0.85	263	P	Pn	09 06 42.5	+0.7
ILA	Ilan	0.87	353	eP	Pn	09 06 43.6	+1.5
	baz=355						
ILA				eS	Sn	09 06 55.6	+2.0
	baz=355						
FULB	Fuli	0.88	217	eP	Pn	09 06 42.9	+0.7
	baz=225						
FULB				eS	Sn	09 06 55.3	+1.5
	baz=225						
SMLT	Sun Moon Lake	0.89	269	⇓iP	Pn	09 06 43.2	+0.7
	baz=266						
SMLT				eS	Sn	09 06 52.7	-1.5
	baz=266						
YHNB	Yeheng	0.89	330	⇓iP	Pn	09 06 43.2	+0.8
	baz=330						
YHNB				eS	Sn	09 06 54.0	-0.2
	baz=330						
YHNB	Yeheng	0.89	330		Pn	09 06 43.2	+0.8
YHNB	Yeheng	0.89	330	P	Pn	09 06 43.2	+0.8
WCS	Beigang Elemen	0.89	280	⇓iP	Pn	09 06 43.3	+1.0
	baz=275						
WCS				eS	Sn	09 06 55.5	+1.3
	baz=275						
NSK	Sanguang	0.91	329	⇓iP	Pn	09 06 43.4	+0.7
	baz=330						
NSK				S	Sn	09 06 54.5	-0.1
	baz=330						
CHKT	Chengkung	0.92	210	P	Pn	09 06 42.9	+0.1
	baz=198						
CHKT				eS	Sn	09 06 54.6	-0.2
	baz=198						
WHP	Taichung City	0.93	294	⇓iP	Pn	09 06 43.9	+1.0
	baz=293						
WHP				eS	Sn	09 06 55.8	+0.7
	baz=293						
TYC	Yuchr	0.93	271	⇓iP	Pn	09 06 43.6	+0.8
	baz=268						
TYC				eS	Sn	09 06 55.5	+0.5
	baz=268						
NWLT	Wulai	0.94	339	⇓iP	Pn	09 06 43.8	+0.8
	baz=332						
NWLT				eS	Sn	09 06 55.3	0.0
	baz=332						
NTC	Toucheng	0.95	358	eP	Pn	09 06 44.4	+1.2
	baz=12						
NTC				eS	Sn	09 06 57.2	+1.6
	baz=12						
WJS	Zhushan	1.05	266	⇓iP	Pn	09 06 46.3	+1.8
	baz=263						
WJS				eS	Sn	09 07 00.4	+2.4
	baz=263						
ELDTW	Lidau	1.06	228	⇓iP	Pn	09 06 45.0	+0.3
	baz=222						
ELDTW				eS	Sn	09 06 58.6	+0.3
	baz=222						
EDH	Donghe	1.06	210	⇓iP	Pn	09 06 45.2	+0.6
	baz=200						
EDH				S	Sn	09 06 59.0	+0.8
	baz=200						
TIPB	Shuangxi	1.07	358	⇓iP	Pn	09 06 46.4	+1.5
	baz=10.0						
TIPB				eS	Sn	09 06 60.0	+1.4
	baz=10.0						
LIOB	Emei	1.08	314	⇓iP	Pn	09 06 46.7	+1.8
	baz=313						
LIOB				eS	Sn	09 07 01.0	+2.3
	baz=313						
NSTT	Nanjuang	1.08	313	⇓iP	Pn	09 06 46.7	+1.8
	baz=312						
NSTT				eS	Sn	09 06 59.7	+1.0
	baz=312						
WNT	Mingjian	1.09	269	⇓iP	Pn	09 06 46.9	+1.9
	baz=267						
WNT				eS	Sn	09 07 01.0	+2.1
	baz=267						
TWQ1	Liyutan	1.10	294	⇓iP	Pn	09 06 46.7	+1.5
	baz=293						
TWQ1				eS	Sn	09 07 00.8	+1.5
	baz=293						
NHDH	Xindian Distri	1.11	343	eP	Pn	09 06 46.5	+1.2
	baz=335						
NHDH				eS	Sn	09 07 00.4	+1.0
	baz=335						
TWA	Mucha	1.11	346	⇓iP	Pn	09 06 46.6	+1.3
	baz=338						
TWA				eS	Sn	09 07 00.7	+1.2
	baz=338						
TWB1	Santiao Chiao	1.11	5	eP	Pn	09 06 46.7	+1.4
	baz=22						
TWB1				eS	Sn	09 07 00.6	+1.2
	baz=22						
TCU	Taichung	1.12	283	⇓iP	Pn	09 06 47.5	+2.1
	baz=281						

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TCU                                eS      Sn      09 07 02.5 +2.8
       baz=281
JYNG   Yonagunijimaku    1.12  60   P      Pn      09 06 47.1 +1.6
JYNG                               eS      Sn      09 07 01.2 +1.4
TATO   Taipei            1.13 342          Pn      09 06 46.6 +1.0
NSY    Sanyi             1.14 297⇓iP       Pn      09 06 47.3 +1.6
       baz=296
NSY                                eS      Sn      09 07 02.0 +1.8
       baz=296
NWF    Wu-fen Shan       1.17 356   P      Pn      09 06 48.0 +1.8
       baz=357
NWF                                eS      Sn      09 07 03.0 +1.9
       baz=357
NMLH   Miaoli            1.17 303  eP      Pn      09 06 47.8 +1.5
       baz=291
NMLH                               eS      Sn      09 07 02.5 +1.4
       baz=291
YOJ    Yonaguni jima     1.18  61  eP      Pn      09 06 47.8 +1.5
       baz=63
YOJ                                eS      Sn      09 07 01.4 +0.2
       baz=63
YOJ    Yonaguni jima     1.18  61   P      Pn      09 06 47.9 +1.5
YOJ                                eS      Sn      09 07 02.7 +1.5
YOJ    Yonaguni jima     1.18  61   Pn     Pn      09 06 47.8 +1.5
YOJ    Yonaguni jima     1.18  61   P      Pn      09 06 48.2 +1.9
LONT   Longtian          1.20 215  eP      Pn      09 06 46.8 +0.2
       baz=212
LONT                               eS      Sn      09 07 02.1 +0.4
       baz=212
SBCB   Hsinchu           1.20 318  eP      Pn      09 06 47.7 +1.1
       baz=331
SBCB                               eS      Sn      09 07 03.6 +1.9
       baz=331
WDJ    Dajia District    1.21 292  eP      Pn      09 06 48.1 +1.4
       baz=290
WDJ                                eS      Sn      09 07 03.1 +1.2
       baz=290
WCHH   Zhanghua          1.22 279   P      Pn      09 06 48.6 +1.9
       baz=276
WCHH                               eS      Sn      09 07 05.3 +3.3
       baz=276
NCUH   Zhongli           1.23 330  eP      Pn      09 06 48.4 +1.3
       baz=330
NCUH                               eS      Sn      09 07 04.4 +1.9
       baz=330
STYH   Taoyuan           1.24 234⇓iP       Pn      09 06 48.5 +1.4
       baz=226
STYH                               eS      Sn      09 07 03.6 +1.0
       baz=226
WDLH   Douliu            1.24 261 ⇓P       Pn      09 06 48.8 +1.7
       baz=258
WDLH                               eS      Sn      09 07 04.5 +1.9
       baz=258
YM01   YM01              1.27 348  eP      Pn      09 06 48.5 +0.9
       baz=337
YM01                               eS      Sn      09 07 02.8  -0.7
       baz=337
LDUT   Ludao             1.27 197   P      Pn      09 06 47.5  -0.1
       baz=187
LDUT                               eS      Sn      09 07 01.6  -1.8
       baz=187
TPUB   Ta-pu             1.29 243 ⇓P       Pn      09 06 49.6 +1.8
       baz=240
TPUB                               eS      Sn      09 07 06.0 +2.2
       baz=240
TPUB   Ta-pu             1.29 243   Pn     Pn      09 06 49.7 +1.9
TPUB   Ta-pu             1.29 243   P      Pn      09 06 49.9 +2.1
TWGBT  Beinan            1.30 214  eP      Pn      09 06 47.9  -0.1
       baz=212
TWGBT                              eS      Sn      09 07 03.8  -0.3
       baz=212
TWG    Pinlang           1.30 215   P      Pn      09 06 47.8  -0.2
       baz=212
TWG                                eS      Sn      09 07 03.7  -0.5
       baz=212
TWG    Pinlang           1.30 215          Pn      09 06 47.9  -0.1
NTST   Danshui           1.32 343  eP      Pn      09 06 48.7 +0.5
       baz=344
NTST                               eS      Sn      09 07 05.8 +1.3
       baz=344
TTN    Taitung           1.32 210  eP      Pn      09 06 49.6 +1.4
       baz=218
TTN                                eS      Sn      09 07 06.0 +1.4
       baz=218
WTP    Ta-pu             1.32 241⇓iP       Pn      09 06 50.3 +2.0
       baz=238
WTP                                 S      Sn      09 07 07.1 +2.3
       baz=238
CHN2   Minshiung         1.33 254  eP      Pn      09 06 50.6 +2.3
       baz=252
CHN2                               eS      Sn      09 07 08.0 +3.1
       baz=252
WRL    Guolierlin Hig    1.37 270⇓iP       Pn      09 06 50.5 +1.6
       baz=279
WRL                                eS      Sn      09 07 08.2 +2.4
       baz=279
WTK    Tuku              1.38 262  eP      Pn      09 06 51.2 +2.2
       baz=259
WTK                                eS      Sn      09 07 08.9 +2.9
       baz=259
CHY    Chiayi            1.39 254  eP      Pn      09 06 51.2 +2.1
       baz=251
CHY                                 S      Sn      09 07 09.4 +3.2
       baz=251
TWY    Chenhua           1.39 350  eP      Pn      09 06 50.8 +1.5
       baz=338
TWK    Hsinying          1.42 244  eP      Pn      09 06 51.8 +2.1
       baz=241
TWK                                eS      Sn      09 07 09.9 +2.8
       baz=241
CHN1   Nanshi            1.42 240  eP      Pn      09 06 51.8 +2.1
       baz=238
CHN1                               eS      Sn      09 07 09.8 +2.6
       baz=238
SNST   Tainan City       1.43 242  eP      Pn      09 06 52.1 +2.4
       baz=239
SNST                               eS      Sn      09 07 09.2 +1.8
       baz=239
SGST   Jiashian          1.44 236⇑iP       Pn      09 06 51.4 +1.5
       baz=233
SGST                                S      Sn      09 07 09.5 +2.0
       baz=233
SLGT   Liugui            1.44 232   P      Pn      09 06 52.4 +2.5
       baz=237
SLGT                               eS      Sn      09 07 10.8 +3.1
       baz=237
WSF    Szhu              1.53 261   P      Pn      09 06 52.9 +1.8
       baz=258
WSF                                i S     Sn      09 07 12.8 +2.9
       baz=258
ECL    Taimali           1.55 213  eP      Pn      09 06 51.4 +0.1
       baz=211
ECL                                eS      Sn      09 07 08.8  -1.4
       baz=211
ICHU   Yijhu             1.56 250  eP      Pn      09 06 53.3 +1.9
       baz=247
ICHU                               eS      Sn      09 07 13.7 +3.3
       baz=247
CHN3   Shinhua           1.61 240  eP      Pn      09 06 55.4 +3.2
       baz=237
CHN3                               eS      Sn      09 07 16.2 +4.5
       baz=237
SSD    Sandimen          1.62 225  eP      Pn      09 06 55.0 +2.7
       baz=212
SSD                                eS      Sn      09 07 13.9 +1.9
       baz=212
SCST   Cishan            1.62 232  eP      Pn      09 06 56.0 +3.7
       baz=240
SCST                               eS      Sn      09 07 15.8 +3.8
       baz=240
CHN8   Yiju              1.62 250  eP      Pn      09 06 53.8 +1.5
       baz=248
CHN8                               eS      Sn      09 07 14.0 +2.0
       baz=248
TSMG   Majia             1.64 224  eP      Pn      09 06 55.0 +2.4
       baz=211
TSMG                               eS      Sn      09 07 16.5 +4.1
       baz=211
SSHA   Shanhua           1.64 243  eP      Pn      09 06 54.4 +1.8
       baz=240
SSHA                               eS      Sn      09 07 16.1 +3.6
       baz=240
SCLT   Jiali             1.70 245  eP      Pn      09 06 56.5 +3.1
       baz=242
SCLT                               eS      Sn      09 07 16.7 +2.8
       baz=242
TWM1   Shoushan          1.71 232  eP      Pn      09 06 57.5 +3.9
       baz=239
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TWM1                               eS      Sn      09 07 19.3 +5.0
       baz=239
MASBT  Mashibuluo        1.71 222  eP      Pn      09 06 55.3 +1.7
       baz=219
MASBT                              eS      Sn      09 07 16.7 +2.4
       baz=219
SGLT   Jiouru            1.73 228  eP      Pn      09 06 57.4 +3.6
       baz=214
SGLT                               eS      Sn      09 07 20.5 +5.9
       baz=214
PCYT   Pengchaiyu        1.73   6  eP      Pn      09 06 54.8 +0.9
       baz=7.0
TAI1   Yung-k'ang        1.73 241  eP      Pn      09 06 56.3 +2.5
       baz=249
TAI1                               eS      Sn      09 07 19.2 +4.4
       baz=249
IRIF   Iriomote-Funau    1.75  75   P      Pn      09 06 56.1 +2.0
IRIF                                S      Sn      09 07 17.4 +2.2
HATJ   Hateruma jima     1.77  85   P      Pn      09 06 56.5 +2.1
HATJ                                S      Sn      09 07 18.1 +2.3
TAW    Tawu              1.78 211  eP      Pn      09 06 55.7 +1.2
       baz=213
TAW                                eS      Sn      09 07 15.3  -0.6
       baz=213
EAST   Anshuo            1.78 212  eP      Pn      09 06 54.8 +0.2
       baz=210
EAST                               eS      Sn      09 07 15.3  -0.7
       baz=210
SNJT   Kaohsiung City    1.81 231  eP      Pn      09 06 58.0 +3.0
       baz=229
SNJT                               eS      Sn      09 07 20.7 +3.9
       baz=229
SSPT   Xinbi             1.85 221  eP      Pn      09 06 58.6 +3.1
       baz=218
SSPT                               eS      Sn      09 07 21.5 +3.8
       baz=218
LAY    Lan-yu            1.87 189  eP      Pn      09 06 56.1 +0.2
       baz=183
LAY                                eS      Sn      09 07 17.5  -0.8
       baz=183
SCZT   Fangliau          1.91 217  eP      Pn      09 06 58.1 +1.8
       baz=215
SCZT                               eS      Sn      09 07 22.5 +3.4
       baz=215
SLIU   Shizi             1.94 211  eP      Pn      09 06 57.5 +0.7
       baz=213
JKRS   Kuro-shima        1.98  80   P      Pn      09 06 59.5 +2.2
JKRS                                S      Sn      09 07 23.3 +2.4
WLCH   Liuqiu            2.06 222  eP      Pn      09 07 02.2 +3.8
       baz=222
JIJ    Ishigaki jima     2.13  77   P      Pn      09 07 00.8 +1.5
JIJ                                 S      Sn      09 07 25.3 +0.8
PHUB   P'eng-hu          2.14 260  eP      Pn      09 07 00.1 +0.7
       baz=270
PHUB                               eS      Sn      09 07 25.1 +0.2
       baz=270
PNG    Penghu            2.15 262⇓iP       Pn      09 07 00.4 +0.8
       baz=258
PNG                                eS      Sn      09 07 25.3 +0.3
       baz=258
HEN    Hengchun          2.15 209  eP      Pn      09 07 02.7 +3.0
       baz=197
HEN                                eS      Sn      09 07 27.7 +2.6
       baz=197
TWK1   Hengchun          2.18 207  eP      Pn      09 07 01.2 +1.2
       baz=196
TWK1                               eS      Sn      09 07 26.6 +0.8
       baz=196
TWKBT  Hengchun          2.18 207  eP      Pn      09 07 01.0 +1.0
       baz=196
TWKBT                              eS      Sn      09 07 26.7 +0.9
       baz=196
TSEB   Hengchuen, Pin    2.18 204  eP      Pn      09 07 02.3 +2.3
       baz=196
TSEB                               eS      Sn      09 07 27.7 +1.9
       baz=196
JISG   Ishigakijimahi    2.33  72   P      Pn      09 07 03.4 +1.3
JISG                               eS      Sn      09 07 29.9 +0.4
VCHM   Qimei             2.34 253  eP      Pn      09 07 02.4 +0.1
       baz=250
VCHM                               eS      Sn      09 07 29.8   0.0
       baz=250
JTJ    Tarama            2.69  73   P      Pn      09 07 08.7 +1.7
JTJ                                eS      Sn      09 07 39.2 +0.9
JIRB   Irabujima         3.15  72   P      Pn      09 07 15.0 +1.7
JIRB                               eS      Sn      09 07 50.4 +0.7
QZH    Quanzhou          3.17 290   P      Pn      09 07 15.2 +1.6
QZH                                 S      Sn      09 07 48.8  -1.3
QZH                                 smax   smax
       comp=N,710nm,0.2s
QZH                                 smax   smax
       comp=E,430nm,0.2s
KNMB   Chin-men Tao      3.23 281   Pn     Pn      09 07 13.9  -0.5
JIKM   Ikemajima         3.24  71   P      Pn      09 07 16.6 +2.0
JIKM                                S      Sn      09 07 53.4 +1.4
JMJ    Miyako jima 2     3.25  73   P      Pn      09 07 17.1 +2.4
JMJ2   Miyako jima3      3.26  74   P      Pn      09 07 16.6 +1.7
JMJ2                                S      Sn      09 07 54.4 +1.9
JOGS   Gusukube          3.34  74   P      Pn      09 07 18.0 +2.1
JOGS                               eS      Sn      09 07 56.4 +2.1
ZPLA   Ao Xicun          3.77 271  eP      Pn      09 07 21.8  -0.1
       baz=268
JOW    Kunigami          6.49  62   P      Pn      09 07 58.8  -0.4
       8.3nm,0.3s,baz=237,slow=8.3,SNR=5.4
JOW                                 S      Sn      09 09 09.5  -2.4
       baz=139,slow=20,SNR=1.3
GZH    Guangzhou         7.87 266   P      Pn      09 08 14.8  -3.4
GZH                                 S      Sn      09 09 39.8  -6.2
GZH                                 smax   smax
       comp=N,140nm,0.9s
GZH                                 smax   smax
       comp=E,250nm,0.9s
WHN    Wuhan             9.41 316 ⇓P       Pn      09 08 36.4  -2.9
WHN                                 S      Sn      09 10 16.9  -6.9
WHN                                 LR     LR
       comp=N,720nm,7.7s
WHN                                 LR     LR
       comp=E,660nm,6.8s
WHN                                 LR     LR
       comp=Z,530nm,18.5s
KSRS   Korea Array      14.47  20   P      Pn      09 09 51.0 +2.7
       comp=Z,0.2nm,0.3s,baz=191,slow=12,SNR=8.0
KSRS                                LR     LR      09 15 36.7
       comp=Z,73nm,20.3s,baz=204,slow=38
XAN    Xi'an            15.17 315   P      P       09 10 03.7 +1.6
XAN                                 pP     pP      09 10 10.9  -1.5
XAN                                 sP     sP      09 10 13.7  -4.1
XAN                                 pmax   pmax
       comp=Z,14nm,0.8s
XAN    Xi'an            15.17 315   P      P       09 10 04.3 +2.2
JHJ    Hachijo jima 2   18.20  56   LR     LR      09 17 05.2
       comp=Z,96nm,21.6s,baz=254,slow=35
MJAR   Matsushiro Arr   18.89  44   LR     LR      09 18 22.2
       comp=Z,61nm,19.9s,baz=195,slow=38
LZH    Lanzhou          19.74 312  eP      Pn      09 10 55.2 +0.8
LZH                                 sP     sP      09 11 06.4  -2.1
LZH                                 pmax   pmax
       comp=Z,19nm,1.3s
CN2    Changchun        20.07   8  eP      Pn      09 11 00.2 +2.2
CHTO   Chiang Mai       21.93 261   P      P       09 11 15.2  -1.1
CHTO                                IAmb   IAmb    09 11 20.3
       comp=Z,16nm,1.1s
CMAR   Chiang Mai Arr   22.04 260   P      P       09 11 19.2 +1.8
       comp=Z,2.5nm,0.6s,baz=61,slow=7.5,SNR=16
CMAR                                LR     LR      09 19 28.2
       comp=Z,78nm,19.5s,baz=184,slow=35
CMAR   Chiang Mai Arr   22.04 260   P      P       09 11 19.1 +1.6
GUMO   Guam             24.04 111   LR     LR      09 20 35.1
       comp=Z,38nm,19.8s,baz=295,slow=35
KLR    Kul'dur          26.45  15   LR     LR      09 24 17.6
       comp=Z,58nm,18.3s,baz=269,slow=41
ULN    Ulaanbaatar      26.67 337   P      P       09 12 00.1  -1.2
SONM   Songino Array    26.88 337   P      P       09 12 02.5  -0.7
       comp=Z,2.1nm,0.7s,baz=150,slow=10.0,SNR=11
SONM                                LR     LR      09 22 43.6
       comp=Z,54nm,20.6s,baz=152,slow=36
LSA    Lhasa            27.97 289   P      P       09 12 13.1  -0.5
LSA                                 IAmb   IAmb    09 12 19.9
       comp=Z,9.4nm,0.6s
JAY    Jayapura         32.02 143   LR     LR      09 25 33.0
       comp=Z,51nm,18.5s,baz=315,slow=36
WMQ    Urumqi           34.31 314  eP      P       09 13 13.5 +4.8
MK31   Makanchi Array   38.98 316   P      P       09 13 47.2  -1.1
MKAR   Makanchi Array   38.98 316   P      P       09 13 47.9  -0.5
       comp=Z,2.2nm,0.6s,baz=102,slow=9.5,SNR=17
MKAR   Makanchi Array   38.98 316   P      P       09 13 47.7  -0.7
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PETK   Petropavlovsk-   39.75  33   LR     LR      09 30 42.2
       comp=Z,43nm,20.4s,baz=191,slow=37
ZAA0   Zalesovo Array   40.83 327   P      P       09 14 01.8  -1.8
ZALV   Zalesovo Beam    40.83 327   P      P       09 14 02.1  -1.4
       comp=Z,3.8nm,0.7s,baz=110,slow=8.1,SNR=11
ZALV                                LR     LR      09 31 03.6
       comp=Z,47nm,19.3s,baz=182,slow=36
ZALV   Zalesovo Beam    40.83 327   P      P       09 14 01.4  -2.2
H11N1  WAKE ISLAND Hy   41.88  87   T      T       09 59 34.1
       baz=283,slow=75,SNR=23
H11N2  WAKE ISLAND Hy   41.88  87   T      T       09 59 26.9
       baz=283,slow=75,SNR=28
H11N3  WAKE ISLAND Hy   41.89  87   T      T       09 59 44.4
       baz=283,slow=75,SNR=24
H11S3  WAKE ISLAND Hy   42.00  89   T      T       09 59 39.6
       baz=284,slow=74,SNR=48
H11S1  WAKE ISLAND Hy   42.01  88   T      T       09 59 34.3
       baz=284,slow=74,SNR=27
H11S2  WAKE ISLAND Hy   42.02  89   T      T       09 59 34.7
       baz=284,slow=74,SNR=23
KURK   Kurchatov        42.71 320   P      P       09 14 17.8  -1.2
KURK   Kurchatov        42.71 320   IAmb   IAmb    09 14 19.3
       comp=Z,3.3nm,0.5s
KURBB  Kurchatov Arra   42.73 320   P      P       09 14 17.8  -1.4
       comp=Z,1.1nm,0.6s,baz=111,slow=8.0,SNR=8.0
AAK    Ala-Archa        43.18 307   P      P       09 14 23.7 +0.6
       comp=Z,0.6nm,0.3s,baz=136,slow=2.2,SNR=3.7
WB0    Warramunga Arr   45.09 163   P      P       09 14 37.4  -1.0
WB0                                 IAmb   IAmb    09 14 38.4
       comp=Z,9.8nm,1.4s
WRAB   Tennant Creek    45.23 163   P      P       09 14 38.3  -1.2
WRAB                                IAmb   IAmb    09 14 39.7
       comp=Z,14nm,1.5s
WRA    Warramunga Arr   45.24 163   P      P       09 14 37.7  -1.9
       comp=Z,2.6nm,0.5s,baz=344,slow=8.8,SNR=5.2
WRA    Warramunga Arr   45.24 163   P      P       09 14 37.5  -2.1
PSA00  Pilbara Seismi   45.24 183   P      P       09 14 38.0  -1.6
PSA00                               IAmb   IAmb    09 14 38.6
       comp=Z,8.7nm,0.8s
WB2    Warramunga Arr   45.24 163   P      P       09 14 39.0  -0.6
WB2                                 IAmb   IAmb    09 14 39.7
       comp=Z,4.0nm,0.5s
WR0    Warramunga Arr   45.31 163   P      P       09 14 39.1  -1.0
GAR    Garm             45.90 302   P      P       09 14 45.4 +0.5
GAR                                 IAmb   IAmb    09 14 45.9
       comp=Z,7.4nm,1.0s
KKAR   Karatay Array    46.14 307   P      P       09 14 46.3  -0.3
KKAR   Karatay Array    46.14 307   P      P       09 14 47.0 +0.4
KKAR                                IAmb   IAmb    09 14 47.6
       comp=Z,2.3nm,0.8s
GIRL   Giralia          46.85 190   P      P       09 14 52.1  -0.2
BVAR   Borovoye Array   48.29 321   P      P       09 15 02.5  -0.7
       comp=Z,1.4nm,0.6s,baz=155,slow=8.2,SNR=5.8
AS31   Alice Springs    48.70 165   P      P       09 15 06.2  -0.4
ASAR   Alice Springs    48.70 165   P      P       09 15 06.4  -0.2
       comp=Z,1.2nm,0.3s,baz=340,slow=6.9,SNR=63
ABKAR  Akbulak array    54.09 314   P      P       09 15 46.1  -0.6
ABKAR                               IAmb   IAmb    09 15 47.1
       comp=Z,2.8nm,0.8s
FORT   Forrest          54.69 173   P      P       09 15 50.1  -1.0
NWAO   Narrogin (SRO)   56.68 185   P      P       09 16 03.8  -1.5
STKA   Stephens Creek   58.58 160   P      P       09 16 18.6  -0.1
       comp=Z,2.0nm,0.9s,baz=302,slow=10,SNR=3.6
KIRV   Kirov            60.81 325   LR     LR      09 43 44.5
       comp=Z,62nm,18.7s,baz=106,slow=37
IMAR   Indian Mountai   66.16  26   P      P       09 17 07.1  -2.0
J20K   Nowinta River    66.16  28   P      P       09 17 09.6 +0.5
J20K                                IAmb   IAmb    09 17 10.5
       comp=Z,5.8nm,1.2s
H21K   Melozitna Rive   66.58  27   P      P       09 17 13.1 +1.3
H21K                                IAmb   IAmb    09 17 14.3
       comp=Z,3.9nm,0.8s
CAST   Castle Rocks     67.16  29   P      P       09 17 16.5 +1.0
CAST                                IAmb   IAmb    09 17 18.2
       comp=Z,3.6nm,0.9s
PPLA   Purkeypile       67.18  30   P      P       09 17 16.6 +0.8
TOLK   Toolik Lake Re   67.46  23   P      P       09 17 17.5 +0.1
TOLK                                IAmb   IAmb    09 17 43.8
       comp=Z,3.0nm,0.9s
SPU    Mount Spurr      67.50  32   P      P       09 17 19.0 +1.3
MLY    Manley           67.51  27   P      P       09 17 19.7 +1.9
MLY                                 IAmb   IAmb    09 17 20.6
       comp=Z,3.4nm,1.2s
BPAW   Bear Paw Mtn.    67.54  28   P      P       09 17 19.5 +1.5
SKT    Skwentna         67.62  31   P      P       09 17 19.2 +0.8
KTH    Kantishna Hill   67.66  29   P      P       09 17 19.6 +0.9
H23K   Yukon River      67.89  26   P      P       09 17 21.9 +1.9
H23K                                IAmb   IAmb    09 17 27.4
       comp=Z,7.9nm,1.4s
SUA    Susitna One      68.07  31   P      P       09 17 21.8 +0.4
I23K   Minto, Yukon-K   68.07  27   P      P       09 17 21.2   0.0
MCK    McKinley         68.50  29   P      P       09 17 24.5 +0.6
MCK                                 IAmb   IAmb    09 17 50.9
       comp=Z,11nm,1.4s
H24K   Noodor Dome      68.56  26   P      P       09 17 24.8 +0.4
H24K                                IAmb   IAmb    09 17 29.9
       comp=Z,9.9nm,1.5s
MDM    Murphy Dome      68.58  27   P      P       09 17 24.3  -0.1
MDM                                 IAmb   IAmb    09 17 27.4
       comp=Z,9.8nm,1.3s
PMR    Palmer           68.81  31   P      P       09 17 26.2 +0.3
PMR                                 IAmb   IAmb    09 17 27.7
       comp=Z,6.2nm,1.1s
SML    Sawmill          69.14  31   P      P       09 17 27.4  -0.6
SML                                 IAmb   IAmb    09 17 32.6
       comp=Z,8.4nm,1.0s
ILAR   Eielson Array    69.18  27   P      P       09 17 27.9  -0.2
       comp=Z,0.7nm,0.6s,baz=285,slow=5.8,SNR=9.4
PWL    Port Wells       69.33  32   P      P       09 17 29.3 +0.1
BMAR   Burnt Mountain   69.53  24   P      P       09 17 31.3 +1.0
SCM    Sheep Creek Mo   69.60  30   P      P       09 17 30.6  -0.2
L27K   Beaver Creek,    71.77  28   P      P       09 17 45.6 +1.6
L27K                                IAmb   IAmb    09 17 46.4
       comp=Z,3.6nm,0.8s
BCAR   Beaver Creek A   71.78  28   P      P       09 17 44.6 +0.5
FINES  FINESS Array B   72.01 330   P      P       09 17 43.8  -1.6
       comp=Z,2.1nm,1.0s,baz=57,slow=7.0,SNR=3.5
BRTR   Keskin Array B   73.85 307   P      P       09 17 56.3  -0.6
       comp=Z,1.1nm,0.7s,baz=145,slow=4.5,SNR=4.0
NOA    NORSAR Array B   78.77 332   LR     LR      09 56 43.7
       comp=Z,36nm,18.4s,baz=80,slow=38
CLL    Collm            82.66 323  eP      P       09 18 47.0 +1.8
YKA    Yellowknife Ar   82.99  23   P      P       09 18 46.3  -0.4
       comp=Z,0.6nm,0.4s,baz=324,slow=6.2,SNR=6.9
GERES  GERESS Array B   83.46 321   P      P       09 18 48.5  -1.0
       comp=Z,0.2nm,0.3s,baz=39,slow=6.7,SNR=4.4
KMBO   Kilima Mbogo     85.53 267   P      P       09 19 00.8   0.0
       comp=Z,1.8nm,0.6s,baz=117,slow=6.7,SNR=1.9
KMBO   Kilima Mbogo     85.53 267   IAmb   IAmb    09 19 02.0
       comp=Z,2.7nm,0.8s
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NIED ***05*** *09:17:08.8, 44.°91N×149.°65E, h30km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}4.69; $M_{\theta\theta}$-1.07; $M_{\phi\phi}$-3.62; $M_{r\theta}$1.97; $M_{\theta\phi}$-3.06; $M_{\phi r}$5.44; Fault plane solution: $M_0$7.78000×10^{14} NP1:ϕ_s23.00000°, δ69.00000°, λ81.00000°. NP2:ϕ_s228.00000°, δ22.00000°, λ113.00000°.*

JMA ***05*** *09:17:08.8±0.4, 44.°91N×149.°65E, h30km, M4.3*

SKHL ***05*** *09:17:09.5±0.2, 44.°50N×149.°80E, h51km±6km, mb4.7/6*

MOS ***05*** *09:17:10.1±0.8, 44.°71N×149.°58E, h47km, mb4.6/5, Error ellipse: s-maj=11.9km s-min=9.2km az=150.4*

IDC ***05*** *09:17:15.3±3.0, 44.°72N×149.°48E, h76km±26km, mb3.4/13, mb1 3.6/16, mb1mx3.5/46, mbtmp3.7/16, MS3.1/1, Ms1 3.1/1, ms1mx2.5/34, Error ellipse: s-maj=24.5km s-min=16.9km az=142.0*

ISC 05 09:17:10.5±0.7**, 44.°38N**±0.°06×**149.°78E**±0.°07**, h50km, n72,** σ**2.s34**/86**, mb3.7**/16**, 3C-4D, Kuril Islands**

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Code   Station Name      Δ°   AZ°  Phase ID         Time        Res
                                   Op     ISC      h  m  s      ISC
KUR    Kuril'sk          1.61 303d iPN     Pn      09 17 32.4  -4.0
KUR                                eS      Sn      09 17 50.0  -6.0
KUR                                 pmax   pmax
       comp=Z,408nm,0.5s
KUR                                 pmax   pmax
       comp=N,158nm,0.2s
KUR                                 pmax   pmax
       comp=E,122nm,0.5s
KUR                                 smax   smax
       comp=N,804nm,0.2s
KUR                                 smax   smax
       comp=E,361nm,0.2s
KUR    Kuril'sk          1.61 303  i P     Pn      09 17 32.6  -3.8
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KUR				AMB	AMB	09 17 36.6	
	comp=E,200nm,0.5s						
KUR				*e*S	Sn	09 17 49.8	-6.2
KUR				A	A	09 17 54.3	
	comp=E,1µm,0.5s						
KUR				A	A	09 17 54.3	
	comp=E,620nm,0.5s						
YUK	Yuzh-Kuril'sk	2.84	264	*e*PN	Pn	09 17 52.9	-0.4
YUK				*e*S	Sn	09 18 27.3	+1.1
YUK				pmax	pmax		
	comp=E,75nm,0.2s						
YUK				pmax	pmax		
	comp=Z,280nm,0.2s						
YUK				pmax	pmax		
	comp=N,97nm,0.1s						
YUK				smax	smax		
	comp=N,290nm,0.4s						
YUK				smax	smax		
	comp=E,713nm,0.5s						
YUK	Yuzh-Kuril'sk	2.84	264	*e*P	Pn	09 17 53.4	+0.1
YUK				AMB	AMB	09 17 59.6	
	comp=E,170nm,0.5s						
YUK				*e*S	Sn	09 18 26.5	+0.3
YUK				A	A	09 18 31.0	
	comp=E,380nm,0.5s						
YUK				A	A	09 18 31.0	
	comp=E,880nm,0.5s						
GRPR	Tuman	2.91	264	*e*PN	Pn	09 17 54.1	-0.1
GRPR				*e*S	Sn	09 18 28.1	+0.2
GRPR				pmax	pmax		
	comp=Z,109nm,0.3s						
GRPR				pmax	pmax		
	comp=E,29nm,0.1s						
GRPR				pmax	pmax		
	comp=N,85nm,0.4s						
GRPR				smax	smax		
	comp=N,440nm,0.4s						
GRPR				smax	smax		
	comp=E,330nm,0.4s						
GRPR	Tuman	2.91	264	*e*P	Pn	09 17 53.6	-0.6
GRPR				AMB	AMB	09 18 00.0	
	comp=E,109nm,0.4s						
GRPR				*e*S	Sn	09 18 28.1	+0.2
GRPR				A	A	09 18 36.0	
	comp=E,440nm,0.4s						
GRPR				A	A	09 18 36.0	
	comp=E,330nm,0.4s						
NEM2	Nemuro 2	3.09	252	P	Pn	09 17 56.0	-0.7
NEM2				*e*S	Sn	09 18 31.0	-1.4
NMR	Nemuro--Hokkai	3.10	252	*e*PN	Pn	09 17 55.8	-1.0
NMR				*e*S	Sn	09 18 32.5	-0.1
NMR	Nemuro--Hokkai	3.10	252	*e*P	Pn	09 17 56.5	-0.3
NMR				*e*S	Sn	09 18 31.3	-1.3
GLVR	Golovnino	3.14	260	*e*PN	Pn	09 17 57.1	-0.3
GLVR				*i* S	Sn	09 18 34.8	+1.3
GLVR				pmax	pmax		
	comp=Z,188nm,0.4s						
GLVR				pmax	pmax		
	comp=E,47nm,0.5s						
GLVR				pmax	pmax		
	comp=N,26nm,0.3s						
GLVR				smax	smax		
	comp=E,599nm,0.5s						
GLVR				smax	smax		
	comp=N,253nm,0.4s						
GLVR	Golovnino	3.14	260	*e*P	Pn	09 17 57.1	-0.3
GLVR				AMB	AMB	09 17 59.0	
	comp=N,188nm,0.4s						
GLVR				*i* S	Sn	09 18 34.8	+1.3
GLVR				A	A	09 18 44.0	
	comp=N,253nm,0.5s						
GLVR				A	A	09 18 44.0	
	comp=N,599nm,0.5s						
RUSJ	Misakicho	3.27	267⇑	*i*PN	Pn	09 17 59.5	+0.3
RUSJ				*e*S	Sn	09 18 38.7	+1.9
JRA	Rausu	3.38	264	P	Pn	09 18 00.9	+0.2
JRA				*e*S	Sn	09 18 40.5	+1.0
JNK	Nakash	3.74	260	P	Pn	09 18 05.6	0.0
JNK				*e*S	Sn	09 18 48.1	-0.2
AKK	Akkeshi	3.83	251	*e*P	Pn	09 18 06.7	-0.2
AKK				*e*S	Sn	09 18 49.5	-1.1
JAK	Akkeshi	3.94	251	P	Pn	09 18 08.3	0.0
JAK				*e*S	Sn	09 18 52.2	-1.0
JTKR	Abashiri--Toko	4.24	267	P	Pn	09 18 13.5	+1.0
JAR	Ashorobuto	4.48	258	P	Pn	09 18 16.9	+1.1
JAR				*e*S	Sn	09 19 07.8	+1.2
JCH	Churui	4.99	252	P	Pn	09 18 23.4	+0.6
JCH				*e*S	Sn	09 19 18.4	-0.7
JKA	Kamikawa-asahi	5.17	270	*e*P	Pn	09 18 27.0	+1.8
ASAJ	Asahikawa	5.17	270	P	Pn	09 18 26.9	+1.8
	comp=N,1.5nm,0.3s,baz=73,slow=14,SNR=13						
ASAJ	Asahikawa	5.17	270	PN	Pn	09 18 27.0	+1.8
ERM	Erimo	5.39	246	*de*PN	Pn	09 18 30.4	+2.2
JNBK	Urakawa-nobuka	5.54	250	P	Pn	09 18 30.4	+0.1
YSS	Yuzh-Sakhalins	5.55	300	*e*P	Pn	09 18 29.8	-0.7
YSS				AMB	AMB	09 18 34.7	
	comp=N,20nm,0.5s						
JBT2	Biratori 2	5.62	256	P	Pn	09 18 32.5	+1.1
JNB	Noboribetsu	6.64	256	P	Pn	09 18 46.2	+0.7
JNB				*e*S	Sn	09 19 59.8	0.0
JKB	Kayabe	6.87	252	P	Pn	09 18 48.6	+0.1
JKB				*e*S	Sn	09 20 01.6	-3.6
JYM2	Yakumo 2	7.23	255	P	Pn	09 18 54.2	+0.7
JANG	Nango	7.31	240	P	Pn	09 18 53.6	-1.0
JANG				*e*S	Sn	09 20 10.2	-6.0
JTM	Tenmabayashi	7.36	244	*e*S	Sn	09 20 12.8	-4.6
JTH	Tanohata	7.37	236	*e*S	Sn	09 20 10.9	-6.6
SKR	Severo-Kuril's	7.62	32	*e*PN	Pn	09 18 58.4	-0.4
SKR				pmax	pmax		
	comp=Z,93nm,0.8s						
SKR				MLR	MLR		
	comp=Z,700nm,17.0s						
SKR				MLR	MLR		
	comp=Z,1µm,16.0s						
SKR	Severo-Kuril's	7.62	32	*e*P	Pn	09 18 58.0	-0.8
SKR				AMB	AMB	09 18 59.0	
	comp=Z,93nm,0.8s						
SKR				*e*S	Sn	09 20 17.6	-6.2
JOSM	Okushiri--Mats	7.87	257	P	Pn	09 19 02.6	+0.4
OFUJ	Ofunato	8.05	232	P	Pn	09 19 04.5	-0.2
OFUJ				*e*S	Sn	09 20 28.8	-5.5
JRG	Rokugo	8.44	237	*e*S	Sn	09 20 39.2	-4.8
JIO	Ouri	8.67	230	*e*S	Sn	09 20 42.6	-6.8
PETK	Petropavlovsk-	10.18	28	P	Pn	09 19 36.9	+3.1
	comp=Z,0.3nm,0.3s,baz=202,slow=16,SNR=8.7						
MAJO	Matsushiro	11.78	232⇑	*e*PN	Pn	09 19 56.3	+0.5
KSRS	Korea Array	17.88	255	P	P	09 21 17.2	+1.6
	comp=Z,0.1nm,0.3s,baz=64,slow=12,SNR=2.3						
KSRS				LR	LR	09 28 29.3	
	comp=Z,56nm,18.8s,baz=139,slow=38						
H11N2	WAKE ISLAND Hy	28.42	144	T	T	09 53 50.3	
	baz=334,slow=76,SNR=100						
H11N1	WAKE ISLAND Hy	28.43	144	T	T	09 53 51.3	
	baz=334,slow=76,SNR=97						
H11N3	WAKE ISLAND Hy	28.44	144	T	T	09 53 51.6	
	baz=334,slow=76,SNR=96						
H11S1	WAKE ISLAND Hy	29.44	146	T	T	09 55 11.4	
	baz=335,slow=76,SNR=110						
H11S3	WAKE ISLAND Hy	29.44	146	T	T	09 55 08.2	
	baz=335,slow=76,SNR=92						
H11S2	WAKE ISLAND Hy	29.45	146	T	T	09 55 12.6	
	baz=335,slow=76,SNR=68						
SONM	Songino Array	29.98	292	P	P	09 23 12.9	-1.3
	comp=Z,0.3nm,0.4s,baz=79,slow=9.0,SNR=2.4						
NRIK	Noril'sk	39.63	331⇓	*e*P	P	09 24 36.2	-0.5
ILAR	Eielson Array	39.86	37	P	P	09 24 39.0	+0.3
	comp=Z,0.4nm,0.6s,baz=269,slow=8.7,SNR=5.5						
DGZ	Jazzator, Alta	41.74	300⇑	*e*P	P	09 24 54.2	-0.4
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.4s						
INK	Inuvik	44.90	31	P	P	09 25 20.0	+0.5
	comp=Z,0.6nm,0.6s,baz=287,slow=5.6,SNR=1.6						
MK31	Makanchi Array	45.97	298	*de*P	P	09 25 27.4	-1.0
MKAR	Makanchi Array	45.97	298	P	P	09 25 27.7	-0.7
	comp=Z,1.2nm,0.6s,baz=78,slow=8.2,SNR=9.5						
RES	Resolute Bay	53.81	17	P	P	09 26 27.1	-0.3
	comp=Z,2.0nm,0.8s,baz=292,slow=5.4,SNR=4.0						
FINES	FINESS Array B	65.16	334	P	P	09 27 45.7	-0.1
	comp=Z,0.6nm,0.5s,baz=34,slow=10,SNR=1.0						
WRA	Warramunga Arr	65.55	196	P	P	09 27 52.1	+3.3
	comp=Z,0.2nm,0.8s,baz=12,slow=7.0,SNR=2.2						
ASAR	Alice Springs	69.26	196	P	P	09 28 16.4	+4.3
	comp=Z,0.2nm,0.3s,baz=16,slow=5.7,SNR=2.1						
NOA	NORSAR Array B	69.68	340	P	P	09 28 13.7	-0.7
	comp=Z,0.4nm,0.5s,baz=29,slow=6.4,SNR=2.0						
KIV	Kislovodsk	70.74	313	*e*P	P	09 28 21.9	+0.6
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KIV	Kislovodsk	70.74	313	*e*P	P	09 28 21.9	+0.6
KBZ	Khabaz	70.78	313	P	P	09 28 21.9	+0.5
	comp=Z,2.5nm,0.8s,baz=85,slow=3.5,SNR=6.3						
KBZ	Khabaz	70.78	313	*e*P	P	09 28 22.2	+0.8
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KBZ	Khabaz	70.78	313	*e*P	P	09 28 22.2	+0.8
AKASG	Malin Array Be	72.18	325	P	P	09 28 28.7	-0.9
	comp=Z,1.0nm,0.4s,baz=40,slow=5.6,SNR=7.5						
CLL	Collm	77.61	334	*e*P	P	09 29 01.0	0.0
CLL				pmax	pmax		
	comp=Z,6.0nm,0.6s						
CLL	Collm	77.61	334	*e*P	P	09 29 00.0	-1.0
	comp=Z,6.0nm,0.6s						
GERES	GERESS Array B	79.51	332	P	P	09 29 11.6	-0.1
	comp=Z,0.2nm,0.3s,baz=44,slow=7.2,SNR=3.6						
TXAR	Lajitas Array	80.72	58	P	P	09 29 20.4	+1.8
	comp=Z,0.2nm,0.6s,baz=303,slow=3.9,SNR=5.7						
H03N2	Juan Fernandez	141.07	91	T	T	12 14 14.7	
	baz=305,slow=77,SNR=4.5						
H03N3	Juan Fernandez	141.09	91	T	T	12 14 11.7	
	baz=305,slow=77,SNR=5.6						
H03N1	Juan Fernandez	141.09	91	T	T	12 14 15.4	
	baz=305,slow=77,SNR=5.6						

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*NEIC **05** 09:36:40.5±1.6, 16°.92N±0°.03×94°.91W±0°.05, h110km±11km, Error ellipse: s-maj=7.6km s-min=4.5km az=111.0*

*MEX **05** 09:36:40.9±1.1, 16°.96N×94°.88W, h118km±6km, MD4.4*

ISC 05 09:36:40.2±0.8**, 16°.94N**±0°.05×**94°.92W**±0°.03**, h114**km±8km**, n33, σ1s.02**/47**, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.16	12		Pn	09 36 55.9	-0.1
CMIG					Sn	09 37 07.8	-0.1
CMIG	Matias Romero	0.16	12	*i* P	Pn	09 36 55.9	-0.1
CMIG				*i* S	Sn	09 37 07.8	-0.1
TUIG	Tuzandepetl	1.19	23		Sn	09 37 20.5	-1.0
TUIG	Tuzandepetl	1.19	23	*i* S	Sn	09 37 20.5	-1.0
HUIG	Huatulco	1.63	225		Pn	09 37 07.3	-1.4
HUIG					Sn	09 37 30.3	-0.2
HUIG	Huatulco	1.63	225	*i* P	Pn	09 37 07.3	-1.4
HUIG				*i* S	Sn	09 37 30.3	-0.2
TGIG		1.73	95		Pn	09 37 09.8	-0.2
TGIG					Sn	09 37 31.2	-1.6
TGIG		1.73	95	*i* P	Pn	09 37 09.8	-0.2
TGIG				*i* S	Sn	09 37 31.2	-1.6
VHO	Vista Hermosa	1.74	275	*e*P	Pn	09 37 11.0	+0.7
VHO				*e*S	Sn	09 37 33.6	+0.3
TGBT	Tuxtla Gutierr	1.76	95		Pn	09 37 10.2	-0.2
TGBT					Sn	09 37 31.8	-1.5
TGBT	Tuxtla Gutierr	1.76	95	*i* P	Pn	09 37 10.2	-0.2
TGBT				*i* S	Sn	09 37 31.8	-1.5
PCIG		2.04	127		Pn	09 37 13.4	-0.4
PCIG					Sn	09 37 39.9	+0.3
PCIG		2.04	127	*e*P	Pn	09 37 13.4	-0.4
PCIG				*e*S	Sn	09 37 39.9	+0.3
PEIG	Puerto Escondi	2.33	247	*i* P	Pn	09 37 15.8	-1.8
PEIG				*i* S	Sn	09 37 45.1	-1.2
TOIG	Toxpalan	2.35	300	*e*P	Pn	09 37 17.9	0.0
TOIG				*e*S	Sn	09 37 44.4	-2.4
CCIG	Comitan	2.75	103		Pn	09 37 23.4	+0.3
THIG		3.25	128		Pn	09 37 31.3	+1.6
THIG					Sn	09 38 07.9	+0.1
THIG		3.25	128	*i* P	Pn	09 37 31.3	+1.6
THIG				*i* S	Sn	09 38 07.9	+0.1
TLIG	Tlapa	3.54	281		Pn	09 37 34.2	+0.6
HUEH	Huehuetenango	3.66	116		Pn	09 37 35.5	+0.2
ESQI	Esquipulas	5.87	113	Pn	Pn	09 38 04.3	-0.6
MTO3	Montecristo	5.92	114		Pn	09 38 04.7	-1.0
MOIG	Morelia	6.55	296	Pn	Pn	09 38 16.6	+2.3
HZTE	Horizontes, Gu	10.96	123	Pn	Pn	09 39 14.0	+0.2
ORTG	Ortega, Santa	11.28	124	Pn	Pn	09 39 18.4	+0.3
SRBA	San Rafael, Bu	13.61	123	Pn	Pn	09 39 48.7	0.0
435B	Jarrell	14.00	350	Pn	Pn	09 39 54.0	+0.5
TX31	Lajitas Ar. Si	14.72	328	P	Pn	09 40 04.2	+1.3
TXAR	Lajitas Array	14.72	328	P	Pn	09 40 02.8	-0.1
MSTX	Muleshoe	18.37	339	IAmb	IAmb	09 40 48.1	
	comp=Z,17nm,1.3s						
AMTX	Amarillo	18.87	343	P	P	09 40 51.6	-0.1
TUL1	Leonard	18.91	358	P	P	09 40 50.7	-1.3
TUL1				IAmb	IAmb	09 41 13.4	
	comp=Z,5.2nm,0.8s						
FCAR	Ozark Folk Cen	19.04	7	P	P	09 40 52.4	-0.9
FCAR				IAmb	IAmb	09 40 52.6	
	comp=Z,3.4nm,0.5s						

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*IDC **05** 09:44:29.0±1.1, 1°.93N×96°.60E, h0km, mb4.2/11, mb1 4.3/12, mb1mx3.9/53, mbtmp4.2/12, ML4.7/1, MS3.1/4, Ms1 3.1/4, ms1mx2.8/52, Error ellipse: s-maj=32.1km s-min=15.4km az=51.0*

*NEIC **05** 09:44:33.9±0.9, 1°.97N±0°.09×96°.6E±0°.1, h28km±6km, mb4.2/9, Error ellipse: s-maj=18.7km s-min=12.0km az=69.0*

*DJA **05** 09:44:33.2±0.5, 2°N±4°×9°7E±°, h37km±15km, M4.0/7, MLv4.0/7*

ISC 05 09:44:33.3±0.7**, 1°.98N**±0°.05×**96°.65E**±0°.06**, h28**km**, n39, σ0s.81**/36**, mb4.2**/15**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNSI	Sinabang, Aceh	0.53	323	P	Pn	09 44 44.8	-0.2
SNSI				S	Sn	09 44 54.0	+0.9
GSI	Gunungsitoli	1.14	126	P	Pn	09 44 53.4	0.0
GSI				S	Sn	09 45 07.9	-0.3
GSI	Gunungsitoli	1.14	126		Pn	09 44 53.1	-0.3
TPTI		1.38	23	P	Pn	09 44 55.6	-1.0
TPTI				S	Sn	09 45 12.5	-1.4
RPSI	Rantau Prapat	2.38	73		Pn	09 45 10.8	+0.4
RPSI	Rantau Prapat	2.38	73		Pn	09 45 10.7	+0.2
PSI	Prapat	2.41	70	Pn	Pn	09 45 10.7	-0.4
	2.2nm,0.3s,baz=256,slow=8.6,SNR=7.7						
PSI				Sn	Sn	09 45 41.9	+2.1
	5.0nm,0.3s,baz=236,slow=18,SNR=4.6						
PSI				LR	LR	09 45 58.8	
	comp=Z,185nm,18.9s,baz=308,slow=37						
MNSI	Mandailing Nat	3.16	112	P	Pn	09 45 21.0	-0.1
MNSI				S	Sn	09 45 56.1	-1.8
LHMI	Lhok Sumawe	3.24	5	P	Pn	09 45 20.8	-1.5
SISI	Saibi	4.09	143	P	Pn	09 45 33.1	-0.9
PPI	Padang Panjang	4.46	123	P	Pn	09 45 39.6	+0.5
LEM	Lembang	14.01	129	LR	LR	09 53 52.7	
	comp=Z,88nm,20.8s,baz=172,slow=40						
CMAR	Chiang Mai Arr	16.53	8	Pn	Pn	09 48 24.3	+1.1
	1.1nm,0.3s,baz=199,slow=11,SNR=20						
CMAR				LR	LR	09 54 11.1	
	comp=Z,63nm,18.6s,baz=220,slow=35						
H08S2	Diego Garcia H	25.93	248	T	T	10 16 50.6	
	baz=69,slow=75,SNR=195						
H08S3	Diego Garcia H	25.93	248	T	T	10 16 50.8	
	baz=69,slow=75,SNR=208						
H08S1	Diego Carcia H	25.94	248	T	T	10 16 48.3	
	baz=69,slow=75,SNR=104						
FITZ	Fitzroy Crossi	34.83	126	P	P	09 51 21.9	-0.2
	1.4nm,0.8s,baz=336,slow=10.0,SNR=2.8						
H01W3	Cape Leeuwin H	40.17	157	T	T	10 35 03.9	
	baz=333,slow=76,SNR=14						
H01W2	Cape Leeuwin H	40.19	157	T	T	10 35 00.0	
	baz=333,slow=76,SNR=13						
H01W1	Cape Leeuwin H	40.19	157	T	T	10 34 44.5	
	baz=333,slow=76,SNR=11						
WB0	Warramunga Arr	42.88	122	P	P	09 52 28.8	-0.8
WRA	Warramunga Arr	42.91	122	P	P	09 52 29.6	-0.3
	2.3nm,0.7s,baz=301,slow=9.1,SNR=35						
WRAB	Tennant Creek	42.92	122	P	P	09 52 29.6	-0.4
WRAB				IAmb	IAmb	09 52 30.2	
	comp=Z,4.6nm,1.1s						
WB2	Warramunga Arr	42.92	122	P	P	09 52 29.5	-0.4
WB2				IAmb	IAmb	09 52 30.1	
	comp=Z,5.3nm,1.1s						
WR0	Warramunga Arr	43.09	122	P	P	09 52 31.0	-0.3
WR0				IAmb	IAmb	09 52 32.0	
	comp=Z,3.4nm,0.7s						
ASAR	Alice Springs	44.30	127	P	P	09 52 41.5	+0.4
	comp=Z,0.8nm,0.5s,baz=306,slow=8.0,SNR=12						
KSRS	Korea Array	45.53	35	P	P	09 52 50.1	-0.4
	comp=Z,1.4nm,0.7s,baz=229,slow=8.0,SNR=4.0						
KSRS				LR	LR	10 13 59.0	
	comp=Z,24nm,18.1s,baz=235,slow=39						
MK31	Makanchi Array	46.36	346	P	P	09 52 57.8	+0.9
MK31				IAmb	IAmb	09 52 59.1	
	comp=Z,4.0nm,1.1s						
MKAR	Makanchi Array	46.36	346	P	P	09 52 57.4	+0.5
	comp=Z,2.0nm,0.5s,baz=159,slow=9.3,SNR=17						
MKAR	Makanchi Array	46.36	346	P	P	09 52 57.1	+0.1
SONM	Songino Array	46.45	9	P	P	09 52 57.7	-0.1
	comp=Z,1.1nm,0.6s,baz=196,slow=10.0,SNR=6.8						
PMG	Port Moresby	51.57	104	P	P	09 53 37.6	+0.2
	comp=Z,7.9nm,0.6s,baz=297,slow=4.5,SNR=5.1						
PMG	Port Moresby	51.57	104	IAmb	IAmb	09 53 38.5	
	comp=Z,11nm,0.8s						
ZALV	Zalesovo Beam	52.71	351	P	P	09 53 45.9	+0.7
	comp=Z,4.4nm,0.6s,baz=157,slow=7.8,SNR=13						
CTA	Charters Tower	53.34	117	P	P	09 53 50.5	0.0
	comp=Z,1.8nm,0.7s,baz=297,slow=6.8,SNR=3.8						
ABKAR	Akbulak array	56.57	332	P	P	09 54 13.8	+0.4
FINES	FINESS Array B	79.06	333	P	P	09 56 34.8	+0.1
	comp=Z,1.0nm,0.6s,baz=100,slow=6.6,SNR=4.6						
ARCES	ARCESS Array B	81.62	340	P	P	09 56 49.0	+0.6
	comp=Z,8.8nm,1.2s,baz=94,slow=6.4,SNR=5.7						
TXAR	Lajitas Array	143.29	30	PKP	PKPdf	10 04 04.6	-1.2
	comp=Z,0.2nm,0.7s,baz=13,slow=1.9,SNR=2.6						

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*NEIC **05** 09:44:38.6±2.2, 13°.51S±0°.08×74°.6W±0°.1, h77km±9km, mb4.4/17, Error ellipse: s-maj=17.5km s-min=11.4km az=80.0*

*IDC **05** 09:44:39.2±1.9, 13°.53S×74°.75W, h96km±18km, mb3.7/7, mb1 4.0/13, mb1mx3.8/35, mbtmp4.2/13, MS3.0/2, Ms1 3.1/2, ms1mx2.6/27, Error ellipse: s-maj=24.5km s-min=13.0km az=64.0*

*VAO **05** 09:44:42.3±0.6, 13°.26S×74°.38W, h82km, mb4.4*

ISC 05 09:44:39.3±0.6**, 13°.56S**±0°.05×**74°.69W**±0°.07**, h100**km**, n104, σ2s.00**/103**, mb4.2**/9**, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CZSB	Cruzeiro do Su	6.12	19	*e*P	Pn	09 46 04.6	-2.6
CZSB	Cruzeiro do Su	6.12	19	Pn	Pn	09 46 04.7	-2.5
LPAZ	La Paz	6.90	114	P	Pn	09 46 20.2	+1.9
	8.7nm,0.3s,baz=311,slow=9.1,SNR=110						
LPAZ				S	Sn	09 47 34.8	-0.9
	baz=199,slow=22,SNR=1.3						
LPAZ	La Paz	6.90	114	*e*P	Pn	09 46 20.5	+2.1
LPAZ	La Paz	6.90	114	*e*P	Pn	09 46 19.5	+1.1
LPAZ	La Paz	6.90	114	Pn	Pn	09 46 19.8	+1.4
ATAH	Atahualpa	7.35	330	P	Pn	09 46 24.3	-0.1
	4.7nm,0.3s,baz=170,slow=4.4,SNR=35						
ATAH				S	Sn	09 47 44.7	-1.8
	2.2nm,0.3s,baz=174,slow=8.4,SNR=1.5						
PSGCX	Pisagua	7.43	144	Pn	Pn	09 46 24.1	-1.1
PB11	IPOC Station P	7.83	143	Pn	Pn	09 46 28.9	-1.7
TA02	Huaiquique	7.97	147		Pn	09 46 31.6	-0.8
TA01	Diego Aracena	8.19	149	Pn	Pn	09 46 34.8	-0.6
PB08	IPOC Station P	8.42	142		Pn	09 46 38.7	-0.2
PB01	IPOC Station P	8.95	147		Pn	09 46 44.7	-1.1
ETMB	Extrema	9.10	67	*e*P	Pn	09 46 46.5	-1.3
ETMB	Extrema	9.10	67	Pn	Pn	09 46 46.3	-1.5
PB07	IPOC Station P	9.32	151		Pn	09 46 50.7	-0.3
PB04	IPOC Station P	9.73	154	Pn	Pn	09 46 55.5	-1.0
PB06	IPOC Station P	10.31	153	Pn	Pn	09 47 03.7	-0.8
TBTG	Tabatinga, AM	10.45	27	*e*P	Pn	09 47 03.0	-3.1
TBTG	Tabatinga, AM	10.45	27	Pn	Pn	09 47 02.9	-3.3
LVC	Limon Verde	10.54	149	P	Pn	09 47 07.5	-0.2
	1.1nm,0.3s,baz=340,slow=9.3,SNR=9.4						
LVC				S	Sn	09 48 57.7	-6.4
	1.3nm,0.3s,baz=124,slow=17,SNR=2.0						
LVC	Limon Verde	10.54	149	*e*P	Pn	09 47 11.2	+3.5
PB10	IPOC Station P	10.65	159	Pn	Pn	09 47 08.3	-0.5
PB15	IPOC Station P	10.80	153		Sn	09 49 05.9	-4.1
SAML	Samuel	12.18	69	*e*P	Pn	09 47 25.6	-3.9
SAML	Samuel	12.18	69	Pn	Pn	09 47 26.0	-3.5
SIV	San Ignacio	13.39	102	P	Pn	09 47 45.8	+0.4
	1.0nm,0.3s,baz=296,slow=9.4,SNR=17						
VILB	Vilhena	14.12	89	Pn	Pn	09 47 53.2	-1.7
AC02	Maricunga	14.20	159	Pn	Pn	09 47 57.4	+1.1
OTAV	Otavalo	14.21	345	*e*P	Pn	09 47 56.8	+0.3
OTAV	Otavalo	14.21	345	*e*P	Pn	09 47 57.7	+1.3
OTAV	Otavalo	14.21	345	Pn	Pn	09 47 56.5	+0.1
PAC1	Pacto, Paraso	14.33	343	*e*P	Pn	09 47 59.5	+1.8
GCUF	Volcan Galeras	14.93	350	*e*P	Pn	09 48 06.3	+0.6
PTLB	Pontes e Lacer	15.18	99	*e*P	Pn	09 48 08.9	+0.5
PTLB	Pontes e Lacer	15.18	99	P	Pn	09 48 09.2	+0.8
MACC	Macarena, Meta	15.63	3	*e*P	Pn	09 48 14.4	+0.3
PCON	Cinco Dias	15.88	354	*e*P	P	09 48 19.8	+0.4
MARP	Paez Belalcaza	16.35	356	*e*P	Pn	09 48 23.9	+0.6
MACA	Manacapuru-AM	17.27	54	*e*P	Pn	09 48 32.6	-1.7
MACA	Manacapuru-AM	17.27	54		Pn	09 48 33.2	-1.2
MACA				IAmb	IAmb	09 48 35.5	
	comp=Z,31nm,0.7s						
ORTC	Ortega, Tolima	17.37	358	*e*P	Pn	09 48 37.4	+1.9
PDRB	Porto dos Gac	17.64	86	*e*P	Pn	09 48 39.5	+0.7
CHIC	Chingaza	18.10	3	*e*P	P	09 48 42.9	-0.9
ROSC	El Rosal	18.29	1	P	P	09 48 46.0	+0.2
	comp=Z,1.9nm,0.3s,baz=204,slow=18,SNR=1.8						
ROSC	El Rosal	18.29	1	IAmb	IAmb	09 49 06.1	
	comp=Z,15nm,0.6s						
PLMC	San Jos del P	18.41	355	*e*P	Pn	09 48 55.0	+6.9
SALV	Santo Antonio	18.52	100	*e*P	Pn	09 48 50.2	+0.8
CLDB	Colider	18.66	84	*e*P	Pn	09 48 50.5	-0.6
GUY2C	Guyana, Caldas	18.68	358	*e*P	P	09 48 51.0	+0.8
NORC	Norcasia	19.00	359	*e*P	P	09 48 53.7	+0.4
CBOC	Ciudad Bolivar	19.34	356	*e*P	P	09 48 51.0	-6.2
PTGA	Pitinga	19.37	50	P	P	09 48 57.1	-0.1
	comp=Z,1.8nm,0.3s,baz=197,slow=18,SNR=18						
PTGA				S	S	09 52 28.6	-2.6
	comp=Z,0.2nm,0.3s,baz=320,slow=20,SNR=2.7						
PTGA	Pitinga	19.37	50	P	P	09 48 57.9	+0.6
PTGA				IAmb	IAmb	09 49 01.6	
	comp=Z,14nm,0.7s						
RUSC	La Rusia	19.39	5	*e*P	P	09 48 59.1	+1.1
AQDB	Aquidauana	19.41	113	*e*P	Pn	09 49 00.2	+0.4
PP1B	Ponte de Pedra	19.50	104	*e*P	Pn	09 49 02.0	+1.1
HELC	Santa Helena	19.64	358	*e*P	Pn	09 49 08.6	+5.7
MT02	Curacav	19.87	171	P	P	09 49 02.6	0.0
NPGB	Novo Progresso	20.09	73	*e*P	P	09 49 04.8	-0.3
MT09	Talagante	20.40	171	P	P	09 49 09.4	+0.9
CPUP	Villa Florida	20.65	131	P	P	09 49 12.4	+1.4
	comp=Z,1.8nm,0.9s,baz=329,slow=12,SNR=3.3						
ITTB	Itaituba	20.82	66	*e*P	P	09 49 12.9	-0.1
PAMC	Pamplona, Colo	20.86	6	*e*P	P	09 49 15.4	+1.5
ZARC	Zaragoza, Cauc	20.92	360	P	P	09 49 13.4	-0.6
ZARC				IAmb	IAmb	09 49 41.1	
	comp=Z,11nm,0.9s						
ELOV	Elorza	21.07	15	*e*P	P	09 49 14.0	-1.6
BOAV	Boa Vista	21.19	43	*e*P	P	09 49 16.8	-0.1
BOAV	Boa Vista	21.19	43	P	P	09 49 16.7	-0.2
OCAC	Ocana	21.70	4	*e*P	P	09 49 20.8	-1.7
OCAC	Ocana	21.70	4	P	P	09 49 23.4	+0.9
OCAC				IAmb	IAmb	09 49 28.0	
	comp=Z,5.4nm,0.5s						
SMLC	San Martn de	22.23	2	*e*P	P	09 49 24.9	-3.0
ARAG	Araguaiana, MT	22.24	98	*e*P	P	09 49 28.8	+0.7
SDV	Santo Domingo	22.66	10	P	P	09 49 33.5	+0.9
	comp=Z,7.0nm,0.2s,baz=188,slow=7.1,SNR=4.8						
SDV	Santo Domingo	22.66	10	*e*P	P	09 49 34.1	+1.4
SNDB	Serra Nova Dou	22.87	89	*e*P	P	09 49 34.9	+0.3
SJCC	San Jacinto, C	23.31	359	*e*P	P	09 49 39.8	+1.1
SJCC	San Jacinto, C	23.31	359	P	P	09 49 40.7	+2.0
BAUV	El Baul	23.31	17	P	P	09 49 36.9	-1.7
MALB	Monte Alegre	23.32	62	*e*P	P	09 49 39.6	+0.8
PTGB	Pitanga	24.05	121	*e*P	P	09 49 50.1	+4.7
ITRB	Iturama	24.09	108	*e*P	P	09 49 47.3	+1.5
URIC	Uribia, Colomb	25.24	6	P	P	09 49 55.2	-0.9
URIC				IAmb	IAmb	09 50 36.7	
	comp=Z,36nm,1.4s						
LC01	Cunco	25.36	175	P	P	09 49 57.1	+0.1
PRPB	Parauapebas	25.57	76	*e*P	P	09 49 59.3	+0.1
MCPB	Macapa, AP	25.97	61	*e*P	P	09 50 03.9	+1.0
PLCA	Paso Flores	27.31	173	P	P	09 50 15.2	+0.6
	comp=Z,3.6nm,0.7s,baz=339,slow=9.8,SNR=15						
PLCA	Paso Flores	27.31	173	IAmb	IAmb	09 51 08.9	
	comp=Z,27nm,1.8s						
MDP	Montagnes des	28.69	51	LR	LR	10 01 25.4	
	comp=Z,35nm,20.9s,baz=288,slow=35						
ROSB	Rosrio	32.01	73	*e*P	P	09 50 56.9	+0.4
CAM01	Campos-RJ	32.47	109	*e*P	P	09 51 03.6	+3.1

GDU01	Guandu, BA	34.11	94	*e*P	P	09 51 17.1	+2.3
NBPB	Pedra_Branca-C	35.49	80	*e*P	P	09 51 28.1	+1.4
NBRF	Rio Formoso -	39.09	87	*e*P	P	09 51 59.8	+2.7
TXAR	Lajitas Array	51.00	327	P	P	09 53 30.3	-0.9
	comp=Z,0.3nm,0.7s,baz=150,slow=9.2,SNR=3.2						
TXAR				pP	pP	09 53 55.9	-0.9
	comp=Z,0.2nm,0.6s,baz=154,slow=9.0,SNR=2.1						
PDAR	Pinedale Array	64.54	332	pP	pP	09 55 32.1	-0.2
	comp=Z,0.3nm,0.7s,baz=156,slow=7.9,SNR=2.4						
TORD	Torodi Ar. Bea	80.20	74	P	P	09 56 39.2	-0.1
	comp=Z,3.8nm,0.9s,baz=270,slow=5.2,SNR=17						
TORD	Torodi Ar. Bea	80.20	74	IAmb	IAmb	09 56 40.8	
	comp=Z,3.8nm,1.0s						
ESDC	Sonseca Array	84.29	47	P	P	09 57 01.0	+0.8
	comp=Z,0.8nm,0.9s,baz=261,slow=7.3,SNR=2.3						
MAW	Mawson	93.43	165	P	P	09 57 43.8	+0.7
	comp=Z,1.0nm,0.8s,baz=229,slow=9.3,SNR=2.4						
MAW	Mawson	93.43	165	IAmb	IAmb	10 00 12.5	
	comp=Z,4.4nm,1.9s						
NOA	NORSAR Array B	99.78	30	LR	LR	10 39 56.4	
	comp=Z,6.4nm,21.9s,baz=315,slow=33						
ASAR	Alice Springs	133.62	217	PKP	PKPdf	10 03 44.8	-0.3
	comp=Z,0.3nm,0.6s,baz=145,slow=3.4,SNR=2.3						
WRA	Warramunga Arr	136.13	221	PKP	PKPdf	10 03 49.7	-0.1
	comp=Z,0.6nm,0.5s,baz=134,slow=2.1,SNR=4.0						
WRA				pPKP	pPKPdf	10 04 17.7	-0.9
	comp=Z,0.9nm,0.9s,baz=152,slow=1.6,SNR=4.0						
SONM	Songino Array	145.82	359	PKPbc	PKPab	10 04 08.4	+0.8
	comp=Z,0.5nm,0.7s,baz=339,slow=3.7,SNR=2.8						

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*IDC **05** 09:58:28.0±1.1, 6°.79S×125°.01E, h556km±16km, mb3.2/6, mb1 3.2/11, mb1mx3.0/47, mbtmp4.2/11, Error ellipse: s-maj=30.9km s-min=15.4km az=71.0*

ISC 05 09:58:27.4±0.7**, 6°.81S**±0°.08×**125°.0E**±0°.1**, h543**km**, n18, σ1ˢ.08**/20**, mb3.7**/6**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	3.61	201	P	P	09 59 47.7	+1.7
	9.1nm,0.3s,baz=79,slow=5.2,SNR=1.9						
BATI				S	S	10 00 50.5	+0.5
	22nm,0.3s,baz=250,slow=22,SNR=8.1						
SANI	Sanana	4.84	12	P	P	09 59 57.3	+1.8
KAPI	Kappang	5.49	289	P	P	10 00 03.4	+2.3
	2.4nm,0.3s,baz=141,slow=7.2,SNR=6.0						
PLAI	Plampang	7.41	254	P	P	10 00 18.5	-0.6
DRS	Darwin Rock St	8.08	134	P	P	10 00 26.9	+1.2
	20nm,0.6s						
FAKI	Fak Fak	8.22	62	P	P	10 00 27.3	+0.1
MTN	Manton Dam	8.53	135	P	P	10 00 30.8	+0.6
	74nm,0.4s						
SIJI	Sorong	8.62	47	P	P	10 00 31.4	+0.2
	2.4nm,0.3s,baz=162,slow=14,SNR=6.0						
TOLI2	Tolitoli	8.91	332	P	P	10 00 34.6	+0.4
KNRA	Kununurra	9.56	157	P	P	10 00 41.1	+0.4
	60nm,0.6s						
FITZ	Fitzroy Crossi	11.24	177	P	P	10 00 58.2	+0.3
	1.3nm,0.3s,baz=0.4,slow=10,SNR=16						
WRA	Warramunga Arr	15.91	146	P	P	10 01 45.5	-0.8
	0.6nm,0.3s,baz=322,slow=11,SNR=18						
WRA				S	S	10 04 27.4	-1.6
	0.1nm,0.3s,baz=324,slow=16,SNR=5.0						
NWAO	Narrogin (SRO)	26.96	194	P	P	10 03 25.7	-0.1
	3.0nm,0.6s,baz=30,slow=8.1,SNR=1.4						
STKA	Stephens Creek	29.37	150	P	P	10 03 47.6	+0.8
	0.6nm,0.4s,baz=315,slow=13,SNR=1.4						
SONM	Songino Array	56.83	345	P	P	10 07 20.2	-0.2
	0.6nm,0.6s,baz=155,slow=7.5,SNR=3.2						
MKAR	Makanchi Array	65.42	329	P	P	10 08 16.3	-0.4
	1.1nm,0.5s,baz=125,slow=7.1,SNR=10						
ZALV	Zalesovo Beam	69.29	336	P	P	10 08 38.9	-1.3
	0.8nm,0.4s,baz=130,slow=4.3,SNR=2.7						
KURBB	Kurchatov Arra	69.81	331	P	P	10 08 42.8	-0.5
	3.0nm,0.2s,baz=139,slow=4.8,SNR=4.7						

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*DDA **05** 10:00:25.8, 34°.84N×27°.69E, h6km±3km, MW3.5*
*ISK **05** 10:00:27.4, 34°.66N×27°.84E, h83km, ML3.1/13*
*ATH **05** 10:00:30.2, 35°.00N×27°.93E, h62km±21km, ML2.8/3, Error ellipse: s-maj=22.4km s-min=2.3km az=347.0*
*THE **05** 10:00:32.6, 35°.04N×27°.95E, h5km±3km, ML2.7/2, Error ellipse: s-maj=4.1km s-min=1.3km az=153.0*

ISC 05 10:00:31.6±1.6**, 35°.00N**±0°.06×**27°.93E**±0°.03**, h18**km±10km**, n39, σ1ˢ.28**/55**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARG	Arkhangelos	1.22	8	P	Pb	10 00 54.3	0.0
ARG				S	Sn	10 01 10.0	0.0
	378nm,0.6s						
ARG	Arkhangelos	1.22	8	P	Pb	10 00 54.4	+0.2
ARG				S	Sn	10 01 10.0	0.0
ARG	Arkhangelos	1.22	8	P	Pb	10 00 54.3	0.0
ARG				S	Sn	10 01 10.0	0.0
ARG				AML	AML	10 01 19.5	
	comp=E,1013μm,0.6s						
ARG				AML	AML	10 01 22.3	
	comp=N,500μm,0.6s						
ARG	Arkhangelos	1.22	8	PN	Pg	10 00 54.7	-0.6
ZKR	Zakros	1.41	275	P	Pn	10 00 56.4	0.0
ZKR				S	Sg	10 01 17.1	0.0
	comp=N,248nm,0.6s						
ZKR	Zakros	1.41	275	P	Pn	10 00 56.4	0.0
ZKR				AML	AML	10 01 23.0	
	comp=N,344μm,0.6s						
ZKR				AML	AML	10 01 33.0	
	comp=E,800μm,0.8s						
ZKR	Zakros	1.41	275	PN	Pn	10 00 51.7	-4.7
ZKR				SN	Sn	10 01 11.1	-3.5
STIA	Sitia Lasithi	1.52	278	P	Pn	10 00 58.6	+0.7
NIS1	Nisyros Isl.	1.71	339	P	Pn	10 01 01.5	+0.9
NIS1	Nisyros Isl.	1.71	339	P	Pn	10 01 01.5	+0.9
NIS1	Nisyros Isl.	1.71	339	PN	Pn	10 01 01.1	+0.5
DAT	Datca	1.75	351	P	Pn	10 01 01.4	+0.2
DAT				S	Sb	10 01 24.2	-0.7
DAT	Datca	1.75	351	*i* P	Pn	10 01 01.2	+0.1
DAT				*i* S	Sg	10 01 26.7	-1.3
DAT	Datca	1.75	351	PN	Pn	10 01 01.3	+0.1
DAT				SN	Sg	10 01 27.0	-1.0
KSL	Kastellorizon	1.77	49	P	Pn	10 01 02.0	+0.6
KSL				S	Sb	10 01 24.3	-1.2
KSL	Kastellorizon	1.77	49	P	Pn	10 01 02.0	+0.6
TURN	Turunc	1.79	8	*i* P	Pb	10 01 03.6	-0.3
TURN				*i* S	Sg	10 01 29.3	0.0
TURN				IAML		10 01 32.0	
	comp=E,72nm,0.4s						
TURN				IAML		10 01 37.0	
	comp=N,70nm,0.6s						
TURN	Turunc	1.79	8	PN	Pb	10 01 02.9	-1.0
AKAS	Kas	1.84	48	*i* P	Pb	10 01 04.3	-0.5
AKAS				*i* S	Sg	10 01 29.3	-1.5
AKAS	Kas	1.84	48	PN	Pn	10 01 02.7	+0.2
AKAS				SN	Sb	10 01 27.8	+0.3
FETY	Fethiye	1.88	30	*i* P	Pn	10 01 02.8	-0.1
FETY				*i* S	Sg	10 01 37.1	+4.9
FETY	Fethiye	1.88	30	PN	Pn	10 01 03.7	+0.7
DALY	Dalyan (Mula)	1.90	18	PN	Pn	10 01 04.3	+1.1
KOSK	Kos Island	1.91	336	PN	Pn	10 01 03.5	+0.2
NPS	Neapolis	1.92	278	P	Pn	10 01 05.3	+1.9
NPS	Neapolis	1.92	278	P	Pb	10 01 05.6	-0.4
NPS	Neapolis	1.92	278	P	Pb	10 01 05.6	-0.4
NPS				AML	AML	10 01 54.1	
	comp=E,324μm,0.7s						
NPS				AML	AML	10 01 54.4	
	comp=N,366μm,0.7s						
BDRM	Kayabasi	2.10	349	*i* P	Pn	10 01 06.1	+0.2
BDRM				*i* S	Sb	10 01 35.8	+0.9
BDRM				IAML		10 01 43.0	
	comp=N,71nm,0.5s						
BODT	Bodrum	2.12	347	PN	Pn	10 01 06.9	+0.7
BODT				SN	Sb	10 01 35.3	-0.1
YER	Yerkesik	2.15	8	PN	Pn	10 01 07.6	+0.9
MLSB	Milas	2.29	357	PN	Pn	10 01 09.5	+0.9
ELL	Elmali	2.37	42	PN	Pn	10 01 10.2	+0.4
IDI	Anoyia	2.50	277	P	Pn	10 01 13.3	+1.7
IDI	Anoyia	2.50	277	P	Pn	10 01 13.8	+2.3
TAVA	DENIZLI_Tavas	2.58	18	*i* P	Pn	10 01 13.8	+1.1
TAVA				*i* S	Sb	10 01 50.3	+1.3
TAVA				IAML		10 02 07.0	
	comp=N,29nm,0.7s						
TAVA				IAML		10 02 10.0	
	comp=E,29nm,0.8s						
AYDN	Tasoluk	2.65	359	*i* P	Pn	10 01 13.7	0.0
AYDN				*i* S	Sb	10 01 51.4	+0.4
GCAM	G?zelcaml?	2.75	348	PN	Pn	10 01 15.8	+0.9
KORT	Korkueli	2.80	44	PN	Pn	10 01 15.8	+0.1
VAM	Vamos	3.08	279	P	Pn	10 01 23.3	+3.9

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*IDC **05** 10:01:08.8±1.9, 8°.11S×125°.79E, h0km, mb3.8/1, mb1 3.8/5, mb1mx3.5/45, mbtmp3.6/5, ML3.5/4, MS3.7/1, Ms1 3.7/1, ms1mx2.5/28, Error ellipse: s-maj=51.6km s-min=27.9km az=75.0*

ISC 05 10:01:19.7±2.7**, 8°.8S**±0°.2×**125°.6E**±0°.1**, h35**km**, n6, σ1ˢ.42**/8**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	2.41	234	Pn	Pn	10 01 57.9	+1.2
	4.9nm,0.3s,baz=280,slow=19,SNR=1.5						
BATI				Sn	Sn	10 02 23.9	-1.0
	9.9nm,0.3s,baz=129,slow=9.3,SNR=2.0						
FITZ	Fitzroy Crossi	9.26	180	Pn	Pn	10 03 30.6	-0.1
	0.3nm,0.3s,baz=359,slow=12,SNR=1.9						
FITZ				Sn	Sn	10 05 13.6	-0.1
	0.6nm,0.3s,baz=96,slow=14,SNR=4.2						
WRA	Warramunga Arr	13.92	144	Pn	Pn	10 04 33.1	-1.5
	0.3nm,0.3s,baz=319,slow=12,SNR=7.2						
WRA				Sn	Sn	10 07 10.3	+2.3
	0.1nm,0.3s,baz=320,slow=26,SNR=1.7						
ASAR	Alice Springs	16.78	153	P	P	10 05 13.9	-0.1
	0.1nm,0.3s,baz=325,slow=11,SNR=5.7						
ASAR				S	Sn	10 08 17.6	+0.1
	0.0nm,0.3s,baz=318,slow=22,SNR=2.2						
PSI	Prapat	29.01	292	LR	LR	10 19 21.5	
	comp=Z,125nm,18.2s,baz=182,slow=38						
MKAR	Makanchi Array	67.44	329	P	P	10 12 03.1	-8.8
	0.7nm,0.9s,baz=122,slow=5.2,SNR=4.4						

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*DDA **05** 10:04:05.9, 34°.85N×27°.89E, h5km±5km, MW3.6*
*ISK **05** 10:04:09.8, 34°.79N×28°.03E, h83km, ML3.2/12*
*ATH **05** 10:04:10.9, 35°.00N×27°.88E, h50km±23km, ML3.0/2, Error ellipse: s-maj=24.4km s-min=1.6km az=342.0*
*THE **05** 10:04:14.4, 35°.01N×27°.84E, h23km±11km, ML2.9/2, Error ellipse: s-maj=14.4km s-min=1.8km az=143.0*

ISC 05 10:04:10.6±1.6**, 34°.96N**±0°.06×**27°.90E**±0°.04**, h16**km±12km**, n38, σ1ˢ.20**/54**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARG	Arkhangelos	1.26	8	P	Pb	10 04 33.4	-0.7
ARG				S	Sb	10 04 50.4	+0.4
	468nm,0.7s						
ARG	Arkhangelos	1.26	8	P	Pb	10 04 33.4	-0.7
ARG				S	Sb	10 04 50.4	+0.4
ARG				AML	AML	10 04 59.3	
	comp=E,1085μm,0.7s						
ARG				AML	AML	10 05 10.2	
	comp=N,859μm,1.2s						
ARG	Arkhangelos	1.26	8	PN	Pg	10 04 35.1	+0.1
ZKR	Zakros	1.39	277	P	Pn	10 04 35.8	+0.5
ZKR				S	Sb	10 04 53.7	0.0
	comp=N,410nm,0.6s						
ZKR	Zakros	1.39	277	P	Pn	10 04 35.8	+0.5
ZKR				AML	AML	10 05 02.7	
	comp=N,570μm,0.6s						
ZKR				AML	AML	10 05 12.8	
	comp=E,1285μm,0.9s						
ZKR	Zakros	1.39	277	PN	Pb	10 04 36.6	+0.4
ZKR				SN	Sg	10 04 56.2	+0.7
STIA	Sitia Lasithi	1.50	280	P	Pb	10 04 38.4	+0.3
STIA				S	Sn	10 04 54.9	-1.2
NIS1	Nisyros Isl.	1.74	340	P	Pn	10 04 40.9	+0.8
NIS1	Nisyros Isl.	1.74	340	P	Pn	10 04 40.9	+0.8
NIS1	Nisyros Isl.	1.74	340	PN	Pb	10 04 42.1	0.0
NIS1				SN	Sg	10 05 06.3	-0.3
MRSB	Marmaris-Mugla	1.76	8	PN	Pb	10 04 42.0	-0.6
FRMA	Ierapetra Chan	1.78	272	P	Pn	10 04 39.9	-0.8
DAT	Datca	1.78	352	*i* P	Pn	10 04 40.6	-0.2
DAT				*i* S	Sg	10 05 06.7	-1.4
DAT	Datca	1.78	352	PN	Pn	10 04 41.6	+0.8
DAT				SN	Sg	10 05 06.6	-1.4
KSL	Kastellorizon	1.81	49	P	Pb	10 04 43.2	-0.2
KSL	Kastellorizon	1.81	49	P	Pb	10 04 43.2	-0.2
TURN	Turunc	1.83	9	*i* P	Pn	10 04 42.4	+1.0
TURN				*i* S	Sg	10 05 09.9	+0.3
TURN				IAML		10 05 17.0	
	comp=N,104nm,0.8s						
TURN	Turunc	1.83	9	PN	Pb	10 04 42.9	-0.8
TURN				SN	Sb	10 05 07.1	+0.8
AKAS	Kas	1.88	47	*i* P	Pn	10 04 43.8	+1.6
AKAS				*i* S	Sg	10 05 09.4	-1.8
AKAS	Kas	1.88	47	PN	Pn	10 04 42.2	0.0
NPS	Neapolis	1.90	280	P	Pb	10 04 44.7	-0.2
FETY	Fethiye	1.93	30	*i* P	Pn	10 04 42.0	-0.7
FETY				*i* S	Sg	10 05 27.3	+15
FETY	Fethiye	1.93	30	PN	Pn	10 04 43.6	+0.9
KOSK	Kos Island	1.93	338	P	Pn	10 04 44.2	+1.4
KOSK	Kos Island	1.93	338	PN	Pb	10 04 44.8	-0.7
DALY	Dalyan (Mula)	1.95	18	*i* P	Pn	10 04 44.6	+1.6
DALY				*i* S	Sg	10 05 18.6	+5.3
DALY	Dalyan (Mula)	1.95	18	PN	Pn	10 04 44.2	+1.2
BDRM	Kayabasi	2.13	350	*i* P	Pn	10 04 46.4	+0.9
BDRM				*i* S	Sg	10 05 17.6	-1.6
BDRM				IAML		10 05 23.0	
	comp=N,69nm,0.6s						
BODT	Bodrum	2.15	347	PN	Pb	10 04 47.7	-1.4
YER	Yerkesik	2.19	8	PN	Pn	10 04 48.0	+1.6
CAME	Cameli-Denizli	2.28	30	PN	Pn	10 04 48.5	+0.8
MULA	Mugla, Merkez-	2.31	8	*e*P	Pb	10 04 51.9	-0.1
MULA				*e*S	Sg	10 05 23.9	-1.1
MULA				IAML		10 05 33.0	
	comp=E,51nm,0.8s						
ELL	Elmali	2.42	42	PN	Pn	10 04 49.8	+0.3
IDI	Anoyia	2.49	278	P	Pb	10 04 54.3	-0.7
TAVA	DENIZLI_Tavas	2.63	18	*i* P	Pn	10 04 51.9	-0.6
TAVA				*i* S	Sg	10 05 34.4	-0.7
AYDN	Tasoluk	2.69	360	*i* P	Pn	10 04 54.2	+0.9
AYDN				*i* S	Sb	10 05 30.9	-0.3
KORT	Korkueli	2.84	44	PN	Pn	10 04 55.7	+0.3
APE	Apeiranthos	2.85	318	PN	Pn	10 04 57.6	+2.2

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*KRNET **05** 10:10:56.7±0.1, 41°.37N×70°.05E, mb2.5*

ISC 05 10:10:55.6±3.0**, 41°.46N**±0°.06×**69°.88E**±0°.10**, h30**km±24km**, n6, σ1ˢ.02**/11**, 8C-4D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRKS	Terek-Say	0.95	85	⇑*i*P	Pn	10 11 13.5	+0.4
	baz=83						
TRKS				⇑*i*S	Sb	10 11 25.5	-0.4
	baz=83						
BTK	Batken	1.57	153	⇓*i*P	Pn	10 11 21.8	+0.3
	baz=56						
BTK				⇓*i*S	Sn	10 11 40.1	-0.8
	baz=56						
KK31	Karatay Array	1.71	16	⇑Pg	Pn	10 11 23.0	-0.4
	0.4nm,0.2s,baz=205,slow=17,SNR=26						
KK31				⇑Lg	Lg	10 11 55.0	
	2.1nm,0.2s,baz=207,slow=29,SNR=8.9						
MNAS	Manas	2.21	61	⇓*i*P	Pn	10 11 31.7	+1.3
	baz=58						
MNAS				⇓*i*S	Sn	10 11 56.7	-0.1
	baz=58						
GAR	Garm	2.48	172	⇑*i*P	Pn	10 11 34.6	+0.6
	baz=75						
GAR				⇑*i*S	Sn	10 12 01.6	-1.7
	baz=75						
CHGR	Chuyangaron	2.85	191	⇑*i*P	Pn	10 11 40.0	+0.9
	baz=94						
CHGR				⇑*i*S	Sn	10 12 12.9	+0.4
	baz=94						

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*IDC **05** 10:42:43.9±1.5, 23°.43S×179°.95W, h560km±20km, mb3.2/6, mb1 3.4/8, mb1mx3.1/30, mbtmp4.1/8, Error ellipse: s-maj=25.3km s-min=17.7km az=8.0*

ISC 05 10:42:42.1±0.9**, 23°.66S**±0°.08×**179°.9W**±0°.1**, h532**km**, n10, σ1ˢ.63**/14**, mb3.5**/6**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	6.20	342	P	P	10 44 21.7	-0.2
	3.5nm,0.3s,baz=205,slow=6.3,SNR=29						
MSVF				S	S	10 45 44.8	+1.5
	baz=353,slow=21,SNR=1.1						
URZ	Urewera	14.77	189	P	P	10 45 51.0	+1.8
	1.0nm,0.3s,baz=288,slow=20,SNR=1.6						
URZ				S	S	10 48 21.1	-2.4
	0.2nm,0.3s,baz=121,slow=23,SNR=1.4						
CTA	Charters Tower	31.55	270	P	P	10 48 22.0	+1.0
	5.3nm,0.3s,baz=92,slow=12,SNR=9.7						
ASAR	Alice Springs	42.14	260	P	P	10 49 48.0	-0.1
	0.7nm,0.4s,baz=82,slow=8.3,SNR=16						
ASAR				PcP	PcP	10 51 29.4	-0.8
	0.3nm,0.6s,baz=108,slow=4.7,SNR=4.3						
ASAR				S	S	10 55 27.9	-1.6
	0.4nm,0.6s,baz=97,slow=13,SNR=10						
WRA	Warramunga Arr	42.49	266	P	P	10 49 50.5	-0.3
	1.3nm,0.4s,baz=98,slow=8.5,SNR=20						
VNDA	Vanda	54.62	185	P	P	10 51 22.1	+2.2
	1.0nm,0.5s,baz=19,slow=7.1,SNR=2.0						
MAW	Mawson	78.00	200	P	P	10 53 45.6	+0.6
	1.1nm,0.5s,baz=135,slow=5.6,SNR=6.5						
TXAR	Lajitas Array	90.25	58	P	P	10 54 45.3	-1.0
	0.3nm,0.8s,baz=216,slow=4.5,SNR=3.6						
AKASG	Malin Array Be	144.81	327	PKP	PKPdf	11 01 15.7	-2.4
	0.7nm,0.2s,baz=46,slow=3.9,SNR=5.7						
TORD	Torodi Ar. Bea	169.43	189	PKPab	PKPab	11 03 04.4	-1.1
	0.7nm,0.8s,baz=161,slow=4.9,SNR=3.6						

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*NOU **05** 10:43:24.4, 14°.30S×167°.55E, h174km, MLv4.6/13, Vanuatu Islands*
*IDC **05** 10:43:28.8±7.2, 14°.64S×167°.34E, h143km±55km, mb3.3/3, mb1 3.5/4, mb1mx3.2/33, mbtmp3.8/4, Error ellipse: s-maj=55.8km s-min=42.5km az=31.0*

ISC 05 10:43:30.1±1.5**, 14°.7S**±0°.1×**167°.5E**±0°.2**, h170**km**, n14, σ1ˢ.64**/15**, mb3.6**/3**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.80	201	P	Pn	10 43 52.0	-3.4
DVP	Devils Point	3.08	168	P	Pn	10 44 18.5	-0.8
RTV	Rentapao	3.20	164	P	Pn	10 44 20.1	-0.7
LIFNC	LIFOU	6.05	182	P	Pn	10 44 55.6	-2.1
KOUNC	Koumac, New Ca	6.58	207	P	Pn	10 45 05.0	+0.3
MARNC	Mare, Loyalty	6.77	176	P	Pn	10 45 05.4	-1.7
YATNC	Mamie plateau,	7.35	184	P	Pn	10 45 13.6	-1.2
DZM	Mont Dzumac	7.41	188	P	Pn	10 45 15.3	-0.3
	2.3nm,0.3s,baz=354,slow=10,SNR=80						
DZM				S	Sn	10 46 37.5	-1.4
	1.6nm,0.3s,baz=284,slow=23,SNR=8.3						
OUENC	Ouen Island, N	7.71	185	P	Pn	10 45 20.4	+0.8
PINNC	Pines Island,	7.88	180	P	Pn	10 45 21.5	-0.3
STKA	Stephens Creek	29.19	230	P	P	10 49 17.0	+1.3
	1.2nm,0.4s,baz=51,slow=9.3,SNR=6.6						
WRA	Warramunga Arr	32.06	256	P	P	10 49 39.9	-1.2
	0.1nm,0.3s,baz=88,slow=8.4,SNR=1.8						
VNDA	Vanda	62.90	181	P	P	10 53 39.3	+1.6
	0.4nm,0.5s,baz=353,slow=7.7,SNR=2.4						
ARCES	ARCESS Array B	120.28	345	PKP	PKiKP	11 02 01.9	+1.4
	3.0nm,0.9s,baz=33,slow=3.5,SNR=1.4						

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*IDC **05** 10:51:09.9±1.9, 0°.11S×97°.42E, h0km, mb3.4/5, mb1 3.5/7, mb1mx3.4/33, mbtmp3.4/7, ML3.6/2, Error ellipse: s-maj=51.6km s-min=23.2km az=69.0*
*DJA **05** 10:51:15.5±1.4, 0°N±4°×9°8E±°, h16km±15km, M3.8/7, MLv3.8/7*

ISC 05 10:51:16.2±1.0**, 0°.34N**±0°.06×**97°.87E**±0°.08**, h29**km**, n18, σ2ˢ.52**/18**, mb3.5**/5**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSI	Gunungsitoli	1.00	343	P	Pn	10 51 32.3	-2.1
GSI				S	Sn	10 51 45.8	-1.7
MNSI	Mandailing Nat	1.77	75	P	Pn	10 51 42.4	-2.5
MNSI				S	Sn	10 52 03.2	-3.2
SISI	Saibi	2.06	144	P	Pb	10 51 51.9	-1.0
PPI	Padang Panjang	2.65	107	P	Pn	10 51 54.8	-2.2
PPI				S	Sn	10 52 27.7	-0.4
PSI	Prapat	2.66	23	Pn	Pb	10 52 00.4	-2.9
	3.0nm,0.3s,baz=170,slow=18,SNR=5.3						
PSI				Sn	Sb	10 52 41.5	+5.9
	1.5nm,0.3s,baz=90,slow=19,SNR=1.4						
PDSI	Padang	2.87	116	P	Pn	10 52 00.4	+0.3
TPTI		2.98	347	P	Pn	10 51 59.8	-1.8
BKNI	Bangkinang	3.17	90	P	Pn	10 52 04.3	+0.1
KSI	Kapahiang	6.16	130	P	Pb	10 52 56.9	-6.1
CMAR	Chiang Mai Arr	18.03	3	P	P	10 55 28.4	+3.3
	0.1nm,0.3s,baz=198,slow=10,SNR=1.7						
H08S2	Diego Garcia H	26.52	252	T	T	11 24 11.4	
	baz=73,slow=75,SNR=147						
H08S3	Diego Garcia H	26.52	252	T	T	11 24 10.9	
	baz=73,slow=75,SNR=195						
H08S1	Diego Carcia H	26.54	252	T	T	11 24 11.9	
	baz=73,slow=75,SNR=168						
WRA	Warramunga Arr	41.01	122	P	P	10 58 55.8	-1.5
	0.4nm,1.1s,baz=305,slow=8.8,SNR=1.7						
ASAR	Alice Springs	42.34	127	P	P	10 59 07.5	-0.6
	0.1nm,0.6s,baz=297,slow=7.7,SNR=1.9						
SONM	Songino Array	47.88	8	P	P	10 59 54.1	+2.3
	0.3nm,0.4s,baz=190,slow=8.5,SNR=3.1						
MKAR	Makanchi Array	48.23	346	P	P	10 59 55.5	+1.1
	0.3nm,0.6s,baz=159,slow=6.5,SNR=1.8						
ZALV	Zalesovo Beam	54.51	351	P	P	11 00 40.8	-0.5
	0.5nm,0.4s,baz=166,slow=6.7,SNR=2.5						

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*ANF **05** 10:58:53.9±0.1, 34°.32N×118°.48W, h12km±1km, ML3.5/35, Error ellipse: s-maj=1.4km s-min=1.0km az=44.0*
*NEIC **05** 10:58:54.6±2.2, 34°.27N±0°.05×118°.52W±0°.06, h10km±6km, Error ellipse: s-maj=7.1km s-min=6.3km az=46.0*
*PAS **05** 10:58:54.5±2.3, 34°.34N±0°.04×118°.47W±0°.06, h3km±7km, ML3.5/195, ML3.2/62(NEIC), Error ellipse: s-maj=7.1km s-min=5.2km az=74.0*

ISC 05 10:58:54.6±0.8**, 34°.31N**±0°.02×**118°.50W**±0°.02**, h14**km±6km**, n77, σ1ˢ.02**/107**, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DECC	Green Verdugo	0.14	112	P	Pg	10 58 57.8	-0.5
	baz=309,SNR=1000						
DECC				S	Sg	10 59 00.7	-0.1
	baz=309						
DJJ	Donna J Jenkin	0.20	170		Pg	10 58 59.1	-0.1
DJJ					Sg	10 59 02.9	+0.6
GR2C	Griffith Obs.	0.25	139		Pg	10 58 59.7	-0.2
PASC	Pasadena Art C	0.29	118	Pg	Pg	10 59 00.2	-0.4
PASC	Pasadena Art C	0.29	118		Sg	10 59 04.8	+0.1
CBCC	Caltech Broad	0.35	119		Pg	10 59 01.5	-0.1
CBCC					Sg	10 59 06.9	+0.5
OSI	Osito Audit: C	0.36	328	P	Pg	10 59 01.5	-0.5
	baz=142,SNR=199						
OSI				S	Sg	10 59 06.6	-0.2
	baz=142						
OSI	Osito Audit: C	0.36	328	Pg	Pg	10 59 01.4	-0.5
OSI				IAML		10 59 07.9	
	comp=E,3μm,0.6s						
OSI				IAML		10 59 10.4	
	comp=N,3μm,0.6s						
MWC	Mount Wilson	0.37	103		Pg	10 59 01.6	-0.6
MWC				IAML		10 59 08.1	
	comp=N,4μm,0.2s						
MWC				IAML		10 59 09.1	
	comp=E,3μm,0.2s						
GVRC	Garvey Reservo	0.40	129		Pg	10 59 02.6	0.0
FMP	Fort Macarthur	0.62	164	P	Pg	10 59 06.4	-0.3
	baz=347,SNR=15						
FMP				S	Sg	10 59 15.0	+0.2
	baz=347						
BFSC	Mount Baldy Ra	0.70	95	P	Pg	10 59 06.7	-1.4
	baz=279,SNR=182						
BFSC				S	Sg	10 59 17.5	+0.1
	baz=279						
EDW2	Edwards Air Fo	0.71	36	P	Pg	10 59 06.7	-1.6
	baz=216,SNR=73						
EDW2				S	Sg	10 59 15.4	-2.3
	baz=216						
ARVC	Arvin	0.86	341	P	Pg	10 59 10.1	-1.2
	baz=159,SNR=89						
ARVC				S	Sg	10 59 22.0	-0.6
	baz=159						
CIS	Catalina Islan	0.91	176	P	Pg	10 59 11.8	-0.3
	baz=357,SNR=58						
CIS				S	Sg	10 59 24.4	+0.4
	baz=357						

SCZ2	Santa Cruz Isl	0.99	252	P	Pg	10 59 12.4	-1.4
	baz=70						
SBC	Santa Barbara	1.02	278	P	Pg	10 59 13.7	-0.5
	baz=95,SNR=5.7						
SBC				Sb	Sn	10 59 29.2	+0.6
	baz=95						
PKM	Mcpherson Peak	1.23	298	P	Pn	10 59 17.7	+0.1
	baz=116,SNR=40						
MURC	Murrieta	1.29	123	P	Pn	10 59 17.1	-1.2
	baz=306,SNR=73						
MURC				S	Sb	10 59 35.2	0.0
	baz=306						
BBRC	Big Bear Solar	1.30	92	P	Pn	10 59 18.1	-0.5
	baz=274,SNR=272						
BBRC				Sb	Sn	10 59 37.0	+1.0
	baz=274						
SCI2	San Clemente I	1.32	182	P	Pn	10 59 17.8	-0.9
	baz=2.8						
LRMC	Laurel Mtn Rad	1.35	30	P	Pn	10 59 18.7	-0.4
	baz=210,SNR=42						
LRMC				S	Sb	10 59 36.3	-0.6
	baz=210						
ISA	Isabella, Lake	1.35	1	P	Pn	10 59 18.4	-0.7
	baz=180,SNR=163						
ISA				S	Sn	10 59 37.4	+0.4
	baz=180						
ISA	Isabella, Lake	1.35	1		Pn	10 59 18.2	-1.0
RRX	Edison Barstow	1.36	65	P	Pn	10 59 18.8	-0.4
	baz=247,SNR=41						
RRX				S	Sb	10 59 37.0	-0.1
	baz=247						
SNCC	San Nicolas Is	1.36	219	P	Pn	10 59 18.2	-1.0
	baz=38						
SNCC				S	Sb	10 59 37.0	-0.2
	baz=38						
SNCC	San Nicolas Is	1.36	219	Pn	Pn	10 59 18.5	-0.7
SMMC	Simmler	1.59	310	Pb	Pn	10 59 23.1	+0.7
	baz=127,SNR=29						
SMMC				Sb	Sg	10 59 45.1	-0.7
	baz=127						
VES	Vestal, Richgr	1.60	343	P	Pn	10 59 22.4	-0.1
	baz=161						
VES				S	Sn	10 59 43.3	+0.3
	baz=161						
GSC	Goldstone, Bar	1.71	54	P	Pn	10 59 23.7	-0.3
	baz=235,SNR=101						
GSC				S	Sn	10 59 45.7	-0.1
	baz=235						
GSC	Goldstone, Bar	1.71	54		Pn	10 59 23.6	-0.5
PFO	Pinyon Flats O	1.83	112	P	Pn	10 59 25.2	-0.5
	baz=294,SNR=31						
PFO				Sb	Sb	10 59 50.6	-0.2
	baz=294						
PFO	Pinyon Flats O	1.83	112	Pn	Pn	10 59 25.4	-0.4
PFO				IAML		10 59 55.2	
	comp=E,189nm,0.5s						
109C	Camp Elliot, M	1.83	140	P	Pn	10 59 25.1	-0.5
	baz=322,SNR=12						
109C				S	Sn	10 59 48.4	-0.3
	baz=322						
109C	Camp Elliot, M	1.83	140	Pn	Pn	10 59 25.8	+0.2
109C				IAML		10 59 53.6	
	comp=E,270nm,0.4s						
109C				IAML		10 59 58.5	
	comp=N,320nm,0.3s						
HEC	Hector,Ludlow	1.86	73	P	Pn	10 59 25.5	-0.6
	baz=255,SNR=78						
HEC				S	Sn	10 59 49.6	+0.1
	baz=255						
PAGB	Antelope Grade	2.02	315		Pn	10 59 29.6	+1.2
PAGB				IAML		11 00 14.7	
	comp=E,162nm,0.9s						
PAGB				IAML		11 00 18.6	
	comp=N,150nm,1.1s						
BELC	Belle Mtn. Jos	2.09	98	Pb	Pb	10 59 31.8	-0.6
	baz=280,SNR=115						
BELC				Sb	Sb	10 59 59.7	+1.3
	baz=280						
QSM	Queen of Sheba	2.12	38	Pn	Pn	10 59 29.5	-0.2
QSM				IAML		11 00 02.1	
	comp=E,178nm,0.9s						
QSM				IAML		11 00 06.0	
	comp=N,219nm,0.8s						
VOG	Valley Oaks Go	2.13	340	Sb	Sb	11 00 00.4	+1.0
	baz=159						
CWC	Cottonwood Cre	2.15	9	Sb	Sb	11 00 01.4	+1.2
	baz=189						
TJX	Tijuana	2.16	146		Pn	10 59 30.0	-0.2
BAR	Barrett	2.23	136		Pn	10 59 31.1	-0.1
MONP2	Monument Peak	2.23	129	P	Pn	10 59 31.3	-0.1
	baz=311,SNR=22						
MONP2				S	Sn	10 59 59.1	+0.1
	baz=311						
TKX	Tecate	2.35	137		Pn	10 59 32.9	+0.1
TKX				IAML		11 00 05.7	
	comp=E,141nm,0.5s						
GMRC	Granite Mounta	2.39	78	P	Pn	10 59 33.0	-0.5
	baz=260,SNR=29						
GMRC				Sb	Sb	11 00 08.1	+1.2
	baz=260						
TUQ	Turquoise Moun	2.40	61	P	Pn	10 59 33.0	-0.5
	baz=243,SNR=18						
TUQ				Sb	Sb	11 00 08.7	+1.6
	baz=243						
GWY	Greenwater Val	2.40	38	Pn	Pn	10 59 33.5	-0.1
GWY				IAML		11 00 13.8	
	comp=N,107nm,0.4s						
GWY				IAML		11 00 16.1	
	comp=E,172nm,0.5s						
SHOC	Shoshone, Teco	2.42	48	Pg	Pg	10 59 39.5	-1.4
	baz=230						
SHOC				Sb	Sb	11 00 09.5	+1.9
	baz=230						
CBX	Cerro Bola	2.51	142		Pn	10 59 35.3	+0.1
CBX	Cerro Bola	2.51	142	IAML		11 00 13.4	
	comp=N,88nm,0.6s						
CBX				IAML		11 00 21.1	
	comp=E,157nm,0.6s						
FURC	Furnace Creek,	2.53	31	Pg	Pg	10 59 41.8	-1.4
	baz=212						
FURC				Sb	Sb	11 00 12.4	+1.5
	baz=212						
IKP	In-Ko-Pah, Jac	2.59	129	Pb	Pb	10 59 40.2	-0.6
	baz=311						
IKP				Sb	Sb	11 00 13.2	+0.6
	baz=311						
BC3	Big Chuckawall	2.61	104	Pb	Pb	10 59 40.8	-0.5
	baz=286						
BC3				Sb	Sb	11 00 14.8	+1.6
	baz=286						
SWSC	Sam W. Stewart	2.63	120	Pb	Pb	10 59 41.3	-0.2
	baz=303						
SWSC				Sb	Sb	11 00 15.4	+1.8
	baz=303						
RMX	La Rumorosa	2.64	129		Pb	10 59 39.9	-1.9
RMX				IAML		11 00 19.4	
	comp=N,84nm,0.8s						
RMX				IAML		11 00 19.7	
	comp=E,98nm,0.7s						
PMPB	Monarch Peak	2.68	316	Pn	Pn	10 59 37.4	0.0
PMPB				IAML		11 00 35.2	
	comp=N,125nm,0.8s						
PMPB				IAML		11 00 44.8	
	comp=E,103nm,0.9s						
IRM	Iron Mountain	2.78	92	P	Pn	10 59 37.8	-1.0
	baz=275,SNR=63						
LCH	Last Change Ra	3.00	13		Pn	10 59 42.1	+0.2
MDPB	Devils Postpil	3.35	352		Pn	10 59 48.8	+1.9
MDPB				IAML		11 00 40.3	
	comp=E,79nm,0.7s						
MDPB				IAML		11 00 49.7	
	comp=N,56nm,1.0s						
SAO	San Andreas Ge	3.44	316	Pn	Pn	10 59 47.1	-0.7
SHPR	Sheep Range	3.50	50	Pn	Pn	10 59 50.2	+1.5
SHPR				IAML		11 00 50.5	
	comp=E,45nm,0.7s						
W13A	Hualapai Mount	3.88	77	Pn	Pn	10 59 53.8	-0.2
W13A				IAML		11 01 02.4	
	comp=N,40nm,0.7s						
TPH	Tonopah	3.90	15	Pn	Pn	10 59 55.8	+1.5
PRN	Pahroc Range	4.17	41	Pn	Pn	10 59 59.6	+1.6
PRN				IAML		11 01 21.0	
	comp=N,30nm,0.9s						
PRN				IAML		11 01 21.7	
	comp=E,40nm,1.0s						
113A	Mohawk Valley,	4.24	110	Pn	Pn	10 59 59.6	+0.8
Y14A	Wickenburg	4.57	93		Pn	11 00 03.3	-0.1
Y14A				IAML		11 01 31.1	
	comp=N,21nm,1.9s						
Y14A				IAML		11 01 32.8	
	comp=E,14nm,0.8s						
KVN	Kaiserville	4.74	4	Pn	Pn	11 00 08.8	+2.9
EMB	Emerald Bay	4.83	345	Pn	Pn	11 00 10.4	+3.3
PNTR	Pine Nut	4.85	350	Pn	Pn	11 00 08.3	+0.9
PNTR				IAML		11 01 36.3	
	comp=N,27nm,0.9s						
CCUT	Cedar City	5.27	51	Pn	Pn	11 00 15.0	+1.8
KNB	Kanab	5.35	58	Pn	Pn	11 00 15.6	+1.3
KNB				IAML		11 01 45.7	
	comp=E,14nm,1.1s						
KNB				IAML		11 01 47.8	
	comp=N,15nm,1.1s						
SZCU	Shurtz Canyon	5.48	52	Pn	Pn	11 00 15.4	-0.6
U15A	North Rim	5.49	66	Pn	Pn	11 00 17.0	+0.7
PSUT	Pine Spring	5.64	40	Pn	Pn	11 00 20.0	+1.8
X16A	Lo Mia Camp, P	5.84	87		Pn	11 00 21.4	+0.5
MSU	Marysvale	6.60	49	Pn	Pn	11 00 34.1	+2.6

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*IDC **05** 11:08:22.8±0.9, 8.°00S×125.°00E, h0^{km}, mb3.9/8, mb1 4.0/9, mb1mx3.9/28, mbtmp4.0/9, MS3.3/9, Ms1 3.4/9, ms1mx3.1/32, Error ellipse: s-maj=35.8km s-min=17.3km az=67.0*

*DJA **05** 11:08:24.6±0.2, 8°S±2°×12°5E±°, h10^{km}, M4.3/12, mb4.4/12, mB5.0/7, MLv4.3/11, Mw(mB)4.4/7, MwMwp4.9/1, Mwp5.2/1*

*NEIC **05** 11:08:27.1±2.5, 8.°30S±0.°07×124.°95E±0.°04, h35^{km}±2^{km}, mb4.2/6, Error ellipse: s-maj=11.5km s-min=5.7km az=162.0*

ISC 05 11:08:25.9±0.5, **8.°33S**±0.°05×**124.°98E**±0.°06, **h24**^{km}, **n59**, σ**1.^{s}85**/57, **mb4.0**/9, **MS3.5**/4, **Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	Soe	1.59	206	P	Pb	11 08 55.7	+1.1
SOEI	Soe	1.59	206		Pb	11 08 55.3	+0.7
SOEI	Soe	1.59	206	P	Pb	11 08 56.4	+1.8
BATI	Baumata	2.28	215	Pn	Pb	11 09 06.1	-0.3
BATI				LR	LR	11 09 42.9	
	comp=Z,196nm,18.4s,baz=128,slow=31						
BATI	Baumata	2.28	215	P	Pn	11 09 03.9	+1.9
MMRI	Maumere	2.73	263	P	Pn	11 09 09.3	+1.1
MMRI	Maumere	2.73	263		Pn	11 09 08.2	0.0
EDFI	Ende, Flores	3.28	262	P	Pn	11 09 16.6	+0.7
EDFI				S	Sn	11 09 57.5	+3.2
BASI	Baing, Sumba	4.73	246	P	Pn	11 09 36.6	+0.8
KDI	Kendari	4.93	331	P	Pn	11 09 37.3	-1.3
BSSI	Bau Bau, Buton	4.95	296	P	Pn	11 09 38.6	-0.2
BSSI				S	Sn	11 10 34.4	-1.0
BKSI	Bulukumba	5.67	301	P	Pn	11 09 48.3	-0.4
	0.1nm20nm,0.7s						
WBSI	Waikabubak, Su	5.67	256	P	Pn	11 09 47.6	-1.2
	1µm104nm,0.8s						
SANI	Sanana	6.31	9	P	Pn	11 09 57.3	-0.3
	0.2nm868nm30nm,1.0s						
SANI	Sanana	6.31	9	P	Pn	11 09 57.7	+0.1
DRS	Darwin Rock St	7.11	126	P	Pn	11 10 10.5	+2.0
	10.0nm,0.5s						
PLAI	Plampang	7.14	265	P	Pn	11 10 11.1	+2.2
	0.8nm858nm68nm,0.8s						
PLAI	Plampang	7.14	265	P	Pn	11 10 11.4	+2.5
TTSI	Tana Toraja	7.34	315	P	Pn	11 10 08.2	-3.4
MTN	Manton Dam	7.53	127	Pn	Pn	11 10 15.5	+1.2
APSI	Ampana	8.08	336	P	Pn	11 10 21.4	-0.4
	2µm26nm,1.0s						
KNRA	Kununurra	8.19	153		Pn	11 10 23.9	+0.6
KNRA	Kununurra	8.19	153	P	Pn	11 10 23.7	+0.4
	56nm,0.8s						
KDU	Kakadu	8.55	121	P	Pn	11 10 29.3	+1.1
	13nm,0.7s						
FAKI	Fak Fak	9.01	54	P	Pn	11 10 35.2	+0.6
	12nm,1.1s						
FAKI	Fak Fak	9.01	54		Pn	11 10 36.2	+1.7
SWI	Sorong	9.70	40	P	Pn	11 10 45.1	+1.1
	1µm20nm,1.0s						
FITZ	Fitzroy Crossi	9.74	176	Pn	Pn	11 10 44.1	-0.5
	1.1nm,0.3s,baz=359,slow=11,SNR=29						
FITZ				Sn	Sn	11 12 27.3	-5.9
	2.4nm,0.3s,baz=211,slow=3.5,SNR=6.7						
FITZ				LR	LR	11 15 08.9	
	comp=Z,86nm,21.0s,baz=344,slow=40						
MPSI	Mapaga	9.98	329	P	Pn	11 10 47.8	-0.1
	4.3nm,0.9s						
TOLI2	Tolitoli	10.27	336		Pn	11 10 52.6	+0.8
PSA00	Pilbara Seismi	14.07	200	Pn	Pn	11 11 42.3	-1.6
WB0	Warramunga Arr	14.58	142	Pn	Pn	11 11 49.2	-1.6
WRA	Warramunga Arr	14.68	143	Pn	Pn	11 11 48.0	-4.2
	1.1nm,0.3s,baz=322,slow=14,SNR=28						
WRA				Sn	Sn	11 14 22.7	-12
	0.2nm,0.3s,baz=303,slow=22,SNR=2.1						
WRA				LR	LR	11 18 50.0	
	comp=Z,71nm,18.5s,baz=295,slow=42						
WRA	Warramunga Arr	14.68	143		Pn	11 11 51.6	-0.6
WRAB	Tennant Creek	14.68	143		Pn	11 11 49.3	-2.8
WB2	Warramunga Arr	14.69	143	Pn	Pn	11 11 49.6	-2.6
WR0	Warramunga Arr	14.81	142	Pn	Pn	11 11 50.7	-3.3
DAV	Davao City (W)	15.30	2	LR	LR	11 18 04.3	
	comp=Z,71nm,18.1s,baz=167,slow=39						
LEM	Lembang	17.27	274	LR	LR	11 19 25.9	
	comp=Z,255nm,21.2s,baz=352,slow=38						
AS31	Alice Springs	17.49	152		Pn	11 12 28.0	-0.3
AS31				IAmb	IAmb	11 12 36.6	
	comp=Z,3.4nm,0.5s						
ASAR	Alice Springs	17.49	152	P	Pn	11 12 27.4	-1.0
	comp=Z,0.7nm,0.3s,baz=324,slow=11,SNR=46						
ASAR				S	Sn	11 15 30.7	-12
	comp=Z,0.1nm,0.3s,baz=320,slow=21,SNR=1.9						
ASAR	Alice Springs	17.49	152		P	11 12 29.1	-0.2
COEN	Coen	18.70	109		Pn	11 12 43.2	-0.1
COEN				IAmb	IAmb	11 13 18.6	
	comp=Z,8.8nm,1.1s						
PMG	Port Moresby	21.94	94	P	P	11 13 17.0	-1.0
PMG				IAmb	IAmb	11 13 28.8	
	comp=Z,14nm,0.8s						
FORT	Forrest	22.52	173	P	P	11 13 23.5	-0.5
CTA	Charters Tower	23.67	122	P	P	11 13 37.1	+1.2
	comp=Z,6.9nm,1.0s,baz=295,slow=9.8,SNR=5.6						
CTAO	Charters Tower	23.67	122	P	P	11 13 35.5	-0.4
CTAO				IAmb	IAmb	11 13 40.0	
	comp=Z,24nm,1.3s						
NWAO	Narrogin (SRO)	25.51	195	LR	LR	11 23 11.0	
	comp=Z,153nm,20.5s,baz=322,slow=34						
STKA	Stephens Creek	28.07	149	P	P	11 14 19.8	+4.1
	comp=Z,1.8nm,0.7s,baz=335,slow=12,SNR=5.9						
STKA				LR	LR	11 27 20.1	
	comp=Z,126nm,21.3s,baz=6.2,slow=40						
STKA	Stephens Creek	28.07	149	P	P	11 14 14.9	-0.8
CMAR	Chiang Mai Arr	36.99	316	P	P	11 15 33.3	-0.5
	comp=Z,1.0nm,0.8s,baz=142,slow=7.0,SNR=6.5						
KSRS	Korea Array	45.62	3	LR	LR	11 35 45.7	
	comp=Z,24nm,21.4s,baz=208,slow=36						
SONM	Songino Array	58.28	345	P	P	11 18 18.6	-0.2
	comp=Z,0.5nm,0.4s,baz=152,slow=5.4,SNR=2.4						
MKAR	Makanchi Array	66.72	330	P	P	11 19 13.6	-1.4
	comp=Z,1.3nm,0.5s,baz=131,slow=7.1,SNR=13						
ZALV	Zalesovo Beam	70.67	336	P	P	11 19 37.6	-1.9
	comp=Z,0.5nm,0.3s,baz=120,slow=5.3,SNR=5.4						
ZALV	Zalesovo Beam	70.67	336	P	P	11 19 37.8	-1.7
VNDA	Vanda	71.78	172	P	P	11 19 49.0	+3.1
	comp=Z,0.4nm,0.5s,baz=58,slow=4.6,SNR=3.3						
MAW	Mawson	71.93	201	P	P	11 19 48.4	+1.5
	comp=Z,1.1nm,0.5s,baz=66,slow=5.4,SNR=4.2						
ILAR	Eielson Array	96.67	26	LR	LR	12 11 21.8	
	comp=Z,44nm,18.8s,baz=227,slow=39						

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*TEH **05** 11:21:36.9, 30.°82N×50.°52E, h9^{km}, ML3.4*

*THR **05** 11:21:37.1±0.5, 30.°77N×50.°52E, h14^{km}±9^{km}, ML3.1*

*KISR **05** 11:21:38.5±0.9, 30.°78N×49.°90E, h188^{km}±177^{km}, ML4.0*

ISC 05 11:21:37.9±0.9, **30.°79N**±0.°04×**50.°49E**±0.°03, **h10**^{km}, **n50**, σ**0.^{s}83**/55, **Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABEH	Behbahan	0.28	227	*e*Pg	Pg	11 21 43.9	+0.4
KLNJ	Kolanjah	0.97	77	*e*Pg	Pg	11 21 55.1	-1.5
KLNJ				*e*Sg	Sg	11 22 08.6	-0.7
KLNJ				*e*		11 22 16.1	
	comp=Z,9µm,0.3s						
AMIS	Naft Sefid	1.35	311	*e*Pg	Pn	11 22 02.4	-0.4
AMIS				*e*Sg	Sg	11 22 22.2	+0.8
KAZ1	Kazerun	1.53	139	*e*		11 22 32.2	
	comp=Z,13µm,0.1s						
KAZ1				*e*Pg	Pn	11 22 06.4	+1.1
SHK1	Shahrekord	1.57	12	*e*Pg	Pn	11 22 06.7	+0.7
AHWZ	Ahwaz	1.67	289	*e*Pg	Pb	11 22 09.7	+0.9
IRAM	Ramesheh	1.91	57	*e*Pn	Pn	11 22 11.8	+1.1
IRAM				*e*		11 22 43.2	
	comp=Z,2µm,0.4s						
IPIR	Pirpir	1.92	10	*e*Pn	Pn	11 22 11.2	+0.3
IPIR				*e*		11 22 41.2	
	comp=Z,4µm,0.6s						
AHBU	AHRAM	2.04	160	*e*Pn	Pn	11 22 12.8	+0.5
IGAR	Gharneh	2.08	39	*e*Pn	Pn	11 22 14.1	+1.0
IGAR				*e*		11 22 17.1	
	comp=Z,3µm,0.1s						
IZEF	Zefreh	2.62	36	*e*Pn	Pn	11 22 21.4	+0.9
IKLH	Kolahrood	2.69	20	*e*Pn	Pn	11 22 22.2	+0.8
IKLH				*e*		11 22 23.6	
	comp=Z,808nm,0.2s						
UMR	Umm Al-Rimmam	2.70	244	*e*P	Pn	11 22 21.3	-0.1
NASN	Na'in	2.81	44	*e*Pn	Pn	11 22 23.7	+0.5
NASN	Na'in	2.81	44	*e*Pn	Pn	11 22 23.7	+0.5
MIB	Mutribah	2.90	251	*e*P	Pn	11 22 23.9	-0.1
MIB				*e*S	Sn	11 22 56.5	-2.4
KBD	Kabd	2.91	237	*e*P	Pn	11 22 23.9	-0.3
KBD				*e*S	Sn	11 22 58.5	-0.8
KBD				IAML		11 23 03.6	
	comp=Z,479nm,0.3s						
ISAD	Sadrabad	2.95	67	*e*Pn	Pn	11 22 25.9	+0.8
ISAD				*e*		11 22 32.9	
	comp=Z,2µm,0.4s						
KHMZ	Khomeyn	2.98	351	*e*Pn	Pn	11 22 26.4	+1.1
KHMZ	Khomeyn	2.98	351	*e*Pn	Pn	11 22 26.4	+1.1
QRN	Al-Qurain	3.03	228	*e*P	Pn	11 22 25.8	0.0
QRN				*e*S	Sn	11 23 02.3	+0.1
QRN				IAML		11 23 04.3	
	comp=Z,384nm,0.3s						
QAMS	Qamsar	3.04	14	*e*Pn	Pn	11 22 27.8	+1.6
KRSH	Karshahi	3.46	23	*e*Pn	Pn	11 22 32.8	+0.8
KRSH				*e*		11 22 35.0	
	comp=Z,705nm,0.3s						
IKFM	Kafar-mosalman	3.53	321	*e*Pn	Pn	11 22 32.6	-0.1
IDOB	Doab	3.57	327	*e*Pn	Pn	11 22 33.8	+0.2
IMEH	Mehriz	3.59	79	*e*Pn	Pn	11 22 34.6	+0.8
ANAR	Anarak	3.65	48	*e*Pn	Pn	11 22 35.1	+0.6
ICHK	Chekchek	3.65	66	*e*Pn	Pn	11 22 35.4	+0.8
ICHK				*e*		11 22 37.5	
	comp=N,993nm,0.2s						
GHVR	GHOM	3.74	10	*e*Pn	Pn	11 22 36.7	+0.9
GHVR	GHOM	3.74	10	*e*Pn	Pn	11 22 36.7	+0.9
ASAO	Ashtian	3.77	354	*e*Pn	Pn	11 22 37.3	+1.0
ASAO	Ashtian	3.77	354	*e*Pn	Pn	11 22 37.3	+1.0
YZKH	Yazd	3.85	64	*e*Pn	Pn	11 22 38.1	+0.9
YZKH				IAML		11 23 27.4	
	comp=N,27nm,0.3s						
YZKH				IAML		11 23 28.3	
	comp=E,25nm,0.2s						
YZKH	Yazd	3.85	64	*e*Pn	Pn	11 22 38.1	+0.9
ISFB	Sefidab	3.85	22	*e*Pn	Pn	11 22 37.5	+0.3
IQOM	Qom	4.07	7	*e*Pn	Pn	11 22 40.9	+0.5
HAGD	Aghdareh	4.18	345	*e*Pn	Pn	11 22 42.1	+0.2
HAGD				*e*		11 23 32.7	
	comp=Z,283nm,0.6s						
IVRN	Varamin	4.32	14	*e*Pn	Pn	11 22 44.3	+0.6
IRAZ	Razeghan	4.63	354	*e*Pn	Pn	11 22 48.8	+0.8
IDMV	Damavand	4.95	15	*e*Pn	Pn	11 22 52.9	+0.4
QABG	Abgarm-Qazvin	4.96	351	*e*Pn	Pn	11 22 52.2	-0.5
KHGB	Koh Gabri	5.18	93	*e*Pn	Pn	11 22 55.6	0.0
IFIR	Firoozkooh	5.20	21	*e*Pn	Pn	11 22 56.1	+0.2
IDHR	Dehrash	5.21	320	*e*Pn	Pn	11 22 56.9	+0.8
TVBK	TV Kerman	5.48	97	*e*Pn	Pn	11 23 01.1	+1.3
IANJ	Anjilo	5.48	31	*e*Pn	Pn	11 23 00.0	+0.2
TPRV	Parvadeh(Tabas	5.72	65	*e*Pn	Pn	11 23 03.4	+0.4
QSDN	Sirdan	5.80	349	*e*Pn	Pn	11 23 03.9	-0.3
TNSJ	Nastanj	6.07	57	*e*Pn	Pn	11 23 08.3	+0.6
TKDS	Koohdasht(Taba	6.29	62	*e*Pn	Pn	11 23 11.2	+0.4

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*TAP **05** 11:28:55.6, 24.°81N×121.°90E, h11^{km}, ML3.7, B*

*JMA **05** 11:28:55.8±0.1, 24.°81N×121.°80E, h39^{km}±4^{km}, M3.3*

ISC 05 11:28:55.6±0.8, **24.°82N**±0.°02×**121.°93E**±0.°02, **h13**^{km}±5^{km}, **n112**, σ**0.^{s}80**/183, **21C-1D**, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NTC	Toucheng	0.09	291	⇑*i*P	Pg	11 28 58.5	0.0
	baz=311						
NTC				*i* S	Sg	11 29 00.7	+0.2
	baz=311						
ILA	Ilan	0.17	251	⇑*i*P	Pg	11 28 59.5	0.0
	baz=249						
ILA				*i* S	Sg	11 29 02.5	+0.3
	baz=249						
TIPB	Shuangxi	0.17	329	⇑*i*P	Pg	11 28 59.9	+0.3
	baz=336						
TIPB				*i* S	Sg	11 29 02.6	+0.1
	baz=336						
TWB1	Santiao Chiao	0.19	17	⇑*i*P	Pg	11 29 00.2	+0.3
	baz=19						
TWB1				*i* S	Sg	11 29 03.1	+0.2
	baz=19						
TWC	Suao	0.22	198	⇑*i*P	Pg	11 29 00.4	0.0
	baz=185						
TWC				*i* S	Sg	11 29 03.2	-0.4
	baz=185						
TWE	Neicheng	0.26	247	⇑*i*P	Pg	11 29 00.8	-0.1
	baz=244						
TWE				S	Sg	11 29 04.2	-0.3
	baz=244						
NDS	Dongshan	0.27	225	⇑*i*P	Pg	11 29 01.1	0.0
	baz=223						
NDS				*e*S	Sg	11 29 04.9	0.0
	baz=223						
NWF	Wu-fen Shan	0.28	332	⇑*i*P	Pb	11 29 02.1	-0.5
	baz=327						
NWF				*i* S	Sg	11 29 05.8	+0.4
	baz=327						
TWA	Mucha	0.35	297	⇑*i*P	Pg	11 29 03.0	+0.4
	baz=300						
TWA				S	Sg	11 29 07.2	-0.1
	baz=300						
ENTT	Nioudou	0.37	241	P	Pg	11 29 02.9	-0.2
	baz=239						
ENTT				*e*S	Sg	11 29 08.2	+0.1
	baz=239						
NWLT	Wulai	0.39	263	⇑*i*P	Pg	11 29 03.2	-0.1
	baz=263						
NWLT				*e*S	Sg	11 29 07.6	-0.9
	baz=263						
NHDH	Xindian Distri	0.39	291	⇑*i*P	Pb	11 29 04.0	-0.4
	baz=293						
NHDH				*e*S	Sb	11 29 09.3	-0.9
	baz=293						
EWUT	Wuta	0.40	200	⇑*i*P	Pg	11 29 03.4	-0.1
	baz=201						
EWUT				*e*S	Sg	11 29 08.3	-0.6
	baz=201						
ENA	Nanau	0.43	203	⇑*i*P	Pg	11 29 03.9	-0.2
	baz=203						
ENA				*e*S	Sg	11 29 09.7	-0.1
	baz=203						
NDT	Datong Townshi	0.43	240	P	Pg	11 29 04.0	-0.2
	baz=239						
NDT				*e*S	Sb	11 29 10.9	-0.7
	baz=239						
TAP	Taipei	0.44	300	⇑*i*P	Pb	11 29 05.1	-0.1
	baz=292						
TAP				*e*S	Sg	11 29 10.1	0.0
	baz=292						
YM01	YM01	0.46	315	⇑*i*P	Pb	11 29 05.5	0.0
	baz=317						
YM01				*e*S	Sg	11 29 11.1	+0.3
	baz=317						
ANP	Anpu	0.52	315	⇑*i*P	Pb	11 29 06.3	-0.3
	baz=317						
ANP				*e*S	Sb	11 29 15.1	+1.1
	baz=317						
YHNB	Yeheng	0.52	253	⇑*i*P	Pg	11 29 05.5	-0.4
	baz=263						
YHNB				*e*S	Sg	11 29 11.1	-1.7
	baz=263						
NSK	Sanguang	0.54	254	⇑*i*P	Pg	11 29 05.6	-0.5
	baz=264						
NSK				*e*S	Sg	11 29 13.3	+0.1
	baz=264						

EHP	**Heping Village** baz=195	0.54	198	eP	Pg	11 29 06.3	+0.2
EHP	baz=195			eS	Sg	11 29 13.0	-0.3
TWS1	**Kuangyinshan** baz=302	0.54	301	⇑iP	Pb	11 29 07.2	+0.4
TWS1	baz=302			eS	Sn	11 29 16.5	-1.3
TWY	**Chenhua** baz=318	0.54	327	⇑iP	Pb	11 29 07.1	+0.2
TWY	baz=318			eS	Sb	11 29 13.7	-0.9
NTST	**Danshui** baz=309	0.55	308	⇑iP	Pb	11 29 07.7	+0.6
NTST	baz=309			eS	Sb	11 29 14.8	-0.1
NNS	**Nan Shan** baz=231	0.63	233	P	Pg	11 29 07.2	-0.7
NNSB	**Datong** baz=230	0.63	232	eP	Pg	11 29 07.2	-0.6
NCU	**National Centr** baz=282	0.69	283	P	Pb	11 29 10.1	+0.7
NCU	baz=282			eS	Sn	11 29 21.7	+0.2
NCUH	**Zhongli** baz=282	0.69	282	P	Pb	11 29 09.9	+0.5
NCUH	baz=282			eS	Sn	11 29 21.4	-0.1
NACB	**Ninganchiao** baz=212	0.71	205	⇓iP	Pg	11 29 09.2	-0.2
NACB	baz=212			eS	Sg	11 29 17.9	-0.9
ETL	**Fush Village** baz=200	0.71	203	eP	Pg	11 29 09.2	-0.3
ETL	baz=200			eS	Sg	11 29 18.0	-0.9
ETLH	**Xiulin Townshi** baz=212	0.73	213	eP	Pg	11 29 09.4	-0.4
ETLH	baz=212			eS	Sg	11 29 17.9	-1.5
TWD	**Chiawan** baz=199	0.80	202	eP	Pg	11 29 10.7	-0.3
TWD	baz=199			eS	Sg	11 29 20.6	-0.9
PCYT	**Pengchaiyu** baz=12	0.81	9	eP	Pb	11 29 11.8	+0.2
PCYT	baz=12			eS	Sb	11 29 23.0	+0.5
FUSS	**Fushou** baz=220	0.84	227	eP	Pg	11 29 11.7	-0.3
FUSS	baz=220			eS	Sg	11 29 23.0	-0.1
LIOB	**Emei** baz=258	0.84	258	eP	Pb	11 29 12.5	+0.4
LIOB	baz=258			eS	Sb	11 29 24.0	+0.6
SBCB	**Hsinchu** baz=285	0.85	268	eP	Pn	11 29 13.5	+0.2
SBCB	baz=285			eS	Sn	11 29 26.6	+0.9
NSTT	**Nanjuang** baz=256	0.86	257	eP	Pb	11 29 12.5	+0.1
NSTT	baz=256			eS	Sn	11 29 25.5	-0.3
HSN	**Hsinchu** baz=287	0.87	269	eP	Pb	11 29 12.9	+0.4
HSN	baz=287			eS	Sn	11 29 25.1	-0.9
TWT	**Tachien** baz=236	0.89	230	eP	Pg	11 29 12.6	-0.1
TWT	baz=236			eS	Sb	11 29 25.7	+1.0
HWA	**Hwalien** baz=196	0.89	199	eP	Pg	11 29 11.9	-0.9
TDCB	**Techi** baz=237	0.90	231	eP	Pg	11 29 12.7	-0.3
TDCB	baz=237			eS	Sb	11 29 25.6	+0.5
WHF	**Hehuan Shan** baz=211	0.90	222	eP	Pg	11 29 12.5	-0.6
WHF	baz=211			eS	Sg	11 29 23.8	-1.2
JYNG	**Yonagunijimaku**	1.00	111	P	Pb	11 29 15.0	+0.3
JYNG				S	Sg	11 29 29.0	+1.1
CHGB	**Renai** baz=214	1.02	222	eP	Pb	11 29 14.9	-0.4
CHGB	baz=214			eS	Sb	11 29 28.2	-0.5
WHP	**Taichung City** baz=238	1.04	239	eP	Pb	11 29 15.6	+0.1
WHP	baz=238			eS	Sb	11 29 28.1	-1.1
YOJ	**Yonaguni jima** baz=110	1.05	110	eP	Pb	11 29 15.1	-0.5
YOJ	baz=110			eS	Sb	11 29 29.7	+0.4
YOJ	**Yonaguni jima**	1.05	110	P	Pb	11 29 15.5	-0.1
YOJ				S	Sb	11 29 29.9	+0.6
NMLH	**Miaoli** baz=254	1.07	255	eP	Pn	11 29 17.2	+0.9
NMLH	baz=254			eS	Sn	11 29 32.8	+1.8
ESL	**Shilin** baz=200	1.10	204	eP	Pb	11 29 15.9	-0.6
OWD	**Renai** baz=216	1.10	218	eP	Pb	11 29 16.2	-0.4
NSY	**Sanyi** baz=241	1.13	249	eP	Pg	11 29 18.0	+0.6
NSY	baz=241			eS	Sn	11 29 34.5	+1.8
TWQ1	**Liyutan** baz=245	1.15	246	eP	Pg	11 29 18.1	+0.4
TWQ1	baz=245			eS	Sn	11 29 33.7	+0.7
WCS	**Beigang Elemen** baz=237	1.20	231	eP	Pg	11 29 18.7	+0.1
WCS	baz=237			eS	Sb	11 29 33.0	-0.5
EGFH	**Guangfu** baz=206	1.23	202	eP	Pn	11 29 18.8	+0.3
EGFH	baz=206			eS	Sb	11 29 34.0	-0.6
WDJ	**Dajia District** baz=247	1.26	248	eP	Pb	11 29 19.5	+0.3
WDJ	baz=247			eS	Sg	11 29 38.3	+2.1
TCU	**Taichung** baz=238	1.32	240	eP	Pg	11 29 22.0	+1.0
TCU	baz=238			eS	Sg	11 29 40.0	+1.9
SMLT	**Sun Moon Lake** baz=216	1.32	225	eP	Pb	11 29 20.8	+0.5
SMLT	baz=216			eS	Sg	11 29 38.2	0.0
TYC	**Yuchr** baz=218	1.33	227	eP	Pb	11 29 20.9	+0.5
TYC	baz=218			eS	Sb	11 29 37.7	+0.2
SSLB	**Suanglung** baz=208	1.36	221	eP	Pn	11 29 20.6	+0.4
SSLB	baz=208			eS	Sg	11 29 39.7	+0.3
HGSD	**Ruisui** baz=208	1.40	199	eP	Pn	11 29 21.4	+0.5
HGSD	baz=208			eS	Sg	11 29 42.6	+1.9
EHY	**Hungye** baz=200	1.42	203	eP	Pn	11 29 21.4	+0.3
EHY	baz=200			eS	Sn	11 29 39.2	-0.5
WCHH	**Zhanghua** baz=258	1.45	240	eP	Pn	11 29 22.0	+0.5
WNT	**Mingjian** baz=246	1.47	231	eP	Pg	11 29 24.2	+0.4
WNT	baz=246			eS	Sg	11 29 45.1	+2.2
WJS	**Zhushan** baz=213	1.48	228	eP	Pg	11 29 24.2	+0.3
WJS	baz=213			eS	Sg	11 29 44.5	+1.4
YULB	**Yu-li** baz=200	1.53	202	eP	Pn	11 29 23.7	+1.0
YULB	baz=200			eS	Sb	11 29 44.0	+0.7
EYUL	**Yuli** baz=206	1.57	201	eP	Pb	11 29 24.6	+0.1
YUS	**Yu-Shan** baz=211	1.60	214	eP	Pb	11 29 25.7	+0.4
YUS	baz=211			eS	Sg	11 29 47.1	0.0
ALS	**Alishan** baz=209	1.66	218	eP	Pb	11 29 27.1	+0.9
ALS	baz=209			eS	Sg	11 29 48.4	-0.6
CHN5	**Tsauling** baz=221	1.67	223	eP	Pg	11 29 27.8	+0.2
CHN5	baz=221			eS	Sg	11 29 48.8	-0.5
WRL	**Guolierlin Hig** baz=235	1.68	237	eP	Pn	11 29 25.3	+0.6
WRL	baz=235			eS	Sg	11 29 48.8	-1.0
WDLH	**Douliu** baz=225	1.69	229	eP	Pb	11 29 27.2	+0.6
IRIF	**Iriomote-Funau**	1.71	106	P	Pn	11 29 24.5	-0.6
IRIF				eS	Sn	11 29 45.7	-1.2
FULB	**Fuli** baz=207	1.72	200	eP	Pb	11 29 27.3	+0.3
CHKT	**Chengkung** baz=207	1.79	197	eP	Pb	11 29 27.8	-0.5
CHKT	baz=207			eS	Sb	11 29 50.7	+0.1
WTK	**Tuku** baz=249	1.80	231	eP	Pn	11 29 27.1	+0.8
ELDTW	**Lidau** baz=190	1.82	207	eP	Pb	11 29 28.6	-0.4
HATJ	**Hateruma jima**	1.88	114	P	Pn	11 29 27.6	+0.3
HATJ				eS	Sn	11 29 49.3	-1.6
CHN4	**Tsaushan** baz=216	1.90	220	eP	Pb	11 29 29.3	-0.8
TPUB	**Ta-pu** baz=216	1.92	218	eP	Pb	11 29 30.8	+0.3
TPUB	baz=216			eS	Sg	11 29 57.8	+0.4
EDH	**Donghe** baz=205	1.93	197	eP	Pn	11 29 27.9	-0.2
STYH	**Taoyuan** baz=195	1.95	213	eP	Pb	11 29 30.2	-0.7
WTP	**Ta-pu** baz=214	1.97	218	eP	Pb	11 29 32.4	+1.0
JKRS	**Kuro-shima**	1.99	107	P	Pn	11 29 28.8	-0.1
JKRS				eS	Sn	11 29 54.1	+0.5
TWK	**Hsinying** baz=216	2.03	221	eP	Pb	11 29 32.2	-0.2
LONT	**Longtian** baz=196	2.04	201	eP	Pn	11 29 30.7	+1.1
SNST	**Tainan City** baz=215	2.06	220	eP	Pb	11 29 33.0	+0.1
JIJ	**Ishigaki jima**	2.07	102	P	Pn	11 29 30.0	0.0
JIJ				eS	Sn	11 29 56.4	+0.7
CHN1	**Nanshi** baz=213	2.07	218	eP	Pb	11 29 33.1	+0.1
ICHU	**Yijhu** baz=242	2.09	226	eP	Pn	11 29 31.6	+1.3
SGST	**Jiashian** baz=196	2.12	216	eP	Pb	11 29 32.8	-1.2
TWG	**Pinlang** baz=181	2.14	202	eP	Pn	11 29 32.9	+1.9
TWGBT	**Beinan** baz=182	2.14	201	eP	Pn	11 29 32.6	+1.6
SLGT	**Liugui** baz=194	2.16	213	eP	Pb	11 29 33.9	-0.7
LDUT	**Ludao** baz=186	2.18	191	eP	Pn	11 29 30.8	-0.7
JISG	**Ishigakijimahi**	2.18	96	P	Pn	11 29 31.8	+0.2
JISG				eS	Sn	11 29 58.0	-0.5
MATB	**Ma-tsu** baz=304	2.23	307	eP	Pn	11 29 31.1	-1.1
SSD	**Sandimen** baz=206	2.38	210	eP	Pb	11 29 38.3	0.0
TSMG	**Majia** baz=205	2.41	209	eP	Pb	11 29 38.5	-0.3
MASBT	**Mashibuluo** baz=204	2.50	209	eP	Pb	11 29 38.6	-1.7
PNG	**Penghu** baz=238	2.50	240	eP	Pn	11 29 36.0	+0.1
PHUB	**P'eng-hu** baz=237	2.51	239	eP	Pn	11 29 36.0	-0.1
JTJ	**Tarama**	2.53	94	P	Pn	11 29 37.2	+0.8
JTJ				eS	Sn	11 30 08.3	+1.2
PTMZ	**Houxiangcun** baz=275	2.56	275	eP	Pn	11 29 35.9	-0.8
LYJJ	**Jianjiangzhen** baz=309	2.60	312	eP	Pn	11 29 36.6	-0.7
XPSS	**Dashiqiu** baz=322	2.62	324	eP	Pn	11 29 36.1	-1.4
EAST	**Anshuo** baz=186	2.62	202	eP	Pb	11 29 41.3	-1.2
SCZT	**Fangliau** baz=201	2.72	206	eP	Pb	11 29 42.6	-1.4
SLIU	**Shizi** baz=185	2.79	202	eP	Pb	11 29 43.2	-2.2
MHZQ	**Yeshan** baz=293	2.91	297	eP	Pb	11 29 45.3	-2.0
TWKBT	**Hengchun** baz=183	3.04	200	eP	Pn	11 29 46.0	+2.6
KNM	**Kinmen** baz=266	3.20	263	eP	Pn	11 29 46.8	+1.2
KNMB	**Chin-men Tao** baz=267	3.24	264	eP	Pn	11 29 45.0	-1.1

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*IDC **05** 11:40:51.2±2.0, 8°.45S×125°.07E, h0^{km}, mb3.6/1, mb1 3.5/4, mb1mx3.3/33, mbtmp3.4/4, ML3.0/3, MS3.5/1, Ms1 3.5/1, ms1mx2.4/34, Error ellipse: s-maj=106.5km s-min=29.2km az=66.0*

ISC 05 11:40:54.6±1.6, **8°.6S**±0°.1×**125°.1E**±0°.2, **h24^{km}, n5,** σ**1^{s}.28**/6, **Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi** 0.1nm,0.3s,baz=343,slow=14,SNR=5.7	9.48	177	Pn	Pn	11 43 11.2	+1.4
FITZ	0.1nm,0.3s,baz=316,slow=19,SNR=1.3			Sn	Sn	11 44 54.0	-1.7
WRA	**Warramunga Arr** 0.1nm,0.3s,baz=316,slow=13,SNR=6.3	14.41	143	Pn	Pn	11 44 17.4	0.0
WRA	0.1nm,0.3s,baz=318,slow=24,SNR=3.3			Sn	Sn	11 46 56.8	+0.2
ASAR	**Alice Springs** 0.0nm,0.3s,baz=321,slow=12,SNR=2.6	17.22	152	P	P	11 44 55.1	0.0
SONM	**Songino Array** comp=Z,41nm,19.3s,baz=172,slow=39	58.55	345	LR	LR	12 18 42.4	
MKAR	**Makanchi Array** 0.5nm,0.7s,baz=114,slow=9.8,SNR=3.1	66.99	330	P	P	11 51 45.2	-0.3

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*IDC **05** 11:45:59.8±1.4, 14°.04N×121°.51E, h0^{km}, mb3.4/5, mb1 3.5/5, mb1mx3.3/45, mbtmp3.4/5, MS3.5/1, Ms1 3.5/1, ms1mx2.4/35, Error ellipse: s-maj=181.3km s-min=21.4km az=67.0*

*MAN **05** 11:46:21.4, 13°.91N×120°.71E, h13^{km}, mb4.3, ML3.1, MS2.9*

ISC 05 11:46:11.3±1.2, **14°.1N**±0°.1×**121°.6E**±0°.2, **h100^{km}, n7,** σ**0^{s}.56**/7, **mb3.4**/5, **1C, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	0.84	229	⇑eP	Pn	11 46 30.7	+0.6
PGP				eS	Sn	11 46 43.4	-0.8
SONM	**Songino Array** 0.2nm,0.4s,baz=173,slow=10.0,SNR=2.2	35.97	342	P	P	11 53 02.2	-0.3
WRA	**Warramunga Arr** 0.2nm,0.8s,baz=337,slow=9.1,SNR=1.7	36.04	159	P	P	11 53 02.9	-0.3
ASAR	**Alice Springs** 0.1nm,0.6s,baz=338,slow=7.9,SNR=5.3	39.38	162	P	P	11 53 31.5	+0.2
PALK	**Pallekele** comp=Z,54nm,18.9s,baz=233,slow=34	40.70	265	LR	LR	12 09 00.1	
MKAR	**Makanchi Array** 0.6nm,0.5s,baz=119,slow=6.2,SNR=5.2	46.27	323	P	P	11 54 26.9	+0.2
ZALV	**Zalesovo Beam** 0.5nm,0.3s,baz=117,slow=5.9,SNR=2.7	49.14	332	P	P	11 54 48.7	0.0

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*SOME **05** 11:50:37.8, 43°.75N×69°.65E*

*NNC **05** 11:50:40.8±0.8, 43°.57N×69°.76E, h0^{km}, mb3.8, mpv3.2, Error ellipse: s-maj=4.3km s-min=3.2km az=95.0, Suspected Mining explosion.*

*KRNET **05** 11:50:41.0±0.1, 43°.71N×69°.77E, mb3.1*

ISC 05 11:50:43.3±2.7, **43°.51N**±0°.07×**69°.8E**±0°.1, **h0^{km}, n16,** σ**0^{s}.68**/24, **18C-2D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array** 0.7nm,0.2s,baz=318,slow=14,SNR=10.0	0.65	128	⇑P	Pg	11 50 54.9	-0.8
KK31	26nm,0.5s,baz=309,slow=25,SNR=97			⇑S	Sg	11 51 05.0	+0.8
TRKS	**Terek-Say** baz=55	2.21	153	⇑iP	Pb	11 51 23.8	-0.4
TRKS	baz=55			⇑iS	Sg	11 51 55.0	+0.8
MNAS	**Manas** baz=20	2.22	116	⇑iP	Pn	11 51 22.0	+0.5
MNAS	baz=20			⇑iS	Sb	11 51 51.9	-0.6
EKS2	**Erkin-Say** baz=8.0	3.02	105	⇑iP	Pn	11 51 32.6	+0.1
EKS2	baz=8.0			⇑iS	Sn	11 52 10.3	+0.8
AML	**Almayashu** baz=17	3.17	114	⇑iP	Pn	11 51 35.2	+0.4
AML	baz=17			⇑iS	Sn	11 52 14.8	+1.3
BTLS	**Baital** 11nm,0.5s	3.41	62	Pg	Pb	11 51 44.7	+0.2
BTLS	4.4nm,0.7s			Lg	Lg	11 52 32.0	
USP	**Ospenovka** baz=96	3.42	92	⇑iP	Pn	11 51 37.8	-0.2
USP	baz=96			⇑iS	Sn	11 52 19.0	-0.3
SGDS	**Sogindy** 2.6nm,0.4s	3.51	89	Pg	Pb	11 51 45.1	-1.1
SGDS	6.3nm,0.6s			Lg	Lg	11 52 32.5	
AAK	**Ala-Archa** 3.3nm,0.5s	3.54	103	⇑Pg	Pb	11 51 45.6	-1.3
AAK	2.5nm,0.5s			⇑Lg	Lg	11 52 35.3	
AAK	**Ala-Archa** baz=6.0	3.54	103	⇓eP	Pn	11 51 39.9	+0.3
AAK	baz=6.0			⇓iS	Sn	11 52 22.6	+0.3
UCH	**Uchtor** baz=11	3.69	109	⇑eP	Pn	11 51 42.3	+0.4
UCH	baz=11			⇑iS	Sn	11 52 26.7	+0.4
KRBS	**Karabastau** 3.4nm,0.6s	4.26	85	Pg	Pb	11 51 58.8	-0.4
KRBS	6.1nm,0.5s			Lg	Lg	11 52 56.4	
TKM2	**Tokmak 2** 2.7nm,0.7s	4.27	96	⇑Pg	Pb	11 51 58.8	-0.5
TKM2	2.2nm,0.6s			⇑Lg	Lg	11 52 57.7	
DGS	**Degeres** 8.5nm,0.4s	4.35	91	Pg	Pb	11 52 00.3	-0.4
DGS	6.3nm,0.7s			Lg	Lg	11 52 59.4	
KTBS	**Karatobe** 1.1nm,0.4s	4.99	85	Pg	Pb	11 52 12.2	+0.6
KTBS	15nm,0.6s			Lg	Lg	11 53 19.1	
TNSS	**Tian-Shan** 0.5nm,0.1s	5.23	93	Pg	Pb	11 52 16.2	+0.4
TNSS	2.7nm,0.6s			Lg	Lg	11 53 26.5	

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*MAN **05** 11:52:48.0, 4°.98N×123°.45E, h602^{km}, mb5.3, ML4.3, MS4.4*

*NEIC **05** 11:52:49.7±1.5, 4°.83N±0°.09×123°.07E±0°.09, h570^{km}±7^{km}, mb4.6/71, Error ellipse: s-maj=13.9km s-min=12.0km az=220.0*

*DJA **05** 11:52:50.6±0.2, 5°N±3°×12°3E±°, h553^{km}±2^{km}, M4.4/37, mb4.5/37, mB4.9/16, MLv4.9/13, Mw(mB)4.2/16, MwMwp5.0/3, Mwp5.3/3*

*KLM **05** 11:52:50, 4°.76N×123°.16E, h581^{km}, mb4.7*

*IDC **05** 11:52:50.2±0.6, 4°.79N×123°.09E, h581^{km}±7^{km}, mb3.7/34, mb1 3.8/38, mb1mx3.7/52, mbtmp4.7/38, Error ellipse: s-maj=9.9km s-min=5.5km az=73.0*

ISC 05 11:52:50.1±0.4, **4°.79N**±0°.04×**123°.10E**±0°.05, **h581^{km}**±4^{km}, **n223,** σ**1^{s}.37**/244, **mb4.7**/101, **4C-5D, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	**General Santos**	2.25	55	⇑iP	P	11 54 03.1	-0.8
GSPH				i S	S	11 55 04.0	+0.1
SGSI	**Sangihe**	2.66	114	P	P	11 54 02.1	-3.7
SGSI				S	S	11 55 04.7	-2.6
DMPH	**Davao City--Mi**	3.31	46	⇑eP	P	11 54 07.8	-1.7
DAV	**Davao City (W)** 112nm,0.3s,baz=211,slow=1.1,SNR=16	3.35	47	P	P	11 54 08.6	-1.2
DAV	75nm,0.3s,baz=123,slow=23,SNR=13			S	S	11 55 15.1	+0.4
DAV	**Davao City (W)**	3.35	47	P	P	11 54 08.5	-1.3
DAV	**Davao City (W)**	3.35	47	P	P	11 54 09.7	-0.1
GTOI	**Gorontalo**	4.13	181	P	P	11 54 13.3	-1.8
GTOI				S	S	11 55 18.8	-5.6
KMSI	**Cibinong**	4.28	168	P	P	11 54 15.6	-0.7
TOLI2	**Tolitoli**	4.33	212	P	P	11 54 15.3	-1.3
TOLI2	**Tolitoli**	4.33	212	P	P	11 54 16.0	-0.6
MRSI	**Marisa**	4.44	195	P	P	11 54 17.0	-0.4
MRSI				S	S	11 55 26.3	-2.3
SNPH	**Sibulan**	4.53	2	⇓eP	P	11 54 16.2	-2.0
SNPH				eS	S	11 55 24.7	-5.2
TBP	**Tagbilaran**	4.93	9	⇑iP	P	11 54 20.5	-0.7
TBP				i S	S	11 55 31.9	-3.7
MPSI	**Mapaga** 0.2nm437nm34nm,0.9s	5.46	216	P	P	11 54 24.9	-0.7
MPSI	0.2nm437nm34nm,0.9s			S	S	11 55 41.1	-2.5
LUWI	**Luwuk** 1.0nm5μm104nm,1.3s	5.80	183	P	P	11 54 28.1	-0.5
LUWI	**Luwuk**	5.80	183	P	P	11 54 27.1	-1.5
LUWI					S	11 55 46.6	-2.4
LUWI	**Luwuk**	5.80	183	P	P	11 54 28.8	+0.2
TNTI	**Ternate** 1.2nm3μm303nm,1.1s	5.84	133	P	P	11 54 27.1	-1.7
TNTI	1.2nm3μm303nm,1.1s			S	S	11 55 46.2	-3.3
TNTI	**Ternate**	5.84	133	P	P	11 54 27.2	-1.7
TNTI	**Ternate**	5.84	133	P	P	11 54 28.0	-0.9
APSI	**Ampana** 0.3nm591nm66nm,1.2s	5.84	194	P	P	11 54 28.2	-0.8
PPR	**Puerto Princes**	6.58	319	⇓eP	P	11 54 35.4	-0.1
SPMM	**Sapulut**	6.61	270	P	P	11 54 36.0	+0.2
LBMI	**Labuha** 1.9nm1μm153nm,0.8s	6.96	141	P	P	11 54 38.3	-0.7
LBMI	1.9nm1μm153nm,0.8s			S	S	11 56 05.7	-2.3
SANI	**Sanana** 0.5nm968nm93nm,0.9s	7.38	157	P	P	11 54 39.8	-3.1
TTSI	**Tana Toraja** 3μm1μm24nm,1.0s	8.45	203	P	P	11 54 53.6	+0.4
SWI	**Sorong** 54nm,1.1s	9.90	124	P	P	11 55 07.2	-0.4
MSAI	**Masohi** 4.0nm,0.7s	9.96	144	P	P	11 55 09.2	+1.0
SBUM	**Sibu**	11.10	258	P	P	11 55 21.0	+1.3
BNDI	**Bandanaira** 3μm185nm,0.9s	11.48	144	P	P	11 55 23.8	+0.3
BNDI	**Bandanaira**	11.48	144	P	P	11 55 24.2	+0.7
FAKI	**Fak Fak** 874nm96nm,0.8s	11.92	130	P	P	11 55 28.1	0.0
FAKI	**Fak Fak**	11.92	130	P	P	11 55 27.7	-0.4
FAKI	**Fak Fak**	11.92	130	P	P	11 55 28.2	+0.1
STKI	**Sintang**	12.52	248	P	P	11 55 34.0	-0.2
KSM	**Kuching**	13.19	256	P	P	11 55 41.0	-0.1
BAKI	**Biak** 4μm431nm,1.2s	14.29	114	P	P	11 55 52.5	+0.3
SOEI	**Soe**	14.50	175	P	P	11 56 00.6	+6.3
SOEI	**Soe**	14.50	175	P	P	11 55 54.7	+0.4
SRPI	**Serui, Papua** 150nm,0.8s	14.70	116	P	P	11 55 55.9	-0.2
BATI	**Baumata** 7.9nm,0.3s,baz=269,slow=2.2,SNR=10	14.91	178	P	P	11 55 58.2	+0.1
BATI	**Baumata** 78nm,0.9s	14.91	178	P	P	11 55 58.6	+0.5
JAGI	**Jajag, Banyuwa** 45nm,0.8s	15.91	214	P	P	11 56 09.5	+1.9
JAGI	**Jajag, Banyuwa**	15.91	214	P	P	11 56 08.5	+0.9
SMPI	**Sarmi** 1μm108nm,1.3s	16.99	113	P	P	11 56 19.4	+1.9
TPUB	**Ta-pu**	18.56	353	P	P	11 56 31.5	-0.2
TPUB	**Ta-pu**	18.56	353	P	P	11 56 32.4	+0.7
YULB	**Yu-li**	18.58	355	P	P	11 56 30.4	-1.5

YULB				IAmb	IAmb	11 56 37.5	
	comp=Z,45nm,1.5s						
DRS	Darwin Rock St	18.78	156	P	P	11 56 34.2	+0.4
	comp=Z,66nm,0.8s						
SSLB	Suanglung	19.00	354	P	P	11 56 35.6	-0.1
SSLB				IAmb	IAmb	11 56 39.4	
	comp=Z,19nm,0.7s						
SSLB	Suanglung	19.00	354	P	P	11 56 38.0	+2.3
JAY	Jayapura	19.03	112	P	P	11 56 35.6	-0.5
	comp=Z,4.1nm,0.3s,baz=215,slow=5.5,SNR=13						
DSRI	Dabo	19.23	255	P	P	11 56 39.3	+1.4
	comp=Z,6.3nm,0.6s						
MTN	Manton Dam	19.25	156	P	P	11 56 37.9	-0.1
MTN	Manton Dam	19.25	156	P	P	11 56 38.4	+0.4
	comp=Z,32nm,0.4s						
LEM	Lembang	19.29	233	P	P	11 56 39.5	+0.9
	comp=Z,3.6nm,0.3s,baz=132,slow=13,SNR=4.6						
LEM	Lembang	19.29	233	P	P	11 56 40.2	+1.6
	comp=Z,25nm,1.0s						
KDU	Kakadu	19.70	152	P	P	11 56 41.9	-0.2
	comp=Z,53nm,0.8s						
JRMM	Jerantut	20.58	268	P	P	11 56 51.0	+0.8
KNRA	Kununurra	21.09	165	P	P	11 56 54.4	-0.2
KNRA				IAmb	IAmb	11 56 56.0	
	comp=Z,15nm,0.9s						
KNRA	Kununurra	21.09	165	P	P	11 56 55.4	+0.7
	comp=Z,18nm,0.9s						
LHSI	Lahat	21.35	247	P	P	11 56 58.8	+1.8
	comp=Z,43nm,0.8s						
IPM	Ipoh	22.00	270	P	P	11 57 03.0	+0.1
KULM	Kulim	22.37	272	P	P	11 57 07.0	+0.8
FITZ	Fitzroy Crossi	22.88	174	P	P	11 57 10.3	-0.2
	comp=Z,3.5nm,0.8s,baz=338,slow=7.1,SNR=10						
FITZ				ScP	ScP	12 03 23.1	+0.1
	comp=Z,4.8nm,0.6s,baz=327,slow=4.5,SNR=6.9						
FITZ	Fitzroy Crossi	22.88	174	P	P	11 57 10.4	-0.2
FITZ	Fitzroy Crossi	22.88	174	P	P	11 57 12.1	+1.5
	comp=Z,6.5nm,1.1s						
MNSI	Mandailing Nat	23.82	261	P	P	11 57 23.0	+3.9
	comp=Z,16nm,0.5s						
PSI	Prapat	24.20	266	P	P	11 57 22.6	0.0
	comp=Z,12nm,0.8s,baz=72,slow=5.0,SNR=16						
RPSI	Rantau Prapat	24.21	266	P	P	11 57 22.9	+0.3
RPSI				IAmb	IAmb	11 57 23.5	
	comp=Z,16nm,0.8s						
SLVN	Son La	24.85	313	P	P	11 57 28.2	+0.1
MANU	Manus Island	25.18	105	P	P	11 57 31.6	+0.6
MANU				IAmb	IAmb	11 57 33.0	
	comp=Z,18nm,0.8s						
GSI	Gunungsitoli	25.72	263	P	P	11 57 35.3	-0.5
GSI	Gunungsitoli	25.72	263	P	P	11 57 34.3	-1.5
GYA	Guiyang	26.67	326	⇑*i*P	P	11 57 45.3	+1.2
GYA				pmax	pmax		
	comp=Z,21nm,0.7s						
WRAB	Tennant Creek	26.94	156	P	P	11 57 45.9	-0.6
WRAB	Tennant Creek	26.94	156	P	P	11 57 46.3	-0.2
WRA	Warramunga Arr	26.95	156	P	P	11 57 46.4	-0.2
	comp=Z,26nm,0.7s,baz=330,slow=10,SNR=427						
WRA				S	S	12 01 40.6	-3.3
	comp=Z,4.0nm,0.9s,baz=337,slow=15,SNR=5.4						
WRA				ScP	ScP	12 03 34.5	-0.2
	comp=Z,1.1nm,0.5s,baz=312,slow=1.7,SNR=5.3						
WR0	Warramunga Arr	27.05	156	IAmb	IAmb	11 57 48.0	
	comp=Z,13nm,0.8s						
CMAR	Chiang Mai Arr	27.23	302	P	P	11 57 49.5	+0.5
	comp=Z,8.2nm,0.9s,baz=118,slow=6.9,SNR=57						
CMAR				PcP	PcP	12 00 50.6	+1.1
	comp=Z,2.0nm,0.7s,baz=145,slow=1.5,SNR=9.9						
CMAR				ScP	ScP	12 03 37.0	+1.3
	comp=Z,1.0nm,0.6s,baz=166,slow=2.6,SNR=6.9						
COEN	Coen	27.27	133	P	P	11 57 48.2	-1.2
COEN				IAmb	IAmb	11 57 49.4	
	comp=Z,7.3nm,0.7s						
COEN	Coen	27.27	133	P	P	11 57 49.5	+0.1
	comp=Z,11nm,0.7s						
CHTO	Chiang Mai	27.39	303	P	P	11 57 50.9	+0.5
CHTO				IAmb	IAmb	11 57 52.0	
	comp=Z,16nm,0.7s						
CHTO	Chiang Mai	27.39	303	P	P	11 57 51.2	+0.8
NJ2	Nanjing	27.41	352	*e*P	P	11 57 52.5	+2.1
NJ2				pmax	pmax		
	comp=Z,200nm,0.6s						
PMG	Port Moresby	27.82	120	P	P	11 57 53.6	-0.5
	comp=Z,23nm,0.8s,baz=314,slow=6.6,SNR=10						
PMG	Port Moresby	27.82	120	P	P	11 57 53.9	-0.2
PMG	Port Moresby	27.82	120	P	P	11 57 54.0	-0.2
PMG	Port Moresby	27.82	120	P	P	11 57 54.1	-0.2
KMI	Kunming	28.12	318	⇓P	P	11 57 58.3	+1.3
KMI				pmax	pmax		
	comp=Z,17nm,1.2s						
ENH	Enshi	28.42	335	P	P	11 57 58.3	-0.9
QIS	Mount Isa	29.95	148	P	P	11 58 13.0	+0.4
	comp=Z,37nm,1.1s						
WRKA	Warakurna	30.07	171	P	P	11 58 14.6	+1.0
	comp=Z,25nm,0.9s						
ASAR	Alice Springs	30.18	160	P	P	11 58 15.2	+0.6
	comp=Z,6.3nm,0.3s,baz=338,slow=7.4,SNR=253						
ASAR				S	S	12 02 33.0	-1.0
	comp=Z,14nm,0.9s,baz=350,slow=21,SNR=27						
ASAR				ScP	ScP	12 03 44.6	-0.4
	comp=Z,8.6nm,0.7s,baz=341,slow=2.8,SNR=36						
RABL	Rabaul	30.37	107	P	P	11 58 17.0	+0.6
RABL	Rabaul	30.37	107	P	P	11 58 17.9	+1.6
MTSU	Mount Surprise	30.93	138	P	P	11 58 22.0	+1.0
	comp=Z,11nm,0.8s						
CD2	Chengdu	31.73	327	P	P	11 58 27.9	+0.2
CD2				pmax	pmax		
	comp=Z,40nm,0.9s						
XAN	Xi'an	31.95	337	P	P	11 58 29.3	-0.2
XAN				pmax	pmax		
	comp=Z,29nm,0.8s						
XAN	Xi'an	31.95	337	P	P	11 58 29.6	+0.1
KSRS	Korea Array	32.81	7	P	P	11 58 36.9	+0.3
	comp=Z,2.0nm,0.6s,baz=187,slow=8.8,SNR=5.2						
KSRS				PcP	PcP	12 01 04.5	+0.5
	comp=Z,0.7nm,0.6s,baz=189,slow=4.1,SNR=4.6						
KSRS				ScP	ScP	12 03 54.1	+0.5
	comp=Z,1.1nm,0.6s,baz=187,slow=2.8,SNR=5.3						
CTA	Charters Tower	33.60	138	P	P	11 58 44.6	+1.0
	comp=Z,17nm,0.9s,baz=320,slow=11,SNR=20						
CTA	Charters Tower	33.60	138	P	P	11 58 45.2	+1.6
	comp=Z,25nm,0.9s						
CTAO	Charters Tower	33.60	138	P	P	11 58 44.6	+1.0
CTAO				IAmb	IAmb	11 58 45.9	
	comp=Z,18nm,0.8s						
CTAO	Charters Tower	33.60	138	P	P	11 58 44.8	+1.2
MORW	Morawa	34.34	191	P	P	11 58 49.6	0.0
MORW				IAmb	IAmb	11 58 50.6	
	comp=Z,7.2nm,0.5s						
OOD	Oodnadatta	34.60	160	P	P	11 58 52.7	+0.9
	comp=Z,25nm,0.9s						
BJI	Beijing	35.65	351	P	P	11 59 00.3	0.0
BJI				PcP	PcP	12 01 13.6	+1.3
BJI				pmax	pmax		
	comp=Z,17nm,1.2s						
FORT	Forrest	35.69	173	P	P	11 59 01.0	+0.2
LZH	Lanzhou	35.84	333	⇓P	P	11 59 03.0	+0.9
LZH				pP	pwP	12 00 43.3	+4.3
LZH				sP	sP	12 01 44.2	-1.1
LZH				pmax	pmax		
	comp=Z,25nm,1.3s						
INKA	Innaminka	36.55	153	P	P	11 59 09.5	+1.6
	comp=Z,54nm,2.0s						
QLP	Quilpie	37.30	148	P	P	11 59 15.1	+1.0
	comp=Z,32nm,1.0s						
HHC	Hu-ho-hao-te	37.37	346	*e*P	P	11 59 14.2	-0.3
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC				pmax	pmax		
	comp=Z,60nm,5.1s						
NWAO	Narrogin (SRO)	37.92	188	P	P	11 59 19.2	+0.2
	comp=Z,5.8nm,0.4s,baz=34,slow=8.0,SNR=12						
NWAO	Narrogin (SRO)	37.92	188	P	P	11 59 19.4	+0.4
NWAO				IAmb	IAmb	11 59 45.0	
	comp=Z,23nm,1.2s						
RK1H	Rockhampton Ha	38.72	137	P	P	11 59 26.6	+1.0
	comp=Z,29nm,0.8s						
LSA	Lhasa	39.05	313	P	P	11 59 30.0	+1.2
LSA				pmax	pmax		
	comp=Z,130nm,0.9s						
LSA	Lhasa	39.05	313	P	P	11 59 28.7	-0.1
JTM	Tenmabayashi	39.31	22	P	P	11 59 30.3	+0.2
BBOO	Buckleboo	39.37	163	P	P	11 59 31.4	+0.7
BBOO				IAmb	IAmb	11 59 32.4	
	comp=Z,13nm,0.8s						
USA0B	Ussuriysk Arra	40.02	10	P	P	11 59 35.5	-0.3
USA0B				IAmb	IAmb	11 59 50.1	
	comp=Z,29nm,1.4s						
USRK	Ussuriysk Ar.	40.02	10	P	P	11 59 35.8	+0.1
	comp=Z,8.1nm,0.7s,baz=198,slow=6.1,SNR=9.7						
MDJ	Mudanjiang	40.07	7	P	P	11 59 36.5	+0.4
MDJ				pmax	pmax		
	comp=Z,22nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,150nm,5.3s						
MDJ	Mudanjiang	40.07	7	P	P	11 59 36.7	+0.6
GTA	Gaotai	40.40	332	⇓P	P	11 59 39.7	+0.7
GTA				pP	PP	12 01 28.2	-0.3
GTA				sP	sP	12 02 32.2	+7.8
GTA				pmax	pmax		
	comp=Z,25nm,0.8s						
EIDS	Eidsvold	40.46	139	P	P	11 59 39.5	0.0
EIDS				IAmb	IAmb	11 59 40.9	
	comp=Z,19nm,0.9s						
EIDS	Eidsvold	40.46	139	P	P	11 59 40.4	+0.8
	comp=Z,26nm,1.0s						
TAPN	Taplejung	40.49	308	*e*P	P	11 59 40.6	+0.5
	comp=Z,38nm,0.7s						
STKA	Stephens Creek	40.49	155	P	P	11 59 40.5	+0.8
	comp=Z,13nm,0.7s,baz=331,slow=8.3,SNR=23						
STKA	Stephens Creek	40.49	155	P	P	11 59 40.1	+0.4
STKA	Stephens Creek	40.49	155	P	P	11 59 40.9	+1.2
	comp=Z,4.2nm,0.8s						
ODAN	Odare	40.52	307	*e*P	P	11 59 40.8	+0.5
	comp=Z,66nm,0.8s						
HTT	Hallett	40.86	160	P	P	11 59 44.7	+2.1
	comp=Z,32nm,1.4s						
RAMN	Ramite	41.20	306	*e*P	P	11 59 46.4	+0.7
	comp=Z,37nm,0.6s						
JIRN	Jiri	41.83	307	*e*P	P	11 59 51.4	+0.6
	comp=Z,57nm,0.6s						
CMSA	Cobar Meteorol	42.06	151	P	P	11 59 54.1	+2.0
	comp=Z,26nm,0.8s						
GUN	Gumba	42.19	307	*e*P	P	11 59 54.1	+0.5
	comp=Z,123nm,0.6s						
PKI	Pulchoki	42.42	306	*e*P	P	11 59 55.3	-0.1
	comp=Z,27nm,0.7s						
PKIN	Phulchoki	42.43	306	*e*P	P	11 59 55.3	-0.1
	comp=Z,32nm,0.7s						
KKN	Kakani	42.62	307	*e*P	P	11 59 56.9	+0.1
	comp=Z,36nm,0.6s						
DMN	Daman	42.68	306	*e*P	P	11 59 57.3	0.0
	comp=Z,70nm,0.9s						
ASAJ	Asahikawa	42.76	21	P	P	11 59 57.7	+0.4
	comp=Z,6.8nm,0.3s,baz=228,slow=8.4,SNR=37						
GKN	Gorkha	43.22	307	*e*P	P	12 00 01.5	+0.1
	comp=Z,31nm,0.6s						
KOLN	Koldanda	43.96	306	*e*P	P	12 00 07.8	+0.6
	comp=Z,179nm,0.7s						
DANN	Dangsing	44.07	307	*e*P	P	12 00 08.4	+0.3
	comp=Z,152nm,0.6s						
PYUN	Piuthan	44.59	306	*e*P	P	12 00 12.7	+0.7
	comp=Z,132nm,0.6s						
KLR	Kul'dur	44.89	8	P	P	12 00 13.2	-0.4
	comp=Z,4.5nm,0.6s,baz=202,slow=5.2,SNR=14						
ARPS	Mount Arapiles	44.90	159	P	P	12 00 15.3	+1.4
	comp=Z,36nm,0.8s						
ULN	Ulaanbaatar	45.07	345	P	P	12 00 14.6	-0.7
ULN				IAmb	IAmb	12 00 16.5	
	comp=Z,19nm,1.4s						
SONM	Songino Array	45.22	344	P	P	12 00 16.5	+0.1
	comp=Z,4.6nm,0.6s,baz=163,slow=9.8,SNR=21						
SONM				PcP	PcP	12 01 43.7	-0.2
	comp=Z,2.0nm,0.6s,baz=170,slow=2.9,SNR=7.1						
SONM				ScP	ScP	12 04 41.7	-0.1
	comp=Z,0.9nm,0.7s,baz=176,slow=3.9,SNR=3.8						
SONM	Songino Array	45.22	344	P	P	12 00 15.4	-1.0
KOUNC	Koumac, New Ca	47.63	123	P	P	12 00 37.0	+2.1
TLY	Talaya	49.46	344	P	P	12 00 48.8	+0.9
TLY				IAmb	IAmb	12 00 49.4	
	comp=Z,12nm,0.8s						
WMQ	Urumqi	49.82	327	*e*P	P	12 00 51.5	+0.7
WMQ				pmax	pmax		
	comp=Z,26nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,100nm,4.3s						
DZM	Mont Dzumac	50.11	124	P	P	12 00 54.3	+1.1
	comp=Z,6.0nm,0.8s,baz=185,slow=22,SNR=7.0						
LIFNC	LIFOU	50.21	122	P	P	12 00 53.4	-0.5
LIFNC	LIFOU	50.21	122	P	P	12 00 54.5	+0.6
YATNC	Mamie plateau,	50.48	124	P	P	12 00 58.0	+2.2
MKAR	Makanchi Array	54.66	327	P	P	12 01 25.6	+0.4
	comp=Z,13nm,0.5s,baz=122,slow=8.7,SNR=94						
MKAR				PcP	PcP	12 02 18.8	-0.2
	comp=Z,7.5nm,0.7s,baz=124,slow=4.5,SNR=15						
MKAR				ScP	ScP	12 05 21.9	-0.4
	comp=Z,1.4nm,0.6s,baz=124,slow=4.5,SNR=5.3						
KSH	Kashi	54.76	316	P	P	12 01 27.4	+1.2
KSH				pmax	pmax		
	comp=Z,11nm,0.7s						
MAKZ	Makanchi	54.84	326	P	P	12 01 26.2	-0.3
MAKZ				IAmb	IAmb	12 01 27.2	
	comp=Z,13nm,0.6s						
PETK	Petropavlovsk-	55.89	24	P	P	12 01 33.9	+0.2
	comp=Z,3.6nm,0.8s,baz=195,slow=2.5,SNR=7.4						
TKM2	Tokmak 2	56.58	320	P	P	12 01 39.5	+0.7
	SNR=14						
KBK	Karagaybulak	56.88	319	P	P	12 01 41.8	+1.0
	SNR=6.7						
UCH	Uchtor	56.97	318	P	P	12 01 42.9	+1.2
	SNR=20						
AAK	Ala-Archa	57.16	319	P	P	12 01 43.6	+0.8
	SNR=5.8						
AAK	Ala-Archa	57.16	319	P	P	12 01 43.6	+0.8
YAK	Yakutsk	57.32	4	P	P	12 01 43.0	-0.2
	comp=Z,26nm,0.7s,baz=207,slow=1.4,SNR=12						
YAK	Yakutsk	57.32	4	P	P	12 01 43.0	-0.2
YAK				IAmb	IAmb	12 01 43.9	
	comp=Z,43nm,0.8s						
USP	Ospenovka	57.45	319	P	P	12 01 45.1	+0.6
	SNR=11						
AML	Almayashu	57.47	318	P	P	12 01 46.2	+1.0
	SNR=20						
EKS2	Erkin-Say	57.65	319	P	P	12 01 47.0	+1.0
	SNR=10						
KBL	Kabul	58.02	308	P	P	12 01 48.3	-0.4
KBL				IAmb	IAmb	12 01 49.7	
	comp=Z,16nm,0.7s						
ZALV	Zalesovo Beam	58.04	334	P	P	12 01 47.4	-0.9
	comp=Z,4.4nm,0.5s,baz=123,slow=5.5,SNR=19						
GAR	Garm	58.56	313	IAmb	IAmb	12 01 53.4	
	comp=Z,50nm,1.2s						
MA2	Magadan	58.63	16	P	P	12 01 53.0	+0.9
	comp=Z,20nm,0.7s,baz=0.1,slow=24,SNR=13						
KURK	Kurchatov	58.93	329	P	P	12 01 53.7	-0.6
KURK				IAmb	IAmb	12 01 55.2	
	comp=Z,39nm,0.8s						
CHGR	Chuyangaron	59.28	313	P	P	12 01 56.1	-0.9
CHGR				IAmb	IAmb	12 01 58.1	
	comp=Z,22nm,0.8s						
KKAR	Karatay Array	60.01	318	P	P	12 02 01.4	-0.3
KKAR	Karatay Array	60.01	318	P	P	12 02 01.3	-0.4
KKAR				IAmb	IAmb	12 02 02.7	
	comp=Z,11nm,0.8s						
SEY	Seymchan	61.88	15	P	P	12 02 14.3	+0.9
	comp=Z,2.3nm,0.5s,baz=227,slow=8.2,SNR=9.1						
BRVK	Borovoye	64.56	328	P	P	12 02 30.7	-0.1
BRVK				IAmb	IAmb	12 02 31.6	
	comp=Z,18nm,0.9s						
TIXI	Tiksi	66.88	2	P	P	12 02 43.9	-0.9
TIXI				IAmb	IAmb	12 02 44.8	
	comp=Z,14nm,0.7s						
GEYT	Alibeck	67.42	309	P	P	12 02 49.1	+0.2
	comp=Z,6.8nm,0.7s,baz=167,slow=7.3,SNR=6.9						
NRIK	Noril'sk	68.57	347	P	P	12 02 55.0	-0.2
	comp=Z,18nm,0.6s,baz=129,slow=6.3,SNR=24						
NRIK	Noril'sk	68.57	347	P	P	12 02 54.6	-0.6
NRIK				IAmb	IAmb	12 02 55.9	
	comp=Z,19nm,0.7s						
SOCY	Socotra	68.61	281	P	P	12 02 54.6	-2.0
SOCY				IAmb	IAmb	12 02 55.9	
	comp=Z,18nm,0.8s						
ABKAR	Akbulak array	69.05	321	P	P	12 02 57.9	-0.6
ABKAR	Akbulak array	69.05	321	IAmb	IAmb	12 02 59.1	
	comp=Z,14nm,0.7s						
ARU	Arti	72.12	328	P	P	12 03 15.3	-1.1
KBZ	Khabaz	79.63	313	P	P	12 03 57.5	-0.5
	comp=Z,3.5nm,0.8s,baz=142,slow=6.8,SNR=6.6						
GURO	Guroymak-BITLI	80.05	308	IAmb	IAmb	12 04 02.3	
	comp=Z,20nm,0.9s						
SVW2	Sparrevohn	81.63	29	IAmb	IAmb	12 04 08.5	
	comp=Z,29nm,0.8s						
MAW	Mawson	83.51	200	P	P	12 04 17.8	+0.6
	comp=Z,1.6nm,0.7s,baz=160,slow=1.6,SNR=6.9						
H23K	Yukon River	84.58	24	P	P	12 04 23.1	+0.5
H23K				IAmb	IAmb	12 04 24.0	
	comp=Z,14nm,1.5s						
TOLK	Toolik Lake Re	84.59	22	P	P	12 04 23.7	+0.9
TOLK				IAmb	IAmb	12 04 25.4	
	comp=Z,7.8nm,1.0s						
VNDA	Vanda	84.95	172	P	P	12 04 24.7	+0.6
	comp=Z,0.7nm,0.6s,baz=320,slow=7.8,SNR=4.7						
KIBK	Kibwezi	85.27	267	P	P	12 04 27.4	+0.2
KIBK				IAmb	IAmb	12 04 28.8	
	comp=Z,7.9nm,1.0s						
HDA	Harding Lake	85.69	26	IAmb	IAmb	12 04 27.9	
	comp=Z,5.2nm,0.8s						
ILAR	Eielson Array	85.71	25	P	P	12 04 26.6	-1.4
	comp=Z,1.0nm,0.7s,baz=246,slow=5.0,SNR=17						
KMBO	Kilima Mbogo	85.96	269	P	P	12 04 31.0	+0.4
	comp=Z,3.5nm,0.7s,baz=59,slow=8.1,SNR=9.8						
KMBO	Kilima Mbogo	85.96	269	P	P	12 04 30.4	-0.2
KMBO				IAmb	IAmb	12 04 32.3	
	comp=Z,6.5nm,0.9s						
BRTR	Keskin Array B	86.56	309	P	P	12 04 31.4	-1.5
	comp=Z,2.7nm,0.7s,baz=103,slow=5.3,SNR=9.1						
ARCES	ARCESS Array B	88.20	340	P	P	12 04 38.4	-1.3
	comp=Z,2.5nm,0.6s,baz=78,slow=6.5,SNR=14						
ARCES	ARCESS Array B	88.20	340	IAmb	IAmb	12 05 07.2	
	comp=Z,22nm,1.4s						
YAH	Yahtse	88.42	30	P	P	12 04 42.5	+1.3
AKASG	Malin Array Be	88.79	321	P	P	12 04 41.4	-1.4
	comp=Z,1.9nm,0.5s,baz=68,slow=4.6,SNR=11						
MNK	Minsk	89.17	324	*i* P	P	12 04 47.3	+2.8
	comp=E,3.0nm,0.8s						
MNK				*i* P	P	12 04 47.3	+2.8
	comp=N,31nm,0.9s						
MNK				*i* P	P	12 04 47.3	+2.8
	comp=Z,7.0nm,0.8s,baz=83						
MNK				*i* pP	pP	12 06 53.0	+2.5
MNK				*i* sP	sP	12 07 51.3	+2.6
MNK				*i* PP	PP	12 08 27.5	+2.1
MNK				*i* PPP	PPP	12 10 30.2	
MNK				*i* S	SKSac	12 14 11.4	-7.8
MNK				*i* sS	sS	12 18 20.0	-8.9
MNK				*i* SS	SS	12 20 45.3	-11
MNK				*i* SSS	SSS	12 24 43.9	
MNK				*i* LRM	MLR	12 46 50.2	
	comp=Z,48nm,15.6s						
MNK				*i* LRM	MLR	12 46 56.2	
	comp=N,55nm,21.7s						
MNK				*i* LRM	MLR	12 47 11.8	
	comp=E,4.0nm,10.5s						
FINES	FINESS Array B	89.19	332	P	P	12 04 43.2	-1.2
	comp=E,8.0nm,0.6s,baz=50,slow=5.5,SNR=40						
BURAR	Bucovina Array	91.80	318	P	P	12 04 55.8	-1.2
BURAR				IAmb	IAmb	12 04 57.7	
	comp=Z,7.8nm,0.8s						
BUR08	Bucovina Ar. S	91.81	318	IAmb	IAmb	12 04 57.5	
	comp=Z,6.2nm,0.7s						
CRVS	Cervenica-Dubn	94.03	320	*e*P	P	12 05 07.1	+0.1
NB2	NORSAR Subarra	96.22	333	P	P	12 05 14.5	-2.2
	comp=Z,1.7nm,0.6s,baz=70,slow=4.4						
NB2	NORSAR Subarra	96.22	333	P	P	12 05 14.5	-2.2
	baz=70,slow=4.4						
NOA	NORSAR Array B	96.22	333	P	P	12 05 14.8	-1.9
	comp=Z,1.3nm,0.6s,baz=69,slow=4.4,SNR=7.7						
GERES	GERESS Array B	99.00	321	P	Pdif	12 05 28.4	-1.0
	comp=Z,0.5nm,0.6s,baz=78,slow=8.7,SNR=3.6						
NVAR	Mina Array Bea	108.86	47	PKKPbc	PKKPbc	12 21 25.4	-0.1
	comp=Z,0.4nm,0.7s,baz=90,slow=4.4,SNR=4.8						
PDAR	Pinedale Array	112.89	39	PKKPbc	PKKPbc	12 21 18.8	+5.9
	comp=Z,0.9nm,0.9s,baz=116,slow=6.8,SNR=5.1						
TORD	Torodi Ar. Bea	119.15	288	PKP	PKPdf	12 10 34.1	-0.7
	comp=Z,3.7nm,0.7s,baz=52,slow=2.1,SNR=20						
TORD	Torodi Ar. Bea	119.15	288		PKPdf	12 10 33.8	-1.0
SCHQ	Schefferville	120.02	7	PKP	PKPdf	12 10 35.2	-0.2
	comp=Z,2.1nm,0.6s,baz=267,slow=2.6,SNR=5.1						
TXAR	Lajitas Array	123.75	50	PKP	PKiKP	12 10 43.6	-0.1
	comp=Z,0.3nm,0.8s,baz=336,slow=2.0,SNR=3.8						
TXAR				PKKPbc	PKKPbc	12 20 33.6	-0.3
	comp=Z,0.7nm,1.1s,baz=113,slow=9.6,SNR=3.7						
S39A	Bolivar	125.85	36		PKPdf	12 10 45.8	-1.3

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*IDC **05** 11:56:43.9±2.0, 8°.21S×125°.51E, h0^{km}, mb3.8/1, mb1 4.1/5, mb1mx3.7/42, mbtmp3.9/5, ML3.5/4, MS3.0/2, Ms1 3.0/2, ms1mx2.5/37, Error ellipse: s-maj=49.2km s-min=27.9km az=75.0*

ISC 05 11:56:49.2±1.5**, 8°.5S**±0°.1×**125°.5E**±0°.1**, h35**^{km}**, n5, σ1**^{s}**99**/7**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	2.50	226	Pn	Pn	11 57 28.4	+1.0
	7.4nm,0.3s,baz=57,slow=2.2,SNR=6.6						
BATI				Sn	Sn	11 57 56.2	-0.5
	4.7nm,0.3s,baz=315,slow=23,SNR=6.7						
BATI				LR	LR	11 58 28.5	
	comp=Z,322nm,18.1s,baz=144,slow=39						
FITZ	Fitzroy Crossi	9.58	179	Pn	Pn	11 59 06.0	+1.3
	0.2nm,0.3s,baz=358,slow=11,SNR=6.2						
FITZ				Sn	Sn	12 00 48.4	-2.8
	0.5nm,0.3s,baz=99,slow=22,SNR=7.8						
WRA	Warramunga Arr	14.28	144	Pn	Pn	12 00 09.0	+0.1
	0.2nm,0.3s,baz=319,slow=13,SNR=7.2						
WRA				LR	LR	12 06 14.0	
	comp=Z,48nm,21.6s,baz=260,slow=39						
ASAR	Alice Springs	17.14	153	P	P	12 00 49.4	+1.9
	0.3nm,0.3s,baz=340,slow=14,SNR=11						
MKAR	Makanchi Array	67.09	329	P	P	12 07 38.0	-1.1
	0.9nm,0.8s,baz=134,slow=8.4,SNR=3.6						

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*JMA **05** 11:58:16.6±0.1, 36°.10N×139°.70E, h85^{km}±1^{km}, M3.1*
JMA Felt I J1.
*IDC **05** 11:58:19.2±1.1, 35°.83N×138°.96E, h106^{km}±9^{km}, mb3.2/2, mb1 3.4/3, mb1mx3.1/46, mbtmp3.7/3, Error ellipse: s-maj=31.4km s-min=11.7km az=68.0*

ISC 05 11:58:16.1±1.1**, 36°.11N**±0°.04×**139°.62E**±0°.08**, h93**^{km}±10^{km}**, n15, σ0**^{s}**49**/23**, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAG	Ashikaga	0.34	337	P	Pn	11 58 29.9	-0.2
JHU	Hanno	0.38	227	P	Pn	11 58 30.6	+0.3
JRY	Ryogami san	0.59	261	P	Pn	11 58 32.2	+0.3
JKT	Katashina	0.72	336	P	Pn	11 58 33.2	+0.1
JKT				S	Sn	11 58 45.9	0.0
JOD2	Odawara 2	0.95	207	P	Pn	11 58 35.2	-0.3
JOD2				S	Sn	11 58 49.2	-0.8
JYN	Shimob	1.07	235	P	Pn	11 58 37.3	+0.5
JYN				S	Sn	11 58 52.8	+0.4
JFNN	Fujinakano	1.19	220	P	Pn	11 58 38.8	+0.6
JFNN				S	Sn	11 58 54.9	+0.1
MJAR	Matsushiro Arr	1.22	291	P	Pn	11 58 37.5	-1.0
	6.3nm,0.3s,baz=142,slow=18,SNR=350						
MJAR				S	Sn	11 58 55.3	-0.1
	3.0nm,0.3s,baz=92,slow=33,SNR=6.3						
MAT	Matsushiro	1.22	291	P	Pn	11 58 39.1	+0.6
MAT				S	Sn	11 58 55.9	+0.4
MAT	Matsushiro	1.22	291	P	Pn	11 58 39.1	+0.6
JFY	Yanaizu	1.30	3	P	Pn	11 58 39.8	+0.3
JFY				*e*S	Sn	11 58 57.3	+0.2
JFT	Otama	1.52	22	P	Pn	11 58 42.6	+0.4
JHJ	Hachijo jima 2	2.99	177	P	Pn	11 59 02.0	+0.5
	33nm,0.3s,baz=56,slow=18,SNR=18						
JHJ				S	Sn	11 59 36.5	+0.1
	15nm,0.3s,baz=250,slow=22,SNR=1.6						
WRA	Warramunga Arr	55.97	186	P	P	12 07 44.2	-0.6
	0.4nm,0.3s,baz=0.7,slow=7.4,SNR=17						
ASAR	Alice Springs	59.70	186	P	P	12 08 10.7	-0.1
	0.1nm,0.3s,baz=5.1,slow=7.2,SNR=5.6						

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*EAF **05** 12:00:29.0±3.2, 26°.78S×29°.82E, h10^{km}, MD3.8*

BUL 05 12:00:30.7±1.5**, 26°.74S×29°.69E, h10**^{km}**, MD4.1, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOPA	Mopani	3.56	26	*e*P	Pn	12 01 22.1	-4.0
MOPA				*e*S	Sn	12 02 00.8	-7.6
MOPA	Mopani	3.56	26	*e*P	Pn	12 01 22.1	-4.0
MOPA				*e*S	Sn	12 02 00.8	-7.6
LBTB	Lobatse	4.07	294	*e*P	Pn	12 01 32.2	-1.0
LBTB				*e*S	Sn	12 02 16.8	-4.2
LBTB	Lobatse	4.07	294	*e*P	Pn	12 01 32.2	-1.0

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBTB				*e*S	Sn	12 02 16.8	-4.2
BOSA	**Boshof**	**4.35**	**244**	*e*P	Pn	12 01 37.8	+0.8
BOSA				*e*S	Sn	12 02 24.4	-3.5
BOSA	**Boshof**	**4.35**	**244**	*e*P	Pn	12 01 37.8	+0.8
BOSA				*e*S	Sn	12 02 24.4	-3.5
MSNA	**Messina**	**4.39**	**4**	*e*P	Pn	12 01 37.6	+0.1
MSNA				*e*S	Sn	12 02 26.2	-2.5
MSNA	**Messina**	**4.39**	**4**	*e*P	Pn	12 01 37.6	+0.1
MSNA				*e*S	Sn	12 02 26.2	-2.5
MATP	**Matopo**	**6.38**	**350**	*e*S	Sn	12 03 12.4	-5.6
MATP	**Matopo**	**6.38**	**350**	*e*S	Sn	12 03 12.4	-5.6
MATP	**Matopo**	**6.38**	**350**	*e*P	Pn	12 02 04.3	-0.7
MATP	**Matopo**	**6.38**	**350**	*e*P	Pn	12 02 04.3	-0.7
BLWY	**Bulawayo**	**6.65**	**351**	*e*S	Sn	12 03 19.0	-5.5
BLWY	**Bulawayo**	**6.65**	**351**	*e*S	Sn	12 03 19.0	-5.5
BLWY	**Bulawayo**	**6.65**	**351**	*e*P	Pn	12 02 07.7	-0.9
BLWY	**Bulawayo**	**6.65**	**351**	*e*P	Pn	12 02 07.7	-0.9

NNC 05 12:15:05.2±11.0**, 37°.11N×70°.51E, h0^{km}, mb3.7, mpv3.3, 4C-2D, Error ellipse: s-maj=87.2km s-min=60.4km az=170.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**5.99**	**0**	⇑P	Pn	12 16 37.1	+2.0
	0.7nm,0.2s,baz=187,slow=12,SNR=51						
KK31				⇑S	Sn	12 17 47.9	+3.5
	3.5nm,0.5s,baz=189,slow=23,SNR=3.9						
AAK	**Ala-Archa**	**6.32**	**28**	⇓P	Pn	12 16 37.9	-1.8
	1.0nm,0.3s						
AAK				⇑S	Sn	12 17 50.8	-1.9
	13nm,0.8s						
AB31	**Akbulak array**	**14.37**	**331**	P	Pn	12 18 31.0	+1.3
	0.2nm,0.3s,baz=163,slow=11,SNR=14						
AB31				S	Sn	12 21 09.1	-0.5
	1.4nm,0.7s,baz=148,slow=23,SNR=6.3						
AKTO	**Aktyubinsk**	**16.06**	**330**	⇑P	Pn	12 18 53.6	+1.3
	2.2nm,0.7s						
AKTO				⇓S	Sn	12 21 50.7	-0.2
	1.6nm,0.8s						

DDA ***05*** *12:24:02.2, 41°.36N×43°.93E, h7^{km}±3^{km}, ML2.6*
TIF ***05*** *12:24:02.2, 41°.36N×43°.95E, h12^{km}±1^{km}*
NORS ***05*** *12:24:03.1±0.0, 41°.48N×43°.90E, h7^{km}, MPVA3.5*
ISC 05 12:24:02.6±0.9**, 41°.35N**±0°.02×**43°.93E**±0°.02**, h10**^{km}±8^{km}**, n31, σ0^{s}.69**/59**, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DMNI	**Dmanisi**	**0.20**	**95**	P	**Pg**	**12 24 07.0**	**+0.2**
DMNI				S	**Sg**	**12 24 10.0**	**+0.3**
BGD	**Bogdanovka**	**0.26**	**252**	P	**Pb**	**12 24 09.5**	**-0.1**
BGD				S	**Sb**	**12 24 13.7**	**-0.5**
BRNG	**Burnasheti**	**0.29**	**345**	P	**Pb**	**12 24 09.3**	**-0.7**
BRNG				S	**Sb**	**12 24 14.2**	**-0.8**
AKH	**Akhalkalaki**	**0.33**	**281**	P	**Pg**	**12 24 09.7**	**+0.4**
AKH				S	**Sg**	**12 24 14.6**	**+0.8**
KZRT	**Kazreti**	**0.36**	**83**	P	**Pg**	**12 24 09.6**	**-0.1**
KZRT				S	**Sg**	**12 24 14.4**	**-0.1**
KZRT	**Kazreti**	**0.36**	**83**	*i* P	**Pg**	**12 24 09.6**	**-0.1**
KZRT				*i* S	**Sg**	**12 24 14.1**	**-0.4**
BKRG	**Bakuriani**	**0.51**	**324**	P	**Pb**	**12 24 13.1**	**-0.7**
BKRG				S	**Sb**	**12 24 21.0**	**-0.5**
EAK	**Akyaka**	**0.70**	**200**	*i* P	**Pg**	**12 24 15.7**	**-0.5**
EAK				*i* S	**Sg**	**12 24 25.2**	**-0.2**
BTNK	**Botanikuri**	**0.74**	**63**	P	**Pg**	**12 24 15.0**	**-1.8**
EPOS	**Posof**	**0.92**	**280**	*i* P	**Pg**	**12 24 19.8**	**-0.4**
EPOS				*i* S	**Sb**	**12 24 33.6**	**+0.6**
ABS	**Abastumani**	**0.93**	**296**	P	**Pg**	**12 24 20.3**	**-0.2**
ABS				S	**Sb**	**12 24 33.7**	**+0.2**
DIGO	**Kars**	**1.02**	**204**	*i* P	**Pg**	**12 24 21.6**	**-0.6**
DIGO				*i* S	**Sg**	**12 24 36.0**	**+0.4**
GUDG	**Gudauri**	**1.19**	**20**	P	**Pn**	**12 24 26.1**	**+0.5**
TKB	**Tkibuli**	**1.22**	**326**	P	**Pb**	**12 24 25.9**	**0.0**
TKB				S	**Sn**	**12 24 42.7**	**+0.2**
ONI	**Oni**	**1.29**	**344**	P	**Pn**	**12 24 27.0**	**+0.1**
ONI				S	**Sn**	**12 24 44.7**	**+0.5**
ONI	**Oni**	**1.29**	**344**	*e*Pg	**Pn**	**12 24 26.6**	**-0.2**
ONI				*e*Sg	**Sn**	**12 24 44.8**	**+0.5**
MTEO	**Meteo**	**1.41**	**19**	P	**Pn**	**12 24 28.1**	**-0.7**
MTEO				S	**Sn**	**12 24 49.0**	**+1.4**
ZEI	**Tsey**	**1.44**	**359**	*e*Pg	**Pb**	**12 24 29.8**	**+0.1**
ZEI				*e*Sg	**Sg**	**12 24 49.5**	**+0.5**
LACR	**Lac**	**1.50**	**10**	*e*Pg	**Pb**	**12 24 30.9**	**+0.2**
LACR				*e*Sg	**Sg**	**12 24 51.3**	**+0.2**
DAGI	**Agillar**	**1.54**	**261**	*i* P	**Pb**	**12 24 31.6**	**+0.3**
DAGI				*i* S	**Sn**	**12 24 50.7**	**+0.3**
DIGR	**Digorskoe uzhe**	**1.57**	**351**	*e*Pg	**Pb**	**12 24 32.0**	**0.0**
DIGR				*e*Sg	**Sg**	**12 24 53.5**	**+0.3**
BATM	**Batumi**	**1.70**	**279**	P	**Pb**	**12 24 33.8**	**-0.1**
DBOC	**Borcka**	**1.70**	**271**	*i* P	**Pn**	**12 24 32.0**	**-0.4**
DBOC				*i* S	**Sb**	**12 24 55.7**	**+0.2**
DDEM	**Demirkent**	**1.71**	**255**	*i* P	**Pb**	**12 24 34.1**	**-0.1**
DDEM				*i* S	**Sb**	**12 24 56.1**	**+0.4**
DDEM				IAML		12 24 57.0	
	comp=N,112nm,0.4s						
DDEM				IAML		12 24 58.0	
	comp=E,123nm,0.3s						
DBAD	**Bademkaya**	**1.72**	**260**	*i* P	**Pb**	**12 24 33.8**	**-0.5**
DBAD				*i* S	**Sb**	**12 24 55.8**	**-0.2**
DBAD				IAML		12 24 57.0	
	comp=N,58nm,0.6s						
KORR	**Kora**	**1.74**	**3**	*e*Pg	**Pg**	**12 24 35.6**	**-0.4**
KORR				*e*Sg	**Sg**	**12 24 59.4**	**+0.7**
LGD	**Lagodekhi**	**1.80**	**74**	P	**Pb**	**12 24 35.4**	**-0.3**
LGD				S	**Sb**	**12 24 59.4**	**+1.0**
LSNR	**Lesken**	**1.93**	**358**	*e*Pg	**Pb**	**12 24 37.5**	**-0.5**
LSNR				*e*Sg	**Sb**	**12 25 03.0**	**+0.9**
NEY	**Neytrino**	**2.10**	**335**	*e*Pg	**Pb**	**12 24 41.6**	**+0.6**
NEY				*e*Sg	**Sg**	**12 25 08.7**	**-1.4**
DVE	**Vedeno**	**2.29**	**45**	*e*Pg	**Pb**	**12 24 43.4**	**-0.8**
DVE				*e*Sg	**Sg**	**12 25 14.8**	**-1.5**
GNBR	**Gunib**	**2.50**	**64**	*e*Pn	**Pb**	**12 24 47.5**	**-0.1**
GNBR				*e*Sn	**Sb**	**12 25 20.7**	**+2.3**

DJA ***05*** *12:24:55.9±0.1, 8°S±2°×12°5E±°, h10^{km}, M4.5/30, mB5.0/9, mb4.5/30, MLv4.5/12, Mw(mB)4.4/9*
NEIC ***05*** *12:24:58.4±2.9, 8°.26S±0°.05×124°.92E±0°.06, h28^{km}±6^{km}, mb4.4/14, Error ellipse: s-maj=9.5km s-min=5.3km az=119.0*
IDC ***05*** *12:25:00.8±1.7, 8°.10S×124°.90E, h47^{km}±18^{km}, mb3.9/10, mb1 4.1/12, mb1mx3.9/31, mbtmp4.2/12, ML4.1/2, MS3.2/8, Ms1 3.2/8, ms1mx2.9/42, Error ellipse: s-maj=17.0km s-min=13.2km az=102.0*
ISC 05 12:24:57.6±0.4**, 8°.28S**±0°.04×**124°.95E**±0°.04**, h24**^{km}**, n89, σ2^{s}.17**/93**, mb4.3**/15**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	**Soe**	**1.61**	**205**	P	**Pb**	**12 25 27.1**	**+0.3**
SOEI				S	**Sb**	**12 25 51.7**	**+4.9**
SOEI	**Soe**	**1.61**	**205**		**Pb**	**12 25 25.9**	**-0.9**
SOEI	**Soe**	**1.61**	**205**	P	**Pb**	**12 25 27.1**	**+0.3**
BATI	**Baumata**	**2.30**	**214**	P	**Pb**	**12 25 36.7**	**-1.7**
	106nm,0.3s,baz=57,slow=1.2,SNR=67						
BATI				S	**Sb**	**12 26 07.3**	**+0.9**
	23nm,0.3s,baz=170,slow=23,SNR=10						
BATI	**Baumata**	**2.30**	**214**	P	**Pb**	**12 25 36.8**	**-1.7**
BATI				S	**Sb**	**12 26 08.4**	**+2.0**
MMRI	**Maumere**	**2.71**	**262**	P	**Pn**	**12 25 40.9**	**+1.2**
MMRI				S	**Sb**	**12 26 17.8**	**-0.5**
MMRI	**Maumere**	**2.71**	**262**		**Pn**	**12 25 39.7**	**0.0**
MMRI	**Maumere**	**2.71**	**262**	P	**Pn**	**12 25 42.2**	**+2.5**
EDFI	**Ende, Flores**	**3.26**	**262**	P	**Pn**	**12 25 48.7**	**+1.3**
EDFI				S	**Sn**	**12 26 26.2**	**+0.6**
BASI	**Baing, Sumba**	**4.73**	**246**	P	**Pn**	**12 26 09.7**	**+2.2**
WSI	**Waingapu**	**4.80**	**253**	P	**Pn**	**12 26 10.3**	**+1.8**
BSSI	**Bau Bau, Buton**	**4.91**	**295**	P	**Pn**	**12 26 08.9**	**-1.2**
BSSI				S	**Sn**	**12 27 04.2**	**-2.0**
BKSI	**Bulukumba**	**5.63**	**301**	P	**Pn**	**12 26 18.6**	**-1.3**
	0.1nm17nm,0.5s						
BKSI				S	**Sn**	**12 27 20.8**	**-3.0**
	0.1nm17nm,0.5s						
WBSI	**Waikabubak, Su**	**5.66**	**256**	P	**Pn**	**12 26 21.3**	**+1.0**
SANI	**Sanana**	**6.28**	**9**	P	**Pn**	**12 26 27.1**	**-1.7**
	0.3nm1μm61nm,0.6s						
SANI	**Sanana**	**6.28**	**9**	P	**Pn**	**12 26 28.8**	**0.0**
MSAI	**Masohi**	**6.30**	**39**	P	**Pn**	**12 26 28.5**	**-0.6**
	0.0nm344nm11nm,0.8s						
PLAI	**Plampang**	**7.12**	**265**	P	**Pn**	**12 26 41.7**	**+1.3**
	0.5nm1μm118nm,0.8s						
PLAI				S	**Sn**	**12 28 01.1**	**+0.5**
	0.5nm1μm118nm,0.8s						
PLAI	**Plampang**	**7.12**	**265**	P	**Pn**	**12 26 44.5**	**+4.1**
DRS	**Darwin Rock St**	**7.15**	**126**	P	**Pn**	**12 26 43.5**	**+2.7**
	18nm,0.5s						
TTSI	**Tana Toraja**	**7.29**	**315**	P	**Pn**	**12 26 42.3**	**-0.5**
	0.1nm13nm,0.9s						
LUWI	**Luwuk**	**7.52**	**343**	P	**Pn**	**12 26 44.7**	**-1.1**
	0.4nm5μm79nm,1.1s						
MTN	**Manton Dam**	**7.58**	**127**	Pn	**Pn**	**12 26 47.7**	**+1.1**
MTN	**Manton Dam**	**7.58**	**127**	P	**Pn**	**12 26 48.8**	**+2.1**
	85nm,0.5s						
TWSI	**Taliwang, Sumb**	**8.00**	**266**	P	**Pn**	**12 26 54.2**	**+1.8**
	26nm,0.9s						
LBMI	**Labuha**	**8.01**	**19**	P	**Pn**	**12 26 49.5**	**-3.1**
	0.1nm20nm,1.2s						
APSI	**Ampana**	**8.03**	**336**	P	**Pn**	**12 26 51.8**	**-1.1**
	0.1nm399nm29nm,1.0s						
KNRA	**Kununurra**	**8.24**	**153**	Pn	**Pn**	**12 26 55.7**	**0.0**
KNRA	**Kununurra**	**8.24**	**153**	P	**Pn**	**12 26 55.7**	**0.0**
	77nm,0.8s						
KDU	**Kakadu**	**8.59**	**121**	P	**Pn**	**12 27 02.7**	**+2.1**
	20nm,0.5s						
FAKI	**Fak Fak**	**9.00**	**54**	P	Pn	12 27 11.7	+5.4
FAKI	**Fak Fak**	**9.00**	**54**	Pn	**Pn**	**12 27 07.8**	**+1.5**
FAKI	**Fak Fak**	**9.00**	**54**	P	**Pn**	**12 27 08.4**	**+2.1**
MRSI	**Marisa**	**9.21**	**341**	P	**Pn**	**12 27 08.1**	**-0.9**
	888nm20nm,1.1s						
TNTI	**Ternate**	**9.31**	**15**	P	**Pn**	**12 27 14.1**	**+3.6**
TNTI	**Ternate**	**9.31**	**15**	P	**Pn**	**12 27 14.1**	**+3.6**
	17nm,1.1s						
SIJI	**Sorong**	**9.68**	**41**	P	**Pn**	**12 27 15.9**	**+0.3**
	0.7nm,0.3s,baz=135,slow=2.4,SNR=8.5						
SIJI				LR	LR	12 31 06.4	
	comp=Z,172nm,19.4s,baz=157,slow=38						
SWI	**Sorong**	**9.69**	**41**	P	**Pn**	**12 27 14.8**	**-0.8**
	30nm,1.0s						
FITZ	**Fitzroy Crossi**	**9.78**	**176**	P	**Pn**	**12 27 15.7**	**-1.2**
	1.2nm,0.3s,baz=358,slow=11,SNR=28						
FITZ				S	**Sn**	**12 29 00.6**	**-5.4**
	3.6nm,0.3s,baz=36,slow=2.1,SNR=14						
FITZ				LR	LR	12 31 49.2	
	comp=Z,65nm,21.1s,baz=339,slow=41						
FITZ	**Fitzroy Crossi**	**9.78**	**176**	Pn	**Pn**	**12 27 15.9**	**-1.0**
FITZ	**Fitzroy Crossi**	**9.78**	**176**	P	**Pn**	**12 27 16.9**	**0.0**
	29nm,0.8s						
MPSI	**Mapaga**	**9.94**	**329**	P	**Pn**	**12 27 17.4**	**-1.7**
	7.8nm,0.8s						
TOLI2	**Tolitoli**	**10.22**	**336**	Pn	**Pn**	**12 27 23.4**	**+0.5**
PCJI	**Pacitan**	**13.64**	**269**	P	**Pn**	**12 28 09.8**	**+0.1**
	60nm,1.6s						
PSA00	**Pilbara Seismi**	**14.10**	**200**	Pn	**Pn**	**12 28 16.0**	**0.0**
WB0	**Warramunga Arr**	**14.62**	**142**	Pn	**Pn**	**12 28 20.2**	**-3.0**
WRA	**Warramunga Arr**	**14.73**	**143**	P	**Pn**	**12 28 20.1**	**-4.4**
	1.1nm,0.3s,baz=319,slow=13,SNR=32						
WRA				S	Sn	12 30 56.9	-10
	1.0nm,0.3s,baz=316,slow=24,SNR=3.2						
WRA				LR	LR	12 35 04.1	
	comp=Z,90nm,20.0s,baz=315,slow=40						
WRA	**Warramunga Arr**	**14.73**	**143**	Pn	**Pn**	**12 28 20.9**	**-3.6**
WRAB	**Tennant Creek**	**14.73**	**143**	Pn	**Pn**	**12 28 20.6**	**-4.0**
WB2	**Warramunga Arr**	**14.73**	**143**	Pn	**Pn**	**12 28 21.2**	**-3.5**
WR0	**Warramunga Arr**	**14.86**	**142**	Pn	**Pn**	**12 28 22.6**	**-3.8**
DAV	**Davao City (W)**	**15.27**	**2**	LR	LR	12 36 29.9	
	comp=Z,67nm,18.5s,baz=151,slow=46						
KPJI	**Karang Pucung**	**15.90**	**272**	P	**Pn**	**12 28 39.6**	**-0.5**
	20nm,0.9s						
LEM	**Lembang**	**17.25**	**274**	LR	LR	12 37 50.7	
	comp=Z,138nm,19.4s,baz=52,slow=45						
AS31	**Alice Springs**	**17.54**	**152**		**Pn**	**12 28 58.7**	**-2.0**
ASAR	**Alice Springs**	**17.54**	**152**	P	**Pn**	**12 28 58.1**	**-2.5**
	0.7nm,0.3s,baz=322,slow=11,SNR=49						
ASAR				S	**Sn**	**12 32 06.8**	**-8.6**
	0.7nm,0.3s,baz=310,slow=17,SNR=8.7						
ASAR				LR	LR	12 36 37.4	
	comp=Z,123nm,21.9s,baz=321,slow=39						
ASAR	**Alice Springs**	**17.54**	**152**		**Pn**	**12 28 58.8**	**-1.9**
CNJI	**Cibinong**	**17.69**	**272**	P	**Pn**	**12 29 00.7**	**-1.9**
	74nm,1.2s						
COEN	**Coen**	**18.74**	**109**	P	**Pn**	**12 29 15.4**	**0.0**
COEN				IAmb	IAmb	12 29 18.5	
	comp=Z,13nm,0.8s						
PPBI	**Pangkal Pinang**	**19.69**	**287**	P	**Pn**	**12 29 29.7**	**+2.8**
MDSI	**Maura Dua**	**20.99**	**279**	P	**P**	**12 29 40.7**	**+1.3**
	comp=Z,4.0nm,1.0s						
DSRI	**Dabo**	**21.73**	**290**	P	**P**	**12 29 47.8**	**+0.3**
	comp=Z,7.6nm,0.7s						
PMG	**Port Moresby**	**21.97**	**95**	P	**P**	**12 29 52.9**	**+2.9**
	comp=Z,29nm,0.8s,baz=327,slow=5.5,SNR=6.8						
MORW	**Morawa**	**22.31**	**201**	P	**P**	**12 29 53.5**	**-0.1**
FORT	**Forrest**	**22.57**	**173**	P	**P**	**12 29 56.1**	**-0.2**
CTA	**Charters Tower**	**23.71**	**122**	P	**P**	**12 30 09.1**	**+1.0**
	comp=Z,12nm,1.1s,baz=302,slow=12,SNR=10						
BBOO	**Buckleboo**	**26.49**	**159**	P	**P**	**12 30 33.6**	**+0.4**
BBOO				IAmb	IAmb	12 30 58.9	
	comp=Z,14nm,1.1s						
STKA	**Stephens Creek**	**28.12**	**149**	P	**P**	**12 30 50.5**	**+2.7**
	comp=Z,2.2nm,0.6s,baz=326,slow=9.6,SNR=7.1						
STKA				LR	LR	12 42 52.7	
	comp=Z,53nm,21.6s,baz=311,slow=38						
STKA	**Stephens Creek**	**28.12**	**149**	P	**P**	**12 30 48.6**	**+0.7**
GUMO	**Guam**	**29.38**	**42**	LR	LR	12 42 10.4	
	comp=Z,22nm,20.7s,baz=131,slow=35						
YULB	**Yu-li**	**31.68**	**354**	P	**P**	**12 31 17.6**	**-1.8**
CMAR	**Chiang Mai Arr**	**36.94**	**316**	P	**P**	**12 32 05.4**	**+0.3**
	comp=Z,0.7nm,0.4s,baz=139,slow=6.4,SNR=10						
SANVU	**Saraoutou**	**41.90**	**104**	P	**P**	**12 32 45.9**	**-0.6**
PINNC	**Pines Island,**	**43.19**	**114**	P	**P**	**12 32 57.8**	**+0.8**
MARNC	**Mare, Loyalty**	**43.50**	**112**	P	**P**	**12 33 00.5**	**+1.0**
MJAR	**Matsushiro Arr**	**46.29**	**15**	P	**P**	**12 33 20.2**	**-1.3**
	comp=Z,2.8nm,0.9s,baz=181,slow=8.5,SNR=5.8						
SONM	**Songino Array**	**58.24**	**345**	P	**P**	**12 34 49.5**	**-0.7**
	comp=Z,0.9nm,0.7s,baz=162,slow=9.3,SNR=5.3						
MK31	**Makanchi Array**	**66.67**	**330**	P	**P**	**12 35 47.4**	**+0.9**
MK31				IAmb	IAmb	12 35 51.8	
	comp=Z,3.4nm,0.8s						
MKAR	**Makanchi Array**	**66.67**	**330**	P	**P**	**12 35 45.6**	**-0.9**
	comp=Z,1.0nm,0.4s,baz=129,slow=6.1,SNR=18						
ZAA0	**Zalesovo Array**	**70.62**	**336**		**P**	**12 36 10.1**	**-0.8**
ZAA0				IAmb	IAmb	12 36 15.5	
	comp=Z,2.4nm,0.8s						
ZALV	**Zalesovo Beam**	**70.62**	**336**	P	**P**	**12 36 09.1**	**-1.8**
	comp=Z,2.6nm,0.8s,baz=114,slow=3.7,SNR=6.6						
ZALV	**Zalesovo Beam**	**70.62**	**336**		**P**	**12 36 08.6**	**-2.3**
KURK	**Kurchatov**	**71.10**	**331**	P	**P**	**12 36 12.6**	**-1.3**
KURK				IAmb	IAmb	12 36 18.9	
	comp=Z,3.7nm,0.8s						
VNDA	**Vanda**	**71.83**	**172**	P	**P**	**12 36 20.2**	**+2.3**
	comp=Z,0.7nm,0.7s,baz=308,slow=9.4,SNR=2.6						
VNDA	**Vanda**	**71.83**	**172**	IAmb	IAmb	12 36 24.1	
	comp=Z,3.2nm,1.2s						
MAW	**Mawson**	**71.95**	**201**	P	**P**	**12 36 19.5**	**+0.7**
	comp=Z,1.9nm,0.6s,baz=86,slow=4.7,SNR=11						
MAW	**Mawson**	**71.95**	**201**	IAmb	IAmb	12 36 20.4	
	comp=Z,0.6nm,0.7s						
TORD	**Torodi Ar. Bea**	**124.13**	**280**	PKP	**PKPdf**	**12 43 54.2**	**-1.0**
	comp=Z,0.2nm,0.6s,baz=103,slow=2.0,SNR=1.9						
CPUP	**Villa Florida**	**145.52**	**176**	PKPbc	**PKPab**	**12 44 35.1**	**+0.2**
	comp=Z,2.4nm,0.9s,baz=59,slow=7.9,SNR=3.8						

MIRAS ***05*** *12:29:28.0±0.0, 54°.48N×59°.41E, h0^{km}, ML2.6/3*
NNC ***05*** *12:29:33.5±2.9, 54°.02N×61°.00E, h0^{km}, mb3.2, mpv2.8, Error ellipse: s-maj=30.4km s-min=7.7km az=145.0, Suspected Mining explosion.*
ISC 05 12:29:27.6±0.9**, 54°.51N**±0°.04×**59°.4E**±0°.1**, h0**^{km}**, n6, σ1^{s}.71**/11**, 5C-3D, Ural Mountains region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARU	**Arti**	**1.98**	**346**	P	**Pn**	**12 30 02.2**	**-0.2**
	32nm,0.5s,baz=345						
ARU				S	**Sb**	**12 30 28.8**	**-0.9**
	baz=345						
KAUR	**Kamensk Uralsk**	**2.26**	**31**	*e*P	**Pn**	**12 30 06.2**	**0.0**
	149nm,0.6s,baz=29						
KAUR				*e*S	**Sn**	**12 30 36.0**	**+1.3**
	baz=29						
SVE	**Sverdlovsk**	**2.42**	**16**	P	**Pb**	**12 30 12.7**	**+0.7**
	47nm,0.3s,baz=14						
SVE				S	**Sg**	**12 30 44.3**	**-1.0**
	baz=14						
AKTO	**Aktyubinsk**	**4.17**	**192**	⇓Pg	**Pg**	**12 30 47.4**	**-0.2**
	2.4nm,0.8s						
AKTO				⇓Sn	**Sn**	**12 31 24.8**	**+2.8**
	2.2nm,0.5s						
AKTO				⇑Lg	Lg	12 31 40.0	
	7.4nm,0.6s						
AB31	**Akbulak array**	**5.28**	**176**	Pn	**Pn**	**12 30 47.3**	**-0.3**
	0.4nm,0.7s,baz=90,slow=39,SNR=6.8						
AB31				⇑Pg	**Pb**	**12 31 01.6**	**+1.0**
	0.4nm,0.5s,baz=9.0,slow=14,SNR=4.8						
AB31				⇓Sn	**Sn**	**12 31 45.9**	**-3.2**
	1.1nm,0.5s						
AB31				⇑Lg	Lg	12 32 08.1	
	3.0nm,0.5s,baz=12,slow=28,SNR=12						
BRVK	**Borovoye**	**6.60**	**98**	⇑Pn	Pn	12 30 59.8	-6.0
	4.2nm,1.4s						
BRVK				⇑Sn	Sn	12 32 03.4	-18
	0.8nm,0.5s						

IASPEI ***05*** *12:29:36.6±0.8, 40°.38N±0°.02×27°.41E±0°.02, h15^{km}±6^{km}, Error ellipse: s-maj=3.0km s-min=2.7km az=4.5, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*
SOF ***05*** *12:29:36.4, 40°.42N×27°.27E, h5^{km}, MD3.9*
DDA ***05*** *12:29:36.7, 40°.35N×27°.40E, h9^{km}±1^{km}, MW3.7*
ISK ***05*** *12:29:36.5, 40°.35N×27°.40E, h14^{km}, ML3.8/51*
CFUSG ***05*** *12:29:41.6, 40°.65N×27°.82E, h15^{km}, mb3.2/3, MD3.4/2, Sea of Marmara Magtype MSH 2.9 from 2 stations*
ISC 05 12:29:36.6±0.8**, 40°.39N**±0°.02×**27°.41E**±0°.02**, h16**^{km}±6^{km}**, n116, σ1^{s}.29**/138**, 13C-11D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRBG	**Karabiga-Canak**	**0.08**	**271**	PG	**Pg**	**12 29 39.7**	**-0.1**
KRBG				SG	**Sg**	**12 29 41.6**	**-0.3**
MRMT	**Marmara Adasi**	**0.26**	**34**	PG	**Pb**	**12 29 42.9**	**-0.1**
MRMT				SG	**Sb**	**12 29 47.4**	**+0.2**
MAR6	**Marsite Statio**	**0.33**	**341**	PG	**Pb**	**12 29 44.7**	**+0.5**
MAR6				SG	**Sb**	**12 29 50.2**	**+0.9**
MAR2	**Marsite Statio**	**0.33**	**347**	PG	**Pb**	**12 29 44.8**	**+0.6**
MAR2				SG	**Sb**	**12 29 50.2**	**+0.8**
RKY	**Sarkoy-Tekirda**	**0.34**	**329**	PG	**Pb**	**12 29 44.7**	**+0.2**
RKY				SG	**Sb**	**12 29 50.0**	**+0.3**
SART	**Tekirdag**	**0.34**	**330**	*i* P	**Pb**	**12 29 44.6**	**+0.2**
SART				*i* S	**Sb**	**12 29 49.7**	**-0.1**
EDC	**Edincik**	**0.35**	**97**	PG	**Pg**	**12 29 44.0**	**+0.1**
EDC				SG	**Sg**	**12 29 49.4**	**+0.6**
MAR3	**Marsite Statio**	**0.36**	**346**	PG	**Pb**	**12 29 45.3**	**+0.6**
MAR3				SG	**Sb**	**12 29 51.0**	**+0.8**
MAR4	**Marsite Statio**	**0.40**	**348**	PG	**Pb**	**12 29 45.9**	**+0.4**
MAR4				SG	**Sb**	**12 29 52.1**	**+0.6**
GONE	**Gonen-Balikesi**	**0.41**	**148**	PG	**Pg**	**12 29 44.9**	**+0.1**
LPK	**Lapseki**	**0.49**	**268**	PG	**Pg**	**12 29 46.8**	**+0.3**
LPK				SG	**Sb**	**12 29 53.9**	**-0.1**
BALY	**Balya**	**0.67**	**166**	*i* P	**Pg**	**12 29 49.4**	**-0.4**
BALY				*i* S	**Sg**	**12 29 58.1**	**-0.6**
KESN	**Edirne-Kesan**	**0.70**	**308**	*i* P	**Pb**	**12 29 50.7**	**-0.1**
GELI	**Tayfur-Gelibol**	**0.71**	**271**	PG	**Pg**	**12 29 50.6**	**0.0**
ERIK	**Erikli-Kesan**	**0.74**	**293**	PG	**Pb**	**12 29 51.2**	**+0.1**
ERIK				SG	**Sb**	**12 30 01.5**	**+0.5**
KCTX	**Karacabey (Bur**	**0.74**	**100**	PG	**Pg**	**12 29 50.6**	**-0.4**
CRLT	**Corlu**	**0.78**	**19**	PG	**Pn**	**12 29 52.8**	**-0.2**
BALB	**Balikesir**	**0.83**	**154**	PG	**Pg**	**12 29 52.2**	**-0.6**
BUHA	**Balikesir, Bur**	**0.93**	**196**	*i* P	**Pb**	**12 29 53.8**	**-0.5**
UKOP	**Uzunkopru-Edir**	**0.94**	**322**	PG	**Pn**	**12 29 55.8**	**+0.5**
ENZZ	**Sultanice-Enez**	**0.99**	**283**	PG	**Pn**	**12 29 56.5**	**+0.6**
CAVK	**Edirne/Enez-Ca**	**0.99**	**288**	*i* P	**Pg**	**12 29 55.6**	**-0.2**
CAVK				*i* S	**Sg**	**12 30 09.1**	**+0.3**
CAVK				IAML		12 30 12.0	
	comp=N,3μm,0.6s						
CAVK				IAML		12 30 13.0	
	comp=E,2μm,0.3s						
ECEA	**Canakkale, Ece**	**1.01**	**250**	*i* P	**Pb**	**12 29 55.4**	**-0.2**
ENEZ	**Enez**	**1.02**	**290**	PG	**Pg**	**12 29 56.2**	**-0.1**
SLVT	**Silivri**	**1.04**	**36**	PG	**Pn**	**12 29 56.6**	**0.0**
STEP	**BALIKESIR_Sava**	**1.04**	**167**	*i* P	**Pb**	**12 29 55.9**	**-0.5**
ELBA	**Catalca**	**1.08**	**46**	*i* P	**Pn**	**12 29 57.5**	**+0.2**
ELBA				*i* S	**Sn**	**12 30 12.2**	**+0.2**
ELBA				IAML		12 30 13.0	
	comp=E,416nm,0.7s						
ELBA				IAML		12 30 17.0	
	comp=N,312nm,0.4s						
MDNY	**Mudanya-Bursa**	**1.13**	**91**	PN	**Pb**	**12 29 58.0**	**+0.2**
DURS	**Dursunbey**	**1.14**	**134**	*i* P	**Pb**	**12 29 57.7**	**-0.4**
ALN	**Alexandroupoli**	**1.15**	**296**	PN	**Pg**	**12 29 58.6**	**-0.3**
GOKC	**Gokceada-Canak**	**1.16**	**261**	PN	**Pb**	**12 29 58.3**	**+0.1**
AVCI	**Avcilar-stanb**	**1.17**	**58**	PN	**Pg**	**12 29 59.3**	**+0.1**
GADA	**Gvkgeada**	**1.17**	**261**	PN	**Pn**	**12 29 58.4**	**0.0**
BOZC	**Bozcaada**	**1.18**	**243**	*i* P	**Pn**	**12 29 58.3**	**-0.1**
BOZC				*i* S	**Sb**	**12 30 14.2**	**+0.6**
BOZC				IAML		12 30 16.0	
	comp=E,5μm,0.5s						
BOZC				IAML		12 30 17.0	
	comp=N,5μm,0.3s						
BOZC	**Bozcaada**	**1.18**	**243**	PN	**Pn**	**12 29 58.4**	**-0.1**
ORLT	**Orhaneli**	**1.19**	**106**	PN	**Pb**	**12 29 59.5**	**+0.6**
AYVA	**Ayvalik**	**1.22**	**207**	*i* P	**Pn**	**12 29 59.2**	**+0.2**
AYVA				*i* S	**Sb**	**12 30 15.3**	**+0.6**
AYVA				IAML		12 30 16.0	
	comp=E,2μm,0.3s						
AYVA				IAML		12 30 18.0	
	comp=N,3μm,0.3s						
DST	**Dursunbey**	**1.22**	**130**	PN	**Pn**	**12 29 59.3**	**+0.2**
VIZE	**Kirklareli, Vi**	**1.23**	**15**	*i* P	**Pg**	**12 29 59.8**	**-0.5**
VIZE				*i* S	**Sg**	**12 30 15.8**	**-0.6**
VIZE				IAML		12 30 16.0	
	comp=N,2μm,0.4s						
VIZE				IAML		12 30 18.0	
	comp=E,714nm,0.7s						
PHSR	**Pinarhisar**	**1.24**	**4**	PN	**Pg**	**12 30 00.2**	**-0.4**
CTYL	**Yalikoy Yolu**	**1.27**	**31**	PN	**Pb**	**12 30 00.2**	**0.0**
KIYI	**Yalıkoy-Catalc**	**1.28**	**31**	PN	**Pg**	**12 30 00.9**	**-0.5**
BGKT	**Bogazkoy**	**1.30**	**52**	PN	**Pb**	**12 30 00.8**	**0.0**
KOCA	**Canakkale, Ayv**	**1.32**	**228**	*i* P	**Pn**	**12 30 00.6**	**+0.2**
KOCA				*i* S	**Sb**	**12 30 16.5**	**-1.2**
KOCA				IAML		12 30 20.0	
	comp=E,3μm,0.3s						
ULDT	**Uludag**	**1.35**	**100**	*i* P	**Pb**	**12 30 01.8**	**+0.2**
ULDT				*i* S	**Sg**	**12 30 20.7**	**+0.6**
ULDT				IAML		12 30 22.0	
	comp=N,889nm,0.7s						
ULDT				IAML		12 30 23.0	
	comp=E,2μm,0.6s						
GPNR	**Gulpinar-Canak**	**1.35**	**227**	PN	**Pn**	**12 30 00.7**	**-0.2**
GEMT	**Gemlik**	**1.36**	**88**	PN	**Pn**	**12 30 01.6**	**+0.6**
TRML	**Termal-Yalova**	**1.36**	**80**	PN	**Pn**	**12 30 01.4**	**+0.3**
DKL	**Dikili**	**1.37**	**197**	PN	**Pn**	**12 30 01.5**	**+0.3**
KIRK	**Kırklareli**	**1.41**	**351**	*i* P	**Pb**	**12 30 02.2**	**-0.4**
KIRK				*i* S	**Sb**	**12 30 19.9**	**-0.4**
KIRK				IAML		12 30 22.0	
	comp=N,219nm,0.4s						
KIRK				IAML		12 30 22.0	
	comp=E,216nm,0.5s						
ISK	**Istanbul-Kandi**	**1.42**	**61**	PN	**Pn**	**12 30 02.0**	**+0.1**
KAVV	**Kandilli-Istan**	**1.42**	**61**	PN	**Pn**	**12 30 02.3**	**+0.4**
ZEDA	**zmir-Bergama**	**1.45**	**190**	*i* P	**Pn**	**12 30 02.8**	**+0.6**
ZEDA				IAML		12 30 22.0	
	comp=N,2μm,0.5s						
ZEDA				*i* S	**Sn**	**12 30 22.2**	**+1.4**
ZEDA				IAML		12 30 23.0	
	comp=E,1μm,0.7s						
ARMN	**Kirklareli, Me**	**1.47**	**1**	*i* P	**Pb**	**12 30 03.5**	**-0.2**
ARMN				*i* S	**Sb**	**12 30 22.2**	**+0.1**
ARMN				IAML		12 30 24.0	
	comp=N,506nm,0.6s						
ARMN				IAML		12 30 24.0	
	comp=E,617nm,0.7s						
CAND	**Candarli**	**1.51**	**198**	PN	**Pn**	**12 30 03.8**	**+0.7**
YLV	**Yalova**	**1.51**	**83**	PN	**Pn**	**12 30 03.9**	**+0.8**
KLYT	**Kilyos**	**1.51**	**55**	PN	**Pb**	**12 30 03.8**	**-0.5**
EDRB	**Edirne**	**1.54**	**341**	PN	**Pb**	**12 30 04.4**	**-0.4**
AKHS	**Akhisar**	**1.54**	**168**	*i* P	**Pn**	**12 30 03.8**	**+0.2**
AKHS				*i* S	**Sn**	**12 30 23.8**	**+0.5**
AKHS				IAML		12 30 27.0	
	comp=E,411nm,0.6s						
AKS	**Akhisar**	**1.54**	**168**	PN	**Pn**	**12 30 03.7**	**+0.2**
RDO	**Rodhopi**	**1.61**	**299**	PN	**Pb**	**12 30 05.7**	**-0.3**
SMAA	**Simav-Kutahya**	**1.77**	**136**	PN	**Pn**	**12 30 07.9**	**+1.2**
HRT	**Hereke**	**1.77**	**75**	PN	**Pn**	**12 30 06.9**	**+0.2**

ADVT	Abdulvahap	1.78	88	PN	Pn	12 30 07.9	+1.1
SIMA	Simav-Kutahya	1.78	137	PN	Pn	12 30 07.6	+0.7
TVSB	Tavsanli	1.84	120	PN	Pn	12 30 08.7	+1.0
SILT	Sile	1.86	65	PN	Pn	12 30 08.6	+0.7
CAVI	Cavuskoy	1.87	95	PN	Pn	12 30 08.9	+0.8
BILE	Bilecik/Merkez	1.90	96	*i* P	Pn	12 30 10.0	+1.4
BILE				*i* S	Sg	12 30 37.9	0.0
SHAP	Saphane-Kutahy	1.96	134	PN	Pn	12 30 09.9	+0.6
KDZ	Kurdzhali	1.96	310	P	Pb	12 30 10.8	-1.2
BLCB	Balcova	2.02	188	PN	Pn	12 30 10.6	+0.5
GEDZ	Gediz	2.05	130	PN	Pn	12 30 11.2	+0.6
AUBOZ	BOZOYUK	2.07	103	PN	Pn	12 30 11.7	+0.9
KULA	Kula-Manisa	2.11	152	PN	Pn	12 30 12.2	+0.8
JMB	Yambol	2.16	344	P	Pb	12 30 14.8	-0.7
DIM	Dimitrovgrad	2.18	320	P	Pn	12 30 13.4	+1.1
RZN	Rozhen	2.41	303	*i* P	Pn	12 30 16.9	+1.2
PLD	Plovdiv	2.66	311	*i* P	Pn	12 30 20.3	+1.4
PRD	Provadia	2.81	360	P	Pn	12 30 23.0	+2.1
MMB	Musomiste	3.03	294	*i* P	Pn	12 30 25.1	+1.1
KALB	Balgarevo	3.10	14	⇑P	Pg	12 30 34.6	-1.5
PVL	Pavlikeni	3.22	332	P	Pn	12 30 28.6	+2.0
PGB	Panagyurishte	3.25	313	P	Pn	12 30 28.4	+1.3
KKB	Krupnik	3.58	296	P	Pn	12 30 32.9	+1.3
APE	Apeiranthos	3.63	204	⇑P	Pg	12 30 51.3	+5.1
VAY	Valandovo	3.78	286	*i* Pn	Pn	12 30 35.3	+0.9
VTS	Vitosha	3.84	307	⇓P	Pn	12 30 34.7	-0.6
VTS	Vitosha	3.84	307	P	Pn	12 30 36.7	+1.4
MPEP	Malo Peshtene	4.03	318	P	Pn	12 30 39.4	+1.6
COPA	Copaceanca	4.08	337	⇑P	Pn	12 30 39.5	+1.1
TIRR	Tirgusor	4.13	10	⇑P	Pb	12 30 46.7	-2.3
STIP	Stip	4.16	290	*i* Pn	Pn	12 30 38.9	-0.6
ANTO	Ankara	4.16	95	⇑P	Pg	12 31 05.4	+9.1
HARR	Harsova	4.31	5	⇓P	Pb	12 30 49.1	-3.0
TPGR	Topolog	4.52	9	⇓P	Pb	12 30 51.9	-3.8
CFR	Carcaliu	4.81	6	⇓P	Pb	12 30 55.1	-5.5
BISRR	Bisoca	5.18	355	⇓P	Pn	12 30 58.2	+4.7
MLR	Muntele Rosu	5.21	349	⇓P	Pn	12 30 57.9	+3.8
VOIR		5.33	342	⇑P	Pn	12 30 58.4	+2.7
BOVS	Bovan	5.34	309	⇓P	Pn	12 30 55.1	-0.6
PLOR	Plostina	5.49	354	⇑P	Pn	12 31 01.7	+4.0
VRI	Vrincioaia	5.50	355	⇓P	Pn	12 31 02.9	+5.1
COVR	Voineasa-Covas	5.52	351	⇑P	Pn	12 31 02.1	+3.9
DOPR	Dopca	5.76	346	⇑P	Pn	12 31 04.5	+2.9
HERR	Herculane	5.80	322	⇑P	Pn	12 31 02.7	+0.6
OZUR		5.82	349	⇑P	Pn	12 31 05.8	+3.5
GZR	Gura Zlata	6.04	327	⇓P	Pn	12 31 05.9	+0.4
MDVR	Moldovita	6.07	318	⇓P	Pn	12 31 06.1	+0.3
SEV	Sevastopol'	6.22	46	*e*P	Pn	12 31 08.0	+0.3
SEV				Pm		12 31 22.7	
	comp=Z,7.0nm,0.5s						
SEV				*e*S	Sn	12 32 15.0	-3.4
SEV				Sm		12 32 20.0	
	comp=N,8.0nm,0.5s						
SEV				Sm		12 32 20.0	
	comp=E,10.0nm,0.5s						
ALU	Alushta	6.71	48	*e*P	Pn	12 31 14.7	+0.2
ALU				Pm		12 31 34.1	
	comp=Z,11nm,0.2s						
BZS	Buzias	6.73	323	⇑P	Pn	12 31 15.3	+0.5
SUDU	Sudak	7.18	49	*e*P	Pn	12 31 23.9	+3.0
SUDU				Pm		12 31 37.6	
	comp=Z,13nm,0.5s						
SUDU				*e*S	Sn	12 32 41.7	-0.4
SUDU				Sm		12 32 48.6	
	comp=N,16nm,0.6s						
SUDU				Sm		12 32 48.6	
	comp=E,11nm,0.6s						
BURAR	Bucovina Array	7.39	348	⇓P	Pn	12 31 28.3	+4.3
MORH	Mrgy, Hungar	8.64	315	⇑P	Pn	12 31 41.1	+0.2
MORH	Mrgy, Hungar	8.64	315	*e*P	Pn	12 31 42.1	+1.2

NNC 05 12:38:40.0±11.0**, 36°.85N×70°.00E, h0^{km}, mb4.2, mpv3.8, 3C-2D, Error ellipse: s-maj=94.5km s-min=88.3km az=40.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	5.99	27	P	Pn	12 40 11.1	+0.7
	SNR=44						
KK31	Karatay Array	6.25	3	⇑Pn	Pn	12 40 15.9	+2.3
	1.7nm,0.4s,baz=189,slow=13,SNR=26						
KK31				⇑Sn	Sn	12 41 28.1	+2.3
	4.1nm,0.5s,baz=188,slow=24,SNR=16						
UCH	Uchtor	6.40	32	P	Pn	12 40 15.8	-0.2
	SNR=16						
EKS2	Erkin-Say	6.49	25	P	Pn	12 40 18.2	+1.3
	SNR=13						
AAK	Ala-Archa	6.73	30	P	Pn	12 40 20.3	0.0
	SNR=7.7						
AAK	Ala-Archa	6.73	30	⇑Pn	Pn	12 40 19.8	-0.5
	4.0nm,0.6s						
AAK				⇓Sn	Sn	12 41 36.9	-0.9
	8.8nm,0.7s						
KBK	Karagaybulak	6.93	32	P	Pn	12 40 22.4	-0.7
	SNR=5.9						
TKM2	Tokmak 2	7.43	34	P	Pn	12 40 28.7	-1.2
	SNR=6.7						
TKM2	Tokmak 2	7.43	34	⇓Pn	Pn	12 40 28.6	-1.3
	14nm,1.0s						

*TAP **05** 12:43:22.0, 24°.83N×122°.04E, h4^{km}, ML3.1, C*

*JMA **05** 12:43:22.5±0.1, 24°.80N×122°.05E, h0^{km}, M2.6*

ISC 05 12:43:22.2±0.9**, 24°.86N**±0°.02×**122°.07E**±0°.02**, h13**^{km}±7^{km}**, n69, σ0^{s}.58**/124**, 5D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWB1	Santiao Chiao	0.17	334	⇓*e*P	Pb	12 43 26.5	-0.7
	baz=347						
TWB1				S	Sg	12 43 29.7	+0.9
	baz=347						
NTC	Toucheng	0.22	269	*i* P	Pb	12 43 27.2	-0.8
	baz=277						
NTC				*i* S	Sg	12 43 30.5	+0.3
	baz=277						
TIPB	Shuangxi	0.25	297	⇓*i*P	Pb	12 43 28.0	-0.6
	baz=306						
TIPB				*i* S	Sb	12 43 31.9	-0.9
	baz=306						
ILA	Ilan	0.31	252	P	Pb	12 43 28.7	-0.8
	baz=255						
ILA				S	Sg	12 43 33.0	+0.3
	baz=255						
TWC	Suao	0.32	219	⇓*i*P	Pg	12 43 28.4	-0.3
	baz=216						
TWC				*i* S	Sg	12 43 32.5	-0.6
	baz=216						
NWF	Wu-fen Shan	0.34	309	P	Pb	12 43 29.9	-0.2
	baz=315						
NWF				S	Sb	12 43 35.8	+0.4
	baz=315						
TWE	Neicheng	0.39	249	⇓*i*P	Pg	12 43 30.0	-0.1
	baz=250						
TWE				*i* S	Sg	12 43 35.4	+0.1
	baz=250						
NDS	Dongshan	0.39	235	P	Pg	12 43 29.9	-0.2
	baz=236						
NDS				S	Sb	12 43 36.0	-1.0
	baz=236						
TWA	Mucha	0.46	285	*i* P	Pb	12 43 32.0	-0.2
	baz=289						
TWA				*i* S	Sb	12 43 38.8	0.0
	baz=289						
EWUT	Wuta	0.49	213	*e*P	Pb	12 43 32.4	-0.3
	baz=211						
EWUT				S	Sb	12 43 40.0	+0.3
	baz=211						
NHDH	Xindian Distri	0.51	282	P	Pb	12 43 32.7	-0.2
	baz=285						
NHDH				S	Sb	12 43 40.7	+0.5
	baz=285						
ENTT	Nioudou	0.51	245	P	Pg	12 43 32.1	-0.1
	baz=245						
ENTT				*e*S	Sb	12 43 40.3	0.0
	baz=245						
NWLT	Wulai	0.52	261	P	Pg	12 43 32.5	0.0
	baz=263						
NWLT				*e*S	Sb	12 43 41.2	+0.5
	baz=263						
ENA	Nanau	0.52	215	P	Pb	12 43 32.8	-0.4
	baz=213						
ENA				S	Sb	12 43 41.0	+0.3
	baz=213						
YM01	YM01	0.54	302	⇓P	Pb	12 43 33.9	+0.4
	baz=306						
YM01				S	Sb	12 43 41.2	0.0
	baz=306						
TAP	Taipei	0.54	289	*e*P	Pb	12 43 33.9	+0.3
	baz=293						
TAP				S	Sb	12 43 41.7	+0.4
	baz=293						
NDT	Datong Townshi	0.57	243	*i* P	Pb	12 43 33.4	-0.6
	baz=244						
NDT				S	Sb	12 43 42.9	+0.9
	baz=244						
TWY	Chenhua	0.59	314	P	Pn	12 43 35.2	-1.1
	baz=318						
TWY				S	Sb	12 43 43.0	+0.2
	baz=318						
ANP	Anpu	0.59	303	P	Pb	12 43 35.1	+0.5
	baz=307						
ANP				S	Sb	12 43 44.1	+1.1
	baz=307						
EHP	Heping Village	0.62	209	*e*S	Sb	12 43 44.8	+1.1
	baz=206						
TWS1	Kuangyinshan	0.64	292	P	Pn	12 43 36.1	-0.8
	baz=295						
TWS1				S	Sb	12 43 45.0	+1.0
	baz=295						
YHNB	Yeheng	0.66	253	P	Pg	12 43 34.7	-0.3
	baz=255						
YHNB				*e*S	Sb	12 43 45.1	+0.4
	baz=255						
NSK	Sanguang	0.67	254	P	Pg	12 43 35.0	-0.4
	baz=255						
NSK				S	Sb	12 43 46.0	+0.9
	baz=255						
NNSB	Datong	0.76	236	P	Pg	12 43 36.4	-0.6
	baz=236						
NNSB				S	Sn	12 43 49.4	-0.7
	baz=236						
NNS	Nan Shan	0.76	237	*i* P	Pb	12 43 37.1	-0.3
	baz=236						
NNS				*i* S	Sb	12 43 48.4	+0.8
	baz=236						
PCYT	Pengchaiyu	0.77	0	*i* P	Pn	12 43 38.9	+0.1
	baz=2.0						
PCYT				S	Sn	12 43 50.2	0.0
	baz=2.0						
ETL	Fush Village	0.81	210	P	Pb	12 43 38.3	+0.1
	baz=209						
ETL				S	Sb	12 43 49.9	+0.9
	baz=209						
NACB	Ninganchiao	0.81	212	P	Pg	12 43 37.6	-0.3
	baz=211						
NACB				S	Sb	12 43 49.3	+0.3
	baz=211						
NCU	National Centr	0.81	278	*e*P	Pb	12 43 38.1	0.0
	baz=280						
NCU				S	Sn	12 43 50.3	-0.9
	baz=280						
NCUH	Zhongli	0.81	278	*e*P	Pb	12 43 38.1	0.0
	baz=280						
NCUH				*e*S	Sn	12 43 51.0	-0.2
	baz=280						
ETLH	Xiulin Townshi	0.84	220	P	Pb	12 43 38.4	-0.4
	baz=219						
ETLH				S	Sn	12 43 51.3	-0.9
	baz=219						
TWD	Chiawan	0.89	209	*i* P	Pb	12 43 39.6	+0.1
	baz=207						
TWD				S	Sb	12 43 51.6	+0.4
	baz=207						
JYNG	Yonagunijimaku	0.90	117	P	Pn	12 43 40.0	-0.5
JYNG				*e*S	Sn	12 43 52.5	-0.8
YOJ	Yonaguni jima	0.94	115	*e*P	Pb	12 43 40.3	-0.2
	baz=112						
YOJ				*e*S	Sn	12 43 54.8	+0.3
	baz=112						
YOJ	Yonaguni jima	0.94	115	P	Pn	12 43 40.5	-0.7
YOJ				*e*S	Sb	12 43 53.0	+0.1
FUSS	Fushou	0.97	231	*i* P	Pb	12 43 40.9	-0.1
	baz=231						
FUSS				*e*S	Sn	12 43 55.2	-0.3
	baz=231						
HWA	Hwalien	0.97	206	*e*P	Pb	12 43 40.6	-0.3
	baz=204						
HWA				S	Sb	12 43 53.9	+0.1
	baz=204						
LIOB	Emei	0.98	258	P	Pn	12 43 41.3	-0.4
	baz=258						
LIOB				*e*S	Sn	12 43 55.6	+0.2
	baz=258						
NSTT	Nanjuang	1.00	257	P	Pn	12 43 41.5	-0.5
	baz=257						
NSTT				S	Sn	12 43 56.1	+0.3
	baz=257						
HSN	Hsinchu	1.00	267	*e*P	Pg	12 43 40.5	-1.0
	baz=269						
HSN				*e*S	Sb	12 43 54.9	+0.5
	baz=269						
TWT	Tachien	1.01	234	P	Pn	12 43 42.2	-0.1
	baz=234						
TWT				S	Sn	12 43 56.8	+0.3
	baz=234						
WHF	Hehuan Shan	1.02	226	P	Pg	12 43 41.6	-0.4
	baz=225						
WHF				S	Sn	12 43 56.6	-0.4
	baz=225						
TDCB	Techi	1.03	234	*e*P	Pb	12 43 41.9	0.0
	baz=234						
TDCB				*e*S	Sn	12 43 57.2	+0.4
	baz=234						
CHGB	Renai	1.14	226	P	Pn	12 43 44.1	0.0
	baz=225						
CHGB				*e*S	Sn	12 44 00.4	+0.7
	baz=225						
WHP	Taichung City	1.18	241	P	Pg	12 43 44.9	0.0
	baz=241						
WHP				S	Sn	12 44 01.6	+1.2
	baz=241						
ESL	Shilin	1.19	209	P	Pb	12 43 44.1	-0.6
	baz=208						
ESL				S	Sn	12 44 01.8	+1.1
	baz=208						
NMLH	Miaoli	1.21	255	*e*P	Pg	12 43 45.1	-0.3
	baz=255						
NMLH				*e*S	Sn	12 44 02.2	+1.1
	baz=255						
OWD	Renai	1.21	222	*i* P	Pg	12 43 45.7	+0.1
	baz=222						
OWD				S	Sn	12 44 02.4	+1.0
	baz=222						
NSY	Sanyi	1.27	250	*e*P	Pg	12 43 47.0	+0.4
	baz=250						
NSY				*e*S	Sg	12 44 03.8	+0.6
	baz=250						
TWQ1	Liyutan	1.28	247	*e*P	Pg	12 43 47.4	+0.4
	baz=247						
TWQ1				S	Sg	12 44 04.4	+0.7
	baz=247						
EGFH	Guangfu	1.32	206	*e*P	Pg	12 43 47.5	-0.2
	baz=205						
EGFH				*e*S	Sg	12 44 05.1	+0.3
	baz=205						
WCS	Beigang Elemen	1.32	233	*e*P	Pg	12 43 47.4	-0.3
	baz=233						
SMLT	Sun Moon Lake	1.44	228	*e*P	Pb	12 43 48.8	-0.2
	baz=227						
TYC	Yuchr	1.46	230	*e*P	Pg	12 43 49.6	-0.6
	baz=229						
SSLB	Suanglung	1.47	224	*e*P	Pb	12 43 49.3	-0.3
	baz=223						
SSLB				*e*S	Sg	12 44 10.0	+0.2
	baz=223						
HGSD	Ruisui	1.48	204	*e*P	Pb	12 43 49.4	-0.3
	baz=202						
EHY	Hungye	1.51	207	*e*P	Pb	12 43 50.0	-0.1
	baz=206						
IRIF	Iriomote-Funau	1.60	109	P	Pg	12 43 53.5	+0.5
IRIF				*e*S	Sg	12 44 14.1	+0.4
WJS	Zhushan	1.60	230	*e*P	Pg	12 43 52.0	-1.0
	baz=229						
YULB	Yu-li	1.62	206	*e*P	Pb	12 43 51.4	-0.6
	baz=205						
ALS	Alishan	1.77	221	*e*P	Pb	12 43 54.6	-0.1
	baz=220						
JKRS	Kuro-shima	1.87	109	P	Pb	12 43 56.0	-0.3
JKRS				*e*S	Sn	12 44 18.2	+0.8
JIJ	Ishigaki jima	1.95	104	P	Pb	12 43 56.1	-1.5
JIJ				*e*S	Sb	12 44 22.5	+0.6
CHN4	Tsaushan	2.02	222	*e*P	Pb	12 43 58.5	-0.3
	baz=221						
TPUB	Ta-pu	2.04	221	*e*P	Pb	12 43 58.6	-0.5
	baz=220						
STYH	Taoyuan	2.06	215	*e*P	Pn	12 43 57.5	+1.1
	baz=214						
JISG	Ishigakijimahi	2.06	97	P	Pb	12 43 59.5	+0.1
JISG				S	Sb	12 44 24.7	-0.2
WTP	Ta-pu	2.09	220	*e*P	Pb	12 43 58.7	-1.2
	baz=219						
TWK	Hsinying	2.15	223	*e*P	Pb	12 44 00.3	-0.7
	baz=222						

IDC 05 12:43:58.8±55.0**, 15°.76S×171°.22W, h0^{km}, mb4.0**/3**, mb1 4.2**/3**, mb1mx3.7**/37**, mbtmp4.0**/3**, Error ellipse: s-maj=1078.0km s-min=192.5km az=80.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	45.69	241	P	P	12 52 22.5	+0.8
	0.7nm,0.4s,baz=59,slow=8.7,SNR=4.5						
WRA	Warramunga Arr	51.81	257	P	P	12 53 08.5	-0.5
	0.4nm,0.4s,baz=98,slow=6.9,SNR=11						
ASAR	Alice Springs	52.00	252	P	P	12 53 09.9	-0.4
	4.1nm,0.6s,baz=89,slow=7.9,SNR=145						

OTT 05 12:48:10.7±0.9**, 42°.28N×55°.44W, h18^{km}, ML3.7**/3**, Atlantic Ocean. 536km south from Grand Bank, Nl, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GBN	Guysborough	5.39	307	PN	Pn	12 49 30.1	-0.1
GBN				SN	Sn	12 50 27.4	-4.4
GBN				Trac		12 50 36.8	
	comp=Z,1.2nm,0.1s						
DRLN	Deer Lake	7.12	349	PN	Pn	12 49 52.3	-1.6
DRLN				SN	Sn	12 51 09.5	-4.9
DRLN				Trac		12 51 14.2	
	comp=Z,24nm,0.8s						
LMN	Caledonia Moun	7.63	301	PN	Pn	12 49 59.9	-1.1
LMN				SN	Sn	12 51 21.0	-6.0
LMN				Trac		12 51 26.9	
	comp=Z,10nm,0.6s						
ELNB	Elgin, New Bru	7.85	300	SN	Sn	12 51 27.3	-5.1
WCNB	Wards Creek	8.01	298	SN	Sn	12 51 28.9	-7.2
WCNB				SN	Sb	12 51 30.2	-34
WCNB				Trac		12 51 35.1	
	comp=Z,1.2nm,0.1s						
SRNB	Snider Mountai	8.16	299	SN	Sn	12 51 33.6	-6.2

*NORS **05** 12:50:25.9±0.0, 42°.34N×44°.97E, h6^{km}, MPVA3.6*

*MOS **05** 12:50:26.3±0.0, 42°.42N×44°.99E, h17^{km}, MPVA3.5*

*TIF **05** 12:50:27.6, 42°.43N×45°.01E, h21^{km}±2^{km}*

*DRS **05** 12:50:32.4±0.0, 42°.41N×45°.67E, h6^{km}*

ISC 05 12:50:28.1±0.9**, 42°.45N**±0°.02×**44°.98E**±0°.02**, h15**^{km}±8^{km}**, n36, σ1^{s}.23**/71**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNSH	Pansheti	0.33	305	P	Pg	12 50 27.5	-7.5
PNSH				S	Pb	12 50 32.4	-3.5
GUDG	Gudauri	0.38	273	P	Pb	12 50 37.4	+0.7
GUDG				S	Sb	12 50 43.4	+1.0
MTEO	Meteo	0.41	305	P	Pg	12 50 36.8	+0.3
MTEO				S	Sg	12 50 42.5	+0.3
LACR	Lac	0.63	307	*e*Pg	Pg	12 50 40.1	-0.5
LACR				*e*Sg	Sb	12 50 50.8	+1.0
VLKR	Vladikavkaz	0.64	339	*e*Pg	Pb	12 50 41.0	-0.1
VLKR				*i* Sg	Sn	12 50 51.6	-1.1
SEAG	Tbilisi Sea	0.70	191	P	Pg	12 50 39.7	-2.0
SEAG				S	Sg	12 50 50.5	-0.4
ZEI	Tsey	0.87	293	*e*Pg	Pb	12 50 44.8	-0.3
ZEI				*e*Sg	Sn	12 50 57.9	-0.7
ARNR	Ardon	0.89	325	*e*Pg	Pn	12 50 46.3	+0.1
ARNR				*i* Sg	Sn	12 50 59.9	+1.0
KORR	Kora	0.93	314	*e*Pg	Pn	12 50 46.5	-0.2
KORR				*e*Sg	Sn	12 51 00.7	+0.9
BTLR	Botlikh	0.94	76	*e*Pg	Pb	12 50 44.5	-1.6
BTLR				*e*Sg	Sb	12 50 58.1	-0.4
GROC	Groznyy	0.96	38	*e*Pg	Pn	12 50 47.0	-0.1
GROC				*e*Sg	Sn	12 51 01.1	+0.5
LGD	Lagodekhi	1.12	123	P	Pn	12 50 49.0	-0.3
LGD				S	Sn	12 51 04.1	-0.3
DIGR	Digorskoe uzhe	1.13	294	*e*Pg	Pb	12 50 48.9	-0.6
DIGR				*e*Sg	Sn	12 51 05.7	+0.7
ONI	Oni	1.14	278	P	Pb	12 50 49.0	-0.7
ONI				S	Sg	12 51 06.1	+1.0
ONI	Oni	1.14	278	*e*Pg	Pg	12 50 50.1	-0.1
ONI				*e*Sg	Sg	12 51 05.7	+0.6
STDR	Stavd-Durt	1.14	324	*e*Pg	Pg	12 50 50.0	-0.1
STDR				*i* Sg	Sg	12 51 06.5	+1.4
KZRT	Kazreti	1.15	203	P	Pb	12 50 49.2	-0.5
KZRT				S	Sn	12 51 04.7	-0.5
LSNR	Lesken	1.19	315	*e*Pg	Pb	12 50 50.6	+0.1
LSNR				*e*Sg	Sg	12 51 07.3	+0.8
BRNG	Burnasheti	1.19	227	P	Pg	12 50 50.6	-0.6
BRNG				S	Sg	12 51 07.5	+0.8
DMNI	Dmanisi	1.27	208	P	Pn	12 50 51.0	-0.4
DMNI				S	Sg	12 51 08.2	-0.8
XNZR	Khunzakh	1.28	85	*e*Pg	Pn	12 50 51.1	-0.5
XNZR				*e*Sg	Sg	12 51 09.2	-0.2
BKRG	Bakuriani	1.29	238	P	Pn	12 50 51.7	-0.1
BKRG				S	Sg	12 51 09.3	-0.4
DDFL	Dedoflistskaro	1.31	139	P	Pg	12 50 55.0	+1.6
DDFL				S	Sg	12 51 17.8	+7.3
DLMR	Dylym	1.36	62	*e*Pg	Pb	12 50 53.5	+0.2
DLMR				*e*Sg	Sg	12 51 12.1	0.0
UNCR	Uncukul	1.36	78	*e*Pg	Pg	12 50 54.0	-0.4
UNCR				*e*Sg	Sg	12 51 12.2	+0.1
GNBR	Gunib	1.47	92	*e*Pg	Pg	12 50 55.6	-0.8
GNBR				*i* Sg	Sg	12 51 14.7	-0.8
KRNR	Karanay	1.47	74	*e*Pg	Pg	12 50 55.8	-0.6
KRNR				*e*Sg	Sg	12 51 15.5	0.0
DBC	Dubki	1.48	67	*e*Pg	Pb	12 50 55.4	0.0
DBC				*e*Sg	Sg	12 51 16.0	+0.3
TKB	Tkibuli	1.48	267	P	Pb	12 50 55.0	-0.3
TKB				S	Sb	12 51 14.5	+0.6
AKH	Akhalkalaki	1.52	227	P	Pb	12 50 55.5	-0.6
AKH				S	Sb	12 51 15.7	+0.4
BGD	Bogdanovka	1.57	222	P	Pb	12 50 57.3	+0.3
BGD				S	Sg	12 51 17.6	-1.3
KMKR	Kumukh	1.60	101	*e*Pg	Pb	12 50 57.2	-0.3
KMKR				*e*Sg	Sg	12 51 19.3	-0.4
ABS	Abastumani	1.76	248	P	Pb	12 50 59.2	-1.0
ABS				S	Sb	12 51 23.1	+1.0
NEY	Neytrino	1.84	296	*e*Pg	Pb	12 51 01.5	-0.2
NEY				*e*Sg	Sb	12 51 25.8	+1.2
KBZ	Khabaz	1.99	311	*i* Pg	Pb	12 51 03.9	-0.1
KBZ				*e*Sg	Sb	12 51 29.6	+0.9
SHA1	Shidzhatmaz	2.14	308	*e*Pg	Pb	12 51 05.0	-1.6
SHA1				*e*Sg	Sb	12 51 32.9	-0.2

*BUC **05** 12:50:58.9±0.2, 45°.50N×26°.36E, h130^{km}±1^{km}, ml4.0/62, Error ellipse: s-maj=1.6km s-min=1.3km az=177.0*

*CFUSG **05** 12:50:58.7, 45°.46N×26°.51E, h100^{km}, mb2.7/1, MD3.2/1, Romania Magtype MSH 2.9 from 2 stations*

*SOF **05** 12:50:59.5, 45°.49N×26°.32E, h107^{km}, MD3.5*

ISC 05 12:50:58.0±1.3**, 45°.53N**±0°.03×**26°.35E**±0°.03**, h140**^{km}±6^{km}**, n88, σ0^{s}.71**/136**, 86C-38D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEHR	Nehoiu	0.11	201	⇑P	Pn	12 51 17.6	+0.7
NEHR				⇑S	Sn	12 51 30.6	-0.6
BISRR	Bisoca	0.25	85	⇑P	Pn	12 51 18.0	+0.8
BISRR				⇑S	Sn	12 51 31.9	+0.1
MLR	Muntele Rosu	0.29	263	⇑P	Pn	12 51 18.0	+0.6
MLR				⇑S	Sn	12 51 31.6	-0.5
COVR	Voineasa-Covas	0.34	342	⇑P	Pn	12 51 17.7	+0.3
COVR				⇓S	Sn	12 51 32.0	-0.3
PLOR	Plostina	0.39	33	⇑P	Pn	12 51 18.0	+0.4
PLOR				⇓S	Sn	12 51 32.0	-0.6
ISR	Istrita	0.43	162	⇑P	Pn	12 51 18.4	+0.6
ISR				⇓S	Sn	12 51 32.3	-0.7
VRI	Vrincioaia	0.43	38	⇓P	Pn	12 51 18.3	+0.5

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VRI				⇑S	Sn	12 51 32.8	-0.2
SECR		0.53	202	⇓P	Pn	12 51 18.9	+0.6
SECR				⇑S	Sn	12 51 33.2	-0.6
ODBI	Odobesti	0.55	64	⇑P	Pn	12 51 19.5	+1.1
ODBI				⇓S	Sn	12 51 33.9	0.0
PLAR	PLOIESTI	0.65	201	⇑P	Pn	12 51 19.7	+0.6
OZUR		0.69	325	⇑P	Pn	12 51 19.5	+0.2
OZUR				⇑S	Sn	12 51 34.7	-1.0
PGOR	Pogoanele	0.76	144	⇑P	Pn	12 51 20.5	+0.7
PGOR				⇓S	Sn	12 51 36.4	0.0
DOPR	Dopca	0.81	304	⇑P	Pn	12 51 20.4	+0.2
DOPR				⇑S	Sn	12 51 36.7	-0.4
SULR		0.85	185	⇓P	Pn	12 51 21.3	+0.9
SULR				⇑S	Sn	12 51 38.1	+0.5
GHRR		0.91	54	⇓P	Pn	12 51 20.5	-0.4
VOIR		0.92	265	⇓P	Pn	12 51 21.4	+0.3
VOIR				⇑S	Sn	12 51 37.7	-1.0
TUDR		0.93	85	⇑P	Pn	12 51 21.2	+0.2
TUDR				⇑S	Sn	12 51 38.1	-0.6
MTUR	Matau	0.96	252	⇑P	Pn	12 51 22.0	+0.5
IZVR	Izvoarele	1.00	89	⇑P	Pn	12 51 21.7	0.0
IZVR				⇑S	Sn	12 51 38.3	-1.3
SLCR	Slobozia Conac	1.00	86	⇑P	Pn	12 51 22.2	+0.5
SLCR				⇑S	Sn	12 51 38.7	-1.1
TESR	Tescani	1.01	12	⇓P	Pn	12 51 22.2	+0.4
TESR				⇓S	Sn	12 51 38.9	-1.1
SCHL	Schela	1.04	91	⇑P	Pn	12 51 21.9	-0.1
SCHL				⇑S	Sn	12 51 39.3	-1.1
INCR	INCERC-Sediu C	1.09	187	⇑S	Sn	12 51 41.2	-0.1
LEHL	Lehliu	1.10	162	⇑P	Pn	12 51 23.3	+0.6
LEHL				⇑S	Sn	12 51 41.6	+0.1
VARL	Varlezi	1.11	70	⇑P	Pn	12 51 23.3	+0.6
VARL				⇑S	Sn	12 51 41.1	-0.5
AMRR	Amara	1.15	142	⇑P	Pn	12 51 23.7	+0.6
AMRR				⇑S	Sn	12 51 42.1	-0.1
BIR	Birlad	1.16	50	⇓P	Pn	12 51 24.0	+0.8
BIR				⇑S	Sn	12 51 42.0	-0.4
SCTR	Scanteiesti	1.16	82	⇑P	Pn	12 51 24.1	+0.8
SCTR				⇑S	Sn	12 51 42.2	-0.3
STFAR	Stefanesti-Arg	1.19	236	⇓P	Pn	12 51 23.8	+0.3
STFAR				⇓S	Sn	12 51 43.0	0.0
TATR	Tatarca	1.20	86	⇑P	Pn	12 51 24.4	+0.9
TATR				⇑S	Sn	12 51 43.0	0.0
BUC1	Bucharest	1.20	191	⇑P	Pn	12 51 23.8	+0.1
BUC1				⇓S	Sn	12 51 43.1	-0.1
GISR	Galati	1.20	94	⇑S	Sn	12 51 42.8	-0.3
ARR	Arges	1.22	263	⇓P	Pn	12 51 24.5	+0.6
VLDR	Vladesti	1.25	75	⇑P	Pn	12 51 24.7	+0.6
VLDR				⇑S	Sn	12 51 43.7	-0.4
CFR	Carcaliu	1.31	105	⇑P	Pn	12 51 24.7	0.0
CFR				⇑S	Sn	12 51 43.7	-1.3
GIUM	Giurgiulesti	1.31	91	⇑P	Pn	12 51 25.0	+0.3
GIUM				⇑S	Sn	12 51 45.2	+0.2
SGRR	Singureni	1.33	192	⇑P	Pn	12 51 25.1	+0.2
SGRR				⇑S	Sn	12 51 44.1	-1.4
HUMR	Humele	1.39	225	⇑P	Pn	12 51 26.0	+0.3
HUMR				⇑S	Sn	12 51 46.4	-0.3
HARR	Harsova	1.40	126	⇑P	Pn	12 51 26.0	+0.4
RASA	Rasa	1.43	156	⇑S	Sn	12 51 47.3	0.0
VASR	Vaslui	1.50	41	⇓P	Pn	12 51 27.5	+0.8
VASR				⇓S	Sn	12 51 47.9	-0.8
MDB	Medias	1.51	295	⇓P	Pn	12 51 28.2	+1.4
TLBR	Topalu	1.55	129	⇓P	Pn	12 51 27.8	+0.5
TLBR				⇓S	Sn	12 51 48.2	-1.5
COPA	Copaceanca	1.61	210	⇑P	Pn	12 51 28.3	+0.3
COPA				⇑S	Sn	12 51 49.9	-0.9
TPGR	Topolog	1.61	114	⇑P	Pn	12 51 28.0	0.0
TPGR				⇓S	Sn	12 51 49.9	-1.0
CVDA	Cernavoda	1.69	134	⇓P	Pn	12 51 29.5	+0.6
TLCR		1.77	100	⇓P	Pn	12 51 30.5	+0.7
TLCR				⇑S	Sn	12 51 53.7	-0.3
TIRR	Tirgusor	1.81	125	⇓P	Pn	12 51 30.6	+0.4
TIRR				⇑S	Sn	12 51 54.0	-0.9
LOT	Lotru	1.82	268	⇑P	Pn	12 51 30.6	+0.2
LOT				⇑S	Sn	12 51 55.0	-0.2
JURR	Jurilovca	1.94	112	⇑P	Pn	12 51 32.2	+0.4
RAZG	Razgrad	1.96	177	⇑P	Pn	12 51 32.8	+0.7
RAZG				⇑S	Sn	12 51 56.8	-1.4
MFTR	Murfatlar	2.00	132	⇓P	Pn	12 51 32.8	+0.4
MFTR				⇑S	Sn	12 51 57.8	-1.0
ZIMR		2.00	201	⇓P	Pn	12 51 32.3	-0.1
ZIMR				⇑S	Sn	12 51 57.7	-1.1
VLAD	Vladila	2.06	223	⇑P	Pn	12 51 33.2	0.0
TSCT	Constanta Port	2.13	129	⇑P	Pn	12 51 34.7	+0.6
EFOR	EFORIE	2.18	131	⇑P	Pn	12 51 35.1	+0.5
EFOR				⇓S	Sn	12 52 02.6	0.0
MILM	Milestii Mici	2.20	50	⇓P	Pn	12 51 35.5	+0.7
BURAR	Bucovina Array	2.23	340	⇓P	Pn	12 51 37.6	+2.3
KIS	Kishinev 120nm,0.3s	2.26	48	⇓eP	Pn	12 51 36.2	+0.7
KIS	340nm,0.4s			eS	Sn	12 52 02.3	-2.1
KIS	Kishinev	2.26	48	⇑P	Pn	12 51 36.3	+0.8
PSN	Preselentsi	2.26	144	iP	Pn	12 51 36.5	+0.9
SZH	Strazhica	2.28	188	iP	Pn	12 51 36.2	+0.3
MANR	Mangalia	2.34	136	⇑P	Pn	12 51 37.0	+0.4
MANR				⇑S	Sn	12 52 05.5	-0.7
TSMN	Mangalia Port-	2.35	136	⇑S	Sn	12 52 05.8	-0.7
SRE	Strehaia	2.39	250	⇓P	Pn	12 51 37.6	+0.4
SRE				⇑S	Sn	12 52 06.8	-0.6
TSSL	Sulina	2.41	98	⇑S	Sn	12 52 07.3	-0.4
PVL	Pavlikeni	2.42	198	iP	Pn	12 51 39.5	+1.9
DEV	Deva	2.44	280	⇑P	Pn	12 51 38.6	+0.7
PRD	Provadia	2.44	162	iP	Pn	12 51 38.9	+1.0
PLVB	Pleven	2.47	211	⇓P	Pn	12 51 38.3	+0.1
KALB	Balgarevo	2.59	144	⇓P	Pn	12 51 40.3	+0.7
KALB				⇑S	Sn	12 52 12.6	+0.9
PUNG	Punghina	2.73	244	⇓P	Pn	12 51 41.2	-0.2
RMGR	Halanga-Turnu	2.73	253	⇑P	Pn	12 51 40.9	-0.5
DRGR		2.83	298	⇑P	Pn	12 51 43.0	+0.3
DJES	Djerdap	2.85	254	⇑P	Pn	12 51 42.6	-0.3
HERR	Herculane	2.85	258	⇓P	Pn	12 51 42.8	-0.2
MPEP	Malo Peshtene	2.87	222	iP	Pn	12 51 43.7	+0.5
SORM	Soroca	2.95	27	⇓P	Pn	12 51 44.4	+0.3
BZS	Buzias	3.33	273	⇑P	Pn	12 51 49.3	+0.2
SIRR	Siria	3.36	284	⇑P	Pn	12 51 50.4	+0.9
MDVR	Moldovita	3.37	259	⇑P	Pn	12 51 49.7	+0.1
PGB	Panagyurishte	3.37	209	P	Pn	12 51 51.1	+1.4
VTS	Vitosha	3.67	219	⇑P	Pn	12 51 54.2	+0.4
VTS	Vitosha	3.67	219	P	Pn	12 51 54.6	+0.8
BOVS	Bovan	3.82	242	⇑P	Pn	12 51 55.3	-0.2
RZN	Rozhen	4.02	198	iP	Pn	12 51 58.9	+0.5
SEV	Sevastopol'	5.28	98	eP	Pn	12 52 15.2	+0.4
SEV	comp=Z,4.0nm,0.4s			Pm		12 52 29.7	
SEV				eS	Sn	12 53 14.3	-0.5
SEV	comp=N,11nm,0.4s			Sm		12 53 15.9	
SEV	comp=E,10.0nm,0.4s			Sm		12 53 15.9	
SUDU	Sudak	6.14	93	x	Sn	12 53 34.8	-0.7
SUDU	comp=N,10.0nm,0.5s			Sm		12 53 49.7	
SUDU	comp=E,33nm,0.6s			Sm		12 53 49.7	

KMA 05 12:53:04.3±0.4, 35°.55N×128°.02E, h13km±4km, Error ellipse: s-maj=2.9km s-min=2.0km az=16.0, South Korea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSKCH	Geochang SNR=93	0.10	308	P	Pg	12 53 07.7	+0.3
KSHAC	HAPCHEON	0.12	87	P	Pg	12 53 07.9	+0.3
HAMB	Hamyang SNR=10	0.23	260	P	Pg	12 53 09.5	+0.2
HAMB				S	Sg	12 53 12.7	+0.1
EURB	Uiryeong-eup	0.32	136	P	Pg	12 53 10.7	0.0
KSJIN	Jinju	0.39	179	P	Pg	12 53 11.9	-0.2
NAWB	Namwon	0.53	256	P	Pg	12 53 14.7	+0.1
KSGIC	Gimchen SNR=8.0	0.53	7	P	Pg	12 53 14.6	-0.2
KSMAS	Masan	0.59	130	P	Pg	12 53 15.5	-0.3
KSJEO	Jeonju SNR=18	0.71	303	P	Pg	12 53 18.0	0.0
KSDGY	Daegwallycong SNR=434	2.20	14	P	Pn	12 53 37.0	-3.6

*EAF **05** 12:59:07.5±3.5, 26°.32S×31°.26E, h10km, MD3.6*

BUL 05 12:59:11.3±1.2, 26°.27S×30°.93E, h10km, MD3.9, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOPA	Mopani	2.77	9	eP	Pn	12 59 52.5	-3.3
MOPA				eS	Sn	13 00 20.1	-9.2
MOPA	Mopani	2.77	9	eP	Pn	12 59 52.5	-3.3
MOPA				eS	Sn	13 00 20.1	-9.2
MSNA	Messina	3.99	348	eP	Pn	13 00 12.6	0.0
MSNA				eS	Sn	13 00 56.9	-2.6
MSNA	Messina	3.99	348	eP	Pn	13 00 12.6	0.0
MSNA				eS	Sn	13 00 56.9	-2.6
BOSA	Boshof	5.56	244	eP	Pn	13 00 32.6	-1.7
BOSA				eS	Sn	13 01 34.0	-4.3
BOSA	Boshof	5.56	244	eP	Pn	13 00 32.6	-1.7
BOSA				eS	Sn	13 01 34.0	-4.3
MATP	Matopo	6.23	338	eP	Pn	13 00 41.7	-1.7
MATP				eS	Sn	13 01 49.0	-5.9
MATP	Matopo	6.23	338	eP	Pn	13 00 41.7	-1.7
MATP				eS	Sn	13 01 49.0	-5.9
BLWY	Bulawayo	6.46	340	eP	Pn	13 00 45.3	-1.4
BLWY				eS	Sn	13 01 54.7	-5.9
BLWY	Bulawayo	6.46	340	eP	Pn	13 00 45.3	-1.4
BLWY				eS	Sn	13 01 54.7	-5.9

IDC 05 13:02:22.3±1.9, 8°.33S×125°.30E, h0km, mb3.8/1, mb1 3.8/3, mb1mx3.5/40, mbtmp3.6/3, ML3.4/2, Error ellipse: s-maj=178.0km s-min=32.0km az=59.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr 0.2nm,0.3s,baz=317,slow=13,SNR=16	14.49	144	Pn	Pn	13 05 47.1	-1.6
WRA	0.2nm,0.3s,baz=322,slow=25,SNR=2.5			Sn	Sn	13 08 23.5	-6.8
ASAR	Alice Springs 0.1nm,0.3s,baz=322,slow=11,SNR=11	17.34	153	P	P	13 06 26.9	-0.4
ASAR	0.0nm,0.3s,baz=317,slow=20,SNR=2.6			S	Sn	13 09 29.2	-10
MKAR	Makanchi Array 0.7nm,0.7s,baz=134,slow=8.2,SNR=4.9	66.88	329	P	P	13 13 16.3	0.0

*IDC **05** 13:09:38.1±0.9, 1°.76N×89°.53E, h0km, mb4.2/11, mb1 4.3/14, mb1mx4.0/53, mbtmp4.2/14, ML4.1/3, MS3.6/21, Ms1 3.6/21, ms1mx3.4/48, Error ellipse: s-maj=32.2km s-min=14.6km az=49.0*

*NEIC **05** 13:09:39.7±2.1, 1°.7N±0°.1×89°.48E±0°.08, h15km±5km, mb4.6/21, Error ellipse: s-maj=15.2km s-min=11.3km az=202.0*

ISC 05 13:09:38.8±0.5, 1°.59N±0°.07×89°.51E±0°.07, h10km, n110, σ1^{s}53/96, mb4.6/39, MS3.6/22, 1D, North Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNSI	Sinabang, Aceh 15nm18μm503nm,1.3s	6.86	83	P	Pn	13 11 18.7	-0.9
TPTI	461nm23nm,0.5s	7.84	78	P	Pn	13 11 31.2	-1.8
GSI	Gunungsitoli 0.3nm102nm,0.8s	8.07	92	P	Pn	13 11 35.1	-1.1
GSI	Gunungsitoli	8.07	92	Pn	Pn	13 11 35.1	-1.1
LHMI	Lhok Sumawe 3μm165nm,0.9s	8.26	64	P	Pn	13 11 38.6	-0.1
LHMI	Lhok Sumawe	8.26	64	Pn	Pn	13 11 38.1	-0.6
TSI	Tuntungan 6μm106nm,0.6s	9.24	78	P	Pn	13 11 52.2	-0.1
RPSI	Rantau Prapat	9.47	83		Pn	13 11 54.5	-0.9
PSI	Prapat 2.4nm,0.3s,baz=301,slow=8.0,SNR=11	9.48	83	Pn	Pn	13 11 54.8	-0.9
PSI	comp=Z,567nm,21.9s,baz=227,slow=36			LR	LR	13 15 21.9	
SISI	Saibi 28nm,0.6s	10.01	107	P	Pn	13 12 01.7	-1.0
MNSI	Mandailing Nat	10.10	94	P	Pn	13 12 03.4	-0.6
PALK	Pallekele 1.5nm,0.3s,baz=236,slow=14,SNR=9.4	10.44	303	Pn	Pn	13 12 07.5	-1.1
PALK	7.3nm,0.3s,baz=135,slow=17,SNR=12			Sn	Sn	13 13 53.7	-12
PALK	comp=Z,351nm,19.0s,baz=227,slow=34			LR	LR	13 15 33.7	
PALK	Pallekele	10.44	303		Pn	13 12 06.5	-2.1
PBA	Port Blair	10.50	18	Pn	Pn	13 12 05.9	-3.7
PPI	Padang Panjang 867nm29nm,0.8s	11.07	100	P	Pn	13 12 17.1	-0.3
PDSI	Padang 21nm,0.6s	11.23	103	P	Pn	13 12 20.9	+1.4
DGPR	DIGLIPUR	12.00	16	eP	Pn	13 12 31.0	+1.0
MDRS	Chennai	14.64	322	eP	Pn	13 13 01.6	-4.4
MNAI	Manna	14.68	114	Pn	Pn	13 13 05.6	-1.2
DSRI	Dabo 1μm8.4nm,0.8s	15.21	98	P	Pn	13 13 14.5	+0.7
MDSI	Maura Dua 910nm8.8nm,1.1s	15.85	112	P	P	13 13 24.9	-1.1
KLSI	9.0nm,0.7s	16.44	112	P	P	13 13 31.9	-0.6
PPBI	Pangkal Pinang	17.04	103	P	P	13 13 38.8	-0.4
VIS	Vishakhapatnam	17.14	340	eP	Pn	13 13 31.1	-7.5
HYB	Hyderabad	19.06	326	iP	P	13 14 01.0	-0.5
HYB				eS	S	13 17 41.0	+3.0
CMAR	Chiang Mai Arr 0.2nm,0.3s,baz=217,slow=12,SNR=16	19.15	28	P	P	13 14 01.5	-0.9
DGAR	Diego Garcia	19.22	242	P	P	13 14 01.5	-1.8
H08S2	Diego Garcia H baz=64,slow=74,SNR=38	19.29	241	T	T	13 33 58.4	
H08S3	Diego Garcia H SNR=44	19.29	241	T	T	13 34 45.3	
H08S1	Diego Carcia H baz=117,slow=74,SNR=72	19.31	241	T	T	13 33 55.1	
LEM	Lembang comp=Z,109nm,21.5s,baz=276,slow=30	19.91	115	LR	LR	13 19 43.8	
UBPT	Khong Chiam	20.81	48	P	P	13 14 20.5	-0.1
UBPT	comp=Z,18nm,0.8s			IAmb	IAmb	13 14 22.1	
STKI	Sintang comp=Z,4μmcomp=Z,13nm,0.7s	22.02	94	P	P	13 14 35.2	+1.6
POO	Poona	22.79	319	eP	P	13 14 41.0	-0.8
ODAN	Odare comp=Z,74nm,1.1s	25.21	356	eP	P	13 15 05.9	+0.8
RAMN	Ramite comp=Z,32nm,0.6s	25.37	354	eP	P	13 15 08.0	+1.4
TAPN	Taplejung comp=Z,31nm,1.0s	25.67	356	eP	P	13 15 10.3	+0.9
JIRN	Jiri comp=Z,74nm,1.0s	26.12	353	eP	P	13 15 14.3	+0.8
PKI	Pulchoki	26.13	352	eP	P	13 15 14.0	+0.4
PKIN	Phulchoki comp=Z,19nm,0.8s	26.14	352	eP	P	13 15 14.0	+0.4
DMN	Daman	26.21	351	eP	P	13 15 15.1	+0.8
KKN	Kakani comp=Z,48nm,1.0s	26.37	352	eP	P	13 15 16.0	+0.4
GUN	Gumba comp=Z,84nm,0.8s	26.40	353	eP	P	13 15 16.9	+0.8
QIZ	Qiongzhong	26.41	48	P	P	13 15 17.2	+1.4
QIZ				S	S	13 19 51.0	+1.5
QIZ	comp=N,470nm,13.7s			LR	LR		
QIZ	comp=E,290nm,15.5s			LR	LR		
QIZ	comp=Z,250nm,12.4s			LR	LR		
KOLN	Koldanda	26.64	348	eP	P	13 15 19.0	+1.0
GKN	Gorkha	26.68	350	eP	P	13 15 18.9	+0.6
DANN	Dangsing comp=Z,41nm,1.0s	27.17	349	eP	P	13 15 23.5	+0.6
LSA	Lhasa	28.00	3	P	P	13 15 31.4	+0.9
LSA	comp=Z,54nm,1.1s			pmax	pmax		
CD2	Chengdu	32.13	23	P	P	13 16 06.3	-0.3
CD2	comp=Z,20nm,0.9s			pmax	pmax		
DAV	Davao City (W) comp=Z,64nm,18.4s,baz=230,slow=41	36.36	80	LR	LR	13 34 37.7	
LZH	Lanzhou	36.81	20	eP	P	13 16 50.2	+3.0
LZH				pP	pwP	13 16 53.6	+0.3
LZH	comp=Z,20nm,1.1s			pmax	pmax		
LZH	comp=Z,62nm,4.9s			pmax	pmax		
LZH	comp=N,170nm,14.0s			LR	LR		
LZH	comp=E,180nm,14.6s			LR	LR		
LZH	comp=Z,110nm,15.7s			LR	LR		
NACB	Ninganchiao	38.30	52	P	P	13 16 58.7	-1.1
GTA	Gaotai	38.80	13	⇓P	P	13 17 04.3	+0.3
GTA				pP	pwP	13 17 11.4	+1.3
GTA				sP	sP	13 17 14.7	+7.7
GTA	comp=Z,12nm,1.0s			pmax	pmax		
KSH	Kashi	39.72	344	P	P	13 17 09.4	-2.2
KSH	comp=Z,13nm,0.9s			pmax	pmax		
FITZ	Fitzroy Crossi comp=Z,1.6nm,0.8s,baz=272,slow=7.2,SNR=5.6	40.59	120	P	P	13 17 19.7	+0.7
FITZ	Fitzroy Crossi	40.59	120	P	P	13 17 19.3	+0.4
NJ2	Nanjing	41.02	39	eP	P	13 17 23.2	+0.8
NJ2	comp=Z,11nm,0.7s			pmax	pmax		
WMQ	Urumqi	42.08	358	eP	P	13 17 31.7	+0.7
WMQ	comp=Z,13nm,0.7s			pmax	pmax		
WMQ	comp=Z,76nm,3.9s			pmax	pmax		
FAKI	Fak Fak	42.96	96	P	P	13 17 37.8	-0.7
FAKI	comp=Z,12nm,0.9s			IAmb	IAmb	13 17 39.5	
H01W3	Cape Leeuwin H baz=324,slow=76,SNR=36	43.00	150	T	T	14 03 27.4	
H01W2	Cape Leeuwin H baz=324,slow=76,SNR=45	43.01	150	T	T	14 03 28.4	
H01W1	Cape Leeuwin H baz=324,slow=76,SNR=39	43.02	150	T	T	14 03 28.7	
NWAO	Narrogin (SRO) comp=Z,72nm,20.5s,baz=264,slow=33	43.17	145	LR	LR	13 33 31.8	
MTN	Manton Dam	43.72	110	P	P	13 17 44.8	+0.2
MTN	comp=Z,13nm,1.4s			IAmb	IAmb	13 17 46.4	
HHC	Hu-ho-hao-te	43.88	24	eP	P	13 17 45.9	+0.2
HHC	comp=Z,16nm,1.0s			pmax	pmax		
HHC	comp=Z,96nm,5.5s			pmax	pmax		
HHC	comp=N,160nm,15.8s			LR	LR		
HHC	comp=E,190nm,15.2s			LR	LR		
HHC	comp=Z,140nm,14.9s			LR	LR		
MK31	Makanchi Array	45.46	353	P	P	13 17 56.8	-1.3
MK31	comp=Z,7.1nm,1.4s			IAmb	IAmb	13 17 58.6	
MKAR	Makanchi Array comp=Z,2.2nm,0.8s,baz=170,slow=9.0,SNR=11	45.46	353	P	P	13 17 57.4	-0.7
MKAR	Makanchi Array	45.46	353	P	P	13 17 53.7	-4.4
SONM	Songino Array comp=Z,5.9nm,0.7s,baz=198,slow=8.8,SNR=31	48.33	15	P	P	13 18 20.6	-0.1
SONM	comp=Z,71nm,18.2s,baz=199,slow=39			LR	LR	13 40 58.7	
SONM	Songino Array	48.33	15	P	P	13 18 19.7	-1.0
WB0	Warramunga Arr	48.87	118	P	P	13 18 25.7	+0.6
WB0	comp=Z,4.6nm,0.6s			IAmb	IAmb	13 18 26.8	
WRA	Warramunga Arr comp=Z,3.7nm,0.5s,baz=298,slow=8.7,SNR=92	48.88	118	P	P	13 18 26.5	+1.2
WRA	Warramunga Arr	48.88	118	P	P	13 18 25.1	-0.1
WRAB	Tennant Creek	48.89	118	P	P	13 18 26.2	+1.0
WRAB	comp=Z,5.1nm,0.7s			IAmb	IAmb	13 18 30.4	
WB2	Warramunga Arr	48.89	118	P	P	13 18 26.1	+0.7
WB2	comp=Z,4.3nm,0.7s			IAmb	IAmb	13 18 31.0	
WR0	Warramunga Arr	49.07	118	P	P	13 18 27.4	+0.7
WR0	comp=Z,5.9nm,0.8s			IAmb	IAmb	13 18 31.7	
KURK	Kurchatov	49.81	351	P	P	13 18 30.9	-0.8
AS31	Alice Springs	49.92	123	P	P	13 18 31.6	-1.5
ASAR	Alice Springs comp=Z,1.2nm,0.5s,baz=297,slow=7.7,SNR=72	49.92	123	P	P	13 18 34.5	+1.3
ASAR	Alice Springs	49.92	123	P	P	13 18 32.8	-0.3
KSRS	Korea Array comp=Z,46nm,18.9s,baz=228,slow=38	50.21	40	LR	LR	13 41 01.2	
TLY	Talaya comp=Z,42nm,20.6s,baz=174,slow=37	51.31	11	LR	LR	13 41 28.3	
ZAA0	Zalesovo Array	52.33	356	P	P	13 18 49.7	-1.0
ZAA0	comp=Z,6.4nm,1.0s			IAmb	IAmb	13 18 50.9	
ZALV	Zalesovo Beam comp=Z,1.5nm,0.4s,baz=178,slow=8.8,SNR=15	52.33	356	P	P	13 18 49.8	-0.9
ZALV	comp=Z,67nm,20.8s,baz=208,slow=37			LR	LR	13 42 10.3	
ZALV	Zalesovo Beam	52.33	356	P	P	13 18 49.0	-1.6
ABKAR	Akbulak array	53.81	336	P	P	13 19 00.2	-1.5
ABKAR	comp=Z,9.7nm,1.3s			IAmb	IAmb	13 19 03.0	
ABKAR	Akbulak array	53.81	336	P	P	13 18 59.8	-1.8
BBOO	Buckleboo	55.66	132	P	P	13 19 13.6	-1.8
GUMO	Guam comp=Z,30nm,21.8s,baz=260,slow=34	56.02	75	LR	LR	13 41 43.4	
MJAR	Matsushiro Arr comp=Z,1.2nm,0.7s,baz=252,slow=8.6,SNR=3.1	56.80	46	P	P	13 19 23.0	-0.5
MJAR	comp=Z,54nm,22.0s,baz=265,slow=36			LR	LR	13 43 30.8	
KBZ	Khabaz comp=Z,1.3nm,0.4s,baz=147,slow=3.0,SNR=3.6	58.88	322	P	P	13 19 38.3	+0.4
KBZ	comp=Z,26nm,18.1s,baz=134,slow=40			LR	LR	13 49 09.5	
STKA	Stephens Creek comp=Z,1.0nm,0.5s,baz=266,slow=7.5,SNR=6.1	59.46	129	P	P	13 19 43.5	+1.2
STKA	Stephens Creek	59.46	129	P	P	13 19 40.7	-1.5
CTA	Charters Tower comp=Z,3.4nm,0.8s,baz=308,slow=11,SNR=4.6	59.62	114	P	P	13 19 45.5	+2.0
NRIK	Noril'sk comp=Z,41nm,18.7s,baz=142,slow=40	67.65	359	LR	LR	13 54 02.8	
BOSA	Boshof comp=Z,37nm,19.3s,baz=40,slow=34	68.37	238	LR	LR	13 48 06.5	
AKASG	Malin Array Be comp=Z,22nm,18.9s,baz=140,slow=39	70.34	324	LR	LR	13 55 16.5	
MNK	Minsk comp=E,2.0nm,0.8s	72.58	327	iP	P	13 21 09.3	+3.2
MNK	comp=N,10.0nm,0.8s			iP	P	13 21 09.3	+3.2
MNK	comp=Z,9.0nm,0.6s,baz=112			iP	P	13 21 09.3	+3.2
MNK				iPcP	PcP	13 21 27.0	+3.3
MNK				iPP	PP	13 23 47.4	-0.2
MNK				iPPP	PPP	13 25 33.9	
MNK				iS	S	13 30 34.3	+3.5
MNK				iSS	SS	13 35 12.4	+2.6
MNK				iSSS	SSS	13 38 32.5	
MNK				iLQ	LQ	13 48 01.6	
MNK				iLR	LR	13 52 38.4	
MNK	comp=N,160nm,23.9s			iLRM	MLR	13 56 06.1	
MNK	comp=E,15nm,15.9s			iLRM	MLR	13 56 12.6	
MNK	comp=Z,137nm,21.7s			iLRM	MLR	13 56 30.7	
TIXI	Tiksi	74.28	12	P	P	13 21 14.3	-1.5
TIXI	comp=Z,3.7nm,0.8s			IAmb	IAmb	13 21 14.8	
PETK	Petropavlovsk- comp=Z,31nm,18.3s,baz=138,slow=38	75.77	35	LR	LR	13 57 21.3	
FINES	FINESS Array B comp=Z,48nm,19.1s,baz=108,slow=38	76.17	334	LR	LR	13 57 11.3	
GERES	GERESS Array B comp=Z,2.1nm,0.8s,baz=104,slow=5.6,SNR=13	79.48	319	P	P	13 21 46.1	+0.3
GERES	GERESS Array B	79.48	319	P	P	13 21 46.4	+0.6
CLL	Collm	80.34	322	eP	P	13 21 50.0	-0.2
NOA	NORSAR Array B comp=Z,23nm,18.5s,baz=80,slow=38	82.95	331	LR	LR	14 01 59.9	
TORD	Torodi Ar. Bea comp=Z,52nm,18.2s,baz=115,slow=35	87.51	283	LR	LR	14 00 59.0	
VNDA	Vanda comp=Z,52nm,18.1s,baz=339,slow=34	87.76	168	LR	LR	14 00 06.2	
QSPA	South Pole Qui	91.54	180	P	P	13 22 45.9	+0.2
DBIC	Dimbokro comp=Z,23nm,20.8s,baz=136,slow=34	94.15	277	LR	LR	14 02 27.0	
TXAR	Lajitas Array comp=Z,0.6nm,0.5s,baz=24,slow=1.4,SNR=9.4	146.77	21	PKPbc	PKPbc	13 29 22.1	+0.1

*IDC **05** 13:23:56.8±2.0, 8°.26S×125°.58E, h0km, mb3.7/1, mb1 3.5/5, mb1mx3.4/28, mbtmp3.4/5, ML3.2/4, Error ellipse: s-maj=50.4km s-min=28.6km az=74.0*

ISC 05 13:24:01.7±1.5, 8°.4S±0°.1×125°.6E±0°.1, h35^{km}, n5, σ1^{s}.02/7, Timor region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	2.58	227	Pn	Pn	13 24 41.6	+0.5
	2.6nm,0.3s,baz=309,slow=8.5,SNR=3.6						
FITZ	**Fitzroy Crossi**	9.61	180	Pn	Pn	13 26 18.2	+0.7
	0.2nm,0.3s,baz=21,slow=12,SNR=7.4						
FITZ				Sn	Sn	13 28 03.0	-1.4
	0.2nm,0.3s,baz=103,slow=2.7,SNR=4.6						
WRA	**Warramunga Arr**	14.24	144	Pn	Pn	13 27 20.8	-0.2
	0.1nm,0.3s,baz=320,slow=13,SNR=10						
WRA				Sn	Sn	13 29 57.5	-0.2
	0.1nm,0.3s,baz=316,slow=24,SNR=2.4						
ASAR	**Alice Springs**	17.12	153	P	P	13 28 00.9	+1.1
	0.1nm,0.3s,baz=327,slow=11,SNR=15						
MKAR	**Makanchi Array**	67.11	329	P	P	13 34 51.3	-0.5
	0.5nm,0.6s,baz=132,slow=6.0,SNR=2.1						

IDC 05 13:55:41.8±1.5, 50°.39N×153°.86E, h0^{km}, mb3.3/3, mb1 3.6/3, mb1mx3.2/34, mbtmp3.3/3, Error ellipse: s-maj=50.7km s-min=43.3km az=163.0
KRSC 05 13:56:12.3±0.7, 50°.33N×154°.62E, h295^{km}±14^{km}, ML3.7
ISC 05 13:56:10.9±1.1, 50°.8N±0°.2×153°.5E±0°.1, h250^{km}, n7, σ1^{s}.65/9, mb3.0/3, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	1.70	91	*e*P	Pn	13 56 52.7	+2.0
KDTR	**Khodutka, Kamc**	3.09	68	*e*P	Pn	13 57 05.6	+1.3
KDTR				*e*S	S	13 57 44.7	-1.9
RUS	**Russkaya**	3.58	60	*e*P	Pn	13 57 11.9	+2.2
RUS				*e*S	S	13 57 55.7	-0.7
MKZ	**Mys Kozlova**	6.32	50	*e*P	Pn	13 57 43.3	+0.5
MKAR	**Makanchi Array**	45.40	294	P	P	14 04 04.9	+0.3
	0.2nm,0.4s,baz=51,slow=6.2,SNR=1.7						
TXAR	**Lajitas Array**	75.36	62	P	P	14 07 26.9	-0.2
	0.1nm,0.3s,baz=297,slow=4.0,SNR=2.2						
ASAR	**Alice Springs**	76.08	198	P	P	14 07 29.6	-1.3
	0.3nm,0.9s,baz=8.2,slow=5.3,SNR=5.2						

NOU 05 13:56:36.0, 15°.41S×167°.53E, h19^{km}, MLv4.1/5, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	0.32	263	P	Pb	13 56 44.1	+1.0
DVP	**Devils Point**	2.39	165	P	Pn	13 57 14.4	+0.3

NEIC 05 14:01:05.5±1.4, 19°.4N±0°.1×66°.11W±0°.04, h1^{km}±12^{km}, Error ellipse: s-maj=16.9km s-min=5.4km az=181.0
RSPR 05 14:01:09.1, 19°.50N×66°.13W, h66^{km}±14^{km}, MD3.4/11
ISC 05 14:01:05.8±1.7, 19°.46N±0°.08×66°.08W±0°.04, h14^{km}, n46, σ0^{s}.91/49, 12C-3D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EMPR	**Esperanza - Ma**	1.07	204	⇑*e*P	Pg	14 01 26.9	+0.5
EMPR	**Esperanza - Ma**	1.07	204	*e*S	Sn	14 01 42.4	+1.5
EMPR	**Esperanza - Ma**	1.07	204		Pg	14 01 26.9	+0.5
EMPR					Sn	14 01 42.4	+1.5
EMPR	**Esperanza - Ma**	1.07	204	IAML		14 01 44.4	
	comp=E,540nm,0.6s						
EMPR				IAML		14 02 01.0	
	comp=N,430nm,1.0s						
GCPR	**Guaynabo City**	1.15	180	⇑*e*P	Pg	14 01 29.2	+1.3
GCPR	**Guaynabo City**	1.15	180		Pg	14 01 27.2	-0.7
GCPR				IAML		14 01 50.0	
	comp=N,260nm,0.8s						
GCPR				IAML		14 01 51.3	
	comp=E,183nm,0.8s						
CBYP	**Canovanas**	1.20	170	⇑*e*P	Pg	14 01 28.7	-0.3
CBYP	**Canovanas**	1.20	170	*e*S	Sg	14 01 46.3	+1.7
CBYP	**Canovanas**	1.20	170		Pg	14 01 28.7	-0.3
CBYP					Sg	14 01 46.3	+1.7
AOPR	**Arecibo Observ**	1.28	210	⇑*e*P	Pg	14 01 30.1	-0.3
AOPR	**Arecibo Observ**	1.28	210	*e*S	Sg	14 01 47.3	+0.2
AOPR	**Arecibo Observ**	1.28	210		Pg	14 01 29.4	-1.1
AOPR	**Arecibo Observ**	1.28	210		Sg	14 01 47.3	+0.2
HUMP	**Col San Antoni**	1.33	171	⇑*e*P	Pg	14 01 30.4	-0.9
HUMP	**Col San Antoni**	1.33	171	*e*S	Sg	14 01 48.1	-0.6
HUMP	**Col San Antoni**	1.33	171		Pg	14 01 30.3	-1.1
HUMP	**Col San Antoni**	1.33	171		Sg	14 01 48.1	-0.6
SJG	**San Juan**	1.34	183		Pb	14 01 30.3	-0.5
SJG				IAML		14 01 50.6	
	comp=E,296nm,0.5s						
SJG				IAML		14 01 51.9	
	comp=E,197nm,0.5s						
CUPR	**Culebra, Puert**	1.37	147	⇑*e*P	Pg	14 01 30.8	-1.4
CUPR	**Culebra, Puert**	1.37	147	*e*S	Sg	14 01 50.3	+0.3
CUPR	**Culebra, Puert**	1.37	147		Pg	14 01 30.8	-1.4
CUPR					Sg	14 01 50.3	+0.3
PDPR	**Patillas Dam,**	1.44	178		Pb	14 01 31.9	-0.5
PDPR				IAML		14 01 54.4	
	comp=E,184nm,0.1s						
MTP	**Monte Pirata**	1.44	160	⇑*e*P	Pg	14 01 33.1	-0.5
MTP	**Monte Pirata**	1.44	160		Pg	14 01 33.1	-0.5
CELP	**Cerrillos**	1.46	199	⇑*e*P	Pg	14 01 32.9	-1.0
CELP				*e*S	Sg	14 01 52.0	-0.8
CELP	**Cerrillos**	1.46	199		Pg	14 01 32.9	-1.0
CELP					Sg	14 01 52.0	-0.8
CELP	**Cerrillos**	1.46	199	IAML		14 01 54.8	
	comp=N,129nm,0.6s						
CELP				IAML		14 02 00.2	
	comp=E,92nm,0.8s						
IGPR	**InterUniversit**	1.49	181	⇑*e*P	Pg	14 01 33.0	-1.4
OBIP	**Obispado Ponce**	1.50	200	⇑*e*P	Pb	14 01 32.8	-0.6
OBIP	**Obispado Ponce**	1.50	200	*e*S	Sb	14 01 52.5	+0.3
OBIP	**Obispado Ponce**	1.50	200		Pb	14 01 32.8	-0.6
OBIP					Sb	14 01 52.5	+0.3
OBIP	**Obispado Ponce**	1.50	200	IAML		14 01 59.0	
	comp=N,148nm,1.1s						
STVI	**Saint Thomas**	1.53	136	⇓*i*P	Pg	14 01 35.2	-0.1
STVI	**Saint Thomas**	1.53	136	*e*S	Sg	14 01 54.6	-0.5
STVI	**Saint Thomas**	1.53	136		Pg	14 01 35.2	-0.1
STVI					Sg	14 01 54.6	-0.5
STVI	**Saint Thomas**	1.53	136	IAML		14 02 03.1	
	comp=N,125nm,0.7s						
LSP	**Las Mesas**	1.60	217	⇓*i*P	Pb	14 01 34.1	-1.0
IDE	**Isla Desecheo**	1.70	231	⇑*e*P	Pb	14 01 35.5	-1.4
IDE	**Isla Desecheo**	1.70	231	*e*S	Sb	14 01 57.1	-1.0
MLPR	**Magueyes Islan**	1.74	212	⇑*e*P	Pb	14 01 37.2	-0.4
MLPR	**Magueyes Islan**	1.74	212		Pb	14 01 37.2	-0.4
CRPR	**Cabo Rojo, PR**	1.75	214	⇓*i*P	Pb	14 01 37.1	-0.6
CRPR	**Cabo Rojo, PR**	1.75	214	*e*S	Sb	14 01 58.3	-1.1
CRPR	**Cabo Rojo, PR**	1.75	214		Pb	14 01 37.1	-0.6
CRPR					Sb	14 01 58.3	-1.1
CRPR	**Cabo Rojo, PR**	1.75	214	IAML		14 02 07.1	
	comp=N,80nm,0.8s						
CRPR				IAML		14 02 14.8	
	comp=E,73nm,0.6s						
SDDR	**Presa de Saban**	4.95	265		Pn	14 02 21.3	+1.5

BER 05 14:13:35.2±1.2, 67°.59N×24°.31E, h3^{km}±4^{km}, ML1.0, ML0.9(HEL), Confirmed Earthquake
HEL 05 14:13:35.4±0.1, 67°.58N×24°.33E, h6^{km}, ML0.9, Confirmed Earthquake, Finland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KLF	**Kolari**	0.38	202	*e*P	Pg	14 13 42.2	-0.5
KLF				*e*S	Sg	14 13 47.0	-0.6
KLF	**Kolari**	0.38	202	*e*P	Pg	14 13 42.2	-0.5
KLF				*e*S	Sg	14 13 47.0	-0.6
PAJU	**Pajala**	0.73	221	*e*P	Pg	14 13 48.6	-0.9
PAJU				*e*S	Sg	14 13 57.6	-1.3
PAJU	**Pajala**	0.73	221	*e*P	Pg	14 13 48.6	-0.9
PAJU				*e*S	Sg	14 13 57.6	-1.3
SGF	**Sodankyl**	0.86	98	*e*P	Pg	14 13 51.0	-0.8
SGF				*e*S	Sg	14 14 01.8	-1.1
SGF	**Sodankyl**	0.86	98	*e*P	Pg	14 13 51.0	-0.8
SGF				*e*S	Sg	14 14 01.8	-1.1
HEF	**Hetta**	0.87	343	*e*P	Pg	14 13 50.9	-1.2
HEF				*e*S	Sg	14 14 01.9	-1.4
HEF	**Hetta**	0.87	343	*e*P	Pg	14 13 50.9	-1.2
HEF				*e*S	Sg	14 14 01.9	-1.4
LANU	**Lannavaara**	1.00	299	*e*P	Pg	14 13 53.5	-1.2
LANU				*e*S	Sg	14 14 05.6	-2.1
LANU				*e*SB	Sb	14 14 07.1	-1.6
LANU	**Lannavaara**	1.00	299	*e*P	Pg	14 13 53.5	-1.2
LANU				*e*S	Sg	14 14 05.6	-2.1
LANU				*e*SB	Sb	14 14 07.1	-1.6
RNF	**Rovaniemi**	1.18	145	*e*P	Pg	14 13 56.1	-1.9
RNF				*e*S	Sg	14 14 11.2	-2.0
RNF	**Rovaniemi**	1.18	145	*e*P	Pg	14 13 56.1	-1.9
RNF				*e*S	Sg	14 14 11.2	-2.0
ERTU	**Ertsjaerv**	1.33	220	*e*P	Pn	14 13 59.3	-1.2
ERTU				*e*S	Sb	14 14 16.1	-1.8
ERTU	**Ertsjaerv**	1.33	220	*e*P	Pn	14 13 59.3	-1.2
ERTU				*e*S	Sb	14 14 16.1	-1.8
KTK1	**Kautokeino**	1.49	345	*e*P	Pn	14 14 01.9	-0.9
KTK1				*e*S	Sn	14 14 18.6	-3.9
KTK1				*e*Sg	Sb	14 14 21.5	-1.2
KTK1				IAML		14 14 23.7	
	comp=Z,1.9nm,0.8s						
TOF	**Tornio**	1.51	180	*e*P	Pn	14 14 02.0	-0.9
TOF				*e*S	Sn	14 14 21.2	-1.6
TOF				MSG		14 14 24.4	
	comp=Z,0.5nm,0.2s						
TOF	**Tornio**	1.51	180	*e*P	Pn	14 14 02.0	-0.9
TOF				*e*S	Sn	14 14 21.2	-1.6
TOF				MSG		14 14 24.4	
	comp=Z,0.5nm,0.2s						
KIF	**Kilpisjarvi**	1.94	319	*e*P	Pn	14 14 09.4	+0.6
KIF				*e*SB	Sb	14 14 34.5	-1.0
KIF				MSG		14 14 36.9	
	comp=Z,0.6nm,0.2s						
KIF	**Kilpisjarvi**	1.94	319	*e*P	Pn	14 14 09.4	+0.6
KIF				*e*SB	Sb	14 14 34.5	-1.0
KIF				MSG		14 14 36.9	
	comp=Z,0.6nm,0.2s						
ARA0	**ARCESS Array S**	2.01	12	*e*P	Pn	14 14 09.8	-0.1
ARA0				*e*Sg	Sn	14 14 34.9	-0.4
ARA0				IAML		14 14 43.6	
	comp=Z,2.0nm,0.8s						
ARA0	**ARCESS Array S**	2.01	12	*e*P	Pn	14 14 09.6	-0.2
ARA0				*e*S	Sn	14 14 34.8	-0.5
VRF	**Varrio**	2.02	83	*e*P	Pn	14 14 10.3	+0.2
VRF				*e*S	Sn	14 14 35.6	-0.1
VRF				MSG		14 14 39.7	
	comp=Z,0.5nm,0.2s						
VRF	**Varrio**	2.02	83	*e*P	Pn	14 14 10.3	+0.2
VRF				*e*S	Sn	14 14 35.6	-0.1
VRF				MSG		14 14 39.7	
	comp=Z,0.5nm,0.2s						
SALU	**Saltoluokta**	2.25	268	*e*P	Pn	14 14 13.2	0.0
SALU				*e*Sg	Sb	14 14 44.4	0.0
KEV	**Kevo**	2.39	23	*e*SB	Sn	14 14 46.2	+1.5
KEV	**Kevo**	2.39	23	*e*SB	Sn	14 14 46.2	+1.5
JETT	**Jettan, Norway**	2.45	326	*e*P	Pn	14 14 14.3	-1.6
JETT				*e*S	Sn	14 14 40.0	-6.2
STEI	**Steigen**	3.47	280	*e*S	Sn	14 15 09.2	-2.1
STEI				IAML		14 15 13.6	
	comp=Z,1.8nm,0.8s						

DNK 05 14:14:10.9±0.8, 58°.82N×15°.09E, h0^{km}, ML1.4(UPP), Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASKU	**Askersund**	0.16	300	P	Pg	14 14 13.6	-0.3
ASKU				S	Sg	14 14 15.9	0.0
LNKU	**Linkoeping**	0.63	160	P	Pg	14 14 22.6	-0.4
LNKU				S	Sg	14 14 31.0	-0.2
NRAU	**Nora**	0.76	358	P	Pg	14 14 24.5	-0.9
ESKU	**Eskilstuna**	0.79	58	P	Pg	14 14 25.2	-0.8
VIKU	**Vikbolandet**	0.90	110	P	Pg	14 14 27.0	-1.1
FKPU	**Falk**	0.97	228	P	Pg	14 14 28.2	-1.3
NASU	**Vaermlandsnaes**	0.99	277	P	Pg	14 14 29.1	-0.9
EKSU	**Eksjoe**	1.25	175	P	Pg	14 14 33.2	-1.7
EKSU				S	Sg	14 14 51.1	+0.1
VSTU	**Vaestervik**	1.39	146	P	Pn	14 14 36.1	-1.4
BACU	**Backbrunna**	1.47	44	P	Pn	14 14 37.5	-1.1
FINU	**Finntorp**	1.47	295	P	Pn	14 14 38.1	-0.6
NYNU	**Nynaeshamn**	1.52	82	P	Pn	14 14 38.5	-0.8
FIBU	**Brunna**	1.59	46	P	Pn	14 14 39.8	-0.4

IDC 05 14:21:56.1±6.9, 22°.12S×175°.06W, h0^{km}, mb3.7/2, mb1 4.0/2, mb1mx3.5/20, mbtmp3.7/2, Error ellipse: s-maj=281.0km s-min=62.5km az=146.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	46.84	258	P	P	14 30 27.4	-0.8
	0.4nm,0.4s,baz=88,slow=7.2,SNR=38						
WRA	**Warramunga Arr**	47.11	263	P	P	14 30 30.8	+0.5
	0.5nm,0.4s,baz=103,slow=7.8,SNR=26						
AKASG	**Malin Array Be**	145.74	332	PKPbc	PKPdf	14 41 35.9	-0.5
	0.2nm,0.3s,baz=45,slow=2.8,SNR=1.8						

NOU 05 14:44:44.2, 40°.83S×171°.84E, h110^{km}, MLv3.8/6, Off W. Coast of S. Island, N.Z.
WEL 05 14:44:46.9, 41°S±5°×17°3E±1°1, h94^{km}±15^{km}, M2.8/18, MLv2.8/18, Error ellipse: s-maj=0.0km s-min=0.0km az=87.4, South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNZ	**Nelson**	0.30	72	P	Pn	14 45 01.7	+0.9
THZ	**Tophouse**	0.46	189	P	Pn	14 45 02.1	+0.3
QRZ	**Quartz Range**	0.60	323	P	Pn	14 45 02.6	-0.3
QRZ	**Quartz Range**	0.60	323	P	Pn	14 45 02.4	-0.5
TUWZ	**Tuamarina**	0.72	100	P	Pn	14 45 05.1	+1.3
BSWZ	**Blackbirch Sta**	0.77	122	P	Pn	14 45 06.4	+2.0
DUWZ	**D'Urville Isla**	0.86	54	P	Pn	14 45 06.1	+0.7
TCW	**Tory Channel**	0.96	85	P	Pn	14 45 07.5	+1.0
DSZ	**Denniston Nort**	1.00	244	P	Pn	14 45 06.9	0.0
KHZ	**Kahutara**	1.18	160	P	Pn	14 45 10.1	+1.3
KIW	**Kapiti Island**	1.51	73	P	Pn	14 45 12.9	0.0
CAW	**Cannon Point**	1.57	83	P	Pn	14 45 13.3	-0.4
LTZ	**Lake Taylor**	1.57	200	P	Pn	14 45 14.4	+0.6
GVZ	**Greta Valley S**	1.66	179	P	Pn	14 45 15.5	+0.7
OGWZ	**Otaki Gorge**	1.71	74	P	Pn	14 45 15.1	-0.3
PLWZ	**Palliser**	1.71	99	P	Pn	14 45 14.8	-0.7
INZ	**Inchbonnie**	1.83	219	P	Pn	14 45 17.1	+0.1
MTW	**Mount Morrison**	1.89	86	P	Pn	14 45 16.9	-0.9
HOWZ	**Holdsworth Sta**	1.94	79	P	Pn	14 45 17.5	-0.9
MRZ	**Mangatainoka R**	2.05	72	P	Pn	14 45 18.6	-1.3
LREZ	**Lake Rotokare**	2.13	31	P	Pn	14 45 21.6	+0.7
OXZ	**Oxford**	2.14	199	P	Pn	14 45 20.4	-0.6
KHEZ	**Kahui Hut**	2.15	21	P	Pn	14 45 21.2	-0.1
WAZ	**Wanganui**	2.17	45	P	Pn	14 45 21.9	+0.6
PKE	**Pukeiti**	2.24	20	P	Pn	14 45 22.1	-0.3
MQZ	**McQueen's Vall**	2.41	186	P	Pn	14 45 23.8	-0.7
OKCZ	**Okains Bay**	2.41	179	P	Pn	14 45 24.7	+0.1
WVZ	**Waitaha Valley**	2.44	223	P	Pn	14 45 24.6	-0.4
MHCZ	**Mount Hutt**	2.46	205	P	Pn	14 45 24.8	-0.5
RACZ	**Rakaia**	2.50	195	P	Pn	14 45 25.3	-0.5
BFZ	**Birch Farm**	2.53	77	P	Pn	14 45 25.4	-0.8
BFZ	**Birch Farm**	2.53	77	P	Pn	14 45 35.0	+8.8
VRZ	**Vera Road**	2.56	32	P	Pn	14 45 26.5	-0.1
TSZ	**Takapari Road**	2.57	62	P	Pn	14 45 25.3	-1.5
DVHZ	**Dannevirke**	2.60	68	P	Pn	14 45 32.9	+5.8
PKVZ	**Pokaka**	2.70	42	P	Pn	14 45 28.8	+0.3
WACZ	**Wakanui South**	2.77	198	P	Pn	14 45 27.3	-2.0
TRVZ	**Turoa**	2.79	45	P	Pn	14 45 30.5	+0.6
WNVZ	**Wahianoa**	2.80	46	P	Pn	14 45 30.1	+0.2
RPZ	**Rata Peaks**	2.80	210	P	Pn	14 45 28.9	-0.9
RPZ	**Rata Peaks**	2.80	210	P	Pn	14 45 29.5	-0.3
GCSZ	**Gaunt Creek Bo**	2.82	224	P	Pn	14 45 29.4	-0.6
FWVZ	**Far West T-bar**	2.83	44	P	Pn	14 45 30.7	+0.2
NGZ	**Ngauruhoe**	2.91	44	P	Pn	14 45 32.0	+0.6
NNVZ	**North Ngauruho**	2.95	43	P	Pn	14 45 32.7	+0.7
WTVZ	**West Tongariro**	2.95	43	P	Pn	14 45 32.7	+0.8
OTVZ	**Oturere**	2.96	44	P	Pn	14 45 32.6	+0.6
BHHZ	**Black Hill Sta**	2.96	53	P	Pn	14 45 31.4	-0.6
ARCZ	**Arundel**	2.96	206	P	Pn	14 45 30.6	-1.4
HIZ	**Hauiti**	3.13	28	P	Pn	14 45 33.2	-1.1
HIZ	**Hauiti**	3.13	28	P	Pn	14 45 34.1	-0.2
FOZ	**Fox Glacier**	3.24	226	P	Pn	14 45 34.8	-0.9
TMZ	**Timaru**	3.41	205	P	Pn	14 45 36.6	-1.3
BKZ	**Black Stump Fm**	3.42	52	P	Pn	14 45 38.0	-0.2
BKZ	**Black Stump Fm**	3.42	52	P	Pn	14 45 42.3	+4.1
HLRZ	**Highlands Stat**	4.00	41	P	Pn	14 45 49.2	+3.3
ODZ	**Otahua Downs**	4.11	204	P	Pn	14 45 46.1	-1.3
ODZ	**Otahua Downs**	4.11	204	P	Pn	14 45 47.4	0.0
JCZ	**Jackson Bay**	4.16	227	P	Pn	14 45 46.7	-1.4
MARZ	**Manawahe**	4.36	42	P	Pn	14 45 56.9	+6.0

TAP 05 14:48:45.4, 21°.09N×121°.98E, h177^{km}±1^{km}, ML3.8, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAY	**Lan-yu**	1.03	337	P	Pn	14 49 13.0	0.0
	baz=337						
LAY				S	Sn	14 49 33.8	-0.8
	baz=337						
TSEB	**Hengchuen, Pin**	1.29	309	*i* P	Pn	14 49 15.6	+0.4
	baz=307						
TSEB				S	Sn	14 49 37.7	-0.5
	baz=307						
TWKBT	**Hengchun**	1.38	308	P	Pn	14 49 16.0	+0.1
	baz=308						
TWKBT				S	Sn	14 49 38.6	-1.0
	baz=308						
TWK1	**Hengchun**	1.39	308	P	Pn	14 49 16.3	+0.3
	baz=308						
TWK1				S	Sn	14 49 38.8	-1.0
	baz=308						
HEN	**Hengchun**	1.47	309	*e*P	Pn	14 49 17.2	+0.4
	baz=308						
HEN				S	Sn	14 49 40.4	-0.8
	baz=308						
SLIU	**Shizi**	1.57	316	*i* P	Pn	14 49 17.7	-0.1
	baz=315						
SLIU				*i* S	Sn	14 49 41.6	-1.3
	baz=315						
TAW	**Tawu**	1.62	322	P	Pn	14 49 17.9	-0.4
	baz=321						
TAW				S	Sn	14 49 41.9	-1.8
	baz=321						
LDUT	**Ludao**	1.65	344	*e*P	Pn	14 49 17.9	-0.7
	baz=343						
LDUT				*e*S	Sn	14 49 42.2	-2.2
	baz=343						
EAST	**Anshuo**	1.66	321	P	Pn	14 49 18.3	-0.5
	baz=321						
EAST				S	Sn	14 49 42.4	-2.3
	baz=321						
ECL	**Taimali**	1.78	328	P	Pn	14 49 19.1	-0.9
	baz=327						
ECL				S	Sn	14 49 43.9	-2.9
	baz=327						
SCZT	**Fangliau**	1.80	316	P	Pn	14 49 20.1	0.0
	baz=315						
SCZT				S	Sn	14 49 45.7	-1.4
	baz=315						
TTN	**Taitung**	1.83	335	P	Pn	14 49 21.0	+0.6
	baz=335						
TTN				*e*S	Sn	14 49 46.8	-1.0
	baz=335						
SSPT	**Xinbi**	1.91	317	*i* P	Pn	14 49 21.9	+0.6
	baz=316						
SSPT				S	Sn	14 49 48.9	-0.3
	baz=316						
TWGBT	**Beinan**	1.91	334	P	Pn	14 49 21.5	+0.1
	baz=334						
TWGBT				S	Sn	14 49 47.4	-2.0
	baz=334						
TWG	**Pinlang**	1.92	334	P	Pn	14 49 21.6	+0.1
	baz=334						
TWG				S	Sn	14 49 46.6	-2.9
	baz=334						
WLCH	**Liuqiu**	1.95	311	*e*P	Pn	14 49 21.0	-0.7
	baz=310						
WLCH				*e*S	Sn	14 49 48.7	-1.2
	baz=310						
MASBT	**Mashibuluo**	1.97	321	P	Pn	14 49 21.8	-0.1
	baz=320						
MASBT				*e*S	Sn	14 49 49.6	-0.7
	baz=320						
LONT	**Longtian**	1.98	337	*e*P	Pn	14 49 22.4	+0.3
	baz=336						
LONT				S	Sn	14 49 49.2	-1.4
	baz=336						
EDH	**Donghe**	1.98	342	*e*P	Pn	14 49 21.9	-0.1
	baz=341						
EDH				S	Sn	14 49 49.8	-0.8
	baz=341						
TSMG	**Majia**	2.03	323	*e*P	Pn	14 49 22.8	+0.2
	baz=322						
TSMG				S	Sn	14 49 49.8	-1.8
	baz=322						
SSD	**Sandimen**	2.07	323	*i* P	Pn	14 49 23.4	+0.4
	baz=323						
SSD				S	Sn	14 49 51.1	-1.2
	baz=323						
CHKT	**Chengkung**	2.08	344	*e*P	Pn	14 49 24.0	+0.8
	baz=344						
CHKT				S	Sn	14 49 51.7	-0.9
	baz=344						
SGLT	**Jiouru**	2.14	320	*e*P	Pn	14 49 24.2	+0.4
	baz=319						
SGLT				*e*S	Sn	14 49 51.6	-2.1
	baz=319						
FULB	**Fuli**	2.20	343	P	Pn	14 49 24.3	-0.2
	baz=343						
FULB				S	Sn	14 49 53.5	-1.4
	baz=343						
WSSB	**Gushan**	2.22	315	P	Pn	14 49 25.7	+0.9
	baz=314						
WSSB				S	Sn	14 49 54.6	-0.8
	baz=314						
TWM1	**Shoushan**	2.25	320	P	Pn	14 49 25.7	+0.6
	baz=320						
TWM1				S	Sn	14 49 54.9	-1.2
	baz=320						
SCST	**Cishan**	2.26	323	*e*S	Sn	14 49 54.4	-1.7
	baz=322						
SLGT	**Liugui**	2.27	327	*e*P	Pn	14 49 26.0	+0.7
	baz=326						
SLGT				*e*S	Sn	14 49 54.9	-1.4
	baz=326						
ELDTW	**Lidau**	2.27	337	P	Pn	14 49 25.8	+0.4
	baz=337						
ELDTW				S	Sn	14 49 54.9	-1.8
	baz=337						
EYUL	**Yuli**	2.33	345	*e*S	Sn	14 49 56.5	-1.1
	baz=344						
STYH	**Taoyuan**	2.35	332	*e*P	Pn	14 49 26.4	+0.2
	baz=331						
STYH				*e*S	Sn	14 49 57.4	-0.6
	baz=331						
SGST	**Jiashian**	2.37	327	*e*P	Pn	14 49 26.1	-0.3
	baz=327						
SGST				S	Sn	14 49 57.1	-1.3
	baz=327						
YULB	**Yu-li**	2.38	345	*e*P	Pn	14 49 27.3	+0.8
	baz=344						
YULB				S	Sn	14 49 56.4	-2.3
	baz=344						
HGSD	**Ruisui**	2.45	348	*e*P	Pn	14 49 27.9	+0.6
	baz=347						
HGSD				*e*S	Sn	14 49 58.6	-1.4
	baz=347						
CHN1	**Nanshi**	2.48	328	*i* P	Pn	14 49 28.4	+0.6
	baz=327						
CHN1				S	Sn	14 49 59.4	-1.4
	baz=327						
EHY	**Hungye**	2.48	346	S	Sn	14 49 59.2	-1.6
	baz=346						
WTP	**Ta-pu**	2.49	330	*i* P	Pn	14 49 28.4	+0.5
	baz=329						
WTP				S	Sn	14 49 58.9	-2.1
	baz=329						
SNST	**Tainan City**	2.53	327	*e*P	Pn	14 49 28.4	+0.1
	baz=327						
SNST				*e*S	Sn	14 50 01.2	-0.5
	baz=327						
TPUB	**Ta-pu**	2.53	331	P	Pn	14 49 28.7	+0.3
	baz=330						
TPUB				S	Sn	14 49 59.7	-2.2
	baz=330						
SSHA	**Shanhua**	2.57	323	*e*S	Sn	14 50 01.9	-0.6
	baz=322						
TWK	**Hsinying**	2.57	328	P	Pn	14 49 29.6	+0.7
	baz=327						
TWK				S	Sn	14 50 00.1	-2.6
	baz=327						
YUS	**Yu-Shan**	2.57	339	P	Pn	14 49 30.0	+0.7
	baz=338						
YUS				*e*S	Sn	14 50 01.5	-2.0
	baz=338						
CHN4	**Tsaushan**	2.59	331	P	Pn	14 49 27.7	-1.4

	baz=330						
CHN4				S	Sn	14 50 00.4	-2.6
	baz=330						
ALS	Alishan	2.65	336	*i* P	Pn	14 49 30.5	+0.5
	baz=335						
ALS				S	Sn	14 50 03.2	-1.5
	baz=335						
SCLT	Jiali	2.66	322	P	Pn	14 49 30.0	+0.3
	baz=321						
SCLT				*e*S	Sn	14 50 02.4	-1.9
	baz=321						
ICHU	Yijhu	2.76	326	*i* P	Pn	14 49 31.4	+0.4
	baz=325						
ICHU				S	Sn	14 50 05.7	-0.8
	baz=325						
ESL	Shilin	2.76	350	*e*S	Sn	14 50 04.7	-2.0
	baz=349						
CHN5	Tsauling	2.77	335	P	Pn	14 49 31.7	+0.4
	baz=334						
CHN5				S	Sn	14 50 05.4	-1.6
	baz=334						
CHN8	Yiju	2.78	324	*e*P	Pn	14 49 31.7	+0.4
	baz=324						
CHN8				S	Sn	14 50 05.6	-1.5
	baz=324						
CHY	Chiayi	2.80	329	*e*S	Sn	14 50 05.9	-1.5
	baz=329						
SSLB	Suanglung	2.85	341	P	Pn	14 49 31.8	-0.3
	baz=340						
SSLB				S	Sn	14 50 06.9	-1.7
	baz=340						
WDLH	Douliu	2.91	333	*e*S	Sn	14 50 08.1	-1.8
	baz=332						
OWD	Renai	2.95	346	*e*S	Sn	14 50 09.5	-1.5
	baz=345						
SMLT	Sun Moon Lake	2.96	341	*e*S	Sn	14 50 09.2	-1.9
	baz=340						
WJS	Zhushan	2.96	337	*e*S	Sn	14 50 09.8	-1.1
	baz=337						
WTK	Tuku	2.98	331	*e*S	Sn	14 50 09.6	-1.7
	baz=330						
TYC	Yuchr	2.99	340	*e*S	Sn	14 50 10.2	-1.4
	baz=339						
WSF	Szhu	3.02	328	*e*S	Sn	14 50 10.1	-2.0
	baz=327						
WNT	Mingjian	3.03	337	*e*P	Pn	14 49 34.6	+0.3
	baz=336						
WNT				*e*S	Sn	14 50 11.3	-1.1
	baz=336						
CHGB	Renai	3.05	346	*e*P	Pn	14 49 35.0	+0.2
	baz=345						
CHGB				*e*S	Sn	14 50 11.4	-1.9
	baz=345						
NACB	Ninganchiao	3.09	354	*e*P	Pn	14 49 35.1	+0.1
	baz=353						
NACB				*e*S	Sn	14 50 12.0	-1.9
	baz=353						
WHF	Hehuan Shan	3.12	348	*e*S	Sn	14 50 12.6	-2.4
	baz=347						
WCS	Beigang Elemen	3.12	342	*e*P	Pn	14 49 35.6	+0.3
	baz=341						
WCS				*e*S	Sn	14 50 12.5	-1.9
	baz=341						
ETLH	Xiulin Townshi	3.14	352	*e*P	Pn	14 49 36.5	+0.8
	baz=351						
ETLH				*e*S	Sn	14 50 12.6	-2.4
	baz=351						
VCHM	Qimei	3.17	312	*e*P	Pn	14 49 35.5	-0.5
	baz=311						
VCHM				*e*S	Sn	14 50 13.8	-1.6
	baz=311						
WRL	Guolierlin Hig	3.17	332	*e*S	Sn	14 50 13.5	-2.0
	baz=332						
FUSS	Fushou	3.22	348	*e*P	Pn	14 49 37.3	+0.4
	baz=347						
FUSS				*e*S	Sn	14 50 15.1	-2.0
	baz=347						
TDCB	Techi	3.24	347	*e*S	Sn	14 50 15.7	-1.8
	baz=346						
WCHH	Zhanghua	3.26	337	*e*S	Sn	14 50 16.3	-1.2
	baz=336						
PHUB	P'eng-hu	3.29	318	*e*P	Pn	14 49 37.3	-0.2
	baz=317						
PHUB				*e*S	Sn	14 50 15.3	-2.7
	baz=317						
PNG	Penghu	3.34	318	*e*P	Pn	14 49 37.7	-0.3
	baz=317						
PNG				*e*S	Sn	14 50 16.9	-2.3
	baz=317						

NOU 05 14:52:54.4, 14°.81S×167°.33E, h89^{km}, MLv4.5/14, **Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.65	191	P	Pn	14 53 11.7	+1.4
DVP	Devils Point	3.01	164	P	Pn	14 53 40.7	+0.6
LIFNC	LIFOU	5.94	181	P	Pn	14 54 19.2	-0.6
KOUNC	Koumac, New Ca	6.40	206	P	Pn	14 54 25.7	-0.5
YATNC	Mamie plateau,	7.22	183	P	Pn	14 54 37.7	+0.4
DZM	Mont Dzumac	7.27	187	P	Pn	14 54 37.3	-0.8
NOUC	Port Laguerre	7.32	187	P	Pn	14 54 39.3	+0.7
ONTNC	Ouen Toro	7.50	186	P	Pn	14 54 41.5	+0.4
OUENC	Ouen Island, N	7.58	183	P	Pn	14 54 42.6	+0.4
PINNC	Pines Island,	7.76	179	P	Pn	14 54 45.3	+0.6

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*NEIC **05** 15:05:13.6±1.5, 21°.2S±0°.1×177°.6W±0°.1, h388^{km}±11^{km}, mb4.6/34, Error ellipse: s-maj=18.6km s-min=16.3km az=181.0*

*IDC **05** 15:05:14.1±1.8, 21°.14S×177°.61W, h401^{km}±19^{km}, mb3.5/6, mb1 3.6/10, mb1mx3.3/38, mbtmp4.4/10, Error ellipse: s-maj=26.2km s-min=21.8km az=124.0*

*NOU **05** 15:05:16.4, 20°.89S×177°.58W, h432^{km}, mb4.3/28, Fiji Islands Region*

ISC 05 15:05:13.5±0.6, **21°.17S**±0°.06×**177°.45W**±0°.08, **h400**^{km}, **n137**, σ**2ˢ23**/147, **mb4.4**/24, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.45	308	P	Pn	15 06 41.0	+0.6
	4.8nm,0.3s,baz=127,slow=8.4,SNR=36						
MSVF	Nonsavu	5.45	308		Pn	15 06 40.1	-0.3
MSVF	Nonsavu	5.45	308	P	Pn	15 06 41.7	+1.3
NIUE	Niue	7.36	75		P	15 07 04.3	+2.4
NIUE	Niue	7.36	75	P	P	15 07 05.0	+3.1
GLKZ	Green Lake	8.07	183	S	S	15 08 41.1	-2.9
AFI	Afiamalu	9.02	38	P	P	15 07 20.6	+0.3
	7.5nm,0.3s,baz=208,slow=3.5,SNR=12						
AFI				S	S	15 08 58.9	-5.5
	1.3nm,0.3s,baz=283,slow=19,SNR=1.5						
MARNC	Mare, Loyalty	13.54	266	P	Pn	15 08 11.1	-1.5
MARNC	Mare, Loyalty	13.54	266	P	Pn	15 08 12.5	-0.1
PINNC	Pines Island,	14.10	261	P	P	15 08 15.6	-0.6
PINNC	Pines Island,	14.10	261	P	Pn	15 08 17.7	+1.5
LIFNC	LIFOU	14.31	269	P	P	15 08 18.0	-0.6
YATNC	Mamie plateau,	14.60	264	P	P	15 08 22.2	+0.5
DZM	Mont Dzumac	15.01	264	P	P	15 08 26.3	+0.1
	0.7nm,0.3s,baz=104,slow=19,SNR=9.4						
DZM	Mont Dzumac	15.01	264	P	P	15 08 25.3	-1.0
DZM	Mont Dzumac	15.01	264	P	P	15 08 26.9	+0.6
NOUC	Port Laguerre	15.14	264	P	P	15 08 28.3	+0.7
OUZ	Omahuta	16.06	207	P	P	15 08 41.1	+3.8
OUZ	Omahuta	16.06	207	P	P	15 08 38.3	+1.0
OUZ				IAmb	IAmb	15 08 48.3	
	comp=Z,39nm,1.2s						
OUZ	Omahuta	16.06	207	P	P	15 08 41.4	+4.1
WCZ	Waipu Caves	16.38	204	P	P	15 08 44.5	+3.8
KUZ	Kuaotunu	16.62	200	P	P	15 08 46.8	+3.5
MXZ	Matakaoa Point	16.75	192	P	P	15 08 46.6	+2.0
MXZ	Matakaoa Point	16.75	192	P	P	15 08 45.1	+0.5
HAZ	Te Kaha	17.04	193	P	P	15 08 48.3	+0.6
HAZ				S	S	15 11 44.8	-0.3
PKGZ	Pakihiroa	17.11	192	P	P	15 08 50.1	+1.6
PUZ	Puketiti	17.25	192	P	P	15 08 52.4	+2.4
PUZ				S	S	15 11 44.4	-4.8
RUGZ	Raukumara Rang	17.26	193	P	P	15 08 51.1	+0.9
TWGZ	Tauwhareparae	17.41	192	P	P	15 08 52.8	+1.1
TWGZ				S	S	15 11 49.4	-2.9
OPRZ	Ohinepanea	17.41	196	P	P	15 08 54.7	+3.0
TOZ	Tahuroa Road	17.60	199	P	P	15 08 56.7	+3.1
MWZ	Matawai	17.65	193	P	P	15 08 54.7	+0.4
MWZ				S	S	15 11 53.1	-3.9
CNGZ	Carnagh Statio	17.66	191	P	P	15 08 55.1	+0.8
URZ	Urewera	17.67	194	P	P	15 08 54.5	+0.1
	comp=Z,3.8nm,0.3s,baz=122,slow=23,SNR=38						
URZ				S	S	15 11 49.5	-7.8
	comp=Z,0.6nm,0.3s,baz=304,slow=23,SNR=1.9						
URZ	Urewera	17.67	194	P	P	15 08 53.1	-1.3
URZ				S	S	15 11 53.2	-4.1
URZ	Urewera	17.67	194	P	P	15 08 52.5	-1.9
URZ				IAmb	IAmb	15 09 11.3	
	comp=Z,42nm,1.4s						
URZ	Urewera	17.67	194	P	P	15 08 58.1	+3.7
TKGZ	Te Karaka	17.69	192	P	P	15 08 56.0	+1.4
MUGZ	Murupara	17.96	195	P	P	15 08 57.9	+0.5
SNGZ	Shannon Statio	18.12	193	P	P	15 09 00.6	+1.4
SNGZ				S	S	15 12 13.0	+7.2
HIZ	Hauiti	18.52	199	P	P	15 09 09.1	+5.7
HIZ	Hauiti	18.52	199	P	P	15 09 01.9	-1.5
HIZ	Hauiti	18.52	199	P	P	15 09 08.2	+4.8
BKZ	Black Stump Fm	18.68	195	P	P	15 09 04.3	-0.8
BKZ	Black Stump Fm	18.68	195	P	P	15 09 04.1	-1.1
TMVZ	Te Maari	18.83	197	P	P	15 09 07.0	+0.2
ETVZ	East Tongariro	18.85	197	P	P	15 09 07.1	+0.1
WTVZ	West Tongariro	18.86	197	P	P	15 09 11.2	+4.0
OTVZ	Oturere	18.89	197	P	P	15 09 07.0	-0.5
MCHZ	McNeill Hill	18.90	194	P	P	15 09 07.1	-0.2
SNVZ	South Ngauruho	18.92	197	P	P	15 09 08.1	+0.4
KWHZ	Kaweka Forest	18.94	195	P	P	15 09 07.2	-0.7
FWVZ	Far West T-bar	19.00	197	P	P	15 09 09.1	+0.5
WNVZ	Wahianoa	19.06	197	P	P	15 09 08.9	-0.3
BHHZ	Black Hill Sta	19.09	196	P	P	15 09 08.0	-1.3
MOVZ	Moawhango	19.09	196	P	P	15 09 09.6	+0.2
VRZ	Vera Road	19.11	199	P	P	15 09 09.9	+0.5
KRHZ	Kereru	19.16	195	P	P	15 09 10.7	+0.7
KAHZ	Kahuranaki	19.19	193	P	P	15 09 10.5	+0.2
PXZ	Pawanui	19.42	193	P	P	15 09 12.6	+0.2
NEZ	North Egmont	19.45	200	P	P	15 09 15.9	+3.1
PNHZ	Pukenui	19.46	195	P	P	15 09 12.5	-0.4
LREZ	Lake Rotokare	19.53	199	P	P	15 09 16.8	+3.4
TSZ	Takapari Road	19.66	195	P	P	15 09 14.5	-0.2
BFZ	Birch Farm	20.18	194	P	P	15 09 19.2	-0.3
BFZ	Birch Farm	20.18	194	P	P	15 09 23.3	+3.8
SNZO	South Karori	21.15	197	P	P	15 09 28.4	+0.2
QRZ	Quartz Range	21.37	201	P	P	15 09 30.5	+0.2
QRZ	Quartz Range	21.37	201	P	P	15 09 31.3	+1.0
TUWZ	Tuamarina	21.48	198	P	P	15 09 31.8	+0.6
THZ	Tophouse	22.09	199	P	P	15 09 37.9	+1.0
THZ	Tophouse	22.09	199	P	P	15 09 37.7	+0.8
THZ				IAmb	IAmb	15 09 44.3	
	comp=Z,98nm,1.8s						
DSZ	Denniston Nort	22.43	201	P	P	15 09 41.4	+1.4
KHZ	Kahutara	22.50	198	P	P	15 09 40.7	+0.2
KHZ	Kahutara	22.50	198	P	P	15 09 42.8	+2.3
GVZ	Greta Valley S	23.15	198	P	P	15 09 49.7	+3.2
INZ	Inchbonnie	23.43	201	P	P	15 09 51.2	+2.3
AMCZ	Amberley	23.46	198	P	P	15 09 52.6	+3.5
OXZ	Oxford	23.78	199	P	P	15 09 52.6	+0.5
OXZ	Oxford	23.78	199	P	P	15 09 52.0	-0.1
OXZ				IAmb	IAmb	15 09 57.3	
	comp=Z,21nm,0.6s						
OKCZ	Okains Bay	23.84	197	P	P	15 09 57.0	+4.4
MQZ	McQueen’s Vall	23.94	198	P	P	15 09 57.4	+3.9
WVZ	Waitaha Valley	23.98	202	P	P	15 09 56.0	+2.1
RACZ	Rakaia	24.11	199	P	P	15 09 58.1	+3.1
GCSZ	Gaunt Creek Bo	24.33	202	P	P	15 10 01.6	+4.5
WACZ	Wakanui South	24.40	199	P	P	15 10 01.9	+4.4
RPZ	Rata Peaks	24.44	200	P	P	15 10 02.5	+4.4
RPZ	Rata Peaks	24.44	200	P	P	15 09 58.2	+0.2
RPZ				IAmb	IAmb	15 10 04.7	
	comp=Z,100nm,1.8s						
RPZ	Rata Peaks	24.44	200	P	P	15 10 00.6	+2.6
ARCZ	Arundel	24.61	200	P	P	15 10 01.9	+2.4
FOZ	Fox Glacier	24.70	203	P	P	15 10 02.2	+1.9
TMZ	Timaru	25.05	200	P	P	15 10 06.6	+3.1
LBZ	Lake Benmore	25.32	201	P	P	15 10 08.6	+2.7
ODZ	Otahua Downs	25.76	200	P	P	15 10 13.5	+3.8
WKZ	Wanaka	26.11	202	P	P	15 10 11.4	-1.5
WHZ	Wether Hill Ro	27.41	202	P	P	15 10 25.0	+0.6
WHZ				IAmb	IAmb	15 10 52.5	
	comp=Z,108nm,1.9s						
ARMA	Armidale	29.25	245	P	P	15 10 40.2	-0.7
ARMA				IAmb	IAmb	15 11 11.3	
	comp=Z,85nm,1.9s						
ARMA	Armidale	29.25	245	P	P	15 10 41.7	+0.8
	comp=Z,20nm,2.3s						
MGCD	Mangrove Creek	30.32	240	P	P	15 10 50.9	+0.9
	comp=Z,19nm,1.1s						
CNB	Canberra Magne	32.29	237	P	P	15 11 07.6	+0.4
CAN	Canberra	32.58	237	P	P	15 11 09.5	-0.1
CAN	Canberra	32.58	237	P	P	15 11 10.4	+0.8
CTA	Charters Tower	33.95	265	P	P	15 11 20.9	-0.6
	comp=Z,1.1nm,0.4s,baz=97,slow=9.7,SNR=7.4						
CTA	Charters Tower	33.95	265	P	P	15 11 20.6	-0.9
	comp=Z,5.3nm,1.7s						
CTAO	Charters Tower	33.95	265	P	P	15 11 20.0	-1.5
CTAO	Charters Tower	33.95	265	P	P	15 11 21.0	-0.5
CMSA	Cobar Meteorol	34.47	245	P	P	15 11 25.3	-0.4
	comp=Z,9.9nm,1.7s						
TOO	Toolangi	35.93	235	P	P	15 11 37.9	-0.1
TOO				IAmb	IAmb	15 11 39.6	
	comp=Z,9.8nm,0.7s						
TOO	Toolangi	35.93	235	P	P	15 11 38.1	+0.1
	comp=Z,16nm,1.0s						
TAU	Tasmania Unive	36.52	225	P	P	15 11 43.5	+0.7
TAU				IAmb	IAmb	15 12 03.6	
	comp=Z,152nm,1.9s						
TAU	Tasmania Unive	36.52	225	P	P	15 11 44.3	+1.5
BRAT	Ballarat	37.12	235	P	P	15 11 49.7	+1.9
	comp=Z,14nm,0.7s						
STKA	Stephens Creek	37.97	245	P	P	15 11 54.6	-0.4
	comp=Z,3.9nm,0.7s,baz=100,slow=11,SNR=11						
STKA	Stephens Creek	37.97	245	P	P	15 11 54.5	-0.5
COEN	Coen	38.15	274	P	P	15 11 56.2	-0.4
COEN				IAmb	IAmb	15 11 56.8	
	comp=Z,20nm,1.6s						
COEN	Coen	38.15	274	P	P	15 11 56.5	-0.1
	comp=Z,7.4nm,2.7s						
BBOO	Buckleboo	42.72	244	P	P	15 12 32.8	-0.7
BBOO				IAmb	IAmb	15 13 24.4	
	comp=Z,30nm,1.5s						
WR0	Warramunga Arr	44.84	263	P	P	15 12 48.6	-1.6
AS31	Alice Springs	44.87	257	P	P	15 12 49.0	-1.5
ASAR	Alice Springs	44.87	257	P	P	15 12 49.5	-1.0
	comp=Z,2.2nm,0.7s,baz=88,slow=8.4,SNR=46						
ASAR				PcP	PcP	15 14 24.4	+0.1
	comp=Z,0.2nm,0.7s,baz=98,slow=5.0,SNR=4.6						
ASAR	Alice Springs	44.87	257	P	P	15 12 49.0	-1.5
WB0	Warramunga Arr	45.01	263	P	P	15 12 50.1	-1.5
WB2	Warramunga Arr	45.01	263	P	P	15 12 49.9	-1.7
WB2				IAmb	IAmb	15 13 05.1	
	comp=Z,22nm,1.9s						
WRA	Warramunga Arr	45.02	263	P	P	15 12 49.8	-1.9
	comp=Z,1.3nm,0.6s,baz=94,slow=7.7,SNR=33						
WRA				PcP	PcP	15 14 26.5	+1.7
	comp=Z,0.2nm,0.5s,baz=99,slow=6.8,SNR=1.3						
WRA	Warramunga Arr	45.02	263	P	P	15 12 49.5	-2.2
FORT	Forrest	49.51	247	P	P	15 13 24.9	-0.7
FORT				IAmb	IAmb	15 13 25.7	
	comp=Z,19nm,0.7s						
KNRA	Kununurra	51.13	267	P	P	15 13 37.0	-0.8
KNRA				IAmb	IAmb	15 13 38.4	
	comp=Z,6.5nm,0.7s						
FITZ	Fitzroy Crossi	53.45	263	P	P	15 13 54.2	-0.4
	comp=Z,2.1nm,0.3s,baz=81,slow=6.1,SNR=28						
FITZ	Fitzroy Crossi	53.45	263	P	P	15 13 54.0	-0.7
SIJI	Sorong	53.91	285	P	P	15 13 57.0	-0.9
	comp=Z,6.2nm,0.7s,baz=88,slow=9.7,SNR=6.4						
PSA00	Pilbara Seismi	58.02	257	P	P	15 14 26.1	-0.5
PSA00				IAmb	IAmb	15 15 13.6	
	comp=Z,22nm,1.9s						
PSA00	Pilbara Seismi	58.02	257	P	P	15 14 26.5	-0.2
PSA00				IAmb	IAmb	15 14 51.7	
	comp=Z,63nm,1.9s						
MORW	Morawa	60.06	248	P	P	15 14 40.1	-0.2
MORW				IAmb	IAmb	15 14 48.9	
	comp=Z,75nm,1.8s						
GIRL	Giralia	62.87	255	P	P	15 14 59.7	+0.7
CASY	Casey	63.59	205	P	P	15 15 05.5	+2.7
CASY				IAmb	IAmb	15 17 21.6	
	comp=Z,17nm,1.1s						
TOLI2	Tolitoli	64.25	282	P	P	15 15 08.9	+0.9
AKASG	Malin Array Be	143.84	331	PKP	PKPdf	15 24 02.1	+0.4
	comp=Z,0.5nm,0.6s,baz=42,slow=4.8,SNR=5.7						

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*NEIC **05** 15:23:48.9±1.8, 18°.1S±0°.1×177°.9W±0°.1, h604^{km}±4^{km}, mb4.7/73, Error ellipse: s-maj=16.2km s-min=13.4km az=142.0*

*NOU **05** 15:23:48.5, 18°.11S×177°.66W, h629^{km}, mb4.7/68, Fiji Islands Region*

*IDC **05** 15:23:49.6±1.0, 18°.09S×177°.88W, h616^{km}±11^{km}, mb3.6/20, mb1 3.8/23, mb1mx3.6/43, mbtmp4.6/23, Error ellipse: s-maj=13.9km s-min=9.8km az=145.0*

ISC 05 15:23:49.7±0.6, **18°.12S**±0°.06×**177°.87W**±0°.06, **h622**^{km}±6^{km}, **n225**, σ**1ˢ07**/238, **mb4.7**/99, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.90	275	P	P	15 25 17.2	+0.9
	48nm,0.3s,baz=134,slow=4.8,SNR=522						
MSVF				S	S	15 26 29.9	+3.1
	baz=127,slow=24,SNR=12						
MSVF	Nonsavu	3.90	275	P	P	15 25 16.9	+0.7
MSVF	Nonsavu	3.90	275	P	P	15 25 17.3	+1.0
AFI	Afiamalu	7.20	55	P	P	15 25 40.3	-2.3
	16nm,0.3s,baz=240,slow=8.1,SNR=25						
AFI				S	S	15 27 17.5	+2.5
	1.1nm,0.3s,baz=155,slow=11,SNR=1.6						
NIUE	Niue	7.59	98	P	P	15 25 44.8	-1.3
NIUE	Niue	7.59	98	P	P	15 25 43.8	-2.3
	169nm,1.1s						
FUNA	Funafuti	9.95	343	P	P	15 26 06.9	-1.7
MARNC	Mare, Loyalty	13.69	254	P	P	15 26 44.0	-0.8
MARNC	Mare, Loyalty	13.69	254	P	P	15 26 46.4	+1.5
	0.7nm,0.5s						
LIFNC	LIFOU	14.29	257	P	P	15 26 48.2	-2.4
LIFNC	LIFOU	14.29	257	P	P	15 26 49.5	-1.1
	40nm,0.9s						
PINNC	Pines Island,	14.48	250	P	P	15 26 51.2	-1.1
PINNC	Pines Island,	14.48	250	P	P	15 26 52.7	+0.4
	42nm,0.6s						
SANVU	Saraoutou	14.54	278	P	P	15 26 52.5	-0.5
YATNC	Mamie plateau,	14.84	252	P	P	15 26 55.7	+0.1
	15nm,1.1s						
OUENC	Ouen Island, N	14.97	251	P	P	15 26 57.8	+1.0
OUENC	Ouen Island, N	14.97	251	P	P	15 26 58.0	+1.3
	16nm,0.8s						
DZM	Mont Dzumac	15.25	252	*e*P	P	15 27 00.4	+1.0
	49nm,1.2s						
DZM	Mont Dzumac	15.25	252	P	P	15 26 59.4	0.0
	1.1nm,0.3s,baz=89,slow=17,SNR=14						
DZM	Mont Dzumac	15.25	252	P	P	15 26 59.3	-0.1
DZM				IAmb	IAmb	15 27 02.5	
	comp=Z,16nm,0.8s						
DZM	Mont Dzumac	15.25	252	P	P	15 26 59.5	+0.1
	comp=Z,26nm,0.9s						
ONTNC	Ouen Toro	15.29	252	P	P	15 26 59.1	-0.6
ONTNC				IAmb	IAmb	15 27 37.9	
	comp=Z,22nm,1.1s						
NOUC	Port Laguerre	15.38	252	P	P	15 27 01.3	+0.8
	comp=Z,24nm,1.2s						
KNTN	Kanton	16.39	22	P	P	15 27 07.5	-2.3
KNTN	Kanton	16.39	22	P	P	15 27 07.4	-2.5
KOUNC	Koumac, New Ca	17.02	259	P	P	15 27 17.3	+1.9
	comp=Z,26nm,1.4s						
MXZ	Matakaoa Point	19.66	189	P	P	15 27 39.3	+0.1
URZ	Urewera	20.55	191	P	P	15 27 45.7	-1.4
	comp=Z,7.0nm,0.4s,baz=121,slow=23,SNR=23						
URZ				S	S	15 30 53.0	-5.5
	comp=Z,4.8nm,0.8s,baz=300,slow=24,SNR=1.3						
URZ	Urewera	20.55	191	P	P	15 27 44.5	-2.6
URZ	Urewera	20.55	191	P	P	15 27 45.2	-1.9
	comp=Z,33nm,2.0s						
BKZ	Black Stump Fm	21.54	192	P	P	15 27 53.6	-2.5
BKZ	Black Stump Fm	21.54	192	P	P	15 27 53.9	-2.2
	comp=Z,29nm,1.9s						
BFZ	Birch Farm	23.05	191	P	P	15 28 08.7	-0.8
	comp=Z,65nm,2.1s						
SNZO	South Karori	23.98	194	P	P	15 28 16.3	-1.3
SNZO	South Karori	23.98	194	P	P	15 28 16.2	-1.4
	comp=Z,74nm,1.5s						
QRZ	Quartz Range	24.09	198	P	P	15 28 19.0	+0.3
	comp=Z,47nm,1.4s						
NNZ	Nelson	24.22	196	P	P	15 28 17.8	-1.9
NNZ				IAmb	IAmb	15 29 06.3	
	comp=Z,45nm,1.1s						
THZ	Tophouse	24.86	197	P	P	15 28 24.9	-0.5
THZ				IAmb	IAmb	15 28 41.2	
	comp=Z,71nm,1.7s						
KHZ	Kahutara	25.30	195	P	P	15 28 28.1	-1.2
KHZ	Kahutara	25.30	195	P	P	15 28 28.0	-1.2
	comp=Z,48nm,1.5s						
LTZ	Lake Taylor	25.98	197	P	P	15 28 33.7	-1.6
OXZ	Oxford	26.54	197	P	P	15 28 38.8	-1.4
OXZ				IAmb	IAmb	15 28 41.9	
	comp=Z,27nm,1.1s						
MQZ	McQueen’s Vall	26.74	195	P	P	15 28 41.2	-0.6
RPZ	Rata Peaks	27.18	198	P	P	15 28 45.3	-0.4
RPZ				IAmb	IAmb	15 28 52.5	
	comp=Z,15nm,0.7s						
RPZ	Rata Peaks	27.18	198	P	P	15 28 45.1	-0.6
	comp=Z,24nm,1.1s						
FOZ	Fox Glacier	27.39	200	P	P	15 28 46.4	-1.2
LBZ	Lake Benmore	28.05	198	P	P	15 28 51.6	-1.7
LBZ				IAmb	IAmb	15 28 56.4	
	comp=Z,21nm,1.0s						
ODZ	Otahua Downs	28.52	197	P	P	15 28 56.2	-1.1
	comp=Z,25nm,3.0s						
MLZ	Mavora Lakes	29.58	200	P	P	15 29 05.9	-0.6
MLZ				IAmb	IAmb	15 29 07.9	
	comp=Z,21nm,0.7s						
EIDS	Eidsvold	29.68	250	P	P	15 29 06.2	-1.4
EIDS				IAmb	IAmb	15 29 08.6	
	comp=Z,20nm,0.7s						
EIDS	Eidsvold	29.68	250	P	P	15 29 07.8	+0.2
	comp=Z,28nm,0.9s						
WHZ	Wether Hill Ro	30.10	200	P	P	15 29 10.7	-0.2
WHZ				IAmb	IAmb	15 29 13.0	
	comp=Z,38nm,1.0s						
ARMA	Armidale	30.28	240	P	P	15 29 14.2	+1.3
ARMA				IAmb	IAmb	15 29 14.6	
	comp=Z,26nm,0.7s						
ARMA	Armidale	30.28	240	P	P	15 29 13.6	+0.8
	comp=Z,44nm,0.8s						
MGCD	Mangrove Creek	31.60	236	P	P	15 29 25.0	+1.1
	comp=Z,49nm,0.8s						
RMQ	Roma	31.91	249	P	P	15 29 27.0	+0.4
	comp=Z,35nm,0.6s						
SYDH	Sydney Hard Ro	32.08	235	P	P	15 29 29.1	+1.2
	comp=Z,67nm,1.2s						
CNB	Canberra Magne	33.71	233	P	P	15 29 42.4	+0.7
	comp=Z,139nm,0.7s						
CTA	Charters Tower	33.92	261	P	P	15 29 43.7	+0.1
	comp=Z,14nm,0.6s,baz=96,slow=10,SNR=50						
CTA	Charters Tower	33.92	261	P	P	15 29 43.5	-0.1
	comp=Z,29nm,0.7s						
CTAO	Charters Tower	33.92	261	P	P	15 29 43.0	-0.6
CTAO				IAmb	IAmb	15 29 44.8	
	comp=Z,18nm,0.8s						
CTAO	Charters Tower	33.92	261	P	P	15 29 43.8	+0.2
	comp=Z,27nm,0.8s						
CAN	Canberra	33.99	233	P	P	15 29 44.4	+0.4
CAN	Canberra	33.99	233	P	P	15 29 45.0	+1.0
	comp=Z,130nm,0.8s						
PMG	Port Moresby	35.00	280	P	P	15 29 53.5	+0.9
	comp=Z,18nm,0.8s,baz=120,slow=8.1,SNR=6.6						
PMG	Port Moresby	35.00	280	P	P	15 29 52.7	+0.1
PMG				IAmb	IAmb	15 29 54.7	
	comp=Z,21nm,0.9s						
CMSA	Cobar Meteorol	35.50	241	P	P	15 29 56.7	+0.3
	comp=Z,78nm,0.7s						
MTSU	Mount Surprise	35.90	264	P	P	15 29 59.8	-0.1
	comp=Z,10nm,0.7s						
QLP	Quilpie	35.94	250	P	P	15 30 00.2	0.0
	comp=Z,147nm,0.9s						
GLAD	Gladstone	37.06	225	P	P	15 30 09.4	+0.3
	comp=Z,38nm,0.8s						
TOO	Toolangi	37.44	231	P	P	15 30 12.6	+0.3
TOO				IAmb	IAmb	15 30 14.2	
	comp=Z,43nm,0.9s						
TOO	Toolangi	37.44	231	P	P	15 30 13.0	+0.7
	comp=Z,57nm,1.4s						
COEN	Coen	37.62	271	P	P	15 30 14.4	+0.5
COEN	Coen	37.62	271	P	P	15 30 14.5	+0.5
	comp=Z,66nm,0.7s						
BRAT	Ballarat	38.59	232	P	P	15 30 23.2	+1.7
	comp=Z,30nm,0.8s						
STKA	Stephens Creek	38.98	242	P	P	15 30 25.8	+1.1
	comp=Z,29nm,0.8s,baz=85,slow=9.4,SNR=63						

STKA	Stephens Creek	38.98	242	P	P	15 30 25.8	+1.1
STKA	Stephens Creek	38.98	242	P	P	15 30 25.5	+0.8
	comp=Z,11nm,0.9s						
INKA	Innaminka	39.15	248	P	P	15 30 27.0	+0.9
	comp=Z,129nm,0.8s						
ARPS	Mount Arapiles	39.94	234	P	P	15 30 32.6	+0.3
	comp=Z,19nm,0.8s						
QIS	Mount Isa	40.12	259	P	P	15 30 35.3	+1.3
	comp=Z,5.1nm,1.1s						
HTT	Hallett	41.48	240	P	P	15 30 44.9	+0.3
	comp=Z,38nm,0.9s						
LCRK	Leigh Creek	41.63	244	P	P	15 30 45.9	+0.2
	comp=Z,54nm,0.8s						
JAY	Jayapura	43.46	286	P	P	15 31 01.0	+0.8
	comp=Z,19nm,0.7s,baz=125,slow=4.4,SNR=6.9						
OOD	Oodnadatta	43.62	249	P	P	15 31 01.7	+0.5
	comp=Z,47nm,0.8s						
BBOO	Buckleboo	43.76	241	P	P	15 31 02.2	0.0
BBOO				IAmb	IAmb	15 31 03.6	
	comp=Z,32nm,0.7s						
BBOO	Buckleboo	43.76	241	P	P	15 31 02.1	-0.1
	comp=Z,51nm,2.2s						
WR0	Warramunga Arr	44.91	260	P	P	15 31 11.0	-0.2
WR0				IAmb	IAmb	15 31 12.7	
	comp=Z,12nm,1.1s						
WR0				PcP	PcP	15 32 38.0	-0.9
WB2	Warramunga Arr	45.09	260	P	P	15 31 12.3	-0.3
WB2				IAmb	IAmb	15 31 13.2	
	comp=Z,39nm,1.1s						
WB2				PcP	PcP	15 32 39.7	+0.1
WRAB	Tennant Creek	45.09	260	P	P	15 31 12.4	-0.2
WRAB				IAmb	IAmb	15 31 13.2	
	comp=Z,32nm,1.1s						
WRAB	Tennant Creek	45.09	260	P	P	15 31 12.2	-0.4
	comp=Z,36nm,1.4s						
WRA	Warramunga Arr	45.10	260	P	P	15 31 12.3	-0.3
	comp=Z,17nm,0.6s,baz=97,slow=7.0,SNR=480						
WRA				PcP	PcP	15 32 39.5	-0.1
	comp=Z,0.7nm,0.6s,baz=112,slow=4.0,SNR=4.8						
WRA				ScP	ScP	15 35 35.4	+1.5
	comp=Z,0.2nm,0.8s,baz=94,slow=3.0,SNR=2.9						
WRA				S	S	15 37 05.6	-2.8
	comp=Z,0.9nm,0.8s,baz=98,slow=14,SNR=5.1						
WRA	Warramunga Arr	45.10	260	P	P	15 31 12.2	-0.5
MULG	Mulgathing	45.19	245	P	P	15 31 12.7	-0.5
	comp=Z,81nm,0.8s						
AS31	Alice Springs	45.23	254	P	P	15 31 13.8	+0.1
AS31				IAmb	IAmb	15 31 14.6	
	comp=Z,10nm,0.8s						
AS31					S	15 37 09.7	-0.4
ASAR	Alice Springs	45.23	254	P	P	15 31 13.9	+0.2
	comp=Z,57nm,0.8s,baz=93,slow=7.8,SNR=975						
ASAR				PcP	PcP	15 32 40.1	+0.1
	comp=Z,4.2nm,0.7s,baz=95,slow=3.8,SNR=6.7						
ASAR				ScP	ScP	15 35 36.3	+1.9
	comp=Z,0.8nm,0.8s,baz=88,slow=5.3,SNR=4.1						
ASAR				S	S	15 37 08.6	-1.5
	comp=Z,4.0nm,0.7s,baz=91,slow=15,SNR=32						
ASAR	Alice Springs	45.23	254	P	P	15 31 13.6	-0.1
ASAR				PcP	PcP	15 32 40.2	+0.1
KDU	Kakadu	48.07	269	P	P	15 31 34.4	-0.6
	comp=Z,29nm,0.8s						
MTN	Manton Dam	49.31	268	P	P	15 31 43.4	-0.7
MTN				IAmb	IAmb	15 31 44.4	
	comp=Z,19nm,0.7s						
MTN				PcP	PcP	15 32 51.4	-3.6
MTN	Manton Dam	49.31	268	P	P	15 31 43.1	-1.0
	comp=Z,27nm,0.9s						
DRS	Darwin Rock St	49.62	269	P	P	15 31 45.6	-0.8
	comp=Z,11nm,0.9s						
WRKA	Warakurna	50.27	252	P	P	15 31 50.5	-0.6
	comp=Z,61nm,1.0s						
FORT	Forrest	50.38	245	P	P	15 31 51.3	-0.5
FORT				IAmb	IAmb	15 31 52.2	
	comp=Z,38nm,0.7s						
FORT				PcP	PcP	15 32 58.8	+0.1
FORT	Forrest	50.38	245	P	P	15 31 50.8	-0.9
	comp=Z,63nm,0.7s						
KNRA	Kununurra	50.98	264	P	P	15 31 56.0	-0.2
KNRA				IAmb	IAmb	15 31 57.0	
	comp=Z,24nm,0.8s						
KNRA				PcP	PcP	15 33 02.0	+0.8
KNRA	Kununurra	50.98	264	P	P	15 31 55.5	-0.7
	comp=Z,31nm,0.8s						
FAKI	Fak Fak	51.12	281	P	P	15 31 57.1	-0.2
FAKI				IAmb	IAmb	15 32 32.4	
	comp=Z,29nm,1.1s						
SWI	Sorong	52.79	283	P	P	15 32 09.6	+0.4
	comp=Z,451nmcomp=Z,48nm,0.7s						
FITZ	Fitzroy Crossi	53.50	261	P	P	15 32 14.3	+0.2
	comp=Z,4.1nm,0.5s,baz=87,slow=4.0,SNR=48						
FITZ	Fitzroy Crossi	53.50	261	P	P	15 32 14.2	0.0
FITZ	Fitzroy Crossi	53.50	261	P	P	15 32 13.8	-0.4
	comp=Z,8.8nm,2.1s						
LBMI	Labuha	56.37	282	P	P	15 32 34.8	+0.7
	comp=Z,398nmcomp=Z,13nm,0.8s						
SOEI	Soe	56.59	270	P	P	15 32 36.9	+1.2
	comp=Z,66nm,0.8s						
SOEI	Soe	56.59	270	P	P	15 32 36.9	+1.2
SOEI				IAmb	IAmb	15 32 38.3	
	comp=Z,48nm,0.8s						
TNTI	Ternate	57.01	283	P	P	15 32 38.0	-0.5
	comp=Z,16nm,0.9s						
TNTI	Ternate	57.01	283	P	P	15 32 37.3	-1.2
BATI	Baumata	57.04	269	P	P	15 32 40.2	+1.4
	comp=Z,20nm,0.7s,baz=37,slow=5.1,SNR=6.0						
BATI	Baumata	57.04	269	P	P	15 32 39.7	+0.9
	comp=Z,15nm,0.7s						
SANI	Sanana	57.28	279	P	P	15 32 39.9	-0.5
	comp=Z,18nm,0.8s						
PSA00	Pilbara Seismi	58.35	255	P	P	15 32 46.9	-0.5
PSA00				IAmb	IAmb	15 32 48.2	
	comp=Z,24nm,0.9s						
PSA00	Pilbara Seismi	58.35	255	P	P	15 32 47.0	-0.5
PSA00				IAmb	IAmb	15 32 48.2	
	comp=Z,11nm,0.8s						
PSA00	Pilbara Seismi	58.35	255	P	P	15 32 46.9	-0.5
MBWA	Marble Bar	58.52	256	P	P	15 32 48.4	-0.2
	comp=Z,28nm,1.4s						
MEEK	Meekatharra	58.84	249	P	P	15 32 49.9	-0.8
EDFI	Ende, Flores	59.30	270	P	P	15 32 53.3	-0.7
	comp=Z,16nm,0.8s						
NWAO	Narrogin (SRO)	59.57	242	P	P	15 32 55.5	+0.2
	comp=Z,8.5nm,0.9s,baz=134,slow=6.9,SNR=6.2						
NWAO	Narrogin (SRO)	59.57	242	P	P	15 32 55.6	+0.2
NWAO				IAmb	IAmb	15 33 27.0	
	comp=Z,52nm,1.6s						
NWAO	Narrogin (SRO)	59.57	242	P	P	15 32 55.6	+0.2
	comp=Z,30nm,2.4s						
BLDU	Ballidu	60.16	245	P	P	15 32 58.7	-0.6
	comp=Z,30nm,1.3s						
SBA	Scott Base	60.25	184	P	P	15 33 01.2	+2.2
SBA				PcP	PcP	15 33 35.9	-0.5
VNDA	Vanda	60.28	185	P	P	15 33 01.1	+1.9
	comp=Z,1.3nm,0.5s,baz=356,slow=5.9,SNR=11						
VNDA	Vanda	60.28	185	P	P	15 33 00.9	+1.6
MUN	Mundaring	60.49	243	P	P	15 33 01.5	0.0
	comp=Z,38nm,0.8s						
MORW	Morawa	60.87	246	P	P	15 33 04.0	0.0
MORW				IAmb	IAmb	15 33 05.4	
	comp=Z,39nm,1.5s						
PLAI	Plampang	63.01	269	P	P	15 33 17.6	-0.4
	comp=Z,36nm,1.0s						
TOLI2	Tolitoli	63.26	281	P	P	15 33 19.7	0.0
TOLI2	Tolitoli	63.26	281	P	P	15 33 19.8	+0.2
	comp=Z,10nm,1.0s						
GIRL	Giralia	63.33	253	P	P	15 33 21.2	+1.2
GIRL	Giralia	63.33	253	P	P	15 33 21.3	+1.4
	comp=Z,108nm,1.8s						
MPSI	Mapaga	63.82	280	P	P	15 33 22.8	-0.4
	comp=Z,13nm,0.8s						
JMZ	Minamidaito 2	66.01	310	P	P	15 33 37.7	+1.1
CASY	Casey	66.17	205	P	P	15 33 37.4	+0.5
CASY				IAmb	IAmb	15 33 52.3	
	comp=Z,22nm,1.2s						
JAGI	Jajag, Banyuwa	66.55	268	P	P	15 33 39.5	-0.8
JAGI				IAmb	IAmb	15 33 40.0	
	comp=Z,19nm,0.8s						
JAGI	Jajag, Banyuwa	66.55	268	P	P	15 33 39.1	-1.1
	comp=Z,29nm,0.7s						
MJAR	Matsushiro Arr	68.38	323	P	P	15 33 50.4	-0.5
	comp=Z,1.7nm,0.7s,baz=160,slow=8.7,SNR=5.2						
MJAR	Matsushiro Arr	68.38	323	P	P	15 33 50.3	-0.6
MAJO	Matsushiro	68.38	323	P	P	15 33 50.6	-0.3
PCJI	Pacitan	69.45	268	P	P	15 33 58.3	+0.5
	comp=Z,102nm,0.7s						
JEM	Erimo	69.83	330	P	P	15 34 11.6	+12
UGM	Wanagama	70.15	268	P	P	15 34 02.0	+0.1
UGM	Wanagama	70.15	268	P	P	15 34 02.2	+0.2
	comp=Z,91nm,1.7s						
JHS	Saijyo	70.39	319	P	P	15 34 03.3	+0.4
JHS				IAmb	IAmb	15 34 05.0	
	comp=Z,14nm,1.2s						
YOJ	Yonaguni jima	71.48	304	P	P	15 34 08.9	-0.5
STKI	Sintang	71.66	276	P	P	15 34 12.1	+1.4
QSPA	South Pole Qui	71.94	180	P	P	15 34 12.5	+1.0
SSLB	Suanglung	72.78	303	P	P	15 34 16.1	-0.8
SSLB				IAmb	IAmb	15 34 18.3	
	comp=Z,76nm,1.7s						
TPUB	Ta-pu	72.80	302	P	P	15 34 16.5	-0.6
CISI	Cisompet, Garu	72.83	268	P	P	15 34 16.3	-1.2
	comp=Z,31nm,1.3s						
CISI	Cisompet, Garu	72.83	268	P	P	15 34 16.8	-0.7
CISI				IAmb	IAmb	15 34 17.5	
	comp=Z,68nm,1.5s						
LEM	Lembang	73.22	268	P	P	15 34 20.3	+0.4
	comp=Z,28nm,0.8s						
PETK	Petropavlovsk-	74.01	345	P	P	15 34 22.6	-0.7
	comp=Z,3.7nm,0.9s,baz=143,slow=9.0,SNR=6.3						
DBJI	Dramaga	74.13	268	P	P	15 34 24.8	0.0
	comp=Z,30µmcomp=Z,136nm,1.0s						
CGJI	Cibinong	75.11	268	P	P	15 34 29.6	-0.7
	comp=Z,2µmcomp=Z,54nm,0.7s						
PPBI	Pangkal Pinang	76.02	272	P	P	15 34 36.2	+0.9
YBH	Yreka Blue Hor	78.36	39	P	P	15 34 48.7	+1.3
NJ2	Nanjing	78.47	309	*e*P	P	15 34 49.9	+1.8
NJ2				pmax	pmax		
	comp=Z,12nm,1.5s						
GSC	Goldstone, Bar	78.55	47	P	P	15 34 49.6	+1.0
NVAR	Mina Array Bea	79.22	44	P	P	15 34 53.2	+1.0
	comp=Z,0.7nm,0.6s,baz=225,slow=8.6,SNR=8.8						
NV11	Mina Array Sit	79.32	44	P	P	15 34 53.4	+0.7
KVN	Kaiserville	79.69	43	P	P	15 34 55.9	+1.3
K05A	Summer Lake	80.04	39	P	P	15 34 57.3	+1.0
I07A	Izee	81.65	38	P	P	15 35 05.5	+1.0
U15A	North Rim	82.28	48	P	P	15 35 09.5	+1.5
WAX	Waxell Ridge	83.24	17	P	P	15 35 12.8	+0.8
WAX				IAmb	IAmb	15 35 20.7	
	comp=Z,48nm,1.4s						
SCM	Sheep Creek Mo	83.30	14	P	P	15 35 12.0	-0.3
TABL	Table Mountain	83.71	17	P	P	15 35 15.1	+0.5
TABL				IAmb	IAmb	15 35 34.0	
	comp=Z,46nm,1.4s						
VRDI	Verde Repeater	83.74	16	P	P	15 35 14.2	-0.4
VRDI				IAmb	IAmb	15 35 55.1	
	comp=Z,30nm,1.7s						
N25K	Chitina, Valde	83.76	15	P	P	15 35 14.7	+0.1
N25K				IAmb	IAmb	15 35 40.7	
	comp=Z,17nm,1.5s						
GLB	Gilahina Butte	83.82	16	P	P	15 35 14.5	-0.3
GLB				IAmb	IAmb	15 35 36.7	
	comp=Z,13nm,1.4s						
MAW	Mawson	83.84	200	P	P	15 35 15.4	+0.5
	comp=Z,2.4nm,0.7s,baz=152,slow=8.0,SNR=7.4						
MAW	Mawson	83.84	200	P	P	15 35 15.4	+0.5
SEY	Seymchan	84.09	347	P	P	15 35 15.6	-0.5
	comp=Z,1.9nm,0.5s,baz=175,slow=11,SNR=2.5						
GSI	Gunungsitoli	85.23	273	P	P	15 35 23.7	+1.0
	comp=Z,28nm,1.2s						
TXAR	Lajitas Array	85.67	57	P	P	15 35 25.8	+1.2
	comp=Z,0.4nm,0.5s,baz=208,slow=6.2,SNR=5.9						
ILAR	Eielson Array	85.97	13	P	P	15 35 24.3	-0.8
	comp=Z,0.8nm,0.4s,baz=216,slow=4.9,SNR=16						
SNSI	Sinabang, Aceh	86.75	274	P	P	15 35 28.6	-1.3
PDAR	Pinedale Array	87.15	43	P	P	15 35 31.7	+0.3
	comp=Z,0.6nm,0.7s,baz=176,slow=1.1,SNR=5.2						
HHC	Hu-ho-hao-te	87.78	314	*e*P	P	15 35 34.4	+0.1
HHC				pmax	pmax		
	comp=Z,12nm,1.2s						
HHC				pmax	pmax		
	comp=Z,65nm,6.0s						
CMAR	Chiang Mai Arr	89.44	290	P	P	15 35 43.5	+1.2
	comp=Z,2.6nm,1.0s,baz=110,slow=3.0,SNR=18						
CMAR	Chiang Mai Arr	89.44	290	P	P	15 35 42.8	+0.4
SNAA	Sanae	90.38	178	P	P	15 35 45.4	-0.4
VNA3	Neumayer Olymp	90.50	176	P	P	15 35 46.6	+0.3
VNA2	Neumayer--Watz	90.94	177	P	P	15 35 49.0	+0.7
	baz=177,slow=3.9						
VNA1	Neumayer--Stat	91.17	177	P	P	15 35 49.6	+0.3
LZH	Lanzhou	91.42	307	*e*P	P	15 35 57.4	+6.1
LZH				pP	pP	15 38 07.6	+2.5
LZH				pmax	pmax		
	comp=Z,34nm,1.2s						
ARCES	ARCESS Array B	126.61	350	PKP	PKPdf	15 41 42.6	-0.3
	comp=Z,5.2nm,0.9s,baz=359,slow=8.3,SNR=1.4						
FINES	FINESS Array B	133.53	344	PKP	PKPdf	15 41 55.9	-0.3
	comp=Z,2.4nm,1.0s,baz=70,slow=1.6,SNR=1.9						
AKASG	Malin Array Be	140.98	333	PKP	PKiKP	15 42 12.3	-0.9
	comp=Z,0.7nm,0.5s,baz=41,slow=2.3,SNR=2.3						
BNN	Bunyan	144.17	312	PKPdf	PKPab	15 42 16.9	+0.1
LODK	Lodwar	144.34	250	PKPdf	PKPdf	15 42 17.1	-0.3
KWP	Kalwaria Pacla	144.46	337	*e*PKPbc	PKPbc	15 42 16.8	+0.1
KWP	Kalwaria Pacla	144.46	337		PKPbc	15 42 16.8	+0.1
OJC	Ojcow	144.98	340	*e*PKPbc	PKPbc	15 42 18.4	+0.2
BUR08	Bucovina Ar. S	145.02	332		PKPbc	15 42 18.5	-0.1
BRTR	Keskin Array B	145.29	315	PKPbc	PKPbc	15 42 19.6	-0.1
	comp=Z,4.2nm,0.9s,baz=135,slow=3.5,SNR=12						
BRTR	Keskin Array B	145.29	315	PKPdf	PKPdf	15 42 18.9	+0.6
KSP	Ksiaz	145.45	344	*e*PKPbc	PKPbc	15 42 19.9	+0.4
CHVC	Chvalec	145.75	344	*e*PKP	PKPbc	15 42 20.9	+0.5
CLL	Collm	145.78	348	*i* PKPbc	PKPbc	15 42 20.7	+0.3
	comp=Z,12nm,0.8s						
CLL				*i* PKPab	PKPab	15 42 22.6	+0.2
CLL	Collm	145.78	348	PKPdf	PKPbc	15 42 20.2	-0.2
DPC	Dobruska-Polom	145.89	344	*e*PKP	PKPbc	15 42 21.1	+0.2
BRG	Berggiesshubel	145.99	347	*e*PKP	PKPbc	15 42 21.6	+0.5
BRG				Amp		15 42 22.3	
	comp=Z,6.0nm,0.9s						
KRLC	Kraliky	146.02	343	*e*PKP	PKPbc	15 42 21.1	-0.1
MLR	Muntele Rosu	146.27	329		PKPbc	15 42 21.8	-0.4
VYHS	Vyhne	146.79	340	*e*PKP	PKPbc	15 42 24.2	+0.9
NKC	Novy Kostel	146.91	348	*e*PKP	PKPbc	15 42 23.9	+0.3
KHC	Kasperske Hory	147.70	346	*e*PKP	PKPbc	15 42 25.9	+0.2
CKRC	Cesky Krumlov	147.82	345	*e*PKP	PKPbc	15 42 25.8	-0.2
GERES	GERESS Array B	147.94	346	PKPbc	PKPbc	15 42 26.4	0.0
	comp=Z,2.2nm,0.7s,baz=29,slow=3.0,SNR=16						
GERES	GERESS Array B	147.94	346		PKPbc	15 42 26.2	-0.2
DIVS	Divibare	150.06	334		PKPbc	15 42 30.4	-1.3
CRNS	Crni Vrh	150.35	343	*i* PKPbc	PKPbc	15 42 31.9	-0.3
BOJS	Bojanci	150.58	341	*i* PKPbc	PKiKP	15 42 33.3	+0.2
STAL	STALIGIAL	150.60	345		PKPbc	15 42 30.5	-2.2
TORD	Torodi Ar. Bea	175.04	175	PKPab	PKPab	15 44 30.3	+0.3
	comp=Z,0.5nm,1.0s,baz=195,slow=4.5,SNR=2.5						

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*IDC **05** 15:35:30.1±1.3, 43°.29N×147°.18E, h0^{km}, mb3.6/6, mb1 3.7/11, mb1mx3.5/57, mbtmp3.6/11, ML3.3/5, MS2.7/2, Ms1 2.7/2, ms1mx2.3/50, Error ellipse: s-maj=29.3km s-min=22.2km az=152.0*

*MOS **05** 15:35:33.4±1.0, 43°.29N×147°.08E, h49^{km}, mb4.2/2, Error ellipse: s-maj=10.2km s-min=9.0km az=121.0*

*JMA **05** 15:35:35.0±0.4, 43°.32N×146°.93E, h43^{km}±4^{km}, M4.3*

JMA Felt I J1.

*SKHL **05** 15:35:35.8±0.3, 43°.40N×147°.00E, h69^{km}±7^{km}, mb5.0/5*

*NIED **05** 15:35:35.1, 43°.32N×146°.93E, h43^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$2.80; M$_{θθ}$1.17; M$_{φφ}$-3.98; M$_{rθ}$-1.98; M$_{θφ}$-5.26; M$_{φr}$3.14; Fault plane solution: M$_0$7.34000×10^{14} NP1: φ$_s$354.00000°, δ71.00000°, λ36.00000°. NP2: φ$_s$251.00000°, δ56.00000°, λ157.00000°.*

ISC 05 15:35:31.8±1.7, **43°.36N**±0°.05×**147°.05E**±0°.05, **h11**^{km}±9^{km}, **n50**, σ1^{s}.**32**/60, **mb3.7**/8, **3C-7D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	0.95	271	P	Pb	15 35 51.0	+0.8
NEM2				*e*S	Sg	15 36 03.1	+0.6
NMR	Nemuro--Hokkai	0.96	271	⇓*i*PN	Pb	15 35 51.0	+0.6
NMR				*i* S	Sg	15 36 03.3	+0.5
NMR	Nemuro--Hokkai	0.96	271	*i* P	Pn	15 35 51.3	+0.1
NMR				*i* S	Sg	15 36 03.3	+0.5
YUK	Yuzh-Kuril'sk	1.09	309	*d i*PN	Pn	15 35 53.7	+0.7
YUK				*e*S	Sg	15 36 07.2	+0.1
YUK				pmax	pmax		
	comp=E,907nm,0.2s						
YUK				pmax	pmax		
	comp=Z,5µm,0.2s						
YUK				pmax	pmax		
	comp=N,719nm,0.3s						
YUK				smax	smax		
	comp=N,7µm,0.3s						
YUK				smax	smax		
	comp=E,5µm,0.2s						
YUK	Yuzh-Kuril'sk	1.09	309	*i* P	Pn	15 35 53.7	+0.7
YUK				AMB	AMB	15 35 55.0	
	comp=E,5µm,0.3s						
YUK				*e*S	Sg	15 36 07.2	+0.1
YUK				A	A	15 36 08.0	
	comp=E,6µm,0.3s						
YUK				A	A	15 36 08.0	
	comp=E,5µm,0.3s						
GRPR	Tuman	1.12	305	*d i*PN	Pg	15 35 53.7	+0.3
GRPR				*e*S	Sg	15 36 06.7	-1.3
GRPR				pmax	pmax		
	comp=Z,2µm,0.2s						
GRPR				pmax	pmax		
	comp=N,202nm,0.1s						
GRPR				pmax	pmax		
	comp=E,388nm,0.2s						
GRPR				smax	smax		
	comp=N,5µm,0.4s						
GRPR				smax	smax		
	comp=E,8µm,0.4s						
GRPR	Tuman	1.12	305	*i* P	Pg	15 35 53.7	+0.3
GRPR				AMB	AMB	15 35 54.0	
	comp=E,2µm,0.4s						
GRPR				*e*S	Sg	15 36 07.0	-1.0
GRPR				A	A	15 36 07.0	
	comp=E,5µm,0.4s						
GRPR				A	A	15 36 07.0	
	comp=E,8µm,0.4s						
GLVR	Golovnino	1.17	289	*d i*PN	Pg	15 35 54.4	0.0
GLVR				*e*S	Sg	15 36 07.0	-2.6
GLVR				pmax	pmax		
	comp=N,62nm,0.2s						
GLVR				pmax	pmax		
	comp=E,52nm,0.2s						
GLVR				pmax	pmax		
	comp=Z,690nm,0.2s						
GLVR				smax	smax		
	comp=N,3µm,0.2s						
GLVR				smax	smax		
	comp=E,4µm,0.3s						
GLVR	Golovnino	1.17	289	*i* P	Pg	15 35 54.4	0.0
GLVR				AMB	AMB	15 35 54.8	
	comp=E,690nm,0.2s						
GLVR				*e*S	Sg	15 36 08.2	-1.4
GLVR				A	A	15 36 11.0	
	comp=E,3µm,0.3s						
GLVR				A	A	15 36 11.0	
	comp=E,4µm,0.3s						
JKHN	Kushirohamanak	1.41	259	P	Pn	15 35 57.8	+0.5
RUSJ	Misakicho	1.50	300	⇓*i*PN	Pn	15 35 59.6	+1.0
RUSJ				S	Sn	15 36 18.9	+0.7
JRA	Rausu	1.51	293	P	Pn	15 35 59.4	+0.6
JNSB	Nemuroshibetsu	1.54	286	P	Pn	15 35 59.8	+0.6
AKK	Akkeshi	1.65	259	*e*P	Pb	15 36 01.7	-0.4
AKK				*e*S	Sn	15 36 21.1	-0.6
JNK	Nakash	1.71	278	P	Pn	15 36 01.6	+0.1
JAK	Akkeshi	1.76	259	P	Pn	15 36 02.2	+0.1
KUR	Kuril'sk	1.97	17	*e*PN	Pb	15 36 06.5	-1.1
KUR				*e*S	Sn	15 36 30.4	+0.8
KUR				smax	smax		
	comp=N,849nm,0.3s						
KUR				smax	smax		
	comp=E,375nm,0.4s						
KUR	Kuril'sk	1.97	17	*e*P	Pb	15 36 07.0	-0.6
KUR				AMB	AMB	15 36 12.9	
	comp=E,20nm,0.6s						
KUR				AMB	AMB	15 36 12.9	
	comp=E,150nm,0.6s						
KUR				*e*S	Sn	15 36 30.2	+0.6
KUR				A	A	15 36 35.0	
	comp=E,800nm,0.3s						
KUR				A	A	15 36 35.0	
	comp=E,475nm,0.3s						
JTKR	Abashiri--Toko	2.36	286	P	Pn	15 36 12.1	+1.7
JAR	Ashorobuto	2.39	270	P	Pn	15 36 11.7	+0.8
JOB	Onbets	2.39	260	P	Pn	15 36 11.9	+1.0
JCH	Churui	2.80	256	P	Pn	15 36 17.2	+0.7
ERM	Erimo	3.17	246	*d i*PN	Pn	15 36 24.3	+2.8
JEM	Erimo	3.17	246	P	Pn	15 36 24.2	+2.7
JKA	Kamikawa-asahi	3.31	285	*e*P	Pn	15 36 26.5	+3.0
ASAJ	Asahikawa	3.31	285	Pn	Pn	15 36 26.5	+3.0
	comp=E,11nm,0.3s,baz=139,slow=15,SNR=52						
ASAJ				Sn	Sb	15 37 08.7	-2.1
	comp=E,4.3nm,0.3s,baz=172,slow=19,SNR=1.7						
ASAJ				LR	LR	15 37 53.9	
	comp=E,128nm,18.2s,baz=126,slow=42						
YSS	Yuzh-Sakhalins	4.71	321	*e*PN	Pn	15 36 45.1	+2.5
YSS				*e*S	Sn	15 37 37.2	0.0
YSS				pmax	pmax		
	comp=Z,20nm,1.1s						
YSS				smax	smax		
	comp=N,20nm,0.7s						
YSS	Yuzh-Sakhalins	4.71	321	*e*P	Pn	15 36 44.8	+2.2
YSS				AMB	AMB	15 36 48.0	
	comp=N,14nm,0.5s						
MAJO	Matsushiro	9.61	228	⇓*e*PN	Pn	15 37 49.6	-0.4
MJAR	Matsushiro Arr	9.61	228	Pn	Pn	15 37 49.6	-0.4
	comp=N,0.2nm,0.3s,baz=20,slow=11,SNR=5.4						
MJAR				Sn	Sn	15 39 36.5	-1.3
	comp=N,0.1nm,0.3s,baz=305,slow=42,SNR=2.4						
USRK	Ussuriysk Ar.	10.92	280	Pn	Pn	15 38 10.3	+2.3
	baz=98,slow=16,SNR=2.2						
PETK	Petropavlovsk-	12.05	32	Pn	Pn	15 38 24.4	+1.0
	comp=N,0.1nm,0.3s,baz=215,slow=12,SNR=1.4						
KSRS	Korea Array	15.70	254	Pn	Pn	15 39 13.7	+0.8
	comp=N,0.1nm,0.3s,baz=60,slow=14,SNR=1.8						
KSRS				LR	LR	15 44 43.3	
	comp=N,24nm,19.9s,baz=234,slow=35						
HIA	Hailar	19.70	297	⇑*e*P	P	15 40 00.4	-0.6
HIA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BILL	Bilibino	26.76	16	⇑*e*P	P	15 41 09.7	-1.4
BILL				*e*		15 41 55.2	
BILL				pmax	pmax		
	comp=Z,7.0nm,1.4s						
BILL				MLR	MLR		
	comp=Z,74nm,21.0s						
BILL	Bilibino	26.76	16	*e*P	P	15 41 09.7	-1.4
SONM	Songino Array	28.55	293	P	P	15 41 27.7	+0.2
	comp=Z,1.6nm,0.9s,baz=80,slow=8.5,SNR=5.8						
H11N2	WAKE ISLAND Hy	28.86	138	T	T	16 12 10.4	
	baz=330,slow=76,SNR=419						
H11N1	WAKE ISLAND Hy	28.87	139	T	T	16 12 15.8	
	baz=330,slow=76,SNR=326						
H11N3	WAKE ISLAND Hy	28.87	138	T	T	16 12 14.2	
	baz=330,slow=76,SNR=356						
H11S1	WAKE ISLAND Hy	29.81	140	T	T	16 13 29.4	
	baz=330,slow=76,SNR=901						
H11S3	WAKE ISLAND Hy	29.82	140	T	T	16 13 22.2	
	baz=330,slow=76,SNR=906						
H11S2	WAKE ISLAND Hy	29.83	140	T	T	16 13 29.9	
	baz=330,slow=76,SNR=566						
DGZ	Jazzator, Alta	40.55	301	⇑*e*P	P	15 43 09.1	-2.0
DGZ				pmax	pmax		
	comp=Z,1.0nm,1.2s						
ILAR	Eielson Array	41.85	36	P	P	15 43 21.1	-0.3
	comp=Z,0.2nm,0.5s,baz=263,slow=7.7,SNR=2.1						
MKAR	Makanchi Array	44.70	298	P	P	15 43 44.3	-0.3
	comp=Z,0.4nm,0.5s,baz=83,slow=11,SNR=7.4						
WRA	Warramunga Arr	64.06	193	*i* P	P	15 46 04.0	-1.6
ASAR	Alice Springs	67.78	193	P	P	15 46 29.7	+0.2
	comp=Z,0.5nm,0.8s,baz=12,slow=5.1,SNR=3.6						
NOA	NORSAR Array B	69.94	339	P	P	15 46 42.8	+0.1
	comp=Z,0.6nm,0.8s,baz=28,slow=7.7,SNR=1.9						
AKASG	Malin Array Be	71.85	324	P	P	15 46 56.4	+2.1
	comp=Z,0.2nm,0.3s,baz=40,slow=6.2,SNR=2.2						

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*IDC **05** 15:35:45.2±2.0, 8°.71S×123°.97E, h0^{km}, mb3.8/1, mb1 3.8/3, mb1mx3.4/42, mbtmp3.6/3, ML3.3/2, Error ellipse: s-maj=62.5km s-min=26.8km az=76.0*

ISC 05 15:35:55.1±1.5, **9°.3S**±0°.1×**123°.7E**±0°.2, **h100**^{km}, **n5**, σ1^{s}.**22**/8, **Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	0.87	180	Pn	Pn	15 36 14.1	-0.2
	47nm,0.3s,baz=69,slow=5.1,SNR=24						
BATI				Sn	Sn	15 36 28.1	-0.4
	26nm,0.3s,baz=49,slow=9.3,SNR=6.6						
BATI				LR	LR	15 36 50.4	

	comp=Z,210nm,18.5s,baz=245,slow=43						
FITZ	Fitzroy Crossi	8.92	168	Sn	Sn	15 39 39.9	0.0
	0.2nm,0.3s,baz=280,slow=17,SNR=2.7						
WRA	Warramunga Arr	14.75	137	Pn	Pn	15 39 17.9	-0.9
	0.1nm,0.3s,baz=309,slow=14,SNR=3.6						
WRA				Sn	Sn	15 42 01.9	+0.4
	0.2nm,0.3s,baz=304,slow=22,SNR=2.5						
ASAR	Alice Springs	17.29	147	P	Pn	15 39 52.8	+2.5
	0.2nm,0.3s,baz=319,slow=12,SNR=12						
ASAR				S	Sn	15 43 02.4	-0.4
	0.0nm,0.3s,baz=318,slow=22,SNR=8.0						
MKAR	Makanchi Array	66.94	330	P	P	15 46 36.9	0.0
	1.1nm,1.1s,baz=137,slow=8.2,SNR=1.6						

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*IDC **05** 15:42:55.9±1.3, 5.°99S×151.°69E, h0^{km}, mb4.0/6, mb1 4.2/7, mb1mx3.8/36, mbtmp4.1/7, ML2.3/1, MS2.7/2, Ms1 2.7/2, ms1mx2.4/33, Error ellipse: s-maj=61.9km s-min=20.8km az=124.0*

*NEIC **05** 15:43:01.9±2.4, 6.°06S±0.°06×151.°6E±0.°1, h39^{km}±8^{km}, mb4.1/15, Error ellipse: s-maj=16.4km s-min=5.0km az=114.0*

ISC 05 15:43:01.7±0.7, 6.°07S±0.°07×151.°55E±0.°08, h41^{km}, n30, $\sigma 1^{s}25$/34, mb4.1/13, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	1.96	18		Pn	15 43 32.4	-0.1
RABL				Sn	Sn	15 43 57.1	+1.2
PMG	Port Moresby	5.47	232	Pn	Pn	15 44 22.6	+1.9
	6.2nm,0.3s,baz=40,slow=9.7,SNR=25						
PMG				Sn	Sn	15 45 23.2	+0.7
	4.4nm,0.3s,baz=114,slow=19,SNR=6.9						
PMG				LR	LR	15 46 41.3	
	comp=Z,46nm,18.6s,baz=10,slow=40						
PMG	Port Moresby	5.47	232		Pn	15 44 22.2	+1.4
PMG				Sn	Sn	15 45 21.7	-0.8
MANU	Manus Island	5.77	314	Pn	Pn	15 44 27.3	+2.3
COEN	Coen	11.38	226	Pn	Pn	15 45 43.4	+1.6
SANVU	Saraoutou	17.97	122	P	Pn	15 47 07.9	-0.8
MTN	Manton Dam	21.22	250	P	P	15 47 42.5	-1.8
MTN				IAmb	IAmb	15 47 58.2	
	comp=Z,11nm,1.2s						
WB0	Warramunga Arr	21.53	229	P	P	15 47 46.9	-0.7
WB0				IAmb	IAmb	15 48 01.7	
	comp=Z,22nm,1.6s						
WR0	Warramunga Arr	21.54	229	P	P	15 47 46.5	-1.2
WR0				IAmb	IAmb	15 48 01.9	
	comp=Z,9.6nm,1.2s						
WRAB	Tennant Creek	21.66	229	P	P	15 47 49.1	+0.1
WRAB				IAmb	IAmb	15 47 54.8	
	comp=Z,4.8nm,0.9s						
WB2	Warramunga Arr	21.67	229	P	P	15 47 47.6	-1.5
WB2				IAmb	IAmb	15 48 03.7	
	comp=Z,12nm,1.4s						
WRA	Warramunga Arr	21.68	229	P	P	15 47 49.8	+0.7
	comp=Z,2.1nm,0.8s,baz=53,slow=10,SNR=8.5						
WRA				PcP	PcP	15 51 50.8	+1.3
	comp=Z,0.6nm,0.8s,baz=43,slow=2.0,SNR=2.7						
WRA	Warramunga Arr	21.68	229	P	P	15 47 48.9	-0.3
PINNC	Pines Island,	22.50	139	P	P	15 47 59.3	+1.4
KNRA	Kununurra	24.30	245	P	P	15 48 15.0	-0.7
KNRA				IAmb	IAmb	15 48 24.0	
	comp=Z,6.4nm,1.0s						
AS31	Alice Springs	24.38	222	P	P	15 48 16.4	+0.1
ASAR	Alice Springs	24.38	222	P	P	15 48 17.3	+1.0
	comp=Z,2.5nm,0.7s,baz=51,slow=9.3,SNR=24						
ASAR				LR	LR	15 57 03.0	
	comp=Z,32nm,20.7s,baz=316,slow=34						
ASAR	Alice Springs	24.38	222	P	P	15 48 16.0	-0.3
STKA	Stephens Creek	27.32	199	P	P	15 48 43.4	+0.7
	comp=Z,0.4nm,0.4s,baz=12,slow=19,SNR=3.4						
STKA	Stephens Creek	27.32	199	P	P	15 48 43.2	+0.5
FITZ	Fitzroy Crossi	27.96	242	P	P	15 48 49.2	+0.5
	comp=Z,1.7nm,0.5s,baz=49,slow=7.0,SNR=13						
FITZ	Fitzroy Crossi	27.96	242	P	P	15 48 47.3	-1.4
FITZ				IAmb	IAmb	15 49 15.8	
	comp=Z,2.7nm,0.8s						
LUWI	Luwuk	29.14	279	P	P	15 48 56.2	-3.0
TOLI2	Tolitoli	31.53	282	P	P	15 49 19.8	-0.6
TOLI2				IAmb	IAmb	15 49 28.1	
	comp=Z,3.5nm,0.9s						
JAGI	Jajag, Banyuwa	37.16	264	P	P	15 50 07.2	-2.0
ZALV	Zalesovo Beam	81.51	327	P	P	15 55 15.6	+0.8
	comp=Z,0.4nm,0.5s,baz=96,slow=5.8,SNR=1.9						
ILAR	Eielson Array	83.79	22	P	P	15 55 26.2	-0.2
	comp=Z,1.7nm,0.6s,baz=246,slow=5.3,SNR=28						
GERES	GERESS Array B	124.46	327	PKP	PKPdf	16 01 56.8	0.0
	comp=Z,0.5nm,0.8s,baz=29,slow=3.0,SNR=3.7						
TORD	Torodi Ar. Bea	149.48	286	PKPbc	PKPbc	16 02 47.8	+0.1
	comp=Z,0.7nm,0.5s,baz=100,slow=3.3,SNR=7.1						
TORD	Torodi Ar. Bea	149.48	286		PKPbc	16 02 46.2	-1.4

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*EAF **05** 15:55:54.7±0.9, 25.°57S×29.°19E, h10^{km}, MD3.5*

BUL 05 15:55:55.1±0.9, 25.°55S×29.°14E, h10^{km}, MD3.7, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOPA	Mopani	2.88	46	*e*P	Pn	15 56 40.3	-0.8
MOPA				*e*S	Sn	15 57 13.1	-2.7
MOPA	Mopani	2.88	46	*e*P	Pn	15 56 40.3	-0.8
MOPA				*e*S	Sn	15 57 13.1	-2.7
MSNA	Messina	3.29	14	*e*P	Pn	15 56 46.9	+0.2
MSNA				*e*S	Sn	15 57 23.3	-2.6
MSNA	Messina	3.29	14	*e*P	Pn	15 56 46.9	+0.2
MSNA				*e*S	Sn	15 57 23.3	-2.6
BOSA	Boshof	4.62	228	*e*P	Pn	15 57 03.6	-1.5
BOSA				*e*S	Sn	15 57 55.8	-3.1
BOSA	Boshof	4.62	228	*e*P	Pn	15 57 03.6	-1.5
BOSA				*e*S	Sn	15 57 55.8	-3.1
MATP	Matopo	5.13	353	*e*P	Pn	15 57 11.3	-0.9
MATP				*e*S	Sn	15 58 07.5	-4.1
MATP	Matopo	5.13	353	*e*P	Pn	15 57 11.3	-0.9
MATP				*e*S	Sn	15 58 07.5	-4.1

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*GCG **05** 16:03:42.4±0.3, 13.°99N×91.°50W, h23^{km}±3^{km}, MD3.5*

*SNET **05** 16:03:42.5±0.8, 14.°04N×91.°22W, h8^{km}±8^{km}, ML3.5*

ISC 05 16:03:39.6±3.4, 13.°7N±0.°1×91.°6W±0.°2, h35^{km}, n11, $\sigma 0^{s}87$/15, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG3	Santiaguito 3,	0.97	3	*e*P	Pn	16 03 56.5	-0.5
FUG	Fuego 3	1.03	47	*e*P	Pn	16 03 57.5	-0.3
NBG	Las Nubes	1.50	55	*e*P	Pn	16 04 05.5	+1.2
NBG				*e*S	Sn	16 04 23.5	+0.8
HUEH	Huehuetenango	1.58	4	*e*S	Sn	16 04 25.2	+0.5
CEVE	Cerro Verde	1.94	87	*e*P	Pn	16 04 10.8	+0.4
CEVE				*e*S	Sn	16 04 33.4	-0.3
CEVE				IAML		16 04 39.5	
	comp=Z,721nm,0.5s						
SBLS	San Blas	1.94	87	*e*S	Sn	16 04 33.0	-0.6
JAYA	Jayaque - finc	2.11	92	*e*P	Pn	16 04 12.8	+0.2
JAYA				*e*S	Sn	16 04 36.1	-1.7
JAYA				IAML		16 04 40.8	
	comp=Z,439nm,0.2s						
TACO	Tacachico	2.21	84	*e*P	Pn	16 04 13.8	-0.1
PMON	Piamonte	2.24	90	*e*P	Pn	16 04 15.4	+1.0
PMON				*e*S	Sn	16 04 40.5	-0.3
MTO3	Montecristo	2.29	73	*e*P	Pn	16 04 14.2	-0.9
LFRS	El Faro	2.49	92	*e*P	Pn	16 04 18.7	+0.9

IDC 05 16:08:37.9±3.9, 3.°66S×150.°67E, h0^{km}, mb3.3/2, mb1 3.7/2, mb1mx3.3/28, mbtmp3.4/2, MS2.8/1, Ms1 2.8/1, ms1mx2.4/23, Error ellipse: s-maj=149.4km s-min=50.5km az=114.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	10.01	276	LR	LR	16 14 08.3	
	comp=Z,48nm,18.2s,baz=342,slow=33						
WRA	Warramunga Arr	22.71	223	P	P	16 13 40.8	-0.8
	0.5nm,0.6s,baz=49,slow=10,SNR=5.3						
ASAR	Alice Springs	25.65	218	P	P	16 14 10.1	+0.5
	0.8nm,0.8s,baz=54,slow=8.3,SNR=18						
TORD	Torodi Ar. Bea	147.93	289	PKPbc	PKPbc	16 28 25.6	-0.7
	0.2nm,0.4s,baz=94,slow=2.0,SNR=1.6						

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*TAP **05** 16:11:06.8, 24.°67N×122.°40E, h16^{km}, ML3.2, D*

*JMA **05** 16:11:07.2, 24.°60N×122.°43E, h31^{km}±2^{km}, M2.7*

ISC 05 16:11:06.5±0.9, 24.°68N±0.°02×122.°43E±0.°02, h17^{km}±8^{km}, n76, $\sigma 0^{s}60$/129, 1C-3D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.52	115	P	Pg	16 11 17.2	+0.4
JYNG				S	Sg	16 11 24.2	+0.4
TWB1	Santiao Chiao	0.52	310	*e*P	Pb	16 11 17.2	0.0
	baz=313						
TWB1				*e*S	Sg	16 11 23.5	-0.4
	baz=313						
TWC	Suao	0.53	263	⇓*i*P	Pg	16 11 16.5	-0.7
	baz=262						
TWC				*e*S	Sb	16 11 24.2	-0.6
	baz=262						
YOJ	Yonaguni jima	0.57	112	*e*P	Pg	16 11 18.1	+0.3
	baz=105						
YOJ	Yonaguni jima	0.57	112	P	Pg	16 11 18.1	+0.3
YOJ				S	Sg	16 11 25.6	+0.2
NTC	Toucheng	0.57	288	*e*P	Pg	16 11 17.5	-0.4
	baz=289						
NTC				*e*S	Sb	16 11 26.5	+0.5
	baz=289						
TIPB	Shuangxi	0.62	298	P	Pb	16 11 19.2	+0.2
	baz=310						
TIPB				*e*S	Sg	16 11 27.0	-0.2
	baz=310						
ILA	Ilan	0.63	278	*e*P	Pb	16 11 18.8	-0.2
	baz=271						
ILA				*e*S	Sb	16 11 27.7	+0.2
	baz=271						
EWUT	Wuta	0.64	249	P	Pg	16 11 18.5	-0.5
	baz=258						
EWUT				*e*S	Sb	16 11 28.5	+0.7
	baz=258						
NDS	Dongshan	0.65	267	P	Pg	16 11 18.9	-0.4
	baz=259						
NDS				*e*S	Sb	16 11 28.9	+0.6
	baz=259						
ENA	Nanau	0.68	249	*e*P	Pg	16 11 19.1	-0.7
	baz=255						
ENA				*e*S	Sb	16 11 28.7	-0.1
	baz=255						
TWE	Neicheng	0.70	274	⇓*i*P	Pg	16 11 19.7	-0.5
	baz=267						
TWE				S	Sb	16 11 30.1	+0.7
	baz=267						
NWF	Wu-fen Shan	0.71	304	P	Pn	16 11 21.5	-0.4
	baz=305						
NWF				S	Sn	16 11 31.1	-1.3
	baz=305						
WFSB	Wu-fen Shan	0.71	304	*e*P	Pn	16 11 21.5	-0.3
	baz=314						
WFSB				*e*S	Sn	16 11 31.2	-1.1
	baz=314						
ENTT	Nioudou	0.79	268	*e*P	Pg	16 11 21.2	-0.7
	baz=261						
ENTT				*e*S	Sb	16 11 32.2	0.0
	baz=261						
TWA	Mucha	0.83	292	*e*P	Pg	16 11 22.8	+0.2
	baz=293						
TWA				S	Sg	16 11 33.7	+0.1
	baz=293						
NDT	Datong Townshi	0.84	265	P	Pb	16 11 22.4	-0.2
	baz=265						
NDT				*e*S	Sn	16 11 34.9	-0.6
	baz=265						
NWLT	Wulai	0.85	277	*e*P	Pg	16 11 23.1	+0.1
	baz=277						
NWLT				S	Sg	16 11 34.1	-0.2
	baz=277						
NHDH	Xindian Distri	0.87	289	*e*P	Pn	16 11 24.3	+0.4
	baz=279						
NHDH				S	Sg	16 11 35.0	0.0
	baz=279						
ETL	Fush Village	0.90	235	*e*P	Pg	16 11 23.7	-0.3
	baz=241						
ETL				*e*S	Sn	16 11 36.4	-0.6
	baz=241						
TATO	Taipei	0.91	289	*e*P	Pn	16 11 24.8	+0.3
	baz=280						
TATO				*e*S	Sg	16 11 35.8	-0.3
	baz=280						
NACB	Ninganchiao	0.91	237	⇓P	Pb	16 11 23.3	-0.5
	baz=235						
NACB				*e*S	Sb	16 11 34.9	-0.8
	baz=235						
YM01	YM01	0.91	301	P	Pn	16 11 24.5	-0.1
	baz=302						
YM01				*e*S	Sn	16 11 36.8	-0.6
	baz=302						
TAP	Taipei	0.92	294	*e*P	Pn	16 11 24.9	+0.3
	baz=294						
TAP				*e*S	Sn	16 11 37.1	-0.2
	baz=294						
YHNB	Yeheng	0.96	270	P	Pb	16 11 24.5	-0.3
	baz=263						
YHNB				*e*S	Sg	16 11 37.0	-0.8
	baz=263						
TWY	Chenhua	0.96	309	*e*P	Pn	16 11 25.2	0.0
	baz=310						
TWY				*e*S	Sn	16 11 38.2	-0.3
	baz=310						
TWD	Chiawan	0.96	232	*e*P	Pb	16 11 24.6	-0.1
	baz=237						
TWD				*e*S	Sn	16 11 37.9	-0.7
	baz=237						
ANP	Anpu	0.97	302	*e*P	Pn	16 11 25.6	+0.1
	baz=302						
NSK	Sanguang	0.98	270	P	Pb	16 11 24.7	-0.3
	baz=270						
NSK				S	Sg	16 11 37.6	-0.7
	baz=270						
ETLH	Xiulin Townshi	0.98	242	*e*P	Pb	16 11 24.7	-0.4
	baz=248						
ETLH				*e*S	Sn	16 11 38.9	-0.2
	baz=248						
NNSB	Datong	0.99	256	*e*P	Pb	16 11 24.8	-0.4
	baz=255						
NNSB				*e*S	Sn	16 11 38.9	-0.4
	baz=255						
NNS	Nan Shan	0.99	257	*e*P	Pb	16 11 24.9	-0.4
	baz=255						
NNS				*e*S	Sn	16 11 38.7	-0.7
	baz=255						
PCYT	Pengchaiyu	1.00	341	*e*P	Pg	16 11 26.4	+0.4
	baz=343						
TWS1	Kuangyinshan	1.01	295	*e*P	Pn	16 11 26.2	+0.3
	baz=296						
TWS1				*e*S	Sn	16 11 39.8	0.0
	baz=296						
NTST	Danshui	1.02	299	*e*P	Pn	16 11 26.4	+0.4
	baz=300						
NTST				*e*S	Sn	16 11 40.6	+0.8
	baz=300						
ETM	Tongmen	1.11	231	*e*P	Pg	16 11 27.6	-0.4
	baz=229						
FUSS	Fushou	1.16	249	*e*P	Pg	16 11 28.5	-0.5
	baz=247						
FUSS				*e*S	Sg	16 11 44.7	+0.5
	baz=247						
WHF	Hehuan Shan	1.19	244	⇑*i*P	Pb	16 11 28.5	-0.3
	baz=250						
WHF				*e*S	Sg	16 11 45.0	-0.1
	baz=250						
TWT	Tachien	1.22	250	*e*P	Pg	16 11 30.2	+0.2
	baz=242						
TWT				*e*S	Sg	16 11 47.0	+1.0
	baz=242						
IRIF	Iriomote-Funau	1.23	106	P	Pn	16 11 28.3	-0.6
IRIF				*e*S	Sb	16 11 44.4	-0.5
TDCB	Techi	1.23	250	*e*P	Pg	16 11 29.9	-0.4
	baz=242						
TDCB				*e*S	Sg	16 11 46.2	-0.3
	baz=242						
ESL	Shilin	1.25	227	*e*P	Pg	16 11 30.2	-0.5
	baz=225						
ESL				*e*S	Sg	16 11 47.2	+0.3
	baz=225						
LIOB	Emei	1.29	269	*e*P	Pg	16 11 31.6	+0.3
	baz=269						
LIOB				*e*S	Sg	16 11 50.0	+1.8
	baz=269						
CHGB	Renai	1.30	242	*e*P	Pb	16 11 30.8	+0.2
	baz=247						
CHGB				*e*S	Sg	16 11 49.6	+1.0
	baz=247						
NSTT	Nanjuang	1.30	268	P	Pg	16 11 31.3	-0.3
	baz=268						
NSTT				*e*S	Sg	16 11 48.7	+0.1
	baz=268						
SBCB	Hsinchu	1.32	275	*e*P	Pg	16 11 32.9	+0.9
	baz=293						
HSN	Hsinchu	1.33	276	*e*P	Pb	16 11 31.4	+0.3
	baz=294						
OWD	Renai	1.35	238	*e*P	Pg	16 11 31.9	-0.7
	baz=241						
OWD				*e*S	Sg	16 11 50.3	+0.1
	baz=241						
EGFH	Guangfu	1.36	223	*e*P	Pg	16 11 32.1	-0.6
	baz=206						
WHP	Taichung City	1.41	254	*e*P	Pg	16 11 33.5	-0.1
	baz=261						
WHP				*e*S	Sg	16 11 51.7	-0.4
	baz=261						
HGSD	Ruisui	1.50	218	*e*P	Pb	16 11 33.4	-0.4
	baz=204						
JKRS	Kuro-shima	1.50	107	P	Pn	16 11 32.8	+0.1
JKRS				S	Sn	16 11 51.2	-0.7
WCS	Beigang Elemen	1.52	246	*e*P	Pg	16 11 35.2	-0.4
	baz=232						
EHY	Hungye	1.54	221	*e*P	Pb	16 11 35.0	+0.4
	baz=220						
TWQ1	Liyutan	1.54	258	*e*P	Pg	16 11 36.7	+0.4
	baz=269						
TWQ1				*e*S	Sg	16 11 57.6	+1.2
	baz=269						
JIJ	Ishigaki jima	1.59	101	P	Pn	16 11 33.4	-0.5
JIJ				S	Sn	16 11 53.6	-0.4
SMLT	Sun Moon Lake	1.60	241	*e*P	Pg	16 11 37.2	-0.2
	baz=244						
SMLT				*e*S	Sg	16 11 58.2	-0.1
	baz=244						
SSLB	Suanglung	1.61	237	*e*P	Pg	16 11 36.5	-1.0
	baz=221						
TYC	Yuchr	1.63	242	*e*P	Pg	16 11 37.5	-0.3
	baz=245						
TYC				*e*S	Sg	16 11 59.0	0.0
	baz=245						
YULB	Yu-li	1.65	219	*e*P	Pn	16 11 35.5	+0.9
	baz=206						
JISG	Ishigakijimahi	1.71	93	P	Pn	16 11 35.2	-0.3
WJS	Zhushan	1.77	242	*e*P	Pg	16 11 41.0	+0.4
	baz=224						
YUS	Yu-Shan	1.79	229	*e*P	Pb	16 11 38.9	-0.3
	baz=211						
YUS				*e*S	Sn	16 12 00.2	+0.5
	baz=211						
FULB	Fuli	1.80	216	*e*P	Pn	16 11 37.5	+0.7
	baz=199						
FULB				*e*S	Sb	16 12 01.4	+0.1
	baz=199						
ALS	Alishan	1.89	232	*e*P	Pb	16 11 40.9	+0.2
	baz=216						
ALS				*e*S	Sb	16 12 04.1	0.0
	baz=216						
CHN5	Tsauling	1.93	237	*e*P	Pb	16 11 42.1	+0.9
	baz=218						
CHN5				*e*S	Sg	16 12 07.9	-0.7
	baz=218						
JTJ	Tarama	2.07	90	P	Pn	16 11 41.3	+0.9
CHN4	Tsaushan	2.14	232	*e*P	Pb	16 11 44.4	-0.3
	baz=231						
TPUB	Ta-pu	2.14	231	*e*P	Pb	16 11 45.0	+0.2
	baz=214						
WTP	Ta-pu	2.19	230	*e*P	Pb	16 11 45.9	+0.2
	baz=211						
WTP				*e*S	Sb	16 12 13.1	+0.6
	baz=211						
TWK	Hsinying	2.26	232	*e*P	Pb	16 11 47.7	+0.8
	baz=231						
CHN1	Nanshi	2.29	230	*e*P	Pb	16 11 47.4	0.0
	baz=229						
SGST	Jiashian	2.32	227	*e*S	Sb	16 12 15.5	-0.8
	baz=210						
ECL	Taimali	2.47	214	*e*P	Pn	16 11 47.5	+1.5
	baz=212						
SSD	Sandimen	2.53	221	*e*P	Pb	16 11 49.6	-1.9
	baz=210						
MASBT	Mashibuluo	2.63	219	*e*P	Pn	16 11 50.6	+2.3
	baz=208						

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*BJI **05** 16:24:12.0±0.0, 8.°30S×124.°90E, h20^{km}, mB5.0/40, mb5.0/61, Ms4.9/30, Ms7 4.5/27*

*NEIC **05** 16:24:13.9±1.8, 8.°22S±0.°04×124.°80E±0.°05, h20^{km}±4^{km}, mb5.0/70, Error ellipse: s-maj=7.9km s-min=6.3km az=80.0*

*DJA **05** 16:24:14.0±0.4, 8°S±1°×12°5E±°, h11^{km}±3^{km}, M4.7/60, mb4.9/60, mB5.2/29, MLv5.0/18, Mw(mB)4.6/29, MwMwp4.5/3, Mwp4.9/3*

*MOS **05** 16:24:14.7±0.9, 8.°14S×124.°86E, h41^{km}, mb5.1/25, Error ellipse: s-maj=11.5km s-min=7.2km az=113.4*

*KLM **05** 16:24:15, 8.°29S×125.°08E, h18^{km}, mb4.9*

*IDC **05** 16:24:17.2±1.6, 8.°12S×124.°82E, h41^{km}±15^{km}, mb4.4/21, mb1 4.5/25, mb1mx4.4/34, mbtmp4.6/25, ML4.4/4, MS4.0/6, Ms1 4.0/6, ms1mx3.6/41, Error ellipse: s-maj=12.8km s-min=8.9km az=79.0*

ISC 05 16:24:14.4±0.3, 8.°24S±0.°03×124.°83E±0.°04, h27^{km}, n303, $\sigma 1^{s}89$/324, mb5.0/89, 12C-18D, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.61	200	P	Pn	16 24 41.5	+0.3
SOEI	Soe	1.61	200		Pn	16 24 40.7	-0.5
SOEI				Sn	Sn	16 24 59.4	-1.8
SOEI	Soe	1.61	200	P	Pb	16 24 43.9	+0.3
BATI	Baumata	2.27	210	P	Pb	16 24 54.5	-0.3
	371nm,0.3s,baz=38,slow=0.5,SNR=245						
BATI				S	Sb	16 25 22.0	-0.5
	207nm,0.3s,baz=14,slow=19,SNR=6.0						
BATI				LR	LR	16 25 45.3	
	comp=Z,5µm,18.2s,baz=34,slow=37						
BATI	Baumata	2.27	210	P	Pb	16 24 54.2	-0.6
MMRI	Maumere	2.60	261	P	Pn	16 24 56.6	+1.9
MMRI	Maumere	2.60	261		Pn	16 24 55.5	+0.9
MMRI				Sn	Sn	16 25 24.0	-1.4
MMRI	Maumere	2.60	261	P	Pn	16 24 57.4	+2.7
EDFI	Ende, Flores	3.15	260	P	Pn	16 25 04.2	+1.8
BASI	Baing, Sumba	4.64	245	P	Pn	16 25 25.7	+2.9
BSSI	Bau Bau, Buton	4.78	295	P	Pn	16 25 25.6	+0.8
BKSI	Bulukumba	5.50	301	P	Pn	16 25 34.9	+0.3
	0.7nm2µm2µm158nm,0.5s						
WBSI	Waikabubak, Su	5.55	255	P	Pn	16 25 38.0	+2.6
KAPI	Kappang	5.98	302	P	Pn	16 25 42.4	+1.3
	4.2nm,0.3s,baz=139,slow=6.2,SNR=20						
KAPI				S	Sn	16 26 47.8	-0.9
	4.7nm,0.3s,baz=71,slow=23,SNR=8.5						
KAPI	Kappang	5.98	302		Pn	16 25 40.5	-0.6
KAPI	Kappang	5.98	302	P	Pn	16 25 44.2	+3.1
BNDI	Bandanaira	6.25	54	P	Pn	16 25 45.6	+0.7
	0.6nm2µm126nm,1.0s						
BNDI	Bandanaira	6.25	54	P	Pn	16 25 45.7	+0.8
SANI	Sanana	6.25	11	P	Pn	16 25 45.2	+0.3
	1.6nm6µm328nm,0.6s						
SANI	Sanana	6.25	11	P	Pn	16 25 45.6	+0.7
MSAI	Masohi	6.34	40	P	Pn	16 25 47.5	+1.3
	0.0nm374nm16nm,0.8s						
PLAI	Plampang	7.00	265	P	Pn	16 25 58.9	+3.6
	1.5nm3µm4µm466nm,0.7s						
PLAI	Plampang	7.00	265	P	Pn	16 25 58.7	+3.4
TTSI	Tana Toraja	7.17	316	P	Pn	16 25 59.4	+1.8
	0.4nm863nm83nm,0.9s						
DRS	Darwin Rock St	7.28	125	P	Pn	16 26 00.3	+1.2
	68nm,0.4s						
LUWI	Luwuk	7.43	344	P	Pn	16 26 00.8	-0.4
	1.5nm4µm383nm,1.3s						
LUWI	Luwuk	7.43	344	Pn	Pn	16 26 00.2	-1.0
LUWI				Sn	Sn	16 27 21.1	-3.6
LUWI	Luwuk	7.43	344	P	Pn	16 26 01.7	+0.5
MTN	Manton Dam	7.70	127	P	Pn	16 26 05.9	+1.0
	baz=7.7,SNR=215						
MTN				S	Sn	16 27 27.0	-4.3
	baz=7.7						
MTN	Manton Dam	7.70	127	Pn	Pn	16 26 05.5	+0.7
MTN				Sn	Sn	16 27 27.9	-3.4
MTN	Manton Dam	7.70	127	P	Pn	16 26 06.0	+1.1
TWSI	Taliwang, Sumb	7.88	266	P	Pn	16 26 09.9	+2.6
	0.4nm1µm957nm112nm,0.9s						
APSI	Ampana	7.94	336	P	Pn	16 26 08.9	+0.8

	0.4nm1µm94nm,1.0s						
LBMI	**Labuha**	**8.00**	**20**	P	**Pn**	**16 26 12.6**	**+3.6**
	0.2nm583nm61nm,1.0s						
KNRA	**Kununurra**	**8.34**	**153**	P	**Pn**	**16 26 13.9**	**+0.3**
	baz=8.4,SNR=408						
KNRA				S	**Sn**	**16 27 43.3**	**-3.5**
	baz=8.4						
KNRA	**Kununurra**	**8.34**	**153**	Pn	**Pn**	**16 26 13.5**	**0.0**
KNRA				Sn	**Sn**	**16 27 42.2**	**-4.6**
KNRA	**Kununurra**	**8.34**	**153**	P	**Pn**	**16 26 14.1**	**+0.6**
	224nm,0.8s						
KDU	**Kakadu**	**8.72**	**121**	P	**Pn**	**16 26 18.6**	**-0.2**
	baz=8.7,SNR=184						
KDU				S	**Sn**	**16 27 54.7**	**-1.6**
	baz=8.7						
KDU	**Kakadu**	**8.72**	**121**	P	**Pn**	**16 26 19.2**	**+0.4**
	78nm,0.5s						
KMSI	**Cibinong**	**8.79**	**354**	P	**Pn**	**16 26 21.5**	**+1.7**
	793nm63nm,0.7s						
FAKI	**Fak Fak**	**9.07**	**55**	P	**Pn**	**16 26 26.3**	**+2.6**
	958nm78nm,1.0s						
FAKI	**Fak Fak**	**9.07**	**55**	Pn	**Pn**	**16 26 24.7**	**+1.0**
FAKI	**Fak Fak**	**9.07**	**55**	P	**Pn**	**16 26 26.3**	**+2.6**
MRSI	**Marisa**	**9.12**	**341**	P	**Pn**	**16 26 24.8**	**+0.4**
	52nm,1.2s						
TNTI	**Ternate**	**9.30**	**16**	P	**Pn**	**16 26 29.9**	**+3.1**
	1µm72nm,1.1s						
TNTI	**Ternate**	**9.30**	**16**	Pn	**Pn**	**16 26 26.5**	**-0.3**
TNTI	**Ternate**	**9.30**	**16**	P	**Pn**	**16 26 30.3**	**+3.5**
SRBI	**Singaraja**	**9.53**	**270**	P	**Pn**	**16 26 32.4**	**+2.5**
	42nm,1.0s						
SIJI	**Sorong**	**9.73**	**42**	P	**Pn**	**16 26 33.3**	**+0.6**
	1.3nm,0.3s,baz=217,slow=6.5,SNR=14						
SWI	**Sorong**	**9.73**	**41**	P	**Pn**	**16 26 34.6**	**+1.9**
	773nm66nm,0.9s						
FITZ	**Fitzroy Crossi**	**9.84**	**175**	P	**Pn**	**16 26 33.7**	**-0.4**
	3.1nm,0.3s,baz=358,slow=8.5,SNR=80						
FITZ				S	**Sn**	**16 28 19.0**	**-4.7**
	4.3nm,0.3s,baz=85,slow=12,SNR=3.7						
FITZ				LR	LR	16 30 46.9	
	comp=Z,406nm,19.5s,baz=352,slow=39						
FITZ	**Fitzroy Crossi**	**9.84**	**175**	P	**Pn**	**16 26 33.3**	**-0.8**
	baz=9.9,SNR=260						
FITZ				S	**Sn**	**16 28 18.9**	**-4.8**
	baz=9.9						
FITZ	**Fitzroy Crossi**	**9.84**	**175**	Pn	**Pn**	**16 26 33.3**	**-0.8**
FITZ	**Fitzroy Crossi**	**9.84**	**175**	P	**Pn**	**16 26 34.3**	**+0.2**
	101nm,1.0s						
MPSI	**Mapaga**	**9.84**	**330**	P	**Pn**	**16 26 34.4**	**+0.3**
	477nm28nm,0.8s						
TOLI2	**Tolitoli**	**10.12**	**336**	Pn	**Pn**	**16 26 38.0**	**-0.1**
TOLI2	**Tolitoli**	**10.12**	**336**	P	**Pn**	**16 26 41.0**	**+2.9**
ABJI	**Asem Bagus**	**10.51**	**272**	P	**Pn**	**16 26 46.3**	**+3.0**
	2µm57nm,1.1s						
JAGI	**Jajag, Banyuwa**	**10.57**	**268**	Pn	**Pn**	**16 26 43.8**	**-0.5**
PWJI	**Pagerwojo**	**12.90**	**270**	P	**Pn**	**16 27 19.9**	**+3.8**
	61nm,1.2s						
SRPI	**Serui, Papua**	**13.00**	**61**	P	**Pn**	**16 27 19.3**	**+1.8**
	32nm,0.9s						
BAKI	**Biak**	**13.23**	**59**	P	**Pn**	**16 27 22.4**	**+1.7**
	1µm91nm,1.2s						
PCJI	**Pacitan**	**13.52**	**269**	P	**Pn**	**16 27 27.6**	**+3.1**
	91nm,0.6s						
PSA00	**Pilbara Seismi**	**14.11**	**199**		**Pn**	**16 27 31.4**	**-1.1**
PSA00	**Pilbara Seismi**	**14.11**	**199**		**Pn**	**16 27 29.2**	**-3.3**
WRA	**Warramunga Arr**	**14.84**	**143**	P	**Pn**	**16 27 38.4**	**-4.2**
	4.2nm,0.3s,baz=318,slow=13,SNR=155						
WRA				S	Sn	16 30 16.2	-10
	4.7nm,0.3s,baz=313,slow=23,SNR=7.9						
WRA				LR	LR	16 33 58.8	
	comp=Z,514nm,18.5s,baz=335,slow=39						
WRA	**Warramunga Arr**	**14.84**	**143**	*i* P	**Pn**	**16 27 38.2**	**-4.4**
WRA				pmax	pmax		
	comp=Z,66nm,0.9s						
WRAB	**Tennant Creek**	**14.84**	**143**	⇓*i*P	**Pn**	**16 27 38.7**	**-3.9**
WRAB				pmax	pmax		
	comp=Z,102nm,1.3s						
WRAB	**Tennant Creek**	**14.84**	**143**		**Pn**	**16 27 37.8**	**-4.7**
WB2	**Warramunga Arr**	**14.85**	**143**		**Pn**	**16 27 38.1**	**-4.6**
WR0	**Warramunga Arr**	**14.97**	**142**		**Pn**	**16 27 39.7**	**-4.7**
WR0				IAmb	IAmb	16 27 47.8	
	comp=Z,86nm,1.1s						
DAV	**Davao City (W)**	**15.22**	**3**	LR	LR	16 34 13.7	
	comp=Z,268nm,20.7s,baz=172,slow=40						
DAV	**Davao City (W)**	**15.22**	**3**	P	**Pn**	**16 27 47.6**	**-0.1**
STKI	**Sintang**	**15.66**	**301**	P	**P**	**16 27 56.0**	**-1.2**
	comp=Z,2µmcomp=Z,28nm,1.4s						
JAY	**Jayapura**	**16.79**	**71**	P	**Pn**	**16 28 05.6**	**-2.3**
	comp=Z,0.2nm,0.3s,baz=286,slow=7.6,SNR=1.9						
CISI	**Cisompet, Garu**	**16.87**	**271**		**Pn**	**16 28 06.7**	**-2.2**
LEM	**Lembang**	**17.12**	**274**	P	**Pn**	**16 28 12.8**	**+0.6**
	comp=Z,2.0nm,0.3s,baz=102,slow=22,SNR=2.2						
LEM				LR	LR	16 35 32.3	
	comp=Z,1µm,21.0s,baz=101,slow=40						
KSM	**Kuching**	**17.40**	**303**	P	P	16 28 25.0	+8.4
GIRL	**Giralia**	**17.58**	**214**	P	**Pn**	**16 28 14.5**	**-3.1**
GIRL				IAmb	IAmb	16 28 50.4	
	comp=Z,287nm,1.4s						
AS31	**Alice Springs**	**17.64**	**151**	P	**Pn**	**16 28 16.2**	**-2.1**
ASAR	**Alice Springs**	**17.64**	**152**	P	**Pn**	**16 28 17.5**	**-0.8**
	comp=Z,1.1nm,0.3s,baz=321,slow=12,SNR=65						
ASAR				S	Sn	16 31 21.8	-12
	comp=Z,1.6nm,0.3s,baz=321,slow=20,SNR=7.1						
ASAR				LR	LR	16 36 13.5	
	comp=Z,869nm,18.0s,baz=320,slow=40						
ASAR	**Alice Springs**	**17.64**	**152**	P	**Pn**	**16 28 16.1**	**-2.3**
ASAR	**Alice Springs**	**17.64**	**152**	P	**Pn**	**16 28 16.1**	**-2.3**
TBP	**Tagbilaran**	**17.84**	**357**	*e*P	**Pn**	**16 28 19.7**	**-1.1**
CBJI	**Citeko**	**17.93**	**275**	P	**P**	**16 28 22.6**	**+0.2**
	comp=Z,101nm,0.9s						
DBJI	**Dramaga**	**18.01**	**274**	P	**P**	**16 28 26.4**	**+3.1**
	comp=Z,25nm,0.4s						
QIS	**Mount Isa**	**18.81**	**132**	P	**Pn**	**16 28 33.2**	**+0.4**
	baz=19,SNR=38						
COEN	**Coen**	**18.87**	**109**	P	**P**	**16 28 31.6**	**-1.2**
COEN	**Coen**	**18.87**	**109**	P	**Pn**	**16 28 33.6**	**+0.1**
	comp=Z,41nm,1.0s						
XMIS	**Christmas Isla**	**19.06**	**262**	P	**P**	**16 28 32.6**	**-2.3**
XMIS				IAmb	IAmb	16 28 40.6	
	comp=Z,69nm,0.8s						
MEEK	**Meekatharra**	**19.23**	**197**	P	**Pn**	**16 28 38.2**	**+0.4**
	baz=19,SNR=5.5						
PPBI	**Pangkal Pinang**	**19.57**	**287**	P	**Pn**	**16 28 43.5**	**+1.7**
	comp=Z,35nm,1.0s						
KLSI		**20.28**	**279**	P	Pn	16 28 51.9	+1.6
	comp=Z,12nm,2.5s						
MDSI	**Maura Dua**	**20.86**	**279**	P	Pn	16 28 58.0	+0.9
	comp=Z,5.2nm,1.1s						
MTSU	**Mount Surprise**	**21.35**	**119**	P	**P**	**16 29 00.0**	**+0.3**
	baz=21,SNR=67						
MTSU	**Mount Surprise**	**21.35**	**119**	P	**P**	**16 29 01.9**	**+2.2**
	comp=Z,37nm,1.2s						
DSRI	**Dabo**	**21.60**	**290**	P	**P**	**16 29 04.9**	**+2.4**
	comp=Z,496nmcomp=Z,26nm,1.1s						
OOD	**Oodnadatta**	**22.00**	**154**	P	**P**	**16 29 08.2**	**+1.6**
	comp=Z,97nm,0.8s						
PMG	**Port Moresby**	**22.09**	**95**	P	**P**	**16 29 09.5**	**+1.8**
	comp=Z,28nm,0.9s,baz=284,slow=5.7,SNR=15						
PMG	**Port Moresby**	**22.09**	**95**	P	**P**	**16 29 08.6**	**+0.9**
PMG				pmax	pmax		
	comp=Z,68nm,0.9s						
PMG	**Port Moresby**	**22.09**	**95**	P	**P**	**16 29 08.6**	**+0.9**
PMG				IAmb	IAmb	16 29 17.4	
	comp=Z,68nm,0.8s						
PMG	**Port Moresby**	**22.09**	**95**	P	**P**	**16 29 11.2**	**+3.5**
PMG	**Port Moresby**	**22.09**	**95**	P	**P**	**16 29 11.1**	**+3.4**
MORW	**Morawa**	**22.31**	**201**	P	**P**	**16 29 12.1**	**+2.1**
	baz=22,SNR=4.7						
MORW	**Morawa**	**22.31**	**201**	P	**P**	**16 29 08.0**	**-2.0**
MORW	**Morawa**	**22.31**	**201**	P	**P**	**16 29 13.1**	**+3.1**
	comp=Z,34nm,2.3s						
FORT	**Forrest**	**22.63**	**173**	P	**P**	**16 29 14.1**	**+0.8**
	baz=23,SNR=21						
FORT	**Forrest**	**22.63**	**173**	P	**P**	**16 29 12.2**	**-1.2**
FORT				IAmb	IAmb	16 29 25.2	
	comp=Z,67nm,0.8s						
MYKOM	**Kota Tinggi**	**23.17**	**295**	P	**P**	**16 29 24.0**	**+4.9**
MANU	**Manus Island**	**23.26**	**76**	P	**P**	**16 29 19.9**	**-0.2**
BLDU	**Ballidu**	**23.53**	**198**	P	**P**	**16 29 22.9**	**+0.5**
	baz=24,SNR=22						
BLDU	**Ballidu**	**23.53**	**198**	P	**P**	**16 29 23.4**	**+0.9**
	comp=Z,50nm,1.0s						
MULG	**Mulgathing**	**23.57**	**160**	P	**P**	**16 29 26.5**	**+3.6**
	comp=Z,44nm,1.3s						
CTA	**Charters Tower**	**23.84**	**122**	P	**P**	**16 29 27.8**	**+2.2**
	comp=Z,16nm,0.8s,baz=298,slow=12,SNR=24						
CTA	**Charters Tower**	**23.84**	**122**	P	**P**	**16 29 28.0**	**+2.4**
	comp=Z,31nm,1.1s						
CTAO	**Charters Tower**	**23.84**	**122**	P	**P**	**16 29 26.1**	**+0.4**
CTAO				pmax	pmax		
	comp=Z,50nm,1.2s						
CTAO	**Charters Tower**	**23.84**	**122**	P	**P**	**16 29 26.1**	**+0.4**
CTAO				IAmb	IAmb	16 29 39.8	
	comp=Z,50nm,1.2s						
CTAO	**Charters Tower**	**23.84**	**122**	P	**P**	**16 29 28.9**	**+3.3**
INKA	**Innaminka**	**24.55**	**144**	P	**P**	**16 29 34.8**	**+2.8**
	comp=Z,90nm,0.9s						
MUN	**Mundaring**	**24.95**	**198**	P	**P**	**16 29 37.7**	**+2.1**
	baz=25,SNR=3.7						
LCRK	**Leigh Creek**	**25.40**	**152**	P	**P**	**16 29 44.4**	**+4.7**
	comp=Z,62nm,1.0s						
NWAO	**Narrogin (SRO)**	**25.56**	**195**	P	**P**	**16 29 43.0**	**+1.8**
	comp=Z,16nm,1.1s,baz=51,slow=15,SNR=3.5						
NWAO	**Narrogin (SRO)**	**25.56**	**195**	P	**P**	**16 29 42.8**	**+1.6**
	baz=26,SNR=4.5						
NWAO				P	**P**	**16 29 42.8**	**+1.6**
	baz=26,SNR=4.5						
NWAO	**Narrogin (SRO)**	**25.56**	**195**	P	**P**	**16 29 40.6**	**-0.5**
NWAO				pmax	pmax		
	comp=Z,83nm,1.7s						
NWAO	**Narrogin (SRO)**	**25.56**	**195**	P	**P**	**16 29 40.6**	**-0.5**
NWAO				IAmb	IAmb	16 30 22.6	
	comp=Z,83nm,1.7s						
NWAO	**Narrogin (SRO)**	**25.56**	**195**	P	**P**	**16 29 44.5**	**+3.4**
NWAO	**Narrogin (SRO)**	**25.56**	**195**	P	**P**	**16 29 44.0**	**+2.9**
QLP	**Quilpie**	**25.92**	**137**	P	**P**	**16 29 45.2**	**+0.6**
	baz=26,SNR=8.7						
CVP	**Callao Caves**	**25.94**	**353**	*e*P	**P**	**16 29 42.8**	**-1.9**
BBOO	**Buckleboo**	**26.57**	**159**	P	**P**	**16 29 51.9**	**+1.5**
	baz=27,SNR=10.0						
BBOO	**Buckleboo**	**26.57**	**159**	P	**P**	**16 29 51.1**	**+0.7**
BBOO				IAmb	IAmb	16 29 58.2	
	comp=Z,25nm,1.1s						
IPM	**Ipoh**	**26.90**	**297**	P	**P**	**16 30 00.0**	**+6.5**
KULM	**Kulim**	**27.61**	**298**	P	**P**	**16 30 03.0**	**+3.2**
PSI	**Prapat**	**28.07**	**292**	P	**P**	**16 30 06.1**	**+2.0**
	comp=Z,12nm,0.8s,baz=159,slow=5.3,SNR=13						
STKA	**Stephens Creek**	**28.22**	**149**	P	**P**	**16 30 07.1**	**+2.0**
	comp=Z,6.5nm,0.7s,baz=315,slow=8.9,SNR=7.1						
STKA	**Stephens Creek**	**28.22**	**149**	P	**P**	**16 30 07.5**	**+2.4**
	baz=28,SNR=11						
STKA	**Stephens Creek**	**28.22**	**149**	⇓*e*P	**P**	**16 30 06.1**	**+1.0**
STKA	**Stephens Creek**	**28.22**	**149**	P	**P**	**16 30 05.2**	**+0.1**
HTT	**Hallett**	**28.25**	**155**	P	**P**	**16 30 07.7**	**+2.2**
	baz=28,SNR=7.6						
UBPT	**Khong Chiam**	**30.23**	**321**	P	**P**	**16 30 23.1**	**0.0**
UBPT				IAmb	IAmb	16 30 42.5	
	comp=Z,54nm,1.8s						
LHMI	**Lhok Sumawe**	**30.86**	**295**	P	**P**	**16 30 27.5**	**-1.2**
TPUB	**Ta-pu**	**31.61**	**353**	P	**P**	**16 30 35.1**	**-0.1**
SSLB	**Suanglung**	**32.05**	**353**	P	**P**	**16 30 37.1**	**-2.0**
SSLB				IAmb	IAmb	16 30 38.8	
	comp=Z,18nm,1.0s						
ARPS	**Mount Arapiles**	**32.34**	**154**	P	**P**	**16 30 44.2**	**+2.7**
	baz=32,SNR=12						
ARMA	**Armidale**	**33.39**	**135**	P	**P**	**16 30 51.6**	**+0.7**
ARMA				IAmb	IAmb	16 31 56.5	
	comp=Z,38nm,1.4s						
TOO	**Toolangi**	**34.68**	**150**	P	**P**	**16 31 02.7**	**+0.8**
TOO				pmax	pmax		
	comp=Z,29nm,1.2s						
TOO	**Toolangi**	**34.68**	**150**	P	**P**	**16 31 02.7**	**+0.8**
TOO				IAmb	IAmb	16 31 11.8	
	comp=Z,29nm,1.2s						
CM31	**Chiang Mai Arr**	**36.83**	**316**	P	**P**	**16 31 21.3**	**+0.8**
CM31				IAmb	IAmb	16 31 22.9	
	comp=Z,23nm,0.8s						
CMAR	**Chiang Mai Arr**	**36.83**	**316**	P	**P**	**16 31 21.6**	**+1.2**
	comp=Z,14nm,0.8s,baz=141,slow=6.7,SNR=86						
CMAR	**Chiang Mai Arr**	**36.83**	**316**	P	**P**	**16 31 20.6**	**+0.1**
CHTO	**Chiang Mai**	**37.07**	**317**	P	**P**	**16 31 22.9**	**+0.3**
CHTO				pmax	pmax		
	comp=Z,32nm,1.0s						
CHTO	**Chiang Mai**	**37.07**	**317**	P	**P**	**16 31 22.9**	**+0.3**
CHTO				IAmb	IAmb	16 31 24.8	
	comp=Z,32nm,1.0s						
GYA	**Guiyang**	**38.74**	**333**	⇑*i*P	**P**	**16 31 38.2**	**+1.5**
GYA				pmax	pmax		
	comp=Z,29nm,0.9s						
GYA				pmax	pmax		
	comp=Z,110nm,4.2s						
KMI	**Kunming**	**39.53**	**328**	⇑P	**P**	**16 31 46.0**	**+2.6**
KMI				pP	pP	16 31 51.8	+0.6
KMI				sP	sP	16 31 53.5	-1.7
KMI				pmax	pmax		
	comp=Z,23nm,0.9s						
WHN	**Wuhan**	**39.85**	**346**	⇓P	**P**	**16 31 47.3**	**+1.6**
WHN				pmax	pmax		
	comp=Z,51nm,0.9s						
NJ2	**Nanjing**	**40.47**	**352**	⇑*i*P	**P**	**16 31 52.3**	**+1.5**
NJ2				pmax	pmax		
	comp=Z,28nm,0.9s						
ENH	**Enshi**	**41.03**	**340**	P	**P**	**16 31 55.0**	**-0.6**
ENH				IAmb	IAmb	16 31 57.2	
	comp=Z,14nm,0.8s						
SANVU	**Saraoutou**	**42.02**	**104**	P	**P**	**16 32 02.1**	**-1.8**
SANVU				IAmb	IAmb	16 32 10.1	
	comp=Z,35nm,0.8s						
DZM	**Mont Dzumac**	**42.30**	**114**	P	**P**	**16 32 07.3**	**+1.0**
	comp=Z,11nm,1.1s,baz=338,slow=19						
DZM	**Mont Dzumac**	**42.30**	**114**	P	**P**	**16 32 03.6**	**-2.6**
JMN	**Monobe**	**42.61**	**11**	P	**P**	**16 32 07.4**	**-1.0**
JMN				IAmb	IAmb	16 32 46.2	
	comp=Z,65nm,1.4s						
JHS	**Saijyo**	**43.71**	**10**	P	**P**	**16 32 17.4**	**+0.1**
CD2	**Chengdu**	**43.85**	**334**	P	**P**	**16 32 19.2**	**+0.6**
CD2				pmax	pmax		
	comp=Z,30nm,0.9s						
JWT	**Wachi**	**44.42**	**12**	P	**P**	**16 32 22.4**	**-0.5**
TJN	**Taejon**	**44.44**	**3**	⇓*e*P	**P**	**16 32 23.8**	**+0.7**
INU	**Inuyama**	**44.85**	**14**	P	**P**	**16 32 26.3**	**-0.1**
INU				IAmb	IAmb	16 32 28.0	
	comp=Z,16nm,1.0s						
JGF	**Kuroka**	**45.17**	**14**	P	**P**	**16 32 27.8**	**-1.3**
KSRS	**Korea Array**	**45.54**	**3**	P	**P**	**16 32 32.6**	**+0.8**
	comp=Z,2.3nm,0.9s,baz=177,slow=11,SNR=8.4						
MAJO	**Matsushiro**	**46.28**	**15**	*d i*P	**P**	**16 32 37.3**	**-0.4**
MAJO				pmax	pmax		
	comp=Z,17nm,0.9s						
MAJO	**Matsushiro**	**46.28**	**15**	P	**P**	**16 32 37.3**	**-0.4**
MAJO				IAmb	IAmb	16 32 38.6	
	comp=Z,21nm,0.9s						
MAT	**Matsushiro**	**46.28**	**15**	P	**P**	**16 32 37.1**	**-0.6**
MAT				*e*S	**S**	**16 39 23.6**	**+0.5**
MJAR	**Matsushiro Arr**	**46.28**	**15**	P	**P**	**16 32 37.0**	**-0.8**
	comp=Z,15nm,0.9s,baz=184,slow=8.8,SNR=33						
MJAR	**Matsushiro Arr**	**46.28**	**15**	P	**P**	**16 32 37.2**	**-0.5**
MJAR				pmax	pmax		
	comp=Z,19nm,1.6s						
MJAR	**Matsushiro Arr**	**46.28**	**15**	P	**P**	**16 32 37.2**	**-0.5**
MJAR				IAmb	IAmb	16 32 38.5	
	comp=Z,19nm,1.6s						
SHL	**Shillong**	**46.44**	**317**	P	**P**	**16 32 38.2**	**-1.2**
SHL				pmax	pmax		
	comp=Z,28nm,1.0s						
SHL	**Shillong**	**46.44**	**317**	P	**P**	**16 32 38.2**	**-1.2**
SHL				IAmb	IAmb	16 32 40.0	
	comp=Z,28nm,1.0s						
JYT	**Yasato**	**46.53**	**17**	P	**P**	**16 32 38.7**	**-0.9**
JYT				IAmb	IAmb	16 32 40.9	
	comp=Z,30nm,1.1s						
JSD	**Sado**	**47.71**	**14**	P	**P**	**16 32 48.6**	**-0.2**
JSD				IAmb	IAmb	16 32 51.3	
	comp=Z,20nm,0.9s						
JMM	**Marumori**	**48.23**	**17**	P	**P**	**16 32 53.0**	**+0.2**
LZH	**Lanzhou**	**48.31**	**337**	⇑P	**P**	**16 32 55.3**	**+1.6**
LZH				pP	pP	16 33 01.2	-0.5
LZH				sP	sP	16 33 04.5	-1.1
LZH				pmax	pmax		
	comp=Z,35nm,1.2s						
LSA	**Lhasa**	**49.72**	**321**	P	**P**	**16 33 05.6**	**+0.5**
LSA				pmax	pmax		
	comp=Z,180nm,1.0s						
HHC	**Hu-ho-hao-te**	**50.35**	**347**	*e*P	**P**	**16 33 09.3**	**+0.1**
HHC				pmax	pmax		
	comp=Z,11nm,1.1s						
HHC				pmax	pmax		
	comp=Z,79nm,5.3s						
TAPN	**Taplejung**	**50.43**	**316**	*e*P	**P**	**16 33 10.0**	**-0.3**
JIRN	**Jiri**	**51.68**	**315**	*e*P	**P**	**16 33 19.8**	**0.0**
GUN	**Gumba**	**52.05**	**315**	*e*P	**P**	**16 33 22.5**	**0.0**
PKI	**Pulchoki**	**52.18**	**314**	*e*P	**P**	**16 33 23.1**	**-0.3**
PKIN	**Phulchoki**	**52.19**	**314**	*e*P	**P**	**16 33 23.2**	**-0.2**
	comp=Z,13nm,0.4s						
HYB	**Hyderabad**	**52.35**	**299**	*i* P	**P**	**16 33 23.0**	**-1.5**
KKN	**Kakani**	**52.40**	**315**	*e*P	**P**	**16 33 24.8**	**-0.1**
	comp=Z,23nm,0.9s						
DMN	**Daman**	**52.41**	**314**	*e*P	**P**	**16 33 25.1**	**0.0**
	comp=Z,37nm,1.0s						
USA0B	**Ussuriysk Arra**	**52.59**	**6**	P	**P**	**16 33 25.2**	**-0.5**
USA0B				pmax	pmax		
	comp=Z,74nm,2.0s						
USA0B	**Ussuriysk Arra**	**52.59**	**6**	P	**P**	**16 33 25.1**	**-0.5**
USRK	**Ussuriysk Ar.**	**52.59**	**6**	P	**P**	**16 33 25.9**	**+0.2**
	comp=Z,6.5nm,0.7s,baz=191,slow=7.1,SNR=15						
GTA	**Gaotai**	**52.78**	**336**	⇓P	**P**	**16 33 28.1**	**+0.7**
GTA				pP	pP	16 33 32.6	-2.8
GTA				sP	sP	16 33 35.5	-3.8
GTA				S	**S**	**16 40 56.0**	**+1.8**
GTA				pmax	pmax		
	comp=Z,18nm,1.1s						
GTA				pmax	pmax		
	comp=Z,95nm,5.2s						
GTA				LR	LR		
	comp=Z,170nm,13.5s						
GTA				LR	LR		
	comp=Z,180nm,16.3s						
GTA				LR	LR		
	comp=Z,160nm,14.3s						
MDJ	**Mudanjiang**	**52.78**	**4**	P	**P**	**16 33 27.7**	**+0.6**
MDJ				pmax	pmax		
	comp=Z,49nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,130nm,4.1s						
MDJ	**Mudanjiang**	**52.78**	**4**	P	**P**	**16 33 27.4**	**+0.3**
GKN	**Gorkha**	**52.98**	**314**	*e*P	**P**	**16 33 29.1**	**-0.1**
RPZ	**Rata Peaks**	**53.52**	**139**	P	**P**	**16 33 34.2**	**+1.5**
RPZ				IAmb	IAmb	16 33 43.5	
	comp=Z,26nm,1.0s						
KOLN	**Koldanda**	**53.58**	**313**	*e*P	**P**	**16 33 33.6**	**-0.1**
	comp=Z,34nm,0.9s						
DANN	**Dangsing**	**53.81**	**314**	*e*P	**P**	**16 33 35.2**	**-0.2**
	comp=Z,35nm,0.6s						
PYUN	**Piuthan**	**54.21**	**313**	*e*P	**P**	**16 33 38.7**	**+0.4**
	comp=Z,56nm,0.9s						
TUWZ	**Tuamarina**	**54.48**	**136**	P	**P**	**16 33 40.6**	**+0.9**
BSWZ	**Blackbirch Sta**	**54.54**	**136**	P	**P**	**16 33 41.7**	**+1.5**
KHZ	**Kahutara**	**54.60**	**137**	P	**P**	**16 33 41.5**	**+1.0**
YSS	**Yuzh-Sakhalins**	**57.22**	**15**	⇓*e*P	P	16 33 54.1	-5.0
YSS				pmax	pmax		
	comp=Z,31nm,1.2s						
KLR	**Kul'dur**	**57.54**	**5**	⇑*e*P	**P**	**16 34 02.0**	**+0.6**
ULN	**Ulaanbaatar**	**58.03**	**346**	*de*P	**P**	**16 34 05.2**	**+0.1**
ULN				pmax	pmax		
	comp=Z,13nm,1.7s						
ULN	**Ulaanbaatar**	**58.03**	**346**	P	**P**	**16 34 04.4**	**-0.7**
SONM	**Songino Array**	**58.16**	**345**	P	**P**	**16 34 06.3**	**+0.3**
	comp=Z,2.6nm,0.9s,baz=161,slow=7.8,SNR=15						
SONM	**Songino Array**	**58.16**	**345**	P	**P**	**16 34 05.6**	**-0.4**
SONM				pmax	pmax		
	comp=Z,10.0nm,1.4s						
SONM	**Songino Array**	**58.16**	**345**	P	**P**	**16 34 05.6**	**-0.4**
CASY	**Casey**	**58.79**	**187**	P	**P**	**16 34 10.9**	**+1.0**
ZAK	**Zakamensk**	**61.31**	**344**	*e*P	**P**	**16 34 25.4**	**-2.2**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
ZEA	**Zeya**	**61.77**	**2**	*e*P	**P**	**16 34 30.9**	**+0.4**
ZEA				pmax	pmax		
	comp=N,10.0nm,1.5s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.2s						
WMQ	**Urumqi**	**61.77**	**330**	*e*P	**P**	**16 34 31.5**	**+0.7**
WMQ				pP	pP	16 34 37.5	-1.3
WMQ				pmax	pmax		
	comp=Z,30nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,100nm,4.3s						
WMQ				LR	LR		
	comp=Z,530nm,18.5s						
WMQ				LR	LR		
	comp=Z,480nm,17.3s						
WMQ				LR	LR		
	comp=Z,540nm,19.7s						
TLY	**Talaya**	**62.40**	**345**	P	**P**	**16 34 35.7**	**+0.9**
TLY				IAmb	IAmb	16 36 46.9	
	comp=Z,30nm,1.5s						
NIL	**Nilore**	**64.24**	**313**	P	**P**	**16 34 46.7**	**-0.7**
NIL				pmax	pmax		
	comp=Z,11nm,1.1s						
NIL	**Nilore**	**64.24**	**313**	P	**P**	**16 34 46.7**	**-0.7**
NIL				IAmb	IAmb	16 34 48.9	
	comp=Z,11nm,1.1s						
KSH	**Kashi**	**65.57**	**320**	P	**P**	**16 34 56.2**	**+0.2**
KSH				sP	sP	16 35 06.5	-1.5
KSH				pmax	pmax		
	comp=Z,13nm,0.7s						
KSH				LR	LR		
	comp=Z,380nm,17.0s						
KSH				LR	LR		
	comp=Z,290nm,14.4s						
KSH				LR	LR		
	comp=Z,280nm,18.6s						
DGZ	**Jazzator, Alta**	**66.28**	**334**	*d i*P	**P**	**16 35 00.2**	**-0.2**
DGZ				pmax	pmax		
	comp=Z,15nm,1.0s						
BOD	**Bodaibo**	**66.42**	**354**	*e*P	**P**	**16 35 01.3**	**+0.4**
BOD				pmax	pmax		
	comp=Z,28nm,1.5s						
MK31	**Makanchi Array**	**66.57**	**330**	*d i*P	**P**	**16 35 02.1**	**0.0**
MK31	**Makanchi Array**	**66.57**	**330**	P	**P**	**16 35 02.1**	**0.0**
MKAR	**Makanchi Array**	**66.57**	**330**	P	**P**	**16 35 02.5**	**+0.4**
	comp=Z,18nm,0.8s,baz=133,slow=8.1,SNR=66						
MKAR	**Makanchi Array**	**66.57**	**330**	*i* P	**P**	**16 35 02.2**	**0.0**
MKAR				pmax	pmax		
	comp=Z,18nm,0.8s						
MKAR	**Makanchi Array**	**66.57**	**330**	P	**P**	**16 35 01.9**	**-0.3**
MAKZ	**Makanchi**	**66.73**	**329**	P	**P**	**16 35 03.7**	**+0.5**
MAKZ				pmax	pmax		
	comp=Z,42nm,1.4s						
MAKZ	**Makanchi**	**66.73**	**329**	P	**P**	**16 35 03.7**	**+0.5**
PEA0B	**Petropavlovsk-**	**67.19**	**21**	P	**P**	**16 35 07.0**	**+1.0**
PEA0B				pmax	pmax		
	comp=Z,115nm,1.9s						
PEA0B	**Petropavlovsk-**	**67.19**	**21**	P	**P**	**16 35 07.0**	**+1.0**
PETK	**Petropavlovsk-**	**67.19**	**21**	P	**P**	**16 35 05.2**	**-0.7**
	comp=Z,3.0nm,0.8s,baz=212,slow=8.4,SNR=10						
PETK	**Petropavlovsk-**	**67.19**	**21**	P	**P**	**16 35 06.1**	**+0.2**
PETK	**Petropavlovsk-**	**67.19**	**21**	P	**P**	**16 35 06.1**	**+0.2**
KBL	**Kabul**	**67.72**	**312**	P	**P**	**16 35 09.5**	**-0.5**
KBL				pmax	pmax		
	comp=Z,12nm,0.8s						
KBL	**Kabul**	**67.72**	**312**	P	**P**	**16 35 09.4**	**-0.5**
KBL				IAmb	IAmb	16 35 12.5	
	comp=Z,12nm,0.8s						
AAK	**Ala-Archa**	**68.28**	**322**	*ce*P	**P**	**16 35 13.6**	**+0.4**
AAK				pmax	pmax		
	comp=Z,17nm,0.8s						
AAK	**Ala-Archa**	**68.28**	**322**	P	**P**	**16 35 13.4**	**+0.2**
AAK				IAmb	IAmb	16 35 14.7	
	comp=Z,7.2nm,0.8s						
GAR	**Garm**	**68.99**	**317**	P	**P**	**16 35 16.9**	**-0.8**
GAR				IAmb	IAmb	16 35 31.4	
	comp=Z,9.7nm,0.9s						
CHGR	**Chuyangaron**	**69.61**	**316**	P	**P**	**16 35 20.6**	**-0.9**
YAK	**Yakutsk**	**70.15**	**2**	*e*P	**P**	**16 35 24.4**	**+0.2**
YAK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.3s						
YAK	**Yakutsk**	**70.15**	**2**	P	**P**	**16 35 24.2**	**0.0**
YAK				IAmb	IAmb	16 35 31.3	
	comp=Z,9.7nm,0.8s						
ZAA0	**Zalesovo Array**	**70.53**	**336**	P	**P**	**16 35 25.1**	**-1.6**
ZALV	**Zalesovo Beam**	**70.53**	**336**	P	**P**	**16 35 25.8**	**-0.9**
	comp=Z,16nm,0.8s,baz=127,slow=4.4,SNR=65						
ZALV	**Zalesovo Beam**	**70.53**	**336**	*i* P	**P**	**16 35 25.6**	**-1.1**
ZALV				pmax	pmax		
	comp=Z,16nm,0.8s						
ZALV	**Zalesovo Beam**	**70.53**	**336**	P	**P**	**16 35 25.3**	**-1.4**
KKAR	**Karatay Array**	**70.98**	**321**	P	**P**	**16 35 28.9**	**-0.8**
KKAR	**Karatay Array**	**70.98**	**321**	P	**P**	**16 35 28.9**	**-0.8**
KURK	**Kurchatov**	**71.00**	**331**	*de*P	**P**	**16 35 29.1**	**-0.5**
KURK				pmax	pmax		
	comp=Z,48nm,1.3s						
KURK	**Kurchatov**	**71.00**	**331**	P	**P**	**16 35 29.1**	**-0.5**
VNDA	**Vanda**	**71.89**	**172**	P	**P**	**16 35 36.0**	**+1.3**

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             comp=Z,1.4nm,0.5s,baz=321,slow=6.6,SNR=13
VNDA  Vanda               71.89 172   P       P        16 35 35.2 +0.6
VNDA                                  pmax    pmax
             comp=Z,14nm,1.7s
VNDA  Vanda               71.89 172   P       P        16 35 35.2 +0.6
VNDA                                  IAmb    IAmb     16 35 43.0
             comp=Z,14nm,1.6s
MAW   Mawson              71.96 201   P       P        16 35 36.5 +1.4
             comp=Z,2.7nm,0.8s,baz=90,slow=6.6,SNR=6.6
MAW   Mawson              71.96 201   P       P        16 35 35.0 -0.2
MAW                                   pmax    pmax
             comp=Z,3.0nm,1.4s
MAW   Mawson              71.96 201   P       P        16 35 35.0 -0.2
SBA   Scott Base          72.84 171   P       P        16 35 41.1 +0.8
SBA                                   pmax    pmax
             comp=Z,9.0nm,1.3s
SBA   Scott Base          72.84 171           P        16 35 41.1 +0.8
SEY   Seymchan            74.04  13⇑eP        P        16 35 47.5  0.0
BRVK  Borovoye            76.52 330ceP        P        16 36 02.0  0.0
BRVK                                  pmax    pmax
             comp=Z,18nm,1.7s
BRVK  Borovoye            76.52 330   P       P        16 36 01.0 -1.0
BRVK                                  IAmb    IAmb     16 36 02.9
             comp=Z,17nm,1.4s
TIXI  Tiksi               79.76   1deP        P        16 36 19.2 -0.3
TIXI  Tiksi               79.76   1   P       P        16 36 18.3 -1.2
ABKAR Akbulak array       80.34 323   P       P        16 36 22.5 -0.7
ABKAR Akbulak array       80.34 323   P       P        16 36 21.8 -1.4
SYO   Syowa Base          80.66 201⇑eP        P        16 36 26.4 +1.9
SYO   Syowa Base          80.66 201⇑ePcP      PcP      16 36 31.0 -0.2
BILL  Bilibino            81.53  15deP        P        16 36 27.9 -1.2
BILL                                 e                 16 39 36.1
BILL                                  pmax    pmax
             comp=Z,23nm,1.9s
NRIK  Noril'sk            81.58 347   P       P        16 36 30.7 +1.4
             comp=Z,3.2nm,0.8s,baz=130,slow=5.8,SNR=6.2
NRIK  Noril'sk            81.58 347⇓eP        P        16 36 30.9 +1.6
NRIK                                  pmax    pmax
             comp=Z,9.0nm,1.1s
NRIK  Noril'sk            81.58 347   P       P        16 36 30.1 +0.8
QSPA  South Pole Qui      81.75 180   P       P        16 36 31.5 +0.9
QSPA                                  IAmb    IAmb     16 36 36.5
             comp=Z,26nm,0.9s
SVE   Sverdlovsk          83.22 330⇓eP        P        16 36 37.9 -0.3
SVE                                   pmax    pmax
             comp=Z,10.0nm,1.1s
ARU   Arti                84.09 329d iP       P        16 36 44.1 +1.5
ARU                                   S       S        16 47 07.7 +2.3
ARU                                   SS      SS       16 52 35.6 +0.9
ARU                                   pmax    pmax
             comp=Z,7.0nm,0.9s
ARU   Arti                84.09 329   P       P        16 36 41.2 -1.4
ARU                                   IAmb    IAmb     16 36 45.7
             comp=Z,6.1nm,0.9s
GNI   Garni               87.76 311⇑iP        P        16 37 01.7 +0.3
GNI                                   pmax    pmax
             comp=Z,5.0nm,1.0s
ZEI   Tsey                88.94 313  eP       P        16 37 08.3 +1.3
ZEI                                   pmax    pmax
             comp=Z,4.0nm,1.3s
KBZ   Khabaz              89.85 314   P       P        16 37 10.8 -0.1
             comp=Z,2.7nm,0.8s,baz=151,slow=2.7,SNR=7.3
KBZ   Khabaz              89.85 314⇑iP        P        16 37 10.1 -0.8
KBZ                                   pmax    pmax
             comp=Z,5.0nm,1.0s
KIV   Kislovodsk          90.04 314  eP       P        16 37 11.8 -0.2
KIV                                   pmax    pmax
             comp=Z,3.0nm,1.1s
SNAA  Sanae               93.23 195   P       P        16 37 28.3 +2.1
SNAA  Sanae               93.23 195d iP       P        16 37 28.4 +2.1
SNAA                                  pmax    pmax
             comp=Z,6.0nm,1.0s
SNAA  Sanae               93.23 195   P       P        16 37 26.5 +0.2
SNAA                                  IAmb    IAmb     16 37 32.4
             comp=Z,6.2nm,1.1s
BOSA  Boshof              94.42 240   P       P        16 37 32.5 -0.2
             comp=Z,3.6nm,1.0s,baz=121,slow=5.9,SNR=2.9
VNA2  Neumayer--Watz      94.84 194   P       P        16 37 36.6 +3.1
             baz=127,slow=3.7
OBN   Obninsk             95.70 325⇓eP        P        16 37 37.4 -0.2
OBN                                  e                 16 41 31.5
OBN                                  ePPP     PPP      16 43 32.4
OBN                                   pmax    pmax
             comp=Z,6.0nm,1.0s
BRTR  Keskin Array B      96.11 309  i P      P        16 37 39.5 -0.6
BRTR                                  pmax    pmax
             comp=Z,1.0nm,0.7s
ILAR  Eielson Array       96.65  26   P       P        16 37 42.5 +0.7
             comp=Z,0.3nm,0.5s,baz=254,slow=6.4,SNR=2.5
AKASG Malin Array Be      99.87 320   P       Pdif     16 37 55.2 -1.3
             comp=Z,1.5nm,0.8s,baz=75,slow=4.1,SNR=4.6
AKASG Malin Array Be      99.87 320  i P      Pdif     16 37 56.0 -0.5
AKASG                                 pmax    pmax
             comp=Z,1.0nm,0.4s
MNK   Minsk              100.69 324  i P      Pdif     16 37 54.3 -5.8
MNK                                  i S      SKSac    16 48 33.4 -3.9
MNK                                  i PS     PS       16 51 09.2 +0.1
MNK                                  i SS     SS       16 56 31.0 -1.8
MNK                                  i SSS    SSS      17 00 26.1
MNK                                   pmax    pmax
             comp=Z,6.0nm,0.9s
MNK                                   pmax    pmax
             comp=N,14nm,0.9s
MNK                                   pmax    pmax
             comp=E,1.0nm,0.8s
MNK                                   MLR     MLR
             comp=Z,68nm,18.0s
MNK                                   MLR     MLR
             comp=N,40nm,16.0s
MNK                                   MLR     MLR
             comp=E,4.0nm,20.0s
MNK   Minsk              100.69 324  i P      Pdif     16 37 54.3 -5.8
             comp=E,1.0nm,0.8s
MNK                                  i P      Pdif     16 37 54.3 -5.8
             comp=N,14nm,0.9s
MNK                                  i P      Pdif     16 37 54.3 -5.8
             comp=Z,6.0nm,0.9s,baz=268
MNK                                  i PP     PP       16 42 02.4 -5.2
MNK                                  i PPP    PPP      16 44 09.8
MNK                                  i S      SKSac    16 48 33.4 -3.8
MNK                                  i PS     PS       16 51 09.2 +0.2
MNK                                  i SS     SS       16 56 31.0 -1.8
MNK                                  i SSS    SSS      17 00 26.1
MNK                                  i LQ     LQ       17 17 27.6
MNK                                  i LR     LR       17 19 44.4
MNK                                  i LRM    MLR      17 23 33.0
             comp=Z,68nm,18.1s
MNK                                  i LRM    MLR      17 23 53.0
             comp=E,4.0nm,20.3s
MNK                                  i LRM    MLR      17 23 53.0
             comp=N,40nm,15.9s
TORD  Torodi Ar. Bea     124.00 280   PKP     PKiKP    16 43 11.9 +0.3
             comp=N,0.8nm,0.7s,baz=90,slow=2.7,SNR=5.5
PLCA  Paso Flores        129.25 165   PKP     PKiKP    16 43 22.4 +0.9
             comp=N,4.4nm,1.2s,baz=220,slow=16,SNR=4.0
CPUP  Villa Florida      145.58 177   PKPbc   PKPdf    16 43 51.0 -0.1
             comp=N,3.6nm,0.7s,baz=115,slow=1.8,SNR=7.3
CPUP  Villa Florida      145.58 177   PKP2    PKPab    16 43 51.4  0.0
CPUP  Villa Florida      145.58 177           PKPab    16 43 51.4  0.0
PB08  IPOC Station P     148.62 154           PKPdf    16 43 53.8 -2.9
LPAZ  La Paz             152.46 152   PKPbc   PKiKP    16 44 12.6 +2.3
             comp=N,1.6nm,0.3s,baz=177,slow=2.2,SNR=6.8
LPAZ  La Paz             152.46 152   PKIKP   PKiKP    16 44 12.1 +1.8
LPAZ  La Paz             152.46 152           PKiKP    16 44 12.1 +1.8
BDFB  Brasilia           155.24 197   PKP     PKPdf    16 44 05.9 -0.5
             comp=N,27nm,1.4s,baz=131,slow=8.3,SNR=3.0
BDFB  Brasilia           155.24 197   PKIKP   PKPdf    16 44 05.5 -1.0
BDFB  Brasilia           155.24 197           PKPdf    16 44 05.5 -1.0
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NDI ***05*** *16:27:45.9±0.8, 31.°70N×74.°32E, h25^{km}±9^{km}, ML3.5, ML3.1(NEIC)*

NEIC ***05*** *16:27:47.5±3.0, 31.°8N±0.°1×74.°4E±0.°1, h60^{km}±9^{km}, ML3.1/4, Error ellipse: s-maj=19.6km s-min=14.7km az=52.0*

ISC 05 16:27:45.1±1.0**, 31.°64N**±0.°06×**74.°30E**±0.°05**, h35**^{km}**, n13, σ2.^{s}29**/19**, India-Pakistan border region**

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Code  Station Name          Δ°   AZ°    Phase ID          Time      Res
                                       Op      ISC       h  m  s   ISC
JMU   Jammu                1.19  25  eP       Pn       16 28 06.5 +1.3
JMU                                  eS       Sn       16 28 22.0 +1.8
DHRM  DHARAMSHALA          1.80  70  eP       Pn       16 28 15.5 +1.6
DHRM                                 eS       Sn       16 28 37.3 +1.6
DHRM                                  IAML             16 28 39.8
             comp=N,774nm,0.4s
DHRM                                  IAML             16 28 40.0
             comp=E,831nm,0.3s
NIL   Nilore               2.19 336           Pn       16 28 21.8 +2.7
NIL                                   Sn      Sn       16 28 43.8 -1.3
NIL                                   IAML             16 28 54.2
             comp=E,160nm,0.4s
SMLA  Simla                2.50 101  eP       Pn       16 28 25.6 +2.4
SMLA                                 i x      x        16 28 33.1
SMLA                                 eS       Sn       16 28 54.9 +2.4
SMLA                                  IAML             16 28 57.4
             comp=E,157nm,0.1s
SMLA                                  IAML             16 28 57.9
             comp=N,224nm,0.7s
KUDL  Kundal               3.96 151  ex       x        16 28 57.5
AJM   Ajmer                5.15 177  eP       Pn       16 29 02.5 +2.7
AJM                                  eS       Sn       16 29 58.0 +0.1
KBL   Kabul                5.28 305   Pn      Pn       16 29 04.4 +2.7
KBL                                   Sn      Sn       16 30 01.6 +0.2
KBL                                   IAML             16 30 47.4
             comp=N,8.2nm,0.8s
GAR   Garm                 8.04 337   Pn      Pn       16 29 40.0 +0.5
GAR                                   Sn      Sn       16 31 06.0 -3.1
CHGR  Chuyangaron          8.17 330   Pn      Pn       16 29 41.9 +0.7
BHPL  Bhopal               8.81 161  eS       Sn       16 31 23.0 -5.1
BTK   Batken               8.87 342   Pn      Pn       16 29 51.6 +0.8
TARG  Taragay, Kyrgy      10.46  15   Pn      Pn       16 30 11.5 -1.4
ABKAR Akbulak array       20.65 333           P        16 32 21.7 +0.1
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NEIC ***05*** *16:32:38.8±2.3, 3.°73S±0.°07×150.°90E±0.°06, h10^{km}±1^{km}, mb5.3/113, Ms_20 5.2/238, Mwb5.4/33, Mww5.5, Mwc5.5(GCMT), Error ellipse: s-maj=12.0km s-min=9.3km az=205.0*

NEIC ***05*** *16:32:38.5, 3.°69S×150.°90E, h6^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.33; M$_{θθ}$1.06; M$_{φφ}$-1.39; M$_{rθ}$0.32; M$_{θφ}$1.05; M$_{φr}$0.44; Fault plane solution: M$_0$1.73000×10^{17} NP1:φ$_s$115.90000°, δ70.09000°, λ8.45000°. NP2:φ$_s$23.00000°, δ82.06000°, λ159.89000°. Principal axes: T 1.6119, Plg20.0000°, Azm338.0000°; N 0.2089, Plg68.0000°, Azm182.0000°; P -1.8208, Plg8.0000°, Azm71.0000°;*

BJI ***05*** *16:32:38.1±0.0, 3.°53S×151.°24E, h13^{km}, mB5.4/48, mb4.7/52, Ms5.1/61, Ms7 5.0/58*

DJA ***05*** *16:32:40.7±0.3, 4°S±3°×15°1E±°, h10^{km}, M5.2/72, mb5.1/72, mB5.6/37, MLv5.3/3, Mw(mB)5.1/37, MwMwp5.7/4, Mwp5.8/4*

MOS ***05*** *16:32:42.6±1.6, 3.°79S×150.°87E, h55^{km}, mb5.0/16, MS4.9/12, Error ellipse: s-maj=8.8km s-min=6.3km az=101.8*

GCMT ***05*** *16:32:42.8±0.1, 3.°73S±0.°01×150.°70E±0.°01, h12^{km}, MW5.5/147, Moment Tensor Solution. s120,c193; s147,c281; Duration: 1.^{s}3 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.09±.02; M$_{θθ}$1.61±.02; M$_{φφ}$-1.52±.02; M$_{rθ}$-0.24±.05; M$_{θφ}$1.26±.02; M$_{φr}$-0.03±.05; Best double couple: M$_0$2.02300×10^{17} NP1:φ$_s$205.00000°, δ84.00000°, λ177.00000°. NP2:φ$_s$296.00000°, δ87.00000°, λ6.00000°. Principal axes: T 2.0800, Plg6.0000°, Azm161.0000°; N -0.1140, Plg84.0000°, Azm326.0000°; P -1.9660, Plg2.0000°, Azm70.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***05*** *16:32:43, 3.°74S×150.°74E, h12^{km}, Moment Tensor Solution. Duration: 2.^{s}6 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.12; M$_{θθ}$1.74; M$_{φφ}$-1.63; M$_{rθ}$-0.40; M$_{θφ}$1.25; M$_{φr}$-0.14; Fault plane solution: M$_0$2.14000×10^{17} NP1: φ$_s$297.00000°, δ83.00000°, λ7.00000°. NP2:φ$_s$206.00000°, δ83.00000°, λ173.00000°. Principal axes: T 2.2298, Plg10.0000°, Azm162.0000°; N -0.1888, Plg80.0000°, Azm343.0000°; P -2.0410, Plg0.0000°, Azm252.0000°;*

NEIC ***05*** *16:32:43, 3.°71S×150.°89E, h16^{km}, Moment Tensor Solution. Duration: 10.^{s}0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.29; M$_{θθ}$1.95; M$_{φφ}$-1.66; M$_{rθ}$0.14; M$_{θφ}$1.07; M$_{φr}$0.06; Fault plane solution: M$_0$2.12000×10^{17} NP1: φ$_s$120.00000°, δ87.00000°, λ2.00000°. NP2:φ$_s$30.00000°, δ88.00000°, λ177.00000°. Principal axes: T 2.2520, Plg3.0000°, Azm345.0000°; N -0.2998, Plg87.0000°, Azm179.0000°; P -1.9523, Plg1.0000°, Azm75.0000°;*

IDC ***05*** *16:32:45.8±2.3, 3.°83S×150.°68E, h55^{km}±20^{km}, mb4.3/24, mb1 4.5/28, mb1mx4.4/37, mbtmp4.6/28, ML3.1/4, MS4.9/32, Ms1 4.9/32, ms1mx4.8/38 Error ellipse: s-maj=13.0km s-min=10.4km az=85.0*

ISC 05 16:32:42.4±0.2**, 3.°80S**±0.°03×**150.°91E**±0.°04**, h35**^{km}**, n501, σ2.^{s}39**/406**, mb5.2**/143**, MS5.2**/176**, 26C-29D, Fault plane solution: NP1:**φ$_s$100.49810°, δ67.71883°, λ19.29627°. **NP2:**φ$_s$2.93633°**,** δ72.19493°**,** λ156.53267°. **Principal axes:** T Plg28.9679°**,** Azm320.7848°**;** N Plg60.8505°**,** Azm147.7776°**;** P Plg2.9740°**,** Azm52.4328°**; New Ireland region**

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Code  Station Name          Δ°   AZ°    Phase ID          Time      Res
                                       Op      ISC       h  m  s   ISC
RABL  Rabaul               1.31 107           Pn       16 33 02.4 -1.8
RABL                                  Sn      Sn       16 33 21.8 +1.3
MANU  Manus Island         3.95 296   Pn      Pn       16 33 37.2 -3.4
PMG   Port Moresby         6.70 214   P       Pn       16 34 18.5 +0.2
             3.3nm,0.3s,baz=28,slow=8.5,SNR=25
PMG                                   S       Sn       16 35 26.7 -6.7
             baz=258,slow=18,SNR=1.0
PMG                                   LR      LR       16 36 52.6
             comp=Z,6µm,18.6s,baz=28,slow=38
PMG   Port Moresby         6.70 214   P       Pn       16 34 18.3  0.0
PMG   Port Moresby         6.70 214   Pn      Pn       16 34 18.3  0.0
PMG   Port Moresby         6.70 214   P       Pn       16 34 21.1 +2.8
PMG   Port Moresby         6.70 214   P       Pn       16 34 21.2 +2.9
JAY   Jayapura            10.27 277   P       Pn       16 35 09.3 +1.9
             0.3nm,0.3s,baz=139,slow=9.8,SNR=5.6
JAY                                   LR      LR       16 38 27.8
             comp=Z,18µm,18.2s,baz=82,slow=34
JAY   Jayapura            10.27 277           Pn       16 35 09.3 +1.9
HNR   Honiara             10.57 122   LR      LR       16 39 31.4
             comp=Z,10µm,19.8s,baz=300,slow=38
HNR   Honiara             10.57 122   P       Pn       16 35 11.9 +0.4
HNR   Honiara             10.57 122   Pn      Pn       16 35 11.9 +0.4
SMPI  Sarmi               12.32 278   P       Pn       16 35 34.2 -1.2
             2µm81nm,1.7s
COEN  Coen                12.65 217   Pn      Pn       16 35 39.1 -0.9
PATS  Pohnpei             12.90  35   Pn      Pn       16 35 40.2 -3.1
SRPI  Serui, Papua        14.78 277   P       Pn       16 36 09.5 +0.5
             2µm37nm,0.7s
MTSU  Mount Surprise      15.64 204   P       Pn       16 36 21.5 +1.2
             baz=16,SNR=4.2
CTA   Charters Tower      16.81 195   P       P        16 36 36.7 -0.3
             0.1nm,0.3s,baz=13,slow=18,SNR=4.5
CTA                                   LR      LR       16 43 24.2
             comp=Z,3µm,19.2s,baz=14,slow=38
CTA   Charters Tower      16.81 195   P       P        16 36 36.7 -0.3
CTAO  Charters Tower      16.81 195   P       Pn       16 36 35.0 -0.2
CTAO                                  pmax    pmax
             comp=Z,206nm,1.2s
CTAO  Charters Tower      16.81 195           Pn       16 36 35.0 -0.2
CTAO                                  IAmb    IAmb     16 36 43.1
             comp=Z,206nm,1.2s
GUMO  Guam                18.29 341   LR      LR       16 42 19.3
             comp=Z,4µm,20.9s,baz=136,slow=31
GUMO  Guam                18.29 341   P       P        16 36 49.7 -3.7
GUMO                                  pmax    pmax
             comp=Z,377nm,1.6s
GUMO  Guam                18.29 341   P       P        16 36 49.7 -3.7
GUMO                                  IAmb    IAmb     16 37 48.5
             comp=Z,376nm,1.6s
FAKI  Fak Fak             18.65 272   P       Pn       16 36 57.9 -0.1
             comp=Z,4µmcomp=Z,157nm,1.7s
FAKI  Fak Fak             18.65 272           P        16 36 55.0 -2.4
FAKI                                  IAmb    IAmb     16 37 01.0
             comp=Z,387nm,1.6s
SANVU Saraoutou           19.77 127   P       P        16 37 08.3 -1.3
SANVU                                 IAmb    IAmb     16 37 25.1
             comp=Z,216nm,1.3s
SIJI  Sorong              19.84 278   P       P        16 37 10.2 -0.2
             comp=Z,0.4nm,0.3s,baz=66,slow=7.8,SNR=12
SIJI  Sorong              19.84 278   P       P        16 37 10.2 -0.2
SWI   Sorong              19.85 278   P       Pn       16 37 12.1 -0.2
             comp=Z,3µmcomp=Z,2µmcomp=Z,100nm,1.0s
QIS   Mount Isa           19.96 213   P       Pn       16 37 12.7 -0.9
             baz=20,SNR=37
KDU   Kakadu              20.25 243   P       P        16 37 14.2 -0.7
             baz=20,SNR=27
KWAJ  Kwajalein Atol      20.84  53   P       P        16 37 21.2  0.0
KWAJ                                  pmax    pmax
             comp=Z,356nm,1.4s
KWAJ                                  MLR     MLR
             comp=Z,5µm,19.0s
KWAJ  Kwajalein Atol      20.84  53   P       P        16 37 21.2  0.0
BNDI  Bandanaira          20.96 267   P       P        16 37 23.3 +0.7
             comp=Z,17µmcomp=Z,1µm,1.6s
EIDS  Eidsvold            21.44 180   P       P        16 37 31.0 +3.3
             baz=22,SNR=11
EIDS  Eidsvold            21.44 180   P       P        16 37 27.6 -0.1
EIDS                                  IAmb    IAmb     16 37 36.9
             comp=Z,186nm,1.1s
MTN   Manton Dam          21.51 244   P       P        16 37 27.9 -0.6
             baz=22,SNR=14
MTN   Manton Dam          21.51 244   P       P        16 37 27.4 -1.2
MTN                                   IAmb    IAmb     16 37 32.5
             comp=Z,144nm,1.2s
MSAI  Masohi              21.94 270   P       P        16 37 33.2  0.0
             comp=Z,6.1nm,1.4s
WB0   Warramunga Arr      22.61 224   P       P        16 37 39.6 -0.7
WR0   Warramunga Arr      22.64 224   P       P        16 37 39.1 -1.5
WR0                                   IAmb    IAmb     16 37 52.9
             comp=Z,83nm,1.0s
RMQ   Roma                22.65 185   P       P        16 37 43.6 +3.0
             baz=23,SNR=20
WRAB  Tennant Creek       22.75 224ceP        P        16 37 40.9 -0.9
WRAB                                  pmax    pmax
             comp=Z,135nm,1.4s
WRAB                                  pmax    pmax
             comp=Z,166nm,1.7s
WRAB  Tennant Creek       22.75 224   P       P        16 37 40.3 -1.5
WB2   Warramunga Arr      22.76 224   P       P        16 37 40.2 -1.7
WRA   Warramunga Arr      22.77 224   P       P        16 37 40.9 -1.0
             comp=Z,45nm,0.8s,baz=51,slow=10,SNR=56
WRA                                   S       S        16 41 45.5 -3.2
             comp=Z,1.9nm,1.0s,baz=46,slow=17,SNR=1.5
WRA                                   LR      LR       16 48 10.0
             comp=Z,3µm,18.9s,baz=35,slow=41
WRA   Warramunga Arr      22.77 224   P       P        16 37 40.2 -1.8
WRA                                   S       S        16 41 45.5 -3.2
WRA                                   pmax    pmax
             comp=Z,6.0nm,1.2s
WRA   Warramunga Arr      22.77 224   P       P        16 37 40.2 -1.8
WRA   Warramunga Arr      22.77 224           S        16 41 45.5 -3.2
LIFNC LIFOU               23.18 138   P       P        16 37 45.6 -0.4
QLP   Quilpie             23.54 195   P       P        16 37 52.2 +2.7
             baz=24,SNR=15
DZM   Mont Dzumac         23.60 142  eP       P        16 37 48.7 -1.6
             comp=Z,201nm,1.4s
DZM                                  eS       S        16 41 57.7 -4.8
             comp=Z,2µm,25.1s
DZM                                  eLQ      LQ       16 42 37.9
             comp=Z,4µm,37.0s
DZM                                  eLR      LR       16 43 34.0
             comp=Z,13µm,24.1s
DZM   Mont Dzumac         23.60 142   P       P        16 37 52.4 +2.1
             comp=Z,14nm,0.9s,baz=345,slow=9.8,SNR=14
DZM                                   LR      LR       16 46 12.1
             comp=Z,7µm,20.3s,baz=310,slow=34
DZM   Mont Dzumac         23.60 142   P       P        16 37 50.1 -0.2
DZM                                   IAmb    IAmb     16 37 59.4
             comp=Z,156nm,1.5s
LBMI  Labuha              23.60 277   P       P        16 37 51.8 +1.5
             comp=Z,3µmcomp=Z,168nm,1.9s
ONTNC Ouen Toro           23.78 142   P       P        16 37 51.3 -0.6
ONTNC                                 IAmb    IAmb     16 38 10.5
             comp=Z,184nm,1.6s
TNTI  Ternate             23.96 280   P       P        16 37 54.3 +0.5
             comp=Z,3µmcomp=Z,125nm,1.5s
TNTI  Ternate             23.96 280   P       P        16 37 50.8 -3.0
OUENC Ouen Island, N      24.10 142   P       P        16 37 55.2 +0.3
OUENC                                 IAmb    IAmb     16 38 34.5
             comp=Z,222nm,1.7s
MARNC Mare, Loyalty       24.19 138   P       P        16 37 54.9 -0.9
PINNC Pines Island,       24.62 141   P       P        16 37 59.1 -0.6
PINNC                                 IAmb    IAmb     16 38 42.5
             comp=Z,138nm,1.4s
KNRA  Kununurra           24.78 240   P       P        16 38 02.0 +0.8
             baz=25,SNR=3.1
KNRA  Kununurra           24.78 240   P       P        16 37 60.0 -1.2
SANI  Sanana              24.95 273   P       P        16 38 02.1 -0.7
             comp=Z,2µmcomp=Z,61nm,1.2s
AS31  Alice Springs       25.68 218   P       P        16 38 09.9 +0.5
ASAR  Alice Springs       25.68 218   P       P        16 38 09.4  0.0
             comp=Z,45nm,0.8s,baz=51,slow=8.5,SNR=62
ASAR                                  PcP     PcP      16 41 38.4 -1.0
             comp=Z,1.9nm,1.0s,baz=40,slow=1.6,SNR=2.4
ASAR                                  LR      LR       16 49 19.9
             comp=Z,4µm,19.4s,baz=41,slow=39
ASAR  Alice Springs       25.68 218   P       P        16 38 08.3 -1.1
ASAR  Alice Springs       25.68 218   P       P        16 38 08.3 -1.1
ARMA  Armidale            26.48 179   P       P        16 38 18.5 +1.9
ARMA                                  IAmb    IAmb     16 38 23.8
             comp=Z,105nm,1.7s
SOEI  Soe                 27.10 256   P       P        16 38 25.7 +3.4
             comp=Z,2µmcomp=Z,139nm,1.0s
SOEI  Soe                 27.10 256   IAMs_20 IAMs_20  16 51 05.9
             comp=Z,6µm,21.0s
KMSI  Cibinong            27.26 279   P       P        16 38 24.1 +0.4
             comp=Z,2µmcomp=Z,116nm,0.9s
BATI  Baumata             27.77 255   P       P        16 38 27.6 -0.6
             comp=Z,32nm,0.8s,baz=73,slow=5.0,SNR=8.7
BATI                                  LR      LR       16 51 32.5
             comp=Z,3µm,20.7s,baz=114,slow=41
BATI  Baumata             27.77 255   P       P        16 38 29.7 +1.5
             comp=Z,755nmcomp=Z,41nm,1.0s
CMSA  Cobar Meteorol      28.02 190   P       P        16 38 33.1 +2.9
             baz=28,SNR=5.0
LUWI  Luwuk               28.24 275   P       P        16 38 33.6 +1.1
             comp=Z,2µmcomp=Z,78nm,1.1s
LUWI  Luwuk               28.24 275   P       P        16 38 32.2 -0.3
FITZ  Fitzroy Crossi      28.53 238   P       P        16 38 34.6 -0.3
             comp=Z,62nm,1.2s,baz=71,slow=10,SNR=8.0
FITZ                                  LR      LR       16 50 36.8
             comp=Z,3µm,19.3s,baz=66,slow=38
FITZ  Fitzroy Crossi      28.53 238   P       P        16 38 34.7 -0.3
             baz=28,SNR=8.9
FITZ  Fitzroy Crossi      28.53 238   P       P        16 38 32.9 -2.0
FITZ                                  IAmb    IAmb     16 38 48.1
             comp=Z,121nm,1.4s
MMRI  Maumere             28.90 259   P       P        16 38 37.1 -1.2
MMRI                                  IAmb    IAmb     16 38 44.6
             comp=Z,48nm,0.6s
MRSI  Marisa              29.26 278   P       P        16 38 41.3 -0.2
             comp=Z,36nm,1.1s
STKA  Stephens Creek      29.27 196   P       P        16 38 42.6 +1.3
             comp=Z,10.0nm,0.8s,baz=56,slow=16,SNR=5.0
STKA                                  LR      LR       16 51 35.5
             comp=Z,3µm,18.6s,baz=12,slow=39
STKA  Stephens Creek      29.27 196   P       P        16 38 43.5 +2.2
             baz=29,SNR=4.4
STKA  Stephens Creek      29.27 196⇓eP        P        16 38 43.0 +1.7
STKA  Stephens Creek      29.27 196   P       P        16 38 39.2 -2.2
APSI  Ampana              29.38 275   P       P        16 38 43.9 +1.4
             comp=Z,809nmcomp=Z,61nm,1.5s
EDFI  Ende, Flores        29.45 259   P       P        16 38 41.5 -1.8
             comp=Z,18nm,1.0s
MSVF  Nonsavu             29.98 120   P       P        16 38 51.0 +3.1
             comp=Z,11nm,1.1s,baz=321,slow=12,SNR=4.6
MSVF                                  LR      LR       16 50 10.2
             comp=Z,3µm,18.7s,baz=300,slow=35
MSVF  Nonsavu             29.98 120⇑eP        P        16 38 46.4 -1.5
MSVF                                  pmax    pmax
             comp=Z,2.0nm,0.7s
MSVF  Nonsavu             29.98 120   P       P        16 38 47.2 -0.7
MSVF                                  IAmb    IAmb     16 38 58.1
             comp=Z,48nm,1.5s
WRKA  Warakurna           30.31 224   P       P        16 38 51.1 +0.4
             baz=30,SNR=10
BSSI  Bau Bau, Buton      30.39 264   P       P        16 38 52.9 +1.4
             comp=Z,699nmcomp=Z,34nm,1.3s
TOLI2 Tolitoli            30.50 279   P       P        16 38 50.4 -2.2
BKSI  Bulukumba           30.73 266   P       P        16 38 54.3 -0.2
             comp=Z,20nm,1.2s
WSI   Waingapu            30.94 258   P       P        16 38 55.7 -0.7
TTSI  Tana Toraja         31.04 270   P       P        16 38 58.1 +0.8
             comp=Z,24nm,1.2s
KAPI  Kappang             31.09 267   P       P        16 38 56.2 -1.5
KAPI                                  pmax    pmax
             comp=Z,63nm,1.4s
KAPI  Kappang             31.09 267   P       P        16 38 56.2 -1.5
KAPI                                  IAmb    IAmb     16 38 59.5
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	comp=Z,63nm,1.4s						
MPSI	Mapaga	31.26	277	P	P	16 38 58.1	-1.1
	comp=Z,534nmcomp=Z,26nm,0.9s						
WBSI	Waikabubak, Su	31.82	258	P	P	16 39 03.9	-0.3
BBOO	Buckleboo	32.03	204	P	P	16 39 05.4	-0.4
ARPS	Mount Arapiles	33.85	193	P	P	16 39 23.8	+2.2
	baz=34,SNR=6.5						
TOO	Toolangi	33.97	188	P	P	16 39 25.2	+2.5
	baz=34,SNR=5.2						
TOO	Toolangi	33.97	188	P	P	16 39 23.4	+0.7
TOO				pmax	pmax		
	comp=Z,30nm,1.2s						
TOO	Toolangi	33.97	188	P	P	16 39 23.4	+0.7
TOO				IAmb	IAmb	16 39 27.1	
	comp=Z,30nm,1.1s						
TWSI	Taliwang, Sumb	34.16	260	P	P	16 39 23.5	-1.1
	comp=Z,18nm,1.0s						
FORT	Forrest	34.42	216	P	P	16 39 27.1	+0.5
	baz=34,SNR=7.7						
FORT	Forrest	34.42	216	P	P	16 39 25.3	-1.3
MBWA	Marble Bar	34.87	238	IAMs_20	IAMs_20	16 54 29.0	
	comp=Z,3μm,18.0s						
PSA00	Pilbara Seismi	34.95	237	P	P	16 39 30.3	-1.0
PSA00				IAmb	IAmb	16 39 32.5	
	comp=Z,40nm,1.1s						
PSA00	Pilbara Seismi	34.95	237	P	P	16 39 30.4	-0.9
PSA00				IAmb	IAmb	16 39 32.5	
	comp=Z,22nm,1.2s						
SRBI	Singaraja	35.75	261	P	P	16 39 37.2	-1.1
	comp=Z,24nm,1.6s						
BBKI	Banjar Baru	36.00	269	P	P	16 39 42.0	+1.5
	comp=Z,41nm,1.2s						
MTKI	Muara Teweh, K	36.09	274	P	P	16 39 41.7	+0.4
	comp=Z,12nm,1.5s						
JAGI	Jajag, Banyuwa	36.83	261	P	P	16 39 44.9	-2.6
	comp=Z,45nm,1.4s						
JAGI	Jajag, Banyuwa	36.83	261	P	P	16 39 43.7	-3.8
JAGI				IAmb	IAmb	16 39 46.7	
	comp=Z,76nm,1.3s						
OUZ	Omahuta	37.66	149	IAMs_20	IAMs_20	16 53 47.6	
	comp=Z,3μm,20.0s						
AFI	Afiamalu	38.15	108	LR	LR	16 54 52.6	
	comp=Z,2μm,18.0s,baz=279,slow=35						
MEEK	Meekatharra	38.34	230	P	P	16 40 00.9	+0.7
	baz=38,SNR=12						
RAO	Raoul Island	38.91	134	P	P	16 40 08.7	+3.8
	comp=Z,221nm,0.5s,baz=98,slow=23,SNR=2.1						
TAU	Tasmania Unive	39.07	184	P	P	16 40 04.6	-1.4
TAU				pmax	pmax		
	comp=Z,148nm,1.8s						
TAU				MLR	MLR		
	comp=Z,5μm,21.0s						
TAU	Tasmania Unive	39.07	184	P	P	16 40 04.6	-1.4
TAU				IAmb	IAmb	16 41 07.6	
	comp=Z,148nm,1.8s						
TAU				IAMs_20	IAMs_20	16 55 58.7	
	comp=Z,5μm,21.0s						
PWJI	Pagerwojo	39.11	262	P	P	16 40 05.9	-0.9
	comp=Z,10μmcomp=Z,60nm,1.1s						
PBKI	Pangkalan Bun	39.19	270	P	P	16 40 08.5	+1.0
	comp=Z,635μmcomp=Z,109nm,1.1s						
YULB	Yu-li	39.55	315	P	P	16 40 09.3	-1.1
YULB				IAMs_20	IAMs_20	16 52 43.7	
	comp=Z,3μm,21.0s						
STKI	Sintang	39.59	275	P	P	16 40 11.8	+1.0
	comp=Z,2μmcomp=Z,23nm,1.3s						
PCJI	Pacitan	39.74	262	P	P	16 40 11.6	-0.4
	comp=Z,135nm,1.2s						
TPUB	Ta-pu	39.98	314	P	P	16 40 12.2	-1.7
SSLB	Suanglung	40.05	315	IAMs_20	IAMs_20	16 52 49.7	
	comp=Z,3μm,21.0s						
GIRL	Giralia	40.13	239	P	P	16 40 14.6	-0.7
JSU	Suzuyama	40.16	332	P	P	16 40 12.1	-3.2
YHNB	Yeheng	40.31	316	IAMs_20	IAMs_20	16 53 13.8	
	comp=Z,3μm,21.0s						
SMRI	Semarang	40.41	264	P	P	16 40 15.8	-1.8
TATO	Taipei	40.44	317	IAMs_20	IAMs_20	16 53 27.8	
	comp=Z,3μm,21.0s						
JMN	Monobe	40.65	338	P	P	16 40 19.0	-0.3
JMN				IAmb	IAmb	16 41 01.3	
	comp=Z,83nm,1.6s						
HIZ	Hauiti	40.86	151	P	P	16 40 20.3	-0.7
HIZ				IAMs_20	IAMs_20	16 53 33.2	
	comp=Z,3μm,21.0s						
JYT	Yasato	41.07	347	P	P	16 40 20.7	-1.9
INU	Inuyama	41.07	343	P	P	16 40 21.2	-1.5
NIUE	Niue	41.14	115	P	P	16 40 21.2	-2.3
JGF	Kuroka	41.21	343	P	P	16 40 21.9	-2.0
JNU	Nakatsue	41.34	334	P	P	16 40 25.4	+0.4
	comp=Z,23nm,1.0s,baz=112,slow=1.7,SNR=5.0						
JNU	Nakatsue	41.34	334	P	P	16 40 22.9	-2.1
JNU				IAmb	IAmb	16 40 38.5	
	comp=Z,64nm,1.4s						
JWT	Wachi	41.52	341	P	P	16 40 24.3	-2.1
MORW	Morawa	41.54	229	P	P	16 40 24.9	-1.8
MORW				IAmb	IAmb	16 40 56.4	
	comp=Z,109nm,1.9s						
QRZ	Quartz Range	41.68	155	P	P	16 40 28.2	+0.5
QRZ				IAMs_20	IAMs_20	16 56 17.8	
	comp=Z,4μm,20.0s						
URZ	Urewera	41.80	149	P	P	16 40 29.9	+1.2
	comp=Z,18nm,1.1s,baz=302,slow=20,SNR=3.0						
URZ	Urewera	41.80	149	P	P	16 40 27.4	-1.3
URZ				IAmb	IAmb	16 40 39.8	
	comp=Z,110nm,1.7s						
URZ				IAMs_20	IAMs_20	16 55 36.1	
	comp=Z,3μm,20.0s						
MJAR	Matsushiro Arr	41.85	345	P	P	16 40 30.2	+1.0
	comp=Z,1.8nm,0.9s,baz=162,slow=11,SNR=5.3						
MJAR				LR	LR	16 57 32.1	
	comp=Z,1μm,18.4s,baz=195,slow=36						
MJAR	Matsushiro Arr	41.85	345	P	P	16 40 27.0	-2.2
MJAR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MJAR	Matsushiro Arr	41.85	345	P	P	16 40 27.0	-2.2
MAJO	Matsushiro	41.85	345	⇑ *e*P	P	16 40 27.6	-1.6
MAJO				pmax	pmax		
	comp=Z,13nm,1.4s						
MAJO	Matsushiro	41.85	345	P	P	16 40 27.0	-2.1
MAT	Matsushiro	41.85	345	P	P	16 40 27.8	-1.4
MAT				S	S	16 46 37.2	-7.6
KPJI	Karang Pucung	41.91	263	P	P	16 40 30.8	+0.8
	comp=Z,78nm,1.1s						
JHS	Saijyo	42.07	338	P	P	16 40 28.5	-2.4
QZH	Quanzhou	42.45	314	*e*P	P	16 40 38.7	+4.5
QZH				S	S	16 46 59.4	+5.5
QZH				LR	LR		
	comp=Z,930nm,17.3s						
QZH				LR	LR		
	comp=Z,690nm,21.8s						
QZH				LR	LR		
	comp=Z,1μm,19.0s						
JMM	Marumori	42.51	348	P	P	16 40 30.9	-3.5
JCJI	Jatiwangi	42.54	265	P	P	16 40 36.1	+1.0
THZ	Tophouse	42.62	156	IAMs_20	IAMs_20	16 56 48.6	
	comp=Z,3μm,20.0s						
TUWZ	Tuamarina	42.78	154	P	P	16 40 36.5	-0.1
FOZ	Fox Glacier	42.96	160	P	P	16 40 37.7	-0.3
FOZ				IAmb	IAmb	16 41 15.8	
	comp=Z,194nm,2.0s						
FOZ				IAMs_20	IAMs_20	16 55 15.6	
	comp=Z,3μm,22.0s						
BSWZ	Blackbirch Sta	42.98	155	P	P	16 40 38.0	-0.3
CISI	Cisompet, Garu	43.03	263	P	P	16 40 38.0	-1.2
	comp=Z,1μmcomp=Z,84nm,1.2s						
CISI	Cisompet, Garu	43.03	263	P	P	16 40 37.6	-1.5
JTU	Tsushima	43.17	334	P	P	16 40 37.6	-2.3
JTU				IAmb	IAmb	16 40 49.5	
	comp=Z,79nm,1.9s						
LEM	Lembang	43.20	264	P	P	16 40 40.9	+0.3
	comp=Z,33nm,1.1s						
LTZ	Lake Taylor	43.22	157	P	P	16 40 41.8	+1.6
LTZ				IAmb	IAmb	16 40 49.2	
	comp=Z,116nm,1.6s						
BFZ	Birch Farm	43.23	152	P	P	16 40 39.3	-1.0
BFZ				IAmb	IAmb	16 41 23.5	
	comp=Z,138nm,1.5s						
JSD	Sado	43.25	345	P	P	16 40 37.5	-2.9
MSWZ	Moikau Station	43.35	153	P	P	16 40 40.3	-1.0
KHZ	Kahutara	43.42	156	P	P	16 40 40.7	-1.0
KHZ				IAmb	IAmb	16 41 27.7	
	comp=Z,75nm,1.4s						
PLWZ	Palliser	43.47	153	P	P	16 40 40.7	-1.6
RPZ	Rata Peaks	43.56	159	P	P	16 40 42.1	-0.8
RPZ				IAmb	IAmb	16 40 47.7	
	comp=Z,54nm,1.1s						
OXZ	Oxford	43.59	158	P	P	16 40 43.1	-0.1
OXZ				IAmb	IAmb	16 41 27.1	
	comp=Z,82nm,1.8s						
CNJI	Cibinong	43.70	263	P	P	16 40 44.8	+0.3
	comp=Z,2μmcomp=Z,182nm,1.4s						
LBZ	Lake Benmore	43.84	160	P	P	16 40 47.1	+1.9
LBZ				IAmb	IAmb	16 41 26.3	
	comp=Z,99nm,1.8s						
LBZ				IAMs_20	IAMs_20	16 54 09.8	
	comp=Z,3μm,20.0s						
WKZ	Wanaka	43.85	161	P	P	16 40 45.4	+0.1
WKZ				IAmb	IAmb	16 41 51.0	
	comp=Z,77nm,1.4s						
DCZ	Deep Cove	43.86	163	P	P	16 40 46.0	+0.8
DCZ				IAmb	IAmb	16 40 52.5	
	comp=Z,60nm,1.3s						
MLZ	Mavora Lakes	44.05	163	P	P	16 40 48.4	+1.5
MLZ				IAmb	IAmb	16 40 51.5	
	comp=Z,62nm,1.3s						
MIDW	Midway	44.11	42	P	P	16 40 46.0	-1.5
PPBI	Pangkal Pinang	44.74	271	P	P	16 40 55.0	+2.2
	comp=Z,5μmcomp=Z,39nm,1.8s						
SSE	Sheshan	44.81	323	P	P	16 40 53.6	+0.6
SSE				S	S	16 47 30.4	+2.2
SSE				pmax	pmax		
	comp=Z,15nm,0.8s						
SSE				pmax	pmax		
	comp=Z,190nm,4.3s						
SSE				LR	LR		
	comp=Z,500nm,18.2s						
SSE				LR	LR		
	comp=Z,630nm,18.4s						
TJN	Taejon	45.63	333	⇓ *e*P	P	16 40 59.2	-0.3
KLI	Kotabumi	45.93	267	P	P	16 41 03.2	+0.9
	comp=Z,236nm,0.4s						
KLSI		46.06	267	P	P	16 41 00.9	-2.4
	comp=Z,9.5nm,1.8s						
PMBI	Palembang	46.06	270	P	P	16 41 05.2	+1.9
	comp=Z,204nm,0.5s						
KSRS	Korea Array	46.28	335	P	P	16 41 04.3	-0.2
	comp=Z,2.1nm,0.9s,baz=154,slow=8.1,SNR=6.8						
KSRS				LR	LR	17 00 52.0	
	comp=Z,667nm,18.2s,baz=152,slow=36						
KSAR	Wonju Array Be	46.29	334	P	P	16 41 01.6	-3.1
KSAR	Wonju Array Be	46.29	334	P	P	16 41 01.6	-3.1
QIZ	Qiongzhong	46.34	301	P	P	16 41 08.8	+3.4
QIZ				S	S	16 47 51.4	+0.7
QIZ				LR	LR		
	comp=Z,1μm,23.5s						
QIZ				LR	LR		
	comp=Z,720nm,19.6s						
QIZ				LR	LR		
	comp=Z,1μm,24.5s						
DSRI	Dabo	46.41	273	P	P	16 41 07.1	+1.0
	comp=Z,736nmcomp=Z,23nm,1.7s						
MDSI	Maura Dua	46.61	267	P	P	16 41 06.3	-1.3
	comp=Z,27nm,1.5s						
LWLI	Liwa	46.72	267	P	P	16 41 10.0	+1.4
	comp=Z,52nm,1.3s						
INCN	Inchon	46.87	333	P	P	16 41 06.6	-2.7
INCN				pmax	pmax		
	comp=Z,80nm,1.3s						
INCN				MLR	MLR		
	comp=Z,1μm,22.0s						
INCN	Inchon	46.87	333	P	P	16 41 06.6	-2.7
NJ2	Nanjing	46.90	322	*e*P	P	16 41 09.8	+0.3
NJ2				S	S	16 48 05.3	+7.1
NJ2				pmax	pmax		
	comp=Z,320nm,4.3s						
NJ2				LR	LR		
	comp=Z,1μm,20.4s						
NJ2				LR	LR		
	comp=Z,1μm,18.7s						
NJ2				LR	LR		
	comp=Z,2μm,17.9s						
JMBI	JAMBI	47.26	271	P	P	16 41 15.5	+2.8
	comp=Z,39nm,0.5s						
LHSI	Lahat	47.28	268	P	P	16 41 13.7	+0.9
	comp=Z,886nmcomp=Z,30nm,1.2s						
YUK	Yuzh-Kuril'sk	47.84	355*c*	*i*P	P	16 41 01.7	-15
YUK				*e*S	S	16 48 03.7	-7.5
YUK				*e*SSS	SSS	16 52 54.0	
JKA	Kamikawa-asahi	48.28	352	P	P	16 41 19.2	-0.9
ASAJ	Asahikawa	48.28	352	P	P	16 41 19.2	-0.9
ASAJ				pmax	pmax		
	comp=Z,146nm,1.9s						
RGRI	Rengat	48.66	273	P	P	16 41 25.7	+2.2
	comp=Z,46μmcomp=Z,319nm,0.4s						
WHN	Wuhan	48.84	317	⇑P	P	16 41 30.4	+5.8
WHN				S	S	16 48 32.2	+6.3
WHN				LR	LR		
	comp=Z,1μm,12.4s						
WHN				LR	LR		
	comp=Z,2μm,17.8s						
WHN				LR	LR		
	comp=Z,4μm,20.7s						
BKNI	Bangkinang	50.00	274	P	P	16 41 35.2	+1.4
	comp=Z,72nm,0.5s						
DL2	Dalian	50.37	330	P	P	16 41 32.6	-3.5
DL2				pmax	pmax		
	comp=Z,21nm,1.3s						
DL2				pmax	pmax		
	comp=Z,490nm,4.1s						
DL2				LR	LR		
	comp=Z,1μm,19.0s						
DL2				LR	LR		
	comp=Z,910nm,16.1s						
DL2				LR	LR		
	comp=Z,1μm,21.1s						
PDSI	Padang	50.48	272	P	P	16 41 38.0	+0.5
	comp=Z,12nm,0.8s						
PPI	Padang Panjang	50.58	273	P	P	16 41 39.2	+1.0
	comp=Z,40nm,0.9s						
USRK	Ussuriysk Ar.	50.72	342	P	P	16 41 39.2	+0.5
	comp=Z,2.1nm,0.8s,baz=163,slow=7.7,SNR=2.6						
USRK				LR	LR	17 01 38.8	
	comp=Z,912nm,22.0s,baz=146,slow=34						
USRK	Ussuriysk Ar.	50.72	342	P	P	16 41 38.2	-0.5
USRK	Ussuriysk Ar.	50.72	342	P	P	16 41 38.2	-0.5
YSS	Yuzh-Sakhalins	51.05	353	*e*P	P	16 41 40.5	-0.6
YSS				*e*S	S	16 48 56.9	+0.8
YSS				*e*SS	SS	16 52 30.2	-1.6
YSS				MLR	MLR		
	comp=Z,700nm,21.0s						
MNSI	Mandailing Nat	51.50	274	P	P	16 41 45.9	+0.8
	comp=Z,37nm,1.0s						
SNY	Shenyang	51.78	334	⇓P	P	16 41 51.5	+4.9
SNY				S	S	16 49 02.6	-3.7
SNY				pmax	pmax		
	comp=Z,230nm,4.0s						
SNY				LR	LR		
	comp=Z,850nm,15.6s						
SNY				LR	LR		
	comp=Z,570nm,16.1s						
SNY				LR	LR		
	comp=Z,1μm,18.7s						
SISI	Saibi	51.82	271	P	P	16 41 48.6	+1.1
	comp=Z,26nm,1.5s						
MDJ	Mudanjiang	51.85	341	P	P	16 41 47.8	+0.7
MDJ				sP	pP	16 41 52.5	-4.4
MDJ				S	S	16 49 10.6	+3.3
MDJ				pmax	pmax		
	comp=Z,14nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,280nm,6.2s						
MDJ				LR	LR		
	comp=Z,1μm,24.9s						
MDJ				LR	LR		
	comp=Z,750nm,19.9s						
MDJ				LR	LR		
	comp=Z,2μm,25.0s						
MDJ	Mudanjiang	51.85	341	P	P	16 41 47.0	-0.2
MDJ				IAmb	IAmb	16 42 08.1	
	comp=Z,44nm,1.5s						
GYA	Guiyang	52.30	308	⇑P	P	16 41 53.9	+2.9
GYA				S	S	16 49 15.7	+1.4
GYA				SS	SS	16 52 47.6	-4.9
GYA				pmax	pmax		
	comp=Z,14nm,1.1s						
GYA				LR	LR		
	comp=Z,540nm,18.1s						
GYA				LR	LR		
	comp=Z,560nm,17.6s						
GYA				LR	LR		
	comp=Z,960nm,17.6s						
PSI	Prapat	52.37	276	P	P	16 41 51.3	-0.5
	comp=Z,9.1nm,1.0s,baz=154,slow=5.6,SNR=9.8						
SLVN	Son La	52.37	301	P	P	16 41 52.4	+0.8
CN2	Changchun	52.64	337	*e*P	P	16 42 01.3	+8.3
CN2				*e*S	S	16 49 22.9	+4.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				LR	LR		
	comp=N,800nm,21.0s						
CN2				LR	LR		
	comp=E,500nm,21.0s						
CN2				LR	LR		
	comp=Z,900nm,26.0s						
GSI	Gunungsitoli	53.55	274	P	P	16 42 00.5	+0.2
	comp=Z,84nm,1.5s						
GSI	Gunungsitoli	53.55	274	P	P	16 41 58.1	-2.1
BJT	Baijiatuau	54.02	327	P	P	16 42 03.6	+0.3
BJT				pmax	pmax		
	comp=Z,50nm,1.9s						
BJT				MLR	MLR		
	comp=Z,2μm,22.0s						
BJT	Baijiatuau	54.02	327	P	P	16 42 03.6	+0.3
BJT				IAmb	IAmb	16 42 36.1	
	comp=Z,50nm,1.9s						
BJI	Beijing	54.03	327	P	P	16 42 03.8	+0.5
BJI				S	S	16 49 39.5	+2.3
BJI				pmax	pmax		
	comp=Z,9.0nm,1.8s						
BJI				LR	LR		
	comp=Z,1μm,20.3s						
BJI				LR	LR		
	comp=Z,1μm,22.7s						
BJI				LR	LR		
	comp=Z,2μm,23.7s						
XAN	Xi'an	54.61	317	P	P	16 42 11.2	+3.5
XAN				S	S	16 49 46.6	+1.3
XAN				pmax	pmax		
	comp=Z,250nm,4.3s						
XAN				LR	LR		
	comp=Z,810nm,18.9s						
XAN				LR	LR		
	comp=Z,780nm,19.2s						
XAN				LR	LR		
	comp=Z,1μm,20.3s						
LHMI	Lhok Sumawe	54.64	279	P	P	16 42 07.8	-0.5
LHMI				IAmb	IAmb	16 42 19.8	
	comp=Z,41nm,0.9s						
KMI	Kunming	54.87	304	⇑P	P	16 42 11.4	+1.4
KMI				pP	pP	16 42 14.1	-5.7
KMI				PcP	PcP	16 43 14.0	+2.0
KMI				S	S	16 49 54.2	+4.7
KMI				SS	SS	16 53 34.5	+1.1
KMI				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KMI				pmax	pmax		
	comp=Z,200nm,4.0s						
KMI				LR	LR		
	comp=Z,410nm,18.1s						
KMI				LR	LR		
	comp=Z,280nm,18.1s						
KMI				LR	LR		
	comp=Z,560nm,17.0s						
KLR	Kul'dur	55.38	345	LR	LR	17 02 38.1	
	comp=Z,1μm,21.9s,baz=164,slow=32						
KLR	Kul'dur	55.38	345	⇑ *e*P	P	16 42 13.5	+0.6
KLR				pmax	pmax		
	comp=Z,24nm,1.7s						
CM31	Chiang Mai Arr	55.75	295	P	P	16 42 15.4	-0.8
CMAR	Chiang Mai Arr	55.75	295	P	P	16 42 17.2	+1.0
	comp=Z,3.9nm,0.9s,baz=108,slow=5.4,SNR=27						
CMAR				LR	LR	17 06 53.2	
	comp=Z,310nm,19.0s,baz=140,slow=37						
CMAR	Chiang Mai Arr	55.75	295	*i* P	P	16 42 17.6	+1.4
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CMAR	Chiang Mai Arr	55.75	295	P	P	16 42 16.1	-0.1
CHTO	Chiang Mai	55.86	296	P	P	16 42 16.0	-1.0
CHTO				pmax	pmax		
	comp=Z,23nm,1.2s						
CHTO	Chiang Mai	55.86	296	P	P	16 42 16.0	-1.0
CHTO				IAmb	IAmb	16 42 31.5	
	comp=Z,23nm,1.2s						
CD2	Chengdu	56.66	311	*e*P	P	16 42 24.0	+1.4
CD2				S	S	16 50 14.3	+1.5
CD2				pmax	pmax		
	comp=Z,30nm,0.9s						
CD2				pmax	pmax		
	comp=Z,330nm,3.9s						
CD2				LR	LR		
	comp=Z,880nm,19.4s						
CD2				LR	LR		
	comp=Z,2μm,20.6s						
CD2				LR	LR		
	comp=Z,2μm,21.6s						
PETK	Petropavlovsk-	56.99	5	P	P	16 42 26.4	+2.1
	comp=Z,5.3nm,0.9s,baz=186,slow=3.0,SNR=5.9						
PETK	Petropavlovsk-	56.99	5	P	P	16 42 26.4	+2.1
PET	Petropavlovsk	56.99	6	*e*P	P	16 42 27.2	+2.9
PET				*e*S	S	16 50 18.0	+1.8
PET				*e*SS	SS	16 54 06.2	+0.9
PET				pmax	pmax		
	comp=Z,300nm,4.9s						
PET				MLR	MLR		
	comp=Z,800nm,20.0s						
HHC	Hu-ho-hao-te	57.15	325	*e*P	P	16 42 23.8	-2.1
HHC				S	S	16 50 14.1	-4.9
HHC				sS	sS	16 50 33.6	-1.7
HHC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,230nm,5.5s						
HHC				LR	LR		
	comp=Z,1μm,18.1s						
HHC				LR	LR		
	comp=Z,1μm,17.2s						
HHC				LR	LR		
	comp=Z,2μm,17.9s						
LZH	Lanzhou	59.21	316	⇑P	P	16 42 50.4	+10
LZH				pP	sP	16 42 55.3	+1.1
LZH				sP	pwP	16 43 01.5	+8.0
LZH				S	S	16 50 54.4	+8.2
LZH				sS	sS	16 51 02.9	+0.4
HIA	Hailar	59.37	337	P	P	16 42 41.7	+0.5
HIA				pmax	pmax		
	comp=Z,22nm,1.2s						
HIA				MLR	MLR		
	comp=Z,700nm,19.0s						
HIA	Hailar	59.37	337	P	P	16 42 41.7	+0.5
HIA				IAmb	IAmb	16 42 51.7	
	comp=Z,22nm,1.2s						
PPT	Papeete	59.82	108	LR	LR	17 05 22.0	
	comp=Z,385nm,19.5s,baz=278,slow=33						
PPT2	Papeete2	59.82	108	*e*S	S	16 50 51.5	-3.0
	comp=Z,1μm,25.5s						
PPT2				*e*LQ	LQ	16 57 53.7	
	comp=Z,2μm,31.0s						
PPT2				*e*LR	LR	17 00 26.6	
	comp=Z,1μm,31.0s						
ZEA	Zeya	60.66	344	*e*P	P	16 42 55.2	+5.3
ZEA				*e*S	S	16 51 19.4	+16
ZEA				pmax	pmax		
	comp=E,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=N,10.0nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ZEA				smax	smax		
	comp=E,100nm,12.2s						
ZEA				MLR	MLR		
	comp=E,300nm,17.0s						
ZEA				MLR	MLR		
	comp=N,400nm,18.0s						
ZEA				MLR	MLR		
	comp=Z,500nm,20.0s						
TBI	Tubuai	60.68	115	*e*S	S	16 51 00.7	-4.5
	comp=Z,656nm,28.2s						
TBI				*e*LQ	LQ	16 58 11.8	
	comp=Z,3μm,35.5s						
TBI				*e*LR	LR	17 00 47.7	
	comp=Z,1μm,26.2s						
PMOR	Pomariorio Ree	61.21	105	*e*P	P	16 42 57.3	+3.0
	comp=Z,161nm,1.3s						
MA2	Magadan	63.19	360	IAMs_20	IAMs_20	17 10 56.0	
	comp=Z,1μm,19.0s						
CIT	Chita	64.00	335	*e*P	P	16 43 13.8	+1.4
CIT				*e*		16 43 30.4	
CIT				*e*	PcP	16 43 52.0	+4.5

CIT				*e*		16 47 03.5	
CIT				pmax	pmax		
	comp=Z,88nm,2.5s						
ULN	**Ulaanbaatar**	**64.17**	**329**	*i* P	**P**	**16 43 14.9**	**+1.3**
ULN	**Ulaanbaatar**	**64.17**	**329**	P	**P**	**16 43 13.6**	**0.0**
ULN				IAmb	IAmb	16 43 24.9	
	comp=Z,47nm,1.8s						
ULN	**Ulaanbaatar**	**64.17**	**329**	IAMs_20	IAMs_20	17 08 55.3	
	comp=Z,1µm,20.0s						
SHL	**Shillong**	**64.18**	**301**	P	**P**	**16 43 13.2**	**-1.0**
SHL				pmax	pmax		
	comp=Z,69nm,1.7s						
SHL	**Shillong**	**64.18**	**301**	P	**P**	**16 43 13.2**	**-1.0**
SONM	**Songino Array**	**64.49**	**328**	P	**P**	**16 43 16.0**	**+0.3**
	comp=Z,1.1nm,0.8s,baz=134,slow=8.5,SNR=9.6						
SONM				LR	LR	17 10 53.9	
	comp=Z,1µm,20.6s,baz=130,slow=36						
SONM	**Songino Array**	**64.49**	**328**	P	**P**	**16 43 15.0**	**-0.7**
SONM				pmax	pmax		
	comp=Z,28nm,1.6s						
SONM	**Songino Array**	**64.49**	**328**	P	**P**	**16 43 15.0**	**-0.7**
SONM				IAmb	IAmb	16 43 26.8	
	comp=Z,28nm,1.6s						
LSA	**Lhasa**	**66.12**	**305**	P	**P**	**16 43 29.1**	**+2.0**
LSA	**Lhasa**	**66.12**	**305**	P	**P**	**16 43 26.6**	**-0.5**
LSA				pmax	pmax		
	comp=Z,19nm,1.2s						
LSA				MLR	MLR		
	comp=Z,200nm,21.0s						
LSA	**Lhasa**	**66.12**	**305**	P	**P**	**16 43 26.6**	**-0.5**
LSA				IAmb	IAmb	16 43 43.3	
	comp=Z,19nm,1.2s						
YAK	**Yakutsk**	**67.64**	**349**	*e*P	**P**	**16 43 37.4**	**+1.9**
YAK				*e*	**PP**	**16 46 00.6**	**-4.4**
YAK				*e*S	**S**	**16 52 34.8**	**+4.8**
YAK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.2s						
YAK				pmax	pmax		
	comp=Z,189nm,3.2s						
YAK				pmax	pmax		
	comp=N,65nm,2.2s						
YAK				smax	smax		
	comp=N,54nm,2.1s						
YAK				smax	smax		
	comp=E,63nm,2.3s						
YAK	**Yakutsk**	**67.64**	**349**	P	**P**	**16 43 35.5**	**0.0**
ZAK	**Zakamensk**	**67.67**	**329**	*e*P	**P**	**16 43 37.0**	**+0.9**
ZAK				pmax	pmax		
	comp=Z,34nm,1.4s						
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
BOD	**Bodaibo**	**68.20**	**340**	*e*P	P	16 43 44.1	+5.0
BOD				pmax	pmax		
	comp=Z,24nm,2.0s						
TAPN	**Taplejung**	**68.28**	**301**	*e*P	**P**	**16 43 41.7**	**+1.1**
	comp=Z,64nm,1.2s						
ODAN	**Odare**	**68.42**	**301**	*e*P	**P**	**16 43 42.7**	**+1.3**
CASY	**Casey**	**68.42**	**196**	P	**P**	**16 43 41.7**	**+1.3**
CASY				IAmb	IAmb	16 43 43.6	
	comp=Z,20nm,1.0s						
TAOE	**Nuku Hiva Isla**	**68.63**	**98**	*e*LR	LR	17 04 32.6	
	comp=Z,1µm,25.2s						
JIRN	**Jiri**	**69.66**	**301**	*e*P	**P**	**16 43 51.2**	**+1.9**
GUN	**Gumba**	**70.00**	**301**	*e*P	**P**	**16 43 52.6**	**+1.3**
PKI	**Pulchoki**	**70.31**	**301**	*e*P	**P**	**16 43 54.2**	**+1.0**
PKIN	**Phulchoki**	**70.32**	**301**	*e*P	**P**	**16 43 53.9**	**+0.7**
KKN	**Kakani**	**70.48**	**301**	*e*P	**P**	**16 43 54.9**	**+0.8**
DMN	**Daman**	**70.58**	**301**	*e*P	**P**	**16 43 56.1**	**+1.3**
PALK	**Pallekele**	**70.92**	**279**	P	**P**	**16 43 56.6**	**-0.2**
PALK				pmax	pmax		
	comp=Z,26nm,1.2s						
PALK	**Pallekele**	**70.92**	**279**	P	**P**	**16 43 56.6**	**-0.2**
PALK				IAmb	IAmb	16 44 07.0	
	comp=Z,26nm,1.2s						
GKN	**Gorkha**	**71.08**	**301**	*e*P	**P**	**16 43 58.6**	**+0.9**
KOLN	**Koldanda**	**71.91**	**301**	*e*P	**P**	**16 44 03.6**	**+0.8**
DANN	**Dangsing**	**71.92**	**301**	*e*P	**P**	**16 44 04.3**	**+1.4**
BILL	**Bilibino**	**72.49**	**6**⇓	*e*P	**P**	**16 44 01.9**	**-3.2**
BILL				*e*	**PcP**	**16 44 23.4**	**+0.7**
BILL				*e*	**PP**	**16 46 47.5**	**+0.8**
BILL				*e*PPP	PPP	16 48 36.6	
BILL				pmax	pmax		
	comp=Z,5.0nm,1.3s						
PYUN	**Piuthan**	**72.51**	**301**	*e*P	**P**	**16 44 07.9**	**+1.5**
CHGN	**Chignik**	**72.68**	**27**	P	**P**	**16 44 06.8**	**+0.4**
WMQ	**Urumqi**	**73.74**	**318**	*e*P	**P**	**16 44 16.8**	**+3.7**
WMQ				sP	pP	16 44 22.7	-0.6
WMQ				S	**S**	**16 53 43.3**	**+1.4**
WMQ				SS	**SS**	**16 58 33.9**	**+7.8**
WMQ				pmax	pmax		
	comp=Z,22nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,230nm,3.7s						
WMQ				LR	LR		
	comp=Z,590nm,19.9s						
WMQ				LR	LR		
	comp=Z,480nm,18.3s						
WMQ				LR	LR		
	comp=Z,550nm,24.1s						
VNDA	**Vanda**	**73.89**	**178**	P	**P**	**16 44 13.9**	**+0.6**
	comp=Z,8.0nm,1.0s,baz=333,slow=6.7,SNR=25						
VNDA				LR	LR	17 12 45.1	
	comp=Z,324nm,21.4s,baz=6.5,slow=32						
VNDA	**Vanda**	**73.89**	**178**	P	**P**	**16 44 14.1**	**+0.8**
VNDA				pmax	pmax		
	comp=Z,14nm,1.1s						
VNDA	**Vanda**	**73.89**	**178**	P	**P**	**16 44 14.1**	**+0.8**
HYB	**Hyderabad**	**74.39**	**289**	*i* P	**P**	**16 44 17.0**	**-0.4**
SBA	**Scott Base**	**74.47**	**177**	P	**P**	**16 44 19.3**	**+2.6**
SBA				pmax	pmax		
	comp=Z,39nm,1.7s						
SBA	**Scott Base**	**74.47**	**177**	P	**P**	**16 44 19.3**	**+2.6**
SBA				IAmb	IAmb	16 44 30.1	
	comp=Z,39nm,1.6s						
DGZ	**Jazzator, Alta**	**76.16**	**323**⇑	*e*P	**P**	**16 44 27.3**	**+0.2**
DGZ				pmax	pmax		
	comp=Z,9.0nm,1.2s						
TIXI	**Tiksi**	**76.68**	**353**⇑	*e*P	**P**	**16 44 30.2**	**+0.9**
TIXI	**Tiksi**	**76.68**	**353**	P	**P**	**16 44 29.8**	**+0.5**
TTA	**Tatalina**	**77.55**	**22**	P	P	16 44 41.7	+7.2
	baz=235						
L19K	**White Mountain**	**77.56**	**23**	P	P	16 44 41.6	+7.1
	baz=236						
L19K	**White Mountain**	**77.56**	**23**	P	**P**	**16 44 35.1**	**+0.6**
L19K				IAmb	IAmb	16 45 11.6	
	comp=Z,47nm,1.4s						
L20K	**Farewell, AK**	**78.11**	**23**	P	P	16 44 45.0	+7.4
	baz=237						
GCSA	**Galena City Sc**	**78.30**	**20**	P	P	16 44 45.8	+7.3
	baz=234						
MK31	**Makanchi Array**	**78.34**	**319**	P	**P**	**16 44 38.1**	**-1.1**
MK31				pmax	pmax		
	comp=Z,93nm,1.9s						
MK31	**Makanchi Array**	**78.34**	**319**	P	**P**	**16 44 38.1**	**-1.1**
MKAR	**Makanchi Array**	**78.34**	**319**	P	**P**	**16 44 38.4**	**-0.8**
	comp=Z,0.9nm,0.8s,baz=102,slow=6.4,SNR=2.5						
MKAR				LR	LR	17 17 59.2	
	comp=Z,608nm,21.8s,baz=94,slow=35						
MKAR	**Makanchi Array**	**78.34**	**319**	P	**P**	**16 44 37.3**	**-1.9**
MKAR	**Makanchi Array**	**78.34**	**319**	P	**P**	**16 44 37.3**	**-1.9**
RDOG	**Red Dog Mine**	**78.54**	**16**	P	**P**	**16 44 36.4**	**-3.4**
RDOG				IAMs_20	IAMs_20	17 14 24.4	
	comp=Z,1µm,21.0s						
SKT	**Skwentna**	**78.77**	**24**	IAMs_20	IAMs_20	17 15 44.9	
	comp=Z,900nm,20.0s						
J20K	**Nowinta River**	**78.94**	**21**	P	P	16 44 48.6	+6.5
	baz=236						
ZAA0	**Zalesovo Array**	**79.29**	**327**	P	**P**	**16 44 42.9**	**-1.3**
ZAA0				IAmb	IAmb	16 44 54.1	
	comp=Z,60nm,1.9s						
ZALV	**Zalesovo Beam**	**79.29**	**327**	P	**P**	**16 44 43.6**	**-0.6**
	comp=Z,4.3nm,0.7s,baz=105,slow=5.2,SNR=12						
ZALV				LR	LR	17 18 49.5	
	comp=Z,902nm,21.1s,baz=105,slow=35						
ZALV	**Zalesovo Beam**	**79.29**	**327**	*i* P	**P**	**16 44 44.5**	**+0.3**
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ZALV	**Zalesovo Beam**	**79.29**	**327**	P	**P**	**16 44 43.2**	**-1.0**
CAST	**Castle Rocks**	**79.30**	**23**	P	P	16 44 49.1	+4.9
	baz=238						
CHUM	**Lake Minchumin**	**79.46**	**22**	P	P	16 44 50.5	+5.6
	baz=238						
H21K	**Melozitna Rive**	**80.23**	**20**	P	P	16 44 54.8	+5.7
	baz=237						
RND	**Reindeer**	**80.56**	**23**	IAMs_20	IAMs_20	17 17 02.9	
	comp=Z,835nm,20.0s						
MCK	**McKinley**	**80.68**	**23**	P	**P**	**16 44 55.6**	**+4.1**
	baz=241						
KSH	**Kashi**	**80.86**	**311**	P	**P**	**16 44 56.8**	**+3.6**
KSH				sP	pP	16 45 02.9	-0.5
KSH				S	**S**	**16 55 03.4**	**+3.9**
KSH				pmax	pmax		
	comp=Z,11nm,1.4s						
KSH				pmax	pmax		
	comp=Z,200nm,3.7s						
KSH				LR	LR		
	comp=Z,490nm,18.9s						
KSH				LR	LR		
	comp=Z,610nm,18.9s						
KSH				LR	LR		
	comp=Z,600nm,20.6s						
NEA2	**Nenana**	**81.05**	**22**	IAMs_20	IAMs_20	17 20 23.9	
	comp=Z,1µm,20.0s						
H23K	**Yukon River**	**81.48**	**21**	P	P	16 45 02.1	+6.3
	baz=240						
MDM	**Murphy Dome**	**81.54**	**22**	IAMs_20	IAMs_20	17 20 20.9	
	comp=Z,864nm,20.0s						
COLA	**College**	**81.64**	**22**⇑	*e*P	**P**	**16 44 55.4**	**-1.2**
COLA				pmax	pmax		
	comp=Z,24nm,2.6s						
COLA	**College**	**81.64**	**22**	IAMs_20	IAMs_20	17 20 43.5	
	comp=Z,990nm,20.0s						
KURK	**Kurchatov**	**81.83**	**322**⇓	*e*P	**P**	**16 44 57.2**	**-0.7**
KURK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KURK	**Kurchatov**	**81.83**	**322**	P	**P**	**16 44 56.7**	**-1.2**
KURK				IAmb	IAmb	16 45 08.3	
	comp=Z,59nm,1.6s						
KURK	**Kurchatov**	**81.83**	**322**	IAMs_20	IAMs_20	17 20 13.9	
	comp=Z,1µm,21.0s						
POKR	**Poker Plat Res**	**81.91**	**22**	IAMs_20	IAMs_20	17 20 20.7	
	comp=Z,862nm,21.0s						
ILAR	**Eielson Array**	**81.96**	**23**	P	**P**	**16 44 58.0**	**-0.4**
	comp=Z,1.3nm,0.8s,baz=238,slow=5.4,SNR=8.4						
ILAR	**Eielson Array**	**81.96**	**23**	P	**P**	**16 44 56.3**	**-2.0**
ILAR	**Eielson Array**	**81.96**	**23**	P	**P**	**16 44 56.3**	**-2.0**
RIDG	**Independent Ri**	**82.31**	**24**	IAMs_20	IAMs_20	17 15 51.4	
	comp=Z,1µm,22.0s						
A21K	**Barrow**	**82.33**	**15**	IAMs_20	IAMs_20	17 16 05.4	
	comp=Z,901nm,21.0s						
AAK	**Ala-Archa**	**82.62**	**314**	LR	LR	17 21 28.6	
	comp=Z,787nm,21.7s,baz=103,slow=35						
AAK	**Ala-Archa**	**82.62**	**314**⇑	*e*P	**P**	**16 44 59.8**	**-2.7**
AAK				pmax	pmax		
	comp=Z,21nm,2.5s						
AAK	**Ala-Archa**	**82.62**	**314**	P	**P**	**16 45 02.0**	**-0.4**
AAK	**Ala-Archa**	**82.62**	**314**	IAMs_20	IAMs_20	17 21 14.8	
	comp=Z,827nm,20.0s						
SCRK	**Sand Creek**	**82.75**	**24**	IAMs_20	IAMs_20	17 16 39.0	
	comp=Z,878nm,22.0s						
PRP	**Porcupine Dome**	**82.81**	**22**	IAMs_20	IAMs_20	17 21 18.4	
	comp=Z,828nm,21.0s						
TOLK	**Toolik Lake Re**	**82.87**	**19**	P	P	16 45 08.3	+5.3
	baz=240						
M27K	**Edge Creek, AK**	**82.99**	**26**	P	P	16 45 09.5	+5.5
	baz=248						
M27K	**Edge Creek, AK**	**82.99**	**26**	P	**P**	**16 45 04.8**	**+0.8**
M27K				IAmb	IAmb	16 45 20.9	
	comp=Z,22nm,1.1s						
BCAR	**Beaver Creek A**	**83.30**	**25**	P	**P**	**16 45 06.0**	**+0.6**
FYU	**Fort Yukon**	**83.37**	**21**	P	**P**	**16 45 06.0**	**+0.4**
FYU				IAmb	IAmb	16 45 31.6	
	comp=Z,31nm,1.4s						
BMAR	**Burnt Mountain**	**83.97**	**21**	P	**P**	**16 45 08.8**	**0.0**
DRK	**Karamyk**	**84.02**	**310**	P	**P**	**16 45 09.8**	**-0.1**
DRK				IAmb	IAmb	16 45 21.3	
	comp=Z,30nm,1.4s						
EGAK	**Eagle**	**84.20**	**24**	P	**P**	**16 45 11.2**	**+1.3**
EGAK				IAmb	IAmb	16 45 28.9	
	comp=Z,20nm,1.2s						
EGAK				IAMs_20	IAMs_20	17 21 51.3	
	comp=Z,845nm,20.0s						
NRIK	**Noril'sk**	**84.42**	**341**	P	**P**	**16 45 10.5**	**-0.4**
	comp=Z,4.2nm,0.8s,baz=86,slow=5.7,SNR=4.6						
NRIK				LR	LR	17 23 40.2	
	comp=Z,386nm,19.0s,baz=117,slow=36						
NRIK	**Noril'sk**	**84.42**	**341**⇓	*e*P	**P**	**16 45 11.6**	**+0.7**
NRIK				pmax	pmax		
	comp=Z,36nm,1.1s						
NRIK	**Noril'sk**	**84.42**	**341**	P	**P**	**16 45 09.5**	**-1.4**
HYT	**Haines Junctio**	**84.43**	**28**	P	**P**	**16 45 10.9**	**-0.5**
HYT				IAmb	IAmb	16 45 30.9	
	comp=Z,26nm,1.2s						
DAWY	**Dawson**	**84.66**	**24**	P	**P**	**16 45 12.9**	**+0.6**
BTK	**Batken**	**84.86**	**311**	P	**P**	**16 45 13.2**	**-0.7**
BTK				pmax	pmax		
	comp=Z,43nm,1.5s						
BTK	**Batken**	**84.86**	**311**	P	**P**	**16 45 13.2**	**-0.7**
BTK				IAmb	IAmb	16 45 18.9	
	comp=Z,43nm,1.5s						
GAR	**Garm**	**85.08**	**310**	P	**P**	**16 45 15.2**	**+0.2**
I29M	**Ogilvie Camp,**	**85.53**	**23**	P	P	16 45 21.5	+4.8
	baz=251						
KK31	**Karatay Array**	**85.58**	**314**	P	**P**	**16 45 17.1**	**-0.3**
KK31				pmax	pmax		
	comp=Z,56nm,1.5s						
KK31	**Karatay Array**	**85.58**	**314**	P	**P**	**16 45 17.1**	**-0.3**
KKAR	**Karatay Array**	**85.58**	**314**	P	**P**	**16 45 17.6**	**+0.2**
KKAR				pmax	pmax		
	comp=Z,56nm,1.5s						
KKAR	**Karatay Array**	**85.58**	**314**	P	**P**	**16 45 17.6**	**+0.2**
KKAR	**Karatay Array**	**85.58**	**314**	P	**P**	**16 45 17.4**	**+0.1**
KKAR				IAmb	IAmb	16 45 22.9	
	comp=Z,56nm,1.4s						
MAW	**Mawson**	**85.76**	**203**	P	**P**	**16 45 18.8**	**+1.2**
	comp=Z,1.1nm,0.8s,baz=22,slow=8.1,SNR=2.3						
MAW				LR	LR	17 21 08.3	
	comp=Z,998nm,21.0s,baz=82,slow=34						
MAW	**Mawson**	**85.76**	**203**	P	**P**	**16 45 18.9**	**+1.2**
MAW				pmax	pmax		
	comp=Z,3.0nm,1.5s						
MAW	**Mawson**	**85.76**	**203**	P	**P**	**16 45 18.9**	**+1.2**
QSPA	**South Pole Qui**	**86.15**	**180**	P	**P**	**16 45 21.2**	**+1.3**
QSPA				IAmb	IAmb	16 45 23.1	
	comp=Z,34nm,1.5s						
M31M	**Drury Creek, Y**	**86.26**	**27**	P	P	16 45 25.5	+5.2
	baz=255						
BRVK	**Borovoye**	**87.39**	**323***c*	*i*P	**P**	**16 45 26.0**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,12nm,1.3s						
BRVK	**Borovoye**	**87.39**	**323**	P	**P**	**16 45 26.1**	**+0.2**
BRVK	**Borovoye**	**87.39**	**323**	IAMs_20	IAMs_20	17 25 56.8	
	comp=Z,913nm,20.0s						
M02C	**Callahan**	**89.66**	**49**	P	P	16 45 42.3	+5.2
	baz=265						
HUMO	**Hull Mountain**	**89.70**	**47**	IAMs_20	IAMs_20	17 17 50.9	
	comp=Z,942nm,22.0s						
WDC	**Whiskeytown Da**	**89.83**	**49**	IAMs_20	IAMs_20	17 19 50.2	
	comp=Z,1µm,20.0s						
J05D	**Fort Rock, OR**	**91.02**	**47**	P	P	16 45 48.8	+5.4
	baz=266						
CMB	**Columbia Colle**	**91.30**	**52**	IAMs_20	IAMs_20	17 24 25.4	
	comp=Z,840nm,19.0s						
A36M	**Sachs Harbour**	**91.68**	**18**	IAMs_20	IAMs_20	17 23 04.7	
	comp=Z,861nm,21.0s						
PASC	**Pasadena Art C**	**92.86**	**56**	IAMs_20	IAMs_20	17 21 28.8	
	comp=Z,902nm,19.0s						
WVOR	**Wild Horse Val**	**92.87**	**48**	IAMs_20	IAMs_20	17 20 34.9	
	comp=Z,999nm,20.0s						
NVAR	**Mina Array Bea**	**92.95**	**52**	P	**P**	**16 45 55.7**	**+3.1**
	comp=Z,1.2nm,0.8s,baz=253,slow=6.3,SNR=10.0						
NVAR				LR	LR	17 24 35.1	
	comp=Z,396nm,18.1s,baz=268,slow=33						
CWC	**Cottonwood Cre**	**93.05**	**54**	P	P	16 45 58.0	+4.9
	baz=268						
LRMC	**Laurel Mtn Rad**	**93.33**	**55**	P	P	16 45 59.5	+5.2
	baz=268						
ABKAR	**Akbulak array**	**93.49**	**319**	P	**P**	**16 45 53.6**	**-0.9**
BMO	**Blue Mountains**	**93.92**	**45**	IAMs_20	IAMs_20	17 31 06.4	
	comp=Z,569nm,18.0s						
SYO	**Syowa Base**	**93.97**	**200**⇓	*e*P	**P**	**16 45 56.4**	**+0.1**
SYO	**Syowa Base**	**93.97**	**200**⇑	*e*pP	**P**	**16 46 01.0**	**+4.7**
NEW	**Newport**	**94.12**	**42**	IAMs_20	IAMs_20	17 23 58.4	
	comp=Z,610nm,19.0s						
ARU	**Arti**	**94.45**	**326**	LR	LR	17 28 27.9	
	comp=Z,1µm,20.4s,baz=83,slow=35						
ARU	**Arti**	**94.45**	**326***c*	*i*P	**P**	**16 45 57.9**	**-0.9**
ARU					**PP**	**16 49 45.6**	**-0.8**
ARU				S	**SKSac**	**16 56 32.9**	**+1.6**
ARU				SS	**SS**	**17 03 30.7**	**-0.3**
ARU				pmax	pmax		
	comp=Z,9.0nm,1.8s						
GEYT	**Alibeck**	**94.52**	**308**	LR	LR	17 29 09.0	
	comp=Z,384nm,21.9s,baz=60,slow=36						
AKTO	**Aktyubinsk**	**94.75**	**320**	LR	LR	17 29 14.9	
	comp=Z,653nm,19.7s,baz=88,slow=36						
PLID	**Pearl Lake**	**94.85**	**45**	IAMs_20	IAMs_20	17 19 48.1	
	comp=Z,652nm,18.0s						
GMRC	**Granite Mounta**	**94.97**	**56**	P	**P**	**16 46 06.4**	**+4.6**
	baz=269						
BC3	**Big Chuckawall**	**95.11**	**57**	P	**P**	**16 46 06.6**	**+4.1**
	baz=269						
ELK	**Elko**	**95.38**	**50**	IAMs_20	IAMs_20	17 32 21.2	
	comp=Z,565nm,19.0s						
YKA	**Yellowknife Ar**	**95.43**	**28**	LR	LR	17 25 13.0	
	comp=Z,408nm,22.0s,baz=0.0,slow=33						
AHID	**Auburn Hatcher**	**98.44**	**47**	IAMs_20	IAMs_20	17 23 22.1	
	comp=Z,753nm,21.0s						
FXWY	**Fox Creek**	**98.45**	**47**	IAMs_20	IAMs_20	17 28 31.3	
	comp=Z,816nm,19.0s						
WUAZ	**Wupatki**	**98.48**	**55**	IAMs_20	IAMs_20	17 25 40.4	
	comp=Z,694nm,19.0s						
TPAW	**Teton Pass**	**98.51**	**47**	IAMs_20	IAMs_20	17 29 34.0	
	comp=Z,818nm,19.0s						
MOOW	**Moose Ponds**	**98.65**	**46**	IAMs_20	IAMs_20	17 28 46.6	
	comp=Z,852nm,18.0s						
FLWY	**Flagg Ranch**	**98.66**	**46**	IAMs_20	IAMs_20	17 25 13.9	
	comp=Z,797nm,20.0s						
LOHW	**Long Hollow**	**98.76**	**47**	IAMs_20	IAMs_20	17 30 00.5	
	comp=Z,816nm,18.0s						
BW06	**Boulder Array**	**99.57**	**47**	IAMs_20	IAMs_20	17 23 06.1	
	comp=Z,743nm,22.0s						
PDAR	**Pinedale Array**	**99.57**	**47**	P	**Pdif**	**16 46 24.9**	**+2.3**
	comp=Z,0.5nm,0.7s,baz=242,slow=3.2,SNR=4.2						
PDAR				LR	LR	17 23 38.0	
	comp=Z,515nm,21.8s,baz=272,slow=31						
PDAR	**Pinedale Array**	**99.57**	**47**	P	**Pdif**	**16 46 24.0**	**+1.4**
MVCO	**Mesa Verde**	**100.72**	**53**	IAMs_20	IAMs_20	17 30 43.1	
	comp=Z,632nm,19.0s						
LAO	**LASA Array**	**101.58**	**43**	IAMs_20	IAMs_20	17 31 14.8	
	comp=Z,668nm,20.0s						
SMCO	**Snowmass**	**101.78**	**51**	IAMs_20	IAMs_20	17 31 02.9	
	comp=Z,566nm,18.0s						
ANMO	**Albuquerque**	**102.52**	**55**	IAMs_20	IAMs_20	17 30 13.6	
	comp=Z,526nm,19.0s						
EPT	**El Paso**	**102.69**	**58**	IAMs_20	IAMs_20	17 26 06.3	
	comp=Z,786nm,20.0s						
DGMT	**Dagmar**	**102.70**	**41**	IAMs_20	IAMs_20	17 31 06.2	
	comp=Z,612nm,18.0s						
ISCO	**Idaho Springs**	**102.78**	**50**	IAMs_20	IAMs_20	17 27 44.1	
	comp=Z,738nm,21.0s						
RSSD	**Black Hills**	**103.44**	**46**	IAMs_20	IAMs_20	17 28 56.2	
	comp=Z,854nm,20.0s						
MNTX	**Cornudas Mount**	**103.65**	**58**	IAMs_20	IAMs_20	17 26 35.8	
	comp=Z,799nm,20.0s						
T25A	**Trinidad**	**103.98**	**53**	IAMs_20	IAMs_20	17 27 54.4	
	comp=Z,526nm,19.0s						
ARCES	**ARCESS Array B**	**105.37**	**343**	Pdiff	**Pdif**	**16 46 49.1**	**+1.7**
	comp=Z,2.3nm,0.8s,baz=355,slow=2.3,SNR=1.8						
AMTX	**Amarillo**	**106.44**	**55**	IAMs_20	IAMs_20	17 28 07.1	
	comp=Z,726nm,20.0s						
CBKS	**Cedar Bluff**	**107.42**	**51**	IAMs_20	IAMs_20	17 35 45.1	
	comp=Z,494nm,18.0s						
AGMN	**Agassiz Nation**	**108.17**	**40**	IAMs_20	IAMs_20	17 33 33.7	
	comp=Z,598nm,19.0s						
ECSD	**EROS Data Cent**	**108.78**	**45**	IAMs_20	IAMs_20	17 32 23.5	
	comp=Z,776nm,20.0s						
WMOK	**Wichita Mounta**	**108.82**	**55**	IAMs_20	IAMs_20	17 30 23.6	
	comp=Z,683nm,21.0s						
OK032	**Salt Plains WL**	**108.95**	**52**	IAMs_20	IAMs_20	17 33 37.7	
	comp=Z,680nm,19.0s						
OK029	**Liberty Lake**	**109.72**	**53**	IAMs_20	IAMs_20	17 34 34.3	
	comp=Z,692nm,20.0s						
KSU1	**Kansas State U**	**109.77**	**50**	IAMs_20	IAMs_20	17 35 43.2	
	comp=Z,633nm,19.0s						
OK025	**Westminster Rd**	**109.85**	**54**	IAMs_20	IAMs_20	17 34 20.8	
	comp=Z,780nm,19.0s						
OK031	**S. Brethren Rd**	**110.19**	**53**	IAMs_20	IAMs_20	17 29 45.6	
	comp=Z,717nm,22.0s						
OK030	**Cody Creek RV**	**110.23**	**53**	IAMs_20	IAMs_20	17 33 36.9	
	comp=Z,605nm,20.0s						
X37A	**Clayton**	**111.61**	**54**	IAMs_20	IAMs_20	17 33 21.5	
	comp=Z,777nm,20.0s						
MNK	**Minsk**	**111.76**	**328**	*i* P	**Pdif**	**16 47 08.5**	**-7.7**
MNK				*i*		16 58 12.9	
MNK				*i* PS	**SP**	**17 01 15.8**	**-8.1**
MNK				*i* SS	**SS**	**17 07 19.9**	**-9.4**
MNK				pmax	pmax		
	comp=N,6.0nm,0.7s						
MNK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MNK				pmax	pmax		
	comp=E,1.0nm,0.8s						
MNK				MLR	MLR		
	comp=N,201nm,20.0s						
MNK				MLR	MLR		
	comp=E,73nm,19.0s						
MNK				MLR	MLR		
	comp=Z,749nm,19.0s						
MNK	**Minsk**	**111.76**	**328**	*i* P	**Pdif**	**16 47 08.5**	**-7.7**
	comp=E,1.0nm,0.8s						
MNK				*i* P	**Pdif**	**16 47 08.5**	**-7.7**
	comp=N,6.0nm,0.7s						
MNK				*i* P	**Pdif**	**16 47 08.5**	**-7.7**
	comp=Z,3.0nm,0.8s,baz=65						
MNK				*i* PP	PP	16 51 42.9	-13
MNK				*i* PPP	PPP	16 54 04.0	
MNK				*i* SKS	**SKSdf**	**16 58 13.0**	**-10**
MNK				*i* PS	**SP**	**17 01 15.8**	**-8.0**
MNK				*i* SS	**SS**	**17 07 20.0**	**-9.3**
MNK				*i* SSS	SSS	17 11 30.2	
MNK				*i* LQ	LQ	17 31 19.7	
MNK				*i* LR	LR	17 33 39.9	
MNK				*i* LRM	MLR	17 39 31.9	
	comp=N,201nm,19.8s						
MNK				*i* LRM	MLR	17 39 39.0	
	comp=E,73nm,19.2s						
MNK				*i* LRM	MLR	17 39 44.7	
	comp=Z,749nm,19.2s						
NATX	**Nacogdoches**	**112.71**	**57**	IAMs_20	IAMs_20	17 38 02.5	
	comp=Z,668nm,19.0s						
MIAR	**Mount Ida**	**113.08**	**54**	IAMs_20	IAMs_20	17 33 21.2	
	comp=Z,708nm,20.0s						
COWI	**Conover**	**113.20**	**41**	IAMs_20	IAMs_20	17 34 22.0	
	comp=Z,506nm,20.0s						
PABE	**Paberze**	**113.29**	**330**	IAMs_20	IAMs_20	17 41 09.1	
	comp=Z,696nm,20.0s						
JFWS	**Jewell Farm**	**113.47**	**45**	IAMs_20	IAMs_20	17 34 58.6	
	comp=Z,625nm,20.0s						
X40A	**Basin Creek Fa**	**113.69**	**54**	IAMs_20	IAMs_20	17 34 58.4	
	comp=Z,736nm,20.0s						
CCM	**Cathedral Cave**	**114.10**	**50**	IAMs_20	IAMs_20	17 37 13.8	
	comp=Z,432nm,18.0s						
MILM	**Milestii Mici**	**114.30**	**320**	*e*P	**Pdif**	**16 47 30.0**	**+2.4**
MILM				MLR	MLR		
	comp=Z,400nm,22.0s						
L44A	**Lake County Fo**	**115.34**	**45**	IAMs_20	IAMs_20	17 36 16.2	
	comp=Z,635nm,21.0s						
VBMS	**Vicksburg**	**116.07**	**56**	IAMs_20	IAMs_20	17 34 54.3	
	comp=Z,701nm,21.0s						
WVT	**Waverly**	**117.25**	**51**	IAMs_20	IAMs_20	17 38 10.3	
	comp=Z,607nm,19.0s						
PLAL	**Pickwick Lake**	**117.37**	**52**	IAMs_20	IAMs_20	17 34 05.7	
	comp=Z,665nm,20.0s						
WCI	**Wyandotte Cave**	**117.79**	**48**	IAMs_20	IAMs_20	17 36 11.5	
	comp=Z,724nm,20.0s						
AAM	**Ann Arbor**	**118.25**	**43**	IAMs_20	IAMs_20	17 35 34.9	
	comp=Z,564nm,20.0s						
P49A	**Miami Univ. Ec**	**118.52**	**47**	IAMs_20	IAMs_20	17 46 14.4	
	comp=Z,547nm,18.0s						
PSZ	**Piszkesteto**	**119.29**	**324**	IAMs_20	IAMs_20	17 45 29.5	
	comp=Z,452nm,22.0s						
P52A	**Corning**	**120.34**	**46**	IAMs_20	IAMs_20	17 41 09.5	
	comp=Z,536nm,21.0s						
TZTN	**Tazewell**	**120.41**	**49**	IAMs_20	IAMs_20	17 39 59.9	
	comp=Z,531nm,20.0s						
M53A	**WI Miller and**	**120.64**	**43**	IAMs_20	IAMs_20	17 36 27.0	
	comp=Z,516nm,22.0s						
ERPA	**Erie**	**120.81**	**42**	IAMs_20	IAMs_20	17 45 42.6	
	comp=Z,521nm,20.0s						
CLL	**Collm**	**121.07**	**331**	*e*PKIKP	**PKPdf**	**16 51 30.0**	**-1.4**
CLL				MLR	MLR		
	comp=Z,600nm,20.9s						
CLL	**Collm**	**121.07**	**331**	*e*PKPdf	**PKPdf**	**16 51 30.0**	**-1.4**
CLL				*e*PP	**PP**	**16 53 00.0**	**-0.8**
CLL				*e*PPP	PPP	16 55 42.0	

CLL				*e*PS	PKKPdf	17 02 49.0	+39
CLL				*e*PPS	PPS	17 04 06.0	
CLL				*e*		17 04 54.0	
CLL				*e*SS	SS	17 09 30.0	-0.6
CLL				*e*(SSS)		17 13 30.0	
CLL				*e*		17 15 30.0	
CLL				*e*SSSS		17 17 42.0	
CLL				Lm	MLR	17 46 00.0	
	comp=Z,600nm,20.9s						
CLL	Collm	121.07	331	IAMs_20	IAMs_20	17 46 47.9	
	comp=Z,616nm,20.0s						
M54A	Oil Creek Stat	121.30	43	IAMs_20	IAMs_20	17 40 14.4	
	comp=Z,615nm,21.0s						
N54A	Moraine State	121.31	43	IAMs_20	IAMs_20	17 37 52.8	
	comp=Z,575nm,21.0s						
GOGA	Godfrey	121.48	53	IAMs_20	IAMs_20	17 39 58.6	
	comp=Z,645nm,21.0s						
PLCA	Paso Flores	121.70	144	PKP	PKiKP	16 51 34.2	+1.0
	comp=Z,3.4nm,1.2s,baz=39,slow=15,SNR=3.2						
PLCA	Paso Flores	121.70	144		PKiKP	16 51 34.2	+1.0
TGUH	Tegucigalpa,Un	121.76	76	IAMs_20	IAMs_20	17 33 55.4	
	comp=Z,725nm,21.0s						
CKRC	Cesky Krumlov	121.91	328	*e*PKP	PKiKP	16 51 35.1	+1.8
KHC	Kasperske Hory	122.11	328	*e*PKIKP	PKiKP	16 51 36.2	+2.5
KHC				MLR	MLR		
	comp=Z,1µm,22.3s						
KHC	Kasperske Hory	122.11	328	*e*PKP	PKiKP	16 51 36.2	+2.5
KHC				AMS	AMS	17 44 10.0	
	comp=Z,1µm,22.3s						
GERES	GERESS Array B	122.22	328	PKP	PKiKP	16 51 34.9	+0.9
	comp=Z,0.9nm,0.7s,baz=82,slow=1.9,SNR=9.7						
GERES	GERESS Array B	122.22	328	PKIKP	PKPdf	16 51 33.2	-0.7
GERES	GERESS Array B	122.22	328		PKPdf	16 51 33.2	-0.7
BLA	Blacksburg	122.51	48	IAMs_20	IAMs_20	17 43 07.2	
	comp=Z,634nm,19.0s						
SSPA	Standing Stone	122.89	43	IAMs_20	IAMs_20	17 38 20.5	
	comp=Z,479nm,20.0s						
GRA1	Grafenberg Arr	122.97	330	IAMs_20	IAMs_20	17 46 03.3	
	comp=Z,595nm,20.0s						
GRFO	Grafenberg	122.97	330	IAMs_20	IAMs_20	17 45 54.3	
	comp=Z,592nm,20.0s						
LONY	Lake Ozonia	123.07	37	IAMs_20	IAMs_20	17 50 03.6	
	comp=Z,549nm,18.0s						
VT1	Waterbury	124.33	37	IAMs_20	IAMs_20	17 46 44.0	
	comp=Z,521nm,20.0s						
STU	Stuttgart	124.58	330	IAMs_20	IAMs_20	17 45 56.8	
	comp=Z,526nm,21.0s						
DWPF	Disney Wildern	124.71	58	IAMs_20	IAMs_20	17 44 46.4	
	comp=Z,526nm,20.0s						
LBNH	Lisbon	124.87	37	IAMs_20	IAMs_20	17 38 49.1	
	comp=Z,600nm,20.0s						
HNH	Hanover	124.95	37	IAMs_20	IAMs_20	17 47 03.4	
	comp=Z,538nm,20.0s						
BFO	Black Forest	125.31	330	IAMs_20	IAMs_20	17 49 22.9	
	comp=Z,526nm,21.0s						
FFD	Franklin Falls	125.47	37	IAMs_20	IAMs_20	17 40 38.0	
	comp=Z,585nm,20.0s						
PQI	Presque Isle	125.61	32	IAMs_20	IAMs_20	17 43 46.2	
	comp=Z,619nm,20.0s						
ECH	Echery	125.96	331	IAMs_20	IAMs_20	17 47 43.2	
	comp=Z,620nm,22.0s						
WVL	Waterville	126.01	35	IAMs_20	IAMs_20	17 50 17.9	
	comp=Z,587nm,20.0s						
HRV	Adam Dziewonsk	126.06	38	IAMs_20	IAMs_20	17 45 14.8	
	comp=Z,613nm,19.0s						
WES	Weston	126.27	38	IAMs_20	IAMs_20	17 45 10.5	
	comp=Z,587nm,20.0s						
BRYW	Bryant College	126.40	39	IAMs_20	IAMs_20	17 47 06.8	
	comp=Z,545nm,20.0s						
VLC	Villacollemand	126.88	325	IAMs_20	IAMs_20	17 49 30.1	
	comp=Z,643nm,21.0s						
M65A	Busby, Falmout	127.15	39	IAMs_20	IAMs_20	17 45 36.7	
	comp=Z,523nm,21.0s						
EMMW	East Machias	127.16	34	IAMs_20	IAMs_20	17 46 21.3	
	comp=Z,503nm,21.0s						
BCIP	Isla Barro Col	129.33	81	IAMs_20	IAMs_20	17 42 47.4	
	comp=Z,608nm,20.0s						
SDDR	Presa de Saban	136.12	66	IAMs_20	IAMs_20	17 44 21.8	
	comp=Z,606nm,22.0s						
LPAZ	La Paz	136.55	118	PKP	PKPdf	16 52 03.3	+0.7
	comp=Z,2.9nm,1.0s,baz=334,slow=4.6,SNR=4.6						
LPAZ	La Paz	136.55	118		PKPdf	16 52 03.3	+0.7
CPUP	Villa Florida	139.45	139	PKP	PKiKP	16 52 08.2	-1.0
	comp=Z,2.2nm,0.8s,baz=186,slow=0.7,SNR=2.6						
SJG	San Juan	141.05	66	IAMs_20	IAMs_20	17 49 01.2	
	comp=Z,394nm,20.0s						
SIV	San Ignacio	142.75	123	PKP	PKPdf	16 52 12.3	-0.8
	comp=Z,3.2nm,0.8s,baz=239,slow=3.6,SNR=11						
SAML	Samuel	143.73	111	IAMs_20	IAMs_20	17 46 29.9	
	comp=Z,352nm,19.0s						
TORD	Torodi Ar. Bea	148.21	289	PKPbc	PKPbc	16 52 26.2	+0.4
	comp=Z,15nm,0.9s,baz=50,slow=2.1,SNR=56						
TORD	Torodi Ar. Bea	148.21	289	PKPdf	PKPdf	16 52 18.1	-4.4
TORD					PKPbc	16 52 24.6	-1.2
BDFB	Brasilia	153.09	136	PKPbc	PKiKP	16 52 40.0	+2.2
	comp=Z,2.4nm,0.3s,baz=156,slow=20,SNR=5.7						
BDFB	Brasilia	153.09	136	PKIKP	PKiKP	16 52 39.8	+2.1
BDFB	Brasilia	153.09	136		PKiKP	16 52 39.8	+2.1
KOWA	Kowa	153.10	295	PKPbc	PKiKP	16 52 39.3	+1.7
	comp=Z,6.6nm,0.8s,baz=129,slow=2.3,SNR=7.3						
KOWA	Kowa	153.10	295	PKPdf	PKPdf	16 52 26.6	-3.4
KOWA					pPKPdf	16 52 39.9	-0.9
DBIC	Dimbokro	155.70	278	PKPab	PKPab	16 53 00.2	+0.1
	comp=Z,14nm,1.1s,baz=89,slow=10.0,SNR=4.6						

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*IDC **05** 16:32:44.6±1.4, 3°.51N×126°.60E, h0^{km}, mb4.1/6, mb1 4.4/7, mb1mx3.9/43, mbtmp4.2/7, ML4.6/1 Error ellipse: s-maj=66.4km s-min=18.6km az=58.0*

*DJA **05** 16:32:49.5±1.0, 4°N±9°×12°7E±°, h44^{km}±15^{km}, M4.2/8, mb4.5/2, mB4.5/1, MLv4.0/8, Mw(mB)3.7/1*

*NEIC **05** 16:32:50.0±1.6, 3°.49N±0°.09×126°.64E±0°.07, h41^{km}±9^{km}, mb4.5/22, Error ellipse: s-maj=13.4km s-min=9.9km az=207.0*

ISC 05 16:32:50.2±0.6**, 3°.52N**±0°.06×**126°.71E**±0°.06**, h53**^{km}**, n41, σ1^{s}57**/45**, mb4.4**/13**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	1.19	278	P	Pn	16 33 10.3	-0.2
SGSI				S	Sn	16 33 27.0	+1.3
TNTI	Ternate	2.80	166	P	Pn	16 33 34.0	+1.4
TNTI	Ternate	2.80	166		Pn	16 33 31.9	-0.7
TNTI				Sn	Sn	16 34 05.2	0.0
KMSI	Cibinong	3.99	223	P	Pn	16 33 53.0	+4.1
LBMI	Labuha	4.20	169	P	Pn	16 33 53.3	+1.5
GTOI	Gorontalo	4.67	232	P	Pn	16 34 00.1	+1.9
LUWI	Luwuk	6.00	221	P	Pn	16 34 20.0	+3.6
	0.3nm65nm,1.1s						
LUWI	Luwuk	6.00	221	Pn	Pn	16 34 15.1	-1.3
SIJI	Sorong	6.30	134	Pn	Pn	16 34 21.1	+0.5
	13nm,0.3s,baz=331,slow=19,SNR=67						
SIJI				Sn	Sn	16 35 31.5	+0.1
	1.2nm,0.3s,baz=171,slow=20,SNR=1.8						
TOLI2	Tolitoli	6.38	248		Pn	16 34 21.1	-0.6
TOLI2				Sn	Sn	16 35 30.2	-3.1
FAKI	Fak Fak	8.46	139	Pn	Pn	16 34 50.5	+0.3
MTN	Manton Dam	16.84	165	Pn	Pn	16 36 41.2	-1.2
JAGI	Jajag, Banyuwa	17.28	226	Pn	Pn	16 36 45.9	-2.0
JAGI				IAmb	IAmb	16 36 57.2	
	comp=Z,41nm,1.4s						
KNRA	Kununurra	19.18	174		P	16 37 08.8	-0.8
KNRA				IAmb	IAmb	16 37 27.1	
	comp=Z,23nm,1.4s						
YULB	Yu-li	20.44	346	P	P	16 37 20.0	-3.3
YULB				IAmb	IAmb	16 37 51.2	
	comp=Z,47nm,1.7s						
TPUB	Ta-pu	20.53	344	P	P	16 37 21.1	-3.2
TPUB				IAmb	IAmb	16 37 41.3	
	comp=Z,43nm,1.4s						
FITZ	Fitzroy Crossi	21.50	183	P	P	16 37 35.2	+0.5
	comp=Z,2.0nm,0.7s,baz=4.9,slow=12,SNR=1.9						
FITZ	Fitzroy Crossi	21.50	183	P	P	16 37 32.4	-2.4
YHNB	Yeheng	21.65	347	P	P	16 37 35.6	-0.7
CISI	Cisompet, Garu	21.82	240	P	P	16 37 36.2	-2.1
CISI				IAmb	IAmb	16 37 40.9	
	comp=Z,18nm,1.0s						
WRAB	Tennant Creek	24.48	162	P	P	16 38 04.8	+0.3
WRA	Warramunga Arr	24.49	162	P	P	16 38 05.1	+0.5
	comp=Z,16nm,0.9s,baz=341,slow=11,SNR=5.3						
PSA00	Pilbara Seismi	25.82	195	P	P	16 38 16.7	0.0
PSA00				IAmb	IAmb	16 38 19.8	
	comp=Z,26nm,1.4s						
AS31	Alice Springs	27.91	166	P	P	16 38 36.0	+0.5
AS31				IAmb	IAmb	16 38 42.3	
	comp=Z,9.7nm,0.8s						
ASAR	Alice Springs	27.91	166	P	P	16 38 37.4	+1.9
	comp=Z,7.2nm,1.0s,baz=344,slow=11,SNR=2.0						
CMAR	Chiang Mai Arr	30.96	301	P	P	16 39 03.6	+1.0
	comp=Z,0.3nm,0.3s,baz=91,slow=6.2,SNR=4.7						
CHTO	Chiang Mai	31.11	301	P	P	16 39 03.2	-0.7
KSAR	Wonju Array Be	33.78	2	P	P	16 39 26.7	-0.3
INCN	Inchon	33.81	360	P	P	16 39 28.0	+0.7
BBOO	Buckleboo	37.20	167	P	P	16 39 56.9	+0.5
STKA	Stephens Creek	37.94	159	P	P	16 40 04.3	+1.6
	comp=Z,3.9nm,0.8s,baz=350,slow=8.3,SNR=1.0						
MK31	Makanchi Array	57.72	325	P	P	16 42 35.4	-0.2
MKAR	Makanchi Array	57.72	325	P	P	16 42 36.4	+0.8
	comp=Z,1.3nm,0.5s,baz=122,slow=8.7,SNR=12						
MAKZ	Makanchi	57.90	325	P	P	16 42 37.2	+0.3
KURK	Kurchatov	61.91	328	P	P	16 43 04.7	+0.5
KURK				IAmb	IAmb	16 43 06.4	
	comp=Z,5.1nm,0.7s						
KKAR	Karatay Array	63.37	317	P	P	16 43 14.5	+0.3
BRVK	Borovoye	67.56	327	P	P	16 43 42.1	+1.1
BRVK				IAmb	IAmb	16 43 43.4	
	comp=Z,2.4nm,0.9s						
TIXI	Tiksi	68.06	1	P	P	16 43 44.9	+1.1
TIXI				IAmb	IAmb	16 43 49.2	
	comp=Z,4.1nm,1.4s						
MSEY	Mahe Island	71.62	264	P	P	16 44 07.8	+0.9
MSEY				IAmb	IAmb	16 44 23.6	
	comp=Z,18nm,1.3s						
ABKAR	Akbulak array	72.30	321	P	P	16 44 10.5	+0.3
ABKAR	Akbulak array	72.30	321	P	P	16 44 09.6	-0.6
ABKAR				IAmb	IAmb	16 44 15.7	
	comp=Z,4.7nm,1.6s						

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*IDC **05** 16:40:34.4±1.4, 3°.70S×150°.30E, h0^{km}, mb3.8/5, mb1 4.0/6, mb1mx3.7/29, mbtmp3.8/6, ML1.1/1, Error ellipse: s-maj=79.4km s-min=23.2km az=127.0*

ISC 05 16:40:38.6±1.1**, 3°.7S**±0°.3×**150°.3E**±0°.4**, h27**^{km}**, n7, σ0^{s}59**/7**, mb3.8**/5**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	6.47	208	Pn	Pn	16 42 12.3	+0.2
	0.2nm,0.3s,baz=30,slow=20,SNR=2.9						
WRA	Warramunga Arr	22.41	223	P	P	16 45 34.4	-0.9
	2.1nm,0.5s,baz=48,slow=10,SNR=14						
ASAR	Alice Springs	25.38	217	P	P	16 46 03.5	-0.4
	1.7nm,0.7s,baz=51,slow=8.7,SNR=22						
FITZ	Fitzroy Crossi	28.04	237	P	P	16 46 28.2	+0.4
	0.9nm,0.8s,baz=84,slow=8.6,SNR=1.1						
ILAR	Eielson Array	82.09	23	P	P	16 52 56.1	-0.3
	0.5nm,0.9s,baz=232,slow=5.6,SNR=2.6						
NVAR	Mina Array Bea	93.39	52	P	P	16 53 52.2	+0.2
	0.3nm,0.7s,baz=251,slow=4.9,SNR=1.8						
TORD	Torodi Ar. Bea	147.54	289	PKPbc	PKPbc	17 00 21.8	+0.3
	1.0nm,0.7s,baz=75,slow=3.2,SNR=4.8						

IDC 05 16:57:25.6±3.7**, 3°.33S**×**150°.29E, h0**^{km}**, mb3.7**/2**, mb1 4.0**/4**, mb1mx3.5**/39**, mbtmp3.8**/4**, ML2.5**/2**, Error ellipse: s-maj=113.1km s-min=43.1km az=104.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	6.79	207	Pn	Pn	16 59 07.2	+0.6
	0.7nm,0.3s,baz=266,slow=23,SNR=1.8						
CTA	Charters Tower	17.12	193	P	Pn	17 01 27.3	+0.9
	0.1nm,0.3s,baz=352,slow=11,SNR=5.0						
WRA	Warramunga Arr	22.69	222	P	P	17 02 28.9	-0.1
	1.8nm,0.5s,baz=47,slow=11,SNR=14						
ASAR	Alice Springs	25.68	217	P	P	17 02 57.2	-0.4
	1.5nm,0.7s,baz=53,slow=8.7,SNR=9.9						
TORD	Torodi Ar. Bea	147.47	289	PKPbc	PKPbc	17 17 12.2	-0.6
	0.5nm,0.7s,baz=94,slow=4.3,SNR=1.5						

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*IDC **05** 17:01:14.8±1.4, 3°.76S×150°.81E, h0^{km}, mb4.0/9, mb1 4.2/12, mb1mx4.0/39, mbtmp4.0/12, ML2.6/2, MS3.8/10, Ms1 3.8/10, ms1mx3.6/37, Error ellipse: s-maj=43.3km s-min=17.8km az=110.0*

*NEIC **05** 17:01:16.1±1.7, 3°.8S±0°.1×150°.88E±0°.03, h13^{km}±8^{km}, mb4.4/11, Error ellipse: s-maj=15.3km s-min=3.8km az=190.0*

*DJA **05** 17:01:19.0±2.0, 4°S±5°×15°1E±°, h22^{km}±16^{km}, M4.3/18, mb4.4/18, MLv4.3/3*

ISC 05 17:01:19.4±0.6**, 3°.76S**±0°.07×**150°.90E**±0°.07**, h35**^{km}**, n46, σ1^{s}78**/39**, mb4.4**/19**, MS3.9**/6**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	1.33	109		Pn	17 01 41.4	-0.1
MANU	Manus Island	3.92	296	Pn	Pn	17 02 15.6	-1.6
PMG	Port Moresby	6.73	213	Pn	Pn	17 02 55.8	0.0
	1.4nm,0.3s,baz=14,slow=3.7,SNR=7.5						
PMG				LR	LR	17 05 28.4	
	comp=Z,487nm,18.7s,baz=44,slow=38						
PMG	Port Moresby	6.73	213	Pn	Pn	17 02 55.3	-0.5
PMG	Port Moresby	6.73	213	P	Pn	17 02 58.5	+2.7
PMG	Port Moresby	6.73	213	P	Pn	17 02 58.5	+2.7
HNR	Honiara	10.60	123	LR	LR	17 08 17.2	
	comp=Z,563nm,19.9s,baz=280,slow=40						
CTA	Charters Tower	16.85	195	Pn	Pn	17 05 12.4	-0.3
	0.1nm,0.3s,baz=151,slow=19,SNR=3.0						
CTAO	Charters Tower	16.85	195	Pn	Pn	17 05 11.6	-1.1
CTAO				IAmb	IAmb	17 05 20.3	
	comp=Z,17nm,1.3s						
GUMO	Guam	18.25	341	LR	LR	17 10 48.3	
	comp=Z,297nm,21.2s,baz=146,slow=32						
SANVU	Saraoutou	19.81	127	P	P	17 05 45.5	-1.5
SIJI	Sorong	19.83	278	P	P	17 05 44.8	-2.6
	baz=230,slow=22,SNR=3.7						
SIJI				LR	LR	17 13 22.7	
	comp=Z,269nm,18.1s,baz=308,slow=37						
SWI	Sorong	19.84	278	P	Pn	17 05 50.6	+1.5
	comp=Z,13nm,0.9s						
BNDI	Bandanaira	20.96	267	P	P	17 06 00.2	+0.6
	comp=Z,80nm,1.1s						
EIDS	Eidsvold	21.49	180		P	17 06 03.7	-1.5
EIDS				IAmb	IAmb	17 06 17.4	
	comp=Z,17nm,1.1s						
MTN	Manton Dam	21.53	244		P	17 06 03.7	-2.0
WB0	Warramunga Arr	22.64	224	P	P	17 06 15.8	-1.8
WB0				IAmb	IAmb	17 06 25.2	
	comp=Z,15nm,1.1s						
WR0	Warramunga Arr	22.67	223	P	P	17 06 16.7	-1.2
WR0				IAmb	IAmb	17 06 22.5	
	comp=Z,10nm,0.9s						
WRAB	Tennant Creek	22.78	224		P	17 06 14.4	-4.7
WRAB				IAmb	IAmb	17 06 18.7	
	comp=Z,11nm,0.7s						
WB2	Warramunga Arr	22.79	224	P	P	17 06 17.4	-1.7
WB2				IAmb	IAmb	17 06 18.9	
	comp=Z,10nm,0.6s						
WRA	Warramunga Arr	22.80	224	P	P	17 06 18.1	-1.2
	comp=Z,8.8nm,0.6s,baz=50,slow=10,SNR=62						
WRA	Warramunga Arr	22.80	224		P	17 06 16.6	-2.7
LBMI	Labuha	23.59	277	P	P	17 06 29.6	+2.4
	comp=Z,14nm,1.2s						
DZM	Mont Dzumac	23.64	142	LR	LR	17 14 57.9	
	comp=Z,386nm,19.1s,baz=324,slow=35						
TNTI	Ternate	23.95	280	P	P	17 06 31.5	+0.9
	comp=Z,17nm,1.2s						
TNTI	Ternate	23.95	280	P	P	17 06 26.6	-4.1
TNTI				IAmb	IAmb	17 06 38.1	
	comp=Z,16nm,1.0s						
SANI	Sanana	24.94	273	P	P	17 06 40.5	+0.8
	comp=Z,11nm,1.1s						
AS31	Alice Springs	25.71	218	P	P	17 06 46.8	+0.2
ASAR	Alice Springs	25.72	218	P	P	17 06 46.7	0.0
	comp=Z,6.4nm,0.6s,baz=50,slow=8.6,SNR=74						
ASAR	Alice Springs	25.72	218	P	P	17 06 45.7	-1.0
DAV	Davao City (W)	27.47	293	LR	LR	17 15 22.2	
	comp=Z,154nm,20.6s,baz=92,slow=31						
FITZ	Fitzroy Crossi	28.55	238	P	P	17 07 11.2	-0.9
	comp=Z,7.3nm,0.8s,baz=52,slow=6.6,SNR=6.8						
FITZ	Fitzroy Crossi	28.55	238	P	P	17 07 12.1	0.0
EDFI	Ende, Flores	29.45	259	P	P	17 07 18.3	-2.0
	comp=Z,3.7nm,0.8s						
MPSI	Mapaga	31.25	277	P	P	17 07 37.1	+1.0
	comp=Z,7.9nm,0.9s						
KSRS	Korea Array	46.24	335	P	P	17 09 41.0	-0.2
	comp=Z,0.3nm,0.6s,baz=220,slow=49,SNR=1.2						
KSRS				LR	LR	17 26 16.8	
	comp=Z,87nm,20.7s,baz=164,slow=32						
KLR	Kul'dur	55.34	345	P	P	17 10 51.2	+1.6
	comp=Z,1.1nm,0.7s,baz=150,slow=18,SNR=1.6						
CMAR	Chiang Mai Arr	55.72	295	P	P	17 10 54.1	+1.1
	comp=Z,1.5nm,1.0s,baz=106,slow=5.1,SNR=4.9						
CMAR	Chiang Mai Arr	55.72	295	P	P	17 10 45.8	-7.2
PETK	Petropavlovsk-	56.95	5	LR	LR	17 31 52.7	
	comp=Z,99nm,19.9s,baz=184,slow=32						
SONM	Songino Array	64.45	328	P	P	17 11 53.7	+1.2
	comp=Z,0.7nm,0.7s,baz=151,slow=6.4,SNR=3.3						
SONM				LR	LR	17 39 23.4	
	comp=Z,170nm,20.1s,baz=166,slow=36						
ILAR	Eielson Array	81.92	23	P	P	17 13 35.2	+0.1
	comp=Z,0.8nm,0.6s,baz=238,slow=5.9,SNR=3.7						
NRIK	Noril'sk	84.38	341	P	P	17 13 46.9	-0.8
	comp=Z,1.4nm,0.6s,baz=117,slow=4.9,SNR=2.7						
PDAR	Pinedale Array	99.55	47	LR	LR	17 54 57.4	
	comp=Z,40nm,18.7s,baz=326,slow=32						
GERES	GERESS Array B	122.18	328	PKP	PKiKP	17 20 12.7	+1.7
	comp=Z,0.7nm,0.6s,baz=66,slow=1.2,SNR=1.9						
TORD	Torodi Ar. Bea	148.18	289	PKPbc	PKPbc	17 21 03.1	+0.4
	comp=Z,3.6nm,0.6s,baz=57,slow=3.4,SNR=9.8						

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*IDC **05** 17:02:35.0±0.6, 30°.74S×71°.73W, h0^{km}, mb4.4/10, mb1 4.5/14, mb1mx4.4/26, mbtmp4.4/14, ML4.3/4, MS3.7/5, Ms1 3.7/5, ms1mx3.5/28, Error ellipse: s-maj=23.0km s-min=17.3km az=84.0*

*NEIC **05** 17:02:38.8, 30°.66S×71°.91W, h29^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$-4.13; M$_{\theta\theta}$-1.58; M$_{\phi\phi}$5.70; M$_{r\theta}$-0.99; M$_{\theta\phi}$0.05; M$_{\phi r}$-1.33; Fault plane solution: M$_0$5.36000×10^{15} NP1:φ$_s$16.47000°, δ55.04000°, λ-68.60000°. NP2:φ$_s$162.10000°, δ40.27000°, λ-117.56000°. Principal axes: T 5.8848, Plg8.0000°, Azm91.0000°; N -1.2692, Plg17.0000°, Azm184.0000°; P -4.6156, Plg71.0000°, Azm338.0000°;*

*GUC **05** 17:02:39.5±0.6, 30°.71S×71°.76W, h33^{km}±1^{km}, ML4.8*

*VAO **05** 17:02:39.3±0.4, 30°.73S×71°.72W, h27^{km}, mb4.6*

*NEIC **05** 17:02:39.7±1.3, 30°.70S±0°.02×71°.78W±0°.09, h26^{km}±3^{km}, mb4.6/43, Mwr4.4/33, ML4.8(GUC), Error ellipse: s-maj=11.0km s-min=1.7km az=101.0*

ISC 05 17:02:39.4±0.6**, 30°.72S**±0°.03×**71°.73W**±0°.05**, h30**^{km}±4^{km}**, n198, σ1^{s}16**/202**, mb4.6**/30**, 4C-10D, Fault plane solution: NP1:**φ$_s$24.45335°**,** δ64.67187°**,** λ-55.22993°. **NP2:** φ$_s$146.09525°**,** δ42.05659°**,** λ-140.30956°. **Principal axes:** T Plg12.8567°**,** Azm90.0208°**;** N Plg31.0285°**,** Azm187.9120°**;** P Plg55.8445°**,** Azm340.3631°**; Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	Fray Jorge	0.09	61	⇓*i*P	Pb	17 02 44.9	+0.1
CO06				*i* S	Sb	17 02 48.5	+0.1
CO06				IAML		17 02 49.0	
	comp=N,224µm,0.4s						
CO06	Fray Jorge	0.09	61		Pb	17 02 44.7	-0.1
CO06				Sg	Sb	17 02 48.5	+0.1
CO03	El Pedregal	0.90	98	⇓*i*P	Pb	17 02 56.7	+0.1
CO03				*i* S	Sn	17 03 08.8	+0.5
CO03				IAML		17 03 12.5	
	comp=E,28µm,0.3s						
CO03	El Pedregal	0.90	98	Pn	Pb	17 02 56.7	+0.1
CO05	La Serena	0.90	28	⇓*i*P	Pn	17 02 56.0	-0.1
CO05				*i* S	Sb	17 03 08.1	-0.1
CO05	La Serena	0.90	28		Pn	17 02 56.0	-0.1
GO04	Tololo Observa	0.97	56	⇓*i*P	Pb	17 02 57.7	-0.1
GO04				*i* S	Sn	17 03 11.3	+1.2
GO04	Tololo Observa	0.97	56	Pn	Pn	17 02 57.5	+0.2
VA06	Catapilco	1.87	169	*e*P	Pn	17 03 05.9	-3.6
VA06				*i* S	Sb	17 03 35.8	-0.2
VA06				IAML		17 03 43.6	
	comp=N,17µm,0.3s						
LCO	Las Campanas	1.92	28	⇑*i*P	Pn	17 03 11.0	+0.7
LCO				*i* S	Sb	17 03 37.1	-0.6
LCO	Las Campanas	1.92	28		Pn	17 03 10.9	+0.5
VA03	San Esteban	2.27	154	*e*P	Pn	17 03 16.7	+1.7
VA03				*i* S	Sb	17 03 45.7	-1.9
VA03				IAML		17 03 56.8	
	comp=N,12µm,0.7s						
VA03	San Esteban	2.27	154	Pn	Pn	17 03 17.0	+1.9
VA01	Torpederas	2.30	178	*e*P	Pn	17 03 17.5	+2.2
VA01				*i* S	Sn	17 03 45.7	+3.2
VA01	Torpederas	2.30	178	Pn	Pn	17 03 16.3	+1.0
ROCH	El Roble	2.33	165	*e*P	Pn	17 03 17.7	+1.8
ROCH				*i* S	Sb	17 03 47.2	-2.1
ROCH				IAML		17 03 57.5	
	comp=N,6µm,0.4s						
AC04	Llanos de Chal	2.57	13	Pn	Pn	17 03 18.1	-1.0
PEL	Peldehue	2.58	160	⇑*i*P	Pn	17 03 21.1	+1.9
PEL				*i* S	Sb	17 03 53.4	-2.9
PEL				IAML		17 04 07.2	
	comp=N,5µm,0.5s						
MT02	Curacav	2.58	169	*e*P	Pn	17 03 21.1	+1.9
MT02				*e*S	Sn	17 03 52.9	+3.3
MT02	Curacav	2.58	169	Pn	Pn	17 03 20.8	+1.5
ZON	Zonda	2.74	108	Pn	Pb	17 03 25.2	-2.6
MT05	Renca	2.79	163	⇓*i*P	Pb	17 03 27.1	-1.6
MT05				*i* S	Sn	17 03 57.9	+2.9
MT05	Renca	2.79	163	Pn	Pn	17 03 23.3	+1.1
VA05	Santo Domingo	2.93	178		Pn	17 03 24.9	+0.9
MT09	Talagante	3.11	169	*e*P	Pn	17 03 28.7	+2.0
MT09				*i* S	Sn	17 04 05.6	+2.7
MT09				IAML		17 04 22.4	
	comp=N,3µm,0.4s						
MT09	Talagante	3.11	169	Pn	Pn	17 03 27.9	+1.3
MT01	Popeta	3.16	173	Pn	Pn	17 03 28.1	+0.9
GO03	Copiap	3.38	23	Pn	Pn	17 03 30.4	+0.2
BO01	Tunca	3.70	172		Pn	17 03 36.3	+1.7
BO02	Sierra Bellavi	4.14	169	Pn	Pn	17 03 42.4	+1.7
GO05	Huala	4.28	182	Pn	Pn	17 03 42.5	-0.1
AC02	Maricunga	4.49	31	Pn	Pn	17 03 46.9	+1.0
ML02	Panimavida	5.04	177	Pn	Pn	17 03 54.0	+1.0
PB14	IPOC Station P	6.18	11	Pn	Pn	17 04 05.6	-3.4
H03N1	Juan Fernandez	6.67	244	T	T	17 11 10.7	
	baz=72,slow=72,SNR=7095						
H03N3	Juan Fernandez	6.69	244	T	T	17 11 07.7	
	baz=72,slow=72,SNR=5961						
H03N2	Juan Fernandez	6.69	244	T	T	17 11 09.0	
	baz=72,slow=72,SNR=7360						
VA04	Juan Fernndez	6.69	242	Pn	Pn	17 04 13.0	-2.7
H03S3	Juan Fernandez	6.82	241	T	T	17 11 17.9	
	baz=71,slow=79						
H03S1	Juan Fernandez	6.83	241	T	T	17 11 17.4	
	baz=71,slow=79						
H03S2	Juan Fernandez	6.84	241	T	T	17 11 18.5	
	baz=71,slow=79						
PB15	IPOC Station P	7.75	16		Pn	17 04 27.7	-2.7
LC01	Cunco	8.16	181		Pn	17 04 34.5	-1.4
PB06	IPOC Station P	8.21	14	Pn	Pn	17 04 35.3	-1.4
AF01	San Pedro de A	8.36	23	Pn	Pn	17 04 35.3	-3.6
LVC	Limon Verde	8.46	18	LR	LR	17 07 55.8	
	comp=N,586nm,19.6s,baz=208,slow=38						
LVC	Limon Verde	8.46	18	*e*P	Pn	17 04 40.2	-0.1
LVC	Limon Verde	8.46	18		Pn	17 04 40.5	+0.1
PB04	IPOC Station P	8.47	10	Pn	Pn	17 04 36.2	-4.1
PB07	IPOC Station P	9.11	11	Pn	Pn	17 04 50.3	+1.3
PB01	IPOC Station P	9.84	12	Pn	Pn	17 04 59.7	+0.6
PLCA	Paso Flores	10.04	175	Pn	Pn	17 05 01.7	+0.1
	comp=N,0.5nm,0.3s,baz=341,slow=12,SNR=20						
PLCA				LR	LR	17 09 23.5	
	comp=N,249nm,21.8s,baz=348,slow=41						
PLCA	Paso Flores	10.04	175	*e*P	Pn	17 05 01.9	+0.2
LL04	Puerto Octay	10.18	183		Pn	17 05 00.4	-3.1
TRQA	Tornquist	10.88	135	*e*P	Pn	17 05 13.1	0.0
TRQA	Tornquist	10.88	135		Pn	17 05 14.3	+1.2
CPUP	Villa Florida	13.39	74	Pn	Pn	17 05 47.7	+0.3
	comp=N,0.5nm,0.3s,baz=239,slow=14,SNR=6.0						
CPUP				LR	LR	17 11 08.0	
	comp=N,264nm,20.8s,baz=260,slow=38						
CPUP	Villa Florida	13.39	74	*e*P	Pn	17 05 47.5	+0.1
CPUP	Villa Florida	13.39	74		Pn	17 05 46.4	-1.1
LPAZ	La Paz	14.74	14	Pn	Pn	17 06 06.9	+0.4
	comp=N,0.9nm,0.3s,baz=187,slow=8.4,SNR=24						
LPAZ	La Paz	14.74	14	*e*P	Pn	17 06 07.3	+0.8
LPAZ	La Paz	14.74	14	Pn	Pn	17 06 05.9	-0.6
PLTB	Pedras Altas	15.54	99	*e*P	Pn	17 06 13.6	-2.9
PLTB	Pedras Altas	15.54	99	Pn	Pn	17 06 16.0	-0.4
CPSB	Cacapava Do Su	15.76	94	*e*P	Pn	17 06 19.0	-0.3
SIV	San Ignacio	17.61	36	P	Pn	17 06 42.9	+0.3
	comp=N,0.5nm,0.3s,baz=225,slow=12,SNR=39						
SIV				LR	LR	17 14 46.4	
	comp=N,435nm,19.1s,baz=249,slow=42						

AQDB	Aquidauana	17.67	59	eP	Pn	17 06 43.0	-0.4
AQDB	Aquidauana	17.67	59	Pn	Pn	17 06 41.9	-1.6
PTGB	Pitanga	18.40	76	eP	Pn	17 06 53.0	+0.6
TRCB	Terra Rica	18.77	70	P	P	17 06 55.5	-0.8
TRCB				IAmb	IAmb	17 07 11.2	
	comp=Z,20nm,0.7s						
PTLB	Pontes e Lacer	19.08	40	eP	P	17 06 59.9	+0.3
PTLB	Pontes e Lacer	19.08	40	P	P	17 06 57.6	-2.1
TER01	Tubaro-SC	19.77	89	eP	P	17 07 07.8	+0.7
PP1B	Ponte de Pedra	20.14	53	eP	P	17 07 11.5	+0.2
PCMB	Pacaembu	20.46	69	eP	P	17 07 15.3	+0.5
VILB	Vilhena	20.64	34	eP	P	17 07 16.9	+0.2
VILB	Vilhena	20.64	34	P	P	17 07 14.2	-2.5
VILB				IAmb	IAmb	17 07 28.1	
	comp=Z,25nm,0.8s						
TIJ01	Guaruva-PR	20.75	81	eP	P	17 07 18.7	+0.7
SALV	Santo Antonio	20.80	48	eP	P	17 07 18.8	+0.4
FRTB	Fartura	21.05	75	eP	P	17 07 21.6	+0.5
ETMB	Extrema	21.42	15	eP	P	17 07 24.8	-0.3
ETMB	Extrema	21.42	15	P	P	17 07 24.6	-0.5
ITRB	Iturama	22.19	65	eP	P	17 07 33.8	+0.4
PET01	Itanhaem-SP	22.59	80	eP	P	17 07 38.0	+0.4
SPB	Sao Paulo	22.73	78	eP	P	17 07 39.2	+0.2
SPB	Sao Paulo	22.73	78	P	P	17 07 39.5	+0.4
SPB				IAmb	IAmb	17 07 53.9	
	comp=Z,36nm,1.1s						
CZSB	Cruzeiro do Su	22.89	358	P	P	17 07 40.6	-0.1
CZSB				IAmb	IAmb	17 07 57.4	
	comp=Z,21nm,0.9s						
BB19B	Bebedouro	22.94	71	eP	P	17 07 41.7	+0.4
SAML	Samuel	23.08	22	eP	P	17 07 42.8	0.0
SAML	Samuel	23.08	22	P	P	17 07 42.5	-0.2
RCLB	Rio Claro- Sao	23.13	75	eP	P	17 07 43.8	+0.5
VAO	Valinhos	23.36	77	eP	P	17 07 46.3	+0.7
PDRB	Porto dos Gac	23.55	39	eP	P	17 07 47.7	+0.3
ARAG	Araguaiana, MT	23.57	55	eP	P	17 07 46.5	-1.0
USHA	Ushuaia	24.22	175	P	P	17 07 52.9	-0.4
	comp=Z,10nm,0.8s,baz=355,slow=8.2,SNR=2.7						
USHA				LR	LR	17 18 22.1	
	comp=Z,294nm,20.1s,baz=332,slow=39						
PARB	Paraibuna	24.35	79	eP	P	17 07 54.9	-0.1
CLDB	Colider	24.68	40	eP	P	17 07 57.6	-0.2
IPMB	Ipameri, GO	24.83	65	eP	P	17 07 59.0	-0.3
BSCB	Bom Sucesso	26.06	75	eP	P	17 08 10.8	+0.4
BDFB	Brasilia	26.39	61	P	P	17 08 12.3	-1.1
	comp=Z,10nm,0.6s,baz=236,slow=6.5,SNR=12						
BDFB	Brasilia	26.39	61	P	P	17 08 13.3	-0.1
TBTG	Tabatinga, AM	26.45	4	P	P	17 08 13.4	-0.5
SNDB	Serra Nova Dou	26.56	50	eP	P	17 08 14.7	-0.3
VAS01	Vassouras-RJ	26.62	78	eP	P	17 08 15.9	+0.4
DUB01	Friburgo-RJ	27.60	79	eP	P	17 08 24.7	+0.4
NPGB	Novo Progresso	28.11	36	eP	P	17 08 28.4	-0.4
DIAM	Diamantina, MG	28.28	71	eP	P	17 08 30.8	+0.3
CAM01	Campos-RJ	28.31	79	eP	P	17 08 31.4	+0.8
PEXB	Peixe	28.51	55	eP	P	17 08 33.2	+0.8
MC01	Montes Claros	28.91	68	eP	P	17 08 36.2	+0.2
JANB	Januaria	29.57	64	eP	P	17 08 42.2	+0.4
ITTB	Itaituba	30.24	33	eP	P	17 08 47.5	-0.2
BSFB	Barra de Sao F	30.33	74	eP	P	17 08 48.8	+0.3
SDBA	SAO DESIDERIO	30.76	60	eP	P	17 08 52.9	+0.5
SMTB	Santa Maria do	31.31	51	eP	P	17 08 58.2	+1.0
OTAV	Otavalo	31.44	347	eP	P	17 08 58.4	-0.4
PRPB	Parauapebas	31.93	45	eP	P	17 09 02.8	+0.1
MALB	Monte Alegre	33.13	33	eP	P	17 09 13.1	0.0
CMC01	Camacan, BA	33.20	70	eP	P	17 09 13.5	-0.2
NBIT	Itapeh - BA	33.50	69	eP	P	17 09 16.6	+0.2
GDU01	Guandu, BA	34.07	67	eP	P	17 09 21.3	0.0
PMSA	Palmer Station	34.41	174	eP	P	17 09 24.0	+0.3
BOAV	Boa Vista	34.62	20	eP	P	17 09 26.4	+0.3
BOAV	Boa Vista	34.62	20	P	P	17 09 26.3	+0.3
NBPN	Ponto Novo - B	35.30	63	eP	P	17 09 31.8	-0.2
MCPB	Macapa, AP	35.50	35	eP	P	17 09 33.8	+0.1
TMAB	Tom-Au,PA,Br	35.98	43	eP	P	17 09 37.9	+0.1
NBLA	Lagarto - SE	37.08	65	eP	P	17 09 46.6	-0.6
ZARC	Zaragoza, Cauc	38.11	355	P	P	17 09 56.0	+0.2
NBMA	Muriti-CE	38.61	60	eP	P	17 10 00.1	-0.1
NBPS	Pedro II - PI	38.72	53	eP	P	17 10 01.3	+0.2
NBAN	Anadia - AL	39.06	65	eP	P	17 10 03.7	-0.2
SDV	Santo Domingo	39.39	2	eP	P	17 10 07.3	+0.5
NBLV	Livramento - P	40.00	62	eP	P	17 10 11.9	+0.1
NBPV	Pedro Velho	41.84	62	eP	P	17 10 27.3	+0.4
MLPR	Magueyes Islan	48.62	6	P	P	17 11 20.4	-0.1
PDPR	Patillas Dam,	48.77	7	P	P	17 11 21.1	-0.5
SJG	San Juan	48.84	7	P	P	17 11 21.3	-0.9
VNA3	Neumayer Olymp	52.30	159	P	P	17 11 48.9	+1.1
VNA1	Neumayer--Stat	52.59	158	P	P	17 11 51.2	+1.3
VNA2	Neumayer--Watz	52.94	158	P	P	17 11 53.7	+1.2
	baz=289,slow=8.6						
SNAA	Sanae	54.53	159	P	P	17 12 05.2	+1.0
SNAA	Sanae	54.53	159	P	P	17 12 05.0	+0.8
SNAA				IAmb	IAmb	17 12 06.3	
	comp=Z,10.0nm,1.1s						
QSPA	South Pole Qui	59.51	180	P	P	17 12 40.6	+0.9
QSPA				IAmb	IAmb	17 12 43.7	
	comp=Z,4.1nm,0.8s						
SWET	Sewanee	66.93	347	P	P	17 13 28.8	-0.1
SWET				IAmb	IAmb	17 13 30.7	
	comp=Z,5.0nm,0.8s						
TXAR	Lajitas Array	67.02	330	P	P	17 13 30.6	+0.9
	comp=Z,0.9nm,0.8s,baz=153,slow=8.8,SNR=7.2						
TXAR	Lajitas Array	67.02	330	P	P	17 13 30.5	+0.8
TX31	Lajitas Ar. Si	67.02	330	P	P	17 13 30.4	+0.7
LCAR	Lake Charles	68.90	343	P	P	17 13 41.5	+0.3
LCAR				IAmb	IAmb	17 13 42.9	
	comp=Z,4.3nm,0.7s						
HHAR	Hobbs	69.83	341	P	P	17 13 47.2	+0.1
HHAR				IAmb	IAmb	17 13 49.0	
	comp=Z,4.0nm,0.7s						
CCM	Cathedral Cave	70.81	344	P	P	17 13 53.6	+0.6
CCM				IAmb	IAmb	17 13 54.5	
	comp=Z,5.5nm,0.7s						
R40A	Maddies Statio	71.28	343	P	P	17 13 56.3	+0.5
P40A	Paris	72.40	344	P	P	17 14 03.2	+0.7
P40A				IAmb	IAmb	17 14 04.1	
	comp=Z,6.9nm,0.8s						
MMNY	Mt. Morris Dam	73.31	355	P	P	17 14 05.9	-1.9
LIC	Lamto	73.51	72	eP	P	17 14 09.4	-0.3
	comp=Z,62nm,1.7s						
TIC	Toumodi	73.75	72	eP	P	17 14 09.9	-1.2
KIC	Kosan Boka	73.82	72	eP	P	17 14 11.5	0.0
	comp=Z,7.4nm,0.5s						
DBIC	Dimbokro	73.90	72	P	P	17 14 12.8	+0.9
	comp=Z,4.8nm,0.4s,baz=269,slow=1.8,SNR=10						
DBIC	Dimbokro	73.90	72	P	P	17 14 12.1	+0.2
MAW	Mawson	76.25	164	P	P	17 14 26.0	+1.4
	comp=Z,7.1nm,0.5s,baz=215,slow=7.4,SNR=61						
MAW	Mawson	76.25	164	P	P	17 14 25.7	+1.1
LMN	Caledonia Moun	76.47	5	P	P	17 14 26.7	+0.7
ECSD	EROS Data Cent	77.52	342	P	P	17 14 32.0	0.0
ECSD				IAmb	IAmb	17 14 33.7	
	comp=Z,5.5nm,0.8s						
SRU	San Rafael Swe	78.30	330	P	P	17 14 36.6	0.0
P18A	Preston Nutter	78.61	331	P	P	17 14 38.8	+0.2
F36A	Milaca	78.74	345	P	P	17 14 38.5	-0.2
F36A				IAmb	IAmb	17 14 41.0	
	comp=Z,8.0nm,1.1s						
RDMU	Red Mountain	79.12	332	P	P	17 14 41.4	+0.2
RDMU				IAmb	IAmb	17 14 43.4	
	comp=Z,3.7nm,0.8s						
TSUM	Tsumeb	79.87	106	P	P	17 14 45.7	-0.1
TSUM				IAmb	IAmb	17 14 48.2	
	comp=Z,8.1nm,1.1s						
HWUT	Hardware Ranch	80.81	331	P	P	17 14 51.1	+0.8
HWUT				IAmb	IAmb	17 14 53.0	
	comp=Z,4.1nm,0.8s						
PDAR	Pinedale Array	80.97	333	P	P	17 14 51.6	+0.4
	comp=Z,0.5nm,0.8s,baz=127,slow=3.9,SNR=4.5						
NVAR	Mina Array Bea	81.36	325	P	P	17 14 54.3	+1.0
	comp=Z,0.7nm,0.7s,baz=152,slow=7.0,SNR=5.9						
BOSA	Boshof	81.37	118	P	P	17 14 54.3	+0.6
	comp=Z,5.2nm,0.7s,baz=246,slow=3.2,SNR=13						
BOSA	Boshof	81.37	118	IAmb	IAmb	17 14 55.0	
	comp=Z,6.0nm,0.8s						
HVU	Hansel Valley	81.47	330	P	P	17 14 52.9	-0.8
HVU				IAmb	IAmb	17 14 56.2	
	comp=Z,3.7nm,0.8s						
AGMN	Agassiz Nation	81.58	344	P	P	17 14 53.1	-0.9
AGMN				IAmb	IAmb	17 14 55.3	
	comp=Z,4.3nm,0.7s						
ELK	Elko	81.72	328	P	P	17 14 54.7	-0.5
TORD	Torodi Ar. Bea	82.85	70	P	P	17 15 02.0	+0.6
	comp=Z,2.1nm,0.5s,baz=276,slow=5.2,SNR=28						
TORD	Torodi Ar. Bea	82.85	70	P	P	17 15 01.4	0.0
TORD				IAmb	IAmb	17 15 15.4	
	comp=Z,8.9nm,1.1s						
ULM	Lac du Bonnet	83.41	345	P	P	17 15 04.2	+0.8
	comp=Z,3.0nm,0.6s,baz=191,slow=5.5,SNR=3.3						
ULM	Lac du Bonnet	83.41	345	IAmb	IAmb	17 15 04.4	
	comp=Z,7.7nm,1.1s						
HLID	Hailey	83.62	330	P	P	17 15 03.0	-1.9
J08A	Circle Bar Ran	85.26	328	P	P	17 15 14.5	+1.3
J08A				IAmb	IAmb	17 15 16.0	
	comp=Z,4.5nm,1.0s						
PLID	Pearl Lake	85.52	330	P	P	17 15 15.5	+0.9
PLID				IAmb	IAmb	17 15 20.5	
	comp=Z,3.0nm,0.9s						
ASAR	Alice Springs	120.60	207	PKP	PKPdf	17 21 27.4	-1.4
	comp=Z,0.4nm,0.6s,baz=139,slow=1.9,SNR=8.9						
WRA	Warramunga Arr	123.74	210	PKP	PKPdf	17 21 33.9	-1.0
	comp=Z,1.1nm,0.7s,baz=166,slow=1.7,SNR=12						
H11S2	WAKE ISLAND Hy	126.02	271	T	T	19 40 25.4	
	baz=116,slow=75,SNR=139						
H11S1	WAKE ISLAND Hy	126.03	271	T	T	19 40 24.7	
	baz=116,slow=75,SNR=232						
H11S3	WAKE ISLAND Hy	126.04	271	T	T	19 40 27.1	
	baz=116,slow=75,SNR=122						
BVAR	Borovoye Array	144.65	40	PKP	PKPdf	17 22 12.6	0.0
	comp=Z,3.8nm,0.5s,baz=243,slow=9.8,SNR=26						
KURBB	Kurchatov Arra	150.24	40	PKPbc	PKPbc	17 22 26.7	-0.4
	comp=Z,2.1nm,0.5s,baz=298,slow=3.2,SNR=9.6						
KURK	Kurchatov	150.24	39		PKPbc	17 22 26.8	-0.4
AAK	Ala-Archa	150.60	57	PKPbc	PKiKP	17 22 29.6	+0.4
	comp=Z,2.6nm,0.8s,baz=239,slow=0.8,SNR=8.8						
AAK	Ala-Archa	150.60	57		PKPdf	17 22 23.2	+0.2
ZALV	Zalesovo Beam	151.28	29	PKP	PKPdf	17 22 23.5	0.0
	comp=Z,0.9nm,0.7s,baz=320,slow=4.3,SNR=2.8						
ZALV				PKPbc	PKPbc	17 22 30.1	+0.6
	comp=Z,11nm,0.7s,baz=260,slow=4.1,SNR=4.3						
ZALV	Zalesovo Beam	151.28	29		PKPbc	17 22 29.8	+0.3
MKAR	Makanchi Array	154.32	44	PKPbc	PKiKP	17 22 37.1	+0.5
	comp=Z,0.9nm,0.8s,baz=347,slow=1.6,SNR=3.2						
MKAR				PKPab	sPKPbc	17 22 49.5	-0.2
	comp=Z,2.6nm,0.9s,baz=306,slow=4.3,SNR=5.4						
SONM	Songino Array	162.85	4	PKPab	PKPab	17 23 27.5	-0.1
	comp=Z,1.5nm,0.9s,baz=292,slow=2.9,SNR=6.7						
CMAR	Chiang Mai Arr	165.15	143	PKPab	PKPab	17 23 37.2	-1.1
	comp=Z,1.1nm,0.8s,baz=229,slow=6.4,SNR=9.5						

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*IDC **05** 17:04:15.2±2.3, 21.°82N×144.°21E, h296^{km}±21^{km}, mb3.0/10, mb1 3.1/11, mb1mx3.0/50, mbtmp3.7/11 Error ellipse: s-maj=56.3km s-min=14.3km az=78.0*

ISC 05 17:04:15.3±1.6**, 21.°8N**±0.°1×**144.°2E**±0.°4**, h300**^{km}**, n11,** σ**0.^{s}65**/12**, mb3.3**/10**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	5.56	341	P	Pn	17 05 38.8	-0.6
	1.9nm,0.3s,baz=290,slow=21,SNR=1.5						
JCJ				S	S	17 06 47.0	-0.1
	9.8nm,0.3s,baz=288,slow=22,SNR=8.2						
KSRS	Korea Array	21.01	321	P	P	17 08 36.8	+0.7
	0.8nm,0.6s,baz=149,slow=9.2,SNR=5.8						
SONM	Songino Array	39.86	320	P	P	17 11 21.3	+0.8
	0.2nm,0.5s,baz=134,slow=8.3,SNR=1.9						
CMAR	Chiang Mai Arr	42.54	274	P	P	17 11 42.2	-0.2
	0.2nm,0.6s,baz=87,slow=6.4,SNR=1.4						
WRA	Warramunga Arr	42.63	194	P	P	17 11 43.6	+0.6
	0.3nm,0.3s,baz=17,slow=9.1,SNR=6.6						
FITZ	Fitzroy Crossi	43.66	206	P	P	17 11 50.1	-1.0
	1.0nm,0.6s,baz=38,slow=10.0,SNR=2.8						
ASAR	Alice Springs	46.33	193	P	P	17 12 12.5	+0.5
	0.2nm,0.7s,baz=16,slow=11,SNR=1.5						
STKA	Stephens Creek	53.46	183	P	P	17 13 04.8	-0.3
	0.8nm,0.3s,baz=352,slow=7.1,SNR=2.2						
ZALV	Zalesovo Beam	54.71	321	P	P	17 13 13.4	-0.5
	1.1nm,0.6s,baz=112,slow=6.6,SNR=4.5						
MKAR	Makanchi Array	55.33	313	P	P	17 13 18.2	-0.3
	1.2nm,0.9s,baz=96,slow=7.4,SNR=2.6						
FINES	FINESS Array B	83.48	335	P	P	17 16 09.6	+0.2
	0.7nm,0.5s,baz=71,slow=6.9,SNR=6.6						

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*SKHL **05** 17:08:58.5±0.4, 43.°70N×145.°60E, h116^{km}±1^{km}, mb4.9/3, msha5.4/3*

*MOS **05** 17:08:59.0±0.8, 43.°85N×145.°63E, h105^{km}, mb3.8/1, Error ellipse: s-maj=25.6km s-min=12.2km az=62.3*

*JMA **05** 17:08:59.2±0.2, 43.°78N×145.°59E, h106^{km}±1^{km}, M3.2*

*IDC **05** 17:09:01.4±4.2, 44.°01N×145.°36E, h126^{km}±22^{km}, mb3.2/3, mb1 3.3/4, mb1mx2.9/51, mbtmp3.6/4, Error ellipse: s-maj=96.0km s-min=26.1km az=161.0*

ISC 05 17:08:59.5±0.8**, 43.°76N**±0.°05×**145.°55E**±0.°05**, h105**^{km}±5^{km}**, n40,** σ**1.^{s}17**/53**, mb3.5**/3**, 6C-3D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLVR	Golovnino	0.03	216	c iPN	Pn	17 09 14.4	+0.5
GLVR				i S	Sn	17 09 26.4	+1.8
GLVR				pmax	pmax		
	comp=E,135nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,3μm,0.1s						
GLVR				smax	smax		
	comp=N,4μm,0.4s						
GLVR				smax	smax		
	comp=E,8μm,0.3s						
GLVR	Golovnino	0.03	216	i P	Pn	17 09 14.2	+0.3
GLVR				AMB	AMB	17 09 14.6	
	comp=E,2μm,0.2s						
GLVR				i S	Sn	17 09 26.0	+1.4
GLVR				A	A	17 09 26.0	
	comp=E,4μm,0.4s						
GLVR				A	A	17 09 26.0	
	comp=E,8μm,0.4s						
GRPR	Tuman	0.28	36	c iPN	Pn	17 09 14.4	-0.1
GRPR				eS	Sn	17 09 26.3	+0.6
GRPR				pmax	pmax		
	comp=E,73nm,0.1s						
GRPR				pmax	pmax		
	comp=Z,463nm,0.1s						
GRPR				smax	smax		
	comp=N,940nm,0.3s						
GRPR				smax	smax		
	comp=E,700nm,0.2s						
GRPR	Tuman	0.28	36	i P	Pn	17 09 14.0	-0.5
GRPR				AMB	AMB	17 09 14.0	
	comp=E,463nm,0.2s						
GRPR				eS	Sn	17 09 26.0	+0.3
GRPR				A	A	17 09 26.0	
	comp=E,940nm,0.3s						
GRPR				A	A	17 09 26.0	
	comp=E,700nm,0.3s						
JRA	Rausu	0.35	300	P	Pn	17 09 14.8	0.0
JRA				eS	Sn	17 09 26.4	+0.1
YUK	Yuzh-Kuril'sk	0.35	40	c iPN	Pn	17 09 15.3	+0.5
YUK				eS	Sn	17 09 27.5	+1.2
YUK				pmax	pmax		
	comp=Z,921nm,0.3s						
YUK				pmax	pmax		
	comp=N,88nm,0.2s						
YUK				pmax	pmax		
	comp=E,105nm,0.1s						
YUK				smax	smax		
	comp=N,2μm,0.5s						
YUK				smax	smax		
	comp=E,1μm,0.5s						
YUK	Yuzh-Kuril'sk	0.35	40	i P	Pn	17 09 15.3	+0.5
YUK				AMB	AMB	17 09 15.7	
	comp=E,921nm,0.3s						
YUK				eS	Sn	17 09 27.5	+1.2
YUK				A	A	17 09 28.0	
	comp=E,2μm,0.5s						
YUK				A	A	17 09 28.0	
	comp=E,2μm,0.5s						
JNSB	Nemuroshibetsu	0.39	272	P	Pn	17 09 15.4	+0.4
RUSJ	Misakicho	0.40	328	⇓ iPN	Pn	17 09 15.3	+0.2
RUSJ				i S	Sn	17 09 27.2	+0.4
NMR	Nemuro--Hokkai	0.42	161	⇑ iPN	Pn	17 09 15.2	0.0
NMR				eS	Sn	17 09 27.2	+0.3
NMR	Nemuro--Hokkai	0.42	161	i P	Pn	17 09 14.8	-0.4
NMR				eS	Sn	17 09 27.2	+0.3
NEM2	Nemuro 2	0.42	160	P	Pn	17 09 15.2	0.0
NEM2				eS	Sn	17 09 27.1	+0.1
JNK	Nakash	0.63	254	P	Pn	17 09 17.0	+0.3
JKHN	Kushirohamanak	0.74	202	P	Pn	17 09 17.9	+0.3
AKK	Akkeshi	0.91	215	eP	Pn	17 09 19.3	+0.1
AKK				eS	Sn	17 09 34.8	+0.7
JAK	Akkeshi	0.99	219	P	Pn	17 09 20.3	+0.3
JAK				eS	Sn	17 09 36.0	+0.5
JTKR	Abashiri--Toko	1.20	280	P	Pn	17 09 22.6	+0.2
JTKR				eS	Sn	17 09 40.2	+0.5
JAR	Ashorobuto	1.37	251	P	Pn	17 09 25.1	+0.7
JOB	Onbets	1.52	236	P	Pn	17 09 26.9	+0.8
JOB				eS	Sn	17 09 47.5	+1.2
JMP	Maruseppu	1.60	279	P	Pn	17 09 27.4	+0.2
JMP				eS	Sn	17 09 48.9	+0.7
JCH	Churui	1.97	235	P	Pn	17 09 32.0	+0.2
JCH				eS	Sn	17 09 56.6	+0.2
JKA	Kamikawa-asahi	2.16	280	eP	Pn	17 09 35.2	+1.0
ASAJ	Asahikawa	2.16	280	P	Pn	17 09 35.2	+1.0
	comp=E,30nm,0.3s,baz=94,slow=13,SNR=276						
KUR	Kuril'sk	2.22	48	d iPN	Pn	17 09 35.8	+0.9
KUR				i S	Sn	17 10 05.5	+3.4
KUR				pmax	pmax		
	comp=Z,55nm,0.5s						
KUR				smax	smax		
	comp=N,123nm,0.2s						
KUR				smax	smax		
	comp=E,161nm,0.2s						
KUR	Kuril'sk	2.22	48	i P	Pn	17 09 35.0	+0.1
KUR				AMB	AMB	17 09 36.0	
	comp=E,70nm,0.4s						
KUR				i S	Sn	17 10 03.6	+1.5
KUR				A	A	17 10 06.3	
	comp=E,100nm,0.4s						
KUR				A	A	17 10 06.3	
	comp=E,120nm,0.4s						
ERM	Erimo	2.48	226	d ePN	Pn	17 09 41.0	+2.6
MAJO	Matsushiro	9.14	220	⇑ ePN	Pn	17 11 11.6	+3.2
PETK	Petropavlovsk-	12.33	36	P	Pn	17 11 50.5	-0.8
	comp=E,0.1nm,0.3s,baz=217,slow=12,SNR=0.9						
TIK	Tiksi	29.11	349	eP	P	17 14 51.7	+1.9
TIXI	Tiksi	29.12	349	⇑ eP	P	17 14 51.7	+1.8
H11N2	WAKE ISLAND Hy	29.89	137	T	T	17 46 07.3	
	baz=329,slow=75,SNR=112						
H11N1	WAKE ISLAND Hy	29.90	137	T	T	17 46 08.3	
	baz=329,slow=75,SNR=84						
H11N3	WAKE ISLAND Hy	29.91	137	T	T	17 46 01.5	
	baz=329,slow=75,SNR=63						
H11S1	WAKE ISLAND Hy	30.84	138	T	T	17 47 17.1	
	baz=330,slow=76,SNR=236						
H11S3	WAKE ISLAND Hy	30.84	138	T	T	17 47 14.2	
	baz=330,slow=76,SNR=183						
H11S2	WAKE ISLAND Hy	30.85	138	T	T	17 47 15.1	
	baz=330,slow=76,SNR=99						
ILAR	Eielson Array	42.16	36	P	P	17 16 40.2	-1.0
	comp=E,0.5nm,0.7s,baz=273,slow=7.0,SNR=5.5						
MKAR	Makanchi Array	43.55	297	P	P	17 16 50.6	-2.0
	comp=E,0.4nm,0.5s,baz=74,slow=7.0,SNR=4.1						
FINES	FINESS Array B	64.33	332	P	P	17 19 20.9	-2.5
	comp=E,0.9nm,0.8s,baz=46,slow=8.0,SNR=4.8						
FINES	FINESS Array B	64.33	332	i P	P	17 19 23.5	+0.1
FINES				pmax	pmax		
	comp=Z,1.0nm,0.8s						

WEL 05 17:09:27.0±1.0**, 36.°S**±19.°×**18.°0E**±2.°7**, h296**^{km}±8^{km}**, M3.5**/7**, mB4.3**/2**, ML4.1**/8**, MLv3.5**/7**, Mw(mB)3.5**/2**, Error ellipse: s-maj=0.0km s-min=0.0km az=125.1, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.06	215	P	Pn	17 10 13.3	-0.5
MXZ				S	S	17 10 49.1	-1.9
WMGZ	Waiomatatini S	2.23	209	P	Pn	17 10 16.4	+1.2
PKGZ	Pakihiroa	2.43	214	P	Pn	17 10 18.7	+1.7
HAZ	Te Kaha	2.47	220	P	Pn	17 10 16.0	-1.4
HAZ				S	S	17 10 55.4	-2.1
PUZ	Puketiti	2.51	209	P	Pn	17 10 18.2	+0.5
PUZ				S	S	17 10 58.8	+0.6
RUGZ	Raukumara Rang	2.68	218	P	Pn	17 10 18.7	-0.8
TWGZ	Tauwhareparae	2.71	212	S	S	17 11 04.2	+2.5
URZ	Urewera	3.20	221	P	Pn	17 10 23.0	-1.4
URZ				S	S	17 11 08.8	-1.4
MTHZ	Maungataniwha	3.78	217	P	Pn	17 10 30.9	+0.3
MTHZ				S	S	17 11 21.7	+0.2
MRHZ	Matea Rd	3.99	221	P	Pn	17 10 37.1	+4.2
MRHZ				S	S	17 11 32.0	+6.4
KWHZ	Kaweka Forest	4.43	216	P	Pn	17 10 38.2	+0.3
KWHZ				S	S	17 11 36.4	+1.8
OTVZ	Oturere	4.63	224	P	Pn	17 10 39.1	-1.2
SNVZ	South Ngauruho	4.66	224	P	Pn	17 10 39.6	-1.0
TSZ	Takapari Road	5.15	215	P	Pn	17 10 45.8	-0.4
TSZ				S	S	17 11 50.9	+1.3
BFZ	Birch Farm	5.54	209	P	Pn	17 10 51.5	+0.8
MRZ	Mangatainoka R	5.81	213	P	Pn	17 10 53.6	-0.3
MRZ				S	S	17 12 03.0	-0.7
HOWZ	Holdsworth Sta	6.03	212	P	Pn	17 10 56.2	-0.3
HOWZ				S	S	17 12 08.4	-0.1
OGWZ	Otaki Gorge	6.12	215	P	Pn	17 10 56.8	-0.8
OGWZ				S	S	17 12 10.4	-0.1
KIW	Kapiti Island	6.28	216	P	Pn	17 10 58.2	-1.2
KIW				S	S	17 12 12.0	-2.0

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*ATH **05** 17:26:09.0, 36.°72N×25.°64E, h22^{km}±9^{km}, ML2.7/3, Error ellipse: s-maj=10.2km s-min=1.7km az=175.0*

*DDA **05** 17:26:08.2, 36.°70N×25.°54E, h7^{km}±3^{km}, ML2.4*

*THE **05** 17:26:09.0, 36.°78N×25.°57E, h3^{km}±2^{km}, ML2.5/5, Error ellipse: s-maj=3.0km s-min=0.6km az=202.0*

ISC 05 17:26:08.9±1.2**, 36.°72N**±0.°03×**25.°58E**±0.°03**, h10**^{km}±10^{km}**, n26,** σ**0.^{s}71**/41**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMBO	Columbo, Santo	0.28	209	P	Pb	17 26 15.5	-0.6
CMBO				S	Sb	17 26 20.7	-0.2
	1μm,0.2s						
CMBO	Columbo, Santo	0.28	209	P	Pb	17 26 15.5	-0.6
CMBO				S	Sb	17 26 20.7	-0.2
CMBO				AML	AML	17 26 22.1	
	comp=N,3685μm,0.2s						
CMBO				AML	AML	17 26 24.8	
	comp=E,2000μm,0.3s						
SAP4	Santorini-Oia	0.30	213	P	Pb	17 26 16.0	-0.2
SAP4				S	Sb	17 26 21.2	0.0
THR2	Thira island,	0.30	202	P	Pb	17 26 15.7	-0.6
THT2	Imerovigli	0.31	203	P	Pb	17 26 16.2	-0.3
THT2				S	Sb	17 26 22.1	+0.4
	comp=E,590nm,0.4s						
THR8	Santorini-Mono	0.32	194	P	Pg	17 26 16.0	+0.6
THR8	Santorini-Mono	0.32	194	P	Pg	17 26 16.0	+0.6
THR3	Thira Island,	0.34	204	P	Pb	17 26 16.5	-0.5
THR3	Thira Island,	0.34	204	P	Pg	17 26 16.3	+0.6
SNT5	Nea Kammeni, S	0.35	205	P	Pb	17 26 16.6	-0.6
SNT5				S	Sb	17 26 22.9	+0.2
	comp=E,1μm,0.2s						
STAX	Taxiarchis Har	0.35	203	P	Pb	17 26 16.9	-0.3
STAX				S	Sb	17 26 23.2	+0.5
STAX	Taxiarchis Har	0.35	203	P	Pg	17 26 16.5	+0.7
THR6	Thira Island,	0.39	202	P	Pb	17 26 17.4	-0.5
THR6	Thira Island,	0.39	202	P	Pb	17 26 17.5	-0.4
TNSA	Tinos	0.88	338	P	Pg	17 26 25.2	-0.7
MHLO	Agia Marina, M	0.94	268	P	Pb	17 26 27.4	+0.1
MHLO				S	Sb	17 26 40.4	+0.5
	comp=E,715nm,0.5s						
MHLO	Agia Marina, M	0.94	268	P	Pb	17 26 27.4	+0.1
MHLO				S	Sb	17 26 40.2	+0.3
MHLO				AML	AML	17 26 45.5	
	comp=N,1456μm,0.5s						
MHLO				AML	AML	17 26 49.5	
	comp=E,1378μm,0.8s						
SMG	Samos	1.41	45	P	Pn	17 26 34.1	-0.5
SMG				S	Sb	17 26 52.8	-0.5
	comp=E,218nm,0.4s						
SMG	Samos	1.41	45	P	Pn	17 26 33.8	-0.7
SMG				AML	AML	17 26 54.1	
	comp=N,333μm,0.3s						
SMG				AML	AML	17 26 56.3	
	comp=E,533μm,0.4s						
DDIM	Aydin, Didim	1.52	61	i P	Pg	17 26 39.7	+1.7
DDIM				i S	Sg	17 26 57.8	0.0
BDRM	Kayabasi	1.54	77	i P	Pn	17 26 36.3	-0.1
BDRM				i S	Sn	17 26 57.2	+0.9
BDRM				IAML		17 26 59.0	
	comp=N,47nm,0.8s						
DAT	Datca	1.61	89	i P	Pn	17 26 35.1	-2.3
GCAM	G?zelcaml?	1.65	53	i P	Pn	17 26 37.5	-0.2
GCAM				i S	Sb	17 27 00.5	+0.5
GCAM				IAML		17 27 05.0	

	comp=E,35nm,0.6s						
GCAM				IAML		17 27 06.0	
	comp=N,40nm,0.3s						
ZEYE	Izmir, Urla-Ze	1.69	26	*i* P	Pn	17 26 37.8	-0.5
ZEYE				*i* S	Sn	17 27 01.2	+1.3
ZEYE				IAML		17 27 04.0	
	comp=E,33nm,0.3s						
ZEYE				IAML		17 27 05.0	
	comp=N,31nm,0.4s						
DGB	zmir	1.69	38	*i* P	Pb	17 26 39.9	-0.1
DGB				*i* S	Sn	17 27 00.9	+0.9
AYDN	Tasoluk	2.06	62	*i* P	Pg	17 26 48.2	-0.3
AYDN				*i* S	Sg	17 27 14.6	-0.7

TAP 05 17:26:21.3, 23°.10N×120°.96E, h3^{km}±1^{km}, ML0.9, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELDTW	Lidau	0.10	33	*i* P	Pg	17 26 24.1	+0.7
	baz=36						
STYH	Taoyuan	0.18	292	P	Pg	17 26 25.6	+0.8
	baz=292						
STYH				*e*S	Sg	17 26 28.1	+1.0
	baz=292						
LONT	Longtian	0.25	141	*e*P	Pg	17 26 27.3	+1.2
	baz=142						
TWG	Pinlang	0.30	159	*e*P	Pg	17 26 28.1	+1.0
	baz=149						
TWG				*e*S	Sg	17 26 32.4	+1.5
	baz=149						
SLGT	Liugui	0.31	249	*e*P	Pg	17 26 28.1	+0.9
	baz=239						
FULB	Fuli	0.33	73	*e*P	Pb	17 26 29.1	-0.7
	baz=59						
FULB				*e*S	Sb	17 26 33.8	-1.7
	baz=59						
WTP	Ta-pu	0.35	294	*e*P	Pg	17 26 28.9	+0.9
	baz=295						
TPUB	Ta-pu	0.36	303	*e*P	Pb	17 26 29.5	-0.9
	baz=303						
YULB	Yu-li	0.43	47	*e*P	Pg	17 26 29.8	+0.3
	baz=47						
ALS	Alishan	0.43	341	*e*P	Pg	17 26 30.3	+0.7
	baz=343						

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*IDC **05** 17:37:22.9±2.0, 8°.31S×125°.34E, h0^{km}, mb3.7/1, mb1 3.6/5, mb1mx3.4/34, mbtmp3.5/5, ML3.0/4, MS4.5/1, Ms1 4.5/1, ms1mx2.8/38, Error ellipse: s-maj=39.7km s-min=27.1km az=87.0*

ISC 05 17:37:27.5±1.5**, 8°.4S**±0°.1×**125°.5E**±0°.1**, h35^{km}, n6,** σ**1^{s}.70**/7**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	2.55	226	Pn	Pn	17 38 05.6	-0.8
	1.6nm,0.3s,baz=131,slow=18,SNR=3.6						
BATI				Sn	Sn	17 38 37.7	+1.5
	0.7nm,0.3s,baz=262,slow=7.3,SNR=4.7						
FITZ	Fitzroy Crossi	9.60	179	Pn	Pn	17 39 43.8	+0.5
	0.1nm,0.3s,baz=4.5,slow=14,SNR=5.4						
FITZ				Sn	Sn	17 41 27.8	-2.3
	0.0nm,0.3s,baz=342,slow=20,SNR=3.0						
WRA	Warramunga Arr	14.26	144	Pn	Pn	17 40 47.1	0.0
	0.1nm,0.3s,baz=315,slow=13,SNR=13						
ASAR	Alice Springs	17.13	153	P	P	17 41 27.5	+1.7
	0.1nm,0.3s,baz=319,slow=10,SNR=9.3						
ASAJ	Asahikawa	54.55	15	LR	LR	18 07 24.1	
	comp=Z,472nm,22.0s,baz=93,slow=33						
MKAR	Makanchi Array	67.09	329	P	P	17 48 16.9	-0.6
	0.7nm,0.8s,baz=123,slow=5.3,SNR=2.2						

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*IDC **05** 17:39:46.6±1.6, 30°.47S×177°.62W, h0^{km}, mb4.2/4, mb1 4.3/5, mb1mx3.8/42, mbtmp4.2/5, ML3.1/1, Error ellipse: s-maj=37.6km s-min=26.5km az=109.0*

*NEIC **05** 17:39:49.6±1.3, 30°.24S±0°.08×177°.7W±0°.2, h10^{km}±1^{km}, mb4.3/9, Error ellipse: s-maj=23.5km s-min=13.1km az=101.0*

ISC 05 17:39:52.5±1.2**, 30°.34S**±0°.08×**177°.8W**±0°.2**, h35^{km}, n26,** σ**1^{s}.41**/19**, mb4.3**/9**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.09	353	Pn	Pn	17 40 11.3	0.0
	111nm,0.3s,baz=246,slow=22,SNR=3.1						
RAO				Sn	Sn	17 40 23.7	-1.5
	655nm,0.3s,baz=15,slow=23,SNR=16						
RAO	Raoul Island	1.09	353		Pn	17 40 10.2	-1.1
OUZ	Omahuta	8.75	234	Pn	Pn	17 41 57.6	+1.2
URZ	Urewera	8.96	207	Pn	Pn	17 41 54.7	-4.7
	0.2nm,0.3s,baz=301,slow=23,SNR=2.6						
URZ				Sn	Sn	17 43 34.8	-4.3
	0.9nm,0.3s,baz=122,slow=23,SNR=2.6						
CTA	Charters Tower	33.99	279	P	P	17 46 33.9	+0.8
	2.3nm,0.4s,baz=113,slow=9.7,SNR=8.6						
STKA	Stephens Creek	34.69	257	P	P	17 46 40.5	+1.6
	2.1nm,0.7s,baz=110,slow=12,SNR=6.1						
STKA	Stephens Creek	34.69	257	IAmb	IAmb	17 46 43.5	
	comp=Z,1.4nm,1.1s						
BBOO	Buckleboo	39.18	254	P	P	17 47 17.7	+0.6
ASAR	Alice Springs	43.31	267	P	P	17 47 51.2	-0.1
	comp=Z,0.5nm,0.3s,baz=104,slow=7.5,SNR=19						
WR0	Warramunga Arr	44.12	272	P	P	17 47 57.1	-0.6
WR0				IAmb	IAmb	17 48 01.7	
	comp=Z,2.8nm,1.1s						
WRAB	Tennant Creek	44.29	272	P	P	17 47 58.5	-0.6
WRAB				IAmb	IAmb	17 48 01.0	
	comp=Z,6.5nm,1.4s						
WRA	Warramunga Arr	44.30	272	P	P	17 47 58.4	-0.8
	comp=Z,1.3nm,0.3s,baz=110,slow=8.1,SNR=16						
WRA	Warramunga Arr	44.30	272	IAmb	IAmb	17 48 04.2	
	comp=Z,0.2nm,1.1s						
WB0	Warramunga Arr	44.32	272	P	P	17 47 59.2	-0.1
WB0				IAmb	IAmb	17 48 00.7	
	comp=Z,6.5nm,1.2s						
MTN	Manton Dam	50.17	279	P	P	17 48 45.4	+0.4
MTN				IAmb	IAmb	17 49 12.7	
	comp=Z,5.2nm,1.1s						
KNRA	Kununurra	50.90	274		P	17 48 51.2	+0.8
QSPA	South Pole Qui	59.77	180	P	P	17 49 55.4	+1.5
QSPA				IAmb	IAmb	17 50 03.1	
	comp=Z,3.1nm,1.0s						
H03S2	Juan Fernandez	80.33	123	T	T	19 21 06.5	
	baz=238,slow=74,SNR=48						
H03S1	Juan Fernandez	80.34	123	T	T	19 21 08.2	
	baz=238,slow=74,SNR=30						
H03S3	Juan Fernandez	80.35	123	T	T	19 21 05.3	
	baz=238,slow=74,SNR=33						
H03N3	Juan Fernandez	80.52	123	T	T	19 21 22.2	
	baz=242,slow=72,SNR=6.1						
H03N2	Juan Fernandez	80.52	123	T	T	19 21 21.3	
	baz=242,slow=72,SNR=6.3						
H03N1	Juan Fernandez	80.54	123	T	T	19 21 19.5	
	baz=242,slow=72,SNR=7.2						
FINES	FINESS Array B	145.16	340	PKPbc	PKPbc	17 59 24.6	-0.6
	comp=Z,1.7nm,0.7s,baz=50,slow=3.4,SNR=9.6						
AKASG	Malin Array Be	151.37	323	PKPbc	PKPbc	17 59 41.6	-0.5
	comp=Z,0.8nm,0.6s,baz=75,slow=2.0,SNR=5.1						
TORD	Torodi Ar. Bea	162.88	178	PKPab	PKPab	18 00 40.2	-0.4
	comp=Z,0.3nm,0.6s,baz=180,slow=4.1,SNR=2.2						

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*ANF **05** 17:44:43.9±0.3, 36°.69N×97°.89W, h5^{km}, ML3.2/7, Error ellipse: s-maj=3.8km s-min=2.3km az=172.0*

*NEIC **05** 17:44:43.9±0.7, 36°.702N±0°.010×97°.89W±0°.02, h6^{km}±7^{km}, Error ellipse: s-maj=2.1km s-min=1.2km az=114.0*

*TUL **05** 17:44:43.9±1.1, 36°.72N±0°.01×97°.91W±0°.02, h6^{km}±7^{km}, ML2.9, mb_Lg2.7/48(NEIC), Error ellipse: s-maj=2.6km s-min=1.4km az=115.0*

ISC 05 17:44:43.9±0.9**, 36°.70N**±0°.02×**97°.89W**±0°.02**, h10^{km}**±8^{km}**, n70,** σ**0^{s}.71**/65**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.16	8	Pg	Pg	17 44 47.2	-0.1
GC02				Sg	Sg	17 44 49.5	-0.3
CROK	Carrier	0.21	202	Pg	Pg	17 44 48.5	+0.3
CROK				Sg	Sg	17 44 51.8	+0.7
KAN14	Manchester OK	0.27	347	Pg	Pg	17 44 49.1	-0.2
KAN14				Sg	Sg	17 44 52.8	-0.2
OK032	Salt Plains WL	0.28	293	Pg	Pg	17 44 49.3	-0.3
OK032				Sg	Sg	17 44 53.1	-0.3
KAN17	Caldwell West	0.36	16	Pg	Pg	17 44 51.1	0.0
KAN17				Sg	Sg	17 44 55.9	0.0
KAN05	Bluff City Nor	0.41	2		Pg	17 44 51.9	-0.2
KAN13	South Haven SW	0.46	46	Pg	Pg	17 44 53.0	+0.2
KAN10	Anthony SW Sta	0.46	339	Pg	Pg	17 44 52.6	-0.3
KAN01	Argonia South	0.47	13	Pg	Pg	17 44 53.0	-0.1
KAN09	Caldwell North	0.49	26	Pg	Pg	17 44 53.2	-0.3
KAN08	Anthony NE Sta	0.53	353		Pg	17 44 54.0	-0.3
BLOK	Blackwell	0.54	83	Pg	Pg	17 44 54.7	+0.3
KAN16	Harper SW Stat	0.55	345	Pg	Pg	17 44 54.2	-0.4
KAN06	Argonia West S	0.55	2		Pg	17 44 54.4	-0.2
KS20	Mayfield South	0.59	26	Pg	Pg	17 44 55.3	-0.2
KAN12	Harper NE Stat	0.61	352	Pg	Pg	17 44 55.4	-0.3
U32A	Winter Ranch,	0.95	251	Pg	Pg	17 45 01.5	-0.8
U32A	Winter Ranch,	0.95	251	P	Pg	17 45 01.6	-0.6
	baz=70						
U32A				S	Sg	17 45 14.5	-0.1
	baz=70						
OK029	Liberty Lake	0.96	159		Pg	17 45 02.4	-0.1
BCOK	Bluff Creek, N	1.06	168		Pg	17 45 04.1	-0.2
QUOK	Quay	1.08	119		Pg	17 45 04.8	+0.1
OK031	S. Brethren Rd	1.12	131	Pg	Pg	17 45 04.9	-0.7
T35A	Sooner Cattle	1.12	78		Pg	17 45 05.1	-0.4
T35B	Sooner Cattle	1.12	78	P	Pg	17 45 05.3	-0.2
	baz=259						
T35B				S	Sg	17 45 20.3	+0.1
	baz=259						
OK030	Cody Creek RV	1.18	130	Pg	Pg	17 45 06.1	-0.4
OK025	Westminster Rd	1.20	158	Pg	Pg	17 45 06.7	-0.2
OKCFA	Oklahoma City	1.33	164		Pn	17 45 08.4	-0.1
OKCFA	Oklahoma City	1.33	164	P	Pn	17 45 09.0	+0.4
	baz=345						
OKCSW	OKLAHOMA CITY	1.34	164		Pn	17 45 09.1	+0.4
FNO	Franklin	1.49	165	Pn	Pn	17 45 11.5	+0.7
R32A	Long Quarter,	1.84	339	Pn	Pn	17 45 16.8	+1.1
R32A	Long Quarter,	1.84	339	P	Pn	17 45 16.9	+1.1
	baz=159						
R32A				S	Sb	17 45 41.1	+0.2
	baz=159						
TUL1	Leonard	1.86	114	Pn	Pn	17 45 16.6	+0.6
TUL1				IAmb_Lg		17 45 48.8	
	comp=Z,30nm,0.8s						
TUL1	Leonard	1.86	114	P	Pb	17 45 17.6	-0.5
	baz=296						
TUL1				Sb	Sg	17 45 43.3	-0.6
	baz=296						
WMOK	Wichita Mounta	2.08	201	Pn	Pn	17 45 19.5	+0.4
WMOK	Wichita Mounta	2.08	201	P	Pn	17 45 20.0	+1.0
	baz=20						
X34A	Smith Ranch, M	2.09	179		Pn	17 45 19.9	+0.9
X34A				IAmb_Lg		17 45 55.3	
	comp=Z,34nm,0.8s						
CBKS	Cedar Bluff	2.57	326		Pn	17 45 27.1	+1.3
CBKS				IAmb_Lg		17 46 06.2	
	comp=Z,25nm,0.9s						
KSU1	Kansas State U	2.60	22		Pn	17 45 26.9	+0.7
KSU1				IAmb_Lg		17 46 12.6	
	comp=Z,25nm,0.7s						
LOOK	Love County	2.76	168		Pn	17 45 28.7	+0.4
U38A	Gravette	2.83	94		Pn	17 45 29.5	+0.3
U38A				IAmb_Lg		17 46 18.0	
	comp=Z,20nm,0.7s						
X37A	Clayton	2.94	135	IAmb_Lg		17 46 23.9	
	comp=Z,17nm,0.7s						
HHAR	Hobbs	3.21	96		Pn	17 45 35.0	+0.5
Z35A	Perchaven, San	3.40	171	Pn	Pn	17 45 37.4	+0.4
W39A	Magazine	3.65	113		Pn	17 45 41.3	+0.8
W39A				IAmb_Lg		17 46 43.9	
	comp=Z,25nm,0.8s						
S39A	Bolivar	3.78	73		Pn	17 45 43.0	+0.8
S39A	Bolivar	3.78	73	P	Pn	17 45 43.4	+1.1
	baz=256						
U40A	Yellville	4.07	93		Pn	17 45 46.8	+0.5
U40A				IAmb_Lg		17 46 58.3	
	comp=Z,23nm,0.7s						
U40A	Yellville	4.07	93	P	Pn	17 45 47.4	+1.1
	baz=276						
U40A				P	Pn	17 45 47.4	+1.1
	baz=276						
MIAR	Mount Ida	4.11	120	Pn	Pn	17 45 47.0	+0.1
MIAR				IAmb_Lg		17 46 59.7	
	comp=Z,24nm,1.2s						
Z38A	Mt. Pleasant	4.17	144	IAmb_Lg		17 47 03.7	
	comp=Z,19nm,0.8s						
KSCO	Kaye Shedlock'	4.41	303	IAmb_Lg		17 47 13.7	
	comp=Z,15nm,0.8s						
P38A	Dawn	4.51	48	IAmb_Lg		17 47 10.7	
	comp=Z,14nm,0.8s						
MGMO	Mountain Grove	4.52	83	Pn	Pn	17 45 53.6	+1.1
MGMO				IAmb_Lg		17 47 10.5	
	comp=Z,19nm,1.0s						
X40A	Basin Creek Fa	4.67	117	IAmb_Lg		17 47 22.6	
	comp=Z,14nm,0.7s						
WHTX	Lake Whitney,	4.71	176	Pn	Pn	17 45 55.1	+0.1
BGNE	Belgrade	4.71	358	Pn	Pn	17 45 55.2	+0.1
R40A	Maddies Statio	4.74	69	Pn	Pn	17 45 56.1	+0.6
WHAR	Wooly Hollow	4.75	106	IAmb_Lg		17 47 20.3	
	comp=Z,16nm,1.0s						
T25A	Trinidad	5.25	277	IAmb_Lg		17 47 32.8	
	comp=Z,12nm,0.8s						
OGNE	Ogallala	5.34	324	Pn	Pn	17 46 02.7	-1.1
P40A	Paris	5.40	57	IAmb_Lg		17 47 39.9	
	comp=Z,9.4nm,0.7s						
T42A	Van Buren	5.46	84		Pn	17 46 02.2	-3.1
CCM	Cathedral Cave	5.46	74	IAmb_Lg		17 47 44.9	
	comp=Z,10nm,0.9s						
435B	Jarrell	5.90	177	IAmb_Lg		17 48 02.8	
	comp=Z,12nm,1.0s						
PBMO	Poplar Bluff	5.99	87	IAmb_Lg		17 47 55.6	
	comp=Z,15nm,0.7s						
FVM	French Village	6.08	76	IAmb_Lg		17 48 02.7	
	comp=Z,9.4nm,0.7s						
JCT	Junction City	6.40	195	IAmb_Lg		17 48 12.6	
	comp=Z,11nm,0.9s						
SIUC	Southern Illin	6.99	79	IAmb_Lg		17 48 26.8	
	comp=Z,10nm,0.7s						
JFWS	Jewell Farm	8.55	41	IAmb_Lg		17 49 23.5	
	comp=Z,9.8nm,0.7s						

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*IDC **05** 17:55:30.8±2.2, 19°.07N×143°.43E, h0^{km}, mb3.5/5, mb1 3.7/7, mb1mx3.5/61, mbtmp3.7/7, ML3.7/2, Error ellipse: s-maj=97.6km s-min=17.7km az=78.0*

ISC 05 17:55:32.8±0.9**, 19°.07N**±0°.10×**143°.2E**±0°.3**, h10^{km}, n7,** σ**0^{s}.99**/9**, mb3.3**/5**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	5.67	164	Pn	Pn	17 56 57.0	-0.2
	3.0nm,0.3s,baz=277,slow=17,SNR=1.4						
GUMO				Sn	Sn	17 58 03.6	+1.1
	4.9nm,0.3s,baz=346,slow=12,SNR=1.9						
JCJ	Chichijima	8.05	353	Pn	Pn	17 57 29.1	-0.7
	0.6nm,0.3s,baz=261,slow=18,SNR=1.1						
JCJ				Sn	Sn	17 59 01.4	+0.4
	1.5nm,0.3s,baz=204,slow=16,SNR=1.8						
WRA	Warramunga Arr	39.73	193	P	P	18 03 05.1	-0.7
	0.2nm,0.5s,baz=18,slow=8.0,SNR=5.1						
SONM	Songino Array	41.40	322	P	P	18 03 19.2	-0.3
	0.2nm,0.4s,baz=108,slow=7.7,SNR=1.7						
ASAR	Alice Springs	43.44	192	P	P	18 03 35.2	-0.9
	0.4nm,0.8s,baz=20,slow=7.5,SNR=4.5						
ZALV	Zalesovo Beam	56.30	323	P	P	18 05 14.8	+1.2
	0.4nm,0.4s,baz=104,slow=6.1,SNR=1.5						
MKAR	Makanchi Array	56.52	314	P	P	18 05 16.4	+1.0
	1.0nm,1.0s,baz=87,slow=8.7,SNR=1.2						

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*UPP **05** 18:00:59.5±0.1, 67°.06N×20°.93E, h0^{km}, ML1.9, Explosion*

*HEL **05** 18:01:00.3±0.1, 67°.07N×20°.97E, h0^{km}, ML2.0, ML1.9(UPP), Explosion*

*HEL **05** 18:01:00.0, 67°.08N×20°.97E, h0^{km}, ML2.0, Explosion*

*IDC **05** 18:01:00.3±0.9, 67°.09N×21°.26E, h0^{km}, mb1 2.8/4, mb1mx2.8/54, mbtmp2.8/4, ML2.0/4, Error ellipse: s-maj=19.1km s-min=6.8km az=114.0*

ISC 05 18:00:59.2±0.8**, 67°.08N**±0°.02×**20°.94E**±0°.03**, h0^{km}, n46,** σ**1^{s}.11**/61**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASU	Masugnsbyn	0.56	47	P	Pg	18 01 10.5	+0.6
MASU	Masugnsbyn	0.56	47	*i* P	Pg	18 01 10.5	+0.6
ERTU	Ertsjaerv	0.73	136	P	Pg	18 01 12.9	-0.1
ERTU				S	Sg	18 01 23.6	+1.2
ERTU	Ertsjaerv	0.73	136	*e*P	Pg	18 01 12.8	-0.3
	baz=315						
ERTU				*e*S	Sg	18 01 23.8	+1.4
PAJU	Pajala	0.86	93	P	Pg	18 01 15.4	-0.1
PAJU	Pajala	0.86	93	*e*P	Pg	18 01 15.3	-0.3
PAJU				*e*SB	Sg	18 01 26.9	+0.3
RATU	Laukkuluspa	0.91	326	P	Pg	18 01 16.6	+0.1
RATU	Laukkuluspa	0.91	326	*e*P	Pg	18 01 16.6	+0.1
HARU	Harads	0.92	179	P	Pg	18 01 16.5	-0.3
HARU	Harads	0.92	179	*e*P	Pg	18 01 16.5	-0.3
SALU	Saltoluokta	0.99	289	P	Pg	18 01 18.3	+0.1
SALU	Saltoluokta	0.99	289	*e*P	Pg	18 01 18.3	+0.1
LANU	Lannavaara	1.05	22	P	Pg	18 01 19.1	-0.2
LANU	Lannavaara	1.05	22	*e*P	Pg	18 01 19.1	-0.2
LANU				*e*SB	Sb	18 01 34.4	-0.2
NIKU	Nikkaluokta	1.08	318	P	Pg	18 01 19.8	0.0
NIKU	Nikkaluokta	1.08	318	*e*P	Pg	18 01 19.8	0.0
KOVU	Salmi	1.19	346	P	Pg	18 01 21.7	-0.1
KOVU	Salmi	1.19	346	*e*P	Pg	18 01 21.7	-0.1
KLF	Kolari	1.19	81	*e*P	Pg	18 01 21.6	-0.4
KLF				*e*SB	Sb	18 01 38.9	+0.4
KALU	Kalix	1.56	140	P	Pn	18 01 28.0	-0.2
KALU	Kalix	1.56	140	*e*P	Pn	18 01 27.9	-0.2
KALU				*e*S	Sn	18 01 47.5	-1.5
SJUU	Sjulsmark	1.60	170	P	Pn	18 01 28.6	-0.1
SJUU	Sjulsmark	1.60	170	*e*P	Pn	18 01 28.6	-0.1
TOF	Tornio	1.69	125	*e*P	Pn	18 01 30.1	+0.3
TOF				MSG		18 01 50.0	
	comp=Z,18nm,0.2s						
TOF				*e*S	Sn	18 01 50.4	-1.7
HEF	Hetta	1.69	37	*e*P	Pb	18 01 30.9	-0.2
HEF	Hetta	1.69	37	*e*P	Pn	18 01 30.3	+0.4
	baz=219						
HEF				*e*S	Sn	18 01 49.4	-2.8
HEF				MSG		18 01 50.3	
	comp=Z,14nm,0.2s						
KIF	Kilpisjarvi	1.93	359	*e*P	Pb	18 01 35.5	+0.3
KIF	Kilpisjarvi	1.93	359	*e*PB	Pb	18 01 35.2	0.0
KIF				MSG		18 01 58.8	
	comp=Z,16nm,0.2s						
RNF	Rovaniemi	2.06	101	*e*PB	Pn	18 01 36.2	+1.2
SGF	Sodankyl	2.20	78	*e*PB	Pn	18 01 38.4	+1.5
SGF				*e*SG	Sg	18 02 09.7	-0.2
BURU	Burvik	2.52	176	*e*P	Pn	18 01 42.5	+1.3
BURU				*e*SG	Sg	18 02 18.9	-0.9
OUL	Oulu	2.85	132	*e*PB	Pn	18 01 48.1	+2.4
	baz=319						
ARA0	ARCESS Array S	2.99	32	*e*P	Pn	18 01 48.7	+0.9
	baz=213						
ARA0				*e*S	Sn	18 02 23.8	-0.5
ARCES	ARCESS Array B	2.99	32	Pn	Pn	18 01 48.6	+0.8
	baz=217,slow=14,SNR=38						
ARCES				Sn	Sn	18 02 24.9	+0.5
	baz=239,slow=23,SNR=5.5						
ARCES				Lg	Lg	18 02 30.8	
	baz=215,slow=31,SNR=8.7						
OUF	Merijarvi	3.14	148	*e*P	Pn	18 01 51.7	+1.8
OUF				MSG		18 02 32.0	
	comp=Z,1.5nm,0.2s						
UMAU	Umeaa	3.21	182	*e*P	Pn	18 01 51.9	+1.1
VRF	Varrio	3.41	75	*e*P	Pn	18 01 55.8	+2.2
VRF				*e*SG	Sg	18 02 47.3	-1.4
MSF	Maaselka	3.45	106	*e*P	Pn	18 01 55.3	+1.2
KEV	Kevo	3.50	37	*e*P	Pn	18 01 55.5	+0.7
KU6	Riekki	3.73	102	*e*P	Pn	18 02 00.0	+2.0
	baz=288						
HUSU	Husum	3.82	192	*e*P	Pn	18 02 02.2	+3.0
VAF	Ylistaro	4.12	169	*e*P	Pn	18 02 05.3	+2.1
HEMU	Hemsoen	4.59	197	*e*P	Pn	18 02 10.8	+1.1
	baz=18						
FINES	FINESS Array B	6.08	156	Pn	Pn	18 02 31.5	+1.3
	comp=Z,0.1nm,0.3s,baz=343,slow=14,SNR=9.1						
FINES				Sn	Sn	18 03 39.5	-1.0
	comp=Z,0.1nm,0.3s,baz=342,slow=22,SNR=1.7						
NOA	NORSAR Array B	7.40	220	Pn	Pn	18 02 49.0	+0.7
	comp=Z,0.0nm,0.3s,baz=28,slow=11,SNR=1.4						
HFS	Hagfors	7.68	208	Pn	Pn	18 02 52.2	+0.1
	comp=Z,0.1nm,0.3s,baz=30,slow=13,SNR=8.5						
HFS				Sn	Sn	18 04 17.6	-2.1
	comp=Z,0.0nm,0.3s,baz=36,slow=20,SNR=1.5						

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*IDC **05** 18:01:20.2±0.8, 67°.05N×21°.48E, h0^{km}, mb1 3.2/5, mb1mx3.0/56, mbtmp3.2/5, ML2.2/5, Error ellipse: s-maj=17.4km s-min=7.9km az=106.0*

ISC 05 18:01:20.1±1.0**, 67°.05N**±0°.06×**21°.0E**±0°.1**, h10^{km}, n5,** σ**0^{s}.89**/8**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARCES	ARCESS Array B	3.00	32	Pn	Pn	18 02 07.6	-0.1
	baz=210,slow=14,SNR=23						
ARCES				Sn	Sn	18 02 44.3	+0.6
	baz=218,slow=22,SNR=6.0						
FINES	FINESS Array B	6.05	156	Pn	Pn	18 02 50.1	+0.6
	0.1nm,0.3s,baz=344,slow=14,SNR=7.3						
FINES				Sn	Sn	18 03 58.4	-0.2
	0.2nm,0.3s,baz=346,slow=23,SNR=6.8						
NOA	NORSAR Array B	7.40	220	Pn	Pn	18 03 09.4	+1.3
	0.0nm,0.3s,baz=36,slow=13,SNR=5.1						
HFS	Hagfors	7.67	209	Pn	Pn	18 03 12.0	+0.3
	0.2nm,0.3s,baz=21,slow=15,SNR=1.8						
HFS				Sn	Sn	18 04 37.5	-1.0
	0.1nm,0.3s,baz=22,slow=24,SNR=1.8						
SPITS	Spitsbergen Ar	11.27	355	Pn	Pn	18 04 00.3	-0.5
	baz=154,slow=14,SNR=5.3						

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*BJI **05** 18:02:51.5±0.0, 39°.44N×143°.36E, h5^{km}, mB5.1/59, mb4.9/78, Ms4.9/85, Ms7 4.8/79*

*IDC **05** 18:02:51.6±0.4, 39°.31N×143°.60E, h0^{km}, mb4.7/48, mb1 4.8/56, mb1mx4.7/77, mbtmp4.7/56, ML3.9/8, MS4.3/27, Ms1 4.3/27, ms1mx4.0/66, Error ellipse: s-maj=10.9km s-min=9.7km az=122.0*

*JMA **05** 18:02:52.6±0.1, 39°.37N×143°.69E, h35^{km}, M5.0*

JMA Felt I J1.

*NIED **05** 18:02:52.7, 39°.37N×143°.70E, h35^{km}, MW4.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}1.56; $M_{\theta\theta}$0.18; $M_{\phi\phi}$-1.74; $M_{r\theta}$0.27; $M_{\theta\phi}$-0.46; $M_{\phi r}$0.63; Fault plane solution: $M_0$1.84000×10^{16} NP1:ϕ_s18.00000°, δ56.00000°, λ96.00000°. NP2:ϕ_s187.00000°, δ34.00000°, λ82.00000°.*

*MOS **05** 18:02:53.9±1.1, 39°.50N×143°.45E, h22^{km}, mb5.3/39, MS4.9/19 Error ellipse: s-maj=5.2km s-min=3.5km az=105.3*

*NEIC **05** 18:02:54.0±1.2, 39°.43N±0°.05×143°.41E±0°.09, h10^{km}±1^{km}, mb5.0/265, Error ellipse: s-maj=11.9km s-min=8.6km az=284.0*

*GCMT **05** 18:02:59.0±0.5, 39°.26N±0°.02×143°.96E±0°.04, h40^{km}±1^{km}, MW4.8/60, Moment Tensor Solution. s21,c21; s60,c86; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.70±.20; $M_{\theta\theta}$-0.31±.12; $M_{\phi\phi}$-1.39±.12; $M_{r\theta}$0.47±.09; $M_{\theta\phi}$-0.77±.06; $M_{\phi r}$1.09±.08; Best double couple: $M_0$2.11000×10^{16} NP1:ϕ_s210.00000°, δ28.00000°, λ95.00000°. NP2: ϕ_s25.00000°, δ62.00000°, λ88.00000°. Principal axes: T 2.0660, Plg73.0000°, Azm289.0000°; N 0.0910, Plg2.0000°, Azm26.0000°; P -2.1540, Plg17.0000°, Azm117.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **05** 18:03:04.4±0.0, 38°.98N×143°.97E, h33^{km}, mb5.1*

ISC 05 18:02:54.1±0.5**, 39°.38N**±0°.03×**143°.59E**±0°.03**, h17^{km}**±2^{km}**, h17^{km}:pP-P, n915,** σ**1^{s}.61**/993**, mb5.0**/262**, MS4.7**/64**, 91C-39D, Fault plane solution: NP1:**ϕ_s178.26956°**,** δ50.09682°**,** λ56.56755°. **NP2:**ϕ_s44.09258°**,** δ50.19347°**,** λ123.37923°. **Principal axes:** T Plg64.9978°**,** Azm21.0856°**;** N Plg25.0022°**,** Azm201.2226°**;** P Plg0.0525°**,** Azm111.1981°**; Fault plane solution: NP1:**ϕ_s352.04001°**,** δ50.22100°**,** λ65.16990°. **NP2:** ϕ_s207.91322°**,** δ45.77531°**,** λ116.76593°. **Principal axes:** T Plg71.0170°**,** Azm196.1394°**;** N Plg18.8277°**,** Azm8.5314°**;** P Plg2.3361°**,** Azm99.3284°**; Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	1.38	279	⇑P	Pn	18 03 17.6	-1.0
JTH	Tanohata	1.45	293	⇑P	Pn	18 03 18.3	-1.2

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JTH                                   eS      Sn      18 03 37.9  -0.1
OFUJ   Ofunato            1.52 259   ⇑P      Pn      18 03 19.5  -1.0
OFUJ                                  eS      Sn      18 03 39.3  -0.5
JKMT   Kesennumamotoy     1.74 252   ⇑P      Pn      18 03 22.6  -0.9
JOM    Ohasama            1.78 274   ⇑P      Pn      18 03 23.7  -0.4
JOM                                   eS      Sn      18 03 46.2  -0.1
JKZ    Kuzumaki           1.85 290   ⇑P      Pn      18 03 24.5  -0.5
JANG   Nango              1.88 303   ⇑P      Pn      18 03 24.1  -1.4
JMK    Ichinoseki         1.89 258   ⇑P      Pn      18 03 25.1  -0.4
JMK                                   eS      Sn      18 03 48.7  -0.2
JIKH   Ishinomakikobu     1.97 238    P       Pn      18 03 25.5  -1.1
JIO    Ouri               1.98 243    P       Pn      18 03 25.7  -1.0
JIO                                   eS      Sn      18 03 49.6  -1.4
JOFO   Osakifurukawao     2.23 251    P       Pn      18 03 30.4  +0.3
JRG    Rokugo             2.29 271    P       Pn      18 03 31.4  +0.3
JTM    Tenmabayashi       2.39 307    Pn      Pn      18 03 31.6  -0.9
JOU    Okura              2.50 247   ⇑P      Pn      18 03 33.5  -0.4
JYK    Kaneyama           2.55 261   ⇑P      Pn      18 03 34.7   0.0
JYW    Yuwa               2.62 275    P       Pn      18 03 36.3  +0.7
ERM    Erimo              2.66 353ceP        Pn      18 03 35.1  -1.0
ERM                                   pmax    pmax
       comp=Z,195nm,1.0s
ERM    Erimo              2.66 353    Pn      Pn      18 03 34.8  -1.3
ERM    Erimo              2.66 353    P       Pn      18 03 36.8  +0.7
JMM    Marumori           2.66 236    P       Pn      18 03 35.0  -1.1
JMM    Marumori           2.66 236            Pn      18 03 34.8  -1.3
JOT    Ohata              2.79 317    P       Pn      18 03 37.8  -0.1
JNBK   Urakawa-nobuka     2.97 348    P       Pn      18 03 40.0  -0.4
JNBK                                  eS      Sn      18 04 15.0  -0.6
JYS    Shirataka          2.98 248    P       Pn      18 03 41.1  +0.5
JYA    Atsumi             3.12 257   ⇑P      Pn      18 03 43.0  +0.5
JFT    Otama              3.16 235    P       Pn      18 03 42.6  -0.4
JFT                                   eS      Sn      18 04 18.4  -1.8
JKB    Kayabe             3.18 323    P       Pn      18 03 43.6  +0.4
JCH    Churui             3.24 357    P       Pn      18 03 42.4  -1.7
JCH                                   eS      Sn      18 04 19.7  -2.6
JAW    Awa shima          3.51 256    P       Pn      18 03 48.6  +0.8
JNS    Sasagawa           3.69 246    P       Pn      18 03 50.4  +0.1
JAK    Akkeshi            3.71  13   ⇓P      Pn      18 03 48.4  -2.2
JAK                                   S       Sn      18 04 30.1  -3.8
JEW    Eniwo              3.82 336    Pn      Pn      18 03 51.4  -0.7
JYT    Yasato             4.13 222    Pn      Pn      18 03 54.6  -1.8
NMR    Nemuro--Hokkai     4.30  21    eP      Pn      18 03 56.0  -2.7
NMR                                   eS      Sn      18 04 43.1  -5.3
JSD    Sado               4.38 254   ⇑P      Pn      18 03 59.9  +0.2
JSD    Sado               4.38 254    Pn      Pn      18 03 59.6  -0.1
GLVR   Golovnino          4.59  18    eP      Pn      18 04 00.7  -2.0
GLVR                                  eS      Sn      18 04 51.6  -4.0
GLVR                                  pmax    pmax
       comp=Z,362nm,0.4s
GLVR                                  pmax    pmax
       comp=E,85nm,0.2s
GLVR                                  pmax    pmax
       comp=N,157nm,0.3s
GLVR                                  smax    smax
       comp=N,2μm,0.8s
GLVR                                  smax    smax
       comp=E,2μm,0.8s
JKA    Kamikawa-asahi     4.79 351    Pn      Pn      18 04 04.7  -0.7
JKA    Kamikawa-asahi     4.79 351            Sn      18 05 01.8  +1.2
ASAJ   Asahikawa          4.79 351    Pn      Pn      18 04 06.0  +0.6
       comp=E,8.8nm,0.3s,baz=207,slow=13,SNR=73
ASAJ                                  Sn      Sn      18 05 01.8  +1.2
       comp=E,13nm,0.3s,baz=42,slow=25,SNR=4.2
JGK    Kuni               4.81 236    P       Pn      18 04 07.1  +1.3
RUSJ   Misakicho          4.88  14    eP      Pn      18 04 04.5  -2.2
RUSJ                                  eS      Sn      18 04 57.4  -5.4
GRPR   Tuman              4.89  19    eP      Pn      18 04 04.3  -2.5
GRPR                                  eS      Sn      18 04 56.8  -6.2
GRPR                                  pmax    pmax
       comp=Z,380nm,0.3s
GRPR                                  pmax    pmax
       comp=N,167nm,0.2s
GRPR                                  pmax    pmax
       comp=E,52nm,0.1s
GRPR                                  smax    smax
       comp=E,3μm,0.6s
GRPR                                  smax    smax
       comp=N,3μm,0.5s
YUK    Yuzh-Kuril'sk      4.96  19    eP      Pn      18 04 05.6  -2.1
YUK                                   eS      Sn      18 04 59.7  -4.8
YUK                                   pmax    pmax
       comp=Z,438nm,0.5s
YUK                                   pmax    pmax
       comp=E,158nm,0.2s
YUK                                   pmax    pmax
       comp=N,76nm,0.4s
YUK                                   smax    smax
       comp=N,3μm,0.6s
YUK                                   smax    smax
       comp=E,3μm,0.5s
YUK                                   MLR     MLR
       comp=Z,2μm,16.0s
YUK                                   MLR     MLR
       comp=N,1μm,9.0s
JKUC   kamogawauchiur     5.00 214    P       Pn      18 04 07.0  -1.3
MJAR   Matsushiro Arr     5.11 238    Pn      Pn      18 04 10.4  +0.6
       comp=N,5.5nm,0.3s,baz=36,slow=15,SNR=432
MJAR                                  LR      LR      18 06 01.2
       comp=N,883nm,19.6s,baz=60,slow=37
MJAR   Matsushiro Arr     5.11 238    P       Pn      18 04 09.8   0.0
MJAR   Matsushiro Arr     5.11 238    Pn      Pn      18 04 09.8   0.0
MAJO   Matsushiro         5.11 238c iP        Pn      18 04 10.8  +1.0
MAJO   Matsushiro         5.11 238    Pn      Pn      18 04 10.7  +0.9
MAJO   Matsushiro         5.11 238    P       Pn      18 04 11.5  +1.7
MAT    Matsushiro         5.11 238    P       Pn      18 04 10.8  +1.0
MAT                                   S       Sn      18 05 10.4  +2.0
MAT    Matsushiro         5.11 238    P       Pn      18 04 10.8  +1.0
MJB9   Matsu-Tunnel       5.11 238            Pn      18 04 09.7  -0.1
JSZ    Suzu               5.25 250   ⇑P      Pn      18 04 12.2  +0.4
JNG    Nsakai             5.26 237    P       Pn      18 04 12.9  +1.0
AJI    Ajiro2             5.62 221    P       Pn      18 04 15.8  -1.0
JGN    Niukaw             5.88 240    P       Pn      18 04 21.7  +1.2
JJH    Hakui              5.90 248    P       Pn      18 04 22.0  +1.4
JNY    Yasuok             6.07 230    P       Pn      18 04 23.7  +0.6
JGF    Kuroka             6.22 235    P       Pn      18 04 26.3  +1.1
JGF    Kuroka             6.22 235            Pn      18 04 25.1  -0.1
JSG    Sagara             6.38 224            Pn      18 04 25.3  -2.0
JYZW   Yoshizawa          6.40 229    P       Pn      18 04 27.4  -0.1
JAO    Obara              6.50 233    P       Pn      18 04 29.6  +0.6
JKG    Kaga               6.52 244    P       Pn      18 04 31.0  +1.8
INU    Inuyama            6.60 235    Pn      Pn      18 04 29.4  -0.8
INU    Inuyama            6.60 235    P       Pn      18 04 31.6  +1.3
KUR    Kuril'sk           6.66  27ceP        Pn      18 04 29.9  -1.1
KUR                                   eS      Sn      18 05 40.8  -5.6
KUR                                   pmax    pmax
       comp=Z,166nm,0.7s
KUR                                   pmax    pmax
       comp=E,74nm,0.6s
KUR                                   pmax    pmax
       comp=N,27nm,0.4s
KUR                                   smax    smax
       comp=N,247nm,0.5s
KUR                                   smax    smax
       comp=E,761nm,0.5s
KUR                                   smax    smax
       comp=Z,1μm,15.0s
JHJ2   Mitsune            6.95 207    Pn      Pn      18 04 33.4  -1.8
JHJ2   Mitsune            6.95 207    P       Pn      18 04 33.8  -1.3
JHJ    Hachijo jima 2     6.96 207    Pn      Pn      18 04 33.6  -1.6
       comp=Z,35nm,0.3s,baz=343,slow=19,SNR=26
JHJ                                   Sn      Sn      18 05 47.5  -6.4
       comp=Z,82nm,0.3s,baz=54,slow=23,SNR=11
JFM    Mihama             7.17 240    P       Pn      18 04 39.9  +1.9
YSS    Yuzh-Sakhalins     7.60 356    eP      Pn      18 04 45.3  +1.3
YSS                                   eS      Sn      18 06 08.7  -0.9
YSS                                   pmax    pmax
       comp=Z,60nm,0.9s
YSS                                   MLR     MLR
       comp=Z,3μm,20.0s
YSS                                   MLR     MLR
       comp=N,4μm,14.0s
YSS    Yuzh-Sakhalins     7.60 356    Pn      Pn      18 04 44.0   0.0
YSS    Yuzh-Sakhalins     7.60 356    P       Pn      18 04 45.5  +1.5
TEY    Ternei             7.67 320⇑eP        Pn      18 04 47.2  +2.3
TEY                                   pmax    pmax
       comp=N,70nm,0.8s
TEY                                   pmax    pmax
       comp=E,90nm,0.8s
TEY                                   pmax    pmax
       comp=Z,110nm,0.8s
TEY                                   MLR     MLR
       comp=E,200nm,13.0s
TEY                                   MLR     MLR
       comp=N,100nm,15.0s
TEY                                   MLR     MLR
       comp=Z,200nm,12.0s
JWT    Wachi              7.70 240    Pn      Pn      18 04 46.0  +0.6
JHS    Saijyo             9.43 246    Pn      Pn      18 05 10.8  +1.7
VLA    Vladivostok        9.57 297⇑eP        Pn      18 05 12.9  +1.9
JMN    Monobe             9.63 237    Pn      Pn      18 05 11.7  -0.2
USA0B  Ussuriysk Arra     9.91 303    P       Pn      18 05 17.0  +1.3
USA0B  Ussuriysk Arra     9.91 303    Pn      Pn      18 05 17.0  +1.3
USRK   Ussuriysk Ar.      9.91 303    Pn      Pn      18 05 17.5  +1.8
       baz=110,slow=13,SNR=32
USRK                                  LR      LR      18 09 04.7
       comp=Z,2μm,18.1s,baz=110,slow=38
USRK   Ussuriysk Ar.      9.91 303    Pn      Pn      18 05 17.2  +1.5
MSHR   Mys Shultsa        9.93 293⇑eP        Pn      18 05 15.4  -0.5
TYV    Tymovskoe         11.51 357    eP      Pn      18 05 36.8  -0.7
TYV                                   e       Sn      18 07 43.9  -1.6
TYV                                   pmax    pmax
       comp=Z,20nm,1.4s
TYV                                   pmax    pmax
       comp=Z,300nm,2.7s
TYV                                   MLR     MLR
       comp=Z,3μm,15.0s
MDJ    Mudanjiang        11.65 301    P       Pn      18 05 41.3  +1.8
MDJ                                   S       Sn      18 07 45.4  -3.7
MDJ                                   pmax    pmax
       comp=Z,62nm,1.0s
MDJ                                   pmax    pmax
       comp=Z,730nm,9.5s
MDJ                                   LR      LR
       comp=Z,3μm,11.7s
MDJ                                   LR      LR
       comp=Z,5μm,13.9s
MDJ                                   LR      LR
       comp=Z,7μm,14.2s
MDJ    Mudanjiang        11.65 301    Pn      Pn      18 05 40.3  +0.8
JNU    Nakatsue          12.00 243    Pn      Pn      18 05 43.9  -0.6
       comp=Z,1.0nm,0.3s,baz=53,slow=9.7,SNR=14
JNU    Nakatsue          12.00 243    Pn      Pn      18 05 43.5  -0.9
JCJ    Chichijima        12.30 186    Pn      Pn      18 05 44.7  -3.7
       comp=Z,7.9nm,0.3s,baz=281,slow=23,SNR=9.3
JCJ                                   Sn      Sn      18 07 51.4   -14
       comp=Z,24nm,0.3s,baz=305,slow=20,SNR=7.1
KSRS   Korea Array       12.44 266    Pn      Pn      18 05 51.4  +1.1
       comp=Z,0.4nm,0.3s,baz=82,slow=13,SNR=38
KSRS                                  LR      LR      18 10 19.3
       comp=Z,2μm,18.7s,baz=80,slow=36
GRNR   Gornyy            12.46 338⇓iP        Pn      18 05 50.7  +0.2
GRNR                                  eS      Sn      18 08 12.6  +3.8
GRNR                                  pmax    pmax
       comp=E,10.0nm,0.8s
GRNR                                  pmax    pmax
       comp=N,20nm,0.9s
GRNR                                  pmax    pmax
       comp=Z,20nm,1.0s
GRNR                                  smax    smax
       comp=N,4.0nm,0.9s
GRNR                                  MLR     MLR
       comp=E,1μm,15.0s
GRNR                                  MLR     MLR
       comp=N,880nm,16.0s
GRNR                                  MLR     MLR
       comp=Z,2μm,13.0s
KS19   Wonju Array Si    12.47 266            Pn      18 05 50.2  -0.5
KSAR   Wonju Array Be    12.47 266    P       Pn      18 05 50.1  -0.6
KSAR   Wonju Array Be    12.47 266    Pn      Pn      18 05 50.1  -0.6
KLR    Kul'dur           12.98 323    Pn      Pn      18 05 57.8  +0.1
       comp=Z,0.3nm,0.3s,baz=135,slow=13,SNR=25
KLR                                   LR      LR      18 11 15.6
       comp=Z,2μm,18.6s,baz=137,slow=39
KLR    Kul'dur           12.98 323deP        Pn      18 05 57.5  -0.1
TJN    Taejon            13.16 262⇓eP        Pn      18 06 01.2  +1.0
JSU    Suzuyama          13.27 238            Pn      18 06 01.5  -0.2
OKH    Okha              14.19 358deP        Pn      18 06 16.7  +2.7
OKH                                   eS      Sn      18 08 44.4  -6.5
OKH                                   pmax    pmax
       comp=Z,100nm,12.3s
OKH                                   smax    smax
       comp=E,400nm,21.4s
OKH                                   MLR     MLR
       comp=E,4μm,19.0s
OKH                                   MLR     MLR
       comp=N,3μm,17.0s
OKH                                   MLR     MLR
       comp=Z,2μm,18.0s
CN2    Changchun         14.28 294    eP      Pn      18 06 15.3   0.0
CN2                                   pmax    pmax
       comp=Z,10.0nm,0.8s
CN2                                   pmax    pmax
       comp=Z,400nm,9.0s
CN2                                   LR      LR
       comp=Z,2μm,12.0s
CN2                                   LR      LR
       comp=Z,2μm,12.0s
CN2                                   LR      LR
       comp=Z,2μm,14.0s
PEA0B  Petropavlovsk-    16.80  31⇑eP        Pn      18 06 47.3  -1.1
PEA0B  Petropavlovsk-    16.80  31            Pn      18 06 47.5  -0.9
PETK   Petropavlovsk-    16.80  31    Pn      P       18 06 51.0  +0.5
       comp=Z,0.2nm,0.3s,baz=205,slow=5.9,SNR=12
PETK                                  LR      LR      18 12 39.8
       comp=Z,362nm,21.0s,baz=217,slow=35
PETK   Petropavlovsk-    16.80  31    P       Pn      18 06 48.9  +0.5
PETK   Petropavlovsk-    16.80  31    P       Pn      18 06 48.9  +0.5
DL2    Dalian            17.04 275    P       Pn      18 06 51.6  +0.1
DL2                                   S       Sn      18 09 58.3  -2.2
DL2                                   pmax    pmax
       comp=Z,64nm,1.4s
DL2                                   pmax    pmax
       comp=Z,540nm,5.5s
DL2                                   LR      LR
       comp=Z,2μm,13.5s
DL2                                   LR      LR
       comp=Z,1μm,14.1s
DL2                                   LR      LR
       comp=Z,2μm,16.5s
PET    Petropavlovsk     17.13  32    eP      P       18 06 55.3  +1.3
PET                                   eS      Sn      18 10 03.0  +0.7
PET                                   pmax    pmax
       comp=Z,94nm,1.3s
PET                                   MLR     MLR
       comp=Z,600nm,19.0s
PET                                   MLR     MLR
       comp=Z,700nm,19.0s
PET    Petropavlovsk     17.13  32    P       P       18 06 54.8  +0.7
ZEA    Zeya              18.17 328    eP      Pn      18 07 02.4  -3.0
ZEA                                   eS      Sn      18 10 11.8   -16
ZEA                                   pmax    pmax
       comp=E,30nm,0.9s
ZEA                                   pmax    pmax
       comp=N,30nm,1.3s
ZEA                                   pmax    pmax
       comp=Z,60nm,1.0s
ZEA                                   smax    smax
       comp=E,200nm,11.6s
ZEA                                   MLR     MLR
       comp=E,1μm,17.0s
ZEA                                   MLR     MLR
       comp=N,600nm,14.0s
ZEA                                   MLR     MLR
       comp=Z,1μm,16.0s
HIA    Hailar            19.64 308    P       P       18 07 19.8  -2.0
HIA                                   pmax    pmax
       comp=Z,45nm,0.9s
HIA    Hailar            19.64 308    P       P       18 07 19.8  -2.0
SSE    Sheshan           20.04 253    P       Pn      18 07 27.7  -0.3
SSE                                   S       S       18 11 11.5  +0.7
SSE                                   pmax    pmax
       comp=Z,42nm,0.9s
SSE                                   pmax    pmax
       comp=Z,220nm,3.5s
SSE                                   LR      LR
       comp=Z,620nm,13.9s
SSE                                   LR      LR
       comp=Z,750nm,13.9s
MA2    Magadan           20.73  10    P       P       18 07 34.3  +0.9
       comp=Z,18nm,0.8s,baz=182,slow=23,SNR=7.7
MA2    Magadan           20.73  10⇑eP        P       18 07 31.8  -1.6
MA2                                   pmax    pmax
       comp=Z,43nm,1.8s
MA2    Magadan           20.73  10            P       18 07 33.7  +0.2
MA2                                   IAmb    IAmb    18 07 44.6
       comp=Z,88nm,0.8s
BJI    Beijing           21.07 281    P       P       18 07 34.8  -2.6
BJI                                   sP      pP      18 07 40.7  -0.8
BJI                                   S       S       18 11 29.4  -1.8
BJI                                   pmax    pmax
       comp=Z,72nm,1.1s
BJI                                   LR      LR
       comp=Z,560nm,13.1s
BJI                                   LR      LR
       comp=Z,2μm,14.5s
BJI                                   LR      LR
       comp=Z,3μm,16.0s
BJT    Baijiatuau        21.08 281    P       P       18 07 34.4  -3.1
BJT                                   pmax    pmax
       comp=Z,50nm,0.9s
BJT    Baijiatuau        21.08 281    P       P       18 07 34.4  -3.1
BJT                                   IAmb    IAmb    18 07 36.1
       comp=Z,50nm,0.9s
TIA    Tai'an            21.13 270    P       P       18 07 36.0  -2.0
TIA                                   S       S       18 11 22.9  -9.5
TIA                                   pmax    pmax
       comp=Z,26nm,0.9s
TIA                                   pmax    pmax
       comp=Z,160nm,4.0s
TIA                                   LR      LR
       comp=Z,740nm,12.1s
TIA                                   LR      LR
       comp=Z,3μm,12.1s
TIA                                   LR      LR
       comp=Z,4μm,13.5s
NJ2    Nanjing           21.33 258    eP      P       18 07 41.4  +1.2
NJ2                                   sP      sP      18 07 46.4  +0.4
NJ2                                   pmax    pmax
       comp=Z,34nm,0.9s
YHNB   Yeheng            23.78 239    P       P       18 08 03.5  -2.4
YHNB                                  IAmb    IAmb    18 08 05.3
       comp=Z,88nm,1.3s
NACB   Ninganchiao       23.98 237    P       P       18 08 05.2  -2.5
NACB                                  IAmb    IAmb    18 08 06.6
       comp=Z,26nm,0.8s
SEY    Seymchan          24.18  10    P       P       18 08 10.1  +0.9
       comp=Z,16nm,0.8s,baz=202,slow=7.3,SNR=21
SEY                                   LR      LR      18 19 26.1
       comp=Z,853nm,18.1s,baz=192,slow=41
SEY    Seymchan          24.18  10⇑eP        P       18 08 09.7  +0.5
YAK    Yakutsk           24.23 344    P       P       18 08 09.3  -0.4
       comp=Z,28nm,0.7s,baz=339,slow=4.9,SNR=21
YAK                                   LR      LR      18 18 08.9
       comp=Z,402nm,19.9s,baz=104,slow=38
YAK    Yakutsk           24.23 344d iP        P       18 08 08.9  -0.7
YAK                                   e*PP    pwP     18 08 19.7  +1.8
YAK                                   ePPP    PPP     18 08 46.6
YAK                                   eS      S       18 12 24.8  -2.3
YAK                                   eSS             18 13 09.7
YAK                                   pmax    pmax
       comp=Z,64nm,1.0s
YAK                                   pmax    pmax
       comp=E,8.0nm,1.1s
YAK                                   pmax    pmax
       comp=N,26nm,0.9s
YAK                                   pmax    pmax
       comp=Z,30nm,0.8s
YAK                                   pmax    pmax
       comp=N,71nm,1.4s
YAK                                   pmax    pmax
       comp=E,83nm,1.6s
YAK                                   smax    smax
       comp=E,173nm,2.4s
YAK                                   smax    smax
       comp=N,112nm,1.9s
YAK                                   MLR     MLR
       comp=Z,1μm,13.0s
YAK                                   MLR     MLR
       comp=N,803nm,13.0s
YAK                                   MLR     MLR
       comp=E,582nm,12.0s
YAK    Yakutsk           24.23 344    P       P       18 08 08.4  -1.2
YAK                                   IAmb    IAmb    18 08 11.8
       comp=Z,64nm,0.8s
CIT    Chita             24.30 311    eP      P       18 08 08.5  -2.0
CIT                                   e               18 08 20.0
CIT                                   e               18 08 52.5
CIT                                   pmax    pmax
       comp=Z,191nm,1.1s
TIY    Taiyuan           24.37 276⇑eP        P       18 08 13.0  +1.7
TIY                                   pmax    pmax
       comp=Z,24nm,0.7s
TIY                                   pmax    pmax
       comp=Z,180nm,5.6s
TIY                                   LR      LR
       comp=Z,810nm,12.0s
TIY                                   LR      LR
       comp=Z,920nm,15.3s
TIY                                   LR      LR
       comp=Z,1μm,16.7s
HHC    Hu-ho-hao-te      24.47 284    eP      P       18 08 10.0  -2.2
HHC                                   PP      PnPn    18 08 42.1  -0.9
HHC                                   pmax    pmax
       comp=Z,21nm,0.9s
HHC                                   pmax    pmax
       comp=Z,230nm,5.2s
HHC                                   LR      LR
       comp=Z,490nm,12.5s
HHC                                   LR      LR
       comp=Z,2μm,15.4s
HHC                                   LR      LR
       comp=Z,3μm,15.8s
SSLB   Suanglung         24.67 238    P       P       18 08 12.1  -1.9
SSLB                                  IAmb    IAmb    18 08 13.9
       comp=Z,46nm,0.8s
YULB   Yu-li             24.72 236    P       P       18 08 11.2  -3.3
YULB                                  IAmb    IAmb    18 08 34.1
       comp=Z,39nm,1.0s
TPUB   Ta-pu             25.22 237    P       P       18 08 17.1  -2.0
TPUB                                  IAmb    IAmb    18 08 21.7
       comp=Z,60nm,0.9s
TWG    Pinlang           25.27 236    P       P       18 08 18.9  -0.6
WHN    Wuhan             25.45 259   ⇑P      P       18 08 21.1  +0.1
WHN                                   S       S       18 12 47.1  -0.1
WHN                                   LR      LR
       comp=Z,760nm,11.5s
WHN                                   LR      LR
       comp=Z,3μm,13.4s
WHN                                   LR      LR
       comp=Z,4μm,13.8s
QZH    Quanzhou          25.48 243    eP      P       18 08 22.0  +0.7
QZH                                   S       S       18 12 51.0  +3.2
QZH                                   LR      LR
       comp=Z,1μm,14.8s
QZH                                   LR      LR
       comp=Z,850nm,12.8s
QZH                                   LR      LR
       comp=Z,2μm,13.4s
BTO    Baotou            25.66 284    eP      P       18 08 22.4  -0.6
BTO                                   S       S       18 12 52.8  +2.0
BTO                                   LR      LR
       comp=Z,2μm,14.3s
BTO                                   LR      LR
       comp=Z,8μm,16.9s
GUMO   Guam              25.71 177    LR      LR      18 16 19.3
       comp=Z,204nm,21.5s,baz=8.0,slow=32
BOD    Bodaibo           26.56 324    eP      P       18 08 30.9  +0.1
BOD                                   pmax    pmax
       comp=Z,85nm,1.0s
ULN    Ulaanbaatar       27.57 300c iP        P       18 08 40.5  +0.3
ULN                                   pmax    pmax
       comp=Z,55nm,1.3s
ULN    Ulaanbaatar       27.57 300    P       P       18 08 40.3  +0.1
ULN                                   IAmb    IAmb    18 08 42.0
       comp=Z,45nm,1.1s
SONM   Songino Array     28.00 300    P       P       18 08 44.9  +0.8
       comp=Z,8.3nm,0.6s,baz=97,slow=8.9,SNR=48
SONM                                  LR      LR      18 20 28.6
       comp=Z,1μm,19.9s,baz=78,slow=38
SONM   Songino Array     28.00 300    P       P       18 08 44.5  +0.4
SONM                                  pmax    pmax
       comp=Z,29nm,0.9s
SONM   Songino Array     28.00 300    P       P       18 08 44.5  +0.4
SONM                                  IAmb    IAmb    18 08 57.0
       comp=Z,29nm,0.9s
H11N2  WAKE ISLAND Hy    28.04 128    T       T       18 38 11.4
       baz=320
H11N3  WAKE ISLAND Hy    28.06 128    T       T       18 38 04.4
       baz=320
XAN    Xi'an             28.19 270    P       P       18 08 46.4  +0.7
XAN                                   pmax    pmax
       comp=Z,290nm,8.2s
XAN                                   LR      LR
       comp=Z,1μm,12.4s
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XAN				LR	LR		
	comp=Z,940nm,11.7s						
XAN				LR	LR		
	comp=Z,2µm,11.7s						
H11S1	WAKE ISLAND Hy	28.86	129	T	T	18 39 08.8	
	baz=321,slow=76,SNR=26						
H11S3	WAKE ISLAND Hy	28.86	130	T	T	18 39 22.4	
	baz=321,slow=76,SNR=22						
H11S2	WAKE ISLAND Hy	28.87	130	T	T	18 39 19.5	
	baz=321,slow=76,SNR=26						
ENH	Enshi	29.29	263	P	P	18 08 54.6	-0.9
IRK	Irkutsk	29.89	309	eP	P	18 08 58.5	-2.1
IRK				pmax	pmax		
	comp=Z,43nm,2.0s						
TLY	Talaya	30.18	307	LR	LR	18 21 41.0	
	comp=Z,323nm,18.1s,baz=101,slow=37						
TLY	Talaya	30.18	307	eP	P	18 09 05.9	+2.6
TLY				e	PP	18 10 17.3	+6.0
TLY				pmax	pmax		
	comp=Z,67nm,1.1s						
TLY				MLR	MLR		
	comp=Z,3µm,13.0s						
TLY	Talaya	30.18	307	P	P	18 09 03.2	0.0
TLY				IAmb	IAmb	18 09 16.1	
	comp=Z,25nm,1.0s						
ZAK	Zakamensk	30.25	305	eP	P	18 09 03.8	-0.2
ZAK				pmax	pmax		
	comp=Z,27nm,1.1s						
BILL	Bilibino	31.30	16	⇓eP	P	18 09 12.2	-0.7
BILL				e	PP	18 10 17.1	-6.4
BILL				pmax	pmax		
	comp=Z,8.0nm,1.3s						
BILL				MLR	MLR		
	comp=Z,249nm,15.0s						
BILL	Bilibino	31.30	16	P	P	18 09 13.5	+0.6
BILL				IAmb	IAmb	18 09 23.2	
	comp=Z,19nm,0.9s						
LZH	Lanzhou	31.43	277	⇓P	P	18 09 15.1	+0.5
LZH				pP	pP	18 09 19.6	+0.5
LZH				sP	pwP	18 09 22.2	-0.3
LZH				S	S	18 14 23.7	+2.0
LZH				sS	sS	18 14 29.3	+0.3
LZH				SS	SnSn	18 16 01.3	-4.7
LZH				pmax	pmax		
	comp=Z,24nm,1.2s						
LZH				pmax	pmax		
	comp=Z,250nm,5.2s						
LZH				LR	LR		
	comp=Z,1µm,13.6s						
LZH				LR	LR		
	comp=Z,3µm,13.0s						
LZH				LR	LR		
	comp=Z,2µm,14.6s						
TIXI	Tiksi	33.20	352	P	P	18 09 29.3	-0.2
	comp=Z,2.7nm,0.7s,baz=134,slow=6.5,SNR=10						
TIXI				LR	LR	18 24 17.3	
	comp=Z,526nm,18.8s,baz=182,slow=39						
TIXI	Tiksi	33.20	352	⇓eP	P	18 09 29.4	-0.1
TIXI	Tiksi	33.20	352	P	P	18 09 28.5	-1.0
GYA	Guiyang	33.34	259	⇓iP	P	18 09 31.2	-0.1
GYA				PP	PnPn	18 10 39.4	-2.5
GYA				S	S	18 14 49.5	-1.9
GYA				pmax	pmax		
	comp=Z,41nm,1.2s						
GYA				pmax	pmax		
	comp=Z,260nm,3.5s						
GYA				LR	LR		
	comp=Z,460nm,12.4s						
GYA				LR	LR		
	comp=Z,720nm,15.5s						
GYA				LR	LR		
	comp=Z,1µm,13.2s						
CD2	Chengdu	33.43	268	P	P	18 09 31.4	-0.6
CD2				pP	pP	18 09 36.1	-0.4
CD2				S	S	18 14 49.4	-3.3
CD2				pmax	pmax		
	comp=Z,60nm,0.9s						
CD2				pmax	pmax		
	comp=Z,210nm,8.8s						
CD2				LR	LR		
	comp=Z,2µm,13.3s						
CD2				LR	LR		
	comp=Z,1µm,14.1s						
CD2				LR	LR		
	comp=Z,2µm,13.1s						
GTA	Gaotai	33.58	284	⇑P	P	18 09 34.0	+0.6
GTA				pP	sP	18 09 39.0	-0.5
GTA				sP	pwP	18 09 43.3	+2.0
GTA				S	S	18 14 58.7	+3.7
GTA				sS	sS	18 15 08.3	+5.9
GTA				pmax	pmax		
	comp=Z,53nm,1.3s						
GTA				pmax	pmax		
	comp=Z,210nm,8.4s						
GTA				LR	LR		
	comp=Z,680nm,16.3s						
GTA				LR	LR		
	comp=Z,2µm,17.9s						
GTA				LR	LR		
	comp=Z,3µm,15.5s						
QIZ	Qiongzhong	35.46	245	P	P	18 09 49.8	+0.2
QIZ				S	S	18 15 23.8	-0.3
QIZ				LR	LR		
	comp=Z,560nm,16.1s						
QIZ				LR	LR		
	comp=Z,810nm,15.7s						
QIZ				LR	LR		
	comp=Z,1µm,13.5s						
KMI	Kunming	37.03	260	⇑P	P	18 10 03.6	+0.3
KMI				pP	pP	18 10 07.6	-0.2
KMI				S	S	18 15 44.5	-4.0
KMI				pmax	pmax		
	comp=Z,19nm,1.6s						
KMI				pmax	pmax		
	comp=Z,200nm,5.4s						
KMI				LR	LR		
	comp=Z,640nm,15.2s						
KMI				LR	LR		
	comp=Z,680nm,16.1s						
KMI				LR	LR		
	comp=Z,570nm,17.9s						
SLVN	Son La	38.31	254	P	P	18 10 14.0	0.0
DGZ	Jazzator, Alta	40.46	304	ceP	P	18 10 32.2	+0.5
DGZ				pmax	pmax		
	comp=Z,26nm,1.1s						
TNTI	Ternate	41.18	205	P	P	18 10 36.2	-1.6
WMQ	Urumqi	41.36	295	P	P	18 10 40.5	+1.4
WMQ				sP	pwP	18 10 49.2	+1.6
WMQ				pmax	pmax		
	comp=Z,97nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,350nm,3.7s						
WMQ				LR	LR		
	comp=Z,750nm,14.7s						
WMQ				LR	LR		
	comp=Z,510nm,15.5s						
WMQ				LR	LR		
	comp=Z,340nm,15.9s						
SRPI	Serui, Papua	41.60	191	P	P	18 10 43.7	+2.6
	comp=Z,1µmcomp=Z,20nm,0.5s						
SWI	Sorong	41.61	199	P	P	18 10 41.5	+0.3
	comp=Z,21nm,1.1s						
SIJI	Sorong	41.62	199	P	P	18 10 40.5	-0.8
	comp=Z,8.2nm,0.8s,baz=20,slow=7.2,SNR=5.2						
ZAA0	Zalesovo Array	41.65	310	P	P	18 10 41.3	0.0
ZAA0				IAmb	IAmb	18 10 51.4	
	comp=Z,32nm,0.8s						
ZALV	Zalesovo Beam	41.65	310	P	P	18 10 41.8	+0.6
	comp=Z,23nm,0.6s,baz=87,slow=7.7,SNR=85						
ZALV				LR	LR	18 28 45.6	
	comp=Z,422nm,18.6s,baz=83,slow=37						
ZALV	Zalesovo Beam	41.65	310	i P	P	18 10 41.7	+0.4
ZALV				pmax	pmax		
	comp=Z,23nm,0.6s						
ZALV	Zalesovo Beam	41.65	310	P	P	18 10 41.0	-0.3
JAY	Jayapura	41.77	184	LR	LR	18 25 03.7	
	comp=Z,200nm,21.8s,baz=348,slow=32						
NRIK	Noril'sk	41.89	334	P	P	18 10 43.6	+0.6
	comp=Z,4.8nm,0.7s,baz=105,slow=13,SNR=8.4						
NRIK				LR	LR	18 29 15.8	
	comp=Z,775nm,18.5s,baz=104,slow=38						
NRIK	Noril'sk	41.89	334	deP	P	18 10 43.4	+0.4
NRIK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NRIK	Noril'sk	41.89	334	P	P	18 10 42.6	-0.4
NRIK				IAmb	IAmb	18 10 53.2	
	comp=Z,38nm,1.4s						
SPMM	Sapulut	42.35	222	P	P	18 10 55.0	+7.6
LBMI	Labuha	42.46	204	P	P	18 10 49.4	+1.2
	comp=Z,21nm,0.9s						
ZSN	Zaisan	42.51	301	eP	P	18 10 48.7	+0.2
	baz=301						
ZSN	Zaisan	42.51	301	eP	P	18 10 48.6	+0.2
TTA	Tatalina	42.52	36	P	P	18 10 49.2	+0.9
	baz=266						
KMSI	Cibinong	42.58	210	P	P	18 10 51.3	+2.2
	comp=Z,586nmcomp=Z,51nm,0.8s						
GTOI	Gorontalo	42.90	211	P	P	18 10 53.1	+1.3
	comp=Z,9.9nm,1.1s						
L19K	White Mountain	43.01	37	P	P	18 10 53.4	+1.1
	baz=268						
J20K	Nowinta River	43.45	34	P	P	18 10 56.5	+0.8
	baz=266						
J20K	Nowinta River	43.45	34	P	P	18 10 56.8	+1.1
MRSI	Marisa	43.48	212	P	P	18 10 57.4	+0.9
	comp=Z,590nmcomp=Z,30nm,1.1s						
CHTO	Chiang Mai	43.54	255	P	P	18 10 57.2	+0.2
CHTO				pmax	pmax		
	comp=Z,12nm,0.7s						
CHTO	Chiang Mai	43.54	255	P	P	18 10 57.2	+0.2
LSA	Lhasa	43.73	274	P	P	18 11 00.4	+1.4
LSA				pmax	pmax		
	comp=Z,49nm,1.6s						
LSA	Lhasa	43.73	274	P	P	18 10 58.2	-0.8
LSA				pmax	pmax		
	comp=Z,22nm,1.0s						
LSA	Lhasa	43.73	274	P	P	18 10 58.2	-0.8
LSA				IAmb	IAmb	18 11 13.6	
	comp=Z,22nm,1.0s						
CM31	Chiang Mai Arr	43.76	255	P	P	18 10 59.2	+0.5
CMAR	Chiang Mai Arr	43.76	255	P	P	18 10 59.5	+0.7
	comp=Z,3.7nm,0.8s,baz=46,slow=6.7,SNR=52						
CMAR	Chiang Mai Arr	43.76	255	ceP	P	18 10 59.7	+0.9
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
IMAR	Indian Mountai	43.76	32	P	P	18 10 59.4	+1.1
RABL	Rabaul	44.07	168		P	18 11 01.0	-0.2
RABL				IAmb	IAmb	18 11 02.7	
	comp=Z,22nm,0.7s						
H21K	Melozitna Rive	44.12	32	P	P	18 11 02.2	+1.0
	baz=266,SNR=5.5						
H21K	Melozitna Rive	44.12	32	P	P	18 11 02.4	+1.2
KDAK	Kodiak Island	44.22	44	P	P	18 11 02.9	+0.9
	baz=274						
CHUM	Lake Minchumin	44.24	35	P	P	18 11 03.7	+1.6
	baz=268						
SANI	Sanana	44.28	206	P	P	18 11 02.2	-0.7
	comp=Z,22nm,1.0s						
CAST	Castle Rocks	44.33	35	P	P	18 11 04.3	+1.4
	baz=269						
CAST	Castle Rocks	44.33	35	P	P	18 11 04.5	+1.6
SPU	Mount Spurr	44.34	39	P	P	18 11 02.8	-0.2
MK31	Makanchi Array	44.37	300	ceP	P	18 11 03.5	+0.1
MK31				pmax	pmax		
	comp=Z,59nm,0.8s						
MK31	Makanchi Array	44.37	300	P	P	18 11 03.3	-0.1
MKAR	Makanchi Array	44.37	300	P	P	18 11 03.7	+0.3
	comp=Z,16nm,0.7s,baz=82,slow=9.2,SNR=62						
MKAR				LR	LR	18 30 26.0	
	comp=Z,758nm,18.3s,baz=74,slow=37						
MKAR	Makanchi Array	44.37	300	P	P	18 11 03.2	-0.2
I21K	Tanana	44.44	33	P	P	18 11 04.1	+0.5
	baz=267						
MPSI	Mapaga	44.48	215	P	P	18 11 05.5	+1.0
	comp=Z,8.5nm,0.7s						
MAKZ	Makanchi	44.58	301	P	P	18 11 04.9	-0.2
MAKZ				pmax	pmax		
	comp=Z,53nm,1.0s						
MAKZ	Makanchi	44.58	301	P	P	18 11 04.8	-0.2
MSAI	Masohi	44.60	201	P	P	18 11 09.4	+3.9
	comp=Z,4.7nm,0.7s						
BPAW	Bear Paw Mtn.	44.83	35	P	P	18 11 07.3	+0.5
	baz=269						
KTH	Kantishna Hill	44.85	35	P	P	18 11 08.8	+1.7
KTH				IAmb	IAmb	18 11 27.5	
	comp=Z,26nm,1.1s						
SEM	Semipalatinsk	44.92	306	eP	P	18 11 05.9	-2.1
	baz=306						
SEM	Semipalatinsk	44.92	306	eP	P	18 11 05.8	-2.1
SUA	Susitna One	44.96	38	P	P	18 11 08.2	+0.2
	baz=272						
SHL	Shillong	45.17	268	P	P	18 11 08.6	-1.6
SHL				pmax	pmax		
	comp=Z,15nm,0.7s						
SHL	Shillong	45.17	268	P	P	18 11 08.6	-1.6
SHL				IAmb	IAmb	18 11 15.7	
	comp=Z,15nm,0.7s						
COLD	Coldfoot	45.27	30	P	P	18 11 10.8	+0.6
	baz=267						
BNDI	Bandanaira	45.47	199	P	P	18 11 12.9	+0.6
	comp=Z,1µmcomp=Z,72nm,1.5s						
H23K	Yukon River	45.48	32	P	P	18 11 12.4	+0.4
	baz=269						
H23K	Yukon River	45.48	32	P	P	18 11 13.6	+1.6
H23K				IAmb	IAmb	18 11 15.0	
	comp=Z,12nm,0.9s						
BWN	Browne	45.50	34	P	P	18 11 13.6	+1.6
I23K	Minto, Yukon-K	45.54	33	P	P	18 11 12.9	+0.5
	baz=270						
I23K	Minto, Yukon-K	45.54	33	P	P	18 11 14.3	+1.9
TOLK	Toolik Lake Re	45.60	28	P	P	18 11 14.1	+1.2
	baz=266,SNR=6.0						
TOLK	Toolik Lake Re	45.60	28	P	P	18 11 13.8	+0.8
NEA2	Nenana	45.67	34	P	P	18 11 14.9	+1.4
	baz=270						
NEA2	Nenana	45.67	34	P	P	18 11 13.9	+0.4
NEA2				IAmb	IAmb	18 11 38.4	
	comp=Z,18nm,1.0s						
PMR	Palmer	45.73	38	P	P	18 11 14.7	+0.8
	baz=273						
MCK	McKinley	45.74	35	P	P	18 11 14.6	+0.6
MCK				pmax	pmax		
	comp=Z,12nm,0.9s						
MCK	McKinley	45.74	35	P	P	18 11 14.6	+0.6
	baz=272						
MCK	McKinley	45.74	35	P	P	18 11 14.6	+0.6
GHO	Glory Hole Cre	45.82	38	P	P	18 11 15.3	+0.6
GHO				IAmb	IAmb	18 11 17.9	
	comp=Z,31nm,1.0s						
KURK	Kurchatov	45.88	307	c iP	P	18 11 15.1	-0.1
KURK				pmax	pmax		
	comp=Z,50nm,0.8s						
KURK	Kurchatov	45.88	307	P	P	18 11 15.2	0.0
KURBB	Kurchatov Arra	45.95	307	P	P	18 11 16.2	+0.3
	comp=Z,42nm,0.8s,baz=82,slow=8.2,SNR=51						
MDM	Murphy Dome	46.02	33	P	P	18 11 17.4	+1.1
MDM				IAmb	IAmb	18 11 34.7	
	comp=Z,18nm,1.0s						
KNK	Knik Glacier	46.06	38	P	P	18 11 17.2	+0.6
	baz=274						
SML	Sawmill	46.09	38	P	P	18 11 17.8	+0.9
	baz=274						
PWL	Port Wells	46.16	39	P	P	18 11 18.0	+0.6
	baz=275						
H24K	Noodor Dome	46.16	32	P	P	18 11 19.0	+1.6
	baz=270						
H24K	Noodor Dome	46.16	32	P	P	18 11 19.3	+1.9
H24K				IAmb	IAmb	18 11 41.5	
	comp=Z,11nm,0.8s						
TCOL	CIGO, UAF Yank	46.18	33	P	P	18 11 18.2	+0.8
	baz=271						
TCOL	CIGO, UAF Yank	46.18	33	P	P	18 11 18.2	+0.8
TCOL				IAmb	IAmb	18 11 42.2	
	comp=Z,20nm,1.0s						
COLA	College	46.19	33	⇑eP	P	18 11 18.1	+0.6
COLA				pmax	pmax		
	comp=Z,16nm,1.8s						
COLA	College	46.19	33	P	P	18 11 18.3	+0.9
	baz=271						
COLA	College	46.19	33	P	P	18 11 18.3	+0.9
COLA				IAmb	IAmb	18 11 37.8	
	comp=Z,28nm,1.2s						
POKR	Poker Plat Res	46.36	33	P	P	18 11 20.0	+1.1
	baz=272						
POKR	Poker Plat Res	46.36	33	P	P	18 11 18.8	-0.1
POKR				IAmb	IAmb	18 11 32.2	
	comp=Z,25nm,0.9s						
SCM	Sheep Creek Mo	46.57	38	P	P	18 11 21.5	+0.8
	baz=275						
HDA	Harding Lake	46.59	34	P	P	18 11 21.6	+1.0
	baz=273						
HDA	Harding Lake	46.59	34	P	P	18 11 21.1	+0.4
HDA				IAmb	IAmb	18 11 34.4	
	comp=Z,12nm,0.9s						
IL31		46.60	34	P	P	18 11 20.5	-0.2
IL31				IAmb	IAmb	18 11 37.6	
	comp=Z,11nm,0.8s						
ILAR	Eielson Array	46.60	34	P	P	18 11 21.3	+0.5
	comp=Z,6.1nm,0.7s,baz=262,slow=6.7,SNR=60						
ILAR	Eielson Array	46.60	34	P	P	18 11 21.4	+0.6
GLI	Glacier Island	46.76	39	P	P	18 11 23.3	+1.2
	baz=276						
M24K	Tolsona, Glenn	47.09	37	P	P	18 11 26.1	+1.4
	baz=275						
PRP	Porcupine Dome	47.15	32	P	P	18 11 26.6	+1.4
	baz=273						
PRP	Porcupine Dome	47.15	32	P	P	18 11 25.5	+0.3
PRP				IAmb	IAmb	18 11 50.8	
	comp=Z,15nm,1.0s						
PDGK	Podgornoye	47.23	297	P	P	18 11 25.6	-0.6
J25K	Salcha River,	47.26	34	P	P	18 11 26.4	+0.4
	baz=274						
KLU	Klutina	47.27	38	P	P	18 11 27.3	+1.2
	baz=276						
KLU	Klutina	47.27	38	P	P	18 11 27.4	+1.3
SHLS	Shalkode	47.30	296	eP	P	18 11 24.1	-2.7
	baz=296						
SHLS	Shalkode	47.30	296	eP	P	18 11 24.0	-2.7
BMAR	Burnt Mountain	47.45	30	P	P	18 11 29.4	+1.9
EYAK	Cordova Ski Ar	47.46	39	P	P	18 11 28.3	+0.8
	baz=277						
TDK	Taldyqorghan	47.46	299	eP	P	18 11 27.1	-0.8
	baz=299						
TDK	Taldyqorghan	47.46	299	eP	P	18 11 27.0	-0.8
TAPN	Taplejung	47.51	273	eP	P	18 11 29.4	+0.7
	comp=Z,72nm,1.1s						
TTSI	Tana Toraja	47.55	213	P	P	18 11 31.9	+3.2
	comp=Z,7.2nm,1.0s						
UZB	Uzynbulak	47.61	297	eP	P	18 11 27.2	-2.0
	comp=Z,8.1nm,1.0s,baz=296						
UZB	Uzynbulak	47.61	297	eP	P	18 11 27.1	-2.0
UZB				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KPKS	Kokpek	47.74	297	eP	P	18 11 28.2	-2.0
	comp=Z,7.6nm,0.7s,baz=297						
KPKS	Kokpek	47.74	297	eP	P	18 11 28.1	-2.0
KPKS				pmax	pmax		
	comp=Z,8.0nm,0.7s						
N25K	Chitina, Valde	47.88	38	P	P	18 11 32.1	+1.1
	baz=277						
SCRK	Sand Creek	47.91	35	P	P	18 11 31.8	+0.6
	baz=276,SNR=8.4						
SCRK	Sand Creek	47.91	35	P	P	18 11 31.7	+0.6
SCRK				IAmb	IAmb	18 11 42.6	
	comp=Z,10nm,0.8s						
BMRM	Bremner River	47.96	39	P	P	18 11 32.4	+0.9
	baz=278						
BMRM	Bremner River	47.96	39	P	P	18 11 32.8	+1.3
MTKI	Muara Teweh, K	47.97	220	P	P	18 11 33.1	+1.1
	comp=Z,14nm,1.1s						
ODAN	Odare	48.00	273	eP	P	18 11 32.7	+0.2
	comp=Z,105nm,0.9s						
J26L	Joseph Creek	48.05	34	P	P	18 11 33.1	+1.0
	baz=276						
SATY	Saty	48.06	297	eP	P	18 11 32.1	-0.6
	baz=297						
SATY	Saty	48.06	297	eP	P	18 11 32.1	-0.6
ARXS	Arharly	48.10	298	eP	P	18 11 33.1	+0.3
MENT	Mentasta	48.14	36	P	P	18 11 34.3	+1.5
MENT				IAmb	IAmb	18 11 59.8	
	comp=Z,24nm,1.2s						
L26K	Log Cabin Wild	48.30	36	P	P	18 11 35.6	+1.6
	baz=277						
L26K	Log Cabin Wild	48.30	36	P	P	18 11 36.0	+2.0
L26K				IAmb	IAmb	18 11 36.8	
	comp=Z,14nm,0.8s						
KSM	Kuching	48.40	227	P	P	18 11 37.0	+1.7
BERG	Berg Lake	48.48	39	P	P	18 11 36.9	+1.5
JIRN	Jiri	48.53	274	eP	P	18 11 37.4	+0.7
	comp=Z,109nm,1.0s						
M26K	Nabesna, AK	48.53	37	P	P	18 11 37.3	+1.4
	baz=278,SNR=6.6						
M26K	Nabesna, AK	48.53	37	P	P	18 11 38.0	+2.1
M26K				IAmb	IAmb	18 11 49.2	
	comp=Z,16nm,1.1s						
RAMN	Ramite	48.57	273	eP	P	18 11 37.1	+0.2
	comp=Z,52nm,0.6s						
GUN	Gumba	48.65	275	eP	P	18 11 37.8	+0.2
	comp=Z,240nm,0.9s						
MCARA	McCarthy VSAT	48.66	38	P	P	18 11 38.2	+1.3
	baz=279						
MCARA	McCarthy VSAT	48.66	38	P	P	18 11 38.6	+1.7
CRQM	Cirque	48.70	39	P	P	18 11 39.1	+1.7
CRQE	Cirque	48.73	39	P	P	18 11 38.8	+1.3
	baz=279						
CHKK	Chushkaly	48.78	298	eP	P	18 11 36.7	-1.3
	baz=298						
STKI	Sintang	48.91	225	P	P	18 11 40.6	+1.4
	comp=Z,9.1nm,0.6s						
MDOK	Medeo	48.97	297	eP	P	18 11 39.1	-0.6
	baz=297						
MDOK	Medeo	48.97	297	eP	P	18 11 39.0	-0.6
L27K	Beaver Creek,	48.98	36	P	P	18 11 40.3	+1.1
	baz=278						
L27K	Beaver Creek,	48.98	36	P	P	18 11 40.8	+1.5
L27K				IAmb	IAmb	18 11 42.2	
	comp=Z,26nm,1.2s						
BCAR	Beaver Creek A	49.00	36	P	P	18 11 40.8	+1.4
AAA	Alma-Ata	49.05	297	eP	P	18 11 37.1	-3.1
	baz=297						
AAA	Alma-Ata	49.05	297	eP	P	18 11 37.0	-3.1
EGAK	Eagle	49.05	33	P	P	18 11 40.4	+0.6
	baz=277						
EGAK	Eagle	49.05	33	P	P	18 11 40.3	+0.6
M27K	Edge Creek, AK	49.06	37	P	P	18 11 41.1	+1.0
	baz=279						
M27K	Edge Creek, AK	49.06	37	P	P	18 11 40.9	+0.8
M27K				IAmb	IAmb	18 11 52.5	
	comp=Z,31nm,1.4s						
KKN	Kakani	49.17	275	eP	P	18 11 41.6	+0.1
	comp=Z,178nm,0.9s						
PKI	Pulchoki	49.18	275	eP	P	18 11 41.6	-0.1
	comp=Z,118nm,1.2s						
PKIN	Phulchoki	49.19	275	eP	P	18 11 41.4	-0.2
	comp=Z,52nm,0.9s						
KUU	Kurty	49.21	298	eP	P	18 11 40.1	-1.2
	comp=Z,20nm,0.9s,baz=298						
KUU	Kurty	49.21	298	eP	P	18 11 40.1	-1.2
KUU				pmax	pmax		
	comp=Z,20nm,0.9s						
KAPI	Kappang	49.35	212	P	P	18 11 43.1	+0.6
	comp=Z,2.5nm,0.3s,baz=176,slow=17,SNR=1.5						
BARN	Barnard Glacie	49.37	38	P	P	18 11 44.1	+1.6
BARN				IAmb	IAmb	18 11 44.9	
	comp=Z,36nm,1.4s						
GRNC	Granite Creek	49.38	39	P	P	18 11 44.0	+1.5
GRNC				IAmb	IAmb	18 11 44.9	
	comp=Z,21nm,1.0s						
DMN	Daman	49.40	275	eP	P	18 11 43.2	0.0
	comp=Z,95nm,1.0s						
CTG	Chitna Glacier	49.53	38	P	P	18 11 44.9	+1.2
	baz=280						
CTGM	Chitina Glacie	49.54	38	P	P	18 11 44.6	+0.8
CTGM				IAmb	IAmb	18 11 46.2	
	comp=Z,40nm,1.3s						
GKN	Gorkha	49.56	276	eP	P	18 11 44.5	+0.1
	comp=Z,91nm,0.8s						
BRZS	Berezniki	49.75	307	eP	P	18 11 44.4	-1.0
	comp=Z,8.9nm,0.8s,baz=307						
BRZS	Berezniki	49.75	307	eP	P	18 11 44.3	-1.0
BRZS				pmax	pmax		
	comp=Z,9.0nm,0.8s						
YUK3	Moose Creek	49.81	37	P	P	18 11 47.0	+1.2
	baz=280,SNR=5.6						
TKM2	Tokmak 2	50.05	297	P	P	18 11 49.1	+1.1
	SNR=24						
DANN	Dangsing	50.07	276	eP	P	18 11 49.0	+0.6
	comp=Z,441nm,0.8s						
I29M	Ogilvie Camp,	50.16	32	P	P	18 11 49.4	+1.2
	baz=279,SNR=15						
BBKI	Banjar Baru	50.18	219	P	P	18 11 49.3	+0.4
	comp=Z,2µmcomp=Z,17nm,1.2s						
PCA	Pinnacle	50.23	39	P	P	18 11 49.6	+0.7
PCA				IAmb	IAmb	18 11 54.8	
	comp=Z,20nm,0.8s						
PINM	Pinnacle	50.23	39	P	P	18 11 50.4	+1.5
	baz=282						
BVAR	Borovoye Array	50.29	311	P	P	18 11 50.0	+0.6
	comp=Z,16nm,0.8s,baz=153,slow=5.0,SNR=77						

BVAR	Borovoye Array	50.29	311	P	P	18 11 50.0	+0.6
BRVK	Borovoye	50.34	311	c iP	P	18 11 49.9	+0.1
BRVK				pmax	pmax		
	comp=Z,28nm,1.0s						
BRVK	Borovoye	50.34	311	P	P	18 11 49.7	-0.1
BTLS	Baital	50.38	300	eP	P	18 11 49.0	-1.2
	baz=300						
BTLS	Baital	50.38	300	eP	P	18 11 48.9	-1.2
KOLN	Koldanda	50.48	276	eP	P	18 11 51.6	+0.2
	comp=Z,205nm,1.1s						
SGDS	Sogindy	50.53	298	eP	P	18 11 50.2	-1.2
	baz=298						
KBK	Karagaybulak	50.59	297	P	P	18 11 53.0	+0.9
	SNR=22						
USP	Ospenovka	50.68	298	P	P	18 11 53.4	+0.9
	SNR=5.9						
YUK4	Talbot Arm	50.74	37	P	P	18 11 54.4	+1.5
	baz=282						
FRU1	Bishkek	50.76	298	P	P	18 11 52.4	-0.7
FRU1				pmax	pmax		
	comp=Z,24nm,1.0s						
FRU1	Bishkek	50.76	298	P	P	18 11 52.4	-0.7
FRU1				IAmb	IAmb	18 12 03.9	
	comp=Z,24nm,0.9s						
PYUN	Piuthan	50.79	277	eP	P	18 11 53.8	+0.1
	comp=Z,242nm,0.9s						
AAK	Ala-Archa	50.91	297	P	P	18 11 55.1	+0.7
	comp=Z,3.4nm,0.6s,baz=82,slow=4.7,SNR=11						
AAK	Ala-Archa	50.91	297	P	P	18 11 54.9	+0.5
	SNR=5.9						
AAK	Ala-Archa	50.91	297	ceP	P	18 11 54.4	0.0
AAK				pmax	pmax		
	comp=Z,33nm,1.3s						
AAK	Ala-Archa	50.91	297	P	P	18 11 54.3	-0.1
AAK				IAmb	IAmb	18 12 04.9	
	comp=Z,16nm,1.0s						
YUK6	Outpost Mounta	50.96	38	P	P	18 11 55.9	+1.2
	baz=283						
KSH	Kashi	51.04	293	P	P	18 11 59.4	+4.0
KSH				sP	pwP	18 12 06.8	+2.9
KSH				PcP	PcP	18 13 14.9	+3.7
KSH				S	S	18 19 18.6	+6.5
KSH				pmax	pmax		
	comp=Z,13nm,0.9s						
KSH				LR	LR		
	comp=Z,420nm,14.3s						
KSH				LR	LR		
	comp=Z,1µm,15.6s						
KSH				LR	LR		
	comp=Z,2µm,17.9s						
JRMM	Jerantut	51.30	237	P	P	18 11 57.0	-0.4
M30M	Minto, Yukon	51.34	36	P	P	18 11 59.1	+1.9
	baz=283,SNR=6.5						
EKS2	Erkin-Say	51.40	298	P	P	18 11 58.5	+0.5
	SNR=6.6						
HYT	Haines Junctio	51.40	38	P	P	18 12 00.1	+2.4
	baz=284,SNR=16						
HYT	Haines Junctio	51.40	38	P	P	18 11 59.2	+1.4
KULM	Kulim	51.47	240	P	P	18 12 00.0	+1.3
INK	Inuvik	51.52	28	P	P	18 11 58.8	+0.5
INK				pmax	pmax		
	comp=Z,14nm,0.6s						
INK	Inuvik	51.52	28	P	P	18 11 58.9	+0.6
	baz=281,SNR=6.5						
INK	Inuvik	51.52	28	P	P	18 11 58.8	+0.5
INK				IAmb	IAmb	18 12 09.8	
	comp=Z,14nm,0.6s						
AML	Almayashu	51.65	297	P	P	18 12 01.4	+1.1
	SNR=5.8						
IPM	Ipoh	51.82	239	P	P	18 12 02.0	+0.7
EDFI	Ende, Flores	52.02	208	P	P	18 12 01.8	-1.0
	comp=Z,9.8nm,1.3s						
N31M	Braeburn, Yuko	52.05	37	P	P	18 12 04.3	+1.8
	baz=284,SNR=5.6						
M31M	Drury Creek, Y	52.52	36	P	P	18 12 07.2	+1.2
	baz=285,SNR=6.4						
WHY	Whitehorse	52.69	38	P	P	18 12 08.7	+1.3
	baz=286						
SKAG	Skagway	52.80	39	P	P	18 12 09.2	+1.2
	baz=286						
DZA	Taraz	52.98	299	eP	P	18 12 07.8	-1.9
	baz=299						
DZA	Taraz	52.98	299	eP	P	18 12 07.8	-1.9
COEN	Coen	53.06	181	P	P	18 12 09.9	-0.4
MTN	Manton Dam	53.23	195	P	P	18 12 10.9	-0.7
MTN				IAmb	IAmb	18 12 16.8	
	comp=Z,19nm,0.9s						
A36M	Sachs Harbour	53.45	23	P	P	18 12 13.9	+1.3
	baz=286						
A36M	Sachs Harbour	53.45	23	P	P	18 12 14.5	+1.9
A36M				IAmb	IAmb	18 12 24.5	
	comp=Z,16nm,1.1s						
KK31	Karatay Array	53.46	299	i P	P	18 12 13.1	-0.1
KK31	Karatay Array	53.46	299	P	P	18 12 12.5	-0.6
KK31				IAmb	IAmb	18 12 23.3	
	comp=Z,21nm,1.1s						
KKAR	Karatay Array	53.46	299	P	P	18 12 12.3	-0.9
KKAR				pmax	pmax		
	comp=Z,21nm,1.1s						
KKAR	Karatay Array	53.46	299	P	P	18 12 12.3	-0.9
KKAR				IAmb	IAmb	18 12 23.3	
	comp=Z,21nm,1.1s						
P33M	Teslin, Yukon	53.80	38	P	P	18 12 17.3	+1.8
	baz=288,SNR=7.5						
BRLS	Borolday	53.94	299	eP	P	18 12 16.7	0.0
	baz=299						
BRLS	Borolday	53.94	299	eP	P	18 12 16.7	0.0
DRK	Karamyk	54.01	295	P	P	18 12 17.4	-0.2
DRK				IAmb	IAmb	18 12 28.3	
	comp=Z,28nm,1.1s						
IUG	Iuzhnay	54.16	298	eP	P	18 12 16.0	-2.4
	baz=298						
IUG	Iuzhnay	54.16	298	eP	P	18 12 16.0	-2.4
PSI	Prapat	54.46	240	P	P	18 12 21.2	+0.3
	comp=Z,3.4nm,0.2s,baz=330,slow=21,SNR=6.5						
BTK	Batken	54.46	296	P	P	18 12 20.0	-0.6
BTK				pmax	pmax		
	comp=Z,25nm,1.3s						
BTK	Batken	54.46	296	P	P	18 12 20.0	-0.6
BTK				IAmb	IAmb	18 12 30.9	
	comp=Z,25nm,1.3s						
RPSI	Rantau Prapat	54.54	240	P	P	18 12 21.2	-0.1
SVE	Sverdlovsk	54.54	318	deP	P	18 12 22.0	+1.2
SVE				pmax	pmax		
	comp=Z,48nm,1.0s						
SVE				MLR	MLR		
	comp=Z,2µm,14.0s						
BKNI	Bangkinang	54.93	236	P	P	18 12 24.1	0.0
GAR	Garm	55.26	295	P	P	18 12 26.2	-0.3
NIL	Nilore	55.53	288	P	P	18 12 29.1	+0.8
NIL				pmax	pmax		
	comp=Z,51nm,0.9s						
NIL	Nilore	55.53	288	P	P	18 12 29.1	+0.8
PWJI	Pagerwojo	55.60	219	P	P	18 12 29.2	+0.3
	comp=Z,22nm,1.2s						
DLBC	Dease Lake	55.73	39	P	P	18 12 32.0	+2.6
ARU	Arti	55.76	318	P	P	18 12 30.0	+0.4
	comp=Z,14nm,0.9s,baz=66,slow=3.8,SNR=40						
ARU	Arti	55.76	318	c iP	P	18 12 30.1	+0.5
ARU				*PP	pwP	18 12 37.9	-0.2
ARU					PP	18 14 35.5	+1.8
ARU				S	S	18 20 19.1	+3.8
ARU				SS	SS	18 24 00.2	0.0
ARU				pmax	pmax		
	comp=Z,44nm,0.9s						
ARU				MLR	MLR		
	comp=Z,1µm,15.0s						
ARU	Arti	55.76	318	P	P	18 12 29.0	-0.6
CHGR	Chuyangaron	56.22	295	P	P	18 12 33.0	-0.4
GSI	Gunungsitoli	56.47	240	P	P	18 12 35.9	+0.7
KPJI	Karang Pucung	56.48	223	P	P	18 12 35.0	-0.2
	comp=Z,18nm,1.6s						
KNRA	Kununurra	56.49	197	P	P	18 12 34.9	-0.3
KNRA				IAmb	IAmb	18 12 41.2	
	comp=Z,16nm,0.9s						
KLSI		56.62	228	P	P	18 12 36.5	+0.3
	comp=Z,12nm,1.0s						
LHSI	Lahat	56.63	230	P	P	18 12 37.5	+1.2
	comp=Z,62nm,1.0s						
LEM	Lembang	56.75	224	P	P	18 12 38.4	+1.1
	comp=Z,21nm,1.1s						
MDSI	Maura Dua	56.77	229	P	P	18 12 37.6	+0.3
MASI	Maura Aman, Be	56.87	232	P	P	18 12 39.0	+0.9
	comp=Z,82nm,1.2s						
WRGLY	Wrigley	56.96	33	P	P	18 12 39.6	+1.6
	baz=293						
EUNU	Eureka	57.61	9	P	P	18 12 42.8	+0.2
EUNU				IAmb	IAmb	18 12 53.1	
	comp=Z,8.7nm,0.8s						
AB31	Akbulak array	57.76	310	P	P	18 12 43.6	-0.3
ABKAR	Akbulak array	57.76	310	P	P	18 12 43.6	-0.3
ABKAR	Akbulak array	57.76	310	P	P	18 12 43.4	-0.5
KBL	Kabul	58.19	291	P	P	18 12 46.6	-0.8
KBL				pmax	pmax		
	comp=Z,36nm,1.0s						
KBL	Kabul	58.19	291	P	P	18 12 46.6	-0.8
AKTO	Aktyubinsk	58.40	312	P	P	18 12 48.9	+0.5
	comp=Z,6.3nm,0.8s,baz=70,slow=13,SNR=16						
NOR	Nord	58.82	357	i P	P	18 12 50.9	0.0
NOR				IAmb	IAmb	18 12 56.2	
	comp=Z,1.2nm,0.5s						
NOR				i		18 13 01.2	
SANVU	Saraoutou	58.83	153	P	P	18 12 51.6	-0.1
KIRV	Kirov	59.42	323	P	P	18 12 56.3	+1.0
	comp=Z,15nm,0.8s,baz=50,slow=2.5,SNR=9.2						
KIRV	Kirov	59.42	323	deP	P	18 12 56.2	+0.9
WB0	Warramunga Arr	59.46	190	P	P	18 12 55.2	-0.8
WB0				IAmb	IAmb	18 12 55.6	
	comp=Z,12nm,0.6s						
FITZ	Fitzroy Crossi	59.59	200	P	P	18 12 56.6	-0.3
FITZ				IAmb	IAmb	18 13 07.1	
	comp=Z,20nm,1.4s						
WRAB	Tennant Creek	59.63	190	ceP	P	18 12 56.2	-0.9
WRAB				pmax	pmax		
	comp=Z,8.0nm,1.0s						
WRAB	Tennant Creek	59.63	190	P	P	18 12 55.9	-1.2
WRAB				IAmb	IAmb	18 12 56.9	
	comp=Z,13nm,1.1s						
WR0	Warramunga Arr	59.63	190	P	P	18 12 55.5	-1.6
WR0				IAmb	IAmb	18 12 56.8	
	comp=Z,8.0nm,0.8s						
WRA	Warramunga Arr	59.64	190	P	P	18 12 56.0	-1.1
	comp=Z,11nm,0.8s,baz=8.3,slow=7.2,SNR=34						
WRA				LR	LR	18 39 42.8	
	comp=Z,36nm,19.4s,baz=240,slow=37						
WRA	Warramunga Arr	59.64	190	P	P	18 12 56.1	-1.1
PRGR	Permogore	59.74	327	eP	P	18 13 05.3	+7.8
RES	Resolute Bay	59.90	15	P	P	18 12 58.4	0.0
RES				pmax	pmax		
	comp=Z,12nm,0.7s						
RES	Resolute Bay	59.90	15	P	P	18 12 58.4	0.0
RES				IAmb	IAmb	18 13 09.0	
	comp=Z,12nm,0.7s						
HYB	Hyderabad	59.98	268	i P	P	18 12 59.0	-0.8
YKA	Yellowknife Ar	60.92	31	P	P	18 13 06.5	+0.9
	comp=Z,2.2nm,0.6s,baz=311,slow=5.2,SNR=9.0						
ARCES	ARCESS Array B	62.41	340	P	P	18 13 16.0	+0.5
	comp=Z,4.3nm,0.9s,baz=42,slow=8.8,SNR=2.5						
ARCES				LR	LR	18 46 28.9	
	comp=Z,228nm,19.1s,baz=40,slow=42						
ARCES	ARCESS Array B	62.41	340	P	P	18 13 16.0	+0.5
TULEG	Thule	62.55	8	i P	P	18 13 16.4	+0.1
TULEG				i		18 13 24.7	
TULEG				IAmb	IAmb	18 13 25.6	
	comp=Z,9.8nm,0.7s						
POO	Poona	62.98	272	eP	P	18 13 19.0	-1.1
NEEM	North Greenlan	63.10	4	i P	P	18 13 20.6	+0.2
NEEM				IAmb	IAmb	18 13 25.6	
	comp=Z,4.0nm,0.7s						
NEEM				i		18 13 29.3	
HRA	Herat	63.15	294	P	P	18 13 20.6	-0.6
HRA				IAmb	IAmb	18 13 32.0	
	comp=Z,13nm,0.8s						
BELG	Belogornoye	63.26	317	P	P	18 13 22.1	+0.8
	comp=Z,30nm,0.8s,baz=273,slow=2.2,SNR=12						
AS31	Alice Springs	63.36	190	P	P	18 13 21.9	-0.4
ASAR	Alice Springs	63.36	190	P	P	18 13 21.9	-0.4
	comp=Z,3.7nm,0.7s,baz=10,slow=6.8,SNR=32						
ASAR	Alice Springs	63.36	190	P	P	18 13 22.0	-0.4
ASAR	Alice Springs	63.36	190	P	P	18 13 21.7	-0.7
LLLB	Lillooet	63.38	45	P	P	18 13 23.4	+1.0
LLLB				IAmb	IAmb	18 13 44.6	
	comp=Z,9.8nm,1.1s						
DAG	Danmarks Havn	63.59	356	i P	P	18 13 23.6	+0.4
DAG				i		18 13 32.0	
DAG				IAmb	IAmb	18 13 33.3	
	comp=Z,5.1nm,1.0s						
NLWA	Neilton Lookou	63.88	49	P	P	18 13 27.5	+1.9
GEYT	Alibeck	64.20	299	P	P	18 13 28.5	+0.6
	comp=Z,6.4nm,0.6s,baz=56,slow=13,SNR=8.4						
GEYT				LR	LR	18 44 26.0	
	comp=Z,374nm,18.0s,baz=195,slow=39						
GYA0B	ALIBECK ARRAY	64.20	299	P	P	18 13 27.9	-0.1
D03D	Eldon	64.26	49	P	P	18 13 30.1	+1.9
	baz=301						
B05A	Bryant	64.46	48	P	P	18 13 30.8	+1.4
	baz=301						
DZM	Mont Dzumac	64.76	157	eP	P	18 13 33.7	+2.1
	comp=Z,66nm,1.2s						
DZM	Mont Dzumac	64.76	157	eLR	LR	18 33 07.4	
	comp=Z,239nm,22.1s						
DZM	Mont Dzumac	64.76	157	P	P	18 13 32.8	+1.2
E04D	Cinebar	65.07	49	P	P	18 13 34.7	+1.3
	baz=302,SNR=8.1						
D05A	Enumclaw	65.08	49	P	P	18 13 35.8	+2.3
MSVF	Nonsavu	65.30	144	⇑eP	P	18 13 34.6	-0.6
MSVF				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MSVF	Nonsavu	65.30	144	P	P	18 13 36.9	+1.6
MSVF				IAmb	IAmb	18 13 38.1	
	comp=Z,18nm,1.1s						
LON	Longmire	65.42	49	P	P	18 13 37.1	+1.4
LON				pmax	pmax		
	comp=Z,17nm,1.4s						
LON	Longmire	65.42	49	P	P	18 13 37.1	+1.4
LON				IAmb	IAmb	18 13 54.2	
	comp=Z,17nm,1.4s						
LTY	Liberty	65.81	48	P	P	18 13 39.7	+1.4
LTY				IAmb	IAmb	18 14 04.0	
	comp=Z,10.0nm,1.1s						
B08A	Colville Reser	65.98	46	P	P	18 13 39.9	+0.6
B08A				IAmb	IAmb	18 13 41.7	
	comp=Z,27nm,1.4s						
J01E	Myrtle Point	66.04	53	P	P	18 13 41.1	+1.4
	baz=302						
H04D	Lebanon	66.05	51	P	P	18 13 41.2	+1.5
	baz=302						
DBG	Daneborg	66.08	355	eP	P	18 13 42.0	+2.5
DBG				IAmb	IAmb	18 13 49.5	
	comp=Z,1.5nm,1.0s						
I03D	Drain, OR	66.11	52	P	P	18 13 42.2	+2.1
	baz=302,SNR=5.0						
HOOD	Mount Hood Mea	66.27	50	P	P	18 13 42.8	+1.4
H04A	Detroit Lake	66.29	51	P	P	18 13 42.6	+1.3
MOS	Moscow	66.39	324	eP	P	18 13 45.2	+3.5
MOS				e	PP	18 16 09.2	+1.8
MOS				eS	S	18 22 27.2	-3.5
MOS				pmax	pmax		
	comp=Z,73nm,1.2s						
MOS				MLR	MLR		
	comp=Z,1µm,16.0s						
EDM	Edmonton	66.45	40	P	P	18 13 43.1	+0.8
EDM				pmax	pmax		
	comp=Z,30nm,1.4s						
EDM	Edmonton	66.45	40	P	P	18 13 43.1	+0.8
K02D	Willamette Mer	66.45	53	P	P	18 13 44.0	+1.5
	baz=303						
G05D	Wamic, OR	66.51	50	P	P	18 13 44.4	+1.7
	baz=303						
I04A	Tendick Farm,	66.63	52	P	P	18 13 44.7	+1.1
	baz=303,SNR=5.9						
E07A	Sunnyside	66.66	48	P	P	18 13 45.2	+1.5
L02E	Cave Junction	66.78	54	P	P	18 13 46.3	+1.8
	baz=303						
C09A	Chrisman Ranch	66.88	47	P	P	18 13 46.2	+1.1
D08A	Wollman Farm,	66.92	47	P	P	18 13 46.7	+1.4
D08A				IAmb	IAmb	18 13 47.6	
	comp=Z,17nm,1.1s						
HAWA	Hanford	66.93	48	P	P	18 13 46.8	+1.4
HAWA				IAmb	IAmb	18 13 48.0	
	comp=Z,17nm,1.3s						
HUMO	Hull Mountain	66.94	53	P	P	18 13 46.8	+1.3
F07A	Phinny Hill Vi	66.98	49	P	P	18 13 46.0	+0.4
F07A				IAmb	IAmb	18 13 48.4	
	comp=Z,13nm,0.8s						
I05D	Terrebonne, OR	66.99	51	P	P	18 13 47.6	+1.8
	baz=303						
VRH	Novokhopyorsk	66.99	318	eP	P	18 13 45.4	-0.3
VRH				e*SP	pwP	18 13 54.8	+0.6
VRH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
J04D	Umpqua Nationa	67.12	52	P	P	18 13 48.2	+1.3
	baz=303,SNR=6.3						
E08A	Dider Farm, El	67.15	48	P	P	18 13 48.2	+1.5
E08A				IAmb	IAmb	18 13 48.7	
	comp=Z,8.2nm,0.8s						
OBN	Obninsk	67.24	323	P	P	18 13 47.4	+0.3
	comp=Z,1.9nm,0.4s,baz=264,slow=23,SNR=4.8						
OBN	Obninsk	67.24	323	⇓eP	P	18 13 47.5	+0.3
OBN				e	PcP	18 14 14.2	-0.8
OBN				e	PP	18 16 12.7	-2.2
OBN				eS	S	18 22 47.7	+6.7
OBN				pmax	pmax		
	comp=Z,40nm,2.5s						
OBN				MLR	MLR		
	comp=Z,766nm,15.0s						
OBN	Obninsk	67.24	323	P	P	18 13 46.1	-1.1
NEW	Newport	67.26	46	P	P	18 13 47.7	+0.2
	comp=Z,9.3nm,0.9s,baz=308,slow=5.9,SNR=14						
NEW	Newport	67.26	46	P	P	18 13 48.8	+1.2
NEW				pmax	pmax		
	comp=Z,17nm,1.1s						
NEW	Newport	67.26	46	P	P	18 13 48.4	+0.8
	baz=304,SNR=10						
NEW	Newport	67.26	46	P	P	18 13 48.8	+1.2
NEW				IAmb	IAmb	18 13 49.8	
	comp=Z,17nm,1.1s						
PINE	Pine Mountain	67.53	51	P	P	18 13 50.9	+1.4
FIA1	FINESS Array S	67.54	333	P	P	18 13 49.2	+0.2
FINES	FINESS Array B	67.54	333	P	P	18 13 49.2	+0.3
	comp=Z,7.8nm,0.7s,baz=52,slow=7.5,SNR=23						
FINES	FINESS Array B	67.54	333	P	P	18 13 49.0	+0.1
L04D	Klamath Falls	67.56	53	P	P	18 13 50.5	+0.9
	baz=304,SNR=9.4						
YBH	Yreka Blue Hor	67.57	54	P	P	18 13 51.0	+1.4
	comp=Z,9.1nm,1.0s,baz=335,slow=6.9,SNR=5.2						
YBH	Yreka Blue Hor	67.57	54	P	P	18 13 51.0	+1.4
YBH	Yreka Blue Hor	67.57	54	P	P	18 13 51.4	+1.7
YBH				IAmb	IAmb	18 13 52.7	
	comp=Z,10nm,0.9s						
LPSR	Galich'ya Gora	67.60	320	eP	P	18 13 49.0	-0.5
LPSR				e*SP	pwP	18 13 58.8	+0.8
LPSR				pmax	pmax		
	comp=Z,20nm,1.3s						
J05D	Fort Rock, OR	67.63	52	P	P	18 13 51.8	+1.7
	baz=304,SNR=8.2						
E09A	Wood Farm, Sta	67.67	48	P	P	18 13 51.9	+1.8
M02C	Callahan	67.67	54	P	P	18 13 51.8	+1.5
	baz=304,SNR=5.5						
G08A	Pilot Rock	67.88	49	P	P	18 13 52.7	+1.1
N02D	Trinity Center	67.99	55	P	P	18 13 53.8	+1.5
	baz=304,SNR=7.5						
M04C	Macdoel	68.08	53	P	P	18 13 54.6	+1.6
	baz=304,SNR=9.6						
K05A	Summer Lake	68.15	52	P	P	18 13 55.4	+2.0
I07A	Izee	68.23	50	P	P	18 13 55.5	+1.7
I07A				IAmb	IAmb	18 13 56.5	
	comp=Z,10nm,1.1s						
VSR	Storozhevoye	68.30	319	eP	P	18 13 53.8	-0.1
VSR				e*SP	pwP	18 14 02.8	+0.4
VSR				pmax	pmax		
	comp=Z,10.0nm,1.4s						
WDC	Whiskeytown Da	68.31	55	P	P	18 13 55.6	+1.4
WDC				pmax	pmax		
	comp=Z,14nm,1.2s						
WDC	Whiskeytown Da	68.31	55	P	P	18 13 55.6	+1.4
WDC				IAmb	IAmb	18 13 56.8	
	comp=Z,14nm,1.1s						
SUMG	Summit	68.34	1	P	P	18 13 54.4	+0.1
SUMG				pmax	pmax		
	comp=Z,17nm,0.9s						
SUMG	Summit	68.34	1	i P	P	18 13 54.9	+0.6
SUMG				IAmb	IAmb	18 14 06.5	
	comp=Z,7.4nm,0.8s						
SUMG	Summit	68.34	1	P	P	18 13 54.4	+0.1
SUMG				IAmb	IAmb	18 14 06.5	
	comp=Z,17nm,0.9s						
O02D	Mt. Diablo Mer	68.38	55	P	P	18 13 56.6	+1.9
	baz=304,SNR=6.7						
VORD	Divnogorie	68.38	319	eP	P	18 13 53.9	-0.5
VORD				e*SP	pwP	18 14 02.9	0.0
VORD				pmax	pmax		
	comp=Z,10.0nm,0.4s						
F10A	Beach Ranch, E	68.50	48	P	P	18 13 57.0	+1.6
WALA	Waterton Lakes	68.56	44	P	P	18 13 57.3	+1.5
WALA				IAmb	IAmb	18 13 57.6	
	comp=Z,9.3nm,1.0s						
O03E	Paynes Creek	68.94	55	P	P	18 13 58.6	+0.4
	baz=304,SNR=7.6						
MOD	Modoc Plateau	68.97	53	P	P	18 13 59.7	+1.2
MOD				IAmb	IAmb	18 14 01.0	
	comp=Z,13nm,1.0s						
BMO	Blue Mountains	69.09	49	P	P	18 14 00.1	+1.0
BMO				pmax	pmax		
	comp=Z,13nm,1.2s						
BMO	Blue Mountains	69.09	49	P	P	18 14 00.1	+1.0
BMO				IAmb	IAmb	18 14 01.6	
	comp=Z,13nm,1.2s						
JTMT	Jette	69.12	45	P	P	18 14 00.8	+1.5
JTMT				IAmb	IAmb	18 14 01.8	
	comp=Z,16nm,0.9s						
J08A	Circle Bar Ran	69.26	51	P	P	18 14 01.0	+0.8
GROC	Groznyy	69.26	309	eP	P	18 13 50.5	-10
GROC				e	PcP	18 14 17.1	-6.6
GROC				pmax	pmax		
	comp=Z,12nm,0.6s						
VSU	Vasula	69.30	330	eP	P	18 14 01.3	+1.3
VSU	Vasula	69.30	330	⇑eP	P	18 14 00.4	+0.4
VSU				pmax	pmax		
	comp=Z,31nm,0.9s						
ORV	Oroville	69.55	55	P	P	18 14 02.5	+0.6
ORV				pmax	pmax		
	comp=Z,21nm,1.5s						
ORV	Oroville	69.55	55	P	P	18 14 02.5	+0.6
ORV				IAmb	IAmb	18 14 03.7	
	comp=Z,21nm,1.4s						
WVOR	Wild Horse Val	69.69	51	P	P	18 14 04.1	+1.2
WVOR				pmax	pmax		
	comp=Z,13nm,1.1s						
WVOR	Wild Horse Val	69.69	51	P	P	18 14 04.1	+1.2
WVOR				IAmb	IAmb	18 14 16.1	
	comp=Z,13nm,1.1s						
PLID	Pearl Lake	69.71	48	P	P	18 14 03.8	+0.7
PLID				IAmb	IAmb	18 14 05.2	
	comp=Z,21nm,1.4s						
GOF	Gofitskoye	69.81	312	⇑eP	P	18 14 04.2	+0.8
GOF				pmax	pmax		
	comp=Z,68nm,1.3s						
MSO	Missoula	69.85	46	P	P	18 14 03.6	-0.3
	baz=307,SNR=5.9						
MSO	Missoula	69.85	46	P	P	18 14 04.2	+0.4
MSO				IAmb	IAmb	18 14 05.8	
	comp=Z,19nm,1.3s						
MTSE	Matsula	70.24	331	eP	P	18 14 06.7	+0.9
NCK	Nalchik	70.40	310	⇓eP	P	18 14 07.9	+0.8
NCK				pmax	pmax		
	comp=Z,28nm,1.1s						
AAL	Aland	70.56	334	eP	P	18 14 08.7	+1.0
MPK	Martis Peak	70.63	55	P	P	18 14 10.2	+1.3
ZEI	Tsey	70.63	310	eP	P	18 14 08.4	-0.4
ZEI				pmax	pmax		
	comp=Z,11nm,1.0s						
KVAR	Kislovodsk Arr	70.66	311	P	P	18 14 10.0	+1.2
	comp=Z,15nm,1.0s,baz=261,slow=19,SNR=11						
KIV	Kislovodsk	70.66	311	eP	P	18 14 09.6	+0.8
KIV				eS	S	18 23 23.9	+1.8
KIV				eSS	SS	18 27 57.1	+4.0
KIV				pmax	pmax		
	comp=Z,108nm,1.0s						
KIV				pmax	pmax		
	comp=Z,27nm,4.4s						
KIV	Kislovodsk	70.66	311	P	P	18 14 09.6	+0.8
KBZ	Khabaz	70.67	311	P	P	18 14 09.9	+1.2
	comp=Z,16nm,0.9s,baz=60,slow=4.2,SNR=45						
KBZ				LR	LR	18 47 32.9	
	comp=Z,202nm,18.2s,baz=11,slow=38						
KBZ	Khabaz	70.67	311	c iP	P	18 14 09.4	+0.7
KBZ				pmax	pmax		
	comp=Z,23nm,0.9s						
EMB	Emerald Bay	70.77	55	P	P	18 14 10.9	+1.2
MFID	Camas Ranch	70.79	49	P	P	18 14 10.4	+0.8
PAHR	Pah Rah Range	70.80	54	P	P	18 14 10.9	+1.1
PAHR				IAmb	IAmb	18 14 12.1	
	comp=Z,16nm,1.0s						
FFC	Flin Flon	70.81	34	P	P	18 14 09.9	+0.5
FFC				pmax	pmax		

	comp=Z,10.0nm,0.9s						
FFC	Flin Flon	70.81	34	P	P	18 14 09.9	+0.5
FFC				IAmb	IAmb	18 14 20.3	
	comp=Z,10.0nm,0.8s						
VCNR	Virginia City	70.87	55	P	P	18 14 10.8	+0.5
VCNR				IAmb	IAmb	18 14 28.6	
	comp=Z,8.9nm,0.8s						
STKA	Stephens Creek	70.92	182	P	P	18 14 10.3	+0.2
	comp=Z,2.1nm,0.5s,baz=342,slow=8.9,SNR=6.6						
STKA	Stephens Creek	70.92	182	P	P	18 14 10.0	-0.1
ONI	Oni	71.02	310	P	P	18 14 11.1	+0.1
ONI				pmax	pmax		
	comp=Z,35nm,1.0s						
ONI	Oni	71.02	310	P	P	18 14 11.1	+0.1
PNTR	Pine Nut	71.02	55	P	P	18 14 12.4	+1.2
PNTR				IAmb	IAmb	18 14 13.8	
	comp=Z,13nm,0.9s						
NEY	Neytrino	71.06	311	⇑eP	P	18 14 12.2	+0.9
NEY				pmax	pmax		
	comp=Z,2.0nm,0.9s						
HRY	Holter Researc	71.08	45	P	P	18 14 12.7	+1.3
CMB	Columbia Colle	71.13	56	P	P	18 14 12.4	+0.7
CMB				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CMB	Columbia Colle	71.13	56	P	P	18 14 12.4	+0.7
CMB				IAmb	IAmb	18 14 14.0	
	comp=Z,10nm,1.1s						
LRM	Limekiln Ridge	71.28	46	P	P	18 14 13.6	+0.9
YERR	Yerington	71.31	55	P	P	18 14 14.4	+1.5
YERR				IAmb	IAmb	18 14 15.4	
	comp=Z,20nm,1.0s						
EGMT	Eagleton	71.39	43	P	P	18 14 13.7	+0.6
	baz=309,SNR=5.9						
EGMT	Eagleton	71.39	43	P	P	18 14 14.1	+1.0
EGMT				IAmb	IAmb	18 14 15.1	
	comp=Z,15nm,1.0s						
DLMT	Dillon	71.48	46	P	P	18 14 14.7	+0.9
DLMT				IAmb	IAmb	18 14 16.1	
	comp=Z,11nm,0.8s						
MNK	Minsk	71.51	326	iP	P	18 14 11.2	-2.4
MNK				i	PcP	18 14 30.3	-2.7
MNK				iS	S	18 23 28.9	-2.5
MNK				iSS	SS	18 28 06.1	+0.7
MNK				pmax	pmax		
	comp=Z,18nm,0.9s						
MNK				pmax	pmax		
	comp=N,23nm,0.9s						
MNK				pmax	pmax		
	comp=E,1.0nm,0.9s						
MNK				MLR	MLR		
	comp=Z,771nm,20.0s						
MNK				MLR	MLR		
	comp=E,56nm,18.0s						
MNK				MLR	MLR		
	comp=N,503nm,18.0s						
MNK	Minsk	71.51	326	iP	P	18 14 11.2	-2.4
	comp=E,1.0nm,0.8s						
MNK				iP	P	18 14 11.2	-2.4
	comp=N,23nm,0.9s						
MNK				iP	P	18 14 11.2	-2.4
	comp=Z,18nm,0.9s,baz=227						
MNK				iPcP	PcP	18 14 30.4	-2.6
MNK				iPP	PP	18 17 02.1	+10
MNK				iPPP	PPP	18 18 45.6	
MNK				iS	S	18 23 28.9	-2.5
MNK				iSS	SS	18 28 06.2	+0.8
MNK				iSSS	SSS	18 31 35.5	
MNK				iLQ	LQ	18 41 04.0	
MNK				iLR	LR	18 43 34.9	
MNK				iLRM	MLR	18 48 40.3	
	comp=Z,771nm,19.5s						
MNK				iLRM	MLR	18 48 43.2	
	comp=E,56nm,18.1s						
MNK				iLRM	MLR	18 48 44.6	
	comp=N,503nm,18.1s						
ISAL	Salakas	71.52	328	eP	P	18 14 14.4	+0.8
HLID	Hailey	71.53	49	P	P	18 14 15.3	+1.2
	baz=307,SNR=8.8						
HLID	Hailey	71.53	49	P	P	18 14 15.6	+1.4
SLIT	Slitere, Latvi	71.58	331	eP	P	18 14 15.1	+1.2
UPP	Uppsala	71.59	335	eP	P	18 14 15.3	+1.3
GNI	Garni	71.67	307	P	P	18 14 16.2	+1.1
	comp=N,4.8nm,0.9s,baz=135,slow=17,SNR=3.9						
GNI	Garni	71.67	307	⇑eP	P	18 14 16.4	+1.3
GNI				pmax	pmax		
	comp=Z,14nm,1.7s						
GNI	Garni	71.67	307	P	P	18 14 15.4	+0.4
GNI				IAmb	IAmb	18 14 41.9	
	comp=Z,18nm,0.9s						
NACGM	Naroch	71.70	327	iP	P	18 14 15.8	+1.0
BMN	Battle Mountai	71.72	53	P	P	18 14 16.9	+1.6
BMN				pmax	pmax		
	comp=Z,16nm,1.0s						
BMN	Battle Mountai	71.72	53	P	P	18 14 16.9	+1.6
BMN				IAmb	IAmb	18 14 18.1	
	comp=Z,16nm,1.0s						
BOZ	Bozeman (W)	71.88	46	P	P	18 14 16.6	+0.4
BOZ				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BOZ	Bozeman (W)	71.88	46	P	P	18 14 17.0	+0.8
	baz=308,SNR=15						
BOZ	Bozeman (W)	71.88	46	P	P	18 14 16.6	+0.4
BOZ				IAmb	IAmb	18 14 18.4	
	comp=Z,10nm,0.8s						
RYN	Ryan	71.97	55	P	P	18 14 18.3	+1.4
RYN				IAmb	IAmb	18 14 19.4	
	comp=Z,10.0nm,1.0s						
KVN	Kaiserville	71.99	54	P	P	18 14 18.3	+1.3
KVN				pmax	pmax		
	comp=Z,22nm,1.0s						
KVN	Kaiserville	71.99	54	P	P	18 14 18.2	+1.3
KVN				IAmb	IAmb	18 14 19.6	
	comp=Z,22nm,1.0s						
MDPB	Devils Postpil	72.20	56	P	P	18 14 19.6	+1.1
LHV	Little Huntoon	72.20	55	P	P	18 14 20.1	+2.1
NVAR	Mina Array Bea	72.23	55	P	P	18 14 19.6	+1.1
	comp=Z,7.6nm,0.8s,baz=286,slow=6.3,SNR=49						
NVAR	Mina Array Bea	72.23	55	P	P	18 14 20.2	+1.7
NV11	Mina Array Sit	72.32	55	P	P	18 14 20.4	+1.4
NV11				IAmb	IAmb	18 14 21.5	
	comp=Z,14nm,1.2s						
KARS	Kars	72.41	308	P	P	18 14 19.0	-0.4
KARS				pmax	pmax		
	comp=Z,110nm,1.0s						
KARS	Kars	72.41	308	P	P	18 14 19.0	-0.4
PABE	Paberze	72.44	329	eP	P	18 14 20.2	+1.0
PABE	Paberze	72.44	329	P	P	18 14 19.0	-0.1
QLMT	Earthquake Lak	72.46	46	P	P	18 14 21.0	+1.2
NC405	NORSAR Array S	72.47	338	P	P	18 14 18.9	-0.4
NC303	NORSAR Array S	72.49	338	P	P	18 14 19.3	-0.1
YHL	Hebgen Lake	72.58	46	P	P	18 14 22.1	+1.5
SOC	Sochi	72.60	312	eP	P	18 14 18.1	-2.2
SOC				e	PP	18 16 58.0	-3.4
SOC				ePPP	PPP	18 18 46.0	
SOC				eS	S	18 23 43.5	-0.8
SOC				eSS	SS	18 28 20.4	-2.2
SOC				eSSS	SSS	18 31 33.4	
SOC				pmax	pmax		
	comp=Z,29nm,1.0s						
SOC				MLR	MLR		
	comp=Z,235nm,17.0s						
NC204	NORSAR Array S	72.62	338	P	P	18 14 20.3	+0.1
NB201	NORSAR Array S	72.65	338	P	P	18 14 20.9	+0.6
HFS	Hagfors	72.65	336	P	P	18 14 20.9	+0.6
	comp=Z,4.9nm,0.6s,baz=42,slow=6.9,SNR=25						
NB2	NORSAR Subarra	72.68	338	P	P	18 14 20.6	0.0
	comp=Z,36nm,1.2s,baz=34,slow=5.9						
NB2	NORSAR Subarra	72.68	338	P	P	18 14 20.6	0.0
	baz=34,slow=5.9						
NOA	NORSAR Array B	72.68	338	P	P	18 14 21.0	+0.5
	comp=Z,3.7nm,0.7s,baz=38,slow=6.0,SNR=19						
NOA				LR	LR	18 50 27.9	
	comp=Z,262nm,18.5s,baz=15,slow=39						
UOSS	Minazif	72.72	288	P	P	18 14 21.6	+0.2
ELK	Elko	72.74	51	P	P	18 14 23.0	+1.4
	comp=Z,2.6nm,0.9s,baz=313,slow=8.0,SNR=8.4						
ELK	Elko	72.74	51	P	P	18 14 23.0	+1.4
ELK	Elko	72.74	51	P	P	18 14 23.0	+1.4
YHH	Holmes Hill	72.81	46	P	P	18 14 23.0	+1.1
GCMT	Greycliff	72.83	45	P	P	18 14 22.9	+1.0
PBUR	Paburge	72.88	330	eP	P	18 14 22.7	+1.0
YNR	Norris Junctio	72.95	46	P	P	18 14 24.6	+1.8
TPH	Tonopah	73.12	55	P	P	18 14 25.1	+1.3
TPH				pmax	pmax		
	comp=Z,76nm,1.0s						
TPH	Tonopah	73.12	55	P	P	18 14 25.1	+1.3
ANN	Anapa	73.13	314	eP	P	18 14 32.5	+9.1
ANN				e*PP	PcP	18 14 37.8	-2.3
ANN				e		18 24 39.4	
ANN				pmax	pmax		
	comp=Z,49nm,1.1s						
ANN				MLR	MLR		
	comp=Z,331nm,12.0s						
H17A	Grant Village	73.21	46	P	P	18 14 26.2	+2.0
	baz=309						
H17A	Grant Village	73.21	46	P	P	18 14 27.0	+2.8
H17A				IAmb	IAmb	18 14 28.4	
	comp=Z,14nm,0.9s						
FLWY	Flagg Ranch	73.33	46	P	P	18 14 27.2	+2.3
PKM	Mcpherson Peak	73.35	58	P	P	18 14 25.9	+0.7
	baz=307						
LCH	Last Change Ra	73.36	55	P	P	18 14 26.4	+1.3
FXWY	Fox Creek	73.43	47	P	P	18 14 27.1	+1.6
RLMT	Red Lodge	73.47	45	P	P	18 14 26.7	+0.9
	baz=310						
RLMT	Red Lodge	73.47	45	P	P	18 14 26.4	+0.6
AKASG	Malin Array Be	73.48	323	P	P	18 14 25.6	+0.2
	comp=Z,4.8nm,0.6s,baz=45,slow=6.1,SNR=22						
AKASG				LR	LR	18 50 52.4	
	comp=Z,299nm,18.2s,baz=5.0,slow=39						
AKASG	Malin Array Be	73.48	323	P	P	18 14 25.8	+0.4
AKASG				pmax	pmax		
	comp=Z,14nm,1.2s						
AKASG	Malin Array Be	73.48	323	P	P	18 14 25.8	+0.4
AKASG				IAmb	IAmb	18 14 36.1	
	comp=Z,14nm,1.2s						
AKBB	Malin Array Si	73.48	323	ceP	P	18 14 25.3	-0.1
AKBB	Malin Array Si	73.48	323	P	P	18 14 25.3	-0.1
AKBB				IAmb	IAmb	18 14 35.7	
	comp=Z,26nm,0.9s						
MOOW	Moose Ponds	73.52	47	P	P	18 14 27.9	+1.8
CWC	Cottonwood Cre	73.55	56	P	P	18 14 27.0	+0.7
	baz=307						
TPAW	Teton Pass	73.56	47	P	P	18 14 27.8	+1.4
TPAW				IAmb	IAmb	18 14 53.9	
	comp=Z,12nm,1.1s						
HVU	Hansel Valley	73.58	49	P	P	18 14 27.3	+0.9
HVU				pmax	pmax		
	comp=Z,13nm,1.2s						
HVU	Hansel Valley	73.58	49	P	P	18 14 27.3	+0.9
GRAC	Grapevine Rang	73.68	55	P	P	18 14 28.4	+1.4
	baz=307						
LOHW	Long Hollow	73.68	47	P	P	18 14 28.9	+1.8
SNOW	Snow King Moun	73.69	47	P	P	18 14 28.4	+1.3
REDW	Red Top Meadow	73.70	47	P	P	18 14 27.8	+0.6
ISA	Isabella, Lake	73.76	57	P	P	18 14 27.7	+0.3
	baz=307						
SUW	Suwalki	73.83	328	eP	P	18 14 28.3	+0.9
SUW	Suwalki	73.83	328	P	P	18 14 25.8	-1.6
SUW				pmax	pmax		
	comp=Z,34nm,1.0s						
SUW	Suwalki	73.83	328	P	P	18 14 25.8	-1.6
BGU	Big Grassy Mou	73.95	50	P	P	18 14 29.9	+1.2
R11A	Troy Canyon, C	73.98	53	P	P	18 14 29.7	+0.9
	baz=308,SNR=15						
R11A	Troy Canyon, C	73.98	53	P	P	18 14 29.8	+0.9
R11A				IAmb	IAmb	18 14 31.3	
	comp=Z,14nm,1.2s						
GURO	Guroymak-BITLI	74.31	307	P	P	18 14 31.4	+0.6
FURC	Furnace Creek,	74.32	56	P	P	18 14 31.5	+1.0
	baz=308						
SPR3	Spring Creek 3	74.36	52	P	P	18 14 32.9	+1.7
LRMC	Laurel Mtn Rad	74.39	57	P	P	18 14 31.6	+0.4
	baz=308						
HWUT	Hardware Ranch	74.39	49	P	P	18 14 32.5	+1.3
HWUT				IAmb	IAmb	18 14 33.9	
	comp=Z,22nm,1.4s						
DUG	Dugway, Tooele	74.54	51	P	P	18 14 33.7	+1.7
DUG				pmax	pmax		
	comp=Z,16nm,1.2s						
DUG	Dugway, Tooele	74.54	51	P	P	18 14 33.3	+1.3
	baz=309,SNR=8.2						
DUG	Dugway, Tooele	74.54	51	P	P	18 14 33.6	+1.7
DUG				IAmb	IAmb	18 14 34.6	
	comp=Z,16nm,1.2s						
EDW2	Edwards Air Fo	74.55	58	P	P	18 14 33.1	+1.1
	baz=308						
GWY	Greenwater Val	74.61	56	P	P	18 14 33.5	+0.9
GWY				IAmb	IAmb	18 14 46.0	
	comp=Z,23nm,1.4s						
QSM	Queen of Sheba	74.62	56	P	P	18 14 33.5	+1.1
QSM				IAmb	IAmb	18 14 34.6	
	comp=Z,17nm,1.1s						
SIRT	Sirnak	74.70	306	P	P	18 14 33.1	+0.1
TCUT	Toone Canyon	74.79	49	P	P	18 14 35.2	+1.7
TCUT				IAmb	IAmb	18 14 46.7	
	comp=Z,13nm,0.9s						
BW06	Boulder Array	74.81	47	P	P	18 14 34.2	+0.6
	baz=310						
BW06	Boulder Array	74.81	47	P	P	18 14 34.2	+0.6
PD31	Pinedale Array	74.81	47	P	P	18 14 34.0	+0.3
PDAR	Pinedale Array	74.81	47	P	P	18 14 34.3	+0.6
	comp=Z,3.2nm,0.6s,baz=268,slow=2.1,SNR=40						
PDAR	Pinedale Array	74.81	47	P	P	18 14 33.8	+0.2
CTU	Camp Tracy	74.86	50	P	P	18 14 34.0	+0.1
PRN	Pahroc Range	74.89	54	P	P	18 14 35.9	+1.8
PSUT	Pine Spring	74.94	52	P	P	18 14 35.4	+1.0
GSC	Goldstone, Bar	75.06	57	P	P	18 14 35.9	+0.9
GSC				pmax	pmax		
	comp=Z,14nm,1.4s						
GSC	Goldstone, Bar	75.06	57	P	P	18 14 35.6	+0.6
	baz=308						
GSC	Goldstone, Bar	75.06	57	P	P	18 14 35.9	+0.9
JLU	Jordanelle	75.09	50	P	P	18 14 35.3	0.0
NLU	North Lily Min	75.13	50	P	P	18 14 36.1	+0.6
MPU	Maple Canyon	75.35	50	P	P	18 14 38.1	+1.3
MPU				IAmb	IAmb	18 14 39.2	
	comp=Z,9.1nm,0.8s						
SHPR	Sheep Range	75.38	55	P	P	18 14 38.6	+1.6
TUQ	Turquoise Moun	75.55	56	P	P	18 14 38.4	+0.5
	baz=308,SNR=6.0						
HEC	Hector,Ludlow	75.66	57	P	P	18 14 39.4	+0.9
	baz=308						
TCRU	Three Creeks R	75.75	52	P	P	18 14 40.4	+1.2
TCRU				IAmb	IAmb	18 14 52.5	
	comp=Z,7.5nm,0.7s						
MURC	Murrieta	75.85	58	P	P	18 14 40.4	+0.9
	baz=308						
CCUT	Cedar City	75.86	53	P	P	18 14 41.2	+1.5
CCUT				IAmb	IAmb	18 14 42.4	
	comp=Z,14nm,1.3s						
MVU	Marysvale	75.96	52	P	P	18 14 41.8	+1.5
MSU	Marysvale	75.98	52	P	P	18 14 41.9	+1.5
MSU	Marysvale	75.98	52	P	P	18 14 41.9	+1.5
SZCU	Shurtz Canyon	76.00	53	P	P	18 14 42.1	+1.5
TMUT	Trail Mountain	76.06	50	P	P	18 14 42.1	+1.1
RDMU	Red Mountain	76.21	49	P	P	18 14 42.7	+1.0
LCMT	Little Creek M	76.27	53	P	P	18 14 43.3	+1.3
LCMT				IAmb	IAmb	18 14 44.7	
	comp=Z,14nm,1.0s						
MTPU	Mount Pierson	76.27	52	P	P	18 14 44.0	+1.8
Q16A	Castle Valley	76.33	51	P	P	18 14 44.0	+1.7
PFO	Pinyon Flats O	76.33	58	P	P	18 14 43.0	+0.7
	baz=308						
TPFO	Pinon Flats	76.33	58	P	P	18 14 42.6	+0.2
	baz=308						
BELC	Belle Mtn. Jos	76.39	57	P	P	18 14 42.7	0.0
	baz=309						
P18A	Preston Nutter	76.42	50	P	P	18 14 44.5	+1.4
P18A				IAmb	IAmb	18 14 45.7	
	comp=Z,17nm,1.3s						
LVV	L'vov	76.48	325	eP	P	18 14 42.1	-0.7
LVV				MLR	MLR		
	comp=N,500nm,14.0s						
LVV				MLR	MLR		
	comp=E,700nm,14.0s						
LVV				MLR	MLR		
	comp=Z,800nm,14.0s						
KNB	Kanab	76.53	53	P	P	18 14 45.3	+1.8
KNB				pmax	pmax		
	comp=Z,15nm,1.1s						
KNB	Kanab	76.53	53	P	P	18 14 45.3	+1.8
KNB				IAmb	IAmb	18 14 57.0	
	comp=Z,15nm,1.1s						
K22A	Casper	76.58	45	P	P	18 14 43.7	0.0
	baz=312						
K22A	Casper	76.58	45	P	P	18 14 44.2	+0.5
K22A				IAmb	IAmb	18 14 45.6	
	comp=Z,13nm,1.1s						
SRU	San Rafael Swe	76.59	50	P	P	18 14 44.6	+0.7
SRU				pmax	pmax		
	comp=Z,17nm,0.8s						
SRU	San Rafael Swe	76.59	50	P	P	18 14 44.6	+0.7
SRU				IAmb	IAmb	18 14 46.0	
	comp=Z,16nm,0.8s						
ULM	Lac du Bonnet	76.61	35	P	P	18 14 43.4	-0.1
	comp=Z,4.5nm,0.9s,baz=6.6,slow=8.2,SNR=4.3						
ULM	Lac du Bonnet	76.61	35	P	P	18 14 43.4	-0.1
MONP2	Monument Peak	76.80	58	P	P	18 14 45.8	+0.7
	baz=309						
IRM	Iron Mountain	76.85	57	P	P	18 14 45.9	+0.8
	baz=309						
RSSD	Black Hills	76.95	43	P	P	18 14 46.2	+0.4
RSSD				pmax	pmax		
	comp=Z,8.0nm,0.8s						
RSSD	Black Hills	76.95	43	P	P	18 14 46.3	+0.4
	baz=313						
RSSD	Black Hills	76.95	43	P	P	18 14 46.2	+0.4
RSSD				IAmb	IAmb	18 14 47.3	
	comp=Z,8.4nm,0.8s						
BC3	Big Chuckawall	76.96	57	P	P	18 14 46.4	+0.5
	baz=309						
W13A	Hualapai Mount	77.06	55	P	P	18 14 47.7	+1.1
IKP	In-Ko-Pah, Jac	77.15	58	P	P	18 14 47.6	+0.6
	baz=309						
U15A	North Rim	77.23	53	P	P	18 14 49.1	+1.6
U15A				IAmb	IAmb	18 14 50.4	
	comp=Z,28nm,1.5s						
O20A	White River Ci	77.27	48	P	P	18 14 48.3	+0.6
	baz=311						
PDMCI	Parker Dam,Lak	77.40	56	P	P	18 14 48.8	+0.6
	baz=309						
BUR08	Bucovina Ar. S	77.51	322	P	P	18 14 49.4	+0.6
BUR08				IAmb	IAmb	18 14 59.8	
	comp=Z,12nm,0.8s						
BURAR	Bucovina Array	77.52	322	⇑P	P	18 14 48.8	0.0
BURAR	Bucovina Array	77.52	322	⇑P	P	18 14 48.8	0.0
BURAR	Bucovina Array	77.52	322	P	P	18 14 49.4	+0.6
GLA	Glamis	77.75	57	P	P	18 14 51.7	+1.4
	baz=309						
BNN	Bunyan	77.86	310	P	P	18 14 51.3	+0.4
KOLS	Kolonicke sedl	77.92	325	eP	P	18 14 51.6	+0.7
KOLS				e	PcP	18 15 01.5	+0.8
KOLS	Kolonicke sedl	77.92	325	eP	P	18 14 51.6	+0.7
KOLS				e	PcP	18 15 01.5	+0.8
OJC	Ojcow	78.03	327	eP	P	18 14 52.5	+1.0
OJC				ePcP	PcP	18 15 02.0	+0.9
OJC	Ojcow	78.03	327	P	P	18 14 51.4	-0.1
OJC				pmax	pmax		
	comp=Z,40nm,1.0s						
OJC	Ojcow	78.03	327	P	P	18 14 51.4	-0.1
VRI	Vrincioaia	78.04	320	⇑P	P	18 14 51.4	-0.2
VRI	Vrincioaia	78.04	320	⇑P	P	18 14 51.4	-0.2
AGMN	Agassiz Nation	78.04	36	P	P	18 14 51.5	0.0
	baz=317						
N23A	Red Feather La	78.08	47	P	P	18 14 52.4	+0.1
	baz=312,SNR=8.2						
UZH	Uzhgorod	78.13	325	eP	P	18 14 50.8	-1.2
UZH				e	PcP	18 14 59.5	-2.1
GAZ	Gaziantep	78.14	308	P	P	18 14 52.6	+0.2
GAZ				IAmb	IAmb	18 15 02.7	
	comp=Z,26nm,1.0s						
CRVS	Cervenica-Dubn	78.30	325	eP	P	18 14 54.5	+1.5
CRVS				e	PcP	18 15 03.7	+1.4
CRVS	Cervenica-Dubn	78.30	325	eP	P	18 14 54.5	+1.5
CRVS				e	PcP	18 15 03.7	+1.4
Y14A	Wickenburg	78.36	56	P	P	18 14 54.2	+0.6
Y14A				IAmb	IAmb	18 15 20.8	
	comp=Z,15nm,1.1s						
WUAZ	Wupatki	78.38	54	P	P	18 14 54.9	+1.0
	baz=310,SNR=9.2						
WUAZ	Wupatki	78.38	54	P	P	18 14 55.4	+1.5
WUAZ				IAmb	IAmb	18 14 56.5	
	comp=Z,15nm,1.2s						
NIE	Niedzica	78.42	326	eP	P	18 14 55.7	+2.0
NIE				ePcP	PcP	18 15 05.2	+2.3
BR131	Keskin Array S	78.56	312	P	P	18 14 53.6	-1.2
BR131				pmax	pmax		
	comp=Z,30nm,1.3s						
BR131	Keskin Array S	78.56	312	P	P	18 14 53.6	-1.2
BR131				IAmb	IAmb	18 15 05.8	
	comp=Z,30nm,1.3s						
BRTR	Keskin Array B	78.57	312	P	P	18 14 55.5	+0.7
	comp=Z,1.3nm,0.6s,baz=107,slow=4.3,SNR=9.7						
BRTR				LR	LR	18 54 23.2	
	comp=Z,234nm,18.3s,baz=16,slow=39						
BRTR	Keskin Array B	78.57	312	P	P	18 14 55.0	+0.2
113A	Mohawk Valley,	78.61	57	P	P	18 14 56.3	+1.4
SMCO	Snowmass	78.63	48	P	P	18 14 56.6	+1.1
MLR	Muntele Rosu	78.69	321	P	P	18 14 57.3	+1.9
	comp=Z,2.1nm,0.6s,baz=169,slow=12,SNR=2.5						
BSEG	Bad Segeberg	78.73	334	eP	PcP	18 15 05.3	+1.2
	comp=Z,24nm,1.1s,baz=35,slow=5.2						
ANTO	Ankara	78.95	313	P	P	18 14 55.9	-0.9
ANTO				pmax	pmax		
	comp=Z,23nm,0.8s						
ANTO	Ankara	78.95	313	P	P	18 14 55.9	-0.9
ANTO				IAmb	IAmb	18 15 08.0	
	comp=Z,23nm,0.8s						
LANS	Liptovska Anna	78.98	326	eP	P	18 14 59.2	+2.4
LANS				e	PcP	18 15 08.2	+2.9
LANS	Liptovska Anna	78.98	326	eP	P	18 14 59.2	+2.4
LANS				e	PcP	18 15 08.2	+2.9
KSP	Ksiaz	79.00	329	eP	P	18 14 58.0	+1.2
KSP				ePcP	pwP	18 15 07.4	+2.1
ISCO	Idaho Springs	79.00	47	P	P	18 14 58.5	+1.1
ISCO				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ISCO	Idaho Springs	79.00	47	P	P	18 14 58.5	+1.1
	baz=313,SNR=5.1						
ISCO	Idaho Springs	79.00	47	P	P	18 14 58.5	+1.1
OKC	Ostrava-Krasne	79.02	327	eP	PcP	18 15 04.9	-0.5
OKC				MLR	MLR		
	comp=Z,500nm,20.0s						
OKC	Ostrava-Krasne	79.02	327	ePCP	PcP	18 15 04.9	-0.5
OKC				ex	x	18 15 22.5	
OKC				AMS	AMS	18 52 50.0	
	comp=Z,500nm,20.0s						
MVCO	Mesa Verde	79.04	51	P	P	18 14 58.6	+1.0
	baz=312,SNR=5.6						
MVCO	Mesa Verde	79.04	51	P	P	18 14 58.5	+0.9
VOIR		79.17	321	⇓P	P	18 14 59.1	+1.2
VOIR		79.17	321	⇓P	P	18 14 59.1	+1.2
OSTC	Ostas	79.25	329	ex	PcP	18 15 08.6	+2.1
OSTC	Ostas	79.25	329	AMS	AMS	18 53 00.0	
	comp=Z,500nm,15.8s						
OSTC	Ostas	79.25	329	eP	P	18 15 03.5	+5.3
CHVC	Chvalec	79.29	329	eP	P	18 14 59.1	+0.7
CHVC				ex	PcP	18 15 08.7	+2.1
CHVC				AMS	AMS	18 52 50.0	
	comp=Z,600nm,18.2s						
MORC	Moravsky Berou	79.32	328	⇑P	P	18 14 59.9	+1.3
MORC	Moravsky Berou	79.32	328	⇑P	P	18 14 59.9	+1.3
MORC	Moravsky Berou	79.32	328	eP	P	18 14 59.7	+1.1
MORC				e	PcP	18 15 09.0	+2.2
MORC	Moravsky Berou	79.32	328	P	P	18 14 59.3	+0.7
MORC				IAmb	IAmb	18 15 10.0	
	comp=Z,25nm,1.1s						
SUSD	Miller	79.34	40	P	P	18 14 58.6	-0.2
	baz=316						
DPC	Dobruska-Polom	79.37	329	eP	P	18 15 00.2	+1.3
DPC				e	pwP	18 15 09.0	+1.6
DPC				MLR	MLR		
	comp=Z,500nm,11.7s						
DPC	Dobruska-Polom	79.37	329	eP	P	18 15 00.2	+1.3
DPC				ePCP	pwP	18 15 09.0	+1.6
DPC				AMS	AMS	18 55 10.0	
	comp=Z,500nm,11.7s						
UPC	Upice	79.37	329	eP	P	18 14 59.8	+1.0
UPC				e	PcP	18 15 08.9	+1.9
UPC				MLR	MLR		
	comp=Z,600nm,18.6s						
UPC	Upice	79.37	329	AMS	AMS	18 53 00.0	
	comp=Z,600nm,18.6s						
UPC	Upice	79.37	329	ePCP	PcP	18 15 08.9	+1.9
UPC	Upice	79.37	329	eP	P	18 14 59.8	+1.0
KRLC	Kraliky	79.40	328	eP	P	18 14 59.6	+0.6
KRLC				e	pwP	18 15 09.0	+1.4
KRLC				MLR	MLR		
	comp=Z,500nm,13.4s						
KRLC	Kraliky	79.40	328	eP	P	18 14 59.6	+0.6
KRLC				ePCP	pwP	18 15 09.0	+1.4
KRLC				AMS	AMS	18 54 10.0	
	comp=Z,500nm,13.4s						

MDUB	Mudurnu	79.44	314	P	P	18 15 00.2	+0.7
F33A	5 Mile Ranch,	79.64	38	P	P	18 15 00.3	0.0
F33A				IAmb	IAmb	18 15 01.7	
	comp=Z,23nm,1.4s						
S22A	4UR Ranch, Cre	79.67	49	P	P	18 15 02.1	+1.0
	baz=312,SNR=8.6						
FLTG	Flechtingen	79.72	333	eP	PcP	18 15 10.6	+2.2
	comp=Z,28nm,1.1s,baz=35,slow=5.2						
PSZ	Piszkesteto	79.73	325	eP	P	18 15 02.3	+1.4
PSZ	Piszkesteto	79.73	325	P	P	18 15 01.0	0.0
PSZ				pmax	pmax		
	comp=Z,29nm,1.1s						
PSZ	Piszkesteto	79.73	325	P	P	18 15 00.9	0.0
PSZ				IAmb	IAmb	18 15 12.4	
	comp=Z,29nm,1.1s						
VYHS	Vyhne	79.75	326	eP	P	18 15 02.8	+1.8
VYHS				e	PcP	18 15 11.9	+3.2
VYHS	Vyhne	79.75	326	eP	P	18 15 02.8	+1.8
VYHS				e	PcP	18 15 11.9	+3.2
Q24A	Divide	79.83	48	P	P	18 15 03.1	+1.2
	baz=313						
BRG	Berggiesshubel	79.89	330	eP	PcP	18 15 11.4	+2.3
	comp=Z,21nm,1.3s,baz=35,slow=5.2						
BRG	Berggiesshubel	79.89	330	eP	P	18 15 02.7	+1.0
BRG				Amp		18 15 03.4	
	comp=Z,2.7nm,0.7s						
CLL	Collm	79.90	331	i P	P	18 15 02.0	+0.3
CLL				i		18 15 11.2	
CLL				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CLL				MLR	MLR		
	comp=Z,400nm,19.4s						
CLL	Collm	79.90	331	i P	P	18 15 02.0	+0.3
	comp=Z,6.0nm,0.8s						
CLL				epP	pP	18 15 05.0	-1.4
CLL				i PcP	pwP	18 15 11.2	+1.0
	comp=Z,25nm,1.1s						
CLL				ePP	PP	18 18 03.0	+0.5
CLL				eSS	SS	18 30 12.0	-0.4
CLL				LmH		18 49 00.0	
	comp=N,400nm,19.5s						
CLL				LmH		18 49 00.0	
	comp=E,500nm,20.5s						
CLL				LmV		18 53 00.0	
	comp=Z,400nm,19.4s						
CLL	Collm	79.90	331	eP	PcP	18 15 11.4	+2.2
	comp=Z,25nm,1.1s,baz=35,slow=5.2						
CLL	Collm	79.90	331	P	P	18 15 01.7	0.0
CLL				IAmb	IAmb	18 15 12.4	
	comp=Z,25nm,1.1s						
PVCC	Panska Ves	79.92	330	eP	P	18 15 03.4	+1.6
PVCC				e	PcP	18 15 09.9	+0.6
PVCC				MLR	MLR		
	comp=Z,700nm,17.6s						
PVCC	Panska Ves	79.92	330	ePCP	PcP	18 15 09.9	+0.6
PVCC	Panska Ves	79.92	330	AMS	AMS	18 53 40.0	
	comp=Z,700nm,17.6s						
PVCC	Panska Ves	79.92	330	eP	P	18 15 03.4	+1.6
JAVC	Velka Javorina	79.97	327	eP	P	18 15 04.2	+2.0
JAVC				e		18 15 13.8	
VRAC	Vranov	80.07	328	⇑P	P	18 15 03.4	+0.7
VRAC	Vranov	80.07	328	P	P	18 15 03.3	+0.7
	comp=Z,5.4nm,0.8s,baz=34,slow=6.9,SNR=5.4						
VRAC	Vranov	80.07	328	eP	P	18 15 03.9	+1.2
VRAC				e		18 15 13.5	
FBE	Freiberg	80.08	331	eP	PcP	18 15 12.8	+2.8
	comp=Z,45nm,1.4s,baz=35,slow=5.2						
ASSE	Asse, Remlinge	80.09	333	eP	PcP	18 15 12.7	+2.8
	comp=Z,20nm,1.4s,baz=35,slow=5.2						
RAR	Rarotonga	80.19	128	LR	LR	18 46 06.5	
	comp=Z,213nm,19.0s,baz=296,slow=32						
OGNE	Ogallala	80.20	44	P	P	18 15 03.7	+0.1
	baz=314						
KRUC	Moravsky	80.34	328	eP	P	18 15 05.3	+1.2
KRUC				e		18 15 14.7	
PRU	Pruhonice	80.36	329	eP	P	18 15 04.8	+0.6
PRU				e		18 15 13.1	
PRU				MLR	MLR		
	comp=Z,500nm,16.3s						
PRU	Pruhonice	80.36	329	eP	P	18 15 04.8	+0.6
PRU				ePCP	pwP	18 15 13.1	+0.3
PRU				AMS	AMS	18 53 40.0	
	comp=Z,500nm,16.3s						
CLZ	Clausthal	80.43	333	eP	PcP	18 15 14.5	+2.9
	comp=Z,44nm,1.4s,baz=35,slow=5.2						
NEUB	Neuenburg	80.44	332	eP	PcP	18 15 14.7	+3.2
	comp=Z,37nm,1.1s,baz=35,slow=5.2						
SDCO	Great Sand Dun	80.45	49	P	P	18 15 06.3	+1.0
	baz=313,SNR=5.3						
SDCO	Great Sand Dun	80.45	49	P	P	18 15 06.2	+1.0
MODS	Modra-Piesok	80.51	327	eP	PcP	18 15 14.5	+2.5
MODS	Modra-Piesok	80.51	327	e	PcP	18 15 14.5	+2.5
TREC	Trest	80.53	329	eP	PcP	18 15 14.9	+2.8
TREC				MLR	MLR		
	comp=Z,500nm,15.3s						
TREC	Trest	80.53	329	ePCP	PcP	18 15 14.9	+2.8
TREC				AMS	AMS	18 55 10.0	
	comp=Z,500nm,15.3s						
GTTG	Gottingen	80.82	333	eP	PcP	18 15 16.8	+3.6
	baz=35,slow=5.2						
TANN	Tannenbergstha	80.82	331	eP	PcP	18 15 17.0	+3.6
	comp=Z,16nm,1.5s,baz=35,slow=5.2						
MOX	Moxa	80.95	331	eP	PcP	18 15 17.6	+3.7
	comp=Z,19nm,1.3s,baz=35,slow=5.2						
WERN	Wernitzgruen	80.96	331	eP	PcP	18 15 17.7	+3.8
	comp=Z,21nm,1.2s,baz=35,slow=5.2						
NKC	Novy Kostel	80.98	331	eP	PcP	18 15 17.3	+3.3
NKC				MLR	MLR		
	comp=Z,400nm,13.2s						
NKC	Novy Kostel	80.98	331	AMS	AMS	18 57 20.0	
	comp=Z,400nm,13.2s						
NKC	Novy Kostel	80.98	331	eP	P	18 15 17.3	+10
ECSD	EROS Data Cent	81.02	40	P	P	18 15 08.3	+0.5
	baz=317						
ECSD	EROS Data Cent	81.02	40	P	P	18 15 08.3	+0.5
MANZ	Manzenberg	81.31	331	eP	PcP	18 15 19.3	+3.9
	comp=Z,3.5nm,1.3s,baz=35,slow=5.2						
MPLH	Magyarpolny	81.33	326	eP	PcP	18 15 19.2	+3.6
SOP	Sopron	81.35	327	eP	P	18 15 11.2	+1.7
CKRC	Cesky Krumlov	81.38	329	eP	P	18 15 10.5	+0.8
CKRC				ex	PcP	18 15 19.0	+3.2
UBBA	Unterbreizbach	81.40	332	eP	PcP	18 15 19.9	+4.2
	baz=35,slow=5.2						
KHC	Kasperske Hory	81.42	329	eP	P	18 15 10.7	+0.7
KHC				e	PcP	18 15 19.7	+3.7
KHC				MLR	MLR		
	comp=Z,500nm,19.7s						
KHC	Kasperske Hory	81.42	329	eP	P	18 15 10.7	+0.7
KHC				ex	PcP	18 15 19.7	+3.7
KHC				AMS	AMS	18 54 30.0	
	comp=Z,500nm,19.7s						
ROTZ	Rotzenmuhle	81.44	331	eP	PcP	18 15 20.1	+4.1
	comp=Z,8.6nm,1.6s,baz=35,slow=5.2						
EKA	Eskdalemuir Ar	81.48	342	P	P	18 15 10.8	+0.8
	comp=Z,1.6nm,0.6s,baz=32,slow=5.0,SNR=6.6						
T25A	Trinidad	81.50	49	P	P	18 15 12.0	+1.2
	baz=314						
T25A	Trinidad	81.50	49	P	P	18 15 11.8	+1.0
T25A				IAmb	IAmb	18 15 12.9	
	comp=Z,9.6nm,0.8s						
GEC2	GERESS Array S	81.61	329	eP	PcP	18 15 20.8	+3.9
	baz=35,slow=5.2						
GERES	GERESS Array B	81.61	329	P	P	18 15 11.4	+0.4
	comp=Z,1.4nm,0.7s,baz=38,slow=5.2,SNR=11						
GERES				LR	LR	18 55 03.9	
	comp=Z,415nm,18.5s,baz=8.5,slow=38						
WET	Wettzell	81.69	330	eP	PcP	18 15 21.2	+4.1
	comp=Z,21nm,1.3s,baz=35,slow=5.2						
ANMO	Albuquerque	81.78	51	P	P	18 15 13.3	+1.0
	comp=Z,2.2nm,0.6s,baz=297,slow=4.0,SNR=8.9						
ANMO	Albuquerque	81.78	51	⇑iP	P	18 15 14.0	+1.7
ANMO				pmax	pmax		
	comp=Z,9.0nm,1.3s						
ANMO	Albuquerque	81.78	51	P	P	18 15 13.2	+1.0
	baz=313						
ANMO	Albuquerque	81.78	51	P	P	18 15 13.6	+1.3
GRF	Grafenberg Arr	81.88	331	eP	PcP	18 15 22.1	+4.1
	comp=Z,43nm,1.2s,baz=35,slow=5.2						
KOVH	Kovagotottos	81.92	325	eP	P	18 15 13.0	+0.4
VTS	Vitosha	82.12	320	P	P	18 15 13.7	-0.2
VTS				pmax	pmax		
	comp=Z,19nm,0.9s						
VTS	Vitosha	82.12	320	P	P	18 15 13.7	-0.2
VTS				IAmb	IAmb	18 15 25.4	
	comp=Z,19nm,0.9s						
TNS	Taunus Mts	82.45	333	eP	PcP	18 15 25.3	+4.8
	comp=Z,16nm,1.5s,baz=35,slow=5.2						
121A	Cookes Peak, D	82.58	54	P	P	18 15 17.0	+0.5
	baz=312						
AHRW	Bad Neuenahr-A	82.66	334	eP	PcP	18 15 26.3	+5.0
	comp=Z,25nm,1.3s,baz=35,slow=5.2						
GROS	Grobnik	82.76	327	i P	P	18 15 17.6	+0.5
GROS				i pP	pwP	18 15 26.6	+1.0
PERS	Pernice	82.78	327	i P	P	18 15 18.0	+0.8
PERS				i pP	pwP	18 15 27.0	+1.2
RJOB	Jochberg	82.86	329	eP	PcP	18 15 27.6	+5.2
	comp=Z,34nm,1.4s,baz=35,slow=5.2						
CBKS	Cedar Bluff	82.96	45	P	P	18 15 17.6	-0.6
	baz=316						
WLF	Walferdange	83.72	334	eP	PcP	18 15 32.2	+6.2
	baz=35,slow=5.2						
JAVS	Javornik	83.82	327	i P	P	18 15 22.2	-0.4
JAVS				i pP	pwP	18 15 31.3	+0.2
UBR	Ueberruh	83.95	330	eP	PcP	18 15 33.0	+5.9
	comp=Z,27nm,1.5s,baz=35,slow=5.2						
BFO	Black Forest	84.08	332	eP	PcP	18 15 33.8	+6.1
	comp=Z,41nm,1.5s,baz=35,slow=5.2						
PPT	Papeete	84.19	118	LR	LR	18 46 02.2	
	comp=Z,129nm,20.4s,baz=318,slow=31						
PDG	Podgorica	84.20	322	P	P	18 15 24.7	+0.3
PPT2	Papeete2	84.20	118	eLR	LR	18 42 15.4	
	comp=Z,235nm,22.8s						
MNTX	Cornudas Mount	84.65	53	P	P	18 15 27.6	+0.7
	baz=314						
MNTX	Cornudas Mount	84.65	53	P	P	18 15 27.6	+0.7
AMTX	Amarillo	84.66	49	P	P	18 15 27.1	+0.1
	baz=315						
DAVOX	Davos/Dischmat	84.78	330	P	P	18 15 28.3	+0.7
	comp=Z,4.2nm,0.7s,baz=37,slow=3.5,SNR=7.0						
TAOE	Nuku Hiva Isla	85.11	106	eS	S	18 25 59.6	+1.0
	comp=Z,2µm,27.6s						
TAOE	Nuku Hiva Isla	85.11	106	eLR	LR	18 42 35.2	
	comp=Z,268nm,21.5s						
TUE	Stuetta	85.25	330	P	P	18 15 30.4	+0.5
WMOK	Wichita Mounta	86.42	47	P	P	18 15 36.2	+0.5
WMOK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
WMOK	Wichita Mounta	86.42	47	P	P	18 15 35.8	0.0
	baz=317						
WMOK	Wichita Mounta	86.42	47	P	P	18 15 36.2	+0.5
P40A	Paris	86.43	40	P	P	18 15 36.7	+1.1
P40A				IAmb	IAmb	18 15 37.3	
	comp=Z,14nm,1.1s						
TX31	Lajitas Ar. Si	87.34	54	P	P	18 15 40.8	+0.3
TX32	Lajitas Array	87.34	54	P	P	18 15 41.0	+0.6
TXAR	Lajitas Array	87.35	54	P	P	18 15 41.1	+0.7
	comp=Z,2.5nm,0.9s,baz=296,slow=3.4,SNR=16						
TXAR	Lajitas Array	87.35	54	P	P	18 15 40.9	+0.5
TXAR	Lajitas Array	87.35	54	P	P	18 15 40.9	+0.5
ABTX	Abilene, Hawle	87.45	49	P	P	18 15 41.1	+0.3
	baz=316						
CCM	Cathedral Cave	87.97	40	P	P	18 15 43.3	+0.2
CCM				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CCM	Cathedral Cave	87.97	40	P	P	18 15 42.5	-0.6
	baz=321						
CCM	Cathedral Cave	87.97	40	P	P	18 15 43.3	+0.2
CCM				IAmb	IAmb	18 16 03.4	
	comp=Z,7.8nm,0.8s						
U40A	Yellville	88.45	42	P	P	18 15 45.0	-0.5
	baz=320						
U40A	Yellville	88.45	42	P	P	18 15 45.2	-0.2
U40A				IAmb	IAmb	18 15 46.6	
	comp=Z,9.1nm,1.0s						
T42A	Van Buren	88.84	41	P	P	18 15 47.3	+0.1
T42A				IAmb	IAmb	18 15 58.5	
	comp=Z,12nm,1.4s						
W39A	Magazine	88.84	44	P	P	18 15 47.1	-0.2
	baz=320						
FCAR	Ozark Folk Cen	89.19	42	P	P	18 15 48.1	-0.8
FCAR				IAmb	IAmb	18 15 49.8	
	comp=Z,7.4nm,1.0s						
MIAR	Mount Ida	89.44	44	P	P	18 15 50.0	-0.1
	baz=320						
LONY	Lake Ozonia	89.59	26	P	P	18 15 49.9	-0.7
	baz=332						
W41B	Gary Mavity, V	89.67	43	P	P	18 15 51.2	0.0
	baz=320						
P49A	Miami Univ. Ec	89.89	35	P	P	18 15 51.5	-0.7
	baz=325						
WVT	Waverly	91.17	39	P	P	18 15 58.1	-0.1
	baz=323						
OXF	Oxford	91.65	41	P	P	18 16 00.3	-0.1
	baz=322						
KEST	Kesra	94.17	324	LR	LR	19 03 37.6	
	comp=Z,394nm,18.2s,baz=322,slow=39						
ESDC	Sonseca Array	95.91	335	LR	LR	19 04 58.1	
	comp=Z,167nm,19.0s,baz=345,slow=39						
TORD	Torodi Ar. Bea	116.83	318	PKP	PKPdf	18 21 37.4	-0.7
	comp=Z,0.2nm,0.6s,baz=0.6,slow=3.5,SNR=1.6						
SYO	Syowa Base	131.07	208	⇓ePdiff	Pdif	18 18 56.8	+1.4
SNAA	Sanae	143.49	197	PKPdf	PKPdf	18 22 27.6	+1.0
LPAZ	La Paz	144.03	59	PKP	PKPbc	18 22 28.0	+0.3
	comp=Z,1.1nm,0.3s,baz=335,slow=4.9,SNR=5.2						
LPAZ	La Paz	144.03	59		PKPbc	18 22 27.6	-0.2
VNA2	Neumayer--Watz	145.04	196	PKPbc	PKPab	18 22 28.8	+0.2
	baz=129,slow=2.9						
VNA3	Neumayer Olymp	145.26	195	PKPbc	PKPbc	18 22 29.2	-0.2
VNA1	Neumayer--Stat	145.44	196	PKPbc	PKPab	18 22 30.0	-0.1
BO02	Sierra Bellavi	152.31	91		PKPbc	18 22 49.0	0.0
PLCA	Paso Flores	153.92	104	PKPbc	PKiKP	18 22 52.9	+0.5
	comp=Z,1.7nm,0.7s,baz=280,slow=6.1,SNR=4.2						
PLCA	Paso Flores	153.92	104	PKIKP	PKiKP	18 22 52.7	+0.3
PLCA	Paso Flores	153.92	104		PKiKP	18 22 52.7	+0.3

MEX 05 18:04:45.7±1.3**, 16°.24N×98°.06W, h14**^{km}±18^{km}**, MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.16	335	i P	Pg	18 04 48.9	-0.8
PNIG				i S	Sg	18 04 52.0	-0.4
YOIG	Yosondua	0.78	39	i P	Pg	18 04 58.6	-2.3
YOIG				i S	Sg	18 05 08.9	-2.4
PEIG	Puerto Escondi	0.91	105	i P	Pg	18 05 00.3	-3.0
PEIG				i S	Sg	18 05 11.4	-3.8
TXIG	Tlaxiaco	1.04	15	i P	Pb	18 05 03.0	-2.8
MGIG	Malinaltepec	1.13	331	eP	Pb	18 05 04.8	-2.4
MGIG				i S	Sb	18 05 19.6	-2.3
TLIG	Tlapa	1.40	340	i P	Pn	18 05 09.2	-1.8
TLIG				i S	Sn	18 05 25.8	-3.7
VHO	Vista Hermosa	1.51	57	i P	Pn	18 05 03.8	-8.8
VHO				i S	Sn	18 05 28.1	-4.2
HLIG	Huajuapan de L	1.60	9	eP	Pn	18 05 11.7	-2.1
HLIG				i S	Sn	18 05 29.7	-4.7
FTIG	Fresnillo de T	1.66	357	eP	Pn	18 05 12.7	-1.8
FTIG				i S	Sn	18 05 30.7	-5.0
DAIG	Los Arroyos	1.71	297	eP	Pb	18 05 16.4	-0.6
DAIG				eS	Sn	18 05 35.9	-1.1
HUIG	Huatulco	1.93	104	i P	Pn	18 05 14.2	-4.0
TOIG	Toxpalan	2.07	27	eP	Pn	18 05 18.5	-1.7
MEIG	Mezcala	2.25	318	i P	Pb	18 05 26.2	+0.1
MEIG				i S	Sb	18 05 52.9	-1.0
CAIG	El Cayaco	2.27	291	i P	Pn	18 05 21.5	-1.3
CAIG				i S	Sn	18 05 47.0	-3.5

MEX 05 18:04:56.3±0.5**, 16°.21N×98°.04W, h10**^{km}**, MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.20	335	i P	Pg	18 05 00.2	-0.4
PNIG				i S	Sg	18 05 03.3	-0.3
YOIG	Yosondua	0.80	36	i P	Pg	18 05 09.6	-2.2
TXIG	Tlaxiaco	1.07	14	eP	Pg	18 05 14.1	-2.9
TXIG	Tlaxiaco	1.07	14	i S	Pg	18 05 14.4	-2.6

IDC ***05*** *18:06:32.1±1.3, 8°.24S×125°.43E, h0*^{km}*, mb4.0/3, mb1 4.1/7, mb1mx3.7/45, mbtmp4.0/7, ML3.7/4, MS3.4/2, Ms1 3.4/2, ms1mx2.8/38, Error ellipse: s-maj=38.6km s-min=20.2km az=90.0*
DJA ***05*** *18:06:34.9±0.3, 8°S±3°×12°5E±°, h10*^{km}*, M4.0/7, mb4.2/6, MLv3.8/7*
ISC 05 18:06:36.3±0.9**, 8°.35S**±0°.06×**125°.47E**±0°.09**, h35**^{km}**, n21,** σ1^{s}.**97**/21**, mb4.1**/3**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.83	220	P	Pn	18 07 04.3	-1.1
SOEI	Soe	1.83	220	P	Pn	18 07 08.6	+3.2
BATI	Baumata	2.57	224	Pn	Pn	18 07 16.3	+0.9
	12nm,0.3s,baz=101,slow=4.9,SNR=19						
BATI				Sn	Sn	18 07 48.4	+3.0
	16nm,0.3s,baz=125,slow=22,SNR=13						
BATI				LR	LR	18 08 32.3	
	comp=Z,433nm,19.7s,baz=300,slow=46						
BATI	Baumata	2.57	224	P	Pn	18 07 15.8	+0.4
MMRI	Maumere	3.21	265	P	Pn	18 07 23.2	-1.0
MMRI	Maumere	3.21	265	P	Pn	18 07 22.4	-1.8
EDFI	Ende, Flores	3.76	264	P	Pn	18 07 29.4	-2.5
BSSI	Bau Bau, Buton	5.40	294	P	Pn	18 07 51.1	-3.3
	0.0nm11nm,0.6s						
WBSI	Waikabubak, Su	6.14	257	P	Pn	18 08 03.7	-0.9
SANI	Sanana	6.28	5	P	Pn	18 08 07.6	+1.2
	0.1nm8.3nm,0.6s						
SANI	Sanana	6.28	5	P	Pn	18 08 09.5	+3.1
PLAI	Plampang	7.62	266	P	Pn	18 08 23.1	-1.8
	0.1nm24nm,1.2s						
KNRA	Kununurra	7.96	156	P	Pn	18 08 38.4	+8.8
	16nm,0.7s						
FITZ	Fitzroy Crossi	9.69	179	Pn	Pn	18 08 54.2	+0.9
	0.3nm,0.3s,baz=6.6,slow=12,SNR=31						
FITZ				Sn	Sn	18 10 38.5	-2.6
	0.9nm,0.3s,baz=111,slow=14,SNR=6.0						
FITZ	Fitzroy Crossi	9.69	179	P	Pn	18 08 58.4	+5.1
	6.9nm,2.2s						
WRA	Warramunga Arr	14.37	144	Pn	Pn	18 09 57.7	+0.4
	0.5nm,0.3s,baz=318,slow=13,SNR=42						
WRA				Sn	Sn	18 12 33.6	-2.1
	0.1nm,0.3s,baz=320,slow=25,SNR=3.6						
ASAR	Alice Springs	17.24	153	P	P	18 10 36.4	+0.6
	0.2nm,0.3s,baz=323,slow=11,SNR=18						
NWAO	Narrogin (SRO)	25.62	196	LR	LR	18 22 57.0	
	comp=Z,107nm,18.1s,baz=358,slow=38						
SONM	Songino Array	58.43	345	P	P	18 16 29.0	+0.4
	1.0nm,0.8s,baz=165,slow=7.4,SNR=3.5						
MKAR	Makanchi Array	66.98	329	P	P	18 17 26.2	+0.6
	2.5nm,0.8s,baz=128,slow=7.4,SNR=7.6						
ZALV	Zalesovo Beam	70.89	336	P	P	18 17 49.9	+0.3
	1.5nm,0.8s,baz=134,slow=4.3,SNR=5.1						

BEO ***05*** *18:12:41.3±0.6, 43°.33N×17°.14E, h6*^{km}*±3*^{km}*, ML2.8/5*
PDG ***05*** *18:12:41.2±0.3, 43°.34N×17°.31E, h6*^{km}*, ML2.6/12, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*
LDG ***05*** *18:12:42.1±0.1, 43°.27N×17°.33E, h2*^{km}*, Ml2.9/7, Error ellipse: s-maj=4.9km s-min=2.3km az=25.0*
PRU ***05*** *18:12:42.2±0.0, 43°.34N×17°.57E, h0*^{km}
RHSSO ***05*** *18:12:42.6±0.3, 43°.39N×17°.36E, h4*^{km}*±1*^{km}*, ML2.8/17*
ISC 05 18:12:41.9±0.9**, 43°.35N**±0°.02×**17°.27E**±0°.02**, h13**^{km}±6^{km}**, n99,** σ1^{s}.**90**/172**, 15C-17D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RICI	Ricice	0.18	327	i Pg	Pg	18 12 45.6	-0.4
RICI				Sg	Sg	18 12 47.9	-0.9
MAKA	Makarska	0.19	252	ePg	Pg	18 12 47.0	+1.0
MAKA				Sg	Sb	18 12 51.6	+0.9
STON	Ston	0.57	146	ePg	Pg	18 12 52.4	-0.6
STON				eSg	Sb	18 13 01.7	0.0
STON	Ston	0.57	146	⇓iPg	Pg	18 12 52.1	-0.9
STON				eSg	Sb	18 13 01.5	-0.2
STON	Ston	0.57	146	ePg	Pg	18 12 52.1	-0.9
STON				Sg	Sb	18 13 01.6	-0.2
HVAR	Hvar	0.62	254	ePg	Pg	18 12 54.5	+0.5
HVAR				Sg	Sn	18 13 05.5	-0.6
KIJV	Kijevo	0.91	317	ePg	Pg	18 12 58.1	-1.3
KIJV				Sg	Sb	18 13 12.2	+0.7
DBRK	Dubrovnik	0.94	136	i Pg	Pb	18 12 58.5	-1.5
DBRK				Sg	Sg	18 13 12.6	+0.5
TREB	Trebinje	1.01	128	⇑iPg	Pb	18 12 59.6	-1.7
TREB				eSg	Sg	18 13 14.7	+0.1
BRY	Bratogost	1.03	115	ePg	Pb	18 12 59.9	-1.8
BRY				eSg	Sb	18 13 14.8	-0.4
BRY	Bratogost	1.03	115	ePg	Pb	18 12 59.7	-2.0
BRY				i Sg	Sg	18 13 15.3	0.0
MGRS	Mrkonjic Grad	1.08	353	ePg	Pb	18 13 01.0	-1.4
MGRS				eSg	Sb	18 13 15.8	-0.6
UPM	Unac-Piva	1.21	96	⇓iPg	Pn	18 13 03.4	-1.2
UPM				eSg	Sb	18 13 19.1	-1.1
UPM	Unac-Piva	1.21	96	ePg	Pn	18 13 02.9	-1.7
UPM				i Sg	Sn	18 13 21.2	+0.3
ZIRJ	Zirje	1.22	285	ePg	Pn	18 13 04.3	-0.3
ZIRJ				Sg	Sg	18 13 22.5	+1.3
MORI	Morici	1.25	295	ePg	Pn	18 13 04.9	-0.1
MORI				Sg	Sg	18 13 24.5	+2.5
HCY	Herceg Novi	1.27	134	ePg	Pn	18 13 04.2	-1.2
HCY				eSg	Sg	18 13 22.8	-0.1
HCY	Herceg Novi	1.27	134	ePg	Pn	18 13 04.1	-1.3
HCY				i Sg	Sg	18 13 23.7	+0.8
NKME	Niksic	1.37	115	⇑iPg	Pn	18 13 05.7	-1.0
NKME				i Sg	Sg	18 13 26.6	+0.7
NKY	Niksic	1.37	112	ePg	Pn	18 13 06.1	-0.7
NKY				eSg	Sg	18 13 26.9	+0.8
BLY	Banja Luka	1.40	358	ePg	Pn	18 13 07.3	+0.2
BLY				eSg	Sg	18 13 29.1	+2.1
BLY	Banja Luka	1.40	358	⇓iPg	Pn	18 13 07.1	0.0
BLY				eSg	Sb	18 13 26.1	+0.4
HAPS	Han Pijesak,Bl	1.43	58	ePg	Pn	18 13 07.4	-0.2
HAPS				eSg	Sn	18 13 25.5	-0.8
CEME	Cevo	1.45	123	⇑iPg	Pn	18 13 07.2	-0.7
CEME				eSg	Sg	18 13 29.5	+0.9
DOB	Doboj	1.51	23	ePg	Pn	18 13 07.9	-0.7
DOB				eSg	Sn	18 13 27.8	-0.3
PLE	Pljevlja	1.55	90	⇑iPg	Pn	18 13 09.1	-0.1
PLE				i Sg	Sg	18 13 32.8	+1.1
RUDO	Rudo	1.56	79	ePg	Pn	18 13 09.6	+0.4
RUDO				eSg	Sb	18 13 29.9	-0.2
BUM	Brajici-Budva	1.59	131	⇓iPg	Pn	18 13 10.1	+0.3
BUM				eSg	Sg	18 13 33.8	+0.8
UDBI	Udbina	1.60	318	ePn	Pb	18 13 12.0	+0.6
UDBI				Sn	Sg	18 13 35.1	+1.7
BBLS	Lazići	1.64	71	ePg	Pb	18 13 11.4	-0.6
BBLS				eSg	Sg	18 13 36.1	+1.5
BBLS	Lazići	1.64	71	⇓iPn	Pn	18 13 10.4	0.0
BBLS				eSn	Sb	18 13 31.9	-0.6
PRIJ	Prijedor	1.68	347	ePn	Pb	18 13 12.2	-0.4
PRIJ				eSn	Sg	18 13 34.9	-0.9
MRAK	Mrakovica	1.69	351	⇓iPn	Pb	18 13 12.0	-0.8
MRAK				eSn	Sb	18 13 34.2	+0.3
KOME	Kolasin	1.72	106	⇓iPn	Pn	18 13 12.4	+0.8
KOME				i Sn	Sg	18 13 37.0	-0.2
PDG	Podgorica	1.73	121	⇓P	Pb	18 13 13.5	+0.2
PDG				⇑S	Sg	18 13 37.7	+0.3
PDG	Podgorica	1.73	121	ePg	Pb	18 13 13.6	+0.2
PDG				eSg	Sg	18 13 38.5	+1.2
PDG	Podgorica	1.73	121	⇓iPn	Pb	18 13 12.8	-0.6
PDG				eSn	Sb	18 13 35.1	+0.1
TTG	Podgorica	1.73	121	⇑iPn	Pn	18 13 12.5	+1.0
TTG				i Sn	Sg	18 13 37.1	-0.2
DUGI	Dugi Otok	1.73	293	ePn	Pb	18 13 13.2	-0.2
DUGI				Sn	Sg	18 13 38.4	+1.0
DRME	Dracevica, Mon	1.83	129	⇓iPn	Pb	18 13 14.5	-0.6
DRME				eSn	Sb	18 13 38.1	+0.2
DRME	Dracevica, Mon	1.83	129	⇑iPn	Pn	18 13 13.9	+0.9
DRME				eSn	Sg	18 13 39.6	-1.0
PLIT	Plitvice	1.94	323	ePn	Pb	18 13 17.8	+0.8
PLIT				Sn	Sg	18 13 44.8	+0.7
SJES	Sjenica	1.98	92	ePg	Pb	18 13 18.0	+0.2
SJES				eSg	Sg	18 13 46.6	+1.1
IVA	Berane	1.98	103	⇑iPn	Pn	18 13 15.9	+0.7
IVA				i Sn	Sb	18 13 43.2	+0.8
ULC	Ulcinj	2.01	133	⇑iPn	Pn	18 13 16.3	+0.8
ULC				i Sn	Sb	18 13 44.0	+0.8
TEKS	Tekeris	2.03	53	ePn	Pn	18 13 16.2	+0.4
TEKS				eSn	Sn	18 13 41.2	+0.2
DIVS	Divibare	2.11	68	⇓iPn	Pn	18 13 17.3	+0.3
DIVS				eSn	Sn	18 13 43.5	+0.3
NVLJ	Novalja	2.11	306	ePn	Pb	18 13 19.4	-0.6
PVY	Plav	2.12	110	⇓iPn	Pn	18 13 17.9	+0.9
PVY				i Sn	Sb	18 13 46.5	+0.2
RABC	Rab	2.27	309	ePn	Pn	18 13 21.0	+1.9
MOSL	Moslavina	2.29	351	ePn	Pn	18 13 20.5	+1.1
TRUS	Trudelj	2.44	68	ePn	Pn	18 13 23.0	+1.6
FRGS	Fruska Gora	2.57	44	ePn	Pn	18 13 24.0	+0.8
FRGS				eSn	Sn	18 13 54.4	0.0

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BOJS  Bojanci          2.59 327  i Pn    Pb     18 13 26.6 -1.6
BOJS                             eSn     Sb     18 13 58.2 -1.8
BOJS                              IAML          18 14 03.7
      comp=Z,15nm,0.4s
OZLJ  Ozalj            2.61 331  ePn     Pb     18 13 26.4 -2.0
PTJ   Puntijarka       2.72 341  ePn     Pn     18 13 27.3 +1.9
MATE  Matera           2.73 189 ⇑P       Pg     18 13 33.7 -0.4
MATE                            ⇑S       Sn     18 14 00.2 +2.0
CRES  Cresnjev         2.79 333⇓iPn      Pn     18 13 28.2 +1.9
CRES                             eSn     Sn     18 14 02.3 +2.4
SMRN  Sveta Marina     2.80 308  ePn     Pn     18 13 28.6 +2.2
RIY   Rijeka           2.81 316  ePn     Pn     18 13 28.8 +2.3
RIY                              eSn     Sb     18 14 03.4 -2.8
RIY   Rijeka           2.81 316  ePn     Pb     18 13 29.9 -1.9
KALN  Kalnik           2.84 349  ePn     Pn     18 13 27.9 +1.0
LOBO  Lobor            2.93 344  ePn     Pn     18 13 29.8 +1.6
MORH  Mrgy, Hungar     3.03  18 ⇓P       Pb     18 13 36.5 +0.9
MORH  Mrgy, Hungar     3.03  18  ePn     Pn     18 13 30.8 +1.3
MORH                             eSn     Sn     18 14 06.5 +0.9
CEY   Cerknica         3.14 321⇓iPn      Pn     18 13 33.6 +2.6
CEY                              eSn     Sn     18 14 10.7 +2.4
BEHE  Becsehely        3.14 354  ePn     Pn     18 13 32.3 +1.3
BEHE                             eSn     Sn     18 14 09.6 +1.2
BARS  Barje            3.38  97  ePn     Pn     18 13 35.6 +1.4
MDVR  Moldovita        3.51  64 ⇑P       Pn     18 13 36.1 -0.1
SOKA  Soboth           3.69 335  i Pn    Pn     18 13 40.9 +2.3
      comp=Z,4.3nm,0.3s,SNR=12
SOKA                             eSn     Sn     18 14 24.4 +2.4
      comp=Z,6.1nm,0.4s
OBKA  Obir             3.70 330  ePn     Pn     18 13 42.7 +3.9
      comp=Z,2.8nm,0.2s
BZS   Buzias           3.85  52 ⇓P       Pb     18 13 47.2 -2.4
BZS                             ⇑S       Sn     18 14 25.2 -0.7
BLKB  Belogradchik     3.95  84 ⇓S       Sn     18 14 30.0 +1.7
ARSA  Arzberg          4.09 343  ePn     Pn     18 13 45.8 +1.7
      comp=Z,8.9nm,0.3s
ARSA                             eSn     Sn     18 14 32.8 +1.0
      comp=Z,3.9nm,0.6s
GZR   Gura Zlata       4.45  61 ⇑P       Pn     18 13 51.0 +1.9
CONA  Conrad Observa   4.69 348  ePn     Pn     18 13 55.2 +2.8
      comp=Z,0.9nm,0.2s
CONA                             eSn     Sn     18 14 48.0 +1.4
      comp=Z,3.4nm,0.4s
ABTA  Abfaltersbach    4.79 317  ePn     Pn     18 13 57.5 +3.8
      comp=Z,1.0nm,0.3s
ABTA                             eSn     Sb     18 14 57.0 -6.1
      comp=Z,4.7nm,0.7s
MOA   Molln            4.97 336  i Pn    Pn     18 13 59.5 +3.3
      comp=Z,4.1nm,0.2s,SNR=9.2
MOA                              eSn     Sn     18 14 56.5 +3.0
      comp=Z,3.3nm,0.4s
MODS  Modra-Piesok     5.03   0  eSN     Sn     18 14 52.9 -2.0
VYHS  Vyhne            5.26  11  ePN     Pn     18 14 01.2 +1.0
WTTA  Wattenberg       5.58 317  ePn     Pn     18 14 08.1 +3.5
      comp=Z,2.8nm,0.3s
WTTA                             eSn     Sn     18 15 15.4 +6.8
      comp=Z,6.4nm,0.6s
WATA  Walderalm        5.66 317  ePn     Pn     18 14 09.1 +3.4
      comp=Z,2.0nm,0.2s
SQTA  Sankt Quirin     5.77 314  ePn     Pn     18 14 10.2 +3.0
      comp=Z,1.2nm,0.2s
CKRC  Cesky Krumlov    5.85 340  ePN     Pn     18 14 11.0 +2.8
MOTA  Moosalm          5.90 315  ePn     Pn     18 14 12.6 +3.5
      comp=Z,2.1nm,0.3s,SNR=5.4
MOTA                             eSn     Sn     18 15 16.8 +0.1
KHC   Kasperske Hory   6.32 337  ePN     Pn     18 14 16.8 +2.0
KHC                              eSN     Sn     18 15 29.0 +2.1
SBF   Sospel           7.16 278  ePn     Pn     18 14 26.7 +0.5
SBF                              eSn     Sn     18 15 43.2 -4.2
      comp=Z,1.3nm,0.3s
KWP   Kalwaria Pacla   7.32  29  eP      Pb     18 14 48.3 -0.4
KWP                              ePcP    Pg     18 14 57.8 -4.1
TESR  Tescani          7.37  61 ⇑P       Pb     18 14 50.0 +0.4
MBDF  Montbardon       7.69 284  ePn     Pn     18 14 32.8 -0.8
MBDF  Montbardon       7.69 284  eP      Pn     18 14 38.0 +4.4
MBDF                             eSn     Sn     18 15 56.7 -3.9
FRF   La Foret Royal   7.73 275  ePn     Pn     18 14 36.0 +1.9
FRF                              eSn     Sn     18 15 56.9 -4.5
      comp=Z,1.4nm,0.5s
LPG   La Plagne        7.83 290  ePn     Pn     18 14 36.0 +0.3
LPG                              eSn     Sn     18 15 59.3 -4.9
      comp=Z,1.4nm,0.3s
LPL   La Plagne        7.84 290  eP      Pn     18 14 39.4 +3.6
LPL                              eSn     Sn     18 15 59.6 -5.0
      comp=Z,1.0nm,0.3s
BRG   Berggiesshubel   7.86 344   P      Pg     18 15 11.8 -0.4
BRG                               Amp           18 15 13.3
      comp=Z,9.7nm,1.1s
ORIF  Oris-en-Rattie   8.34 285  ePn     Pn     18 14 43.4 +0.9
ORIF                             eSn     Sn     18 16 11.4 -5.2
      comp=Z,1.1nm,0.5s
VIVF  Saint-Julien-l   9.19 284  ePn     Pn     18 14 54.6 +0.5
VIVF                             eSn     Sn     18 16 31.6 -5.7
      comp=Z,0.6nm,0.3s
SSF   Saint Saulge    10.39 296  ePn     Pn     18 15 10.0 -0.6
BGF   Bois d'Agland   10.71 292  ePn     Pn     18 15 14.6 -0.3
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IDC 05 18:22:49.1±3.6**, 3°.99S×150°.79E, h0km, mb3.8**/3**, mb1 4.0**/3**, mb1mx3.5**/35**, mbtmp3.8**/3**, MS3.7**/1**, Ms1 3.6**/1**, ms1mx2.8**/46**, Error ellipse: s-maj=111.0km s-min=50.2km az=115.0, New Ireland region**

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Code  Station Name      Δ°   AZ°     Phase ID           Time      Res
                                   Op        ISC       h  m  s    ISC
WRA   Warramunga Arr  22.55 224    P         P         18 27 51.0 -0.1
      1.2nm,0.8s,baz=50,slow=10,SNR=14
ASAR  Alice Springs   25.47 218    P         P         18 28 18.9 -0.3
      2.0nm,0.8s,baz=50,slow=8.3,SNR=32
FITZ  Fitzroy Crossi  28.33 238    P         P         18 28 45.5 +0.6
      1.9nm,0.9s,baz=61,slow=10,SNR=2.3
STKA  Stephens Creek  29.06 196    LR        LR        18 40 29.8
      comp=Z,132nm,18.4s,baz=16,slow=36
TORD  Torodi Ar. Bea 148.15 289    PKPbc     PKPbc     18 42 37.4 -0.7
      0.7nm,1.0s,baz=64,slow=3.2,SNR=3.1
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*MOS **05** 18:32:11.4±0.9, 39°.30N×143°.89E, h14km, mb4.5/11, Error ellipse: s-maj=11.5km s-min=6.7km az=86.8*

*IDC **05** 18:32:11.5±1.1, 39°.31N×143°.88E, h0km, mb3.8/11, mb1 3.9/16, mb1mx3.7/68, mbtmp3.9/16, ML3.3/5, MS3.6/3, Ms1 3.6/3, ms1mx2.9/60, Error ellipse: s-maj=24.6km s-min=17.1km az=104.0*

*NEIC **05** 18:32:12.8±1.9, 39°.39N±0°.06×143°.78E±0°.07, h10km±1km, mb4.3/6, Error ellipse: s-maj=10.3km s-min=9.1km az=207.0*

*NIED **05** 18:32:14.9, 39°.38N×143°.62E, h39km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}5.43; $M_{\theta\theta}$0.56; $M_{\phi\phi}$-5.98; $M_{r\theta}$0.42; $M_{\theta\phi}$-0.68; $M_{\phi r}$1.49; Fault plane solution: $M_0$5.94000×10^{14} NP1:ϕ_s9.00000°, δ53.00000°, λ94.00000°. NP2:ϕ_s183.00000°, δ38.00000°, λ85.00000°.*

*JMA **05** 18:32:14.9±0.2, 39°.38N×143°.62E, h39km, M4.1*

ISC 05 18:32:12.6±0.6**, 39°.42N**±0°.05×**143°.70E**±0°.06**, h10km, n77, σ2.s00**/94**, mb4.2**/23**, MS4.0**/4**, 6C-4D, Off east coast of Honshu**

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Code  Station Name      Δ°   AZ°     Phase ID           Time      Res
                                   Op        ISC       h  m  s    ISC
MIYJ  Miyakonagasawa   1.46 277   P      Pn     18 32 38.8 -0.2
MIYJ                             eS      Sn     18 32 56.1 -2.1
JTH   Tanohata         1.51 291   P      Pn     18 32 39.6 -0.1
OFUJ  Ofunato          1.61 259   P      Pn     18 32 40.8 -0.3
JOM   Ohasama          1.86 273   P      Pn     18 32 44.9 +0.3
JANG  Nango            1.93 300   P      Pn     18 32 45.1 -0.4
JMK   Ichinoseki       1.98 257   P      Pn     18 32 46.3 +0.2
JMK                              eS      Sn     18 33 09.1 -1.9
JIO   Ouri             2.07 243   P      Pn     18 32 46.8 -0.5
JIO                              eS      Sn     18 33 11.0 -2.2
JTM   Tenmabayashi     2.44 305          Pn     18 32 52.4  0.0
ERM   Erimo            2.63 351⇑eP       Pb     18 32 57.8 -1.9
ERM   Erimo            2.63 351   Pn     Pn     18 32 54.1 -1.0
JYK   Kaneyama         2.64 260   P      Pn     18 32 55.9 +0.6
JMM   Marumori         2.75 237          Pn     18 32 55.7 -1.1
JOT   Ohata            2.82 315   P      Pn     18 32 59.2 +1.5
JNBK  Urakawa-nobuka   2.95 346   P      Pn     18 33 01.4 +1.9
JNBK                             eS      Sn     18 33 36.0 +1.1
JCH   Churui           3.21 356   P      Pn     18 33 04.6 +1.6
JCH                               S      Sn     18 33 41.4 +0.2
JFT   Otama            3.25 235   P      Pn     18 33 03.8 +0.2
JAW   Awa shima        3.60 256   P      Pn     18 33 09.4 +1.0
JEW   Eniwo            3.82 334          Pn     18 33 11.9 +0.5
JYT   Yasato           4.22 222          Pn     18 33 15.8 -1.2
NMR   Nemuro--Hokkai   4.23  20  eP      Pn     18 33 17.0 -0.1
NMR                              eS      Sn     18 34 04.6 -2.0
JSD   Sado             4.47 254          Pn     18 33 20.4  0.0
GLVR  Golovnino        4.53  17  eP      Pn     18 33 22.0 +0.9
GLVR                             eS      Sn     18 34 12.2 -1.6
GLVR                              pmax   pmax
      comp=Z,78nm,0.5s
GLVR                              pmax   pmax
      comp=E,20nm,0.3s
GLVR                              pmax   pmax
      comp=N,27nm,0.2s
GLVR                              smax   smax
      comp=N,236nm,0.3s
GLVR                              smax   smax
      comp=E,294nm,0.3s
JKA   Kamikawa-asahi   4.77 350          Pn     18 33 24.2 -0.3
ASAJ  Asahikawa        4.77 350   Pn     Pn     18 33 27.2 +2.7
      comp=E,2.4nm,0.3s,baz=185,slow=7.0,SNR=20
ASAJ                              Sn     Sn     18 34 20.1 +0.4
      comp=E,1.9nm,0.3s,baz=270,slow=20,SNR=2.4
RUSJ  Misakicho        4.83  13  eP      Pn     18 33 26.8 +1.6
RUSJ                             eS      Sn     18 34 22.2 +1.1
GRPR  Tuman            4.83  18   P      Pn     18 33 25.8 +0.5
GRPR                             eS      Sn     18 34 19.4 -1.8
GRPR                              pmax   pmax
      comp=Z,85nm,0.4s
GRPR                              pmax   pmax
      comp=E,27nm,0.3s
GRPR                              pmax   pmax
      comp=N,28nm,0.1s
GRPR                              smax   smax
      comp=E,363nm,0.3s
GRPR                              smax   smax
      comp=N,206nm,0.7s
YUK   Yuzh-Kuril'sk    4.89  19  eP      Pn     18 33 27.0 +0.9
YUK                              eS      Sn     18 34 21.0 -1.7
YUK                               pmax   pmax
      comp=Z,79nm,0.4s
YUK                               pmax   pmax
      comp=N,26nm,0.2s
YUK                               pmax   pmax
      comp=E,32nm,0.2s
YUK                               smax   smax
      comp=N,148nm,0.5s
YUK                               smax   smax
      comp=E,331nm,0.5s
MJAR  Matsushiro Arr   5.20 238   Pn     Pn     18 33 31.9 +1.4
      comp=E,0.8nm,0.3s,baz=53,slow=13,SNR=48
MJAR                              Sn     Sn     18 34 33.1 +2.6
      baz=78,slow=13,SNR=1.2
MJAR                              LR     LR     18 35 43.6
      comp=E,142nm,18.9s,baz=30,slow=40
MJAR  Matsushiro Arr   5.20 238          Pn     18 33 31.3 +0.9
MAJO  Matsushiro       5.20 238c iP      Pn     18 33 31.7 +1.3
MAJO  Matsushiro       5.20 238          Pn     18 33 32.4 +2.0
MAT   Matsushiro       5.20 238   P      Pn     18 33 31.9 +1.5
MAT                              eS      Sn     18 34 28.9 -1.6
JGF   Kuroka           6.32 235          Pn     18 33 47.0 +1.2
KUR   Kuril'sk         6.58  27   P      Pn     18 33 50.8 +1.5
KUR                              eS      Sn     18 35 01.9 -2.5
KUR                               pmax   pmax
      comp=N,29nm,0.9s
KUR                               pmax   pmax
      comp=Z,37nm,0.9s
KUR                               smax   smax
      comp=N,63nm,0.3s
KUR                               smax   smax
      comp=E,30nm,0.4s
INU   Inuyama          6.69 235          Pn     18 33 51.8 +1.0
JHJ   Hachijo jima 2   7.03 208   Pn     Pn     18 33 55.2 -0.4
      comp=E,6.8nm,0.3s,baz=45,slow=17,SNR=9.4
JHJ                               Sn     Sn     18 35 08.6 -7.0
      comp=E,17nm,0.3s,baz=66,slow=22,SNR=7.0
JWT   Wachi            7.79 241          Pn     18 34 06.1 +0.1
USRK  Ussuriysk Ar.    9.96 302   Pn     Pn     18 34 38.7 +3.0
      baz=86,slow=16,SNR=4.7
USRK  Ussuriysk Ar.    9.96 302          Pn     18 34 34.4 -1.3
JNU   Nakatsue        12.10 243   LR     LR     18 40 20.7
      comp=E,527nm,20.1s,baz=332,slow=40
KSRS  Korea Array     12.53 266   Pn     Pn     18 35 13.9 +3.0
      comp=E,0.1nm,0.3s,baz=74,slow=13,SNR=4.8
SEY   Seymchan        24.12  10   P      P      18 37 30.1 +1.8
      comp=E,1.8nm,0.8s,baz=40,slow=18,SNR=1.8
YAK   Yakutsk         24.21 344ceP       P      18 37 31.1 +2.0
YAK                               pmax   pmax
      comp=Z,22nm,2.5s
ULN   Ulaanbaatar     27.62 300ceP       P      18 38 01.5 +1.2
ULN                               pmax   pmax
      comp=Z,5.0nm,1.7s
H11N2 WAKE ISLAND Hy  28.00 128   T      T      19 07 26.4
      baz=319
H11N1 WAKE ISLAND Hy  28.01 128   T      T      19 07 26.4
      baz=319
H11N1 WAKE ISLAND Hy  28.01 128   P      P      18 38 06.8 +3.3
H11N3 WAKE ISLAND Hy  28.02 128   T      T      19 07 27.6
      baz=319
SONM  Songino Array   28.06 300   P      P      18 38 05.8 +1.7
      comp=Z,0.7nm,0.4s,baz=92,slow=9.1,SNR=4.3
SONM  Songino Array   28.06 300   P      P      18 38 04.9 +0.7
SONM                              IAmb   IAmb   18 38 17.6
      comp=Z,1.7nm,0.8s
ENH   Enshi           29.38 263   P      P      18 38 15.9  0.0
ENH                               IAmb   IAmb   18 38 18.0
      comp=Z,5.9nm,0.9s
DGZ   Jazzator, Alta  40.51 304⇑eP       P      18 39 55.2 +3.5
DGZ                               pmax   pmax
      comp=Z,4.0nm,0.8s
ZALV  Zalesovo Beam   41.69 310   P      P      18 40 02.6 +1.4
      comp=Z,1.8nm,0.5s,baz=95,slow=7.7,SNR=7.5
ZALV  Zalesovo Beam   41.69 310   P      P      18 40 01.7 +0.6
CMAR  Chiang Mai Arr  43.85 255   P      P      18 40 20.4 +1.3
      comp=Z,0.2nm,0.5s,baz=55,slow=7.3,SNR=4.1
CMAR  Chiang Mai Arr  43.85 255 i P      P      18 40 21.7 +2.6
CMAR  Chiang Mai Arr  43.85 255   P      P      18 40 18.6 -0.5
MKAR  Makanchi Array  44.42 300   P      P      18 40 24.9 +1.5
      comp=Z,1.0nm,0.6s,baz=85,slow=10,SNR=5.8
KURK  Kurchatov       45.92 307⇓eP       P      18 40 36.4 +1.2
KURK                              pmax   pmax
      comp=Z,3.0nm,0.8s
KURK  Kurchatov       45.92 307   P      P      18 40 35.0 -0.2
KURK                              IAmb   IAmb   18 40 45.7
      comp=Z,6.2nm,0.6s
KURBB Kurchatov Arra  45.99 307   P      P      18 40 37.1 +1.3
      comp=Z,3.4nm,0.8s,baz=81,slow=8.2,SNR=21
ILAR  Eielson Array   46.52  34   P      P      18 40 39.9 +0.1
      comp=Z,0.4nm,0.7s,baz=250,slow=6.4,SNR=4.1
ILAR  Eielson Array   46.52  34   P      P      18 40 38.7 -1.1
BRVK  Borovoye        50.38 311⇓eP       P      18 41 10.9 +1.2
BRVK                              pmax   pmax
      comp=Z,1.0nm,0.8s
ARU   Arti            55.78 318d iP      P      18 41 59.9  +10
ARU                               S      S      18 49 55.3  +19
ARU                               pmax   pmax
      comp=Z,7.0nm,1.0s
ABKAR Akbulak array   57.80 310   P      P      18 42 04.6 +0.8
ABKAR                             IAmb   IAmb   18 42 14.9
      comp=Z,1.7nm,0.7s
WRA   Warramunga Arr  59.69 190   P      P      18 42 16.9 -0.3
      comp=Z,0.7nm,0.9s,baz=8.9,slow=7.0,SNR=4.8
HRA   Herat           63.21 294   P      P      18 42 42.6 +1.3
ASAR  Alice Springs   63.42 190   P      P      18 42 42.5 +0.1
      comp=Z,0.3nm,0.7s,baz=8.8,slow=6.7,SNR=2.5
OBN   Obninsk         67.26 323⇓eP       P      18 43 08.2 +1.3
OBN                              e              18 43 33.4
OBN                              e              18 45 35.7
OBN                               pmax   pmax
      comp=Z,7.0nm,1.1s
OBN                               MLR    MLR
      comp=Z,55nm,14.0s
FINES FINESS Array B  67.54 333   P      P      18 43 10.8 +2.1
      comp=Z,1.4nm,0.9s,baz=4.6,slow=3.5,SNR=1.8
KIV   Kislovodsk      70.70 311  eP      P      18 43 29.4 +0.7
KIV                               pmax   pmax
      comp=Z,4.0nm,1.1s
KBZ   Khabaz          70.71 311   P      P      18 43 30.2 +1.7
      comp=Z,0.4nm,0.4s,baz=59,slow=7.3,SNR=5.0
KBZ   Khabaz          70.71 311⇑eP       P      18 43 29.2 +0.6
KBZ                               pmax   pmax
      comp=Z,8.0nm,2.4s
MNK   Minsk           71.52 326 i P      P      18 43 30.1 -3.2
MNK                             i               18 43 49.4
MNK                             i PPP    PPP    18 47 51.4
MNK                             i S      S      18 52 46.3 -5.6
MNK                             i               18 53 41.4
MNK                             i SS     SS     18 57 23.2 -2.7
MNK                             i SSS    SSS    19 00 42.3
MNK                               pmax   pmax
      comp=N,10.0nm,0.9s
MNK                               pmax   pmax
      comp=Z,8.0nm,0.9s
MNK                               pmax   pmax
      comp=E,2.0nm,0.9s
MNK                               MLR    MLR
      comp=N,117nm,24.0s
MNK                               MLR    MLR
      comp=Z,112nm,22.0s
MNK                               MLR    MLR
      comp=E,16nm,23.0s
MNK   Minsk           71.52 326 i P      P      18 43 30.1 -3.2
      comp=E,2.0nm,0.8s
MNK                             i P      P      18 43 30.1 -3.2
      comp=N,10.0nm,0.9s
MNK                             i P      P      18 43 30.1 -3.2
      comp=Z,8.0nm,0.9s,baz=227
MNK                             i PcP    PcP    18 43 49.5 -3.2
MNK                             i PP     PP     18 46 08.2 -3.2
MNK                             i PPP    PPP    18 47 51.5
MNK                             i S      S      18 52 46.4 -5.6
MNK                             i SS     SS     18 57 23.2 -2.7
MNK                             i SSS    SSS    19 00 42.4
MNK                             i LQ     LQ     19 09 46.5
MNK                             i LR     LR     19 15 24.8
MNK                             i LRM    MLR    19 17 10.8
      comp=N,117nm,24.1s
MNK                             i LRM    MLR    19 17 37.4
      comp=E,16nm,23.2s
MNK                             i LRM    MLR    19 17 37.4
      comp=Z,112nm,22.3s
VRAC  Vranov          80.08 328   LR     LR     19 23 00.9
      comp=Z,54nm,18.2s,baz=71,slow=38
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*IDC **05** 18:33:14.8±17.0, 12°.43S×167°.07E, h253km±159km, mb3.1/5, mb1 3.3/5, mb1mx3.0/55, mbtmp3.7/5, Error ellipse: s-maj=171.4km s-min=54.0km az=138.0*

ISC 05 18:33:13.9±4.7**, 13°S**±1°×**16°7E**±°**, h250km, n6, σ0.s65**/6**, mb3.4**/5**, Santa Cruz Islands**

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Code  Station Name      Δ°   AZ°     Phase ID           Time      Res
                                   Op        ISC       h  m  s    ISC
CTA   Charters Tower  21.44 247   P      P      18 37 43.5 +0.6
      2.1nm,0.7s,baz=65,slow=13,SNR=3.0
WRA   Warramunga Arr  32.36 253   P      P      18 39 19.6 -0.7
      0.1nm,0.3s,baz=85,slow=8.9,SNR=4.8
ASAR  Alice Springs   33.44 246   P      P      18 39 29.2 -0.6
      0.4nm,0.5s,baz=69,slow=9.4,SNR=10
FITZ  Fitzroy Crossi  40.41 257   P      P      18 40 28.4 +0.2
      0.4nm,0.3s,baz=51,slow=8.5,SNR=6.1
ILAR  Eielson Array   84.51  18   P      P      18 45 18.4 -0.1
      0.8nm,0.6s,baz=239,slow=5.3,SNR=9.9
ARCES ARCESS Array B 118.17 346   PKP    PKPdf  18 51 30.8 +0.1
      4.2nm,0.9s,baz=27,slow=2.6,SNR=6.5
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*IDC **05** 18:40:00.3±2.3, 7°.35S×129°.23E, h138km±29km, mb3.4/1, mb1 3.6/6, mb1mx3.2/39, mbtmp4.0/6, Error ellipse: s-maj=26.4km s-min=20.8km az=116.0*

ISC 05 18:39:59.4±0.8**, 7°.39S**±0°.06×**129°.29E**±0°.08**, h150km, n13, σ3.s03**/18**, Banda Sea**

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Code  Station Name      Δ°   AZ°     Phase ID           Time      Res
                                   Op        ISC       h  m  s    ISC
DRS   Darwin Rock St   5.26 163   P      Pn     18 41 19.9 +3.6
      65nm,0.7s
FAKI  Fak Fak          5.33  34   P      Pn     18 41 17.3  0.0
SOEI  Soe              5.49 244   P      Pn     18 41 21.5 +2.0
MTN   Manton Dam       5.72 162   P      Pn     18 41 25.7 +3.3
      148nm,0.5s
KDU   Kakadu           6.13 149   P      Pn     18 41 31.0 +3.1
BATI  Baumata          6.22 243   P      Pn     18 41 30.9 +1.7
      9.4nm,0.3s,baz=75,slow=17,SNR=24
BATI                              S      Sn     18 42 39.2 -0.3
      18nm,0.3s,baz=39,slow=21,SNR=14
SIJI  Sorong           6.77  17   P      Pn     18 41 36.8 +0.3
      0.3nm,0.3s,baz=114,slow=19,SNR=1.2
SIJI                              S      Sn     18 42 47.4 -5.1
      2.0nm,0.3s,baz=218,slow=23,SNR=8.9
KNRA  Kununurra        8.25 184   P      Pn     18 41 57.7 +1.4
      12nm,0.5s
LUWI  Luwuk            9.05 314   P      Pn     18 42 06.6 -0.3
FITZ  Fitzroy Crossi  11.22 198   P      Pn     18 42 36.0 +0.4
      0.5nm,0.3s,baz=23,slow=14,SNR=29
FITZ                              S      Sn     18 44 34.1 -5.6
      1.1nm,0.3s,baz=102,slow=22,SNR=6.6
WRA   Warramunga Arr  13.41 159   P      Pn     18 43 05.2 +1.3
      1.4nm,0.3s,baz=338,slow=14,SNR=29
WRA                               S      Sn     18 45 28.0 -4.4
      0.7nm,0.3s,baz=338,slow=20,SNR=5.9
ASAR  Alice Springs   16.78 165   P      Pn     18 43 48.9 +3.1
      0.5nm,0.3s,baz=338,slow=9.5,SNR=36
ASAR                              S      S      18 46 50.6 -1.8
      0.3nm,0.3s,baz=320,slow=16,SNR=2.7
MKAR  Makanchi Array  68.16 327   P      P      18 50 45.2 +1.7
      1.0nm,1.0s,baz=112,slow=6.4,SNR=1.5
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*TEH **05** 18:41:49.3, 31°.53N×59°.94E, h8km, ML3.5*

*THR **05** 18:41:50.4±0.6, 31°.52N×59°.94E, h14km±8km, ML3.3*

ISC 05 18:41:50.5±1.0**, 31°.54N**±0°.03×**59°.98E**±0°.05**, h10km, n30, σ1.s24**/34**, Northern and central Iran**

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Code  Station Name      Δ°   AZ°     Phase ID           Time      Res
                                   Op        ISC       h  m  s    ISC
NHDN  Nehbandan        0.15 158  ePg     Pg     18 41 52.6 -1.4
NHDN                             eSg     Sg     18 41 55.9 -0.6
BSRN  Basiran          0.84 301  ePg     Pg     18 42 05.8 -1.0
BSRN                             eSg     Sg     18 42 17.5 -0.4
BSRN  Basiran          0.84 301  ePg     Pg     18 42 05.8 -1.0
IDAH  Dahanechah       1.20 355  ePg     Pb     18 42 12.9 -0.6
IDAH                             eSg     Sb     18 42 29.9 +0.7
IKOO  Kooshah          1.21 317  ePg     Pb     18 42 12.4 -1.3
IKOO                             e              18 42 15.1
      comp=Z,18μm,0.3s
IMON  Monand           1.67 351  ePg     Pn     18 42 21.1 +1.0
IMON                             e              18 42 23.1
      comp=Z,5μm,0.2s
ITEG  Tejag            1.71 323  ePg     Pn     18 42 21.1 +0.5
ITEG                             e              18 42 24.5
      comp=Z,2μm,0.3s
ZHSF  Zahedan          2.04 160  ePn     Pn     18 42 26.1 +1.1
ZHSF  Zahedan          2.04 160  ePn     Pn     18 42 26.1 +1.1
AFRZ  Afriz            2.05 337  ePn     Pn     18 42 25.6 +0.4
SHRT  Shahrakht        2.12   7  ePn     Pn     18 42 27.9 +1.8
SHRT  Shahrakht        2.12   7  ePn     Pn     18 42 27.9 +1.8
ZHDN  Zahedan          2.25 161  ePn     Pn     18 42 28.5 +0.6
CHMN  Cheshme madani   2.69 232  ePn     Pn     18 42 35.6 +1.5
CHMN                             e              18 43 14.2
      comp=Z,2μm,0.6s
KBAM  BAM              2.73 209  ePn     Pn     18 42 34.7 +0.2
KBAM                             e              18 42 40.3
      comp=Z,2μm,0.3s
TPRV  Parvadeh(Tabas   3.16 299  ePn     Pn     18 42 41.1 +0.7
TVBK  TV Kerman        3.17 242  ePn     Pn     18 42 42.1 +1.3
TVBK                             e              18 43 38.6
      comp=Z,1μm,0.6s
KRBR  Kerman           3.18 242  ePn     Pn     18 42 41.9 +1.1
KRBR                             eSg     Sb     18 43 28.4 +2.3
KRBR                              IAML          18 43 32.8
      comp=N,63nm,0.2s
KRBR                              IAML          18 43 37.0
      comp=E,72nm,0.6s
KRBR  Kerman           3.18 242  ePn     Pn     18 42 41.9 +1.1
TKDS  Koohdasht(Taba   3.18 311  ePn     Pn     18 42 41.5 +0.8
TABS  Tabas            3.21 312  ePn     Pn     18 42 42.3 +1.3
TABS                              IAML          18 43 40.6
      comp=N,52nm,0.7s
TABS  Tabas            3.21 312  ePn     Pn     18 42 42.3 +1.3
KHGB  Koh Gabri        3.23 250  ePn     Pn     18 42 42.0 +0.6
KHGB                             e              18 43 33.0
      comp=Z,1μm,0.5s
NGRK  Negar Kerman     3.38 237  ePn     Pn     18 42 44.8 +1.1
NGRK                             e              18 43 41.4
      comp=Z,1μm,0.5s
TBJM  Torbat-e-JAM     3.73   4  ePn     Pn     18 42 49.3 +1.0
TNSJ  Nastanj          3.73 311  ePn     Pn     18 42 48.8 +0.5
IMEH  Mehriz           4.59 270  ePn     Pn     18 43 01.5 +1.3
SRVN  Saravan          4.63 152  ePn     Pn     18 43 03.0 +2.4
IPAY  Payeh            4.97 351  ePn     Pn     18 43 07.1 +1.7
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IFIR	Firoozkooh	7.29	306	*e*Pn	Pn	18 43 37.8	+0.5

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*IDC **05** 18:48:35.0±1.2, 2°.70N×98°.12E, h0^{km}, mb3.8/7, mb1 3.9/7, mb1mx3.6/46, mbtmp3.8/7, Error ellipse: s-maj=32.1km s-min=10.1km az=12.0*

*DJA **05** 18:48:41.0±0.2, 3°N±2°×9°8E±°, h10^{km}, M4.3/12, mb4.2/4, MLv4.4/12*

ISC 05 18:48:37.6±0.7**, 2°.78N**±0°.04×**98°.19E**±0°.04**, h10**^{km}**, n20,** σ**1**^{s}**97**/21**, mb3.8**/7**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	Prapat	0.73	89	Pg	Pg	18 48 51.2	-0.6
	211nm,0.3s,baz=295,slow=13,SNR=424						
PSI				Lg	Lg	18 49 01.4	
	179nm,0.3s,baz=135,slow=20,SNR=12						
PSI				LR	LR	18 49 28.6	
	comp=Z,399nm,21.7s,baz=24,slow=66						
TSI	Tuntungan	0.80	27	P	Pb	18 48 54.7	+1.0
TSI				S	Sn	18 49 07.2	+0.2
TPTI		1.12	295	P	Pn	18 49 02.1	+2.8
GSI	Gunungsitoli	1.59	203	P	Pg	18 49 07.6	-0.6
SNSI	Sinabang, Aceh	1.90	259	P	Pg	18 49 14.4	+0.3
MNSI	Mandailing Nat	2.41	145	P	Pb	18 49 19.8	-1.3
LHMI	Lhok Sumawe	2.73	333	P	Pb	18 49 25.7	-0.9
BKNI	Bangkinang	3.75	131	P	Pn	18 49 38.3	+2.8
PPI	Padang Panjang	3.90	146	P	Pn	18 49 41.2	+3.6
SISI	Saibi	4.18	168	P	Pn	18 49 45.2	+3.7
PDSI	Padang	4.31	148	P	Pn	18 49 46.5	+3.1
PPSI	Pulau Pagai	5.80	162	P	Pn	18 50 06.6	+2.8
	0.7nm139nm,0.7s						
CMAR	Chiang Mai Arr	15.60	3	Pn	P	18 52 21.7	-0.2
	0.2nm,0.3s,baz=196,slow=12,SNR=21						
WRA	Warramunga Arr	42.06	124	P	P	18 56 28.4	-1.5
	0.7nm,0.8s,baz=302,slow=9.2,SNR=8.5						
ASAR	Alice Springs	43.58	129	P	P	18 56 41.3	-1.0
	0.3nm,0.6s,baz=302,slow=7.8,SNR=3.0						
MKAR	Makanchi Array	45.97	345	P	P	18 56 59.9	-1.1
	0.7nm,0.7s,baz=156,slow=9.3,SNR=4.8						
ZALV	Zalesovo Beam	52.17	350	P	P	18 57 47.6	-0.7
	0.4nm,0.3s,baz=174,slow=4.0,SNR=3.9						
AKASG	Malin Array Be	74.62	322	P	P	19 00 16.8	-0.3
	0.6nm,0.6s,baz=88,slow=5.4,SNR=3.0						
FINES	FINESS Array B	79.07	332	P	P	19 00 41.0	-1.0
	2.2nm,0.9s,baz=129,slow=5.7,SNR=3.0						
ARCES	ARCESS Array B	81.39	340	P	P	19 00 54.0	-0.4
	2.0nm,0.8s,baz=90,slow=4.5,SNR=1.3						

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*IDC **05** 18:52:39.1±0.5, 11°.87N×143°.41E, h0^{km}, mb4.4/28, mb1 4.5/29, mb1mx4.4/54, mbtmp4.4/29, ML4.5/1, MS3.7/18, Ms1 3.7/18, ms1mx3.5/38, Error ellipse: s-maj=16.8km s-min=10.8km az=87.0*

*NEIC **05** 18:52:41.2±1.4, 11°.91N±0°.07×143°.30E±0°.07, h10^{km}±1^{km}, mb4.8/81, Error ellipse: s-maj=15.6km s-min=6.0km az=220.0*

*BJI **05** 18:52:42.1±0.0, 12°.25N×143°.06E, h5^{km}, mB5.1/19, mb4.5/32, Ms4.4/3, Ms7 4.1/4*

ISC 05 18:52:40.5±0.4**, 11°.85N**±0°.06×**143°.31E**±0°.08**, h10**^{km}**, n141,** σ**1**^{s}**07**/136**, mb4.7**/73**, MS3.8**/17**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	2.30	41	Pn	Pn	18 53 18.8	+0.3
	127nm,0.3s,baz=185,slow=9.3,SNR=60						
GUMO				Sn	Sn	18 53 47.2	+0.2
	145nm,0.3s,baz=298,slow=23,SNR=11						
GUMO				LR	LR	18 54 21.1	
	comp=Z,1μm,18.2s,baz=166,slow=46						
GUMO	Guam	2.30	41		Pn	18 53 18.6	+0.1
JAY	Jayapura	14.50	190	LR	LR	19 01 14.7	
	comp=Z,443nm,18.1s,baz=355,slow=36						
JCJ	Chichijima	15.21	356	LR	LR	18 59 46.3	
	comp=Z,73nm,21.2s,baz=66,slow=28						
SIJI	Sorong	17.40	224	LR	LR	19 03 07.3	
	comp=Z,198nm,18.7s,baz=44,slow=36						
JOW	Kunigami	20.55	319	P	Pn	18 57 21.9	+0.4
	15nm,0.5s,baz=166,slow=11,SNR=6.6						
PMG	Port Moresby	21.46	170	P	P	18 57 29.1	-0.1
	5.7nm,0.6s,baz=358,slow=8.6,SNR=4.6						
PMG				LR	LR	19 05 48.7	
	comp=Z,141nm,18.4s,baz=7.0,slow=37						
JSU	Suzuyama	22.88	331	P	P	18 57 43.6	-0.7
JSU				IAmb	IAmb	18 57 47.0	
	comp=Z,20nm,0.9s						
H11S3	WAKE ISLAND Hy	23.49	71	T	T	19 22 11.5	
	baz=252,slow=74,SNR=5.3						
H11S1	WAKE ISLAND Hy	23.51	71	T	T	19 22 15.5	
	baz=252,SNR=4.6						
H11S2	WAKE ISLAND Hy	23.51	71	T	T	19 22 08.1	
	baz=252,slow=74,SNR=7.2						
H11N1	WAKE ISLAND Hy	23.98	68	T	T	19 22 44.4	
	baz=255,slow=75,SNR=8.2						
H11N2	WAKE ISLAND Hy	23.99	68	T	T	19 22 56.8	
	baz=255,slow=75,SNR=10						
H11N3	WAKE ISLAND Hy	24.00	68	T	T	19 22 50.3	
	baz=255,slow=75,SNR=7.6						
JNU	Nakatsue	24.05	334	P	P	18 57 56.3	+0.4
	comp=Z,12nm,1.0s,baz=110,slow=4.0,SNR=4.7						
JNU	Nakatsue	24.05	334	IAmb	IAmb	18 58 01.1	
	comp=Z,25nm,1.3s						
LUWI	Luwuk	24.09	239	P	P	18 57 56.2	-0.2
SSLB	Suanglung	24.33	302	P	P	18 57 58.9	+0.2
SSLB				IAmb	IAmb	18 58 06.3	
	comp=Z,15nm,0.7s						
JWT	Wachi	24.41	344	P	P	18 57 59.0	-0.2
JYT	Yasato	24.44	354	P	P	18 57 58.1	-1.3
JHS	Saijyo	24.84	340	P	P	18 57 59.8	-3.3
MJAR	Matsushiro Arr	25.01	350	P	P	18 58 03.7	-1.0
	comp=Z,4.3nm,0.6s,baz=186,slow=11,SNR=14						
MJAR				LR	LR	19 07 14.7	
	comp=Z,160nm,19.5s,baz=185,slow=35						
MJAR	Matsushiro Arr	25.01	350	P	P	18 58 02.0	-2.7
MAJO	Matsushiro	25.01	350	P	P	18 58 02.3	-2.4
MAJO				IAmb	IAmb	18 58 04.3	
	comp=Z,10nm,0.7s						
MAT	Matsushiro	25.01	350	P	P	18 58 03.5	-1.2
COEN	Coen	25.64	180	P	P	18 58 10.0	-0.5
JMM	Marumori	26.01	355	P	P	18 58 13.3	-0.3
JMM				IAmb	IAmb	18 58 17.0	
	comp=Z,33nm,1.1s						
JSD	Sado	26.47	351	P	P	18 58 16.4	-1.4
JSD				IAmb	IAmb	18 58 20.3	
	comp=Z,26nm,1.2s						
KSRS	Korea Array	28.99	334	P	P	18 58 41.6	+1.1
	comp=Z,0.8nm,0.6s,baz=141,slow=9.1,SNR=2.8						
KSRS				LR	LR	19 09 41.4	
	comp=Z,48nm,18.7s,baz=145,slow=35						
NJ2	Nanjing	30.18	316	*e*P	P	18 58 53.0	+2.0
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
CTA	Charters Tower	31.87	175	P	P	18 59 05.9	-0.1
	comp=Z,3.1nm,0.9s,baz=340,slow=7.6,SNR=4.0						
WB0	Warramunga Arr	32.62	196	P	P	18 59 12.0	-0.6
WB0				IAmb	IAmb	18 59 13.3	
	comp=Z,16nm,1.4s						
WR0	Warramunga Arr	32.77	195	P	P	18 59 13.0	-0.9
WB2	Warramunga Arr	32.80	196	P	P	18 59 13.9	-0.3
WB2				IAmb	IAmb	18 59 15.0	
	comp=Z,8.6nm,0.8s						
WRA	Warramunga Arr	32.80	196	P	P	18 59 14.3	+0.1
	comp=Z,5.5nm,0.7s,baz=20,slow=9.7,SNR=57						
WRA				LR	LR	19 13 04.1	
	comp=Z,251nm,18.0s,baz=45,slow=37						
WRA	Warramunga Arr	32.80	196	P	P	18 59 13.8	-0.5
USRK	Ussuriysk Ar.	33.68	345	P	P	18 59 22.4	+0.8
	comp=Z,3.8nm,0.6s,baz=161,slow=7.6,SNR=5.4						
FITZ	Fitzroy Crossi	34.49	211	P	P	18 59 29.9	+0.9
	comp=Z,1.9nm,0.9s,baz=55,slow=9.9,SNR=4.8						
AS31	Alice Springs	36.48	195	P	P	18 59 46.1	+0.1
ASAR	Alice Springs	36.48	195	P	P	18 59 46.2	+0.2
	comp=Z,0.7nm,0.5s,baz=21,slow=11,SNR=21						
ASAR				LR	LR	19 15 17.8	
	comp=Z,162nm,18.1s,baz=330,slow=37						
BJI	Beijing	36.91	324	P	P	18 59 50.9	+1.4
BJI				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HHC	Hu-ho-hao-te	40.14	322	*e*P	P	19 00 17.1	+0.3
HHC				S	S	19 06 23.6	+0.1
HHC				pmax	pmax		
	comp=Z,12nm,0.9s						
HHC				pmax	pmax		
	comp=Z,100nm,4.9s						
HHC				LR	LR		
	comp=Z,190nm,15.5s						
HHC				LR	LR		
	comp=Z,180nm,18.0s						
HHC				LR	LR		
	comp=Z,220nm,16.7s						
DZM	Mont Dzumac	40.64	146	P	P	19 00 21.0	0.0
	comp=Z,12nm,0.7s,baz=300,slow=8.2,SNR=11						
DZM	Mont Dzumac	40.64	146	P	P	19 00 21.3	+0.3
DZM				IAmb	IAmb	19 00 25.9	
	comp=Z,12nm,0.7s						
CD2	Chengdu	41.15	304	*e*P	P	19 00 25.0	-0.2
PETK	Petropavlovsk-	42.74	13	LR	LR	19 19 09.7	
	comp=Z,120nm,18.3s,baz=94,slow=37						
CM31	Chiang Mai Arr	43.24	284	P	P	19 00 40.4	-2.0
CMAR	Chiang Mai Arr	43.24	284	P	P	19 00 44.5	+2.0
	comp=Z,1.2nm,0.6s,baz=88,slow=6.7,SNR=16						
CMAR	Chiang Mai Arr	43.24	284	P	P	19 00 42.0	-0.4
STKA	Stephens Creek	43.51	182	P	P	19 00 45.8	+1.5
	comp=Z,1.5nm,0.7s,baz=0.0,slow=12,SNR=2.4						
GTA	Gaotai	47.22	313	*e*P	P	19 01 13.9	0.0
GTA				pP	sP	19 01 18.1	+1.5
GTA				sP	pwP	19 01 21.3	+0.3
GTA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SONM	Songino Array	47.30	327	P	P	19 01 15.2	+0.8
	comp=Z,1.8nm,0.5s,baz=148,slow=6.9,SNR=12						
SONM				PcP	PcP	19 02 45.6	+0.3
	comp=Z,1.3nm,0.7s,baz=157,slow=4.3,SNR=3.9						
SONM	Songino Array	47.30	327	IAmb	IAmb	19 01 16.4	
	comp=Z,1.5nm,0.6s						
TAPN	Taplejung	54.19	295	*e*P	P	19 02 07.0	+0.1
ODAN	Odare	54.43	295	*e*P	P	19 02 09.0	+0.4
	comp=Z,5.0nm,0.6s						
JIRN	Jiri	55.56	295	*e*P	P	19 02 17.5	+0.6
	comp=Z,6.5nm,0.5s						
GUN	Gumba	55.85	296	*e*P	P	19 02 19.8	+0.8
PKIN	Phulchoki	56.25	295	*e*P	P	19 02 21.9	+0.1
KKN	Kakani	56.37	295	*e*P	P	19 02 22.4	-0.2
DMN	Daman	56.51	295	*e*P	P	19 02 24.0	+0.4
GKN	Gorkha	56.95	296	*e*P	P	19 02 26.9	+0.3
WMQ	Urumqi	57.25	315	*e*P	P	19 02 30.4	+2.0
WMQ				sP	pwP	19 02 37.7	+2.2
WMQ				pmax	pmax		
	comp=Z,14nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,200nm,6.7s						
WMQ				LR	LR		
	comp=Z,140nm,15.9s						
DANN	Dangsing	57.75	296	*e*P	P	19 02 32.7	+0.3
	comp=Z,14nm,0.6s						
KOLN	Koldanda	57.85	295	*e*P	P	19 02 33.3	+0.2
	comp=Z,14nm,0.9s						
PYUN	Piuthan	58.41	296	*e*P	P	19 02 36.8	-0.2
	comp=Z,21nm,0.8s						
MKAR	Makanchi Array	61.70	317	P	P	19 02 59.8	+0.8
	comp=Z,3.7nm,0.9s,baz=92,slow=7.8,SNR=12						
ZALV	Zalesovo Beam	62.16	325	P	P	19 03 01.9	0.0
	comp=Z,3.2nm,0.6s,baz=108,slow=7.2,SNR=16						
ZALV				PcP	PcP	19 03 41.6	-0.3
	comp=Z,1.3nm,0.5s,baz=131,slow=4.0,SNR=4.4						
ZALV				LR	LR	19 30 36.9	
	comp=Z,52nm,19.5s,baz=56,slow=37						
ZALV	Zalesovo Beam	62.16	325	P	P	19 03 01.4	-0.5
KURK	Kurchatov	64.94	321	P	P	19 03 20.2	-0.1
NIL	Nilore	66.98	302	P	P	19 03 34.0	+0.2
NIL				IAmb	IAmb	19 03 35.2	
	comp=Z,6.9nm,0.7s						
NRIK	Noril'sk	67.28	341	P	P	19 03 35.0	0.0
	comp=Z,2.3nm,0.4s,baz=108,slow=9.9,SNR=8.3						
NRIK	Noril'sk	67.28	341	P	P	19 03 34.9	-0.1
J20K	Nowinta River	67.60	25	P	P	19 03 38.0	+0.9
J20K				IAmb	IAmb	19 03 39.0	
	comp=Z,7.8nm,0.8s						
H21K	Melozitna Rive	68.64	24	P	P	19 03 44.0	+0.3
H21K				IAmb	IAmb	19 03 45.2	
	comp=Z,6.7nm,0.9s						
I21K	Tanana	68.81	24	P	P	19 03 44.9	+0.2
I21K				IAmb	IAmb	19 03 46.9	
	comp=Z,11nm,1.0s						
BPAW	Bear Paw Mtn.	68.89	25	P	P	19 03 45.1	-0.2
GAR	Garm	69.45	307	P	P	19 03 49.5	+0.1
KK31	Karatay Array	69.46	312	P	P	19 03 49.5	+0.3
KKAR	Karatay Array	69.46	312	P	P	19 03 49.3	+0.1
KKAR	Karatay Array	69.46	312	P	P	19 03 48.8	-0.4
I23K	Minto, Yukon-K	69.86	25	P	P	19 03 51.4	+0.2
H23K	Yukon River	69.97	24	P	P	19 03 52.5	+0.6
H23K				IAmb	IAmb	19 03 53.6	
	comp=Z,7.2nm,0.8s						
COLD	Coldfoot	70.12	22	P	P	19 03 53.9	+1.0
WRH	Wood River Hil	70.20	25	P	P	19 03 53.1	-0.2
MDM	Murphy Dome	70.27	25	P	P	19 03 53.5	-0.3
CHGR	Chuyangaron	70.35	307	P	P	19 03 55.0	+0.1
BRVK	Borovoye	70.42	322	P	P	19 03 55.2	+0.3
H24K	Noodor Dome	70.64	24	P	P	19 03 56.6	+0.5
HDA	Harding Lake	70.67	26	P	P	19 03 55.1	-1.1
HDA				IAmb	IAmb	19 03 56.0	
	comp=Z,7.4nm,0.8s						
TOLK	Toolik Lake Re	70.77	21	P	P	19 03 57.5	+0.7
IL31		70.78	25	P	P	19 03 55.4	-1.4
ILAR	Eielson Array	70.78	25	P	P	19 03 55.9	-1.0
	comp=Z,8.7nm,0.5s,baz=250,slow=6.0,SNR=120						
ILAR	Eielson Array	70.78	25	P	P	19 03 55.3	-1.6
PAX	Paxson	71.00	27	P	P	19 03 58.0	-0.4
PAX				IAmb	IAmb	19 03 59.4	
	comp=Z,7.7nm,0.8s						
DOT	Dot Lake	71.76	27	P	P	19 04 02.4	-0.4
FYU	Fort Yukon	71.85	24	P	P	19 04 03.0	-0.3
SCRK	Sand Creek	71.85	26	P	P	19 04 03.0	-0.6
SCRK				IAmb	IAmb	19 04 04.4	
	comp=Z,5.3nm,0.8s						
L26K	Log Cabin Wild	71.97	27	P	P	19 04 03.4	-0.7
L26K				IAmb	IAmb	19 04 05.5	
	comp=Z,9.8nm,0.9s						
BMAR	Burnt Mountain	72.28	23	P	P	19 04 06.5	+0.6
L27K	Beaver Creek,	72.66	27	P	P	19 04 08.1	-0.2
DAWY	Dawson	73.87	27	P	P	19 04 15.6	+0.3
DAWY				IAmb	IAmb	19 04 17.2	
	comp=Z,7.9nm,0.8s						
HRA	Herat	76.09	303	P	P	19 04 27.6	-1.4
INK	Inuvik	76.54	22	P	P	19 04 30.6	0.0
INK				IAmb	IAmb	19 04 31.7	
	comp=Z,6.2nm,0.9s						
ABKAR	Akbulak array	76.81	318	P	P	19 04 32.4	-0.1
ABKAR				IAmb	IAmb	19 04 33.5	
	comp=Z,6.3nm,0.7s						
ARU	Arti	77.33	325	P	P	19 04 34.9	-0.4
ARU				IAmb	IAmb	19 04 36.2	
	comp=Z,8.7nm,0.7s						
DLBC	Dease Lake	78.26	32	P	P	19 04 41.2	+0.7
	comp=Z,2.9nm,0.6s,baz=4.5,slow=2.2,SNR=7.2						
DLBC	Dease Lake	78.26	32	IAmb	IAmb	19 04 43.8	
	comp=Z,8.8nm,1.3s						
A36M	Sachs Harbour	79.27	18	P	P	19 04 45.1	-0.6
A36M				IAmb	IAmb	19 04 46.8	
	comp=Z,7.9nm,0.8s						
YKA	Yellowknife Ar	85.09	27	P	P	19 05 16.3	-0.1
	comp=Z,1.8nm,0.9s,baz=53,slow=8.4,SNR=6.7						
YKA				LR	LR	19 40 43.7	
	comp=Z,44nm,21.3s,baz=0.0,slow=34						
YBH	Yreka Blue Hor	85.16	49	P	P	19 05 17.7	+0.3
	comp=Z,4.2nm,0.8s,baz=264,slow=1.6,SNR=12						
YBH	Yreka Blue Hor	85.16	49	P	P	19 05 18.1	+0.7
YBH				IAmb	IAmb	19 05 24.4	
	comp=Z,5.5nm,0.8s						
PINE	Pine Mountain	86.00	46	P	P	19 05 21.2	-0.5
PINE				IAmb	IAmb	19 05 28.8	
	comp=Z,11nm,1.1s						
B08A	Colville Reser	86.08	42	P	P	19 05 21.8	+0.1
B08A				IAmb	IAmb	19 05 23.4	
	comp=Z,7.7nm,0.9s						
RES	Resolute Bay	86.58	13	P	P	19 05 24.6	+1.0
RES				IAmb	IAmb	19 05 25.3	
	comp=Z,5.6nm,0.9s						
C09A	Chrisman Ranch	86.90	42	P	P	19 05 26.0	+0.2
C09A				IAmb	IAmb	19 05 28.6	
	comp=Z,4.8nm,0.7s						
NEW	Newport	87.53	41	P	P	19 05 29.3	+0.5
NEW				IAmb	IAmb	19 05 32.3	
	comp=Z,7.3nm,1.1s						
WVOR	Wild Horse Val	87.96	47	P	P	19 05 31.9	+0.8
WVOR				IAmb	IAmb	19 05 32.6	
	comp=Z,9.4nm,1.4s						
ARCES	ARCESS Array B	88.26	342	P	P	19 05 32.2	+0.3
	comp=Z,2.7nm,0.5s,baz=58,slow=4.2,SNR=19						
ARCES				LR	LR	19 49 01.5	
	comp=Z,41nm,18.5s,baz=340,slow=38						
BMO	Blue Mountains	88.29	45	P	P	19 05 32.8	+0.2
BMO				IAmb	IAmb	19 05 34.3	
	comp=Z,5.3nm,1.0s						
MDPB	Devils Postpil	88.79	52	P	P	19 05 35.1	-0.3
MDPB				IAmb	IAmb	19 05 36.9	
	comp=Z,6.5nm,1.4s						
PLID	Pearl Lake	89.12	44	P	P	19 05 35.6	-1.1
KVN	Kaiserville	89.19	50	P	P	19 05 37.2	+0.1
KVN				IAmb	IAmb	19 05 39.2	
	comp=Z,4.5nm,0.9s						
NVAR	Mina Array Bea	89.19	51	P	P	19 05 38.1	+1.0
	comp=Z,5.3nm,0.7s,baz=265,slow=5.7,SNR=23						
NVAR	Mina Array Bea	89.19	51	P	P	19 05 37.4	+0.2
KBZ	Khabaz	89.30	315	P	P	19 05 36.5	-0.7
	comp=Z,1.8nm,0.9s,baz=69,slow=10,SNR=3.7						
KBZ				LR	LR	19 49 04.4	
	comp=Z,27nm,19.4s,baz=34,slow=38						
NV11	Mina Array Sit	89.30	51	P	P	19 05 38.4	+0.9
NV11				IAmb	IAmb	19 05 42.2	
	comp=Z,3.9nm,0.8s						
MFID	Camas Ranch	89.70	46	P	P	19 05 40.2	+1.0
MFID				IAmb	IAmb	19 05 41.4	
	comp=Z,7.7nm,1.1s						
TPH	Tonopah	90.10	51	P	P	19 05 41.6	+0.2
HLID	Hailey	90.64	45	P	P	19 05 43.6	-0.2
ELK	Elko	90.86	48	P	P	19 05 44.4	-0.5
	comp=Z,1.2nm,0.8s,baz=199,slow=2.6,SNR=4.3						
ELK	Elko	90.86	48	P	P	19 05 44.9	-0.1
QSM	Queen of Sheba	90.93	53	P	P	19 05 46.2	+1.1
QSM				IAmb	IAmb	19 05 47.2	
	comp=Z,4.3nm,0.9s						
GWY	Greenwater Val	91.02	53	P	P	19 05 46.1	+0.4
GWY				IAmb	IAmb	19 05 54.2	
	comp=Z,5.1nm,1.2s						
FINES	FINESS Array B	92.08	335	P	P	19 05 49.0	-0.8
	comp=Z,2.4nm,0.6s,baz=59,slow=3.8,SNR=14						
FINES				LR	LR	19 50 53.6	
	comp=Z,42nm,18.2s,baz=44,slow=38						
RLMT	Red Lodge	93.64	43	P	P	19 05 57.7	0.0
RLMT				IAmb	IAmb	19 06 02.2	
	comp=Z,2.8nm,0.7s						
PDAR	Pinedale Array	94.26	45	P	P	19 06 00.3	-0.3
	comp=Z,0.3nm,0.5s,baz=282,slow=4.3,SNR=2.2						
PDAR				LR	LR	19 41 25.4	
	comp=Z,30nm,19.7s,baz=330,slow=31						
MNK	Minsk	94.56	328	*i* P	P	19 06 00.1	-1.2
	comp=E,1.0nm,1.0s						
MNK				*i* P	P	19 06 00.1	-1.2
	comp=N,13nm,1.2s						
MNK				*i* P	P	19 06 00.1	-1.2
	comp=Z,5.0nm,0.9s,baz=62						
MNK				*i* PP	PP	19 09 47.1	-1.5
MNK				*i* PPP	PPP	19 11 49.0	
MNK				*i* SKS	SKSac	19 16 29.1	-7.7
MNK				*i* S	S	19 17 14.0	-0.1
MNK				*i* PS	PS	19 18 30.4	-0.1
MNK				*i* SS	SS	19 23 59.6	+24
MNK				*i* SSS	SSS	19 27 19.1	
MNK				*i* LQ	LQ	19 42 10.2	
MNK				*i* LR	LR	19 47 52.9	
MNK				*i* LRM	MLR	19 49 26.2	
	comp=N,188nm,18.1s						
MNK				*i* LRM	MLR	19 49 32.0	
	comp=E,54nm,24.6s						
MNK				*i* LRM	MLR	19 49 45.8	
	comp=Z,42nm,20.3s						
AKASG	Malin Array Be	95.55	324	P	P	19 06 06.7	+0.7
	comp=Z,0.1nm,0.2s,baz=62,slow=5.0,SNR=1.7						
AKASG				LR	LR	19 52 22.2	
	comp=Z,56nm,18.5s,baz=60,slow=38						
NOA	NORSAR Array B	98.12	339	LR	LR	19 54 18.0	
	comp=Z,16nm,18.4s,baz=305,slow=38						
TORD	Torodi Ar. Bea	134.54	302	PKP	PKiKP	19 12 00.9	-0.7
	comp=Z,0.5nm,0.7s,baz=16,slow=3.4,SNR=3.5						
LPAZ	La Paz	149.20	102	PKPbc	PKPbc	19 12 30.1	-1.0
	comp=Z,0.8nm,0.6s,baz=284,slow=4.2,SNR=2.3						

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*NEIC **05** 18:58:01.8±0.7, 36°.62N±0°.01×97°.73W±0°.02, h14^{km}±4^{km}, Error ellipse: s-maj=2.2km s-min=1.9km az=130.0*

TUL 05 18:58:01.9±1.1**, 36°.63N**±0°.01×**97°.72W**±0°.02**, h5**^{km}±7^{km}**, ML2.6, mb_Lg2.4**/21(NEIC)**, Error ellipse: s-maj=1.7km s-min=1.5km az=98.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CROK	Carrier	0.24	240	Pg	Pg	18 58 07.0	+0.4
CROK				Sg	Sg	18 58 10.6	+0.8
GC02	Grant County #	0.25	334	Pg	Pg	18 58 07.2	+0.4
GC02				Sg	Sg	18 58 11.1	+0.9
KAN14	Manchester OK	0.38	330	Pg	Pg	18 58 09.8	+0.4
KAN14				Sg	Sg	18 58 15.2	+0.9
KAN17	Caldwell West	0.42	355	Pg	Pg	18 58 10.2	+0.2
BLOK	Blackwell	0.43	72	Pg	Pg	18 58 10.5	+0.3
BLOK				Sg	Sg	18 58 16.6	+0.8
OK032	Salt Plains WL	0.43	294	Pg	Pg	18 58 08.7	-1.5
KAN13	South Haven SW	0.43	27	Pg	Pg	18 58 10.8	+0.5
KAN05	Bluff City Nor	0.50	346	Pg	Pg	18 58 11.9	+0.4
KAN09	Caldwell North	0.52	9	Pg	Pg	18 58 12.2	+0.4
KAN01	Argonia South	0.53	357	Pg	Pg	18 58 12.4	+0.4
KAN10	Anthony SW Sta	0.58	329	Pg	Pg	18 58 13.1	0.0
KS20	Mayfield South	0.62	13	Pg	Pg	18 58 13.8	+0.1
KAN06	Argonia West S	0.63	350		Pg	18 58 13.9	-0.1
KAN16	Harper SW Stat	0.66	335	Pg	Pg	18 58 14.8	+0.3
KAN12	Harper NE Stat	0.71	342	Pg	Pg	18 58 15.7	+0.2
OK029	Liberty Lake	0.85	165	Pg	Pg	18 58 18.1	-0.2
QUOK	Quay	0.94	119	Pg	Pg	18 58 19.6	-0.2
BCOK	Bluff Creek, N	0.97	175	Pg	Pg	18 58 19.7	-0.8
OK031	S. Brethren Rd	0.98	133	Pg	Pg	18 58 20.5	-0.2
T35A	Sooner Cattle	1.01	73	Pg	Pg	18 58 21.1	-0.2
OK030	Cody Creek RV	1.03	132	Pg	Pg	18 58 21.5	-0.1
U32A	Winter Ranch,	1.06	257	Pg	Pg	18 58 21.8	-0.5
OK025	Westminster Rd	1.09	163		Pg	18 58 21.9	-0.8
OKCFA	Oklahoma City	1.23	170	Pn	Pg	18 58 24.7	-0.7
FNO	Franklin	1.39	169	Pn	Pn	18 58 27.5	-0.5
TUL1	Leonard	1.71	114	Pn	Pn	18 58 31.9	-0.6
R32A	Long Quarter,	1.96	337	Pn	Pn	18 58 35.5	-0.3
R32A				IAmb_Lg		18 59 09.4	
	comp=Z,16nm,0.7s						
X34A	Smith Ranch, M	2.02	183	IAmb_Lg		18 59 09.6	
	comp=Z,15nm,0.8s						
WMOK	Wichita Mounta	2.07	205	Pn	Pn	18 58 37.6	+0.2
U38A	Gravette	2.69	93	Pn	Pn	18 58 45.0	-1.0
X37A	Clayton	2.79	136	Pn	Pn	18 58 46.1	-1.2
W39A	Magazine	3.50	113	IAmb_Lg		19 00 02.1	
	comp=Z,13nm,0.9s						
AMTX	Amarillo	3.66	243	IAmb_Lg		18 59 58.0	
	comp=Z,9.9nm,0.8s						
U40A	Yellville	3.93	92		Pn	18 59 01.9	-1.1
MIAR	Mount Ida	3.96	120	IAmb_Lg		19 00 08.9	
	comp=Z,7.7nm,0.7s						
MGMO	Mountain Grove	4.40	82	IAmb_Lg		19 00 22.3	
	comp=Z,7.1nm,0.8s						
P38A	Dawn	4.46	47	IAmb_Lg		19 00 30.7	
	comp=Z,9.1nm,0.9s						
X40A	Basin Creek Fa	4.52	117	IAmb_Lg		19 00 35.8	
	comp=Z,7.1nm,0.9s						
R40A	Maddies Statio	4.65	67	IAmb_Lg		19 00 40.4	
	comp=Z,6.7nm,1.2s						
LCAR	Lake Charles	5.33	94	IAmb_Lg		19 00 59.3	
	comp=Z,5.3nm,0.8s						
FVM	French Village	5.97	75	IAmb_Lg		19 01 10.7	
	comp=Z,7.7nm,0.8s						

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*INET **05** 19:16:22.9, 12°.25N×87°.04W, h60^{km}, MW3.4*

*UCR **05** 19:16:25.1±1.9, 12°.13N×87°.14W, h35^{km}±14^{km}, ML3.4, MW3.5*

*SNET **05** 19:16:26.4±1.4, 12°.26N×87°.20W, h23^{km}±95^{km}, ML3.5*

ISC 05 19:16:26.5±6.5**, 12°.17N**±0°.08×**87°.08W**±0°.09**, h36**^{km}±7^{km}**, n27,** σ**1**^{s}**24**/38**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	Conchagua	1.33	326	*e*P	Pn	19 16 47.2	-1.4
CNCH				*e*S	Sn	19 17 04.9	-0.3
CNCH	Conchagua	1.33	326	*e*P	Pn	19 16 47.2	-1.4
CNCH				*e*S	Sn	19 17 04.9	-0.3
LCND	La Caada	1.39	325	*e*P	Pn	19 16 47.7	-1.6
LCND				*e*S	Sn	19 17 05.2	-1.3
LCND				IAML		19 17 08.1	
	comp=Z,920nm,0.3s						

LCND	La Caada	1.39	325	eP	Pn	19 16 47.7	-1.6
LCND				eS	Sn	19 17 05.2	-1.3
LCND				IAML		19 17 08.1	
	comp=Z,920nm,0.3s						
JUCU	Jucuar¡n	1.57	314	eS	Sn	19 17 09.3	-1.8
JUCU				IAML		19 17 16.1	
	comp=Z,580nm,0.3s						
JUCU	Jucuar¡n	1.57	314	eS	Sn	19 17 09.3	-1.8
JUCU				IAML		19 17 16.1	
	comp=Z,580nm,0.3s						
PACA	Pacayal	1.77	317	eP	Pn	19 16 54.4	-0.4
PACA	Pacayal	1.77	317	eP	Pn	19 16 54.4	-0.4
TGUH	Tegucigalpa,Un	1.89	354	eP	Pn	19 16 55.6	-0.8
TGUH	Tegucigalpa,Un	1.89	354	eP	Pn	19 16 55.6	-0.8
COEB	Comit de Eme	1.94	313	eS	Sn	19 17 19.9	-0.3
COEB				IAML		19 17 27.9	
	comp=Z,332nm,0.2s						
COEB	Comit de Eme	1.94	313	eS	Sn	19 17 19.9	-0.3
COEB				IAML		19 17 27.9	
	comp=Z,332nm,0.2s						
SCLA	Alcaldia de Sa	2.22	314	eP	Pn	19 16 59.8	-1.0
SCLA				eS	Sn	19 17 27.2	+0.2
SCLA	Alcaldia de Sa	2.22	314	eP	Pn	19 16 59.8	-1.0
SCLA				eS	Sn	19 17 27.2	+0.2
COEG	Centro de Oper	2.27	310	IAML		19 17 38.0	
	comp=Z,324nm,0.4s						
COEG	Centro de Oper	2.27	310	IAML		19 17 38.0	
	comp=Z,324nm,0.4s						
SJTE	Alcalda de S	2.37	308	eP	Pn	19 17 01.8	-1.2
SJTE				eS	Sn	19 17 29.1	-1.6
SJTE	Alcalda de S	2.37	308	eP	Pn	19 17 01.8	-1.2
SJTE				eS	Sn	19 17 29.1	-1.6
GUAI	GUAI	2.43	141	i P	Pn	19 17 03.1	-0.6
GUAI				i S	Sn	19 17 30.7	-1.5
JAYA	Jayaque - finc	2.74	303	eP	Pn	19 17 07.8	-0.3
JAYA				eS	Sn	19 17 38.6	-1.5
JAYA				IAML		19 17 45.3	
	comp=Z,265nm,0.2s						
JAYA	Jayaque - finc	2.74	303	eP	Pn	19 17 07.8	-0.3
JAYA				eS	Sn	19 17 38.6	-1.5
JAYA				IAML		19 17 45.3	
	comp=Z,265nm,0.2s						
TACO	Tacachico	2.85	309	eP	Pn	19 17 08.2	-1.3
TACO				eS	Sn	19 17 40.5	-2.1
TACO	Tacachico	2.85	309	eP	Pn	19 17 08.2	-1.3
TACO				eS	Sn	19 17 40.5	-2.1
CEVE	Cerro Verde	2.98	304	eP	Pn	19 17 11.6	+0.1
CEVE	Cerro Verde	2.98	304	eP	Pn	19 17 11.6	+0.1
MTO3	Montecristo	3.14	315	eP	Pn	19 17 13.0	-0.7
MTO3	Montecristo	3.14	315	eP	Pn	19 17 13.0	-0.7

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*IDC **05** 19:29:25.9±1.2, 60°.68S×19°.20W, h0^{km}, mb4.1/3, mb1 4.1/3, mb1mx3.9/21, mbtmp4.1/3, MS3.4/4, Ms1 3.4/4, ms1mx3.2/21, Error ellipse: s-maj=48.7km s-min=31.9km az=83.0*

ISC 05 19:29:27.2±1.1, **61°.0S**±0°.1×**18°.7W**±0°.3, **h10**^{km}**, n11,** σ**3^{s}32**/12, **mb4.1**/3, **MS3.7**/3, **East of South Sandwich Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	10.59	161	P	Pn	19 32 02.4	+3.7
VNA1				S	Sn	19 33 56.0	-1.1
VNA3	Neumayer Olymp	10.92	165	P	Pn	19 32 05.4	+2.1
VNA3				S	Sn	19 34 01.6	-3.7
VNA2	Neumayer--Watz	10.97	160	P	Pn	19 32 06.5	+2.5
	baz=327,slow=15						
VNA2				S	Sn	19 34 02.8	-3.7
SNAA	Sanae	12.42	156	P	Pn	19 32 26.1	+2.3
SNAA				S	Sn	19 34 37.0	-5.0
SNAA	Sanae	12.42	156	LR	LR	19 36 24.7	
	comp=Z,44nm,19.8s,baz=10.0,slow=33						
QSPA	South Pole Qui	29.26	180	P	P	19 35 32.1	+3.0
	3.3nm,1.0s,baz=214,slow=5.7,SNR=7.4						
PLCA	Paso Flores	37.23	279	LR	LR	19 50 45.7	
	comp=Z,127nm,18.9s,baz=115,slow=35						
SUR	Sutherland	38.39	60	LR	LR	19 48 38.0	
	comp=Z,101nm,18.7s,baz=200,slow=30						
LPAZ	La Paz	56.79	299	P	P	19 39 09.5	-2.6
	1.7nm,0.8s,baz=152,slow=4.3,SNR=4.8						
LPAZ				LR	LR	20 07 15.3	
	comp=Z,26nm,18.1s,baz=148,slow=40						
TORD	Torodi Ar. Bea	75.64	20	P	P	19 41 11.8	-0.4
	1.2nm,1.0s,baz=185,slow=6.8,SNR=5.2						
SONM	Songino Array	146.50	88	PKPbc	PKPbc	19 49 07.5	-0.2
	2.1nm,0.9s,baz=212,slow=3.2,SNR=8.0						

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*IDC **05** 19:29:40.9±0.7, 48°.88S×121°.28E, h0^{km}, mb4.5/13, mb1 4.5/13, mb1mx4.4/29, mbtmp4.5/13, MS3.9/11, Ms1 3.9/11, ms1mx3.8/18, Error ellipse: s-maj=33.1km s-min=13.5km az=112.0*

*NEIC **05** 19:29:42.1±1.4, 48°.9S±0°.1×121°.1E±0°.2, h10^{km}±1^{km}, mb4.5/21, Error ellipse: s-maj=25.7km s-min=17.6km az=286.0*

ISC 05 19:29:42.5±0.5, **48°.95S**±0°.07×**121°.2E**±0°.1, **h10**^{km}**, n75,** σ**1^{s}45**/65, **mb4.6**/29, **MS3.9**/10, **Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W1	Cape Leeuwin H	14.98	337	T	T	19 48 40.8	
	baz=159,slow=74,SNR=124						
H01W2	Cape Leeuwin H	14.98	337	T	T	19 48 40.9	
	baz=159,slow=74,SNR=109						
H01W3	Cape Leeuwin H	15.00	337	T	T	19 48 41.7	
	baz=159,slow=74,SNR=85						
NWAO	Narrogin (SRO)	16.28	348	Pn	P	19 33 33.5	-0.7
	0.6nm,0.3s,baz=194,slow=6.4,SNR=5.8						
NWAO				LR	LR	19 38 12.8	
	comp=Z,686nm,21.5s,baz=246,slow=32						
NWAO	Narrogin (SRO)	16.28	348	P	Pn	19 33 31.1	0.0
NWAO				IAmb	IAmb	19 33 50.1	
	comp=Z,21nm,1.0s						
CASY	Casey	18.25	194	P	Pn	19 33 54.5	-1.0
TAU	Tasmania Unive	19.08	81	P	P	19 34 03.6	-1.4
TAU				IAmb	IAmb	19 34 18.9	
	comp=Z,54nm,1.4s						
ARPS	Mount Arapiles	19.33	59	P	Pn	19 34 10.5	+1.6
	comp=Z,25nm,0.8s						
BBOO	Buckleboo	19.58	40	P	P	19 34 09.8	-0.8
BBOO				IAmb	IAmb	19 34 16.6	
	comp=Z,15nm,1.0s						
TOO	Toolangi	20.92	66	P	P	19 34 25.2	+0.1
TOO				IAmb	IAmb	19 34 40.1	
	comp=Z,21nm,0.9s						
TOO	Toolangi	20.92	66	P	P	19 34 26.7	+1.5
	comp=Z,27nm,1.0s						
MEEK	Meekatharra	22.36	354	P	P	19 34 45.0	+4.3
	comp=Z,29nm,1.3s						
LCRK	Leigh Creek	22.54	41	P	P	19 34 46.1	+3.5
	comp=Z,24nm,1.2s						
STKA	Stephens Creek	22.93	49	P	P	19 34 45.4	-1.3
	comp=Z,3.7nm,0.8s,baz=246,slow=9.5,SNR=8.2						
STKA				LR	LR	19 42 29.5	
	comp=Z,346nm,18.1s,baz=211,slow=34						
STKA	Stephens Creek	22.93	49	P	P	19 34 45.9	-0.8
STKA	Stephens Creek	22.93	49	P	P	19 34 49.5	+2.8
	comp=Z,3.0nm,1.3s						
OOD	Oodnadatta	23.89	33	P	P	19 34 58.0	+1.8
	comp=Z,12nm,1.1s						
WRKA	Warakurna	24.50	16	P	P	19 35 02.9	+0.9
	comp=Z,20nm,2.2s						
INKA	Innaminka	25.99	43	P	P	19 35 18.8	+3.5
	comp=Z,18nm,1.9s						
ASAR	Alice Springs	27.15	26	P	P	19 35 25.4	-0.4
	comp=Z,5.7nm,0.9s,baz=192,slow=9.1,SNR=40						
ASAR	Alice Springs	27.15	26	P	P	19 35 24.7	-1.2
AS31	Alice Springs	27.15	26	P	P	19 35 25.1	-0.8
PSA00	Pilbara Seismi	27.34	357	P	P	19 35 26.6	-1.0
QLP	Quilpie	28.59	47	P	P	19 35 40.2	+1.4
	comp=Z,11nm,0.9s						
WRA	Warramunga Arr	30.80	25	P	P	19 35 57.6	-0.7
	comp=Z,4.2nm,1.1s,baz=197,slow=11,SNR=12						
WRA				LR	LR	19 47 08.7	
	comp=Z,348nm,20.3s,baz=195,slow=34						
WRA	Warramunga Arr	30.80	25	P	P	19 35 57.4	-1.0
WB2	Warramunga Arr	30.80	25	P	P	19 35 57.6	-0.8
WB2				IAmb	IAmb	19 36 05.6	
	comp=Z,10nm,1.4s						
WRAB	Tennant Creek	30.81	25	P	P	19 35 57.4	-1.1
WRAB				IAmb	IAmb	19 36 04.9	
	comp=Z,5.3nm,1.0s						
WRAB	Tennant Creek	30.81	25	P	P	19 35 59.8	+1.4
WR0	Warramunga Arr	30.84	25	P	P	19 35 56.9	-1.8
WR0				IAmb	IAmb	19 36 00.3	
	comp=Z,8.0nm,1.3s						
QIS	Mount Isa	31.93	34	P	P	19 36 08.6	+0.3
	comp=Z,12nm,1.0s						
VNDA	Vanda	32.57	165	P	P	19 36 13.4	+0.1
	comp=Z,3.8nm,0.7s,baz=308,slow=9.2,SNR=30						
VNDA				LR	LR	19 48 35.1	
	comp=Z,263nm,18.5s,baz=320,slow=35						
VNDA	Vanda	32.57	165	P	P	19 36 13.0	-0.3
VNDA				IAmb	IAmb	19 36 20.9	
	comp=Z,10nm,0.9s						
SBA	Scott Base	33.63	164	P	P	19 36 22.5	-0.1
MAW	Mawson	34.20	215	P	P	19 36 28.9	+1.3
	comp=Z,9.7nm,0.9s,baz=77,slow=14,SNR=16						
MAW	Mawson	34.20	215	P	P	19 36 28.7	+1.0
MAW				IAmb	IAmb	19 36 36.7	
	comp=Z,3.3nm,1.0s						
CTA	Charters Tower	35.10	44	P	P	19 36 35.5	-0.4
	comp=Z,1.4nm,0.6s,baz=204,slow=9.7,SNR=3.6						
URZ	Urewera	41.00	97	P	P	19 37 25.2	-0.3
	comp=Z,24nm,1.1s,baz=118,slow=22,SNR=4.5						
URZ	Urewera	41.00	97	IAmb	IAmb	19 37 28.2	
	comp=Z,35nm,1.1s						
QSPA	South Pole Qui	41.18	180	P	P	19 37 27.2	+0.3
	comp=Z,16nm,1.0s,baz=337,slow=2.3,SNR=17						
QSPA				LR	LR	19 53 31.1	
	comp=Z,311nm,20.4s,baz=319,slow=35						
QSPA	South Pole Qui	41.18	180	P	P	19 37 27.1	+0.3
LEM	Lembang	43.52	340	LR	LR	19 54 57.7	
	comp=Z,96nm,19.5s,baz=187,slow=35						
PMG	Port Moresby	45.00	38	P	P	19 37 57.1	-1.0
	comp=Z,6.0nm,0.7s,baz=217,slow=10,SNR=3.3						
KASI	Kota Agung	45.54	336	P	P	19 38 02.2	-0.2
	comp=Z,39nm,1.1s						
LHSI	Lahat	47.43	336	P	P	19 38 17.0	-0.1
	comp=Z,26nm,0.6s						
LBMI	Labuha	48.43	8	P	P	19 38 27.9	+3.0
	comp=Z,320nmcomp=Z,25nm,1.1s						
MPSI	Mapaga	49.10	358	P	P	19 38 33.1	+3.0
	comp=Z,5.8nm,1.4s						
JAY	Jayapura	49.18	26	LR	LR	19 58 57.6	
	comp=Z,284nm,19.7s,baz=208,slow=36						
STKI	Sintang	49.54	347	P	P	19 38 35.6	+2.2
	comp=Z,12nm,0.7s						
SNAA	Sanae	53.38	199	P	P	19 39 02.4	+0.7
SNAA	Sanae	53.38	199	P	P	19 39 02.4	+0.7
	comp=Z,8.0nm,0.8s,baz=138,slow=8.0,SNR=30						
SNAA	Sanae	53.38	199	P	P	19 39 01.8	+0.2
VNA2	Neumayer--Watz	54.91	198	P	P	19 39 13.7	+0.9
	baz=129,slow=7.2						
VNA3	Neumayer Olymp	55.12	197	P	P	19 39 14.5	+0.2
VNA1	Neumayer--Stat	55.31	198	P	P	19 39 16.0	+0.5
CM31	Chiang Mai Arr	69.97	337	P	P	19 40 50.9	-3.1
CM31				IAmb	IAmb	19 41 02.8	
	comp=Z,7.9nm,1.1s						
CMAR	Chiang Mai Arr	69.97	337	LR	LR	20 12 52.2	
	comp=Z,66nm,18.3s,baz=206,slow=37						
CMAR	Chiang Mai Arr	69.97	337	P	P	19 40 51.6	-2.4
BOSA	Boshof	72.66	246	LR	LR	20 05 20.6	
	comp=Z,65nm,18.9s,baz=178,slow=29						
KSRS	Korea Array	86.23	5	P	P	19 42 22.7	-1.0
	comp=Z,1.6nm,0.9s,baz=177,slow=2.4,SNR=4.5						
MJAR	Matsushiro Arr	86.44	14	P	P	19 42 24.2	-0.6
	comp=Z,3.7nm,1.0s,baz=169,slow=6.7,SNR=6.9						
MJAR				LR	LR	20 20 47.0	
	comp=Z,20nm,19.6s,baz=130,slow=36						
MJAR	Matsushiro Arr	86.44	14	P	P	19 42 23.6	-1.2
MJAR				IAmb	IAmb	19 42 27.8	
	comp=Z,5.2nm,1.3s						
MAT	Matsushiro	86.45	14	P	P	19 42 24.4	-0.4
PLCA	Paso Flores	90.10	171	P	P	19 42 42.5	-0.1
	comp=Z,3.4nm,0.9s,baz=217,slow=4.9,SNR=5.4						
PLCA	Paso Flores	90.10	171	IAmb	IAmb	19 42 51.0	
	comp=Z,11nm,1.1s						
WMQ	Urumqi	96.95	336	eP	P	19 43 14.3	+0.7
SONM	Songino Array	97.25	350	LR	LR	20 30 18.5	
	comp=Z,21nm,18.4s,baz=142,slow=37						
TORD	Torodi Ar. Bea	119.11	256	PKP	PKPdf	19 48 31.2	-0.5
	comp=Z,0.6nm,0.6s,baz=80,slow=1.9,SNR=5.2						
FINES	FINESS Array B	133.46	319	PKP	PKPdf	19 48 56.5	-1.1
	comp=Z,1.9nm,0.8s,baz=120,slow=2.6,SNR=4.3						
ILAR	Eielson Array	133.53	36	PKP	PKPdf	19 48 57.1	-0.6
	comp=Z,0.5nm,0.8s,baz=266,slow=2.7,SNR=3.9						
NVAR	Mina Array Bea	136.72	81	PKP	PKPdf	19 49 05.0	+0.1
	comp=Z,0.6nm,0.8s,baz=207,slow=4.8,SNR=4.7						
TXAR	Lajitas Array	140.75	103	PKhKP	PKPpre	19 49 05.0	
	comp=Z,0.3nm,0.7s,baz=193,slow=5.1,SNR=3.7						
TXAR				PKP	PKPdf	19 49 13.0	+0.7
	comp=Z,0.5nm,0.8s,baz=191,slow=3.8,SNR=4.2						
PDAR	Pinedale Array	144.66	80	PKP	PKPab	19 49 17.7	0.0
	comp=Z,1.4nm,0.9s,baz=194,slow=3.1,SNR=10						
YKA	Yellowknife Ar	146.92	45	PKPbc	PKPbc	19 49 23.8	0.0
	comp=Z,1.6nm,0.7s,baz=223,slow=0.8,SNR=5.1						
YKA	Yellowknife Ar	146.92	45		PKPdf	19 49 22.0	+0.1

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*IDC **05** 19:33:49.1±1.0, 9°.38S×121°.71E, h0^{km}, mb4.3/8, mb1 4.4/9, mb1mx4.0/29, mbtmp4.3/9, ML4.2/1, MS3.3/3, Ms1 3.3/3, ms1mx2.8/29, Error ellipse: s-maj=39.7km s-min=19.4km az=40.0*

*NEIC **05** 19:33:54.8±2.1, 9°.74S±0°.04×121°.89E±0°.08, h55^{km}±9^{km}, mb4.4/21, Error ellipse: s-maj=12.3km s-min=3.5km az=114.0*

*DJA **05** 19:33:57.1±0.2, 10°S±3°×12°2E±°, h67^{km}±6^{km}, M4.4/14, mb4.5/14, mB5.0/4, MLv4.5/12, Mw(mB)4.3/4, MwMwp5.2/1, Mwp5.4/1*

ISC 05 19:33:53.2±0.4, **9°.74S**±0°.05×**121°.76E**±0°.05, **h35**^{km}**, n86,** σ**2^{s}46**/73, **mb4.5**/20, **Savu Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMRI	Maumere	1.20	23	Pn	Pn	19 34 15.5	+2.0
MMRI				Sn	Sn	19 34 28.2	-0.3
BASI	Baing, Sumba	1.26	248	P	Pn	19 34 20.2	+5.9
WSI	Waingapu	1.45	273	P	Pn	19 34 21.7	+4.8
BATI	Baumata	1.93	104	Pn	Pn	19 34 27.4	+3.8
	86nm,0.3s,baz=305,slow=2.4,SNR=121						
BATI				Sn	Sn	19 34 50.3	+3.6
	110nm,0.3s,baz=352,slow=22,SNR=8.8						
BATI				LR	LR	19 35 42.8	
	comp=Z,515nm,19.7s,baz=35,slow=54						
BATI	Baumata	1.93	104	P	Pn	19 34 27.9	+4.3
WBSI	Waikabubak, Su	2.34	272	P	Pn	19 34 33.3	+4.0
SOEI	Soe	2.47	91	P	Pn	19 34 36.8	+5.7
SOEI	Soe	2.47	91	Pn	Pn	19 34 32.6	+1.5
BSSI	Bau Bau, Buton	3.79	340	P	Pn	19 34 53.2	+4.0
PLAI	Plampang	4.04	283	P	Pn	19 34 57.5	+4.9
PLAI	Plampang	4.04	283	P	Pn	19 34 58.5	+5.9
BKSI	Bulukumba	4.68	340	P	Pn	19 35 05.4	+3.9
TWSI	Taliwang, Sumb	4.92	281	P	Pn	19 35 10.5	+5.8
KAPI	Kappang	5.10	337	Pn	Pn	19 35 12.9	+5.7
	7.4nm,0.3s,baz=190,slow=10,SNR=25						
KAPI	Kappang	5.10	337		Pn	19 35 09.2	+2.0
KAPI	Kappang	5.10	337	P	Pn	19 35 14.2	+7.0
TTSI	Tana Toraja	6.93	344	P	Pn	19 35 40.6	+8.3
	0.1nm27nm,0.8s						
JAGI	Jajag, Banyuwa	7.62	279	P	Pn	19 35 45.8	+3.9
	0.3nm36nm,0.6s						
JAGI	Jajag, Banyuwa	7.62	279		Pn	19 35 44.9	+3.0
JAGI	Jajag, Banyuwa	7.62	279	P	Pn	19 35 45.9	+4.0
KBKI	Kotabaru	8.48	319	P	Pn	19 35 59.7	+6.1
	46nm,0.6s						
LUWI	Luwuk	8.70	7	Pn	Pn	19 35 59.6	+2.9
SANI	Sanana	8.72	29	P	Pn	19 36 01.5	+4.6
	12nm,0.9s						
SANI	Sanana	8.72	29	P	Pn	19 36 03.6	+6.7
APSI	Ampana	8.78	359	P	Pn	19 36 03.8	+6.1
	24nm,0.8s						
KNRA	Kununurra	9.02	132		Pn	19 36 00.9	-0.2
KNRA	Kununurra	9.02	132	P	Pn	19 36 04.2	+3.1
	44nm,0.5s						
FITZ	Fitzroy Crossi	9.12	156	Pn	Pn	19 36 01.0	-1.4
	0.4nm,0.3s,baz=336,slow=11,SNR=25						
FITZ				Sn	Sn	19 37 39.5	-4.4
	2.2nm,0.3s,baz=121,slow=10,SNR=11						
FITZ	Fitzroy Crossi	9.12	156	P	Pn	19 36 02.7	+0.3
	12nm,0.9s						
BBKI	Banjar Baru	9.28	312	P	Pn	19 36 11.7	+7.0
	8μm678nm24nm,0.8s						
MTN	Manton Dam	9.69	109	Pn	Pn	19 36 10.8	+0.6
MRSI	Marisa	10.15	1	P	Pn	19 36 22.5	+5.9
	12nm,0.9s						
TOLI2	Tolitoli	10.83	355	Pn	Pn	19 36 24.8	-1.0
MTKI	Muara Teweh, K	11.10	322	P	Pn	19 36 37.2	+7.7
UGM	Wanagama	11.26	278	Pn	Pn	19 36 28.1	-3.6
PSA00	Pilbara Seismi	11.91	189	Pn	Pn	19 36 41.2	+0.7
PSA00	Pilbara Seismi	11.91	189	Pn	Pn	19 36 41.0	+0.4
FAKI	Fak Fak	12.43	58	Pn	Pn	19 36 49.1	+1.3
SIJI	Sorong	12.93	48	LR	LR	19 43 01.5	
	comp=Z,22nm,18.9s,baz=230,slow=43						
CISI	Cisompet, Garu	13.96	278	Pn	Pn	19 37 09.2	+0.5
GIRL	Giralia	14.72	208	Pn	Pn	19 37 17.8	-1.1
WB0	Warramunga Arr	15.75	131	Pn	Pn	19 37 28.3	-4.3
WB0				IAmb	IAmb	19 37 52.3	
	comp=Z,11nm,1.4s						
WRA	Warramunga Arr	15.82	131	Pn	Pn	19 37 30.6	-2.9
	comp=Z,0.3nm,0.3s,baz=304,slow=14,SNR=17						
WRA				Sn	Sn	19 40 13.3	-15
	comp=Z,0.4nm,0.3s,baz=299,slow=22,SNR=9.0						
WRA	Warramunga Arr	15.82	131	Pn	Pn	19 37 29.5	-4.0
WRAB	Tennant Creek	15.82	131		Pn	19 37 29.5	-4.0
WB2	Warramunga Arr	15.83	131		Pn	19 37 30.3	-3.3
WR0	Warramunga Arr	15.98	131	Pn	Pn	19 37 32.3	-3.2
AS31	Alice Springs	18.06	142		Pn	19 38 00.0	-1.6
ASAR	Alice Springs	18.06	142	P	P	19 38 01.3	-0.4
	comp=Z,0.4nm,0.3s,baz=319,slow=12,SNR=24						
ASAR				S	Sn	19 41 09.0	-13
	comp=Z,0.3nm,0.3s,baz=317,slow=25,SNR=7.1						
ASAR	Alice Springs	18.06	142	P	Pn	19 37 59.0	-2.5
MNAI	Manna	19.41	285	P	P	19 38 17.2	+0.7
MORW	Morawa	19.96	195	P	P	19 38 21.2	-1.3
MORW				IAmb	IAmb	19 38 21.3	
	comp=Z,11nm,1.1s						
JAY	Jayapura	20.14	70	P	P	19 38 22.4	-2.2
	comp=Z,5.7nm,0.9s,baz=166,slow=22,SNR=1.2						
COEN	Coen	21.37	103	P	P	19 38 36.6	-1.2
COEN				IAmb	IAmb	19 39 03.9	
	comp=Z,13nm,1.4s						
NWAO	Narrogin (SRO)	23.45	190	P	P	19 39 13.6	+14
	comp=Z,10.0nm,0.9s,baz=9.6,slow=14,SNR=2.1						
NWAO				S	S	19 43 16.7	+6.1
	comp=Z,4.9nm,0.6s,baz=82,slow=22,SNR=2.3						
CTA	Charters Tower	25.77	116	LR	LR	19 49 49.7	
	comp=Z,432nm,21.9s,baz=230,slow=37						
STKA	Stephens Creek	28.68	143	P	P	19 39 49.4	+2.4
	comp=Z,0.4nm,0.2s,baz=128,slow=21,SNR=1.7						
CMAR	Chiang Mai Arr	35.95	321	P	P	19 40 48.3	-2.4
	comp=Z,1.6nm,0.8s,baz=150,slow=6.7,SNR=18						
CMAR				PcP	PcP	19 43 19.0	+1.7
	comp=Z,0.7nm,0.6s,baz=182,slow=2.5,SNR=5.7						
CHTO	Chiang Mai	36.22	322	P	P	19 40 52.9	-0.2
CHTO				IAmb	IAmb	19 41 05.5	
	comp=Z,5.3nm,1.2s						
NJ2	Nanjing	41.65	356	eP	P	19 41 39.7	+1.4
NJ2				pmax	pmax		
	comp=Z,8.0nm,1.5s						
JSG	Sagara	46.84	19	P	P	19 42 18.8	-1.0
KSAR	Wonju Array Be	47.28	7	P	P	19 42 20.5	-2.8
LSA	Lhasa	49.06	324	P	P	19 42 38.3	+0.6
LSA				IAmb	IAmb	19 42 39.1	
	comp=Z,5.3nm,0.6s						
JSD	Sado	49.97	17	P	P	19 42 42.5	-1.4
HHC	Hu-ho-hao-te	51.21	350	eP	P	19 42 56.5	+3.1
HHC				pmax	pmax		
	comp=Z,16nm,1.1s						
HHC				pmax	pmax		
	comp=Z,93nm,6.0s						
SONM	Songino Array	58.92	348	P	P	19 43 47.7	-1.3
	comp=Z,1.4nm,0.5s,baz=162,slow=8.2,SNR=12						
SONM	Songino Array	58.92	348	P	P	19 43 47.4	-1.6
SONM				IAmb	IAmb	19 43 49.6	
	comp=Z,2.6nm,1.2s						
WMQ	Urumqi	61.64	333	eP	P	19 44 08.3	+0.8
WMQ				pmax	pmax		
	comp=Z,11nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,96nm,3.7s						
KSH	Kashi	64.84	322	P	P	19 44 28.6	-0.4
KSH				pmax	pmax		
	comp=Z,4.0nm,0.4s						
MK31	Makanchi Array	66.38	332	P	P	19 44 38.5	-0.1
MK31				IAmb	IAmb	19 44 39.5	
	comp=Z,7.2nm,0.7s						
MKAR	Makanchi Array	66.38	332	P	P	19 44 38.5	-0.1
	comp=Z,9.4nm,0.6s,baz=143,slow=7.4,SNR=96						
MKAR	Makanchi Array	66.38	332	P	P	19 44 38.3	-0.4
MAKZ	Makanchi	66.54	331	P	P	19 44 39.2	-0.4
PETK	Petropavlovsk-	69.69	22	P	P	19 44 59.2	-0.1
	comp=Z,4.6nm,1.0s,baz=318,slow=2.0,SNR=4.2						
PETK	Petropavlovsk-	69.69	22	P	P	19 44 58.8	-0.4
KKAR	Karatay Array	70.28	323	P	P	19 45 02.4	-0.8
ZAA0	Zalesovo Array	70.73	338	P	P	19 45 03.8	-1.8
ZAA0				IAmb	IAmb	19 45 04.8	
	comp=Z,8.9nm,0.6s						
ZALV	Zalesovo Beam	70.73	338	P	P	19 45 03.8	-1.7
	comp=Z,8.8nm,0.5s,baz=136,slow=5.1,SNR=38						
SOCY	Socotra	70.77	287	P	P	19 45 07.7	+1.0
KURK	Kurchatov	70.88	333	P	P	19 45 05.5	-1.1
KURK				IAmb	IAmb	19 45 06.7	
	comp=Z,5.2nm,0.8s						
YAK	Yakutsk	71.82	4	P	P	19 45 11.4	-0.5
YAK				IAmb	IAmb	19 45 12.0	
	comp=Z,12nm,0.7s						
ABKAR	Akbulak array	79.75	324	P	P	19 45 56.2	-1.3
TIXI	Tiksi	81.35	2	P	P	19 46 03.6	-2.1
TIXI				IAmb	IAmb	19 46 05.8	
	comp=Z,1.9nm,0.8s						
KBZ	Khabaz	88.73	315	P	P	19 46 44.0	+0.7
	comp=Z,1.2nm,0.7s,baz=136,slow=7.6,SNR=4.4						
TORD	Torodi Ar. Bea	121.27	279	PKP	PKiKP	19 52 44.3	+0.6
	comp=Z,0.9nm,0.6s,baz=41,slow=1.8,SNR=9.3						
ESDC	Sonseca Array	123.44	311	PKP	PKiKP	19 52 48.5	+1.0
	comp=Z,0.2nm,0.5s,baz=52,slow=2.8,SNR=1.8						

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*IDC **05** 19:45:27.4±2.0, 8°.01S×125°.03E, h0^{km}, mb3.8/1, mb1 3.7/5, mb1mx3.5/30, mbtmp3.6/5, ML3.1/4, Error ellipse: s-maj=52.7km s-min=27.6km az=76.0*

ISC 05 19:45:32.4±1.5, **8°.3S**±0°.1×**125°.3E**±0°.1, **h35**^{km}**, n5,** σ**3^{s}73**/9, **Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	2.51	221	Pn	Pn	19 46 10.6	-0.2
	3.9nm,0.3s,baz=46,slow=1.0,SNR=13						
BATI				Sn	Sn	19 46 40.6	+0.3
	4.0nm,0.3s,baz=340,slow=24,SNR=11						
FITZ	Fitzroy Crossi	9.75	178	Pn	Pn	19 47 52.1	+1.9
	0.1nm,0.3s,baz=358,slow=11,SNR=3.0						
FITZ				Sn	Sn	19 49 37.2	-1.2
	0.1nm,0.3s,baz=125,slow=5.9,SNR=4.7						
WRA	Warramunga Arr	14.49	144	Pn	Pn	19 48 58.1	+2.9
	0.1nm,0.3s,baz=317,slow=13,SNR=9.8						
WRA				Sn	Sn	19 51 30.6	-4.1
	0.0nm,0.3s,baz=277,slow=40,SNR=2.1						
ASAR	Alice Springs	17.35	153	P	P	19 49 37.4	+4.3
	0.1nm,0.3s,baz=323,slow=11,SNR=12						
ASAR				S	Sn	19 52 38.7	-5.4
	0.0nm,0.3s,baz=267,slow=26,SNR=2.2						
MKAR	Makanchi Array	66.87	329	P	P	19 56 18.8	-2.2
	1.0nm,1.0s,baz=135,slow=8.8,SNR=2.1						

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*NEIC **05** 20:09:00.1±0.5, 36°.61N±0°.01×97°.725W±0°.007, h6^{km}±7^{km}, Error ellipse: s-maj=1.8km s-min=0.8km az=179.0*

TUL 05 20:09:00.2±1.6, **36°.625N**±0°.008×**97°.72W**±0°.01, **h6**^{km}±7^{km}, **ML2.5, mb_Lg2.5**/8(NEIC), **Error ellipse: s-maj=1.7km s-min=1.1km az=104.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CROK	Carrier	0.24	240		Pg	20 09 05.2	+0.2
CROK				Sg	Sg	20 09 08.9	+0.7
GC02	Grant County #	0.25	334		Pg	20 09 05.5	+0.3
GC02				Sg	Sg	20 09 09.2	+0.7
KAN14	Manchester OK	0.38	330		Pg	20 09 07.9	+0.2
KAN14				Sg	Sg	20 09 13.5	+0.7
KAN17	Caldwell West	0.42	355	Pg	Pg	20 09 08.6	+0.2
BLOK	Blackwell	0.43	72		Pg	20 09 08.6	0.0
BLOK				Sg	Sg	20 09 15.3	+1.1
OK032	Salt Plains WL	0.43	295	Pg	Pg	20 09 08.6	+0.1
OK032				Sg	Sg	20 09 15.0	+0.8
KAN13	South Haven SW	0.43	27	Pg	Pg	20 09 08.9	+0.2
KAN05	Bluff City Nor	0.50	346	Pg	Pg	20 09 09.9	+0.1
KAN09	Caldwell North	0.52	9		Pg	20 09 10.3	+0.1
KAN01	Argonia South	0.53	357	Pg	Pg	20 09 10.6	+0.2
KAN10	Anthony SW Sta	0.58	329	Pg	Pg	20 09 11.5	+0.1
KAN06	Argonia West S	0.63	350	Pg	Pg	20 09 12.5	+0.1

OK029	Liberty Lake	0.85	165	Pg	Pg	20 09 16.1	-0.5
QUOK	Quay	0.94	119	Pg	Pg	20 09 17.7	-0.5
T35A	Sooner Cattle	1.01	73		Pg	20 09 19.3	-0.4
U32A	Winter Ranch,	1.06	257	Pg	Pg	20 09 20.1	-0.4
OK025	Westminster Rd	1.09	163	Pg	Pg	20 09 20.6	-0.5
OKCSW	OKLAHOMA CITY	1.24	169		Pg	20 09 23.1	-0.8
FNO	Franklin	1.39	169		Pn	20 09 25.8	-0.3
X34A	Smith Ranch, M	2.02	183	Pn	Pn	20 09 34.3	-0.5
S39A	Bolivar	3.67	72	IAmb_Lg		20 11 02.6	
	comp=Z,7.3nm,1.2s						
R40A	Maddies Statio	4.65	67	IAmb_Lg		20 11 37.6	
	comp=Z,4.7nm,1.0s						
MSTX	Muleshoe	4.91	239	IAmb_Lg		20 11 44.0	
	comp=Z,11nm,0.7s						
RSSD	Black Hills	8.90	329	IAmb_Lg		20 13 47.7	
	comp=Z,9.8nm,1.1s						

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*NEIC **05** 20:44:11.4±1.3, 18°.2S±0°.1×178°.3W±0°.2, h605^{km}±8^{km}, mb4.2/51, Error ellipse: s-maj=24.5km s-min=16.5km az=126.0*

*IDC **05** 20:44:12.5±1.3, 18°.06S×178°.43W, h620^{km}±16^{km}, mb3.4/17, mb1 3.6/18, mb1mx3.4/36, mbtmp4.3/18, Error ellipse: s-maj=19.5km s-min=11.0km az=149.0*

ISC 05 20:44:08.8±0.5**, 18°.0S**±0°.1×**178°.4W**±0°.1**, h579^{km}, n138, σ0ˢ.89**/136**, mb4.1**/40**, 16C-3D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.43	274	P	P	20 45 35.6	+6.6
	11nm,0.3s,baz=137,slow=2.5,SNR=65						
MSVF	Nonsavu	3.43	274	P	P	20 45 35.4	+6.4
KNTN	Kanton	16.46	24	P	P	20 47 32.0	+0.5
URZ	Urewera	20.58	190	P	P	20 48 07.9	-0.6
	4.4nm,0.4s,baz=121,slow=23,SNR=5.8						
URZ	Urewera	20.58	190	P	P	20 48 08.0	-0.6
URZ				IAmb	IAmb	20 48 31.5	
	comp=Z,25nm,1.2s						
BKZ	Black Stump Fm	21.57	191	P	P	20 48 16.1	-1.4
BFZ	Birch Farm	23.09	191	P	P	20 48 29.7	-1.2
BHW	Baring Head	24.05	193	P	P	20 48 39.0	-0.5
QRZ	Quartz Range	24.07	197	P	P	20 48 40.4	+0.7
QRZ				IAmb	IAmb	20 48 43.7	
	comp=Z,21nm,1.3s						
PLWZ	Palliser	24.13	192	P	P	20 48 39.8	-0.5
NNZ	Nelson	24.21	195	P	P	20 48 41.1	+0.2
THZ	Tophouse	24.85	196	P	P	20 48 46.5	-0.1
KHZ	Kahutara	25.31	194	P	P	20 48 49.5	-1.1
LTZ	Lake Taylor	25.96	196	P	P	20 48 55.0	-1.4
LTZ				IAmb	IAmb	20 49 20.4	
	comp=Z,27nm,1.4s						
FOZ	Fox Glacier	27.36	199	P	P	20 49 08.0	-0.5
LBZ	Lake Benmore	28.02	198	P	P	20 49 12.9	-1.5
ODZ	Otahua Downs	28.50	196	P	P	20 49 17.5	-0.9
WKZ	Wanaka	28.77	199	P	P	20 49 20.3	-0.6
EIDS	Eidsvold	29.29	250	P	P	20 49 26.8	+1.2
EIDS				IAmb	IAmb	20 49 48.7	
	comp=Z,14nm,1.5s						
MLZ	Mavora Lakes	29.54	200	P	P	20 49 28.3	+0.8
DCZ	Deep Cove	29.94	201	P	P	20 49 33.4	+2.5
DCZ				IAmb	IAmb	20 49 47.9	
	comp=Z,25nm,1.3s						
CTA	Charters Tower	33.48	261	P	P	20 50 02.5	+1.0
	comp=Z,2.6nm,0.6s,baz=94,slow=12,SNR=7.2						
CTAO	Charters Tower	33.48	261	P	P	20 50 02.5	+1.0
CTAO				IAmb	IAmb	20 50 18.9	
	comp=Z,8.8nm,1.4s						
COEN	Coen	37.16	270	P	P	20 50 33.7	+1.8
COEN				IAmb	IAmb	20 50 34.5	
	comp=Z,11nm,0.8s						
STKA	Stephens Creek	38.63	241	P	P	20 50 45.1	+1.5
	comp=Z,2.2nm,0.5s,baz=97,slow=11,SNR=11						
STKA	Stephens Creek	38.63	241	P	P	20 50 45.0	+1.3
BBOO	Buckleboo	43.41	241	P	P	20 51 22.0	+0.5
BBOO				IAmb	IAmb	20 51 22.4	
	comp=Z,11nm,1.2s						
WR0	Warramunga Arr	44.48	260	P	P	20 51 30.1	+0.3
WB0	Warramunga Arr	44.63	260	P	P	20 51 31.6	+0.5
WB0				IAmb	IAmb	20 51 32.0	
	comp=Z,3.5nm,0.6s						
WB2	Warramunga Arr	44.66	260	P	P	20 51 31.6	+0.3
WB2				IAmb	IAmb	20 51 32.3	
	comp=Z,6.5nm,1.1s						
WRAB	Tennant Creek	44.66	260	P	P	20 51 31.5	+0.3
WRAB				IAmb	IAmb	20 51 32.2	
	comp=Z,6.7nm,1.2s						
WRA	Warramunga Arr	44.67	260	P	P	20 51 31.6	+0.3
	comp=Z,3.0nm,0.7s,baz=94,slow=7.5,SNR=63						
WRA				PcP	PcP	20 53 00.9	-0.3
	comp=Z,0.7nm,0.5s,baz=90,slow=3.7,SNR=5.3						
WRA	Warramunga Arr	44.67	260	P	P	20 51 31.4	+0.1
AS31	Alice Springs	44.82	254	P	P	20 51 33.2	+0.7
AS31				IAmb	IAmb	20 51 33.9	
	comp=Z,3.8nm,0.9s						
ASAR	Alice Springs	44.82	254	P	P	20 51 33.1	+0.7
	comp=Z,10nm,0.5s,baz=86,slow=8.8,SNR=119						
ASAR				PcP	PcP	20 53 01.4	-0.4
	comp=Z,1.2nm,0.5s,baz=89,slow=4.4,SNR=8.4						
ASAR				S	S	20 57 25.0	-3.6
	comp=Z,1.3nm,1.0s,baz=84,slow=16,SNR=9.1						
MTN	Manton Dam	48.85	268	P	P	20 52 03.0	+0.1
MTN				IAmb	IAmb	20 52 03.5	
	comp=Z,6.3nm,0.8s						
KNRA	Kununurra	50.53	264	P	P	20 52 15.4	+0.3
KNRA				IAmb	IAmb	20 52 15.8	
	comp=Z,5.9nm,0.8s						
SIJI	Sorong	52.30	283	P	P	20 52 27.6	-0.4
	comp=Z,12nm,0.8s,baz=152,slow=2.1,SNR=4.7						
FITZ	Fitzroy Crossi	53.06	261	P	P	20 52 33.8	+0.5
	comp=Z,0.5nm,0.3s,baz=102,slow=4.2,SNR=8.0						
VNDA	Vanda	60.37	185	P	P	20 53 22.5	+0.3
	comp=Z,0.6nm,0.9s,baz=355,slow=6.2,SNR=2.2						
MJAR	Matsushiro Arr	68.00	323	P	P	20 54 10.9	-0.2
	comp=Z,0.8nm,0.5s,baz=154,slow=9.1,SNR=4.2						
PETK	Petropavlovsk-	73.77	345	P	P	20 54 44.1	-0.5
	comp=Z,4.7nm,1.0s,baz=103,slow=6.4,SNR=2.6						
MDPB	Devils Postpil	78.50	44		P	20 55 12.0	+0.7
YERR	Yerington	79.14	43	P	P	20 55 14.8	+0.2
LHV	Little Huntoon	79.22	44	P	P	20 55 15.6	+0.9
LHV				IAmb	IAmb	20 55 17.1	
	comp=Z,5.0nm,1.0s						
GWY	Greenwater Val	79.36	46	P	P	20 55 16.4	+0.7
NVAR	Mina Array Bea	79.45	44	P	P	20 55 17.0	+0.8
	comp=Z,1.7nm,0.8s,baz=222,slow=8.2,SNR=11						
NVAR	Mina Array Bea	79.45	44	P	P	20 55 16.2	0.0
KVN	Kaiserville	79.92	43		P	20 55 18.7	+0.1
BRLK	Bradley Lake	80.64	14	P	P	20 55 21.5	-0.1
PINE	Pine Mountain	80.82	38		P	20 55 24.5	+1.3
PINE				IAmb	IAmb	20 55 25.5	
	comp=Z,9.7nm,1.1s						
PRN	Pahroc Range	81.10	46		P	20 55 25.6	+0.9
PRN				IAmb	IAmb	20 55 27.0	
	comp=Z,4.6nm,0.9s						
BMN	Battle Mountai	81.23	43		P	20 55 25.6	+0.3
BMN				IAmb	IAmb	20 55 27.2	
	comp=Z,5.2nm,1.0s						
WVOR	Wild Horse Val	81.44	40	P	P	20 55 26.5	+0.2
WVOR				IAmb	IAmb	20 55 28.3	
	comp=Z,8.1nm,1.2s						
J08A	Circle Bar Ran	82.05	40	P	P	20 55 30.5	+1.1
J08A				IAmb	IAmb	20 55 31.2	
	comp=Z,7.4nm,1.1s						
X16A	Lo Mia Camp, P	82.20	50		P	20 55 31.5	+1.1
CCUT	Cedar City	82.33	47		P	20 55 30.2	-0.9
U15A	North Rim	82.53	48		P	20 55 33.1	+0.9
U15A				IAmb	IAmb	20 55 34.5	
	comp=Z,5.9nm,0.9s						
ELK	Elko	82.68	43		P	20 55 32.4	-0.4
G08A	Pilot Rock	82.84	38	P	P	20 55 33.5	+0.2
G08A				IAmb	IAmb	20 55 35.0	
	comp=Z,9.4nm,1.5s						
F10A	Beach Ranch, E	84.23	38	P	P	20 55 40.5	+0.3
F10A				IAmb	IAmb	20 55 41.3	
	comp=Z,7.6nm,1.1s						
HLID	Hailey	84.66	41		P	20 55 42.8	+0.4
ILAR	Eielson Array	85.96	13	P	P	20 55 47.1	-0.8
	comp=Z,1.1nm,0.5s,baz=220,slow=4.8,SNR=14						
TX31	Lajitas Ar. Si	86.00	58	P	P	20 55 50.3	+1.3
TX31				IAmb	IAmb	20 55 51.3	
	comp=Z,15nm,0.9s						
TX32	Lajitas Array	86.00	58	P	P	20 55 50.5	+1.4
TX32				IAmb	IAmb	20 55 51.4	
	comp=Z,5.1nm,0.9s						
TXAR	Lajitas Array	86.00	58	P	P	20 55 50.8	+1.7
	comp=Z,2.6nm,0.7s,baz=219,slow=6.6,SNR=21						
MCMT	McKenzie Canyo	86.27	40		P	20 55 50.7	+0.5
YHL	Hebgen Lake	87.31	41	P	P	20 55 56.5	+1.3
YHL				IAmb	IAmb	20 55 57.6	
	comp=Z,4.2nm,0.9s						
PDAR	Pinedale Array	87.38	43	P	P	20 55 55.8	+0.4
	comp=Z,2.3nm,0.9s,baz=222,slow=2.0,SNR=11						
PDAR	Pinedale Array	87.38	43	P	P	20 55 55.2	-0.2
CMAR	Chiang Mai Arr	88.96	290	P	P	20 56 04.7	+1.6
	comp=Z,1.6nm,1.0s,baz=110,slow=3.0,SNR=8.8						
CMAR	Chiang Mai Arr	88.96	290	P	P	20 56 04.5	+1.4
SNAA	Sanae	90.51	179	P	P	20 56 09.5	+0.2
VNA3	Neumayer Olymp	90.65	176	P	P	20 56 09.8	-0.1
VNA2	Neumayer--Watz	91.09	177	P	P	20 56 12.3	+0.4
VNA1	Neumayer--Stat	91.32	177	P	P	20 56 13.2	+0.2
INK	Inuvik	91.95	15	P	P	20 56 14.1	-1.5
	comp=Z,1.8nm,0.9s,baz=232,slow=6.6,SNR=5.1						
YKA	Yellowknife Ar	94.39	25	P	P	20 56 28.6	+1.6
	comp=Z,0.8nm,0.9s,baz=257,slow=7.9,SNR=2.0						
YKA	Yellowknife Ar	94.39	25	P	P	20 56 27.9	+1.0
MKAR	Makanchi Array	109.23	314	PKiKP	PKiKP	21 01 32.1	-1.6
	comp=Z,0.4nm,0.6s,baz=241,slow=1.2,SNR=5.8						
ARCES	ARCESS Array B	126.41	350	PKP	PKPdf	21 02 05.2	-0.7
	comp=Z,3.5nm,0.9s,baz=20,slow=4.0,SNR=3.9						
FINES	FINESS Array B	133.28	344	PKP	PKPdf	21 02 17.9	-1.2
	comp=Z,0.7nm,0.8s,baz=64,slow=3.2,SNR=4.1						
TLCR		144.67	326	⇑P	PKPab	21 02 40.9	-0.4
BURAR	Bucovina Array	144.71	332	⇑P	PKPdf	21 02 40.0	-0.4
TESR	Tescani	144.86	330	⇑P	PKPdf	21 02 40.6	+0.1
BRTR	Keskin Array B	144.88	315	PKP	PKPbc	21 02 41.4	-0.3
	comp=Z,3.2nm,1.0s,baz=172,slow=3.5,SNR=10						
BRTR	Keskin Array B	144.88	315	PKPdf	PKPdf	21 02 39.6	-1.4
CFR	Carcaliu	145.03	327	⇑P	PKPbc	21 02 41.8	+0.1
TPGR	Topolog	145.10	326	⇓P	PKPbc	21 02 42.0	0.0
VRI	Vrincioaia	145.28	329	⇑P	PKPbc	21 02 42.6	+0.1
PLOR	Plostina	145.32	329	⇑P	PKPbc	21 02 42.0	-0.7
OSTC	Ostas	145.48	344	*e*PKP	PKPbc	21 02 43.0	+0.1
ARCR	ARCALIA	145.50	332	⇑P	PKPbc	21 02 43.2	+0.2
CHVC	Chvalec	145.50	344	*e*PKP	PKPbc	21 02 42.3	-0.7
BISRR	Bisoca	145.51	328	⇑P	PKPbc	21 02 42.7	-0.5
CLL	Collm	145.56	347	*e*pPKPdf	pPKPdf	21 05 03.0	+6.9
CLL	Collm	145.56	347	PKPdf	PKPdf	21 02 41.0	-0.5
CLL	Collm	145.56	347	*i* PKPbc	PKPbc	21 02 42.5	-0.6
	comp=Z,12nm,1.0s						
DPC	Dobruska-Polom	145.64	343	*e*PKP	PKPbc	21 02 43.4	0.0
BRG	Berggiesshubel	145.76	346	Amp		21 02 44.6	
	comp=Z,4.6nm,0.8s						
BRG	Berggiesshubel	145.76	346	*e*P	PKPbc	21 02 43.6	-0.1
KRLC	Kraliky	145.76	343	*e*PKP	PKPbc	21 02 43.8	0.0
MORC	Moravsky Berou	145.81	342	*e*PKP	PKPbc	21 02 43.9	0.0
DOPR	Dopca	145.85	330	⇓P	PKPbc	21 02 44.4	+0.3
MLR	Muntele Rosu	145.93	329	⇑P	PKPbc	21 02 44.2	-0.3
MLR	Muntele Rosu	145.93	329		PKPdf	21 02 41.1	-1.5
PVCC	Panska Ves	145.93	345	*e*PKP	PKPbc	21 02 44.6	+0.4
VOIR		146.40	330	⇑P	PKPbc	21 02 45.4	-0.3
DRGR		146.44	333	⇑P	PKPbc	21 02 45.5	-0.2
PRU	Pruhonice	146.44	345	*e*PKP	PKPbc	21 02 45.4	-0.2
JAVC	Velka Javorina	146.58	341	*e*PKP	PKiKP	21 02 47.3	-0.9
ARR	Arges	146.65	330	⇑P	PKPbc	21 02 47.0	+0.6
NKC	Novy Kostel	146.69	347	*e*PKP	PKPbc	21 02 45.0	-1.3
KRUC	Moravsky	146.78	342	*e*PKP	PKPbc	21 02 46.6	+0.1
SIRR	Siria	147.29	334	⇑P	PKPbc	21 02 47.8	-0.2
GRF	Grafenberg Arr	147.45	348	*e*PKPbc	PKPbc	21 02 47.7	-0.6
	baz=345,slow=2.8						
KHC	Kasperske Hory	147.47	345	*e*PKP	PKPbc	21 02 48.1	-0.3
GZR	Gura Zlata	147.50	332	⇑P	PKPbc	21 02 47.5	-1.1
CKRC	Cesky Krumlov	147.57	344	*e*PKP	PKPbc	21 02 48.5	-0.2
GERES	GERESS Array B	147.71	345	PKPbc	PKPbc	21 02 48.7	-0.4
	comp=Z,3.2nm,0.7s,baz=29,slow=3.0,SNR=17						
GERES	GERESS Array B	147.71	345		PKPbc	21 02 48.3	-0.8
HERR	Herculane	148.05	332	⇓P	PKPbc	21 02 48.8	-1.1
FRGS	Fruska Gora	148.95	335	⇑P	PKPbc	21 02 51.9	-0.3
VTS	Vitosha	149.35	328	⇑P	PKPbc	21 02 53.1	-0.4
KBA	Koelnbreinsper	149.43	344	*e*P	PKPbc	21 02 52.3	-1.1
	comp=Z,5.2nm,1.0s						
WATA	Walderalm	149.62	347	*e*P	PKPbc	21 02 53.4	-0.5
	comp=Z,12nm,1.8s						
RETA	Reutte	149.65	348	*e*P	PKPbc	21 02 53.7	-0.2
	comp=Z,2.5nm,0.6s						
WTTA	Wattenberg	149.67	346	*i* P	PKPbc	21 02 53.7	-0.4
	comp=Z,6.6nm,0.6s,SNR=5.2						
MOTA	Moosalm	149.71	347	*e*P	PKPbc	21 02 53.6	-0.5
	comp=Z,6.2nm,1.0s						
SQTA	Sankt Quirin	149.81	347	*e*P	PKPbc	21 02 54.0	-0.3
	comp=Z,6.8nm,1.0s						
ABTA	Abfaltersbach	149.95	345	*i* P	PKPbc	21 02 53.4	-1.2
	comp=Z,6.7nm,0.7s,SNR=7.2						
DAVA	Damuels	150.01	349	*e*P	PKPbc	21 02 54.1	-0.7
	comp=Z,8.1nm,1.0s						
STAL	STALIGIAL	150.36	344		PKPbc	21 02 53.7	-1.8
TUE	Stuetta	150.89	349		PKPbc	21 02 56.5	-0.5
FNA	Florina	151.64	327		PKPbc	21 02 57.3	-1.3
ESDC	Sonseca Array	157.85	12	PKPab	PKPab	21 03 36.5	-0.3
	comp=Z,0.2nm,0.6s,baz=294,slow=2.2,SNR=3.4						
ESDC	Sonseca Array	157.85	12		PKPab	21 03 35.8	-0.9
TORD	Torodi Ar. Bea	175.18	181	PKP	PKPdf	21 03 12.3	-1.4
	comp=Z,0.9nm,1.0s,baz=80,slow=4.1,SNR=4.0						

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*IDC **05** 20:44:03.6±2.4, 6°.01S×151°.67E, h0^{km}, mb3.3/4, mb1 3.6/5, mb1mx3.4/33, mbtmp3.4/5, ML1.7/1, Error ellipse: s-maj=133.6km s-min=28.9km az=131.0*

ISC 05 20:44:09.2±2.1**, 6°.1S**±0°.7×**151°.6E**±0°.7**, h41^{km}, n6, σ0ˢ.88**/7**, mb3.2**/4**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	5.51	233	Pn	Pn	20 45 27.8	-1.1
	1.3nm,0.3s,baz=65,slow=4.9,SNR=2.7						
PMG				Sn	Sn	20 46 31.0	0.0
	1.8nm,0.3s,baz=164,slow=6.3,SNR=3.6						
WRA	Warramunga Arr	21.71	229	P	P	20 48 57.9	+0.8
	0.5nm,0.8s,baz=54,slow=10,SNR=3.2						
ASAR	Alice Springs	24.41	222	P	P	20 49 24.4	+0.3
	0.4nm,0.8s,baz=55,slow=9.2,SNR=3.8						
FITZ	Fitzroy Crossi	28.02	243	P	P	20 49 57.7	+1.0
	1.0nm,0.9s,baz=63,slow=6.8,SNR=1.9						
ILAR	Eielson Array	83.80	22	P	P	20 56 33.8	-0.2
	0.4nm,0.9s,baz=260,slow=5.1,SNR=1.8						
TORD	Torodi Ar. Bea	149.57	286	PKPbc	PKiKP	21 03 56.0	-0.5
	0.5nm,1.0s,baz=72,slow=3.8,SNR=1.8						

NNC 05 20:54:39.6±2.4**, 36°.99N**×**70°.47E, h0^{km}, mb3.7, mpv3.4, 3C-2D, Error ellipse: s-maj=18.8km s-min=16.4km az=167.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.10	0	⇑Pn	Pn	20 56 11.2	+0.1
	0.8nm,0.3s,baz=177,slow=12,SNR=21						
KK31				Sn	Sn	20 57 22.6	+1.0
	0.8nm,0.3s,baz=181,slow=22,SNR=4.5						
AAK	Ala-Archa	6.43	28	⇓Pn	Pn	20 56 15.7	+0.1
	1.0nm,0.4s						
AAK				⇑Sn	Sn	20 57 31.4	+1.6
	7.7nm,0.8s						
TKM2	Tokmak 2	7.11	32	⇑Pn	Pn	20 56 24.8	-0.2
	2.0nm,0.5s						
TKM2				⇓Sn	Sn	20 57 47.5	+0.9
	2.9nm,0.8s						

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*NEIC **05** 21:18:16.4±1.3, 36°.54N±0°.02×121°.06W±0°.03, h11^{km}±7^{km}, Error ellipse: s-maj=4.4km s-min=0.5km az=60.0*

*NCEDC **05** 21:18:16.3±1.4, 36°.55N±0°.03×121°.03W±0°.03, h8^{km}±7^{km}, ML3.0/20, ML2.9/58(NEIC), Error ellipse: s-maj=4.8km s-min=2.0km az=219.0*

*ANF **05** 21:18:17.2±1.7, 36°.38N×121°.01W, h6^{km}±21^{km}, ML3.3/6, Error ellipse: s-maj=18.8km s-min=4.8km az=94.0*

ISC 05 21:18:16.3±0.9**, 36°.54N**±0°.02×**121°.06W**±0°.02**, h13^{km}**±7^{km}**, n68, σ0ˢ.72**/72**, Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBNM	San Benito	0.03	213		Pg	21 18 18.4	-0.4
BLRM	Lewis Ranch	0.22	307		Pg	21 18 21.5	+0.4
BJCM	Johnson Can.	0.27	273		Pg	21 18 21.9	-0.1
SCZ	Santa Cruz	0.29	283		Pg	21 18 22.2	-0.1
SCZ					Sg	21 18 26.4	+0.1
BSMM	Soledad Missio	0.34	243		Pg	21 18 23.4	+0.2
PMPB	Monarch Peak	0.38	147		Pg	21 18 24.3	+0.4
PMPB				IAML		21 18 34.2	
	comp=N,2μm,0.6s						
SAO	San Andreas Ge	0.39	306		Pg	21 18 24.0	-0.2
HAST	Hastings Reser	0.43	250		Pg	21 18 24.8	0.0
HAST					Sg	21 18 30.8	+0.3
HSFM	Saint Francis	0.45	308		Pb	21 18 25.9	-0.3
PACP	Pacheco Peak	0.51	339		Pg	21 18 26.7	+0.3
HFEM	San Felipe	0.53	328		Pg	21 18 27.0	+0.4
PDRM	Domengine Ranc	0.59	110		Pb	21 18 28.6	+0.1
HCOM	Corn Cob Canyo	0.63	304		Pg	21 18 28.6	0.0
GHS	Gilroy Hot Spr	0.64	331		Pg	21 18 28.9	+0.1
PAPM	Alder Peak	0.67	202		Pg	21 18 29.5	+0.2
PKD	Bear Valley Ra	0.72	145		Pg	21 18 30.3	0.0
PKD					Sb	21 18 40.8	+0.3
MOBB	Monterey Bay O	0.91	280		Pb	21 18 34.0	+0.1
RAMR	Ramage Ranch	0.91	170		Pg	21 18 33.8	-0.1
MHC	Mount Hamilton	0.93	330		Pg	21 18 34.0	-0.3
TCHL	Shandon	1.00	148		Pb	21 18 35.8	+0.4
COSM	Mount Oso	1.00	345		Pb	21 18 35.9	+0.3
PAGB	Antelope Grade	1.03	141		Pb	21 18 35.7	-0.4
THIS	South End of C	1.05	140		Pb	21 18 36.2	-0.1
TRAM	Private Proper	1.07	143		Pb	21 18 36.5	-0.1
TSCN	Private Proper	1.14	150		Pb	21 18 37.8	-0.2
WENL	Wente Vineyard	1.22	333		Pn	21 18 38.2	-0.9
JRSC	Jasper Ridge	1.28	313		Pn	21 18 39.5	-0.4
SMMC	Simmler	1.49	144	P	Pn	21 18 42.7	-0.2
	baz=326						
CMB	Columbia Colle	1.59	19		Pn	21 18 44.0	-0.2
KCC	Kaiser Creek	1.60	60		Pn	21 18 45.0	+0.7
BKS	Berkeley--Byer	1.64	325		Pn	21 18 44.0	-0.9
HELL	Mitchell Peak,	1.64	84		Pn	21 18 44.7	-0.3
PMLM	Mount Lospe	1.68	167		Pn	21 18 44.8	-0.6
VES	Vestal, Richgr	1.74	113	S	Sn	21 19 08.7	+0.4
	baz=295						
MRDM	Red Cones	1.92	56		Pb	21 18 50.8	-0.6
MDPB	Devils Postpil	1.92	55		Pn	21 18 49.8	+0.8
MDPB				IAML		21 19 18.1	
	comp=E,115nm,0.4s						
MDPB				IAML		21 19 18.3	
	comp=N,149nm,0.5s						
PKM	Mcpherson Peak	1.93	148	P	Pn	21 18 48.8	-0.2
	baz=330						
MDCM	Deadman Creek	1.99	53		Pn	21 18 51.4	+1.5
MLAC	Mammoth, Mammo	2.08	58	P	Pb	21 18 53.7	-0.5
	baz=239						
MLAC				S	Sb	21 19 21.2	+1.2
	baz=239						
MDRNC	Doe Ridge	2.09	58		Pb	21 18 53.6	-0.6
MCCM	Marconi Confer	2.17	318	Pn	Pn	21 18 51.0	-1.1
MCCM				IAML		21 19 31.6	
	comp=N,62nm,1.4s						
MCCM				IAML		21 19 38.8	
	comp=E,68nm,1.4s						
ISA	Isabella, Lake	2.26	112	P	Pn	21 18 53.9	+0.3
	baz=294						
ISA	Isabella, Lake	2.26	112		Pn	21 18 53.5	0.0
ISA				IAML		21 19 26.0	
	comp=N,99nm,0.5s						
ISA				IAML		21 19 26.2	
	comp=E,68nm,0.6s						
TIN	Tinemaha, Big	2.33	76	S	Sb	21 19 27.0	+0.1
	baz=258						
EMB	Emerald Bay	2.55	17		Pn	21 18 57.7	+0.1
FTR	Fort Ross	2.60	320		Pn	21 18 57.5	-0.5
RUBR	Rubicon Trail	2.61	16		Pn	21 18 58.3	-0.1
RUBR				IAML		21 19 55.0	
	comp=E,85nm,0.8s						
LHV	Little Huntoon	2.66	49	Pg	Pg	21 19 06.0	-1.3
LHV				IAML		21 19 54.0	
	comp=E,82nm,0.9s						
LHV				IAML		21 19 55.5	
	comp=N,60nm,0.9s						
OSI	Osito Audit: C	2.70	135		Pn	21 18 60.0	+0.5
OSI				IAML		21 20 01.5	
	comp=E,44nm,0.9s						
OSI				IAML		21 20 02.8	
	comp=N,32nm,0.7s						
PNTR	Pine Nut	2.80	24		Pn	21 19 00.5	-0.5
LCH	Last Change Ra	2.82	75		Pn	21 19 01.7	+0.5
LCH				IAML		21 19 44.4	
	comp=N,54nm,0.6s						
LCH				IAML		21 19 45.1	
	comp=E,49nm,0.6s						
YERR	Yerington	2.84	30		Pn	21 19 01.7	+0.2
YERR				IAML		21 19 49.6	
	comp=N,64nm,0.6s						
MPK	Martis Peak	2.87	16		Pn	21 19 02.9	+0.9
NVAR	Mina Array Bea	2.89	48		Pn	21 19 05.0	+2.7
RYN	Ryan	2.90	43		Pn	21 19 01.2	-1.1
RYN				IAML		21 19 48.0	
	comp=N,28nm,0.6s						
RYN				IAML		21 19 55.0	
	comp=E,33nm,0.8s						
VCNR	Virginia City	2.97	22	Pn	Pn	21 19 03.8	+0.4
VCNR				IAML		21 19 46.8	
	comp=E,38nm,0.6s						
VCNR				IAML		21 19 58.4	
	comp=N,42nm,1.1s						
NV11	Mina Array Sit	2.98	50		Pb	21 19 07.1	-2.3
ORV	Oroville	3.04	353	Pn	Pn	21 19 04.6	+0.5
MWC	Mount Wilson	3.36	132	Pn	Pn	21 19 08.6	-0.2
MWC				IAML		21 19 58.0	
	comp=E,19nm,1.6s						
MWC				IAML		21 20 13.2	
	comp=N,20nm,1.2s						
TPH	Tonopah	3.42	62	Pn	Pn	21 19 09.3	-0.3
PAHR	Pah Rah Range	3.43	22		Pn	21 19 09.5	-0.1
QSM	Queen of Sheba	3.43	98	Pn	Pn	21 19 09.5	0.0
QSM				IAML		21 20 14.8	
	comp=N,17nm,0.9s						
KVN	Kaiserville	3.43	42	Pg	Pb	21 19 19.2	+2.1
KVN				IAML		21 20 09.0	
	comp=E,18nm,0.8s						
GWY	Greenwater Val	3.56	94		Pg	21 19 23.1	-1.4
GSC	Goldstone, Bar	3.66	108	Pn	Pn	21 19 12.6	-0.2
GSC				IAML		21 20 22.7	
	comp=N,18nm,1.1s						
GSC				IAML		21 20 24.9	
	comp=E,23nm,0.9s						
KCPM	Cahto Peak	3.72	328	Pn	Pn	21 19 13.1	-0.5
KCPM				IAML		21 20 56.9	
	comp=E,27nm,3.7s						
KCPM				IAML		21 21 01.5	
	comp=N,24nm,4.3s						
SHPR	Sheep Range	4.75	89	Pn	Pn	21 19 28.1	+0.4
PFO	Pinyon Flats O	4.76	126	Pn	Pn	21 19 27.6	-0.4
PFO				IAML		21 20 36.2	
	comp=N,8.5nm,4.8s						
PFO				IAML		21 20 46.2	
	comp=N,10.0nm,4.6s						

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*DJA **05** 21:19:55.5±2.0, 3°S±4°×9°9E±°, h20^{km}±14^{km}, M3.8/11, mb3.4/1, MLv3.9/11*

*IDC **05** 21:20:32.1±19.0, 1°.67S×101°.42E, h263^{km}±176^{km}, mb2.7/4, mb1 3.0/4, mb1mx2.7/49, mbtmp3.4/4, Error ellipse: s-maj=237.9km s-min=20.3km az=55.0*

ISC 05 21:20:05.9±1.1**, 2°.63S**±0°.08×**100°.31E**±0°.08**, h50^{km}, n13, σ2ˢ.60**/10**, mb3.3**/3**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPSI	Pulau Pagai	0.33	246	P	Pn	21 20 13.9	-1.4
PPSI				S	Sn	21 20 25.6	+3.5
PDSI	Padang	1.71	5	P	Pn	21 20 38.7	+5.3
SISI	Saibi	1.78	317	P	Pn	21 20 30.3	-4.0
SISI				S	Sn	21 20 57.2	+1.5
MASI	Maura Aman, Be	1.99	105	P	Pn	21 20 40.1	+2.9
PPI	Padang Panjang	2.16	2	P	Pn	21 20 44.3	+4.8
MNAI	Manna	3.15	123	P	Pn	21 20 51.1	-2.0
MNSI	Mandailing Nat	3.48	348	P	Pn	21 20 58.2	+0.6
LWLI	Liwa	4.43	123	P	Pn	21 21 07.7	-3.0
KLSI		4.86	115	P	Pn	21 21 16.6	0.0
CMAR	Chiang Mai Arr	21.00	356	P	Pn	21 24 47.4	-1.1
	1.0nm,0.6s,baz=184,slow=11,SNR=12						
WRA	Warramunga Arr	37.41	120	P	P	21 27 15.6	+1.1
	0.2nm,0.5s,baz=300,slow=8.4,SNR=5.1						
ASAR	Alice Springs	38.63	126	P	P	21 27 28.9	+4.0
	0.2nm,0.5s,baz=298,slow=8.4,SNR=4.5						
MKAR	Makanchi Array	51.72	344	P	P	21 29 07.7	-0.4
	0.5nm,0.8s,baz=148,slow=5.6,SNR=1.5						

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*IDC **05** 21:20:28.4±3.4, 37°.63N×78°.11E, h0^{km}, mb3.6/3, mb1 3.7/5, mb1mx3.4/54, mbtmp3.6/5, ML3.3/2, Error*

ellipse: s-maj=57.8km s-min=32.5km az=160.0
SOME ***05*** *21:20:28.2, 37°.68N×78°.33E, h5^{km}*
NNC ***05*** *21:20:31.3±1.4, 37°.70N×78°.29E, h0^{km}, mb4.1, mpv3.7, Error ellipse: s-maj=11.8km s-min=9.6km az=91.0*
ISC 05 21:20:24.9±1.8**, 37°.03N**±0°.10×**78°.29E**±0°.08**, h10^{km}, n48, σ1^{s}.67**/69**, mb3.6**/3**, 4C-6D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SATY	Saty	6.03	1	eP	Pb	21 22 10.6	+0.5
	8.5nm,0.5s						
SATY				eS	Sb	21 23 24.4	+2.0
	47nm,0.9s						
SATY	Saty	6.03	1	Pg	Pb	21 22 10.6	+0.5
	8.5nm,0.5s						
SATY				Lg	Lg	21 23 24.4	
	47nm,0.9s						
TNSS	Tian-Shan	6.09	351	eP	Pb	21 22 10.1	-1.2
	8.1nm,0.5s						
TNSS				eS	Sb	21 23 23.6	-0.9
	17nm,1.1s						
TNSS	Tian-Shan	6.09	351	Pg	Pb	21 22 10.1	-1.2
	8.1nm,0.5s						
TNSS				Lg	Lg	21 23 23.6	
	17nm,1.1s						
IZV	Izvestkoviy	6.14	348	eP	Pb	21 22 11.6	-0.5
	5.2nm,0.5s						
IZV				eS	Sb	21 23 25.7	+0.1
	23nm,0.6s						
IZV	Izvestkoviy	6.14	348	Pg	Pb	21 22 11.6	-0.5
	5.2nm,0.5s						
IZV				Lg	Lg	21 23 25.7	
	23nm,0.6s						
UZB	Uzynbulak	6.14	5	eP	Pb	21 22 11.3	-0.7
	6.4nm,0.5s						
UZB				eS	Sb	21 23 25.6	0.0
	26nm,0.8s						
UZB	Uzynbulak	6.14	5	Pg	Pb	21 22 11.3	-0.7
	6.4nm,0.5s						
UZB				Lg	Lg	21 23 25.6	
	26nm,0.8s						
SHLS	Shalkode	6.19	8	eP	Pb	21 22 14.7	+1.9
	9.7nm,0.3s						
SHLS				eS	Sb	21 23 31.3	+4.3
	43nm,0.7s						
SHLS	Shalkode	6.19	8	Pg	Pb	21 22 14.7	+1.9
	9.7nm,0.3s						
SHLS				Lg	Lg	21 23 31.3	
	43nm,0.7s						
MDOK	Medeo	6.21	352	eP	Pb	21 22 12.8	-0.3
	7.6nm,0.6s						
MDOK				eS	Sb	21 23 28.1	+0.6
	17nm,0.8s						
MDOK	Medeo	6.21	352	Pg	Pb	21 22 10.6	-2.5
	16nm,0.9s						
MDOK				Lg	Lg	21 23 27.7	
	22nm,0.6s						
MDOK	Medeo	6.21	352	Pg	Pb	21 22 12.8	-0.3
	7.6nm,0.6s						
MDOK				Lg	Lg	21 23 28.1	
	17nm,0.8s						
TKM2	Tokmak 2	6.24	341	⇓Pn	Pn	21 21 57.4	+0.2
	1.6nm,0.5s						
TKM2				⇓Pg	Pb	21 22 11.3	-2.5
	2.5nm,0.6s						
TKM2				⇓Lg	Lg	21 23 27.1	
	11nm,0.6s						
KOTS	Kotyrbulak	6.27	352	eP	Pb	21 22 14.8	+0.6
	4.5nm,0.5s						
KOTS				eS	Sb	21 23 31.4	+2.2
	60nm,0.6s						
KOTS	Kotyrbulak	6.27	352	Pg	Pb	21 22 14.8	+0.6
	4.5nm,0.5s						
KOTS				Lg	Lg	21 23 31.4	
	60nm,0.6s						
KST	Kastek	6.27	344	eP	Pb	21 22 15.6	+1.4
	7.0nm,0.4s						
KST				eS	Sb	21 23 32.7	+3.4
	14nm,1.1s						
KST	Kastek	6.27	344	Pg	Pb	21 22 15.6	+1.4
	7.0nm,0.4s						
KST				Lg	Lg	21 23 32.7	
	14nm,1.1s						
AAK	Ala-Archa	6.32	334	⇑Pn	Pn	21 21 58.1	-0.2
	2.5nm,0.7s						
AAK				⇑Pg	Pb	21 22 14.2	-0.9
	7.5nm,0.7s						
AAK				⇑Lg	Lg	21 23 31.2	
	25nm,0.8s						
PDGK	Podgornoye	6.36	8	Pg	Pb	21 22 14.6	-1.2
	1.8nm,0.6s						
PDGK				Lg	Lg	21 23 31.1	
	9.7nm,0.6s						
PDGK	Podgornoye	6.36	8	⇓Pn	Pn	21 21 56.5	-2.3
	4.1nm,0.6s						
PDGK				⇓Pg	Pb	21 22 14.9	-0.9
	5.1nm,0.5s						
PDGK				⇑Lg	Lg	21 23 31.0	
KURS	Kuram	6.46	359	eP	Pb	21 22 17.0	-0.4
	8.1nm,0.7s						
KURS				eS	Sb	21 23 35.2	+0.7
	20nm,1.2s						
KURS	Kuram	6.46	359	Pg	Pb	21 22 17.0	-0.4
	8.1nm,0.7s						
KURS				Lg	Lg	21 23 35.2	
	20nm,1.2s						
DGS	Degeres	6.50	344	eP	Pb	21 22 19.0	+0.9
	8.2nm,0.7s						
DGS				eS	Sb	21 23 38.6	+2.7
	14nm,1.0s						
DGS	Degeres	6.50	344	Pg	Pb	21 22 19.0	+0.9
	8.2nm,0.7s						
DGS				Lg	Lg	21 23 38.6	
	14nm,1.0s						
KTMS	Ketmen	6.60	13	eP	Pb	21 22 19.9	0.0
	4.6nm,0.4s						
KTMS				eS	Sb	21 23 40.0	+1.1
	14nm,0.6s						
KTMS	Ketmen	6.60	13	Pg	Pb	21 22 19.9	0.0
	4.6nm,0.4s						
KTMS				Lg	Lg	21 23 40.0	
	14nm,0.6s						
KTBS	Karatobe	6.79	350	eP	Pb	21 22 23.3	+0.3
	3.4nm,0.4s						
KTBS				eS	Sb	21 23 46.2	+2.0
	26nm,0.6s						
KTBS	Karatobe	6.79	350	Pg	Pb	21 22 23.3	+0.3
	3.4nm,0.4s						
KTBS				Lg	Lg	21 23 46.2	
	26nm,0.6s						
CHKK	Chushkaly	6.89	352	eP	Pb	21 22 24.8	0.0
	2.8nm,0.6s						
CHKK				eS	Sb	21 23 48.3	+1.2
	12nm,0.7s						
CHKK	Chushkaly	6.89	352	Pg	Pb	21 22 24.8	0.0
	2.8nm,0.6s						
CHKK				Lg	Lg	21 23 48.3	
	12nm,0.7s						
KRBS	Karabastau	6.96	344	eP	Pb	21 22 25.2	-0.6
	3.3nm,0.4s						
KRBS				eS	Sb	21 23 49.4	+0.5
	8.4nm,0.7s						
KRBS	Karabastau	6.96	344	Pg	Pb	21 22 25.2	-0.6
	3.3nm,0.4s						
KRBS				Lg	Lg	21 23 49.4	
	8.4nm,0.7s						
KUU	Kurty	7.02	348	eP	Pb	21 22 28.8	+1.8
	3.2nm,0.9s						
KUU				eS	Sb	21 23 55.6	+4.9
	13nm,1.0s						
KUU	Kurty	7.02	348	Pg	Pb	21 22 28.8	+1.8
	3.2nm,0.9s						
KUU				Lg	Lg	21 23 55.6	
	13nm,1.0s						
BLB	Baldybastay	7.07	1	Pg	Pb	21 22 27.6	-0.2
	3.6nm,0.2s						
BLB				Lg	Lg	21 23 53.4	
	17nm,0.8s						
ARXS	Arharly	7.19	357	eP	Pb	21 22 29.2	-0.6
	2.5nm,0.4s						
ARXS				eS	Sb	21 23 55.9	+0.3
	12nm,0.4s						
ARXS	Arharly	7.19	357	Pg	Pb	21 22 29.2	-0.6
	2.5nm,0.4s						
ARXS				Lg	Lg	21 23 55.9	
	12nm,0.4s						
DJR	Jarkent	7.39	8	eP	Pb	21 22 34.2	+1.0
	2.1nm,0.2s						
DJR				eS	Sb	21 24 04.8	+3.4
	9.6nm,0.6s						
DJR	Jarkent	7.39	8	Pg	Pb	21 22 34.2	+1.0
	2.1nm,0.2s						
DJR				Lg	Lg	21 24 04.8	
	9.6nm,0.6s						
KAPS	Kapalarasan	8.29	5	eP	Pb	21 22 50.2	+1.7
	1.3nm,0.5s						
KAPS				eS	Sb	21 24 32.4	+5.1
	6.1nm,0.7s						
KAPS	Kapalarasan	8.29	5	Pg	Pb	21 22 50.3	+1.7
	1.3nm,0.5s						
KAPS				Lg	Lg	21 24 32.4	
	6.1nm,0.7s						
MK31	Makanchi Array	10.20	16	Pn	Pn	21 22 50.2	-1.2
	0.7nm,0.3s,baz=198,slow=12,SNR=47						
MK31				⇓Sn	Sn	21 24 40.5	-5.4
	5.2nm,1.1s,baz=195,slow=24,SNR=5.6						
MKAR	Makanchi Array	10.20	16	Pn	Pn	21 22 50.8	-0.6
	0.7nm,0.3s,baz=197,slow=13,SNR=48						
MKAR				Sn	Sn	21 24 35.8	-10
	0.4nm,0.3s,baz=187,slow=26,SNR=2.6						
ZALV	Zalesovo Beam	17.52	13	Pn	Pn	21 24 27.8	-1.2
	0.2nm,0.3s,baz=202,slow=10,SNR=2.9						
SONM	Songino Array	23.26	53	P	P	21 25 34.9	+2.3
	0.9nm,1.0s,baz=251,slow=9.0,SNR=4.9						
FINES	FINESS Array B	40.41	324	P	P	21 28 03.1	+0.3
	0.7nm,0.5s,baz=110,slow=11,SNR=8.0						
NOA	NORSAR Array B	47.51	323	P	P	21 29 00.1	+0.2
	1.2nm,1.0s,baz=92,slow=8.4,SNR=3.3						

JMA ***05*** *21:25:22.5±0.1, 39°.40N×143°.71E, h35^{km}, M4.0*
NIED ***05*** *21:25:22.6, 39°.40N×143°.71E, h35^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}3.30; $M_{\theta\theta}$0.29; $M_{\phi\phi}$-3.60; $M_{r\theta}$-0.08; $M_{\theta\phi}$0.49; $M_{\phi r}$0.69; Fault plane solution: $M_0$3.55000×10^{14} NP1: ϕ_s353.00000°, δ51.00000°, λ90.00000°. NP2: ϕ_s173.00000°, δ39.00000°, λ90.00000°.*
IDC ***05*** *21:25:26.8±2.6, 39°.34N×143°.39E, h46^{km}±26^{km}, mb3.3/7, mb1 3.6/10, mb1mx3.4/52, mbtmp3.6/10, ML3.4/3 Error ellipse: s-maj=29.0km s-min=20.0km az=98.0*
ISC 05 21:25:24.9±0.8**, 39°.39N**±0°.05×**143°.67E**±0°.07**, h35^{km}, n29, σ1^{s}.26**/33**, mb3.5**/7**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	1.45	278	P	Pn	21 25 47.6	-0.9
MIYJ				eS	Sn	21 26 05.7	-0.6
JTH	Tanohata	1.50	292	P	Pn	21 25 48.3	-1.0
JTH				S	Sn	21 26 07.1	-0.5
OFUJ	Ofunato	1.58	260	P	Pn	21 25 49.7	-0.7
OFUJ				S	Sn	21 26 09.8	+0.1
JOM	Ohasama	1.84	273	P	Pn	21 25 53.8	-0.2
JANG	Nango	1.93	301	P	Pn	21 25 54.0	-1.2
JMK	Ichinoseki	1.95	258	P	Pn	21 25 55.1	-0.4
JMK				eS	Sn	21 26 18.3	-0.5
JIO	Ouri	2.04	244	P	Pn	21 25 55.8	-0.8
JYK	Kaneyama	2.62	261	P	Pn	21 26 04.8	+0.2
JNBK	Urakawa-nobuka	2.98	347	P	Pn	21 26 10.4	+0.9
JNBK				S	Sn	21 26 44.8	+0.8
JFT	Otama	3.21	236	P	Pn	21 26 12.7	-0.1
JCH	Churui	3.23	356	P	Pn	21 26 12.9	-0.2
JCH				S	Sn	21 26 49.4	-1.0
JAK	Akkeshi	3.69	12	P	Pn	21 26 18.8	-0.5
JAK				eS	Sn	21 27 01.2	-0.4
ASAJ	Asahikawa	4.79	351	P	Pn	21 26 35.7	+1.2
	1.1nm,0.3s,baz=127,slow=34,SNR=1.5						
ASAJ				S	Sn	21 27 27.8	-1.0
	2.0nm,0.3s,baz=96,slow=31,SNR=1.9						
MAT	Matsushiro	5.17	238	P	Pn	21 26 40.9	+1.2
MAT				eS	Sn	21 27 39.4	+1.3
MJAR	Matsushiro Arr	5.17	238	P	Pn	21 26 39.8	+0.1
	0.6nm,0.3s,baz=33,slow=15,SNR=33						
JHJ	Hachijo jima 2	7.00	208	P	Pn	21 27 04.2	-0.7
	5.7nm,0.3s,baz=75,slow=20,SNR=1.6						
JHJ				S	Sn	21 28 18.6	-4.6
	4.3nm,0.3s,baz=346,slow=1.2,SNR=1.3						
H11N2	WAKE ISLAND Hy	28.00	128	T	T	22 00 40.6	
	baz=319						
H11N1	WAKE ISLAND Hy	28.01	128	T	T	22 00 40.8	
	baz=319						
H11N3	WAKE ISLAND Hy	28.02	128	T	T	22 00 31.9	
	baz=319						
SONM	Songino Array	28.05	300	P	P	21 31 12.1	-0.8
	0.2nm,0.3s,baz=72,slow=9.3,SNR=2.0						
H11S1	WAKE ISLAND Hy	28.81	130	T	T	22 01 43.5	
	baz=321						
H11S3	WAKE ISLAND Hy	28.82	130	T	T	22 01 42.0	
	baz=321						
H11S2	WAKE ISLAND Hy	28.83	130	T	T	22 01 47.1	
	baz=321						
ZALV	Zalesovo Beam	41.70	310	P	P	21 33 09.6	-0.3
	1.1nm,0.5s,baz=351,slow=25,SNR=3.9						
MKAR	Makanchi Array	44.42	300	P	P	21 33 31.5	-0.6
	0.7nm,0.8s,baz=88,slow=11,SNR=3.6						
ILAR	Eielson Array	46.56	34	P	P	21 33 50.0	+1.3
	0.6nm,0.9s,baz=260,slow=7.2,SNR=2.5						
WRA	Warramunga Arr	59.66	190	P	P	21 35 25.4	-0.2
	0.4nm,0.9s,baz=8.4,slow=7.0,SNR=2.8						
ASAR	Alice Springs	63.38	190	P	P	21 35 50.2	-0.5
	0.3nm,0.8s,baz=7.0,slow=8.4,SNR=2.9						
NVAR	Mina Array Bea	72.17	55	P	P	21 36 49.4	+3.1
	0.1nm,0.3s,baz=329,slow=3.4,SNR=2.2						

IDC 05 21:27:09.8±2.3**, 5°.78S**×**151°.02E, h0^{km}, mb3.3**/3**, mb1 3.6**/3**, mb1mx3.4**/45**, mbtmp3.3**/3**, Error ellipse: s-maj=154.8km s-min=32.5km az=126.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.48	228	P	P	21 32 00.6	+0.4
	0.4nm,0.7s,baz=55,slow=10,SNR=5.2						
ASAR	Alice Springs	24.25	221	P	P	21 32 28.8	0.0
	0.6nm,0.6s,baz=50,slow=9.6,SNR=10						
ILAR	Eielson Array	83.73	22	P	P	21 39 40.1	-0.3
	0.5nm,0.9s,baz=243,slow=4.0,SNR=2.3						

IDC ***05*** *21:30:31.1±2.2, 0°.18N×98°.05E, h0^{km}, mb3.6/5, mb1 3.6/7, mb1mx3.5/42, mbtmp3.5/7, ML3.4/2, MS2.7/1, Ms1 2.7/1, ms1mx2.4/33, Error ellipse: s-maj=72.2km s-min=22.8km az=64.0*
DJA ***05*** *21:30:35.1±1.0, 0°N±4°×9°8E±°, h14^{km}±10^{km}, M4.3/12, mb4.5/4, MLv4.2/12*
ISC 05 21:30:35.9±1.0**, 0°.43N**±0°.07×**98°.00E**±0°.09**, h29^{km}, n22, σ1^{s}.63**/22**, mb3.7**/5**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSI	Gunungsitoli	0.96	334	P	Pn	21 30 53.1	-0.4
GSI				S	Sn	21 31 06.1	-0.1
MNSI	Mandailing Nat	1.63	77	P	Pb	21 31 03.9	-1.3
SISI	Saibi	2.06	148	P	Pn	21 31 09.3	+0.7
PSI	Prapat	2.53	22	Pn	Pn	21 31 14.9	-0.2
	2.4nm,0.3s,baz=188,slow=7.8,SNR=9.5						
PSI				Sn	Sn	21 31 45.4	+0.2
	5.5nm,0.3s,baz=181,slow=20,SNR=2.3						
PSI				LR	LR	21 31 56.7	
	comp=Z,138nm,20.0s,baz=223,slow=32						
PPI	Padang Panjang	2.56	110	P	Pn	21 31 16.3	+0.9
PDSI	Padang	2.80	118	P	Pn	21 31 20.1	+1.2
TPTI		2.92	344	P	Pn	21 31 20.4	-0.1
BKNI	Bangkinang	3.05	92	P	Pn	21 31 23.8	+1.6
TSI	Tuntungan	3.10	11	P	Pn	21 31 23.5	+0.6
LHMI	Lhok Sumawe	4.88	348	P	Pn	21 31 48.3	+0.9
MASI	Maura Aman, Be	5.53	130	P	Pn	21 31 57.9	+1.5
	0.3nm61nm,1.5s						
MNAI	Manna	6.87	134	P	Pn	21 32 16.0	+1.2
	1.1nm217nm,1.2s						
MDSI	Maura Dua	7.88	128	P	Pn	21 32 30.6	+2.0
CMAR	Chiang Mai Arr	17.94	3	P	P	21 34 45.0	+1.2
	0.1nm,0.3s,baz=191,slow=11,SNR=2.9						
H08S2	Diego Garcia H	26.66	252	T	T	22 03 30.2	
	baz=73,slow=75						
H08S3	Diego Garcia H	26.67	252	T	T	22 03 32.0	
	baz=73,slow=75						
H08S1	Diego Carcia H	26.68	252	T	T	22 03 35.9	
	baz=73,slow=75						
WRA	Warramunga Arr	40.96	122	P	P	21 38 14.9	-1.5
	0.1nm,0.4s,baz=305,slow=8.8,SNR=2.5						
WRA				S	S	21 44 23.1	-3.8
	0.3nm,1.1s,baz=257,slow=34,SNR=1.6						
ASAR	Alice Springs	42.30	127	P	P	21 38 24.5	-2.9
	0.1nm,0.3s,baz=299,slow=7.8,SNR=2.1						
SONM	Songino Array	47.78	8	P	P	21 39 12.6	+1.9
	0.4nm,0.5s,baz=196,slow=8.7,SNR=3.6						
MKAR	Makanchi Array	48.18	346	P	P	21 39 15.0	+1.4
	0.9nm,0.8s,baz=159,slow=8.8,SNR=4.9						
ZALV	Zalesovo Beam	54.44	350	P	P	21 40 01.8	+1.4
	0.9nm,0.4s,baz=182,slow=7.4,SNR=6.3						

IDC ***05*** *21:54:36.0±5.4, 8°.72S×125°.38E, h87^{km}±61^{km}, mb3.4/1, mb1 3.3/5, mb1mx3.1/28, mbtmp3.5/5, ML3.3/4, MS2.8/1, Ms1 2.8/1, ms1mx2.4/17, Error ellipse: s-maj=53.3km s-min=20.9km az=31.0*
ISC 05 21:54:37.6±3.4**, 8°.8S**±0°.2×**125°.41E**±0°.10**, h35^{km}, n11, σ1^{s}.83**/10**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.45	231	P	Pn	21 55 00.8	-0.7
BATI	Baumata	2.20	231	P	Pn	21 55 11.7	0.0
	7.0nm,0.3s,baz=194,slow=0.6,SNR=7.4						
BATI				S	Sn	21 55 39.3	+1.6
	3.5nm,0.3s,baz=341,slow=22,SNR=7.1						
MTN	Manton Dam	6.89	126	P	Pn	21 56 20.1	+3.9
	13nm,0.4s						
KNRA	Kununurra	7.55	155	P	Pn	21 56 26.9	+1.6
	7.2nm,1.8s						
KDU	Kakadu	7.92	120	P	Pn	21 56 36.0	+5.6
FITZ	Fitzroy Crossi	9.21	179	P	Pn	21 56 46.8	-1.3
	0.2nm,0.3s,baz=2.1,slow=10,SNR=7.2						
FITZ				S	Sn	21 58 30.0	-0.5
	0.3nm,0.3s,baz=143,slow=20,SNR=3.0						
FITZ	Fitzroy Crossi	9.21	179	P	Pn	21 56 47.7	-0.4
	2.9nm,1.9s						
WRA	Warramunga Arr	14.02	143	P	Pn	21 57 51.5	-2.3
	0.2nm,0.3s,baz=315,slow=14,SNR=7.0						
WRA				S	Sn	22 00 31.0	+2.7
	0.1nm,0.3s,baz=321,slow=23,SNR=2.5						
ASAR	Alice Springs	16.84	152	P	Pn	21 58 29.2	-1.6
	0.1nm,0.3s,baz=332,slow=14,SNR=6.8						
GUMO	Guam	29.49	41	LR	LR	22 12 44.7	
	comp=Z,19nm,19.7s,baz=116,slow=37						
MKAR	Makanchi Array	67.37	329	P	P	22 05 21.2	-8.2
	0.7nm,0.8s,baz=140,slow=7.0,SNR=3.1						

NEIC ***05*** *21:58:28.5±0.5, 36°.739N±0°.009×97°.87W±0°.02, h4^{km}±6^{km}, Error ellipse: s-maj=2.2km s-min=1.2km az=70.0*
TUL 05 21:58:28.5±0.9**, 36°.77N**±0°.01×**97°.87W**±0°.02**, h6^{km}**±5^{km}**, ML2.8, mb_Lg2.6**/42(NEIC)**, Error ellipse: s-maj=2.1km s-min=1.6km az=106.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.08	5	Pg	Pg	21 58 30.7	+0.3
GC02				Sg	Sg	21 58 32.3	+0.6
KAN14	Manchester OK	0.20	338	Pg	Pg	21 58 32.9	+0.4
KAN14				Sg	Sg	21 58 35.8	+0.6
OK032	Salt Plains WL	0.28	277	Pg	Pg	21 58 34.1	+0.2
OK032				Sg	Sg	21 58 37.7	+0.1
CROK	Carrier	0.28	199	Pg	Pg	21 58 34.1	+0.1
CROK				Sg	Sg	21 58 37.8	0.0
KAN17	Caldwell West	0.29	17	Pg	Pg	21 58 34.5	+0.4
KAN17				Sg	Sg	21 58 38.4	+0.5
KAN05	Bluff City Nor	0.34	360		Pg	21 58 35.4	+0.3
KAN05				Sg	Sb	21 58 41.7	-0.9
KAN01	Argonia South	0.39	13	Pg	Pg	21 58 36.5	+0.3
KAN01				Sg	Sb	21 58 43.6	-0.6
KAN10	Anthony SW Sta	0.40	333	Pg	Pg	21 58 36.5	+0.3
KAN10				Sg	Sg	21 58 42.2	+0.8
KAN13	South Haven SW	0.40	52	Pg	Pg	21 58 36.4	+0.2
KAN13				Sg	Sg	21 58 42.0	+0.6
KAN09	Caldwell North	0.42	29	Pg	Pg	21 58 36.8	+0.2
KAN09				Sg	Sg	21 58 42.9	+0.8
KAN08	Anthony NE Sta	0.46	350		Pg	21 58 37.7	+0.3
KAN08				Sg	Sg	21 58 44.5	+0.9
KAN06	Argonia West S	0.48	1		Pg	21 58 37.9	+0.2
KAN06				Sg	Sg	21 58 44.9	+0.9
KAN16	Harper SW Stat	0.48	341	Pg	Pg	21 58 38.3	+0.5
KAN16				Sg	Sg	21 58 44.7	+0.7
KS20	Mayfield South	0.52	29	Pg	Pg	21 58 38.8	+0.2
BLOK	Blackwell	0.53	91	Pg	Pg	21 58 38.6	0.0
BLOK				Sg	Sg	21 58 45.6	+0.1
KAN12	Harper NE Stat	0.54	349	Pg	Pg	21 58 39.0	+0.1
KAN12				Sg	Sg	21 58 46.6	+0.8
OK029	Liberty Lake	1.03	161		Pg	21 58 47.6	-0.6
T35A	Sooner Cattle	1.10	82		Pg	21 58 49.1	-0.5
QUOK	Quay	1.11	122		Pg	21 58 49.3	-0.5
BCOK	Bluff Creek, N	1.13	169		Pg	21 58 49.4	-0.8
OK031	S. Brethren Rd	1.17	134		Pg	21 58 50.1	-0.7
OK030	Cody Creek RV	1.21	134	Pg	Pg	21 58 51.2	-0.5
OK025	Westminster Rd	1.26	160		Pn	21 58 51.9	-0.7
OKCFA	Oklahoma City	1.39	166		Pn	21 58 54.2	-0.3
OKCSW	OKLAHOMA CITY	1.41	165	Pn	Pn	21 58 54.4	-0.3
FNO	Franklin	1.56	166		Pn	21 58 56.8	0.0
R32A	Long Quarter,	1.78	338	Pn	Pb	21 59 00.9	-0.7
TUL1	Leonard	1.88	116		Pn	21 59 01.3	+0.1
TUL1				IAmb_Lg		21 59 30.7	
	comp=Z,28nm,0.8s						
WMOK	Wichita Mounta	2.16	200		Pn	21 59 05.0	0.0
WMOK				IAmb_Lg		21 59 37.0	
	comp=Z,24nm,0.7s						
X34A	Smith Ranch, M	2.17	179		Pn	21 59 04.7	-0.4
CBKS	Cedar Bluff	2.52	325	Pn	Pn	21 59 11.6	+1.6
KSU1	Kansas State U	2.53	23	Pn	Pn	21 59 10.5	+0.4
U38A	Gravette	2.82	96		Pn	21 59 14.8	+0.6
LOOK	Love County	2.83	168	Pn	Pn	21 59 13.3	-0.9
LOOK				IAmb_Lg		22 00 05.1	
	comp=Z,16nm,0.8s						
X37A	Clayton	2.98	136	Pn	Pn	21 59 16.9	+0.6
X37A				IAmb_Lg		22 00 05.7	
	comp=Z,13nm,0.8s						
HHAR	Hobbs	3.20	98		Pn	21 59 19.5	+0.1
HHAR				IAmb_Lg		22 00 12.6	
	comp=Z,12nm,0.9s						
Z35A	Perchaven, San	3.47	171	Pn	Pn	21 59 22.9	-0.1
AMTX	Amarillo	3.62	240	Pn	Pn	21 59 26.3	+1.1
AMTX				IAmb_Lg		22 00 32.5	
	comp=Z,17nm,0.8s						
W39A	Magazine	3.67	114		Pn	21 59 25.2	-0.5
W39A				IAmb_Lg		22 00 32.9	
	comp=Z,17nm,0.8s						
S39A	Bolivar	3.74	74	Pn	Pn	21 59 27.1	+0.2
U40A	Yellville	4.06	94		Pn	21 59 31.8	+0.6
U40A				IAmb_Lg		22 00 36.3	
	comp=Z,16nm,0.8s						
MIAR	Mount Ida	4.14	121	Pn	Pn	21 59 32.9	+0.6
KSCO	Kaye Shedlock’	4.38	302	IAmb_Lg		22 00 58.1	
	comp=Z,12nm,0.8s						
P38A	Dawn	4.45	49	IAmb_Lg		22 00 54.7	
	comp=Z,9.4nm,0.8s						
MGMO	Mountain Grove	4.50	83	IAmb_Lg		22 00 52.5	
	comp=Z,12nm,0.7s						
BGNE	Belgrade	4.64	357	Pn	Pn	21 59 39.4	+0.3
X40A	Basin Creek Fa	4.69	118	Pn	Pn	21 59 40.1	+0.3
X40A				IAmb_Lg		22 01 00.6	
	comp=Z,9.1nm,0.8s						
R40A	Maddies Statio	4.70	69	Pn	Pn	21 59 39.9	0.0
R40A				IAmb_Lg		22 01 05.6	
	comp=Z,13nm,0.8s						
FCAR	Ozark Folk Cen	4.72	99	Pn	Pn	21 59 39.6	-0.6
FCAR				IAmb_Lg		22 01 06.2	
	comp=Z,7.3nm,0.8s						
OGNE	Ogallala	5.29	323	IAmb_Lg		22 01 22.5	
	comp=Z,13nm,0.8s						
N38A	Joes South For	5.41	41	IAmb_Lg		22 01 30.1	
	comp=Z,13nm,0.7s						
CCM	Cathedral Cave	5.43	74	IAmb_Lg		22 01 28.6	
	comp=Z,10nm,0.7s						
LCAR	Lake Charles	5.46	95	IAmb_Lg		22 01 36.3	
	comp=Z,6.7nm,0.8s						
PBMO	Poplar Bluff	5.97	88	IAmb_Lg		22 01 45.4	
	comp=Z,5.8nm,0.8s						
JCT	Junction City	6.48	195	IAmb_Lg		22 02 01.7	
	comp=Z,7.4nm,0.8s						
S44A	Carbondale	6.93	80	IAmb_Lg		22 02 08.8	
	comp=Z,8.5nm,0.7s						
MNTX	Cornudas Mount	8.02	233	IAmb_Lg		22 02 55.2	
	comp=Z,4.3nm,1.1s						

*NEIC **05** 22:03:42.0±1.2, 43°.82N±0°.05×105°.39W±0°.05, h0^{km}±2^{km}, ML3.1/58, Error ellipse: s-maj=9.6km s-min=3.1km az=142.0*

*IDC **05** 22:03:44.5±1.7, 43°.84N×105°.56W, h0^{km}, mb1 3.7/3, mb1mx3.3/37, mbtmp3.4/3, ML3.3/3, Error ellipse: s-maj=50.6km s-min=9.0km az=149.0*

ISC 05 22:03:41.7±1.0**, 43°.80N**±0°.04×**105°.40W**±0°.04**, h0^{km}, n40, σ0^{s}91**/45**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	**Black Hills**	1.04	71	Pn	Pn	22 04 03.2	-0.5
K22A	**Casper**	1.41	216		Pb	22 04 09.6	+0.7
K22A				IAML		22 04 32.6	
	comp=N,215nm,0.7s						
K22A				IAML		22 04 32.7	
	comp=E,226nm,0.7s						
RWWY	**Rawlins**	2.49	213	Pn	Pn	22 04 24.4	+0.7
RWWY				IAML		22 05 01.8	
	comp=E,91nm,1.0s						
RWWY				IAML		22 05 03.7	
	comp=E,141nm,1.1s						
LAO	**LASA Array**	2.95	349	Pn	Pn	22 04 30.0	+0.2
LAO				IAML		22 05 35.1	
	comp=E,92nm,0.9s						
RLMT	**Red Lodge**	3.07	297	Pn	Pn	22 04 31.7	+0.1
RLMT				IAML		22 05 28.5	
	comp=E,36nm,1.1s						
RLMT				IAML		22 05 43.4	
	comp=E,40nm,1.0s						
BW06	**Boulder Array**	3.21	253	Pn	Pn	22 04 35.6	+2.0
BW06				IAML		22 05 28.4	
	comp=E,42nm,0.7s						
PD31	**Pinedale Array**	3.21	253	Pn	Pn	22 04 34.4	+0.8
PDAR	**Pinedale Array**	3.21	253	Pn	Pb	22 04 37.6	-2.0
	comp=E,3.5nm,0.3s,baz=68,slow=16,SNR=32						
PDAR				Lg	Lg	22 05 21.4	
	comp=E,10.0nm,0.3s,baz=73,slow=33,SNR=14						
PDAR	**Pinedale Array**	3.21	253	Pn	Pn	22 04 34.9	+1.4
GCMT	**Greycliff**	3.63	305		Pn	22 04 40.4	+1.0
GCMT				Pg	Pg	22 04 52.1	+0.8
H17A	**Grant Village**	3.78	281		Pn	22 04 41.6	+0.2
H17A				IAML		22 05 48.3	
	comp=N,22nm,0.7s						
H17A				IAML		22 05 51.0	
	comp=E,20nm,1.5s						
LOHW	**Long Hollow**	3.78	269	Pn	Pn	22 04 40.5	-0.9
LOHW				Pg	Pg	22 04 54.5	+0.4
OGNE	**Ogallala**	3.79	138	Pn	Pn	22 04 41.8	+0.4
OGNE				Pg	Pg	22 04 54.1	-0.2
YUF	**Upper Falls**	3.79	286	Pn	Pn	22 04 41.5	0.0
YUF				Pg	Pg	22 04 56.6	+2.4
YUF				IAML		22 06 23.5	
	comp=N,19nm,0.9s						
FLWY	**Flagg Ranch**	3.84	276		Pg	22 04 55.6	+0.3
FLWY				IAML		22 07 06.7	
	comp=N,30nm,2.9s						
MOOW	**Moose Ponds**	3.87	271		Pg	22 04 55.9	0.0
SNOW	**Snow King Moun**	3.90	267		Pg	22 04 56.1	-0.4
SNOW				IAML		22 06 08.1	
	comp=N,34nm,1.2s						
SNOW				IAML		22 06 12.7	
	comp=N,36nm,1.0s						
YNR	**Norris Junctio**	3.90	285	Pg	Pg	22 04 57.1	+0.7
REDW	**Red Top Meadow**	3.99	266		Pg	22 04 58.8	+0.8
REDW				IAML		22 05 54.2	
	comp=N,30nm,1.2s						
REDW				IAML		22 05 59.5	
	comp=N,36nm,1.1s						
ISCO	**Idaho Springs**	4.00	182	Pn	Pn	22 04 45.8	+1.3
TPAW	**Teton Pass**	4.04	268		Pn	22 04 45.1	0.0
TPAW				Pg	Pg	22 05 00.4	+1.3
TPAW				IAML		22 06 06.2	
	comp=N,20nm,1.0s						
TPAW				IAML		22 06 13.2	
	comp=N,28nm,0.8s						
FXWY	**Fox Creek**	4.08	270	Pn	Pn	22 04 45.1	-0.5
FXWY				Pg	Pg	22 04 59.3	-0.6
O20A	**White River Ci**	4.23	211		Pg	22 05 02.9	+0.2
O20A				IAML		22 06 23.9	
	comp=N,33nm,1.4s						
O20A				IAML		22 06 25.5	
	comp=E,34nm,2.6s						
YHL	**Hebgen Lake**	4.28	286		Pn	22 04 48.7	+0.3
YHL				Pg	Pg	22 05 03.6	-0.2
YHL				IAML		22 06 15.5	
	comp=E,23nm,0.9s						
AHID	**Auburn Hatcher**	4.29	258		Pg	22 05 03.9	+0.1
AHID				IAML		22 06 05.0	
	comp=E,26nm,1.7s						
AHID				IAML		22 07 23.8	
	comp=E,21nm,0.7s						
QLMT	**Earthquake Lak**	4.45	286	Pg	Pg	22 05 07.1	+0.2
RDMU	**Red Mountain**	4.47	225		Pg	22 05 07.7	+0.3
RDMU				IAML		22 06 12.8	
	comp=N,17nm,0.8s						
RDMU				IAML		22 06 13.0	
	comp=E,25nm,0.9s						
DGMT	**Dagmar**	4.75	10	Pn	Pn	22 04 55.3	+0.7
SMCO	**Snowmass**	4.76	195		Pg	22 05 11.9	-1.1
SMCO				IAML		22 06 23.9	
	comp=E,17nm,1.3s						
SMCO				IAML		22 07 26.3	
	comp=E,17nm,0.4s						
BOZ	**Bozeman (W)**	4.79	294		Pg	22 05 11.8	-1.7
BOZ				IAML		22 06 16.8	
	comp=E,11nm,1.1s						
BOZ				IAML		22 06 21.1	
	comp=E,15nm,0.8s						
HWUT	**Hardware Ranch**	5.04	246	Pn	Pn	22 04 58.6	-0.1
TCUT	**Toone Canyon**	5.19	241		Pn	22 05 00.4	-0.4
EGMT	**Eagleton**	5.21	326		Pn	22 04 59.9	-0.9
KSCO	**Kaye Shedlock’**	5.21	156	Pn	Pn	22 05 00.9	-0.2
P18A	**Preston Nutter**	5.52	223	Pn	Pn	22 05 05.8	+0.4
MDND	**Maddock**	5.73	43	Pn	Pn	22 05 07.6	-0.3
HVU	**Hansel Valley**	5.79	252	Pn	Pn	22 05 09.3	+0.4
I10CA	**LAC DU BONNET**	9.05	42	*i*		22 59 30.0	
	baz=222,slow=329,SNR=2.9						
ULM	**Lac du Bonnet**	9.16	42	Pn	Pn	22 05 56.5	+1.5
	comp=E,0.8nm,0.3s,baz=233,slow=12,SNR=7.1						
ULM				Lg	Lg	22 08 25.9	
	comp=E,0.2nm,0.3s,baz=303,slow=19,SNR=1.7						
NVAR	**Mina Array Bea**	11.11	246	Pn	Pn	22 06 27.6	+5.6
	comp=E,0.1nm,0.3s,baz=57,slow=10.0,SNR=3.5						

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*NEIC **05** 22:05:50.6±2.7, 43°.65N±0°.06×105°.20W±0°.07, h0^{km}±2^{km}, ML3.4/56, Error ellipse: s-maj=10.0km s-min=8.4km az=348.0*

*IDC **05** 22:05:51.2±1.7, 43°.98N×105°.70W, h0^{km}, mb1 3.7/3, mb1mx3.3/37, mbtmp3.4/3, ML2.5/2, Error ellipse: s-maj=51.4km s-min=9.2km az=148.0*

ISC 05 22:05:51.1±0.9**, 43°.73N**±0°.04×**105°.31W**±0°.04**, h0^{km}, n41, σ1^{s}38**/41**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	**Black Hills**	1.00	67	Pg	Pg	22 06 09.8	-0.5
K22A	**Casper**	1.40	220	Pn	Pg	22 06 15.4	-2.5
K22A				IAML		22 06 38.1	
	comp=E,496nm,0.8s						
K22A				IAML		22 06 40.3	
	comp=N,665nm,0.3s						
RWWY	**Rawlins**	2.48	215	Pn	Pn	22 06 32.7	-0.3
RWWY				IAML		22 07 09.7	
	comp=N,182nm,0.6s						
RWWY				IAML		22 07 11.5	
	comp=N,254nm,0.7s						
LAO	**LASA Array**	3.03	348	Pn	Pn	22 06 40.5	+0.2
LAO				IAML		22 07 33.2	
	comp=N,142nm,0.9s						
RLMT	**Red Lodge**	3.16	297	Pn	Pn	22 06 42.1	-0.2
RLMT				IAML		22 07 44.2	
	comp=N,59nm,2.0s						
RLMT				IAML		22 07 45.9	
	comp=N,65nm,1.1s						
PD31	**Pinedale Array**	3.25	254	Pn	Pn	22 06 42.9	-0.6
PDAR	**Pinedale Array**	3.25	254	Pn	Pn	22 06 43.7	+0.1
	comp=N,3.5nm,0.3s,baz=73,slow=17,SNR=3.0						
PDAR				Lg	Lg	22 07 26.9	
	comp=N,14nm,0.3s,baz=68,slow=36,SNR=11						
PDAR	**Pinedale Array**	3.25	254		Pn	22 06 43.5	-0.1
BW06	**Boulder Array**	3.25	254	Pn	Pn	22 06 44.1	+0.5
BW06				IAML		22 07 31.0	
	comp=N,56nm,0.7s						
OGNE	**Ogallala**	3.69	138		Pg	22 07 00.7	-1.3
OGNE				IAML		22 08 03.2	
	comp=N,88nm,1.1s						
GCMT	**Greycliff**	3.72	305	Pg	Pg	22 07 00.9	-1.6
LOHW	**Long Hollow**	3.84	270	Pg	Pg	22 07 02.6	-2.1
H17A	**Grant Village**	3.85	282		Pg	22 07 03.0	-2.0
H17A				IAML		22 07 54.0	
	comp=E,44nm,1.9s						
FLWY	**Flagg Ranch**	3.91	277	Pn	Pn	22 06 51.9	-0.7
FLWY				IAML		22 08 04.0	
	comp=E,66nm,2.1s						
FLWY				IAML		22 08 47.3	
	comp=E,54nm,1.9s						
MOOW	**Moose Ponds**	3.94	272	Pn	Pn	22 06 54.1	+1.1
SNOW	**Snow King Moun**	3.96	268	Pn	Pn	22 06 53.8	+0.4
SNOW				IAML		22 08 19.3	
	comp=E,62nm,0.9s						
SNOW				IAML		22 08 21.6	
	comp=E,53nm,1.8s						
REDW	**Red Top Meadow**	4.04	267	Pn	Pn	22 06 56.4	+1.9
REDW				IAML		22 08 16.3	
	comp=E,67nm,1.6s						
REDW				IAML		22 08 16.5	
	comp=E,52nm,1.1s						
TPAW	**Teton Pass**	4.10	269	Pn	Pn	22 06 56.6	+1.2
TPAW				IAML		22 08 24.4	
	comp=E,42nm,1.1s						
YHH	**Holmes Hill**	4.12	287	Pn	Pn	22 06 57.0	+1.4
FXWY	**Fox Creek**	4.15	271	Pn	Pn	22 06 55.3	-0.6
YMR	**Madison River**	4.17	285	Pn	Pn	22 06 55.4	-0.9
YMR				IAML		22 08 12.7	
	comp=E,42nm,1.2s						
O20A	**White River Ci**	4.21	212	Pn	Pn	22 06 55.1	-1.6
E28A	**Huff**	4.33	47	Pn	Pn	22 06 57.9	-0.3
AHID	**Auburn Hatcher**	4.34	259		Pg	22 07 14.4	+0.1
AHID				IAML		22 08 17.3	
	comp=E,50nm,1.9s						
AHID				IAML		22 08 18.0	
	comp=E,41nm,1.0s						
YHL	**Hebgen Lake**	4.36	287	Pn	Pn	22 07 01.6	+2.7
YHL				IAML		22 08 20.4	
	comp=E,45nm,1.8s						
YHL				IAML		22 08 31.5	
	comp=N,35nm,1.2s						
RDMU	**Red Mountain**	4.47	227	Pg	Pb	22 07 13.9	+3.3
RDMU				IAML		22 08 16.8	
	comp=N,35nm,2.4s						
RDMU				IAML		22 08 18.0	
	comp=E,40nm,1.9s						
QLMT	**Earthquake Lak**	4.53	286	Pg	Pb	22 07 12.2	+0.6
SMCO	**Snowmass**	4.72	196	Pg	Pb	22 07 17.8	+2.9
SMCO				IAML		22 08 27.3	
	comp=E,26nm,0.9s						
SMCO				IAML		22 08 27.6	
	comp=E,28nm,0.9s						
DGMT	**Dagmar**	4.80	9	Pn	Pn	22 07 05.2	+0.5
BOZ	**Bozeman (W)**	4.88	295	Pn	Pn	22 07 06.1	+0.2
BOZ				IAML		22 08 25.7	
	comp=E,21nm,1.6s						
HWUT	**Hardware Ranch**	5.08	247	Pn	Pn	22 07 09.6	+0.9
HWUT				IAML		22 08 59.5	
	comp=E,26nm,1.1s						
KSCO	**Kaye Shedlock’**	5.13	156	Pn	Pn	22 07 07.8	-1.5
TCUT	**Toone Canyon**	5.21	242	Pn	Pn	22 07 11.5	+0.9
EGMT	**Eagleton**	5.30	326	Pn	Pn	22 07 12.6	+1.0
HRY	**Holter Researc**	5.49	305	Pn	Pn	22 07 14.4	+0.2
P18A	**Preston Nutter**	5.52	224	Pn	Pn	22 07 15.5	+0.7
JLU	**Jordanelle**	5.53	238	Pn	Pn	22 07 14.1	-0.8
SPUT	**South Promonto**	5.80	248	Pn	Pn	22 07 19.4	+0.8
HVU	**Hansel Valley**	5.83	253	Pn	Pn	22 07 19.8	+0.8
ULM	**Lac du Bonnet**	9.16	41	Pn	Pn	22 08 02.4	-2.1
	comp=E,0.8nm,0.3s,baz=233,slow=12,SNR=6.4						
ULM				Lg	Lg	22 10 36.1	
	comp=E,0.3nm,0.3s,baz=356,slow=21,SNR=1.8						
NVAR	**Mina Array Bea**	11.14	246	Pn	Pn	22 08 32.8	+1.0
	comp=E,0.0nm,0.3s,baz=65,slow=13,SNR=1.5						
NVAR				Lg	Lg	22 11 30.1	
	comp=E,0.1nm,0.3s,baz=342,slow=13,SNR=2.2						

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*TAP **05** 22:23:52.0, 24°.83N×122°.05E, h6^{km}, ML2.9, C*

*JMA **05** 22:23:53.1±0.1, 24°.85N×121°.99E, h42^{km}±5^{km}, M2.4*

ISC 05 22:23:52.4±0.9**, 24°.86N**±0°.03×**122°.06E**±0°.02**, h17^{km}**±6^{km}**, n53, σ0^{s}69**/76**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	0.16	334	*i* P	Pg	22 23 56.6	0.0
	baz=345						
TWB1				*i* S	Sg	22 24 00.0	+0.5
	baz=345						
NTC	**Toucheng**	0.21	268	P	Pg	22 23 57.6	+0.1
	baz=278						
NTC				S	Sg	22 24 01.9	+1.1
	baz=278						
TIPB	**Shuangxi**	0.24	296	*i* P	Pb	22 23 58.0	-0.3
	baz=305						
TIPB				*i* S	Sb	22 24 01.9	-0.5
	baz=305						
ILA	**Ilan**	0.30	251	*e*P	Pg	22 23 58.1	-0.8
	baz=256						
TWC	**Suao**	0.32	218	P	Pg	22 23 58.6	-0.6
	baz=218						
NWF	**Wu-fen Shan**	0.33	309	P	Pb	22 23 59.2	-0.7
	baz=315						
NWF				S	Sb	22 24 05.9	+0.9
	baz=315						
NDS	**Dongshan**	0.39	234	P	Pg	22 23 59.9	-0.6
	baz=237						
NDS				*e*S	Sb	22 24 07.6	+1.0
	baz=237						
TWA	**Mucha**	0.45	285	*e*P	Pb	22 24 02.1	+0.2
	baz=290						
TWA				*e*S	Sb	22 24 08.9	+0.5
	baz=290						
EWUT	**Wuta**	0.49	212	*e*P	Pg	22 24 01.9	-0.3
	baz=212						
EWUT				*e*S	Sb	22 24 09.3	-0.2
	baz=212						
NHDH	**Xindian Distri**	0.50	282	*e*S	Sb	22 24 10.4	+0.7
	baz=286						
ENTT	**Nioudou**	0.51	244	P	Pg	22 24 02.3	-0.2
	baz=246						
NWLT	**Wulai**	0.52	261	*i* P	Pb	22 24 02.6	-0.4
	baz=264						
ENA	**Nanau**	0.52	214	*e*P	Pg	22 24 02.2	-0.7
	baz=214						
ENA				*e*S	Sb	22 24 10.3	-0.2
	baz=214						
YM01	**YM01**	0.53	302	P	Pn	22 24 04.1	-1.2
	baz=306						
YM01				*e*S	Sn	22 24 11.8	-2.1
	baz=306						
NDT	**Datong Townshi**	0.56	243	*e*P	Pg	22 24 03.2	-0.4
	baz=245						
NDT				*e*S	Sb	22 24 11.7	+0.1
	baz=245						
TWY	**Chenhua**	0.59	314	*e*P	Pn	22 24 05.3	-0.7
	baz=318						
ANP	**Anpu**	0.59	303	*e*P	Pn	22 24 04.8	-1.3
	baz=307						
NTST	**Danshui**	0.63	298	*e*P	Pn	22 24 06.5	-0.1
	baz=301						
YHNB	**Yeheng**	0.66	253	P	Pb	22 24 04.8	-0.7
	baz=255						
NSK	**Sanguang**	0.67	254	P	Pb	22 24 05.0	-0.6
	baz=256						
NNSB	**Datong**	0.76	235	*e*P	Pb	22 24 06.7	-0.5
	baz=236						
NNS	**Nan Shan**	0.76	236	*e*P	Pg	22 24 07.3	0.0
	baz=237						
PCYT	**Pengchaiyu**	0.76	0	P	Pn	22 24 09.2	+0.7
	baz=2.0						
ETL	**Fush Village**	0.81	210	*e*P	Pg	22 24 08.1	-0.1
	baz=210						
NACB	**Ninganchiao**	0.81	212	*e*P	Pb	22 24 07.6	-0.4
	baz=212						
NACB				*e*S	Sb	22 24 18.2	-0.4
	baz=212						
ETLH	**Xiulin Townshi**	0.84	219	*e*P	Pb	22 24 08.3	-0.3
	baz=219						
ETLH				*e*S	Sb	22 24 19.7	0.0
	baz=219						
TWD	**Chiawan**	0.89	209	*e*P	Pb	22 24 09.3	-0.1
	baz=208						
TWD				*e*S	Sb	22 24 21.2	+0.2
	baz=208						
JYNG	**Yonagunijimaku**	0.90	117	P	Pn	22 24 10.1	-0.2
JYNG				S	Sn	22 24 22.8	-0.1
YOJ	**Yonaguni jima**	0.95	115	*e*P	Pn	22 24 10.3	-0.6
	baz=112						
YOJ				*e*S	Sn	22 24 24.5	+0.4
	baz=112						
YOJ	**Yonaguni jima**	0.95	115	P	Pg	22 24 11.0	+0.2
YOJ				S	Sn	22 24 24.1	0.0
FUSS	**Fushou**	0.97	231	*e*P	Pb	22 24 10.8	-0.1
	baz=231						
FUSS				*e*S	Sg	22 24 24.2	+0.2
	baz=231						
LIOB	**Emei**	0.98	257	*e*P	Pg	22 24 12.8	+1.4
	baz=259						
NSTT	**Nanjuang**	0.99	257	*e*P	Pg	22 24 13.3	+1.6
	baz=258						
TWT	**Tachien**	1.01	233	P	Pg	22 24 13.0	+1.0
	baz=234						
WHF	**Hehuan Shan**	1.02	226	*e*P	Pg	22 24 12.7	+0.4
	baz=226						
WHF				*e*S	Sn	22 24 26.8	+0.3
	baz=226						
TDCB	**Techi**	1.02	234	P	Pg	22 24 12.6	+0.3
	baz=234						
CHGB	**Renai**	1.14	226	*e*P	Pb	22 24 13.9	+0.1
	baz=226						
CHGB				*e*S	Sg	22 24 29.5	+0.1
	baz=226						
WHP	**Taichung City**	1.17	240	*e*P	Pg	22 24 15.1	0.0
	baz=241						
ESL	**Shilin**	1.19	209	*e*P	Pb	22 24 14.5	-0.1
	baz=208						
OWD	**Renai**	1.22	222	*e*P	Pg	22 24 15.8	-0.2
	baz=222						
NSY	**Sanyi**	1.27	250	*e*P	Pg	22 24 18.1	+1.2
	baz=250						
TWQ1	**Liyutan**	1.28	247	*e*P	Pg	22 24 18.1	+0.9
	baz=247						
SMLT	**Sun Moon Lake**	1.44	228	*e*P	Pg	22 24 19.8	-0.4
	baz=227						
TYC	**Yuchr**	1.46	229	*e*P	Pg	22 24 21.2	+0.7
	baz=229						
SSLB	**Suanglung**	1.48	224	*e*P	Pb	22 24 19.6	+0.2
	baz=223						
HGSD	**Ruisui**	1.49	203	*e*P	Pg	22 24 21.8	+0.8
	baz=203						
IRIF	**Iriomote-Funau**	1.60	109	P	Pn	22 24 20.1	+0.1
IRIF				*e*S	Sb	22 24 41.0	-0.6
YULB	**Yu-li**	1.62	206	*e*P	Pb	22 24 22.6	+0.7
	baz=205						
ALS	**Alishan**	1.77	221	*e*P	Pg	22 24 26.0	-0.5
	baz=220						
HATJ	**Hateruma jima**	1.78	117	*e*S	Sb	22 24 45.4	-1.2
JKRS	**Kuro-shima**	1.88	109	P	Pn	22 24 24.4	+0.7
JKRS				S	Sn	22 24 47.6	+0.6
JIJ	**Ishigaki jima**	1.96	104	P	Pn	22 24 25.6	+0.8
JIJ				S	Sb	22 24 50.1	-1.6
JISG	**Ishigakijimahi**	2.06	97	P	Pn	22 24 27.1	+0.8
JISG				*e*S	Sn	22 24 51.4	-0.2

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*NEIC **05** 22:28:36±0.8, 36°.92N±0°.01×97°.81W±0°.02, h3^{km}±7^{km}, Error ellipse: s-maj=2.9km s-min=0.4km az=121.0*

TUL 05 22:28:35.8±0.8**, 36°.94N**±0°.01×**97°.84W**±0°.02**, h2^{km}**±7^{km}**, ML2.7, mb_Lg2.5**/21(NEIC)**, Error ellipse: s-maj=3.1km s-min=1.2km az=118.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	**Grant County #**	0.09	188	Pg	Pg	22 28 38.0	+0.4
GC02				Sg	Sg	22 28 39.6	+0.9
KAN14	**Manchester OK**	0.10	279	Pg	Pg	22 28 38.3	+0.6
KAN14				Sg	Sg	22 28 39.9	+0.9
KAN17	**Caldwell West**	0.12	32	Pg	Pg	22 28 38.9	+0.7
KAN17				Sg	Sg	22 28 40.8	+1.0
KAN05	**Bluff City Nor**	0.17	352		Pg	22 28 39.7	+0.6
KAN05				Sg	Sg	22 28 42.0	+0.7
KAN01	**Argonia South**	0.22	18	Pg	Pg	22 28 40.6	+0.5
KAN01				Sg	Sg	22 28 44.0	+1.0
KAN09	**Caldwell North**	0.27	43	Pg	Pg	22 28 41.5	+0.6
KAN09				Sg	Sg	22 28 45.2	+0.8
KAN10	**Anthony SW Sta**	0.27	312	Pg	Pg	22 28 41.6	+0.6
KAN10				Sg	Sg	22 28 45.4	+0.8
KAN08	**Anthony NE Sta**	0.30	340		Pg	22 28 42.3	+0.6
KAN06	**Argonia West S**	0.31	358		Pg	22 28 42.4	+0.6
OK032	**Salt Plains WL**	0.32	245	Pg	Pg	22 28 42.3	+0.3
OK032				Sg	Sg	22 28 46.9	+0.6
KAN16	**Harper SW Stat**	0.33	328	Pg	Pg	22 28 42.8	+0.5
KS20	**Mayfield South**	0.37	39	Pg	Pg	22 28 43.4	+0.5
KAN12	**Harper NE Stat**	0.38	341	Pg	Pg	22 28 43.6	+0.6
CROK	**Carrier**	0.45	194	Pg	Pg	22 28 44.8	+0.3
BLOK	**Blackwell**	0.54	110	Pg	Pg	22 28 46.6	+0.5
T35A	**Sooner Cattle**	1.07	91		Pg	22 28 56.2	0.0
QUOK	**Quay**	1.20	130		Pg	22 28 58.3	-0.4
OK031	**S. Brethren Rd**	1.28	140		Pg	22 28 59.7	-0.6
BCOK	**Bluff Creek, N**	1.30	172	Pg	Pg	22 28 59.6	-1.1
OK030	**Cody Creek RV**	1.32	139		Pg	22 29 00.4	-0.8
OK025	**Westminster Rd**	1.42	163		Pn	22 29 02.1	-0.5
OKCFA	**Oklahoma City**	1.56	168	IAmb_Lg		22 29 28.2	
	comp=Z,34nm,0.9s						
R32A	**Long Quarter,**	1.63	335		Pn	22 29 05.8	+0.3
FNO	**Franklin**	1.72	168		Pn	22 29 06.8	0.0
TUL1	**Leonard**	1.95	121		Pn	22 29 10.5	+0.6
WMOK	**Wichita Mounta**	2.33	199		Pn	22 29 16.7	+1.6
X34A	**Smith Ranch, M**	2.34	180		Pn	22 29 15.7	+0.5
KSU1	**Kansas State U**	2.37	24	Pn	Pn	22 29 15.6	-0.1
CBKS	**Cedar Bluff**	2.40	322	Pn	Pn	22 29 16.8	+0.7
U38A	**Gravette**	2.82	99	Pn	Pn	22 29 21.8	-0.2
X37A	**Clayton**	3.09	139		Pb	22 29 32.0	+0.5
X37A				IAmb_Lg		22 30 21.2	
	comp=Z,15nm,0.8s						
HHAR	**Hobbs**	3.21	101	Pn	Pn	22 29 26.8	-0.5
HHAR				IAmb_Lg		22 30 17.4	
	comp=Z,10.0nm,0.9s						
Z35A	**Perchaven, San**	3.63	172	Pn	Pn	22 29 32.4	-0.7
S39A	**Bolivar**	3.68	77	Pn	Pn	22 29 32.8	-0.9
W39A	**Magazine**	3.72	117	Pn	Pn	22 29 34.2	-0.1
KSCO	**Kaye Shedlock’**	4.31	300	Pn	Pn	22 29 43.0	+0.5
KSCO				IAmb_Lg		22 31 00.6	
	comp=Z,9.0nm,0.7s						
P38A	**Dawn**	4.32	50		Pn	22 29 41.6	-0.9
P38A				IAmb_Lg		22 30 55.1	
	comp=Z,8.6nm,0.7s						
MGMO	**Mountain Grove**	4.46	86	Pn	Pn	22 29 45.0	+0.5
MGMO				IAmb_Lg		22 31 03.9	
	comp=Z,11nm,1.3s						
BGNE	**Belgrade**	4.47	357	Pn	Pn	22 29 44.6	+0.1
BGNE				IAmb_Lg		22 31 09.2	
	comp=Z,15nm,0.8s						
R40A	**Maddies Statio**	4.63	71	Pn	Pn	22 29 45.6	-1.1
FCAR	**Ozark Folk Cen**	4.73	101	IAmb_Lg		22 31 06.4	
	comp=Z,6.4nm,0.9s						
P40A	**Paris**	5.24	59	IAmb_Lg		22 31 24.5	
	comp=Z,5.0nm,0.7s						
T25A	**Trinidad**	5.26	274	IAmb_Lg		22 31 27.8	
	comp=Z,6.5nm,1.1s						
PBMO	**Poplar Bluff**	5.95	89	IAmb_Lg		22 31 49.5	
	comp=Z,6.2nm,0.7s						

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*IDC **05** 23:06:32.5±0.8, 52°.99N×161°.93W, h0^{km}, mb3.9/22, mb1 4.1/24, mb1mx3.9/60, mbtmp3.9/24, ML3.6/2, Error ellipse: s-maj=23.0km s-min=14.8km az=1.0*

*NEIC **05** 23:06:36.1±1.6, 52°.97N±0°.09×161°.93W±0°.09, h21^{km}±6^{km}, mb3.9/7, ML3.8/10, ML3.7(AEIC), Error ellipse: s-maj=12.4km s-min=8.1km az=175.0*

*AEIC **05** 23:06:37±2.7, 53°.02N±0°.05×162°.12W±0°.09, h30^{km}±6^{km}, Error ellipse: s-maj=9.2km s-min=5.4km az=51.0*

ISC 05 23:06:36.6±3.4**, 52°.97N**±0°.08×**161°.86W**±0°.05, **h27^{km}**±25^{km}**, n115, σ1^{s}26**/116**, mb4.0**/24**, South of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRPK	**Brown Peak**	2.01	327		Pn	23 07 08.2	-0.6
ISLZ	**Isanotski Laza**	2.07	329		Pn	23 07 08.8	-0.8
ISLZ					Sn	23 07 33.7	-0.9
FALS	**False Pass**	2.10	335	Pn	Pn	23 07 09.2	-0.8
FALS	**False Pass**	2.10	335		Sn	23 07 35.1	-0.1
SSLS	**Shishaldin Sou**	2.16	325		Pn	23 07 10.6	-0.2
ISNN	**Isanotski Nort**	2.18	329		Pn	23 07 11.3	+0.2
ISNN					Sn	23 07 37.5	+0.3
SSLN	**Shishaldin Nor**	2.24	326		Pn	23 07 12.5	+0.6

SSLW	Shishaldin Wes	2.25	324		Pn	23 07 11.9	-0.2
SSBA	Shishaldin	2.25	324		Pn	23 07 11.9	-0.1
SSBA					Sn	23 07 39.6	+0.7
WESP	Westdahl Peak	2.28	313		Pn	23 07 12.1	-0.5
CNBA	Chernabura Isl	2.29	35	Pn	Pn	23 07 13.4	+0.9
WECS	Westdahl Cape	2.33	313		Pn	23 07 12.7	-0.5
WECS					Sn	23 07 40.7	-0.3
WEBT	Westdahl Beart	2.36	315		Pn	23 07 13.4	-0.2
SDPT	Sand Point	2.52	18	Pn	Pn	23 07 15.5	-0.2
SDPT				IAML		23 07 49.2	
	comp=N,274nm,0.3s						
SDPT				IAML		23 07 50.0	
	comp=E,301nm,0.3s						
AKSA	Akutan Strait	2.57	299		Pn	23 07 15.8	-0.6
AKSA	Akutan Strait	2.57	299		Pn	23 07 15.8	-0.6
AKSA					Sn	23 07 44.9	-1.8
AKUT	Akutan	2.61	298		Pn	23 07 15.7	-1.3
AKUT				IAML		23 07 47.2	
	comp=E,392nm,1.4s						
AKUT				IAML		23 07 50.4	
	comp=N,351nm,0.7s						
AKBBA	Akutan Broad B	2.68	297		Pn	23 07 17.6	-0.4
AKBBA					Sn	23 07 49.0	-0.5
AKLV	Akutan Long Va	2.72	298		Pn	23 07 18.0	-0.5
AKMO	Akutan Morgan	2.72	296		Pn	23 07 18.1	-0.3
AKMO					Sn	23 07 48.7	-1.7
LVA	Lava Point	2.76	297		Pn	23 07 19.0	0.0
UNV	Unalaska Valle	2.92	289		Pn	23 07 19.5	-1.6
UNV	Unalaska Valle	2.92	289		Sn	23 07 51.9	-3.3
MNAT	Makushin Natee	3.03	289		Pn	23 07 22.4	-0.3
MNAT					Sn	23 07 55.8	-2.2
MREP	Makushin Rep't	3.04	288		Pn	23 07 22.7	-0.3
MSW	Makushin Switc	3.09	290		Pn	23 07 23.5	-0.1
VNSG	Veniaminof 6	3.55	26		Pn	23 07 30.7	+0.8
VNHG	Veniaminof 1	3.61	25		Pn	23 07 31.6	+0.8
OKFG	Magazine Ridge	3.67	279		Pn	23 07 30.1	-1.4
OKTU	Okmok Mt. Tuli	3.74	279		Pn	23 07 32.1	-0.5
OKSO	Okmok South	3.81	278		Pn	23 07 32.7	-0.8
CHGN	Chignik	3.89	30	Pn	Pn	23 07 34.5	0.0
CHGN				IAML		23 08 21.6	
	comp=N,139nm,0.1s						
CHGN				IAML		23 08 23.0	
	comp=E,266nm,0.1s						
ANNE	Aniakchak Nort	4.51	27		Pn	23 07 43.9	+0.7
CHIR	Chirikof Islan	4.63	49	Pn	Pn	23 07 43.0	-1.6
SII	Sitkinak Islan	5.71	48	Pn	Pn	23 08 01.6	+2.0
SPIA	Saint Paul Isl	6.40	315	Pn	Pn	23 08 07.9	-1.0
OHAK	Old Harbor	6.50	46	Pn	Pn	23 08 09.2	-1.2
KDAK	Kodiak Island	7.15	44	Pn	Pn	23 08 17.7	-1.5
	comp=E,2.7nm,0.3s,baz=272,slow=5.5,SNR=37						
KDAK				Sn	Sn	23 09 32.2	-7.3
	comp=E,0.8nm,0.3s,baz=354,slow=22,SNR=1.3						
KDAK	Kodiak Island	7.15	44	Pn	Pn	23 08 18.4	-0.8
P18K	Big Mountain,	7.42	27	Pn	Pn	23 08 22.9	-0.2
Q19K	Cape Douglas,	7.54	34	Pn	Pn	23 08 24.7	0.0
CNPM	China Poot	8.83	38	Pn	Pn	23 08 42.8	+0.5
N19K	Bonanza Creek	8.83	24	Pn	Pn	23 08 42.8	+0.4
SVW2	Sparrevohn	8.83	20	Pn	Pn	23 08 43.1	+0.8
BRLK	Bradley Lake	9.12	37	Pn	Pn	23 08 44.7	-1.7
ADK	Adak	9.13	269	Pn	Pn	23 08 46.2	-0.1
SPU	Mount Spurr	9.80	29	Pn	Pn	23 08 57.0	+1.4
M19K	Big River Lodg	9.81	21	Pn	Pn	23 08 56.1	+0.4
SEW	Seward	9.89	39	Pn	Pn	23 08 56.7	0.0
L19K	White Mountain	9.96	19	Pn	Pn	23 08 57.4	-0.5
SUA	Susitna One	10.41	31	Pn	Pn	23 09 04.5	+0.4
RC01	Rabbit Creek A	10.46	34	Pn	Pn	23 09 04.4	-0.2
SKT	Skwentna	10.59	27	Pn	Pn	23 09 06.7	+0.3
PWL	Port Wells	10.80	38	Pn	Pn	23 09 08.6	-0.7
KNK	Knik Glacier	11.13	35	Pn	Pn	23 09 13.1	-0.7
GLI	Glacier Island	11.28	40	Pn	Pn	23 09 13.7	-2.1
CUT	Chulitna	11.29	29		Pn	23 09 16.2	+0.4
FID	Port Fidalgo	11.45	41	Pn	Pn	23 09 16.8	-1.3
SML	Sawmill	11.45	34	Pn	Pn	23 09 17.5	-0.7
AMKA	Amchitka	11.68	270	Pn	Pn	23 09 19.4	-1.9
SCM	Sheep Creek Mo	11.81	36	Pn	Pn	23 09 22.6	-0.6
J20K	Nowinta River	11.92	17	Pn	Pn	23 09 24.6	+0.1
KLU	Klutina	12.11	39	Pn	Pn	23 09 26.6	-0.6
M24K	Tolsona, Glenn	12.40	36	Pn	Pn	23 09 31.4	+0.2
N25K	Chitina, Valde	12.69	40	Pn	Pn	23 09 35.3	+0.2
SNH	Sunshine Point	12.70	48	Pn	Pn	23 09 35.4	+0.2
GLB	Gilahina Butte	12.91	42	Pn	Pn	23 09 38.5	+0.5
VRDI	Verde Repeater	12.94	43	Pn	Pn	23 09 38.3	-0.4
GRNC	Granite Creek	13.42	47	Pn	Pn	23 09 45.7	+0.4
H21K	Melozitna Rive	13.51	16	Pn	Pn	23 09 46.5	+0.2
TABL	Table Mountain	13.57	48	Pn	Pn	23 09 47.8	+0.5
IMAR	Indian Mountai	13.67	14	Pn	Pn	23 09 49.2	+0.9
LOGN	Logan Glacier	13.79	47	Pn	Pn	23 09 51.9	+1.7
PCA	Pinnacle	13.84	50	Pn	Pn	23 09 52.6	+1.8
MDM	Murphy Dome	13.88	25	Pn	Pn	23 09 52.5	+1.2
ILAR	Eielson Array	14.08	27	Pn	Pn	23 09 50.4	-3.7
	comp=E,0.1nm,0.3s,baz=220,slow=12,SNR=1.6						
ILAR				Sn	Sn	23 12 17.4	-12
	comp=E,0.1nm,0.3s,baz=206,slow=16,SNR=1.5						
DAWY	Dawson	16.05	37	P	P	23 10 24.5	+1.1
DAWY				IAmb	IAmb	23 10 38.4	
	comp=Z,6.7nm,0.8s						
WHY	Whitehorse	16.55	52	Pn	Pn	23 10 26.8	+0.2
BMAR	Burnt Mountain	16.75	23	Pn	Pn	23 10 29.8	+0.8
TOLK	Toolik Lake Re	16.76	16		Pn	23 10 29.0	-0.2
TOLK				IAmb	IAmb	23 10 35.0	
	comp=Z,5.2nm,0.8s						
H02S1	DAWSON INLET T	17.60	77	T	T	23 28 40.4	
	SNR=3.2						
INK	Inuvik	20.41	30	P	P	23 11 12.1	+0.9
	comp=Z,1.2nm,0.3s,baz=198,slow=12,SNR=14						
INK	Inuvik	20.41	30	P	Pn	23 11 12.5	-0.8
INK				IAmb	IAmb	23 11 17.6	
	comp=Z,4.1nm,0.8s						
PETK	Petropavlovsk-	24.09	287	P	P	23 11 50.3	+0.7
	comp=Z,2.9nm,0.6s,baz=103,slow=12,SNR=5.1						
LLLB	Lillooet	24.62	79	P	P	23 11 56.8	+2.3
LLLB				IAmb	IAmb	23 11 58.4	
	comp=Z,5.8nm,0.9s						
A36M	Sachs Harbour	24.78	26	P	P	23 11 57.9	+2.2
A36M				IAmb	IAmb	23 12 00.8	
	comp=Z,5.9nm,0.8s						
NVAR	Mina Array Bea	33.16	98	P	P	23 13 11.8	+1.0
	comp=Z,0.2nm,0.4s,baz=295,slow=11,SNR=3.6						
PDAR	Pinedale Array	35.79	85	P	P	23 13 34.5	+0.9
	comp=Z,0.4nm,0.5s,baz=308,slow=4.4,SNR=2.4						
ULM	Lac du Bonnet	39.77	66	P	P	23 14 06.5	-0.2
	comp=Z,2.8nm,0.6s,baz=306,slow=4.3,SNR=4.0						
H11N2	WAKE ISLAND Hy	41.03	228	T	T	23 58 09.6	
	baz=28,slow=76,SNR=13						
H11N3	WAKE ISLAND Hy	41.04	228	T	T	23 58 07.1	
	baz=28,slow=76,SNR=15						
H11N1	WAKE ISLAND Hy	41.05	228	T	T	23 58 11.0	
	baz=28,slow=76,SNR=15						
H11S1	WAKE ISLAND Hy	42.19	227	T	T	23 59 32.3	
	baz=28,slow=76,SNR=28						
H11S2	WAKE ISLAND Hy	42.20	227	T	T	23 59 33.9	
	baz=28,slow=76,SNR=28						
H11S3	WAKE ISLAND Hy	42.21	227	T	T	23 59 39.9	
	baz=28,slow=76,SNR=30						
TXAR	Lajitas Array	48.20	96	P	P	23 15 15.7	+1.0
	comp=Z,0.6nm,0.5s,baz=303,slow=5.9,SNR=8.2						
E46A	Sault Ste Mari	48.33	65	P	P	23 15 16.0	+0.6
SADO	Sadowa	52.15	63	P	P	23 15 44.0	-0.4
	comp=Z,4.7nm,0.6s,baz=290,slow=7.3,SNR=7.0						
SONM	Songino Array	54.82	305	P	P	23 16 03.6	-0.5
	comp=Z,0.2nm,0.4s,baz=57,slow=5.3,SNR=2.0						
ARCES	ARCESS Array B	57.69	357	P	P	23 16 24.2	+0.2
	comp=Z,1.7nm,0.7s,baz=7.5,slow=7.6,SNR=5.7						
KURBB	Kurchatov Arra	64.94	322	P	P	23 17 14.2	+0.9
	comp=Z,0.9nm,0.8s,baz=31,slow=6.8,SNR=4.5						
BVAR	Borovoye Array	65.73	328	P	P	23 17 15.7	-2.7
	comp=Z,0.7nm,0.6s,baz=338,slow=43,SNR=1.4						
FINES	FINESS Array B	65.76	356	P	P	23 17 18.0	-0.4
	comp=Z,1.2nm,0.5s,baz=6.9,slow=7.4,SNR=9.9						
FINES	FINESS Array B	65.76	356	P	P	23 17 18.9	+0.5
ARU	Arti	66.02	337	P	P	23 17 19.5	-0.7
	comp=Z,0.9nm,0.4s,baz=257,slow=16,SNR=5.3						
NOA	NORSAR Array B	66.20	4	P	P	23 17 20.6	-0.7
	comp=Z,0.9nm,0.8s,baz=354,slow=6.3,SNR=3.6						
MKAR	Makanchi Array	66.58	318	P	P	23 17 24.3	+0.3
	comp=Z,0.6nm,0.5s,baz=46,slow=7.6,SNR=5.7						
AKTO	Aktyubinsk	71.61	334	P	P	23 17 56.3	+1.2
	comp=Z,0.9nm,0.5s,baz=61,slow=4.9,SNR=5.5						
AAK	Ala-Archa	73.13	320	P	P	23 18 04.9	+0.4
	comp=Z,2.3nm,0.7s,baz=303,slow=2.0,SNR=7.7						
AKASG	Malin Array Be	76.28	353	P	P	23 18 21.9	-0.4
	comp=Z,0.7nm,0.4s,baz=11,slow=6.8,SNR=3.9						
GERES	GERESS Array B	78.49	3	P	P	23 18 33.9	-1.0
	comp=Z,0.1nm,0.3s,baz=347,slow=4.0,SNR=3.7						
CMAR	Chiang Mai Arr	80.86	288	P	P	23 18 48.0	-0.1
	comp=Z,0.8nm,0.3s,baz=28,slow=4.1,SNR=4.7						
ESDC	Sonseca Array	85.76	17	P	P	23 19 13.9	+0.7
	comp=Z,0.2nm,0.7s,baz=333,slow=5.2,SNR=1.7						
WRA	Warramunga Arr	91.08	238	P	P	23 19 37.2	-1.3
	comp=Z,0.3nm,0.7s,baz=33,slow=6.0,SNR=3.1						
ASAR	Alice Springs	94.41	236	P	P	23 19 53.0	-0.8
	comp=Z,0.3nm,0.5s,baz=29,slow=3.9,SNR=4.5						

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*DDA **05** 23:19:17.2, 34.°61N×32.°97E, h16^{km}±1^{km}, ML2.7*
*NIC **05** 23:19:18.8±0.0, 34.°73N×33.°04E, h22^{km}, Ml3.0/5*
*GII **05** 23:19:19.0±0.0, 34.°80N×33.°01E, h20^{km}, Mm2.5/7*
*ISK **05** 23:19:23.3, 35.°19N×33.°04E, h6^{km}, ML3.0/24*
ISC 05 23:19:19.2±0.9, **34.°76N**±0.°02×**33.°03E**±0.°02, **h22**^{km}±2^{km},
n84, σ**1**^{s}**54**/124, **4C-2D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASGA	Asgata	0.18	82	⇑iP	Pb	23 19 24.6	-0.3
ASGA				S	Sb	23 19 28.1	-0.8
ASGA				AML	AML	23 19 28.8	
	37nm,0.3s						
ASGA				AML	AML	23 19 28.8	
	97nm,0.2s						
ASGA				AML	AML	23 19 28.8	
	37nm,0.3s						
ASGA				AML	AML	23 19 28.8	
	97nm,0.2s						
CSS	Mathiatis	0.32	51	Pg	Pb	23 19 26.0	-0.2
CSS				Sg	Sb	23 19 31.5	+0.4
CSS	Mathiatis	0.32	51	⇓iP	Pb	23 19 26.3	0.0
CSS				S	Sb	23 19 32.0	+1.0
LEF	Lefka	0.38	342	i P	Pb	23 19 27.2	+0.1
LEF				i S	Sn	23 19 35.0	-0.9
LEF				IAML		23 19 37.0	
	comp=N,1µm,0.6s						
LEF	Lefka	0.38	342	PG	Pb	23 19 27.3	+0.1
NATA	Nata	0.38	273	⇑iP	Pb	23 19 27.2	-0.1
NATA				S	Sb	23 19 33.7	+1.0
NATA				AML	AML	23 19 36.2	
	comp=N,13nm,0.4s						
NATA				AML	AML	23 19 36.2	
	comp=N,13nm,0.4s						
NATA				AML	AML	23 19 36.5	
	comp=N,12nm,0.7s						
NATA				AML	AML	23 19 36.5	
	comp=N,12nm,0.7s						
ATHAL	Athalassa	0.48	38	P	Pb	23 19 29.3	+0.2
ATHAL				S	Sn	23 19 37.4	-1.2
ALFC	Alefka	0.53	318	⇓eP	Pb	23 19 29.5	-0.5
ALFC				S	Sb	23 19 38.6	+1.4
ALFC				AML	AML	23 19 38.9	
	comp=N,13nm,0.8s						
ALFC				AML	AML	23 19 38.9	
	comp=N,13nm,0.8s						
ALFC				AML	AML	23 19 39.4	
	comp=N,14nm,0.5s						
ALFC				AML	AML	23 19 39.4	
	comp=N,14nm,0.5s						
MVOU	Mavrovouni	0.56	62	⇑eP	Pb	23 19 29.9	-0.4
MVOU				S	Sn	23 19 39.7	-0.7
MVOU				AML	AML	23 19 41.5	
	comp=N,3.6nm,0.7s						
MVOU				AML	AML	23 19 41.5	
	comp=N,3.6nm,0.7s						
MVOU				AML	AML	23 19 43.1	
	comp=N,2.3nm,0.3s						
MVOU				AML	AML	23 19 43.1	
	comp=N,2.3nm,0.3s						
AKMS	Akamas	0.63	294	⇑eP	Pb	23 19 31.5	0.0
AKMS				S	Sn	23 19 41.5	-0.7
AKMS				AML	AML	23 19 42.7	
	comp=N,3.2nm,0.3s						
AKMS				AML	AML	23 19 42.7	
	comp=N,3.2nm,0.3s						
AKMS				AML	AML	23 19 45.9	
	comp=N,2.7nm,0.2s						
AKMS				AML	AML	23 19 45.9	
	comp=N,2.7nm,0.2s						
LFK	Lefkose	0.66	38	PG	Pb	23 19 32.4	+0.3
LFK				SG	Sb	23 19 38.1	-2.9
PARAL	Paralimni	0.86	74	P	Pn	23 19 36.3	+0.3
EREN	Erenkoy	1.21	50	i P	Pb	23 19 42.2	+0.8
EREN				i S	Sb	23 19 59.8	+3.2
EREN				IAML		23 20 05.0	
	comp=N,134nm,0.5s						
EREN				IAML		23 20 06.0	
	comp=E,98nm,0.8s						
EREN	Erenkoy	1.21	50	PG	Pb	23 19 42.6	+1.2
TEKE	Tekeli-Mersin	1.38	3	PG	Pn	23 19 42.3	-0.9
YORU	Yoruktepe-Mers	1.42	12	PG	Pn	23 19 43.2	-0.6
AKKU	Akkuyu-Mersin	1.46	17	PG	Pn	23 19 43.8	-0.4
AKKU				SG	Sn	23 19 59.0	-3.7
GULN	MERSIN_Gulnar	1.48	16	i P	Pn	23 19 44.1	-0.5
OREN	Orenkoy-Mersin	1.49	13	PG	Pn	23 19 44.3	-0.3
TISA	Tisan-Mersin	1.50	20	PN	Pn	23 19 45.3	+0.6
YESI	Yesilovacik-Me	1.52	19	PN	Pn	23 19 45.2	+0.2
KARG	Kargicak-Mersi	1.54	21	PN	Pn	23 19 45.9	+0.5
IKL	Isikli	1.57	20	PN	Pn	23 19 45.6	-0.2
GAZI	Gazipasa	1.58	339	i P	Pn	23 19 45.6	-0.4
GAZI				i S	Sn	23 20 05.8	0.0
GAZI	Gazipasa	1.58	339	PN	Pn	23 19 46.4	+0.4
BERE	Bereket-Mersin	1.59	6	PN	Pn	23 19 46.0	-0.2
TEVE	Tevekalti-Mers	1.71	11	PN	Pn	23 19 47.8	+0.1
SILI	Silifke-Mersin	1.76	24	PN	Pb	23 19 49.7	-1.1
KEBE	Keben-Mersin	1.77	18	PN	Pn	23 19 49.1	+0.5
SLFK	Silifke-Mersin	1.79	24	PN	Pb	23 19 50.2	-1.1
ERMK	Ermenek	1.88	357	i P	Pn	23 19 50.7	+0.5
ERMK				IAML		23 20 21.0	
	comp=N,63nm,0.3s						
OSC1	CSNet OBS 1	1.92	230	P	Pn	23 19 49.9	-0.7
OSC1				S	Sn	23 20 14.4	+0.3
KIZK	Mersin	1.94	28	i P	Pn	23 19 51.1	+0.2
KIZK				i S	Sb	23 20 19.7	+2.1
KIZK	Mersin	1.94	28	PN	Pn	23 19 52.1	+1.2
HDMB	Hadim	2.24	349	PN	Pn	23 19 56.2	+1.0
KRMN	Karaman	2.42	4	PN	Pn	23 19 58.5	+1.0
MERS	Mersin	2.43	30	PN	Pn	23 19 59.5	+1.9
KEPZ	Antalya-Kepez	2.43	332	i P	Pn	23 19 57.8	+0.2
KEPZ				i S	Sn	23 20 29.6	+2.8
HNTI	Hanita	2.44	133	Pn	Pn	23 19 57.4	-0.4
HNTI				Sn	Sn	23 20 26.7	-0.3
KKBE	Karaman, Kazim	2.46	358	i P	Pn	23 19 59.3	+1.2
KKBE				i S	Sb	23 20 33.7	+1.1
KKBE				IAML		23 20 38.0	
	comp=E,30nm,0.6s						
MMA0B	Mount Meron ar	2.63	131	Pn	Pn	23 20 00.2	-0.2
GEM	Giv'at Ha'Em	2.68	125	Pn	Pn	23 20 00.8	-0.2
GEM				Sn	Sn	23 20 32.9	+0.1
OFRI	`Ofer	2.68	142	Pn	Pn	23 20 00.9	-0.2
OFRI				Sn	Sn	23 20 32.8	-0.2
AKUM	Antalya-Kumluc	2.69	306	i P	Pb	23 20 06.0	-0.7
BLGI	Bet Lehem HaGe	2.71	138	Pn	Pn	23 20 01.8	+0.4
BLGI				Sn	Sn	23 20 33.9	+0.4
ASUZ	Hatay-Arsuz	2.72	55	i P	Pb	23 20 06.3	-0.7
ASUZ				i S	Sb	23 20 38.8	-1.1
ASUZ				IAML		23 20 48.0	
	comp=N,34nm,1.2s						
ASUZ				IAML		23 20 49.0	
	comp=E,40nm,0.7s						
KERG	Konya-Eregli	2.79	18	i P	Pn	23 20 04.1	+1.4
KERG				i S	Sb	23 20 41.9	-0.4
KERG				IAML		23 20 45.0	
	comp=E,24nm,0.6s						
KERG				IAML		23 20 45.0	
	comp=N,24nm,0.6s						
SEYD	Seydisehir-KON	2.81	340	PN	Pn	23 20 04.5	+1.5
YAYL	Yayladag	2.81	62	i P	Pn	23 20 05.6	+2.5
YAYL				i S	Sb	23 20 40.1	-2.9
YAYL				IAML		23 20 46.0	
	comp=N,26nm,0.5s						
YAYL	Yayladag	2.81	62	PN	Pb	23 20 07.5	-1.3
SEDI	Konya, Seydise	2.88	339	i P	Pn	23 20 06.7	+2.8
SEDI				i S	Sb	23 20 44.6	-0.1
SEDI				IAML		23 20 54.0	
	comp=E,28nm,0.5s						
GULE	Gulek	2.89	29	i P	Pn	23 20 07.0	+2.9
GULE				i S	Sb	23 20 43.9	-1.2
GULE				IAML		23 20 49.0	
	comp=E,32nm,0.7s						
GULE				IAML		23 20 51.0	
	comp=N,21nm,0.6s						
KARA	Karaisali	2.99	33	PN	Pn	23 20 07.5	+2.2
SLTI	Sal'it	3.02	146	Pn	Pn	23 20 05.6	-0.2
SLTI				Sn	Sn	23 20 41.6	+0.3
TAHT	Tahtakopru-Hat	3.03	57	PN	Pb	23 20 10.2	-2.3
KMER	Konya-Meram	3.05	350	i P	Pn	23 20 09.0	+2.8
MMLI	Mount Malkishu	3.06	139	Pn	Pn	23 20 06.0	-0.3
MMLI				Sn	Sn	23 20 43.0	+0.8
KORT	Korkueli	3.12	317	i P	Pn	23 20 10.4	+3.2
KORT				IAML		23 21 01.0	
	comp=E,20nm,0.9s						
KORT	Korkueli	3.12	317	PN	Pn	23 20 10.4	+3.2
AKAS	Kas	3.16	299	i P	Pn	23 20 08.4	+0.7
AKAS				i S	Sn	23 20 44.6	-0.2
KONT	Konya--Tatoy	3.22	351	i P	Pn	23 20 11.3	+2.7
KONT				IAML		23 20 59.0	
	comp=N,20nm,0.3s						
KONT				IAML		23 21 03.0	
	comp=E,30nm,1.4s						
HMDT	Nahal Hemdat	3.25	140	Pn	Pn	23 20 09.5	+0.6
HMDT				Sn	Sn	23 20 47.5	+0.5
AKO	Adana	3.33	35	i P	Pn	23 20 12.3	+2.3
AKO				i S	Sb	23 20 53.8	-3.8
AKO				IAML		23 21 01.0	
	comp=N,14nm,0.8s						
UJAP	Al Uja	3.46	143	Pn	Pn	23 20 12.1	+0.3
UJAP				Sn	Sn	23 20 52.6	+0.5
DOGA	KONYA_Doganhis	3.52	342	i P	Pn	23 20 14.7	+2.0
NIDE	Nigde/Merkez-G	3.53	23	i P	Pn	23 20 15.9	+3.1
NIDE				IAML		23 21 04.0	
	comp=E,16nm,0.3s						
NIDE				IAML		23 21 06.0	
	comp=N,15nm,0.5s						
ALIN	Konya, Altinte	3.53	358	i P	Pn	23 20 09.5	-3.3
KOZT	Kozan	3.53	39	PN	Pn	23 20 15.1	+2.3
AMAZ	Amatzia	3.59	153	Pn	Pn	23 20 13.8	+0.3
AMAZ				Sn	Sn	23 20 55.8	+0.6
BAGO	Egridir - ISPA	3.70	331	i P	Pn	23 20 19.1	+4.0
FETY	Fethiye	3.72	301	i P	Pn	23 20 15.0	-0.4
FETY				i S	Sn	23 20 57.9	-0.6
DSI	Dead Sea	3.74	148	Pn	Pn	23 20 16.0	+0.4
DSI				Sn	Sn	23 20 59.9	+0.9
YVAC	Isparta, Yalva	3.79	338	i P	Pn	23 20 20.0	+3.6
YVAC				i S	Sb	23 21 07.1	-3.8
YTIR	Yattir	3.81	152	Pn	Pn	23 20 17.2	+0.5
YTIR				Sn	Sn	23 21 01.8	+0.9
KAMA	Osmaniye	3.81	50	i P	Pn	23 20 18.3	+1.6
KAMA				i S	Sn	23 21 02.6	+1.6
KAMA				IAML		23 21 07.0	
	comp=N,13nm,1.1s						
ANDN	Andirin	3.89	43	i P	Pn	23 20 20.4	+2.7
ANDN				IAML		23 21 10.0	
	comp=N,16nm,1.3s						
KZIT	Kziot	4.01	163	Pn	Pn	23 20 20.1	+0.7
GHAJ	Ghor Haditha	4.05	148	Pn	Pn	23 20 19.5	-0.4
DALY	Dalyan (Mula)	4.11	301	i P	Pn	23 20 20.4	-0.2
DALY				i S	Sn	23 21 04.9	-3.1
DALY				IAML		23 21 08.0	
	comp=E,10nm,0.5s						
DALY				IAML		23 21 08.0	
	comp=N,18nm,1.0s						
PRNI	Paran	4.70	159	Pn	Pn	23 20 29.3	+0.4
KRMI	Paran Flat	4.85	162	Pn	Pn	23 20 30.3	-0.6
HRFI	Mount Harif	5.01	160	Pn	Pn	23 20 33.6	+0.5
MBRI	Mt Berech	5.20	162	Pn	Pn	23 20 36.6	+0.8
MBRI				Sn	Sn	23 21 36.1	+0.9
EIL	Elat	5.33	162	Pn	Pn	23 20 38.3	+0.8

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*NNC **05** 23:28:42.7±0.4, 45.°32N×78.°04E, h0^{km}, mb4.1, mpv3.9,*
Error ellipse: s-maj=3.0km s-min=2.3km az=148.0
*SOME **05** 23:28:43.6, 45.°27N×78.°00E, h10^{km}*
ISC 05 23:28:42.6±1.2, **45.°33N**±0.°03×**78.°03E**±0.°02, **h2**^{km}±11^{km},
n64, σ**1**^{s}**19**/100, **16C-14D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TDK	Taldyqorghan	0.42	141	⇑eP	Pg	23 28 51.4	+0.7
	1µm,0.2s						
TDK				eS	Sg	23 28 57.2	+1.0
	3µm,0.1s						
TDK	Taldyqorghan	0.42	141	P	Pg	23 28 51.4	+0.7
	1µm,0.2s						
TDK				S	Sg	23 28 57.2	+1.0
	3µm,0.1s						
KAPS	Kapalarasan	0.94	93	⇑eP	Pg	23 28 59.8	-0.7
	84nm,0.1s						
KAPS				eS	Sg	23 29 11.8	-0.8
	561nm,0.2s						
KAPS	Kapalarasan	0.94	93	P	Pg	23 29 00.1	-0.4
	84nm,0.1s						
KAPS				S	Sg	23 29 12.0	-0.6
	561nm,0.2s						
ARXS	Arharly	1.13	188	⇑eP	Pg	23 29 04.2	-0.1
	209nm,0.2s						
ARXS				eS	Sb	23 29 19.2	-0.9
	380nm,0.3s						
ARXS	Arharly	1.13	188	P	Pg	23 29 04.2	-0.1
	209nm,0.2s						
ARXS				S	Sb	23 29 19.0	-1.1
	380nm,0.3s						
BLB	Baldybastay	1.28	165	P	Pg	23 29 06.9	-0.2
	368nm,0.1s						
BLB				S	Sb	23 29 23.8	-0.6
	667nm,0.3s						
DJR	Jarkent	1.60	128	⇓eP	Pn	23 29 12.4	+0.4
	47nm,0.2s						
DJR				eS	Sn	23 29 33.1	-0.3
	313nm,0.4s						
DJR	Jarkent	1.60	128	P	Pn	23 29 12.5	+0.4
	47nm,0.2s						
DJR				S	Sn	23 29 33.1	-0.3
	313nm,0.4s						
CHKK	Chushkaly	1.66	207	eP	Pb	23 29 13.2	-0.7
	54nm,0.1s						
CHKK				eS	Sb	23 29 34.6	-0.7
	1µm,0.3s						
CHKK	Chushkaly	1.66	207	P	Pb	23 29 13.2	-0.7
	54nm,0.1s						
CHKK				S	Sb	23 29 34.6	-0.7
	1µm,0.3s						
KURS	Kuram	1.85	177	eP	Pb	23 29 16.8	-0.4
	173nm,0.2s						
KURS				eS	Sg	23 29 40.9	-1.1
	299nm,0.3s						
KURS	Kuram	1.85	177	P	Pb	23 29 16.8	-0.4
	173nm,0.2s						
KURS				S	Sg	23 29 40.9	-1.1
	299nm,0.3s						
KUU	Kurty	1.88	221	eP	Pb	23 29 16.9	-0.8
	28nm,0.3s						
KUU				eS	Sb	23 29 40.8	-0.9
	1µm,0.3s						
KUU	Kurty	1.88	221	P	Pb	23 29 16.9	-0.8
	28nm,0.3s						
KUU				S	Sb	23 29 40.8	-0.9
	1µm,0.3s						
KTBS	Karatobe	1.89	211	eP	Pb	23 29 17.8	-0.1
	29nm,0.2s						
KTBS				eS	Sg	23 29 42.3	-1.0
	1µm,0.3s						
KTBS	Karatobe	1.89	211	P	Pb	23 29 17.8	-0.1
	29nm,0.2s						
KTBS				S	Sg	23 29 42.3	-1.0
	1µm,0.3s						
KOTS	Kotyrbulak	2.20	198	eP	Pb	23 29 23.2	-0.1
	30nm,0.4s						
KOTS				eS	Sg	23 29 51.6	-1.7
	237nm,0.3s						
KOTS	Kotyrbulak	2.20	198	Pg	Pb	23 29 23.2	-0.1
	30nm,0.4s						
KOTS				Lg	Lg	23 29 51.6	
	237nm,0.3s						
KNDC	Almaty	2.25	200	⇓Pn	Pb	23 29 23.4	-0.7
	92nm,0.5s						
KNDC				⇓Lg	Lg	23 29 53.7	
	324nm,0.6s						
PDGK	Podgornoye	2.26	152	Pg	Pb	23 29 23.2	-1.0
	20nm,0.1s						
PDGK				Lg	Lg	23 29 51.7	
	79nm,0.4s						
PDGK	Podgornoye	2.26	152	⇓Pn	Pb	23 29 22.5	-1.7
	20nm,0.6s						
PDGK				⇑Lg	Lg	23 29 53.4	
	68nm,0.5s						
AAA	Alma-Ata	2.27	201	eP	Pb	23 29 24.6	+0.2

	71nm,0.3s						
AAA				eS	Sg	23 29 54.1	-1.4
	65nm,0.5s						
AAA	Alma-Ata	2.27	201	Pg	Pb	23 29 24.6	+0.2
	71nm,0.3s						
AAA				Lg	Lg	23 29 54.1	
	65nm,0.5s						
MDOK	Medeo	2.28	198	eP	Pb	23 29 24.6	-0.1
	32nm,0.4s						
MDOK				eS	Sg	23 29 53.8	-2.1
	200nm,0.5s						
MDOK	Medeo	2.28	198	⇑Pn	Pn	23 29 22.2	+0.8
	24nm,0.4s						
MDOK				⇑Lg	Lg	23 29 54.0	
	219nm,0.6s						
MDOK	Medeo	2.28	198	Pg	Pb	23 29 24.6	-0.1
	32nm,0.4s						
MDOK				Lg	Lg	23 29 53.8	
	200nm,0.5s						
SATY	Saty	2.29	173	eP	Pb	23 29 24.2	-0.6
	49nm,0.2s						
SATY				eS	Sb	23 29 53.2	-0.4
	348nm,0.1s						
SATY	Saty	2.29	173	Pg	Pb	23 29 24.2	-0.6
	49nm,0.2s						
SATY				Lg	Lg	23 29 53.2	
	348nm,0.1s						
UZB	Uzynbulak	2.30	162	eP	Pb	23 29 24.3	-0.6
	54nm,0.3s						
UZB				eS	Sb	23 29 53.5	-0.3
	153nm,0.3s						
UZB	Uzynbulak	2.30	162	Pg	Pb	23 29 24.3	-0.6
	54nm,0.3s						
UZB				Lg	Lg	23 29 53.5	
	153nm,0.3s						
KRBS	Karabastau	2.35	227	eP	Pb	23 29 25.3	-0.5
	14nm,0.2s						
KRBS				eS	Sb	23 29 55.0	-0.2
	497nm,0.3s						
KRBS	Karabastau	2.35	227	Pg	Pb	23 29 25.3	-0.5
	14nm,0.2s						
KRBS				Lg	Lg	23 29 55.0	
	497nm,0.3s						
SHLS	Shalkode	2.41	154	eP	Pg	23 29 29.9	+1.1
	54nm,0.3s						
SHLS				eS	Sg	23 30 02.7	+2.8
	140nm,0.6s						
SHLS	Shalkode	2.41	154	Pg	Pg	23 29 29.9	+1.1
	54nm,0.3s						
SHLS				Lg	Lg	23 30 02.7	
	140nm,0.6s						
TNSS	Tian-Shan	2.43	199	eP	Pb	23 29 27.1	-0.1
	26nm,0.3s						
TNSS				eS	Sg	23 29 58.7	-1.9
	142nm,0.3s						
TNSS	Tian-Shan	2.43	199	Pg	Pb	23 29 27.1	-0.1
	26nm,0.3s						
TNSS				Lg	Lg	23 29 58.7	
	142nm,0.3s						
IZV	Izvestkoviy	2.51	204	eP	Pb	23 29 28.6	+0.1
	27nm,0.2s						
IZV				eS	Sg	23 30 01.1	-2.3
	135nm,0.3s						
IZV	Izvestkoviy	2.51	204	Pg	Pb	23 29 28.7	+0.1
	27nm,0.2s						
IZV				Lg	Lg	23 30 01.1	
	135nm,0.3s						
KTMS	Ketmen	2.52	138	eP	Pb	23 29 28.9	+0.3
	21nm,0.1s						
KTMS				eS	Sb	23 30 01.4	+1.3
	196nm,0.3s						
KTMS	Ketmen	2.52	138	Pg	Pb	23 29 28.8	+0.3
	21nm,0.1s						
KTMS				Lg	Lg	23 30 01.3	
	196nm,0.3s						
DGS	Degeres	2.65	219	eP	Pb	23 29 30.9	0.0
	28nm,0.3s						
DGS				eS	Sb	23 30 04.3	+0.5
	492nm,0.4s						
DGS	Degeres	2.65	219	Pg	Pb	23 29 30.9	0.0
	28nm,0.3s						
DGS				Lg	Lg	23 30 04.3	
	492nm,0.4s						
KST	Kastek	2.73	214	eP	Pb	23 29 32.1	-0.1
	28nm,0.4s						
KST				eS	Sb	23 30 06.8	+0.5
	137nm,0.5s						
KST	Kastek	2.73	214	Pg	Pb	23 29 32.1	-0.1
	28nm,0.4s						
KST				Lg	Lg	23 30 06.8	
	137nm,0.5s						
BTLS	Baital	2.83	265	eP	Pb	23 29 33.8	-0.2
	10nm,0.2s						
BTLS				eS	Sb	23 30 09.7	+0.6
	5.4nm,0.3s						
BTLS	Baital	2.83	265	Pg	Pb	23 29 33.8	-0.2
	10nm,0.2s						
BTLS				Lg	Lg	23 30 09.7	
	5.4nm,0.3s						
TKM2	Tokmak 2	2.98	217	P	Pn	23 29 32.1	+0.9
	SNR=19						
TKM2	Tokmak 2	2.98	217	⇑Pg	Pb	23 29 36.2	-0.4
	4.5nm,0.3s						
TKM2				⇑Lg	Lg	23 30 16.1	
	85nm,0.3s						
MAKZ	Makanchi	3.12	60	⇓Pn	Pn	23 29 32.8	0.0
	7.9nm,0.6s						
MAKZ				⇓Lg	Lg	23 30 21.8	
	19nm,0.4s						
USP	Ospenovka	3.27	232	P	Pn	23 29 35.3	+0.3
	SNR=9.3						
MK31	Makanchi Array	3.30	62	⇑Pn	Pn	23 29 35.8	+0.4
	1.7nm,0.3s,baz=237,slow=13,SNR=468						
MK31				⇑Pg	Pb	23 29 44.1	+2.1
	2.3nm,0.2s,baz=239,slow=13,SNR=8.5						
MK31				⇓Lg	Lg	23 30 27.1	
	11nm,0.4s,baz=239,slow=25,SNR=6.8						
ULHL	Ulahol	3.35	203	P	Pn	23 29 38.4	+2.2
	SNR=18						
KBK	Karagaybulak	3.48	221	P	Pn	23 29 39.0	+1.0
	SNR=7.6						
AAK	Ala-Archa	3.71	225	P	Pn	23 29 42.1	+0.9
	SNR=14						
AAK	Ala-Archa	3.71	225	⇓Pn	Pn	23 29 41.8	+0.6
	4.0nm,0.3s						
AAK				⇑Lg	Lg	23 30 39.4	
	43nm,0.6s						
MRKS	Merke	4.33	235	eP	Pb	23 30 00.8	+1.4
	2.7nm,0.2s						
MRKS				eS	Sb	23 30 56.0	+3.9
	85nm,0.6s						
MRKS	Merke	4.33	235	Pg	Pb	23 30 00.8	+1.4
	2.7nm,0.2s						
MRKS				Lg	Lg	23 30 56.0	
	85nm,0.6s						
OTUK	Ortayu	4.88	309	⇓Pn	Pn	23 29 56.1	-1.0
	2.8nm,0.5s						
OTUK				⇓Lg	Lg	23 31 16.1	
	24nm,0.6s						
ZSN	Zaisan	5.18	63	eP	Pb	23 30 12.2	-1.6
	3.8nm,0.1s						
ZSN				eS	Sb	23 31 15.9	-0.7
	18nm,0.8s						
ZSN	Zaisan	5.18	63	Pg	Pb	23 30 12.3	-1.6
	3.8nm,0.1s						
ZSN				Lg	Lg	23 31 15.9	
	18nm,0.8s						
KURBB	Kurchatov Arra	5.30	3	⇓Pn	Pn	23 30 03.9	+1.1
	1.3nm,0.4s						
KURBB				⇑Pg	Pb	23 30 19.7	+3.7
	2.1nm,0.3s						
KURBB				⇑Lg	Lg	23 31 30.7	
	89nm,0.6s						
KURK	Kurchatov	5.40	4	⇑Pn	Pn	23 30 03.6	-0.5
	1.3nm,0.4s						
KURK				⇓Pg	Pb	23 30 21.5	+3.9
	3.1nm,0.6s						
KURK				⇑Lg	Lg	23 31 33.0	
	29nm,0.6s						
KK31	Karatay Array	5.85	250	⇓Pn	Pn	23 30 09.5	-0.9
	0.6nm,0.3s,baz=60,slow=12,SNR=12						
KK31				⇑Pg	Pb	23 30 28.6	+3.3
	2.2nm,0.4s,baz=64,slow=16,SNR=4.6						
KK31				⇓Lg	Lg	23 31 48.1	
	16nm,0.6s,baz=63,slow=26,SNR=11						

BJI ***05*** *23:30:11.3±0.0, 43°.17N×146°.56E, h32^{km}, mB4.9/17, mb4.5/27, Ms4.2/2, Ms7 4.1/1*

SKHL ***05*** *23:30:13.8±0.3, 42°.90N×146°.60E, h59^{km}±2^{km}, mb5.5/5*

JMA ***05*** *23:30:13.5±0.1, 42°.95N×146°.48E, h57^{km}±2^{km}, M4.1*

JMA Felt I J1.

NIED ***05*** *23:30:13.6, 42°.95N×146°.48E, h57^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}2.08; $M_{\theta\theta}$-0.79; $M_{\phi\phi}$-1.29; $M_{r\theta}$1.06; $M_{\theta\phi}$-1.32; $M_{\phi r}$-0.95; Fault plane solution: $M_0$2.62000×10^{15} NP1: ϕ_s194.00000°, δ53.00000°, λ52.00000°. NP2: ϕ_s65.00000°, δ51.00000°, λ128.00000°.*

MOS ***05*** *23:30:13.1±0.8, 42°.95N×146°.42E, h53^{km}, mb4.8/13 Error ellipse: s-maj=7.9km s-min=5.6km az=110.5*

NEIC ***05*** *23:30:14, 42°.90N×146°.50E, h45^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.79; $M_{\theta\theta}$1.01; $M_{\phi\phi}$-0.22; $M_{r\theta}$-0.63; $M_{\theta\phi}$2.27; $M_{\phi r}$1.21; Fault plane solution: $M_0$2.80000×10^{15} NP1: ϕ_s192.55000°, δ70.31000°, λ-152.14000°. NP2: ϕ_s92.45000°, δ63.90000°, λ-22.04000°. Principal axes: T 2.7620, Plg4.0000°, Azm321.0000°; N 0.0773, Plg56.0000°, Azm225.0000°; P -2.8393, Plg33.0000°, Azm54.0000°;*

NEIC ***05*** *23:30:14.2±1.1, 42°.91N±0°.08×146°.5E±0°.1, h42^{km}±6^{km}, mb4.6/147, Mwr4.2/10 Error ellipse: s-maj=12.6km s-min=9.7km az=130.0*

IDC ***05*** *23:30:15.4±2.2, 42°.93N×146°.44E, h61^{km}±19^{km}, mb3.9/23, mb1 4.1/28, mb1mx3.9/46, mbtmp4.2/28, MS3.2/9, Ms1 3.2/9, ms1mx3.0/36, Error ellipse: s-maj=15.6km s-min=14.2km az=160.0*

ISC 05 23:30:14.1±0.6, **42°.91N**±0°.04×**146°.53E**±0°.04, **h48**^{km}±4^{km}, **h48**^{km}**:pP-P, n304,** σ1^{s}**06**/313, **mb4.6**/119, **MS3.5**/8, **7C-14D,**

Off southeast coast of Hokkaido

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	Nemuro 2	0.74	309	P	Pn	23 30 27.4	-0.8
NEM2				eS	Sn	23 30 37.5	-0.9
NMR	Nemuro--Hokkai	0.75	308	⇓iPN	Pn	23 30 27.5	-0.8
NMR				eS	Sn	23 30 37.6	-1.1
NMR	Nemuro--Hokkai	0.75	308	i P	Pn	23 30 27.5	-0.8
NMR				eS	Sn	23 30 37.6	-1.1
JKHN	Kushirohamanak	1.02	280	P	Pn	23 30 31.4	-0.6
GLVR	Golovnino	1.11	319	d iPN	Pn	23 30 32.3	-0.9
GLVR				eS	Sn	23 30 46.3	-1.1
GLVR				pmax	pmax		
	comp=Z,4μm,0.4s						
GLVR				pmax	pmax		
	comp=E,1μm,0.2s						
GLVR				pmax	pmax		
	comp=N,2μm,0.3s						
GLVR				smax	smax		
	comp=N,9μm,0.2s						
GLVR				smax	smax		
	comp=E,6μm,0.2s						
GLVR	Golovnino	1.11	319	i P	Pn	23 30 32.3	-0.9
GLVR				AMB	AMB	23 30 33.0	
	comp=E,4μm,0.4s						
GLVR				eS	Sn	23 30 46.3	-1.1
GLVR				A	A	23 30 48.0	
	comp=E,9μm,0.2s						
GLVR				A	A	23 30 48.0	
	comp=E,6μm,0.2s						
GRPR	Tuman	1.22	333	d iPN	Pn	23 30 33.3	-1.4
GRPR				eS	Sn	23 30 47.8	-2.2
GRPR				pmax	pmax		
	comp=E,3μm,0.3s						
GRPR				pmax	pmax		
	comp=Z,23μm,0.3s						
GRPR				pmax	pmax		
	comp=N,4μm,0.2s						
GRPR				smax	smax		
	comp=N,15μm,0.4s						
GRPR				smax	smax		
	comp=E,23μm,0.3s						
GRPR	Tuman	1.22	333	i P	Pn	23 30 33.3	-1.4
GRPR				AMB	AMB	23 30 33.9	
	comp=E,2μm,0.3s						
GRPR				eS	Sn	23 30 48.2	-1.8
GRPR				A	A	23 30 48.8	
	comp=E,15μm,0.4s						
GRPR				A	A	23 30 48.8	
	comp=E,23μm,0.4s						
YUK	Yuzh-Kuril'sk	1.23	337	d iPN	Pn	23 30 33.8	-1.0
YUK				eS	Sn	23 30 48.8	-1.5
YUK				pmax	pmax		
	comp=Z,7μm,0.3s						
YUK				pmax	pmax		
	comp=E,732nm,0.2s						
YUK				pmax	pmax		
	comp=N,1μm,0.3s						
YUK				smax	smax		
	comp=E,13μm,0.5s						
YUK				smax	smax		
	comp=N,6μm,0.3s						
YUK	Yuzh-Kuril'sk	1.23	337	i P	Pn	23 30 33.8	-1.0
YUK				AMB	AMB	23 30 38.0	
	comp=N,7μm,0.2s						
YUK				eS	Sn	23 30 48.8	-1.5
YUK				A	A	23 30 49.0	
	comp=N,6μm,0.6s						
YUK				A	A	23 30 49.0	
	comp=N,21μm,0.6s						
JAK	Akkeshi	1.35	274	P	Pn	23 30 35.9	-0.6
JAK				eS	Sn	23 30 52.2	-1.0
JNSB	Nemuroshibetsu	1.41	308	P	Pn	23 30 36.4	-0.9
JRA	Rausu	1.45	316	P	Pn	23 30 37.3	-0.6
JRA				eS	Sn	23 30 54.4	-1.4
JNK	Nakash	1.49	298	P	Pn	23 30 37.3	-1.1
JNK				eS	Sn	23 30 54.7	-1.9
RUSJ	Misakicho	1.52	322	d iPN	Pn	23 30 38.2	-0.6
RUSJ				eS	Sn	23 30 57.2	-0.1
JOB	Onbets	1.98	271	P	Pn	23 30 44.8	-0.3
JOB				eS	Sn	23 31 07.0	-1.7
JAR	Ashorobuto	2.06	282	P	Pn	23 30 45.9	-0.3
JAR				eS	Sn	23 31 09.5	-1.2
JTKR	Abashiri--Toko	2.19	300	P	Pn	23 30 48.0	+0.1
JCH	Churui	2.35	264	P	Pn	23 30 49.5	-0.7
JCH				eS	Sn	23 31 16.0	-1.8
KUR	Kuril'sk	2.52	22	ePN	Pn	23 30 52.3	-0.1
KUR				eS	Sn	23 31 20.3	-1.6
KUR				pmax	pmax		
	comp=N,168nm,0.3s						
KUR				pmax	pmax		
	comp=E,206nm,0.3s						
KUR				pmax	pmax		
	comp=Z,369nm,0.3s						
KUR				smax	smax		
	comp=N,815nm,0.2s						
KUR				smax	smax		
	comp=E,2μm,0.2s						
KUR	Kuril'sk	2.52	22	eP	Pn	23 30 52.0	-0.4
KUR				AMB	AMB	23 30 53.0	
	comp=E,369nm,0.3s						
KUR				eS	Sn	23 31 20.3	-1.6
KUR				A	A	23 31 23.0	
	comp=E,815nm,0.2s						
KUR				A	A	23 31 23.0	
	comp=E,2μm,0.2s						
JMP	Maruseppu	2.56	297	P	Pn	23 30 53.3	+0.3
JEM	Erimo	2.65	251	P	Pn	23 30 55.5	+1.2
JEM	Erimo	2.65	251		Pn	23 30 55.9	+1.6
ERM	Erimo	2.65	251	d iPN	Pn	23 30 55.6	+1.3
ERM	Erimo	2.65	251		Pn	23 30 55.7	+1.4
JKA	Kamikawa-asahi	3.10	294	eP	Pn	23 31 01.5	+1.0
JKA	Kamikawa-asahi	3.10	294	Pn	Pn	23 31 00.9	+0.4
ASAJ	Asahikawa	3.11	294	P	Pn	23 31 01.5	+1.0
	comp=E,28nm,0.3s,baz=113,slow=11,SNR=68						
ASAJ				S	Sn	23 31 39.9	+3.5
	comp=E,14nm,0.3s,baz=200,slow=7.2,SNR=3.7						
ASAJ				LR	LR	23 32 24.8	
	comp=E,315nm,19.8s,baz=94,slow=43						
JEW	Eniwo	3.73	271	Pn	Pn	23 31 09.8	+0.6
JTM	Tenmabayashi	4.60	244		Pn	23 31 21.0	0.0
JTM				Sn	Sn	23 32 10.3	-2.8
YSS	Yuzh-Sakhalins	4.85	328	ePN	Pn	23 31 24.7	+0.2
YSS				eS	Sn	23 32 18.2	-1.1
YSS				pmax	pmax		
	comp=Z,50nm,0.5s						
YSS				smax	smax		
	comp=E,50nm,0.5s						
YSS				MLR	MLR		
	comp=Z,600nm,19.0s						
YSS	Yuzh-Sakhalins	4.85	328	eP	Pn	23 31 24.0	-0.5
YSS				AMB	AMB	23 31 25.0	
	comp=Z,50nm,0.5s						
YSS				eS	Sn	23 32 18.0	-1.3
YSS	Yuzh-Sakhalins	4.85	328	Pn	Pn	23 31 24.1	-0.3
JMM	Marumori	6.67	223	Pn	Pn	23 31 47.8	-1.7
JMM				Sn	Sn	23 32 55.0	-9.2
JSD	Sado	7.96	235	Pn	Pn	23 32 07.2	+0.1
MJAR	Matsushiro Arr	9.03	228	P	Pn	23 32 21.8	+0.1
	comp=Z,0.1nm,0.3s,baz=23,slow=14,SNR=2.2						
MJAR				LR	LR	23 36 08.1	
	comp=Z,94nm,21.4s,baz=40,slow=39						
MAJO	Matsushiro	9.03	228	d ePN	Pn	23 32 22.4	+0.7
MAJO	Matsushiro	9.03	228	Pn	Pn	23 32 21.2	-0.5
USRK	Ussuriysk Ar.	10.64	282	P	Pn	23 32 44.3	+0.6
	baz=91,slow=14,SNR=4.2						
VLA	Vladivostok	10.73	276	⇓ePN	Pn	23 32 44.9	-0.1
VLA	Vladivostok	10.73	276	eP	Pn	23 32 44.9	-0.1
PAU	Pauzhetka	11.05	36	eP	Pn	23 32 49.6	+0.4
JHJ	Hachijo jima 2	11.12	211	P	Pn	23 32 50.4	0.0
	comp=Z,5.0nm,0.3s,baz=247,slow=22,SNR=1.2						
JHJ				S	Sn	23 34 43.2	-10
	comp=Z,16nm,0.3s,baz=64,slow=22,SNR=6.7						
MSHR	Mys Shultsa	11.31	274	⇑ePN	Pn	23 32 51.1	-1.9
MSHR				pmax	pmax		
	comp=Z,30nm,1.0s						
KLR	Kul'dur	12.05	307	P	Pn	23 33 03.5	+0.6
	comp=Z,0.2nm,0.3s,baz=111,slow=19,SNR=6.6						
KLR				LR	LR	23 37 22.5	
	comp=Z,109nm,20.3s,baz=100,slow=36						
KLR	Kul'dur	12.05	307	⇑ePN	Pn	23 33 02.9	0.0
KLR				pmax	pmax		
	comp=Z,5.0nm,1.4s						
KLR	Kul'dur	12.05	307	eP	Pn	23 33 02.9	0.0
PEA0B	Petropavlovsk-	12.63	32	PN	Pn	23 33 08.6	-2.3
PEA0B	Petropavlovsk-	12.63	32	Pn	Pn	23 33 08.6	-2.3
PETK	Petropavlovsk-	12.63	32	P	Pn	23 33 09.1	-1.9
	comp=Z,0.6nm,0.3s,baz=211,slow=14,SNR=7.4						
PETK				LR	LR	23 38 52.5	
	comp=Z,22nm,18.6s,baz=230,slow=41						
PETK	Petropavlovsk-	12.63	32	PN	Pn	23 33 08.6	-2.3
PETK	Petropavlovsk-	12.63	32	Pn	Pn	23 33 08.6	-2.3
KSRS	Korea Array	15.22	255	LR	LR	23 39 54.2	
	comp=Z,83nm,18.6s,baz=56,slow=38						
CN2	Changchun	15.36	281	eP	Pn	23 33 45.6	-1.9
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
SEY	Seymchan	20.35	8	P	P	23 34 45.5	-0.6
	comp=Z,2.6nm,0.7s,baz=171,slow=9.2,SNR=4.1						
BJI	Beijing	22.86	273	P	P	23 35 12.6	-0.6
BJI				pmax	pmax		
	comp=Z,16nm,0.8s						
BJT	Baijiatuau	22.88	273	P	P	23 35 12.4	-0.9
BJT				pmax	pmax		
	comp=Z,9.0nm,0.6s						
BJT	Baijiatuau	22.88	273	P	P	23 35 12.4	-0.9
HHC	Hu-ho-hao-te	26.01	277	eP	P	23 35 44.0	+1.5
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,71nm,3.9s						
BILL	Bilibino	27.29	16	⇑eP	P	23 35 55.1	+1.4
BILL				e		23 36 40.0	
BILL				pmax	pmax		
	comp=Z,3.0nm,0.3s						
BILL				MLR	MLR		
	comp=Z,112nm,17.0s						
BILL	Bilibino	27.29	16	eP	P	23 35 55.1	+1.4
ULN	Ulaanbaatar	27.95	294	c iP	P	23 36 00.2	+0.3
ULN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ULN	Ulaanbaatar	27.95	294	eP	P	23 36 00.2	+0.3
ULN	Ulaanbaatar	27.95	294	P	P	23 36 00.2	+0.3
ULN				IAmb	IAmb	23 36 01.0	
	comp=Z,8.2nm,0.8s						
SONM	Songino Array	28.39	294	P	P	23 36 03.8	0.0
	comp=Z,10nm,0.6s,baz=90,slow=8.5,SNR=58						
SONM				LR	LR	23 48 25.3	
	comp=Z,96nm,19.9s,baz=82,slow=38						
SONM	Songino Array	28.39	294	P	P	23 36 04.2	+0.4
SONM				pmax	pmax		
	comp=Z,13nm,0.7s						
SONM	Songino Array	28.39	294	P	P	23 36 04.2	+0.4
SONM				IAmb	IAmb	23 36 05.0	
	comp=Z,13nm,0.7s						
H11N2	WAKE ISLAND Hy	28.78	137	T	T	00 07 11.9	
	baz=329,slow=75,SNR=538						
H11N1	WAKE ISLAND Hy	28.79	137	T	T	00 06 59.0	
	baz=329,slow=75,SNR=444						
H11N3	WAKE ISLAND Hy	28.79	137	T	T	00 07 09.3	
	baz=329,slow=75,SNR=109						
H11S1	WAKE ISLAND Hy	29.72	139	T	T	00 08 10.2	
	baz=330,slow=76,SNR=1085						
H11S3	WAKE ISLAND Hy	29.72	139	T	T	00 08 07.8	
	baz=330,slow=76,SNR=1488						
H11S2	WAKE ISLAND Hy	29.73	139	T	T	00 08 08.3	
	baz=330,slow=76,SNR=728						
SVW2	Sparrevohn	38.49	41	P	P	23 37 31.9	+0.8
L19K	White Mountain	38.87	40	P	P	23 37 34.8	+0.5
N19K	Bonanza Creek	39.03	42	P	P	23 37 36.2	+0.5
N19K				IAmb	IAmb	23 37 45.9	
	comp=Z,16nm,1.1s						
K20K	Telida	39.27	38	P	P	23 37 38.9	+1.2
K20K				IAmb	IAmb	23 37 39.0	
	comp=Z,15nm,1.4s						
J20K	Nowinta River	39.28	37	P	P	23 37 38.6	+0.9
J20K				IAmb	IAmb	23 37 39.4	
	comp=Z,10nm,0.8s						
Q19K	Cape Douglas,	39.51	45	P	P	23 37 39.8	+0.1
IMAR	Indian Mountai	39.59	34	P	P	23 37 41.1	+0.8
NRIK	Noril'sk	39.77	332	⇑eP	P	23 37 43.0	+1.3
H21K	Melozitna Rive	39.95	34	P	P	23 37 44.0	+0.7
H21K				IAmb	IAmb	23 37 45.6	
	comp=Z,10nm,1.4s						
PPLA	Purkeypile	40.12	39	P	P	23 37 44.1	-0.8
KDAK	Kodiak Island	40.15	47	P	P	23 37 45.4	+0.4
KDAK				pmax	pmax		
	comp=Z,91nm,1.4s						
KDAK	Kodiak Island	40.15	47	P	P	23 37 45.4	+0.4
SPU	Mount Spurr	40.20	41	P	P	23 37 46.7	+1.2
DGZ	Jazzator, Alta	40.46	301	⇑eP	P	23 37 46.9	-0.9
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KTH	Kantishna Hill	40.69	38	P	P	23 37 49.8	+0.3
KTH				IAmb	IAmb	23 37 51.8	
	comp=Z,15nm,1.0s						
CNPM	China Poot	40.70	44	P	P	23 37 49.7	+0.1
MLY	Manley	40.79	35	P	P	23 37 50.4	+0.2
SUA	Susitna One	40.82	41	P	P	23 37 51.9	+1.3
SUA				IAmb	IAmb	23 37 54.1	
	comp=Z,26nm,1.2s						
CUT	Chulitna	41.01	39	P	P	23 37 50.5	-1.5
COLD	Coldfoot	41.10	32	P	P	23 37 53.1	+0.3
ZALV	Zalesovo Beam	41.15	308	P	P	23 37 52.3	-1.0
	comp=Z,0.5nm,0.4s,baz=67,slow=8.8,SNR=2.9						
ZALV				PcP	PcP	23 39 51.7	-0.1
	comp=Z,2.5nm,0.5s,baz=95,slow=2.4,SNR=10						
ZALV				LR	LR	23 56 12.8	
	comp=Z,34nm,21.9s,baz=22,slow=38						
ZALV	Zalesovo Beam	41.15	308		PcP	23 39 51.9	+0.1
H23K	Yukon River	41.31	34	P	P	23 37 55.9	+1.4
BWN	Browne	41.33	37	P	P	23 37 56.3	+1.6
BWN				IAmb	IAmb	23 37 56.7	
	comp=Z,15nm,0.7s						
I23K	Minto, Yukon-K	41.38	35	P	P	23 37 55.8	+0.8
I23K				IAmb	IAmb	23 38 10.1	
	comp=Z,13nm,1.5s						
TOLK	Toolik Lake Re	41.44	30	P	P	23 37 55.9	+0.3
NEA2	Nenana	41.50	36	P	P	23 37 56.6	+0.6
NEA2				IAmb	IAmb	23 37 57.5	
	comp=Z,9.4nm,0.8s						
MCK	McKinley	41.58	37	P	P	23 37 57.2	+0.5
MCK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MCK	McKinley	41.58	37	P	P	23 37 57.2	+0.5
MCK				IAmb	IAmb	23 37 57.7	
	comp=Z,8.0nm,0.9s						
MDM	Murphy Dome	41.86	35	P	P	23 37 59.6	+0.6
WRH	Wood River Hil	41.93	36	P	P	23 37 60.0	+0.5
SML	Sawmill	41.95	40	P	P	23 38 00.6	+0.8
SML				IAmb	IAmb	23 38 20.0	
	comp=Z,20nm,1.0s						
WMQ	Urumqi	41.99	292	eP	P	23 38 00.1	-0.3
WMQ				pP	pP	23 38 10.8	-2.1
WMQ				pmax	pmax		
	comp=Z,14nm,0.7s						

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WMQ                               pmax      pmax
         comp=Z,97nm,5.1s
H24K  Noodor Dome       41.99  34  P         P          23 38 01.1 +1.0
COLA  College           42.02  36⇓eP        P          23 38 00.7 +0.5
COLA                               pmax      pmax
         comp=Z,8.0nm,0.9s
POKR  Poker Plat Res    42.19  35  P         P          23 38 02.5 +0.8
POKR                               IAmb      IAmb       23 38 03.6
         comp=Z,13nm,0.8s
HDA   Harding Lake      42.42  36  P         P          23 38 03.5  0.0
HDA                                IAmb      IAmb       23 38 04.1
         comp=Z,6.8nm,0.6s
ILAR  Eielson Array     42.44  36  P         P          23 38 03.6 -0.1
         comp=Z,3.6nm,0.8s,baz=261,slow=6.1,SNR=24
ILAR                               PcP       PcP        23 39 54.6 -1.2
         comp=Z,0.5nm,0.6s,baz=277,slow=3.7,SNR=4.5
M24K  Tolsona, Glenn    42.94  40  P         P          23 38 08.7 +0.8
PRP   Porcupine Dome    42.98  35  P         P          23 38 08.7 +0.5
PRP                                IAmb      IAmb       23 38 10.2
         comp=Z,9.5nm,0.9s
KLU   Klutina           43.13  40  P         P          23 38 10.1 +0.6
KLU                                IAmb      IAmb       23 38 13.8
         comp=Z,21nm,1.2s
BMAR  Burnt Mountain    43.29  32  P         P          23 38 11.9 +1.3
DOT   Dot Lake          43.75  37  P         P          23 38 14.1 -0.3
DOT                                IAmb      IAmb       23 38 26.3
         comp=Z,14nm,1.4s
SCRK  Sand Creek        43.75  37  P         P          23 38 14.4  0.0
BMRM  Bremner River     43.83  41  P         P          23 38 15.7 +0.7
BMRM                               IAmb      IAmb       23 38 31.7
         comp=Z,27nm,1.3s
GLB   Gilahina Butte    44.14  40  P         P          23 38 18.0 +0.5
VRDI  Verde Repeater    44.34  41  P         P          23 38 20.1 +0.8
VRDI                               IAmb      IAmb       23 38 36.9
         comp=Z,16nm,1.2s
MK31  Makanchi Array    44.58 298d iP        P          23 38 21.1 -0.1
MK31  Makanchi Array    44.58 298  P         P          23 38 21.5 +0.3
MKAR  Makanchi Array    44.58 298  P         P          23 38 21.3 +0.1
         comp=Z,4.2nm,0.7s,baz=80,slow=9.1,SNR=20
MKAR                               PcP       PcP        23 40 03.7 +0.2
         comp=Z,0.4nm,0.5s,baz=71,slow=5.2,SNR=2.3
MKAR  Makanchi Array    44.58 298 eP         P          23 38 21.2  0.0
WAX   Waxell Ridge      44.76  42  P         P          23 38 23.7 +1.1
MAKZ  Makanchi          44.78 298  P         P          23 38 23.1 +0.3
MAKZ                               pmax      pmax
         comp=Z,5.0nm,0.8s
MAKZ  Makanchi          44.78 298  P         P          23 38 23.1 +0.3
MAKZ                               IAmb      IAmb       23 38 23.9
         comp=Z,5.1nm,0.8s
L27K  Beaver Creek,     44.82  38  P         P          23 38 24.1 +1.2
L27K                               IAmb      IAmb       23 38 24.9
         comp=Z,11nm,0.9s
BCAR  Beaver Creek A    44.84  38  P         P          23 38 24.1 +1.0
EGAK  Eagle             44.88  35  P         P          23 38 23.7 +0.4
M27K  Edge Creek, AK    44.91  39  P         P          23 38 24.6 +0.9
M27K                               IAmb      IAmb       23 38 25.9
         comp=Z,11nm,1.1s
BARN  Barnard Glacie    45.23  41  P         P          23 38 27.4 +1.1
BARN                               IAmb      IAmb       23 38 29.8
         comp=Z,13nm,1.0s
GRNC  Granite Creek     45.24  41  P         P          23 38 27.4 +0.9
CTGM  Chitina Glacie    45.40  41  P         P          23 38 28.5 +0.8
LOGN  Logan Glacier     45.59  41  P         P          23 38 29.9 +0.7
KURK  Kurchatov         45.63 305⇑eP        P          23 38 29.4  0.0
KURK                               pmax      pmax
         comp=Z,2.0nm,0.7s
KURK  Kurchatov         45.63 305 eP         P          23 38 29.4  0.0
DAWY  Dawson            45.74  36  P         P          23 38 30.7 +0.5
CMAR  Chiang Mai Arr    46.85 254  P         P          23 38 39.5 +0.1
         comp=Z,0.7nm,0.4s,baz=40,slow=7.1,SNR=4.4
CMAR  Chiang Mai Arr    46.85 254  P         P          23 38 37.8 -1.6
HYT   Haines Junctio    47.26  40  P         P          23 38 43.9 +1.7
INK   Inuvik            47.36  30  P         P          23 38 43.3 +0.6
INK                                pmax      pmax
         comp=Z,11nm,0.7s
INK   Inuvik            47.36  30  P         P          23 38 43.3 +0.6
WHY   Whitehorse        48.55  40  P         P          23 38 53.5 +1.4
WHY                                IAmb      IAmb       23 38 58.8
         comp=Z,11nm,1.3s
BESE  Bessie Mountai    49.17  43  P         P          23 38 59.3 +2.4
BESE                               IAmb      IAmb       23 39 16.1
         comp=Z,14nm,1.2s
A36M  Sachs Harbour     49.32  24  P         P          23 38 58.2 +0.5
A36M                               IAmb      IAmb       23 38 58.7
         comp=Z,3.2nm,0.7s
WMR   Waimanalo Ridg    50.92  97  P         P          23 39 11.1 +0.6
CRAG  Craig             51.11  46  P         P          23 39 10.7 -0.8
AAK   Ala-Archa         51.32 296  P         P          23 39 13.9 +0.4
AAK                                pmax      pmax
         comp=Z,3.0nm,0.4s
AAK   Ala-Archa         51.32 296 eP         P          23 39 13.9 +0.4
AAK   Ala-Archa         51.32 296  P         P          23 39 13.9 +0.4
AAK                                IAmb      IAmb       23 39 15.1
         comp=Z,2.7nm,0.3s
KSH   Kashi             51.75 292  P         P          23 39 22.1 +5.4
KSH                                pmax      pmax
         comp=Z,3.0nm,0.8s
DIB   Dawson Inlet,     52.33  49  P         P          23 39 21.5 +0.8
DIB                                IAmb      IAmb       23 39 22.2
         comp=Z,11nm,0.9s
KK31  Karatay Array     53.71 298  P         P          23 39 31.5 +0.5
KK31                               pmax      pmax
         comp=Z,3.0nm,0.7s
KK31  Karatay Array     53.71 298  P         P          23 39 31.5 +0.5
KKAR  Karatay Array     53.71 298  P         P          23 39 31.3 +0.3
KKAR                               pmax      pmax
         comp=Z,3.0nm,0.7s
KKAR  Karatay Array     53.71 298  P         P          23 39 31.3 +0.3
KKAR                               IAmb      IAmb       23 39 32.4
         comp=Z,2.8nm,0.7s
KKAR  Karatay Array     53.71 298  P         P          23 39 31.6 +0.6
MLH   Mauna Loa         53.74  97  P         P          23 39 29.7 -2.0
EUNU  Eureka            53.77  10  IAmb      IAmb       23 39 31.1
         comp=Z,8.0nm,0.8s
ARU   Arti              54.65 317  P         P          23 39 37.4 -0.3
         comp=Z,1.2nm,0.6s,baz=43,slow=5.9,SNR=6.6
ARU   Arti              54.65 317d iP        P          23 39 37.6 -0.1
ARU                                *PP       pP         23 39 51.3 +0.9
ARU                                                     23 41 35.7
ARU                                S         S          23 47 15.7 +1.9
ARU                                SS        SS         23 50 53.1 -3.4
ARU                                pmax      pmax
         comp=Z,6.0nm,0.9s
ARU   Arti              54.65 317 eP         P          23 39 37.5 -0.1
GAR   Garm              55.83 294  P         P          23 39 47.1 +0.6
GAR                                IAmb      IAmb       23 40 02.4
         comp=Z,3.8nm,0.7s
HOLB  Holberg           55.87  50  P         P          23 39 46.5  0.0
RES   Resolute Bay      55.90  16  P         P          23 39 46.3 -0.1
RES                                pmax      pmax
         comp=Z,13nm,0.6s
RES   Resolute Bay      55.90  16  P         P          23 39 46.2 -0.1
YKA   Yellowknife Ar    56.75  33  P         P          23 39 53.6 +1.0
         comp=Z,1.9nm,1.0s,baz=310,slow=5.8,SNR=8.1
YKA   Yellowknife Ar    56.75  33  P         P          23 39 53.0 +0.4
YKA   Yellowknife Ar    56.75  33  P         P          23 39 53.0 +0.4
CHGR  Chuyangaron       56.79 294  P         P          23 39 54.3 +1.0
CHGR                               IAmb      IAmb       23 39 55.3
         comp=Z,6.8nm,0.7s
ABKAR Akbulak array     57.24 309  P         P          23 39 56.5 +0.3
ABKAR Akbulak array     57.24 309  IAmb      IAmb       23 40 14.8
         comp=Z,3.1nm,0.5s
AKTO  Aktyubinsk        57.74 311  P         P          23 39 60.0 +0.2
         comp=Z,1.3nm,0.6s,baz=47,slow=9.6,SNR=3.8
AKTO  Aktyubinsk        57.74 311  P         P          23 40 00.0 +0.2
KIRV  Kirov             57.98 322⇓eP        P          23 40 00.8 -0.5
NEEM  North Greenlan    59.42   4 i P        P          23 40 10.0 -1.4
NEEM                               IAmb      IAmb       23 40 12.2
         comp=Z,5.9nm,0.9s
ARCES ARCESS Array B    59.88 340  P         P          23 40 13.5 -0.8
         comp=Z,3.1nm,0.9s,baz=38,slow=2.2,SNR=4.3
ARCES ARCESS Array B    59.88 340  P         P          23 40 14.9 +0.6
DAG   Danmarks Havn     60.23 356 i P        P          23 40 14.6 -2.0
LON   Longmire          61.45  51  P         P          23 40 26.0 +0.6
LON                                pmax      pmax
         comp=Z,7.0nm,1.4s
LON   Longmire          61.45  51  P         P          23 40 26.0 +0.6
LON                                IAmb      IAmb       23 40 41.2
         comp=Z,7.3nm,1.4s
B08A  Colville Reser    61.96  49  IAmb      IAmb       23 40 30.1
         comp=Z,5.5nm,0.8s
KEBM  Edson Butte       62.09  56  P         P          23 40 30.7 +0.9
BELG  Belogornoye       62.20 317  P         P          23 40 29.1 -1.2
         comp=Z,10.0nm,0.9s,baz=46,slow=3.6,SNR=3.6
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HOOD  Mount Hood Mea    62.33  53  P         P          23 40 32.0 +0.5
H04A  Detroit Lake      62.38  54  P         P          23 40 31.9 +0.2
H04A                               IAmb      IAmb       23 40 33.1
         comp=Z,4.5nm,0.7s
KBO   Bosley Butte      62.53  57  P         P          23 40 33.9 +1.1
DBO   Dodson Butte      62.62  56  P         P          23 40 34.4 +1.0
DBO                                IAmb      IAmb       23 40 37.1
         comp=Z,10nm,1.3s
C09A  Chrisman Ranch    62.86  49  IAmb      IAmb       23 40 36.1
         comp=Z,7.1nm,0.9s
D08A  Wollman Farm,     62.92  50  P         P          23 40 35.8 +0.6
D08A                               IAmb      IAmb       23 40 36.1
         comp=Z,3.9nm,0.7s
HUMO  Hull Mountain     63.08  56  P         P          23 40 37.4 +1.0
HUMO                               IAmb      IAmb       23 40 50.1
         comp=Z,5.9nm,1.4s
KRMB  Red Mountain      63.11  57  P         P          23 40 38.4 +1.7
KRMB                               IAmb      IAmb       23 40 55.7
         comp=Z,8.3nm,1.3s
NEW   Newport           63.23  48  IAmb      IAmb       23 40 38.7
         comp=Z,4.8nm,0.8s
WB0   Warramunga Arr    63.36 193  P         P          23 40 38.0 -0.3
WR0   Warramunga Arr    63.52 193  P         P          23 40 39.3  0.0
WR0                                IAmb      IAmb       23 40 57.0
         comp=Z,4.9nm,1.1s
WB2   Warramunga Arr    63.54 193  P         P          23 40 41.9 +2.5
WB2                                IAmb      IAmb       23 40 54.6
         comp=Z,11nm,1.5s
WRA   Warramunga Arr    63.54 193  P         P          23 40 39.0 -0.4
         comp=Z,0.3nm,0.7s,baz=11,slow=6.9,SNR=5.8
WRA   Warramunga Arr    63.54 193 i P        P          23 40 41.4 +2.0
WRA   Warramunga Arr    63.54 193  P         P          23 40 39.6 +0.1
KHMM  Horse Mountain    63.59  58  P         P          23 40 40.7 +0.8
KHMM                               IAmb      IAmb       23 40 42.9
         comp=Z,12nm,1.3s
PINE  Pine Mountain     63.62  54  P         P          23 40 41.8 +1.6
YBH   Yreka Blue Hor    63.73  57  P         P          23 40 42.2 +1.5
YBH                                pmax      pmax
         comp=Z,3.0nm,0.8s
YBH   Yreka Blue Hor    63.73  57  P         P          23 40 42.2 +1.5
YBH                                IAmb      IAmb       23 40 43.2
         comp=Z,3.1nm,0.8s
K05A  Summer Lake       64.26  55  P         P          23 40 45.6 +1.3
K05A                               IAmb      IAmb       23 40 46.8
         comp=Z,7.9nm,0.8s
KCPM  Cahto Peak        64.37  59  P         P          23 40 46.4 +1.3
WDC   Whiskeytown Da    64.50  58  P         P          23 40 47.0 +1.3
WDC                                pmax      pmax
         comp=Z,3.0nm,0.9s
WDC   Whiskeytown Da    64.50  58  P         P          23 40 47.0 +1.3
SUMG  Summit            64.77   2  P         P          23 40 47.8 +0.4
SUMG                               pmax      pmax
         comp=Z,5.0nm,0.7s
SUMG  Summit            64.77   2 i P        P          23 40 47.0 -0.4
SUMG                               IAmb      IAmb       23 40 48.0
         comp=Z,7.1nm,0.6s
SUMG  Summit            64.77   2  P         P          23 40 47.8 +0.4
SUMG                               IAmb      IAmb       23 40 50.9
         comp=Z,5.4nm,0.7s
JTMT  Jette             65.08  47  P         P          23 40 50.3 +0.8
JTMT                               IAmb      IAmb       23 40 51.2
         comp=Z,6.6nm,0.9s
FINES FINESS Array B    65.42 333  P         P          23 40 50.8 -0.5
         comp=Z,3.7nm,0.6s,baz=44,slow=8.6,SNR=18
PLID  Pearl Lake        65.72  50  IAmb      IAmb       23 40 55.7
         comp=Z,4.8nm,0.7s
VRH   Novokhopyorsk     65.85 318 eP         P          23 40 53.7 -0.5
VRH                                pmax      pmax
         comp=Z,10.0nm,1.4s
LPSR  Galich'ya Gora    66.29 321 eP         P          23 40 56.5 -0.5
LPSR                               pmax      pmax
         comp=Z,8.0nm,0.7s
MFID  Camas Ranch       66.83  52  P         P          23 41 01.6 +0.8
MFID                               IAmb      IAmb       23 41 02.4
         comp=Z,2.7nm,0.7s
EMB   Emerald Bay       66.96  58  P         P          23 41 02.0 +0.1
VSR   Storozhevoye      67.08 319 eP         P          23 41 01.0 -1.1
VSR                                pmax      pmax
         comp=Z,7.0nm,1.0s
VORD  Divnogorie        67.18 319 eP         P          23 41 01.8 -0.9
VORD                               pmax      pmax
         comp=Z,6.0nm,0.8s
ASAR  Alice Springs     67.26 193  P         P          23 41 03.4  0.0
         comp=Z,0.3nm,0.8s,baz=14,slow=6.0,SNR=2.8
EGMT  Eagleton          67.30  45  IAmb      IAmb       23 41 05.0
         comp=Z,8.6nm,0.8s
DLMT  Dillon            67.46  49  P         P          23 41 05.6 +0.8
DLMT                               IAmb      IAmb       23 41 06.5
         comp=Z,4.4nm,0.7s
HLID  Hailey            67.56  51  P         P          23 41 06.4 +0.9
BMN   Battle Mountai    67.84  55  P         P          23 41 07.8 +0.5
BMN                                pmax      pmax
         comp=Z,4.0nm,0.8s
BMN   Battle Mountai    67.84  55  P         P          23 41 07.8 +0.5
BMN                                IAmb      IAmb       23 41 09.2
         comp=Z,4.3nm,0.8s
KVN   Kaiserville       68.15  57  IAmb      IAmb       23 41 11.3
         comp=Z,6.9nm,0.9s
LHV   Little Huntoon    68.40  58  IAmb      IAmb       23 41 13.3
         comp=Z,6.0nm,0.8s
NVAR  Mina Array Bea    68.41  57  P         P          23 41 12.0 +1.0
         comp=Z,3.0nm,0.7s,baz=288,slow=7.1,SNR=22
YHH   Holmes Hill       68.78  48  IAmb      IAmb       23 41 15.1
         comp=Z,5.4nm,1.0s
MOOW  Moose Ponds       69.50  49  P         P          23 41 18.5 +0.8
MOOW                               IAmb      IAmb       23 41 19.9
         comp=Z,4.9nm,0.9s
TPAW  Teton Pass        69.56  49  P         P          23 41 18.7 +0.6
TPAW                               IAmb      IAmb       23 41 20.5
         comp=Z,8.5nm,1.0s
HVU   Hansel Valley     69.62  52  P         P          23 41 19.4 +1.0
HVU                                pmax      pmax
         comp=Z,3.0nm,0.9s
HVU   Hansel Valley     69.62  52  P         P          23 41 19.4 +1.0
REDW  Red Top Meadow    69.69  49  P         P          23 41 20.2 +1.4
REDW                               IAmb      IAmb       23 41 21.0
         comp=Z,9.9nm,1.4s
MNK   Minsk             69.78 327 i P        P          23 41 19.7 +0.8
MNK                               i *PP      pwP        23 41 33.9 -0.5
MNK                               i                     23 41 41.8
MNK                               i                     23 43 54.3
MNK                               i S        S          23 50 24.0 -0.2
MNK                               i *SS      sS         23 50 50.1 +2.9
MNK                               i                     23 51 17.1
MNK                               i SS       SS         23 54 56.1 +3.7
MNK                                pmax      pmax
         comp=Z,11nm,1.0s
MNK                                pmax      pmax
         comp=N,10.0nm,1.1s
MNK                                pmax      pmax
         comp=E,2.0nm,1.3s
MNK                                MLR       MLR
         comp=E,9.0nm,22.0s
MNK                                MLR       MLR
         comp=Z,89nm,22.0s
MNK                                MLR       MLR
         comp=N,151nm,25.0s
MNK   Minsk             69.78 327 i P        P          23 41 19.7 +0.8
         comp=E,2.0nm,1.3s
MNK                               i P        P          23 41 19.7 +0.8
         comp=N,10.0nm,1.1s
MNK                               i P        P          23 41 19.7 +0.8
         comp=Z,11nm,1.0s,baz=223
MNK                               i pP       pwP        23 41 33.9 -0.5
MNK                               i PcP      PcP        23 41 41.8 +0.5
MNK                               i PP       PP         23 43 54.3 +1.3
MNK                               i PPP      PPP        23 45 44.0
MNK                               i S        S          23 50 24.1 -0.2
MNK                               i sS       sS         23 50 50.2 +3.0
MNK                               i SS       SS         23 54 56.1 +3.7
MNK                               i SSS      SSS        23 58 14.1
MNK                               i LQ       LQ         00 07 12.2
MNK                               i LR       LR         00 08 56.4
MNK                               i LRM      MLR        00 13 50.2
         comp=E,9.0nm,21.7s
MNK                               i LRM      MLR        00 14 38.0
         comp=Z,89nm,21.7s
MNK                               i LRM      MLR        00 14 55.3
         comp=N,151nm,24.6s
NACGM Naroch            69.92 328 i P        P          23 41 19.6 -0.1
KVAR  Kislovodsk Arr    69.98 312  P         P          23 41 21.0 +0.5
         comp=N,1.8nm,0.7s,baz=344,slow=19,SNR=2.1
KIV   Kislovodsk        69.99 312 eP         P          23 41 20.9 +0.4
KIV                                pmax      pmax
         comp=Z,8.0nm,1.0s
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KIV                                MLR       MLR
         comp=Z,27nm,17.0s
KIV   Kislovodsk        69.99 312 eP         P          23 41 20.9 +0.4
KIV   Kislovodsk        69.99 312  P         P          23 41 23.6 +3.1
KIV                                IAmb      IAmb       23 41 25.4
         comp=Z,5.6nm,0.6s
KBZ   Khabaz            70.02 311  P         P          23 41 19.9 -0.6
         comp=Z,3.2nm,0.7s,baz=80,slow=2.1,SNR=9.7
KBZ                                LR        LR         00 17 57.4
         comp=Z,28nm,18.7s,baz=24,slow=41
KBZ   Khabaz            70.02 311⇓eP        P          23 41 21.5 +1.0
KBZ                                pmax      pmax
         comp=Z,4.0nm,0.8s
KBZ   Khabaz            70.02 311 eP         P          23 41 21.5 +1.0
NB2   NORSAR Subarra    70.22 339  P         P          23 41 21.2 -0.4
         comp=Z,1.9nm,0.6s,baz=32,slow=6.5
NOA   NORSAR Array B    70.22 339  P         P          23 41 20.1 -1.5
         comp=Z,3.1nm,0.7s,baz=33,slow=6.2,SNR=16
DUG   Dugway, Tooele    70.61  53  IAmb      IAmb       23 41 25.9
         comp=Z,3.8nm,0.7s
BW06  Boulder Array     70.80  49  IAmb      IAmb       23 41 26.5
         comp=Z,3.8nm,0.6s
PD31  Pinedale Array    70.80  49  IAmb      IAmb       23 41 26.5
         comp=Z,3.5nm,0.6s
PDAR  Pinedale Array    70.80  49  P         P          23 41 25.9 +0.3
         comp=Z,3.8nm,0.7s,baz=243,slow=0.9,SNR=35
QSM   Queen of Sheba    70.84  59  IAmb      IAmb       23 41 27.6
         comp=Z,4.2nm,0.9s
SHPR  Sheep Range       71.56  57  P         P          23 41 30.9 +0.6
AKASG Malin Array Be    71.99 324  P         P          23 41 31.9 -0.5
         comp=Z,3.6nm,0.6s,baz=41,slow=6.0,SNR=18
AKASG                              LR        LR         00 16 14.3
         comp=Z,36nm,18.3s,baz=0.0,slow=38
AKASG Malin Array Be    71.99 324  P         P          23 41 32.5 +0.2
AKBB  Malin Array Si    71.99 324deP         P          23 41 32.0 -0.4
AKBB  Malin Array Si    71.99 324  P         P          23 41 32.2 -0.2
AKBB                               IAmb      IAmb       23 41 32.7
         comp=Z,4.0nm,0.7s
LCMT  Little Creek M    72.41  56  P         P          23 41 36.7 +1.4
K22A  Casper            72.55  48  P         P          23 41 36.1  0.0
SRU   San Rafael Swe    72.65  53  P         P          23 41 37.5 +0.7
SRU                                pmax      pmax
         comp=Z,7.0nm,0.8s
SRU   San Rafael Swe    72.65  53  P         P          23 41 37.5 +0.7
SRU                                IAmb      IAmb       23 41 38.3
         comp=Z,6.8nm,0.8s
RSSD  Black Hills       72.87  45  P         P          23 41 38.4 +0.4
RSSD                               pmax      pmax
         comp=Z,6.0nm,0.8s
RSSD  Black Hills       72.87  45  P         P          23 41 38.4 +0.4
RSSD                               IAmb      IAmb       23 41 39.0
         comp=Z,6.4nm,0.8s
O20A  White River Ci    73.29  51  P         P          23 41 40.4 -0.2
O20A                               IAmb      IAmb       23 41 42.1
         comp=Z,13nm,1.4s
SMCO  Snowmass          74.65  51  P         P          23 41 49.0 +0.2
LVV   L'vov             74.86 326 eP         P          23 41 46.9 -2.4
BUR08 Bucovina Ar. S    76.03 323  IAmb      IAmb       23 41 57.0
         comp=Z,4.0nm,0.6s
BURAR Bucovina Array    76.04 323  P         P          23 41 56.4 +0.2
OJC   Ojcow             76.25 328 eP         P          23 41 57.4 +0.2
OJC   Ojcow             76.25 328  IAmb      IAmb       23 41 57.9
         comp=Z,4.5nm,0.6s
CLL   Collm             77.85 332 eP         P          23 42 04.0 -2.2
CLL                                pmax      pmax
         comp=Z,5.0nm,1.0s
CKRC  Cesky Krumlov     79.47 330 eP         P          23 42 14.9 -0.3
KHC   Kasperske Hory    79.47 331 eP         P          23 42 15.2  0.0
KHC   Kasperske Hory    79.47 331 eP         P          23 42 15.2  0.0
GERES GERESS Array B    79.67 330  P         P          23 42 15.9 -0.5
         comp=Z,0.4nm,0.6s,baz=32,slow=5.8,SNR=2.6
MNTX  Cornudas Mount    80.78  55  P         P          23 42 22.9 +0.3
VTS   Vitosha           80.80 321  P         P          23 42 22.6  0.0
VTS                                pmax      pmax
         comp=Z,4.0nm,0.8s
VTS   Vitosha           80.80 321  P         P          23 42 22.6  0.0
KBA   Koelnbreinsper    81.28 330 i P        P          23 42 25.2  0.0
         comp=Z,1.3nm,0.6s
P38A  Dawn              81.50  43  P         P          23 42 26.1 -0.1
P38A                               IAmb      IAmb       23 42 26.9
         comp=Z,7.6nm,0.7s
MOTA  Moosalm           81.87 331 i P        P          23 42 28.6 +0.4
         comp=Z,0.8nm,0.4s
TXAR  Lajitas Array     83.50  56  P         P          23 42 37.2 +0.3
         comp=Z,2.6nm,0.9s,baz=296,slow=3.6,SNR=19
CCM   Cathedral Cave    83.85  42  P         P          23 42 38.3 -0.1
CCM                                pmax      pmax
         comp=Z,6.0nm,0.9s
CCM   Cathedral Cave    83.85  42  P         P          23 42 38.3 -0.1
CCM                                IAmb      IAmb       23 42 39.2
         comp=Z,5.9nm,0.9s
U40A  Yellville         84.36  44  P         P          23 42 40.5 -0.6
FCAR  Ozark Folk Cen    85.09  44  IAmb      IAmb       23 42 45.1
         comp=Z,5.6nm,0.8s
T47A  Sharon Grove      86.70  40  P         P          23 42 53.0 +0.3
U49A  Red Boiling Sp    87.71  40  P         P          23 42 58.1 +0.5
T50A  Nancy             87.73  39  P         P          23 42 58.0 +0.3
ESDC  Sonseca Array     93.56 338  P         P          23 43 24.4 -0.5
         comp=Z,0.3nm,0.8s,baz=17,slow=3.3,SNR=1.6
TORD  Torodi Ar. Bea   115.58 322  PKP       PKiKP      23 48 50.1 -1.0
         comp=Z,0.3nm,0.4s,baz=29,slow=2.5,SNR=8.3
DBIC  Dimbokro         124.22 325  PKP       PKPdf      23 49 06.7 -1.1
         comp=Z,5.4nm,1.0s,baz=193,slow=6.4,SNR=2.1
VNA2  Neumayer--Watz   149.05 196  PKPdf     PKPbc      23 49 56.1 +0.6
VNA2  Neumayer--Watz   149.05 196  sPKPab    sPKPab     23 50 16.9 -1.2
VNA2  Neumayer--Watz   149.05 196  sPKiKP    sPKiKP     23 50 14.1 -1.2
VNA3  Neumayer Olymp   149.24 195  PKPdf     PKPbc      23 49 56.5 +0.5
VNA3  Neumayer Olymp   149.24 195  sPKPab    sPKPab     23 50 17.8 -1.1
VNA3  Neumayer Olymp   149.24 195  sPKiKP    sPKiKP     23 50 14.3 -1.5
VNA1  Neumayer--Stat   149.45 196  PKPdf     PKPbc      23 49 56.3 -0.1
VNA1  Neumayer--Stat   149.45 196  sPKPab    sPKPab     23 50 18.0 -1.7
VNA1  Neumayer--Stat   149.45 196  sPKiKP    sPKiKP     23 50 15.1 -1.0
BDFB  Brasilia         150.10  29  PKPbc     PKPbc      23 49 59.0 -0.8
         comp=Z,2.9nm,0.6s,baz=239,slow=2.9,SNR=6.2
PLCA  Paso Flores      152.42  98  PKPbc     PKiKP      23 50 04.8  0.0
         comp=Z,1.3nm,0.6s,baz=191,slow=5.7,SNR=3.8
```

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*PRE **06** 00:21:13.1±0.8, 26.°27S×32.°19E, h5km, ML2.9*
*EAF **06** 00:21:19.9±4.3, 26.°08S×31.°87E, h10km, MD4.0*
*BUL **06** 00:21:22.3±1.7, 26.°12S×31.°69E, h10km, MD4.4*
ISC 06 00:21:14.2±1.7,**26.°21S**±0.°05×**32.°07E**±0.°09,**h10km,n25,**
σ3.s27/44,**Mozambique**

```
Code  Station Name      Δ°   AZ°    Phase ID             Time     Res
                                   Op        ISC        h  m  s   ISC
POGA  Pongola            1.18 196   IAML                00 21 57.2
         comp=Z,177nm,0.5s
POGA  Pongola            1.18 196  eP        Pn         00 21 35.4 -1.4
POGA  Pongola            1.18 196  eS        Sb         00 21 51.4 -0.6
CRLN  Carolina, Mapu     1.85 276  eP        Pb         00 21 48.5 +0.2
CRLN                               eS        Sg         00 22 13.7 -0.1
CRLN                                IAML                00 22 29.3
         comp=Z,51nm,0.3s
MOPA  Mopani             2.75 347  eP        Pn         00 21 59.5 +1.1
MOPA                               eS        Sn         00 22 33.4 +1.8
MOPA                                IAML                00 22 45.6
         comp=Z,63nm,0.3s
MOPA  Mopani             2.75 347  eP        Pn         00 21 59.2 +0.9
MOPA                               eS        Sn         00 22 26.7 -5.0
MOPA  Mopani             2.75 347  eP        Pn         00 21 59.2 +0.9
MOPA                               eS        Sn         00 22 26.7 -5.0
HRAO  HartRAO            3.96 274  eP        Pn         00 22 17.5 +2.4
HRAO                               eS        Sn         00 23 04.2 +2.5
HRAO                                IAML                00 23 29.4
         comp=Z,30nm,2.9s
MSNA  Messina            4.28 334  eP        Pn         00 22 20.1 +0.7
MSNA                               eS        Sn         00 23 08.3 -1.2
MSNA                                IAML                00 23 32.6
         comp=Z,27nm,0.4s
MSNA  Messina            4.28 334  eP        Pn         00 22 21.2 +1.8
MSNA                               eS        Sn         00 23 09.6 +0.2
MSNA  Messina            4.28 334  eP        Pn         00 22 21.2 +1.8
MSNA                               eS        Sn         00 23 09.6 +0.2
PRYS  Parys              4.28 259  eP        Pn         00 22 21.2 +1.7
PRYS                               eS        Sn         00 23 10.4 +0.8
PRYS                                IAML                00 23 39.5
         comp=Z,46nm,1.4s
LBTB  Lobatse            5.96 280  eP        Pn         00 22 44.8 +2.2
LBTB                               eS        Sn         00 23 51.5 +0.4
LBTB                                IAML                00 23 57.1
         comp=Z,15nm,4.8s
LBTB  Lobatse            5.96 280  eP        Pn         00 22 45.3 +2.7
LBTB                               eS        Sn         00 23 45.3 -5.8
```

LBTB	**Lobatse**	**5.96**	**280**	*e*P	**Pn**	**00 22 45.3**	**+2.7**
LBTB				*e*S	**Sn**	**00 23 45.3**	**-5.8**
SWZ	**Schweizer**	**6.10**	**259**	*e*P	**Pn**	**00 22 46.8**	**+2.2**
SWZ				*e*S	**Sn**	**00 23 53.9**	**-0.7**
SWZ				IAML		00 23 58.0	
	comp=Z,16nm,0.4s						
BOSA	**Boshof**	**6.51**	**247**	*e*P	**Pn**	**00 22 54.2**	**+4.0**
BOSA				*e*S	**Sn**	**00 24 00.7**	**-4.0**
BOSA	**Boshof**	**6.51**	**247**	*e*P	**Pn**	**00 22 54.2**	**+4.0**
BOSA				*e*S	**Sn**	**00 24 00.7**	**-4.0**
MATP	**Matopo**	**6.62**	**330**	*e*P	**Pn**	**00 22 56.2**	**+4.4**
MATP				*e*S	**Sn**	**00 24 03.3**	**-4.2**
MATP	**Matopo**	**6.62**	**330**	*e*P	**Pn**	**00 22 56.2**	**+4.4**
MATP				*e*S	**Sn**	**00 24 03.3**	**-4.2**
BLWY	**Bulawayo**	**6.83**	**332**	*e*P	**Pn**	**00 22 59.0**	**+4.4**
BLWY				*e*S	**Sn**	**00 24 09.0**	**-3.5**
BLWY	**Bulawayo**	**6.83**	**332**	*e*P	**Pn**	**00 22 59.0**	**+4.4**
BLWY				*e*S	**Sn**	**00 24 09.0**	**-3.5**
KRI	**Karoi**	**9.61**	**346**	*e*P	**Pn**	**00 23 28.7**	**-4.1**
KRI				*e*S	Sn	00 24 59.7	-21
KRI	**Karoi**	**9.61**	**346**	*e*P	**Pn**	**00 23 28.7**	**-4.1**
KRI				*e*S	Sn	00 24 59.7	-21
CVNA	**Calvinia**	**12.00**	**241**	*e*P	**Pn**	**00 24 08.0**	**+2.6**
CVNA				*e*S	**Sn**	**00 26 14.6**	**-4.8**
CVNA				IAML		00 26 21.0	
	comp=Z,20nm,3.6s						

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*IDC **06** 00:27:08.1±2.0, 8°.13S×125°.56E, h0^{km}, mb3.7/1, mb1 3.6/5, mb1mx3.4/31, mbtmp3.4/5, ML3.2/4, Error ellipse: s-maj=50.9km s-min=27.7km az=76.0*

ISC 06 00:27:13.6±1.5**, 8°.4S**±0°.1×**125°.6E**±0°.1**, h35**^{km}**, n5,** σ**2**^{s}**24**/8**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**2.62**	**226**	Pn	**Pn**	**00 27 54.6**	**+1.0**
	7.4nm,0.3s,baz=95,slow=3.5,SNR=5.0						
BATI				Sn	**Sn**	**00 28 24.8**	**+0.6**
	5.6nm,0.3s,baz=30,slow=20,SNR=1.9						
FITZ	**Fitzroy Crossi**	**9.67**	**180**	Pn	**Pn**	**00 29 30.9**	**+0.5**
	0.2nm,0.3s,baz=355,slow=10,SNR=10						
FITZ				Sn	**Sn**	**00 31 13.6**	**-4.3**
	0.3nm,0.3s,baz=331,slow=19,SNR=8.8						
WRA	**Warramunga Arr**	**14.30**	**144**	Pn	**Pn**	**00 30 34.3**	**+0.5**
	0.1nm,0.3s,baz=318,slow=13,SNR=8.9						
WRA				Sn	**Sn**	**00 33 12.2**	**+0.9**
	0.1nm,0.3s,baz=310,slow=18,SNR=2.3						
ASAR	**Alice Springs**	**17.18**	**153**	P	**P**	**00 31 13.4**	**+0.9**
	0.0nm,0.3s,baz=324,slow=10,SNR=2.6						
MKAR	**Makanchi Array**	**67.05**	**329**	P	**P**	**00 38 01.8**	**-1.5**
	0.4nm,0.5s,baz=118,slow=9.8,SNR=3.9						

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*TUL **06** 00:31:23.1±0.6, 36°.95N±0°.01×97°.85W±0°.01, h6^{km}±5^{km}, ML2.9, mb_Lg2.6/47(NEIC), Error ellipse: s-maj=1.5km s-min=1.4km az=103.0*

NEIC 06 00:31:23.5±0.7**, 36°.94N**±0°.01×**97°.84W**±0°.01**, h7**^{km}±4^{km}**, Error ellipse: s-maj=1.6km s-min=1.5km az=105.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GC02	**Grant County #**	**0.09**	**189**	Pg	Pg	00 31 25.4	-0.2
GC02				Sg	Sg	00 31 26.9	-0.1
KAN14	**Manchester OK**	**0.10**	**283**	Pg	Pg	00 31 25.4	-0.4
KAN14				Sg	Sg	00 31 26.9	-0.4
KAN17	**Caldwell West**	**0.13**	**30**	Pg	Pg	00 31 26.1	-0.1
KAN17				Sg	Sg	00 31 28.0	-0.1
KAN05	**Bluff City Nor**	**0.17**	**352**		Pg	00 31 26.9	-0.2
KAN05				Sg	Sg	00 31 29.4	-0.1
KAN01	**Argonia South**	**0.23**	**17**	Pg	Pg	00 31 28.0	0.0
KAN01				Sg	Sg	00 31 31.1	0.0
KAN09	**Caldwell North**	**0.27**	**42**	Pg	Pg	00 31 28.7	-0.1
KAN09				Sg	Sg	00 31 32.5	+0.1
KAN10	**Anthony SW Sta**	**0.28**	**313**	Pg	Pg	00 31 28.8	-0.2
KAN10				Sg	Sg	00 31 32.2	-0.4
KAN13	**South Haven SW**	**0.30**	**75**	Pg	Pg	00 31 29.5	+0.1
KAN13				Sg	Sg	00 31 33.5	0.0
KAN08	**Anthony NE Sta**	**0.31**	**341**		Pg	00 31 29.2	-0.3
KAN08				Sg	Sg	00 31 34.0	+0.3
KAN06	**Argonia West S**	**0.31**	**358**		Pg	00 31 29.4	-0.2
OK032	**Salt Plains WL**	**0.32**	**246**	Pg	Pg	00 31 29.7	-0.1
OK032				Sg	Sg	00 31 34.1	+0.1
KAN16	**Harper SW Stat**	**0.34**	**329**	Pg	Pg	00 31 30.0	-0.2
KAN16				Sg	Sg	00 31 34.6	0.0
KS20	**Mayfield South**	**0.37**	**38**	Pg	Pg	00 31 30.7	-0.1
KS20				Sg	Sg	00 31 35.7	0.0
KAN12	**Harper NE Stat**	**0.38**	**341**	Pg	Pg	00 31 30.4	-0.5
KAN12				Sg	Sg	00 31 36.0	0.0
CROK	**Carrier**	**0.44**	**195**	Pg	Pg	00 31 32.0	0.0
CROK				Sg	Sg	00 31 38.3	+0.4
BLOK	**Blackwell**	**0.53**	**109**	Pg	Pg	00 31 33.7	-0.1
BLOK				Sg	Sg	00 31 41.0	+0.3
T35A	**Sooner Cattle**	**1.07**	**91**	Pg	Pg	00 31 43.6	-0.4
T35A				Sg	Sg	00 31 57.8	0.0
U32A	**Winter Ranch,**	**1.08**	**240**	Pg	Pg	00 31 43.6	-0.7
U32A				Sg	Sg	00 31 58.0	-0.3
QUOK	**Quay**	**1.19**	**129**	Pg	Pg	00 31 45.6	-0.7
OK031	**S. Brethren Rd**	**1.27**	**140**		Pn	00 31 46.8	-0.8
OK030	**Cody Creek RV**	**1.32**	**139**		Pn	00 31 47.8	-0.5
OK025	**Westminster Rd**	**1.41**	**163**		Pn	00 31 49.4	-0.1
OKCFA	**Oklahoma City**	**1.55**	**168**		Pn	00 31 51.5	0.0
OKCSW	**OKLAHOMA CITY**	**1.56**	**168**	Pn	Pn	00 31 51.9	+0.3
R32A	**Long Quarter,**	**1.64**	**335**	Pn	Pn	00 31 53.0	+0.3
FNO	**Franklin**	**1.71**	**168**	Pn	Pn	00 31 54.0	+0.3
TUL1	**Leonard**	**1.94**	**121**	Pn	Pn	00 31 57.4	+0.5
WMOK	**Wichita Mounta**	**2.32**	**199**	Pn	Pn	00 32 02.2	+0.1
X34A	**Smith Ranch, M**	**2.33**	**180**	Pn	Pn	00 32 02.8	+0.7
X34A				IAmb_Lg		00 32 41.0	
	comp=Z,22nm,0.8s						
KSU1	**Kansas State U**	**2.37**	**24**	Pn	Pn	00 32 03.0	+0.2
CBKS	**Cedar Bluff**	**2.40**	**322**	Pn	Pn	00 32 03.1	-0.1
U38A	**Gravette**	**2.82**	**99**	Pn	Pn	00 32 09.3	+0.3
LOOK	**Love County**	**2.99**	**169**	Pn	Pn	00 32 11.5	+0.3
X37A	**Clayton**	**3.09**	**139**	Pn	Pn	00 32 12.4	-0.2
X37A				IAmb_Lg		00 33 06.3	
	comp=Z,32nm,0.7s						
HHAR	**Hobbs**	**3.21**	**101**	Pn	Pn	00 32 14.6	+0.3
HHAR				IAmb_Lg		00 33 13.6	
	comp=Z,21nm,0.7s						
Z35A	**Perchaven, San**	**3.63**	**172**	Pn	Pn	00 32 20.5	+0.4
S39A	**Bolivar**	**3.68**	**77**	Pn	Pn	00 32 20.8	0.0
W39A	**Magazine**	**3.72**	**117**		Pn	00 32 21.8	+0.6
W39A				IAmb_Lg		00 33 23.2	
	comp=Z,19nm,0.7s						
AMTX	**Amarillo**	**3.73**	**238**	Pn	Pn	00 32 21.8	+0.3
AMTX				IAmb_Lg		00 33 31.4	
	comp=Z,20nm,0.8s						
N33A	**J Bar K, Exete**	**3.81**	**4**	IAmb_Lg		00 33 25.0	
	comp=Z,14nm,0.8s						
U40A	**Yellville**	**4.05**	**97**	Pn	Pn	00 32 26.5	+0.6
MIAR	**Mount Ida**	**4.21**	**123**	Pn	Pn	00 32 29.4	+1.4
MIAR				IAmb_Lg		00 33 39.6	
	comp=Z,9.1nm,0.7s						
KSCO	**Kaye Shedlock'**	**4.31**	**300**	Pn	Pn	00 32 29.0	-0.5
KSCO				IAmb_Lg		00 33 49.8	
	comp=Z,15nm,0.7s						
P38A	**Dawn**	**4.33**	**50**	Pn	Pn	00 32 29.9	+0.3
P38A				IAmb_Lg		00 33 47.7	
	comp=Z,12nm,0.8s						
Z38A	**Mt. Pleasant**	**4.35**	**147**	Pn	Pn	00 32 29.8	-0.1
Z38A				IAmb_Lg		00 33 52.8	
	comp=Z,19nm,0.7s						
MGMO	**Mountain Grove**	**4.46**	**86**	Pn	Pn	00 32 31.7	+0.1
MGMO				IAmb_Lg		00 33 51.0	
	comp=Z,20nm,1.3s						
BGNE	**Belgrade**	**4.47**	**357**	Pn	Pn	00 32 31.0	-0.6
ABTX	**Abilene, Hawle**	**4.55**	**200**	IAmb_Lg		00 33 45.9	
	comp=Z,9.3nm,1.0s						
R40A	**Maddies Statio**	**4.63**	**71**	Pn	Pn	00 32 33.5	-0.2
FCAR	**Ozark Folk Cen**	**4.73**	**101**	IAmb_Lg		00 33 49.7	
	comp=Z,11nm,0.9s						
X40A	**Basin Creek Fa**	**4.75**	**119**	IAmb_Lg		00 34 06.9	
	comp=Z,10nm,0.9s						
WHAR	**Wooly Hollow**	**4.79**	**108**	IAmb_Lg		00 33 56.0	
	comp=Z,13nm,0.8s						
WHTX	**Lake Whitney,**	**4.94**	**176**	IAmb_Lg		00 34 12.3	
	comp=Z,10nm,0.7s						
WLAR	**White Oak Lake**	**5.05**	**129**	IAmb_Lg		00 34 12.7	
	comp=Z,14nm,0.7s						
P40A	**Paris**	**5.25**	**59**	IAmb_Lg		00 34 16.2	
	comp=Z,7.2nm,0.8s						
CCM	**Cathedral Cave**	**5.37**	**76**	IAmb_Lg		00 34 16.6	
	comp=Z,9.8nm,0.7s						
PBMO	**Poplar Bluff**	**5.95**	**89**	IAmb_Lg		00 34 46.3	
	comp=Z,8.0nm,0.7s						
SCIA	**State Center**	**6.12**	**34**	IAmb_Lg		00 34 49.3	
	comp=Z,12nm,0.7s						
JCT	**Junction City**	**6.64**	**195**	IAmb_Lg		00 34 59.3	
	comp=Z,6.6nm,0.7s						
S44A	**Carbondale**	**6.89**	**81**	IAmb_Lg		00 35 06.1	
	comp=Z,8.0nm,0.8s						
SIUC	**Southern Illin**	**6.92**	**81**	IAmb_Lg		00 35 03.9	
	comp=Z,7.5nm,0.8s						
RSSD	**Black Hills**	**8.59**	**329**	IAmb_Lg		00 36 02.0	
	comp=Z,4.3nm,1.0s						

IDC 06 00:33:18.9±9.4**, 12°.73S**×**74°.11W, h76**^{km}±119^{km}**, mb3.8**/1**, mb1 3.9**/2**, mb1mx3.3**/22**, mbtmp4.0**/2**, ML3.9**/1**, MS2.7**/2**, Ms1 2.7**/2**, ms1mx2.6**/31**, Error ellipse: s-maj=313.0km s-min=59.1km az=26.0, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**6.79**	**122**	P	Pn	00 34 57.2	+0.9
	1.2nm,0.3s,baz=300,slow=8.1,SNR=42						
LPAZ				S	Sn	00 36 12.8	+0.3
	baz=316,slow=18,SNR=1.0						
LPAZ				LR	LR	00 37 41.8	
	comp=Z,24nm,21.7s,baz=318,slow=39						
CPUP	**Villa Florida**	**20.78**	**133**	LR	LR	00 46 41.3	
	comp=Z,46nm,18.8s,baz=125,slow=39						
TORD	**Torodi Ar. Bea**	**79.42**	**74**	P	P	00 45 17.3	-0.2
	1.4nm,0.8s,baz=268,slow=5.5,SNR=6.7						
SONM	**Songino Array**	**145.00**	**359**	PKPbc	PKPbc	00 52 46.5	-0.6
	0.5nm,0.5s,baz=1.1,slow=3.7,SNR=3.5						

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*TUL **06** 00:34:19.5±0.8, 36°.95N±0°.01×97°.85W±0°.01, h5^{km}±1^{km}, ML2.7, mb_Lg2.4/19(NEIC), Error ellipse: s-maj=2.7km s-min=2.3km az=245.0*

NEIC 06 00:34:19.5±1.0**, 36°.92N**±0°.01×**97°.83W**±0°.02**, h8**^{km}±1^{km}**, Error ellipse: s-maj=1.8km s-min=1.5km az=104.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GC02	**Grant County #**	**0.07**	**199**	Pg	Pg	00 34 21.7	+0.2
GC02				Sg	Sg	00 34 23.2	+0.3
KAN14	**Manchester OK**	**0.11**	**290**	Pg	Pg	00 34 21.7	-0.5
KAN14				Sg	Sg	00 34 23.4	-0.6
KAN17	**Caldwell West**	**0.14**	**23**	Pg	Pg	00 34 22.5	0.0
KAN17				Sg	Sg	00 34 24.5	-0.1
KAN05	**Bluff City Nor**	**0.19**	**350**	Pg	Pg	00 34 23.2	-0.3
KAN05				Sg	Sg	00 34 25.7	-0.5
KAN01	**Argonia South**	**0.24**	**14**	Pg	Pg	00 34 24.3	-0.1
KAN01				Sg	Sg	00 34 27.6	-0.1
KAN09	**Caldwell North**	**0.28**	**38**	Pg	Pg	00 34 25.2	+0.2
KAN10	**Anthony SW Sta**	**0.29**	**314**	Pg	Pg	00 34 25.1	-0.3
KAN10				Sg	Sg	00 34 28.8	-0.5
KAN13	**South Haven SW**	**0.30**	**71**		Pg	00 34 24.9	-0.5
OK032	**Salt Plains WL**	**0.33**	**250**	Pg	Pg	00 34 25.8	-0.1
OK032				Sg	Sg	00 34 30.7	+0.4
KAN08	**Anthony NE Sta**	**0.33**	**340**	Pg	Pg	00 34 25.7	-0.4
KAN06	**Argonia West S**	**0.33**	**356**		Pg	00 34 25.9	-0.2
KAN16	**Harper SW Stat**	**0.36**	**329**	Pg	Pg	00 34 26.6	-0.1
KS20	**Mayfield South**	**0.38**	**35**	Pg	Pg	00 34 27.0	0.0
KAN12	**Harper NE Stat**	**0.40**	**341**	Pg	Pg	00 34 26.7	-0.7
CROK	**Carrier**	**0.43**	**197**	Pg	Pg	00 34 28.5	+0.6
BLOK	**Blackwell**	**0.52**	**107**	Pg	Pb	00 34 30.3	-0.6
T35A	**Sooner Cattle**	**1.06**	**90**	Pg	Pg	00 34 39.8	0.0
U32A	**Winter Ranch,**	**1.08**	**241**	Pg	Pg	00 34 40.1	-0.2
OK029	**Liberty Lake**	**1.16**	**165**		Pg	00 34 41.8	0.0
QUOK	**Quay**	**1.17**	**129**		Pg	00 34 41.9	-0.1
OK031	**S. Brethren Rd**	**1.25**	**140**		Pn	00 34 43.3	-0.1
BCOK	**Bluff Creek, N**	**1.27**	**172**		Pn	00 34 43.5	-0.1
OK030	**Cody Creek RV**	**1.30**	**139**		Pg	00 34 44.4	-0.1
OKCFA	**Oklahoma City**	**1.53**	**168**	IAmb_Lg		00 35 11.4	
	comp=Z,28nm,0.9s						
OKCSW	**OKLAHOMA CITY**	**1.54**	**168**		Pb	00 34 48.0	-0.4
R32A	**Long Quarter,**	**1.66**	**335**		Pn	00 34 49.3	+0.3
TUL1	**Leonard**	**1.93**	**121**	Pn	Pn	00 34 53.6	+1.0
WMOK	**Wichita Mounta**	**2.31**	**200**	Pn	Pn	00 34 58.6	+0.7
WMOK				IAmb_Lg		00 35 36.1	
	comp=Z,13nm,0.7s						
X34A	**Smith Ranch, M**	**2.31**	**180**	Pn	Pn	00 34 59.6	+1.6
KSU1	**Kansas State U**	**2.38**	**24**	IAmb_Lg		00 35 33.3	
	comp=Z,24nm,0.7s						
CBKS	**Cedar Bluff**	**2.42**	**322**	Pn	Pn	00 35 00.7	+1.2
HHAR	**Hobbs**	**3.19**	**100**	IAmb_Lg		00 36 10.0	
	comp=Z,9.9nm,0.8s						
W39A	**Magazine**	**3.70**	**116**	IAmb_Lg		00 36 22.7	
	comp=Z,9.1nm,0.8s						
AMTX	**Amarillo**	**3.73**	**238**	IAmb_Lg		00 36 23.3	
	comp=Z,9.4nm,0.8s						
U40A	**Yellville**	**4.04**	**96**	IAmb_Lg		00 36 32.3	
	comp=Z,8.4nm,1.0s						
P38A	**Dawn**	**4.33**	**50**	IAmb_Lg		00 36 35.2	
	comp=Z,5.3nm,0.8s						
FCAR	**Ozark Folk Cen**	**4.72**	**101**	IAmb_Lg		00 36 55.3	
	comp=Z,6.4nm,0.9s						
WHAR	**Wooly Hollow**	**4.77**	**108**	IAmb_Lg		00 36 54.6	
	comp=Z,7.3nm,0.9s						
N38A	**Joes South For**	**5.28**	**41**	IAmb_Lg		00 37 20.4	
	comp=Z,7.7nm,0.8s						

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*TUL **06** 00:36:27.2±0.7, 36°.943N±0°.009×97°.85W±0°.01, h4^{km}±5^{km}, ML2.6, mb_Lg2.4/14(NEIC), Error ellipse: s-maj=1.7km s-min=1.2km az=116.0*

NEIC 06 00:36:27.5±0.8**, 36°.927N**±0°.008×**97°.84W**±0°.01**, h7**^{km}±5^{km}**, Error ellipse: s-maj=1.8km s-min=1.0km az=115.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GC02	**Grant County #**	**0.08**	**194**	Pg	Pg	00 36 29.5	+0.1
GC02				Sg	Sg	00 36 31.0	+0.3
KAN14	**Manchester OK**	**0.11**	**286**	Pg	Pg	00 36 29.6	-0.3
KAN14				Sg	Sg	00 36 31.1	-0.4
KAN17	**Caldwell West**	**0.13**	**26**	Pg	Pg	00 36 30.2	-0.1
KAN17				Sg	Sg	00 36 32.2	+0.1
KAN05	**Bluff City Nor**	**0.18**	**351**		Pg	00 36 31.0	-0.2
KAN05				Sg	Sg	00 36 33.5	-0.2
KAN01	**Argonia South**	**0.23**	**15**	Pg	Pg	00 36 31.8	-0.4
KAN01				Sg	Sg	00 36 35.2	0.0
KAN09	**Caldwell North**	**0.27**	**40**	Pg	Pg	00 36 32.6	-0.3
KAN09				Sg	Sg	00 36 36.5	0.0
KAN10	**Anthony SW Sta**	**0.29**	**313**	Pg	Pg	00 36 32.8	-0.3
KAN10				Sg	Sg	00 36 36.6	-0.3
KAN13	**South Haven SW**	**0.30**	**73**	Pg	Pg	00 36 33.5	+0.2
KAN13				Sg	Sg	00 36 37.5	+0.2
KAN08	**Anthony NE Sta**	**0.32**	**340**	Pg	Pg	00 36 33.3	-0.4
KAN08				Sg	Sg	00 36 38.2	+0.2
KAN06	**Argonia West S**	**0.32**	**357**		Pg	00 36 33.7	-0.1
KAN06				Sg	Sg	00 36 38.1	+0.1
OK032	**Salt Plains WL**	**0.33**	**248**	Pg	Pg	00 36 33.7	-0.1
OK032				Sg	Sg	00 36 38.2	+0.1
KAN16	**Harper SW Stat**	**0.35**	**329**	Pg	Pg	00 36 34.1	-0.3
KS20	**Mayfield South**	**0.38**	**37**		Pg	00 36 34.7	-0.1
KAN12	**Harper NE Stat**	**0.39**	**341**	Pg	Pg	00 36 34.7	-0.4
CROK	**Carrier**	**0.44**	**196**	Pg	Pg	00 36 36.2	+0.2
BLOK	**Blackwell**	**0.53**	**108**	Pg	Pg	00 36 37.7	+0.1
T35A	**Sooner Cattle**	**1.06**	**90**	Pg	Pg	00 36 47.3	-0.5
U32A	**Winter Ranch,**	**1.08**	**240**	Pg	Pg	00 36 47.8	-0.5
OK029	**Liberty Lake**	**1.17**	**165**		Pg	00 36 49.3	-0.5
QUOK	**Quay**	**1.18**	**129**		Pg	00 36 49.6	-0.5
OK031	**S. Brethren Rd**	**1.26**	**140**		Pn	00 36 51.0	-0.5
BCOK	**Bluff Creek, N**	**1.28**	**172**		Pn	00 36 51.2	-0.6
OK030	**Cody Creek RV**	**1.31**	**139**	Pn	Pn	00 36 51.9	-0.3
OK025	**Westminster Rd**	**1.40**	**163**		Pn	00 36 53.5	0.0
OKCFA	**Oklahoma City**	**1.54**	**168**		Pn	00 36 55.4	0.0
OKCFA				IAmb_Lg		00 37 19.6	
	comp=Z,27nm,0.8s						
OKCSW	**OKLAHOMA CITY**	**1.55**	**168**		Pn	00 36 55.9	+0.3
R32A	**Long Quarter,**	**1.65**	**335**		Pn	00 36 57.5	+0.6
FNO	**Franklin**	**1.70**	**168**		Pn	00 36 58.1	+0.5
TUL1	**Leonard**	**1.94**	**121**	Pn	Pb	00 37 02.0	-1.1
TUL1				IAmb_Lg		00 37 31.5	
	comp=Z,27nm,0.8s						
WMOK	**Wichita Mounta**	**2.31**	**200**		Pn	00 37 06.4	+0.3
X34A	**Smith Ranch, M**	**2.32**	**180**	Pn	Pn	00 37 06.5	+0.4
X37A	**Clayton**	**3.08**	**139**	Pn	Pn	00 37 17.2	+0.7
X37A				IAmb_Lg		00 38 10.1	
	comp=Z,14nm,0.7s						
HHAR	**Hobbs**	**3.20**	**100**	IAmb_Lg		00 38 17.3	
	comp=Z,7.3nm,0.8s						
W39A	**Magazine**	**3.71**	**117**	IAmb_Lg		00 38 29.1	
	comp=Z,9.9nm,0.8s						
AMTX	**Amarillo**	**3.73**	**238**	IAmb_Lg		00 38 30.5	
	comp=Z,7.2nm,0.8s						
P38A	**Dawn**	**4.33**	**50**	IAmb_Lg		00 38 51.8	
	comp=Z,5.2nm,0.7s						
FCAR	**Ozark Folk Cen**	**4.72**	**101**	IAmb_Lg		00 39 00.7	
	comp=Z,7.1nm,1.1s						

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*IDC **06** 00:37:24.2±1.9, 20°.02N×144°.43E, h433^{km}±21^{km}, mb3.1/12, mb1 3.3/14, mb1mx3.2/36, mbtmp3.9/14, Error ellipse: s-maj=26.4km s-min=13.1km az=82.0*

*NEIC **06** 00:37:24.7±1.3, 19°.93N±0°.08×144°.4E±0°.2, h428^{km}±11^{km}, mb4.2/23, Error ellipse: s-maj=21.8km s-min=9.8km az=103.0*

ISC 06 00:37:25.3±0.6**, 19°.93N**±0°.09×**144°.4E**±0°.1**, h450**^{km}**, n39,** σ**0**^{s}**99**/40**, mb3.9**/22**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**6.32**	**176**	P	**P**	**00 39 02.4**	**-0.7**
	5.5nm,0.3s,baz=17,slow=20,SNR=2.1						
GUMO	**Guam**	**6.32**	**176**	P	**P**	**00 39 00.5**	**-2.5**
JCJ	**Chichijima**	**7.42**	**345**	P	**P**	**00 39 11.8**	**-2.6**
	4.1nm,0.3s,baz=180,slow=20,SNR=1.2						
JCJ				S	S	00 40 33.4	-10
	2.4nm,0.3s,baz=233,slow=20,SNR=0.9						
JMN	**Monobe**	**16.62**	**328**	P	**P**	**00 40 52.4**	**-1.2**
JMN				IAmb	IAmb	00 40 58.5	
	comp=Z,23nm,1.1s						
PATS	**Pohnpei**	**18.77**	**132**	P	**P**	**00 41 14.8**	**-0.8**
TPUB	**Ta-pu**	**22.32**	**283**	P	**P**	**00 41 47.4**	**-0.6**
KSRS	**Korea Array**	**22.60**	**324**	P	**P**	**00 41 49.6**	**-0.6**
	comp=Z,1.2nm,0.4s,baz=147,slow=9.5,SNR=4.6						
WB0	**Warramunga Arr**	**40.64**	**195**	P	**P**	**00 44 25.5**	**+0.5**
WB0				IAmb	IAmb	00 45 08.6	
	comp=Z,12nm,1.8s						
WR0	**Warramunga Arr**	**40.79**	**194**	P	**P**	**00 44 26.8**	**+0.6**
WR0				IAmb	IAmb	00 45 21.8	
	comp=Z,12nm,1.6s						
WB2	**Warramunga Arr**	**40.82**	**195**	P	**P**	**00 44 27.1**	**+0.7**
WB2				IAmb	IAmb	00 46 04.2	
	comp=Z,14nm,1.8s						
WRA	**Warramunga Arr**	**40.82**	**195**	P	**P**	**00 44 27.2**	**+0.7**
	comp=Z,0.9nm,0.3s,baz=13,slow=8.7,SNR=32						
WRA				PcP	**PcP**	**00 46 18.4**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=17,slow=4.4,SNR=1.4						
SONM	**Songino Array**	**41.41**	**321**	P	**P**	**00 44 30.8**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=140,slow=8.3,SNR=4.8						
SONM	**Songino Array**	**41.41**	**321**	P	**P**	**00 44 31.5**	**+0.5**
FITZ	**Fitzroy Crossi**	**42.02**	**207**	P	**P**	**00 44 36.5**	**+0.5**
FITZ				IAmb	IAmb	00 45 25.2	
	comp=Z,15nm,1.9s						
CMAR	**Chiang Mai Arr**	**42.83**	**276**	P	**P**	**00 44 42.7**	**+0.1**
	comp=Z,0.9nm,0.3s,baz=66,slow=4.8,SNR=4.6						
ASAR	**Alice Springs**	**44.51**	**194**	P	**P**	**00 44 55.7**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=10,slow=5.1,SNR=2.5						
ZALV	**Zalesovo Beam**	**56.29**	**322**	P	**P**	**00 46 21.8**	**0.0**
	comp=Z,0.4nm,0.3s,baz=99,slow=9.2,SNR=3.0						
MKAR	**Makanchi Array**	**56.72**	**313**	P	**P**	**00 46 25.7**	**+0.8**
	comp=Z,1.1nm,0.8s,baz=91,slow=9.3,SNR=8.3						
MKAR				PcP	**PcP**	**00 47 14.7**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=89,slow=5.2,SNR=3.2						
MAKZ	**Makanchi**	**56.93**	**313**	P	**P**	**00 46 27.1**	**+0.8**
KURK	**Kurchatov**	**59.53**	**318**	P	**P**	**00 46 44.3**	**+0.3**
KURK				IAmb	IAmb	00 48 38.6	
	comp=Z,12nm,2.0s						
I21K	**Tanana**	**61.09**	**26**	P	**P**	**00 46 55.1**	**+1.0**
TOLK	**Toolik Lake Re**	**62.93**	**22**	P	**P**	**00 47 07.9**	**+1.8**
ILAR	**Eielson Array**	**63.11**	**27**	P	**P**	**00 47 07.0**	**-0.3**
	comp=Z,0.5nm,0.9s,baz=243,slow=6.0,SNR=2.4						
NIL	**Nilore**	**63.85**	**298**	P	**P**	**00 47 13.7**	**+1.0**
NIL				IAmb	IAmb	00 47 15.1	
	comp=Z,11nm,1.0s						
BMAR	**Burnt Mountain**	**64.50**	**24**	P	**P**	**00 47 18.1**	**+1.9**
BRVK	**Borovoye**	**64.80**	**320**	P	**P**	**00 47 19.5**	**+1.2**
KK31	**Karatay Array**	**65.03**	**309**	P	**P**	**00 47 20.0**	**0.0**
KK31				IAmb	IAmb	00 47 22.2	
	comp=Z,16nm,1.9s						
KKAR	**Karatay Array**	**65.03**	**309**	P	**P**	**00 47 20.6**	**+0.6**
KKAR	**Karatay Array**	**65.03**	**309**	P	**P**	**00 47 20.3**	**+0.3**
KKAR				IAmb	IAmb	00 47 22.1	
	comp=Z,16nm,1.9s						
CHGR	**Chuyangaron**	**66.50**	**304**	P	**P**	**00 47 30.0**	**+0.5**
CHGR				IAmb	IAmb	00 47 30.9	
	comp=Z,9.6nm,0.7s						
KBL	**Kabul**	**67.18**	**300**	P	**P**	**00 47 34.7**	**+0.8**
KBL				IAmb	IAmb	00 47 35.2	
	comp=Z,3.2nm,0.7s						
ABKAR	**Akbulak array**	**71.59**	**317**	P	**P**	**00 48 00.5**	**+0.5**
ARCES	**ARCESS Array B**	**80.95**	**342**	P	**P**	**00 48 51.3**	**-0.1**
	comp=Z,1.6nm,0.7s,baz=81,slow=7.5,SNR=7.4						
ARCES	**ARCESS Array B**	**80.95**	**342**	P	**P**	**00 48 51.8**	**+0.4**
NVAR	**Mina Array Bea**	**83.37**	**52**	P	**P**	**00 49 05.3**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=270,slow=5.4,SNR=2.3						
FINES	**FINESS Array B**	**85.25**	**335**	P	**P**	**00 49 12.3**	**-0.8**
	comp=Z,1.2nm,0.3s,baz=62,slow=4.4,SNR=38						
NOA	**NORSAR Array B**	**90.99**	**339**	P	**P**	**00 49 39.1**	**-1.1**
	comp=Z,0.2nm,0.4s,baz=59,slow=4.4,SNR=2.2						
KAN17	**Caldwell West**	**98.55**	**46**		pwP	00 51 56.6	-4.4
TORD	**Torodi Ar. Bea**	**130.72**	**309**	PKP	**PKPdf**	**00 55 45.2**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=12,slow=2.1,SNR=1.6						

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*IDC **06** 00:52:48.4±1.9, 60°.14N×153°.87W, h138^{km}±22^{km}, mb3.3/5, mb1 3.5/10, mb1mx3.2/59, mbtmp3.8/10, Error ellipse: s-maj=24.0km s-min=22.5km az=159.0*

*NEIC **06** 00:52:48.8±1.3, 60°.06N±0°.04×153°.56W±0°.06, h165^{km}±4^{km}, Error ellipse: s-maj=6.4km s-min=4.6km az=192.0*

*AEIC **06** 00:52:49±1.4, 60°.04N±0°.05×153°.58W±0°.10, h162^{km}±3^{km}, ML4.0, ML4.0/115(NEIC), Error ellipse: s-maj=7.7km s-min=5.8km az=133.0*

*ANF **06** 00:52:49.0±0.3, 60°.06N×153°.55W, h157^{km}±3^{km}, ML4.0/52, Error ellipse: s-maj=3.2km s-min=2.4km az=103.0*

ISC 06 00:52:49.6±0.7**, 60°.07N**±0°.03×**153°.52W**±0°.03**, h164**^{km}±5^{km}**, n252,** σ**1**^{s}**31**/287**, mb3.5**/5**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILSW	**Iliamna Southw**	**0.21**	**115**		**Pn**	**00 53 10.8**	**-0.9**
ILSW					**Sn**	**00 53 27.4**	**-1.1**
ILS	**Iliamna Low So**	**0.26**	**116**		**Pn**	**00 53 10.9**	**-0.8**
ILS					**Sn**	**00 53 27.3**	**-1.4**
IVE	**Iliamna Volcan**	**0.26**	**102**		**Pn**	**00 53 11.1**	**-0.7**
IVE					**Sn**	**00 53 28.1**	**-0.6**
O19K	**Port Alsworth**	**0.42**	**288**	P	**Pn**	**00 53 11.3**	**-0.8**
	baz=112,SNR=59						
O19K				S	**Sn**	**00 53 27.4**	**-1.9**
	baz=112						
O19K	**Port Alsworth**	**0.42**	**288**		**Pn**	**00 53 11.2**	**-0.8**
O19K					**Sn**	**00 53 27.7**	**-1.7**
OPT	**Oil Point**	**0.45**	**161**		**Pn**	**00 53 12.1**	**-0.2**
P19K	**Oil Pt**	**0.45**	**161**	P	**Pn**	**00 53 12.1**	**-0.3**
	baz=336,SNR=26						
P19K				S	**Sn**	**00 53 29.0**	**-0.7**
	baz=336						
P19K	**Oil Pt**	**0.45**	**161**		**Pn**	**00 53 12.0**	**-0.3**
P19K					**Sn**	**00 53 29.0**	**-0.7**
O20K	**Slope Mountain**	**0.45**	**88**	P	**Pn**	**00 53 12.0**	**-0.3**
	baz=265,SNR=17						
O20K				S	**Sn**	**00 53 29.3**	**-0.5**
	baz=265						
O20K	**Slope Mountain**	**0.45**	**88**		**Pn**	**00 53 12.1**	**-0.3**
RED	**Redoubt Volcan**	**0.51**	**47**		**Pn**	**00 53 12.1**	**-0.6**
RED					**Sn**	**00 53 29.5**	**-0.8**
RDWB	**Redoubt West**	**0.54**	**39**		**Pn**	**00 53 12.4**	**-0.4**
RDWB					**Sn**	**00 53 29.7**	**-1.0**
RSO	**Redoubt South**	**0.55**	**44**		**Pn**	**00 53 12.1**	**-0.8**
RDN	**Redoubt North**	**0.58**	**40**		**Pn**	**00 53 12.6**	**-0.4**
RDJH	**Redoubt Jeurge**	**0.63**	**34**		**Pn**	**00 53 12.9**	**-0.4**
RDJH					**Sn**	**00 53 30.5**	**-1.0**
AUL	**Augustine Lava**	**0.69**	**176**		**Pn**	**00 53 13.4**	**-0.2**
AUW	**Augustine West**	**0.70**	**178**		**Pn**	**00 53 13.3**	**-0.2**
AU22	**Augustine Moun**	**0.71**	**173**		**Pn**	**00 53 13.3**	**-0.2**
AU22					**Sn**	**00 53 31.3**	**-0.6**
AGU	**Augustine-Summ**	**0.72**	**176**		**Pn**	**00 53 13.7**	**-0.1**
AUQ	**Augustine Qik'**	**0.72**	**176**		**Pn**	**00 53 13.7**	**-0.1**
O18K	**Koktuh Hills**	**0.88**	**256**	P	**Pn**	**00 53 13.8**	**-1.0**

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           baz=77,SNR=24
O18K                                S     Sn      00 53 31.7 -2.3
           baz=77
O18K  Koktuh Hills      0.88 256          Pn      00 53 13.8 -1.0
O18K                                      Sn      00 53 32.1 -1.9
N19K  Bonanza Creek     0.88 328    P     Pn      00 53 14.2 -0.7
           baz=150,SNR=102
N19K                                S     Sn      00 53 32.3 -2.0
           baz=150
N19K  Bonanza Creek     0.88 328    Pn    Pn      00 53 14.2 -0.7
N19K  Bonanza Creek     0.88 328          Sn      00 53 32.4 -2.0
HOM   Homer             1.04 113    P     Pn      00 53 15.8 -0.1
           baz=292
HOM                                 S     Sn      00 53 35.8 -0.3
           baz=292
HOM   Homer             1.04 113          Pn      00 53 16.0 +0.1
HOM   Homer             1.04 113    IAML          00 53 36.8
           comp=E,6µm,0.3s
HOM                                 IAML          00 53 37.4
           comp=N,6µm,0.3s
P18K  Big Mountain,     1.10 232    P     Pn      00 53 15.8 -0.7
           baz=52
P18K                                S     Sn      00 53 35.5 -1.7
           baz=52
P18K  Big Mountain,     1.10 232          Pn      00 53 15.9 -0.6
P18K  Big Mountain,     1.10 232          Sn      00 53 35.5 -1.7
Q19K  Cape Douglas,     1.15 183    P     Pn      00 53 16.5 -0.5
           baz=1.8,SNR=42
Q19K                                S     Sn      00 53 36.9 -1.0
           baz=1.8
Q19K  Cape Douglas,     1.15 183          Pn      00 53 16.4 -0.6
Q19K  Cape Douglas,     1.15 183          Sn      00 53 36.9 -1.0
Q19K                                IAML          00 53 37.2
           comp=E,2µm,0.6s
Q19K                                IAML          00 53 38.5
           comp=N,2µm,0.7s
CNPM  China Poot        1.28 114          Pn      00 53 18.0 -0.1
SPCR  Spurr Chakacha    1.30  29    P     Pn      00 53 18.1 -0.2
           baz=211,SNR=49
SPCR  Spurr Chakacha    1.30  29          Pn      00 53 18.1 -0.2
SPU   Mount Spurr       1.33  32          Pn      00 53 18.2 -0.3
SPCN  Chakachatna No    1.33  29          Pn      00 53 18.5 -0.1
BRLK  Bradley Lake      1.36 102          Pn      00 53 18.8 -0.1
BRLK                                      Sn      00 53 39.6 -1.8
CAPN  Captain Cook N    1.37  58    P     Pn      00 53 19.8 +0.9
           baz=240
CAPN  Captain Cook N    1.37  58          Sn      00 53 40.9 -0.4
CAPN                                IAML          00 53 44.3
           comp=N,3µm,0.6s
CAPN                                IAML          00 53 44.9
           comp=E,3µm,0.6s
CAPN  Captain Cook N    1.37  58          Pn      00 53 19.7 +0.9
SPCP  Crater Peak Br    1.38  29          Pn      00 53 19.0 -0.1
CRP   Crater Peak       1.38  29          Pn      00 53 19.0 -0.1
CRP                                       Sn      00 53 42.0 +0.1
SPCG  Spurr Capps Gl    1.43  31          Pn      00 53 19.3 -0.3
BRSE  Bradley Lake S    1.44 102    P     Pn      00 53 19.6  0.0
           baz=283,SNR=13
BRSE                                S     Sn      00 53 41.1 -1.6
           baz=283
BRSE  Bradley Lake S    1.44 102          Pn      00 53 19.5  0.0
SVW2  Sparrevohn        1.45 316          Pn      00 53 18.9 -0.7
SVW2                                      Sn      00 53 40.5 -2.4
STLK  Strandline Lak    1.66  29          Pn      00 53 21.6 -0.2
SLKM  Skilak Lake       1.70  74          Pn      00 53 21.7 -0.5
SLKM                                      Sn      00 53 45.2 -2.3
M19K  Big River Lodg    1.89 347    P     Pn      00 53 23.7 -0.5
           baz=168
M19K                                S     Sn      00 53 49.5 -1.6
           baz=168
M19K  Big River Lodg    1.89 347          Pn      00 53 23.7 -0.5
M19K  Big River Lodg    1.89 347    IAML          00 53 50.2
           comp=E,366nm,0.9s
O22K  Cooper Landing    1.94  76    P     Pn      00 53 24.0 -0.7
           baz=259,SNR=15
O22K                                S     Sn      00 53 49.8 -2.1
           baz=259
O22K  Cooper Landing    1.94  76          Pn      00 53 24.1 -0.7
O22K  Cooper Landing    1.94  76    IAML          00 53 51.3
           comp=E,3µm,0.4s
KAKN  Katmai Knife C    1.95 205          Pn      00 53 24.5 -0.5
KAKN                                      Sn      00 53 50.4 -1.9
SUA   Susitna One       1.95  43    P     Pn      00 53 24.6 -0.5
           baz=225,SNR=58
SUA                                 S     Sn      00 53 51.6 -0.9
           baz=225
SUA   Susitna One       1.95  43          Pn      00 53 24.6 -0.5
SUA                                       Sn      00 53 52.2 -0.3
SUA                                 IAML          00 53 52.6
           comp=N,1µm,0.6s
SUA                                 IAML          00 53 53.1
           comp=E,1µm,0.5s
FIS   Fire Island       1.95  55          Sn      00 53 53.3 +1.0
FIS                                 IAML          00 53 54.6
           comp=N,3µm,0.7s
FIS                                 IAML          00 53 56.1
           comp=E,2µm,0.5s
FIS   Fire Island       1.95  55          Pn      00 53 24.9  0.0
KABU  Katmai Buttres    2.02 207          Pn      00 53 25.4 -0.4
SEW   Seward            2.04  87    P     Pn      00 53 25.4 -0.5
           baz=270,SNR=9.2
SEW                                 S     Sn      00 53 51.6 -2.4
           baz=270
SEW   Seward            2.04  87          Pn      00 53 25.5 -0.4
RC01  Rabbit Creek A    2.13  60    P     Pn      00 53 25.8 -1.2
           baz=243
RC01                                S     Sn      00 53 54.0 -1.9
           baz=243
RC01  Rabbit Creek A    2.13  60          Pn      00 53 25.9 -1.0
RC01                                      Sn      00 53 54.6 -1.3
RC01                                IAML          00 53 55.4
           comp=N,1µm,0.2s
RC01                                IAML          00 53 55.6
           comp=E,898nm,0.3s
SKT   Skwentna          2.15  26    P     Pn      00 53 26.9 -0.3
           baz=208,SNR=34
SKT   Skwentna          2.15  26          Pn      00 53 26.9 -0.3
L19K  White Mountain    2.21 344    P     Pn      00 53 27.3 -0.6
           baz=163,SNR=17
L19K                                S     Sn      00 53 56.0 -1.7
           baz=163
L19K  White Mountain    2.21 344          Pn      00 53 27.3 -0.6
KDAK  Kodiak Island     2.35 168    P     Pn      00 53 27.8 -1.7
           comp=E,22nm,0.3s,baz=63,slow=6.9,SNR=695
KDAK                                S     Sn      00 53 57.5 -2.9
           comp=E,35nm,0.3s,baz=349,slow=14,SNR=7.8
KDAK  Kodiak Island     2.35 168    P     Pn      00 53 27.7 -1.8
           baz=348
KDAK                                S     Sn      00 53 57.5 -2.9
           baz=348
KDAK  Kodiak Island     2.35 168    IAML          00 53 59.0
           comp=E,589nm,0.5s
KDAK                                IAML          00 53 59.1
           comp=E,868nm,0.4s
M22K  Willow            2.37  43    P     Pn      00 53 28.8 -0.8
           baz=226,SNR=26
M22K                                S     Sn      00 53 59.7 -1.1
           baz=226
M22K  Willow            2.37  43          Pn      00 53 28.9 -0.8
L20K  Farewell, AK      2.42 356    P     Pn      00 53 30.3 -0.1
           baz=176,SNR=22
L20K                                S     Sn      00 54 00.8 -1.2
           baz=176
L20K  Farewell, AK      2.42 356          Pn      00 53 30.3 -0.1
PMR   Palmer            2.64  53    P     Pn      00 53 31.0 -1.9
           baz=236,SNR=6.4
PMR                                 S     Sn      00 54 03.7 -2.9
           baz=236
PMR   Palmer            2.64  53          Pn      00 53 31.0 -1.9
PMR   Palmer            2.64  53          Sn      00 54 03.9 -2.6
PMR                                 IAML          00 54 05.5
           comp=N,509nm,0.3s
PMR                                 IAML          00 54 05.6
           comp=E,388nm,0.5s
PWL   Port Wells        2.69  71    P     Pn      00 53 31.9 -1.6
           baz=255,SNR=6.5
PWL                                 S     Sn      00 54 05.0 -2.7
           baz=255
PWL   Port Wells        2.69  71          Pn      00 53 32.0 -1.6
PWL   Port Wells        2.69  71    IAML          00 54 06.9
           comp=E,1µm,0.3s
CUT   Chulitna          2.82  33    P     Pn      00 53 34.3 -0.8
           baz=215,SNR=62
CUT                                 S     Sn      00 54 09.5 -1.1
           baz=215
CUT   Chulitna          2.82  33          Pn      00 53 34.5 -0.7
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CUT   Chulitna          2.82  33    IAML          00 54 11.5
           comp=N,1µm,0.6s
GHO   Glory Hole Cre    2.82  51          Pn      00 53 33.7 -1.6
GHO                                       Sn      00 54 08.0 -2.7
GHO   Glory Hole Cre    2.82  51    IAML          00 54 08.7
           comp=N,623nm,0.4s
GHO                                 IAML          00 54 10.3
           comp=E,713nm,0.8s
KNK   Knik Glacier      2.83  59    P     Pn      00 53 33.6 -1.6
           baz=244
KNK                                 S     Sn      00 54 08.3 -2.5
           baz=244
KNK   Knik Glacier      2.83  59          Pn      00 53 33.6 -1.6
KNK   Knik Glacier      2.83  59    IAML          00 54 10.5
           comp=N,1µm,0.4s
KNK                                 IAML          00 54 11.5
           comp=E,916nm,0.5s
OHAK  Old Harbor        2.86 177    P     Pn      00 53 33.7 -2.0
           baz=357,SNR=7.2
OHAK                                S     Sn      00 54 08.1 -3.3
           baz=357
OHAK  Old Harbor        2.86 177          Pn      00 53 33.7 -2.0
OHAK  Old Harbor        2.86 177    IAML          00 54 10.9
           comp=N,400nm,0.5s
OHAK                                IAML          00 54 12.2
           comp=E,427nm,0.6s
PPLA  Purkeypile        2.91  12    P     Pn      00 53 36.8 +0.4
           baz=194,SNR=17
PPLA  Purkeypile        2.91  12    Pn    Pn      00 53 36.8 +0.4
PPLA  Purkeypile        2.91  12          Sn      00 54 13.4 +0.6
SML   Sawmill           3.07  53    P     Pn      00 53 36.7 -1.6
           baz=238,SNR=8.3
SML                                 S     Sn      00 54 13.1 -3.2
           baz=238
SML   Sawmill           3.07  53    Pn    Pn      00 53 36.6 -1.8
SML                                 IAML          00 54 14.5
           comp=N,503nm,0.5s
SML                                 IAML          00 54 22.6
           comp=E,356nm,0.6s
TT01  Tatalina          3.09 338          Pn      00 53 37.7 -0.8
TTA   Tatalina          3.11 339    P     Pn      00 53 37.9 -0.9
           baz=157,SNR=9.9
TTA   Tatalina          3.11 339          Pn      00 53 37.9 -0.9
GLI   Glacier Island    3.28  73    P     Pn      00 53 38.9 -2.1
           baz=258
GLI   Glacier Island    3.28  73          Pn      00 53 40.5 -0.5
GLI                                 IAML          00 54 24.2
           comp=N,460nm,0.4s
K20K  Telida            3.31 356    P     Pn      00 53 41.2  0.0
           baz=176,SNR=19
K20K                                S     Sn      00 54 19.9 -1.6
           baz=176
K20K  Telida            3.31 356          Pn      00 53 41.3  0.0
CAST  Castle Rocks      3.43  11    P     Pn      00 53 42.6 -0.2
           baz=192,SNR=23
CAST  Castle Rocks      3.43  11          Pn      00 53 42.5 -0.3
SCM   Sheep Creek Mo    3.50  57    P     Pn      00 53 42.4 -1.3
           baz=242,SNR=10
SCM   Sheep Creek Mo    3.50  57          Pn      00 53 42.5 -1.2
SCM                                 IAML          00 54 25.8
           comp=E,501nm,0.9s
SCM                                 IAML          00 54 26.5
           comp=N,452nm,0.9s
HIN   Hinchinbrook I    3.52  82    Pn    Pn      00 53 44.3 +0.4
SII   Sitkinak Islan    3.54 186    P     Pn      00 53 42.5 -1.7
           baz=5.0
SII                                 S     Sn      00 54 23.0 -3.8
           baz=5.0
SII   Sitkinak Islan    3.54 186          Pn      00 53 42.6 -1.7
SII   Sitkinak Islan    3.54 186    IAML          00 54 25.1
           comp=N,631nm,0.4s
JPK   Jack Peak         3.56  71          Pn      00 53 43.0 -1.4
FID   Port Fidalgo      3.56  76          Pn      00 53 42.4 -2.1
VMT   TAPS Tl Valdez    3.67  71          Pn      00 53 44.8 -1.1
KTH   Kantishna Hill    3.71  18          Pn      00 53 45.7 -0.6
KTH   Kantishna Hill    3.71  18    IAML          00 54 30.5
           comp=N,118nm,0.5s
KTH                                 IAML          00 54 31.1
           comp=E,69nm,0.3s
TRF   Thorofare Moun    3.72  23    P     Pn      00 53 46.1 -0.6
           baz=206,SNR=19
TRF                                 S     Sn      00 54 28.6 -2.6
           baz=206
TRF   Thorofare Moun    3.72  23          Pn      00 53 46.2 -0.4
TRF                                 IAML          00 54 30.4
           comp=N,198nm,0.3s
TRF                                 IAML          00 54 32.2
           comp=E,130nm,0.4s
CHUM  Lake Minchumin    3.87   8    P     Pn      00 53 48.1 -0.2
           baz=189,SNR=8.7
CHUM  Lake Minchumin    3.87   8          Pn      00 53 48.1 -0.2
EYAK  Cordova Ski Ar    3.90  80    P     Pn      00 53 48.3 -0.5
           baz=266
EYAK  Cordova Ski Ar    3.90  80          Pn      00 53 48.5 -0.2
ANNE  Aniakchak Nort    3.96 219          Pn      00 53 48.8 -0.9
DIV   Divide            3.97  71          Pn      00 53 48.6 -1.1
KLU   Klutina           3.99  66    P     Pn      00 53 48.7 -1.3
           baz=252,SNR=28
KLU   Klutina           3.99  66          Pn      00 53 48.8 -1.3
RND   Reindeer          4.01  32          Pn      00 53 49.6 -0.7
RND   Reindeer          4.01  32    IAML          00 54 38.5
           comp=E,152nm,0.3s
RND                                 IAML          00 54 39.6
           comp=N,125nm,0.3s
M24K  Tolsona, Glenn    4.11  57    P     Pn      00 53 51.0 -0.6
           baz=243,SNR=12
M24K  Tolsona, Glenn    4.11  57          Pn      00 53 51.0 -0.6
M24K                                IAML          00 54 42.0
           comp=N,344nm,0.6s
M24K                                IAML          00 54 48.4
           comp=E,415nm,0.7s
J20K  Nowinta River     4.13 356    P     Pn      00 53 51.5 -0.2
           baz=176,SNR=11
J20K  Nowinta River     4.13 356          Pn      00 53 51.7  0.0
BPAW  Bear Paw Mtn.     4.21  15    P     Pn      00 53 51.9 -0.9
           baz=198,SNR=8.2
BPAW  Bear Paw Mtn.     4.21  15          Pn      00 53 52.0 -0.9
BPAW  Bear Paw Mtn.     4.21  15    IAML          00 54 39.2
           comp=N,50nm,0.9s
MCK   McKinley          4.27  29    P     Pn      00 53 53.0 -0.5
           baz=213,SNR=22
MCK   McKinley          4.27  29          Pn      00 53 53.1 -0.4
MCK                                 IAML          00 54 44.8
           comp=N,132nm,0.3s
MCK                                 IAML          00 54 45.1
           comp=E,110nm,0.3s
PS11  TAPS Pump St11    4.40  59          Pn      00 53 54.7 -0.5
CHIR  Chirikof Islan    4.41 196    P     Pn      00 53 54.0 -1.4
           baz=14
BMRM  Bremner River     4.50  75    P     Pn      00 53 55.5 -1.1
           baz=262,SNR=7.7
BMRM  Bremner River     4.50  75          Pn      00 53 55.5 -1.1
BWN   Browne            4.53  23          Pn      00 53 56.9 -0.1
BWN   Browne            4.53  23    IAML          00 54 51.3
           comp=N,93nm,0.4s
BWN                                 IAML          00 55 01.2
           comp=E,86nm,0.9s
CHGN  Chignik           4.58 217    P     Pn      00 53 56.5 -1.2
           baz=32
CHGN  Chignik           4.58 217    Pn    Pn      00 53 56.5 -1.2
CHGN                                IAML          00 54 49.8
           comp=E,168nm,0.2s
N25K  Chitina, Valde    4.63  67    P     Pn      00 53 57.5 -0.9
           baz=254,SNR=22
N25K  Chitina, Valde    4.63  67          Pn      00 53 57.3 -1.0
N25K                                IAML          00 54 53.0
           comp=E,309nm,0.6s
HARP  HAARP             4.67  56    P     Pn      00 53 58.4 -0.4
           baz=244,SNR=9.8
HARP  HAARP             4.67  56          Pn      00 53 58.4 -0.4
PAX   Paxson            4.83  50    P     Pn      00 54 00.4 -0.5
           baz=236,SNR=22
PAX   Paxson            4.83  50          Pn      00 54 00.4 -0.5
VNHG  Veniaminof 1      4.88 220          Pn      00 54 00.7 -1.0
VNSG  Veniaminof 6      4.94 219          Pn      00 54 01.3 -1.0
GCSA  Galena City Sc    4.94 343    P     Pn      00 54 01.6 -0.6
           baz=160,SNR=5.2
GLB   Gilahina Butte    4.96  70          Pn      00 54 02.1 -0.5
GLB                                 IAML          00 55 00.5
           comp=N,188nm,0.4s
GLB                                 IAML          00 55 00.6
           comp=E,175nm,0.7s
PS10  TAPS Pump St10    4.99  44          Pn      00 54 03.5 +0.6
NEA2  Nenana            4.99  23    P     Pn      00 54 01.8 -1.1
           baz=207,SNR=40
NEA2  Nenana            4.99  23          Pn      00 54 01.8 -1.1
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NEA2                                IAML          00 54 56.4
           comp=N,32nm,0.7s
NEA2                                IAML          00 54 57.2
           comp=E,30nm,0.4s
VRDI  Verde Repeater    5.09  72          Pn      00 54 03.8 -0.7
VRDI                                IAML          00 55 03.6
           comp=E,122nm,0.7s
WRH   Wood River Hil    5.09  28          Pn      00 54 03.0 -1.3
WRH   Wood River Hil    5.09  28    IAML          00 55 00.3
           comp=E,50nm,0.4s
WRH                                 IAML          00 55 00.8
           comp=N,34nm,0.8s
MLY   Manley            5.14  13    P     Pn      00 54 03.8 -1.1
           baz=196
MLY   Manley            5.14  13          Pn      00 54 04.0 -1.0
I21K  Tanana            5.18   7    P     Pn      00 54 04.7 -0.6
           baz=189,SNR=11
I21K  Tanana            5.18   7          Pn      00 54 05.0 -0.3
I21K  Tanana            5.18   7    IAML          00 57 29.6
           comp=N,30nm,3.7s
CCB   Clear Creek Bu    5.31  28          Pn      00 54 06.1 -0.9
CCB   Clear Creek Bu    5.31  28    IAML          00 55 05.4
           comp=E,42nm,0.4s
CCB                                 IAML          00 55 09.1
           comp=N,44nm,0.3s
MCARA McCarthy VSAT     5.32  71    P     Pn      00 54 06.2 -1.1
           baz=260
MCARA McCarthy VSAT     5.32  71          Pn      00 54 06.2 -1.1
HDA   Harding Lake      5.33  32    P     Pn      00 54 06.4 -0.9
           baz=218,SNR=96
HDA   Harding Lake      5.33  32          Pn      00 54 06.5 -0.9
WAX   Waxell Ridge      5.33  81    Pn    Pn      00 54 07.6 +0.1
SNH   Sunshine Point    5.34  84    Pn    Pn      00 54 06.9 -0.8
TGL   Tana Glacier      5.34  78    Pn    Pn      00 54 08.1 +0.4
TGL                                 IAML          00 55 06.8
           comp=N,181nm,0.6s
I23K  Minto, Yukon-K    5.44  19    P     Pn      00 54 07.7 -1.2
           baz=203,SNR=42
I23K  Minto, Yukon-K    5.44  19          Pn      00 54 07.8 -1.1
MDM   Murphy Dome       5.48  24          Pn      00 54 08.5 -0.9
TCOL  CIGO, UAF Yank    5.49  26    P     Pn      00 54 08.2 -1.2
           baz=211,SNR=24
TCOL  CIGO, UAF Yank    5.49  26          Pn      00 54 08.8 -0.6
COLA  College           5.49  26    P     Pn      00 54 08.7 -0.7
           baz=211
COLA  College           5.49  26          Pn      00 54 08.5 -0.9
RIDG  Independent Ri    5.51  44    P     Pn      00 54 09.6 -0.2
           baz=232
RIDG  Independent Ri    5.51  44          Pn      00 54 09.8  0.0
RIDG                                      Sn      00 55 12.6 -0.1
PTPK  Patty Peak        5.56  74          Pn      00 54 10.8 +0.2
KIAG  Kiagna River      5.58  76          Pn      00 54 10.7 -0.2
M26K  Nabesna, AK       5.59  61    P     Pn      00 54 09.3 -1.7
           baz=250,SNR=24
M26K  Nabesna, AK       5.59  61          Pn      00 54 09.9 -1.0
BALM  Baldy             5.60  75          Pn      00 54 11.0 -0.1
H21K  Melozitna Rive    5.62   3    P     Pn      00 54 11.0 -0.2
           baz=184
IL31                    5.63  30          Pn      00 54 10.3 -1.0
ILAR  Eielson Array     5.63  30    P     Pn      00 54 10.3 -1.0
           comp=N,14nm,0.3s,baz=218,slow=13,SNR=598
ILAR                                S     Sn      00 55 10.1 -5.5
           comp=N,13nm,0.3s,baz=216,slow=27,SNR=7.8
L26K  Log Cabin Wild    5.70  54    P     Pn      00 54 12.3 +0.1
           baz=243
L26K  Log Cabin Wild    5.70  54          Pn      00 54 12.4 +0.2
DOT   Dot Lake          5.74  47          Pn      00 54 12.2 -0.6
MESA  MESA              5.79  84    Pn    Pn      00 54 13.1 -0.6
POKR  Poker Plat Res    5.79  26    P     Pn      00 54 12.6 -0.8
           baz=212,SNR=30
POKR  Poker Plat Res    5.79  26          Pn      00 54 12.7 -0.8
GRNC  Granite Creek     5.87  78          Pn      00 54 15.2 +0.4
GRNC  Granite Creek     5.87  78          Sn      00 55 18.7 -2.8
YAH   Yahtse            5.88  82          Pn      00 54 15.8 +1.0
J25K  Salcha River,     5.93  36    P     Pn      00 54 14.7 -0.7
           baz=224,SNR=54
J25K  Salcha River,     5.93  36          Pn      00 54 14.7 -0.7
BARN  Barnard Glacie    5.94  75          Pn      00 54 16.0 +0.5
IM03                    5.94 359          Pn      00 54 15.5 +0.2
IMAR  Indian Mountai    5.94 359    Pn    Pn      00 54 15.4  0.0
SCRK  Sand Creek        5.96  45    P     Pn      00 54 14.7 -1.1
           baz=233,SNR=16
SCRK  Sand Creek        5.96  45          Pn      00 54 15.1 -0.7
SDPT  Sand Point        6.02 221    P     Pn      00 54 15.2 -1.4
           baz=35
SDPT  Sand Point        6.02 221    Pn    Pn      00 54 15.0 -1.6
H23K  Yukon River       6.05  16    P     Pn      00 54 15.8 -1.1
           baz=199
H23K  Yukon River       6.05  16          Pn      00 54 15.9 -1.1
M27K  Edge Creek, AK    6.08  63    P     Pn      00 54 17.5 +0.2
           baz=253,SNR=9.9
M27K  Edge Creek, AK    6.08  63          Pn      00 54 17.6 +0.2
CTG   Chitna Glacier    6.08  76    P     Pn      00 54 17.7 +0.2
           baz=267,SNR=5.3
CTGM  Chitina Glacie    6.09  76          Pn      00 54 18.1 +0.5
CTGM                                Sn    Sn      00 55 24.3 -2.3
TABL  Table Mountain    6.18  81    Pn    Pn      00 54 19.8 +1.0
LOGN  Logan Glacier     6.24  78          Pn      00 54 20.0 +0.4
H24K  Noodor Dome       6.33  22    P     Pn      00 54 19.6 -1.0
           baz=207
L27K  Beaver Creek,     6.34  57    P     Pn      00 54 20.5 -0.2
           baz=247,SNR=9.8
J26L  Joseph Creek      6.42  42    P     Pn      00 54 21.2 -0.8
           baz=231,SNR=43
PRP   Porcupine Dome    6.58  30    P     Pn      00 54 23.1 -0.9
           baz=218,SNR=29
YUK3  Moose Creek       6.59  69    P     Pn      00 54 24.4  0.0
           baz=261,SNR=8.2
PCA   Pinnacle          6.64  84    Pn    Pn      00 54 25.7 +0.9
PINM  Pinnacle          6.64  84    P     Pn      00 54 25.1 +0.2
           baz=275
ANM   Nome              7.12 314    P     Pn      00 54 31.6 +0.6
           baz=124
PNL   Peninsula         7.12  87    P     Pn      00 54 32.1 +1.0
           baz=279
YUK4  Talbot Arm        7.41  74    P     Pn      00 54 36.8 +1.6
           baz=266
EGAK  Eagle             7.42  45    P     Pn      00 54 34.3 -0.7
           baz=236,SNR=11
FYU   Fort Yukon        7.50  26    Pn    Pn      00 54 35.4 -0.7
YUK6  Outpost Mounta    7.54  77    P     Pn      00 54 38.3 +1.4
           baz=270
DAWY  Dawson            7.74  53    P     Pn      00 54 39.9 +0.6
           baz=245
DAWY  Dawson            7.74  53    Pn    Pn      00 54 39.5 +0.1
HYT   Haines Junctio    7.96  78    P     Pn      00 54 43.6 +1.3
           baz=271
BMAR  Burnt Mountain    8.37  24    Pn    Pn      00 54 45.5 -2.2
M30M  Minto, Yukon      8.42  65    P     Pn      00 54 49.4 +1.0
           baz=260
TOLK  Toolik Lake Re    8.77  10    Pn    Pn      00 54 52.6 -0.3
SKAG  Skagway           9.20  86          Pn      00 55 00.2 +1.6
CRAG  Craig            11.81 104    Pn    Pn      00 55 30.8 -1.9
INK   Inuvik           11.94  38    P     Pn      00 55 35.0 +0.6
           comp=N,0.4nm,0.3s,baz=235,slow=18,SNR=17
INK                                 S     Sn      00 57 43.6 -2.8
           comp=N,0.2nm,0.3s,baz=259,slow=18,SNR=1.7
DLBC  Dease Lake       12.12  88    P     P       00 55 40.1 -2.5
           comp=N,0.3nm,0.3s,baz=291,slow=9.5,SNR=2.6
DLBC                                S     Sn      00 57 48.0 -2.9
           comp=N,0.1nm,0.3s,baz=227,slow=22,SNR=1.9
BBB   Bella Bella      16.13 108    P     P       00 56 33.5 +6.4
           comp=N,0.2nm,0.3s,baz=108,slow=16,SNR=1.5
BBB                                 S     Sn      00 59 29.9 +3.0
           comp=N,0.1nm,0.3s,baz=74,slow=22,SNR=1.9
YKA   Yellowknife Ar   18.66  66    P     Pn      00 56 56.0 -0.9
           comp=N,0.1nm,0.3s,baz=286,slow=10,SNR=5.2
PDAR  Pinedale Array   31.67 103    P     P       00 59 00.4 +3.0
           comp=N,0.2nm,0.4s,baz=334,slow=6.0,SNR=2.0
SONM  Songino Array    54.53 305    P     P       01 02 01.7 +1.4
           comp=N,0.6nm,0.7s,baz=28,slow=6.5,SNR=2.2
ZALV  Zalesovo Beam    57.16 323    P     P       01 02 19.1 +0.5
           comp=N,1.2nm,0.4s,baz=35,slow=7.0,SNR=5.5
FINES FINESS Array B   58.81   0    P     P       01 02 30.3 +0.4
           comp=N,1.8nm,1.0s,baz=328,slow=4.9,SNR=1.6
MKAR  Makanchi Array   64.21 321    P     P       01 03 06.3 -0.1
           comp=N,0.3nm,0.5s,baz=40,slow=7.6,SNR=5.8
```

PRE ***06*** *00:53:56.0±1.1, 27°.90S×26°.63E, $h2^{km}$, ML2.9*

IDC ***06*** *00:53:58.2±1.1, 27°.81S×26°.70E, $h0^{km}$, mb3.6/3, mb1 3.7/8, mb1mx3.5/49, mbtmp3.6/8, ML2.7/4, MS2.9/1, Ms1 2.9/1, ms1mx2.5/30, Error ellipse: s-maj=18.7km s-min=11.0km az=105.0*

*EAF **06** 00:54:00.3±0.8, 27°.92S×26°.76E, h10^{km}, MD3.3*

*BUL **06** 00:54:00.9±1.1, 27°.89S×26°.71E, h10^{km}, MD3.5*

ISC 06 00:53:58.6±1.2, 27°.77S±0°.03×26°.61E±0°.04, h14^{km}±8^{km}, n40, σ1^{s}96/71, mb3.9/3, South Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRYS	Parys	1.07	39	*e*P	Pb	00 54 19.3	+0.1
PRYS				*e*S	Sb	00 54 33.9	+0.8
PRYS				IAML		00 54 42.4	
	comp=Z,140nm,0.3s						
SWZ	Schweizer	1.28	297	*e*P	Pn	00 54 22.1	-0.1
SWZ				*e*S	Sn	00 54 41.1	+1.9
SWZ				IAML		00 54 46.5	
	comp=Z,174nm,0.1s						
BOSA	Boshof	1.46	235	Pg	Pg	00 54 26.4	-0.3
	comp=Z,33nm,0.3s,baz=62,slow=16,SNR=1373						
BOSA				Lg	Lg	00 54 45.7	
	comp=Z,37nm,0.3s,baz=142,slow=19,SNR=11						
BOSA	Boshof	1.46	235	*e*P	Pg	00 54 26.6	-0.1
BOSA				*e*S	Sg	00 54 45.8	+0.1
BOSA	Boshof	1.46	235	*e*P	Pg	00 54 26.6	-0.1
BOSA				*e*S	Sg	00 54 45.8	+0.1
KLOF	Kloof	1.67	32	*e*P	Pb	00 54 28.8	-0.5
KLOF				*e*S	Sg	00 54 51.5	-1.0
KLOF				IAML		00 54 56.1	
	comp=Z,463nm,0.2s						
KSR	Koster	1.93	8	*e*P	Pb	00 54 32.9	-0.8
KSR				*e*S	Sg	00 54 58.4	-2.3
KSR				IAML		00 55 02.5	
	comp=Z,596nm,0.1s						
HRAO	HartRAO	2.11	27	*e*P	Pb	00 54 35.1	-1.6
HRAO				*e*S	Sb	00 55 02.8	0.0
HRAO				IAML		00 55 07.5	
	comp=Z,101nm,0.6s						
SLR	Silverton	2.52	37	*e*P	Pn	00 54 41.0	+1.7
SLR				*e*S	Sn	00 55 12.1	+2.1
SLR				IAML		00 55 26.0	
	comp=Z,168nm,0.5s						
LBTB	Lobatse	2.89	341	Pn	Pb	00 54 48.0	-2.1
	comp=Z,4.6nm,0.3s,baz=165,slow=12,SNR=103						
LBTB				Pg	Pg	00 54 54.1	+0.1
	comp=Z,5.1nm,0.3s,baz=165,slow=16,SNR=11						
LBTB				Sn	Sb	00 55 23.3	-2.1
	comp=Z,3.7nm,0.3s,baz=233,slow=20,SNR=12						
LBTB				Lg	Lg	00 55 30.9	
	comp=Z,16nm,0.3s,baz=247,slow=21,SNR=31						
LBTB	Lobatse	2.89	341	*e*P	Pb	00 54 48.4	-1.7
LBTB				*e*S	Sb	00 55 24.3	-1.1
LBTB	Lobatse	2.89	341	*e*P	Pb	00 54 48.4	-1.7
LBTB				*e*S	Sb	00 55 24.3	-1.1
PKA	Prieska	3.88	240	*e*P	Pn	00 54 57.5	-0.4
PKA				*e*S	Sn	00 55 40.7	-2.6
PKA				IAML		00 56 06.3	
	comp=Z,8.4nm,0.3s						
POGA	Pongola	4.55	86	*e*P	Pn	00 55 06.3	-0.8
POGA				*e*S	Sn	00 55 57.9	-1.8
POGA				IAML		00 56 45.6	
	comp=Z,22nm,5.5s						
UPI	Upington	4.77	262	*e*P	Pn	00 55 10.7	+0.5
UPI				*e*S	Sn	00 56 04.2	-1.2
UPI				IAML		00 56 43.4	
	comp=Z,16nm,3.8s						
SOE	Somerset East	5.01	190	*e*P	Pn	00 55 11.4	-2.0
SOE				*e*S	Sn	00 56 06.0	-5.2
SOE				IAML		00 56 38.5	
	comp=Z,19nm,0.7s						
KEIM	Keimoes	5.06	258	*e*P	Pn	00 55 13.8	-0.4
KEIM				*e*S	Sn	00 56 10.6	-2.0
KEIM				IAML		00 56 42.6	
	comp=Z,39nm,2.6s						
GRAN	Grantham	5.93	219	*e*P	Pn	00 55 25.3	-0.9
GRAN				*e*S	Sn	00 56 28.9	-5.1
GRAN				IAML		00 57 04.2	
	comp=Z,14nm,0.5s						
MOPA	Mopani	6.05	47	*e*P	Pn	00 55 28.9	+1.1
MOPA				*e*S	Sn	00 56 36.1	-0.8
MOPA				IAML		00 57 08.8	
	comp=Z,13nm,1.1s						
MOPA	Mopani	6.05	47	*e*P	Pn	00 55 29.1	+1.3
MOPA				*e*S	Sn	00 56 34.3	-2.6
MOPA	Mopani	6.05	47	*e*P	Pn	00 55 29.1	+1.3
MOPA				*e*S	Sn	00 56 34.3	-2.6
ARMS	Ukamas	6.08	266	*e*P	Pn	00 55 28.3	0.0
ARMS				*e*S	Sn	00 56 34.8	-3.0
ARMS				IAML		00 57 12.3	
	comp=Z,26nm,0.4s						
MSNA	Messina	6.23	31	*e*P	Pn	00 55 30.5	+0.3
MSNA				*e*S	Sn	00 56 38.4	-2.9
MSNA				IAML		00 57 16.8	
	comp=Z,14nm,2.0s						
MSNA	Messina	6.23	31	*e*P	Pn	00 55 32.1	+1.9
MSNA				*e*S	Sn	00 56 40.7	-0.6
MSNA	Messina	6.23	31	*e*P	Pn	00 55 32.1	+1.9
MSNA				*e*S	Sn	00 56 40.7	-0.6
SUR	Sutherland	6.81	226	Pn	Pn	00 55 40.2	+1.9
	comp=Z,0.6nm,0.3s,baz=54,slow=8.7,SNR=21						
SUR				Lg	Lg	00 57 28.1	
	comp=Z,2.1nm,0.3s,baz=321,slow=20,SNR=12						
MATP	Matopo	7.51	14	Pn	Pn	00 55 49.5	+1.6
	comp=Z,0.3nm,0.3s,baz=194,slow=18,SNR=11						
MATP				Sn	Sn	00 57 11.6	-1.5
	comp=Z,0.3nm,0.3s,baz=246,slow=20,SNR=3.8						
MATP				Lg	Lg	00 57 55.8	
	comp=Z,0.9nm,0.3s,baz=115,slow=23,SNR=10						
MATP	Matopo	7.51	14	*e*P	Pn	00 55 49.9	+2.0
MATP				*e*S	Sn	00 57 10.7	-2.4
MATP	Matopo	7.51	14	*e*P	Pn	00 55 49.9	+2.0
MATP				*e*S	Sn	00 57 10.7	-2.4
BLWY	Bulawayo	7.81	14	*e*P	Pn	00 55 53.7	+1.6
BLWY				*e*S	Sn	00 57 17.1	-3.4
BLWY	Bulawayo	7.81	14	*e*P	Pn	00 55 53.7	+1.6
BLWY				*e*S	Sn	00 57 17.1	-3.4
AUSN	Aus	9.28	274	*e*P	Pn	00 56 12.7	+0.5
AUSN				*e*S	Sn	00 57 52.4	-4.2
AUSN				IAML		00 58 07.5	
	comp=Z,9.5nm,2.3s						
KRI	Karoi	11.24	15	*e*P	Pn	00 56 33.1	-5.9
KRI	Karoi	11.24	15	*e*P	Pn	00 56 33.1	-5.9
TSUM	Tsumeb	11.88	314	Pn	Pn	00 56 50.1	+2.3
	comp=Z,0.3nm,0.3s,baz=138,slow=12,SNR=2.3						
TSUM				Sn	Sn	00 59 00.4	0.0
	comp=Z,0.3nm,0.3s,baz=98,slow=14,SNR=2.1						
TSUM				Lg	Lg	01 00 18.9	
	comp=Z,0.2nm,0.3s,baz=60,slow=20,SNR=2.5						
LSZ	Lusaka	12.52	7	Pn	Pn	00 56 58.2	+1.6
	comp=Z,0.2nm,0.3s,baz=188,slow=9.2,SNR=1.6						
LSZ				Sn	Sn	00 59 14.3	-1.7
	comp=Z,0.2nm,0.3s,baz=248,slow=19,SNR=3.7						
LSZ				Lg	Lg	01 00 30.8	
	comp=Z,0.3nm,0.3s,baz=270,slow=19,SNR=1.9						
LSZ				LR	LR	01 01 46.8	
	comp=Z,58nm,21.8s,baz=200,slow=37						
SNAA	Sanae	46.86	192	P	P	01 02 30.0	+2.0
	comp=Z,1.0nm,0.8s,baz=50,slow=7.5,SNR=3.8						
TORD	Torodi Ar. Bea	47.30	326	P	P	01 02 34.3	+2.3
	comp=Z,0.8nm,0.6s,baz=148,slow=7.2,SNR=8.6						
QSPA	South Pole Qui	62.42	180	P	P	01 04 22.1	+1.0
	baz=259,slow=5.2						
ESDC	Sonseca Array	72.90	336	P	P	01 05 29.6	+2.3
	comp=Z,0.3nm,0.7s,baz=156,slow=6.0,SNR=5.4						

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*IDC **06** 00:59:58.6±2.0, 8°.10S×125°.30E, h0^{km}, mb3.5/1, mb1 3.8/5, mb1mx3.6/40, mbtmp3.7/5, ML3.5/4, Error ellipse: s-maj=41.8km s-min=26.6km az=86.0*

ISC 06 01:00:03.5±1.5, 8°.2S±0°.1×125°.5E±0°.1, h35^{km}, n5, σ1^{s}58/7, Timor region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	2.64	222	Pn	Pn	01 00 43.8	+0.2
	7.8nm,0.3s,baz=314,slow=3.4,SNR=2.4						
BATI				Sn	Sn	01 01 14.9	+0.5
	3.4nm,0.3s,baz=161,slow=23,SNR=13						
FITZ	Fitzroy Crossi	9.80	179	Pn	Pn	01 02 22.7	+0.8
	0.3nm,0.3s,baz=6.1,slow=12,SNR=11						
FITZ				Sn	Sn	01 04 08.3	-2.5
	0.6nm,0.3s,baz=66,slow=3.5,SNR=15						
WRA	Warramunga Arr	14.46	144	Pn	Pn	01 03 26.2	+0.4
	0.2nm,0.3s,baz=319,slow=13,SNR=12						
ASAR	Alice Springs	17.34	153	P	P	01 04 05.4	+1.4
	0.2nm,0.3s,baz=320,slow=11,SNR=12						
MKAR	Makanchi Array	66.89	329	P	P	01 10 51.3	-0.8
	0.4nm,0.7s,baz=142,slow=7.3,SNR=2.6						

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*IDC **06** 01:01:26.6±1.8, 2°.90S×139°.63E, h41^{km}±25^{km}, mb4.0/6, mb1 4.2/8, mb1mx3.8/37, mbtmp4.3/8, ML4.3/2, MS3.2/4, Ms1 3.2/4, ms1mx3.0/36, Error ellipse: s-maj=20.7km s-min=12.1km az=154.0*

*DJA **06** 01:01:27.8±1.0, 3°S±8°×14°0E±1°0, h58^{km}±7^{km}, M4.6/12, mb4.5/12, mB5.2/5, MLv4.6/4, Mw(mB)4.6/5, MwMwp5.1/1, Mwp5.3/1*

ISC 06 01:01:27.3±0.8, 2°.86S±0°.08×139°.70E±0°.07, h46^{km}, n21, σ1^{s}84/22, mb4.2/5, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	1.06	71	P	Pn	01 01 46.4	+0.5
	143nm,0.3s,baz=246,slow=9.7,SNR=374						
JAY				S	Sn	01 02 00.6	+1.1
	252nm,0.3s,baz=111,slow=17,SNR=9.0						
JAY				LR	LR	01 02 20.6	
	comp=Z,338nm,19.4s,baz=7.5,slow=47						
SMPI	Sarmi	1.31	311	P	Pn	01 01 51.7	+2.5
WAMI	Wamena	1.41	224	P	Pn	01 01 54.0	+3.4
SRPI	Serui, Papua	3.59	286	P	Pn	01 02 22.3	+1.8
FAKI	Fak Fak	7.44	269	P	Pn	01 03 13.7	+0.4
	0.2nm997nm41nm,0.7s						
SIJI	Sorong	8.65	283	P	Pn	01 03 30.3	+0.3
	4.5nm,0.3s,baz=108,slow=19,SNR=9.3						
SIJI				S	Sn	01 05 04.1	-2.3
	1.4nm,0.3s,baz=237,slow=22,SNR=1.8						
SIJI				LR	LR	01 08 03.1	
	comp=Z,72nm,18.2s,baz=300,slow=46						
SWI	Sorong	8.66	283	P	Pn	01 03 33.6	+3.5
	58nm,0.8s						
LBMI	Labuha	12.39	280	P	Pn	01 04 24.2	+3.1
	33nm,1.0s						
SANI	Sanana	13.72	273	P	Pn	01 04 39.4	+0.1
	61nm,0.7s						
WRA	Warramunga Arr	17.77	197	P	Pn	01 05 29.9	-1.5
	0.9nm,0.3s,baz=18,slow=13,SNR=6.7						
WRA				LR	LR	01 13 31.3	
	comp=Z,46nm,21.8s,baz=150,slow=41						
MMRI	Maumere	18.29	251	P	P	01 05 37.6	+0.1
	52nm,0.4s						
BSSI	Bau Bau, Buton	19.42	260	P	Pn	01 05 52.9	+1.5
	10nm,1.3s						
BKSI	Bulukumba	19.68	262	P	P	01 05 53.7	+1.0
	10nm,1.3s						
TTSI	Tana Toraja	19.85	269	P	P	01 05 55.5	+0.9
FITZ	Fitzroy Crossi	20.47	221	P	P	01 05 59.5	-1.9
	5.7nm,0.4s,baz=32,slow=13,SNR=5.8						
FITZ				S	S	01 09 35.8	-12
	11nm,0.8s,baz=175,slow=15,SNR=6.8						
FITZ				LR	LR	01 14 28.8	
	comp=Z,79nm,20.0s,baz=6.5,slow=38						
ASAR	Alice Springs	21.43	195	P	P	01 06 12.0	+0.4
	7.4nm,0.8s,baz=23,slow=9.7,SNR=28						
LEM	Lembang	32.20	262	LR	LR	01 23 46.4	
	comp=Z,191nm,18.9s,baz=146,slow=42						
PSI	Prapat	41.14	278	P	P	01 09 05.8	-1.8
	5.0nm,0.8s,baz=110,slow=12,SNR=4.4						
KSRS	Korea Array	41.58	346	P	P	01 09 10.8	+0.2
	2.2nm,0.6s,baz=160,slow=8.4,SNR=5.4						
CMAR	Chiang Mai Arr	45.37	299	P	P	01 09 40.5	-1.1
	1.0nm,0.4s,baz=120,slow=6.0,SNR=4.4						
USRK	Ussuriysk Ar.	47.36	352	P	P	01 09 57.1	+0.4
	2.9nm,0.7s,baz=187,slow=10,SNR=4.5						

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*IDC **06** 01:01:42.8±6.9, 7°.55S×127°.55E, h179^{km}±76^{km}, mb3.2/1, mb1 3.6/4, mb1mx3.2/36, mbtmp4.1/4, MS3.1/1, Ms1 3.1/1, ms1mx2.5/19, Error ellipse: s-maj=75.3km s-min=26.7km az=37.0*

ISC 06 01:01:44.1±1.6, 7°.7S±0°.2×127°.5E±0°.1, h200^{km}, n5, σ1^{s}44/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	4.57	237	P	Pn	01 02 53.4	+0.3
	24nm,0.3s,baz=68,slow=3.2,SNR=6.1						
BATI				S	Sn	01 03 46.8	-0.6
	37nm,0.3s,baz=230,slow=21,SNR=16						
WRA	Warramunga Arr	13.83	152	P	Pn	01 04 51.2	-0.8
	0.8nm,0.3s,baz=331,slow=12,SNR=16						
WRA				S	S	01 07 17.3	-8.9
	2.5nm,0.3s,baz=321,slow=25,SNR=7.5						
DAV	Davao City (W)	14.81	352	LR	LR	01 10 43.9	
	comp=Z,68nm,18.1s,baz=332,slow=37						
ASAR	Alice Springs	17.00	160	P	Pn	01 05 32.3	+1.7
	1.1nm,0.3s,baz=338,slow=12,SNR=22						
MKAR	Makanchi Array	67.50	328	P	P	01 12 18.6	-0.1
	0.5nm,0.6s,baz=135,slow=5.7,SNR=3.6						

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*IDC **06** 01:02:42.9±1.1, 55°.98S×26°.52W, h0^{km}, mb3.9/5, mb1 3.9/6, mb1mx3.8/27, mbtmp3.8/6, ML3.4/1, Error ellipse: s-maj=39.4km s-min=23.8km az=64.0*

*NEIC **06** 01:02:51.6±1.0, 56°.1S±0°.2×26°.7W±0°.2, h73^{km}±12^{km}, mb4.2/8, Error ellipse: s-maj=22.5km s-min=17.5km az=200.0*

ISC 06 01:02:47.5±1.0, 55°.9S±0°.2×26°.4W±0°.2, h35^{km}, n17, σ1^{s}11/10, mb4.0/6, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	6.04	282	Pn	Pn	01 04 15.6	+1.3
SNAA	Sanae	18.66	157	P	P	01 07 02.1	0.0
	0.1nm,0.3s,baz=290,slow=14,SNR=5.8						
ZON	Zonda	38.22	292	P	P	01 10 02.7	-1.2
ZON				IAmb	IAmb	01 10 27.0	
	comp=Z,2.9nm,0.9s						
LVC	Limon Verde	45.65	299	P	P	01 11 04.3	-0.7
	comp=Z,3.1nm,0.6s,baz=139,slow=9.3,SNR=3.5						
LVC	Limon Verde	45.65	299	IAmb	IAmb	01 11 05.7	
	comp=Z,5.7nm,0.9s						
VNDA	Vanda	46.71	182	P	P	01 11 12.2	0.0
	comp=Z,1.1nm,0.7s,baz=188,slow=6.0,SNR=6.8						
VNDA	Vanda	46.71	182	IAmb	IAmb	01 11 18.2	
	comp=Z,1.6nm,1.0s						
H10S2	ASCENSION HYDR	47.76	16	T	T	02 03 03.9	
	baz=188,slow=74,SNR=4.9						
H10S3	ASCENSION HYDR	47.77	16	T	T	02 03 04.6	
	baz=32,slow=74,SNR=13						
SIV	San Ignacio	47.84	312	P	P	01 11 21.7	0.0
	comp=Z,0.2nm,0.3s,baz=144,slow=8.7,SNR=1.5						
H10N1	ASCENSION HYDR	48.88	16	T	T	02 04 23.9	
	baz=189,slow=75,SNR=5.8						
H10N3	ASCENSION HYDR	48.88	16	T	T	02 04 28.6	
	baz=189,slow=75,SNR=15						
H10N2	ASCENSION HYDR	48.90	16	T	T	02 04 29.5	
	baz=189,slow=75,SNR=12						
LPAZ	La Paz	50.69	304	P	P	01 11 44.9	+0.6
	comp=Z,1.2nm,0.3s,baz=152,slow=5.3,SNR=11						
LPAZ	La Paz	50.69	304	P	P	01 11 43.1	-1.2
LPAZ				IAmb	IAmb	01 11 45.3	
	comp=Z,1.9nm,0.7s						
TORD	Torodi Ar. Bea	72.73	29	P	P	01 14 13.1	+1.3
	comp=Z,0.3nm,0.4s,baz=199,slow=5.9,SNR=8.5						
CDVI	St. Croix	80.23	323	P	P	01 14 52.9	-1.3

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*BJI **06** 01:09:54.1±0.0, 52°.63N×169°.86W, h10^{km}, mB5.4/59, mb5.5/78, Ms5.3/77, Ms7 5.1/74*

*MOS **06** 01:09:55.9±1.1, 52°.27N×169°.54W, h29^{km}, mb5.6/92, MS4.9/61, Error ellipse: s-maj=7.4km s-min=4.3km az=99.9*

*NEIC **06** 01:09:55.6, 52°.28N×169°.59W, h21^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.77; $M_{\theta\theta}$-0.91; $M_{\phi\phi}$0.14; $M_{r\theta}$0.44; $M_{\theta\phi}$-0.29; $M_{\phi r}$0.31; Fault plane solution: $M_0$1.05000×10^{17} NP1:ϕ_s271.37000°, δ31.90000°, λ115.18000°. NP2:ϕ_s62.40000°, δ61.43000°, λ75.17000°. Principal axes: T 0.9571, Plg70.0000°, Azm301.0000°; N 0.1693, Plg13.0000°, Azm70.0000°; P -1.1264, Plg15.0000°, Azm163.0000°;*

*IDC **06** 01:09:55.4±3.1, 52°.27N×169°.61W, h14^{km}±18^{km}, mb5.0/36, mb1 5.1/38, mb1mx5.1/51, mbtmp5.1/38, ML4.6/2, MS4.8/41, Ms1 4.8/41, ms1mx4.7/47 Error ellipse: s-maj=13.7km s-min=9.3km az=166.0*

*NEIC **06** 01:09:56.5±1.8, 52°.27N±0°.04×169°.45W±0°.06, h19^{km}±2^{km}, mb5.5/676, Ms_20 4.9/199, Mwb5.3/61, Mww5.3, ML5.1(AEIC), Mwc5.4(GCMT), Error ellipse: s-maj=5.9km s-min=4.3km az=141.0*

*AEIC **06** 01:09:58±2.0, 52°.25N±0°.05×169°.42W±0°.08, h24^{km}±3^{km}, Error ellipse: s-maj=9.4km s-min=4.6km az=136.0*

*NEIC **06** 01:09:59, 52°.09N×169°.45W, h21^{km}, Moment Tensor Solution. Duration: 2^{s}6 Moment tensor: Scale 10^{17}Nm; M_{rr}1.20; $M_{\theta\theta}$-1.11; $M_{\phi\phi}$-0.09; $M_{r\theta}$1.11; $M_{\theta\phi}$-0.51; $M_{\phi r}$0.39; Fault plane solution: $M_0$1.73000×10^{17} NP1: ϕ_s245.00000°, δ24.00000°, λ86.00000°. NP2:ϕ_s70.00000°, δ67.00000°, λ92.00000°. Principal axes: T 1.6651, Plg68.0000°, Azm343.0000°; N 0.1178, Plg2.0000°, Azm249.0000°; P -1.7829, Plg22.0000°, Azm158.0000°;*

*NEIC **06** 01:09:59, 52°.06N×168°.87W, h20^{km}, Moment Tensor Solution. Duration: 8^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}0.94; $M_{\theta\theta}$-0.91; $M_{\phi\phi}$-0.03; $M_{r\theta}$0.69; $M_{\theta\phi}$-0.37; $M_{\phi r}$0.52; Fault plane solution: $M_0$1.31000×10^{17} NP1: ϕ_s263.00000°, δ26.00000°, λ112.00000°. NP2: ϕ_s59.00000°, δ66.00000°, λ80.00000°. Principal axes: T 1.2818, Plg68.0000°, Azm309.0000°; N 0.0627, Plg9.0000°, Azm63.0000°; P -1.3445, Plg20.0000°, Azm156.0000°;*

*GCMT **06** 01:09:59.5±0.1, 52°.13N±0°.01×169°.43W±0°.01, h21^{km}, MW5.4/135, Moment Tensor Solution. s116,c204; s135,c253; Duration: 1^{s}2 Moment tensor: Scale 10^{17} Nm; M_{rr}1.22±.02; $M_{\theta\theta}$-1.12±.02; $M_{\phi\phi}$-0.10±.01; $M_{r\theta}$0.95±.03; $M_{\theta\phi}$-0.46±.01; $M_{\phi r}$0.29±.03; Best double couple: $M_0$1.60200×10^{17} NP1:ϕ_s246.00000°, δ26.00000°, λ85.00000°. NP2:ϕ_s71.00000°, δ64.00000°, λ92.00000°. Principal axes: T 1.5650, Plg71.0000°, Azm347.0000°; N 0.0710, Plg2.0000°, Azm250.0000°; P -1.6400, Plg19.0000°, Azm160.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **06** 01:10:00.8±0.0, 53°.45N×169°.22W, h10^{km}, mb5.6, Ms4.7*

ISC 06 01:09:54.5±0.5, **52°.12N**±0°.04×**169°.51W**±0°.03, **h11^{km}**±2^{km}, **h12^{km}:pP-P, n1590, σ1^{s}29**/1347, **mb5.5**/547, **MS4.9**/201, **411C-212D, Fault plane solution: NP1:**ϕ_s219.75031°, δ37.02058°, λ35.18788°. **NP2:**ϕ_s100.37210°, δ69.69809°, λ121.64616°. **Principal axes:** T Plg54.0872°, Azm49.6074°; N Plg29.4772°, Azm268.3017°; P Plg18.6161°, Azm167.3254°; **Fault plane solution: NP1:**ϕ_s81.50153°, δ53.60613°, λ63.37309°. **NP2:** ϕ_s301.69846°, δ43.97964°, λ121.30092°. **Principal axes:** T Plg68.1828°, Azm292.9929°; N Plg21.1472°, Azm98.0676°; P Plg5.1219°, Azm190.0545°; **Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIKH	Nikolski High	0.94	25		Pb	01 10 12.7	0.0
NIKH					Sg	01 10 24.6	-0.2
OKSP	Okmok Steeple	1.35	33		Pn	01 10 18.5	-0.7
OKSO	Okmok South	1.48	33		Pn	01 10 20.9	-0.1
OKSO					Sn	01 10 37.5	-2.8
OKTU	Okmok Mt. Tuli	1.54	35		Pn	01 10 21.6	-0.3
OKFG	Magazine Ridge	1.61	36		Pn	01 10 22.4	-0.4
MAPS	Pakushin South	2.29	42		Pn	01 10 32.4	+0.2
MAPS					Sn	01 11 00.9	+0.6
MSW	Makushin Switc	2.44	41		Pn	01 10 34.8	+0.7
MNAT	Makushin Natee	2.45	43		Pn	01 10 35.5	+1.1
MNAT					Sn	01 11 04.5	+0.2
UNV	Unalaska Valle	2.50	45	P	Pn	01 10 35.7	+0.7
	baz=229,SNR=217						
UNV	Unalaska Valle	2.50	45	Pn	Pn	01 10 35.3	+0.3
UNV	Unalaska Valle	2.50	45		Sn	01 11 04.6	-0.9
MTBL	Makushin Table	2.52	42		Pn	01 10 36.0	+0.7
KOFP	Korovin Flat P	2.83	275		Pb	01 10 42.8	-2.1
AKMO	Akutan Morgan	2.89	46		Pn	01 10 41.6	+1.4
AKMO					Sn	01 11 15.7	+0.8
AKRB	Akutan Reef Bi	2.89	45		Pn	01 10 42.0	+1.7
KOKL	Mount Kliuchef	2.89	276		Pb	01 10 44.4	-1.6
LVA	Lava Point	2.92	44		Pn	01 10 42.5	+1.7
AKBBA	Akutan Broad B	2.92	46		Pn	01 10 42.6	+1.8
AKLV	Akutan Long Va	2.96	45		Pn	01 10 42.9	+1.6
AKGG	Akutan Green G	2.97	44		Pn	01 10 42.9	+1.5
AKUT	Akutan	3.02	47		Pn	01 10 44.3	+2.2
AKSA	Akutan Strait	3.06	47		Pn	01 10 44.3	+1.7
WECS	Westdahl Cape	3.72	48		Pn	01 10 53.7	+1.9
WEBT	Westdahl Beart	3.77	47		Pn	01 10 54.7	+2.2
GSTR	Great Sitkin T	4.04	272	Pn	Pn	01 10 57.0	+0.9
GSTD	Great Sitkin T	4.09	272		Pn	01 10 60.0	+3.0
SSLS	Shishaldin Sou	4.19	50		Pn	01 11 00.2	+1.9
ISLZ	Isanotski Laza	4.34	51		Pn	01 11 01.7	+1.5
ADK	Adak	4.44	270	P	Pn	01 11 02.7	+1.1
ADK	Adak	4.44	270	Pn	Pn	01 11 02.7	+1.1
FALS	False Pass	4.55	51	P	Pn	01 11 06.7	+3.6
	baz=236,SNR=8.8						
FALS	False Pass	4.55	51	Pn	Pn	01 11 04.4	+1.3
KIWB	Kanaga Island	4.73	270		Pn	01 11 06.7	+1.1
KIMD	Kanaga Island	4.79	269		Pn	01 11 09.1	+2.6
SPIA	Saint Paul Isl	5.08	355	P	Pn	01 11 13.1	+2.8
	baz=174,SNR=14						
SPIA	Saint Paul Isl	5.08	355	Pn	Pn	01 11 10.0	-0.4
TASE	Tanaga Southea	5.28	270		Pn	01 11 16.1	+2.9
GAEA	Gareloi East	5.72	270		Pn	01 11 22.8	+3.6
SDPT	Sand Point	6.26	55	P	Pn	01 11 28.0	+1.4
	baz=243,SNR=7.7						
SDPT	Sand Point	6.26	55	Pn	Pn	01 11 27.1	+0.6
CNBA	Chernabura Isl	6.51	62	Pn	Pn	01 11 30.6	+0.6
CHNA	Chernabura Isl	6.51	61	P	Pn	01 11 31.1	+1.1
	baz=250						
AMKA	Amchitka	6.99	268	Pn	Pn	01 11 38.8	+2.2
VNHG	Veniaminof 1	7.33	52		Pn	01 11 44.0	+2.7
LSPA	Little Sitkin	7.36	273		Pn	01 11 46.5	+4.9
LSNW	Little Sitkin	7.39	274		Pn	01 11 46.9	+4.8
CHGN	Chignik	7.73	53	P	Pn	01 11 48.7	+2.0
	baz=242						
CHGN	Chignik	7.73	53		Pn	01 11 48.1	+1.4
CHIR	Chirikof Islan	8.98	60	P	Pn	01 12 05.2	+1.3
	baz=252						
CHIR	Chirikof Islan	8.98	60	Pn	Pn	01 12 04.9	+1.1
SII	Sitkinak Islan	9.98	58	P	Pn	01 12 17.6	-0.1
	baz=250						
SII	Sitkinak Islan	9.98	58	Pn	Pn	01 12 19.4	+1.7
OHAK	Old Harbor	10.68	55	P	Pn	01 12 26.4	-0.8
	baz=249						
OHAK	Old Harbor	10.68	55	Pn	Pn	01 12 25.5	-1.7
P18K	Big Mountain,	10.83	42	P	Pn	01 12 29.2	-0.1
	baz=234						
P18K	Big Mountain,	10.83	42	Pn	Pn	01 12 28.3	-1.0
O18K	Koktuh Hills	11.12	40	P	Pn	01 12 34.0	+0.8
	baz=232,SNR=21						
O18K	Koktuh Hills	11.12	40		Pn	01 12 33.5	+0.3
KDAK	Kodiak Island	11.25	53	Pn	Pn	01 12 33.6	-1.3
	2.9nm,0.3s,baz=224,slow=2.8,SNR=29						
KDAK	Kodiak Island	11.25	53	P	Pn	01 12 33.7	-1.2
KDAK	Kodiak Island	11.25	53	P	Pn	01 12 34.3	-0.6
	baz=247						
KDAK	Kodiak Island	11.25	53	Pn	Pn	01 12 33.7	-1.2
Q19K	Cape Douglas,	11.26	47	P	Pn	01 12 35.5	+0.3
	baz=240						
SVW2	Sparrevohn	11.79	35		Pn	01 12 43.8	+1.5
P19K	Oil Pt	11.82	44	P	Pn	01 12 43.8	+1.0
	baz=238						
N19K	Bonanza Creek	12.00	38	P	Pn	01 12 47.2	+1.8
	baz=230,SNR=11						
N19K	Bonanza Creek	12.00	38		Pn	01 12 45.5	+0.1
O20K	Slope Mountain	12.31	43	P	Pn	01 12 50.2	+0.7
	baz=237						
RSO	Redoubt South	12.47	41		Pn	01 12 52.0	+0.2
HOM	Homer	12.52	46	P	Pn	01 12 53.2	+1.0
	baz=241						
ANM	Nome	12.66	8	P	Pn	01 12 52.7	-1.5
ANM	Nome	12.66	8	P	Pn	01 12 54.8	+0.6
	baz=192						
ANM	Nome	12.66	8		Pn	01 12 52.7	-1.5
M19K	Big River Lodg	12.76	34	P	Pn	01 12 57.4	+1.8
	baz=227						
L19K	White Mountain	12.80	32	P	Pn	01 12 58.1	+2.0
	baz=225,SNR=36						
L19K	White Mountain	12.80	32	Pn	Pn	01 12 56.4	+0.3
BRSE	Bradley Lake S	12.96	47	P	Pn	01 12 58.6	+0.3
	baz=242						
TTA	Tatalina	13.00	28	P	Pn	01 13 00.4	+1.5
	baz=220,SNR=48						
SPCR	Spurr Chakacha	13.12	39	P	Pn	01 13 01.5	+1.0
	baz=234						
SPU	Mount Spurr	13.17	40	Pn	Pn	01 13 00.5	-0.7
L20K	Farewell, AK	13.34	33	P	Pn	01 13 04.4	+1.0
	baz=226,SNR=10						
TNA	Tin City	13.50	3	P	Pn	01 13 08.8	+3.2

	baz=184						
TNA	Tin City	13.50	3	Pn	Pn	01 13 04.8	-0.9
SEW	Seward	13.70	46	P	Pn	01 13 07.4	-0.9
	baz=243						
SEW	Seward	13.70	46	Pn	Pn	01 13 06.2	-2.1
O22K	Cooper Landing	13.76	45	P	Pn	01 13 08.1	-1.1
	baz=242						
SKT	Skwentna	13.85	38	P	Pn	01 13 12.1	+1.7
	baz=233						
SUA	Susitna One	13.85	40	P	Pn	01 13 10.6	+0.2
	baz=236						
K20K	Telida	13.90	30	P	Pn	01 13 12.9	+1.8
	baz=223,SNR=20						
PPLA	Purkeypile	14.19	34	P	Pn	01 13 15.4	+0.1
	baz=229,SNR=5.1						
GCSA	Galena City Sc	14.24	22	P	Pn	01 13 16.4	+0.7
	baz=213,SNR=19						
M22K	Willow	14.26	40	P	Pn	01 13 15.5	-0.4
	baz=236						
J20K	Nowinta River	14.49	28	P	Pn	01 13 18.6	-0.6
	baz=221,SNR=38						
PWL	Port Wells	14.54	45	P	Pn	01 13 17.6	-2.3
	baz=243						
PMR	Palmer	14.57	41	P	Pn	01 13 18.6	-1.6
PMR	Palmer	14.57	41	P	Pn	01 13 20.1	-0.1
	baz=239						
PMR	Palmer	14.57	41	Pn	Pn	01 13 18.6	-1.6
CUT	Chulitna	14.57	38	P	Pn	01 13 20.9	+0.6
	baz=234						
CAST	Castle Rocks	14.58	32	P	Pn	01 13 20.4	0.0
	baz=227,SNR=6.9						
KNK	Knik Glacier	14.75	43	P	Pn	01 13 21.6	-1.2
	baz=241						
CHUM	Lake Minchumin	14.83	31	P	Pn	01 13 23.4	-0.4
	baz=226,SNR=14						
Q23K	Middleton Isla	14.88	52	P	Pn	01 13 24.0	-0.5
	baz=251						
SML	Sawmill	15.01	42	P	Pn	01 13 24.9	-1.3
	baz=240						
GLI	Glacier Island	15.09	46	P	Pn	01 13 24.9	-2.4
	baz=245						
TRF	Thorofare Moun	15.21	34	P	Pn	01 13 29.3	+0.2
	baz=231						
TRF	Thorofare Moun	15.21	34	IAmb	IAmb	01 13 56.1	
	comp=Z,206nm,1.4s						
FID	Port Fidalgo	15.31	47	IAmb	IAmb	01 13 39.7	
	comp=Z,205nm,1.2s						
BPAW	Bear Paw Mtn.	15.40	32	P	Pn	01 13 30.6	-0.8
	baz=228,SNR=28						
BPAW	Bear Paw Mtn.	15.40	32	IAmb	IAmb	01 13 36.8	
	comp=Z,231nm,1.0s						
SCM	Sheep Creek Mo	15.43	42	P	Pn	01 13 30.0	-1.9
	baz=241,SNR=18						
SCM	Sheep Creek Mo	15.43	42	IAmb	IAmb	01 13 36.3	
	comp=Z,231nm,1.0s						
EYAK	Cordova Ski Ar	15.56	48	P	Pn	01 13 32.1	-1.4
	baz=248						
RND	Reindeer	15.69	36	P	Pn	01 13 33.3	-2.0
RND				pmax	pmax		
	comp=Z,178nm,1.4s						
RND	Reindeer	15.69	36	Pn	Pn	01 13 33.3	-2.0
MCK	McKinley	15.86	35	P	Pn	01 13 37.1	-0.3
	baz=233,SNR=13						
I21K	Tanana	15.86	28	P	Pn	01 13 37.4	+0.1
	baz=223,SNR=22						
KLU	Klutina	15.87	45	P	Pn	01 13 35.4	-2.2
	baz=245,SNR=19						
BWN	Browne	15.95	33	IAmb	IAmb	01 13 52.7	
	comp=Z,530nm,1.3s						
H21K	Melozitna Rive	16.00	26	P	Pn	01 13 39.3	+0.2
	baz=220						
M24K	Tolsona, Glenn	16.04	42	P	Pn	01 13 37.7	-2.0
	baz=242,SNR=5.8						
M24K	Tolsona, Glenn	16.04	42	IAmb	IAmb	01 13 44.5	
	comp=Z,216nm,0.8s						
MLY	Manley	16.12	29	P	P	01 13 42.5	-1.5
	baz=226						
MLY	Manley	16.12	29	IAmb	IAmb	01 13 50.8	
	comp=Z,234nm,1.0s						
BMRM	Bremner River	16.24	47	P	Pn	01 13 40.0	-2.3
	baz=248,SNR=6.0						
BMRM	Bremner River	16.24	47	Pn	Pn	01 13 40.6	-1.7
BMRM				IAmb	IAmb	01 13 50.6	
	comp=Z,372nm,1.2s						
RDOG	Red Dog Mine	16.30	9	P	Pn	01 13 43.1	+0.1
	baz=194,SNR=7.3						
NEA2	Nenana	16.36	32	P	Pn	01 13 43.5	-0.2
	baz=230,SNR=11						
BERG	Berg Lake	16.46	50	IAmb	IAmb	01 14 04.9	
	comp=Z,592nm,1.4s						
N25K	Chitina, Valde	16.49	45	P	Pn	01 13 43.2	-2.4
	baz=246,SNR=15						
HARP	HAARP	16.60	42	P	Pn	01 13 46.3	-0.5
	baz=243,SNR=12						
I23K	Minto, Yukon-K	16.63	31	P	Pn	01 13 46.7	-0.4
	baz=228,SNR=33						
PAX	Paxson	16.74	40	P	Pn	01 13 47.5	-1.2
	baz=241						
GLB	Gilahina Butte	16.78	46	Pn	Pn	01 13 47.0	-2.1
SNH	Sunshine Point	16.80	51	IAmb	IAmb	01 13 55.6	
	comp=Z,470nm,1.1s						
CRQE	Cirque	16.86	49	P	Pn	01 13 48.6	-1.6
	baz=251						
WAX	Waxell Ridge	16.88	50	IAmb	IAmb	01 14 11.0	
	comp=Z,204nm,0.8s						
TCOL	CIGO, UAF Yank	16.94	33	P	Pn	01 13 49.3	-1.7
	baz=231,SNR=7.4						
COLA	College	16.94	33	*de*P	Pn	01 13 50.1	-0.9
COLA				pmax	pmax		
	comp=Z,29nm,0.8s						
COLA	College	16.94	33	P	Pn	01 13 49.0	-2.0
	baz=231						
COLA	College	16.94	33	Pn	Pn	01 13 49.2	-1.8
HDA	Harding Lake	16.97	35	P	Pn	01 13 49.5	-1.9
	baz=234,SNR=13						
H23K	Yukon River	17.04	29	P	Pn	01 13 52.3	-0.1
	baz=226						
MCARA	McCarthy VSAT	17.11	47	P	Pn	01 13 50.6	-2.6
	baz=249,SNR=13						
ILAR	Eielson Array	17.20	34	P	Pn	01 13 52.5	-1.8
	comp=Z,0.9nm,0.3s,baz=231,slow=11,SNR=37						
ILAR				PcP	PcP	01 18 37.7	+0.4
	comp=Z,0.2nm,0.3s,baz=260,slow=3.5,SNR=6.2						
ILAR	Eielson Array	17.20	34	Pn	Pn	01 13 52.7	-1.7
MESA	MESA	17.23	51	P	Pn	01 13 53.8	-1.1
	baz=255,SNR=6.8						
MESA	MESA	17.23	51	IAmb	IAmb	01 14 00.2	
	comp=Z,362nm,1.1s						
POKR	Poker Plat Res	17.23	32	P	Pn	01 13 53.3	-1.5
	baz=232						
RIDG	Independent Ri	17.37	38	P	Pn	01 13 54.8	-1.8
	baz=240						
YAH	Yahtse	17.38	51	IAmb	IAmb	01 14 08.9	
	comp=Z,204nm,0.8s						
GRNC	Granite Creek	17.48	50	IAmb	IAmb	01 14 11.0	
	comp=Z,254nm,1.1s						
M26K	Nabesna, AK	17.51	44	P	Pn	01 13 57.0	-1.3
	baz=246,SNR=22						
M26K	Nabesna, AK	17.51	44		Pn	01 13 56.9	-1.4
H24K	Noodor Dome	17.55	30	P	Pn	01 13 58.4	-0.3
	baz=229						
L26K	Log Cabin Wild	17.63	42	P	Pn	01 13 57.7	-2.0
	baz=244,SNR=16						
J25K	Salcha River,	17.64	36	P	Pn	01 13 57.6	-2.3
	baz=236,SNR=39						
TABL	Table Mountain	17.69	51	IAmb	IAmb	01 14 14.0	
	comp=Z,312nm,1.0s						
CTG	Chitna Glacier	17.74	49	P	Pn	01 13 59.8	-1.4
	baz=253,SNR=14						
SCRK	Sand Creek	17.82	38	P	Pn	01 14 00.0	-2.2
	baz=240,SNR=18						
COLD	Coldfoot	17.87	25	P	Pn	01 14 02.0	-0.7
	baz=222,SNR=21						
M27K	Edge Creek, AK	17.97	45	P	Pn	01 14 02.7	-1.3
	baz=248,SNR=41						
M27K	Edge Creek, AK	17.97	45	IAmb	IAmb	01 14 10.8	
	comp=Z,272nm,1.1s						
PCA	Pinnacle	18.03	52	Pn	Pn	01 14 01.2	-3.6
PCA				IAmb	IAmb	01 14 11.5	
	comp=Z,192nm,0.8s						
PINM	Pinnacle	18.03	52	P	Pn	01 14 03.6	-1.1
	baz=257,SNR=12						
PRP	Porcupine Dome	18.11	33	P	Pn	01 14 03.3	-2.4
	baz=234,SNR=11						
J26L	Joseph Creek	18.25	37	P	Pn	01 14 05.8	-1.6
	baz=240,SNR=58						
L27K	Beaver Creek,	18.27	42	P	Pn	01 14 06.2	-1.4
	baz=246,SNR=18						
PNL	Peninsula	18.36	54	P	Pn	01 14 08.6	-0.1
	baz=259,SNR=5.8						
YUK3	Moose Creek	18.40	47	P	Pn	01 14 07.8	-1.6
	baz=252,SNR=34						
BVCY	Beaver Creek	18.43	45	P	Pn	01 14 09.6	0.0
	baz=249						
YUK4	Talbot Arm	19.10	49	P	Pn	01 14 18.8	+0.8
	baz=255,SNR=26						
TOLK	Toolik Lake Re	19.10	22	P	P	01 14 16.2	-0.7
	baz=220,SNR=23						
YUK6	Outpost Mounta	19.14	50	P	P	01 14 17.5	0.0
	baz=257,SNR=17						
EGAK	Eagle	19.29	38	P	P	01 14 18.5	-0.3
	baz=242,SNR=17						
PET	Petropavlovsk	19.29	285	*de*P	P	01 14 19.1	+0.1
PET				*e*S	Sn	01 17 49.0	-7.0
PET				pmax	pmax		
	comp=Z,126nm,1.0s						
PET				pmax	pmax		
	comp=Z,1µm,14.9s						
PET				MLR	MLR		
	comp=Z,3µm,17.0s						
PET				MLR	MLR		
	comp=Z,3µm,17.0s						
PET	Petropavlovsk	19.29	285	P	P	01 14 17.6	-1.4
HYT	Haines Junctio	19.52	51	P	P	01 14 21.7	+0.1
	baz=258,SNR=88						
HYT	Haines Junctio	19.52	51	IAmb	IAmb	01 14 26.4	
	comp=Z,220nm,0.9s						
DAWY	Dawson	19.67	41	P	P	01 14 22.2	-0.9
	baz=247,SNR=22						
BILL	Bilibino	19.78	333	*de*P	Pn	01 14 25.3	-0.4
BILL				*e*S	S	01 18 06.3	-0.3
BILL				pmax	pmax		
	comp=Z,125nm,1.3s						
BILL				MLR	MLR		
	comp=Z,2µm,14.0s						
BILL	Bilibino	19.78	333		P	01 14 24.2	0.0
PEA0B	Petropavlovsk-	19.84	286	*c i*P	P	01 14 25.3	+0.3
PEA0B	Petropavlovsk-	19.84	286	P	P	01 14 24.9	-0.2
PETK	Petropavlovsk-	19.84	286	P	P	01 14 25.1	+0.1
	comp=Z,23nm,0.3s,baz=95,slow=11,SNR=212						
PETK				LR	LR	01 22 31.4	
	comp=Z,2µm,19.8s,baz=92,slow=38						
PETK	Petropavlovsk-	19.84	286	P	P	01 14 25.4	+0.3
SIT	Sitka	20.27	62	P	P	01 14 28.9	-0.7
SIT				pmax	pmax		
	comp=Z,116nm,1.1s						
SIT	Sitka	20.27	62	P	P	01 14 29.2	-0.3
	baz=271						
SIT	Sitka	20.27	62	P	P	01 14 28.9	-0.7
M30M	Minto, Yukon	20.28	46	P	P	01 14 29.4	-0.3
	baz=254,SNR=16						
SKAG	Skagway	20.38	55	P	Pn	01 14 32.6	-0.3
	baz=264,SNR=54						
SKAG	Skagway	20.38	55	IAmb	IAmb	01 14 38.9	
	comp=Z,199nm,0.8s						
N31M	Braeburn, Yuko	20.48	50	P	Pn	01 14 32.9	-1.1
	baz=258,SNR=31						
BESE	Bessie Mountai	20.55	58	P	P	01 14 32.9	+0.1
BESE				IAmb	IAmb	01 15 00.7	
	comp=Z,409nm,1.4s						
I29M	Ogilvie Camp,	20.63	38	P	P	01 14 33.5	0.0
	baz=245						
WHY	Whitehorse	20.76	52	P	P	01 14 36.0	+1.0
	baz=262,SNR=55						
WHY	Whitehorse	20.76	52	IAmb	IAmb	01 14 44.4	
	comp=Z,188nm,0.9s						
M31M	Drury Creek, Y	21.27	48	P	P	01 14 40.9	+0.5
	baz=258,SNR=41						
CRAG	Craig	21.59	67	P	P	01 14 44.5	+0.7
	baz=277,SNR=6.1						
CRAG	Craig	21.59	67	IAmb	IAmb	01 15 14.4	
	comp=Z,202nm,1.3s						
P33M	Teslin, Yukon	21.72	54	P	P	01 14 46.0	+0.7
	baz=265,SNR=69						
WRAK	Wrangell Islan	21.93	64	P	P	01 14 46.4	-1.1
	baz=275						
H02S1	DAWSON INLET T	22.33	72	T	T	01 38 01.0	
SEY	Seymchan	22.77	313	P	P	01 14 56.1	-0.3
	comp=Z,56nm,1.1s,baz=61,slow=12,SNR=28						
SEY				PcP	PcP	01 18 48.7	+1.2
	comp=Z,18nm,0.7s,baz=148,slow=3.8,SNR=9.7						
SEY				LR	LR	01 24 04.5	
	comp=Z,3µm,18.7s,baz=104,slow=38						
SEY	Seymchan	22.77	313	⇓*i*P	P	01 14 56.8	+0.3
DLBC	Dease Lake	23.09	59	P	P	01 15 01.2	+1.3
	comp=Z,79nm,1.1s,baz=267,slow=10,SNR=40						
DLBC				LR	LR	01 24 12.3	
	comp=Z,2µm,21.5s,baz=296,slow=37						
DLBC	Dease Lake	23.09	59	P	P	01 15 01.1	+1.3
DLBC				IAmb	IAmb	01 15 12.7	
	comp=Z,237nm,1.4s						
MA2	Magadan	23.21	304	P	P	01 15 02.1	+1.2
	comp=Z,66nm,0.8s,baz=79,slow=8.0,SNR=15						
MA2				LR	LR	01 25 21.3	
	comp=Z,2µm,18.5s,baz=100,slow=40						
MA2	Magadan	23.21	304	*d i*P	P	01 15 02.9	+1.9
MA2				pmax	pmax		
	comp=Z,107nm,1.3s						
MA2				MLR	MLR		
	comp=Z,2µm,17.0s						
MA2	Magadan	23.21	304	P	P	01 15 00.7	-0.3
MA2				IAmb	IAmb	01 15 03.7	
	comp=Z,86nm,0.9s						
INK	Inuvik	23.60	33	P	P	01 15 02.5	-2.3
	comp=Z,37nm,0.6s,baz=233,slow=9.7,SNR=70						
INK				PcP	PcP	01 18 50.2	+1.1
	comp=Z,20nm,0.8s,baz=304,slow=2.9,SNR=7.1						
INK				LR	LR	01 24 33.5	
	comp=Z,3µm,21.1s,baz=234,slow=37						
INK	Inuvik	23.60	33	P	P	01 15 02.2	-2.6
	baz=245,SNR=56						
INK	Inuvik	23.60	33	P	P	01 15 02.4	-2.3
BBB	Bella Bella	25.16	73	P	P	01 15 21.3	+2.0
	comp=Z,26nm,1.0s,baz=293,slow=10.0,SNR=6.3						
WRGLY	Wrigley	26.39	47	P	P	01 15 30.4	0.0
	baz=267						
CBB	Campbell River	27.50	77	IAmb	IAmb	01 15 56.4	
	comp=Z,87nm,1.5s						
A36M	Sachs Harbour	27.67	28	P	P	01 15 40.8	-1.0
	baz=248,SNR=12						
A36M	Sachs Harbour	27.67	28	P	P	01 15 41.0	-0.8
A36M				PcP	PcP	01 18 58.9	+0.5
A36M				ScP	ScP	01 22 37.1	-1.5
OZB	Mount Ozzard	27.83	79	IAmb	IAmb	01 15 59.3	
	comp=Z,88nm,1.3s						
CLRS	Cowichan Lake	28.71	78	IAmb	IAmb	01 16 07.0	
	comp=Z,131nm,1.5s						
PGC	Sidney	29.19	78	P	P	01 15 57.0	+1.5
B04A	Port Angeles	29.41	79	P	P	01 15 59.2	+1.7
NLWA	Neilton Lookou	29.48	81	P	P	01 15 59.4	+1.2
NLWA				IAMs_20	IAMs_20	01 26 30.6	
	comp=Z,2µm,18.0s						
D03D	Eldon	29.89	80	P	P	01 16 03.7	+1.9
	baz=297,SNR=11						
B05A	Bryant	30.17	78	P	P	01 16 05.9	+1.7
	baz=296,SNR=30						
YKA	Yellowknife Ar	30.47	49	P	P	01 16 06.9	+0.2
	comp=Z,28nm,0.8s,baz=273,slow=8.8,SNR=58						
YKA				ScP	ScP	01 22 47.2	-0.4
	comp=Z,4.5nm,1.0s,baz=277,slow=1.6,SNR=7.1						
YKA				LR	LR	01 30 57.2	
	comp=Z,2µm,18.4s,baz=0.0,slow=42						
YUK	Yuzh-Kuril'sk	30.48	273	*e*P	P	01 16 03.8	-3.2
YUK				*e*SS	SS	01 22 43.0	-34
YUK				pmax	pmax		
	comp=Z,592nm,1.2s						
YUK				pmax	pmax		
	comp=N,312nm,1.0s						
E04D	Cinebar	30.65	82	P	P	01 16 09.9	+1.4
	baz=298,SNR=8.7						
YSS	Yuzh-Sakhalins	30.95	280	*de*P	P	01 16 07.0	-4.1
YSS				*e*PPP	PPP	01 17 19.3	
YSS				pmax	pmax		
	comp=Z,500nm,4.0s						
YSS				pmax	pmax		
	comp=Z,50nm,1.0s						
YSS				MLR	MLR		
	comp=Z,2µm,16.0s						
YSS	Yuzh-Sakhalins	30.95	280	P	P	01 16 12.5	+1.4
YSS				IAmb	IAmb	01 16 15.0	
	comp=Z,95nm,1.3s						
YSS				IAMs_20	IAMs_20	01 27 23.3	
	comp=Z,2µm,21.0s						
F04A	Amboy	31.04	82	IAmb	IAmb	01 16 37.4	
	comp=Z,54nm,1.3s						
COR	Corvallis	31.16	85	IAMs_20	IAMs_20	01 26 39.6	
	comp=Z,2µm,20.0s						
LTY	Liberty	31.48	79	IAmb	IAmb	01 16 30.5	
	comp=Z,107nm,1.5s						
I03D	Drain, OR	31.60	87	P	P	01 16 19.6	+2.8
	baz=302						
H04A	Detroit Lake	31.80	84	IAmb	IAmb	01 16 46.6	
	comp=Z,69nm,1.1s						
K02D	Willamette Mer	31.94	89	P	P	01 16 22.5	+2.5
	baz=304						
G05D	Wamic, OR	32.05	83	P	P	01 16 22.3	+1.4
	baz=300						
I04A	Tendick Farm,	32.12	86	P	P	01 16 21.1	-0.4
	baz=302						
L02E	Cave Junction	32.28	89	P	P	01 16 22.6	-0.3
	baz=304						
HUMO	Hull Mountain	32.43	88	IAMs_20	IAMs_20	01 26 37.3	
	comp=Z,2µm,20.0s						
JKA	Kamikawa-asahi	32.44	275	IAmb	IAmb	01 16 27.2	
	comp=Z,77nm,1.0s						
KRMB	Red Mountain	32.45	91	P	P	01 16 25.8	+1.2
KRMB				IAmb	IAmb	01 16 47.3	
	comp=Z,64nm,1.5s						
HAWA	Hanford	32.57	80	IAmb	IAmb	01 16 41.0	
	comp=Z,127nm,1.3s						
F07A	Phinny Hill Vi	32.58	81	IAmb	IAmb	01 16 41.3	
	comp=Z,103nm,1.4s						
J04D	Umpqua Nationa	32.60	87	P	P	01 16 28.4	+2.4
	baz=303						
D08A	Wollman Farm,	32.63	78	IAmb	IAmb	01 16 41.0	
	comp=Z,54nm,1.1s						
C09A	Chrisman Ranch	32.67	77	IAmb	IAmb	01 16 41.3	
	comp=Z,102nm,1.2s						
E08A	Dider Farm, El	32.81	79	IAmb	IAmb	01 16 42.9	
	comp=Z,72nm,1.2s						
TIXI	Tiksi	32.90	329	*c i*P	P	01 16 27.1	-0.9
TIXI	Tiksi	32.90	329	P	P	01 16 27.4	-0.6
TIXI				PcP	PcP	01 19 12.4	+0.4
KHMM	Horse Mountain	32.93	92	IAmb	IAmb	01 16 51.6	
	comp=Z,56nm,1.1s						
L04D	Klamath Falls	33.05	88	P	P	01 16 31.8	+2.0
	baz=304						
YBH	Yreka Blue Hor	33.07	89	LR	LR	01 26 37.7	
	comp=Z,2µm,21.3s,baz=306,slow=30						
YBH	Yreka Blue Hor	33.07	89	IAMs_20	IAMs_20	01 26 37.3	
	comp=Z,2µm,20.0s						
GRNR	Gornyy	33.07	290	⇓*i*P	P	01 16 30.0	+0.2
GRNR				*e*S	S	01 21 51.7	+3.4
GRNR				pmax	pmax		
	comp=E,10.0nm,1.1s						
GRNR				pmax	pmax		
	comp=Z,50nm,0.9s						
GRNR				smax	smax		
	comp=E,7.0nm,0.7s						
GRNR				MLR	MLR		
	comp=E,930nm,15.0s						
GRNR				MLR	MLR		
	comp=N,1µm,20.0s						
GRNR				MLR	MLR		
	comp=Z,1µm,17.0s						
J05D	Fort Rock, OR	33.12	86	P	P	01 16 32.4	+2.0
	baz=303						
NEW	Newport	33.15	75	LR	LR	01 29 13.5	
	comp=Z,1µm,19.0s,baz=298,slow=35						
NEW	Newport	33.15	75	P	P	01 16 32.0	+1.4
	baz=297,SNR=35						
NEW	Newport	33.15	75	IAmb	IAmb	01 16 44.7	
	comp=Z,74nm,1.1s						
M02C	Callahan	33.17	90	P	P	01 16 33.7	+2.8
	baz=305						
ERM	Erimo	33.24	271	*de*P	P	01 16 32.7	+1.5
ERM				pmax	pmax		
	comp=Z,188nm,1.3s						
ERM				MLR	MLR		
	comp=Z,2µm,20.0s						
ERM	Erimo	33.24	271	P	P	01 16 32.0	+0.8
JEM	Erimo	33.24	271	P	P	01 16 26.3	-4.9
JEM				IAmb	IAmb	01 16 33.6	
	comp=Z,91nm,1.0s						
YAK	Yakutsk	33.27	311	LR	LR	01 30 19.4	
	comp=Z,2µm,18.4s,baz=94,slow=37						
YAK	Yakutsk	33.27	311	*e*P	P	01 16 29.9	-1.4
YAK				*e*	PcP	01 19 13.6	+0.5
YAK				*e*S	S	01 21 48.3	-2.7
YAK				*e*SS	SnSn	01 23 43.3	-7.5
YAK				*e*		01 26 51.0	
YAK				pmax	pmax		
	comp=Z,78nm,1.0s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,28nm,1.2s						
YAK				smax	smax		
	comp=E,64nm,2.1s						
YAK				MLR	MLR		
	comp=Z,2µm,17.0s						
YAK				MLR	MLR		
	comp=E,2µm,17.0s						
YAK	Yakutsk	33.27	311	P	P	01 16 30.3	-1.0
YAK				IAmb	IAmb	01 16 32.2	
	comp=Z,63nm,0.8s						
YAK				IAMs_20	IAMs_20	01 29 39.3	
	comp=Z,3µm,21.0s						
KMRM	Mail Ridge	33.33	92	IAmb	IAmb	01 16 53.9	
	comp=Z,34nm,0.9s						
E09A	Wood Farm, Sta	33.36	79	IAmb	IAmb	01 16 47.3	
	comp=Z,108nm,1.2s						
G08A	Pilot Rock	33.47	81	P	P	01 16 34.5	+1.1
M04C	Macdoel	33.58	89	P	P	01 16 36.1	+1.7
	baz=305						
K05A	Summer Lake	33.63	87	IAmb	IAmb	01 16 58.1	
	comp=Z,112nm,1.3s						
I07A	Izee	33.76	84	IAmb	IAmb	01 16 55.5	
	comp=Z,44nm,1.2s						
O02D	Mt. Diablo Mer	33.92	92	P	P	01 16 39.2	+1.8
	baz=307						
F10A	Beach Ranch, E	34.18	79	IAmb	IAmb	01 16 53.9	
	comp=Z,90nm,1.4s						
MOD	Modoc Plateau	34.45	87	IAMs_20	IAMs_20	01 27 44.8	
	comp=Z,2µm,20.0s						
O03E	Paynes Creek	34.46	91	P	P	01 16 43.4	+1.4
	baz=307						
HOPS	Hopland Field	34.46	94	IAMs_20	IAMs_20	01 26 56.5	
	comp=Z,2µm,20.0s						
KKO	Keanakako`i	34.51	156	P	P	01 16 43.7	+1.1
WALA	Waterton Lakes	34.70	72	IAmb	IAmb	01 16 57.9	
	comp=Z,113nm,1.4s						
J08A	Circle Bar Ran	34.77	84	IAmb	IAmb	01 17 04.3	
	comp=Z,47nm,1.1s						
JTMT	Jette	35.09	75	P	P	01 16 48.0	+0.6
JTMT				IAmb	IAmb	01 17 08.5	
	comp=Z,39nm,1.1s						
MCCM	Marconi Confer	35.10	95	IAMs_20	IAMs_20	01 27 10.7	
	comp=Z,2µm,21.0s						
WVOR	Wild Horse Val	35.18	85	IAMs_20	IAMs_20	01 28 12.9	
	comp=Z,2µm,20.0s						
JTM	Tenmabayashi	35.23	271	IAmb	IAmb	01 16 50.0	
	comp=Z,89nm,1.1s						
MSO	Missoula	35.73	76	P	P	01 16 53.9	+0.9
	baz=300,SNR=21						
MSO	Missoula	35.73	76	IAmb	IAmb	01 17 07.5	
	comp=Z,121nm,1.4s						
MFID	Camas Ranch	36.36	82	IAmb	IAmb	01 17 17.3	
	comp=Z,54nm,1.4s						
KLR	Kul'dur	36.46	289	*c i*P	P	01 16 57.8	-1.2
KLR				pmax	pmax		
	comp=Z,76nm,1.5s						
KLR				MLR	MLR		
	comp=Z,2µm,17.0s						
PNTR	Pine Nut	36.54	91	IAmb	IAmb	01 17 30.0	
	comp=Z,42nm,1.0s						
RES	Resolute Bay	36.63	25	LR	LR	01 34 14.5	
	comp=Z,2µm,18.6s,baz=271,slow=40						
RES	Resolute Bay	36.63	25	P	P	01 16 59.5	-0.6
RES				pmax	pmax		
	comp=Z,11nm,1.1s						
RES	Resolute Bay	36.63	25	P	P	01 16 59.5	-0.6
CMB	Columbia Colle	36.71	93	IAMs_20	IAMs_20	01 28 18.9	
	comp=Z,2µm,21.0s						
SAO	San Andreas Ge	36.86	95	IAMs_20	IAMs_20	01 28 00.2	
	comp=Z,2µm,21.0s						
ZEA	Zeya	37.04	298	*e*P	P	01 17 03.3	-0.6
ZEA				*e*	PP	01 18 30.6	+2.6
ZEA				*e*		01 25 44.6	
ZEA				pmax	pmax		
	comp=Z,20nm,0.6s						
ZEA				MLR	MLR		

	comp=E,600nm,18.0s						
ZEA				MLR	MLR		
	comp=N,500nm,16.0s						
ZEA				MLR	MLR		
	comp=Z,1µm,18.0s						
HLID	**Hailey**	**37.14**	**81**	P	**P**	**01 17 06.1**	**+1.0**
	baz=303,SNR=23						
HLID	**Hailey**	**37.14**	**81**	P	**P**	**01 17 05.9**	**+0.7**
HLID				IAmb	IAmb	01 17 19.6	
	comp=Z,68nm,1.5s						
JMM	**Marumori**	**37.17**	**268**	IAmb	IAmb	01 17 06.9	
	comp=Z,83nm,1.5s						
H11N2	**WAKE ISLAND Hy**	**37.21**	**219**	T	T	01 56 56.5	
	baz=24,slow=76,SNR=200						
H11N3	**WAKE ISLAND Hy**	**37.22**	**219**	T	T	01 57 01.9	
	baz=24,slow=76,SNR=229						
H11N1	**WAKE ISLAND Hy**	**37.23**	**219**	T	T	01 57 04.3	
	baz=24,slow=76,SNR=172						
EGMT	**Eagleton**	**37.62**	**72**	P	**P**	**01 17 09.3**	**+0.2**
	baz=300,SNR=26						
LHV	**Little Huntoon**	**37.73**	**91**	IAmb	IAmb	01 17 32.1	
	comp=Z,77nm,1.5s						
BOZ	**Bozeman (W)**	**37.74**	**76**	P	**P**	**01 17 10.1**	**0.0**
BOZ				pmax	pmax		
	comp=Z,97nm,1.5s						
BOZ				MLR	MLR		
	comp=Z,800nm,18.0s						
BOZ	**Bozeman (W)**	**37.74**	**76**	P	**P**	**01 17 10.6**	**+0.5**
	baz=302,SNR=38						
BOZ	**Bozeman (W)**	**37.74**	**76**	P	**P**	**01 17 10.1**	**0.0**
BOZ				IAmb	IAmb	01 17 23.9	
	comp=Z,97nm,1.4s						
NVAR	**Mina Array Bea**	**37.75**	**91**	P	**P**	**01 17 12.1**	**+1.8**
	comp=Z,3.7nm,0.7s,baz=298,slow=7.6,SNR=29						
NVAR				ScP	**ScP**	**01 23 12.8**	**-1.3**
	comp=Z,1.3nm,0.8s,baz=303,slow=2.0,SNR=5.9						
NVAR				LR	LR	01 29 31.1	
	comp=Z,886nm,20.9s,baz=296,slow=31						
ELK	**Elko**	**38.24**	**85**	LR	LR	01 31 01.3	
	comp=Z,2µm,19.4s,baz=298,slow=33						
ELK	**Elko**	**38.24**	**85**	IAMs_20	IAMs_20	01 30 49.8	
	comp=Z,2µm,20.0s						
PAGB	**Antelope Grade**	**38.27**	**96**	P	**P**	**01 17 16.4**	**+1.9**
H11S1	**WAKE ISLAND Hy**	**38.40**	**218**	T	T	01 58 40.9	
	baz=23,slow=76,SNR=327						
YHL	**Hebgen Lake**	**38.40**	**77**	IAmb	IAmb	01 17 30.6	
	comp=Z,59nm,1.1s						
H11S2	**WAKE ISLAND Hy**	**38.41**	**218**	T	T	01 58 29.5	
	baz=23,slow=76,SNR=436						
H11S3	**WAKE ISLAND Hy**	**38.41**	**218**	T	T	01 58 30.9	
	baz=23,slow=76,SNR=480						
JYT	**Yasato**	**38.58**	**266**	P	**P**	**01 17 17.9**	**+0.9**
JYT				IAmb	IAmb	01 17 29.2	
	comp=Z,113nm,1.4s						
JSD	**Sado**	**38.62**	**270**	IAmb	IAmb	01 17 19.5	
	comp=Z,80nm,1.1s						
YMR	**Madison River**	**38.63**	**77**	IAmb	IAmb	01 17 32.5	
	comp=Z,108nm,1.4s						
TPH	**Tonopah**	**38.63**	**90**	IAmb	IAmb	01 17 47.4	
	comp=Z,144nm,1.3s						
YHH	**Holmes Hill**	**38.63**	**77**	IAmb	IAmb	01 17 32.3	
	comp=Z,68nm,1.1s						
TIN	**Tinemaha, Big**	**38.66**	**92**	P	**P**	**01 17 18.5**	**+0.7**
	baz=310						
YNR	**Norris Junctio**	**38.78**	**77**	IAmb	IAmb	01 17 34.2	
	comp=Z,112nm,1.2s						
USRK	**Ussuriysk Ar.**	**38.86**	**282**	P	**P**	**01 17 18.6**	**-0.7**
	comp=Z,13nm,1.0s,baz=53,slow=7.8,SNR=9.5						
USRK				PcP	**PcP**	**01 19 31.3**	**+1.1**
	comp=Z,6.2nm,0.8s,baz=82,slow=3.0,SNR=4.5						
USRK				LR	LR	01 32 12.8	
	comp=Z,2µm,21.7s,baz=59,slow=34						
USRK	**Ussuriysk Ar.**	**38.86**	**282**	P	**P**	**01 17 18.8**	**-0.6**
VES	**Vestal, Richgr**	**38.91**	**94**	P	**P**	**01 17 20.8**	**+0.9**
	baz=311						
FFC	**Flin Flon**	**38.92**	**59**	P	**P**	**01 17 19.9**	**+0.2**
FFC				pmax	pmax		
	comp=Z,34nm,1.1s						
FFC				MLR	MLR		
	comp=Z,1µm,18.0s						
FFC	**Flin Flon**	**38.92**	**59**	P	**P**	**01 17 19.9**	**+0.2**
FFC	**Flin Flon**	**38.92**	**59**	IAMs_20	IAMs_20	01 35 39.8	
	comp=Z,1µm,18.0s						
H17A	**Grant Village**	**39.01**	**77**	P	**P**	**01 17 22.0**	**+1.1**
	baz=303,SNR=11						
H17A	**Grant Village**	**39.01**	**77**	IAmb	IAmb	01 17 41.8	
	comp=Z,70nm,1.2s						
PKM	**Mcpherson Peak**	**39.09**	**96**	P	**P**	**01 17 23.0**	**+1.4**
	baz=312						
CWC	**Cottonwood Cre**	**39.14**	**93**	P	**P**	**01 17 22.8**	**+0.8**
	baz=310						
GRAC	**Grapevine Rang**	**39.22**	**92**	P	**P**	**01 17 23.7**	**+1.1**
	baz=310						
MOOW	**Moose Ponds**	**39.27**	**78**	P	**P**	**01 17 24.0**	**+1.0**
ISA	**Isabella, Lake**	**39.40**	**94**	P	**P**	**01 17 25.3**	**+1.2**
	baz=311						
RLMT	**Red Lodge**	**39.40**	**76**	P	**P**	**01 17 25.1**	**+0.9**
	baz=303,SNR=34						
RLMT	**Red Lodge**	**39.40**	**76**	IAmb	IAmb	01 17 38.4	
	comp=Z,150nm,1.4s						
R11A	**Troy Canyon, C**	**39.47**	**89**	P	**P**	**01 17 25.6**	**+0.8**
	baz=309,SNR=11						
VLA	**Vladivostok**	**39.52**	**281**	⇑*e*P	**P**	**01 17 24.3**	**-0.6**
VLA				pmax	pmax		
	comp=Z,52nm,0.9s						
AHID	**Auburn Hatcher**	**39.60**	**80**	IAmb	IAmb	01 17 47.5	
	comp=Z,74nm,1.2s						
AHID				IAMs_20	IAMs_20	01 33 24.4	
	comp=Z,2µm,18.0s						
MAJO	**Matsushiro**	**39.60**	**268**	*c i*P	**P**	**01 17 26.1**	**+0.4**
MAJO				pmax	pmax		
	comp=Z,27nm,0.9s						
MAJO				MLR	MLR		
	comp=Z,1µm,20.0s						
MAJO	**Matsushiro**	**39.60**	**268**	P	**P**	**01 17 26.7**	**+1.0**
MAT	**Matsushiro**	**39.60**	**268**	P	**P**	**01 17 26.5**	**+0.8**
MAT				S	**S**	**01 23 25.2**	**-3.0**
MJAR	**Matsushiro Arr**	**39.60**	**268**	P	**P**	**01 17 26.3**	**+0.6**
	comp=Z,7.2nm,0.7s,baz=50,slow=6.9,SNR=22						
MJAR				PcP	**PcP**	**01 19 33.2**	**+0.6**
	comp=Z,8.0nm,0.9s,baz=72,slow=1.8,SNR=5.8						
MJAR				LR	LR	01 32 59.5	
	comp=Z,1µm,21.0s,baz=60,slow=35						
MJB9	**Matsu-Tunnel**	**39.60**	**268**	P	**P**	**01 17 26.4**	**+0.8**
FURC	**Furnace Creek,**	**39.87**	**92**	P	**P**	**01 17 30.0**	**+2.1**
	baz=310						
LRMC	**Laurel Mtn Rad**	**40.01**	**94**	P	**P**	**01 17 31.4**	**+2.2**
	baz=311						
DUG	**Dugway, Tooele**	**40.05**	**84**	P	**P**	**01 17 30.2**	**+0.7**
	baz=307,SNR=20						
DUG	**Dugway, Tooele**	**40.05**	**84**	IAmb	IAmb	01 17 49.4	
	comp=Z,66nm,1.1s						
DUG				IAMs_20	IAMs_20	01 30 57.7	
	comp=Z,1µm,21.0s						
MDJ	**Mudanjiang**	**40.07**	**284**	IAMs_20	IAMs_20	01 35 03.4	
	comp=Z,2µm,20.0s						
GWY	**Greenwater Val**	**40.17**	**92**	P	**P**	**01 17 32.3**	**+1.7**
QSM	**Queen of Sheba**	**40.20**	**92**	P	**P**	**01 17 31.7**	**+1.1**
EDW2	**Edwards Air Fo**	**40.21**	**95**	P	**P**	**01 17 31.8**	**+1.0**
	baz=312						
MSHR	**Mys Shultsa**	**40.27**	**281**	⇑*e*P	**P**	**01 17 29.8**	**-1.3**
MSHR				pmax	pmax		
	comp=Z,37nm,1.1s						
LAO	**LASA Array**	**40.37**	**72**	P	**P**	**01 17 32.6**	**+0.6**
	baz=302,SNR=16						
LAO	**LASA Array**	**40.37**	**72**	P	**P**	**01 17 32.2**	**+0.2**
LAO				IAmb	IAmb	01 17 45.3	
	comp=Z,78nm,1.3s						
LAO				IAMs_20	IAMs_20	01 33 58.1	
	comp=Z,1µm,18.0s						
PRN	**Pahroc Range**	**40.39**	**89**	P	**P**	**01 17 34.0**	**+1.7**
BW06	**Boulder Array**	**40.53**	**79**	P	**P**	**01 17 34.4**	**+0.8**
	baz=305,SNR=46						
BW06	**Boulder Array**	**40.53**	**79**	P	**P**	**01 17 33.7**	**+0.1**
BW06				IAmb	IAmb	01 17 52.2	
	comp=Z,70nm,1.2s						
PDAR	**Pinedale Array**	**40.53**	**79**	P	**P**	**01 17 34.0**	**+0.3**
	comp=Z,22nm,0.6s,baz=301,slow=4.4,SNR=231						
PDAR				LR	LR	01 31 54.3	
	comp=Z,881nm,21.3s,baz=320,slow=32						
PASC	**Pasadena Art C**	**40.57**	**96**	IAMs_20	IAMs_20	01 30 22.4	
	comp=Z,1µm,20.0s						
DGMT	**Dagmar**	**40.62**	**68**	P	**P**	**01 17 34.9**	**+0.9**
	baz=301,SNR=11						
DGMT	**Dagmar**	**40.62**	**68**	P	**P**	**01 17 34.3**	**+0.3**
DGMT				IAmb	IAmb	01 17 46.6	
	comp=Z,75nm,1.2s						
DGMT	**Dagmar**	**40.62**	**68**	IAMs_20	IAMs_20	01 34 23.5	
	comp=Z,2µm,20.0s						
NLU	**North Lily Min**	**40.65**	**84**	IAmb	IAmb	01 17 53.5	
	comp=Z,76nm,1.4s						
GSC	**Goldstone, Bar**	**40.67**	**93**	P	**P**	**01 17 36.1**	**+1.5**
	baz=312,SNR=8.8						
JGF	**Kuroka**	**40.73**	**268**	P	**P**	**01 17 35.4**	**+0.3**
BFSC	**Mount Baldy Ra**	**40.85**	**95**	P	**P**	**01 17 38.0**	**+1.8**
	baz=312						
TUQ	**Turquoise Moun**	**41.12**	**92**	P	**P**	**01 17 39.5**	**+1.1**
	baz=311						
FCC	**Fort Churchill**	**41.16**	**50**	P	**P**	**01 17 39.0**	**+0.7**
FCC				pmax	pmax		
	comp=Z,187nm,1.0s						
FCC	**Fort Churchill**	**41.16**	**50**	P	**P**	**01 17 39.0**	**+0.7**
HEC	**Hector,Ludlow**	**41.27**	**93**	P	**P**	**01 17 40.3**	**+0.7**
	baz=312,SNR=6.5						
MVU	**Marysvale**	**41.45**	**86**	IAmb	IAmb	01 18 01.3	
	comp=Z,121nm,1.2s						
TMUT	**Trail Mountain**	**41.58**	**84**	P	**P**	**01 17 43.4**	**+1.1**
TMUT				IAmb	IAmb	01 18 01.5	
	comp=Z,97nm,1.4s						
GMRC	**Granite Mounta**	**41.71**	**93**	P	**P**	**01 17 44.1**	**+0.8**
	baz=312,SNR=5.9						
RDMU	**Red Mountain**	**41.81**	**81**	IAmb	IAmb	01 18 03.7	
	comp=Z,126nm,1.2s						
Q16A	**Castle Valley**	**41.84**	**85**	IAmb	IAmb	01 18 04.4	
	comp=Z,81nm,1.1s						
P18A	**Preston Nutter**	**41.97**	**83**	IAmb	IAmb	01 18 05.4	
	comp=Z,121nm,1.2s						
PFO	**Pinyon Flats O**	**42.01**	**95**	P	**P**	**01 17 47.4**	**+1.8**
PFO				pmax	pmax		
	comp=Z,25nm,1.1s						
PFO	**Pinyon Flats O**	**42.01**	**95**	P	**P**	**01 17 45.7**	**+0.1**
	baz=313						
PFO	**Pinyon Flats O**	**42.01**	**95**	P	**P**	**01 17 47.4**	**+1.8**
PFO	**Pinyon Flats O**	**42.01**	**95**	IAMs_20	IAMs_20	01 31 17.4	
	comp=Z,2µm,19.0s						
TPFO	**Pinon Flats**	**42.01**	**95**	P	**P**	**01 17 46.7**	**+1.0**
	baz=313						
BELC	**Belle Mtn. Jos**	**42.03**	**94**	P	**P**	**01 17 46.5**	**+0.7**
	baz=313						
BOD	**Bodaibo**	**42.08**	**309**	*e*P	**P**	**01 17 45.3**	**-0.5**
BOD				pmax	pmax		
	comp=Z,84nm,1.2s						
SRU	**San Rafael Swe**	**42.12**	**84**	IAmb	IAmb	01 18 02.7	
	comp=Z,57nm,1.0s						
JWT	**Wachi**	**42.15**	**269**	P	**P**	**01 17 47.4**	**+0.8**
JWT				IAmb	IAmb	01 18 04.1	
	comp=Z,84nm,1.4s						
TULEG	**Thule**	**42.38**	**20**	P	**P**	**01 17 47.1**	**-0.9**
K22A	**Casper**	**42.43**	**77**	P	**P**	**01 17 49.3**	**+0.2**
	baz=306,SNR=8.5						
K22A	**Casper**	**42.43**	**77**	IAmb	IAmb	01 18 03.0	
	comp=Z,67nm,1.2s						
IRM	**Iron Mountain**	**42.45**	**93**	P	**P**	**01 17 50.3**	**+1.1**
	baz=312,SNR=7.5						
MONP2	**Monument Peak**	**42.52**	**95**	P	**P**	**01 17 51.0**	**+1.1**
	baz=314						
RWWY	**Rawlins**	**42.58**	**79**	IAMs_20	IAMs_20	01 35 33.1	
	comp=Z,1µm,18.0s						
BC3	**Big Chuckawall**	**42.59**	**94**	P	**P**	**01 17 51.4**	**+0.9**
	baz=313						
SWSC	**Sam W. Stewart**	**42.86**	**95**	P	**P**	**01 17 53.8**	**+1.4**
	baz=313						
IKP	**In-Ko-Pah, Jac**	**42.87**	**95**	P	**P**	**01 17 52.4**	**-0.3**
	baz=314						
O20A	**White River Ci**	**42.88**	**81**	P	**P**	**01 17 53.3**	**+0.5**
	baz=308,SNR=54						
O20A	**White River Ci**	**42.88**	**81**	IAmb	IAmb	01 18 11.9	
	comp=Z,137nm,1.2s						
PDMCI	**Parker Dam,Lak**	**42.97**	**92**	P	**P**	**01 17 54.1**	**+0.8**
	baz=312						
CN2	**Changchun**	**42.99**	**286**	*e*P	**P**	**01 17 53.5**	**+0.1**
CN2				*e*sP	pwP	01 18 07.3	+7.1
CN2				*e*S	**S**	**01 24 14.1**	**-4.3**
CN2				pmax	pmax		
	comp=Z,50nm,0.8s						
CN2				pmax	pmax		
	comp=Z,300nm,4.0s						
CN2				LR	LR		
	comp=Z,1µm,16.0s						
CN2				LR	LR		
	comp=Z,1µm,16.0s						
CN2				LR	LR		
	comp=Z,2µm,17.0s						
RSSD	**Black Hills**	**43.07**	**74**	P	**P**	**01 17 54.1**	**-0.2**
RSSD				pmax	pmax		
	comp=Z,100nm,1.4s						
RSSD				MLR	MLR		
	comp=Z,1µm,21.0s						
RSSD	**Black Hills**	**43.07**	**74**	P	**P**	**01 17 54.5**	**+0.2**
	baz=305						
RSSD	**Black Hills**	**43.07**	**74**	P	**P**	**01 17 54.1**	**-0.2**
RSSD				IAmb	IAmb	01 18 07.4	
	comp=Z,100nm,1.4s						
HIA	**Hailar**	**43.28**	**296**	*d i*P	**P**	**01 17 55.6**	**-0.1**
HIA				MLR	MLR		
	comp=Z,2µm,19.0s						
HIA	**Hailar**	**43.28**	**296**	P	**P**	**01 17 55.0**	**-0.7**
HIA				IAmb	IAmb	01 17 56.4	
	comp=Z,41nm,0.6s						
HIA	**Hailar**	**43.28**	**296**	IAMs_20	IAMs_20	01 36 45.2	
	comp=Z,2µm,20.0s						
GLA	**Glamis**	**43.39**	**94**	P	**P**	**01 17 58.0**	**+1.3**
	baz=313						
CPBX	**Cerro Prieto**	**43.53**	**95**	P	**P**	**01 17 59.8**	**+1.9**
MDND	**Maddock**	**43.56**	**67**	P	**P**	**01 17 58.5**	**+0.5**
	baz=303,SNR=12						
JHS	**Saijyo**	**43.74**	**270**	P	**P**	**01 17 59.8**	**+0.2**
N23A	**Red Feather La**	**43.82**	**79**	P	**P**	**01 18 00.8**	**+0.3**
	baz=307,SNR=12						
WUAZ	**Wupatki**	**43.87**	**89**	P	**P**	**01 18 02.0**	**+1.2**
	baz=311,SNR=7.5						
WUAZ	**Wupatki**	**43.87**	**89**	IAmb	IAmb	01 18 17.2	
	comp=Z,65nm,1.3s						
WUAZ				IAMs_20	IAMs_20	01 33 17.2	
	comp=Z,2µm,20.0s						
ULM	**Lac du Bonnet**	**44.34**	**62**	P	**P**	**01 18 04.2**	**+0.1**
	comp=Z,12nm,0.7s,baz=317,slow=9.3,SNR=10						
ULM				LR	LR	01 38 22.6	
	comp=Z,2µm,18.4s,baz=312,slow=38						
MVCO	**Mesa Verde**	**44.55**	**85**	P	**P**	**01 18 07.1**	**+0.8**
	baz=310,SNR=7.8						
MVCO	**Mesa Verde**	**44.55**	**85**	IAmb	IAmb	01 18 33.0	
	comp=Z,44nm,1.1s						
ISCO	**Idaho Springs**	**44.69**	**80**	P	**P**	**01 18 08.7**	**+1.2**
ISCO				pmax	pmax		
	comp=Z,28nm,1.3s						
ISCO				MLR	MLR		
	comp=Z,2µm,19.0s						
ISCO	**Idaho Springs**	**44.69**	**80**	P	**P**	**01 18 07.8**	**+0.3**
	baz=308,SNR=11						
ISCO	**Idaho Springs**	**44.69**	**80**	P	**P**	**01 18 08.7**	**+1.2**
ISCO				IAMs_20	IAMs_20	01 36 17.0	
	comp=Z,2µm,19.0s						
W18A	**Petrified Fore**	**45.14**	**88**	P	**P**	**01 18 11.0**	**0.0**
	baz=312						
W18A	**Petrified Fore**	**45.14**	**88**	IAmb	IAmb	01 18 30.4	
	comp=Z,79nm,1.3s						
S22A	**4UR Ranch, Cre**	**45.23**	**83**	P	**P**	**01 18 12.8**	**+1.0**
	baz=310,SNR=24						
NEEM	**North Greenlan**	**45.25**	**16**	*i* P	**P**	**01 18 11.2**	**-0.3**
NEEM				IAmb	IAmb	01 18 12.7	
	comp=Z,50nm,0.5s						
SNY	**Shenyang**	**45.27**	**285**	⇓P	**P**	**01 18 12.8**	**+1.2**
SNY				S	**S**	**01 24 51.9**	**+0.4**
SNY				pmax	pmax		
	comp=Z,39nm,1.0s						
SNY				pmax	pmax		
	comp=Z,580nm,3.2s						
SNY				LR	LR		
	comp=Z,1µm,16.1s						
SNY				LR	LR		
	comp=Z,1µm,14.3s						
SNY				LR	LR		
	comp=Z,2µm,16.2s						
KSRS	**Korea Array**	**45.35**	**277**	P	**P**	**01 18 11.0**	**-1.3**
	comp=Z,32nm,0.9s,baz=57,slow=7.7,SNR=46						
KSRS				LR	LR	01 34 55.6	
	comp=Z,843nm,21.9s,baz=55,slow=33						
KSRS	**Korea Array**	**45.35**	**277**	P	**P**	**01 18 11.0**	**-1.3**
KS19	**Wonju Array Si**	**45.35**	**277**	P	**P**	**01 18 11.9**	**-0.4**
KS19				IAmb	IAmb	01 18 15.0	
	comp=Z,56nm,1.0s						
214A	**Organ Pipe Nat**	**45.38**	**93**	P	**P**	**01 18 14.1**	**+1.4**
	baz=314,SNR=5.4						
214A	**Organ Pipe Nat**	**45.38**	**93**	IAmb	IAmb	01 18 31.3	
	comp=Z,34nm,1.0s						
KSAR	**Wonju Array Be**	**45.38**	**277**	P	**P**	**01 18 13.3**	**+0.7**
KSAR	**Wonju Array Be**	**45.38**	**277**	P	**P**	**01 18 13.3**	**+0.7**
AGMN	**Agassiz Nation**	**45.41**	**64**	P	**P**	**01 18 12.3**	**-0.4**
	baz=304						
AGMN	**Agassiz Nation**	**45.41**	**64**	IAmb	IAmb	01 18 13.7	
	comp=Z,48nm,0.8s						
AGMN				IAMs_20	IAMs_20	01 38 08.9	
	comp=Z,1µm,18.0s						
D32A	**Dogwood Acres,**	**45.42**	**66**	IAmb	IAmb	01 18 13.4	
	comp=Z,32nm,0.8s						
Q24A	**Divide**	**45.49**	**80**	P	**P**	**01 18 14.3**	**+0.5**
	baz=309						
NOR	**Nord**	**45.72**	**5**	*i* P	**P**	**01 18 14.5**	**-0.3**
SUSD	**Miller**	**45.86**	**70**	P	**P**	**01 18 16.1**	**-0.2**
	baz=306,SNR=18						
SDCO	**Great Sand Dun**	**46.04**	**82**	P	**P**	**01 18 19.2**	**+1.0**
	baz=310,SNR=19						
INCN	**Inchon**	**46.12**	**278**	P	**P**	**01 18 19.7**	**+1.2**
INCN				pmax	pmax		
	comp=Z,84nm,0.9s						
INCN	**Inchon**	**46.12**	**278**	P	**P**	**01 18 19.2**	**+0.7**
INCN				P	**P**	**01 18 19.2**	**+0.7**
INCN	**Inchon**	**46.12**	**278**	P	**P**	**01 18 19.7**	**+1.2**
OGNE	**Ogallala**	**46.14**	**76**	P	**P**	**01 18 18.9**	**+0.2**
	baz=308						
JNU	**Nakatsue**	**46.38**	**270**	IAmb	IAmb	01 18 23.0	
	comp=Z,70nm,1.2s						
TUC	**Tucson**	**46.38**	**91**	P	**P**	**01 18 22.0**	**+1.3**
TUC				pmax	pmax		
	comp=Z,25nm,1.1s						
TUC	**Tucson**	**46.38**	**91**	P	**P**	**01 18 21.2**	**+0.5**
	baz=314						
TUC	**Tucson**	**46.38**	**91**	P	**P**	**01 18 22.0**	**+1.3**
TJN	**Taejon**	**46.38**	**276**	*c i*P	**P**	**01 18 21.2**	**+0.7**
B35A	**Bob, Littlefor**	**46.56**	**63**	IAmb	IAmb	01 18 22.4	
	comp=Z,40nm,0.7s						
F33A	**5 Mile Ranch,**	**46.57**	**67**	IAmb	IAmb	01 18 22.5	
	comp=Z,32nm,0.9s						
NRIK	**Noril'sk**	**46.60**	**332**	P	**P**	**01 18 21.0**	**-0.8**
	comp=Z,18nm,0.4s,baz=69,slow=8.2,SNR=56						
NRIK				LR	LR	01 40 34.5	
	comp=Z,906nm,18.6s,baz=70,slow=40						
NRIK	**Noril'sk**	**46.60**	**332**	*c i*P	**P**	**01 18 21.2**	**-0.6**
NRIK				pmax	pmax		
	comp=Z,53nm,1.2s						
NRIK				MLR	MLR		
	comp=Z,927nm,17.0s						
NRIK	**Noril'sk**	**46.60**	**332**	P	**P**	**01 18 21.2**	**-0.6**
NRIK				IAmb	IAmb	01 18 22.7	
	comp=Z,51nm,1.1s						
KSCO	**Kaye Shedlock’**	**46.98**	**79**	P	**P**	**01 18 25.7**	**+0.3**
	baz=309,SNR=7.6						
T25A	**Trinidad**	**47.10**	**82**	P	**P**	**01 18 27.3**	**+0.9**
	baz=310,SNR=30						
ANMO	**Albuquerque**	**47.27**	**85**	LR	LR	01 36 24.3	
	comp=Z,1µm,19.1s,baz=310,slow=34						
ANMO	**Albuquerque**	**47.27**	**85**	⇑*e*P	**P**	**01 18 27.8**	**0.0**
ANMO				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ANMO				MLR	MLR		
	comp=Z,2µm,16.0s						
ANMO	**Albuquerque**	**47.27**	**85**	P	**P**	**01 18 28.4**	**+0.6**
	baz=312						
ANMO	**Albuquerque**	**47.27**	**85**	P	**P**	**01 18 28.9**	**+1.1**
ANMO				IAmb	IAmb	01 18 46.7	
	comp=Z,41nm,1.2s						
ANMO	**Albuquerque**	**47.27**	**85**	IAMs_20	IAMs_20	01 36 14.0	
	comp=Z,1µm,20.0s						
Y22D	**IRIS PASSCAL I**	**47.57**	**87**	P	**P**	**01 18 29.4**	**-0.6**
	baz=312						
ECSD	**EROS Data Cent**	**47.64**	**70**	P	**P**	**01 18 29.1**	**-1.2**
	baz=307,SNR=29						
ECSD	**EROS Data Cent**	**47.64**	**70**	IAmb	IAmb	01 18 30.7	
	comp=Z,55nm,1.1s						
ECSD	**EROS Data Cent**	**47.64**	**70**	IAMs_20	IAMs_20	01 38 29.2	
	comp=Z,1µm,19.0s						
JSU	**Suzuyama**	**47.74**	**269**	P	**P**	**01 18 32.0**	**+0.7**
JSU				IAmb	IAmb	01 18 32.7	
	comp=Z,34nm,1.1s						
EYMN	**Ely**	**48.02**	**62**	P	**P**	**01 18 32.7**	**-0.4**
	baz=306,SNR=7.1						
EYMN	**Ely**	**48.02**	**62**	IAmb	IAmb	01 18 34.0	
	comp=Z,42nm,0.9s						
121A	**Cookes Peak, D**	**48.08**	**89**	P	**P**	**01 18 34.3**	**+0.3**
	baz=313						
121A	**Cookes Peak, D**	**48.08**	**89**	IAmb	IAmb	01 18 52.2	
	comp=Z,34nm,1.1s						
F36A	**Milaca**	**48.12**	**66**	IAmb	IAmb	01 18 34.6	
	comp=Z,29nm,0.8s						
BGNE	**Belgrade**	**48.16**	**73**	P	**P**	**01 18 34.4**	**+0.1**
	baz=309,SNR=10						
DL2	**Dalian**	**48.25**	**283**	*e*P	**P**	**01 18 36.2**	**+1.2**
DL2				S	**S**	**01 25 33.6**	**-0.6**
DL2				pmax	pmax		
	comp=Z,59nm,1.5s						
DL2				pmax	pmax		
	comp=Z,1µm,4.0s						
DL2				LR	LR		
	comp=Z,990nm,16.4s						
DL2				LR	LR		
	comp=Z,2µm,18.0s						
DL2				LR	LR		
	comp=Z,2µm,17.8s						
HSIG		**48.58**	**95**	P	**P**	**01 18 39.5**	**+1.8**
E38A	**The Farm, Brul**	**48.78**	**64**	IAmb	IAmb	01 18 39.5	
	comp=Z,56nm,0.8s						
CBKS	**Cedar Bluff**	**48.85**	**77**	P	**P**	**01 18 40.5**	**+0.7**
	baz=310,SNR=11						
SPMN	**Marine on St.**	**48.91**	**66**	P	**P**	**01 18 39.6**	**-0.5**
	baz=308,SNR=9.9						
SPMN	**Marine on St.**	**48.91**	**66**	IAmb	IAmb	01 18 52.4	
	comp=Z,86nm,1.4s						
KBS	**Kingsbay**	**49.21**	**360**	*de*P	**P**	**01 18 42.8**	**+0.9**
KBS				pmax	pmax		
	comp=Z,46nm,1.0s						
KBS				MLR	MLR		
	comp=Z,1µm,18.0s						
KBS	**Kingsbay**	**49.21**	**360**	*e*P	**P**	**01 18 42.1**	**+0.2**
KBS	**Kingsbay**	**49.21**	**360**	P	**P**	**01 18 42.4**	**+0.5**
KBS				IAmb	IAmb	01 18 43.5	
	comp=Z,48nm,1.1s						
KBS	**Kingsbay**	**49.21**	**360**	IAMs_20	IAMs_20	01 42 09.8	
	comp=Z,1µm,19.0s						
FRB	**Frobisher Bay**	**49.23**	**35**	LR	LR	01 41 45.0	
	comp=Z,3µm,20.1s,baz=303,slow=39						
IRK	**Irkutsk**	**49.77**	**307**	*e*P	**P**	**01 18 46.4**	**-0.1**
IRK				pmax	pmax		
	comp=Z,119nm,1.3s						
SPA0	**Spitsbergen Ar**	**49.91**	**358**	*e*P	**P**	**01 18 47.3**	**0.0**
SPITS	**Spitsbergen Ar**	**49.91**	**358**	LR	LR	01 40 51.9	
	comp=Z,1µm,18.4s,baz=355,slow=37						
SPB2	**Spitsbergen Ar**	**49.91**	**358**	P	**P**	**01 18 46.9**	**-0.4**
SPB2				IAmb	IAmb	01 18 47.9	
	comp=Z,79nm,1.2s						
DAG	**Danmarks Havn**	**50.05**	**8**	⇑*i*P	**P**	**01 18 47.0**	**-1.2**
DAG				IAmb	IAmb	01 18 48.8	
	comp=Z,104nm,1.1s						
MNTX	**Cornudas Mount**	**50.13**	**88**	P	**P**	**01 18 50.4**	**+0.8**
	baz=314,SNR=19						
MSTX	**Muleshoe**	**50.19**	**84**	P	**P**	**01 18 50.6**	**+0.5**
	baz=313,SNR=9.1						
MSTX	**Muleshoe**	**50.19**	**84**	IAmb	IAmb	01 19 05.4	
	comp=Z,74nm,1.1s						
AMTX	**Amarillo**	**50.24**	**82**	P	**P**	**01 18 51.1**	**+0.6**
	baz=312						
AMTX	**Amarillo**	**50.24**	**82**	IAmb	IAmb	01 19 08.8	
	comp=Z,54nm,1.2s						
G40A	**Rib Lake**	**50.34**	**64**	IAmb	IAmb	01 18 51.6	
	comp=Z,39nm,0.9s						
TLY	**Talaya**	**50.41**	**306**	*e*P	**P**	**01 18 51.8**	**+0.3**
TLY				*e*	**PP**	**01 20 43.6**	**-3.1**
TLY				*e*S	**S**	**01 26 09.0**	**+4.6**
TLY				pmax	pmax		
	comp=Z,226nm,1.1s						
TLY				MLR	MLR		
	comp=Z,2µm,18.0s						
TLY	**Talaya**	**50.41**	**306**	P	**P**	**01 18 50.9**	**-0.5**
TLY				P	**P**	**01 18 50.9**	**-0.5**
TLY	**Talaya**	**50.41**	**306**	P	**P**	**01 18 51.5**	**0.0**
TLY				IAMs_20	IAMs_20	01 41 47.0	
	comp=Z,1µm,21.0s						
K38A	**Parkersburg**	**50.52**	**68**	IAmb	IAmb	01 19 04.5	
	comp=Z,110nm,1.4s						
KSU1	**Kansas State U**	**50.53**	**74**	P	**P**	**01 18 51.9**	**-0.6**
	baz=310,SNR=5.6						

KSU1	**Kansas State U**	50.53	74	IAmb	IAmb	01 19 04.8	
	comp=Z,66nm,1.1s						
SCIA	**State Center**	50.73	70	P	P	01 18 53.7	-0.3
	baz=310						
SCIA	**State Center**	50.73	70	IAmb	IAmb	01 19 06.5	
	comp=Z,67nm,1.0s						
SCIA				IAMs_20	IAMs_20	01 40 25.1	
	comp=Z,2µm,20.0s						
BJI	**Beijing**	50.77	287	P	P	01 18 55.4	+1.2
BJI				S	S	01 26 10.4	+1.0
BJI				pmax	pmax		
	comp=Z,29nm,0.7s						
BJI				LR	LR		
	comp=Z,2µm,15.0s						
BJI				LR	LR		
	comp=Z,1µm,19.4s						
BJI				LR	LR		
	comp=Z,2µm,17.9s						
BJT	**Baijiatuau**	50.78	287	P	P	01 18 54.5	+0.1
BJT				pmax	pmax		
	comp=Z,18nm,0.8s						
BJT				MLR	MLR		
	comp=Z,2µm,18.0s						
BJT	**Baijiatuau**	50.78	287	P	P	01 18 54.5	+0.1
U32A	**Winter Ranch,**	50.88	79	IAmb	IAmb	01 19 13.0	
	comp=Z,50nm,1.2s						
U32A				IAMs_20	IAMs_20	01 41 13.8	
	comp=Z,1µm,19.0s						
I40A	**Norwalk**	50.96	66	IAmb	IAmb	01 19 07.8	
	comp=Z,92nm,1.3s						
ULN	**Ulaanbaatar**	50.98	301	*c i*P	P	01 18 55.4	-0.6
ULN				pmax	pmax		
	comp=Z,44nm,1.0s						
ULN				MLR	MLR		
	comp=Z,2µm,18.0s						
ULN	**Ulaanbaatar**	50.98	301	P	P	01 18 55.7	-0.3
ULN				P	P	01 18 55.7	-0.3
ULN	**Ulaanbaatar**	50.98	301	P	P	01 18 55.9	-0.1
ULN				IAmb	IAmb	01 18 57.8	
	comp=Z,33nm,0.9s						
SUMG	**Summit**	51.04	17	P	P	01 18 55.8	-0.5
SUMG				pmax	pmax		
	comp=Z,88nm,0.9s						
SUMG	**Summit**	51.04	17	*i* P	P	01 18 56.0	-0.3
SUMG				IAmb	IAmb	01 18 57.8	
	comp=Z,84nm,0.9s						
SUMG	**Summit**	51.04	17	P	P	01 18 55.8	-0.5
F42A	**Maple Grove Fa**	51.17	63	IAmb	IAmb	01 18 58.3	
	comp=Z,70nm,1.0s						
HOPEN	**Hopen**	51.30	356	*e*P	P	01 18 57.6	-0.1
SONM	**Songino Array**	51.35	301	P	P	01 18 58.3	-0.4
	comp=Z,53nm,1.2s,baz=52,slow=6.0,SNR=99						
SONM				PcP	PcP	01 20 14.3	+0.9
	comp=Z,8.6nm,0.8s,baz=49,slow=2.9,SNR=5.8						
SONM				LR	LR	01 42 45.3	
	comp=Z,3µm,18.8s,baz=56,slow=38						
SONM	**Songino Array**	51.35	301	P	P	01 18 58.5	-0.2
SONM				IAmb	IAmb	01 19 01.0	
	comp=Z,80nm,1.3s						
ZAK	**Zakamensk**	51.39	305	*e*P	P	01 18 59.9	+1.0
ZAK				*e*		01 19 09.5	
ZAK				pmax	pmax		
	comp=Z,65nm,1.4s						
ZAK				pmax	pmax		
	comp=Z,38nm,1.4s						
CROK	**Carrier**	51.41	78	IAmb	IAmb	01 19 11.8	
	comp=Z,90nm,1.4s						
E43A	**Lone Tree Farm**	51.41	61	IAmb	IAmb	01 18 59.9	
	comp=Z,46nm,0.8s						
BLOK	**Blackwell**	51.70	77	IAmb	IAmb	01 19 14.7	
	comp=Z,89nm,1.3s						
MOY	**Mondy**	51.73	308	*e*P	P	01 19 02.4	+0.9
MOY				pmax	pmax		
	comp=Z,71nm,1.2s						
L40A	**Anamosa**	51.78	68	IAmb	IAmb	01 19 02.1	
	comp=Z,48nm,0.9s						
JFWS	**Jewell Farm**	51.79	67	P	P	01 19 00.0	-1.9
JFWS				pmax	pmax		
	comp=Z,44nm,0.9s						
JFWS				MLR	MLR		
	comp=Z,2µm,19.0s						
JFWS	**Jewell Farm**	51.79	67	P	P	01 19 00.9	-1.0
	baz=310,SNR=9.7						
JFWS	**Jewell Farm**	51.79	67	P	P	01 18 60.0	-1.9
JFWS				IAmb	IAmb	01 19 01.8	
	comp=Z,44nm,0.8s						
I42A	**Draeger Farm,**	51.92	65	IAmb	IAmb	01 19 03.4	
	comp=Z,59nm,0.9s						
P38A	**Dawn**	52.01	72	IAmb	IAmb	01 19 15.5	
	comp=Z,92nm,1.1s						
T35A	**Sooner Cattle**	52.02	76	IAmb	IAmb	01 19 16.2	
	comp=Z,45nm,1.1s						
WMOK	**Wichita Mounta**	52.11	80	P	P	01 19 04.3	0.0
	baz=313,SNR=20						
WMOK	**Wichita Mounta**	52.11	80	IAmb	IAmb	01 19 18.8	
	comp=Z,31nm,0.9s						
WMOK	**Wichita Mounta**	52.11	80	IAMs_20	IAMs_20	01 42 29.5	
	comp=Z,1µm,18.0s						
DBG	**Daneborg**	52.17	10	*i* P	P	01 19 03.0	-1.3
OK029	**Liberty Lake**	52.20	78	IAmb	IAmb	01 19 17.9	
	comp=Z,74nm,1.3s						
BCOK	**Bluff Creek, N**	52.20	78		P	01 19 04.6	-0.5
BCOK				IAmb	IAmb	01 19 17.9	
	comp=Z,93nm,1.4s						
QUOK	**Quay**	52.40	77	IAmb	IAmb	01 19 19.1	
	comp=Z,47nm,1.2s						
OK025	**Westminster Rd**	52.41	78	IAmb	IAmb	01 19 20.2	
	comp=Z,38nm,1.0s						
OK030	**Cody Creek RV**	52.52	78	IAmb	IAmb	01 19 20.9	
	comp=Z,93nm,1.2s						
FNO	**Franklin**	52.59	79	IAmb	IAmb	01 19 21.1	
	comp=Z,108nm,1.4s						
SFJD	**Kangerlussuaq**	52.63	26	P	P	01 19 07.8	0.0
SFJD				pmax	pmax		
	comp=Z,42nm,0.9s						
SFJD	**Kangerlussuaq**	52.63	26	*i* P	P	01 19 07.1	-0.6
SFJD				IAmb	IAmb	01 19 08.8	
	comp=Z,17nm,0.8s						
SFJD	**Kangerlussuaq**	52.63	26	P	P	01 19 07.8	0.0
SFJD				IAmb	IAmb	01 19 08.8	
	comp=Z,42nm,0.9s						
L42A	**Oliver, Polo**	52.70	67	IAmb	IAmb	01 19 09.1	
	comp=Z,39nm,0.8s						
TIA	**Tai'an**	52.71	283	P	P	01 19 08.4	-0.4
TIA				S	S	01 26 38.4	+2.0
TIA				pmax	pmax		
	comp=Z,54nm,1.4s						
TIA				pmax	pmax		
	comp=Z,290nm,10.3s						
TIA				LR	LR		
	comp=Z,810nm,20.1s						
TIA				LR	LR		
	comp=Z,1µm,17.7s						
TIA				LR	LR		
	comp=Z,1µm,19.1s						
X34A	**Smith Ranch, M**	52.77	80	IAmb	IAmb	01 19 23.1	
	comp=Z,63nm,1.4s						
TX31	**Lajitas Ar. Si**	52.84	89	P	P	01 19 10.4	+0.5
TX32	**Lajitas Array**	52.84	89	IAmb	IAmb	01 19 25.6	
	comp=Z,39nm,0.9s						
TXAR	**Lajitas Array**	52.84	89	P	P	01 19 10.2	+0.2
	comp=Z,9.6nm,0.7s,baz=298,slow=5.4,SNR=111						
TXAR				LR	LR	01 39 16.5	
	comp=Z,934nm,20.3s,baz=0.0,slow=33						
E46A	**Sault Ste Mari**	52.86	60	IAmb	IAmb	01 19 10.8	
	comp=Z,41nm,0.8s						
HHC	**Hu-ho-hao-te**	52.93	291	*i* P	P	01 19 11.0	+0.5
HHC				S	S	01 26 40.0	+0.6
HHC				pmax	pmax		
	comp=Z,37nm,1.0s						
HHC				pmax	pmax		
	comp=Z,430nm,5.1s						
HHC				LR	LR		
	comp=Z,1µm,19.3s						
HHC				LR	LR		
	comp=Z,1µm,17.1s						
HHC				LR	LR		
	comp=Z,2µm,20.5s						
K43A	**Burlington**	53.00	66	IAmb	IAmb	01 19 11.1	
	comp=Z,68nm,0.9s						
ABTX	**Abilene, Hawle**	53.02	83	P	P	01 19 11.2	+0.1
	baz=314,SNR=6.0						
ABTX	**Abilene, Hawle**	53.02	83	IAmb	IAmb	01 19 30.2	
	comp=Z,95nm,1.2s						
TUL1	**Leonard**	53.12	77	P	P	01 19 11.4	-0.5
	baz=313,SNR=7.4						
TUL1	**Leonard**	53.12	77	IAmb	IAmb	01 19 24.6	
	comp=Z,43nm,1.1s						
HPIG		53.32	92	P	P	01 19 13.9	+0.2
HPIG				IAmb	IAmb	01 19 31.1	
	comp=Z,42nm,1.3s						
BJO1	**Bjornoya**	53.53	357	*e*P	P	01 19 14.2	-0.1
L44A	**Lake County Fo**	53.58	66	P	P	01 19 13.9	-1.2
	baz=311						
L44A	**Lake County Fo**	53.58	66	IAmb	IAmb	01 19 15.4	
	comp=Z,90nm,1.0s						
LOOK	**Love County**	53.58	80		P	01 19 15.9	+0.7
LOOK				IAmb	IAmb	01 19 29.7	
	comp=Z,70nm,1.0s						
U38A	**Gravette**	53.61	75	IAmb	IAmb	01 19 27.4	
	comp=Z,40nm,1.0s						
ICESG	**Greenland Ices**	53.63	20	*i* P	P	01 19 14.7	-0.8
ICESG				IAmb	IAmb	01 19 15.8	
	comp=Z,56nm,0.7s						
GLMI	**Grayling**	53.69	62	P	P	01 19 15.2	-0.7
	baz=311						
GLMI	**Grayling**	53.69	62	IAmb	IAmb	01 19 16.8	
	comp=Z,96nm,1.1s						
SSE	**Sheshan**	53.73	276	P	P	01 19 18.0	+1.6
SSE				S	S	01 26 50.8	+0.5
SSE				pmax	pmax		
	comp=Z,96nm,1.2s						
SSE				pmax	pmax		
	comp=Z,250nm,3.5s						
SSE				LR	LR		
	comp=Z,190nm,19.0s						
SSE				LR	LR		
	comp=Z,220nm,19.4s						
HDIL	**Hopedale**	53.86	68	P	P	01 19 15.9	-1.3
	baz=311,SNR=14						
HDIL	**Hopedale**	53.86	68	IAMs_20	IAMs_20	01 42 31.8	
	comp=Z,2µm,19.0s						
BTO	**Baotou**	53.97	292	*e*P	P	01 19 18.1	-0.1
BTO				S	S	01 26 55.4	+1.8
BTO				LR	LR		
	comp=Z,3µm,19.2s						
BTO				LR	LR		
	comp=Z,4µm,18.2s						
Z35A	**Perchaven, San**	53.99	80	IAmb	IAmb	01 19 46.5	
	comp=Z,45nm,1.1s						
M44A	**Midewin, Midew**	54.02	67	IAmb	IAmb	01 19 18.8	
	comp=Z,79nm,1.0s						
DY2G	**Dye2**	54.17	24	*i* P	P	01 19 19.0	-0.4
DY2G				IAmb	IAmb	01 19 20.6	
	comp=Z,20nm,0.6s						
X37A	**Clayton**	54.27	78	IAmb	IAmb	01 19 33.5	
	comp=Z,67nm,1.2s						
X37A				IAMs_20	IAMs_20	01 43 56.5	
	comp=Z,795nm,18.0s						
P43A	**Skaggs, Pawnee**	54.33	69	IAmb	IAmb	01 19 20.9	
	comp=Z,68nm,0.9s						
CCM	**Cathedral Cave**	54.39	72	P	P	01 19 19.6	-1.5
CCM				pmax	pmax		
	comp=Z,47nm,1.1s						
CCM				MLR	MLR		
	comp=Z,800nm,19.0s						
CCM	**Cathedral Cave**	54.39	72	P	P	01 19 19.4	-1.7
	baz=312						
CCM	**Cathedral Cave**	54.39	72	P	P	01 19 19.6	-1.5
CCM				IAmb	IAmb	01 19 32.4	
	comp=Z,47nm,1.1s						
CCM				IAMs_20	IAMs_20	01 42 17.1	
	comp=Z,847nm,19.0s						
MGMO	**Mountain Grove**	54.39	73	IAmb	IAmb	01 19 32.6	
	comp=Z,47nm,1.1s						
JCT	**Junction City**	54.41	85	P	P	01 19 21.0	-0.4
	baz=315,SNR=6.9						
JCT	**Junction City**	54.41	85	IAmb	IAmb	01 19 35.4	
	comp=Z,64nm,0.9s						
JCT				IAMs_20	IAMs_20	01 42 27.9	
	comp=Z,1µm,18.0s						
TIY	**Taiyuan**	54.49	288	⇓P	P	01 19 23.4	+1.4
TIY				pmax	pmax		
	comp=Z,24nm,0.6s						
TIY				pmax	pmax		
	comp=Z,300nm,7.0s						
TIY				LR	LR		
	comp=Z,200nm,6.7s						
TIY				LR	LR		
	comp=Z,1µm,15.3s						
TIY				LR	LR		
	comp=Z,1µm,16.6s						
NJ2	**Nanjing**	54.50	278	⇓*i*P	P	01 19 23.0	+1.1
NJ2				pP	pwP	01 19 27.4	-1.3
NJ2				sP	sP	01 19 29.0	+3.4
NJ2				S	S	01 27 03.8	+3.2
NJ2				pmax	pmax		
	comp=Z,65nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,490nm,3.5s						
NJ2				LR	LR		
	comp=Z,520nm,19.9s						
NJ2				LR	LR		
	comp=Z,740nm,18.0s						
NJ2				LR	LR		
	comp=Z,1µm,22.0s						
U40A	**Yellville**	54.58	75	P	P	01 19 21.0	-1.5
	baz=313,SNR=8.0						
U40A	**Yellville**	54.58	75	IAMs_20	IAMs_20	01 46 43.4	
	comp=Z,759nm,18.0s						
SLM	**Saint Louis**	54.59	71	IAmb	IAmb	01 19 22.7	
	comp=Z,72nm,1.2s						
L46A	**Eue Claire**	54.60	65	IAmb	IAmb	01 19 22.9	
	comp=Z,62nm,0.8s						
O44A	**Mansfield**	54.60	68	IAmb	IAmb	01 19 22.6	
	comp=Z,37nm,0.7s						
J47A	**Sunmer**	54.61	63	IAmb	IAmb	01 19 23.2	
	comp=Z,34nm,0.8s						
WHTX	**Lake Whitney,**	54.79	82	P	P	01 19 24.4	+0.3
	baz=314,SNR=9.7						
W39A	**Magazine**	54.81	76	P	P	01 19 23.5	-0.7
	baz=313,SNR=11						
W39A	**Magazine**	54.81	76	P	P	01 19 23.9	-0.3
W39A				IAmb	IAmb	01 19 36.7	
	comp=Z,112nm,1.5s						
FVM	**French Village**	54.91	71	IAmb	IAmb	01 19 36.6	
	comp=Z,73nm,1.1s						
Q44A	**Meyer Farm, Va**	55.12	70	IAmb	IAmb	01 19 38.2	
	comp=Z,103nm,1.4s						
SFIN	**Lafayette**	55.23	67	P	P	01 19 26.2	-0.9
	baz=312						
I49A	**Point Hope**	55.24	61	IAmb	IAmb	01 19 28.1	
	comp=Z,54nm,0.8s						
FCAR	**Ozark Folk Cen**	55.33	74	IAmb	IAmb	01 19 39.3	
	comp=Z,55nm,0.9s						
MIAR	**Mount Ida**	55.38	77	P	P	01 19 27.8	-0.5
	baz=314,SNR=29						
MIAR	**Mount Ida**	55.38	77	IAmb	IAmb	01 19 41.2	
	comp=Z,88nm,1.2s						
SCO	**Scoresbysund**	55.48	13	*i* P	P	01 19 28.0	-0.5
SCO				IAmb	IAmb	01 19 29.2	
	comp=Z,54nm,0.9s						
435B	**Jarrell**	55.56	83	P	P	01 19 29.6	0.0
	baz=315						
435B	**Jarrell**	55.56	83	IAMs_20	IAMs_20	01 43 30.1	
	comp=Z,968nm,18.0s						
WHAR	**Wooly Hollow**	55.64	75	IAmb	IAmb	01 19 42.0	
	comp=Z,55nm,1.4s						
SCHQ	**Schefferville**	55.67	43	P	P	01 19 30.4	+0.2
	comp=Z,87nm,0.9s,baz=322,slow=7.8,SNR=39						
SCHQ				LR	LR	01 43 45.4	
	comp=Z,1µm,20.4s,baz=325,slow=36						
SCHQ	**Schefferville**	55.67	43	P	P	01 19 29.8	-0.3
P46A	**Rosedale**	55.68	68	IAmb	IAmb	01 19 30.8	
	comp=Z,36nm,0.9s						
L48A	**N Adams**	55.68	64	IAmb	IAmb	01 19 42.3	
	comp=Z,115nm,1.5s						
PBMO	**Poplar Bluff**	55.73	73	IAmb	IAmb	01 19 42.2	
	comp=Z,88nm,1.4s						
W41B	**Gary Mavity, V**	55.74	75	P	P	01 19 29.8	-1.1
	baz=314,SNR=9.1						
LCAR	**Lake Charles**	55.78	74	IAmb	IAmb	01 19 42.3	
	comp=Z,38nm,1.3s						
S44A	**Carbondale**	55.79	71	IAmb	IAmb	01 19 42.9	
	comp=Z,29nm,0.9s						
SIUC	**Southern Illin**	55.80	71	IAmb	IAmb	01 19 42.9	
	comp=Z,46nm,1.1s						
X40A	**Basin Creek Fa**	55.87	76	P	P	01 19 31.1	-0.7
	baz=314,SNR=7.0						
X40A	**Basin Creek Fa**	55.87	76	IAMs_20	IAMs_20	01 47 35.6	
	comp=Z,845nm,18.0s						
AAM	**Ann Arbor**	55.87	63	P	P	01 19 31.6	-0.1
	baz=312						
AAM	**Ann Arbor**	55.87	63	IAMs_20	IAMs_20	01 45 07.6	
	comp=Z,1µm,19.0s						
833A	**Chaparral WMA,**	56.19	86	P	P	01 19 33.9	-0.3
	baz=316,SNR=5.7						
H06E1	**SOCORRO T-PHAS**	56.19	103	T	T	02 20 33.8	
	SNR=6.5						
BLO	**Bloomington**	56.37	68	IAmb	IAmb	01 19 35.6	
	comp=Z,72nm,1.1s						
HBAR	**Harrisburg**	56.43	74	P	P	01 19 35.6	-0.1
JMIC	**Jan Mayen**	56.44	7	*e*P	P	01 19 35.0	-0.4
N49A	**Columbus Grove**	56.51	65	IAmb	IAmb	01 19 48.0	
	comp=Z,76nm,1.4s						
SADO	**Sadowa**	56.65	59	IAmb	IAmb	01 19 54.5	
	comp=Z,23nm,0.8s						
NATX	**Nacogdoches**	56.66	80	P	P	01 19 37.6	+0.1
	baz=315						
NATX	**Nacogdoches**	56.66	80	IAmb	IAmb	01 19 51.7	
	comp=Z,79nm,1.2s						
Z41A	**Richland Creek**	56.73	77	P	P	01 19 37.8	-0.2
	baz=314						
O49A	**Covington**	56.92	66	IAmb	IAmb	01 19 50.8	
	comp=Z,64nm,1.2s						
WCI	**Wyandotte Cave**	57.14	69	P	P	01 19 40.2	-0.6
WCI	**Wyandotte Cave**	57.14	69	P	P	01 19 40.0	-0.9
	baz=314						
WCI	**Wyandotte Cave**	57.14	69	P	P	01 19 40.2	-0.6
WCI				IAmb	IAmb	01 19 41.1	
	comp=Z,44nm,0.9s						
P49A	**Miami Univ. Ec**	57.15	66	P	P	01 19 39.3	-1.5
	baz=313,SNR=20						
P49A	**Miami Univ. Ec**	57.15	66	IAmb	IAmb	01 19 40.5	
	comp=Z,49nm,0.8s						
HAMF	**Hammerfest**	57.17	355	*e*P	P	01 19 39.7	-0.9
HKT	**Hockley**	57.22	82	*ce*P	P	01 19 41.3	-0.1
HKT				pmax	pmax		
	comp=Z,26nm,1.5s						
HKT				MLR	MLR		
	comp=Z,1µm,17.0s						
HKT	**Hockley**	57.22	82	P	P	01 19 42.3	+1.0
HKT				IAmb	IAmb	01 19 59.3	
	comp=Z,45nm,1.3s						
HKT	**Hockley**	57.22	82	IAMs_20	IAMs_20	01 44 50.6	
	comp=Z,1µm,18.0s						
N51A	**Ashland**	57.52	64	IAmb	IAmb	01 19 43.7	
	comp=Z,71nm,1.1s						
T47A	**Sharon Grove**	57.52	70	IAmb	IAmb	01 19 55.8	
	comp=Z,78nm,1.1s						
ZALV	**Zalesovo Beam**	57.55	318	P	P	01 19 42.6	-0.9
	comp=Z,9.2nm,0.6s,baz=40,slow=6.9,SNR=41						
ZALV				PcP	PcP	01 20 37.4	+0.6
	comp=Z,6.0nm,0.6s,baz=58,slow=3.7,SNR=4.8						
ACSO	**Alum Creek Sta**	57.65	65	P	P	01 19 43.4	-1.0
	baz=314,SNR=8.9						
ACSO	**Alum Creek Sta**	57.65	65	IAmb	IAmb	01 19 44.7	
	comp=Z,23nm,0.7s						
M52A	**Chesterland**	57.65	63	IAmb	IAmb	01 19 44.9	
	comp=Z,36nm,0.8s						
KVTX	**Kingsville**	57.67	86	IAMs_20	IAMs_20	01 44 22.2	
	comp=Z,979nm,18.0s						
WVT	**Waverly**	57.70	71	P	P	01 19 44.4	-0.4
WVT				pmax	pmax		
	comp=Z,81nm,1.4s						
WVT				MLR	MLR		
	comp=Z,900nm,21.0s						
WVT	**Waverly**	57.70	71	P	P	01 19 44.0	-0.8
	baz=314						
WVT	**Waverly**	57.70	71	P	P	01 19 44.4	-0.4
WVT				IAmb	IAmb	01 19 57.1	
	comp=Z,81nm,1.4s						
WVT	**Waverly**	57.70	71	IAMs_20	IAMs_20	01 44 08.6	
	comp=Z,882nm,21.0s						
KEV	**Kevo**	57.84	353	P	P	01 19 44.8	-0.4
KEV				pmax	pmax		
	comp=Z,36nm,0.9s						
KEV	**Kevo**	57.84	353	P	P	01 19 44.8	-0.4
KEV				IAmb	IAmb	01 19 45.7	
	comp=Z,36nm,0.9s						
OXF	**Oxford**	57.89	74	P	P	01 19 45.2	-0.9
	baz=314,SNR=12						
OXF	**Oxford**	57.89	74	IAMs_20	IAMs_20	01 48 14.9	
	comp=Z,669nm,18.0s						
J54A	**Appleton**	57.93	60	IAmb	IAmb	01 19 47.5	
	comp=Z,37nm,0.8s						
ERPA	**Erie**	58.00	61	P	P	01 19 46.5	-0.4
	baz=314						
TRQ	**Mont Tremblant**	58.02	55	IAmb	IAmb	01 19 59.3	
	comp=Z,96nm,1.3s						
M53A	**WI Miller and**	58.09	62	P	P	01 19 46.8	-0.7
	baz=314,SNR=14						
M53A	**WI Miller and**	58.09	62	IAmb	IAmb	01 19 48.2	
	comp=Z,54nm,0.9s						
MEDO	**Medina**	58.10	60	IAmb	IAmb	01 19 59.9	
	comp=Z,68nm,1.0s						
P51A	**Williamsport**	58.12	65	IAmb	IAmb	01 19 59.4	
	comp=Z,52nm,1.3s						
ARA0	**ARCESS Array S**	58.16	354	*e*P	P	01 19 47.1	-0.4
ARCES	**ARCESS Array B**	58.16	354	P	P	01 19 46.7	-0.8
	comp=Z,9.5nm,0.4s,baz=14,slow=7.8,SNR=108						
ARCES				PcP	PcP	01 20 39.1	+0.2
	comp=Z,10nm,0.8s,baz=12,slow=6.2,SNR=4.8						
ARCES				LR	LR	01 46 50.9	
	comp=Z,907nm,18.9s,baz=355,slow=38						
ARCES	**ARCESS Array B**	58.16	354	IAmb	IAmb	01 19 49.2	
	comp=Z,59nm,1.4s						
YHNB	**Yeheng**	58.21	270	IAMs_20	IAMs_20	01 44 02.1	
	comp=Z,1µm,21.0s						
R50A	**Paris**	58.23	67	IAmb	IAmb	01 20 00.7	
	comp=Z,71nm,1.1s						
ALLY	**Alegheny Colle**	58.24	62	P	P	01 19 47.8	-0.7
Q51A	**Peebles**	58.27	66	IAmb	IAmb	01 19 49.5	
	comp=Z,69nm,0.9s						
WHN	**Wuhan**	58.30	280	⇑*i*P	P	01 19 49.8	+0.8
WHN				pP	pwP	01 19 55.2	-0.6
WHN				S	S	01 27 52.5	+1.5
WHN				pmax	pmax		
	comp=Z,280nm,0.9s						
WHN				LR	LR		
	comp=Z,3µm,21.3s						
WHN				LR	LR		
	comp=Z,750nm,14.2s						
WHN				LR	LR		
	comp=Z,2µm,15.2s						
342A	**Flagon Creek P**	58.34	78	P	P	01 19 50.5	+1.2
342A				IAmb	IAmb	01 20 03.5	
	comp=Z,41nm,1.1s						
PLAL	**Pickwick Lake**	58.35	73	IAmb	IAmb	01 20 01.3	
	comp=Z,46nm,0.9s						
PLAL				IAMs_20	IAMs_20	01 45 58.0	
	comp=Z,790nm,18.0s						
O52A	**Adamsville**	58.37	64	IAmb	IAmb	01 19 49.8	
	comp=Z,68nm,0.9s						
J55A	**Hilton**	58.37	59	IAmb	IAmb	01 20 02.6	
	comp=Z,60nm,1.1s						
TRO	**Tromso**	58.40	357	*e*P	P	01 19 48.8	-0.3
JETT	**Jettan, Norway**	58.41	356	*e*P	P	01 19 50.1	+0.7
N53A	**Lisbon**	58.44	63	IAmb	IAmb	01 20 01.9	
	comp=Z,67nm,1.2s						
NACB	**Ninganchiao**	58.44	269	IAMs_20	IAMs_20	01 43 41.2	
	comp=Z,1µm,21.0s						
P52A	**Corning**	58.53	65	P	P	01 19 49.4	-1.2
	baz=314						
P52A	**Corning**	58.53	65	IAmb	IAmb	01 20 03.8	
	comp=Z,48nm,1.4s						
V48A	**Smith Brothers**	58.55	71	IAmb	IAmb	01 20 02.8	
	comp=Z,28nm,1.1s						
CLTN	**Cedars of Leba**	58.59	70	IAmb	IAmb	01 20 03.5	
	comp=Z,91nm,1.3s						
M54A	**Oil Creek Stat**	58.59	62	P	P	01 19 50.4	-0.6
	baz=314,SNR=10						
M54A	**Oil Creek Stat**	58.59	62	IAMs_20	IAMs_20	01 47 05.5	
	comp=Z,1µm,19.0s						
O53A	**New Philadelph**	58.62	64	P	P	01 19 50.1	-1.1
	baz=314,SNR=7.5						
O53A	**New Philadelph**	58.62	64	IAmb	IAmb	01 20 03.0	
	comp=Z,76nm,1.4s						
U49A	**Red Boiling Sp**	58.62	70	IAmb	IAmb	01 20 03.3	
	comp=Z,36nm,1.1s						
MMNY	**Mt. Morris Dam**	58.69	60	IAmb	IAmb	01 20 04.8	
	comp=Z,73nm,1.2s						
N54A	**Moraine State**	58.80	62	P	P	01 19 51.7	-0.7
	baz=314,SNR=6.6						
T50A	**Nancy**	58.81	69	IAmb	IAmb	01 20 04.7	
	comp=Z,54nm,1.1s						
KTK1	**Kautokeino**	58.81	355	*e*P	P	01 19 52.2	+0.1
VBMS	**Vicksburg**	58.83	77	P	P	01 19 52.4	-0.3
	baz=315						
VBMS	**Vicksburg**	58.83	77	IAMs_20	IAMs_20	01 48 28.2	
	comp=Z,706nm,19.0s						

J56A	**Wolcott**	**58.87**	**58**	IAmb	IAmb	01 20 06.0	
	comp=Z,57nm,0.9s						
Q52A	**Bidwell**	**58.92**	**65**	IAmb	IAmb	01 19 53.5	
	comp=Z,24nm,0.8s						
LVZ	**Lovozero**	**58.94**	**350**	*ce*P	**P**	**01 19 52.1**	**-1.0**
LVZ				pmax	pmax		
	comp=Z,97nm,1.3s						
LVZ				MLR	MLR		
	comp=Z,1μm,19.0s						
LVZ	**Lovozero**	**58.94**	**350**	P	**P**	**01 19 52.3**	**-0.8**
MNTQ	**Montreal, Queb**	**58.99**	**55**	IAmb	IAmb	01 20 05.6	
	comp=Z,40nm,1.1s						
P53A	**Whipple**	**59.05**	**64**	IAmb	IAmb	01 20 06.2	
	comp=Z,45nm,1.1s						
XAN	**Xi'an**	**59.09**	**287**	P	**P**	**01 19 55.3**	**+0.7**
XAN	**Xi'an**	**59.09**	**287**	P	**P**	**01 19 55.3**	**+0.7**
S51A	**Beattyville**	**59.09**	**67**	IAmb	IAmb	01 19 54.9	
	comp=Z,34nm,0.9s						
LONY	**Lake Ozonia**	**59.11**	**56**	P	**P**	**01 19 53.7**	**-0.9**
	baz=314,SNR=9.4						
LONY	**Lake Ozonia**	**59.11**	**56**	IAmb	IAmb	01 20 06.9	
	comp=Z,35nm,1.1s						
SSLB	**Suanglung**	**59.12**	**270**	IAmb	IAmb	01 20 07.4	
	comp=Z,61nm,1.0s						
SSLB				IAMs_20	IAMs_20	01 44 12.1	
	comp=Z,1μm,21.0s						
LMQ	**La Malbaie**	**59.17**	**51**	P	**P**	**01 19 54.9**	**-0.1**
LMQ				IAmb	IAmb	01 19 55.5	
	comp=Z,36nm,1.0s						
YULB	**Yu-li**	**59.20**	**269**	IAMs_20	IAMs_20	01 43 55.3	
	comp=Z,878nm,22.0s						
X48A	**Hartselle**	**59.32**	**72**	IAmb	IAmb	01 20 07.7	
	comp=Z,31nm,0.9s						
APA	**Apatity**	**59.39**	**350**	⇓*i*P	**P**	**01 19 54.7**	**-1.4**
APA				*i*	**PcP**	**01 20 48.4**	**+4.6**
APA				*i*	**PP**	**01 22 12.0**	**+5.3**
APA				*i* PPP	PPP	01 23 30.0	
APA				*i* S	**S**	**01 27 59.0**	**-5.3**
APA				*i* PS	**PnS**	**01 28 09.0**	**-7.1**
APA				*i* SSS	SSS	01 34 20.0	
APA				pmax	pmax		
	comp=Z,15nm,1.2s						
APA				MLR	MLR		
	comp=Z,1μm,14.0s						
DGZ	**Jazzator, Alta**	**59.45**	**313**	*c i*P	**P**	**01 19 56.8**	**-0.2**
DGZ				pmax	pmax		
	comp=Z,42nm,0.7s						
DGZ				MLR	MLR		
	comp=Z,2μm,17.0s						
FRNY	**Flat Rock**	**59.47**	**55**	IAmb	IAmb	01 20 09.0	
	comp=Z,38nm,1.3s						
TPUB	**Ta-pu**	**59.68**	**270**	IAMs_20	IAMs_20	01 44 42.0	
	comp=Z,1μm,20.0s						
Q54A	**Coxs Mills**	**59.71**	**64**	IAmb	IAmb	01 19 59.5	
	comp=Z,36nm,0.8s						
QZH	**Quanzhou**	**59.73**	**272**	⇑*i*P	**P**	**01 20 01.3**	**+2.3**
QZH				S	**S**	**01 28 14.4**	**+4.7**
QZH				pmax	pmax		
	comp=Z,320nm,4.3s						
QZH				LR	LR		
	comp=Z,410nm,19.7s						
QZH				LR	LR		
	comp=Z,190nm,16.1s						
QZH				LR	LR		
	comp=Z,450nm,18.8s						
NCB	**Newcomb**	**59.75**	**56**	IAmb	IAmb	01 20 12.9	
	comp=Z,56nm,1.2s						
MCWV	**Mont Chateau**	**59.78**	**63**	P	**P**	**01 19 58.8**	**-0.5**
	baz=315,SNR=8.2						
MCWV	**Mont Chateau**	**59.78**	**63**	P	**P**	**01 19 59.2**	**0.0**
MCWV				IAmb	IAmb	01 20 00.1	
	comp=Z,56nm,0.9s						
W50A	**Signal Mountai**	**59.81**	**70**	IAmb	IAmb	01 20 11.5	
	comp=Z,54nm,1.1s						
TZTN	**Tazewell**	**59.88**	**68**	P	**P**	**01 19 59.5**	**-0.5**
	baz=315,SNR=7.8						
V51A	**Loudon**	**59.94**	**69**	IAmb	IAmb	01 20 12.3	
	comp=Z,26nm,1.2s						
LOF	**Lofoten**	**60.04**	**359**	*e*P	**P**	**01 20 00.2**	**-0.3**
O56A	**Blue Knob Stat**	**60.06**	**62**	P	**P**	**01 20 00.4**	**-0.8**
	baz=315,SNR=14						
O56A	**Blue Knob Stat**	**60.06**	**62**	IAmb	IAmb	01 20 01.7	
	comp=Z,35nm,0.8s						
O56A				IAMs_20	IAMs_20	01 47 42.2	
	comp=Z,1μm,19.0s						
BINY	**Binghamton**	**60.08**	**59**	P	**P**	**01 20 01.4**	**+0.1**
	baz=315,SNR=12						
BINY	**Binghamton**	**60.08**	**59**	IAMs_20	IAMs_20	01 46 29.6	
	comp=Z,790nm,22.0s						
CPCT	**Cooper Cave**	**60.09**	**70**	IAmb	IAmb	01 20 13.2	
	comp=Z,53nm,1.4s						
D62A	**Allapoint, All**	**60.11**	**51**	IAmb	IAmb	01 20 02.4	
	comp=Z,36nm,1.1s						
Y49A	**Blount Mountai**	**60.11**	**72**	IAmb	IAmb	01 20 13.2	
	comp=Z,64nm,1.4s						
SSPA	**Standing Stone**	**60.17**	**61**	P	**P**	**01 20 01.3**	**-0.5**
	baz=315						
SSPA	**Standing Stone**	**60.17**	**61**	P	**P**	**01 20 01.5**	**-0.3**
SSPA	**Standing Stone**	**60.17**	**61**	IAMs_20	IAMs_20	01 47 15.1	
	comp=Z,860nm,18.0s						
STEI	**Steigen**	**60.21**	**358**	*e*P	**P**	**01 20 01.2**	**-0.5**
E62A	**Clayton Lake**	**60.22**	**51**	IAmb	IAmb	01 20 14.6	
	comp=Z,57nm,1.5s						
VT1	**Waterbury**	**60.25**	**55**	IAmb	IAmb	01 20 15.1	
	comp=Z,48nm,1.3s						
V52A	**Sevierville**	**60.35**	**69**	IAmb	IAmb	01 20 15.3	
	comp=Z,50nm,1.2s						
TKL	**Tuckaleechee C**	**60.38**	**69**	IAmb	IAmb	01 20 15.2	
	comp=Z,46nm,1.1s						
ACCN	**Adirondack Com**	**60.45**	**56**	P	**P**	**01 20 04.1**	**+0.3**
ACCN				IAmb	IAmb	01 20 18.8	
	comp=Z,53nm,1.2s						
GTA	**Gaotai**	**60.51**	**297**	*e*P	**P**	**01 20 03.9**	**-0.5**
GTA				pP	sP	01 20 08.6	+0.5
GTA				sP	pwP	01 20 11.1	-0.1
GTA				PcP	**PcP**	**01 20 48.2**	**-0.8**
GTA				S	**S**	**01 28 13.1**	**-6.7**
GTA				pmax	pmax		
	comp=Z,34nm,0.8s						
GTA				pmax	pmax		
	comp=Z,140nm,5.2s						
GTA				LR	LR		
	comp=Z,880nm,17.1s						
GTA				LR	LR		
	comp=Z,2μm,20.0s						
GTA				LR	LR		
	comp=Z,2μm,18.9s						
F62A	**Pittston Farm,**	**60.52**	**52**	IAmb	IAmb	01 20 05.0	
	comp=Z,38nm,1.1s						
X51A	**Calhoun**	**60.52**	**71**	IAmb	IAmb	01 20 16.4	
	comp=Z,85nm,1.4s						
Q56A	**Snyder Ridge,**	**60.58**	**63**	IAmb	IAmb	01 20 17.2	
	comp=Z,34nm,1.1s						
R55A	**Marlinton**	**60.60**	**65**	IAmb	IAmb	01 20 18.4	
	comp=Z,70nm,1.1s						
LZH	**Lanzhou**	**60.60**	**292**	⇓P	**P**	**01 20 06.5**	**+1.4**
LZH				pP	pwP	01 20 10.7	-1.2
LZH				SS	SS	01 32 18.7	0.0
LZH				pmax	pmax		
	comp=Z,87nm,1.1s						
LZH				pmax	pmax		
	comp=Z,380nm,4.6s						
LZH				LR	LR		
	comp=Z,2μm,16.3s						
LZH				LR	LR		
	comp=Z,2μm,15.2s						
LZH				LR	LR		
	comp=Z,2μm,17.4s						
KSPA	**Keystone Colle**	**60.65**	**59**	IAmb	IAmb	01 20 18.5	
	comp=Z,48nm,1.1s						
N58A	**Sunbury**	**60.65**	**60**	IAmb	IAmb	01 20 18.4	
	comp=Z,67nm,1.2s						
G62A	**West of Eustis**	**60.73**	**53**	IAmb	IAmb	01 20 18.4	
	comp=Z,52nm,1.2s						
LBNH	**Lisbon**	**60.73**	**55**	P	**P**	**01 20 05.2**	**-0.5**
	baz=316						
FAUS	**Fauske**	**60.76**	**358**	*e*P	**P**	**01 20 05.0**	**-0.5**
H62A	**Milan**	**60.88**	**54**	IAmb	IAmb	01 20 19.4	
	comp=Z,66nm,1.2s						
U54A	**Nelsons Funny**	**60.89**	**67**	P	**P**	**01 20 07.0**	**+0.1**
PQI	**Presque Isle**	**60.90**	**51**	IAMs_20	IAMs_20	01 47 39.5	
	comp=Z,1μm,19.0s						
P57A	**Homestead Farm**	**60.91**	**62**	IAmb	IAmb	01 20 19.4	
	comp=Z,70nm,1.3s						
TRY	**Troy**	**60.92**	**57**	IAMs_20	IAMs_20	01 47 51.6	
	comp=Z,1μm,18.0s						
J61A	**Chester**	**61.05**	**56**	IAmb	IAmb	01 20 21.1	
	comp=Z,72nm,1.3s						
F63A	**Nahmakanta, Br**	**61.08**	**52**	IAmb	IAmb	01 20 20.5	
	comp=Z,31nm,1.0s						
PAGS	**Pennsylvania G**	**61.08**	**61**	IAmb	IAmb	01 20 20.3	
	comp=Z,78nm,1.4s						
N59A	**State Game Lan**	**61.10**	**60**	P	**P**	**01 20 08.1**	**-0.2**
	baz=316,SNR=11						
BLA	**Blacksburg**	**61.19**	**66**	P	**P**	**01 20 08.9**	**-0.1**
	baz=316,SNR=29						
NBB30	**Finnes**	**61.20**	**359**	*e*P	**P**	**01 20 08.6**	**+0.1**
Z51A	**Franklin**	**61.22**	**72**	IAmb	IAmb	01 20 20.6	
	comp=Z,38nm,0.9s						
PKME	**Peaks-Kenny Pk**	**61.30**	**52**	P	**P**	**01 20 08.8**	**-0.7**
	baz=316						
PKME	**Peaks-Kenny Pk**	**61.30**	**52**	IAmb	IAmb	01 20 10.4	
	comp=Z,45nm,1.2s						
PKME				IAMs_20	IAMs_20	01 49 42.3	
	comp=Z,1μm,19.0s						
F64A	**Sherman**	**61.33**	**51**	IAmb	IAmb	01 20 22.2	
	comp=Z,85nm,1.4s						
ENH	**Enshi**	**61.42**	**283**	P	**P**	**01 20 10.6**	**-0.1**
ENH				IAMs_20	IAMs_20	01 49 14.6	
	comp=Z,766nm,18.0s						
MOIG	**Morelia**	**61.44**	**94**	P	**P**	**01 20 11.1**	**0.0**
MOIG				IAmb	IAmb	01 20 27.9	
	comp=Z,65nm,1.1s						
MVL	**Millersville**	**61.45**	**61**	IAmb	IAmb	01 20 22.9	
	comp=Z,57nm,1.4s						
I63A	**Otisfield**	**61.54**	**54**	IAmb	IAmb	01 20 12.3	
	comp=Z,50nm,1.4s						
NBB13	**Alf Garage**	**61.55**	**359**	*e*P	**P**	**01 20 10.9**	**0.0**
SDMD	**Soldier's Deli**	**61.60**	**62**	IAmb	IAmb	01 20 23.8	
	comp=Z,30nm,1.3s						
ODNJ	**Ogdensburg**	**61.60**	**59**	IAmb	IAmb	01 20 24.9	
	comp=Z,58nm,1.2s						
L61B	**Northampton**	**61.63**	**57**	P	**P**	**01 20 11.1**	**-0.6**
	baz=316,SNR=5.6						
WVL	**Waterville**	**61.63**	**53**	IAMs_20	IAMs_20	01 46 37.0	
	comp=Z,1μm,21.0s						
BRAL	**Brewton**	**61.65**	**75**	P	**P**	**01 20 11.5**	**-0.6**
	baz=316						
BRAL	**Brewton**	**61.65**	**75**	IAMs_20	IAMs_20	01 50 28.7	
	comp=Z,791nm,19.0s						
KONS	**Konsvik**	**61.69**	**359**	*e*P	**P**	**01 20 11.4**	**-0.3**
K62A	**Royalston**	**61.70**	**56**	IAmb	IAmb	01 20 25.5	
	comp=Z,57nm,1.1s						
V55A	**Taylorsville**	**61.70**	**67**	P	**P**	**01 20 12.2**	**-0.2**
V55A				IAmb	IAmb	01 20 13.3	
	comp=Z,38nm,0.9s						
KSCT	**Kent School, K**	**61.73**	**58**	IAmb	IAmb	01 20 25.9	
	comp=Z,64nm,1.2s						
U56A	**King**	**61.82**	**66**	IAmb	IAmb	01 20 25.7	
	comp=Z,53nm,1.1s						
STOK	**Stokkvaagen**	**61.85**	**359**	*e*P	**P**	**01 20 13.2**	**+0.4**
WUPA	**West Chester U**	**61.89**	**60**	IAmb	IAmb	01 20 26.8	
	comp=Z,26nm,1.2s						
BRNJ	**Basking Ridge**	**61.91**	**59**	IAmb	IAmb	01 20 27.1	
	comp=Z,60nm,1.1s						
QUA2	**Belchertown**	**61.92**	**57**	IAmb	IAmb	01 20 26.8	
	comp=Z,41nm,1.2s						
152A	**Waverly Hall**	**61.95**	**72**	IAmb	IAmb	01 20 25.4	
	comp=Z,30nm,0.9s						
P60A	**Greenville**	**61.96**	**61**	P	**P**	**01 20 13.3**	**-0.7**
	baz=316						
P60A	**Greenville**	**61.96**	**61**	P	**P**	**01 20 14.3**	**+0.2**
P60A				IAmb	IAmb	01 20 27.3	
	comp=Z,53nm,1.4s						
T57A	**Hurt**	**61.99**	**65**	IAmb	IAmb	01 20 15.1	
	comp=Z,42nm,0.8s						
MOR8	**Moi Rana**	**61.99**	**358**	*e*P	**P**	**01 20 12.2**	**-1.7**
PAL	**Palisades**	**62.02**	**59**	P	**P**	**01 20 14.4**	**0.0**
	baz=316,SNR=5.1						
PAL	**Palisades**	**62.02**	**59**	IAMs_20	IAMs_20	01 47 18.1	
	comp=Z,764nm,21.0s						
SEM	**Semipalatinsk**	**62.06**	**317**	*e*P	**P**	**01 20 12.2**	**-2.7**
	baz=317						
SEM	**Semipalatinsk**	**62.06**	**317**	*e*P	**P**	**01 20 12.1**	**-2.7**
PAULI	**Pauline**	**62.10**	**68**	IAmb	IAmb	01 20 27.1	
	comp=Z,42nm,1.0s						
KMSC	**Kings Mountain**	**62.14**	**68**	P	**P**	**01 20 14.1**	**-1.2**
	baz=316,SNR=22						
GOGA	**Godfrey**	**62.15**	**71**	P	**P**	**01 20 14.3**	**-1.1**
GOGA				pmax	pmax		
	comp=Z,42nm,1.1s						
GOGA				MLR	MLR		
	comp=Z,1μm,20.0s						
GOGA	**Godfrey**	**62.15**	**71**	P	**P**	**01 20 13.6**	**-1.9**
	baz=316,SNR=16						
GOGA	**Godfrey**	**62.15**	**71**	P	**P**	**01 20 14.3**	**-1.1**
GOGA				IAmb	IAmb	01 20 26.9	
	comp=Z,42nm,1.1s						
GOGA	**Godfrey**	**62.15**	**71**	IAMs_20	IAMs_20	01 46 58.6	
	comp=Z,1μm,20.0s						
HRV	**Adam Dziewonsk**	**62.16**	**56**	P	**P**	**01 20 15.8**	**+0.4**
HRV				pmax	pmax		
	comp=Z,70nm,1.4s						
HRV				MLR	MLR		
	comp=Z,2μm,19.0s						
HRV	**Adam Dziewonsk**	**62.16**	**56**	P	**P**	**01 20 14.7**	**-0.6**
	baz=316						
HRV	**Adam Dziewonsk**	**62.16**	**56**	P	**P**	**01 20 15.8**	**+0.4**
HRV				IAmb	IAmb	01 20 28.6	
	comp=Z,70nm,1.4s						
CBN	**Corbin Frederi**	**62.17**	**63**	P	**P**	**01 20 14.8**	**-0.7**
	baz=316						
G65A	**Princeton**	**62.19**	**51**	IAmb	IAmb	01 20 17.0	
	comp=Z,31nm,1.1s						
WSPT	**Westport, CT**	**62.21**	**58**	IAMs_20	IAMs_20	01 49 06.9	
	comp=Z,871nm,18.0s						
ZSN	**Zaisan**	**62.26**	**312**	*e*P	**P**	**01 20 14.8**	**-1.2**
	comp=Z,55nm,1.6s,baz=312						
ZSN	**Zaisan**	**62.26**	**312**	*e*P	**P**	**01 20 14.7**	**-1.2**
ZSN				pmax	pmax		
	comp=Z,55nm,1.6s						
HODGE	**Hodges**	**62.27**	**69**	IAmb	IAmb	01 20 28.1	
	comp=Z,35nm,1.0s						
YLE	**Yale**	**62.31**	**58**	IAMs_20	IAMs_20	01 48 38.5	
	comp=Z,661nm,20.0s						
UCCT	**U. Connecticut**	**62.33**	**57**	P	**P**	**01 20 17.1**	**+0.6**
WES	**Weston**	**62.37**	**56**	IAmb	IAmb	01 20 28.8	
	comp=Z,58nm,1.1s						
BCX	**Boston College**	**62.48**	**56**	P	**P**	**01 20 17.9**	**+0.5**
BCX				IAmb	IAmb	01 20 38.7	
	comp=Z,30nm,1.3s						
KURK	**Kurchatov**	**62.50**	**318**	*c i*P	**P**	**01 20 16.7**	**-0.7**
KURK				pmax	pmax		
	comp=Z,98nm,1.3s						
KURK				MLR	MLR		
	comp=Z,1μm,18.0s						
KURK	**Kurchatov**	**62.50**	**318**	P	**P**	**01 20 17.2**	**-0.3**
KURK				P	**P**	**01 20 17.2**	**-0.3**
KURK	**Kurchatov**	**62.50**	**318**	P	**P**	**01 20 16.8**	**-0.7**
BRYW	**Bryant College**	**62.60**	**56**	IAmb	IAmb	01 20 31.3	
	comp=Z,58nm,1.2s						
KURBB	**Kurchatov Arra**	**62.61**	**318**	P	**P**	**01 20 17.8**	**-0.4**
Q61A	**Milford**	**62.80**	**61**	P	**P**	**01 20 19.8**	**+0.2**
	baz=316						
JSC	**Jenkinsville**	**62.80**	**69**	IAmb	IAmb	01 20 32.0	
	comp=Z,58nm,1.0s						
W57A	**Gilead**	**62.90**	**67**	IAmb	IAmb	01 20 32.6	
	comp=Z,42nm,1.1s						
154A	**Montrose**	**62.94**	**71**	P	**P**	**01 20 19.5**	**-1.1**
BIRD	**Birdtown, Kers**	**63.00**	**68**	IAmb	IAmb	01 20 21.7	
	comp=Z,36nm,0.9s						
PRGR	**Permogore**	**63.19**	**342**	*e*P	**P**	**01 20 21.0**	**-0.9**
PRGR				pmax	pmax		
	comp=Z,21nm,1.1s						
U59A	**Littleton**	**63.27**	**65**	IAmb	IAmb	01 20 35.7	
	comp=Z,75nm,1.3s						
TIGA	**Tifton**	**63.50**	**72**	P	**P**	**01 20 23.0**	**-1.5**
	baz=317						
TIGA	**Tifton**	**63.50**	**72**	P	**P**	**01 20 24.5**	**+0.1**
TIGA				IAmb	IAmb	01 20 44.7	
	comp=Z,25nm,1.0s						
WMQ	**Urumqi**	**63.61**	**308**	*e*P	**P**	**01 20 25.9**	**+0.8**
WMQ				pP	sP	01 20 28.6	-0.2
WMQ				PcP	**PcP**	**01 20 59.2**	**-2.2**
WMQ				PP	**PP**	**01 22 47.2**	**+2.7**
WMQ				S	**S**	**01 28 57.5**	**-1.2**
WMQ				pmax	pmax		
	comp=Z,65nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,300nm,5.1s						
WMQ				LR	LR		
	comp=Z,2μm,18.3s						
WMQ				LR	LR		
	comp=Z,1μm,19.3s						
WMQ				LR	LR		
	comp=Z,1μm,19.3s						
NSS	**Namsos**	**63.68**	**359**	*e*P	**P**	**01 20 24.8**	**-0.3**
X58A	**Rowland**	**63.70**	**67**	IAmb	IAmb	01 20 26.8	
	comp=Z,47nm,0.9s						
BRVK	**Borovoye**	**63.86**	**324**	*c i*P	**P**	**01 20 25.8**	**-0.7**
BRVK				pmax	pmax		
	comp=Z,94nm,1.4s						
BRVK				MLR	MLR		
	comp=Z,3μm,18.0s						
BRVK	**Borovoye**	**63.86**	**324**	P	**P**	**01 20 26.2**	**-0.3**
BRVK				P	**P**	**01 20 26.2**	**-0.3**
BRVK	**Borovoye**	**63.86**	**324**	P	**P**	**01 20 26.1**	**-0.3**
SVE	**Sverdlovsk**	**63.86**	**332**	*de*P	**P**	**01 20 26.1**	**-0.3**
SVE				pmax	pmax		
	comp=Z,80nm,1.4s						
MK31	**Makanchi Array**	**63.91**	**313**	*d i*P	**P**	**01 20 26.2**	**-0.7**
MK31				pmax	pmax		
	comp=Z,28nm,0.9s						
MK31	**Makanchi Array**	**63.91**	**313**	P	**P**	**01 20 26.3**	**-0.7**
MKAR	**Makanchi Array**	**63.91**	**313**	P	**P**	**01 20 25.6**	**-1.3**
	comp=Z,11nm,0.7s,baz=50,slow=6.4,SNR=75						
MKAR				LR	LR	01 48 55.7	
	comp=Z,1μm,20.4s,baz=34,slow=37						
MKAR	**Makanchi Array**	**63.91**	**313**	*ce*P	**P**	**01 20 26.1**	**-0.9**
MKAR				pmax	pmax		
	comp=Z,12nm,0.7s						
MKAR	**Makanchi Array**	**63.91**	**313**	P	**P**	**01 20 25.9**	**-1.0**
CNNC	**Cliffs of the**	**64.02**	**66**	P	**P**	**01 20 27.7**	**-0.1**
	baz=317						
MAKZ	**Makanchi**	**64.04**	**314**	P	**P**	**01 20 26.5**	**-1.3**
MAKZ	**Makanchi**	**64.04**	**314**	P	**P**	**01 20 26.9**	**-0.9**
MAKZ				IAmb	IAmb	01 20 28.3	
	comp=Z,29nm,1.1s						
NHSC	**New Hope**	**64.28**	**69**	P	**P**	**01 20 29.7**	**+0.2**
	baz=317,SNR=20						
TLIG	**Tlapa**	**64.65**	**94**	P	**P**	**01 20 32.9**	**+0.7**
TLIG				IAmb	IAmb	01 20 55.1	
	comp=Z,42nm,1.2s						
ARU	**Arti**	**64.80**	**333**	*c i*P	**P**	**01 20 31.9**	**-0.6**
ARU					**PcP**	**01 21 05.8**	**-0.1**
ARU					**PP**	**01 22 51.5**	**-2.9**
ARU				PPP	PPP	01 24 26.1	
ARU				S	**S**	**01 29 14.2**	**+1.4**
ARU						01 30 28.9	
ARU				SS	**SS**	**01 33 28.9**	**+6.0**
ARU				pmax	pmax		
	comp=Z,104nm,1.5s						
ARU				MLR	MLR		
	comp=Z,987nm,17.0s						
ARU	**Arti**	**64.80**	**333**	P	**P**	**01 20 31.9**	**-0.6**
ARU				IAMs_20	IAMs_20	01 53 49.8	
	comp=Z,1μm,18.0s						
TBLU	**Trondheim**	**64.97**	**0**	*e*P	**P**	**01 20 32.7**	**-0.8**
MANU	**Manus Island**	**65.05**	**229**	P	**P**	**01 20 35.5**	**+0.8**
KIRV	**Kirov**	**65.20**	**339**	*c i*P	**P**	**01 20 34.0**	**-1.1**
BRZS	**Berezniki**	**65.44**	**321**	⇑*i*P	**P**	**01 20 35.9**	**-1.0**
	comp=Z,30nm,1.2s,baz=321						
BRZS	**Berezniki**	**65.44**	**321**	*c i*P	**P**	**01 20 35.8**	**-1.0**
BRZS				pmax	pmax		
	comp=Z,30nm,1.2s						
MOL	**Molde**	**65.63**	**1**	*e*P	**P**	**01 20 38.1**	**+0.3**
TAOE	**Nuku Hiva Isla**	**65.76**	**148**	*e*S	**S**	**01 29 21.0**	**-4.5**
	comp=Z,350nm,27.5s						
TAOE	**Nuku Hiva Isla**	**65.76**	**148**	*e*LR	LR	01 40 17.8	
	comp=Z,1μm,22.9s,baz=347						
TAOE	**Nuku Hiva Isla**	**65.76**	**148**	*e*T	T	02 31 49.3	
	comp=Z,26nm,0.2s						
AFI	**Afiamalu**	**65.79**	**182**	LR	LR	01 48 37.7	
	comp=Z,146nm,18.1s,baz=14,slow=35						
GYA	**Guiyang**	**65.90**	**282**	⇓*i*P	**P**	**01 20 41.6**	**+1.3**
GYA				PP	**PP**	**01 23 03.0**	**-2.0**
GYA				S	**S**	**01 29 26.1**	**-1.3**
GYA				pmax	pmax		
	comp=Z,150nm,1.2s						
GYA				pmax	pmax		
	comp=Z,600nm,3.5s						
GYA				LR	LR		
	comp=Z,570nm,17.8s						
GYA				LR	LR		
	comp=Z,660nm,18.2s						
GYA				LR	LR		
	comp=Z,1μm,17.4s						
AKN	**Aaknes**	**66.01**	**2**	*e*P	**P**	**01 20 40.8**	**+0.5**
FIA1	**FINESS Array S**	**66.10**	**352**	P	**P**	**01 20 40.1**	**-0.7**
FINES	**FINESS Array B**	**66.10**	**352**	P	**P**	**01 20 39.7**	**-1.2**
	comp=Z,16nm,0.5s,baz=9.6,slow=6.5,SNR=150						
FINES				LR	LR	01 51 40.8	
	comp=Z,695nm,19.5s,baz=16,slow=38						
FINES	**FINESS Array B**	**66.10**	**352**	*i* P	**P**	**01 20 40.0**	**-0.9**
FINES				pmax	pmax		
	comp=Z,16nm,0.5s						
DOMB	**Dombas**	**66.17**	**1**	*e*P	**P**	**01 20 40.3**	**-1.1**
FOO	**Floro**	**66.54**	**3**	*e*P	**P**	**01 20 43.5**	**-0.2**
OTUK	**Ortayu**	**66.97**	**320**	P	**P**	**01 20 46.5**	**-0.3**
HYA	**Hoyanger**	**67.01**	**2**	*e*P	**P**	**01 20 46.8**	**+0.2**
TDK	**Taldyqorghan**	**67.02**	**314**	*e*P	**P**	**01 20 46.0**	**-1.1**
	baz=314						
TDK	**Taldyqorghan**	**67.02**	**314**	*e*P	**P**	**01 20 46.0**	**-1.1**
SUE	**Sulen**	**67.08**	**3**	*e*P	**P**	**01 20 47.1**	**0.0**
NB2	**NORSAR Subarra**	**67.18**	**360**	P	**P**	**01 20 47.3**	**-0.6**
	comp=Z,60nm,1.0s,baz=359,slow=6.2						
NB2	**NORSAR Subarra**	**67.18**	**360**	P	**P**	**01 20 47.3**	**-0.6**
	baz=359,slow=6.2						
NOA	**NORSAR Array B**	**67.18**	**360**	P	**P**	**01 20 46.6**	**-1.2**
	comp=Z,31nm,0.9s,baz=0.5,slow=6.3,SNR=95						
NOA				LR	LR	01 49 35.8	
	comp=Z,245nm,20.5s,baz=355,slow=36						
DWPF	**Disney Wildern**	**67.21**	**73**	IAMs_20	IAMs_20	01 54 10.8	
	comp=Z,774nm,19.0s						
PUL	**Pulkovo**	**67.31**	**349**	⇑*e*P	**P**	**01 20 48.9**	**+0.3**
PUL				pmax	pmax		
	comp=Z,57nm,0.4s						
PUL				MLR	MLR		
	comp=Z,756nm,20.0s						
NAO01	**NORSAR Array S**	**67.38**	**360**	IAmb	IAmb	01 21 08.5	
	comp=Z,52nm,1.2s						
NC602	**NORSAR Array S**	**67.49**	**359**	*e*P	**P**	**01 20 49.5**	**-0.2**
SKAR	**Skarslia**	**67.53**	**1**	*e*P	**P**	**01 20 49.6**	**-0.5**
ASK	**Askoy**	**67.66**	**3**	*e*P	**P**	**01 20 51.4**	**+0.5**
BER	**Bergen**	**67.77**	**3**	*e*P	**P**	**01 20 51.7**	**+0.2**
AAL	**Aland**	**67.79**	**355**	*e*P	**P**	**01 20 51.9**	**+0.2**
PDGK	**Podgornoye**	**67.84**	**313**	P	**P**	**01 20 52.1**	**-0.4**
ARXS	**Arharly**	**67.89**	**314**	*e*P	**P**	**01 20 52.4**	**-0.3**
SHLS	**Shalkode**	**67.99**	**313**	⇑*i*P	**P**	**01 20 51.9**	**-1.5**
	comp=Z,70nm,1.1s,baz=312						
SHLS	**Shalkode**	**67.99**	**313**	*c i*P	**P**	**01 20 51.9**	**-1.5**
SHLS				pmax	pmax		
	comp=Z,70nm,1.1s						
KPKS	**Kokpek**	**68.10**	**313**	⇑*i*P	**P**	**01 20 53.5**	**-0.5**
	comp=Z,40nm,1.1s,baz=313						
KPKS	**Kokpek**	**68.10**	**313**	*c i*P	**P**	**01 20 53.5**	**-0.5**
KPKS				pmax	pmax		
	comp=Z,40nm,1.1s						
UZB	**Uzynbulak**	**68.20**	**313**	⇑*i*P	**P**	**01 20 54.0**	**-0.8**
	comp=Z,25nm,1.1s,baz=313						
UZB	**Uzynbulak**	**68.20**	**313**	*c i*P	**P**	**01 20 53.9**	**-0.8**
UZB				pmax	pmax		
	comp=Z,25nm,1.1s						
UPP	**Uppsala**	**68.22**	**356**	*e*P	**P**	**01 20 54.6**	**+0.3**
ODD1	**Odda**	**68.27**	**2**	*e*P	**P**	**01 20 55.1**	**+0.3**
OSL	**Oslo**	**68.29**	**360**	*e*P	**P**	**01 20 55.0**	**+0.2**
SATY	**Saty**	**68.55**	**313**	⇑*i*P	**P**	**01 20 56.3**	**-0.6**
	comp=Z,30nm,1.4s,baz=313						
SATY	**Saty**	**68.55**	**313**	*c i*P	**P**	**01 20 56.3**	**-0.6**
SATY				pmax	pmax		
	comp=Z,30nm,1.4s						
CHKK	**Chushkaly**	**68.55**	**315**	*e*P	**P**	**01 20 55.2**	**-1.5**
	baz=314						
KONO	**Kongsberg**	**68.58**	**0**	*c i*P	**P**	**01 20 56.3**	**-0.3**
KONO				pmax	pmax		
	comp=Z,119nm,1.3s						
KONO				MLR	MLR		
	comp=Z,405nm,19.0s						
KONO	**Kongsberg**	**68.58**	**0**	*e*P	**P**	**01 20 57.0**	**+0.4**
KONO	**Kongsberg**	**68.58**	**0**	P	**P**	**01 20 56.5**	**-0.1**
BLS5	**Blasjo**	**68.76**	**2**	*e*P	**P**	**01 20 58.2**	**+0.4**
KUU	**Kurty**	**68.80**	**315**	⇑*i*P	**P**	**01 20 56.8**	**-1.5**
	comp=Z,52nm,1.3s,baz=315						
KUU	**Kurty**	**68.80**	**315**	*c i*P	**P**	**01 20 56.8**	**-1.5**
KUU				pmax	pmax		
	comp=Z,53nm,1.3s						
BTLS	**Baital**	**68.86**	**317**	⇑*i*P	**P**	**01 20 57.9**	**-0.8**
	comp=Z,37nm,0.9s,baz=317						
BTLS	**Baital**	**68.86**	**317**	*c i*P	**P**	**01 20 57.8**	**-0.8**

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BTLS                                  pmax      pmax
      comp=Z,37nm,0.9s
KMY   Karmoy            68.94   3 eP        P         01 20 59.2 +0.4
VSU   Vasula            68.98 351 eP        P         01 20 59.5 +0.4
VSU   Vasula            68.98 351c iP       P         01 20 58.4 -0.7
VSU                               pmax      pmax
      comp=Z,294nm,1.0s
VSU                               MLR       MLR
      comp=Z,2µm,21.0s
MTSE  Matsula           68.99 353 eP        P         01 20 59.5 +0.3
MDOK  Medeo             69.07 314 i P       P         01 20 59.4 -0.9
      baz=314
MDOK  Medeo             69.07 314 i P       P         01 20 59.3 -0.9
AAA   Alma-Ata          69.09 314 eP        P         01 20 58.9 -1.4
      baz=314
AAA   Alma-Ata          69.09 314 eP        P         01 20 58.8 -1.4
BIGH  Upper Bighouse    69.12   8 eP        P         01 21 00.1 +0.1
TNSS  Tian-Shan         69.22 314 eP        P         01 21 00.5 -0.9
      baz=314
KMI   Kunming           69.25 284 ⇑P        P         01 21 02.2 +0.6
KMI                               pP        pwP       01 21 07.5 -0.9
KMI                               PcP       PcP       01 21 27.6 +2.3
KMI                               S         S         01 30 09.0 +1.2
KMI                               SKS       SKSac     01 30 58.0 -3.8
KMI                               pmax      pmax
      comp=Z,100nm,1.3s
KMI                               pmax      pmax
      comp=Z,520nm,3.7s
KMI                               LR        LR
      comp=Z,430nm,19.6s
KMI                               LR        LR
      comp=Z,560nm,17.0s
KMI                               LR        LR
      comp=Z,560nm,16.4s
LINV  Loch Inver, As    69.34   9 eP        P         01 20 59.7 -1.7
LINV                              IAmb      IAmb      01 21 02.4
      comp=Z,74nm,1.2s
PMOR  Pomariorio Ree    69.43 158 eT        T         02 36 25.2
      comp=Z,5.1nm,0.3s
QIZ   Qiongzhong        69.52 275 P         P         01 21 02.7 -0.3
QIZ                               PP        PP        01 23 35.9 -0.6
QIZ                               S         S         01 30 10.7 +0.1
QIZ                               LR        LR
      comp=Z,380nm,18.6s
QIZ                               LR        LR
      comp=Z,430nm,19.6s
QIZ                               LR        LR
      comp=Z,480nm,20.1s
QIZ   Qiongzhong        69.52 275 IAMs_20   IAMs_20   01 49 08.9
      comp=Z,585nm,22.0s
SNART Snartemo          69.86   2 eP        P         01 21 03.9 -0.7
TARG  Taragay, Kyrgy    69.87 313 IAmb      IAmb      01 21 08.2
      comp=Z,20nm,0.7s
SGDS  Sogindy           69.89 316⇑iP        P         01 21 04.6 -0.6
      comp=Z,35nm,1.3s,baz=316
TKM2  Tokmak 2          69.90 315 P         P         01 21 06.0 +0.6
      SNR=51
TKM2  Tokmak 2          69.90 315 P         P         01 21 05.4  0.0
HOMB  Homborsund        69.95   1 eP        P         01 21 05.6 +0.5
KAC   Achnashellach     69.97   9 eP        P         01 21 05.0 -0.3
MCD   Coleburn Disti    70.08   8 eP        P         01 21 06.3 +0.4
KPL   Plockton          70.10   9 eP        P         01 21 05.9 -0.1
USP   Ospenovka         70.10 316 P         P         01 21 06.8 +0.5
      SNR=19
ULHL  Ulahol            70.16 314 P         P         01 21 08.4 +1.4
      SNR=14
SLIT  Slitere, Latvi    70.18 353 eP        P         01 21 07.0 +0.4
MOS   Moscow            70.18 344 eP        P         01 21 05.3 -1.3
MOS                               pmax      pmax
      comp=Z,74nm,0.8s
MOS                               MLR       MLR
      comp=Z,900nm,20.0s
MOS                               MLR       MLR
      comp=N,1µm,20.0s
CHMS  Chumysh           70.21 315 P         P         01 21 08.1 +1.0
      SNR=29
SANVU Saraoutou         70.26 204 IAMs_20   IAMs_20   01 46 49.4
      comp=Z,710nm,20.0s
KBK   Karagaybulak      70.40 315 P         P         01 21 09.0 +0.6
      SNR=8.0
MSVF  Nonsavu           70.40 193 P         P         01 21 09.8 +1.5
      comp=Z,5.3nm,0.7s,baz=320,slow=3.6,SNR=4.9
MSVF  Nonsavu           70.40 193ceP        P         01 21 09.5 +1.1
MSVF                              pmax      pmax
      comp=Z,13nm,1.0s
MSVF  Nonsavu           70.40 193 P         P         01 21 09.7 +1.4
AB31  Akbulak array     70.60 328 eP        P         01 21 09.0 -0.2
ABKAR Akbulak array     70.60 328 P         P         01 21 08.8 -0.5
AAK   Ala-Archa         70.61 315 P         P         01 21 10.3 +0.7
      SNR=77
AAK   Ala-Archa         70.61 315 i P       P         01 21 10.2 +0.5
      SNR=12
AAK   Ala-Archa         70.61 315c iP       P         01 21 09.5 -0.2
AAK                               pmax      pmax
      comp=Z,242nm,0.9s
AAK                               MLR       MLR
      comp=Z,3µm,17.0s
AAK   Ala-Archa         70.61 315 P         P         01 21 09.9 +0.2
AAK                               P         P         01 21 09.9 +0.2
AAK   Ala-Archa         70.61 315 P         P         01 21 09.8 +0.2
AAK   Ala-Archa         70.61 315 IAMs_20   IAMs_20   01 54 53.5
      comp=Z,738nm,18.0s
DRUM  Mains of Drumt    70.80   7 eP        P         01 21 09.5 -0.8
DRUM                              IAmb      IAmb      01 21 11.0
      comp=Z,106nm,0.9s
EKS2  Erkin-Say         70.90 316 P         P         01 21 12.2 +0.8
      SNR=75
UCH   Uchtor            70.94 315 P         P         01 21 13.0 +1.0
      SNR=32
OBN   Obninsk           70.96 345d iP       P         01 21 10.7 -0.6
OBN                              e          PP        01 23 47.8  0.0
OBN                              eS         S         01 30 28.1 +1.7
OBN                               pmax      pmax
      comp=Z,98nm,1.3s
OBN                               MLR       MLR
      comp=Z,700nm,21.0s
OBN   Obninsk           70.96 345 P         P         01 21 10.4 -0.9
OBN                               IAMs_20   IAMs_20   01 56 35.3
      comp=Z,712nm,20.0s
AML   Almayashu         71.37 316 P         P         01 21 15.9 +1.3
      SNR=57
AML   Almayashu         71.37 316 i P       P         01 21 14.5 -0.1
      SNR=10
AML   Almayashu         71.37 316 P         P         01 21 15.3 +0.7
EBH   Black Hill        71.38   8 eP        P         01 21 13.8  0.0
SLVN  Son La            71.40 281 IAMs_20   IAMs_20   01 51 44.3
      comp=Z,646nm,20.0s
PPT   Papeete           71.54 160 LR        LR        01 44 33.4
      comp=Z,704nm,20.3s,baz=317,slow=29
PPT2  Papeete2          71.56 160 eS        S         01 30 31.1 -3.1
      comp=Z,2µm,28.0s
PPT2  Papeete2          71.56 160 eLR       LR        01 42 55.9
      comp=Z,2µm,32.0s
PMG   Port Moresby      71.66 226 P         P         01 21 17.0 +1.0
      comp=Z,9.7nm,0.3s,baz=337,slow=7.5,SNR=6.2
PMG   Port Moresby      71.66 226 P         P         01 21 16.4 +0.4
PMG                               pmax      pmax
      comp=Z,29nm,1.0s
PMG   Port Moresby      71.66 226 P         P         01 21 16.4 +0.4
PMG                               IAmb      IAmb      01 21 17.8
      comp=Z,29nm,1.0s
DZA   Taraz             71.75 317 eP        P         01 21 15.0 -1.4
      baz=318
DZA   Taraz             71.75 317 eP        P         01 21 15.0 -1.4
MUD   Monsted U'grnd    71.78   1 i P       P         01 21 16.8 +0.5
MUD                               IAmb      IAmb      01 21 17.4
      comp=Z,50nm,0.9s
PBUR  Paburge           71.80 353 eP        P         01 21 16.8 +0.4
EBL   Broad Law         71.89   8 eP        P         01 21 17.3 +0.4
ISAL  Salakas           71.89 351 eP        P         01 21 17.8 +0.9
KK31  Karatay Array     71.91 318 i P       P         01 21 17.0 -0.4
KKAR  Karatay Array     71.91 318 P         P         01 21 16.7 -0.6
KKAR  Karatay Array     71.91 318 P         P         01 21 16.7 -0.6
PABE  Paberze           72.16 352 eP        P         01 21 19.1 +0.6
PABE  Paberze           72.16 352 P         P         01 21 18.2 -0.3
PABE                              IAMs_20   IAMs_20   01 53 58.0
      comp=Z,1µm,21.0s
BRLS  Borolday          72.25 319 eP        P         01 21 19.0 -0.4
      baz=318
BRLS  Borolday          72.25 319 eP        P         01 21 19.0 -0.4
CLGH  Cloghs, Cushen    72.27  10 eP        P         01 21 19.0 -0.3
CLGH                              IAmb      IAmb      01 21 20.1
      comp=Z,60nm,1.4s
ESK   Eskdalemuir       72.32   8 eP        P         01 21 19.6 +0.1
ESK                               IAmb      IAmb      01 21 20.6
      comp=Z,49nm,1.0s
ESK   Eskdalemuir       72.32   8 P         P         01 21 19.2 -0.3
ESK                               pmax      pmax
      comp=Z,46nm,1.0s
ESK   Eskdalemuir       72.32   8 P         P         01 21 19.2 -0.3
ESK                               IAmb      IAmb      01 21 20.8
      comp=Z,46nm,1.0s
SWI   Sorong            72.33 244 P         P         01 21 20.8 +0.7
      comp=Z,1µmcomp=Z,66nm,1.2s
SIJI  Sorong            72.33 244 P         P         01 21 19.8 -0.3
      comp=Z,26nm,0.7s,baz=21,slow=7.2,SNR=30
NEWG  New Galloway      72.43   9 eP        P         01 21 20.3 +0.1
KSH   Kashi             72.48 312 P         P         01 21 23.8 +2.9
KSH                               pP        pwP       01 21 29.6 +1.8
KSH                               sP        sP        01 21 31.4 +6.7
KSH                               PcP       PcP       01 21 41.9 +3.2
KSH                               S         S         01 30 47.8 +3.0
KSH                               ScS       ScS       01 31 28.4 +0.7
KSH                               SS        SS        01 35 27.0 +4.6
KSH                               pmax      pmax
      comp=Z,130nm,1.1s
KSH                               LR        LR
      comp=Z,1µm,18.9s
KSH                               LR        LR
      comp=Z,910nm,17.2s
KSH                               LR        LR
      comp=Z,2µm,19.9s
LSA   Lhasa             72.48 296 P         P         01 21 22.5 +1.0
LSA   Lhasa             72.48 296 P         P         01 21 22.0 +0.5
LSA                               pmax      pmax
      comp=Z,84nm,0.8s
LSA                               MLR       MLR
      comp=Z,600nm,22.0s
LSA   Lhasa             72.48 296 P         P         01 21 23.3 +1.8
LSA   Lhasa             72.48 296 P         P         01 21 22.0 +0.5
LSA                               IAMs_20   IAMs_20   01 54 09.4
      comp=Z,640nm,22.0s
NACGM Naroch            72.48 350 i P       P         01 21 20.5  0.0
GAL1  Galloway          72.63   9 eP        P         01 21 21.3  0.0
GAL1                              IAmb      IAmb      01 21 22.2
      comp=Z,62nm,0.9s
MNK   Minsk             72.76 349 i P       P         01 21 22.5 +0.4
MNK                              i          PcP       01 21 39.3 -0.1
MNK                              i          PP        01 24 02.5 -0.7
MNK                              i PPP      PPP       01 25 48.5
MNK                              i S        S         01 30 46.9 -0.3
MNK                              i SS       SS        01 35 27.1 +1.6
MNK                               pmax      pmax
      comp=Z,133nm,1.0s
MNK                               pmax      pmax
      comp=E,4.0nm,1.4s
MNK                               pmax      pmax
      comp=N,65nm,0.9s
MNK                               MLR       MLR
      comp=E,35nm,17.0s
MNK                               MLR       MLR
      comp=N,480nm,20.0s
MNK                               MLR       MLR
      comp=Z,431nm,20.0s
MNK   Minsk             72.76 349 i P       P         01 21 22.6 +0.4
      comp=E,4.0nm,1.4s
MNK                              i P        P         01 21 22.6 +0.4
      comp=N,65nm,0.9s
MNK                              i P        P         01 21 22.6 +0.4
      comp=Z,133nm,1.1s,baz=191
MNK                              i PcP      PcP       01 21 39.3 -0.1
MNK                              i PP       PP        01 24 02.6 -0.6
MNK                              i PPP      PPP       01 25 48.5
MNK                              i S        S         01 30 47.0 -0.2
MNK                              i SS       SS        01 35 27.2 +1.7
MNK                              i SSS      SSS       01 38 44.5
MNK                              i LQ       LQ        01 48 03.0
MNK                              i LR       LR        01 51 13.9
MNK                              i LRM      MLR       01 54 49.7
      comp=E,35nm,16.6s
MNK                              i LRM      MLR       01 55 06.6
      comp=N,480nm,19.7s
MNK                              i LRM      MLR       01 55 14.8
      comp=Z,431nm,20.4s
IUG   Iuzhnay           72.91 318⇑iP        P         01 21 23.4 -0.1
      baz=318
IUG   Iuzhnay           72.91 318c iP       P         01 21 23.3 -0.1
EDMD  Edmundbyers       72.91   8 eP        P         01 21 22.6 -0.5
EDMD                              IAmb      IAmb      01 21 24.0
      comp=Z,42nm,0.9s
LPSR  Galich'ya Gora    72.95 342 eP        P         01 21 21.9 -1.4
LPSR                             e          PcP       01 21 39.4 -0.8
LPSR                              pmax      pmax
      comp=Z,50nm,1.0s
LPSR                              MLR       MLR
      comp=Z,510nm,21.0s
ITAN  ITANAGAR          72.99 292 eP        P         01 21 25.7 +1.7
BSD   Bornholm Skovb    73.07 357 i P       P         01 21 24.3 +0.3
BSD                               IAmb      IAmb      01 21 24.8
      comp=Z,10nm,0.5s
BSD                              i          PcP       01 21 40.1 -0.6
MOKO  MOKOCHONG         73.16 291 eP        P         01 21 26.7 +1.5
MOKO                              IAmb      IAmb      01 21 29.0
      comp=Z,65nm,0.8s
KLNR  Kaliningrad       73.33 354d iP       P         01 21 25.4 -0.1
KLNR                              pmax      pmax
      comp=Z,219nm,1.3s
KLNR                              MLR       MLR
      comp=Z,662nm,19.0s
FAKI  Fak Fak           73.49 242 P         P         01 21 27.7 +0.7
      comp=Z,1µmcomp=Z,66nm,1.3s
FAKI  Fak Fak           73.49 242 P         P         01 21 27.3 +0.3
FAKI                              IAmb      IAmb      01 21 40.6
      comp=Z,56nm,1.0s
RAR   Rarotonga         73.52 171 LR        LR        01 46 28.3
      comp=Z,674nm,20.6s,baz=327,slow=30
RGN   Rugen             73.67 358 eP        P         01 21 27.4 -0.1
      comp=Z,153nm,1.0s,baz=0.4,slow=5.7
RGN   Rugen             73.67 358 IAMs_20   IAMs_20   01 59 39.1
      comp=Z,568nm,20.0s
SUW   Suwalki           73.70 352 eP        P         01 21 27.0 -0.7
SUW   Suwalki           73.70 352 eP        P         01 21 27.4 -0.3
SUW   Suwalki           73.70 352 IAMs_20   IAMs_20   02 00 02.9
      comp=Z,660nm,18.0s
VRH   Novokhopyorsk     73.72 340 eP        P         01 21 27.1 -0.8
VRH                              e          PcP       01 21 38.4 -5.2
VRH                               pmax      pmax
      comp=Z,70nm,1.2s
VRH                               MLR       MLR
      comp=Z,1µm,27.0s
HPK   Haverah Park      73.80   7 eP        P         01 21 28.1 -0.2
HPK                               IAmb      IAmb      01 21 29.5
      comp=Z,178nm,1.5s
KOHI  KOHIMA            73.86 291 eP        P         01 21 30.0 +0.7
KOHI                              IAmb      IAmb      01 21 37.4
      comp=Z,43nm,1.4s
DSB   Dublin            74.05  10 P         P         01 21 29.6 -0.2
DSB                               IAmb      IAmb      01 21 31.1
      comp=Z,70nm,1.3s
WME   Myndd Eilian      74.12   9 eP        P         01 21 30.1 -0.1
WLF1  Llynfaes          74.22   9 eP        P         01 21 29.3 -1.5
VSR   Storozhevoye      74.22 342 eP        P         01 21 30.4 -0.4
VSR                              e          PcP       01 21 46.1 +0.4
VSR                               pmax      pmax
      comp=Z,80nm,1.0s
TGUH  Tegucigalpa,Un    74.28  87 P         P         01 21 32.4 +0.5
TGUH                              IAmb      IAmb      01 21 58.0
      comp=Z,64nm,1.4s
TGUH                              IAMs_20   IAMs_20   01 50 37.7
      comp=Z,680nm,22.0s
BSEG  Bad Segeberg      74.31   0 eP        P         01 21 31.0 -0.3
      comp=Z,76nm,1.1s,baz=0.4,slow=5.7
LBWR  Ladybower, Pea    74.35   8 eP        P         01 21 30.6 -0.9
LBWR                              IAmb      IAmb      01 21 32.5
      comp=Z,75nm,1.1s
VORD  Divnogorie        74.44 342 eP        P         01 21 32.0  0.0
VORD                             e          PcP       01 21 46.3 -0.3
VORD                              pmax      pmax
      comp=Z,100nm,1.6s
STNC  Stoke             74.62   8 eP        P         01 21 32.9 -0.1
FOEL  Foel Wylfa        74.73   9 eP        P         01 21 33.8  0.0
FOEL                              IAmb      IAmb      01 21 35.1
      comp=Z,116nm,0.9s
GKP   Gorka Klasztor    74.83 356 eP        P         01 21 34.3  0.0
GKP   Gorka Klasztor    74.83 356 eP        P         01 21 35.1 +0.9
CWF   Charnwood Fore    75.04   7 eP        P         01 21 35.5  0.0
CWF                               IAmb      IAmb      01 21 36.5
      comp=Z,79nm,1.3s
UBPT  Khong Chiam       75.06 276 P         P         01 21 36.7 +0.6
UBPT                              IAmb      IAmb      01 21 53.8
      comp=Z,46nm,1.1s
HLM1  Long Mynd         75.12   8 eP        P         01 21 36.1  0.0
WACR  West Acre         75.19   6 eP        P         01 21 35.1 -1.3
WACR                              IAmb      IAmb      01 21 37.2
      comp=Z,136nm,0.9s
SHL   Shillong          75.25 293 eP        P         01 21 37.5 +0.1
SHL                               IAmb      IAmb      01 21 38.8
      comp=Z,30nm,1.7s
SHL   Shillong          75.25 293 P         P         01 21 37.1 -0.4
      SNR=44
RSBS  Rosebush, Pemb    75.50  10 eP        P         01 21 37.9 -0.4
MCH1  Michaelchurch     75.63   9 eP        P         01 21 38.9  0.0
MCH1                              IAmb      IAmb      01 21 40.0
      comp=Z,68nm,1.1s
RUE   Ruedersdorf       75.73 358 eP        P         01 21 40.3 +0.9
RUE   Ruedersdorf       75.73 358 eP        P         01 21 39.6 +0.1
      comp=Z,116nm,1.2s,baz=0.4,slow=5.7
GTK   Tadong            75.73 296 IAmb      IAmb      01 21 43.0
      comp=Z,46nm,0.6s
NRDL  Niedersach Rie    75.75   0 eP        P         01 21 39.2 -0.4
      comp=Z,50nm,1.1s,baz=0.4,slow=5.7
FLTG  Flechtingen       75.92 360 eP        P         01 21 40.4 -0.2
      comp=Z,42nm,1.0s,baz=0.4,slow=5.7
IBBN  Ibbenburen        75.92   2 eP        P         01 21 40.5  0.0
      comp=Z,126nm,1.2s,baz=0.4,slow=5.7
BEL   Belsk             76.05 353 eP        P         01 21 41.6 +0.3
ASSE  Asse, Remlinge    76.12 360 eP        P         01 21 41.3 -0.3
      comp=Z,39nm,1.2s,baz=0.4,slow=5.7
TAPN  Taplejung         76.20 297 eP        P         01 21 42.7 -0.3
      comp=Z,156nm,0.9s
SANI  Sanana            76.28 248 P         P         01 21 42.8 -0.3
      comp=Z,26nm,0.8s
CHTO  Chiang Mai        76.31 283 P         P         01 21 43.5 +0.1
CHTO                              pmax      pmax
      comp=Z,123nm,1.5s
CHTO                              MLR       MLR
      comp=Z,600nm,19.0s
CHTO  Chiang Mai        76.31 283 P         P         01 21 44.0 +0.6
CHTO                              P         P         01 21 44.0 +0.6
CHTO  Chiang Mai        76.31 283 P         P         01 21 43.5 +0.1
CHTO  Chiang Mai        76.31 283 IAMs_20   IAMs_20   01 58 35.2
      comp=Z,625nm,19.0s
AKASG Malin Array Be    76.33 348 P         P         01 21 41.4 -1.6
      comp=Z,15nm,0.4s,baz=16,slow=5.9,SNR=68
AKASG                             LR        LR        02 00 01.4
      comp=Z,592nm,19.6s,baz=0.0,slow=40
AKASG Malin Array Be    76.33 348 IAmb      IAmb      01 21 43.0
      comp=Z,45nm,0.9s
AKBB  Malin Array Si    76.33 348d iP       P         01 21 41.2 -1.7
AKBB  Malin Array Si    76.33 348 IAmb      IAmb      01 21 43.1
      comp=Z,50nm,0.8s
CLZ   Clausthal         76.41   0 eP        P         01 21 43.3 -0.1
      comp=Z,75nm,1.1s,baz=0.4,slow=5.7
SPMM  Sapulut           76.51 260 P         P         01 21 44.0 -0.5
CM31  Chiang Mai Arr    76.59 283 P         P         01 21 46.4 +1.5
      SNR=24
CM31                              P         P         01 21 46.4 +1.5
      SNR=24
CM31  Chiang Mai Arr    76.59 283 P         P         01 21 45.4 +0.4
CMAR  Chiang Mai Arr    76.59 283 P         P         01 21 45.5 +0.5
      comp=Z,56nm,0.9s,baz=27,slow=6.6,SNR=36
CMAR                              LR        LR        01 59 31.5
      comp=Z,567nm,18.7s,baz=86,slow=39
GTTG  Gottingen         76.70   0 eP        P         01 21 44.9 -0.1
      comp=Z,96nm,1.2s,baz=0.4,slow=5.7
ODAN  Odare             76.76 297 eP        P         01 21 45.6 -0.5
GUN   Gumba             76.76 298 eP        P         01 21 46.3 +0.1
      comp=Z,218nm,0.8s
BUG   Bochum--Univer    76.77   2 eP        P         01 21 44.8 -0.6
      comp=Z,75nm,1.3s,baz=0.4,slow=5.7
JIRN  Jiri              76.79 298 eP        P         01 21 46.7 +0.3
      comp=Z,260nm,0.8s
DZM   Mont Dzumac       76.81 203 eP        P         01 21 42.7 -3.3
      comp=Z,33nm,1.1s
DZM                              eS         S         01 31 30.2 -3.0
      comp=Z,307nm,25.8s
DZM   Mont Dzumac       76.81 203 eLR       LR        01 45 19.7
      comp=Z,1µm,21.9s
CLL   Collm             76.92 358 i P       P         01 21 45.8 -0.5
CLL                              eS         S         01 31 34.0 +0.3
CLL                               pmax      pmax
      comp=Z,48nm,1.1s
CLL                               MLR       MLR
      comp=Z,600nm,20.2s
CLL   Collm             76.92 358 i P       P         01 21 45.8 -0.5
      comp=Z,48nm,1.1s
CLL                              e                    01 23 12.0
CLL                              ePP        PP        01 24 36.0 -2.5
CLL                              ePPP       PPP       01 26 23.0
CLL                              eS         S         01 31 34.0 +0.3
CLL                              ePS        PnS       01 32 10.0 -1.5
CLL                              ePPS       PPS       01 32 23.0
CLL                              eSS        SS        01 36 30.0 +1.3
CLL                              e                    01 40 42.0
CLL                              eSSSS                01 42 12.0
CLL                               LmV                 01 58 00.0
      comp=Z,600nm,20.2s
CLL                               Lm        MLR       02 00 00.0
      comp=N,400nm,19.4s
CLL                               Lm        MLR       02 00 00.0
      comp=E,300nm,18.7s
CLL                               Lm        MLR       02 00 00.0
      comp=Z,500nm,19.8s
CLL   Collm             76.92 358 eP        P         01 21 45.6 -0.7
      comp=Z,48nm,1.1s,baz=0.4,slow=5.7
CLL   Collm             76.92 358 IAmb      IAmb      01 21 47.5
      comp=Z,37nm,1.0s
CLL                               IAMs_20   IAMs_20   01 58 26.0
      comp=Z,632nm,20.0s
NEUB  Neuenburg         77.04 359 eP        P         01 21 46.6 -0.4
      comp=Z,94nm,1.1s,baz=0.4,slow=5.7
RAMN  Ramite            77.13 297 eP        P         01 21 48.2  0.0
      comp=Z,91nm,0.5s
TBI   Tubuai            77.17 161 eS        S         01 31 32.7 -4.1
      comp=Z,925nm,29.8s
TBI   Tubuai            77.17 161 eLR       LR        01 45 33.7
      comp=Z,920nm,31.2s,baz=341
KKN   Kakani            77.18 299 eP        P         01 21 48.2 -0.2
      comp=Z,90nm,0.8s
PKI   Pulchoki          77.28 299 eP        P         01 21 48.7 -0.5
      comp=Z,239nm,1.2s
PKIN  Phulchoki         77.29 299 eP        P         01 21 48.7 -0.4
      comp=Z,199nm,1.3s
KSP   Ksiaz             77.29 356 eP        P         01 21 48.5 +0.1
FBE   Freiberg          77.30 358 eP        P         01 21 48.3 -0.1
      comp=Z,74nm,1.1s,baz=0.4,slow=5.7
LUWI  Luwuk             77.32 251 P         P         01 21 48.9 -0.1
      comp=Z,6µmcomp=Z,46nm,0.8s
LUWI  Luwuk             77.32 251 P         P         01 21 48.9 -0.1
LUWI                              IAmb      IAmb      01 21 49.5
      comp=Z,38nm,0.7s
UCC   Uccle             77.32   4 dP        P         01 21 49.1 +0.5
BRG   Berggiesshubel    77.34 358 eP        P         01 21 48.1 -0.5
      comp=Z,59nm,1.2s,baz=0.4,slow=5.7
BRG   Berggiesshubel    77.34 358 i P       P         01 21 49.3 +0.7
BRG                               Amp                 01 21 50.2
      comp=Z,39nm,0.9s
GKN   Gorkha            77.36 299 eP        P         01 21 49.3 -0.1
      comp=Z,229nm,0.9s
BEBN  Eben Emael        77.37   3 bP        P         01 21 48.4 -0.5
      comp=Z,41nm,1.0s
DMN   Daman             77.42 299 eP        P         01 21 49.7 -0.1
      comp=Z,140nm,1.0s
UBBA  Unterbreizbach    77.43   0 eP        P         01 21 48.8 -0.2
      comp=Z,39nm,1.4s,baz=0.4,slow=5.7
CHVC  Chvalec           77.55 356 eP        P         01 21 50.6 +0.7
CHVC                              AMS       AMS       01 58 40.0
      comp=Z,500nm,21.0s
DANN  Dangsing          77.56 300 eP        P         01 21 50.7 +0.1
      comp=Z,386nm,0.9s
MEM   Membach           77.57   3 dP        P         01 21 50.1 +0.1
MEM                              dP         pP        01 21 50.3 -2.4
      comp=Z,30nm,1.1s
OSTC  Ostas             77.58 356 eP        P         01 21 50.6 +0.6
OSTC                              AMS       AMS       01 58 40.0
      comp=Z,500nm,19.8s
BTNL  Ternell           77.60   3 dP        P         01 21 50.8 +0.6
      comp=Z,34nm,1.1s
MOX   Moxa              77.60 359 eP        P         01 21 49.9 -0.3
      comp=Z,58nm,1.1s,baz=0.4,slow=5.7
MOX                              eL         L         02 04 50.2
      comp=Z,425nm,19.7s
SNF   Seneffe           77.61   4 dP        P         01 21 50.6 +0.5
UPC   Upice             77.64 356 eP        P         01 21 51.1 +0.8
UPC                               MLR       MLR
      comp=Z,500nm,22.0s
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UPC	Upice	77.64	356	eP	P	01 21 51.1	+0.8
UPC				AMS	AMS	01 58 40.0	
	comp=Z,500nm,22.0s						
PVCC	Panska Ves	77.66	357	eP	P	01 21 51.3	+0.8
PVCC				MLR	MLR		
	comp=Z,500nm,22.9s						
PVCC	Panska Ves	77.66	357	eP	P	01 21 51.3	+0.8
PVCC				AMS	AMS	01 59 40.0	
	comp=Z,500nm,22.9s						
AHRW	Bad Neuenahr-A	77.67	2	eP	P	01 21 50.4	-0.1
	comp=Z,63nm,1.2s,baz=0.4,slow=5.7						
OJC	Ojcow	77.73	354	eP	P	01 21 49.9	-1.0
OJC	Ojcow	77.73	354	IAmb	IAmb	01 21 52.4	
	comp=Z,72nm,1.2s						
BCLA	Clavier	77.74	3	bP	P	01 21 51.1	+0.2
	comp=Z,24nm,1.1s						
BCLA				dPcP	PcP	01 22 01.4	+0.5
BGES	Gesves	77.76	4	dP	P	01 21 51.3	+0.3
	comp=Z,23nm,1.0s						
DPC	Dobruska-Polom	77.78	356	eP	P	01 21 51.7	+0.5
DPC				MLR	MLR		
	comp=Z,500nm,20.4s						
DPC	Dobruska-Polom	77.78	356	eP	P	01 21 51.7	+0.5
DPC				AMS	AMS	01 58 50.0	
	comp=Z,500nm,20.4s						
LVV	L'vov	77.78	351	eP	P	01 21 50.9	-0.3
LVV				MLR	MLR		
	comp=E,300nm,21.0s						
LVV				MLR	MLR		
	comp=N,600nm,20.0s						
LVV				MLR	MLR		
	comp=Z,700nm,20.0s						
WERD	Werda	77.79	359	eP	P	01 21 51.0	-0.3
	comp=Z,29nm,1.3s,baz=0.4,slow=5.7						
TANN	Tannenbergstha	77.82	359	eP	P	01 21 51.3	-0.2
	comp=Z,46nm,1.5s,baz=0.4,slow=5.7						
BHOU	Houvegnez	77.83	3	dP	P	01 21 52.1	+0.7
	comp=Z,9.5nm,1.2s						
BMRD	Maredsous	77.83	4	dP	P	01 21 52.1	+0.7
	comp=Z,38nm,1.1s						
GUNZ	Gunzen	77.88	359	eP	P	01 21 51.6	-0.2
	comp=Z,65nm,1.7s,baz=0.4,slow=5.7						
MPSI	Mapaga	77.91	255	P	P	01 21 52.4	+0.1
	comp=Z,21nm,1.2s						
WERN	Wernitzgruen	77.95	359	eP	P	01 21 52.1	-0.1
	comp=Z,55nm,1.2s,baz=0.4,slow=5.7						
RCHB	Rochefort	78.00	3	dP	P	01 21 52.7	+0.3
	comp=Z,34nm,1.1s						
NKC	Novy Kostel	78.00	359	eP	P	01 21 52.8	+0.4
NKC				MLR	MLR		
	comp=Z,500nm,17.1s						
NKC	Novy Kostel	78.00	359	eP	P	01 21 52.8	+0.4
NKC				AMS	AMS	01 58 40.0	
	comp=Z,500nm,17.1s						
TNS	Taunus Mts	78.01	1	eP	P	01 21 52.1	-0.4
	comp=Z,52nm,1.3s,baz=0.4,slow=5.7						
DOU	Dourbes	78.03	4	bP	P	01 21 52.5	0.0
	comp=Z,25nm,1.2s						
DOU				dPcP	PcP	01 22 02.1	-0.1
KRLC	Kraliky	78.04	356	eP	P	01 21 53.0	+0.4
KRLC				MLR	MLR		
	comp=Z,400nm,15.8s						
KRLC	Kraliky	78.04	356	eP	P	01 21 53.0	+0.4
KRLC				AMS	AMS	02 05 30.0	
	comp=Z,400nm,15.8s						
KWP	Kalwaria Pacla	78.09	352	eP	P	01 21 52.9	0.0
KOLN	Koldanda	78.10	300	eP	P	01 21 53.1	-0.5
	comp=Z,203nm,1.1s						
PRA	Prague	78.13	357	eP	P	01 21 54.0	+1.0
PRA				MLR	MLR		
	comp=Z,600nm,25.7s						
PRA	Prague	78.13	357	eP	P	01 21 54.0	+1.0
PRA				AMS	AMS	01 56 40.0	
	comp=Z,600nm,25.7s						
PYUN	Piuthan	78.16	301	eP	P	01 21 54.0	+0.1
	comp=Z,360nm,1.2s						
PRU	Pruhonice	78.20	357	eP	P	01 21 53.9	+0.4
PRU				MLR	MLR		
	comp=Z,500nm,16.1s						
PRU	Pruhonice	78.20	357	eP	P	01 21 53.9	+0.4
PRU				AMS	AMS	01 59 40.0	
	comp=Z,500nm,16.1s						
OKC	Ostrava-Krasne	78.21	355	eP	P	01 21 54.3	+0.8
OKC				MLR	MLR		
	comp=Z,600nm,18.5s						
OKC	Ostrava-Krasne	78.21	355	eP	P	01 21 54.3	+0.8
OKC				AMS	AMS	01 59 40.0	
	comp=Z,600nm,18.5s						
DHRM	DHARAMSHALA	78.23	308	eP	P	01 21 53.9	-0.3
DHRM				IAmb	IAmb	01 21 56.7	
	comp=Z,65nm,1.1s						
MANZ	Manzenberg	78.26	359	eP	P	01 21 53.5	-0.3
	comp=Z,7.3nm,1.2s,baz=0.4,slow=5.7						
MORC	Moravsky Berou	78.30	355	⇓P	P	01 21 54.9	+0.8
MORC	Moravsky Berou	78.30	355	eP	P	01 21 54.0	-0.1
MORC	Moravsky Berou	78.30	355	IAmb	IAmb	01 21 55.7	
	comp=Z,50nm,1.1s						
STHS	Stebnicka Huta	78.42	353	eP	P	01 21 54.9	+0.2
STHS	Stebnicka Huta	78.42	353	eP	P	01 21 54.9	+0.2
ROTZ	Rotzenmuhle	78.47	359	eP	P	01 21 55.0	0.0
	comp=Z,14nm,1.4s,baz=0.4,slow=5.7						
NIE	Niedzica	78.49	353	eP	P	01 21 56.1	+1.0
WLF	Walferdange	78.52	3	dP	P	01 21 56.3	+1.0
	comp=Z,20nm,1.2s						
WLF	Walferdange	78.52	3	eP	P	01 21 55.3	0.0
	comp=Z,62nm,1.3s,baz=0.4,slow=5.7						
WLF	Walferdange	78.52	3	IAmb	IAmb	01 21 57.3	
	comp=Z,45nm,1.1s						
WLF				IAMs_20	IAMs_20	02 02 22.4	
	comp=Z,620nm,19.0s						
NIL	Nilore	78.53	311	P	P	01 21 56.1	+0.5
NIL				pmax	pmax		
	comp=Z,140nm,0.9s						
NIL				MLR	MLR		
	comp=Z,1µm,20.0s						
NIL	Nilore	78.53	311	P	P	01 21 56.1	+0.5
GRF	Grafenberg Arr	78.56	360	eP	P	01 21 55.7	+0.2
	comp=Z,146nm,1.4s,baz=0.4,slow=5.7						
GRF				eL	L	02 00 30.7	
	comp=Z,309nm,20.1s						
GRFO	Grafenberg	78.56	360	P	P	01 21 55.9	+0.4
GRFO				pmax	pmax		
	comp=Z,102nm,1.2s						
GRFO	Grafenberg	78.56	360	P	P	01 21 55.9	+0.4
SMLA	Simla	78.72	307	eP	P	01 21 56.7	+0.1
SMLA				IAmb	IAmb	01 22 02.7	
	comp=Z,64nm,0.9s						
VRAC	Vranov	78.81	356	⇓P	P	01 21 56.8	0.0
VRAC	Vranov	78.81	356	eP	P	01 21 57.2	+0.3
LANS	Liptovska Anna	78.81	354	eP	P	01 21 58.6	+1.7
LANS				pmax	pmax		
	comp=Z,58nm,1.2s						
LANS	Liptovska Anna	78.81	354	eP	P	01 21 58.6	+1.7
KOLS	Kolonicke sedl	78.82	352	eP	P	01 21 57.8	+0.9
KOLS				pmax	pmax		
	comp=Z,46nm,1.2s						
KOLS	Kolonicke sedl	78.82	352	eP	P	01 21 57.8	+0.9
TREC	Trest	78.87	357	eP	P	01 21 57.4	+0.2
TREC				MLR	MLR		
	comp=Z,500nm,20.1s						
TREC	Trest	78.87	357	eP	P	01 21 57.4	+0.2
TREC				AMS	AMS	01 59 00.0	
	comp=Z,500nm,20.1s						
CRVS	Cervenica-Dubn	78.92	353	eP	P	01 21 58.1	+0.6
CRVS				pmax	pmax		
	comp=Z,57nm,1.2s						
CRVS	Cervenica-Dubn	78.92	353	eP	P	01 21 58.1	+0.6
SORM	Soroca	78.96	348	⇑P	P	01 21 57.5	-0.1
KRUC	Moravsky	79.06	356	eP	P	01 21 58.1	-0.2
KHC	Kasperske Hory	79.09	358	eP	P	01 21 59.3	+0.9
KHC				e	PcP	01 22 08.2	+1.3
KHC				MLR	MLR		
	comp=Z,600nm,19.7s						
KHC	Kasperske Hory	79.09	358	eP	P	01 21 59.3	+0.9
KHC				ex	x	01 22 08.2	
KHC				AMS	AMS	02 01 50.0	
	comp=Z,600nm,19.7s						
WET	Wettzell	79.09	358	eP	P	01 21 58.4	0.0
	comp=Z,50nm,1.3s,baz=0.4,slow=5.7						
UZH	Uzhgorod	79.12	352	eP	P	01 21 53.8	-4.7
UZH				i	P	01 22 00.3	+1.8
UZH				e	PcP	01 22 05.7	-1.2
JAVC	Velka Javorina	79.21	355	eP	P	01 22 00.0	+0.9
GOF	Gofitskoye	79.22	337	⇑eP	P	01 22 00.3	+1.1
GOF				eS	S	01 32 00.0	+1.3
GOF				pmax	pmax		
	comp=Z,455nm,1.0s						
GOF				smax	smax		
	comp=E,42nm,1.4s						
GOF				smax	smax		
	comp=N,44nm,1.5s						
GEC2	GERESS Array S	79.37	358	eP	P	01 21 59.8	-0.3
	comp=N,71nm,1.4s,baz=0.4,slow=5.7						
GEC2	GERESS Array S	79.37	358	IAmb	IAmb	01 22 01.7	
	comp=Z,44nm,1.1s						
GERES	GERESS Array B	79.37	358	P	P	01 21 60.0	-0.1
	comp=Z,12nm,0.8s,baz=20,slow=4.3,SNR=106						
GERES	GERESS Array B	79.37	358	P	P	01 22 00.0	-0.1
IZAB	Izabela	79.38	354	eP	P	01 22 01.0	+1.0
CKRC	Cesky Krumlov	79.38	357	eP	P	01 22 00.6	+0.6
CKRC				AMS	AMS	02 03 30.0	
	comp=Z,600nm,17.5s						
KECS	Kecovo	79.41	353	eP	P	01 22 00.9	+0.8
KECS				pmax	pmax		
	comp=Z,27nm,1.1s						
KECS	Kecovo	79.41	353	eP	P	01 22 00.9	+0.8
KOLL	Kolacno	79.45	355	eP	P	01 22 01.6	+1.3
STU	Stuttgart	79.47	1	eP	P	01 22 00.3	-0.2
	comp=Z,210nm,1.4s,baz=0.4,slow=5.7						
STU	Stuttgart	79.47	1	IAmb	IAmb	01 22 02.2	
	comp=Z,68nm,1.3s						
VYHS	Vyhne	79.51	354	eP	P	01 22 01.5	+0.8
VYHS				pmax	pmax		
	comp=Z,78nm,1.2s						
VYHS	Vyhne	79.51	354	eP	P	01 22 01.5	+0.8
SMOL	Smolenice	79.56	355	eP	P	01 22 02.3	+1.3
SMOL				pmax	pmax		
	comp=Z,43nm,1.1s						
SMOL	Smolenice	79.56	355	eP	P	01 22 02.3	+1.3
KBL	Kabul	79.70	314	P	P	01 22 01.1	-1.1
KBL				pmax	pmax		
	comp=Z,182nm,1.4s						
KBL	Kabul	79.70	314	P	P	01 22 01.4	-0.8
	SNR=51						
KBL				P	P	01 22 01.4	-0.8
	SNR=51						
KBL	Kabul	79.70	314	P	P	01 22 01.1	-1.1
MODS	Modra-Piesok	79.71	355	eP	P	01 22 02.2	+0.4
MODS				pmax	pmax		
	comp=Z,131nm,1.2s						
MODS	Modra-Piesok	79.71	355	eP	P	01 22 02.2	+0.4
BURAR	Bucovina Array	79.84	350	IAmb	IAmb	01 22 04.0	
	comp=Z,30nm,1.1s						
BUR01	Bucovina Ar. S	79.84	350	⇑P	P	01 22 02.5	-0.2
ZST	Bratislava	79.90	356	eP	P	01 22 04.2	+1.4
ZST				pmax	pmax		
	comp=Z,259nm,1.2s						
ZST	Bratislava	79.90	356	eP	P	01 22 04.2	+1.4
BFO	Black Forest	79.91	1	P	P	01 22 02.7	-0.2
BFO				pmax	pmax		
	comp=Z,53nm,1.2s						
BFO	Black Forest	79.91	1	eP	P	01 22 02.6	-0.2
	comp=Z,67nm,1.3s,baz=0.4,slow=5.7						
BFO	Black Forest	79.91	1	P	P	01 22 02.7	-0.2
BFO				IAmb	IAmb	01 22 04.6	
	comp=Z,52nm,1.2s						
BMR	Baia Mare	79.96	351	⇑P	P	01 22 02.5	-0.6
IAS	Iasi	79.98	348	⇓P	P	01 22 03.0	-0.3
ECH	Echery	80.00	2	IAmb	IAmb	01 22 05.0	
	comp=Z,77nm,1.2s						
BOK	Bokaro	80.01	296	eP	P	01 22 04.6	+0.8
PSZ	Piszkesteto	80.01	354	⇓P	P	01 22 04.1	+0.6
PSZ	Piszkesteto	80.01	354	IAmb	IAmb	01 22 05.6	
	comp=Z,74nm,1.2s						
PSZ				IAMs_20	IAMs_20	02 00 49.8	
	comp=Z,538nm,21.0s						
KIS	Kishinev	80.01	347	⇑iP	P	01 22 02.0	-1.4
	comp=Z,45nm,1.3s						
KIS	Kishinev	80.01	347	ePP	PP	01 25 15.0	+11
KIS	Kishinev	80.01	347	⇓P	P	01 22 03.2	-0.2
KIS	Kishinev	80.01	347	c iP	P	01 22 02.0	-1.4
KIS				ePS	PnS	01 32 41.0	-10
KIS				pmax	pmax		
	comp=Z,45nm,1.3s						
MAK	Makhachkala	80.02	333	eP	P	01 21 58.3	-5.2
MAK				eS	S	01 32 00.8	-6.4
MAK				eSSS	SSS	01 40 40.2	
MAK				pmax	pmax		
	comp=Z,208nm,1.2s						
FUR	Furstenfeldbru	80.09	359	eP	P	01 22 04.1	+0.2
	comp=Z,109nm,1.3s,baz=0.4,slow=5.7						
MILM	Milestii Mici	80.09	347	⇓P	P	01 22 03.4	-0.4
MILM	Milestii Mici	80.09	347	ceP	P	01 21 59.0	-4.8
MILM				pmax	pmax		
	comp=Z,110nm,1.2s						
SDDR	Presa de Saban	80.15	72	IAmb	IAmb	01 22 17.8	
	comp=Z,34nm,1.0s						
SDDR				IAMs_20	IAMs_20	01 57 34.3	
	comp=Z,670nm,20.0s						
SRO	Srobarova	80.22	355	eP	P	01 22 05.9	+1.4
SRO				pmax	pmax		
	comp=Z,62nm,1.1s						
SRO	Srobarova	80.22	355	eP	P	01 22 05.9	+1.4
CONA	Conrad Observa	80.22	356	eP	P	01 22 05.1	+0.4
	comp=Z,102nm,1.3s,SNR=67						
GROC	Groznyy	80.26	335	eP	P	01 22 05.1	+0.3
GROC				e	PP	01 25 09.1	+2.5
GROC				eS	S	01 32 10.2	+0.5
GROC				pmax	pmax		
	comp=Z,24nm,0.7s						
SRO2	Moca	80.26	355	eP	P	01 22 05.2	+0.5
SRO2				pmax	pmax		
	comp=Z,42nm,1.0s						
SRO2	Moca	80.26	355	eP	P	01 22 05.2	+0.5
KIV	Kislovodsk	80.34	337	⇑P	P	01 22 06.4	+1.0
KIV	Kislovodsk	80.34	337	i P	P	01 22 05.6	+0.1
	SNR=12						
KIV	Kislovodsk	80.34	337	eP	P	01 22 05.5	+0.1
KIV				e	PP	01 25 07.3	0.0
KIV				eS	S	01 32 11.7	+0.9
KIV				eSS	SS	01 37 23.5	+2.9
KIV				pmax	pmax		
	comp=Z,81nm,1.0s						
KIV				pmax	pmax		
	comp=Z,70nm,4.3s						
KIV	Kislovodsk	80.34	337	P	P	01 22 06.1	+0.7
KIV				P	P	01 22 06.1	+0.7
KIV	Kislovodsk	80.34	337	P	P	01 22 05.9	+0.5
KIV				IAmb	IAmb	01 22 07.7	
	comp=Z,69nm,0.9s						
MOA	Molln	80.35	357	i P	P	01 22 06.0	+0.7
	comp=Z,30nm,1.3s,SNR=21						
SOP	Sopron	80.44	356	eP	P	01 22 06.2	+0.5
ARCR	ARCALIA	80.46	350	⇓P	P	01 22 07.1	+1.3
RJOB	Jochberg	80.50	358	eP	P	01 22 06.4	+0.3
	comp=Z,30nm,1.0s,baz=0.4,slow=5.7						
VASR	Vaslui	80.50	348	⇓P	P	01 22 06.2	+0.2
BUD	Budapest	80.50	354	eP	P	01 22 07.0	+0.9
KBZ	Khabaz	80.50	337	P	P	01 22 07.1	+1.0
	comp=Z,39nm,0.9s,baz=48,slow=2.8,SNR=75						
KBZ	Khabaz	80.50	337	c iP	P	01 22 06.4	+0.3
KBZ				pmax	pmax		
	comp=Z,53nm,0.9s						
MESR	Meseseni	80.53	351	⇑P	P	01 22 07.3	+1.0
NCK	Nalchik	80.55	336	d iP	P	01 22 07.7	+1.3
NCK				pmax	pmax		
	comp=Z,168nm,0.8s						
UBR	Ueberruh	80.57	0	eP	P	01 22 06.8	+0.2
	comp=Z,83nm,1.3s,baz=0.4,slow=5.7						
BSZH	Besenyszg	80.60	353	⇑P	P	01 22 06.5	-0.1
BSZH	Besenyszg	80.60	353	eP	P	01 22 05.3	-1.2
TTSI	Tana Toraja	80.66	253	P	P	01 22 07.8	+0.5
	comp=Z,26nm,1.2s						
NDI	New Delhi	80.68	305	eP	P	01 22 07.2	-0.1
ANN	Anapa	80.70	341	c iP	P	01 22 07.0	-0.1
ANN				pmax	pmax		
	comp=Z,73nm,0.9s						
ANN				MLR	MLR		
	comp=Z,605nm,23.0s						
RETA	Reutte	80.77	360	i P	P	01 22 08.1	+0.5
	comp=Z,44nm,1.2s,SNR=25						
TESR	Tescani	80.77	349	⇓P	P	01 22 07.0	-0.5
CBBR	Cluj-Babes-Bol	80.85	351	⇓P	P	01 22 08.3	+0.4
AYAN	Aya Nagar	80.89	305	eP	P	01 22 08.1	-0.4
MPLH	Magyarpolny	80.90	355	eP	P	01 22 09.4	+1.2
CJR	Cluj-Napoca	80.90	351	⇓P	P	01 22 08.9	+0.6
DRGR		80.91	352	⇓P	P	01 22 08.1	-0.2
MOTA	Moosalm	80.91	360	i P	P	01 22 09.2	+0.8
	comp=Z,100nm,1.2s,SNR=56						
ARSA	Arzberg	80.91	357	i P	P	01 22 09.5	+1.2
	comp=Z,70nm,1.2s,SNR=30						
WATA	Walderalm	80.91	359	i P	P	01 22 09.3	+0.8
	comp=Z,78nm,1.2s,SNR=32						
DAVA	Damuels	80.97	0	i P	P	01 22 09.7	+1.0
	comp=Z,40nm,1.4s,SNR=14						
WTTA	Wattenberg	80.98	359	i P	P	01 22 09.2	+0.3
	comp=Z,113nm,1.5s,SNR=35						
NEY	Neytrino	81.00	337	⇓iP	P	01 22 09.7	+0.7
NEY				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SQTA	Sankt Quirin	81.03	360	i P	P	01 22 10.2	+1.1
	comp=Z,109nm,1.3s,SNR=45						
SONA	Sohna	81.10	305	eP	P	01 22 09.8	+0.2
ZEI	Tsey	81.14	336	eP	P	01 22 08.1	-1.7
ZEI				pmax	pmax		
	comp=Z,31nm,1.5s						
KBA	Koelnbreinsper	81.14	358	i P	P	01 22 10.7	+0.9
	comp=Z,176nm,1.2s,SNR=92						
TIH	Tihany	81.15	355	eP	P	01 22 10.5	+1.0
GEYT	Alibeck	81.18	324	P	P	01 22 09.9	0.0
	comp=Z,41nm,0.9s,baz=325,slow=2.3,SNR=46						
GEYT				LR	LR	02 01 53.1	
	comp=Z,433nm,18.8s,baz=40,slow=38						
GYA0B	ALIBECK ARRAY	81.18	324	IAmb	IAmb	01 22 12.2	
	comp=Z,77nm,1.1s						
FETA	Feichten	81.23	360	i P	P	01 22 11.4	+1.2
	comp=Z,89nm,1.1s,SNR=34						
VLDR	Vladesti	81.24	348	⇓P	P	01 22 10.7	+0.7
OZUR		81.28	349	⇓P	P	01 22 11.0	+0.7
RAO	Raoul Island	81.36	187	LR	LR	01 55 06.9	
	comp=Z,524nm,18.4s,baz=15,slow=33						
SOC	Sochi	81.38	339	c iP	P	01 22 10.6	-0.2
SOC				e	PP	01 25 14.2	-1.6
SOC				ePPP	PPP	01 27 07.3	
SOC				eS	S	01 32 23.8	+2.4
SOC				eSSS	SSS	01 41 04.3	
SOC				pmax	pmax		
	comp=Z,42nm,0.7s						
SOC				MLR	MLR		
	comp=Z,1µm,21.0s						
VRI	Vrincioaia	81.39	349	⇓P	P	01 22 11.2	+0.4
VRI				⇓P	P	01 22 11.3	+0.4
PLOR	Plostina	81.42	349	⇓P	P	01 22 11.3	+0.3
SCTR	Scanteiesti	81.42	348	⇓P	P	01 22 11.9	+0.9
DOPR	Dopca	81.45	350	⇓P	P	01 22 12.1	+0.9
ODBI	Odobesti	81.45	348	⇓P	P	01 22 11.4	+0.3
COVR	Voineasa-Covas	81.48	349	⇓P	P	01 22 12.4	+1.0
KUDL	Kundal	81.49	305	eP	P	01 22 12.3	+0.6
TATR	Tatarca	81.49	348	⇓P	P	01 22 12.2	+0.9
ABTA	Abfaltersbach	81.49	359	i P	P	01 22 11.7	+0.2
	comp=Z,88nm,1.3s,SNR=48						
SOKA	Soboth	81.50	357	i P	P	01 22 12.6	+1.1
	comp=Z,136nm,1.2s,SNR=87						
AMBH	Ambrzfalva	81.51	353	⇓P	P	01 22 11.9	+0.5
AMBH	Ambrzfalva	81.51	353	eP	P	01 22 13.2	+1.8
SIRR	Siria	81.52	352	⇓P	P	01 22 11.9	+0.4
SLCR	Slobozia Conac	81.53	348	⇑P	P	01 22 12.6	+1.0
PERS	Pernice	81.54	357	i P	P	01 22 12.1	+0.4
IZVR	Izvoarele	81.58	348	⇑P	P	01 22 12.9	+1.1
CTAO	Charters Tower	81.58	222	P	P	01 22 12.7	+0.6
CTAO				pmax	pmax		
	comp=Z,20nm,0.9s						
CTAO	Charters Tower	81.58	222	P	P	01 22 12.7	+0.6
MYKA	Terra Mystica	81.59	358	i P	P	01 22 12.5	+0.6
	comp=Z,44nm,1.2s,SNR=20						
SCHL	Schela	81.61	348	⇑P	P	01 22 13.2	+1.2
BEHE	Becsehely	81.64	356	eP	P	01 22 12.1	0.0
BEHE	Becsehely	81.64	356	⇑iP	P	01 22 12.9	+0.8
CHVG	Ch'k'valeri	81.65	337	⇑P	P	01 22 13.9	+1.6
ZOU	Zoufplan	81.67	358	IAmb	IAmb	01 22 14.8	
	comp=Z,46nm,1.1s						
KOGS	Kog	81.68	356	eP	P	01 22 12.5	+0.1
OBKA	Obir	81.68	357	i P	P	01 22 13.0	+0.5
	comp=Z,55nm,1.0s,SNR=31						
BISRR	Bisoca	81.71	349	⇓P	P	01 22 13.1	+0.5
TUE	Stuetta	81.78	1	IAMs_20	IAMs_20	01 59 32.6	
	comp=Z,712nm,20.0s						
MORH	Mrgy, Hungar	81.79	354	⇑iP	P	01 22 12.4	-0.5
TLCR		81.79	347	⇓P	P	01 22 13.4	+0.5
MLR	Muntele Rosu	81.86	349	⇑P	P	01 22 14.3	+0.8
NEHR	Nehoiu	81.88	349	⇓P	P	01 22 13.4	-0.1
CFR	Carcaliu	81.89	347	⇓P	P	01 22 13.7	+0.2
KOVH	Kovagotottos	81.95	355	eP	P	01 22 13.9	+0.2
STAL	STALIGIAL	81.98	358	IAmb	IAmb	01 22 15.7	
	comp=Z,41nm,1.2s						
LOBO	Lobor	81.98	356	i P	P	01 22 13.8	-0.2
CADS	Cadrg	81.99	358	i P	P	01 22 13.4	-0.7
KALN	Kalnik	81.99	356	i P	P	01 22 14.0	0.0
VOIR		82.01	350	⇓P	P	01 22 14.8	+0.6
ARR	Arges	82.13	350	⇓P	P	01 22 15.3	+0.5
LOT	Lotru	82.14	351	⇓P	P	01 22 14.9	0.0
LJU	Ljubljana	82.15	357	i P	P	01 22 14.7	-0.1
ISR	Istrita	82.15	349	⇓P	P	01 22 14.6	-0.4
BZS	Buzias	82.17	352	⇓P	P	01 22 14.8	-0.1
TPGR	Topolog	82.17	347	⇑P	P	01 22 15.3	+0.3
CTI	Castel Tesino	82.20	359	IAmb	IAmb	01 22 16.5	
	comp=Z,60nm,1.2s						
PTJ	Puntijarka	82.23	356	P	P	01 22 15.4	0.0
KAPI	Kappang	82.28	252	P	P	01 22 16.4	+0.5
	comp=Z,1.5nm,0.3s,baz=185,slow=1.1,SNR=8.1						
KAPI	Kappang	82.28	252	P	P	01 22 16.6	+0.7
GZR	Gura Zlata	82.29	351	⇑P	P	01 22 15.7	0.0
SECR		82.29	349	⇑P	P	01 22 16.1	+0.5
ZAG	Zagreb	82.31	356	⇑iP	P	01 22 16.0	+0.3
BKSI	Bulukumba	82.32	251	P	P	01 22 16.0	-0.1
	comp=Z,477nmcomp=Z,28nm,1.1s						
CRES	Cresnjev	82.33	356	⇑iP	P	01 22 15.5	-0.3
VISS	Visnje	82.38	357	eP	P	01 22 15.7	-0.3
MTN	Manton Dam	82.38	238	IAmb	IAmb	01 22 29.5	
	comp=Z,32nm,0.9s						
HARR	Harsova	82.40	348	⇓P	P	01 22 16.6	+0.4
BANR	Banloc	82.44	352	⇓P	P	01 22 16.7	+0.4
CEY	Cerknica	82.46	357	⇑iP	P	01 22 16.1	-0.4
MOSL	Moslavina	82.49	356	i P	P	01 22 16.2	-0.5
TLBR	Topalu	82.53	347	⇑P	P	01 22 17.7	+0.9
AKH	Akhalkalaki	82.54	336	⇓P	P	01 22 18.5	+1.3
OZLJ	Ozalj	82.55	356	i P	P	01 22 16.3	-0.5
TIRR	Tirgusor	82.56	347	⇑P	P	01 22 17.4	+0.5
SULR		82.62	349	⇑P	P	01 22 18.3	+1.0
KNDS	Knezji Dol	82.67	357	eP	P	01 22 17.5	-0.2
HRA	Herat	82.70	319	P	P	01 22 18.0	-0.2
HRA				IAmb	IAmb	01 22 19.6	
	comp=Z,62nm,1.2s						
LEHL	Lehliu	82.75	348	⇓P	P	01 22 18.6	+0.6
FRGS	Fruska Gora	82.76	353	⇓P	P	01 22 18.5	+0.4
FRGS	Fruska Gora	82.76	353	⇑iP	P	01 22 17.8	-0.3
KSM	Kuching	82.81	263	P	P	01 22 20.0	+1.3
HERR	Herculane	82.83	351	⇓P	P	01 22 18.3	-0.1
MFTR	Murfatlar	82.83	347	⇑P	P	01 22 19.4	+1.0
SSB	Saint Sauveur	82.84	4	IAmb	IAmb	01 22 20.6	
	comp=Z,49nm,1.0s						
RIY	Rijeka	82.87	357	⇑iP	P	01 22 18.2	-0.4
RIY	Rijeka	82.87	357	P	P	01 22 18.0	-0.6
HUMR	Humele	82.92	350	⇑P	P	01 22 19.0	+0.1
BCA	Borcka	82.97	337	⇑P	P	01 22 19.8	+0.6
RASA	Rasa	82.97	348	⇑P	P	01 22 19.8	+0.7
MDVR	Moldovita	82.99	352	⇑P	P	01 22 19.2	-0.1
MRAK	Mrakovica	83.08	355	⇑iP	P	01 22 19.7	-0.1
SGRR	Singureni	83.10	349	⇓P	P	01 22 19.7	-0.2
MANR	Mangalia	83.17	347	⇓P	P	01 22 21.1	+0.9
SMRN	Sveta Marina	83.17	357	i P	P	01 22 19.4	-0.7
PLIT	Plitvice	83.28	356	i P	P	01 22 20.1	-0.7
COPA	Copaceanca	83.28	349	⇓P	P	01 22 20.4	-0.4
BLY	Banja Luka	83.33	355	⇑iP	P	01 22 20.8	-0.2
PUNG	Punghina	83.38	351	⇑P	P	01 22 21.4	+0.2
TEKS	Tekeris	83.39	354	⇑iP	P	01 22 20.6	-0.8
GNI	Garni	83.39	334	P	P	01 22 22.8	+1.2
GNI	Garni	83.39	334	c iP	P	01 22 22.6	+1.0
GNI				pmax	pmax		
	comp=Z,37nm,1.3s						
GNI	Garni	83.39	334	P	P	01 22 23.3	+1.7
GNI				P	P	01 22 23.3	+1.7
GNI	Garni	83.39	334	IAMs_20	IAMs_20	02 06 29.7	
	comp=Z,616nm,21.0s						
RABC	Rab	83.43	357	i P	P	01 22 21.2	-0.3
VLAD	Vladila	83.50	350	⇓P	P	01 22 21.8	-0.1
SOEI	Soe	83.54	245	P	P	01 22 22.2	-0.3
	comp=Z,34nm,0.8s						
SOEI	Soe	83.54	245	P	P	01 22 22.4	-0.1
SOEI				IAmb	IAmb	01 22 38.2	
	comp=Z,49nm,1.1s						
NVLJ	Novalja	83.62	357	i P	P	01 22 21.8	-0.6
UDBI	Udbina	83.62	356	i P	P	01 22 22.3	-0.3

MGRS	Mrkonjic Grad	83.67	355	*e*P	P	01 22 22.0	-0.8
RAZG	Razgrad	83.69	348	⇑P	P	01 22 23.0	+0.1
AJM	Ajmer	83.78	306	*e*P	P	01 22 23.4	-0.3
DIVS	Divibare	83.81	353	⇑*i*P	P	01 22 23.0	-0.6
DIVS	Divibare	83.81	353	IAmb	IAmb	01 22 28.3	
	comp=Z,32nm,1.1s						
SJG	San Juan	83.81	69	P	P	01 22 23.5	-0.4
SJG				pmax	pmax		
	comp=Z,47nm,1.2s						
SJG				MLR	MLR		
	comp=Z,500nm,20.0s						
SJG	San Juan	83.81	69	P	P	01 22 23.5	-0.4
SJG				IAmb	IAmb	01 22 37.7	
	comp=Z,47nm,1.1s						
SJG	San Juan	83.81	69	IAMs_20	IAMs_20	02 01 37.1	
	comp=Z,521nm,20.0s						
KTUT	Trabzon	83.84	338	⇓P	P	01 22 24.6	+0.9
HAPS	Han Pijesak,BI	83.89	354	⇑*i*P	P	01 22 23.8	-0.2
PDPR	Patillas Dam,	83.96	69	P	P	01 22 25.0	+0.4
BBLS	Lazići	84.08	354	⇑*i*P	P	01 22 24.8	-0.2
PLVB	Pleven	84.08	350	⇓P	P	01 22 25.3	+0.4
VLC	Villacollemand	84.09	0	IAMs_20	IAMs_20	02 01 23.9	
	comp=Z,590nm,21.0s						
BZK	Bozkurt	84.10	343	⇓P	P	01 22 26.5	+1.6
KIJV	Kijevo	84.11	356	*i* P	P	01 22 24.7	-0.3
BOVS	Bovan	84.13	352	⇑P	P	01 22 24.5	-0.6
DIKM	Dikmen	84.16	342	⇑P	P	01 22 25.8	+0.5
EDFI	Ende, Flores	84.18	248	P	P	01 22 23.5	-2.3
DUGI	Dugi Otok	84.18	357	*i* P	P	01 22 25.1	-0.3
BATI	Baumata	84.25	245	P	P	01 22 26.2	+0.2
	comp=Z,683nmcomp=Z,26nm,0.9s						
MORI	Morici	84.28	356	*i* P	P	01 22 24.5	-1.4
DGPR	DIGLIPUR	84.30	284	*e*P	P	01 22 26.2	-0.1
RUDO	Rudo	84.33	354	⇑*i*P	P	01 22 26.0	-0.1
ZIRJ	Zirje	84.50	356	*i* P	P	01 22 25.7	-1.3
RICI	Ricice	84.59	355	*i* P	P	01 22 26.3	-1.2
UPM	Unac-Piva	84.77	354	*e*P	P	01 22 28.5	-0.1
MAKA	Makarska	84.80	355	*i* P	P	01 22 26.9	-1.6
PGAV	Gavieira, Arco	84.88	14	*e*P	P	01 22 30.3	+1.2
	comp=Z,77nm,1.6s						
PGAV	Gavieira, Arco	84.88	14	*e*LR	LR	01 53 19.7	
	comp=Z,769nm,18.0s						
HVAR	Hvar	84.94	356	*i* P	P	01 22 28.0	-1.2
VTS	Vitosha	84.99	351	⇓P	P	01 22 29.9	+0.2
VTS	Vitosha	84.99	351	P	P	01 22 28.9	-0.8
VTS				pmax	pmax		
	comp=Z,19nm,1.0s						
VTS	Vitosha	84.99	351	P	P	01 22 28.9	-0.8
VTS				IAmb	IAmb	01 22 30.6	
	comp=Z,19nm,1.0s						
BHPL	Bhopal	85.02	302	*e*P	P	01 22 29.9	-0.2
BHPL				IAmb	IAmb	01 22 32.1	
	comp=Z,90nm,1.1s						
BRY	Bratogost	85.10	354	*e*P	P	01 22 30.0	-0.2
PCAB	Cabril	85.17	14	*e*P	P	01 22 31.4	+0.9
	comp=Z,62nm,1.7s						
KDZE	Karadeniz Ereo	85.18	344	⇑P	P	01 22 31.5	+1.0
STON	Ston	85.18	355	⇑*i*P	P	01 22 28.6	-1.8
STON	Ston	85.18	355	*i* P	P	01 22 28.5	-1.9
PBRG	Braganca	85.26	13	*e*P	P	01 22 31.5	+0.6
	comp=Z,62nm,1.9s						
TREB	Trebinje	85.29	354	*e*P	P	01 22 30.9	-0.1
DBRK	Dubrovnik	85.35	354	*i* P	P	01 22 30.2	-1.1
PDG	Podgorica	85.52	354	⇓P	P	01 22 32.4	+0.3
PDG	Podgorica	85.52	354	⇑*i*P	P	01 22 31.0	-1.1
PDG	Podgorica	85.52	354	IAMs_20	IAMs_20	02 04 43.5	
	comp=Z,612nm,21.0s						
POLO	Lamas de Olo	85.53	14	*e*P	P	01 22 33.2	+0.8
	comp=Z,29nm,1.4s						
HCY	Herceg Novi	85.55	354	*e*P	P	01 22 31.8	-0.5
GURO	Guroymak-BITLI	85.60	336	IAmb	IAmb	01 22 35.3	
	comp=Z,65nm,1.4s						
PVRL	Vila Real	85.64	14	*e*P	P	01 22 33.6	+0.8
	comp=Z,53nm,1.4s						
JRMM	Jerantut	85.74	271	P	P	01 22 34.0	+0.4
DRME	Dracevica, Mon	85.77	354	⇑*i*P	P	01 22 32.8	-0.6
MVO	Moncorvo	85.85	13	*e*P	P	01 22 34.4	+0.5
	comp=Z,74nm,1.3s						
MVO	Moncorvo	85.85	13	*e*LQ	LQ	01 45 41.2	
MVO				*e*LR	LR	01 53 03.3	
	comp=Z,521nm,20.0s						
PUK	Puka	85.86	353	IAmb	IAmb	01 22 45.1	
	comp=Z,34nm,1.3s						
AQU	L'Aquila	85.87	358	⇑*i*P	P	01 22 34.2	+0.3
AQU	L'Aquila	85.87	358	IAMs_20	IAMs_20	02 06 04.7	
	comp=Z,517nm,20.0s						
KNRA	Kununurra	85.99	238	P	P	01 22 34.3	-0.3
KNRA				IAmb	IAmb	01 22 47.8	
	comp=Z,28nm,0.9s						
STIP	Stip	86.01	351	*i* P	P	01 22 33.6	-0.9
PVIS	Viseu	86.16	14	*e*P	P	01 22 35.9	+0.5
	comp=Z,38nm,1.3s						
IPM	Ipoh	86.17	272	P	P	01 22 36.0	+0.2
PHP	Peshkopia	86.17	353	P	P	01 22 34.8	-0.7
VIS	Vishakhapatnam	86.28	294	*e*x	P	01 22 31.6	-4.7
VIS				IAmb	IAmb	01 22 32.7	
	comp=Z,28nm,0.8s						
BR131	Keskin Array S	86.33	342	P	P	01 22 37.1	+0.7
	SNR=11						
BR131				P	P	01 22 37.1	+0.7
	SNR=11						
BR131	Keskin Array S	86.33	342	IAmb	IAmb	01 22 37.6	
	comp=Z,21nm,1.1s						
BRTR	Keskin Array B	86.33	342	P	P	01 22 36.3	-0.1
	comp=Z,4.8nm,0.8s,baz=40,slow=2.2,SNR=31						
BRTR				LR	LR	02 05 43.4	
	comp=Z,318nm,19.9s,baz=34,slow=39						
VAY	Valandovo	86.34	351	*i* P	P	01 22 36.5	+0.2
ANTO	Ankara	86.35	343	P	P	01 22 37.1	+0.7
ANTO				pmax	pmax		
	comp=Z,79nm,1.2s						
ANTO	Ankara	86.35	343	P	P	01 22 37.1	+0.7
MTE	Manteigas	86.53	14	*e*P	P	01 22 38.1	+0.9
	comp=Z,48nm,1.5s						
MTE	Manteigas	86.53	14	*e*S	S	01 33 16.9	+3.5
MTE				*e*SS	SS	01 39 11.3	+19
MTE				*e*LQ	LQ	01 45 51.3	
MTE				*e*LR	LR	01 53 47.3	
	comp=Z,524nm,18.0s						
MTE	Manteigas	86.53	14	P	P	01 22 36.8	-0.5
MTE				IAMs_20	IAMs_20	02 04 02.6	
	comp=Z,654nm,19.0s						
TIR	Tirane	86.55	353	⇓P	P	01 22 38.0	+0.8
TIR	Tirane	86.55	353	IAMs_20	IAMs_20	02 05 58.8	
	comp=Z,692nm,20.0s						
WB0	Warramunga Arr	86.61	232	IAmb	IAmb	01 22 50.6	
	comp=Z,45nm,1.5s						
OHR	Ohrid	86.71	352	*i* P	P	01 22 37.9	-0.2
PCAS	Casmilo, Conde	86.72	14	*e*P	P	01 22 38.7	+0.6
	comp=Z,37nm,1.4s						
WRAB	Tennant Creek	86.77	231	*ce*P	P	01 22 38.1	-0.3
WRAB				pmax	pmax		
	comp=Z,17nm,1.1s						
WRAB				MLR	MLR		
	comp=Z,231nm,18.0s						
WRAB	Tennant Creek	86.77	231	P	P	01 22 38.2	-0.2
WRAB				IAmb	IAmb	01 22 50.8	
	comp=Z,36nm,1.4s						
WB2	Warramunga Arr	86.78	231	IAmb	IAmb	01 22 51.5	
	comp=Z,30nm,1.2s						
WRA	Warramunga Arr	86.78	231	P	P	01 22 38.3	-0.2
	comp=Z,7.2nm,0.9s,baz=38,slow=5.7,SNR=50						
WRA				LR	LR	01 57 37.7	
	comp=Z,204nm,20.8s,baz=55,slow=33						
HATO	Hato, Curacao	86.87	74	IAMs_20	IAMs_20	02 01 12.6	
	comp=Z,614nm,21.0s						
FNA	Florina	86.98	352	IAmb	IAmb	01 22 40.3	
	comp=Z,38nm,0.9s						
PCBR	Castelo Branco	87.08	14	*e*P	P	01 22 39.6	-0.3
	comp=Z,24nm,1.3s						
PAOL	Paolisi	87.15	357	P	P	01 22 40.4	+0.1
PAOL				IAmb	IAmb	01 22 41.3	
	comp=Z,51nm,1.2s						
PSBE	So Bento	87.20	15	*e*P	P	01 22 40.7	+0.2
	comp=Z,65nm,1.9s						
MATE	Matera	87.44	355	⇑P	P	01 22 41.6	+0.1
PMRV	Marv??o	87.50	14	*e*P	P	01 22 42.2	+0.3
	comp=Z,30nm,1.5s						
PMRV	Marv??o	87.50	14	*e*SS	SS	01 39 34.9	+29
PMRV	Marv??o	87.50	14	*e*LR	LR	01 54 42.7	
	comp=Z,433nm,18.0s						
PMAFR	Mafra	87.67	15	*e*P	P	01 22 43.3	+0.6
	comp=Z,168nm,1.5s						
LSK	Leskovik	87.68	352	P	P	01 22 42.8	-0.1
ESBB	Sonseca Array	87.71	11	IAmb	IAmb	01 22 44.3	
	comp=Z,29nm,1.0s						
ESDC	Sonseca Array	87.71	11	P	P	01 22 42.6	-0.4
	comp=Z,22nm,0.9s,baz=348,slow=4.6,SNR=104						
ESDC				LR	LR	02 06 52.5	
	comp=Z,254nm,18.1s,baz=315,slow=39						
ESDC	Sonseca Array	87.71	11	IAmb	IAmb	01 22 44.3	
	comp=Z,30nm,1.1s						
PMTG	Montargil	87.73	14	*e*P	P	01 22 42.6	-0.4
	comp=Z,23nm,1.5s						
PAB	San Pablo	87.79	11	P	P	01 22 43.2	-0.2
PAB				pmax	pmax		
	comp=Z,17nm,1.0s						
PAB				MLR	MLR		
	comp=Z,700nm,22.0s						
PAB	San Pablo	87.79	11	P	P	01 22 43.2	-0.2
PAB				IAmb	IAmb	01 22 44.6	
	comp=Z,17nm,1.0s						
PAB	San Pablo	87.79	11	IAMs_20	IAMs_20	02 01 16.1	
	comp=Z,727nm,22.0s						
PAB	San Pablo	87.79	11	P	P	01 22 43.6	+0.1
PMST	Lisbon--Monsan	87.90	15	*e*P	P	01 22 43.4	-0.4
SRN	Sarande	88.00	353	P	P	01 22 43.4	-0.8
PESTR	Estremoz	88.02	14	*e*P	P	01 22 44.3	-0.2
	comp=Z,30nm,1.6s						
PESTR	Estremoz	88.02	14	P	P	01 22 44.2	-0.2
GAZ	Gaziantep	88.06	339	IAmb	IAmb	01 22 46.6	
	comp=Z,38nm,1.2s						
SDV	Santo Domingo	88.46	78	*e*P	P	01 22 46.4	-0.7
SDV	Santo Domingo	88.46	78	P	P	01 22 46.8	-0.3
SDV				IAmb	IAmb	01 23 05.2	
	comp=Z,18nm,0.9s						
PNCL	Nicolau / Gran	88.62	15	*e*P	P	01 22 47.4	+0.2
	comp=Z,49nm,1.5s						
VSL	Villasalto	88.75	1	IAmb	IAmb	01 22 49.3	
	comp=Z,21nm,1.0s						
VSL				IAMs_20	IAMs_20	02 08 33.1	
	comp=Z,416nm,20.0s						
PBAR	Barrancos	88.78	14	*e*P	P	01 22 48.0	0.0
	comp=Z,53nm,1.5s						
PBEJ	Beja	88.80	14	*e*P	P	01 22 48.5	+0.4
TIP	Timpagrande	88.91	355	⇑P	P	01 22 49.0	+0.3
TIP	Timpagrande	88.91	355	IAmb	IAmb	01 22 50.8	
	comp=Z,28nm,1.3s						
TIP				IAMs_20	IAMs_20	02 05 08.2	
	comp=Z,510nm,20.0s						
MESJ	Messejana	88.93	15	*e*P	P	01 22 48.1	-0.6
MESJ				IAmb	IAmb	01 22 48.7	
	comp=Z,19nm,1.2s						
MESJ	Messejana	88.93	15	*e*P	P	01 22 48.1	-0.6
MESJ	Messejana	88.93	15	*e*P	P	01 22 48.4	-0.3
NYDR	Nydri-Lefkada	89.10	352	P	P	01 22 49.4	-0.1
ANX	Ano Chora	89.11	351	P	P	01 22 48.9	-0.8
PVO	Paravola	89.12	351	P	P	01 22 49.2	-0.4
PTEO	Sao Teotonio	89.14	15	*e*P	P	01 22 49.9	+0.2
PCVE	Castro Verde	89.16	15	*e*P	P	01 22 49.5	-0.3
	comp=Z,32nm,1.2s						
HYB	Hyderabad	89.18	298	*i* P	P	01 22 49.0	-1.2
HYB				*e*sP	pwP	01 22 59.5	+2.3
HYB	Hyderabad	89.18	298	*e*P	P	01 22 50.2	0.0
EVGI	Lefkada island	89.19	352	P	P	01 22 49.3	-0.6
EFP	Efpalio	89.27	351	P	P	01 22 50.1	-0.2
TRIZ	Trizonia	89.32	351	P	P	01 22 49.8	-0.7
MORF	Marmelete	89.38	15	*e*P	P	01 22 50.6	-0.3
MORF				IAmb	IAmb	01 22 51.8	
	comp=Z,52nm,1.3s						
MORF	Marmelete	89.38	15	*e*P	P	01 22 50.6	-0.3
MORF	Marmelete	89.38	15	*e*P	P	01 22 51.3	+0.4
	comp=Z,70nm,1.6s						
ROSC	El Rosal	89.40	83	LR	LR	02 05 30.4	
	comp=Z,126nm,18.1s,baz=35,slow=37						
BKNI	Bangkinang	89.41	270	P	P	01 22 52.5	+1.3
BKNI	Bangkinang	89.41	270	P	P	01 22 51.9	+0.6
PVAQ	Vaqueiros	89.44	14	*e*P	P	01 22 51.1	0.0
	comp=Z,33nm,1.4s						
PVAQ	Vaqueiros	89.44	14	*e*S	S	01 33 48.5	+7.4
PVAQ				*e*SS	SS	01 39 43.7	+9.3
PVAQ	Vaqueiros	89.44	14	*e*LQ	LQ	01 49 43.8	
PVAQ				*e*LR	LR	01 54 29.4	
	comp=Z,444nm,18.0s						
PVAQ	Vaqueiros	89.44	14	IAmb	IAmb	01 22 52.3	
	comp=Z,39nm,1.5s						
PFVI	Vila Bisbo	89.53	15	*e*P	P	01 22 52.0	+0.5
	comp=Z,76nm,1.4s						
PBDV	Barranco-do-Ve	89.56	15	*e*P	P	01 22 51.5	-0.2
	comp=Z,46nm,1.5s						
LTK	Loutraki	89.57	350	P	P	01 22 50.1	-1.6
FITZ	Fitzroy Crossi	89.65	239	P	P	01 22 53.0	+0.8
FITZ				IAmb	IAmb	01 23 05.9	
	comp=Z,22nm,1.2s						
PSDA	Pessada-Kefalo	89.70	352	P	P	01 22 50.6	-1.7
YER	Yerkesik	89.76	346	P	P	01 22 52.6	-0.1
DRO	Drossia	89.76	351	P	P	01 22 52.5	-0.2
LTHK	Lithakia	90.08	352	P	P	01 22 52.7	-1.4
AS31	Alice Springs	90.17	230	P	P	01 22 55.1	+0.5
ASAR	Alice Springs	90.17	230	P	P	01 22 54.2	-0.3
	comp=Z,12nm,1.0s,baz=37,slow=4.4,SNR=69						
ASAR				LR	LR	01 58 23.4	
	comp=Z,369nm,21.2s,baz=38,slow=32						
OTAV	Otavalo	90.47	89	P	P	01 22 57.6	+0.8
OTAV				pmax	pmax		
	comp=Z,11nm,1.1s						
OTAV	Otavalo	90.47	89	*e*P	P	01 22 57.5	+0.8
OTAV	Otavalo	90.47	89	P	P	01 22 57.6	+0.8
POO	Poona	90.78	302	*e*P	P	01 22 56.5	-1.2
POO	Poona	90.78	302	*e*P	P	01 22 56.0	-1.7
PYL	PYLOS	90.81	351	P	P	01 22 56.1	-1.4
LEF	Lefka	90.94	342	⇓P	P	01 22 59.0	+0.9
CSS	Mathiatis	91.00	341	IAmb	IAmb	01 23 00.4	
	comp=Z,35nm,1.0s						
CSS				IAMs_20	IAMs_20	02 06 41.9	
	comp=Z,362nm,22.0s						
KTHR	Kythira	91.31	350	P	P	01 22 59.2	-0.7
SMIR	Smir Dam	91.47	13	P	P	01 23 02.0	+1.4
PMOZ	Porto Moniz, M	92.00	23	*e*LR	LR	01 56 34.5	
	comp=Z,547nm,20.0s						
CHEFC	Chefchaouen	92.04	13	P	P	01 23 05.0	+1.6
RSA	Sarsar	92.19	13	P	P	01 23 05.0	+1.0
KEST	Kesra	92.51	1	P	P	01 23 06.2	+0.6
	comp=Z,15nm,1.1s,baz=180,slow=1.4,SNR=8.7						
KEST	Kesra	92.51	1	P	P	01 23 05.9	+0.4
KEST	Kesra	92.51	1	IAmb	IAmb	01 23 07.1	
	comp=Z,36nm,1.3s						
SHME	Shamm	92.51	320	P	P	01 23 04.3	-1.3
BANOM	Banah	92.56	320	P	P	01 23 04.9	-0.9
GVDS	Gavdos	92.58	349	P	P	01 23 05.1	-0.7
TAF	Taforalt	92.69	11	P	P	01 23 08.0	+1.6
AKLM	AKL	92.82	12	P	P	01 23 06.0	-1.0
MASF	Masafi	93.11	320	P	P	01 23 08.3	-0.1
MDH	Madha	93.12	319	P	P	01 23 06.5	-1.8
MSFE	Esma-Masafi	93.12	320	*i* P	P	01 23 07.1	-1.4
	SNR=8.3						
JBK	JBK	93.15	11	P	P	01 23 09.1	+0.4
UMQ	Umm Al-Quwin	93.17	320	P	P	01 23 07.9	-0.7
UOSS	Minazif	93.47	319	*i* P	P	01 23 08.6	-1.4
	SNR=10						
UOSS	Minazif	93.47	319	P	P	01 23 09.1	-0.9
UOSS	Minazif	93.47	319	P	P	01 23 08.9	-1.1
UOSS				IAmb	IAmb	01 23 09.8	
	comp=Z,28nm,1.0s						
UOSS	Minazif	93.47	319	IAMs_20	IAMs_20	02 10 13.3	
	comp=Z,440nm,19.0s						
HATD	Hatta, Dubai	93.61	319	*i* P	P	01 23 09.6	-1.1
	SNR=8.8						
HATD	Hatta, Dubai	93.61	319	P	P	01 23 11.0	+0.4
	SNR=5.5						
NAZ	Nazwa, Dubai	93.65	320	*i* P	P	01 23 09.6	-1.3
	SNR=9.1						
ASHO	Ashiyiah	93.76	319	*i* P	P	01 23 09.9	-1.5
	SNR=17						
ASHO	Ashiyiah	93.76	319	P	P	01 23 11.1	-0.3
	SNR=9.1						
FAQ	Al Faqa, Dubai	93.89	320	*i* P	P	01 23 10.4	-1.5
	SNR=6.8						
BIDO	Bidbid	93.95	317	P	P	01 23 11.5	-0.8
STKA	Stephens Creek	93.95	220	P	P	01 23 12.7	+0.9
	comp=Z,1.3nm,0.4s,baz=4.9,slow=5.8,SNR=4.0						
STKA				LR	LR	02 00 36.5	
	comp=Z,542nm,20.6s,baz=26,slow=32						
STKA	Stephens Creek	93.95	220	⇑*e*P	P	01 23 11.8	0.0
STKA	Stephens Creek	93.95	220	P	P	01 23 12.8	+0.9
WSAR	Wadi Sarin	93.99	317	P	P	01 23 13.3	+0.8
	SNR=7.0						
SOHO	SOHO	94.06	319	*i* P	P	01 23 11.2	-1.5
	SNR=13						
ASUD	Al Ashush, Dub	94.11	320	*i* P	P	01 23 12.1	-0.8
	SNR=10						
CZD	Col de Zad	94.12	13	P	P	01 23 14.3	+1.0
HOQ	Hoqain	94.23	318	P	P	01 23 14.0	+0.4
	SNR=7.4						
SMDO	Samad	94.39	317	P	P	01 23 14.4	0.0
	SNR=6.9						
MDT	Midelt	94.39	13	P	P	01 23 14.9	+0.7
ALNE	Al Ain	94.45	319	*i* P	P	01 23 13.6	-1.0
	SNR=12						
ALNE	Al Ain	94.45	319	P	P	01 23 15.3	+0.7
	SNR=7.0						
TDRA	Tendrara	94.49	11	P	P	01 23 16.0	+1.1
JLN	Jalan Bani Buh	94.61	315	P	P	01 23 16.0	+0.7
	SNR=6.4						
ARQ	Araqi	94.78	318	P	P	01 23 15.7	-0.4
	SNR=14						
JMDO	Jabal Madar	94.98	317	P	P	01 23 17.2	+0.2
	SNR=8.4						
BSY	Bisya	95.03	318	P	P	01 23 18.0	+0.8
	SNR=8.3						
FIGM	Figuig	95.47	10	P	P	01 23 20.0	+0.7
PALK	Pallekele	96.20	290	P	P	01 23 22.5	-0.2
PALK				pmax	pmax		
	comp=Z,20nm,0.9s						
PALK	Pallekele	96.20	290	P	P	01 23 22.5	-0.2
PALK				IAmb	IAmb	01 23 24.2	
	comp=Z,20nm,0.9s						
MHTO	MHTO	96.26	316	P	P	01 23 22.6	-0.2
	SNR=13						
MZR	Muzera	96.29	321	*i* P	P	01 23 22.4	-0.6
	SNR=12						
RAYN	Ar Rayn	98.69	328	P	P	01 23 33.4	-0.4
RAYN	Ar Rayn	98.69	328	IAMs_20	IAMs_20	02 16 57.6	
	comp=Z,568nm,19.0s						
TBTG	Tabatinga, AM	99.19	85	*e*P	Pdif	01 23 35.8	-0.3
DOK	Doka	99.98	318	P	Pdif	01 23 38.9	-0.6
WHFO	Wadi Hawf	100.75	318	P	Pdif	01 23 42.5	-0.6
SOCY	Socotra	105.79	316	IAMs_20	IAMs_20	02 16 55.3	
	comp=Z,448nm,20.0s						
TORD	Torodi Ar. Bea	114.55	9	PKP	PKiKP	01 28 34.0	-0.7
	comp=Z,2.9nm,0.8s,baz=346,slow=2.8,SNR=14						
TORD				PKKPbc	PKKPbc	01 39 11.5	+0.5
	comp=Z,0.4nm,0.6s,baz=168,slow=2.5,SNR=2.6						
FURI	Furi	114.58	329	IAMs_20	IAMs_20	02 26 38.1	
	comp=Z,414nm,19.0s						
TIC	Toumodi	119.97	18	*e*PKIKP	PKPdf	01 28 44.3	-0.9
DBIC	Dimbokro	119.98	18	PKP	PKiKP	01 28 45.3	0.0
	comp=Z,21nm,1.2s,baz=4.1,slow=4.1,SNR=6.6						
KIC	Kosan Boka	120.31	18	*e*PKIKP	PKPdf	01 28 44.5	-1.3
	comp=Z,20nm,0.9s						
LIC	Lamto	120.38	18	*e*PKIKP	PKPdf	01 28 44.6	-1.3
	comp=Z,76nm,1.6s						
AQDB	Aquidauana	120.47	84	*e*P	PKiKP	01 28 47.6	+1.7
SDBA	SAO DESIDERIO	120.67	69	*e*P	PKiKP	01 28 47.3	+0.8
LODK	Lodwar	120.78	331	IAMs_20	IAMs_20	02 25 22.1	
	comp=Z,455nm,22.0s						
NBRF	Rio Formoso -	122.98	57	*e*P	PKiKP	01 28 52.8	+1.8
CPUP	Villa Florida	123.80	90	PKP	PKPdf	01 28 51.8	-0.2
	comp=Z,2.5nm,0.7s,baz=144,slow=2.3,SNR=4.5						
KMBO	Kilima Mbogo	124.45	327	PKP	PKiKP	01 28 55.8	+1.4
	comp=Z,11nm,0.9s,baz=1.4,slow=3.3,SNR=20						
KMBO	Kilima Mbogo	124.45	327	*i* P	PKiKP	01 28 54.9	+0.6
	SNR=9.4						
KMBO	Kilima Mbogo	124.45	327	PKIKP	PKiKP	01 28 54.7	+0.4
KMBO	Kilima Mbogo	124.45	327	PKPdf	PKiKP	01 28 54.7	+0.4
MBAR	Mbarara	125.92	335	*d i*PKIKP	PKiKP	01 28 57.8	+0.6
MBAR	Mbarara	125.92	335		PKPdf	01 28 55.8	-0.9
TRQA	Tornquist	129.04	104	*e*P	PKiKP	01 29 03.1	+0.6
LSZ	Lusaka	140.62	332	PKIKP	PKPdf	01 29 21.9	-2.2
LSZ	Lusaka	140.62	332		PKPdf	01 29 21.9	-2.2
QSPA	South Pole Qui	141.89	180	PKPdf	PKPdf	01 29 25.6	+0.9
MATP	Matopo	145.39	329	*e*P	PKPab	01 29 32.9	+0.4
MATP	Matopo	145.39	329	*e*P	PKPab	01 29 32.9	+0.4
MSNA	Messina	146.67	326	*e*P	PKPab	01 29 36.8	-0.4
MSNA	Messina	146.67	326	*e*P	PKPab	01 29 36.8	-0.4
TSUM	Tsumeb	146.68	348		PKPbc	01 29 35.6	-0.6
MOPA	Mopani	147.25	323	*e*P	PKPab	01 29 39.4	0.0
MOPA	Mopani	147.25	323	*e*P	PKPab	01 29 39.4	0.0
MAW	Mawson	150.63	218	PKPbc	PKiKP	01 29 45.3	-0.1
	comp=Z,11nm,1.0s,baz=89,slow=2.7,SNR=18						
MAW	Mawson	150.63	218		PKiKP	01 29 45.2	-0.2
MAW				PKPab	pPKPab	01 29 53.5	-1.1
BOSA	Boshof	154.06	329	PKP	PKPdf	01 29 46.9	+1.0
	comp=Z,7.1nm,1.0s,baz=45,slow=5.3,SNR=5.0						
BOSA				PKPbc	PKiKP	01 29 54.9	+0.8
	comp=Z,12nm,0.7s,baz=36,slow=2.8,SNR=27						
BOSA	Boshof	154.06	329	*e*P	PKPbc	01 29 52.4	-1.6
BOSA	Boshof	154.06	329	*e*P	PKPbc	01 29 52.4	-1.6
BOSA	Boshof	154.06	329	PKPdf	PKPdf	01 29 45.0	-0.9
BOSA				PKPbc	PKiKP	01 29 54.3	+0.3
BOSA				PKPab	PKPab	01 30 05.7	-1.7
VNA3	Neumayer Olymp	158.78	162	PKPdf	PKPdf	01 29 48.7	-1.8
VNA3	Neumayer Olymp	158.78	162	sPKPdf	sPKPdf	01 30 03.0	+8.6
VNA2	Neumayer--Watz	159.47	163	PKPdf	PKPdf	01 29 49.4	-2.0
VNA2	Neumayer--Watz	159.47	163	pPKPdf	pPKPdf	01 29 56.5	+2.3
VNA2	Neumayer--Watz	159.47	163	sPKPdf	sPKPdf	01 30 01.2	+6.0
VNA1	Neumayer--Stat	159.54	162	PKPdf	PKPdf	01 29 49.9	-1.5
VNA1	Neumayer--Stat	159.54	162	sPKPdf	sPKPdf	01 30 00.9	+5.6

NEIC ***06*** *01:19:35.1±1.2, 64°.70N±0°.01×151°.31W±0°.02, h4*^{km}*±10*^{km}

Error ellipse: s-maj=2.1km s-min=1.3km az=151.0

AEIC 06 01:19:35±1.9**, 64°.74N**±0°.01×**151°.35W**±0°.02**, h7**^{km}±7^{km}**,**
ML2.6, ML2.5/18(NEIC)**, Error ellipse: s-maj=2.1km**
s-min=1.3km az=165.0, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLY	Manley	0.39	41	S	Sg	01 19 48.3	+0.5
	baz=219						
MLY	Manley	0.39	41		Pg	01 19 43.0	+0.3
MLY				IAML		01 19 49.4	
	comp=E,280nm,0.2s						
MLY				IAML		01 19 49.5	
	comp=N,433nm,0.4s						
MLY	Manley	0.39	41		Sg	01 19 48.3	+0.5
I21K	Tanana	0.52	329	P	Pb	01 19 46.0	-0.4
	baz=150						
I21K				S	Sb	01 19 53.2	-1.0
	baz=150						
I21K	Tanana	0.52	329		Pb	01 19 46.0	-0.4
I21K					Sb	01 19 53.2	-1.0
I21K	Tanana	0.52	329	IAML		01 19 54.6	
	comp=E,113nm,0.4s						
I21K				IAML		01 19 55.3	
	comp=N,188nm,0.6s						
BPAW	Bear Paw Mtn.	0.66	166	P	Pg	01 19 46.0	-1.6
	baz=346						
BPAW	Bear Paw Mtn.	0.66	166		Pg	01 19 46.0	-1.6
I23K	Minto, Yukon-K	0.94	63	P	Pg	01 19 53.0	0.0
	baz=244						
I23K	Minto, Yukon-K	0.94	63		Pg	01 19 53.0	0.0
I23K	Minto, Yukon-K	0.94	63	IAML		01 20 06.6	
	comp=E,144nm,0.9s						
I23K				IAML		01 20 08.0	
	comp=N,178nm,0.3s						
CHUM	Lake Minchumin	0.96	207	P	Pg	01 19 53.4	+0.1
	baz=26						
CHUM	Lake Minchumin	0.96	207		Pg	01 19 53.4	+0.1
NEA2	Nenana	0.99	97	P	Pg	01 19 53.8	-0.2
	baz=278						
NEA2	Nenana	0.99	97		Pg	01 19 53.8	-0.2
NEA2	Nenana	0.99	97	IAML		01 20 09.8	
	comp=N,109nm,0.5s						
BWN	Browne	0.99	124	Pg	Pn	01 19 55.3	-0.1
BWN					Sb	01 20 07.7	-0.2
BWN				IAML		01 20 14.9	
	comp=N,153nm,0.9s						
H21K	Melozitna Rive	1.11	327		Pn	01 19 57.2	+0.2
H21K				IAML		01 20 12.7	
	comp=E,135nm,0.3s						
H21K				IAML		01 20 12.8	
	comp=N,100nm,0.3s						
KTH	Kantishna Hill	1.20	171		Pg	01 19 57.4	-0.7
KTH	Kantishna Hill	1.20	171		Sb	01 20 13.9	0.0
KTH				IAML		01 20 16.0	
	comp=E,77nm,0.9s						
J20K	Nowinta River	1.34	246	P	Pn	01 20 00.1	0.0
	baz=65						
J20K	Nowinta River	1.34	246		Pn	01 20 00.1	0.0
MDM	Murphy Dome	1.35	79		Pb	01 20 00.5	-0.1
TRF	Thorofare Moun	1.37	160	Pn	Pn	01 19 59.9	-0.9
WRH	Wood River Hil	1.43	99		Pn	01 20 01.5	+0.1
MCK	McKinley	1.46	133	Pn	Pn	01 20 02.1	+0.3
TCOL	CIGO, UAF Yank	1.50	83	P	Pb	01 20 02.8	-0.3

	baz=265						
TCOL	**CIGO, UAF Yank**	**1.50**	**83**		Pb	01 20 02.8	-0.3
COLA	**College**	**1.50**	**83**		Pn	01 20 02.5	+0.2
CCB	**Clear Creek Bu**	**1.53**	**92**		Pn	01 20 02.5	-0.1
IM03		**1.60**	**322**		Pb	01 20 05.0	+0.1
IMAR	**Indian Mountai**	**1.60**	**322**	Pn	Pn	01 20 03.9	+0.1
POKR	**Poker Plat Res**	**1.71**	**75**	Pn	Pb	01 20 06.1	-0.6
H24K	**Noodor Dome**	**1.83**	**51**		Pb	01 20 08.0	-0.8
K20K	**Telida**	**1.83**	**222**	Pn	Pn	01 20 07.8	+0.9
PPLA	**Purkeypile**	**1.89**	**192**	Pn	Pb	01 20 09.6	-0.2
IL31		**1.91**	**87**		Pb	01 20 09.2	-1.0
ILAR	**Eielson Array**	**1.91**	**87**		Pb	01 20 09.2	-1.0
HDA	**Harding Lake**	**1.93**	**98**	Pn	Pn	01 20 07.0	-1.2
COLD	**Coldfoot**	**2.54**	**10**	Pn	Pb	01 20 18.9	-2.0
PRP	**Porcupine Dome**	**2.58**	**70**	Pn	Pn	01 20 17.6	+0.3
SCRK	**Sand Creek**	**3.29**	**100**	Pn	Pn	01 20 25.7	-1.3
KNK	**Knik Glacier**	**3.59**	**157**	Pn	Pn	01 20 30.8	-0.2
BMAR	**Burnt Mountain**	**3.86**	**43**	Pn	Pn	01 20 34.0	-0.7

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*NSSP **06** 01:19:46.8, 38°.45N×46°.77E, h12^{km}, Ms3.2*
*AZER **06** 01:19:47.1±0.1, 38°.46N×46°.68E, h10^{km}, ml3.2/32, Error ellipse: s-maj=2.5km s-min=1.1km az=6.0*
*DDA **06** 01:19:52.0, 38°.72N×46°.70E, h6^{km}±5^{km}, ML2.3*
ISC 06 01:19:49.5±1.2**, 38°.51N**±0°.03×**46°.75E**±0°.02**, h7**^{km}±11^{km}**, n44, σ1^{s}.27**/82**, 2D, Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ORD	**Ordubad**	**0.72**	**306**	P	**Pg**	**01 20 02.7**	**-0.8**
	SNR=126						
ORD				S	**Sg**	**01 20 13.0**	**+0.1**
QRD	**Qoradiz**	**1.05**	**25**	P	**Pb**	**01 20 09.5**	**-0.6**
	SNR=47						
QRD				S	**Sn**	**01 20 25.9**	**+0.2**
NAX	**Nakhchivan**	**1.18**	**305**	P	**Pb**	**01 20 11.4**	**-0.9**
	SNR=77						
NAX				S	**Sn**	**01 20 28.2**	**-0.8**
YRD	**Yardimli**	**1.24**	**70**	P	**Pn**	**01 20 11.7**	**-1.8**
	SNR=29						
YRD				S	**Sb**	**01 20 28.9**	**-0.7**
LRK	**Lerik**	**1.26**	**83**	P	**Pn**	**01 20 11.6**	**-2.1**
	SNR=28						
LRK				S	**Sb**	**01 20 29.1**	**-1.0**
SBZ	**Shahbuz**	**1.29**	**314**	P	**Pn**	**01 20 13.0**	**-1.1**
	SNR=75						
SBZ				S	**Sg**	**01 20 31.0**	**+0.1**
BLQ	**Beylaqan**	**1.37**	**27**	P	**Pb**	**01 20 15.2**	**-0.2**
	SNR=95						
BLQ				S	**Sg**	**01 20 34.9**	**+1.4**
GLBA	**Clilabad**	**1.48**	**60**	P	**Pb**	**01 20 17.1**	**-0.3**
	SNR=17						
GLBA				S	**Sg**	**01 20 38.8**	**+1.7**
ASTR	**Astara**	**1.60**	**87**	P	**Pn**	**01 20 18.1**	**-0.2**
	SNR=29						
ASTR				S	**Sb**	**01 20 40.6**	**+0.7**
LKRN	**Lenkeran, Azer**	**1.60**	**82**	P	**Pn**	**01 20 18.1**	**-0.2**
	SNR=24						
LKRN				S	**Sb**	**01 20 40.4**	**+0.4**
AGDM	**Agdam**	**1.62**	**10**	P	**Pb**	**01 20 19.3**	**-0.5**
	SNR=52						
AGDM				S	**Sg**	**01 20 42.9**	**+1.1**
BRDA	**Brd**	**1.79**	**11**	P	**Pb**	**01 20 22.2**	**-0.4**
	SNR=9.6						
BRDA				S	**Sg**	**01 20 49.9**	**+3.0**
SAAT	**Saatly**	**1.88**	**43**	S	**Sg**	**01 20 49.3**	**-0.6**
HYR	**Heyderabad**	**1.91**	**310**	P	**Pb**	**01 20 23.4**	**-1.3**
	SNR=28						
HYR				S	**Sb**	**01 20 49.3**	**+0.5**
ZRD	**Zardab**	**1.91**	**22**	P	**Pb**	**01 20 24.7**	**-0.1**
	SNR=61						
ZRD				S	**Sg**	**01 20 52.8**	**+1.8**
YOVA	**Hakkari_Yksek**	**2.15**	**245**	*i* P	**Pb**	**01 20 28.5**	**-0.3**
GANJ	**Ganja**	**2.16**	**351**	P	**Pb**	**01 20 27.4**	**-1.6**
	SNR=20						
GANJ				S	**Sb**	**01 20 56.8**	**+0.7**
OZAP	**Van, Ozalp-Mer**	**2.16**	**275**	*i* P	**Pn**	**01 20 27.1**	**+0.9**
OZAP				*i* S	**Sg**	**01 20 59.4**	**+0.3**
KDMR	**Kurdemir**	**2.17**	**30**	P	**Pn**	**01 20 27.1**	**+1.0**
	SNR=10						
KDMR				S	**Sg**	**01 20 58.8**	**-0.5**
GNI	**Garni**	**2.26**	**317**	*i* P	**Pb**	**01 20 30.6**	**-0.1**
GNI				*i* S	**Sg**	**01 21 02.5**	**+0.3**
ALIB	**Äli-Bayra**	**2.28**	**50**	P	**Pn**	**01 20 29.1**	**+1.6**
ALIB				S	**Sb**	**01 21 00.4**	**+1.2**
MNGR	**Mingechevir, A**	**2.28**	**6**	P	**Pb**	**01 20 30.9**	**0.0**
MNGR				S	**Sg**	**01 21 02.1**	**-0.7**
CLDR	**Caldiran**	**2.30**	**287**	*i* P	**Pb**	**01 20 31.8**	**+0.3**
CLDR				*i* S	**Sg**	**01 21 05.0**	**+1.5**
CLDR				IAML		01 21 13.0	
	comp=N,16nm,1.0s						
CLDR				IAML		01 21 16.0	
	comp=E,25nm,0.8s						
GDB	**GEDABAY**	**2.34**	**341**	P	**Pb**	**01 20 31.6**	**-0.6**
	SNR=14						
GDB				S	**Sg**	**01 21 03.2**	**-1.5**
IGDI	**IGDIR**	**2.48**	**304**	*i* P	**Pb**	**01 20 32.8**	**-1.7**
IGDI				*i* S	**Sb**	**01 21 06.0**	**+0.7**
IGDI				IAML		01 21 12.0	
	comp=E,15nm,0.4s						
IGDI				IAML		01 21 14.0	
	comp=N,14nm,0.7s						
VMUR	**Van-Muradiye**	**2.53**	**282**	*i* P	**Pb**	**01 20 34.9**	**-0.4**
VMUR				*i* S	**Sg**	**01 21 08.9**	**-1.9**
VMUR				IAML		01 21 16.0	
	comp=E,17nm,0.9s						
IML	**Ismayilli**	**2.54**	**25**	P	**Pn**	**01 20 33.0**	**+1.8**
	SNR=43						
IML				S	**Sb**	**01 21 07.0**	**+0.2**
QBL	**Gabala**	**2.58**	**19**	P	**Pn**	**01 20 33.3**	**+1.6**
	SNR=8.0						
QBL				S	**Sb**	**01 21 08.4**	**+0.4**
HAKT	**HAKKARI**	**2.58**	**249**	*i* P	**Pg**	**01 20 39.5**	**+0.6**
GBS	**Qobustan**	**2.64**	**39**	P	**Pn**	**01 20 34.6**	**+2.0**
GBS				S	**Sb**	**01 21 07.8**	**-2.1**
PQL	**Pirkuli**	**2.69**	**31**	P	**Pn**	**01 20 35.3**	**+1.9**
	SNR=7.2						
PQL				S	**Sb**	**01 21 11.5**	**+0.2**
SEKA	**Sheki**	**2.72**	**7**	P	**Pn**	**01 20 35.2**	**+1.5**
	SNR=12						
SEKA				S	**Sb**	**01 21 11.7**	**-0.5**
QZX	**Qazax, Azerbai**	**2.76**	**338**	P	**Pb**	**01 20 38.5**	**-0.7**
	SNR=7.4						
QZX				S	**Sb**	**01 21 13.2**	**-0.1**
CUKT	**Cukurca**	**2.78**	**244**	*i* P	**Pb**	**01 20 40.8**	**+1.1**
CUKT				IAML		01 21 34.0	
	comp=E,19nm,0.7s						
CUKT				IAML		01 21 36.0	
	comp=N,17nm,1.0s						
XNQ	**Khinaliq**	**2.87**	**21**	P	**Pn**	**01 20 36.7**	**+0.8**
	SNR=5.7						
XNQ				S	**Sb**	**01 21 15.5**	**-1.1**
ATGJ	**Altiaghaj**	**2.90**	**35**	P	**Pb**	**01 20 39.2**	**-2.3**
ATGJ				S	**Sb**	**01 21 17.7**	**+0.5**
KOTA	**Agri, Merkez-K**	**3.04**	**296**	*i* P	**Pb**	**01 20 43.5**	**-0.6**
SIZA	**Siyzn**	**3.06**	**32**	P	**Pn**	**01 20 40.3**	**+2.0**
SIZA				S	**Sb**	**01 21 21.5**	**-0.3**
STE	**Stepanavan**	**3.09**	**324**	⇓ *i* P	**Pb**	**01 20 45.4**	**+0.5**
STE				⇓S	**Sg**	**01 21 28.2**	**-0.6**
ZKTA	**Zakatala**	**3.13**	**358**	P	**Pn**	**01 20 41.6**	**+2.3**
ZKTA				S	**Sb**	**01 21 22.9**	**-1.0**
QUBA	**Quba, Azerbaij**	**3.15**	**25**	P	**Pn**	**01 20 42.2**	**+2.7**
QUBA				S	**Sb**	**01 21 22.4**	**-1.9**
QSAR	**Qusar**	**3.22**	**21**	P	**Pn**	**01 20 42.9**	**+2.3**
	SNR=11						
QSAR				S	**Sb**	**01 21 24.0**	**-2.6**
DIGO	**Kars**	**3.23**	**307**	*i* P	**Pg**	**01 20 52.7**	**+1.2**
EAK	**Akyaka**	**3.26**	**313**	*i* P	**Pg**	**01 20 50.2**	**-1.8**
EAK				*i* S	**Sg**	**01 21 33.4**	**-0.9**

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*NEIC **06** 01:20:12.9±2.0, 64°.75N±0°.01×151°.29W±0°.04, h4^{km}±11^{km}, Error ellipse: s-maj=3.1km s-min=1.4km az=57.0*
AEIC 06 01:20:12±2.2**, 64°.76N**±0°.02×**151°.31W**±0°.08**, h2**^{km}±7^{km}**, ML3.7**/30**, Error ellipse: s-maj=5.9km s-min=1.9km az=119.0, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLY	**Manley**	**0.37**	**41**	P	Pb	01 20 20.4	-0.9
	baz=205						
MLY				S	Sg	01 20 25.1	+1.2
	baz=205						
MLY	**Manley**	**0.37**	**41**		Pb	01 20 20.4	-0.9
MLY					Sg	01 20 25.1	+1.3
I21K	**Tanana**	**0.51**	**326**	Pg	Pb	01 20 24.0	+0.2
BPAW	**Bear Paw Mtn.**	**0.67**	**168**	Pg	Pg	01 20 24.1	-0.8
I23K	**Minto, Yukon-K**	**0.92**	**64**	P	Pg	01 20 30.1	+0.5
	baz=240						
I23K	**Minto, Yukon-K**	**0.92**	**64**		Pg	01 20 30.1	+0.5
NEA2	**Nenana**	**0.98**	**99**	P	Pb	01 20 31.7	0.0
	baz=279						
NEA2	**Nenana**	**0.98**	**99**		Pb	01 20 31.6	0.0
CHUM	**Lake Minchumin**	**0.98**	**207**	P	Pb	01 20 31.7	0.0
	baz=32						
CHUM	**Lake Minchumin**	**0.98**	**207**		Pb	01 20 31.7	0.0
BWN	**Browne**	**0.99**	**125**	Pg	Pn	01 20 32.7	-0.2
H21K	**Melozitna Rive**	**1.10**	**326**	Pg	Pb	01 20 33.5	-0.3
KTH	**Kantishna Hill**	**1.22**	**172**	Pg	Pb	01 20 35.7	-0.1
H23K	**Yukon River**	**1.31**	**34**	P	Pg	01 20 36.8	-0.2
	baz=211						
H23K	**Yukon River**	**1.31**	**34**		Pg	01 20 36.8	-0.2
MDM	**Murphy Dome**	**1.33**	**80**	Pg	Pn	01 20 37.7	0.0
J20K	**Nowinta River**	**1.36**	**246**	Pn	Pg	01 20 37.7	-0.3
CAST	**Castle Rocks**	**1.38**	**195**	P	Pb	01 20 38.9	+0.3
	baz=18						
CAST	**Castle Rocks**	**1.38**	**195**		Pb	01 20 38.6	0.0
TRF	**Thorofare Moun**	**1.39**	**161**	P	Pb	01 20 38.7	0.0
	baz=345						
TRF	**Thorofare Moun**	**1.39**	**161**		Pb	01 20 38.7	0.0
PS07	**TAPS Pump Stn7**	**1.40**	**65**		Pb	01 20 39.2	+0.4
WRH	**Wood River Hil**	**1.42**	**100**		Pb	01 20 39.2	0.0
MCK	**McKinley**	**1.46**	**134**	Pn	Pb	01 20 39.8	-0.1
TCOL	**CIGO, UAF Yank**	**1.48**	**84**	P	Pg	01 20 40.4	0.0
	baz=265						
TCOL	**CIGO, UAF Yank**	**1.48**	**84**		Pg	01 20 40.4	0.0
COLA	**College**	**1.48**	**84**		Pn	01 20 39.9	+0.2
CCB	**Clear Creek Bu**	**1.51**	**93**	Pn	Pg	01 20 41.0	+0.2
IM03		**1.60**	**321**		Pg	01 20 44.5	+1.8
IMAR	**Indian Mountai**	**1.60**	**321**	Pn	Pg	01 20 44.1	+1.4
POKR	**Poker Plat Res**	**1.69**	**76**	Pn	Pb	01 20 43.2	-0.6
RND	**Reindeer**	**1.73**	**140**		Pg	01 20 45.5	+0.3
H24K	**Noodor Dome**	**1.81**	**51**	P	Pg	01 20 46.4	-0.1
	baz=232						
H24K	**Noodor Dome**	**1.81**	**51**		Pg	01 20 46.4	-0.1
K20K	**Telida**	**1.86**	**222**	Pn	Pb	01 20 46.5	-0.1
IL31		**1.90**	**88**	Pn	Pb	01 20 46.4	-0.9
ILAR	**Eielson Array**	**1.90**	**88**	Pn	Pb	01 20 46.9	-0.4
PPLA	**Purkeypile**	**1.91**	**192**	Pn	Pb	01 20 47.6	0.0
HDA	**Harding Lake**	**1.91**	**98**	Pn	Pb	01 20 47.4	-0.3
CUT	**Chulitna**	**2.41**	**168**		Pn	01 20 53.9	+1.5
COLD	**Coldfoot**	**2.52**	**10**	Pn	Pn	01 20 52.9	-1.1
PRP	**Porcupine Dome**	**2.56**	**70**	Pn	Pn	01 20 54.2	-0.5
L19K	**White Mountain**	**3.03**	**213**	Pn	Pn	01 20 58.5	-2.6
PAX	**Paxson**	**3.15**	**122**	Pn	Pn	01 21 01.9	-0.8
M19K	**Big River Lodg**	**3.18**	**207**	Pn	Pn	01 21 02.1	-1.0
GHO	**Glory Hole Cre**	**3.18**	**159**	Pn	Pn	01 21 01.6	-1.5
SML	**Sawmill**	**3.25**	**154**	Pn	Pn	01 21 03.1	-0.9
PMR	**Palmer**	**3.33**	**162**	Pn	Pn	01 21 04.0	-1.0
SCM	**Sheep Creek Mo**	**3.44**	**147**		Pn	01 21 06.1	-0.5
KNK	**Knik Glacier**	**3.60**	**158**	Pn	Pn	01 21 08.8	0.0
SPU	**Mount Spurr**	**3.60**	**186**	Pn	Pn	01 21 08.9	0.0
RC01	**Rabbit Creek A**	**3.75**	**168**	Pn	Pn	01 21 10.6	-0.3
MENT	**Mentasta**	**3.82**	**115**	Pn	Pn	01 21 12.5	+0.6
TOLK	**Toolik Lake Re**	**3.96**	**9**	Pn	Pn	01 21 14.9	+1.0
KLU	**Klutina**	**4.09**	**141**	Pn	Pn	01 21 16.0	+0.5
PWL	**Port Wells**	**4.14**	**159**	Pn	Pn	01 21 17.1	+0.8
GLI	**Glacier Island**	**4.34**	**152**	Pn	Pn	01 21 20.2	+1.2
M26K	**Nabesna, AK**	**4.40**	**119**	Pn	Pn	01 21 19.6	-0.3
L27K	**Beaver Creek,**	**4.52**	**108**	Pn	Pn	01 21 19.8	-1.7
FID	**Port Fidalgo**	**4.59**	**149**	Pn	Pn	01 21 22.9	+0.5
M27K	**Edge Creek, AK**	**4.85**	**115**	Pn	Pn	01 21 24.7	-1.5
DAWY	**Dawson**	**5.21**	**92**	Pn	Pn	01 21 32.0	+1.0
INK	**Inuvik**	**7.93**	**55**	Pn	Pn	01 22 07.0	-1.1

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*NEIC **06** 01:20:23.7±1.8, 64°.73N±0°.02×151°.25W±0°.07, h10^{km}±11^{km}, Error ellipse: s-maj=5.0km s-min=1.6km az=125.0*
*AEIC **06** 01:20:23±1.6, 64°.73N±0°.02×151°.27W±0°.09, h5^{km}±7^{km}, ML3.5, ML3.8/111(NEIC), Error ellipse: s-maj=5.6km s-min=3.4km az=93.0*
*IDC **06** 01:20:24.9±2.7, 64°.60N×151°.09W, h0^{km}, mb3.7/2, mb1 4.2/2, mb1mx3.3/45, mbtmp3.7/2, Error ellipse: s-maj=30.5km s-min=19.5km az=144.0*
ISC 06 01:20:23.5±0.8**, 64°.73N**±0°.03×**151°.26W**±0°.03**, h10**^{km}**, n79, σ1^{s}.02**/78**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLY	**Manley**	**0.37**	**36**	Pg	**Pg**	**01 20 30.4**	**-0.5**
MLY				IAML		01 20 36.5	
	comp=N,10µm,0.4s						
MLY				IAML		01 20 36.5	
	comp=E,8µm,0.4s						
I21K	**Tanana**	**0.55**	**326**	Pg	**Pg**	**01 20 34.5**	**+0.4**
I21K				IAML		01 20 42.4	
	comp=N,6µm,0.6s						
BPAW	**Bear Paw Mtn.**	**0.65**	**169**	Pg	**Pg**	**01 20 34.5**	**-1.5**
BPAW				Sg	**Sb**	**01 20 45.5**	**-0.4**
I23K	**Minto, Yukon-K**	**0.91**	**62**	Pg	**Pb**	**01 20 41.1**	**-0.2**
I23K	**Minto, Yukon-K**	**0.91**	**62**	S	Sg	01 20 41.1	-12
	baz=240						
NEA2	**Nenana**	**0.95**	**97**	Pg	**Pb**	**01 20 42.2**	**+0.1**
NEA2				IAML		01 20 55.8	
	comp=E,3µm,0.6s						
NEA2				IAML		01 20 55.9	
	comp=N,3µm,0.4s						
NEA2	**Nenana**	**0.95**	**97**	S	Sg	01 20 42.5	-12
	baz=279						
NEA2	**Nenana**	**0.95**	**97**		Sg	01 20 42.5	-12
BWN	**Browne**	**0.96**	**125**	Pg	**Pn**	**01 20 42.6**	**-0.4**
BWN				IAML		01 21 04.2	
	comp=N,3µm,0.7s						
H21K	**Melozitna Rive**	**1.14**	**326**	Pg	**Pn**	**01 20 45.5**	**0.0**
H21K				IAML		01 21 00.3	
	comp=N,3µm,0.3s						
KTH	**Kantishna Hill**	**1.19**	**173**	Pg	**Pb**	**01 20 45.9**	**-0.4**
KTH				IAML		01 21 02.7	
	comp=N,2µm,0.6s						
KTH				IAML		01 21 03.8	
	comp=E,2µm,0.8s						
H23K	**Yukon River**	**1.31**	**32**	Pn	**Pn**	**01 20 46.8**	**-1.1**
MDM	**Murphy Dome**	**1.31**	**79**	Pn	**Pg**	**01 20 48.7**	**+0.1**
MDM				IAML		01 21 06.3	
	comp=N,2µm,0.6s						
MDM				IAML		01 21 06.6	
	comp=E,2µm,0.5s						
TRF	**Thorofare Moun**	**1.36**	**161**	Pn	**Pn**	**01 20 48.0**	**-0.6**
TRF				IAML		01 21 07.8	
	comp=E,1µm,0.8s						
CAST	**Castle Rocks**	**1.37**	**196**	Pn	**Pb**	**01 20 49.2**	**+0.1**
CAST				IAML		01 21 07.7	
	comp=N,2µm,0.6s						
J20K	**Nowinta River**	**1.37**	**247**	Pn	**Pn**	**01 20 48.2**	**-0.4**
WRH	**Wood River Hil**	**1.39**	**99**	Pn	**Pn**	**01 20 48.9**	**0.0**
WRH				IAML		01 21 07.6	
	comp=N,966nm,0.9s						
WRH				IAML		01 21 07.8	
	comp=E,814nm,0.6s						
MCK	**McKinley**	**1.43**	**134**	Pn	**Pn**	**01 20 49.3**	**-0.2**
MCK				IAML		01 21 09.0	
	comp=N,1µm,0.7s						
TCOL	**CIGO, UAF Yank**	**1.46**	**83**	Pn	**Pb**	**01 20 50.7**	**0.0**
COLA	**College**	**1.46**	**83**	Pn	**Pb**	**01 20 50.4**	**-0.4**
CCB	**Clear Creek Bu**	**1.49**	**92**	Pn	**Pb**	**01 20 50.5**	**-0.7**
CCB				IAML		01 21 10.3	
	comp=N,1µm,0.3s						
CCB				IAML		01 21 11.6	
	comp=E,927nm,0.5s						
IMAR	**Indian Mountai**	**1.63**	**321**	Pn	**Pb**	**01 20 53.3**	**-0.4**
POKR	**Poker Plat Res**	**1.67**	**75**	Pn	**Pb**	**01 20 53.6**	**-0.7**
POKR				IAML		01 21 18.2	
	comp=N,1µm,0.5s						
POKR				IAML		01 21 19.5	
	comp=E,1µm,0.3s						
RND	**Reindeer**	**1.70**	**140**	Pn	**Pn**	**01 20 53.8**	**+0.6**
RND				IAML		01 21 17.2	
	comp=N,467nm,0.8s						
RND				IAML		01 21 18.9	
	comp=E,332nm,1.1s						
H24K	**Noodor Dome**	**1.80**	**50**	Pn	**Pb**	**01 20 55.7**	**-0.9**
H24K				IAML		01 21 24.1	
	comp=E,1µm,0.5s						
H24K				IAML		01 21 29.9	
	comp=N,842nm,0.7s						
K20K	**Telida**	**1.85**	**223**	Pn	**Pb**	**01 20 56.7**	**-0.7**
K20K				IAML		01 21 28.9	
	comp=E,673nm,0.7s						
IL31		**1.87**	**87**	Pn	**Pn**	**01 20 56.4**	**+0.8**
ILAR	**Eielson Array**	**1.87**	**87**	Pg	**Pb**	**01 20 58.2**	**+0.4**
	comp=E,88nm,0.3s,baz=256,slow=17,SNR=15						
ILAR				Lg	Lg	01 21 22.3	
	comp=E,183nm,0.3s,baz=266,slow=28,SNR=13						
ILAR	**Eielson Array**	**1.87**	**87**	Pn	**Pb**	**01 20 57.1**	**-0.6**
HDA	**Harding Lake**	**1.89**	**98**	Pn	**Pn**	**01 20 56.3**	**+0.5**
HDA				IAML		01 21 23.3	
	comp=N,876nm,0.7s						
HDA				IAML		01 21 25.5	
	comp=E,1µm,0.3s						
PPLA	**Purkeypile**	**1.89**	**193**	Pn	**Pn**	**01 20 56.7**	**+0.7**
CUT	**Chulitna**	**2.38**	**169**	Pn	**Pn**	**01 21 03.4**	**+0.9**
COLD	**Coldfoot**	**2.54**	**9**	Pn	**Pn**	**01 21 05.9**	**+1.1**
PRP	**Porcupine Dome**	**2.55**	**69**	Pn	**Pn**	**01 21 05.1**	**+0.2**
PRP				IAML		01 21 44.3	
	comp=E,402nm,0.6s						
PRP				IAML		01 21 44.9	
	comp=N,560nm,0.7s						
SKT	**Skwentna**	**2.77**	**183**	Pn	**Pn**	**01 21 08.7**	**+0.9**
SKT				IAML		01 21 52.7	
	comp=N,319nm,0.8s						
SKT				IAML		01 21 56.2	
	comp=E,465nm,0.8s						
TTA	**Tatalina**	**2.78**	**232**	Pn	**Pn**	**01 21 08.1**	**0.0**
TTA				IAML		01 21 57.2	
	comp=N,385nm,1.0s						
TTA				IAML		01 22 01.0	
	comp=E,361nm,0.7s						
RIDG	**Independent Ri**	**2.97**	**107**	Pn	**Pn**	**01 21 11.1**	**+0.4**
RIDG				IAML		01 21 58.9	
	comp=N,304nm,0.7s						
RIDG				IAML		01 22 06.5	
	comp=E,261nm,0.7s						
L19K	**White Mountain**	**3.03**	**214**	Pn	**Pn**	**01 21 09.1**	**-2.3**
L19K				IAML		01 22 06.2	
	comp=E,294nm,0.9s						
L19K				IAML		01 22 09.8	
	comp=N,386nm,0.9s						
FYU	**Fort Yukon**	**3.10**	**51**	Pn	**Pn**	**01 21 12.2**	**-0.2**
FYU				IAML		01 22 04.2	
	comp=E,287nm,0.5s						
PAX	**Paxson**	**3.11**	**122**	Pn	**Pn**	**01 21 11.7**	**-1.0**
GHO	**Glory Hole Cre**	**3.15**	**159**	Pn	**Pn**	**01 21 12.2**	**-1.0**
GHO				IAML		01 22 04.1	
	comp=E,186nm,0.6s						
M19K	**Big River Lodg**	**3.17**	**208**	Pn	**Pn**	**01 21 13.0**	**-0.5**
M19K				IAML		01 22 11.8	
	comp=E,190nm,0.7s						
SML	**Sawmill**	**3.22**	**154**	Pn	**Pn**	**01 21 13.9**	**-0.2**
SCRK	**Sand Creek**	**3.25**	**100**	Pn	**Pn**	**01 21 13.1**	**-1.5**
SUA	**Susitna One**	**3.29**	**176**		**Pn**	**01 21 14.3**	**-0.8**
SUA				IAML		01 22 08.8	
	comp=E,279nm,1.0s						
PMR	**Palmer**	**3.30**	**162**	Pn	**Pn**	**01 21 15.0**	**-0.1**
DOT	**Dot Lake**	**3.33**	**106**	Pn	**Pn**	**01 21 14.7**	**-0.9**
SCM	**Sheep Creek Mo**	**3.41**	**147**	Pn	**Pn**	**01 21 16.0**	**-0.7**
SCM				IAML		01 22 21.2	
	comp=N,184nm,1.7s						
M24K	**Tolsona, Glenn**	**3.49**	**137**	Pn	**Pn**	**01 21 18.2**	**+0.4**
M24K				IAML		01 22 27.4	
	comp=N,217nm,1.1s						
M24K				IAML		01 22 47.9	
	comp=E,233nm,1.9s						
KNK	**Knik Glacier**	**3.57**	**158**	Pn	**Pn**	**01 21 19.5**	**+0.6**
SPU	**Mount Spurr**	**3.58**	**186**	Pn	**Pn**	**01 21 19.2**	**+0.1**
MENT	**Mentasta**	**3.79**	**115**	Pn	**Pn**	**01 21 22.4**	**+0.5**
MENT				IAML		01 22 25.0	
	comp=E,182nm,0.7s						
MENT				IAML		01 22 27.8	
	comp=N,151nm,0.9s						
BMAR	**Burnt Mountain**	**3.84**	**42**	Pn	**Pn**	**01 21 22.3**	**-0.3**
L26K	**Log Cabin Wild**	**3.89**	**113**	Pn	**Pn**	**01 21 22.8**	**-0.6**
TOLK	**Toolik Lake Re**	**3.98**	**9**	Pn	**Pn**	**01 21 24.1**	**-0.5**
TOLK				IAML		01 22 32.1	
	comp=N,132nm,0.8s						
TOLK				IAML		01 22 36.0	
	comp=E,137nm,1.2s						
KLU	**Klutina**	**4.05**	**141**	Pn	**Pn**	**01 21 25.7**	**+0.1**
KLU				IAML		01 22 32.9	
	comp=E,70nm,0.9s						
KLU				IAML		01 22 33.9	
	comp=N,76nm,1.3s						
PWL	**Port Wells**	**4.11**	**160**		**Pn**	**01 21 28.4**	**+2.1**
PWL	**Port Wells**	**4.11**	**160**		**Pn**	**01 21 28.4**	**+2.1**
PWL				IAML		01 22 33.8	
	comp=N,109nm,1.8s						
PWL				IAML		01 22 58.4	
	comp=E,90nm,3.3s						
SVW2	**Sparrevohn**	**4.15**	**210**		**Pn**	**01 21 26.6**	**-0.2**
SVW2	**Sparrevohn**	**4.15**	**210**		**Pn**	**01 21 26.6**	**-0.2**
SVW2				IAML		01 22 41.2	
	comp=N,151nm,0.6s						
N19K	**Bonanza Creek**	**4.20**	**202**		**Pn**	**01 21 30.4**	**+2.8**
N19K	**Bonanza Creek**	**4.20**	**202**		**Pn**	**01 21 27.7**	**0.0**
N19K				IAML		01 22 39.4	
	comp=N,163nm,1.0s						
N19K				IAML		01 22 39.9	
	comp=E,192nm,1.1s						
GLI	**Glacier Island**	**4.31**	**152**	Pn	**Pn**	**01 21 29.8**	**+0.7**
GLI				IAML		01 22 42.9	
	comp=E,80nm,2.2s						
GLI				IAML		01 23 07.5	
	comp=N,82nm,3.7s						
EGAK	**Eagle**	**4.33**	**85**	Pn	**Pn**	**01 21 29.3**	**0.0**
RSO	**Redoubt South**	**4.34**	**190**	Pn	**Pn**	**01 21 29.6**	**-0.1**
N25K	**Chitina, Valde**	**4.35**	**133**	Pn	**Pn**	**01 21 30.6**	**+0.9**
M26K	**Nabesna, AK**	**4.37**	**119**	Pn	**Pn**	**01 21 30.4**	**+0.4**
M26K				IAML		01 22 42.6	
	comp=E,80nm,0.7s						
DIV	**Divide**	**4.40**	**143**	Pn	**Pn**	**01 21 30.4**	**+0.1**
L27K	**Beaver Creek,**	**4.49**	**108**	Pn	**Pn**	**01 21 30.7**	**-0.8**
L27K				IAML		01 22 53.6	
	comp=N,74nm,1.2s						
BCAR	**Beaver Creek A**	**4.51**	**107**		**Pn**	**01 21 29.3**	**-2.4**
FID	**Port Fidalgo**	**4.56**	**149**	Pn	**Pn**	**01 21 31.5**	**-1.0**
FID				IAML		01 22 04.1	
	comp=N,83nm,3.1s						
FID				IAML		01 22 47.5	
	comp=E,96nm,1.9s						
M27K	**Edge Creek, AK**	**4.82**	**115**	Pn	**Pn**	**01 21 36.6**	**+0.4**
M27K				IAML		01 23 01.5	
	comp=E,66nm,1.1s						
M27K				IAML		01 23 04.9	
	comp=N,76nm,1.0s						
BMRM	**Bremner River**	**4.85**	**138**	Pn	**Pn**	**01 21 36.9**	**+0.4**
BMRM				IAML		01 23 04.1	
	comp=N,73nm,1.8s						
BMRM				IAML		01 23 16.8	
	comp=E,54nm,2.4s						
EYAK	**Cordova Ski Ar**	**4.91**	**146**	Pn	**Pn**	**01 21 38.7**	**+1.5**
DAWY	**Dawson**	**5.19**	**92**	Pn	**Pn**	**01 21 42.2**	**+1.0**
O18K	**Koktuh Hills**	**5.23**	**202**	Pn	**Pn**	**01 21 42.3**	**+0.6**
O18K				IAML		01 22 58.8	
	comp=N,73nm,3.0s						
O18K				IAML		01 23 19.1	
	comp=E,71nm,1.1s						
INK	**Inuvik**	**7.92**	**55**	Pn	**Pn**	**01 22 18.0**	**-0.5**
	comp=E,0.3nm,0.3s,baz=254,slow=15,SNR=4.0						
INK				Sn	**Sn**	**01 23 44.1**	**-3.9**
	comp=E,1.3nm,0.3s,baz=148,slow=32,SNR=7.4						
NVAR	**Mina Array Bea**	**32.65**	**128**	P	**P**	**01 26 57.6**	**+2.0**
	comp=E,0.7nm,0.6s,baz=314,slow=6.7,SNR=6.8						
TXAR	**Lajitas Array**	**46.13**	**117**	P	**P**	**01 28 49.4**	**+1.5**
	comp=E,0.5nm,0.6s,baz=327,slow=6.7,SNR=5.3						

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*IDC **06** 01:31:10.7±0.6, 52°.31N×169°.50W, h0^{km}, mb4.4/28, mb1 4.6/30, mb1mx4.4/51, mbtmp4.4/30, ML4.2/2, MS4.1/17, Ms1 4.1/17, ms1mx3.9/39, Error ellipse: s-maj=18.9km s-min=11.3km az=171.0*
*MOS **06** 01:31:12.3±0.9, 52°.23N×169°.46W, h22^{km}, mb4.9/51, Error ellipse: s-maj=9.1km s-min=5.4km az=97.1*
*BJI **06** 01:31:13.0±0.0, 52°.30N×169°.40W, h40^{km}, mB5.1/22, mb4.9/44, Ms4.8/14, Ms7 4.7/14*
*NEIC **06** 01:31:14.5±1.5, 52°.28N±0°.06×169°.50W±0°.02, h22^{km}±4^{km}, mb4.7/186, ML4.3(AEIC), Error ellipse: s-maj=8.8km s-min=1.7km az=175.0*

AEIC ***06*** *01:31:14±1.8, 52.°19N±0.°06×169.°35W±0.°09, h22km±4km, Error ellipse: s-maj=10.0km s-min=6.9km az=147.0*

GCMT ***06*** *01:31:16.5±0.3, 52.°11N±0.°02×169.°37W±0.°04, h24km, MW5.0/94, Moment Tensor Solution. s51,c61; s94,c144; Duration: 0 Moment tensor: Scale 10¹⁶Nm; M_{rr}3.72±.20; $M_{\theta\theta}$-2.95±.13; $M_{\phi\phi}$-0.76±.12; $M_{r\theta}$1.84±.17; $M_{\theta\phi}$-1.15±.06; $M_{\phi r}$0.32±.17; Best double couple: $M_0$4.03700×10¹⁶ NP1:ϕ_s242.00000°, δ32.00000°, λ81.00000°. NP2: ϕ_s73.00000°, δ59.00000°, λ96.00000°. Principal axes: T 4.1940, Plg76.0000°, Azm359.0000°; N -0.3080, Plg5.0000°, Azm250.0000°; P -3.8810, Plg14.0000°, Azm158.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 06 01:31:15.1±0.4**, 52.°21N**±0.°06×**169.°44W**±0.°04**, h30**km**,** **n471, σ0.s96**/436**, mb4.7**/160**, MS4.1**/21**, 65C-13D, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	Nikolski High	0.84	25		Pn	01 31 30.1	-0.8
NIKH					Sb	01 31 41.4	-0.8
OKSP	Okmok Steeple	1.25	33		Pn	01 31 35.9	-0.8
OKTU	Okmok Mt. Tuli	1.45	35		Pn	01 31 39.2	-0.1
OKNC	Okmok New Cone	1.48	32		Pn	01 31 40.0	+0.3
OKFG	Magazine Ridge	1.52	37		Pn	01 31 40.0	-0.2
OKFG					Sn	01 32 00.2	+1.3
MAPS	Pakushin South	2.20	42		Pn	01 31 49.6	+0.1
MSW	Makushin Switc	2.34	42		Pn	01 31 51.9	+0.4
MNAT	Makushin Natee	2.36	44		Pn	01 31 52.4	+0.6
UNV	Unalaska Valle	2.41	46		Sn	01 32 22.2	+1.3
UNV	Unalaska Valle	2.41	46	Pn	Pn	01 31 52.3	-0.1
AKRB	Akutan Reef Bi	2.79	45		Pn	01 31 59.0	+1.2
KOFP	Korovin Flat P	2.87	273		Pn	01 32 00.3	+1.5
AKGG	Akutan Green G	2.87	45		Pn	01 31 59.9	+1.1
AKUT	Akutan	2.93	47		Pn	01 31 59.3	-0.3
ATKA	Atka Island	2.93	272	Pn	Pn	01 31 59.2	-0.3
KOKL	Mount Kliuchef	2.93	274		Pn	01 32 02.1	+2.5
AKSA	Akutan Strait	2.96	48		Pn	01 32 01.7	+1.6
GSTR	Great Sitkin T	4.08	271	Pn	Pn	01 32 14.0	-1.4
GSMY	Great Sitkin M	4.08	270		Pn	01 32 16.9	+1.4
GSTD	Great Sitkin T	4.14	271		Pn	01 32 17.2	+1.0
FALS	False Pass	4.46	51		Pn	01 32 21.9	+1.2
ADK	Adak	4.49	269	P	Pn	01 32 20.7	-0.3
ADK	Adak	4.49	269		Pn	01 32 20.7	-0.3
KIWB	Kanaga Island	4.78	269		Pn	01 32 24.7	-0.3
KIMD	Kanaga Island	4.84	268		Pn	01 32 27.2	+1.3
SPIA	Saint Paul Isl	5.00	355		Pn	01 32 27.9	-0.1
TASE	Tanaga Southea	5.33	269		Pn	01 32 34.4	+1.9
GAEA	Gareloi East	5.77	269		Pn	01 32 40.4	+1.8
SDPT	Sand Point	6.17	56	Pn	Pn	01 32 45.0	+0.9
CERAA	Semis' Rag'd T	6.72	272		Pn	01 32 52.9	+1.2
CESW	Semis' Southwe	6.79	272		Pn	01 32 54.8	+2.1
AMKA	Amchitka	7.04	268		Pn	01 32 55.8	-0.2
LSPA	Little Sitkin	7.40	273		Pn	01 33 03.2	+2.3
LSNW	Little Sitkin	7.43	273		Pn	01 33 04.0	+2.6
CHGN	Chignik	7.64	53	Pn	Pn	01 33 05.2	+1.0
SII	Sitkinak Islan	9.90	58	Pn	Pn	01 33 34.7	-0.5
SMY	Shemya	10.06	279	P	Pn	01 33 37.9	+0.5
SMY	Shemya	10.06	279	Pn	Pn	01 33 37.9	+0.5
OHAK	Old Harbor	10.59	55	Pn	Pn	01 33 42.9	-1.7
O18K	Koktuh Hills	11.03	40		Pn	01 33 48.7	-1.9
KDAK	Kodiak Island	11.16	53	Pn	Pn	01 33 51.0	-1.4
	2.1nm,0.3s,baz=270,slow=6.2,SNR=23						
KDAK	Kodiak Island	11.16	53	P	Pn	01 33 51.3	-1.1
KDAK	Kodiak Island	11.16	53	Pn	Pn	01 33 51.3	-1.1
Q19K	Cape Douglas,	11.17	47	Pn	Pn	01 33 52.4	-0.2
N19K	Bonanza Creek	11.91	38		Pn	01 34 02.3	-0.4
RSO	Redoubt South	12.38	42		Pn	01 34 08.5	-0.7
L19K	White Mountain	12.71	32		Pn	01 34 13.1	-0.4
TTA	Tatalina	12.90	28	P	Pn	01 34 16.0	-0.3
TTA	Tatalina	12.90	28		Pn	01 34 16.0	-0.3
TNA	Tin City	13.41	3	Pn	Pn	01 34 22.2	-0.9
SKT	Skwentna	13.75	38	Pn	Pn	01 34 28.8	+1.0
J20K	Nowinta River	14.40	28		Pn	01 34 34.4	-2.1
KNK	Knik Glacier	14.66	43	Pn	Pn	01 34 38.7	-1.5
KTH	Kantishna Hill	14.96	33	Pn	Pn	01 34 43.9	-0.4
BPAW	Bear Paw Mtn.	15.31	32	Pn	Pn	01 34 46.6	-2.2
SCM	Sheep Creek Mo	15.34	42	IAmb	IAmb	01 35 14.4	
	comp=Z,44nm,1.0s						
I21K	Tanana	15.77	28	IAmb	IAmb	01 35 15.2	
	comp=Z,36nm,1.1s						
KLU	Klutina	15.78	45	Pn	Pn	01 34 52.6	-2.4
KLU				IAmb	IAmb	01 35 10.8	
	comp=Z,24nm,0.6s						
IMAR	Indian Mountai	15.91	24	Pn	Pn	01 34 55.6	-0.9
BMRM	Bremner River	16.15	47	Pn	Pn	01 34 57.7	-2.0
BMRM				IAmb	IAmb	01 35 14.5	
	comp=Z,56nm,1.2s						
I23K	Minto, Yukon-K	16.53	31	Pn	Pn	01 35 01.0	-3.4
I23K				IAmb	IAmb	01 35 16.0	
	comp=Z,52nm,1.5s						
CCB	Clear Creek Bu	16.72	33		Pn	01 35 05.7	-1.1
MDM	Murphy Dome	16.77	32		Pn	01 35 06.5	-1.0
WAX	Waxell Ridge	16.79	50	Pn	Pn	01 35 07.2	-0.6
WAX				IAmb	IAmb	01 35 34.9	
	comp=Z,69nm,0.7s						
COLA	College	16.84	33	⇑eP	Pn	01 35 08.0	-0.3
IL31		17.11	34		Pn	01 35 10.3	-1.4
ILAR	Eielson Array	17.11	34	P	Pn	01 35 09.8	-1.8
	comp=Z,0.3nm,0.3s,baz=230,slow=11,SNR=11						
ILAR	Eielson Array	17.11	34	P	Pn	01 35 10.9	-0.8
ILAR	Eielson Array	17.11	34	Pn	Pn	01 35 10.9	-0.8
GRNC	Granite Creek	17.39	50		Pn	01 35 14.9	-0.6
M26K	Nabesna, AK	17.41	44		Pn	01 35 14.8	-0.8
H24K	Noodor Dome	17.45	30		Pn	01 35 16.1	0.0
L26K	Log Cabin Wild	17.53	42	P	Pn	01 35 17.5	+0.5
CTGM	Chitina Glacie	17.66	49	Pn	Pn	01 35 16.4	-2.3
CTGM				IAmb	IAmb	01 35 36.2	
	comp=Z,48nm,1.4s						
SCRK	Sand Creek	17.73	39	Pn	Pn	01 35 18.4	-1.1
L27K	Beaver Creek,	18.18	43		P	01 35 25.2	+0.2
BCAR	Beaver Creek A	18.20	43		Pn	01 35 23.9	-1.2
TOLK	Toolik Lake Re	19.01	22	P	P	01 35 34.2	+0.1
EGAK	Eagle	19.19	38	P	P	01 35 36.6	+0.5
PET	Petropavlovsk	19.31	285	eP	P	01 35 37.6	+0.1
PET				pmax	pmax		
	comp=Z,69nm,1.6s						
PET				MLR	MLR		
	comp=Z,1µm,20.0s						
PET	Petropavlovsk	19.31	285	P	P	01 35 37.6	+0.1
PET				IAmb	IAmb	01 35 40.4	
	comp=Z,25nm,0.6s						
HYT	Haines Junctio	19.43	51	IAmb	IAmb	01 35 49.0	
	comp=Z,31nm,0.6s						
BILL	Bilibino	19.72	333	⇑eP	P	01 35 42.3	+0.4
BILL				eS	S	01 39 19.7	-2.6
BILL				pmax	pmax		
	comp=Z,43nm,2.8s						
BILL				MLR	MLR		
	comp=Z,613nm,15.0s						
BILL	Bilibino	19.72	333	P	P	01 35 40.3	-1.6
PEA0B	Petropavlovsk-	19.86	286	deP	P	01 35 43.9	+0.4
PEA0B	Petropavlovsk-	19.86	286	P	P	01 35 43.4	-0.1
PETK	Petropavlovsk-	19.86	286	P	P	01 35 43.2	-0.3
	comp=Z,7.7nm,0.3s,baz=90,slow=13,SNR=74						
PETK				LR	LR	01 43 48.5	
	comp=Z,468nm,18.7s,baz=95,slow=38						
PETK	Petropavlovsk-	19.86	286	P	P	01 35 42.6	-0.9
PETK	Petropavlovsk-	19.86	286	P	P	01 35 42.6	-0.9
SKAG	Skagway	20.30	56		P	01 35 48.3	+0.2
SKAG				IAmb	IAmb	01 36 04.5	
	comp=Z,29nm,0.8s						
BESE	Bessie Mountai	20.47	58	P	P	01 35 48.9	-1.2
BESE				IAmb	IAmb	01 36 10.6	
	comp=Z,34nm,1.0s						
WHY	Whitehorse	20.67	52	IAmb	IAmb	01 36 05.3	
	comp=Z,33nm,0.8s						
H02S1	DAWSON INLET T	22.26	73	T	T	01 59 19.4	
	SNR=6.9						
SEY	Seymchan	22.75	313	P	P	01 36 13.9	-0.5
	comp=Z,4.3nm,0.7s,baz=65,slow=7.7,SNR=5.2						
SEY				PcP	PcP	01 40 06.1	+1.0
	comp=Z,1.9nm,0.4s,baz=2.8,slow=23,SNR=4.1						
SEY				LR	LR	01 45 22.5	
	comp=Z,494nm,18.8s,baz=94,slow=38						
SEY	Seymchan	22.75	313	⇑eP	P	01 36 13.6	-0.8
DLBC	Dease Lake	23.00	59	P	P	01 36 19.8	+2.6
	comp=Z,9.6nm,1.0s,baz=289,slow=8.6,SNR=7.6						
DLBC				LR	LR	01 45 17.7	
	comp=Z,290nm,19.6s,baz=284,slow=37						
DLBC	Dease Lake	23.00	59	P	P	01 36 17.7	+0.4
DLBC				IAmb	IAmb	01 36 22.9	
	comp=Z,21nm,1.3s						
MA2	Magadan	23.20	304	LR	LR	01 45 00.7	
	comp=Z,525nm,20.9s,baz=90,slow=36						
INK	Inuvik	23.50	33	P	P	01 36 20.1	-1.8
	comp=Z,6.1nm,0.4s,baz=241,slow=7.2,SNR=48						
INK				PcP	PcP	01 40 07.5	+0.9
	comp=Z,1.5nm,0.5s,baz=300,slow=2.9,SNR=3.7						
INK				LR	LR	01 45 30.6	
	comp=Z,358nm,20.9s,baz=235,slow=37						
INK	Inuvik	23.50	33	P	P	01 36 20.5	-1.4
INK						01 40 07.5	
INK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
INK	Inuvik	23.50	33	P	P	01 36 20.5	-1.4
INK				IAmb	IAmb	01 36 28.0	
	comp=Z,9.0nm,0.6s						
A36M	Sachs Harbour	27.57	28	P	P	01 36 58.9	-0.1
YKA	Yellowknife Ar	30.38	49	P	P	01 37 23.3	-0.7
	comp=Z,1.1nm,0.3s,baz=272,slow=8.4,SNR=53						
YKA				LR	LR	01 52 16.9	
	comp=Z,464nm,19.7s,baz=0.0,slow=42						
YKA	Yellowknife Ar	30.38	49	i P	P	01 37 24.7	+0.7
YKA				pmax	pmax		
	comp=Z,2.0nm,0.4s						
D05A	Enumclaw	30.65	80	P	P	01 37 27.9	+1.4
B08A	Colville Reser	31.73	77	P	P	01 37 36.1	+0.1
B08A				IAmb	IAmb	01 37 55.5	
	comp=Z,12nm,1.1s						
HAWA	Hanford	32.51	80	P	P	01 37 43.9	+1.0
HAWA				IAmb	IAmb	01 38 02.6	
	comp=Z,12nm,1.1s						
D08A	Wollman Farm,	32.57	79		P	01 37 44.8	+1.4
D08A				IAmb	IAmb	01 38 01.9	
	comp=Z,8.4nm,1.0s						
C09A	Chrisman Ranch	32.61	77	IAmb	IAmb	01 38 02.4	
	comp=Z,11nm,1.1s						
TIXI	Tiksi	32.85	329	⇑eP	P	01 37 44.4	-1.2
NEW	Newport	33.09	76	P	P	01 37 49.2	+1.2
	comp=Z,5.7nm,1.0s,baz=324,slow=5.3,SNR=3.9						
NEW	Newport	33.09	76	IAmb	IAmb	01 38 07.1	
	comp=Z,11nm,1.1s						
EDM	Edmonton	33.25	66	P	P	01 37 50.0	+0.7
EDM				pmax	pmax		
	comp=Z,13nm,0.9s						
EDM	Edmonton	33.25	66	P	P	01 37 50.0	+0.7
EDM				IAmb	IAmb	01 38 03.4	
	comp=Z,13nm,0.9s						
ERM	Erimo	33.28	271	P	P	01 37 50.2	+0.5
ERM				pmax	pmax		
	comp=Z,67nm,1.4s						
ERM	Erimo	33.28	271	P	P	01 37 50.2	+0.5
E09A	Wood Farm, Sta	33.30	79	IAmb	IAmb	01 38 00.5	
	comp=Z,11nm,1.2s						
J08A	Circle Bar Ran	34.72	84	P	P	01 38 03.7	+1.4
J08A				IAmb	IAmb	01 38 24.4	
	comp=Z,6.8nm,1.0s						
JTMT	Jette	35.02	75	P	P	01 38 05.1	+0.2
JTMT				IAmb	IAmb	01 38 23.4	
	comp=Z,15nm,1.3s						
MSO	Missoula	35.67	76	IAmb	IAmb	01 38 29.2	
	comp=Z,10nm,1.1s						
KLR	Kul'dur	36.47	289	P	P	01 38 15.7	-1.4
	comp=Z,4.9nm,0.5s,baz=69,slow=6.6,SNR=26						
KLR				LR	LR	01 53 22.1	
	comp=Z,439nm,19.6s,baz=56,slow=37						
KLR	Kul'dur	36.47	289	⇓eP	P	01 38 15.7	-1.4
KLR				pmax	pmax		
	comp=Z,4.0nm,1.1s						
RES	Resolute Bay	36.53	25	P	P	01 38 16.1	-1.2
	comp=Z,0.9nm,0.5s,baz=229,slow=9.3,SNR=2.2						
RES	Resolute Bay	36.53	25	P	P	01 38 15.4	-1.9
RES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
RES	Resolute Bay	36.53	25	P	P	01 38 15.4	-1.9
HLID	Hailey	37.09	81	P	P	01 38 23.1	+0.5
H11N2	WAKE ISLAND Hy	37.30	219	T	T	02 18 15.7	
	baz=24,slow=76,SNR=26						
H11N3	WAKE ISLAND Hy	37.31	219	T	T	02 18 16.1	
	baz=24,slow=76,SNR=31						
H11N1	WAKE ISLAND Hy	37.32	219	T	T	02 18 15.1	
	baz=24,slow=76,SNR=24						
EGMT	Eagleton	37.55	72	IAmb	IAmb	01 38 45.2	
	comp=Z,23nm,1.1s						
BOZ	Bozeman (W)	37.67	76	IAmb	IAmb	01 38 46.3	
	comp=Z,9.8nm,1.2s						
NVAR	Mina Array Bea	37.70	91	P	P	01 38 28.9	+0.9
	comp=Z,0.2nm,0.3s,baz=279,slow=8.1,SNR=3.1						
NVAR				LR	LR	01 50 34.8	
	comp=Z,220nm,19.8s,baz=314,slow=31						
NV11	Mina Array Sit	37.79	91	P	P	01 38 29.8	+1.1
YHL	Hebgen Lake	38.34	77	IAmb	IAmb	01 38 51.7	
	comp=Z,9.4nm,1.0s						
H11S1	WAKE ISLAND Hy	38.49	218	T	T	02 19 45.9	
	baz=23,slow=76,SNR=215						
H11S2	WAKE ISLAND Hy	38.51	218	T	T	02 19 46.0	
	baz=23,slow=76,SNR=169						
H11S3	WAKE ISLAND Hy	38.51	218	T	T	02 19 46.3	
	baz=23,slow=76,SNR=143						
YNR	Norris Junctio	38.71	77	IAmb	IAmb	01 38 55.9	
	comp=Z,20nm,1.3s						
USRK	Ussuriysk Ar.	38.89	282	LR	LR	01 53 30.8	
	comp=Z,335nm,21.6s,baz=47,slow=34						
REDW	Red Top Meadow	39.35	79	IAmb	IAmb	01 39 05.3	
	comp=Z,12nm,1.4s						
MAJO	Matsushiro	39.65	268	⇑eP	P	01 38 44.1	0.0
MAJO				pmax	pmax		
	comp=Z,16nm,1.5s						
MAJO	Matsushiro	39.65	268	P	P	01 38 44.0	-0.1
MAJO				IAmb	IAmb	01 39 03.2	
	comp=Z,8.1nm,0.8s						
MAT	Matsushiro	39.65	268	P	P	01 38 36.8	-7.3
MAT	Matsushiro	39.65	268	P	P	01 38 44.3	+0.2
MJAR	Matsushiro Arr	39.65	268	P	P	01 38 44.0	-0.1
	comp=Z,1.9nm,0.6s,baz=37,slow=6.7,SNR=5.5						
MJAR				LR	LR	01 54 48.1	
	comp=Z,256nm,20.5s,baz=40,slow=36						
MJAR	Matsushiro Arr	39.65	268	P	P	01 38 44.2	+0.1
MJAR				pmax	pmax		
	comp=Z,3.0nm,1.1s						
MJAR	Matsushiro Arr	39.65	268	P	P	01 38 44.2	+0.1
MDJ	Mudanjiang	40.09	284	P	P	01 38 48.2	+0.6
MDJ				IAmb	IAmb	01 38 51.6	
	comp=Z,8.2nm,0.4s						
PRN	Pahroc Range	40.34	89	P	P	01 38 50.9	+0.9
PRN				IAmb	IAmb	01 39 11.0	
	comp=Z,10nm,0.9s						
PD31	Pinedale Array	40.47	79	P	P	01 38 51.3	+0.2
PDAR	Pinedale Array	40.47	79	P	P	01 38 51.8	+0.7
	comp=Z,3.7nm,0.6s,baz=301,slow=3.0,SNR=24						
PDAR				LR	LR	01 53 31.4	
	comp=Z,236nm,18.9s,baz=331,slow=33						
FCC	Fort Churchill	41.07	50	P	P	01 38 55.6	+0.1
FCC				pmax	pmax		
	comp=Z,28nm,1.2s						
FCC	Fort Churchill	41.07	50	P	P	01 38 55.6	+0.1
FCC				IAmb	IAmb	01 39 02.1	
	comp=Z,28nm,1.2s						
RDMU	Red Mountain	41.75	82	IAmb	IAmb	01 39 19.3	
	comp=Z,13nm,1.1s						
P18A	Preston Nutter	41.91	83	IAmb	IAmb	01 39 21.5	
	comp=Z,16nm,1.3s						
BOD	Bodaibo	42.06	309	eP	P	01 39 02.5	-1.1
BOD				pmax	pmax		
	comp=Z,15nm,1.0s						
JWT	Wachi	42.20	269	P	P	01 39 05.7	+0.7
JWT				IAmb	IAmb	01 39 08.3	
	comp=Z,16nm,1.3s						
O20A	White River Ci	42.83	81	IAmb	IAmb	01 39 34.4	
	comp=Z,12nm,0.8s						
RSSD	Black Hills	43.00	74	P	P	01 39 11.4	-0.3
RSSD				pmax	pmax		
	comp=Z,6.0nm,0.9s						
RSSD	Black Hills	43.00	74	P	P	01 39 11.4	-0.3
CN2	Changchun	43.02	286	eP	P	01 39 11.0	-0.6
HIA	Hailar	43.28	296	P	P	01 39 12.9	-0.8
HIA				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HIA	Hailar	43.28	296	P	P	01 39 12.9	-0.8
HIA				IAmb	IAmb	01 39 14.0	
	comp=Z,9.4nm,0.6s						
WUAZ	Wupatki	43.83	89	P	P	01 39 18.7	+0.3
ULM	Lac du Bonnet	44.26	62	LR	LR	01 57 49.2	
	comp=Z,261nm,21.3s,baz=329,slow=36						
NEEM	North Greenlan	45.16	16	i P	P	01 39 28.5	-0.2
AGMN	Agassiz Nation	45.33	64	IAmb	IAmb	01 39 57.9	
	comp=Z,18nm,1.4s						
KSRS	Korea Array	45.38	277	P	P	01 39 31.1	+0.6
	comp=Z,5.6nm,0.9s,baz=57,slow=7.8,SNR=9.1						
KSRS				LR	LR	01 59 48.9	
	comp=Z,166nm,18.6s,baz=44,slow=38						
KSAR	Wonju Array Be	45.41	277	P	P	01 39 30.5	-0.3
KSAR	Wonju Array Be	45.41	277	P	P	01 39 30.5	-0.3
NOR	Nord	45.63	5	i P	P	01 39 31.9	-0.1
TUC	Tucson	46.34	92	P	P	01 39 39.3	+1.0
TUC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TUC	Tucson	46.34	92	P	P	01 39 39.3	+1.0
TJN	Taejon	46.42	276	⇓eP	P	01 39 39.2	+0.4
NRIK	Noril'sk	46.55	332	P	P	01 39 39.0	-0.3
	comp=Z,4.7nm,0.4s,baz=68,slow=9.1,SNR=14						
NRIK				LR	LR	02 00 28.2	
	comp=Z,283nm,20.3s,baz=46,slow=38						
NRIK	Noril'sk	46.55	332	ceP	P	01 39 38.7	-0.6
NRIK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
NRIK	Noril'sk	46.55	332	P	P	01 39 38.5	-0.9
NRIK				IAmb	IAmb	01 39 40.3	
	comp=Z,5.8nm,0.5s						
ANMO	Albuquerque	47.22	86	⇑eP	P	01 39 44.6	-0.7
ANMO				pmax	pmax		
	comp=Z,12nm,3.7s						
ECSD	EROS Data Cent	47.56	70	P	P	01 39 46.9	-0.7
ECSD				IAmb	IAmb	01 40 09.2	
	comp=Z,10nm,1.1s						
FRB	Frobisher Bay	49.13	35	P	P	01 39 59.4	0.0
	comp=Z,8.2nm,0.8s,baz=309,slow=10.0,SNR=9.0						
SPITS	Spitsbergen Ar	49.83	358	P	P	01 40 04.0	-0.6
	comp=Z,1.6nm,0.3s,baz=43,slow=6.2,SNR=26						
DAG	Danmarks Havn	49.95	8	i P	P	01 40 04.6	-1.0
MNTX	Cornudas Mount	50.08	88	IAmb	IAmb	01 40 22.8	
	comp=Z,3.9nm,0.8s						
AMTX	Amarillo	50.19	82	P	P	01 40 07.3	-0.7
AMTX				IAmb	IAmb	01 40 31.1	
	comp=Z,4.4nm,0.8s						
TLY	Talaya	50.40	306	⇑eP	P	01 40 10.0	+0.7
TLY				pmax	pmax		
	comp=Z,11nm,1.2s						
SUMG	Summit	50.95	17	P	P	01 40 13.2	-0.4
SUMG				pmax	pmax		
	comp=Z,13nm,0.9s						
SUMG	Summit	50.95	17	i P	P	01 40 13.0	-0.6
SUMG	Summit	50.95	17	P	P	01 40 13.2	-0.4
SUMG				IAmb	IAmb	01 40 19.7	
	comp=Z,13nm,0.9s						
ULN	Ulaanbaatar	50.98	301	⇓iP	P	01 40 13.8	-0.1
ULN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ULN	Ulaanbaatar	50.98	301	P	P	01 40 13.5	-0.3
SONM	Songino Array	51.35	301	P	P	01 40 16.6	0.0
	comp=Z,3.4nm,0.9s,baz=41,slow=5.9,SNR=17						
SONM				PcP	PcP	01 41 32.5	+1.5
	comp=Z,1.5nm,0.6s,baz=69,slow=2.4,SNR=3.7						
SONM				LR	LR	02 03 53.4	
	comp=Z,662nm,19.0s,baz=37,slow=38						
SONM	Songino Array	51.35	301	P	P	01 40 15.8	-0.8
SONM				IAmb	IAmb	01 40 18.5	
	comp=Z,18nm,1.5s						
P38A	Dawn	51.94	72	IAmb	IAmb	01 40 45.6	
	comp=Z,8.2nm,0.8s						
WMOK	Wichita Mounta	52.05	80	IAmb	IAmb	01 40 44.9	
	comp=Z,6.3nm,0.9s						
DBG	Daneborg	52.08	10	i P	P	01 40 20.8	-0.7
DBG				IAmb	IAmb	01 40 21.2	
	comp=Z,5.9nm,0.5s						
TX32	Lajitas Array	52.79	89	IAmb	IAmb	01 40 57.0	
	comp=Z,7.6nm,0.9s						
TXAR	Lajitas Array	52.79	89	P	P	01 40 27.6	+0.1
	comp=Z,2.5nm,0.6s,baz=302,slow=5.4,SNR=21						
TXAR				LR	LR	02 02 01.1	
	comp=Z,203nm,18.1s,baz=0.0,slow=35						
HHC	Hu-ho-hao-te	52.94	291	eP	P	01 40 29.6	+1.1
HHC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,330nm,5.0s						
HHC				LR	LR		
	comp=Z,320nm,14.3s						
HHC				LR	LR		
	comp=Z,510nm,15.0s						
HHC				LR	LR		
	comp=Z,540nm,16.0s						
BJO1	Bjornoya	53.45	357	eP	P	01 40 32.2	+0.7
MGMO	Mountain Grove	54.32	74	IAmb	IAmb	01 41 01.9	
	comp=Z,5.4nm,0.9s						
NJ2	Nanjing	54.53	278	eP	P	01 40 40.2	+0.1
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
WHTX	Lake Whitney,	54.73	82	IAmb	IAmb	01 41 00.1	
	comp=Z,13nm,0.9s						
FCAR	Ozark Folk Cen	55.26	75	IAmb	IAmb	01 40 51.1	
	comp=Z,5.3nm,0.8s						
MIAR	Mount Ida	55.32	77	P	P	01 40 46.3	+0.6
MIAR				pmax	pmax		
	comp=Z,17nm,1.3s						
MIAR	Mount Ida	55.32	77	P	P	01 40 46.3	+0.6
MIAR				IAmb	IAmb	01 41 08.6	
	comp=Z,16nm,1.3s						
SCO	Scoresbysund	55.39	13	i P	P	01 40 46.0	+0.3
SCHQ	Schefferville	55.58	43	P	P	01 40 47.4	0.0
	comp=Z,8.1nm,0.8s,baz=306,slow=10.0,SNR=6.4						
CCAR	Cane Creek	56.83	76	P	P	01 40 56.8	+0.2
P49A	Miami Univ. Ec	57.07	67	IAmb	IAmb	01 41 00.1	
	comp=Z,8.1nm,0.7s						
HAMF	Hammerfest	57.09	355	eP	P	01 40 57.8	-0.1
HKT	Hockley	57.16	82	⇑eP	P	01 40 59.0	+0.1
HKT				pmax	pmax		
	comp=Z,5.0nm,1.1s						
PLVO	Plevna	57.46	57	P	P	01 41 01.5	+0.6
ZAA0	Zalesovo Array	57.51	318	P	P	01 41 00.5	-0.6
ZALV	Zalesovo Beam	57.51	318	P	P	01 41 00.3	-0.8
	comp=Z,2.7nm,0.5s,baz=43,slow=6.7,SNR=11						
ZALV	Zalesovo Beam	57.51	318	P	P	01 41 00.4	-0.7
WVT	Waverly	57.62	71	P	P	01 41 01.5	-0.6
WVT				pmax	pmax		
	comp=Z,15nm,1.5s						
WVT	Waverly	57.62	71	P	P	01 41 01.5	-0.6
WVT				IAmb	IAmb	01 41 14.5	
	comp=Z,15nm,1.4s						
ARA0	ARCESS Array S	58.08	354	eP	P	01 41 04.5	-0.4
ARCES	ARCESS Array B	58.08	354	P	P	01 41 04.0	-0.9
	comp=Z,2.0nm,0.4s,baz=17,slow=8.2,SNR=30						
ARCES				LR	LR	02 07 49.4	
	comp=Z,214nm,18.8s,baz=345,slow=38						
ARCES	ARCESS Array B	58.08	354	IAmb	IAmb	01 41 29.1	
	comp=Z,13nm,1.1s						
R50A	Paris	58.16	67	IAmb	IAmb	01 41 18.3	
	comp=Z,6.6nm,0.8s						
ZAIG	Zacatecas	58.23	93	P	P	01 41 06.6	-0.4
ZAIG				IAmb	IAmb	01 41 27.9	
	comp=Z,3.5nm,0.5s						
PLAL	Pickwick Lake	58.28	73	IAmb	IAmb	01 41 12.7	
	comp=Z,5.4nm,0.8s						
TRO	Tromso	58.32	357	eP	P	01 41 06.1	-0.3
WHN	Wuhan	58.33	280	⇑P	P	01 41 07.2	+0.1
JETT	Jettan, Norway	58.33	356	eP	P	01 41 06.0	-0.6
KTK1	Kautokeino	58.73	355	eP	P	01 41 09.5	+0.1
XAN	Xi'an	59.10	287	P	P	01 41 12.9	+0.3
XAN				pP	pwP	01 41 25.8	+1.0
XAN				pmax	pmax		
	comp=Z,15nm,1.6s						
J57A	Williamstown	59.14	58	IAmb	IAmb	01 41 23.7	
	comp=Z,8.5nm,0.9s						
DGZ	Jazzator, Alta	59.42	313	c iP	P	01 41 14.8	+0.1
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.7s						
LOF	Lofoten	59.96	359	eP	P	01 41 17.8	0.0
SSPA	Standing Stone	60.09	61	P	P	01 41 19.2	0.0
SSPA				IAmb	IAmb	01 41 25.9	
	comp=Z,8.4nm,0.8s						
STEI	Steigen	60.13	358	eP	P	01 41 18.5	-0.5
GTA	Gaotai	60.52	297	eP	P	01 41 21.8	-0.5
GTA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
LZH	Lanzhou	60.61	292	eP	P	01 41 23.2	+0.2
LZH				sP	sP	01 41 36.0	+1.5
LZH				pmax	pmax		
	comp=Z,32nm,1.3s						
FAUS	Fauske	60.68	358	eP	P	01 41 22.1	-0.7
ENH	Enshi	61.45	283	P	P	01 41 28.1	-0.6

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KONS  Konsvik            61.60 359  eP    P       01 41 28.8  -0.2
MOR8  Moi Rana           61.91 358  eP    P       01 41 29.6  -1.6
KMSC  Kings Mountain     62.07  68   P    P       01 41 33.0 +0.3
KURK  Kurchatov          62.47 318d iP    P       01 41 34.9  -0.2
KURK                                pmax  pmax
      comp=Z,6.0nm,1.0s
KURK  Kurchatov          62.47 318   P    P       01 41 34.8  -0.2
NSS   Namsos             63.59 359  eP    P       01 41 41.8  -0.6
WMQ   Urumqi             63.60 308  eP    P       01 41 43.7 +0.8
WMQ                                 pP    sP      01 41 57.7 +2.9
WMQ                                 pmax  pmax
      comp=Z,21nm,0.7s
WMQ                                 pmax  pmax
      comp=Z,200nm,5.3s
SVE   Sverdlovsk         63.81 332  eP    P       01 41 44.3 +0.4
SVE                                 pmax  pmax
      comp=Z,11nm,1.3s
BRVK  Borovoye           63.82 324c iP    P       01 41 43.7  -0.4
BRVK                                pmax  pmax
      comp=Z,8.0nm,1.4s
BRVK  Borovoye           63.82 324   P    P       01 41 44.0  -0.1
MK31  Makanchi Array     63.88 313d iP    P       01 41 43.8  -0.9
MK31  Makanchi Array     63.88 313   P    P       01 41 43.6  -1.1
MK31                                IAmb  IAmb    01 41 45.7
      comp=Z,8.1nm,1.5s
MKAR  Makanchi Array     63.88 313   P    P       01 41 43.6  -1.0
      comp=Z,1.3nm,0.3s,baz=56,slow=6.7,SNR=38
MKAR  Makanchi Array     63.88 313  i P   P       01 41 43.5  -1.2
MKAR                                pmax  pmax
      comp=Z,1.0nm,0.3s
MKAR  Makanchi Array     63.88 313   P    P       01 41 43.7  -0.9
MAKZ  Makanchi           64.01 314   P    P       01 41 44.5  -1.0
MAKZ                                pmax  pmax
      comp=Z,10.0nm,1.5s
MAKZ  Makanchi           64.01 314   P    P       01 41 44.5  -1.0
MAKZ                                IAmb  IAmb    01 41 46.5
      comp=Z,9.5nm,1.4s
ARU   Arti               64.74 333c iP    P       01 41 49.6  -0.5
ARU                                               01 42 22.7
ARU                                 S     S       01 50 28.1   0.0
ARU                                 SS    SS      01 54 45.0 +6.6
ARU                                 pmax  pmax
      comp=Z,17nm,1.4s
ARU   Arti               64.74 333   P    P       01 41 49.1  -0.9
TBLU  Trondheim          64.88   0  eP    P       01 41 49.7  -1.2
KIRV  Kirov              65.14 339c iP    P       01 41 51.8  -0.7
MOL   Molde              65.54   2  eP    P       01 41 55.2 +0.1
GYA   Guiyang            65.92 283⥣iP    P       01 41 58.6 +0.3
GYA                                 pP    pwP     01 42 13.2 +2.6
GYA                                 pmax  pmax
      comp=Z,29nm,1.2s
FIA1  FINESS Array S     66.02 352   P    P       01 41 57.7  -0.5
FIA1                                IAmb  IAmb    01 42 15.4
      comp=Z,7.3nm,0.9s
FINES FINESS Array B     66.02 352   P    P       01 41 57.4  -0.8
      comp=Z,3.1nm,0.4s,baz=10,slow=8.0,SNR=49
FINES FINESS Array B     66.02 352   P    P       01 41 57.6  -0.6
FINES FINESS Array B     66.02 352   P    P       01 41 57.6  -0.6
DOMB  Dombas             66.09   1  eP    P       01 41 58.2  -0.5
NB2   NORSAR Subarra     67.10 360   P    P       01 42 04.9  -0.3
      comp=Z,4.3nm,0.7s,baz=1.0,slow=6.9
NB2   NORSAR Subarra     67.10 360   P    P       01 42 04.9  -0.3
      baz=1.0,slow=6.9
NOA   NORSAR Array B     67.10 360   P    P       01 42 04.4  -0.8
      comp=Z,3.0nm,0.7s,baz=360,slow=6.3,SNR=19
NC602 NORSAR Array S     67.40 359  eP    P       01 42 07.1   0.0
SKAR  Skarslia           67.45   1  eP    P       01 42 07.3  -0.1
OSL   Oslo               68.21 360  eP    P       01 42 12.7 +0.6
KONO  Kongsberg          68.49   1ceP    P       01 42 15.5 +1.6
KONO                                pmax  pmax
      comp=Z,28nm,1.7s
KONO  Kongsberg          68.49   1  eP    P       01 42 13.2  -0.7
VSU   Vasula             68.90 351  eP    P       01 42 16.4   0.0
VSU   Vasula             68.90 351ceP    P       01 42 16.2  -0.3
VSU                                 pmax  pmax
      comp=Z,39nm,0.8s
KMI   Kunming            69.27 284 ⥣P    P       01 42 20.1 +0.5
KMI                                 PcP   PcP     01 42 42.3  -0.8
KMI                                 pmax  pmax
      comp=Z,22nm,1.1s
KMI                                 pmax  pmax
      comp=Z,71nm,4.0s
KMI                                 LR    LR
      comp=Z,240nm,18.9s
KMI                                 LR    LR
      comp=Z,350nm,19.0s
KMI                                 LR    LR
      comp=Z,250nm,17.8s
TARG  Taragay, Kyrgy     69.85 313   IAmb IAmb    01 42 28.0
      comp=Z,6.3nm,0.9s
TKM2  Tokmak 2           69.88 315   P    P       01 42 23.2 +0.1
      SNR=7.9
USP   Ospenovka          70.07 316   P    P       01 42 24.8 +0.8
      SNR=10.0
SLIT  Slitere, Latvi     70.10 353  eP    P       01 42 24.0 +0.1
MOS   Moscow             70.11 344  eP    P       01 42 23.3  -0.7
KBK   Karagaybulak       70.37 315   P    P       01 42 26.9 +0.8
      SNR=5.6
FRU1  Bishkek            70.39 315   P    P       01 42 26.6 +0.6
FRU1                                pmax  pmax
      comp=Z,16nm,0.8s
FRU1  Bishkek            70.39 315   P    P       01 42 26.6 +0.6
MSVF  Nonsavu            70.49 193⥥eP    P       01 42 27.3 +0.5
MSVF                                pmax  pmax
      comp=Z,3.0nm,0.9s
ABKAR Akbulak array      70.55 328   P    P       01 42 26.6  -0.2
AAK   Ala-Archa          70.58 315   P    P       01 42 28.1 +0.8
      SNR=7.8
AAK   Ala-Archa          70.58 315d iP    P       01 42 27.9 +0.6
AAK                                 pmax  pmax
      comp=Z,24nm,1.1s
AAK   Ala-Archa          70.58 315   P    P       01 42 27.6 +0.3
EKS2  Erkin-Say          70.87 316   P    P       01 42 29.8 +0.7
      SNR=6.0
OBN   Obninsk            70.89 345⥣eP    P       01 42 28.7   0.0
OBN                                 pmax  pmax
      comp=Z,8.0nm,1.1s
SLVN  Son La             71.43 281   IAmb IAmb    01 42 34.8
      comp=Z,11nm,1.1s
KK31  Karatay Array      71.88 318   P    P       01 42 34.6  -0.4
KK31                                pmax  pmax
      comp=Z,6.0nm,0.8s
KK31  Karatay Array      71.88 318   P    P       01 42 34.6  -0.4
KK31                                IAmb  IAmb    01 42 39.4
      comp=Z,6.2nm,0.8s
KKAR  Karatay Array      71.88 318   P    P       01 42 34.4  -0.6
KKAR  Karatay Array      71.88 318   P    P       01 42 34.4  -0.6
PABE  Paberze            72.08 352  eP    P       01 42 35.9 +0.1
PABE  Paberze            72.08 352   P    P       01 42 36.1 +0.2
KSH   Kashi              72.45 312   P    P       01 42 41.6 +3.0
KSH                                 pP    PcP     01 42 54.0  -2.3
KSH                                 sP    sP      01 42 58.0 +7.3
KSH                                 pmax  pmax
      comp=Z,20nm,1.3s
KSH                                 LR    LR
      comp=Z,400nm,15.8s
KSH                                 LR    LR
      comp=Z,470nm,18.2s
KSH                                 LR    LR
      comp=Z,460nm,19.2s
LSA   Lhasa              72.48 296   P    P       01 42 39.8 +0.4
LSA                                 pmax  pmax
      comp=Z,10.0nm,0.8s
LSA   Lhasa              72.48 296   P    P       01 42 39.8 +0.4
LSA                                 IAmb  IAmb    01 42 41.1
      comp=Z,10.0nm,0.8s
MNK   Minsk              72.68 350  i P   P       01 42 40.2 +0.7
MNK                                 i *PP sP      01 42 52.2 +0.8
MNK                                 i             01 45 21.8
MNK                                 i PPP PPP     01 47 06.3
MNK                                 i S   S       01 52 03.9 +1.6
MNK                                 i SS  SS      01 56 43.3 +2.7
MNK                                 pmax  pmax
      comp=Z,14nm,1.5s
MNK                                 pmax  pmax
      comp=E,1.0nm,1.0s
MNK                                 pmax  pmax
      comp=N,11nm,0.9s
MNK                                 MLR   MLR
      comp=Z,215nm,24.0s
MNK                                 MLR   MLR
      comp=N,142nm,19.0s
MNK                                 MLR   MLR
      comp=E,26nm,15.0s
MNK   Minsk              72.68 350  i P   P       01 42 40.3 +0.7
      comp=E,1.0nm,1.0s
MNK                                 i P   P       01 42 40.3 +0.7
      comp=N,11nm,0.9s
MNK                                 i P   P       01 42 40.3 +0.7
      comp=Z,14nm,1.5s,baz=191
MNK                                 i pP  sP      01 42 52.3 +0.9
MNK                                 i PP  PP      01 45 21.8 +1.2
MNK                                 i PPP PPP     01 47 06.4
MNK                                 i S   S       01 52 03.9 +1.6
MNK                                 i SS  SS      01 56 43.3 +2.7
MNK                                 i SSS SSS     02 00 04.1
MNK                                 i LQ  LQ      02 09 43.9
MNK                                 i LR  LR      02 12 57.1
MNK                                 i LRM MLR     02 16 36.8
      comp=Z,215nm,23.6s
MNK                                 i LRM MLR     02 16 40.7
      comp=N,142nm,19.2s
MNK                                 i LRM MLR     02 16 50.9
      comp=E,26nm,15.3s
SUW   Suwalki            73.62 352  eP    P       01 42 44.4  -0.7
SUW   Suwalki            73.62 352  eP    P       01 42 44.7  -0.4
BTK   Batken             74.28 316   IAmb IAmb    01 42 55.9
      comp=Z,7.9nm,0.8s
SHL   Shillong           75.26 293   P    P       01 42 54.7  -0.6
SHL                                 pmax  pmax
      comp=Z,17nm,1.0s
SHL   Shillong           75.26 293   P    P       01 42 54.7  -0.6
GAR   Garm               75.37 316   P    P       01 42 55.7   0.0
AKASG Malin Array Be     76.25 348   P    P       01 42 59.1  -1.2
      comp=Z,3.3nm,0.4s,baz=16,slow=5.9,SNR=22
AKASG Malin Array Be     76.25 348  i P   P       01 42 59.5  -0.8
AKASG                               pmax  pmax
      comp=Z,3.0nm,0.4s
AKBB  Malin Array Si     76.25 348deP    P       01 42 59.6  -0.7
AKBB  Malin Array Si     76.25 348   P    P       01 42 59.2  -1.1
AKBB                                IAmb  IAmb    01 43 00.7
      comp=Z,6.1nm,0.8s
CHTO  Chiang Mai         76.34 283   P    P       01 43 01.2  -0.1
CHTO                                pmax  pmax
      comp=Z,16nm,1.3s
CHTO  Chiang Mai         76.34 283   P    P       01 43 01.2  -0.1
CHTO                                IAmb  IAmb    01 43 02.9
      comp=Z,16nm,1.2s
CM31  Chiang Mai Arr     76.61 283   P    P       01 43 03.6 +0.7
CMAR  Chiang Mai Arr     76.61 283   P    P       01 43 03.5 +0.7
      comp=Z,4.2nm,0.7s,baz=28,slow=6.1,SNR=23
CMAR  Chiang Mai Arr     76.61 283   P    P       01 43 03.0 +0.1
CMAR  Chiang Mai Arr     76.61 283   P    P       01 43 03.0 +0.1
GUN   Gumba              76.76 298  eP    P       01 43 04.3 +0.3
      comp=Z,46nm,0.5s
TOLI2 Tolitoli           76.83 254   P    P       01 43 02.8  -1.3
TOLI2                               IAmb  IAmb    01 43 22.4
      comp=Z,8.6nm,1.2s
CLL   Collm              76.84 358  eP    P       01 43 03.0  -0.6
CLL                                 pmax  pmax
      comp=Z,4.0nm,0.8s
CLL   Collm              76.84 358  eP    P       01 43 03.0  -0.6
      comp=Z,4.0nm,0.8s
CLL   Collm              76.84 358   IAmb IAmb    01 43 07.3
      comp=Z,4.2nm,0.8s
KKN   Kakani             77.18 299  eP    P       01 43 06.2   0.0
      comp=Z,18nm,0.7s
BRG   Berggiesshubel     77.25 358  eP    P       01 43 06.4 +0.4
BRG                                 Amp           01 43 07.7
      comp=Z,4.7nm,0.8s
BRG   Berggiesshubel     77.25 358   P    P       01 43 14.2 +8.2
BRG                                 Amp           01 43 14.8
      comp=Z,3.0nm,0.9s
BRG                                 Amp           01 57 22.0
      comp=N,0.3nm,19.8s
BRG                                 Amp           01 57 27.0
      comp=Z,0.5nm,21.3s
BRG                                 Amp           01 57 36.0
      comp=E,0.3nm,20.3s
PKIN  Phulchoki          77.29 299  eP    P       01 43 06.5  -0.4
      comp=E,20nm,0.9s
GKN   Gorkha             77.36 299  eP    P       01 43 07.0  -0.2
      comp=E,18nm,0.6s
CHVC  Chvalec            77.47 356  eP    P       01 43 07.7 +0.4
OSTC  Ostas              77.50 356  eP    P       01 43 07.8 +0.4
DANN  Dangsing           77.55 300  eP    P       01 43 08.6 +0.2
      comp=E,60nm,0.9s
PVCC  Panska Ves         77.58 357  eP    P       01 43 08.3 +0.5
PVCC  Panska Ves         77.58 357  eP    P       01 43 08.3 +0.5
OJC   Ojcow              77.65 354  eP    P       01 43 08.8 +0.6
DPC   Dobruska-Polom     77.70 356  eP    P       01 43 09.4 +0.8
DPC   Dobruska-Polom     77.70 356  eP    P       01 43 09.4 +0.8
NKC   Novy Kostel        77.92 359  eP    P       01 43 10.4 +0.6
NKC   Novy Kostel        77.92 359  eP    P       01 43 10.4 +0.6
KRLC  Kraliky            77.95 356  eP    P       01 43 10.5 +0.5
KRLC  Kraliky            77.95 356  eP    P       01 43 10.5 +0.5
KWP   Kalwaria Pacla     78.01 352  eP    P       01 43 10.5 +0.2
PRU   Pruhonice          78.12 357  eP    P       01 43 11.4 +0.6
PRU   Pruhonice          78.12 357  eP    P       01 43 11.4 +0.6
OKC   Ostrava-Krasne     78.13 355  eP    P       01 43 11.5 +0.6
OKC   Ostrava-Krasne     78.13 355  eP    P       01 43 11.5 +0.6
MORC  Moravsky Berou     78.22 355 ⥣P    P       01 43 11.0  -0.4
MORC  Moravsky Berou     78.22 355 ⥣P    P       01 43 11.0  -0.4
MORC  Moravsky Berou     78.22 355  eP    P       01 43 11.8 +0.3
MORC  Moravsky Berou     78.22 355   P    P       01 43 11.7 +0.3
MORC                                IAmb  IAmb    01 43 13.3
      comp=Z,4.7nm,0.8s
NIL   Nilore             78.51 311   P    P       01 43 13.4 +0.1
NIL                                 pmax  pmax
      comp=Z,12nm,0.7s
NIL   Nilore             78.51 311   P    P       01 43 13.4 +0.1
JTS   Las Juntas de      78.57  88⥣eP    P       01 43 11.8  -2.1
JTS                                 pmax  pmax
      comp=Z,18nm,1.7s
VRAC  Vranov             78.73 356 ⥣P    P       01 43 14.5 +0.3
VRAC  Vranov             78.73 356 ⥣P    P       01 43 14.5 +0.3
VRAC  Vranov             78.73 356  eP    P       01 43 14.9 +0.7
LANS  Liptovska Anna     78.73 354  eP    P       01 43 15.2 +0.9
LANS                                pmax  pmax
      comp=Z,4.0nm,0.8s
LANS  Liptovska Anna     78.73 354  eP    P       01 43 15.2 +0.9
KOLS  Kolonicke sedl     78.74 352  eP    P       01 43 15.2 +0.9
KOLS  Kolonicke sedl     78.74 352  eP    P       01 43 15.2 +0.9
CRVS  Cervenica-Dubn     78.84 353  eP    P       01 43 16.0 +1.2
CRVS  Cervenica-Dubn     78.84 353  eP    P       01 43 16.0 +1.2
SORM  Soroca             78.89 348 ⥣P    P       01 43 14.2  -0.8
SORM  Soroca             78.89 348 ⥣P    P       01 43 14.2  -0.8
KRUC  Moravsky           78.98 356  eP    P       01 43 16.0 +0.4
KHC   Kasperske Hory     79.00 358  eP    P       01 43 16.3 +0.5
KHC   Kasperske Hory     79.00 358  eP    P       01 43 16.3 +0.5
UZH   Uzhgorod           79.04 352  eP    P       01 43 19.0 +3.1
UZH                                 i             01 43 25.5
JAVC  Velka Javorina     79.13 355  eP    P       01 43 18.1 +1.6
GOF   Gofitskoye         79.16 337⥣eP    P       01 43 17.1 +0.5
GOF                                 pmax  pmax
      comp=Z,26nm,0.6s
GEC2  GERESS Array S     79.29 358   IAmb IAmb    01 43 21.9
      comp=Z,5.8nm,1.1s
GERES GERESS Array B     79.29 358   P    P       01 43 17.6 +0.1
      comp=Z,1.4nm,0.7s,baz=18,slow=4.6,SNR=13
SMOL  Smolenice          79.48 355  eP    P       01 43 19.4 +1.0
SMOL                                pmax  pmax
      comp=Z,7.0nm,1.3s
SMOL  Smolenice          79.48 355  eP    P       01 43 19.4 +1.0
MODS  Modra-Piesok       79.63 355  eP    P       01 43 19.0  -0.2
MODS                                pmax  pmax
      comp=Z,18nm,1.5s
MODS  Modra-Piesok       79.63 355  eP    P       01 43 19.0  -0.2
KBL   Kabul              79.67 314   P    P       01 43 19.1  -0.8
KBL                                 pmax  pmax
      comp=Z,12nm,1.0s
KBL   Kabul              79.67 314   P    P       01 43 19.1  -0.8
KBL                                 IAmb  IAmb    01 43 20.8
      comp=Z,12nm,1.0s
BUR08 Bucovina Ar. S     79.74 350   P    P       01 43 20.0 +0.1
BURAR Bucovina Array     79.77 350 ⥣P    P       01 43 19.9  -0.1
BURAR Bucovina Array     79.77 350 ⥣P    P       01 43 19.9  -0.1
BURAR Bucovina Array     79.77 350   IAmb IAmb    01 43 21.6
      comp=Z,3.9nm,0.6s
ECH   Echery             79.91   2   P    P       01 43 21.1 +0.4
ECH                                 pmax  pmax
      comp=Z,6.0nm,1.0s
ECH   Echery             79.91   2   P    P       01 43 21.1 +0.4
ECH                                 IAmb  IAmb    01 43 24.8
      comp=Z,6.2nm,1.0s
PSZ   Piszkesteto        79.93 354   IAmb IAmb    01 43 23.1
      comp=Z,11nm,1.4s
MILM  Milestii Mici      80.02 347 ⥣P    P       01 43 20.3  -1.0
MILM  Milestii Mici      80.02 347 ⥣P    P       01 43 20.3  -1.0
SRO   Srobarova          80.14 355  eP    P       01 43 23.3 +1.4
SRO                                 pmax  pmax
      comp=Z,21nm,1.7s
SRO   Srobarova          80.14 355  eP    P       01 43 23.3 +1.4
CONA  Conrad Observa     80.14 356  i P   P       01 43 23.1 +1.0
      comp=Z,10nm,1.1s,SNR=6.7
MOA   Molln              80.27 357  eP    P       01 43 23.3 +0.7
      comp=Z,5.8nm,1.6s
KIV   Kislovodsk         80.28 337 ⥣P    P       01 43 22.5  -0.4
KIV   Kislovodsk         80.28 337  eP    P       01 43 23.3 +0.4
KIV                                 pmax  pmax
      comp=Z,11nm,1.0s
KIV   Kislovodsk         80.28 337   P    P       01 43 21.9  -0.9
KIV                                 IAmb  IAmb    01 43 29.7
      comp=Z,9.2nm,0.8s
ARCR  ARCALIA            80.38 350 ⥣P    P       01 43 22.9  -0.3
KBZ   Khabaz             80.44 337   P    P       01 43 23.8 +0.2
      comp=Z,5.1nm,0.8s,baz=318,slow=3.5,SNR=12
KBZ   Khabaz             80.44 337⥥eP    P       01 43 23.2  -0.4
KBZ                                 pmax  pmax
      comp=Z,9.0nm,1.2s
NCK   Nalchik            80.49 336ceP    P       01 43 24.9 +1.0
MOTA  Moosalm            80.82 360  eP    P       01 43 26.5 +0.7
      comp=Z,11nm,1.5s
ARSA  Arzberg            80.83 357  eP    P       01 43 25.7   0.0
      comp=Z,14nm,1.5s
DRGR                     80.83 352 ⥣P    P       01 43 25.5  -0.2
DRGR                     80.83 352 ⥣P    P       01 43 25.5  -0.2
WATA  Walderalm          80.83 359  i P   P       01 43 27.6 +1.7
      comp=Z,5.1nm,0.8s,SNR=5.3
WTTA  Wattenberg         80.90 359  eP    P       01 43 27.1 +0.9
      comp=Z,6.7nm,0.8s
SQTA  Sankt Quirin       80.95 360  i P   P       01 43 27.3 +0.9
      comp=Z,9.2nm,1.1s,SNR=6.5
KBA   Koelnbreinsper     81.06 358  i P   P       01 43 28.4 +1.3
      comp=Z,17nm,0.8s,SNR=11
ZEI   Tsey               81.08 336  eP    P       01 43 15.8   -12
ZEI                                 pmax  pmax
      comp=Z,3.0nm,0.6s
GYA0B ALIBECK ARRAY      81.14 324   P    P       01 43 27.1  -0.4
GYA0B                               IAmb  IAmb    01 43 45.0
      comp=Z,6.5nm,0.7s
FETA  Feichten           81.15 360  eP    P       01 43 28.6 +1.0
      comp=Z,7.2nm,1.0s
PLOR  Plostina           81.34 349 ⥣P    P       01 43 28.3  -0.2
PLOR  Plostina           81.34 349 ⥣P    P       01 43 28.3  -0.2
DOPR  Dopca              81.38 350 ⥣P    P       01 43 29.1 +0.5
COVR  Voineasa-Covas     81.40 349 ⥣P    P       01 43 29.2 +0.4
ABTA  Abfaltersbach      81.41 359  i P   P       01 43 29.5 +0.7
      comp=Z,9.4nm,1.1s,SNR=8.1
SOKA  Soboth             81.42 357  i P   P       01 43 29.7 +0.9
      comp=Z,20nm,1.3s,SNR=14
SIRR  Siria              81.44 352 ⥣P    P       01 43 29.0   0.0
MYKA  Terra Mystica      81.50 358  eP    P       01 43 30.1 +0.8
      comp=Z,3.2nm,0.6s
ZOU   Zoufplan           81.59 358   IAmb IAmb    01 43 32.4
      comp=Z,6.2nm,1.0s
OBKA  Obir               81.60 357  eP    P       01 43 30.5 +0.6
      comp=Z,7.6nm,1.1s
CTAO  Charters Tower     81.68 222   P    P       01 43 30.4 +0.1
CTAO                                pmax  pmax
      comp=Z,7.0nm,1.0s
CTAO  Charters Tower     81.68 222   P    P       01 43 30.4 +0.1
CTAO                                IAmb  IAmb    01 43 45.4
      comp=Z,7.3nm,0.9s
TUE   Stuetta            81.69   1   P    P       01 43 31.1 +0.6
MLR   Muntele Rosu       81.78 349 ⥣P    P       01 43 29.9  -1.0
MLR   Muntele Rosu       81.78 349 ⥣P    P       01 43 29.9  -1.0
CFR   Carcaliu           81.82 348 ⥣P    P       01 43 30.9 +0.1
CFR   Carcaliu           81.82 348 ⥣P    P       01 43 30.9 +0.1
VOIR                     81.94 350 ⥣P    P       01 43 31.7 +0.1
VOIR                     81.94 350 ⥣P    P       01 43 31.7 +0.1
ARR   Arges              82.05 350 ⥣P    P       01 43 31.2  -1.0
BZS   Buzias             82.09 352 ⥣P    P       01 43 31.0  -1.3
BZS   Buzias             82.09 352 ⥣P    P       01 43 31.0  -1.3
CTI   Castel Tesino      82.12 359   IAmb IAmb    01 43 46.4
      comp=Z,7.5nm,1.2s
GZR   Gura Zlata         82.21 351 ⥣P    P       01 43 32.7  -0.4
HARR  Harsova            82.32 348 ⥣P    P       01 43 32.7  -0.9
HARR  Harsova            82.32 348 ⥣P    P       01 43 32.7  -0.9
TLBR  Topalu             82.45 347 ⥣P    P       01 43 33.8  -0.4
AKH   Akhalkalaki        82.48 336 ⥣P    P       01 43 35.5 +0.8
TIRR  Tirgusor           82.49 347 ⥣P    P       01 43 34.0  -0.4
TIRR  Tirgusor           82.49 347 ⥣P    P       01 43 34.0  -0.4
HRA   Herat              82.67 319   P    P       01 43 35.5  -0.3
HRA                                 IAmb  IAmb    01 43 36.2
      comp=Z,5.5nm,1.2s
FRGS  Fruska Gora        82.69 353 ⥣P    P       01 43 35.0  -0.5
HERR  Herculane          82.75 352 ⥣P    P       01 43 35.5  -0.2
TEOL  Teolo              82.81 359   P    P       01 43 36.5 +0.5
BNI   Bardonecchia       83.06   3   P    P       01 43 38.3 +0.7
BNI                                 pmax  pmax
      comp=Z,7.0nm,1.0s
BNI   Bardonecchia       83.06   3   P    P       01 43 38.3 +0.7
BNI                                 IAmb  IAmb    01 43 40.1
      comp=Z,7.5nm,1.0s
GNI   Garni              83.34 334⥥eP    P       01 43 40.7 +1.6
GNI                                 pmax  pmax
      comp=Z,13nm,2.1s
ZIMR                     83.66 349 ⥥P    P       01 43 40.6 +0.2
ZIMR                     83.66 349 ⥥P    P       01 43 40.6 +0.2
MSSA  Maissana           83.85   1   P    P       01 43 41.5   0.0
PLVB  Pleven             84.01 350 ⥣P    P       01 43 42.7 +0.5
BOVS  Bovan              84.05 352 ⥣P    P       01 43 41.6  -0.8
VTS   Vitosha            84.92 351 ⥣P    P       01 43 46.5  -0.6
VTS   Vitosha            84.92 351 ⥣P    P       01 43 46.5  -0.6
GURO  Guroymak-BITLI     85.54 336   P    P       01 43 50.9 +0.6
GURO                                IAmb  IAmb    01 43 54.2
      comp=Z,6.1nm,1.3s
BRTR  Keskin Array B     86.26 342   P    P       01 43 54.1 +0.3
      comp=Z,1.0nm,0.7s,baz=5.7,slow=1.2,SNR=6.2
WB0   Warramunga Arr     86.70 232   P    P       01 43 55.3  -0.6
WB0                                 IAmb  IAmb    01 44 12.0
      comp=Z,6.0nm,1.1s
WRAB  Tennant Creek      86.86 232⥣eP    P       01 43 55.7  -0.9
WRAB                                pmax  pmax
      comp=Z,3.0nm,0.9s
WB2   Warramunga Arr     86.87 232   P    P       01 43 56.6   0.0
WB2                                 IAmb  IAmb    01 44 19.1
      comp=Z,5.4nm,1.1s
WRA   Warramunga Arr     86.87 232   P    P       01 43 55.6  -1.1
      comp=Z,1.8nm,0.9s,baz=34,slow=5.8,SNR=11
WRA   Warramunga Arr     86.87 232  i P   P       01 43 56.9 +0.2
WRA                                 pmax  pmax
      comp=Z,2.0nm,0.9s
FNA   Florina            86.91 352   IAmb IAmb    01 43 57.9
      comp=Z,5.3nm,0.7s
ESDC  Sonseca Array      87.62  11   P    P       01 44 00.2  -0.1
      comp=Z,1.9nm,0.8s,baz=347,slow=4.5,SNR=15
ESDC  Sonseca Array      87.62  11   IAmb IAmb    01 44 05.6
      comp=Z,2.6nm,0.9s
TIP   Timpagrande        88.83 355   P    P       01 44 05.5  -0.6
TIP                                 IAmb  IAmb    01 44 07.5
      comp=Z,5.5nm,1.1s
FITZ  Fitzroy Crossi     89.73 239   P    P       01 44 11.6 +1.3
FITZ                                IAmb  IAmb    01 44 21.9
      comp=Z,8.4nm,1.4s
ASAR  Alice Springs      90.26 230   P    P       01 44 12.3  -0.5
      comp=Z,3.2nm,0.8s,baz=35,slow=4.8,SNR=21
ASAR  Alice Springs      90.26 230   P    P       01 44 12.0  -0.7
ASAR  Alice Springs      90.26 230   P    P       01 44 12.0  -0.7
OTAV  Otavalo            90.42  89ceP    P       01 44 16.8 +2.5
OTAV                                pmax  pmax
      comp=Z,4.0nm,1.3s
TSUM  Tsumeb            146.60 348   PKPbc PKPbc  01 50 53.8 +0.1
BOSA  Boshof            154.01 329   PKPbc PKPbc  01 51 11.5   0.0
      comp=Z,1.2nm,0.6s,baz=354,slow=1.1,SNR=7.3
```

RSNC 06 01:35:39.8±0.9, 6°.79N×73°.11W, h148km±4km, ML3.2, Mw3.5, 4C-3D, Fault plane solution: NP1:φs148.00000°, δ71.00000°, λ98.00000°., Northern Colombia

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Code  Station Name         Δ°   AZ°     Phase ID           Time      Res
                                     Op       ISC        h  m  s     ISC
BARC  Barichara           0.21 200⥣iP       Pn        01 35 59.6  -0.6
BARC                                 eS       Sn        01 36 14.8  -0.9
BARC                                 i                  01 36 16.4
      comp=Z,300nm,0.4s
BRRC  Barranca, Sant      0.68 297⥣iP       Pn        01 36 01.5  -0.5
BRRC                                 eS       Sn        01 36 19.0 +0.2
BRRC                                 i                  01 36 23.7
      comp=Z,187nm,0.2s
PAMC  Pamplona, Colo      0.68  37⥥iP       Pn        01 36 02.4  -0.1
PAMC                                 eS       Sn        01 36 19.9 +0.1
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PAMC				i		01 36 21.8	
	comp=Z,128nm,0.5s						
RUSC	La Rusia	0.90	178	eP	Pn	01 36 03.5	-0.6
RUSC				eS	Sn	01 36 22.1	-0.6
RUSC				i		01 36 23.1	
	comp=Z,192nm,0.2s						
TAMC	Tame, Arauca	1.36	105	⇓iP	Pn	01 36 07.7	-0.1
TAMC				eS	Sn	01 36 29.1	-0.1
TAMC				i		01 36 32.7	
	comp=Z,56nm,0.2s						
OCAC	Ocana	1.45	352	eP	Pn	01 36 07.9	-1.0
OCAC				eS	Sn	01 36 30.8	-0.4
OCAC				i		01 36 35.5	
	comp=Z,371nm,0.2s						
SPBC	San Pablo de B	1.48	220	eP	Pn	01 36 08.3	-0.8
SPBC				eS	Sn	01 36 30.8	-0.8
SPBC				i		01 36 37.6	
	comp=Z,226nm,0.3s						
ZARC	Zaragoza, Cauc	1.87	292	eP	Pn	01 36 12.2	-1.1
ZARC				eS	Sn	01 36 38.1	-0.9
ZARC				i		01 36 43.3	
	comp=Z,243nm,0.6s						
NORC	Norcasia	2.13	235	⇑eP	Pn	01 36 15.4	-1.1
NORC				eS	Sn	01 36 44.0	-0.7
NORC				i		01 36 50.9	
	comp=Z,147nm,0.2s						
SMLC	San Martn de	2.21	335	eP	Pn	01 36 15.9	-1.4
SMLC				eS	Sn	01 36 46.4	+0.1
SMLC				i		01 36 52.5	
	comp=Z,132nm,0.1s						
CHIC	Chingaza	2.24	196	eP	Pn	01 36 17.6	-0.5
CHIC				eS	Sn	01 36 47.1	-0.4
CHIC				i		01 36 52.8	
	comp=Z,94nm,0.3s						
ROSC	El Rosal	2.29	212	eP	Pn	01 36 18.9	+0.3
ROSC				eS	Sn	01 36 50.6	+2.1
ROSC				i		01 36 52.9	
	comp=Z,186nm,0.4s						
HELC	Santa Helena	2.48	256	eP	Pn	01 36 21.3	+0.4
HELC				eS	Sn	01 36 52.6	+0.1
HELC				i		01 36 57.9	
	comp=Z,78nm,0.3s						
UREC	San Jos de Ur	2.59	292	eP	Pn	01 36 19.5	-2.4
UREC				eS	Sn	01 36 51.4	-3.0
UREC				i		01 37 03.6	
	comp=Z,139nm,0.3s						
VILC	Villavicencio,	2.73	192	eP	Pn	01 36 23.2	-0.6
VILC				eS	Sn	01 36 57.4	-0.4
GUY2C	Guyana, Caldas	2.73	235	eP	Pn	01 36 24.1	-0.1
GUY2C				eS	Sn	01 36 58.7	+0.4
GUY2C				i		01 37 08.3	
	comp=Z,80nm,0.3s						
CBOC	Ciudad Bolivar	3.03	252	eP	Pn	01 36 27.5	-0.2
CBOC				eS	Sn	01 37 04.7	+0.1
CBOC				i		01 37 16.1	
	comp=Z,30nm,0.5s						
DBBC	Dabeiba	3.09	274	eP	Pn	01 36 28.3	0.0
DBBC				eS	Sn	01 37 04.3	-1.4
MOTC	Monteria, Cord	3.21	308	⇑iP	Pn	01 36 26.8	-3.0
MOTC				eS	Sn	01 37 05.7	-2.8
MOTC				i		01 37 20.9	
	comp=Z,53nm,0.4s						
ANIL	Santa Ana	3.23	225	eP	Pn	01 36 30.6	+0.2
ANIL				eS	Sn	01 37 09.9	+0.5
ARGC	Ariguani, Magd	3.25	340	eP	Pn	01 36 29.7	-0.5
ARGC				eS	Sn	01 37 08.5	-0.9
ARGC				i		01 37 19.2	
	comp=Z,24nm,0.3s						
ORTC	Ortega, Tolima	3.57	217	eP	Pn	01 36 33.6	-0.9
ORTC				eS	Sn	01 37 16.9	0.0
ORTC				i		01 37 21.1	
	comp=Z,40nm,0.7s						
PLMC	San Jos del P	3.67	239	⇓iP	Pn	01 36 35.1	-0.7
PLMC				eP	Pn	01 36 35.1	-0.7
PLMC				eS	Sn	01 37 19.2	0.0
PLMC				i		01 37 23.6	
	comp=Z,27nm,0.3s						
SJCC	San Jacinto, C	3.70	327	eP	Pn	01 36 33.2	-3.0
SJCC				eS	Sn	01 37 15.1	-4.9
SJCC				i		01 37 27.6	
	comp=Z,23nm,0.3s						
YOTC	Yotoco, Valle	4.26	229	eP	Pn	01 36 41.9	-1.7
YOTC				eS	Sn	01 37 35.6	+2.4
SMRC	Santa Marta, M	4.48	346	eP	Pn	01 36 44.6	-1.7
SMRC				eS	Sn	01 37 32.9	-5.2
SMRC				i		01 37 37.9	
	comp=Z,24nm,0.4s						

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*IDC **06** 01:44:20.2±1.4, 52°.35N×169°.62W, h0km, mb3.9/14, mb1 4.1/16, mb1mx3.9/41, mbtmp3.9/16, ML3.3/2, Error ellipse: s-maj=36.8km s-min=16.8km az=174.0*

*NEIC **06** 01:44:23.3±1.2, 52°.18N±0°.07×169°.45W±0°.07, h20km±9km, ML3.4(AEIC), Error ellipse: s-maj=11.1km s-min=5.8km az=192.0*

*AEIC **06** 01:44:24±0.8, 52°.25N±0°.10×169°.5W±0°.1, h41km±10km, Error ellipse: s-maj=15.5km s-min=8.4km az=153.0*

ISC 06 01:44:25.4±1.0**, 52°.4N**±0°.2×**169°.56W**±0°.08**, h35km, n33, σ0ˢ.77**/30**, mb3.9**/14**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIKH	Nikolski High	0.76	34		Pn	01 44 40.1	+0.5
OKSO	Okmok South	1.32	39		Pn	01 44 47.9	+0.5
OKTU	Okmok Mt. Tuli	1.39	41		Pn	01 44 49.0	+0.7
OKNC	Okmok New Cone	1.41	38		Pn	01 44 49.5	+0.9
OKFG	Magazine Ridge	1.46	43		Pn	01 44 49.2	0.0
MSW	Makushin Switc	2.30	46		Pn	01 45 01.6	+0.8
UNV	Unalaska Valle	2.38	50		Pn	01 45 02.0	+0.2
AKUT	Akutan	2.90	50	Pn	Pn	01 45 09.8	+0.8
GSMY	Great Sitkin M	4.01	268		Pn	01 45 25.9	+1.6
ADK	Adak	4.41	267	Pn	Pn	01 45 29.3	-0.5
KIWB	Kanaga Island	4.71	267	Pn	Pn	01 45 33.8	0.0
AMKA	Amchitka	6.97	266	Pn	Pn	01 46 04.9	+0.1
KDAK	Kodiak Island	11.14	54	Pn	Pn	01 47 00.6	-1.4
	0.6nm,0.3s,baz=276,slow=7.8,SNR=9.8						
ILAR	Eielson Array	17.04	34	Pn	Pn	01 48 19.7	-0.9
	0.0nm,0.3s,baz=230,slow=11,SNR=1.8						
PETK	Petropavlovsk-	19.75	285	P	P	01 48 52.1	+0.1
	2.1nm,0.3s,baz=90,slow=13,SNR=46						
INK	Inuvik	23.43	33	P	P	01 49 29.5	-1.4
	1.6nm,0.4s,baz=235,slow=7.0,SNR=18						
YKA	Yellowknife Ar	30.35	49	P	P	01 50 33.9	+0.6
	0.5nm,0.4s,baz=280,slow=15,SNR=11						
KLR	Kul'dur	36.35	289	P	P	01 51 24.8	-1.0
	1.3nm,0.4s,baz=51,slow=14,SNR=5.8						
H11S1	WAKE ISLAND Hy	38.55	218	T	T	02 32 57.2	
	baz=23,slow=76,SNR=36						
H11S2	WAKE ISLAND Hy	38.57	218	T	T	02 32 57.6	
	baz=23,slow=76,SNR=27						
H11S3	WAKE ISLAND Hy	38.57	218	T	T	02 32 50.2	
	baz=23,slow=76,SNR=28						
PDAR	Pinedale Array	40.52	79	P	P	01 52 00.5	-0.7
	0.4nm,0.5s,baz=299,slow=3.3,SNR=6.1						
TXAR	Lajitas Array	52.87	89	P	P	01 53 38.4	+0.7
	0.3nm,0.6s,baz=298,slow=6.0,SNR=3.7						
ZALV	Zalesovo Beam	57.36	317	P	P	01 54 10.1	+0.5
	0.6nm,0.4s,baz=4.3,slow=5.9,SNR=3.5						
ARCES	ARCESS Array B	57.93	354	P	P	01 54 13.2	-0.2
	2.1nm,0.7s,baz=24,slow=7.4,SNR=8.1						
MKAR	Makanchi Array	63.73	313	P	P	01 54 52.8	-0.4
	0.3nm,0.3s,baz=53,slow=6.7,SNR=9.2						
FINES	FINESS Array B	65.87	352	P	P	01 55 06.6	-0.2
	0.8nm,0.4s,baz=8.6,slow=7.6,SNR=14						
NB2	NORSAR Subarra	66.96	360	P	P	01 55 13.7	-0.2
	comp=Z,0.4nm,0.6s,baz=2.1,slow=6.5						
NOA	NORSAR Array B	66.96	360	P	P	01 55 13.8	-0.1
	comp=Z,0.6nm,0.6s,baz=0.7,slow=6.3,SNR=4.5						
AKASG	Malin Array Be	76.10	348	P	P	01 56 08.5	-0.6
	comp=Z,1.7nm,0.6s,baz=16,slow=5.8,SNR=4.4						
CMAR	Chiang Mai Arr	76.51	283	P	P	01 56 12.4	+0.5
	comp=Z,0.8nm,0.3s,baz=28,slow=6.1,SNR=6.4						
GERES	GERESS Array B	79.15	358	P	P	01 56 26.9	+0.7
	comp=Z,0.4nm,0.6s,baz=57,slow=4.9,SNR=4.3						
KBZ	Khabaz	80.28	337	P	P	01 56 33.3	+1.1
	comp=Z,1.9nm,0.9s,baz=69,slow=1.8,SNR=4.5						

PRU 06 01:45:41.0±0.0**, 50°.22N×18°.92E, h0km, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OJC	Ojcow	0.56	90	ePg	Pg	01 45 51.0	-0.8
OJC				eSg	Sg	01 45 58.2	-0.9
OKC	Ostrava-Krasne	0.63	233	ePG	Pg	01 45 53.8	+0.8
OKC				eSG	Sg	01 46 01.7	+0.5
	comp=Z,7.3nm,0.6s						
MORC	Moravsky Berou	0.99	244	ePG	Pg	01 46 00.1	+0.1
MORC				eSG	Sb	01 46 14.3	-0.5
LANS	Liptovska Anna	1.13	161	ePG	Pg	01 46 02.6	0.0
LANS				eSG	Sg	01 46 17.8	+0.6
LANS				eLG	Lg	01 46 21.3	
NIE	Niedzica	1.20	131	ePg	Pg	01 46 04.3	+0.3
NIE				eSg	Sb	01 46 20.5	-0.3
KRLC	Kraliky	1.38	265	ePG	Pg	01 46 06.6	-0.9
KRLC				eSG	Sb	01 46 26.0	0.0
	comp=Z,7.3nm,0.3s						
JAVC	Velka Javorina	1.59	211	ePN	Pn	01 46 10.1	-0.3
DPC	Dobruska-Polom	1.67	275	ePG	Pn	01 46 11.4	-0.2
DPC				eSG	Sg	01 46 34.8	+0.1
	comp=Z,8.0nm,0.6s						
DPC	Dobruska-Polom	1.67	275	e	Pn	01 46 11.4	-0.2
VYHS	Vyhne	1.73	182	ePN	Pn	01 46 11.3	-1.0
VYHS				eSN	Sn	01 46 33.7	-1.4
VRAC	Vranov	1.76	240	ePN	Pn	01 46 12.4	-0.4
VRAC				eSG	Sb	01 46 37.1	+0.2
OSTC	Ostas	1.76	282	eSG	Sg	01 46 37.9	+0.3
KSP	Ksiaz	1.79	291	ePg	Pg	01 46 15.0	-0.2
KSP				eSg	Sg	01 46 39.5	+1.1
CHVC	Chvalec	1.87	282	ePG	Pn	01 46 14.1	-0.2
UPC	Upice	1.88	280	eSG	Sg	01 46 43.1	+1.6
KRUC	Moravsky	2.01	236	ePN	Pn	01 46 15.2	-1.0
KRUC				eSG	Sb	01 46 44.2	+0.3
PRU	Pruhonice	2.83	267	eSG	Sg	01 47 10.9	-0.9
CKRC	Cesky Krumlov	3.31	247	eSG	Sg	01 47 26.4	-1.0
KHC	Kasperske Hory	3.64	255	ePN	Pn	01 46 38.0	-0.6
KHC				ePG	Pb	01 46 44.5	-1.6
KHC				eSG	Sg	01 47 35.2	-2.6
	comp=Z,2.7nm,0.5s						

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*NNC **06** 02:07:27.9±2.1, 36°.88N×70°.44E, h214km±31km, mb2.7, mpv3.6, Error ellipse: s-maj=21.4km s-min=12.1km az=1.0*

ISC 06 02:07:26.6±3.4**, 36°.8N**±0°.2×**70°.5E**±0°.2**, h200km, n12, σ0ˢ.73**/15**, 5C-3D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	5.92	24	P	Pn	02 08 53.3	+0.2
	SNR=54						
UCH	Uchtor	6.29	28	P	Pn	02 08 58.2	+0.2
	SNR=10						
KK31	Karatay Array	6.34	0	⇑P	Pn	02 08 58.1	-0.1
	1.0nm,0.2s,baz=178,slow=12,SNR=100						
KK31				S	Sn	02 10 09.8	-1.1
	0.6nm,0.2s,baz=187,slow=16,SNR=5.6						
EKS2	Erkin-Say	6.43	22	P	Pn	02 09 00.8	+1.4
	SNR=9.4						
AAK	Ala-Archa	6.64	27	P	Pn	02 09 03.3	+1.1
	SNR=5.7						
AAK	Ala-Archa	6.64	27	⇓P	Pn	02 09 02.7	+0.4
	2.6nm,0.6s						
AAK				⇓S	Sn	02 10 18.2	+0.1
	17nm,0.7s						
USP	Ospenovka	7.20	24	P	Pn	02 09 09.5	+0.2
	SNR=5.9						
TKM2	Tokmak 2	7.31	31	P	Pn	02 09 10.7	-0.3
	SNR=5.6						
TKM2	Tokmak 2	7.31	31	⇑P	Pn	02 09 10.7	-0.3
	2.7nm,0.5s						
TKM2				⇓S	Sn	02 10 34.3	+0.4
	10nm,0.8s						
MAKZ	Makanchi	13.20	37	⇑P	Pn	02 10 25.3	-1.1
	3.8nm,0.7s						
MK31	Makanchi Array	13.34	38	⇑P	Pn	02 10 28.0	-0.2
	0.9nm,0.4s,baz=217,slow=15,SNR=26						
AB31	Akbulak array	14.66	332	⇑P	Pn	02 10 44.8	+0.3
	0.5nm,0.3s,baz=141,slow=12,SNR=36						

IDC 06 02:15:19.5±15.0**, 51°.94S×161°.29E, h0km, mb3.6**/3**, mb1 3.9**/3**, mb1mx3.7**/14**, mbtmp3.6**/3**, MS3.5**/2**, Ms1 3.5**/2**, ms1mx3.1**/21**, Error ellipse: s-maj=677.8km s-min=26.7km az=68.0, North of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	Vanda	25.69	180	P	P	02 20 50.7	0.0
	1.1nm,0.8s,baz=338,slow=9.4,SNR=8.8						
ASAR	Alice Springs	35.16	313	P	P	02 22 15.4	+0.4
	0.5nm,0.7s,baz=149,slow=8.2,SNR=8.3						
MSVF	Nonsavu	36.61	27	LR	LR	02 35 12.9	
	comp=Z,125nm,18.8s,baz=332,slow=33						
H01W1	Cape Leeuwin H	37.49	278	T	T	03 01 45.5	
	baz=132,slow=76,SNR=77						
H01W2	Cape Leeuwin H	37.50	278	T	T	03 01 46.0	
	baz=132,slow=76,SNR=90						
H01W3	Cape Leeuwin H	37.51	278	T	T	03 01 46.8	
	baz=132,slow=76,SNR=73						
WRA	Warramunga Arr	38.24	316	P	P	02 22 40.6	-0.6
	0.9nm,0.9s,baz=150,slow=7.8,SNR=4.8						
FITZ	Fitzroy Crossi	43.86	307	LR	LR	02 40 53.0	
	comp=Z,40nm,20.7s,baz=276,slow=35						
H03S2	Juan Fernandez	79.67	133	T	T	03 55 59.3	
	baz=211,slow=74,SNR=49						
H03S1	Juan Fernandez	79.68	133	T	T	03 56 00.6	
	baz=211,slow=74,SNR=57						
H03S3	Juan Fernandez	79.69	133	T	T	03 55 55.9	
	baz=211,slow=74,SNR=48						

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*IDC **06** 02:17:31.6±1.6, 52°.34N×169°.52W, h0km, mb3.7/9, mb1 3.9/11, mb1mx3.7/42, mbtmp3.7/11, ML3.4/2, Error ellipse: s-maj=41.8km s-min=20.4km az=179.0*

*NEIC **06** 02:17:34.5±1.3, 52°.15N±0°.06×169°.44W±0°.04, h20km±5km, ML3.2(AEIC), Error ellipse: s-maj=9.3km s-min=1.6km az=158.0*

*AEIC **06** 02:17:36±1.7, 52°.25N±0°.07×169°.38W±0°.06, h34km±6km, Error ellipse: s-maj=10.7km s-min=5.5km az=186.0*

ISC 06 02:17:37.0±1.0**, 52°.3N**±0°.2×**169°.49W**±0°.09**, h40km, n26, σ0ˢ.71**/22**, mb3.6**/9**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIKH	Nikolski High	0.80	29		Pn	02 17 51.5	-0.3
OKTU	Okmok Mt. Tuli	1.42	38		Pn	02 17 59.8	-0.4
OKFG	Magazine Ridge	1.49	40		Pn	02 18 00.5	-0.7
MAPS	Pakushin South	2.17	44		Pn	02 18 10.7	0.0
MAPS					Sn	02 18 37.7	+1.4
MSW	Makushin Switc	2.32	44		Pn	02 18 12.6	0.0
MNAT	Makushin Natee	2.34	45		Pn	02 18 12.6	-0.3
UNV	Unalaska Valle	2.39	48		Pn	02 18 13.4	-0.1
UNV					Sn	02 18 42.0	+0.4
KIWB	Kanaga Island	4.74	268	Pn	Pn	02 18 45.6	-0.3
KDAK	Kodiak Island	11.15	54	Pn	Pn	02 20 11.7	-1.9
	0.5nm,0.3s,baz=241,slow=3.2,SNR=9.7						
ILAR	Eielson Array	17.07	34	P	Pn	02 21 32.1	-0.2
	0.1nm,0.3s,baz=225,slow=8.9,SNR=1.9						
PETK	Petropavlovsk-	19.81	285	P	P	02 22 03.9	+0.1
	1.2nm,0.3s,baz=87,slow=14,SNR=20						
INK	Inuvik	23.46	33	P	P	02 22 41.5	-0.8
	0.8nm,0.4s,baz=218,slow=7.6,SNR=10						
YKA	Yellowknife Ar	30.36	49	P	P	02 23 45.2	+0.7
	0.4nm,0.4s,baz=280,slow=15,SNR=7.3						
H11N2	WAKE ISLAND Hy	37.33	218	T	T	03 04 34.7	
	baz=22						
H11N3	WAKE ISLAND Hy	37.34	218	T	T	03 04 34.9	
	baz=22,slow=74,SNR=5.5						
H11N1	WAKE ISLAND Hy	37.35	218	T	T	03 04 42.7	
	baz=22,slow=74,SNR=3.7						
H11S1	WAKE ISLAND Hy	38.52	218	T	T	03 06 05.4	
	baz=23,slow=76,SNR=22						
H11S2	WAKE ISLAND Hy	38.53	218	T	T	03 06 06.5	
	baz=23,slow=76,SNR=10.0						
H11S3	WAKE ISLAND Hy	38.54	218	T	T	03 06 07.1	
	baz=23,slow=76,SNR=15						
PDAR	Pinedale Array	40.50	79	P	P	02 25 11.8	-0.1
	0.4nm,0.5s,baz=281,slow=4.1,SNR=6.9						
TXAR	Lajitas Array	52.83	89	P	P	02 26 48.5	+0.1
	0.2nm,0.4s,baz=327,slow=6.5,SNR=2.0						
ARCES	ARCESS Array B	58.01	354	P	P	02 27 24.8	-0.2
	1.2nm,0.7s,baz=21,slow=7.8,SNR=4.7						
MKAR	Makanchi Array	63.81	313	P	P	02 28 04.2	-0.6
	0.2nm,0.4s,baz=39,slow=6.2,SNR=4.9						
FINES	FINESS Array B	65.95	352	P	P	02 28 18.2	-0.2
	1.2nm,0.7s,baz=357,slow=7.6,SNR=6.2						
NOA	NORSAR Array B	67.03	360	P	P	02 28 25.3	0.0
	0.1nm,0.5s,baz=1.9,slow=4.0,SNR=1.3						
CMAR	Chiang Mai Arr	76.56	283	P	P	02 29 24.2	+1.1
	1.2nm,0.3s,baz=50,slow=8.4,SNR=2.0						

IDC 06 02:31:05.2±4.0**, 3°.86S×150°.55E, h0km, mb3.4**/2**, mb1 3.7**/2**, mb1mx3.4**/38**, mbtmp3.4**/2**, Error ellipse: s-maj=145.9km s-min=51.5km az=114.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.48	223	P	P	02 36 05.5	-0.9
	0.7nm,0.5s,baz=50,slow=10,SNR=11						
ASAR	Alice Springs	25.42	218	P	P	02 36 35.7	+0.9
	0.6nm,0.6s,baz=52,slow=8.5,SNR=8.0						
TORD	Torodi Ar. Bea	147.88	289	PKPbc	PKPbc	02 50 52.5	-1.0
	0.3nm,0.6s,baz=71,slow=4.4,SNR=2.2						

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*MOS **06** 02:46:02.2±1.2, 45°.79N×150°.66E, h47km, mb4.7/13, Error ellipse: s-maj=9.8km s-min=8.7km az=105.1*

*JMA **06** 02:46:03.6±0.4, 45°.56N×150°.71E, h30km, M4.6*

*SKHL **06** 02:46:04.6±0.6, 45°.20N×150°.90E, h86km±3km, mb5.3/4, msha6.0/3*

*IDC **06** 02:46:06.7±3.9, 45°.53N×150°.87E, h85km±37km, mb3.9/18, mb1 4.0/19, mb1mx3.7/42, mbtmp4.2/19, MS2.9/2, Ms1 2.9/2, ms1mx2.4/50, Error ellipse: s-maj=44.4km s-min=16.1km az=175.0*

*NEIC **06** 02:46:07.6±1.7, 45°.7N±0°.3×150°.8E±0°.2, h84km±14km, mb4.4/21, Error ellipse: s-maj=40.2km s-min=4.5km az=155.0*

ISC 06 02:46:05.0±0.7**, 45°.00N**±0°.07×**150°.87E**±0°.07**, h100km, n130, σ1ˢ.95**/139**, mb4.3**/35**, 9C-7D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	Kuril'sk	2.14	277	ePN	Pn	02 46 38.9	-0.3
KUR				i S	Sn	02 47 04.9	-0.6
KUR				pmax	pmax		
	comp=Z,214nm,0.4s						
KUR				pmax	pmax		
	comp=E,73nm,0.2s						
KUR				pmax	pmax		
	comp=N,72nm,0.3s						
KUR				smax	smax		
	comp=N,1µm,0.3s						
KUR				smax	smax		
	comp=E,657nm,0.4s						
KUR	Kuril'sk	2.14	277	eP	Pn	02 46 38.8	-0.5
KUR				AMB	AMB	02 46 44.0	
	comp=E,160nm,0.3s						
KUR				i S	Sn	02 47 04.0	-1.5
KUR				A	A	02 47 07.0	
	comp=E,2µm,0.4s						
KUR				A	A	02 47 07.0	
	comp=E,960nm,0.4s						
YUK	Yuzh-Kuril'sk	3.71	257	ePN	Pn	02 47 02.3	+2.2
YUK				eS	Sn	02 47 43.7	+0.8
YUK				pmax	pmax		
	comp=E,19nm,0.1s						
YUK				pmax	pmax		
	comp=Z,146nm,0.1s						
YUK				smax	smax		
	comp=E,545nm,0.4s						
YUK				smax	smax		
	comp=N,239nm,0.3s						
YUK	Yuzh-Kuril'sk	3.71	257	eP	Pn	02 47 01.6	+1.5
YUK				AMB	AMB	02 47 02.8	
	comp=N,146nm,0.3s						
YUK				eS	Sn	02 47 44.8	+1.9
YUK				A	A	02 47 46.0	
	comp=N,239nm,0.4s						
YUK				A	A	02 47 46.0	
	comp=N,545nm,0.4s						
NEM2	Nemuro 2	4.03	248	P	Pn	02 47 04.3	-0.2
NEM2				eS	Sn	02 47 49.5	-1.2
GLVR	Golovnino	4.04	254	ePN	Pn	02 47 05.4	+0.8
GLVR				eS	Sn	02 47 52.1	+1.3
GLVR				smax	smax		
	comp=N,380nm,0.2s						
GLVR				smax	smax		
	comp=E,573nm,0.5s						
GLVR	Golovnino	4.04	254	eP	Pn	02 47 05.4	+0.8
GLVR				eS	Sn	02 47 52.1	+1.3
GLVR				A	A	02 47 57.0	
	comp=E,380nm,0.5s						
GLVR				A	A	02 47 57.0	
	comp=E,573nm,0.5s						
NMR	Nemuro--Hokkai	4.04	248	⇑iPN	Pn	02 47 04.4	-0.2
NMR	Nemuro--Hokkai	4.04	248	i P	Pn	02 47 04.4	-0.2
JRA	Rausu	4.25	258	P	Pn	02 47 09.0	+1.6
JRA				eS	Sn	02 47 58.4	+2.5
JNK	Nakash	4.63	254	P	Pn	02 47 13.8	+1.1
JNK				eS	Sn	02 48 05.6	+0.3
AKK	Akkeshi	4.78	248	eP	Pn	02 47 15.7	+1.1
AKK				eS	Sn	02 48 07.4	-1.3
JAK	Akkeshi	4.88	248	P	Pn	02 47 16.0	0.0
JAK				eS	Sn	02 48 09.6	-1.7
JTKR	Abashiri--Toko	5.08	261	P	Pn	02 47 20.2	+1.5
JAR	Ashorobuto	5.38	254	P	Pn	02 47 24.5	+1.7
JAR				eS	Sn	02 48 25.1	+1.6
JMP	Maruseppu	5.46	262	P	Pn	02 47 25.5	+1.6
JOB	Onbets	5.49	250	P	Pn	02 47 24.9	+0.6
JOB				eS	Sn	02 48 25.5	-0.6
JKK2	Kamakawa 2	5.92	262	P	Pn	02 47 32.2	+2.1
JCH	Churui	5.93	249	P	Pn	02 47 31.1	+0.8
JCH				eS	Sn	02 48 36.0	-0.8
JKA	Kamikawa-asahi	5.97	264	eP	Pn	02 47 32.9	+2.1
JKA	Kamikawa-asahi	5.97	264		Pn	02 47 32.9	+2.1
ASAJ	Asahikawa	5.97	264	P	Pn	02 47 32.8	+2.0
	comp=E,1.8nm,0.3s,baz=70,slow=19,SNR=4.9						
ASAJ				LR	LR	02 50 15.0	
	comp=E,49nm,18.3s,baz=358,slow=41						
ERM	Erimo	6.35	245	⇑iPN	Pn	02 47 37.9	+2.0
ERM	Erimo	6.35	245	Pn	Pn	02 47 43.0	+7.0
JNBK	Urakawa-nobuka	6.49	248	P	Pn	02 47 37.7	-0.1
JBT2	Biratori 2	6.53	253	P	Pn	02 47 39.4	+1.0
SKR	Severo-Kuril's	6.69	30	ePN	Pn	02 47 26.4	-14
SKR				pmax	pmax		
	comp=Z,108nm,0.6s						
SKR	Severo-Kuril's	6.69	30	eP	Pn	02 47 38.8	-1.7
SKR				AMB	AMB	02 47 45.5	
	comp=Z,600nm,0.5s						
JNB	Noboribetsu	7.55	254	P	Pn	02 47 53.8	+1.5
PAU	Pauzhetka	7.59	29	eP	Pn	02 47 49.9	-2.8
JKB	Kayabe	7.80	250	P	Pn	02 47 55.8	+0.1
JKB				eS	Sn	02 49 19.2	-3.1
TYV	Tymovskoe	8.05	320	eP	Pn	02 47 56.9	-2.0
TYV				AMB	AMB	02 48 01.5	
	comp=Z,30nm,0.5s						
JANG	Nango	8.29	239	eS	Sn	02 49 29.7	-4.7
JTM	Tenmabayashi	8.33	243	eS	Sn	02 49 31.0	-4.3
OFUJ	Ofunato	9.04	232	P	Pn	02 48 11.5	-1.1
OFUJ				eS	Sn	02 49 48.2	-4.4
JRG	Rokugo	9.43	237	eS	Sn	02 49 58.7	-3.3
JIO	Ouri	9.66	231	eS	Sn	02 50 02.6	-5.0
KLR	Kul'dur	13.68	295	⇓ePN	Pn	02 49 05.2	-9.4
KLR				pmax	pmax		
	comp=Z,4.0nm,1.4s						
KLR	Kul'dur	13.68	295	eP	Pn	02 49 13.3	-1.3
MSHR	Mys Shultsa	14.44	267	⇑eP	Pn	02 49 23.0	-1.4
MSHR				pmax	pmax		
	comp=Z,20nm,1.0s						
YAK	Yakutsk	21.03	332	i P	P	02 50 33.9	-6.4
BILL	Bilibino	24.46	14	⇑eP	P	02 51 10.3	-3.8
BILL				pmax	pmax		
	comp=Z,5.0nm,1.3s						
H11N2	WAKE ISLAND Hy	28.50	147	T	T	03 22 40.1	
	baz=337,slow=76,SNR=292						
H11N1	WAKE ISLAND Hy	28.51	147	T	T	03 22 46.9	
	baz=337,slow=76,SNR=225						
H11N3	WAKE ISLAND Hy	28.51	147	T	T	03 22 43.9	
	baz=337,slow=76,SNR=242						
TIXI	Tiksi	28.74	346	⇓eP	P	02 51 48.6	-3.9
H11S1	WAKE ISLAND Hy	29.54	148	T	T	03 24 06.1	
	baz=337,slow=76,SNR=207						
H11S3	WAKE ISLAND Hy	29.54	148	T	T	03 23 57.9	
	baz=337,slow=76,SNR=171						
H11S2	WAKE ISLAND Hy	29.55	148	T	T	03 24 00.8	
	baz=337,slow=76,SNR=147						
ULN	Ulaanbaatar	30.03	291	⇑eP	P	02 52 06.1	+1.7
ULN				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ULN	Ulaanbaatar	30.03	291	eP	P	02 52 06.1	+1.7

SONM	Songino Array	30.47	291	P	P	02 52 10.9	+2.6
	comp=Z,1.0nm,0.8s,baz=92,slow=8.9,SNR=3.7						
SONM	Songino Array	30.47	291	IAmb	IAmb	02 52 11.3	
	comp=Z,1.8nm,1.3s						
TLY	Talaya	31.63	299	LR	LR	03 06 36.0	
	comp=Z,46nm,18.3s,baz=2.5,slow=39						
COLA	College	38.48	37	⇑eP	P	02 53 17.6	+0.8
COLA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
IL31		38.89	37	P	P	02 53 19.8	-0.4
IL31				IAmb	IAmb	02 53 31.4	
	comp=Z,5.5nm,1.2s						
ILAR	Eielson Array	38.89	37	P	P	02 53 20.2	-0.1
	comp=Z,0.3nm,0.7s,baz=260,slow=8.4,SNR=4.9						
BCAR	Beaver Creek A	41.25	40	P	P	02 53 40.9	+1.1
DGZ	Jazzator, Alta	42.10	300	⇓eP	P	02 53 48.2	+1.2
DGZ				pmax	pmax		
	comp=Z,1.0nm,1.1s						
ZALV	Zalesovo Beam	42.38	307	PcP	PcP	02 55 42.8	+2.3
	comp=Z,1.0nm,0.5s,baz=46,slow=4.3,SNR=4.4						
ZALV	Zalesovo Beam	42.38	307	P	P	02 53 48.1	-0.9
ZALV	Zalesovo Beam	42.38	307	P	P	02 53 48.1	-0.9
INK	Inuvik	43.96	31	P	P	02 54 02.5	+1.0
	comp=Z,1.8nm,0.8s,baz=283,slow=7.2,SNR=5.2						
INK	Inuvik	43.96	31	IAmb	IAmb	02 54 03.2	
	comp=Z,2.3nm,0.9s						
MK31	Makanchi Array	46.36	298	d iP	P	02 54 21.7	+0.8
MK31	Makanchi Array	46.36	298	P	P	02 54 21.2	+0.4
MKAR	Makanchi Array	46.36	298	P	P	02 54 22.1	+1.2
	comp=Z,0.9nm,0.5s,baz=73,slow=8.3,SNR=13						
MKAR				PcP	PcP	02 55 56.4	+2.1
	comp=Z,0.8nm,0.7s,baz=62,slow=2.9,SNR=4.9						
MKAR	Makanchi Array	46.36	298	ceP	P	02 54 22.0	+1.1
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	Makanchi Array	46.36	298	eP	P	02 54 22.0	+1.1
KURK	Kurchatov	47.04	304	ceP	P	02 54 26.1	+0.1
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KURK	Kurchatov	47.04	304	eP	P	02 54 26.1	+0.1
KURK	Kurchatov	47.04	304	P	P	02 54 26.1	+0.1
KURK				IAmb	IAmb	02 54 26.8	
	comp=Z,4.4nm,0.8s						
KURBB	Kurchatov Arra	47.12	304	P	P	02 54 26.7	0.0
	comp=Z,2.1nm,0.5s,baz=69,slow=8.5,SNR=15						
SHL	Shillong	50.75	268	P	P	02 54 57.1	+2.1
SHL				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SHL	Shillong	50.75	268	P	P	02 54 57.1	+2.1
SHL				IAmb	IAmb	02 54 57.7	
	comp=Z,6.8nm,1.0s						
AAK	Ala-Archa	53.20	296	P	P	02 55 15.7	+2.7
	comp=Z,2.1nm,0.5s,baz=128,slow=6.5,SNR=7.5						
AAK	Ala-Archa	53.20	296	⇑eP	P	02 55 14.5	+1.6
AAK				pmax	pmax		
	comp=Z,15nm,1.7s						
AAK	Ala-Archa	53.20	296	eP	P	02 55 14.5	+1.6
AAK	Ala-Archa	53.20	296	IAmb	IAmb	02 55 16.0	
	comp=Z,3.5nm,0.8s						
SPITS	Spitsbergen Ar	54.05	350	P	P	02 55 17.3	-1.1
	comp=Z,5.6nm,0.8s,baz=61,slow=8.7,SNR=8.3						
ARU	Arti	55.24	317	P	P	02 55 27.1	-0.2
	comp=Z,2.7nm,0.4s,baz=79,slow=3.0,SNR=10.0						
ARU	Arti	55.24	317	d iP	P	02 55 26.7	-0.6
ARU					PP	02 57 25.7	-5.6
ARU				S	S	03 03 04.9	+2.0
ARU				SS	SS	03 06 38.8	-8.9
ARU				pmax	pmax		
	comp=Z,5.0nm,0.5s						
ARU	Arti	55.24	317	P	P	02 55 26.1	-1.2
KK31	Karatay Array	55.47	299	P	P	02 55 30.0	+0.8
KK31				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KK31	Karatay Array	55.47	299	P	P	02 55 30.0	+0.8
KK31				IAmb	IAmb	02 55 31.6	
	comp=Z,3.5nm,0.8s						
KKAR	Karatay Array	55.47	299	P	P	02 55 30.0	+0.8
KKAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KKAR	Karatay Array	55.47	299	P	P	02 55 30.0	+0.8
KKAR				IAmb	IAmb	02 55 31.6	
	comp=Z,3.5nm,0.8s						
BTK	Batken	56.92	296	P	P	02 55 41.7	+2.1
BTK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BTK	Batken	56.92	296	P	P	02 55 41.7	+2.1
BTK				IAmb	IAmb	02 55 43.3	
	comp=Z,4.1nm,0.7s						
ABKAR	Akbulak array	58.34	310	P	P	02 55 49.1	-0.2
NIL	Nilore	58.96	288	P	P	02 55 56.3	+2.4
NIL				pmax	pmax		
	comp=Z,6.0nm,0.9s						
NIL	Nilore	58.96	288	P	P	02 55 56.3	+2.4
ARCES	ARCESS Array B	58.98	340	P	P	02 55 53.4	-0.1
	comp=Z,2.8nm,0.9s,baz=37,slow=6.7,SNR=6.2						
ARCES	ARCESS Array B	58.98	340	eP	P	02 55 52.5	-0.9
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KBL	Kabul	61.25	291	P	P	02 56 10.7	+1.0
KBL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KBL	Kabul	61.25	291	P	P	02 56 10.7	+1.0
KBL				IAmb	IAmb	02 56 13.2	
	comp=Z,3.8nm,0.8s						
SUMG	Summit	62.54	3	i P	P	02 56 19.8	+1.8
BELG	Belogornoye	62.79	318	P	P	02 56 20.0	+0.6
	comp=Z,6.6nm,0.3s,baz=6.6,slow=0.8,SNR=11						
NVAR	Mina Array Bea	64.65	60	P	P	02 56 33.9	+1.7
	comp=Z,0.4nm,0.6s,baz=296,slow=7.6,SNR=4.5						
FINES	FINESS Array B	64.94	334	P	P	02 56 33.0	-0.4
	comp=Z,2.5nm,0.4s,baz=37,slow=7.6,SNR=41						
PDAR	Pinedale Array	67.05	52	P	P	02 56 48.4	+0.8
	comp=Z,0.3nm,0.5s,baz=289,slow=2.1,SNR=4.7						
NB2	NORSAR Subarra	69.36	340	P	P	02 57 00.9	-0.5
	comp=Z,1.6nm,0.4s,baz=29,slow=6.5						
NOA	NORSAR Array B	69.36	340	P	P	02 57 01.7	+0.3
	comp=Z,2.4nm,0.4s,baz=27,slow=6.5,SNR=23						
MNK	Minsk	69.69	329	i P	P	02 57 03.2	-0.2
MNK				i	PP	02 59 34.7	-3.4
MNK				i PPP	PPP	03 01 13.9	
MNK				i S	S	03 06 04.9	+1.1
MNK				i SS	SS	03 10 32.6	-0.1
MNK				pmax	pmax		
	comp=E,1.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MNK				pmax	pmax		
	comp=N,16nm,1.3s						
MNK				MLR	MLR		
	comp=Z,113nm,17.0s						
MNK				MLR	MLR		
	comp=N,378nm,25.0s						
MNK				MLR	MLR		
	comp=E,65nm,33.0s						
MNK	Minsk	69.69	329	i P	P	02 57 03.2	-0.2
	comp=E,1.0nm,0.9s						
MNK				i P	P	02 57 03.2	-0.2
	comp=N,16nm,1.3s						
MNK				i P	P	02 57 03.2	-0.2
	comp=Z,7.0nm,0.8s,baz=219						
MNK				i PP	PP	02 59 34.7	-3.4
MNK				i PPP	PPP	03 01 14.0	
MNK				i S	S	03 06 05.0	+1.2
MNK				i SS	SS	03 10 32.7	0.0
MNK				i SSS	SSS	03 13 49.1	
MNK				i LQ	LQ	03 22 22.0	
MNK				i LR	LR	03 26 39.2	
MNK				i LRM	MLR	03 29 33.0	
	comp=Z,113nm,16.9s						
MNK				i LRM	MLR	03 29 35.6	
	comp=N,378nm,25.1s						
MNK				i LRM	MLR	03 29 45.0	
	comp=E,65nm,32.8s						
KIV	Kislovodsk	70.88	313	eP	P	02 57 13.6	+2.6
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KIV	Kislovodsk	70.88	313	eP	P	02 57 13.6	+2.6
KBZ	Khabaz	70.93	313	P	P	02 57 13.4	+2.2
	comp=Z,3.4nm,0.8s,baz=58,slow=4.6,SNR=8.0						
KBZ	Khabaz	70.93	313	⇓eP	P	02 57 13.1	+1.9
KBZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KBZ	Khabaz	70.93	313	eP	P	02 57 13.1	+1.9
AKASG	Malin Array Be	72.11	325	P	P	02 57 18.6	+0.5
	comp=Z,3.4nm,0.4s,baz=38,slow=6.2,SNR=15						
AKASG	Malin Array Be	72.11	325	P	P	02 57 17.9	-0.2
AKBB	Malin Array Si	72.11	325	⇓eP	P	02 57 18.5	+0.3
BUR08	Bucovina Ar. S	76.14	326	IAmb	IAmb	02 57 44.2	
	comp=Z,7.4nm,1.4s						
BURAR	Bucovina Array	76.16	326	P	P	02 57 43.0	+1.1
LANS	Liptovska Anna	77.08	330	eP	P	02 57 50.2	+3.2
LANS	Liptovska Anna	77.08	330	eP	P	02 57 50.2	+3.2
KRLC	Kraliky	77.24	332	eP	P	02 57 49.2	+1.3
KRLC	Kraliky	77.24	332	eP	P	02 57 49.2	+1.3
CLL	Collm	77.39	334	eP	P	02 57 49.0	+0.4
KHC	Kasperske Hory	79.11	333	eP	P	02 57 59.6	+1.4
KHC	Kasperske Hory	79.11	333	eP	P	02 57 59.6	+1.4
CKRC	Cesky Krumlov	79.14	332	eP	P	02 58 00.0	+1.6
GEC2	GERESS Array S	79.32	333	P	P	02 58 00.2	+0.8
GERES	GERESS Array B	79.32	333	P	P	02 58 00.3	+0.8
	comp=Z,0.9nm,0.6s,baz=32,slow=5.9,SNR=11						
TXAR	Lajitas Array	79.73	59	P	P	02 58 03.4	+1.4
	comp=Z,0.3nm,0.6s,baz=297,slow=4.8,SNR=2.3						
VTS	Vitosha	81.04	324	IAmb	IAmb	02 58 12.4	
	comp=Z,3.1nm,0.7s						
H03N2	Juan Fernandez	140.30	91	T	T	05 42 17.3	
	baz=306,slow=77,SNR=11						
H03N3	Juan Fernandez	140.32	91	T	T	05 42 21.7	
	baz=306,slow=77,SNR=11						
H03N1	Juan Fernandez	140.32	91	T	T	05 42 23.6	
	baz=306,slow=77,SNR=13						

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*TUL **06** 02:47:56.8±1.1, 36°.76N±0°.01×98°.07W±0°.03, h6^{km}±7^{km}, ML2.7, mb_Lg2.3/23(NEIC), Error ellipse: s-maj=3.5km s-min=1.7km az=76.0*

NEIC 06 02:47:56.9±1.2**, 36°.74N**±0°.02×**98°.02W**±0°.03**, h5**^{km}±2^{km}**, Error ellipse: s-maj=3.8km s-min=3.0km az=298.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK032	Salt Plains WL	0.16	292	Pg	Pg	02 47 58.8	-1.3
GC02	Grant County #	0.17	51	Pg	Pg	02 48 00.7	+0.4
KAN14	Manchester OK	0.22	13	Pg	Pg	02 48 01.4	+0.1
CROK	Carrier	0.24	172	Pg	Pg	02 48 01.8	+0.2
KAN17	Caldwell West	0.36	35	Pg	Pg	02 48 04.2	+0.1
KAN10	Anthony SW Sta	0.38	351	Pg	Pg	02 48 03.9	-0.5
KAN05	Bluff City Nor	0.38	18	Pg	Pg	02 48 04.5	+0.2
KAN01	Argonia South	0.46	27	Pg	Pg	02 48 05.3	-0.5
KAN16	Harper SW Stat	0.48	356	Pg	Pg	02 48 05.8	-0.4
KAN08	Anthony NE Sta	0.48	5	Pg	Pg	02 48 05.7	-0.6
KAN09	Caldwell North	0.51	40	Pg	Pg	02 48 06.4	-0.3
KAN13	South Haven SW	0.51	58	Pg	Pg	02 48 07.0	+0.2
KAN06	Argonia West S	0.52	15	Pg	Pg	02 48 06.5	-0.4
KAN12	Harper NE Stat	0.55	2	Pg	Pg	02 48 07.3	-0.3
BLOK	Blackwell	0.65	88	Pg	Pb	02 48 10.2	-0.6
U32A	Winter Ranch,	0.87	246	Pg	Pg	02 48 12.8	-0.8
OK029	Liberty Lake	1.05	154	Pg	Pg	02 48 17.1	0.0
BCOK	Bluff Creek, N	1.14	163	Pg	Pg	02 48 18.4	-0.3
QUOK	Quay	1.21	118	Pg	Pg	02 48 19.6	-0.5
T35A	Sooner Cattle	1.23	81	Pn	Pg	02 48 19.8	-0.7
OK031	S. Brethren Rd	1.24	129		Pg	02 48 20.7	0.0
OK025	Westminster Rd	1.29	154		Pn	02 48 21.2	-0.3
OK030	Cody Creek RV	1.29	129		Pb	02 48 21.7	0.0
FNO	Franklin	1.57	161	Pn	Pn	02 48 25.9	+0.5
R32A	Long Quarter,	1.76	342		Pn	02 48 28.1	-0.1
TUL1	Leonard	1.98	114	Pn	Pn	02 48 32.1	+1.0
WMOK	Wichita Mounta	2.09	197		Pn	02 48 33.4	+0.7
X34A	Smith Ranch, M	2.14	176	Pn	Pn	02 48 33.7	+0.4
CBKS	Cedar Bluff	2.47	327	Pn	Pn	02 48 37.7	-0.2
KSU1	Kansas State U	2.60	25	Pn	Pn	02 48 39.3	-0.4
KSU1				IAmb_Lg		02 49 22.1	
	comp=Z,15nm,0.9s						
U38A	Gravette	2.94	95	Pn	Pn	02 48 44.5	+0.1
X37A	Clayton	3.05	134	Pn	Pn	02 48 47.8	+2.0
X37A				IAmb_Lg		02 49 40.8	
	comp=Z,7.1nm,0.7s						
HHAR	Hobbs	3.32	97	Pn	Pn	02 48 49.7	+0.1
AMTX	Amarillo	3.50	239	Pn	Pn	02 48 51.5	-0.6
AMTX				IAmb_Lg		02 49 55.5	
	comp=Z,6.6nm,0.7s						
S39A	Bolivar	3.87	74	Pn	Pn	02 48 56.1	-1.1
S39A					LR	02 49 58.5	
U40A	Yellville	4.18	94	IAmb_Lg		02 50 20.2	
	comp=Z,7.6nm,0.7s						
MIAR	Mount Ida	4.23	120	Pn	Pn	02 49 01.5	-0.6
MIAR				IAmb_Lg		02 50 16.7	
	comp=Z,6.9nm,0.8s						
P38A	Dawn	4.56	50	Pn	Pn	02 49 06.9	+0.4
P38A				IAmb_Lg		02 50 26.5	
	comp=Z,5.2nm,0.7s						
MGMO	Mountain Grove	4.63	83	IAmb_Lg		02 50 25.9	
	comp=Z,4.5nm,0.7s						
MSTX	Muleshoe	4.77	236	IAmb_Lg		02 50 27.0	
	comp=Z,5.6nm,1.2s						
X40A	Basin Creek Fa	4.79	117	Pn	Pn	02 49 09.4	-0.4
X40A				IAmb_Lg		02 50 33.1	
	comp=Z,8.8nm,0.7s						
WHAR	Wooly Hollow	4.87	106	Pn	Pn	02 49 11.0	+0.1
WHAR				IAmb_Lg		02 50 44.9	
	comp=Z,7.0nm,1.1s						
T25A	Trinidad	5.13	276	IAmb_Lg		02 50 42.0	
	comp=Z,7.9nm,0.7s						
OGNE	Ogallala	5.23	325	IAmb_Lg		02 50 46.9	
	comp=Z,7.2nm,0.9s						
PBMO	Poplar Bluff	6.10	87	IAmb_Lg		02 51 20.3	
	comp=Z,6.1nm,0.7s						

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*VIE **06** 02:56:55.8±0.3, 46°.03N×10°.73E, h8^{km}, mb1.2/2, ml1.7/6, Error ellipse: s-maj=2.1km s-min=1.3km az=40.0   15 km SSW of Pinzolo*

*ROM **06** 02:56:55.4±0.1, 46°.009N±0°.004×10°.732E±0°.006, h8^{km}, ML1.5/5, Error ellipse: s-maj=0.5km s-min=0.4km az=316.0*

*IASPEI **06** 02:56:56.1±1.0, 46°.01N±0°.02×10°.72E±0°.03, h7^{km}±8^{km}, Error ellipse: s-maj=3.8km s-min=3.2km az=94.5, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

ISC 06 02:56:56.0±1.0**, 46°.01N**±0°.02×**10°.72E**±0°.03**, h10**^{km}**, n19, σ0^{s}.51**/34**, 1C-2D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RONC	Roncone	0.07	250	P	Pg	02 56 58.0	-0.4
RONC				S	Sg	02 56 59.4	-0.8
MABI	Malga Bissina	0.15	289	⇓P	Pg	02 56 59.3	-0.2
MABI				S	Sg	02 57 01.6	-0.4
MABI				AML	AML		
	comp=E,100μm,0.1s						
MABI				AML	AML		
	comp=N,266μm,0.2s						
MABI				AML	AML		
	comp=E,99μm,0.1s						
GAGG	Gaggia	0.18	64	⇑ePg	Pg	02 56 59.6	-0.4
GAGG				eSg	Sg	02 57 02.5	-0.2
GAGG	Gaggia	0.18	64	P	Pg	02 56 59.5	-0.4
GAGG				S	Sg	02 57 02.6	-0.2
GAGG				AML	AML		
	comp=N,194μm,0.1s						
GAGG				AML	AML		
	comp=E,284μm,0.5s						
VARA	Varagna	0.22	146	P	Pg	02 57 00.4	-0.2
VARA				S	Sg	02 57 04.3	+0.6
MAGA	Magasa	0.24	196	P	Pg	02 57 00.9	0.0
MAGA				S	Sg	02 57 05.5	+1.3
MAGA				AML	AML		
	comp=E,302μm,0.2s						
MAGA				AML	AML		
	comp=N,286μm,0.4s						
MAGA				AML	AML		
	comp=N,285μm,0.4s						
GARGN	Gargnano BS	0.32	188	ePg	Pg	02 57 02.2	-0.2
GARGN				eSg	Sg	02 57 07.2	+0.5
DOSS	Dosso del Somm	0.35	111	ePg	Pg	02 57 02.8	-0.2
DOSS				eSg	Sg	02 57 08.0	+0.4
DOSS	Dosso del Somm	0.35	111	P	Pg	02 57 02.9	-0.2
DOSS				S	Sg	02 57 08.1	+0.5
DOSS				AML	AML		
	comp=N,47μm,1.6s						
DOSS				AML	AML		
	comp=E,42μm,0.8s						
DOSS				AML	AML		
	comp=N,47μm,1.6s						
SALO	Salr	0.41	200	P	Pg	02 57 04.4	+0.3
SALO				S	Sb	02 57 11.5	-0.1
ROVR	Rover Verones	0.43	146	P	Pg	02 57 04.5	0.0
BRMO	Bormio	0.53	333	P	Pg	02 57 06.2	-0.1
BRMO				S	Sg	02 57 13.5	+0.2
APPI	Appiano	0.59	36	P	Pg	02 57 07.7	+0.2
APPI				S	Sg	02 57 15.8	+0.5
MOSI	Grossmontoni	0.62	349	P	Pg	02 57 08.2	0.0
ABSI	Aberstueckl	0.83	30	P	Pg	02 57 12.2	+0.1
ABSI				S	Sb	02 57 24.0	0.0
FETA	Feichten	1.02	0	i Pg	Pb	02 57 15.9	+0.2
	comp=N,0.1nm,0.1s						
FETA				eSg	Sg	02 57 28.8	0.0
	comp=N,0.4nm,0.1s						
SQTA	Sankt Quirin	1.26	15	i Sg	Sn	02 57 37.2	+0.3
	comp=N,1.1nm,0.3s						
WTTA	Wattenberg	1.41	26	ePg	Pg	02 57 22.9	-0.1
	comp=N,0.2nm,0.1s						
WTTA				eSg	Sg	02 57 41.3	0.0
	comp=N,1.3nm,0.2s						
FSSB	Fossombrone	2.74	147	⇓P	Pg	02 57 46.6	-1.7

IDC 06 03:10:01.3±2.1**, 8°.06S**×**125°.21E, h0**^{km}**, mb3.5**/1**, mb1 3.5**/3**, mb1mx3.3**/36**, mbtmp3.3**/3**, ML3.2**/1**, Error ellipse: s-maj=196.3km s-min=33.8km az=59.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.75	144	Pn	Pn	03 13 31.5	+0.1
	0.1nm,0.3s,baz=318,slow=13,SNR=7.1						
WRA				Sn	Sn	03 16 10.6	-5.2
	0.1nm,0.3s,baz=318,slow=26,SNR=2.6						
ASAR	Alice Springs	17.61	153	P	Pn	03 14 08.2	-0.1
	baz=325,slow=11,SNR=3.0						
MKAR	Makanchi Array	66.61	329	P	P	03 20 53.6	0.0
	0.3nm,0.5s,baz=127,slow=7.6,SNR=2.6						

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*ARE **06** 03:13:44±3.1, 14°.74S±0°.08×76°.2W±0°.1, h11^{km}±4^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=164.0*

*IDC **06** 03:13:47.4±0.8, 14°.62S×76°.03W, h19^{km}±4^{km}, mb3.9/10, mb1 4.2/12, mb1mx4.0/38, mbtmp4.1/12, ML4.0/2, MS3.9/12, Ms1 3.9/12, ms1mx3.7/25, Error ellipse: s-maj=24.9km s-min=17.6km az=65.0*

*NEIC **06** 03:13:48.3±2.1, 14°.72S±0°.08×76°.0W±0°.1, h24^{km}±5^{km}, mb4.5/35, ML4.7(ARE), Error ellipse: s-maj=16.6km s-min=10.2km az=70.0*

*VAO **06** 03:13:51.6±0.8, 14°.65S×75°.52W, h10^{km}, mb4.2*

ISC 06 03:13:46.2±0.5**, 14°.74S**±0°.06×**75°.97W**±0°.08**, h10**^{km}**, n129, σ1^{s}.41**/106**, mb4.4**/24**, MS3.9**/10**, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGCX	Pisagua	7.39	132	Pn	Pn	03 15 35.2	+0.9
CZSB	Cruzeiro do Su	7.66	25		Pn	03 15 38.6	+0.6
LPAZ	La Paz	7.71	103	Pn	Pn	03 15 44.5	+5.2
	6.5nm,0.3s,baz=275,slow=7.8,SNR=170						
LPAZ				LR	LR	03 19 04.6	
	comp=Z,817nm,18.6s,baz=286,slow=41						
LPAZ	La Paz	7.71	103	Pn	Pn	03 15 41.6	+2.4
TA02	Huaiquique	7.83	135		Pn	03 15 40.4	+0.1
PB11	IPOC Station P	7.83	131	Pn	Pn	03 15 39.8	-0.7
TA01	Diego Aracena	8.00	137		Pn	03 15 43.0	+0.4
PB08	IPOC Station P	8.44	131		Pn	03 15 49.4	+0.4
PB01	IPOC Station P	8.80	136		Pn	03 15 53.9	+0.3
PB07	IPOC Station P	9.04	141		Pn	03 15 57.4	+0.3
PB06	IPOC Station P	9.98	144	Pn	Pn	03 16 11.6	+1.7
LVC	Limon Verde	10.30	141	Pn	Pn	03 16 16.0	+1.6
	2.5nm,0.3s,baz=316,slow=10.0,SNR=22						
LVC				Sn	Sn	03 18 07.7	-2.5
	2.8nm,0.3s,baz=85,slow=20,SNR=13						
LVC				LR	LR	03 19 56.8	
	comp=Z,268nm,21.5s,baz=306,slow=35						
LVC	Limon Verde	10.30	141	eP	Pn	03 16 17.2	+2.8
LVC	Limon Verde	10.30	141	Pn	Pn	03 16 15.6	+1.2
PB15	IPOC Station P	10.43	145		Pn	03 16 16.2	+0.1
ETMB	Extrema	10.71	64	eP	Pn	03 16 20.7	+0.8
ETMB	Extrema	10.71	64	Pn	Pn	03 16 21.3	+1.5
AF01	San Pedro de A	11.00	139	Pn	Pn	03 16 24.2	+0.1
TBTG	Tabatinga, AM	12.06	30	Pn	Pn	03 16 37.6	-0.7
SAML	Samuel	13.77	67	eP	Pn	03 17 01.4	-0.3
SAML	Samuel	13.77	67		Pn	03 17 01.0	-0.6
SIV	San Ignacio	14.42	97	Pn	Pn	03 17 09.8	-0.9
	0.4nm,0.3s,baz=270,slow=15,SNR=13						
PTLC	Puerto Leguiza	14.86	5	eP	Pn	03 17 10.6	-6.0
OTAV	Otavalo	15.08	350	eP	P	03 17 22.9	-2.4
OTAV	Otavalo	15.08	350	eP	P	03 17 25.1	-0.3
OTAV	Otavalo	15.08	350	Pn	Pn	03 17 21.0	+1.0
VILB	Vilhena	15.42	85	eP	Pn	03 17 24.0	0.0
TULM	Tulcn-Chalpat	15.46	353	eP	P	03 17 28.4	-1.1
GCUF	Volcan Galeras	15.92	355	eP	P	03 17 34.0	-0.8
PTLB	Pontes e Lacer	16.27	95	eP	Pn	03 17 34.2	-0.8
PTLB	Pontes e Lacer	16.27	95	Pn	Pn	03 17 32.9	-2.1
SOTA	Rioblanco	16.77	358	eP	P	03 17 45.0	+0.8
MACC	Macarena, Meta	16.90	7	eP	P	03 17 45.0	-0.2
PCON	Cinco Dias	16.96	359	eP	P	03 17 50.5	+4.1
ORTC	Ortega, Tolima	18.54	2	eP	Pn	03 18 09.7	+6.3
H03N1	Juan Fernandez	18.81	188	T	T	03 37 26.4	
	baz=8.5,slow=74,SNR=517						
H03N2	Juan Fernandez	18.81	188	T	T	03 37 22.5	
	baz=8.5,slow=74,SNR=403						
H03N3	Juan Fernandez	18.83	188	T	T	03 37 23.6	
	baz=8.5,slow=74,SNR=452						
MACA	Manacapuru-AM	18.96	54	eP	P	03 18 07.5	-0.3
MACA	Manacapuru-AM	18.96	54	P	P	03 18 06.9	-0.9
MACA				IAmb	IAmb	03 18 13.7	
	comp=Z,20nm,0.6s						
MT09	Talagante	19.49	167	P	Pn	03 18 15.2	+0.4
MT09				IAmb	IAmb	03 18 20.8	
	comp=Z,23nm,1.4s						
PLMC	San Jos del P	19.52	359	eP	Pn	03 18 15.2	0.0
ROSC	El Rosal	19.52	5	LR	LR	03 27 12.3	
	comp=Z,494nm,19.0s,baz=221,slow=42						
SALV	Santo Antonio	19.59	96	eP	Pn	03 18 15.9	-0.2
GUY2C	Guyana, Caldas	19.84	2	eP	P	03 18 18.0	+0.1
CLDB	Colider	20.04	81	eP	P	03 18 20.1	+0.4
AQDB	Aquidauana	20.14	109	eP	Pn	03 18 22.2	-0.4
AQDB	Aquidauana	20.14	109	P	P	03 18 20.8	+0.1
NORC	Norcasia	20.20	3	eP	P	03 18 18.0	-3.4
SPBC	San Pablo de B	20.34	5	eP	Pn	03 18 26.3	+1.2
CBOC	Ciudad Bolivar	20.47	360	eP	Pn	03 18 27.8	+1.2
RUSC	La Rusia	20.70	8	eP	P	03 18 27.6	+0.4
CPUP	Villa Florida	20.89	126	P	P	03 18 30.4	+1.6
	comp=Z,9.5nm,1.2s,baz=313,slow=12,SNR=4.9						
CPUP				LR	LR	03 28 16.1	
	comp=Z,239nm,18.2s,baz=290,slow=41						
CPUP	Villa Florida	20.89	126	P	P	03 18 28.1	-0.7
CPUP				IAmb	IAmb	03 18 31.3	
	comp=Z,20nm,1.4s						
PTGA	Pitinga	21.07	50	P	P	03 18 30.0	-0.8
	comp=Z,13nm,1.0s,baz=220,slow=12,SNR=14						
PTGA	Pitinga	21.07	50	P	P	03 18 30.1	-0.8
PTGA				IAmb	IAmb	03 18 38.1	
	comp=Z,20nm,1.1s						
ZARC	Zaragoza, Cauc	22.11	3	eP	P	03 18 41.4	-0.6
ZARC	Zaragoza, Cauc	22.11	3	P	P	03 18 40.3	-1.7
ZARC				IAmb	IAmb	03 19 00.7	
	comp=Z,12nm,0.9s						
PAMC	Pamplona, Colo	22.17	9	eP	P	03 18 42.8	-0.4
UREC	San Jos de Ur	22.35	1	eP	P	03 18 46.9	+2.4
ITTB	Itaituba	22.43	65	eP	P	03 18 45.8	+0.3
BOAV	Boa Vista	22.89	43	eP	P	03 18 52.5	+2.2
BOAV	Boa Vista	22.89	43	P	P	03 18 50.6	+0.4
BOAV				IAmb	IAmb	03 18 58.5	
	comp=Z,16nm,1.2s						
ITQB	Itaqui	23.22	133	eP	P	03 18 56.7	+3.1
ITQB	Itaqui	23.22	133	P	P	03 18 54.3	+0.7
ARAG	Araguaiana, MT	23.33	96	eP	P	03 18 56.1	+1.3
MOTC	Monteria, Cord	23.36	1	eP	P	03 18 55.2	0.0
MOTC	Monteria, Cord	23.36	1	P	P	03 18 55.3	+0.1
MOTC				IAmb	IAmb	03 18 57.0	
	comp=Z,22nm,1.4s						
SMLC	San Martn de	23.46	5	eP	P	03 18 52.4	-3.7
SDV	Santo Domingo	24.06	13	P	P	03 19 01.4	-0.7
	comp=Z,9.1nm,0.6s,baz=186,slow=8.9,SNR=6.2						
SDV	Santo Domingo	24.06	13	P	P	03 19 01.0	-1.1
SDV				IAmb	IAmb	03 19 01.9	
	comp=Z,11nm,0.6s						
SNDB	Serra Nova Dou	24.16	86	eP	P	03 19 02.7	-0.2

LC01	Cunco	24.34	172	P	P	03 19 03.9	-0.4
LC01				IAmb	IAmb	03 19 06.5	
	comp=Z,11nm,0.9s						
SJCC	San Jacinto, C	24.49	2	eP	P	03 19 07.5	+1.7
SJCC	San Jacinto, C	24.49	2	P	P	03 19 06.7	+0.8
PLCA	Paso Flores	26.33	171	P	P	03 19 22.8	+0.4
	comp=Z,1.9nm,0.8s,baz=329,slow=12,SNR=3.8						
PLCA				LR	LR	03 27 56.4	
	comp=Z,59nm,18.0s,baz=132,slow=32						
IPMB	Ipameri, GO	26.82	101	eP	P	03 19 27.4	+0.3
BDFB	Brasilia	26.99	96	P	P	03 19 28.4	-0.2
	comp=Z,2.2nm,0.7s,baz=228,slow=11,SNR=3.8						
BDFB				LR	LR	03 31 16.3	
	comp=Z,679nm,18.9s,baz=290,slow=39						
BDFB	Brasilia	26.99	96	IAmb	IAmb	03 19 29.9	
	comp=Z,8.7nm,1.2s						
TKL	Tuckaleechee C	50.66	352	LR	LR	03 44 43.0	
	comp=Z,90nm,18.7s,baz=160,slow=37						
WHTX	Lake Whitney,	50.82	336	P	P	03 22 46.3	-0.8
WHTX				IAmb	IAmb	03 22 52.2	
	comp=Z,10nm,1.2s						
V48A	Smith Brothers	51.24	349	P	P	03 22 50.2	0.0
V48A				IAmb	IAmb	03 23 12.9	
	comp=Z,5.0nm,1.1s						
TXAR	Lajitas Array	51.33	329	P	P	03 22 50.1	-1.1
	comp=Z,0.3nm,0.6s,baz=120,slow=5.5,SNR=2.1						
TXAR				pP	sP	03 22 55.0	-0.4
	comp=Z,0.9nm,0.5s,baz=149,slow=7.6,SNR=8.8						
TX31	Lajitas Ar. Si	51.33	329	P	P	03 22 51.5	+0.3
TUL1	Leonard	53.75	340	P	P	03 23 07.4	-1.4
ANMO	Albuquerque	57.26	330	LR	LR	03 47 03.0	
	comp=Z,60nm,18.0s,baz=136,slow=35						
SDCO	Great Sand Dun	59.12	333	P	P	03 23 46.6	-0.9
SDCO				IAmb	IAmb	03 23 52.7	
	comp=Z,3.1nm,0.9s						
K31A	O'Neill	60.80	341	P	P	03 23 57.0	-1.6
SMCO	Snowmass	60.95	333	P	P	03 23 58.1	-2.0
SMCO				IAmb	IAmb	03 24 08.6	
	comp=Z,3.1nm,1.0s						
BATG	Bathurst New B	62.37	8	P	P	03 24 07.2	-1.8
CCUT	Cedar City	62.77	327	P	P	03 24 12.0	-0.2
CCUT				IAmb	IAmb	03 24 18.7	
	comp=Z,4.0nm,1.2s						
TAOE	Nuku Hiva Isla	62.93	267	eLR	LR	03 42 53.7	
	comp=Z,197nm,24.4s						
HWUT	Hardware Ranch	64.99	331	P	P	03 24 25.7	-1.0
HWUT				IAmb	IAmb	03 24 32.4	
	comp=Z,4.0nm,0.9s						
PDAR	Pinedale Array	65.01	333	P	P	03 24 25.0	-1.8
	comp=Z,0.3nm,0.7s,baz=113,slow=9.1,SNR=2.4						
PDAR				pP	sP	03 24 31.2	0.0
	comp=Z,0.5nm,0.6s,baz=141,slow=9.6,SNR=3.8						
PDAR	Pinedale Array	65.01	333	P	P	03 24 25.6	-1.3
NVAR	Mina Array Bea	66.09	325	pP	pP	03 24 39.2	+2.0
	comp=Z,0.5nm,0.8s,baz=136,slow=9.2,SNR=3.1						
ULM	Lac du Bonnet	67.03	346	pP	pP	03 24 43.5	+0.9
	comp=Z,3.8nm,0.6s,baz=162,slow=6.8,SNR=3.0						
YHL	Hebgen Lake	67.38	334	P	P	03 24 40.7	-1.4
YHL				IAmb	IAmb	03 24 43.0	
	comp=Z,5.8nm,1.1s						
HLID	Hailey	67.84	331	P	P	03 24 45.2	+0.4
MFID	Camas Ranch	68.40	330	P	P	03 24 48.0	-0.3
MFID				IAmb	IAmb	03 24 54.4	
	comp=Z,4.1nm,0.8s						
VNA3	Neumayer Olymp	68.59	161	P	P	03 24 49.4	+0.4
VNA3	Neumayer Olymp	68.59	161	PcP	PcP	03 25 14.7	+0.6
VNA1	Neumayer--Stat	68.86	161	P	P	03 24 51.6	+0.9
VNA1	Neumayer--Stat	68.86	161	PcP	PcP	03 25 15.7	+0.6
VNA2	Neumayer--Watz	69.21	161	P	P	03 24 53.4	+0.5
	baz=296,slow=6.1						
VNA2	Neumayer--Watz	69.21	161	PcP	PcP	03 25 16.4	-0.3
TBI	Tubuai	69.37	250	eT	T	04 40 24.0	
	comp=Z,13nm,0.3s						
TIAR	Tiarei	70.13	256	eT	T	04 41 21.5	
	comp=Z,1.3nm,0.2s						
SNAA	Sanae	70.81	161	P	P	03 25 03.2	+0.4
SNAA	Sanae	70.81	161	P	P	03 25 02.0	-0.8
SNAA				IAmb	IAmb	03 25 04.1	
	comp=Z,5.2nm,1.0s						
DBIC	Dimbokro	73.62	78	LR	LR	03 55 55.3	
	comp=Z,228nm,19.9s,baz=252,slow=34						
EDM	Edmonton	74.91	338	P	P	03 25 28.9	+1.6
TORD	Torodi Ar. Bea	81.71	74	P	P	03 26 05.8	+0.1
	comp=Z,7.2nm,1.0s,baz=267,slow=4.8,SNR=22						
TORD				LR	LR	04 01 35.9	
	comp=Z,72nm,18.2s,baz=210,slow=35						
TORD	Torodi Ar. Bea	81.71	74	P	P	03 26 04.1	-1.6
VNDA	Vanda	82.26	191	P	P	03 26 08.0	+0.5
	comp=Z,1.0nm,0.9s,baz=144,slow=3.7,SNR=5.8						
VNDA				LR	LR	03 55 21.6	
	comp=Z,52nm,22.0s,baz=134,slow=30						
ESDC	Sonseca Array	85.99	47	P	P	03 26 27.4	+0.3
	comp=Z,1.4nm,1.1s,baz=284,slow=6.0,SNR=4.5						
ESDC	Sonseca Array	85.99	47	IAmb	IAmb	03 26 28.2	
	comp=Z,1.7nm,1.1s						
BOSA	Boshof	92.59	120	LR	LR	04 05 04.3	
	comp=Z,51nm,19.4s,baz=282,slow=33						
H11N3	WAKE ISLAND Hy	120.02	284	T	T	05 43 45.2	
	baz=96,slow=74,SNR=96						
H11N2	WAKE ISLAND Hy	120.03	284	T	T	05 43 46.2	
	baz=96,slow=74,SNR=91						
H11N1	WAKE ISLAND Hy	120.04	284	T	T	05 43 46.5	
	baz=96,slow=74,SNR=35						
H11S2	WAKE ISLAND Hy	120.08	283	T	T	05 43 52.9	
	baz=96,slow=74,SNR=104						
H11S1	WAKE ISLAND Hy	120.08	283	T	T	05 43 43.7	
	baz=96,slow=74,SNR=63						
H11S3	WAKE ISLAND Hy	120.09	283	T	T	05 43 53.1	
	baz=96,slow=74,SNR=63						
ASAR	Alice Springs	131.94	218	pPKP	pPKPdf	03 33 06.7	+2.4
	comp=Z,0.7nm,0.9s,baz=172,slow=2.8,SNR=3.4						
WRA	Warramunga Arr	134.44	222	PKP	PKPdf	03 33 04.7	-0.9
	comp=Z,0.3nm,0.5s,baz=133,slow=2.1,SNR=5.7						
WRA				pPKP	sPKPdf	03 33 11.7	+1.5
	comp=Z,0.4nm,0.6s,baz=136,slow=1.9,SNR=4.2						
WRA	Warramunga Arr	134.44	222		PKPdf	03 33 03.8	-1.9
ZALV	Zalesovo Beam	138.07	17	PKP	PKPdf	03 33 10.8	-0.4
	comp=Z,0.8nm,0.6s,baz=336,slow=3.3,SNR=4.7						
SONM	Songino Array	146.94	357	PKPbc	PKPdf	03 33 28.2	+0.8
	comp=Z,2.4nm,0.7s,baz=290,slow=1.6,SNR=11						
SONM				pPKPbc	sPKPab	03 33 35.0	-0.1
	comp=Z,2.9nm,0.7s,baz=348,slow=3.1,SNR=8.6						

*IDC **06** 03:20:45.0±1.8, 1°.20N×124°.30E, h0^{km}, mb3.7/4, mb1 4.0/5, mb1mx3.6/45, mbtmp3.8/5, ML3.8/1, Error ellipse: s-maj=131.5km s-min=25.6km az=65.0*

*NEIC **06** 03:21:05.4±0.8, 0°.8N±0°.2×124°.01E±0°.10, h176^{km}±14^{km}, mb4.0/5, Error ellipse: s-maj=23.9km s-min=13.8km az=179.0*

ISC 06 03:21:07.2±1.4**, 0°.6N**±0°.2×**123°.8E**±0°.2**, h200^{km}, n11, σ0^{s}.63**/10**, mb4.0**/6**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TOLI2	Tolitoli	3.00	279		Pn	03 21 56.8	-0.1
FITZ	Fitzroy Crossi	18.71	174	P	P	03 25 10.4	-0.5
	0.2nm,0.3s,baz=2.0,slow=8.1,SNR=7.3						
FITZ	Fitzroy Crossi	18.71	174	IAmb	IAmb	03 25 16.4	
	comp=Z,3.9nm,0.8s						
WB0	Warramunga Arr	22.81	153	P	P	03 25 52.3	-0.7
WRA	Warramunga Arr	22.94	154	P	P	03 25 53.6	-0.6
	comp=Z,1.8nm,0.3s,baz=334,slow=10.0,SNR=71						
WB2	Warramunga Arr	22.94	154	P	P	03 25 54.0	-0.1
WB2				IAmb	IAmb	03 26 26.5	
	comp=Z,7.6nm,1.4s						
WR0	Warramunga Arr	23.04	153	P	P	03 25 55.0	-0.1
WR0				IAmb	IAmb	03 26 23.9	
	comp=Z,10nm,1.6s						
ASAR	Alice Springs	26.10	158	P	P	03 26 23.6	+0.9
	comp=Z,0.4nm,0.4s,baz=341,slow=7.3,SNR=6.7						
STKA	Stephens Creek	36.49	154	P	P	03 27 54.1	+0.8
	comp=Z,0.9nm,0.4s,baz=330,slow=9.2,SNR=3.5						
STKA	Stephens Creek	36.49	154	P	P	03 27 52.7	-0.6
MKAR	Makanchi Array	58.47	328	P	P	03 30 42.4	+0.1
	comp=Z,0.2nm,0.5s,baz=143,slow=5.0,SNR=2.0						

*GCG **06** 03:39:51.2±0.8, 13°.69N×92°.32W, h30^{km}±711^{km}, MD4.0*

*IDC **06** 03:39:54.0±3.3, 14°.43N×91°.70W, h0^{km}, mb3.6/4, mb1 4.0/6, mb1mx3.7/39, mbtmp3.7/6, ML3.7/2, MS3.7/1, Ms1 3.6/1, ms1mx2.7/31, Error ellipse: s-maj=120.5km s-min=29.6km az=35.0*

ISC 06 03:39:57.1±1.8**, 13°.9N**±0°.2×**92°.15W**±0°.07**, h35^{km}, n13, σ1^{s}.63**/13**, mb3.7**/4**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STG3	Santiaguito 3,	1.00	34	eP	Pn	03 40 13.1	-1.6
FUG	Fuego 3	1.39	66	eP	Pn	03 40 17.9	-2.2
PCG	Pacaya	1.58	71	eP	Pn	03 40 21.1	-1.7
PCG				eS	Sn	03 40 42.9	+0.7
NBG	Las Nubes	1.88	68	eP	Pn	03 40 26.6	-0.5
NBG				eS	Sn	03 40 52.1	+2.4
CMIG	Matias Romero	4.14	321	Pn	Pn	03 40 56.5	-1.3
	2.7nm,0.3s,baz=133,slow=8.7,SNR=15						
CMIG				Lg	Lg	03 42 00.9	
	10.0nm,0.3s,baz=260,slow=21,SNR=6.1						
H06E1	SOCORRO T-PHAS	18.66	288	T	T	04 03 28.4	
	SNR=8.8						
TXAR	Lajitas Array	18.72	327	Pn	Pn	03 44 14.3	+0.9
	0.1nm,0.3s,baz=142,slow=8.9,SNR=11						
ANMO	Albuquerque	24.63	331	P	P	03 45 15.1	+0.5
	1.5nm,0.6s,baz=143,slow=14,SNR=9.9						
NVAR	Mina Array Bea	33.67	321	P	P	03 46 36.8	+1.8
	0.7nm,0.7s,baz=141,slow=8.6,SNR=4.3						
YKA	Yellowknife Ar	51.11	347	P	P	03 48 54.2	-1.8
	0.6nm,0.7s,baz=130,slow=9.9,SNR=6.1						
BDFB	Brasilia	52.58	122	LR	LR	04 12 50.1	
	comp=Z,69nm,20.6s,baz=115,slow=38						
ILAR	Eielson Array	62.89	337	P	P	03 50 19.2	-0.2
	0.4nm,0.5s,baz=117,slow=6.0,SNR=4.6						
CMAR	Chiang Mai Arr	146.06	341	PKPbc	PKPdf	03 59 33.9	+0.5
	1.0nm,0.3s,baz=342,slow=4.2,SNR=8.3						

*IDC **06** 03:47:09.9±1.0, 19°.47S×56°.39W, h0^{km}, mb3.8/3, mb1 4.2/8, mb1mx3.9/33, mbtmp4.1/8, ML4.5/5, MS2.9/1, Ms1 2.9/1, ms1mx2.6/23, Error ellipse: s-maj=26.2km s-min=23.5km az=82.0*

*VAO **06** 03:47:09.3±0.2, 19°.39S×56°.26W, h0^{km}, mbR4.0*

*NEIC **06** 03:47:10.7±1.7, 19°.46S±0°.05×56°.35W±0°.03, h12^{km}±4^{km}, mb4.1/12, mb_Lg4.0(BDF), Error ellipse: s-maj=8.0km s-min=1.9km az=211.0*

*BDF **06** 03:47:13±3.9, 19°.40S±0°.06×56°.24W±0°.06, h74^{km}±7^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=137.0*

ISC 06 03:47:10.0±0.5**, 19°.46S**±0°.04×**56°.35W**±0°.05**, h10^{km}, n69, σ1^{s}.25**/76**, mb4.1**/5**, Brazil**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AQDB	Aquidauana	1.18	149	eP	Pn	03 47 33.1	+0.5
AQDB				eS	Sb	03 47 48.0	+0.1
AQDB	Aquidauana	1.18	149	Pn	Pn	03 47 33.0	+0.4
AQDB				Sg	Sb	03 47 48.2	+0.3
PTLB	Pontes e Lacer	4.80	326	eP	Pn	03 48 22.4	+0.1
PTLB				eS	Sn	03 49 18.1	0.0
PTLB	Pontes e Lacer	4.80	326	Pn	Pn	03 48 22.2	-0.2
PTLB				Pg	Pb	03 48 37.3	+3.0
PTLB				Sn	Sn	03 49 15.1	-2.9
PTLB				LR	LR	03 49 35.4	
TRCB	Terra Rica	4.80	134	eS	Sn	03 49 18.7	+0.5
TRCB	Terra Rica	4.80	134	Pn	Pn	03 48 22.8	+0.4
PCMB	Pacaembu	5.22	115	eS	Sn	03 49 29.5	+0.9
SIV	San Ignacio	5.67	307	Pn	Pn	03 48 35.0	+0.5
	8.1nm,0.3s,baz=131,slow=15,SNR=96						
SIV				Lg	Lg	03 50 04.6	
	100nm,0.3s,baz=39,slow=23,SNR=10						
PTGB	Pitanga	6.57	144	eP	Pn	03 48 48.1	+1.3
CPUP	Villa Florida	6.89	187	Pn	Pn	03 48 52.1	+0.9
	7.6nm,0.3s,baz=13,slow=12,SNR=142						
CPUP				Sn	Sn	03 50 08.6	-1.1
	3.2nm,0.3s,baz=278,slow=19,SNR=3.3						
CPUP				Lg	Lg	03 50 45.5	
	10nm,0.3s,baz=280,slow=14,SNR=5.5						
CPUP	Villa Florida	6.89	187	Pn	Pn	03 48 51.9	+0.7
CPUP				Sn	Sn	03 50 07.7	-2.1
FRTB	Fartura	7.41	123	eP	Pn	03 48 59.2	+0.8
VILB	Vilhena	7.45	330	eP	Pn	03 48 59.5	+0.5
VILB				eS	Sn	03 50 25.4	+1.8
VILB	Vilhena	7.45	330	Pn	Pn	03 48 58.9	0.0
IPMB	Ipameri, GO	7.85	81	eP	Pn	03 49 04.1	-0.4
CLDB	Colider	8.56	4	eP	Pn	03 49 14.0	-0.1
RCLB	Rio Claro- Sao	8.75	111	eP	Pn	03 49 17.2	+0.4
BDFB	Brasilia	8.81	66	Pn	Pn	03 49 17.5	-0.2
	5.6nm,0.3s,baz=239,slow=13,SNR=34						
BDFB				Sn	Sn	03 50 54.7	-2.5
	2.7nm,0.3s,baz=193,slow=17,SNR=3.8						
BDFB	Brasilia	8.81	66		Pn	03 49 17.2	-0.4
SNDB	Serra Nova Dou	8.89	34	eP	Pn	03 49 18.2	-0.5
SPB	Sao Paulo	9.26	118	eP	Pn	03 49 24.2	+0.6
SPB	Sao Paulo	9.26	118	Pn	Pn	03 49 24.2	+0.6
ITQB	Itaqui	10.17	181	eP	Pn	03 49 36.7	+0.6
ITQB	Itaqui	10.17	181		Pn	03 49 36.5	+0.4
PEXB	Peixe	10.65	48	eP	Pn	03 49 42.7	-0.2
PARB	Paraibuna	10.71	113	eP	Pn	03 49 42.1	-1.5
LPAZ	La Paz	11.65	284	Pn	Pn	03 49 57.7	+0.7
	0.3nm,0.3s,baz=110,slow=9.0,SNR=8.1						
LPAZ	La Paz	11.65	284	eP	Pn	03 49 57.8	+0.7
LPAZ	La Paz	11.65	284	Pn	Pn	03 49 57.3	+0.3
DIAM	Diamantina, MG	12.06	87	eP	Pn	03 50 00.4	-1.8
MC01	Montes Claros	12.11	79	eP	Pn	03 50 01.2	-1.7
LVC	Limon Verde	12.14	253	LR	LR	03 54 34.5	
	comp=Z,58nm,20.8s,baz=131,slow=37						
SAML	Samuel	12.37	327	Pn	Pn	03 50 03.9	-2.4
NPGB	Novo Progresso	12.38	5	eP	Pn	03 50 05.4	-1.1
VAS01	Vassouras-RJ	12.39	105	eP	Pn	03 50 05.3	-1.3
PB01	IPOC Station P	12.43	260	Pn	Pn	03 50 06.6	-0.6
PLTB	Pedras Altas	12.50	169	Pn	Pn	03 50 06.7	-1.3
PB11	IPOC Station P	12.54	266	Pn	Pn	03 50 09.6	+0.8
PB06	IPOC Station P	12.76	253	Pn	Pn	03 50 13.0	+1.2
PB15	IPOC Station P	12.78	251		Pn	03 50 12.5	+0.4
ETMB	Extrema	13.52	314	Pn	Pn	03 50 20.8	-1.2
SMTB	Santa Maria do	13.53	40	eP	Pn	03 50 22.4	+0.2
SJMB	Sao Joao De Ma	14.36	89	eP	Pn	03 50 31.5	-2.0
PRPB	Parauapebas	14.66	27	eP	Pn	03 50 35.7	-1.9
NAN01	Guarapari, ES	15.46	87	eP	Pn	03 50 48.0	-0.3
GUA01	Guaratinga, BA	15.99	82	eP	Pn	03 50 53.6	-1.6
ZON	Zonda	16.37	220	Pn	Pn	03 50 59.9	-0.2
MACA	Manacapuru-AM	16.75	345	Pn	Pn	03 51 03.8	-1.1
MACA				IAmb	IAmb	03 51 22.1	
	comp=Z,11nm,0.6s						
MALB	Monte Alegre	17.62	7	eP	Pn	03 51 14.6	-1.2
NBPN	Ponto Novo - B	17.78	64	eP	Pn	03 51 16.8	-1.0
MT05	Renca	18.90	220	P	P	03 51 28.4	-2.5
PTGA	Pitinga	18.95	349	P	P	03 51 30.9	-0.5
	comp=Z,0.7nm,0.3s,baz=324,slow=22,SNR=2.3						
TRQA	Tornquist	19.16	194	P	P	03 51 34.1	+0.4
BO02	Sierra Bellavi	19.92	217	P	P	03 51 43.0	+0.9
BO02				IAmb	IAmb	03 52 21.7	
	comp=Z,12nm,1.4s						
BOAV	Boa Vista	22.11	349	P	P	03 52 03.7	-2.0
BOAV				IAmb	IAmb	03 52 41.5	
	comp=Z,10nm,1.4s						
LC01	Cunco	23.57	211	P	P	03 52 20.3	-0.6
LC01				IAmb	IAmb	03 52 41.4	
	comp=Z,6.6nm,1.1s						
LL04	Puerto Octay	25.41	209	P	P	03 52 37.0	-0.7
VNA2	Neumayer--Watz	58.90	163	P	P	03 57 10.0	+1.2
SNAA	Sanae	60.55	163	P	P	03 57 21.3	+1.0
SNAA	Sanae	60.55	163	P	P	03 57 21.3	+1.0
	comp=Z,1.0nm,0.8s,baz=286,slow=9.3,SNR=7.1						
SNAA	Sanae	60.55	163	P	P	03 57 21.1	+0.8
TORD	Torodi Ar. Bea	65.69	65	P	P	03 57 57.4	+2.2
	comp=Z,1.2nm,0.7s,baz=256,slow=7.2,SNR=7.4						
TORD	Torodi Ar. Bea	65.69	65	P	P	03 57 56.5	+1.3
TORD				IAmb	IAmb	03 57 59.4	
	comp=Z,1.1nm,0.8s						
ESDC	Sonseca Array	76.48	39	P	P	03 59 02.8	+2.5
	comp=Z,0.8nm,1.1s,baz=231,slow=5.9,SNR=4.0						
ESDC	Sonseca Array	76.48	39	IAmb	IAmb	03 59 07.6	
	comp=Z,3.1nm,1.6s						
ASAR	Alice Springs	135.98	194	PKP	PKiKP	04 06 33.6	-0.2
	comp=Z,0.4nm,0.8s,baz=150,slow=2.0,SNR=4.9						
ASAR	Alice Springs	135.98	194		PKPdf	04 06 30.0	-2.2
WRA	Warramunga Arr	139.46	196	PKP	PKiKP	04 06 40.5	-0.4
	comp=Z,0.3nm,1.0s,baz=171,slow=2.2,SNR=5.0						
SONM	Songino Array	148.41	22	PKPbc	PKiKP	04 06 58.6	0.0
	comp=Z,1.0nm,0.7s,baz=300,slow=2.9,SNR=3.9						

*JMA **06** 03:57:41.6, 23°.26N×121°.55E, h44^{km}±1^{km}, M2.9*

*TAP **06** 03:57:42.2, 23°.26N×121°.56E, h42^{km}, ML3.2, C*

ISC 06 03:57:42.2±0.9**, 23°.24N**±0°.02×**121°.61E**±0°.02**, h31**^{km}±2^{km}**, n86, σ1^{s}.00**/171**, 1C-2D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ECBN	Changbin	0.16	298	i P	Pn	03 57 49.4	+0.7
	baz=299						
ECBN				S	Sb	03 57 54.3	+2.1
	baz=299						
CHKT	Chengkung	0.26	238	⇓iP	Pn	03 57 50.0	0.0
	baz=219						
CHKT				S	Sn	03 57 55.4	+0.4
	baz=219						
EYUL	Yuli	0.28	292	eP	Pn	03 57 50.5	+0.2
	baz=291						
EYUL				eS	Sn	03 57 56.7	+1.1
	baz=291						
FULB	Fuli	0.29	262	P	Pn	03 57 50.4	-0.1
	baz=254						
FULB				eS	Sn	03 57 56.6	+0.9
	baz=254						
HGSD	Ruisui	0.30	326	⇑iP	Pn	03 57 50.1	-0.5
	baz=333						
HGSD				eS	Sb	03 57 57.5	+2.6
	baz=333						
TWF1	Yuli	0.30	291	eP	Pb	03 57 50.4	+0.5
	baz=291						
TWF1				eS	Sn	03 57 56.1	0.0
	baz=291						
YULB	Yu-li	0.32	298	eP	Pb	03 57 50.4	+0.3
	baz=299						
YULB				eS	Sn	03 57 56.2	-0.3
	baz=299						
EHY	Hungye	0.37	315	eP	Pb	03 57 50.9	+0.1
	baz=307						
EHY				eS	Sb	03 57 57.0	+0.4
	baz=307						
ECS	Chishang	0.38	248	eP	Pb	03 57 51.5	+0.5
	baz=253						
ECS				eS	Sb	03 57 58.7	+1.7
	baz=253						
EDH	Donghe	0.39	226	P	Pb	03 57 51.9	+0.9
	baz=213						
EDH				eS	Sb	03 57 58.3	+1.4
	baz=213						
EGFH	Guangfu	0.46	339	eP	Pn	03 57 52.3	-0.4
	baz=334						
EGFH				eS	Sb	03 57 59.7	+1.0
	baz=334						
TEGC	Jichi Village	0.47	353	eP	Pn	03 57 52.6	-0.2
	baz=5.0						
TEGC				eS	Sb	03 58 00.0	+0.9
	baz=5.0						
ELDTW	Lidau	0.55	265	eP	Pn	03 57 53.0	-1.0
	baz=255						
ELDTW				eS	Sn	03 58 00.3	-1.8
	baz=255						
LONT	Longtian	0.55	233	eP	Pn	03 57 53.3	-0.7
	baz=237						
LONT				eS	Sn	03 58 01.3	-0.8
	baz=237						
LDUT	Ludao	0.58	193	P	Pn	03 57 53.5	-0.8
	baz=180						
LDUT				eS	Sn	03 58 02.3	-0.5
	baz=180						
ESL	Shilin	0.59	344	eP	Pn	03 57 54.1	-0.4
	baz=340						
ESL				eS	Sn	03 58 01.5	-1.7
	baz=340						
TEYL	Yanliau Villag	0.62	359	eP	Pn	03 57 55.0	-0.1
	baz=14						
TEYL				eS	Sn	03 58 04.7	+0.7
	baz=14						
TWGBT	Beinan	0.64	229	eP	Pn	03 57 54.2	-1.0
	baz=234						
TWGBT				eS	Sn	03 58 03.1	-1.3
	baz=234						
TWG	Pinlang	0.65	230	eP	Pn	03 57 54.2	-1.1
	baz=234						
TWG				eS	Sn	03 58 03.6	-0.9
	baz=234						
YUS	Yu-Shan	0.65	293	⇓P	Pn	03 57 55.3	-0.5
	baz=292						
YUS				eS	Sn	03 58 04.2	-1.1
	baz=292						
HWA	Hwalien	0.73	360	eP	Pn	03 57 55.9	-0.6
	baz=12						
HWA				eS	Sn	03 58 06.8	+0.1
	baz=12						
STYH	Taoyuan	0.77	265	eP	Pn	03 57 56.6	-0.3
	baz=262						
STYH				eS	Sn	03 58 06.5	-0.9
	baz=262						
ALS	Alishan	0.78	290	P	Pn	03 57 55.8	-1.7
	baz=290						
ALS				eS	Sn	03 58 08.3	-0.1
	baz=290						
SSLB	Suanglung	0.81	312	eP	Pn	03 57 57.1	-0.5
	baz=318						
SSLB				eS	Sn	03 58 06.9	-1.7
	baz=318						
OWD	Renai	0.81	331	eP	Pn	03 57 57.1	-0.6
	baz=341						
OWD				eS	Sn	03 58 06.9	-2.0
	baz=341						
TWD	Chiawan	0.84	359	eP	Pn	03 57 57.4	-0.5
	baz=351						
TWD				eS	Sn	03 58 08.5	-0.7
	baz=351						
ECL	Taimali	0.88	223	eP	Pn	03 57 58.0	-0.5
	baz=218						
ECL				eS	Sn	03 58 08.6	-1.6
	baz=218						
TPUB	Ta-pu	0.90	274	eP	Pn	03 57 59.5	+0.6
	baz=272						
TPUB				eS	Sn	03 58 11.3	+0.5
	baz=272						
CHGB	Renai	0.91	334	eP	Pn	03 57 58.6	-0.5
	baz=343						
CHGB				eS	Sn	03 58 09.9	-1.4
	baz=343						
SMLT	Sun Moon Lake	0.91	315	eP	Pn	03 57 59.0	0.0
	baz=318						
SMLT				eS	Sn	03 58 10.3	-0.9
	baz=318						
WTP	Ta-pu	0.91	271	eP	Pn	03 57 59.5	+0.5
	baz=268						
WTP				eS	Sn	03 58 12.1	+1.0
	baz=268						
ETL	Fush Village	0.92	1	eP	Pn	03 57 58.8	-0.2
	baz=353						
ETL				eS	Sn	03 58 10.2	-1.0
	baz=353						
SLGT	Liugui	0.92	255	eP	Pn	03 57 59.5	+0.5
	baz=248						
SLGT				eS	Sn	03 58 11.4	+0.2
	baz=248						
CHN5	Tsauling	0.92	293	eP	Pn	03 58 00.4	+1.2
	baz=292						
CHN5				eS	Sn	03 58 12.4	+0.9
	baz=292						
NACB	Ninganchiao	0.93	359	eP	Pn	03 57 58.3	-0.9
	baz=352						
NACB				eS	Sn	03 58 09.9	-1.6
	baz=352						
CHN4	Tsaushan	0.94	277	eP	Pn	03 57 58.5	-0.8
	baz=275						
CHN4				eS	Sn	03 58 11.2	-0.5
	baz=275						
TYC	Yuchr	0.95	314	eP	Pn	03 57 59.7	+0.2
	baz=322						
TYC				eS	Sn	03 58 11.6	-0.5
	baz=322						
WHF	Hehuan Shan	0.95	341	eP	Pn	03 57 59.1	-0.9
	baz=344						
WHF				eS	Sn	03 58 11.4	-1.3
	baz=344						
SGST	Jiashian	0.95	261	eP	Pn	03 57 59.5	-0.1
	baz=253						
SGST				eS	Sn	03 58 12.8	+0.7
	baz=253						
ETLH	Xiulin Townshi	0.97	353	eP	Pn	03 57 58.8	-1.0
	baz=356						
ETLH				eS	Sn	03 58 10.3	-2.3
	baz=356						
WJS	Zhushan	0.99	306	eP	Pn	03 57 59.4	-0.7
	baz=306						
WJS				eS	Sn	03 58 12.5	-0.6
	baz=306						
CHN1	Nanshi	0.99	267	eP	Pn	03 58 01.3	+1.2
	baz=265						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHN1	baz=265			*e*S	Sb	03 58 15.5	+1.7
SNST	Tainan City baz=267	1.02	269	*e*P	Pn	03 58 01.4	+0.9
SNST	baz=267			*e*S	Sb	03 58 15.6	+1.2
SSD	Sandimen baz=234	1.02	241	*e*P	Pn	03 58 01.8	+1.2
SSD	baz=234			*e*S	Sn	03 58 13.6	-0.2
TWK	Hsinying baz=270	1.03	272	*e*P	Pn	03 58 01.4	+0.8
TWK	baz=270			*e*S	Sb	03 58 15.8	+1.1
WCS	Beigang Elemen baz=330	1.03	322	*e*P	Pn	03 58 01.1	+0.5
TSMG	Majia baz=232	1.03	239	*e*P	Pn	03 58 01.5	+0.8
TSMG	baz=232			*e*S	Sn	03 58 14.6	+0.5
FUSS	Fushou baz=352	1.06	342	*e*P	Pn	03 58 00.9	-0.2
FUSS	baz=352			*e*S	Sn	03 58 14.1	-0.9
WNT	Mingjian baz=308	1.06	307	*e*P	Pn	03 58 00.2	-0.8
WNT	baz=308			*e*S	Sn	03 58 16.0	+1.3
WDLH	Douliu baz=304	1.08	295	*e*P	Pn	03 58 02.4	+1.2
WDLH	baz=304			*e*S	Sn	03 58 16.8	+1.7
TWT	Tachien baz=347	1.08	339	*e*P	Pn	03 58 01.9	+0.4
TWT	baz=347			*e*S	Sn	03 58 15.2	-0.3
TDCB	Techi baz=346	1.09	338	*e*P	Pn	03 58 01.8	+0.2
TDCB	baz=346			*e*S	Sn	03 58 14.5	-1.2
MASBT	Mashibuluo baz=227	1.09	235	*e*P	Pn	03 58 01.5	0.0
MASBT	baz=227			*e*S	Sb	03 58 18.5	+2.0
CHY	Chiayi baz=283	1.12	284	*e*P	Pn	03 58 00.9	-0.9
CHY	baz=283			*e*S	Sn	03 58 17.1	+1.0
ENA	Nanau baz=17	1.19	6	*e*P	Pn	03 58 02.7	-0.1
ENA	baz=17			*e*S	Sn	03 58 17.6	-0.3
LAY	Lan-yu baz=173	1.20	182	*e*P	Pn	03 58 02.1	-0.8
LAY	baz=173			*e*S	Sn	03 58 16.5	-1.7
WHP	Taichung City baz=331	1.20	330	*e*P	Pn	03 58 02.3	-0.7
WHP	baz=331			*e*S	Sn	03 58 17.9	-0.4
NNSB	Datong baz=1.0	1.20	350	*e*P	Pn	03 58 03.1	+0.1
NNSB	baz=1.0			*e*S	Sn	03 58 16.8	-1.6
EWUT	Wuta baz=19	1.21	7	*e*P	Pn	03 58 03.0	0.0
EWUT	baz=19			*e*S	Sn	03 58 17.2	-1.2
ICHU	Yijhu baz=274	1.23	276	*e*P	Pn	03 58 04.2	+0.9
ICHU	baz=274			*e*S	Sn	03 58 20.1	+1.3
SCZT	Fangliau baz=222	1.25	227	*e*P	Pb	03 58 06.1	+0.8
SCZT	baz=222			*e*S	Sb	03 58 22.8	+1.7
SLIU	Shizi baz=212	1.26	216	*e*P	Pn	03 58 03.3	-0.5
SLIU	baz=212			*e*S	Sn	03 58 19.4	-0.4
WCHH	Zhanghua baz=312	1.27	311	*e*P	Pn	03 58 03.4	-0.6
WCHH	baz=312			*e*S	Sn	03 58 19.3	-0.6
CHN8	Yiju baz=274	1.29	275	*e*P	Pn	03 58 03.3	-0.8
CHN8	baz=274			*e*S	Sn	03 58 19.3	-1.0
WRL	Guolierlin Hig baz=301	1.31	301	*e*P	Pn	03 58 03.8	-0.5
WRL	baz=301			*e*S	Sn	03 58 20.0	-0.8
TWC	Suao baz=12	1.38	9	*e*P	Pn	03 58 05.7	+0.3
TWC	baz=12			*e*S	Sn	03 58 23.0	+0.4
NDS	Dongshan baz=356	1.39	4	*e*P	Pn	03 58 05.4	-0.2
NDS	baz=356			*e*S	Sn	03 58 22.9	0.0
ENTT	Nioudou baz=353	1.39	358	*e*P	Pn	03 58 05.7	0.0
ENTT	baz=353			*e*S	Sn	03 58 22.8	-0.2
YHNB	Yeheng baz=353	1.44	352	*e*P	Pn	03 58 06.9	+0.6
YHNB	baz=353			*e*S	Sn	03 58 23.5	-0.7
NSK	Sanguang baz=353	1.45	351	*e*P	Pn	03 58 07.1	+0.7
NSK	baz=353			*e*S	Sn	03 58 24.0	-0.4
NSTT	Nanjuang baz=340	1.49	338	*e*P	Pn	03 58 08.7	+1.8
NSTT	baz=340			*e*S	Sn	03 58 26.4	+1.0
LIOB	Emei baz=340	1.50	339	*e*P	Pn	03 58 08.6	+1.5
LIOB	baz=340			*e*S	Sn	03 58 27.0	+1.4
NWLT	Wulai baz=358	1.53	356	*e*P	Pn	03 58 07.8	+0.2
NWLT	baz=358			*e*S	Sn	03 58 26.2	-0.3
TIPB	Shuangxi baz=359	1.73	7	*e*P	Pn	03 58 12.4	+2.0
TIPB	baz=359			*e*S	Sn	03 58 33.0	+1.6
YOJ	Yonaguni jima baz=50	1.77	46	*e*P	Pn	03 58 11.5	+0.8
YOJ	baz=50			*e*S	Sn	03 58 32.8	+0.6
YOJ	Yonaguni jima	1.77	46	P	Pn	03 58 11.6	+0.8
YOJ				S	Sn	03 58 32.6	+0.4
PHUB	P'eng-hu baz=266	1.89	279	*e*P	Pn	03 58 12.3	-0.1
PHUB	baz=266			*e*S	Sn	03 58 34.0	-1.2
PNG	Penghu baz=267	1.91	280	*e*P	Pn	03 58 12.7	0.0
PNG	baz=267			*e*S	Sn	03 58 34.2	-1.5
IRIF	Iriomote-Funau	2.23	60	P	Pn	03 58 18.0	+0.9
IRIF				*e*S	Sn	03 58 44.4	+0.8
JKRS	Kuro-shima	2.42	65	P	Pn	03 58 20.3	+0.7
JKRS				*e*S	Sn	03 58 48.6	+0.4
JIJ	Ishigaki jima	2.58	64	P	Pn	03 58 22.1	+0.2
JIJ				S	Sn	03 58 51.7	-0.5
JISG	Ishigakijimahi	2.81	61	P	Pn	03 58 25.0	-0.1
JISG				S	Sn	03 58 56.8	-1.2
PTMZ	Houxiangcun baz=309	2.89	309	*e*P	Pn	03 58 25.1	-1.2
PTMZ	baz=309			*e*S	Sn	03 58 57.7	-2.2
JTJ	Tarama	3.16	63	P	Pn	03 58 30.7	+0.9
JTJ				S	Sn	03 59 07.2	+0.7
KNMB	Chin-men Tao baz=293	3.19	293	*e*P	Pn	03 58 29.7	-0.6
KNMB	baz=293			*e*S	Sn	03 59 04.2	-3.0
MATB	Ma-tsu baz=333	3.27	333	*e*P	Pn	03 58 31.1	-0.3
MATB	baz=333			*e*S	Sn	03 59 07.3	-1.9

JMA ***06*** *04:01:55.8±0.1, 24.°54N×122.°67E, h105^{km}±1^{km}, M2.4*

TAP ***06*** *04:01:55.5, 24.°65N×122.°70E, h107^{km}, ML3.6, C*

ISC 06 04:01:57.0±1.5**, 24.°57N**±0.°05×**122.°69E**±0.°03**, h95**^{km}±9^{km}**,**
n69, σ0^{s}82/120**, 12C-1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.26	118	P	Pn	04 02 11.0	+0.1
JYNG				S	Sn	04 02 22.2	+1.0
YOJ	Yonaguni jima baz=130	0.31	111	⇑*e*P	Pn	04 02 11.3	+0.1
YOJ	baz=130			*e*S	Sn	04 02 22.7	+1.1
YOJ	Yonaguni jima	0.31	111	P	Pn	04 02 11.1	0.0
YOJ				S	Sn	04 02 22.7	+1.1
TWC	Suao baz=265	0.77	273	⇑*i*P	Pn	04 02 14.1	-0.6
TWC	baz=265			*i* S	Sn	04 02 27.3	-0.6
TWB1	Santiao Chiao baz=295	0.77	304	*e*P	Pn	04 02 14.2	-0.5
NTC	Toucheng baz=281	0.83	290	*e*P	Pn	04 02 14.9	-0.4
NTC	baz=281			*e*S	Sn	04 02 29.0	0.0
EWUT	Wuta baz=253	0.84	261	*e*P	Pn	04 02 15.2	-0.2
EWUT	baz=253			*e*S	Sn	04 02 29.3	0.0
ENA	Nanau baz=252	0.88	261	*e*P	Pn	04 02 15.7	-0.1
ENA	baz=252			*e*S	Sn	04 02 30.8	+0.8
TIPB	Shuangxi baz=289	0.88	297	⇑*i*P	Pn	04 02 15.4	-0.4
TIPB	baz=289			*i* S	Sn	04 02 29.1	-0.9
NDS	Dongshan baz=269	0.89	274	*e*P	Pn	04 02 15.7	-0.2
NDS	baz=269			*e*S	Sn	04 02 30.0	-0.2
TWE	Neicheng baz=273	0.95	279	⇑*i*P	Pn	04 02 16.2	-0.3
TWE	baz=273			*i* S	Sn	04 02 31.1	0.0
NWF	Wu-fen Shan baz=291	0.97	301	⇑*i*P	Pn	04 02 16.4	-0.4
NWF	baz=291			*i* S	Sn	04 02 31.5	-0.2
IRIF	Iriomote-Funau	0.97	104	P	Pn	04 02 16.7	-0.1
IRIF				S	Sn	04 02 32.2	+0.5
ENTT	Nioudou baz=268	1.03	274	*e*P	Pn	04 02 17.4	-0.1
ETL	Fush Village baz=237	1.06	247	*e*P	Pn	04 02 17.2	-0.6
ETL	baz=237			*e*S	Sn	04 02 33.6	+0.2
NDT	Datong Townshi baz=266	1.08	272	P	Pn	04 02 18.2	+0.2
NDT	baz=266			*i* S	Sn	04 02 34.5	+0.7
NACB	Ninganchiao baz=239	1.08	249	*e*P	Pn	04 02 17.3	-0.7
NACB	baz=239			*e*S	Sn	04 02 33.5	-0.3
NWLT	Wulai baz=283	1.10	281	*e*P	Pn	04 02 17.7	-0.6
NWLT	baz=283			*e*S	Sn	04 02 33.5	-0.8
TWD	Chiawan baz=235	1.12	244	*i* P	Pn	04 02 17.8	-0.6
TWD	baz=235			*i* S	Sn	04 02 34.5	-0.1
HATJ	Hateruma jima	1.14	117	S	Sn	04 02 35.7	+0.8
ETLH	Xiulin Townshi baz=248	1.16	252	*e*P	Pn	04 02 18.7	-0.3
ETLH	baz=248			*e*S	Sn	04 02 35.7	0.0
YM01	YM01 baz=287	1.17	299	⇑*e*P	Pn	04 02 18.4	-0.7
YM01	baz=287			*e*S	Sn	04 02 35.4	-0.3
NNSB	Datong baz=252	1.20	263	*e*P	Pn	04 02 19.1	-0.5
NNSB	baz=252			*e*S	Sn	04 02 36.6	0.0
YHNB	Yeheng baz=264	1.20	275	⇑*e*P	Pn	04 02 19.4	-0.1
YHNB	baz=264			*e*S	Sn	04 02 36.1	-0.4
NNS	Nan Shan baz=254	1.21	264	P	Pn	04 02 19.3	-0.4
NNS	baz=254			S	Sn	04 02 37.2	+0.5
NSK	Sanguang baz=265	1.22	275	⇑*e*P	Pn	04 02 19.4	-0.3
NSK	baz=265			*e*S	Sn	04 02 36.4	-0.5
JKRS	Kuro-shima	1.25	105	P	Pn	04 02 20.3	+0.4
JKRS				S	Sn	04 02 37.9	+0.7
JIJ	Ishigaki jima	1.34	99	P	Pn	04 02 20.8	-0.2
JIJ				S	Sn	04 02 38.3	-0.9
FUSS	Fushou baz=248	1.36	257	P	Pn	04 02 21.7	+0.1
FUSS	baz=248			*i* S	Sn	04 02 40.4	+0.3
WHF	Hehuan Shan baz=248	1.37	252	⇑*i*P	Pn	04 02 21.2	-0.7
WHF	baz=248			*i* S	Sn	04 02 40.1	-0.5
ESL	Shilin baz=233	1.38	237	P	Pn	04 02 20.8	-0.7
ESL	baz=233			*e*S	Sn	04 02 39.1	-1.0
TWT	Tachien baz=253	1.42	257	*e*P	Pn	04 02 22.6	+0.4
TWT	baz=253			*e*S	Sn	04 02 41.5	+0.2
TDCB	Techi baz=254	1.44	257	*e*P	Pn	04 02 22.4	0.0
TDCB	baz=254			*e*S	Sn	04 02 41.2	-0.4
EGFH	Guangfu baz=229	1.47	232	*e*P	Pn	04 02 22.0	-0.7
EGFH	baz=229			*e*S	Sn	04 02 41.9	-0.2
JISG	Ishigakijimahi	1.47	89	P	Pn	04 02 22.2	-0.5
JISG				S	Sn	04 02 41.4	-0.7
CHGB	Renai baz=241	1.48	250	⇑*e*P	Pn	04 02 22.8	-0.2
CHGB	baz=241			*e*S	Sn	04 02 42.6	0.0
LIOB	Emei baz=270	1.53	273	S	Sn	04 02 43.1	-0.4
NSTT	Nanjuang baz=269	1.54	272	⇓*i*P	Pn	04 02 23.4	-0.2
NSTT	baz=269			*i* S	Sn	04 02 43.2	-0.5
HGSD	Ruisui baz=223	1.58	227	*e*P	Pn	04 02 23.6	-0.5
HGSD	baz=223			*e*S	Sn	04 02 44.8	+0.2
WHP	Taichung City baz=254	1.62	260	*e*S	Sn	04 02 45.9	+0.2
EHY	Hungye baz=234	1.64	230	*e*P	Pn	04 02 23.9	-1.0
WCS	Beigang Elemen baz=254	1.71	253	*e*P	Pn	04 02 26.5	+0.9
WCS	baz=254			*e*S	Sn	04 02 49.2	+1.8
NMLH	Miaoli baz=266	1.73	269	*e*P	Pn	04 02 25.8	-0.2
YULB	Yu-li baz=231	1.74	228	⇑*e*P	Pn	04 02 25.1	-1.0
YULB	baz=231			*e*S	Sn	04 02 46.9	-1.2
EYUL	Yuli baz=230	1.75	226	*e*S	Sn	04 02 49.2	+0.7
SSLB	Suanglung baz=238	1.77	244	*e*P	Pn	04 02 26.3	-0.2
SSLB	baz=238			*e*S	Sn	04 02 49.4	+0.4
SMLT	Sun Moon Lake baz=238	1.78	248	P	Pn	04 02 27.5	+0.8
SMLT	baz=238			*e*S	Sn	04 02 51.4	+2.2
TYC	Yuchr baz=240	1.81	249	*e*P	Pn	04 02 27.5	+0.6
TYC	baz=240			*e*S	Sn	04 02 50.7	+1.1
JTJ	Tarama	1.83	87	P	Pn	04 02 26.8	-0.4
JTJ				*e*S	Sn	04 02 50.4	+0.2
FULB	Fuli baz=214	1.88	223	*i* P	Pn	04 02 27.4	-0.5
FULB	baz=214			*i* S	Sn	04 02 51.0	-0.3
CHKT	Chengkung baz=212	1.91	220	*i* P	Pn	04 02 27.3	-0.9
CHKT	baz=212			*i* S	Sn	04 02 50.4	-1.6
WJS	Zhushan baz=238	1.94	248	S	Sn	04 02 54.6	+1.7
WNT	Mingjian baz=246	1.96	250	*e*S	Sn	04 02 55.0	+1.7
ALS	Alishan baz=235	2.03	239	*i* P	Pn	04 02 30.5	+0.4
ALS	baz=235			S	Sn	04 02 56.1	+0.9
EDH	Donghe baz=216	2.04	219	*e*P	Pn	04 02 29.1	-0.9
EDH	baz=216			*e*S	Sn	04 02 53.6	-1.5
CHN5	Tsauling baz=233	2.08	243	*e*P	Pn	04 02 31.3	+0.7
CHN5	baz=233			*e*S	Sn	04 02 57.8	+1.6
LONT	Longtian baz=218	2.19	221	*e*S	Sn	04 02 58.3	-0.4
LDUT	Ludao baz=205	2.20	211	*e*S	Sn	04 02 57.4	-1.5
WRL	Guolierlin Hig baz=259	2.22	253	*e*S	Sn	04 02 58.2	-1.1
CHN4	Tsaushan baz=234	2.27	238	*e*P	Pn	04 02 32.8	-0.3
CHN4	baz=234			*e*S	Sn	04 03 00.8	+0.1
TPUB	Ta-pu baz=234	2.27	237	*e*P	Pn	04 02 34.0	+1.0
TPUB	baz=234			*e*S	Sn	04 03 01.5	+0.9
TWGBT	Beinan baz=217	2.29	221	*e*S	Sn	04 02 59.8	-1.2
TWG	Pinlang baz=217	2.29	221	*i* S	Sn	04 02 59.9	-1.2
WTP	Ta-pu baz=232	2.32	236	⇑*i*P	Pn	04 02 35.1	+1.5
WTP	baz=232			*e*S	Sn	04 03 03.3	+1.6
TWK	Hsinying baz=234	2.40	238	*e*S	Sn	04 03 04.8	+1.2
CHN1	Nanshi baz=232	2.42	236	*e*P	Pn	04 02 36.4	+1.4
CHN1	baz=232			*e*S	Sn	04 03 05.2	+1.2
SLGT	Liugui baz=232	2.45	230	*e*S	Sn	04 03 06.4	+1.6
MASBT	Mashibuluo baz=233	2.72	224	*e*P	Pn	04 02 40.0	+1.1
MASBT	baz=233			*e*S	Sn	04 03 12.1	+1.0
LAY	Lan-yu baz=194	2.73	203	*e*S	Sn	04 03 09.4	-2.1

MOS ***06*** *04:03:03.4±1.0, 44.°55N×6.°74E, h8^{km}, mb4.2/6, Error ellipse: s-maj=9.1km s-min=4.2km az=62.1*

GEN ***06*** *04:03:04.0, 44.°46N×6.°68E, h7^{km}±2^{km}, Ml3.8*

IASPEI ***06*** *04:03:04.0±0.8, 44.°48N±0.°01×6.°72E±0.°02, h11^{km}±6^{km}, mb4.0/10, Error ellipse: s-maj=2.4km s-min=2.0km az=79.3, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

STR ***06*** *04:03:03.9±0.1, 44.°5N±0.°9×6.°7E±1.°0, h12^{km}±1^{km}, mb4.2/7, mB5.0/4, MLv4.2/22, Mw(mB)4.3/4, preliminary*

PRU ***06*** *04:03:03.2±0.0, 44.°37N×6.°71E, h0^{km}, M4.0*

NEIC ***06*** *04:03:04.3±2.3, 44.°46N±0.°05×6.°73E±0.°08, h1^{km}±5^{km}, Error ellipse: s-maj=8.7km s-min=7.8km az=102.0*

IDC ***06*** *04:03:04.4±1.0, 44.°60N×6.°64E, h0^{km}, mb3.8/6, mb1 4.0/12, mb1mx3.8/58, mbtmp3.9/12, ML4.5/7, MS3.1/5, Ms1 3.1/5, ms1mx2.6/50, Error ellipse: s-maj=22.8km s-min=11.7km az=130.0*

ROM ***06*** *04:03:04.1±0.1, 44.°471N±0.°002×6.°706E±0.°004, h11^{km}, ML3.8/83, Error ellipse: s-maj=0.3km s-min=0.2km az=300.0*

LDG ***06*** *04:03:04.6±0.1, 44.°47N×6.°73E, h2^{km}, Md3.9/2, Ml4.3/54, Error ellipse: s-maj=1.5km s-min=1.2km az=65.0*

NEIC ***06*** *04:03:04.2, 44.°48N×6.°73E, h8^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-5.65; $M_{\theta\theta}$-0.21; $M_{\phi\phi}$5.85; $M_{r\theta}$0.06; $M_{\theta\phi}$-0.81; $M_{\phi r}$-0.23; Fault plane solution: $M_0$5.81000×10^{14} NP1:ϕ_s172.87000°, δ43.84000°, λ-89.50000°. NP2:ϕ_s352.17000°, δ46.16000°, λ-90.48000°. Principal axes: T 5.9638, Plg1.0000°, Azm83.0000°; N -0.3122, Plg0.0000°, Azm353.0000°; P -5.6516, Plg89.0000°, Azm246.0000°;*

BGS ***06*** *04:03:05.7±2.0, 44.°55N×6.°58E, h5^{km}, ML4.4, ML4.4*

MED_RC ***06*** *04:03:05.0±0.4, 44.°47N×6.°69E, h12^{km}±1^{km}, MW4.0/14, Moment Tensor Solution.Mantle waves: s14,c21; Duration: 1^{s}0 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.07±.17; $M_{\theta\theta}$0.21±.11; $M_{\phi\phi}$0.87±.11; $M_{r\theta}$0.10±.17; $M_{\theta\phi}$-0.12±.06; $M_{\phi r}$0.79±.21; Best double couple: $M_0$1.26000×10^{15} NP1:ϕ_s344.00000°, δ26.00000°, λ-105.00000°. NP2:ϕ_s180.00000°, δ65.00000°, λ-83.00000°. Principal axes: T 1.1600, Plg19.0000°, Azm265.0000°; N 0.2100, Plg6.0000°, Azm357.0000°; P -1.3600, Plg70.0000°, Azm104.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

BGR ***06*** *04:03:06.4±0.4, 44.°45N×6.°81E, h5^{km}, ML4.2 Error ellipse: s-maj=17.8km s-min=8.9km az=99.0*

ISC 06 04:03:04.1±0.4**, 44.°48N**±0.°01×**6.°708E**±0.°010**, h10**^{km}±2^{km}**,**
n513, σ1^{s}85/706**, mb4.0**/10**, 35C-42D, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SURF	Saint Ours	0.07	87	Pg	Pg	04 03 06.5	-0.1
SURF				Sg	Sg	04 03 07.9	-0.5
OGAG	Argentiere	0.12	259	Pg	Pb	04 03 10.8	+2.2
OGAG				Sg	Sg	04 03 15.5	+6.2
MBDF	Montbardon	0.25	10	*e*Pg	Pg	04 03 09.4	0.0
MBDF	5μm,0.2s			*e*Sg	Sg	04 03 13.2	+0.3
PZZ	Stroppo	0.29	84	P	Pg	04 03 10.1	+0.1
PZZ				S	Sg	04 03 14.6	+0.5
PZZ	Stroppo	0.29	84	⇑P	Pg	04 03 10.2	+0.1
PZZ	comp=E,20700μm,0.5s			AML	AML		
PZZ	comp=N,40950μm,0.8s			AML	AML		
ISO	Isola	0.38	140	Pg	Pg	04 03 11.4	-0.3
ISO				Sg	Sg	04 03 16.1	-0.6
RRL	Rocca Remolon	0.45	8	P	Pg	04 03 13.0	0.0
RRL				S	Sg	04 03 19.6	+0.7
RRL	Rocca Remolon	0.45	8	⇑P	Pg	04 03 13.0	0.0
RRL				S	Sg	04 03 19.6	+0.7
RRL	comp=E,12950μm,0.4s			AML	AML		
RRL	comp=N,10700μm,0.5s			AML	AML		
OGDI	Digne	0.47	219	Pg	Pb	04 03 14.4	-0.1
OGDI				Sg	Sb	04 03 21.7	+0.2
BHB	Bricherasio	0.54	47	P	Pg	04 03 14.5	-0.1
BHB				S	Sg	04 03 21.7	-0.1
BHB	Bricherasio	0.54	47	⇑P	Pg	04 03 14.5	-0.1
BHB				S	Sg	04 03 21.6	-0.1
BHB	comp=E,2930μm,1.6s			AML	AML		
BHB	comp=N,2835μm,0.5s			AML	AML		
BHB	comp=E,3395μm,0.7s			AML	AML		
BHB	comp=N,2965μm,0.5s			AML	AML		
SPIF	crte de Spivo	0.57	138	Pg	Pg	04 03 14.9	-0.3
SPIF				Sg	Sg	04 03 22.5	-0.1
ENR	Entracque	0.57	116	P	Pg	04 03 14.9	-0.3
ENR				S	Sg	04 03 22.3	-0.4
ENR	Entracque	0.57	116	⇑P	Pg	04 03 14.9	-0.3

ENR				S	Sg	04 03 23.1	+0.4
ENR				AML	AML		
	comp=N,14250µm,0.3s						
ENR				AML	AML		
	comp=E,11400µm,0.4s						
BNI	**Bardonecchia**	0.57	358	P	Pg	04 03 15.1	-0.2
BNI	**Bardonecchia**	0.57	358	P	Pg	04 03 15.2	-0.1
BNI				S	Sb	04 03 23.8	-0.9
BNI				AML	AML		
	comp=E,2000µm,0.8s						
BNI				AML	AML		
	comp=N,2555µm,0.4s						
BNI				AML	AML		
	comp=N,2145µm,0.5s						
BNI				AML	AML		
	comp=E,2700µm,0.8s						
BNI				AML	AML		
	comp=E,1995µm,0.8s						
BNI	**Bardonecchia**	0.57	358	Pg	Pg	04 03 15.1	-0.2
MVIF	**Mont Vial**	0.66	151	Pg	Pg	04 03 16.7	-0.3
MVIF				Sg	Sg	04 03 25.6	-0.1
TURF	**col de Turini**	0.70	135	Pg	Pg	04 03 17.4	-0.4
TURF				Sg	Sg	04 03 26.6	-0.3
BLAF	**les Blancs**	0.71	222	Pg	Pg	04 03 18.0	+0.2
BLAF				Sg	Sb	04 03 28.3	-0.1
OGMO	**Fort Saint-Gob**	0.73	359	Pg	Pg	04 03 18.0	-0.3
OGMO				Sg	Sg	04 03 28.0	+0.2
ORIF	**Oris-en-Rattie**	0.74	307	*e*Pg	Pg	04 03 17.9	-0.5
ORIF				*e*Sg	Sb	04 03 28.5	-0.8
	comp=E,3µm,0.2s						
ORIF				*e*Sn	Sn	04 03 31.8	-0.2
	comp=E,5µm,0.4s						
ORIF	**Oris-en-Rattie**	0.74	307	Pg	Pg	04 03 17.9	-0.5
ORIF				Sg	Sg	04 03 27.5	-0.5
ORIF	**Oris-en-Rattie**	0.74	307	P	Pg	04 03 17.9	-0.5
ORIF				S	Sg	04 03 27.8	-0.2
ORIF				AML	AML		
	comp=N,6465µm,0.4s						
ORIF				AML	AML		
	comp=E,8985µm,0.4s						
CALF	**Calern**	0.74	168	Pg	Pg	04 03 18.5	+0.1
RSP	**Reno Superiore**	0.78	30	P	Pg	04 03 19.1	0.0
RSP				S	Sg	04 03 29.4	+0.1
RSP	**Reno Superiore**	0.78	30	⇑P	Pg	04 03 19.2	0.0
RSP				S	Sb	04 03 29.9	-0.6
RSP				AML	AML		
	comp=N,7110µm,0.4s						
RSP				AML	AML		
	comp=E,7255µm,0.6s						
RSP				AML	AML		
	comp=N,7430µm,0.4s						
RSP				AML	AML		
	comp=N,7105µm,0.4s						
RSP				AML	AML		
	comp=E,7250µm,0.6s						
RSP				AML	AML		
	comp=E,7685µm,0.6s						
SAOF	**Saorge**	0.78	129	Pg	Pg	04 03 19.0	-0.2
SAOF				Sg	Sg	04 03 29.0	-0.4
SAOF	**Saorge**	0.78	129	P	Pg	04 03 19.0	-0.2
SAOF				S	Sg	04 03 29.1	-0.4
ESCA	**l'Escarene**	0.81	143	Pg	Pg	04 03 19.3	-0.3
ESCA				Sg	Sg	04 03 30.0	-0.1
SBF	**Sospel**	0.81	139	*e*Pg	Pg	04 03 19.2	-0.5
SBF				*e*Sg	Sg	04 03 30.0	-0.2
	comp=E,6µm,0.4s						
SBF				*e*Sn	Sn	04 03 33.4	-0.2
	comp=E,8µm,0.4s						
MLYF	**Mely**	0.83	234	Pg	Pb	04 03 20.4	-0.3
MLYF				Sg	Sb	04 03 32.3	+0.3
GDM	**Grand'Maison**	0.84	330	Pg	Pg	04 03 20.0	-0.3
GDM				Sg	Sg	04 03 31.2	-0.1
GBOS	**Grotte di Boss**	0.84	106	P	Pg	04 03 19.8	-0.6
GBOS				S	Sg	04 03 31.3	-0.2
GBOS	**Grotte di Boss**	0.84	106	⇑P	Pg	04 03 19.9	-0.6
GBOS				S	Sg	04 03 31.2	-0.2
GBOS				AML	AML		
	comp=E,10685µm,0.7s						
GBOS				AML	AML		
	comp=N,7975µm,0.4s						
MGRO	**Montegrosso**	0.90	118	⇑P	Pg	04 03 21.1	-0.4
MGRO				S	Sg	04 03 33.6	+0.4
MGRO				AML	AML		
	comp=E,8335µm,0.4s						
MGRO				AML	AML		
	comp=E,8340µm,0.4s						
MGRO				AML	AML		
	comp=N,8130µm,0.4s						
FRF	**La Foret Royal**	0.92	183	*e*Pg	Pg	04 03 21.3	-0.5
FRF	**La Foret Royal**	0.92	183	*e*Pn	Pn	04 03 23.2	+0.2
FRF				*e*Sg	Sg	04 03 33.6	-0.1
	comp=N,1µm,0.2s						
FRF				*e*Sn	Sn	04 03 35.8	-0.5
	comp=N,7µm,0.3s						
BURY	**Giardini Botan**	0.93	138	P	Pg	04 03 21.6	-0.4
BURY				S	Sg	04 03 34.0	+0.1
BURY				AML	AML		
	comp=N,8105µm,0.5s						
BURY				AML	AML		
	comp=E,5485µm,0.5s						
SMRF	**Simiane la Rot**	0.96	239	*e*Pg	Pb	04 03 22.7	-0.1
SMRF				*e*Sg	Sb	04 03 35.5	0.0
	comp=E,5µm,0.4s						
BSTF	**la Bastide-des**	0.97	232	Pg	Pn	04 03 23.6	-0.1
BSTF				Sg	Sn	04 03 37.9	+0.3
EILF	**Villa Eilenroc**	0.98	162	Pg	Pg	04 03 22.6	-0.3
EILF				Sg	Sg	04 03 35.5	-0.1
LPG	**La Plagne**	1.02	2	*e*Pg	Pg	04 03 23.4	-0.4
LPG				*e*Sg	Sb	04 03 37.3	-0.3
	comp=E,961nm,0.3s						
LPG				*e*Sn	Sn	04 03 39.0	-0.3
	comp=E,1µm,0.3s						
IMI	**Imperia**	1.02	123	⇑P	Pg	04 03 23.3	-0.5
IMI				AML	AML		
	comp=N,25750µm,0.6s						
IMI				AML	AML		
	comp=E,18100µm,0.4s						
GRN	**Grenoble**	1.03	318	Pg	Pb	04 03 23.7	-0.3
GRN				Sg	Sb	04 03 37.3	-0.3
LSD	**Lago del Serru**	1.03	17	⇑P	Pg	04 03 23.4	-0.5
LSD				S	Sg	04 03 37.2	-0.1
LSD				AML	AML		
	comp=E,7165µm,0.6s						
LSD				AML	AML		
	comp=N,6925µm,0.3s						
RUSF	**Rustrel**	1.03	239	Pg	Pn	04 03 24.2	-0.4
RUSF				Sg	Sn	04 03 38.9	-0.2
LPL	**La Plagne**	1.04	1	*e*Pg	Pg	04 03 23.7	-0.4
LPL				*e*Sg	Sb	04 03 38.1	0.0
	comp=N,2µm,0.5s						
RORO	**Rocca Rossa**	1.04	110	⇓P	Pb	04 03 23.3	-0.9
RORO				S	Sg	04 03 37.3	-0.3
RORO				AML	AML		
	comp=N,7860µm,0.7s						
RORO				AML	AML		
	comp=E,5165µm,0.4s						
MONC	**Moncucco Torin**	1.05	55	⇑P	Pg	04 03 24.5	+0.1
MONC				AML	AML		
	comp=N,12200µm,0.4s						
MONC				AML	AML		
	comp=E,9705µm,0.5s						
ARTF	**Artigues**	1.10	217	Pg	Pg	04 03 25.3	0.0
ARTF				Sg	Sn	04 03 40.6	-0.3
LMR	**La Mourre**	1.15	187	*e*Pg	Pb	04 03 25.4	-0.7
LMR				*e*Sg	Sb	04 03 40.9	-0.2
	comp=E,2µm,0.2s						
QLNO	**Quiliano**	1.18	97	⇑P	Pn	04 03 25.9	-0.8
QLNO				S	Sg	04 03 42.5	+0.3
QLNO				AML	AML		
	comp=E,4310µm,0.9s						
QLNO				AML	AML		
	comp=N,4165µm,0.4s						
RSL	**Roselend**	1.21	357	Pn	Pn	04 03 26.4	-0.8
ROTM	**Rocchetta Tana**	1.23	72	P	Pb	04 03 27.5	0.0
ROTM				AML	AML		
	comp=E,11200µm,1.6s						
ROTM				AML	AML		
	comp=E,13550µm,0.7s						
ROTM				AML	AML		
	comp=N,16650µm,0.4s						
TRAV	**Traversella**	1.27	35	⇑P	Pn	04 03 26.6	-1.4
TRAV				S	Sb	04 03 43.5	-1.1
TRAV				AML	AML		
	comp=N,3245µm,0.3s						
TRAV				AML	AML		
	comp=E,5390µm,0.2s						
SAUF	**chteau de Sau**	1.27	245	Pg	Pg	04 03 28.6	0.0
SAUF				Sg	Sg	04 03 46.3	+1.3
CIRO	**Champorcher**	1.28	28	P	Pn	04 03 27.6	-0.7
CIRO				S	Sb	04 03 44.6	-0.5
CIRO				AML	AML		
	comp=E,3085µm,0.5s						
CIRO				AML	AML		
	comp=N,2290µm,0.7s						
MRGE	**Morge**	1.32	11	⇑P	Pb	04 03 28.6	-0.4
MRGE				AML	AML		
	comp=N,3595µm,0.8s						
MRGE				AML	AML		
	comp=E,2560µm,0.9s						
MRGE				AML	AML		
	comp=N,3600µm,0.8s						
PCP	**Piancastagn**	1.32	87	⇑P	Pn	04 03 28.2	-0.4
PCP				S	Sn	04 03 46.1	-0.1
PCP				AML	AML		
	comp=N,3925µm,0.6s						
PCP				AML	AML		
	comp=E,4220µm,0.7s						
OGSM	**Saint Maurice**	1.34	328	Pg	Pg	04 03 29.6	-0.2
REMY	**Saint-Rhmy-en**	1.40	13	P	Pb	04 03 30.3	-0.1
REMY				AML	AML		
	comp=E,3310µm,1.0s						
REMY				AML	AML		
	comp=N,3620µm,1.1s						
REMY				AML	AML		
	comp=E,3315µm,1.0s						
ARBF	**Arbois**	1.40	226	Pg	Pg	04 03 31.2	+0.3
VIVF	**Saint-Julien-l**	1.50	285	*e*Pg	Pb	04 03 31.6	-0.5
VIVF				*e*Sg	Sb	04 03 51.3	+0.1
	comp=E,2µm,0.3s						
SATI	**Passo dei Sala**	1.62	30	⇑P	Pn	04 03 32.5	-0.5
SATI				AML	AML		
	comp=E,1810µm,0.6s						
SATI				AML	AML		
	comp=N,2275µm,0.4s						
DIX	**Grande Dixence**	1.68	17	P	Pb	04 03 35.5	+0.3
DIX				S	Sg	04 03 57.3	-0.7
DIX				AML	AML		
	comp=N,1200µm,0.8s						
DIX				AML	AML		
	comp=E,1375µm,0.9s						
DIX				AML	AML		
	comp=N,1200µm,0.8s						
ASEAF	**Site Antares,**	1.73	193	Pn	Pn	04 03 34.5	+0.7
SSB	**Saint Sauveur**	1.74	298	P	Pb	04 03 35.1	-1.0
SSB	**Saint Sauveur**	1.74	298	Pn	Pb	04 03 35.1	-1.0
MMK	**Mattmark**	1.81	29	P	Pn	04 03 35.9	+0.4
MMK				AML	AML		
	comp=N,2315µm,0.7s						
MMK				AML	AML		
	comp=E,1510µm,0.6s						
GORR	**Gorreto**	1.85	85	P	Pn	04 03 36.6	+0.7
SENIN	**Lac Senin/Sane**	1.93	12		Pb	04 03 39.2	-0.3
BOB	**Bobbio (Coli)**	1.98	81	P	Pb	04 03 39.8	-0.4
BOB				AML	AML		
	comp=N,1920µm,0.8s						
BOB				AML	AML		
	comp=E,2035µm,1.4s						
BOB				AML	AML		
	comp=N,1870µm,1.4s						
BOB				AML	AML		
	comp=E,1740µm,1.4s						
TRBF	**Trabuc cave**	2.01	260	Pn	Pn	04 03 37.8	-0.2
TRBF				Sn	Sn	04 04 02.3	-0.9
VARE	**Varese**	2.02	46	⇑P	Pn	04 03 38.2	0.0
VARE				AML	AML		
	comp=N,1500µm,0.6s						
VARE				AML	AML		
	comp=E,1191µm,0.9s						
MSSA	**Maissana**	2.02	94	Pn	Pn	04 03 38.5	+0.2
LASF	**Ste Croix**	2.09	260	*e*Pn	Pn	04 03 39.1	0.0
LASF	**Ste Croix**	2.09	260	*e*Pg	Pg	04 03 43.6	-0.5
LASF				*e*Sn	Sn	04 04 03.6	-1.6
	comp=E,423nm,0.3s						
LASF				*e*Sg	Sg	04 04 10.9	-0.3
	comp=E,266nm,0.3s						
CABF	**La Chapelle**	2.18	349	*e*P	Pb	04 03 41.9	-1.7
CABF				*e*Sg	Sg	04 04 12.6	-1.5
MUGIO	**Muggio**	2.19	48	P	Pn	04 03 40.7	0.0
MUGIO				AML	AML		
	comp=N,805µm,0.4s						
MUGIO				AML	AML		
	comp=E,944µm,0.4s						
PLMA	**Palmaria, Port**	2.30	100	P	Pn	04 03 41.8	-0.2
PLMA				AML	AML		
	comp=E,1130µm,0.7s						
PLMA				AML	AML		
	comp=N,1170µm,0.5s						
CTL8	**Castelleone**	2.31	69	P	Pn	04 03 43.5	+1.3
CTL8				AML	AML		
	comp=N,914µm,1.0s						
CTL8				AML	AML		
	comp=E,3720µm,0.8s						
CTL8				AML	AML		
	comp=N,2660µm,1.5s						
CTL8				AML	AML		
	comp=E,718µm,0.8s						
GRAM	**Graiana**	2.40	88	P	Pn	04 03 44.4	+0.8
GRAM				AML	AML		
	comp=E,1730µm,0.3s						
GRAM				AML	AML		
	comp=N,1840µm,1.0s						
FUSIO	**Fusio**	2.41	34	P	Pn	04 03 44.2	+0.5
FUSIO				AML	AML		
	comp=N,730µm,0.7s						
FUSIO				AML	AML		
	comp=E,701µm,1.4s						
MDI	**Monti di Nese**	2.49	58	P	Pn	04 03 44.6	-0.2
MDI				AML	AML		
	comp=N,978µm,0.5s						
MDI				AML	AML		
	comp=N,886µm,0.5s						
MDI				AML	AML		
	comp=E,1150µm,1.5s						
MDI				AML	AML		
	comp=E,1150µm,0.3s						
EQUI	**Equi**	2.49	96	P	Pn	04 03 44.7	0.0
EQUI				AML	AML		
	comp=N,915µm,0.8s						
EQUI				AML	AML		
	comp=E,611µm,0.9s						
GROG	**Isola di Gorgo**	2.53	113	⇑P	Pn	04 03 45.0	-0.2
GROG				AML	AML		
	comp=N,693µm,1.0s						
GROG				AML	AML		
	comp=E,732µm,0.6s						
LBL	**Lubilhac**	2.58	288	Pn	Pn	04 03 46.3	+0.4
PRMA	**PARMA**	2.59	82	Pn	Pn	04 03 47.4	+1.4
VLC	**Villacollemand**	2.66	96	⇑P	Pn	04 03 47.2	+0.2
VLC				AML	AML		
	comp=N,480µm,1.0s						
VLC				AML	AML		
	comp=N,488µm,1.0s						
VLC				AML	AML		
	comp=E,557µm,0.9s						
VLC				AML	AML		
	comp=E,548µm,0.9s						
VLC	**Villacollemand**	2.66	96		Pn	04 03 47.2	+0.2
SARO	**Sassorosso**	2.67	95	⇑P	Pn	04 03 47.3	+0.1
SARO				AML	AML		
	comp=N,393µm,0.7s						
SARO				AML	AML		
	comp=E,340µm,0.5s						
BNALP	**Bannalp**	2.68	26	P	Pb	04 03 50.5	-1.8
BNALP				AML	AML		
	comp=N,722µm,1.0s						
BNALP				AML	AML		
	comp=E,1290µm,1.3s						
TUE	**Stuetta**	2.73	42	Pn	Pn	04 03 48.4	+0.3
CARD	**Cardoso**	2.75	98	⇑P	Pn	04 03 48.3	0.0
CARD				AML	AML		
	comp=E,1805µm,0.5s						
CARD				AML	AML		
	comp=N,1200µm,0.8s						
MAIM	**Mastiano**	2.78	100	⇑P	Pn	04 03 48.8	+0.2
MAIM				S	Sn	04 04 23.1	+0.9
MAIM				AML	AML		
	comp=N,654µm,0.4s						
MAIM				AML	AML		
	comp=E,644µm,0.5s						
CORF	**Corte**	2.81	140	Pn	Pn	04 03 49.3	+0.1
CORF				Sn	Sn	04 04 21.0	-2.1
CORF	**Corte**	2.81	140	P	Pn	04 03 49.4	+0.3
CORF				S	Sn	04 04 21.8	-1.3
CORF	**Corte**	2.81	140	AML	AML		
	comp=N,1056µm,0.9s						
CORF				AML	AML		
	comp=E,1380µm,0.6s						
BDI	**Bagni Di Lucca**	2.82	97	P	Pn	04 03 49.3	0.0
BDI				AML	AML		
	comp=E,769µm,0.4s						
BDI				AML	AML		
	comp=N,806µm,0.6s						
BDI				AML	AML		
	comp=N,693µm,0.5s						
BDI				AML	AML		
	comp=E,815µm,0.6s						
PII	**Pisa**	2.85	104	⇑P	Pn	04 03 49.9	+0.3
PII				AML	AML		
	comp=E,694µm,0.4s						
PII				AML	AML		
	comp=N,543µm,1.4s						
CFF	**Clermont-Ferra**	2.85	298	Pn	Pn	04 03 49.2	-0.5
PYM	**Petit Puy Mans**	2.91	297	Pn	Pn	04 03 50.8	+0.3
SALO	**Salr**	2.94	66	P	Pn	04 03 51.0	+0.1
SALO				AML	AML		
	comp=N,1155µm,0.9s						
SALO				AML	AML		
	comp=E,822µm,0.6s						
SALO				AML	AML		
	comp=E,839µm,0.6s						
SALO				AML	AML		
	comp=N,1190µm,0.9s						
SALO	**Salr**	2.94	66	Pn	Pn	04 03 51.3	+0.5
BALST	**Balsthal**	2.94	13	*e*Pn	Pn	04 03 52.2	+1.3
BALST				*e*Sg	Sg	04 04 39.1	+0.6
AJAC	**Base Areonaval**	2.96	149	Pn	Pn	04 03 51.0	0.0
AJAC				Sn	Sn	04 04 24.3	-2.3
AJAC	**Base Areonaval**	2.96	149	P	Pn	04 03 51.5	+0.4
AJAC				S	Sn	04 04 26.1	-0.5
AJAC	**Base Areonaval**	2.96	149	AML	AML		
	comp=N,2350µm,0.2s						
AJAC				AML	AML		
	comp=E,2815µm,0.7s						
SMF	**Signal de Mont**	2.96	318	*e*P	Pn	04 03 52.3	+1.2
SMF	**Signal de Mont**	2.96	318	*e*Pg	Pg	04 03 59.7	-1.1
SMF				*e*Sn	Sn	04 04 26.7	0.0
	comp=E,110nm,0.3s						
SMF				*e*Sg	Sg	04 04 37.4	-1.7
	comp=E,380nm,0.5s						
AGO	**Saint Agoulin**	2.98	303	Pn	Pn	04 03 51.2	-0.1
SMPL	**Sampolo**	3.04	141	Pn	Pn	04 03 52.2	+0.1
SMPL	**Sampolo**	3.04	141	⇑P	Pn	04 03 52.8	+0.6
SMPL				S	Sn	04 04 28.4	-0.1
SMPL	**Sampolo**	3.04	141	AML	AML		
	comp=E,612µm,0.5s						
SMPL				AML	AML		
	comp=N,535µm,0.3s						
ZCCA	**Zocca**	3.06	91	P	Pb	04 03 56.0	-2.7
ZCCA	**Zocca**	3.06	91		Pn	04 03 54.1	+1.6
MAGA	**Magasa**	3.06	64	P	Pn	04 03 52.4	-0.3
MAGA				AML	AML		
	comp=E,3535µm,0.3s						
MAGA				AML	AML		
	comp=N,1935µm,0.3s						
MTCR	**Monte La Croce**	3.12	97	P	Pn	04 03 53.6	+0.3
MABI	**Malga Bissina**	3.12	58	P	Pn	04 03 53.7	+0.3
MABI				AML	AML		
	comp=E,610µm,0.6s						
MABI				AML	AML		
	comp=N,399µm,0.4s						
CRMI	**Carmignano**	3.14	101	P	Pn	04 03 54.1	+0.5
CRMI				AML	AML		
	comp=N,328µm,0.7s						
CRMI				AML	AML		
	comp=E,322µm,0.6s						
CRMI				AML	AML		
	comp=N,310µm,0.7s						
CRMI				AML	AML		
	comp=E,308µm,0.6s						
PLONS	**Plons/SG**	3.18	35	P	Pn	04 03 56.1	+1.8
PLONS				AML	AML		
	comp=N,870µm,0.7s						
PLONS				AML	AML		
	comp=E,663µm,1.0s						
PLONS	**Plons/SG**	3.18	35	*e*Pn	Pn	04 03 56.0	+1.8
PLONS				*e*Sg	Sg	04 04 43.0	-3.3
MPPT	**Montemurlo**	3.19	98	P	Pn	04 03 54.4	0.0
MPPT				AML	AML		
	comp=E,278µm,1.1s						
MPPT				AML	AML		
	comp=N,324µm,0.4s						
DAVOX	**Davos/Dischmat**	3.20	43	Pn	Pn	04 03 56.2	+1.6
	comp=N,21nm,0.3s,baz=245,slow=7.0,SNR=165						
DAVOX				Lg	Lg	04 04 43.5	
	comp=N,22nm,0.3s,baz=162,slow=22,SNR=7.1						
DAVOX				LR	LR	04 05 03.1	
	comp=N,133nm,18.6s,baz=256,slow=38						
DAVOX	**Davos/Dischmat**	3.20	43	P	Pn	04 03 56.1	+1.6
DAVOX				AML	AML		
	comp=N,458µm,0.5s						
DAVOX				AML	AML		
	comp=E,464µm,0.5s						
SULZ	**Cheisacher**	3.20	17	*e*Pn	Pn	04 03 55.9	+1.4
SULZ				*e*Pg	Pg	04 04 05.1	-0.4
SULZ				*e*Sg	Sg	04 04 50.4	+3.5
BRMO	**Bormio**	3.26	51	P	Pn	04 03 56.7	+1.3
BRMO				AML	AML		
	comp=E,299µm,0.5s						
BRMO				AML	AML		
	comp=N,219µm,0.4s						
AVF	**Avril sur Loir**	3.30	316	*e*P	Pn	04 03 56.9	+1.1
AVF	**Avril sur Loir**	3.30	316	*e*Pg	Pg	04 04 06.7	-0.6
AVF				*e*Sn	Sn	04 04 33.4	-1.6
AVF				*e*Sg	Sg	04 04 47.9	-2.2
	comp=N,172nm,0.4s						
ROVR	**Rover Verones**	3.31	68	P	Pn	04 03 55.3	-0.7
ROVR				AML	AML		
	comp=E,668µm,1.3s						
ROVR				AML	AML		
	comp=E,202µm,0.9s						
ROVR				AML	AML		
	comp=N,1260µm,0.3s						
ROVR				AML	AML		
	comp=N,516µm,0.3s						
WILA	**Wila**	3.31	27	*e*Pn	Pn	04 03 58.1	+2.1
WILA				*e*Pg	Pg	04 04 07.0	-0.6
TRIF	**Trifonti**	3.33	113	P	Pn	04 03 56.2	0.0
TRIF				AML	AML		
	comp=E,227µm,1.1s						
TRIF				AML	AML		
	comp=N,216µm,0.6s						
CAF	**Calviac**	3.34	279	*e*P	Pn	04 03 57.1	+0.7
CAF	**Calviac**	3.34	279	*e*Pg	Pg	04 04 06.3	-1.8
CAF				*e*Sn	Sn	04 04 34.3	-1.8
	comp=N,217nm,0.4s						
CAF				*e*Sg	Sg	04 04 49.1	-2.3
HINF	**Hinteralfeld**	3.34	2	*e*P	Pn	04 03 57.0	+0.6
HINF	**Hinteralfeld**	3.34	2	*e*Pg	Pg	04 04 07.2	-0.9
HINF				*e*Sn	Sn	04 04 35.1	-1.1
	comp=N,79nm,0.3s						
HINF				*e*Sg	Sg	04 04 51.4	0.0
	comp=N,154nm,0.4s						
GAGG	**Gaggia**	3.40	60	P	Pn	04 03 57.7	+0.3
GAGG				AML	AML		
	comp=N,632µm,1.4s						
GAGG				AML	AML		
	comp=E,766µm,0.7s						
OSSC	**Osservatorio P**	3.41	105	⇑P	Pn	04 03 57.9	+0.6
OSSC				AML	AML		
	comp=N,277µm,0.9s						
OSSC				AML	AML		
	comp=E,326µm,0.8s						
OSSC				AML	AML		
	comp=N,380µm,0.8s						
OSSC				AML	AML		
	comp=E,378µm,0.9s						
OSSC	**Osservatorio P**	3.41	105		Pn	04 03 57.7	+0.3
BGF	**Bois d'Agland**	3.42	309	*e*P	Pn	04 03 58.5	+1.1
BGF	**Bois d'Agland**	3.42	309	*e*Pg	Pg	04 04 08.0	-1.6
BGF				*e*Sn	Sn	04 04 35.3	-2.7
	comp=E,224nm,0.3s						
BGF				*e*Sg	Sg	04 04 50.2	-3.7
	comp=E,918nm,0.4s						
SSF	**Saint Saulge**	3.42	320	*e*P	Pn	04 03 58.6	+1.1
SSF	**Saint Saulge**	3.42	320	*e*Pg	Pg	04 04 07.9	-1.7

SSF				eSg	Sg	04 04 53.3	-0.6
	comp=E,210nm,0.3s						
LOR	Lormes	3.43	326	eP	Pn	04 03 58.6	+1.0
	baz=146						
LOR				eSn	Sn	04 04 35.6	-2.6
	comp=E,306nm,0.5s						
LOR				eSg	Sg	04 04 51.5	-2.7
	comp=E,339nm,0.4s						
LOR	Lormes	3.43	326	Pn	Pn	04 03 58.2	+0.6
MTLF	Montolieu	3.44	252	ePn	Pn	04 03 58.0	+0.3
MTLF	Montolieu	3.44	252	ePg	Pg	04 04 08.7	-1.3
MTLF				eSn	Sn	04 04 36.2	-2.3
	comp=E,303nm,0.3s						
MTLF				eSg	Sg	04 04 52.5	-2.0
	comp=E,328nm,0.5s						
MTLF	Montolieu	3.44	252	Pn	Pn	04 03 58.1	+0.3
MTLF	Montolieu	3.44	252	P	Pn	04 03 58.1	+0.3
MTLF				S	Sn	04 04 38.0	-0.5
MTLF				AML	AML		
	comp=N,424µm,0.7s						
MTLF				AML	AML		
	comp=E,320µm,0.5s						
MOSI	Grossmontoni	3.44	50	P	Pn	04 04 00.1	+2.2
MOSI				AML	AML		
	comp=E,1260µm,0.6s						
MOSI				AML	AML		
	comp=N,1990µm,0.7s						
CSNT	Castellina Chi	3.46	105	⇑P	Pn	04 03 58.4	+0.4
CSNT				AML	AML		
	comp=N,244µm,0.6s						
CSNT				AML	AML		
	comp=E,199µm,0.8s						
DOSS	Dosso del Somm	3.46	65	P	Pn	04 03 57.7	-0.5
DOSS				AML	AML		
	comp=E,892µm,1.2s						
DOSS				AML	AML		
	comp=E,892µm,1.6s						
DOSS				AML	AML		
	comp=N,911µm,1.6s						
DOSS				AML	AML		
	comp=N,896µm,1.2s						
RUFI	Rufina	3.51	99	P	Pn	04 03 58.8	+0.1
SLE	Schleitheim	3.51	20	ePn	Pn	04 03 59.5	+0.8
SLE				eSn	Sn	04 04 41.3	+0.9
SLE				eSg	Sg	04 04 58.2	+1.3
HAU	Haudompre	3.54	356	eP	Pn	04 03 59.9	+0.8
HAU	Haudompre	3.54	356	ePg	Pg	04 04 12.2	+0.3
HAU				eSn	Sn	04 04 40.6	-0.4
	comp=N,306nm,0.3s						
HAU				eSg	Sg	04 04 58.5	+0.8
DAVA	Damuels	3.58	37	i Pn	Pn	04 04 02.0	+2.2
	comp=N,31nm,0.2s,SNR=31						
DAVA				eSn	Sb	04 04 46.8	-4.3
	comp=N,196nm,0.5s						
DAVA	Damuels	3.58	37	ePn	Pn	04 04 02.0	+2.2
DAVA				eSg	Sb	04 04 53.6	+2.6
DAVA	Damuels	3.58	37		Pn	04 04 02.0	+2.2
DAVA					Sb	04 04 46.8	-4.3
KIZ	Kirchzarten	3.58	13	Pn	Pn	04 03 59.9	+0.2
TEOL	Teolo	3.63	74		Pn	04 04 00.8	+0.5
TCF	Toulx Ste Croi	3.65	301	eP	Pn	04 04 01.4	+0.8
TCF	Toulx Ste Croi	3.65	301	ePg	Pg	04 04 12.7	-1.3
TCF				eSn	Sn	04 04 40.7	-3.0
	comp=N,110nm,0.3s						
TCF				eSg	Sg	04 04 59.4	-1.9
	comp=N,343nm,0.7s						
FNEB	Nbias	3.69	246	Pn	Pn	04 04 01.7	+0.5
FNEB				Sn	Sn	04 04 42.1	-2.6
ASQU	Asqua	3.72	99	P	Pn	04 04 01.8	+0.2
SFI	Santa Sofia	3.74	97	P	Pn	04 04 01.9	0.0
SFI				AML	AML		
	comp=E,182µm,0.8s						
SFI				AML	AML		
	comp=N,162µm,0.5s						
ECH	Echery	3.75	5	P	Pn	04 04 03.0	+0.9
ECH	Echery	3.75	5	Pn	Pn	04 04 02.0	0.0
ECH	Echery	3.75	5		Pn	04 04 03.0	+0.9
APPI	Appiano	3.76	56	P	Pn	04 04 03.9	+1.7
APPI				AML	AML		
	comp=E,476µm,1.1s						
APPI				AML	AML		
	comp=N,632µm,0.5s						
RJF	Les Rejaudoux	3.78	284	eP	Pn	04 04 03.7	+1.3
RJF				eSn	Sn	04 04 43.9	-3.0
	comp=N,159nm,0.4s						
RJF				eSg	Sg	04 05 02.5	-3.0
	comp=N,133nm,0.4s						
FETA	Feichten	3.79	46	i Pn	Pn	04 04 04.9	+2.2
	comp=N,23nm,0.3s,SNR=7.9						
FETA				eSn	Sb	04 04 53.2	-4.0
	comp=N,138nm,0.7s						
FETA	Feichten	3.79	46		Pn	04 04 04.9	+2.2
FETA					Sb	04 04 53.2	-4.0
MAON	Monte Argentar	3.82	121	P	Pn	04 04 03.4	+0.5
MAON				AML	AML		
	comp=N,240µm,0.7s						
MAON				AML	AML		
	comp=E,222µm,0.4s						
CTI	Castel Tesino	3.83	64	P	Pn	04 04 03.2	+0.1
CTI	Castel Tesino	3.83	64	P	Pn	04 04 03.1	+0.1
CTI				AML	AML		
	comp=E,1038µm,0.4s						
CTI				AML	AML		
	comp=N,1725µm,0.4s						
CTI	Castel Tesino	3.83	64	Pn	Pn	04 04 03.2	+0.1
KOSI	Kohlern	3.84	57	⇓P	Pn	04 04 05.8	+2.5
KOSI				AML	AML		
	comp=N,376µm,0.7s						
KOSI				AML	AML		
	comp=E,586µm,0.7s						
OBER	Oberstdorf	3.85	39	ePn	Pn	04 04 05.1	+1.7
CRE	Caprese Michel	3.88	101	⇓P	Pn	04 04 04.8	+1.0
CRE				AML	AML		
	comp=E,618µm,0.8s						
CRE				AML	AML		
	comp=N,527µm,0.4s						
SFTF	Sexfontaines	3.90	343	eP	Pn	04 04 05.7	+1.6
	baz=155						
SFTF	Sexfontaines	3.90	343	ePg	Pg	04 04 18.1	-0.8
SFTF				eSn	Sn	04 04 51.7	+1.8
SFTF				eSg	Sg	04 05 09.1	-0.3
	comp=N,347nm,0.6s						
ABSI	Aberstueckl	3.94	54	P	Pn	04 04 06.6	+1.8
MONQ	Montcuq	3.95	270	Pn	Pn	04 04 04.8	+0.1
CDF	Champ du Feu	3.96	5	eP	Pn	04 04 05.1	+0.2
CDF				eSn	Sn	04 04 52.3	+1.0
	comp=N,81nm,0.3s						
CDF				eSg	Sg	04 05 14.4	+3.3
	comp=N,72nm,0.5s						
WLS	Welschbruch	3.96	6	Pn	Pn	04 04 05.1	+0.2
GUT	Gutenstein	3.96	24	Pn	Pn	04 04 05.5	+0.6
CAFI	Castiglion Fio	3.97	105	P	Pn	04 04 05.9	+0.9
UBR	Ueberruh	3.98	35	ePn	Pn	04 04 06.8	+1.6
HYF	Humbligny	3.98	316	eP	Pn	04 04 06.8	+1.6
HYF	Humbligny	3.98	316	ePg	Pg	04 04 18.6	-1.8
HYF				eSg	Sg	04 05 11.7	-0.3
BFO	Black Forest	4.01	16	P	Pn	04 04 06.5	+0.9
BFO	Black Forest	4.01	16	ePn	Pn	04 04 05.9	+0.3
BFO				ePg	Pg	04 04 19.9	-1.1
BFO				eSn	Sn	04 04 52.1	-0.6
BFO				eSg	Sg	04 05 14.2	+1.3
BFO	Black Forest	4.01	16	Pn	Pn	04 04 06.5	+0.9
PARC	Parchiule	4.07	100	⇑P	Pn	04 04 07.5	+1.1
PARC				AML	AML		
	comp=E,156µm,0.5s						
PARC				AML	AML		
	comp=N,268µm,0.5s						
ROSI	Rosskopf	4.11	52	P	Pn	04 04 09.8	+2.7
BADI	Badiali	4.11	102	⇑P	Pn	04 04 08.0	+1.0
BADI				AML	AML		
	comp=E,172µm,0.7s						
BADI				AML	AML		
	comp=N,282µm,0.5s						
RETA	Reutte	4.13	42	i Pn	Pn	04 04 08.7	+1.5
	comp=N,18nm,0.2s,SNR=17						
RETA				eSn	Sb	04 05 01.3	-5.5
	comp=N,36nm,0.4s						
RETA	Reutte	4.13	42		Pn	04 04 08.7	+1.5
RETA					Sb	04 05 01.2	-5.5
PAGF	Fort de Pagny	4.13	351	eP	Pn	04 04 09.1	+1.8
	baz=170						
PAGF				eSn	Sn	04 04 54.0	-1.6
PAGF				eSg	Sg	04 05 17.8	+1.0
	comp=N,262nm,0.7s						
AGOR	Agordo	4.17	62	P	Pn	04 04 08.7	+0.9
AGOR				AML	AML		
	comp=N,308µm,1.2s						
AGOR				AML	AML		
	comp=E,487µm,0.6s						
SQTA	Sankt Quirin	4.17	47	i Pn	Pn	04 04 10.1	+2.2
	comp=E,13nm,0.2s						
SQTA				eSn	Sb	04 05 03.3	-4.8
	comp=E,244nm,0.7s						
SQTA	Sankt Quirin	4.17	47	P	Pn	04 04 10.1	+2.2
SQTA					Sb	04 05 03.3	-4.8
SQTA	Sankt Quirin	4.17	47		Pn	04 04 10.1	+2.2
SQTA					Sb	04 05 03.3	-4.8
ATMI	Monte Miggiano	4.18	104	⇓P	Pn	04 04 09.0	+1.1
ATMI				AML	AML		
	comp=E,300µm,1.6s						
ATMI				AML	AML		
	comp=N,512µm,0.6s						
ZUGS	Zugspitze, Sch	4.18	44	ePn	Pn	04 04 09.9	+1.7
MEZF	Maizieres J'vi	4.18	345	eP	Pn	04 04 09.9	+2.0
	baz=160						
MEZF	Maizieres J'vi	4.18	345	ePg	Pg	04 04 22.8	-1.4
MEZF				eSn	Sn	04 04 56.7	-0.1
MEZF				eSg	Sg	04 05 18.8	+0.4
	comp=N,301nm,0.6s						
MOTA	Moosalm	4.20	45	i Pn	Pn	04 04 10.1	+1.8
	comp=N,24nm,0.2s,SNR=30						
MOTA				eSn	Sn	04 05 01.9	+4.5
	comp=N,34nm,0.4s						
MOTA	Moosalm	4.20	45		Pn	04 04 10.1	+1.8
MOTA					Sn	04 05 01.9	+4.5
APEC	Apecchio	4.22	101	P	Pn	04 04 10.0	+1.5
APEC				AML	AML		
	comp=E,256µm,0.6s						
APEC				AML	AML		
	comp=N,226µm,0.6s						
PE3	Peglio	4.24	99	⇑P	Pn	04 04 10.4	+1.6
PE3				AML	AML		
	comp=E,405µm,0.5s						
PE3				AML	AML		
	comp=N,412µm,0.5s						
ATVO	AVT- Monte Val	4.26	103	⇓P	Pn	04 04 09.8	+0.7
ATVO				AML	AML		
	comp=N,188µm,0.7s						
ATVO				AML	AML		
	comp=E,204µm,0.6s						
ATTE	AVT- Monte Tez	4.28	105	⇓P	Pn	04 04 10.7	+1.3
ATTE				AML	AML		
	comp=E,160µm,0.9s						
ATTE				AML	AML		
	comp=N,173µm,0.7s						
LFF	La Frestale	4.28	278	eP	Pn	04 04 10.8	+1.6
LFF	La Frestale	4.28	278	ePg	Pg	04 04 24.6	-1.5
LFF				eSn	Sn	04 04 56.3	-2.9
LFF				eSg	Sg	04 05 18.6	-2.9
	comp=N,485nm,0.6s						
SAVF	Savonnieres en	4.28	346	eP	Pn	04 04 11.4	+2.1
	baz=165						
SAVF	Savonnieres en	4.28	346	ePg	Pg	04 04 26.3	+0.2
SAVF				eSn	Sn	04 05 00.3	+1.1
SAVF				eSg	Sg	04 05 22.0	+0.5
	comp=N,227nm,0.5s						
PART	Garmisch-Parte	4.31	44	ePn	Pn	04 04 12.8	+3.2
PIEI	Pieia	4.31	101	⇓P	Pn	04 04 10.6	+0.9
NARO	Abbazia di Nar	4.32	100	P	Pn	04 04 11.1	+1.2
NARO				AML	AML		
	comp=N,84µm,1.4s						
NARO				AML	AML		
	comp=E,94µm,0.3s						
MURB	Monte Urbino	4.38	104		Pn	04 04 11.5	+0.8
ATFO	Monte Foce - G	4.38	103	⇓P	Pn	04 04 11.3	+0.6
ATFO				AML	AML		
	comp=N,120µm,0.7s						
ATFO				AML	AML		
	comp=E,180µm,0.5s						
WTTA	Wattenberg	4.43	49	i Pn	Pn	04 04 13.8	+2.3
	comp=E,38nm,0.3s,SNR=24						
WTTA				eSn	Sn	04 05 08.1	+5.0
	comp=E,72nm,0.4s						
WTTA	Wattenberg	4.43	49	⇑P	Pn	04 04 13.8	+2.3
WTTA				AML	AML		
	comp=N,416µm,1.3s						
WTTA				AML	AML		
	comp=E,416µm,0.8s						
WTTA	Wattenberg	4.43	49	ePn	Pn	04 04 13.8	+2.3
WTTA	Wattenberg	4.43	49		Pn	04 04 13.8	+2.3
WTTA					Sn	04 05 08.1	+5.0
WATA	Walderalm	4.44	48	i Pn	Pn	04 04 13.6	+2.0
	comp=E,16nm,0.2s,SNR=22						
WATA				eSn	Sn	04 05 09.4	+6.0
	comp=E,67nm,0.6s						
WATA	Walderalm	4.44	48		Pn	04 04 13.6	+2.0
WATA					Sn	04 05 09.4	+6.0
FSSB	Fossombrone	4.44	98	P	Pn	04 04 12.0	+0.4
FSSB				AML	AML		
	comp=E,244µm,0.3s						
FSSB				AML	AML		
	comp=N,307µm,0.4s						
FRON	Frontone	4.45	100	⇑P	Pn	04 04 12.9	+1.3
RISI	Rein	4.50	55	⇓P	Pn	04 04 14.1	+1.6
RISI				AML	AML		
	comp=E,466µm,0.4s						
RISI				AML	AML		
	comp=N,493µm,0.4s						
FOSV	Fossato di Vic	4.53	103	⇓P	Pn	04 04 13.6	+0.8
FOSV				AML	AML		
	comp=N,101µm,0.6s						
FOSV				AML	AML		
	comp=E,85µm,0.6s						
TOLF	Tolfa	4.55	120	⇓P	Pn	04 04 14.0	+0.9
TOLF				AML	AML		
	comp=N,160µm,0.6s						
TOLF				AML	AML		
	comp=E,143µm,1.4s						
STAL	STALIGIAL	4.59	65		Pn	04 04 13.5	0.0
ARVD	Arcevia	4.60	100	P	Pn	04 04 15.4	+1.7
ARVD				AML	AML		
	comp=N,72µm,1.6s						
ARVD				AML	AML		
	comp=E,70µm,0.9s						
STU	Stuttgart	4.62	21	P	Pn	04 04 14.9	+0.9
STU	Stuttgart	4.62	21	ePn	Pn	04 04 14.9	+0.9
STU				eSn	Sn	04 05 07.2	-0.5
STU	Stuttgart	4.62	21	Pn	Pn	04 04 14.9	+0.9
ABTA	Abfaltersbach	4.66	59	i Pn	Pn	04 04 15.9	+1.3
	comp=E,34nm,0.4s,SNR=33						
ABTA				eSn	Sn	04 05 13.7	+4.9
	comp=E,192nm,0.6s						
ABTA	Abfaltersbach	4.66	59		Pn	04 04 15.8	+1.3
ABTA					Sn	04 05 13.7	+4.9
SNTG	Esanatoglia	4.67	103	⇑P	Pn	04 04 15.9	+1.3
SNTG				AML	AML		
	comp=E,73µm,1.1s						
SNTG				AML	AML		
	comp=N,81µm,1.4s						
DGI	Dorgali Grotta	4.68	152	⇑P	Pn	04 04 15.9	+1.2
CLF	Chambon-Foret	4.70	321		Pn	04 04 16.8	+1.8
EL6	Elcito	4.76	102	⇓P	Pn	04 04 19.4	+3.5
SENI	Senigallia	4.76	97	⇓P	Pb	04 04 25.6	-2.0
SRES	S.Oreste - Sor	4.79	116	⇓P	Pn	04 04 18.6	+2.4
SRES				AML	AML		
	comp=E,89µm,0.4s						
SRES				AML	AML		
	comp=N,84µm,0.5s						
CING	Cingoli	4.81	101	⇓P	Pn	04 04 19.2	+2.6
CING				AML	AML		
	comp=E,73µm,1.1s						
CING				AML	AML		
	comp=N,118µm,1.0s						
EPF	Esparros	4.83	255	ePn	Pn	04 04 16.7	-0.2
EPF	Esparros	4.83	255	ePg	Pg	04 04 34.1	-2.6
EPF				eSn	Sn	04 05 09.5	-3.5
EPF				eSg	Sg	04 05 35.9	-3.4
	comp=N,131nm,0.4s						
FDMO	Fiordimonte	4.84	105	⇓P	Pn	04 04 18.3	+1.3
FUR	Furstenfeldbru	4.86	39	ePn	Pn	04 04 17.9	+0.7
ZOU	Zoufplan	4.87	63	Pn	Pn	04 04 17.9	+0.3
CSP1	Cessapalombo	4.90	104	P	Pn	04 04 19.5	+1.6
LNSS	Leonessa	4.97	110	⇑P	Pn	04 04 22.1	+3.2
PCRO	Pietralacroce	5.00	98	⇓P	Pn	04 04 22.4	+3.3
LRVF	chteau la Riv	5.02	278	Pn	Pn	04 04 19.9	+0.4
NORI	Noerdlinger Ri	5.03	31	eSn	Sn	04 05 18.3	+0.6
MTCE	Montecelio	5.04	117	⇓P	Pn	04 04 21.0	+1.3
ECHI	Chisagues Biel	5.07	251	Pn	Pn	04 04 20.7	+0.5
VIEF	Viey	5.10	254	Pn	Pn	04 04 20.5	-0.2
ROBS	Robic	5.11	67	i Pn	Pn	04 04 20.0	-0.6
TRI	Trieste	5.14	74	P	Pn	04 04 21.3	+0.2
TRI	Trieste	5.14	74	Pn	Pn	04 04 21.3	+0.2
RDP	Rocca di Papa	5.17	120	⇑P	Pn	04 04 23.1	+1.5
WLF	Walferdange	5.20	356	dP	Pn	04 04 24.4	+2.5
WLF	Walferdange	5.20	356	P	Pn	04 04 22.9	+1.0
WLF	Walferdange	5.20	356	Pn	Pn	04 04 21.1	-0.8
WLF	Walferdange	5.20	356	ePn	Pn	04 04 24.5	+2.5
WLF				eSn	Sn	04 05 22.6	+0.7
WLF	Walferdange	5.20	356	Pn	Pn	04 04 22.9	+1.0
CERT	Cerreto	5.24	117	P	Pn	04 04 24.7	+2.2
MFF	Saint Martin d	5.26	296	eP	Pn	04 04 24.4	+1.7
MFF				eSn	Sn	04 05 20.3	-3.1
MFF				eSg	Sg	04 05 52.3	-0.7
	comp=N,114nm,0.6s						
CHIF	Chize	5.29	291	Pn	Pn	04 04 22.7	-0.3
SKDS	Skadanscina	5.29	76	i Pn	Pn	04 04 21.9	-1.3
SKDS				IAML		04 05 28.8	
	comp=Z,34nm,0.3s						
AQU	L'Aquila	5.32	111	P	Pn	04 04 24.5	+0.9
AQU	L'Aquila	5.32	111		Pn	04 04 24.5	+0.9
KBA	Koelnbreinsper	5.32	58	i Pn	Pn	04 04 25.8	+2.1
	comp=Z,14nm,0.4s,SNR=16						
KBA				eSn	Sn	04 05 32.3	+7.1
	comp=Z,20nm,0.5s						
KBA	Koelnbreinsper	5.32	58	ePn	Pn	04 04 26.0	+2.3
KBA	Koelnbreinsper	5.32	58		Pn	04 04 25.8	+2.1
KBA					Sn	04 05 32.2	+7.1
MYKA	Terra Mystica	5.32	64	i Pn	Pn	04 04 24.7	+1.0
	comp=Z,10nm,0.4s						
MYKA				eSn	Sn	04 05 29.1	+4.0
	comp=Z,21nm,0.4s						
MYKA	Terra Mystica	5.32	64		Pn	04 04 24.7	+1.0
MYKA					Sn	04 05 29.1	+4.0
SMRN	Sveta Marina	5.33	81	ePn	Pn	04 04 22.3	-1.4
SMRN				Sn	Sn	04 05 16.6	-8.5
TERO	Teramo	5.34	108	⇑P	Pn	04 04 26.8	+2.8
VSL	Villasalto	5.36	157	P	Pn	04 04 25.2	+1.0
VSL	Villasalto	5.36	157	Pn	Pn	04 04 25.1	+1.0
ABH	Alteburg	5.44	6	Pn	Pn	04 04 25.2	+0.1
CGL	Cagliari Serpe	5.46	158	⇓P	Pn	04 04 28.1	+2.5
ETSF	Etsaut	5.50	256	ePn	Pn	04 04 26.3	+0.2
ETSF	Etsaut	5.50	256	eP	Pn	04 04 29.9	+3.8
ETSF	Etsaut	5.50	256	ePg	Pg	04 04 46.6	-2.8
ETSF				eSn	Sn	04 05 25.8	-3.6
	comp=Z,163nm,0.6s						
ETSF				eSg	Sg	04 05 57.4	-3.3
	comp=Z,83nm,0.6s						
ATE	Arette	5.54	258	Pn	Pn	04 04 27.0	+0.4
RIY	Rijeka	5.59	79	ePn	Pn	04 04 23.8	-3.4
RIY	Rijeka	5.59	79	Sn	Sn	04 05 23.1	-8.3
CEY	Cerknica	5.61	74	ePn	Pn	04 04 26.7	-0.8
GIUL	Giuliano Di Ro	5.62	119	⇓P	Pn	04 04 29.7	+2.0
MILB	Miltenberg	5.64	17	ePn	Pn	04 04 27.7	-0.2
MILB				eSn	Sn	04 05 32.6	0.0
LJU	Ljubljana	5.74	71	ePn	Pn	04 04 29.6	+0.3
RABC	Rab	5.77	84	ePn	Pn	04 04 29.4	-0.3
RCHB	Rochefort	5.77	350	dP	Pn	04 04 31.5	+1.8
RCHB				dS	Sn	04 05 33.1	-2.7
GIVF	Givet	5.77	348	eP	Pn	04 04 31.4	+1.7
GIVF				eSn	Sn	04 05 35.3	-0.6
	comp=Z,46nm,0.4s						
GIVF				eSg	Sg	04 06 09.5	+0.2
DOU	Dourbes	5.80	346	dP	Pn	04 04 31.7	+1.6
DOU				dS	Sn	04 05 35.8	-0.9
DOU	Dourbes	5.80	346	Pn	Pn	04 04 30.0	-0.1
POFI	Posta Fibreno	5.82	116	P	Pn	04 04 33.6	+3.1
BAIF	Baives	5.84	344	eP	Pn	04 04 32.2	+1.6
BAIF				eSn	Sn	04 05 37.2	-0.3
	comp=Z,34nm,0.4s						
BAIF				eSg	Sg	04 06 11.4	0.0
NVLJ	Novalja	5.84	86	ePn	Pn	04 04 30.2	-0.4
TNS	Taunus Mts	5.87	11	ePn	Pn	04 04 31.5	+0.4
OBKA	Obir	5.87	67	i Pn	Pn	04 04 31.3	+0.1
	comp=Z,6.2nm,0.3s,SNR=10						
OBKA				eSn	Sn	04 05 38.9	+0.2
	comp=Z,38nm,0.7s						
OBKA	Obir	5.87	67	ePn	Pn	04 04 31.3	+0.1
OBKA	Obir	5.87	67		Pn	04 04 31.3	+0.1
OBKA					Sn	04 05 38.9	+0.2
BHOU	Houvegnez	5.90	356	dP	Pn	04 04 32.7	+1.2
BHOU				dS	Sn	04 05 39.4	+0.3
SJPF	Ste Jean	5.90	259	ePn	Pn	04 04 30.9	-0.7
SJPF	Ste Jean	5.90	259	ePg	Pg	04 04 53.9	-3.2
SJPF				eSn	Sn	04 05 35.1	-4.1
	comp=Z,20nm,0.3s						
SJPF				eSg	Sg	04 06 09.6	-3.9
	comp=Z,82nm,1.0s						
BMRD	Maredsous	5.97	348	dP	Pn	04 04 34.4	+1.9
BMRD				dS	Sn	04 05 41.8	+0.8
BGES	Gesves	6.01	350	dP	Pn	04 04 34.9	+1.9
BGES				dS	Sn	04 05 40.9	-1.0
DUGI	Dugi Otok	6.02	92	ePn	Pn	04 04 32.7	-0.4
BCLA	Clavier	6.02	351	dP	Pn	04 04 35.0	+1.8
BCLA				dS	Sn	04 05 40.9	-1.1
GRFO	Grafenberg	6.06	29	P	Pn	04 04 34.6	+1.0
GRFO	Grafenberg	6.06	29		Pn	04 04 34.6	+1.0
GRA1	Grafenberg Arr	6.06	29		Pn	04 04 35.3	+1.6
GRF	Grafenberg Arr	6.06	29	P	Pn	04 04 35.3	+1.6
GRF	Grafenberg Arr	6.06	29	ePn	Pn	04 04 33.4	-0.3
GRF				ePg	Pg	04 04 58.6	-1.4
AHRW	Bad Neuenahr-A	6.07	2	ePn	Pn	04 04 34.8	+1.0
BTNL	Ternell	6.12	357	dP	Pn	04 04 35.1	+0.5
BTNL				dS	Sn	04 05 45.3	+0.7
MEM	Membach	6.15	356	dP	Pn	04 04 36.2	+1.2
MEM				dS	Sn	04 05 43.5	-1.8
MOA	Molln	6.24	55	i Pn	Pn	04 04 36.7	+0.5
	comp=Z,13nm,0.3s,SNR=6.8						
MOA				eSn	Sn	04 05 49.1	+1.6
	comp=Z,24nm,0.5s						
MOA	Molln	6.24	55	ePn	Pn	04 04 36.6	+0.5
MOA	Molln	6.24	55		Pn	04 04 36.7	+0.5
MOA					Sn	04 05 49.1	+1.6
SOKA	Soboth	6.24	66	i Pn	Pn	04 04 36.2	-0.1
	comp=Z,8.3nm,0.3s,SNR=6.8						
SOKA				eSn	Sn	04 05 51.8	+4.1
	comp=Z,12nm,0.5s						
SOKA	Soboth	6.24	66		Pn	04 04 36.2	-0.1
SOKA					Sn	04 05 51.8	+4.1
SNF	Seneffe	6.25	346	dP	Pn	04 04 38.8	+2.4
LDF	La Druitiere	6.26	314	eP	Pn	04 04 37.5	+1.1
LDF	La Druitiere	6.26	314	ePg	Pg	04 05 00.4	-3.4
LDF				eSn	Sn	04 05 44.4	-3.5
LDF				eSg	Sg	04 06 25.7	+0.9
	comp=Z,114nm,0.7s						
WET	Wettzell	6.30	40	ePn	Pn	04 04 36.9	-0.1
WET				eSn	Sn	04 05 46.7	-2.3
OZLJ	Ozalj	6.31	77	ePn	Pn	04 04 36.8	-0.3
CRES	Cresnjev	6.33	75	ePn	Pn	04 04 37.0	-0.5
BEBN	Eben Emael	6.36	354	dP	Pn	04 04 39.9	+2.1
BEBN				dS	Sn	04 05 48.4	-2.0
PLIT	Plitvice	6.37	83	ePn	Pn	04 04 37.8	-0.2
PLIT				Sn	Sn	04 05 45.5	-5.3
UDBI	Udbina	6.48	86	ePn	Pn	04 04 39.0	-0.5
ZIRJ	Zirje	6.49	94	ePn	Pn	04 04 38.7	-0.9
HROE	Hohe Rhon--Fla	6.50	20	ePg	Pg	04 05 06.1	-2.4
HROE				eSg	Sg	04 06 34.5	+2.0
GEC2	GERESS Array S	6.50	45	ePn	Pn	04 04 40.3	+0.5
GEC2				eSn	Sn	04 05 53.0	-1.0
GEC2	GERESS Array S	6.50	45		Pn	04 04 40.6	+0.8
GERES	GERESS Array B	6.50	45	Pn	Pn	04 04 40.0	+0.2
	comp=Z,18nm,0.3s,baz=224,slow=13,SNR=360						
GERES				Sn	Sn	04 05 51.9	-2.1
	comp=Z,5.1nm,0.3s,baz=242,slow=23,SNR=2.6						
GERES				LR	LR	04 07 21.6	
	comp=Z,78nm,18.2s,baz=241,slow=40						
GERES	GERESS Array B	6.50	45	Pn	Pn	04 04 40.3	+0.5
MORI	Morici	6.50	92	ePn	Pn	04 04 39.8	0.0
UCC	Uccle	6.52	347	dP	Pn	04 04 43.9	+3.9
UCC				dS	Sn	04 05 53.6	-0.8
UCC	Uccle	6.52	347	P	Pn	04 04 41.5	+1.5
UCC	Uccle	6.52	347		Pn	04 04 41.5	+1.5
GRR	Gorron	6.53	309	eP	Pn	04 04 41.6	+1.5
GRR				eSn	Sn	04 05 50.7	-3.9
GRR				eSg	Sg	04 06 30.1	-3.5
	comp=Z,86nm,0.6s						
FLN	La Foliniere	6.55	313	eP	Pn	04 04 41.5	+1.1
FLN				eSn	Sn	04 05 52.1	-2.9
FLN				eSg	Sg	04 06 32.8	-1.3
	comp=Z,41nm,0.5s						
KHC	Kasperske Hory	6.62	43	eP	Pn	04 04 42.1	+0.6
KHC				e	Sn	04 05 57.0	0.0
KHC	Kasperske Hory	6.62	43	ePN	Pn	04 04 42.1	+0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KHC				*e*x	x	04 05 02.0	
KHC				*e*SN	Sn	04 05 57.0	0.0
PTJ	Puntijarka	6.70	74	*e*Pn	Pn	04 04 42.4	-0.1
UBBA	Unterbreizbach	6.72	18	*e*Sg	Sg	04 06 38.4	-1.3
PAOL	Paolisi	6.73	118		Pn	04 04 44.9	+1.9
ARSA	Arzberg	6.75	63	*i* Pn	Pn	04 04 43.8	+0.6
	comp=Z,15nm,0.3s,SNR=12						
ARSA				*e*Sn	Sn	04 06 01.9	+1.8
	comp=Z,16nm,0.8s						
ARSA	Arzberg	6.75	63	*e*Pn	Pn	04 04 43.9	+0.6
ARSA	Arzberg	6.75	63		Pn	04 04 43.8	+0.6
ARSA					Sn	04 06 01.9	+1.8
CKRC	Cesky Krumlov	6.80	48	*e*PN	Pn	04 04 44.1	+0.2
CKRC				*e*SN	Sn	04 06 00.0	-1.3
LOBO	Lobor	6.81	72	*e*Pn	Pn	04 04 42.0	-2.0
KASTN	Kahler Asten	6.83	9	*e*Pn	Pn	04 04 45.9	+1.7
NKC	Novy Kostel	6.95	32	*e*P	Pn	04 04 46.8	+0.8
NKC	Novy Kostel	6.95	32	*e*PN	Pn	04 04 46.8	+0.8
BUG	Bochum--Univer	6.98	3	*e*Pn	Pn	04 04 48.5	+2.2
BUG				*e*Sn	Sn	04 06 05.3	-0.2
KIJV	Kijevo	6.98	90	*e*Pn	Pn	04 04 45.9	-0.5
MOX	Moxa	7.00	27	*e*Pg	Pg	04 05 18.3	+0.1
KALN	Kalnik	7.07	73	*e*Pn	Pn	04 04 46.2	-1.4
SGRT	San Giovanni R	7.15	109	Pn	Pn	04 04 49.0	+0.2
HVAR	Hvar	7.16	97	*e*Pn	Pn	04 04 48.1	-0.7
HVAR				Sn	Sn	04 06 04.5	-5.7
MOSL	Moslavina	7.21	77	*e*Pn	Pn	04 04 47.7	-1.7
CONA	Conrad Observa	7.23	58	*i* Pn	Pn	04 04 50.0	+0.2
	comp=Z,5.3nm,0.6s						
CONA				*e*Sn	Sn	04 06 14.4	+2.5
	comp=Z,6.0nm,0.3s						
CONA	Conrad Observa	7.23	58		Pn	04 04 50.0	+0.2
CONA					Sn	04 06 14.4	+2.5
MRAK	Mrakovica	7.28	82	*e*Pn	Pn	04 04 49.4	-1.1
BEHE	Becsehely	7.35	71	*e*P	Pn	04 04 51.1	-0.4
BEHE	Becsehely	7.35	71	*e*Pn	Pn	04 04 49.8	-1.6
MGRS	Mrkonjic Grad	7.43	87	*e*Pn	Pn	04 04 52.3	-0.2
SGMF	Saint Gilles	7.44	304	*e*P	Pn	04 04 53.8	+1.2
SGMF	Saint Gilles	7.44	304	*e*Pg	Pg	04 05 23.1	-3.3
SGMF				*e*Sg	Sg	04 06 58.9	-3.8
	comp=Z,130nm,1.0s						
BLY	Banja Luka	7.48	84	*e*Pn	Pn	04 04 52.6	-0.6
NEUB	Neuenburg	7.55	25	*e*Pg	Pg	04 05 25.0	-3.5
SOP	Sopron	7.56	61	*e*P	Pn	04 04 53.9	-0.4
RICI	Ricice	7.58	94	*e*Pn	Pn	04 04 54.2	-0.4
CHRS	Christianenhau	7.65	20	*e*Pg	Pg	04 05 29.4	-1.0
CHRS				*e*Sn	Sn	04 06 20.0	-2.2
CHRS				*e*Sg	Sg	04 07 08.7	-0.6
QUIF	Quistinic	7.67	300	*e*P	Pn	04 04 57.0	+1.3
QUIF	Quistinic	7.67	300	*e*Pg	Pg	04 05 27.1	-3.7
QUIF				*e*Sn	Sn	04 06 18.7	-3.8
QUIF				*e*Sg	Sg	04 07 05.2	-4.7
	comp=Z,47nm,0.6s						
PRU	Pruhonice	7.67	41	*e*P	Pn	04 04 56.1	+0.4
PRU				*e*	Sn	04 06 20.3	-2.3
PRU	Pruhonice	7.67	41	*e*PN	Pn	04 04 56.1	+0.4
PRU				*e*SN	Sn	04 06 20.3	-2.3
JSA	Saint Aubin	7.70	311	*e*P	Pn	04 04 56.9	+0.8
JSA				IAML		04 07 28.2	
	comp=E,21nm,0.6s						
JSA				IAML		04 07 34.8	
	comp=N,21nm,0.7s						
TREC	Trest	7.70	48	*e*P	Pn	04 04 57.0	+0.7
TREC				*e*	Sn	04 06 21.2	-2.3
TREC	Trest	7.70	48	*e*PN	Pn	04 04 57.0	+0.7
TREC				*e*SN	Sn	04 06 21.2	-2.3
WIMM	Wimmelburg	7.75	23	*e*Pg	Pg	04 05 29.5	-2.8
WIMM				*e*Sg	Sg	04 07 14.0	+1.5
CLZ	Clausthal	7.76	17	*e*Pg	Pg	04 05 30.7	-1.9
CLZ				*e*Sg	Sg	04 07 13.4	+0.3
ROSF	Rostrenen	7.90	303	*e*P	Pn	04 04 59.8	+0.8
ROSF				*e*Sg	Sg	04 07 12.8	-4.8
	comp=N,162nm,1.0s						
MPLH	Magyarpolny	8.03	67	*e*P	Pn	04 04 59.9	-0.8
CLL	Collm	8.03	29	P	Pn	04 05 03.6	+2.8
CLL	Collm	8.03	29	*e*Pn	Pn	04 05 01.0	+0.2
CLL				*e*Pg	Pg	04 05 34.0	-3.8
CLL				*e*Sn	Sn	04 06 26.0	-5.6
CLL				*e*Sb	Sb	04 06 51.0	-7.9
CLL				*e*Sg	Sg	04 07 21.0	-0.8
	comp=Z,26nm,0.9s						
CLL				*e*Sglp		04 07 25.0	
	comp=N,100nm,24.6s						
CLL				*e*Sglp		04 07 25.0	
	comp=E,200nm,17.3s						
CLL				Lmax		04 08 00.0	
CLL	Collm	8.03	29	Pn	Pn	04 05 03.6	+2.8
BRG	Berggiesshubel	8.04	35	*e*Pg	Pg	04 05 37.6	-0.4
BRG	Berggiesshubel	8.04	35	Pn	Pn	04 05 01.8	+0.9
BRG				Pg	Pg	04 05 34.5	-3.6
BRG				r		04 06 46.7	
BRG				r		04 07 22.8	
BRG				Amp		04 07 42.1	
	comp=Z,22nm,1.0s						
KRUC	Moravsky	8.07	52	*e*PN	Pn	04 05 00.5	-0.8
KRUC				*e*SN	Sn	04 06 26.5	-6.1
ZST	Bratislava	8.10	59	*e*SN	Sn	04 06 32.2	-0.9
ASSE	Asse, Remlinge	8.10	18	*e*Sg	Sg	04 07 23.4	-0.4
STON	Ston	8.13	98	*e*Pn	Pn	04 05 01.5	-0.6
KOVH	Kovagotottos	8.19	75	*e*P	Pn	04 05 01.1	-1.8
TIH	Tihany	8.20	69	*e*P	Pn	04 05 02.3	-0.7
CORL	Corleone	8.24	141		Pn	04 05 04.7	+0.9
MODS	Modra-Piesok	8.28	58	*e*P	Pn	04 05 07.2	+3.1
MODS				*e*	Sn	04 06 35.0	-2.6
MODS	Modra-Piesok	8.28	58	*e*PN	Pn	04 05 07.2	+3.1
MODS				*e*SN	Sn	04 06 35.0	-2.6
VRAC	Vranov	8.31	51	Pn	Pn	04 05 04.6	-0.1
	comp=Z,1.4nm,0.3s,baz=251,slow=14,SNR=7.8						
VRAC				Sn	Sn	04 06 36.7	-1.8
	comp=Z,0.7nm,0.3s,baz=183,slow=13,SNR=3.3						
VRAC	Vranov	8.31	51	*e*PN	Pn	04 05 04.3	-0.3
VRAC				*e*SN	Sn	04 06 37.7	-0.8
NRDL	Niedersach Rie	8.33	14	*e*Sg	Sg	04 07 37.0	+5.7
FLTG	Flechtingen	8.41	19	*e*Sg	Sg	04 07 37.6	+3.6
CLTB	Caltabellotta	8.46	142		Pn	04 05 08.7	+1.9
ELMS	Elmsett, Ipswi	8.52	335	*e*P	Pn	04 05 10.0	+2.6
ELMS				*e*S	Sn	04 06 39.3	-4.1
ELMS				IAML		04 06 45.3	
	comp=N,78nm,0.3s						
ELMS				IAML		04 06 46.2	
	comp=E,81nm,0.3s						
MORH	Mrgy, Hungar	8.59	74	*e*Pn	Pn	04 05 06.1	-2.2
TREB	Trebinje	8.63	98	*e*Pn	Pn	04 05 09.3	+0.3
BRY	Bratogost	8.72	96	*e*Pn	Pn	04 05 10.6	+0.3
JAVC	Velka Javorina	8.72	56	*e*PN	Pn	04 05 11.0	+0.8
SRO	Srobarova	8.72	63	*e*P	Pn	04 05 11.2	+1.0
SRO				*e*	Sn	04 06 47.4	-1.1
SRO	Srobarova	8.72	63	*e*PN	Pn	04 05 11.2	+1.0
SRO				*e*SN	Sn	04 06 47.4	-1.1
DPC	Dobruska-Polom	8.77	45	*e*P	Pn	04 05 10.5	-0.4
DPC				*e*	Sn	04 06 46.7	-3.1
DPC	Dobruska-Polom	8.77	45	*e*PN	Pn	04 05 10.5	-0.4
DPC				*e*SN	Sn	04 06 46.7	-3.1
CHVC	Chvalec	8.79	43	*e*PN	Pn	04 05 11.1	-0.1
CHVC				*e*SN	Sn	04 06 47.7	-2.5
HAPS	Han Pijesak,Bl	8.79	88	*e*Pn	Pn	04 05 10.4	-0.9
HCY	Herceg Novi	8.81	99	*e*Pn	Pn	04 05 12.1	+0.7
KRLC	Kraliky	8.84	47	*e*P	Pn	04 05 12.2	+0.3
KRLC	Kraliky	8.84	47	*e*PN	Pn	04 05 12.2	+0.3
OSTC	Ostas	8.85	43	*e*PN	Pn	04 05 12.0	0.0
UPM	Unac-Piva	8.91	94	*e*Pn	Pn	04 05 13.4	+0.4
KEST	Kesra	8.97	166	Pn	Pn	04 05 18.3	+4.7
	comp=E,0.9nm,0.3s,baz=323,slow=6.4,SNR=15						
KEST				Sn	Sn	04 06 53.8	-0.9
	comp=E,0.3nm,0.3s,baz=106,slow=20,SNR=1.8						
KEST	Kesra	8.97	166		Pn	04 05 14.5	+0.8
SWN1	Swindon	9.05	324	*e*P	Pn	04 05 16.2	+1.4
MORC	Moravsky Berou	9.09	50	P	Pn	04 05 16.4	+1.1
MORC	Moravsky Berou	9.09	50	*e*PN	Pn	04 05 14.2	-1.1
MORC				*e*SN	Sn	04 06 54.4	-3.2
MORC	Moravsky Berou	9.09	50	Pn	Pn	04 05 16.4	+1.1
BBLS	Lazići	9.15	89	*e*Pn	Pn	04 05 15.2	-0.9
RUDO	Rudo	9.16	91	*e*Pn	Pn	04 05 13.5	-2.8
WACR	West Acre	9.18	336	*e*P	Pn	04 05 17.0	+0.5
ESBB	Sonseca Array	9.27	243	Pn	Pn	04 05 18.2	+0.4
ESDC	Sonseca Array	9.27	243	Pn	Pn	04 05 18.1	+0.3
	comp=E,1.2nm,0.3s,baz=59,slow=14,SNR=42						
ESDC				Sn	Sn	04 06 58.7	-3.4
	comp=E,0.4nm,0.3s,baz=53,slow=24,SNR=13						
ESDC	Sonseca Array	9.27	243	Pn	Pn	04 05 18.5	+0.6
VYHS	Vyhne	9.28	60	*e*P	Pn	04 05 18.9	+1.0
VYHS				*e*	Sn	04 07 01.0	-1.2
VYHS	Vyhne	9.28	60	*e*PN	Pn	04 05 18.9	+1.0
VYHS				*e*SN	Sn	04 07 01.0	-1.2
FRGS	Fruska Gora	9.34	81	*e*Pn	Pn	04 05 20.0	+1.3
PDG	Podgorica	9.35	98	*e*Pn	Pn	04 05 19.4	+0.5
DRME	Dracevica, Mon	9.38	100	*e*Pn	Pn	04 05 19.1	-0.1
STRD	Stroud	9.40	324	*e*P	Pn	04 05 20.9	+1.4
DIVS	Divibare	9.54	88	*e*Pn	Pn	04 05 17.6	-3.9
PAB	San Pablo	9.59	243	P	Pn	04 05 23.0	+0.8
PAB	San Pablo	9.59	243	Pn	Pn	04 05 23.0	+0.8
PSZ	Piszkesteto	9.77	65	*e*P	Pn	04 05 24.7	0.0
PSZ	Piszkesteto	9.77	65	P	Pn	04 05 25.9	+1.3
PSZ	Piszkesteto	9.77	65	Pn	Pn	04 05 25.9	+1.3
CWF	Charnwood Fore	9.82	330	*e*P	Pn	04 05 26.4	+1.2
CCA1	Carnmenellis	9.91	309	*e*P	Pn	04 05 27.8	+1.4
LANS	Liptovska Anna	9.91	57	*e*P	Pn	04 05 27.0	+0.4
LANS	Liptovska Anna	9.91	57	*e*PN	Pn	04 05 27.0	+0.4
MCH1	Michaelchurch	9.92	323	*e*P	Pn	04 05 27.2	+0.6
HTL	Hartland	9.96	315	*e*P	Pn	04 05 28.6	+1.5
PBRG	Braganca	10.19	259	*e*P	Pn	04 05 31.3	+0.9
	comp=E,18nm,1.7s						
HLM1	Long Mynd	10.25	325	*e*P	Pn	04 05 32.1	+1.0
HLM1				*e*S	Sn	04 07 17.6	-8.4
MVO	Moncorvo	10.62	257	*e*P	Pn	04 05 37.1	+0.8
	comp=E,23nm,2.1s						
FOEL	Foel Wylfa	10.66	326	*e*P	Pn	04 05 37.9	+1.2
HPK	Haverah Park	10.93	333	*e*P	Pn	04 05 40.9	+0.5
PVRL	Vila Real	11.06	258	*e*P	Pn	04 05 43.4	+1.1
	comp=E,25nm,1.4s						
GDLE	Glaisdale, N Y	11.09	337	*e*P	Pn	04 05 43.9	+1.4
PCBR	Castelo Branco	11.50	251	*e*P	Pn	04 05 49.5	+1.2
PMRV	Marv??o	11.64	249	*e*P	Pn	04 05 50.2	-0.1
	comp=E,19nm,1.2s						
EDMD	Edmundbyers	11.78	335	*e*P	Pn	04 05 52.4	+0.4
KESW	Keswick, Cumbr	11.95	331	*e*P	Pn	04 05 55.6	+1.3
PESTR	Estremoz	12.07	247	*e*P	Pn	04 05 57.0	+0.9
	comp=E,16nm,1.6s						
PBAR	Barrancos	12.09	243	*e*P	Pn	04 05 56.3	-0.1
	comp=E,9.4nm,1.9s						
PMTG	Montargil	12.38	249	*e*P	Pn	04 05 59.8	-0.6
	comp=E,15nm,1.6s						
EKA	Eskdalemuir Ar	12.57	333	Pn	Pn	04 06 03.4	+0.5
	baz=140,slow=14,SNR=21						
EKA				Sn	Sn	04 08 16.9	-5.9
	baz=144,slow=24,SNR=6.6						
ESK	Eskdalemuir	12.58	333	*e*P	Pn	04 06 03.3	+0.4
ESK	Eskdalemuir	12.58	333	P	Pn	04 06 03.3	+0.4
ESK	Eskdalemuir	12.58	333	Pn	Pn	04 06 03.3	+0.4
PMAFR	Mafra	13.15	251	*e*P	Pn	04 06 14.3	+3.4
	comp=E,74nm,1.8s						
SUW	Suwalki	14.35	42	P	Pn	04 06 26.8	-0.3
SUW	Suwalki	14.35	42	Pn	Pn	04 06 26.8	-0.3
AKASG	Malin Array Be	16.38	60	Pn	P	04 06 56.2	-0.6
	comp=E,0.6nm,0.3s,baz=248,slow=12,SNR=6.0						
AKASG	Malin Array Be	16.38	60	IAmb	IAmb	04 07 01.7	
	comp=Z,3.3nm,1.6s						
AKBB	Malin Array Si	16.38	60	*i* P	P	04 06 55.5	-1.3
NOA	NORSAR Array B	16.81	8	LR	LR	04 13 54.2	
	comp=Z,22nm,20.8s,baz=300,slow=39						
MNK	Minsk	16.96	46	*i* P	Pn	04 06 52.4	-8.8
MNK				*i* SS	S	04 10 16.4	-3.4
MNK				pmax	pmax		
	comp=N,12nm,0.9s						
MNK				pmax	pmax		
	comp=Z,11nm,0.6s						
MNK				pmax	pmax		
	comp=E,4.0nm,1.6s						
MNK				MLR	MLR		
	comp=Z,63nm,29.0s						
MNK				MLR	MLR		
	comp=N,112nm,18.0s						
MNK				MLR	MLR		
	comp=E,12nm,15.0s						
MNK	Minsk	16.96	46	*i* P	Pn	04 06 52.5	-8.8
	comp=E,4.0nm,1.6s						
MNK				*i* P	Pn	04 06 52.5	-8.8
	comp=N,12nm,0.9s						
MNK				*i* P	Pn	04 06 52.5	-8.8
	comp=Z,11nm,0.6s,baz=63						
MNK				*i* PP	P	04 07 01.6	-1.5
MNK				*i* S	Sn	04 09 58.4	-11
MNK				*i* SS	S	04 10 16.4	-3.3
MNK				*i* LQ	LQ	04 11 40.4	
MNK				*i* LR	LR	04 13 01.9	
MNK				*i* LRM	MLR	04 14 01.2	
	comp=Z,63nm,28.9s						
MNK				*i* LRM	MLR	04 14 07.1	
	comp=E,12nm,15.4s						
MNK				*i* LRM	MLR	04 14 07.1	
	comp=N,112nm,18.4s						
VSU	Vasula	18.64	34	*i* P	Pn	04 07 23.3	+1.3
VSU				pmax	pmax		
	comp=Z,21nm,0.8s						
ANTO	Ankara	19.84	94	P	P	04 07 33.7	-1.4
ANTO				pmax	pmax		
	comp=Z,9.0nm,1.1s						
ANTO	Ankara	19.84	94	P	P	04 07 33.6	-1.4
ANTO				IAmb	IAmb	04 07 45.0	
	comp=Z,9.0nm,1.1s						
FINES	FINESS Array B	20.47	27	P	P	04 07 42.4	+0.7
	comp=Z,3.3nm,0.6s,baz=205,slow=8.2,SNR=28						
FINES	FINESS Array B	20.47	27	P	Pn	04 07 42.5	-1.3
FINES	FINESS Array B	20.47	27	P	Pn	04 07 42.5	-1.2
BRTR	Keskin Array B	20.50	94	P	Pn	04 07 45.6	+1.2
	comp=Z,3.4nm,0.7s,baz=289,slow=7.5,SNR=18						
BRTR				LR	LR	04 17 09.2	
	comp=Z,59nm,18.4s,baz=296,slow=41						
BRTR	Keskin Array B	20.50	94	*i* P	Pn	04 07 48.2	+3.8
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
PUL	Pulkovo	20.91	35	*i* P	Pn	04 07 48.0	-0.9
OBN	Obninsk	21.85	50	*e*P	P	04 07 58.4	+1.9
OBN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BNN	Bunyan	22.41	94	P	P	04 08 05.4	+2.5
KIV	Kislovodsk	25.67	78	*e*P	P	04 08 36.1	+2.1
KIV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ASF	Jabal al Asfar	26.52	107	P	P	04 08 45.3	+3.4
	comp=Z,5.2nm,1.0s,baz=260,slow=3.4,SNR=6.0						
KIRV	Kirov	29.50	46	*i* P	P	04 09 10.0	+1.9
TORD	Torodi Ar. Bea	31.52	189	P	P	04 09 27.3	+1.0
	comp=Z,0.6nm,0.9s,baz=3.8,slow=9.2,SNR=2.8						
TORD	Torodi Ar. Bea	31.52	189	IAmb	IAmb	04 09 53.2	
	comp=Z,1.1nm,0.7s						
ARU	Arti	34.29	51	*i* P	P	04 09 51.7	+1.5
ARU				pmax	pmax		
	comp=Z,3.0nm,1.2s						
BRVK	Borovoye	41.50	55	*i* P	P	04 10 52.3	+1.3
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRVK	Borovoye	41.50	55	P	P	04 10 50.7	-0.3
BRVK				IAmb	IAmb	04 10 55.1	
	comp=Z,3.7nm,1.2s						
NRIK	Noril'sk	46.12	29	*i* P	P	04 11 29.4	+1.4
NRIK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MKAR	Makanchi Array	50.97	59	P	P	04 12 06.2	+0.5
	comp=Z,0.4nm,0.4s,baz=294,slow=7.2,SNR=5.7						
WMQ	Urumqi	55.74	60	*e*P	P	04 12 44.0	+3.2
SONM	Songino Array	64.23	48	LR	LR	04 45 11.0	
	comp=Z,87nm,19.1s,baz=156,slow=39						
ILAR	Eielson Array	69.14	348	P	P	04 14 12.3	+2.3
	comp=Z,0.6nm,0.8s,baz=14,slow=5.6,SNR=6.1						
HHC	Hu-ho-hao-te	71.60	51	*e*P	P	04 14 24.6	-1.0
HHC				pmax	pmax		
	comp=Z,10.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,59nm,5.9s						
VNDA	Vanda	145.37	171	PKPbc	PKPab	04 22 42.2	+1.4
	comp=Z,0.9nm,0.8s,baz=236,slow=3.7,SNR=7.8						

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*IDC **06** 04:10:14.2±4.0, 4°14N×62°35E, h0^{km}, mb3.9/4, mb1 4.1/4, mb1mx3.5/48, mbtmp3.9/4, MS3.4/5, Ms1 3.4/5, ms1mx3.1/31, Error ellipse: s-maj=105.9km s-min=43.2km az=76.0*

*NEIC **06** 04:10:16.9±0.8, 4°2N±0°2×62°3E±0°2, h10^{km}±1^{km}, mb4.1/7, Error ellipse: s-maj=30.4km s-min=23.3km az=320.0*

ISC 06 04:10:16.1±0.8**, 4°2N**±0°1×**62°4E**±0°2**, h10**^{km}**, n17,** σ**0^{s}79**/11**, mb3.9**/8**, MS3.5**/4**, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MSEY	Mahe Island	11.16	218		Pn	04 12 56.9	+0.9
PALK	Pallekele	18.51	80	LR	LR	04 19 55.3	
	comp=Z,96nm,20.2s,baz=354,slow=31						
KMBO	Kilima Mbogo	25.63	259	LR	LR	04 25 57.9	
	comp=Z,59nm,18.3s,baz=94,slow=37						
KMBO	Kilima Mbogo	25.63	259	P	P	04 15 46.0	-0.5
KMBO				IAmb	IAmb	04 15 54.8	
	comp=Z,10nm,1.4s						
MBAR	Mbarara	31.95	262	P	P	04 16 41.5	-1.3
BTK	Batken	36.52	11	P	P	04 17 22.3	+0.4
BTK				IAmb	IAmb	04 17 24.2	
	comp=Z,3.8nm,0.9s						
CMAR	Chiang Mai Arr	38.47	65	P	P	04 17 38.5	-0.2
	comp=Z,0.8nm,0.5s,baz=253,slow=9.5,SNR=4.3						
KK31	Karatay Array	39.42	9	P	P	04 17 47.6	+1.3
KKAR	Karatay Array	39.42	9	P	P	04 17 46.8	+0.5
KKAR				IAmb	IAmb	04 17 49.1	
	comp=Z,4.0nm,1.4s						
ABKAR	Akbulak array	44.95	358	P	P	04 18 31.4	+0.1
ABKAR				IAmb	IAmb	04 18 38.6	
	comp=Z,1.9nm,1.1s						
BOSA	Boshof	48.33	225	LR	LR	04 37 47.5	
	comp=Z,49nm,19.6s,baz=12,slow=34						
ZALV	Zalesovo Beam	52.89	16	P	P	04 19 32.1	-0.1
	comp=Z,0.7nm,0.4s,baz=211,slow=8.1,SNR=4.1						
TORD	Torodi Ar. Bea	60.49	283	LR	LR	04 46 15.7	
	comp=Z,37nm,19.4s,baz=210,slow=36						
WRA	Warramunga Arr	74.60	112	P	P	04 21 55.9	-0.3
	comp=Z,0.9nm,0.9s,baz=291,slow=5.1,SNR=5.5						
WRA	Warramunga Arr	74.60	112	IAmb	IAmb	04 22 04.6	
	comp=Z,0.3nm,1.2s						
ASAR	Alice Springs	74.91	116	P	P	04 21 57.5	-0.4
	comp=Z,0.3nm,0.3s,baz=294,slow=4.6,SNR=2.5						
MJAR	Matsushiro Arr	76.16	54	LR	LR	04 57 31.5	
	comp=Z,24nm,18.4s,baz=45,slow=37						

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*NEIC **06** 04:14:49.8±2.3, 52°06N±0°04×169°2W±0°1, h10^{km}±1^{km}, mb4.3/7, ML3.3(AEIC), Error ellipse: s-maj=12.3km s-min=4.8km az=302.0*

*IDC **06** 04:14:49.2±1.8, 52°35N×169°55W, h0^{km}, mb3.9/8, mb1 4.1/10, mb1mx3.7/43, mbtmp3.9/10, ML3.4/2, MS3.1/1, Ms1 3.1/1, ms1mx2.5/38, Error ellipse: s-maj=47.0km s-min=20.5km az=168.0*

*AEIC **06** 04:14:53±2.1, 52°3N±0°1×169°4W±0°1, h34^{km}±5^{km}, Error ellipse: s-maj=15.9km s-min=8.1km az=158.0*

ISC 06 04:14:50.4±1.1**, 52°2N**±0°2×**169°39W**±0°09**, h10**^{km}**, n37,** σ**1^{s}11**/34**, mb3.9**/8**, Fox Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NIKH	Nikolski High	0.82	23		Pg	04 15 08.1	+1.9
OKSP	Okmok Steeple	1.23	32		Pn	04 15 14.1	+0.4
OKSO	Okmok South	1.36	33		Pn	04 15 16.3	+0.9
OKCE	Okmok Cone E	1.42	31		Pn	04 15 17.4	+1.1
OKTU	Okmok Mt. Tuli	1.42	35		Pn	04 15 17.2	+0.9
OKFG	Magazine Ridge	1.49	36		Pn	04 15 17.8	+0.6
MAPS	Pakushin South	2.17	42		Pn	04 15 27.5	+0.9
MSW	Makushin Switc	2.31	42		Pn	04 15 30.0	+1.5
UNV	Unalaska Valle	2.38	46		Pn	04 15 30.7	+1.3
AKUT	Akutan	2.90	47	Pn	Pn	04 15 38.2	+1.7
ADK	Adak	4.52	269	Pn	Pn	04 16 00.1	+1.3
AMKA	Amchitka	7.07	268	Pn	Pn	04 16 35.3	+1.5
KDAK	Kodiak Island	11.13	53	Pn	Pn	04 17 29.2	-0.2
	0.6nm,0.3s,baz=212,slow=2.4,SNR=9.9						
KDAK				LR	LR	04 22 15.3	
	comp=Z,98nm,18.8s,baz=244,slow=40						
SEW	Seward	13.58	47	Pn	Pn	04 18 02.4	-0.4
KLU	Klutina	15.75	45	Pn	Pn	04 18 30.4	-1.8
KLU				IAmb	IAmb	04 18 32.5	
	comp=Z,50nm,1.5s						
M24K	Tolsona, Glenn	15.92	43	Pn	Pn	04 18 33.3	-0.9
M24K				IAmb	IAmb	04 18 37.9	
	comp=Z,73nm,1.4s						
VRDI	Verde Repeater	16.74	47	Pn	Pn	04 18 43.6	-1.3
VRDI				IAmb	IAmb	04 18 54.2	
	comp=Z,22nm,1.2s						
ILAR	Eielson Array	17.08	34	Pn	Pn	04 18 47.9	-1.1
	comp=Z,0.1nm,0.3s,baz=231,slow=11,SNR=5.4						
M27K	Edge Creek, AK	17.85	45		Pn	04 18 58.5	-0.2
BCAR	Beaver Creek A	18.16	43		Pn	04 19 01.4	-1.1
HYT	Haines Junctio	19.40	51	P	Pn	04 19 19.4	+1.8
HYT				IAmb	IAmb	04 19 24.9	
	comp=Z,20nm,1.3s						
BMAR	Burnt Mountain	19.46	29	P	P	04 19 16.1	-0.9
PEA0B	Petropavlovsk-	19.89	286	P	P	04 19 21.7	0.0
PETK	Petropavlovsk-	19.89	286	P	P	04 19 21.0	-0.7
	comp=Z,1.1nm,0.3s,baz=85,slow=13,SNR=15						
INK	Inuvik	23.47	33	P	P	04 19 58.9	-0.8
	comp=Z,1.1nm,0.4s,baz=230,slow=7.2,SNR=13						
INK	Inuvik	23.47	33	P	P	04 19 58.7	-1.0
INK				IAmb	IAmb	04 20 16.7	
	comp=Z,6.5nm,1.5s						
YKA	Yellowknife Ar	30.35	49	P	P	04 21 02.7	+0.8
	comp=Z,0.6nm,0.4s,baz=27,slow=3.5,SNR=7.3						
YKA	Yellowknife Ar	30.35	49	P	P	04 21 01.2	-0.6
H11S1	WAKE ISLAND Hy	38.52	218	T	T	05 03 22.9	
	baz=23,slow=76,SNR=16						
H11S2	WAKE ISLAND Hy	38.53	218	T	T	05 03 24.1	
	baz=23,slow=76,SNR=13						
H11S3	WAKE ISLAND Hy	38.54	218	T	T	05 03 24.2	
	baz=23,slow=76,SNR=10						
PDAR	Pinedale Array	40.44	79	P	P	04 22 29.5	+0.5
	comp=Z,0.5nm,0.5s,baz=298,slow=3.8,SNR=6.6						
ARCES	ARCESS Array B	58.07	354	P	P	04 24 42.1	-1.0
	comp=Z,5.3nm,1.1s,baz=21,slow=7.8,SNR=4.4						
MKAR	Makanchi Array	63.90	313	P	P	04 25 21.9	-1.2
	comp=Z,0.2nm,0.4s,baz=72,slow=7.8,SNR=4.4						
FINES	FINESS Array B	66.01	352	P	P	04 25 35.6	-0.9
	comp=Z,0.5nm,0.5s,baz=21,slow=9.8,SNR=6.4						
NOA	NORSAR Array B	67.09	360	P	P	04 25 42.9	-0.6
	comp=Z,0.2nm,0.5s,baz=360,slow=2.8,SNR=1.9						
CMAR	Chiang Mai Arr	76.64	283	P	P	04 26 42.0	+0.5
	comp=Z,2.3nm,0.3s,baz=39,slow=6.1,SNR=4.7						

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*IDC **06** 04:57:04.0±1.1, 30°32S×71°94W, h0^{km}, mb4.1/6, mb1 4.3/10, mb1mx4.1/25, mbtmp4.2/10, ML4.0/4, MS3.9/10, Ms1 3.9/10, ms1mx3.7/21, Error ellipse: s-maj=29.9km s-min=27.7km az=34.0*

*VAO **06** 04:57:05.8±0.7, 30°26S×71°99W, h9^{km}, mb4.5*

*GUC **06** 04:57:05.9±0.5, 30°33S×72°01W, h36^{km}±4^{km}, ML4.5*

*NEIC **06** 04:57:05.8±1.9, 30°38S±0°05×72°05W±0°02, h12^{km}±3^{km}, mb4.7/40, Mwr4.5/48, ML4.5(GUC), Error ellipse: s-maj=8.0km s-min=1.6km az=172.0*

*NEIC **06** 04:57:05.7, 30°38S×72°06W, h15^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}4.49; $M_{\theta\theta}$0.48; $M_{\phi\phi}$-4.97; $M_{r\theta}$-0.45; $M_{\theta\phi}$2.10; $M_{\phi r}$-3.39; Fault plane solution: $M_0$6.22000×10^{15} NP1:ϕ_s321.92000°, δ32.37000°, λ58.72000°. NP2:ϕ_s177.65000°, δ62.77000°, λ108.22000°. Principal axes: T 5.8104, Plg67.0000°, Azm122.0000°; N 0.7530, Plg16.0000°, Azm349.0000°; P -6.5634, Plg16.0000°, Azm254.0000°;*

ISC 06 04:57:03.7±2.4**, 30°34S**±0°04×**72°11W**±0°06**, h1**^{km}±14^{km}**, n173,** σ**1^{s}03**/157**, mb4.7**/23**, MS4.1**/6**, 4D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.52	129	⇓*i*P	Pb	04 57 16.5	+0.8
CO06	Fray Jorge	0.52	129	Pg	Pb	04 57 16.4	+0.8
CO05	La Serena	0.86	61	⇓*i*P	Pb	04 57 21.2	-0.2
CO05				*e*S	Sg	04 57 33.0	+1.6
CO05				IAML		04 57 37.7	
	comp=E,22µm,0.5s						
CO05	La Serena	0.86	61	Pg	Pb	04 57 20.9	-0.5
GO04	Tololo Observa	1.14	82	⇓*i*P	Pb	04 57 26.2	-0.2
GO04	Tololo Observa	1.14	82	Pn	Pb	04 57 26.5	+0.1
GO04	Tololo Observa	1.14	82	*e*P	Pb	04 57 26.3	-0.1
CO03	El Pedregal	1.32	112	⇓*i*P	Pn	04 57 28.9	-0.4
CO03				*e*S	Sn	04 57 46.3	-1.3
CO03	El Pedregal	1.32	112	Pn	Pn	04 57 29.4	+0.1
CO03	El Pedregal	1.32	112	*i* P	Pn	04 57 29.1	-0.1
CO03				*i* S	Sg	04 57 47.7	+1.7
LCO	Las Campanas	1.81	43	*e*P	Pn	04 57 35.5	-0.7
LCO	Las Campanas	1.81	43	*i* P	Pn	04 57 35.6	-0.5
LCO				*i* S	Sb	04 58 00.5	-0.4
LCO				IAML		04 58 05.7	
	comp=Z,23µm,0.9s						

AROD	Rodeo	2.29	86	*i* P	Pb	04 57 46.1	+0.2
AROD				*i* S	Sg	04 58 18.4	+1.3
AROD				IAML		04 58 19.2	
	comp=Z,1µm,1.2s						
AC04	Llanos de Chal	2.31	23	*e*P	Pn	04 57 41.0	-1.9
AC04	Llanos de Chal	2.31	23	*i* P	Pn	04 57 41.3	-1.6
VA06	Catapilco	2.32	163	*e*P	Pn	04 57 43.5	+0.5
VA06				IAML		04 58 25.6	
	comp=E,3µm,0.5s						
ACDV	Cuesta del Vie	2.59	87	*i* P	Pb	04 57 51.3	+0.3
ACDV				IAML		04 58 37.9	
	comp=Z,2µm,1.1s						
ACCO	Cerro Coronel	2.64	96	*e*P	Pb	04 57 51.6	-0.3
ACCO				*i* S	Sg	04 58 27.6	-0.8
ACCO				IAML		04 58 31.2	
	comp=Z,2µm,1.2s						
VA01	Torpederas	2.70	172	*e*P	Pn	04 57 48.4	+0.2
VA01	Torpederas	2.70	172	Pn	Pn	04 57 47.3	-0.9
VA03	San Esteban	2.75	152	*e*P	Pn	04 57 50.7	+1.7
VA03				IAML		04 58 39.6	
	comp=E,2µm,0.4s						
ROCH	El Roble	2.78	161	*e*P	Pn	04 57 50.5	+0.9
ROCH				IAML		04 58 45.2	
	comp=E,2µm,0.7s						
ROC1	El Roble	2.78	161	*e*P	Pn	04 57 50.3	+0.7
RTLS	Leoncito	2.81	122	*i* P	Pb	04 57 54.5	-0.4
RTLS				IAML		04 58 39.4	
	comp=Z,845nm,0.9s						
AUSP	Uspallata	2.99	130	*e*P	Pb	04 57 56.7	-1.2
MT02	Curacav	3.02	164	*e*P	Pn	04 57 53.4	+0.8
MT02	Curacav	3.02	164	*i* P	Pn	04 57 54.3	+1.6
PEL	Peldehue	3.04	157	*e*P	Pn	04 57 54.3	+1.3
PEL				IAML		04 58 50.9	
	comp=E,996nm,0.2s						
PEL	Peldehue	3.04	157	*i* P	Pn	04 57 54.9	+2.0
ZON	Zonda	3.18	113	*i* P	Pb	04 57 58.7	-2.2
ZON				IAML		04 58 58.2	
	comp=Z,794nm,1.4s						
GO03	Copiap	3.19	31	*e*P	Pn	04 57 54.2	-0.9
GO03				IAML		04 58 55.2	
	comp=E,1µm,0.8s						
GO03	Copiap	3.19	31	Pn	Pn	04 57 54.7	-0.4
AGUA	GUANDACOL	3.25	76	*i* P	Pb	04 58 00.1	-2.2
AGUA				IAML		04 58 51.3	
	comp=Z,552nm,2.3s						
MT05	Renca	3.25	159	*e*P	Pn	04 57 57.5	+1.6
MT05				IAML		04 58 54.7	
	comp=E,2µm,0.5s						
MT05	Renca	3.25	159	Pn	Pn	04 57 55.9	0.0
VA05	Santo Domingo	3.33	173	*e*P	Pn	04 57 56.9	+0.1
VA05				IAML		04 58 59.9	
	comp=E,1µm,0.4s						
VA05	Santo Domingo	3.33	173	Pn	Pn	04 57 56.4	-0.4
FCH	Farellones	3.35	153	*e*P	Pn	04 57 59.0	+1.5
FCH				IAML		04 58 56.8	
	comp=E,417nm,0.7s						
RTCV	Cerro Valdivia	3.41	117	*i* P	Pb	04 58 02.9	-2.1
RTCV				IAML		04 58 57.3	
	comp=Z,630nm,3.1s						
MT09	Talagante	3.55	165	*e*P	Pn	04 58 01.2	+1.1
MT09				IAML		04 59 09.3	
	comp=E,668nm,0.6s						
MT01	Popeta	3.58	169	*e*P	Pn	04 58 00.9	+0.5
MT01				IAML		04 59 05.8	
	comp=E,459nm,0.6s						
MT01	Popeta	3.58	169	Pn	Pn	04 58 00.4	0.0
MT01	Popeta	3.58	169	*i* P	Pn	04 58 01.0	+0.6
ARCO	CERRO ARCO	3.68	133	*i* P	Pb	04 58 07.3	-2.2
ARCO				IAML		04 59 17.1	
	comp=Z,1µm,0.8s						
LMEL	Las Melosas	3.85	156	*e*P	Pn	04 58 06.5	+2.4
LMEL				IAML		04 59 15.6	
	comp=N,424nm,0.3s						
BO01	Tunca	4.13	168	*e*P	Pn	04 58 08.8	+0.9
BO01	Tunca	4.13	168	Pn	Pn	04 58 07.8	0.0
BO01	Tunca	4.13	168	*i* P	Pn	04 58 08.6	+0.8
AC02	Maricunga	4.37	38	Pn	Pn	04 58 12.5	+0.9
BO02	Sierra Bellavi	4.57	166	*e*P	Pn	04 58 15.5	+1.4
GO05	Huala	4.66	178	Pn	Pn	04 58 14.7	-0.4
GO05	Huala	4.66	178	*i* P	Pn	04 58 14.8	-0.4
PB14	IPOC Station P	5.89	15	Pn	Pn	04 58 33.4	+1.0
H03N1	Juan Fernandez	6.56	240	T	T	05 05 49.7	
	baz=71,slow=72,SNR=46						
H03N2	Juan Fernandez	6.57	240	T	T	05 05 51.9	
	baz=71,slow=72,SNR=619						
H03N3	Juan Fernandez	6.57	240	T	T	05 05 55.5	
	baz=71,slow=72,SNR=38						
VA04	Juan Fernndez	6.59	238		Pn	04 58 40.1	-1.6
PB06	IPOC Station P	7.94	17		Pn	04 59 01.2	+0.8
PB04	IPOC Station P	8.17	13	Pn	Pn	04 59 04.7	+1.1
LVC	Limon Verde	8.22	21	Pn	Pn	04 59 02.5	-1.9
	comp=N,1.2nm,0.3s,baz=154,slow=13,SNR=2.4						
LVC	Limon Verde	8.22	21	Pn	Pn	04 59 05.7	+1.3
LC01	Cunco	8.54	179		Pn	04 59 08.0	-0.4
PB07	IPOC Station P	8.81	14	Pn	Pn	04 59 13.7	+1.4
PLCA	Paso Flores	10.44	173	Pn	Pn	04 59 35.3	+0.7
	comp=N,0.4nm,0.3s,baz=336,slow=16,SNR=5.0						
PLCA				LR	LR	05 04 09.0	
	comp=N,377nm,18.4s,baz=350,slow=41						
PLCA	Paso Flores	10.44	173	Pn	Pn	04 59 33.5	-1.1
TRQA	Tornquist	11.37	135	*e*P	Pn	04 59 49.0	+1.7
TRQA	Tornquist	11.37	135	Pn	Pn	04 59 47.4	+0.1
ITQB	Itaqui	13.44	91	*e*P	Pn	05 00 15.3	-0.2
ITQB	Itaqui	13.44	91		Pn	05 00 14.5	-1.0
CPUP	Villa Florida	13.61	77	LR	LR	05 05 52.8	
	comp=N,736nm,18.9s,baz=260,slow=39						
CPUP	Villa Florida	13.61	77	*e*P	Pn	05 00 16.5	-1.4
CPUP	Villa Florida	13.61	77	Pn	Pn	05 00 17.4	-0.5
LPAZ	La Paz	14.46	15	Pn	Pn	05 00 31.2	+1.2
	comp=N,0.4nm,0.3s,baz=188,slow=7.0,SNR=21						
LPAZ				LR	LR	05 05 52.6	
	comp=N,211nm,19.7s,baz=115,slow=37						
LPAZ	La Paz	14.46	15	*e*P	Pn	05 00 28.9	-1.2
LPAZ	La Paz	14.46	15	Pn	Pn	05 00 28.4	-1.6
SIV	San Ignacio	17.50	38	Pn	P	05 01 09.8	-0.6
	comp=N,0.2nm,0.3s,baz=228,slow=12,SNR=50						
SIV				LR	LR	05 08 16.2	
	comp=N,339nm,19.9s,baz=238,slow=39						
AQDB	Aquidauana	17.76	60	*e*P	P	05 01 13.1	-0.1
AQDB	Aquidauana	17.76	60	Pn	Pn	05 01 10.5	-1.8
PTGB	Pitanga	18.63	77	*e*P	Pn	05 01 23.6	+0.5
TRCB	Terra Rica	18.95	71	*e*P	Pn	05 01 27.2	+0.2
PTLB	Pontes e Lacer	19.01	42	*e*P	P	05 01 26.4	-0.6
PTLB	Pontes e Lacer	19.01	42	P	P	05 01 25.9	-1.1
VILB	Vilhena	20.51	35	*e*P	P	05 01 42.9	-0.5
VILB	Vilhena	20.51	35	P	P	05 01 42.3	-1.1
VILB				IAmb	IAmb	05 01 48.5	
	comp=Z,30nm,0.9s						
PCMB	Pacaembu	20.64	70	*e*P	P	05 01 44.5	-0.2
SALV	Santo Antonio	20.81	50	*e*P	P	05 01 45.7	-0.8
TIJ01	Guaruva-PR	21.02	82	*e*P	P	05 01 48.5	-0.4
ETMB	Extrema	21.15	16	*e*P	P	05 01 50.9	+0.7
ETMB	Extrema	21.15	16	P	P	05 01 49.8	-0.5
FRTB	Fartura	21.27	76	*e*P	P	05 01 51.5	-0.1
ITRB	Iturama	22.33	67	*e*P	P	05 02 01.7	-1.3
CZSB	Cruzeiro do Su	22.50	358	*e*P	P	05 02 05.5	+0.8
CZSB	Cruzeiro do Su	22.50	358	P	P	05 02 05.0	+0.2
CZSB				IAmb	IAmb	05 02 20.4	
	comp=Z,25nm,1.0s						
SAML	Samuel	22.86	23	P	P	05 02 07.2	-1.3
SPB	Sao Paulo	22.97	79	*e*P	P	05 02 09.7	0.0
SPB	Sao Paulo	22.97	79	P	P	05 02 08.8	-0.8
BB19B	Bebedouro	23.13	72	*e*P	P	05 02 11.3	-0.1
PDRB	Porto dos Gac	23.48	41	*e*P	P	05 02 13.3	-1.6
ARAG	Araguaiana, MT	23.63	56	*e*P	P	05 02 14.4	-2.0
CLDB	Colider	24.61	41	*e*P	P	05 02 24.3	-1.3
USHA	Ushuaia	24.61	175	LR	LR	05 13 46.4	
	comp=Z,209nm,19.1s,baz=354,slow=41						
IPMB	Ipameri, GO	24.97	66	*e*P	P	05 02 28.2	-0.7
TBTG	Tabatinga, AM	26.10	5	P	P	05 02 38.6	-0.5
BSCB	Bom Sucesso	26.28	76	*e*P	P	05 02 40.3	-0.5
BDFB	Brasilia	26.49	62	P	P	05 02 41.7	-1.1
	comp=Z,7.6nm,0.8s,baz=237,slow=8.2,SNR=13						
BDFB	Brasilia	26.49	62	P	P	05 02 41.4	-1.4
BDFB				IAmb	IAmb	05 02 42.5	
	comp=Z,11nm,0.9s						
SNDB	Serra Nova Dou	26.58	51	*e*P	P	05 02 42.7	-0.7
DUB01	Friburgo-RJ	27.85	80	*e*P	P	05 02 55.1	+0.1
NPGB	Novo Progresso	28.01	38	*e*P	P	05 02 55.0	-1.3
DIAM	Diamantina, MG	28.47	72	*e*P	P	05 03 00.2	-0.3
PEXB	Peixe	28.56	56	*e*P	P	05 03 00.8	-0.4
MC01	Montes Claros	29.08	69	*e*P	P	05 03 05.0	-0.9
JANB	Januaria	29.70	65	*e*P	P	05 03 11.8	+0.3
SMTB	Santa Maria do	31.33	52	*e*P	P	05 03 25.0	-0.7
PTGA	Pitinga	31.63	24	P	P	05 03 28.1	-0.3
PTGA				IAmb	IAmb	05 03 28.7	
	comp=Z,9.2nm,1.1s						
PRPB	Parauapebas	31.90	46	*e*P	P	05 03 30.4	-0.4
BOAV	Boa Vista	34.38	21	*e*P	P	05 03 52.4	0.0
BOAV	Boa Vista	34.38	21	P	P	05 03 51.7	-0.8
MCPB	Macapa, AP	35.39	36	*e*P	P	05 04 01.2	0.0
TMAB	Tom-Au,PA,Br	35.94	44	*e*P	P	05 04 06.5	+0.7
NBLA	Lagarto - SE	37.22	66	*e*P	P	05 04 16.4	-0.5
NBMA	Muriti-CE	38.71	61	*e*P	P	05 04 29.2	-0.3
VNA3	Neumayer Olymp	52.77	159	P	P	05 06 20.7	+0.8
VNA3	Neumayer Olymp	52.77	159	sP	sP	05 06 26.2	+7.3
VNA1	Neumayer--Stat	53.06	158	P	P	05 06 23.1	+1.1
VNA1	Neumayer--Stat	53.06	158	sP	sP	05 06 27.5	+6.5
VNA2	Neumayer--Watz	53.41	158	P	P	05 06 25.3	+0.8
	baz=289,slow=8.7						
VNA2	Neumayer--Watz	53.41	158	sP	sP	05 06 29.4	+5.8
SNAA	Sanae	54.99	159	P	P	05 06 36.9	+0.7
SNAA	Sanae	54.99	159	P	P	05 06 36.4	+0.2
QSPA	South Pole Qui	59.88	180	P	P	05 07 11.2	+0.4
QSPA				IAmb	IAmb	05 07 29.1	
	comp=Z,7.1nm,1.2s						
143A	Socs Landing,	65.32	342	P	P	05 07 49.3	+2.0
JCT	Junction City	65.98	334	P	P	05 07 53.0	+1.4
JCT				IAmb	IAmb	05 08 04.6	
	comp=Z,7.4nm,0.9s						
CPCT	Cooper Cave	66.48	349	IAmb	IAmb	05 07 57.1	
	comp=Z,5.6nm,1.1s						
TXAR	Lajitas Array	66.53	330	P	P	05 07 56.4	+1.1
	comp=Z,0.9nm,0.8s,baz=154,slow=6.6,SNR=6.7						
TXAR	Lajitas Array	66.53	330	P	P	05 07 56.6	+1.3
TKL	Tuckaleechee C	66.56	350	IAmb	IAmb	05 07 56.0	
	comp=Z,6.3nm,0.9s						
WVT	Waverly	67.75	346	P	P	05 08 03.2	+0.4
WVT				IAmb	IAmb	05 08 05.0	
	comp=Z,5.1nm,0.9s						
W39A	Magazine	68.31	341	IAmb	IAmb	05 08 11.1	
	comp=Z,8.6nm,1.1s						
MNTX	Cornudas Mount	69.32	330	P	P	05 08 12.8	+0.1
MNTX				IAmb	IAmb	05 08 23.1	
	comp=Z,5.1nm,1.2s						
HHAR	Hobbs	69.38	341	IAmb	IAmb	05 08 23.6	
	comp=Z,8.7nm,1.3s						
MSTX	Muleshoe	70.22	333	IAmb	IAmb	05 08 29.8	
	comp=Z,7.6nm,0.9s						
CCM	Cathedral Cave	70.36	344	P	P	05 08 19.6	+0.7
CCM				IAmb	IAmb	05 08 21.6	
	comp=Z,4.9nm,0.9s						
R40A	Maddies Statio	70.83	343	IAmb	IAmb	05 08 31.5	
	comp=Z,5.9nm,0.8s						
ANMO	Albuquerque	72.56	331	P	P	05 08 34.1	+1.5
DBIC	Dimbokro	74.09	72	P	P	05 08 41.7	-0.1
	comp=Z,6.3nm,0.9s,baz=232,slow=8.7,SNR=4.5						
DBIC				LR	LR	05 39 03.2	
	comp=Z,152nm,19.2s,baz=206,slow=34						
DBIC	Dimbokro	74.09	72	IAmb	IAmb	05 08 55.6	
	comp=Z,12nm,1.1s						
MAW	Mawson	76.69	164	LR	LR	05 43 55.2	
	comp=Z,92nm,18.4s,baz=237,slow=37						
ECSD	EROS Data Cent	77.06	342	P	P	05 08 59.0	+0.8
ECSD				IAmb	IAmb	05 09 08.1	
	comp=Z,7.1nm,1.0s						
CCUT	Cedar City	77.79	328	P	P	05 09 02.6	-0.2
KOWA	Kowa	79.20	66	P	P	05 09 09.2	-1.5
KOWA				IAmb	IAmb	05 09 11.9	
	comp=Z,11nm,0.9s						
R11A	Troy Canyon, C	79.48	327	P	P	05 09 14.5	+2.5
TPH	Tonopah	80.05	325	P	P	05 09 16.6	+1.5
PDAR	Pinedale Array	80.49	333	P	P	05 09 17.8	+0.4
	comp=Z,0.4nm,0.6s,baz=151,slow=5.8,SNR=3.6						
NVAR	Mina Array Bea	80.86	325	P	P	05 09 20.2	+0.7
	comp=Z,0.2nm,0.5s,baz=142,slow=4.6,SNR=2.2						
ELK	Elko	81.23	328	P	P	05 09 22.1	+0.7
BOSA	Boshof	81.83	118	LR	LR	05 40 54.5	
	comp=Z,47nm,18.4s,baz=186,slow=32						
TORD	Torodi Ar. Bea	83.03	70	P	P	05 09 31.1	-0.1
	comp=Z,6.8nm,0.8s,baz=260,slow=4.9,SNR=36						
TORD				LR	LR	05 44 47.5	
	comp=Z,153nm,19.0s,baz=190,slow=34						
TORD	Torodi Ar. Bea	83.03	70	P	P	05 09 30.9	-0.2
ORV	Oroville	83.33	324	P	P	05 09 33.3	+1.2
ORV				IAmb	IAmb	05 09 49.0	
	comp=Z,4.6nm,1.1s						
J08A	Circle Bar Ran	84.77	328	P	P	05 09 40.1	+0.5
J08A				IAmb	IAmb	05 09 51.8	
	comp=Z,5.6nm,1.0s						
ESDC	Sonseca Array	94.09	46	LR	LR	05 52 31.7	
	comp=Z,55nm,18.4s,baz=270,slow=35						
H11S2	WAKE ISLAND Hy	125.68	272	T	T	07 34 59.1	
	baz=115,slow=74,SNR=44						
H11S1	WAKE ISLAND Hy	125.69	272	T	T	07 34 57.1	
	baz=115,slow=74,SNR=42						
H11S3	WAKE ISLAND Hy	125.70	272	T	T	07 34 55.8	
	baz=115,slow=74,SNR=34						
BRVK	Borovoye	144.50	39	PKPdf	PKPbc	05 16 40.3	+0.3
CHGR	Chuyangaron	147.21	65	PKPbc	PKPbc	05 16 48.3	-0.5
KK31	Karatay Array	147.71	56	PKPbc	PKPdf	05 16 48.4	+1.2
KKAR	Karatay Array	147.71	56	PKPbc	PKPbc	05 16 49.2	-0.8
GAR	Garm	148.09	64	PKPbc	PKPbc	05 16 50.4	-0.9
ZALV	Zalesovo Beam	151.11	29	PKPbc	PKiKP	05 16 58.4	-0.2
	comp=Z,9.0nm,0.9s,baz=300,slow=3.3,SNR=23						
ZALV	Zalesovo Beam	151.11	29		PKPbc	05 16 58.1	0.0
MKAR	Makanchi Array	154.27	43	PKPbc	PKiKP	05 17 05.7	+0.2
	comp=Z,0.7nm,0.9s,baz=8.5,slow=2.5,SNR=3.6						

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*IDC **06** 05:05:11.4±1.2, 55°.77S×25°.86W, h0^{km}, mb3.9/3, mb1 4.1/3, mb1mx3.8/17, mbtmp3.9/3, Error ellipse: s-maj=49.7km s-min=30.5km az=82.0*

*NEIC **06** 05:05:13.6±1.0, 55°.8S±0°.1×26°.1W±0°.3, h10^{km}±2^{km}, mb4.4/11, Error ellipse: s-maj=31.6km s-min=8.4km az=53.0*

ISC 06 05:05:13.0±0.9**, 55°.7S**±0°.1×**26°.0W**±0°.1**, h10^{km}, n21, σ0^{s}.66**/21**, mb4.3**/8**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	6.23	279	Pn	Pn	05 06 44.4	-0.5
VNA1	Neumayer--Stat	16.84	160	P	Pn	05 09 09.1	+0.7
VNA3	Neumayer Olymp	17.06	162	P	Pn	05 09 11.8	+0.4
VNA2	Neumayer--Watz	17.23	159	P	Pn	05 09 13.9	+0.5
	baz=320,slow=14						
SNAA	Sanae	18.75	157	P	Pn	05 09 33.1	+0.9
SNAA	Sanae	18.75	157	P	P	05 09 31.5	-0.3
PMSA	Palmer Station	20.63	229	P	P	05 09 53.2	+1.1
PMSA				IAmb	IAmb	05 09 56.3	
	comp=Z,12nm,0.8s						
TRQA	Tornquist	29.85	291	P	P	05 11 19.8	-0.5
TRQA				IAmb	IAmb	05 11 39.9	
	comp=Z,9.5nm,1.5s						
COYC	Coyhaique	30.42	270	P	P	05 11 25.1	-0.1
COYC				IAmb	IAmb	05 11 51.2	
	comp=Z,13nm,1.4s						
QSPA	South Pole Qui	34.51	180	P	P	05 12 00.2	-0.8
QSPA				IAmb	IAmb	05 12 02.0	
	comp=Z,4.7nm,0.7s						
AC04	Llanos de Chal	42.27	292	P	P	05 13 06.8	+0.3
AC02	Maricunga	42.37	295	P	P	05 13 08.2	+0.3
AC02				IAmb	IAmb	05 13 23.6	
	comp=Z,6.4nm,1.0s						
VNDA	Vanda	46.91	182	P	P	05 13 42.5	-0.5
	comp=Z,0.9nm,0.6s,baz=189,slow=7.9,SNR=15						
VNDA	Vanda	46.91	182	P	P	05 13 42.5	-0.5
PB01	IPOC Station P	47.36	299	P	P	05 13 48.6	+1.5
LPAZ	La Paz	50.77	304	P	P	05 14 14.2	+0.2
	comp=Z,1.4nm,0.5s,baz=147,slow=5.7,SNR=12						
LPAZ	La Paz	50.77	304	P	P	05 14 14.0	0.0
LPAZ				IAmb	IAmb	05 14 14.8	
	comp=Z,1.8nm,0.6s						
OTAV	Otavalo	70.07	302	P	P	05 16 25.9	+0.2
OTAV				IAmb	IAmb	05 16 34.3	
	comp=Z,6.3nm,1.5s						
TORD	Torodi Ar. Bea	72.45	28	P	P	05 16 39.4	0.0
	comp=Z,0.5nm,0.5s,baz=200,slow=6.3,SNR=4.5						
BCAR	Beaver Creek A	147.83	310	PKPdf	PKPbc	05 24 55.8	-0.9
ILAR	Eielson Array	150.43	312	PKPbc	PKPbc	05 25 03.3	+0.1
	comp=Z,0.5nm,0.8s,baz=115,slow=1.5,SNR=5.6						

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*TUL **06** 05:35:37.9±0.3, 36°.76N±0°.01×98°.07W±0°.01, h5^{km}±4^{km}, ML2.9, mb_Lg2.6/27(NEIC), Error ellipse: s-maj=1.7km s-min=1.4km az=216.0*

NEIC 06 05:35:38.4±0.5**, 36°.75N**±0°.01×**98°.07W**±0°.02**, h7^{km}**±4^{km}**, Error ellipse: s-maj=1.9km s-min=1.4km az=121.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK032	Salt Plains WL	0.12	295	Pg	Pg	05 35 40.9	-0.2
OK032				Sg	Sg	05 35 42.9	0.0
GC02	Grant County #	0.20	60	Pg	Pg	05 35 42.2	-0.2
KAN14	Manchester OK	0.22	23	Pg	Pg	05 35 42.7	-0.2
KAN14				Sg	Sg	05 35 46.0	0.0
CROK	Carrier	0.26	164	Pg	Pg	05 35 43.3	-0.2
CROK				Sg	Sg	05 35 46.7	-0.3
KAN10	Anthony SW Sta	0.37	357	Pg	Pg	05 35 45.4	-0.3
KAN10				Sg	Sg	05 35 50.3	-0.3
KAN17	Caldwell West	0.38	40	Pg	Pg	05 35 45.5	-0.5
KAN17				Sg	Sg	05 35 50.8	-0.2
KAN05	Bluff City Nor	0.39	24	Pg	Pg	05 35 46.0	-0.1
KAN16	Harper SW Stat	0.47	1	Pg	Pg	05 35 47.3	-0.3
KAN01	Argonia South	0.47	32	Pg	Pg	05 35 47.2	-0.4
KAN01				Sg	Sg	05 35 53.6	-0.2
KAN08	Anthony NE Sta	0.48	10		Pg	05 35 47.5	-0.3
KAN06	Argonia West S	0.52	19		Pg	05 35 48.0	-0.6
KAN09	Caldwell North	0.53	43	Pg	Pg	05 35 48.1	-0.5
KAN13	South Haven SW	0.54	61	Pg	Pg	05 35 48.4	-0.6
KAN12	Harper NE Stat	0.55	6	Pg	Pg	05 35 48.5	-0.5
KS20	Mayfield South	0.63	41		Pg	05 35 50.0	-0.7
BLOK	Blackwell	0.69	89	Pg	Pg	05 35 51.0	-0.8
U32A	Winter Ranch,	0.83	244		Pg	05 35 53.7	-0.8
OK029	Liberty Lake	1.08	152	Pg	Pg	05 35 58.0	-1.1
QUOK	Quay	1.24	117		Pn	05 36 01.0	-1.2
T35A	Sooner Cattle	1.26	82		Pn	05 36 01.3	-1.2
OK031	S. Brethren Rd	1.28	128	Pg	Pn	05 36 01.5	-1.2
OK025	Westminster Rd	1.31	153	Pg	Pn	05 36 02.3	-0.9
OK030	Cody Creek RV	1.33	128	Pg	Pn	05 36 02.4	-1.0
OKCFA	Oklahoma City	1.43	159		Pn	05 36 03.8	-0.9
OKCSW	OKLAHOMA CITY	1.44	159		Pn	05 36 04.3	-0.6
FNO	Franklin	1.59	160	Pg	Pn	05 36 06.9	-0.1
R32A	Long Quarter,	1.74	343		Pn	05 36 09.6	+0.4
TUL1	Leonard	2.02	114		Pn	05 36 13.8	+0.8
WMOK	Wichita Mounta	2.09	196		Pn	05 36 14.9	+1.0
KSU1	Kansas State U	2.62	26	IAmb_Lg		05 37 07.3	
	comp=Z,27nm,1.1s						
KSCO	Kaye Shedlock’	4.25	303	IAmb_Lg		05 37 53.0	
	comp=Z,8.4nm,0.7s						
MIAR	Mount Ida	4.27	120	IAmb_Lg		05 38 03.3	
	comp=Z,8.6nm,0.9s						
ABTX	Abilene, Hawle	4.32	198	IAmb_Lg		05 37 55.5	
	comp=Z,9.4nm,0.9s						
P38A	Dawn	4.58	50	IAmb_Lg		05 38 04.7	
	comp=Z,11nm,0.8s						
X40A	Basin Creek Fa	4.83	116	IAmb_Lg		05 38 14.1	
	comp=Z,14nm,0.7s						
FCAR	Ozark Folk Cen	4.88	98	IAmb_Lg		05 38 13.0	
	comp=Z,8.6nm,0.9s						
WHAR	Wooly Hollow	4.91	106	IAmb_Lg		05 38 09.7	
	comp=Z,9.8nm,1.2s						
P40A	Paris	5.50	58	IAmb_Lg		05 38 38.2	
	comp=Z,10nm,1.0s						
N38A	Joes South For	5.53	42	IAmb_Lg		05 38 46.7	
	comp=Z,11nm,0.7s						
CCM	Cathedral Cave	5.59	74	IAmb_Lg		05 38 41.1	
	comp=Z,6.1nm,0.8s						
LCAR	Lake Charles	5.62	95	IAmb_Lg		05 38 38.2	
	comp=Z,6.3nm,0.8s						
K31A	O'Neill	5.89	355	IAmb_Lg		05 38 55.8	
	comp=Z,12nm,0.8s						
PBMO	Poplar Bluff	6.14	87	IAmb_Lg		05 38 56.2	
	comp=Z,8.4nm,0.7s						
JCT	Junction City	6.42	193	IAmb_Lg		05 39 06.1	
	comp=Z,10nm,1.1s						

IDC 06 05:47:39.0±2.0**, 7°.92S**×**125°.37E, h0^{km}, mb3.8**/1**, mb1 3.7**/3**, mb1mx3.4**/44**, mbtmp3.6**/3**, ML3.4**/2**, Error ellipse: s-maj=184.0km s-min=32.4km az=60.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	14.77	145	Pn	Pn	05 51 08.4	-1.0
	0.2nm,0.3s,baz=318,slow=13,SNR=17						
WRA				Sn	Sn	05 53 45.3	-8.6
	0.1nm,0.3s,baz=319,slow=24,SNR=6.4						
ASAR	Alice Springs	17.66	153	P	P	05 51 47.4	-0.3
	0.1nm,0.3s,baz=334,slow=13,SNR=4.1						
ASAR				S	Sn	05 54 56.2	-8.0
	0.1nm,0.3s,baz=323,slow=20,SNR=5.2						
MKAR	Makanchi Array	66.57	329	P	P	05 58 31.0	0.0
	0.8nm,0.7s,baz=141,slow=7.8,SNR=4.5						

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*IDC **06** 05:57:30.0±4.8, 21°.50S×175°.11W, h147^{km}±41^{km}, mb3.5/6, mb1 3.8/7, mb1mx3.5/38, mbtmp4.0/7, MS3.6/1, Ms1 3.6/1, ms1mx2.9/21, Error ellipse: s-maj=34.2km s-min=25.1km az=127.0*

ISC 06 05:57:30.8±1.2**, 21°.5S**±0°.2×**175°.2W**±0°.2**, h150^{km}, n8, σ1^{s}.53**/8**, mb3.8**/7**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	7.43	299	P	Pn	05 59 16.1	-0.7
	1.7nm,0.3s,baz=116,slow=13,SNR=13						
MSVF				LR	LR	06 02 12.3	
	comp=Z,463nm,18.6s,baz=129,slow=38						
STKA	Stephens Creek	39.77	246	P	P	06 04 49.3	+0.2
	1.6nm,0.8s,baz=118,slow=23,SNR=4.4						
ASAR	Alice Springs	46.89	257	P	P	06 05 46.1	-0.3
	2.1nm,0.8s,baz=92,slow=8.0,SNR=23						
WRA	Warramunga Arr	47.10	262	P	P	06 05 47.8	-0.3
	2.1nm,0.7s,baz=101,slow=7.9,SNR=23						
VNDA	Vanda	57.16	186	P	P	06 07 00.5	-0.8
	0.6nm,0.8s,baz=21,slow=5.4,SNR=4.2						
MJAR	Matsushiro Arr	72.62	322	P	P	06 08 40.9	-1.1
	1.7nm,0.6s,baz=152,slow=6.0,SNR=5.2						
NVAR	Mina Array Bea	79.96	42	P	P	06 09 23.4	-0.2
	0.3nm,0.6s,baz=234,slow=7.6,SNR=4.2						
CMAR	Chiang Mai Arr	92.96	289	P	P	06 10 30.6	+3.0
	0.8nm,0.4s,baz=118,slow=3.2,SNR=6.4						

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*OMAN **06** 05:58:06.9±0.7, 29°.66N×57°.79E, h181^{km}±43^{km}, mb4.6/5, ml3.6/5, Error ellipse: s-maj=42.3km s-min=11.7km az=287.0*

*TEH **06** 05:58:24.6, 28°.26N×57°.38E, h8^{km}, ML3.2*

*DSN **06** 05:58:24.2±2.2, 27°.98N×57°.95E, h10^{km}, ML2.9/8, Error ellipse: s-maj=49.0km s-min=19.0km az=135.0*

ISC 06 05:58:26.0±1.0**, 28°.17N**±0°.04×**57°.43E**±0°.05**, h10^{km}, n37, σ1^{s}.30**/41**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHNJ	Kahnooj	0.33	132	*e*Pg	Pg	05 58 33.3	+0.6
KHNJ				*e*Sg	Sb	05 58 39.4	-0.1
IBND	Bandar-abas	1.07	228	*e*Pg	Pb	05 58 46.5	-0.1
IBND				*e*Sg	Sn	05 59 02.3	+0.4
IBND				*e*		05 59 12.1	
	comp=Z,13µm,0.4s						
KBAM	BAM	1.32	43	*e*Pg	Pn	05 58 48.9	-1.7
KBAM				*e*		05 59 16.3	
	comp=Z,3µm,0.3s						
GENO	Geno	1.35	236	*e*Pg	Pn	05 58 50.8	-0.4
GENO				*e*Sg	Sg	05 59 10.1	+0.5
NGRK	Negar Kerman	1.59	338	*e*Pg	Pn	05 58 52.9	-1.7
NGRK				*e*		05 59 26.2	
	comp=Z,4µm,0.3s						
CHMN	Cheshme madani	1.69	3	*e*Pn	Pn	05 58 54.7	-1.2
CHMN				*e*		05 59 00.2	
	comp=Z,2µm,0.2s						
TVBK	TV Kerman	1.90	342	*e*Pn	Pn	05 58 58.1	-0.7
KHGB	Koh Gabri	2.35	340	*e*Pn	Pn	05 59 04.8	-0.1
KHGB				*e*		05 59 43.1	
	comp=Z,2µm,0.6s						
SHME	Shamm	2.41	209	P	Pn	05 59 04.4	-1.1
SHME	Shamm	2.41	209	P	Pn	05 59 04.5	-0.9
	SNR=7.6						
BANOM	Banah	2.46	204	P	Pn	05 59 05.5	-0.7
BANOM				S	Sn	05 59 37.2	+0.9
BANOM	Banah	2.46	204	P	Pn	05 59 05.6	-0.6
	SNR=27						
MASF	Masafi	3.01	202	P	Pn	05 59 16.0	+2.2
MSFE	Esma-Masafi	3.02	202	P	Pn	05 59 13.3	-0.7
MDH	Madha	3.04	200	P	Pn	05 59 12.0	-2.1
MDH	Madha	3.04	200	P	Pn	05 59 12.7	-1.5

ZHDN	Zahedan	3.21	67	*e*Pn	Pn	05 59 17.5	+0.8
UOSS	Minazif	3.40	199	P	Pn	05 59 18.8	-0.3
UOSS	Minazif	3.40	199	P	Pn	05 59 20.5	+1.4
HATD	Hatta, Dubai	3.53	199	P	Pn	05 59 17.4	-3.6
ASHO	Ashiyiah	3.69	200	P	Pn	05 59 22.7	-0.5
ASHO	Ashiyiah	3.69	200	P	Pn	05 59 24.0	+0.9
	SNR=12						
NHDN	Nehbandan	3.94	35	*e*Pn	Pn	05 59 27.1	+0.4
ASUD	Al Ashush, Dub	4.00	209	P	Pn	05 59 27.6	+0.2
ASUD	Al Ashush, Dub	4.00	209	P	Pn	05 59 28.1	+0.7
IMEH	Mehriz	4.03	323	*e*Pn	Pn	05 59 27.4	-0.7
SOHO	SOHO	4.10	191	P	Pn	05 59 26.0	-2.8
SOHO	SOHO	4.10	191	P	Pn	05 59 26.7	-2.1
HOQ	Hoqain	4.57	181	P	Pn	05 59 33.6	-1.7
ITEG	Tejag	4.84	13	*e*Pn	Pn	05 59 39.8	+0.6
TPRV	Parvadeh(Tabas	4.88	353	*e*Pn	Pn	05 59 39.2	-0.4
ARQ	Araqi	4.88	190	P	Pn	05 59 40.4	+0.7
WSAR	Wadi Sarin	5.03	167	P	Pn	05 59 40.3	-1.3
	SNR=17						
AFRZ	Afriz	5.41	14	*e*Pn	Pn	05 59 46.3	-0.6
IRAM	Ramesheh	5.68	311	*e*Pn	Pn	05 59 49.9	-0.8
WBK	Wadi Bani Khal	5.71	166	P	Pn	05 59 49.3	-1.7
	SNR=14						
KLNJ	Kolanjah	5.81	300	*e*Pn	Pn	05 59 53.3	+0.6

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*IDC **06** 05:58:51.5±2.5, 24°.05S×66°.93W, h182^{km}±24^{km}, mb3.4/1, mb1 3.5/5, mb1mx3.2/38, mbtmp4.0/5, MS2.6/1, Ms1 2.7/1, ms1mx2.5/9, Error ellipse: s-maj=38.2km s-min=25.4km az=161.0*

*VAO **06** 05:58:51.2±0.5, 24°.20S×67°.53W, h245^{km}±9^{km}, mb3.9*

*GUC **06** 05:58:52.4±0.5, 23°.91S×67°.39W, h215^{km}±6^{km}, ML4.3*

ISC 06 05:58:51.6±0.7**, 24°.09S**±0°.06×**67°.28W**±0°.08**, h212**^{km}±9^{km}**, n50,** σ1^{s}.**23**/63**, 5C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AF01	San Pedro de A	1.40	324	⇑*i*P	Pn	05 59 26.3	+0.3
LVC	Limon Verde	2.10	314	P	Pn	05 59 33.3	+0.9
	48nm,0.3s,baz=123,slow=7.0,SNR=620						
LVC				S	S	06 00 04.5	+0.5
	44nm,0.3s,baz=200,slow=5.4,SNR=34						
LVC	Limon Verde	2.10	314	*i* P	Pn	05 59 33.0	+0.5
LVC				*e*S	S	06 00 03.7	-0.3
LVC	Limon Verde	2.10	314	*e*P	Pn	05 59 33.4	+0.9
PB15	IPOC Station P	2.19	293	⇑*i*P	Pn	05 59 34.2	+1.0
PB15				*e*S	S	06 00 05.7	+0.4
PB06	IPOC Station P	2.52	303	⇑*i*P	Pn	05 59 37.7	+1.1
PB06				*i* S	S	06 00 11.8	+0.3
PB06				IAML		06 00 13.4	
	comp=N,964nm,0.3s						
PB14	IPOC Station P	2.90	259	*i* P	Pn	05 59 41.4	+0.4
PB05	IPOC Station P	2.96	294	*i* P	Pn	05 59 42.4	+0.8
PB05				*e*S	S	06 00 19.6	-0.5
PB05				IAML		06 00 25.1	
	comp=N,296nm,0.3s						
PB03	IPOC Station P	3.06	311	⇑*i*P	Pn	05 59 43.6	+0.8
PB03				*e*S	S	06 00 21.8	-0.5
PB03				IAML		06 00 24.4	
	comp=E,483nm,0.4s						
PB10	IPOC Station P	3.06	280	*e*P	Pn	05 59 43.7	+1.1
PB10				*e*S	S	06 00 21.4	-0.6
PB10				IAML		06 00 27.2	
	comp=E,372nm,0.1s						
PB04	IPOC Station P	3.17	303	*i* P	Pn	05 59 44.9	+0.9
PB04				*e*S	S	06 00 24.4	-0.3
PB07	IPOC Station P	3.37	314	*i* P	Pn	05 59 47.2	+0.8
PB07				*i* S	S	06 00 28.7	-0.2
PB01	IPOC Station P	3.66	326	⇑*i*P	Pn	05 59 50.1	+0.3
PB01				*e*S	S	06 00 35.0	-0.1
PB02	IPOC Station P	3.67	318	*i* P	Pn	05 59 50.4	+0.4
PB02				*e*S	S	06 00 34.1	-1.2
PB08	IPOC Station P	4.30	336	⇓*i*P	Pn	05 59 59.0	+1.0
GO03	Copiap	4.39	217	*i* P	Pn	05 59 56.9	-1.7
HMBC	Humberstone	4.50	327	*i* P	Pn	05 59 59.4	-0.8
HMBC				*e*S	S	06 00 52.2	-1.8
PB11	IPOC Station P	4.84	332	*i* P	Pn	06 00 04.1	-0.4
LPAZ	La Paz	7.81	354	P	Pn	06 00 43.8	+0.8
	comp=E,1.9nm,0.3s,baz=159,slow=5.8,SNR=72						
LPAZ				S	S	06 02 11.3	-0.4
	comp=E,0.1nm,0.3s,baz=235,slow=24,SNR=2.1						
LPAZ				LR	LR	06 04 44.2	
	comp=E,42nm,20.6s,baz=126,slow=45						
LPAZ	La Paz	7.81	354	*e*P	Pn	06 00 43.7	+0.7
SIV	San Ignacio	9.95	37	P	Pn	06 01 07.3	-2.8
	comp=E,0.3nm,0.3s,baz=218,slow=7.3,SNR=6.1						
TRCB	Terra Rica	13.51	87	*e*P	Pn	06 01 56.9	+1.8
SALV	Santo Antonio	13.59	55	*e*P	Pn	06 01 58.3	+2.1
CPSB	Cacapava Do Su	13.82	120	*e*P	Pn	06 01 58.8	0.0
PTGB	Pitanga	13.88	96	*e*P	Pn	06 02 01.7	+2.0
TRQA	Tornquist	14.64	163	*e*P	Pn	06 02 06.0	-2.8
SAML	Samuel	15.56	15	*e*P	P	06 02 20.1	0.0
PDRB	Porto dos Gac	15.95	41	*e*P	P	06 02 23.3	-1.0
ARAG	Araguaiana, MT	16.75	63	*e*P	P	06 02 33.6	+0.5
CLDB	Colider	17.09	42	*e*P	P	06 02 35.4	-1.5
BB19B	Bebedouro	17.58	84	*e*P	P	06 02 42.2	+0.1
IPMB	Ipameri, GO	18.80	75	*e*P	P	06 02 53.9	-1.5
SNDB	Serra Nova Dou	19.37	54	*e*P	P	06 03 00.2	-1.4
PARB	Paraibuna	19.84	92	*e*P	P	06 03 06.0	-0.6
BDFB	Brasilia	19.96	69	P	P	06 03 07.1	-0.8
	comp=E,0.7nm,0.3s,baz=247,slow=11,SNR=9.8						
PEXB	Peixe	21.59	60	*e*P	P	06 03 23.4	-1.6
ITTB	Itaituba	22.55	31	*e*P	P	06 03 33.3	-0.7
JANB	Januaria	23.40	72	*e*P	P	06 03 40.8	-1.0
SMTB	Santa Maria do	24.15	54	*e*P	P	06 03 48.9	+0.4
SDBA	SAO DESIDERIO	24.18	65	*e*P	P	06 03 47.9	-1.0
PRPB	Parauapebas	24.47	46	*e*P	P	06 03 50.5	-1.0
MALB	Monte Alegre	25.44	32	*e*P	P	06 03 58.0	-2.2
BOAV	Boa Vista	27.14	15	*e*P	P	06 04 12.9	-2.4
VNA3	Neumayer Olymp	57.15	161	P	P	06 08 17.5	+1.7
VNA1	Neumayer--Stat	57.35	160	P	P	06 08 19.5	+2.4
VNA2	Neumayer--Watz	57.72	160	P	P	06 08 21.5	+1.8
	baz=288,slow=5.2						
SNAA	Sanae	59.35	161	P	P	06 08 32.5	+1.4
TORD	Torodi Ar. Bea	76.84	69	P	P	06 10 21.2	+0.7
	comp=E,0.6nm,0.5s,baz=260,slow=4.9,SNR=6.9						
ZALV	Zalesovo Beam	143.59	28	PKP	PKPdf	06 18 01.9	+1.2
	comp=E,1.3nm,0.6s,baz=316,slow=3.3,SNR=5.2						
MKAR	Makanchi Array	146.76	39	PKPbc	PKiKP	06 18 11.5	+0.5
	comp=E,1.4nm,0.5s,baz=308,slow=3.0,SNR=14						

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*NNC **06** 05:59:59.2±3.2, 37°.00N×70°.41E, h225^{km}±40^{km}, mb2.7, mpv3.6, Error ellipse: s-maj=30.1km s-min=18.4km az=14.0*

*SOME **06** 06:00:00.4, 37°.20N×70°.77E, h0^{km}*

ISC 06 05:59:57.4±3.1**, 36°.9N**±0°.2×**70°.3E**±0°.1**, h200**^{km}**, n14,** σ1^{s}.**58**/22**, 7C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	Iuzhnay	5.25	357	*e*P	Pn	06 01 16.8	+1.9
	127nm,0.2s						
IUG				*e*S	Sn	06 02 17.8	+1.5
	221nm,0.5s						
BRLS	Borolday	6.14	357	*e*P	Pn	06 01 25.3	-1.0
	2.5nm,0.1s						
BRLS				*e*S	Sn	06 02 32.6	-4.2
	16nm,0.3s						
KK31	Karatay Array	6.20	1	P	Pn	06 01 29.1	+2.0
	1.4nm,0.4s,baz=187,slow=18,SNR=7.9						
KK31				⇑S	Sn	06 02 38.8	+0.5
	3.2nm,0.3s,baz=192,slow=26,SNR=7.8						
MRKS	Merke	6.25	20	*e*P	Pn	06 01 28.6	+0.8
	6.8nm,0.4s						
MRKS				*e*S	Sn	06 02 38.9	-0.6
	36nm,0.4s						
AAK	Ala-Archa	6.56	28	⇑P	Pn	06 01 32.5	+0.5
	2.5nm,0.4s						
AAK				⇑S	Sn	06 02 47.9	+0.9
	51nm,0.8s						
TKM2	Tokmak 2	7.25	32	⇓P	Pn	06 01 40.7	-0.1
	2.6nm,0.5s						
TKM2				⇓S	Sn	06 03 03.3	+0.2
	14nm,0.8s						
KST	Kastek	7.50	33	*e*P	Pn	06 01 44.8	+0.6
	4.0nm,0.4s						
KST				*e*S	Sn	06 03 07.3	-1.7
	20nm,1.0s						
DGS	Degeres	7.58	32	*e*P	Pn	06 01 45.7	+0.6
	1.6nm,0.3s						
KRBS	Karabastau	7.92	29	*e*P	Pn	06 01 51.3	+1.8
	1.3nm,0.6s						
KOTS	Kotyrbulak	8.18	37	*e*P	Pn	06 01 53.6	+0.6
	5.6nm,0.6s						
BTLS	Baital	8.60	18	*e*P	Pn	06 02 01.0	+2.7
	1.8nm,1.0s						
MAKZ	Makanchi	13.15	38	⇑P	Pn	06 02 56.0	-0.6
	5.6nm,0.7s						
MK31	Makanchi Array	13.29	38	⇑P	Pn	06 02 58.5	+0.2
	1.1nm,0.5s,baz=205,slow=9.7,SNR=14						
AB31	Akbulak array	14.48	332	⇑P	Pn	06 03 11.9	-1.1
	0.6nm,0.5s,baz=204,slow=11,SNR=16						
AB31				⇑S	Sn	06 05 55.1	+0.2
	0.8nm,0.7s,baz=156,slow=23,SNR=3.0						

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*MOS **06** 06:11:43.1±0.9, 6°.06S×147°.44E, h41^{km}, mb5.2/21, Error ellipse: s-maj=11.7km s-min=6.5km az=95.4*

*IDC **06** 06:11:44.6±1.3, 6°.10S×147°.66E, h42^{km}±10^{km}, mb4.4/19, mb1 4.5/23, mb1mx4.4/39, mbtmp4.6/23, ML4.6/3, MS4.0/23, Ms1 4.0/23, ms1mx4.0/28, Error ellipse: s-maj=17.1km s-min=8.0km az=95.0*

*GCMT **06** 06:11:48.9±0.1, 6°.37S±0°.01×147°.65E±0°.01, h73^{km}±1^{km}, MW5.2/114, Moment Tensor Solution. s104,c170; s114,c190; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.77±.13; $M_{\theta\theta}$-5.62±.12; $M_{\phi\phi}$0.85±.13; $M_{r\theta}$4.12±.09; $M_{\theta\phi}$-2.10±.11; $M_{\phi r}$-1.27±.09; Best double couple: $M_0$7.09300×10^{16} NP1:ϕ_s230.00000°, δ33.00000°, λ49.00000°. NP2:ϕ_s95.00000°, δ65.00000°, λ113.00000°. Principal axes: T 6.8220, Plg62.0000°, Azm42.0000°; N 0.5470, Plg21.0000°, Azm265.0000°; P -7.3630, Plg17.0000°, Azm168.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **06** 06:11:49.7±0.4, 6°S±3°×14°8E±°, h76^{km}±4^{km}, M4.9/42, mb5.1/42, mB5.4/25, MLv5.1/3, Mw(mB)4.8/25, MwMwp4.7/2, Mwp5.0/2*

*NEIC **06** 06:11:49.9±2.2, 6°.27S±0°.06×147°.56E±0°.06, h86^{km}±6^{km}, mb5.0/45, Error ellipse: s-maj=9.5km s-min=6.4km az=223.0*

ISC 06 06:11:48.4±0.3**, 6°.21S**±0°.04×**147°.60E**±0°.05**, h77**^{km}**, n278,** σ1^{s}.**50**/270**, mb5.0**/75**, 17C-2D, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.20	188	P	Pn	06 12 35.1	-1.3
	52nm,0.3s,baz=337,slow=8.6,SNR=54						
PMG				S	Sn	06 13 13.2	-0.3
	173nm,0.3s,baz=35,slow=9.1,SNR=3.7						
PMG				LR	LR	06 14 25.3	
	comp=Z,4µm,19.3s,baz=41,slow=48						
PMG	Port Moresby	3.20	188	P	Pn	06 12 35.2	-1.3
PMG	Port Moresby	3.20	188	P	Pn	06 12 35.5	-1.0
MANU	Manus Island	4.15	357	Pn	Pn	06 12 50.5	+1.1
RABL	Rabaul	4.97	66	Pn	Pn	06 13 01.2	+0.7
RABL	Rabaul	4.97	66	P	Pn	06 13 02.8	+2.3
JAY	Jayapura	7.80	298	P	Pn	06 13 40.4	+1.1
	4.8nm,0.3s,baz=56,slow=6.2,SNR=14						
COEN	Coen	8.84	209	P	Pn	06 13 52.5	-1.0
	baz=8.8						
COEN	Coen	8.84	209	Pn	Pn	06 13 52.1	-1.4
COEN	Coen	8.84	209	P	Pn	06 13 52.5	-1.0
SMPI	Sarmi	9.81	295	P	Pn	06 14 11.3	+4.6
	2µm1µm105nm,1.6s						
MTSU	Mount Surprise	12.27	195	P	Pn	06 14 40.1	-0.2
	baz=12,SNR=110						
MTSU	Mount Surprise	12.27	195	P	Pn	06 14 40.4	+0.1
CTA	Charters Tower	13.85	185	P	Pn	06 15 01.3	-0.1
	1.0nm,0.3s,baz=3.7,slow=14,SNR=20						
CTA				LR	LR	06 20 05.4	
	comp=Z,617nm,21.4s,baz=27,slow=36						
CTA	Charters Tower	13.85	185	P	Pn	06 15 01.6	+0.2
CTAO	Charters Tower	13.85	185	P	Pn	06 15 01.0	-0.3
CTAO	Charters Tower	13.85	185	Pn	Pn	06 15 01.0	-0.3
CTAO	Charters Tower	13.85	185	P	Pn	06 15 01.7	+0.3
FAKI	Fak Fak	15.65	281	P	P	06 15 28.0	+0.8
	1µm65nm,2.0s						
FAKI	Fak Fak	15.65	281		Pn	06 15 24.0	-0.5
FAKI				IAmb	IAmb	06 15 60.0	
	comp=Z,70nm,1.0s						
FAKI	Fak Fak	15.65	281	P	P	06 15 26.5	-0.7
QIS	Mount Isa	16.23	208	P	Pn	06 15 31.5	-0.3
	baz=16,SNR=13						
QIS	Mount Isa	16.23	208	P	Pn	06 15 32.1	+0.2
KDU	Kakadu	16.25	246	P	Pn	06 15 31.8	-0.2
	baz=16,SNR=9.3						
KDU	Kakadu	16.25	246	P	Pn	06 15 31.9	-0.1
PATS	Pohnpei	16.80	40	P	P	06 15 42.4	+2.5
SIJI	Sorong	17.14	287	P	Pn	06 15 42.5	-0.7
	comp=Z,1.1nm,0.3s,baz=98,slow=8.8,SNR=10						
SWI	Sorong	17.15	287	P	P	06 15 45.6	+1.8
	comp=Z,2µmcomp=Z,139nm,1.2s						
RK1H	Rockhampton Ha	17.30	171	P	P	06 15 45.9	+0.6
MTN	Manton Dam	17.52	247	P	P	06 15 48.4	+0.6
	baz=18,SNR=7.3						
MTN	Manton Dam	17.52	247	P	Pn	06 15 46.5	-1.2
MTN				IAmb	IAmb	06 16 19.2	
	comp=Z,76nm,1.2s						
MTN	Manton Dam	17.52	247	P	P	06 15 49.0	+1.2
DRS	Darwin Rock St	17.60	248	P	Pn	06 15 50.2	+1.5
BNDI	Bandanaira	17.70	275	P	Pn	06 15 53.4	+3.4
	comp=Z,510nm,1.6s						
BNDI	Bandanaira	17.70	275	P	Pn	06 15 52.9	+2.9
WB0	Warramunga Arr	18.61	222	P	P	06 15 59.1	-0.8
WRAB	Tennant Creek	18.76	222	*d i*P	P	06 16 00.2	-1.2
WRAB				pmax	pmax		
	comp=Z,29nm,0.8s						
WRAB	Tennant Creek	18.76	222	P	P	06 16 00.0	-1.4
WRAB	Tennant Creek	18.76	222	P	P	06 16 01.0	-0.4
WC3	Warramunga Arr	18.76	222	P	P	06 16 00.5	-0.9
	baz=19						
WRA	Warramunga Arr	18.77	222	P	P	06 16 00.6	-0.9
	comp=Z,3.4nm,0.3s,baz=50,slow=11,SNR=126						
WRA				PcP	PcP	06 20 27.8	+1.5
	comp=Z,0.2nm,0.3s,baz=28,slow=2.0,SNR=4.7						
WRA				ScP	ScP	06 23 58.1	+2.7
	comp=Z,0.1nm,0.3s,baz=29,slow=2.1,SNR=7.5						
WRA				PKiKP	PKiKP	06 28 15.8	-1.3
	comp=Z,0.0nm,0.3s,baz=346,slow=1.0,SNR=4.8						
WRA	Warramunga Arr	18.77	222	P	P	06 16 00.9	-0.6
EIDS	Eidsvold	19.34	170	P	P	06 16 08.3	+0.6
	baz=19,SNR=21						
EIDS	Eidsvold	19.34	170	P	P	06 16 08.2	+0.6
EIDS	Eidsvold	19.34	170	P	Pn	06 16 08.5	-1.0
GUMO	Guam	19.86	352	P	P	06 16 14.1	+0.7
	comp=Z,4.7nm,0.3s,baz=179,slow=15,SNR=5.1						
GUMO				LR	LR	06 23 50.7	
	comp=Z,508nm,19.1s,baz=170,slow=37						
GUMO	Guam	19.86	352	P	Pn	06 16 14.9	-0.8
GUMO				pmax	pmax		
	comp=Z,804nm,1.9s						
GUMO	Guam	19.86	352	P	Pn	06 16 14.8	-0.8
RMQ	Roma	20.19	177	P	Pn	06 16 18.3	-1.2
	baz=20,SNR=31						
RMQ	Roma	20.19	177	P	P	06 16 17.8	+0.8
QLP	Quilpie	20.51	189	P	P	06 16 20.8	+0.4
	baz=20,SNR=41						
QLP	Quilpie	20.51	189	P	P	06 16 21.0	+0.6
KNRA	Kununurra	20.73	241	P	P	06 16 23.6	+0.7
	baz=21,SNR=7.9						
KNRA	Kununurra	20.73	241	P	P	06 16 23.1	+0.2
AS31	Alice Springs	21.79	216	P	P	06 16 33.8	-0.3
ASAR	Alice Springs	21.79	216	P	P	06 16 33.7	-0.5
	comp=Z,20nm,0.6s,baz=52,slow=8.8,SNR=342						
ASAR				PcP	PcP	06 20 31.9	0.0
	comp=Z,6.0nm,0.8s,baz=54,slow=4.7,SNR=5.9						
ASAR				S	S	06 20 34.8	+3.7
	comp=Z,5.0nm,0.7s,baz=36,slow=24,SNR=9.3						
ASAR				ScP	ScP	06 24 05.3	+2.8
	comp=Z,8.2nm,0.8s,baz=44,slow=3.3,SNR=18						
ASAR				LR	LR	06 25 49.7	
	comp=Z,609nm,18.1s,baz=44,slow=39						
ASAR	Alice Springs	21.79	216	P	P	06 16 34.1	-0.1
ASPA	Alice Springs	21.79	216	P	P	06 16 34.1	-0.1
	baz=22						
SANI	Sanana	21.95	280	P	P	06 16 37.5	+1.6
	comp=Z,2µmcomp=Z,66nm,0.7s						
SANI	Sanana	21.95	280	P	P	06 16 38.1	+2.2
INKA	Innaminka	22.38	196	P	P	06 16 40.2	-0.2
SOEI	Soe	23.37	260	P	P	06 16 52.6	+1.9
	comp=Z,2µmcomp=Z,107nm,1.4s						
SOEI	Soe	23.37	260	P	P	06 16 51.3	+0.6
SOEI				IAmb	IAmb	06 17 39.7	
	comp=Z,128nm,1.1s						
SOEI	Soe	23.37	260	P	P	06 16 52.7	+2.0
BATI	Baumata	24.02	259	P	P	06 16 57.5	+1.1
	comp=Z,187nm,1.1s,baz=251,slow=1.7,SNR=18						
BATI				LR	LR	06 26 41.2	
	comp=Z,498nm,21.6s,baz=100,slow=37						
BATI	Baumata	24.02	259	P	P	06 16 58.8	+2.4
	comp=Z,1µmcomp=Z,98nm,1.1s						
DZM	Mont Dzumac	24.08	133	*e*P	P	06 17 04.3	+7.4
	comp=Z,118nm,1.4s						
DZM				*e*S	S	06 21 21.0	+12
	comp=Z,605nm,25.2s						
DZM				*e*LR	LR	06 23 26.3	
	comp=Z,2µm,24.6s						
DZM	Mont Dzumac	24.08	133	P	P	06 16 56.9	0.0
	comp=Z,9.6nm,1.0s,baz=320,slow=11,SNR=3.3						
DZM	Mont Dzumac	24.08	133	IAmb	IAmb	06 17 15.5	
	comp=Z,112nm,1.6s						
OOD	Oodnadatta	24.26	206	P	P	06 16 58.8	+0.4
ARMA	Armidale	24.37	172	P	P	06 17 00.7	+1.2
	baz=24,SNR=13						
ARMA	Armidale	24.37	172	P	P	06 17 00.0	+0.5
ARMA				IAmb	IAmb	06 17 03.0	
	comp=Z,67nm,1.1s						
ARMA	Armidale	24.37	172	P	P	06 17 00.8	+1.3
YATNC	Mamie plateau,	24.40	132	P	P	06 17 01.0	+1.3
FITZ	Fitzroy Crossi	24.47	239	LR	LR	06 28 30.6	
	comp=Z,556nm,20.8s,baz=359,slow=41						
CMSA	Cobar Meteorol	25.26	184	P	P	06 17 07.8	+0.4
	baz=25,SNR=15						
CMSA	Cobar Meteorol	25.26	184	P	P	06 17 08.6	+1.2
LUWI	Luwuk	25.30	281	P	P	06 17 11.3	+3.3
	comp=Z,3µmcomp=Z,229nm,1.8s						
LUWI	Luwuk	25.30	281	P	P	06 17 08.3	+0.3
LUWI	Luwuk	25.30	281	P	P	06 17 11.3	+3.3
	comp=Z,224nm,1.3s						
LCRK	Leigh Creek	25.67	199	P	P	06 17 11.8	+0.6
EDFI	Ende, Flores	25.81	263	P	P	06 17 11.4	-1.4
	comp=Z,377nmcomp=Z,28nm,0.7s						
STKA	Stephens Creek	26.14	192	P	P	06 17 15.7	+0.2
	comp=Z,9.4nm,0.3s,baz=355,slow=9.0,SNR=33						
STKA				LR	LR	06 28 17.5	
	comp=Z,497nm,18.3s,baz=9.2,slow=38						
STKA	Stephens Creek	26.14	192	P	P	06 17 15.7	+0.2
	baz=26,SNR=26						
STKA	Stephens Creek	26.14	192	*d i*P	P	06 17 15.2	-0.2
STKA	Stephens Creek	26.14	192	P	P	06 17 15.1	-0.4
STKA	Stephens Creek	26.14	192	P	P	06 17 16.1	+0.7
WRKA	Warakurna	26.31	223	P	P	06 17 17.1	0.0
	baz=26,SNR=94						
WRKA	Warakurna	26.31	223	P	P	06 17 17.4	+0.3
TARA	Tarawa	26.37	74	P	P	06 17 19.7	+2.0
TARA				IAmb	IAmb	06 17 21.0	
	comp=Z,117nm,1.1s						
TARA	Tarawa	26.37	74	P	P	06 17 20.6	+2.9
	comp=Z,101nm,1.5s						
APSI	Ampana	26.43	280	P	P	06 17 20.5	+2.3
	comp=Z,824nmcomp=Z,54nm,1.1s						
BSSI	Bau Bau, Buton	26.95	269	P	P	06 17 23.6	+0.6
	comp=Z,728nmcomp=Z,41nm,1.2s						
MGCD	Mangrove Creek	27.06	174	P	P	06 17 25.5	+1.8
	baz=27,SNR=10						
MULG	Mulgathing	27.12	206	P	P	06 17 24.2	-0.1
BKSI	Bulukumba	27.36	270	P	P	06 17 25.7	-0.9
	comp=Z,461nmcomp=Z,23nm,1.0s						
BNSI	Bone	27.44	272	P	P	06 17 28.9	+1.6
	comp=Z,45nm,1.7s						
KAPI	Kappang	27.74	271	P	P	06 17 30.5	+0.5
	comp=Z,9.9nm,0.7s,baz=113,slow=5.1,SNR=10						
KAPI	Kappang	27.74	271	P	P	06 17 30.3	+0.3
KAPI				IAmb	IAmb	06 17 31.5	
	comp=Z,30nm,1.0s						
KAPI	Kappang	27.74	271	P	P	06 17 31.5	+1.5
	comp=Z,32nm,1.3s						
TOLI2	Tolitoli	27.75	284	P	P	06 17 29.8	-0.3
TOLI2	Tolitoli	27.75	284	P	P	06 17 32.1	+2.0
TTSI	Tana Toraja	27.87	275	P	P	06 17 32.5	+1.4
	comp=Z,2µmcomp=Z,43nm,1.2s						
YNG	Young	27.96	179	P	P	06 17 32.9	+1.2
	baz=28,SNR=8.2						
YNG	Young	27.96	179	P	P	06 17 32.9	+1.2
NAPP	Napperby	28.24	197	P	P	06 17 34.2	0.0
HTT	Hallett	28.26	195	P	P	06 17 34.6	+0.2
	baz=28,SNR=6.3						
HTT	Hallett	28.26	195	P	P	06 17 35.5	+1.1
WHYH	Whyalla	28.27	198	P	P	06 17 35.5	+1.0
BBOO	Buckleboo	28.56	201	P	P	06 17 37.7	+0.5
	baz=29,SNR=14						
BBOO	Buckleboo	28.56	201	P	P	06 17 37.6	+0.5
PSA00	Pilbara Seismi	30.88	238	P	P	06 17 58.7	+0.9
PSA00				IAmb	IAmb	06 17 59.3	
	comp=Z,18nm,0.9s						
PSA00	Pilbara Seismi	30.88	238	P	P	06 17 59.2	+1.4
PSA00				IAmb	IAmb	06 17 59.8	
	comp=Z,8.4nm,0.9s						
PSA00	Pilbara Seismi	30.88	238	P	P	06 17 59.2	+1.4
H11S3	WAKE ISLAND Hy	30.94	37	T	T	06 50 48.6	
	baz=220						
H11S2	WAKE ISLAND Hy	30.95	37	T	T	06 50 49.0	
	baz=220,slow=74,SNR=15						
H11S1	WAKE ISLAND Hy	30.95	37	T	T	06 50 49.9	
	baz=220,slow=74,SNR=14						
MSVF	Nonsavu	31.85	114	*i* P	P	06 18 07.7	+1.3
MSVF				pmax	pmax		
	comp=Z,9.0nm,1.2s						
MSVF	Nonsavu	31.85	114	P	P	06 18 08.2	+1.8
H11N1	WAKE ISLAND Hy	32.00	36	T	T	06 52 10.3	
	baz=219,slow=76,SNR=4.2						
H11N3	WAKE ISLAND Hy	32.02	36	T	T	06 52 09.0	
	baz=219,slow=76,SNR=3.7						
H11N2	WAKE ISLAND Hy	32.02	36	T	T	06 52 13.1	
	baz=219,slow=76,SNR=10						
BBKI	Banjar Baru	32.76	273	P	P	06 18 16.2	+1.9
	comp=Z,5µmcomp=Z,32nm,0.8s						
JAGI	Jajag, Banyuwa	33.25	264	P	P	06 18 18.2	-0.4
JAGI				IAmb	IAmb	06 18 18.7	
	comp=Z,20nm,0.6s						
JCJ	Chichijima	33.53	351	P	P	06 18 19.6	-1.2
	comp=Z,63nm,0.5s,baz=288,slow=22,SNR=7.2						
MEEK	Meekatharra	34.28	230	P	P	06 18 27.9	+0.4
	baz=34,SNR=19						
MEEK	Meekatharra	34.28	230	P	P	06 18 28.0	+0.5
PBKI	Pangkalan Bun	35.99	274	P	P	06 18 45.3	+3.0
	comp=Z,242nm,1.0s						
MORW	Morawa	37.48	229	P	P	06 18 56.1	+1.3
	baz=38,SNR=4.2						
MORW	Morawa	37.48	229	P	P	06 18 55.2	+0.4
KSM	Kuching	38.01	280	P	P	06 18 56.0	-3.4
NWAO	Narrogin (SRO)	38.78	223	P	P	06 19 06.3	+0.7
NWAO				pmax	pmax		
	comp=Z,51nm,1.4s						
NWAO	Narrogin (SRO)	38.78	223	P	P	06 19 06.3	+0.7
NWAO				IAmb	IAmb	06 19 57.8	
	comp=Z,51nm,1.4s						
TPUB	Ta-pu	39.44	319	P	P	06 19 11.6	+0.3
KNTN	Kanton	40.69	87	P	P	06 19 22.9	+1.2
PPBI	Pangkal Pinang	41.54	274	P	P	06 19 30.0	+1.3
	comp=Z,20µmcomp=Z,102nm,1.0s						
TUWZ	Tuamarina	42.19	150	P	P	06 19 34.9	+1.2
JNU	Nakatsue	42.22	339	P	P	06 19 34.1	+0.1
	comp=Z,10nm,0.8s,baz=163,slow=7.5,SNR=5.0						
JNU	Nakatsue	42.22	339	IAmb	IAmb	06 19 54.2	
	comp=Z,21nm,1.0s						
BFZ	Birch Farm	42.83	148	P	P	06 19 39.2	+0.4
JWT	Wachi	42.85	345	P	P	06 19 39.4	+0.4
JWT				IAmb	IAmb	06 19 39.6	
	comp=Z,16nm,0.8s						
MDSI	Maura Dua	43.26	270	P	P	06 19 42.8	+0.1
	comp=Z,687nmcomp=Z,40nm,1.3s						
DSRI	Dabo	43.31	276	P	P	06 19 44.2	+1.1
	comp=Z,51nm,1.1s						
MJAR	Matsushiro Arr	43.43	349	P	P	06 19 42.5	-1.2
	comp=Z,9.7nm,0.9s,baz=166,slow=8.7,SNR=26						
MAJO	Matsushiro	43.43	349	*c i*P	P	06 19 42.9	-0.8
MAJO				pmax	pmax		
	comp=Z,57nm,1.5s						
MAT	Matsushiro	43.44	349	P	P	06 19 42.9	-0.8
MAT				S	S	06 26 09.0	+2.5
LHSI	Lahat	43.97	271	P	P	06 19 49.8	+1.4
	comp=Z,65nm,1.2s						
MYKOM	Kota Tinggi	44.40	279	P	P	06 19 49.0	-2.9
QIZ	Qiongzhong	44.87	305	P	P	06 19 55.9	+0.4
QIZ				S	S	06 26 29.7	+1.9
MASI	Maura Aman, Be	45.30	272	P	P	06 19 59.9	+0.8
	comp=Z,136nm,1.0s						
KRJI	Kerinci	46.19	273	P	P	06 20 07.0	+0.9

	comp=Z,298nm,0.8s						
NJ2	Nanjing	46.89	326	eP	P	06 20 14.4	+3.2
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
BKNI	Bangkinang	46.93	276	P	P	06 20 11.9	+0.1
KSRS	Korea Array	47.17	339	P	P	06 20 12.6	-0.6
	comp=Z,6.8nm,0.8s,baz=154,slow=9.0,SNR=12						
PDSI	Padang	47.32	274	P	P	06 20 14.7	-0.2
	comp=Z,20nm,0.7s						
PPI	Padang Panjang	47.45	275	P	P	06 20 15.7	-0.2
	comp=Z,909nmcomp=Z,107nm,0.9s						
MNSI	Mandailing Nat	48.44	277	P	P	06 20 23.8	+0.3
	comp=Z,64nm,1.1s						
WHN	Wuhan	48.48	321	P	P	06 20 23.4	-0.1
GSI	Gunungsitoli	50.50	277	P	P	06 20 38.7	-0.5
SLVN	Son La	50.86	304	P	P	06 20 42.0	+0.1
SLVN				IAmb	IAmb	06 21 07.3	
	comp=Z,12nm,1.3s						
USA0B	Ussuriysk Arra	52.12	346	⇑iP	P	06 20 50.6	-0.2
USRK	Ussuriysk Ar.	52.12	346	P	P	06 20 50.8	0.0
	comp=Z,6.3nm,0.7s,baz=159,slow=5.5,SNR=7.9						
USRK	Ussuriysk Ar.	52.12	346	P	P	06 20 51.0	+0.2
USRK	Ussuriysk Ar.	52.12	346	P	P	06 20 51.0	+0.2
YSS	Yuzh-Sakhalins	53.11	356	⇑iP	P	06 20 57.9	-0.1
YSS				pmax	pmax		
	comp=Z,27nm,1.1s						
CMAR	Chiang Mai Arr	53.88	298	P	P	06 21 03.8	-0.4
	comp=Z,2.5nm,0.7s,baz=126,slow=5.8,SNR=7.9						
CMAR				LR	LR	06 46 24.5	
	comp=Z,60nm,18.8s,baz=177,slow=39						
CMAR	Chiang Mai Arr	53.88	298	P	P	06 21 03.6	-0.6
XAN	Xi'an	54.23	320	P	P	06 21 05.3	-1.2
XAN				pP	pP	06 21 28.4	+2.4
XAN				pmax	pmax		
	comp=Z,13nm,1.3s						
XAN	Xi'an	54.23	320	P	P	06 21 06.3	-0.2
XAN	Xi'an	54.23	320	P	P	06 21 06.3	-0.2
BJT	Baijiatuau	54.37	330	P	P	06 21 06.8	-0.5
BJT				pmax	pmax		
	comp=Z,33nm,1.4s						
BJT	Baijiatuau	54.37	330	P	P	06 21 06.8	-0.5
BJT				IAmb	IAmb	06 21 30.3	
	comp=Z,33nm,1.4s						
KLR	Kul'dur	56.92	348	P	P	06 21 26.1	+0.6
	comp=Z,7.7nm,0.8s,baz=155,slow=5.4,SNR=20						
KLR				LR	LR	06 46 25.1	
	comp=Z,56nm,18.1s,baz=187,slow=37						
KLR	Kul'dur	56.92	348	⇑iP	P	06 21 24.6	-0.9
KLR				pmax	pmax		
	comp=Z,11nm,1.0s						
HHC	Hu-ho-hao-te	57.33	328	eP	P	06 21 28.2	-0.5
HHC				sS	sS	06 30 01.7	+9.3
HHC				pmax	pmax		
	comp=Z,16nm,1.1s						
HHC				pmax	pmax		
	comp=Z,180nm,5.5s						
HHC				LR	LR		
	comp=Z,210nm,16.3s						
HHC				LR	LR		
	comp=Z,230nm,16.4s						
HHC				LR	LR		
	comp=Z,340nm,18.4s						
LZH	Lanzhou	58.76	319	eP	P	06 21 42.0	+3.2
LZH				pP	sP	06 22 05.3	-1.9
LZH				sP	pP	06 22 11.0	+12
LZH				pmax	pmax		
	comp=Z,21nm,1.1s						
LZH				LR	LR		
	comp=Z,180nm,14.4s						
LZH				LR	LR		
	comp=Z,190nm,12.5s						
LZH				LR	LR		
	comp=Z,200nm,15.2s						
PEA0B	Petropavlovsk-	59.71	7	⇑iP	P	06 21 43.9	-0.9
PEA0B	Petropavlovsk-	59.71	7	P	P	06 21 45.8	+1.0
PETK	Petropavlovsk-	59.71	7	P	P	06 21 45.0	+0.1
	comp=Z,22nm,1.0s,baz=171,slow=10,SNR=9.5						
PETK				LR	LR	06 44 05.6	
	comp=Z,263nm,21.1s,baz=196,slow=33						
PETK	Petropavlovsk-	59.71	7	P	P	06 21 45.0	+0.1
PETK	Petropavlovsk-	59.71	7	P	P	06 21 45.8	+1.0
PET	Petropavlovsk	59.75	8	⇑iP	P	06 21 44.6	-0.5
PET				pmax	pmax		
	comp=Z,96nm,1.4s						
HIA	Hailar	60.36	339	P	P	06 21 49.1	-0.3
HIA				pmax	pmax		
	comp=Z,29nm,0.9s						
HIA	Hailar	60.36	339	P	P	06 21 49.1	-0.3
ZEA	Zeya	62.15	346	eP	P	06 22 01.5	+0.2
ZEA				pmax	pmax		
	comp=N,20nm,0.6s						
ZEA				pmax	pmax		
	comp=Z,40nm,1.0s						
PPT	Papeete	62.26	107	LR	LR	06 47 10.8	
	comp=Z,64nm,18.6s,baz=48,slow=34						
GTA	Gaotai	63.29	320	eP	P	06 22 09.7	+0.3
GTA				pP	pP	06 22 31.5	+2.2
GTA				sP	sP	06 22 40.5	+2.6
GTA				pmax	pmax		
	comp=Z,5.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,82nm,7.1s						
GTA				LR	LR		
	comp=Z,79nm,17.1s						
GTA				LR	LR		
	comp=Z,180nm,19.6s						
GTA				LR	LR		
	comp=Z,110nm,18.5s						
ULN	Ulaanbaatar	64.58	331	c iP	P	06 22 17.4	-0.4
ULN				pmax	pmax		
	comp=Z,18nm,1.0s						
ULN	Ulaanbaatar	64.58	331	P	P	06 22 17.9	+0.1
ULN				IAmb	IAmb	06 22 18.9	
	comp=Z,18nm,1.1s						
SONM	Songino Array	64.88	331	P	P	06 22 19.3	-0.4
	comp=Z,9.8nm,1.0s,baz=149,slow=7.2,SNR=33						
SONM				LR	LR	06 50 09.7	
	comp=Z,223nm,21.6s,baz=134,slow=36						
SONM	Songino Array	64.88	331	P	P	06 22 19.5	-0.1
SONM				pmax	pmax		
	comp=Z,22nm,1.2s						
SONM	Songino Array	64.88	331	P	P	06 22 19.5	-0.1
SONM				IAmb	IAmb	06 22 20.7	
	comp=Z,22nm,1.2s						
PALK	Pallekele	68.07	280	eP	P	06 22 39.9	-0.7
PALK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ZAK	Zakamensk	68.11	331	eP	P	06 22 39.7	-0.5
ZAK				e		06 22 57.8	
ZAK				pmax	pmax		
	comp=Z,23nm,1.2s						
ZAK				pmax	pmax		
	comp=Z,13nm,1.2s						
BOD	Bodaibo	69.37	342	eP	P	06 22 47.0	-0.7
BOD				pmax	pmax		
	comp=Z,16nm,1.0s						
YAK	Yakutsk	69.44	351	LR	LR	06 52 45.1	
	comp=Z,162nm,19.4s,baz=104,slow=36						
YAK	Yakutsk	69.44	351	c iP	P	06 22 47.7	-0.3
YAK				pmax	pmax		
	comp=Z,41nm,1.2s						
MOY	Mondy	70.05	331	eP	P	06 22 50.6	-1.6
MOY				pmax	pmax		
	comp=Z,29nm,2.2s						
VNDA	Vanda	71.67	177	P	P	06 23 02.2	+0.9
	comp=Z,1.3nm,0.6s,baz=340,slow=7.0,SNR=11						
VNDA	Vanda	71.67	177	P	P	06 23 02.3	+0.9
VNDA				pmax	pmax		
	comp=Z,32nm,1.5s						
VNDA	Vanda	71.67	177	P	P	06 23 02.3	+0.9
VNDA				IAmb	IAmb	06 23 21.6	
	comp=Z,32nm,1.5s						
WMQ	Urumqi	73.34	319	eP	P	06 23 10.6	-1.5
WMQ				pmax	pmax		
	comp=Z,18nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,100nm,6.7s						
BILL	Bilibino	75.25	7	eP	P	06 23 21.3	-1.2
BILL				eS	S	06 32 55.0	-0.2
BILL				pmax	pmax		
	comp=Z,13nm,1.1s						
BILL				MLR	MLR		
	comp=Z,141nm,20.0s						
DGZ	Jazzator, Alta	76.15	325	c iP	P	06 23 27.2	-1.1
DGZ				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MK31	Makanchi Array	78.04	320	c iP	P	06 23 37.8	-1.0
MK31	Makanchi Array	78.04	320	P	P	06 23 37.8	-1.0
MKAR	Makanchi Array	78.04	320	P	P	06 23 37.5	-1.3
	comp=Z,3.5nm,0.8s,baz=100,slow=7.2,SNR=20						
MKAR				LR	LR	06 57 34.6	
	comp=Z,31nm,19.9s,baz=92,slow=35						
MKAR	Makanchi Array	78.04	320	i P	P	06 23 38.0	-0.8
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
TIXI	Tiksi	78.68	354	P	P	06 23 39.9	-1.8
	comp=Z,2.1nm,0.6s,baz=146,slow=1.5,SNR=4.2						
TIXI	Tiksi	78.68	354	⇑iP	P	06 23 39.8	-1.9
ZAA0	Zalesovo Array	79.51	328	P	P	06 23 44.8	-1.8
ZALV	Zalesovo Beam	79.51	328	P	P	06 23 44.5	-2.1
	comp=Z,2.7nm,0.4s,baz=109,slow=5.7,SNR=16						
ZALV				LR	LR	06 58 41.2	
	comp=Z,82nm,21.9s,baz=88,slow=36						
ZALV	Zalesovo Beam	79.51	328	i P	P	06 23 44.7	-1.9
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.5s						
ZALV	Zalesovo Beam	79.51	328	P	P	06 23 44.3	-2.3
NIL	Nilore	80.54	305	P	P	06 23 52.0	-0.7
NIL				pmax	pmax		
	comp=Z,47nm,1.8s						
NIL	Nilore	80.54	305	P	P	06 23 52.0	-0.7
NIL				IAmb	IAmb	06 23 54.0	
	comp=Z,47nm,1.8s						
KURK	Kurchatov	81.74	323	c iP	P	06 23 57.2	-1.4
KURK				pmax	pmax		
	comp=Z,9.0nm,1.2s						
KURK	Kurchatov	81.74	323	P	P	06 23 56.4	-2.1
KURK				IAmb	IAmb	06 23 58.6	
	comp=Z,26nm,1.8s						
AAK	Ala-Archa	81.92	315	c iP	P	06 23 59.2	-0.7
AAK				pmax	pmax		
	comp=Z,13nm,1.2s						
MAW	Mawson	82.28	203	P	P	06 24 00.9	-0.2
	comp=Z,2.4nm,0.8s,baz=75,slow=8.5,SNR=4.5						
MAW				LR	LR	06 58 53.2	
	comp=Z,117nm,21.4s,baz=64,slow=34						
QSPA	South Pole Qui	83.75	180	P	P	06 24 09.3	+0.3
QSPA				IAmb	IAmb	06 24 28.9	
	comp=Z,22nm,1.1s						
KK31	Karatay Array	84.87	314	P	P	06 24 14.0	-0.9
KK31				pmax	pmax		
	comp=Z,17nm,1.4s						
KK31	Karatay Array	84.87	314	P	P	06 24 14.0	-0.9
KK31				IAmb	IAmb	06 24 15.0	
	comp=Z,17nm,1.4s						
KKAR	Karatay Array	84.87	314	P	P	06 24 13.6	-1.3
KKAR				pmax	pmax		
	comp=Z,17nm,1.4s						
KKAR	Karatay Array	84.87	314	P	P	06 24 13.6	-1.3
KKAR	Karatay Array	84.87	314	P	P	06 24 13.7	-1.2
KKAR				IAmb	IAmb	06 24 15.0	
	comp=Z,17nm,1.4s						
ILAR	Eielson Array	85.44	23	P	P	06 24 15.0	-2.2
	comp=Z,1.7nm,0.6s,baz=251,slow=5.5,SNR=15						
ILAR				LR	LR	06 59 25.9	
	comp=Z,76nm,20.7s,baz=262,slow=34						
NRIK	Noril'sk	85.66	342	P	P	06 24 17.3	-0.9
	comp=Z,4.6nm,1.0s,baz=97,slow=4.9,SNR=9.3						
NRIK				LR	LR	07 00 29.0	
	comp=Z,78nm,21.6s,baz=114,slow=34						
NRIK	Noril'sk	85.66	342	c iP	P	06 24 16.8	-1.4
NRIK				pmax	pmax		
	comp=Z,24nm,1.5s						
NRIK	Noril'sk	85.66	342	P	P	06 24 17.5	-0.8
NRIK				IAmb	IAmb	06 24 18.5	
	comp=Z,33nm,1.6s						
BRVK	Borovoye	87.36	324	c iP	P	06 24 24.0	-2.9
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.7s						
SYO	Syowa Base	90.60	200	⇑ePcP	PcP	06 24 43.2	+0.3
SYO	Syowa Base	90.60	200	⇑epP	pP	06 25 05.0	+1.9
ABKAR	Akbulak array	93.13	319	P	P	06 24 51.4	-2.5
GEYT	Alibeck	93.37	308	LR	LR	07 10 05.5	
	comp=Z,56nm,20.9s,baz=145,slow=38						
NVAR	Mina Array Bea	97.02	52	LR	LR	07 05 07.5	
	comp=Z,77nm,18.6s,baz=272,slow=33						
NEW	Newport	98.11	42	LR	LR	07 01 11.3	
	comp=Z,85nm,21.7s,baz=276,slow=30						
TKX	Tecate	98.18	58	P	P	06 25 16.6	-0.8
YKA	Yellowknife Ar	99.08	28	LR	LR	07 07 11.8	
	comp=Z,62nm,20.2s,baz=0.0,slow=34						
ELK	Elko	99.44	50	LR	LR	07 03 16.0	
	comp=Z,70nm,19.0s,baz=284,slow=31						
SNAA	Sanae	99.88	189	Pdiff	Pdif	06 25 23.9	-0.3
VNA2	Neumayer--Watz	101.23	188	Pdiff	Pdif	06 25 30.4	+0.3
VNA3	Neumayer Olymp	101.24	187	Pdiff	Pdif	06 25 30.2	0.0
VNA1	Neumayer--Stat	101.60	188	Pdiff	Pdif	06 25 31.4	-0.3
CLL	Collm	121.46	328	ePKPdf	PKiKP	06 30 35.0	+1.9
	comp=Z,5.0nm,0.6s						
CLL				epPKPdf	pPKPdf	06 30 59.0	+3.9
CLL				Lm	MLR	07 26 00.0	
	comp=Z,100nm,20.6s						
GERES	GERESS Array B	122.42	326	PKP	PKPdf	06 30 33.8	-1.3
	comp=Z,0.8nm,0.5s,baz=93,slow=2.7,SNR=6.6						
OTAV	Otavalo	133.66	96	eP	PKPdf	06 30 57.5	-0.4
TULM	Tulcn-Chalpat	134.38	95	eP	PKPdf	06 30 58.1	-1.2
SOTA	Rioblanco	135.73	93	eP	PKPdf	06 30 57.1	-4.7
PCON	Cinco Dias	135.97	93	eP	PKPdf	06 31 01.1	-1.3
YOTC	Yotoco, Valle	136.18	91	eP	PKPdf	06 31 01.1	-1.1
PLMC	San Jos del P	136.31	89	eP	PKPdf	06 31 00.1	-2.3
MARP	Paez Belalcaza	136.46	92	eP	PKiKP	06 31 04.0	-0.6
CBOC	Ciudad Bolivar	136.63	88	eP	PKiKP	06 31 04.0	-0.9
MOTC	Monteria, Cord	137.04	84	eP	PKPdf	06 31 03.7	0.0
HELC	Santa Helena	137.13	88	eP	PKPdf	06 31 04.9	+0.6
GUY2C	Guyana, Caldas	137.24	89	eP	PKiKP	06 31 05.5	-1.0
ORTC	Ortega, Tolima	137.26	91	eP	PKPdf	06 30 58.1	-6.0
NORC	Norcasia	137.75	89	eP	PKPdf	06 31 05.5	+0.4
ZARC	Zaragoza, Cauc	137.83	86	eP	PKPdf	06 31 04.3	-0.8
LPAZ	La Paz	138.16	123	PKP	PKiKP	06 31 07.4	-1.1
	comp=Z,7.1nm,1.1s,baz=286,slow=1.8,SNR=6.8						
LPAZ				SKPbc	SKiKP	06 34 37.5	-0.4
	comp=Z,5.7nm,1.0s,baz=278,slow=1.2,SNR=8.5						
ROSC	El Rosal	138.26	90	PKP	PKPdf	06 31 07.1	+0.7
	comp=Z,13nm,0.6s,baz=73,slow=5.5,SNR=10						
ROSC	El Rosal	138.26	90	eP	PKPdf	06 31 05.0	-1.4
MACC	Macarena, Meta	138.47	94	eP	PKPdf	06 31 06.5	+0.2
SPBC	San Pablo de B	138.55	88	eP	PKPdf	06 30 57.1	-9.4
BRRC	Barranca, Sant	138.96	86	eP	PKPdf	06 31 03.5	-3.7
OCAC	Ocana	139.36	85	eP	PKPdf	06 31 02.9	-5.2
BARC	Barichara	139.47	87	eP	PKPdf	06 31 01.1	-7.3
RUSC	La Rusia	139.55	88	eP	PKPdf	06 30 59.1	-10
CPUP	Villa Florida	139.61	144	PKP	PKiKP	06 31 10.0	-0.3
	comp=Z,8.6nm,1.1s,baz=265,slow=2.1,SNR=6.9						
PAMC	Pamplona, Colo	139.97	86	eP	PKPdf	06 31 00.1	-10
ETMB	Extrema	142.74	115		PKPdf	06 31 09.8	-4.1
TORD	Torodi Ar. Bea	145.72	284	PKPbc	PKPbc	06 31 19.3	-0.3
	comp=Z,25nm,0.8s,baz=71,slow=3.1,SNR=81						
TORD				SKP	SKiKP	06 34 51.7	-1.1
	comp=Z,1.5nm,0.8s,baz=76,slow=1.6,SNR=4.1						
KIC	Kosan Boka	152.51	272	ePKIKP	PKPbc	06 31 36.9	-0.1
	comp=Z,53nm,1.3s						
DBIC	Dimbokro	152.63	272	PKPbc	PKiKP	06 31 38.4	+0.8
	comp=Z,7.8nm,0.9s,baz=106,slow=2.5,SNR=8.7						
LIC	Lamto	152.79	272	ePKIKP	PKPbc	06 31 36.9	-0.8
	comp=Z,36nm,0.9s						
TIC	Toumodi	152.79	272	ePKIKP	PKPbc	06 31 37.4	-0.3
BDFB	Brasilia	153.34	145	PKP	PKPdf	06 31 32.4	+1.1
	comp=Z,6.6nm,1.1s,baz=201,slow=5.7,SNR=5.2						
BDFB				PKPbc	PKiKP	06 31 39.7	+0.7
	comp=Z,10nm,0.8s,baz=169,slow=3.9,SNR=15						

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*TUL **06** 06:25:59.5±1.4, 35°.64N±0°.01×98°.01W±0°.01, h2^{km}±8^{km}, ML2.7, mb_Lg2.4/24(NEIC), Error ellipse: s-maj=2.3km s-min=0.6km az=139.0*

NEIC 06 06:25:59.2±1.0, 35°.64N±0°.02×98°.06W±0°.02, h5^{km}±2^{km}, Error ellipse: s-maj=3.3km s-min=3.1km az=60.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BCOK	Bluff Creek, N	0.37	87	Pg	Pg	06 26 06.2	0.0
OK029	Liberty Lake	0.52	72	Pg	Pg	06 26 09.3	+0.2
OK029				Sg	Sg	06 26 16.2	+0.3
OKCFA	Oklahoma City	0.54	114	Pg	Pg	06 26 09.5	-0.1
OKCFA				Sg	Sg	06 26 16.8	+0.2
OK025	Westminster Rd	0.59	95	Pg	Pg	06 26 10.4	-0.1
OK025				Sg	Sg	06 26 18.4	+0.2
FNO	Franklin	0.66	125	Pg	Pb	06 26 12.7	-0.5
FNO				Sg	Sg	06 26 20.7	+0.3
CROK	Carrier	0.87	4	Pg	Pg	06 26 16.2	+0.4
OK031	S. Brethren Rd	1.04	72	Pg	Pg	06 26 18.7	-0.5
X34A	Smith Ranch, M	1.05	170	Pg	Pb	06 26 19.6	-0.2
U32A	Winter Ranch,	1.06	314	Pg	Pb	06 26 20.1	0.0
WMOK	Wichita Mounta	1.07	214	Pg	Pb	06 26 20.1	-0.2
OK030	Cody Creek RV	1.08	74	Pg	Pg	06 26 19.3	-0.5
OK032	Salt Plains WL	1.17	354	Pg	Pg	06 26 21.5	-0.1
QUOK	Quay	1.22	64	Pg	Pg	06 26 21.8	-0.8
GC02	Grant County #	1.22	8	Pg	Pg	06 26 22.2	-0.4
KAN14	Manchester OK	1.32	3	Pn	Pn	06 26 24.1	-0.2
KAN17	Caldwell West	1.43	10	Pn	Pn	06 26 25.6	-0.2
KAN08	Anthony NE Sta	1.59	3	IAmb_Lg		06 26 50.0	
	comp=Z,16nm,1.2s						
LOOK	Love County	1.79	156	IAmb_Lg		06 27 00.2	
	comp=Z,19nm,0.8s						
TUL1	Leonard	1.86	81	IAmb_Lg		06 27 02.0	
	comp=Z,24nm,1.0s						
X37A	Clayton	2.44	115	IAmb_Lg		06 27 18.2	
	comp=Z,14nm,0.8s						
CBKS	Cedar Bluff	3.44	338	IAmb_Lg		06 27 53.4	
	comp=Z,9.6nm,0.8s						
KSU1	Kansas State U	3.65	18	IAmb_Lg		06 28 00.8	
	comp=Z,10nm,0.8s						
MIAR	Mount Ida	3.83	105	IAmb_Lg		06 28 05.5	
	comp=Z,7.7nm,1.1s						
435B	Jarrell	4.86	175	IAmb_Lg		06 28 44.2	
	comp=Z,8.4nm,0.9s						
MGMO	Mountain Grove	4.91	70	IAmb_Lg		06 28 35.0	
	comp=Z,8.1nm,1.1s						
T25A	Trinidad	5.34	288	IAmb_Lg		06 28 56.8	
	comp=Z,7.0nm,0.8s						
JCT	Junction City	5.35	196	IAmb_Lg		06 29 03.2	
	comp=Z,9.3nm,0.8s						
P38A	Dawn	5.36	41	IAmb_Lg		06 28 58.9	
	comp=Z,5.3nm,0.8s						

NOU 06 06:33:16.0, 19°.13S×168°.69E, h0^{km}, MLv4.5/5, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTV	Rentapao	1.35	349	P	Pg	06 33 40.7	-1.3
DVP	Devils Point	1.48	341	P	Pn	06 33 43.5	-0.3
LIFNC	LIFOU	2.13	220	P	Pn	06 33 52.6	-0.3
MARNC	Mare, Loyalty	2.42	195	P	Pn	06 33 56.9	+0.1

IDC 06 07:00:35.8±5.9, 6°.56S×129°.34E, h102^{km}±75^{km}, mb3.1/1, mb1 3.6/4, mb1mx3.3/31, mbtmp3.8/4, ML3.9/3, Error ellipse: s-maj=123.0km s-min=25.7km az=82.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.97	19	P	Pn	07 02 01.4	-0.3
	0.7nm,0.3s,baz=113,slow=23,SNR=7.5						
SIJI				S	Sn	07 03 03.2	-5.5
	2.0nm,0.3s,baz=252,slow=23,SNR=6.4						
WRA	Warramunga Arr	14.16	160	P	Pn	07 03 53.4	+1.6
	1.4nm,0.3s,baz=339,slow=12,SNR=22						
ASAR	Alice Springs	17.57	166	P	P	07 04 32.6	-1.3
	0.3nm,0.3s,baz=344,slow=9.3,SNR=17						
MKAR	Makanchi Array	67.50	327	P	P	07 11 21.2	+0.2
	0.2nm,0.5s,baz=111,slow=7.9,SNR=2.7						

IDC 06 07:05:47.0±2.0, 8°.21S×125°.38E, h0^{km}, mb3.6/1, mb1 3.6/4, mb1mx3.4/44, mbtmp3.5/4, ML3.4/3, Error ellipse: s-maj=110.2km s-min=29.4km az=67.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	9.83	179	Pn	Pn	07 08 09.8	0.0
	0.4nm,0.3s,baz=356,slow=11,SNR=2.5						
FITZ				Sn	Sn	07 09 52.7	-8.3
	0.3nm,0.3s,baz=264,slow=7.2,SNR=4.5						
WRA	Warramunga Arr	14.54	144	Pn	Pn	07 09 12.2	-2.0
	0.1nm,0.3s,baz=317,slow=12,SNR=4.6						
ASAR	Alice Springs	17.41	153	P	P	07 09 52.8	-0.1
	0.1nm,0.3s,baz=326,slow=11,SNR=5.9						
MKAR	Makanchi Array	66.82	329	P	P	07 16 40.7	0.0
	0.5nm,0.8s,baz=137,slow=4.9,SNR=3.1						

GEN 06 07:18:56.3, 44°.27N×7°.45E, h4^{km}±3^{km}, Ml0.7, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENR	Entracque	0.04	208	P	Pg	07 18 57.8	+0.3
ENR				S	Sg	07 18 58.7	+0.4
GBOS	Grotte di Boss	0.28	95	P	Pg	07 19 01.4	-0.4
GBOS				S	Sg	07 19 05.4	-0.2
MGRO	Montegrosso	0.34	131	P	Pg	07 19 03.1	+0.2
MGRO				S	Sg	07 19 08.1	+0.7
RORO	Rocca Rossa	0.47	109	P	Pg	07 19 05.0	-0.4
RORO				S	Sg	07 19 11.9	+0.5
PCP	Piancastagn	0.83	70	P	Pg	07 19 12.6	+0.3
PCP				S	Sg	07 19 22.9	-0.2

LDG 06 07:19:20.9±0.0, 44°.44N×6°.66E, h2^{km}, Md0.8/2, Error ellipse: s-maj=1.3km s-min=0.7km az=44.0, France

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBDF	Montbardon	0.30	16	ePg	Pg	07 19 26.9	+0.2
MBDF				eSg	Sg	07 19 31.1	+0.5
	2.3nm,0.2s						
ORIF	Oris-en-Rattie	0.73	311	ePg	Pg	07 19 34.8	-0.2
ORIF				eSg	Sg	07 19 44.4	-0.1
	2.6nm,0.4s						

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*SOME **06** 07:37:11.5, 40°.48N×73°.40E, h15^{km}*

*KRNET **06** 07:37:11.7±0.1, 40°.39N×73°.38E, h14^{km}, mb2.8*

*NNC **06** 07:37:13.1±1.2, 40°.49N×73°.36E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=9.7km s-min=4.8km az=165.0*

ISC 06 07:37:09.6±1.1, 40°.47N±0°.03×73°.37E±0°.02, h9^{km}±10^{km}, n42, $\sigma 1^{s}18$/72, 40C-4D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	Osh	0.45	277	⇑iP	Pn	07 37 21.1	-1.3
	baz=87						
OHH				⇑iS	Sb	07 37 27.7	+1.1
	baz=87						
SFK	Sufi-Kurgan	0.47	167	⇓iP	Pg	07 37 19.0	+0.2
	baz=66						
SFK				⇓iS	Sg	07 37 24.7	-0.3
	baz=66						
SALK	Salom-Alik	0.54	40	⇑eP	Pn	07 37 22.9	-0.7
	baz=34						
SALK				⇑eS	Sn	07 37 31.1	-1.8
	baz=34						
DRK	Karamyk	1.56	231	⇑iP	Pg	07 37 39.8	+0.2
	baz=34						
DRK				⇑iS	Sg	07 38 00.1	+0.3
	baz=34						
AML	Almayashu	1.68	8	⇑iP	Pg	07 37 44.0	+2.1
	baz=8.0						
AML				⇑iS	Sg	07 38 07.8	+4.1
	baz=8.0						
UCH	Uchtor	1.96	26	⇑iP	Pg	07 37 48.2	+1.0
	baz=24						
UCH				⇑iS	Sg	07 38 14.6	+2.0
	baz=24						
TRKS	Terek-Say	1.99	303	⇑iP	Pg	07 37 47.5	-0.3
	baz=3.0						
TRKS				⇑iS	Sg	07 38 13.4	-0.3
	baz=3.0						
BTK	Batken	2.00	259	⇑iP	Pg	07 37 47.5	-0.4
	baz=61						
BTK				⇑iS	Sg	07 38 13.4	-0.3
	baz=61						
MNAS	Manas	2.12	342	⇑iP	Pg	07 37 50.6	+0.3
	baz=43						
MNAS				⇑iS	Sg	07 38 18.7	+1.0
	baz=43						
EKS2	Erkin-Say	2.21	8	⇑eP	Pg	07 37 51.7	-0.3
	baz=7.0						
EKS2				⇑iS	Sg	07 38 20.9	+0.2
	baz=7.0						
MRKS	Merke	2.28	357	eP	Pg	07 37 53.7	+0.4
	5.3nm,0.3s						

MRKS				*e*S	Sg	07 38 24.0	+1.2
	34nm,0.5s						
MRKS	Merke	2.28	357	Pg	Pg	07 37 53.7	+0.4
	5.3nm,0.3s						
MRKS				Lg	Lg	07 38 24.0	
	34nm,0.5s						
AAK	Ala-Archa	2.33	21	⇑Pn	Pg	07 37 53.1	-1.1
	4.4nm,0.5s						
AAK				⇑Sn	Sg	07 38 23.8	-0.6
	22nm,0.7s						
AAK	Ala-Archa	2.33	21	⇑*i*P	Pg	07 37 53.4	-0.8
	baz=20						
AAK				⇑*i*S	Sg	07 38 23.3	-1.1
	baz=20						
CHMS	Chumysh	2.73	22	⇑*e*P	Pb	07 37 58.7	0.0
	baz=21						
CHMS				⇑*i*S	Sb	07 38 32.8	+0.5
	baz=21						
GAR	Garm	2.77	239	⇑*i*P	Pb	07 37 58.0	-1.4
	baz=41						
GAR				⇑*i*S	Sb	07 38 31.6	-2.0
	baz=41						
BOOM	Boomskoye usch	2.79	43	⇑*i*P	Pb	07 37 59.3	-0.5
	baz=42						
BOOM				⇑*i*S	Sb	07 38 34.5	+0.3
	baz=42						
ULHL	Ulahol	2.80	50	⇑*e*P	Pb	07 37 59.5	-0.4
	baz=48						
ULHL				⇑*i*S	Sb	07 38 34.2	-0.2
	baz=48						
USP	Ospenovka	2.92	16	⇑*i*P	Pb	07 38 01.4	-0.5
	baz=16						
USP				⇑*i*S	Sb	07 38 37.5	-0.2
	baz=16						
TKM2	Tokmak 2	2.96	34	⇓Pg	Pg	07 38 06.8	+0.4
	2.0nm,0.5s						
TKM2				⇓Lg	Lg	07 38 47.4	
	8.6nm,0.6s						
TKM2	Tokmak 2	2.96	34	⇑*i*P	Pb	07 38 01.9	-0.8
	baz=33						
TKM2				⇑*i*S	Sb	07 38 38.5	-0.6
	baz=33						
IUG	Iuzhnay	3.02	305	*e*P	Pg	07 38 07.0	-0.5
	300nm,0.2s						
IUG				*e*S	Sg	07 38 46.8	+0.1
	31nm,0.2s						
IUG	Iuzhnay	3.02	305	Pg	Pg	07 38 07.0	-0.5
	300nm,0.2s						
IUG				Lg	Lg	07 38 46.8	
	31nm,0.2s						
SGDS	Sogindy	3.12	17	Pg	Pg	07 38 08.8	-0.7
	2.0nm,0.3s						
SGDS				Lg	Lg	07 38 49.8	
	4.2nm,0.2s						
KST	Kastek	3.22	36	*e*P	Pg	07 38 11.2	-0.2
	2.6nm,0.2s						
KST				*e*S	Sg	07 38 54.0	+0.9
	8.4nm,0.2s						
KST	Kastek	3.22	36	Pg	Pg	07 38 11.2	-0.2
	2.6nm,0.2s						
KST				Lg	Lg	07 38 54.0	
	8.4nm,0.2s						
DGS	Degeres	3.30	32	*e*P	Pg	07 38 12.9	0.0
	2.5nm,0.3s						
DGS				*e*S	Sg	07 38 56.9	+1.3
	11nm,0.2s						
DGS	Degeres	3.30	32	Pg	Pg	07 38 12.9	0.0
	2.5nm,0.3s						
DGS				Lg	Lg	07 38 56.9	
	11nm,0.2s						
KK31	Karatay Array	3.39	322	⇑Pn	Pb	07 38 07.5	-2.4
	0.3nm,0.3s						
KK31				⇑Pg	Pg	07 38 14.3	-0.3
	0.5nm,0.3s,baz=145,slow=16,SNR=8.5						
KK31				⇑Lg	Lg	07 39 01.4	
	1.5nm,0.3s,baz=129,slow=30,SNR=4.1						
KRBS	Karabastau	3.65	27	*e*P	Pg	07 38 18.8	-0.8
	1.1nm,0.2s						
KRBS				*e*S	Sg	07 39 07.3	+0.4
	10nm,0.6s						
KRBS	Karabastau	3.65	27	Pg	Pg	07 38 18.8	-0.8
	1.1nm,0.2s						
KRBS				Lg	Lg	07 39 07.3	
	10nm,0.6s						
TNSS	Tian-Shan	3.71	45	*e*P	Pg	07 38 20.3	-0.4
	2.4nm,0.3s						
TNSS				⇑*i*S	Sg	07 39 09.7	+1.0
	5.7nm,0.6s						
TNSS	Tian-Shan	3.71	45	Pg	Pg	07 38 20.3	-0.4
	2.4nm,0.3s						
TNSS				Lg	Lg	07 39 09.7	
	5.7nm,0.6s						
CHGR	Chuyangaron	3.72	242	⇑*i*P	Pn	07 38 11.2	+3.8
	baz=44						
CHGR				⇑*i*S	Sn	07 38 54.5	+3.1
	baz=44						
MDOK	Medeo	3.85	44	*e*P	Pg	07 38 22.3	-1.0
	2.4nm,0.2s						
MDOK				*e*S	Sg	07 39 13.3	+0.1
	8.5nm,0.6s						
MDOK	Medeo	3.85	44	Pg	Pg	07 38 22.3	-1.0
	2.4nm,0.2s						
MDOK				Lg	Lg	07 39 13.3	
	8.5nm,0.6s						
KOTS	Kotyrbulak	3.93	44	*e*P	Pg	07 38 24.5	-0.4
	2.9nm,0.2s						
KOTS				*e*S	Sg	07 39 16.9	+1.1
	13nm,0.3s						
KOTS	Kotyrbulak	3.93	44	Pg	Pg	07 38 24.5	-0.4
	2.9nm,0.2s						
KOTS				Lg	Lg	07 39 16.9	
	13nm,0.3s						
KTBS	Karatobe	4.07	36	*e*P	Pg	07 38 26.5	-1.1
	1.0nm,0.5s						
KTBS				*e*S	Sg	07 39 20.1	-0.3
	5.9nm,0.2s						
KTBS	Karatobe	4.07	36	Pg	Pg	07 38 26.5	-1.1
	1.0nm,0.5s						
KTBS				Lg	Lg	07 39 20.1	
	5.9nm,0.2s						
ARXS	Arharly	4.99	40	*e*P	Pg	07 38 44.3	-0.9
	1.9nm,0.5s						
ARXS				*e*S	Sg	07 39 51.0	+1.1
	2.1nm,0.5s						
ARXS	Arharly	4.99	40	Pg	Pg	07 38 44.3	-0.9
	1.9nm,0.5s						
ARXS				Lg	Lg	07 39 51.0	
	2.1nm,0.5s						

IDC ***06*** *08:20:09.7±1.8, 30°.28S×72°.08W, h0^{km}, mb4.1/1, mb1 3.7/5, mb1mx3.6/31, mbtmp3.7/5, ML3.7/4, MS2.6/2, Ms1 2.6/2, ms1mx2.6/21, Error ellipse: s-maj=83.6km s-min=29.1km az=105.0*

SJA ***06*** *08:20:09.0, 30°.20S×72°.56W, h10^{km}, ML4.3*

NEIC ***06*** *08:20:11.0±1.7, 30°.26S±0°.05×72°.12W±0°.07, h9^{km}±5^{km}, mb4.2/3, ML4.0(GUC), Error ellipse: s-maj=8.9km s-min=6.9km az=105.0*

GUC ***06*** *08:20:10.9±0.6, 30°.26S×72°.13W, h42^{km}±4^{km}, ML4.0*

ISC 06 08:20:09.6±1.7**, 30°.25S**±0°.04×**72°.24W**±0°.06**, h9**^{km}±10^{km}**, n83, σ1^{s}.74**/89**, mb4.1**/3**, 4C, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	Fray Jorge	0.68	129	*e*S	Sg	08 20 31.4	-0.2
CO06				IAML		08 20 34.3	
	comp=N,7µm,0.2s						
CO06	Fray Jorge	0.68	129	Pg	Pg	08 20 22.7	0.0
CO05	La Serena	0.93	70	*e*S	Sb	08 20 38.1	-2.3
CO05				IAML		08 20 44.2	
	comp=E,16µm,0.4s						
CO05	La Serena	0.93	70		Pb	08 20 27.4	-0.6
GO04	Tololo Observa	1.25	87	*e*P	Pn	08 20 32.0	-1.6
GO04				*e*S	Sb	08 20 45.8	-4.2
GO04				IAML		08 20 53.2	
	comp=E,11µm,0.3s						
GO04				IAML		08 20 55.8	
	comp=N,11µm,0.4s						
GO04	Tololo Observa	1.25	87		Pn	08 20 32.5	-1.1
GO04	Tololo Observa	1.25	87	*i* P	Pn	08 20 32.0	-1.6
CO03	El Pedregal	1.47	114	*e*P	Pn	08 20 34.8	-1.6
CO03				*e*S	Sn	08 20 52.8	-3.0
CO03				IAML		08 20 58.6	
	comp=N,3µm,0.2s						
CO03				IAML		08 20 59.4	
	comp=E,3µm,0.3s						
CO03	El Pedregal	1.47	114		Pn	08 20 35.7	-0.7
CO03	El Pedregal	1.47	114	*i* P	Pn	08 20 35.0	-1.4
LCO	Las Campanas	1.82	48	⇑*e*P	Pn	08 20 40.7	-0.7
LCO				*e*S	Sn	08 21 03.4	-1.4
LCO	Las Campanas	1.82	48		Pn	08 20 41.7	+0.3
LCO	Las Campanas	1.82	48	*i* P	Pn	08 20 41.0	-0.4
AC04	Llanos de Chal	2.28	27	*e*P	Pn	08 20 46.9	-0.5
AC04				*e*S	Sn	08 21 14.6	-1.1
AC04				IAML		08 21 28.9	
	comp=E,475nm,0.4s						
AC04	Llanos de Chal	2.28	27		Pn	08 20 47.0	-0.5
AC04	Llanos de Chal	2.28	27	*i* P	Pn	08 20 47.0	-0.5
AROD	Rodeo	2.40	89	*i* P	Pn	08 20 51.0	+1.6
VA06	Catapilco	2.45	161	*e*P	Pn	08 20 49.5	-0.3
VA06				*e*S	Sn	08 21 18.6	-1.2
ACDV	Cuesta del Vie	2.71	89	*i* P	Pb	08 20 58.0	-0.3
ACCO	Cerro Coronel	2.77	98	*i* P	Pn	08 20 57.0	+2.5
VA01	Torpederas	2.81	170		Pn	08 20 54.4	-0.5
VA03	San Esteban	2.90	150	⇑*e*P	Pn	08 20 55.8	-0.2
VA03				*e*S	Sn	08 21 29.3	-1.9
VA03				IAML		08 21 45.8	
	comp=E,846nm,0.4s						
VA03	San Esteban	2.90	150		Pn	08 20 56.9	+0.8
VA03	San Esteban	2.90	150	*i* P	Pn	08 20 57.0	+0.9
ROCH	El Roble	2.91	159	*e*P	Pn	08 20 56.5	0.0
ROCH				*e*S	Sn	08 21 29.9	-1.8
ROCH				IAML		08 21 51.5	
	comp=N,601nm,0.2s						
ROC1	El Roble	2.92	159	*i* P	Pn	08 20 57.0	+0.5
RTLS	Leoncito	2.97	122	*i* P	Pn	08 21 00.0	+2.8
AUSP	Uspallata	3.14	130	*i* P	Pn	08 21 03.0	+3.4
MT02	Curacav	3.15	163		Pn	08 20 59.8	+0.4
MT02	Curacav	3.15	163	*i* P	Pn	08 21 00.0	+0.6
GO03	Copiap	3.18	34		Pn	08 21 00.8	+0.9
GO03	Copiap	3.18	34	*i* P	Pn	08 21 01.0	+1.1
PEL	Peldehue	3.18	156	⇑*e*P	Pn	08 20 59.1	-0.8
PEL				*e*S	Sn	08 21 36.0	-2.0
PEL				IAML		08 21 53.5	
	comp=E,318nm,0.6s						
PEL	Peldehue	3.18	156	*i* P	Pn	08 21 01.0	+1.1
ZON	Zonda	3.33	114	*i* P	Pn	08 21 05.0	+3.0
AGUA	GUANDACOL	3.35	78	*i* P	Pn	08 21 06.0	+3.7
MT05	Renca	3.39	158	⇑*e*P	Pn	08 21 02.8	0.0
MT05				*e*S	Sn	08 21 41.0	-2.2
MT05				IAML		08 22 04.7	
	comp=E,642nm,0.7s						
MT05	Renca	3.39	158		Pn	08 21 03.1	+0.3
MT05	Renca	3.39	158	*i* P	Pn	08 21 04.0	+1.2
VA05	Santo Domingo	3.44	171		Pn	08 21 03.7	+0.2
RTCV	Cerro Valdivia	3.56	118	*i* P	Pn	08 21 08.4	+3.3
MT09	Talagante	3.68	163		Pn	08 21 07.5	+0.7
MT01	Popeta	3.71	167		Pn	08 21 07.1	0.0
MT01	Popeta	3.71	167	*i* P	Pn	08 21 07.0	0.0
ASAL	Salagasta	3.74	130	*i* P	Pn	08 21 11.0	+3.4
VCA	Vinchina	3.83	68	*i* P	Pn	08 21 13.0	+4.1
ARCO	CERRO ARCO	3.83	133	*i* P	Pn	08 21 13.0	+4.0
AAGR	Agrelo	4.06	135	*i* P	Pn	08 21 16.0	+3.9
BO01	Tunca	4.25	167		Pn	08 21 14.7	+0.1
BO01	Tunca	4.25	167	*i* P	Pn	08 21 15.0	+0.4
AC02	Maricunga	4.37	40		Pn	08 21 17.5	+0.9
AC02	Maricunga	4.37	40	*i* P	Pn	08 21 17.0	+0.4
ACLC	CERRO LA CRUZ	4.67	81	*i* P	Pn	08 21 22.0	+1.5
BO02	Sierra Bellavi	4.70	165		Pn	08 21 22.0	+1.2
BO02	Sierra Bellavi	4.70	165	*i* P	Pn	08 21 22.0	+1.2
GO05	Huala	4.76	177	*i* P	Pn	08 21 20.0	-1.6
APLL	PUNTA DE LOS L	4.94	93	*i* P	Pn	08 21 27.0	+2.8
RFA	San Rafael	5.53	146	*i* P	Pn	08 21 34.0	+1.8
MRA	San Martin	5.99	113	*i* P	Pn	08 21 39.0	+0.4
H03N1	Juan Fernandez	6.51	239	Pn	Pn	08 21 46.2	+0.8
	baz=12,slow=28,SNR=23						
H03N1				T	T	08 28 59.5	
	baz=69,slow=72,SNR=829						
H03N2	Juan Fernandez	6.52	239	Pn	Pn	08 21 46.4	+0.9
	baz=12,slow=28,SNR=17						
H03N2				T	T	08 28 59.4	
	baz=69,slow=72,SNR=982						
H03N3	Juan Fernandez	6.52	239	Pn	Pn	08 21 46.2	+0.6
	baz=12,slow=28,SNR=20						
H03N3				T	T	08 29 16.2	
	baz=69,slow=72,SNR=838						
PB15	IPOC Station P	7.43	20	*i* P	Pn	08 22 00.0	+1.4
PB05	IPOC Station P	7.59	14	*i* P	Pn	08 21 59.0	-1.6
LVC	Limon Verde	8.17	22	Pn	Pn	08 22 08.0	-0.8
	comp=E,0.4nm,0.3s,baz=209,slow=13,SNR=1.9						
LVC				Sn	Sn	08 23 36.9	-4.6
	comp=E,0.9nm,0.3s,baz=91,slow=20,SNR=1.6						
PLCA	Paso Flores	10.55	173	Pn	Pn	08 22 41.3	+0.2
	comp=E,0.3nm,0.3s,baz=331,slow=10,SNR=4.9						
PLCA				LR	LR	08 26 18.1	
	comp=E,16nm,21.1s,baz=16,slow=35						
TRQA	Tornquist	11.53	135		Pn	08 22 53.7	-0.8
CPUP	Villa Florida	13.71	77	LR	LR	08 29 07.4	
	comp=E,68nm,19.6s,baz=137,slow=40						
LPAZ	La Paz	14.40	16	Pn	Pn	08 23 35.4	+1.1
	comp=E,0.1nm,0.3s,baz=195,slow=8.4,SNR=3.3						
SIV	San Ignacio	17.50	38	P	P	08 24 15.9	+0.7
	comp=E,0.2nm,0.3s,baz=218,slow=14,SNR=3.0						
VNA3	Neumayer Olymp	52.90	159	P	P	08 29 26.6	+1.0
VNA1	Neumayer--Stat	53.20	158	P	P	08 29 28.2	+0.5
VNA2	Neumayer--Watz	53.54	158	P	P	08 29 31.4	+1.1
	baz=278,slow=8.8						
SNAA	Sanae	55.13	159	P	P	08 29 42.9	+1.0
SNAA	Sanae	55.13	159	P	P	08 29 43.1	+1.2
SNAA				IAmb	IAmb	08 29 43.9	
	comp=Z,5.1nm,1.0s						
QSPA	South Pole Qui	59.98	180	P	P	08 30 18.3	+2.0
QSPA				IAmb	IAmb	08 30 35.1	
	comp=Z,2.0nm,1.2s						
TORD	Torodi Ar. Bea	83.11	71	P	P	08 32 36.9	+0.7
	comp=Z,1.1nm,0.7s,baz=258,slow=4.8,SNR=7.0						
TORD	Torodi Ar. Bea	83.11	71	P	P	08 32 37.0	+0.7
TORD				IAmb	IAmb	08 32 37.8	
	comp=Z,1.1nm,0.8s						
WRA	Warramunga Arr	123.92	210	PKP	PKPdf	08 39 10.1	+1.2
	comp=Z,0.2nm,0.6s,baz=163,slow=1.8,SNR=1.3						
H11S2	WAKE ISLAND Hy	125.56	272	T	T	10 58 04.5	
	baz=115,slow=74,SNR=17						
H11S1	WAKE ISLAND Hy	125.57	272	T	T	10 58 03.9	
	baz=115,slow=74,SNR=23						
H11S3	WAKE ISLAND Hy	125.58	272	T	T	10 58 04.3	
	baz=115,slow=74,SNR=22						
ZALV	Zalesovo Beam	151.08	28	PKPbc	PKiKP	08 40 04.4	+1.2
	comp=Z,0.8nm,0.5s,baz=333,slow=2.3,SNR=3.7						

LJU 06 08:28:02.8, 45°.87N×15°.53E, h5^{km}, ML0.2, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GCIS	Gornji Cirnik	0.07	92	*i* Pg	Pg	08 28 04.5	+0.1
GCIS				*i* Sg	Sg	08 28 05.6	+0.1
GCIS				IAML		08 28 05.8	
	comp=Z,4.7nm,0.1s						
CRES	Cresnjev	0.07	230	*i* Pg	Pg	08 28 04.5	+0.1
CRES				*i* Sg	Sg	08 28 05.7	+0.1
CRES				IAML		08 28 06.3	
	comp=Z,7.4nm,0.1s						

SJA ***06*** *08:44:03.6±0.8, 30°.09S×72°.51W, h11^{km}±5^{km}, ML5.0, MW5.2*

VAO ***06*** *08:44:06.2±0.4, 30°.31S×72°.39W, h10^{km}, mb4.8*

NEIC ***06*** *08:44:07.5±1.6, 30°.14S±0°.03×72°.26W±0°.06, h8^{km}±4^{km}, mb5.3/48, Ms_20 5.0/77, Mwb5.2/26, Mwr5.2/40, Mww5.4, Mwr5.3(GUC), Error ellipse: s-maj=7.2km s-min=4.4km az=94.0*

NEIC ***06*** *08:44:07.8, 30°.12S×72°.26W, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$6.73; M$_{\theta\theta}$1.24; M$_{\phi\phi}$-7.97; M$_{r\theta}$1.28; M$_{\theta\phi}$-0.76; M$_{\phi r}$-2.55; Fault plane solution: M$_0$8.00000×10^{16} NP1:ϕ_s171.97000°, δ55.56000°, λ74.16000°. NP2:ϕ_s18.62000°, δ37.49000°, λ111.71000°. Principal axes: T 7.4727, Plg74.0000°, Azm38.0000°; N 0.9601, Plg13.0000°, Azm181.0000°; P -8.4328, Plg9.0000°, Azm273.0000°;*

NEIC ***06*** *08:44:07.8, 30°.12S×72°.26W, h13^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$5.54; M$_{\theta\theta}$2.17; M$_{\phi\phi}$-7.71; M$_{r\theta}$0.61; M$_{\theta\phi}$-0.86; M$_{\phi r}$-5.73; Fault plane solution: M$_0$9.02000×10^{16} NP1:ϕ_s175.35000°, δ65.88000°, λ79.82000°. NP2:ϕ_s19.08000°, δ26.06000°, λ111.55000°. Principal axes: T 7.8115, Plg68.0000°, Azm66.0000°; N 2.0591, Plg9.0000°, Azm180.0000°; P -9.8706, Plg20.0000°, Azm273.0000°;*

IDC ***06*** *08:44:08.0±0.6, 30°.11S×71°.98W, h0^{km}, mb4.7/10, mb1 4.8/14, mb1mx4.6/25, mbtmp4.6/14, ML4.6/4, MS4.8/15, Ms1 4.8/15, ms1mx4.6/20 Error ellipse: s-maj=23.9km s-min=14.9km az=95.0*

MOS ***06*** *08:44:08.3±1.5, 30°.13S×72°.00W, h19^{km}, mb5.2/11, Error ellipse: s-maj=18.3km s-min=9.0km az=85.8*

GUC ***06*** *08:44:09.1±0.8, 30°.16S×72°.13W, h42^{km}±3^{km}, ML5.1, MW5.3*

NEIC ***06*** *08:44:13, 30°.23S×72°.26W, h18^{km}, Moment Tensor Solution. Duration: 12^{s}4 Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.17; M$_{\theta\theta}$-0.02; M$_{\phi\phi}$-1.15; M$_{r\theta}$0.16; M$_{\theta\phi}$-0.01; M$_{\phi r}$-0.99; Fault plane solution: M$_0$1.53000×10^{17} NP1:ϕ_s6.00000°, δ25.00000°, λ101.00000°. NP2:ϕ_s174.00000°, δ66.00000°, λ85.00000°. Principal axes: T 1.5495, Plg69.0000°, Azm74.0000°; N -0.0317, Plg5.0000°, Azm176.0000°; P -1.5177, Plg20.0000°, Azm268.0000°;*

GCMT ***06*** *08:44:13.5±0.1, 30°.26S±0°.01×72°.28W±0°.01, h12^{km}, MW5.3/133, Moment Tensor Solution. s98,c146; s133,c220; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M$_{rr}$0.89±.02; M$_{\theta\theta}$0.01±.01; M$_{\phi\phi}$-0.90±.01; M$_{r\theta}$0.06±.03; M$_{\theta\phi}$-0.03±.01; M$_{\phi r}$-0.76±.04; Best double couple: M$_0$1.18100×10^{17} NP1:ϕ_s6.00000°, δ25.00000°, λ97.00000°. NP2:ϕ_s178.00000°, δ65.00000°, λ87.00000°. Principal axes: T 1.1770, Plg70.0000°, Azm81.0000°; N 0.0090, Plg3.0000°, Azm179.0000°; P -1.1850, Plg20.0000°, Azm270.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 06 08:44:08.1±0.8**, 30°.15S**±0°.02×**72°.16W**±0°.03**, h8**^{km}±4^{km}**, n429, σ1^{s}.86**/419**, mb5.2**/38**, MS5.0**/56**, 14C-6D, Fault plane solution: NP1:**ϕ_s183.18576°**,** δ71.79662°**,** λ91.74328°. **NP2:**ϕ_s357.62116°**,** δ18.28384°**,** λ84.71470°. **Principal axes:** T Plg63.1639°**,** Azm95.9169°**;** N Plg1.6560°**,** Azm2.6410°**;** P Plg26.7767°**,** Azm271.8051°**; Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	Fray Jorge	0.69	139	⇑*e*P	Pg	08 44 21.9	+0.3
CO06				*i* S	Sb	08 44 32.3	+0.1
CO06	Fray Jorge	0.69	139	Pg	Pg	08 44 21.8	+0.3
CO05	La Serena	0.83	74	⇑*e*P	Pg	08 44 24.3	+0.1
CO05				*e*S	Sb	08 44 36.3	+0.2
CO05				IAML		08 44 44.3	
	comp=E,95µm,0.4s						
CO05	La Serena	0.83	74		Pb	08 44 24.5	-0.3
GO04	Tololo Observa	1.18	92	⇓*e*P	Pg	08 44 30.2	-0.6
GO04				*e*S	Sb	08 44 46.7	+0.2
GO04				IAML		08 44 55.8	
	comp=N,69µm,0.5s						
GO04	Tololo Observa	1.18	92		Pb	08 44 30.9	0.0
GO04	Tololo Observa	1.18	92	*e*P	Pn	08 44 31.4	+0.2
CO03	El Pedregal	1.44	119	⇑*e*P	Pn	08 44 34.0	-0.7
CO03				*e*S	Sn	08 44 52.2	-1.6
CO03	El Pedregal	1.44	119		Pn	08 44 34.6	-0.1
CO03	El Pedregal	1.44	119	*e*P	Pn	08 44 34.3	-0.4
CO03				*e*S	Sn	08 44 51.1	-2.7
CO03				IAML		08 45 02.1	
	comp=Z,12µm,0.7s						
LCO	Las Campanas	1.70	49	*e*P	Pn	08 44 38.3	-0.1
LCO	Las Campanas	1.70	49	⇑*e*P	Pn	08 44 38.0	-0.4
LCO				*e*S	Sn	08 44 59.2	-1.3
LCO	Las Campanas	1.70	49		Pn	08 44 38.3	-0.1
LCO	Las Campanas	1.70	49	*e*P	Pn	08 44 38.4	-0.1
LCO				*e*S	Sg	08 45 04.0	+1.1
AC04	Llanos de Chal	2.16	26	⇑*e*P	Pn	08 44 43.7	-0.7
AC04				*e*S	Sn	08 45 09.5	-1.8
AC04	Llanos de Chal	2.16	26	Pn	Pn	08 44 43.6	-0.8
AC04	Llanos de Chal	2.16	26	*e*P	Pn	08 44 43.5	-0.8
AC04				*e*S	Sg	08 45 20.1	+2.6
AC04				IAML		08 45 29.7	
	comp=Z,4µm,1.0s						
AROD	Rodeo	2.33	91	*e*P	Pn	08 44 44.1	-2.9
AROD				*e*P	Pb	08 44 49.8	-0.8
VA06	Catapilco	2.52	163	*e*P	Pn	08 44 46.9	-2.4
ACDV	Cuesta del Vie	2.63	91	*e*P	Pb	08 44 54.2	-1.4
ACDV				*e*S	Sg	08 45 32.6	-0.1
ACDV				IAML		08 45 37.8	
	comp=Z,3µm,1.4s						
ACCO	Cerro Coronel	2.71	100	*e*P	Pb	08 44 55.8	-1.3
VA01	Torpederas	2.90	171	Pn	Pn	08 44 53.8	-0.7
VA03	San Esteban	2.95	153	IAML		08 45 50.3	
	comp=N,8µm,0.6s						
VA03	San Esteban	2.95	153		Pn	08 44 55.6	+0.3
VA03	San Esteban	2.95	153	*e*P	Pn	08 44 56.1	+0.8
VA03				*e*P	Pb	08 44 56.6	-4.4
VA03				IAML		08 45 55.5	
	comp=Z,3µm,0.7s						
RTLS	Leoncito	2.96	125	*e*P	Pb	08 44 58.8	-2.5
RTLS				*e*S	Sg	08 45 43.6	+0.4
RTLS				IAML		08 46 04.8	
	comp=Z,4µm,1.0s						
ROC1	El Roble	2.98	161	*e*P	Pn	08 44 56.1	+0.1
ROC1				*e*S	Sn	08 45 34.9	+2.8
GO03	Copiap	3.06	34	Pn	Pn	08 44 56.6	-0.2
GO03	Copiap	3.06	34	*e*P	Pn	08 44 52.6	-4.2
GO03				*e*P	Pb	08 44 56.6	-6.2
GO03				*e*S	Sb	08 45 40.1	-0.1
GO03				*e*S	Sg	08 45 44.1	-2.2
AUSP	Uspallata	3.15	132	*e*P	Pn	08 44 56.1	-2.2
AUSP				*e*P	Pb	08 45 01.4	-3.1
AUSP				*e*S	Sb	08 45 43.1	-0.1
MT02	Curacav	3.22	165		Pn	08 44 58.7	-0.4
MT02	Curacav	3.22	165	*e*P	Pn	08 44 58.9	-0.2
MT02				*e*S	Sb	08 45 47.6	+2.6
MT02				IAML		08 46 07.6	
	comp=Z,2µm,1.4s						
PEL	Peldehue	3.24	158	*e*P	Pn	08 45 00.0	+0.7
PEL				*e*S	Sn	08 45 41.1	+3.0
AGUA	GUANDACOL	3.26	79	*e*P	Pb	08 45 03.4	-2.8
AGUA				*e*S	Sg	08 45 52.6	-0.1
AGUA				IAML		08 46 05.4	
	comp=Z,5µm,1.0s						
ZON	Zonda	3.30	116	*e*P	Pn	08 44 58.6	-1.6
ZON				*e*P	Pb	08 45 03.1	-3.9
ZON				*e*S	Sn	08 45 41.1	+1.5
ZON				IAML		08 46 27.4	
	comp=Z,2µm,1.4s						
MT05	Renca	3.45	160	Pn	Pn	08 45 03.1	+0.8
MT05	Renca	3.45	160	*e*P	Pn	08 45 03.0	+0.7
VA05	Santo Domingo	3.53	173		Pn	08 45 02.5	-0.7
RTCV	Cerro Valdivia	3.55	120	*e*P	Pn	08 45 06.7	+3.2
RTCV				*e*S	Sg	08 45 58.6	-3.4
VCA	Vinchina	3.73	69	*e*P	Pn	08 45 10.2	+4.1
VCA				*e*P	Pb	08 45 10.6	-3.7
VCA				*e*S	Sn	08 45 44.1	-6.1
VCA				IAML		08 46 20.5	
	comp=Z,4µm,1.3s						
ASAL	Salagasta	3.74	131	*e*P	Pn	08 45 10.1	+3.8
ASAL				*e*S	Sg	08 46 08.6	+0.2
MT09	Talagante	3.75	165		Pn	08 45 07.4	+1.0
MT01	Popeta	3.78	168		Pn	08 45 06.6	-0.2
MT01	Popeta	3.78	168	*e*P	Pn	08 45 06.4	-0.3
MT01				*e*S	Sg	08 46 07.6	-2.1
ARCO	CERRO ARCO	3.85	135	*e*P	Pb	08 45 12.3	-4.1
ARCO				*e*S	Sg	08 46 10.6	-1.1
ARCO				IAML		08 46 27.1	
	comp=Z,2µm,1.2s						
AAGR	Agrelo	4.08	137	*e*P	Pn	08 45 14.9	+4.0
AAGR				*e*S	Sg	08 46 26.1	+6.9
AC02	Maricunga	4.24	40	Pn	Pn	08 45 14.3	+0.8
AC02	Maricunga	4.24	40	*e*P	Pn	08 45 08.6	-4.9
AC02				*e*P	Pn	08 45 14.1	+0.6
AC02				*e*P	Pn	08 45 14.3	+0.8
AC02				*e*S	Sn	08 46 08.1	+4.6
AC02				IAML		08 46 36.5	
	comp=Z,2µm,0.9s						
BO01	Tunca	4.33	168		Pn	08 45 14.1	-0.1
BO01	Tunca	4.33	168	*e*P	Pn	08 45 14.1	-0.1
BO01				*e*S	Sn	08 46 06.2	+1.3
BO01				IAML		08 46 51.3	
	comp=Z,680nm,1.1s						
ACLC	CERRO LA CRUZ	4.58	82	*e*P	Pn	08 45 14.1	-3.8
ACLC				*e*P	Pn	08 45 20.1	+2.2
ACLC				IAML		08 46 43.6	

	comp=Z,2μm,1.1s						
BO02	Sierra Bellavi	4.78	166	Pn	Pn	08 45 21.0	+0.6
BO02	Sierra Bellavi	4.78	166	eP	Pn	08 45 20.9	+0.4
BO02				IAML		08 46 59.1	
	comp=Z,1μm,1.2s						
GO05	Huala	4.85	178	Pn	Pn	08 45 20.2	-1.3
GO05	Huala	4.85	178	eP	Pn	08 45 20.3	-1.1
RFA	San Rafael	5.57	147	eP	Pn	08 45 33.1	+1.8
RFA				eS	Sb	08 46 50.1	-2.4
RFA				IAML		08 47 19.1	
	comp=Z,566nm,2.1s						
ML02	Panimavida	5.63	174	Pn	Pn	08 45 31.4	-0.8
PB14	IPOC Station P	5.72	16	Pn	Pn	08 45 31.0	-2.6
H03N1	Juan Fernandez	6.62	239	Pn	Pn	08 45 44.3	-1.1
	baz=113,slow=18,SNR=254						
H03N1				T	T	08 53 07.0	
	baz=69,slow=72,SNR=238						
H03N2	Juan Fernandez	6.63	239	Pn	Pn	08 45 44.5	-1.1
	baz=113,slow=18,SNR=260						
H03N2				T	T	08 53 12.7	
	baz=69,slow=72,SNR=204						
H03N3	Juan Fernandez	6.63	238	Pn	Pn	08 45 44.2	-1.5
	baz=113,slow=18,SNR=215						
H03N3				T	T	08 53 03.9	
	baz=69,slow=72,SNR=181						
VA04	Juan Fernndez	6.66	237	Pn	Pn	08 45 44.4	-1.8
PB10	IPOC Station P	6.76	13		Pn	08 45 45.9	-1.9
FSA	Cafayete	6.78	55	eS	Sn	08 46 59.6	-6.0
H03S3	Juan Fernandez	6.80	236	Pn	Pn	08 45 46.5	-1.5
H03S1	Juan Fernandez	6.81	236	Pn	Pn	08 45 45.8	-2.3
H03S2	Juan Fernandez	6.82	236	Pn	Pn	08 45 46.1	-2.1
PB04	IPOC Station P	7.99	14		Pn	08 46 02.0	-2.7
LVC	Limon Verde	8.05	22	Pn	Pn	08 46 04.0	-1.8
	comp=Z,2.8nm,0.3s,baz=189,slow=13,SNR=13						
LVC				LR	LR	08 49 09.0	
	comp=Z,4μm,20.8s,baz=209,slow=38						
LVC	Limon Verde	8.05	22		Pn	08 46 03.5	-2.2
LC01	Cunco	8.73	179		Pn	08 46 13.8	-0.9
PLCA	Paso Flores	10.64	173	Pn	Pn	08 46 40.9	0.0
	comp=Z,1.8nm,0.3s,baz=349,slow=15,SNR=16						
PLCA				LR	LR	08 51 07.8	
	comp=Z,6μm,19.0s,baz=352,slow=39						
PLCA	Paso Flores	10.64	173	eP	Pn	08 46 36.2	-4.7
LL04	Puerto Octay	10.74	181		Pn	08 46 40.5	-1.7
TRQA	Tornquist	11.54	136	P	Pn	08 46 53.4	+0.1
TRQA	Tornquist	11.54	136	eP	Pn	08 46 52.8	-0.5
TRQA	Tornquist	11.54	136		Pn	08 46 53.4	+0.1
LPA	La Plata	12.91	115	i P	Pn	08 47 04.1	-7.8
LPA				pP		08 47 15.2	
LPA				PPP	PPP	08 47 30.1	
LPA				PP	PbPb	08 47 59.9	+6.1
LPA				pPP		08 48 17.7	
LPA				S	Sn	08 49 29.0	-6.7
LPA				sS		08 49 42.0	
LPA				SS	SbSb	08 50 42.6	+14
LPA				SSS	SSS	08 51 15.2	
LPA				PCP	PcP	08 52 45.4	-1.1
LPA				PKIKP	PKiKP	09 00 44.8	+1.2
LPA				SKIKP	SKiKP	09 04 15.9	+1.0
LPA				PKIKS		09 04 22.9	
LPA				SKIKS		09 07 48.0	
ITQB	Itaqui	13.49	92	eP	Pn	08 47 20.5	+0.7
ITQB	Itaqui	13.49	92	Pn	Pn	08 47 20.4	+0.5
CPUP	Villa Florida	13.61	77	eP	Pn	08 47 22.2	+0.7
LPAZ	La Paz	14.28	16	Pn	Pn	08 47 30.4	-0.9
	comp=Z,1.0nm,0.3s,baz=188,slow=8.6,SNR=8.7						
LPAZ				LR	LR	08 54 17.8	
	comp=Z,3μm,18.4s,baz=189,slow=43						
LPAZ	La Paz	14.28	16	Pn	Pn	08 47 28.8	-2.5
PLTB	Pedras Altas	16.00	100	eP	Pn	08 47 53.5	-0.1
PLTB	Pedras Altas	16.00	100	Pn	Pn	08 47 53.8	+0.2
SIV	San Ignacio	17.38	38	P	Pn	08 48 10.1	-1.1
	comp=Z,1.5nm,0.3s,baz=218,slow=10,SNR=33						
SIV				LR	LR	08 55 31.5	
	comp=Z,4μm,21.0s,baz=222,slow=40						
AQDB	Aquidauana	17.71	61	eP	P	08 48 16.4	+0.3
PTGB	Pitanga	18.63	78	eP	Pn	08 48 26.7	+0.1
PTLB	Pontes e Lacer	18.90	42	eP	P	08 48 29.3	+0.1
TRCB	Terra Rica	18.94	72	eP	Pn	08 48 31.3	+1.0
PP1B	Ponte de Pedra	20.11	55	eP	P	08 48 42.2	-0.3
TER01	Tubaro-SC	20.14	91	eP	P	08 48 42.4	-0.3
VILB	Vilhena	20.38	35	eP	P	08 48 45.3	-0.2
VILB	Vilhena	20.38	35	P	P	08 48 44.4	-1.0
PCMB	Pacaembu	20.61	71	eP	P	08 48 47.7	-0.3
SALV	Santo Antonio	20.72	50	eP	P	08 48 48.8	-0.3
ETMB	Extrema	20.98	17	eP	Pn	08 48 53.4	-1.0
ETMB	Extrema	20.98	17	P	P	08 48 52.5	+0.6
TIJ01	Guaruva-PR	21.04	82	eP	P	08 48 52.6	0.0
FRTB	Fartura	21.27	77	eP	P	08 48 53.0	-2.0
ITRB	Iturama	22.30	67	eP	P	08 49 05.7	-0.4
SAML	Samuel	22.70	24	P	P	08 49 08.8	-1.6
SAML				pmax	pmax		
	comp=Z,53nm,1.2s						
SAML	Samuel	22.70	24	eP	P	08 49 11.1	+0.8
SAML	Samuel	22.70	24	eP	P	08 49 10.7	+0.3
SAML	Samuel	22.70	24	P	P	08 49 08.8	-1.6
PET01	Itanhaem-SP	22.86	81	eP	P	08 49 12.9	+0.9
SPB	Sao Paulo	22.98	79	eP	P	08 49 13.5	+0.3
BB19B	Bebedouro	23.11	72	eP	P	08 49 15.1	+0.4
RCLB	Rio Claro- Sao	23.35	77	eP	P	08 49 17.5	+0.3
ATAH	Atahualpa	23.63	344	P	P	08 49 23.5	+3.2
	comp=Z,7.6nm,0.7s,baz=163,slow=7.2,SNR=5.1						
EFI	East Falkland	23.92	158	IAMs_20	IAMs_20	08 58 60.0	
	comp=Z,3μm,18.0s						
CLDB	Colider	24.49	42	eP	P	08 49 26.9	-1.1
USHA	Ushuaia	24.81	175	P	P	08 49 32.0	+1.5
	comp=Z,16nm,0.8s,baz=333,slow=5.8,SNR=7.7						
USHA				LR	LR	09 00 19.9	
	comp=Z,4μm,18.2s,baz=358,slow=39						
IPMB	Ipameri, GO	24.94	66	eP	P	08 49 31.4	-0.7
TBTG	Tabatinga, AM	25.91	5	eP	P	08 49 40.2	-0.6
BSCB	Bom Sucesso	26.28	76	eP	P	08 49 43.8	-0.4
BDFB	Brasilia	26.44	62	P	P	08 49 45.3	-0.4
	comp=Z,5.3nm,0.5s,baz=229,slow=11,SNR=7.7						
BDFB				LR	LR	09 00 49.9	
	comp=Z,1μm,19.8s,baz=239,slow=38						
BDFB	Brasilia	26.44	62	P	P	08 49 45.3	-0.4
BDFB				IAmb	IAmb	08 49 58.7	
	comp=Z,51nm,1.1s						
SNDB	Serra Nova Dou	26.49	51	eP	P	08 49 46.0	-0.1
VAS01	Vassouras-RJ	26.88	80	eP	P	08 49 48.6	-1.0
DUB01	Friburgo-RJ	27.87	80	eP	P	08 49 57.4	-1.1
NPGB	Novo Progresso	27.88	38	eP	P	08 49 57.9	-0.7
DIAM	Diamantina, MG	28.45	72	eP	P	08 50 04.0	+0.1
PEXB	Peixe	28.49	56	eP	P	08 50 04.0	-0.1
MACA	Manacapuru-AM	28.96	24	eP	P	08 50 07.1	-1.1
MACA	Manacapuru-AM	28.96	24	P	P	08 50 07.5	-0.7
MC01	Montes Claros	29.05	69	eP	P	08 50 08.7	-0.4
JANB	Januaria	29.67	66	eP	P	08 50 15.0	+0.5
ITTB	Itaituba	29.97	34	eP	P	08 50 17.4	+0.2
PTLC	Puerto Leguiza	30.26	355	eP	P	08 50 18.6	-1.0
SJMB	Sao Joao De Ma	30.32	75	eP	P	08 50 20.6	+0.3
BSFB	Barra de Sao F	30.55	76	eP	P	08 50 21.8	-0.5
SDBA	SAO DESIDERIO	30.80	61	eP	P	08 50 24.5	-0.1
OTAV	Otavalo	30.81	348	eP	P	08 50 27.8	+2.8
OTAV	Otavalo	30.81	348	eP	P	08 50 23.6	-1.5
PAC1	Pacto, Paraso	30.90	347	eP	P	08 50 25.2	-0.3
SMTB	Santa Maria do	31.25	52	eP	P	08 50 28.7	+0.2
PTGA	Pitinga	31.47	24	P	P	08 50 30.1	-0.3
PTGA				IAmb	IAmb	08 50 35.2	
	comp=Z,31nm,1.1s						
PTGA				IAMs_20	IAMs_20	09 05 11.3	
	comp=Z,2μm,19.0s						
NAN01	Guarapari, ES	31.61	75	eP	P	08 50 29.9	-1.8
PRPB	Parauapebas	31.80	46	eP	P	08 50 31.1	-2.2
MACC	Macarena, Meta	32.15	357	eP	P	08 50 38.8	+2.4
SOTA	Rioblanco	32.38	352	eP	P	08 50 40.3	+1.3
GUA01	Guaratinga, BA	32.50	73	eP	P	08 50 39.1	-0.3
PCON	Cinco Dias	32.55	352	eP	P	08 50 46.8	+6.4
RPN	Rapa Nui	32.67	266	IAMs_20	IAMs_20	08 59 49.9	
	comp=Z,3μm,20.0s						
MALB	Monte Alegre	32.87	34	eP	P	08 50 42.0	-0.6
CMC01	Camacan, BA	33.36	71	eP	P	08 50 46.9	-0.1
NBIT	Itapeh - BA	33.66	71	eP	P	08 50 50.6	+1.0
ORTC	Ortega, Tolima	33.99	354	eP	P	08 50 56.1	+3.6
PAYG	Puerto Ayora	34.01	326	IAMs_20	IAMs_20	09 01 43.8	
	comp=Z,2μm,18.0s						
YOTC	Yotoco, Valle	34.17	353	eP	P	08 50 59.4	+5.3
GDU01	Guandu, BA	34.20	69	eP	P	08 50 54.0	-0.4
BOAV	Boa Vista	34.22	21	eP	P	08 50 55.2	+0.8
BOAV	Boa Vista	34.22	21	P	P	08 50 53.6	-0.8
PMSA	Palmer Station	35.02	174	eP	P	08 50 56.6	-4.2
PMSA	Palmer Station	35.02	174	IAMs_20	IAMs_20	09 05 06.8	
	comp=Z,3μm,18.0s						
PLMC	San Jos del P	35.08	353	eP	P	08 51 04.8	+2.9
MCPB	Macapa, AP	35.26	37	eP	P	08 51 03.5	0.0
GUY2C	Guyana, Caldas	35.30	354	eP	P	08 51 05.1	+0.8
NBPN	Ponto Novo - B	35.38	64	eP	P	08 51 04.5	-0.1
NORC	Norcasia	35.60	355	eP	P	08 51 09.2	+2.8
TMAB	Tom-Au,PA,Br	35.83	44	eP	P	08 51 08.4	+0.1
RUSC	La Rusia	35.85	358	eP	P	08 51 11.0	+2.0
HELC	Santa Helena	36.28	354	eP	P	08 51 13.3	+0.8
NBLA	Lagarto - SE	37.19	67	eP	P	08 51 19.4	-0.6
ZARC	Zaragoza, Cauc	37.51	356	eP	P	08 51 23.6	+1.0
UREC	San Jos de Ur	37.82	355	eP	P	08 51 26.7	+1.5
ROSB	Rosrio	37.94	50	eP	P	08 51 25.3	-1.0
NBMA	Muriti-CE	38.66	61	eP	P	08 51 32.6	+0.2
NBPS	Pedro II - PI	38.69	55	eP	P	08 51 32.8	+0.1
SMLC	San Martn de	38.77	357	eP	P	08 51 31.5	-1.7
MOTC	Monteria, Cord	38.85	354	eP	P	08 51 36.4	+2.5
NBAN	Anadia - AL	39.17	66	eP	P	08 51 38.2	+1.5
SJCC	San Jacinto, C	39.92	355	eP	P	08 51 44.4	+1.4
SJCC	San Jacinto, C	39.92	355	P	P	08 51 42.3	-0.6
SRBA	San Rafael, Bu	40.61	343	P	P	08 51 47.0	-1.7
NBPA	Parau_RN	40.95	61	eP	P	08 51 51.3	-0.1
NBPV	Pedro Velho	41.91	63	eP	P	08 51 59.6	+0.2
JTS	Las Juntas de	42.05	341	i P	P	08 52 02.4	+2.0
JTS				pmax	pmax		
	comp=Z,17nm,1.4s						
COVE	Coope Vega, Sa	42.31	342	P	P	08 52 02.3	-0.2
COVE				IAmb	IAmb	08 52 11.9	
	comp=Z,45nm,1.1s						
FDF	Fort de France	45.87	15	IAMs_20	IAMs_20	09 12 48.6	
	comp=Z,1μm,20.0s						
TGUH	Tegucigalpa,Un	46.30	340	P	P	08 52 31.5	-3.1
TGUH				IAmb	IAmb	08 52 42.5	
	comp=Z,31nm,1.1s						
MTO3	Montecristo	47.29	337	P	P	08 52 39.5	-3.0
MLPR	Magueyes Islan	48.09	7	P	P	08 52 48.2	-0.1
CRPR	Cabo Rojo, PR	48.12	6	P	P	08 52 47.5	-1.1
OBIP	Obispado Ponce	48.21	7	P	P	08 52 48.0	-1.3
CELP	Cerrillos	48.24	7	P	P	08 52 47.8	-1.8
PDPR	Patillas Dam,	48.25	8	P	P	08 52 48.8	-0.8
CBYP	Canovanas	48.52	8	P	P	08 52 49.7	-2.1
VNA3	Neumayer Olymp	52.97	159	P	P	08 53 25.5	+0.8
VNA1	Neumayer--Stat	53.26	158	P	P	08 53 27.9	+1.1
VNA2	Neumayer--Watz	53.60	158	P	P	08 53 29.6	+0.2
	baz=291,slow=8.3						
SNAA	Sanae	55.19	159	P	P	08 53 41.5	+0.5
SNAA	Sanae	55.19	159	i P	P	08 53 40.3	-0.7
SNAA				pmax	pmax		
	comp=Z,24nm,0.8s						
SNAA	Sanae	55.19	159	P	P	08 53 41.0	0.0
SNAA				IAMs_20	IAMs_20	09 14 50.7	
	comp=Z,990nm,20.0s						
UNM	Universidad Na	55.65	329	IAMs_20	IAMs_20	09 14 56.5	
	comp=Z,816nm,18.0s						
QSPA	South Pole Qui	60.08	180	P	P	08 54 16.9	+1.3
	comp=Z,15nm,0.9s,baz=161,slow=3.9,SNR=25						
QSPA	South Pole Qui	60.08	180	P	P	08 54 16.8	+1.3
QSPA				IAmb	IAmb	08 54 27.5	
	comp=Z,34nm,1.1s						
TIGA	Tifton	62.20	349	P	P	08 54 31.4	+1.3
	baz=169						
BRAL	Brewton	62.60	346	P	P	08 54 34.0	+1.2
	baz=166						
NHSC	New Hope	63.37	352	P	P	08 54 38.5	+0.7
	baz=172						
833A	Chaparral WMA,	63.70	333	P	P	08 54 40.9	+0.8
	baz=154						
HKT	Hockley	63.88	337	i P	P	08 54 43.8	+2.6
HKT				pmax	pmax		
	comp=Z,20nm,2.0s						
GOGA	Godfrey	64.11	349	P	P	08 54 43.6	+0.9
	baz=169						
VBMS	Vicksburg	64.42	343	P	P	08 54 46.5	+1.7
	baz=163						
435B	Jarrell	65.24	336	P	P	08 54 51.2	+1.0
	baz=156						
CNNC	Cliffs of the	65.26	355	P	P	08 54 51.7	+1.5
	baz=175						
X51A	Calhoun	65.47	348	P	P	08 54 49.7	-1.9
KMSC	Kings Mountain	65.52	352	P	P	08 54 53.2	+1.4
	baz=171						
Y45A	Yeager Farm, C	65.76	344	P	P	08 54 51.5	-1.9
Y45A				IAmb	IAmb	08 54 59.1	
	comp=Z,26nm,0.8s						
X48A	Hartselle	65.77	347	P	P	08 54 52.8	-0.7
X48A				IAmb	IAmb	08 55 09.8	
	comp=Z,17nm,0.9s						
JCT	Junction City	65.78	334	P	P	08 54 54.8	+1.0
	baz=154,SNR=7.5						
Z41A	Richland Creek	66.02	341	P	P	08 54 56.7	+1.6
	baz=161						
CPCT	Cooper Cave	66.28	349	P	P	08 54 54.7	-2.1
CPCT				IAmb	IAmb	08 55 01.6	
	comp=Z,19nm,1.0s						
WHTX	Lake Whitney,	66.30	337	P	P	08 54 58.0	+1.1
	baz=156						
OXF	Oxford	66.34	344	P	P	08 54 57.1	-0.1
OXF				pmax	pmax		
	comp=Z,48nm,1.1s						
OXF	Oxford	66.34	344	P	P	08 54 58.3	+1.1
	baz=164,SNR=9.4						
OXF	Oxford	66.34	344	P	P	08 54 57.1	-0.1
TXAR	Lajitas Array	66.34	330	P	P	08 54 58.5	+1.1
	comp=Z,2.7nm,0.8s,baz=156,slow=6.9,SNR=14						
TXAR				LR	LR	09 19 59.4	
	comp=Z,452nm,18.0s,baz=0.0,slow=32						
U59A	Littleton	66.36	355	P	P	08 54 56.5	-0.8
TKL	Tuckaleechee C	66.36	350	P	P	08 54 56.6	-0.7
TKL				pmax	pmax		
	comp=Z,23nm,1.0s						
TKL	Tuckaleechee C	66.36	350	P	P	08 54 56.6	-0.7
TKL				IAmb	IAmb	08 55 02.3	
	comp=Z,23nm,0.9s						
V52A	Sevierville	66.52	350	P	P	08 54 56.5	-1.8
V52A				IAmb	IAmb	08 55 03.3	
	comp=Z,23nm,1.0s						
TAOE	Nuku Hiva Isla	66.59	273	eS	S	09 03 51.5	+0.2
	comp=Z,1μm,27.5s						
TAOE	Nuku Hiva Isla	66.59	273	eLR	LR	09 14 59.1	
	comp=Z,708nm,29.2s,baz=117						
Z38A	Mt. Pleasant	66.66	339	P	P	08 54 58.4	-0.9
V48A	Smith Brothers	66.98	347	P	P	08 55 00.1	-1.2
V48A				IAmb	IAmb	08 55 22.6	
	comp=Z,24nm,1.2s						
X40A	Basin Creek Fa	67.19	342	P	P	08 55 04.2	+1.6
	baz=161						
TZTN	Tazewell	67.20	350	P	P	08 55 03.9	+1.2
	baz=170						
CLTN	Cedars of Leba	67.22	348	P	P	08 55 00.9	-1.9
CLTN				IAmb	IAmb	08 55 19.0	
	comp=Z,13nm,0.8s						
MIAR	Mount Ida	67.45	341	P	P	08 55 05.2	+1.0
	baz=160						
BLA	Blacksburg	67.45	353	P	P	08 55 05.4	+1.1
	baz=172						
WVT	Waverly	67.55	346	P	P	08 55 06.2	+1.3
	baz=166						
ABTX	Abilene, Hawle	67.65	335	P	P	08 55 06.2	+0.6
	baz=155,SNR=6.7						
W41B	Gary Mavity, V	67.67	342	P	P	08 55 06.5	+0.8
	baz=161						
VNDA	Vanda	67.85	191	P	P	08 55 08.3	+2.0
	comp=Z,2.3nm,1.0s,baz=131,slow=4.7,SNR=10						
VNDA				LR	LR	09 19 23.5	
	comp=Z,212nm,21.6s,baz=138,slow=31						
UTMT	University of	67.98	346	P	P	08 55 06.7	-0.9
W39A	Magazine	68.11	341	P	P	08 55 09.0	+0.6
	baz=160,SNR=7.6						
TBI	Tubuai	68.17	255	eS	S	09 04 12.2	+2.4
	comp=Z,867nm,28.5s						
TBI	Tubuai	68.17	255	eLR	LR	09 15 43.7	
	comp=Z,972nm,27.8s,baz=100						
TBI	Tubuai	68.17	255	eT	T	10 09 11.2	
	comp=Z,3.2nm,0.2s						
T47A	Sharon Grove	68.24	347	P	P	08 55 08.5	-0.7
T47A				IAmb	IAmb	08 55 14.5	
	comp=Z,27nm,1.0s						
Q61A	Milford	68.74	357	P	P	08 55 13.9	+1.7
	baz=177						
U40A	Yellville	68.95	342	P	P	08 55 15.1	+1.4
	baz=161,SNR=8.1						
MNTX	Cornudas Mount	69.12	330	P	P	08 55 15.2	+0.3
	baz=150,SNR=16						
MNTX	Cornudas Mount	69.12	330	P	P	08 55 14.5	-0.3
MNTX				IAMs_20	IAMs_20	09 21 20.4	
	comp=Z,633nm,18.0s						
HHAR	Hobbs	69.18	341	P	P	08 55 14.1	-1.0
HHAR				IAmb	IAmb	08 55 20.5	
	comp=Z,14nm,0.9s						
WMOK	Wichita Mounta	69.25	337	P	P	08 55 16.2	+0.6
	baz=156						
WCI	Wyandotte Cave	69.29	348	P	P	08 55 16.6	+0.9
	baz=167						
S44A	Carbondale	69.36	346	P	P	08 55 15.0	-1.1
S44A				IAmb	IAmb	08 55 21.9	
	comp=Z,21nm,0.8s						
TUL1	Leonard	69.37	340	P	P	08 55 17.1	+0.9
	baz=158						
EPT	El Paso	69.68	329	IAMs_20	IAMs_20	09 22 04.1	
	comp=Z,680nm,18.0s						
P60A	Greenville	69.68	357	P	P	08 55 19.4	+1.3
	baz=177						
MCWV	Mont Chateau	69.82	354	P	P	08 55 20.6	+1.7
	baz=173						
FVM	French Village	69.90	345	P	P	08 55 18.5	-1.0
FVM				pmax	pmax		
	comp=Z,48nm,1.4s						
FVM	French Village	69.90	345	P	P	08 55 18.5	-1.0
FVM				IAmb	IAmb	08 55 32.7	
	comp=Z,48nm,1.4s						
P51A	Williamsport	70.01	351	P	P	08 55 19.1	-1.0
P51A				IAmb	IAmb	08 55 25.1	
	comp=Z,25nm,1.0s						
MSTX	Muleshoe	70.03	333	P	P	08 55 21.7	+1.2
	baz=152,SNR=9.0						
P52A	Corning	70.04	352	P	P	08 55 21.9	+1.5
	baz=171,SNR=8.2						
OLIL	Olney	70.12	347	P	P	08 55 18.1	-2.7
OLIL				IAmb	IAmb	08 55 25.2	
	comp=Z,24nm,1.1s						
CCM	Cathedral Cave	70.16	344	P	P	08 55 22.4	+1.4
	baz=163						
BLO	Bloomington	70.25	348	P	P	08 55 20.1	-1.5
BLO				pmax	pmax		
	comp=Z,12nm,0.8s						
BLO	Bloomington	70.25	348	P	P	08 55 20.1	-1.5
P49A	Miami Univ. Ec	70.31	350	P	P	08 55 23.2	+1.3
	baz=169						
P49A	Miami Univ. Ec	70.31	350	P	P	08 55 20.9	-1.1
O56A	Blue Knob Stat	70.31	355	P	P	08 55 23.6	+1.5
	baz=174						
S39A	Bolivar	70.33	342	P	P	08 55 19.2	-3.0
S39A				IAmb	IAmb	08 55 33.9	
	comp=Z,29nm,1.4s						
AMTX	Amarillo	70.42	335	P	P	08 55 23.8	+0.9
	baz=153						
O53A	New Philadelph	70.54	353	P	P	08 55 24.4	+1.0
	baz=172						
SSPA	Standing Stone	70.63	355	P	P	08 55 25.1	+1.3
	baz=175						
R40A	Maddies Statio	70.63	343	P	P	08 55 21.8	-2.2
R40A				IAmb	IAmb	08 55 29.4	
	comp=Z,18nm,0.8s						
PPT2	Papeete2	70.73	260	eS	S	09 04 42.3	+2.0
	comp=Z,391nm,24.8s						
PPT2	Papeete2	70.73	260	eLR	LR	09 16 57.2	
	comp=Z,1μm,23.8s						
PPT	Papeete	70.73	260	LR	LR	09 18 25.6	
	comp=Z,412nm,20.6s,baz=121,slow=29						
ACSO	Alum Creek Sta	70.74	351	P	P	08 55 25.7	+1.1
	baz=170,SNR=6.3						
N59A	State Game Lan	70.79	357	P	P	08 55 26.1	+1.3
	baz=177						
121A	Cookes Peak, D	70.90	329	P	P	08 55 26.5	+0.6
	baz=148						
N54A	Moraine State	71.12	354	P	P	08 55 28.7	+1.8
	baz=173						
SFIN	Lafayette	71.53	348	P	P	08 55 30.8	+1.5
	baz=166						
M54A	Oil Creek Stat	71.64	354	P	P	08 55 31.7	+1.7
	baz=173						
M53A	WI Miller and	71.66	353	P	P	08 55 31.5	+1.3
	baz=172						
P40A	Paris	71.75	344	P	P	08 55 28.0	-2.7
P40A				IAmb	IAmb	08 55 36.3	
	comp=Z,31nm,0.9s						
Y22D	IRIS PASSCAL I	71.82	330	IAMs_20	IAMs_20	09 22 57.9	
	comp=Z,487nm,20.0s						
BINY	Binghamton	72.08	357	P	P	08 55 34.0	+1.4
	baz=177						
TUC	Tucson	72.11	326	P	P	08 55 33.9	+0.7
	baz=146						
HDIL	Hopedale	72.12	346	P	P	08 55 34.6	+1.7
	baz=165						
L61B	Northampton	72.24	360	P	P	08 55 35.6	+2.0
	baz=180						
HRV	Adam Dziewonsk	72.30	0	P	P	08 55 35.4	+1.5
	baz=181						
ANMO	Albuquerque	72.37	331	i P	P	08 55 36.4	+1.6
ANMO				pmax	pmax		
	comp=Z,12nm,1.1s						
ANMO	Albuquerque	72.37	331	P	P	08 55 35.8	+1.0
	baz=149						
KSU1	Kansas State U	72.56	340	P	P	08 55 36.8	+1.2
	baz=158						
MMNY	Mt. Morris Dam	72.71	356	P	P	08 55 34.6	-1.7
214A	Organ Pipe Nat	72.82	325	P	P	08 55 37.5	+0.1
	baz=144						
AAM	Ann Arbor	72.87	351	P	P	08 55 39.1	+1.8
	baz=170						
CBKS	Cedar Bluff	73.27	338	P	P	08 55 41.5	+1.7
	baz=155						
T25A	Trinidad	73.44	334	P	P	08 55 42.4	+1.3
	baz=151,SNR=7.7						
LIC	Lamto	73.69	73	eP	P	08 55 38.0	-4.9
	comp=Z,68nm,1.2s						
TIC	Toumodi	73.93	72	eP	P	08 55 38.7	-5.6
L40A	Anamosa	73.97	345	P	P	08 55 41.8	-2.1
L40A				IAmb	IAmb	08 55 49.5	
	comp=Z,32nm,0.9s						
KIC	Kosan Boka	74.00	73	eP	P	08 55 40.0	-4.7
	comp=Z,56nm,1.2s						
LBNH	Lisbon	74.03	0	P	P	08 55 45.7	+1.5
	baz=180						
DBIC	Dimbokro	74.08	72	P	P	08 55 45.6	+0.4
	comp=Z,18nm,0.8s,baz=232,slow=5.7,SNR=15						
DBIC				LR	LR	09 26 28.5	
	comp=Z,977nm,19.0s,baz=244,slow=34						
SDCO	Great Sand Dun	74.39	333	P	P	08 55 47.3	+0.5
	baz=151,SNR=15						
KSCO	Kaye Shedlock’	74.43	336	P	P	08 55 48.1	+1.3
	baz=153,SNR=6.4						
LONY	Lake Ozonia	74.44	358	P	P	08 55 48.3	+1.7
	baz=178						
JFWS	Jewell Farm	74.58	346	P	P	08 55 48.8	+1.4
	baz=164						
GLA	Glamis	74.71	324	P	P	08 55 48.9	+0.4
	baz=143						
S22A	4UR Ranch, Cre	74.92	332	P	P	08 55 51.0	+1.1
	baz=150						
WUAZ	Wupatki	75.02	328	P	P	08 55 50.8	+0.4
	baz=146,SNR=7.4						
PKME	Peaks-Kenny Pk	75.10	2	P	P	08 55 52.0	+1.7
	baz=183						
SWSC	Sam W. Stewart	75.13	323	P	P	08 55 51.8	+1.0
	baz=142						
BGNE	Belgrade	75.14	340	P	P	08 55 52.2	+1.4
	baz=157						
MVCO	Mesa Verde	75.16	331	P	P	08 55 51.9	+0.7
	baz=148,SNR=13						
MVCO	Mesa Verde	75.16	331	IAMs_20	IAMs_20	09 25 08.2	
	comp=Z,483nm,18.0s						
Q24A	Divide	75.32	334	P	P	08 55 52.6	+0.4
	baz=151						
MONP2	Monument Peak	75.42	323	P	P	08 55 53.3	+0.5
	baz=142						
BC3	Big Chuckawall	75.51	324	P	P	08 55 54.2	+1.0
	baz=142						
IRM	Iron Mountain	75.75	324	P	P	08 55 55.4	+1.0
	baz=143						
TPFO	Pinon Flats	75.99	323	P	P	08 55 56.2	+0.3
	baz=142						
PFO	Pinyon Flats O	76.00	323	P	P	08 55 56.0	+0.1
	baz=142						
PFO	Pinyon Flats O	76.00	323	IAMs_20	IAMs_20	09 21 50.1	
	comp=Z,426nm,21.0s						
ISCO	Idaho Springs	76.22	334	P	P	08 55 58.5	+1.2
	baz=151,SNR=12						
MURC	Murrieta	76.37	323	P	P	08 55 58.1	+0.2
	baz=141						
GMRC	Granite Mounta	76.50	324	P	P	08 55 59.6	+0.8
	baz=142						

ECSD	EROS Data Cent	76.86	342	P	P	08 56 01.7	+1.3
	baz=159,SNR=30						
CIS	Catalina Islan	76.87	322	P	P	08 56 02.4	+1.7
	baz=140						
HEC	Hector,Ludlow	76.88	324	P	P	08 56 02.5	+1.6
	baz=142						
MAW	Mawson	76.89	164	LR	LR	09 29 11.2	
	comp=Z,1µm,20.5s,baz=228,slow=35						
TUQ	Turquoise Moun	77.15	325	P	P	08 56 03.4	+0.9
	baz=142						
N23A	Red Feather La	77.30	334	P	P	08 56 04.5	+1.1
	baz=151						
SPMN	Marine on St.	77.33	345	P	P	08 56 04.5	+1.5
	baz=162						
GSC	Goldstone, Bar	77.49	324	P	P	08 56 05.5	+1.2
	baz=142						
O20A	White River Ci	77.54	332	P	P	08 56 05.8	+1.3
	baz=149,SNR=14						
SHOC	Shoshone, Teco	77.69	325	P	P	08 56 06.5	+1.2
	baz=142						
EDW2	Edwards Air Fo	77.78	323	P	P	08 56 07.5	+1.7
	baz=141						
LRMC	Laurel Mtn Rad	78.08	323	P	P	08 56 09.1	+1.4
	baz=141						
SUSD	Miller	78.16	341	P	P	08 56 09.4	+1.7
	baz=157						
FURC	Furnace Creek,	78.43	325	P	P	08 56 10.6	+1.3
	baz=142						
ISA	Isabella, Lake	78.63	323	P	P	08 56 11.6	+1.0
	baz=140						
PKM	Mcpherson Peak	78.75	322	P	P	08 56 11.7	+0.3
	baz=139						
CWC	Cottonwood Cre	79.03	324	P	P	08 56 14.3	+1.4
	baz=141						
K22A	Casper	79.04	335	P	P	08 56 14.3	+1.5
	baz=150,SNR=10						
VES	Vestal, Richgr	79.09	323	P	P	08 56 14.5	+1.5
	baz=140						
GRAC	Grapevine Rang	79.10	325	P	P	08 56 14.5	+1.5
	baz=141						
KOWA	Kowa	79.16	66	P	P	08 56 14.3	+0.5
KOWA				IAmb	IAmb	08 56 27.9	
	comp=Z,36nm,1.2s						
R11A	Troy Canyon, C	79.29	327	P	P	08 56 15.3	+1.1
	baz=143,SNR=9.9						
RSSD	Black Hills	79.45	337	P	P	08 56 16.4	+1.3
	baz=152						
DUG	Dugway, Tooele	79.51	330	P	P	08 56 16.6	+1.2
	baz=145,SNR=7.1						
DUG	Dugway, Tooele	79.51	330	IAMs_20	IAMs_20	09 26 42.3	
	comp=Z,468nm,21.0s						
HWUT	Hardware Ranch	80.14	331	IAMs_20	IAMs_20	09 28 22.0	
	comp=Z,498nm,19.0s						
BW06	Boulder Array	80.29	333	P	P	08 56 20.7	+1.0
	baz=148,SNR=6.6						
PDAR	Pinedale Array	80.29	333	P	P	08 56 20.9	+1.2
	comp=Z,2.5nm,0.8s,baz=146,slow=8.4,SNR=14						
PDAR				LR	LR	09 29 09.9	
	comp=Z,145nm,18.2s,baz=150,slow=34						
NVAR	Mina Array Bea	80.68	325	P	P	08 56 24.1	+2.3
	comp=Z,2.1nm,0.9s,baz=143,slow=6.3,SNR=9.4						
AGMN	Agassiz Nation	80.93	344	P	P	08 56 24.2	+1.6
	baz=160						
MDND	Maddock	81.46	342	P	P	08 56 27.0	+1.5
	baz=156						
BOSA	Boshof	81.96	118	LR	LR	09 28 23.2	
	comp=Z,543nm,20.4s,baz=227,slow=32						
RLMT	Red Lodge	82.18	334	P	P	08 56 31.2	+1.6
	baz=148						
LAO	LASA Array	82.44	337	P	P	08 56 32.4	+1.6
	baz=151						
ULM	Lac du Bonnet	82.76	345	P	P	08 56 33.5	+1.3
	comp=Z,12nm,1.0s,baz=147,slow=6.1,SNR=6.5						
HLID	Hailey	82.94	330	P	P	08 56 34.9	+1.3
	baz=144,SNR=22						
TORD	Torodi Ar. Bea	83.01	71	P	P	08 56 34.8	+0.4
	comp=Z,19nm,0.7s,baz=263,slow=5.0,SNR=37						
TORD				LR	LR	09 32 11.8	
	comp=Z,1µm,18.4s,baz=240,slow=35						
TORD	Torodi Ar. Bea	83.01	71	P	P	08 56 35.0	+0.6
TORD				IAmb	IAmb	08 56 48.3	
	comp=Z,22nm,0.9s						
DGMT	Dagmar	83.36	339	P	P	08 56 36.8	+1.4
	baz=153						
BOZ	Bozeman (W)	83.48	333	P	P	08 56 37.0	+0.7
	baz=146						
O03E	Paynes Creek	83.85	324	P	P	08 56 38.9	+0.7
	baz=139						
O02D	Mt. Diablo Mer	84.27	323	P	P	08 56 41.4	+1.0
	baz=138						
N02D	Trinity Center	84.82	324	P	P	08 56 43.8	+0.7
	baz=138						
M04C	Macdoel	84.98	325	P	P	08 56 45.0	+1.0
	baz=139						
M02C	Callahan	85.20	324	P	P	08 56 46.0	+0.9
	baz=138						
BMO	Blue Mountains	85.22	330	IAMs_20	IAMs_20	09 30 55.1	
	comp=Z,395nm,20.0s						
MSO	Missoula	85.40	333	P	P	08 56 47.6	+1.6
	baz=145						
L04D	Klamath Falls	85.54	325	P	P	08 56 47.4	+0.6
	baz=138						
J05D	Fort Rock, OR	85.82	326	P	P	08 56 49.5	+1.3
	baz=139						
L02E	Cave Junction	86.14	324	P	P	08 56 51.0	+1.3
	baz=137						
J04D	Umpqua Nationa	86.20	326	P	P	08 56 51.4	+1.2
	baz=138						
K02D	Willamette Mer	86.57	325	P	P	08 56 52.9	+1.1
	baz=137						
I05D	Terrebonne, OR	86.66	327	P	P	08 56 53.2	+1.0
	baz=139						
I04A	Tendick Farm,	86.76	326	P	P	08 56 54.1	+1.4
	baz=138						
NEW	Newport	87.84	332	P	P	08 56 59.4	+1.6
	baz=142						
D03D	Eldon	89.86	328	P	P	08 57 08.7	+1.5
	baz=138						
B05A	Bryant	89.96	329	P	P	08 57 09.6	+2.0
	baz=139						
COI	Coimbra	91.60	43	IAMs_20	IAMs_20	09 35 60.0	
	comp=Z,773nm,20.0s						
ESDC	Sonseca Array	93.98	46	LR	LR	09 40 03.6	
	comp=Z,568nm,18.1s,baz=250,slow=36						
VSL	Villasalto	102.59	52	IAMs_20	IAMs_20	09 48 09.3	
	comp=Z,382nm,19.0s						
DZM	Mont Dzumac	103.41	234	*e*PS	PS	09 11 38.3	+3.8
	comp=Z,123nm,25.0s						
DZM	Mont Dzumac	103.41	234	*e*LR	LR	09 32 04.9	
	comp=Z,537nm,24.4s,baz=131						
WLF	Walferdange	105.42	41	IAMs_20	IAMs_20	09 49 42.4	
	comp=Z,522nm,18.0s						
KMBO	Kilima Mbogo	106.14	101	IAMs_20	IAMs_20	09 46 01.0	
	comp=Z,434nm,19.0s						
KIBK	Kibwezi	106.18	102	IAMs_20	IAMs_20	09 42 42.5	
	comp=Z,657nm,21.0s						
AQU	L'Aquila	106.60	50	IAMs_20	IAMs_20	09 55 14.6	
	comp=Z,430nm,18.0s						
STU	Stuttgart	106.77	43	IAMs_20	IAMs_20	09 49 17.5	
	comp=Z,363nm,19.0s						
LODK	Lodwar	106.86	96	IAMs_20	IAMs_20	09 45 56.1	
	comp=Z,545nm,19.0s						
A36M	Sachs Harbour	108.25	345	IAMs_20	IAMs_20	09 54 00.8	
	comp=Z,440nm,18.0s						
CLL	Collm	110.07	42	*e*PS	PS	09 12 38.0	-4.7
CLL				*e*PPS	PPS	09 13 46.0	
CLL				*e*SS	SS	09 18 30.0	-10
CLL				*e*SSS	SSS	09 22 42.0	
CLL				Lm	MLR	09 50 00.0	
	comp=N,300nm,19.1s						
CLL				Lm	MLR	09 50 00.0	
	comp=E,400nm,18.8s						
CLL				Lm	MLR	09 50 00.0	
	comp=Z,400nm,18.5s						
CLL	Collm	110.07	42	IAMs_20	IAMs_20	09 50 22.5	
	comp=Z,457nm,19.0s						
PDG	Podgorica	110.59	52	IAMs_20	IAMs_20	09 53 24.4	
	comp=Z,425nm,18.0s						
DIVS	Divibare	111.71	51	IAMs_20	IAMs_20	09 58 09.8	
	comp=Z,310nm,18.0s						
FURI	Furi	112.41	93	IAMs_20	IAMs_20	09 46 42.5	
	comp=Z,485nm,20.0s						
PSZ	Piszkesteto	113.00	47	IAMs_20	IAMs_20	09 53 22.4	
	comp=Z,495nm,18.0s						
MLR	Muntele Rosu	116.17	51	IAMs_20	IAMs_20	09 58 05.8	
	comp=Z,430nm,19.0s						
ASAR	Alice Springs	120.93	208	PKP	PKiKP	09 03 02.5	+0.6
	comp=Z,0.5nm,0.7s,baz=116,slow=1.7,SNR=5.2						
ASAR				PKKPab	PKKPab	09 13 10.3	+1.8
	comp=Z,0.2nm,0.7s,baz=331,slow=3.4,SNR=4.4						
WRA	Warramunga Arr	124.04	210	PKP	PKiKP	09 03 08.2	+0.2
	comp=Z,1.6nm,1.0s,baz=161,slow=1.7,SNR=16						
RAYN	Ar Rayn	124.57	81	IAMs_20	IAMs_20	10 02 35.8	
	comp=Z,338nm,18.0s						
OBN	Obninsk	124.67	41	*i* PKIKP	PKiKP	09 03 08.7	+0.7
OBN				*e*		09 04 54.3	
OBN				*e*SS	SS	09 21 53.7	+4.3
OBN				pmax	pmax		
	comp=Z,4.0nm,0.6s						
OBN	Obninsk	124.67	41	IAMs_20	IAMs_20	10 05 12.5	
	comp=Z,337nm,21.0s						
H11S2	WAKE ISLAND Hy	125.63	272	T	T	11 22 10.9	
	baz=115,slow=74,SNR=53						
H11S1	WAKE ISLAND Hy	125.64	272	T	T	11 22 05.4	
	baz=115,slow=74,SNR=59						
H11S3	WAKE ISLAND Hy	125.65	272	T	T	11 22 12.2	
	baz=115,slow=74,SNR=56						
KIV	Kislovodsk	127.48	56	*i* PKIKP	PKPdf	09 03 12.7	-0.9
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
UOSS	Minazif	134.24	83	IAMs_20	IAMs_20	10 10 06.9	
	comp=Z,317nm,18.0s						
KAPI	Kappang	143.22	200	IAMs_20	IAMs_20	10 07 46.3	
	comp=Z,276nm,18.0s						
BRVK	Borovoye	144.38	39	IAMs_20	IAMs_20	10 08 29.6	
	comp=Z,244nm,18.0s						
POO	Poona	147.06	103	*e*x	PKPdf	09 03 53.0	+2.8
KURK	Kurchatov	150.03	38	IAMs_20	IAMs_20	10 12 22.1	
	comp=Z,288nm,22.0s						
AAK	Ala-Archa	150.60	56	IAMs_20	IAMs_20	10 17 19.2	
	comp=Z,219nm,20.0s						
ZALV	Zalesovo Beam	150.96	28	PKPbc	PKiKP	09 04 01.8	+0.2
	comp=Z,8.3nm,0.5s,baz=298,slow=3.2,SNR=36						
BOD	Bodaibo	152.01	353	*e*PKIKP	PKiKP	09 04 03.5	-0.1
BOD				pmax	pmax		
	comp=Z,19nm,1.5s						
KSH	Kashi	152.34	62	PKPbc	PKPdf	09 03 56.6	-1.5
KSH				LR	LR		
	comp=Z,510nm,24.0s						
KSH				LR	LR		
	comp=Z,470nm,24.0s						
MAKZ	Makanchi	153.97	43	IAMs_20	IAMs_20	10 14 13.8	
	comp=Z,296nm,20.0s						
MKAR	Makanchi Array	154.16	43	PKPbc	PKiKP	09 04 10.2	+1.7
	comp=Z,2.0nm,0.7s,baz=310,slow=2.1,SNR=11						
TLY	Talaya	158.26	7	*i* PKP2	PKPab	09 04 44.0	+4.5
TLY				pmax	pmax		
	comp=Z,34nm,1.4s						
WMQ	Urumqi	158.97	44	*e*PKP	PKPdf	09 04 06.1	-0.6
WMQ				LR	LR		
	comp=Z,240nm,16.1s						
WMQ				LR	LR		
	comp=Z,340nm,19.3s						
WMQ				LR	LR		
	comp=Z,330nm,20.9s						
ZAK	Zakamensk	159.50	8	*e*PKP2	PKPab	09 04 47.1	+2.1
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.5s						
SONM	Songino Array	162.30	3	PKPab	PKPab	09 04 58.9	+1.5
	comp=Z,2.2nm,0.9s,baz=352,slow=5.9,SNR=6.2						
GTA	Gaotai	168.65	33	*e*PKP	PKPdf	09 04 16.8	+1.0
GTA				PKPab	sPKPab	09 05 29.4	+1.6
GTA				PP	PP	09 09 14.0	-0.5
GTA				AMB	AMB		
	comp=Z,190nm,6.9s						
GTA				LR	LR		
	comp=Z,100nm,24.4s						
GTA				LR	LR		
	comp=Z,220nm,21.1s						
GTA				LR	LR		
	comp=Z,220nm,20.7s						
QIZ	Qiongzhong	168.78	190	PKP	PKPdf	09 04 13.4	-2.9
QIZ				PP	PP	09 09 12.3	-2.1
QIZ				SS	SS	09 30 07.3	+0.1
QIZ				LR	LR		
	comp=Z,210nm,16.1s						
QIZ				LR	LR		
	comp=Z,150nm,11.0s						
QIZ				LR	LR		
	comp=Z,220nm,15.7s						
HHC	Hu-ho-hao-te	168.90	345	*e*PKP	PKPdf	09 04 09.3	-6.6
HHC				AMB	AMB		
	comp=Z,110nm,12.5s						
HHC				LR	LR		
	comp=Z,340nm,19.8s						
HHC				LR	LR		
	comp=Z,360nm,19.9s						
HHC				LR	LR		
	comp=Z,450nm,22.3s						
NJ2	Nanjing	170.37	284	*e*PKP	PKPdf	09 04 15.5	-1.4
GYA	Guiyang	176.18	164	PKP	PKPdf	09 04 13.5	-6.0
GYA				PKPab	sPKPab	09 06 01.6	+0.3
GYA				PP	PP	09 09 50.6	-0.4
GYA				SS	SS	09 31 17.0	-2.8

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*TUL **06** 08:47:35.7±0.7, 36°.80N±0°.01×97°.66W±0°.02, h4km±6km, ML2.6, mb_Lg2.2/17(NEIC) Error ellipse: s-maj=1.9km s-min=1.4km az=122.0*

NEIC 06 08:47:36.0±0.5**, 36°.79N**±0°.01×**97°.66W**±0°.01**, h7**km±4km**, Error ellipse: s-maj=1.9km s-min=1.3km az=138.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.17	290	Pg	Pg	08 47 39.5	0.0
GC02				Sg	Sg	08 47 42.0	+0.2
KAN17	Caldwell West	0.26	342	Pg	Pg	08 47 41.2	0.0
KAN17				Sg	Sg	08 47 45.0	+0.2
KAN13	South Haven SW	0.27	34	Pg	Pg	08 47 41.2	0.0
KAN13				Sg	Sg	08 47 45.0	+0.2
KAN14	Manchester OK	0.29	304	Pg	Pg	08 47 41.7	0.0
KAN14				Sg	Sg	08 47 45.8	+0.2
KAN09	Caldwell North	0.34	6	Pg	Pg	08 47 42.7	0.0
BLOK	Blackwell	0.36	95	Pg	Pg	08 47 42.9	-0.2
KAN01	Argonia South	0.37	348	Pg	Pg	08 47 43.1	0.0
CROK	Carrier	0.39	222		Pg	08 47 43.5	0.0
CROK				Sg	Sg	08 47 49.0	+0.4
OK032	Salt Plains WL	0.44	272	Pg	Pg	08 47 44.4	-0.1
KS20	Mayfield South	0.44	11	Pg	Pg	08 47 44.5	-0.1
KAN10	Anthony SW Sta	0.48	314	Pg	Pg	08 47 45.1	-0.1
KAN06	Argonia West S	0.48	341		Pg	08 47 45.1	-0.2
KAN08	Anthony NE Sta	0.50	330		Pg	08 47 45.5	-0.1
KAN16	Harper SW Stat	0.54	323	Pg	Pg	08 47 46.2	-0.2
KAN12	Harper NE Stat	0.57	332	Pg	Pg	08 47 46.8	-0.2
T35A	Sooner Cattle	0.93	82	Pg	Pg	08 47 53.3	-0.6
QUOK	Quay	0.99	129		Pg	08 47 54.8	-0.2
OK031	S. Brethren Rd	1.07	141	Pg	Pg	08 47 56.0	-0.5
OK030	Cody Creek RV	1.12	140	Pg	Pg	08 47 56.8	-0.6
BCOK	Bluff Creek, N	1.14	178	Pg	Pg	08 47 57.3	-0.5
OK025	Westminster Rd	1.24	168	Pg	Pb	08 47 59.0	-0.6
OKCFA	Oklahoma City	1.39	173		Pn	08 48 01.7	-0.1
FNO	Franklin	1.55	172	Pn	Pn	08 48 04.2	+0.2
FNO				IAmb_Lg		08 48 23.8	
	comp=Z,9.9nm,1.3s						
TUL1	Leonard	1.75	120	IAmb_Lg		08 48 32.8	
	comp=Z,11nm,0.8s						
WMOK	Wichita Mounta	2.24	204	IAmb_Lg		08 48 51.2	
	comp=Z,7.0nm,0.9s						
X37A	Clayton	2.88	139	IAmb_Lg		08 49 14.3	
	comp=Z,9.3nm,0.8s						
HHAR	Hobbs	3.04	99		Pn	08 48 25.1	+0.6
W39A	Magazine	3.53	116	IAmb_Lg		08 49 32.4	
	comp=Z,7.7nm,0.8s						
S39A	Bolivar	3.58	74	IAmb_Lg		08 49 33.3	
	comp=Z,5.5nm,0.8s						
AMTX	Amarillo	3.78	241	IAmb_Lg		08 49 44.0	
	comp=Z,7.2nm,0.8s						
P38A	Dawn	4.31	48	IAmb_Lg		08 50 04.2	
	comp=Z,7.3nm,1.0s						
R40A	Maddies Statio	4.54	69	IAmb_Lg		08 49 59.7	
	comp=Z,6.9nm,0.8s						

ISC 06 08:59:08.1±1.0**, 48°.69N**±0°.07×**18°.41E**±0°.04**, h11**km±10km**, n6, σ0s.42**/12**, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOLL	Kolacno	0.12	182	*e*PG	Pg	08 59 10.9	-0.1
KOLL				*e*SG	Sg	08 59 13.5	+0.4
VYHS	Vyhne	0.35	125	*e*PG	Pg	08 59 14.9	-0.2
VYHS				*e*SG	Sg	08 59 19.8	+0.1
JAVC	Velka Javorina	0.52	289	*e*PG	Pg	08 59 18.6	+0.4
JAVC				*e*SG	Sb	08 59 26.5	-0.3
MODS	Modra-Piesok	0.82	247	*e*PG	Pb	08 59 24.0	-0.4
MODS				*e*SG	Sb	08 59 35.9	+0.5
LANS	Liptovska Anna	0.84	56	*e*PG	Pn	08 59 26.2	+0.3
LANS				*e*SG	Sn	08 59 38.7	+0.5
MORC	Moravsky Berou	1.22	333	*e*PG	Pn	08 59 30.8	-0.5
MORC				*e*SG	Sb	08 59 46.9	-0.3

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*DDA **06** 09:07:17.3, 35°.03N×26°.53E, h4km±3km, ML2.3*
*ATH **06** 09:07:21.5, 35°.22N×26°.49E, h21km±6km, ML3.0/2, Error ellipse: s-maj=8.1km s-min=2.7km az=160.0*
*THE **06** 09:07:22.6, 35°.04N×26°.35E, h24km, ML2.9/2, Error ellipse: s-maj=1.9km s-min=0.8km az=172.0*

ISC 06 09:07:15.9±1.7**, 34°.97N**±0°.10×**26°.68E**±0°.04**, h9**km±13km**, n20, σ0s.91**/28**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZKR	Zakros	0.40	292	P	Pn	09 07 27.3	-0.6
ZKR				S	Sb	09 07 31.4	-0.1
	9µm,0.2s						
ZKR	Zakros	0.40	292	P	Pn	09 07 27.2	-0.6
ZKR				S	Sb	09 07 31.7	+0.2
ZKR				AML	AML	09 07 31.8	
	comp=E,26870µm,0.2s						
ZKR				AML	AML	09 07 32.1	
	comp=N,10606µm,0.3s						
STIA	Sitia Lasithi	0.53	296	P	Pb	09 07 28.7	+1.3
STIA				S	Sg	09 07 33.7	+0.4
FRMA	Ierapetra Chan	0.78	274	P	Pg	09 07 31.0	+0.1
NPS	Neapolis	0.92	289	P	Pn	09 07 34.7	-0.3
NPS				S	Sg	09 07 44.1	-1.5
	comp=N,615nm,0.4s						
NPS	Neapolis	0.92	289	P	Pn	09 07 34.7	-0.3
NPS				S	Sg	09 07 44.9	-0.7
NPS				AML	AML	09 07 46.8	
	comp=E,1686µm,0.5s						
NPS				AML	AML	09 07 47.6	
	comp=N,930µm,0.3s						
SIVA	Sivas	1.53	272	P	Pg	09 07 46.4	+1.1
THR6	Thira Island,	1.73	323	P	Pn	09 07 47.1	+0.9
THR8	Santorini-Mono	1.74	326	P	Pn	09 07 47.0	+0.8
SNT5	Nea Kammeni, S	1.77	324	P	Pn	09 07 47.8	+1.1
SNT5	Nea Kammeni, S	1.77	324	P	Pn	09 07 47.8	+1.1
THR3	Thira Island,	1.77	325	P	Pb	09 07 47.9	-0.7
DAT	Datca	1.91	22	*i* P	Pb	09 07 51.6	+0.7
VAM	Vamos	2.08	283	P	Pg	09 07 55.0	-0.7
TURN	Turunc	2.21	35	*i* P	Pg	09 07 58.3	0.0
TURN				*i* S	Sg	09 08 28.1	+1.1
TURN				IAML		09 08 47.0	
	comp=E,23nm,1.0s						
DALY	Dalyan (Mula)	2.45	40	*i* P	Pg	09 08 02.6	-0.2
FETY	Fethiye	2.57	49	*i* P	Pb	09 08 02.5	+0.4
AKAS	Kas	2.70	61	*i* P	Pb	09 08 04.8	+0.4
AKAS				*i* S	Sb	09 08 36.1	-1.6
AYDN	Tasoluk	2.86	20	*i* P	Pb	09 08 05.2	-1.9
TAVA	DENIZLI_Tavas	3.08	35	*i* P	Pb	09 08 11.3	+0.4
TAVA				*i* S	Sb	09 08 48.6	-0.1
TAVA				IAML		09 08 59.0	
	comp=N,10.0nm,0.7s						

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*TUL **06** 09:23:14.9±0.4, 36°.916N±0°.009×98°.15W±0°.01, h7km±4km, ML2.6, mb_Lg2.1/15(NEIC), Error ellipse: s-maj=1.7km s-min=1.2km az=103.0*

NEIC 06 09:23:15.3±0.5**, 36°.919N**±0°.008×**98°.15W**±0°.01**, h5**km±1km**, Error ellipse: s-maj=2.9km s-min=2.0km az=181.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK032	Salt Plains WL	0.12	204	Pg	Pg	09 23 17.8	-0.1
OK032				Sg	Sg	09 23 20.1	+0.5
KAN14	Manchester OK	0.15	75	Pg	Pg	09 23 18.5	+0.1
KAN14				Sg	Sg	09 23 21.1	+0.7
KAN10	Anthony SW Sta	0.21	11	Pg	Pg	09 23 19.6	+0.1
KAN10				Sg	Sg	09 23 23.0	+0.7
GC02	Grant County #	0.24	106	Pg	Pg	09 23 19.9	-0.1
GC02				Sg	Sg	09 23 23.6	+0.5
KAN05	Bluff City Nor	0.29	49		Pg	09 23 21.0	0.0
KAN05				Sg	Sg	09 23 25.1	+0.3
KAN16	Harper SW Stat	0.31	12	Pg	Pg	09 23 21.5	0.0
KAN17	Caldwell West	0.33	68	Pg	Pg	09 23 21.7	0.0
KAN08	Anthony NE Sta	0.34	24		Pg	09 23 21.9	0.0
KAN01	Argonia South	0.39	53	Pg	Pg	09 23 22.8	0.0
KAN12	Harper NE Stat	0.40	17	Pg	Pg	09 23 23.0	0.0
KAN06	Argonia West S	0.40	35		Pg	09 23 23.0	-0.1
CROK	Carrier	0.43	162	Pg	Pg	09 23 23.7	0.0
KAN09	Caldwell North	0.47	63	Pg	Pg	09 23 24.4	-0.1
KAN13	South Haven SW	0.54	80	Pg	Pg	09 23 25.5	-0.3
KS20	Mayfield South	0.57	57	Pg	Pg	09 23 25.9	-0.3
BLOK	Blackwell	0.76	102	Pg	Pg	09 23 29.3	-0.7
U32A	Winter Ranch,	0.87	232	Pg	Pg	09 23 31.3	-0.8
T35A	Sooner Cattle	1.31	90	Pn	Pn	09 23 39.2	-1.1
QUOK	Quay	1.38	122	Pn	Pn	09 23 40.2	-1.1
OK031	S. Brethren Rd	1.43	132	Pn	Pn	09 23 41.0	-0.9
OK030	Cody Creek RV	1.48	132	Pn	Pn	09 23 41.8	-0.8
TUL1	Leonard	2.15	117	IAmb_Lg		09 24 22.7	
	comp=Z,10nm,0.9s						
WMOK	Wichita Mounta	2.24	194	IAmb_Lg		09 24 27.2	
	comp=Z,5.9nm,0.7s						
CBKS	Cedar Bluff	2.27	327	IAmb_Lg		09 24 26.5	
	comp=Z,7.2nm,0.8s						
X34A	Smith Ranch, M	2.33	174	IAmb_Lg		09 24 32.7	
	comp=Z,9.8nm,0.7s						
U38A	Gravette	3.06	98	IAmb_Lg		09 24 57.7	
	comp=Z,7.2nm,0.7s						
X37A	Clayton	3.24	135	IAmb_Lg		09 25 01.3	
	comp=Z,6.3nm,0.9s						
HHAR	Hobbs	3.44	99	IAmb_Lg		09 25 12.9	
	comp=Z,6.5nm,0.8s						
AMTX	Amarillo	3.52	236	IAmb_Lg		09 25 06.7	
	comp=Z,6.6nm,0.9s						
R40A	Maddies Statio	4.86	72	IAmb_Lg		09 25 51.0	
	comp=Z,3.5nm,0.7s						

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*BJI **06** 09:43:50.5±0.0, 20°.26S×173°.70W, h13km, mB5.6/17, mb5.1/29, Ms5.1/7, Ms7 4.9/7*
*NEIC **06** 09:43:50.9±2.9, 20°.2S±0°.1×173°.55W±0°.08, h10km±1km, mb5.0/35, Error ellipse: s-maj=22.5km s-min=12.4km az=178.0*
*IDC **06** 09:43:51.2±0.6, 20°.05S×174°.03W, h0km, mb4.6/19, mb1 4.7/20, mb1mx4.5/43, mbtmp4.6/20, ML4.8/1, MS4.1/20, Ms1 4.1/20, ms1mx4.0/29, Error ellipse: s-maj=19.7km s-min=15.8km az=140.0*
*MOS **06** 09:43:52.9±1.5, 20°.08S×174°.06W, h20km, mb4.9/13, Error ellipse: s-maj=14.8km s-min=11.3km az=14.0*
*GCMT **06** 09:43:55.9±0.3, 20°.16S±0°.03×173°.32W±0°.02, h22km, MW5.0/78, Moment Tensor Solution. s30,c39; s78,c109; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.99±.20; M$_{\theta\theta}$-0.55±.14; M$_{\phi\phi}$-2.44±.12; M$_{r\theta}$0.53±.26; M$_{\theta\phi}$-1.66±.08; M$_{\phi r}$0.79±.17; Best double couple: M$_0$3.33600×10^{16} NP1:ϕ_s209.00000°, δ37.00000°, λ88.00000°. NP2: ϕ_s31.00000°, δ53.00000°, λ91.00000°. Principal axes: T 3.1280, Plg82.0000°, Azm308.0000°; N 0.4130, Plg1.0000°, Azm210.0000°; P -3.5430, Plg8.0000°, Azm120.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 06 09:43:53.5±0.4**, 20°.07S**±0°.07×**173°.61W**±0°.06**, h25**km**, n178, σ1s.69**/157**, mb5.0**/46**, MS4.2**/22**, 8C-11D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	3.61	75	Pn	Pn	09 44 44.9	-3.0
AFI	Afiamalu	6.37	16	Pn	Pn	09 45 24.1	-1.9
	17nm,0.3s,baz=104,slow=1.8,SNR=30						
AFI				LR	LR	09 47 50.3	
	comp=Z,1µm,20.5s,baz=198,slow=37						
AFI				T	T	09 52 12.9	
	8.3nm,0.3s,baz=193,slow=20,SNR=6.7						
MSVF	Nonsavu	8.23	285	LR	LR	09 48 43.7	
	comp=Z,5µm,18.3s,baz=129,slow=37						
MSVF	Nonsavu	8.23	285	*i* P	Pn	09 45 47.8	-3.7
MSVF	Nonsavu	8.23	285	Pn	Pn	09 45 56.7	+5.2

RAR	Rarotonga	13.00	97	Pn	Pn	09 46 51.8	-5.0
	3.2nm,0.3s,baz=285,slow=9.6,SNR=14						
RAR				LR	LR	09 51 30.0	
	comp=Z,479nm,18.1s,baz=273,slow=34						
RAR	Rarotonga	13.00	97	P	Pn	09 46 52.5	-4.3
RAR	Rarotonga	13.00	97	Pn	Pn	09 46 52.5	-4.3
MARNC	Mare, Loyalty	17.23	262	P	Pn	09 47 52.5	-0.1
PINNC	Pines Island,	17.83	258	P	Pn	09 47 59.6	-0.4
PINNC				IAmb	IAmb	09 48 12.9	
	comp=Z,57nm,1.0s						
OUENC	Ouen Island, N	18.37	259	P	Pn	09 48 07.8	+1.1
OUENC				IAmb	IAmb	09 48 20.4	
	comp=Z,88nm,1.1s						
DZM	Mont Dzumac	18.72	260	eP	P	09 48 10.4	-0.1
	comp=Z,134nm,1.3s						
DZM				eLR	LR	09 52 39.0	
	comp=Z,732nm,26.1s						
HAZ	Te Kaha	19.15	201	P	Pn	09 48 16.7	+0.8
TWGZ	Tauwhareparae	19.46	200	P	Pn	09 48 21.8	+2.0
MWZ	Matawai	19.76	201	P	Pn	09 48 23.7	+0.5
URZ	Urewera	19.83	202	P	P	09 48 22.2	-0.3
	comp=Z,3.1nm,0.3s,baz=299,slow=24,SNR=22						
URZ				LR	LR	09 54 12.5	
	comp=Z,317nm,21.3s,baz=31,slow=32						
URZ	Urewera	19.83	202	P	Pn	09 48 22.9	-1.2
TOZ	Tahuroa Road	19.99	206	P	Pn	09 48 26.9	+1.0
RTZ	Ruatahuna	20.20	202	P	Pn	09 48 30.1	+1.6
MTHZ	Maungataniwha	20.46	202	P	Pn	09 48 30.4	-1.1
MRHZ	Matea Rd	20.59	203	P	Pn	09 48 37.2	+4.1
BKZ	Black Stump Fm	20.86	202	P	Pn	09 48 34.3	-1.9
HIZ	Hauiti	20.92	206	P	Pn	09 48 36.9	+0.1
MCHZ	McNeill Hill	21.04	201	P	P	09 48 37.9	+2.4
ETVZ	East Tongariro	21.12	204	P	P	09 48 35.4	-1.1
OTVZ	Oturere	21.16	204	P	P	09 48 37.7	+0.8
KAHZ	Kahuranaki	21.29	201	P	P	09 48 40.6	+2.4
BHHZ	Black Hill Sta	21.30	202	P	P	09 48 38.1	-0.3
TBI	Tubuai	22.66	103	eS	S	09 52 44.1	-16
	comp=Z,145nm,27.5s						
TBI				eLQ	LQ	09 53 12.4	
	comp=Z,1μm,26.0s						
TBI				eLR	LR	09 54 02.5	
	comp=Z,812nm,32.2s						
PPT2	Papeete2	22.87	88	eS	S	09 52 46.9	-17
	comp=Z,193nm,23.5s						
PPT2				eLQ	LQ	09 53 15.9	
	comp=Z,1μm,24.8s						
PPT2				eLR	LR	09 54 20.8	
	comp=Z,951nm,29.0s						
PPT	Papeete	22.88	88	LR	LR	09 57 12.6	
	comp=Z,360nm,18.1s,baz=282,slow=34						
TAOE	Nuku Hiva Isla	34.19	76	eLR	LR	09 59 31.0	
	comp=Z,407nm,27.7s						
CTA	Charters Tower	37.63	263	LR	LR	10 05 23.5	
	comp=Z,338nm,19.0s,baz=92,slow=35						
CTAO	Charters Tower	37.63	263	P	P	09 51 04.8	-1.9
CTAO				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CTAO	Charters Tower	37.63	263	P	P	09 51 04.8	-1.9
PMG	Port Moresby	39.30	280	P	P	09 51 18.4	-2.4
	comp=Z,12nm,0.6s,baz=187,slow=15,SNR=3.9						
PMG				LR	LR	10 05 36.2	
	comp=Z,492nm,18.6s,baz=132,slow=34						
TOO	Toolangi	39.50	235	P	P	09 51 20.7	-1.5
TOO				pmax	pmax		
	comp=Z,15nm,1.1s						
TOO	Toolangi	39.50	235	P	P	09 51 20.7	-1.5
COEN	Coen	41.68	271	P	P	09 51 39.0	-1.5
STKA	Stephens Creek	41.69	244	P	P	09 51 38.7	-1.7
	comp=Z,5.7nm,0.8s,baz=89,slow=10,SNR=11						
STKA				LR	LR	10 07 59.4	
	comp=Z,302nm,18.1s,baz=44,slow=35						
STKA	Stephens Creek	41.69	244	P	P	09 51 38.7	-1.7
BBOO	Buckleboo	46.43	243	P	P	09 52 17.1	-1.3
BBOO				IAmb	IAmb	09 52 23.6	
	comp=Z,19nm,1.2s						
JAY	Jayapura	47.86	285	P	P	09 52 28.7	-1.2
	comp=Z,39nm,0.9s,baz=148,slow=3.2,SNR=8.3						
AS31	Alice Springs	48.62	256	P	P	09 52 35.5	-0.2
ASAR	Alice Springs	48.62	256	P	P	09 52 32.8	-2.9
	comp=Z,3.5nm,0.7s,baz=93,slow=7.7,SNR=42						
ASAR				PcP	PcP	09 54 01.9	+0.9
	comp=Z,1.9nm,0.7s,baz=103,slow=3.4,SNR=4.9						
ASAR				LR	LR	10 12 37.7	
	comp=Z,359nm,18.6s,baz=102,slow=36						
ASAR	Alice Springs	48.62	256	P	P	09 52 36.0	+0.3
ASAR	Alice Springs	48.62	256	P	P	09 52 36.0	+0.3
WB2	Warramunga Arr	48.73	261	P	P	09 52 34.1	-2.3
WB2				IAmb	IAmb	09 52 45.8	
	comp=Z,26nm,1.2s						
WRAB	Tennant Creek	48.73	261	i P	P	09 52 33.0	-3.5
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WRAB	Tennant Creek	48.73	261	P	P	09 52 34.3	-2.2
WRAB				IAmb	IAmb	09 52 45.8	
	comp=Z,20nm,1.1s						
WRA	Warramunga Arr	48.74	261	P	P	09 52 33.4	-3.2
	comp=Z,3.0nm,0.7s,baz=95,slow=5.8,SNR=32						
WRA				LR	LR	10 12 08.7	
	comp=Z,260nm,18.4s,baz=120,slow=35						
WRA	Warramunga Arr	48.74	261	P	P	09 52 34.1	-2.5
WRA				pmax	pmax		
	comp=Z,1.0nm,1.2s						
WRA	Warramunga Arr	48.74	261	P	P	09 52 34.0	-2.5
FORT	Forrest	53.24	246	P	P	09 53 09.2	-1.0
FORT				IAmb	IAmb	09 53 34.8	
	comp=Z,19nm,0.8s						
MTN	Manton Dam	53.29	269	P	P	09 53 09.8	-1.0
MTN				IAmb	IAmb	09 53 10.4	
	comp=Z,11nm,0.8s						
KNRA	Kununurra	54.80	265	P	P	09 53 20.5	-1.4
KNRA				IAmb	IAmb	09 53 31.3	
	comp=Z,16nm,0.9s						
FAKI	Fak Fak	55.45	281	P	P	09 53 25.3	-1.2
FAKI				IAmb	IAmb	09 53 26.2	
	comp=Z,16nm,1.1s						
SIJI	Sorong	57.14	282	P	P	09 53 36.4	-2.2
	comp=Z,58nm,1.0s,baz=59,slow=6.6,SNR=18						
FITZ	Fitzroy Crossi	57.17	261	P	P	09 53 36.8	-2.0
	comp=Z,2.9nm,0.7s,baz=92,slow=4.8,SNR=7.0						
FITZ	Fitzroy Crossi	57.17	261	P	P	09 53 37.5	-1.2
FITZ				IAmb	IAmb	09 53 49.9	
	comp=Z,12nm,1.2s						
SBA	Scott Base	58.60	185	P	P	09 53 48.6	+0.7
SBA				pmax	pmax		
	comp=Z,12nm,1.1s						
SBA	Scott Base	58.60	185	P	P	09 53 48.6	+0.7
SBA				IAmb	IAmb	09 53 52.8	
	comp=Z,12nm,1.1s						
VNDA	Vanda	58.73	186	P	P	09 53 52.0	+3.2
	comp=Z,3.4nm,1.0s,baz=358,slow=6.6,SNR=17						
VNDA	Vanda	58.73	186	P	P	09 53 49.9	+1.1
SOEI	Soe	60.62	270	P	P	09 54 02.8	-0.2
TNTI	Ternate	61.37	282	P	P	09 54 06.9	-1.0
PSA00	Pilbara Seismi	61.77	256	P	P	09 54 09.2	-1.4
PSA00				IAmb	IAmb	09 54 20.9	
	comp=Z,15nm,1.2s						
LUWI	Luwuk	64.93	279	P	P	09 54 30.5	-1.0
TOLI2	Tolitoli	67.57	280	P	P	09 54 47.4	-1.1
TOLI2				IAmb	IAmb	09 54 49.0	
	comp=Z,15nm,0.8s						
QSPA	South Pole Qui	70.00	180	P	P	09 55 01.9	-1.0
QSPA				IAmb	IAmb	09 55 17.9	
	comp=Z,12nm,1.1s						
JAGI	Jajag, Banyuwa	70.52	268	P	P	09 55 05.7	-1.1
JYT	Yasato	71.01	322	P	P	09 55 10.3	+1.1
JMM	Marumori	71.82	323	P	P	09 55 13.7	-0.4
JMM				IAmb	IAmb	09 55 16.3	
	comp=Z,20nm,1.0s						
MJAR	Matsushiro Arr	72.39	321	P	P	09 55 17.9	+0.3
	comp=Z,13nm,0.8s,baz=156,slow=5.9,SNR=32						
MJAR				LR	LR	10 22 57.8	
	comp=Z,62nm,21.0s,baz=240,slow=33						
MJAR	Matsushiro Arr	72.39	321	P	P	09 55 18.1	+0.5
MJAR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MJAR	Matsushiro Arr	72.39	321	P	P	09 55 18.1	+0.5
MJAR				IAmb	IAmb	09 55 19.3	
	comp=Z,8.6nm,0.8s						
MAJO	Matsushiro	72.39	321	i P	P	09 55 15.7	-1.9
MAJO				pmax	pmax		
	comp=Z,16nm,0.8s						
MAT	Matsushiro	72.39	321	P	P	09 55 18.4	+0.8
SPMM	Sapulut	72.92	282	P	P	09 55 22.0	+0.7
JOW	Kunigami	73.11	308	P	P	09 55 22.8	+0.7
	comp=Z,25nm,0.9s,baz=159,slow=8.6,SNR=5.1						
YUK	Yuzh-Kuril'sk	73.80	331	i P	P	09 55 23.8	-1.9
NACB	Ninganchiao	76.90	302	P	P	09 55 43.1	-0.9
SSLB	Suanglung	77.23	301	P	P	09 55 44.7	-1.2
TPUB	Ta-pu	77.26	301	P	P	09 55 44.7	-1.4
YBH	Yreka Blue Hor	77.44	37	LR	LR	10 24 07.1	
	comp=Z,159nm,18.9s,baz=236,slow=31						
YSS	Yuzh-Sakhalins	77.44	331	eP	P	09 55 49.1	+2.6
YSS				pmax	pmax		
	comp=Z,30nm,1.6s						
YSS				MLR	MLR		
	comp=Z,500nm,16.0s						
NVAR	Mina Array Bea	77.93	41	P	P	09 55 52.2	+2.4
	comp=Z,1.2nm,0.7s,baz=222,slow=8.5,SNR=12						
KSRS	Korea Array	79.36	316	P	P	09 55 59.4	+2.1
	comp=Z,8.1nm,1.0s,baz=140,slow=6.0,SNR=11						
KSRS				LR	LR	10 26 23.2	
	comp=Z,72nm,20.1s,baz=210,slow=32						
KSAR	Wonju Array Be	79.38	316	P	P	09 55 58.9	+1.4
KSAR	Wonju Array Be	79.38	316	P	P	09 55 58.9	+1.4
USRK	Ussuriysk Ar.	81.00	324	LR	LR	10 27 58.4	
	comp=Z,147nm,20.2s,baz=172,slow=33						
H03S2	Juan Fernandez	82.81	123	T	T	11 28 51.1	
	baz=248,slow=75,SNR=10						
H03S1	Juan Fernandez	82.82	123	T	T	11 28 47.4	
	baz=248,slow=75,SNR=9.8						
H03S3	Juan Fernandez	82.82	123	T	T	11 28 45.6	
	baz=248,slow=75,SNR=8.0						
NJ2	Nanjing	82.83	308	eP	P	09 56 16.3	+0.4
NJ2				pmax	pmax		
	comp=Z,17nm,0.5s						
H03N2	Juan Fernandez	82.93	123	T	T	11 28 56.0	
	baz=257,slow=71,SNR=5.1						
H03N3	Juan Fernandez	82.93	123	T	T	11 28 47.8	
	baz=257,slow=71,SNR=3.6						
H03N1	Juan Fernandez	82.95	123	T	T	11 28 46.8	
	baz=257,slow=71,SNR=3.9						
MAW	Mawson	83.33	199	P	P	09 56 19.5	+1.5
	comp=Z,3.4nm,0.8s,baz=124,slow=4.3,SNR=8.5						
MAW				LR	LR	10 32 40.8	
	comp=Z,201nm,18.4s,baz=64,slow=35						
MAW	Mawson	83.33	199	P	P	09 56 19.3	+1.3
MAW	Mawson	83.33	199	P	P	09 56 19.2	+1.3
TX31	Lajitas Ar. Si	83.38	56	P	P	09 56 19.8	+0.8
TX31				IAmb	IAmb	09 56 34.6	
	comp=Z,12nm,1.1s						
TX32	Lajitas Array	83.38	56	P	P	09 56 20.0	+1.0
TXAR	Lajitas Array	83.38	56	P	P	09 56 22.1	+3.1
	comp=Z,0.7nm,0.8s,baz=212,slow=8.7,SNR=7.2						
TXAR				LR	LR	10 28 16.5	
	comp=Z,52nm,18.5s,baz=0.0,slow=32						
ANMO	Albuquerque	83.95	50	i P	P	09 56 22.5	+0.6
ANMO				pmax	pmax		
	comp=Z,9.0nm,1.8s						
KLR	Kul'dur	84.32	328	P	P	09 56 25.4	+2.2
	comp=Z,2.8nm,0.9s,baz=128,slow=9.0,SNR=3.7						
KLR	Kul'dur	84.32	328	i P	P	09 56 24.0	+0.8
KLR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
JRMM	Jerantut	85.62	276	P	P	09 56 32.0	+1.4
PDAR	Pinedale Array	85.86	42	P	P	09 56 33.1	+1.7
	comp=Z,0.6nm,0.8s,baz=208,slow=2.9,SNR=5.2						
PDAR				LR	LR	10 29 39.8	
	comp=Z,96nm,18.3s,baz=280,slow=32						
PLCA	Paso Flores	86.54	132	LR	LR	10 29 58.2	
	comp=Z,90nm,18.4s,baz=242,slow=32						
H21K	Melozitna Rive	86.92	8	P	P	09 56 34.9	-0.8
H21K				IAmb	IAmb	09 56 52.4	
	comp=Z,18nm,1.4s						
SEY	Seymchan	86.96	345	i P	P	09 56 34.3	-1.7
COLA	College	86.96	11	i P	P	09 56 34.0	-1.9
COLA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ILAR	Eielson Array	87.04	11	P	P	09 56 38.2	+1.8
	comp=Z,1.1nm,0.9s,baz=220,slow=6.6,SNR=7.7						
ILAR				LR	LR	10 31 37.0	
	comp=Z,32nm,19.6s,baz=193,slow=33						
IPM	Ipoh	87.18	276	P	P	09 56 40.0	+1.7
SYO	Syowa Base	88.00	191	⇑eP	P	09 56 40.6	-0.5
VNA3	Neumayer Olymp	88.25	175	P	P	09 56 44.6	+2.3
SNAA	Sanae	88.28	177	P	P	09 56 44.0	+1.5
SNAA	Sanae	88.28	177	i P	P	09 56 42.6	+0.1
SNAA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BJI	Beijing	88.53	314	P	P	09 56 45.1	+1.1
BJI				pmax	pmax		
	comp=Z,11nm,1.5s						
RPSI	Rantau Prapat	88.54	273	P	P	09 56 45.4	+0.7
PSI	Prapat	88.57	273	P	P	09 56 45.4	+0.3
	comp=Z,14nm,1.0s,baz=154,slow=2.5,SNR=9.2						
VNA2	Neumayer--Watz	88.74	176	P	P	09 56 46.5	+1.9
VNA1	Neumayer--Stat	88.94	175	P	P	09 56 47.4	+1.8
ZEA	Zeya	89.31	329	eP	P	09 56 50.1	+2.7
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
XAN	Xi'an	91.19	306	P	P	09 56 58.9	+2.2
XAN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
HHC	Hu-ho-hao-te	92.04	313	eP	P	09 57 02.6	+2.0
HHC				PP	PP	10 00 47.0	+6.2
HHC				S	S	10 08 00.2	-1.1
HHC				pmax	pmax		
	comp=Z,17nm,1.3s						
HHC				pmax	pmax		
	comp=Z,100nm,7.2s						
HHC				LR	LR		
	comp=Z,170nm,16.1s						
HHC				LR	LR		
	comp=Z,280nm,20.4s						
HHC				LR	LR		
	comp=Z,450nm,22.2s						
KMI	Kunming	92.86	296	⇑P	P	09 57 05.2	+0.3
KMI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KMI				LR	LR		
	comp=Z,140nm,16.2s						
KMI				LR	LR		
	comp=Z,130nm,15.7s						
KMI				LR	LR		
	comp=Z,200nm,17.5s						
CMAR	Chiang Mai Arr	93.88	288	P	P	09 57 11.7	+2.2
	comp=Z,8.7nm,1.0s,baz=110,slow=2.9,SNR=24						
CHTO	Chiang Mai	94.00	288	P	P	09 57 11.2	+1.2
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CHTO	Chiang Mai	94.00	288	P	P	09 57 11.2	+1.2
CHTO				IAmb	IAmb	09 57 13.1	
	comp=Z,6.5nm,0.8s						
LZH	Lanzhou	95.81	306	eP	P	09 57 20.2	+2.1
LZH				pP	sP	09 57 25.6	-1.6
LZH				sP	pwP	09 57 28.0	-2.9
LZH				pmax	pmax		
	comp=Z,15nm,1.1s						
SONM	Songino Array	98.17	318	P	Pdif	09 57 30.5	+2.0
	comp=Z,0.6nm,0.6s,baz=153,slow=5.0,SNR=3.6						
LPAZ	La Paz	98.38	111	LR	LR	10 34 30.9	
	comp=Z,55nm,18.6s,baz=247,slow=31						
MKAR	Makanchi Array	113.91	313	PKiKP	PKiKP	10 02 30.6	+0.4
	comp=Z,0.5nm,0.7s,baz=166,slow=0.6,SNR=4.9						
KURK	Kurchatov	116.47	317	PKIKP	PKiKP	10 02 35.7	+0.7
KURBB	Kurchatov Arra	116.53	317	PKP	PKiKP	10 02 35.6	+0.6
	comp=Z,1.1nm,0.2s,baz=60,slow=2.4,SNR=5.9						
BVAR	Borovoye Array	121.39	321	PKP	PKiKP	10 02 45.2	+0.6
	comp=Z,1.1nm,0.7s,baz=189,slow=16,SNR=5.6						
AKASG	Malin Array Be	144.51	335	PKP	PKPdf	10 03 26.9	-0.7
	comp=Z,4.8nm,0.7s,baz=39,slow=4.6,SNR=14						
SORM	Soroca	146.86	333	⇓P	PKiKP	10 03 35.1	-1.0
LVV	L'vov	147.16	339	ePKP2	PKPab	10 03 34.6	-1.4
CLL	Collm	148.40	352	ePKP2	PKiKP	10 03 39.0	-0.3
CLL				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CLL	Collm	148.40	352	i	PKPab	10 03 50.3	+9.5
CLL	Collm	148.40	352	ePKPbc	PKiKP	10 03 39.0	-0.3
	comp=Z,8.0nm,0.8s						
CLL	Collm	148.40	352	e(pPKPab)	pPKPab	10 03 43.0	-4.5
BURAR	Bucovina Array	148.56	335	⇓P	PKPab	10 03 40.8	-1.0
BRG	Berggiesshubel	148.69	351	Amp		10 03 49.9	
	comp=Z,6.1nm,0.9s						
BRG	Berggiesshubel	148.69	351	ePKP	PKPab	10 03 43.9	+1.8
UZH	Uzhgorod	148.76	339	ePKP2	PKiKP	10 03 39.8	-0.3
DPC	Dobruska-Polom	148.77	348	ePKP2	PKPab	10 03 41.1	-1.4
DPC	Dobruska-Polom	148.77	348	⇑ePKP	PKPab	10 03 41.1	-1.4
CRVS	Cervenica-Dubn	148.79	341	ePKP2	PKPab	10 03 45.7	+3.1
CRVS	Cervenica-Dubn	148.79	341	ePKP	PKPab	10 03 45.7	+3.1
TPGR	Topolog	149.27	329	⇓P	PKiKP	10 03 42.1	+0.8
VRI	Vrincioaia	149.31	332	⇓P	PKiKP	10 03 41.9	+0.5
PLOR	Plostina	149.36	332	⇑P	PKiKP	10 03 42.3	+0.8
BRTR	Keskin Array B	149.51	316	PKPbc	PKiKP	10 03 41.9	-0.3
	comp=Z,2.0nm,0.8s,baz=134,slow=3.6,SNR=8.2						
DOPR	Dopca	149.81	333	⇓P	PKPab	10 03 44.1	-2.8
VYHS	Vyhne	149.92	343	ePKP2	PKiKP	10 03 43.5	+1.0
VYHS	Vyhne	149.92	343	ePKP	PKiKP	10 03 43.5	+1.0
VYHS				e		10 03 54.2	
MLR	Muntele Rosu	149.95	332	⇓P	PKiKP	10 03 43.8	+1.0
DRGR		150.19	337	⇑P	PKiKP	10 03 43.0	-0.2
VOIR		150.38	333	⇓P	PKiKP	10 03 44.2	+0.5
MODS	Modra-Piesok	150.43	345	ePKIKP	PKiKP	10 03 44.9	+1.3
MODS				e		10 03 55.9	
MODS	Modra-Piesok	150.43	345	ePKP	PKiKP	10 03 44.9	+1.3
MODS				e		10 03 55.9	
KHC	Kasperske Hory	150.44	350	ePKIKP	PKiKP	10 03 44.8	+1.2
KHC				e		10 03 55.4	
KHC	Kasperske Hory	150.44	350	⇑ePKP	PKiKP	10 03 44.8	+1.2
KHC				epPKP	pPKPab	10 03 55.4	-0.6
ARR	Arges	150.61	333	⇓P	PKiKP	10 03 46.5	+2.3
CKRC	Cesky Krumlov	150.62	349	⇑ePKP	PKiKP	10 03 45.1	+1.1
CKRC				ex	x	10 03 56.7	
GERES	GERESS Array B	150.70	350	PKPbc	PKiKP	10 03 45.0	+0.8
	comp=Z,4.3nm,1.2s,baz=347,slow=1.8,SNR=7.8						
SIRR	Siria	151.02	338	⇓P	PKiKP	10 03 46.1	+1.2
CONA	Conrad Observa	151.17	347	eP	PKiKP	10 03 46.9	+1.7
	comp=Z,4.4nm,0.8s						
GZR	Gura Zlata	151.35	336	⇓P	PKiKP	10 03 46.8	+1.2
BZS	Buzias	151.59	337	⇑P	PKiKP	10 03 45.5	-0.5
HERR	Herculane	151.91	335	⇓P	PKiKP	10 03 48.0	+1.3
FETA	Feichten	152.89	353	eP	PKPbc	10 03 48.0	-0.7
	comp=Z,2.7nm,0.8s						
FETA				eP	PKPab	10 04 02.1	+2.4
	comp=Z,6.2nm,0.9s						
KEST	Kesra	164.18	351	PKPab	PKPab	10 04 49.8	+1.0
	comp=Z,1.6nm,0.8s,baz=165,slow=3.8,SNR=4.0						
TORD	Torodi Ar. Bea	171.78	146	PKP	PKPdf	10 04 01.1	+0.2
	comp=Z,0.7nm,0.9s,baz=204,slow=3.6,SNR=4.0						
TORD				PKPab	PKPab	10 05 24.5	+1.7
	comp=Z,1.5nm,1.2s,baz=227,slow=3.6,SNR=2.6						

HEL ***06*** *09:59:56.7±0.1, 64°.75N×30°.68E, h0^{km}, ML2.1, Explosion*
KOLA ***06*** *09:59:57.5, 64°.78N×30°.47E, h0^{km}, ML2.5, Kostomuksha, Karelia*
NAO ***06*** *09:59:57.8±1.7, 64°.81N×30°.59E, ML2.4*
IDC ***06*** *09:59:58.8±2.5, 64°.77N×30°.65E, h0^{km}, mb1 3.0/2, mb1mx2.8/41, mbtmp2.9/2, ML2.3/2, Error ellipse: s-maj=44.0km s-min=8.8km az=100.0*
BER ***06*** *09:59:59.4±2.7, 64°.81N×30°.57E, h0^{km}, ML1.7, ML2.4(NAO), Suspected explosion*
UPP ***06*** *10:00:01.6±2.8, 64°.92N×30°.13E, h0^{km}, ML1.6, Suspected explosion*

ISC 06 09:59:57.1±0.9**, 64°.85N**±0°.02×**30°.50E**±0°.04**, h0^{km}, n54, σ1^{s}.53**/80**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KU6	Riekki	1.21	348	PG	Pg	10 00 20.4	+0.1
	baz=163						
KU6				MSG		10 00 36.6	
	comp=Z,13nm,0.2s						
KU6				SG	Sb	10 00 37.4	+0.4
MSF	Maaselka	1.23	331	PG	Pg	10 00 20.9	+0.2
	baz=152						
MSF				SG	Sn	10 00 39.6	+0.7
JOF	Joensuu	1.97	169	PG	Pn	10 00 30.0	-1.7
JOF				SG	Sn	10 00 56.9	-0.1
OUL	Oulu	1.97	279	PG	Pb	10 00 33.6	-0.2
OUL				SG	Sg	10 01 00.2	-0.1
OUF	Merijarvi	2.53	262	PB	Pb	10 00 41.5	-1.8
OUF				MSG		10 01 13.4	
	comp=Z,15nm,0.2s						
OUF				SG	Sb	10 01 16.5	+1.5
RNF	Rovaniemi	2.56	316	PB	Pb	10 00 42.2	-1.7
RNF				SG	Sb	10 01 17.4	+1.6
OBF0	Syolatti, Pyha	2.71	265	PB	Pb	10 00 44.7	-1.7
OBF0				SG	Sg	10 01 23.1	-1.1
TOF	Tornio	2.86	298	PB	Pn	10 00 46.2	+2.3
TOF				MSG		10 01 24.0	
	comp=Z,6.5nm,0.2s						
TOF				SB	Sb	10 01 24.9	+0.5
SUF	Sumiainen	2.88	224	PB	Pn	10 00 46.1	+1.9
SUF				MSG		10 01 21.2	
	comp=Z,7.9nm,0.2s						
SUF				SG	Sb	10 01 24.9	-0.1
VRF	Varrio	2.94	353	PN	Pn	10 00 46.0	+1.0
	baz=171						
VRF				MSG		10 01 26.1	
	comp=Z,3.5nm,0.2s						
APA0	Apatity Array	2.95	19	Pn	Pn	10 00 45.6	+0.4
	baz=199,slow=11						
APA0				Sn	Sn	10 01 21.9	+0.7
	baz=194,slow=18						
APA0	Apatity Array	2.95	19	Pn	Pn	10 00 45.6	+0.4
	baz=199,slow=11						
APA0				Sn	Sn	10 01 21.9	+0.7
	baz=194,slow=18						
APA0	Apatity Array	2.95	19	P	Pn	10 00 45.8	+0.7
APA0				S	Sn	10 01 22.1	+0.9
APA	Apatity	2.98	22	P	Pn	10 00 46.3	+0.8
APA				S	Sn	10 01 22.7	+0.9
SGF	Sodankyl	3.06	330	SB	Sb	10 01 31.1	+0.8
KALU	Kalix	3.16	292	P	Pn	10 00 50.0	+2.0
KALU	Kalix	3.16	292	PB	Pn	10 00 50.7	+2.7
KALU				SG	Sb	10 01 35.0	+2.0
KAF	Kangasniemi	3.33	216	PB	Pn	10 00 52.2	+1.8
KLF	Kolari	3.58	315	PN	Pn	10 00 55.3	+1.5
KLF				SG	Sg	10 01 51.1	-1.0
KEF	Keuruu	3.69	226	PB	Pn	10 00 57.4	+2.1
PAJU	Pajala	3.73	309	P	Pn	10 00 57.4	+1.5
PAJU				S	Sn	10 01 39.7	-0.8
PAJU	Pajala	3.73	309	PN	Pn	10 00 57.2	+1.3
PAJU				SG	Sg	10 01 54.6	-2.2
ERTU	Ertsjaerv	3.84	300	P	Pn	10 00 59.6	+2.2
ERTU				S	Sn	10 01 43.3	+0.3
ERTU	Ertsjaerv	3.84	300	PN	Pn	10 00 59.7	+2.3
VAF	Ylistaro	3.90	246	PB	Pn	10 01 00.9	+2.7
BURU	Burvik	3.92	270	PN	Pn	10 00 59.4	+1.0
	baz=88						
FIA0	FINESS Array S	3.96	212	Pn	Pn	10 00 59.8	+0.7
	baz=31,slow=14						
FIA0				Sn	Sn	10 01 46.3	+0.2
	baz=42,slow=28						
FIA0				Lg	Lg	10 02 00.4	
	baz=30,slow=28						
FIA0	FINESS Array S	3.96	212	Pn	Pn	10 00 59.8	+0.7
	baz=31,slow=14						
FIA0				Sn	Sn	10 01 46.3	+0.2
	baz=42,slow=28						
FIA0				Sg	Sg	10 02 00.4	-3.8
	baz=30,slow=28						
FIA0	FINESS Array S	3.96	212	PN	Pn	10 00 59.3	+0.3
FIA0				SG	Sb	10 01 59.5	+3.4
FINES	FINESS Array B	3.96	212	Pn	Pn	10 00 59.6	+0.6
	comp=Z,0.3nm,0.3s,baz=37,slow=13,SNR=9.8						
FINES				Pg	Pb	10 01 08.6	+0.9
	comp=Z,0.5nm,0.3s,baz=25,slow=15,SNR=15						
FINES				Lg	Lg	10 02 00.6	
	comp=Z,1.5nm,0.3s,baz=35,slow=25,SNR=13						
HARU	Harads	4.18	293	P	Pn	10 01 03.6	+1.6
MASU	Masugnsbyn	4.33	311	P	Pn	10 01 06.0	+1.8
UMAU	Umeaa	4.37	262	SG	Sg	10 02 14.9	-2.6
HEF	Hetta	4.49	326	eP	Pn	10 01 07.3	+1.0
HEF	Hetta	4.49	326	PN	Pn	10 01 07.7	+1.4
	baz=140						
HEF				SG	Sg	10 02 16.9	-4.4
DUNU	Dundret	4.65	304	P	Pn	10 01 10.6	+2.1
LANU	Lannavaara	4.69	317	P	Pn	10 01 10.2	+1.2
KTK1	Kautokeino	5.06	329	eP	Pn	10 01 14.3	+0.2
KTK1				IAML		10 02 21.8	
	comp=Z,1.3nm,0.2s						
ARA0	ARCESS Array S	5.09	340	Pn	Pn	10 01 15.0	+0.4
	baz=154,slow=14						
ARA0				Sn	Sn	10 02 12.5	-1.5
	baz=153,slow=28						
ARA0				Lg	Lg	10 02 34.6	
	baz=148,slow=37						
ARA0	ARCESS Array S	5.09	340	Pn	Pn	10 01 15.0	+0.4
	baz=154,slow=14						
ARA0				Sn	Sn	10 02 12.5	-1.5
	baz=153,slow=28						
ARA0				IAML		10 02 19.5	
	comp=Z,1.6nm,0.2s						

ARCES	ARCESS Array B	5.09	340	Pn	Pn	10 01 15.3	+0.7
	baz=153,slow=14,SNR=111						
ARCES				Sn	Sn	10 02 13.4	-0.6
	baz=159,slow=25,SNR=1.9						
ARCES				Lg	Lg	10 02 36.8	
	baz=148,slow=34,SNR=2.6						
KEV	Kevo	5.11	346	*e*P	Pn	10 01 14.9	+0.1
RATU	Laukkuluspa	5.31	309	P	Pn	10 01 19.4	+1.8
KOVU	Salmi	5.34	314	P	Pn	10 01 19.2	+1.3
SALU	Saltoluokta	5.49	303	P	Pn	10 01 21.4	+1.4
SALU	Saltoluokta	5.49	303	*e*P	Pn	10 01 22.2	+2.1
NIKU	Nikkaluokta	5.52	308	P	Pn	10 01 22.2	+1.9
KIF	Kilpisjarvi	5.65	322	*e*P	Pn	10 01 22.6	+0.5
JETT	Jettan, Norway	6.13	325	*e*P	Pn	10 01 29.1	+0.2
JETT				IAML		10 02 35.5	
	comp=Z,4.6nm,0.4s						
I43RU	DUBNA INFRASON	8.78	155	*i*		10 52 10.0	
	baz=351,slow=326,SNR=1.8						
NB2	NORSAR Subarra	9.56	255	Pn	Pn	10 02 16.9	+1.0
	baz=61,slow=16						
NB2	NORSAR Subarra	9.56	255	Pn	Pn	10 02 16.9	+1.0
	baz=61,slow=16						
NRA0	NORESS Array S	9.59	253	Pn	Pn	10 02 16.1	-0.2
	baz=50,slow=12						
NRA0	NORESS Array S	9.59	253	Pn	Pn	10 02 16.1	-0.2
	baz=50,slow=12						

*UPP **06** 10:19:07.3±0.2,59.°00N×18.°19E,h0^{km},ML2.5,Explosion*
*DNK **06** 10:19:07.8±0.3,59.°00N×18.°19E,h0^{km},ML2.5(UPP), Explosion*
*HEL **06** 10:19:08.2±0.1,59.°00N×18.°16E,h0^{km},ML2.0, ML2.5(UPP),Explosion*
*IDC **06** 10:19:11.0±1.0,59.°44N×18.°08E,h0^{km},mb1 3.0/3, mb1mx2.9/32,mbtmp2.8/3,ML1.8/3,Error ellipse: s-maj=13.7km s-min=2.5km az=173.0*

ISC 06 10:19:07.3±0.8,**58.°99N**±0.°02×**18.°22E**±0.°03,**h0**^{km}**,n49,** σ**1**^{s}**06**/71,**Baltic Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NYNU	Nynaeshamn	0.11	280	P	Pg	10 19 09.4	0.0
NYNU				S	Sg	10 19 10.8	-0.1
NYNU	Nynaeshamn	0.11	280	P	Pg	10 19 09.4	0.0
NYNU				S	Sg	10 19 10.8	-0.1
NYNU	Nynaeshamn	0.11	280	*i* P	Pg	10 19 09.4	0.0
NYNU				*i* S	Sg	10 19 10.8	-0.1
NRTU	Norrtaelje	0.73	17	P	Pg	10 19 20.8	-0.4
NRTU				S	Sg	10 19 30.1	-0.5
NRTU	Norrtaelje	0.73	17	P	Pg	10 19 20.8	-0.4
NRTU				S	Sg	10 19 30.1	-0.5
NRTU	Norrtaelje	0.73	17	*e*P	Pg	10 19 20.8	-0.4
NRTU				*e*S	Sg	10 19 30.5	-0.1
UPP	Uppsala	0.93	341	P	Pg	10 19 24.4	-0.7
UPP	Uppsala	0.93	341	*e*P	Pg	10 19 24.4	-0.7
VIKU	Vikbolandet	0.93	239	P	Pg	10 19 24.6	-0.4
VIKU	Vikbolandet	0.93	239	P	Pg	10 19 24.6	-0.4
VIKU	Vikbolandet	0.93	239	*e*P	Pg	10 19 24.6	-0.4
ESKU	Eskilstuna	0.97	285	P	Pg	10 19 25.1	-0.8
ESKU	Eskilstuna	0.97	285	P	Pg	10 19 25.1	-0.8
ESKU	Eskilstuna	0.97	285	*e*P	Pg	10 19 25.1	-0.8
FIBU	Brunna	1.02	335	P	Pg	10 19 26.1	-0.7
FIBU	Brunna	1.02	335	P	Pg	10 19 26.1	-0.7
FIBU	Brunna	1.02	335	*e*P	Pg	10 19 26.1	-0.7
BACU	Backbrunna	1.04	327	P	Pg	10 19 26.4	-0.9
BACU	Backbrunna	1.04	327	P	Pg	10 19 26.4	-0.9
BACU	Backbrunna	1.04	327	*e*P	Pg	10 19 26.4	-0.9
FLYU	Flymyra	1.16	352	P	Pg	10 19 28.7	-0.8
FLYU				S	Sg	10 19 44.1	-0.4
FLYU	Flymyra	1.16	352	P	Pg	10 19 28.7	-0.8
FLYU				S	Sg	10 19 44.1	-0.4
FLYU	Flymyra	1.16	352	*e*P	Pg	10 19 28.7	-0.8
FLYU				*e*S	Sg	10 19 44.1	-0.4
GOTU	Gotland	1.32	172	*e*P	Pg	10 19 32.0	-0.5
GOTU				*e*S	Sb	10 19 50.6	+0.4
GRAU	Graesoe	1.36	7	P	Pg	10 19 32.5	-0.9
GRAU	Graesoe	1.36	7	P	Pg	10 19 32.5	-0.9
GRAU	Graesoe	1.36	7	*e*P	Pg	10 19 32.5	-0.9
OSTU	Oestervaala	1.36	337	P	Pg	10 19 32.5	-1.0
OSTU				S	Sb	10 19 50.5	-1.2
OSTU	Oestervaala	1.36	337	P	Pg	10 19 32.5	-1.0
OSTU				S	Sb	10 19 50.5	-1.2
OSTU	Oestervaala	1.36	337	*e*P	Pg	10 19 32.5	-1.0
OSTU				*e*S	Sb	10 19 50.5	-1.2
FORU	Forsmark	1.41	359	P	Pg	10 19 33.2	-1.0
FORU	Forsmark	1.41	359	P	Pg	10 19 33.2	-1.0
FORU	Forsmark	1.41	359	*e*P	Pg	10 19 33.2	-1.0
AAL	Aland	1.50	36	P	Pn	10 19 34.8	-0.6
AAL	Aland	1.50	36	*e*P	Pn	10 19 34.8	-0.6
AAL				*e*S	Sg	10 19 54.6	-0.9
VSTU	Vaestervik	1.60	214	P	Pn	10 19 36.7	-0.1
VSTU	Vaestervik	1.60	214	P	Pn	10 19 36.7	-0.1
VSTU	Vaestervik	1.60	214	*e*P	Pn	10 19 36.7	-0.1
LNKU	Linkoeping	1.61	243	P	Pn	10 19 36.7	-0.3
LNKU	Linkoeping	1.61	243	P	Pn	10 19 36.7	-0.3
LNKU	Linkoeping	1.61	243	*e*P	Pn	10 19 36.7	-0.3
SLIT	Slitere, Latvi	2.54	121	*e*PB	Pb	10 19 52.2	-1.5
SLIT				*e*SB	Sb	10 20 25.6	0.0
RAF	Rauma	2.71	40	*e*PB	Pb	10 19 55.1	-1.6
RAF				*e*S	Sn	10 20 26.8	+1.3
RAF				MSG		10 20 32.9	
	comp=Z,5.2nm,0.2s						
HEMU	Hemsoen	3.71	359	*e*P	Pn	10 20 06.2	+0.5
HEMU				*e*SG	Sb	10 21 00.7	+1.8
NOA	NORSAR Array B	4.07	303	Pn	Pn	10 20 10.4	-0.5
	comp=Z,0.0nm,0.3s,baz=127,slow=11,SNR=9.8						
NOA				Pg	Pb	10 20 20.7	+0.8
	comp=Z,0.0nm,0.3s,baz=118,slow=13,SNR=8.4						
NOA				Lg	Lg	10 21 09.1	
	comp=Z,0.1nm,0.3s,baz=157,slow=11,SNR=2.6						
KEF	Keuruu	4.58	43	*e*P	Pn	10 20 19.4	+1.7
KEF				*e*S	Sn	10 21 11.6	+0.1
KEF				MSG		10 21 32.2	
	comp=Z,1.7nm,0.2s						
VAF	Ylistaro	4.61	26	*e*P	Pn	10 20 21.9	+3.8
VAF				*e*SG	Sb	10 21 29.0	+4.0
VAF				MSG		10 21 33.1	
	comp=Z,1.5nm,0.2s						
FINES	FINESS Array B	4.63	54	Pn	Pn	10 20 19.9	+1.5
	comp=Z,0.2nm,0.3s,baz=248,slow=12,SNR=10						
FINES				Pg	Pb	10 20 30.4	+1.0
	comp=Z,0.3nm,0.3s,baz=239,slow=14,SNR=8.2						
FINES				Sn	Sn	10 21 13.1	+0.3
	comp=Z,0.8nm,0.3s,baz=244,slow=22,SNR=11						
FINES				Lg	Lg	10 21 32.3	
	comp=Z,1.0nm,0.3s,baz=242,slow=23,SNR=10						
ARCES	ARCESS Array B	11.04	13	Pn	Pn	10 21 44.3	-2.0
	baz=187,slow=13,SNR=9.0						

IDC 06 11:21:28.6±2.0,**28.°22S**×**176.°42W**,**h0**^{km}**,mb3.6**/2, **mb1 3.9**/2,**mb1mx3.5**/24,**mbtmp3.6**/2,**Error ellipse: s-maj=51.9km s-min=7.7km az=130.0,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.67	232	Pn	Pb	11 22 00.2	0.0
	143nm,0.3s,baz=308,slow=22,SNR=2.0						
RAO				Sn	Sb	11 22 22.0	+0.2
	250nm,0.3s,baz=80,slow=24,SNR=7.6						
ASAR	Alice Springs	44.66	264	P	P	11 29 43.1	-0.2
	0.5nm,0.6s,baz=106,slow=7.3,SNR=11						
WRA	Warramunga Arr	45.45	269	P	P	11 29 49.9	+0.1
	0.9nm,0.8s,baz=108,slow=7.6,SNR=8.9						
FINES	FINESS Array B	143.55	342	PKP	PKPdf	11 41 03.6	-1.1
	1.3nm,0.8s,baz=60,slow=3.4,SNR=1.8						

*NEIC **06** 11:44:48.0±2.5,19.°99S±0.°05×68.°96W±0.°05,h113^{km}±4^{km}, mb4.6/24,ML4.6(GUC),Error ellipse: s-maj=7.9km s-min=6.6km az=186.0*
*SJA **06** 11:44:47.1±0.7,20.°03S×69.°10W,h126^{km}±4^{km},ML4.6, MW4.3*
*VAO **06** 11:44:48.7±0.3,19.°89S×68.°85W,h113^{km},mb4.6*
*GUC **06** 11:44:49.1±0.6,19.°99S×68.°95W,h106^{km}±3^{km},ML4.6*
*IDC **06** 11:44:49.4±0.7,19.°91S×68.°72W,h116^{km}±6^{km},mb4.3/9, mb1 4.4/13,mb1mx4.0/31,mbtmp4.8/13,MS3.0/2, Ms1 3.0/2,ms1mx2.8/26,Error ellipse: s-maj=19.7km s-min=12.6km az=104.0*

ISC 06 11:44:47.7±0.4,**19.°98S**±0.°03×**69.°00W**±0.°04,**h113**^{km}±3^{km}, **h113**^{km}**:pP-P,n182,**σ**1**^{s}**37**/216,**mb4.6**/14,**8C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB08	IPOC Station P	0.21	222	⇑*i*P	Pn	11 45 04.7	+0.7
PB08				*e*S	Sn	11 45 16.2	0.0
PB08				IAML		11 45 17.6	
	comp=E,38μm,0.2s						
PB08	IPOC Station P	0.21	222		Pn	11 45 04.4	+0.4
PB08	IPOC Station P	0.21	222	*e*P	Pn	11 45 05.3	+1.3
PB08				*e*S	Sn	11 45 09.1	-7.2
PB08				IAML		11 45 17.6	
	comp=Z,22μm,0.2s						
PB11	IPOC Station P	0.66	289	⇑*i*P	Pn	11 45 06.8	+0.6
PB11				*i* S	Sn	11 45 20.4	+0.4
PB11				IAML		11 45 21.4	
	comp=E,49μm,0.4s						
PB11	IPOC Station P	0.66	289	Pn	Pn	11 45 06.8	+0.6
PB11	IPOC Station P	0.66	289	*e*P	Pn	11 45 06.8	+0.6
PB11				*e*S	Sn	11 45 21.5	+1.5
PB11				IAML		11 45 25.3	
	comp=Z,12μm,0.4s						
TA02	Huaiquique	1.10	255	*e*P	Pn	11 45 10.7	+0.6
TA02				*i* S	Sn	11 45 27.9	+0.7
TA02	Huaiquique	1.10	255		Pn	11 45 10.8	+0.6
TA02	Huaiquique	1.10	255	*e*P	Pn	11 45 10.9	+0.8
TA02				*e*P		11 45 11.0	
TA02				*e*S	Sn	11 45 28.4	+1.2
TA02				IAML		11 45 29.0	
	comp=Z,6μm,0.1s						
PSGC	Pisagua	1.12	290	⇑*i*P	Pn	11 45 11.2	+0.6
PSGC				*i* S	Sn	11 45 27.8	0.0
PSGC				IAML		11 45 28.9	
	comp=N,9μm,0.3s						
PSGCX	Pisagua	1.12	290	Pn	Pn	11 45 11.2	+0.6
PSGCX	Pisagua	1.12	290	*e*P	Pn	11 45 11.0	+0.4
PSGCX				*e*P	P	11 45 11.1	+0.6
PSGCX				*e*P	P	11 45 11.1	+0.6
PSGCX				*e*P		11 45 11.2	
PSGCX				IAML		11 45 31.0	
	comp=Z,7μm,0.8s						
PB01	IPOC Station P	1.15	203	⇑*i*P	Pn	11 45 11.5	+0.7
PB01				*e*S	Sn	11 45 28.5	+0.2
PB01				IAML		11 45 30.3	
	comp=E,23μm,0.4s						
PB01	IPOC Station P	1.15	203		Pn	11 45 11.6	+0.7
PB01	IPOC Station P	1.15	203	*e*P	Pn	11 45 11.0	+0.1
PB01				*e*S	Sn	11 45 29.2	+0.9
PB01				IAML		11 45 30.1	
	comp=Z,10μm,0.2s						
TA01	Diego Aracena	1.25	242	⇑*i*P	Pn	11 45 11.9	+0.2
TA01	Diego Aracena	1.25	242	Pn	Pn	11 45 12.0	+0.2
TA01	Diego Aracena	1.25	242	*e*P	Pn	11 45 12.0	+0.2
TA01				*e*S	Sn	11 45 32.3	+2.2
PB02	IPOC Station P	1.57	212	⇑*i*P	Pn	11 45 16.1	+0.4
PB02				*e*S	Sn	11 45 36.4	-0.6
PB02				IAML		11 45 45.0	
	comp=E,10μm,0.5s						
PB02	IPOC Station P	1.57	212	*e*P	Pn	11 45 16.0	+0.3
PB02				*e*S	Sn	11 45 37.6	+0.6
PB02				IAML		11 45 45.8	
	comp=Z,8μm,0.2s						
PB07	IPOC Station P	1.93	205	⇑*i*P	Pn	11 45 20.1	0.0
PB07				IAML		11 45 47.7	
	comp=N,5μm,0.2s						
PB07	IPOC Station P	1.93	205		Pn	11 45 20.1	0.0
PB07	IPOC Station P	1.93	205	*e*P	Pn	11 45 15.1	-5.0
PB07				*e*P		11 45 20.0	
PB07				*e*S	Sn	11 45 44.7	0.0
PB07				IAML		11 45 47.8	
	comp=Z,3μm,0.1s						
AP01	Chacalluta	2.04	321	*e*P	Pn	11 45 21.5	+0.1
AP01	Chacalluta	2.04	321		Pn	11 45 21.1	-0.3
AP01	Chacalluta	2.04	321	*e*P	Pn	11 45 23.0	+1.6
AP01				IAML		11 46 00.4	
	comp=Z,3μm,1.2s						
PB03	IPOC Station P	2.17	199	⇑*i*P	Pn	11 45 23.3	+0.1
PB03				*e*S	Sn	11 45 48.8	-1.6
PB03				IAML		11 45 55.8	
	comp=E,4μm,0.5s						
PB03	IPOC Station P	2.17	199	*e*P	Pn	11 45 23.0	-0.2
PB03				*e*P		11 45 23.4	
PB03				*e*S	Sn	11 45 49.9	-0.5
PB03				IAML		11 45 55.8	
	comp=Z,2μm,0.5s						
PB04	IPOC Station P	2.58	204	*i* P	Pn	11 45 28.8	+0.5
PB04				IAML		11 46 04.8	
	comp=E,2μm,0.3s						
PB04	IPOC Station P	2.58	204		Pn	11 45 28.9	+0.5
PB04	IPOC Station P	2.58	204	*e*P	Pn	11 45 28.9	+0.5
PB04				*e*S	Sn	11 45 58.4	-1.2
PB04				IAML		11 46 13.5	
	comp=Z,2μm,0.6s						
LVC	Limon Verde	2.62	178	P	Pn	11 45 30.5	+1.4
	comp=Z,55nm,0.3s,baz=12,slow=12,SNR=116						
LVC				S	Sn	11 46 01.8	+0.9
	comp=Z,333nm,0.3s,baz=352,slow=11,SNR=10						
LVC	Limon Verde	2.62	178	*e*P	Pn	11 45 30.3	+1.2
LVC				*e*S	Sn	11 46 02.0	+1.0
LVC	Limon Verde	2.62	178	*e*P	Pn	11 45 31.3	+2.2
LVC	Limon Verde	2.62	178	*e*P	Pn	11 45 30.6	+1.4
LVC				*e*S	Sn	11 46 02.2	+1.3
PB06	IPOC Station P	2.76	191	*e*P	Pn	11 45 30.7	-0.2
PB06				IAML		11 46 06.4	
	comp=E,3μm,0.3s						
PB06	IPOC Station P	2.76	191		Pn	11 45 30.7	-0.2
PB06	IPOC Station P	2.76	191	*e*P	Pn	11 45 31.0	+0.1
PB06				*e*S	Sn	11 46 02.9	-1.1
PB06				IAML		11 46 06.1	
	comp=Z,1μm,0.2s						
PB05	IPOC Station P	3.07	201	*e*P	Pn	11 45 34.6	-0.2
PB05				IAML		11 46 27.6	
	comp=N,1μm,0.2s						
PB05	IPOC Station P	3.07	201	*e*P	Pn	11 45 34.6	-0.2
PB05				*e*S	Sn	11 46 08.9	-2.3
PB05				IAML		11 46 32.8	
	comp=Z,1μm,0.6s						
PB15	IPOC Station P	3.24	188	*e*P	Pn	11 45 37.6	+0.4
PB15	IPOC Station P	3.24	188		Pn	11 45 37.5	+0.3
PB15	IPOC Station P	3.24	188	*e*P	Pn	11 45 38.0	+0.8
PB15				*e*S	Sn	11 46 15.1	-0.3
PB15				IAML		11 46 38.3	
	comp=Z,4μm,0.3s						
LPAZ	La Paz	3.77	13	P	Pn	11 45 46.2	+1.6
	comp=Z,19nm,0.3s,baz=197,slow=5.6,SNR=312						
LPAZ	La Paz	3.77	13	Pn	Pn	11 45 48.0	+3.4
LPAZ	La Paz	3.77	13	*e*P	Pn	11 45 42.5	-2.0
LPAZ				*e*P		11 45 47.8	
LPAZ				*e*S	Sn	11 46 42.5	+14
PB10	IPOC Station P	3.80	202	*e*P	Pn	11 45 43.6	-0.9
PB10	IPOC Station P	3.80	202		Pn	11 45 43.8	-0.7
PB10	IPOC Station P	3.80	202	*e*P	Pn	11 45 44.0	-0.5
PB10				*e*S	Sn	11 46 23.1	-5.3
PB10				IAML		11 46 45.3	
	comp=Z,422nm,0.9s						
YJA	Yavi	3.92	124	*e*P	Pn	11 45 49.0	+2.5
YJA				*e*P		11 45 49.9	
YJA				*e*S	Sn	11 46 16.1	-16
HJA	Humahuaca	4.63	135	*e*P	Pn	11 45 58.9	+2.9
HJA				*e*S	Sn	11 46 53.8	+4.7
PB14	IPOC Station P	4.80	195		Pn	11 45 57.2	-1.1
PB14	IPOC Station P	4.80	195	*e*P	Pn	11 45 57.0	-1.2
PB14				*e*S	Sn	11 46 47.9	-5.0
PB14				IAML		11 47 09.4	
	comp=Z,409nm,0.8s						
AZAP	Zapla	5.58	140	*e*P	Pn	11 46 10.0	+1.4
SLA	San Lorenzo	5.72	146	*e*P	Pn	11 46 13.0	+2.5
ASTB	Santa Barbara	5.78	134	*e*P	Pn	11 46 12.3	+1.1
ASTB				*e*S	Sn	11 47 15.1	-1.3
ALOL	LOMAS DE OLMED	6.02	130	*e*S	Sn	11 47 21.2	-0.9
AC02	Maricunga	6.82	181	Pn	Pn	11 46 25.2	-0.6
AC02	Maricunga	6.82	181	*e*P	Pn	11 46 25.0	-0.7
AC02				*e*P		11 46 25.1	
AC02				IAML		11 48 30.1	
	comp=Z,159nm,1.1s						
GO03	Copiap	7.66	188		Pn	11 46 34.2	-2.5
GO03	Copiap	7.66	188	*e*P	Pn	11 46 36.0	-0.7
GO03				*e*P	Pn	11 46 36.0	-0.7
SIV	San Ignacio	8.52	64	P	Pn	11 46 46.7	-1.7
	comp=Z,32nm,0.3s,baz=251,slow=10,SNR=712						
SIV				LR	LR	11 50 46.4	
	comp=Z,26nm,21.3s,baz=214,slow=43						
ACDV	Cuesta del Vie	10.15	181	*e*P	Pn	11 47 09.0	-1.4
PTLB	Pontes e Lacer	10.42	66	*e*P	Pn	11 47 12.1	-2.0
PTLB	Pontes e Lacer	10.42	66	Pn	Pn	11 47 12.3	-1.8
ETMB	Extrema	10.46	15	*e*P	Pn	11 47 13.5	-1.1
ETMB	Extrema	10.46	15	Pn	Pn	11 47 14.0	-0.5
CO03	El Pedregal	10.92	188		Pn	11 47 23.0	+2.2
VILB	Vilhena	10.96	52	*e*P	Pn	11 47 20.1	-1.2
VILB	Vilhena	10.96	52	Pn	Pn	11 47 19.8	-1.5
SAML	Samuel	12.33	28	*e*P	Pn	11 47 37.9	-1.6
SAML	Samuel	12.33	28		Pn	11 47 37.0	-2.5
CPUP	Villa Florida	12.45	123	P	Pn	11 47 40.4	-0.7
	comp=Z,0.8nm,0.3s,baz=307,slow=11,SNR=28						
CPUP	Villa Florida	12.45	123	*e*P	Pn	11 47 40.5	-0.5
CPUP	Villa Florida	12.45	123	Pn	Pn	11 47 40.1	-1.0
AQDB	Aquidauana	12.50	95	*e*P	Pn	11 47 39.9	-1.7
AQDB	Aquidauana	12.50	95		Pn	11 47 39.1	-2.6
CZSB	Cruzeiro do Su	12.70	343	*e*P	Pn	11 47 44.7	+0.3
VA03	San Esteban	12.81	186	Pn	Pn	11 47 45.5	-0.3
VA01	Torpederas	13.20	190	Pn	Pn	11 47 51.0	+0.2
SALV	Santo Antonio	13.29	74	*e*P	Pn	11 47 50.0	-2.2
MT02	Curacav	13.36	188	Pn	Pn	11 47 53.5	+0.6
VA05	Santo Domingo	13.82	189	Pn	Pn	11 47 57.8	-1.0
MT09	Talagante	13.85	187	Pn	Pn	11 47 57.2	-2.2
MT01	Popeta	13.97	188	Pn	Pn	11 47 57.7	-3.1
BO01	Tunca	14.47	187	Pn	Pn	11 48 06.0	-1.2
BO02	Sierra Bellavi	14.84	186	Pn	Pn	11 48 10.5	-1.4
TRCB	Terra Rica	15.50	103	*e*P	Pn	11 48 20.2	0.0
TRCB	Terra Rica	15.50	103	Pn	Pn	11 48 19.4	-0.9
CLDB	Colider	15.61	56	*e*P	Pn	11 48 21.0	-0.6
TBTG	Tabatinga, AM	15.72	357	Pn	Pn	11 48 21.8	-1.2
TBTG				IAmb	IAmb	11 48 26.9	
	comp=Z,26nm,0.6s						
ML02	Panimavida	15.87	187	Pn	Pn	11 48 24.2	-0.5
PTGB	Pitanga	16.36	110	*e*P	P	11 48 31.8	0.0
PCMB	Pacaembu	16.67	99	*e*P	Pn	11 48 33.4	-1.2
ARAG	Araguaiana, MT	16.90	78	*e*P	Pn	11 48 37.2	-0.4
CPSB	Cacapava Do Su	17.47	129	*e*P	P	11 48 43.5	-0.4
ITRB	Iturama	17.54	92	*e*P	P	11 48 44.5	-0.2
PLTB	Pedras Altas	18.13	133	*e*P	P	11 48 51.1	0.0
PLTB	Pedras Altas	18.13	133	P	P	11 48 50.0	-1.2
FRTB	Fartura	18.37	104	*e*P	P	11 48 53.8	-0.1
NPGB	Novo Progresso	18.45	48	*e*P	P	11 48 53.8	-1.0
MACA	Manacapuru-AM	18.58	27	*e*P	P	11 48 55.2	-0.9
MACA	Manacapuru-AM	18.58	27	P	P	11 48 54.3	-1.9
MACA				IAmb	IAmb	11 48 58.5	
	comp=Z,51nm,0.6s						
SNDB	Serra Nova Dou	18.78	68	*e*P	P	11 48 58.2	-0.2
LC01	Cunco	19.02	187	P	P	11 48 59.0	-1.7
LC01				IAmb	IAmb	11 49 03.5	
	comp=Z,31nm,1.1s						
TRQA	Tornquist	19.02	163	*e*P	P	11 49 01.4	+0.6
TRQA	Tornquist	19.02	163	P	P	11 49 00.3	-0.4
TRQA				IAmb	IAmb	11 49 04.8	
	comp=Z,50nm,1.4s						
BB19B	Bebedouro	19.21	97	*e*P	P	11 49 02.7	-0.3
IPMB	Ipameri, GO	19.76	88	*e*P	P	11 49 08.7	-0.4
TER01	Tubaro-SC	20.00	119	*e*P	P	11 49 10.7	-0.8
RCLB	Rio Claro- Sao	20.16	101	*e*P	P	11 49 13.1	-0.3
ITTB	Itaituba	20.20	42	*e*P	P	11 49 13.1	-0.7
SPB	Sao Paulo	20.34	104	*e*P	P	11 49 15.4	+0.2
BDFB	Brasilia	20.44	81	P	P	11 49 15.0	-1.4
	comp=Z,8.8nm,0.5s,baz=251,slow=13,SNR=14						
BDFB	Brasilia	20.44	81	P	P	11 49 15.9	-0.5
BDFB				IAmb	IAmb	11 49 21.9	
	comp=Z,19nm,1.0s						
PET01	Itanhaem-SP	20.57	106	*e*P	P	11 49 18.0	+0.3
VAO	Valinhos	20.72	102	*e*P	P	11 49 18.9	-0.5
PLCA	Paso Flores	20.73	183	P	P	11 49 20.5	+1.2
	comp=Z,18nm,0.8s,baz=7.7,slow=12,SNR=31						
PLCA	Paso Flores	20.73	183	*e*P	P	11 49 20.8	+1.5
PLCA	Paso Flores	20.73	183	P	P	11 49 20.4	+1.2
PLCA				IAmb	IAmb	11 49 21.6	
	comp=Z,26nm,1.0s						
LL04	Puerto Octay	21.06	187	P	P	11 49 22.6	-0.1
LL04				IAmb	IAmb	11 49 27.1	
	comp=Z,15nm,0.8s						
PTGA	Pitinga	21.08	26	P	P	11 49 21.5	-1.6
	comp=Z,8.5nm,0.3s,baz=322,slow=23,SNR=44						
PTGA	Pitinga	21.08	26	P	P	11 49 21.5	-1.6
PTGA				IAmb	IAmb	11 49 24.7	
	comp=Z,12nm,0.5s						
LL03	Petrohue	21.29	187	P	P	11 49 25.6	+0.4
LL03				IAmb	IAmb	11 49 34.5	
	comp=Z,38nm,0.8s						
PEXB	Peixe	21.36	72	*e*P	P	11 49 25.2	-1.1
PARB	Paraibuna	21.98	103	*e*P	P	11 49 31.7	-1.1
OTAV	Otavalo	22.12	334	*e*P	P	11 49 35.4	+0.7
OTAV	Otavalo	22.12	334	P	P	11 49 33.7	-1.1
MALB	Monte Alegre	23.07	40	*e*P	P	11 49 42.3	-1.3
PRPB	Parauapebas	23.15	56	*e*P	P	11 49 43.0	-1.5
SMTB	Santa Maria do	23.47	65	*e*P	P	11 49 46.9	-0.5
MAN01	Angra dos Reis	23.47	102	*e*P	P	11 49 47.0	-0.4
BOAV	Boa Vista	23.74	21	*e*P	P	11 49 49.9	+0.1
BOAV	Boa Vista	23.74	21	P	P	11 49 50.0	+0.1
BOAV				IAmb	IAmb	11 49 50.9	
	comp=Z,15nm,0.7s						
VAS01	Vassouras-RJ	23.94	100	*e*P	P	11 49 52.2	+0.5
DIAM	Diamantina, MG	23.98	90	*e*P	P	11 49 50.8	-1.3
MC01	Montes Claros	24.00	86	*e*P	P	11 49 51.8	-0.4
JANB	Januaria	24.04	82	*e*P	P	11 49 51.2	-1.3
SDBA	SAO DESIDERIO	24.31	76	*e*P	P	11 49 53.6	-1.5
DUB01	Friburgo-RJ	24.93	100	*e*P	P	11 50 00.1	-0.6
MCPB	Macapa, AP	25.60	42	*e*P	P	11 50 05.3	-1.5
SJMB	Sao Joao De Ma	26.27	92	*e*P	P	11 50 12.4	-0.3
ALF01	Guarapari-ES	26.52	96	*e*P	P	11 50 15.7	+0.8
BSFB	Barra de Sao F	26.57	92	*e*P	P	11 50 15.1	-0.3
ZARC	Zaragoza, Cauc	27.90	348	P	P	11 50 26.4	-0.9
PCRV	Puerto La Cruz	30.27	9	P	P	11 50 48.9	+0.6
	comp=Z,6.3nm,0.5s,baz=243,slow=4.5,SNR=2.2						
NBPS	Pedro II - PI	30.99	64	*e*P	P	11 50 53.7	-1.1
NBLA	Lagarto - SE	31.33	78	*e*P	P	11 50 56.5	-1.2
NBMA	Muriti-CE	31.87	71	*e*P	P	11 51 03.2	+0.7
NBPB	Pedra_Branca-C	32.00	67	*e*P	P	11 51 03.1	-0.4
TOSP	Speyside	32.18	16	P	P	11 51 05.5	+0.5
GRGR	Grenville	32.72	13	P	P	11 51 09.8	+0.1
EFI	East Falkland	32.77	167	P	P	11 51 11.3	+1.4
NBAN	Anadia - AL	33.19	77	*e*P	P	11 51 13.5	-0.5
NBLV	Livramento - P	33.52	73	*e*P	P	11 51 17.4	+0.5
NBPV	Pedro Velho	35.38	72	*e*P	P	11 51 32.5	-0.4
SJG	San Juan	37.96	4	P	P	11 51 54.1	-0.5
	comp=Z,9.4nm,0.5s,baz=162,slow=3.4,SNR=4.5						
SJG	San Juan	37.96	4	IAmb	IAmb	11 52 02.5	
	comp=Z,33nm,0.2s						
TX32	Lajitas Array	59.34	325	P	P	11 54 37.7	-0.5
TXAR	Lajitas Array	59.34	325	P	P	11 54 37.9	-0.3
VNA3	Neumayer Olymp	61.53	162	P	P	11 54 54.0	+1.5
VNA1	Neumayer--Stat	61.74	161	P	P	11 54 55.9	+2.1
VNA2	Neumayer--Watz	62.11	161	P	P	11 54 57.7	+1.5
	baz=281,slow=7.5						
MSTX	Muleshoe	62.56	329	P	P	11 54 57.8	-2.1
MSTX				pP	pP	11 55 26.6	-1.9
MSTX				sP	sP	11 55 42.4	+1.4
SNAA	Sanae	63.74	161	P	P	11 55 08.5	+1.4
SNAA	Sanae	63.74	161	P	P	11 55 08.6	+1.4
SNAA				IAmb	IAmb	11 55 09.6	
	comp=Z,5.9nm,0.9s						
LIC	Lamto	68.05	74	*e*P	P	11 55 34.6	-1.1
	comp=Z,97nm,1.2s						
TIC	Toumodi	68.23	74	*e*P	P	11 55 36.2	-0.6
KIC	Kosan Boka	68.37	74	*e*P	P	11 55 36.6	-1.1
	comp=Z,48nm,0.7s						
DBIC	Dimbokro	68.39	74	P	P	11 55 37.6	-0.2
	comp=Z,38nm,0.7s,baz=247,slow=5.6,SNR=38						
DBIC	Dimbokro	68.39	74	P	P	11 55 37.9	+0.1
ULM	Lac du Bonnet	73.85	342	LR	LR	12 30 40.7	
	comp=Z,37nm,18.4s,baz=68,slow=37						
NVAR	Mina Array Bea	74.25	322	P	P	11 56 15.1	+2.3
	comp=Z,0.3nm,0.8s,baz=121,slow=8.7,SNR=2.2						
NVAR				pP	pP	11 56 43.7	+1.6
	comp=Z,0.7nm,0.8s,baz=153,slow=6.1,SNR=3.9						
TORD	Torodi Ar. Bea	76.93	71	P	P	11 56 27.9	-0.4
	comp=Z,9.8nm,0.4s,baz=254,slow=5.2,SNR=94						
TORD				pP	pP	11 56 58.1	0.0
	comp=Z,2.6nm,0.7s,baz=256,slow=5.9,SNR=2.8						
TORD	Torodi Ar. Bea	76.93	71	P	P	11 56 27.6	-0.7
TORD				IAmb	IAmb	11 56 30.0	
	comp=Z,4.8nm,0.6s						
TORD				pP	pP	11 56 57.3	-0.8
TORD				sP	sP	11 57 11.3	+0.6
VNDA	Vanda	78.32	190	P	P	11 56 38.0	+3.0
	comp=Z,1.3nm,0.8s,baz=132,slow=5.7,SNR=12						

MAW	Mawson	85.80	163	P	P	11 57 15.8	+1.6
	comp=Z,2.4nm,0.8s,baz=216,slow=6.8,SNR=11						
MAW	Mawson	85.80	163	IAmb	IAmb	11 57 23.7	
	comp=Z,1.0nm,1.2s						
ASAR	Alice Springs	131.21	208	PKP	PKiKP	12 03 48.2	-0.1
	comp=Z,0.4nm,0.5s,baz=122,slow=1.7,SNR=12						
ASAR				pPKP	pPKPdf	12 04 19.8	+0.3
	comp=Z,0.7nm,0.9s,baz=135,slow=1.7,SNR=3.5						
ASAR				sPKP	sPKPdf	12 04 31.3	-0.3
	comp=Z,0.2nm,0.4s,baz=133,slow=1.5,SNR=4.1						
WRA	Warramunga Arr	134.21	211	PKP	PKiKP	12 03 54.4	0.0
	comp=Z,0.6nm,0.4s,baz=152,slow=1.9,SNR=12						
WRA				pPKP	pPKPdf	12 04 25.6	+0.4
	comp=Z,0.4nm,0.6s,baz=152,slow=1.6,SNR=2.2						
ZALV	Zalesovo Beam	140.62	24	pPKP	pPKPdf	12 04 36.9	+1.1
	comp=Z,1.0nm,0.6s,baz=298,slow=3.2,SNR=2.7						
MKAR	Makanchi Array	144.45	35	PKP	PKPdf	12 04 10.6	-0.2
	comp=Z,0.3nm,0.5s,baz=344,slow=4.0,SNR=4.6						
MKAR				pPKP	pPKPdf	12 04 43.7	+0.8
	comp=Z,0.6nm,0.7s,baz=323,slow=1.8,SNR=3.6						

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*IDC **06** 11:52:49.8±1.7, 36°.43N×142°.06E, h0^{km}, mb3.4/3, mb1 3.6/7, mb1mx3.4/63, mbtmp3.6/7, ML3.2/4, MS3.2/1, Ms1 3.2/1, ms1mx2.2/34, Error ellipse: s-maj=34.6km s-min=23.7km az=61.0*

*NIED **06** 11:52:53.7, 36°.61N×141°.76E, h56^{km}, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-1.51; M$_{\theta\theta}$0.10; M$_{\phi\phi}$1.41; M$_{r\theta}$0.54; M$_{\theta\phi}$-0.80; M$_{\phi r}$0.45; Fault plane solution: M$_0$1.81000×10^{14} NP1: φ$_s$177.00000°, δ53.00000°, λ-60.00000°. NP2: φ$_s$313.00000°, δ47.00000°, λ-124.00000°.*

*JMA **06** 11:52:53.7±0.2, 36°.61N×141°.76E, h56^{km}±4^{km}, M3.5*

ISC 06 11:52:50.6±2.3**, 36°.55N**±0°.05×**141°.86E**±0°.08**, h8**^{km}±13^{km}**, n25, σ1^s.43**/24**, mb3.6**/3**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONAJ	Iwakimizuishiy	1.01	303	P	Pg	11 53 10.5	+0.4
JHO	Hitachi	1.04	274	P	Pb	11 53 10.8	-0.1
JHO				S	Sg	11 53 24.0	-0.1
JHYU	Hitachinakayam	1.05	259	P	Pn	11 53 11.7	+0.2
JHYU				S	Sb	11 53 24.8	0.0
JFK	Kawauchi	1.14	316	P	Pb	11 53 12.2	-0.3
JFK				*e*S	Sb	11 53 25.4	-2.0
JFFD	Fukushimafurud	1.17	298	P	Pb	11 53 12.8	-0.4
JFT	Otama	1.56	309	P	Pb	11 53 19.5	-0.2
JFT				S	Sn	11 53 37.6	-1.4
JMM	Marumori	1.57	327	P	Pn	11 53 18.2	-0.5
JFY	Yanaizu	1.93	297	P	Pb	11 53 25.0	-1.0
JAG	Ashikaga	1.94	267	P	Pn	11 53 24.4	+0.5
JIO	Ouri	1.95	348	P	Pn	11 53 23.8	-0.1
MJAR	Matsushiro Arr	2.94	271	Pn	Pn	11 53 38.4	+0.8
	2.3nm,0.3s,baz=112,slow=11,SNR=101						
MJAR				Sn	Sb	11 54 16.4	-2.9
	1.0nm,0.3s,baz=48,slow=28,SNR=2.8						
MAT	Matsushiro	2.94	271	P	Pn	11 53 39.3	+1.7
MAT				S	Sn	11 54 14.8	+1.7
JHJ	Hachijo jima 2	3.82	207	Pn	Pn	11 53 49.2	-0.6
	8.7nm,0.3s,baz=346,slow=23,SNR=12						
JHJ				Sn	Sn	11 54 31.9	-3.0
	45nm,0.3s,baz=310,slow=19,SNR=8.2						
ASAJ	Asahikawa	7.58	4	Pn	Pn	11 54 41.5	+0.1
	0.3nm,0.3s,baz=205,slow=19,SNR=1.9						
KSRS	Korea Array	11.18	279	Pn	Pn	11 55 35.6	+4.9
	0.2nm,0.3s,baz=82,slow=13,SNR=2.1						
MA2	Magadan	23.76	11	LR	LR	12 08 49.1	
	comp=Z,52nm,19.3s,baz=83,slow=40						
H11N2	WAKE ISLAND Hy	27.59	121	T	T	12 28 00.1	
	baz=313,slow=75,SNR=15						
H11N1	WAKE ISLAND Hy	27.60	121	T	T	12 27 58.5	
	baz=313,slow=75,SNR=15						
H11N3	WAKE ISLAND Hy	27.61	121	T	T	12 28 08.0	
	baz=313,slow=75,SNR=11						
H11S1	WAKE ISLAND Hy	28.30	123	T	T	12 28 59.5	
	baz=315,slow=75,SNR=7.2						
H11S3	WAKE ISLAND Hy	28.30	123	T	T	12 29 09.6	
	baz=315,slow=75,SNR=6.8						
H11S2	WAKE ISLAND Hy	28.31	123	T	T	12 28 50.8	
	baz=315,slow=75,SNR=7.6						
MKAR	Makanchi Array	44.68	303	P	P	12 01 06.8	+2.9
	0.2nm,0.6s,baz=96,slow=9.7,SNR=2.0						
WRA	Warramunga Arr	56.63	188	P	P	12 02 33.7	-0.5
	0.2nm,0.3s,baz=5.7,slow=7.5,SNR=11						
ASAR	Alice Springs	60.36	188	P	P	12 03 00.1	-0.1
	0.3nm,0.6s,baz=5.0,slow=6.6,SNR=7.2						

IDC 06 11:53:38.6±1.9**, 8°.32S×125°.10E, h0**^{km}**, mb3.6**/1**, mb1 3.4**/4**, mb1mx3.2**/47**, mbtmp3.2**/4**, ML3.0**/3**, MS2.6**/1**, Ms1 2.6**/1**, ms1mx2.3**/35**, Error ellipse: s-maj=117.3km s-min=28.2km az=66.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	9.62	40	LR	LR	11 59 15.2	
	comp=Z,36nm,20.6s,baz=74,slow=35						
FITZ	Fitzroy Crossi	9.74	177	Pn	Pn	11 56 00.8	+0.8
	0.1nm,0.3s,baz=27,slow=11,SNR=2.1						
FITZ				Sn	Sn	11 57 45.0	-5.2
	0.3nm,0.3s,baz=236,slow=14,SNR=6.1						
WRA	Warramunga Arr	14.61	143	Pn	Pn	11 57 05.2	-1.6
	0.1nm,0.3s,baz=318,slow=14,SNR=5.0						
ASAR	Alice Springs	17.44	152	P	Pn	11 57 43.9	+0.3
	0.0nm,0.3s,baz=322,slow=11,SNR=4.8						
MKAR	Makanchi Array	66.77	329	P	P	12 04 32.0	0.0
	0.5nm,0.8s,baz=131,slow=5.0,SNR=4.8						

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*SOME **06** 12:03:13.5, 42°.95N×71°.07E, h0^{km}*

*KRNET **06** 12:03:14.2±0.1, 42°.91N×71°.12E, h15^{km}, mb2.6*

*NNC **06** 12:03:14.2±0.9, 42°.84N×70°.95E, h0^{km}, mb2.9, mpv2.9, Error ellipse: s-maj=7.8km s-min=4.9km az=48.0, Suspected Mining explosion.*

ISC 06 12:03:14.4±0.7**, 42°.88N**±0°.04×**70°.99E**±0°.02**, h0**^{km}**, n30, σ1^s.01**/58**, 28C-7D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZA	Taraz	0.25	87	*e*P	Pg	12 03 18.7	-0.5
DZA				*e*S	Sg	12 03 21.9	-0.5
DZA	Taraz	0.25	87	P	Pb	12 03 22.0	+2.8
	144nm,0.2s						
DZA				S	Sb	12 03 25.7	+3.4
	139nm,0.3s						
KK06	Karatay Array	0.41	302	⇓P	Pg	12 03 22.0	-0.2
KK06				⇑S	Sg	12 03 27.8	+0.3
KK07	Karatay Array	0.42	300	⇑P	Pg	12 03 22.1	-0.3
KK07				⇑S	Sg	12 03 28.3	+0.4
KK02	Karatay Array	0.42	303	⇑P	Pg	12 03 22.2	-0.2
KK02				⇑S	Sg	12 03 28.3	+0.4
KK05	Karatay Array	0.42	305	⇑P	Pg	12 03 22.3	-0.2
KK05				⇑S	Sg	12 03 28.2	+0.3
KK31	Karatay Array	0.42	303	⇓P	Pg	12 03 22.2	-0.2
	2.4nm,0.5s,baz=120,slow=18,SNR=44						
KK31				⇑S	Sg	12 03 28.2	+0.3
	3.3nm,0.4s,baz=120,slow=29,SNR=15						
KK01	Karatay Array	0.42	303	⇓P	Pg	12 03 22.3	-0.3
KK01				⇑S	Sg	12 03 28.4	+0.4
KK03	Karatay Array	0.43	302	⇑P	Pg	12 03 22.3	-0.2
KK03				⇑S	Sg	12 03 28.4	+0.4
KK04	Karatay Array	0.43	303	⇑P	Pg	12 03 22.4	-0.2
KK04				⇑S	Sg	12 03 28.4	+0.3
KK08	Karatay Array	0.43	301	⇑P	Pg	12 03 22.5	-0.2
KK08				⇑S	Sg	12 03 28.3	-0.1
KK09	Karatay Array	0.44	304	⇑P	Pg	12 03 22.6	-0.2
KK09				⇑S	Sg	12 03 28.3	-0.1
BRLS	Borolday	0.86	280	*e*P	Pn	12 03 33.4	-0.5
	2.1nm,0.3s						
BRLS				*e*S	Sn	12 03 47.1	0.0
	6.5nm,0.3s						
BRLS	Borolday	0.86	280	P	Pn	12 03 34.3	+0.4
	0.5nm,0.1s						
BRLS				S	Sn	12 03 47.0	-0.2
	6.5nm,0.3s						
BRLS	Borolday	0.86	280	*e*P	Pn	12 03 33.4	-0.5
	baz=63						
BRLS				*e*S	Sn	12 03 47.2	0.0
	baz=63						
IUG	Iuzhnay	1.02	225	*e*P	Pn	12 03 35.5	-0.6
	2.5nm,0.1s						
IUG				*e*S	Sn	12 03 51.0	-0.2
	19nm,0.5s						
IUG	Iuzhnay	1.02	225	P	Pn	12 03 36.5	+0.4
	63nm,0.3s						
IUG				S	Sn	12 03 50.7	-0.5
	19nm,0.5s						
IUG	Iuzhnay	1.02	225	*e*P	Pn	12 03 35.5	-0.6
	baz=27						
IUG				*e*S	Sn	12 03 51.0	-0.2
	baz=27						
MNAS	Manas	1.18	109	⇑*i*P	Pg	12 03 35.1	-1.9
	baz=12						
MNAS				⇑*i*S	Sg	12 03 51.2	-1.1
	baz=12						
TRKS	Terek-Say	1.35	175	⇑*i*P	Pb	12 03 41.4	+0.7
	baz=78						
TRKS				⇑*i*S	Sn	12 04 02.1	+2.7
	baz=78						
MRKS	Merke	1.65	94	*e*P	Pb	12 03 45.4	-0.4
	0.8nm,0.1s						
MRKS				*e*S	Sb	12 04 07.2	+0.1
	2.3nm,0.3s						
MRKS	Merke	1.65	94	P	Pg	12 03 47.0	+1.0
	2.1nm,0.2s						
MRKS				S	Sg	12 04 08.4	+1.1
	4.7nm,0.4s						
MRKS	Merke	1.65	94	*e*P	Pn	12 03 43.9	-0.8
	baz=95						
MRKS				*e*S	Sn	12 04 05.2	-1.4
	baz=95						
EKS2	Erkin-Say	2.06	95	⇑*e*P	Pn	12 03 51.0	+0.6
	baz=96						
EKS2				⇑*i*S	Sb	12 04 18.1	-0.9
	baz=96						
AML	Almayashu	2.13	110	⇓*i*P	Pn	12 03 52.3	+0.7
	baz=11						
AML				⇓*i*S	Sn	12 04 20.1	+1.1
	baz=11						
AAK	Ala-Archa	2.59	94	Pg	Pb	12 04 00.1	-1.7
	1.8nm,0.8s						
AAK				⇑Lg	Lg	12 04 35.8	
	2.0nm,0.6s						
USP	Ospenovka	2.60	80	⇑*i*P	Pn	12 03 58.3	+0.6
	baz=81						
USP				⇑*i*S	Sn	12 04 30.8	+0.8
	baz=81						
UCH	Uchtor	2.68	103	⇑*i*P	Pn	12 03 59.5	+0.3
	baz=4.0						
UCH				⇑*i*S	Sn	12 04 33.2	+0.6
	baz=4.0						
SGDS	Sogindy	2.72	77	Pg	Pg	12 04 05.6	-0.9
	0.9nm,0.3s						
SGDS				Lg	Lg	12 04 40.4	
	1.8nm,0.5s						
BTK	Batken	2.82	183	⇓*i*P	Pn	12 04 02.7	+1.9
	baz=85						
BTK				⇓*i*S	Sb	12 04 39.0	-1.8
	baz=85						

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*PRE **06** 12:08:20.2±1.1, 24°.25S×29°.40E, h5^{km}, ML2.5*

*EAF **06** 12:08:39.8±2.4, 25°.89S×30°.67E, h10^{km}, MD3.4*

*BUL **06** 12:08:42.6±1.1, 25°.83S×30°.41E, h10^{km}, MD3.6*

ISC 06 12:08:34.1±0.9**, 25°.60S**±0°.04×**29°.12E**±0°.06**, h10**^{km}**, n11, σ0^s.93**/18**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRLN	Carolina, Mapu	0.90	116	*e*P	Pn	12 08 54.0	+0.9
CRLN				*e*S	Sn	12 09 16.8	+11
CRLN				IAML		12 09 17.0	
	comp=Z,105nm,0.6s						
PRYS	Parys	2.06	230	*e*P	Pg	12 09 12.9	-0.7
PRYS				*e*S	Sg	12 09 50.5	+10
PRYS				IAML		12 09 50.5	
	comp=Z,62nm,0.7s						
POGA	Pongola	2.90	127	*e*P	Pn	12 09 19.2	-1.1
POGA				*e*S	Sb	12 10 01.9	+0.4
POGA				IAML		12 10 08.1	
	comp=Z,28nm,0.5s						
MOPA	Mopani	2.93	45	*e*P	Pn	12 09 20.7	-0.2
MOPA				*e*S	Sn	12 09 46.2	-10
MOPA	Mopani	2.93	45	*e*P	Pn	12 09 20.7	-0.2
MOPA				*e*S	Sn	12 09 46.2	-10
MSNA	Messina	3.34	14	*e*P	Pg	12 09 36.9	-1.4
MSNA				*e*S	Sb	12 10 15.6	+1.2
MSNA	Messina	3.34	14	*e*P	Pg	12 09 36.9	-1.4
MSNA				*e*S	Sb	12 10 15.6	+1.2
BOSA	Boshof	4.57	228	*e*P	Pg	12 10 01.3	-0.4
BOSA				*e*S	Sg	12 11 00.5	-0.4
BOSA	Boshof	4.57	228	*e*P	Pg	12 10 01.3	-0.4
BOSA				*e*S	Sg	12 11 00.5	-0.4
MATP	Matopo	5.18	354	*e*P	Pb	12 10 06.1	+1.1
MATP				*e*S	Sb	12 11 07.2	-0.2
MATP	Matopo	5.18	354	*e*P	Pb	12 10 06.1	+1.1
MATP				*e*S	Sb	12 11 07.2	-0.2

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*IDC **06** 12:20:02.6±1.1, 7°.98S×125°.20E, h0^{km}, mb3.9/6, mb1 4.0/10, mb1mx3.8/43, mbtmp3.9/10, ML3.8/4, MS3.4/12, Ms1 3.5/12, ms1mx3.1/44, Error ellipse: s-maj=40.7km s-min=16.5km az=69.0*

*DJA **06** 12:20:06.2±0.3, 8°S±3°×12°5E±°, h10^{km}, M4.3/12, mb4.6/9, mB4.8/3, MLv4.2/12, Mw(mB)4.0/3*

ISC 06 12:20:06.6±0.7**, 8°.24S**±0°.06×**125°.16E**±0°.08**, h27**^{km}**, n32, σ1^s.93**/29**, mb4.0**/6**, MS3.5**/8**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	Soe	1.74	210	P	Pb	12 20 37.0	-1.0
SOEI	Soe	1.74	210	P	Pb	12 20 38.2	+0.2
BATI	Baumata	2.45	217	Pn	Pb	12 20 48.0	-2.0
	34nm,0.3s,baz=73,slow=1.9,SNR=18						
BATI				Sn	Sb	12 21 21.1	+1.4
	15nm,0.3s,baz=142,slow=23,SNR=9.3						
BATI	Baumata	2.45	217	P	Pb	12 20 47.8	-2.1
MMRI	Maumere	2.92	262	P	Pn	12 20 52.3	+1.1
EDFI	Ende, Flores	3.47	261	P	Pn	12 20 58.4	-0.5
BASI	Baing, Sumba	4.93	246	P	Pn	12 21 20.2	+1.3
BSSI	Bau Bau, Buton	5.08	294	P	Pn	12 21 19.9	-1.1
BKSI	Bulukumba	5.78	300	P	Pn	12 21 28.8	-1.9
	0.1nm18nm,0.8s						
WBSI	Waikabubak, Su	5.87	256	P	Pn	12 21 33.4	+1.5
	0.2nm858nm65nm,0.8s						
MSAI	Masohi	6.14	38	P	Pn	12 21 37.1	+1.5
	0.1nm572nm6.4nm,0.5s						
SANI	Sanana	6.21	8	P	Pn	12 21 37.5	+1.0
	0.1nm591nm28nm,0.5s						
SANI	Sanana	6.21	8	P	Pn	12 21 38.2	+1.7
KAPI	Kappang	6.26	301	Pn	Pn	12 21 35.6	-1.5
	0.7nm,0.3s,baz=193,slow=3.8,SNR=3.8						
PLAI	Plampang	7.33	265	P	Pn	12 21 53.1	+1.2
TTSI	Tana Toraja	7.41	314	P	Pn	12 21 52.8	-0.2
	0.1nm14nm,1.1s						
FITZ	Fitzroy Crossi	9.81	177	Pn	Pn	12 22 26.4	+0.5
	0.7nm,0.3s,baz=12,slow=13,SNR=18						
FITZ				Sn	Sn	12 24 10.3	-4.9
	2.5nm,0.3s,baz=282,slow=3.9,SNR=11						
FITZ				LR	LR	12 26 24.4	
	comp=Z,89nm,20.4s,baz=355,slow=38						
FITZ	Fitzroy Crossi	9.81	177	P	Pn	12 22 27.1	+1.2
WRA	Warramunga Arr	14.64	144	Pn	Pn	12 23 30.1	-1.9
	1.0nm,0.3s,baz=316,slow=13,SNR=39						
WRA				Sn	Sn	12 26 10.6	-2.9
	0.7nm,0.3s,baz=320,slow=24,SNR=7.4						
WRA				LR	LR	12 29 58.0	
	comp=Z,82nm,21.9s,baz=330,slow=40						
LEM	Lembang	17.45	273	LR	LR	12 31 47.2	
	comp=Z,238nm,18.6s,baz=104,slow=40						
ASAR	Alice Springs	17.48	152	P	P	12 24 09.1	-0.5
	0.3nm,0.3s,baz=322,slow=11,SNR=22						
ASAR				LR	LR	12 32 05.7	
	comp=Z,78nm,18.9s,baz=305,slow=41						
PMG	Port Moresby	21.77	95	LR	LR	12 33 50.4	
	comp=Z,75nm,19.5s,baz=251,slow=38						
STKA	Stephens Creek	28.05	149	P	P	12 25 59.4	+3.7
	1.0nm,0.7s,baz=337,slow=13,SNR=3.5						
STKA				LR	LR	12 39 06.5	
	comp=Z,121nm,19.1s,baz=21,slow=40						
PSI	Prapat	28.37	292	LR	LR	12 37 42.4	
	comp=Z,151nm,18.1s,baz=53,slow=38						
HNR	Honiara	34.39	95	LR	LR	12 41 28.1	
	comp=Z,51nm,18.5s,baz=190,slow=37						
CMAR	Chiang Mai Arr	37.06	316	P	P	12 27 13.0	-1.6
	0.7nm,0.3s,baz=142,slow=7.5,SNR=8.2						
CMAR				LR	LR	12 45 48.0	
	comp=Z,70nm,18.1s,baz=212,slow=42						
DZM	Mont Dzumac	42.00	114	LR	LR	12 45 39.0	
	comp=Z,45nm,19.7s,baz=243,slow=36						
URZ	Urewera	55.38	131	LR	LR	12 54 42.7	
	comp=Z,64nm,18.2s,baz=31,slow=38						
MKAR	Makanchi Array	66.74	329	P	P	12 30 55.1	-0.3
	1.1nm,0.7s,baz=128,slow=7.6,SNR=12						
ZALV	Zalesovo Beam	70.67	336	P	P	12 31 17.6	-2.1
	0.9nm,0.6s,baz=134,slow=4.3,SNR=4.8						
VNDA	Vanda	71.84	172	P	P	12 31 28.6	+2.0
	0.4nm,0.6s,baz=320,slow=6.7,SNR=7.5						
VNDA				LR	LR	13 01 38.0	
	comp=Z,30nm,19.3s,baz=16,slow=35						
MAW	Mawson	72.07	201	P	P	12 31 29.6	+1.7
	1.1nm,0.6s,baz=77,slow=8.4,SNR=7.7						

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*IDC **06** 12:24:36.0±0.9, 36°.31N×141°.90E, h0^{km}, mb3.6/7, mb1 3.8/10, mb1mx3.6/53, mbtmp3.6/10, ML3.0/3, Error ellipse: s-maj=22.3km s-min=19.5km az=96.0*

*JMA **06** 12:24:38.6±0.2, 36°.43N×141°.76E, h50^{km}, M3.2*

ISC 06 12:24:36.0±2.1**, 36°.45N**±0°.04×**141°.86E**±0°.07**, h0**^{km}±13^{km}**, n32, σ1^s.13**/32**, mb3.6**/7**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHYU	Hitachinakayam	1.03	264	P	Pg	12 24 55.8	+0.1
JHO	Hitachi	1.05	279	P	Pg	12 24 56.0	-0.1
ONAJ	Iwakimizuishiy	1.07	308	P	Pg	12 24 56.5	0.0
CHOJ	Chosi	1.10	227	P	Pg	12 24 57.1	0.0
JFK	Kawauchi	1.20	320	P	Pn	12 24 59.0	-1.1
JFK				*e*S	Sb	12 25 14.7	-1.1
JFT	Otama	1.61	312	P	Pn	12 25 04.7	-1.1
JFT				*e*S	Sn	12 25 25.6	-1.7
JMM	Marumori	1.65	329	P	Pn	12 25 05.0	-1.2
BSO1	Boso 1	1.93	202	P	Pn	12 25 09.1	-0.5
JAG	Ashikaga	1.94	270	P	Pn	12 25 09.6	-0.6
JFY	Yanaizu	1.97	300	P	Pn	12 25 10.7	+0.1
BSO3	Boso 3	1.98	214	P	Pn	12 25 10.1	-0.4
JIO	Ouri	2.04	349	P	Pn	12 25 11.3	-0.2
JIO				*e*S	Sn	12 25 35.6	-2.1
JKT	Katashina	2.12	279	P	Pn	12 25 12.7	-0.1
JOU	Okura	2.13	334	P	Pn	12 25 12.2	-0.7
MJAR	Matsushiro Arr	2.94	273	Pn	Pn	12 25 24.7	+0.7
	0.8nm,0.3s,baz=106,slow=9.4,SNR=25						
MJAR				Sn	Sn	12 26 00.8	+0.9
	0.4nm,0.3s,baz=68,slow=14,SNR=7.1						
MAT	Matsushiro	2.94	273	P	Pn	12 25 23.8	-0.2
MAT				S	Sn	12 25 58.9	-1.1
JHJ	Hachijo jima 2	3.74	208	Pn	Pn	12 25 33.6	-1.3
	5.5nm,0.3s,baz=128,slow=23,SNR=19						
JHJ				Sn	Sn	12 26 16.9	-2.8
	12nm,0.3s,baz=54,slow=23,SNR=1.5						
ASAJ	Asahikawa	7.68	4	Pn	Pn	12 26 28.9	-0.1
	0.3nm,0.3s,baz=200,slow=12,SNR=2.3						
H11N2	WAKE ISLAND Hy	27.55	120	T	T	12 59 01.4	
	baz=313,slow=75,SNR=16						
H11N1	WAKE ISLAND Hy	27.55	120	T	T	12 59 00.9	
	baz=313,slow=75,SNR=10						
H11N3	WAKE ISLAND Hy	27.57	120	T	T	12 59 02.7	
	baz=313,slow=75,SNR=11						
H11S1	WAKE ISLAND Hy	28.25	123	T	T	12 59 59.7	
	baz=315,slow=76,SNR=7.5						
H11S3	WAKE ISLAND Hy	28.25	123	T	T	13 00 01.6	
	baz=315,slow=76,SNR=9.0						
H11S2	WAKE ISLAND Hy	28.26	123	T	T	13 00 03.7	
	baz=315,slow=76,SNR=7.8						
SONM	Songino Array	28.41	305	P	P	12 30 34.2	+2.0
	0.6nm,0.6s,baz=116,slow=10,SNR=2.5						
ZALV	Zalesovo Beam	42.57	313	P	P	12 32 34.0	+0.7
	0.6nm,0.5s,baz=104,slow=6.1,SNR=2.2						
MKAR	Makanchi Array	44.73	303	P	P	12 32 51.4	+0.5
	0.4nm,0.8s,baz=81,slow=8.9,SNR=3.0						
WRA	Warramunga Arr	56.54	188	P	P	12 34 18.6	-1.6
	0.8nm,0.8s,baz=6.4,slow=7.2,SNR=6.8						
ASAR	Alice Springs	60.26	188	P	P	12 34 45.5	-0.7
	0.5nm,0.7s,baz=18,slow=8.5,SNR=6.2						
NVAR	Mina Array Bea	75.05	53	P	P	12 36 20.5	+0.6
	0.2nm,0.6s,baz=258,slow=4.5,SNR=2.5						
TXAR	Lajitas Array	90.19	53	P	P	12 37 39.2	+0.5
	0.2nm,0.5s,baz=308,slow=4.4,SNR=1.8						
LPAZ	La Paz	146.67	61	PKPbc	PKPdf	12 44 20.6	+1.3
	0.5nm,0.5s,baz=18,slow=3.2,SNR=3.5						

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*IDC **06** 12:31:11.4±1.4, 14°.83S×76°.16W, h75^{km}±11^{km}, mb3.4/2, mb1 3.7/5, mb1mx3.4/35, mbtmp3.9/5, MS3.0/3, Ms1 3.0/3, ms1mx2.8/15, Error ellipse: s-maj=24.7km s-min=8.0km az=45.0*

ISC 06 12:31:10.5±1.6**, 14°.7S**±0°.1×**75°.8W**±0°.2**, h35**^{km}**, n17, σ1^s.46**/7**, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	La Paz	7.52	103	P	Pn	12 33 03.8	+5.6
	1.8nm,0.3s,baz=281,slow=8.2,SNR=29						
LPAZ				LR	LR	12 36 24.1	
	comp=Z,87nm,19.7s,baz=318,slow=40						
ATAH	Atahualpa	7.93	341	P	Pn	12 33 04.5	+0.8
	0.7nm,0.3s,baz=182,slow=4.5,SNR=5.0						
LVC	Limon Verde	10.21	142	P	Pn	12 33 36.2	+1.3
	0.7nm,0.3s,baz=295,slow=9.4,SNR=1.9						
LVC				S	Sn	12 35 28.2	-0.2
	0.8nm,0.3s,baz=73,slow=22,SNR=6.4						
LVC				LR	LR	12 37 25.4	
	comp=Z,82nm,19.7s,baz=322,slow=36						
SIV	San Ignacio	14.22	97	P	Pn	12 34 29.4	-0.1
	0.2nm,0.3s,baz=266,slow=13,SNR=3.6						
H03N1	Juan Fernandez	18.90	188	T	T	12 54 44.6	
	baz=8.5,slow=74,SNR=385						
H03N2	Juan Fernandez	18.90	188	T	T	12 54 48.3	
	baz=8.5,slow=74,SNR=553						
H03N3	Juan Fernandez	18.92	188	T	T	12 54 42.9	
	baz=8.5,slow=74,SNR=856						
CPUP	Villa Florida	20.76	127	LR	LR	12 45 32.9	
	comp=Z,46nm,19.5s,baz=107,slow=41						
PTGA	Pitinga	20.87	50	P	P	12 35 50.7	+1.1
	1.2nm,0.5s,baz=230,slow=16,SNR=2.8						
TORD	Torodi Ar. Bea	81.49	74	P	P	12 43 22.8	-2.1
	0.9nm,0.8s,baz=259,slow=3.7,SNR=4.4						
H11N3	WAKE ISLAND Hy	120.21	284	T	T	15 01 03.3	
	baz=96,slow=74,SNR=24						
H11N2	WAKE ISLAND Hy	120.22	284	T	T	15 01 04.4	
	baz=96,slow=74,SNR=42						
H11N1	WAKE ISLAND Hy	120.23	284	T	T	15 01 05.9	
	baz=96,slow=74,SNR=14						
H11S2	WAKE ISLAND Hy	120.27	283	T	T	15 01 04.2	
	baz=96,slow=74,SNR=36						
H11S1	WAKE ISLAND Hy	120.28	283	T	T	15 01 09.7	
	baz=96,slow=74,SNR=37						
H11S3	WAKE ISLAND Hy	120.29	283	T	T	15 01 07.0	
	baz=96,slow=74,SNR=26						
SONM	Songino Array	146.89	357	PKPbc	PKPdf	12 50 46.7	-0.8
	0.3nm,0.5s,baz=356,slow=2.0,SNR=1.7						

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*IDC **06** 12:46:11.5±7.4, 12°.16S×166°.80E, h236^{km}±83^{km}, mb3.3/6, mb1 3.4/7, mb1mx3.2/36, mbtmp3.8/7, MS3.5/1, Ms1 3.5/1, ms1mx2.7/17, Error ellipse: s-maj=71.3km s-min=27.4km az=152.0*

ISC 06 12:46:09.7±1.0**, 12°.19S**±0°.09×**166°.8E**±0°.3**, h220**^{km}**, n9, σ1^s.41**/9**, mb3.7**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	9.83	182	P	Pn	12 48 28.8	+2.2
	0.3nm,0.3s,baz=53,slow=11,SNR=8.7						
DZM				S	S	12 50 14.5	-2.5
	0.2nm,0.3s,baz=325,slow=20,SNR=2.0						
WRA	Warramunga Arr	32.11	252	P	P	12 52 16.5	-0.2
	0.1nm,0.4s,baz=84,slow=8.6,SNR=4.8						
ASAR	Alice Springs	33.25	245	P	P	12 52 26.8	+0.2
	0.3nm,0.6s,baz=71,slow=9.8,SNR=6.4						
NWAO	Narrogin (SRO)	49.72	237	LR	LR	13 15 06.4	
	comp=Z,52nm,21.2s,baz=279,slow=35						
SEY	Seymchan	75.73	353	P	P	12 57 30.9	+0.3
	1.2nm,0.5s,baz=176,slow=6.5,SNR=5.4						
SONM	Songino Array	80.21	324	P	P	12 57 55.5	-0.4
	0.5nm,0.4s,baz=97,slow=2.9,SNR=2.3						
ILAR	Eielson Array	84.26	18	P	P	12 58 15.7	-0.7
	1.5nm,0.6s,baz=247,slow=5.0,SNR=33						
MKAR	Makanchi Array	95.08	317	P	P	12 59 07.9	+0.1
	0.4nm,0.5s,baz=86,slow=7.9,SNR=6.5						
ARCES	ARCESS Array B	117.70	346	PKP	PKPdf	13 04 28.9	-0.2
	3.2nm,1.0s,baz=59,slow=1.6,SNR=7.3						

*IDC **06** 13:06:01.8±2.9, 6°.19S×130°.21E, h76km±40km, mb3.2/1, mb1 3.7/5, mb1mx3.3/40, mbtmp3.8/5, ML4.0/4, Error ellipse: s-maj=73.0km s-min=22.6km az=89.0*

*DJA **06** 13:06:04.4±0.4, 6°S±5°×13°1E±°, h151km±11km, M4.1/8, mb4.0/5, mB5.0/3, MLv4.1/8, Mw(mB)4.3/3*

ISC 06 13:06:03.3±1.0, **6°.32S**±0°.07×**130°.7E**±0°.1, **h100**km, **n10**, σ**1^s.82**/12, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.95	336	P	Pn	13 06 36.3	+1.0
BNDI				S	Sn	13 07 01.7	+2.1
MSAI	Masohi	3.44	329	P	Pn	13 06 54.3	-0.6
FAKI	Fak Fak	3.72	25	P	Pn	13 06 59.4	+0.6
SIJI	Sorong	5.45	6	P	Pn	13 07 20.0	-2.2
	11nm,0.3s,baz=150,slow=24,SNR=46						
SIJI				S	Sn	13 08 14.4	-9.2
	4.5nm,0.3s,baz=39,slow=22,SNR=12						
SWI	Sorong	5.46	6	P	Pn	13 07 21.2	-1.0
	0.7nm2µm7.0nm,0.8s						
SOEI	Soe	7.21	241	P	Pn	13 07 46.7	+0.5
FITZ	Fitzroy Crossi	12.70	202	P	Pn	13 08 58.8	-1.4
	0.5nm,0.3s,baz=33,slow=14,SNR=22						
FITZ				S	Sn	13 11 11.0	-8.9
	0.7nm,0.3s,baz=215,slow=18,SNR=5.9						
WRA	Warramunga Arr	13.99	166	P	Pn	13 09 18.3	+1.1
	0.7nm,0.3s,baz=348,slow=13,SNR=18						
WRA				S	Sn	13 11 50.4	-1.0
	0.4nm,0.3s,baz=328,slow=24,SNR=4.7						
ASAR	Alice Springs	17.52	170	P	Pn	13 10 04.7	+3.4
	0.4nm,0.3s,baz=341,slow=11,SNR=41						
MKAR	Makanchi Array	68.04	326	P	P	13 16 50.7	-1.3
	0.2nm,0.4s,baz=119,slow=7.8,SNR=4.3						

IDC 06 13:16:01.7±2.4, **26°.78N**×**142°.28E**, **h41**km±17km, **mb3.6**/3, **mb1 3.7**/3, **mb1mx3.2**/42, **mbtmp3.8**/3, **MS3.2**/1, **Ms1 3.2**/1, **ms1mx2.3**/42, **Error ellipse: s-maj=151.8km s-min=26.6km az=81.0**, **Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	0.33	345	P	Pn	13 16 12.3	+1.9
	380nm,0.3s,baz=195,slow=2.8,SNR=994						
JCJ				S	Sn	13 16 19.0	+2.5
	2µm,0.3s,baz=290,slow=22,SNR=41						
KLR	Kul'dur	23.85	343	LR	LR	13 30 07.0	
	comp=Z,48nm,18.5s,baz=265,slow=35						
WRA	Warramunga Arr	47.08	190	P	P	13 24 29.1	-0.5
	1.1nm,0.4s,baz=14,slow=6.9,SNR=28						
ASAR	Alice Springs	50.80	190	P	P	13 24 58.0	-0.1
	0.1nm,0.4s,baz=19,slow=10,SNR=4.1						
FINES	FINESS Array B	78.27	334	P	P	13 27 57.3	+0.3
	1.5nm,0.8s,baz=56,slow=4.8,SNR=4.6						

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*EAF **06** 13:22:56.4±1.5, 25°.77S×29°.56E, h10km, MD3.6*

BUL 06 13:22:57.3±1.3, **25°.72S**×**29°.45E**, **h10**km, **MD3.8**, **South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOPA	Mopani	2.82	39	*e*P	Pn	13 23 39.6	-2.9
MOPA				*e*S	Sn	13 24 13.4	-3.1
MOPA	Mopani	2.82	39	*e*P	Pn	13 23 39.6	-2.9
MOPA				*e*S	Sn	13 24 13.4	-3.1
MSNA	Messina	3.40	9	*e*P	Pn	13 23 50.4	-0.1
MSNA				*e*S	Sn	13 24 28.9	-2.0
MSNA	Messina	3.40	9	*e*P	Pn	13 23 50.4	-0.1
MSNA				*e*S	Sn	13 24 28.9	-2.0
BOSA	Boshof	4.72	231	*e*P	Pn	13 24 08.9	+0.2
BOSA				*e*S	Sn	13 24 59.3	-4.3
BOSA	Boshof	4.72	231	*e*P	Pn	13 24 08.9	+0.2
BOSA				*e*S	Sn	13 24 59.3	-4.3
MATP	Matopo	5.34	350	*e*P	Pn	13 24 17.4	+0.1
MATP				*e*S	Sn	13 25 14.0	-5.0
MATP	Matopo	5.34	350	*e*P	Pn	13 24 17.4	+0.1
MATP				*e*S	Sn	13 25 14.0	-5.0
KRI	Karoi	8.85	1	*e*P	Pn	13 24 56.0	-9.5
KRI				*e*S	Sn	13 26 22.8	-23
KRI	Karoi	8.85	1	*e*P	Pn	13 24 56.0	-9.5
KRI				*e*S	Sn	13 26 22.8	-23

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*IDC **06** 13:30:19.8±0.6, 52°.27N×169°.48W, h0km, mb4.4/31, mb1 4.6/33, mb1mx4.4/51, mbtmp4.4/33, ML4.2/2, MS3.4/8, Ms1 3.4/8, ms1mx3.0/67, Error ellipse: s-maj=18.0km s-min=10.9km az=174.0*

*NEIC **06** 13:30:20.7±2.1, 52°.03N±0°.04×169°.26W±0°.08, h10km±1km, mb4.5/107, ML4.3(AEIC), Error ellipse: s-maj=9.0km s-min=6.2km az=103.0*

*MOS **06** 13:30:21.8±1.0, 52°.31N×169°.52W, h24km, mb4.9/29, Error ellipse: s-maj=9.5km s-min=6.0km az=92.9*

*AEIC **06** 13:30:22±2.4, 52°.11N±0°.04×169°.35W±0°.07, h9km±3km, Error ellipse: s-maj=6.8km s-min=4.8km az=128.0*

*BJI **06** 13:30:23.9±0.0, 52°.62N×170°.03W, h23km, mB5.1/19, mb4.9/39, Ms4.4/2, Ms7 4.3/4*

ISC 06 13:30:24.5±1.1, **52°.26N**±0°.06×**169°.39W**±0°.05, **h33**km±4km, **n349**, σ**1^s.16**/364, **mb4.6**/96, **MS3.5**/11, **3C-7D**, **Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	Nikolski High	0.79	24		Pb	13 30 39.5	-0.3
NIKH					Sn	13 30 52.1	+2.2
OKSP	Okmok Steeple	1.20	33		Pn	13 30 45.3	+0.3
OKSO	Okmok South	1.33	34		Pn	13 30 47.4	+0.6
OKSO					Sb	13 31 06.4	+0.7
OKCE	Okmok Cone E	1.39	32		Pn	13 30 48.8	+1.3
OKCE					Sb	13 31 11.1	+3.8
OKTU	Okmok Mt. Tuli	1.40	35		Pn	13 30 48.4	+0.7
OKNC	Okmok New Cone	1.43	32		Pb	13 30 49.8	-0.8
OKFG	Magazine Ridge	1.47	37		Pn	13 30 49.3	+0.7
OKFG					Sb	13 31 10.3	+0.9
MAPS	Pakushin South	2.15	43		Pn	13 30 58.8	+0.9
MAPS					Sn	13 31 26.4	+3.0
MSW	Makushin Switc	2.29	42		Pn	13 31 01.4	+1.5
MNAT	Makushin Natee	2.31	44		Pn	13 31 01.5	+1.4
MNAT					Sn	13 31 30.8	+3.4
UNV	Unalaska Valle	2.36	46		Pn	13 31 01.6	+0.8
UNV					Sn	13 31 31.3	+2.7
MTBL	Makushin Table	2.37	43		Pn	13 31 02.7	+1.6
AKMO	Akutan Morgan	2.74	47		Pn	13 31 08.3	+2.2
AKMO					Sb	13 31 43.0	-3.0
AKRB	Akutan Reef Bi	2.74	46		Pn	13 31 08.3	+2.2
AKBBA	Akutan Broad B	2.78	47		Pn	13 31 09.0	+2.4
AKUT	Akutan	2.88	48	Pn	Pn	13 31 09.6	+1.6
KOFP	Korovin Flat P	2.89	272		Pn	13 31 09.5	+1.3
KOKL	Mount Kliuchef	2.95	273		Pn	13 31 10.7	+1.7
GSIG	Igitkin Island	4.03	269		Pn	13 31 24.4	+0.5
GSTR	Great Sitkin T	4.11	270		Pn	13 31 24.2	-0.7
GSMY	Great Sitkin M	4.11	270		Pn	13 31 26.1	+1.2
GSTD	Great Sitkin T	4.16	270		Pn	13 31 26.4	+0.7
FALS	False Pass	4.41	51		Pn	13 31 30.7	+1.7
ADK	Adak	4.51	268	P	Pn	13 31 30.3	-0.1
ADK	Adak	4.51	268	Pn	Pn	13 31 30.2	-0.1
KIWB	Kanaga Island	4.80	268		Pn	13 31 34.3	-0.2
KIMD	Kanaga Island	4.87	267		Pn	13 31 36.0	+0.7
SPIA	Saint Paul Isl	4.96	355	Pn	Pn	13 31 40.3	+3.8
TASE	Tanaga Southea	5.35	269		Pn	13 31 43.7	+1.7
GAEA	Gareloi East	5.79	269		Pn	13 31 49.5	+1.4
GALAA	Gareloi Lava P	5.81	269		Pn	13 31 50.3	+2.0
SDPT	Sand Point	6.12	56	Pn	Pn	13 31 52.6	+0.1
CERAA	Semis' Rag'd T	6.74	271		Pn	13 32 02.8	+1.8
CESW	Semis' Southwe	6.82	271		Pn	13 32 03.9	+1.9
AMKA	Amchitka	7.06	267	Pn	Pn	13 32 06.0	+0.5
CHGN	Chignik	7.60	53	Pn	Pn	13 32 12.4	-0.3
SMY	Shemya	10.08	279	P	Pn	13 32 47.5	+0.7
SMY	Shemya	10.08	279	Pn	Pn	13 32 47.5	+0.7
OHAK	Old Harbor	10.55	56	Pn	Pn	13 32 52.9	-0.2
P18K	Big Mountain,	10.69	42	Pn	Pn	13 32 56.5	+1.4
O18K	Koktuh Hills	10.97	41		Pn	13 32 59.4	+0.4
KDAK	Kodiak Island	11.11	54	Pn	Pn	13 32 59.7	-1.1
	1.9nm,0.3s,baz=269,slow=7.0,SNR=34						
KDAK				Sn	Sn	13 34 59.8	-3.9
	baz=0.0,slow=20,SNR=1.2						
KDAK	Kodiak Island	11.11	54	P	Pn	13 33 00.5	-0.3
KDAK	Kodiak Island	11.11	54		Pn	13 33 00.5	-0.3
Q19K	Cape Douglas,	11.12	47	Pn	Pn	13 33 01.9	+0.9
P19K	Oil Pt	11.68	44	Pn	Pn	13 33 10.4	+1.8
HOM	Homer	12.38	46	Pn	Pn	13 33 18.8	+0.7
CNPM	China Poot	12.49	47	Pn	Pn	13 33 19.9	+0.1
M19K	Big River Lodg	12.62	34		Pn	13 33 23.4	+2.1
L19K	White Mountain	12.65	33	Pn	Pn	13 33 23.4	+1.5
BRLK	Bradley Lake	12.76	47	Pn	Pn	13 33 24.4	+1.0
TTA	Tatalina	12.85	28	P	Pn	13 33 24.0	-0.6
TTA	Tatalina	12.85	28	Pn	Pn	13 33 24.0	-0.6
SPU	Mount Spurr	13.02	40	Pn	Pn	13 33 28.4	+1.5
TNA	Tin City	13.37	3	Pn	Pn	13 33 33.3	+1.7
SEW	Seward	13.56	47	Pn	Pn	13 33 34.0	-0.2
O22K	Cooper Landing	13.62	45	Pn	Pn	13 33 35.4	+0.4
SUA	Susitna One	13.70	40	Pn	Pn	13 33 37.8	+1.5
RC01	Rabbit Creek A	13.91	43	Pn	Pn	13 33 38.5	-0.5
PWL	Port Wells	14.40	45	Pn	Pn	13 33 45.4	-0.3
PMR	Palmer	14.42	42	P	Pn	13 33 47.0	+1.1
PMR	Palmer	14.42	42	Pn	Pn	13 33 47.0	+1.1
CAST	Castle Rocks	14.43	32		Pn	13 33 45.9	-0.3
GHO	Glory Hole Cre	14.60	41	Pn	Pn	13 33 48.7	+0.2
KNK	Knik Glacier	14.61	43	Pn	Pn	13 33 48.6	+0.1
SML	Sawmill	14.86	42	Pn	Pn	13 33 52.1	+0.1
GLI	Glacier Island	14.95	46	Pn	Pn	13 33 53.0	-0.1
HIN	Hinchinbrook I	15.02	48	Pn	Pn	13 33 53.8	-0.3
FID	Port Fidalgo	15.17	47	Pn	Pn	13 33 54.8	-1.3
FID				IAmb	IAmb	13 33 59.9	
	comp=Z,40nm,1.0s						
BPAW	Bear Paw Mtn.	15.25	32	Pn	Pn	13 33 59.0	+1.9
BPAW				IAmb	IAmb	13 34 03.0	
	comp=Z,22nm,0.9s						
SCM	Sheep Creek Mo	15.29	43	P	Pn	13 33 57.2	-0.4
SCM				pmax	pmax		
	comp=Z,36nm,0.9s						
SCM	Sheep Creek Mo	15.29	43		Pn	13 33 57.2	-0.4
SCM				IAmb	IAmb	13 34 11.5	
	comp=Z,36nm,0.9s						
EYAK	Cordova Ski Ar	15.42	48	Pn	Pn	13 33 58.4	-0.9
EYAK				IAmb	IAmb	13 34 20.3	
	comp=Z,37nm,1.2s						
RND	Reindeer	15.54	36	P	Pn	13 34 03.0	+2.0
RND				pmax	pmax		
	comp=Z,9.0nm,1.0s						
RND	Reindeer	15.54	36		Pn	13 34 03.0	+2.0
MCK	McKinley	15.71	35	P	Pn	13 34 03.6	+0.5
MCK				pmax	pmax		
	comp=Z,16nm,1.3s						
MCK	McKinley	15.71	35		Pn	13 34 03.6	+0.5
KLU	Klutina	15.73	45	Pn	Pn	13 34 02.2	-1.2
KLU				IAmb	IAmb	13 34 10.7	
	comp=Z,23nm,0.9s						
BWN	Browne	15.80	33	Pn	Pn	13 34 06.1	+1.9
BWN				IAmb	IAmb	13 34 12.8	
	comp=Z,30nm,1.1s						
H21K	Melozitna Rive	15.85	26		Pn	13 34 04.9	+0.1
IMAR	Indian Mountai	15.86	24	Pn	Pn	13 34 06.7	+1.8
M24K	Tolsona, Glenn	15.90	43	Pn	Pn	13 34 05.3	-0.2
M24K				IAmb	IAmb	13 34 23.4	
	comp=Z,28nm,0.7s						
MLY	Manley	15.97	30	P	P	13 34 08.9	-0.7
MLY				IAmb	IAmb	13 34 16.6	
	comp=Z,16nm,0.8s						
HMT	Hamilton	16.04	50	Pn	Pn	13 34 07.6	+0.3
HMT				IAmb	IAmb	13 34 24.3	
	comp=Z,86nm,1.4s						
BMRM	Bremner River	16.10	48	Pn	Pn	13 34 07.7	-0.4
BMRM				IAmb	IAmb	13 34 12.7	
	comp=Z,60nm,1.4s						
NEA2	Nenana	16.21	32	Pn	Pn	13 34 10.4	+1.1
BERG	Berg Lake	16.32	50	Pn	Pn	13 34 10.5	-0.3
BERG				IAmb	IAmb	13 34 14.8	
	comp=Z,45nm,0.9s						
N25K	Chitina, Valde	16.35	45		Pn	13 34 11.0	-0.3
N25K				IAmb	IAmb	13 34 24.6	
	comp=Z,30nm,1.4s						
WRH	Wood River Hil	16.46	34	Pn	Pn	13 34 13.0	+0.4
I23K	Minto, Yukon-K	16.48	31		Pn	13 34 12.7	-0.1
I23K				IAmb	IAmb	13 34 24.0	
	comp=Z,24nm,1.5s						
PAX	Paxson	16.60	40	P	Pn	13 34 15.0	+0.6
PAX				pmax	pmax		
	comp=Z,4.0nm,0.8s						
PAX	Paxson	16.60	40		Pn	13 34 15.0	+0.6
GLB	Gilahina Butte	16.64	46	Pn	Pn	13 34 14.3	-0.6
GLB				IAmb	IAmb	13 34 43.0	
	comp=Z,28nm,1.4s						
CCB	Clear Creek Bu	16.66	34		Pn	13 34 15.3	+0.2
CRQM	Cirque	16.70	49	Pn	Pn	13 34 16.5	+0.6
CRQM				IAmb	IAmb	13 34 28.5	
	comp=Z,26nm,0.8s						
VRDI	Verde Repeater	16.72	47	Pn	Pn	13 34 15.4	-0.6
VRDI				IAmb	IAmb	13 34 38.9	
	comp=Z,28nm,1.3s						
MDM	Murphy Dome	16.72	32	Pn	Pn	13 34 16.0	+0.2
WAX	Waxell Ridge	16.74	50	Pn	Pn	13 34 16.4	+0.2
WAX				IAmb	IAmb	13 34 25.6	
	comp=Z,108nm,1.3s						
COLA	College	16.79	33	*i* P	Pn	13 34 17.2	+0.5
HDA	Harding Lake	16.82	35	P	Pn	13 34 17.8	+0.7
HDA				IAmb	IAmb	13 34 29.9	
	comp=Z,11nm,0.5s						
TGL	Tana Glacier	16.84	49		Pn	13 34 18.0	+0.5
TGL				IAmb	IAmb	13 34 37.7	
	comp=Z,19nm,0.8s						
H23K	Yukon River	16.89	29	P	P	13 34 20.6	+0.9
MCARA	McCarthy VSAT	16.97	47		Pn	13 34 19.2	+0.3
MCARA				IAmb	IAmb	13 34 44.2	
	comp=Z,24nm,1.0s						
ISLE	Juniper Island	17.03	50		Pn	13 34 20.3	+0.4
ISLE				IAmb	IAmb	13 34 32.3	
	comp=Z,23nm,0.8s						
IL31		17.05	34		Pn	13 34 18.9	-1.1
ILAR	Eielson Array	17.05	34	P	Pn	13 34 18.7	-1.4
	comp=Z,0.4nm,0.3s,baz=233,slow=11,SNR=20						
ILAR				S	Sn	13 37 20.6	-7.7
	comp=Z,0.2nm,0.3s,baz=237,slow=29,SNR=4.9						
ILAR	Eielson Array	17.05	34	P	Pn	13 34 19.8	-0.3
ILAR	Eielson Array	17.05	34		Pn	13 34 19.8	-0.3
MESA	MESA	17.09	52	P	Pn	13 34 21.4	+0.6
MESA				IAmb	IAmb	13 34 35.8	
	comp=Z,62nm,1.0s						
YAH	Yahtse	17.24	51	P	P	13 34 24.1	+0.2
YAH				IAmb	IAmb	13 34 35.2	
	comp=Z,110nm,1.4s						
MENT	Mentasta	17.29	42	P	Pn	13 34 23.8	+0.7
GRNC	Granite Creek	17.34	50		Pn	13 34 24.2	+0.3
GRNC				IAmb	IAmb	13 34 42.8	
	comp=Z,51nm,1.2s						
M26K	Nabesna, AK	17.36	44		Pn	13 34 24.1	+0.1
H24K	Noodor Dome	17.40	30	P	P	13 34 25.8	+0.4
L26K	Log Cabin Wild	17.48	42	P	Pn	13 34 25.7	+0.3
BARN	Barnard Glacie	17.48	49		Pn	13 34 26.1	+0.6
BARN				IAmb	IAmb	13 34 39.1	
	comp=Z,30nm,1.3s						
DOT	Dot Lake	17.48	39		Pn	13 34 24.0	-1.4
TABL	Table Mountain	17.55	51		P	13 34 27.3	0.0
TABL				IAmb	IAmb	13 34 29.2	
	comp=Z,90nm,1.3s						
CTGM	Chitina Glacie	17.61	49		Pn	13 34 27.4	+0.4
CTGM				IAmb	IAmb	13 34 49.0	
	comp=Z,16nm,0.8s						
SCRK	Sand Creek	17.67	39		Pn	13 34 27.8	-0.1
LOGN	Logan Glacier	17.72	50		P	13 34 29.8	+0.7
LOGN				IAmb	IAmb	13 34 39.0	
	comp=Z,25nm,0.9s						
M27K	Edge Creek, AK	17.83	45		Pn	13 34 30.0	+0.2
M27K				IAmb	IAmb	13 34 36.3	
	comp=Z,32nm,1.4s						
PRP	Porcupine Dome	17.96	33		Pn	13 34 30.8	-0.6
L27K	Beaver Creek,	18.12	43	P	Pn	13 34 32.9	-0.4
BCAR	Beaver Creek A	18.14	43	P	Pn	13 34 33.8	+0.2
TOLK	Toolik Lake Re	18.95	22	P	P	13 34 42.2	-0.3
EGAK	Eagle	19.14	38	P	P	13 34 45.2	+0.7
PET	Petropavlovsk	19.33	285	*i* P	P	13 34 47.0	+0.4
PET				pmax	pmax		
	comp=Z,8.0nm,0.4s						
PET	Petropavlovsk	19.33	285	P	P	13 34 47.0	+0.4
PET				IAmb	IAmb	13 35 09.1	
	comp=Z,74nm,1.2s						
HYT	Haines Junctio	19.38	51	P	P	13 34 47.9	+0.6
BMAR	Burnt Mountain	19.44	29	P	P	13 34 47.0	-0.8
DAWY	Dawson	19.53	41	P	P	13 34 49.3	+0.5
BILL	Bilibino	19.69	333	*e*P	P	13 34 49.1	-1.4
BILL				pmax	pmax		
	comp=Z,13nm,1.1s						
BILL				MLR	MLR		
	comp=Z,128nm,20.0s						
PEA0B	Petropavlovsk-	19.88	286	⇓*i*P	P	13 34 53.0	+0.4
PEA0B	Petropavlovsk-	19.88	286	P	P	13 34 53.1	+0.4
PETK	Petropavlovsk-	19.88	286	P	P	13 34 51.8	-0.8
	comp=Z,8.6nm,0.3s,baz=89,slow=13,SNR=160						
PETK	Petropavlovsk-	19.88	286	P	P	13 34 52.7	0.0
PETK	Petropavlovsk-	19.88	286	P	P	13 34 52.7	0.0
SKAG	Skagway	20.25	56		P	13 34 55.2	-1.4
SKAG				IAmb	IAmb	13 35 14.8	
	comp=Z,21nm,0.8s						
WHY	Whitehorse	20.62	52	P	P	13 34 60.0	-0.8
WHY				IAmb	IAmb	13 35 06.9	
	comp=Z,16nm,0.8s						
EPYK	Eagle Plains	21.50	36	P	P	13 35 09.8	-0.3
EPYK				IAmb	IAmb	13 35 16.3	
	comp=Z,22nm,0.7s						
SEY	Seymchan	22.73	313	P	P	13 35 22.5	-0.8
	comp=Z,3.5nm,0.6s,baz=96,slow=7.3,SNR=7.9						
SEY				PcP	PcP	13 39 15.2	+1.2
	comp=Z,2.6nm,0.5s,baz=225,slow=2.6,SNR=7.8						
SEY	Seymchan	22.73	313	*i* P	P	13 35 22.2	-1.1
DLBC	Dease Lake	22.96	59	P	P	13 35 27.1	+1.3
	comp=Z,2.9nm,0.7s,baz=297,slow=12,SNR=4.1						
MA2	Magadan	23.19	304	P	P	13 35 27.2	-0.8
	comp=Z,11nm,0.7s,baz=104,slow=7.0,SNR=6.7						
MA2	Magadan	23.19	304	*i* P	P	13 35 26.7	-1.3
MA2				pmax	pmax		
	comp=Z,24nm,1.2s						
MA2	Magadan	23.19	304	P	P	13 35 28.0	0.0
INK	Inuvik	23.45	33	P	P	13 35 29.5	-0.9
	comp=Z,7.4nm,0.4s,baz=247,slow=7.5,SNR=83						
INK				PcP	PcP	13 39 16.8	+1.4
	comp=Z,3.4nm,0.8s,baz=163,slow=2.6,SNR=5.5						
INK	Inuvik	23.45	33	P	P	13 35 30.0	-0.4
INK				pmax	pmax		
	comp=Z,9.0nm,0.5s						
INK	Inuvik	23.45	33	P	P	13 35 29.9	-0.4
INK				IAmb	IAmb	13 35 31.4	
	comp=Z,8.8nm,0.5s						
A36M	Sachs Harbour	27.52	28	P	P	13 36 08.6	+1.1
A36M				IAmb	IAmb	13 36 30.5	
	comp=Z,4.6nm,0.8s						
YKA	Yellowknife Ar	30.33	49	P	P	13 36 33.6	+1.1
	comp=Z,1.7nm,0.3s,baz=275,slow=8.7,SNR=41						
YKA				LR	LR	13 49 21.0	
	comp=Z,89nm,18.7s,baz=0.0,slow=38						
YKA	Yellowknife Ar	30.33	49	P	P	13 36 32.5	+0.1
YKA	Yellowknife Ar	30.33	49	P	P	13 36 32.5	+0.1
TIXI	Tiksi	32.82	329	P	P	13 36 54.7	+0.4
	comp=Z,2.1nm,0.4s,baz=110,slow=16,SNR=10						
TIXI				PcP	PcP	13 39 39.0	+0.6
	comp=Z,2.3nm,0.7s,baz=100,slow=3.9,SNR=6.3						
TIXI	Tiksi	32.82	329	*ce*P	P	13 36 53.9	-0.4
TIXI	Tiksi	32.82	329	P	P	13 36 55.3	+1.0
TIXI				IAmb	IAmb	13 37 17.6	
	comp=Z,7.6nm,1.5s						
NEW	Newport	33.05	76	P	P	13 36 58.3	+1.6
	comp=Z,1.6nm,0.6s,baz=270,slow=5.9,SNR=4.3						
EDM	Edmonton	33.21	66	P	P	13 36 58.6	+0.6
EDM				pmax	pmax		
	comp=Z,7.0nm,0.7s						
EDM	Edmonton	33.21	66	P	P	13 36 58.5	+0.6
EDM				IAmb	IAmb	13 37 11.6	
	comp=Z,7.0nm,0.7s						
YAK	Yakutsk	33.23	311	*ce*P	P	13 36 57.5	-0.5
YAK				pmax	pmax		
	comp=Z,39nm,2.5s						
ERM	Erimo	33.31	271	P	P	13 36 57.3	-1.5
ERM				pmax	pmax		
	comp=Z,103nm,1.3s						
ERM	Erimo	33.31	271	P	P	13 36 57.3	-1.5
RES	Resolute Bay	36.48	26	P	P	13 37 25.3	-0.4
	comp=Z,0.6nm,0.3s,baz=225,slow=9.5,SNR=8.0						
RES	Resolute Bay	36.48	26	P	P	13 37 25.4	-0.4
RES				pmax	pmax		
	comp=Z,8.0nm,1.5s						
RES	Resolute Bay	36.48	26	P	P	13 37 25.4	-0.4
RES				IAmb	IAmb	13 37 31.4	
	comp=Z,7.5nm,1.4s						
KLR	Kul'dur	36.48	289	⇓*i*P	P	13 37 25.1	-1.0
KLR				pmax	pmax		
	comp=Z,16nm,1.7s						
H11N2	WAKE ISLAND Hy	37.35	219	T	T	14 17 27.6	
	baz=23,slow=74,SNR=25						
H11N3	WAKE ISLAND Hy	37.36	219	T	T	14 17 23.3	
	baz=251,slow=74,SNR=27						
H11N1	WAKE ISLAND Hy	37.37	219	T	T	14 17 25.4	
	SNR=24						
NVAR	Mina Array Bea	37.68	91	P	P	13 37 36.6	-0.1
	comp=Z,1.9nm,0.3s,baz=308,slow=11,SNR=4.2						
NVAR				LR	LR	13 49 54.4	
	comp=Z,38nm,18.4s,baz=280,slow=31						
EUNU	Eureka	37.83	16	P	P	13 37 38.9	+1.5
YHH	Holmes Hill	38.54	77	P	P	13 37 44.3	+0.4
YHH				IAmb	IAmb	13 38 09.2	
	comp=Z,3.6nm,0.9s						
H11S1	WAKE ISLAND Hy	38.54	218	T	T	14 18 54.3	
	baz=23,slow=76,SNR=194						
H11S2	WAKE ISLAND Hy	38.56	218	T	T	14 18 57.5	
	baz=23,slow=76,SNR=174						
H11S3	WAKE ISLAND Hy	38.56	218	T	T	14 18 55.6	
	baz=23,slow=76,SNR=209						
USRK	Ussuriysk Ar.	38.90	282	LR	LR	13 53 12.0	
	comp=Z,58nm,21.6s,baz=55,slow=35						
RLMT	Red Lodge	39.30	76	P	P	13 37 52.6	+2.4
MJAR	Matsushiro Arr	39.68	268	P	P	13 37 53.4	+0.2
	comp=Z,1.9nm,0.6s,baz=55,slow=9.3,SNR=5.1						
MJAR				LR	LR	13 53 26.3	
	comp=Z,45nm,21.3s,baz=70,slow=35						
MAJO	Matsushiro	39.68	268	*i* P	P	13 37 52.9	-0.3
MAJO				pmax	pmax		
	comp=Z,26nm,2.7s						
MAT	Matsushiro	39.68	268	P	P	13 37 53.0	-0.2
BW06	Boulder Array	40.44	79	P	P	13 37 58.8	-1.0
PD31	Pinedale Array	40.44	79	P	P	13 37 59.0	-0.7
PDAR	Pinedale Array	40.44	79	P	P	13 38 01.1	+1.3
	comp=Z,2.0nm,0.6s,baz=299,slow=3.9,SNR=24						
PDAR	Pinedale Array	40.44	79	P	P	13 37 58.4	-1.3
BOD	Bodaibo	42.05	309	*e*P	P	13 38 12.0	-0.5
BOD				pmax	pmax		
	comp=Z,13nm,0.8s						
CN2	Changchun	43.03	286	*e*P	P	13 38 18.5	-2.1
NEEM	North Greenlan	45.10	16	*e*P	P	13 38 37.5	+0.3
KSRS	Korea Array	45.40	277	P	P	13 38 40.5	+0.9
	comp=Z,5.4nm,0.8s,baz=58,slow=7.6,SNR=8.9						
KSRS				LR	LR	13 54 37.0	
	comp=Z,46nm,21.2s,baz=49,slow=32						
NOR	Nord	45.59	5	*e*P	P	13 38 40.9	+0.3
NRIK	Noril'sk	46.52	332	P	P	13 38 48.3	+0.3
	comp=Z,4.8nm,0.4s,baz=76,slow=8.9,SNR=9.8						
NRIK	Noril'sk	46.52	332	*i* P	P	13 38 46.5	-1.5
NRIK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KBS	Kingsbay	49.08	360	*e*P	P	13 39 05.7	-2.0
KBS				IAML		13 39 20.1	
	comp=Z,4.1nm,0.4s						
FRB	Frobisher Bay	49.08	35	P	P	13 39 08.2	+0.3
	comp=Z,3.3nm,0.3s,baz=312,slow=8.5,SNR=6.8						
DAG	Danmarks Havn	49.91	8	*i* P	P	13 39 14.0	-0.1
DAG				AMP		13 39 14.5	
	comp=Z,6.6nm,0.4s						
TLY	Talaya	50.39	306	*e*P	P	13 39 19.3	+1.1
TLY				pmax	pmax		
	comp=Z,15nm,0.6s						
SUMG	Summit	50.89	17	*i* P	P	13 39 22.0	-0.1
ULN	Ulaanbaatar	50.98	301	*i* P	P	13 39 22.9	+0.1
ULN				pmax	pmax		
	comp=Z,4.0nm,0.6s						
SONM	Songino Array	51.34	301	P	P	13 39 26.0	+0.5
	comp=Z,1.2nm,0.3s,baz=57,slow=7.2,SNR=12						
SONM				PcP	PcP	13 40 41.0	+1.1
	comp=Z,0.9nm,0.4s,baz=52,slow=1.8,SNR=4.4						
SONM	Songino Array	51.34	301	P	P	13 39 25.4	-0.1
SONM				pmax	pmax		
	comp=Z,7.0nm,1.2s						
SONM	Songino Array	51.34	301	P	P	13 39 25.4	-0.1
SONM				IAmb	IAmb	13 39 27.2	
	comp=Z,6.6nm,1.2s						
ZAK	Zakamensk	51.37	305	*e*P	P	13 39 24.6	-1.0
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.4s						
MOY	Mondy	51.71	307	*e*P	P	13 39 28.6	+0.5
DBG	Daneborg	52.02	10	⇓*i*P	P	13 39 29.1	-0.9
DBG				AMP		13 39 30.1	
	comp=Z,81nm,0.4s						
TXAR	Lajitas Array	52.77	89	P	P	13 39 36.7	+0.5
	comp=Z,1.8nm,0.7s,baz=303,slow=5.7,SNR=18						

HHC	Hu-ho-hao-te	52.95	291	eP	P	13 39 37.7	+0.2
HHC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,140nm,6.3s						
ICESG	Greenland Ices	53.48	20	eP	P	13 39 41.0	-0.2
NJ2	Nanjing	54.55	278	eP	P	13 39 48.4	-0.7
NJ2				pmax	pmax		
	comp=Z,18nm,0.6s						
SCO	Scoresbysund	55.34	13	i P	P	13 39 54.0	-0.3
SCHQ	Schefferville	55.53	43	P	P	13 39 56.3	+0.4
	comp=Z,9.3nm,0.8s,baz=301,slow=2.3,SNR=6.0						
SCHQ	Schefferville	55.53	43	P	P	13 39 55.7	-0.2
ZALV	Zalesovo Beam	57.50	318	P	P	13 40 09.7	-0.2
	comp=Z,2.6nm,0.5s,baz=67,slow=4.4,SNR=10						
ZALV				LR	LR	14 07 08.3	
	comp=Z,36nm,18.2s,baz=78,slow=38						
ZALV	Zalesovo Beam	57.50	318	P	P	13 40 09.4	-0.5
ZALV	Zalesovo Beam	57.50	318	P	P	13 40 09.3	-0.5
ARCES	ARCESS Array B	58.03	354	P	P	13 40 13.5	0.0
	comp=Z,2.2nm,0.4s,baz=21,slow=7.7,SNR=3.8						
ARCES	ARCESS Array B	58.03	354	P	P	13 40 13.3	-0.2
ARCES				pmax	pmax		
	comp=Z,21nm,1.5s						
ARCES	ARCESS Array B	58.03	354	P	P	13 40 13.3	-0.2
XAN	Xi'an	59.12	287	P	P	13 40 21.7	+0.1
XAN				pP	pP	13 40 26.0	-5.0
XAN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
DGZ	Jazzator, Alta	59.41	313	⇓iP	P	13 40 23.8	+0.3
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.4s						
GTA	Gaotai	60.52	297	⇓P	P	13 40 31.1	-0.1
GTA				pP	pP	13 40 35.7	-4.9
GTA				sP	pwP	13 40 39.9	-3.8
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,44nm,5.0s						
GTA				LR	LR		
	comp=Z,67nm,16.4s						
GTA				LR	LR		
	comp=Z,120nm,18.9s						
GTA				LR	LR		
	comp=Z,100nm,17.1s						
KURK	Kurchatov	62.45	318	ceP	P	13 40 43.7	-0.2
KURK				pmax	pmax		
	comp=Z,5.0nm,0.3s						
KURK	Kurchatov	62.45	318	P	P	13 40 44.0	+0.1
WMQ	Urumqi	63.59	308	eP	P	13 40 54.2	+2.5
BRVK	Borovoye	63.80	325	P	P	13 40 53.2	+0.4
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BRVK	Borovoye	63.80	325	P	P	13 40 53.2	+0.4
MK31	Makanchi Array	63.87	313	i P	P	13 40 52.9	-0.6
MK31				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MK31	Makanchi Array	63.87	313	P	P	13 40 53.1	-0.4
MK31				IAmb	IAmb	13 40 53.8	
	comp=Z,2.0nm,0.8s						
MKAR	Makanchi Array	63.87	313	P	P	13 40 52.8	-0.7
	comp=Z,1.3nm,0.3s,baz=50,slow=6.3,SNR=36						
MKAR	Makanchi Array	63.87	313	P	P	13 40 52.9	-0.6
MAKZ	Makanchi	64.00	314	P	P	13 40 53.8	-0.5
MAKZ				pmax	pmax		
	comp=Z,6.0nm,1.2s						
MAKZ	Makanchi	64.00	314	P	P	13 40 53.8	-0.5
MAKZ				IAmb	IAmb	13 40 54.5	
	comp=Z,6.3nm,1.2s						
ARU	Arti	64.71	333	d iP	P	13 40 58.9	+0.1
ARU				S	S	13 49 38.1	+1.7
ARU				SS	SS	13 53 43.3	-3.3
ARU				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ARU	Arti	64.71	333	P	P	13 40 58.4	-0.4
KIRV	Kirov	65.10	339	i P	P	13 41 00.4	-0.8
GYA	Guiyang	65.94	283	⇓P	P	13 41 08.2	+0.9
GYA				pmax	pmax		
	comp=Z,19nm,0.9s						
FIA1	FINESS Array S	65.98	352	P	P	13 41 06.2	-0.6
FINES	FINESS Array B	65.98	352	P	P	13 41 07.0	+0.2
	comp=Z,4.0nm,0.5s,baz=9.7,slow=7.6,SNR=45						
FINES				LR	LR	14 14 35.5	
	comp=Z,41nm,18.6s,baz=347,slow=40						
NC204	NORSAR Array S	66.82	360	P	P	13 41 12.7	+0.4
NC303	NORSAR Array S	66.87	360	P	P	13 41 13.3	+0.7
OTUK	Ortayu	66.92	320	P	P	13 41 12.8	-0.4
NB2	NORSAR Subarra	67.05	360	P	P	13 41 13.3	-0.5
	comp=Z,2.6nm,0.6s,baz=1.2,slow=6.5						
NOA	NORSAR Array B	67.05	360	P	P	13 41 13.5	-0.3
	comp=Z,2.9nm,0.5s,baz=0.1,slow=6.3,SNR=17						
PDGK	Podgornoye	67.81	313	P	P	13 41 18.6	-0.4
VSU	Vasula	68.86	351	eP	P	13 41 25.8	+0.7
MTSE	Matsula	68.87	353	eP	P	13 41 25.4	+0.3
MDOK	Medeo	69.03	314	P	P	13 41 26.6	-0.1
TARG	Taragay, Kyrgy	69.83	313	P	P	13 41 32.7	+0.7
TKM2	Tokmak 2	69.86	315	P	P	13 41 32.8	+0.9
	SNR=8.3						
TKM2	Tokmak 2	69.86	315	P	P	13 41 32.0	+0.1
USP	Ospenovka	70.06	316	P	P	13 41 33.6	+0.7
	SNR=17						
SLIT	Slitere, Latvi	70.06	353	eP	P	13 41 32.8	+0.3
KBK	Karagaybulak	70.36	315	P	P	13 41 36.1	+1.2
	SNR=5.5						
AB31	Akbulak array	70.52	328	eP	P	13 41 35.6	+0.1
ABKAR	Akbulak array	70.52	328	P	P	13 41 35.7	+0.2
ABKAR	Akbulak array	70.52	328	P	P	13 41 35.8	+0.3
AAK	Ala-Archa	70.57	315	P	P	13 41 37.1	+1.0
	SNR=12						
AAK	Ala-Archa	70.57	315	i P	P	13 41 36.2	+0.1
AAK				pmax	pmax		
	comp=Z,20nm,0.5s						
AAK	Ala-Archa	70.57	315	P	P	13 41 36.4	+0.3
EKS2	Erkin-Say	70.86	316	P	P	13 41 38.7	+0.8
	SNR=12						
AML	Almayashu	71.32	316	P	P	13 41 42.1	+1.0
	SNR=9.2						
KK31	Karatay Array	71.86	318	i P	P	13 41 43.7	-0.1
KK31	Karatay Array	71.86	318	P	P	13 41 42.8	-1.0
KK31				IAmb	IAmb	13 41 44.8	
	comp=Z,7.8nm,0.8s						
KKAR	Karatay Array	71.86	318	P	P	13 41 44.1	+0.3
KKAR	Karatay Array	71.86	318	P	P	13 41 44.1	+0.3
KKAR	Karatay Array	71.86	318	P	P	13 41 43.6	-0.2
KKAR				IAmb	IAmb	13 41 44.8	
	comp=Z,7.8nm,0.8s						
PABE	Paberze	72.04	352	eP	P	13 41 45.1	+0.6
NACGM	Naroch	72.36	350	i P	P	13 41 47.3	+0.8
KSH	Kashi	72.44	312	P	P	13 41 51.0	+3.6
KSH				pP	pP	13 41 56.8	-0.2
KSH				pmax	pmax		
	comp=Z,15nm,0.6s						
LSA	Lhasa	72.48	296	P	P	13 41 49.6	+1.3
LSA				pmax	pmax		
	comp=Z,13nm,0.6s						
LSA	Lhasa	72.48	296	P	P	13 41 49.6	+1.3
MNK	Minsk	72.64	350	i P	P	13 41 49.1	+0.9
MNK				i	PP	13 44 28.8	-0.4
MNK				i PPP	PPP	13 46 12.9	
MNK				i S	S	13 51 08.7	-1.7
MNK				pmax	pmax		
	comp=Z,24nm,0.8s						
MNK				pmax	pmax		
	comp=N,31nm,0.9s						
MNK				pmax	pmax		
	comp=E,3.0nm,0.7s						
MNK				MLR	MLR		
	comp=Z,89nm,17.0s						
MNK				MLR	MLR		
	comp=E,29nm,31.0s						
MNK				MLR	MLR		
	comp=N,216nm,26.0s						
MNK	Minsk	72.64	350	i P	P	13 41 49.2	+1.0
	comp=E,3.0nm,0.7s						
MNK				i P	P	13 41 49.2	+1.0
	comp=N,31nm,0.9s						
MNK				i P	P	13 41 49.2	+1.0
	comp=Z,24nm,0.8s,baz=194						
MNK				i PP	PP	13 44 28.9	-0.3
MNK				i PPP	PPP	13 46 12.9	
MNK				i S	S	13 51 08.8	-1.7
MNK				i SS	SS	13 55 04.0	-45
MNK				i SSS	SSS	13 58 47.0	
MNK				i LQ	LQ	14 08 34.1	
MNK				i LR	LR	14 12 57.1	
MNK				i LRM	MLR	14 17 16.2	
	comp=Z,89nm,16.8s						
MNK				i LRM	MLR	14 17 24.0	
	comp=E,29nm,31.4s						
MNK				i LRM	MLR	14 17 25.2	
	comp=N,216nm,25.8s						
BTK	Batken	74.26	316	P	P	13 41 58.1	0.0
BTK				pmax	pmax		
	comp=Z,13nm,0.9s						
BTK	Batken	74.26	316	P	P	13 41 58.1	0.0
GAR	Garm	75.36	316	P	P	13 42 04.7	+0.2
CHGR	Chuyangaron	76.14	317		P	13 42 09.6	+0.7
TAPN	Taplejung	76.21	297	eP	P	13 42 10.1	+0.4
	comp=Z,15nm,0.5s						
AKASG	Malin Array Be	76.21	348	P	P	13 42 08.9	-0.1
	comp=Z,5.7nm,0.5s,baz=17,slow=6.0,SNR=10.0						
AKASG				LR	LR	14 20 37.3	
	comp=Z,28nm,18.7s,baz=260,slow=40						
AKASG	Malin Array Be	76.21	348	P	P	13 42 08.4	-0.6
AKASG				pmax	pmax		
	comp=Z,4.0nm,1.5s						
AKASG	Malin Array Be	76.21	348	P	P	13 42 08.4	-0.6
AKASG				IAmb	IAmb	13 42 21.6	
	comp=Z,3.8nm,1.4s						
AKBB	Malin Array Si	76.21	348	P	P	13 42 08.1	-0.9
AKBB				pmax	pmax		
	comp=Z,9.0nm,0.5s						
AKBB	Malin Array Si	76.21	348	P	P	13 42 08.1	-0.9
CHTO	Chiang Mai	76.35	283	P	P	13 42 10.1	-0.2
CHTO				pmax	pmax		
	comp=Z,8.0nm,1.3s						
CHTO	Chiang Mai	76.35	283	P	P	13 42 10.1	-0.2
CHTO				IAmb	IAmb	13 42 11.5	
	comp=Z,8.3nm,1.3s						
CM31	Chiang Mai Arr	76.63	283	P	P	13 42 12.0	+0.2
CM31				IAmb	IAmb	13 42 13.2	
	comp=Z,7.0nm,0.8s						
CMAR	Chiang Mai Arr	76.63	283	P	P	13 42 12.3	+0.5
	comp=Z,7.7nm,0.9s,baz=25,slow=6.7,SNR=44						
GUN	Gumba	76.76	298	eP	P	13 42 13.5	+0.6
	comp=Z,42nm,0.6s						
JIRN	Jiri	76.79	298	eP	P	13 42 13.8	+0.7
	comp=Z,43nm,0.4s						
RAMN	Ramite	77.13	297	eP	P	13 42 15.3	+0.4
	comp=Z,26nm,0.4s						
KKN	Kakani	77.18	299	eP	P	13 42 15.5	+0.4
	comp=Z,15nm,0.5s						
PKIN	Phulchoki	77.29	299	eP	P	13 42 16.2	+0.4
	comp=Z,9.6nm,0.5s						
GKN	Gorkha	77.36	299	eP	P	13 42 16.5	+0.4
	comp=Z,25nm,0.7s						
DMN	Daman	77.42	299	eP	P	13 42 17.3	+0.8
CHVC	Chvalec	77.43	356	eP	P	13 42 17.0	+1.1
OSTC	Ostas	77.45	356	eP	P	13 42 18.2	+2.2
DANN	Dangsing	77.55	300	eP	P	13 42 17.8	+0.5
DPC	Dobruska-Polom	77.66	356	eP	P	13 42 18.8	+1.6
DPC	Dobruska-Polom	77.66	356	eP	P	13 42 18.8	+1.6
KRLC	Kraliky	77.91	356	eP	P	13 42 19.8	+1.2
KRLC	Kraliky	77.91	356	eP	P	13 42 19.8	+1.2
KOLN	Koldanda	78.10	300	eP	P	13 42 20.7	+0.5
	comp=Z,7.0nm,0.4s						
PYUN	Piuthan	78.16	301	eP	P	13 42 21.0	+0.4
NIL	Nilore	78.50	311	P	P	13 42 22.3	+0.1
NIL				pmax	pmax		
	comp=Z,17nm,0.7s						
NIL	Nilore	78.50	311	P	P	13 42 22.2	+0.1
LANS	Liptovska Anna	78.69	354	eP	P	13 42 25.0	+2.1
LANS				pmax	pmax		
	comp=Z,4.0nm,0.7s						
LANS	Liptovska Anna	78.69	354	eP	P	13 42 25.0	+2.1
KHC	Kasperske Hory	78.96	358	eP	P	13 42 26.0	+1.6
KHC	Kasperske Hory	78.96	358	eP	P	13 42 26.0	+1.6
GERES	GERESS Array B	79.24	358	P	P	13 42 26.2	+0.1
	comp=Z,1.5nm,0.6s,baz=4.3,slow=5.4,SNR=12						
SMOL	Smolenice	79.44	355	eP	P	13 42 28.7	+1.7
SMOL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SMOL	Smolenice	79.44	355	eP	P	13 42 28.7	+1.7
MODS	Modra-Piesok	79.59	355	eP	P	13 42 28.1	+0.3
MODS	Modra-Piesok	79.59	355	eP	P	13 42 28.1	+0.3
BUR08	Bucovina Ar. S	79.70	350	P	P	13 42 28.5	-0.1
BUR08				IAmb	IAmb	13 42 31.0	
	comp=Z,2.5nm,0.7s						
BURAR	Bucovina Array	79.72	350	P	P	13 42 29.5	+0.8
BURAR				IAmb	IAmb	13 42 30.2	
	comp=Z,5.2nm,1.2s						
CONA	Conrad Observa	80.09	356	eP	P	13 42 32.3	+1.7
	comp=Z,5.9nm,0.9s						
KIV	Kislovodsk	80.25	337	eP	P	13 42 33.1	+1.5
KIV				pmax	pmax		
	comp=Z,15nm,1.1s						
KBZ	Khabaz	80.41	337	P	P	13 42 34.0	+1.7
	comp=Z,6.5nm,0.8s,baz=182,slow=1.6,SNR=12						
RETA	Reutte	80.64	360	i P	P	13 42 35.5	+1.9
	comp=Z,2.5nm,0.6s						
MOTA	Moosalm	80.78	360	eP	P	13 42 35.6	+1.2
	comp=Z,2.9nm,0.5s						
ARSA	Arzberg	80.78	357	eP	P	13 42 36.1	+1.8
	comp=Z,5.3nm,1.0s						
WATA	Walderalm	80.78	359	i P	P	13 42 35.8	+1.4
	comp=Z,3.1nm,0.5s						
WTTA	Wattenberg	80.86	359	i P	P	13 42 36.4	+1.5
	comp=Z,4.7nm,0.5s						
SQTA	Sankt Quirin	80.90	360	i P	P	13 42 36.6	+1.5
	comp=Z,2.3nm,0.4s						
KBA	Koelnbreinsper	81.02	358	eP	P	13 42 37.8	+2.0
	comp=Z,9.8nm,0.6s						
FETA	Feichten	81.10	360	eP	P	13 42 37.8	+1.6
	comp=Z,5.6nm,0.8s						
GEYT	Alibeck	81.11	324	P	P	13 42 37.3	+1.0
	comp=Z,4.2nm,0.7s,baz=330,slow=3.9,SNR=5.5						
ABTA	Abfaltersbach	81.36	359	i P	P	13 42 38.3	+0.8
	comp=Z,3.0nm,0.6s						
SOKA	Soboth	81.37	357	i P	P	13 42 39.0	+1.4
	comp=Z,7.5nm,0.9s						
MYKA	Terra Mystica	81.46	358	eP	P	13 42 39.9	+1.9
	comp=Z,8.7nm,1.6s						
OBKA	Obir	81.56	357	eP	P	13 42 39.7	+1.2
	comp=Z,3.0nm,0.5s						
CTAO	Charters Tower	81.73	222	P	P	13 42 38.9	-0.6
CTAO				pmax	pmax		
	comp=Z,7.0nm,1.2s						
CTAO	Charters Tower	81.73	222	P	P	13 42 38.9	-0.6
CTAO				IAmb	IAmb	13 42 46.1	
	comp=Z,7.0nm,1.1s						
BRTR	Keskin Array B	86.23	342	P	P	13 43 03.6	+1.0
	comp=Z,0.8nm,0.6s,baz=72,slow=4.0,SNR=3.7						
BRTR	Keskin Array B	86.23	342	P	P	13 43 02.3	-0.2
BRTR	Keskin Array B	86.23	342	P	P	13 43 02.3	-0.2
WB0	Warramunga Arr	86.75	232	P	P	13 43 03.8	-1.2
WB0				IAmb	IAmb	13 43 16.3	
	comp=Z,1.8nm,0.8s						
WR0	Warramunga Arr	86.84	231	P	P	13 43 04.3	-1.2
WR0				IAmb	IAmb	13 43 25.0	
	comp=Z,7.8nm,1.4s						
WRAB	Tennant Creek	86.91	232	P	P	13 43 04.8	-1.0
WRAB				pmax	pmax		
	comp=Z,4.0nm,1.5s						
WRAB	Tennant Creek	86.91	232	P	P	13 43 04.8	-1.0
WRAB				IAmb	IAmb	13 43 20.1	
	comp=Z,3.6nm,1.4s						
WB2	Warramunga Arr	86.92	232	P	P	13 43 05.7	-0.1
WB2				IAmb	IAmb	13 43 21.2	
	comp=Z,5.3nm,1.3s						
WRA	Warramunga Arr	86.92	232	P	P	13 43 04.4	-1.5
	comp=Z,1.2nm,0.9s,baz=37,slow=6.0,SNR=9.6						
WRA	Warramunga Arr	86.92	232	P	P	13 43 05.5	-0.4
ESDC	Sonseca Array	87.57	11	P	P	13 43 08.1	-0.9
	comp=Z,1.1nm,0.7s,baz=346,slow=5.0,SNR=12						
ESDC	Sonseca Array	87.57	11	P	P	13 43 09.7	+0.7
ESDC				IAmb	IAmb	13 43 21.7	
	comp=Z,1.8nm,0.8s						
ASAR	Alice Springs	90.31	230	P	P	13 43 21.4	-0.4
	comp=Z,2.4nm,1.0s,baz=38,slow=4.1,SNR=12						
QSPA	South Pole Qui	142.02	180	PKP	PKiKP	13 49 54.0	-0.5
	comp=Z,0.5nm,0.5s,baz=274,slow=1.1,SNR=5.8						
MAW	Mawson	150.78	218	PKPbc	PKPbc	13 50 11.7	0.0
	comp=Z,1.6nm,1.0s,baz=69,slow=10,SNR=2.8						
BOSA	Boshof	153.98	330	PKPbc	PKiKP	13 50 21.2	+0.8
	comp=Z,2.5nm,0.6s,baz=39,slow=4.0,SNR=4.8						

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*BUL **06** 13:40:23.2±1.1, 16°.28S×34°.33E, h10^{km}, MD4.1*

EAF 06 13:40:27.8±2.9**, 16°.27S×34°.02E, h10^{km}, MD3.8, Mozambique**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZOMB	Zomba	1.56	56	i P	Pn	13 40 54.1	-1.6
ZOMB				S	Sn	13 41 16.1	+0.2
ZOMB	Zomba	1.56	56	i P	Pn	13 40 54.1	-1.6
ZOMB				S	Sn	13 41 16.1	+0.2
KRI	Karoi	4.26	262	eP	Pn	13 41 27.7	-5.3
KRI				eS	Sn	13 42 15.2	-7.6
KRI	Karoi	4.26	262	eP	Pn	13 41 27.7	-5.3
KRI				eS	Sn	13 42 15.2	-7.6
BLWY	Bulawayo	6.42	232	eP	Pn	13 42 00.2	-2.4
BLWY				eS	Sn	13 43 09.9	-6.2
BLWY	Bulawayo	6.42	232	eP	Pn	13 42 00.2	-2.4
BLWY				eS	Sn	13 43 09.9	-6.2
MATP	Matopo	6.67	231	eP	Pn	13 42 04.0	-2.1
MATP				eS	Sn	13 43 17.7	-4.7
MATP	Matopo	6.67	231	eP	Pn	13 42 04.0	-2.1
MATP				eS	Sn	13 43 17.7	-4.7
MSNA	Messina	7.12	211	eP	Pn	13 42 09.3	-2.9
MSNA				eS	Sn	13 43 25.3	-8.0
MSNA	Messina	7.12	211	eP	Pn	13 42 09.3	-2.9
MSNA				eS	Sn	13 43 25.3	-8.0
MOPA	Mopani	7.62	198	eP	Pn	13 42 16.2	-2.7
MOPA				eS	Sn	13 43 40.9	-4.5
MOPA	Mopani	7.62	198	eP	Pn	13 42 16.2	-2.7
MOPA				eS	Sn	13 43 40.9	-4.5

BEO 06 13:40:52.1±0.5**, 44°.13N×22°.15E, h0^{km}, ML1.7**/10**, 6C-4D, Mining explosion., Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUBS	Kucevo	0.44	309	ePg	Pg	13 40 59.1	-1.4
KUBS				eSg	Sg	13 41 06.0	-0.2
BOVS	Bovan	0.59	213	⇓P	Pg	13 41 02.6	-0.9
BOVS				⇑S	Sg	13 41 11.0	-0.1
BOVS	Bovan	0.59	213	ePg	Pg	13 41 02.7	-0.7
BOVS				eSg	Sg	13 41 10.5	-0.6
BLKB	Belogradchik	0.64	143	⇑S	Sb	13 41 14.4	-1.2
MDVR	Moldovita	0.72	334	⇓P	Pg	13 41 05.3	-0.5
MDVR				⇑S	Sg	13 41 15.3	+0.1
HERR	Herculane	0.77	14	⇑P	Pg	13 41 06.8	-0.1
ZAPS	Zavoj	0.93	158	ePg	Pg	13 41 09.0	-0.9
ZAPS				eSg	Sg	13 41 21.6	-0.3
GRUS	Gruza	1.06	257	ePg	Pg	13 41 12.0	-0.5
GRUS				eSg	Sg	13 41 26.5	+0.3
SELS	Selova	1.18	220	ePg	Pg	13 41 13.5	-1.2
SELS				eSg	Sg	13 41 30.4	+0.4
GZR	Gura Zlata	1.34	19	⇑P	Pg	13 41 16.9	-0.8
GZR				⇑S	Sb	13 41 35.5	-0.3
BARS	Barje	1.34	191	ePg	Pg	13 41 16.1	-1.6
BARS				eSg	Sg	13 41 35.3	+0.2
BZS	Buzias	1.53	346	⇓P	Pn	13 41 19.6	-1.1
BZS				⇓S	Sg	13 41 40.0	-1.3
DIVS	Divibare	1.55	269	ePg	Pb	13 41 21.5	-0.3
DIVS				eSg	Sn	13 41 41.7	-0.3
BOSS	Bosilegrad	1.66	171	ePg	Pn	13 41 22.2	-0.2
BOSS				eSg	Sn	13 41 43.4	-1.0
SJES	Sjenica	1.80	242	eSg	Sg	13 41 49.7	-0.3

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*IDC **06** 13:52:52.0±1.1, 39°.31N×143°.62E, h0^{km}, mb3.6/7, mb1 3.7/10, mb1mx3.6/60, mbtmp3.6/10, ML3.0/3, Error ellipse: s-maj=26.3km s-min=21.3km az=102.0*

*JMA **06** 13:52:55.1±0.2, 39°.43N×143°.62E, h47^{km}, M3.6*

*NIED **06** 13:52:55.2, 39°.43N×143°.62E, h47^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}3.73; $M_{\theta\theta}$0.01; $M_{\phi\phi}$-3.74; $M_{r\theta}$1.61; $M_{\theta\phi}$-1.47; $M_{\phi r}$1.34; Fault plane solution: $M_0$4.52000×10^{14} NP1:ϕ_s34.00000°, δ59.00000°, λ107.00000°. NP2:ϕ_s183.00000°, δ35.00000°, λ64.00000°.*

ISC 06 13:52:52.4±3.2**, 39°.39N**±0°.06×**143°.66E**±0°.07**, h7^{km}**±19^{km}**, n24, σ1^{s}.86**/33**, mb3.6**/7**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	1.44	278	P	Pn	13 53 19.0	+0.2
MIYJ				eS	Sg	13 53 36.5	-2.0
JTH	Tanohata	1.49	292	P	Pn	13 53 19.5	0.0
JTH				eS	Sn	13 53 36.7	-2.5
OFUJ	Ofunato	1.58	259	P	Pn	13 53 21.0	+0.3
OFUJ				eS	Sn	13 53 39.9	-1.4
JOM	Ohasama	1.83	273	P	Pn	13 53 25.1	+0.8
JOM				eS	Sn	13 53 47.2	-0.5
JANG	Nango	1.92	301	P	Pn	13 53 25.1	-0.3
JMK	Ichinoseki	1.94	258	P	Pn	13 53 26.5	+0.7
JIO	Ouri	2.03	243	P	Pn	13 53 27.1	+0.2
JIO				eS	Sn	13 53 51.4	-1.1
JYK	Kaneyama	2.61	261	P	Pn	13 53 36.2	+1.3
JOT	Ohata	2.82	316	P	Pn	13 53 38.2	+0.5
JNBK	Urakawa-nobuka	2.97	347	P	Pn	13 53 40.7	+0.9
JFT	Otama	3.21	235	P	Pn	13 53 44.0	+0.8
JFT				eS	Sn	13 54 19.6	-2.0
JCH	Churui	3.23	356	P	Pn	13 53 43.6	+0.2
JCH				eS	Sn	13 54 19.8	-2.3
ASAJ	Asahikawa	4.79	351	Pn	Pn	13 54 05.5	+0.7
	1.6nm,0.3s,baz=206,slow=14,SNR=23						
ASAJ				Sn	Sn	13 54 59.0	-1.6
	0.2nm,0.3s,baz=121,slow=25,SNR=1.7						
MJAR	Matsushiro Arr	5.16	238	Pn	Pn	13 54 10.5	+0.5
	0.3nm,0.3s,baz=24,slow=12,SNR=19						
MAT	Matsushiro	5.16	238	P	Pn	13 54 12.1	+2.1
MAT				eS	Sn	13 55 11.0	+1.2
JHJ	Hachijo jima 2	7.00	208	Sn	Sn	13 55 48.0	-7.0
	6.6nm,0.3s,baz=67,slow=19,SNR=1.1						
USRK	Ussuriysk Ar.	9.95	303	Pn	Pn	13 55 18.1	+2.4
	baz=100,slow=12,SNR=4.5						
SONM	Songino Array	28.04	300	P	P	13 58 44.3	+0.1
	0.5nm,0.5s,baz=107,slow=10,SNR=3.9						
ZALV	Zalesovo Beam	41.68	310	P	P	14 00 42.3	+0.9
	1.8nm,0.5s,baz=88,slow=7.5,SNR=6.5						
MKAR	Makanchi Array	44.41	300	P	P	14 01 04.4	+0.9
	1.0nm,0.7s,baz=87,slow=7.4,SNR=8.0						
ILAR	Eielson Array	46.56	34	P	P	14 01 21.7	+1.4
	0.3nm,0.5s,baz=269,slow=6.1,SNR=4.1						
INK	Inuvik	51.48	28	P	P	14 01 59.9	+2.0
	0.9nm,0.5s,baz=310,slow=5.9,SNR=5.6						
WRA	Warramunga Arr	59.66	190	P	P	14 02 56.7	-0.6
	0.2nm,0.5s,baz=8.8,slow=6.9,SNR=1.8						
ASAR	Alice Springs	63.39	190	P	P	14 03 23.0	+0.6
	0.2nm,0.8s,baz=354,slow=8.1,SNR=1.8						

IDC 06 13:59:58.9±2.2**, 2°.26N×127°.76E, h0^{km}, mb3.5**/3**, mb1 3.7**/3**, mb1mx3.3**/56**, mbtmp3.5**/3**, Error ellipse: s-maj=136.0km s-min=27.6km az=67.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.99	164	P	P	14 05 05.7	+0.3
	1.7nm,0.5s,baz=344,slow=11,SNR=27						
ASAR	Alice Springs	26.46	167	P	P	14 05 37.5	-0.4
	0.3nm,0.5s,baz=343,slow=11,SNR=11						
MKAR	Makanchi Array	59.34	325	P	P	14 10 03.0	+0.2
	0.2nm,0.4s,baz=113,slow=7.0,SNR=2.3						

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*IDC **06** 14:09:21.2±4.8, 14°.49S×167°.14E, h119^{km}±39^{km}, mb3.5/9, mb1 3.6/10, mb1mx3.5/54, mbtmp3.9/10, Error ellipse: s-maj=31.4km s-min=22.5km az=42.0*

*NOU **06** 14:09:22.2, 14°.42S×167°.01E, h82^{km}, MLv5.1/14, Vanuatu Islands*

ISC 06 14:09:17.6±1.1**, 14°.3S**±0°.1×**167°.0E**±0°.1**, h67^{km}, n27, σ2^{s}.79**/20**, mb3.6**/8**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	3.63	162	P	Pn	14 10 14.3	+3.0
RTV	Rentapao	3.77	159	P	Pn	14 10 15.9	+2.7
KOUNC	Koumac, New Ca	6.76	202	P	Pn	14 10 57.1	+2.9
MARNC	Mare, Loyalty	7.24	172	P	Pn	14 11 03.6	+2.8
	0.6nm,1.2s						
YATNC	Mamie plateau,	7.75	181	P	Pn	14 11 09.1	+1.3
DZM	Mont Dzumac	7.78	184	P	Pn	14 11 09.9	+1.6
	3.5nm,0.3s,baz=30,slow=5.2,SNR=64						
DZM				S	Sn	14 12 32.4	-2.6
	1.5nm,0.3s,baz=141,slow=20,SNR=2.1						
DZM	Mont Dzumac	7.78	184	P	Pn	14 11 10.3	+2.0

NOUC	Port Laguerre	7.82	185	P	Pn	14 11 10.7	+2.0
ONTNC	Ouen Toro	8.01	184	P	Pn	14 11 14.4	+3.0
OUENC	Ouen Island, N	8.11	181	P	Pn	14 11 15.2	+2.5
	25nm,1.2s						
PINNC	Pines Island,	8.31	177	P	Pn	14 11 18.6	+3.2
CTA	Charters Tower	20.64	251	P	P	14 13 53.1	+1.3
	1.0nm,0.5s,baz=82,slow=13,SNR=7.5						
STKA	Stephens Creek	29.09	229	P	P	14 15 11.3	-0.7
	1.4nm,0.3s,baz=68,slow=7.5,SNR=5.2						
WRA	Warramunga Arr	31.68	255	P	P	14 15 32.9	-2.1
	0.2nm,0.4s,baz=85,slow=9.4,SNR=5.7						
ASAR	Alice Springs	32.59	248	P	P	14 15 41.6	-1.4
	0.3nm,0.4s,baz=74,slow=9.6,SNR=27						
VNDA	Vanda	63.32	181	P	P	14 19 35.4	-3.7
	0.4nm,0.6s,baz=354,slow=8.1,SNR=5.6						
CMAR	Chiang Mai Arr	74.52	294	P	P	14 20 49.3	-0.3
	0.2nm,0.3s,baz=114,slow=4.4,SNR=4.1						
CMAR				pP	sP	14 21 20.3	+5.9
	0.4nm,0.5s,baz=145,slow=4.2,SNR=4.8						
QSPA	South Pole Qui	75.76	180	P	P	14 20 52.9	-3.1
	1.8nm,0.8s,baz=202,slow=1.1,SNR=12						
ILAR	Eielson Array	86.17	18	P	P	14 21 48.7	-2.4
	0.3nm,0.8s,baz=220,slow=8.2,SNR=2.1						
PVM	Polavaram	89.85	288	P	P	14 10 15.0	-715
SNAA	Sanae	93.99	183	P	P	14 22 23.8	-4.2
VNA3	Neumayer Olymp	94.67	181	P	P	14 22 26.8	-4.2
VNA2	Neumayer--Watz	94.93	182	P	P	14 22 28.3	-3.9
VNA1	Neumayer--Stat	95.23	182	P	P	14 22 29.7	-3.8
MKAR	Makanchi Array	96.69	316	P	P	14 22 39.6	-1.0
	0.2nm,0.4s,baz=65,slow=5.8,SNR=3.6						
ARCES	ARCESS Array B	119.74	345	PKP	PKPdf	14 27 57.2	-2.3
	0.5nm,0.4s,baz=83,slow=1.9,SNR=7.7						
LAKA	Lakka	140.94	314	P		14 09 50.7	

*IDC **06** 14:11:57.5±3.7, 36°.24N×70°.71E, h168^{km}±31^{km}, mb3.6/9, mb1 3.7/13, mb1mx3.3/68, mbtmp4.1/13, Error ellipse: s-maj=24.5km s-min=18.3km az=27.0*

*NEIC **06** 14:12:02.1±1.4, 36°.46N±0°.07×70°.66E±0°.09, h205^{km}±6^{km}, mb4.2/10, Error ellipse: s-maj=11.9km s-min=9.4km az=128.0*

*NNC **06** 14:12:05.1±2.0, 36°.80N×70°.71E, h201^{km}±23^{km}, mb3.3, mpv4.6, Error ellipse: s-maj=19.2km s-min=10.1km az=29.0*

*SOME **06** 14:12:06.7, 37°.08N×70°.80E, h0^{km}*

ISC 06 14:12:01.2±0.6, **36°.46N**±0°.05×**70°.79E**±0°.07, **h200**^{km}, **n90**, σ**1^{s}38**/101, **mb3.9**/12, **7C-4D**, **Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	Kabul	2.39	217	Pn	Pn	14 12 44.4	+0.3
CHGR	Chuyangaron	2.54	330	Pn	Pn	14 12 45.8	+0.2
GAR	Garm	2.56	352		Pn	14 12 46.6	+0.8
CEP	Cherat	2.79	160	P	Pn	14 12 49.9	+1.3
CEP				S	Sn	14 13 25.0	-0.5
DRK	Karamyk	3.12	15		Pn	14 12 53.6	+1.1
CHCP	Chirah Chowk	3.46	143	P	Pn	14 12 58.0	+1.6
NIL	Nilore	3.46	144	Pn	Pn	14 12 58.0	+1.6
BTK	Batken	3.59	0	Pn	Pn	14 12 59.5	+1.6
THW	Thamme Wali	3.74	168	P	Pn	14 13 00.8	+0.9
SARP	Sargodha	4.79	160	P	Pn	14 13 13.2	+0.2
TAS	Tashkent	4.99	347	Pn	Pn	14 13 16.2	+0.8
IUG	Iuzhnay	5.71	354	eP	Pn	14 13 24.8	+0.1
	2μm,0.2s						
IUG				eS	Sn	14 14 27.6	-3.2
	201nm,0.6s						
AML	Almayashu	6.09	21	P	Pn	14 13 30.4	+0.4
	SNR=506						
DHRM	DHARAMSHALA	6.20	131	eP	Pn	14 13 31.5	+0.3
DHRM				eS	Sn	14 14 40.1	-2.4
DHRM				IAML		14 14 44.5	
	comp=N,135nm,0.1s						
DHRM				IAML		14 14 45.3	
	comp=E,105nm,0.5s						
UCH	Uchtor	6.44	25	P	Pn	14 13 35.1	+0.6
	SNR=99						
MRKS	Merke	6.55	16	eP	Pn	14 13 35.8	+0.2
	comp=E,66nm,0.3s						
MRKS				eS	Sn	14 14 46.9	-3.5
	comp=E,51nm,0.6s						
EKS2	Erkin-Say	6.61	20	P	Pn	14 13 36.9	+0.5
	SNR=20						
KK31	Karatay Array	6.64	358	⇑P	Pn	14 13 36.7	+0.1
	comp=E,24nm,0.5s,baz=170,slow=11,SNR=193						
KK31				⇑S	Sn	14 14 48.2	-4.2
	comp=E,5.9nm,0.3s,baz=194,slow=17,SNR=3.5						
KK31	Karatay Array	6.64	358	Pn	Pn	14 13 36.8	+0.2
KKAR	Karatay Array	6.64	358	Pn	Pn	14 13 36.6	0.0
KKAR	Karatay Array	6.64	358		Pn	14 13 36.8	+0.2
AAK	Ala-Archa	6.80	24	P	Pn	14 13 39.6	+0.8
	comp=E,9.9nm,0.3s,baz=189,slow=5.9,SNR=116						
AAK				S	Sn	14 14 54.7	-1.7
	comp=E,2.6nm,0.3s,baz=342,slow=21,SNR=13						
AAK	Ala-Archa	6.80	24	P	Pn	14 13 39.7	+0.8
	SNR=47						
AAK	Ala-Archa	6.80	24	⇑P	Pn	14 13 39.2	+0.3
	comp=E,14nm,0.4s						
AAK				⇓S	Sn	14 14 54.9	-1.5
	comp=E,20nm,0.6s						
AAK	Ala-Archa	6.80	24	Pn	Pn	14 13 39.8	+0.9
KBK	Karagaybulak	6.97	26	P	Pn	14 13 42.1	+1.0
	SNR=15						
FRU1	Bishkek	7.00	24		Pn	14 13 41.9	+0.6
ULHL	Ulahol	7.15	35	P	Pn	14 13 44.4	+0.9
	SNR=13						
CHMS	Chumysh	7.21	24	P	Pn	14 13 44.8	+0.8
	SNR=18						
USP	Ospenovka	7.37	22	P	Pn	14 13 46.4	+0.2
	SNR=16						
TKM2	Tokmak 2	7.44	28	P	Pn	14 13 47.9	+0.7
	SNR=9.7						
TKM2	Tokmak 2	7.44	28	⇑P	Pn	14 13 47.7	+0.5
	comp=E,32nm,0.6s						
SMLA	Simla	7.51	133	eP	Pn	14 13 48.2	+0.1
SMLA				eS	Sn	14 15 10.5	-2.6
SMLA				IAML		14 15 13.7	
	comp=N,42nm,0.3s						
SMLA				IAML		14 15 13.7	
	comp=E,48nm,0.0s						
TARG	Taragay, Kyrgy	7.58	44		Pn	14 13 49.5	+0.3
KST	Kastek	7.68	30	eP	Pn	14 13 52.1	+1.8
	comp=E,16nm,0.7s						
KST				eS	Sn	14 15 15.1	-2.1
	comp=E,11nm,0.8s						
MDOK	Medeo	8.24	34	⇑P	Pn	14 13 58.4	+0.7
	comp=E,16nm,0.6s						
NDI	New Delhi	9.46	143	eP	Pn	14 14 12.9	-0.6
KUDL	Kundal	9.59	148	eP	Pn	14 14 13.9	-1.2
KUDL				eS	Sn	14 15 55.4	-7.1
AJM	Ajmer	10.48	161	eP	Pn	14 14 26.1	-0.6
OTUK	Ortayu	11.83	5	⇑P	Pn	14 14 43.0	-0.8
	comp=E,3.7nm,0.8s						
PYUN	Piuthan	13.26	126	eP	Pn	14 15 00.6	-1.6
	comp=E,25nm,0.3s						
MAKZ	Makanchi	13.28	35	⇑P	Pn	14 15 02.3	+0.2
	comp=E,3.1nm,0.6s						
MAKZ	Makanchi	13.28	35	Pn	Pn	14 15 02.5	+0.5
MK31	Makanchi Array	13.42	36	⇓P	Pn	14 15 04.7	+0.9
	comp=E,0.6nm,0.4s,baz=221,slow=14,SNR=11						
MK31	Makanchi Array	13.42	36		Pn	14 15 05.2	+1.4
MKAR	Makanchi Array	13.42	36	P	Pn	14 15 04.3	+0.5
	comp=E,0.2nm,0.3s,baz=224,slow=15,SNR=7.6						
MKAR	Makanchi Array	13.42	36		Pn	14 15 03.9	+0.1
DANN	Dangsing	13.61	123	eP	Pn	14 15 06.3	-0.3
	comp=E,9.2nm,0.2s						
KOLN	Koldanda	13.88	125	eP	Pn	14 15 09.0	-0.9
	comp=E,10nm,0.3s						
BHPL	Bhopal	14.37	155	eP	P	14 15 19.6	+2.4
BHPL				eS	S	14 17 45.6	-10
GKN	Gorkha	14.43	122	eP	Pn	14 15 17.2	+0.6
	comp=E,16nm,0.3s						
DMN	Daman	15.00	122	eP	Pn	14 15 24.2	+0.5
	comp=E,19nm,0.5s						
KKN	Kakani	15.00	121	eP	Pn	14 15 23.9	+0.2
	comp=E,13nm,0.4s						
AB31	Akbulak array	15.04	332	P	Pn	14 15 22.8	-0.9
	comp=E,3.2nm,0.5s,baz=142,slow=11,SNR=95						
AB31				⇓S	S	14 18 08.3	-2.2
	comp=E,0.9nm,0.5s,baz=154,slow=23,SNR=4.2						
ABKAR	Akbulak array	15.04	332		Pn	14 15 23.8	+0.1
ABKAR	Akbulak array	15.04	332		Pn	14 15 23.2	-0.5
KURBB	Kurchatov Arra	15.21	19	P	P	14 15 27.1	+0.9
	comp=E,0.4nm,0.3s,baz=208,slow=9.9,SNR=6.6						
PKIN	Phulchoki	15.22	121	eP	Pn	14 15 26.0	-0.3
	comp=E,15nm,0.4s						
PKI	Pulchoki	15.23	121	eP	Pn	14 15 26.2	-0.4
GUN	Gumba	15.35	119	eP	Pn	14 15 27.9	-0.1
JIRN	Jiri	15.72	120	eP	Pn	14 15 33.1	+0.6
	comp=E,16nm,0.3s						
RAMN	Ramite	16.44	121	eP	Pn	14 15 41.4	+0.3
	comp=E,19nm,0.4s						
AKTO	Aktyubinsk	16.73	331	P	Pn	14 15 44.5	+0.5
	comp=E,0.5nm,0.3s,baz=159,slow=11,SNR=12						
AKTO	Aktyubinsk	16.73	331	⇓P	Pn	14 15 44.3	+0.3
	comp=E,4.9nm,0.7s						
TAPN	Taplejung	16.98	118	eP	Pn	14 15 48.5	+1.0
	comp=E,6.2nm,0.3s						
ODAN	Odare	17.05	119	eP	Pn	14 15 49.5	+1.2
	comp=E,7.3nm,0.4s						
ZAA0	Zalesovo Array	20.02	25	P	P	14 16 19.1	+0.6
ZAA0				IAmb	IAmb	14 16 22.9	
	comp=Z,4.5nm,0.6s						
ZALV	Zalesovo Beam	20.02	25	P	P	14 16 19.7	+1.2
	comp=Z,4.4nm,0.4s,baz=221,slow=11,SNR=18						
ZALV	Zalesovo Beam	20.02	25	P	P	14 16 19.3	+0.8
FIA1	FINESS Array S	37.42	326	P	P	14 18 54.3	-0.4
FIA1				IAmb	IAmb	14 19 18.2	
	comp=Z,9.8nm,1.1s						
FINES	FINESS Array B	37.42	326	P	P	14 18 55.5	+0.8
	comp=Z,1.1nm,0.4s,baz=121,slow=8.7,SNR=12						
FINES	FINESS Array B	37.42	326	P	P	14 18 55.0	+0.4
ARCES	ARCESS Array B	41.12	338	P	P	14 19 26.1	+0.9
ARCES				IAmb	IAmb	14 19 41.5	
	comp=Z,14nm,1.4s						
NC405	NORSAR Array S	44.07	323	P	P	14 19 49.3	+0.2
NB201	NORSAR Array S	44.27	323	P	P	14 19 51.1	+0.4
NB2	NORSAR Subarra	44.31	323	P	P	14 19 51.3	+0.4
	comp=Z,0.8nm,0.4s,baz=100,slow=7.9						
NOA	NORSAR Array B	44.31	323	P	P	14 19 51.1	+0.1
	comp=Z,0.5nm,0.5s,baz=98,slow=7.8,SNR=3.6						
TIXI	Tiksi	45.87	22	P	P	14 20 04.1	+1.1
	comp=Z,3.7nm,0.3s,baz=270,slow=3.9						
TIXI	Tiksi	45.87	22	P	P	14 20 04.2	+1.2
TORD	Torodi Ar. Bea	65.55	269	P	P	14 22 22.1	-1.5
	comp=Z,1.0nm,0.5s,baz=49,slow=5.6,SNR=7.4						
TORD	Torodi Ar. Bea	65.55	269	P	P	14 22 22.6	-1.1
TOLK	Toolik Lake Re	71.00	15	P	P	14 22 57.8	+1.2
TOLK				IAmb	IAmb	14 23 00.6	
	comp=Z,8.5nm,1.5s						
A36M	Sachs Harbour	71.26	5	P	P	14 22 59.9	+1.9
A36M				IAmb	IAmb	14 23 04.5	
	comp=Z,3.7nm,1.0s						
IMAR	Indian Mountai	72.26	18	P	P	14 23 05.2	+1.0
BMAR	Burnt Mountain	73.02	14	P	P	14 23 10.9	+2.2
INK	Inuvik	73.97	9	P	P	14 23 15.8	+1.7
	comp=Z,1.2nm,0.5s,baz=349,slow=5.4,SNR=16						
INK	Inuvik	73.97	9	P	P	14 23 15.2	+1.1
INK				IAmb	IAmb	14 23 18.7	
	comp=Z,5.8nm,1.5s						
ILAR	Eielson Array	74.86	16	P	P	14 23 19.5	+0.1
	comp=Z,0.3nm,0.8s,baz=299,slow=5.0,SNR=4.5						
WRA	Warramunga Arr	82.11	122	P	P	14 23 59.2	-0.4
	comp=Z,1.0nm,0.7s,baz=322,slow=4.8,SNR=14						
ASAR	Alice Springs	84.37	125	P	P	14 24 10.8	-0.3
	comp=Z,0.6nm,0.7s,baz=307,slow=5.0,SNR=10						

*IDC **06** 14:15:52.9±1.8, 30°.44S×177°.45W, h0^{km}, mb4.0/5, mb1 4.1/6, mb1mx3.8/52, mbtmp4.0/6, ML3.3/1, Error ellipse: s-maj=38.9km s-min=23.9km az=88.0*

*NEIC **06** 14:15:54.9±1.2, 30°.20S±0°.07×177°.4W±0°.1, h10^{km}±1^{km}, mb4.1/11, Error ellipse: s-maj=23.8km s-min=6.1km az=65.0*

ISC 06 14:15:58.3±0.9, **30°.13S**±0°.08×**178°.0W**±0°.2, **h10**^{km}, **n26**, σ**2^{s}26**/24, **mb4.2**/11, **Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	0.88	4	Pn	Pn	14 16 17.2	+0.5
	194nm,0.3s,baz=130,slow=11,SNR=8.6						
RAO				Sn	Sn	14 16 30.0	+0.5
	1000nm,0.3s,baz=30,slow=21,SNR=16						
URZ	Urewera	9.07	205	Pn	Pn	14 18 02.3	-6.9
	0.3nm,0.3s,baz=307,slow=20,SNR=1.1						
BKZ	Black Stump Fm	10.09	205	Pn	Pn	14 18 23.6	+0.3
CTA	Charters Tower	33.77	279	P	P	14 22 41.6	+1.2
	3.7nm,0.6s,baz=103,slow=9.0,SNR=10.0						
CTAO	Charters Tower	33.77	279	P	P	14 22 41.6	+1.2
STKA	Stephens Creek	34.55	257	P	P	14 22 47.2	+0.1
	1.6nm,0.5s,baz=111,slow=14,SNR=4.4						
STKA	Stephens Creek	34.55	257	P	P	14 22 48.5	+1.4
AS31	Alice Springs	43.13	267	P	P	14 23 58.5	-0.8
AS31				IAmb	IAmb	14 24 16.3	
	comp=Z,1.7nm,1.5s						
ASAR	Alice Springs	43.13	267	P	P	14 23 58.2	-1.0
	comp=Z,0.5nm,0.4s,baz=105,slow=7.6,SNR=39						
ASAR	Alice Springs	43.13	267	P	P	14 23 58.0	-1.2
WR0	Warramunga Arr	43.92	272	P	P	14 24 05.2	-0.3
WR0				IAmb	IAmb	14 24 05.6	
	comp=Z,3.1nm,1.0s						
WB2	Warramunga Arr	44.09	272	P	P	14 24 06.4	-0.5
WRAB	Tennant Creek	44.09	272	P	P	14 24 06.5	-0.4
WRAB				IAmb	IAmb	14 24 08.0	
	comp=Z,3.0nm,0.8s						
WRA	Warramunga Arr	44.10	272	P	P	14 24 06.7	-0.3
	comp=Z,1.7nm,0.3s,baz=110,slow=8.0,SNR=88						
WRA	Warramunga Arr	44.10	272	P	P	14 24 06.5	-0.5
WB0	Warramunga Arr	44.12	272	P	P	14 24 06.2	-1.0
WB0				IAmb	IAmb	14 24 17.0	
	comp=Z,4.3nm,1.2s						
QSPA	South Pole Qui	59.98	180	P	P	14 25 58.9	-5.8
	comp=Z,0.6nm,0.8s,baz=31,slow=2.2,SNR=0.9						
QSPA	South Pole Qui	59.98	180	P	P	14 26 02.6	-2.2
QSPA				IAmb	IAmb	14 26 20.8	
	comp=Z,1.8nm,0.8s						
MAW	Mawson	72.56	201	P	P	14 27 22.0	-3.1
MAW				IAmb	IAmb	14 27 25.7	
	comp=Z,0.6nm,0.9s						
SNAA	Sanae	78.42	178	P	P	14 28 02.1	+3.2
SNAA	Sanae	78.42	178	P	P	14 27 55.2	-3.6
SNAA				IAmb	IAmb	14 28 00.1	
	comp=Z,2.9nm,1.2s						
VNA3	Neumayer Olymp	78.57	176	P	P	14 28 03.9	+4.2
VNA2	Neumayer--Watz	79.01	177	P	P	14 28 06.2	+4.2
	baz=180,slow=4.9						
VNA1	Neumayer--Stat	79.24	177	P	P	14 28 07.2	+4.0
FINES	FINESS Array B	144.90	340	PKPbc	PKPab	14 35 31.1	-2.9
	comp=Z,1.8nm,0.4s,baz=57,slow=3.7,SNR=22						
FINES	FINESS Array B	144.90	340		PKPab	14 35 30.5	-3.6

*NNC **06** 14:18:41.9±3.1, 36°.84N×70°.64E, h215^{km}±47^{km}, mb2.7, mpv3.7, Error ellipse: s-maj=31.0km s-min=18.7km az=19.0*

ISC 06 14:18:40.2±3.2, **36°.7N**±0°.2×**70°.6E**±0°.1, **h200**^{km}, **n11**, σ**0^{s}67**/14, **4C-4D**, **Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	5.91	23	P	Pn	14 20 07.0	+0.4
	SNR=34						
UCH	Uchtor	6.27	27	P	Pn	14 20 11.5	+0.1
	SNR=13						
KK31	Karatay Array	6.38	359	P	Pn	14 20 12.9	+0.6
	1.8nm,0.3s,baz=195,slow=15,SNR=50						
KK31				⇑S	Sn	14 21 24.7	-0.7
	2.5nm,0.5s,baz=190,slow=23,SNR=6.4						
EKS2	Erkin-Say	6.42	21	P	Pn	14 20 13.7	+0.8
	SNR=9.7						
AAK	Ala-Archa	6.62	26	P	Pn	14 20 16.5	+0.8
	SNR=6.9						
AAK	Ala-Archa	6.62	26	⇓P	Pn	14 20 15.9	+0.3
	3.5nm,0.6s						
AAK				⇓S	Sn	14 21 32.4	+1.1
	9.5nm,0.5s						
TKM2	Tokmak 2	7.28	30	P	Pn	14 20 24.4	+0.1
	SNR=8.8						
TKM2	Tokmak 2	7.28	30	⇓P	Pn	14 20 24.3	+0.1
	2.8nm,0.5s						
TKM2				⇑S	Sn	14 21 45.9	-1.0
	2.8nm,0.7s						
MDOK	Medeo	8.11	35	⇑P	Pn	14 20 34.8	-0.2
	1.2nm,0.4s						
AB31	Akbulak array	14.75	332	⇑P	Pn	14 21 58.7	-0.5
	0.5nm,0.4s,baz=146,slow=12,SNR=17						
AKTO	Aktyubinsk	16.45	330	⇓P	P	14 22 19.1	+0.2
	2.5nm,0.8s						

*SJA **06** 14:21:09.5±0.8, 23°.50S×69°.52W, h84^{km}±3^{km}, ML4.1, MW4.0*

*IDC **06** 14:21:11.7±1.0, 23°.63S×69°.42W, h74^{km}±5^{km}, mb4.0/2, mb1 4.0/4, mb1mx3.5/36, mbtmp4.2/4, MS2.9/2, Ms1 2.9/2, ms1mx2.6/26, Error ellipse: s-maj=47.6km s-min=9.2km az=109.0*

*GUC **06** 14:21:11.8±0.8, 23°.49S×69°.66W, h75^{km}±4^{km}, ML3.9*

ISC 06 14:21:11.2±0.6, **23°.44S**±0°.03×**69°.61W**±0°.04, **h77**^{km}±4^{km}, **n54**, σ**1^{s}79**/77, **8C-2D**, **Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB15	IPOC Station P	0.26	28	⇓iP	Pn	14 21 23.5	+0.4
PB15				i S	Sn	14 21 32.1	+0.2
PB15	IPOC Station P	0.26	28	eP	Pn	14 21 23.3	+0.1
PB15				eP		14 21 23.6	
PB15				eS	Sn	14 21 33.0	+1.0
PB15				IAML		14 21 33.4	
	comp=Z,36μm,0.3s						
PB06	IPOC Station P	0.73	2	⇑iP	Pn	14 21 28.1	+0.9
PB06				i S	Sn	14 21 40.3	+1.4
PB06				IAML		14 21 41.5	
	comp=E,16μm,0.2s						
PB06	IPOC Station P	0.73	2	eP	Pn	14 21 27.8	+0.7
PB06				eS	Sn	14 21 38.0	-0.9
PB06				IAML		14 21 41.6	
	comp=Z,5μm,0.3s						
PB10	IPOC Station P	0.88	265	⇓iP	Pn	14 21 29.5	+0.9
PB10				i S	Sn	14 21 42.9	+1.4
PB10				IAML		14 21 44.9	
	comp=E,3μm,0.3s						
PB10	IPOC Station P	0.88	265	eP	Pn	14 21 29.3	+0.8
PB10				eS	Sn	14 21 43.6	+2.1
PB10				IAML		14 21 46.2	
	comp=Z,2μm,0.3s						
LVC	Limon Verde	1.04	38	P	Pn	14 21 32.4	+1.4
	baz=224,slow=12						
LVC				S	Sn	14 21 47.5	+1.8
	comp=Z,707nm,0.3s,baz=354,slow=23,SNR=26						
LVC				LR	LR	14 21 54.9	
	comp=Z,195nm,18.0s,baz=220,slow=39						
LVC	Limon Verde	1.04	38	eP	Pn	14 21 31.9	+1.0
LVC				i S	Sn	14 21 47.4	+1.8
LVC	Limon Verde	1.04	38	eP	Pn	14 21 32.0	+1.0
LVC				eS	Sn	14 21 48.0	+2.3
PB04	IPOC Station P	1.21	335	⇑iP	Pn	14 21 34.0	+1.1
PB04				i S	Sn	14 21 50.2	+1.2
PB04				IAML		14 22 01.3	
	comp=E,3μm,0.4s						
PB04	IPOC Station P	1.21	335	eP	Pn	14 21 33.9	+1.1
PB04				eS	Sn	14 21 50.9	+1.8
PB04				eS		14 21 52.7	
PB04				IAML		14 21 58.5	
	comp=Z,2μm,0.2s						
PB14	IPOC Station P	1.39	212	⇑iP	Pn	14 21 35.5	+0.2
PB14				i S	Sn	14 21 53.0	-0.3
PB14				IAML		14 21 55.2	
	comp=E,2μm,0.4s						
PB14	IPOC Station P	1.39	212	eP	Pn	14 21 35.4	+0.1
PB14				eS	Sn	14 21 54.1	+0.8
PB14				IAML		14 21 57.4	
	comp=Z,4μm,0.2s						
PB03	IPOC Station P	1.39	354	⇑iP	Pn	14 21 36.6	+1.4
PB03				i S	Sn	14 21 55.6	+2.4
PB03				IAML		14 21 56.6	
	comp=N,3μm,0.3s						
PB03	IPOC Station P	1.39	354	eP	Pn	14 21 36.0	+0.8
PB03				eS	Sn	14 21 55.3	+2.1
PB03				IAML		14 21 58.1	
	comp=Z,2μm,0.4s						
AF01	San Pedro de A	1.40	70	⇑iP	Pn	14 21 37.2	+1.8
AF01				i S	Sn	14 21 56.2	+2.7
PB07	IPOC Station P	1.73	351	⇑iP	Pn	14 21 40.7	+1.2
PB07	IPOC Station P	1.73	351	eP	Pn	14 21 35.6	-4.0
PB07				eP		14 21 40.7	
PB07				eS	Sn	14 22 04.2	+3.2
PB07				IAML		14 22 11.5	
	comp=Z,1μm,0.3s						
PB02	IPOC Station P	2.13	353	⇑iP	Pn	14 21 45.9	+1.1
PB01	IPOC Station P	2.39	3	⇑iP	Pn	14 21 49.6	+1.3
PB01	IPOC Station P	2.39	3	eP	Pn	14 21 49.7	+1.3
PB01				eS	Sn	14 22 18.1	+1.4
PB01				IAML		14 22 24.9	
	comp=Z,1μm,0.5s						
TA01	Diego Aracena	2.91	349	eP	Pn	14 21 55.1	-0.1
TA01				eS	Sn	14 22 23.6	-5.6
TA01				eS		14 22 35.6	
TA01				IAML		14 22 43.5	
	comp=Z,515nm,1.1s						
PB08	IPOC Station P	3.31	7	eP	Pn	14 22 02.1	+1.1
PB08				eS	Sn	14 22 54.1	+15
PB08				IAML		14 23 07.0	
	comp=Z,210nm,0.6s						
AC02	Maricunga	3.41	173	eP	Pn	14 22 03.0	+0.5
AC02				eS	Sn	14 22 43.6	+1.5
AC02				eS		14 22 57.6	
AC02				IAML		14 23 06.6	
	comp=Z,401nm,0.4s						
PB11	IPOC Station P	3.66	359	eP	Pn	14 22 05.9	+0.2
PB11				eS	Sn	14 22 49.7	+1.9
PB11				eS		14 22 54.1	
PB11				IAML		14 23 19.7	
	comp=Z,311nm,1.3s						
PSGCX	Pisagua	3.85	353	eP	Pn	14 22 02.1	-6.2
PSGCX				eP	P	14 22 07.3	-0.9
PSGCX				eP	P	14 22 07.3	-0.9
PSGCX				eS	Sn	14 22 52.7	+0.3
PSGCX				IAML		14 23 15.5	
	comp=Z,199nm,0.3s						
HJA	Humahuaca	3.86	87	eP	Pn	14 22 07.6	-1.0
GO03	Copiap	4.17	188	eP	Pn	14 22 12.0	-0.5
GO03				eS	Sn	14 22 57.6	-2.6
ASTB	Santa Barbara	4.75	97	eP	Pn	14 22 19.1	-1.4
AHML	Horco Molle	5.11	132	eP	Pn	14 22 23.6	-1.6
AHML				eS	Sn	14 23 02.7	-20
VCA	Vinchina	5.42	167	eP	Pn	14 22 27.1	-2.6
VCA				eP		14 22 32.0	
VCA				eS	Sn	14 23 38.1	+7.3
VCA				IAML		14 23 45.8	
	comp=Z,71nm,1.3s						
LCO	Las Campanas	5.63	190	eP	Pn	14 22 36.0	+3.4
ACCO	Cerro Coronel	7.14	176	eP	Pn	14 22 53.0	-0.2
LPAZ	La Paz	7.25	11	P	Pn	14 22 57.0	+1.9
	comp=Z,0.7nm,0.3s,baz=183,slow=6.3,SNR=2.7						
LPAZ				LR	LR	14 26 52.8	
	comp=Z,68nm,18.5s,baz=176,slow=46						
RTCV	Cerro Valdivia	8.44	174	eP	Pn	14 23 11.2	+0.4
AAGR	Agrelo	9.63	176	eP	Pn	14 23 28.3	+1.2
SIV	San Ignacio	10.93	49	P	Pn	14 23 44.6	-0.2
	comp=Z,1.2nm,0.3s,baz=241,slow=11,SNR=21						
CPUP	Villa Florida	11.51	107	LR	LR	14 28 43.4	
	comp=Z,68nm,20.5s,baz=158,slow=40						
VNA3	Neumayer Olymp	58.46	161	P	P	14 30 58.8	+0.1
VNA1	Neumayer--Stat	58.69	160	P	P	14 31 01.0	+0.7
VNA2	Neumayer--Watz	59.05	160	P	P	14 31 02.7	-0.1
	baz=296,slow=7.5						
SNAA	Sanae	60.67	161	P	P	14 31 13.3	-0.7
TORD	Torodi Ar. Bea	78.61	70	P	P	14 33 05.0	-0.2
	comp=Z,0.9nm,0.5s,baz=251,slow=5.0,SNR=8.7						
TORD				pP	pP	14 33 25.2	-1.1
	comp=Z,1.7nm,0.5s,baz=257,slow=5.2,SNR=9.4						
TORD				sP	sP	14 33 34.1	-0.8
	comp=Z,1.0nm,0.5s,baz=254,slow=6.0,SNR=3.7						
MAW	Mawson	82.66	163	P	P	14 33 26.0	+0.2
	comp=Z,2.9nm,0.7s,baz=212,slow=5.8,SNR=11						
H11S2	WAKE ISLAND Hy	127.46	276	T	T	17 00 13.4	
	baz=107,slow=74,SNR=28						
H11S1	WAKE ISLAND Hy	127.47	276	T	T	17 00 10.0	
	baz=107,slow=74,SNR=25						
H11S3	WAKE ISLAND Hy	127.47	276	T	T	17 00 15.0	
	baz=107,slow=74,SNR=24						
H11N3	WAKE ISLAND Hy	127.59	277	T	T	17 00 23.6	
	baz=106,slow=74,SNR=8.0						
H11N2	WAKE ISLAND Hy	127.61	277	T	T	17 00 28.6	
	baz=106,slow=74,SNR=6.1						
H11N1	WAKE ISLAND Hy	127.61	277	T	T	17 00 21.0	
	baz=106,slow=74,SNR=6.8						
ASAR	Alice Springs	127.90	208	PKP	PKPdf	14 40 09.1	+0.2
	comp=Z,0.5nm,0.9s,baz=168,slow=1.7,SNR=5.0						
ASAR				pPKP	pPKPdf	14 40 29.6	-1.5
	comp=Z,0.3nm,0.8s,baz=114,slow=4.0,SNR=3.4						
WRA	Warramunga Arr	130.96	210	PKP	PKPdf	14 40 15.2	+0.4
	comp=Z,0.5nm,1.0s,baz=144,slow=1.6,SNR=4.9						
ZALV	Zalesovo Beam	143.97	26	PKP	PKPdf	14 40 38.4	+0.9

	comp=Z,0.5nm,0.5s,baz=339,slow=3.2,SNR=2.2						
ZALV				pPKP	pPKPdf	14 40 58.6	-1.2
	comp=Z,0.7nm,0.5s,baz=302,slow=3.2,SNR=2.3						
MKAR	Makanchi Array	147.57	37	PKPbc	PKPbc	14 40 47.4	+0.8
	comp=Z,0.6nm,0.6s,baz=318,slow=3.3,SNR=3.6						
MKAR				pPKPbc	pPKPbc	14 41 07.5	-1.2
	comp=Z,1.8nm,0.7s,baz=311,slow=3.0,SNR=8.8						

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*IDC **06** 14:23:52.6±2.2, 21.°51N×142.°57E, h260^{km}±88^{km}, mb2.8/3, mb1 3.3/5, mb1mx2.9/56, mbtmp4.0/5, Error ellipse: s-maj=244.2km s-min=15.0km az=77.0*

ISC 06 14:23:52.8±1.8, **21.°5N**±0.°1×**142.°3E**±0.°5, **h250**^{km}, **n5**, σ**0^{s}62**/6, **mb2.8**/3, **Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	Chichijima	5.62	359	P	Pn	14 25 16.8	+0.6
	5.4nm,0.3s,baz=269,slow=20,SNR=5.3						
JCJ				S	S	14 26 22.2	-0.6
	14nm,0.3s,baz=265,slow=23,SNR=12						
JHJ	Hachijo jima 2	11.83	350	P	Pn	14 26 33.9	-0.4
	3.6nm,0.3s,baz=180,slow=20,SNR=1.5						
WRA	Warramunga Arr	41.87	191	P	P	14 31 18.5	-0.3
	1.3nm,0.7s,baz=12,slow=8.3,SNR=22						
ASAR	Alice Springs	45.58	191	P	P	14 31 48.2	-0.1
	0.3nm,0.5s,baz=15,slow=14,SNR=7.2						
MKAR	Makanchi Array	54.24	313	P	P	14 32 53.5	+0.4
	0.1nm,0.5s,baz=90,slow=10,SNR=1.5						

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*IDC **06** 14:24:31.6±3.2, 6.°70N×72.°95W, h160^{km}±50^{km}, mb1 3.8/2, mb1mx3.1/37, mbtmp4.3/2, Error ellipse: s-maj=590.8km s-min=7.7km az=132.0*

*RSNC **06** 14:24:33.0±1.0, 6.°80N×73.°12W, h150^{km}±4^{km}, ML3.4, Mw3.7, Fault plane solution: NP1:ϕ_s50.00000°, δ28.00000°, λ38.00000°.*

ISC 06 14:24:31.1±1.0, **6.°81N**±0.°03×**73.°11W**±0.°03, **h160**^{km}±6^{km}, **n34**, σ**1^{s}38**/65, **6C-1D**, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	Barichara	0.22	200	⇑*e*P	Pn	14 24 53.1	0.0
BARC				*e*S	Sn	14 25 08.7	-1.1
BARC				*i*		14 25 09.5	
	comp=Z,781nm,0.3s						
PAMC	Pamplona, Colo	0.67	37	⇑*e*P	Pn	14 24 55.9	+0.7
PAMC				*e*S	Sn	14 25 13.3	-0.2
PAMC				*i*		14 25 15.3	
	comp=Z,257nm,0.4s						
BRRC	Barranca, Sant	0.67	297	⇑*i*P	Pn	14 24 54.9	+0.3
BRRC				*e*S	Sn	14 25 12.0	-0.5
BRRC				*i*		14 25 15.8	
	comp=Z,487nm,0.3s						
RUSC	La Rusia	0.91	179	⇓*i*P	Pn	14 24 57.0	+0.2
RUSC				*e*S	Sn	14 25 15.7	-0.8
RUSC				*i*		14 25 17.1	
	comp=Z,325nm,0.3s						
TAMC	Tame, Arauca	1.36	106	⇑*i*P	Pn	14 25 01.5	+1.4
TAMC				*e*S	Sn	14 25 23.2	+0.8
TAMC				*i*		14 25 24.3	
	comp=Z,150nm,0.5s						
OCAC	Ocana	1.44	352	⇑*e*P	Pn	14 25 01.1	0.0
OCAC				*e*S	Sn	14 25 23.8	-0.4
OCAC				*i*		14 25 31.5	
	comp=Z,579nm,0.2s						
SPBC	San Pablo de B	1.49	220	*e*P	Pn	14 25 02.0	+0.5
SPBC				*e*S	Sn	14 25 24.0	-0.9
SPBC				*i*		14 25 28.2	
	comp=Z,356nm,0.1s						
ZARC	Zaragoza, Cauc	1.87	292	*e*P	Pn	14 25 05.7	+0.3
ZARC				*e*S	Sn	14 25 31.1	-0.8
ZARC				*i*		14 25 36.3	
	comp=Z,340nm,0.3s						
NORC	Norcasia	2.14	235	*e*P	Pn	14 25 09.2	+0.5
NORC				*e*S	Sn	14 25 36.7	-0.9
NORC				*i*		14 25 43.8	
	comp=Z,147nm,0.2s						
SMLC	San Martn de	2.20	334	*e*P	Pn	14 25 09.3	0.0
SMLC				*e*S	Sn	14 25 38.5	-0.3
SMLC				*i*		14 25 45.7	
	comp=Z,316nm,0.2s						
CHIC	Chingaza	2.25	196	*e*P	Pn	14 25 11.4	+1.2
CHIC				*e*S	Sn	14 25 40.5	+0.1
CHIC				*i*		14 25 44.0	
	comp=Z,149nm,0.6s						
ROSC	El Rosal	2.29	212	P	Pn	14 25 12.8	+2.0
	comp=Z,45nm,0.3s,baz=251,slow=16,SNR=103						
ROSC				S	Sn	14 25 41.8	+0.4
	comp=Z,121nm,0.3s,baz=218,slow=23,SNR=21						
ROSC	El Rosal	2.29	212	*e*P	Pn	14 25 12.8	+2.0
ROSC				*e*S	Sn	14 25 42.5	+1.2
ROSC				*i*		14 25 47.6	
	comp=Z,466nm,0.4s						
HELC	Santa Helena	2.48	256	*e*P	Pn	14 25 15.3	+2.3
HELC				*e*S	Sn	14 25 45.6	+0.4
HELC				*i*		14 25 53.3	
	comp=Z,97nm,0.3s						
UREC	San Jos de Ur	2.58	292	*e*P	Pn	14 25 12.9	-0.9
UREC				*e*S	Sn	14 25 44.3	-2.5
UREC				*i*		14 25 57.0	
	comp=Z,169nm,0.2s						
SOCV	Socops	2.67	56	⇑*e*P	Pn	14 25 14.9	0.0
SOCV				*e*S	Sn	14 25 45.4	-3.4
SOCV				*i*		14 25 48.6	
	comp=Z,311nm,0.4s						
VILC	Villavicencio,	2.74	192	*e*P	Pn	14 25 16.8	+1.0
VILC				*e*S	Sn	14 25 50.9	+0.4
LL1C	La Loma 1 Cana	2.76	351	*e*P	Pn	14 25 18.8	+2.9
LL1C				*e*S	Sn	14 25 53.6	+2.9
PTGC	Puerto Gaitan,	2.76	159	*i* P	Pn	14 25 16.2	+0.2
PTGC				*e*S	Sn	14 25 50.4	-0.4
PTGC				*i*		14 25 55.1	
	comp=Z,60nm,0.2s						
CBOC	Ciudad Bolivar	3.04	252	*e*P	Pn	14 25 21.3	+1.7
CBOC				*e*S	Sn	14 25 57.4	+0.3
CBOC				*i*		14 26 08.0	
	comp=Z,37nm,0.5s						
DBBC	Dabeiba	3.09	274	*e*P	Pn	14 25 20.6	+0.4
DBBC				*e*S	Sn	14 25 55.7	-2.4
MOTC	Monteria, Cord	3.21	308	*e*P	Pn	14 25 20.1	-1.4
MOTC				*e*S	Sn	14 25 58.7	-1.9
MOTC				*i*		14 26 13.9	
	comp=Z,109nm,0.4s						
SDV	Santo Domingo	3.21	50	P	Pn	14 25 22.7	+1.0
	comp=Z,29nm,0.3s,baz=206,slow=1.6,SNR=20						
SDV				S	Sn	14 26 00.4	-0.6
	comp=Z,13nm,0.3s,baz=255,slow=22,SNR=11						
SDV	Santo Domingo	3.21	50	*e*P	Pn	14 25 22.7	+1.0
SDV				*e*S	Sn	14 26 00.7	-0.3
SDV				*i*		14 26 01.9	
	comp=Z,32nm,0.4s						
ARGC	Ariguani, Magd	3.24	340	*e*P	Pn	14 25 23.4	+1.4
ARGC				*e*S	Sn	14 26 02.5	+1.1
ARGC				*i*		14 26 10.4	
	comp=Z,51nm,0.3s						
ANIL	Santa Ana	3.24	225	*e*P	Pn	14 25 23.7	+1.5
ANIL				*e*S	Sn	14 26 04.4	+2.5
ANIL				*i*		14 26 13.1	
	comp=Z,345nm,0.4s						
ORTC	Ortega, Tolima	3.58	217	*e*P	Pn	14 25 27.8	+1.4
ORTC				*e*S	Sn	14 26 09.4	+0.2
ORTC				*i*		14 26 14.4	
	comp=Z,84nm,0.2s						
PLMC	San Jos del P	3.68	239	*e*P	Pn	14 25 28.8	+1.1
PLMC				*e*S	Sn	14 26 11.8	+0.2
PLMC				*i*		14 26 16.6	
	comp=Z,29nm,0.2s						
GUVC	San Jose del G	4.26	174	*e*P	Pn	14 25 35.8	+0.7
GUVC				*e*S	Sn	14 26 25.0	+0.1
GUVC				*i*		14 26 30.7	
	comp=Z,107nm,0.3s						
YOTC	Yotoco, Valle	4.27	229	*e*P	Pn	14 25 35.8	+0.4
MACC	Macarena, Meta	4.69	189	*e*P	Pn	14 25 40.1	-0.6
MACC				*e*S	Sn	14 26 31.3	-3.8
MACC				*i*		14 26 37.4	
	comp=Z,89nm,0.9s						
GARC	Garzon, Huila	5.17	208	*e*P	Pn	14 25 47.4	+0.2
GARC				*e*S	Sn	14 26 44.0	-2.7
GARC				*i*		14 26 51.2	
	comp=Z,42nm,0.2s						
ASAR	Alice Springs	149.11	234	PKPbc	PKPbc	14 44 01.1	-0.3
	comp=Z,0.5nm,0.7s,baz=113,slow=3.8,SNR=10						
WRA	Warramunga Arr	150.34	241	PKPbc	PKiKP	14 44 04.9	-0.2
	comp=Z,0.3nm,0.4s,baz=110,slow=2.7,SNR=13						

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*MOS **06** 14:26:47.9±1.3, 62.°03N×150.°15W, h58^{km}, mb4.7/29, Error ellipse: s-maj=13.2km s-min=5.9km az=97.2*

*IDC **06** 14:26:49.4±0.5, 62.°08N×150.°14W, h60^{km}±4^{km}, mb4.0/26, mb1 4.2/32, mb1mx4.1/56, mbtmp4.3/32, MS3.5/18, Ms1 3.5/18, ms1mx3.3/45, Error ellipse: s-maj=9.4km s-min=8.1km az=70.0*

*ANF **06** 14:26:49.7±0.1, 61.°96N×149.°89W, h49^{km}±1^{km}, ML4.9/70, Error ellipse: s-maj=0.9km s-min=0.8km az=141.0*

*NEIC **06** 14:26:49.9±1.2, 62.°00N±0.°03×149.°87W±0.°06, h49^{km}±5^{km}, Error ellipse: s-maj=4.6km s-min=3.9km az=219.0*

*AEIC **06** 14:26:50±1.1, 62.°00N±0.°03×149.°88W±0.°04, h46^{km}±5^{km}, ML4.6, mb4.4/41(NEIC), ML4.7/184(NEIC), Mwr4.4/137(NEIC), Error ellipse: s-maj=4.3km s-min=2.6km az=191.0*

*NEIC **06** 14:26:50, 61.°99N×149.°91W, h58^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-4.88; $M_{\theta\theta}$1.56; $M_{\phi\phi}$3.31; $M_{r\theta}$1.60; $M_{\theta\phi}$2.85; $M_{\phi r}$0.21; Fault plane solution: $M_0$5.41000×10^{15} NP1:ϕ_s22.86000°, δ40.48000°, λ-111.04000°. NP2:ϕ_s229.69000°, δ52.71000°, λ-72.96000°. Principal axes: T 5.5399, Plg6.0000°, Azm308.0000°; N -0.2597, Plg13.0000°, Azm39.0000°; P -5.2802, Plg75.0000°, Azm193.0000°;*

ISC 06 14:26:49.0±0.4, **62.°00N**±0.°02×**149.°90W**±0.°02, **h54**^{km}±3^{km}, **h54**^{km}**:pP-P**, **n537**, σ**1^{s}11**/542, **mb4.6**/79, **MS3.4**/14, **61C-38D**, **Fault plane solution: NP1:**ϕ_s247.70766°, δ64.64381°, λ-57.68230°. **NP2:**ϕ_s11.80380°, δ40.21006°, λ-138.44521°. **Principal axes:** T Plg13.7208°, Azm314.8071°; N Plg28.8887°, Azm52.5495°; P Plg57.4391°, Azm202.3275°; **Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
M22K	Willow	0.26	203	P	Pn	14 26 58.3	+0.1
	baz=25,SNR=1000						
M22K				S	Sn	14 27 05.7	+0.9
	baz=25						
M22K	Willow	0.26	203		Pn	14 26 58.3	+0.1
M22K					Sn	14 27 05.8	+1.0
CUT	Chulitna	0.45	338	P	Pn	14 27 00.3	+0.3
	baz=156,SNR=1000						
CUT				S	Sn	14 27 08.7	+0.9
	baz=156						
CUT	Chulitna	0.45	338		Pn	14 27 00.3	+0.3
CUT					Sn	14 27 08.7	+0.9
CUT	Chulitna	0.45	338	IAML		14 27 09.1	
	comp=N,94µm,0.5s						
CUT				IAML		14 27 09.3	
	comp=E,151µm,0.6s						
GHO	Glory Hole Cre	0.52	115		Pn	14 27 01.0	+0.2
GHO				IAML		14 27 11.1	
	comp=E,82µm,0.6s						
PMR	Palmer	0.55	137	P	Pn	14 27 00.9	-0.2
PMR						14 27 09.7	
PMR	Palmer	0.55	137	P	Pn	14 27 00.8	-0.2
	baz=319,SNR=1000						
PMR				S	Sn	14 27 09.7	0.0
	baz=319						
PMR	Palmer	0.55	137		Pn	14 27 00.9	-0.2
PMR					Sn	14 27 09.7	0.0
PMR	Palmer	0.55	137	IAML		14 27 10.6	
	comp=E,46µm,0.4s						
SUA	Susitna One	0.67	217	P	Pn	14 27 03.3	+0.7
	baz=37,SNR=1000						
SUA				S	Sn	14 27 13.6	+1.1
	baz=37						
SUA	Susitna One	0.67	217	Pn	Pn	14 27 03.4	+0.7
SML	Sawmill	0.77	104	P	Pn	14 27 03.8	0.0
	baz=285,SNR=1000						
SML				S	Sn	14 27 15.2	+0.5
	baz=285						
SML	Sawmill	0.77	104		Pn	14 27 03.3	-0.6
SML				IAML		14 27 16.3	
	comp=E,43µm,0.8s						
SML				IAML		14 27 17.9	
	comp=N,48µm,0.5s						
SKT	Skwentna	0.77	270	P	Pn	14 27 04.1	+0.3
	baz=88,SNR=1000						
SKT				S	Sn	14 27 15.4	+0.8
	baz=88						
SKT	Skwentna	0.77	270	Pn	Pn	14 27 04.5	+0.7
SKT				IAML		14 27 16.1	
	comp=E,27µm,0.3s						
SKT				IAML		14 27 16.3	
	comp=N,33µm,0.3s						
SKT	Skwentna	0.77	270		Sn	14 27 15.7	+1.0
FIS	Fire Island	0.87	190		Pn	14 27 06.2	+1.2
FIS					Sn	14 27 19.1	+2.3
FIS	Fire Island	0.87	190	IAML		14 27 22.8	
	comp=E,30µm,0.5s						
FIS				IAML		14 27 23.6	
	comp=N,29µm,0.3s						
KNK	Knik Glacier	0.90	130	P	Pn	14 27 05.8	+0.2
	baz=312,SNR=1000						
KNK				S	Sn	14 27 18.5	+0.8
	baz=312						
KNK	Knik Glacier	0.90	130		Pn	14 27 05.3	-0.2
KNK				IAML		14 27 20.7	
	comp=N,37µm,0.5s						
RC01	Rabbit Creek A	0.91	175	P	Pn	14 27 05.9	+0.2
	baz=356,SNR=1000						
RC01				S	Sn	14 27 18.4	+0.5
	baz=356						
RC01	Rabbit Creek A	0.91	175		Pn	14 27 05.8	+0.2
RC01					Sn	14 27 19.0	+1.1
STLK	Strandline Lak	1.04	242		Pn	14 27 08.0	+0.5
SCM	Sheep Creek Mo	1.23	96	P	Pn	14 27 10.5	+0.5
	baz=279,SNR=1000						
SCM				S	Sn	14 27 27.1	+1.5
	baz=279						
SCM	Sheep Creek Mo	1.23	96		Pn	14 27 10.5	+0.5
SCM					Sn	14 27 27.4	+1.8
SPCG	Spurr Capps Gl	1.23	236		Pn	14 27 11.2	+1.1
SPCP	Crater Peak Br	1.30	237		Pn	14 27 12.6	+1.6
SPU	Mount Spurr	1.31	233		Pn	14 27 12.3	+1.2
PWL	Port Wells	1.37	146	P	Pn	14 27 12.2	+0.5
	baz=328,SNR=1000						
PWL				S	Sn	14 27 29.6	+0.8
	baz=328						
PWL	Port Wells	1.37	146		Pn	14 27 12.4	+0.6
PWL	Port Wells	1.37	146		Sn	14 27 30.0	+1.2
CAPN	Captain Cook N	1.37	207	P	Pn	14 27 14.2	+2.4
	baz=26,SNR=12						
CAPN				S	Sn	14 27 29.1	+0.3
	baz=26						
CAPN	Captain Cook N	1.37	207		Pn	14 27 13.2	+1.5
CAPN	Captain Cook N	1.37	207	IAML		14 27 50.4	
	comp=N,19µm,0.8s						
CAPN				IAML		14 27 54.1	
	comp=E,17µm,0.5s						
PPLA	Purkeypile	1.40	311	P	Pn	14 27 13.1	+0.9
	baz=129,SNR=514						
PPLA	Purkeypile	1.40	311	Pn	Pn	14 27 13.2	+0.9
PPLA	Purkeypile	1.40	311		Sn	14 27 31.5	+1.8
TRF	Thorofare Moun	1.47	353	P	Pn	14 27 14.3	+0.9
	baz=172,SNR=664						
TRF	Thorofare Moun	1.47	353		Pn	14 27 14.2	+0.9
TRF	Thorofare Moun	1.47	353	IAML		14 27 35.6	
	comp=E,8µm,0.8s						
TRF				IAML		14 27 36.9	
	comp=N,10µm,0.3s						
RND	Reindeer	1.50	18	P	Pn	14 27 14.3	+0.7
RND	Reindeer	1.50	18		Pn	14 27 14.3	+0.7
RND	Reindeer	1.50	18	IAML		14 27 46.3	
	comp=E,6µm,0.6s						
SLKM	Skilak Lake	1.50	186		Pn	14 27 14.3	+0.7
O22K	Cooper Landing	1.52	177	P	Pn	14 27 14.0	+0.2
	baz=357,SNR=400						
O22K	Cooper Landing	1.52	177		Pn	14 27 14.9	+1.1
O22K	Cooper Landing	1.52	177		Sn	14 27 35.2	+2.7
KTH	Kantishna Hill	1.63	344		Pn	14 27 16.5	+1.0
KTH					Sn	14 27 36.9	+1.6
KTH	Kantishna Hill	1.63	344	IAML		14 27 37.7	
	comp=E,11µm,0.7s						
KTH				IAML		14 27 39.2	
	comp=N,6µm,0.5s						
CAST	Castle Rocks	1.75	326	P	Pn	14 27 17.9	+1.0
	baz=144,SNR=918						
CAST	Castle Rocks	1.75	326	Pn	Pn	14 27 17.6	+0.6
GLI	Glacier Island	1.75	128	P	Pn	14 27 17.3	+0.3
	baz=311,SNR=152						
GLI	Glacier Island	1.75	128		Pn	14 27 17.3	+0.3
GLI	Glacier Island	1.75	128	IAML		14 27 43.1	
	comp=N,13µm,0.7s						
M24K	Tolsona, Glenn	1.76	85	P	Pn	14 27 18.6	+1.5
	baz=268,SNR=948						
M24K	Tolsona, Glenn	1.76	85		Pn	14 27 18.7	+1.5
M24K				IAML		14 27 51.4	
	comp=N,13µm,0.9s						
M24K	Tolsona, Glenn	1.76	85		Sn	14 27 40.0	+1.5
MCK	McKinley	1.80	14	P	Pn	14 27 18.9	+1.3
MCK	McKinley	1.80	14	P	Pn	14 27 19.0	+1.3
	baz=194,SNR=560						
MCK				S	Sn	14 27 40.8	+1.5
	baz=194						
MCK	McKinley	1.80	14		Pn	14 27 18.9	+1.3
MCK	McKinley	1.80	14	IAML		14 27 43.5	
	comp=N,5µm,0.8s						
JPK	Jack Peak	1.84	119		Pn	14 27 18.8	+0.5
SEW	Seward	1.91	173	P	Pn	14 27 18.9	-0.2
	baz=354						
SEW	Seward	1.91	173		Pn	14 27 19.0	-0.1
L20K	Farewell, AK	1.92	286	P	Pn	14 27 20.2	+0.8
	baz=103,SNR=1000						
L20K	Farewell, AK	1.92	286		Pn	14 27 20.0	+0.7
L20K					Sn	14 27 44.1	+1.7
VMT	TAPS Tl Valdez	1.93	117		Pn	14 27 19.5	+0.2
DFR	Drift River	1.95	225		Pn	14 27 20.9	+1.2
KLU	Klutina	1.96	103	P	Pn	14 27 20.4	+0.4
	baz=287,SNR=855						
KLU	Klutina	1.96	103		Pn	14 27 20.3	+0.4
KLU					Sn	14 27 44.5	+1.2
KLU	Klutina	1.96	103	IAML		14 27 53.5	
	comp=N,9µm,0.5s						
KLU				IAML		14 27 54.6	
	comp=E,7µm,0.5s						
RDN	Redoubt North	2.03	224		Pn	14 27 21.8	+0.9
NCT	North Crescent	2.05	227		Pn	14 27 22.5	+1.4
RSO	Redoubt South	2.06	223		Pn	14 27 21.4	-0.1
FID	Port Fidalgo	2.07	126		Pn	14 27 21.3	0.0
FID	Port Fidalgo	2.07	126	IAML		14 27 55.9	
	comp=N,8µm,0.4s						
RDWB	Redoubt West	2.07	224		Pn	14 27 22.7	+1.2
PS11	TAPS Pump St11	2.09	86		Pn	14 27 23.1	+1.5
PS11					Sn	14 27 48.5	+2.1
RED	Redoubt Volcan	2.10	223		Pn	14 27 23.0	+1.1
M19K	Big River Lodg	2.12	270	P	Pn	14 27 23.0	+0.9
	baz=86,SNR=191						
M19K	Big River Lodg	2.12	270		Pn	14 27 22.9	+0.9
M19K	Big River Lodg	2.12	270	IAML		14 28 07.0	
	comp=E,4µm,0.4s						
M19K				IAML		14 28 08.3	
	comp=N,4µm,0.6s						
DIV	Divide	2.16	112		Pn	14 27 22.8	+0.2
DIV					Sn	14 27 48.9	+0.7
BPAW	Bear Paw Mtn.	2.17	347	P	Pn	14 27 23.3	+0.6
	baz=166,SNR=567						
BPAW	Bear Paw Mtn.	2.17	347		Pn	14 27 23.3	+0.6
BPAW	Bear Paw Mtn.	2.17	347	IAML		14 28 06.9	
	comp=N,3µm,0.8s						
CHUM	Lake Minchumin	2.19	331	P	Pn	14 27 24.0	+1.1
	baz=148,SNR=880						
CHUM	Lake Minchumin	2.19	331		Pn	14 27 24.0	+1.1
BWN	Browne	2.19	5		Pn	14 27 24.2	+1.2
BWN	Browne	2.19	5	IAML		14 28 06.5	
	comp=E,7µm,0.9s						
BWN				IAML		14 28 07.1	
	comp=N,5µm,1.2s						
HARP	HAARP	2.26	78	P	Pn	14 27 25.4	+1.4
	baz=262,SNR=480						
HARP	HAARP	2.26	78		Pn	14 27 25.4	+1.4
PAX	Paxson	2.28	63	P	Pn	14 27 25.9	+1.6
PAX						14 27 53.5	
PAX	Paxson	2.28	63	P	Pn	14 27 25.1	+0.8
	baz=246						
PAX	Paxson	2.28	63		Pn	14 27 25.9	+1.6
PAX					Sn	14 27 53.5	+2.3
BRLK	Bradley Lake	2.29	193		Pn	14 27 24.5	+0.2
BRSE	Bradley Lake S	2.30	191	P	Pn	14 27 24.5	0.0
	baz=10						
BRSE	Bradley Lake S	2.30	191		Pn	14 27 24.3	-0.1
HIN	Hinchinbrook I	2.30	133		Pn	14 27 24.7	+0.2
PS12	TAPS Pump St12	2.33	101		Pn	14 27 25.2	+0.4
PS12					Sn	14 27 53.2	+1.0
O20K	Slope Mountain	2.33	216	P	Pn	14 27 26.3	+1.4
	baz=34						
O20K	Slope Mountain	2.33	216		Pn	14 27 26.2	+1.3
L19K	White Mountain	2.34	277	P	Pn	14 27 26.1	+1.1
	baz=92,SNR=342						
L19K				S	Sn	14 27 53.9	+1.4
	baz=92						
L19K	White Mountain	2.34	277		Pn	14 27 25.9	+0.9
L19K					Sn	14 27 54.4	+1.9
L19K	White Mountain	2.34	277	IAML		14 27 56.1	
	comp=N,3µm,0.5s						
L19K				IAML		14 27 56.4	
	comp=E,3µm,0.5s						
K20K	Telida	2.36	307	P	Pn	14 27 26.0	+0.8
	baz=123,SNR=268						
K20K	Telida	2.36	307		Pn	14 27 25.9	+0.6
PS10	TAPS Pump St10	2.38	51		Pn	14 27 28.2	+2.6
EYAK	Cordova Ski Ar	2.48	124	P	Pn	14 27 26.9	0.0
	baz=308						
EYAK	Cordova Ski Ar	2.48	124		Pn	14 27 26.8	0.0
HOM	Homer	2.50	201		Pn	14 27 29.1	+2.0
HOM				IAML		14 28 25.7	
	comp=E,6µm,0.7s						
IVE	Iliamna Volcan	2.50	219		Pn	14 27 28.3	+1.1
N19K	Bonanza Creek	2.50	244	P	Pn	14 27 28.5	+1.2
	baz=60,SNR=76						
N19K	Bonanza Creek	2.50	244		Pn	14 27 28.3	+1.0
N25K	Chitina, Valde	2.55	96	P	Pn	14 27 28.6	+0.6
	baz=281,SNR=329						
N25K	Chitina, Valde	2.55	96		Pn	14 27 28.5	+0.6
N25K					Sn	14 27 58.8	+1.0
N25K	Chitina, Valde	2.55	96	IAML		14 28 05.5	
	comp=N,4µm,0.6s						
N25K				IAML		14 28 09.2	
	comp=E,4µm,0.5s						
ILS	Iliamna Low So	2.56	218		Pn	14 27 29.4	+1.3
ILSW	Iliamna Southw	2.56	219		Pn	14 27 29.6	+1.4
CNPM	China Poot	2.56	195		Pn	14 27 29.7	+1.7
CNPM				IAML		14 28 07.2	
	comp=E,2µm,0.4s						
CNPM				IAML		14 28 10.6	
	comp=N,3µm,0.4s						
WRH	Wood River Hil	2.62	17		Pn	14 27 29.5	+0.7
NEA2	Nenana	2.63	8	P	Pn	14 27 29.5	+0.5
	baz=188,SNR=191						
NEA2	Nenana	2.63	8		Pn	14 27 29.6	+0.5
BMRM	Bremner River	2.74	110	P	Pn	14 27 30.3	-0.3
	baz=295,SNR=187						
BMRM	Bremner River	2.74	110		Pn	14 27 30.5	-0.1
BMRM	Bremner River	2.74	110	IAML		14 28 12.2	
	comp=E,4µm,0.7s						
HDA	Harding Lake	2.77	28	P	Pn	14 27 31.7	+0.9
	baz=210,SNR=152						
HDA	Harding Lake	2.77	28		Pn	14 27 31.7	+0.9
HDA	Harding Lake	2.77	28	IAML		14 28 10.6	
	comp=E,2µm,0.6s						
HDA				IAML		14 28 11.3	
	comp=N,3µm,0.4s						
O19K	Port Alsworth	2.80	232	P	Pn	14 27 31.7	+0.4
	baz=48						
O19K	Port Alsworth	2.80	232		Pn	14 27 32.1	+0.9
O19K	Port Alsworth	2.80	232	IAML		14 28 14.0	
	comp=E,3µm,0.5s						
O19K				IAML		14 28 47.5	
	comp=N,2µm,0.5s						
CCB	Clear Creek Bu	2.83	19		Pn	14 27 32.2	+0.6
CCB	Clear Creek Bu	2.83	19	IAML		14 28 21.4	
	comp=E,2µm,0.7s						
P19K	Oil Pt	2.86	216	P	Pn	14 27 32.9	+0.8
	baz=33						
P19K	Oil Pt	2.86	216		Pn	14 27 33.7	+1.6
P19K	Oil Pt	2.86	216	IAML		14 28 30.0	
	comp=N,2µm,0.5s						
P19K				IAML		14 28 30.7	
	comp=E,2µm,0.8s						
SVW2	Sparrevohn	2.86	254		Pn	14 27 33.0	+0.8
SVW2	Sparrevohn	2.86	254	IAML		14 28 08.8	
	comp=E,2µm,0.6s						
RIDG	Independent Ri	2.91	51	P	Pn	14 27 34.3	+1.5
	baz=235						
RIDG	Independent Ri	2.91	51		Pn	14 27 34.5	+1.8

RIDG	Independent Ri	2.91	51	IAML		14 28 13.4	
	comp=N,4µm,1.2s						
PS08	TAPS Pump Stn8	2.91	27		Pn	14 27 33.6	+0.8
J20K	Nowinta River	2.92	320	P	Pn	14 27 34.0	+1.1
	baz=136,SNR=1000						
J20K	Nowinta River	2.92	320		Pn	14 27 33.8	+0.9
J20K	Nowinta River	2.92	320	IAML		14 28 09.7	
	comp=N,2µm,0.6s						
J20K				IAML		14 28 25.4	
	comp=E,2µm,0.6s						
GLB	Gilahina Butte	2.95	98		Pn	14 27 33.7	+0.3
GLB	Gilahina Butte	2.95	98	IAML		14 28 19.5	
	comp=N,3µm,0.9s						
GLB				IAML		14 28 19.9	
	comp=E,2µm,0.7s						
TT01	Tatalina	2.99	291		Pn	14 27 34.2	+0.4
TTA	Tatalina	2.99	291	P	Pn	14 27 34.3	+0.4
TTA	Tatalina	2.99	291	P	Pn	14 27 34.3	+0.4
	baz=106,SNR=218						
TTA	Tatalina	2.99	291		Pn	14 27 34.3	+0.4
RAGM	Ragged Mountai	3.00	120		Pn	14 27 35.0	+1.0
MENT	Mentasta	3.02	69		Pn	14 27 34.8	+0.4
MENT				IAML		14 28 29.8	
	comp=N,4µm,0.9s						
TCOL	CIGO, UAF Yank	3.03	17	P	Pn	14 27 35.5	+1.0
	baz=198,SNR=273						
TCOL	CIGO, UAF Yank	3.03	17		Pn	14 27 35.4	+1.0
COLA	College	3.03	17	*i* P	Pn	14 27 35.2	+0.8
COLA	College	3.03	17	P	Pn	14 27 35.5	+1.0
	baz=198						
COLA	College	3.03	17		Pn	14 27 35.4	+1.0
I53US	FAIRBANKS INFR	3.03	17	*i*		14 41 00.0	
	baz=209,slow=328,SNR=0.8						
MDM	Murphy Dome	3.07	13		Pn	14 27 36.0	+1.1
MDM	Murphy Dome	3.07	13	IAML		14 28 12.5	
	comp=N,2µm,1.0s						
MLY	Manley	3.07	353		Pn	14 27 35.7	+0.7
MLY				IAML		14 28 11.4	
	comp=N,2µm,0.6s						
IL31		3.10	25		Pn	14 27 36.1	+0.7
ILAR	Eielson Array	3.10	25	P	Pn	14 27 36.1	+0.7
	comp=N,33nm,0.3s,baz=207,slow=14,SNR=769						
ILAR				S	Sn	14 28 10.0	-1.1
	comp=N,86nm,0.3s,baz=225,slow=15,SNR=3.6						
Q23K	Middleton Isla	3.11	144	P	Pn	14 27 36.2	+0.7
	baz=328						
Q23K	Middleton Isla	3.11	144	Pn	Pn	14 27 36.5	+1.0
Q23K				IAML		14 28 29.4	
	comp=N,2µm,0.7s						
Q23K				IAML		14 28 40.3	
	comp=E,2µm,0.6s						
MID	Middleton Isla	3.12	144	P	Pn	14 27 36.0	+0.5
MID	Middleton Isla	3.12	144		Pn	14 27 36.0	+0.5
MID				IAML		14 28 40.0	
	comp=N,2µm,0.8s						
MID				IAML		14 28 40.3	
	comp=E,2µm,0.6s						
AU22	Augustine Moun	3.13	214		Pn	14 27 38.8	+3.0
AUL	Augustine Lava	3.14	215		Pn	14 27 39.0	+3.0
DOT	Dot Lake	3.15	56		Pn	14 27 38.7	+2.5
AGU	Augustine-Summ	3.16	215		Pn	14 27 38.6	+2.2
AUQ	Augustine Qik’	3.16	215		Pn	14 27 39.2	+3.0
AUCH	Augustine Cone	3.16	215		Pn	14 27 39.3	+3.0
AUW	Augustine West	3.16	215		Pn	14 27 39.2	+2.9
I23K	Minto, Yukon-K	3.17	4	P	Pn	14 27 37.5	+1.1
	baz=184,SNR=743						
I23K	Minto, Yukon-K	3.17	4		Pn	14 27 37.0	+0.7
I23K				IAML		14 28 15.6	
	comp=N,2µm,1.0s						
VRDI	Verde Repeater	3.18	101	Pn	Pn	14 27 36.0	-0.6
VRDI				IAML		14 28 25.8	
	comp=N,2µm,0.5s						
VRDI				IAML		14 28 27.5	
	comp=E,1µm,0.5s						
HMT	Hamilton	3.20	119		Pn	14 27 36.7	-0.1
L26K	Log Cabin Wild	3.21	68	P	Pn	14 27 38.1	+1.1
	baz=254						
L26K	Log Cabin Wild	3.21	68		Pn	14 27 38.0	+1.1
L26K				IAML		14 28 32.8	
	comp=E,3µm,0.5s						
L26K				IAML		14 28 36.5	
	comp=N,3µm,0.5s						
M26K	Nabesna, AK	3.26	80	P	Pn	14 27 38.5	+0.8
	baz=266,SNR=56						
M26K	Nabesna, AK	3.26	80		Pn	14 27 38.5	+0.8
M26K	Nabesna, AK	3.26	80	IAML		14 28 35.1	
	comp=E,2µm,0.7s						
M26K				IAML		14 28 35.8	
	comp=N,2µm,0.7s						
POKR	Poker Plat Res	3.32	18	P	Pn	14 27 39.6	+1.2
	baz=200,SNR=110						
POKR	Poker Plat Res	3.32	18		Pn	14 27 39.5	+1.1
I21K	Tanana	3.33	345	P	Pn	14 27 39.5	+1.0
	baz=163,SNR=714						
I21K				S	Sn	14 28 16.2	-0.5
	baz=163						
I21K	Tanana	3.33	345		Pn	14 27 38.8	+0.3
J25K	Salcha River,	3.33	36	P	Pn	14 27 39.5	+0.9
	baz=220,SNR=294						
J25K	Salcha River,	3.33	36		Pn	14 27 39.5	+0.9
MCARA	McCarthy VSAT	3.33	98	P	Pn	14 27 39.1	+0.4
	baz=284,SNR=138						
MCARA	McCarthy VSAT	3.33	98		Pn	14 27 39.0	+0.4
SCRK	Sand Creek	3.35	51	P	Pn	14 27 39.5	+0.6
	baz=236						
SCRK	Sand Creek	3.35	51		Pn	14 27 39.5	+0.6
O18K	Koktuh Hills	3.36	233	P	Pn	14 27 39.5	+0.5
	baz=48						
O18K	Koktuh Hills	3.36	233		Pn	14 27 39.7	+0.7
NICHA	Nichawak Mount	3.38	119		Pn	14 27 39.5	+0.3
KAIM	Kayak Island	3.38	125	P	Pn	14 27 38.9	-0.4
	baz=310						
KAIM	Kayak Island	3.38	125		Pn	14 27 39.3	0.0
KAIM				IAML		14 28 54.6	
	comp=N,1µm,0.8s						
KAIM				IAML		14 29 07.9	
	comp=E,1µm,2.2s						
BERG	Berg Lake	3.41	115		Pn	14 27 39.8	+0.3
PS07	TAPS Pump Stn7	3.41	12		Pn	14 27 40.9	+1.3
CRQM	Cirque	3.48	108		Pn	14 27 41.5	+0.7
CRQE	Cirque	3.51	108	P	Pn	14 27 41.3	+0.2
	baz=294						
SUCK	Suckling Hills	3.55	120		Pn	14 27 42.4	+0.8
SUCK				IAML		14 28 47.1	
	comp=E,2µm,1.1s						
KHIT	Khitrov Hills	3.58	113		Pn	14 27 42.0	0.0
Q19K	Cape Douglas,	3.59	213	P	Pn	14 27 42.4	+0.2
	baz=30						
Q19K	Cape Douglas,	3.59	213		Pn	14 27 43.3	+1.2
Q19K				IAML		14 29 00.8	
	comp=E,2µm,1.1s						
Q19K				IAML		14 29 03.0	
	comp=N,1µm,0.8s						
TGL	Tana Glacier	3.62	107		Pn	14 27 42.7	0.0
TGL	Tana Glacier	3.62	107	IAML		14 28 43.7	
	comp=N,2µm,0.7s						
GRIN	Grindle Hills	3.63	115		Pn	14 27 43.4	+0.8
PTPK	Patty Peak	3.65	100		Pn	14 27 43.5	+0.4
P18K	Big Mountain,	3.70	227	P	Pn	14 27 44.1	+0.5
	baz=43						
P18K	Big Mountain,	3.70	227		Pn	14 27 44.6	+1.0
WAX	Waxell Ridge	3.75	111		Pn	14 27 45.4	+1.1
BALM	Baldy	3.75	102		Pn	14 27 44.1	-0.2
KIAG	Kiagna River	3.78	103		Pn	14 27 44.5	-0.3
M27K	Edge Creek, AK	3.78	81	P	Pn	14 27 45.8	+0.9
	baz=268,SNR=30						
M27K	Edge Creek, AK	3.78	81		Pn	14 27 46.1	+1.3
M27K	Edge Creek, AK	3.78	81	IAML		14 28 57.5	
	comp=N,856nm,1.1s						
J26L	Joseph Creek	3.81	46	P	Pn	14 27 46.1	+0.8
	baz=232						
H23K	Yukon River	3.85	2	Pn	Pn	14 27 46.7	+1.0
H23K				IAML		14 28 47.5	
	comp=E,732nm,0.8s						
PS06	TAPS Pump Stn6	3.88	1		Pn	14 27 46.9	+0.9
SNH	Sunshine Point	3.88	115		Pn	14 27 47.6	+1.5
SNH				IAML		14 28 52.7	
	comp=N,1µm,0.8s						
SNH				IAML		14 28 57.7	
	comp=E,1µm,0.7s						
L27K	Beaver Creek,	3.89	70	P	Pn	14 27 46.6	+0.3
	baz=258,SNR=140						
L27K	Beaver Creek,	3.89	70		Pn	14 27 47.1	+0.9
H21K	Melozitna Rive	3.90	342		Pn	14 27 46.9	+0.7
ISLE	Juniper Island	3.91	108		Pn	14 27 47.0	+0.4
ISLE	Juniper Island	3.91	108	IAML		14 28 46.6	
	comp=E,2µm,0.8s						
BC03		3.91	70		Pn	14 27 47.2	+0.8
BCAR	Beaver Creek A	3.91	70	Pn	Pn	14 27 47.1	+0.6
BARK	Barkley Ridge	3.93	111		Pn	14 27 47.5	+0.8
H24K	Noodor Dome	3.96	12		Pn	14 27 48.3	+1.1
PRP	Porcupine Dome	4.04	27	P	Pn	14 27 49.4	+1.1
	baz=211,SNR=111						
PRP	Porcupine Dome	4.04	27		Pn	14 27 49.4	+1.1
PRP	Porcupine Dome	4.04	27	IAML		14 28 56.9	
	comp=E,640nm,0.4s						
PRP				IAML		14 29 05.3	
	comp=N,848nm,0.6s						
BARN	Barnard Glacie	4.06	100		Pn	14 27 49.3	+0.6
BAGL	Bagley Icefiel	4.07	108		Pn	14 27 48.7	+0.2
GRNC	Granite Creek	4.12	104		Pn	14 27 49.5	-0.1
GRNC	Granite Creek	4.12	104	IAML		14 28 56.4	
	comp=E,862nm,0.7s						
GRNC				IAML		14 28 57.4	
	comp=N,2µm,0.8s						
GCSA	Galena City Sc	4.18	314	P	Pn	14 27 51.1	+1.1
	baz=128,SNR=186						
GCSA	Galena City Sc	4.18	314		Pn	14 27 51.2	+1.1
CTG	Chitna Glacier	4.24	100	P	Pn	14 27 51.5	+0.4
	baz=288,SNR=48						
CTGM	Chitina Glacie	4.24	100		Pn	14 27 51.6	+0.5
CTGM	Chitina Glacie	4.24	100	IAML		14 28 56.5	
	comp=N,1µm,0.7s						
CTGM				IAML		14 28 58.7	
	comp=E,679nm,0.6s						
BVCY	Beaver Creek	4.26	80	P	Pn	14 27 52.2	+1.0
	baz=268,SNR=34						
BVCY	Beaver Creek	4.26	80		Pn	14 27 52.3	+1.0
MESA	MESA	4.27	112	P	Pn	14 27 51.7	+0.1
	baz=299,SNR=14						
MESA	MESA	4.27	112		Pn	14 27 52.1	+0.5
YAH	Yahtse	4.28	109		Pn	14 27 51.8	+0.1
YAH	Yahtse	4.28	109	IAML		14 29 02.5	
	comp=E,1µm,0.8s						
YUK2	White River	4.29	89		Pn	14 27 52.3	+0.5
IM03		4.35	339		Pn	14 27 53.2	+0.9
IMAR	Indian Mountai	4.35	339	Pn	Pn	14 27 53.1	+0.6
YUK1	Sand Pete Hill	4.41	84		Pn	14 27 54.9	+1.4
KDAK	Kodiak Island	4.44	199	P	Pn	14 27 52.8	-0.9
	comp=E,12nm,0.3s,baz=71,slow=6.2,SNR=195						
KDAK				S	Sn	14 28 42.6	-1.4
	comp=E,25nm,0.3s,baz=114,slow=24,SNR=1.8						
KDAK				LR	LR	14 29 57.3	
	comp=E,523nm,20.1s,baz=54,slow=42						
KDAK	Kodiak Island	4.44	199	P	Pn	14 27 53.3	-0.4
KDAK	Kodiak Island	4.44	199	P	Pn	14 27 53.2	-0.4
	baz=17						
KDAK	Kodiak Island	4.44	199		Pn	14 27 53.3	-0.4
LOGN	Logan Glacier	4.44	101		Pn	14 27 53.9	+0.1
LOGN	Logan Glacier	4.44	101	IAML		14 29 02.7	
	comp=N,1µm,0.7s						
LOGN				IAML		14 29 03.9	
	comp=E,982nm,0.9s						
YUK3	Moose Creek	4.47	89	P	Pn	14 27 54.9	+0.5
	baz=277,SNR=41						
YUK3	Moose Creek	4.47	89		Pn	14 27 54.9	+0.5
RKAV	Rock Avalanche	4.48	109		Pn	14 27 55.3	+0.8
TABL	Table Mountain	4.51	106		Pn	14 27 54.9	0.0
TABL	Table Mountain	4.51	106	IAML		14 29 08.7	
	comp=E,837nm,0.8s						
KAKN	Katmai Knife C	4.52	217		Pn	14 27 56.3	+1.4
KABU	Katmai Buttres	4.60	218		Pn	14 27 57.9	+1.8
KABR	Katmai Barrier	4.63	215		Pn	14 27 58.5	+2.1
CHX	Chaix Hills	4.69	110		Pn	14 27 58.6	+1.3
SAMH	Samovar Hills	4.81	109		Pn	14 27 59.7	+0.8
EGAK	Eagle	4.82	51	P	Pn	14 27 59.1	+0.1
	baz=238						
EGAK	Eagle	4.82	51		Pn	14 27 59.5	+0.6
EGAK	Eagle	4.82	51	IAML		14 29 23.9	
	comp=E,676nm,0.9s						
PS05	TAPS Pump Stn5	4.85	356		Pn	14 28 00.9	+1.6
FYU	Fort Yukon	5.02	22	Pn	Pn	14 28 03.2	+1.6
FYU				IAML		14 29 31.9	
	comp=E,510nm,1.5s						
FYU				IAML		14 29 44.7	
	comp=N,365nm,1.0s						
PCA	Pinnacle	5.06	108	Pn	Pn	14 28 02.7	+0.4
PINM	Pinnacle	5.06	108	P	Pn	14 28 02.1	-0.2
	baz=296						
OHAK	Old Harbor	5.09	201	P	Pn	14 28 01.6	-1.0
	baz=18						
OHAK	Old Harbor	5.09	201	Pn	Pn	14 28 03.0	+0.5
DAWY	Dawson	5.22	62	P	Pn	14 28 05.2	+0.8
	baz=251,SNR=93						
DAWY	Dawson	5.22	62		Pn	14 28 05.2	+0.8
DAWY	Dawson	5.22	62	IAML		14 29 32.2	
	comp=N,470nm,0.6s						
DAWY				IAML		14 29 38.9	
	comp=E,428nm,0.9s						
COLD	Coldfoot	5.26	359	P	Pn	14 28 06.1	+1.2
	baz=178,SNR=109						
COLD	Coldfoot	5.26	359		Pn	14 28 06.0	+1.2
BCPM	Bancas Point	5.40	108		Pn	14 28 07.2	+0.3
BCPM				IAML		14 29 32.3	
	comp=E,613nm,0.9s						
BCPM				IAML		14 29 35.7	
	comp=N,578nm,0.9s						
YUK6	Outpost Mounta	5.63	96	P	Pn	14 28 10.1	-0.1
	baz=286						
YUK6	Outpost Mounta	5.63	96		Pn	14 28 10.4	+0.1
PNL	Peninsula	5.64	110	P	Pn	14 28 10.4	+0.2
	baz=299						
PNL	Peninsula	5.64	110		Pn	14 28 10.7	+0.4
YUK7	Dusty Glacier	5.86	99		Pn	14 28 14.2	+0.7
BM03	Burnt Mountain	5.90	20		Pn	14 28 14.8	+1.0
BMAR	Burnt Mountain	5.91	20	Pn	Pn	14 28 14.8	+0.9
BM01	Burnt Mountain	5.94	20		Pn	14 28 15.3	+1.1
HYT	Haines Junctio	6.07	96	P	Pn	14 28 15.7	-0.4
	baz=287						
HYT	Haines Junctio	6.07	96	Pn	Pn	14 28 15.0	-1.1
M30M	Minto, Yukon	6.15	79	P	Pn	14 28 17.3	+0.2
	baz=270						
I29M	Ogilvie Camp,	6.16	52	P	Pn	14 28 18.6	+1.3
	baz=242						
TOLK	Toolik Lake Re	6.68	1	P	Pn	14 28 26.5	+2.1
	baz=181,SNR=58						
TOLK	Toolik Lake Re	6.68	1	Pn	Pn	14 28 25.5	+1.2
N31M	Braeburn, Yuko	6.73	88	P	Pn	14 28 25.2	+0.1
	baz=281						
EPYK	Eagle Plains	7.23	47	P	Pn	14 28 33.7	+1.8
	baz=239,SNR=20						
EPYK	Eagle Plains	7.23	47		Pn	14 28 32.5	+0.6
M31M	Drury Creek, Y	7.28	82	P	Pn	14 28 33.2	+0.5
	baz=275,SNR=7.2						
WHY	Whitehorse	7.35	94	P	Pn	14 28 32.8	-0.9
	baz=287,SNR=10						
WHY	Whitehorse	7.35	94	Pn	Pn	14 28 33.0	-0.7
ANM	Nome	7.43	297	P	Pn	14 28 36.2	+1.5
ANM	Nome	7.43	297	P	Pn	14 28 35.4	+0.7
	baz=103						
ANM	Nome	7.43	297	Pn	Pn	14 28 36.2	+1.5
SKAG	Skagway	7.58	103	P	Pn	14 28 37.0	+0.3
	baz=296,SNR=9.8						
SKAG	Skagway	7.58	103	Pn	Pn	14 28 37.2	+0.5
RDOG	Red Dog Mine	8.18	324	P	Pn	14 28 46.8	+1.9
	baz=132,SNR=36						
BESE	Bessie Mountai	8.22	108	Pn	Pn	14 28 46.1	+0.6
P33M	Teslin, Yukon	8.46	95	P	Pn	14 28 48.6	-0.3
	baz=290						
JIS	Juneau Island	8.59	109		Pn	14 28 50.9	+0.4
TNA	Tin City	8.73	302	P	Pn	14 28 53.8	+1.5
	baz=106,SNR=8.5						
TNA	Tin City	8.73	302	Pn	Pn	14 28 54.7	+2.4
SIT	Sitka	8.90	117	P	Pn	14 28 53.8	-0.9
	baz=310						
INK	Inuvik	9.33	40	P	Pn	14 29 00.6	0.0
	comp=N,1.6nm,0.3s,baz=237,slow=16,SNR=86						
INK				S	Sn	14 30 45.6	+1.7
	comp=N,4.6nm,0.3s,baz=174,slow=11,SNR=5.5						
INK				LR	LR	14 32 54.2	
	comp=N,198nm,21.4s,baz=206,slow=39						
INK	Inuvik	9.33	40	P	Pn	14 29 02.4	+1.8
INK	Inuvik	9.33	40	P	Pn	14 29 01.1	+0.6
	baz=235,SNR=23						
INK	Inuvik	9.33	40	Pn	Pn	14 29 02.4	+1.8
A21K	Barrow	9.73	347	P	Pn	14 29 06.7	+0.7
	baz=161						
DLBC	Dease Lake	10.50	101	P	Pn	14 29 16.9	+0.3
	comp=N,1.0nm,0.3s,baz=332,slow=13,SNR=16						
DLBC				LR	LR	14 33 39.9	
	comp=N,290nm,19.7s,baz=290,slow=39						
DLBC	Dease Lake	10.50	101	Pn	Pn	14 29 16.8	+0.2
WRAK	Wrangell Islan	10.57	114	P	Pn	14 29 18.1	+0.5
	baz=309						
A36M	Sachs Harbour	13.76	33	P	Pn	14 30 00.6	-0.3
	baz=236,SNR=12						
A36M	Sachs Harbour	13.76	33		Pn	14 30 01.0	+0.1
BBB	Bella Bella	15.31	120	P	Pn	14 30 22.1	+0.7
	comp=N,0.7nm,0.3s,baz=297,slow=11,SNR=1.2						
BBB				LR	LR	14 35 24.9	
	comp=N,125nm,20.5s,baz=82,slow=33						
YKA	Yellowknife Ar	16.33	73	P	Pn	14 30 34.8	+0.5
	comp=N,0.3nm,0.3s,baz=339,slow=6.1,SNR=4.8						
YKA				LR	LR	14 37 04.6	
	comp=N,103nm,19.9s,baz=0.0,slow=38						
YKA	Yellowknife Ar	16.33	73	*ce*P	P	14 30 37.0	+0.6
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA	Yellowknife Ar	16.33	73		Pn	14 30 35.8	+1.6
BILL	Bilibino	19.10	307	*e*P	P	14 31 04.3	-2.6
BILL				pmax	pmax		
	comp=Z,7.0nm,1.3s						
BILL				MLR	MLR		
	comp=Z,72nm,16.0s						
RES	Resolute Bay	22.80	34	P	P	14 31 47.2	+0.5
	comp=Z,1.7nm,0.3s,baz=225,slow=8.9,SNR=12						
RES				LR	LR	14 41 21.7	
	comp=Z,78nm,20.2s,baz=82,slow=38						
RES	Resolute Bay	22.80	34	P	P	14 31 48.3	+1.7
RES				pmax	pmax		
	comp=Z,10.0nm,0.7s						
RES	Resolute Bay	22.80	34	P	P	14 31 48.3	+1.7
RES				IAmb	IAmb	14 32 15.7	
	comp=Z,10nm,0.7s						
NEW	Newport	22.92	112	LR	LR	14 41 05.9	
	comp=Z,118nm,18.4s,baz=303,slow=37						
NEW	Newport	22.92	112	P	P	14 31 49.3	+1.2
NEW				pmax	pmax		
	comp=Z,10.0nm,1.1s						
NEW	Newport	22.92	112	P	P	14 31 48.3	+0.2
	baz=319						
NEW	Newport	22.92	112		P	14 31 49.3	+1.2
NEW				IAmb	IAmb	14 32 13.5	
	comp=Z,9.9nm,1.1s						
D08A	Wollman Farm,	23.07	116		P	14 31 49.9	+0.3
D08A				IAmb	IAmb	14 32 16.5	
	comp=Z,9.4nm,1.0s						
WALA	Waterton Lakes	23.76	106		P	14 31 58.2	+2.0
WALA				IAmb	IAmb	14 32 22.4	
	comp=Z,12nm,0.9s						
I05D	Terrebonne, OR	24.29	123	P	P	14 32 01.7	+0.7
	baz=327						
I04A	Tendick Farm,	24.33	126	P	P	14 32 02.5	+1.1
	baz=328						
G08A	Pilot Rock	24.46	119	P	P	14 32 04.0	+1.3
F10A	Beach Ranch, E	24.65	115	P	P	14 32 05.3	+1.0
K02D	Willamette Mer	24.80	129	P	P	14 32 07.8	+2.1
	baz=330						
J04D	Umpqua Nationa	24.92	126	P	P	14 32 08.3	+1.3
	baz=329						
EUNU	Eureka	25.20	21	P	P	14 32 10.4	+1.4
EUNU				IAmb	IAmb	14 32 19.4	
	comp=Z,23nm,1.4s						
J05D	Fort Rock, OR	25.21	125	P	P	14 32 10.4	+0.8
	baz=328						
MSO	Missoula	25.41	110		P	14 32 12.6	+1.3
MSO				IAmb	IAmb	14 32 36.0	
	comp=Z,4.8nm,0.7s						
L04D	Klamath Falls	25.72	128	P	P	14 32 15.7	+1.6
	baz=330						
SEY	Seymchan	25.94	298	P	P	14 32 14.3	-1.4
	comp=Z,2.6nm,0.8s,baz=180,slow=20,SNR=2.3						
SEY				LR	LR	14 43 28.8	
	comp=Z,125nm,18.7s,baz=72,slow=39						
SEY	Seymchan	25.94	298	*i* P	P	14 32 17.1	+1.4
YBH	Yreka Blue Hor	25.99	129	P	P	14 32 17.7	+1.2
	comp=Z,2.5nm,0.9s,baz=356,slow=1.9,SNR=8.2						
YBH				LR	LR	14 42 04.0	
	comp=Z,57nm,19.0s,baz=347,slow=35						
YBH	Yreka Blue Hor	25.99	129	P	P	14 32 18.0	+1.5
YBH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
YBH	Yreka Blue Hor	25.99	129	P	P	14 32 18.0	+1.5
EGMT	Eagleton	26.41	103	P	P	14 32 20.8	+0.6
	baz=317						
EGMT	Eagleton	26.41	103	P	P	14 32 21.3	+1.0
EGMT				IAmb	IAmb	14 32 39.0	
	comp=Z,13nm,0.9s						
HRY	Holter Researc	26.44	108	P	P	14 32 22.1	+1.5
N02D	Trinity Center	26.65	130	P	P	14 32 23.6	+1.1
	baz=331,SNR=6.5						
MFID	Camas Ranch	27.30	117	P	P	14 32 28.9	+0.6
MFID				IAmb	IAmb	14 32 49.2	
	comp=Z,5.9nm,0.9s						
BOZ	Bozeman (W)	27.39	109	P	P	14 32 30.4	+1.3
BOZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BOZ	Bozeman (W)	27.39	109	P	P	14 32 29.8	+0.7
	baz=321						
BOZ	Bozeman (W)	27.39	109	P	P	14 32 30.4	+1.3
O03E	Paynes Creek	27.58	129	P	P	14 32 31.1	+0.3
	baz=331						
HLID	Hailey	27.78	115	P	P	14 32 33.3	+0.7
	baz=324						
GCMT	Greycliff	28.12	106	P	P	14 32 37.1	+1.5
MA2	Magadan	28.19	292	*i* P	P	14 32 34.2	-1.7
MA2				pmax	pmax		
	comp=Z,43nm,1.4s						
YHH	Holmes Hill	28.36	109	P	P	14 32 39.5	+1.5
YHH				IAmb	IAmb	14 33 04.8	
	comp=Z,6.5nm,1.1s						
PEA0B	Petropavlovsk-	28.72	276	*i* P	P	14 32 41.7	+1.0
PETK	Petropavlovsk-	28.72	276	P	P	14 32 40.7	-0.1
	comp=Z,5.0nm,1.0s,baz=82,slow=15,SNR=1.4						
PETK				LR	LR	14 45 15.6	
	comp=Z,76nm,19.6s,baz=79,slow=39						
RLMT	Red Lodge	28.81	107	P	P	14 32 43.0	+1.1
	baz=320,SNR=7.2						
RLMT	Red Lodge	28.81	107	P	P	14 32 43.4	+1.5
RLMT				IAmb	IAmb	14 33 01.6	
	comp=Z,14nm,0.8s						
LAO	LASA Array	29.02	101	P	P	14 32 44.9	+1.4
	baz=318						
ELK	Elko	29.75	119	P	P	14 32 52.2	+1.9
	comp=Z,2.4nm,0.8s,baz=322,slow=8.5,SNR=10						
ELK	Elko	29.75	119	P	P	14 32 52.5	+2.2
ELK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ELK	Elko	29.75	119	P	P	14 32 52.5	+2.2
ELK				IAmb	IAmb	14 33 12.3	
	comp=Z,5.2nm,1.0s						
HVU	Hansel Valley	29.93	115	P	P	14 32 53.8	+2.1
HVU				pmax	pmax		
	comp=Z,10.0nm,1.4s						
HVU	Hansel Valley	29.93	115		P	14 32 53.8	+2.1
HVU				IAmb	IAmb	14 33 15.2	
	comp=Z,10.0nm,1.4s						
KVN	Kaiserville	30.06	125	P	P	14 32 55.1	+2.2
KVN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KVN	Kaiserville	30.06	125	P	P	14 32 55.1	+2.2
NVAR	Mina Array Bea	30.52	126	P	P	14 32 58.9	+1.8
	comp=Z,2.4nm,0.7s,baz=315,slow=9.6,SNR=20						
NVAR				pP	pP	14 33 13.8	+2.8
	comp=Z,4.9nm,0.9s,baz=302,slow=8.6,SNR=12						
NVAR				PcP	PcP	14 35 54.9	+0.1
	comp=Z,1.5nm,0.7s,baz=287,slow=2.6,SNR=7.5						
NVAR				LR	LR	14 43 52.3	
	comp=Z,86nm,19.2s,baz=270,slow=33						
NVAR	Mina Array Bea	30.52	126	P	P	14 32 58.2	+1.1
BW06	Boulder Array	30.53	110	P	P	14 32 57.9	+0.8
	baz=323						
PD31	Pinedale Array	30.53	110	P	P	14 32 58.3	+1.2
PDAR	Pinedale Array	30.53	110	P	P	14 32 58.1	+1.0
	comp=Z,0.9nm,0.6s,baz=310,slow=5.1,SNR=12						
PDAR				pP	sP	14 33 14.6	-3.1
	comp=Z,1.5nm,0.8s,baz=310,slow=6.9,SNR=5.9						
PDAR				PcP	PcP	14 35 54.2	-0.5
	comp=Z,0.6nm,0.5s,baz=135,slow=1.6,SNR=4.1						
PDAR				LR	LR	14 45 35.4	
	comp=Z,96nm,20.6s,baz=331,slow=37						
PDAR	Pinedale Array	30.53	110	P	P	14 32 57.7	+0.6
NV11	Mina Array Sit	30.57	126	P	P	14 32 59.3	+1.8
NV11				IAmb	IAmb	14 33 14.7	
	comp=Z,7.8nm,1.1s						
TIXI	Tiksi	30.80	322	P	P	14 32 57.8	-1.1

	comp=Z,0.4nm,0.2s,baz=130,slow=6.8,SNR=3.3						
TIXI				PcP	PcP	14 35 54.2	-0.4
	comp=Z,2.4nm,0.7s,baz=38,slow=3.9,SNR=5.6						
TIXI	Tiksi	30.80	322	P	P	14 33 00.0	+1.2
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.0s						
TIXI	Tiksi	30.80	322	P	P	14 33 00.0	+1.2
DUG	Dugway, Tooele	31.22	117	P	P	14 33 03.9	+0.8
	baz=327						
ULM	Lac du Bonnet	31.36	87	LR	LR	14 45 44.4	
	comp=Z,80nm,19.9s,baz=309,slow=36						
R11A	Troy Canyon, C	31.65	122	P	P	14 33 07.9	+1.0
	baz=330						
R11A	Troy Canyon, C	31.65	122	P	P	14 33 08.2	+1.2
RSSD	Black Hills	31.97	103	P	P	14 33 11.2	+1.4
RSSD				pmax	pmax		
	comp=Z,8.0nm,0.6s						
RSSD	Black Hills	31.97	103	P	P	14 33 10.9	+1.1
	baz=320						
RSSD	Black Hills	31.97	103	P	P	14 33 11.2	+1.4
RSSD				IAmb	IAmb	14 33 12.0	
	comp=Z,7.9nm,0.6s						
K22A	Casper	31.98	107	P	P	14 33 10.6	+0.8
	baz=322						
CWC	Cottonwood Cre	32.35	127	P	P	14 33 14.1	+1.0
	baz=332						
NEEM	North Greenlan	32.40	24	eP	P	14 33 12.6	-0.6
SMMC	Simmler	32.65	131	P	P	14 33 16.8	+1.2
	baz=334						
AGMN	Agassiz Nation	32.72	89	P	P	14 33 16.1	+0.1
	baz=315						
FURC	Furnace Creek,	32.79	126	P	P	14 33 17.5	+0.8
	baz=332						
MSU	Marysvale	32.91	118	P	P	14 33 20.3	+2.3
MSU	Marysvale	32.91	118		P	14 33 20.3	+2.3
PKM	Mcpherson Peak	33.10	131	P	P	14 33 21.5	+1.8
	baz=334						
O20A	White River Ci	33.24	112	P	P	14 33 21.9	+1.0
	baz=325						
LRMC	Laurel Mtn Rad	33.35	128	P	P	14 33 22.9	+1.1
	baz=333						
GSC	Goldstone, Bar	33.84	127	P	P	14 33 25.1	-0.9
	baz=333						
MVCO	Mesa Verde	35.56	115	P	P	14 33 42.2	+1.2
	baz=328						
Q24A	Divide	35.57	109	P	P	14 33 42.2	+1.0
	baz=325						
ECSD	EROS Data Cent	35.72	96	P	P	14 33 42.3	+0.3
	baz=320,SNR=5.6						
ECSD	EROS Data Cent	35.72	96	P	P	14 33 42.3	+0.3
WUAZ	Wupatki	35.80	120	P	P	14 33 43.3	+0.4
	baz=330,SNR=5.4						
WUAZ	Wupatki	35.80	120	P	P	14 33 44.4	+1.4
WUAZ				IAmb	IAmb	14 34 06.5	
	comp=Z,12nm,1.1s						
S22A	4UR Ranch, Cre	35.83	112	P	P	14 33 44.5	+1.1
	baz=327						
SDCO	Great Sand Dun	36.42	111	P	P	14 33 47.8	-0.5
	baz=326						
SDCO	Great Sand Dun	36.42	111	P	P	14 33 49.6	+1.3
DAG	Danmarks Havn	38.17	16	i P	P	14 34 01.0	-1.4
ANMO	Albuquerque	38.35	114	ceP	P	14 34 05.5	+0.8
ANMO				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ANMO	Albuquerque	38.35	114	P	P	14 34 05.5	+0.8
	baz=329						
JFWS	Jewell Farm	39.35	91	P	P	14 34 12.5	-0.2
	baz=320						
121A	Cookes Peak, D	39.86	118	P	P	14 34 18.4	+1.1
	baz=330						
MSTX	Muleshoe	40.78	111	P	P	14 34 25.7	+0.9
	baz=328						
MSTX	Muleshoe	40.78	111	P	P	14 34 25.7	+0.9
MSTX				IAmb	IAmb	14 34 26.7	
	comp=Z,14nm,0.9s						
MNTX	Cornudas Mount	41.60	116	P	P	14 34 31.3	-0.1
	baz=330						
WMOK	Wichita Mounta	41.92	106	P	P	14 34 34.6	+0.6
WMOK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
WMOK	Wichita Mounta	41.92	106	P	P	14 34 34.0	0.0
	baz=327,SNR=6.0						
WMOK	Wichita Mounta	41.92	106	P	P	14 34 34.6	+0.6
WMOK				IAmb	IAmb	14 34 51.3	
	comp=Z,6.1nm,0.9s						
NRIK	Noril'sk	42.77	334	P	P	14 34 39.6	-0.9
	comp=Z,3.3nm,0.5s,baz=53,slow=6.5,SNR=6.9						
NRIK				pP	pP	14 34 54.2	-0.3
	comp=Z,4.4nm,0.6s,baz=29,slow=5.9,SNR=4.7						
NRIK	Noril'sk	42.77	334	i P	P	14 34 39.5	-0.9
NRIK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
NRIK	Noril'sk	42.77	334	P	P	14 34 40.0	-0.4
NRIK				IAmb	IAmb	14 34 55.8	
	comp=Z,5.4nm,0.6s						
KLR	Kul'dur	43.26	290	i P	P	14 34 45.0	+0.4
KLR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ABTX	Abilene, Hawle	43.31	109	P	P	14 34 45.5	+0.2
	baz=328						
U40A	Yellville	43.32	99	P	P	14 34 44.4	-0.9
	baz=325						
W39A	Magazine	43.83	101	P	P	14 34 48.8	-0.6
	baz=326						
PBMO	Poplar Bluff	44.11	96	P	P	14 34 51.2	-0.4
TX31	Lajitas Ar. Si	44.38	116	P	P	14 34 55.3	+1.4
TX31				IAmb	IAmb	14 35 13.3	
	comp=Z,12nm,1.1s						
TX32	Lajitas Array	44.38	116	P	P	14 34 55.2	+1.2
TXAR	Lajitas Array	44.38	116	P	P	14 34 55.2	+1.2
	comp=Z,1.4nm,0.6s,baz=334,slow=6.7,SNR=15						
TXAR				pP	pP	14 35 10.6	+2.1
	comp=Z,2.7nm,0.9s,baz=336,slow=5.8,SNR=7.8						
TXAR	Lajitas Array	44.38	116	P	P	14 34 54.9	+1.0
TXAR	Lajitas Array	44.38	116	P	P	14 34 54.9	+1.0
MIAR	Mount Ida	44.47	101	P	P	14 34 54.5	0.0
	baz=326						
P49A	Miami Univ. Ec	44.59	89	P	P	14 34 55.2	-0.2
	baz=322						
JCT	Junction City	45.06	111	P	P	14 35 00.2	+0.9
JCT				pmax	pmax		
	comp=Z,13nm,0.8s						
JCT	Junction City	45.06	111	P	P	14 34 59.1	-0.2
	baz=329,SNR=6.1						
JCT	Junction City	45.06	111	P	P	14 35 00.2	+0.9
OXF	Oxford	46.44	97	P	P	14 35 10.7	+0.7
OXF				pmax	pmax		
	comp=Z,55nm,1.3s						
OXF	Oxford	46.44	97	P	P	14 35 10.7	+0.7
CLTN	Cedars of Leba	46.59	93	P	P	14 35 11.9	+0.7
TZTN	Tazewell	47.54	90	P	P	14 35 18.3	-0.4
	baz=324						
X48A	Hartselle	47.59	95	P	P	14 35 19.3	+0.2
N59A	State Game Lan	47.70	80	P	P	14 35 19.4	-0.5
	baz=322						
TKL	Tuckaleechee C	48.15	91	P	P	14 35 23.7	+0.3
TKL				pmax	pmax		
	comp=Z,9.0nm,0.7s						
TKL	Tuckaleechee C	48.15	91	P	P	14 35 23.7	+0.3
FPAL	Fort Paine	48.20	94	P	P	14 35 23.9	+0.1
ARCES	ARCESS Array B	48.72	2	P	P	14 35 25.1	-2.2
	comp=Z,4.0nm,0.9s,baz=56,slow=6.6,SNR=7.8						
ARCES				PcP	PcP	14 36 51.3	-0.2
	comp=Z,5.5nm,0.5s,baz=356,slow=3.5,SNR=15						
ARCES				pPcP		14 37 06.8	
	comp=Z,5.7nm,0.8s,baz=344,slow=3.9,SNR=5.2						
ARCES	ARCESS Array B	48.72	2	P	P	14 35 28.1	+0.8
ARCES				pmax	pmax		
	comp=Z,22nm,1.4s						
ARCES	ARCESS Array B	48.72	2	P	P	14 35 28.1	+0.8
HODGE	Hodges	50.03	91	P	P	14 35 38.1	+0.4
GOGA	Godfrey	50.13	93	P	P	14 35 38.1	-0.4
	baz=326						
CN2	Changchun	50.21	290	eP	P	14 35 37.6	-1.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KSRS	Korea Array	54.20	284	P	P	14 36 07.5	-1.1
	comp=Z,1.7nm,0.6s,baz=32,slow=7.0,SNR=6.8						
KSRS				pP	pP	14 36 23.9	+0.7
	comp=Z,2.4nm,1.0s,baz=31,slow=6.5,SNR=4.0						
KSRS				LR	LR	15 01 27.7	
	comp=Z,30nm,18.7s,baz=40,slow=38						
ULN	Ulaanbaatar	54.55	306	i P	P	14 36 11.1	-0.1
ULN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SONM	Songino Array	54.82	307	P	P	14 36 12.9	-0.3
	comp=Z,4.4nm,0.7s,baz=31,slow=7.3,SNR=16						
SONM				pP	pP	14 36 29.1	+1.3
	comp=Z,5.3nm,0.7s,baz=33,slow=7.4,SNR=10.0						
SONM	Songino Array	54.82	307	P	P	14 36 14.1	+0.9
SONM				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SONM	Songino Array	54.82	307	P	P	14 36 14.1	+0.9
SONM				IAmb	IAmb	14 36 29.6	
	comp=Z,5.5nm,0.8s						
PRGR	Permogore	56.12	351	eP	P	14 36 21.5	-0.6
PRGR				e*PP	pP	14 36 34.7	-2.1
PRGR				pmax	pmax		
	comp=Z,49nm,1.2s						
NB2	NORSAR Subarra	56.44	11	P	P	14 36 22.9	-1.6
	comp=Z,3.3nm,1.0s,baz=349,slow=6.9						
NOA	NORSAR Array B	56.44	11	P	P	14 36 23.4	-1.2
	comp=Z,0.6nm,0.6s,baz=350,slow=7.1,SNR=3.3						
NOA				PcP	PcP	14 37 19.6	-1.1
	comp=Z,0.9nm,0.5s,baz=354,slow=4.8,SNR=4.6						
NOA				pPcP		14 37 35.8	
	comp=Z,1.0nm,0.5s,baz=344,slow=3.3,SNR=4.9						
ZALV	Zalesovo Beam	56.64	325	P	P	14 36 23.6	-2.3
	comp=Z,3.4nm,0.5s,baz=27,slow=6.9,SNR=16						
ZALV				LR	LR	15 04 20.8	
	comp=Z,36nm,18.2s,baz=88,slow=40						
ZALV	Zalesovo Beam	56.64	325	i P	P	14 36 24.7	-1.2
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.5s						
FINES	FINESS Array B	56.84	2	P	P	14 36 25.9	-1.4
	comp=Z,3.8nm,0.8s,baz=4.2,slow=10,SNR=6.5						
FINES	FINESS Array B	56.84	2	ceP	P	14 36 25.8	-1.5
FINES				pmax	pmax		
	comp=Z,4.0nm,0.9s						
HHC	Hu-ho-hao-te	58.58	298	eP	P	14 36 41.6	+1.7
HHC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,90nm,5.0s						
DGZ	Jazzator, Alta	59.66	321	i P	P	14 36 47.2	-0.1
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ARU	Arti	59.83	342	c iP	P	14 36 47.4	-0.8
ARU				*PP	pP	14 37 01.4	-1.6
ARU				S	S	14 44 56.2	+1.0
ARU				SS	SS	14 48 50.2	-0.7
ARU				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BRVK	Borovoye	60.97	334	ceP	P	14 36 54.7	-1.3
BRVK				pmax	pmax		
	comp=Z,9.0nm,1.7s						
KURK	Kurchatov	61.20	327	ceP	P	14 36 55.9	-1.6
KURK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
NJ2	Nanjing	62.81	287	eP	P	14 37 09.4	+0.8
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
OBN	Obninsk	63.12	356	ceP	P	14 37 09.8	-0.5
OBN				pmax	pmax		
	comp=Z,14nm,0.6s						
MK31	Makanchi Array	63.78	323	⇓iP	P	14 37 13.1	-1.8
MKAR	Makanchi Array	63.78	323	P	P	14 37 13.5	-1.4
	comp=Z,2.7nm,0.5s,baz=41,slow=6.9,SNR=30						
MKAR	Makanchi Array	63.78	323	P	P	14 37 13.9	-1.0
GTA	Gaotai	64.49	306	eP	P	14 37 20.2	+0.4
GTA				pP	pP	14 37 32.2	-2.5
GTA				sP	sP	14 37 39.7	-1.1
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,44nm,4.7s						
GTA				LR	LR		
	comp=N,56nm,17.8s						
GTA				LR	LR		
	comp=E,63nm,17.8s						
GTA				LR	LR		
	comp=Z,110nm,17.4s						
WMQ	Urumqi	64.84	318	eP	P	14 37 26.3	+4.4
LPSR	Galich'ya Gora	65.53	354	eP	P	14 37 24.4	-1.7
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LZH	Lanzhou	65.80	302	eP	P	14 37 34.2	+5.9
LZH				pP	pP	14 37 38.0	-5.3
LZH				pmax	pmax		
	comp=Z,23nm,1.5s						
VRH	Novokhopyorsk	66.77	352	eP	P	14 37 32.4	-1.7
VRH				pmax	pmax		
	comp=Z,4.0nm,0.4s						
VSR	Storozhevoye	66.91	354	eP	P	14 37 33.7	-1.3
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
AKASG	Malin Array Be	67.65	1	P	P	14 37 38.6	-1.1
	comp=Z,1.0nm,0.3s,baz=3.6,slow=6.5,SNR=12						
AKBB	Malin Array Si	67.65	1	ceP	P	14 37 38.1	-1.6
KHC	Kasperske Hory	68.44	12	eP	P	14 37 44.0	-0.7
KHC	Kasperske Hory	68.44	12	eP	P	14 37 44.0	-0.7
GERES	GERESS Array B	68.73	12	P	P	14 37 46.1	-0.5
	comp=Z,0.5nm,0.4s,baz=0.0,slow=6.7,SNR=4.3						
TKM2	Tokmak 2	69.20	326	P	P	14 37 49.2	-0.6
	SNR=6.7						
CHMS	Chumysh	69.34	327	P	P	14 37 50.2	-0.3
	SNR=6.3						
KBK	Karagaybulak	69.61	326	P	P	14 37 52.0	-0.3
	SNR=5.8						
AAK	Ala-Archa	69.75	327	P	P	14 37 52.7	-0.4
	SNR=7.0						
AAK	Ala-Archa	69.75	327	ceP	P	14 37 52.8	-0.4
AAK				pmax	pmax		
	comp=Z,9.0nm,0.7s						
EKS2	Erkin-Say	69.91	327	P	P	14 37 53.8	-0.3
	SNR=14						
AML	Almayashu	70.43	327	P	P	14 37 57.6	0.0
	SNR=10						
KSH	Kashi	72.27	324	P	P	14 38 10.1	+1.7
KSH				pP	pP	14 38 24.6	+1.1
KSH				pmax	pmax		
	comp=Z,10.0nm,0.4s						
KIV	Kislovodsk	73.91	351	eP	P	14 38 17.5	-0.5
KIV				pmax	pmax		
	comp=Z,14nm,1.1s						
KBZ	Khabaz	74.12	350	P	P	14 38 18.2	-0.8
	comp=Z,6.5nm,0.8s,baz=343,slow=7.1,SNR=16						
KBZ	Khabaz	74.12	350	ceP	P	14 38 19.2	+0.2
KBZ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ZEI	Tsey	74.97	350	eP	P	14 38 22.4	-1.9
ZEI				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ESDC	Sonseca Array	75.00	27	P	P	14 38 24.5	+0.2
	comp=Z,3.7nm,0.8s,baz=340,slow=5.5,SNR=19						
ESDC				pP	pP	14 38 39.8	+0.1
	comp=Z,7.8nm,0.8s,baz=342,slow=5.6,SNR=21						
GEYT	Alibeck	77.87	338	LR	LR	15 19 49.0	
	comp=Z,42nm,19.0s,baz=145,slow=41						
BRTR	Keskin Array B	78.59	357	P	P	14 38 44.1	-0.4
	comp=Z,2.6nm,0.8s,baz=27,slow=3.0,SNR=8.3						
TAPN	Taplejung	79.75	310	eP	P	14 38 51.2	-0.1
	comp=Z,29nm,0.5s						
GUN	Gumba	79.89	312	eP	P	14 38 51.8	-0.3
JIRN	Jiri	80.00	312	eP	P	14 38 52.8	0.0
	comp=Z,24nm,0.5s						
KKN	Kakani	80.21	312	eP	P	14 38 53.5	-0.2
	comp=Z,13nm,0.5s						
DANN	Dangsing	80.22	314	eP	P	14 38 53.6	-0.2
	comp=Z,38nm,0.6s						
GKN	Gorkha	80.23	313	eP	P	14 38 53.4	-0.3
	comp=Z,21nm,0.3s						
ODAN	Odare	80.31	310	ePn	P	14 38 54.3	0.0
	comp=Z,14nm,0.7s						
PKIN	Phulchoki	80.36	312	eP	P	14 38 53.8	-0.8
	comp=Z,8.8nm,0.4s						
PKI	Pulchoki	80.36	312	eP	P	14 38 54.0	-0.6
DMN	Daman	80.43	313	eP	P	14 38 54.7	-0.2
	comp=Z,13nm,0.5s						
RAMN	Ramite	80.51	311	eP	P	14 38 55.0	-0.3
	comp=Z,19nm,0.5s						
PYUN	Piuthan	80.71	314	eP	P	14 38 55.8	-0.5
	comp=Z,26nm,0.8s						
KOLN	Koldanda	80.80	314	eP	P	14 38 56.3	-0.6
	comp=Z,9.2nm,0.6s						
KEST	Kesra	81.17	17	P	P	14 38 58.5	-0.1
	comp=Z,7.2nm,0.9s,baz=50,slow=4.0,SNR=5.0						
CMAR	Chiang Mai Arr	83.35	297	P	P	14 39 09.4	-0.6
	comp=Z,3.2nm,0.9s,baz=5.4,slow=6.0,SNR=25						
CMAR				LR	LR	15 19 22.4	
	comp=Z,82nm,18.3s,baz=238,slow=38						
CMAR	Chiang Mai Arr	83.35	297	P	P	14 39 10.1	0.0
MDP	Montagnes des	88.94	81	P	P	14 39 36.2	-1.4
	comp=Z,3.3nm,0.7s,baz=52,slow=15,SNR=2.1						
PTGA	Pitinga	90.61	90	P	P	14 39 44.7	-0.6
	comp=Z,6.8nm,0.5s,baz=311,slow=23,SNR=19						
PTGA				LR	LR	15 22 54.5	
	comp=Z,38nm,19.2s,baz=63,slow=37						
PLCA	Paso Flores	120.45	120	PKP	PKPdf	14 45 33.1	-0.3
	comp=Z,0.4nm,0.4s,baz=73,slow=2.8,SNR=3.0						
PLCA	Paso Flores	120.45	120	PKIKP	PKPdf	14 45 34.0	+0.6
PLCA	Paso Flores	120.45	120		PKPdf	14 45 34.0	+0.6
BOSA	Boshof	146.46	8	PKPbc	PKPdf	14 46 22.8	+0.6
	comp=Z,12nm,0.4s,baz=355,slow=3.7,SNR=36						
BOSA				pPKPbc	pPKPbc	14 46 39.3	-0.4
	comp=Z,4.3nm,0.5s,baz=348,slow=3.7,SNR=12						
BOSA	Boshof	146.46	8	PKP2	PKPdf	14 46 23.5	+1.4
BOSA	Boshof	146.46	8		PKPdf	14 46 23.5	+1.4

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*INET **06** 14:36:04.2, 12°94N×86°55W, h16km, MW3.7*

SNET 06 14:36:08.7±0.9**, 12°93N×86°63W, h16**km±10km**, ML3.0, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	1.22	287	eP	Pn	14 36 30.3	-0.9
CNCH				eS	Sn	14 36 47.5	0.0
LCND	La Caada	1.28	287	eP	Pn	14 36 31.0	-1.0
LCND				eS	Sn	14 36 49.1	+0.2
LCND				IAML		14 36 54.1	
	comp=Z,818nm,0.4s						
TGUH	Tegucigalpa,Un	1.28	331	eP	Pn	14 36 31.6	-0.6
TGUH				eS	Sb	14 36 48.5	-0.4
PACA	Pacayal	1.73	288	eP	Pn	14 36 38.4	+0.1
SCLA	Alcaldia de Sa	2.18	291	eP	Pn	14 36 45.1	+0.7
SCLA				IAML		14 37 34.9	
	comp=Z,38nm,0.5s						
MTO3	Montecristo	3.03	299	eP	Pn	14 36 56.0	-0.2

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*IDC **06** 14:58:22.2±2.3, 62°16N×150°58W, h43km±23km, mb3.3/4, mb1 3.7/8, mb1mx3.4/45, mbtmp3.6/8, ML3.4/4, MS3.3/2, Ms1 3.2/2, ms1mx2.6/33, Error ellipse: s-maj=25.1km s-min=15.2km az=100.0*

*NEIC **06** 14:58:23.5±1.1, 61°99N±0°03×149°86W±0°06, h44km±9km, Error ellipse: s-maj=4.1km s-min=3.7km az=193.0*

*AEIC **06** 14:58:23±1.2, 61°99N±0°03×149°87W±0°06, h49km±5km, ML3.5, ML3.8/180(NEIC), Error ellipse: s-maj=4.5km s-min=3.6km az=198.0*

ISC 06 14:58:23.4±0.8**, 62°00N**±0°02×**149°89W**±0°02**, h47**km±6km**, n278, σ0°75**/288**, mb3.5**/4**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
M22K	Willow	0.27	204	P	Pn	14 58 31.6	-0.4
	baz=25,SNR=473						
M22K				S	Sn	14 58 38.9	+0.8
	baz=25						
M22K	Willow	0.27	204		Pn	14 58 31.6	-0.4
M22K					Sn	14 58 39.2	+1.1
CUT	Chulitna	0.44	336	P	Pn	14 58 33.6	-0.2
	baz=156,SNR=197						
CUT				S	Sn	14 58 42.1	+0.9
	baz=156						
CUT	Chulitna	0.44	336		Pn	14 58 33.5	-0.2
CUT					Sn	14 58 41.1	0.0
CUT	Chulitna	0.44	336	IAML		14 58 42.4	
	comp=N,7µm,0.5s						
CUT				IAML		14 58 42.6	
	comp=E,21µm,0.6s						
GHO	Glory Hole Cre	0.51	116		Pn	14 58 34.1	-0.6
GHO	Glory Hole Cre	0.51	116	IAML		14 58 44.1	
	comp=N,10µm,0.7s						
GHO				IAML		14 58 44.3	
	comp=E,8µm,0.6s						
PMR	Palmer	0.55	138	P	Pn	14 58 34.1	-1.0
	baz=320,SNR=121						
PMR				S	Sn	14 58 43.0	-0.3
	baz=320						
PMR	Palmer	0.55	138		Pn	14 58 34.1	-1.0
PMR					Sn	14 58 43.0	-0.3
PMR	Palmer	0.55	138	IAML		14 58 43.4	
	comp=E,4µm,0.6s						
PMR				IAML		14 58 45.7	
	comp=N,2µm,0.5s						
SUA	Susitna One	0.68	217	P	Pn	14 58 36.5	-0.4
	baz=37,SNR=210						
SUA				S	Sn	14 58 46.8	+0.2
	baz=37						
SUA	Susitna One	0.68	217		Pn	14 58 36.5	-0.4
SUA					Sn	14 58 47.3	+0.8
SUA	Susitna One	0.68	217	IAML		14 58 48.2	
	comp=E,3µm,0.8s						
SML	Sawmill	0.76	104	P	Pn	14 58 37.1	-0.9
	baz=286,SNR=186						
SML				S	Sn	14 58 48.0	-0.4
	baz=286						
SML	Sawmill	0.76	104		Pn	14 58 37.0	-1.0
SML	Sawmill	0.76	104	IAML		14 58 49.9	
	comp=E,4µm,0.9s						
SML				IAML		14 58 50.0	
	comp=N,4µm,0.9s						
SKT	Skwentna	0.78	269	P	Pn	14 58 37.4	-0.7
	baz=88,SNR=300						
SKT				S	Sn	14 58 48.5	-0.2
	baz=88						
SKT	Skwentna	0.78	269		Pn	14 58 37.4	-0.7
SKT					Sn	14 58 49.1	+0.4
SKT	Skwentna	0.78	269	IAML		14 58 49.7	
	comp=E,3µm,0.4s						
SKT				IAML		14 58 50.0	
	comp=N,5µm,0.3s						
FIS	Fire Island	0.88	191		Pn	14 58 39.3	-0.1
FIS	Fire Island	0.88	191	IAML		14 58 56.4	
	comp=E,4µm,0.4s						
FIS				IAML		14 58 56.9	
	comp=N,3µm,0.3s						
KNK	Knik Glacier	0.90	130	P	Pn	14 58 39.0	-0.8
	baz=312,SNR=178						
KNK				S	Sn	14 58 51.6	-0.2
	baz=312						
KNK	Knik Glacier	0.90	130		Pn	14 58 39.0	-0.8
KNK					Sn	14 58 52.6	+0.9
KNK	Knik Glacier	0.90	130	IAML		14 58 53.9	
	comp=N,4µm,0.5s						
RC01	Rabbit Creek A	0.92	175	P	Pn	14 58 39.3	-0.7
	baz=356,SNR=97						
RC01				S	Sn	14 58 52.0	-0.1
	baz=356						
RC01	Rabbit Creek A	0.92	175		Pn	14 58 39.2	-0.7
STLK	Strandline Lak	1.05	242		Pn	14 58 41.4	-0.5
SCM	Sheep Creek Mo	1.22	97	P	Pn	14 58 43.7	-0.5
	baz=279,SNR=325						
SCM				S	Sn	14 59 00.3	+0.7
	baz=279						
SCM	Sheep Creek Mo	1.22	97		Pn	14 58 43.7	-0.5
SCM					Sn	14 59 00.8	+1.2
SPCG	Spurr Capps Gl	1.24	236		Pn	14 58 44.3	-0.2
SPCG					Sn	14 59 01.1	+1.0
SPCP	Crater Peak Br	1.31	237		Pn	14 58 45.4	0.0
SPU	Mount Spurr	1.32	232		Pn	14 58 45.4	-0.1
PWL	Port Wells	1.37	146	P	Pn	14 58 45.5	-0.6
	baz=328,SNR=124						
PWL				S	Sn	14 59 03.1	0.0
	baz=328						
PWL	Port Wells	1.37	146		Pn	14 58 45.5	-0.6
PWL					Sn	14 59 03.3	+0.2
PWL	Port Wells	1.37	146	IAML		14 59 03.9	
	comp=E,2µm,0.5s						
CAPN	Captain Cook N	1.38	207	P	Pn	14 58 47.9	+1.7
	baz=26						
CAPN	Captain Cook N	1.38	207		Pn	14 58 47.7	+1.5
CAPN	Captain Cook N	1.38	207	IAML		14 59 23.2	
	comp=N,2µm,0.7s						
CAPN				IAML		14 59 27.4	
	comp=E,2µm,0.5s						
PPLA	Purkeypile	1.40	311	P	Pn	14 58 46.5	-0.1
	baz=129,SNR=52						
PPLA	Purkeypile	1.40	311		Pn	14 58 46.5	-0.1
BGL	Barrier Glacie	1.41	239		Pn	14 58 46.9	+0.2
TRF	Thorofare Moun	1.47	353	P	Pn	14 58 47.6	0.0
	baz=172,SNR=70						
TRF				S	Sn	14 59 06.0	+0.4
	baz=172						
TRF	Thorofare Moun	1.47	353		Pn	14 58 47.5	0.0
TRF					Sn	14 59 06.4	+0.8

TRF	**Thorofare Moun**	**1.47**	**353**	IAML		14 59 09.0	
	comp=E,851nm,0.7s						
TRF				IAML		14 59 09.1	
	comp=N,2µm,0.5s						
RND	**Reindeer**	**1.49**	**18**		**Pn**	**14 58 48.0**	**+0.2**
SLKM	**Skilak Lake**	**1.51**	**186**		**Pn**	**14 58 47.3**	**-0.7**
O22K	**Cooper Landing**	**1.53**	**177**	P	**Pn**	**14 58 47.4**	**-0.8**
	baz=357,SNR=21						
O22K	**Cooper Landing**	**1.53**	**177**		**Pn**	**14 58 47.5**	**-0.8**
KTH	**Kantishna Hill**	**1.63**	**343**		**Pn**	**14 58 49.9**	**+0.3**
KTH					**Sn**	**14 59 10.3**	**+0.8**
KTH	**Kantishna Hill**	**1.63**	**343**	IAML		14 59 11.1	
	comp=E,1µm,0.7s						
KTH				IAML		14 59 11.4	
	comp=N,647nm,0.7s						
CAST	**Castle Rocks**	**1.74**	**326**	P	**Pn**	**14 58 51.2**	**0.0**
	baz=143,SNR=126						
CAST				S	**Sn**	**14 59 12.7**	**+0.4**
	baz=143						
CAST	**Castle Rocks**	**1.74**	**326**		**Pn**	**14 58 51.3**	**0.0**
GLI	**Glacier Island**	**1.75**	**129**	P	**Pn**	**14 58 50.6**	**-0.7**
	baz=311,SNR=32						
GLI				S	**Sn**	**14 59 12.4**	**-0.1**
	baz=311						
GLI	**Glacier Island**	**1.75**	**129**		**Pn**	**14 58 50.6**	**-0.7**
M24K	**Tolsona, Glenn**	**1.75**	**85**	P	**Pn**	**14 58 51.9**	**+0.5**
	baz=268,SNR=94						
M24K	**Tolsona, Glenn**	**1.75**	**85**		**Pn**	**14 58 51.9**	**+0.5**
M24K					**Sn**	**14 59 13.2**	**+0.7**
M24K	**Tolsona, Glenn**	**1.75**	**85**	IAML		14 59 24.6	
	comp=N,1µm,0.8s						
MCK	**McKinley**	**1.79**	**14**	P	**Pn**	**14 58 52.2**	**+0.4**
	baz=194,SNR=65						
MCK				S	**Sn**	**14 59 14.1**	**+0.7**
	baz=194						
MCK	**McKinley**	**1.79**	**14**		**Pn**	**14 58 52.1**	**+0.2**
JPK	**Jack Peak**	**1.84**	**120**		**Pn**	**14 58 52.1**	**-0.5**
SEW	**Seward**	**1.92**	**173**	P	**Pn**	**14 58 53.7**	**+0.2**
	baz=354						
SEW				S	**Sn**	**14 59 15.5**	**-0.9**
	baz=354						
SEW	**Seward**	**1.92**	**173**		**Pn**	**14 58 53.6**	**+0.1**
SEW					**Sn**	**14 59 16.4**	**0.0**
VMT	**TAPS Tl Valdez**	**1.92**	**117**		**Pn**	**14 58 53.3**	**-0.3**
L20K	**Farewell, AK**	**1.93**	**286**	P	**Pn**	**14 58 53.5**	**-0.3**
	baz=102,SNR=163						
L20K				S	**Sn**	**14 59 17.0**	**+0.2**
	baz=102						
L20K	**Farewell, AK**	**1.93**	**286**		**Pn**	**14 58 53.5**	**-0.3**
DFR	**Drift River**	**1.96**	**225**		**Pn**	**14 58 54.3**	**+0.1**
DFR					**Sn**	**14 59 19.7**	**+2.1**
KLU	**Klutina**	**1.96**	**103**	P	**Pn**	**14 58 53.6**	**-0.6**
	baz=287,SNR=97						
KLU				S	**Sn**	**14 59 17.5**	**-0.1**
	baz=287						
KLU	**Klutina**	**1.96**	**103**		**Pn**	**14 58 53.6**	**-0.6**
KLU	**Klutina**	**1.96**	**103**	IAML		14 59 25.7	
	comp=E,696nm,0.6s						
KLU				IAML		14 59 26.7	
	comp=N,785nm,0.5s						
RDJH	**Redoubt Jeurge**	**2.00**	**226**		**Pn**	**14 58 54.9**	**+0.1**
NCT	**North Crescent**	**2.06**	**227**		**Pn**	**14 58 56.2**	**+0.6**
FID	**Port Fidalgo**	**2.07**	**126**		**Pn**	**14 58 54.6**	**-1.1**
FID					**Sn**	**14 59 21.1**	**+0.9**
FID	**Port Fidalgo**	**2.07**	**126**	IAML		14 59 27.3	
	comp=N,1µm,0.3s						
RSO	**Redoubt South**	**2.08**	**223**		**Pn**	**14 58 56.2**	**+0.2**
PS11	**TAPS Pump St11**	**2.08**	**86**		**Pn**	**14 58 56.3**	**+0.5**
PS11					**Sn**	**14 59 21.2**	**+0.7**
RDWB	**Redoubt West**	**2.08**	**224**		**Pn**	**14 58 56.2**	**+0.2**
RED	**Redoubt Volcan**	**2.12**	**223**		**Pn**	**14 58 56.5**	**+0.1**
M19K	**Big River Lodg**	**2.13**	**269**	P	**Pn**	**14 58 56.3**	**-0.2**
	baz=85,SNR=30						
M19K				S	**Sn**	**14 59 21.9**	**+0.2**
	baz=85						
M19K	**Big River Lodg**	**2.13**	**269**		**Pn**	**14 58 56.3**	**-0.2**
M19K	**Big River Lodg**	**2.13**	**269**	IAML		14 59 25.8	
	comp=E,412nm,0.5s						
M19K				IAML		14 59 26.6	
	comp=N,401nm,0.6s						
DIV	**Divide**	**2.16**	**112**		**Pn**	**14 58 56.1**	**-0.8**
BPAW	**Bear Paw Mtn.**	**2.16**	**347**	P	**Pn**	**14 58 56.7**	**-0.3**
	baz=166,SNR=36						
BPAW				S	**Sn**	**14 59 23.0**	**+0.4**
	baz=166						
BPAW	**Bear Paw Mtn.**	**2.16**	**347**		**Pn**	**14 58 56.7**	**-0.3**
BPAW					**Sn**	**14 59 23.1**	**+0.6**
BPAW	**Bear Paw Mtn.**	**2.16**	**347**	IAML		14 59 40.2	
	comp=N,336nm,0.7s						
BWN	**Browne**	**2.19**	**5**		**Pn**	**14 58 57.7**	**+0.5**
BWN	**Browne**	**2.19**	**5**	IAML		14 59 43.1	
	comp=E,600nm,1.0s						
BWN				IAML		14 59 48.0	
	comp=N,528nm,0.9s						
CHUM	**Lake Minchumin**	**2.19**	**331**	P	**Pn**	**14 58 57.3**	**+0.1**
	baz=148,SNR=66						
CHUM				S	**Sn**	**14 59 23.1**	**0.0**
	baz=148						
CHUM	**Lake Minchumin**	**2.19**	**331**		**Pn**	**14 58 57.4**	**+0.1**
HARP	**HAARP**	**2.25**	**78**	P	**Pn**	**14 58 58.2**	**0.0**
	baz=262,SNR=50						
HARP	**HAARP**	**2.25**	**78**		**Pn**	**14 58 58.7**	**+0.5**
HARP					**Sn**	**14 59 27.0**	**+2.2**
PAX	**Paxson**	**2.27**	**63**	P	**Pn**	**14 58 59.0**	**+0.5**
	baz=247,SNR=72						
PAX				S	**Sn**	**14 59 26.2**	**+1.0**
	baz=247						
PAX	**Paxson**	**2.27**	**63**		**Pn**	**14 58 58.9**	**+0.4**
BRLK	**Bradley Lake**	**2.30**	**193**		**Pn**	**14 58 59.8**	**+1.0**
HIN	**Hinchinbrook I**	**2.30**	**133**		**Pn**	**14 58 58.1**	**-0.7**
BRSE	**Bradley Lake S**	**2.31**	**191**		**Pn**	**14 58 60.0**	**+1.0**
PS12	**TAPS Pump St12**	**2.32**	**101**		**Pn**	**14 58 58.5**	**-0.6**
L19K	**White Mountain**	**2.34**	**277**	P	**Pn**	**14 58 59.4**	**0.0**
	baz=92,SNR=48						
L19K				S	**Sn**	**14 59 27.4**	**+0.5**
	baz=92						
L19K	**White Mountain**	**2.34**	**277**		**Pn**	**14 58 59.4**	**0.0**
L19K					**Sn**	**14 59 28.2**	**+1.2**
L19K	**White Mountain**	**2.34**	**277**	IAML		14 59 29.1	
	comp=E,582nm,0.5s						
L19K				IAML		14 59 29.5	
	comp=N,362nm,0.5s						
O20K	**Slope Mountain**	**2.34**	**216**	P	**Pn**	**14 59 00.1**	**+0.6**
	baz=34						
O20K	**Slope Mountain**	**2.34**	**216**		**Pn**	**14 59 00.0**	**+0.6**
K20K	**Telida**	**2.36**	**307**	P	**Pn**	**14 58 59.4**	**-0.3**
	baz=123,SNR=37						
K20K				S	**Sn**	**14 59 27.9**	**+0.5**
	baz=123						
K20K	**Telida**	**2.36**	**307**		**Pn**	**14 58 59.3**	**-0.3**
K20K	**Telida**	**2.36**	**307**	IAML		14 59 28.9	
	comp=E,331nm,0.5s						
PS10	**TAPS Pump St10**	**2.37**	**51**		**Pn**	**14 59 00.8**	**+0.9**
PS10					**Sn**	**14 59 28.8**	**+1.0**
EYAK	**Cordova Ski Ar**	**2.48**	**124**	P	**Pn**	**14 59 00.1**	**-1.0**
	baz=308,SNR=24						
EYAK	**Cordova Ski Ar**	**2.48**	**124**		**Pn**	**14 59 00.3**	**-0.9**
HOM	**Homer**	**2.50**	**201**	Pn	**Pn**	**14 59 00.7**	**-1.0**
HOM				IAML		14 59 59.0	
	comp=E,586nm,0.7s						
N19K	**Bonanza Creek**	**2.51**	**244**	P	**Pn**	**14 59 01.9**	**+0.1**
	baz=60						
N19K	**Bonanza Creek**	**2.51**	**244**		**Pn**	**14 59 02.3**	**+0.5**
N19K	**Bonanza Creek**	**2.51**	**244**	IAML		14 59 48.9	
	comp=N,248nm,0.9s						
N25K	**Chitina, Valde**	**2.54**	**97**	P	**Pn**	**14 59 01.8**	**-0.4**
	baz=281,SNR=49						
N25K				S	**Sn**	**14 59 31.8**	**-0.1**
	baz=281						
N25K	**Chitina, Valde**	**2.54**	**97**		**Pn**	**14 59 01.8**	**-0.4**
N25K	**Chitina, Valde**	**2.54**	**97**	IAML		14 59 38.8	
	comp=N,497nm,0.6s						
N25K				IAML		14 59 42.7	
	comp=E,327nm,0.5s						
CNPM	**China Poot**	**2.57**	**195**		**Pn**	**14 59 03.6**	**+1.0**
CNPM	**China Poot**	**2.57**	**195**	IAML		14 59 43.7	
	comp=N,316nm,0.5s						
WRH	**Wood River Hil**	**2.61**	**17**		**Pn**	**14 59 03.1**	**0.0**
NEA2	**Nenana**	**2.63**	**8**	P	**Pn**	**14 59 02.9**	**-0.4**
	baz=188,SNR=26						
NEA2				S	**Sn**	**14 59 33.2**	**-0.6**
	baz=188						
NEA2	**Nenana**	**2.63**	**8**		**Pn**	**14 59 02.9**	**-0.4**
BMRM	**Bremner River**	**2.74**	**110**	P	**Pn**	**14 59 03.8**	**-1.1**
	baz=295,SNR=18						
BMRM	**Bremner River**	**2.74**	**110**		**Pn**	**14 59 03.9**	**-1.0**
BMRM	**Bremner River**	**2.74**	**110**	IAML		14 59 46.3	
	comp=N,492nm,0.5s						
BMRM				IAML		14 59 52.4	
	comp=E,345nm,0.8s						
HDA	**Harding Lake**	**2.76**	**28**	P	**Pn**	**14 59 05.2**	**+0.1**
	baz=210,SNR=14						
HDA	**Harding Lake**	**2.76**	**28**		**Pn**	**14 59 05.2**	**+0.1**
HDA	**Harding Lake**	**2.76**	**28**	IAML		14 59 43.8	
	comp=E,249nm,0.4s						
HDA				IAML		14 59 44.3	
	comp=N,272nm,0.5s						
O19K	**Port Alsworth**	**2.81**	**232**		**Pn**	**14 59 05.9**	**0.0**
O19K				IAML		14 59 47.3	
	comp=E,355nm,0.5s						
O19K				IAML		14 59 48.9	
	comp=N,423nm,0.5s						
CCB	**Clear Creek Bu**	**2.82**	**19**		**Pn**	**14 59 05.7**	**-0.2**
P19K	**Oil Pt**	**2.87**	**216**		**Pn**	**14 59 07.6**	**+0.9**
P19K	**Oil Pt**	**2.87**	**216**	IAML		14 59 49.4	
	comp=E,293nm,0.5s						
P19K				IAML		14 59 52.5	
	comp=N,271nm,0.5s						
SVW2	**Sparrevohn**	**2.87**	**254**		**Pn**	**14 59 06.5**	**-0.1**
SVW2					**Sn**	**14 59 40.8**	**+0.9**
SVW2	**Sparrevohn**	**2.87**	**254**	IAML		14 59 41.9	
	comp=N,192nm,0.4s						
SVW2				IAML		14 59 42.2	
	comp=E,234nm,0.5s						
RIDG	**Independent Ri**	**2.90**	**51**		**Pn**	**14 59 07.8**	**+0.8**
PS08	**TAPS Pump Stn8**	**2.90**	**27**		**Pn**	**14 59 07.2**	**+0.2**
J20K	**Nowinta River**	**2.92**	**320**	P	**Pn**	**14 59 07.3**	**0.0**
	baz=136,SNR=158						
J20K				S	**Sn**	**14 59 40.8**	**-0.3**
	baz=136						
J20K	**Nowinta River**	**2.92**	**320**		**Pn**	**14 59 07.2**	**0.0**
J20K	**Nowinta River**	**2.92**	**320**	IAML		14 59 41.9	
	comp=E,278nm,0.8s						
J20K				IAML		14 59 43.1	
	comp=N,285nm,0.6s						
GLB	**Gilahina Butte**	**2.95**	**98**		**Pn**	**14 59 07.0**	**-0.7**
GLB	**Gilahina Butte**	**2.95**	**98**	IAML		14 59 51.7	
	comp=N,335nm,0.8s						
GLB				IAML		14 59 52.0	
	comp=E,273nm,0.7s						
TT01	**Tatalina**	**2.99**	**290**		**Pn**	**14 59 07.7**	**-0.6**
TTA	**Tatalina**	**2.99**	**291**	P	**Pn**	**14 59 07.6**	**-0.7**
	baz=105,SNR=29						
TTA				S	**Sn**	**14 59 42.1**	**-0.9**
	baz=105						
TTA	**Tatalina**	**2.99**	**291**		**Pn**	**14 59 07.6**	**-0.7**
RAGM	**Ragged Mountai**	**3.00**	**120**		**Pn**	**14 59 08.8**	**+0.3**
MENT	**Mentasta**	**3.02**	**69**		**Pn**	**14 59 08.8**	**+0.2**
MENT				IAML		15 00 03.3	
	comp=N,399nm,0.8s						
TCOL	**CIGO, UAF Yank**	**3.02**	**17**	P	**Pn**	**14 59 08.9**	**+0.2**
	baz=198,SNR=41						
TCOL				S	**Sn**	**14 59 43.3**	**-0.3**
	baz=198						
TCOL	**CIGO, UAF Yank**	**3.02**	**17**		**Pn**	**14 59 08.9**	**+0.2**
COLA	**College**	**3.02**	**17**	P	**Pn**	**14 59 08.9**	**+0.1**
	baz=198						
COLA				S	**Sn**	**14 59 43.3**	**-0.3**
	baz=198						
COLA	**College**	**3.02**	**17**		**Pn**	**14 59 08.8**	**+0.1**
MDM	**Murphy Dome**	**3.06**	**13**		**Pn**	**14 59 09.5**	**+0.2**
MLY	**Manley**	**3.06**	**353**		**Pn**	**14 59 09.0**	**-0.3**
IL31		**3.09**	**25**		**Pn**	**14 59 09.4**	**-0.2**
ILAR	**Eielson Array**	**3.09**	**25**	P	**Pn**	**14 59 09.4**	**-0.2**
	comp=N,3.3nm,0.3s,baz=208,slow=14,SNR=247						
ILAR				S	**Sn**	**14 59 44.5**	**-0.8**
	comp=N,8.7nm,0.3s,baz=210,slow=24,SNR=13						
DOT	**Dot Lake**	**3.14**	**56**	Pn	**Pn**	**14 59 11.4**	**+1.0**
AUL	**Augustine Lava**	**3.15**	**215**		**Pn**	**14 59 11.3**	**+0.7**
I23K	**Minto, Yukon-K**	**3.17**	**4**	P	**Pn**	**14 59 10.8**	**+0.1**
	baz=184,SNR=110						
I23K				S	**Sn**	**14 59 46.6**	**-0.6**
	baz=184						
I23K	**Minto, Yukon-K**	**3.17**	**4**		**Pn**	**14 59 10.8**	**+0.1**
I23K	**Minto, Yukon-K**	**3.17**	**4**	IAML		14 59 49.0	
	comp=N,229nm,0.8s						
VRDI	**Verde Repeater**	**3.17**	**101**		**Pn**	**14 59 10.2**	**-0.7**
VRDI	**Verde Repeater**	**3.17**	**101**	IAML		15 00 00.6	
	comp=N,189nm,0.9s						
VRDI				IAML		15 00 01.1	
	comp=E,158nm,0.9s						
AUQ	**Augustine Qik’**	**3.17**	**215**		**Pn**	**14 59 11.6**	**+0.8**
AUW	**Augustine West**	**3.17**	**215**		**Pn**	**14 59 11.6**	**+0.8**
HMT	**Hamilton**	**3.20**	**119**		**Pn**	**14 59 12.5**	**+1.3**
L26K	**Log Cabin Wild**	**3.20**	**68**		**Pn**	**14 59 11.2**	**0.0**
L26K	**Log Cabin Wild**	**3.20**	**68**	IAML		15 00 06.1	
	comp=E,310nm,0.6s						
L26K				IAML		15 00 08.9	
	comp=N,260nm,0.4s						
M26K	**Nabesna, AK**	**3.25**	**80**	P	**Pn**	**14 59 11.6**	**-0.4**
	baz=266,SNR=43						
M26K	**Nabesna, AK**	**3.25**	**80**		**Pn**	**14 59 11.5**	**-0.5**
M26K	**Nabesna, AK**	**3.25**	**80**	IAML		15 00 08.3	
	comp=N,207nm,0.6s						
M26K				IAML		15 00 08.3	
	comp=E,233nm,0.7s						
POKR	**Poker Plat Res**	**3.31**	**18**	P	**Pn**	**14 59 12.9**	**+0.2**
	baz=200,SNR=8.8						
POKR				S	**Sn**	**14 59 50.3**	**-0.5**
	baz=200						
POKR	**Poker Plat Res**	**3.31**	**18**		**Pn**	**14 59 13.0**	**+0.2**
J25K	**Salcha River,**	**3.32**	**36**	P	**Pn**	**14 59 12.8**	**0.0**
	baz=220						
J25K	**Salcha River,**	**3.32**	**36**		**Pn**	**14 59 12.9**	**0.0**
I21K	**Tanana**	**3.32**	**345**	P	**Pn**	**14 59 12.9**	**+0.1**
	baz=163,SNR=75						
I21K				S	**Sn**	**14 59 49.8**	**-1.2**
	baz=163						
I21K	**Tanana**	**3.32**	**345**		**Pn**	**14 59 12.8**	**0.0**
MCARA	**McCarthy VSAT**	**3.33**	**98**	P	**Pn**	**14 59 12.4**	**-0.5**
	baz=284,SNR=17						
MCARA	**McCarthy VSAT**	**3.33**	**98**		**Pn**	**14 59 12.4**	**-0.5**
SCRK	**Sand Creek**	**3.34**	**51**	P	**Pn**	**14 59 13.0**	**-0.2**
	baz=236						
SCRK	**Sand Creek**	**3.34**	**51**		**Pn**	**14 59 13.1**	**-0.2**
SCRK	**Sand Creek**	**3.34**	**51**	IAML		14 59 56.9	
	comp=N,175nm,1.0s						
SCRK				IAML		14 59 57.0	
	comp=E,138nm,0.5s						
O18K	**Koktuh Hills**	**3.37**	**233**	P	**Pn**	**14 59 13.2**	**-0.4**
	baz=48						
O18K	**Koktuh Hills**	**3.37**	**233**		**Pn**	**14 59 13.8**	**+0.3**
NICHA	**Nichawak Mount**	**3.38**	**119**		**Pn**	**14 59 13.5**	**0.0**
KAIM	**Kayak Island**	**3.38**	**126**	Pn	**Pn**	**14 59 13.1**	**-0.6**
PS07	**TAPS Pump Stn7**	**3.40**	**11**		**Pn**	**14 59 14.3**	**+0.5**
BERG	**Berg Lake**	**3.40**	**116**		**Pn**	**14 59 14.4**	**+0.5**
CRQM	**Cirque**	**3.48**	**108**		**Pn**	**14 59 15.0**	**-0.1**
CRQE	**Cirque**	**3.50**	**108**	P	**Pn**	**14 59 14.9**	**-0.6**
	baz=294						
SUCK	**Suckling Hills**	**3.55**	**120**	Pn	**Pn**	**14 59 16.2**	**+0.2**
SUCK				IAML		15 00 01.2	
	comp=E,245nm,3.6s						
SUCK				IAML		15 00 12.3	
	comp=N,273nm,0.8s						
KHIT	**Khitrov Hills**	**3.57**	**113**		**Pn**	**14 59 16.2**	**-0.1**
Q19K	**Cape Douglas,**	**3.60**	**213**	P	**Pn**	**14 59 17.1**	**+0.4**
	baz=30						
Q19K	**Cape Douglas,**	**3.60**	**213**	Pn	**Pn**	**14 59 17.6**	**+0.9**
Q19K				IAML		15 00 35.3	
	comp=N,244nm,1.2s						
TGL	**Tana Glacier**	**3.62**	**107**		**Pn**	**14 59 16.6**	**-0.4**
TGL	**Tana Glacier**	**3.62**	**107**	IAML		15 00 14.7	
	comp=N,253nm,0.7s						
GRIN	**Grindle Hills**	**3.62**	**116**		**Pn**	**14 59 17.2**	**+0.3**
PTPK	**Patty Peak**	**3.64**	**100**		**Pn**	**14 59 16.9**	**-0.5**
P18K	**Big Mountain,**	**3.71**	**227**		**Pn**	**14 59 18.0**	**-0.1**
BALM	**Baldy**	**3.74**	**102**		**Pn**	**14 59 17.6**	**-1.0**
WAX	**Waxell Ridge**	**3.74**	**111**		**Pn**	**14 59 19.1**	**+0.4**
KIAG	**Kiagna River**	**3.77**	**103**		**Pn**	**14 59 17.8**	**-1.4**
M27K	**Edge Creek, AK**	**3.77**	**81**	P	**Pn**	**14 59 19.1**	**0.0**
	baz=268,SNR=6.4						
M27K	**Edge Creek, AK**	**3.77**	**81**		**Pn**	**14 59 19.7**	**+0.5**
M27K	**Edge Creek, AK**	**3.77**	**81**	IAML		15 00 28.6	
	comp=N,103nm,1.3s						
J26L	**Joseph Creek**	**3.80**	**46**	P	**Pn**	**14 59 19.6**	**+0.1**
	baz=232,SNR=34						
H23K	**Yukon River**	**3.84**	**2**	P	**Pn**	**14 59 19.8**	**-0.1**
	baz=182						
H23K	**Yukon River**	**3.84**	**2**		**Pn**	**14 59 20.0**	**0.0**
SNH	**Sunshine Point**	**3.88**	**115**	Pn	**Pn**	**14 59 21.8**	**+1.3**
SNH				IAML		14 59 56.1	
	comp=E,219nm,3.2s						
L27K	**Beaver Creek,**	**3.88**	**71**	P	**Pn**	**14 59 20.0**	**-0.5**
	baz=258,SNR=11						
L27K	**Beaver Creek,**	**3.88**	**71**		**Pn**	**14 59 20.2**	**-0.3**
H21K	**Melozitna Rive**	**3.89**	**342**	P	**Pn**	**14 59 20.3**	**-0.3**
	baz=159						
H21K	**Melozitna Rive**	**3.89**	**342**		**Pn**	**14 59 20.0**	**-0.6**
BC03		**3.90**	**71**		**Pn**	**14 59 20.8**	**+0.1**
BCAR	**Beaver Creek A**	**3.90**	**71**	Pn	**Pn**	**14 59 20.8**	**0.0**
ISLE	**Juniper Island**	**3.90**	**108**		**Pn**	**14 59 20.9**	**0.0**
ISLE				IAML		15 00 24.1	
	comp=N,213nm,1.0s						
ISLE				IAML		15 00 33.1	
	comp=E,197nm,0.8s						
H24K	**Noodor Dome**	**3.95**	**12**	P	**Pn**	**14 59 21.4**	**0.0**
	baz=194,SNR=11						
H24K	**Noodor Dome**	**3.95**	**12**	Pn	**Pn**	**14 59 21.7**	**+0.2**
PRP	**Porcupine Dome**	**4.03**	**27**	P	**Pn**	**14 59 22.9**	**+0.3**
	baz=211,SNR=14						
PRP	**Porcupine Dome**	**4.03**	**27**		**Pn**	**14 59 22.7**	**+0.1**
PRP	**Porcupine Dome**	**4.03**	**27**	IAML		15 00 35.4	
	comp=N,83nm,0.8s						
BARN	**Barnard Glacie**	**4.05**	**100**		**Pn**	**14 59 22.5**	**-0.5**
BARN	**Barnard Glacie**	**4.05**	**100**	IAML		15 00 26.3	
	comp=E,181nm,0.7s						
BARN				IAML		15 00 27.2	
	comp=N,185nm,0.8s						
BAGL	**Bagley Icefiel**	**4.06**	**108**		**Pn**	**14 59 22.3**	**-0.6**
GRNC	**Granite Creek**	**4.12**	**104**		**Pn**	**14 59 22.8**	**-1.1**
GRNC	**Granite Creek**	**4.12**	**104**	IAML		15 00 29.5	
	comp=E,110nm,0.7s						
GRNC				IAML		15 00 30.6	
	comp=N,147nm,0.9s						
GCSA	**Galena City Sc**	**4.18**	**314**	P	**Pn**	**14 59 24.4**	**-0.1**
	baz=128,SNR=19						
GCSA	**Galena City Sc**	**4.18**	**314**		**Pn**	**14 59 24.6**	**+0.1**
CTG	**Chitna Glacier**	**4.23**	**100**	P	**Pn**	**14 59 24.8**	**-0.6**
	baz=288,SNR=6.7						
CTGM	**Chitina Glacie**	**4.23**	**100**		**Pn**	**14 59 24.9**	**-0.6**
CTGM	**Chitina Glacie**	**4.23**	**100**	IAML		15 00 29.7	
	comp=N,146nm,0.7s						
CTGM				IAML		15 00 35.3	
	comp=E,71nm,1.1s						
BVCY	**Beaver Creek**	**4.25**	**80**	P	**Pn**	**14 59 25.5**	**-0.1**
	baz=268,SNR=7.5						
BVCY	**Beaver Creek**	**4.25**	**80**		**Pn**	**14 59 25.9**	**+0.3**
MESA	**MESA**	**4.27**	**112**	P	**Pn**	**14 59 25.2**	**-0.7**
	baz=299						
MESA	**MESA**	**4.27**	**112**	Pn	**Pn**	**14 59 25.6**	**-0.3**
YAH	**Yahtse**	**4.27**	**109**	Pn	**Pn**	**14 59 26.4**	**+0.3**
YAH				IAML		15 00 36.0	
	comp=E,153nm,0.8s						
YUK2	**White River**	**4.29**	**89**		**Pn**	**14 59 25.8**	**-0.4**
IM03		**4.34**	**339**		**Pn**	**14 59 26.7**	**0.0**
IMAR	**Indian Mountai**	**4.34**	**339**	Pn	**Pn**	**14 59 26.4**	**-0.3**
YUK1	**Sand Pete Hill**	**4.41**	**84**		**Pn**	**14 59 28.4**	**+0.6**
LOGN	**Logan Glacier**	**4.43**	**102**		**Pn**	**14 59 27.3**	**-0.9**
LOGN	**Logan Glacier**	**4.43**	**102**	IAML		15 00 34.5	
	comp=E,99nm,0.7s						
LOGN				IAML		15 00 35.9	
	comp=N,111nm,0.7s						
KDAK	**Kodiak Island**	**4.45**	**199**	P	**Pn**	**14 59 26.5**	**-1.7**
	comp=N,0.4nm,0.3s,baz=63,slow=7.6,SNR=71						
KDAK	**Kodiak Island**	**4.45**	**199**		**Pn**	**14 59 25.6**	**-2.6**
KDAK				IAML		15 01 00.2	
	comp=N,110nm,4.1s						
KDAK				IAML		15 01 13.4	
	comp=N,89nm,3.8s						
YUK3	**Moose Creek**	**4.47**	**89**	P	**Pn**	**14 59 28.3**	**-0.5**
	baz=277,SNR=5.5						
YUK3	**Moose Creek**	**4.47**	**89**		**Pn**	**14 59 28.2**	**-0.5**
TABL	**Table Mountain**	**4.51**	**106**	Pn	**Pn**	**14 59 28.1**	**-1.2**
TABL				IAML		15 00 41.9	
	comp=E,74nm,0.7s						
TABL				IAML		15 00 44.9	
	comp=N,126nm,0.8s						
KAKN	**Katmai Knife C**	**4.53**	**217**		**Pn**	**14 59 29.6**	**+0.2**
KABU	**Katmai Buttres**	**4.61**	**218**		**Pn**	**14 59 31.3**	**+0.7**
EGAK	**Eagle**	**4.81**	**51**		**Pn**	**14 59 32.8**	**-0.4**
EGAK	**Eagle**	**4.81**	**51**	IAML		15 00 49.8	
	comp=N,96nm,0.9s						
EGAK				IAML		15 00 50.4	
	comp=N,80nm,0.7s						
FYU	**Fort Yukon**	**5.01**	**22**	Pn	**Pn**	**14 59 36.1**	**+0.2**
FYU				IAML		15 00 58.1	
	comp=N,72nm,4.5s						
FYU				IAML		15 02 12.8	
	comp=E,55nm,3.9s						
PCA	**Pinnacle**	**5.06**	**108**	Pn	**Pn**	**14 59 36.1**	**-0.6**
OHAK	**Old Harbor**	**5.10**	**201**	Pn	**Pn**	**14 59 36.4**	**-0.7**
OHAK				IAML		15 01 00.0	
	comp=E,80nm,3.5s						
OHAK				IAML		15 01 13.1	
	comp=N,61nm,3.1s						
DAWY	**Dawson**	**5.21**	**62**	P	**Pn**	**14 59 38.3**	**-0.4**
	baz=251						
DAWY	**Dawson**	**5.21**	**62**		**Pn**	**14 59 38.7**	**0.0**
DAWY	**Dawson**	**5.21**	**62**	IAML		15 01 05.1	
	comp=N,54nm,1.6s						
DAWY				IAML		15 01 12.2	
	comp=E,49nm,0.9s						
COLD	**Coldfoot**	**5.25**	**359**	P	**Pn**	**14 59 39.6**	**+0.4**
	baz=178,SNR=9.0						
COLD	**Coldfoot**	**5.25**	**359**		**Pn**	**14 59 39.5**	**+0.4**
BCPM	**Bancas Point**	**5.40**	**108**	Pn	**Pn**	**14 59 41.0**	**-0.3**
BM03	**Burnt Mountain**	**5.89**	**20**		**Pn**	**14 59 48.3**	**+0.3**
BMAR	**Burnt Mountain**	**5.90**	**20**	Pn	**Pn**	**14 59 48.4**	**+0.2**
BM01	**Burnt Mountain**	**5.93**	**20**		**Pn**	**14 59 48.9**	**+0.3**
HYT	**Haines Junctio**	**6.06**	**96**	P	**Pn**	**14 59 50.1**	**-0.4**
	baz=287						
HYT	**Haines Junctio**	**6.06**	**96**	Pn	**Pn**	**14 59 50.1**	**-0.4**
TOLK	**Toolik Lake Re**	**6.67**	**1**	P	**Pn**	**14 59 60.0**	**+1.3**
	baz=181,SNR=6.9						
TOLK	**Toolik Lake Re**	**6.67**	**1**		**Pn**	**14 59 59.5**	**+0.8**
EPYK	**Eagle Plains**	**7.22**	**47**	Pn	**Pn**	**15 00 07.5**	**+1.2**
WHY	**Whitehorse**	**7.34**	**94**	Pn	**Pn**	**15 00 07.9**	**-0.2**
ANM	**Nome**	**7.43**	**297**	Pn	**Pn**	**15 00 09.9**	**+0.7**
SKAG	**Skagway**	**7.58**	**103**	Pn	**Pn**	**15 00 11.1**	**-0.1**
JIS	**Juneau Island**	**8.59**	**109**	Pn	**Pn**	**15 00 24.0**	**-0.9**
TNA	**Tin City**	**8.73**	**302**	Pn	**Pn**	**15 00 27.4**	**+0.6**
INK	**Inuvik**	**9.32**	**40**	P	**Pn**	**15 00 36.1**	**+1.2**
	comp=E,0.2nm,0.3s,baz=238,slow=17,SNR=5.5						
INK				S	**Sn**	**15 02 18.5**	**+0.3**
	comp=E,0.7nm,0.3s,baz=36,slow=12,SNR=6.4						
INK	**Inuvik**	**9.32**	**40**		**Pn**	**15 00 35.3**	**+0.4**
DLBC	**Dease Lake**	**10.49**	**101**	P	**Pn**	**15 00 55.3**	**+4.3**
	comp=E,0.4nm,0.3s,baz=305,slow=16,SNR=3.0						
NVAR	**Mina Array Bea**	**30.52**	**126**	P	**P**	**15 04 36.0**	**+3.9**
	comp=E,0.3nm,0.7s,baz=295,slow=11,SNR=2.2						
PDAR	**Pinedale Array**	**30.53**	**110**	LR	LR	15 19 19.9	
	comp=E,49nm,19.4s,baz=56,slow=41						
TXAR	**Lajitas Array**	**44.37**	**116**	P	**P**	**15 06 29.2**	**+0.1**
	comp=E,0.2nm,0.5s,baz=353,slow=6.5,SNR=1.9						
ZALV	**Zalesovo Beam**	**56.63**	**325**	LR	LR	15 35 13.9	
	comp=E,21nm,18.1s,baz=58,slow=39						
MKAR	**Makanchi Array**	**63.78**	**323**	P	**P**	**15 08 46.9**	**-3.2**
	comp=E,0.5nm,0.5s,baz=38,slow=6.2,SNR=9.4						
CMAR	**Chiang Mai Arr**	**83.36**	**297**	P	**P**	**15 10 43.0**	**-2.3**
	comp=E,1.0nm,1.0s,baz=14,slow=4.3,SNR=5.1						
BOSA	**Boshof**	**146.45**	**8**	PKPbc	**PKPdf**	**15 17 56.8**	**-0.6**
	comp=E,1.9nm,0.6s,baz=0.0,slow=3.0,SNR=7.0						

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*IDC **06** 15:14:38.0±7.7, 14°.42S×167°.12E, h88km±79km, mb3.7/5, mb1 4.0/6, mb1mx3.5/39, mbtmp4.1/6, ML4.1/1, Error ellipse: s-maj=62.4km s-min=34.6km az=148.0*

*NOU **06** 15:14:45.2, 14°.82S×167°.53E, h130km, MLv4.7/12, Vanuatu Islands*

ISC 06 15:14:38.8±1.4**, 14°.4S**±0°.1×**167°.3E**±0°.2**, h100**km**, n14,** σ**1°.76**/15**, mb4.2**/5**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**3.38**	**166**	P	**Pn**	**15 15 30.6**	**+1.0**
KOUNC	**Koumac, New Ca**	**6.73**	**205**	P	**Pn**	**15 16 17.9**	**+2.9**
YATNC	**Mamie plateau,**	**7.59**	**183**	P	**Pn**	**15 16 27.0**	**+0.3**
DZM	**Mont Dzumac**	**7.64**	**186**	P	**Pn**	**15 16 27.8**	**+0.4**
	2.7nm,0.3s,baz=330,slow=7.6,SNR=52						
DZM				S	**Sn**	**15 17 50.5**	**-2.0**
	0.3nm,0.3s,baz=206,slow=19,SNR=1.6						
DZM	**Mont Dzumac**	**7.64**	**186**	P	**Pn**	**15 16 28.8**	**+1.4**
NOUC	**Port Laguerre**	**7.68**	**187**	P	**Pn**	**15 16 30.3**	**+2.3**
ONTNC	**Ouen Toro**	**7.87**	**186**	P	**Pn**	**15 16 32.6**	**+2.1**
OUENC	**Ouen Island, N**	**7.95**	**183**	P	**Pn**	**15 16 33.6**	**+2.0**

PINNC	**Pines Island,**	**8.13**	**179**	P	**Pn**	**15 16 35.5**	**+1.4**
STKA	**Stephens Creek**	**29.21**	**229**	P	**P**	**15 20 31.0**	**-0.1**
	2.3nm,0.4s,baz=59,slow=9.3,SNR=21						
WRA	**Warramunga Arr**	**31.93**	**255**	P	**P**	**15 20 53.5**	**-1.8**
	0.5nm,0.5s,baz=85,slow=9.0,SNR=13						
ASAR	**Alice Springs**	**32.81**	**249**	P	**P**	**15 21 01.4**	**-1.5**
	1.4nm,0.4s,baz=76,slow=9.4,SNR=88						
FITZ	**Fitzroy Crossi**	**40.10**	**259**	P	**P**	**15 22 04.5**	**-0.4**
	1.7nm,0.5s,baz=87,slow=10,SNR=2.7						
ILAR	**Eielson Array**	**86.24**	**18**	P	**P**	**15 27 09.3**	**+0.5**
	0.4nm,0.8s,baz=239,slow=5.1,SNR=2.7						

*IDC **06** 15:31:21.3±13.0, 15°.02S×165°.73E, h0^{km}, mb4.0/3, mb1 4.3/4, mb1mx3.8/37, mbtmp4.1/4, ML4.5/1, Error ellipse: s-maj=231.4km s-min=36.3km az=56.0*

*NOU **06** 15:31:23.8, 14°.79S×167°.44E, h126^{km}, MLv5.0/13, Vanuatu Islands*

ISC 06 15:31:23.9±1.9**, 14°.9S**±0°.1×**167°.5E**±0°.2**, h150**^{km}**, n15, σ1^{s}.12**/17**, mb3.8**/3**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	**Devils Point**	**2.95**	**166**	P	**Pn**	**15 32 10.1**	**-0.5**
KOUNC	**Koumac, New Ca**	**6.42**	**208**	P	**Pn**	**15 32 56.5**	**+0.2**
MARNC	**Mare, Loyalty**	**6.62**	**175**	P	**Pn**	**15 32 59.3**	**+0.4**
YATNC	**Mamie plateau,**	**7.19**	**184**	P	**Pn**	**15 33 06.0**	**-0.6**
DZM	**Mont Dzumac**	**7.25**	**187**	*e*Pn	**Pn**	**15 33 07.2**	**-0.2**
	19nm,0.2s						
DZM				*e*Sn	**Sn**	**15 34 29.8**	**+1.2**
	22nm,0.3s						
DZM	**Mont Dzumac**	**7.25**	**187**	Pn	**Pn**	**15 33 06.1**	**-1.3**
	7.6nm,0.3s,baz=105,slow=21,SNR=83						
DZM				Sn	**Sn**	**15 34 26.3**	**-2.3**
	0.7nm,0.3s,baz=124,slow=21,SNR=1.5						
DZM	**Mont Dzumac**	**7.25**	**187**	P	**Pn**	**15 33 07.7**	**+0.3**
NOUC	**Port Laguerre**	**7.30**	**188**	P	**Pn**	**15 33 09.4**	**+1.5**
ONTNC	**Ouen Toro**	**7.48**	**187**	P	**Pn**	**15 33 10.8**	**+0.4**
OUENC	**Ouen Island, N**	**7.55**	**184**	P	**Pn**	**15 33 12.6**	**+1.2**
PINNC	**Pines Island,**	**7.73**	**180**	P	**Pn**	**15 33 14.4**	**+0.8**
STKA	**Stephens Creek**	**29.05**	**230**	P	**P**	**15 37 11.3**	**+1.2**
	4.5nm,0.4s,baz=55,slow=9.1,SNR=25						
WRA	**Warramunga Arr**	**31.96**	**256**	P	**P**	**15 37 35.0**	**-1.0**
	0.2nm,0.3s,baz=86,slow=9.0,SNR=6.9						
ASAR	**Alice Springs**	**32.79**	**249**	P	**P**	**15 37 42.1**	**-1.1**
	0.6nm,0.3s,baz=74,slow=9.4,SNR=26						
SNAA	**Sanae**	**93.44**	**183**	P	**P**	**15 44 22.4**	**+0.3**

*NEIC **06** 15:35:33.4±1.6, 21°.5N±0°.1×143°.4E±0°.3, h304^{km}±10^{km}, mb4.1/14, Error ellipse: s-maj=42.8km s-min=13.3km az=71.0*

*IDC **06** 15:35:34.4±1.8, 21°.52N×143°.00E, h311^{km}±18^{km}, mb3.3/10, mb1 3.5/13, mb1mx3.3/43, mbtmp4.2/13, Error ellipse: s-maj=24.8km s-min=11.3km az=83.0*

ISC 06 15:35:33.8±0.6**, 21°.50N**±0°.07×**143°.2E**±0°.1**, h311**^{km}**, n52, σ0^{s}.83**/53**, mb3.7**/11**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**5.65**	**351**	P	**Pn**	**15 36 58.1**	**-1.0**
	12nm,0.3s,baz=108,slow=19,SNR=1.8						
JCJ				S	**S**	**15 38 09.3**	**+1.2**
	18nm,0.3s,baz=303,slow=23,SNR=9.1						
JCJ	**Chichijima**	**5.65**	**351**		**Pn**	**15 36 56.8**	**-2.4**
CBIJ	**Chichi jima**	**5.65**	**351**	P	**Pn**	**15 37 00.3**	**+1.1**
JHJ2	**Mitsune**	**11.95**	**346**		**Pn**	**15 38 16.1**	**+0.6**
JHJ	**Hachijo jima 2**	**11.96**	**346**	P	**Pn**	**15 38 15.1**	**-0.5**
	14nm,0.3s,baz=55,slow=23,SNR=9.8						
JIE	**Ise**	**14.06**	**337**	P	**Pn**	**15 38 41.7**	**+1.0**
JOD2	**Odawara 2**	**14.18**	**346**	P	**Pn**	**15 38 42.3**	**+0.2**
JMN	**Monobe**	**14.70**	**328**		**Pn**	**15 38 50.1**	**+1.8**
INU	**Inuyama**	**14.82**	**340**	P	**P**	**15 38 46.3**	**-1.9**
JYT	**Yasato**	**14.91**	**351**	P	**Pn**	**15 38 50.8**	**+0.1**
JYT	**Yasato**	**14.91**	**351**	P	**P**	**15 38 49.1**	**0.0**
JRY	**Ryogami san**	**14.95**	**346**	P	**P**	**15 38 50.4**	**+0.8**
JSU	**Suzuyama**	**15.13**	**314**	P	**P**	**15 38 50.7**	**-0.9**
JSU				IAmb	IAmb	15 38 53.2	
	comp=Z,12nm,1.1s						
JWT	**Wachi**	**15.34**	**335**	P	**Pn**	**15 38 55.4**	**-0.3**
JWT	**Wachi**	**15.34**	**335**	P	**P**	**15 38 54.4**	**+0.5**
JWT				IAmb	IAmb	15 39 01.3	
	comp=Z,8.2nm,0.8s						
MJAR	**Matsushiro Arr**	**15.61**	**345**	P	**P**	**15 38 55.8**	**-1.1**
	comp=Z,0.4nm,0.3s,baz=161,slow=10,SNR=27						
MJAR	**Matsushiro Arr**	**15.61**	**345**	P	**P**	**15 38 56.7**	**-0.1**
MJAR				IAmb	IAmb	15 38 58.3	
	comp=Z,4.6nm,0.9s						
MAJO	**Matsushiro**	**15.61**	**345**	P	**P**	**15 38 57.4**	**+0.5**
MAJO				IAmb	IAmb	15 38 58.5	
	comp=Z,18nm,1.0s						
MAT	**Matsushiro**	**15.61**	**345**	P	**P**	**15 38 57.5**	**+0.6**
MAT	**Matsushiro**	**15.61**	**345**	P	**P**	**15 38 57.5**	**+0.6**
JHS	**Saijyo**	**16.10**	**329**	P	**Pn**	**15 39 04.2**	**-0.4**
JHS	**Saijyo**	**16.10**	**329**	P	**P**	**15 39 03.3**	**+1.0**
JHS				IAmb	IAmb	15 39 21.9	
	comp=Z,18nm,1.0s						
JMM	**Marumori**	**16.45**	**353**	P	**Pn**	**15 39 07.9**	**-0.7**
JMM	**Marumori**	**16.45**	**353**	P	**Pn**	**15 39 07.8**	**-0.8**
JSD	**Sado**	**17.02**	**347**	P	**P**	**15 39 12.5**	**+0.3**
JSD	**Sado**	**17.02**	**347**	P	**P**	**15 39 11.4**	**-0.8**
JSD				IAmb	IAmb	15 39 13.3	
	comp=Z,25nm,0.7s						
JYA	**Atsumi**	**17.30**	**351**	P	**Pn**	**15 39 17.6**	**-0.9**
KSRS	**Korea Array**	**20.68**	**324**	P	**P**	**15 39 50.2**	**-0.4**
	comp=Z,3.1nm,0.6s,baz=148,slow=9.1,SNR=17						
KSAR	**Wonju Array Be**	**20.69**	**324**	P	**P**	**15 39 51.1**	**+0.4**
USRK	**Ussuriysk Ar.**	**24.47**	**340**	P	**P**	**15 40 24.6**	**-0.5**
	comp=Z,2.3nm,0.6s,baz=138,slow=6.3,SNR=4.2						
KLR	**Kul'dur**	**29.14**	**345**	P	**P**	**15 41 06.5**	**0.0**
	comp=Z,4.6nm,0.6s,baz=161,slow=7.8,SNR=14						
CMAR	**Chiang Mai Arr**	**41.59**	**274**	P	**P**	**15 42 51.5**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=97,slow=5.3,SNR=1.3						
WR0	**Warramunga Arr**	**42.06**	**192**	P	**P**	**15 42 56.4**	**+0.4**
WR0				IAmb	IAmb	15 42 57.2	
	comp=Z,2.6nm,1.1s						
WRAB	**Tennant Creek**	**42.07**	**192**	P	**P**	**15 42 56.6**	**+0.6**
WRAB				IAmb	IAmb	15 42 57.0	
	comp=Z,3.7nm,0.8s						
WRA	**Warramunga Arr**	**42.08**	**192**	P	**P**	**15 42 56.6**	**+0.5**
	comp=Z,2.1nm,0.2s,baz=10,slow=7.9,SNR=113						
WRA	**Warramunga Arr**	**42.08**	**192**	P	**P**	**15 42 55.6**	**-0.5**
AS31	**Alice Springs**	**45.79**	**192**	P	**P**	**15 43 25.4**	**+0.1**
ASAR	**Alice Springs**	**45.79**	**192**	P	**P**	**15 43 25.6**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=11,slow=7.1,SNR=25						
ASAR	**Alice Springs**	**45.79**	**192**	P	**P**	**15 43 25.4**	**0.0**
STKA	**Stephens Creek**	**53.09**	**182**	P	**P**	**15 44 20.1**	**+0.2**
	comp=Z,2.4nm,0.5s,baz=349,slow=8.2,SNR=8.0						
STKA	**Stephens Creek**	**53.09**	**182**	P	**P**	**15 44 20.1**	**+0.2**
MKAR	**Makanchi Array**	**54.83**	**313**	P	**P**	**15 44 32.6**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=93,slow=8.6,SNR=6.1						
MKAR	**Makanchi Array**	**54.83**	**313**	P	**P**	**15 44 32.8**	**+0.4**
NNZ	**Nelson**	**68.40**	**156**	P	**P**	**15 46 02.5**	**+0.2**
BFZ	**Birch Farm**	**69.08**	**154**	P	**P**	**15 46 06.7**	**+0.2**
MSWZ	**Moikau Station**	**69.30**	**155**	P	**P**	**15 46 06.7**	**-1.2**
PLWZ	**Palliser**	**69.43**	**155**	P	**P**	**15 46 07.6**	**-1.1**
ABKAR	**Akbulak array**	**69.69**	**316**	P	**P**	**15 46 10.3**	**0.0**
NVAR	**Mina Array Bea**	**83.27**	**51**	P	**P**	**15 47 27.5**	**+1.1**
	comp=Z,0.5nm,0.7s,baz=274,slow=5.9,SNR=5.1						
FINES	**FINESS Array B**	**83.36**	**334**	P	**P**	**15 47 25.1**	**-1.0**
	comp=Z,0.7nm,0.5s,baz=61,slow=3.3,SNR=8.0						
PLCA	**Paso Flores**	**145.62**	**132**	PKPbc	**PKPbc**	**15 54 37.2**	**+0.8**
	comp=Z,2.6nm,0.6s,baz=214,slow=6.5,SNR=6.8						
LPAZ	**La Paz**	**149.96**	**85**	PKPbc	**PKiKP**	**15 54 50.0**	**+0.2**
	comp=Z,1.5nm,0.5s,baz=271,slow=3.9,SNR=6.6						

*DRS **06** 15:40:51.6±0.0, 42°.37N×48°.21E, h16^{km}, ML3.0/9*

*MOS **06** 15:40:51.5±0.0, 42°.30N×48°.04E, h23^{km}, MPVA3.8*

*NORS **06** 15:40:51.2±0.0, 42°.30N×48°.15E, h19^{km}, MPVA3.8*

ISC 06 15:40:51.2±1.6**, 42°.33N**±0°.04×**48°.19E**±0°.06**, h18**^{km}±3^{km}**, n20, σ1^{s}.01**/40**, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRN	**Derbent**	**0.31**	**161**	*i* Pg	**Pn**	**15 41 00.7**	**-0.1**
	275nm,0.2s						
DRN				*i* Sg	**Sn**	**15 41 07.4**	**+0.5**
	3µm,0.3s						
SGKR	**Sergokala**	**0.42**	**289**	*e*Pg	**Pb**	**15 41 00.7**	**+0.6**
	637nm,0.1s						
SGKR				*i* Sg	**Sb**	**15 41 07.0**	**+0.9**
	1µm,0.6s						
URKR	**Urkarakh**	**0.45**	**249**	*e*Pg	**Pb**	**15 41 00.9**	**+0.3**
URKR				*e*Sg	**Sb**	**15 41 06.5**	**-0.5**
KSMR	**Kasumkent**	**0.72**	**184**	*e*Pg	**Pn**	**15 41 06.1**	**-0.4**
KSMR				*e*Sg	**Sn**	**15 41 16.6**	**-0.5**
MAK	**Makhachkala**	**0.81**	**322**	*e*Pg	**Pb**	**15 41 06.6**	**-0.1**
MAK				*e*Sg	**Sn**	**15 41 19.1**	**-0.2**
KMKR	**Kumukh**	**0.83**	**257**	*e*Pg	**Pb**	**15 41 07.0**	**-0.2**
	142nm,0.4s						
KMKR				*i* Sg	**Sg**	**15 41 18.5**	**-0.2**
	330nm,0.2s						
AKT	**Akhty**	**0.91**	**202**	*e*Pg	**Pg**	**15 41 08.8**	**-0.2**
	61nm,0.2s						
AKT				*i* Sg	**Sn**	**15 41 21.2**	**-0.7**
	293nm,0.2s						
GNBR	**Gunib**	**0.91**	**274**	*i* Pg	**Pb**	**15 41 08.3**	**-0.2**
	89nm,0.1s						
GNBR				*i* Sg	**Sg**	**15 41 20.5**	**-0.5**
	183nm,0.5s						
ARKR	**Arakani**	**0.93**	**288**	*e*Pg	**Pb**	**15 41 08.6**	**-0.2**
	27nm,0.4s						
ARKR				*i* Sg	**Sg**	**15 41 20.9**	**-0.6**
	99nm,0.3s						
BUJR	**Buynaksk**	**0.94**	**302**	*e*Pg	**Pb**	**15 41 09.2**	**+0.2**
BUJR				*e*Sg	**Sg**	**15 41 21.9**	**-0.2**
KRNR	**Karanay**	**1.07**	**298**	*e*Pg	**Pb**	**15 41 11.0**	**-0.3**
	14nm,0.4s						
KRNR				*i* Sg	**Sg**	**15 41 25.9**	**-0.2**
	119nm,0.4s						
UNCR	**Uncukul**	**1.10**	**291**	*e*Pg	**Pb**	**15 41 11.7**	**0.0**
	23nm,0.3s						
UNCR				*i* Sg	**Sb**	**15 41 25.9**	**+0.1**
	85nm,0.5s						
XNZR	**Khunzakh**	**1.12**	**282**	*e*Pg	**Pb**	**15 41 11.1**	**-1.0**
XNZR				*e*Sg	**Sn**	**15 41 26.7**	**-0.5**
DBC	**Dubki**	**1.22**	**305**	*e*Pg	**Pn**	**15 41 13.6**	**+0.2**
	24nm,0.3s						
DBC				*i* Sg	**Sn**	**15 41 30.0**	**+0.5**
	97nm,0.2s						
DLMR	**Dylym**	**1.37**	**303**	*e*Pg	**Pb**	**15 41 16.9**	**+0.6**
DLMR				*e*Sg	**Sb**	**15 41 34.4**	**+0.9**
BTLR	**Botlikh**	**1.50**	**284**	*e*Pg	**Pb**	**15 41 18.1**	**-0.3**
BTLR				*e*Sg	**Sg**	**15 41 38.3**	**-1.3**
LGD	**Lagodekhi**	**1.53**	**252**	P	**Pb**	**15 41 18.2**	**-0.8**
LGD				S	**Sg**	**15 41 39.4**	**-1.2**
DDFL	**Dedoflistskaro**	**1.78**	**241**	P	**Pg**	**15 41 26.3**	**+0.9**
DDFL				S	**Sg**	**15 41 53.5**	**+4.9**
GROC	**Groznyy**	**1.97**	**297**	*e*Pg	**Pb**	**15 41 25.9**	**-0.6**
GROC				*e*Sg	**Sb**	**15 41 50.7**	**0.0**
MTEO	**Meteo**	**2.73**	**279**	P	**Pb**	**15 41 39.1**	**-0.6**
MTEO				S	**Sb**	**15 42 12.4**	**-0.6**

*IDC **06** 15:47:30.4±1.2, 42°.59N×141°.20E, h133^{km}±14^{km}, mb3.5/7, mb1 3.6/10, mb1mx3.3/38, mbtmp4.0/10, MS2.8/1, Ms1 2.8/1, ms1mx2.2/40, Error ellipse: s-maj=26.8km s-min=14.6km az=107.0*

*JMA **06** 15:47:31.0±0.1, 42°.66N×141°.24E, h133^{km}±1^{km}, M3.1*

ISC 06 15:47:30.6±0.7**, 42°.63N**±0°.05×**141°.28E**±0°.05**, h137**^{km}±6^{km}**, n30, σ0^{s}.67**/40**, mb3.7**/7**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNB	**Noboribetsu**	**0.23**	**228**	P	**Pn**	**15 47 49.2**	**-0.1**
JEW	**Eniwo**	**0.25**	**31**	P	**Pn**	**15 47 49.6**	**+0.2**
JEW				*e*S	**Sn**	**15 48 03.4**	**-0.3**
JIAM	**Iburiatsuma**	**0.48**	**90**	P	**Pn**	**15 47 50.9**	**+0.6**
JIAM				*e*S	**Sn**	**15 48 05.9**	**+0.7**
JISS	**Ishikarishitsu**	**0.66**	**9**	P	**Pn**	**15 47 51.5**	**+0.1**
JKB	**Kayabe**	**0.76**	**194**	P	**Pn**	**15 47 52.6**	**+0.5**
JKB				*e*S	**Sn**	**15 48 08.7**	**+0.3**
JBT2	**Biratori 2**	**0.82**	**79**	P	**Pn**	**15 47 52.7**	**+0.2**
JYM2	**Yakumo 2**	**0.84**	**233**	P	**Pn**	**15 47 53.1**	**+0.4**
JYM2				*e*S	**Sn**	**15 48 09.6**	**0.0**
JSH	**Shimam**	**0.91**	**272**	P	**Pn**	**15 47 53.3**	**0.0**
JSK	**Shakotan**	**0.93**	**321**	P	**Pn**	**15 47 53.3**	**-0.2**
JSK				*e*S	**Sn**	**15 48 10.3**	**-0.6**
JHST	**Hiyamasetana**	**1.05**	**259**	P	**Pn**	**15 47 54.7**	**+0.1**
JFR	**Furan**	**1.11**	**61**	P	**Pn**	**15 47 54.9**	**-0.2**
JFR				*e*S	**Sn**	**15 48 13.4**	**-0.4**
JNBK	**Urakawa-nobuka**	**1.15**	**107**	P	**Pn**	**15 47 56.0**	**+0.5**
JHR	**Hokuryu**	**1.16**	**16**	P	**Pn**	**15 47 56.2**	**+0.6**
JOT	**Ohata**	**1.25**	**188**	P	**Pn**	**15 47 57.2**	**+0.6**
JOSM	**Okushiri--Mats**	**1.44**	**248**	P	**Pn**	**15 47 58.6**	**+0.1**
JOMM	**Oshimamatsumae**	**1.45**	**221**	P	**Pn**	**15 47 59.4**	**+0.8**
JCH	**Churui**	**1.54**	**90**	P	**Pn**	**15 47 59.6**	**0.0**
JCH				*e*S	**Sn**	**15 48 21.0**	**-0.7**
JKK2	**Kamakawa 2**	**1.65**	**40**	P	**Pn**	**15 48 01.1**	**+0.3**
JKK2				*e*S	**Sn**	**15 48 23.5**	**-0.4**
ASAJ	**Asahikawa**	**1.77**	**32**	P	**Pn**	**15 48 02.9**	**+0.7**
	7.3nm,0.3s,baz=205,slow=16,SNR=76						
ASAJ				S	**Sn**	**15 48 27.0**	**+0.5**
	2.9nm,0.3s,baz=325,slow=33,SNR=3.0						
JAR	**Ashorobuto**	**1.95**	**69**	P	**Pn**	**15 48 04.3**	**0.0**
JAR				*e*S	**Sn**	**15 48 29.0**	**-1.1**
MJAR	**Matsushiro Arr**	**6.52**	**202**	P	**Pn**	**15 49 05.1**	**+1.0**
	0.1nm,0.3s,baz=19,slow=9.9,SNR=2.8						
JHJ	**Hachijo jima 2**	**9.56**	**188**	P	**Pn**	**15 49 43.0**	**-1.9**
	3.5nm,0.3s,baz=288,slow=22,SNR=5.1						
PETK	**Petropavlovsk-**	**15.17**	**41**	P	**P**	**15 50 59.0**	**-0.4**
	0.1nm,0.3s,baz=224,slow=7.8,SNR=1.5						
PETK				LR	LR	15 57 14.8	
	comp=Z,36nm,18.9s,baz=111,slow=38						
SONM	**Songino Array**	**24.97**	**294**	P	**P**	**15 52 41.1**	**-0.2**
	1.8nm,0.7s,baz=82,slow=8.2,SNR=7.2						
ZALV	**Zalesovo Beam**	**38.25**	**307**	P	**P**	**15 54 37.3**	**+0.3**
	4.4nm,0.4s,baz=89,slow=9.0,SNR=18						
MKAR	**Makanchi Array**	**41.28**	**297**	P	**P**	**15 55 00.8**	**-1.4**
	0.5nm,0.7s,baz=89,slow=11,SNR=4.6						
INK	**Inuvik**	**49.51**	**29**	P	**P**	**15 56 06.8**	**+0.3**
	0.4nm,0.5s,baz=301,slow=5.9,SNR=1.5						
ARCES	**ARCESS Array B**	**58.75**	**338**	P	**P**	**15 57 15.1**	**+1.6**
	3.5nm,1.0s,baz=62,slow=6.5,SNR=3.6						
WRA	**Warramunga Arr**	**62.58**	**187**	P	**P**	**15 57 39.8**	**-0.2**
	0.3nm,0.7s,baz=6.1,slow=6.6,SNR=1.9						
FINES	**FINESS Array B**	**63.85**	**331**	P	**P**	**15 57 48.0**	**+0.2**
	0.9nm,0.5s,baz=31,slow=5.6,SNR=10						

*ECX **06** 16:23:24.6±0.4, 31°.69N×115°.04W, h10^{km}±7^{km}, MD2.8, ML3.0*

*MEX **06** 16:23:26.1±0.6, 31°.62N×115°.02W, h13^{km}±23^{km}, MD3.7*

ISC 06 16:23:21.1±1.4**, 31°.68N**±0°.04×**115°.01W**±0°.04**, h11**^{km}±11^{km}**, n15, σ0^{s}.70**/22**, 1C, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFX	**San Felipe**	**0.65**	**168**	*e*P	**Pn**	**16 23 36.7**	**+0.4**
SFX				*e*S	**Sn**	**16 23 45.4**	**-1.2**
MBIG	**Mexicali**	**0.75**	**347**	*e*P	Pg	16 23 25.5	-10
MBIG				*e*S	**Sn**	**16 23 49.3**	**+0.3**
CPBX	**Cerro Prieto**	**0.78**	**341**	IAML		16 23 52.6	
	comp=N,2µm,0.1s						
CPBX				*e*		16 23 53.3	
CPBX				IAML		16 23 53.3	
	comp=E,2µm,0.2s						
YMD	**Yuma Desert**	**0.96**	**24**	*e*P	**Pn**	**16 23 40.8**	**+0.2**
SVX	**San Vicente**	**1.12**	**252**	*e*P	**Pg**	**16 23 43.4**	**+0.9**
SVX				*e*S	**Sn**	**16 23 58.4**	**+0.3**
YUH2	**Yuha Desert**	**1.24**	**322**	*e*P	**Pg**	**16 23 45.7**	**+0.8**
RMX	**La Rumorosa**	**1.30**	**316**	*e*P	**Pb**	**16 23 45.8**	**+0.2**
RMX				*e*S	**Sb**	**16 24 01.4**	**-1.0**
IKP	**In-Ko-Pah, Jac**	**1.35**	**316**	*e*P	**Pg**	**16 23 47.6**	**+0.6**
CCX	**Cicese**	**1.43**	**278**	*e*P	**Pg**	**16 23 48.9**	**+0.4**
CBX	**Cerro Bola**	**1.54**	**295**	*e*P	**Pg**	**16 23 50.6**	**-0.1**
CBX				*e*S	**Sg**	**16 24 10.4**	**-0.4**
CBX				⇑*e*		16 24 14.9	
CBX				IAML		16 24 14.9	
	comp=N,172nm,0.5s						
CBX	**Cerro Bola**	**1.54**	**295**	*e*P	**Pb**	**16 23 49.8**	**0.0**
CBX				*e*S	**Sb**	**16 24 08.9**	**-0.5**
TJIG	**Tijuana**	**1.60**	**298**	*i* P	**Pg**	**16 23 51.5**	**-0.4**
TJIG				*i* S	**Sn**	**16 24 10.3**	**+0.1**
MONP2	**Monument Peak**	**1.71**	**316**	*e*P	**Pg**	**16 23 53.4**	**-0.4**
BAR	**Barrett**	**1.73**	**306**	*e*P	**Pb**	**16 23 53.6**	**+0.7**
BAR				*e*S	**Sg**	**16 24 15.8**	**-1.0**
214A	**Organ Pipe Nat**	**1.89**	**81**	*i* P	**Pb**	**16 23 55.1**	**-0.5**
214A				*i* S	**Sn**	**16 24 18.4**	**+1.2**

*IDC **06** 16:31:32.6±1.2, 8°.39S×125°.33E, h0^{km}, mb3.4/1, mb1 3.4/5, mb1mx3.3/31, mbtmp3.2/5, ML3.0/4, Error ellipse: s-maj=17.4km s-min=13.1km az=65.0*

ISC 06 16:31:37.7±1.5**, 8°.5S**±0°.1×**125°.4E**±0°.2**, h35**^{km}**, n5, σ1^{s}.32**/6**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	**2.43**	**225**	Pn	**Pn**	**16 32 16.0**	**+1.0**
	4.2nm,0.3s,baz=354,slow=1.3,SNR=2.3						
FITZ	**Fitzroy Crossi**	**9.57**	**179**	Pn	**Pn**	**16 33 52.6**	**-0.4**
	0.1nm,0.3s,baz=356,slow=8.9,SNR=13						
FITZ				Sn	**Sn**	**16 35 38.1**	**-1.3**
	0.1nm,0.3s,baz=184,slow=14,SNR=1.9						
WRA	**Warramunga Arr**	**14.31**	**144**	Pn	**Pn**	**16 34 59.0**	**+1.1**
	0.1nm,0.3s,baz=317,slow=14,SNR=5.1						
ASAR	**Alice Springs**	**17.16**	**153**	P	**P**	**16 35 36.4**	**0.0**
	0.0nm,0.3s,baz=320,slow=11,SNR=1.9						
MKAR	**Makanchi Array**	**67.06**	**329**	P	**P**	**16 42 26.3**	**-1.1**
	0.4nm,0.8s,baz=123,slow=5.3,SNR=2.8						

*IDC **06** 16:45:43.6±1.8, 4°.19N×124°.61E, h0^{km}, mb3.5/4, mb1 3.7/4, mb1mx3.4/48, mbtmp3.5/4, Error ellipse: s-maj=118.1km s-min=24.7km az=67.0*

*DJA **06** 16:46:28.9±0.7, 3°N±8°×12°3E±°, h462^{km}±4^{km}, M3.9/9, mb3.9/6, mB4.3/4, MLv3.9/9, Mw(mB)3.4/4*

ISC 06 16:46:29.3±1.3**, 3°.3N**±0°.2×**123°.3E**±0°.1**, h450**^{km}**, n14, σ1^{s}.91**/14**, mb3.2**/4**, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**2.76**	**166**	P	**P**	**16 47 37.1**	**+2.5**
MRSI	**Marisa**	**3.11**	**207**	P	**P**	**16 47 39.1**	**+1.9**
LUWI	**Luwuk**	**4.32**	**187**	P	**P**	**16 47 47.7**	**+0.3**
MPSI	**Mapaga**	**4.51**	**230**	P	**P**	**16 47 49.8**	**+0.8**
TNTI	**Ternate**	**4.73**	**122**	P	**P**	**16 47 52.9**	**+1.8**
LBMI	**Labuha**	**5.70**	**133**	P	**P**	**16 48 00.9**	**+0.3**
	0.2nm5.3nm,0.4s						
MSAI	**Masohi**	**8.63**	**140**	P	**P**	**16 48 33.8**	**+2.2**
	110nm6.7nm,0.5s						
BNDI	**Bandanaira**	**10.15**	**140**	P	**P**	**16 48 49.3**	**+1.2**
	44nm,0.9s						
EDFI	**Ende, Flores**	**12.06**	**188**	P	**P**	**16 49 08.9**	**0.0**
	1.4nm,1.3s						
BASI	**Baing, Sumba**	**13.68**	**192**	P	**P**	**16 49 28.0**	**+1.6**
FITZ	**Fitzroy Crossi**	**21.36**	**174**	P	**P**	**16 50 41.3**	**-1.8**
	0.6nm,0.6s,baz=11,slow=7.0,SNR=9.0						
WRA	**Warramunga Arr**	**25.48**	**155**	P	**P**	**16 51 16.9**	**-3.2**
	0.7nm,0.4s,baz=338,slow=9.9,SNR=14						
ASAR	**Alice Springs**	**28.69**	**159**	P	**P**	**16 51 46.4**	**-2.1**
	0.3nm,0.4s,baz=336,slow=7.2,SNR=24						
MKAR	**Makanchi Array**	**56.04**	**327**	P	**P**	**16 55 23.8**	**-0.3**
	0.2nm,0.3s,baz=128,slow=6.6,SNR=5.2						

IDC 06 16:46:36.7±21.0**, 46°.02N×153°.02E, h107**^{km}±19^{km}**, mb3.7**/3**, mb1 3.7**/5**, mb1mx3.1**/51**, mbtmp4.0**/5**, MS2.9**/2**, Ms1 2.9**/2**, ms1mx2.3**/63**, Error ellipse: s-maj=456.8km s-min=14.9km az=140.0, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAJ	**Asahikawa**	**7.62**	**259**	P	Pn	16 48 24.9	0.0
	0.3nm,0.3s,baz=86,slow=14,SNR=2.4						
PETK	**Petropavlovsk-**	**7.72**	**22**	P	Pn	16 48 26.2	0.0
	0.2nm,0.3s,baz=199,slow=8.5,SNR=1.7						
PETK				LR	LR	16 51 45.4	
	comp=Z,28nm,19.5s,baz=76,slow=40						
FINES	**FINESS Array B**	**64.67**	**335**	P	P	16 57 02.4	-0.2
	5.0nm,1.1s,baz=46,slow=5.5,SNR=6.4						
NOA	**NORSAR Array B**	**68.90**	**341**	P	P	16 57 29.9	+0.5
	0.4nm,0.6s,baz=34,slow=4.6,SNR=1.8						
KBZ	**Khabaz**	**71.32**	**314**	LR	LR	17 35 37.2	
	comp=Z,23nm,21.1s,baz=20,slow=41						
AKASG	**Malin Array Be**	**72.11**	**326**	P	P	16 57 49.1	+0.1
	0.7nm,0.4s,baz=37,slow=6.0,SNR=4.4						

NOU 06 16:53:40.5, 16°.80S×167°.17E, h0^{km}**, MLv4.6**/10**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	**Devils Point**	**1.34**	**134**	P	Pg	16 54 05.0	-1.2
RTV	**Rentapao**	**1.55**	**130**	P	Pb	16 54 09.8	-0.3
KOUNC	**Koumac, New Ca**	**4.62**	**216**	P	Pn	16 54 51.9	+0.2
YATNC	**Mamie plateau,**	**5.24**	**183**	P	Pn	16 54 58.9	-1.2
DZM	**Mont Dzumac**	**5.29**	**187**	P	Pn	16 55 00.5	-0.4
NOUC	**Port Laguerre**	**5.34**	**189**	P	Pn	16 55 01.5	0.0
ONTNC	**Ouen Toro**	**5.52**	**187**	P	Pn	16 55 04.5	+0.5
OUENC	**Ouen Island, N**	**5.60**	**183**	P	Pn	16 55 05.3	+0.2

*IDC **06** 16:54:20.7±1.6, 52°.29N×169°.40W, h0^{km}, mb3.9/11, mb1 4.1/14, mb1mx3.9/50, mbtmp3.9/14, ML3.7/3, Error ellipse: s-maj=42.7km s-min=18.5km az=164.0*

*NEIC **06** 16:54:22.1±2.6, 52°.04N±0°.06×169°.24W±0°.05, h10^{km}±2^{km}, Error ellipse: s-maj=11.0km s-min=3.2km az=157.0*

*AEIC **06** 16:54:26±2.5, 52°.29N±0°.09×169°.37W±0°.09, h32^{km}±8^{km}, ML3.5, mb4.2/11(NEIC), Error ellipse: s-maj=13.8km s-min=7.3km az=161.0*

ISC 06 16:54:27.1±1.2**, 52°.4N**±0°.2×**169°.43W**±0°.10**, h40**^{km}**, n41, σ0^{s}.90**/40**, mb4.0**/12**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	**Nikolski High**	**0.69**	**30**		**Pn**	**16 54 40.6**	**+0.2**
OKSP	**Okmok Steeple**	**1.12**	**38**		**Pn**	**16 54 47.4**	**+1.2**
OKTU	**Okmok Mt. Tuli**	**1.31**	**39**		**Pn**	**16 54 49.6**	**+0.6**
OKFG	**Magazine Ridge**	**1.39**	**41**		**Pn**	**16 54 50.4**	**+0.5**
MAPS	**Pakushin South**	**2.08**	**45**		**Pn**	**16 55 00.1**	**+0.7**
MSW	**Makushin Switc**	**2.22**	**45**		**Pn**	**16 55 02.3**	**+1.0**
MNAT	**Makushin Natee**	**2.24**	**47**		**Pn**	**16 55 03.1**	**+1.5**
UNV	**Unalaska Valle**	**2.30**	**49**		**Pn**	**16 55 03.0**	**+0.6**
MTBL	**Makushin Table**	**2.30**	**45**		**Pn**	**16 55 03.3**	**+0.8**
ZRO	**Akutan Zero**	**2.69**	**49**		**Pn**	**16 55 09.4**	**+1.5**
KOFP	**Korovin Flat P**	**2.86**	**270**		**Pn**	**16 55 11.3**	**+1.1**
ADK	**Adak**	**4.50**	**267**		**Pn**	**16 55 32.6**	**+0.1**
KIWB	**Kanaga Island**	**4.79**	**267**	Pn	**Pn**	**16 55 37.2**	**+0.6**
AMKA	**Amchitka**	**7.05**	**266**	Pn	**Pn**	**16 56 07.9**	**+0.4**
KDAK	**Kodiak Island**	**11.06**	**54**	Pn	**Pn**	**16 57 02.2**	**-0.2**
	0.6nm,0.3s,baz=259,slow=9.4,SNR=5.8						
SCM	**Sheep Creek Mo**	**15.21**	**43**	Pn	**Pn**	**16 57 57.6**	**-1.3**
SCM				IAmb	IAmb	16 58 13.2	
	comp=Z,33nm,1.4s						
KLU	**Klutina**	**15.66**	**45**	Pn	**Pn**	**16 58 03.3**	**-1.4**
KLU				IAmb	IAmb	16 58 10.2	
	comp=Z,23nm,1.3s						
M24K	**Tolsona, Glenn**	**15.82**	**43**	Pn	**Pn**	**16 58 05.7**	**-1.0**
N25K	**Chitina, Valde**	**16.28**	**46**	Pn	**Pn**	**16 58 11.1**	**-1.5**
N25K				IAmb	IAmb	16 58 24.8	
	comp=Z,16nm,1.2s						
GLB	**Gilahina Butte**	**16.57**	**47**	Pn	**Pn**	**16 58 15.4**	**-0.7**
GLB				IAmb	IAmb	16 58 36.7	
	comp=Z,27nm,1.5s						
VRDI	**Verde Repeater**	**16.65**	**48**	Pn	**Pn**	**16 58 16.4**	**-1.0**
ILAR	**Eielson Array**	**16.97**	**34**	Pn	**Pn**	**16 58 19.6**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=233,slow=10,SNR=3.2						
RIDG	**Independent Ri**	**17.14**	**39**	Pn	**Pn**	**16 58 21.4**	**-2.0**
RIDG				IAmb	IAmb	16 58 43.6	
	comp=Z,16nm,1.1s						
M26K	**Nabesna, AK**	**17.29**	**44**	Pn	**Pn**	**16 58 24.6**	**-0.6**
BMAR	**Burnt Mountain**	**19.34**	**29**	Pn	**Pn**	**16 58 50.3**	**+0.2**
PEA0B	**Petropavlovsk-**	**19.82**	**285**	P	**P**	**16 58 53.8**	**-0.2**
PETK	**Petropavlovsk-**	**19.82**	**285**	P	**P**	**16 58 53.8**	**-0.3**
	comp=Z,2.6nm,0.3s,baz=88,slow=13,SNR=56						
EPYK	**Eagle Plains**	**21.42**	**37**	P	**P**	**16 59 11.3**	**+0.1**
EPYK				IAmb	IAmb	16 59 23.3	
	comp=Z,20nm,1.4s						
INK	**Inuvik**	**23.36**	**33**	P	**P**	**16 59 31.1**	**-0.3**
	comp=Z,1.5nm,0.6s,baz=242,slow=9.0,SNR=10						
INK	**Inuvik**	**23.36**	**33**	IAmb	IAmb	16 59 41.7	
	comp=Z,7.2nm,1.4s						
SONM	**Songino Array**	**51.26**	**301**	P	**P**	**17 03 27.3**	**+0.6**
	comp=Z,0.8nm,0.7s,baz=62,slow=6.4,SNR=5.6						
TXAR	**Lajitas Array**	**52.79**	**89**	P	**P**	**17 03 38.1**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=294,slow=6.3,SNR=3.6						
ARCES	**ARCESS Array B**	**57.91**	**354**	P	**P**	**17 04 14.4**	**0.0**
	comp=Z,1.1nm,0.6s,baz=23,slow=7.2,SNR=7.7						
MKAR	**Makanchi Array**	**63.77**	**313**	P	**P**	**17 04 53.9**	**-0.7**
	comp=Z,0.4nm,0.4s,baz=57,slow=7.0,SNR=8.0						
FINES	**FINESS Array B**	**65.86**	**352**	P	**P**	**17 05 08.0**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=6.9,slow=7.4,SNR=7.3						
NB2	**NORSAR Subarra**	**66.93**	**360**	P	**P**	**17 05 15.1**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=360,slow=6.2						
NOA	**NORSAR Array B**	**66.93**	**360**	P	**P**	**17 05 15.4**	**+0.6**
	comp=Z,0.8nm,0.6s,baz=360,slow=6.2,SNR=4.2						
AKASG	**Malin Array Be**	**76.09**	**348**	P	**P**	**17 06 09.2**	**-0.9**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,1.6nm,0.5s,baz=16,slow=5.9,SNR=5.7						
CMAR	Chiang Mai Arr	76.58	283	P	P	17 06 12.9	-0.4
	comp=Z,2.1nm,0.8s,baz=26,slow=6.8,SNR=21						
GERES	GERESS Array B	79.12	358	P	P	17 06 27.9	+0.7
	comp=Z,0.4nm,0.5s,baz=31,slow=5.4,SNR=3.8						
KBZ	Khabaz	80.29	337	P	P	17 06 34.4	+1.0
	comp=Z,2.3nm,0.8s,baz=128,slow=2.5,SNR=5.1						

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*MAN **06** 16:58:26.3, 5°32N×127°42E, h1km, mb4.9, ML3.8, MS3.8*

*DJA **06** 16:58:26.5±0.7, 5°N±6°×12°7E±°, h62km±10km, M4.3/13, mB4.9/5, mb4.3/13, MLv4.5/12, Mw(mB)4.2/5*

*IDC **06** 16:58:28.4±1.2, 5°14N×127°32E, h126km±11km, mb3.7/15, mb1 3.8/17, mb1mx3.7/35, mbtmp4.1/17, MS2.6/1, Ms1 2.6/1, ms1mx2.3/38, Error ellipse: s-maj=24.4km s-min=8.2km az=65.0*

*NEIC **06** 16:58:28.7±1.4, 5°21N±0°08×127°4E±0°2, h131km±9km, mb4.2/18, Error ellipse: s-maj=22.9km s-min=10.0km az=70.0*

ISC 06 16:58:30.0±0.5, **5°21N**±0°04×**127°30E**±0°07, **h150**km, **n62**, σ**2.01**s/68, **mb4.0**/23, **2C-2D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	2.33	229	P	Pn	16 59 06.2	-2.8
GSPH	General Santos	2.49	290	⇑iP	Pn	16 59 07.3	-3.8
GSPH				i S	Sn	16 59 37.9	-4.9
DAV	Davao City (W)	2.51	317	P	Pn	16 59 11.1	-0.3
	82nm,0.3s,baz=111,slow=5.2,SNR=4.7						
DAV				S	Sn	16 59 41.4	-1.7
	78nm,0.3s,baz=238,slow=20,SNR=12						
DAV				LR	LR	17 00 25.9	
	comp=Z,109nm,18.3s,baz=264,slow=45						
DAV	Davao City (W)	2.51	317		Pn	16 59 09.8	-1.5
DMPH	Davao City--Mi	2.57	316	⇓eP	Pn	16 59 10.8	-1.3
DMPH				eS	Sn	16 59 43.3	-1.1
BIPH	Bislig	3.09	343	⇑eP	Pn	16 59 14.6	-4.0
BIPH				eS	Sn	16 59 48.4	-7.9
BUKP	Musuan	3.45	320	⇓iP	Pn	16 59 32.5	+9.2
BUKP				i S	Sn	17 00 02.7	-1.9
TNTI	Ternate	4.41	179	P	Pn	16 59 35.2	-0.6
TNTI	Ternate	4.41	179		Pn	16 59 35.5	-0.3
KMSI	Cibinong	5.67	216	P	Pn	16 59 51.7	-0.7
	0.3nm1μm79nm,0.6s						
LBMI	Labuha	5.82	178	P	Pn	16 59 53.6	-0.8
	0.1nm17nm,0.7s						
MRSI	Marisa	7.12	229	P	Pn	17 00 12.0	+0.2
	0.8nm2μm215nm,0.6s						
SWI	Sorong	7.22	147	P	Pn	17 00 12.0	-1.1
	0.1nm842nm25nm,0.8s						
SIJI	Sorong	7.23	147	P	Pn	17 00 10.8	-2.4
	6.7nm,0.3s,baz=326,slow=16,SNR=25						
SIJI				S	Sn	17 01 28.1	-6.0
	3.6nm,0.3s,baz=134,slow=21,SNR=9.6						
TOLI2	Tolitoli	7.67	238		Pn	17 00 16.0	-3.2
LUWI	Luwuk	7.68	216	P	Pn	17 00 20.1	+0.8
	0.2nm51nm,1.1s						
LUWI	Luwuk	7.68	216		Pn	17 00 18.9	-0.4
MPSI	Mapaga	8.83	237	P	Pn	17 00 34.0	-0.6
	11nm,0.6s						
FAKI	Fak Fak	9.47	148	P	Pn	17 00 43.0	-0.2
	11nm,1.0s						
FAKI	Fak Fak	9.47	148	Pn	Pn	17 00 40.6	-2.5
TTSI	Tana Toraja	11.09	222	P	P	17 01 09.6	-3.3
	6.7nm,0.6s						
MTKI	Muara Teweh, K	13.81	244	P	P	17 01 43.8	+0.6
EDFI	Ende, Flores	14.96	202	P	P	17 01 59.1	+3.1
	4.4nm,0.7s						
KMMI	Kalianget	18.04	228	P	Pn	17 02 34.7	+3.3
TPUB	Ta-pu	19.10	341	P	P	17 02 40.7	-0.7
TPUB				IAmb	IAmb	17 02 51.7	
	comp=Z,12nm,1.0s						
YHNB	Yeheng	20.16	344	P	P	17 02 53.8	+0.9
YHNB				IAmb	IAmb	17 02 57.2	
	comp=Z,8.6nm,0.7s						
JMZ	Minamidaito 2	20.83	10	P	P	17 02 59.8	-0.1
FITZ	Fitzroy Crossi	23.22	184	P	P	17 03 24.4	+0.5
	comp=Z,7.9nm,0.9s,baz=349,slow=5.7,SNR=34						
WB0	Warramunga Arr	25.79	164	P	P	17 03 46.1	-1.1
WB0				IAmb	IAmb	17 03 53.4	
	comp=Z,4.0nm,0.9s						
WRA	Warramunga Arr	25.94	165	P	P	17 03 48.5	-0.2
	comp=Z,1.8nm,0.4s,baz=345,slow=10,SNR=31						
WRA	Warramunga Arr	25.94	165	P	P	17 03 47.8	-0.9
WB2	Warramunga Arr	25.95	165	P	P	17 03 48.7	0.0
WB2				IAmb	IAmb	17 04 07.2	
	comp=Z,4.9nm,1.1s						
WR0	Warramunga Arr	26.01	164	P	P	17 03 49.1	-0.1
WR0				IAmb	IAmb	17 03 56.5	
	comp=Z,3.0nm,1.1s						
JSU	Suzuyama	26.32	6	P	P	17 03 52.2	+0.2
AS31	Alice Springs	29.42	168	P	P	17 04 19.6	0.0
ASAR	Alice Springs	29.42	168	P	P	17 04 19.9	+0.3
	comp=Z,0.3nm,0.4s,baz=346,slow=7.0,SNR=19						
ASAR				PcP	PcP	17 07 23.2	+1.2
	comp=Z,0.4nm,0.4s,baz=350,slow=2.3,SNR=6.8						
ASAR	Alice Springs	29.42	168	P	P	17 04 19.0	-0.6
CMAR	Chiang Mai Arr	30.65	298	P	P	17 04 31.5	+1.0
	comp=Z,0.4nm,0.7s,baz=90,slow=6.3,SNR=5.8						
JWT	Wachi	30.84	13	P	P	17 04 32.5	+0.5
JWT				IAmb	IAmb	17 04 46.6	
	comp=Z,5.0nm,1.1s						
JMM	Marumori	34.75	19	P	P	17 05 06.0	+0.1
USRK	Ussuriysk Ar.	39.05	5	P	P	17 05 43.5	+1.4
	comp=Z,2.5nm,0.9s,baz=193,slow=7.6,SNR=4.0						
STKA	Stephens Creek	39.32	161	P	P	17 05 44.6	0.0
	comp=Z,1.4nm,0.6s,baz=350,slow=9.3,SNR=5.0						
STKA	Stephens Creek	39.32	161	P	P	17 05 43.6	-1.0
SONM	Songino Array	46.09	341	P	P	17 06 41.1	+2.0
	comp=Z,0.7nm,0.5s,baz=160,slow=9.2,SNR=6.4						
SONM	Songino Array	46.09	341	P	P	17 06 39.3	+0.2
PEA0B	Petropavlovsk-	53.85	22	P	P	17 07 37.3	-0.1
PETK	Petropavlovsk-	53.85	22	P	P	17 07 39.9	+2.5
	comp=Z,5.0nm,0.7s,baz=117,slow=1.7,SNR=8.2						
PETK	Petropavlovsk-	53.85	22	P	P	17 07 37.0	-0.5
MK31	Makanchi Array	56.67	324	P	P	17 07 57.9	+0.1
MK31				IAmb	IAmb	17 08 00.5	
	comp=Z,2.5nm,0.8s						
MKAR	Makanchi Array	56.67	324	P	P	17 07 59.8	+2.0
	comp=Z,3.6nm,0.5s,baz=116,slow=7.9,SNR=73						
MKAR	Makanchi Array	56.67	324	P	P	17 07 58.6	+0.8
MAKZ	Makanchi	56.86	324	P	P	17 07 59.4	+0.3
MAKZ				IAmb	IAmb	17 08 01.5	
	comp=Z,3.3nm,0.6s						
ZALV	Zalesovo Beam	59.53	332	P	P	17 08 18.4	+0.9
	comp=Z,1.2nm,0.6s,baz=118,slow=6.9,SNR=5.0						
KURK	Kurchatov	60.81	327	P	P	17 08 26.6	+0.4
KURK				IAmb	IAmb	17 08 28.7	
	comp=Z,5.4nm,1.0s						
KKAR	Karatay Array	62.55	316	P	P	17 08 39.4	+1.4
BRVK	Borovoye	66.47	326	P	P	17 09 03.9	+0.6
BRVK				IAmb	IAmb	17 09 05.3	
	comp=Z,2.7nm,0.6s						
NRIK	Noril'sk	69.13	346	P	P	17 09 20.9	+1.3
	comp=Z,3.7nm,1.0s,baz=129,slow=5.9,SNR=5.4						
ABKAR	Akbulak array	71.37	320	P	P	17 09 33.6	0.0
ILAR	Eielson Array	83.53	25	P	P	17 10 41.6	+0.7
	comp=Z,0.9nm,0.5s,baz=246,slow=5.4,SNR=14						
VNDA	Vanda	84.82	173	P	P	17 10 47.9	+0.7
	comp=Z,0.3nm,0.7s,baz=339,slow=7.9,SNR=3.5						
ARCES	ARCESS Array B	89.26	340	P	P	17 11 08.3	-0.4
	comp=Z,4.8nm,1.0s,baz=78,slow=5.6,SNR=7.5						
FINES	FINESS Array B	90.80	332	P	P	17 11 15.5	-0.5
	comp=Z,1.3nm,0.9s,baz=190,slow=3.3,SNR=4.7						

IDC 06 17:18:33.3±987.0, **50°63N**×**52°29E, h0**km, **Error ellipse: s-maj=457.1km s-min=85.2km az=90.0, Western Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I31KZ	AKTYUBINSK INF	3.67	91	i		17 41 00.0	
	baz=276,slow=310,SNR=2.1						
I46RU	ZALESOVO INFRA	20.07	68	i		19 24 40.0	
	baz=276,slow=327,SNR=1.1						
I34MN	SONGINO INFRAS	34.81	73	i		20 52 00.0	
	baz=293,slow=331,SNR=1.5						

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*NEIC **06** 17:22:39.5±2.4, 8°18S±0°06×125°32E±0°08, h10km±1km, mb4.1/3, Error ellipse: s-maj=14.3km s-min=9.3km az=252.0*

*IDC **06** 17:22:40.1±1.6, 8°12S×125°30E, h0km, mb3.7/2, mb1 4.0/6, mb1mx3.7/35, mbtmp3.8/6, ML3.6/4, MS2.9/2, Ms1 2.9/2, ms1mx2.5/42, Error ellipse: s-maj=39.5km s-min=21.1km az=80.0*

*DJA **06** 17:22:45.0±0.5, 8°S±4°×12°5E±°, h10km, M3.9/9, mb4.0/4, mB4.5/1, MLv3.8/9, Mw(mB)3.7/1*

ISC 06 17:22:39.7±0.8, **8°25S**±0°05×**125°29E**±0°07, **h10**km, **n30**, σ**1.49**s/34, **mb4.0**/4, **Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.80	214	P	Pg	17 23 14.7	+0.4
SOEI	Soe	1.80	214		Pn	17 23 10.0	-1.0
SOEI				Sn	Sb	17 23 35.7	+0.1
BATI	Baumata	2.52	219	Pn	Pb	17 23 25.2	+0.1
	9.5nm,0.3s,baz=70,slow=1.4,SNR=18						
BATI				Sn	Sb	17 23 56.9	+0.7
	12nm,0.3s,baz=136,slow=23,SNR=10						
BATI	Baumata	2.52	219	P	Pb	17 23 24.9	-0.2
MMRI	Maumere	3.04	263	P	Pn	17 23 26.9	-1.0
MMRI	Maumere	3.04	263	Pn	Pn	17 23 27.9	-0.1
EDFI	Ende, Flores	3.59	262	P	Pn	17 23 35.6	0.0
WSI	Waingapu	5.12	254	P	Pn	17 23 56.0	-0.6
BSSI	Bau Bau, Buton	5.20	293	P	Pn	17 23 57.0	-0.7
BKSI	Bulukumba	5.90	299	P	Pn	17 24 06.9	-0.3
	0.1nm12nm,0.7s						
SANI	Sanana	6.20	7	P	Pn	17 24 14.8	+3.4
	0.2nm7.8nm,0.9s						
LUWI	Luwuk	7.59	341	Pn	Pn	17 24 27.7	-2.8
FITZ	Fitzroy Crossi	9.79	178	Pn	Pn	17 25 02.0	+1.3
	0.3nm,0.3s,baz=356,slow=9.8,SNR=15						
FITZ				Sn	Sn	17 26 50.2	-0.6
	1.1nm,0.3s,baz=101,slow=2.9,SNR=11						
TOLI2	Tolitoli	10.33	334	Pn	Pn	17 25 06.1	-2.0
WB0	Warramunga Arr	14.45	143		Pn	17 26 04.8	+0.3
WRAB	Tennant Creek	14.55	144		Pn	17 26 04.9	-1.0
WRA	Warramunga Arr	14.56	144	Pn	Pn	17 26 08.7	+2.8
	0.5nm,0.3s,baz=320,slow=13,SNR=29						
WRA				Sn	Sn	17 28 47.2	-0.3
	0.3nm,0.3s,baz=315,slow=23,SNR=5.9						
WRA				LR	LR	17 32 46.8	
	comp=Z,57nm,18.4s,baz=215,slow=41						
WRA	Warramunga Arr	14.56	144	Pn	Pn	17 26 05.8	-0.2
WB2	Warramunga Arr	14.56	144	Pn	Pn	17 26 06.5	+0.5
WR0	Warramunga Arr	14.69	143	Pn	Pn	17 26 09.4	+1.7
AS31	Alice Springs	17.41	153	Pn	Pn	17 26 39.6	-3.3
AS31				IAmb	IAmb	17 27 02.3	
	comp=Z,1.6nm,0.7s						
ASAR	Alice Springs	17.41	153	P	P	17 26 46.4	+2.2
	comp=Z,0.1nm,0.3s,baz=322,slow=9.9,SNR=22						
ASAR				S	Sn	17 29 54.9	-2.0
	comp=Z,0.1nm,0.3s,baz=315,slow=18,SNR=6.8						
ASAR	Alice Springs	17.41	153	Pn	Pn	17 26 41.3	-1.6
LEM	Lembang	17.57	273	LR	LR	17 34 37.5	
	comp=Z,34nm,19.0s,baz=318,slow=41						
CTAO	Charters Tower	23.45	122	P	P	17 27 49.4	-0.2
CTAO				IAmb	IAmb	17 28 04.1	
	comp=Z,10.0nm,1.4s						
CMAR	Chiang Mai Arr	37.15	316	P	P	17 29 52.5	+1.5
	comp=Z,0.7nm,0.7s,baz=144,slow=6.5,SNR=8.6						
CMAR	Chiang Mai Arr	37.15	316	P	P	17 29 51.8	+0.7
MK31	Makanchi Array	66.81	329	P	P	17 33 30.1	-1.5
MK31				IAmb	IAmb	17 33 49.9	
	comp=Z,3.4nm,1.4s						
MKAR	Makanchi Array	66.81	329	P	P	17 33 32.5	+0.8
	comp=Z,0.5nm,0.6s,baz=130,slow=7.7,SNR=4.1						
MKAR	Makanchi Array	66.81	329	P	P	17 33 31.3	-0.4

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*IDC **06** 17:33:17.1±1.1, 8°48S×125°39E, h0km, mb4.0/1, mb1 3.6/5, mb1mx3.4/41, mbtmp3.4/5, ML3.1/4, Error ellipse: s-maj=14.0km s-min=9.3km az=175.0*

ISC 06 17:33:18.5±1.5, **8°6S**±0°1×**125°4E**±0°1, **h10**km, **n5**, σ**0.35**s/7, **Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	2.35	226	Pn	Pn	17 33 57.5	+0.3
	3.4nm,0.3s,baz=115,slow=2.5,SNR=4.4						
BATI				Sn	Sb	17 34 29.8	-0.3
	1.7nm,0.3s,baz=335,slow=22,SNR=1.4						
FITZ	Fitzroy Crossi	9.48	178	Pn	Pn	17 35 35.6	+0.4
	0.1nm,0.3s,baz=1.0,slow=9.9,SNR=6.7						
FITZ				Sn	Sn	17 37 21.7	-0.2
	0.1nm,0.3s,baz=204,slow=6.1,SNR=3.8						
WRA	Warramunga Arr	14.25	143	Pn	Pn	17 36 40.4	-0.2
	0.1nm,0.3s,baz=319,slow=13,SNR=6.5						
ASAR	Alice Springs	17.09	152	P	P	17 37 19.7	+0.2
	0.1nm,0.3s,baz=344,slow=14,SNR=7.5						
MKAR	Makanchi Array	67.12	329	P	P	17 44 12.4	-0.1
	1.0nm,0.6s,baz=118,slow=5.9,SNR=1.7						

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*IDC **06** 17:33:19.3±0.6, 7°28N×125°98E, h0km, mb4.3/16, mb1 4.4/19, mb1mx4.2/47, mbtmp4.4/19, ML4.5/3, MS3.6/23, Ms1 3.6/23, ms1mx3.5/45, Error ellipse: s-maj=11.3km s-min=7.6km az=149.0*

*BJI **06** 17:33:21.9±0.0, 7°22N×125°79E, h26km, mB4.8/28, mb4.6/47, Ms4.3/21, Ms7 4.1/21*

*MAN **06** 17:33:23.1, 7°20N×125°50E, h8km, mb5.4, ML4.4, MS4.7*

*NEIC **06** 17:33:24.7±1.9, 7°21N±0°07×125°59E±0°06, h31km±5km, mb4.7/49, Error ellipse: s-maj=10.4km s-min=7.8km az=214.0*

*DJA **06** 17:33:25.8±1.2, 7°N±6°×12°6E±°, h38km±12km, M4.9/20, mB5.3/11, mb4.9/20, MLv5.3/6, Mw(mB)4.7/11*

ISC 06 17:33:24.1±0.7, **7°15N**±0°03×**125°57E**±0°04, **h30**km±4km, **n135**, σ**1.73**s/136, **mb4.6**/55, **MS3.8**/25, **7C-6D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.08	176	Pg	Pb	17 33 28.7	-0.5
	36μm,0.3s,baz=357,slow=2.2,SNR=5559						
DAV				Lg	Lg	17 33 33.8	
	baz=301,slow=19						
DAV				LR	LR	17 33 47.5	
	comp=Z,71μm,19.4s,baz=264,slow=62						
DAV	Davao City (W)	0.08	176		Pb	17 33 28.7	-0.5
DAV				Sg	Sb	17 33 34.3	+1.5
DMPH	Davao City--Mi	0.09	226	⇑eP	Pb	17 33 27.2	-2.2
DMPH				i S	Sb	17 33 32.6	-0.3
KCP	Kidapawan	0.50	254	⇓iP	Pb	17 33 32.6	-1.9
KCP				i S	Sb	17 33 39.9	-1.8
GSPH	General Santos	1.22	211	⇑iP	Pn	17 33 45.2	-0.1
GSPH				i S	Sn	17 34 02.8	+1.9
BIPH	Bislig	1.29	37	⇓iP	Pb	17 33 47.2	-0.6
BIPH				i S	Sb	17 34 05.7	+1.7
SCPH	Surigao	2.62	358	⇓eP	Pn	17 34 05.1	+0.7
DCPH	Dipolog City	2.62	303	⇑eP	Pn	17 34 08.0	+3.5
TBP	Tagbilaran	3.04	326	eP	Pn	17 34 10.2	-0.1
TBP				i S	Sb	17 34 54.6	+0.2
SNPH	Sibulan	3.18	313	eP	Pn	17 34 13.5	+1.3
SNPH				eS	Sb	17 35 04.8	+6.5
SGSI	Sangihe	3.44	181	P	Pn	17 34 18.0	+2.3
ZCP	Zamboanga City	3.48	267	⇑eP	Pn	17 34 17.9	+1.7
ZCP				eS	Sn	17 34 54.2	-2.3
LLP	Lapu-Lapu	3.53	333	⇑eP	Pn	17 34 17.7	+0.7
LLP				i S	Sn	17 34 58.0	+0.3
JAP	San Jose, Anti	5.06	315	⇓eP	Pn	17 34 40.4	+2.4
RCP	Roxas	5.20	328	⇓eP	Pn	17 34 41.4	+1.5
TNTI	Ternate	6.58	164	P	Pn	17 34 59.3	+0.4
	0.4nm1μm106nm,0.6s						
TNTI	Ternate	6.58	164		Pn	17 35 00.6	+1.7
TNTI				Sn	Sn	17 36 14.6	+1.6
KMSI	Cibinong	6.72	194	P	Pn	17 35 04.4	+3.6
	1.1nm3μm302nm,0.8s						
GTOI	Gorontalo	6.96	202	P	Pn	17 35 05.3	+1.3
	0.6nm2μm181nm,0.6s						
TOLI2	Tolitoli	7.67	219	Pn	Pn	17 35 12.4	-1.4
TOLI2				Sn	Sn	17 36 36.3	-3.4
LBMI	Labuha	7.97	166	P	Pn	17 35 21.2	+3.2
	817nm67nm,0.7s						
LQP	Lukban	7.98	331	⇑eP	Pn	17 35 21.1	+2.8
LUWI	Luwuk	8.60	199	P	Pn	17 35 31.6	+4.9
	2μm162nm,0.7s						
LUWI	Luwuk	8.60	199		Pn	17 35 30.7	+4.1
APSI	Ampana	8.91	206	P	Pn	17 35 35.3	+4.4
	993nm99nm,0.5s						
SIJI	Sorong	9.78	144	Pn	Pn	17 35 41.4	-1.5
	3.2nm,0.3s,baz=360,slow=11,SNR=10						
SIJI				Sn	Sn	17 37 31.9	+0.2
	0.9nm,0.3s,baz=172,slow=21,SNR=6.2						
SIJI				LR	LR	17 38 11.8	
	comp=Z,40nm,22.0s,baz=302,slow=30						
TTSI	Tana Toraja	11.64	210	P	Pn	17 36 12.4	+4.1
	535nm57nm,0.9s						
FAKI	Fak Fak	12.02	146	P	Pn	17 36 15.4	+1.9
	23nm,1.1s						
FAKI	Fak Fak	12.02	146	Pn	Pn	17 36 14.7	+1.2
FAKI				Sn	Sn	17 38 26.3	-0.3
KAPI	Kappang	13.40	206	Pn	Pn	17 36 34.3	+1.9
YULB	Yu-li	16.67	346	Pn	Pn	17 37 14.1	-1.5
YULB				IAmb	IAmb	17 37 47.4	
	comp=Z,48nm,1.6s						
TPUB	Ta-pu	16.75	344		P	17 37 17.1	-1.6
TPUB				IAmb	IAmb	17 38 04.6	
	comp=Z,76nm,1.8s						
SOEI	Soe	16.84	184	P	Pn	17 37 19.3	+1.3
SOEI				IAmb	IAmb	17 38 02.5	
	comp=Z,71nm,1.1s						
SSLB	Suanglung	17.13	345		P	17 37 22.4	-0.5
BATI	Baumata	17.34	186	P	Pn	17 37 25.0	+0.8
	comp=Z,5.4nm,0.3s,baz=116,slow=0.6,SNR=7.9						
BATI				LR	LR	17 45 41.1	
	comp=Z,318nm,18.1s,baz=356,slow=42						
BATI	Baumata	17.34	186	P	P	17 37 26.7	+1.4
	comp=Z,35nm,0.6s						
PLAI	Plampang	17.67	206	P	P	17 37 32.6	+3.7
	comp=Z,41nm,0.8s						
JAY	Jayapura	17.89	122	LR	LR	17 43 04.0	
	comp=Z,120nm,21.2s,baz=7.5,slow=33						
QIZ	Qiongzhong	19.32	309	P	P	17 37 47.2	+0.1
QIZ				S	S	17 41 23.6	-0.7
QIZ				LR	LR		
	comp=Z,250nm,14.9s						
QIZ				LR	LR		
	comp=Z,220nm,10.6s						
QIZ				LR	LR		
	comp=Z,280nm,15.9s						
JOW	Kunigami	19.75	7	P	P	17 37 50.3	-1.4
	comp=Z,1.6nm,0.3s,baz=168,slow=9.3,SNR=2.0						
JOW				LR	LR	17 45 01.9	
	comp=Z,52nm,20.9s,baz=178,slow=36						
UBPT	Khong Chiam	21.30	294	P	P	17 38 07.5	-1.0
LEM	Lembang	22.66	233	P	P	17 38 27.8	+4.4
	comp=Z,21nm,0.7s,baz=358,slow=18,SNR=3.7						
CISI	Cisompet, Garu	22.95	231	P	P	17 38 24.3	-2.0
CISI				IAmb	IAmb	17 39 11.9	
	comp=Z,33nm,1.1s						
KLSI		23.89	241	P	P	17 38 39.0	+3.5
	comp=Z,11nm,1.2s						
LHSI	Lahat	24.56	244	P	P	17 38 44.4	+2.8
	comp=Z,2μmcomp=Z,28nm,0.9s						
FITZ	Fitzroy Crossi	25.08	180	P	P	17 38 45.7	-0.5
	comp=Z,3.1nm,0.4s,baz=6.9,slow=7.3,SNR=15						
SLVN	Son La	25.25	306	P	P	17 38 47.3	-0.6
JCJ	Chichijima	25.35	37	P	P	17 38 48.4	-0.2
NJ2	Nanjing	25.56	347	eP	P	17 38 52.6	+2.2
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
PSI	Prapat	26.89	262	LR	LR	17 51 22.4	
	comp=Z,145nm,18.3s,baz=74,slow=40						
PMG	Port Moresby	27.07	127	LR	LR	17 52 20.6	
	comp=Z,44nm,18.3s,baz=280,slow=42						
PMG	Port Moresby	27.07	127	P	P	17 39 05.0	+0.6
PMG				IAmb	IAmb	17 39 29.0	
	comp=Z,13nm,0.9s						
ENH	Enshi	27.52	329	P	P	17 39 05.6	-2.6
ENH				IAmb	IAmb	17 39 11.7	
	comp=Z,14nm,0.9s						
WB0	Warramunga Arr	28.12	162	P	P	17 39 12.2	-1.4
WB0				IAmb	IAmb	17 39 54.0	
	comp=Z,11nm,0.8s						
KMI	Kunming	28.21	312	⇑P	P	17 39 16.8	+2.1
KMI				pmax	pmax		
	comp=Z,12nm,1.3s						
KMI				LR	LR		
	comp=Z,200nm,17.3s						
KMI				LR	LR		
	comp=Z,260nm,14.4s						
KMI				LR	LR		
	comp=Z,330nm,18.8s						
CM31	Chiang Mai Arr	28.25	296	P	P	17 39 14.3	-0.6
CMAR	Chiang Mai Arr	28.25	296	P	P	17 39 15.6	+0.7
	comp=Z,1.4nm,0.8s,baz=123,slow=7.6,SNR=16						
CMAR				LR	LR	17 50 39.8	
	comp=Z,211nm,18.1s,baz=158,slow=36						
CMAR	Chiang Mai Arr	28.25	296	P	P	17 39 14.1	-0.8
WRAB	Tennant Creek	28.26	162	P	P	17 39 12.8	-2.1
WRAB				IAmb	IAmb	17 39 34.0	
	comp=Z,27nm,1.4s						
WRA	Warramunga Arr	28.27	162	P	P	17 39 13.7	-1.3
	comp=Z,3.8nm,0.7s,baz=342,slow=9.8,SNR=25						
WRA				LR	LR	17 51 50.2	
	comp=Z,66nm,21.5s,baz=315,slow=39						
WRA	Warramunga Arr	28.27	162	P	P	17 39 13.5	-1.5
WB2	Warramunga Arr	28.27	162	P	P	17 39 13.4	-1.6
WB2				IAmb	IAmb	17 39 46.4	
	comp=Z,11nm,0.8s						
WR0	Warramunga Arr	28.34	162	P	P	17 39 14.4	-1.2
WR0				IAmb	IAmb	17 39 48.2	
	comp=Z,11nm,1.1s						
CHTO	Chiang Mai	28.37	297	P	P	17 39 15.3	-0.6
GSI	Gunungsitoli	28.51	260	P	P	17 39 16.5	-0.7
GSI				IAmb	IAmb	17 39 29.9	
	comp=Z,23nm,0.8s						
KSRS	Korea Array	30.25	4	LR	LR	17 51 11.0	
	comp=Z,78nm,21.8s,baz=202,slow=36						
XAN	Xi'an	30.87	332	P	P	17 39 38.3	+0.3
XAN				pP	sP	17 39 52.3	+2.0
XAN				pmax	pmax		
	comp=Z,23nm,0.8s						
MJAR	Matsushiro Arr	31.45	20	P	P	17 39 39.4	-3.7
	comp=Z,1.7nm,0.8s,baz=184,slow=10,SNR=4.8						
MJAR				LR	LR	17 51 45.2	
	comp=Z,112nm,19.7s,baz=215,slow=36						
AS31	Alice Springs	31.69	165	P	P	17 39 44.4	-0.8
ASAR	Alice Springs	31.69	165	P	P	17 39 44.1	-1.1
	comp=Z,2.8nm,0.5s,baz=341,slow=6.8,SNR=76						
ASAR	Alice Springs	31.69	165	P	P	17 39 43.8	-1.5
JMM	Marumori	33.55	22	P	P	17 39 59.5	-1.9
BJT	Baijiatuau	33.80	347	P	P	17 40 02.4	-1.1
BJT				IAmb	IAmb	17 40 03.8	
	comp=Z,8.2nm,0.9s						
CTA	Charters Tower	33.86	143	P	P	17 40 02.6	-1.7
	comp=Z,2.7nm,0.5s,baz=320,slow=7.7,SNR=8.7						
CTAO	Charters Tower	33.86	143	P	P	17 40 05.0	+0.7
CTAO				IAmb	IAmb	17 40 06.8	
	comp=Z,27nm,1.4s						
LZH	Lanzhou	35.00	328	eP	P	17 40 15.7	+1.5
LZH				pP	sP	17 40 25.0	-1.6
LZH				pmax	pmax		
	comp=Z,35nm,1.2s						
LZH				LR	LR		
	comp=Z,240nm,13.1s						
LZH				LR	LR		
	comp=Z,270nm,14.6s						
LZH				LR	LR		
	comp=Z,230nm,14.7s						
HHC	Hu-ho-hao-te	35.81	342	eP	P	17 40 24.9	+3.9
HHC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,59nm,4.4s						
HHC				LR	LR		
	comp=Z,200nm,16.7s						
HHC				LR	LR		
	comp=Z,200nm,14.4s						
HHC				LR	LR		
	comp=Z,170nm,15.6s						
SHL	Shillong	36.98	304	P	P	17 40 30.8	-0.6
SHL				IAmb	IAmb	17 41 00.0	
	comp=Z,28nm,1.3s						
USA0B	Ussuriysk Arra	37.33	8	P	P	17 40 33.0	-0.8
USRK	Ussuriysk Ar.	37.33	8	P	P	17 40 33.2	-0.6
LSA	Lhasa	39.37	309	P	P	17 40 51.8	+0.1
GTA	Gaotai	39.60	328	⇓P	P	17 40 54.7	+1.6
GTA				pP	pP	17 41 01.9	-0.1
GTA				sP	sP	17 41 06.7	+1.1
GTA				pmax	pmax		
	comp=Z,9.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,64nm,5.7s						
GTA				LR	LR		
	comp=Z,110nm,16.0s						
GTA				LR	LR		
	comp=Z,180nm,16.7s						
GTA				LR	LR		
	comp=Z,220nm,17.1s						
TAPN	Taplejung	41.12	304	eP	P	17 41 06.4	+0.3
	comp=Z,14nm,0.6s						

ODAN	**Odare**	**41.21**	**303**	*e*P	**P**	**17 41 06.9**	**+0.2**
	comp=Z,25nm,0.8s						
STKA	**Stephens Creek**	**41.71**	**159**	P	**P**	**17 41 10.0**	**-0.5**
	comp=Z,10nm,0.7s,baz=340,slow=8.1,SNR=20						
STKA				LR	LR	17 59 39.0	
	comp=Z,81nm,21.2s,baz=4.2,slow=38						
STKA	**Stephens Creek**	**41.71**	**159**	P	**P**	**17 41 10.4**	**0.0**
RAMN	**Ramite**	**41.90**	**303**	*e*P	**P**	**17 41 13.3**	**+0.9**
	comp=Z,14nm,0.7s						
YSS	**Yuzh-Sakhalins**	**42.31**	**17**	P	**P**	**17 41 14.5**	**-0.6**
JIRN	**Jiri**	**42.49**	**304**	*e*P	**P**	**17 41 17.7**	**+0.3**
	comp=Z,29nm,0.8s						
GUN	**Gumba**	**42.84**	**304**	*e*P	**P**	**17 41 20.9**	**+0.7**
	comp=Z,34nm,0.7s						
PKIN	**Phulchoki**	**43.12**	**303**	*e*P	**P**	**17 41 22.2**	**-0.2**
	comp=Z,18nm,0.9s						
KKN	**Kakani**	**43.29**	**303**	*e*P	**P**	**17 41 23.6**	**-0.1**
	comp=Z,14nm,0.7s						
DMN	**Daman**	**43.37**	**303**	*e*P	**P**	**17 41 25.3**	**+0.9**
ULN	**Ulaanbaatar**	**43.53**	**342**	P	**P**	**17 41 25.1**	**-0.2**
ULN				IAmb	IAmb	17 41 35.4	
	comp=Z,31nm,1.3s						
SONM	**Songino Array**	**43.71**	**341**	P	**P**	**17 41 26.9**	**+0.2**
	comp=Z,4.6nm,0.9s,baz=158,slow=8.9,SNR=24						
SONM				LR	LR	17 59 59.1	
	comp=Z,76nm,20.3s,baz=156,slow=37						
SONM	**Songino Array**	**43.71**	**341**	P	**P**	**17 41 26.5**	**-0.1**
SONM				IAmb	IAmb	17 41 36.8	
	comp=Z,21nm,1.4s						
GKN	**Gorkha**	**43.90**	**303**	*e*P	**P**	**17 41 28.5**	**0.0**
	comp=Z,17nm,1.0s						
KOLN	**Koldanda**	**44.68**	**303**	*e*P	**P**	**17 41 35.2**	**+0.3**
	comp=Z,30nm,0.7s						
DANN	**Dangsing**	**44.74**	**303**	*e*P	**P**	**17 41 35.3**	**-0.1**
	comp=Z,38nm,0.8s						
PYUN	**Piuthan**	**45.30**	**303**	*e*P	**P**	**17 41 40.4**	**+0.6**
	comp=Z,32nm,0.7s						
TLY	**Talaya**	**47.95**	**342**	P	**P**	**17 42 01.5**	**+1.6**
	comp=Z,5.9nm,0.7s,baz=235,slow=15,SNR=3.2						
TLY				LR	LR	18 02 25.0	
	comp=Z,60nm,18.5s,baz=158,slow=36						
TLY	**Talaya**	**47.95**	**342**	P	**P**	**17 41 59.8**	**-0.1**
WMQ	**Urumqi**	**49.29**	**324**	*e*P	**P**	**17 42 11.6**	**+1.2**
WMQ				pP	pP	17 42 18.3	-1.2
WMQ				sP	sP	17 42 27.7	+4.7
WMQ				pmax	pmax		
	comp=Z,12nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,71nm,4.3s						
WMQ				LR	LR		
	comp=Z,240nm,18.5s						
WMQ				LR	LR		
	comp=Z,170nm,18.5s						
WMQ				LR	LR		
	comp=Z,180nm,19.5s						
DZM	**Mont Dzumac**	**49.47**	**127**	P	**P**	**17 42 11.3**	**-0.8**
	comp=Z,6.5nm,0.7s,baz=318,slow=20,SNR=3.6						
MK31	**Makanchi Array**	**54.12**	**324**	P	**P**	**17 42 46.2**	**-0.2**
MKAR	**Makanchi Array**	**54.12**	**324**	P	**P**	**17 42 46.8**	**+0.4**
	comp=Z,1.2nm,0.6s,baz=126,slow=8.0,SNR=13						
MKAR				LR	LR	18 07 23.4	
	comp=Z,111nm,19.2s,baz=104,slow=38						
MKAR	**Makanchi Array**	**54.12**	**324**	P	**P**	**17 42 46.2**	**-0.2**
MAKZ	**Makanchi**	**54.31**	**324**	P	**P**	**17 42 47.6**	**-0.2**
MAKZ				IAmb	IAmb	17 42 56.6	
	comp=Z,7.1nm,1.3s						
KSH	**Kashi**	**54.84**	**314**	P	**P**	**17 42 53.9**	**+2.0**
KSH				pP	sP	17 43 05.6	+0.9
KSH				pmax	pmax		
	comp=Z,8.0nm,1.2s						
NIL	**Nilore**	**54.96**	**306**	P	**P**	**17 42 52.5**	**-0.3**
ZAA0	**Zalesovo Array**	**57.04**	**333**	P	**P**	**17 43 07.9**	**+0.7**
ZAA0				IAmb	IAmb	17 43 33.4	
	comp=Z,4.0nm,1.0s						
ZALV	**Zalesovo Beam**	**57.04**	**333**	P	**P**	**17 43 07.8**	**+0.6**
	comp=Z,1.6nm,0.7s,baz=116,slow=7.2,SNR=5.8						
ZALV				LR	LR	18 09 02.7	
	comp=Z,64nm,18.6s,baz=108,slow=38						
ZALV	**Zalesovo Beam**	**57.04**	**333**	P	**P**	**17 43 07.6**	**+0.4**
AAK	**Ala-Archa**	**57.08**	**317**	P	**P**	**17 43 07.6**	**-0.4**
KURK	**Kurchatov**	**58.26**	**327**	P	**P**	**17 43 15.5**	**-0.4**
KURK				IAmb	IAmb	17 43 44.3	
	comp=Z,12nm,1.4s						
KBL	**Kabul**	**58.57**	**306**	P	**P**	**17 43 18.1**	**-0.4**
BTK	**Batken**	**58.75**	**313**	P	**P**	**17 43 18.8**	**-0.8**
BTK				IAmb	IAmb	17 43 28.5	
	comp=Z,6.9nm,0.9s						
GAR	**Garm**	**58.79**	**312**	P	**P**	**17 43 20.3**	**+0.3**
CHGR	**Chuyangaron**	**59.56**	**311**	P	**P**	**17 43 25.1**	**-0.2**
KK31	**Karatay Array**	**59.98**	**316**	P	**P**	**17 43 26.9**	**-1.1**
KK31				IAmb	IAmb	17 43 36.4	
	comp=Z,7.0nm,0.9s						
KKAR	**Karatay Array**	**59.98**	**316**	P	**P**	**17 43 26.9**	**-1.1**
KKAR	**Karatay Array**	**59.98**	**316**	P	**P**	**17 43 26.7**	**-1.2**
KKAR				IAmb	IAmb	17 43 36.4	
	comp=Z,7.0nm,0.9s						
BRVK	**Borovoye**	**63.92**	**326**	P	**P**	**17 43 53.6**	**-0.6**
BRVK				IAmb	IAmb	17 44 02.6	
	comp=Z,3.3nm,0.8s						
RAO	**Raoul Island**	**65.26**	**127**	LR	LR	18 10 33.5	
	comp=Z,962nm,19.8s,baz=276,slow=34						
GEYT	**Alibeck**	**67.88**	**308**	LR	LR	18 17 20.8	
	comp=Z,65nm,18.7s,baz=145,slow=39						
ABKAR	**Akbulak array**	**68.80**	**320**	P	**P**	**17 44 24.5**	**-1.0**
KBZ	**Khabaz**	**79.81**	**313**	LR	LR	18 24 30.0	
	comp=Z,48nm,20.1s,baz=72,slow=38						
ILAR	**Eielson Array**	**82.53**	**26**	P	**P**	**17 45 41.9**	**-2.0**
	comp=Z,0.8nm,0.8s,baz=222,slow=5.9,SNR=5.6						
ARCES	**ARCESS Array B**	**86.86**	**340**	LR	LR	18 27 41.5	
	comp=Z,28nm,18.3s,baz=285,slow=38						
VNDA	**Vanda**	**86.94**	**173**	P	**P**	**17 46 07.4**	**+1.7**
	comp=Z,1.4nm,1.0s,baz=310,slow=4.4,SNR=6.4						
VNDA				LR	LR	18 26 42.6	
	comp=Z,33nm,18.1s,baz=5.5,slow=37						
VNDA	**Vanda**	**86.94**	**173**	IAmb	IAmb	17 46 10.3	
	comp=Z,3.1nm,1.1s						
PPT	**Papeete**	**87.25**	**108**	LR	LR	18 22 15.3	
	comp=Z,127nm,19.8s,baz=9.5,slow=34						
FINES	**FINESS Array B**	**88.30**	**332**	P	**P**	**17 46 11.6**	**-1.0**
	comp=Z,1.4nm,0.8s,baz=95,slow=7.0,SNR=1.7						
FINES				LR	LR	18 27 38.3	
	comp=Z,31nm,18.3s,baz=43,slow=37						
AKASG	**Malin Array Be**	**88.53**	**321**	LR	LR	18 29 04.5	
	comp=Z,33nm,19.3s,baz=315,slow=38						
NOA	**NORSAR Array B**	**95.23**	**334**	LR	LR	18 33 17.7	
	comp=Z,63nm,19.6s,baz=65,slow=38						

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*ISK **06** 17:50:23.5, 34°.16N×35°.98E, h5^{km}, ML3.2/20*
*GII **06** 17:50:23.2±0.0, 34°.23N×36°.06E, h1^{km}, MD3.2/3, Mm3.3/6*
*GRAL **06** 17:50:25.7±0.3, 34°.12N×36°.26E, h16^{km}±8^{km}, MD3.9*
*NIC **06** 17:50:28.3±0.0, 34°.19N×36°.00E, h22^{km}±3^{km}, Ml3.4/7*
ISC 06 17:50:26.6±1.2**, 34°.15N**±0°.02×**36°.09E**±0°.05**, h18**^{km}±4^{km}**,**
n55, σ1^{s}.01/78**, 2C, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HWQ	**Hawqa**	**0.17**	**318**	*e*P	**Pg**	**17 50 31.8**	**+0.5**
HWQ				*e*S	**Sg**	**17 50 36.2**	**+1.7**
BHL	**Bhannes**	**0.43**	**236**	*e*P	**Pb**	**17 50 35.6**	**-0.2**
BHL				*e*S	**Sb**	**17 50 43.1**	**+1.1**
BEYL	**Beirut**	**0.57**	**241**	*e*P	**Pb**	**17 50 37.9**	**0.0**
DQRL	**Deir Qamar**	**0.62**	**224**	*e*P	**Pb**	**17 50 38.4**	**-0.4**
DQRL				*e*S	**Sb**	**17 50 47.7**	**+0.5**
RCY	**Rachaya**	**0.69**	**198**	*e*P	**Pg**	**17 50 38.5**	**-1.7**
RCY				*e*S	**Sg**	**17 50 48.0**	**-1.3**
GEM	**Giv'at Ha'Em**	**1.00**	**201**	Pg	**Pg**	**17 50 43.8**	**-2.3**
GEM				Sg	**Sn**	**17 51 00.1**	**+0.7**
MMC7	**Mount Meron ar**	**1.27**	**207**	Pn	**Pn**	**17 50 48.6**	**-0.8**
MMA0B	**Mount Meron ar**	**1.27**	**207**	Pn	**Pn**	**17 50 48.5**	**-1.0**
MMA0B				Sn	**Sn**	**17 51 08.0**	**+1.9**
HNTI	**Hanita**	**1.31**	**216**	Pn	**Pn**	**17 50 49.3**	**-0.7**
HNTI				Sn	**Sg**	**17 51 09.4**	**+0.4**
BLGI	**Bet Lehem HaGe**	**1.60**	**208**	Pn	**Pn**	**17 50 53.8**	**-0.1**
BLGI				Sn	**Sg**	**17 51 17.3**	**-0.9**
OFRI	**`Ofer**	**1.78**	**211**	Pn	**Pn**	**17 50 56.4**	**-0.1**
OFRI				Sn	**Sb**	**17 51 21.8**	**+1.0**
MMLI	**Mount Malkishu**	**1.80**	**198**	Pn	**Pn**	**17 50 56.7**	**0.0**
MMLI				Sn	**Sb**	**17 51 21.5**	**+0.3**
MMLI	**Mount Malkishu**	**1.80**	**198**	PN	**Pn**	**17 50 56.7**	**0.0**
MMLI				SN	**Sb**	**17 51 20.9**	**-0.3**
MMLI	**Mount Malkishu**	**1.80**	**198**	P	**Pn**	**17 50 57.1**	**+0.4**
MMLI				S	**Sb**	**17 51 21.5**	**+0.3**
MMLI				AML	AML	17 51 21.5	
	1.1nm,0.8s						
MMLI				AML	AML	17 51 21.5	
	1.1nm,0.8s						
MMLI				AML	AML	17 51 21.7	
	0.9nm,0.3s						
MMLI				AML	AML	17 51 21.7	
	0.9nm,0.3s						
YAYL	**Yayladag**	**1.88**	**1**	PN	**Pn**	**17 50 57.2**	**-0.7**
YAYL				SN	**Sb**	**17 51 23.3**	**-0.3**
PARAL	**Paralimni**	**1.89**	**297**	P	**Pn**	**17 50 58.3**	**+0.4**
PARAL				S	**Sn**	**17 51 21.6**	**+0.4**
PARAL				AML	AML	17 51 26.8	
	0.6nm,1.3s						
PARAL				AML	AML	17 51 26.8	
	0.6nm,1.3s						
PARAL				AML	AML	17 51 28.3	
	0.5nm,0.5s						
PARAL				AML	AML	17 51 28.3	
	0.5nm,0.5s						
HMDT	**Nahal Hemdat**	**1.95**	**194**	Pn	**Pn**	**17 50 58.8**	**0.0**
HMDT				Sn	**Sb**	**17 51 26.4**	**+0.9**
EREN	**Erenkoy**	**2.09**	**312**	PN	**Pn**	**17 50 59.9**	**-0.8**
SLTI	**Sal'it**	**2.10**	**205**	Pn	**Pn**	**17 51 00.7**	**-0.1**
SLTI				Sn	**Sb**	**17 51 29.0**	**-0.8**
MVOU	**Mavrovouni**	**2.20**	**294**	P	**Pn**	**17 51 02.2**	**0.0**
MVOU				S	**Sn**	**17 51 28.6**	**-0.4**
MVOU				AML	AML	17 51 38.6	
	0.2nm,0.4s						
MVOU				AML	AML	17 51 38.6	
	0.2nm,0.4s						
MVOU				AML	AML	17 51 39.8	
	0.2nm,0.7s						
MVOU				AML	AML	17 51 39.8	
	0.2nm,0.7s						
TAHT	**Tahtakopru-Hat**	**2.22**	**2**	PN	**Pn**	**17 51 02.6**	**+0.1**
TAHT				SN	**Sb**	**17 51 31.9**	**-1.4**
LFK	**Lefkose**	**2.39**	**299**	PN	**Pn**	**17 51 03.9**	**-0.9**
CSS	**Mathiatis**	**2.41**	**290**	PN	**Pn**	**17 51 04.3**	**-0.9**
CSS	**Mathiatis**	**2.41**	**290**	P	**Pn**	**17 51 05.9**	**+0.8**
CSS				S	**Sn**	**17 51 34.3**	**0.0**
ASGA	**Asgata**	**2.43**	**286**	P	**Pn**	**17 51 05.5**	**+0.1**
ASGA				S	**Sn**	**17 51 34.5**	**-0.1**
ASGA				AML	AML	17 51 39.6	
	0.3nm,0.3s						
ASGA				AML	AML	17 51 39.6	
	0.3nm,0.3s						
ASGA				AML	AML	17 51 40.0	
	0.3nm,0.3s						
ASGA				AML	AML	17 51 40.0	
	0.3nm,0.3s						
KRTS	**Karatas**	**2.48**	**347**	PN	**Pn**	**17 51 06.4**	**+0.3**
DSI	**Dead Sea**	**2.64**	**193**	Pn	**Pn**	**17 51 10.0**	**+1.7**
AMAZ	**Amatzia**	**2.79**	**201**	Pn	**Pn**	**17 51 10.5**	**+0.1**
AMAZ	**Amatzia**	**2.79**	**201**	P	**Pn**	**17 51 12.0**	**+1.6**
AMAZ				AML	AML	17 51 55.0	
	0.7nm,0.4s						
LEF	**Lefka**	**2.81**	**291**	PN	**Pn**	**17 51 10.2**	**-0.3**
KIZK	**Mersin**	**2.81**	**326**	PN	**Pn**	**17 51 10.8**	**+0.1**
SLFK	**Silifke-Mersin**	**2.84**	**323**	PN	**Pn**	**17 51 10.6**	**-0.4**
IKL	**Isikli**	**2.86**	**317**	PN	**Pn**	**17 51 10.9**	**-0.4**
CEYT	**Ceyhan**	**2.87**	**355**	PN	**Pn**	**17 51 11.6**	**+0.3**
GHAJ	**Ghor Haditha**	**2.87**	**189**	Pn	**Pn**	**17 51 12.1**	**+0.7**
AKKU	**Akkuyu-Mersin**	**2.88**	**315**	PN	**Pn**	**17 51 09.5**	**-2.1**
YTIR	**Yattir**	**2.90**	**197**	Pn	**Pn**	**17 51 12.3**	**+0.4**
YTIR				Sn	**Sb**	**17 51 50.3**	**-2.6**
NATA	**Nata**	**2.97**	**283**	⇑*e*P	**Pn**	**17 51 13.4**	**+0.5**
MERS	**Mersin**	**3.00**	**335**	PN	**Pn**	**17 51 13.6**	**+0.4**
KEBE	**Keben-Mersin**	**3.00**	**320**	PN	**Pn**	**17 51 13.2**	**-0.1**
ALFC	**Alefka**	**3.04**	**290**	P	**Pn**	**17 51 14.5**	**+0.7**
ALFC				AML	AML	17 51 51.8	
	0.4nm,0.2s						
ALFC				AML	AML	17 51 52.4	
	0.4nm,0.4s						
TEVE	**Tevekalti-Mers**	**3.14**	**317**	PN	**Pn**	**17 51 14.9**	**-0.3**
TEKE	**Tekeli-Mersin**	**3.14**	**310**	PN	**Pn**	**17 51 15.0**	**-0.2**
BERE	**Bereket-Mersin**	**3.21**	**314**	PN	**Pn**	**17 51 16.2**	**0.0**
AKMS	**Akamas**	**3.21**	**287**	⇑*e*P	**Pn**	**17 51 16.3**	**+0.2**
AKMS				AML	AML	17 51 57.4	
	0.3nm,0.3s						
AKMS				AML	AML	17 52 00.4	
	0.3nm,0.4s						
KARA	**Karaisali**	**3.21**	**345**	PN	**Pn**	**17 51 16.2**	**0.0**
KOZT	**Kozan**	**3.33**	**356**	PN	**Pn**	**17 51 18.6**	**+0.9**
OSC2	**CSNet OBS 4**	**3.36**	**252**	P	**Pn**	**17 51 18.8**	**+0.6**
OSC2				S	**Sn**	**17 51 58.7**	**+1.1**
KZIT	**Kziot**	**3.54**	**204**	Pn	**Pn**	**17 51 21.3**	**+0.7**
CMRD	**Camardi-Nigde**	**3.62**	**346**	PN	**Pn**	**17 51 21.9**	**+0.1**
GAZI	**Gazipasa**	**3.72**	**305**	PN	**Pn**	**17 51 23.3**	**+0.1**
PRNI	**Paran**	**3.90**	**194**	Pn	**Pn**	**17 51 25.7**	**+0.1**
OSC1	**CSNet OBS 1**	**4.06**	**262**	S	**Sn**	**17 52 16.0**	**+1.3**
KRMI	**Paran Flat**	**4.18**	**196**	Pn	**Pn**	**17 51 31.0**	**+1.5**
HRFI	**Mount Harif**	**4.20**	**193**	Pn	**Pn**	**17 51 30.7**	**+1.0**
HRFI				Sn	**Sn**	**17 52 22.6**	**+4.3**

IDC 06 18:06:54.7±1.5**, 30°.23S**×**177°.51W, h0**^{km}**, mb3.3**/2**,**
mb1 3.6/2**, mb1mx3.4**/30**, mbtmp3.3**/2**, Error ellipse:**
s-maj=32.5km s-min=8.3km az=85.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.04**	**340**	Pn	Pn	18 07 18.1	+1.6
	86nm,0.3s,baz=235,slow=23,SNR=1.5						
RAO				Sn	Sn	18 07 32.4	+0.7
	342nm,0.3s,baz=203,slow=23,SNR=6.9						
ASAR	**Alice Springs**	**43.54**	**267**	P	P	18 15 00.5	0.0
	0.2nm,0.6s,baz=102,slow=7.7,SNR=1.4						
WRA	**Warramunga Arr**	**44.52**	**272**	P	P	18 15 08.1	-0.2
	0.4nm,0.5s,baz=110,slow=8.1,SNR=6.1						
FINES	**FINESS Array B**	**145.13**	**340**	PKPbc	PKPbc	18 26 31.6	-1.4
	1.7nm,0.8s,baz=66,slow=3.4,SNR=4.5						

IDC 06 18:17:11.9±1.9**, 6°.54S**×**130°.14E, h0**^{km}**, mb3.4**/1**,**
mb1 3.5/4**, mb1mx3.3**/37**, mbtmp3.4**/4**, ML3.3**/3**, Error**
ellipse: s-maj=79.3km s-min=28.8km az=81.0, Banda
Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.74**	**11**	Pn	Pn	18 18 38.9	+0.4
	1.6nm,0.3s,baz=295,slow=23,SNR=11						
SIJI				Sn	Sn	18 19 37.8	-7.3
	1.4nm,0.3s,baz=141,slow=22,SNR=12						
WRA	**Warramunga Arr**	**13.93**	**163**	Pn	Pn	18 20 29.5	-1.3
	0.1nm,0.3s,baz=347,slow=14,SNR=8.3						
ASAR	**Alice Springs**	**17.41**	**168**	P	P	18 21 17.6	-0.2
	0.1nm,0.3s,baz=349,slow=9.4,SNR=5.4						
MKAR	**Makanchi Array**	**67.92**	**327**	P	P	18 28 12.3	-0.2
	0.2nm,0.4s,baz=113,slow=8.3,SNR=1.9						

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*IDC **06** 18:17:46.3±1.3, 8°.29S×125°.37E, h0^{km}, mb3.7/4,*
mb1 3.9/8, mb1mx3.7/39, mbtmp3.8/8, ML3.6/4, Error
ellipse: s-maj=35.9km s-min=20.7km az=75.0
*DJA **06** 18:17:50.4±0.9, 8°S±7°×12°5E±°, h10^{km}, M3.7/7, mb4.1/3,*
MLv3.5/7
ISC 06 18:17:47.2±0.9**, 8°.43S**±0°.07×**125°.18E**±0°.08**, h10**^{km}**, n15,**
σ**2^{s}.26**/18**, mb3.9**/4**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**2.32**	**220**	Pn	**Pb**	**18 18 28.9**	**-0.2**
	12nm,0.3s,baz=113,slow=1.6,SNR=18						
BATI				Sn	**Sg**	**18 19 00.6**	**-1.1**
	14nm,0.3s,baz=327,slow=23,SNR=5.7						
BATI	**Baumata**	**2.32**	**220**	P	**Pb**	**18 18 29.4**	**+0.3**
MMRI	**Maumere**	**2.92**	**266**	P	**Pn**	**18 18 32.4**	**-1.3**
EDFI	**Ende, Flores**	**3.46**	**264**	P	**Pn**	**18 18 40.4**	**-0.9**
BSSI	**Bau Bau, Buton**	**5.17**	**296**	P	**Pn**	**18 19 01.8**	**-2.9**
WBSI	**Waikabubak, Su**	**5.84**	**258**	P	**Pn**	**18 19 13.9**	**-0.1**
	0.1nm18nm,0.7s						
BKSI	**Bulukumba**	**5.89**	**301**	P	**Pn**	**18 19 10.8**	**-3.8**
	0.0nm7.8nm,1.1s						
PLAI	**Plampang**	**7.33**	**266**	P	**Pn**	**18 19 33.6**	**-0.8**
FITZ	**Fitzroy Crossi**	**9.62**	**177**	Pn	**Pn**	**18 20 07.4**	**+1.5**
	0.4nm,0.3s,baz=357,slow=11,SNR=30						
FITZ				Sn	**Sn**	**18 21 51.4**	**-2.8**
	1.6nm,0.3s,baz=144,slow=4.1,SNR=12						
WRA	**Warramunga Arr**	**14.48**	**143**	Pn	**Pn**	**18 21 11.9**	**-0.5**
	0.3nm,0.3s,baz=318,slow=13,SNR=16						
WRA				Sn	**Sn**	**18 23 48.6**	**-4.5**
	0.3nm,0.3s,baz=312,slow=22,SNR=4.5						
ASAR	**Alice Springs**	**17.31**	**152**	P	**Pn**	**18 21 50.3**	**+1.2**
	0.3nm,0.3s,baz=322,slow=10,SNR=6.9						
CMAR	**Chiang Mai Arr**	**37.20**	**316**	P	**P**	**18 25 01.7**	**+2.8**
	0.7nm,0.3s,baz=152,slow=6.5,SNR=4.7						
MKAR	**Makanchi Array**	**66.90**	**329**	P	**P**	**18 28 38.5**	**-1.2**
	0.4nm,0.5s,baz=129,slow=7.2,SNR=4.0						
VNDA	**Vanda**	**71.66**	**172**	P	**P**	**18 29 10.9**	**+2.2**
	0.2nm,0.5s,baz=322,slow=8.2,SNR=1.2						
QSPA	**South Pole Qui**	**81.56**	**180**	P	**P**	**18 30 06.7**	**+1.6**
	0.6nm,0.6s,baz=297,slow=1.2,SNR=6.4						

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*SLM **06** 18:39:00.1±1.6, 37°.43N±0°.01×90°.10W±0°.02, h12^{km}±6^{km},*
Md2.5/20, mb_Lg2.9/100(NEIC), Error ellipse: s-maj=2.2km
s-min=1.6km az=96.0
NEIC 06 18:38:59.3±1.3**, 37°.44N**±0°.01×**90°.10W**±0°.02**, h9**^{km}±6^{km}**,**
Error ellipse: s-maj=2.4km s-min=1.9km az=58.0,
Missouri-Illinois border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CGM3	**Cape Girardeau**	**0.38**	**112**		Pg	18 39 07.3	+0.5
CGM3					Sg	18 39 12.5	+0.7
GUAMO	**Guam**	**0.59**	**159**		Pg	18 39 10.9	+0.2
GUAMO					Sg	18 39 18.9	+0.4
FVM	**French Village**	**0.60**	**335**		Pg	18 39 11.2	+0.2
FVM				Sg	Sg	18 39 19.5	+0.6
PBMO	**Poplar Bluff**	**0.71**	**202**		Pg	18 39 13.1	+0.1
PBMO				Sg	Sg	18 39 22.1	-0.1
BRNM	**Bernie**	**0.72**	**173**		Pg	18 39 13.2	0.0
BRNM					Sg	18 39 22.9	+0.3
S44A	**Carbondale**	**0.72**	**69**		Pg	18 39 12.9	-0.3
S44A				Sg	Sg	18 39 22.9	+0.3
SIUC	**Southern Illin**	**0.76**	**68**		Pg	18 39 13.5	-0.4
SIUC				Sg	Sg	18 39 22.9	-0.8
MATM	**Matthews**	**0.77**	**149**		Pg	18 39 14.3	0.0
COKM	**Charter Oak**	**0.79**	**157**		Pg	18 39 14.3	-0.2
DWDM	**Dogwood**	**0.81**	**143**		Pg	18 39 14.8	-0.1
DWDM					Sg	18 39 25.5	+0.2
PARMO	**Parma**	**0.82**	**160**		Pg	18 39 14.9	-0.3
PARMO				Sg	Sg	18 39 25.8	-0.1
BETM	**Bethany**	**0.83**	**178**		Pg	18 39 15.2	0.0
BETM					Sg	18 39 26.4	+0.4
MLDM	**Malden**	**0.83**	**170**		Pg	18 39 15.1	-0.1
MLDM					Sg	18 39 26.2	+0.3
CHRM	**Charleston**	**0.83**	**134**		Pg	18 39 15.4	0.0
CHRM					Sg	18 39 26.5	+0.3
KEWM	**Kewanee**	**0.84**	**151**		Pg	18 39 15.4	-0.2
HENM	**Henderson Moun**	**0.88**	**145**		Pg	18 39 16.0	-0.3
HENM				Sg	Sg	18 39 27.5	-0.2
T42A	**Van Buren**	**0.89**	**243**		Pg	18 39 16.1	-0.3
T42A				Sg	Sg	18 39 27.8	-0.2
CATM	**Catron**	**0.90**	**156**		Pg	18 39 16.4	-0.3
CATM					Sg	18 39 28.7	+0.3
TOPM	**Tallapoosa**	**0.93**	**169**		Pg	18 39 16.9	-0.2
EPRM	**East Prairie**	**0.94**	**140**		Pg	18 39 16.9	-0.4
EPRM					Sg	18 39 29.5	0.0
MARMO	**Marston**	**0.97**	**159**		Pg	18 39 17.6	-0.4
MARMO					Sg	18 39 30.7	+0.1
WALK	**Watson Lake**	**1.00**	**153**		Pg	18 39 18.1	-0.5
WALK					Sg	18 39 31.7	0.0
PGVM	**Portageville**	**1.02**	**163**		Pg	18 39 18.5	-0.5
PGVM					Sg	18 39 32.2	0.0
PENMO	**Penman**	**1.06**	**159**		Pg	18 39 18.9	-0.7
PENMO	**Penman**	**1.06**	**159**	Sg	Sg	18 39 33.1	-0.3
PVMO	**Portageville**	**1.07**	**162**	Pg	Pg	18 39 18.4	-1.6
PVMO				Sg	Sg	18 39 33.4	-0.5
POBM	**Portage Bay**	**1.09**	**161**		Pg	18 39 19.8	-0.4
CCM	**Cathedral Cave**	**1.09**	**305**		Pg	18 39 19.8	-0.5
CCM	**Cathedral Cave**	**1.09**	**305**	Sg	Sg	18 39 33.7	-0.9
HICK	**Hickman**	**1.14**	**142**		Pb	18 39 20.4	-0.7
HICK				Sg	Sg	18 39 34.8	-1.1
SLM	**Saint Louis**	**1.20**	**355**		Pb	18 39 21.7	-0.5
SLM				Sg	Sb	18 39 37.2	-0.7
GLAT	**Glass**	**1.34**	**150**		Pn	18 39 24.1	-0.1
GLAT				Sn	Sb	18 39 41.5	-0.3
PEBM	**Pemiscott Bayo**	**1.34**	**172**		Pn	18 39 23.9	-0.2
PEBM					Sg	18 39 42.2	-0.2
PEBM				IAmb_Lg		18 39 45.1	
	comp=Z,120nm,0.9s						
LNXT	**Lenox**	**1.42**	**160**		Pn	18 39 25.6	+0.3
GNAR	**Gosnell**	**1.47**	**177**		Pn	18 39 26.2	+0.2
UTMT	**University of**	**1.48**	**137**	Pn	Pn	18 39 26.4	+0.3
LCAR	**Lake Charles**	**1.61**	**212**		Pn	18 39 28.0	+0.1
HALT	**Halls**	**1.65**	**158**		Pn	18 39 29.1	+0.7
HALT				IAmb_Lg		18 39 52.0	
	comp=Z,78nm,0.8s						
Q44A	**Meyer Farm, Va**	**1.69**	**30**		Pn	18 39 29.8	+0.8
Q44A				IAmb_Lg		18 39 55.8	
	comp=Z,95nm,0.7s						
MGMO	**Mountain Grove**	**1.75**	**261**		Pn	18 39 30.7	+0.8
LPAR	**Lepanto**	**1.84**	**185**		Pn	18 39 31.0	-0.1
R40A	**Maddies Statio**	**1.91**	**297**		Pn	18 39 32.9	+0.9
R40A				IAmb_Lg		18 40 02.5	
	comp=Z,56nm,0.9s						
HBAR	**Harrisburg**	**1.93**	**194**		Pn	18 39 33.5	+1.2
HBAR	**Harrisburg**	**1.93**	**194**	IAmb_Lg		18 40 02.4	
	comp=Z,72nm,0.7s						
OLIL	**Olney**	**2.04**	**50**		Pn	18 39 34.3	+0.4
SFTN	**Shelby Forest**	**2.08**	**178**		Pb	18 39 37.1	-0.1
FCAR	**Ozark Folk Cen**	**2.24**	**227**		Pn	18 39 37.3	+0.7
FCAR				IAmb_Lg		18 40 15.0	
	comp=Z,42nm,0.8s						
P43A	**Skaggs, Pawnee**	**2.25**	**12**		Pb	18 39 38.9	-1.2
P43A				IAmb_Lg		18 40 11.0	
	comp=Z,65nm,0.9s						
WVT	**Waverly**	**2.25**	**125**		Pn	18 39 36.9	+0.2
EBZ	**Ebenezer Churc**	**2.37**	**165**		Pb	18 39 43.1	+0.9
W45A	**Hickory Valley**	**2.40**	**162**		Pn	18 39 38.7	0.0
T47A	**Sharon Grove**	**2.44**	**100**		Pn	18 39 38.7	-0.5
U40A	**Yellville**	**2.46**	**245**		Pn	18 39 39.8	+0.3
S39A	**Bolivar**	**2.57**	**277**		Pn	18 39 41.6	+0.5
P40A	**Paris**	**2.59**	**324**		Pn	18 39 42.1	+0.8
WHAR	**Wooly Hollow**	**2.78**	**220**		Pn	18 39 44.0	+0.1
PLAL	**Pickwick Lake**	**2.95**	**146**		Pn	18 39 45.8	-0.5
PWLA	**Pickwick Lake**	**2.96**	**145**		Pn	18 39 46.1	-0.3
OXF	**Oxford**	**2.98**	**169**		Pn	18 39 46.4	-0.3
OXF				IAmb_Lg		18 40 40.7	
	comp=Z,34nm,1.0s						
O44A	**Mansfield**	**3.00**	**25**		Pn	18 39 46.4	-0.5
O44A				IAmb_Lg		18 40 43.3	
	comp=Z,35nm,0.7s						
WCI	**Wyandotte Cave**	**3.12**	**74**		Pn	18 39 48.4	-0.2
V48A	**Smith Brothers**	**3.14**	**122**	Pn	Pn	18 39 47.2	-1.7
P46A	**Rosedale**	**3.15**	**45**		Pn	18 39 47.3	-1.7
HDIL	**Hopedale**	**3.18**	**11**		Pn	18 39 50.5	+1.1
HDIL				IAmb_Lg		18 40 46.6	
	comp=Z,37nm,0.7s						
HHAR	**Hobbs**	**3.29**	**251**		Pn	18 39 51.5	+0.5
BLO	**Bloomington**	**3.31**	**57**	Pn	Pn	18 39 50.0	-1.2
CLTN	**Cedars of Leba**	**3.31**	**113**	Pn	Pn	18 39 51.2	-0.2
CLTN				IAmb_Lg		18 40 43.9	
	comp=Z,39nm,1.0s						
N41A	**Harden Midland**	**3.32**	**350**		Pn	18 39 52.2	+0.8
P38A	**Dawn**	**3.46**	**310**		Pn	18 39 54.3	+0.9
U38A	**Gravette**	**3.57**	**255**		Pn	18 39 55.4	+0.5
U38A				IAmb_Lg		18 40 54.0	
	comp=Z,25nm,0.8s						
U49A	**Red Boiling Sp**	**3.58**	**104**	Pn	Pn	18 39 56.3	+1.2
Y45A	**Yeager Farm, C**	**3.59**	**173**		Pn	18 39 54.4	-0.8
X40A	**Basin Creek Fa**	**3.69**	**218**		Pn	18 39 56.6	+0.1
X40A				IAmb_Lg		18 41 02.7	
	comp=Z,25nm,0.8s						
W39A	**Magazine**	**3.72**	**234**		Pn	18 39 57.5	+0.5
SFIN	**Lafayette**	**3.76**	**38**		Pn	18 39 56.6	-0.8
SFIN				IAmb_Lg		18 41 00.2	
	comp=Z,31nm,0.8s						
CCAR	**Cane Creek**	**3.77**	**202**	Pn	Pn	18 39 57.1	-0.4
CCAR				IAmb_Lg		18 41 04.3	
	comp=Z,34nm,0.7s						
X48A	**Hartselle**	**3.88**	**139**		Pn	18 39 57.7	-1.4
X48A				IAmb_Lg		18 41 01.6	
	comp=Z,23nm,0.7s						
R49A	**Shelbyville**	**4.00**	**76**	Pn	Pn	18 40 00.2	-0.5
MIAR	**Mount Ida**	**4.03**	**225**	Pn	Pn	18 40 01.6	+0.4
SWET	**Sewanee**	**4.03**	**122**		Pn	18 40 01.5	+0.2
N38A	**Joes South For**	**4.14**	**325**		Pn	18 40 04.4	+1.7
P48A	**Milroy**	**4.19**	**60**	Pn	Pn	18 40 04.6	+1.2
P48A				IAmb_Lg		18 41 18.6	
	comp=Z,22nm,0.8s						
T50A	**Nancy**	**4.22**	**94**	Pn	Pn	18 40 05.2	+1.3
M44A	**Midewin, Midew**	**4.25**	**21**	Pn	Pn	18 40 05.0	+0.7
M44A				IAmb_Lg		18 41 23.9	
	comp=Z,31nm,0.8s						

W50A	**Signal Mountai**	**4.47**	**119**		Pn	18 40 07.8	+0.6
W50A				IAmb_Lg		18 41 24.8	
	comp=Z,28nm,0.8s						
WLAR	**White Oak Lake**	**4.47**	**214**	Pn	Pn	18 40 06.0	-1.3
WLAR				IAmb_Lg		18 41 31.1	
	comp=Z,29nm,1.0s						
Z47A	**Carrollton**	**4.54**	**158**	Pn	Pn	18 40 08.5	+0.2
Z47A				IAmb_Lg		18 41 23.6	
	comp=Z,34nm,1.0s						
L42A	**Oliver, Polo**	**4.57**	**4**		Pn	18 40 08.7	0.0
R50A	**Paris**	**4.65**	**78**		Pn	18 40 13.2	+3.6
FPAL	**Fort Paine**	**4.65**	**127**		Pn	18 40 10.4	+0.6
FPAL				IAmb_Lg		18 41 25.8	
	comp=Z,31nm,1.0s						
Y49A	**Blount Mountai**	**4.67**	**139**	Pn	Pn	18 40 09.5	-0.5
L40A	**Anamosa**	**4.70**	**350**		Pn	18 40 11.1	+0.7
P49A	**Miami Univ. Ec**	**4.72**	**62**	Pn	Pn	18 40 09.9	-0.7
BCRT	**Bacon Ridge**	**4.75**	**109**		Pn	18 40 14.6	+3.5
TUL1	**Leonard**	**4.82**	**253**	Pn	Pn	18 40 10.7	-1.3
TUL1				IAmb_Lg		18 41 34.2	
	comp=Z,21nm,0.9s						
143A	**Socs Landing,**	**4.84**	**193**	IAmb_Lg		18 41 40.0	
	comp=Z,20nm,0.9s						
N47A	**Urbana**	**4.85**	**44**	Pn	Pn	18 40 12.6	+0.1
V51A	**Loudon**	**4.91**	**108**		Pn	18 40 12.1	-1.1
CPCT	**Cooper Cave**	**4.92**	**112**	Pn	Pn	18 40 11.2	-2.2
SCIA	**State Center**	**5.07**	**333**		Pn	18 40 13.4	-2.1
SCIA				IAmb_Lg		18 41 53.3	
	comp=Z,24nm,0.7s						
X51A	**Calhoun**	**5.13**	**122**	Pn	Pn	18 40 16.9	+0.6
X51A				IAmb_Lg		18 41 39.9	
	comp=Z,30nm,0.8s						
X37A	**Clayton**	**5.13**	**238**	IAmb_Lg		18 41 52.3	
	comp=Z,26nm,0.9s						
T35A	**Sooner Cattle**	**5.14**	**266**		Pn	18 40 14.6	-2.0
T35A				IAmb_Lg		18 41 49.8	
	comp=Z,28nm,1.0s						
S51A	**Beattyville**	**5.18**	**86**	Pn	Pn	18 40 16.1	-0.9
O49A	**Covington**	**5.28**	**57**	Pn	Pn	18 40 18.5	+0.2
TZTN	**Tazewell**	**5.32**	**98**	Pn	Pn	18 40 19.9	+1.0
TZTN				IAmb_Lg		18 41 49.0	
	comp=Z,17nm,0.9s						
L46A	**Eue Claire**	**5.43**	**32**	Pn	Pn	18 40 21.3	+0.9
K43A	**Burlington**	**5.43**	**14**	Pn	Pn	18 40 21.1	+0.7
JFWS	**Jewell Farm**	**5.47**	**359**	IAmb_Lg		18 41 55.3	
	comp=Z,19nm,0.9s						
V52A	**Sevierville**	**5.47**	**105**	Pn	Pn	18 40 19.6	-1.4
V52A				IAmb_Lg		18 41 56.0	
	comp=Z,17nm,0.9s						
N35A	**Tabor**	**5.50**	**310**	Pn	Pn	18 40 21.3	0.0
W52A	**Murphy**	**5.51**	**113**	Pn	Pn	18 40 23.5	+1.9
W52A				IAmb_Lg		18 41 55.5	
	comp=Z,23nm,0.8s						
Q51A	**Peebles**	**5.55**	**71**	Pn	Pn	18 40 21.1	-1.0
Q51A				IAmb_Lg		18 42 11.8	
	comp=Z,23nm,0.8s						
OK030	**Cody Creek RV**	**5.58**	**256**	IAmb_Lg		18 42 05.8	
	comp=Z,25nm,0.9s						
Z51A	**Franklin**	**5.75**	**134**	Pn	Pn	18 40 22.7	-2.2
N49A	**Columbus Grove**	**5.77**	**51**	IAmb_Lg		18 42 02.2	
	comp=Z,20nm,0.7s						
Z38A	**Mt. Pleasant**	**5.77**	**225**	IAmb_Lg		18 42 15.0	
	comp=Z,21nm,0.8s						
P51A	**Williamsport**	**5.89**	**68**	IAmb_Lg		18 42 05.1	
	comp=Z,23nm,0.8s						
V53A	**Saluda**	**6.13**	**105**	IAmb_Lg		18 42 14.7	
	comp=Z,14nm,0.9s						
ACSO	**Alum Creek Sta**	**6.22**	**61**	IAmb_Lg		18 42 14.9	
	comp=Z,24nm,1.0s						
250A	**Grady**	**6.30**	**149**	IAmb_Lg		18 42 19.7	
	comp=Z,17nm,0.8s						
342A	**Flagon Creek P**	**6.32**	**198**	IAmb_Lg		18 42 33.2	
	comp=Z,18nm,0.8s						
152A	**Waverly Hall**	**6.49**	**136**	IAmb_Lg		18 42 28.2	
	comp=Z,15nm,0.8s						
R53A	**Hurricane**	**6.51**	**80**	IAmb_Lg		18 42 32.6	
	comp=Z,20nm,1.0s						
U54A	**Nelsons Funny**	**6.69**	**95**	IAmb_Lg		18 42 37.6	
	comp=Z,16nm,0.8s						
HODGE	**Hodges**	**7.13**	**114**	IAmb_Lg		18 42 48.2	
	comp=Z,11nm,1.0s						
U32A	**Winter Ranch,**	**7.21**	**264**	IAmb_Lg		18 42 57.2	
	comp=Z,16nm,0.9s						
CBKS	**Cedar Bluff**	**7.72**	**283**	IAmb_Lg		18 43 10.4	
	comp=Z,13nm,0.7s						
BLA	**Blacksburg**	**7.72**	**89**	IAmb_Lg		18 43 23.3	
	comp=Z,14nm,0.9s						
ECSD	**EROS Data Cent**	**8.00**	**324**	IAmb_Lg		18 43 26.0	
	comp=Z,9.3nm,1.1s						

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*SLM **06** 18:40:50.4±0.9, 37°.44N±0°.01×90°.10W±0°.02, h9^{km}±6^{km}, Md2.1/10, mb_Lg2.8/23(NEIC), Error ellipse: s-maj=1.9km s-min=1.8km az=90.0*

NEIC 06 18:40:49.9±1.0**, 37°.43N**±0°.01×**90°.11W**±0°.02**, h8**^{km}±6^{km}**, Error ellipse: s-maj=1.9km s-min=1.8km az=108.0, Missouri-Illinois border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CGM3	**Cape Girardeau**	**0.39**	**110**		Pg	18 40 57.6	+0.1
CGM3					Sg	18 41 02.8	+0.3
GUAMO	**Guam**	**0.58**	**158**		Pg	18 41 01.3	+0.2
FVM	**French Village**	**0.61**	**336**	Pg	Pg	18 41 01.9	+0.2
FVM				Sg	Sg	18 41 10.0	+0.4
PBMO	**Poplar Bluff**	**0.70**	**201**	Pg	Pg	18 41 03.3	0.0
PBMO				Sg	Sg	18 41 12.7	+0.3
BRNM	**Bernie**	**0.71**	**172**		Pg	18 41 03.5	-0.1
BRNM					Sg	18 41 13.2	+0.4
S44A	**Carbondale**	**0.73**	**69**	Pg	Pg	18 41 03.7	-0.3
S44A				Sg	Sg	18 41 13.5	0.0
SIUC	**Southern Illin**	**0.77**	**68**	Pg	Pg	18 41 04.1	-0.6
SIUC				Sg	Sg	18 41 14.2	-0.5
MATM	**Matthews**	**0.77**	**148**		Pg	18 41 04.7	0.0
MATM					Sg	18 41 15.2	+0.5
COKM	**Charter Oak**	**0.78**	**156**		Pg	18 41 04.6	-0.3
COKM					Sg	18 41 15.5	+0.4
DWDM	**Dogwood**	**0.80**	**142**		Pg	18 41 05.2	-0.2
BETM	**Bethany**	**0.82**	**177**		Pg	18 41 05.5	-0.1
MLDM	**Malden**	**0.82**	**169**		Pg	18 41 05.5	-0.1
MLDM					Sg	18 41 16.6	+0.3
PARMO	**Parma**	**0.82**	**159**	Pg	Pg	18 41 05.3	-0.3
PARMO				Sg	Sg	18 41 16.6	+0.4
CHRM	**Charleston**	**0.83**	**134**		Pg	18 41 05.5	-0.4
KEWM	**Kewanee**	**0.84**	**150**		Pg	18 41 05.7	-0.3
T42A	**Van Buren**	**0.88**	**243**	Pg	Pg	18 41 06.8	0.0
T42A				Sg	Sg	18 41 18.2	+0.1
HENM	**Henderson Moun**	**0.88**	**144**	Pg	Pg	18 41 06.4	-0.4
HENM				Sg	Sg	18 41 17.9	-0.2
CATM	**Catron**	**0.90**	**155**		Pg	18 41 06.8	-0.4
TOPM	**Tallapoosa**	**0.92**	**169**		Pg	18 41 07.2	-0.3
EPRM	**East Prairie**	**0.93**	**139**		Pg	18 41 07.4	-0.4
SJMO	**Saint John's B**	**0.95**	**147**		Pg	18 41 07.7	-0.4
MARMO	**Marston**	**0.96**	**158**		Pg	18 41 08.0	-0.4
PENMO	**Penman**	**1.05**	**158**	Pg	Pg	18 41 09.5	-0.6
PENMO				Sg	Sg	18 41 23.7	0.0
CCM	**Cathedral Cave**	**1.09**	**305**	Pg	Pg	18 41 10.2	-0.7
CCM	**Cathedral Cave**	**1.09**	**305**	Sg	Sg	18 41 24.2	-0.9
HICK	**Hickman**	**1.14**	**141**	Pg	Pg	18 41 10.7	-1.0
HICK				IAmb_Lg		18 41 26.4	
	comp=Z,93nm,0.9s						
PEBM	**Pemiscott Bayo**	**1.33**	**171**		Pn	18 41 14.5	-0.3
PEBM					Sn	18 41 33.1	+0.5
GLAT	**Glass**	**1.33**	**150**		Pn	18 41 14.3	-0.6
GLAT					Pg	18 41 15.8	+0.3
LNXT	**Lenox**	**1.42**	**159**	Pn	Pn	18 41 16.1	+0.1
GNAR	**Gosnell**	**1.46**	**177**	Pn	Pn	18 41 16.8	+0.2
LCAR	**Lake Charles**	**1.59**	**212**	Pn	Pn	18 41 18.8	+0.3
HALT	**Halls**	**1.64**	**157**	Pn	Pn	18 41 18.9	-0.1
HALT				IAmb_Lg		18 41 42.6	
	comp=Z,55nm,0.9s						
Q44A	**Meyer Farm, Va**	**1.71**	**30**	Pn	Pn	18 41 20.6	+0.5
Q44A				IAmb_Lg		18 41 48.7	
	comp=Z,53nm,0.9s						
MGMO	**Mountain Grove**	**1.74**	**262**	Pn	Pn	18 41 21.1	+0.6
LPAR	**Lepanto**	**1.83**	**185**	Pn	Pn	18 41 22.5	+0.8
LPAR				IAmb_Lg		18 41 52.5	
	comp=Z,59nm,0.8s						
R40A	**Maddies Statio**	**1.91**	**297**	IAmb_Lg		18 41 55.7	
	comp=Z,39nm,0.8s						
P43A	**Skaggs, Pawnee**	**2.26**	**12**	Pn	Pb	18 41 29.5	-1.4
P43A				IAmb_Lg		18 42 01.7	
	comp=Z,42nm,0.9s						
P40A	**Paris**	**2.59**	**325**	Pn	Pn	18 41 31.0	-1.1
P46A	**Rosedale**	**3.16**	**45**	IAmb_Lg		18 42 30.4	
	comp=Z,32nm,0.9s						
HDIL	**Hopedale**	**3.19**	**11**	IAmb_Lg		18 42 33.8	
	comp=Z,24nm,0.7s						
CLTN	**Cedars of Leba**	**3.32**	**113**	IAmb_Lg		18 42 33.8	
	comp=Z,14nm,0.9s						
BLO	**Bloomington**	**3.32**	**57**	IAmb_Lg		18 42 34.4	
	comp=Z,31nm,0.7s						
P38A	**Dawn**	**3.46**	**310**	IAmb_Lg		18 42 39.2	
	comp=Z,31nm,0.7s						
X40A	**Basin Creek Fa**	**3.67**	**218**	IAmb_Lg		18 42 51.8	
	comp=Z,14nm,0.7s						
MIAR	**Mount Ida**	**4.02**	**225**	IAmb_Lg		18 43 08.1	
	comp=Z,25nm,1.1s						

TAP 06 18:46:40.9, 24°.82N×121°.92E, h11^{km}±1^{km}**, ML1.8, D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NTC	**Toucheng**	**0.09**	**292**	P	Pg	18 46 44.1	+0.8
	baz=291						
NTC				S	Sg	18 46 46.3	+1.1
	baz=291						
TIPB	**Shuangxi**	**0.17**	**331**	*i* P	Pb	18 46 45.5	-0.6
	baz=330						
TIPB				*i* S	Sg	18 46 48.5	+1.2
	baz=330						
TWB1	**Santiao Chiao**	**0.20**	**19**	*i* P	Pg	18 46 45.1	0.0
	baz=21						
TWE	**Neicheng**	**0.25**	**246**	*i* P	Pb	18 46 47.0	-0.5
	baz=243						
TWE				S	Sg	18 46 50.9	+1.5
	baz=243						
NDS	**Dongshan**	**0.26**	**224**	*i* P	Pg	18 46 46.8	+0.6
	baz=224						
ENTT	**Nioudou**	**0.37**	**240**	*i* P	Pb	18 46 49.2	-0.2
	baz=239						
NWLT	**Wulai**	**0.38**	**263**	*i* P	Pb	18 46 49.6	-0.1
	baz=263						
NDT	**Datong Townshi**	**0.43**	**239**	P	Pb	18 46 50.4	-0.1
	baz=239						
YM01	**YM01**	**0.45**	**316**	*i* P	Pb	18 46 51.4	+0.5
	baz=315						
YM01				S	Sb	18 46 57.7	0.0
	baz=315						
YHNB	**Yeheng**	**0.52**	**253**	P	Pb	18 46 51.8	-0.2
	baz=252						
YHNB				*e*S	Sg	18 46 58.4	+0.6
	baz=252						
NSK	**Sanguang**	**0.53**	**254**	*e*P	Pb	18 46 51.9	-0.3
	baz=253						
NSK				*e*S	Sb	18 46 59.1	-0.8
	baz=253						

TAP 06 18:46:42.9, 24°.26N×121°.73E, h11^{km}**, ML1.7, 3D, D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETL	**Fush Village**	**0.14**	**222**	*i* P	Pb	18 46 47.0	-0.6
	baz=221						
ETL				S	Sg	18 46 49.9	+1.4
	baz=221						
NACB	**Ninganchiao**	**0.15**	**233**	⇓*i*P	Pg	18 46 47.0	+0.7
	baz=233						
NACB				*i* S	Sg	18 46 50.0	+1.3
	baz=233						
ENA	**Nanau**	**0.16**	**4**	*i* P	Pb	18 46 47.4	-0.6
	baz=7.0						
ENA				S	Sg	18 46 50.5	+1.4
	baz=7.0						
EWUT	**Wuta**	**0.19**	**15**	⇓*i*P	Pb	18 46 47.7	-0.6
	baz=14						
EWUT				S	Sg	18 46 50.9	+1.3
	baz=14						
TWD	**Chiawan**	**0.22**	**213**	*i* P	Pg	18 46 48.1	+0.7
	baz=211						
TWD				S	Sg	18 46 51.8	+1.2
	baz=211						
ETLH	**Xiulin Townshi**	**0.23**	**256**	P	Pb	18 46 48.6	-0.6
	baz=255						
ETLH				S	Sg	18 46 52.5	+1.5
	baz=255						
NNSB	**Datong**	**0.35**	**298**	*i* P	Pb	18 46 51.4	+0.1
	baz=297						
NNSB				S	Sb	18 46 56.9	0.0
	baz=297						
NNS	**Nan Shan**	**0.37**	**299**	⇓*i*P	Pb	18 46 51.5	0.0
	baz=298						
NNS				S	Sb	18 46 56.7	-0.6
	baz=298						
NDS	**Dongshan**	**0.37**	**358**	*i* P	Pb	18 46 51.2	-0.2
	baz=358						
NDS				*i* S	Sb	18 46 56.6	-0.6
	baz=358						
NDT	**Datong Townshi**	**0.39**	**330**	*e*P	Pb	18 46 51.2	-0.6
	baz=329						
ENTT	**Nioudou**	**0.40**	**339**	*e*P	Pb	18 46 52.0	0.0
	baz=339						
WHF	**Hehuan Shan**	**0.44**	**254**	*i* P	Pb	18 46 52.4	-0.5
	baz=253						
WHF				*e*S	Sb	18 46 59.0	-0.7
	baz=253						
FUSS	**Fushou**	**0.44**	**268**	P	Pb	18 46 52.8	-0.1
	baz=267						
FUSS				*e*S	Sb	18 46 59.1	-0.4
	baz=267						
TWE	**Neicheng**	**0.46**	**353**	*e*P	Pg	18 46 52.0	+0.1
	baz=354						
TWT	**Tachien**	**0.50**	**269**	*e*S	Sb	18 47 01.6	+0.4
	baz=268						
TDCB	**Techi**	**0.52**	**269**	*e*S	Sb	18 47 01.5	-0.2
	baz=268						
ESL	**Shilin**	**0.52**	**211**	*e*P	Pg	18 46 53.4	+0.3
	baz=210						
ESL				*e*S	Sb	18 47 01.8	+0.1
	baz=210						
CHGB	**Renai**	**0.54**	**248**	P	Pb	18 46 54.5	-0.1
	baz=248						
CHGB				*e*S	Sb	18 47 02.2	-0.3
	baz=248						
NWLT	**Wulai**	**0.55**	**338**	*i* P	Pb	18 46 54.6	+0.1
	baz=338						
OWD	**Renai**	**0.59**	**239**	*e*P	Pb	18 46 55.3	0.0
	baz=238						
OWD				*e*S	Sb	18 47 03.2	-0.6
	baz=238						
EGFH	**Guangfu**	**0.65**	**205**	*e*P	Pb	18 46 56.2	-0.1
	baz=204						
EGFH				*e*S	Sb	18 47 06.6	+1.2
	baz=204						
WHP	**Taichung City**	**0.71**	**271**	*e*S	Sb	18 47 08.2	+1.0
	baz=271						
LIOB	**Emei**	**0.75**	**301**	*e*P	Pn	18 46 59.1	-0.3
	baz=300						
WCS	**Beigang Elemen**	**0.77**	**255**	*e*P	Pn	18 47 00.0	+0.3
	baz=254						
SSLB	**Suanglung**	**0.85**	**236**	*e*P	Pb	18 46 59.9	+0.2
	baz=236						
SSLB				*e*S	Sg	18 47 10.5	+0.1
	baz=236						
TYC	**Yuchr**	**0.87**	**246**	*e*S	Sb	18 47 11.9	+0.2
	baz=245						

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*IDC **06** 19:00:33.5±1.0, 2°.33S×120°.51E, h0^{km}, mb3.7/6, mb1 3.9/7, mb1mx3.7/30, mbtmp3.7/7, ML3.2/1, MS3.3/6, Ms1 3.3/6, ms1mx2.9/33, Error ellipse: s-maj=42.4km s-min=16.8km az=68.0*

*DJA **06** 19:00:35.9±0.2, 2°S±3°×12°1E±°, h10^{km}, M4.1/17, mb4.2/6, MLv4.1/17*

ISC 06 19:00:35.1±0.8**, 2°.38S**±0°.05×**120°.53E**±0°.07**, h10**^{km}**, n25,** σ**1**^{s}**38**/22**, mb3.8**/6**, MS3.1**/3**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TTSI	**Tana Toraja**	**0.97**	**227**	P	**Pg**	**19 00 52.1**	**-1.8**
APSI	**Ampana**	**1.84**	**37**	P	**Pn**	**19 01 07.0**	**+0.2**
LUWI	**Luwuk**	**2.60**	**59**	P	**Pn**	**19 01 18.3**	**+1.0**
KAPI	**Kappang**	**2.73**	**197**	Pn	**Pn**	**19 01 19.7**	**+0.6**
	3.6nm,0.3s,baz=77,slow=3.0,SNR=20						
KAPI				Sn	**Sn**	**19 01 54.4**	**+2.2**
	3.5nm,0.3s,baz=200,slow=22,SNR=2.5						
MPSI	**Mapaga**	**2.77**	**347**	P	**Pn**	**19 01 20.3**	**+0.6**
BKSI	**Bulukumba**	**2.95**	**188**	P	**Pn**	**19 01 23.2**	**+1.1**
MRSI	**Marisa**	**3.17**	**26**	P	**Pn**	**19 01 26.4**	**+1.3**
BSSI	**Bau Bau, Buton**	**3.74**	**181**	P	**Pn**	**19 01 33.3**	**+0.4**
GTOI	**Gorontalo**	**3.89**	**40**	P	**Pn**	**19 01 36.5**	**+1.5**
KBKI	**Kotabaru**	**4.46**	**258**	P	**Pn**	**19 01 44.3**	**+1.5**
KMSI	**Cibinong**	**4.53**	**50**	P	**Pn**	**19 01 45.9**	**+2.1**
SANI	**Sanana**	**5.46**	**87**	P	**Pn**	**19 01 55.3**	**-1.3**
	0.1nm8.7nm,0.7s						
BBKI	**Banjar Baru**	**5.79**	**259**	P	**Pn**	**19 02 03.7**	**+2.6**
	0.1nm6.7nm,0.5s						
MTKI	**Muara Teweh, K**	**5.81**	**284**	P	**Pn**	**19 02 02.6**	**+1.1**
	0.2nm25nm,0.5s						
LBMI	**Labuha**	**7.18**	**76**	P	**Pn**	**19 02 20.5**	**+0.3**
	0.1nm28nm,0.8s						
BATI	**Baumata**	**8.37**	**158**	LR	LR	19 06 10.4	
	comp=Z,304nm,20.9s,baz=326,slow=40						
LEM	**Lembang**	**13.61**	**251**	LR	LR	19 10 13.3	
	comp=Z,81nm,19.5s,baz=314,slow=43						
FITZ	**Fitzroy Crossi**	**16.40**	**163**	LR	LR	19 11 16.2	
	comp=Z,89nm,18.9s,baz=354,slow=39						
WRA	**Warramunga Arr**	**22.06**	**143**	P	**P**	**19 05 30.6**	**+0.2**
	2.8nm,0.7s,baz=321,slow=11,SNR=7.3						
WRA				LR	LR	19 16 30.5	
	comp=Z,64nm,18.7s,baz=280,slow=43						
ASAR	**Alice Springs**	**24.80**	**150**	P	**P**	**19 05 58.2**	**+0.6**
	2.2nm,0.9s,baz=342,slow=15,SNR=26						
CMAR	**Chiang Mai Arr**	**29.67**	**315**	P	**P**	**19 06 41.0**	**-0.3**
	0.4nm,0.9s,baz=143,slow=7.4,SNR=4.2						
CMAR				LR	LR	19 20 25.6	
	comp=Z,78nm,18.1s,baz=195,slow=40						
JOW	**Kunigami**	**29.99**	**14**	LR	LR	19 17 08.0	
	comp=Z,34nm,20.0s,baz=132,slow=33						
STKA	**Stephens Creek**	**35.42**	**148**	P	**P**	**19 07 31.4**	**-0.1**
	1.2nm,0.7s,baz=308,slow=12,SNR=3.1						
SONM	**Songino Array**	**51.52**	**348**	P	**P**	**19 09 41.9**	**+0.7**
	0.8nm,0.8s,baz=157,slow=8.0,SNR=5.1						
MKAR	**Makanchi Array**	**59.39**	**330**	P	**P**	**19 10 35.9**	**-1.9**
	0.6nm,0.8s,baz=139,slow=7.8,SNR=5.3						

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*DSN **06** 19:25:32.0±3.9, 25°.11N×63°.85E, h10^{km}, ML2.9/6, Error ellipse: s-maj=94.9km s-min=29.3km az=18.0*

OMAN 06 19:25:31.3±1.0**, 25°.57N×64°.03E, h19**^{km}±38^{km}**, mb4.7**/7**, Error ellipse: s-maj=72.0km s-min=6.1km az=251.0, Southwestern Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JLN	**Jalan Bani Buh**	**5.42**	**232**	P	Pn	19 26 51.1	0.0
JLN				S	Sn	19 27 54.3	+1.2
WSAR	**Wadi Sarin**	**5.44**	**246**	P	Pn	19 26 52.0	+0.7
	SNR=40						
WSAR				S	Sn	19 27 53.8	+0.3
WBK	**Wadi Bani Khal**	**5.48**	**239**	P	Pn	19 26 52.5	+0.6
	SNR=40						
WBK				S	Sn	19 27 55.2	+0.7
SMDO	**Samad**	**6.00**	**247**	P	Pn	19 27 00.7	+1.5
SMDO				S	Sn	19 28 10.7	+3.3
HOQ	**Hoqain**	**6.43**	**254**	P	Pn	19 27 05.2	+0.3
	SNR=10						
HOQ				S	Sn	19 28 20.9	+3.1
SOHO	**SOHO**	**6.96**	**260**	P	Pn	19 27 09.7	-2.4
BANOM	**Banah**	**6.98**	**275**	P	Pn	19 27 12.9	+0.4
BANOM				S	Sn	19 28 32.0	+0.6
BANOM	**Banah**	**6.98**	**275**	P	Pn	19 27 12.3	-0.3
	SNR=22						
BANOM				S	Sn	19 28 32.3	+0.9
MDH	**Madha**	**7.00**	**269**	P	Pn	19 27 09.5	-3.2
UOSS	**Minazif**	**7.11**	**267**	P	Pn	19 27 12.8	-1.5
UOSS	**Minazif**	**7.11**	**267**	P	Pn	19 27 13.5	-0.9
UOSS				S	Sn	19 28 34.8	+0.2
SHME	**Shamm**	**7.13**	**276**	P	Pn	19 27 15.5	+1.0
SHME	**Shamm**	**7.13**	**276**	P	Pn	19 27 15.6	+1.1
	SNR=5.9						
SHME				S	Sn	19 28 34.6	-0.4
ARQ	**Araqi**	**7.19**	**254**	P	Pn	19 27 19.1	+3.6
	SNR=17						
HATD	**Hatta, Dubai**	**7.19**	**266**	P	Pn	19 27 15.7	+0.3
ASHO	**Ashiyiah**	**7.28**	**265**	P	Pn	19 27 18.3	+1.7
ASHO	**Ashiyiah**	**7.28**	**265**	P	Pn	19 27 20.0	+3.4
	SNR=7.6						

TRN 06 19:29:28.4, 16°.40N×62°.27W, h173^{km}**, MD4.0, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBE	**Ff, Capester**	**0.72**	**117**	*e*P	Pn	19 29 55.1	+1.5
CBE				*e*S	Sn	19 30 06.9	-6.0
ANBD	**Bethesda, Anti**	**0.81**	**37**	*e*P	Pn	19 29 55.0	+0.9
ANBD				*e*S	Sn	19 30 14.8	+0.8
TBG	**Guadaloupe-3**	**0.81**	**132**	*e*P	Pn	19 29 55.3	+1.2
TDBA	**Terre de Bas,**	**0.82**	**132**	*e*P	Pn	19 29 55.4	+1.2
SKOC	**St. Kitts, UWI**	**0.99**	**334**	*e*P	Pn	19 29 57.4	+2.0
SKOC				*e*S	Sn	19 30 17.1	+0.8
SKI	**Saint Kitts**	**1.03**	**334**	*e*P	Pn	19 29 57.4	+1.7
SKI				*e*S	Sn	19 30 18.2	+1.3
MAGL	**Barre de l'ile**	**1.05**	**115**	*e*P	Pn	19 29 57.5	+1.7
MAGL				*e*S	Sn	19 30 18.0	+1.1
MDCT	**Cottage Hill,**	**1.10**	**135**	*e*P	Pn	19 29 54.7	-1.6
MDCT				*e*S	Sn	19 30 14.4	-3.2
MDPV	**Dominica, Penn**	**1.12**	**133**	*e*P	Pn	19 29 56.8	+0.4
MDPV				*e*S	Sn	19 30 19.0	+0.9
MDVC	**Dominica, Viel**	**1.14**	**133**	*e*P	Pn	19 29 58.1	+1.5
MDVC				*e*S	Sn	19 30 19.6	+1.3
DWS	**Wesley**	**1.24**	**132**	*e*P	Pn	19 29 57.7	+0.3
DWS				*e*S	Sn	19 30 19.4	-0.4
DSLB	**Salisbury**	**1.26**	**139**	*e*P	Pn	19 29 58.7	+1.1
DSLB				*e*S	Sn	19 30 21.3	+1.1
SEUS	**St. Eustatius**	**1.28**	**328**	*e*P	Pn	19 29 59.5	+1.7
SEUS				*e*S	Sn	19 30 21.9	+1.3
ANWB	**Willy Bob**	**1.35**	**20**	*e*P	Pn	19 29 59.6	+1.2
ANWB				*e*S	Sn	19 30 21.8	+0.1
DLPL	**La Plaine**	**1.45**	**137**	*e*S	Sn	19 30 24.2	+1.0
SABA	**Saba**	**1.53**	**323**	*e*P	Pn	19 30 01.1	+1.0
SABA				*e*S	Sn	19 30 25.4	+0.7
SMRT	**St. Maarten**	**1.81**	**335**	*e*P	Pn	19 30 03.8	+0.8
SMRT				*e*S	Sn	19 30 28.9	-1.1
PCM	**Pelee Case Pet**	**1.88**	**147**	*e*P	Pn	19 30 04.5	+0.8
SVN	**Savane Anatole**	**1.88**	**145**	*e*P	Pn	19 30 04.8	+1.0
CXM	**Morne La Croix**	**1.90**	**146**	*e*P	Pn	19 30 05.1	+0.9
BAMF	**Morne Balai**	**1.91**	**145**	*e*P	Pn	19 30 05.2	+1.1
GBMF	**Grand Be**	**1.92**	**146**	*e*P	Pn	19 30 05.1	+0.9
FDF	**Fort de France**	**1.98**	**147**	*e*P	Pn	19 30 05.2	+0.4
FDF				*e*S	Sn	19 30 34.8	+1.7
ZAM	**Aeronautique**	**2.17**	**146**	*e*P	Pn	19 30 07.9	+0.9
BIM	**Bigot**	**2.20**	**148**	*e*S	Sn	19 30 39.1	+1.6
MPOM	**Morne Pois Mar**	**2.37**	**145**	*e*P	Pn	19 30 10.3	+1.0
MPOM				*e*S	Sn	19 30 41.7	+0.8
SLBI	**Saint Lucia, B**	**2.67**	**152**	*e*P	Pn	19 30 13.1	+0.3
SLBI				*e*S	Sn	19 30 48.7	+1.4
MCLT	**Moule a Chique**	**2.96**	**154**	*e*P	Pn	19 30 17.2	+0.8
MCLT				*e*S	Sn	19 30 54.8	+1.1
SVB	**Belmont**	**3.26**	**162**	*e*P	Pn	19 30 20.4	+0.4
GCMP	**Grenada, Carri**	**3.97**	**168**	*e*P	Pn	19 30 29.2	+0.2
GCMP				*e*S	Sn	19 31 13.9	-2.5
BBGH	**Gun Hill**	**4.17**	**141**	*e*P	Pn	19 30 33.0	+1.5
BBGH	**Gun Hill**	**4.17**	**141**	*e*S	Sn	19 31 19.3	-1.5
BBSP	**Saint Philip**	**4.26**	**140**	*e*P	Pn	19 30 34.7	+2.0
BBSP	**Saint Philip**	**4.26**	**140**	*e*S	Sn	19 31 20.5	-2.4
GRGR	**Grenville**	**4.28**	**172**	*e*P	Pn	19 30 33.2	+0.2
AOPR	**Arecibo Observ**	**4.70**	**295**	*e*P	Pn	19 30 38.8	+0.5
TOSP	**Speyside**	**5.34**	**161**	*e*P	Pn	19 30 47.1	+0.4
TOSP	**Speyside**	**5.34**	**161**	*e*S	Sn	19 31 44.4	-3.9
TRN	**Trinidad (W)**	**5.78**	**171**	*e*P	Pn	19 30 53.9	+1.4
TRN	**Trinidad (W)**	**5.78**	**171**	*e*S	Sn	19 31 54.5	-4.0

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*IDC **06** 19:33:11.1±0.7, 8°.15S×125°.36E, h0^{km}, mb4.2/7, mb1 4.3/11, mb1mx4.1/35, mbtmp4.2/11, ML4.1/4, MS3.0/3, Ms1 3.0/3, ms1mx2.6/29, Error ellipse: s-maj=25.5km s-min=15.5km az=78.0*

*NEIC **06** 19:33:13.7±1.8, 8°.15S±0°.05×125°.10E±0°.07, h10^{km}±1^{km}, mb4.4/21, Error ellipse: s-maj=12.9km s-min=5.5km az=122.0*

*DJA **06** 19:33:13.8±1.0, 8°S±3°×12°5E±°, h20^{km}±8^{km}, M4.2/15, mB4.7/3, mb4.5/15, MLv4.1/13, Mw(mB)3.9/3*

ISC 06 19:33:11.9±0.4**, 8°.43S**±0°.04×**125°.27E**±0°.06**, h10**^{km}**, n71,** σ**1**^{s}**83**/74**, mb4.4**/16**, 1C, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.64	217	P	Pb	19 33 41.6	-0.8
SOEI	Soe	1.64	217		Pg	19 33 44.2	+0.7
BATI	Baumata	2.37	222	Pn	Pb	19 33 54.7	0.0
	15nm,0.3s,baz=102,slow=0.8,SNR=40						
BATI				Sn	Sg	19 34 29.3	+1.1
	18nm,0.3s,baz=128,slow=22,SNR=7.2						
BATI				LR	LR	19 34 45.3	
	comp=Z,194nm,18.3s,baz=68,slow=36						
BATI	Baumata	2.37	222	P	Pb	19 33 54.4	-0.4
MMRI	Maumere	3.00	266	P	Pn	19 34 02.1	+2.5
MMRI	Maumere	3.00	266		Pn	19 33 59.5	-0.1
EDFI	Ende, Flores	3.55	265	P	Pn	19 34 08.1	+0.9
BSSI	Bau Bau, Buton	5.25	295	P	Pn	19 34 32.4	+1.8
	0.1nm26nm,0.7s						
WBSI	Waikabubak, Su	5.93	258	P	Pn	19 34 40.6	+0.7
	0.2nm60nm,0.8s						
BKSI	Bulukumba	5.97	301	P	Pn	19 34 39.8	-0.6
	0.0nm9.3nm,0.8s						
SANI	Sanana	6.38	7	P	Pn	19 34 46.6	+0.5
	0.1nm432nm20nm,0.6s						
PLAI	Plampang	7.42	266	P	Pn	19 35 03.1	+2.8
	0.2nm52nm,0.7s						
TTSI	Tana Toraja	7.62	314	P	Pn	19 35 04.9	+1.9
	0.1nm14nm,0.7s						
LUWI	Luwuk	7.75	341	P	Pn	19 35 03.7	-1.2
	0.5nm517nm38nm,1.1s						
LUWI	Luwuk	7.75	341	Pn	Pn	19 35 03.0	-1.9
TWSI	Taliwang, Sumb	8.30	267	P	Pn	19 35 13.8	+1.4
	24nm,0.9s						
FAKI	Fak Fak	8.85	52	Pn	Pn	19 35 23.3	+3.3
GTOI	Gorontalo	9.28	346	P	Pn	19 35 27.5	+1.6
	4.5nm,1.1s						
FITZ	Fitzroy Crossi	9.62	178	Pn	Pn	19 35 32.7	+2.2
	1.2nm,0.3s,baz=6.0,slow=10.0,SNR=58						
FITZ				Sn	Sn	19 37 15.6	-3.1
	2.1nm,0.3s,baz=101,slow=19,SNR=8.8						
MPSI	Mapaga	10.22	328	P	Pn	19 35 40.6	+1.8
	3.9nm,1.0s						
TOLI2	Tolitoli	10.48	335	Pn	Pn	19 35 38.7	-3.7
WB0	Warramunga Arr	14.32	143	Pn	Pn	19 36 34.9	0.0
WRA	Warramunga Arr	14.43	143	Pn	Pn	19 36 37.1	+0.8
	1.0nm,0.3s,baz=316,slow=14,SNR=42						
WRA				Sn	Sn	19 39 13.6	-3.0
	0.7nm,0.3s,baz=318,slow=26,SNR=6.1						
WRA	Warramunga Arr	14.43	143		Pn	19 36 35.1	-1.3
WRAB	Tennant Creek	14.43	143		Pn	19 36 33.7	-2.7
WB2	Warramunga Arr	14.43	143	Pn	Pn	19 36 35.1	-1.4
WB2					Sn	19 39 13.8	-2.9
WR0	Warramunga Arr	14.56	143	Pn	Pn	19 36 37.5	-0.7
AS31	Alice Springs	17.26	152	P	P	19 37 15.1	+0.3
ASAR	Alice Springs	17.26	152	P	P	19 37 14.6	-0.2
	0.8nm,0.3s,baz=313,slow=11,SNR=28						
ASAR				S	Sn	19 40 20.4	-5.1
	0.3nm,0.3s,baz=307,slow=17,SNR=4.1						
ASAR	Alice Springs	17.26	152	P	P	19 37 15.5	+0.7
CISI	Cisompet, Garu	17.30	272		Pn	19 37 11.4	-2.5
CISI				IAmb	IAmb	19 37 24.0	
	comp=Z,61nm,1.5s						
LEM	Lembang	17.57	274	LR	LR	19 43 46.6	
	comp=Z,51nm,21.8s,baz=184,slow=36						
PMG	Port Moresby	21.65	94	P	P	19 38 02.8	0.0
	comp=Z,1.8nm,0.4s,baz=248,slow=19,SNR=1.3						
PMG				LR	LR	19 47 13.7	
	comp=Z,66nm,20.2s,baz=263,slow=39						
PMG	Port Moresby	21.65	94	P	P	19 38 06.3	+3.5
PMG				IAmb	IAmb	19 38 13.0	
	comp=Z,11nm,0.8s						
TPUB	Ta-pu	31.86	352	P	P	19 39 37.8	+0.4
CM31	Chiang Mai Arr	37.26	316	P	P	19 40 22.9	-1.3
CM31				IAmb	IAmb	19 40 25.3	
	comp=Z,6.9nm,0.9s						
CMAR	Chiang Mai Arr	37.26	316	P	P	19 40 24.4	+0.2
	comp=Z,3.7nm,0.8s,baz=142,slow=6.7,SNR=41						
CMAR	Chiang Mai Arr	37.26	316	P	P	19 40 23.5	-0.7
CHTO	Chiang Mai	37.51	316	P	P	19 40 25.6	-0.8
CHTO				IAmb	IAmb	19 40 27.3	
	comp=Z,6.9nm,0.9s						
KMI	Kunming	39.92	327	⇑P	P	19 40 48.3	+1.5
KMI				pP	pwP	19 41 03.1	+11
KMI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MJAR	Matsushiro Arr	46.36	14	P	P	19 41 37.0	-1.4
	comp=Z,3.1nm,1.0s,baz=182,slow=8.4,SNR=4.9						
MJAR	Matsushiro Arr	46.36	14	IAmb	IAmb	19 41 43.4	
	comp=Z,5.5nm,1.5s						
SHL	Shillong	46.87	317	P	P	19 41 41.1	-1.7
PALK	Pallekele	47.08	288	P	P	19 41 43.4	-1.1
HHC	Hu-ho-hao-te	50.64	347	eP	P	19 42 14.2	+2.8
HHC				pmax	pmax		
	comp=Z,17nm,1.0s						
HHC				pmax	pmax		
	comp=Z,120nm,4.9s						
GTA	Gaotai	53.13	335	eP	P	19 42 29.8	-0.3
GTA				pP	pwP	19 42 44.7	+9.1
GTA				sP	sP	19 42 52.8	+19
GTA				pmax	pmax		
	comp=Z,1.0nm,1.1s						
SONM	Songino Array	58.46	345	P	P	19 43 07.1	-1.1
	comp=Z,2.4nm,0.9s,baz=165,slow=8.5,SNR=12						
SONM	Songino Array	58.46	345	P	P	19 43 07.3	-0.9
WMQ	Urumqi	62.16	330	eP	P	19 43 34.8	+1.3
MK31	Makanchi Array	66.95	329	P	P	19 44 04.3	-0.5
MKAR	Makanchi Array	66.95	329	P	P	19 44 04.3	-0.5
	comp=Z,4.9nm,0.8s,baz=134,slow=7.8,SNR=35						
MKAR	Makanchi Array	66.95	329	P	P	19 44 04.0	-0.8
MAKZ	Makanchi	67.12	329	P	P	19 44 05.4	-0.5
MAKZ				IAmb	IAmb	19 44 05.8	
	comp=Z,4.2nm,0.9s						
KBL	Kabul	68.17	312	P	P	19 44 11.8	-1.2
AAK	Ala-Archa	68.69	322	P	P	19 44 15.2	-0.8
GAR	Garm	69.42	317	P	P	19 44 19.7	-0.9
GAR				IAmb	IAmb	19 44 24.3	
	comp=Z,3.4nm,0.9s						
ZAA0	Zalesovo Array	70.88	336	P	P	19 44 27.3	-1.7
ZALV	Zalesovo Beam	70.88	336	P	P	19 44 27.5	-1.5
	comp=Z,3.7nm,0.9s,baz=117,slow=5.2,SNR=14						
ZALV	Zalesovo Beam	70.88	336	P	P	19 44 27.4	-1.6
KURK	Kurchatov	71.38	331	P	P	19 44 30.9	-1.2
KURK				IAmb	IAmb	19 44 32.0	
	comp=Z,5.4nm,1.1s						
VNDA	Vanda	71.64	172	P	P	19 44 37.0	+3.7
	comp=Z,0.5nm,0.5s,baz=360,slow=6.3,SNR=6.5						
VNDA	Vanda	71.64	172	P	P	19 44 36.8	+3.5
TIXI	Tiksi	79.94	1	P	P	19 45 19.7	-1.0
TIXI				IAmb	IAmb	19 45 21.5	
	comp=Z,4.3nm,1.3s						
ABKAR	Akbulak array	80.76	323	P	P	19 45 24.2	-1.4
ABKAR	Akbulak array	80.76	323	P	P	19 45 23.8	-1.8
ABKAR				IAmb	IAmb	19 45 24.7	
	comp=Z,1.2nm,1.1s						
SNAA	Sanae	93.15	194	P	P	19 46 28.2	+2.1
VNA2	Neumayer--Watz	94.75	194	P	P	19 46 36.1	+2.7
TORD	Torodi Ar. Bea	124.46	280	PKP	PKPdf	19 52 12.3	-0.2
	comp=Z,0.3nm,0.6s,baz=11,slow=1.7,SNR=2.2						
CPUP	Villa Florida	145.35	176	PKPbc	PKiKP	19 52 53.0	-1.9
	comp=Z,1.5nm,0.6s,baz=239,slow=2.5,SNR=3.9						
CPUP	Villa Florida	145.35	176		PKPdf	19 52 52.3	+1.3
LPAZ	La Paz	152.09	152	PKPbc	PKiKP	19 53 11.4	+1.6
	comp=Z,0.9nm,0.5s,baz=27,slow=2.3,SNR=2.5						

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*UPA **06** 19:36:58.8±0.6, 6.°27N×82.°08W, h20^{km}±15^{km}, MW4.5*

ISC 06 19:36:58.9±1.9, **6.°44N**±0.°06×**82.°11W**±0.°09, **h10**^{km}, **n20**, σ1.^{s}**26**/22, **1C-1D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CACAO	El Cacao, Vera	1.53	54	eP	Pn	19 37 24.9	-1.3
CACAO				eS	Sn	19 37 45.3	-1.0
GMAL	Guarumal, Vera	1.58	33	eP	Pn	19 37 27.3	+0.4
GMAL				eS	Sg	19 37 48.5	-1.2
PTPM	Petroterminale	1.92	337	eP	Pn	19 37 31.9	+0.3
PESE3	Pese, Herrera	2.08	45	eS	Sn	19 38 00.2	+0.3
CHIT3	Chitre	2.26	48	⇑eP	Pn	19 37 36.3	0.0
CHIT3				eS	Sn	19 38 04.5	+0.3
AZU	Azuero	2.26	53	⇓eP	Pn	19 37 35.8	-0.6
AZU				eS	Sn	19 38 03.8	-0.6
DBBC	Dabeiba	5.89	84	eP	Pn	19 38 33.9	+7.6
CBOC	Ciudad Bolivar	6.09	95	eP	Pn	19 38 28.5	-0.6
YOTC	Yotoco, Valle	6.24	113	eP	Pn	19 38 29.6	-1.5
HELC	Santa Helena	6.54	92	eP	Pn	19 38 36.1	+0.6
UREC	San Jos de Ur	6.66	78	eP	Pn	19 38 39.1	+2.3
MOTC	Monteria, Cord	6.80	70	eP	Pn	19 38 41.5	+2.7
ANIL	Santa Ana	6.95	106	eP	Pn	19 38 42.5	+1.4
SOTA	Rioblanco	6.95	128	eP	Pn	19 38 40.8	-0.6
PCON	Cinco Dias	7.01	125	eP	Pn	19 38 43.8	+1.6
GCUF	Volcan Galeras	7.03	137	eP	Pn	19 38 41.9	-0.5
MARP	Paez Belalcaza	7.10	120	eP	Pn	19 38 43.8	+0.7
TULM	Tulcn-Chalpat	7.13	143	eP	Pn	19 38 51.5	+7.7
ZARC	Zaragoza, Cauc	7.27	81	eP	Pn	19 38 47.0	+1.7
ORTC	Ortega, Tolima	7.28	110	eP	Pn	19 38 46.4	+1.0

IDC 06 19:38:05.8±2.0, **54.°09S**×**145.°37E**, **h0**^{km}, **mb3.4**/3, **mb1 3.7**/3, **mb1mx3.6**/24, **mbtmp3.4**/3, **MS3.6**/1, **Ms1 3.6**/1, **ms1mx2.8**/17, **Error ellipse: s-maj=310.2km s-min=16.6km az=76.0, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	24.28	171	P	P	19 43 24.2	0.0
	0.3nm,0.4s,baz=349,slow=5.2,SNR=2.6						
H01W1	Cape Leeuwin H	29.03	299	T	T	20 14 02.6	
	baz=141,slow=74,SNR=5.5						
H01W2	Cape Leeuwin H	29.04	299	T	T	20 14 04.2	
	baz=141,slow=74,SNR=5.4						
H01W3	Cape Leeuwin H	29.05	299	T	T	20 14 04.1	
	baz=141,slow=74,SNR=6.0						
ASAR	Alice Springs	31.58	340	P	P	19 44 29.5	-0.5
	0.3nm,0.7s,baz=166,slow=9.5,SNR=2.4						
WRA	Warramunga Arr	35.12	342	P	P	19 45 00.9	+0.2
	1.0nm,0.7s,baz=167,slow=8.0,SNR=5.4						
BATI	Baumata	47.07	330	LR	LR	20 04 37.6	
	comp=Z,59nm,19.0s,baz=293,slow=34						

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*MAN **06** 19:40:52.1, 9.°78N×126.°11E, h7^{km}, mb4.5, ML3.4, MS3.2*

*NEIC **06** 19:40:54.6±1.1, 9.°91N±0.°08×126.°4E±0.°1, h76^{km}±7^{km}, mb4.2/14, Error ellipse: s-maj=20.0km s-min=11.9km az=91.0*

*IDC **06** 19:40:57.6±5.0, 9.°76N×126.°18E, h103^{km}±41^{km}, mb3.4/7, mb1 3.6/9, mb1mx3.4/41, mbtmp3.9/9, Error ellipse: s-maj=62.2km s-min=17.4km az=63.0*

ISC 06 19:40:50.1±0.6, **9.°99N**±0.°05×**126.°46E**±0.°07, **h35**^{km}, **n42**, σ1.^{s}**75**/43, **mb4.1**/14, **4C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	0.98	258	⇓eP	Pn	19 41 05.1	-2.3
SCPH				eS	Sn	19 41 17.0	-3.0
BIPH	Bislig	1.80	183	⇓eP	Pn	19 41 18.8	+0.2
BIPH				eS	Sn	19 41 37.7	-2.5
LLP	Lapu-Lapu	2.48	278	⇑eP	Pn	19 41 29.6	+1.6
LLP				eS	Sn	19 41 59.0	+1.9
TBP	Tagbilaran	2.58	264	⇓iP	Pn	19 41 42.3	+13
TBP				iS	Sn	19 41 59.4	-0.1
DAV	Davao City (W)	3.03	197	P	Pn	19 41 40.3	+4.7
	29nm,0.3s,baz=72,slow=3.2,SNR=1.3						
DAV				S	Sn	19 42 12.9	+2.2
	31nm,0.3s,baz=286,slow=18,SNR=4.6						
DAV	Davao City (W)	3.03	197		Pn	19 41 39.1	+3.5
SNPH	Sibulan	3.25	259	⇑iP	Pn	19 41 39.6	+1.0
SNPH				iS	Sn	19 42 18.3	+2.3
DCPH	Dipolog City	3.38	246	⇑eP	Pn	19 41 40.7	+0.4
RCP	Roxas	3.97	293	⇑eP	Pn	19 41 51.1	+2.6
TOLI2	Tolitoli	10.48	213	Pn	Pn	19 43 21.0	+3.2
LUWI	Luwuk	11.56	199	Pn	Pn	19 43 36.1	+3.4
FAKI	Fak Fak	14.06	156	Pn	Pn	19 44 07.7	+0.8
TPUB	Ta-pu	14.36	338	Pn	P	19 44 14.1	-3.4
SOEI	Soe	19.74	186	P	Pn	19 45 17.7	-1.1
SOEI				IAmb	IAmb	19 45 45.7	
	comp=Z,10nm,0.9s						
BATI	Baumata	20.26	188	P	P	19 45 23.1	+0.4
	comp=Z,1.8nm,0.3s,baz=338,slow=10,SNR=3.8						
UBPT	Khong Chiam	21.14	287	P	P	19 45 31.9	-0.3
UBPT				IAmb	IAmb	19 45 37.0	
	comp=Z,7.7nm,1.1s						
JSU	Suzuyama	21.73	9	P	P	19 45 39.7	+1.3
JSU				IAmb	IAmb	19 45 50.1	
	comp=Z,13nm,1.0s						
FITZ	Fitzroy Crossi	27.92	182	P	P	19 46 36.4	-0.8
	comp=Z,2.7nm,1.0s,baz=351,slow=13,SNR=3.1						
CMAR	Chiang Mai Arr	27.94	291	P	P	19 46 36.8	-0.6
	comp=Z,0.2nm,0.6s,baz=93,slow=8.1,SNR=3.5						
WB0	Warramunga Arr	30.59	165	P	P	19 46 59.3	-1.5
WB0				IAmb	IAmb	19 47 23.7	
	comp=Z,3.8nm,1.1s						
WRAB	Tennant Creek	30.73	165	P	P	19 46 59.3	-2.8
WRAB				IAmb	IAmb	19 47 10.1	
	comp=Z,10nm,1.6s						
WRA	Warramunga Arr	30.74	165	P	P	19 47 01.4	-0.8
	comp=Z,0.3nm,0.6s,baz=345,slow=9.3,SNR=5.0						
WRA	Warramunga Arr	30.74	165	P	P	19 47 01.2	-1.0
WB2	Warramunga Arr	30.74	165	P	P	19 47 01.5	-0.7
WB2				IAmb	IAmb	19 47 21.6	
	comp=Z,12nm,1.6s						
WR0	Warramunga Arr	30.81	165	P	P	19 47 02.1	-0.6
WR0				IAmb	IAmb	19 47 26.0	
	comp=Z,5.4nm,1.4s						
AS31	Alice Springs	34.23	168	P	P	19 47 31.4	-1.4
ASAR	Alice Springs	34.23	168	P	P	19 47 32.0	-0.7
	comp=Z,0.2nm,0.4s,baz=350,slow=7.5,SNR=9.8						
ASAR	Alice Springs	34.23	168	P	P	19 47 31.9	-0.9
H11N1	WAKE ISLAND Hy	40.16	71	T	T	20 31 50.9	
	baz=265,slow=74,SNR=14						
H11N2	WAKE ISLAND Hy	40.17	71	T	T	20 31 51.5	
	baz=265,slow=74,SNR=15						
H11N3	WAKE ISLAND Hy	40.18	71	T	T	20 31 52.3	
	baz=265,slow=74,SNR=14						
MKAR	Makanchi Array	52.36	323	P	P	19 49 58.7	0.0
	comp=Z,0.6nm,0.7s,baz=125,slow=7.4,SNR=5.5						
MKAR	Makanchi Array	52.36	323	P	P	19 49 57.8	-0.9
KURK	Kurchatov	56.40	326	P	P	19 50 27.3	-0.7
KURK				IAmb	IAmb	19 50 28.4	
	comp=Z,1.8nm,0.8s						
CHGR	Chuyangaron	58.41	309	P	P	19 50 41.2	-1.3
AMKA	Amchitka	59.52	35	P	P	19 50 52.2	+2.4
TIXI	Tiksi	61.62	1	P	P	19 51 04.9	+1.1
KIWB	Kanaga Island	61.74	36	P	P	19 51 05.6	+0.7
ABKAR	Akbulak array	67.21	319	P	P	19 51 40.0	-0.7
ARCES	ARCESS Array B	84.52	340	P	P	19 53 20.3	+1.1
	comp=Z,3.0nm,0.9s,baz=90,slow=6.1,SNR=5.5						
ARCES	ARCESS Array B	84.52	340	P	P	19 53 18.5	-0.7
FINES	FINESS Array B	86.22	332	P	P	19 53 27.5	-0.3
	comp=Z,0.7nm,0.5s,baz=104,slow=1.9,SNR=7.9						

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*IDC **06** 19:42:35.4±3.0, 2.°21N×127.°11E, h43^{km}±26^{km}, mb3.6/4, mb1 3.9/4, mb1mx3.4/36, mbtmp3.8/4, Error ellipse: s-maj=20.0km s-min=15.9km az=29.0*

*DJA **06** 19:42:42.0±0.3, 2.°N±4.°×12.°7E±.°, h53^{km}±9^{km}, M4.1/14, mB4.7/7, mb4.3/9, MLv4.2/14, Mw(mB)4.0/7*

*NEIC **06** 19:42:48.4±1.5, 1.°1N±0.°2×126.°54E±0.°07, h97^{km}±10^{km}, mb4.2/6, Error ellipse: s-maj=24.4km s-min=10.2km az=188.0*

*MAN **06** 19:43:31.1, 6.°82N×125.°25E, h1^{km}, mb4.0, ML2.8, MS2.5*

ISC 06 19:42:40.4±1.1, **2.°22N**±0.°08×**126.°94E**±0.°08, **h100**^{km}, **n28**, σ**2.**^{s}**10**/29, **mb3.9**/7, **1C, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.50	163	P	Pn	19 43 07.5	+0.9
TNTI	Ternate	1.50	163		Pn	19 43 07.4	+0.7
TNTI				Sn	Sn	19 43 21.8	-4.7
SGSI	Sangihe	2.03	316	P	Pn	19 43 13.3	0.0
LBMI	Labuha	2.89	169	P	Pn	19 43 25.9	+1.2
KMSI	Cibinong	3.38	241	P	Pn	19 43 33.1	+1.9
GTOI	Gorontalo	4.23	248	P	Pn	19 43 45.1	+2.4
GSPH	General Santos	4.33	333	⇑iP	Pn	19 43 43.9	-0.2
LUWI	Luwuk	5.28	232	P	Pn	19 43 58.6	+1.7
	1.1nm831nm51nm,0.7s						
MRSI	Marisa	5.29	251	P	Pn	19 43 59.4	+2.4
	0.9nm2μm286nm,0.6s						
SWI	Sorong	5.29	125	P	Pn	19 43 58.5	+1.4
	0.1nm11nm,1.0s						
MSAI	Masohi	5.87	160	P	Pn	19 44 07.6	+2.6
	0.1nm349nm4.7nm,0.6s						
TOLI2	Tolitoli	6.25	260		Pn	19 44 11.0	+0.9
TOLI2				Sn	Sn	19 45 15.3	-4.9
MPSI	Mapaga	7.28	255	P	Pn	19 44 26.9	+2.8
	0.1nm332nm12nm,0.6s						
FAKI	Fak Fak	7.36	134	Pn	Pn	19 44 26.7	+1.5
TTSI	Tana Toraja	8.83	234	P	Pn	19 44 45.4	+0.2
	329nm8.7nm,0.5s						
BKSI	Bulukumba	10.12	222	P	Pn	19 45 06.3	+3.5
	6.2nm,0.7s						
FITZ	Fitzroy Crossi	20.23	184	P	P	19 47 07.1	-0.5
	2.3nm,0.4s,baz=17,slow=9.3,SNR=14						
WB0	Warramunga Arr	23.04	162	P	P	19 47 36.6	-0.6
WRAB	Tennant Creek	23.18	162	P	P	19 47 38.1	-0.5
WRAB				IAmb	IAmb	19 47 45.7	
	comp=Z,17nm,0.6s						
WRA	Warramunga Arr	23.19	162	P	P	19 47 38.0	-0.6
	comp=Z,3.1nm,0.3s,baz=340,slow=11,SNR=34						
WRA	Warramunga Arr	23.19	162	P	P	19 47 36.9	-1.7
WB2	Warramunga Arr	23.19	162	P	P	19 47 37.8	-0.8
WB2				IAmb	IAmb	19 47 45.8	
	comp=Z,16nm,0.6s						
WR0	Warramunga Arr	23.27	162	P	P	19 47 38.3	-1.1
WR0				IAmb	IAmb	19 47 46.6	
	comp=Z,6.9nm,1.1s						
AS31	Alice Springs	26.61	166	P	P	19 48 07.5	-2.0
AS31				IAmb	IAmb	19 48 18.8	
	comp=Z,1.1nm,0.8s						
ASAR	Alice Springs	26.61	166	P	P	19 48 09.4	-0.1
	comp=Z,0.7nm,0.5s,baz=338,slow=7.1,SNR=17						
ASAR	Alice Springs	26.61	166	P	P	19 48 08.0	-1.6
MKAR	Makanchi Array	58.91	326	P	P	19 52 30.7	+1.6
	comp=Z,0.3nm,0.5s,baz=121,slow=9.1,SNR=2.4						
ABKAR	Akbulak array	73.45	321	P	P	19 54 13.7	+12

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*IDC **06** 19:54:49.7±4.9, 15.°63N×95.°05W, h32^{km}±36^{km}, mb4.3/21, mb1 4.5/22, mb1mx4.4/34, mbtmp4.5/22, ML5.1/1, MS3.9/15, Ms1 3.9/15, ms1mx3.7/30, Error ellipse: s-maj=25.3km s-min=11.0km az=58.0*

*NEIC **06** 19:54:49.4±2.4, 15.°62N±0.°05×95.°10W±0.°01, h30^{km}±4^{km}, mb4.8/241, Md4.7/110(MEX), Error ellipse: s-maj=8.0km s-min=1.5km az=179.0*

*MEX **06** 19:54:50.2±4.5, 15.°50N×95.°09W, h16^{km}±102^{km}, MD4.7*

ISC 06 19:54:49.5±0.3, **15.°56N**±0.°04×**95.°15W**±0.°03, **h35**^{km}±3^{km}, **n517**, σ1.^{s}**86**/499, **mb4.8**/112, **MS3.9**/14, **Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	0.95	283		Pn	19 55 05.8	-0.6
HUIG					Sn	19 55 17.5	-1.2
HUIG	Huatulco	0.95	283	iP	Pn	19 55 05.8	-0.6
HUIG				iS	Sn	19 55 17.5	-1.2
PANG	Puerto Angel	1.28	275		Pn	19 55 10.4	-0.5
PANG					Sn	19 55 25.2	-1.7
PANG	Puerto Angel	1.28	275	iP	Pn	19 55 10.4	-0.5
PANG				iS	Sn	19 55 25.2	-1.7
CMIG	Matias Romero	1.54	9	Pn	Pn	19 55 13.3	-1.3
	1μm,0.3s,baz=195,slow=12,SNR=6544						
CMIG				Sn	Sn	19 55 30.9	-2.5
	4μm,0.3s,baz=340,slow=23,SNR=26						
CMIG	Matias Romero	1.54	9		Pn	19 55 13.5	-1.1
CMIG					Sn	19 55 31.4	-2.1
CMIG	Matias Romero	1.54	9	iP	Pn	19 55 13.5	-1.1
CMIG				iS	Sn	19 55 31.4	-2.1
PCIG		1.86	85		Pn	19 55 17.3	-1.7
PCIG					Sn	19 55 38.0	-3.3
PCIG		1.86	85	iP	Pn	19 55 17.3	-1.7
PCIG				iS	Sn	19 55 38.0	-3.3
PEIG	Puerto Escondi	1.97	283	iP	Pn	19 55 20.4	-0.1
PEIG				iS	Sn	19 55 41.6	-2.4
OXBJ	Oaxaca	2.13	315		Pn	19 55 24.2	+1.4
OXBJ	Oaxaca	2.13	315	iP	Pn	19 55 24.2	+1.4
VHO	Vista Hermosa	2.14	315	iP	Pn	19 55 24.4	+1.4
VHO				iS	Sn	19 55 49.4	+1.0
TGIG		2.29	58		Pn	19 55 23.8	-1.1
TGIG					Sn	19 55 51.7	-0.3
TGIG		2.29	58	iP	Pn	19 55 23.8	-1.1
TGIG				iS	Sn	19 55 51.7	-0.3
TGIG				iS	Sn	19 55 51.7	-0.3
TGBT	Tuxtla Gutierr	2.32	58		Pn	19 55 25.7	+0.5
TGBT					Sn	19 55 52.6	+0.1
TGBT	Tuxtla Gutierr	2.32	58	iP	Pn	19 55 25.7	+0.5
TGBT				iS	Sn	19 55 52.6	+0.1
TUIG	Tuzandepetl	2.56	16		Pn	19 55 28.5	-0.1
TUIG					Sn	19 56 06.0	+7.6
TUIG	Tuzandepetl	2.56	16	iP	Pn	19 55 28.5	-0.1
TUIG				iS	Sn	19 56 06.0	+7.6
YOIG	Yosondua	2.64	300	iP	Pn	19 55 31.5	+1.6
YOIG				iS	Sn	19 56 01.3	+0.4
THIG		2.86	103		Pn	19 55 32.0	-0.7
THIG					Sn	19 56 03.4	-2.5
THIG		2.86	103	iP	Pn	19 55 31.9	-0.7
THIG				iP	Pn	19 55 32.0	-0.7
THIG				iS	Sn	19 56 03.2	-2.6
THIG				iS		19 56 03.4	
PNIG	Pinotepa	2.98	287		Pn	19 55 35.2	+0.8
PNIG					Sn	19 56 05.7	-3.3
PNIG	Pinotepa	2.98	287	iP	Pn	19 55 35.2	+0.8
PNIG				iS	Sn	19 56 05.7	-3.3
CCIG	Comitan	2.98	76		Pn	19 55 34.1	-0.5
CCIG				Sn	Sn	19 56 06.1	-3.2
CCIG	Comitan	2.98	76	iP	Pn	19 55 34.1	-0.5
CCIG				iS	Sn	19 56 06.9	-2.4
TXIG	Tlaxiaco	3.03	304	iP	Pn	19 55 37.0	+1.8
TXIG				iS	Sn	19 56 09.9	-0.6
TOIG	Toxpalan	3.12	324	iP	Pn	19 55 38.8	+2.4
TOIG				iS	Sn	19 56 13.8	+1.3
HLIG	Huajuapan de L	3.40	312	iP	Pn	19 55 42.5	+2.2
HLIG				iS	Sn	19 56 32.7	+13
HUEH	Huehuetenango	3.52	93		Pn	19 55 42.9	+0.9
HUEH				Sn	Sn	19 56 17.5	-5.1
FTIG	Fresnillo de T	3.69	310	eP	Pn	19 55 46.8	+2.6
FTIG				iS	Sn	19 56 26.1	-0.6
MGIG	Malinaltepec	3.74	297	iP	Pn	19 55 47.0	+2.1
MGIG				iS	Sn	19 56 26.5	-1.3
TLIG	Tlapa	3.84	302	Pn	Pn	19 55 48.6	+2.4
TLIG				Sn	Sn	19 56 28.6	-1.6
TLIG	Tlapa	3.84	302	iP	Pn	19 55 48.6	+2.4
TLIG				iS	Sn	19 56 28.9	-1.3
HMTT	Tlapaneco	3.96	305		Pn	19 55 51.1	+3.3
HMTT	Tlapaneco	3.96	305	iP	Pn	19 55 51.1	+3.3
LVIG	Laguna Verde	4.32	344		Pn	19 55 50.4	-2.3
LVIG					Sn	19 56 35.2	-6.6
LVIG	Laguna Verde	4.32	344	iP	Pn	19 55 50.4	-2.3
LVIG				iS	Sn	19 56 35.2	-6.6
PPM	Popocatepetl	4.82	317	iP	Pn	19 56 03.8	+3.7
MEIG	Mezcala	4.89	299		Pn	19 56 03.6	+2.9
MEIG					Sn	19 56 53.7	-2.3
MEIG	Mezcala	4.89	299	iP	Pn	19 56 03.6	+2.9
MEIG				iS	Sn	19 56 53.7	-2.3
AMVM	AMECAMECA	4.97	316		Pn	19 56 05.7	+3.7
AMVM	AMECAMECA	4.97	316	iP	Pn	19 56 05.7	+3.7
YAIG	Yautepec	4.98	312		Pn	19 56 05.2	+3.2
YAIG					Sn	19 56 56.4	-2.0
YAIG	Yautepec	4.98	312	iP	Pn	19 56 05.2	+3.2
YAIG				iS	Sn	19 56 56.4	-2.0
SCIG	Sabancuy	5.08	48		Pn	19 56 01.9	-1.3
SCIG					Sn	19 56 54.0	-6.7
SCIG	Sabancuy	5.08	48	iP	Pn	19 56 01.9	-1.3
SCIG				iS	Sn	19 56 54.0	-6.7
CAIG	El Cayaco	5.13	287		Pn	19 56 05.5	+1.6
CAIG					Sn	19 56 56.1	-5.9
CAIG	El Cayaco	5.13	287	iP	Pn	19 56 05.5	+1.6
CAIG				iS	Sn	19 56 56.1	-5.9
MAVM	Malinalco, Edo	5.35	310		Pn	19 56 10.8	+3.6
MAVM					Sn	19 57 05.8	-2.0
MAVM	Malinalco, Edo	5.35	310	iP	Pn	19 56 10.8	+3.6
MAVM				iS	Sn	19 57 05.8	-2.0
UNM	Universidad Na	5.37	315	Pn	Pn	19 56 07.4	0.0
UNM				Sn	Sn	19 57 08.3	0.0
UNM				LR	LR	19 57 38.1	
PTVM	Pico Tres Padr	5.51	317		Sn	19 57 04.4	-7.3
PTVM	Pico Tres Padr	5.51	317	eS	Sn	19 57 04.4	-7.3
ARIG	Puente Sto Nin	5.67	299		Pn	19 56 14.5	+3.2
ARIG					Sn	19 57 12.2	-3.0
ARIG	Puente Sto Nin	5.67	299	iP	Pn	19 56 14.5	+3.2
ARIG				iS	Sn	19 57 12.2	-3.0
ESQI	Esquipulas	5.70	99		Pn	19 56 11.9	+0.1
MTO3	Montecristo	5.71	101		Pn	19 56 11.6	-0.5
DEIG	Demacu	5.99	322	iP	Pn	19 56 22.9	+6.9
SNET	Serv Nac Est T	6.02	107	Pn	Pn	19 56 15.9	-0.3
ZIIG	Zihuatanejo	6.39	289		Pn	19 56 23.7	+2.5
ZIIG					Sn	19 57 27.0	-6.0
ZIIG	Zihuatanejo	6.39	289	iP	Pn	19 56 23.7	+2.5
ZIIG				iS	Sn	19 57 27.0	-6.0
MOIG	Morelia	7.07	306	Pn	Pn	19 56 30.9	+0.2
MOIG	Morelia	7.07	306	iP	Pn	19 56 32.9	+2.2
MYIG	Mrida	7.43	43		Pn	19 56 35.5	0.0

MYIG					Sn	19 57 50.5	-8.1
MYIG	Mrida	7.43	43	*i* P	Pn	19 56 35.5	0.0
MYIG				*i* S	Sn	19 57 50.5	-8.1
TGUH	Tegucigalpa,Un	7.76	100	Pn	Pn	19 56 39.7	-0.5
RPIG	Rio Verde	7.78	325	*i* P	Pn	19 56 43.8	+3.3
MMIG	Aquila	8.30	290		Pn	19 56 50.2	+2.7
MMIG					Sn	19 58 14.2	-5.8
MMIG	Aquila	8.30	290	*i* P	Pn	19 56 50.2	+2.7
MMIG				*i* S	Sn	19 58 14.2	-5.8
CRIN	San Cristobal	8.35	109		Pn	19 56 46.7	-1.6
CNGN	Cerro Negro	8.74	109		Pn	19 56 52.7	-0.9
COIG	Colima	8.91	295	*i* P	Pn	19 57 00.5	+4.5
COIG				*e*S	Sn	19 58 38.2	+3.0
EZ5V		8.96	297	*i* P	Pn	19 57 01.9	+5.1
EZ5V				*e*S	Sn	19 58 35.0	-1.5
R15V		9.17	294	*i* P	Pn	19 57 04.1	+4.7
R15V				*e*S	Sn	19 58 43.3	+1.9
AAIG	Aguscalientes	9.36	314	*i* P	Pn	19 57 06.0	+3.9
ZAIG	Zacatecas	10.03	317	Pn	Pn	19 57 12.6	+1.2
CJM	Chamela	10.22	294	*i* P	Pn	19 57 16.4	+2.6
ACON	Acoyapa	10.32	109		Pn	19 57 14.9	-0.3
HZTE	Horizontes, Gu	10.47	116		Pn	19 57 18.3	+1.0
ORTG	Ortega, Santa	10.76	118		Pn	19 57 22.8	+1.5
DUNO	Dulce Nombre,	10.87	119		Pn	19 57 23.0	+0.2
JTS	Las Juntas de	11.23	117	Pn	Pn	19 57 27.9	+0.2
CAO2	Cobano, Puntar	11.40	120		Pn	19 57 30.5	+0.5
RIMA	Rio Macho	12.42	116		Pn	19 57 44.1	0.0
PEZE	Perez Zeledon,	12.77	117	Pn	Pn	19 57 49.2	+0.4
SRBA	San Rafael, Bu	13.12	117	Pn	Pn	19 57 53.7	+0.2
833A	Chaparral WMA,	13.30	344	P	Pn	19 57 56.4	+0.6
	baz=162,SNR=15						
735A	Kenedy	13.46	350		Pn	19 57 58.6	+0.6
SOR	Soroa	13.53	56	Pn	Pn	19 57 59.7	+0.6
BRU2	Volcan	13.90	117	Pn	Pn	19 58 04.4	+0.1
HKT	Hockley	14.34	358	Pn	Pn	19 58 08.7	-1.3
HPIG		14.96	321		Pn	19 58 18.7	0.0
435B	Jarrell	15.32	352	P	Pn	19 58 23.1	-0.1
	baz=171,SNR=18						
435B	Jarrell	15.32	352	Pn	Pn	19 58 23.0	-0.2
JCT	Junction City	15.45	345	P	Pn	19 58 25.0	0.0
	baz=163,SNR=17						
JCT	Junction City	15.45	345	Pn	Pn	19 58 24.6	-0.4
JCT				IAmb	IAmb	19 58 34.6	
	comp=Z,49nm,0.8s						
TXAR	Lajitas Array	15.80	332	Pn	Pn	19 58 31.1	+1.6
	comp=Z,1.9nm,0.3s,baz=150,slow=15,SNR=134						
TXAR				LR	LR	20 05 23.6	
	comp=Z,97nm,20.4s,baz=0.0,slow=40						
TXAR	Lajitas Array	15.80	332	P	Pn	19 58 30.7	+1.2
TX31	Lajitas Ar. Si	15.80	332	P	Pn	19 58 30.7	+1.2
TX31				IAmb	IAmb	19 58 36.1	
	comp=Z,160nm,1.1s						
TX32	Lajitas Array	15.80	332	P	Pn	19 58 30.3	+0.8
TX32				IAmb	IAmb	19 58 36.2	
	comp=Z,49nm,1.1s						
NATX	Nacogdoches	16.13	1	P	Pn	19 58 33.9	+0.2
	baz=181						
NATX	Nacogdoches	16.13	1	P	Pn	19 58 33.5	-0.2
NATX				IAmb	IAmb	19 58 40.6	
	comp=Z,40nm,0.9s						
237A	Washetta, Mont	16.38	358	P	Pn	19 58 35.9	-0.8
237A				IAmb	IAmb	19 59 03.5	
	comp=Z,51nm,0.9s						
WHTX	Lake Whitney,	16.49	353	P	Pn	19 58 38.6	+0.4
	baz=172,SNR=35						
WHTX	Lake Whitney,	16.49	353	P	Pn	19 58 37.4	-0.9
VBMS	Vicksburg	17.11	13	P	Pn	19 58 46.3	+0.3
	baz=195						
ABTX	Abilene, Hawle	17.47	347	P	Pn	19 58 50.4	-0.2
	baz=165,SNR=27						
ABTX	Abilene, Hawle	17.47	347	P	Pn	19 58 49.7	-0.8
ABTX				IAmb	IAmb	19 58 57.1	
	comp=Z,127nm,1.0s						
Z38A	Mt. Pleasant	17.62	0	P	Pn	19 58 52.0	-0.4
Z38A				IAmb	IAmb	19 58 55.6	
	comp=Z,76nm,0.9s						
Z41A	Richland Creek	17.75	6	P	Pn	19 58 53.8	-0.1
	baz=187						
Z35A	Perchaven, San	17.80	354	P	Pn	19 58 53.0	-1.5
Z35A				IAmb	IAmb	19 59 19.9	
	comp=Z,62nm,0.9s						
WLAR	White Oak Lake	18.14	5	P	Pn	19 58 57.3	-1.5
WLAR				IAmb	IAmb	19 59 01.3	
	comp=Z,44nm,0.9s						
352A	Blakely	18.39	29	P	P	19 58 59.2	-2.3
352A				IAmb	IAmb	19 59 14.0	
	comp=Z,66nm,1.4s						
LOOK	Love County	18.45	355		P	19 59 01.1	-1.0
CCAR	Cane Creek	18.53	9	P	P	19 59 02.7	-0.3
MNTX	Cornudas Mount	18.58	332	P	Pn	19 59 04.4	+0.3
	baz=147,SNR=29						
MNTX	Cornudas Mount	18.58	332		P	19 59 03.4	-0.3
Y45A	Yeager Farm, C	18.92	15	P	P	19 59 05.7	-1.6
X37A	Clayton	18.95	359	P	P	19 59 05.8	-1.9
X37A				IAmb	IAmb	19 59 21.9	
	comp=Z,47nm,0.7s						
MIAR	Mount Ida	18.96	4	P	P	19 59 06.2	-1.6
	baz=184,SNR=13						
MIAR	Mount Ida	18.96	4	P	P	19 59 05.7	-2.1
X40A	Basin Creek Fa	18.96	6	P	P	19 59 06.5	-1.3
TIGA	Tifton	19.01	32	P	P	19 59 08.4	+0.1
	baz=216						
X34A	Smith Ranch, M	19.11	353		P	19 59 07.9	-1.6
WMOK	Wichita Mounta	19.38	351	P	P	19 59 11.6	-0.7
	baz=169,SNR=26						
WMOK	Wichita Mounta	19.38	351	P	P	19 59 11.2	-1.2
WMOK				IAmb	IAmb	19 59 50.3	
	comp=Z,24nm,0.7s						
152A	Waverly Hall	19.49	27	P	P	19 59 11.2	-2.4
152A				IAmb	IAmb	19 59 35.0	
	comp=Z,64nm,1.7s						
OXF	Oxford	19.57	14	P	P	19 59 12.9	-1.5
	baz=196						
MSTX	Muleshoe	19.58	341	P	Pn	19 59 15.7	-0.5
	baz=157,SNR=26						
MSTX	Muleshoe	19.58	341	P	P	19 59 13.9	-0.8
MSTX				IAmb	IAmb	19 59 17.2	
	comp=Z,80nm,0.8s						
W39A	Magazine	19.59	3	P	P	19 59 14.3	-0.4
	baz=184,SNR=6.9						
W39A	Magazine	19.59	3	P	P	19 59 12.5	-2.2
W39A				IAmb	IAmb	19 59 41.1	
	comp=Z,29nm,0.7s						
W41B	Gary Mavity, V	19.70	7	P	P	19 59 14.9	-1.0
	baz=188						
FNO	Franklin	19.72	355		P	19 59 16.0	-0.1
HSIG		19.80	315	P	P	19 59 15.8	-1.2
HSIG				IAmb	IAmb	19 59 23.7	
	comp=Z,69nm,1.2s						
WHAR	Wooly Hollow	19.82	7	P	P	19 59 15.6	-1.6
Y49A	Blount Mountai	19.85	22	P	P	19 59 14.3	-3.3
OKCFA	Oklahoma City	19.88	354	P	P	19 59 15.8	-2.0
OK025	Westminster Rd	20.04	355		P	19 59 18.6	-0.9
AMTX	Amarillo	20.12	344	P	P	19 59 20.4	-0.2
	baz=161						
AMTX	Amarillo	20.12	344	P	P	19 59 19.4	-1.1
AMTX				IAmb	IAmb	19 59 24.4	
	comp=Z,66nm,0.8s						
BCOK	Bluff Creek, N	20.14	354		P	19 59 19.4	-1.2
X48A	Hartselle	20.18	20	P	P	19 59 17.5	-3.5
OK029	Liberty Lake	20.26	355	IAmb	IAmb	19 59 27.6	
	comp=Z,72nm,0.9s						
SJCC	San Jacinto, C	20.27	104	P	P	19 59 19.8	-2.5
TUL1	Leonard	20.28	358	P	P	19 59 22.5	+0.4
	baz=178						
TUL1	Leonard	20.28	358	P	P	19 59 20.6	-1.5
TUL1				IAmb	IAmb	19 59 28.0	
	comp=Z,40nm,0.8s						
319A	Douglas	20.36	323	P	Pn	19 59 24.6	-0.8
319A				IAmb	IAmb	19 59 30.6	
	comp=Z,50nm,0.9s						
FCAR	Ozark Folk Cen	20.43	7	IAmb	IAmb	19 59 27.4	
	comp=Z,21nm,0.7s						
121A	Cookes Peak, D	20.43	328	P	Pn	19 59 26.7	+0.4
	baz=143,SNR=60						
HHAR	Hobbs	20.67	3	IAmb	IAmb	19 59 28.9	
	comp=Z,34nm,1.3s						
GOGA	Godfrey	20.68	29	P	P	19 59 25.7	-0.9
	baz=213						
GOGA	Godfrey	20.68	29	P	P	19 59 26.2	-0.3
UREC	San Jos de Ur	20.70	110	*e*P	P	19 59 25.1	-1.8
U38A	Gravette	20.81	2	P	P	19 59 25.9	-2.0
U38A				IAmb	IAmb	19 59 31.5	
	comp=Z,26nm,0.8s						
U40A	Yellville	20.81	5	P	P	19 59 26.1	-1.8
	baz=186,SNR=17						
U40A	Yellville	20.81	5	IAmb	IAmb	19 59 46.4	
	comp=Z,33nm,0.7s						
U32A	Winter Ranch,	21.02	351	P	P	19 59 29.5	-0.7
CBOC	Ciudad Bolivar	21.11	115	*e*P	P	19 59 32.5	+1.0
TUMC	Tumaco	21.18	129	*e*P	P	19 59 35.6	+3.6
Y22D	IRIS PASSCAL I	21.27	332	P	P	19 59 32.4	-0.8
	baz=147						
PLMC	San Jos del P	21.35	118	*e*P	P	19 59 34.4	+0.5
HELC	Santa Helena	21.38	114	*e*P	P	19 59 34.9	+0.3
ZARC	Zaragoza, Cauc	21.42	110	*e*P	P	19 59 31.1	-3.6
KAN14	Manchester OK	21.46	354	P	P	19 59 33.3	-1.6
KAN14				IAmb	IAmb	19 59 37.3	
	comp=Z,106nm,1.4s						
WVT	Waverly	21.50	16	P	P	19 59 34.5	-0.8
	baz=199						
WVT	Waverly	21.50	16	P	P	19 59 32.8	-2.5
KAN01	Argonia South	21.63	354	P	P	19 59 35.3	-1.5
SMLC	San Martn de	21.66	106	*e*P	P	19 59 41.9	+4.7
KAN08	Anthony NE Sta	21.73	354	P	P	19 59 36.4	-1.3
KAN16	Harper SW Stat	21.73	354	IAmb	IAmb	19 59 40.1	
	comp=Z,45nm,0.7s						
YOTC	Yotoco, Valle	21.78	120	*e*P	P	19 59 36.5	-2.1
ANMO	Albuquerque	21.81	334	P	P	19 59 39.6	+0.7
	baz=149						
ANMO	Albuquerque	21.81	334	P	P	19 59 38.6	-0.3
TUC	Tucson	21.92	322	P	P	19 59 41.1	+1.2
	baz=136						
TUC	Tucson	21.92	322	P	P	19 59 41.8	+1.8
TUC				IAmb	IAmb	19 59 45.3	
	comp=Z,41nm,1.0s						
HODGE	Hodges	21.92	30		pP	19 59 48.9	-0.3
NHSC	New Hope	22.12	35	P	P	19 59 41.9	-0.1
	baz=221						
PAC1	Pacto, Paraso	22.18	132	*e*P	P	19 59 41.9	-1.0
NORC	Norcasia	22.25	114	*e*P	P	19 59 44.7	+1.1
ANIL	Santa Ana	22.31	117	*e*P	P	19 59 47.4	+2.8
OTAV	Otavalo	22.44	131	*e*P	P	19 59 47.4	+1.3
OTAV	Otavalo	22.44	131	P	P	19 59 48.2	+2.1
TKL	Tuckaleechee C	22.45	25	P	P	19 59 46.3	+0.7
	comp=Z,6.8nm,0.9s,baz=212,slow=16,SNR=6.0						
U49A	Red Boiling Sp	22.48	20	P	P	19 59 41.0	-4.8
T47A	Sharon Grove	22.51	17	IAmb	IAmb	20 00 03.4	
	comp=Z,19nm,0.7s						
BRRC	Barranca, Sant	22.61	109	*e*P	P	19 59 47.4	-0.1
SOTA	Rioblanco	22.63	124	*e*P	P	19 59 49.0	+0.9
S44A	Carbondale	22.66	12	IAmb	IAmb	20 00 02.7	
	comp=Z,26nm,0.9s						
CCM	Cathedral Cave	22.67	8	P	P	19 59 46.6	-1.3
	baz=190						
CCM	Cathedral Cave	22.67	8	P	P	19 59 43.9	-3.9
V52A	Sevierville	22.69	25	P	P	19 59 48.7	+0.7
ORTC	Ortega, Tolima	22.75	119	*e*P	P	19 59 50.3	+1.4
R40A	Maddies Statio	22.79	6	P	P	19 59 46.2	-2.8
R40A				IAmb	IAmb	19 59 50.3	
	comp=Z,21nm,0.7s						
SPBC	San Pablo de B	22.91	113	*e*P	P	19 59 50.9	+0.2
214A	Organ Pipe Nat	22.92	319	P	P	19 59 52.9	+2.3
	baz=131,SNR=16						
214A	Organ Pipe Nat	22.92	319	P	P	19 59 51.8	+1.2
214A				IAmb	IAmb	19 59 54.5	
	comp=Z,38nm,1.1s						
T25A	Trinidad	23.01	341	P	P	19 59 53.2	+1.6
	baz=156,SNR=35						
T25A	Trinidad	23.01	341	P	P	19 59 52.9	+1.2
SDDR	Presa de Saban	23.03	78	*e*P	P	19 59 57.4	+5.5
ROSC	El Rosal	23.07	115	P	P	19 59 54.4	+1.7
	comp=Z,88nm,0.9s,baz=141,slow=2.4,SNR=36						
ROSC				LR	LR	20 09 35.0	
	comp=Z,136nm,18.3s,baz=94,slow=38						
ROSC	El Rosal	23.07	115	*e*P	P	19 59 55.0	+2.3
X18A	Snowflake	23.11	327	IAmb	IAmb	19 59 56.9	
	comp=Z,27nm,0.9s						
BIRD	Birdtown, Kers	23.14	32	P	P	19 59 53.0	+0.3
BARC	Barichara	23.30	110	*e*P	P	19 59 55.5	+0.7
TZTN	Tazewell	23.31	24	P	P	19 59 53.1	-1.4
	baz=209						
PAMC	Pamplona, Colo	23.45	108	*e*P	P	19 59 57.4	+0.9
W18A	Petrified Fore	23.46	329	P	P	19 59 58.1	+1.9
	baz=142						
W18A	Petrified Fore	23.46	329	IAmb	IAmb	20 00 29.8	
	comp=Z,18nm,0.9s						
KSU1	Kansas State U	23.49	357	P	P	19 59 55.7	-0.4
	baz=176						
KSU1	Kansas State U	23.49	357	P	P	19 59 54.1	-2.0
KSU1				IAmb	IAmb	19 59 57.4	
	comp=Z,28nm,0.8s						
CBKS	Cedar Bluff	23.52	351	P	P	19 59 55.6	-0.8
	baz=169,SNR=24						
CHIC	Chingaza	23.69	115	*e*P	P	19 59 59.5	+0.8
RUSC	La Rusia	23.69	112	*e*P	P	19 59 59.1	+0.3
SDCO	Great Sand Dun	23.92	339	P	P	20 00 01.8	+1.2
	baz=154,SNR=54						
SDCO	Great Sand Dun	23.92	339	IAmb	IAmb	20 00 03.3	
	comp=Z,28nm,0.8s						
P38A	Dawn	24.02	3	IAmb	IAmb	20 00 33.1	
	comp=Z,16nm,0.7s						
P40A	Paris	24.04	6	IAmb	IAmb	20 00 11.7	
	comp=Z,13nm,0.6s						
KSCO	Kaye Shedlock'	24.27	346	P	P	20 00 03.9	+0.3
	baz=162,SNR=5.7						
KSCO	Kaye Shedlock'	24.27	346	P	P	20 00 03.5	-0.1
KSCO				IAmb	IAmb	20 00 05.3	
	comp=Z,44nm,0.9s						
Y14A	Wickenburg	24.38	322	IAmb	IAmb	20 00 08.9	
	comp=Z,37nm,1.1s						
S22A	4UR Ranch, Cre	24.40	337	P	P	20 00 06.3	+1.3
	baz=152,SNR=13						
MVCO	Mesa Verde	24.60	334	P	P	20 00 08.4	+1.6
	baz=148,SNR=17						
MVCO	Mesa Verde	24.60	334	IAmb	IAmb	20 00 10.4	
	comp=Z,44nm,1.2s						
WUAZ	Wupatki	24.62	327	P	P	20 00 08.9	+2.1
	baz=140,SNR=47						
TAMC	Tame, Arauca	24.63	109	*e*P	P	20 00 05.0	-2.1
SDV	Santo Domingo	24.84	103	*e*P	P	20 00 09.6	+0.5
SDV	Santo Domingo	24.84	103	*e*P	P	20 00 07.8	-1.3
SDV	Santo Domingo	24.84	103	P	P	20 00 06.7	-2.4
SDV				IAmb	IAmb	20 00 13.9	
	comp=Z,17nm,0.7s						
MACC	Macarena, Meta	24.87	120	*e*P	P	20 00 10.9	+1.7
Q24A	Divide	24.92	341	P	P	20 00 10.6	+0.9
	baz=156,SNR=6.7						
GLA	Glamis	24.92	318	P	P	20 00 08.9	-0.6
	baz=129						
GLA	Glamis	24.92	318	P	P	20 00 08.0	-1.5
GLA				IAmb	IAmb	20 00 14.3	
	comp=Z,29nm,0.8s						
PTGC	Puerto Gaitan,	25.29	114	*e*P	P	20 00 15.3	+2.3
PDMCI	Parker Dam,Lak	25.32	321	P	P	20 00 14.1	+1.1
	baz=133,SNR=7.5						
SWSC	Sam W. Stewart	25.49	316	P	P	20 00 16.3	+1.7
	baz=128						
IKP	In-Ko-Pah, Jac	25.52	316	P	P	20 00 16.8	+1.8
	baz=127						
P49A	Miami Univ. Ec	25.57	19	P	P	20 00 15.0	-0.3
	baz=204						
SFIN	Lafayette	25.70	14	P	P	20 00 17.2	+0.7
	baz=198						
BC3	Big Chuckawall	25.71	318	P	P	20 00 18.8	+2.1
	baz=129,SNR=9.4						
SMCO	Snowmass	25.72	338	IAmb	IAmb	20 00 23.9	
	comp=Z,40nm,1.4s						
U15A	North Rim	25.79	327	IAmb	IAmb	20 00 23.1	
	comp=Z,15nm,0.8s						
ISCO	Idaho Springs	25.83	341	P	P	20 00 18.6	+0.7
	baz=156,SNR=8.3						
ISCO	Idaho Springs	25.83	341	P	P	20 00 17.4	-0.5
ISCO				IAmb	IAmb	20 00 22.8	
	comp=Z,14nm,0.8s						
IRM	Iron Mountain	25.84	319	P	P	20 00 20.2	+2.4
	baz=131,SNR=9.7						
MONP2	Monument Peak	25.88	316	P	P	20 00 20.4	+2.1
	baz=127						
BGNE	Belgrade	25.89	355	P	P	20 00 17.8	-0.3
	baz=173,SNR=5.5						
OGNE	Ogallala	25.99	348	P	P	20 00 19.4	+0.2
	baz=164,SNR=9.8						
BELC	Belle Mtn. Jos	26.28	318	P	P	20 00 23.0	+1.1
	baz=129						
SCIA	State Center	26.31	3	P	P	20 00 20.2	-1.7
	baz=184,SNR=6.9						
TPFO	Pinon Flats	26.33	317	P	P	20 00 23.2	+0.8
	baz=128						
PFO	Pinyon Flats O	26.34	317	P	P	20 00 24.8	+2.4
	baz=128						
PFO	Pinyon Flats O	26.34	317	P	P	20 00 21.9	-0.5
GMRC	Granite Mounta	26.57	320	P	P	20 00 26.9	+2.4
	baz=131,SNR=11						
N23A	Red Feather La	26.93	342	P	P	20 00 29.4	+1.6
	baz=156						
MTPU	Mount Pierson	26.98	329	IAmb	IAmb	20 00 34.5	
	comp=Z,15nm,1.0s						
O20A	White River Ci	27.02	338	P	P	20 00 29.8	+1.2
	baz=151						
O20A	White River Ci	27.02	338	IAmb	IAmb	20 00 39.1	
	comp=Z,49nm,1.7s						
HEC	Hector,Ludlow	27.02	319	P	P	20 00 31.1	+2.5
	baz=130,SNR=7.4						
SRU	San Rafael Swe	27.07	333	P	P	20 00 29.0	0.0
K38A	Parkersburg	27.07	4	IAmb	IAmb	20 00 28.7	
	comp=Z,21nm,0.6s						
TUQ	Turquoise Moun	27.16	321	P	P	20 00 31.6	+1.7
	baz=131,SNR=10						
L44A	Lake County Fo	27.25	12	P	P	20 00 32.1	+1.7
	baz=195						
MVU	Marysvale	27.35	330	P	P	20 00 32.5	+0.9
MVU				IAmb	IAmb	20 00 44.3	
	comp=Z,47nm,1.1s						
P18A	Preston Nutter	27.38	334	IAmb	IAmb	20 00 39.5	
	comp=Z,15nm,1.0s						
SCI2	San Clemente I	27.39	313	P	P	20 00 34.3	+2.5
	baz=124						
MCWV	Mont Chateau	27.49	26	P	P	20 00 34.2	+1.7
	baz=213						
BFSC	Mount Baldy Ra	27.51	317	P	P	20 00 33.9	+0.9
	baz=127						
CIS	Catalina Islan	27.53	314	P	P	20 00 34.1	+1.0
	baz=124						
JFWS	Jewell Farm	27.58	8	P	P	20 00 35.7	+2.4
	baz=190						
JFWS	Jewell Farm	27.58	8	IAmb	IAmb	20 00 55.6	
	comp=Z,19nm,0.8s						
RDMU	Red Mountain	27.90	336	ScP	ScP	20 07 25.7	-4.2
PRN	Pahroc Range	28.01	325	P	P	20 00 38.0	+0.6
RWWY	Rawlins	28.05	341	IAmb	IAmb	20 00 39.4	
	comp=Z,12nm,0.9s						
ECSD	EROS Data Cent	28.11	358	P	P	20 00 37.9	-0.1
	baz=177,SNR=6.9						
ECSD	EROS Data Cent	28.11	358	IAmb	IAmb	20 01 21.0	
	comp=Z,26nm,1.1s						
EDW2	Edwards Air Fo	28.12	317	P	P	20 00 38.7	+0.4
	baz=127						
LRMC	Laurel Mtn Rad	28.29	319	P	P	20 00 40.0	+0.1
	baz=129						
FURC	Furnace Creek,	28.41	321	P	P	20 00 42.2	+1.4
	baz=131						
M53A	WI Miller and	28.67	23	P	P	20 00 43.2	+0.2
	baz=210						
SCZ2	Santa Cruz Isl	28.71	314	P	P	20 00 44.1	+0.6
	baz=124						
K22A	Casper	28.71	342	P	P	20 00 44.1	+0.4
	baz=156						
K22A	Casper	28.71	342	P	P	20 00 43.3	-0.3
K22A				IAmb	IAmb	20 01 28.9	
	comp=Z,17nm,1.3s						
ISA	Isabella, Lake	28.91	318	P	P	20 00 45.5	+0.2
	baz=128						
R11A	Troy Canyon, C	28.98	325	P	P	20 00 46.0	-0.1
	baz=136,SNR=6.7						
DUG	Dugway, Tooele	28.98	331	P	P	20 00 46.4	+0.4
	baz=143						
TCUT	Toone Canyon	29.11	334	P	P	20 00 47.7	+0.4
TCUT				IAmb	IAmb	20 00 50.2	
	comp=Z,28nm,0.8s						
CWC	Cottonwood Cre	29.14	320	P	P	20 00 49.3	+1.8
	baz=129						
PKM	Mcpherson Peak	29.33	316	P	P	20 00 50.1	+0.8
	baz=125						
LCH	Last Change Ra	29.39	322	IAmb	IAmb	20 00 53.4	
	comp=Z,24nm,1.7s						
VES	Vestal, Richgr	29.41	318	P	P	20 00 49.7	0.0
	baz=127,SNR=7.2						
RSSD	Black Hills	29.45	347	P	P	20 00 50.7	+0.5
	baz=162						
SPMN	Marine on St.	29.64	3	P	P	20 00 50.3	-1.3
	baz=184						
BW06	Boulder Array	29.80	338	P	P	20 00 53.9	+0.5
	baz=151						
PD31	Pinedale Array	29.80	338	P	P	20 00 53.2	-0.1
PDAR	Pinedale Array	29.80	338	P	P	20 00 53.6	+0.2
	comp=Z,1.6nm,0.9s,baz=141,slow=9.6,SNR=11						
PDAR				LR	LR	20 15 38.6	
	comp=Z,200nm,19.6s,baz=156,slow=42						
HVU	Hansel Valley	30.24	333	IAmb	IAmb	20 00 59.9	
	comp=Z,17nm,0.8s						
HVU				ScP	ScP	20 07 27.9	-9.4
F36A	Milaca	30.24	2	IAmb	IAmb	20 00 55.9	
	comp=Z,15nm,1.0s						
AHID	Auburn Hatcher	30.37	336	IAmb	IAmb	20 01 01.4	
	comp=Z,7.9nm,0.8s						
NV11	Mina Array Sit	30.49	323	IAmb	IAmb	20 01 03.4	
	comp=Z,14nm,0.9s						
ELK	Elko	30.57	329	LR	LR	20 15 35.1	
	comp=Z,783nm,18.1s,baz=156,slow=41						
ELK	Elko	30.57	329	P	P	20 01 00.8	+0.6
ELK				IAmb	IAmb	20 01 03.4	
	comp=Z,11nm,0.9s						
LHV	Little Huntoon	30.57	322	IAmb	IAmb	20 01 03.8	
	comp=Z,9.9nm,0.8s						
NVAR	Mina Array Bea	30.57	323	P	P	20 01 01.9	+1.6
	comp=Z,12nm,0.7s,baz=138,slow=8.9,SNR=98						
NVAR				LR	LR	20 14 45.6	
	comp=Z,1μm,18.7s,baz=134,slow=39						
REDW	Red Top Meadow	30.79	337	IAmb	IAmb	20 01 04.4	
	comp=Z,17nm,0.8s						
RYN	Ryan	30.83	323	P	P	20 01 03.5	+1.0
KVN	Kaiserville	30.87	324	IAmb	IAmb	20 01 34.7	
	comp=Z,11nm,0.5s						
LOHW	Long Hollow	30.91	338	IAmb	IAmb	20 01 05.4	
	comp=Z,12nm,0.8s						
TPAW	Teton Pass	30.93	337	IAmb	IAmb	20 01 06.0	
	comp=Z,20nm,1.2s						
MOOW	Moose Ponds	31.08	338	P	P	20 01 05.1	+0.4
MOOW				IAmb	IAmb	20 01 06.8	
	comp=Z,8.3nm,0.8s						
MOOW				ScP	ScP	20 07 34.4	-5.6
E38A	The Farm, Brul	31.10	5	IAmb	IAmb	20 01 03.3	
	comp=Z,27nm,0.9s						
BMN	Battle Mountai	31.35	327	IAmb	IAmb	20 01 10.3	
	comp=Z,9.1nm,1.0s						
YERR	Yerington	31.49	322	IAmb	IAmb	20 01 11.5	
	comp=Z,7.0nm,0.7s						
PNTR	Pine Nut	31.77	322	IAmb	IAmb	20 01 14.7	
	comp=Z,8.2nm,1.0s						
RLMT	Red Lodge	31.79	341	P	P	20 01 10.9	0.0
	baz=153,SNR=6.0						
RLMT	Red Lodge	31.79	341	IAmb	IAmb	20 01 12.9	
	comp=Z,8.7nm,0.9s						
YMR	Madison River	31.96	338	P	P	20 01 12.9	+0.6
YMR				IAmb	IAmb	20 01 15.1	
	comp=Z,14nm,0.8s						
PAHR	Pah Rah Range	32.05	323	IAmb	IAmb	20 01 16.7	
	comp=Z,7.8nm,1.0s						
MPK	Martis Peak	32.16	322	IAmb	IAmb	20 01 18.2	
	comp=Z,19nm,1.0s						
YHL	Hebgen Lake	32.19	338	P	P	20 01 15.1	+0.6
YHL				IAmb	IAmb	20 01 17.8	
	comp=Z,7.3nm,0.8s						
LAO	LASA Array	32.38	346	P	P	20 01 16.0	+0.1
	baz=160						
HLID	Hailey	32.39	333	P	P	20 01 17.6	+1.5
	baz=143,SNR=24						
HLID	Hailey	32.39	333	IAmb	IAmb	20 01 18.6	
	comp=Z,13nm,0.9s						
MDND	Maddock	32.41	354	P	P	20 01 15.4	-0.6
	baz=172						
EYMN	Ely	32.44	5	P	P	20 01 14.2	-2.0
	baz=186						
AGMN	Agassiz Nation	32.65	359	P	P	20 01 16.0	-2.2
	baz=178,SNR=14						
B35A	Bob, Littlefor	32.73	2	IAmb	IAmb	20 01 18.8	
	comp=Z,12nm,0.8s						
MCMT	McKenzie Canyo	32.79	336	P	P	20 01 21.3	+1.6
BOZ	Bozeman (W)	33.00	339	P	P	20 01 20.8	-0.6
	baz=150						
WVOR	Wild Horse Val	33.53	328	P	P	20 01 27.1	+1.0
WVOR				IAmb	IAmb	20 01 29.0	
	comp=Z,21nm,1.1s						
DGMT	Dagmar	33.65	349	P	P	20 01 26.5	-0.4
	baz=164						
O03E	Paynes Creek	33.84	322	P	P	20 01 29.1	+0.4
	baz=129						

MOD	Modoc Plateau	34.04	325	IAmb	IAmb	20 01 33.1	
	comp=Z,9.6nm,0.9s						
O02D	Mt. Diablo Mer	34.36	321	P	P	20 01 33.2	-0.1
	baz=128						
EGMT	Eagleton	34.55	343	P	P	20 01 34.5	-0.2
	baz=154						
EGMT	Eagleton	34.55	343	P	P	20 01 35.3	+0.6
ULM	Lac du Bonnet	34.60	359	P	P	20 01 33.2	-1.9
	comp=Z,9.6nm,0.9s,baz=169,slow=8.9,SNR=6.8						
ULM				LR	LR	20 17 44.1	
	comp=Z,83nm,18.3s,baz=156,slow=40						
ULM	Lac du Bonnet	34.60	359	IAmb	IAmb	20 01 34.6	
	comp=Z,8.2nm,0.8s						
BMO	Blue Mountains	34.69	332	IAmb	IAmb	20 01 37.1	
	comp=Z,14nm,1.6s						
MSO	Missoula	34.89	337	P	P	20 01 37.7	0.0
	baz=147,SNR=7.2						
MSO	Missoula	34.89	337	IAmb	IAmb	20 01 39.5	
	comp=Z,12nm,0.9s						
KMRM	Mail Ridge	34.95	320	IAmb	IAmb	20 01 41.9	
	comp=Z,8.9nm,1.0s						
M02C	Callahan	35.15	323	P	P	20 01 40.0	-0.1
	baz=129						
I07A	Izee	35.16	329	P	P	20 01 39.9	-0.2
I07A				IAmb	IAmb	20 01 42.1	
	comp=Z,6.1nm,0.8s						
YBH	Yreka Blue Hor	35.28	323	P	P	20 01 41.0	-0.2
	comp=Z,3.2nm,0.6s,baz=111,slow=3.6,SNR=17						
YBH				LR	LR	20 17 11.1	
	comp=Z,585nm,21.6s,baz=148,slow=38						
KHMM	Horse Mountain	35.36	321	IAmb	IAmb	20 01 44.6	
	comp=Z,12nm,0.8s						
L04D	Klamath Falls	35.36	324	P	P	20 01 41.5	-0.4
	baz=130						
J05D	Fort Rock, OR	35.49	326	P	P	20 01 43.4	+0.4
	baz=133						
PINE	Pine Mountain	35.68	327	P	P	20 01 45.3	+0.5
PINE				IAmb	IAmb	20 01 46.9	
	comp=Z,7.5nm,1.0s						
J04D	Umpqua Nationa	35.93	326	P	P	20 01 47.3	+0.4
	baz=132						
I05D	Terrebonne, OR	36.27	328	P	P	20 01 50.9	+1.3
	baz=134						
E09A	Wood Farm, Sta	36.34	333	IAmb	IAmb	20 01 51.8	
	comp=Z,8.9nm,0.9s						
K02D	Willamette Mer	36.44	324	P	P	20 01 51.1	0.0
	baz=129						
I04A	Tendick Farm,	36.46	326	P	P	20 01 51.3	0.0
	baz=132						
KBO	Bosley Butte	36.47	323	IAmb	IAmb	20 01 54.7	
	comp=Z,24nm,1.0s						
BOAV	Boa Vista	36.53	108	*e*P	P	20 01 51.8	-0.3
BOAV	Boa Vista	36.53	108	P	P	20 01 49.8	-2.3
WALA	Waterton Lakes	36.77	339	pP	pP	20 02 03.2	-0.6
J01E	Myrtle Point	36.89	324	P	P	20 01 54.7	-0.1
	baz=129						
G05D	Wamic, OR	36.89	329	P	P	20 01 55.8	+1.0
	baz=135						
I03D	Drain, OR	36.91	325	P	P	20 01 55.3	+0.3
	baz=131						
KEBM	Edson Butte	36.94	323	P	P	20 01 55.2	-0.1
H04A	Detroit Lake	36.95	327	IAmb	IAmb	20 01 57.5	
	comp=Z,18nm,0.9s						
H04D	Lebanon	37.13	327	P	P	20 01 57.2	+0.4
	baz=132						
E07A	Sunnyside	37.14	331	P	P	20 01 57.1	+0.2
E07A				IAmb	IAmb	20 01 59.7	
	comp=Z,6.3nm,0.7s						
NEW	Newport	37.29	336	P	P	20 01 58.4	+0.2
	comp=Z,9.6nm,0.6s,baz=151,slow=8.0,SNR=17						
NEW				LR	LR	20 19 47.9	
	comp=Z,307nm,18.6s,baz=156,slow=40						
NEW	Newport	37.29	336	P	P	20 01 58.4	+0.2
	baz=143,SNR=8.5						
NEW	Newport	37.29	336	IAmb	IAmb	20 02 00.1	
	comp=Z,10nm,0.7s						
F05D	White Salmon	37.42	329	P	P	20 02 00.9	+1.7
	baz=135,SNR=7.7						
I02E	Swisshome, OR	37.45	325	P	P	20 01 59.8	+0.3
	baz=130						
G03D	McMinnville, O	37.87	327	P	P	20 02 03.5	+0.4
	baz=132						
LTY	Liberty	38.04	332	IAmb	IAmb	20 02 06.3	
	comp=Z,11nm,0.8s						
ETMB	Extrema	38.17	130	*e*P	P	20 02 06.1	+0.2
ETMB	Extrema	38.17	130	P	P	20 02 05.3	-0.6
ETMB				IAmb	IAmb	20 02 06.9	
	comp=Z,31nm,1.0s						
LON	Longmire	38.20	330	IAmb	IAmb	20 02 09.3	
	comp=Z,12nm,0.8s						
B08A	Colville Reser	38.28	334	IAmb	IAmb	20 02 09.3	
	comp=Z,9.7nm,0.9s						
D05A	Enumclaw	38.60	330	IAmb	IAmb	20 02 11.7	
	comp=Z,19nm,0.8s						
MACA	Manacapuru-AM	38.84	116	*e*P	P	20 02 10.9	-0.7
B06A	Marblemount	39.34	332	IAmb	IAmb	20 02 16.7	
	comp=Z,13nm,0.8s						
D03D	Eldon	39.38	330	P	P	20 02 16.0	+0.3
	baz=134						
B05A	Bryant	39.43	332	P	P	20 02 16.4	+0.3
	baz=136						
A04D	Lummi Island	40.04	332	P	P	20 02 21.7	+0.6
	baz=136						
EDM	Edmonton	40.22	343	P	P	20 02 22.2	-0.5
LLLB	Lillooet	41.07	334	P	P	20 02 30.4	+0.7
LLLB				IAmb	IAmb	20 02 34.5	
	comp=Z,11nm,0.9s						
LPAZ	La Paz	41.38	139	P	P	20 02 34.0	+0.7
	comp=Z,8.5nm,0.7s,baz=332,slow=7.5,SNR=12						
LPAZ				LR	LR	20 18 22.1	
	comp=Z,189nm,21.9s,baz=300,slow=34						
LPAZ	La Paz	41.38	139	*e*P	P	20 02 33.2	-0.1
LPAZ	La Paz	41.38	139	IAmb	IAmb	20 02 34.8	
	comp=Z,9.3nm,0.8s						
MDP	Montagnes des	43.01	99	LR	LR	20 22 23.6	
	comp=Z,93nm,20.4s,baz=272,slow=38						
ITTB	Itaituba	43.75	114	*e*P	P	20 02 50.5	-1.4
MALB	Monte Alegre	43.97	110	*e*P	P	20 02 52.5	-1.2
VILB	Vilhena	44.70	127	*e*P	P	20 02 59.2	-0.3
VILB	Vilhena	44.70	127	P	P	20 02 58.6	-0.9
NPGB	Novo Progresso	45.36	117	*e*P	P	20 03 02.9	-1.9
MCPB	Macapa, AP	45.40	106	*e*P	P	20 03 04.0	-1.1
LVC	Limon Verde	45.82	145	LR	LR	20 21 15.7	
	comp=Z,133nm,18.4s,baz=322,slow=35						
LVC	Limon Verde	45.82	145	P	P	20 03 08.8	+0.1
LVC				IAmb	IAmb	20 03 12.3	
	comp=Z,35nm,1.7s						
PDRB	Porto dos Gac	46.64	123	*e*P	P	20 03 13.5	-1.4
CLDB	Colider	46.99	122	*e*P	P	20 03 16.3	-1.3
PTLB	Pontes e Lacer	47.06	129	*e*P	P	20 03 17.7	-0.4
PTLB	Pontes e Lacer	47.06	129	P	P	20 03 17.2	-0.8
PTLB				IAmb	IAmb	20 03 18.6	
	comp=Z,18nm,1.2s						
YKA	Yellowknife Ar	48.85	348	P	P	20 03 31.3	0.0
	comp=Z,9.2nm,0.8s,baz=146,slow=8.4,SNR=9.7						
PRPB	Parauapebas	49.82	112	*e*P	P	20 03 38.6	-0.9
TMAB	Tom-Au,PA,Br	49.82	107	*e*P	P	20 03 39.7	+0.3
SALV	Santo Antonio	49.95	127	*e*P	P	20 03 39.9	-0.5
DLBC	Dease Lake	50.01	337	P	P	20 03 42.3	+1.9
	comp=Z,11nm,1.1s,baz=152,slow=5.5,SNR=5.3						
DLBC	Dease Lake	50.01	337	P	P	20 03 41.5	+1.1
SNDB	Serra Nova Dou	51.31	120	*e*P	P	20 03 50.4	-0.3
PP1B	Ponte de Pedra	51.59	128	*e*P	P	20 03 53.0	+0.3
AQDB	Aquidauana	52.76	132	*e*P	P	20 04 00.8	-0.6
AQDB	Aquidauana	52.76	132	P	P	20 04 00.3	-1.1
AQDB				IAmb	IAmb	20 04 01.5	
	comp=Z,11nm,0.7s						
ARAG	Araguaiana, MT	52.88	124	*e*P	P	20 04 01.8	-0.6
SMTB	Santa Maria do	52.99	114	*e*P	P	20 04 03.0	-0.2
ROSB	Rosrio	53.69	106	*e*P	P	20 04 07.8	-0.6
PEXB	Peixe	53.90	118	*e*P	P	20 04 09.7	-0.2
M31M	Drury Creek, Y	54.17	339	P	P	20 04 12.0	+0.8
	baz=131						
M30M	Minto, Yukon	55.27	338	P	P	20 04 19.5	+0.3
	baz=129						
CPUP	Villa Florida	55.55	138	P	P	20 04 20.8	-0.8
	comp=Z,4.0nm,0.7s,baz=320,slow=5.9,SNR=9.3						
CPUP				LR	LR	20 27 50.3	
	comp=Z,100nm,21.6s,baz=14,slow=36						
CPUP	Villa Florida	55.55	138	*e*P	P	20 04 20.9	-0.8
CPUP	Villa Florida	55.55	138	IAmb	IAmb	20 04 21.6	
	comp=Z,14nm,1.4s						
BDFB	Brasilia	55.92	122	P	P	20 04 24.2	-0.4
	comp=Z,9.4nm,0.5s,baz=304,slow=7.5,SNR=14						
BDFB				LR	LR	20 29 36.5	
	comp=Z,162nm,19.6s,baz=92,slow=37						
BDFB	Brasilia	55.92	122	P	P	20 04 24.1	-0.6
BDFB				IAmb	IAmb	20 04 28.6	
	comp=Z,16nm,0.9s						
TRCB	Terra Rica	56.43	132	*e*P	P	20 04 27.8	-0.3
PCMB	Pacaembu	56.71	129	*e*P	P	20 04 29.4	-0.6
NBPS	Pedro II - PI	56.73	106	*e*P	P	20 04 30.3	-0.1
SDBA	SAO DESIDERIO	56.96	116	*e*P	P	20 04 32.1	+0.1
IPMB	Ipameri, GO	57.01	124	*e*P	P	20 04 31.6	-0.6
L27K	Beaver Creek,	57.42	337	P	P	20 04 34.6	+0.2
	baz=124						
PTGB	Pitanga	58.04	133	*e*P	P	20 04 38.7	-0.8
INK	Inuvik	58.10	344	P	P	20 04 39.4	+0.3
	baz=135,SNR=9.2						
INK	Inuvik	58.10	344	IAmb	IAmb	20 04 40.4	
	comp=Z,11nm,0.9s						
EGAK	Eagle	58.15	339	P	P	20 04 39.5	0.0
	baz=125						
ITQB	Itaqui	58.34	140	*e*P	P	20 04 41.1	-0.1
BB19B	Bebedouro	58.47	127	*e*P	P	20 04 42.4	0.0
JANB	Januaria	58.72	119	*e*P	P	20 04 44.3	0.0
SCRK	Sand Creek	58.73	337	P	P	20 04 44.4	+0.6
	baz=122						
J26L	Joseph Creek	58.86	338	P	P	20 04 44.5	0.0
	baz=122						
RIDG	Independent Ri	58.93	337	P	P	20 04 45.2	+0.1
	baz=121						
SFJD	Kangerlussuaq	58.99	19	ScP	ScP	20 09 36.1	+4.0
RES	Resolute Bay	59.13	0	P	P	20 04 45.4	-0.8
RES				IAmb	IAmb	20 05 03.5	
	comp=Z,17nm,1.4s						
A36M	Sachs Harbour	59.15	350	P	P	20 04 45.9	-0.4
	baz=146,SNR=6.0						
A36M	Sachs Harbour	59.15	350	IAmb	IAmb	20 04 47.0	
	comp=Z,14nm,1.0s						
KNK	Knik Glacier	59.29	333	P	P	20 04 47.4	-0.2
	baz=116						
NBCL	Cascavel-CE	59.60	104	*e*P	P	20 04 51.0	+0.6
MC01	Montes Claros	59.83	120	*e*P	P	20 04 52.1	+0.1
RCLB	Rio Claro- Sao	59.99	128	*e*P	P	20 04 53.1	+0.1
HDA	Harding Lake	60.07	337	P	P	20 04 52.4	-0.4
	baz=119						
HDA	Harding Lake	60.07	337	P	P	20 04 53.2	+0.3
PRP	Porcupine Dome	60.10	338	P	P	20 04 51.8	-1.4
	baz=121						
PRP	Porcupine Dome	60.10	338	P	P	20 04 53.0	-0.2
PRP				IAmb	IAmb	20 05 03.7	
	comp=Z,11nm,1.4s						
ILAR	Eielson Array	60.22	337	P	P	20 04 54.0	+0.1
	comp=Z,1.7nm,0.8s,baz=142,slow=4.5,SNR=13						
NBMA	Muriti-CE	60.31	108	*e*P	P	20 04 56.0	+0.7
NBPN	Ponto Novo - B	60.40	112	*e*P	P	20 04 55.8	-0.1
PLCA	Paso Flores	60.48	159	P	P	20 04 57.1	+1.1
	comp=Z,6.9nm,0.7s,baz=338,slow=8.1,SNR=18						
PLCA				LR	LR	20 26 06.2	
	comp=Z,101nm,18.3s,baz=355,slow=31						
PLCA	Paso Flores	60.48	159	*e*P	P	20 04 57.5	+1.5
PLCA	Paso Flores	60.48	159	P	P	20 04 56.6	+0.6
PLCA				IAmb	IAmb	20 04 58.1	
	comp=Z,7.1nm,0.8s						
CPSB	Cacapava Do Su	60.83	139	*e*P	P	20 04 58.4	-0.1
RSO	Redoubt South	60.83	331	P	P	20 04 59.0	+0.6
DIAM	Diamantina, MG	60.85	122	*e*P	P	20 04 59.6	+0.6
TRF	Thorofare Moun	60.94	335	P	P	20 04 59.2	+0.2
	baz=115						
NBPA	Parau_RN	61.24	106	*e*P	P	20 05 02.5	+1.0
BSCB	Bom Sucesso	61.35	125	*e*P	P	20 05 02.7	+0.4
PLTB	Pedras Altas	61.65	140	*e*P	P	20 05 03.8	-0.2
PLTB	Pedras Altas	61.65	140	P	P	20 05 02.9	-1.1
PLTB				IAmb	IAmb	20 05 05.2	
	comp=Z,9.0nm,1.1s						
N19K	Bonanza Creek	61.75	331	P	P	20 05 04.8	+0.4
	baz=110						
MLY	Manley	61.80	337	P	P	20 05 05.4	+0.8
	baz=115						
MLY	Manley	61.80	337	IAmb	IAmb	20 05 05.8	
	comp=Z,4.7nm,0.8s						
NBLV	Livramento - P	62.00	107	*e*P	P	20 05 07.1	+0.3
L20K	Farewell, AK	62.07	333	P	P	20 05 06.7	+0.2
	baz=111						
GDU01	Guandu, BA	62.18	115	*e*P	P	20 05 08.9	+1.0
I21K	Tanana	62.34	336	P	P	20 05 09.1	+1.0
	baz=114						
L19K	White Mountain	62.39	333	P	P	20 05 08.5	-0.1
	baz=110						
J20K	Nowinta River	62.80	335	P	P	20 05 11.0	-0.3
	baz=112						
H21K	Melozitna Rive	62.85	337	P	P	20 05 11.8	+0.2
	baz=114						
CMC01	Camacan, BA	62.95	117	*e*P	P	20 05 13.2	+0.2
TOLK	Toolik Lake Re	63.03	340	P	P	20 05 12.9	+0.1
	baz=118						
SJMB	Sao Joao De Ma	63.10	121	*e*P	P	20 05 14.8	+0.9
TTA	Tatalina	63.15	333	P	P	20 05 13.8	+0.1
	baz=109						
NBPV	Pedro Velho	63.17	106	*e*P	P	20 05 14.2	-0.4
BSFB	Barra de Sao F	63.44	121	*e*P	P	20 05 16.7	+0.5
COYC	Coyhaique	64.33	162	P	P	20 05 22.0	+0.4
COYC				IAmb	IAmb	20 05 24.0	
	comp=Z,13nm,0.9s						
EUNU	Eureka	64.65	2	P	P	20 05 23.3	-0.1
EUNU				IAmb	IAmb	20 05 38.1	
	comp=Z,19nm,1.4s						
NEEM	North Greenlan	65.70	10	*e*P	P	20 05 29.4	-1.0
NEEM				AMP		20 05 31.4	
	comp=Z,30nm,0.7s						
TNA	Tin City	68.83	335	P	P	20 05 50.2	+0.2
	baz=99						
DAG	Danmarks Havn	71.87	14	*i* P	P	20 06 07.0	-1.4
DAG				AMP		20 06 08.0	
	comp=Z,30nm,0.6s						
NOR	Nord	73.02	9	*e*P	P	20 06 13.6	-1.6
PCAS	Casmilo, Conde	77.64	52	*e*P	P	20 06 42.6	0.0
	comp=Z,39nm,1.7s						
POLO	Lamas de Olo	77.94	50	*e*P	P	20 06 43.6	-0.7
PVIS	Viseu	77.98	51	*e*P	P	20 06 44.0	-0.5
MORF	Marmelete	78.00	54	*e*P	P	20 06 44.3	-0.4
MORF				IAmb	IAmb	20 06 45.9	
	comp=Z,60nm,1.6s						
MORF	Marmelete	78.00	54	*e*P	P	20 06 44.5	-0.2
PMTG	Montargil	78.02	53	*e*P	P	20 06 43.9	-0.8
MESJ	Messejana	78.24	54	*e*P	P	20 06 45.5	-0.5
MESJ				IAmb	IAmb	20 06 49.8	
	comp=Z,28nm,1.5s						
MTE	Manteigas	78.30	51	*e*P	P	20 06 45.3	-1.0
PCBR	Castelo Branco	78.45	52	*e*P	P	20 06 46.3	-0.7
	comp=Z,20nm,2.1s						
PBEJ	Beja	78.48	54	*e*P	P	20 06 46.8	-0.5
MVO	Moncorvo	78.54	50	*e*P	P	20 06 46.4	-1.2
PMRV	Marv??o	78.59	52	*e*P	P	20 06 46.8	-1.1
PBAR	Barrancos	79.10	53	*e*P	P	20 06 50.4	-0.3
	comp=Z,15nm,1.8s						
PAB	San Pablo	80.87	52	P	P	20 06 59.9	-0.5
PAB				IAmb	IAmb	20 07 01.2	
	comp=Z,11nm,1.2s						
ESDC	Sonseca Array	81.13	51	P	P	20 07 01.3	-0.4
	comp=Z,3.5nm,0.9s,baz=292,slow=5.6,SNR=16						
ESDC	Sonseca Array	81.13	51	P	P	20 07 01.3	-0.4
ESBB	Sonseca Array	81.14	51	P	P	20 07 00.5	-1.2
ESBB				IAmb	IAmb	20 07 13.8	
	comp=Z,6.9nm,1.1s						
NB2	NORSAR Subarra	84.22	28	P	P	20 07 18.2	+0.9
	comp=Z,0.7nm,0.7s,baz=291,slow=5.1						
NOA	NORSAR Array B	84.22	28	P	P	20 07 18.2	+0.9
	comp=Z,1.3nm,0.8s,baz=292,slow=5.0,SNR=5.4						
ARCES	ARCESS Array B	85.60	18	P	P	20 07 24.6	+0.5
	comp=Z,4.8nm,0.8s,baz=312,slow=7.2,SNR=5.3						
KOWA	Kowa	87.26	76	P	P	20 07 33.0	-0.1
PETK	Petropavlovsk-	87.63	325	LR	LR	20 47 31.3	
	comp=Z,34nm,19.3s,baz=78,slow=36						
DBIC	Dimbokro	88.52	84	P	P	20 07 38.5	-0.7
	comp=Z,3.4nm,0.8s,baz=268,slow=5.3,SNR=3.8						
GERES	GERESS Array B	90.32	39	P	P	20 07 47.0	-0.2
	comp=Z,0.4nm,0.7s,baz=324,slow=6.6,SNR=3.5						
FINES	FINESS Array B	90.36	24	P	P	20 07 48.9	+2.0
	comp=Z,1.9nm,0.9s,baz=298,slow=12,SNR=2.2						
TORD	Torodi Ar. Bea	92.96	76	P	P	20 07 59.1	-0.8
	comp=Z,0.4nm,0.5s,baz=292,slow=6.0,SNR=4.8						
BOSA	Boshof	123.77	114	PKP	PKPdf	20 13 43.6	-0.8
	comp=Z,1.5nm,0.8s,baz=252,slow=3.2,SNR=3.3						
MAW	Mawson	126.06	170	PKP	PKiKP	20 13 47.8	-0.1
	comp=Z,1.4nm,0.6s,baz=200,slow=4.1,SNR=4.4						
WRA	Warramunga Arr	132.80	257	PKP	PKPdf	20 14 01.7	0.0
	comp=Z,0.2nm,0.6s,baz=84,slow=2.6,SNR=2.2						
ASAR	Alice Springs	133.28	252	PKP	PKPdf	20 14 02.5	0.0
	comp=Z,0.2nm,0.6s,baz=90,slow=2.8,SNR=1.6						
CMAR	Chiang Mai Arr	143.46	337	PKP	PKPdf	20 14 21.0	-0.3
	comp=Z,0.4nm,0.5s,baz=28,slow=4.1,SNR=2.3						

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*NEIC **06** 20:14:02.6±2.6, 16°.57N±0°.04×95°.88W±0°.04, h49km±5km, mb5.0/323, Md4.7/114(MEX), Error ellipse: s-maj=5.5km s-min=5.0km az=168.0*

*MEX **06** 20:14:03.7±2.8, 16°.48N×95°.90W, h69km±62km, MD4.7*

*MOS **06** 20:14:03.1±0.8, 16°.74N×95°.62W, h67km, mb5.0/18, Error ellipse: s-maj=12.7km s-min=6.7km az=100.7*

*IDC **06** 20:14:04.1±0.6, 16°.60N×95°.77W, h60km±4km, mb4.2/27, mb1 4.4/29, mb1mx4.3/40, mbtmp4.5/29, MS3.5/20, Ms1 3.5/20, ms1mx3.4/38, Error ellipse: s-maj=8.9km s-min=7.8km az=173.0*

ISC 06 20:14:03.0±0.4**, 16°.52N**±0°.03×**95°.89W**±0°.03**, h58**km±4km**, h58**km**:pP-P, n581,** σ1s.**56**/536**, mb5.0**/141**, MS3.6**/17**,**
Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	0.78	196		Sn	20 14 28.2	-0.9
HUIG	Huatulco	0.78	196	*i* S	Sn	20 14 28.2	-0.9
OXBJ	Oaxaca	0.97	304		Pn	20 14 21.6	+0.9
OXBJ					Sn	20 14 34.7	+0.9
OXBJ	Oaxaca	0.97	304	*i* P	Pn	20 14 21.6	+0.9
OXBJ				*i* S	Sn	20 14 34.7	+0.9
VHO	Vista Hermosa	0.98	304	*i* P	Pn	20 14 21.7	+0.9
PANG	Puerto Angel	1.02	214		Pn	20 14 19.7	-1.5
PANG					Sn	20 14 32.8	-1.8
PANG	Puerto Angel	1.02	214	*i* P	Pn	20 14 19.7	-1.5
PANG				*i* S	Sn	20 14 32.8	-1.8
CMIG	Matias Romero	1.12	59	P	Pn	20 14 22.0	-0.5
	1µm,0.3s,baz=252,slow=10,SNR=8680						
CMIG				S	Sn	20 14 35.6	-1.5
	5µm,0.3s,baz=255,slow=13,SNR=25						
CMIG				LR	LR	20 14 54.8	
	comp=Z,3µm,21.2s,baz=198,slow=52						
CMIG	Matias Romero	1.12	59		Pn	20 14 22.3	-0.2
CMIG					Sn	20 14 35.5	-1.6
CMIG	Matias Romero	1.12	59	*i* P	Pn	20 14 22.3	-0.2
CMIG				*i* S	Sn	20 14 35.5	-1.6
PEIG	Puerto Escondi	1.31	247	*i* P	Pn	20 14 24.0	-1.2
PEIG				*i* S	Sn	20 14 40.2	-1.6
YOIG	Yosondua	1.62	282	*i* P	Pn	20 14 29.9	+0.4
YOIG				*i* S	Sn	20 14 49.6	0.0
TOIG	Toxpalan	1.93	325	*i* P	Pn	20 14 35.5	+1.9
TOIG				*i* S	Sn	20 15 00.5	+3.7
TXIG	Tlaxiaco	1.94	292	*e*P	Pn	20 14 35.0	+1.1
TUIG	Tuzandepetl	2.06	43		Pn	20 14 35.7	+0.5
TUIG	Tuzandepetl	2.06	43	*i* P	Pn	20 14 35.7	+0.5
PNIG	Pinotepa	2.15	267		Pn	20 14 35.8	-0.8
PNIG	Pinotepa	2.15	267	*i* P	Pn	20 14 35.8	-0.8
HLIG	Huajuapan de L	2.25	306	*e*P	Pn	20 14 40.8	+2.8
HLIG				*i* S	Sn	20 15 20.7	+16
FTIG	Fresnillo de T	2.55	303	*e*P	Pn	20 14 44.2	+2.1
FTIG				*i* S	Sn	20 15 26.8	+15
TGIG		2.67	84		Pn	20 14 44.0	+0.4
TGIG		2.67	84	*e*P	Pn	20 14 44.0	+0.4
PCIG		2.69	107		Pn	20 14 44.7	+0.8
PCIG					Sn	20 15 16.3	+0.9
PCIG		2.69	107	*e*P	Pn	20 14 44.6	+0.8
PCIG				*i* P	Pn	20 14 44.7	+0.8
PCIG				*i* S	Sn	20 15 16.3	+0.9
TGBT	Tuxtla Gutierr	2.70	84		Pn	20 14 45.7	+1.7
TGBT					Sn	20 15 17.8	+2.3
TGBT	Tuxtla Gutierr	2.70	84	*i* P	Pn	20 14 45.7	+1.7
TGBT				*i* S	Sn	20 15 17.8	+2.3
TLIG	Tlapa	2.76	292		Sn	20 15 30.5	+13
TLIG	Tlapa	2.76	292		Pn	20 14 45.3	+0.3
TLIG	Tlapa	2.76	292	*e*P	Pn	20 14 46.5	+1.5
TLIG				*i* S	Sn	20 15 30.5	+13
HMTT	Tlapaneco	2.85	297		Pn	20 14 52.2	+6.0
HMTT					Sn	20 15 34.4	+15
HMTT	Tlapaneco	2.85	297	*e*P	Pn	20 14 52.2	+6.0
HMTT				*i* S	Sn	20 15 34.4	+15
LVIG	Laguna Verde	3.23	351		Pn	20 14 49.1	-2.1
LVIG					Sn	20 15 24.9	-3.5
LVIG	Laguna Verde	3.23	351	*i* P	Pn	20 14 49.1	-2.1
LVIG				*i* S	Sn	20 15 24.9	-3.5
CCIG	Comitan	3.61	93		Sn	20 15 39.0	+0.8
CCIG	Comitan	3.61	93		Pn	20 14 56.9	+0.3
CCIG	Comitan	3.61	93	*i* P	Pn	20 14 59.2	+2.6
CCIG				*i* S	Sn	20 15 39.0	+0.8
PPM	Popocatepetl	3.63	315	*e*P	Pn	20 15 01.6	+4.3
PPM				*i* S	Sn	20 16 02.3	+23
DAIG	Los Arroyos	3.64	278		Pn	20 14 56.7	-0.2
DAIG					Sn	20 15 33.7	-4.8
DAIG	Los Arroyos	3.64	278	*i* P	Pn	20 14 56.7	-0.2
DAIG				*i* S	Sn	20 15 33.7	-4.8
AMVM	AMECAMECA	3.79	314	*e*P	Pn	20 15 13.5	+14
YAIG	Yautepec	3.82	308		Pn	20 15 02.1	+2.6
YAIG	Yautepec	3.82	308	*e*P	Pn	20 15 02.1	+2.6
YAIG				*i* S	Sn	20 15 59.1	+16
MEIG	Mezcala	3.83	292		Pn	20 15 01.4	+1.8
MEIG					Sn	20 15 57.6	+14
MEIG	Mezcala	3.83	292	*i* P	Pn	20 15 01.4	+1.8
MEIG				*i* S	Sn	20 15 57.6	+14
THIG		3.84	114		Pn	20 15 01.4	+1.7
THIG					Sn	20 15 42.6	-1.0
THIG		3.84	114	*i* P	Pn	20 15 01.4	+1.7
THIG				*i* S	Sn	20 15 42.6	-1.0
MAVM	Malinalco, Edo	4.20	306		Pn	20 15 07.5	+2.6
MAVM	Malinalco, Edo	4.20	306	*e*P	Pn	20 15 07.5	+2.6
MAVM				*i* S	Sn	20 16 19.6	+27
PBVM	Pinon	4.21	314	*e*P	Pn	20 15 15.0	+10
PBVM				*i* S	Sn	20 16 17.9	+25
CAIG	El Cayaco	4.22	278		Pn	20 15 04.8	-0.1
CAIG					Sn	20 15 46.6	-6.4
CAIG	El Cayaco	4.22	278	*i* P	Pn	20 15 04.8	-0.1
CAIG				*i* S	Sn	20 15 46.6	-6.4
PTVM	Pico Tres Padr	4.33	315		Pn	20 15 12.8	+6.2
PTVM	Pico Tres Padr	4.33	315	*e*P	Pn	20 15 12.8	+6.2
PTVM				*i* S	Sn	20 16 15.0	+19
HUEH	Huehuetenango	4.39	105		Pn	20 15 08.7	+1.4
ARIG	Puente Sto Nin	4.60	293		Pn	20 15 12.3	+2.2
ARIG					Sn	20 16 01.4	-0.9
ARIG	Puente Sto Nin	4.60	293	*i* P	Pn	20 15 12.3	+2.2
ARIG				*e*S	Sn	20 16 01.4	-0.9
DEIG	Demacu	4.80	322	*i* P	Pn	20 15 25.6	+13
DEIG				*i* S	Sn	20 16 31.0	+23
SCIG	Sabancuy	5.10	61		Pn	20 15 15.6	-1.3
SCIG					Sn	20 16 08.5	-6.0
SCIG	Sabancuy	5.10	61	*i* P	Pn	20 15 15.6	-1.3
SCIG				*i* S	Sn	20 16 08.5	-6.0
ACIG	Acambay	5.12	313	*e*P	Pn	20 15 31.1	+14
ACIG				*i* S	Sn	20 16 47.3	+32
ZIIG	Zihuatanejo	5.44	282		Pn	20 15 22.6	+1.1
ZIIG					Sn	20 16 18.4	-4.4
ZIIG	Zihuatanejo	5.44	282	*i* P	Pn	20 15 22.6	+1.1
ZIIG				*e*S	Sn	20 16 18.4	-4.4
JRQG	Juriquilla Cam	6.00	315	*i* P	Pn	20 16 01.1	+32
JRQG				*i* S	Sn	20 17 19.2	+42
RPIG	Rio Verde	6.59	325	*i* P	Pn	20 15 39.8	+2.4
RPIG				*i* S	Sn	20 17 40.4	+49
ESQI	Esquipulas	6.61	106		Pn	20 15 37.6	-0.1
MTO3	Montecristo	6.64	108		Pn	20 15 37.7	-0.5
MYIG	Mrida	7.31	52		Pn	20 15 48.3	+1.1
MYIG					Sn	20 17 03.5	-5.3
MYIG	Mrida	7.31	52	*i* P	Pn	20 15 48.3	+1.1
MYIG				*i* S	Sn	20 17 03.5	-5.3
MMIG	Aquila	7.33	285		Pn	20 15 48.7	+1.2
MMIG					Sn	20 17 21.9	+13
MMIG	Aquila	7.33	285	*i* P	Pn	20 15 48.7	+1.2
MMIG				*i* S	Sn	20 17 21.9	+13
COIG	Colima	7.88	291	*e*P	Pn	20 15 59.2	+4.0
COIG				*i* S	Sn	20 18 03.8	+41
EZ5V		7.91	293	*e*P	Pn	20 16 00.4	+4.8
EZ5V				*i* S	Sn	20 18 04.5	+41
R15V		8.14	290	*e*P	Pn	20 16 02.4	+3.7
R15V				*e*S	Sn	20 18 02.0	+33
AAIG	Aguscalientes	8.18	313	*i* P	Pn	20 16 05.7	+6.3
AAIG				*i* S	Sn	20 18 21.3	+51
TGUH	Tegucigalpa,Un	8.67	105	Pn	Pn	20 16 04.0	-2.0
ZAIG	Zacatecas	8.84	316	Pn	Pn	20 16 06.0	-2.5
CRIN	San Cristobal	9.36	113		Pn	20 16 15.9	+0.6
ACON	Acoyapa	11.33	112		Pn	20 16 39.8	-2.4
HZTE	Horizontes, Gu	11.55	119		Pn	20 16 43.6	-1.7
ORTG	Ortega, Santa	11.85	120		Pn	20 16 51.0	+1.7
833A	Chaparral WMA,	12.19	345	P	Pn	20 16 55.3	+1.5

	baz=163,SNR=18						
JTS	Las Juntas de	12.31	119	P	Pn	20 16 55.9	+0.3
	4.7nm,0.3s,baz=21,slow=16,SNR=9.8						
JTS				LR	LR	20 21 25.3	
	comp=Z,98nm,19.5s,baz=19,slow=36						
JTS	Las Juntas de	12.31	119	*i* P	Pn	20 16 56.6	+1.0
JTS				pmax	pmax		
	comp=Z,9.0nm,0.3s						
JTS	Las Juntas de	12.31	119	Pn	Pn	20 16 56.5	+0.9
CAO2	Cobano, Puntar	12.50	122		Pn	20 16 58.7	+0.4
HKT	Hockley	13.37	0	*i* P	Pn	20 17 09.8	-0.1
HKT				pmax	pmax		
	comp=Z,25nm,2.1s						
RIMA	Rio Macho	13.49	118		Pn	20 17 12.6	+0.7
SOR	Soroa	13.64	61	P	Pn	20 17 11.0	-2.7
SOR	Soroa	13.64	61	Pn	Pn	20 17 11.0	-2.7
HPIG		13.77	320		Pn	20 17 15.2	-0.5
PEZE	Perez Zeledon,	13.85	119		Pn	20 17 16.4	-0.2
SRBA	San Rafael, Bu	14.20	119		Pn	20 17 21.9	+0.6
FSCY	Frank Sound, G	14.27	77		Pn	20 17 19.5	-2.6
435B	Jarrell	14.28	354	P	Pn	20 17 23.9	+1.7
	baz=173,SNR=21						
435B	Jarrell	14.28	354	Pn	Pn	20 17 21.8	-0.5
545A	Edgard	14.34	19		Pn	20 17 20.8	-2.2
JCT	Junction City	14.35	346	P	Pn	20 17 22.8	-0.4
JCT	Junction City	14.35	346	P	Pn	20 17 23.6	+0.5
	baz=164,SNR=7.0						
JCT	Junction City	14.35	346	Pn	Pn	20 17 22.8	-0.4
441A	DeRidder	14.38	9		Pn	20 17 22.1	-1.4
TX32	Lajitas Array	14.62	332		Pn	20 17 26.8	+0.1
TXAR	Lajitas Array	14.62	332	P	Pn	20 17 28.1	+1.4
	comp=Z,0.3nm,0.3s,baz=153,slow=14,SNR=61						
TXAR				LR	LR	20 23 19.4	
	comp=Z,58nm,18.5s,baz=0.0,slow=38						
TXAR	Lajitas Array	14.62	332	P	Pn	20 17 27.4	+0.6
TXAR	Lajitas Array	14.62	332	Pn	Pn	20 17 27.4	+0.6
TX31	Lajitas Ar. Si	14.62	332		Pn	20 17 27.5	+0.7
342A	Flagon Creek P	15.14	12	P	Pn	20 17 32.4	-1.0
NATX	Nacogdoches	15.21	4	P	Pn	20 17 34.2	-0.1
	baz=184,SNR=5.4						
NATX	Nacogdoches	15.21	4	P	Pn	20 17 32.4	-2.0
NATX				IAmb	IAmb	20 17 39.6	
	comp=Z,106nm,0.6s						
237A	Washetta, Mont	15.41	0	P	Pn	20 17 36.0	-0.9
WHTX	Lake Whitney,	15.47	355	P	Pn	20 17 37.9	+0.3
	baz=174,SNR=24						
WHTX	Lake Whitney,	15.47	355	P	Pn	20 17 37.4	-0.2
LPIG	La Paz	15.48	301	LR	LR	20 23 26.6	
	comp=Z,240nm,20.6s,baz=104,slow=36						
344A	Westbrook Farm	15.59	17	P	Pn	20 17 38.2	-1.0
344A				IAmb	IAmb	20 17 40.8	
	comp=Z,144nm,1.0s						
346A	Big Creek Wild	15.92	20	P	Pn	20 17 42.3	-1.0
VBMS	Vicksburg	16.37	16	P	Pn	20 17 48.7	-0.4
	baz=198						
VBMS	Vicksburg	16.37	16	P	Pn	20 17 47.2	-1.8
VBMS				IAmb	IAmb	20 17 51.7	
	comp=Z,55nm,0.7s						
ABTX	Abilene, Hawle	16.39	349	P	Pn	20 17 49.3	0.0
	baz=167,SNR=18						
ABTX	Abilene, Hawle	16.39	349	P	Pn	20 17 48.9	-0.4
ABTX				IAmb	IAmb	20 17 54.1	
	comp=Z,79nm,0.8s						
143A	Socs Landing,	16.62	13	P	Pn	20 17 50.0	-2.1
143A				IAmb	IAmb	20 17 55.8	
	comp=Z,77nm,0.6s						
BRAL	Brewton	16.66	27	P	Pn	20 17 52.6	-0.1
	baz=211						
BRAL	Brewton	16.66	27	P	Pn	20 17 50.9	-1.8
BRAL				IAmb	IAmb	20 17 55.5	
	comp=Z,67nm,0.7s						
Z38A	Mt. Pleasant	16.69	3	P	Pn	20 17 53.6	+0.6
061Z	Ochoppi	16.77	54	P	Pn	20 17 54.4	+0.4
061Z				IAmb	IAmb	20 18 24.5	
	comp=Z,165nm,1.0s						
Z35A	Perchaven, San	16.78	356	P	Pn	20 17 53.1	-1.1
Z35A				IAmb	IAmb	20 18 12.0	
	comp=Z,67nm,0.8s						
Z41A	Richland Creek	16.90	9	P	Pn	20 17 54.8	-0.8
	baz=190,SNR=17						
146A	Union	17.20	20	P	Pn	20 17 56.2	-3.1
146A				IAmb	IAmb	20 18 01.2	
	comp=Z,68nm,0.6s						
WLAR	White Oak Lake	17.28	8		Pn	20 17 58.3	-2.0
WLAR				IAmb	IAmb	20 18 06.1	
	comp=Z,250nm,1.1s						
MNTX	Cornudas Mount	17.40	332	P	P	20 18 03.2	+0.7
	baz=148,SNR=11						
MNTX	Cornudas Mount	17.40	332	P	P	20 18 02.5	0.0
LOOK	Love County	17.44	356	P	Pn	20 18 02.2	-0.1
LOOK				IAmb	IAmb	20 18 16.9	
	comp=Z,102nm,0.6s						
MTDJ	Mount Denham	17.60	82	P	Pn	20 18 03.5	-1.1
DWPF	Disney Wildern	17.64	47	P	Pn	20 18 04.1	-0.7
	baz=232						
DWPF	Disney Wildern	17.64	47	P	Pn	20 18 02.9	-1.9
DWPF				IAmb	IAmb	20 18 35.9	
	comp=Z,99nm,0.7s						
250A	Grady	17.70	28	P	Pn	20 18 03.5	-2.0
250A				IAmb	IAmb	20 18 10.0	
	comp=Z,98nm,1.1s						
CCAR	Cane Creek	17.72	11	P	Pn	20 18 03.2	-2.5
CCAR				IAmb	IAmb	20 18 20.9	
	comp=Z,106nm,1.0s						
352A	Blakely	17.93	32	P	P	20 18 06.2	-2.0
352A				IAmb	IAmb	20 18 15.7	
	comp=Z,82nm,1.0s						
X37A	Clayton	18.00	1		P	20 18 07.5	-1.5
Z47A	Carrollton	18.05	22	P	P	20 18 06.8	-2.7
Z47A				IAmb	IAmb	20 18 30.1	
	comp=Z,65nm,0.8s						
MIAR	Mount Ida	18.07	6	P	P	20 18 08.0	-1.8
MIAR				pmax	pmax		
	comp=Z,62nm,0.8s						
MIAR	Mount Ida	18.07	6	P	P	20 18 09.6	-0.2
	baz=187,SNR=50						
MIAR	Mount Ida	18.07	6	P	P	20 18 08.0	-1.8
MIAR				IAmb	IAmb	20 18 11.7	
	comp=Z,62nm,0.8s						
X34A	Smith Ranch, M	18.09	355	P	P	20 18 09.4	-0.6
X34A				IAmb	IAmb	20 18 42.3	
	comp=Z,122nm,0.7s						
X40A	Basin Creek Fa	18.10	8	P	P	20 18 09.4	-0.7
	baz=189,SNR=26						
X40A	Basin Creek Fa	18.10	8	P	P	20 18 08.6	-1.5
Y45A	Yeager Farm, C	18.19	17	P	P	20 18 10.0	-1.1
Y45A				IAmb	IAmb	20 18 17.3	
	comp=Z,97nm,0.7s						
WMOK	Wichita Mounta	18.33	352	P	P	20 18 11.6	-1.1
WMOK				pmax	pmax		
	comp=Z,22nm,0.5s						
WMOK	Wichita Mounta	18.33	352	P	P	20 18 12.5	-0.1
	baz=171,SNR=19						
WMOK	Wichita Mounta	18.33	352		P	20 18 11.6	-1.1
MSTX	Muleshoe	18.45	342	P	Pn	20 18 14.6	-0.1
	baz=158,SNR=13						
MSTX	Muleshoe	18.45	342	P	P	20 18 13.4	-0.6
TIGA	Tifton	18.60	35	P	P	20 18 14.4	-1.2
	baz=220						
TIGA	Tifton	18.60	35	P	P	20 18 13.4	-2.2
TIGA				IAmb	IAmb	20 18 36.9	
	comp=Z,43nm,0.7s						
W39A	Magazine	18.70	5	P	Pn	20 18 17.1	-0.4
	baz=186,SNR=72						
W39A	Magazine	18.70	5	P	P	20 18 14.7	-1.9
W39A				IAmb	IAmb	20 18 27.2	
	comp=Z,227nm,1.1s						
FNO	Franklin	18.71	356		P	20 18 16.0	-0.8
FNO				IAmb	IAmb	20 18 20.0	
	comp=Z,74nm,0.5s						
OXF	Oxford	18.84	17	P	P	20 18 16.3	-1.9
OXF				pmax	pmax		
	comp=Z,103nm,0.8s						
OXF	Oxford	18.84	17	P	P	20 18 17.4	-0.8
	baz=199						
OXF	Oxford	18.84	17	P	P	20 18 16.3	-1.9
OXF				IAmb	IAmb	20 18 19.1	
	comp=Z,103nm,0.8s						
OKCSW	OKLAHOMA CITY	18.86	356		P	20 18 17.1	-1.4
W41B	Gary Mavity, V	18.86	9	P	P	20 18 18.3	-0.1
	baz=190,SNR=26						
OKCFA	Oklahoma City	18.87	356	P	P	20 18 17.9	-0.7
OKCFA				IAmb	IAmb	20 18 21.6	
	comp=Z,89nm,0.6s						
WHAR	Wooly Hollow	18.97	9	P	P	20 18 19.4	-0.2
WHAR				IAmb	IAmb	20 18 39.5	
	comp=Z,118nm,1.0s						
152A	Waverly Hall	19.00	30	P	P	20 18 18.4	-1.6
152A				IAmb	IAmb	20 18 26.9	
	comp=Z,64nm,0.7s						
AMTX	Amarillo	19.01	345	P	Pn	20 18 21.3	-0.1
	baz=162						
AMTX	Amarillo	19.01	345	P	P	20 18 20.1	-0.1
AMTX				IAmb	IAmb	20 18 22.5	
	comp=Z,42nm,0.7s						
OK025	Westminster Rd	19.03	356		P	20 18 19.4	-0.9
OK025				IAmb	IAmb	20 18 23.7	
	comp=Z,66nm,0.7s						
BCOK	Bluff Creek, N	19.12	356		P	20 18 20.9	-0.4
319A	Douglas	19.17	323	P	P	20 18 21.5	-0.5
121A	Cookes Peak, D	19.24	328	P	Pn	20 18 25.8	+1.5
	baz=143,SNR=13						
121A	Cookes Peak, D	19.24	328	P	Pn	20 18 24.2	-0.2
OK029	Liberty Lake	19.25	356		P	20 18 21.9	-0.9
OK029				IAmb	IAmb	20 18 25.6	
	comp=Z,61nm,0.7s						
Y49A	Blount Mountai	19.26	25	P	P	20 18 20.6	-2.3
Y49A				IAmb	IAmb	20 18 23.2	
	comp=Z,45nm,0.5s						
TUL1	Leonard	19.31	0	P	P	20 18 23.2	-0.1
	baz=180,SNR=21						
TUL1	Leonard	19.31	0		P	20 18 22.5	-0.9
TUL1				IAmb	IAmb	20 18 27.0	
	comp=Z,110nm,0.9s						
Z51A	Franklin	19.32	28	P	P	20 18 22.3	-1.2
Z51A				IAmb	IAmb	20 18 40.4	
	comp=Z,36nm,0.5s						
OK030	Cody Creek RV	19.35	358		P	20 18 22.9	-0.9
OK031	S. Brethren Rd	19.37	358		P	20 18 23.5	-0.6
W45A	Hickory Valley	19.50	17	P	P	20 18 24.1	-1.4
HBAR	Harrisburg	19.52	13	P	P	20 18 24.6	-1.0
X48A	Hartselle	19.54	22	P	P	20 18 23.7	-2.2
X48A				IAmb	IAmb	20 18 25.8	
	comp=Z,31nm,0.5s						
FCAR	Ozark Folk Cen	19.58	9	P	P	20 18 25.6	-0.7
QUOK	Quay	19.59	358		P	20 18 25.9	-0.5
255A	Hazlehurst	19.59	36	P	P	20 18 23.4	-3.1
255A				IAmb	IAmb	20 18 34.3	
	comp=Z,215nm,1.6s						
PLAL	Pickwick Lake	19.67	19	P	P	20 18 25.4	-1.9
PLAL				IAmb	IAmb	20 18 28.3	
	comp=Z,57nm,0.6s						
HHAR	Hobbs	19.76	5	P	P	20 18 27.6	-0.7
HHAR				IAmb	IAmb	20 18 29.0	
	comp=Z,60nm,0.9s						
154A	Montrose	19.77	34	P	P	20 18 27.5	-0.9
154A				IAmb	IAmb	20 18 38.0	
	comp=Z,75nm,1.0s						
U38A	Gravette	19.89	4		P	20 18 29.2	-0.4
LCAR	Lake Charles	19.92	11	P	P	20 18 29.1	-0.9
LCAR				IAmb	IAmb	20 18 30.5	
	comp=Z,49nm,0.7s						
U40A	Yellville	19.94	7	P	P	20 18 30.3	0.0
	baz=188,SNR=131						
U40A	Yellville	19.94	7	P	P	20 18 30.2	-0.1
U32A	Winter Ranch,	19.97	353		P	20 18 30.9	+0.3
U32A				IAmb	IAmb	20 18 36.7	
	comp=Z,64nm,0.8s						
CROK	Carrier	19.99	355		P	20 18 30.5	-0.3
BNM	Barren Site	20.03	333	P	Pn	20 18 33.3	-0.4
GNAR	Gosnell	20.06	14	P	P	20 18 30.9	-0.7
GNAR				IAmb	IAmb	20 18 42.7	
	comp=Z,135nm,0.9s						
HALT	Halls	20.18	16	P	P	20 18 32.0	-0.8
FPAL	Fort Paine	20.18	25	P	P	20 18 30.7	-2.2
BLOK	Blackwell	20.20	357		P	20 18 32.1	-0.9
LENM	Lemitar	20.20	333	P	Pn	20 18 34.7	-0.9
GOGA	Godfrey	20.21	31	P	P	20 18 30.5	-2.7
GOGA				pmax	pmax		
	comp=Z,84nm,1.0s						
GOGA	Godfrey	20.21	31	P	P	20 18 30.8	-2.3
	baz=216,SNR=18						
GOGA	Godfrey	20.21	31	P	P	20 18 30.5	-2.7
GOGA				IAmb	IAmb	20 18 43.9	
	comp=Z,84nm,0.9s						
PEBM	Pemiscott Bayo	20.24	14	P	P	20 18 32.1	-1.4
LNXT	Lenox	20.32	15	P	P	20 18 33.6	-0.7
T35A	Sooner Cattle	20.32	359		P	20 18 33.2	-1.2
KAN17	Caldwell West	20.51	356	IAmb	IAmb	20 18 51.1	
	comp=Z,70nm,0.5s						
GLAT	Glass	20.53	15	P	P	20 18 34.8	-1.8
KAN05	Bluff City Nor	20.58	355	IAmb	IAmb	20 18 38.4	
	comp=Z,65nm,0.6s						
KAN09	Caldwell North	20.59	356	IAmb	IAmb	20 18 41.0	
	comp=Z,75nm,0.7s						
KAN10	Anthony SW Sta	20.62	355		P	20 18 35.7	-1.8
KAN01	Argonia South	20.62	356	IAmb	IAmb	20 18 41.4	
	comp=Z,58nm,0.8s						
SWET	Sewanee	20.64	24	IAmb	IAmb	20 18 38.9	
	comp=Z,50nm,0.7s						
ANMO	Albuquerque	20.64	335	P	P	20 18 39.2	+1.1
	comp=Z,17nm,0.8s,baz=144,slow=12,SNR=19						
ANMO	Albuquerque	20.64	335	*i* P	P	20 18 39.3	+1.2
ANMO				pmax	pmax		
	comp=Z,25nm,1.0s						
ANMO	Albuquerque	20.64	335	P	P	20 18 39.3	+1.2
	baz=150						
ANMO	Albuquerque	20.64	335	P	P	20 18 37.7	-0.4
KS20	Mayfield South	20.68	356	IAmb	IAmb	20 18 43.6	
	comp=Z,95nm,1.1s						
KAN08	Anthony NE Sta	20.71	355	P	P	20 18 37.0	-1.6
KAN08				IAmb	IAmb	20 18 57.0	
	comp=Z,58nm,0.7s						
KAN16	Harper SW Stat	20.71	355		P	20 18 36.8	-1.8
KAN06	Argonia West S	20.72	356	IAmb	IAmb	20 18 42.5	
	comp=Z,96nm,0.9s						
TUC	Tucson	20.72	322	P	P	20 18 39.7	+0.8
TUC				pmax	pmax		
	comp=Z,16nm,1.0s						
TUC	Tucson	20.72	322	P	P	20 18 38.8	0.0
	baz=135						
TUC	Tucson	20.72	322	P	P	20 18 39.7	+0.8
V48A	Smith Brothers	20.78	21	IAmb	IAmb	20 18 42.9	
	comp=Z,38nm,0.6s						
KAN12	Harper NE Stat	20.78	355	IAmb	IAmb	20 18 43.5	
	comp=Z,68nm,0.8s						
PARMO	Parma	20.79	14	P	P	20 18 38.6	-0.8
MGMO	Mountain Grove	20.80	8	P	P	20 18 38.6	-1.0
MGMO				IAmb	IAmb	20 18 44.3	
	comp=Z,53nm,0.7s						
WVT	Waverly	20.81	19	P	P	20 18 37.3	-2.3
WVT				pmax	pmax		
	comp=Z,49nm,0.5s						
WVT	Waverly	20.81	19	P	P	20 18 38.7	-0.9
	baz=202						
WVT	Waverly	20.81	19	P	P	20 18 37.3	-2.3
WVT				IAmb	IAmb	20 18 39.8	
	comp=Z,49nm,0.5s						
T42A	Van Buren	20.87	11	IAmb	IAmb	20 18 43.5	
	comp=Z,51nm,0.8s						
S39A	Bolivar	21.21	6	IAmb	IAmb	20 18 45.2	
	comp=Z,62nm,0.9s						
CLTN	Cedars of Leba	21.27	22	IAmb	IAmb	20 18 47.4	
	comp=Z,25nm,0.6s						
HODGE	Hodges	21.47	32	P	P	20 18 44.2	-2.5
HODGE				IAmb	IAmb	20 18 45.7	
	comp=Z,50nm,0.6s						
214A	Organ Pipe Nat	21.73	318	P	P	20 18 51.5	+1.9
NHSC	New Hope	21.77	38	P	P	20 18 48.6	-1.4
	baz=224						
NHSC	New Hope	21.77	38	IAmb	IAmb	20 19 08.9	
	comp=Z,118nm,1.2s						
V51A	Loudon	21.79	26	IAmb	IAmb	20 18 50.8	
	comp=Z,30nm,0.8s						
CCM	Cathedral Cave	21.84	10	P	P	20 18 48.5	-2.2
CCM				pmax	pmax		
	comp=Z,72nm,0.8s						
CCM	Cathedral Cave	21.84	10	P	P	20 18 48.9	-1.7
	baz=192						
CCM	Cathedral Cave	21.84	10	P	P	20 18 48.5	-2.2
CCM				IAmb	IAmb	20 18 52.7	
	comp=Z,72nm,0.8s						
T25A	Trinidad	21.88	341	P	P	20 18 52.8	+1.5
	baz=157,SNR=12						
T25A	Trinidad	21.88	341	IAmb	IAmb	20 18 59.9	
	comp=Z,40nm,1.1s						
TKL	Tuckaleechee C	21.91	27	P	P	20 18 49.0	-2.4
	comp=Z,11nm,0.4s,baz=191,slow=9.1,SNR=19						
TKL				pP	pP	20 19 04.9	+0.3
	comp=Z,17nm,0.5s,baz=198,slow=9.9,SNR=10.0						
TKL				LR	LR	20 29 44.3	
	comp=Z,80nm,18.1s,baz=212,slow=43						
TKL	Tuckaleechee C	21.91	27	IAmb	IAmb	20 19 06.8	
	comp=Z,34nm,0.8s						
R40A	Maddies Statio	21.92	8	IAmb	IAmb	20 18 54.0	
	comp=Z,82nm,0.7s						
X18A	Snowflake	21.92	328	P	P	20 18 51.1	-0.7
R32A	Long Quarter,	21.96	354	IAmb	IAmb	20 18 57.4	
	comp=Z,76nm,0.8s						
JSC	Jenkinsville	22.03	34	IAmb	IAmb	20 18 51.5	
	comp=Z,63nm,0.5s						
PAULI	Pauline	22.16	32	IAmb	IAmb	20 18 52.9	
	comp=Z,48nm,0.8s						
V53A	Saluda	22.35	29	IAmb	IAmb	20 19 32.3	
	comp=Z,30nm,0.8s						
CBKS	Cedar Bluff	22.47	352	P	P	20 18 56.9	-0.6
	baz=170,SNR=12						
CBKS	Cedar Bluff	22.47	352	IAmb	IAmb	20 19 31.0	
	comp=Z,49nm,0.8s						
KSU1	Kansas State U	22.51	359	P	P	20 18 56.3	-1.6
	baz=178,SNR=6.7						
KSU1	Kansas State U	22.51	359	P	P	20 18 55.9	-1.9
KSU1				IAmb	IAmb	20 18 57.4	
	comp=Z,61nm,0.6s						
T50A	Nancy	22.64	23	P	P	20 18 56.0	-3.3
KMSC	Kings Mountain	22.66	32	P	P	20 18 56.8	-2.6
	baz=219,SNR=14						
KMSC	Kings Mountain	22.66	32	IAmb	IAmb	20 18 58.5	
	comp=Z,56nm,0.8s						
TZTN	Tazewell	22.75	26	P	P	20 18 57.5	-2.9
	baz=212,SNR=11						
SDCO	Great Sand Dun	22.78	340	P	P	20 19 01.1	+0.1
	baz=155,SNR=17						
SDCO	Great Sand Dun	22.78	340	P	P	20 19 00.9	-0.1
Q44A	Meyer Farm, Va	23.10	14	P	P	20 19 02.0	-1.9
P38A	Dawn	23.11	5	IAmb	IAmb	20 19 26.9	
	comp=Z,54nm,0.6s						
Y59A	Loris	23.17	38	IAmb	IAmb	20 19 06.5	
	comp=Z,45nm,0.7s						
P40A	Paris	23.17	8	P	P	20 19 02.3	-2.3
P40A				IAmb	IAmb	20 19 04.8	
	comp=Z,112nm,1.0s						
KSCO	Kaye Shedlock’	23.17	347	P	P	20 19 04.7	-0.1
	baz=163,SNR=5.2						
KSCO	Kaye Shedlock’	23.17	347	IAmb	IAmb	20 19 07.1	
	comp=Z,37nm,0.7s						
WCI	Wyandotte Cave	23.21	19	P	P	20 19 02.7	-2.4
WCI				pmax	pmax		
	comp=Z,88nm,0.9s						
WCI	Wyandotte Cave	23.21	19	P	P	20 19 02.9	-2.2
	baz=204						
WCI	Wyandotte Cave	23.21	19	P	P	20 19 02.7	-2.4
WCI				IAmb	IAmb	20 19 05.8	
	comp=Z,88nm,0.8s						
S22A	4UR Ranch, Cre	23.24	338	P	P	20 19 06.2	+0.6
	baz=152						
V55A	Taylorsville	23.27	31	IAmb	IAmb	20 19 26.6	
	comp=Z,75nm,1.1s						
X58A	Rowland	23.30	36	IAmb	IAmb	20 19 34.9	
	comp=Z,31nm,0.7s						
W57A	Gilead	23.37	34	IAmb	IAmb	20 19 05.0	
	comp=Z,96nm,1.2s						
MVCO	Mesa Verde	23.43	334	P	P	20 19 07.5	+0.1
	baz=148						
MVCO	Mesa Verde	23.43	334	P	P	20 19 07.7	+0.2
MVCO				IAmb	IAmb	20 19 25.5	
	comp=Z,42nm,1.2s						
Y60A	Bolivia	23.57	39	P	P	20 19 05.9	-2.5
Y60A				IAmb	IAmb	20 19 30.0	
	comp=Z,39nm,0.8s						
R49A	Shelbyville	23.65	21	IAmb	IAmb	20 19 09.5	
	comp=Z,50nm,0.8s						
S51A	Beattyville	23.67	25	P	P	20 19 06.3	-3.0
S51A				IAmb	IAmb	20 19 07.8	
	comp=Z,47nm,1.1s						
P43A	Skaggs, Pawnee	23.70	12	P	P	20 19 07.2	-2.3
P43A				IAmb	IAmb	20 19 09.5	
	comp=Z,56nm,0.6s						
SOTA	Rioblanco	23.76	125	*e*P	P	20 19 04.0	-6.9
Q24A	Divide	23.79	342	P	P	20 19 11.8	+1.1
	baz=157						
PCON	Cinco Dias	23.80	124	*e*P	P	20 19 10.6	-0.8
R50A	Paris	23.94	23	P	P	20 19 09.2	-2.6
R50A				IAmb	IAmb	20 19 32.5	
	comp=Z,29nm,0.5s						
U56A	King	24.08	32	IAmb	IAmb	20 19 35.6	
	comp=Z,58nm,0.9s						
N35A	Tabor	24.26	0	P	P	20 19 14.2	-0.5
V58A	Windy Hill, Pi	24.33	35	IAmb	IAmb	20 19 37.0	
	comp=Z,41nm,0.9s						
U15A	North Rim	24.60	327	P	P	20 19 19.4	+1.3
P48A	Milroy	24.61	20	P	P	20 19 15.7	-2.2
HDIL	Hopedale	24.62	12	P	P	20 19 17.8	-0.2
	baz=195						
ISCO	Idaho Springs	24.69	342	P	P	20 19 19.3	+0.3
	baz=157,SNR=11						
MONP2	Monument Peak	24.70	315	P	P	20 19 20.9	+1.9
	baz=126						
BLA	Blacksburg	24.74	31	P	P	20 19 16.9	-2.2
	baz=218,SNR=12						
BLA	Blacksburg	24.74	31	IAmb	IAmb	20 19 19.4	
	comp=Z,45nm,0.8s						
S54A	Dingess, Beckl	24.79	28	IAmb	IAmb	20 19 19.0	
	comp=Z,26nm,0.7s						
BGNE	Belgrade	24.88	356	P	P	20 19 20.5	+0.2
	baz=174						
BGNE	Belgrade	24.88	356	IAmb	IAmb	20 19 22.5	
	comp=Z,57nm,0.7s						
OGNE	Ogallala	24.91	349	P	P	20 19 22.0	+1.3
	baz=166,SNR=12						
OGNE	Ogallala	24.91	349	IAmb	IAmb	20 19 24.2	
	comp=Z,89nm,0.9s						
P49A	Miami Univ. Ec	24.92	21	P	P	20 19 19.2	-1.5
	baz=206,SNR=15						
P49A	Miami Univ. Ec	24.92	21	IAmb	IAmb	20 19 21.0	
	comp=Z,56nm,0.7s						
R53A	Hurricane	24.94	27	IAmb	IAmb	20 19 20.8	
	comp=Z,50nm,0.7s						
Q51A	Peebles	24.97	24	P	P	20 19 18.2	-2.9
Q51A				IAmb	IAmb	20 19 22.3	
	comp=Z,47nm,0.7s						
SFIN	Lafayette	24.97	16	P	P	20 19 20.4	-0.8
	baz=200,SNR=43						
PFO	Pinyon Flats O	25.15	316	pP	pP	20 19 40.8	+3.0
	comp=Z,6.1nm,0.8s,baz=130,slow=8.0,SNR=5.0						
PFO				LR	LR	20 29 38.8	
	comp=Z,198nm,19.7s,baz=132,slow=37						
PFO	Pinyon Flats O	25.15	316	*e*P	P	20 19 23.3	+0.2
PFO	Pinyon Flats O	25.15	316	P	P	20 19 23.3	+0.2
T57A	Hurt	25.16	33	IAmb	IAmb	20 19 23.0	
	comp=Z,31nm,0.5s						
Q52A	Bidwell	25.34	25	IAmb	IAmb	20 19 25.3	
	comp=Z,66nm,0.8s						
SCIA	State Center	25.41	5	P	P	20 19 24.2	-0.8
	baz=186,SNR=10						
O49A	Covington	25.63	21	P	P	20 19 25.0	-2.2
R55A	Marlinton	25.73	30	IAmb	IAmb	20 19 29.3	
	comp=Z,52nm,0.6s						
SDV	Santo Domingo	25.76	104	P	P	20 19 29.0	+0.2
	comp=Z,13nm,0.5s,baz=295,slow=3.7,SNR=17						
SDV				LR	LR	20 30 40.1	
	comp=Z,97nm,19.7s,baz=322,slow=39						
SDV	Santo Domingo	25.76	104	*e*P	P	20 19 28.4	-0.4
SDV	Santo Domingo	25.76	104	P	P	20 19 27.9	-0.9
N23A	Red Feather La	25.80	342	P	P	20 19 30.5	+1.5
	baz=157						
O20A	White River Ci	25.86	338	P	P	20 19 31.3	+1.8
	baz=152						
O20A	White River Ci	25.86	338	P	P	20 19 28.1	-1.4
S57A	Dark Hollow, R	25.89	32	IAmb	IAmb	20 20 00.8	
	comp=Z,26nm,0.9s						
L42A	Oliver, Polo	25.95	11	IAmb	IAmb	20 19 31.3	
	comp=Z,54nm,0.8s						
P52A	Corning	25.97	25	P	P	20 19 27.6	-2.6
	baz=211,SNR=12						
ACSO	Alum Creek Sta	26.15	23	P	P	20 19 30.5	-1.4
	baz=209,SNR=8.8						
SHPR	Sheep Range	26.24	323		P	20 19 33.0	+0.1
N49A	Columbus Grove	26.34	20	IAmb	IAmb	20 19 54.8	
	comp=Z,32nm,0.8s						
L44A	Lake County Fo	26.47	13	P	P	20 19 33.8	-0.9
	baz=197						
JFWS	Jewell Farm	26.75	9	P	P	20 19 36.1	-1.0
	baz=192,SNR=26						
O53A	New Philadelph	26.86	25	P	P	20 19 36.6	-1.7
	baz=212,SNR=7.2						
O53A	New Philadelph	26.86	25	IAmb	IAmb	20 19 37.4	

	comp=Z,39nm,0.6s						
K43A	Burlington	26.89	12	P	P	20 19 37.7	-0.8
RWWY	Rawlins	26.91	341	IAmb	IAmb	20 19 59.0	
	comp=Z,26nm,1.1s						
MCWV	Mont Chateau	26.96	28	P	P	20 19 37.8	-1.4
	baz=216						
ECSD	EROS Data Cent	27.13	359	P	P	20 19 40.3	-0.4
	baz=178,SNR=11						
ECSD	EROS Data Cent	27.13	359	IAmb	IAmb	20 20 19.9	
	comp=Z,21nm,0.6s						
O54A	Avella	27.16	27	IAmb	IAmb	20 19 43.3	
	comp=Z,27nm,0.7s						
L48A	N Adams	27.18	19	IAmb	IAmb	20 19 46.1	
	comp=Z,45nm,0.6s						
N53A	Lisbon	27.49	25	P	P	20 19 42.1	-1.8
K22A	Casper	27.59	343	P	P	20 19 46.1	+1.2
	baz=157						
I40A	Norwalk	27.65	8	IAmb	IAmb	20 19 45.6	
	comp=Z,44nm,0.7s						
I42A	Draeger Farm,	27.92	11	P	P	20 19 46.4	-1.3
I42A				IAmb	IAmb	20 19 48.4	
	comp=Z,40nm,0.9s						
TCUT	Toone Canyon	27.94	334	P	P	20 19 50.1	+1.9
N54A	Moraine State	27.97	26	P	P	20 19 46.4	-1.8
	baz=214,SNR=5.8						
N54A	Moraine State	27.97	26	IAmb	IAmb	20 20 35.9	
	comp=Z,36nm,1.0s						
O56A	Blue Knob Stat	28.04	29	P	P	20 19 47.0	-1.9
	baz=217						
M53A	WI Miller and	28.09	25	P	P	20 19 48.0	-1.2
	baz=212						
SJG	San Juan	28.42	82	LR	LR	20 32 14.6	
	comp=Z,77nm,20.3s,baz=248,slow=38						
M54A	Oil Creek Stat	28.56	26	P	P	20 19 52.0	-1.4
	baz=214						
M54A	Oil Creek Stat	28.56	26	IAmb	IAmb	20 20 52.4	
	comp=Z,69nm,1.3s						
SSPA	Standing Stone	28.65	29	P	P	20 19 52.5	-1.7
	baz=218						
SSPA	Standing Stone	28.65	29	P	P	20 19 52.2	-2.0
SSPA				IAmb	IAmb	20 19 54.4	
	comp=Z,56nm,1.8s						
PDAR	Pinedale Array	28.65	339	P	P	20 19 55.6	+1.2
	comp=Z,1.9nm,0.6s,baz=136,slow=11,SNR=17						
SPMN	Marine on St.	28.73	5	P	P	20 19 54.0	-0.9
	baz=186,SNR=14						
SPMN	Marine on St.	28.73	5	P	P	20 19 53.9	-1.0
SPMN				IAmb	IAmb	20 19 55.1	
	comp=Z,39nm,0.6s						
M55A	Ridgway	28.91	27	IAmb	IAmb	20 20 39.8	
	comp=Z,31nm,0.9s						
ERPA	Erie	28.93	25	P	P	20 19 54.9	-1.8
	baz=213						
P60A	Greenville	29.14	33	P	P	20 19 56.9	-1.7
	baz=223						
ATAH	Atahualpa	29.19	142	P	P	20 20 01.7	+2.0
	comp=Z,9.3nm,0.7s,baz=345,slow=4.7,SNR=5.6						
ATAH				LR	LR	20 30 02.7	
	comp=Z,95nm,18.4s,baz=323,slow=33						
F33A	5 Mile Ranch,	29.23	359	P	P	20 19 58.1	-1.2
F33A				IAmb	IAmb	20 20 59.7	
	comp=Z,48nm,1.4s						
F36A	Milaca	29.32	3	IAmb	IAmb	20 20 48.3	
	comp=Z,18nm,0.5s						
NVAR	Mina Array Bea	29.38	322	P	P	20 20 03.8	+2.8
	comp=Z,1.3nm,0.7s,baz=149,slow=7.9,SNR=10						
NVAR				pP	pP	20 20 17.9	+2.1
	comp=Z,2.2nm,0.6s,baz=134,slow=9.1,SNR=9.0						
NVAR				LR	LR	20 33 12.8	
	comp=Z,266nm,20.1s,baz=132,slow=39						
ELK	Elko	29.38	329	pP	pP	20 20 17.8	+2.0
	comp=Z,2.4nm,0.7s,baz=107,slow=7.0,SNR=4.6						
ELK	Elko	29.38	329	P	P	20 20 00.9	-0.1
ELK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ELK	Elko	29.38	329		P	20 20 00.9	-0.1
RYN	Ryan	29.64	322	P	P	20 20 03.1	-0.1
SNOW	Snow King Moun	29.68	338	IAmb	IAmb	20 20 06.5	
	comp=Z,23nm,0.7s						
GLMI	Grayling	29.77	16	P	P	20 20 02.8	-1.4
	baz=202						
N59A	State Game Lan	29.89	32	P	P	20 20 03.5	-1.8
	baz=221						
COWI	Conover	30.03	9	IAmb	IAmb	20 20 06.5	
	comp=Z,33nm,1.2s						
E38A	The Farm, Brul	30.21	6	P	P	20 20 07.2	-0.8
E28A	Huff	30.23	353	IAmb	IAmb	20 20 10.2	
	comp=Z,24nm,0.8s						
MMNY	Mt. Morris Dam	30.31	27	IAmb	IAmb	20 20 08.0	
	comp=Z,49nm,1.1s						
RLMT	Red Lodge	30.65	341	P	P	20 20 12.2	0.0
	baz=154,SNR=7.2						
E43A	Lone Tree Farm	30.68	12	IAmb	IAmb	20 20 12.2	
	comp=Z,32nm,0.6s						
BINY	Binghamton	30.76	30	P	P	20 20 11.1	-1.9
	baz=220						
YHH	Holmes Hill	30.87	339	P	P	20 20 14.9	+0.6
HLID	Hailey	31.21	334	P	P	20 20 18.5	+1.4
	baz=144						
MDND	Maddock	31.39	355	P	P	20 20 18.0	-0.4
	baz=173						
MDND	Maddock	31.39	355	IAmb	IAmb	20 20 19.5	
	comp=Z,36nm,0.8s						
EYMN	Ely	31.55	6	P	P	20 20 18.8	-0.9
	baz=188						
EYMN	Ely	31.55	6	P	P	20 20 18.5	-1.3
EYMN				IAmb	IAmb	20 20 19.2	
	comp=Z,16nm,0.8s						
KSCT	Kent School, K	31.66	33	IAmb	IAmb	20 20 59.6	
	comp=Z,44nm,1.5s						
AGMN	Agassiz Nation	31.69	0	P	P	20 20 20.7	-0.4
	baz=180,SNR=34						
B35A	Bob, Littlefor	31.80	3	P	P	20 20 20.9	-1.1
B35A				IAmb	IAmb	20 20 22.0	
	comp=Z,22nm,0.8s						
BOZ	Bozeman (W)	31.85	339	P	P	20 20 23.3	+0.7
	baz=150						
DELO	Deloro Mine	31.89	25	IAmb	IAmb	20 20 21.7	
	comp=Z,32nm,0.9s						
DLMT	Dillon	31.99	338	IAmb	IAmb	20 20 27.2	
	comp=Z,16nm,0.8s						
LRM	Limekiln Ridge	32.33	338	P	P	20 20 28.4	+1.4
WVOR	Wild Horse Val	32.34	328	P	P	20 20 27.4	+0.5
WVOR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
WVOR	Wild Horse Val	32.34	328	P	P	20 20 27.4	+0.5
J59A	Piesco	32.43	30	IAmb	IAmb	20 20 26.6	
	comp=Z,38nm,1.5s						
PLVO	Plevna	32.54	25	IAmb	IAmb	20 20 27.3	
	comp=Z,24nm,1.0s						
L61B	Northampton	32.59	33	P	P	20 20 26.6	-2.4
	baz=224						
TBTG	Tabatinga, AM	32.91	126	*e*P	P	20 20 31.2	-0.9
NCB	Newcomb	32.95	29	IAmb	IAmb	20 20 34.1	
	comp=Z,46nm,1.6s						
PLID	Pearl Lake	33.12	334	P	P	20 20 34.7	+0.9
LONY	Lake Ozonia	33.28	28	P	P	20 20 32.9	-2.1
	baz=219,SNR=5.4						
LONY	Lake Ozonia	33.28	28	IAmb	IAmb	20 20 33.9	
	comp=Z,17nm,0.7s						
BMO	Blue Mountains	33.51	332	P	P	20 20 37.4	+0.3
BMO				pmax	pmax		
	comp=Z,5.0nm,1.2s						
BMO	Blue Mountains	33.51	332	P	P	20 20 37.4	+0.3
ULM	Lac du Bonnet	33.65	0	P	P	20 20 37.2	-0.9
	comp=Z,28nm,0.7s,baz=183,slow=9.4,SNR=30						
ULM				LR	LR	20 35 22.7	
	comp=Z,45nm,20.1s,baz=162,slow=38						
ULM	Lac du Bonnet	33.65	0	P	P	20 20 36.9	-1.1
ULM				pmax	pmax		
	comp=Z,30nm,0.7s						
ULM	Lac du Bonnet	33.65	0	P	P	20 20 36.9	-1.1
ULM				IAmb	IAmb	20 20 38.1	
	comp=Z,30nm,0.7s						
MSO	Missoula	33.73	337	P	P	20 20 39.8	+0.8
	baz=147						
YBH	Yreka Blue Hor	34.09	323	P	P	20 20 42.1	-0.1
	comp=Z,0.7nm,0.6s,baz=84,slow=7.9,SNR=3.6						
LBNH	Lisbon	34.26	31	P	P	20 20 42.1	-1.4
	baz=224						
F10A	Beach Ranch, E	34.35	333	IAmb	IAmb	20 21 07.8	
	comp=Z,13nm,0.9s						
TRQ	Mont Tremblant	34.54	26	IAmb	IAmb	20 20 45.4	
	comp=Z,36nm,1.1s						
L02E	Cave Junction	34.88	323	P	P	20 20 50.1	+1.2
	baz=128						
G62A	West of Eustis	35.65	31	P	P	20 20 53.5	-1.9
G62A				IAmb	IAmb	20 20 54.8	
	comp=Z,23nm,0.7s						
NEW	Newport	36.13	336	P	P	20 21 00.7	+1.1
	baz=144						
I02E	Swisshome, OR	36.26	325	P	P	20 21 02.2	+1.6
	baz=130						
LMQ	La Malbaie	37.43	29	IAmb	IAmb	20 21 25.8	
	comp=Z,17nm,0.9s						
BOAV	Boa Vista	37.51	108	*e*P	P	20 21 11.8	+0.1
BOAV	Boa Vista	37.51	108	P	P	20 21 10.7	-1.0
D62A	Allapoint, All	37.70	30	IAmb	IAmb	20 21 27.1	
	comp=Z,23nm,1.0s						
FFC	Flin Flon	38.42	354	*e*P	P	20 21 19.3	+0.5
FFC	Flin Flon	38.42	354	P	P	20 21 17.9	-0.9
FFC				IAmb	IAmb	20 21 49.4	
	comp=Z,42nm,1.6s						
EDM	Edmonton	39.10	343	IAmb	IAmb	20 21 26.1	
	comp=Z,12nm,0.8s						
ETMB	Extrema	39.33	130	*e*P	P	20 21 28.2	+1.3
ETMB	Extrema	39.33	130	P	P	20 21 27.3	+0.4
PTGA	Pitinga	39.36	112	P	P	20 21 27.0	-0.2
	comp=Z,2.1nm,0.3s,baz=318,slow=7.2,SNR=10						
PTGA	Pitinga	39.36	112	P	P	20 21 27.3	0.0
MACA	Manacapuru-AM	39.90	116	*e*P	P	20 21 31.7	-0.1
OZB	Mount Ozzard	40.34	330	P	P	20 21 33.7	-1.2
SAML	Samuel	41.08	126	P	P	20 21 40.3	-1.1
SAML				pmax	pmax		
	comp=Z,7.0nm,0.7s						
SAML	Samuel	41.08	126	P	P	20 21 40.3	-1.1
LPAZ	La Paz	42.57	139	P	P	20 21 54.0	-0.2
	comp=Z,4.7nm,0.6s,baz=321,slow=6.4,SNR=18						
LPAZ				LR	LR	20 38 57.5	
	comp=Z,54nm,20.3s,baz=290,slow=35						
LPAZ	La Paz	42.57	139	*e*P	P	20 21 55.0	+0.8
LPAZ	La Paz	42.57	139	*e*P	P	20 21 54.4	+0.2
LPAZ	La Paz	42.57	139	P	P	20 21 54.6	+0.4
MDP	Montagnes des	43.87	100	P	P	20 22 02.9	-1.2
	comp=Z,4.0nm,0.8s,baz=305,slow=8.4,SNR=3.6						
SCHQ	Schefferville	44.31	24	P	P	20 22 05.3	-1.7
	comp=Z,9.7nm,0.5s,baz=234,slow=6.5,SNR=24						
SCHQ				pP	pP	20 22 20.3	-2.1
	comp=Z,14nm,0.7s,baz=226,slow=8.7,SNR=6.9						
SCHQ				LR	LR	20 43 07.1	
	comp=Z,81nm,19.3s,baz=268,slow=39						
SCHQ	Schefferville	44.31	24	P	P	20 22 05.8	-1.3
SCHQ				IAmb	IAmb	20 22 21.2	
	comp=Z,19nm,0.8s						
PB11	IPOC Station P	44.32	143	IAmb	IAmb	20 22 09.8	
	comp=Z,15nm,0.8s						
ITTB	Itaituba	44.79	114	*e*P	P	20 22 10.7	-0.8
MALB	Monte Alegre	44.96	110	*e*P	P	20 22 12.7	-0.2
VILB	Vilhena	45.85	128	*e*P	P	20 22 20.7	+0.9
MCPB	Macapa, AP	46.36	107	*e*P	P	20 22 23.3	-0.6
NPGB	Novo Progresso	46.43	117	*e*P	P	20 22 24.4	-0.1
LVC	Limon Verde	47.01	145	P	P	20 22 30.4	+1.2
	comp=Z,4.3nm,0.7s,baz=8.4,slow=21,SNR=4.9						
LVC	Limon Verde	47.01	145	*e*P	P	20 22 31.0	+1.9
PDRB	Porto dos Gac	47.76	123	*e*P	P	20 22 34.7	-0.1
YKA	Yellowknife Ar	47.77	348	P	P	20 22 34.5	+0.3
	comp=Z,4.3nm,0.8s,baz=143,slow=8.7,SNR=4.9						
YKA				LR	LR	20 43 38.7	
	comp=Z,90nm,20.4s,baz=0.0,slow=37						
YKA	Yellowknife Ar	47.77	348	*i* P	P	20 22 39.2	+5.1
YKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
CLDB	Colider	48.10	122	*e*P	P	20 22 36.7	-0.7
PTLB	Pontes e Lacer	48.22	129	*e*P	P	20 22 38.4	+0.2
PTLB	Pontes e Lacer	48.22	129	P	P	20 22 37.9	-0.3
PTLB				IAmb	IAmb	20 22 43.7	
	comp=Z,7.4nm,0.8s						
DLBC	Dease Lake	48.86	337	P	P	20 22 43.5	+0.8
	comp=Z,3.4nm,0.7s,baz=94,slow=6.9,SNR=4.1						
DLBC	Dease Lake	48.86	337	IAmb	IAmb	20 23 33.3	
	comp=Z,40nm,1.6s						
AC02	Maricunga	50.33	148	P	P	20 22 56.0	+1.2
AC02				IAmb	IAmb	20 22 57.4	
	comp=Z,9.7nm,0.7s						
PRPB	Parauapebas	50.84	113	*e*P	P	20 22 59.0	+0.7
SALV	Santo Antonio	51.09	127	*e*P	P	20 22 60.0	-0.2
SNDB	Serra Nova Dou	52.40	120	*e*P	P	20 23 10.5	+0.6
PP1B	Ponte de Pedra	52.74	128	*e*P	P	20 23 13.5	+1.2
AQDB	Aquidauana	53.93	132	*e*P	P	20 23 20.8	-0.3
ARAG	Araguaiana, MT	54.01	124	*e*P	P	20 23 21.9	+0.2
SMTB	Santa Maria do	54.03	114	*e*P	P	20 23 23.1	+1.2
ROSB	Rosrio	54.64	106	*e*P	P	20 23 26.5	+0.2
PEXB	Peixe	54.98	118	*e*P	P	20 23 29.2	+0.4
CPUP	Villa Florida	56.74	138	P	P	20 23 42.4	+1.3
	comp=Z,2.5nm,0.9s,baz=315,slow=9.6,SNR=3.7						
CPUP	Villa Florida	56.74	138	*e*P	P	20 23 41.4	+0.3
INK	Inuvik	56.99	344	P	P	20 23 42.9	+0.6
	comp=Z,8.2nm,0.7s,baz=118,slow=6.8,SNR=25						
INK	Inuvik	56.99	344	P	P	20 23 42.6	+0.3
INK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
INK	Inuvik	56.99	344	P	P	20 23 42.6	+0.3
	baz=136,SNR=7.6						
INK	Inuvik	56.99	344	P	P	20 23 42.6	+0.3
INK				IAmb	IAmb	20 23 44.0	
	comp=Z,8.4nm,0.8s						
BDFB	Brasilia	57.03	122	P	P	20 23 44.1	+0.5
	comp=Z,2.0nm,0.3s,baz=273,slow=11,SNR=4.7						
BDFB	Brasilia	57.03	122	P	P	20 23 44.1	+0.5
BDFB				pmax	pmax		
	comp=Z,41nm,1.9s						
BDFB	Brasilia	57.03	122	IAmb	IAmb	20 24 11.0	
	comp=Z,41nm,1.9s						
SCRK	Sand Creek	57.57	337	P	P	20 23 46.9	+0.2
SCRK				IAmb	IAmb	20 24 36.0	
	comp=Z,30nm,1.9s						
PAX	Paxson	57.62	336	P	P	20 23 47.1	+0.1
	baz=120						
NBPS	Pedro II - PI	57.68	106	*e*P	P	20 23 48.4	+0.3
J26L	Joseph Creek	57.70	338	P	P	20 23 47.7	+0.1
	baz=123						
PCMB	Pacaembu	57.87	129	*e*P	P	20 23 49.6	+0.3
SDBA	SAO DESIDERIO	58.02	117	*e*P	P	20 23 50.6	+0.1
A36M	Sachs Harbour	58.08	350	P	P	20 23 50.3	+0.3
	baz=146						
A36M	Sachs Harbour	58.08	350	P	P	20 23 49.1	-0.8
A36M				IAmb	IAmb	20 24 44.2	
	comp=Z,8.3nm,0.9s						
IPMB	Ipameri, GO	58.13	124	*e*P	P	20 23 52.1	+0.9
HDA	Harding Lake	58.91	337	P	P	20 23 56.8	+0.9
	baz=119						
ILAR	Eielson Array	59.06	337	P	P	20 23 57.2	+0.3
	comp=Z,1.0nm,0.8s,baz=121,slow=7.4,SNR=13						
RND	Reindeer	59.18	335	P	P	20 23 57.9	0.0
RND				pmax	pmax		
	comp=Z,12nm,1.0s						
RND	Reindeer	59.18	335		P	20 23 57.9	0.0
RND				IAmb	IAmb	20 24 17.0	
	comp=Z,12nm,1.0s						
PTGB	Pitanga	59.21	133	*e*P	P	20 23 57.7	-1.0
COLA	College	59.48	337	*i* P	P	20 24 00.6	+0.9
COLA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ITQB	Itaqui	59.53	140	*e*P	P	20 24 00.6	0.0
BB19B	Bebedouro	59.61	127	*e*P	P	20 24 01.7	+0.3
TRF	Thorofare Moun	59.77	335	IAmb	IAmb	20 24 43.9	
	comp=Z,19nm,1.0s						
NEA2	Nenana	59.80	336	P	P	20 24 03.2	+1.1
	baz=117						
JANB	Januaria	59.81	119	*e*P	P	20 24 02.9	0.0
NBPB	Pedra_Branca-C	59.83	107	*e*P	P	20 24 03.3	+0.3
H24K	Noodor Dome	59.95	338	P	P	20 24 04.3	+1.2
	baz=119						
FRTB	Fartura	60.17	130	*e*P	P	20 24 04.0	-1.2
I23K	Minto, Yukon-K	60.17	337	P	P	20 24 05.9	+1.4
	baz=117						
I23K	Minto, Yukon-K	60.17	337	P	P	20 24 06.1	+1.6
I23K				IAmb	IAmb	20 24 23.3	
	comp=Z,7.6nm,0.8s						
BPAW	Bear Paw Mtn.	60.34	336	P	P	20 24 06.4	+0.7
	baz=115						
NBCL	Cascavel-CE	60.53	105	*e*P	P	20 24 09.2	+1.3
H23K	Yukon River	60.55	338	P	P	20 24 08.0	+0.8
	baz=117						
N19K	Bonanza Creek	60.57	331	P	P	20 24 08.4	+0.9
	baz=110						
N19K	Bonanza Creek	60.57	331	P	P	20 24 07.8	+0.3
N19K				IAmb	IAmb	20 24 25.8	
	comp=Z,22nm,1.1s						
MLY	Manley	60.64	337	P	P	20 24 09.0	+1.2
	baz=116						
MLY	Manley	60.64	337	IAmb	IAmb	20 24 26.2	
	comp=Z,41nm,1.8s						
L20K	Farewell, AK	60.89	333	P	P	20 24 10.4	+0.8
	baz=111						
M19K	Big River Lodg	60.91	332	P	P	20 24 10.4	+0.7
M19K				IAmb	IAmb	20 24 44.1	
	comp=Z,27nm,1.4s						
MC01	Montes Claros	60.93	120	*e*P	P	20 24 11.7	+1.2
RCLB	Rio Claro- Sao	61.14	128	*e*P	P	20 24 12.4	+0.5
I21K	Tanana	61.18	336	P	P	20 24 13.0	+1.6
	baz=114						
L19K	White Mountain	61.21	333	P	P	20 24 12.8	+1.1
	baz=110						
NBPN	Ponto Novo - B	61.42	112	*e*P	P	20 24 14.2	+0.3
PLCA	Paso Flores	61.63	158	P	P	20 24 15.7	+0.9
	comp=Z,8.0nm,0.9s,baz=332,slow=7.9,SNR=15						
PLCA				pP	pP	20 24 32.0	+1.3
	comp=Z,3.8nm,0.7s,baz=332,slow=6.1,SNR=4.9						
PLCA	Paso Flores	61.63	158	*e*P	P	20 24 15.9	+1.1
PLCA	Paso Flores	61.63	158	*e*P	P	20 24 16.4	+1.5
PLCA	Paso Flores	61.63	158	P	P	20 24 15.4	+0.6
PLCA				IAmb	IAmb	20 24 16.8	
	comp=Z,18nm,1.2s						
J20K	Nowinta River	61.63	335	P	P	20 24 15.5	+1.0
	baz=112						
H21K	Melozitna Rive	61.69	337	P	P	20 24 15.7	+0.8
	baz=114						
TIJ01	Guaruva-PR	61.76	131	*e*P	P	20 24 16.6	+0.5
TOLK	Toolik Lake Re	61.90	340	P	P	20 24 17.4	+1.1
	baz=119						
PLTB	Pedras Altas	62.84	140	*e*P	P	20 24 22.9	-0.2
ICESG	Greenland Ices	62.93	20	*i* P	P	20 24 23.3	-0.2
ICESG				IAmb	IAmb	20 24 24.1	
	comp=Z,25nm,0.9s						
PARB	Paraibuna	63.11	128	*e*P	P	20 24 25.8	+0.7
GDU01	Guandu, BA	63.23	115	*e*P	P	20 24 25.6	-0.3
NBLA	Lagarto - SE	63.63	111	*e*P	P	20 24 28.5	-0.1
TER01	Tubaro-SC	63.65	134	*e*P	P	20 24 28.8	+0.4
EUNU	Eureka	63.72	2	P	P	20 24 28.6	+0.4
EUNU				IAmb	IAmb	20 24 29.7	
	comp=Z,8.1nm,0.8s						
NBIT	Itapeh - BA	63.89	116	*e*P	P	20 24 30.6	+0.3
CMC01	Camacan, BA	64.02	117	*e*P	P	20 24 31.1	0.0
NBPV	Pedro Velho	64.11	106	*e*P	P	20 24 31.2	-0.6
MAN01	Angra dos Reis	64.12	126	*e*P	P	20 24 32.1	+0.4
SJMB	Sao Joao De Ma	64.20	121	*e*P	P	20 24 32.1	-0.1
BSFB	Barra de Sao F	64.54	121	*e*P	P	20 24 34.5	+0.1
SUMG	Summit	64.85	16	P	P	20 24 35.8	-0.3
SUMG				pmax	pmax		
	comp=Z,14nm,0.7s						
SUMG	Summit	64.85	16	*i* P	P	20 24 36.0	-0.2
SUMG				IAmb	IAmb	20 24 37.4	
	comp=Z,18nm,0.8s						
SUMG	Summit	64.85	16	P	P	20 24 35.8	-0.3
SUMG				IAmb	IAmb	20 24 38.0	
	comp=Z,14nm,0.7s						
NEEM	North Greenlan	64.88	10	*i* P	P	20 24 36.2	+0.1
NEEM				IAmb	IAmb	20 24 37.2	
	comp=Z,21nm,0.7s						
DUB01	Friburgo-RJ	64.95	125	*e*P	P	20 24 36.3	-0.9
RIB01	Linhares ES	65.15	121	*e*P	P	20 24 37.4	-1.0
CAM01	Campos-RJ	65.39	124	*e*P	P	20 24 40.1	+0.3
ALF01	Guarapari-ES	65.52	122	*e*P	P	20 24 39.5	-1.2
DAG	Danmarks Havn	71.11	14	*i* P	P	20 25 14.4	-0.4
DAG				IAmb	IAmb	20 25 15.3	
	comp=Z,3.6nm,0.6s						
DAG				*i*		20 25 29.5	
NOR	Nord	72.19	9	*i* P	P	20 25 21.5	+0.3
NOR				IAmb	IAmb	20 25 22.2	
	comp=Z,3.4nm,0.6s						
PGAV	Gavieira, Arco	77.41	50	*e*P	P	20 25 52.7	+0.4
PCAS	Casmilo, Conde	77.61	52	*e*P	P	20 25 53.9	+0.6
	comp=Z,46nm,1.1s						
PCAS				*e*pP	pP	20 26 10.0	+0.2
PCAB	Cabril	77.64	50	*e*P	P	20 25 54.1	+0.6
	comp=Z,64nm,1.8s						
POLO	Lamas de Olo	77.87	50	*e*P	P	20 25 55.1	+0.2
POLO				*e*pP	pP	20 26 11.3	-0.1
PVIS	Viseu	77.93	51	*e*P	P	20 25 54.9	-0.2
	comp=Z,36nm,1.4s						
PVIS				*e*pP	pP	20 26 11.9	+0.2
PNCL	Nicolau / Gran	77.96	54	*e*P	P	20 25 55.7	+0.4
PNCL				*e*pP	pP	20 26 12.0	+0.2
PMTG	Montargil	78.01	53	*e*P	P	20 25 55.9	+0.4
	comp=Z,20nm,2.0s						
PMTG				*e*pP	pP	20 26 11.0	-1.0
MTE	Manteigas	78.25	51	*e*P	P	20 25 56.9	-0.1
	comp=Z,31nm,1.3s						
MTE				*e*pP	pP	20 26 13.5	0.0
MTE	Manteigas	78.25	51	P	P	20 25 56.1	-0.9
MTE				IAmb	IAmb	20 25 57.9	
	comp=Z,23nm,1.1s						
MESJ	Messejana	78.26	54	*e*P	P	20 25 58.0	+1.1
PCBR	Castelo Branco	78.42	52	*e*P	P	20 25 58.2	+0.4
	comp=Z,31nm,1.4s						
PCBR				*e*pP	pP	20 26 14.4	+0.1
MVO	Moncorvo	78.48	50	*e*P	P	20 25 58.8	+0.6
	comp=Z,23nm,1.7s						
MVO				*e*pP	pP	20 26 15.2	+0.5
PBEJ	Beja	78.49	54	*e*P	P	20 25 58.8	+0.5
	comp=Z,19nm,1.6s						
PBEJ				*e*pP	pP	20 26 15.3	+0.5
PESTR	Estremoz	78.53	53	*e*P	P	20 25 59.8	+1.3
PESTR				*e*pP	pP	20 26 15.2	+0.2
PBRG	Braganca	78.56	50	*e*P	P	20 25 59.4	+0.8
PBRG				*e*pP	pP	20 26 15.3	+0.2
PMRV	Marv??o	78.57	52	*e*P	P	20 25 58.9	+0.2
PMRV				*e*pP	pP	20 26 15.2	0.0
PVAQ	Vaqueiros	78.74	54	*e*P	P	20 26 00.8	+1.2
PVAQ				*e*pP	pP	20 26 15.5	-0.6
PBAR	Barrancos	79.10	53	*e*pP	pP	20 26 17.9	-0.2
PAB	San Pablo	80.84	52	P	P	20 26 10.7	-0.3
PAB				pmax	pmax		
	comp=Z,23nm,1.5s						
PAB	San Pablo	80.84	52	P	P	20 26 10.7	-0.3
PAB				IAmb	IAmb	20 26 13.8	
	comp=Z,23nm,1.5s						
ESDC	Sonseca Array	81.09	51	P	P	20 26 11.8	-0.5
	comp=Z,4.3nm,1.1s,baz=298,slow=5.5,SNR=14						
ESDC				pP	pP	20 26 27.9	-1.0
	comp=Z,3.6nm,0.9s,baz=293,slow=5.9,SNR=8.7						
ESDC				LR	LR	21 00 35.3	
	comp=Z,40nm,18.9s,baz=300,slow=34						
NB2	NORSAR Subarra	83.71	28	P	P	20 26 26.8	+1.2
	comp=Z,8.8nm,0.8s,baz=296,slow=5.3						
NOA	NORSAR Array B	83.71	28	P	P	20 26 25.8	+0.3
	comp=Z,6.2nm,0.8s,baz=295,slow=5.1,SNR=23						
NOA				LR	LR	21 03 45.2	
	comp=Z,16nm,18.4s,baz=300,slow=36						
ARCES	ARCESS Array B	84.91	18	P	P	20 26 31.9	+0.5
	comp=Z,2.9nm,0.6s,baz=307,slow=4.2,SNR=12						
ARCES				pP	pP	20 26 48.7	+0.6
	comp=Z,3.5nm,0.7s,baz=294,slow=6.0,SNR=2.9						
ARCES				LR	LR	21 04 32.4	
	comp=Z,32nm,21.6s,baz=270,slow=36						
KOWA	Kowa	87.71	76	P	P	20 26 46.0	-0.2
CLL	Collm	88.57	36	*e*P	P	20 26 47.0	-2.6
TIC	Toumodi	88.97	83	*e*PKP2	P	20 26 53.4	+1.2
LIC	Lamto	89.08	84	*e*PKP2	P	20 26 53.0	+0.3
	comp=Z,61nm,1.2s						
DBIC	Dimbokro	89.12	83	P	P	20 26 55.0	+2.1
	comp=Z,5.1nm,0.8s,baz=306,slow=3.5,SNR=6.0						
DBIC				LR	LR	21 03 40.7	
	comp=Z,25nm,20.1s,baz=344,slow=33						
DBIC	Dimbokro	89.12	83	P	P	20 26 55.0	+2.1
DBIC				pmax	pmax		
	comp=Z,26nm,1.5s						
KIC	Kosan Boka	89.31	84	*e*PKP2	P	20 26 52.0	-1.8
	comp=Z,18nm,0.8s						
FINES	FINESS Array B	89.78	24	P	P	20 26 57.1	+2.1
	comp=Z,2.3nm,0.8s,baz=354,slow=3.8,SNR=4.7						
FINES				LR	LR	21 07 07.3	
	comp=Z,32nm,20.2s,baz=296,slow=36						
GERES	GERESS Array B	90.02	38	P	P	20 26 56.8	+0.2
	comp=Z,0.6nm,0.8s,baz=329,slow=5.0,SNR=6.5						
GERES				LR	LR	21 07 24.7	
	comp=Z,47nm,19.2s,baz=298,slow=36						
ZCCA	Zocca	90.16	43	IAmb	IAmb	20 27 04.2	
	comp=Z,7.8nm,0.9s						
TORD	Torodi Ar. Bea	93.41	75	P	P	20 27 14.1	+1.3
	comp=Z,0.9nm,0.7s,baz=288,slow=4.8,SNR=7.1						
AKASG	Malin Array Be	97.63	32	LR	LR	21 11 34.4	
	comp=Z,34nm,19.5s,baz=210,slow=35						
KSH	Kashi	123.74	8	PKP	PKiKP	20 32 59.3	+4.2
STKA	Stephens Creek	125.96	242	PKP	PKPdf	20 32 59.3	+0.2
	comp=Z,2.5nm,0.9s,baz=98,slow=2.3,SNR=7.2						

STKA				pPKP	pPKPdf	20 33 16.8	+0.3
	comp=Z,2.3nm,0.8s,baz=287,slow=1.7,SNR=3.1						
MAW	Mawson	127.13	170	PKP	PKPdf	20 33 00.0	-0.1
	comp=Z,2.1nm,0.5s,baz=240,slow=16,SNR=11						
WRA	Warramunga Arr	132.31	258	PKP	PKiKP	20 33 12.2	-0.4
	comp=Z,1.1nm,0.5s,baz=83,slow=2.1,SNR=22						
WRA				pPKP	pPKPdf	20 33 30.8	+1.9
	comp=Z,0.9nm,0.6s,baz=83,slow=2.4,SNR=3.8						
WRA	Warramunga Arr	132.31	258	PKIKP	PKPdf	20 33 11.5	0.0
WRA	Warramunga Arr	132.31	258		PKPdf	20 33 11.5	0.0
ASAR	Alice Springs	132.89	253	PKP	PKPdf	20 33 13.1	+0.6
	comp=Z,0.5nm,0.5s,baz=77,slow=2.0,SNR=13						
CMAR	Chiang Mai Arr	142.30	337	PKP	PKPdf	20 33 30.2	+0.3
	comp=Z,0.3nm,0.6s,baz=357,slow=1.6,SNR=4.4						
HYB	Hyderabad	145.84	9	*i* PKP	PKiKP	20 33 52.0	+12

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*TUL **06** 20:20:31.2±1.5, 36°.12N±0°.01×97°.06W±0°.01, h7^{km}±7^{km}, ML2.9, mb_Lg2.5/11(NEIC), Error ellipse: s-maj=1.8km s-min=1.6km az=128.0*

NEIC 06 20:20:31.3±0.9**, 36°.139N**±0°.010×**97°.07W**±0°.01**, h7**^{km}±7^{km}**, Error ellipse: s-maj=1.7km s-min=0.9km az=219.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK031	S. Brethren Rd	0.26	135	Pg	Pg	20 20 36.5	+0.1
OK031				Sg	Sg	20 20 40.2	+0.2
QUOK	Quay	0.29	84	Pg	Pg	20 20 37.4	+0.3
QUOK				Sg	Sg	20 20 41.5	+0.5
OK030	Cody Creek RV	0.31	132	Pg	Pg	20 20 37.5	+0.1
OK030				Sg	Sg	20 20 41.9	+0.3
OK029	Liberty Lake	0.46	223	Pg	Pg	20 20 40.2	0.0
OK029				Sg	Sg	20 20 46.6	+0.3
OK005	Luther M Schoo	0.49	192	Pg	Pg	20 20 40.8	0.0
OK005				Sg	Sg	20 20 47.8	+0.6
OK025	Westminster Rd	0.60	201	Pg	Pg	20 20 42.6	-0.1
OK025				Sg	Sg	20 20 50.9	+0.4
OK001	Jones High Sch	0.60	197	Pg	Pg	20 20 42.7	-0.2
BLOK	Blackwell	0.63	349	Pg	Pg	20 20 43.7	+0.2
BLOK				Sg	Sg	20 20 52.3	+0.6
BCOK	Bluff Creek, N	0.65	222	Pg	Pg	20 20 43.6	-0.2
BCOK				Sg	Sg	20 20 52.3	+0.1
OKCFA	Oklahoma City	0.79	203		Pg	20 20 46.0	-0.4
OKCFA				Sg	Sg	20 20 56.8	+0.3
OKCSW	OKLAHOMA CITY	0.79	202	Pg	Pg	20 20 46.0	-0.4
OKCSW				Sg	Sg	20 20 56.8	+0.1
CROK	Carrier	0.82	297		Pg	20 20 47.1	+0.1
CROK				Sg	Sg	20 20 58.2	+0.4
T35A	Sooner Cattle	0.90	30	Pg	Pg	20 20 48.2	-0.3
T35A				Sg	Sg	20 21 00.2	0.0
FNO	Franklin	0.92	197		Pg	20 20 48.1	-0.8
FNO				Sg	Sg	20 21 00.9	+0.1
KAN13	South Haven SW	0.93	340	Pg	Pg	20 20 49.1	-0.1
KAN13				Sg	Sg	20 21 01.5	+0.2
GC02	Grant County #	0.95	318		Pg	20 20 49.4	-0.2
TUL1	Leonard	1.06	102	Pg	Pg	20 20 50.4	-1.2
TUL1				Sg	Sg	20 21 04.9	-0.5
KAN17	Caldwell West	1.06	328	Pg	Pg	20 20 51.4	-0.3
KAN14	Manchester OK	1.09	319	Pg	Pg	20 20 51.9	-0.3
KAN09	Caldwell North	1.09	336	Pg	Pg	20 20 51.9	-0.3
OK032	Salt Plains WL	1.13	306	Pg	Pg	20 20 52.2	-0.8
KAN01	Argonia South	1.16	332	Pg	Pg	20 20 52.4	-1.1
KS20	Mayfield South	1.16	340	Pg	Pg	20 20 53.2	-0.3
KAN05	Bluff City Nor	1.16	327	Pg	Pg	20 20 53.1	-0.5
KAN06	Argonia West S	1.28	330	Pn	Pn	20 20 55.4	-0.2
KAN10	Anthony SW Sta	1.28	320	Pn	Pn	20 20 55.3	-0.4
KAN08	Anthony NE Sta	1.30	327	Pn	Pn	20 20 55.5	-0.4
KAN16	Harper SW Stat	1.35	324	Pn	Pn	20 20 56.6	+0.1
KAN12	Harper NE Stat	1.38	327	Pn	Pn	20 20 57.1	+0.2
U32A	Winter Ranch,	1.58	279	Pn	Pb	20 21 00.4	-0.4
X34A	Smith Ranch, M	1.66	202	Pn	Pn	20 21 01.2	+0.4
WMOK	Wichita Mounta	1.98	225	Pn	Pn	20 21 05.8	+0.7
X37A	Clayton	2.08	138	Pn	Pn	20 21 06.6	0.0
X37A				IAmb_Lg		20 21 42.0	
	comp=Z,18nm,0.7s						
LOOK	Love County	2.14	182	Pn	Pn	20 21 08.8	+1.3
LOOK				IAmb_Lg		20 21 41.6	
	comp=Z,26nm,0.8s						
U38A	Gravette	2.19	81	Pn	Pn	20 21 09.2	+1.1
HHAR	Hobbs	2.54	86	Pn	Pn	20 21 13.8	+0.9
R32A	Long Quarter,	2.63	331	Pn	Pn	20 21 15.1	+1.0
W39A	Magazine	2.84	108	Pn	Pn	20 21 17.4	+0.4
W39A				IAmb_Lg		20 22 00.4	
	comp=Z,15nm,0.9s						
KSU1	Kansas State U	2.98	7	Pn	Pn	20 21 19.4	+0.5
MIAR	Mount Ida	3.27	118	Pn	Pn	20 21 21.5	-1.4
S39A	Bolivar	3.38	62	Pn	Pn	20 21 25.0	+0.5
CBKS	Cedar Bluff	3.41	322	Pn	Pn	20 21 23.1	-1.9
U40A	Yellville	3.42	85	Pn	Pn	20 21 24.9	0.0
AMTX	Amarillo	3.96	253	Pn	Pn	20 21 32.2	-0.4
AMTX				IAmb_Lg		20 22 43.8	
	comp=Z,14nm,1.1s						
WHAR	Wooly Hollow	3.98	101	Pn	Pn	20 21 32.0	-0.8
MGMO	Mountain Grove	3.99	74	Pn	Pn	20 21 32.6	-0.3
FCAR	Ozark Folk Cen	4.02	92	Pn	Pn	20 21 32.6	-0.6
FCAR				IAmb_Lg		20 22 48.1	
	comp=Z,11nm,0.7s						
R40A	Maddies Statio	4.39	59	Pn	Pn	20 21 36.0	-2.3
R40A				IAmb_Lg		20 22 47.9	
	comp=Z,10nm,0.8s						
P38A	Dawn	4.47	38	Pn	Pn	20 21 38.1	-1.3
LCAR	Lake Charles	4.79	89	Pn	Pn	20 21 41.6	-2.2
T42A	Van Buren	4.89	78	Pn	Pn	20 21 42.9	-2.4
CCM	Cathedral Cave	5.03	66	Pn	Pn	20 21 44.7	-2.5
PBMO	Poplar Bluff	5.39	81	IAmb_Lg		20 23 26.9	
	comp=Z,8.0nm,0.7s						

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*IDC **06** 20:50:31.8±1.3, 6°.44S×130°.14E, h0^{km}, mb3.7/4, mb1 4.0/8, mb1mx3.7/33, mbtmp3.9/8, ML4.0/4, MS2.9/1, Ms1 2.9/1, ms1mx2.3/46, Error ellipse: s-maj=46.1km s-min=21.1km az=77.0*

ISC 06 20:50:35.6±0.8**, 6°.48S**±0°.06×**130°.3E**±0°.1**, h35**^{km}**, n10,** σ**2**^{s}**.85**/13**, mb3.8**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.66	10	Pn	Pn	20 51 55.9	-1.3
	3.5nm,0.3s,baz=40,slow=23,SNR=16						
SIJI				Sn	Sn	20 52 57.9	-3.2
	2.4nm,0.3s,baz=189,slow=23,SNR=7.2						
BATI	Baumata	7.54	240	Sn	Sn	20 53 47.5	+0.1
	3.1nm,0.3s,baz=25,slow=21,SNR=2.1						
KAPI	Kappang	10.60	277	LR	LR	20 56 47.5	
	comp=Z,67nm,19.0s,baz=134,slow=36						
FITZ	Fitzroy Crossi	12.41	201	Pn	Pn	20 53 29.8	0.0
	0.8nm,0.3s,baz=21,slow=9.3,SNR=20						
FITZ				Sn	Sn	20 55 40.9	-6.0
	0.6nm,0.3s,baz=243,slow=4.5,SNR=2.7						
WRA	Warramunga Arr	13.94	164	Pn	Pn	20 53 51.0	+0.1
	0.9nm,0.3s,baz=340,slow=13,SNR=45						
WRA				Sn	Sn	20 56 20.6	-3.9
	0.9nm,0.3s,baz=341,slow=21,SNR=8.3						
ASAR	Alice Springs	17.43	169	P	Pn	20 54 37.9	+1.7
	0.7nm,0.3s,baz=339,slow=8.7,SNR=44						
ASAR				S	Sn	20 57 48.1	-1.2
	0.3nm,0.3s,baz=0.4,slow=28,SNR=5.7						
CTA	Charters Tower	20.56	133	P	P	20 55 12.5	+1.1
	0.6nm,0.5s,baz=302,slow=14,SNR=0.9						
STKA	Stephens Creek	27.38	159	P	P	20 56 19.9	+2.1
	1.3nm,0.5s,baz=338,slow=9.7,SNR=3.8						
MKAR	Makanchi Array	67.96	327	P	P	21 01 32.2	+1.2
	0.8nm,0.8s,baz=142,slow=10,SNR=4.6						
VNDA	Vanda	72.92	173	P	P	21 02 03.4	+2.6
	0.5nm,0.8s,baz=326,slow=6.3,SNR=2.4						

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*SJA **06** 20:50:54.9±0.7, 33°.33S×72°.58W, h8^{km}, ML4.0, MW3.9*

*IDC **06** 20:50:57.6±1.4, 33°.30S×71°.97W, h0^{km}, mb3.9/2, mb1 4.1/5, mb1mx3.8/28, mbtmp3.9/5, ML3.9/3, MS3.2/4, Ms1 3.2/4, ms1mx3.0/26, Error ellipse: s-maj=52.5km s-min=22.8km az=87.0*

*NEIC **06** 20:50:58.2±1.6, 33°.32S±0°.04×72°.44W±0°.04, h17^{km}±5^{km}, mb4.1/4, ML3.7(GUC), Error ellipse: s-maj=5.7km s-min=4.1km az=221.0*

*GUC **06** 20:50:59.4±0.9, 33°.32S×72°.47W, h37^{km}±3^{km}, ML3.7*

ISC 06 20:50:57.2±1.7**, 33°.31S**±0°.03×**72°.41W**±0°.05**, h5**^{km}±10^{km}**, n81,** σ**1**^{s}**.77**/100**, mb4.1**/4**, 13C, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA01	Torpederas	0.70	66	⇑*i*P	Pn	20 51 13.1	-0.7
VA01				*i* S	Sn	20 51 23.5	-1.5
VA01				IAML		20 51 26.2	
	comp=N,3µm,0.2s						
VA01	Torpederas	0.70	66		Pn	20 51 13.1	-0.7
VA01				Sg	Sn	20 51 23.5	-1.5
VA01	Torpederas	0.70	66	*e*P	Pn	20 51 13.0	-0.7
VA01				*e*S	Sn	20 51 23.8	-1.2
VA05	Santo Domingo	0.75	118	⇑*i*P	Pn	20 51 13.8	-0.6
VA05				*i* S	Sn	20 51 25.0	-1.3
VA05				IAML		20 51 27.0	
	comp=N,9µm,0.3s						
VA05	Santo Domingo	0.75	118		Pn	20 51 13.7	-0.7
VA05					Sn	20 51 24.9	-1.3
MT02	Curacav	1.07	88	⇑*i*P	Pn	20 51 18.4	-0.4
MT02				*i* S	Sn	20 51 32.6	-1.5
MT02				IAML		20 51 37.2	
	comp=E,1µm,0.4s						
MT02	Curacav	1.07	88		Pn	20 51 18.4	-0.4
MT02				Sg	Sn	20 51 32.5	-1.5
MT02	Curacav	1.07	88	*e*P	Pb	20 51 18.0	-0.2
MT02				*e*S	Sn	20 51 34.6	+0.5
MT02				IAML		20 51 36.3	
	comp=Z,2µm,0.6s						
MT01	Popeta	1.12	120	⇑*i*P	Pb	20 51 18.8	-0.3
MT01				*i* S	Sn	20 51 34.1	-1.1
MT01				IAML		20 51 40.1	
	comp=E,3µm,0.3s						
MT01	Popeta	1.12	120		Pb	20 51 18.7	-0.3
MT01				Sg	Sg	20 51 31.6	-1.6
MT01	Popeta	1.12	120	*e*P	Pb	20 51 18.8	-0.3
MT01				*e*S	Sn	20 51 35.8	+0.6
MT01				IAML		20 51 40.2	
	comp=Z,2µm,0.3s						
VA06	Catapilco	1.20	52	⇑*i*P	Pb	20 51 20.1	-0.3
VA06				*i* S	Sn	20 51 36.7	-0.5
VA06				IAML		20 51 45.2	
	comp=E,5µm,0.5s						
ROC1	El Roble	1.22	75	*e*P	Pb	20 51 20.7	-0.2
ROCH	El Roble	1.22	74	⇑*i*P	Pg	20 51 20.9	+0.2
ROCH				*i* S	Sn	20 51 37.5	-0.7
ROCH				IAML		20 51 45.0	
	comp=E,3µm,0.4s						
MT09	Talagante	1.28	112	⇑*i*P	Pn	20 51 21.4	-0.4
MT09				*i* S	Sn	20 51 38.8	-0.6
MT09				IAML		20 51 44.3	
	comp=N,3µm,0.3s						
MT09	Talagante	1.28	112		Pn	20 51 21.4	-0.4
MT05	Renca	1.41	94	⇑*i*P	Pb	20 51 23.9	0.0
MT05				*i* S	Sg	20 51 42.6	+0.2
MT05				IAML		20 51 48.0	
	comp=E,3µm,0.4s						
MT05	Renca	1.41	94		Pb	20 51 23.7	-0.3
MT05	Renca	1.41	94	*e*P	Pb	20 51 24.0	0.0
PEL	Peldehue	1.46	84	⇑*i*P	Pb	20 51 24.9	0.0
PEL				*i* S	Sg	20 51 44.0	-0.1
PEL				IAML		20 51 51.2	
	comp=N,2µm,0.5s						
PEL	Peldehue	1.46	84	*e*P	Pg	20 51 25.0	-0.2
PEL				*e*S	Sg	20 51 49.5	+5.4
BO01	Tunca	1.54	135		Pn	20 51 24.8	-0.6
BO01	Tunca	1.54	135	*e*P	Pn	20 51 25.0	-0.4
BO01				*e*P	Pb	20 51 25.5	-0.8
BO04	La Punta	1.65	115	⇑*i*P	Pn	20 51 27.1	+0.2
BO04				*i* S	Sn	20 51 48.1	-0.4
VA03	San Esteban	1.66	71	⇑*i*P	Pn	20 51 27.3	+0.3
VA03				*i* S	Sb	20 51 49.2	-0.2
VA03				IAML		20 52 01.7	
	comp=N,3µm,0.4s						
VA03	San Esteban	1.66	71		Pn	20 51 27.3	+0.3
VA03	San Esteban	1.66	71	*e*P	Pb	20 51 27.6	-0.7
VA03				*e*S	Sg	20 51 54.2	+3.8
VA03				IAML		20 51 56.9	
	comp=Z,2µm,1.5s						
GO05	Huala	1.74	167	⇑*i*P	Pn	20 51 27.7	-0.4
GO05				IAML		20 52 04.3	
	comp=E,893nm,0.5s						
GO05	Huala	1.74	167		Pn	20 51 27.4	-0.7
GO05	Huala	1.74	167	*e*P	Pn	20 51 28.0	-0.1
LMEL	Las Melosas	1.92	107	⇑*i*P	Pb	20 51 31.5	-1.3
LMEL				IAML		20 52 06.8	
	comp=N,1µm,0.4s						
BO02	Sierra Bellavi	2.01	138		Pn	20 51 32.1	+0.3
BO02	Sierra Bellavi	2.01	138	*e*P	Pn	20 51 32.7	+0.9
BO02				IAML		20 52 11.0	
	comp=Z,2µm,0.5s						
ML02	Panimavida	2.58	162		Pn	20 51 37.4	-2.3
CO06	Fray Jorge	2.71	14		Pn	20 51 40.3	-1.1
AUSP	Uspallata	2.77	68	*e*P	Pb	20 51 45.0	-2.4
AUSP				*e*S	Sb	20 52 23.2	+1.5
CO03	El Pedregal	2.87	31		Pn	20 51 43.8	+0.2
CO03	El Pedregal	2.87	31	*e*P	Pn	20 51 44.3	+0.7
CO03				*e*S	Sn	20 52 20.4	+1.9
RTLS	Leoncito	3.03	61	*e*P	Pb	20 51 49.0	-2.8
RTLS				*e*S	Sg	20 52 31.7	-2.9
RTLS				IAML		20 52 43.3	
	comp=Z,351nm,0.8s						
GO04	Tololo Observa	3.42	24		Pn	20 51 51.0	-0.3
GO04	Tololo Observa	3.42	24	*e*P	Pn	20 51 52.2	+0.9
GO04				*e*S	Sg	20 52 55.7	+8.7
CO05	La Serena	3.53	17		Pn	20 51 49.4	-3.2
ZON	Zonda	3.62	62		Pn	20 51 55.1	+1.2
ACCO	Cerro Coronel	3.93	47	*e*P	Pn	20 52 01.7	+3.2
ACCO				*e*P	Pb	20 52 02.0	-5.2
AROD	Rodeo	4.01	39	*e*P	Pn	20 51 56.7	-2.9
AROD				*e*P	Pb	20 52 02.0	-6.5
AROD				*e*S	Sg	20 53 02.2	-3.9
LCO	Las Campanas	4.53	19		Pn	20 52 06.8	+0.2
LCO	Las Campanas	4.53	19	*e*P	Pn	20 52 07.0	+0.3
AGUA	GUANDACOL	5.08	42	*e*P	Pn	20 52 16.9	+2.9
AGUA				*e*S	Sg	20 53 35.2	-5.0
AGUA				IAML		20 53 54.5	
	comp=Z,112nm,2.0s						
H03N1	Juan Fernandez	5.44	267	T	T	20 58 06.4	
	baz=89,slow=73,SNR=13						
H03S1	Juan Fernandez	5.45	263	T	T	20 57 50.0	
	baz=88,slow=74,SNR=289						
H03S3	Juan Fernandez	5.45	263	T	T	20 57 49.4	
	baz=88,slow=74,SNR=233						
H03N3	Juan Fernandez	5.45	267	T	T	20 58 03.5	
	baz=89,slow=73,SNR=12						
H03N2	Juan Fernandez	5.46	267	T	T	20 58 09.1	
	baz=89,slow=73,SNR=11						
H03S2	Juan Fernandez	5.46	263	T	T	20 57 50.9	
	baz=88,SNR=271						
VCA	Vinchina	5.81	39	*e*P	Pn	20 52 26.9	+2.6
VCA				*e*S	Sb	20 53 48.7	-0.5
VCA				*e*S	Sg	20 53 52.2	-12
VCA				IAML		20 53 57.9	
	comp=Z,94nm,0.8s						
GO03	Copiap	6.00	19		Pn	20 52 26.6	-0.1
ACLC	CERRO LA CRUZ	6.07	52	*e*S	Sb	20 53 56.7	+0.2
ACLC				IAML		20 54 01.7	
	comp=Z,54nm,0.9s						
AC02	Maricunga	7.05	25		Pn	20 52 39.9	-1.6
PLCA	Paso Flores	7.56	169	Pn	Pn	20 52 48.2	+0.1
	comp=Z,0.6nm,0.3s,baz=338,slow=10,SNR=7.3						
PLCA				Lg	Lg	20 54 57.3	
	comp=Z,0.1nm,0.3s,baz=294,slow=15,SNR=2.9						
LL04	Puerto Octay	7.59	180	Pn	Pn	20 52 47.2	-1.2
LL03	Petrohue	7.81	180	Pn	Pn	20 52 49.8	-1.7
PB14	IPOC Station P	8.83	12	Pn	Pn	20 53 05.3	-0.5
LVC	Limon Verde	11.10	17	LR	LR	20 58 17.4	
	comp=Z,56nm,20.5s,baz=240,slow=40						
PB08	IPOC Station P	13.43	13	Pn	Pn	20 54 08.0	-0.9
CPUP	Villa Florida	14.82	66	Lg	Lg	20 58 38.3	
	comp=Z,0.2nm,0.3s,baz=321,slow=17,SNR=3.5						
CPUP				LR	LR	21 00 41.3	
	comp=Z,118nm,20.7s,baz=226,slow=40						
LPAZ	La Paz	17.39	14	P	Pn	20 55 01.4	+0.2
	comp=Z,0.2nm,0.3s,baz=171,slow=8.9,SNR=5.0						
LPAZ	La Paz	17.39	14	P	Pn	20 55 00.9	-0.3
SIV	San Ignacio	20.06	33	P	P	20 55 30.2	-1.2
	comp=Z,0.3nm,0.3s,baz=216,slow=11,SNR=13						
SIV				LR	LR	21 04 48.2	
	comp=Z,124nm,19.1s,baz=287,slow=42						
PTLB	Pontes e Lacer	21.47	37	P	P	20 55 45.4	-1.1
PTLB				IAmb	IAmb	20 55 49.9	
	comp=Z,9.4nm,1.2s						
ETMB	Extrema	24.07	15	P	P	20 56 14.1	+0.5
ETMB				IAmb	IAmb	20 56 28.1	
	comp=Z,5.8nm,1.1s						
ATAH	Atahualpa	26.63	347	LR	LR	21 04 55.9	
	comp=Z,71nm,19.1s,baz=155,slow=31						
VNA3	Neumayer Olymp	50.12	158	P	P	20 59 54.0	+1.1
VNA1	Neumayer--Stat	50.43	157	P	P	20 59 56.4	+1.2
VNA2	Neumayer--Watz	50.77	157	P	P	20 59 58.9	+1.1
	baz=285,slow=8.6						
SNAA	Sanae	52.34	158	P	P	21 00 10.6	+0.9
TXAR	Lajitas Array	68.98	331	P	P	21 02 06.6	+3.0
	comp=Z,0.6nm,0.8s,baz=163,slow=10,SNR=3.9						
TXAR	Lajitas Array	68.98	331	P	P	21 02 04.9	+1.3
TORD	Torodi Ar. Bea	84.27	70	P	P	21 03 30.6	+0.3
	comp=Z,1.6nm,0.8s,baz=224,slow=4.0,SNR=9.3						
TORD	Torodi Ar. Bea	84.27	70	P	P	21 03 30.2	-0.1
KURBB	Kurchatov Arra	152.58	42	PKPbc	PKPbc	21 10 53.0	-1.3
	comp=Z,0.2nm,0.2s,baz=307,slow=3.1,SNR=4.7						
KURK	Kurchatov	152.58	42		PKPbc	21 10 53.0	-1.3

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*IDC **06** 20:57:55.2±1.8, 36°.54S×179°.63W, h0^{km}, mb4.0/2, mb1 4.2/3, mb1mx3.7/41, mbtmp3.9/3, ML3.3/1, Error ellipse: s-maj=52.2km s-min=40.1km az=167.0*

*WEL **06** 20:58:22.8, 38°S±32°×17°9E±2°2, h34^{km}±23^{km}, M2.5/8, ML2.6/6, MLv2.5/8, Error ellipse: s-maj=0.1km s-min=0.0km az=19.4*

ISC 06 20:57:60.0±1.5**, 36°.8S**±0°.2×**179°.6W**±0°.2**, h35**^{km}**, n17,** σ**0**^{s}**.47**/18**, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.86	244	P	Pn	20 58 28.7	-0.6
WMGZ	Waiomatatini S	1.91	236	P	Pn	20 58 30.0	0.0
PUZ	Puketiti	2.16	232	P	Pn	20 58 33.0	-0.4
PKGZ	Pakihiroa	2.17	238	P	Pn	20 58 33.1	-0.5
HAZ	Te Kaha	2.32	244	P	Pn	20 58 36.1	+0.5
TWGZ	Tauwhareparae	2.39	233	P	Pn	20 58 36.8	+0.1
CNGZ	Carnagh Statio	2.45	225	P	Pn	20 58 37.2	-0.2
RUGZ	Raukumara Rang	2.49	240	P	Pn	20 58 38.0	0.0
RIGZ	Rimuhau	2.86	226	P	Pn	20 58 42.5	-0.6
RAGZ	Rawiri	2.94	233	P	Pn	20 58 44.2	0.0
URZ	Urewera	3.02	239	Pn	Pn	20 58 45.6	+0.4
	3.9nm,0.3s,baz=121,slow=24,SNR=28						
URZ				Sn	Sn	20 59 20.4	+0.3
	8.7nm,0.3s,baz=8.7,slow=22,SNR=6.2						
URZ	Urewera	3.02	239	P	Pn	20 58 45.1	-0.2
ASAR	Alice Springs	41.87	275	P	P	21 05 47.3	+0.4
	3.5nm,0.6s,baz=117,slow=7.8,SNR=69						
WRA	Warramunga Arr	43.43	280	P	P	21 05 58.7	-0.9
	0.5nm,0.5s,baz=120,slow=7.7,SNR=9.9						
ARCES	ARCESS Array B	144.45	345	PKP	PKPdf	21 17 31.2	-0.2
	1.7nm,0.8s,baz=46,slow=5.2,SNR=4.2						
FINES	FINESS Array B	150.50	335	PKPbc	PKiKP	21 17 47.9	+0.2
	1.6nm,0.6s,baz=48,slow=2.1,SNR=3.7						
TORD	Torodi Ar. Bea	156.46	183	PKPab	PKPab	21 18 20.8	+0.7
	0.6nm,0.7s,baz=183,slow=2.4,SNR=3.4						

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*ANF **06** 21:15:22.1±0.2, 35°.30N×91°.77W, h0^{km}, ML3.3/10, Error ellipse: s-maj=2.8km s-min=1.7km az=120.0*

*NEIC **06** 21:15:22.7±1.4, 35°.29N±0°.02×91°.76W±0°.03, h5^{km}±2^{km}, Error ellipse: s-maj=3.8km s-min=3.4km az=316.0*

*SLM **06** 21:15:22.8±1.2, 35°.31N±0°.02×91°.765W±0°.009, h0^{km}±6^{km}, Md2.6/22, mb_Lg3.0/106(NEIC), Error ellipse: s-maj=2.8km s-min=0.7km az=196.0*

ISC 06 21:15:23.0±1.0**, 35°.31N**±0°.03×**91°.76W**±0°.02**, h9**^{km}±7^{km}**, n104,** σ**0**^{s}**.77**/75**, Arkansas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SEAR	Searcy	0.06	146		Pg	21 15 25.0	+0.1
W41B	Gary Mavity, V	0.42	252	P	Pg	21 15 30.2	-1.1
	baz=70,SNR=149						
WHAR	Wooly Hollow	0.44	268		Pg	21 15 30.4	-1.1
WHAR				Sg	Sg	21 15 38.1	+0.8
FCAR	Ozark Folk Cen	0.66	333		Pg	21 15 34.9	-0.8
FCAR				Sg	Sg	21 15 43.4	-0.9
LCAR	Lake Charles	0.91	33		Pg	21 15 39.5	-0.9
LCAR				Sg	Sg	21 15 51.0	-1.2
LCAR	Lake Charles	0.91	33	P	Pg	21 15 39.6	-0.9
	baz=214						
HBAR	Harrisburg	0.93	74		Pg	21 15 40.6	-0.3
QUAR	Qualls	0.96	69		Pg	21 15 41.2	-0.4
TWAR	Twist	0.98	86		Pg	21 15 41.3	-0.6
TWAR					Sb	21 15 55.4	+0.2
V43A	Jonesboro	1.10	64		Pg	21 15 43.0	-1.1
V43A					Sg	21 15 58.4	+0.1
X40A	Basin Creek Fa	1.20	228		Pg	21 15 44.9	-1.2
X40A	Basin Creek Fa	1.20	228	P	Pg	21 15 44.9	-1.2
	baz=46,SNR=56						
X40A				P	Pg	21 15 44.9	-1.2
	baz=46,SNR=56						
LPAR	Lepanto	1.23	76		Pg	21 15 45.3	-1.2
U40A	Yellville	1.38	320		Pn	21 15 47.7	-0.8
U40A	Yellville	1.38	320	P	Pn	21 15 47.5	-0.9
	baz=139,SNR=237						
U40A				P	Pn	21 15 47.5	-0.9
	baz=139,SNR=237						
CCAR	Cane Creek	1.38	181		Pn	21 15 48.3	-0.2
CCAR	Cane Creek	1.38	181	P	Pn	21 15 48.5	0.0
	baz=0.2						
CCAR				S	Sn	21 16 07.5	+0.6
	baz=0.2						
MET	Memphis--Engin	1.50	96	Pn	Pn	21 15 50.6	+0.5
MET					Sn	21 16 09.6	-0.2
GNAR	Gosnell	1.56	65		Pn	21 15 50.9	0.0
W39A	Magazine	1.66	267		Pn	21 15 52.7	+0.4
W39A	Magazine	1.66	267	P	Pn	21 15 52.7	+0.4
	baz=85,SNR=77						
W39A				S	Sb	21 16 15.2	+0.3
	baz=85						
MIAR	Mount Ida	1.68	244		Pn	21 15 52.9	+0.4
MIAR				IAmb_Lg		21 16 17.1	
	comp=Z,71nm,0.8s						
MIAR	Mount Ida	1.68	244	P	Pn	21 15 53.0	+0.4
	baz=62,SNR=122						
MIAR				S	Sb	21 16 15.0	-0.2
	baz=62						
PEBM	Pemiscott Bayo	1.74	62	Pn	Pn	21 15 53.5	+0.2
PEBM				IAmb_Lg		21 16 20.2	
	comp=Z,102nm,0.7s						
T42A	Van Buren	1.80	17		Pn	21 15 54.7	+0.5
T42A	Van Buren	1.80	17	P	Pn	21 15 54.9	+0.6
	baz=198,SNR=184						
T42A				S	Sn	21 16 18.5	+1.2
	baz=198						
PBMO	Poplar Bluff	1.82	36		Pn	21 15 55.4	+0.8
PBMO	Poplar Bluff	1.82	36	P	Pn	21 15 55.5	+1.0
	baz=217,SNR=11						
MGMO	Mountain Grove	1.89	347		Pn	21 15 56.1	+0.6
MGMO				IAmb_Lg		21 16 26.5	
	comp=Z,53nm,0.8s						
WLAR	White Oak Lake	1.96	215		Pn	21 15 57.1	+0.6
WLAR				IAmb_Lg		21 16 25.3	
	comp=Z,75nm,0.7s						
EBZ	Ebenezer Churc	1.98	94		Pn	21 15 56.7	+0.1
LNXT	Lenox	2.01	66		Pn	21 15 57.3	+0.2
LNXT	Lenox	2.01	66	P	Pn	21 15 57.3	+0.2
	baz=248						
HHAR	Hobbs	2.03	299		Pn	21 15 58.4	+1.0
HALT	Halls	2.06	72	Pn	Pn	21 15 56.5	-1.2
PENMO	Penman	2.07	56	Pn	Pn	21 15 58.3	+0.3
W45A	Hickory Valley	2.11	93		Pn	21 15 58.0	-0.4
PARMO	Parma	2.12	50	Pn	Pn	21 15 59.4	+0.9
GLAT	Glass	2.23	64	Pn	Pn	21 15 58.9	-1.1
Y45A	Yeager Farm, C	2.32	128	Pn	Pn	21 16 02.8	+1.5
HENM	Henderson Moun	2.33	52	Pn	Pn	21 16 02.1	+0.7
HICK	Hickman	2.39	58		Pn	21 16 02.3	-0.1
U38A	Gravette	2.42	299	IAmb_Lg		21 16 38.7	
	comp=Z,89nm,0.8s						
UTMT	University of	2.57	65	Pn	Pn	21 16 02.8	-1.9
143A	Socs Landing,	2.61	173	Pn	Pn	21 16 04.4	-0.9
S39A	Bolivar	2.69	333		Pn	21 16 07.1	+0.6
S39A	Bolivar	2.69	333	P	Pn	21 16 07.4	+0.8
	baz=152,SNR=26						
CCM	Cathedral Cave	2.78	8		Pn	21 16 08.0	+0.4
CCM				IAmb_Lg		21 16 53.0	
	comp=Z,35nm,0.8s						
CCM	Cathedral Cave	2.78	8	P	Pn	21 16 08.6	+1.0
	baz=189,SNR=32						
FVM	French Village	2.88	21	Pn	Pn	21 16 09.8	+0.7
FVM				IAmb_Lg		21 16 60.0	
	comp=Z,38nm,0.9s						
R40A	Maddies Statio	3.01	352		Pn	21 16 11.0	+0.2
R40A	Maddies Statio	3.01	352	P	Pn	21 16 11.5	+0.7
	baz=172,SNR=14						

PLAL	**Pickwick Lake**	**3.03**	**95**		**Pn**	**21 16 11.4**	**+0.3**
PWLA	**Pickwick Lake**	**3.04**	**95**		**Pn**	**21 16 11.3**	**0.0**
X37A	**Clayton**	**3.05**	**258**		**Pb**	**21 16 18.1**	**+0.6**
S44A	**Carbondale**	**3.12**	**39**	IAmb_Lg		21 17 01.9	
	comp=Z,50nm,0.8s						
SIUC	**Southern Illin**	**3.16**	**40**	IAmb_Lg		21 17 02.6	
	comp=Z,47nm,1.0s						
WVT	**Waverly**	**3.30**	**74**		**Pn**	**21 16 14.3**	**-0.5**
WVT	**Waverly**	**3.30**	**74**	Pn	**Pn**	**21 16 13.9**	**-0.9**
WVT					**Pb**	**21 16 22.2**	**+0.5**
TUL1	**Leonard**	**3.34**	**282**	Pn	**Pn**	**21 16 15.9**	**+0.5**
TUL1				IAmb_Lg		21 17 11.7	
	comp=Z,53nm,0.9s						
Z38A	**Mt. Pleasant**	**3.36**	**234**	Pn	**Pn**	**21 16 16.0**	**+0.3**
146A	**Union**	**3.48**	**139**	IAmb_Lg		21 17 18.8	
	comp=Z,26nm,0.7s						
SLM	**Saint Louis**	**3.54**	**20**	IAmb_Lg		21 17 23.1	
	comp=Z,27nm,0.8s						
Z47A	**Carrollton**	**3.71**	**123**	IAmb_Lg		21 17 29.7	
	comp=Z,32nm,0.9s						
QUOK	**Quay**	**4.12**	**284**	IAmb_Lg		21 17 43.6	
	comp=Z,47nm,1.1s						
T47A	**Sharon Grove**	**4.12**	**65**	Pn	**Pn**	**21 16 26.5**	**+0.4**
T47A				IAmb_Lg		21 17 38.2	
	comp=Z,20nm,0.7s						
Q44A	**Meyer Farm, Va**	**4.21**	**31**	IAmb_Lg		21 17 35.8	
	comp=Z,44nm,0.8s						
P40A	**Paris**	**4.22**	**357**		**Pn**	**21 16 28.2**	**+0.6**
P40A				IAmb_Lg		21 17 39.2	
	comp=Z,37nm,0.8s						
OLIL	**Olney**	**4.50**	**39**	IAmb_Lg		21 17 46.7	
	comp=Z,26nm,0.8s						
P38A	**Dawn**	**4.54**	**342**	Pn	**Pn**	**21 16 31.8**	**-0.1**
P38A				IAmb_Lg		21 17 43.9	
	comp=Z,36nm,0.7s						
Y49A	**Blount Mountai**	**4.64**	**107**	IAmb_Lg		21 17 51.1	
	comp=Z,24nm,0.8s						
BLOK	**Blackwell**	**4.66**	**290**	IAmb_Lg		21 17 58.9	
	comp=Z,29nm,0.8s						
LOOK	**Love County**	**4.66**	**255**	Pn	**Pn**	**21 16 34.2**	**+0.6**
P43A	**Skaggs, Pawnee**	**4.68**	**22**	IAmb_Lg		21 17 55.1	
	comp=Z,37nm,0.8s						
KAN17	**Caldwell West**	**5.16**	**291**	IAmb_Lg		21 18 10.2	
	comp=Z,35nm,1.0s						
KAN01	**Argonia South**	**5.19**	**293**	IAmb_Lg		21 18 11.4	
	comp=Z,28nm,0.8s						
KAN05	**Bluff City Nor**	**5.26**	**292**	IAmb_Lg		21 18 14.3	
	comp=Z,36nm,0.9s						
WCI	**Wyandotte Cave**	**5.27**	**55**	IAmb_Lg		21 18 11.0	
	comp=Z,17nm,0.8s						
W50A	**Signal Mountai**	**5.27**	**89**	IAmb_Lg		21 18 13.7	
	comp=Z,19nm,0.7s						
KAN06	**Argonia West S**	**5.30**	**293**	IAmb_Lg		21 18 11.5	
	comp=Z,31nm,0.8s						
KAN08	**Anthony NE Sta**	**5.38**	**293**	IAmb_Lg		21 18 21.0	
	comp=Z,32nm,0.7s						
OK032	**Salt Plains WL**	**5.44**	**288**	IAmb_Lg		21 18 23.4	
	comp=Z,27nm,1.1s						
O44A	**Mansfield**	**5.50**	**27**	IAmb_Lg		21 18 16.1	
	comp=Z,26nm,0.8s						
250A	**Grady**	**5.65**	**124**	IAmb_Lg		21 18 38.2	
	comp=Z,16nm,0.8s						
BLO	**Bloomington**	**5.69**	**46**	IAmb_Lg		21 18 27.7	
	comp=Z,29nm,0.8s						
V51A	**Loudon**	**6.06**	**83**	IAmb_Lg		21 18 52.2	
	comp=Z,12nm,0.8s						
SFIN	**Lafayette**	**6.26**	**35**	IAmb_Lg		21 18 40.7	
	comp=Z,24nm,0.8s						
152A	**Waverly Hall**	**6.41**	**112**	IAmb_Lg		21 18 44.0	
	comp=Z,14nm,0.8s						
W52A	**Murphy**	**6.41**	**90**	IAmb_Lg		21 18 46.1	
	comp=Z,17nm,0.8s						
TKL	**Tuckaleechee C**	**6.52**	**85**	IAmb_Lg		21 18 56.9	
	comp=Z,13nm,1.0s						
SCIA	**State Center**	**6.69**	**351**	IAmb_Lg		21 18 53.2	
	comp=Z,22nm,0.8s						
L40A	**Anamosa**	**6.76**	**3**	IAmb_Lg		21 19 00.6	
	comp=Z,23nm,0.7s						
L42A	**Oliver, Polo**	**6.89**	**13**	IAmb_Lg		21 18 57.5	
	comp=Z,30nm,0.9s						
S51A	**Beattyville**	**6.98**	**68**	IAmb_Lg		21 19 13.9	
	comp=Z,15nm,0.9s						
P49A	**Miami Univ. Ec**	**7.01**	**51**	IAmb_Lg		21 19 02.2	
	comp=Z,19nm,1.0s						
CBKS	**Cedar Bluff**	**7.28**	**301**	IAmb_Lg		21 19 13.7	
	comp=Z,19nm,0.9s						
V53A	**Saluda**	**7.30**	**85**	IAmb_Lg		21 19 20.7	
	comp=Z,9.7nm,0.7s						
154A	**Montrose**	**7.67**	**108**	IAmb_Lg		21 19 42.9	
	comp=Z,24nm,0.7s						
Q51A	**Peebles**	**7.67**	**59**	IAmb_Lg		21 19 46.6	
	comp=Z,10nm,0.7s						
JFWS	**Jewell Farm**	**7.69**	**8**	IAmb_Lg		21 19 37.1	
	comp=Z,16nm,0.7s						
HODGE	**Hodges**	**7.89**	**95**	IAmb_Lg		21 19 31.5	
	comp=Z,11nm,1.0s						
P51A	**Williamsport**	**8.08**	**56**	IAmb_Lg		21 19 43.8	
	comp=Z,15nm,0.7s						
AMTX	**Amarillo**	**8.15**	**270**	IAmb_Lg		21 19 42.0	
	comp=Z,16nm,1.1s						
Q52A	**Bidwell**	**8.41**	**61**	IAmb_Lg		21 20 10.4	
	comp=Z,16nm,0.7s						

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*IDC **06** 21:22:30.8±1.3, 52°.43N×169°.37W, h0^{km}, mb3.9/11, mb1 4.1/13, mb1mx3.8/49, mbtmp4.0/13, ML3.8/2, Error ellipse: s-maj=36.9km s-min=16.6km az=176.0*

*NEIC **06** 21:22:32.4±1.9, 52°.11N±0°.04×169°.24W±0°.03, h10^{km}±1^{km}, mb4.0/20, ML3.3(AEIC), Error ellipse: s-maj=7.4km s-min=3.0km az=158.0*

*AEIC **06** 21:22:35±3.5, 52°.30N±0°.04×169°.22W±0°.09, h13^{km}±4^{km}, Error ellipse: s-maj=8.0km s-min=5.3km az=99.0*

ISC 06 21:22:31.5±0.8**, 52°.15N**±0°.09**×169°.29W**±0°.07**, h10**^{km}**, n72,** σ1^{s}**34**/67**, mb3.9**/11**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	**Nikolski High**	**0.87**	**18**		**Pn**	**21 22 49.7**	**-0.1**
NIKH					**Sg**	**21 22 59.5**	**0.0**
OKSP	**Okmok Steeple**	**1.26**	**28**		**Pn**	**21 22 55.2**	**-0.1**
OKCE	**Okmok Cone E**	**1.45**	**28**		**Pb**	**21 22 58.9**	**+0.2**
OKWE	**Okmok W'ng Wal**	**1.47**	**25**		**Pb**	**21 22 59.0**	**0.0**
OKNC	**Okmok New Cone**	**1.49**	**28**		**Pn**	**21 22 59.0**	**+0.6**
OKFG	**Magazine Ridge**	**1.52**	**33**		**Pn**	**21 22 59.5**	**+0.8**
OKFG					**Sb**	**21 23 19.2**	**+0.2**
MAPS	**Pakushin South**	**2.19**	**40**		**Pn**	**21 23 09.1**	**+1.1**
MSW	**Makushin Switc**	**2.33**	**40**		**Pn**	**21 23 11.3**	**+1.4**
MNAT	**Makushin Natee**	**2.34**	**41**		**Pn**	**21 23 11.4**	**+1.3**
UNV	**Unalaska Valle**	**2.39**	**44**		**Pn**	**21 23 12.0**	**+1.3**
UNV	**Unalaska Valle**	**2.39**	**44**		**Sn**	**21 23 41.7**	**+1.6**
MTBL	**Makushin Table**	**2.41**	**40**		**Pn**	**21 23 12.3**	**+1.3**
AKMO	**Akutan Morgan**	**2.77**	**44**		**Pn**	**21 23 18.3**	**+2.3**
AKUT	**Akutan**	**2.91**	**45**	Pn	**Pn**	**21 23 20.3**	**+2.5**
GSTR	**Great Sitkin T**	**4.17**	**272**	Pn	**Pn**	**21 23 36.8**	**+1.6**
ADK	**Adak**	**4.58**	**270**	Pn	**Pn**	**21 23 42.0**	**+1.3**
KIWB	**Kanaga Island**	**4.87**	**270**		**Pn**	**21 23 46.4**	**+1.7**
SPIA	**Saint Paul Isl**	**5.07**	**354**	Pn	**Pn**	**21 23 49.9**	**+2.4**
AMKA	**Amchitka**	**7.12**	**268**	Pn	**Pn**	**21 24 17.3**	**+1.6**
OHAK	**Old Harbor**	**10.56**	**55**	Pn	**Pn**	**21 25 02.7**	**0.0**
KDAK	**Kodiak Island**	**11.12**	**53**	Pn	**Pn**	**21 25 10.7**	**+0.3**
	0.6nm,0.3s,baz=269,slow=2.2,SNR=7.7						
Q19K	**Cape Douglas,**	**11.15**	**46**	Pn	**Pn**	**21 25 13.1**	**+2.3**
N19K	**Bonanza Creek**	**11.90**	**37**	Pn	**Pn**	**21 25 22.7**	**+1.5**
RSO	**Redoubt South**	**12.36**	**41**	Pn	**Pn**	**21 25 29.5**	**+1.9**
M19K	**Big River Lodg**	**12.67**	**34**	Pn	**Pn**	**21 25 35.0**	**+3.4**
L19K	**White Mountain**	**12.71**	**32**	Pn	**Pn**	**21 25 35.8**	**+3.6**
BRLK	**Bradley Lake**	**12.79**	**46**	Pn	**Pn**	**21 25 32.6**	**-0.6**
J20K	**Nowinta River**	**14.41**	**27**		**P**	**21 25 59.4**	**-2.9**
PWL	**Port Wells**	**14.43**	**45**	Pn	**Pn**	**21 25 54.3**	**-1.3**
CAST	**Castle Rocks**	**14.49**	**32**	P	**P**	**21 26 03.7**	**+0.5**
GHO	**Glory Hole Cre**	**14.64**	**41**	Pn	**Pn**	**21 25 59.6**	**+1.0**
TRF	**Thorofare Moun**	**15.11**	**34**	Pn	**Pn**	**21 26 03.3**	**-1.7**
TRF				IAmb	IAmb	21 26 19.5	
	comp=Z,7.5nm,1.2s						
BPAW	**Bear Paw Mtn.**	**15.31**	**31**	P	**P**	**21 26 12.5**	**+0.2**
BPAW				IAmb	IAmb	21 26 13.1	
	comp=Z,5.4nm,0.9s						
SCM	**Sheep Creek Mo**	**15.32**	**42**	Pn	**Pn**	**21 26 07.2**	**-0.5**
SCM				IAmb	IAmb	21 26 13.2	
	comp=Z,8.5nm,0.9s						
KLU	**Klutina**	**15.76**	**44**	P	**Pn**	**21 26 12.5**	**-0.9**
KLU				IAmb	IAmb	21 26 12.9	
	comp=Z,7.2nm,0.5s						
H21K	**Melozitna Rive**	**15.92**	**25**	Pn	**Pn**	**21 26 15.7**	**+0.3**
IMAR	**Indian Mountai**	**15.93**	**24**		**P**	**21 26 18.9**	**-0.3**
M24K	**Tolsona, Glenn**	**15.93**	**42**	Pn	**Pn**	**21 26 14.7**	**-0.9**
MLY	**Manley**	**16.04**	**29**	Pn	**Pn**	**21 26 18.2**	**+1.3**
BERG	**Berg Lake**	**16.34**	**50**	Pn	**Pn**	**21 26 20.4**	**-0.4**
N25K	**Chitina, Valde**	**16.38**	**45**	Pn	**Pn**	**21 26 21.0**	**-0.4**
N25K				IAmb	IAmb	21 26 26.2	
	comp=Z,6.2nm,0.8s						
CRQM	**Cirque**	**16.72**	**49**	Pn	**Pn**	**21 26 26.0**	**+0.2**
VRDI	**Verde Repeater**	**16.74**	**47**	Pn	**Pn**	**21 26 25.2**	**-0.9**
VRDI				IAmb	IAmb	21 26 34.0	
	comp=Z,16nm,1.2s						
YAH	**Yahtse**	**17.26**	**51**		**P**	**21 26 34.9**	**+0.8**
YAH				IAmb	IAmb	21 26 46.9	
	comp=Z,15nm,1.2s						
RIDG	**Independent Ri**	**17.27**	**38**	Pn	**Pn**	**21 26 33.4**	**+0.8**
GRNC	**Granite Creek**	**17.36**	**50**	Pn	**Pn**	**21 26 34.4**	**+0.5**
GRNC				IAmb	IAmb	21 26 44.8	
	comp=Z,9.3nm,1.2s						
DOT	**Dot Lake**	**17.53**	**39**	Pn	**Pn**	**21 26 36.3**	**+0.6**
TABL	**Table Mountain**	**17.57**	**51**		**P**	**21 26 37.9**	**+0.4**
TABL				IAmb	IAmb	21 26 52.7	
	comp=Z,18nm,1.0s						
CTGM	**Chitina Glacie**	**17.63**	**49**	Pn	**Pn**	**21 26 35.8**	**-1.3**
CTGM				IAmb	IAmb	21 26 47.2	
	comp=Z,10nm,1.0s						
HYT	**Haines Junctio**	**19.40**	**51**	P	**Pn**	**21 27 01.0**	**+2.3**
BMAR	**Burnt Mountain**	**19.50**	**29**	P	**Pn**	**21 26 59.7**	**-0.1**
PEA0B	**Petropavlovsk-**	**19.97**	**286**	P	**P**	**21 27 03.2**	**-0.4**
PETK	**Petropavlovsk-**	**19.97**	**286**	P	**P**	**21 27 03.6**	**0.0**
	comp=Z,1.5nm,0.3s,baz=87,slow=14,SNR=14						
PETK	**Petropavlovsk-**	**19.97**	**286**	P	**P**	**21 27 03.3**	**-0.4**
INK	**Inuvik**	**23.50**	**33**	P	**P**	**21 27 40.2**	**-0.9**
	comp=Z,1.3nm,0.4s,baz=223,slow=7.6,SNR=9.6						
INK	**Inuvik**	**23.50**	**33**	IAmb	IAmb	21 27 47.5	
	comp=Z,2.1nm,0.9s						
KLR	**Kul'dur**	**36.58**	**290**	P	**P**	**21 29 35.7**	**-1.7**
	comp=Z,0.9nm,0.4s,baz=37,slow=5.1,SNR=4.5						
H11N2	**WAKE ISLAND Hy**	**37.31**	**219**	T	T	22 09 51.5	
	baz=24,slow=76,SNR=16						
H11N3	**WAKE ISLAND Hy**	**37.32**	**219**	T	T	22 09 53.8	
	baz=24,slow=76,SNR=22						
H11N1	**WAKE ISLAND Hy**	**37.33**	**219**	T	T	22 09 50.2	
	baz=24,slow=76,SNR=16						
H11S1	**WAKE ISLAND Hy**	**38.50**	**218**	T	T	22 11 02.0	
	baz=23,slow=76,SNR=103						
H11S2	**WAKE ISLAND Hy**	**38.51**	**218**	T	T	22 10 59.9	
	baz=23,slow=76,SNR=90						
H11S3	**WAKE ISLAND Hy**	**38.52**	**218**	T	T	22 11 02.2	
	baz=23,slow=76,SNR=59						
PDAR	**Pinedale Array**	**40.40**	**79**	P	**P**	**21 30 11.1**	**+1.3**
	comp=Z,0.8nm,0.5s,baz=300,slow=3.1,SNR=9.1						
SPITS	**Spitsbergen Ar**	**49.89**	**358**	P	**P**	**21 31 23.7**	**-0.8**
	comp=Z,7.8nm,1.1s,baz=44,slow=6.4,SNR=8.4						
SONM	**Songino Array**	**51.45**	**301**	P	**P**	**21 31 37.0**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=50,slow=6.7,SNR=5.0						
TXAR	**Lajitas Array**	**52.70**	**89**	P	**P**	**21 31 47.1**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=302,slow=5.3,SNR=5.1						
ARCES	**ARCESS Array B**	**58.15**	**354**	P	**P**	**21 32 24.0**	**-0.8**
	comp=Z,2.8nm,0.9s,baz=17,slow=8.9,SNR=6.5						
MKAR	**Makanchi Array**	**63.99**	**314**	P	**P**	**21 33 03.5**	**-1.4**
	comp=Z,0.3nm,0.4s,baz=53,slow=6.7,SNR=8.2						
FINES	**FINESS Array B**	**66.09**	**352**	P	**P**	**21 33 17.4**	**-0.8**
	comp=Z,1.9nm,0.8s,baz=2.9,slow=7.6,SNR=6.8						
AKASG	**Malin Array Be**	**76.33**	**348**	P	**P**	**21 34 18.8**	**-1.5**
	comp=Z,0.6nm,0.4s,baz=15,slow=6.0,SNR=4.1						
CMAR	**Chiang Mai Arr**	**76.71**	**283**	P	**P**	**21 34 23.3**	**+0.3**
	comp=Z,1.0nm,0.7s,baz=25,slow=6.9,SNR=8.4						

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*IDC **06** 21:32:43.6±5.2, 30°.40S×60°.29E, h0^{km}, mb3.9/4, mb1 4.1/4, mb1mx3.5/51, mbtmp3.9/4, Error ellipse: s-maj=145.5km s-min=46.9km az=61.0*

*NEIC **06** 21:32:46.0±1.4, 30°.0S±0°.1×60°.31E±0°.03, h10^{km}±1^{km}, mb4.7/16, Error ellipse: s-maj=18.3km s-min=3.4km az=170.0*

ISC 06 21:32:45.2±0.7**, 30°.0S**±0°.1**×60°.24E**±0°.09**, h10**^{km}**, n22,** σ1^{s}**24**/22**, mb4.5**/12**, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RER	**Riviere de l'E**	**9.68**	**334**	Pn	**Pn**	**21 35 06.7**	**+2.1**
VOI	**Vohitsoka**	**14.52**	**301**		**P**	**21 36 15.3**	**-2.3**
MSEY	**Mahe Island**	**25.58**	**349**	P	**P**	**21 38 15.0**	**+0.5**
MSEY				IAmb	IAmb	21 38 17.9	
	comp=Z,19nm,1.2s						
BOSA	**Boshof**	**30.47**	**264**	P	**P**	**21 38 59.3**	**+0.9**
BOSA				IAmb	IAmb	21 39 05.1	
	comp=Z,18nm,1.5s						
KAAM	**Kaadhehdhoo**	**32.66**	**24**	P	**P**	**21 39 16.4**	**-1.1**
SUR	**Sutherland**	**33.69**	**256**	P	**P**	**21 39 27.5**	**+0.8**
SUR				IAmb	IAmb	21 39 43.3	
	comp=Z,23nm,1.3s						
KIBK	**Kibwezi**	**34.63**	**318**	P	**P**	**21 39 33.1**	**-1.8**
KIBK				IAmb	IAmb	21 39 36.6	
	comp=Z,17nm,1.5s						
WIN	**Windhoek**	**39.20**	**270**	P	**P**	**21 40 13.9**	**0.0**
WIN				IAmb	IAmb	21 40 21.5	
	comp=Z,12nm,1.2s						
GSI	**Gunungsitoli**	**47.28**	**56**	P	**P**	**21 41 18.6**	**-0.4**
GSI				IAmb	IAmb	21 41 34.0	
	comp=Z,14nm,1.0s						
LHMI	**Lhok Sumawe**	**49.64**	**51**	P	**P**	**21 41 37.8**	**+0.6**
CISI	**Cisompet, Garu**	**49.82**	**73**	P	**P**	**21 41 38.0**	**-0.7**
SNAA	**Sanae**	**53.41**	**201**	P	**P**	**21 42 05.8**	**+1.1**
CMAR	**Chiang Mai Arr**	**60.91**	**43**	P	**P**	**21 43 00.3**	**+1.9**
	comp=Z,1.1nm,0.7s,baz=231,slow=7.6,SNR=10						
CMAR	**Chiang Mai Arr**	**60.91**	**43**	P	**P**	**21 42 57.5**	**-0.9**
SHEL	**Horse Pasture**	**61.61**	**267**	P	**P**	**21 43 02.8**	**-0.5**
SHL	**Shillong**	**63.02**	**32**	P	**P**	**21 43 12.9**	**+0.3**
SHL				IAmb	IAmb	21 43 15.2	
	comp=Z,3.3nm,0.5s						
NIL	**Nilore**	**64.48**	**12**	P	**P**	**21 43 21.1**	**-0.8**
NIL				IAmb	IAmb	21 43 25.5	
	comp=Z,2.6nm,0.8s						
ASAR	**Alice Springs**	**65.02**	**104**	P	**P**	**21 43 25.0**	**-0.9**
	comp=Z,0.3nm,0.5s,baz=239,slow=5.9,SNR=2.9						
AS31	**Alice Springs**	**65.03**	**104**	P	**P**	**21 43 25.2**	**-0.8**
WRA	**Warramunga Arr**	**66.91**	**100**	P	**P**	**21 43 37.4**	**-0.6**
	comp=Z,0.8nm,0.9s,baz=243,slow=5.9,SNR=5.5						
ABKAR	**Akbulak array**	**78.89**	**360**	P	**P**	**21 44 49.1**	**+0.8**
ZALV	**Zalesovo Beam**	**86.26**	**14**	P	**P**	**21 45 28.4**	**+1.9**
	comp=Z,0.3nm,0.4s,baz=217,slow=4.5,SNR=4.9						

JMA 06 21:46:02.1±0.1**, 24°.13N×141°.94E, h191**^{km}**, M4.8, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHH2	**Haha-jima-NKT2**	**2.50**	**5**	P	Pn	21 46 45.8	+0.4
JHH2				S	Sn	21 47 19.6	+0.2
CBIJ	**Chichi jima**	**2.96**	**4**	P	Pn	21 46 51.2	+0.4
CBIJ				S	Sn	21 47 29.2	+0.2
BSO1	**Boso 1**	**10.52**	**356**	P	Pn	21 48 29.8	+2.2
BSO1				*e*S	S	21 50 26.5	+1.4
BSO3	**Boso 3**	**10.71**	**354**	P	Pn	21 48 31.0	+0.7
TATJ	**Tateyama 2**	**11.01**	**351**	P	Pn	21 48 36.8	+2.4
JKUC	**kamogawauchiur**	**11.10**	**353**	P	Pn	21 48 36.1	+0.6
JKUC				*e*S	Sn	21 50 37.2	-1.9
JHO	**Hitachi**	**12.50**	**355**	P	Pn	21 48 54.1	+0.7

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*EAF **06** 22:37:14.0±4.8, 17°.45S×27°.39E, h10^{km}, MD3.5, ML3.0*

*LSZ **06** 22:37:20.5±0.3, 16°.91S×27°.44E, h10^{km}, MD2.2, ML2.7*

BUL 06 22:37:18.1±1.3**, 17°.69S×27°.66E, h10**^{km}**, MD3.9, Zimbabwe**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRI	**Karoi**	**2.06**	**66**	*i* P	Pb	22 37 54.9	-0.8
KRI				*i* S	Sg	22 38 23.6	-0.7
KRI	**Karoi**	**2.06**	**66**	*i* P	Pb	22 37 54.9	-0.8
KRI				*i* S	Sg	22 38 23.6	-0.7
ITZ	**Itezhi-Tezhi**	**2.49**	**321**	*e*P	Pn	22 37 50.8	-8.0
ITZ				*i*		22 37 50.9	
	baz=130,slow=7.4						
ITZ				*e*S	Sn	22 38 13.0	-16
ITZ				IAML		22 38 20.3	
	comp=Z,122nm,0.2s						
ITZ	**Itezhi-Tezhi**	**2.49**	**321**	*e*P	Pn	22 37 50.8	-8.0
ITZ				*i*		22 37 50.9	
	baz=130,slow=7.4						
ITZ				*e*S	Sn	22 38 13.0	-16
ITZ				IAML		22 38 20.3	
	comp=Z,122nm,0.2s						
MATP	**Matopo**	**2.84**	**164**	*e*P	Pn	22 38 03.1	-0.5
MATP				*e*S	Sn	22 38 36.4	-1.5
MATP	**Matopo**	**2.84**	**164**	*e*P	Pn	22 38 03.1	-0.5
MATP				*e*S	Sn	22 38 36.4	-1.5
MSNA	**Messina**	**5.14**	**155**	*e*P	Pn	22 38 35.5	+0.3
MSNA				*e*S	Sn	22 39 30.9	-3.8
MSNA	**Messina**	**5.14**	**155**	*e*P	Pn	22 38 35.5	+0.3
MSNA				*e*S	Sn	22 39 30.9	-3.8
MOPA	**Mopani**	**6.78**	**149**	*e*P	Pn	22 39 02.3	+4.7
MOPA				*e*S	Sn	22 40 16.8	+1.8
MOPA	**Mopani**	**6.78**	**149**	*e*P	Pn	22 39 02.3	+4.7
MOPA				*e*S	Sn	22 40 16.8	+1.8

TAP 06 23:10:04.4, 24°.79N×121°.85E, h10^{km}±1^{km}**, ML1.5, C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NTC	**Toucheng**	**0.07**	**342**	*i* P	Pg	23 10 07.0	+0.4
	baz=341						
NTC				*i* S	Sg	23 10 09.1	+0.8
	baz=341						
ILA	**Ilan**	**0.10**	**255**	P	Pg	23 10 07.5	+0.5
	baz=252						
ILA				S	Sg	23 10 09.6	+0.8
	baz=252						
TWC	**Suao**	**0.18**	**181**	*i* P	Pg	23 10 09.0	+0.7
	baz=177						
TWC				S	Sg	23 10 12.4	+1.5
	baz=177						
TIPB	**Shuangxi**	**0.18**	**352**	*i* P	Pb	23 10 09.2	-0.7
	baz=352						
TIPB				*i* S	Sg	23 10 11.9	+0.8
	baz=352						
TWE	**Neicheng**	**0.18**	**248**	*e*P	Pb	23 10 10.1	+0.3
	baz=244						
TWE				S	Sg	23 10 12.8	+1.8
	baz=244						
NDS	**Dongshan**	**0.20**	**218**	*e*P	Pb	23 10 10.7	+0.5
	baz=218						
NDS				*e*S	Sg	23 10 15.7	+4.2
	baz=218						
TWB1	**Santiao Chiao**	**0.25**	**30**	*i* P	Pb	23 10 10.7	-0.3
	baz=31						
NWF	**Wu-fen Shan**	**0.29**	**347**	P	Pb	23 10 11.4	-0.3
	baz=347						
NWF				S	Sb	23 10 16.0	-0.6
	baz=347						
WFSB	**Wu-fen Shan**	**0.29**	**347**	P	Pb	23 10 11.5	-0.2
	baz=346						
WFSB				S	Sb	23 10 15.9	-0.7
	baz=346						
ENTT	**Nioudou**	**0.30**	**240**	*i* P	Pb	23 10 11.8	-0.1
	baz=238						
NWLT	**Wulai**	**0.32**	**268**	P	Pb	23 10 12.5	+0.2
	baz=267						
NWLT				S	Sb	23 10 16.7	-0.7
	baz=267						
ENA	**Nanau**	**0.38**	**196**	*i* P	Pb	23 10 13.4	+0.2
	baz=194						
ENA				*i* S	Sb	23 10 18.6	-0.5
	baz=194						
YHNB	**Yeheng**	**0.45**	**255**	P	Pb	23 10 14.9	+0.5
	baz=254						
YHNB				S	Sb	23 10 20.6	-0.7
	baz=254						
NACB	**Ninganchiao**	**0.66**	**201**	P	Pg	23 10 17.4	+0.3
	baz=200						
NACB				S	Sb	23 10 27.2	+0.1
	baz=200						

JMA 06 23:10:16.8±0.1**, 24°.37N×123°.03E, h54**^{km}±2^{km}**, M1.6, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.09**	**349**	P	Pn	23 10 25.1	0.0
YOJ				S	Sn	23 10 31.1	+0.1
JYNG	**Yonagunijimaku**	**0.11**	**316**	P	Pn	23 10 25.1	0.0
JYNG				*e*S	Sn	23 10 31.1	0.0
IRIF	**Iriomote-Funau**	**0.64**	**93**	P	Pn	23 10 29.7	-0.3
IRIF				S	Sn	23 10 39.6	+0.1
JKRS	**Kuro-shima**	**0.90**	**98**	P	Pn	23 10 33.8	+0.5
JKRS				S	Sn	23 10 46.8	+1.3
JIJ	**Ishigaki jima**	**1.01**	**90**	P	Pn	23 10 34.9	+0.1
JIJ				S	Sn	23 10 48.0	-0.1
JISG	**Ishigakijimahi**	**1.19**	**79**	P	Pn	23 10 37.5	+0.4
JISG				S	Sn	23 10 52.8	+0.5

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*AEIC **06** 23:11:42±1.9, 53°.6N±0°.2×166°.8W±0°.1, h73^{km}±5^{km}, Error ellipse: s-maj=22.8km s-min=9.8km az=164.0*

NEIC 06 23:11:41.9±1.7**, 53°.5N**±0°.1**×166°.8W**±0°.1**, h80**^{km}±6^{km}**, mb4.0**/10**, ML3.5**/39(AEIC)**, Error ellipse: s-maj=21.7km s-min=8.8km az=163.0, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MGOD	**Makushin Gods**	**0.25**	**355**		Pn	23 11 54.0	0.0
MGOD					Sn	23 12 03.1	+0.2
MAPS	**Pakushin South**	**0.27**	**347**		Pn	23 11 54.0	0.0
MAPS					Sn	23 12 03.2	+0.2
MREP	**Makushin Rep't**	**0.27**	**12**		Pn	23 11 53.9	-0.2
MREP					Sn	23 12 03.1	0.0
MNAT	**Makushin Natee**	**0.35**	**15**		Pn	23 11 54.2	-0.4
MNAT					Sn	23 12 03.5	-0.3
UNV	**Unalaska Valle**	**0.36**	**33**		Pn	23 11 54.3	-0.3
UNV	**Unalaska Valle**	**0.36**	**33**		Sn	23 12 03.6	-0.3
MSW	**Makushin Switc**	**0.37**	**5**		Pn	23 11 54.4	-0.3
MSW					Sn	23 12 04.0	-0.1
MTBL	**Makushin Table**	**0.44**	**12**		Pn	23 11 54.9	-0.3
OKFG	**Magazine Ridge**	**0.66**	**259**		Pn	23 11 57.7	+0.6
OKFG					Sn	23 12 09.3	+1.0
AKMO	**Akutan Morgan**	**0.74**	**41**		Pn	23 11 58.1	+0.2
OKTU	**Okmok Mt. Tuli**	**0.74**	**258**		Pn	23 11 58.8	+0.8
AKRB	**Akutan Reef Bi**	**0.74**	**37**		Pn	23 11 58.1	+0.1
AKBBA	**Akutan Broad B**	**0.77**	**44**		Pn	23 11 58.2	-0.1
LVA	**Lava Point**	**0.78**	**37**		Pn	23 11 58.4	-0.1
AKLV	**Akutan Long Va**	**0.81**	**40**		Pn	23 11 58.7	-0.1
AKLV					Sn	23 12 11.5	+0.1
AKGG	**Akutan Green G**	**0.83**	**37**		Pn	23 11 58.9	0.0
AKUT	**Akutan**	**0.87**	**46**		Pn	23 11 58.9	-0.4
AKUT	**Akutan**	**0.87**	**46**		Sn	23 12 11.7	-0.6
AKSA	**Akutan Strait**	**0.90**	**48**		Pn	23 11 59.2	-0.5
OKSP	**Okmok Steeple**	**0.92**	**252**		Pn	23 12 00.7	+0.7
NIKH	**Nikolski High**	**1.34**	**246**		Pn	23 12 06.5	+1.3
NIKH					Sn	23 12 24.1	+1.5
WECS	**Westdahl Cape**	**1.57**	**50**		Pn	23 12 08.2	+0.1
WESP	**Westdahl Peak**	**1.57**	**52**		Pn	23 12 08.2	0.0
WEBT	**Westdahl Beart**	**1.62**	**49**		Pn	23 12 08.9	+0.2
WEBT					Sn	23 12 29.2	+0.2
WTUG	**Tugumak**	**1.94**	**47**		Pn	23 12 12.8	-0.3
SSBA	**Shishaldin**	**2.02**	**51**		Pn	23 12 13.7	-0.3
SSLN	**Shishaldin Nor**	**2.10**	**52**		Pn	23 12 15.7	+0.6
SSLN					Sn	23 12 42.1	+1.6
BRPK	**Brown Peak**	**2.13**	**58**		Pn	23 12 15.8	+0.2
ISLZ	**Isanotski Laza**	**2.19**	**56**		Pn	23 12 16.6	+0.3
FALS	**False Pass**	**2.40**	**55**	Pn	Pn	23 12 18.2	-0.9
FALS					Sn	23 12 48.8	+1.2
SPIA	**Saint Paul Isl**	**4.13**	**333**	Pn	Pn	23 12 42.4	0.0
SDPT	**Sand Point**	**4.13**	**61**	Pn	Pn	23 12 42.9	+0.3
KDAK	**Kodiak Island**	**9.10**	**56**	Pn	Pn	23 13 50.3	+0.1
Q19K	**Cape Douglas,**	**9.11**	**48**	Pn	Pn	23 13 50.8	+0.4
N19K	**Bonanza Creek**	**9.89**	**38**	Pn	Pn	23 14 02.3	+1.2
RSO	**Redoubt South**	**10.33**	**42**	Pn	Pn	23 14 07.4	+0.2
CNPM	**China Poot**	**10.48**	**49**	Pn	Pn	23 14 08.2	-0.9
M19K	**Big River Lodg**	**10.68**	**33**	Pn	Pn	23 14 12.6	+0.8
L19K	**White Mountain**	**10.74**	**32**	Pn	Pn	23 14 13.2	+0.6
BRLK	**Bradley Lake**	**10.75**	**48**	Pn	Pn	23 14 12.6	-0.2
TTA	**Tatalina**	**10.99**	**27**	Pn	Pn	23 14 16.6	+0.6
SPU	**Mount Spurr**	**11.04**	**40**	Pn	Pn	23 14 17.1	+0.4
SUA	**Susitna One**	**11.71**	**41**	Pn	Pn	23 14 26.9	+0.9
SKT	**Skwentna**	**11.73**	**38**	Pn	Pn	23 14 26.9	+0.8
PPLA	**Purkeypile**	**12.11**	**34**	Pn	Pn	23 14 32.2	+0.9
J20K	**Nowinta River**	**12.49**	**26**	Pn	Pn	23 14 37.1	+0.8
SML	**Sawmill**	**12.86**	**43**	Pn	Pn	23 14 40.4	-1.1
SCM	**Sheep Creek Mo**	**13.29**	**44**	Pn	Pn	23 14 44.0	-3.1
KLU	**Klutina**	**13.72**	**46**	Pn	Pn	23 14 50.3	-2.4
I21K	**Tanana**	**13.86**	**27**	Pn	Pn	23 14 54.5	+0.1
M24K	**Tolsona, Glenn**	**13.90**	**44**	Pn	Pn	23 14 53.0	-2.1

DHY	**Denali Highway**	13.93	39	Pn	Pn	23 14 54.3	-1.2
H21K	**Melozitna Rive**	14.02	25	Pn	Pn	23 14 58.7	+2.1
IMAR	**Indian Mountai**	14.06	22	Pn	Pn	23 14 59.5	+2.4
BMRM	**Bremner River**	14.09	49	Pn	Pn	23 14 55.3	-2.2
GLB	**Gilahina Butte**	14.62	48	Pn	Pn	23 15 02.7	-1.8
VRDI	**Verde Repeater**	14.70	49	Pn	Pn	23 15 03.9	-1.7
WAX	**Waxell Ridge**	14.72	52	Pn	Pn	23 15 05.1	-0.7
TGL	**Tana Glacier**	14.83	51		P	23 15 09.9	-1.1
RIDG	**Independent Ri**	15.25	39	Pn	Pn	23 15 12.7	+0.3
RIDG				IAmb	IAmb	23 15 26.1	
	comp=Z,12nm,1.4s						
GRNC	**Granite Creek**	15.33	52	Pn	Pn	23 15 12.7	-0.9
GRNC				IAmb	IAmb	23 15 21.6	
	comp=Z,20nm,1.2s						
DOT	**Dot Lake**	15.50	40	Pn	Pn	23 15 15.0	-0.6
DOT				IAmb	IAmb	23 15 26.8	
	comp=Z,6.9nm,1.4s						
H24K	**Noodor Dome**	15.51	30	Pn	Pn	23 15 15.1	-0.6
SCRK	**Sand Creek**	15.70	39	Pn	Pn	23 15 16.5	-1.7
LOGN	**Logan Glacier**	15.71	52	Pn	Pn	23 15 16.6	-1.8
LOGN				IAmb	IAmb	23 15 33.6	
	comp=Z,30nm,1.4s						
BMAR	**Burnt Mountain**	17.56	29		P	23 15 40.5	-0.6
INK	**Inuvik**	21.52	34	P	P	23 16 24.2	+0.3
INK				IAmb	IAmb	23 16 28.2	
	comp=Z,3.4nm,1.1s						
GRNB	**Grenville Isla**	21.69	74	P	P	23 16 25.4	-0.5
HOLB	**Holberg**	23.76	81	P	P	23 16 46.1	-0.6
HOLB				IAmb	IAmb	23 17 00.2	
	comp=Z,26nm,1.3s						
TLCB	**Telegraph Cove**	24.56	81	P	P	23 16 51.4	-2.5

IDC ***06*** *23:25:44.3±0.6, 38°.04N×21°.52E, h0km, mb4.0/20, mb1 3.9/32, mb1mx3.9/49, mbtmp3.9/32, ML3.6/12, MS3.6/29, Ms1 3.6/29, ms1mx3.5/50, Error ellipse: s-maj=13.3km s-min=11.3km az=141.0*

MOS ***06*** *23:25:44.5±1.4, 37°.92N×21°.38E, h11km, mb4.3/5, Error ellipse: s-maj=7.0km s-min=4.3km az=79.4*

UPSL ***06*** *23:25:46.0, 37°.91N×21°.49E, h28km, Mw4.3, Moment Tensor Solution. s7 Moment tensor: Mrr-0.26; Mθθ2.94; Mφφ-2.68; Mrθ0.67; Mθφ1.21; Mφr0.46; Fault plane solution: NP1:φs33.00000°, δ86.00000°, λ167.00000°. NP2: φs124.00000°, δ77.00000°, λ4.00000°.*

ATH ***06*** *23:25:47.0, 37°.91N×21°.49E, h29km±2km, ML3.9/29 Error ellipse: s-maj=2.3km s-min=0.8km az=37.0*

THE ***06*** *23:25:47.4, 37°.91N×21°.48E, h19km±1km, ML4.1/11, Error ellipse: s-maj=1.2km s-min=0.5km az=134.0*

NEIC ***06*** *23:25:47.2±2.2, 37°.90N±0°.05×21°.43E±0°.07, h10km±1km, mb4.4/28, Mwr4.3/19, ML4.1(THE), Error ellipse: s-maj=9.8km s-min=7.1km az=233.0*

NEIC ***06*** *23:25:47.4, 37°.90N×21°.45E, h20km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; Mrr0.30; Mθθ-3.74; Mφφ3.44; Mrθ-1.19; Mθφ-0.63; Mφr1.20; Fault plane solution: M0 4.02000×10^{15} NP1:φs309.03000°, δ86.20000°, λ155.01000°. NP2:φs40.80000°, δ65.07000°, λ4.19000°. Principal axes: T 3.9679, Plg20.0000°, Azm262.0000°; N 0.1063, Plg65.0000°, Azm121.0000°; P -4.0742, Plg15.0000°, Azm358.0000°;*

HLW ***06*** *23:25:48.0, 37°.91N×22°.66E, h10km±22km, Md4.6, Ml4.7*

ISC 06 23:25:47.7±0.7, **37°.92N**±0°.02×**21°.47E**±0°.01, **h18**km±4km, **n347**, σ**2s.13**/389, **mb4.2**/37, **MS3.6**/20, **11C-10D, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	0.14	360	P	Pb	23 25 51.9	+0.5
RLS				S	Sg	23 25 55.6	+1.0
RLS	**Riolos of Patr**	0.14	360	P	Pb	23 25 51.9	+0.5
RLS				S	Sg	23 25 55.5	+1.0
DRO	**Drossia**	0.20	80	P	Pb	23 25 52.4	-0.2
DRO				S	Sg	23 25 56.4	+0.6
	238μm,0.2s						
DRO	**Drossia**	0.20	80	P	Pb	23 25 52.4	-0.2
DRO				S	Sg	23 25 56.5	+0.7
DRO				AML	AML	23 25 57.0	
DRO				AML	AML	23 25 57.0	
VTN	**Vitineika**	0.22	270	P	Pb	23 25 53.9	+0.8
VTN	**Vitineika**	0.22	270	P	Pb	23 25 53.9	+0.8
VTN				S	Sg	23 25 59.4	+2.9
UPR	**University Cam**	0.44	34	P	Pb	23 25 56.3	-0.7
UPR				S	Sb	23 26 03.6	+0.3
LAKA	**Lakka**	0.52	51	P	Pg	23 25 57.0	-1.0
LAKA				S	Sb	23 26 05.0	-0.4
	36μm,0.7s						
LAKA	**Lakka**	0.52	51	P	Pg	23 25 57.1	-1.0
LAKA				S	Sb	23 26 04.9	-0.6
LAKA				AML	AML	23 26 06.8	
LAKA				AML	AML	23 26 06.9	
LTHK	**Lithakia**	0.54	248	P	Pg	23 25 58.0	-0.4
LTHK				S	Sb	23 26 07.0	+1.0
	66μm,0.5s						
LTHK	**Lithakia**	0.54	248	P	Pg	23 25 58.1	-0.4
LTHK				AML	AML	23 26 15.7	
LTHK				AML	AML	23 26 16.5	
KLV	**Kalavryta, Ach**	0.55	77	P	Pg	23 25 57.6	-1.2
KLV				S	Sb	23 26 06.3	-0.2
	6μm,0.3s						
KLV	**Kalavryta, Ach**	0.55	77	P	Pg	23 25 57.5	-1.2
KLV				S	Sg	23 26 05.4	-0.8
KLV				AML	AML	23 26 09.7	
	comp=E,12056μm,0.3s						
KLV				AML	AML	23 26 12.4	
	comp=N,12963μm,0.5s						
ALIK	**Aliki, Aigiali**	0.61	56	P	Pg	23 25 58.8	-1.0
EFP	**Efpalio**	0.61	34	P	Pg	23 25 58.8	-1.0
EFP				S	Sb	23 26 07.9	-0.3
	comp=N,18μm,0.5s						
EFP	**Efpalio**	0.61	34	P	Pg	23 25 58.8	-1.0
EFP				S	Sb	23 26 08.2	0.0
EFP				AML	AML	23 26 09.0	
	comp=N,39466μm,0.7s						
EFP				AML	AML	23 26 10.8	
	comp=E,29314μm,0.3s						
TRIZ	**Trizonia**	0.65	47	P	Pg	23 25 59.3	-1.3
TRIZ	**Trizonia**	0.65	47	P	Pg	23 25 59.3	-1.3
TRIZ				S	Sb	23 26 09.1	-0.2
SERG	**Sergoula**	0.68	43	P	Pg	23 25 59.8	-1.2
SERG				S	Sb	23 26 10.1	0.0
	comp=E,14μm,0.4s						
SERG	**Sergoula**	0.68	43	P	Pg	23 25 59.8	-1.2
SERG				S	Sb	23 26 09.9	-0.2
SERG				AML	AML	23 26 13.0	
	comp=N,45964μm,0.5s						
SERG				AML	AML	23 26 14.9	
	comp=E,22252μm,0.3s						
GUR	**Goura**	0.69	88	P	Pg	23 25 59.8	-1.5
GUR				S	Sb	23 26 10.0	-0.5
GUR	**Goura**	0.69	88	P	Pg	23 25 59.9	-1.5
GUR				S	Sg	23 26 09.6	-1.0
GUR				AML	AML	23 26 13.7	
	comp=E,26355μm,0.4s						
GUR				AML	AML	23 26 14.0	
	comp=N,33938μm,0.3s						
PVO	**Paravola**	0.70	4	P	Pg	23 26 00.5	-0.9
PVO	**Paravola**	0.70	4	P	Pg	23 26 00.5	-0.9
PSDA	**Pessada-Kefalo**	0.72	286	P	Pg	23 26 00.6	-1.3
PSDA				S	Sb	23 26 12.1	+0.7
PSDA	**Pessada-Kefalo**	0.72	286	P	Pg	23 26 00.8	-1.1
VLS	**Valsamata**	0.74	291	P	Pg	23 26 00.8	-1.4
VLS				S	Sb	23 26 13.4	+1.5
VLS	**Valsamata**	0.74	291	P	Pg	23 26 00.8	-1.4
VLS				AML	AML	23 26 19.1	
	comp=E,14399μm,0.3s						
VLS				AML	AML	23 26 20.6	
	comp=N,34367μm,0.6s						
ITM	**Ithomi**	0.82	154	P	Pg	23 26 02.5	-1.2
ITM				S	Sb	23 26 14.2	0.0
	comp=N,10μm,0.7s						
ITM	**Ithomi**	0.82	154	P	Pg	23 26 02.7	-1.0
ITM				AML	AML	23 26 25.1	
	comp=N,22688μm,0.5s						
ITM				AML	AML	23 26 26.9	
	comp=E,15791μm,0.7s						
ITM	**Ithomi**	0.82	154		Pg	23 26 02.8	-0.9
ITM				Sn	Sn	23 26 17.4	+1.3
LXRA	**Lixouri, Kepha**	0.86	289	P	Pg	23 26 03.4	-1.1
KEF4	**Livadi, Kephal**	0.89	293	P	Pg	23 26 03.4	-1.6
KEF4	**Livadi, Kephal**	0.89	293	P	Pg	23 26 03.6	-1.4
FSK	**Fiskardo**	0.90	307	P	Pg	23 26 03.8	-1.3
FSK				S	Sb	23 26 17.7	+1.4
	comp=E,9μm,0.3s						
FSK	**Fiskardo**	0.90	307	P	Pg	23 26 03.9	-1.3
FSK				AML	AML	23 26 20.3	
	comp=E,16293μm,0.3s						
FSK				AML	AML	23 26 21.5	
	comp=N,20568μm,0.3s						
DMLN	**Damoulianata-K**	0.92	291	P	Pg	23 26 03.9	-1.7
DMLN				S	Sb	23 26 18.6	+1.5
	comp=N,29μm,0.7s						
DMLN	**Damoulianata-K**	0.92	291	P	Pg	23 26 04.0	-1.7
KEF3	**Kipouria, Keph**	0.93	288	P	Pg	23 26 03.7	-2.0
KEF3	**Kipouria, Keph**	0.93	288	P	Pg	23 26 03.8	-2.0
EVGI	**Lefkada island**	0.95	318	P	Pg	23 26 04.3	-1.8
EVGI	**Lefkada island**	0.95	318	P	Pg	23 26 04.8	-1.3
THAL	**Thalero**	0.95	82	P	Pg	23 26 04.3	-1.9
THAL	**Thalero**	0.95	82	P	Pg	23 26 04.4	-1.8
THAL				AML	AML	23 26 28.2	
	comp=E,33805μm,0.6s						
THAL				AML	AML	23 26 30.0	
	comp=N,19314μm,0.5s						
NYDR	**Nydri-Lefkada**	1.00	323	P	Pg	23 26 05.0	-2.1
NYDR	**Nydri-Lefkada**	1.00	323	P	Pg	23 26 05.3	-1.8
EVR	**Evrytania**	1.03	15	P	Pg	23 26 05.8	-1.9
EVR				S	Sn	23 26 21.5	0.0
	comp=N,4μm,0.8s						
EVR	**Evrytania**	1.03	15	P	Pg	23 26 05.8	-1.9
EVR				AML	AML	23 26 29.1	
	comp=E,8223μm,1.0s						
EVR				AML	AML	23 26 31.1	
	comp=N,7453μm,0.9s						
DRAG	**Dragano-Lefkad**	1.04	318	P	Pb	23 26 05.8	-1.4
DRAG				S	Sn	23 26 21.9	+0.4
	comp=N,48μm,0.3s						
DRAG	**Dragano-Lefkad**	1.04	318	P	Pb	23 26 06.2	-1.0
PYL	**PYLOS**	1.04	168	P	Pg	23 26 05.9	-2.0
PYL	**PYLOS**	1.04	168	P	Pg	23 26 06.6	-1.3
PYL				AML	AML	23 26 27.7	
	comp=E,21471μm,1.1s						
PYL				AML	AML	23 26 28.0	
	comp=N,16646μm,0.8s						
LKD2	**Lefkada island**	1.08	324	P	Pb	23 26 06.5	-1.3
LKD2	**Lefkada island**	1.08	324	P	Pb	23 26 06.7	-1.2
LKD2				AML	AML	23 26 29.6	
	comp=E,39213μm,0.5s						
LKD2				AML	AML	23 26 33.2	
	comp=N,28873μm,0.5s						
TSLK	**Tsoukalades, L**	1.11	325	P	Pb	23 26 07.2	-1.1
TSLK	**Tsoukalades, L**	1.11	325	P	Pb	23 26 07.5	-0.8
LTK	**Loutraki**	1.19	84	P	Pb	23 26 08.6	-1.1
LTK	**Loutraki**	1.19	84	P	Pb	23 26 08.8	-0.9
MAKR	**Makrakomi, Fth**	1.21	25	P	Pn	23 26 09.3	-0.5
MAKR	**Makrakomi, Fth**	1.21	25	P	Pn	23 26 09.6	-0.2
MAKR				AML	AML	23 26 32.5	
	comp=N,6513μm,0.6s						
MAKR				AML	AML	23 26 35.0	
	comp=E,8863μm,0.9s						
AGG	**Agios Georgios**	1.29	31	P	Pn	23 26 10.2	-0.7
AGG	**Agios Georgios**	1.29	31	P	Pn	23 26 10.5	-0.4
AGG				AML	AML	23 26 34.3	
	comp=E,4137μm,0.4s						
AGG				AML	AML	23 26 38.2	
	comp=N,4552μm,0.7s						
AGG	**Agios Georgios**	1.29	31	P	Pn	23 26 10.5	-0.4
AGG						23 26 29.0	
AGG	**Agios Georgios**	1.29	31		Pn	23 26 10.5	-0.4
AGG				Sn	Sg	23 26 28.9	-0.6
EPID	**Epidavros**	1.34	103	P	Pn	23 26 11.6	0.0
LKR	**Lokris**	1.41	58	P	Pn	23 26 12.3	-0.2
LKR	**Lokris**	1.41	58	P	Pn	23 26 12.1	-0.4
LKR				AML	AML	23 26 38.6	
	comp=E,5077μm,0.3s						
LKR				AML	AML	23 26 38.8	
	comp=N,4855μm,0.4s						
VIL2	**Platees**	1.45	78	P	Pb	23 26 13.5	-0.7
VIL2				AML	AML	23 26 49.5	
	comp=E,5348μm,0.9s						
VIL2				AML	AML	23 26 50.1	
	comp=N,4348μm,1.0s						
VILL	**Villia**	1.48	80	P	Pn	23 26 12.9	-0.5
THL	**Klokotos Trika**	1.70	14	P	Pb	23 26 18.0	-0.4
THL				AML	AML	23 26 46.5	
	comp=E,2504μm,0.6s						
THL				AML	AML	23 26 56.8	
	comp=N,1750μm,0.6s						
ATH	**Athens Observa**	1.78	88	P	Pb	23 26 18.6	-1.1
ATH				AML	AML	23 26 50.6	
	comp=E,4000μm,0.7s						
ATH				AML	AML	23 26 52.3	
	comp=N,2493μm,0.9s						
JAN	**Janina**	1.80	345	P	Pb	23 26 19.7	-0.5
JAN				AML	AML	23 27 00.5	
	comp=N,2218μm,0.5s						
JAN				AML	AML	23 27 10.1	
	comp=E,2963μm,0.9s						
ATHU	**Athens Univers**	1.83	88	P	Pn	23 26 18.1	-0.2
ATHU				AML	AML	23 26 51.1	
	comp=E,1118μm,0.5s						
ATHU				AML	AML	23 27 00.4	
	comp=N,1746μm,0.5s						
IGT	**Igoumenitsa**	1.84	332	P	Pn	23 26 19.6	+1.2
VLY	**Voula,Athens**	1.84	91	P	Pn	23 26 18.4	0.0
PTL	**Penteli**	1.90	85	P	Pn	23 26 19.6	+0.4
PTL				AML	AML	23 26 51.6	
	comp=E,3768μm,0.6s						
PTL				AML	AML	23 26 52.0	
	comp=N,2588μm,0.6s						
NEO	**Neokhori**	1.95	44	P	Pn	23 26 20.3	+0.3
NEO				AML	AML	23 26 54.6	
	comp=E,2507μm,0.5s						
NEO				AML	AML	23 26 54.8	
	comp=N,2063μm,0.4s						
DION	**Dionisos Attik**	1.95	85	P	Pn	23 26 20.2	+0.2
DION				AML	AML	23 26 51.1	
	comp=E,4987μm,0.4s						
DION				AML	AML	23 26 51.1	
	comp=N,4436μm,0.5s						
XOR	**Xorichti**	1.98	42	P	Pn	23 26 20.2	-0.1
XOR	**Xorichti**	1.98	42	P	Pn	23 26 20.7	+0.3
KPRO	**Kipourio**	2.04	358	P	Pb	23 26 23.8	-0.4
KYMI	**Kymi, Euboea I**	2.19	70	P	Pn	23 26 22.9	-0.3
KYMI	**Kymi, Euboea I**	2.19	70	P	Pn	23 26 23.3	+0.1
KYMI				AML	AML	23 27 09.3	
	comp=E,1351μm,0.6s						
KYMI				AML	AML	23 27 15.5	
	comp=N,1216μm,0.8s						
KEK	**Kerkira**	2.22	324	P	Pn	23 26 24.8	+1.2
KEK				AML	AML	23 27 09.8	
	comp=N,2471μm,0.7s						
KEK				AML	AML	23 27 11.7	
	comp=E,2471μm,0.8s						
KARY	**Karystos**	2.35	86	P	Pn	23 26 26.6	+1.2
KZN	**Kozani**	2.40	6	P	Pn	23 26 28.2	+2.0
KZN				AML	AML	23 27 12.6	
	comp=N,892μm,0.7s						
KZN				AML	AML	23 27 19.3	
	comp=E,958μm,0.5s						
ANKY	**Antikythira Is**	2.52	144	P	Pb	23 26 30.7	-1.6
ANKY				AML	AML	23 27 24.1	
	comp=N,1928μm,0.8s						
ANKY				AML	AML	23 27 28.8	
	comp=E,2189μm,0.7s						
KBN	**Korca**	2.75	349	P	Pn	23 26 33.3	+2.3
KBN	**Korca**	2.75	349	Pn	Pn	23 26 33.3	+2.3
FNA	**Florina**	2.86	359	P	Pn	23 26 33.6	+1.1
FNA	**Florina**	2.86	359	Pn	Pn	23 26 33.6	+1.1
VLO	**Vlora**	2.97	330	P	Pn	23 26 34.8	+0.9
VLO	**Vlora**	2.97	330		Pn	23 26 34.8	+0.9
SCTE	**Santa Cesarea**	3.18	314	Pn	Pn	23 26 37.1	+0.3
OHR	**Ohrid**	3.23	351	*i* Pn	Pn	23 26 40.2	+2.6
APE	**Apeiranthos**	3.34	103	⇑P	Pg	23 26 52.0	+0.3
VAY	**Valandovo**	3.50	14	*i* Pn	Pn	23 26 42.8	+1.5
TIR	**Tirane**	3.64	341	P	Pn	23 26 43.9	+0.8
TIR	**Tirane**	3.64	341		Pn	23 26 43.9	+0.8
IDI	**Anoyia**	3.80	133	Pn	Pn	23 26 45.8	+0.4
	comp=E,1.7nm,0.3s,baz=221,slow=8.2,SNR=19						
IDI				Sn	Sn	23 27 28.9	-0.8
	comp=E,7.1nm,0.3s,baz=358,slow=15,SNR=5.3						
IDI				LR	LR	23 28 17.1	
	comp=E,649nm,20.4s,baz=311,slow=40						
STIP	**Stip**	3.81	8	*i* Pn	Pn	23 26 48.2	+2.7
TIP	**Timpagrande**	3.90	290	⇑P	Pn	23 26 47.5	+0.7
TIP				⇓S	Sn	23 27 31.2	-1.0
TIP	**Timpagrande**	3.90	290		Pn	23 26 47.1	+0.3
PUK	**Puka**	4.29	344		Pn	23 26 52.7	+0.5
CEL	**Celeste**	4.41	276		Pn	23 26 54.2	+0.5
DRME	**Dracevica, Mon**	4.61	338	*e*Pn	Pn	23 26 56.2	-0.3
ALN	**Alexandroupoli**	4.63	49	P	Pn	23 26 57.5	+0.8
ALN	**Alexandroupoli**	4.63	49	Pn	Pn	23 26 57.5	+0.8
PDG	**Podgorica**	4.81	340	⇑P	Pn	23 26 59.4	+0.1
PDG				⇓S	Sn	23 27 49.9	-4.7
PDG	**Podgorica**	4.81	340	*e*Pn	Pn	23 26 59.3	+0.1
PDG	**Podgorica**	4.81	340	Pn	Pn	23 26 59.3	+0.1
VTS	**Vitosha**	4.89	16	⇓P	Pn	23 27 01.9	+1.5
VTS	**Vitosha**	4.89	16	P	Pn	23 27 01.3	+0.9
VTS	**Vitosha**	4.89	16	Pn	Pn	23 27 01.3	+0.9
HCY	**Herceg Novi**	5.07	334	*e*Pn	Pn	23 27 01.3	-1.4
BALB	**Balikesir**	5.30	69		Pn	23 27 06.8	+0.9
TREB	**Trebinje**	5.35	335	*e*Pn	Pn	23 27 05.2	-1.5
DBRK	**Dubrovnik**	5.38	333	*e*Pn	Pn	23 27 05.7	-1.4
DBRK				Sn	Sn	23 28 02.9	-5.7
BRY	**Bratogost**	5.46	337	*e*Pn	Pn	23 27 06.7	-1.5
VAE	**Valguarnera**	5.61	268	Pn	Pn	23 27 10.6	+0.3
	comp=E,0.9nm,0.3s,baz=132,slow=17,SNR=4.5						
VAE				Sn	Sn	23 28 13.9	-0.4
	comp=E,2.5nm,0.3s,baz=316,slow=20,SNR=3.1						
UPM	**Unac-Piva**	5.63	341	*e*Pn	Pn	23 27 10.1	-0.5
RAFF	**Raffo Rosso**	5.69	265	Pn	Pn	23 27 10.3	-1.0
BOVS	**Bovan**	5.71	2	⇓P	Pn	23 27 12.4	+0.8
STON	**Ston**	5.72	331	*e*Pn	Pn	23 27 10.3	-1.4
STON	**Ston**	5.72	331	*e*Pn	Pn	23 27 10.1	-1.6
SGRT	**San Giovanni R**	5.84	313	Pn	Pn	23 27 12.8	-0.6
RUDO	**Rudo**	5.91	345	*e*Pn	Pn	23 27 12.3	-2.1
BBLS	**Lazići**	6.14	346	*e*Pn	Pn	23 27 16.5	-1.1
PAOL	**Paolisi**	6.18	302		Pn	23 27 18.9	+0.9
DIVS	**Divibare**	6.28	350	*e*Pn	Pn	23 27 18.7	-0.7
DIVS	**Divibare**	6.28	350		Pn	23 27 18.6	-0.7
MAKA	**Makarska**	6.34	329	*e*Pn	Pn	23 27 19.2	-1.0
MAKA				Sn	Sn	23 28 25.4	-6.7
HAPS	**Han Pijesak,BI**	6.45	344	*e*Pn	Pn	23 27 20.9	-0.9
CORL	**Corleone**	6.46	272		Pn	23 27 22.6	+0.7
RICI	**Ricice**	6.47	331	*e*Pn	Pn	23 27 20.7	-1.3
RICI				Sn	Sn	23 28 31.4	-4.0
HVAR	**Hvar**	6.50	326	*e*Pn	Pn	23 27 21.0	-1.4
HVAR				Sn	Sn	23 28 30.5	-5.4
CLTB	**Caltabellotta**	6.55	270		Pn	23 27 24.4	+1.2
ELL	**Elmali**	6.83	97	P	Pn	23 27 29.1	+2.1
ELL	**Elmali**	6.83	97		Pn	23 27 29.1	+2.1
MDVR	**Moldovita**	6.86	1	⇑P	Pn	23 27 27.7	+0.3
HERR	**Herculane**	6.99	6	⇓P	Pn	23 27 30.7	+1.5
SLUM	**Salum**	7.11	153	P	Pn	23 27 30.6	-0.3
	baz=161						
SLUM				AMP		23 28 00.0	
	baz=161						
SLUM				S	Sn	23 28 40.6	-11
	baz=161						
KIJV	**Kijevo**	7.19	329	*e*Pn	Pn	23 27 30.8	-1.0
KIJV				Sn	Sn	23 28 47.4	-5.6
ZIRJ	**Zirje**	7.24	324	*e*Pn	Pn	23 27 31.0	-1.5
ZIRJ				Sn	Sn	23 28 48.2	-5.9
MGRS	**Mrkonjic Grad**	7.29	334	*e*Pn	Pn	23 27 33.2	0.0
FRGS	**Fruska Gora**	7.34	351	⇑P	Pn	23 27 33.4	-0.6
FRGS	**Fruska Gora**	7.34	351	*e*Pn	Pn	23 27 31.9	-2.1
MORI	**Morici**	7.37	326	*e*Pn	Pn	23 27 33.7	-0.6
MORI				Sn	Sn	23 28 53.4	-4.0
GZR	**Gura Zlata**	7.53	7	⇓P	Pn	23 27 38.2	+1.6
BLY	**Banja Luka**	7.55	336	*e*Pn	Pn	23 27 35.3	-1.5
AQU	**L'Aquila**	7.60	308	*e*Pn	Pn	23 27 40.3	+2.7
BZS	**Buzias**	7.69	1	⇓P	Pn	23 27 40.4	+1.6
DUGI	**Dugi Otok**	7.77	323	*e*Pn	Pn	23 27 39.8	0.0
MRAK	**Mrakovica**	7.87	336	*e*Pn	Pn	23 27 40.6	-0.7
UDBI	**Udbina**	7.88	329	*e*Pn	Pn	23 27 41.8	+0.5
MDUB	**Mudurnu**	7.97	68		Pn	23 27 42.3	-0.5
VOIR		7.98	18	⇓P	Pn	23 27 45.4	+2.7
NRCA	**Norcia**	8.04	310		Pn	23 27 44.4	+0.7
PLIT	**Plitvice**	8.22	330	*e*Pn	Pn	23 27 45.5	-0.5
MLR	**Muntele Rosu**	8.27	22	⇑P	Pn	23 27 50.5	+3.6
MLR	**Muntele Rosu**	8.27	22	Pn	Pn	23 27 44.6	-2.2
	comp=E,0.4nm,0.3s,baz=198,slow=6.0,SNR=3.4						
MLR				LR	LR	23 31 24.2	
	comp=E,494nm,19.1s,baz=215,slow=42						
MLR	**Muntele Rosu**	8.27	22	P	Pn	23 27 47.9	+1.1
MLR	**Muntele Rosu**	8.27	22		Pn	23 27 47.9	+1.1
NVLJ	**Novalja**	8.29	325	*e*Pn	Pn	23 27 46.2	-0.7
NVLJ				Sn	Sn	23 29 14.0	-6.1
SIRR	**Siria**	8.35	1	⇓P	Pn	23 27 48.4	+0.7
TIRR	**Tirgusor**	8.37	37	P	Pn	23 27 48.5	+0.5
TIRR	**Tirgusor**	8.37	37	Pn	Pn	23 27 48.5	+0.5
MOSL	**Moslavina**	8.46	337	*e*Pn	Pn	23 27 47.1	-2.2
RABC	**Rab**	8.48	326	*e*Pn	Pn	23 27 49.0	-0.5
KOVH	**Kovagotottos**	8.54	344	*e*PN	Pn	23 27 48.1	-2.3
KOVH				*e*SN	Sn	23 29 19.0	-7.2
DOPR	**Dopca**	8.56	19	⇑P	Pn	23 27 53.0	+2.4
BISRR	**Bisoca**	8.57	26	⇑P	Pn	23 27 54.3	+3.4
MURB	**Monte Urbino**	8.65	311		Pn	23 27 52.8	+0.9
COVR	**Voineasa-Covas**	8.67	23	⇑P	Pn	23 27 55.5	+3.3
PLOR	**Plostina**	8.82	24	⇑P	Pn	23 27 58.2	+4.0
VRI	**Vrincioaia**	8.86	25	⇑P	Pn	23 27 58.8	+4.0
BOJS	**Bojanci**	8.89	330	*e*Pn	Pn	23 27 54.0	-1.2
OZLJ	**Ozalj**	8.90	332	*e*Pn	Pn	23 27 53.4	-1.9
PTJ	**Puntijarka**	8.97	335	*e*Pn	Pn	23 27 54.0	-2.4
SMRN	**Sveta Marina**	8.98	325	*e*Pn	Pn	23 27 56.3	-0.1
RIY	**Rijeka**	9.06	327	*e*Pn	Pn	23 27 57.1	-0.4
RIY	**Rijeka**	9.06	327	*e*Pn	Pn	23 27 57.0	-0.4
CRES	**Cresnjev**	9.08	332	*e*Pn	Pn	23 27 56.0	-1.8
GBRS	**Gornja Briga**	9.09	329	*e*Pn	Pn	23 27 56.9	-1.0
GBRS				*e*Sn	Sn	23 29 33.5	-6.3
GBRS				IAML		23 29 37.2	
	comp=Z,72nm,1.4s						
LOBO	**Lobor**	9.16	336	*e*Pn	Pn	23 27 56.5	-2.4
BEHE	**Becsehely**	9.23	339	*e*Pn	Pn	23 27 47.2	-13
SWA2		9.27	158	P	Pn	23 27 58.5	-1.9
	baz=164						
CEY	**Cerknica**	9.41	328	*e*Pn	Pn	23 28 01.5	-0.9
VSL	**Villasalto**	9.58	283	Pn	Pn	23 28 05.2	+0.5
GROS	**Grobnik**	9.61	335	*e*Pn	Pn	23 28 03.5	-1.6
LJU	**Ljubljana**	9.62	330	*e*Pn	Pn	23 28 02.6	-2.6
BR131	**Keskin Array S**	9.67	75	P	Pn	23 28 08.1	+2.1
BR131	**Keskin Array S**	9.67	75		Pn	23 28 08.1	+2.1
BRTR	**Keskin Array B**	9.67	75	Pn	Pn	23 28 07.4	+1.4
	comp=Z,0.7nm,0.3s,baz=258,slow=12,SNR=26						
BRTR	**Keskin Array B**	9.67	75	*i* P	Pn	23 28 09.5	+3.5
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BRTR	**Keskin Array B**	9.67	75		Pn	23 28 09.2	+3.2
TRI	**Trieste**	9.67	326	P	Pn	23 28 04.8	-1.1
TRI	**Trieste**	9.67	326	Pn	Pn	23 28 04.8	-1.1
MPLH	**Magyarpolny**	9.69	344	*e*PN	Pn	23 28 05.1	-1.1
MPLH	**Magyarpolny**	9.69	344	*e*P	Pn	23 28 12.4	+6.3
KEST	**Kesra**	9.96	261	Pn	Pn	23 28 09.7	-0.3
	comp=Z,0.3nm,0.3s,baz=23,slow=7.0,SNR=9.9						
KEST				Sn	Sn	23 29 56.4	-4.9
	comp=Z,0.2nm,0.3s,baz=339,slow=17,SNR=1.4						
KEST				LR	LR	23 32 55.6	
	comp=Z,201nm,20.2s,baz=356,slow=43						
KEST	**Kesra**	9.96	261		Pn	23 28 10.1	+0.1
SOKA	**Soboth**	9.96	334	*e*Pn	Pn	23 28 08.8	-1.2
	comp=Z,4.2nm,0.4s,SNR=9.2						
SOKA				*e*Sn	Sn	23 29 54.9	-6.4
	comp=Z,5.6nm,0.7s						
OBKA	**Obir**	10.00	331	*e*Pn	Pn	23 28 09.6	-0.8
	comp=Z,5.4nm,0.6s,SNR=6.0						
OBKA				*i* Sn	Sn	23 29 57.2	-5.0
	comp=Z,12nm,0.5s						
CSS	**Mathiatis**	10.00	104	Pn	Pn	23 28 11.0	+0.5
PSZ	**Piszkesteto**	10.06	354	P	Pn	23 28 11.7	+0.4
PSZ	**Piszkesteto**	10.06	354	Pn	Pn	23 28 11.7	+0.4
TRPA	**Tarpa**	10.24	4	*e*PN	Pn	23 28 13.3	-0.3
TRPA	**Tarpa**	10.24	4	*e*P	Pn	23 28 16.7	+3.1
ARSA	**Arzberg**	10.30	337	*e*Pn	Pn	23 28 12.8	-1.8
	comp=Z,1.7nm,0.4s						
VLC	**Villacollemand**	10.43	310	Pn	Pn	23 28 15.6	-0.8
TEOL	**Teolo**	10.44	319	Pn	Pn	23 28 15.5	-0.9
MYKA	**Terra Mystica**	10.45	329	*e*Pn	Pn	23 28 16.4	-0.3
	comp=Z,2.2nm,0.6s						
MYKA				*i* Sn	Sn	23 30 06.6	-6.7
	comp=Z,2.9nm,0.6s						
STAL	**STALIGIAL**	10.57	325	Pn	Pn	23 28 17.6	-0.6
ZOU	**Zoufplan**	10.68	327		Pn	23 28 20.1	+0.2
UZH	**Uzhgorod**	10.73	3	*e*P	Pn	23 28 18.5	-1.8
UZH				*e*S	Sn	23 30 17.5	-2.3
UZH				MLR	MLR		
	comp=N,50nm,16.0s						
UZH				MLR	MLR		
	comp=E,130nm,16.0s						

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UZH                                    MLR   MLR
       comp=Z,40nm,16.0s
CTI    Castel Tesino     10.92 321    P     Pn        23 28 22.5  -0.6
CTI    Castel Tesino     10.92 321          Pn        23 28 22.5  -0.6
ABTA   Abfaltersbach     11.03 326    Pn    Pn        23 28 24.1  -0.4
       comp=Z,3.0nm,0.6s,SNR=5.3
ABTA                                 eSn    Sn        23 30 20.6  -6.9
       comp=Z,6.0nm,0.5s
MSSA   Maissana          11.04 309    Pn    Pn        23 28 25.4  +0.6
SALO   Salr              11.22 317    Pn    Pn        23 28 27.4  +0.3
MOA    Molln             11.24 334   ePn    Pn        23 28 27.1  -0.2
       comp=Z,2.2nm,0.3s
MOA                                  eSn    Sn        23 30 28.9  -3.5
       comp=Z,2.4nm,0.3s
RYAN   Fayoum            11.47 138    P     Pn        23 28 28.0  -2.6
       baz=142
WTTA   Wattenberg        11.81 325   ePn    Pn        23 28 35.5  +0.2
       comp=Z,5.4nm,0.6s
WTTA                                 eSn    Sn        23 30 40.4  -6.3
       comp=Z,9.1nm,0.5s
WATA   Walderalm         11.89 325   ePn    Pn        23 28 35.7  -0.7
       comp=Z,3.6nm,0.5s
WATA                                 i Sn   Sn        23 30 43.0  -5.7
       comp=Z,6.4nm,0.7s
VRAC   Vranov            11.92 344    LR    LR        23 34 31.3
       comp=Z,499nm,18.0s,baz=176,slow=45
FETA   Feichten          12.06 322   eSn    Sn        23 30 48.8  -3.9
       comp=Z,4.8nm,0.9s
MOTA   Moosalm           12.11 324   ePn    Pn        23 28 39.9  +0.4
       comp=Z,2.5nm,0.5s,SNR=4.3
MOTA                                 eSn    Sn        23 30 48.7  -5.4
       comp=Z,6.7nm,0.7s
HFRF   Wahat Farafira    12.19 150    P     Pn        23 28 37.9  -2.5
       baz=154
HFRF                                  AMP             23 31 31.4
       baz=154
GEC2   GERESS Array S    12.29 335    Pn    Pn        23 28 40.7  -1.0
GERES  GERESS Array B    12.29 335    Pn    Pn        23 28 40.9  -0.9
       comp=Z,0.3nm,0.3s,baz=159,slow=14,SNR=8.8
GERES                                 Sn    Sn        23 30 51.3  -7.0
       comp=Z,0.2nm,0.3s,baz=147,slow=22,SNR=1.5
GERES  GERESS Array B    12.29 335    Pn    Pn        23 28 41.0  -0.8
DAVOX  Davos/Dischmat    12.31 320    Pn    Pn        23 28 41.1  -1.1
       comp=Z,0.2nm,0.3s,baz=350,slow=20,SNR=1.8
DAVOX                                 Sn    Sn        23 30 53.7  -5.4
       comp=Z,0.3nm,0.3s,baz=340,slow=23,SNR=1.9
DAVOX                                 LR    LR        23 34 10.4
       comp=Z,259nm,19.2s,baz=116,slow=41
MMAI   Mount Meron Ar    12.37 109    Pn    Pn        23 28 40.1  -2.8
       comp=Z,0.7nm,0.3s,baz=300,slow=13,SNR=8.2
MMAI                                  Sn    Sn        23 30 51.4  -8.9
       comp=Z,0.5nm,0.3s,baz=293,slow=12,SNR=1.9
RETA   Reutte            12.38 324   ePn    Pn        23 28 43.3  +0.3
       comp=Z,1.3nm,0.4s
RETA                                 eSn    Sn        23 30 53.3  -7.0
       comp=Z,3.4nm,0.5s
TUE    Stuetta           12.39 317    Pn    Pn        23 28 43.9  +0.5
KHC    Kasperske Hory    12.58 336   eP     Pn        23 28 45.1  -0.6
KHC    Kasperske Hory    12.58 336   ePN    Pn        23 28 45.1  -0.6
GHAJ   Ghor Haditha      13.35 115          Pn        23 28 56.2   0.0
SENIN  Lac Senin/Sane    13.47 313          Pn        23 28 58.6  +0.7
ANN    Anapa             13.81  55   eP     Pn        23 28 58.5  -4.0
ANN                                   pmax  pmax
       comp=Z,42nm,1.0s
ASF    Jabal al Asfar    13.87 110    Pn    Pn        23 29 01.9  -1.6
       comp=Z,0.1nm,0.3s,baz=273,slow=2.3,SNR=2.4
AKASG  Malin Array Be    13.92  21    Pn    Pn        23 29 00.2  -3.8
       comp=Z,0.8nm,0.3s,baz=9.3,slow=24,SNR=4.1
AKBB   Malin Array Si    13.92  21   i P    Pn        23 29 04.8  +0.8
HDK1   Dakhla            14.05 149    P     Pn        23 29 03.0  -2.9
       baz=153
CLL    Collm             14.67 339   eP     P         23 29 24.0  +3.7
CLL    Collm             14.67 339   ePP    P         23 29 24.0  +3.7
CLL                                  e                23 29 43.0
CLL                                   LmH             23 34 00.0
       comp=N,300nm,20.0s
CLL                                   LmH             23 34 00.0
       comp=E,400nm,21.5s
SUW    Suwalki           16.14   4   eP     P         23 29 35.5  -1.1
SUW    Suwalki           16.14   4    P     Pn        23 29 34.9  +1.5
SUW                                   pmax  pmax
       comp=Z,38nm,0.5s
SUW    Suwalki           16.14   4          Pn        23 29 34.9  +1.5
KIV    Kislovodsk        17.11  63   eP     P         23 29 48.1  +0.5
KIV                                  eS     Sn        23 33 00.7  +5.0
KIV                                   pmax  pmax
       comp=Z,5.0nm,1.1s
KIV                                   MLR   MLR
       comp=Z,33nm,14.0s
KVAR   Kislovodsk Arr    17.12  63    LR    LR        23 37 47.6
       comp=Z,110nm,20.6s,baz=92,slow=42
MNK    Minsk             17.16  13   i P    P         23 29 56.1  +8.2
MNK                                   pmax  pmax
       comp=N,26nm,1.0s
MNK                                   pmax  pmax
       comp=Z,9.0nm,0.8s
MNK                                   pmax  pmax
       comp=E,1.0nm,0.7s
MNK                                   MLR   MLR
       comp=N,133nm,16.0s
MNK                                   MLR   MLR
       comp=E,13nm,17.0s
MNK                                   MLR   MLR
       comp=Z,221nm,22.0s
MNK    Minsk             17.16  13   i P    P         23 29 56.2  +8.3
       comp=E,1.0nm,0.7s
MNK                                  i P    P         23 29 56.2  +8.3
       comp=N,26nm,1.0s
MNK                                  i P    P         23 29 56.2  +8.3
       comp=Z,9.0nm,0.8s,baz=197
MNK                                  i PP   PnPn      23 30 06.7   +10
MNK                                  i S    S         23 33 14.8  +9.0
MNK                                  i SS   SnSn      23 33 42.9   +33
MNK                                  i LQ   LQ        23 35 12.0
MNK                                  i LR   LR        23 36 32.9
MNK                                  i LRM  MLR       23 37 15.0
       comp=E,13nm,17.2s
MNK                                  i LRM  MLR       23 37 15.0
       comp=N,133nm,16.2s
MNK                                  i LRM  MLR       23 37 18.8
       comp=Z,221nm,21.7s
KBZ    Khabaz            17.21  64    Pn    Pn        23 29 47.3  +0.3
       comp=Z,0.0nm,0.3s,baz=138,slow=20,SNR=1.2
KBZ                                   LR    LR        23 37 54.2
       comp=Z,88nm,22.0s,baz=272,slow=43
NACGM  Naroch            17.37  10   i P    Pn        23 29 48.9  -0.1
NCK    Nalchik           17.66  65   i P    Pn        23 29 52.8  +0.1
PABE   Paberze           17.68   5   eP     Pn        23 29 51.5  -1.3
PABE                                  IAmb  IAmb      23 29 54.4
       comp=Z,31nm,1.2s
PABE   Paberze           17.68   5          Pn        23 29 51.2  -1.5
PABE                                  IAmb  IAmb      23 29 51.9
       comp=Z,18nm,0.7s
VORD   Divnogorie        18.16  38   eP     P         23 30 02.9  +3.9
VORD                                  pmax  pmax
       comp=Z,6.0nm,0.6s
GNI    Garni             18.21  76    LR    LR        23 37 46.5
       comp=Z,237nm,20.6s,baz=277,slow=40
VSR    Storozhevoye      18.26  38   eP     Pn        23 30 00.1  +0.1
VSR                                   pmax  pmax
       comp=Z,3.0nm,0.5s
VRH    Novokhopyorsk     19.53  41   eP     P         23 30 14.0   0.0
VRH                                   pmax  pmax
       comp=Z,9.0nm,0.6s
ESBB   Sonseca Array     19.88 283    P     P         23 30 18.8  +0.8
ESDC   Sonseca Array     19.88 283    P     P         23 30 17.4  -0.7
       comp=Z,0.1nm,0.3s,baz=79,slow=11,SNR=17
ESDC                                  LR    LR        23 38 10.5
       comp=Z,100nm,20.0s,baz=35,slow=38
ESDC   Sonseca Array     19.88 283    P     P         23 30 18.6  +0.5
OBN    Obninsk           20.02  26    LR    LR        23 38 31.1
       comp=Z,54nm,18.0s,baz=206,slow=39
OBN    Obninsk           20.02  26   eP     Pn        23 30 23.1  +2.0
OBN                                   pmax  pmax
       comp=Z,6.0nm,0.8s
PAB    San Pablo         20.19 283    P     P         23 30 22.1  +0.7
PAB                                   pmax  pmax
       comp=Z,6.0nm,1.2s
PAB    San Pablo         20.19 283    P     P         23 30 22.1  +0.7
VSU    Vasula            20.84   8   eP     P         23 30 28.0  -0.2
VSU                                   IAmb  IAmb      23 30 30.7
       comp=Z,89nm,0.8s
VSU    Vasula            20.84   8   i P    P         23 30 27.4  -0.8
VSU                                   pmax  pmax
       comp=Z,84nm,0.8s
MTSE   Matsula           20.87   3   eP     P         23 30 27.4  -1.0
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MDT    Midelt            21.83 264    P     P         23 30 39.3  +0.1
       comp=Z,2.2nm,0.8s,baz=80,slow=13,SNR=2.5
MDT                                   LR    LR        23 39 01.8
       comp=Z,55nm,19.9s,baz=69,slow=36
PBRG   Braganca          21.95 289   eP     P         23 30 44.1  +3.7
MVO    Moncorvo          22.17 287   eP     P         23 30 46.2  +3.4
       comp=Z,32nm,1.9s
AAL    Aland             22.30 358   eP     P         23 30 43.1  -0.7
PMRV   Marv??o           22.55 283   eP     P         23 30 46.9  +0.2
HFS    Hagfors           22.78 350    P     P         23 30 46.7  -2.3
       comp=Z,3.0nm,0.4s,baz=156,slow=11,SNR=25
HFS                                   LR    LR        23 41 23.5
       comp=Z,160nm,19.4s,baz=168,slow=41
PVIS   Viseu             22.84 286   eP     P         23 30 53.3  +3.4
PMTG   Montargil         23.23 282   eP     P         23 30 51.8  -2.0
BELG   Belogornoye       23.27  43    P     P         23 30 52.7  -1.4
       comp=Z,13nm,1.1s,baz=142,slow=3.8,SNR=3.1
BELG                                  LR    LR        23 41 16.3
       comp=Z,74nm,18.8s,baz=25,slow=40
NC602  NORSAR Array S    23.68 348    P     P         23 30 55.9  -2.1
FINES  FINESS Array B    23.73   6    P     P         23 30 56.7  -1.8
       comp=Z,3.9nm,0.8s,baz=166,slow=11,SNR=13
FINES                                 LR    LR        23 41 04.4
       comp=Z,210nm,20.4s,baz=188,slow=39
FINES  FINESS Array B    23.73   6    P     P         23 30 57.4  -1.1
FIA1   FINESS Array S    23.73   6    P     P         23 30 57.7  -0.8
FIA1                                  IAmb  IAmb      23 31 02.9
       comp=Z,13nm,1.1s
NAO01  NORSAR Array S    23.90 347    P     P         23 30 59.1  -1.0
NAO01                                 IAmb  IAmb      23 31 19.0
       comp=Z,19nm,1.0s
NC405  NORSAR Array S    24.01 348    P     P         23 30 59.1  -2.1
NB201  NORSAR Array S    24.02 348    P     P         23 31 00.1  -1.2
NB2    NORSAR Subarra    24.02 348    P     P         23 31 00.2  -1.2
       comp=Z,2.0nm,0.6s,baz=156,slow=9.3
NOA    NORSAR Array B    24.02 348    P     P         23 30 59.5  -1.8
       comp=Z,0.2nm,0.4s,baz=158,slow=20,SNR=9.5
NOA                                   LR    LR        23 42 15.2
       comp=Z,137nm,18.9s,baz=155,slow=41
EKA    Eskdalemuir Ar    24.07 324    P     P         23 31 01.2  -0.6
       comp=Z,3.7nm,0.7s,baz=129,slow=10,SNR=7.5
ESK    Eskdalemuir       24.09 324    P     P         23 31 02.3  +0.4
ESK                                   pmax  pmax
       comp=Z,19nm,1.0s
ESK    Eskdalemuir       24.09 324    P     P         23 31 02.3  +0.4
NBO00  NORSAR Array S    24.09 347    P     P         23 31 00.3  -1.6
NC303  NORSAR Array S    24.18 348    P     P         23 31 01.1  -1.6
NC303                                 IAmb  IAmb      23 31 17.1
       comp=Z,15nm,1.1s
NC300  NORSAR Array S    24.20 348    P     P         23 31 01.6  -1.3
NC300                                 IAmb  IAmb      23 31 14.4
       comp=Z,8.3nm,1.0s
NC204  NORSAR Array S    24.32 347    P     P         23 31 03.1  -1.0
NC204                                 IAmb  IAmb      23 31 04.4
       comp=Z,10nm,0.9s
RAYN   Ar Rayn           25.06 118    P     P         23 31 11.6  +0.4
RAYN                                  pmax  pmax
       comp=Z,4.0nm,1.1s
RAYN   Ar Rayn           25.06 118    P     P         23 31 11.6  +0.4
KIRV   Kirov             27.47  32    LR    LR        23 43 00.7
       comp=Z,123nm,19.5s,baz=230,slow=38
AKTO   Aktyubinsk        28.74  52    P     P         23 31 42.4  -1.6
       comp=Z,0.4nm,0.3s,baz=243,slow=5.2,SNR=1.6
AKTO                                  LR    LR        23 45 09.9
       comp=Z,65nm,18.2s,baz=275,slow=41
GEYT   Alibeck           28.79  79    LR    LR        23 44 23.9
       comp=Z,67nm,21.4s,baz=45,slow=39
ABKAR  Akbulak array     29.77  55    P     P         23 31 53.4  +0.2
ABKAR  Akbulak array     29.77  55    P     P         23 31 53.2  +0.1
TORD   Torodi Ar. Bea    30.31 221    P     P         23 31 58.7  +0.6
       comp=Z,1.0nm,0.5s,baz=33,slow=8.9,SNR=18
TORD   Torodi Ar. Bea    30.31 221    P     P         23 31 58.5  +0.4
ARU    Arti              30.76  41d iP    P         23 32 02.9  +1.1
ARU                                                   23 33 01.4
ARU                                   S     S         23 37 08.1  +4.2
ARU                                   SS    SnSn      23 38 45.6  +3.1
ARU                                   pmax  pmax
       comp=Z,6.0nm,2.0s
LVZ    Lovozero          30.92  10   i P    P         23 32 03.7  +0.6
ARCES  ARCESS Array B    31.75   3    P     P         23 32 07.8  -2.5
       comp=Z,1.2nm,0.7s,baz=201,slow=6.5,SNR=10
ARCES                                 LR    LR        23 44 42.0
       comp=Z,67nm,18.2s,baz=170,slow=36
ARCES  ARCESS Array B    31.75   3    P     P         23 32 08.7  -1.6
KEV    Kevo              32.04   4    P     P         23 32 10.9  -1.9
KEV                                   pmax  pmax
       comp=Z,4.0nm,0.8s
KEV    Kevo              32.04   4    P     P         23 32 10.9  -1.9
KEV                                   IAmb  IAmb      23 32 11.0
       comp=Z,3.9nm,0.8s
UOSS   Minazif           32.15 104    P     P         23 32 15.2  +0.9
UOSS                                  IAmb  IAmb      23 32 22.6
       comp=Z,5.7nm,0.9s
KOWA   Kowa              32.47 231    P     P         23 32 16.3  -0.8
       comp=Z,0.3nm,0.3s,baz=91,slow=9.8,SNR=1.4
KOWA   Kowa              32.47 231    P     P         23 32 16.3  -0.8
BRVK   Borovoye          36.65  50   i P    P         23 32 51.7  -1.3
BRVK                                  pmax  pmax
       comp=Z,3.0nm,0.9s
BRVK   Borovoye          36.65  50    P     P         23 32 53.9  +0.8
BRVK                                  IAmb  IAmb      23 32 54.3
       comp=Z,2.9nm,0.9s
CHGR   Chuyangaron       37.11  74    P     P         23 32 57.0  -0.1
CHGR                                  IAmb  IAmb      23 33 05.5
       comp=Z,5.0nm,0.7s
KKAR   Karatay Array     37.22  66    P     P         23 32 59.4  +1.4
KKAR   Karatay Array     37.22  66    P     P         23 32 59.4  +1.4
DBIC   Dimbokro          39.22 224    P     P         23 33 14.5  -0.5
       comp=Z,2.5nm,0.7s,baz=312,slow=4.0,SNR=2.2
DBIC                                  LR    LR        23 52 09.6
       comp=Z,78nm,18.3s,baz=36,slow=40
DBIC   Dimbokro          39.22 224    P     P         23 33 14.7  -0.3
DBIC                                  IAmb  IAmb      23 33 31.4
       comp=Z,8.4nm,0.9s
MK31   Makanchi Array    44.80  58   i P    P         23 33 59.1  -1.3
MK31   Makanchi Array    44.80  58    IAmb  IAmb      23 34 00.4
       comp=Z,2.3nm,0.8s
MKAR   Makanchi Array    44.80  58    P     P         23 33 59.2  -1.2
       comp=Z,2.7nm,0.6s,baz=273,slow=7.3,SNR=27
ZAA0   Zalesovo Array    45.31  48    P     P         23 34 05.3  +1.0
ZAA0                                  IAmb  IAmb      23 34 19.6
       comp=Z,3.0nm,0.6s
ZALV   Zalesovo Beam     45.31  48    P     P         23 34 02.8  -1.5
       comp=Z,2.6nm,0.4s,baz=273,slow=8.7,SNR=11
ZALV                                  LR    LR        23 53 37.9
       comp=Z,59nm,18.3s,baz=67,slow=37
ZALV   Zalesovo Beam     45.31  48   i P    P         23 34 03.2  -1.0
ZALV                                  pmax  pmax
       comp=Z,3.0nm,0.4s
ZALV   Zalesovo Beam     45.31  48    P     P         23 34 05.0  +0.7
DGZ    Jazzator, Alta    47.58  53   i P    P         23 34 23.9  +1.6
DGZ                                   pmax  pmax
       comp=Z,1.0nm,0.4s
WMQ    Urumqi            49.23  61   eP     P         23 34 38.1  +3.1
SCHQ   Schefferville     59.16 318    P     P         23 35 46.8  -0.4
       comp=Z,2.4nm,0.7s,baz=73,slow=14,SNR=1.5
SCHQ                                  LR    LR        00 02 20.2
       comp=Z,121nm,18.1s,baz=251,slow=37
SONM   Songino Array     60.04  51    P     P         23 35 51.5  -2.1
       comp=Z,0.3nm,0.6s,baz=300,slow=8.6,SNR=2.2
SONM                                  LR    LR        00 05 56.1
       comp=Z,70nm,18.5s,baz=338,slow=40
BOSA   Boshof            66.28 176    P     P         23 36 35.4  +0.5
       comp=Z,0.7nm,0.6s,baz=21,slow=17,SNR=0.9
HHC    Hu-ho-hao-te      66.56  56   eP     P         23 36 37.6  +0.8
HHC                                   pmax  pmax
       comp=Z,11nm,1.2s
HHC                                   pmax  pmax
       comp=Z,76nm,5.7s
INK    Inuvik            72.45 351    P     P         23 37 11.3  -1.1
       comp=Z,0.8nm,0.8s,baz=108,slow=6.4,SNR=1.5
ULM    Lac du Bonnet     76.35 324    P     P         23 37 34.7  -0.8
       comp=Z,2.5nm,1.0s,baz=322,slow=16,SNR=1.3
ULM    Lac du Bonnet     76.35 324    IAmb  IAmb      23 37 35.2
       comp=Z,7.5nm,1.1s
ILAR   Eielson Array     77.24 355    P     P         23 37 39.4  -0.8
       comp=Z,0.4nm,0.9s,baz=8.6,slow=3.0,SNR=2.8
ILAR                                  LR    LR        00 13 32.3
       comp=Z,51nm,18.8s,baz=149,slow=37
KSRS   Korea Array       78.91  51    P     P         23 37 48.8  -1.2
       comp=Z,1.8nm,0.8s,baz=316,slow=3.4,SNR=2.6
KSRS                                  LR    LR        00 17 31.1
       comp=Z,43nm,18.4s,baz=320,slow=39
PETK   Petropavlovsk-    81.73  25    LR    LR        00 17 53.0
       comp=Z,58nm,19.1s,baz=342,slow=38
NVAR   Mina Array Bea    95.48 329    LR    LR        00 25 08.4
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       comp=Z,65nm,19.0s,baz=322,slow=37
TXAR   Lajitas Array     95.69 314    LR    LR        00 21 43.5
       comp=Z,67nm,18.2s,baz=0.0,slow=35
CPUP   Villa Florida     97.59 243    LR    LR        00 23 23.1
       comp=Z,46nm,20.6s,baz=43,slow=35
WRA    Warramunga Arr   119.78  93    PKP   PKPdf     23 44 37.1   0.0
       comp=Z,0.4nm,0.9s,baz=317,slow=2.1,SNR=1.8
ASAR   Alice Springs    121.40  97    PKP   PKPdf     23 44 40.0  -0.2
       comp=Z,0.2nm,0.4s,baz=305,slow=1.3,SNR=2.6
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*IDC **06** 23:44:04.8±1.1, 61.°93N×148.°55W, h0^{km}, mb3.4/4, mb1 3.7/7, mb1mx3.4/51, mbtmp3.4/7, ML3.0/3, Error ellipse: s-maj=25.1km s-min=11.5km az=98.0*

*ANF **06** 23:44:04.6±0.1, 62.°18N×150.°39W, h54^{km}±3^{km}, ML3.7/57, Error ellipse: s-maj=1.5km s-min=1.2km az=59.0*

*NEIC **06** 23:44:04.8±1.4, 62.°19N±0.°03×150.°37W±0.°02, h50^{km}±7^{km}, Error ellipse: s-maj=5.0km s-min=1.5km az=183.0*

*AEIC **06** 23:44:05±1.4, 62.°19N±0.°03×150.°37W±0.°07, h55^{km}±4^{km}, ML3.3, ML3.6/170(NEIC), Error ellipse: s-maj=5.0km s-min=4.3km az=198.0*

ISC 06 23:44:04.7±0.9**, 62.°20N**±0.°02×**150.°38W**±0.°02**, h58**^{km}±6^{km}**,**
n167, σ**0.s78**/199**, mb3.3**/4**, Central Alaska**

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Code   Station Name       Δ°    AZ°   Phase ID        Time        Res
                                      Op    ISC       h  m  s     ISC
CUT    Chulitna           0.22  14    P     Pn        23 44 13.9  -0.1
       baz=194,SNR=428
CUT                                   S     Sn        23 44 21.5  +0.9
       baz=194
CUT    Chulitna           0.22  14    Pn    Pn        23 44 13.9  -0.1
CUT                                   Sn    Sn        23 44 21.3  +0.7
M22K   Willow             0.46 165    P     Pn        23 44 15.1  -0.9
       baz=344,SNR=39
M22K                                  S     Sn        23 44 23.9  -0.3
       baz=344
SKT    Skwentna           0.58 249    P     Pn        23 44 17.0  -0.5
       baz=68,SNR=180
SKT                                   S     Sn        23 44 26.7   0.0
       baz=68
SKT    Skwentna           0.58 249          Pn        23 44 16.9  -0.5
SKT                                   Sn    Sn        23 44 26.6  -0.1
SKT                                   IAML            23 44 27.1
       comp=E,3μm,0.5s
SKT                                   IAML            23 44 27.1
       comp=N,3μm,0.7s
SUA    Susitna One        0.76 194    P     Pn        23 44 18.9  -0.7
       baz=13,SNR=86
SUA                                   S     Sn        23 44 30.0  -0.5
       baz=13
SUA    Susitna One        0.76 194    Pn    Pn        23 44 18.9  -0.7
SUA                                   Sn    Sn        23 44 30.1  -0.4
GHO    Glory Hole Cre     0.81 121    Pn    Pn        23 44 19.5  -0.7
GHO                                   Sn    Sn        23 44 31.4  -0.2
GHO                                   IAML            23 44 33.9
       comp=E,2μm,0.6s
GHO                                   IAML            23 44 34.5
       comp=N,3μm,0.5s
PMR    Palmer             0.85 135    P     Pn        23 44 19.7  -0.9
       baz=316,SNR=62
PMR                                   S     Sn        23 44 31.7  -0.5
       baz=316
PMR    Palmer             0.85 135    Pn    Pn        23 44 19.7  -0.9
PMR                                   Sn    Sn        23 44 31.8  -0.5
PMR                                   IAML            23 44 33.0
       comp=E,1μm,0.4s
PMR                                   IAML            23 44 33.9
       comp=N,1μm,0.6s
SML    Sawmill            1.04 111    P     Pn        23 44 22.6  -0.7
       baz=292,SNR=92
SML                                   S     Sn        23 44 37.5  +0.6
       baz=292
SML    Sawmill            1.04 111    Pn    Pn        23 44 22.4  -0.8
SML                                   Sn    Sn        23 44 37.8  +0.9
SML                                   IAML            23 44 39.9
       comp=E,2μm,1.0s
SML                                   IAML            23 44 40.0
       comp=N,2μm,1.0s
FIS    Fire Island        1.06 176    Pn    Pn        23 44 23.4   0.0
FIS                                   Sn    Sn        23 44 39.7  +2.5
FIS                                   IAML            23 44 40.5
       comp=N,1μm,0.8s
FIS                                   IAML            23 44 41.2
       comp=E,1μm,0.6s
PPLA   Purkeypile         1.09 311    P     Pn        23 44 23.9  -0.2
       baz=130
PPLA                                  S     Sn        23 44 38.4   0.0
       baz=130
PPLA   Purkeypile         1.09 311    Pn    Pn        23 44 23.8  -0.2
RC01   Rabbit Creek A     1.15 164    P     Pn        23 44 23.8  -0.9
       baz=345,SNR=25
RC01                                  S     Sn        23 44 39.9  +0.5
       baz=345
RC01   Rabbit Creek A     1.15 164    Pn    Pn        23 44 23.6  -1.1
RC01                                  IAML            23 44 41.9
       comp=E,625nm,0.5s
KNK    Knik Glacier       1.20 130    P     Pn        23 44 25.0  -0.4
       baz=311,SNR=73
KNK                                   S     Sn        23 44 41.5  +0.7
       baz=311
KNK    Knik Glacier       1.20 130    Pn    Pn        23 44 24.9  -0.4
KNK                                   IAML            23 44 42.8
       comp=N,2μm,0.8s
TRF    Thorofare Moun     1.26   2    Pn    Pn        23 44 26.2   0.0
TRF                                   IAML            23 44 43.6
       comp=N,907nm,0.5s
TRF                                   IAML            23 44 43.9
       comp=E,756nm,0.3s
WAT6   Susitna Watana     1.29  71    P     Pn        23 44 26.3  -0.3
       baz=253,SNR=166
WAT6                                  S     Sn        23 44 43.3  +0.3
       baz=253
SPU    Mount Spurr        1.29 219          Pn        23 44 25.6  -1.0
KTH    Kantishna Hill     1.39 350          Pn        23 44 28.2  +0.3
KTH                                   IAML            23 44 47.8
       comp=N,987nm,0.6s
KTH                                   IAML            23 44 47.0
       comp=E,495nm,0.9s
RND    Reindeer           1.40  29    Pn    Pn        23 44 27.9  -0.2
CAST   Castle Rocks       1.46 328    P     Pn        23 44 28.7  -0.1
       baz=147,SNR=35
CAST                                  S     Sn        23 44 47.2  +0.4
       baz=147
CAST   Castle Rocks       1.46 328          Pn        23 44 28.6  -0.1
CAPN   Captain Cook N     1.48 195    P     Pn        23 44 30.9  +1.9
       baz=14
CAPN   Captain Cook N     1.48 195    Pn    Pn        23 44 29.7  +0.7
SCM    Sheep Creek Mo     1.48 103    P     Pn        23 44 29.2   0.0
       baz=285,SNR=93
SCM                                   S     Sn        23 44 48.7  +1.1
       baz=285
SCM    Sheep Creek Mo     1.48 103          Pn        23 44 29.1   0.0
SCM                                   IAML            23 44 52.5
       comp=N,1μm,0.6s
DHY    Denali Highway     1.64  56    P     Pn        23 44 31.2  -0.2
       baz=239
DHY                                   S     Sn        23 44 51.8  +0.2
       baz=239
DHY    Denali Highway     1.64  56          Pn        23 44 31.1  -0.3
DHY                                   IAML            23 45 06.3
       comp=E,317nm,0.6s
DHY                                   IAML            23 45 07.1
       comp=N,323nm,0.8s
L20K   Farewell, AK       1.66 281    P     Pn        23 44 31.1  -0.4
       baz=99,SNR=26
L20K                                  S     Sn        23 44 51.8   0.0
       baz=99
PWL    Port Wells         1.66 143    P     Pn        23 44 30.7  -0.8
       baz=325,SNR=20
PWL                                   S     Sn        23 44 50.7  -1.0
       baz=325
PWL    Port Wells         1.66 143          Pn        23 44 30.5  -1.1
PWL                                   IAML            23 44 58.5
       comp=E,634nm,0.8s
PWL                                   IAML            23 44 59.4
       comp=N,572nm,0.7s
MCK    McKinley           1.68  23    P     Pn        23 44 32.1  +0.3
       baz=204,SNR=32
MCK                                   S     Sn        23 44 52.9  +0.7
       baz=204
MCK    McKinley           1.68  23          Pn        23 44 31.6  -0.1
MCK                                   IAML            23 44 54.7
       comp=N,372nm,0.6s
MCK                                   IAML            23 44 57.4
       comp=E,347nm,0.7s
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O22K	Cooper Landing	1.75	169	P	Pn	23 44 32.2	-0.4
	baz=350,SNR=11						
O22K				S	Sn	23 44 53.7	-0.2
	baz=350						
O22K	Cooper Landing	1.75	169		Pn	23 44 32.7	0.0
O22K				IAML		23 45 09.7	
	comp=E,1μm,0.7s						
CHUM	Lake Minchumin	1.91	333	P	Pn	23 44 35.2	+0.3
	baz=152,SNR=34						
CHUM				S	Sn	23 44 58.1	+0.3
	baz=152						
M19K	Big River Lodg	1.91	263	Pn	Pn	23 44 33.7	-1.3
BPAW	Bear Paw Mtn.	1.93	352	P	Pn	23 44 35.1	-0.1
	baz=172,SNR=30						
BPAW				S	Sn	23 44 57.5	-0.8
	baz=172						
BPAW	Bear Paw Mtn.	1.93	352	Pn	Pn	23 44 35.0	-0.2
M24K	Tolsona, Glenn	1.98	91	P	Pn	23 44 36.8	+0.9
	baz=274,SNR=85						
M24K	Tolsona, Glenn	1.98	91		Pn	23 44 36.5	+0.7
M24K				IAML		23 45 19.6	
	comp=N,830nm,0.8s						
BWN	Browne	2.03	11		Pn	23 44 36.4	-0.1
BWN				IAML		23 45 19.4	
	comp=E,529nm,1.1s						
BWN				IAML		23 45 23.7	
	comp=N,492nm,1.0s						
GLI	Glacier Island	2.05	129	P	Pn	23 44 35.9	-0.9
	baz=311,SNR=6.5						
GLI				S	Sn	23 45 00.7	-0.6
	baz=311						
GLI	Glacier Island	2.05	129		Pn	23 44 35.9	-0.9
GLI				IAML		23 45 08.7	
	comp=N,860nm,0.9s						
GLI				IAML		23 45 09.0	
	comp=E,624nm,0.5s						
RSO	Redoubt South	2.08	214		Pn	23 44 37.6	+0.2
L19K	White Mountain	2.10	272	P	Pn	23 44 37.1	-0.4
	baz=88,SNR=21						
L19K				S	Sn	23 45 02.4	-0.1
	baz=88						
L19K	White Mountain	2.10	272	Pn	Pn	23 44 37.0	-0.4
L19K				IAML		23 45 03.3	
	comp=E,336nm,0.5s						
SEW	Seward	2.15	168	P	Pn	23 44 38.1	0.0
	baz=348						
SEW	Seward	2.15	168		Pn	23 44 38.1	0.0
KLU	Klutina	2.23	107	P	Pn	23 44 38.6	-0.7
	baz=290,SNR=26						
KLU	Klutina	2.23	107		Pn	23 44 38.7	-0.6
KLU				IAML		23 45 12.3	
	comp=N,394nm,0.5s						
KLU				IAML		23 45 13.2	
	comp=E,328nm,0.6s						
FID	Port Fidalgo	2.37	126		Pn	23 44 39.9	-1.2
FID				IAML		23 45 18.7	
	comp=N,549nm,0.6s						
O20K	Slope Mountain	2.38	208	P	Pn	23 44 42.3	+0.8
	baz=26,SNR=9.5						
PAX	Paxson	2.40	69	P	Pn	23 44 42.6	+1.0
	baz=253,SNR=91						
PAX	Paxson	2.40	69	Pn	Pn	23 44 41.8	+0.2
N19K	Bonanza Creek	2.41	237	P	Pn	23 44 41.4	-0.4
	baz=53,SNR=19						
N19K	Bonanza Creek	2.41	237		Pn	23 44 41.6	-0.1
N19K				IAML		23 45 35.1	
	comp=N,132nm,0.7s						
DIV	Divide	2.44	114		Pn	23 44 41.3	-0.9
HARP	HAARP	2.45	83	P	Pn	23 44 42.9	+0.7
	baz=267,SNR=50						
BRLK	Bradley Lake	2.45	186		Pn	23 44 43.0	+0.7
BRLK				IAML		23 45 19.1	
	comp=N,280nm,0.5s						
BRLK				IAML		23 45 20.1	
	comp=E,236nm,0.5s						
BRSE	Bradley Lake S	2.47	184	P	Pn	23 44 43.1	+0.6
	baz=3.9						
NEA2	Nenana	2.48	13	P	Pn	23 44 42.3	-0.3
	baz=194,SNR=14						
NEA2	Nenana	2.48	13		Pn	23 44 42.1	-0.5
WRH	Wood River Hil	2.51	23		Pn	23 44 42.9	-0.1
HIN	Hinchinbrook I	2.60	132		Pn	23 44 43.4	-0.9
HOM	Homer	2.62	194	Pn	Pn	23 44 46.1	+1.6
J20K	Nowinta River	2.62	321	P	Pn	23 44 44.6	+0.1
	baz=138,SNR=21						
J20K				S	Sn	23 45 15.4	+0.3
	baz=138						
J20K	Nowinta River	2.62	321		Pn	23 44 44.0	-0.5
J20K				IAML		23 45 16.2	
	comp=N,335nm,0.7s						
J20K				IAML		23 45 16.6	
	comp=E,212nm,0.8s						
HDA	Harding Lake	2.71	33	P	Pn	23 44 46.1	+0.3
	baz=216,SNR=23						
HDA	Harding Lake	2.71	33		Pn	23 44 45.8	+0.1
HDA				IAML		23 45 24.4	
	comp=E,140nm,0.5s						
HDA				IAML		23 45 36.8	
	comp=N,316nm,0.6s						
TTA	Tatalina	2.71	288	P	Pn	23 44 45.2	-0.6
	baz=103,SNR=11						
TTA				S	Sn	23 45 16.7	-0.7
	baz=103						
TTA	Tatalina	2.71	288	Pn	Pn	23 44 45.1	-0.8
CNPM	China Poot	2.71	189		Pn	23 44 46.3	+0.4
CNPM				IAML		23 45 25.4	
	comp=N,365nm,0.6s						
CNPM				IAML		23 45 26.9	
	comp=E,364nm,0.5s						
SVW2	Sparrevohn	2.72	248		Pn	23 44 45.2	-0.7
CCB	Clear Creek Bu	2.72	24		Pn	23 44 45.6	-0.3
O19K	Port Alsworth	2.77	225	P	Pn	23 44 46.5	-0.1
	baz=42						
O19K	Port Alsworth	2.77	225	Pn	Pn	23 44 46.5	-0.1
O19K				IAML		23 45 24.3	
	comp=E,146nm,0.5s						
O19K				IAML		23 45 28.9	
	comp=N,352nm,0.5s						
EYAK	Cordova Ski Ar	2.77	125	Pn	Pn	23 44 46.2	-0.5
N25K	Chitina, Valde	2.80	100	P	Pn	23 44 46.9	-0.2
	baz=285,SNR=22						
N25K				S	Sn	23 45 19.3	-0.3
	baz=285						
N25K	Chitina, Valde	2.80	100		Pn	23 44 46.5	-0.5
N25K				IAML		23 45 30.5	
	comp=N,195nm,0.6s						
N25K				IAML		23 45 31.2	
	comp=E,156nm,0.7s						
MLY	Manley	2.85	357	P	Pn	23 44 47.7	0.0
	baz=177,SNR=25						
MLY				S	Sn	23 45 19.6	-1.3
	baz=177						
MLY	Manley	2.85	357		Pn	23 44 47.7	0.0
P19K	Oil Pt	2.91	210		Pn	23 44 48.6	+0.1
P19K				IAML		23 45 37.6	
	comp=N,221nm,0.6s						
P19K				IAML		23 45 38.6	
	comp=E,264nm,0.6s						
TCOL	CIGO, UAF Yank	2.92	22	P	Pn	23 44 48.9	+0.3
	baz=204,SNR=10						
TCOL				S	Sn	23 45 21.9	-0.4
	baz=204						
TCOL	CIGO, UAF Yank	2.92	22		Pn	23 44 48.8	+0.2
COLA	College	2.92	22	P	Pn	23 44 48.7	+0.1
	baz=204						
COLA				S	Sn	23 45 21.9	-0.4
	baz=204						
COLA	College	2.92	22		Pn	23 44 48.6	+0.1
MDM	Murphy Dome	2.94	18		Pn	23 44 49.1	+0.2
MDM				IAML		23 45 25.3	
	comp=N,98nm,0.7s						
RIDG	Independent Ri	2.96	56	P	Pn	23 44 50.0	+0.7
	baz=241,SNR=72						
RIDG	Independent Ri	2.96	56		Pn	23 44 50.0	+0.7
RIDG				IAML		23 45 36.4	
	comp=N,234nm,1.0s						
I23K	Minto, Yukon-K	3.00	8	P	Pn	23 44 49.8	+0.1
	baz=189,SNR=13						
I23K	Minto, Yukon-K	3.00	8		Pn	23 44 49.5	-0.1
IL31		3.02	30		Pn	23 44 49.9	-0.1
ILAR	Eielson Array	3.02	30	Pn	Pn	23 44 50.5	+0.5
	comp=N,2.8nm,0.3s,baz=206,slow=13,SNR=100						
ILAR				Sn	Sn	23 45 24.2	-0.7
	comp=N,6.1nm,0.3s,baz=194,slow=18,SNR=4.7						
ILAR				Lg	Lg	23 45 41.3	
	comp=N,8.6nm,0.3s,baz=203,slow=27,SNR=8.8						
BMRM	Bremner River	3.02	112	P	Pn	23 44 49.9	-0.2
	baz=296,SNR=15						
BMRM	Bremner River	3.02	112	Pn	Pn	23 44 49.3	-0.8
BMRM				IAML		23 45 35.9	
	comp=E,299nm,0.8s						
BMRM				IAML		23 45 40.6	
	comp=N,211nm,0.5s						
I21K	Tanana	3.08	347	P	Pn	23 44 51.2	+0.4
	baz=166,SNR=18						
I21K	Tanana	3.08	347		Pn	23 44 50.6	-0.2
MENT	Mentasta	3.17	73		Pn	23 44 48.6	-3.5
MENT				IAML		23 45 41.2	
	comp=E,298nm,0.6s						
MENT				IAML		23 45 47.2	
	comp=N,209nm,0.8s						
GLB	Gilahina Butte	3.21	101	IAML		23 45 40.8	
	comp=N,108nm,0.7s						
GLB				IAML		23 45 43.4	
	comp=E,102nm,0.7s						
POKR	Poker Plat Res	3.21	23	P	Pn	23 44 53.0	+0.3
	baz=205						
POKR	Poker Plat Res	3.21	23		Pn	23 44 52.8	+0.1
DOT	Dot Lake	3.23	60		Pn	23 44 53.3	+0.3
RAGM	Ragged Mountai	3.30	121		Pn	23 44 52.5	-1.3
J25K	Salcha River,	3.31	41	P	Pn	23 44 54.1	+0.1
	baz=225,SNR=48						
O18K	Koktuh Hills	3.32	227	P	Pn	23 44 53.8	-0.4
	baz=43						
O18K	Koktuh Hills	3.32	227	Pn	Pn	23 44 53.3	-0.8
O18K				IAML		23 45 33.4	
	comp=N,66nm,0.6s						
L26K	Log Cabin Wild	3.35	73	Pn	Pn	23 44 55.4	+0.8
L26K				IAML		23 45 52.6	
	comp=N,116nm,0.8s						
L26K				IAML		23 45 55.4	
	comp=E,150nm,0.6s						
SCRK	Sand Creek	3.41	56	P	Pn	23 44 55.8	+0.3
	baz=241,SNR=60						
SCRK	Sand Creek	3.41	56	Pn	Pn	23 44 56.7	+1.2
SCRK				IAML		23 45 41.0	
	comp=N,172nm,1.0s						
SCRK				IAML		23 45 41.0	
	comp=E,202nm,0.7s						
VRDI	Verde Repeater	3.44	103	Pn	Pn	23 44 57.3	+1.4
VRDI				IAML		23 45 47.0	
	comp=N,94nm,0.8s						
VRDI				IAML		23 45 55.1	
	comp=E,59nm,0.9s						
MCARA	McCarthy VSAT	3.59	100		Pn	23 45 00.0	+2.3
MCARA				IAML		23 46 06.3	
	comp=N,209nm,1.1s						
H21K	Melozitna Rive	3.64	344	P	Pn	23 44 58.6	+0.1
	baz=162						
Q19K	Cape Douglas,	3.65	208	P	Pn	23 44 59.6	+0.9
	baz=25						
Q19K	Cape Douglas,	3.65	208	Pn	Pn	23 44 59.2	+0.5
Q19K				IAML		23 46 12.6	
	comp=N,199nm,0.8s						
H23K	Yukon River	3.66	5	P	Pn	23 44 59.0	+0.2
	baz=186						
H23K	Yukon River	3.66	5	Pn	Pn	23 44 59.0	+0.2
KAIM	Kayak Island	3.68	126	Pn	Pn	23 44 59.6	+0.5
P18K	Big Mountain,	3.68	222	Pn	Pn	23 44 58.8	-0.3
P18K				IAML		23 45 59.3	
	comp=E,50nm,3.1s						
P18K				IAML		23 46 04.7	
	comp=N,50nm,4.2s						
BERG	Berg Lake	3.69	116	Pn	Pn	23 45 00.3	+1.0
CRQM	Cirque	3.76	109		Pn	23 45 01.4	+1.0
CRQE	Cirque	3.78	109	P	Pn	23 45 01.5	+0.9
	baz=296,SNR=12						
H24K	Noodor Dome	3.82	16	Pn	Pn	23 45 01.3	+0.4
J26L	Joseph Creek	3.84	50	P	Pn	23 45 02.1	+0.7
	baz=236,SNR=54						
SUCK	Suckling Hills	3.84	121	Pn	Pn	23 45 01.6	+0.3
TGL	Tana Glacier	3.90	108		Pn	23 45 02.3	+0.2
TGL				IAML		23 46 10.4	
	comp=E,116nm,0.9s						
PRP	Porcupine Dome	3.96	31	P	Pn	23 45 03.5	+0.4
	baz=215,SNR=19						
PRP	Porcupine Dome	3.96	31	IAML		23 45 56.9	
	comp=E,43nm,0.6s						
PRP				IAML		23 46 14.8	
	comp=N,73nm,0.8s						
WAX	Waxell Ridge	4.03	112	Pn	Pn	23 45 03.8	-0.1
L27K	Beaver Creek,	4.04	74	P	Pn	23 45 04.5	+0.5
	baz=261,SNR=14						
L27K	Beaver Creek,	4.04	74	IAML		23 46 17.8	
	comp=N,35nm,0.9s						
IMAR	Indian Mountai	4.08	340	Pn	Pn	23 45 04.6	+0.1
SNH	Sunshine Point	4.17	116	Pn	Pn	23 45 05.2	-0.6
ISLE	Juniper Island	4.18	109	Pn	Pn	23 45 05.1	-1.0
ISLE				IAML		23 46 08.7	
	comp=E,105nm,0.9s						
BARN	Barnard Glacie	4.31	101		Pn	23 45 09.0	+1.1
BARN				IAML		23 46 15.5	
	comp=E,59nm,0.6s						
BARN				IAML		23 46 16.3	
	comp=N,63nm,1.0s						
GRNC	Granite Creek	4.39	106		Pn	23 45 09.3	+0.3
GRNC				IAML		23 46 20.3	
	comp=N,88nm,0.6s						
GRNC				IAML		23 46 29.8	
	comp=E,43nm,1.8s						
CTGM	Chitina Glacie	4.50	102	Pn	Pn	23 45 10.4	+0.1
CTGM				IAML		23 46 21.9	
	comp=N,56nm,0.6s						
CTGM				IAML		23 46 27.8	
	comp=E,43nm,1.5s						
MESA	MESA	4.55	113	P	Pn	23 45 10.5	-0.6
	baz=300						
MESA	MESA	4.55	113	Pn	Pn	23 45 11.1	-0.1
YAH	Yahtse	4.55	110	Pn	Pn	23 45 11.4	+0.2
YAH				IAML		23 46 23.2	
	comp=E,103nm,3.4s						
KDAK	Kodiak Island	4.56	195	Pn	Pn	23 45 11.1	0.0
	comp=E,0.3nm,0.3s,baz=342,slow=6.4,SNR=1.4						
KDAK	Kodiak Island	4.56	195	Pn	Pn	23 45 11.6	+0.5
LOGN	Logan Glacier	4.70	103	Pn	Pn	23 45 13.6	+0.5
LOGN				IAML		23 46 23.2	
	comp=N,43nm,0.6s						
LOGN				IAML		23 46 25.8	
	comp=E,53nm,0.8s						
YUK3	Moose Creek	4.70	91	P	Pn	23 45 13.0	-0.1
	baz=279						
TABL	Table Mountain	4.79	107	Pn	Pn	23 45 15.2	+0.9
TABL				IAML		23 46 14.9	
	comp=N,64nm,2.9s						
TABL				IAML		23 46 28.1	
	comp=E,59nm,1.9s						
EGAK	Eagle	4.88	54	Pn	Pn	23 45 16.6	+1.3
EGAK				IAML		23 46 44.2	
	comp=E,77nm,0.9s						
FYU	Fort Yukon	4.92	25	Pn	Pn	23 45 17.5	+1.5
FYU				IAML		23 47 10.8	
	comp=E,76nm,4.1s						
FYU				IAML		23 47 24.1	
	comp=N,69nm,4.2s						
COLD	Coldfoot	5.05	1	P	Pn	23 45 18.4	+0.6
	baz=181						
COLD	Coldfoot	5.05	1	Pn	Pn	23 45 18.3	+0.5
OHAK	Old Harbor	5.20	198	Pn	Pn	23 45 19.4	-0.4
DAWY	Dawson	5.33	65	P	Pn	23 45 24.1	+2.5
	baz=254,SNR=29						
PCA	Pinnacle	5.33	109	Pn	Pn	23 45 22.4	+0.6
BCPM	Bancas Point	5.68	109	Pn	Pn	23 45 26.5	+0.1
BMAR	Burnt Mountain	5.81	23	Pn	Pn	23 45 28.8	+0.7
ANM	Nome	7.14	296	Pn	Pn	23 45 47.0	+0.6
EPYK	Eagle Plains	7.26	49	Pn	Pn	23 45 48.7	+0.7
WHY	Whitehorse	7.59	95	Pn	Pn	23 45 49.9	-2.8
INK	Inuvik	9.33	42	Pn	Pn	23 46 16.7	+0.5
	comp=N,0.1nm,0.3s,baz=226,slow=13,SNR=5.5						
INK				Sn	Sn	23 47 56.6	-2.8
	comp=N,0.1nm,0.3s,baz=298,slow=27,SNR=1.1						
INK	Inuvik	9.33	42	Pn	Pn	23 46 17.4	+1.3
PDAR	Pinedale Array	30.81	110	P	P	23 50 15.0	0.0
	comp=N,0.1nm,0.4s,baz=297,slow=10.0,SNR=2.0						
NVAR	Mina Array Bea	30.82	126	P	P	23 50 15.6	+0.5
	comp=N,0.5nm,0.8s,baz=314,slow=7.1,SNR=4.1						
TXAR	Lajitas Array	44.66	115	P	P	23 52 11.1	-0.5
	comp=N,0.5nm,0.9s,baz=334,slow=8.0,SNR=3.9						
MKAR	Makanchi Array	63.49	322	P	P	23 54 42.2	+14
	comp=N,0.6nm,0.8s,baz=29,slow=6.6,SNR=1.9						

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*IDC **06** 23:49:05.5±1.9, 8°.34S×125°.47E, h0^{km}, mb3.8/1, mb1 3.6/5, mb1mx3.4/28, mbtmp3.4/5, ML3.3/4, Error ellipse: s-maj=39.9km s-min=26.6km az=87.0*

*DJA **06** 23:49:09.5±2.1, 8°S±16°×12°5E±1°0, h10^{km}, M3.2/4, MLv3.2/4*

ISC 06 23:49:06.7±1.4**, 8°.49S**±0°.09×**125°.53E**±0°.08**, h10**^{km}**, n8,** σ**1^{s}89**/12**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.77	225	P	Pg	23 49 41.7	+1.0
BATI	Baumata	2.51	227	Pn	Pn	23 49 48.5	+0.9
	4.2nm,0.3s,baz=117,slow=6.8,SNR=1.9						
BATI				Sn	Sb	23 50 22.1	-0.9
	6.0nm,0.3s,baz=178,slow=17,SNR=2.0						
BATI	Baumata	2.51	227	P	Pn	23 49 49.0	+1.4
EDFI	Ende, Flores	3.81	266	P	Pn	23 50 03.5	-2.0
FITZ	Fitzroy Crossi	9.55	179	Pn	Pn	23 51 25.7	+1.3
	0.2nm,0.3s,baz=359,slow=12,SNR=8.2						
FITZ				Sn	Sn	23 53 11.1	-0.8
	0.3nm,0.3s,baz=260,slow=10.0,SNR=4.0						
WRA	Warramunga Arr	14.22	144	Pn	Pn	23 52 30.5	+2.1
	0.1nm,0.3s,baz=318,slow=13,SNR=7.8						
WRA				Sn	Sn	23 55 04.4	-1.9
	0.0nm,0.3s,baz=323,slow=29,SNR=2.0						
ASAR	Alice Springs	17.09	153	P	P	23 53 08.8	+1.2
	0.1nm,0.3s,baz=329,slow=12,SNR=3.1						
ASAR				S	Sn	23 56 12.8	-3.3
	0.1nm,0.3s,baz=323,slow=24,SNR=2.5						
MKAR	Makanchi Array	67.14	329	P	P	00 00 00.2	-0.5
	0.3nm,0.7s,baz=122,slow=7.0,SNR=4.1						

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*TUL **07** 00:01:11.9±0.8, 36°.33N±0°.01×97°.729W±0°.007, h5^{km}±7^{km}, ML2.5, mb_Lg2.4/20(NEIC), Error ellipse: s-maj=1.7km s-min=0.7km az=177.0*

NEIC 07 00:01:11.9±0.7**, 36°.330N**±0°.005×**97°.72W**±0°.02**, h4**^{km}±7^{km}**, Error ellipse: s-maj=2.2km s-min=0.3km az=71.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CROK	Carrier	0.27	310	Pg	Pg	00 01 17.6	+0.4
CROK				Sg	Sg	00 01 21.6	+0.8
GC02	Grant County #	0.53	348	Pg	Pg	00 01 22.3	+0.2
GC02				Sg	Sg	00 01 29.7	+0.7
OK029	Liberty Lake	0.57	158	Pg	Pg	00 01 22.9	0.0
OK029				Sg	Sg	00 01 31.1	+0.7
BLOK	Blackwell	0.59	43	Pg	Pg	00 01 23.5	+0.2
BLOK				Sg	Sg	00 01 31.0	0.0
OK032	Salt Plains WL	0.61	320		Pg	00 01 23.7	0.0
OK032				Sg	Sg	00 01 32.0	+0.3
KAN14	Manchester OK	0.66	343		Pg	00 01 24.5	0.0
BCOK	Bluff Creek, N	0.68	172	Pg	Pg	00 01 24.8	0.0
KAN13	South Haven SW	0.71	16		Pg	00 01 25.6	+0.1
KAN17	Caldwell West	0.71	357	Pg	Pg	00 01 25.6	0.0
KAN05	Bluff City Nor	0.79	351		Pg	00 01 26.9	-0.1
OK031	S. Brethren Rd	0.81	117	Pg	Pg	00 01 27.4	0.0
KAN09	Caldwell North	0.81	6	Pg	Pg	00 01 27.4	-0.1
OK025	Westminster Rd	0.81	157	Pg	Pg	00 01 27.3	-0.1
KAN01	Argonia South	0.82	358		Pg	00 01 27.6	0.0
QUOK	Quay	0.83	101	Pg	Pg	00 01 27.8	-0.1
KAN10	Anthony SW Sta	0.85	339		Pg	00 01 28.1	-0.1
OK030	Cody Creek RV	0.86	118		Pg	00 01 28.3	0.0
KS20	Mayfield South	0.91	8		Pg	00 01 29.0	-0.3
KAN08	Anthony NE Sta	0.92	348		Pg	00 01 29.3	-0.2
KAN06	Argonia West S	0.92	353		Pg	00 01 29.2	-0.3
KAN16	Harper SW Stat	0.94	343	Pg	Pg	00 01 29.3	-0.5
OKCFA	Oklahoma City	0.94	166		Pg	00 01 29.6	-0.2
OKCSW	OKLAHOMA CITY	0.95	166	Pg	Pg	00 01 29.8	-0.3
KAN12	Harper NE Stat	0.99	347	Pg	Pg	00 01 30.4	-0.5
U32A	Winter Ranch,	1.03	273	Pg	Pg	00 01 31.1	-0.6
FNO	Franklin	1.10	166	Pg	Pg	00 01 32.4	-0.6
T35A	Sooner Cattle	1.14	59	Pg	Pg	00 01 33.4	-0.3
TUL1	Leonard	1.62	104		Pn	00 01 41.1	-0.1
TUL1				IAmb_Lg		00 02 07.1	
	comp=Z,18nm,0.9s						
X34A	Smith Ranch, M	1.73	183		Pn	00 01 42.8	+0.1
WMOK	Wichita Mounta	1.81	209		Pn	00 01 44.0	+0.2
R32A	Long Quarter,	2.23	340		Pn	00 01 50.6	+0.9
LOOK	Love County	2.37	169	Pn	Pn	00 01 51.8	+0.2
LOOK				IAmb_Lg		00 02 30.7	
	comp=Z,29nm,1.3s						
X37A	Clayton	2.59	131	Pn	Pn	00 01 55.6	+1.0
X37A				IAmb_Lg		00 02 40.3	
	comp=Z,12nm,0.7s						
U38A	Gravette	2.69	87		Pn	00 01 56.0	0.0
KSU1	Kansas State U	2.90	17		Pn	00 01 58.6	-0.3
CBKS	Cedar Bluff	2.95	328		Pn	00 01 58.9	-0.7
AMTX	Amarillo	3.53	247	IAmb_Lg		00 03 03.6	
	comp=Z,6.8nm,0.7s						
S39A	Bolivar	3.77	68	IAmb_Lg		00 03 18.3	
	comp=Z,9.5nm,0.9s						
U40A	Yellville	3.93	88	IAmb_Lg		00 03 19.1	
	comp=Z,10nm,0.7s						
MGMO	Mountain Grove	4.46	78	IAmb_Lg		00 03 33.5	
	comp=Z,6.4nm,0.9s						
FCAR	Ozark Folk Cen	4.55	94	IAmb_Lg		00 03 40.3	
	comp=Z,5.2nm,0.8s						
CCM	Cathedral Cave	5.45	70	IAmb_Lg		00 04 14.5	
	comp=Z,8.3nm,1.0s						
PBMO	Poplar Bluff	5.89	83	IAmb_Lg		00 04 29.8	
	comp=Z,8.3nm,0.8s						

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*IDC **07** 00:01:34.9±1.0, 4°.79N×95°.91E, h0^{km}, mb3.9/9, mb1 4.0/11, mb1mx3.7/39, mbtmp3.8/11, ML4.1/2, MS3.4/5, Ms1 3.4/5, ms1mx3.0/29, Error ellipse: s-maj=42.8km s-min=14.4km az=49.0*

*DJA **07** 00:01:34.3±3.6, 5°N±19°×9°6E±2°6, h10^{km}, M4.7/6, mb4.8/2, mB5.3/2, MLv4.6/6, Mw(mB)4.8/2*

*NEIC **07** 00:01:40.1±0.8, 4°.97N±0°.08×96°.0E±0°.1, h28^{km}±9^{km}, mb4.3/11, Error ellipse: s-maj=16.0km s-min=11.3km az=100.0*

ISC 07 00:01:39.9±0.7**, 4°.94N**±0°.06×**95°.97E**±0°.10**, h29**^{km}**, n37,** σ**0^{s}96**/33**, mb4.2**/13**, MS3.5**/3**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	1.01	73	P	Pn	00 01 57.2	-0.9
LHMI	Lhok Sumawe	1.01	73		Pn	00 01 57.1	-0.9
TPTI		2.06	144	P	Pn	00 02 12.5	0.0
SNSI	Sinabang, Aceh	2.54	172	P	Pn	00 02 18.5	-0.6
TSI	Tuntungan	2.95	119	P	Pn	00 02 26.0	+1.2
PSI	Prapat	3.63	126	Pn	Pn	00 02 34.8	+0.6
	5.6nm,0.3s,baz=314,slow=13,SNR=30						
PSI				Lg	Lg	00 03 30.7	
	11nm,0.3s,baz=50,slow=5.4,SNR=7.2						
PSI				LR	LR	00 04 10.9	
	comp=Z,350nm,18.0s,baz=260,slow=43						
RPSI	Rantau Prapat	3.69	127		Pn	00 02 34.8	-0.2
GSI	Gunungsitoli	3.95	156	P	Pn	00 02 38.5	-0.1
GSI	Gunungsitoli	3.95	156		Pn	00 02 38.1	-0.4
SRIT	Nakonsritamara	5.12	45	Pn	Pn	00 02 53.8	-0.8
MNSI	Mandailing Nat	5.47	139	P	Pn	00 02 58.2	-1.3
BKNI	Bangkinang	6.83	132	P	Pn	00 03 18.1	0.0
	0.6nm4μm46nm,0.6s						
PPI	Padang Panjang	6.95	140	P	Pn	00 03 20.9	+1.1
PDSI	Padang	7.34	142	P	Pn	00 03 26.4	+1.2
CMAR	Chiang Mai Arr	13.75	12	Pn	Pn	00 04 54.8	+1.9
	0.6nm,0.3s,baz=196,slow=13,SNR=6.4						
CMAR				Lg	Lg	00 09 03.5	
	0.4nm,0.3s,baz=174,slow=31,SNR=4.5						
CMAR				LR	LR	00 10 25.4	
	comp=Z,61nm,18.2s,baz=270,slow=38						
SHL	Shillong	20.88	350	P	P	00 06 19.7	-0.3
SHL				IAmb	IAmb	00 06 32.6	
	comp=Z,14nm,1.0s						
H08S2	Diego Garcia H	26.55	242	T	T	00 34 22.0	
	baz=62,slow=75						
H08S3	Diego Garcia H	26.55	242	T	T	00 34 13.6	
	baz=62,slow=75						
H08S1	Diego Carcia H	26.57	242	T	T	00 34 23.9	
	baz=62,slow=75						
DRK	Karamyk	40.74	331	P	P	00 09 18.3	-0.4
GAR	Garm	41.11	329	P	P	00 09 20.8	-0.7
GAR				IAmb	IAmb	00 09 31.1	
	comp=Z,11nm,1.5s						
MKAR	Makanchi Array	43.34	346	P	P	00 09 38.6	-0.9
	comp=Z,0.2nm,0.5s,baz=154,slow=8.3,SNR=1.8						
SONM	Songino Array	43.66	10	P	P	00 09 43.0	+0.9
	comp=Z,0.2nm,0.4s,baz=188,slow=8.7,SNR=4.1						
WB0	Warramunga Arr	45.06	124	P	P	00 09 52.2	-1.4

WB0				IAmb	IAmb	00 10 11.9	
	comp=Z,3.7nm,1.2s						
WRA	**Warramunga Arr**	**45.10**	**124**	P	**P**	**00 09 52.4**	**-1.5**
	comp=Z,1.1nm,0.5s,baz=302,slow=9.2,SNR=26						
WRA	**Warramunga Arr**	**45.10**	**124**	P	**P**	**00 09 53.1**	**-0.8**
WB2	**Warramunga Arr**	**45.11**	**124**	P	**P**	**00 09 53.0**	**-1.0**
WB2				IAmb	IAmb	00 10 11.8	
	comp=Z,4.9nm,1.1s						
WR0	**Warramunga Arr**	**45.27**	**124**	P	**P**	**00 09 54.6**	**-0.6**
WR0				IAmb	IAmb	00 10 13.2	
	comp=Z,3.8nm,0.8s						
AS31	**Alice Springs**	**46.65**	**129**	P	**P**	**00 10 05.6**	**-0.6**
ASAR	**Alice Springs**	**46.65**	**129**	P	**P**	**00 10 05.0**	**-1.2**
	comp=Z,2.2nm,0.6s,baz=300,slow=7.7,SNR=36						
ASAR	**Alice Springs**	**46.65**	**129**	P	**P**	**00 10 05.5**	**-0.7**
ZALV	**Zalesovo Beam**	**49.70**	**351**	P	**P**	**00 10 30.1**	**+1.0**
	comp=Z,0.7nm,0.3s,baz=137,slow=5.1,SNR=1.5						
ZALV				LR	LR	00 33 17.6	
	comp=Z,32nm,19.5s,baz=283,slow=38						
STKA	**Stephens Creek**	**56.78**	**133**	P	**P**	**00 11 20.9**	**-0.7**
	comp=Z,1.5nm,0.5s,baz=319,slow=6.6,SNR=3.0						
BRTR	**Keskin Array B**	**65.72**	**311**	P	**P**	**00 12 21.1**	**-1.2**
	comp=Z,0.2nm,0.5s,baz=134,slow=5.0,SNR=2.0						
ARCES	**ARCESS Array B**	**78.62**	**340**	P	**P**	**00 13 39.3**	**+0.6**
	comp=Z,4.7nm,1.1s,baz=121,slow=6.4,SNR=1.8						
ARCES				LR	LR	00 51 08.1	
	comp=Z,45nm,20.1s,baz=270,slow=38						
NOA	**NORSAR Array B**	**83.17**	**331**	LR	LR	00 54 36.5	
	comp=Z,22nm,19.3s,baz=295,slow=38						
TORD	**Torodi Ar. Bea**	**93.04**	**283**	P	**P**	**00 14 52.8**	**+1.3**
	comp=Z,0.3nm,0.6s,baz=91,slow=4.7,SNR=2.4						

*DSN **07** 00:05:53.2±2.9, 26°.26N×54°.91E, h10^{km}, ML2.2/7, Error ellipse: s-maj=35.1km s-min=10.3km az=165.0*
*OMAN **07** 00:05:54.6±0.4, 26°.30N×54°.95E, h10^{km}±3^{km}, mb5.0/3, ml2.3/6, Error ellipse: s-maj=9.5km s-min=4.1km az=9.0*
ISC 07 00:05:54.3±2.9**, 26°.3N**±0°.1×**55°.0E**±0°.1**, h6**^{km}±14^{km}**, n18, σ1^{s}.11**/25**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHME	**Shamm**	**1.05**	**102**	P	**Pb**	**00 06 14.7**	**-0.2**
SHME				S	**Sn**	**00 06 31.0**	**+0.5**
SHME	**Shamm**	**1.05**	**102**	P	**Pn**	**00 06 15.4**	**-0.1**
SHME				S	**Sn**	**00 06 31.1**	**+0.6**
BANOM	**Banah**	**1.22**	**107**	P	**Pb**	**00 06 18.1**	**+0.3**
BANOM				S	**Sn**	**00 06 35.2**	**+0.4**
BANOM	**Banah**	**1.22**	**107**	P	**Pb**	**00 06 18.1**	**+0.3**
BANOM				S	**Sn**	**00 06 36.0**	**+1.2**
MASF	**Masafi**	**1.38**	**131**	P	**Pb**	**00 06 20.7**	**+0.2**
MASF				S	**Sn**	**00 06 38.4**	**-0.4**
MSFE	**Esma-Masafi**	**1.39**	**131**	P	**Pn**	**00 06 20.2**	**-0.1**
NAZ	**Nazwa, Dubai**	**1.42**	**155**	P	**Pb**	**00 06 20.9**	**-0.2**
NAZ	**Nazwa, Dubai**	**1.42**	**155**	P	**Pg**	**00 06 22.1**	**+0.6**
	SNR=9.3						
MDH	**Madha**	**1.52**	**130**	P	**Pn**	**00 06 19.2**	**-2.8**
ASUD	**Al Ashush, Dub**	**1.67**	**170**	P	**Pg**	**00 06 25.9**	**-0.5**
ASUD				S	**Sg**	**00 06 48.3**	**+0.2**
UOSS	**Minazif**	**1.72**	**140**	P	**Pn**	**00 06 21.5**	**-3.3**
UOSS	**Minazif**	**1.72**	**140**	P	**Pn**	**00 06 25.1**	**+0.4**
HATD	**Hatta, Dubai**	**1.77**	**145**	P	**Pn**	**00 06 23.8**	**-1.7**
HATD	**Hatta, Dubai**	**1.77**	**145**	P	**Pb**	**00 06 27.4**	**+0.2**
HATD				S	**Sb**	**00 06 49.8**	**+0.1**
ASHO	**Ashiyiah**	**1.85**	**149**	P	**Pn**	**00 06 27.0**	**+0.3**
MHTO	**MHTO**	**5.93**	**152**	P	**Pn**	**00 07 23.0**	**+0.3**
	SNR=8.6						
WHFO	**Wadi Hawf**	**8.40**	**188**	P	**Pn**	**00 07 57.0**	**+0.3**
	SNR=19						
ABTO	**Aybut**	**9.02**	**190**	P	**Pn**	**00 08 04.5**	**-0.7**
	SNR=12						

*SNET **07** 00:12:40.0±0.8, 14°.10N×90°.39W, h112^{km}±6^{km}, ML3.4*
*GCG **07** 00:12:42.4±0.3, 14°.18N×90°.47W, h112^{km}±5^{km}, MD3.9*
ISC 07 00:12:40.7±2.5**, 13°.9N**±0°.1×**90°.42W**±0°.07**, h117**^{km}±19^{km}**, n15, σ0^{s}.61**/25**, 2C-2D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCG	**Pacaya**	**0.50**	**338**	*e*P	**Pn**	**00 12 59.1**	**+0.4**
NBG	**Las Nubes**	**0.66**	**6**	*e*P	**Pn**	**00 13 00.1**	**+0.3**
FUG	**Fuego 3**	**0.66**	**321**	⇑*e*P	**Pn**	**00 12 59.9**	**+0.2**
CEVE	**Cerro Verde**	**0.78**	**97**	*e*P	**Pn**	**00 13 00.3**	**-0.4**
CEVE				*e*S	**Sn**	**00 13 16.1**	**+0.3**
CEVE				IAML		00 13 19.9	
	comp=Z,1μm,0.3s						
JAYA	**Jayaque - finc**	**0.98**	**106**	*e*P	**Pn**	**00 13 02.0**	**-0.4**
JAYA				*e*S	**Sn**	**00 13 18.3**	**-0.6**
TACO	**Tacachico**	**1.03**	**88**	⇓*i*P	**Pn**	**00 13 01.9**	**-0.9**
TACO				*e*S	**Sn**	**00 13 19.0**	**-0.6**
LALI	**Alcalda de L**	**1.15**	**112**	*e*P	**Pn**	**00 13 04.0**	**0.0**
LALI				*e*S	**Sn**	**00 13 22.1**	**+0.4**
UEES	**Universidad Ev**	**1.16**	**100**	*e*P	**Pn**	**00 13 03.7**	**-0.6**
MRL	**Marmol**	**1.35**	**32**	⇑*e*P	**Pn**	**00 13 06.6**	**+0.1**
MRL				*e*S	**Sn**	**00 13 25.6**	**-0.4**
STG3	**Santiaguito 3,**	**1.36**	**305**	*e*P	**Pn**	**00 13 06.6**	**+0.1**
STG3				*e*S	**Sn**	**00 13 25.4**	**-0.8**
SJTE	**Alcalda de S**	**1.41**	**103**	*e*P	**Pn**	**00 13 06.2**	**-0.8**
SJTE				*e*S	**Sn**	**00 13 27.9**	**+1.0**
SJTE				IAML		00 13 31.0	
	comp=Z,251nm,0.3s						
PAVA	**Las Pavas**	**1.45**	**98**	⇓*i*P	**Pn**	**00 13 07.2**	**-0.3**
PAVA				*e*S	**Sn**	**00 13 28.7**	**+0.8**
PAVA				IAML		00 13 33.2	
	comp=Z,193nm,0.2s						
COEG	**Centro de Oper**	**1.52**	**101**	*e*S	**Sn**	**00 13 29.4**	**+0.1**
SCLA	**Alcaldia de Sa**	**1.66**	**98**	*i* P	**Pn**	**00 13 09.6**	**-0.2**
SCLA				*e*S	**Sn**	**00 13 32.7**	**+0.6**
COEB	**Comit de Eme**	**1.88**	**103**	*e*P	**Pn**	**00 13 12.6**	**-0.1**
COEB				*e*S	**Sn**	**00 13 38.2**	**+1.1**
COEB				IAML		00 13 42.9	
	comp=Z,255nm,0.3s						

IDC 07 00:44:07.2±6.8**, 22°.62S**×**12°.16W, h0**^{km}**, mb3.7**/4**, mb1 3.9**/4**, mb1mx3.6**/22**, mbtmp3.7**/4**, MS3.6**/2**, Ms1 3.5**/2**, ms1mx3.0**/21**, Error ellipse: s-maj=169.6km s-min=140.9km az=89.0, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOSA	**Boshof**	**34.16**	**108**	LR	LR	01 03 08.2	
	comp=Z,65nm,18.7s,baz=246,slow=33						
BDFB	**Brasilia**	**34.51**	**275**	LR	LR	01 01 55.9	
	comp=Z,115nm,18.9s,baz=143,slow=31						
TORD	**Torodi Ar. Bea**	**38.05**	**22**	P	P	00 51 27.5	-0.1
	2.2nm,0.7s,baz=201,slow=8.8,SNR=28						
ESDC	**Sonseca Array**	**62.44**	**7**	P	P	00 54 31.8	-0.3
	0.5nm,0.5s,baz=176,slow=6.2,SNR=2.9						
GERES	**GERESS Array B**	**74.80**	**17**	P	P	00 55 49.6	+0.4
	0.2nm,0.6s,baz=205,slow=4.3,SNR=1.9						
BRTR	**Keskin Array B**	**75.32**	**35**	P	P	00 55 52.4	-0.1
	0.4nm,0.6s,baz=213,slow=4.3,SNR=4.2						

*HEL **07** 00:51:40.6±0.1, 67°.85N×20°.19E, h0^{km}, ML1.7, ML2.1(UPP), Explosion*
UPP 07 00:51:40.0±0.4**, 67°.85N**×**20°.18E, h0**^{km}**, ML2.1, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOVU	**Salmi**	**0.38**	**359**	P	Pg	00 51 47.2	0.0
KOVU				S	Sg	00 51 52.6	+0.5
KOVU	**Salmi**	**0.38**	**359**	*i* P	Pg	00 51 47.2	0.0
KOVU				*i* S	Sg	00 51 52.6	+0.5
LANU	**Lannavaara**	**0.71**	**73**	*e*P	Pg	00 51 53.0	-0.6
LANU				*e*S	Sg	00 52 02.5	-0.4
DUNU	**Dundret**	**0.74**	**168**	S	Sg	00 52 03.5	-0.4
DUNU	**Dundret**	**0.74**	**168**	*i* S	Sg	00 52 03.5	-0.4
KIF	**Kilpisjarvi**	**1.19**	**11**	MSG		00 52 16.8	
	comp=Z,7.9nm,0.2s						
KIF				*e*S	Sg	00 52 18.4	+0.4
PAJU	**Pajala**	**1.40**	**125**	*e*P	Pn	00 52 05.2	-1.6
	baz=310						
PAJU				*e*S	Sg	00 52 23.6	-1.3
HEF	**Hetta**	**1.42**	**65**	*e*P	Pn	00 52 05.8	-1.3
HEF				MSG		00 52 23.2	
	comp=Z,4.6nm,0.2s						
HEF				*e*SN	Sn	00 52 27.8	+1.4
ERTU	**Ertsjaerv**	**1.52**	**148**	*e*P	Pn	00 52 07.4	-0.9
ERTU				*e*SB	Sg	00 52 27.8	-0.8
KLF	**Kolari**	**1.58**	**111**	*e*P	Pn	00 52 08.6	-0.6
KLF				*e*SG	Sn	00 52 29.4	-0.9
HARU	**Harads**	**1.72**	**169**	P	Pb	00 52 11.9	-0.5
HARU	**Harads**	**1.72**	**169**	*e*P	Pb	00 52 11.9	-0.5
KALU	**Kalix**	**2.36**	**146**	P	Pn	00 52 20.5	+0.6
KALU	**Kalix**	**2.36**	**146**	*e*SB	Sb	00 52 51.3	-1.5
TOF	**Tornio**	**2.41**	**135**	*e*P	Pn	00 52 21.7	+1.1
	baz=314						
TOF				MSG		00 52 51.7	
	comp=Z,3.8nm,0.2s						
TOF				*e*SB	Sb	00 52 53.9	-0.5
SGF	**Sodankyl**	**2.46**	**97**	*e*SG	Sg	00 52 57.6	-1.4
ARA0	**ARCESS Array S**	**2.58**	**46**	*e*PB	Pn	00 52 24.7	+1.7
ARA0				*e*SG	Sb	00 53 00.1	+0.8
RNF	**Rovaniemi**	**2.59**	**116**	*e*PB	Pn	00 52 24.9	+1.8
	baz=306						
RNF				*e*SB	Sb	00 52 58.8	-0.7

UPP 07 00:51:43.2±0.1**, 67°.84N**×**20°.26E, h0**^{km}**, ML2.9, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOVU	**Salmi**	**0.39**	**355**	P	Pg	00 51 50.6	0.0
KOVU				S	Sg	00 51 55.8	+0.3
DUNU	**Dundret**	**0.73**	**170**	P	Pg	00 51 57.0	-0.2
HARU	**Harads**	**1.71**	**170**	P	Pb	00 52 15.0	-0.4

*NAO **07** 00:55:50.7±1.5, 67°.83N×20°.35E, ML2.4*
*HEL **07** 00:55:51.6±0.0, 67°.85N×20°.20E, h0^{km}, ML1.8, ML2.1(UPP), Explosion*
*UPP **07** 00:55:51.1±0.1, 67°.85N×20°.21E, h0^{km}, ML2.1, Explosion*
*IDC **07** 00:55:52.0±1.3, 67°.76N×20°.56E, h0^{km}, mb1 2.8/3, mb1mx2.8/38, mbtmp2.7/3, ML1.9/3, Error ellipse: s-maj=20.2km s-min=9.5km az=111.0*
*BER **07** 00:55:54.0±3.9, 67°.89N×20°.47E, h0^{km}, ML1.9, ML2.4(NAO), Suspected explosion*
ISC 07 00:55:50.5±0.7**, 67°.82N**±0°.02×**20°.31E**±0°.02**, h0**^{km}**, n44, σ0^{s}.90**/64**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RATU	**Laukkuluspa**	**0.27**	**271**	P	**Pg**	**00 55 55.7**	**+0.1**
RATU				S	**Sg**	**00 55 58.6**	**-0.6**
RATU	**Laukkuluspa**	**0.27**	**271**	*i* P	**Pg**	**00 55 55.7**	**+0.1**
RATU				*i* S	**Sg**	**00 55 58.6**	**-0.6**
KOVU	**Salmi**	**0.41**	**352**	P	**Pg**	**00 55 58.4**	**+0.1**
KOVU				S	**Sg**	**00 56 03.4**	**-0.1**
KOVU	**Salmi**	**0.41**	**352**	*i* P	**Pg**	**00 55 58.4**	**+0.1**
KOVU				*i* S	**Sg**	**00 56 03.4**	**-0.1**
NIKU	**Nikkaluokta**	**0.48**	**276**	P	**Pg**	**00 55 59.6**	**-0.1**
NIKU	**Nikkaluokta**	**0.48**	**276**	*i* P	**Pg**	**00 55 59.6**	**-0.1**
LANU	**Lannavaara**	**0.68**	**69**	P	**Pb**	**00 56 04.4**	**-0.8**
LANU	**Lannavaara**	**0.68**	**69**	*e*P	**Pb**	**00 56 04.5**	**-0.7**
LANU				*e*S	**Sb**	**00 56 13.5**	**-1.5**
MASU	**Masugnsbyn**	**0.74**	**119**	P	**Pb**	**00 56 05.9**	**-0.4**
MASU	**Masugnsbyn**	**0.74**	**119**	*i* P	**Pb**	**00 56 05.9**	**-0.4**
SALU	**Saltoluokta**	**0.82**	**238**	P	**Pg**	**00 56 06.1**	**0.0**
SALU	**Saltoluokta**	**0.82**	**238**	*i* P	**Pg**	**00 56 06.1**	**0.0**
KIF	**Kilpisjarvi**	**1.20**	**9**	Pg	**Pg**	**00 56 13.6**	**+0.1**
KIF				Lg	Lg	00 56 29.3	
KIF	**Kilpisjarvi**	**1.20**	**9**	*e*P	**Pg**	**00 56 13.9**	**+0.4**
KIF				*e*S	**Sg**	**00 56 29.2**	**+0.2**
KIF	**Kilpisjarvi**	**1.20**	**9**	*e*P	**Pg**	**00 56 13.4**	**-0.1**
KIF				*e*S	**Sg**	**00 56 29.3**	**+0.2**
KIF				MSG		00 56 32.5	
	comp=Z,15nm,0.2s						
PAJU	**Pajala**	**1.35**	**125**	P	**Pn**	**00 56 16.6**	**0.0**
PAJU	**Pajala**	**1.35**	**125**	*e*P	**Pg**	**00 56 16.2**	**-0.1**
PAJU				*e*S	**Sb**	**00 56 34.3**	**-0.1**
HEF	**Hetta**	**1.39**	**63**	Pg	**Pn**	**00 56 17.0**	**-0.1**
HEF				Lg	Lg	00 56 35.0	
HEF	**Hetta**	**1.39**	**63**	*e*P	**Pn**	**00 56 17.1**	**-0.1**
HEF				*e*S	**Sb**	**00 56 35.1**	**-0.4**
HEF	**Hetta**	**1.39**	**63**	*e*P	**Pg**	**00 56 16.7**	**-0.4**
HEF				*e*S	**Sb**	**00 56 35.1**	**-0.4**
HEF				MSG		00 56 40.9	
	comp=Z,5.9nm,0.2s						
ERTU	**Ertsjaerv**	**1.47**	**149**	P	**Pb**	**00 56 18.6**	**0.0**
ERTU	**Ertsjaerv**	**1.47**	**149**	*e*P	**Pg**	**00 56 18.3**	**-0.3**
KLF	**Kolari**	**1.52**	**111**	*e*P	**Pg**	**00 56 19.5**	**-0.2**
KTK1	**Kautokeino**	**1.61**	**41**	Pn	**Pn**	**00 56 20.5**	**+0.3**
KTK1				Sn	**Sb**	**00 56 41.9**	**-0.1**
KTK1	**Kautokeino**	**1.61**	**41**	*e*P	**Pn**	**00 56 20.6**	**+0.3**
KTK1				IAML		00 56 48.1	
	comp=Z,14nm,0.3s						
HARU	**Harads**	**1.69**	**171**	P	**Pb**	**00 56 22.2**	**-0.1**
HARU	**Harads**	**1.69**	**171**	*e*P	**Pb**	**00 56 22.2**	**-0.1**
JETT	**Jettan, Norway**	**1.74**	**1**	Pn	**Pn**	**00 56 22.2**	**+0.2**
JETT				Sn	**Sn**	**00 56 44.6**	**-0.3**
JETT				IAML		00 56 48.1	
	comp=Z,54nm,0.3s						
FAUS	**Fauske**	**1.97**	**259**	*e*P	**Pb**	**00 56 26.6**	**-0.6**
FAUS				IAML		00 56 56.5	
	comp=Z,15nm,0.4s						
KALU	**Kalix**	**2.31**	**147**	*e*P	**Pb**	**00 56 31.8**	**-1.2**
TOF	**Tornio**	**2.36**	**136**	*e*PB	**Pb**	**00 56 32.9**	**-0.8**
TOF				*e*SB	**Sb**	**00 57 04.2**	**+0.8**
SGF	**Sodankyl**	**2.41**	**96**	*e*P	**Pn**	**00 56 32.6**	**+1.5**
SGF				*e*SB	**Sb**	**00 57 04.5**	**-0.4**
SGF				MSG		00 57 10.3	
	comp=Z,4.1nm,0.2s						
RNF	**Rovaniemi**	**2.53**	**116**	*e*PB	**Pb**	**00 56 35.7**	**-1.1**
ARA0	**ARCESS Array S**	**2.56**	**45**	Pn	**Pn**	**00 56 34.6**	**+1.3**
	baz=233,slow=16						
ARA0				Sn	**Sn**	**00 57 06.2**	**+1.1**
	baz=228,slow=22						
ARA0	**ARCESS Array S**	**2.56**	**45**	Pn	**Pn**	**00 56 34.6**	**+1.3**
	baz=233,slow=16						
ARA0				Sn	**Sn**	**00 57 06.2**	**+1.1**
	baz=228,slow=22						
ARCES	**ARCESS Array B**	**2.56**	**45**	Pn	**Pn**	**00 56 34.5**	**+1.3**
	baz=224,slow=16,SNR=15						
ARCES				Sn	**Sb**	**00 57 08.2**	**-1.1**
	baz=227,slow=25,SNR=18						
BURU	**Burvik**	**3.28**	**172**	*e*P	**Pn**	**00 56 44.7**	**+1.6**
APA0	**Apatity Array**	**4.84**	**87**	Pn	**Pn**	**00 57 04.2**	**-0.1**
	baz=300,slow=11						
APA0				Sn	**Sn**	**00 58 00.1**	**-0.9**
	baz=286,slow=28						
APA0				Lg	Lg	00 58 19.6	
	baz=274,slow=28						
APA0	**Apatity Array**	**4.84**	**87**	Pn	**Pn**	**00 57 04.2**	**-0.1**
	baz=300,slow=11						
APA0				Sg	**Sb**	**00 58 19.6**	**+5.0**
	baz=274,slow=28						
FIA0	**FINESS Array S**	**6.86**	**156**	Sn	**Sn**	**00 58 50.8**	**-0.1**
	baz=346,slow=28						
FIA0				Lg	Lg	00 59 24.2	
	baz=344,slow=28						
FIA0	**FINESS Array S**	**6.86**	**156**	Sn	**Sn**	**00 58 50.8**	**-0.1**
	baz=346,slow=28						
FINES	**FINESS Array B**	**6.86**	**156**	Pn	**Pn**	**00 57 32.1**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=349,slow=28,SNR=1.0						
FINES				Sn	**Sn**	**00 58 50.8**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=345,slow=24,SNR=1.0						
FINES				Lg	Lg	00 59 22.9	
	comp=Z,0.2nm,0.3s,baz=351,slow=24,SNR=3.0						
NB2	**NORSAR Subarra**	**7.85**	**214**	Pn	**Pn**	**00 57 45.6**	**-0.2**
NOA	**NORSAR Array B**	**7.85**	**214**	Pn	**Pn**	**00 57 46.0**	**+0.2**
	comp=Z,0.0nm,0.3s,baz=31,slow=12,SNR=1.3						
NOA				Lg	Lg	00 59 57.6	
	comp=Z,0.0nm,0.3s,baz=54,slow=12,SNR=2.4						

*KRNET **07** 00:57:01.0±0.1, 41°.82N×79°.18E, h12^{km}, mb2.2*
*SOME **07** 00:57:00.2, 41°.85N×79°.27E, h15^{km}*
*NNC **07** 00:57:01.9±1.6, 41°.94N×79°.35E, h0^{km}, mb3.2, mpv3.0, Error ellipse: s-maj=11.1km s-min=5.9km az=150.0*
ISC 07 00:57:00.5±2.0**, 41°.82N**±0°.07×**79°.19E**±0°.05**, h9**^{km}±11^{km}**, n42, σ0^{s}.93**/71**, 11C-5D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRZ	**Przheval'sk**	**0.89**	**319**	⇑*i*P	**Pg**	**00 57 18.1**	**+0.5**
	baz=20						
PRZ				⇑*i*S	**Sb**	**00 57 30.8**	**+0.7**
	baz=20						
TARG	**Taragay, Kyrgy**	**1.04**	**266**	⇑*i*P	**Pg**	**00 57 20.7**	**+0.2**
	baz=66						
TARG				⇑*i*S	**Sb**	**00 57 35.3**	**+0.6**
	baz=66						
UZB	**Uzynbulak**	**1.33**	**355**	*e*P	**Pn**	**00 57 24.8**	**-0.6**
	3.7nm,0.1s						
UZB				*e*S	**Sb**	**00 57 42.6**	**-0.4**
	14nm,0.1s						
UZB	**Uzynbulak**	**1.33**	**355**	P	**Pn**	**00 57 24.8**	**-0.6**
	3.7nm,0.1s						
UZB				S	**Sb**	**00 57 42.6**	**-0.4**
	14nm,0.1s						
SHLS	**Shalkode**	**1.35**	**9**	*e*P	**Pn**	**00 57 26.1**	**+0.4**
	23nm,0.2s						
SHLS				*e*S	**Sg**	**00 57 44.7**	**+0.6**
	31nm,0.2s						
SHLS	**Shalkode**	**1.35**	**9**	P	**Pn**	**00 57 26.1**	**+0.4**
	23nm,0.2s						
SHLS				S	**Sg**	**00 57 44.7**	**+0.6**
	31nm,0.2s						
SATY	**Saty**	**1.37**	**335**	*e*P	**Pb**	**00 57 26.4**	**0.0**
	1.6nm,0.1s						
SATY				*e*S	**Sg**	**00 57 45.1**	**+0.6**
	20nm,0.1s						
SATY	**Saty**	**1.37**	**335**	P	**Pb**	**00 57 26.4**	**0.0**
	1.6nm,0.1s						
SATY				S	**Sg**	**00 57 45.1**	**+0.6**
	20nm,0.1s						
ANVS	**Anan'yevo**	**1.48**	**311**	⇓*i*P	**Pg**	**00 57 29.0**	**0.0**
	baz=11						
ANVS				⇓*i*S	**Sg**	**00 57 49.5**	**+1.2**
	baz=11						
PDGK	**Podgornoye**	**1.53**	**8**	P	**Pn**	**00 57 27.8**	**-0.3**
	2.6nm,0.1s						
PDGK				S	**Sn**	**00 57 47.6**	**-0.5**
	5.5nm,0.2s						
PDGK	**Podgornoye**	**1.53**	**8**	⇑P	**Pn**	**00 57 27.4**	**-0.7**
	3.5nm,0.3s						
PDGK				⇓S	**Sn**	**00 57 47.3**	**-0.8**
	17nm,0.5s						
KURS	**Kuram**	**1.83**	**336**	*e*P	**Pb**	**00 57 34.2**	**+0.1**
	3.5nm,0.3s						
KURS				*e*S	**Sg**	**00 57 58.6**	**-0.7**
	7.3nm,0.4s						
KTMS	**Ketmen**	**1.84**	**27**	*e*P	**Pn**	**00 57 32.8**	**+0.4**
	4.9nm,0.1s						
KTMS				*e*S	**Sn**	**00 57 56.5**	**+0.6**
	21nm,0.2s						
KTMS	**Ketmen**	**1.84**	**27**	P	**Pn**	**00 57 32.8**	**+0.4**
	4.9nm,0.1s						
KTMS				S	**Sn**	**00 57 56.5**	**+0.6**
	21nm,0.2s						
TNSS	**Tian-Shan**	**2.06**	**307**	*e*P	**Pb**	**00 57 39.0**	**+0.8**
	2.4nm,0.2s						
TNSS				*e*S	**Sg**	**00 58 06.8**	**+0.2**
	4.6nm,0.4s						
TNSS	**Tian-Shan**	**2.06**	**307**	Pg	**Pb**	**00 57 39.0**	**+0.8**
	2.4nm,0.2s						
TNSS				Lg	Lg	00 58 06.8	
	4.6nm,0.4s						
MDOK	**Medeo**	**2.08**	**311**	*e*P	**Pb**	**00 57 39.0**	**+0.5**
	3.0nm,0.2s						
MDOK				*e*S	**Sg**	**00 58 06.7**	**-0.5**
	16nm,0.4s						
MDOK	**Medeo**	**2.08**	**311**	Pn	**Pb**	**00 57 38.2**	**-0.2**
	1.6nm,0.4s						
MDOK				Sn	**Sg**	**00 58 06.3**	**-0.9**
	4.9nm,0.4s						
MDOK	**Medeo**	**2.08**	**311**	Pg	**Pb**	**00 57 39.0**	**+0.5**
	3.0nm,0.2s						
MDOK				Lg	Lg	00 58 06.7	
	16nm,0.4s						
KOTS	**Kotyrbulak**	**2.09**	**313**	*e*P	**Pb**	**00 57 39.5**	**+0.9**
	4.5nm,0.2s						
KOTS				*e*S	**Sg**	**00 58 07.5**	**-0.1**
	22nm,0.3s						
KOTS	**Kotyrbulak**	**2.09**	**313**	Pg	**Pb**	**00 57 39.5**	**+0.9**
	4.5nm,0.2s						
KOTS				Lg	Lg	00 58 07.5	
	22nm,0.3s						
ULHL	**Ulahol**	**2.23**	**282**	⇑*i*P	**Pb**	**00 57 41.4**	**+0.3**
	baz=82						
ULHL				⇑*i*S	**Sb**	**00 58 10.7**	**+1.7**
	baz=82						
BLB	**Baldybastay**	**2.34**	**347**	Pg	**Pb**	**00 57 42.9**	**+0.1**
	11nm,0.2s						
BLB				Lg	Lg	00 58 13.3	
	27nm,0.2s						
BOOM	**Boomskoye usch**	**2.50**	**287**	⇑*i*P	**Pb**	**00 57 45.1**	**-0.6**
	baz=87						
BOOM				⇑*i*S	**Sb**	**00 58 17.2**	**+0.5**
	baz=87						
DJR	**Jarkent**	**2.55**	**10**	*e*P	**Pb**	**00 57 45.4**	**-1.1**
	1.4nm,0.1s						
DJR				*e*S	**Sb**	**00 58 17.6**	**-0.4**
	20nm,0.2s						
DJR	**Jarkent**	**2.55**	**10**	Pg	**Pb**	**00 57 45.4**	**-1.1**
	1.4nm,0.1s						
DJR				Lg	Lg	00 58 17.6	
	20nm,0.2s						
ARXS	**Arharly**	**2.59**	**338**	*e*P	**Pb**	**00 57 46.8**	**-0.4**
	1.7nm,0.2s						
ARXS				*e*S	**Sb**	**00 58 19.8**	**+0.6**
	6.0nm,0.5s						
ARXS	**Arharly**	**2.59**	**338**	Pg	**Pb**	**00 57 46.7**	**-0.4**
	1.7nm,0.2s						
ARXS				Lg	Lg	00 58 19.8	
	6.0nm,0.5s						
KTBS	**Karatobe**	**2.64**	**317**	*e*P	**Pb**	**00 57 49.0**	**+1.0**
	3.7nm,0.3s						
KTBS				*e*S	**Sg**	**00 58 23.8**	**-1.6**
	9.6nm,0.2s						
KTBS	**Karatobe**	**2.64**	**317**	Pg	**Pb**	**00 57 49.0**	**+1.0**
	3.7nm,0.3s						
KTBS				Lg	Lg	00 58 23.8	
	9.6nm,0.2s						
KST	**Kastek**	**2.68**	**298**	*e*P	**Pb**	**00 57 49.7**	**+1.0**
	2.2nm,0.2s						
KST				*e*S	**Sg**	**00 58 25.0**	**-1.6**
	8.0nm,0.7s						
KST	**Kastek**	**2.68**	**298**	Pg	**Pb**	**00 57 49.7**	**+1.0**
	2.2nm,0.2s						
KST				Lg	Lg	00 58 25.0	
	8.0nm,0.7s						
TKM2	**Tokmak 2**	**2.88**	**294**	⇓Pn	**Pb**	**00 57 50.9**	**-1.3**
	0.7nm,0.6s						
TKM2				⇓Sn	**Sg**	**00 58 31.9**	**-1.1**
	6.6nm,0.8s						
TKM2	**Tokmak 2**	**2.88**	**294**	⇑*i*P	**Pb**	**00 57 50.3**	**-1.8**
	baz=94						
TKM2				⇑*i*S	**Sb**	**00 58 26.2**	**-1.3**
	baz=94						
DGS	**Degeres**	**2.90**	**301**	*e*P	**Pb**	**00 57 51.6**	**-0.7**
	1.3nm,0.4s						
DGS				*e*S	**Sb**	**00 58 28.3**	**+0.4**
	2.8nm,0.4s						
DGS	**Degeres**	**2.90**	**301**	Lg	Lg	00 58 28.3	
	2.8nm,0.4s						
KUU	**Kurty**	**2.95**	**316**	*e*P	**Pb**	**00 57 54.4**	**+1.2**
	0.6nm,0.2s						
KUU				*e*S	**Sg**	**00 58 33.2**	**-2.0**
	6.2nm,0.5s						
KUU	**Kurty**	**2.95**	**316**	Pg	**Pb**	**00 57 54.4**	**+1.2**
	0.6nm,0.2s						
KUU				Lg	Lg	00 58 33.2	
	6.2nm,0.5s						
KRBS	**Karabastau**	**3.20**	**307**	*e*P	**Pb**	**00 57 59.0**	**+1.6**
	0.7nm,0.3s						
KRBS				*e*S	**Sg**	**00 58 41.0**	**-2.1**
	4.9nm,0.2s						
KRBS	**Karabastau**	**3.20**	**307**	Pg	**Pb**	**00 57 59.0**	**+1.6**
	0.7nm,0.3s						
KRBS				Lg	Lg	00 58 41.0	
	4.9nm,0.2s						
KAPS	**Kapalarasan**	**3.47**	**2**	*e*P	**Pb**	**00 58 01.7**	**-0.4**
	1.7nm,0.3s						
KAPS				*e*S	**Sb**	**00 58 46.0**	**+1.7**
	5.5nm,0.3s						
KAPS	**Kapalarasan**	**3.47**	**2**	Pg	**Pb**	**00 58 01.7**	**-0.4**
	1.7nm,0.3s						
KAPS				Lg	Lg	00 58 46.0	
	5.5nm,0.3s						

*IDC **07** 01:23:32.4±4.6, 16°.66S×174°.23W, h104^{km}±32^{km}, mb3.4/4, mb1 3.7/5, mb1mx3.4/25, mbtmp3.8/5, Error ellipse: s-maj=141.7km s-min=23.2km az=145.0*
ISC 07 01:23:33.2±2.3**, 16°.2S**±0°.8×**174°.5W**±0°.6**, h100**^{km}**, n6, σ1^{s}.10**/8**, mb3.5**/4**, Tonga Islands**

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Code  Station Name       Δ°    AZ°   Phase ID        Time      Res
                                     Op     ISC      h  m  s   ISC
AFI   Afiamalu           3.47   50   P      Pn       01 24 26.6 +1.2
      13nm,0.3s,baz=354,slow=5.9,SNR=4.5
AFI                                  S      Sn       01 25 03.8 -1.8
      32nm,0.3s,baz=52,slow=23,SNR=9.4
WRA   Warramunga Arr    48.63  258   P      P        01 32 07.0 -0.3
      0.2nm,0.5s,baz=98,slow=6.8,SNR=5.1
ASAR  Alice Springs     48.86  253   P      P        01 32 08.7 -0.3
      2.9nm,0.6s,baz=88,slow=8.3,SNR=52
ASAR                                 PcP    PcP      01 33 31.5 -0.8
      0.3nm,0.6s,baz=99,slow=5.7,SNR=1.4
ILAR  Eielson Array     83.42   12   P      P        01 35 49.6 +0.6
      0.7nm,0.8s,baz=224,slow=5.7,SNR=7.5
PDAR  Pinedale Array    83.56   42   P      P        01 35 50.5  0.0
      0.2nm,0.5s,baz=204,slow=2.0,SNR=1.6
BRTR  Keskin Array B   146.07  319   PKPbc  PKPdf    01 43 01.1 +0.1
      0.4nm,0.7s,baz=79,slow=3.1,SNR=2.9
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SJA ***07*** *01:34:46.5±0.7, 29°.92S×72°.67W, h26km±7km, ML4.8, MW4.8*

IDC ***07*** *01:34:50.4±0.8, 30°.11S×71°.89W, h0km, mb4.2/9, mb1 4.3/14, mb1mx4.2/30, mbtmp4.2/14, ML4.2/5, MS3.9/8, Ms1 3.9/8, ms1mx3.6/22, Error ellipse: s-maj=24.7km s-min=21.6km az=78.0*

NEIC ***07*** *01:34:52.0±2.3, 30°.03S±0°.04×72°.06W±0°.06, h9km±3km, mb4.8/45, ML4.7(GUC), Error ellipse: s-maj=8.2km s-min=5.1km az=60.0*

VAO ***07*** *01:34:52.7±0.4, 30°.08S×71°.87W, h10km, mb4.6*

GUC ***07*** *01:34:53.1±0.8, 30°.15S×71°.98W, h27km±8km, ML4.7*

ISC 07 01:34:50.1±1.5**, 30°.01S**±0°.02×**72°.15W**±0°.05**, h1**km±9km**, n221, σ1^{s}64**/233**, mb4.8**/31**, MS4.1**/4**, 4C-4D, Off coast of central Chile**

```
Code  Station Name       Δ°    AZ°   Phase ID        Time      Res
                                     Op     ISC      h  m  s   ISC
CO05  La Serena          0.80   84⇓iP     Pg       01 35 06.6 +1.3
CO05                                 iS     Sg       01 35 17.0 +1.3
CO05                                 IAML            01 35 18.7
      comp=E,103µm,0.4s
CO05  La Serena          0.80   84          Pg       01 35 06.7 +1.3
CO05                                        Sg       01 35 16.9 +1.2
CO06  Fray Jorge         0.80  146⇓iP     Pg       01 35 06.0 +0.7
CO06                                 eS     Sg       01 35 14.4 -1.3
CO06  Fray Jorge         0.80  146          Pg       01 35 06.0 +0.7
CO06                                        Sg       01 35 16.5 +0.8
GO04  Tololo Observa     1.18   98⇓iP     Pn       01 35 12.6 -1.3
GO04                                 iS     Sb       01 35 28.3 -1.0
GO04  Tololo Observa     1.18   98          Pn       01 35 12.7 -1.3
CO03  El Pedregal        1.51  124⇓iP     Pn       01 35 17.4 -0.9
CO03                                 iS     Sn       01 35 36.0 -2.7
CO03                                 IAML            01 35 39.9
      comp=E,17µm,0.4s
CO03  El Pedregal        1.51  124   Pn     Pn       01 35 17.4 -0.9
CO03  El Pedregal        1.51  124   eP     Pg       01 35 32.7  +14
CO03                                 eS     Sn       01 35 36.9 -1.8
CO03                                 IAML            01 35 38.9
      comp=Z,11µm,0.6s
LCO   Las Campanas       1.61   52⇑iP     Pn       01 35 19.9  0.0
LCO                                  eS     Sn       01 35 40.4 -1.0
LCO   Las Campanas       1.61   52          Pn       01 35 20.1 +0.2
LCO   Las Campanas       1.61   52   eP     Pn       01 35 20.0 +0.2
LCO                                  eS     Sg       01 35 44.1 +2.3
AC04  Llanos de Chal     2.03   28⇑iP     Pn       01 35 25.2 -0.2
AC04  Llanos de Chal     2.03   28   Pn     Pn       01 35 25.3 -0.2
AC04  Llanos de Chal     2.03   28   eP     Pn       01 35 23.7 -1.7
AROD  Rodeo              2.32   94   eP     Pb       01 35 32.2 -0.8
AROD                                 eS     Sb       01 36 04.3 +2.0
ACDV  Cuesta del Vie     2.63   94   eP     Pb       01 35 36.8 -1.3
ACDV                                 eS     Sg       01 36 14.6  0.0
ACDV                                 IAML            01 36 16.1
      comp=Z,1µm,0.5s
VA06  Catapilco          2.64  164⇑iP     Pn       01 35 33.1 -0.7
VA06                                 IAML            01 36 23.9
      comp=E,3µm,0.4s
ACCO  Cerro Coronel      2.73  103   eP     Pb       01 35 38.8 -1.1
ACCO                                 eS     Sg       01 36 17.7  0.0
GO03  Copiap             2.94   35   i P    Pn       01 35 37.6 -0.3
GO03  Copiap             2.94   35   Pn     Pn       01 35 38.3 +0.3
RTLS  Leoncito           3.03  127   eP     Pb       01 35 42.3 -2.7
RTLS                                 eS     Sb       01 36 23.2 +0.6
RTLS                                 IAML            01 36 29.1
      comp=Z,2µm,0.8s
VA01  Torpederas         3.03  172   eP     Pn       01 35 38.2 -1.0
VA01  Torpederas         3.03  172   Pn     Pn       01 35 38.9 -0.3
VA03  San Esteban        3.06  154   i P    Pn       01 35 40.0 +0.2
VA03                                 eS     Sn       01 36 15.6 -1.6
VA03                                 IAML            01 36 35.0
      comp=N,3µm,0.6s
VA03  San Esteban        3.06  154          Pn       01 35 39.6 -0.1
VA03  San Esteban        3.06  154   eP     Pn       01 35 34.7 -5.0
VA03                                 eP     Pb       01 35 40.3 -5.2
VA03                                 eS     Sb       01 36 19.7 -3.7
VA03                                 IAML            01 36 38.4
      comp=Z,2µm,0.7s
ROCH  El Roble           3.11  162   i P    Pn       01 35 39.9 -0.6
ROCH                                 IAML            01 36 37.1
      comp=N,2µm,0.7s
ROC1  El Roble           3.11  162   eP     Pn       01 35 40.5  0.0
ROC1                                 eS     Sb       01 36 20.7 -4.2
ROC1                                 eS     Sn       01 36 23.2 +4.8
AUSP  Uspallata          3.24  134   eP     Pn       01 35 45.2 +2.9
AUSP                                 eS     Sb       01 36 26.2 -2.3
MT02  Curacav            3.35  165   eP     Pn       01 35 43.0 -0.7
MT02  Curacav            3.35  165          Pn       01 35 44.4 +0.8
MT02  Curacav            3.35  165   eP     Pn       01 35 43.2 -0.4
MT02                                 eS     Sn       01 36 25.7 +1.7
ZON   Zonda              3.35  118   Pn     Pn       01 35 44.7 +1.0
ZON   Zonda              3.35  118   eP     Pn       01 35 46.2 +2.5
ZON                                  eS     Sb       01 36 32.2 +0.5
ZON                                  IAML            01 36 48.5
      comp=Z,1µm,0.8s
PEL   Peldehue           3.36  159   eP     Pn       01 35 43.9 +0.1
PEL                                  IAML            01 36 45.2
      comp=E,1µm,0.8s
PEL   Peldehue           3.36  159   eP     Pn       01 35 43.9 +0.1
PEL                                  eS     Sn       01 36 26.2 +1.8
MT05  Renca              3.58  161   eP     Pn       01 35 46.7 -0.1
MT05                                 IAML            01 36 52.6
      comp=E,2µm,0.4s
MT05  Renca              3.58  161   Pn     Pn       01 35 46.2 -0.6
VA05  Santo Domingo      3.66  173   eP     Pn       01 35 46.9 -1.0
VA05  Santo Domingo      3.66  173          Pn       01 35 47.1 -0.7
VCA   Vinchina           3.67   71   eP     Pn       01 35 46.7 -1.4
VCA                                  eP     Pb       01 35 52.3 -3.5
VCA                                  eS     Sb       01 36 39.8 -1.0
VCA                                  IAML            01 36 59.3
      comp=Z,2µm,1.2s
ASAL  Salagasta          3.83  133   eP     Pn       01 35 53.9 +3.7
ASAL                                 eS     Sb       01 36 46.7 +1.3
ASAL                                 IAML            01 36 59.5
      comp=Z,931nm,1.3s
MT09  Talagante          3.88  166   eP     Pn       01 35 50.8 -0.2
MT09  Talagante          3.88  166          Pn       01 35 51.4 +0.3
MT01  Popeta             3.92  169   i P    Pn       01 35 50.6 -0.7
MT01  Popeta             3.92  169          Pn       01 35 50.7 -0.7
ARCO  CERRO ARCO         3.94  137   eP     Pn       01 35 55.8 +4.0
ARCO                                 eS     Sb       01 36 49.7 +1.1
ARCO                                 eS     Sg       01 36 51.2 -5.5
ARCO                                 IAML            01 37 05.7
      comp=Z,899nm,1.7s
AC02  Maricunga          4.13   41⇑iP     Pn       01 35 55.7 +0.9
AC02  Maricunga          4.13   41   Pn     Pn       01 35 55.8 +1.0
AC02  Maricunga          4.13   41   eP     Pn       01 35 55.8 +1.0
AC02                                 eS     Sb       01 36 51.2 -3.3
AC02                                 IAML            01 37 09.6
      comp=Z,1µm,0.9s
LMEL  Las Melosas        4.17  157   eP     Pn       01 35 55.4 +0.4
AAGR  Agrelo             4.17  138   eP     Pn       01 35 58.6 +3.6
AAGR                                 eS     Sg       01 37 06.7 +2.5
AAGR                                 IAML            01 37 12.1
      comp=Z,1µm,2.6s
BO01  Tunca              4.46  169          Pn       01 35 58.1 -0.7
BO01  Tunca              4.46  169   eP     Pn       01 35 58.5 -0.3
BO01                                 eS     Sb       01 37 01.2 -2.3
ACLC  CERRO LA CRUZ      4.56   84   eP     Pn       01 36 02.3 +2.0
ACLC                                 eS     Sb       01 37 03.2 -3.3
ACLC                                 IAML            01 37 13.6
      comp=Z,1µm,1.2s
APLL  PUNTA DE LOS L     4.88   96   eP     Pn       01 36 06.6 +1.9
APLL                                 eS     Sg       01 37 29.3 +2.4
BO02  Sierra Bellavi     4.91  167          Pn       01 36 04.7 -0.4
BO02  Sierra Bellavi     4.91  167   eP     Pn       01 36 05.1  0.0
BO02                                 eS     Sb       01 37 19.2 +2.8
BO02                                 IAML            01 37 34.4
      comp=Z,409nm,0.8s
GO05  Huala              4.99  178   Pn     Pn       01 36 04.5 -1.6
GO05  Huala              4.99  178   eP     Pn       01 36 04.8 -1.3
GO05                                 eS     Sb       01 37 17.7 -1.0
PB14  IPOC Station P     5.58   17          Pn       01 36 12.7 -1.9
PB14  IPOC Station P     5.58   17   eP     Pn       01 36 12.9 -1.7
PB14                                 eS     Sb       01 37 31.2 -4.9
PB14                                 IAML            01 37 57.7
      comp=Z,260nm,0.6s
RFA   San Rafael         5.68  148   eP     Pn       01 36 17.1 +1.5
RFA                                  eP     Pb       01 36 17.7  -12
RFA                                  eS     Sb       01 37 44.2 +5.7
RFA                                  IAML            01 38 11.9
      comp=Z,212nm,0.8s
ML02  Panimavida         5.77  174   Pn     Pn       01 36 15.6 -1.2
H03N1 Juan Fernandez     6.70  238   T      T        01 43 45.2
      baz=67,slow=72,SNR=2507
H03N2 Juan Fernandez     6.71  238   T      T        01 43 42.9
      baz=67,slow=72,SNR=569
H03N3 Juan Fernandez     6.71  238   T      T        01 43 44.1
      baz=67,slow=72,SNR=1794
AHML  Horco Molle        6.81   63   eP     Pn       01 36 34.7 +3.6
AHML                                 eS     Sb       01 38 03.7 -7.4
AHML                                 IAML            01 38 29.4
      comp=Z,120nm,1.1s
PB15  IPOC Station P     7.19   20   eP     Pn       01 36 31.2 -5.3
PB15                                 eP     Pb       01 36 35.0  -21
PB15                                 eS     Sn       01 37 56.6 -2.3
PB15                                 IAML            01 38 45.9
      comp=Z,274nm,0.9s
PB04  IPOC Station P     7.85   14   Pn     Pn       01 36 43.8 -1.8
LVC   Limon Verde        7.92   22   Pn     Pn       01 36 45.0 -1.7
      comp=Z,1.6nm,0.3s,baz=159,slow=8.3,SNR=14
LVC                                  Sn     Sn       01 38 14.0 -3.3
      comp=Z,2.5nm,0.3s,baz=330,slow=20,SNR=1.3
LVC   Limon Verde        7.92   22   eP     Pn       01 36 47.5 +0.8
LVC   Limon Verde        7.92   22          Pn       01 36 44.9 -1.8
LC01  Cunco              8.87  179          Pn       01 36 57.7 -1.7
PSGCX Pisagua           10.53   11   Pn     Pn       01 37 21.0 -1.3
PLCA  Paso Flores       10.78  173   Pn     Pn       01 37 25.4 -0.2
      comp=Z,0.5nm,0.3s,baz=337,slow=10,SNR=18
PLCA                                 LR     LR       01 41 51.0
      comp=Z,310nm,19.4s,baz=354,slow=40
PLCA  Paso Flores       10.78  173   eP     Pn       01 37 25.5 -0.2
PLCA  Paso Flores       10.78  173          Pn       01 37 25.2 -0.4
LL04  Puerto Octay      10.88  181   Pn     Pn       01 37 26.2 -0.7
ITQB  Itaqui            13.48   92   eP     Pn       01 38 00.4 -2.2
ITQB  Itaqui            13.48   92          Pn       01 38 00.6 -1.9
CPUP  Villa Florida     13.58   78   Pn     Pn       01 38 02.4 -1.4
      comp=Z,0.1nm,0.3s,baz=244,slow=13,SNR=4.4
CPUP                                 LR     LR       01 43 36.8
      comp=Z,591nm,18.6s,baz=260,slow=39
CPUP  Villa Florida     13.58   78   eP     Pn       01 38 02.8 -1.0
CPUP  Villa Florida     13.58   78          Pn       01 38 01.0 -2.8
LPAZ  La Paz            14.15   16   Pn     Pn       01 38 14.7 +2.5
      comp=Z,1.1nm,0.3s,baz=198,slow=5.4,SNR=41
LPAZ                                 LR     LR       01 43 33.8
      comp=Z,168nm,18.4s,baz=193,slow=37
LPAZ  La Paz            14.15   16   eP     Pn       01 38 15.7 +3.4
LPAZ  La Paz            14.15   16   Pn     Pn       01 38 14.3 +2.1
PLTB  Pedras Altas      16.02  101   eP     Pn       01 38 36.4 -0.3
PLTB  Pedras Altas      16.02  101          Pn       01 38 35.8 -0.8
CPSB  Cacapava Do Su    16.18   96   eP     Pn       01 38 37.2 -1.5
SIV   San Ignacio       17.26   39   P      Pn       01 38 53.2 +0.6
      comp=Z,0.6nm,0.3s,baz=222,slow=12,SNR=42
SIV                                  LR     LR       01 46 38.2
      comp=Z,289nm,20.2s,baz=268,slow=41
AQDB  Aquidauana        17.63   61   eP     Pn       01 38 56.5 -0.6
AQDB  Aquidauana        17.63   61   Pn     Pn       01 38 54.6 -2.5
PTGB  Pitanga           18.59   78   eP     P        01 39 07.8 -1.1
PTLB  Pontes e Lacer    18.79   42   eP     Pn       01 39 11.4 +0.1
PTLB  Pontes e Lacer    18.79   42   P      P        01 39 10.8 -0.1
TER01 Tubaro-SC         20.13   92   eP     P        01 39 26.1 +0.5
VILB  Vilhena           20.26   36   eP     P        01 39 27.6 +0.5
VILB  Vilhena           20.26   36          P        01 39 26.4 -0.7
PCMB  Pacaembu          20.56   71   eP     P        01 39 30.0 -0.3
SALV  Santo Antonio     20.62   51   eP     P        01 39 31.0  0.0
ETMB  Extrema           20.84   17   eP     Pn       01 39 35.4 -0.4
ETMB  Extrema           20.84   17          P        01 39 33.2 -0.2
FRTB  Fartura           21.23   77   eP     P        01 39 36.5 -1.0
CZSB  Cruzeiro do Su    22.17  359   eP     P        01 39 50.9 +3.2
CZSB  Cruzeiro do Su    22.17  359   P      P        01 39 48.1 +0.4
CZSB                                 IAmb   IAmb     01 40 14.5
      comp=Z,32nm,0.9s
ITRB  Iturama           22.24   68   eP     P        01 39 47.3 -1.1
SAML  Samuel            22.57   24   eP     P        01 39 52.6 +0.6
SAML  Samuel            22.57   24   P      P        01 39 52.1 +0.2
PET01 Itanhaem-SP       22.83   82   eP     P        01 39 52.2 -2.5
SPB   Sao Paulo         22.95   80   eP     P        01 39 54.1 -1.7
BB19B Bebedouro         23.06   73   eP     P        01 39 55.2 -1.9
PDRB  Porto dos Gac     23.25   41   eP     P        01 39 57.8 -1.3
RCLB  Rio Claro- Sao    23.31   77   eP     P        01 39 57.8 -1.9
ARAG  Araguaiana, MT    23.48   57   eP     P        01 39 59.2 -2.2
CLDB  Colider           24.38   42   eP     P        01 40 08.9 -1.1
IPMB  Ipameri, GO       24.87   67   eP     P        01 40 13.7 -0.8
TBTG  Tabatinga, AM     25.77    5   eP     P        01 40 23.4 +0.9
BSCB  Bom Sucesso       26.23   76   eP     P        01 40 26.1 -0.8
BDFB  Brasilia          26.37   62   P      P        01 40 27.1 -1.0
      comp=Z,9.8nm,0.8s,baz=222,slow=8.9,SNR=12
BDFB  Brasilia          26.37   62   P      P        01 40 27.3 -0.8
BDFB                                 IAmb   IAmb     01 40 27.9
      comp=Z,11nm,0.7s
SNDB  Serra Nova Dou    26.40   52   eP     P        01 40 28.0 -0.3
NPGB  Novo Progresso    27.77   38   eP     P        01 40 40.1 -0.5
DUB01 Friburgo-RJ       27.83   81   eP     P        01 40 40.8 -0.4
DIAM  Diamantina, MG    28.40   72   eP     P        01 40 45.8 -0.6
PEXB  Peixe             28.41   56   eP     P        01 40 45.5 -0.9
CAM01 Campos-RJ         28.55   81   eP     P        01 40 47.8 +0.3
MACA  Manacapuru-AM     28.83   24   eP     P        01 40 50.8 +0.8
MACA  Manacapuru-AM     28.83   24   P      P        01 40 49.8 -0.3
MACA                                 IAmb   IAmb     01 40 50.8
      comp=Z,9.4nm,0.6s
MC01  Montes Claros     28.99   69   eP     P        01 40 51.1 -0.5
JANB  Januaria          29.60   66   eP     P        01 40 56.4 -0.6
ALF01 Guarapari-ES      29.83   79   eP     P        01 40 59.1 +0.2
SJMB  Sao Joao De Ma    30.28   75   eP     P        01 41 02.1 -0.8
BSFB  Barra de Sao F    30.50   76   eP     P        01 41 04.1 -0.7
SDBA  SAO DESIDERIO     30.73   61   eP     P        01 41 06.4 -0.5
SMTB  Santa Maria do    31.16   53   eP     P        01 41 10.7  0.0
PTGA  Pitinga           31.34   24   P      P        01 41 12.2 -0.1
PTGA                                 IAmb   IAmb     01 41 13.6
      comp=Z,14nm,1.1s
NAN01 Guarapari, ES     31.57   75   eP     P        01 41 13.3 -1.0
PRPB  Parauapebas       31.69   46   eP     P        01 41 14.6 -0.8
GUA01 Guaratinga, BA    32.45   73   eP     P        01 41 21.3 -0.7
MALB  Monte Alegre      32.75   35   eP     P        01 41 24.1 -0.6
CMC01 Camacan, BA       33.31   71   eP     P        01 41 29.9 +0.4
NBIT  Itapeh - BA       33.60   71   eP     P        01 41 32.1  0.0
BOAV  Boa Vista         34.09   21   eP     P        01 41 37.0 +0.8
BOAV  Boa Vista         34.09   21   P      P        01 41 36.6 +0.3
BOAV                                 IAmb   IAmb     01 41 37.7
      comp=Z,8.8nm,1.0s
GDU01 Guandu, BA        34.14   69   eP     P        01 41 36.0 -0.9
MCPB  Macapa, AP        35.15   37   eP     P        01 41 45.6 +0.2
NBPN  Ponto Novo - B    35.31   64   eP     P        01 41 46.0 -1.0
TMAB  Tom-Au,PA,Br      35.72   44   eP     P        01 41 51.5 +1.0
ZARC  Zaragoza, Cauc    37.38  356   P      P        01 42 04.7 +0.1
NBMA  Muriti-CE         38.58   61   eP     P        01 42 14.6 -0.2
NBPS  Pedro II - PI     38.60   55   eP     P        01 42 14.8 -0.2
SDV   Santo Domingo     38.70    2   P      P        01 42 16.7 +0.8
NBAN  Anadia - AL       39.10   66   eP     P        01 42 18.3 -0.9
NBPB  Pedra_Branca-C    39.16   58   eP     P        01 42 19.8 +0.1
NBLV  Livramento - P    40.00   63   eP     P        01 42 26.3 -0.4
NBPA  Parau_RN          40.87   61   eP     P        01 42 33.5 -0.4
NBPV  Pedro Velho       41.84   63   eP     P        01 42 41.3 -0.5
CELP  Cerrillos         48.11    7   P      P        01 43 32.6 +1.0
CBYP  Canovanas         48.38    8   P      P        01 43 33.8  0.0
VNA3  Neumayer Olymp    53.09  159   P      P        01 44 08.9 +0.2
VNA1  Neumayer--Stat    53.38  158   P      P        01 44 11.3 +0.5
VNA1  Neumayer--Stat    53.38  158   pP     pP       01 44 13.9 +3.9
VNA2  Neumayer--Watz    53.73  158   P      P        01 44 13.5 +0.1
VNA2  Neumayer--Watz    53.73  158   pP     pP       01 44 16.1 +3.5
SNAA  Sanae             55.32  159   P      P        01 44 25.0  0.0
SNAA  Sanae             55.32  159   pP     pP       01 44 27.8 +3.6
SNAA  Sanae             55.32  159   P      P        01 44 25.0  0.0
SNAA                                 IAmb   IAmb     01 44 36.8
      comp=Z,10nm,0.9s
143A  Socs Landing,     64.99  342   P      P        01 45 33.3 +1.8
X48A  Hartselle         65.64  347   IAmb   IAmb     01 45 48.5
      comp=Z,8.3nm,0.8s
SWET  Sewanee           66.17  348   P      P        01 45 40.6 +1.4
TXAR  Lajitas Array     66.23  330   P      P        01 45 42.6 +2.8
      comp=Z,0.5nm,0.7s,baz=141,slow=8.8,SNR=4.8
CLTN  Cedars of Leba    67.09  348   IAmb   IAmb     01 45 57.8
      comp=Z,6.9nm,0.8s
WVT   Waverly           67.42  346   P      P        01 45 47.8 +0.7
WVT                                  IAmb   IAmb     01 45 59.7
      comp=Z,8.5nm,1.1s
W39A  Magazine          67.99  341   P      P        01 45 52.4 +1.6
W39A                                 IAmb   IAmb     01 46 11.5
      comp=Z,8.1nm,1.1s
HHAR  Hobbs             69.05  341   IAmb   IAmb     01 46 09.3
      comp=Z,5.6nm,0.7s
LIC   Lamto             73.64   73   eP     P        01 46 24.3 -1.4
      comp=Z,83nm,2.1s
TIC   Toumodi           73.88   72   eP     P        01 46 25.4 -1.7
KIC   Kosan Boka        73.95   73   eP     P        01 46 25.8 -1.7
      comp=Z,30nm,0.9s
DBIC  Dimbokro          74.03   72   P      P        01 46 27.8 -0.1
      comp=Z,12nm,0.8s,baz=228,slow=5.5,SNR=12
DBIC                                 LR     LR       02 17 26.8
      comp=Z,102nm,18.9s,baz=222,slow=35
DBIC  Dimbokro          74.03   72   P      P        01 46 28.1 +0.1
MVCO  Mesa Verde        75.04  331   P      P        01 46 34.0 +0.4
SMCO  Snowmass          76.09  333   IAmb   IAmb     01 46 54.0
      comp=Z,5.6nm,0.7s
ECSD  EROS Data Cent    76.73  342   P      P        01 46 43.9 +1.1
ECSD                                 IAmb   IAmb     01 46 55.5
      comp=Z,9.4nm,0.8s
SUR   Sutherland        76.86  120   P      P        01 46 45.1 +0.8
MAW   Mawson            77.02  164   P      P        01 46 43.9 -0.4
      comp=Z,1.1nm,0.8s,baz=247,slow=13,SNR=2.5
MAW   Mawson            77.02  164   IAmb   IAmb     01 46 50.8
      comp=Z,1.1nm,1.5s
KOWA  Kowa              79.10   66   P      P        01 46 57.1 +0.4
KOWA                                 IAmb   IAmb     01 46 58.0
      comp=Z,9.5nm,1.0s
PDAR  Pinedale Array    80.17  333   P      P        01 47 03.4 +1.2
      comp=Z,0.3nm,0.6s,baz=118,slow=5.2,SNR=2.0
B35A  Bob, Littlefor    80.38  346   P      P        01 47 04.1 +1.3
B35A                                 IAmb   IAmb     01 47 33.5
      comp=Z,18nm,1.4s
NVAR  Mina Array Bea    80.57  325   P      P        01 47 06.4 +2.1
      comp=Z,0.1nm,0.3s,baz=160,slow=5.6,SNR=1.9
BOSA  Boshof            82.02  118   P      P        01 47 11.4 -1.0
      comp=Z,5.4nm,1.1s,baz=238,slow=5.1,SNR=3.1
BOSA                                 LR     LR       02 22 01.4
      comp=Z,70nm,18.1s,baz=200,slow=35
BOSA  Boshof            82.02  118   P      P        01 47 12.2 -0.2
BOSA                                 IAmb   IAmb     01 47 23.5
      comp=Z,9.5nm,1.3s
ULM   Lac du Bonnet     82.63  345   P      P        01 47 15.7 +1.0
      comp=Z,2.4nm,0.9s,baz=175,slow=11,SNR=1.5
HLID  Hailey            82.83  330   IAmb   IAmb     01 47 30.3
      comp=Z,4.1nm,0.8s
TORD  Torodi Ar. Bea    82.96   71   P      P        01 47 17.2  0.0
      comp=Z,9.4nm,0.8s,baz=264,slow=5.0,SNR=50
TORD                                 LR     LR       02 22 50.8
      comp=Z,98nm,18.6s,baz=280,slow=35
TORD  Torodi Ar. Bea    82.96   71   P      P        01 47 17.5 +0.3
TORD                                 IAmb   IAmb     01 47 18.4
      comp=Z,8.9nm,0.9s
J08A  Circle Bar Ran    84.47  328   IAmb   IAmb     01 47 38.6
      comp=Z,7.4nm,0.9s
PLID  Pearl Lake        84.73  330   IAmb   IAmb     01 47 39.4
      comp=Z,5.3nm,0.8s
PINE  Pine Mountain     85.95  327   P      P        01 47 34.4 +2.4
PINE                                 IAmb   IAmb     01 47 46.2
      comp=Z,8.4nm,0.8s
JTMT  Jette             86.17  333   P      P        01 47 34.6 +1.8
JTMT                                 IAmb   IAmb     01 47 45.7
      comp=Z,6.2nm,0.9s
H04A  Detroit Lake      87.21  327          P        01 47 38.0  0.0
H04A                                 IAmb   IAmb     01 47 51.5
      comp=Z,9.0nm,1.0s
ESDC  Sonseca Array     93.88   46   LR     LR       02 30 32.9
      comp=Z,65nm,18.3s,baz=275,slow=36
BRTR  Keskin Array B   119.92   59   PKP    PKPdf    01 53 40.5 -1.9
      comp=Z,0.4nm,0.8s,baz=159,slow=3.7,SNR=3.6
WRA   Warramunga Arr   124.17  210   PKP    PKiKP    01 53 51.1 -0.3
      comp=Z,0.2nm,0.4s,baz=160,slow=1.5,SNR=1.5
H11S2 WAKE ISLAND Hy125.64  272   T      T        04 12 41.1
      baz=114,slow=75,SNR=26
H11S1 WAKE ISLAND Hy125.65  272   T      T        04 12 42.6
      baz=114,slow=75,SNR=36
H11S3 WAKE ISLAND Hy125.65  272   T      T        04 12 38.9
      baz=114,slow=75,SNR=26
H11N3 WAKE ISLAND Hy125.95  274   T      T        04 13 12.1
      baz=116
H11N1 WAKE ISLAND Hy125.96  274   T      T        04 13 19.0
      baz=116
H11N2 WAKE ISLAND Hy125.96  274   T      T        04 13 18.0
      baz=116,SNR=3.3
CHGR  Chuyangaron      147.10   64   PKPbc  PKPdf    01 54 33.3 +0.4
KKAR  Karatay Array    147.56   56   PKPbc  PKPbc    01 54 35.1 -0.9
GAR   Garm             147.98   64   PKPbc  PKiKP    01 54 38.2 -1.1
KURK  Kurchatov        149.92   38   PKPbc  PKiKP    01 54 41.9 -0.8
HYB   Hyderabad        150.49  108 i PKP    PKiKP    01 54 44.0 -0.9
ZALV  Zalesovo Beam    150.84   28   PKPbc  PKiKP    01 54 44.8 +0.3
      comp=Z,13nm,0.6s,baz=296,slow=3.2,SNR=58
KSH   Kashi            152.27   61   PKPbc  PKPdf    01 54 43.6 +2.5
MKAR  Makanchi Array   154.05   43   PKPbc  PKiKP    01 54 51.0 -0.5
      comp=Z,1.0nm,0.7s,baz=0.0,slow=1.3,SNR=4.6
SONM  Songino Array    162.17    3   PKPab  PKPab    01 55 39.9  0.0
      comp=Z,0.4nm,0.3s,baz=346,slow=5.2,SNR=1.9
```

IDC ***07*** *01:41:41.5±2.0, 17°.45S×167°.78E, h0km, mb4.1/7, mb1 4.3/8, mb1mx4.0/27, mbtmp4.1/8, ML4.5/1, MS3.6/4, Ms1 3.6/4, ms1mx3.1/36, Error ellipse: s-maj=51.7km s-min=26.9km az=122.0*

NOU ***07*** *01:41:43.6, 17°.49S×168°.08E, h23km, MLv5.2/13, Vanuatu Islands*

NEIC ***07*** *01:41:45.1±1.2, 17°.6S±0°.1×167°.9E±0°.1, h24km±7km, mb4.5/10, Error ellipse: s-maj=18.3km s-min=12.4km az=139.0*

ISC 07 01:41:44.6±0.7**, 17°.61S**±0°.08×**167°.98E**±0°.07**, h27**km**, n39, σ1^{s}05**/37**, mb4.4**/11**, Vanuatu Islands**

```
Code  Station Name       Δ°    AZ°   Phase ID        Time      Res
                                     Op     ISC      h  m  s   ISC
DVP   Devils Point       0.23  120   P      Pb       01 41 51.3 +0.5
RTV   Rentapao           0.46  113   P      Pb       01 41 53.9 -0.4
LIFNC LIFOU              3.23  192   Pn     Pn       01 42 31.3 -2.2
MARNC Mare, Loyalty      3.85  179          Pn       01 42 40.1 -2.0
YATNC Mamie plateau,     4.54  193   P      Pn       01 42 52.5 +0.9
KOUNC Koumac, New Ca     4.55  229   P      Pn       01 42 53.4 +1.7
DZM   Mont Dzumac        4.67  198   ePn    Pn       01 42 54.0 +0.6
      63nm,0.3s
DZM                                  eSn    Sn       01 43 47.7 +1.0
      49nm,0.2s
DZM   Mont Dzumac        4.67  198   Pn     Pn       01 42 54.1 +0.8
      20nm,0.3s,baz=35,slow=16,SNR=136
DZM                                  Sn     Sn       01 43 47.0 +0.3
      15nm,0.3s,baz=331,slow=23,SNR=12
DZM   Mont Dzumac        4.67  198          Pn       01 42 53.6 +0.3
DZM   Mont Dzumac        4.67  198   P      Pn       01 42 54.3 +0.9
NOUC  Port Laguerre      4.74  199   P      Pn       01 42 55.7 +1.4
ONTNC Ouen Toro          4.89  197          Pn       01 42 56.2 -0.1
ONTNC Ouen Toro          4.89  197   P      Pn       01 42 57.9 +1.6
OUENC Ouen Island, N     4.90  192          Pn       01 42 57.0 +0.5
OUENC Ouen Island, N     4.90  192   P      Pn       01 42 58.2 +1.7
PINNC Pines Island,      5.00  186          Pn       01 42 57.9  0.0
MSVF  Nonsavu            9.60   92   LR     LR       01 47 03.0
      comp=Z,322nm,18.1s,baz=242,slow=33
MSVF  Nonsavu            9.60   92   Pn     Pn       01 44 02.8 +1.6
HNR   Honiara           11.27  315   LR     LR       01 47 46.5
      comp=Z,147nm,21.4s,baz=148,slow=33
CTA   Charters Tower    20.70  260   P      P        01 46 22.1 -0.8
      1.2nm,0.6s,baz=90,slow=12,SNR=1.6
STKA  Stephens Creek    27.76  234   P      P        01 47 31.9 +0.7
      1.5nm,0.5s,baz=56,slow=10,SNR=5.3
STKA                                 LR     LR       01 58 26.6
      comp=Z,81nm,18.5s,baz=27,slow=36
WR0   Warramunga Arr    31.71  260   P      P        01 48 05.5 -0.9
WR0                                  IAmb   IAmb     01 48 16.0
      comp=Z,9.4nm,1.5s
WB0   Warramunga Arr    31.86  261   P      P        01 48 07.1 -0.6
WB0                                  IAmb   IAmb     01 48 07.6
      comp=Z,3.8nm,0.7s
WB2   Warramunga Arr    31.89  260   P      P        01 48 06.8 -1.2
WB2                                  IAmb   IAmb     01 48 07.6
```

	comp=Z,4.8nm,1.1s						
WRA	Warramunga Arr	31.90	260	P	P	01 48 07.3	-0.7
	comp=Z,1.5nm,0.7s,baz=80,slow=6.5,SNR=20						
AS31	Alice Springs	32.40	253	P	P	01 48 11.5	-0.9
ASAR	Alice Springs	32.40	253	P	P	01 48 12.2	-0.2
	comp=Z,5.6nm,0.7s,baz=79,slow=9.0,SNR=70						
KNRA	Kununurra	37.58	267	P	P	01 48 56.4	-0.7
KNRA				IAmb	IAmb	01 49 23.2	
	comp=Z,9.0nm,0.9s						
FAKI	Fak Fak	37.96	289	P	P	01 48 58.9	-1.5
FITZ	Fitzroy Crossi	40.24	263	P	P	01 49 19.5	+0.1
FITZ				IAmb	IAmb	01 49 20.4	
	comp=Z,10.0nm,0.9s						
BATI	Baumata	43.56	274	LR	LR	02 06 49.8	
	comp=Z,264nm,18.1s,baz=296,slow=35						
CMAR	Chiang Mai Arr	76.75	294	P	P	01 53 34.5	+0.5
	comp=Z,0.8nm,0.3s,baz=134,slow=4.5,SNR=7.2						
ULN	Ulaanbaatar	84.85	324	P	P	01 54 16.2	-0.7
SONM	Songino Array	85.20	324	P	P	01 54 17.9	-0.8
	comp=Z,2.8nm,0.9s,baz=145,slow=5.7,SNR=10						
SONM	Songino Array	85.20	324	IAmb	IAmb	01 54 18.6	
	comp=Z,3.2nm,1.0s						
ILAR	Eielson Array	89.05	18	P	P	01 54 38.1	+1.4
	comp=Z,0.5nm,0.7s,baz=230,slow=7.0,SNR=1.5						
SNAA	Sanae	90.72	183	P	P	01 54 44.2	-0.5
VNA3	Neumayer Olymp	91.36	181	P	P	01 54 46.9	-0.7
VNA2	Neumayer--Watz	91.64	182	P	P	01 54 48.6	-0.3

IDC 07 02:24:54.0±2.1**, 8°.20S×125°.63E, h0^{km}, mb3.8**/1**, mb1 3.8**/3**, mb1mx3.4**/36**, mbtmp3.6**/3**, ML3.5**/2**, MS4.0**/2**, Ms1 4.0**/2**, ms1mx2.9**/41**, Error ellipse: s-maj=167.4km s-min=33.2km az=60.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.40	145	Pn	Pn	02 28 17.7	-1.7
	0.3nm,0.3s,baz=319,slow=13,SNR=15						
WRA				Sn	Sn	02 30 56.0	-3.9
	0.1nm,0.3s,baz=312,slow=24,SNR=4.4						
ASAR	Alice Springs	17.30	154	P	P	02 28 58.2	-0.5
	0.1nm,0.3s,baz=323,slow=10,SNR=9.4						
HNR	Honiara	33.93	95	LR	LR	02 46 45.1	
	comp=Z,208nm,18.2s,baz=282,slow=39						
JCJ	Chichijima	38.59	24	LR	LR	02 47 45.9	
	comp=Z,205nm,18.6s,baz=121,slow=36						
MKAR	Makanchi Array	66.94	329	P	P	02 35 48.5	+0.1
	0.6nm,0.7s,baz=142,slow=8.9,SNR=2.4						

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*MOS **07** 02:30:18.5±0.9, 3°.10S×137°.41E, h27^{km}, mb5.2/25, Error ellipse: s-maj=11.4km s-min=6.4km az=108.7*

*BJI **07** 02:30:19.6±0.0, 3°.48S×137°.76E, h63^{km}, mB5.1/33, mb4.8/59, Ms4.6/21, Ms7 4.3/23*

*IDC **07** 02:30:22.6±1.7, 3°.08S×137°.58E, h42^{km}±16^{km}, mb4.3/20, mb1 4.5/26, mb1mx4.3/44, mbtmp4.6/26, ML4.5/7, MS4.0/19, Ms1 4.0/19, ms1mx3.9/28, Error ellipse: s-maj=11.9km s-min=10.4km az=109.0*

*DJA **07** 02:30:23.9±0.3, 3°S±3°×13°8E±°, h58^{km}±3^{km}, M5.0/45, mB5.5/30, mb5.2/45, MLv5.4/7, Mw(mB)4.9/30, MwMwp4.7/3, Mwp5.0/3*

*NEIC **07** 02:30:23.3±2.2, 3°.07S±0°.08×137°.44E±0°.06, h45^{km}±5^{km}, mb5.0/77, Error ellipse: s-maj=11.3km s-min=8.4km az=196.0*

*GCMT **07** 02:30:26.3±0.2, 2°.81S±0°.01×137°.61E±0°.02, h47^{km}±1^{km}, MW5.1/84, Moment Tensor Solution. s64,c86; s84,c126; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.93±.19; M$_{\theta\theta}$-4.67±.12; M$_{\phi\phi}$0.74±.16; M$_{r\theta}$-0.83±.12; M$_{\theta\phi}$2.12±.10; M$_{\phi r}$2.02±.13; Best double couple: M$_0$5.27000×10^{16} NP1:φ$_s$85.00000°, δ42.00000°, λ51.00000°. NP2: φ$_s$312.00000°, δ58.00000°, λ119.00000°. Principal axes: T 4.9130, Plg64.0000°, Azm273.0000°; N 0.7160, Plg25.0000°, Azm115.0000°; P -5.6270, Plg9.0000°, Azm21.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 02:30:23.3±0.3**, 3°.15S**±0°.04×**137°.48E**±0°.04**, h54^{km}, n260,** σ1^{s}**44**/253**, mb4.9**/85**, MS4.0**/23**, 10C, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMPI	Sarmi	1.69	47	P	Pn	02 30 48.5	-1.9
SMPI				S	Sn	02 31 06.1	-4.7
SRPI	Serui, Papua	1.78	316	P	Pn	02 30 51.3	-0.3
BAKI	Biak	2.38	325	P	Pn	02 30 58.9	-1.0
JAY	Jayapura	3.28	79	P	Pn	02 31 10.9	-1.4
	22nm,0.3s,baz=230,slow=9.3,SNR=60						
JAY				S	Sn	02 31 46.7	-3.4
	36nm,0.3s,baz=65,slow=22,SNR=5.5						
FAKI	Fak Fak	5.23	272	P	Pn	02 31 39.4	+0.4
	2.9nm4μm4μm339nm,0.8s						
FAKI	Fak Fak	5.23	272	Pn	Pn	02 31 39.1	+0.1
FAKI	Fak Fak	5.23	272	P	Pn	02 31 40.2	+1.2
SIJI	Sorong	6.61	290	P	Pn	02 31 58.0	+0.1
	17nm,0.3s,baz=88,slow=11,SNR=48						
SIJI				S	Sn	02 33 08.9	-3.1
	12nm,0.3s,baz=289,slow=22,SNR=6.6						
SIJI				LR	LR	02 35 30.0	
	comp=Z,2μm,20.2s,baz=74,slow=46						
SWI	Sorong	6.62	290	P	Pn	02 31 58.6	+0.6
	1.3nm3μm260nm,0.7s						
BNDI	Bandanaira	7.68	260	P	Pn	02 32 17.8	+5.2
	5.9nm3μm8μm379nm,0.6s						
MSAI	Masohi	8.54	268	P	Pn	02 32 28.0	+3.6
MANU	Manus Island	9.94	84		Pn	02 32 44.3	+0.8
LBMI	Labuha	10.28	284	P	Pn	02 32 49.6	+1.4
	1μm117nm,0.9s						
KDU	Kakadu	10.69	207	P	Pn	02 32 54.3	+0.5
	baz=11,SNR=139						
KDU				S	Sn	02 34 51.1	-0.9
	baz=11						
TNTI	Ternate	10.84	291	P	Pn	02 32 57.5	+1.7
	4μm32nm,0.7s						
TNTI	Ternate	10.84	291	Pn	Pn	02 32 55.5	-0.3
PMG	Port Moresby	11.45	123	P	Pn	02 33 05.6	+1.5
	2.5nm,0.3s,baz=304,slow=10,SNR=18						
PMG				S	Sn	02 35 12.1	+1.5
	1.4nm,0.3s,baz=238,slow=19,SNR=1.1						
MTN	Manton Dam	11.50	213	P	Pn	02 33 06.3	+1.6
	baz=12,SNR=104						
MTN	Manton Dam	11.50	213	Pn	Pn	02 33 05.3	+0.5
SANI	Sanana	11.53	275	P	Pn	02 33 03.8	-1.5
	873nm100nm,1.1s						
COEN	Coen	12.12	153	P	Pn	02 33 13.7	+0.3
	baz=12						
COEN	Coen	12.12	153	Pn	Pn	02 33 12.9	-0.4
KMSI	Cibinong	13.99	285	P	Pn	02 33 39.4	+0.5
	5μm513nm,0.8s						
SOEI	Soe	14.67	243	P	Pn	02 33 47.9	0.0
	3μm439nm,1.1s						
RABL	Rabaul	14.69	94	Pn	Pn	02 33 49.4	+1.4
LUWI	Luwuk	14.85	278	P	Pn	02 33 50.6	+0.4
	3μm255nm,1.1s						
LUWI	Luwuk	14.85	278		Pn	02 33 50.5	+0.4
GTOI	Gorontalo	14.95	284	P	P	02 33 54.0	-1.9
	776nm68nm,0.8s						
KNRA	Kununurra	15.12	214	P	Pn	02 33 53.6	+0.1
	baz=15,SNR=138						
KNRA	Kununurra	15.12	214	Pn	Pn	02 33 53.7	+0.1
BATI	Baumata	15.40	242	P	P	02 33 59.7	-1.3
	5.0nm,0.3s,baz=102,slow=6.1,SNR=16						
BATI				S	Sn	02 36 46.7	-0.4
	13nm,0.3s,baz=105,slow=16,SNR=2.2						
BATI	Baumata	15.40	242	P	Pn	02 33 58.8	+1.5
	2μm265nm,0.8s						
DAV	Davao City (W)	15.63	311	LR	LR	02 40 03.5	
	comp=Z,257nm,20.5s,baz=154,slow=37						
MRSI	Marisa	15.95	283	P	Pn	02 34 04.2	-0.1
	2μm303nm,1.1s						
APSI	Ampana	15.98	278	P	Pn	02 34 06.0	+1.3
	3μm216nm,1.3s						
MMRI	Maumere	16.11	250	Pn	Pn	02 34 06.7	+0.4
MTSU	Mount Surprise	16.33	156	P	P	02 34 10.5	-0.7
	baz=16,SNR=29						
EDFI	Ende, Flores	16.66	250	P	Pn	02 34 14.1	+0.8
	27nm,1.0s						
WB0	Warramunga Arr	16.79	190		Pn	02 34 14.2	-0.7
WB0				IAmb	IAmb	02 34 20.2	
	comp=Z,98nm,0.8s						
WR0	Warramunga Arr	16.95	190	Pn	Pn	02 34 16.0	-0.8
WR0				IAmb	IAmb	02 34 37.4	
	comp=Z,166nm,0.9s						
WRAB	Tennant Creek	16.96	190	*ce*P	Pn	02 34 15.0	-1.9
WRAB				pmax	pmax		
	comp=Z,54nm,1.7s						
WRAB	Tennant Creek	16.96	190		Pn	02 34 16.3	-0.6
WRAB				IAmb	IAmb	02 34 23.6	
	comp=Z,148nm,0.8s						
WB2	Warramunga Arr	16.97	190	P	Pn	02 34 16.8	-0.3
	baz=17						
WB2	Warramunga Arr	16.97	190		Pn	02 34 16.1	-1.0
WB2				IAmb	IAmb	02 34 23.8	
	comp=Z,136nm,0.7s						
WRA	Warramunga Arr	16.97	190	P	Pn	02 34 16.2	-0.8
	comp=Z,0.8nm,0.3s,baz=8.5,slow=12,SNR=60						
WRA				S	Sn	02 37 16.0	-8.9
	comp=Z,1.6nm,0.3s,baz=9.2,slow=22,SNR=4.9						
WRA				LR	LR	02 41 19.3	
	comp=Z,2μm,21.6s,baz=15,slow=38						
WRA	Warramunga Arr	16.97	190	P	Pn	02 34 17.4	+0.3
WRA				pmax	pmax		
	comp=Z,19nm,0.9s						
WRA	Warramunga Arr	16.97	190		Pn	02 34 17.4	+0.3
BSSI	Bau Bau, Buton	17.19	259	P	P	02 34 21.9	+1.1
	comp=Z,792nmcomp=Z,60nm,1.1s						
TOLI2	Tolitoli	17.22	284	Pn	Pn	02 34 18.7	-1.6
QIS	Mount Isa	17.42	173	P	P	02 34 24.2	+0.9
	baz=18,SNR=33						
BKSI	Bulukumba	17.45	262	P	P	02 34 24.7	+1.1
	comp=Z,878nmcomp=Z,54nm,1.1s						
TTSI	Tana Toraja	17.64	270	P	P	02 34 27.8	+2.1
	comp=Z,2μmcomp=Z,147nm,1.1s						
KAPI	Kappang	17.78	263	P	P	02 34 28.8	+1.5
	comp=Z,0.6nm,0.3s,baz=89,slow=7.5,SNR=9.3						
KAPI	Kappang	17.78	263	Pn	Pn	02 34 24.8	-2.3
MPSI	Mapaga	17.91	281	P	P	02 34 30.0	+1.2
	comp=Z,1μmcomp=Z,47nm,0.9s						
FITZ	Fitzroy Crossi	18.85	217	P	Pn	02 34 40.5	+0.4
	comp=Z,2.2nm,0.3s,baz=34,slow=12,SNR=56						
FITZ				S	Sn	02 38 01.7	-8.7
	comp=Z,6.6nm,0.3s,baz=85,slow=17,SNR=10						
FITZ				LR	LR	02 42 47.3	
	comp=Z,839nm,18.4s,baz=36,slow=39						
FITZ	Fitzroy Crossi	18.85	217	P	Pn	02 34 41.0	+1.0
	baz=19,SNR=74						
FITZ	Fitzroy Crossi	18.85	217	P	Pn	02 34 40.0	0.0
FITZ				IAmb	IAmb	02 34 59.3	
	comp=Z,118nm,0.8s						
CTA	Charters Tower	18.89	154	P	Pn	02 34 40.5	+0.1
	comp=Z,1.1nm,0.3s,baz=337,slow=12,SNR=21						
CTA				LR	LR	02 42 45.9	
	comp=Z,1μm,19.8s,baz=339,slow=39						
CTAO	Charters Tower	18.89	154	P	P	02 34 39.8	+0.4
CTAO				pmax	pmax		
	comp=Z,38nm,0.9s						
CTAO	Charters Tower	18.89	154	P	P	02 34 39.8	+0.4
WBSI	Waikabubak, Su	19.09	249	P	P	02 34 42.3	+0.6
	comp=Z,76nm,0.9s						
PLAI	Plampang	20.39	253	P	P	02 34 54.0	-1.8
	comp=Z,63nm,1.1s						
SMKI	Samarinda	20.44	277	P	Pn	02 35 00.9	+2.0
AS31	Alice Springs	20.68	189	P	Pn	02 35 00.8	-1.0
ASAR	Alice Springs	20.68	189	P	Pn	02 35 00.7	-1.1
	comp=Z,102nm,0.7s,baz=18,slow=11,SNR=580						
ASAR				S	S	02 38 44.5	-2.8
	comp=Z,17nm,1.1s,baz=10,slow=26,SNR=5.3						
ASAR				LR	LR	02 43 35.1	
	comp=Z,1μm,19.4s,baz=12,slow=38						
KBKI	Kotabaru	21.28	269	P	P	02 35 07.3	+1.8
	comp=Z,44nm,1.1s						
SPMM	Sapulut	22.40	290	P	P	02 35 20.0	+2.4
BBKI	Banjar Baru	22.61	269	P	P	02 35 21.8	+2.1
	comp=Z,7μmcomp=Z,78nm,0.7s						
WRKA	Warakurna	23.49	201	P	P	02 35 29.1	+0.7
	baz=24,SNR=45						
KMMI	Kalianget	23.73	260	P	P	02 35 33.2	+2.4
	comp=Z,2μmcomp=Z,148nm,1.2s						
QLP	Quilpie	24.18	165	P	P	02 35 36.1	+1.4
	baz=24,SNR=7.5						
GMJI	Gumukmas	24.45	257	P	P	02 35 37.7	+0.4
	comp=Z,32nm,1.1s						
PSA00	Pilbara Seismi	25.08	222	P	P	02 35 43.4	+0.4
PSA00				IAmb	IAmb	02 36 11.2	
	comp=Z,49nm,1.0s						
PSA00	Pilbara Seismi	25.08	222	P	P	02 35 42.6	-0.3
PSA00				IAmb	IAmb	02 36 05.0	
	comp=Z,20nm,0.8s						
EIDS	Eidsvold	25.68	151	P	P	02 35 51.5	+3.2
	baz=26,SNR=9.6						
EIDS	Eidsvold	25.68	151	P	P	02 35 50.5	+2.2
EIDS				IAmb	IAmb	02 36 09.1	
	comp=Z,75nm,1.3s						
STKI	Sintang	26.19	277	P	P	02 35 54.3	+1.2
	comp=Z,7μmcomp=Z,16nm,0.5s						
STKA	Stephens Creek	28.84	173	P	P	02 36 17.1	+0.6
	comp=Z,1.7nm,0.5s,baz=346,slow=7.5,SNR=8.9						
STKA				LR	LR	02 48 52.5	
	comp=Z,295nm,20.9s,baz=349,slow=38						
STKA	Stephens Creek	28.84	173	P	P	02 36 17.1	+0.6
	baz=29,SNR=5.9						
STKA	Stephens Creek	28.84	173	P	P	02 36 17.2	+0.6
FORT	Forrest	28.89	197	P	P	02 36 17.5	+0.5
FORT				IAmb	IAmb	02 36 36.5	
	comp=Z,31nm,0.8s						
CMSA	Cobar Meteorol	29.28	166	P	P	02 36 22.3	+1.8
	baz=29						
BBOO	Buckleboo	29.53	182	P	P	02 36 24.4	+1.6
ARMA	Armidale	30.24	155	P	P	02 36 32.4	+3.2
JOW	Kunigami	31.11	344	LR	LR	02 47 27.0	
	comp=Z,279nm,21.8s,baz=94,slow=33						
MORW	Morawa	32.86	216	P	P	02 36 52.8	+0.7
MORW				IAmb	IAmb	02 37 20.7	
	comp=Z,28nm,1.2s						
MDSI	Maura Dua	33.25	267	P	P	02 36 56.0	+0.2
	comp=Z,1μmcomp=Z,13nm,1.2s						
CAN	Canberra	33.74	163	P	P	02 36 59.4	-0.4
CAN				pmax	pmax		
	comp=Z,28nm,1.1s						
CAN	Canberra	33.74	163	P	P	02 36 59.4	-0.4
CAN				IAmb	IAmb	02 37 21.4	
	comp=Z,28nm,1.1s						
DZM	Mont Dzumac	33.82	126	*e*LR	LR	02 46 11.5	
	comp=Z,690nm,26.1s						
CNB	Canberra Magne	33.85	162	P	P	02 37 05.7	+5.0
	baz=34,SNR=7.0						
QIZ	Qiongzhong	35.00	310	P	P	02 37 11.2	+0.4
QIZ				S	S	02 42 42.0	+2.7
QIZ				pmax	pmax		
	comp=Z,32nm,1.3s						
QIZ	Qiongzhong	35.00	310	P	P	02 37 11.0	+0.1
NWAO	Narrogin (SRO)	35.17	210	P	P	02 37 11.8	-0.4
	comp=Z,16nm,1.0s,baz=56,slow=8.9,SNR=4.3						
NWAO	Narrogin (SRO)	35.17	210	P	P	02 37 12.0	-0.1
NWAO				pmax	pmax		
	comp=Z,22nm,1.2s						
NWAO	Narrogin (SRO)	35.17	210	P	P	02 37 12.0	-0.1
NWAO				IAmb	IAmb	02 37 14.3	
	comp=Z,22nm,1.1s						
MASI	Maura Aman, Be	35.19	269	P	P	02 37 13.8	+1.2
	comp=Z,54nm,1.4s						
JRMM	Jerantut	35.67	281	P	P	02 37 18.0	+1.3
BKNI	Bangkinang	36.59	275	P	P	02 37 25.5	+1.0
	comp=Z,9μmcomp=Z,182nm,0.9s						
BKNI	Bangkinang	36.59	275	P	P	02 37 25.1	+0.6
UBPT	Khong Chiam	36.60	301	P	P	02 37 24.1	-0.4
JNU	Nakatsue	36.61	351	P	P	02 37 23.4	-1.1
	comp=Z,10nm,0.9s,baz=120,slow=4.1,SNR=3.9						
JNU	Nakatsue	36.61	351	IAmb	IAmb	02 37 42.1	
	comp=Z,24nm,1.1s						
PDSI	Padang	37.06	273	P	P	02 37 27.9	-0.7
	comp=Z,3μmcomp=Z,24nm,1.0s						
PPI	Padang Panjang	37.16	273	P	P	02 37 29.5	+0.1
	comp=Z,58nm,0.9s						
IPM	Ipoh	37.21	282	P	P	02 37 30.0	+0.2
KULM	Kulim	37.73	283	P	P	02 37 35.0	+0.8
MNSI	Mandailing Nat	38.09	275	P	P	02 37 36.8	-0.4
	comp=Z,24nm,0.4s						
SISI	Saibi	38.40	272	P	P	02 37 39.0	-0.9
	comp=Z,38nm,1.0s						
RPSI	Rantau Prapat	38.98	278	P	P	02 37 43.4	-1.2
RPSI				IAmb	IAmb	02 37 45.7	
	comp=Z,43nm,1.0s						
PSI	Prapat	38.99	278	P	P	02 37 43.4	-1.6
PSI				pmax	pmax		
	comp=Z,43nm,1.0s						
NJ2	Nanjing	39.23	335	*e*P	P	02 37 48.6	+2.1
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
MJAR	Matsushiro Arr	39.49	1	P	P	02 37 48.8	+0.2
	comp=Z,1.1nm,0.6s,baz=170,slow=7.4,SNR=2.3						
MJAR				LR	LR	02 51 49.9	
	comp=Z,213nm,20.7s,baz=155,slow=33						
MJB9	Matsu-Tunnel	39.50	1	P	P	02 37 47.0	-1.7
GSI	Gunungsitoli	40.14	276	P	P	02 37 53.4	-1.0
	comp=Z,52nm,1.2s						
GSI	Gunungsitoli	40.14	276	P	P	02 37 52.9	-1.4
GSI				IAmb	IAmb	02 37 54.3	
	comp=Z,32nm,0.8s						
SLVN	Son La	40.90	308	IAmb	IAmb	02 38 03.0	
	comp=Z,45nm,1.0s						
LHMI	Lhok Sumawe	41.34	282	P	P	02 38 05.4	+1.2
	comp=Z,214nm,1.0s						
LHMI	Lhok Sumawe	41.34	282	P	P	02 38 02.9	-1.3
KSAR	Wonju Array Be	41.36	348	P	P	02 38 03.7	-0.4
KSAR	Wonju Array Be	41.36	348	P	P	02 38 03.6	-0.4
KSRS	Korea Array	41.37	348	LR	LR	02 54 43.3	
	comp=Z,147nm,18.5s,baz=158,slow=35						
GYA	Guiyang	41.88	317	⇑P	P	02 38 09.5	+0.8
GYA				pP	sP	02 38 28.4	-0.7
GYA				PP	PP	02 39 45.2	-1.3
GYA				S	S	02 44 23.5	+0.3
GYA				pmax	pmax		
	comp=Z,16nm,1.2s						
GYA				LR	LR		
	comp=Z,220nm,18.4s						
ENH	Enshi	42.66	323	P	P	02 38 14.4	-0.4
ENH				IAmb	IAmb	02 38 17.2	
	comp=Z,26nm,1.0s						
CM31	Chiang Mai Arr	43.60	301	P	P	02 38 23.2	+0.6
CMAR	Chiang Mai Arr	43.60	301	P	P	02 38 23.8	+1.2
	comp=Z,40nm,1.0s,baz=125,slow=6.6,SNR=110						
CMAR				LR	LR	02 56 08.8	
	comp=Z,54nm,21.5s,baz=175,slow=35						
CMAR	Chiang Mai Arr	43.60	301	*ce*P	P	02 38 23.7	+1.2
CMAR				pmax	pmax		
	comp=Z,41nm,1.0s						
CMAR	Chiang Mai Arr	43.60	301	P	P	02 38 22.4	-0.2
CHTO	Chiang Mai	43.76	301	P	P	02 38 24.4	+0.6
CHTO				pmax	pmax		
	comp=Z,49nm,1.0s						
CHTO	Chiang Mai	43.76	301	P	P	02 38 24.4	+0.6
KMI	Kunming	43.89	312	⇑P	P	02 38 26.3	+1.3
KMI				pP	pP	02 38 41.4	+2.1
KMI				sP	sP	02 38 48.8	+3.3
KMI				pmax	pmax		
	comp=Z,39nm,1.1s						
KMI				pmax	pmax		
	comp=Z,140nm,3.5s						
KMI				LR	LR		
	comp=Z,140nm,16.1s						
KMI				LR	LR		
	comp=Z,160nm,20.6s						
KMI				LR	LR		
	comp=Z,280nm,25.1s						
XAN	Xi'an	45.75	326	P	P	02 38 39.4	-0.1
XAN				pP	pP	02 38 56.3	+2.5
XAN				pmax	pmax		
	comp=Z,12nm,1.4s						
BJT	Baijiatuau	47.20	338	IAmb	IAmb	02 39 09.5	
	comp=Z,9.3nm,0.7s						
BJI	Beijing	47.22	338	P	P	02 38 50.7	-0.1
BJI				pP	pP	02 39 06.2	+1.0
BJI				PcP	PcP	02 40 22.9	+1.4
BJI				pmax	pmax		
	comp=Z,11nm,1.1s						
USRK	Ussuriysk Ar.	47.40	355	P	P	02 38 52.6	+0.5
	comp=Z,3.1nm,0.6s,baz=171,slow=13,SNR=5.8						
USRK	Ussuriysk Ar.	47.40	355	P	P	02 38 52.4	+0.3
HHC	Hu-ho-hao-te	49.78	334	*e*P	P	02 39 12.7	+2.0
HHC				pmax	pmax		
	comp=Z,16nm,1.2s						
HHC				pmax	pmax		
	comp=Z,90nm,7.6s						
HHC				LR	LR		
	comp=Z,310nm,14.8s						
HHC				LR	LR		
	comp=Z,220nm,17.3s						
HHC				LR	LR		
	comp=Z,300nm,19.0s						
LZH	Lanzhou	50.11	324	*e*P	P	02 39 14.8	+1.5
LZH				pP	pP	02 39 30.8	+3.0
LZH				sP	sP	02 39 39.1	+5.1
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
LZH				pmax	pmax		
	comp=Z,110nm,4.1s						
LZH				LR	LR		
	comp=Z,230nm,17.0s						
LZH				LR	LR		
	comp=Z,250nm,16.4s						
LZH				LR	LR		
	comp=Z,270nm,17.9s						
KLR	Kul'dur	52.41	355	P	P	02 39 30.5	+0.4
	comp=Z,3.9nm,0.5s,baz=180,slow=5.7,SNR=11						
KLR	Kul'dur	52.41	355	*ce*P	P	02 39 30.2	+0.1
KLR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
SHL	Shillong	52.59	306	P	P	02 39 32.4	+0.3
SHL				pmax	pmax		
	comp=Z,67nm,1.0s						
SHL	Shillong	52.59	306	P	P	02 39 32.4	+0.3
GTA	Gaotai	54.70	325	*e*P	P	02 39 48.2	+0.9
GTA				pP	sP	02 40 06.2	-1.9
GTA				sP	pP	02 40 14.4	+12
GTA				S	S	02 47 23.4	-0.5
GTA				pmax	pmax		
	comp=Z,10.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,53nm,7.1s						
GTA				LR	LR		
	comp=Z,63nm,15.3s						
GTA				LR	LR		
	comp=Z,110nm,18.2s						
GTA				LR	LR		
	comp=Z,120nm,20.4s						
LSA	Lhasa	55.05	310	IAmb	IAmb	02 39 53.4	
	comp=Z,20nm,0.9s						
ZEA	Zeya	57.33	353	*e*P	P	02 40 05.8	+0.2
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ULN	Ulaanbaatar	57.36	336	*ce*P	P	02 40 07.2	+1.1
ULN				pmax	pmax		
	comp=Z,11nm,1.3s						
ULN	Ulaanbaatar	57.36	336	P	P	02 40 06.0	-0.2
ULN				IAmb	IAmb	02 40 25.9	
	comp=Z,15nm,1.1s						
PALK	Pallekele	57.60	281	P	P	02 40 07.5	-0.8
PALK				pmax	pmax		
	comp=Z,28nm,1.4s						
PALK	Pallekele	57.60	281	P	P	02 40 07.5	-0.8
PALK				IAmb	IAmb	02 40 20.3	
	comp=Z,28nm,1.4s						
SONM	Songino Array	57.60	336	P	P	02 40 08.3	+0.5
	comp=Z,2.2nm,0.7s,baz=154,slow=8.5,SNR=14						
SONM				LR	LR	03 04 29.5	
	comp=Z,265nm,21.3s,baz=150,slow=36						
SONM	Songino Array	57.60	336	P	P	02 40 08.1	+0.2
PETK	Petropavlovsk-	58.58	14	P	P	02 40 14.9	+0.5
	comp=Z,2.3nm,0.6s,baz=182,slow=7.8,SNR=5.6						
ZAK	Zakamensk	60.87	336	*e*P	P	02 40 30.0	-0.3
ZAK				pmax	pmax		
	comp=Z,14nm,1.2s						
HYB	Hyderabad	61.59	292	*i* P	P	02 40 36.0	+0.3
HYB				*e*sP	pP	02 40 53.5	+2.9
BOD	Bodaibo	63.64	346	*e*P	P	02 40 48.4	-0.1
BOD				pmax	pmax		
	comp=Z,13nm,1.8s						
WMQ	Urumqi	64.60	322	*e*P	P	02 40 56.1	+0.9
WMQ				pmax	pmax		
	comp=Z,13nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,26nm,3.8s						
WMQ				LR	LR		
	comp=Z,510nm,29.1s						
WMQ				LR	LR		
	comp=Z,1μm,28.8s						
WMQ				LR	LR		
	comp=Z,97nm,26.5s						
SEY	Seymchan	66.87	7	P	P	02 41 10.0	+0.7
	comp=Z,3.1nm,0.6s,baz=191,slow=8.4,SNR=5.2						
SEY				LR	LR	03 10 19.8	
	comp=Z,47nm,21.1s,baz=206,slow=36						
DGZ	Jazzator, Alta	67.99	328	*i* P	P	02 41 17.0	+0.1
DGZ				pmax	pmax		

	comp=Z,14nm,1.3s						
MK31	Makanchi Array	69.39	323	P	P	02 41 25.6	0.0
MK31				pmax	pmax		
	comp=Z,19nm,1.4s						
MK31	Makanchi Array	69.39	323	P	P	02 41 25.6	0.0
MK31				IAmb	IAmb	02 41 27.4	
	comp=Z,19nm,1.4s						
MKAR	Makanchi Array	69.39	323	P	P	02 41 26.1	+0.5
	comp=Z,1.9nm,0.5s,baz=110,slow=8.2,SNR=19						
MKAR	Makanchi Array	69.39	323	P	P	02 41 25.1	-0.5
MAKZ	Makanchi	69.59	323	P	P	02 41 27.9	+1.1
MAKZ				pmax	pmax		
	comp=Z,14nm,0.9s						
MAKZ	Makanchi	69.59	323	P	P	02 41 27.9	+1.1
MAKZ				IAmb	IAmb	02 41 46.7	
	comp=Z,14nm,0.8s						
PRZ	Przheval'sk	69.95	318	P	P	02 41 29.4	0.0
PRZ				pmax	pmax		
	comp=Z,32nm,1.2s						
PRZ	Przheval'sk	69.95	318	P	P	02 41 29.4	0.0
PRZ				IAmb	IAmb	02 41 32.3	
	comp=Z,32nm,1.1s						
KSH	Kashi	70.50	314	P	P	02 41 34.3	+1.7
KSH				pP	PcP	02 41 51.4	-2.3
KSH				sP	sP	02 41 56.2	+2.3
KSH				pmax	pmax		
	comp=Z,28nm,1.1s						
NIL	Nilore	70.61	307	P	P	02 41 32.2	-1.1
NIL				pmax	pmax		
	comp=Z,33nm,1.0s						
NIL	Nilore	70.61	307	P	P	02 41 32.2	-1.1
ZAA0	Zalesovo Array	71.70	330	P	P	02 41 38.6	-0.8
ZALV	Zalesovo Beam	71.70	330	P	P	02 41 39.4	0.0
	comp=Z,1.6nm,0.5s,baz=116,slow=5.4,SNR=8.6						
ZALV				LR	LR	03 12 29.6	
	comp=Z,82nm,21.6s,baz=2.5,slow=35						
ZALV	Zalesovo Beam	71.70	330	P	P	02 41 38.7	-0.8
TKM2	Tokmak 2	72.03	317	P	P	02 41 42.7	+0.8
	SNR=9.7						
UCH	Uchtor	72.51	316	P	P	02 41 47.0	+1.8
	SNR=5.4						
AAK	Ala-Archa	72.67	316	LR	LR	03 14 24.8	
	comp=Z,94nm,21.6s,baz=76,slow=36						
AAK	Ala-Archa	72.67	316	P	P	02 41 46.7	+0.9
	SNR=5.7						
AAK	Ala-Archa	72.67	316	*ce*P	P	02 41 46.1	+0.4
AAK				pmax	pmax		
	comp=Z,41nm,1.3s						
AAK	Ala-Archa	72.67	316	P	P	02 41 46.2	+0.4
AAK				IAmb	IAmb	02 41 47.9	
	comp=Z,19nm,1.4s						
PPT2	Papeete2	72.80	107	*e*LR	LR	03 04 12.3	
	comp=Z,415nm,30.0s						
USP	Ospenovka	72.90	317	P	P	02 41 47.7	+0.8
	SNR=16						
AML	Almayashu	73.05	316	P	P	02 41 49.5	+1.3
	SNR=9.0						
EKS2	Erkin-Say	73.18	316	P	P	02 41 49.7	+1.1
	SNR=9.5						
KURK	Kurchatov	73.38	325	*i* P	P	02 41 49.3	-0.2
KURK				pmax	pmax		
	comp=Z,22nm,1.4s						
KURK	Kurchatov	73.38	325	P	P	02 41 49.0	-0.5
KURK				IAmb	IAmb	02 42 08.6	
	comp=Z,14nm,1.1s						
DRK	Karamyk	73.52	313	P	P	02 41 50.6	-0.3
DRK				IAmb	IAmb	02 42 10.7	
	comp=Z,30nm,1.2s						
KBL	Kabul	74.21	307	P	P	02 41 54.7	-0.3
KBL				pmax	pmax		
	comp=Z,19nm,1.2s						
KBL	Kabul	74.21	307	P	P	02 41 54.7	-0.3
KBL				IAmb	IAmb	02 41 56.1	
	comp=Z,19nm,1.1s						
BTK	Batken	74.42	313	IAmb	IAmb	02 41 57.8	
	comp=Z,27nm,1.4s						
TIXI	Tiksi	74.88	357	P	P	02 41 57.0	-0.8
	comp=Z,2.1nm,0.4s,baz=140,slow=3.2,SNR=7.7						
TIXI	Tiksi	74.88	357	IAmb	IAmb	02 41 59.0	
	comp=Z,2.6nm,0.6s						
VNDA	Vanda	75.45	175	P	P	02 42 02.5	+1.5
	comp=Z,4.9nm,1.0s,baz=320,slow=6.0,SNR=16						
VNDA				LR	LR	03 14 43.5	
	comp=Z,300nm,20.5s,baz=343,slow=35						
VNDA	Vanda	75.45	175	P	P	02 42 01.4	+0.3
KK31	Karatay Array	75.59	316	P	P	02 42 02.1	-0.4
KK31				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KK31	Karatay Array	75.59	316	P	P	02 42 02.1	-0.4
KKAR	Karatay Array	75.59	316	P	P	02 42 02.1	-0.4
KKAR	Karatay Array	75.59	316	P	P	02 42 02.1	-0.4
TAS	Tashkent	75.91	314	P	P	02 42 05.3	+0.9
TAS				pmax	pmax		
	comp=Z,59nm,0.3s						
TAS	Tashkent	75.91	314	P	P	02 42 05.2	+0.9
SBA	Scott Base	76.24	174	P	P	02 42 06.4	+0.9
SBA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SBA	Scott Base	76.24	174	P	P	02 42 06.4	+0.9
BRVK	Borovoye	79.05	325	*ce*P	P	02 42 20.6	-1.0
BRVK				pmax	pmax		
	comp=Z,16nm,1.3s						
BRVK	Borovoye	79.05	325	P	P	02 42 21.3	-0.3
BRVK				IAmb	IAmb	02 42 41.6	
	comp=Z,17nm,1.0s						
NRIK	Noril'sk	79.80	344	P	P	02 42 25.8	+0.4
	comp=Z,3.7nm,0.8s,baz=127,slow=4.9,SNR=7.1						
NRIK	Noril'sk	79.80	344	*ce*P	P	02 42 25.2	-0.2
NRIK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
NRIK	Noril'sk	79.80	344	IAmb	IAmb	02 42 46.1	
	comp=Z,18nm,1.3s						
MAW	Mawson	81.26	202	P	P	02 42 34.9	+1.6
	comp=Z,2.9nm,0.8s,baz=104,slow=8.6,SNR=6.4						
MAW				LR	LR	03 17 27.2	
	comp=Z,64nm,19.5s,baz=59,slow=35						
MAW	Mawson	81.26	202	P	P	02 42 35.3	+2.1
	baz=81,SNR=4.8						
MAW	Mawson	81.26	202	P	P	02 42 34.7	+1.5
TAOE	Nuku Hiva Isla	81.99	98	*e*LR	LR	03 08 27.3	
	comp=Z,269nm,27.6s						
GEYT	Alibeck	83.55	309	P	P	02 42 47.3	+1.4
	comp=Z,4.8nm,0.8s,baz=211,slow=14,SNR=5.8						
GEYT				LR	LR	03 22 42.9	
	comp=Z,35nm,21.7s,baz=175,slow=38						
GYA0B	ALIBECK ARRAY	83.55	309	P	P	02 42 46.5	+0.6
ABKAR	Akbulak array	84.27	320	P	P	02 42 49.3	+0.1
ABKAR				IAmb	IAmb	02 42 50.3	
	comp=Z,13nm,1.1s						
IMAR	Indian Mountai	84.37	23	P	P	02 42 49.1	-0.3
RND	Reindeer	85.55	26	P	P	02 42 54.8	-0.7
RND				pmax	pmax		
	comp=Z,13nm,1.0s						
RND	Reindeer	85.55	26	P	P	02 42 54.8	-0.7
RND				IAmb	IAmb	02 42 57.3	
	comp=Z,13nm,1.0s						
AKTO	Aktyubinsk	85.71	321	LR	LR	03 22 40.8	
	comp=Z,20nm,21.2s,baz=100,slow=37						
DHY	Denali Highway	86.11	26	P	P	02 42 57.8	-0.5
DHY				IAmb	IAmb	02 43 22.7	
	comp=Z,14nm,1.1s						
COLD	Coldfoot	86.11	22	P	P	02 42 59.4	+1.3
COLD				IAmb	IAmb	02 43 00.5	
	comp=Z,12nm,1.3s						
ARU	Arti	86.49	327	*c i*P	P	02 42 59.2	-1.0
ARU						02 46 17.3	
ARU				S	SKSac	02 53 20.1	-2.0
ARU				SS	SS	02 59 11.6	-1.9
ARU				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ARU	Arti	86.49	327	P	P	02 42 58.9	-1.2
ARU				IAmb	IAmb	02 43 00.4	
	comp=Z,7.3nm,1.0s						
H24K	Noodor Dome	86.61	23	IAmb	IAmb	02 43 02.6	
	comp=Z,7.5nm,1.1s						
IL31		86.74	25	P	P	02 43 00.5	-0.6
IL31				IAmb	IAmb	02 43 02.2	
	comp=Z,11nm,1.4s						
ILAR	Eielson Array	86.74	25	P	P	02 43 00.6	-0.6
	comp=Z,2.8nm,1.0s,baz=267,slow=4.4,SNR=12						
ILAR	Eielson Array	86.74	25	P	P	02 43 00.2	-1.0
QSPA	South Pole Qui	86.80	180	P	P	02 43 02.8	+1.2
BCAR	Beaver Creek A	88.59	27	P	P	02 43 10.4	+0.3
DAWY	Dawson	89.80	26	IAmb	IAmb	02 43 18.0	
	comp=Z,8.4nm,1.1s						
INK	Inuvik	92.53	22	P	P	02 43 27.3	-1.0
	comp=Z,1.6nm,1.0s,baz=250,slow=11,SNR=3.0						
INK	Inuvik	92.53	22	IAmb	IAmb	02 43 29.2	
	comp=Z,11nm,1.5s						
SIRT	Sirnak	95.91	307	P	P	02 43 43.2	-1.5
KLMR	Klimovskoe	96.62	331	*e*P	P	02 43 44.5	-2.7
KLMR				pmax	pmax		
	comp=Z,19nm,1.5s						
KLMR	Klimovskoe	96.62	331	*e*P	P	02 43 44.5	-2.7
KLMR				AMP		02 43 46.8	
	comp=Z,19nm,1.5s						
KLMR				*e*sP	sP	02 44 07.2	-1.6
ARCES	ARCESS Array B	100.52	341	P	Pdif	02 44 06.2	+1.7
	comp=Z,1.3nm,0.7s,baz=97,slow=7.6,SNR=4.2						
SNAA	Sanae	101.03	192	Pdiff	Pdif	02 44 07.1	+0.2
VNA2	Neumayer--Watz	102.53	191	Pdiff	Pdif	02 44 14.8	+1.3
TXAR	Lajitas Array	116.57	59	PKP	PKiKP	02 49 02.6	+0.5
	comp=Z,0.2nm,0.6s,baz=183,slow=4.5,SNR=2.2						
PLCA	Paso Flores	129.37	152	PKP	PKPdf	02 49 26.4	0.0
	comp=Z,4.8nm,1.1s,baz=248,slow=3.8,SNR=4.6						
TORD	Torodi Ar. Bea	135.19	285	PKP	PKPdf	02 49 38.3	+0.5
	comp=Z,3.2nm,1.0s,baz=41,slow=1.5,SNR=12						
DBIC	Dimbokro	142.32	277	PKhKP	PKPpre	02 49 47.4	
	comp=Z,5.1nm,0.9s,baz=101,slow=5.0,SNR=3.7						
DBIC	Dimbokro	142.32	277	PKIKP	PKPdf	02 49 48.3	-2.6
DBIC	Dimbokro	142.32	277		PKPdf	02 49 48.3	-2.6
PLTB	Pedras Altas	143.71	164	PKPdf	PKPdf	02 49 52.5	-0.5
OTAV	Otavalo	143.97	94	PKIKP	PKPdf	02 49 53.7	-0.8
OTAV	Otavalo	143.97	94	PKPdf	PKPdf	02 49 53.7	-0.8
PSGCX	Pisagua	144.69	131	PKPdf	PKPbc	02 49 54.5	+0.5
PB11	IPOC Station P	144.94	132	PKPdf	PKPbc	02 49 54.9	0.0
PB08	IPOC Station P	145.08	133	PKPbc	PKPdf	02 49 56.4	+0.3
SJCC	San Jacinto, C	146.89	77	PKPbc	PKPbc	02 50 00.8	-0.1
CPUP	Villa Florida	147.38	155	PKPbc	PKPbc	02 50 02.2	+0.4
	comp=Z,16nm,1.0s,baz=218,slow=2.6,SNR=22						
CPUP	Villa Florida	147.38	155	PKPbc	PKPbc	02 50 02.4	+0.6
ZARC	Zaragoza, Cauc	147.52	81	PKPbc	PKPdf	02 50 01.1	+1.1
CZSB	Cruzeiro do Su	148.00	110	PKPbc	PKPdf	02 50 01.9	+1.1
LPAZ	La Paz	148.16	128	PKPbc	PKPbc	02 50 04.8	-0.2
	comp=Z,6.8nm,0.9s,baz=234,slow=2.8,SNR=22						
LPAZ	La Paz	148.16	128	PKP2	PKPdf	02 50 03.2	+1.5
LPAZ	La Paz	148.16	128	PKPbc	PKPdf	02 50 03.2	+1.5
ROSC	El Rosal	148.23	86	PKPbc	PKiKP	02 50 05.9	-0.8
	comp=Z,5.7nm,0.4s,baz=123,slow=14,SNR=4.0						
ROSC	El Rosal	148.23	86	PKP2	PKPbc	02 50 04.9	-0.1
ROSC	El Rosal	148.23	86	PKPbc	PKPbc	02 50 04.9	-0.1
OCAC	Ocana	148.95	79	PKPbc	PKPdf	02 50 03.9	+1.5

NNC 07 02:35:19.6±7.2**, 37°.18N**×**70°.35E, h0^{km}, mb4.7, mpv4.3, 4C-2D, Error ellipse: s-maj=62.9km s-min=52.9km az=140.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.58	26	P	Pn	02 36 45.8	+1.6
	SNR=40						
KK31	Karatay Array	5.92	1	⇑P	Pn	02 36 48.1	-0.4
	68nm,3.4s,baz=178,slow=13,SNR=35						
KK31				⇑S	Sn	02 37 57.4	+0.4
	7.1nm,1.1s,baz=188,slow=26,SNR=24						
UCH	Uchtor	5.98	31	P	Pn	02 36 50.6	+0.9
	SNR=46						
EKS2	Erkin-Say	6.08	25	P	Pn	02 36 52.7	+1.9
	SNR=15						
AAK	Ala-Archa	6.31	29	P	Pn	02 36 55.1	+1.0
	SNR=24						
AAK	Ala-Archa	6.31	29	⇑P	Pn	02 36 54.8	+0.7
	12nm,0.5s						
AAK				⇓S	Sn	02 38 10.1	+3.1
	18nm,0.7s						
KBK	Karagaybulak	6.51	31	P	Pn	02 36 57.7	+0.9
	SNR=8.2						
CHMS	Chumysh	6.72	29	P	Pn	02 37 00.1	+0.6
	SNR=7.2						
ULHL	Ulahol	6.80	40	P	Pn	02 37 00.4	-0.3
	SNR=5.8						
TKM2	Tokmak 2	7.00	33	P	Pn	02 37 03.3	-0.3
	SNR=13						
TKM2	Tokmak 2	7.00	33	⇓P	Pn	02 37 03.1	-0.6
	22nm,0.6s						
TKM2				⇑S	Sn	02 38 23.5	-0.6
	7.1nm,0.9s						

IDC 07 02:42:00.8±6.7**, 17°.23S**×**174°.84W, h55^{km}**±48^{km}**, mb3.3**/3**, mb1 3.6**/4**, mb1mx3.4**/23**, mbtmp3.6**/4**, ML3.5**/1**, Error ellipse: s-maj=278.6km s-min=26.1km az=139.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	4.43	42	P	Pn	02 43 07.3	+1.8
	2.5nm,0.3s,baz=71,slow=18,SNR=1.8						
AFI				S	Sn	02 43 55.8	-0.1
	8.7nm,0.3s,baz=32,slow=22,SNR=6.7						
WRA	Warramunga Arr	48.10	258	P	P	02 50 35.2	-0.3
	0.2nm,0.4s,baz=97,slow=7.7,SNR=6.2						
ASAR	Alice Springs	48.25	253	P	P	02 50 36.5	-0.2
	0.8nm,0.5s,baz=90,slow=8.7,SNR=17						
ILAR	Eielson Array	84.50	12	P	P	02 54 27.6	+0.3
	0.2nm,0.5s,baz=222,slow=6.1,SNR=4.5						

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*IDC **07** 02:53:17.8±1.5, 30°.24S×72°.19W, h0^{km}, mb3.7/2, mb1 3.9/5, mb1mx3.7/20, mbtmp3.6/5, ML3.8/3, Error ellipse: s-maj=46.6km s-min=35.5km az=73.0*

*GUC **07** 02:53:18.2±0.9, 30°.24S×72°.22W, h39^{km}±3^{km}, ML3.5*

ISC 07 02:53:18.7±2.0**, 30°.24S**±0°.04×**72°.16W**±0°.08**, h9^{km}**±12^{km}**, n17, σ1^{s}.32**/22**, 5C, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.63	134	*e*P	Pg	02 53 31.1	+0.2
CO06				*e*S	Sb	02 53 40.9	+0.1
CO06				IAML		02 53 48.2	
	comp=N,2μm,0.6s						
CO05	La Serena	0.85	69	⇑*e*P	Pg	02 53 35.0	-0.2
CO05				*e*S	Sb	02 53 48.3	+1.1
CO05				IAML		02 53 52.1	
	comp=E,2μm,0.7s						
GO04	Tololo Observa	1.18	87	⇑*e*P	Pb	02 53 40.1	-1.3
GO04				*e*S	Sb	02 53 57.7	+1.0
GO04				IAML		02 54 06.0	
	comp=N,4μm,0.6s						
CO03	El Pedregal	1.40	116	⇑*e*P	Pn	02 53 42.9	-1.6
CO03				*e*S	Sn	02 54 02.7	-0.4
CO03				IAML		02 54 10.9	
	comp=E,1μm,0.3s						
LCO	Las Campanas	1.76	46	⇑*e*P	Pn	02 53 48.5	-1.1
LCO				*e*S	Sn	02 54 11.6	-0.6
AC04	Llanos de Chal	2.23	25	*e*P	Pn	02 53 53.6	-2.3
AC04				*e*S	Sn	02 54 21.4	-2.2
AC04				IAML		02 54 43.1	
	comp=N,144nm,0.5s						
VA06	Catapilco	2.43	163	*e*P	Pn	02 53 57.4	-1.2
VA06				*e*S	Sn	02 54 26.3	-2.1
VA06				IAML		02 54 50.2	
	comp=E,386nm,0.4s						
VA03	San Esteban	2.87	152	⇑*e*P	Pn	02 54 05.6	+0.9
VA03				*e*S	Sn	02 54 37.6	-1.8
VA03				IAML		02 54 59.8	
	comp=N,621nm,0.9s						
H03N1	Juan Fernandez	6.58	239	T	T	03 02 08.2	
	baz=70,slow=72,SNR=59						
H03N2	Juan Fernandez	6.59	239	T	T	03 01 59.9	
	baz=70,slow=72,SNR=130						
H03N3	Juan Fernandez	6.59	239	T	T	03 02 04.7	
	baz=70,slow=72,SNR=66						
PLCA	Paso Flores	10.55	173	Pn	Pn	02 55 50.9	+0.6
	comp=N,0.1nm,0.3s,baz=338,slow=12,SNR=4.9						
CPUP	Villa Florida	13.63	77	Pn	Pn	02 56 33.3	+1.1
	comp=N,0.1nm,0.3s,baz=281,slow=10,SNR=1.7						
LPAZ	La Paz	14.37	16	Pn	Pn	02 56 43.9	+1.0
	comp=N,0.2nm,0.3s,baz=178,slow=8.9,SNR=8.1						
TXAR	Lajitas Array	66.42	330	P	P	03 04 08.8	+0.5
	comp=N,0.2nm,0.6s,baz=152,slow=4.1,SNR=2.2						
TORD	Torodi Ar. Bea	83.03	70	P	P	03 05 45.4	+0.5
	comp=N,1.2nm,0.7s,baz=222,slow=1.9,SNR=9.8						
ZALV	Zalesovo Beam	151.04	29	PKPbc	PKPbc	03 13 12.1	+0.5
	comp=N,1.5nm,0.5s,baz=292,slow=3.5,SNR=6.5						

IDC 07 03:02:41.7±2.0**, 5°.46S**×**152°.22E, h0^{km}, mb3.6**/5**, mb1 3.8**/5**, mb1mx3.6**/47**, mbtmp3.6**/5**, Error ellipse: s-maj=79.4km s-min=24.4km az=123.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.58	229	P	P	03 07 43.5	-0.4
	0.6nm,0.6s,baz=54,slow=9.8,SNR=8.9						
ASAR	Alice Springs	25.28	222	P	P	03 08 10.2	+0.1
	0.3nm,0.4s,baz=55,slow=9.0,SNR=14						
FITZ	Fitzroy Crossi	28.84	242	P	P	03 08 42.1	+0.1
	1.1nm,0.7s,baz=79,slow=6.1,SNR=1.5						
SONM	Songino Array	66.57	328	P	P	03 13 33.9	0.0
	0.3nm,0.5s,baz=110,slow=8.3,SNR=1.5						
ILAR	Eielson Array	82.98	22	P	P	03 15 08.7	+0.1
	0.9nm,0.7s,baz=248,slow=5.6,SNR=8.9						

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*IDC **07** 03:07:15.2±1.3, 44°.25N×139°.07E, h0^{km}, mb3.5/3, mb1 3.6/6, mb1mx3.3/66, mbtmp3.4/6, ML2.8/3, MS2.7/1, Ms1 2.7/1, ms1mx2.2/45, Error ellipse: s-maj=36.4km s-min=25.5km az=1.0*

*JMA **07** 03:07:15.4±0.3, 44°.24N×138°.87E, h38^{km}, M3.7*

ISC 07 03:07:19.5±1.1**, 44°.16N**±0°.05×**139°.05E**±0°.06**, h35^{km}, n18, σ1^{s}.41**/19**, mb3.6**/3**, Eastern Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSK	Shakotan	1.31	127	P	Pn	03 07 40.2	-1.0
JSK				*e*S	Sn	03 07 58.4	+0.9
JSH	Shimam	1.68	154	P	Pn	03 07 44.7	-1.6
JSH				*e*S	Sn	03 08 05.5	-1.1
JRBN	Rebuntou	1.91	48	P	Pn	03 07 46.7	-2.8
JHR	Hokuryu	1.98	101	P	Pn	03 07 49.1	-1.3
JOSM	Okushiri--Mats	2.10	171	P	Pn	03 07 50.6	-1.5
JOSM				*e*S	Sn	03 08 15.5	-1.4
JEW	Eniwo	2.19	126	P	Pn	03 07 53.5	+0.2
JWK2	Keihoku	2.33	59	P	Pn	03 07 54.3	-1.0
JWK2				*e*S	Sn	03 08 24.0	+1.2
ASAJ	Asahikawa	2.55	90	Pn	Pn	03 07 57.0	-1.3
	2.9nm,0.3s,baz=290,slow=8.6,SNR=15						
JSE	Soyaes	2.65	71	P	Pn	03 07 59.3	-0.4
JKK2	Kamakawa 2	2.68	95	P	Pn	03 07 58.6	-1.5
JOT	Ohata	3.14	151	P	Pn	03 08 06.4	0.0
USRK	Ussuriysk Ar.	5.08	273	Pn	Pn	03 08 32.4	-0.7
	baz=81,slow=15,SNR=8.7						
KLR	Kul'dur	7.13	318	Pn	Pn	03 09 00.1	-1.2
	0.1nm,0.3s,baz=109,slow=15,SNR=2.6						
MJAR	Matsushiro Arr	7.63	185	Pn	Pn	03 09 16.0	+7.8
	0.0nm,0.3s,baz=359,slow=14,SNR=7.7						
KSRS	Korea Array	10.76	235	LR	LR	03 13 29.2	
	comp=Z,38nm,18.7s,baz=55,slow=34						
ASAR	Alice Springs	67.66	185	P	P	03 18 14.5	+1.7
	0.2nm,0.7s,baz=16,slow=4.0,SNR=1.4						
NVAR	Mina Array Bea	72.18	54	P	P	03 18 42.4	+1.4
	0.5nm,0.7s,baz=294,slow=7.2,SNR=4.1						
PDAR	Pinedale Array	73.96	46	P	P	03 18 51.9	+0.5
	0.4nm,0.6s,baz=341,slow=3.1,SNR=4.3						

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*TRN **07** 03:07:50.7, 18°.68N×64°.33W, h51^{km}, M3.7(RSPR)*

*NEIC **07** 03:07:51.8±1.2, 18°.8N±0°.1×64°.33W±0°.04, h44^{km}±48^{km}, Error ellipse: s-maj=17.6km s-min=3.3km az=195.0*

*RSPR **07** 03:07:52.8, 18°.78N×64°.34W, h46^{km}±2^{km}, MD3.7/20*

*OSPL **07** 03:07:56.9±0.9, 18°.33N×64°.78W, h0^{km}±127^{km}, ML3.3*

ISC 07 03:07:51.8±1.4**, 18°.74N**±0°.08×**64°.33W**±0°.03**, h54^{km}**±12^{km}**, n115, σ0^{s}.94**/136**, 19C-13D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBVI	Tortola	0.42	221	⇓*e*P	Pn	03 08 02.5	0.0
TBVI	Tortola	0.42	221	⇓*e*P	Pn	03 08 02.5	0.0
TBVI				*e*S	Sn	03 08 10.0	-0.2
STVI	Saint Thomas	0.71	237	⇓*e*P	Pn	03 08 05.7	-0.2
STVI	Saint Thomas	0.71	237	⇓*e*P	Pn	03 08 05.7	-0.2
STVI				*e*S	Sn	03 08 15.6	-0.6
STVI	Saint Thomas	0.71	237		Pn	03 08 05.6	-0.2
STVI	Saint Thomas	0.71	237		Sn	03 08 15.6	-0.6
STVI	Saint Thomas	0.71	237	IAML		03 08 16.7	
	comp=N,7μm,0.2s						
CUPR	Culebra, Puert	1.00	245	⇓*e*P	Pn	03 08 09.4	-0.3
CUPR	Culebra, Puert	1.00	245	*e*S	Sn	03 08 23.2	+0.3
CUPR	Culebra, Puert	1.00	245		Pn	03 08 09.0	-0.7
CUPR	Culebra, Puert	1.00	245		Sn	03 08 23.2	+0.3
CUPR	Culebra, Puert	1.00	245	IAML		03 08 25.7	
	comp=N,898nm,0.5s						
CUPR				IAML		03 08 26.3	
	comp=E,835nm,0.5s						
CDVI	St. Croix	1.06	203	⇓*e*P	Pn	03 08 10.5	0.0
CDVI	St. Croix	1.06	203	*e*P	Pn	03 08 10.7	+0.1
CDVI				*e*S	Sn	03 08 24.4	0.0
CDVI	St. Croix	1.06	203		Pn	03 08 10.5	0.0
CDVI					Sn	03 08 24.4	0.0
MTP	Monte Pirata	1.33	242	⇓*e*P	Pn	03 08 14.1	0.0
MTP	Monte Pirata	1.33	242	⇓*e*P	Pn	03 08 14.1	0.0
MTP				*e*S	Sn	03 08 30.9	+0.2
MTP	Monte Pirata	1.33	242		Pn	03 08 14.1	0.0
MTP					Sn	03 08 30.9	+0.2
MTP	Monte Pirata	1.33	242	IAML		03 08 31.9	
	comp=E,2μm,0.2s						
MTP				IAML		03 08 34.4	
	comp=N,2μm,0.2s						
SMRT	St. Maarten	1.37	120	⇑*e*P	Pn	03 08 15.0	+0.3
SMRT	St. Maarten	1.37	120	*e*P	Pn	03 08 15.0	+0.3
SMRT				*e*S	Sn	03 08 32.3	+0.5
SMRT	St. Maarten	1.37	120		Pn	03 08 14.3	-0.4
SMRT	St. Maarten	1.37	120		Sn	03 08 32.6	+0.8
SMRT	St. Maarten	1.37	120	IAML		03 08 33.3	
	comp=E,3μm,0.2s						
SMRT				IAML		03 08 35.2	
	comp=N,3μm,0.2s						
SABA	Saba	1.51	137	⇑*e*P	Pn	03 08 16.7	0.0
SABA	Saba	1.51	137	*e*P	Pn	03 08 16.6	0.0
SABA				*e*S	Sn	03 08 36.5	+1.2
SABA	Saba	1.51	137		Pn	03 08 16.7	0.0
SABA					Sn	03 08 36.6	+1.4
SABA	Saba	1.51	137	IAML		03 08 38.9	
	comp=N,2μm,0.4s						
SABA				IAML		03 08 43.5	
	comp=E,2μm,0.5s						
CBYP	Canovanas	1.52	253	⇑*e*P	Pn	03 08 16.5	-0.3
CBYP	Canovanas	1.52	253	⇑*e*P	Pn	03 08 16.5	-0.3
CBYP	Canovanas	1.52	253		Pn	03 08 16.5	-0.3
HUMP	Col San Antoni	1.56	248	⇑*e*P	Pn	03 08 17.1	-0.2
HUMP	Col San Antoni	1.56	248	⇑*e*P	Pn	03 08 17.1	-0.2
HUMP				*e*S	Sn	03 08 37.0	+0.5
HUMP	Col San Antoni	1.56	248	Pn	Pn	03 08 16.9	-0.4
HUMP				IAML		03 08 39.5	
	comp=N,1μm,0.2s						
HUMP	Col San Antoni	1.56	248		Sn	03 08 37.0	+0.5
GCPR	Guaynabo City	1.72	256	⇑*e*P	Pn	03 08 19.1	-0.3
GCPR	Guaynabo City	1.72	256	*e*S	Sn	03 08 39.6	-0.7
GCPR	Guaynabo City	1.72	256		Pn	03 08 19.1	-0.3
GCPR					Sn	03 08 39.6	-0.7
PDPR	Patillas Dam,	1.76	246	⇑*e*P	Pn	03 08 20.3	+0.3
PDPR	Patillas Dam,	1.76	246		Pn	03 08 20.3	+0.3
PDPR	Patillas Dam,	1.76	246	IAML		03 08 44.2	
	comp=E,602nm,0.4s						
SEUS	St. Eustatius	1.78	134	⇑*e*P	Pn	03 08 20.1	-0.1
SEUS	St. Eustatius	1.78	134	*e*S	Sn	03 08 42.3	+0.6
SEUS	St. Eustatius	1.78	134	*e*P	Pn	03 08 20.3	+0.1
SEUS				*e*S	Sn	03 08 40.8	-0.9
SEUS	St. Eustatius	1.78	134	Pn	Pn	03 08 20.2	+0.1
SEUS				IAML		03 08 45.5	
	comp=E,594nm,0.4s						
SEUS				IAML		03 08 50.4	
	comp=N,676nm,0.5s						
SEUS	St. Eustatius	1.78	134		Sn	03 08 42.3	+0.6
SJG	San Juan	1.84	251	*e*P	Pn	03 08 21.0	0.0
SJG				*e*S	Sn	03 08 43.8	+0.5
SJG	San Juan	1.84	251		Pn	03 08 20.9	-0.2
SJG				IAML		03 08 46.5	
	comp=N,528nm,0.2s						
IGPR	InterUniversit	1.86	246	⇓*e*P	Pn	03 08 21.5	+0.2
IGPR	InterUniversit	1.86	246	*e*S	Sn	03 08 45.2	+1.5
SKI	Saint Kitts	2.06	133	*e*P	Pn	03 08 24.4	+0.4
SKI				*e*S	Sn	03 08 48.1	-0.4
SKOC	St. Kitts, UWI	2.09	133	*e*P	Pn	03 08 24.6	+0.2
SKOC				*e*S	Sn	03 08 49.6	+0.3
EMPR	Esperanza - Ma	2.11	263	⇑*e*P	Pn	03 08 25.0	+0.4
EMPR	Esperanza - Ma	2.11	263	*e*S	Sn	03 08 51.4	+1.6
EMPR	Esperanza - Ma	2.11	263		Pn	03 08 25.0	+0.4
EMPR					Sn	03 08 51.4	+1.6
EMPR	Esperanza - Ma	2.11	263	IAML		03 08 53.3	
	comp=N,730nm,0.3s						

EMPR				IAML		03 08 54.6	
	comp=E,848nm,0.3s						
CELP	Cerrillos	2.24	253	⇑eP	Pn	03 08 26.7	+0.2
CELP	Cerrillos	2.24	253	⇑eP	Pn	03 08 26.7	+0.2
CELP				eS	Sn	03 08 54.0	+0.9
CELP	Cerrillos	2.24	253		Pn	03 08 26.7	+0.2
CELP	Cerrillos	2.24	253		Sn	03 08 54.0	+0.9
CELP	Cerrillos	2.24	253	IAML		03 08 53.5	
	comp=N,297nm,0.6s						
OBIP	Obispado Ponce	2.27	253	⇑eP	Pn	03 08 27.4	+0.4
OBIP	Obispado Ponce	2.27	253	⇑eP	Pn	03 08 27.4	+0.4
OBIP				eS	Sn	03 08 54.1	+0.3
OBIP	Obispado Ponce	2.27	253		Pn	03 08 27.4	+0.4
OBIP					Sn	03 08 54.1	+0.3
OBIP	Obispado Ponce	2.27	253	IAML		03 08 54.5	
	comp=N,372nm,0.6s						
AOPR	Arecibo Observ	2.34	261	⇑eP	Pn	03 08 28.1	+0.3
AOPR	Arecibo Observ	2.34	261	eP	Pn	03 08 28.1	+0.3
AOPR				eS	Sn	03 08 57.4	+1.9
AOPR	Arecibo Observ	2.34	261		Pn	03 08 28.1	+0.3
AOPR					Sn	03 08 57.4	+1.9
AOPR	Arecibo Observ	2.34	261	IAML		03 09 01.7	
	comp=N,743nm,0.3s						
ANWB	Willy Bob	2.64	113	eP	Pn	03 08 30.7	-1.2
ANWB				eS	Sn	03 09 03.6	+0.9
AGPR	Aguadilla, PR	2.66	265	⇑eP	Pn	03 08 32.3	+0.1
AGPR	Aguadilla, PR	2.66	265	⇑eP	Pn	03 08 32.3	+0.1
AGPR				eS	Sn	03 09 02.8	-0.5
AGPR	Aguadilla, PR	2.66	265		Pn	03 08 32.3	+0.1
AGPR					Sn	03 09 02.8	-0.5
AGPR	Aguadilla, PR	2.66	265	IAML		03 09 05.2	
	comp=E,448nm,0.3s						
AGPR				IAML		03 09 07.0	
	comp=N,383nm,0.5s						
AGPR	Aguadilla, PR	2.66	265	iP	Pn	03 08 32.4	+0.1
AGPR				eS	Sn	03 08 59.9	-3.3
AGPR				IAML		03 09 08.2	
	comp=Z,174nm,0.2s						
LSP	Las Mesas	2.68	258	⇑eP	Pn	03 08 33.1	+0.5
LSP	Las Mesas	2.68	258	⇑eP	Pn	03 08 33.1	+0.5
LSP				eS	Sn	03 09 04.7	+0.8
PRSN	Puerto Rico Se	2.73	260		Pn	03 08 33.5	+0.3
PRSN				IAML		03 09 11.9	
	comp=E,616nm,0.3s						
CRPR	Cabo Rojo, PR	2.74	255	⇓eP	Pn	03 08 34.0	+0.6
CRPR	Cabo Rojo, PR	2.74	255	⇓eP	Pn	03 08 34.0	+0.6
CRPR				eS	Sn	03 09 05.1	-0.2
CRPR	Cabo Rojo, PR	2.74	255		Pn	03 08 34.0	+0.6
CRPR					Sn	03 09 05.1	-0.2
CRPR	Cabo Rojo, PR	2.74	255	iP	Pn	03 08 33.5	+0.1
CRPR				eS	Sn	03 09 00.1	-5.2
CRPR				IAML		03 09 10.8	
	comp=Z,187nm,0.7s						
ANBD	Bethesda, Anti	2.96	124	eP	Pn	03 08 35.8	-0.6
ANBD				eS	Sn	03 09 09.6	-1.1
IDE	Isla Desecheo	3.01	264	⇓eP	Pn	03 08 37.2	+0.2
IDE	Isla Desecheo	3.01	264	⇓eP	Pn	03 08 37.2	+0.2
IDE				eS	Sn	03 09 11.8	-0.1
CBE	Ff, Capester	3.71	135	eP	Pn	03 08 48.1	+1.4
CBE				eS	Sn	03 09 28.1	-1.1
TDBA	Terre de Bas,	3.85	138	eP	Pn	03 08 48.9	+0.3
MAGL	Barre de l'ile	4.02	133	eP	Pn	03 08 51.6	+0.7
MAGL				eS	Sn	03 09 35.5	-1.2
MDCT	Cottage Hill,	4.14	138	eP	Pn	03 08 49.8	-2.7
MDVC	Dominica, Viel	4.17	138	eP	Pn	03 08 51.9	-1.1
DWS	Wesley	4.27	137	eP	Pn	03 08 53.1	-1.2
DSLB	Salisbury	4.30	139	eP	Pn	03 08 54.8	+0.1
MDN	Morne-Daniel	4.41	140	eP	Pn	03 08 57.0	+0.8
DR12	Loma Pena Alta	4.79	271		Pn	03 09 01.4	-0.2
SVN	Savane Anatole	4.91	142	Pn	Pn	03 09 02.8	-0.4
BIM	Bigot	5.23	143	eP	Pn	03 09 06.9	-0.6
BIM	Bigot	5.23	143	Pn	Pn	03 09 07.4	-0.1
BIM				IAML		03 09 55.5	
	comp=N,89nm,2.5s						
BIM				IAML		03 11 35.5	
	comp=E,103nm,1.9s						
MPOM	Morne Pois Mar	5.41	142	eP	Pn	03 09 10.4	+0.5
MPOM	Morne Pois Mar	5.41	142	eS	Sn	03 10 09.6	-1.4
SLBI	Saint Lucia, B	5.68	145	eP	Pn	03 09 13.0	-0.8
SC01	Santiago de lo	6.09	278	Pn	Pn	03 09 19.8	+0.4
SC01	Santiago de lo	6.09	278	iP	Pn	03 09 20.8	+1.4
SVB	Belmont	6.18	151	eP	Pn	03 09 20.1	-0.5
SVB	Belmont	6.18	151	Pn	Pn	03 09 20.5	-0.1
LOBA2	Hotel Casa Bon	6.46	265	iP	Pn	03 09 24.8	+0.5
LOBA2				IAML		03 10 34.7	
	comp=Z,40nm,10.9s						
SDDR	Presa de Saban	6.60	273	eP	Pn	03 09 27.9	+1.6
SDDR	Presa de Saban	6.60	273	iP	Pn	03 09 27.9	+1.6
SDDR				IAML		03 10 25.6	
	comp=Z,12nm,2.4s						
LONE2	Loma La Sidra	6.78	270	iP	Pn	03 09 29.6	+0.7
GCMP	Grenada, Carri	6.81	155	eP	Pn	03 09 27.9	-1.4
GRTK	Grand Turk	6.97	294	Pn	Pn	03 09 30.5	-0.8
GRGR	Grenville	7.05	158	eP	Pn	03 09 25.0	-7.5
GRGR	Grenville	7.05	158	e	Pn	03 09 30.0	-2.5
GRGR	Grenville	7.05	158	e	Pn	03 09 34.6	+2.1
TOSP	Speyside	8.25	153	eP	Pn	03 09 49.5	+0.6
TRN	Trinidad (W)	8.52	160	eP	Pn	03 09 53.0	+0.3

IDC 07 03:45:06.6±6.5**, 19°.78S**×**176°.04W, h0**km**, mb3.7**/2**, mb1 3.9**/2**, mb1mx3.6**/23**, mbtmp3.7**/2**, Error ellipse: s-maj=308.4km s-min=101.3km az=154.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	46.48	256	P	P	03 53 36.0	+0.1
	0.6nm,0.5s,baz=98,slow=7.4,SNR=14						
WRA	Warramunga Arr	46.53	261	P	P	03 53 36.0	-0.3
	0.3nm,0.3s,baz=97,slow=7.6,SNR=12						
AKASG	Malin Array Be	143.24	333	PKP	PKPdf	04 04 42.0	-0.7
	0.3nm,0.4s,baz=49,slow=3.9,SNR=1.6						

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*IDC **07** 03:58:44.7±1.9, 15°.88S×175°.11W, h263km±18km, mb3.8/20, mb1 3.9/21, mb1mx3.8/48, mbtmp4.4/21, Error ellipse: s-maj=18.2km s-min=10.2km az=143.0*

*NEIC **07** 03:58:44.6±2.7, 15°.88S±0°.09×175°.06W±0°.06, h263km±4km, mb4.4/29, Error ellipse: s-maj=13.5km s-min=7.4km az=156.0*

ISC 07 03:58:45.6±0.4**, 15°.85S**±0°.07×**175°.03W**±0°.07**, h278**km**, n130, σ1s.07**/117**, mb4.3**/35**, 17C-7D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	3.69	59	P	Pn	03 59 46.7	-0.6
	47nm,0.3s,baz=165,slow=2.1,SNR=18						
AFI				S	S	04 00 32.5	-4.1
	62nm,0.3s,baz=6.3,slow=23,SNR=12						
NIUE	Niue	5.83	124		Pn	04 00 12.4	+0.1
NIUE				Sn	S	04 01 22.2	+0.2
MSVF	Nonsavu	6.88	253	P	Pn	04 00 28.3	+3.0
	2.1nm,0.3s,baz=87,slow=12,SNR=30						
MSVF	Nonsavu	6.88	253		Pn	04 00 26.2	+0.9
FUNA	Funafuti	9.21	322	Pn	Pn	04 00 52.0	-2.2
URZ	Urewera	23.37	196	P	P	04 03 27.1	-2.6
URZ				IAmb	IAmb	04 03 29.3	
	comp=Z,12nm,0.8s						
QRZ	Quartz Range	27.13	201	P	P	04 04 01.5	-1.9
WHZ	Wether Hill Ro	33.17	202	P	P	04 04 55.9	-0.4
ARMA	Armidale	33.77	239	P	P	04 05 00.4	-1.4
ARMA				IAmb	IAmb	04 05 11.6	
	comp=Z,22nm,1.4s						
CTA	Charters Tower	37.01	258	P	P	04 05 28.1	-1.3
	comp=Z,1.4nm,0.6s,baz=83,slow=12,SNR=2.0						
CTA				PcP	PcP	04 07 44.9	+0.9
	comp=Z,1.1nm,0.5s,baz=117,slow=2.3,SNR=1.8						
PMG	Port Moresby	37.40	275	P	P	04 05 31.0	-1.6
PMG				IAmb	IAmb	04 05 35.1	
	comp=Z,21nm,1.2s						
CAN	Canberra	37.51	232	P	P	04 05 32.8	-0.6
COEN	Coen	40.38	267	P	P	04 05 57.5	+0.1
COEN				IAmb	IAmb	04 05 59.2	
	comp=Z,18nm,0.8s						
STKA	Stephens Creek	42.45	240	P	P	04 06 13.4	-0.4
	comp=Z,3.7nm,0.8s,baz=63,slow=2.8,SNR=6.6						
STKA	Stephens Creek	42.45	240	IAmb	IAmb	04 06 15.5	
	comp=Z,0.7nm,0.8s						
WR0	Warramunga Arr	48.02	257	P	P	04 06 55.6	-1.9
WB0	Warramunga Arr	48.17	258	P	P	04 06 57.1	-1.6
WB0				IAmb	IAmb	04 06 58.7	
	comp=Z,10.0nm,0.8s						
WB2	Warramunga Arr	48.20	257	P	P	04 06 58.3	-0.6
WB2				IAmb	IAmb	04 06 59.0	
	comp=Z,11nm,0.6s						
WRAB	Tennant Creek	48.20	257	P	P	04 06 57.7	-1.2
WRAB				IAmb	IAmb	04 06 59.0	
	comp=Z,8.6nm,0.6s						
WRA	Warramunga Arr	48.21	257	P	P	04 06 58.5	-0.5
	comp=Z,6.4nm,0.6s,baz=91,slow=6.8,SNR=108						
WRA				PcP	PcP	04 08 22.2	+0.6
	comp=Z,2.4nm,0.8s,baz=86,slow=3.8,SNR=7.7						
AS31	Alice Springs	48.48	252	P	P	04 07 00.0	-1.0
AS31				IAmb	IAmb	04 07 01.0	
	comp=Z,4.2nm,0.4s						
ASAR	Alice Springs	48.48	252	P	P	04 07 00.5	-0.5
	comp=Z,11nm,0.4s,baz=88,slow=7.9,SNR=210						
ASAR				PcP	PcP	04 08 21.8	-0.7
	comp=Z,1.6nm,0.6s,baz=90,slow=6.5,SNR=5.4						
ASAR	Alice Springs	48.48	252	P	P	04 06 59.7	-1.3
FORT	Forrest	53.81	243	P	P	04 07 39.0	-1.3
SIJI	Sorong	54.98	280	P	P	04 07 48.9	-0.1
	comp=Z,14nm,0.6s,baz=74,slow=10.0,SNR=4.9						
FITZ	Fitzroy Crossi	56.58	259	P	P	04 08 00.2	0.0
	comp=Z,2.1nm,1.0s,baz=59,slow=5.9,SNR=2.4						
FITZ	Fitzroy Crossi	56.58	259	P	P	04 07 58.9	-1.2
PSA00	Pilbara Seismi	61.57	254	P	P	04 08 32.4	-1.9
PSA00				IAmb	IAmb	04 08 34.2	
	comp=Z,6.5nm,0.6s						
VNDA	Vanda	62.78	186	P	P	04 08 42.3	+1.0
	comp=Z,2.2nm,0.9s,baz=355,slow=4.7,SNR=11						
VNDA	Vanda	62.78	186	P	P	04 08 41.3	+0.1
VNDA				IAmb	IAmb	04 08 43.1	
	comp=Z,4.8nm,1.1s						
NWAO	Narrogin (SRO)	63.03	241	P	P	04 08 42.4	-1.3
MORW	Morawa	64.27	245	P	P	04 08 51.0	-0.9
MJAR	Matsushiro Arr	68.28	321	P	P	04 09 17.4	+0.4
	comp=Z,0.9nm,0.3s,baz=152,slow=3.5,SNR=4.7						
MJAR	Matsushiro Arr	68.28	321	IAmb	IAmb	04 09 27.0	
	comp=Z,5.0nm,1.4s						
JNU	Nakatsue	70.97	314	P	P	04 09 33.6	+0.2
	comp=Z,6.1nm,0.4s,baz=141,slow=4.5						
JKA	Kamikawa-asahi	71.10	329	P	P	04 09 35.9	+2.0
ASAJ	Asahikawa	71.10	329	P	P	04 09 35.9	+2.0
	comp=Z,11nm,0.9s,baz=129,slow=6.5,SNR=4.6						
PETK	Petropavlovsk-	72.59	343	P	P	04 09 43.2	+0.7
	comp=Z,5.5nm,0.7s,baz=116,slow=10,SNR=5.4						
QSPA	South Pole Qui	74.20	180	P	P	04 09 51.3	-0.7
QSPA				IAmb	IAmb	04 09 52.7	
	comp=Z,6.0nm,0.9s						
YBH	Yreka Blue Hor	74.91	38	P	P	04 09 58.1	+1.8
	comp=Z,2.4nm,0.8s,baz=164,slow=2.1,SNR=11						
YBH	Yreka Blue Hor	74.91	38	P	P	04 09 55.7	-0.7
NVAR	Mina Array Bea	75.72	43	P	P	04 10 02.4	+1.2
	comp=Z,1.2nm,0.8s,baz=224,slow=9.5,SNR=8.5						
NVAR	Mina Array Bea	75.72	43	P	P	04 10 01.1	-0.1
TPH	Tonopah	76.23	43	P	P	04 10 03.8	-0.2
ELK	Elko	78.96	42	P	P	04 10 19.8	+0.8
	comp=Z,0.6nm,0.4s,baz=193,slow=14,SNR=2.6						
TXAR	Lajitas Array	82.17	57	P	P	04 10 37.6	+1.5
	comp=Z,0.7nm,0.9s,baz=224,slow=5.2,SNR=3.5						
ANMO	Albuquerque	82.30	51	P	P	04 10 36.1	-0.7
	comp=Z,0.8nm,0.7s,baz=180,slow=9.1,SNR=4.3						
ANMO	Albuquerque	82.30	51	IAmb	IAmb	04 10 39.4	
	comp=Z,3.1nm,1.2s						
WRH	Wood River Hil	82.69	11	P	P	04 10 37.5	-0.3
WRH				IAmb	IAmb	04 10 40.0	
	comp=Z,14nm,1.2s						
CCB	Clear Creek Bu	82.91	11	P	P	04 10 38.0	-0.9
CCB				IAmb	IAmb	04 10 40.0	
	comp=Z,7.7nm,1.2s						
IL31		83.19	12	P	P	04 10 40.0	-0.4
IL31				IAmb	IAmb	04 10 41.5	
	comp=Z,3.2nm,0.7s						
ILAR	Eielson Array	83.19	12	P	P	04 10 40.6	+0.2
	comp=Z,1.4nm,0.5s,baz=229,slow=5.7,SNR=36						
ILAR	Eielson Array	83.19	12	P	P	04 10 40.5	+0.1
PDAR	Pinedale Array	83.65	42	P	P	04 10 44.0	+0.4
	comp=Z,1.2nm,0.6s,baz=212,slow=3.4,SNR=14						
MAW	Mawson	86.86	199	P	P	04 10 58.8	+0.2
	comp=Z,3.7nm,0.7s,baz=128,slow=5.8,SNR=10.0						
MAW	Mawson	86.86	199	P	P	04 10 57.8	-0.8
XAN	Xi'an	87.62	306	P	P	04 11 04.7	+1.8
XAN				pP	PcP	04 11 22.2	+18
XAN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
HHC	Hu-ho-hao-te	88.18	313	eP	P	04 11 07.2	+1.7
HHC				pmax	pmax		
	comp=Z,16nm,1.2s						
HHC				pmax	pmax		
	comp=Z,120nm,8.5s						
INK	Inuvik	89.08	14	P	P	04 11 08.4	-0.4
	comp=Z,0.8nm,0.6s,baz=184,slow=6.3,SNR=4.4						
INK	Inuvik	89.08	14	IAmb	IAmb	04 11 15.5	
	comp=Z,5.4nm,1.3s						
SNAA	Sanae	92.53	178	P	P	04 11 25.6	+0.4
VNA3	Neumayer Olymp	92.55	175	P	P	04 11 26.2	+1.1
VNA2	Neumayer--Watz	93.03	176	P	P	04 11 27.8	+0.5
	baz=194,slow=3.6						
VNA1	Neumayer--Stat	93.23	176	P	P	04 11 28.6	+0.4
FINES	FINESS Array B	132.03	347	PKP	PKPdf	04 17 26.9	+1.2
	comp=Z,1.6nm,0.8s,baz=90,slow=1.9,SNR=6.5						
FINES	FINESS Array B	132.03	347		PKPdf	04 17 25.9	+0.2
OJC	Ojcow	143.68	344	PKPdf	PKPab	04 17 45.2	+0.3
KMBO	Kilima Mbogo	143.92	245	PKP	PKPbc	04 17 48.8	+1.0
	comp=Z,4.3nm,0.8s,baz=51,slow=8.7,SNR=9.0						
KMBO	Kilima Mbogo	143.92	245	PKPdf	PKPbc	04 17 48.3	+0.5
BUR08	Bucovina Ar. S	144.16	336	PKPdf	PKPab	04 17 47.3	+0.4
BURAR	Bucovina Array	144.17	336	⇓P	PKPab	04 17 47.7	+0.7
OSTC	Ostas	144.21	348	ePKP	PKPbc	04 17 47.9	+0.6
CHVC	Chvalec	144.21	348	ePKP	PKPbc	04 17 48.4	+1.1
UPC	Upice	144.30	348	ePKP	PKPbc	04 17 48.3	+0.8
CRVS	Cervenica-Dubn	144.38	341	ePKP	PKiKP	04 17 52.3	-0.1
DPC	Dobruska-Polom	144.38	347	ePKP	PKPbc	04 17 48.7	+0.8
GAZ	Gaziantep	144.44	313		PKPab	04 17 47.7	-0.7
OKC	Ostrava-Krasne	144.45	345	ePKP	PKPab	04 17 48.6	+0.8
TESR	Tescani	144.49	334	⇑P	PKPab	04 17 47.9	-0.2
BNN	Bunyan	144.54	316	PKPdf	PKPbc	04 17 49.6	+0.8
KRLC	Kraliky	144.54	347	ePKP	PKPbc	04 17 49.1	+0.8
PVCC	Panska Ves	144.55	349	ePKP	PKPbc	04 17 49.1	+0.8
MORC	Moravsky Berou	144.65	346	⇑P	PKPbc	04 17 49.6	+0.9
MORC	Moravsky Berou	144.65	346	ePKP	PKPab	04 17 49.1	+0.4
MORC	Moravsky Berou	144.65	346		PKPab	04 17 48.7	0.0
TRPA	Tarpa	144.71	340	⇑P	PKPbc	04 17 49.5	+0.7
CFR	Carcaliu	144.86	331	⇓P	PKPab	04 17 50.2	+0.7
VRI	Vrincioaia	144.96	333	⇑P	PKPbc	04 17 48.7	-1.1
TPGR	Topolog	144.96	330	⇑P	PKPab	04 17 51.0	+1.0
PLOR	Plostina	145.01	333	⇑P	PKPbc	04 17 49.9	0.0
PRU	Pruhonice	145.07	349	ePKP	PKPbc	04 17 50.7	+0.8
NKC	Novy Kostel	145.17	352	ePKP	PKPab	04 17 51.2	+0.6
COVR	Voineasa-Covas	145.20	334	⇑P	PKPdf	04 17 50.1	-0.1
TIRR	Tirgusor	145.26	330	⇑P	PKPab	04 17 51.6	+0.6
VRAC	Vranov	145.31	347	ePKP	PKPdf	04 17 51.1	+0.8
HARR	Harsova	145.32	331	⇑P	PKPab	04 17 52.0	+0.7
DOPR	Dopca	145.45	335	⇑P	PKPab	04 17 52.4	+0.5
JAVC	Velka Javorina	145.47	345	ePKP	PKPbc	04 17 52.0	+0.8
BR131	Keskin Array S	145.49	319	PKPbc	PKPdf	04 17 51.5	+0.4
BRTR	Keskin Array B	145.49	319	PKPbc	PKPbc	04 17 52.5	+0.7
	comp=Z,7.9nm,0.9s,baz=94,slow=2.2,SNR=41						
KRUC	Moravsky	145.58	347	ePKP	PKPdf	04 17 51.7	+1.0
MLR	Muntele Rosu	145.59	334	⇓P	PKPab	04 17 53.5	+0.9
MLR	Muntele Rosu	145.59	334	PKPbc	PKPbc	04 17 52.5	+0.6
ISR	Istrita	145.62	333	⇑P	PKPab	04 17 53.1	+0.5
PSZ	Piszkesteto	145.73	342	PKPbc	PKPbc	04 17 52.7	+0.6
DRGR		145.80	338	⇓P	PKPdf	04 17 52.5	+1.2
ANTO	Ankara	145.93	320	PKPbc	PKPdf	04 17 52.3	+0.6
VOIR		146.01	334	⇓P	PKPbc	04 17 53.1	+0.1
MODS	Modra-Piesok	146.02	345	ePKP	PKPbc	04 17 53.0	+0.1
KHC	Kasperske Hory	146.07	350	ePKP	PKPbc	04 17 53.6	+0.6
CKRC	Cesky Krumlov	146.24	349	ePKP	PKPbc	04 17 53.7	+0.2
ARR	Arges	146.24	335	⇑P	PKPbc	04 17 53.8	+0.1
GEC2	GERESS Array S	146.32	350	PKPbc	PKPdf	04 17 53.5	+1.3
GERES	GERESS Array B	146.32	350	PKPbc	PKPbc	04 17 54.4	+0.5
	comp=Z,2.3nm,0.8s,baz=20,slow=4.3,SNR=12						
GERES	GERESS Array B	146.32	350	PKPbc	PKPdf	04 17 52.9	+0.8
SIRR	Siria	146.62	339	⇑P	PKPbc	04 17 54.5	-0.1
GZR	Gura Zlata	146.96	337	⇑P	PKPbc	04 17 55.9	+0.2
BZS	Buzias	147.19	338	⇓P	PKPbc	04 17 56.0	-0.2
HERR	Herculane	147.53	337	⇑P	PKPdf	04 17 56.1	+2.0
PLVB	Pleven	147.84	333	⇑P	PKPbc	04 17 57.2	-0.8
CSS	Mathiatis	148.26	312	PKPbc	PKPdf	04 17 57.4	+1.8
ZOU	Zoufplan	148.66	349	PKPbc	PKPbc	04 17 59.3	-1.0
VTS	Vitosha	149.06	333	⇑P	PKPbc	04 18 01.2	-0.1
VTS	Vitosha	149.06	333	PKPbc	PKPbc	04 18 01.4	+0.1
DIVS	Divibare	149.09	339	PKPbc	PKPbc	04 18 01.4	+0.2
TUE	Stuetta	149.25	354	PKPbc	PKPbc	04 18 02.3	+0.5
CTI	Castel Tesino	149.38	351	PKPbc	PKPbc	04 18 00.6	-1.3
PDG	Podgorica	150.81	338	⇓P	PKPbc	04 18 05.7	+0.4
ESDC	Sonseca Array	155.01	16	PKPab	PKPab	04 18 32.0	+0.6
	comp=Z,0.6nm,0.7s,baz=325,slow=3.8,SNR=5.1						
TORD	Torodi Ar. Bea	175.85	130	PKP	PKPdf	04 18 22.0	-1.3
	comp=Z,1.2nm,1.0s,baz=304,slow=1.8,SNR=4.8						

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*IDC **07** 03:58:53.3±1.3, 0°.99N×126°.93E, h0km, mb3.9/5, mb1 4.0/6, mb1mx3.7/38, mbtmp3.9/6, ML3.4/1, Error ellipse: s-maj=105.8km s-min=18.8km az=71.0*

ISC 07 03:59:02.0±1.3**, 1°.0N**±0°.2×**127°.1E**±0°.6**, h72**km**, n6, σ0s.40**/6**, mb3.9**/5**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	19.03	184	P	P	04 03 18.1	-0.3
	0.1nm,0.3s,baz=18,slow=9.4,SNR=1.6						
WRA	Warramunga Arr	21.98	162	P	P	04 03 49.8	-0.5
	1.9nm,0.4s,baz=339,slow=11,SNR=36						
ASAR	Alice Springs	25.39	165	P	P	04 04 22.9	+0.1
	2.3nm,0.4s,baz=341,slow=8.8,SNR=40						
SONM	Songino Array	50.00	342	P	P	04 07 49.2	0.0
	0.4nm,0.3s,baz=162,slow=10,SNR=3.9						
MKAR	Makanchi Array	60.02	326	P	P	04 09 01.2	-0.1
	1.0nm,0.4s,baz=119,slow=7.7,SNR=20						
VNDA	Vanda	80.68	173	P	P	04 11 07.2	+0.4
	0.5nm,0.8s,baz=334,slow=4.3,SNR=3.6						

IDC 07 04:04:46.2±4.0**, 6°.33S**×**149°.02E, h0**km**, mb3.5**/2**, mb1 3.9**/3**, mb1mx3.5**/46**, mbtmp3.6**/3**, ML4.0**/1**, Error ellipse: s-maj=110.0km s-min=53.3km az=116.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	19.66	225	P	P	04 09 17.5	+0.6
	0.4nm,0.3s,baz=52,slow=11,SNR=7.5						
ASAR	Alice Springs	22.55	219	P	P	04 09 48.5	+0.3
	0.5nm,0.7s,baz=52,slow=9.9,SNR=2.9						
FITZ	Fitzroy Crossi	25.63	241	P	P	04 10 17.3	-0.4
	2.3nm,0.8s,baz=56,slow=13,SNR=7.8						
TORD	Torodi Ar. Bea	147.12	284	PKPbc	PKPbc	04 24 31.6	-0.8
	0.1nm,0.4s,baz=58,slow=3.6,SNR=1.7						

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*TAP **07** 04:12:31.0, 24°.46N×122°.69E, h92km, ML4.0, C*

*JMA **07** 04:12:31.1±0.1, 24°.43N×122°.65E, h90km±2km, M3.0*

*IDC **07** 04:12:35.6±9.8, 24°.39N×122°.37E, h136km±102km, mb3.3/7, mb1 3.4/8, mb1mx3.2/43, mbtmp3.7/8, ML3.7/1, MS2.6/1, Ms1 2.6/1, ms1mx2.2/28, Error ellipse: s-maj=91.6km s-min=15.4km az=68.0*

ISC 07 04:12:30.7±0.7**, 24°.46N**±0°.03×**122°.69E**±0°.02**, h91**km±5km**, n135, σ1s.14**/232**, mb3.5**/7**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	Yonagunijimaku	0.24	93	P	Pn	04 12 44.5	+0.6
JYNG				S	Sn	04 12 54.1	+0.3
YOJ	Yonaguni jima	0.30	90	eP	Pn	04 12 44.9	+0.7
	baz=93						
YOJ				eS	Sn	04 12 54.6	+0.3
	baz=93						
YOJ	Yonaguni jima	0.30	90	P	Pn	04 12 44.8	+0.6
YOJ				S	Sn	04 12 54.4	+0.1
TWC	Suao	0.78	281	P	Pn	04 12 48.1	+0.1
	baz=286						
TWC				S	Sn	04 13 00.5	-0.5
	baz=286						
EWUT	Wuta	0.83	269	eP	Pn	04 12 49.3	+0.7
	baz=264						
EWUT				eS	Sn	04 13 02.1	+0.1
	baz=264						
TWB1	Santiao Chiao	0.83	311	eP	Pn	04 12 48.8	+0.2
	baz=304						
ENA	Nanau	0.86	268	eP	Pn	04 12 49.4	+0.5
	baz=263						
ENA				eS	Sn	04 13 02.7	+0.1
	baz=263						
NTC	Toucheng	0.87	297	eP	Pn	04 12 49.4	+0.4
	baz=297						
NTC				eS	Sn	04 13 02.3	-0.4
	baz=297						
NDS	Dongshan	0.90	281	eP	Pn	04 12 49.9	+0.6
	baz=287						
NDS				eS	Sn	04 13 03.5	+0.2
	baz=287						
TIPB	Shuangxi	0.93	303	eP	Pn	04 12 50.0	+0.3
	baz=303						
TIPB				eS	Sn	04 13 04.1	+0.1
	baz=303						
IRIF	Iriomote-Funau	0.96	97	P	Pn	04 12 50.8	+0.8
IRIF				S	Sn	04 13 05.1	+0.6
TWE	Neicheng	0.96	286	eP	Pn	04 12 50.5	+0.5
	baz=286						
TWE				eS	Sn	04 13 04.6	+0.1
	baz=286						
ETL	Fush Village	1.02	253	eP	Pn	04 12 50.7	0.0
	baz=253						
ETL				eS	Sn	04 13 05.3	-0.4
	baz=253						
NWF	Wu-fen Shan	1.02	307	P	Pn	04 12 51.6	+0.8
	baz=300						
NWF				eS	Sn	04 13 06.2	+0.3
	baz=300						
WFSB	Wu-fen Shan	1.02	307	P	Pn	04 12 51.6	+0.9
	baz=300						
WFSB				S	Sn	04 13 06.4	+0.7
	baz=300						
ENTT	Nioudou	1.03	280	eP	Pn	04 12 51.7	+0.9
	baz=284						
ENTT				eS	Sn	04 13 06.2	+0.1
	baz=284						
NACB	Ninganchiao	1.04	254	eP	Pn	04 12 50.8	-0.1
	baz=247						
NACB				eS	Sn	04 13 05.5	-0.6
	baz=247						
TWD	Chiawan	1.06	249	eP	Pn	04 12 51.1	-0.1
	baz=249						
TWD				eS	Sn	04 13 06.0	-0.6
	baz=249						
NDT	Datong Townshi	1.08	278	eP	Pn	04 12 52.3	+0.9
	baz=281						
NDT				eS	Sn	04 13 07.4	+0.5
	baz=281						
HATJ	Hateruma jima	1.10	111	P	Pn	04 12 53.0	+1.4
HATJ				S	Sn	04 13 08.0	+0.7
HWA	Hwalien	1.10	244	eP	Pn	04 12 51.9	+0.4
	baz=243						
HWA				eS	Sn	04 13 07.7	+0.4
	baz=243						
NWLT	Wulai	1.12	286	eP	Pn	04 12 52.4	+0.5
	baz=290						
NWLT				eS	Sn	04 13 08.2	+0.3
	baz=290						
TWA	Mucha	1.13	297	eP	Pn	04 12 52.5	+0.6
	baz=290						
TWA				eS	Sn	04 13 07.9	0.0
	baz=290						
ETLH	Xiulin Townshi	1.13	257	eP	Pn	04 12 52.3	+0.2
	baz=253						
ETLH				eS	Sn	04 13 07.8	-0.3
	baz=253						
TEYL	Yanliau Villag	1.16	239	P	Pn	04 12 52.3	+0.1
	baz=237						
TEYL				eS	Sn	04 13 08.3	-0.2
	baz=237						
NHY	Taipei	1.17	300	eP	Pn	04 12 52.7	+0.4
	baz=291						
NHDH	Xindian Distri	1.17	295	eP	Pn	04 12 53.0	+0.6
	baz=295						
NHDH				eS	Sn	04 13 08.3	-0.4
	baz=295						
NNSB	Datong	1.19	269	eP	Pn	04 12 53.0	+0.2
	baz=262						
NNSB				eS	Sn	04 13 09.0	-0.4
	baz=262						
NWRT	Kuosheng	1.19	309	eP	Pn	04 12 53.5	+0.9
	baz=300						
ETM	Tongmen	1.20	246	eP	Pn	04 12 52.7	-0.1
	baz=244						
ETM				eS	Sn	04 13 08.8	-0.6
	baz=244						
NNS	Nan Shan	1.20	269	eP	Pn	04 12 53.4	+0.5

	baz=263						
NNS	baz=263			eS	Sn	04 13 09.4	-0.2
TAP1	Taipei baz=290	1.20	299	eS	Sn	04 13 09.2	-0.2
TATO	Taipei baz=295	1.20	295	P	Pn	04 12 53.1	+0.3
TATO	baz=295			eS	Sn	04 13 09.4	0.0
YHNB	Yeheng baz=280	1.21	280	P	Pn	04 12 53.7	+0.7
YHNB	baz=280			S	Sn	04 13 10.2	+0.4
TAP	Taipei baz=290	1.22	298	eP	Pn	04 12 53.2	+0.3
TAP	baz=290			eS	Sn	04 13 09.7	0.0
YM01	YM01 baz=296	1.22	304	eP	Pn	04 12 53.6	+0.5
YM01	baz=296			eS	Sn	04 13 10.0	+0.1
NSK	Sanguang baz=280	1.23	280	P	Pn	04 12 53.8	+0.6
NSK	baz=280			S	Sn	04 13 10.3	+0.1
JKRS	Kuro-shima	1.23	100	P	Pn	04 12 54.2	+1.1
JKRS				S	Sn	04 13 11.3	+1.3
YM08	YM08 baz=299	1.23	306	eP	Pn	04 12 53.4	+0.3
YM08	baz=299			eS	Sn	04 13 10.0	-0.2
TWY	Chenhua baz=303	1.28	310	P	Pn	04 12 54.7	+1.0
TWY	baz=303			eS	Sn	04 13 12.2	+1.2
TEGC	Jichi Village baz=230	1.29	235	eP	Pn	04 12 54.2	+0.4
TEGC	baz=230			eS	Sn	04 13 11.7	+0.4
ESL	Shilin baz=246	1.31	241	P	Pn	04 12 54.1	-0.1
ESL	baz=246			eS	Sn	04 13 10.8	-1.1
NTST	Danshui baz=296	1.32	302	eP	Pn	04 12 55.1	+0.9
NTST	baz=296			eS	Sn	04 13 12.4	+0.3
JIJ	Ishigaki jima	1.33	94	P	Pn	04 12 55.0	+0.6
JIJ				S	Sn	04 13 12.2	-0.1
FUSS	Fushou baz=266	1.33	261	P	Pn	04 12 55.3	+0.7
FUSS	baz=266			eS	Sn	04 13 13.0	+0.3
WHF	Hehuan Shan baz=262	1.33	257	eP	Pn	04 12 55.2	+0.3
WHF	baz=262			eS	Sn	04 13 12.6	-0.4
EGFH	Guangfu baz=232	1.40	236	eP	Pn	04 12 55.2	0.0
EGFH	baz=232			eS	Sn	04 13 13.7	0.0
TDCB	Techi baz=261	1.41	262	P	Pn	04 12 56.5	+1.0
TDCB	baz=261			S	Sn	04 13 14.0	-0.3
CHGB	Renai baz=248	1.44	254	P	Pn	04 12 56.6	+0.7
CHGB	baz=248			eS	Sn	04 13 15.1	+0.1
NCU	National Centr baz=290	1.45	291	eP	Pn	04 12 56.3	+0.4
NCU	baz=290			eS	Sn	04 13 16.2	+1.2
NCUH	Zhongli baz=290	1.46	291	eP	Pn	04 12 56.5	+0.6
NCUH	baz=290			eS	Sn	04 13 16.4	+1.3
OWD	Renai baz=246	1.47	250	eP	Pn	04 12 56.5	+0.3
OWD	baz=246			eS	Sn	04 13 15.1	-0.4
NJD	Zhudong baz=281	1.48	281	eP	Pn	04 12 57.4	+1.2
NJD	baz=281			eS	Sn	04 13 17.0	+1.4
JISG	Ishigakijimahi	1.48	85	P	Pn	04 12 56.6	+0.3
JISG				S	Sn	04 13 15.8	+0.1
HGSD	Ruisui baz=228	1.51	230	eP	Pn	04 12 56.2	-0.4
HGSD	baz=228			eS	Sn	04 13 15.2	-1.0
LIOB	Emei baz=277	1.53	277	eP	Pn	04 12 57.8	+0.9
LIOB	baz=277			eS	Sn	04 13 17.9	+1.1
NSTT	Nanjuang baz=276	1.54	277	eP	Pn	04 12 58.0	+1.0
NSTT	baz=276			eS	Sn	04 13 17.6	+0.6
HSN1	Hsinchu baz=282	1.55	282	eP	Pn	04 12 58.2	+1.2
HSN1	baz=282			eS	Sn	04 13 18.1	+1.0
EHY	Hungye baz=232	1.57	233	eP	Pn	04 12 57.1	-0.3
EHY	baz=232			eS	Sn	04 13 16.1	-1.5
SBCB	Hsinchu baz=282	1.58	282	eS	Sn	04 13 18.5	+0.6
HSN	Hsinchu baz=283	1.60	283	eS	Sn	04 13 18.1	-0.1
WHP	Taichung City baz=263	1.60	264	eP	Pn	04 12 59.6	+1.8
WHP	baz=263			eS	Sn	04 13 19.4	+1.0
ECBN	Changbin baz=219	1.61	225	eP	Pn	04 12 57.9	+0.1
ECBN	baz=219			eS	Sn	04 13 17.9	-0.6
WPL	Puli Township baz=251	1.64	254	eP	Pn	04 12 59.2	+0.9
WPL	baz=251			eS	Sn	04 13 20.3	+1.1
YULB	Yu-li baz=238	1.66	230	eP	Pn	04 12 58.2	-0.3
YULB	baz=238			eS	Sn	04 13 18.2	-1.4
DPDB	Guoxing baz=252	1.66	255	eP	Pn	04 12 59.7	+1.1
DPDB	baz=252			eS	Sn	04 13 20.9	+1.1
WCS	Beigang Elemen baz=254	1.67	256	eP	Pn	04 13 00.6	+2.0
WCS	baz=254			eS	Sn	04 13 21.0	+1.2
EYUL	Yuli baz=238	1.67	229	eP	Pn	04 12 59.0	+0.3
EYUL	baz=238			eS	Sn	04 13 20.5	+0.5
TWF1	Yuli baz=238	1.69	229	eP	Pn	04 12 58.8	-0.1
SSLB	Suanglung baz=247	1.72	247	eP	Pn	04 12 59.8	+0.5
SSLB	baz=247			eS	Sn	04 13 21.5	+0.5
NMLH	Miaoli baz=272	1.73	273	eS	Sn	04 13 21.5	+0.3
SMLT	Sun Moon Lake baz=247	1.73	251	eP	Pn	04 13 00.4	+0.9
SMLT	baz=247			eS	Sn	04 13 22.6	+1.1
NSY	Sanyi baz=268	1.75	269	eP	Pn	04 13 00.9	+1.2
NSY	baz=268			eS	Sn	04 13 23.0	+1.2
TYC	Yuchr baz=247	1.76	252	eP	Pn	04 13 00.9	+1.1
TYC	baz=247			eS	Sn	04 13 22.3	+0.3
FULB	Fuli baz=219	1.79	226	eP	Pn	04 13 00.1	-0.2
FULB	baz=219			eS	Sn	04 13 22.0	-0.7
CHKT	Chengkung baz=218	1.82	222	eP	Pn	04 12 59.9	-0.7
CHKT	baz=218			eS	Sn	04 13 21.2	-2.1
WHYT	Xinyi Township baz=247	1.84	246	eP	Pn	04 13 02.5	+1.6
WHYT	baz=247			eS	Sn	04 13 25.9	+2.0
JTJ	Tarama	1.84	84	P	Pn	04 13 02.0	+1.1
JTJ				S	Sn	04 13 24.7	+0.8
WWF	Wufeng baz=268	1.86	257	eS	Sn	04 13 25.6	+1.3
WDJ	Dajia District baz=275	1.87	267	eS	Sn	04 13 25.1	+0.6
WJS	Zhushan baz=250	1.90	251	eP	Pn	04 13 03.7	+2.1
WJS	baz=250			eS	Sn	04 13 27.7	+2.6
ECS	Chishang baz=235	1.91	225	eP	Pn	04 13 01.9	+0.1
ECS	baz=235			eS	Sn	04 13 25.9	+0.3
WNT1	Nantou City baz=253	1.91	254	eS	Sn	04 13 27.9	+2.4
WNT	Mingjian baz=252	1.92	253	eP	Pn	04 13 03.8	+2.0
WNT	baz=252			eS	Sn	04 13 28.1	+2.5
EDH	Donghe baz=217	1.95	221	eP	Pn	04 13 01.8	-0.5
EDH	baz=217			eS	Sn	04 13 25.0	-1.3
ALS	Alishan baz=235	1.96	242	eP	Pn	04 13 04.0	+1.3
ALS	baz=235			eS	Sn	04 13 28.3	+1.2
WCHH	Zhanghua baz=269	1.98	259	eS	Sn	04 13 28.3	+1.3
ELDTW	Lidau baz=226	1.99	231	eP	Pn	04 13 02.9	0.0
ELDTW	baz=226			eS	Sn	04 13 26.3	-1.1
WYL	Yuanlin Townsh baz=255	1.99	256	eS	Sn	04 13 28.2	+1.0
CHN5	Tsauling baz=238	2.03	245	eP	Pn	04 13 05.0	+1.6
CHN5	baz=238			eS	Sn	04 13 30.5	+2.2
WGK	Gukeng baz=248	2.09	249	eS	Sn	04 13 32.6	+3.0
LDUT	Ludao baz=211	2.10	212	eP	Pn	04 13 03.9	-0.3
LDUT	baz=211			eS	Sn	04 13 28.8	-1.1
LONT	Longtian baz=229	2.11	223	eP	Pn	04 13 04.1	-0.3
LONT	baz=229			eS	Sn	04 13 29.2	-0.8
WDLH	Douliu baz=261	2.11	249	eP	Pn	04 13 06.2	+1.9
WDLH	baz=261			eS	Sn	04 13 32.8	+2.8
STYH	Taoyuan baz=230	2.17	234	eP	Pn	04 13 06.5	+1.4
STYH	baz=230			eS	Sn	04 13 32.5	+1.0
WRL	Guolierlin Hig baz=255	2.18	256	eS	Sn	04 13 31.6	-0.2
STYT	Tauyuan baz=229	2.19	234	eP	Pn	04 13 06.9	+1.4
STYT	baz=229			eS	Sn	04 13 33.3	+1.2
TWGBT	Beinan baz=228	2.20	222	eP	Pn	04 13 05.2	-0.4
TWGBT	baz=228			eS	Sn	04 13 31.3	-1.0
TWG	Pinlang baz=228	2.21	222	eP	Pn	04 13 05.5	-0.2
TWG	baz=228			eS	Sn	04 13 31.4	-1.0
TPUB	Ta-pu baz=232	2.21	239	eP	Pn	04 13 07.5	+1.8
TPUB	baz=232			eS	Sn	04 13 34.4	+1.9
CHN2	Minshiung baz=245	2.22	246	eS	Sn	04 13 36.2	+3.4
WTK	Tuku baz=261	2.24	250	eS	Sn	04 13 34.9	+1.8
WTP	Ta-pu baz=237	2.25	238	eP	Pn	04 13 08.1	+1.8
WTP	baz=237			eS	Sn	04 13 36.5	+2.9
CHY	Chiayi baz=236	2.28	246	eS	Sn	04 13 36.6	+2.4
JIRB	Irabujima	2.29	80	S	Sn	04 13 33.9	-0.5
CHN1	Nanshi baz=237	2.35	238	eP	Pn	04 13 09.5	+1.9
CHN1	baz=237			eS	Sn	04 13 38.6	+2.8
SGST	Jiashian baz=234	2.37	235	eP	Pn	04 13 09.6	+1.8
SGST	baz=234			eS	Sn	04 13 39.0	+2.8
SLGT	Liugui baz=224	2.37	232	eP	Pn	04 13 10.4	+2.5
SLGT	baz=224			eS	Sn	04 13 39.0	+2.7
WSF	Szhu baz=259	2.40	250	eS	Sn	04 13 38.4	+1.5
ECL	Taimali baz=220	2.44	221	eP	Pn	04 13 09.1	+0.3
ECL	baz=220			eS	Sn	04 13 36.2	-1.8
SSD	Sandimen baz=227	2.54	228	eP	Pn	04 13 12.1	+1.9
SSD	baz=227			eS	Sn	04 13 42.0	+1.6
TSMG	Majia baz=227	2.56	227	eP	Pn	04 13 12.6	+2.2
TSMG	baz=227			eS	Sn	04 13 43.0	+2.1
LAY	Lan-yu baz=197	2.63	204	eP	Pn	04 13 10.8	-0.5
LAY	baz=197			eS	Sn	04 13 40.7	-1.8
MASBT	Mashibuluo baz=233	2.64	226	eP	Pn	04 13 12.4	+1.1
MASBT	baz=233			eS	Sn	04 13 44.6	+2.0
SSPT	Xinbi baz=236	2.77	225	eP	Pn	04 13 14.9	+1.8
SCZT	Fangliau baz=233	2.82	223	eP	Pn	04 13 15.2	+1.4
SCZT	baz=233			eS	Sn	04 13 48.6	+1.7
MATB	Ma-tsu baz=304	3.00	305	eP	Pn	04 13 16.2	0.0
MATB	baz=304			eS	Sn	04 13 49.5	-1.7
PHUB	P'eng-hu baz=252	3.00	252	eS	Sn	04 13 49.7	-1.6
TWKBT	Hengchun baz=213	3.04	215	eP	Pn	04 13 17.5	+0.6
TWKBT	baz=213			eS	Sn	04 13 52.6	+0.2
VCHM	Qimei baz=248	3.23	248	eS	Sn	04 13 55.9	-1.0
PTMZ	Houxiangcun baz=272	3.29	281	eP	Pn	04 13 20.6	+0.5
PTMZ	baz=272			eS	Sn	04 13 56.1	-2.3
XPSS	Dashiqiu baz=316	3.33	318	eP	Pn	04 13 20.6	-0.1
LYJJ	Jianjiangzhen baz=307	3.36	309	eP	Pn	04 13 21.2	+0.1
MHZQ	Yeshan baz=295	3.69	297	eP	Pn	04 13 25.7	+0.2
KNM	Kinmen baz=269	3.88	270	eS	Sn	04 14 12.6	+0.1
KNMB	Chin-men Tao baz=270	3.92	271	eS	Sn	04 14 11.0	-2.4
KSRS	Korea Array 0.3nm,0.3s,baz=196,slow=13,SNR=5.6	13.70	18	P	P	04 15 46.9	+0.4
MJAR	Matsushiro Arr comp=Z,18nm,20.0s,baz=195,slow=41	17.97	44	LR	LR	04 25 06.3	
SONM	Songino Array 0.3nm,0.4s,baz=145,slow=8.8,SNR=2.9	26.67	335	P	P	04 18 00.2	-0.8
MKAR	Makanchi Array 0.7nm,0.9s,baz=105,slow=8.8,SNR=2.2	39.10	315	P	P	04 19 48.8	-0.2
FITZ	Fitzroy Crossi 0.6nm,0.6s,baz=354,slow=9.2,SNR=1.2	42.40	176	P	P	04 20 15.3	-0.9
WRA	Warramunga Arr 0.8nm,0.5s,baz=347,slow=8.8,SNR=12	45.57	165	P	P	04 20 42.1	+0.5
ASAR	Alice Springs 0.2nm,0.3s,baz=352,slow=7.9,SNR=7.6	49.07	166	P	P	04 21 09.6	+0.9
FINES	FINESS Array B 1.7nm,0.8s,baz=57,slow=7.0,SNR=6.1	71.89	330	P	P	04 23 42.8	-0.8
BRTR	Keskin Array B 0.3nm,0.6s,baz=78,slow=9.1,SNR=2.5	74.11	307	P	P	04 23 57.0	-0.3

*SOME **07** 04:14:45.6, 44°.28N×81°.35E, h20^{km}*
*NNC **07** 04:14:45.2±2.7, 44°.42N×81°.17E, h0^{km}, mb2.7, mpv2.4,*
Error ellipse: s-maj=54.0km s-min=9.8km az=123.0
ISC 07 04:14:43.6±1.7**, 44°.27N**±0°.05×**81°.41E**±0°.07**, h9**^{km}±12^{km}**,**
n10, σ1^{s}.56/20**, 4C-2D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	Ketmen 6.6nm,0.1s	1.12	223	eP	Pg	04 15 05.8	+0.6
KTMS	69nm,0.3s			eS	Sg	04 15 20.9	+1.1
DJR	Jarkent 3.0nm,0.1s	1.17	274	eP	Pn	04 15 07.3	+1.1
DJR	19nm,0.2s			eS	Sn	04 15 23.4	+1.0
PDGK	Podgornoye 1.5nm,0.6s	1.68	237	⇓P	Pn	04 15 14.3	+1.0
PDGK	16nm,0.8s			⇑S	Sb	04 15 37.1	+1.1
KAPS	Kapalarasan 2.9nm,0.3s	1.78	305	eP	Pg	04 15 17.7	-0.1
KAPS	17nm,0.3s			eS	Sg	04 15 41.2	+0.3
SHLS	Shalkode 6.0nm,0.1s	1.80	233	eP	Pn	04 15 13.5	-1.4
SHLS	48nm,0.2s			eS	Sn	04 15 33.9	-4.1
UZB	Uzynbulak 4.4nm,0.2s	2.06	238	eP	Pb	04 15 21.8	+0.4
UZB	9.5nm,0.3s			eS	Sb	04 15 48.1	+0.9
SATY	Saty 1.3nm,0.1s	2.50	242	eP	Pb	04 15 28.6	-0.1
SATY	10nm,0.2s			eS	Sb	04 15 59.8	+0.3
MAKZ	Makanchi 5.6nm,0.9s	2.57	9	⇑P	Pb	04 15 28.7	-1.2
MAKZ	6.0nm,0.9s			⇑S	Sn	04 15 57.8	+0.9
ARXS	Arharly 1.4nm,0.2s	2.58	270	eP	Pb	04 15 30.5	+0.5
ARXS	7.2nm,0.3s			eS	Sg	04 16 03.2	-3.2
MK31	Makanchi Array 0.4nm,0.3s,baz=198,slow=16,SNR=16	2.60	13	⇓P	Pb	04 15 29.8	-0.6
MK31	0.4nm,0.2s,baz=196,slow=27,SNR=7.6			⇑S	Sn	04 15 58.3	+0.7

*JMA **07** 04:29:52.7, 32°.73N×133°.90E, h38^{km}±2^{km}, M3.4*
*IDC **07** 04:29:58.5±4.0, 31°.30N×132°.07E, h0^{km}, mb3.5/3,*
mb1 3.7/4, mb1mx3.4/39, mbtmp3.5/4, ML2.6/1, MS3.0/2,
Ms1 3.1/2, ms1mx2.5/39, Error ellipse: s-maj=213.1km
s-min=19.1km az=68.0
ISC 07 04:29:52.8±1.8**, 32°.76N**±0°.08×**133°.90E**±0°.06**, h31**^{km}±13^{km}**,**
n15, σ0^{s}.59/20**, mb3.6**/3**, 4C-3D, Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRT2	Murotomisaki 2	0.66	18	⇑P	Pb	04 30 05.9	0.0
MRT2				S	Sb	04 30 14.6	-0.2
JKHR	Kochiharuno	0.82	336	P	Pn	04 30 08.7	+0.5
JKU	Kubokawa	0.90	308	⇓P	Pn	04 30 09.4	+0.2
JKU				eS	Sn	04 30 20.2	-0.9
JTO	Tosashimizu	0.93	277	⇑P	Pn	04 30 09.3	-0.4
JTO				eS	Sn	04 30 21.0	-1.0
JMN	Monobe	0.97	359	⇑P	Pn	04 30 10.8	+0.5
JMN				S	Sn	04 30 22.9	-0.1
JAI	Aioi	1.13	24	⇑P	Pn	04 30 12.7	+0.3
JAI				S	Sn	04 30 26.1	-0.8
UWA2	Uwa jima 2	1.17	293	⇓P	Pn	04 30 13.2	+0.2
UWA2				S	Sn	04 30 27.5	-0.4
JET	Tanbara	1.25	325	⇓P	Pn	04 30 14.6	+0.5
JET				eS	Sn	04 30 29.5	-0.3
JNA	Nagahama	1.44	304	P	Pn	04 30 17.1	+0.4
JNU	Nakatsue 3.9nm,0.3s,baz=151,slow=5.4,SNR=9.7	2.57	279	Pn	Pn	04 30 33.1	+0.8
JNU	21nm,0.3s,baz=199,slow=8.4,SNR=18			Sn	Sn	04 31 03.4	+0.9
KSRS	Korea Array comp=Z,29nm,20.1s,baz=50,slow=39	6.78	315	LR	LR	04 34 34.9	
SONM	Songino Array 0.3nm,0.5s,baz=138,slow=11,SNR=2.3	25.65	314	P	P	04 35 30.2	+10
WRA	Warramunga Arr 1.5nm,0.9s,baz=355,slow=8.2,SNR=9.3	52.40	179	P	P	04 39 02.1	-0.1
ASAR	Alice Springs 0.5nm,0.9s,baz=350,slow=5.5,SNR=6.7	56.11	180	P	P	04 39 29.2	+0.1
TXAR	Lajitas Array comp=Z,24nm,18.8s,baz=0.0,slow=36	97.59	48	LR	LR	05 29 10.4	

*TUL **07** 04:49:56.5±1.8, 36°.27N±0°.01×97°.26W±0°.04, h5^{km}±6^{km},*
Error ellipse: s-maj=4.6km s-min=1.2km az=76.0
*IDC **07** 04:50:07.4±2.3, 36°.22N×97°.09W, h0^{km}, mb1 3.5/4,*
mb1mx3.3/49, mbtmp3.2/4, ML2.7/3, Error ellipse:
s-maj=31.3km s-min=13.7km az=107.0
*NEIC **07** 04:50:08.5±1.3, 36°.26N±0°.01×97°.24W±0°.01, h4^{km}±7^{km},*
mb_Lg3.5/112, Error ellipse: s-maj=1.8km s-min=1.0km
az=147.0
*ANF **07** 04:50:09.9±0.9, 36°.22N×97°.15W, h10^{km}±7^{km}, ML4.4/11,*
Error ellipse: s-maj=5.6km s-min=3.5km az=24.0
ISC 07 04:50:08.4±1.1**, 36°.25N**±0°.02×**97°.21W**±0°.02**, h1**^{km}±10^{km}**,**
n145, σ1^{s}.34/144**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QUOK	Quay	0.41	100	Pg	Pg	04 50 17.0	+0.7
OK031	S. Brethren Rd	0.42	134	Pg	Pg	04 50 17.2	+0.8
OK031				Sg	Sb	04 50 23.8	-1.6
OK030	Cody Creek RV	0.47	132	Pg	Pg	04 50 17.4	0.0
OK030				Sg	Sb	04 50 25.3	-1.6
OK029	Liberty Lake	0.49	204	Pg	Pg	04 50 18.2	+0.5
BLOK	Blackwell	0.51	360	Pg	Pg	04 50 18.2	0.0
BLOK				Sg	Sg	04 50 25.7	+0.8
BCOK	Bluff Creek, N	0.67	209	Pg	Pg	04 50 20.9	-0.3
BCOK				Sg	Sg	04 50 31.0	+1.1
OK025	Westminster Rd	0.67	189	Pg	Pg	04 50 21.0	-0.2
OK025				Sg	Sg	04 50 31.3	+1.4
CROK	Carrier	0.67	293	Pg	Pg	04 50 20.1	-1.2
CROK				Sg	Sg	04 50 30.2	+0.1
OK009	Oakdale Elemen	0.68	195		Pn	04 50 32.0	+6.8
KAN13	South Haven SW	0.80	345		Pg	04 50 23.5	-0.1
KAN13				Sg	Sg	04 50 34.4	+0.5
GC02	Grant County #	0.80	319	Pg	Pg	04 50 23.4	-0.3
OKCFA	Oklahoma City	0.85	193	Pg	Pg	04 50 24.9	+0.2
OKCSW	OKLAHOMA CITY	0.86	192	Pg	Pg	04 50 24.7	-0.1
T35A	Sooner Cattle	0.88	40		Pg	04 50 25.7	+0.5
T35A				Sg	Sg	04 50 37.0	+0.5
KAN17	Caldwell West	0.91	331	Sg	Sg	04 50 37.4	-0.3
KAN14	Manchester OK	0.93	320		Pg	04 50 25.4	-0.9
KAN14				Sg	Sg	04 50 37.7	-0.7
KAN09	Caldwell North	0.95	340		Pg	04 50 26.0	-0.5
KAN09				Sg	Sg	04 50 39.0	+0.2
OK032	Salt Plains WL	0.98	305		Pg	04 50 26.4	-0.7
KAN01	Argonia South	1.01	334		Pg	04 50 27.3	-0.4
KAN05	Bluff City Nor	1.01	329		Pg	04 50 27.0	-0.7
KS20	Mayfield South	1.02	344	Pg	Pg	04 50 27.0	-1.0
KAN06	Argonia West S	1.13	333	Pg	Pb	04 50 29.6	-1.0
KAN10	Anthony SW Sta	1.13	321		Pb	04 50 29.4	-1.3
KAN08	Anthony NE Sta	1.15	328		Pb	04 50 30.1	-1.0
KAN16	Harper SW Stat	1.19	325	Pg	Pn	04 50 30.8	-1.4
TUL1	Leonard baz=287	1.20	106	P	Pb	04 50 31.3	-0.5
TUL1	baz=287			S	Sn	04 50 48.1	-1.0
TUL1	Leonard	1.20	106	Pg	Pb	04 50 31.6	-0.2
U32A	Winter Ranch,	1.45	276		Pn	04 50 34.3	-1.4
X34A	Smith Ranch, M	1.72	197	Pn	Pn	04 50 40.3	+0.9
WMOK	Wichita Mounta baz=39	1.98	221	P	Pn	04 50 43.8	+0.9
WMOK	baz=39			S	Sb	04 51 10.3	+0.1
WMOK	Wichita Mounta	1.98	221	Pn	Pn	04 50 43.9	+0.9
WMOK				IAmb_Lg		04 51 12.0	

	comp=Z,370nm,0.8s						
X37A	**Clayton**	**2.23**	**137**	Pn	**Pn**	**04 50 46.8**	**+0.3**
LOOK	**Love County**	**2.25**	**179**		**Pn**	**04 50 47.5**	**+0.8**
U38A	**Gravette**	**2.29**	**84**	Pn	**Pn**	**04 50 47.9**	**+0.7**
R32A	**Long Quarter,**	**2.48**	**332**		**Pn**	**04 50 49.7**	**-0.2**
R32A				IAmb_Lg		04 51 26.5	
	comp=Z,114nm,0.8s						
HHAR	**Hobbs**	**2.65**	**88**	Pn	**Pn**	**04 50 52.8**	**+0.7**
KSU1	**Kansas State U**	**2.89**	**9**	Pb	**Pb**	**04 51 02.8**	**+2.1**
	baz=190						
KSU1	**Kansas State U**	**2.89**	**9**	Pn	**Pn**	**04 50 55.5**	**-0.1**
KSU1				IAmb_Lg		04 51 47.4	
	comp=Z,178nm,1.0s						
Z35A	**Perchaven, San**	**2.91**	**181**	Pn	**Pn**	**04 50 54.8**	**-0.9**
W39A	**Magazine**	**2.98**	**110**		**Pn**	**04 50 56.2**	**-0.5**
W39A				IAmb_Lg		04 51 48.6	
	comp=Z,179nm,0.7s						
CBKS	**Cedar Bluff**	**3.26**	**323**	Pb	**Pb**	**04 51 08.1**	**+1.2**
	baz=142						
CBKS				Sb	**Sb**	**04 51 51.3**	**+4.1**
	baz=142						
CBKS	**Cedar Bluff**	**3.26**	**323**	Pn	**Pn**	**04 50 59.6**	**-1.0**
MIAR	**Mount Ida**	**3.42**	**119**	P	**Pn**	**04 51 04.1**	**+1.3**
	baz=301						
MIAR				S	**Sn**	**04 51 45.9**	**+2.0**
	baz=301						
MIAR	**Mount Ida**	**3.42**	**119**		**Pn**	**04 51 02.5**	**-0.3**
MIAR				IAmb_Lg		04 52 01.3	
	comp=Z,81nm,0.8s						
S39A	**Bolivar**	**3.43**	**64**		**Pn**	**04 50 59.9**	**-3.0**
S39A				IAmb_Lg		04 52 04.1	
	comp=Z,107nm,0.9s						
Z38A	**Mt. Pleasant**	**3.50**	**148**		**Pn**	**04 51 02.9**	**-0.9**
Z38A				IAmb_Lg		04 52 08.9	
	comp=Z,133nm,0.8s						
U40A	**Yellville**	**3.52**	**87**		**Pn**	**04 51 04.0**	**-0.2**
U40A				IAmb_Lg		04 52 03.7	
	comp=Z,172nm,0.7s						
AMTX	**Amarillo**	**3.89**	**251**	Sb	**Sb**	**04 52 10.6**	**+5.2**
	baz=68						
AMTX	**Amarillo**	**3.89**	**251**	Pn	**Pn**	**04 51 08.6**	**-0.7**
AMTX				IAmb_Lg		04 52 19.5	
	comp=Z,107nm,0.9s						
X40A	**Basin Creek Fa**	**3.98**	**115**		**Pn**	**04 51 11.6**	**+1.0**
X40A				IAmb_Lg		04 52 22.7	
	comp=Z,111nm,0.8s						
MGMO	**Mountain Grove**	**4.08**	**76**		**Pn**	**04 51 10.9**	**-0.9**
MGMO				IAmb_Lg		04 52 18.2	
	comp=Z,112nm,0.8s						
WHAR	**Wooly Hollow**	**4.12**	**102**	Pn	**Pn**	**04 51 12.5**	**+0.2**
WHAR				IAmb_Lg		04 52 22.0	
	comp=Z,126nm,0.8s						
ABTX	**Abilene, Hawle**	**4.13**	**210**	Pb	**Pb**	**04 51 22.4**	**+0.5**
	baz=28						
ABTX	**Abilene, Hawle**	**4.13**	**210**		**Pn**	**04 51 11.5**	**-1.1**
ABTX				IAmb_Lg		04 52 21.2	
	comp=Z,88nm,0.9s						
FCAR	**Ozark Folk Cen**	**4.14**	**93**	Pn	**Pn**	**04 51 11.0**	**-1.7**
FCAR				IAmb_Lg		04 52 23.8	
	comp=Z,101nm,0.7s						
W41B	**Gary Mavity, V**	**4.18**	**103**	S	**Sn**	**04 52 02.8**	**+0.1**
	baz=286						
WLAR	**White Oak Lake**	**4.22**	**126**	Pn	**Pn**	**04 51 12.4**	**-1.4**
WLAR				IAmb_Lg		04 52 29.7	
	comp=Z,74nm,0.7s						
WHTX	**Lake Whitney,**	**4.25**	**183**	Pn	**Pn**	**04 51 14.6**	**+0.5**
237A	**Washetta, Mont**	**4.39**	**164**		**Pn**	**04 51 16.1**	**0.0**
237A				IAmb_Lg		04 52 40.5	
	comp=Z,58nm,0.9s						
R40A	**Maddies Statio**	**4.44**	**61**		**Pn**	**04 51 15.8**	**-1.0**
R40A				IAmb_Lg		04 52 28.3	
	comp=Z,68nm,0.8s						
P38A	**Dawn**	**4.46**	**40**		**Pn**	**04 51 16.9**	**-0.1**
P38A				IAmb_Lg		04 52 33.4	
	comp=Z,76nm,0.8s						
N33A	**J Bar K, Exete**	**4.49**	**358**	IAmb_Lg		04 52 33.9	
	comp=Z,83nm,0.8s						
Z41A	**Richland Creek**	**4.70**	**128**	S	**Sn**	**04 52 14.9**	**-0.5**
	baz=311						
N35A	**Tabor**	**4.77**	**14**	Pn	**Pn**	**04 51 21.3**	**-0.1**
LCAR	**Lake Charles**	**4.91**	**90**	Pn	**Pn**	**04 51 23.6**	**+0.4**
LCAR				IAmb_Lg		04 52 46.0	
	comp=Z,134nm,0.7s						
NATX	**Nacogdoches**	**4.95**	**154**	Pn	**Pn**	**04 51 23.4**	**-0.4**
T42A	**Van Buren**	**4.98**	**79**	Pn	**Pn**	**04 51 23.6**	**-0.7**
T42A				IAmb_Lg		04 52 48.5	
	comp=Z,106nm,0.9s						
CCAR	**Cane Creek**	**5.03**	**116**	Pn	**Pn**	**04 51 25.6**	**+0.7**
CCAR				IAmb_Lg		04 52 56.8	
	comp=Z,92nm,0.9s						
MSTX	**Muleshoe**	**5.09**	**245**		**Pn**	**04 51 23.9**	**-2.0**
CCM	**Cathedral Cave**	**5.10**	**67**		**Pn**	**04 51 26.2**	**+0.3**
CCM				IAmb_Lg		04 52 59.8	
	comp=Z,62nm,0.7s						
KSCO	**Kaye Shedlock'**	**5.11**	**304**	P	**Pn**	**04 51 28.2**	**+2.1**
	baz=121						
KSCO	**Kaye Shedlock'**	**5.11**	**304**		**Pn**	**04 51 25.8**	**-0.3**
KSCO				IAmb_Lg		04 52 56.3	
	comp=Z,96nm,0.8s						
BGNE	**Belgrade**	**5.21**	**352**	P	**Pn**	**04 51 27.1**	**-0.3**
	baz=172						
BGNE	**Belgrade**	**5.21**	**352**		**Pn**	**04 51 26.8**	**-0.5**
P40A	**Paris**	**5.24**	**50**	Pn	**Pn**	**04 51 26.9**	**-0.9**
P40A				IAmb_Lg		04 52 56.6	
	comp=Z,58nm,0.7s						
HBAR	**Harrisburg**	**5.37**	**95**	Pn	**Pn**	**04 51 29.4**	**-0.1**
435B	**Jarrell**	**5.46**	**183**	S	**Sn**	**04 52 32.3**	**-1.9**
	baz=2.8						
435B	**Jarrell**	**5.46**	**183**	Pn	**Pn**	**04 51 30.7**	**-0.1**
435B				IAmb_Lg		04 53 15.6	
	comp=Z,95nm,0.7s						
PBMO	**Poplar Bluff**	**5.49**	**82**	Pn	**Pn**	**04 51 30.3**	**-0.9**
N38A	**Joes South For**	**5.51**	**33**		**Pn**	**04 51 30.2**	**-1.3**
N38A				IAmb_Lg		04 53 15.7	
	comp=Z,68nm,0.8s						
LPAR	**Lepanto**	**5.65**	**94**	Pn	**Pn**	**04 51 33.3**	**-0.1**
FVM	**French Village**	**5.69**	**70**	Pn	**Pn**	**04 51 34.9**	**+0.8**
FVM				IAmb_Lg		04 53 19.6	
	comp=Z,50nm,0.7s						
L34A	**Svendsen Farm,**	**5.75**	**6**	Pn	**Pn**	**04 51 34.1**	**-0.7**
GNAR	**Gosnell**	**5.83**	**91**	Pn	**Pn**	**04 51 35.0**	**-0.9**
T25A	**Trinidad**	**5.85**	**281**	P	**Pn**	**04 51 37.0**	**+0.6**
	baz=96						
T25A				Sb	**Sb**	**04 53 10.3**	**+8.3**
	baz=96						
T25A	**Trinidad**	**5.85**	**281**		**Pn**	**04 51 36.0**	**-0.4**
PEBM	**Pemiscott Bayo**	**5.95**	**89**	Pn	**Pn**	**04 51 37.7**	**+0.2**
143A	**Socs Landing,**	**5.96**	**125**	IAmb_Lg		04 53 34.6	
	comp=Z,49nm,0.9s						
OGNE	**Ogallala**	**6.02**	**323**		**Pn**	**04 51 37.9**	**-0.8**
OGNE				IAmb_Lg		04 53 30.1	
	comp=Z,51nm,0.7s						
PARMO	**Parma**	**6.03**	**84**	Pn	**Pn**	**04 51 38.0**	**-0.6**
SLM	**Saint Louis**	**6.04**	**65**	IAmb_Lg		04 53 22.8	
	comp=Z,79nm,0.8s						
JCT	**Junction City**	**6.14**	**201**	Pn	**Pn**	**04 51 39.5**	**-0.8**
LNXT	**Lenox**	**6.25**	**89**	Pn	**Pn**	**04 51 41.5**	**-0.1**
HENM	**Henderson Moun**	**6.25**	**83**	Pn	**Pn**	**04 51 41.3**	**-0.4**
HKT	**Hockley**	**6.38**	**169**	Pn	**Pn**	**04 51 44.4**	**+1.0**
GLAT	**Glass**	**6.40**	**87**	Pn	**Pn**	**04 51 43.4**	**-0.4**
HICK	**Hickman**	**6.45**	**85**	Pn	**Pn**	**04 51 45.2**	**+0.9**
SCIA	**State Center**	**6.45**	**28**	Pn	**Pn**	**04 51 44.5**	**0.0**
K31A	**O'Neill**	**6.48**	**350**	Pn	**Pn**	**04 51 44.6**	**-0.3**
S44A	**Carbondale**	**6.53**	**75**	Pn	**Pn**	**04 51 45.9**	**+0.3**
S44A				IAmb_Lg		04 53 37.3	
	comp=Z,73nm,0.7s						
SIUC	**Southern Illin**	**6.57**	**75**	Pn	**Pn**	**04 51 45.5**	**-0.5**
N41A	**Harden Midland**	**6.69**	**46**	Pn	**Pn**	**04 51 47.3**	**-0.4**
Y45A	**Yeager Farm, C**	**6.72**	**108**	Pn	**Pn**	**04 51 48.8**	**+0.7**
Y45A				IAmb_Lg		04 53 55.4	
	comp=Z,42nm,0.9s						
UTMT	**University of**	**6.74**	**87**	Pn	**Pn**	**04 51 48.8**	**+0.4**
SDCO	**Great Sand Dun**	**6.80**	**285**	Sb	Sb	04 53 40.1	+11
	baz=100						
SDCO	**Great Sand Dun**	**6.80**	**285**		**Pn**	**04 51 47.7**	**-1.8**
SDCO				IAmb_Lg		04 53 46.1	
	comp=Z,91nm,1.1s						
VBMS	**Vicksburg**	**6.84**	**124**	Pn	**Pn**	**04 51 49.7**	**-0.1**
Q24A	**Divide**	**6.86**	**296**	Sb	**Sg**	**04 53 43.1**	**-5.6**
	baz=111						
P43A	**Skaggs, Pawnee**	**6.96**	**59**	Pn	**Pn**	**04 51 50.6**	**-0.8**
P43A				IAmb_Lg		04 53 52.1	
	comp=Z,78nm,0.9s						
Q44A	**Meyer Farm, Va**	**7.03**	**65**	Pn	**Pn**	**04 51 52.1**	**-0.3**
Q44A				IAmb_Lg		04 54 02.3	
	comp=Z,74nm,1.0s						
K38A	**Parkersburg**	**7.26**	**27**	Pn	**Pn**	**04 51 55.2**	**-0.3**
K38A				IAmb_Lg		04 54 10.1	
	comp=Z,87nm,0.8s						
735A	**Kenedy**	**7.39**	**184**	IAmb_Lg		04 54 19.2	
	comp=Z,48nm,0.9s						
L40A	**Anamosa**	**7.44**	**37**	IAmb_Lg		04 54 07.4	
	comp=Z,41nm,0.8s						
ECSD	**EROS Data Cent**	**7.49**	**3**		**Pn**	**04 51 58.3**	**-0.5**
ECSD				IAmb_Lg		04 54 11.7	
	comp=Z,30nm,0.7s						
ISCO	**Idaho Springs**	**7.52**	**301**		**Pn**	**04 51 59.1**	**-0.3**
PLAL	**Pickwick Lake**	**7.55**	**97**	IAmb_Lg		04 54 16.1	
	comp=Z,34nm,0.8s						
HDIL	**Hopedale**	**7.56**	**53**		**Pn**	**04 51 59.6**	**-0.1**
HDIL				IAmb_Lg		04 54 27.3	
	comp=Z,71nm,0.7s						
WVT	**Waverly**	**7.59**	**88**	Pn	**Pn**	**04 52 00.9**	**+0.9**
ANMO	**Albuquerque**	**7.64**	**263**	Pn	**Pn**	**04 52 01.6**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=78,slow=13,SNR=1.8						
ANMO				Lg	Lg	04 54 03.3	
	comp=Z,1.1nm,0.3s,baz=12,slow=14,SNR=4.4						
ANMO	**Albuquerque**	**7.64**	**263**	Pn	**Pn**	**04 51 59.8**	**-1.2**
OLIL	**Olney**	**7.66**	**68**	Pn	**Pn**	**04 52 01.3**	**+0.3**
OLIL				IAmb_Lg		04 54 33.3	
	comp=Z,71nm,1.0s						
O44A	**Mansfield**	**7.91**	**58**	Pn	**Pn**	**04 52 04.7**	**+0.2**
O44A				IAmb_Lg		04 54 22.4	
	comp=Z,48nm,0.8s						
BNM	**Barren Site**	**7.99**	**258**	Pn	**Pn**	**04 52 04.3**	**-1.5**
Z47A	**Carrollton**	**8.12**	**109**	Pn	**Pn**	**04 52 06.6**	**-0.7**
Z47A				IAmb_Lg		04 54 35.1	
	comp=Z,25nm,1.0s						
MNTX	**Cornudas Mount**	**8.16**	**239**		**Pn**	**04 52 07.0**	**-0.9**
T47A	**Sharon Grove**	**8.16**	**82**	Pn	**Pn**	**04 52 08.2**	**+0.3**
L42A	**Oliver, Polo**	**8.21**	**43**	Pn	**Pn**	**04 52 08.4**	**-0.1**
L42A				IAmb_Lg		04 54 44.5	
	comp=Z,48nm,0.8s						
Y22D	**IRIS PASSCAL I**	**8.24**	**258**	Pn	**Pn**	**04 52 08.3**	**-0.8**
LENM	**Lemitar**	**8.26**	**258**	Pn	**Pn**	**04 52 08.5**	**-0.9**
SMCO	**Snowmass**	**8.27**	**294**	Pn	**Pn**	**04 52 08.7**	**-1.1**
I37A	**Lemond, Waseca**	**8.29**	**19**	Pn	**Pn**	**04 52 09.6**	**0.0**
I37A				IAmb_Lg		04 54 46.5	
	comp=Z,69nm,0.9s						
SUSD	**Miller**	**8.30**	**351**	Pn	**Pn**	**04 52 08.9**	**-0.8**
SUSD				IAmb_Lg		04 54 51.1	
	comp=Z,60nm,0.9s						
V48A	**Smith Brothers**	**8.44**	**90**	Pn	**Pn**	**04 52 11.0**	**-0.7**
JFWS	**Jewell Farm**	**8.56**	**37**	Pn	**Pn**	**04 52 12.6**	**-0.7**
JFWS				IAmb_Lg		04 54 41.3	
	comp=Z,54nm,0.8s						
P46A	**Rosedale**	**8.59**	**64**	Pn	**Pn**	**04 52 13.5**	**-0.3**
TXAR	**Lajitas Array**	**8.77**	**220**	Pn	**Pn**	**04 52 14.2**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=51,slow=13,SNR=2.3						
TXAR				Lg	Lg	04 54 40.7	
	comp=Z,0.5nm,0.3s,baz=34,slow=25,SNR=4.9						
K43A	**Burlington**	**9.42**	**44**	IAmb_Lg		04 55 24.2	
	comp=Z,51nm,1.0s						
RSSD	**Black Hills**	**9.44**	**329**	IAmb_Lg		04 55 21.6	
	comp=Z,20nm,1.0s						
RWWY	**Rawlins**	**9.49**	**308**	IAmb_Lg		04 55 23.7	
	comp=Z,29nm,1.1s						
SPMN	**Marine on St.**	**9.57**	**19**	IAmb_Lg		04 55 22.3	
	comp=Z,34nm,1.0s						
K22A	**Casper**	**9.63**	**314**	IAmb_Lg		04 55 39.2	
	comp=Z,41nm,1.1s						
F36A	**Milaca**	**10.00**	**15**	IAmb_Lg		04 55 30.9	
	comp=Z,33nm,1.3s						
TKL	**Tuckaleechee C**	**10.91**	**89**	Lg	Lg	04 55 46.7	
	comp=Z,0.4nm,0.3s,baz=216,slow=18,SNR=3.7						
PDAR	**Pinedale Array**	**11.54**	**308**	Pn	**Pn**	**04 52 55.0**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=117,slow=13,SNR=4.4						
PDAR				Lg	Lg	04 56 11.6	
	comp=Z,0.3nm,0.3s,baz=122,slow=29,SNR=8.4						
ULM	**Lac du Bonnet**	**14.03**	**4**	Pn	Pn	04 53 24.0	-4.2
	comp=Z,0.2nm,0.3s,baz=181,slow=15,SNR=2.1						
ULM				Sn	Sn	04 55 50.1	-14
	baz=104,slow=8.3,SNR=1.9						
ULM				Lg	Lg	04 57 23.1	
	comp=Z,0.3nm,0.3s,baz=205,slow=11,SNR=3.0						

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*IDC **07** 04:58:07.0±5.4, 41.°57N×144.°13E, h0^{km}, mb3.8/3, mb1 3.7/4, mb1mx3.4/41, mbtmp3.8/4, ML3.9/1, Error ellipse: s-maj=107.5km s-min=73.1km az=105.0*

*JMA **07** 04:58:23.3±0.1, 42.°35N×143.°11E, h49^{km}±1^{km}, M3.4*

JMA Felt I J1.

ISC 07 04:58:22.2±1.2, **42.°24N**±0.°08×**143.°19E**±0.°06, **h58**^{km}±8^{km}, **n23**, σ**1.^{s}77**/22, **mb3.8**/3, **4C-3D**, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTHR	**Tokachihiroo**	**0.10**	**55**	⇑P	**Pn**	**04 58 31.3**	**+0.3**
JEM	**Erimo**	**0.22**	**187**	⇑P	**Pn**	**04 58 32.8**	**+1.3**
JNBK	**Urakawa-nobuka**	**0.33**	**278**	⇓P	**Pn**	**04 58 32.0**	**-0.3**
JNBK				*e*S	**Sn**	**04 58 39.2**	**-0.4**
JCH	**Churui**	**0.40**	**18**	⇑P	**Pn**	**04 58 32.5**	**-0.5**
JCH				*e*S	**Sn**	**04 58 39.8**	**-0.9**
JSHD	**Hidakashinhida**	**0.57**	**288**	⇓P	**Pn**	**04 58 34.5**	**-0.2**
JBT2	**Biratori 2**	**0.82**	**312**	⇓P	**Pn**	**04 58 37.2**	**-0.6**
JOB	**Onbets**	**0.82**	**35**	⇑P	**Pn**	**04 58 38.5**	**+0.7**
JOB				*e*S	**Sn**	**04 58 50.6**	**+1.4**
JIAM	**Iburiatsuma**	**1.02**	**293**	P	**Pn**	**04 58 41.5**	**+1.1**
JFR	**Furan**	**1.03**	**335**	P	**Pn**	**04 58 39.0**	**-1.6**
JAR	**Ashorobuto**	**1.14**	**22**	P	**Pn**	**04 58 41.7**	**-0.4**
JAR				*e*S	**Sn**	**04 58 55.7**	**-1.1**
JAK	**Akkeshi**	**1.34**	**55**	P	**Pn**	**04 58 45.0**	**+0.3**
JEW	**Eniwo**	**1.42**	**296**	P	**Pn**	**04 58 46.0**	**+0.2**
JAB	**Ashibetsu**	**1.46**	**331**	P	**Pn**	**04 58 46.1**	**-0.1**
ASAJ	**Asahikawa**	**1.93**	**347**	Pn	**Pn**	**04 58 53.0**	**+0.3**
	12nm,0.3s,baz=198,slow=14,SNR=26						
ASAJ				Sn	**Sn**	**04 59 22.4**	**+6.6**
	7.6nm,0.3s,baz=266,slow=31,SNR=4.7						
H11N2	**WAKE ISLAND Hy**	**30.08**	**131**	T	T	05 35 58.3	
	baz=323,slow=75,SNR=22						
H11N1	**WAKE ISLAND Hy**	**30.09**	**131**	T	T	05 35 59.0	
	baz=323,slow=75,SNR=9.2						
H11N3	**WAKE ISLAND Hy**	**30.10**	**131**	T	T	05 35 58.0	
	baz=323,slow=75,SNR=17						
H11S1	**WAKE ISLAND Hy**	**30.96**	**133**	T	T	05 37 04.8	
	baz=325,slow=76,SNR=23						
H11S3	**WAKE ISLAND Hy**	**30.96**	**133**	T	T	05 37 05.7	
	baz=325,slow=76,SNR=20						
H11S2	**WAKE ISLAND Hy**	**30.98**	**133**	T	T	05 37 08.7	
	baz=325,slow=76,SNR=17						
ZALV	**Zalesovo Beam**	**39.61**	**308**	P	**P**	**05 05 47.6**	**-0.2**
	0.7nm,0.4s,baz=97,slow=7.4,SNR=4.2						
MKAR	**Makanchi Array**	**42.72**	**298**	P	**P**	**05 06 13.3**	**-0.2**
	0.3nm,0.7s,baz=87,slow=11,SNR=4.6						
FINES	**FINESS Array B**	**64.87**	**332**	P	**P**	**05 08 53.5**	**-1.3**
	0.4nm,0.4s,baz=35,slow=7.0,SNR=7.9						

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*IDC **07** 05:00:15.6±2.1, 63.°16N×151.°26W, h107^{km}±20^{km}, mb3.5/7, mb1 3.5/10, mb1mx3.2/42, mbtmp3.8/10, Error ellipse: s-maj=29.4km s-min=17.0km az=114.0*

*NEIC **07** 05:00:17.1±1.0, 63.°07N±0.°04×150.°89W±0.°09, h130^{km}±2^{km}, Error ellipse: s-maj=5.8km s-min=4.9km az=64.0*

*AEIC **07** 05:00:18.0±1.0, 63.°06N±0.°03×150.°84W±0.°06, h120^{km}±4^{km}, ML3.3, ML3.5/166(NEIC), Error ellipse: s-maj=5.3km s-min=3.2km az=214.0*

ISC 07 05:00:17.3±0.8, **63.°05N**±0.°02×**150.°88W**±0.°03, **h130**^{km}±5^{km}, **n286**, σ**0.^{s}64**/272, **mb3.7**/7, **Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRF	**Thorofare Moun**	**0.48**	**34**	P	**Pn**	**05 00 36.4**	**0.0**
	baz=213						
TRF				S	**Sn**	**05 00 50.6**	**-0.3**
	baz=213						
TRF	**Thorofare Moun**	**0.48**	**34**		**Pn**	**05 00 36.4**	**0.0**
TRF	**Thorofare Moun**	**0.48**	**34**	IAML		05 00 37.1	
	comp=N,260nm,0.3s						
TRF				IAML		05 00 38.7	
	comp=E,153nm,0.3s						
KTH	**Kantishna Hill**	**0.50**	**358**		**Pn**	**05 00 36.4**	**0.0**
KTH	**Kantishna Hill**	**0.50**	**358**		**Sn**	**05 00 50.0**	**-0.9**
KTH	**Kantishna Hill**	**0.50**	**358**	IAML		05 00 37.7	
	comp=N,97nm,0.4s						
KTH				IAML		05 00 40.1	
	comp=E,71nm,0.6s						
PPLA	**Purkeypile**	**0.62**	**256**	P	**Pn**	**05 00 37.4**	**+0.2**
	baz=74						
PPLA	**Purkeypile**	**0.62**	**256**		**Pn**	**05 00 37.4**	**+0.2**
CAST	**Castle Rocks**	**0.66**	**304**	P	**Pn**	**05 00 37.0**	**-0.3**
	baz=122						
CAST				S	**Sn**	**05 00 51.5**	**-1.0**
	baz=122						
CAST	**Castle Rocks**	**0.66**	**304**		**Pn**	**05 00 37.0**	**-0.3**
CAST					**Sn**	**05 00 51.5**	**-1.0**
CUT	**Chulitna**	**0.71**	**156**	P	**Pn**	**05 00 37.7**	**0.0**
	baz=338						
CUT				S	**Sn**	**05 00 53.1**	**+0.1**
	baz=338						
CUT	**Chulitna**	**0.71**	**156**		**Pn**	**05 00 37.7**	**0.0**
CUT					**Sn**	**05 00 53.1**	**+0.1**
CUT	**Chulitna**	**0.71**	**156**	IAML		05 00 53.8	
	comp=E,4µm,0.4s						
CUT				IAML		05 00 56.0	
	comp=N,2µm,0.5s						
WAT7	**Susitna Watana**	**0.96**	**102**		**Pn**	**05 00 39.7**	**-0.1**
WAT7					**Sn**	**05 00 56.4**	**-0.6**
RND	**Reindeer**	**0.98**	**68**		**Pn**	**05 00 40.0**	**0.0**
RND	**Reindeer**	**0.98**	**68**	IAML		05 00 57.7	
	comp=N,513nm,0.5s						
RND				IAML		05 00 58.4	
	comp=E,510nm,0.3s						
BPAW	**Bear Paw Mtn.**	**1.05**	**357**	P	**Pn**	**05 00 40.5**	**-0.1**
	baz=176						
BPAW				S	**Sn**	**05 00 57.5**	**-0.9**
	baz=176						
BPAW	**Bear Paw Mtn.**	**1.05**	**357**		**Pn**	**05 00 40.5**	**-0.1**
BPAW					**Sn**	**05 00 57.5**	**-0.9**
CHUM	**Lake Minchumin**	**1.05**	**323**	P	**Pn**	**05 00 40.6**	**0.0**
	baz=141						
CHUM				S	**Sn**	**05 00 57.6**	**-0.8**
	baz=141						
CHUM	**Lake Minchumin**	**1.05**	**323**		**Pn**	**05 00 40.6**	**0.0**
CHUM					**Sn**	**05 00 57.6**	**-0.8**
MCK	**McKinley**	**1.11**	**51**	P	**Pn**	**05 00 41.3**	**+0.1**
	baz=233						
MCK	**McKinley**	**1.11**	**51**		**Pn**	**05 00 41.3**	**+0.1**
SKT	**Skwentna**	**1.12**	**196**	P	**Pn**	**05 00 41.1**	**-0.2**
	baz=16						
SKT				S	**Sn**	**05 00 59.6**	**+0.1**
	baz=16						
SKT	**Skwentna**	**1.12**	**196**		**Pn**	**05 00 41.1**	**-0.2**
SKT					**Sn**	**05 00 59.6**	**+0.1**
SKT	**Skwentna**	**1.12**	**196**	IAML		05 00 60.0	
	comp=E,904nm,0.4s						
SKT				IAML		05 01 00.2	
	comp=N,996nm,0.3s						
BWN	**Browne**	**1.29**	**29**		**Pn**	**05 00 43.5**	**+0.6**
M22K	**Willow**	**1.35**	**164**	P	**Pn**	**05 00 43.7**	**0.0**
	baz=346						
M22K				S	**Sn**	**05 01 03.9**	**+0.1**
	baz=346						
M22K	**Willow**	**1.35**	**164**		**Pn**	**05 00 43.7**	**0.0**
M22K					**Sn**	**05 01 03.9**	**+0.1**
L20K	**Farewell, AK**	**1.50**	**249**	P	**Pn**	**05 00 45.3**	**0.0**
	baz=66						
L20K	**Farewell, AK**	**1.50**	**249**		**Pn**	**05 00 45.3**	**0.0**
WAT6	**Susitna Watana**	**1.52**	**107**	P	**Pn**	**05 00 45.2**	**-0.5**
	baz=290						
WAT6	**Susitna Watana**	**1.52**	**107**		**Pn**	**05 00 45.2**	**-0.5**
GHO	**Glory Hole Cre**	**1.58**	**144**		**Pn**	**05 00 46.5**	**+0.3**
GHO					**Sn**	**05 01 08.1**	**-0.2**
DHY	**Denali Highway**	**1.60**	**88**	P	**Pn**	**05 00 46.6**	**+0.1**
	baz=271						
DHY	**Denali Highway**	**1.60**	**88**		**Pn**	**05 00 46.6**	**+0.1**
DHY	**Denali Highway**	**1.60**	**88**	IAML		05 01 09.6	
	comp=E,727nm,0.9s						
DHY				IAML		05 01 09.9	
	comp=N,580nm,0.6s						
SUA	**Susitna One**	**1.60**	**178**	P	**Pn**	**05 00 46.5**	**0.0**
	baz=358						
SUA	**Susitna One**	**1.60**	**178**		**Pn**	**05 00 46.5**	**0.0**
SUA	**Susitna One**	**1.60**	**178**	IAML		05 01 10.0	
	comp=N,338nm,0.5s						
SUA				IAML		05 01 10.2	
	comp=E,347nm,0.5s						
STLK	**Strandline Lak**	**1.62**	**196**		**Pn**	**05 00 46.6**	**-0.1**
PMR	**Palmer**	**1.68**	**150**	P	**Pn**	**05 00 47.4**	**+0.1**
	baz=332						
PMR				S	**Sn**	**05 01 09.3**	**-0.9**
	baz=332						
PMR	**Palmer**	**1.68**	**150**		**Pn**	**05 00 47.4**	**+0.1**
PMR					**Sn**	**05 01 09.3**	**-0.9**
PMR	**Palmer**	**1.68**	**150**	IAML		05 01 15.4	
	comp=N,418nm,0.4s						
SML	**Sawmill**	**1.72**	**135**	P	**Pn**	**05 00 47.6**	**-0.3**
	baz=318						
SML	**Sawmill**	**1.72**	**135**		**Pn**	**05 00 47.6**	**-0.3**
SML	**Sawmill**	**1.72**	**135**	IAML		05 01 11.9	
	comp=N,906nm,0.4s						
SML				IAML		05 01 12.2	
	comp=E,920nm,0.6s						
NEA2	**Nenana**	**1.74**	**27**	P	**Pn**	**05 00 47.8**	**-0.3**
	baz=208						
NEA2				S	**Sn**	**05 01 10.1**	**-1.6**
	baz=208						
NEA2	**Nenana**	**1.74**	**27**		**Pn**	**05 00 47.8**	**-0.3**
NEA2					**Sn**	**05 01 10.1**	**-1.6**
J20K	**Nowinta River**	**1.84**	**309**	P	**Pn**	**05 00 49.4**	**+0.2**
	baz=126						
J20K	**Nowinta River**	**1.84**	**309**		**Pn**	**05 00 49.4**	**+0.2**
SPCG	**Spurr Capps Gl**	**1.85**	**197**		**Pn**	**05 00 49.6**	**+0.1**
WRH	**Wood River Hil**	**1.89**	**40**		**Pn**	**05 00 49.8**	**0.0**
WRH	**Wood River Hil**	**1.89**	**40**	IAML		05 01 15.1	
	comp=N,162nm,0.8s						
CRP	**Crater Peak**	**1.89**	**199**		**Pn**	**05 00 50.3**	**+0.3**
SPCP	**Crater Peak Br**	**1.89**	**199**		**Pn**	**05 00 50.0**	**0.0**
SPCN	**Chakachatna No**	**1.94**	**199**		**Pn**	**05 00 51.2**	**+0.7**
FIS	**Fire Island**	**1.94**	**170**		**Pn**	**05 00 51.7**	**+1.2**
SPWE	**Spurr West**	**1.95**	**205**		**Pn**	**05 00 51.1**	**+0.4**
SPU	**Mount Spurr**	**1.96**	**197**		**Pn**	**05 00 50.6**	**-0.1**
MLY	**Manley**	**1.99**	**2**	P	**Pn**	**05 00 51.0**	**0.0**
	baz=181						
MLY	**Manley**	**1.99**	**2**		**Pn**	**05 00 51.0**	**0.0**
M19K	**Big River Lodg**	**2.00**	**236**	P	**Pn**	**05 00 51.0**	**-0.2**
	baz=53						
M19K	**Big River Lodg**	**2.00**	**236**		**Pn**	**05 00 51.0**	**-0.2**
M19K	**Big River Lodg**	**2.00**	**236**	IAML		05 01 18.5	
	comp=E,143nm,0.7s						
KNK	**Knik Glacier**	**2.00**	**144**	P	**Pn**	**05 00 51.3**	**+0.1**
	baz=327						
KNK				S	**Sn**	**05 01 16.9**	**-0.2**
	baz=327						
KNK	**Knik Glacier**	**2.00**	**144**		**Pn**	**05 00 51.3**	**+0.1**
KNK					**Sn**	**05 01 16.9**	**-0.2**
KNK	**Knik Glacier**	**2.00**	**144**	IAML		05 01 20.2	
	comp=N,520nm,0.4s						
KNK				IAML		05 01 26.9	
	comp=E,756nm,0.5s						
L19K	**White Mountain**	**2.03**	**246**	P	**Pn**	**05 00 51.6**	**0.0**
	baz=63						
L19K	**White Mountain**	**2.03**	**246**		**Pn**	**05 00 51.6**	**0.0**
L19K	**White Mountain**	**2.03**	**246**	IAML		05 01 18.8	
	comp=E,164nm,0.9s						
L19K				IAML		05 01 19.9	
	comp=N,125nm,0.8s						
RC01	**Rabbit Creek A**	**2.04**	**164**	P	**Pn**	**05 00 51.2**	**-0.5**
	baz=346						
RC01	**Rabbit Creek A**	**2.04**	**164**		**Pn**	**05 00 51.2**	**-0.5**
RC01	**Rabbit Creek A**	**2.04**	**164**	IAML		05 01 18.8	
	comp=E,756nm,0.2s						
SCM	**Sheep Creek Mo**	**2.06**	**125**	P	**Pn**	**05 00 51.5**	**-0.4**
	baz=309						
SCM	**Sheep Creek Mo**	**2.06**	**125**		**Pn**	**05 00 51.5**	**-0.4**
SCM	**Sheep Creek Mo**	**2.06**	**125**	IAML		05 01 19.6	
	comp=E,773nm,0.7s						
CCB	**Clear Creek Bu**	**2.10**	**39**		**Pn**	**05 00 52.4**	**0.0**
I21K	**Tanana**	**2.19**	**348**	P	**Pn**	**05 00 53.5**	**+0.1**
	baz=166						
I21K	**Tanana**	**2.19**	**348**		**Pn**	**05 00 53.5**	**+0.1**
I23K	**Minto, Yukon-K**	**2.21**	**17**	P	**Pn**	**05 00 53.8**	**+0.2**
	baz=198						
I23K				S	**Sn**	**05 01 20.6**	**-1.0**
	baz=198						
I23K	**Minto, Yukon-K**	**2.21**	**17**		**Pn**	**05 00 53.8**	**+0.2**
I23K					**Sn**	**05 01 20.6**	**-1.0**
HDA	**Harding Lake**	**2.22**	**50**	P	**Pn**	**05 00 53.7**	**-0.1**
	baz=234						
HDA	**Harding Lake**	**2.22**	**50**		**Pn**	**05 00 53.7**	**-0.1**
HDA	**Harding Lake**	**2.22**	**50**	IAML		05 01 25.8	
	comp=N,161nm,0.3s						
MDM	**Murphy Dome**	**2.24**	**30**		**Pn**	**05 00 54.1**	**0.0**
TCOL	**CIGO, UAF Yank**	**2.26**	**35**	P	**Pn**	**05 00 54.4**	**+0.1**

	baz=217						
TCOL	CIGO, UAF Yank	2.26	35		Pn	05 00 54.4	+0.1
TCOL	CIGO, UAF Yank	2.26	35	IAML		05 01 22.6	
	comp=E,197nm,0.6s						
TCOL				IAML		05 01 27.2	
	comp=N,425nm,0.5s						
COLA	College	2.26	35		Pn	05 00 54.4	+0.1
COLA	College	2.26	35	IAML		05 01 22.6	
	comp=N,222nm,0.6s						
COLA				IAML		05 01 27.2	
	comp=N,470nm,0.5s						
CAPN	Captain Cook N	2.30	183	P	Pn	05 00 56.8	+2.0
	baz=3.5						
CAPN	Captain Cook N	2.30	183		Pn	05 00 56.8	+2.0
PS08	TAPS Pump Stn8	2.34	49		Pn	05 00 55.3	-0.1
PS10	TAPS Pump St10	2.34	79		Pn	05 00 56.6	+1.2
TTA	Tatalina	2.34	269	P	Pn	05 00 55.5	0.0
	baz=84						
TTA	Tatalina	2.34	269		Pn	05 00 55.5	0.0
M24K	Tolsona, Glenn	2.38	111	P	Pn	05 00 56.1	+0.3
	baz=296						
M24K	Tolsona, Glenn	2.38	111		Pn	05 00 56.1	+0.3
M24K	Tolsona, Glenn	2.38	111	IAML		05 01 37.3	
	comp=N,312nm,0.4s						
IL31		2.47	44		Pn	05 00 56.8	-0.1
ILAR	Eielson Array	2.47	44	P	Pn	05 00 56.8	-0.2
	comp=N,6.3nm,0.3s,baz=226,slow=12,SNR=196						
ILAR				S	Sn	05 01 25.8	-1.8
	comp=N,4.6nm,0.3s,baz=225,slow=16,SNR=16						
ILAR	Eielson Array	2.47	44	Pn	Pn	05 00 56.6	-0.4
PAX	Paxson	2.47	90	P	Pn	05 00 57.2	+0.1
	baz=274						
PAX				S	Sn	05 01 28.2	+0.5
	baz=274						
PAX	Paxson	2.47	90		Pn	05 00 57.2	+0.1
PAX					Sn	05 01 28.2	+0.5
PWL	Port Wells	2.51	150	P	Pn	05 00 57.1	-0.5
	baz=333						
PWL	Port Wells	2.51	150		Pn	05 00 57.1	-0.5
PWL	Port Wells	2.51	150	IAML		05 01 30.6	
	comp=N,538nm,0.4s						
PS07	TAPS Pump Stn7	2.54	26		Pn	05 00 58.0	+0.2
POKR	Poker Plat Res	2.57	35	P	Pn	05 00 58.6	+0.4
	baz=218						
POKR	Poker Plat Res	2.57	35		Pn	05 00 58.6	+0.4
SLKM	Skilak Lake	2.57	173		Pn	05 00 58.3	-0.1
DFR	Drift River	2.62	200		Pn	05 00 59.2	+0.2
DFR	Drift River	2.62	200		Pn	05 00 59.2	+0.2
O22K	Cooper Landing	2.64	167	P	Pn	05 00 59.4	+0.2
	baz=349						
O22K				S	Sn	05 01 30.6	-0.8
	baz=349						
O22K	Cooper Landing	2.64	167		Pn	05 00 59.4	+0.2
O22K					Sn	05 01 30.6	-0.8
PS11	TAPS Pump St11	2.69	109		Pn	05 01 00.3	+0.5
HARP	HAARP	2.72	101	P	Pn	05 01 00.4	+0.2
	baz=287						
HARP	HAARP	2.72	101		Pn	05 01 00.4	+0.2
RDWB	Redoubt West	2.74	201		Pn	05 01 00.8	+0.2
H21K	Melozitna Rive	2.75	343	P	Pn	05 01 00.5	+0.1
	baz=161						
H21K	Melozitna Rive	2.75	343		Pn	05 01 00.6	+0.1
RSO	Redoubt South	2.75	200		Pn	05 01 01.2	+0.4
RDSO	Redoubt South	2.75	200		Pn	05 01 01.0	+0.2
KLU	Klutina	2.80	122	P	Pn	05 01 00.5	-0.8
	baz=307						
KLU				S	Sn	05 01 33.9	-1.2
	baz=307						
KLU	Klutina	2.80	122		Pn	05 01 00.5	-0.8
KLU					Sn	05 01 33.9	-1.2
KLU	Klutina	2.80	122	IAML		05 01 45.7	
	comp=E,228nm,0.5s						
KLU				IAML		05 01 46.7	
	comp=N,299nm,0.6s						
RIDG	Independent Ri	2.80	73	P	Pn	05 01 01.5	+0.2
	baz=258						
RIDG	Independent Ri	2.80	73		Pn	05 01 01.5	+0.2
RIDG	Independent Ri	2.80	73	IAML		05 01 42.6	
	comp=E,206nm,0.6s						
RIDG				IAML		05 01 43.3	
	comp=N,101nm,0.4s						
N19K	Bonanza Creek	2.82	219	P	Pn	05 01 01.9	+0.3
	baz=36						
N19K	Bonanza Creek	2.82	219		Pn	05 01 01.9	+0.3
GLI	Glacier Island	2.82	139	P	Pn	05 01 00.9	-0.6
	baz=323						
GLI	Glacier Island	2.82	139		Pn	05 01 00.9	-0.6
H23K	Yukon River	2.84	11	P	Pn	05 01 02.1	+0.4
	baz=192						
H23K	Yukon River	2.84	11		Pn	05 01 02.1	+0.4
H23K	Yukon River	2.84	11	IAML		05 01 37.0	
	comp=E,58nm,0.5s						
JPK	Jack Peak	2.84	133		Pn	05 01 00.9	-0.9
PS06	TAPS Pump Stn6	2.86	10		Pn	05 01 02.4	+0.5
J25K	Salcha River,	2.90	55	P	Pn	05 01 02.2	-0.3
	baz=240						
J25K	Salcha River,	2.90	55		Pn	05 01 02.2	-0.3
SVW2	Sparrevohn	2.96	230		Pn	05 01 03.3	+0.1
SVW2	Sparrevohn	2.96	230	IAML		05 01 39.7	
	comp=N,84nm,1.1s						
SVW2				IAML		05 01 40.1	
	comp=E,67nm,0.7s						
SEW	Seward	3.04	166	P	Pn	05 01 03.9	-0.3
	baz=348						
SEW	Seward	3.04	166		Pn	05 01 03.9	-0.3
DIV	Divide	3.08	126		Pn	05 01 03.6	-1.3
H24K	Noodor Dome	3.08	24	P	Pn	05 01 05.0	+0.1
	baz=206						
H24K	Noodor Dome	3.08	24		Pn	05 01 05.0	+0.1
O20K	Slope Mountain	3.10	196	P	Pn	05 01 05.6	+0.4
	baz=15						
O20K	Slope Mountain	3.10	196		Pn	05 01 05.6	+0.4
FID	Port Fidalgo	3.11	136		Pn	05 01 04.7	-0.6
FID					Sn	05 01 41.1	-1.2
PS12	TAPS Pump St12	3.12	118		Pn	05 01 04.4	-0.9
DOT	Dot Lake	3.13	76		Pn	05 01 05.1	-0.4
GCSA	Galena City Sc	3.15	305	P	Pn	05 01 06.0	+0.4
	baz=120						
GCSA	Galena City Sc	3.15	305		Pn	05 01 06.0	+0.4
IM03		3.19	338		Pn	05 01 06.3	+0.1
IMAR	Indian Mountai	3.19	338	Pn	Pn	05 01 06.0	-0.2
IVE	Iliamna Volcan	3.21	199		Pn	05 01 06.8	+0.2
SCRK	Sand Creek	3.23	70	P	Pn	05 01 06.5	-0.3
	baz=256						
SCRK	Sand Creek	3.23	70		Pn	05 01 06.5	-0.3
SCRK	Sand Creek	3.23	70	IAML		05 01 50.1	
	comp=N,66nm,0.9s						
SCRK				IAML		05 01 50.5	
	comp=E,54nm,0.8s						
MENT	Mentasta	3.27	89		Pn	05 01 06.9	-0.5
MENT	Mentasta	3.27	89	IAML		05 01 57.6	
	comp=N,112nm,0.6s						
MENT				IAML		05 02 00.3	
	comp=E,155nm,0.5s						
N25K	Chitina, Valde	3.27	114	P	Pn	05 01 07.2	-0.2
	baz=299						
N25K	Chitina, Valde	3.27	114		Pn	05 01 07.2	-0.2
N25K	Chitina, Valde	3.27	114	IAML		05 01 47.3	
	comp=E,105nm,0.6s						
N25K				IAML		05 01 48.2	
	comp=N,123nm,0.7s						
BRLK	Bradley Lake	3.30	180		Pn	05 01 08.0	+0.2
O19K	Port Alsworth	3.31	211	P	Pn	05 01 07.8	+0.1
	baz=28						
O19K	Port Alsworth	3.31	211		Pn	05 01 07.8	+0.1
O19K	Port Alsworth	3.31	211	IAML		05 01 47.9	
	comp=N,241nm,0.5s						
O19K				IAML		05 01 49.0	
	comp=E,184nm,0.4s						
BRSE	Bradley Lake S	3.33	179	P	Pn	05 01 07.9	-0.2
	baz=359						
BRSE	Bradley Lake S	3.33	179		Pn	05 01 07.9	-0.2
HIN	Hinchinbrook I	3.38	140		Pn	05 01 08.3	-0.5
PRP	Porcupine Dome	3.40	41	P	Pn	05 01 09.2	+0.1
	baz=226						
PRP	Porcupine Dome	3.40	41		Pn	05 01 09.2	+0.1
PRP	Porcupine Dome	3.40	41	IAML		05 01 50.2	
	comp=N,57nm,0.6s						
PRP				IAML		05 01 52.4	
	comp=E,41nm,0.7s						
HOM	Homer	3.43	186	P	Pn	05 01 10.0	+0.6
	baz=6.1						
HOM	Homer	3.43	186		Pn	05 01 10.0	+0.6
L26K	Log Cabin Wild	3.43	87	P	Pn	05 01 09.9	+0.5
	baz=274						
L26K	Log Cabin Wild	3.43	87		Pn	05 01 09.9	+0.5
L26K	Log Cabin Wild	3.43	87	IAML		05 02 01.0	
	comp=E,162nm,0.4s						
EYAK	Cordova Ski Ar	3.50	134	P	Pn	05 01 10.0	-0.3
	baz=318						
EYAK	Cordova Ski Ar	3.50	134		Pn	05 01 10.0	-0.3
CNPM	China Poot	3.54	183		Pn	05 01 11.1	+0.2
CNPM	China Poot	3.54	183	IAML		05 01 54.5	
	comp=E,201nm,0.5s						
J26L	Joseph Creek	3.56	63	P	Pn	05 01 11.6	+0.4
	baz=249						
J26L	Joseph Creek	3.56	63		Pn	05 01 11.6	+0.4
P19K	Oil Pt	3.60	199	P	Pn	05 01 12.3	+0.6
	baz=18						
P19K	Oil Pt	3.60	199		Pn	05 01 12.3	+0.6
P19K	Oil Pt	3.60	199	IAML		05 01 56.4	
	comp=N,129nm,0.5s						
BMRM	Bremner River	3.62	122	P	Pn	05 01 11.5	-0.5
	baz=308						
BMRM	Bremner River	3.62	122		Pn	05 01 11.5	-0.5
BMRM	Bremner River	3.62	122	IAML		05 02 09.6	
	comp=E,170nm,0.6s						
GLB	Gilahina Butte	3.68	113		Pn	05 01 12.5	-0.3
GLB	Gilahina Butte	3.68	113	IAML		05 01 55.9	
	comp=E,84nm,0.5s						
M26K	Nabesna, AK	3.69	97	P	Pn	05 01 12.8	0.0
	baz=284						
M26K	Nabesna, AK	3.69	97		Pn	05 01 12.8	0.0
M26K	Nabesna, AK	3.69	97	IAML		05 01 45.3	
	comp=E,66nm,0.5s						
M26K				IAML		05 02 14.2	
	comp=N,68nm,0.5s						
GOAT	Goat Mountain	3.83	128		Pn	05 01 13.9	-0.8
AUCH	Augustine Cone	3.91	200		Pn	05 01 17.0	+1.3
VRDI	Verde Repeater	3.94	114		Pn	05 01 15.6	-0.7
VRDI	Verde Repeater	3.94	114	IAML		05 02 03.3	
	comp=E,49nm,0.7s						
VRDI				IAML		05 02 18.6	
	comp=N,89nm,1.0s						
MCARA	McCarthy VSAT	4.04	111	P	Pn	05 01 17.5	+0.1
	baz=298						
MCARA	McCarthy VSAT	4.04	111		Pn	05 01 17.5	+0.1
MCARA	McCarthy VSAT	4.04	111	IAML		05 02 26.9	
	comp=E,93nm,0.8s						
MCARA				IAML		05 02 37.3	
	comp=N,100nm,0.8s						
L27K	Beaver Creek,	4.12	86	P	Pn	05 01 17.9	-0.6
	baz=274						
L27K	Beaver Creek,	4.12	86		Pn	05 01 17.9	-0.6
BC03		4.14	86		Pn	05 01 18.2	-0.5
BCAR	Beaver Creek A	4.14	86	Pn	Pn	05 01 18.2	-0.6
HMT	Hamilton	4.17	128		Pn	05 01 19.3	+0.1
COLD	Coldfoot	4.20	4	P	Pn	05 01 19.9	+0.4
	baz=184						
COLD	Coldfoot	4.20	4		Pn	05 01 19.9	+0.4
FYU	Fort Yukon	4.27	32	Pn	Pn	05 01 20.4	-0.1
FYU				IAML		05 03 00.5	
	comp=E,47nm,4.4s						
CRQM	Cirque	4.33	119		Pn	05 01 21.1	-0.4
CRQM	Cirque	4.33	119	IAML		05 02 28.0	
	comp=E,113nm,0.9s						
CRQM				IAML		05 02 35.3	
	comp=N,117nm,1.0s						
BERG	Berg Lake	4.33	125		Pn	05 01 21.1	-0.3
NICHA	Nichawak Mount	4.34	128		Pn	05 01 21.1	-0.3
CRQE	Cirque	4.35	119	P	Pn	05 01 21.0	-0.6
	baz=306						
Q19K	Cape Douglas,	4.35	199	P	Pn	05 01 22.7	+1.1
	baz=17						
Q19K	Cape Douglas,	4.35	199		Pn	05 01 22.7	+1.1
PTPK	Patty Peak	4.37	112		Pn	05 01 21.9	-0.2
KAIM	Kayak Island	4.41	132	P	Pn	05 01 21.9	-0.5
	baz=318						
KAIM	Kayak Island	4.41	132		Pn	05 01 21.9	-0.5
TGL	Tana Glacier	4.45	118		Pn	05 01 22.1	-0.9
TGL	Tana Glacier	4.45	118	IAML		05 02 35.2	
	comp=N,81nm,0.7s						
TGL				IAML		05 02 38.0	
	comp=E,77nm,1.0s						
KHIT	Khitrov Hills	4.47	122		Pn	05 01 22.8	-0.5
BALM	Baldy	4.50	113		Pn	05 01 23.0	-0.6
SUCK	Suckling Hills	4.53	128		Pn	05 01 23.7	-0.2
GRIN	Grindle Hills	4.55	124		Pn	05 01 24.0	-0.3
KIAG	Kiagna River	4.55	114		Pn	05 01 23.5	-0.9
WAX	Waxell Ridge	4.62	121		Pn	05 01 25.1	-0.1
EGAK	Eagle	4.63	64	P	Pn	05 01 25.0	-0.2
	baz=252						
EGAK	Eagle	4.63	64		Pn	05 01 25.0	-0.2
EGAK	Eagle	4.63	64	IAML		05 02 21.4	
	comp=E,79nm,0.8s						
BVCY	Beaver Creek	4.66	93	P	Pn	05 01 25.5	-0.1
	baz=282						
BVCY	Beaver Creek	4.66	93		Pn	05 01 25.5	-0.1
BARN	Barnard Glacie	4.78	111		Pn	05 01 27.5	+0.1
BARN	Barnard Glacie	4.78	111	IAML		05 02 28.5	
	comp=N,38nm,3.2s						
BARK	Barkley Ridge	4.79	120		Pn	05 01 27.2	-0.3
SNH	Sunshine Point	4.80	123		Pn	05 01 27.8	+0.2
YUK2	White River	4.84	101		Pn	05 01 28.5	+0.4
BAGL	Bagley Icefiel	4.90	118		Pn	05 01 28.4	-0.5
GRNC	Granite Creek	4.91	114		Pn	05 01 28.4	-0.8
GRNC	Granite Creek	4.91	114	IAML		05 02 46.2	
	comp=E,36nm,3.7s						
CTG	Chitna Glacier	4.96	111	P	Pn	05 01 30.2	+0.3
	baz=299						
CTGM	Chitina Glacie	4.96	111		Pn	05 01 30.2	+0.3
CTGM	Chitina Glacie	4.96	111	IAML		05 02 42.3	
	comp=N,58nm,3.6s						
CTGM				IAML		05 02 53.2	
	comp=E,26nm,2.9s						
YUK3	Moose Creek	5.01	100	P	Pn	05 01 30.9	+0.3
	baz=290						
YUK3	Moose Creek	5.01	100		Pn	05 01 30.9	+0.3
BM03	Burnt Mountain	5.11	28		Pn	05 01 32.0	+0.3
YAH	Yahtse	5.12	118		Pn	05 01 31.3	-0.7
BMAR	Burnt Mountain	5.13	28	Pn	Pn	05 01 31.9	-0.1
MESA	MESA	5.14	120	P	Pn	05 01 32.3	0.0
	baz=308						
MESA	MESA	5.14	120		Pn	05 01 32.3	0.0
LOGN	Logan Glacier	5.17	111		Pn	05 01 32.7	0.0
LOGN	Logan Glacier	5.17	111	IAML		05 02 55.0	
	comp=N,44nm,4.5s						
LOGN				IAML		05 03 14.1	
	comp=E,38nm,4.4s						
KAKN	Katmai Knife C	5.20	205		Pn	05 01 33.4	+0.4
DAWY	Dawson	5.24	74	P	Pn	05 01 33.1	-0.3
	baz=264						
DAWY	Dawson	5.24	74		Pn	05 01 33.1	-0.3
DAWY	Dawson	5.24	74	IAML		05 02 43.2	
	comp=E,15nm,2.4s						
DAWY				IAML		05 03 12.9	
	comp=N,18nm,1.7s						
RKAV	Rock Avalanche	5.31	117		Pn	05 01 34.8	+0.2
TABL	Table Mountain	5.32	115		Pn	05 01 34.0	-0.6
TABL	Table Mountain	5.32	115	IAML		05 04 40.5	
	comp=E,60nm,2.8s						
KDAK	Kodiak Island	5.36	190	P	Pn	05 01 33.8	-1.2
	comp=E,2.4nm,0.3s,baz=60,slow=7.6,SNR=36						
KDAK				S	Sn	05 02 31.0	-4.6
	comp=E,4.2nm,0.3s,baz=224,slow=22,SNR=11						
KDAK	Kodiak Island	5.36	190	P	Pn	05 01 33.7	-1.2
	baz=8.5						
TOLK	Toolik Lake Re	5.64	5	P	Pn	05 01 40.2	+1.4
	baz=186						
TOLK	Toolik Lake Re	5.64	5		Pn	05 01 40.2	+1.4
SAMH	Samovar Hills	5.64	117		Pn	05 01 39.8	+0.8
PCA	Pinnacle	5.88	116		Pn	05 01 42.2	+0.2
PINM	Pinnacle	5.88	116	P	Pn	05 01 42.2	+0.1
	baz=305						
YUK6	Outpost Mounta	6.26	104	P	Pn	05 01 46.9	-0.5
	baz=295						
YUK6	Outpost Mounta	6.26	104		Pn	05 01 46.9	-0.5
M30M	Minto, Yukon	6.47	88	P	Pn	05 01 49.4	-0.6
	baz=281						
M30M	Minto, Yukon	6.47	88		Pn	05 01 49.4	-0.6
PNL	Peninsula	6.48	116	P	Pn	05 01 50.0	-0.1
	baz=307						
PNL	Peninsula	6.48	116		Pn	05 01 50.0	-0.1
HYT	Haines Junctio	6.70	103	P	Pn	05 01 52.6	-0.4
	baz=295						
HYT	Haines Junctio	6.70	103		Pn	05 01 52.6	-0.4
INK	Inuvik	8.87	46	P	Pn	05 02 19.7	-2.3
	comp=E,0.2nm,0.3s,baz=248,slow=13,SNR=9.7						
JIS	Juneau Island	9.39	113		Pn	05 02 28.7	-0.5
RES	Resolute Bay	22.19	36	P	P	05 05 03.2	+0.8
	comp=E,1.2nm,0.3s,baz=92,slow=23,SNR=11						
TXAR	Lajitas Array	45.24	116	P	P	05 08 23.7	+2.3
	comp=E,0.3nm,0.5s,baz=353,slow=6.4,SNR=2.2						
ARCES	ARCESS Array B	47.67	2	P	P	05 08 40.3	+0.6
	comp=E,3.2nm,1.0s,baz=13,slow=8.3,SNR=5.5						
ZALV	Zalesovo Beam	55.51	324	P	P	05 09 37.4	-0.7
	comp=E,0.5nm,0.5s,baz=21,slow=8.4,SNR=2.2						
FINES	FINESS Array B	55.80	2	P	P	05 09 39.2	-0.9
	comp=E,2.0nm,0.9s,baz=348,slow=8.0,SNR=3.7						
MKAR	Makanchi Array	62.66	322	P	P	05 10 27.2	-0.3
	comp=E,0.4nm,0.4s,baz=49,slow=7.1,SNR=6.6						
AKASG	Malin Array Be	66.59	360	P	P	05 10 52.6	-0.3
	comp=E,0.4nm,0.3s,baz=6.4,slow=6.2,SNR=4.8						

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*IDC **07** 05:02:21.6±0.6, 27°.80S×65°.07E, h0^{km}, mb4.0/16, mb1 4.1/16, mb1mx4.0/33, mbtmp4.0/16, MS3.6/7, Ms1 3.6/7, ms1mx3.3/31, Error ellipse: s-maj=20.7km s-min=16.7km az=95.0*

*NEIC **07** 05:02:23.6±1.1, 27°.80S±0°.10×65°.1E±0°.1, h10^{km}±1^{km}, mb4.5/20, Error ellipse: s-maj=20.9km s-min=8.6km az=220.0*

ISC 07 05:02:23.2±0.5**, 27°.81S**±0°.09×**65°.0E**±0°.1**, h10^{km}, n43, σ1^{s}.14**/38**, mb4.4**/23**, MS3.6**/7**, Indian Ocean Triple Junction**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RER	Riviere de l'E	10.73	306	Pn	Pn	05 04 57.1	-0.1
BOSA	Boshof	34.95	259	P	P	05 09 15.8	+0.1
	2.1nm,0.7s,baz=83,slow=4.6,SNR=4.6						
BOSA	Boshof	34.95	259	P	P	05 09 15.6	-0.1
KMBO	Kilima Mbogo	37.57	310	LR	LR	05 21 15.6	
	comp=Z,49nm,20.8s,baz=124,slow=30						
SUR	Sutherland	38.33	252	P	P	05 09 44.7	+0.2
MAW	Mawson	39.84	181	P	P	05 09 55.3	-1.1
	1.3nm,0.7s,baz=7.0,slow=9.5,SNR=4.1						
MAW				LR	LR	05 22 53.9	
	comp=Z,59nm,18.4s,baz=47,slow=31						
CM31	Chiang Mai Arr	56.52	39	P	P	05 12 05.8	-0.1
CMAR	Chiang Mai Arr	56.52	39	P	P	05 12 06.5	+0.6
	4.0nm,0.8s,baz=231,slow=7.1,SNR=23						
CMAR				LR	LR	05 32 58.8	
	comp=Z,32nm,19.5s,baz=240,slow=32						
CMAR	Chiang Mai Arr	56.52	39	P	P	05 12 05.9	0.0
SNAA	Sanae	56.92	200	P	P	05 12 10.5	+2.3
SNAA	Sanae	56.92	200	P	P	05 12 09.1	+0.9
	1.0nm,0.9s,baz=96,slow=8.1,SNR=5.0						
SNAA	Sanae	56.92	200	IAmb	IAmb	05 12 12.9	
	comp=Z,3.6nm,1.3s						
VNA2	Neumayer--Watz	58.25	202	P	P	05 12 12.9	-4.6
VNA3	Neumayer Olymp	59.02	201	P	P	05 12 25.8	+2.9
SHL	Shillong	59.03	28	P	P	05 12 23.8	+0.1
SHL				IAmb	IAmb	05 12 24.9	
	comp=Z,6.0nm,1.2s						
ASAR	Alice Springs	61.45	103	P	P	05 12 39.5	-0.8
	comp=Z,2.1nm,0.7s,baz=247,slow=6.2,SNR=21						
ASAR	Alice Springs	61.45	103	P	P	05 12 39.9	-0.4
AS31	Alice Springs	61.45	103	P	P	05 12 40.9	+0.6
QSPA	South Pole Qui	62.34	180	P	P	05 12 45.5	-0.2
	comp=Z,4.9nm,0.9s,baz=244,slow=4.8,SNR=11						
QSPA	South Pole Qui	62.34	180	P	P	05 12 45.8	+0.1
WRA	Warramunga Arr	63.14	99	P	P	05 12 50.8	-0.8
	comp=Z,3.0nm,0.9s,baz=246,slow=6.1,SNR=13						
WRA	Warramunga Arr	63.14	99	P	P	05 12 50.7	-1.0
WB2	Warramunga Arr	63.15	99	P	P	05 12 50.8	-1.0
WB2				IAmb	IAmb	05 12 54.9	
	comp=Z,7.0nm,1.1s						
WRAB	Tennant Creek	63.15	99	P	P	05 12 51.1	-0.6
WRAB				IAmb	IAmb	05 12 55.0	
	comp=Z,6.4nm,1.1s						
VNDA	Vanda	64.53	166	P	P	05 13 01.2	+1.4
	comp=Z,1.1nm,0.8s,baz=278,slow=6.5,SNR=7.7						
VNDA				LR	LR	05 39 13.0	
	comp=Z,80nm,19.0s,baz=294,slow=34						
VNDA	Vanda	64.53	166	IAmb	IAmb	05 13 08.7	
	comp=Z,0.2nm,0.6s						
KK31	Karatay Array	70.74	4	P	P	05 13 39.2	-0.2
KK31				IAmb	IAmb	05 13 40.9	
	comp=Z,2.7nm,0.8s						
KKAR	Karatay Array	70.74	4	P	P	05 13 39.5	+0.1
BRTR	Keskin Array B	73.28	335	P	P	05 13 55.6	+0.7
	comp=Z,0.3nm,0.4s,baz=155,slow=7.6,SNR=3.0						
TORD	Torodi Ar. Bea	73.60	295	P	P	05 13 56.0	-1.1
	comp=Z,0.4nm,0.7s,baz=112,slow=4.1,SNR=2.4						
TORD				LR	LR	05 46 20.3	
	comp=Z,28nm,18.2s,baz=310,slow=36						
KBZ	Khabaz	74.03	343	LR	LR	05 44 35.0	
	comp=Z,60nm,20.8s,baz=162,slow=34						
MKAR	Makanchi Array	75.88	12	P	P	05 14 09.5	-0.2
	comp=Z,0.7nm,0.6s,baz=210,slow=4.2,SNR=4.3						
ABKAR	Akbulak array	76.85	357	P	P	05 14 15.4	+0.3
ABKAR	Akbulak array	76.85	357	P	P	05 14 15.6	+0.5
ABKAR				IAmb	IAmb	05 14 15.8	
	comp=Z,3.0nm,0.6s						
KOWA	Kowa	78.97	293	P	P	05 14 27.6	-0.1
KOWA				IAmb	IAmb	05 14 32.6	
	comp=Z,4.1nm,1.1s						
RAFF	Raffo Rosso	80.29	321	P	P	05 14 34.2	-0.2
ZAA0	Zalesovo Array	83.20	12	P	P	05 14 49.1	-0.1
ZAA0				IAmb	IAmb	05 14 58.8	
	comp=Z,3.4nm,0.9s						
ZALV	Zalesovo Beam	83.20	12	P	P	05 14 49.2	-0.1
	comp=Z,1.9nm,0.6s,baz=197,slow=4.6,SNR=7.3						
SONM	Songino Array	83.97	27	P	P	05 14 53.5	-0.1
	comp=Z,0.4nm,0.5s,baz=210,slow=5.0,SNR=3.2						
AKASG	Malin Array Be	84.34	338	P	P	05 14 54.9	-0.2
	comp=Z,0.5nm,0.6s,baz=159,slow=4.5,SNR=4.9						
KSRS	Korea Array	87.70	45	P	P	05 15 12.0	0.0
	comp=Z,1.1nm,0.6s,baz=235,slow=4.3,SNR=1.9						
ESDC	Sonseca Array	92.87	314	P	P	05 15 36.4	0.0
	comp=Z,0.9nm,1.0s,baz=127,slow=2.7,SNR=4.6						
ESDC				LR	LR	05 59 49.7	
	comp=Z,23nm,18.1s,baz=310,slow=37						
ESDC	Sonseca Array	92.87	314	IAmb	IAmb	05 15 38.0	
	comp=Z,2.3nm,1.2s						

NEIC 07 05:18:20.1±1.2**, 31°.32N**±0°.03×**103°.09W**±0°.05**, h1^{km}**±7^{km}**, mb_Lg3.0**/38**, Error ellipse: s-maj=6.6km s-min=3.9km az=115.0, Western Texas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNTX	Cornudas Mount	1.99	281		Pn	05 18 54.5	-0.4
MNTX				Sn	Sn	05 19 20.6	+0.1
MNTX				IAmb_Lg		05 19 26.2	
	comp=Z,92nm,0.7s						
TX31	Lajitas Ar. Si	2.04	194		Pn	05 18 55.7	+0.1
TX31				Sn	Sb	05 19 23.2	-0.8
TX32	Lajitas Array	2.04	194		Pn	05 18 55.6	-0.1
TX32				Sn	Sb	05 19 22.9	-1.1
TXAR	Lajitas Array	2.04	194		Pn	05 18 55.1	-0.6
MSTX	Muleshoe	2.65	6		Pn	05 19 04.5	+0.4
MSTX				IAmb_Lg		05 19 43.4	
	comp=Z,53nm,0.9s						
JCT	Junction City	2.95	106		Pn	05 19 08.6	+0.5
ABTX	Abilene, Hawle	3.21	65	Pn	Pn	05 19 11.5	-0.1
AMTX	Amarillo	3.74	18	Pn	Pn	05 19 20.9	+1.9
BNM	Barren Site	4.10	314		Pn	05 19 24.7	+0.6
121A	Cookes Peak, D	4.17	288		Pn	05 19 24.8	-0.2
121A				IAmb_Lg		05 20 38.5	
	comp=Z,33nm,1.1s						
ANMO	Albuquerque	4.59	323		Pn	05 19 29.5	-1.3
435B	Jarrell	4.76	95	Pn	Pn	05 19 32.6	-0.2
WHTX	Lake Whitney,	4.85	81	Pn	Pn	05 19 33.7	-0.5
WHTX				IAmb_Lg		05 21 02.9	
	comp=Z,29nm,0.8s						
HPIG		4.92	208		Pn	05 19 33.7	-1.6
WMOK	Wichita Mounta	4.97	46		Pn	05 19 35.4	-0.5
WMOK				IAmb_Lg		05 21 11.1	
	comp=Z,21nm,0.8s						
735A	Kenedy	5.20	117	IAmb_Lg		05 21 15.3	
	comp=Z,37nm,0.9s						
Z35A	Perchaven, San	5.33	66		Pn	05 19 39.6	-1.2
LOOK	Love County	5.65	60	Pn	Pn	05 19 45.1	-0.1
T25A	Trinidad	5.90	350	IAmb_Lg		05 21 36.9	
	comp=Z,24nm,0.9s						
U32A	Winter Ranch,	6.08	33	IAmb_Lg		05 21 46.1	
	comp=Z,22nm,1.0s						
FNO	Franklin	6.17	49	IAmb_Lg		05 21 39.4	
	comp=Z,24nm,0.7s						
OKCFA	Oklahoma City	6.24	48	IAmb_Lg		05 21 48.2	
	comp=Z,25nm,0.9s						
BCOK	Bluff Creek, N	6.30	45	IAmb_Lg		05 21 51.6	

	comp=Z,17nm,0.9s						
OK029	**Liberty Lake**	**6.48**	**45**	IAmb_Lg		05 21 56.8	
	comp=Z,15nm,0.8s						
NATX	**Nacogdoches**	**7.21**	**84**	IAmb_Lg		05 22 17.3	
	comp=Z,20nm,0.9s						
X37A	**Clayton**	**7.26**	**61**	IAmb_Lg		05 22 13.5	
	comp=Z,28nm,1.1s						
KSCO	**Kaye Shedlock’**	**7.68**	**3**	IAmb_Lg		05 22 34.3	
	comp=Z,18nm,1.0s						
R32A	**Long Quarter,**	**7.94**	**26**	IAmb_Lg		05 22 52.0	
	comp=Z,11nm,0.8s						
MIAR	**Mount Ida**	**8.62**	**66**	IAmb_Lg		05 22 58.4	
	comp=Z,8.7nm,0.7s						
WLAR	**White Oak Lake**	**8.75**	**72**	IAmb_Lg		05 23 14.0	
	comp=Z,11nm,0.8s						
U38A	**Gravette**	**8.85**	**52**	IAmb_Lg		05 23 04.7	
	comp=Z,8.7nm,0.8s						

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*ANF **07** 05:30:09.4±0.3, 36°.46N×97°.35W, h0^{km}, ML3.5/8, Error ellipse: s-maj=4.0km s-min=3.6km az=156.0*

*NEIC **07** 05:30:10.3±0.8, 36°.42N±0°.01×97°.35W±0°.03, h3^{km}±7^{km}, Error ellipse: s-maj=3.3km s-min=1.7km az=65.0*

*TUL **07** 05:30:10.1±1.2, 36°.424N±0°.010×97°.34W±0°.03, h5^{km}±2^{km}, ML3.0, mb_Lg3.0/65(NEIC), Error ellipse: s-maj=3.8km s-min=3.0km az=65.0*

ISC 07 05:30:10.3±1.1**, 36°.42N**±0°.02×**97°.33W**±0°.02**, h6**^{km}±12^{km}**, n85, σ0^s.61**/68**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BLOK	**Blackwell**	**0.35**	**15**	Pg	**Pg**	**05 30 17.3**	**+0.1**
CROK	**Carrier**	**0.54**	**279**	Pg	**Pg**	**05 30 20.6**	**0.0**
CROK				Sg	**Sg**	**05 30 27.9**	**+0.3**
QUOK	**Quay**	**0.56**	**116**		**Pg**	**05 30 21.2**	**+0.2**
KAN13	**South Haven SW**	**0.60**	**349**		**Pg**	**05 30 21.9**	**-0.1**
GC02	**Grant County #**	**0.61**	**315**	Pg	**Pg**	**05 30 21.9**	**-0.1**
GC02				Sg	**Sg**	**05 30 30.0**	**+0.1**
OK029	**Liberty Lake**	**0.63**	**189**	Pg	**Pg**	**05 30 22.4**	**0.0**
OK029				Sg	**Sg**	**05 30 31.2**	**+0.6**
OK030	**Cody Creek RV**	**0.66**	**138**		**Pg**	**05 30 22.9**	**-0.1**
KAN17	**Caldwell West**	**0.72**	**331**		**Pg**	**05 30 23.9**	**-0.2**
KAN14	**Manchester OK**	**0.74**	**317**		**Pg**	**05 30 24.3**	**-0.3**
KAN09	**Caldwell North**	**0.75**	**342**		**Pg**	**05 30 24.5**	**-0.2**
BCOK	**Bluff Creek, N**	**0.79**	**197**	Pg	**Pg**	**05 30 25.4**	**-0.1**
OK032	**Salt Plains WL**	**0.81**	**299**		**Pg**	**05 30 25.4**	**-0.4**
KAN01	**Argonia South**	**0.81**	**335**		**Pg**	**05 30 25.6**	**-0.3**
KAN05	**Bluff City Nor**	**0.81**	**328**		**Pg**	**05 30 25.7**	**-0.2**
T35A	**Sooner Cattle**	**0.82**	**53**		**Pg**	**05 30 25.9**	**-0.3**
T35B	**Sooner Cattle**	**0.82**	**53**	P	**Pg**	**05 30 25.9**	**-0.2**
	baz=234,SNR=67						
T35B				S	**Sg**	**05 30 36.9**	**+0.1**
	baz=234						
KS20	**Mayfield South**	**0.83**	**347**		**Pg**	**05 30 25.9**	**-0.3**
OK025	**Westminster Rd**	**0.84**	**181**	Pg	**Pg**	**05 30 26.1**	**-0.2**
OK025				IAmb_Lg		05 30 36.4	
	comp=Z,100nm,1.0s						
KAN06	**Argonia West S**	**0.93**	**333**		**Pg**	**05 30 27.9**	**-0.3**
KAN10	**Anthony SW Sta**	**0.94**	**319**	Pg	**Pg**	**05 30 28.0**	**-0.3**
KAN08	**Anthony NE Sta**	**0.96**	**328**		**Pg**	**05 30 28.4**	**-0.3**
KAN16	**Harper SW Stat**	**1.00**	**324**	Pg	**Pg**	**05 30 28.9**	**-0.6**
OKCFA	**Oklahoma City**	**1.01**	**186**		**Pg**	**05 30 29.1**	**-0.5**
OKCFA	**Oklahoma City**	**1.01**	**186**	P	**Pg**	**05 30 29.1**	**-0.5**
	baz=5.3,SNR=12						
OKCFA				S	**Sg**	**05 30 43.1**	**+0.5**
	baz=5.3						
OKCSW	**OKLAHOMA CITY**	**1.01**	**185**		**Pg**	**05 30 29.4**	**-0.4**
KAN12	**Harper NE Stat**	**1.03**	**329**		**Pg**	**05 30 29.8**	**-0.2**
FNO	**Franklin**	**1.16**	**183**	Pg	**Pg**	**05 30 31.9**	**-0.7**
FNO				IAmb_Lg		05 30 47.0	
	comp=Z,78nm,1.1s						
TUL1	**Leonard**	**1.34**	**112**	P	**Pn**	**05 30 34.9**	**-0.8**
	baz=293						
TUL1	**Leonard**	**1.34**	**112**	Pn	**Pn**	**05 30 34.8**	**-0.8**
TUL1	**Leonard**	**1.34**	**112**	P	**Pn**	**05 30 34.9**	**-0.8**
	baz=293						
U32A	**Winter Ranch,**	**1.35**	**269**	Pn	**Pg**	**05 30 35.2**	**-1.0**
U32A	**Winter Ranch,**	**1.35**	**269**	P	**Pg**	**05 30 35.3**	**-0.9**
	baz=88,SNR=14						
U32A				S	**Sb**	**05 30 53.4**	**-0.2**
	baz=88						
X34A	**Smith Ranch, M**	**1.86**	**193**	Pn	**Pb**	**05 30 43.9**	**-0.9**
WMOK	**Wichita Mounta**	**2.05**	**216**	P	**Pn**	**05 30 45.8**	**+0.4**
	baz=34						
WMOK				S	**Sb**	**05 31 13.2**	**-0.6**
	baz=34						
WMOK	**Wichita Mounta**	**2.05**	**216**		**Pn**	**05 30 45.9**	**+0.5**
WMOK	**Wichita Mounta**	**2.05**	**216**	P	**Pn**	**05 30 45.6**	**+0.1**
	baz=34,SNR=131						
R32A	**Long Quarter,**	**2.28**	**332**		**Pn**	**05 30 49.8**	**+1.2**
U38A	**Gravette**	**2.37**	**89**		**Pn**	**05 30 50.8**	**+1.0**
LOOK	**Love County**	**2.42**	**177**	Pn	**Pn**	**05 30 51.8**	**+1.3**
X37A	**Clayton**	**2.42**	**138**		**Pn**	**05 30 51.3**	**+0.8**
X37A				IAmb_Lg		05 31 30.7	
	comp=Z,53nm,0.8s						
X37A	**Clayton**	**2.42**	**138**	P	**Pn**	**05 30 51.1**	**+0.6**
	baz=320,SNR=26						
KSU1	**Kansas State U**	**2.74**	**12**	Pg	**Pg**	**05 31 01.4**	**-1.4**
	baz=192						
KSU1	**Kansas State U**	**2.74**	**12**		**Pn**	**05 30 55.0**	**+0.2**
HHAR	**Hobbs**	**2.74**	**92**		**Pn**	**05 30 55.4**	**+0.5**
CBKS	**Cedar Bluff**	**3.06**	**322**	Sb	**Sb**	**05 31 43.5**	**+0.6**
	baz=141						
CBKS	**Cedar Bluff**	**3.06**	**322**		**Pn**	**05 30 59.8**	**+0.5**
W39A	**Magazine**	**3.13**	**112**	P	**Pn**	**05 31 01.1**	**+0.9**
	baz=294						
W39A	**Magazine**	**3.13**	**112**		**Pn**	**05 31 00.7**	**+0.5**
W39A				IAmb_Lg		05 31 57.1	
	comp=Z,54nm,0.9s						
W39A	**Magazine**	**3.13**	**112**	P	**Pn**	**05 31 00.6**	**+0.5**
	baz=294						
S39A	**Bolivar**	**3.45**	**67**		**Pn**	**05 31 05.0**	**+0.4**
S39A				IAmb_Lg		05 32 03.8	
	comp=Z,43nm,0.9s						
S39A	**Bolivar**	**3.45**	**67**	P	**Pn**	**05 31 05.0**	**+0.4**
	baz=250						
MIAR	**Mount Ida**	**3.59**	**120**	P	**Pn**	**05 31 07.3**	**+0.8**
	baz=303						
MIAR	**Mount Ida**	**3.59**	**120**		**Pn**	**05 31 07.3**	**+0.8**
MIAR				IAmb_Lg		05 32 07.5	
	comp=Z,27nm,1.2s						
MIAR	**Mount Ida**	**3.59**	**120**	P	**Pn**	**05 31 07.1**	**+0.6**
	baz=303,SNR=29						
U40A	**Yellville**	**3.61**	**90**		**Pn**	**05 31 07.7**	**+0.8**
Z38A	**Mt. Pleasant**	**3.69**	**148**		**Pn**	**05 31 08.5**	**+0.6**
Z38A				IAmb_Lg		05 32 16.5	
	comp=Z,57nm,0.9s						
AMTX	**Amarillo**	**3.86**	**248**		**Pn**	**05 31 11.5**	**+1.1**
AMTX				IAmb_Lg		05 32 19.1	
	comp=Z,34nm,0.8s						
MGMO	**Mountain Grove**	**4.13**	**78**	IAmb_Lg		05 32 31.4	
	comp=Z,23nm,0.8s						
X40A	**Basin Creek Fa**	**4.14**	**116**	P	**Pn**	**05 31 14.9**	**+0.7**
	baz=299						
X40A	**Basin Creek Fa**	**4.14**	**116**	P	**Pn**	**05 31 14.9**	**+0.7**
	baz=299						
X40A				P	**Pn**	**05 31 14.9**	**+0.7**
	baz=299						
ABTX	**Abilene, Hawle**	**4.24**	**207**	Pb	**Pb**	**05 31 25.1**	**-0.2**
	baz=26						
FCAR	**Ozark Folk Cen**	**4.24**	**96**	IAmb_Lg		05 32 23.5	
	comp=Z,21nm,0.7s						
WHAR	**Wooly Hollow**	**4.25**	**104**	IAmb_Lg		05 32 29.4	
	comp=Z,44nm,1.2s						
P38A	**Dawn**	**4.38**	**42**	IAmb_Lg		05 32 39.1	
	comp=Z,27nm,0.7s						
WLAR	**White Oak Lake**	**4.40**	**127**	IAmb_Lg		05 32 37.4	
	comp=Z,21nm,0.9s						
KSCO	**Kaye Shedlock’**	**4.93**	**303**	IAmb_Lg		05 33 00.8	
	comp=Z,18nm,0.7s						
BGNE	**Belgrade**	**5.02**	**353**	IAmb_Lg		05 32 57.6	
	comp=Z,34nm,0.7s						
T42A	**Van Buren**	**5.05**	**81**	IAmb_Lg		05 32 55.5	
	comp=Z,19nm,0.8s						
CCM	**Cathedral Cave**	**5.12**	**70**	IAmb_Lg		05 33 01.5	
	comp=Z,37nm,0.8s						
NATX	**Nacogdoches**	**5.15**	**154**	IAmb_Lg		05 33 05.1	
	comp=Z,22nm,0.8s						
N38A	**Joes South For**	**5.42**	**35**	IAmb_Lg		05 33 14.7	
	comp=Z,34nm,0.8s						
HBAR	**Harrisburg**	**5.48**	**97**	IAmb_Lg		05 33 19.7	
	comp=Z,39nm,0.7s						
435B	**Jarrell**	**5.62**	**182**	IAmb_Lg		05 33 13.3	
	comp=Z,17nm,0.7s						
FVM	**French Village**	**5.73**	**72**	IAmb_Lg		05 33 10.5	
	comp=Z,31nm,0.9s						
OGNE	**Ogallala**	**5.83**	**322**	IAmb_Lg		05 33 20.0	
	comp=Z,24nm,0.7s						
JCT	**Junction City**	**6.27**	**200**	IAmb_Lg		05 33 44.9	
	comp=Z,14nm,0.7s						
K31A	**O'Neill**	**6.29**	**350**	IAmb_Lg		05 33 41.9	
	comp=Z,23nm,0.7s						
SCIA	**State Center**	**6.34**	**29**	IAmb_Lg		05 33 34.0	
	comp=Z,28nm,0.8s						
N41A	**Harden Midland**	**6.64**	**48**	IAmb_Lg		05 33 53.2	
	comp=Z,28nm,0.7s						
W45A	**Hickory Valley**	**6.74**	**98**	IAmb_Lg		05 33 55.2	
	comp=Z,21nm,0.8s						
P43A	**Skaggs, Pawnee**	**6.95**	**60**	IAmb_Lg		05 33 57.6	
	comp=Z,27nm,0.7s						
735A	**Kenedy**	**7.55**	**183**	IAmb_Lg		05 34 27.9	
	comp=Z,15nm,0.7s						
OLIL	**Olney**	**7.68**	**70**	IAmb_Lg		05 34 24.5	
	comp=Z,25nm,0.8s						
O44A	**Mansfield**	**7.90**	**59**	IAmb_Lg		05 34 34.0	
	comp=Z,22nm,0.8s						
K22A	**Casper**	**9.44**	**314**	IAmb_Lg		05 35 14.2	
	comp=Z,8.5nm,1.1s						

IDC 07 05:41:31.3±2.5**, 8°.26N**×**91°.62E, h0**^{km}**, mb3.6**/4**, mb1 3.7**/5**, mb1mx3.5**/32**, mbtmp3.5**/5**, Error ellipse: s-maj=78.2km s-min=24.4km az=68.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**12.38**	**34**	Pn	Pn	05 44 30.6	+1.5
	baz=226,slow=12,SNR=3.3						
H08S3	**Diego Garcia H**	**24.76**	**231**	T	T	06 13 10.4	
	baz=51,slow=74,SNR=8.5						
H08S2	**Diego Garcia H**	**24.76**	**231**	T	T	06 13 05.1	
	baz=51,SNR=6.0						
H08S1	**Diego Carcia H**	**24.78**	**231**	T	T	06 13 05.6	
	baz=51,slow=74,SNR=5.8						
MKAR	**Makanchi Array**	**39.22**	**350**	P	P	05 49 01.9	+0.6
	0.4nm,0.4s,baz=168,slow=7.9,SNR=8.5						
SONM	**Songino Array**	**41.39**	**15**	P	P	05 49 18.2	-1.2
	1.1nm,0.6s,baz=200,slow=8.6,SNR=8.1						
WRA	**Warramunga Arr**	**50.52**	**124**	P	P	05 50 32.1	+0.3
	0.5nm,0.8s,baz=304,slow=8.1,SNR=2.6						
ASAR	**Alice Springs**	**52.09**	**129**	P	P	05 50 43.2	-0.3
	0.2nm,0.7s,baz=312,slow=4.7,SNR=3.7						

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*SJA **07** 05:49:43±3.3, 24°.02S±0°.07×66°.97W±0°.09, h204^{km}±5^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=178.0*

*NEIC **07** 05:49:43.7±2.1, 24°.01S±0°.07×66°.88W±0°.03, h188^{km}±7^{km}, mb4.4/18, Md4.2(SJA), ML4.8(GUC), Error ellipse: s-maj=9.7km s-min=3.7km az=187.0*

*IDC **07** 05:49:44.2±1.1, 23°.93S×66°.80W, h190^{km}±10^{km}, mb3.5/7, mb1 3.8/12, mb1mx3.6/28, mbtmp4.2/12, MS2.5/1, Ms1 2.5/1, ms1mx2.3/16, Error ellipse: s-maj=14.7km s-min=14.3km az=15.0*

*VAO **07** 05:49:44.6±0.3, 23°.99S×67°.02W, h209^{km}±3^{km}, mb4.2*

*GUC **07** 05:49:46.1±0.6, 24°.00S×67°.24W, h213^{km}±5^{km}, ML4.8*

ISC 07 05:49:44.1±0.6**, 23°.99S**±0°.03×**67°.00W**±0°.03**, h196**^{km}±6^{km}**, n182, σ1^s.18**/219**, mb4.0**/10**, 7C-2D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AF01	**San Pedro de A**	**1.50**	**313**	*e*P	**Pn**	**05 50 20.0**	**+2.2**
AF01				*e*S	**Sn**	**05 50 45.0**	**+1.1**
AF01				IAML		05 50 59.4	
	comp=E,3µm,0.6s						
AF01	**San Pedro de A**	**1.50**	**313**		**Pn**	**05 50 20.0**	**+2.2**
SLA	**San Lorenzo**	**1.55**	**119**	*i* P	**Pn**	**05 50 19.0**	**+0.9**
SLA				*i* S	**Sn**	**05 50 44.9**	**+0.4**
SLA				IAML		05 50 45.8	
	comp=Z,379nm,1.4s						
HJA	**Humahuaca**	**1.65**	**62**	*i* P	**Pn**	**05 50 20.2**	**+0.9**
HJA				*i* S	**Sn**	**05 50 47.7**	**+1.1**
HJA				IAML		05 50 50.5	
	comp=Z,252nm,1.4s						
AZAP	**Zapla**	**1.78**	**98**	*i* P	**Pn**	**05 50 21.1**	**+0.7**
AZAP				*i* S	**Sn**	**05 50 46.2**	**-2.3**
AZAP				IAML		05 50 51.7	
	comp=Z,704nm,0.8s						
LVC	**Limon Verde**	**2.23**	**308**	P	**Pn**	**05 50 26.8**	**+1.6**
	comp=Z,276nm,0.3s,baz=134,slow=7.0,SNR=1867						
LVC				LR	LR	05 50 51.6	
	comp=Z,103nm,20.2s,baz=180,slow=29						
LVC				S	**Sn**	**05 50 58.6**	**+1.5**
	comp=Z,207nm,0.3s,baz=258,slow=22,SNR=49						
LVC	**Limon Verde**	**2.23**	**308**	⇑*e*P	**Pn**	**05 50 26.5**	**+1.3**
LVC				*e*S	**Sn**	**05 50 56.9**	**-0.1**
LVC	**Limon Verde**	**2.23**	**308**	*e*P	**Pn**	**05 50 26.9**	**+1.8**
LVC				*e*S	**Sn**	**05 50 58.4**	**+1.3**
LVC	**Limon Verde**	**2.23**	**308**		**Pn**	**05 50 26.7**	**+1.5**
LVC	**Limon Verde**	**2.23**	**308**	*i* P	**Pn**	**05 50 27.0**	**+1.8**
LVC				*i* S	**Sn**	**05 50 58.6**	**+1.5**
LVC				IAML		05 51 02.8	
	comp=Z,496nm,0.2s						
YJA	**Yavi**	**2.26**	**37**	*i* P	**Pn**	**05 50 26.8**	**+1.1**
YJA				*e*S	**Sn**	**05 50 59.3**	**+1.4**
YJA				IAML		05 51 00.5	
	comp=Z,43nm,0.5s						
FSA	**Cafayete**	**2.31**	**157**	*i* P	**Pn**	**05 50 26.2**	**+0.4**
FSA				*i* S	**Sn**	**05 50 56.8**	**-1.7**
ASTB	**Santa Barbara**	**2.33**	**90**	*e*P	**Pn**	**05 50 26.3**	**+0.3**
ASTB				IAML		05 51 05.8	
	comp=Z,12nm,1.2s						
PB15	**IPOC Station P**	**2.40**	**288**	*e*P	**Pn**	**05 50 27.9**	**+1.1**
PB15				*e*S	**Sn**	**05 50 59.5**	**-0.6**
PB15	**IPOC Station P**	**2.40**	**288**		**Pn**	**05 50 28.5**	**+1.6**
PB15	**IPOC Station P**	**2.40**	**288**	*i* P	**Pn**	**05 50 28.0**	**+1.1**
PB15				*i* S	**Sn**	**05 51 00.8**	**+0.7**
PB15				IAML		05 51 02.0	
	comp=Z,18µm,0.2s						
PB06	**IPOC Station P**	**2.69**	**298**	⇑*e*P	**Pn**	**05 50 30.9**	**+0.9**
PB06				*e*S	**Sn**	**05 51 04.8**	**-1.1**
PB06				IAML		05 51 07.9	
	comp=N,4µm,0.2s						
PB06	**IPOC Station P**	**2.69**	**298**		**Pn**	**05 50 31.2**	**+1.2**
PB06	**IPOC Station P**	**2.69**	**298**	*i* P	**Pn**	**05 50 31.7**	**+1.6**
PB06				*i* S	**Sn**	**05 51 06.0**	**+0.2**
PB06				IAML		05 51 10.5	
	comp=Z,2µm,0.3s						
ALOL	**LOMAS DE OLMED**	**2.77**	**87**	*i* P	**Pn**	**05 50 31.3**	**+0.5**
ALOL				*i* S	**Sn**	**05 51 08.4**	**+1.2**
PB05	**IPOC Station P**	**3.15**	**290**	⇑*e*P	**Pn**	**05 50 36.2**	**+0.7**
PB05				*e*S	**Sn**	**05 51 14.0**	**-1.6**
PB05	**IPOC Station P**	**3.15**	**290**	*i* P	**Pn**	**05 50 36.6**	**+1.1**
PB05				*i* S	**Sn**	**05 51 14.4**	**-1.2**
PB05				IAML		05 51 19.4	
	comp=Z,871nm,0.2s						
AHML	**Horco Molle**	**3.17**	**152**	*i* P	**Pn**	**05 50 35.7**	**+0.1**
AHML				*i* S	**Sn**	**05 51 14.4**	**-1.5**
AHML				IAML		05 51 15.2	
	comp=Z,135nm,1.0s						
PB14	**IPOC Station P**	**3.17**	**258**	⇑*e*P	**Pn**	**05 50 36.5**	**+0.7**
PB14				*e*S	**Sn**	**05 51 14.9**	**-1.5**
PB14				IAML		05 51 19.0	
	comp=N,2µm,0.1s						
PB14	**IPOC Station P**	**3.17**	**258**		**Pn**	**05 50 36.6**	**+0.7**
PB14	**IPOC Station P**	**3.17**	**258**	*e*P	**Pn**	**05 50 36.7**	**+0.8**
PB14				*i* S	**Sn**	**05 51 14.9**	**-1.5**
PB14				IAML		05 51 17.2	
	comp=Z,2µm,0.2s						
PB03	**IPOC Station P**	**3.19**	**307**	*e*P	**Pn**	**05 50 37.1**	**+1.1**
PB03				*e*S	**Sn**	**05 51 15.2**	**-1.3**
PB03				IAML		05 51 18.6	
	comp=E,2µm,0.6s						
PB03	**IPOC Station P**	**3.19**	**307**	*i* P	**Pn**	**05 50 37.1**	**+1.1**
PB03				*i* S	**Sn**	**05 51 16.0**	**-0.5**
PB03				IAML		05 51 19.4	
	comp=Z,2µm,0.3s						
PB10	**IPOC Station P**	**3.29**	**278**	*e*P	**Pn**	**05 50 38.1**	**+1.1**
PB10				*e*S	**Sn**	**05 51 16.7**	**-1.8**
PB10	**IPOC Station P**	**3.29**	**278**		**Pn**	**05 50 37.9**	**+0.8**
PB10	**IPOC Station P**	**3.29**	**278**	*i* P	**Pn**	**05 50 38.3**	**+1.2**
PB10				*i* S	**Sn**	**05 51 17.9**	**-0.6**
PB10				IAML		05 51 20.1	
	comp=Z,2µm,0.7s						
PB04	**IPOC Station P**	**3.33**	**299**	⇑*e*P	**Pn**	**05 50 38.7**	**+1.0**
PB04				*e*S	**Sn**	**05 51 18.4**	**-1.2**
PB04	**IPOC Station P**	**3.33**	**299**		**Pn**	**05 50 38.2**	**+0.5**
PB04	**IPOC Station P**	**3.33**	**299**	*i* P	**Pn**	**05 50 38.8**	**+1.0**
PB04				*i* S	**Sn**	**05 51 18.9**	**-0.8**
AC02	**Maricunga**	**3.43**	**214**	⇓*e*P	**Pn**	**05 50 40.2**	**+1.1**
AC02				⇑*e*P	**Pn**	**05 50 40.2**	**+1.1**
AC02				*e*S	**Sn**	**05 51 22.1**	**-0.2**
AC02	**Maricunga**	**3.43**	**214**		**Pn**	**05 50 39.5**	**+0.4**
AC02	**Maricunga**	**3.43**	**214**	*i* P	**Pn**	**05 50 40.3**	**+1.1**
PB07	**IPOC Station P**	**3.49**	**310**	*e*P	**Pn**	**05 50 40.5**	**+1.0**
PB07				*e*S	**Sn**	**05 51 21.7**	**-1.3**
PB07	**IPOC Station P**	**3.49**	**310**		**Pn**	**05 50 39.9**	**+0.3**
PB07	**IPOC Station P**	**3.49**	**310**	*e*P	**Pn**	**05 50 40.6**	**+1.0**
PB07				*i* S	**Sn**	**05 51 21.9**	**-1.2**
PB07				IAML		05 51 25.2	
	comp=Z,1µm,0.5s						
PB01	**IPOC Station P**	**3.73**	**321**	*e*P	**Pn**	**05 50 43.0**	**+0.6**
PB01				*e*S	**Sn**	**05 51 27.5**	**-0.7**
PB01	**IPOC Station P**	**3.73**	**321**		**Pn**	**05 50 42.9**	**+0.4**
PB02	**IPOC Station P**	**3.77**	**314**	⇑*e*P	**Pn**	**05 50 43.5**	**+0.5**
PB02				⇓*e*S	**Sn**	**05 51 28.1**	**-1.1**
PB08	**IPOC Station P**	**4.32**	**332**	*e*P	**Pn**	**05 50 51.3**	**+1.2**
PB08				*e*S	**Sn**	**05 51 41.9**	**-0.1**
PB08	**IPOC Station P**	**4.32**	**332**	Pn	**Pn**	**05 50 51.2**	**+1.0**
TA01	**Diego Aracena**	**4.50**	**318**		**Pn**	**05 50 52.0**	**0.0**
TA01	**Diego Aracena**	**4.50**	**318**	*i* P	**Pn**	**05 50 51.6**	**-0.5**
GO03	**Copiap**	**4.63**	**218**	Pn	**Pn**	**05 50 52.8**	**-0.9**
GO03	**Copiap**	**4.63**	**218**	*i* P	**Pn**	**05 50 52.7**	**-0.9**
GO03				*i* S	**Sn**	**05 51 45.6**	**-2.9**
TA02	**Huaiquique**	**4.70**	**321**		**Pn**	**05 50 54.5**	**-0.1**
VCA	**Vinchina**	**4.85**	**193**	*i* P	**Pn**	**05 50 58.1**	**+1.4**
VCA				*i* S	**Sn**	**05 51 53.8**	**-0.1**
VCA				IAML		05 52 01.4	
	comp=Z,58nm,0.5s						
PB11	**IPOC Station P**	**4.88**	**329**	Pn	**Pn**	**05 50 56.5**	**-0.5**
PB11	**IPOC Station P**	**4.88**	**329**	*i* P	**Pn**	**05 50 56.6**	**-0.5**
PB11				*i* S	**Sn**	**05 51 51.7**	**-2.7**
PB11				IAML		05 51 56.2	
	comp=Z,870nm,0.6s						
PSGCX	**Pisagua**	**5.25**	**326**	Pn	**Pn**	**05 51 01.0**	**-0.7**
PSGCX	**Pisagua**	**5.25**	**326**	*i* P	**Pn**	**05 51 00.2**	**-1.5**
PSGCX				*i* S	**Sn**	**05 51 58.1**	**-4.8**
PSGCX				IAML		05 52 05.8	
	comp=Z,311nm,0.6s						
ACLC	**CERRO LA CRUZ**	**5.42**	**180**	*i* P	**Pn**	**05 51 03.5**	**-0.4**
AC04	**Llanos de Chal**	**5.57**	**220**	Pn	**Pn**	**05 51 04.1**	**-1.6**
AC04	**Llanos de Chal**	**5.57**	**220**	*i* P	**Pn**	**05 51 03.8**	**-1.9**
LCO	**Las Campanas**	**6.00**	**213**	Pn	**Pn**	**05 51 10.1**	**-1.5**
APLL	**PUNTA DE LOS L**	**6.40**	**176**	*i* P	**Pn**	**05 51 15.1**	**-1.3**
ACDV	**Cuesta del Vie**	**6.44**	**197**	*i* P	**Pn**	**05 51 17.6**	**+0.4**
ACDV				IAML		05 52 36.1	
	comp=Z,21nm,0.5s						
AROD	**Rodeo**	**6.54**	**199**	*i* P	**Pn**	**05 51 19.0**	**+0.4**
AROD				IAML		05 52 37.3	
	comp=Z,3.2nm,0.4s						
ACCO	**Cerro Coronel**	**6.83**	**195**	*e*P	**Pn**	**05 51 22.5**	**+0.2**
ACCO				IAML		05 52 40.5	
	comp=Z,76nm,0.5s						
CO05	**La Serena**	**7.01**	**212**		**Pn**	**05 51 22.3**	**-2.1**
CO03	**El Pedregal**	**7.57**	**205**		**Pn**	**05 51 29.3**	**-2.5**
ZON	**Zonda**	**7.68**	**191**	Pn	**Pn**	**05 51 30.8**	**-2.3**
ZON	**Zonda**	**7.68**	**191**	*i* P	**Pn**	**05 51 33.0**	**-0.1**
ZON				IAML		05 53 01.5	
	comp=Z,22nm,0.3s						
LPAZ	**La Paz**	**7.73**	**352**	P	**Pn**	**05 51 35.3**	**+0.8**
	comp=Z,3.6nm,0.3s,baz=166,slow=10,SNR=75						
LPAZ				S	**Sn**	**05 52 59.9**	**-2.2**
	comp=Z,1.7nm,0.3s,baz=259,slow=24,SNR=9.6						
LPAZ	**La Paz**	**7.73**	**352**	*e*P	**Pn**	**05 51 35.2**	**+0.7**
LPAZ	**La Paz**	**7.73**	**352**		**Pn**	**05 51 34.7**	**+0.2**
RTCV	**Cerro Valdivia**	**7.96**	**190**	*i* P	**Pn**	**05 51 35.1**	**-1.8**
RTCV				IAML		05 53 04.3	
	comp=Z,17nm,0.4s						
RTLS	**Leoncito**	**8.04**	**194**	*i* P	**Pn**	**05 51 38.0**	**-0.1**
RTLS				IAML		05 53 13.0	
	comp=Z,11nm,0.4s						
AUSP	**Uspallata**	**8.47**	**194**	*i* P	**Pn**	**05 51 43.6**	**-0.1**
ARCO	**CERRO ARCO**	**8.98**	**190**	*i* P	**Pn**	**05 51 49.4**	**-0.9**
ARCO				IAML		05 53 48.5	
	comp=Z,36nm,0.6s						
CPUP	**Villa Florida**	**9.06**	**107**	P	**Pn**	**05 51 49.3**	**-1.9**
	comp=Z,0.4nm,0.3s,baz=292,slow=12,SNR=20						
AAGR	**Agrelo**	**9.21**	**190**	*i* P	**Pn**	**05 51 52.2**	**-0.9**
AAGR				*i* P	**Pn**	**05 51 52.2**	**-0.9**
AAGR				IAML		05 53 43.5	
	comp=Z,19nm,0.5s						
VA03	**San Esteban**	**9.29**	**199**		**Pn**	**05 51 52.5**	**-1.6**
SIV	**San Ignacio**	**9.71**	**36**	P	**Pn**	**05 51 58.2**	**-1.5**
	comp=Z,18nm,0.3s,baz=216,slow=10,SNR=356						
MT02	**Curacav**	**9.93**	**201**		**Pn**	**05 52 01.4**	**-1.0**
MT05	**Renca**	**9.93**	**198**		**Pn**	**05 52 02.0**	**-0.4**
MT01	**Popeta**	**10.52**	**200**		**Pn**	**05 52 07.2**	**-2.9**
ITQB	**Itaqui**	**10.86**	**124**	*e*P	**Pn**	**05 52 12.9**	**-1.4**
ITQB	**Itaqui**	**10.86**	**124**		**Pn**	**05 52 13.0**	**-1.4**
BO01	**Tunca**	**10.96**	**198**		**Pn**	**05 52 13.1**	**-2.6**
AQDB	**Aquidauana**	**11.03**	**74**	*e*P	**Pn**	**05 52 17.9**	**+1.1**
AQDB	**Aquidauana**	**11.03**	**74**		**Pn**	**05 52 16.6**	**-0.1**
BO02	**Sierra Bellavi**	**11.26**	**196**		**Pn**	**05 52 18.1**	**-1.5**
PTLB	**Pontes e Lacer**	**11.26**	**42**		**Pn**	**05 52 18.0**	**-1.8**
ML02	**Panimavida**	**12.34**	**197**		**Pn**	**05 52 32.1**	**-1.2**
VILB	**Vilhena**	**12.72**	**32**	*e*P	**Pn**	**05 52 39.2**	**+0.9**
VILB	**Vilhena**	**12.72**	**32**		**Pn**	**05 52 38.0**	**-0.4**
PP1B	**Ponte de Pedra**	**12.99**	**63**	*e*P	**Pn**	**05 52 42.3**	**+0.7**
TRCB	**Terra Rica**	**13.24**	**88**	*e*P	**P**	**05 52 46.0**	**-1.9**
SALV	**Santo Antonio**	**13.32**	**55**	*e*P	**Pn**	**05 52 45.4**	**-0.4**
PTGB	**Pitanga**	**13.63**	**96**	*e*P	**Pn**	**05 52 50.4**	**+0.7**
CPSB	**Cacapava Do Su**	**13.65**	**121**	*e*P	**Pn**	**05 52 48.8**	**-1.0**
ETMB	**Extrema**	**14.11**	**3**	*e*P	**Pn**	**05 52 54.6**	**-1.0**
ETMB	**Extrema**	**14.11**	**3**		**Pn**	**05 52 54.8**	**-0.9**
PLTB	**Pedras Altas**	**14.14**	**126**	Pn	**Pn**	**05 52 53.8**	**-2.1**
PCMB	**Pacaembu**	**14.71**	**84**	*e*P	**P**	**05 53 03.0**	**-1.0**
SAML	**Samuel**	**15.39**	**14**	*e*P	**P**	**05 53 11.6**	**-0.1**
SAML	**Samuel**	**15.39**	**14**	P	**Pn**	**05 53 10.7**	**-0.7**
SAML				IAmb	IAmb	05 53 12.1	
	comp=Z,16nm,0.9s						
LC01	**Cunco**	**15.43**	**194**	P	**Pn**	**05 53 11.3**	**-0.3**
LC01				IAmb	IAmb	05 53 16.5	
	comp=Z,20nm,1.2s						
PDRB	**Porto dos Gac**	**15.71**	**40**	*e*P	**Pn**	**05 53 14.2**	**-0.9**
FRTB	**Fartura**	**15.99**	**91**	*e*P	**Pn**	**05 53 18.2**	**-0.4**
ITRB	**Iturama**	**16.02**	**78**	*e*P	**Pn**	**05 53 19.7**	**+0.7**
TIJ01	**Guaruva-PR**	**16.41**	**98**	*e*P	**Pn**	**05 53 22.9**	**-0.8**
ARAG	**Araguaiana, MT**	**16.48**	**63**	*e*P	**Pn**	**05 53 25.3**	**+0.8**
TER01	**Tubaro-SC**	**16.65**	**110**	*e*P	**P**	**05 53 24.8**	**-0.7**
CLDB	**Colider**	**16.84**	**41**	*e*P	**P**	**05 53 27.3**	**-0.4**
PLCA	**Paso Flores**	**16.96**	**189**	P	**Pn**	**05 53 29.6**	**-0.5**
	comp=Z,1.0nm,0.3s,baz=6.9,slow=11,SNR=38						
PLCA	**Paso Flores**	**16.96**	**189**	*e*P	**P**	**05 53 29.0**	**+0.2**
PLCA	**Paso Flores**	**16.96**	**189**	P	**P**	**05 53 29.0**	**+0.2**
PLCA				IAmb	IAmb	05 53 37.0	
	comp=Z,9.0nm,0.8s						
CZSB	**Cruzeiro do Su**	**17.07**	**340**	*e*P	**P**	**05 53 30.3**	**+0.2**
BB19B	**Bebedouro**	**17.31**	**84**	*e*P	**Pn**	**05 53 33.9**	**-0.4**
LL04	**Puerto Octay**	**17.48**	**194**	P	**P**	**05 53 34.3**	**0.0**
LL04				IAmb	IAmb	05 53 35.5	
	comp=Z,21nm,0.7s						
SPB	**Sao Paulo**	**17.91**	**93**	*e*P	**Pn**	**05 53 40.3**	**-1.1**
RCLB	**Rio Claro- Sao**	**17.96**	**89**	*e*P	**P**	**05 53 39.5**	**-0.4**
PET01	**Itanhaem-SP**	**18.01**	**95**	*e*P	**P**	**05 53 39.9**	**-0.4**
VAO	**Valinhos**	**18.40**	**91**	*e*P	**P**	**05 53 43.8**	**-0.9**
IPMB	**Ipameri, GO**	**18.52**	**75**	*e*P	**P**	**05 53 46.0**	**0.0**
SNDB	**Serra Nova Dou**	**19.10**	**54**	*e*P	**P**	**05 53 51.8**	**-0.5**
PARB	**Paraibuna**	**19.59**	**92**	*e*P	**P**	**05 53 57.8**	**+0.3**
BDFB	**Brasilia**	**19.68**	**69**	P	**P**	**05 53 58.1**	**-0.4**
	comp=Z,1.0nm,0.3s,baz=247,slow=9.9,SNR=16						
BDFB	**Brasilia**	**19.68**	**69**	P	**P**	**05 53 58.6**	**+0.1**
BDFB				IAmb	IAmb	05 53 59.9	
	comp=Z,6.6nm,0.8s						
TBTG	**Tabatinga, AM**	**19.88**	**351**	*e*P	**P**	**05 54 00.6**	**0.0**
TBTG	**Tabatinga, AM**	**19.88**	**351**	P	**P**	**05 54 01.8**	**+1.2**
BSCB	**Bom Sucesso**	**20.75**	**86**	*e*P	**P**	**05 54 10.2**	**+0.4**
PEXB	**Peixe**	**21.32**	**60**	*e*P	**P**	**05 54 14.4**	**-1.4**
MACA	**Manacapuru-AM**	**21.58**	**17**	*e*P	**P**	**05 54 17.2**	**-1.3**
MACA	**Manacapuru-AM**	**21.58**	**17**	P	**P**	**05 54 16.7**	**-1.9**
VAS01	**Vassouras-RJ**	**21.73**	**90**	*e*P	**P**	**05 54 19.9**	**-0.1**
COYC	**Coyhaique**	**21.93**	**190**	P	**P**	**05 54 21.2**	**-0.5**
COYC				IAmb	IAmb	05 54 23.4	
	comp=Z,19nm,0.9s						
ITTB	**Itaituba**	**22.32**	**31**	*e*P	**P**	**05 54 24.2**	**-1.6**
DIAM	**Diamantina, MG**	**22.47**	**80**	*e*P	**P**	**05 54 26.5**	**-0.8**
DUB01	**Friburgo-RJ**	**22.73**	**90**	*e*P	**P**	**05 54 28.8**	**-0.8**
MC01	**Montes Claros**	**22.78**	**76**	*e*P	**P**	**05 54 28.7**	**-1.3**
JANB	**Januaria**	**23.13**	**72**	*e*P	**P**	**05 54 31.9**	**-1.2**
SMTB	**Santa Maria do**	**23.88**	**54**	*e*P	**P**	**05 54 39.8**	**-0.1**
SDBA	**SAO DESIDERIO**	**23.90**	**65**	*e*P	**P**	**05 54 39.2**	**-0.9**
PTGA	**Pitinga**	**24.10**	**17**	P	**P**	**05 54 41.6**	**-0.3**

	comp=Z,2.6nm,0.4s,baz=204,slow=9.4,SNR=12						
PTGA	Pitinga	24.10	17	P	P	05 54 41.1	-0.8
PTGA				IAmb	IAmb	05 54 43.7	
	comp=Z,7.8nm,1.1s						
PRPB	Parauapebas	24.22	46	*e*P	P	05 54 42.2	-0.7
BSFB	Barra de Sao F	24.86	83	*e*P	P	05 54 48.5	-0.2
RIB01	Linhares ES	25.14	85	*e*P	P	05 54 51.2	-0.1
MALB	Monte Alegre	25.22	31	*e*P	P	05 54 50.3	-1.7
NAN01	Guarapari, ES	25.81	81	*e*P	P	05 54 56.0	-1.4
GUA01	Guaratinga, BA	26.52	79	*e*P	P	05 55 03.2	-0.5
BOAV	Boa Vista	26.97	14	*e*P	P	05 55 07.7	0.0
BOAV	Boa Vista	26.97	14	P	P	05 55 08.2	+0.5
BOAV				IAmb	IAmb	05 55 10.6	
	comp=Z,6.8nm,1.2s						
CMC01	Camacan, BA	27.22	77	*e*P	P	05 55 09.7	-0.3
NBIT	Itapeh - BA	27.46	76	*e*P	P	05 55 12.6	+0.5
MCPB	Macapa, AP	27.60	34	*e*P	P	05 55 12.4	-0.9
GDU01	Guandu, BA	27.84	73	*e*P	P	05 55 14.5	-0.9
NBPN	Ponto Novo - B	28.65	68	*e*P	P	05 55 22.6	-0.1
MG02	Cerro Sombrero	28.80	183	P	P	05 55 25.1	+1.6
NBMA	Muriti-CE	31.71	63	*e*P	P	05 55 49.7	+0.1
NBPB	Pedra_Branca-C	32.12	60	*e*P	P	05 55 52.8	-0.3
ZARC	Zaragoza, Cauc	32.21	345	P	P	05 55 53.4	-0.5
NBAN	Anadia - AL	32.57	69	*e*P	P	05 55 56.5	-0.6
SDV	Santo Domingo	32.86	353	*e*P	P	05 55 58.3	-1.5
NBMO	Morrinhos-CE	33.16	56	*e*P	P	05 56 01.9	-0.3
NBPA	Parau_RN	33.97	63	*e*P	P	05 56 08.8	-0.4
NBPV	Pedro Velho	35.09	65	*e*P	P	05 56 18.6	-0.2
PMSA	Palmer Station	40.83	178	*e*P	P	05 57 05.2	-0.9
VNA3	Neumayer Olymp	57.16	161	P	P	05 59 10.9	+0.9
VNA1	Neumayer--Stat	57.36	160	P	P	05 59 12.6	+1.3
VNA2	Neumayer--Watz	57.73	160	P	P	05 59 14.8	+0.9
	baz=282,slow=8.5						
SNAA	Sanae	59.36	161	P	P	05 59 26.0	+0.8
SNAA	Sanae	59.36	161	P	P	05 59 25.9	+0.6
TXAR	Lajitas Array	63.67	324	P	P	05 59 56.6	+1.9
	comp=Z,0.1nm,0.3s,baz=140,slow=7.1,SNR=3.5						
QSPA	South Pole Qui	66.22	180	P	P	06 00 12.5	+1.9
QSPA				IAmb	IAmb	06 00 24.1	
	comp=Z,38nm,2.0s						
VNDA	Vanda	74.71	190	P	P	06 01 04.6	+2.9
	comp=Z,0.9nm,0.9s,baz=126,slow=4.6,SNR=3.6						
VNDA	Vanda	74.71	190	IAmb	IAmb	06 01 04.7	
	comp=Z,2.7nm,1.2s						
TORD	Torodi Ar. Bea	76.56	69	P	P	06 01 12.4	-0.7
	comp=Z,1.3nm,0.7s,baz=264,slow=5.1,SNR=9.2						
TORD	Torodi Ar. Bea	76.56	69	P	P	06 01 13.1	-0.1
TORD				IAmb	IAmb	06 01 22.7	
	comp=Z,9.8nm,1.8s						
PDAR	Pinedale Array	77.14	329	P	P	06 01 17.2	+1.1
	comp=Z,0.2nm,0.5s,baz=137,slow=8.5,SNR=3.8						
ULM	Lac du Bonnet	78.22	342	P	P	06 01 22.2	+0.7
	comp=Z,2.2nm,0.8s,baz=124,slow=11,SNR=1.4						
MAW	Mawson	81.45	163	P	P	06 01 38.1	-0.7
	comp=Z,3.0nm,0.8s,baz=267,slow=6.5,SNR=6.0						
MAW	Mawson	81.45	163	IAmb	IAmb	06 01 40.8	
	comp=Z,1.6nm,1.4s						
ASAR	Alice Springs	128.47	205	PKP	PKiKP	06 08 28.9	+0.1
	comp=Z,0.6nm,0.8s,baz=177,slow=1.9,SNR=4.3						
WRA	Warramunga Arr	131.64	207	PKP	PKiKP	06 08 36.3	+1.1
	comp=Z,0.3nm,0.4s,baz=161,slow=1.0,SNR=2.7						

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*TUL **07** 05:51:14.8±1.3, 36.°15N±0.°01×97.°49W±0.°02, h4^{km}±7^{km}, ML2.5, mb_Lg2.2/15(NEIC), Error ellipse: s-maj=2.0km s-min=1.6km az=62.0*

NEIC 07 05:51:15.0±1.0**, 36.°155N**±0.°009×**97.°49W**±0.°01**, h5**^{km}±7^{km}**,**
Error ellipse: s-maj=2.1km s-min=0.5km az=54.0,
Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK029	Liberty Lake	0.36	175	Pg	Pg	05 51 22.0	0.0
OK029				Sg	Sg	05 51 27.1	+0.4
BCOK	Bluff Creek, N	0.51	191	Pg	Pg	05 51 24.8	+0.1
BCOK				Sg	Sg	05 51 31.8	+0.5
CROK	Carrier	0.53	311	Pg	Pg	05 51 25.4	+0.2
CROK				Sg	Sg	05 51 32.6	+0.5
OK031	S. Brethren Rd	0.56	111	Pg	Pg	05 51 25.9	+0.1
OK031				Sg	Sg	05 51 33.7	+0.5
OK025	Westminster Rd	0.58	168	Pg	Pg	05 51 26.2	0.0
OK025				Sg	Sg	05 51 34.4	+0.6
OK030	Cody Creek RV	0.61	111		Pg	05 51 27.0	+0.2
OK030				Sg	Sg	05 51 35.3	+0.5
QUOK	Quay	0.63	88	Pg	Pg	05 51 27.1	0.0
QUOK				Sg	Sg	05 51 35.6	+0.2
BLOK	Blackwell	0.64	20	Pg	Pg	05 51 27.4	0.0
OKCFA	Oklahoma City	0.74	178		Pg	05 51 29.2	+0.1
OKCFA				IAmb_Lg		05 51 38.4	
	comp=Z,20nm,1.0s						
OKCSW	OKLAHOMA CITY	0.75	177	Pg	Pg	05 51 29.3	-0.1
GC02	Grant County #	0.76	337	Pg	Pg	05 51 29.3	-0.2
KAN13	South Haven SW	0.86	1		Pg	05 51 31.3	-0.2
OK032	Salt Plains WL	0.87	318		Pg	05 51 31.2	-0.5
KAN14	Manchester OK	0.89	335		Pg	05 51 31.6	-0.5
FNO	Franklin	0.90	175	Pg	Pg	05 51 31.7	-0.5
KAN17	Caldwell West	0.92	346	Pg	Pg	05 51 32.2	-0.4
KAN09	Caldwell North	0.98	354	Pg	Pg	05 51 33.5	-0.4
KAN05	Bluff City Nor	1.00	342		Pg	05 51 33.8	-0.4
KAN01	Argonia South	1.02	348		Pg	05 51 34.1	-0.4
KS20	Mayfield South	1.07	357		Pg	05 51 35.2	-0.4
KAN10	Anthony SW Sta	1.08	333	Pg	Pg	05 51 35.1	-0.7
T35A	Sooner Cattle	1.09	46	Pg	Pg	05 51 35.7	-0.3
KAN06	Argonia West S	1.13	345		Pg	05 51 36.3	-0.4
KAN08	Anthony NE Sta	1.14	340		Pg	05 51 36.2	-0.6
KAN16	Harper SW Stat	1.17	337	Pg	Pg	05 51 36.7	-0.6
KAN12	Harper NE Stat	1.21	340		Pg	05 51 37.6	-0.7
U32A	Winter Ranch,	1.24	281	Pg	Pg	05 51 38.5	-0.3
TUL1	Leonard	1.40	100		Pn	05 51 40.3	-0.8
TUL1				IAmb_Lg		05 52 01.4	
	comp=Z,18nm,1.0s						
X34A	Smith Ranch, M	1.57	190		Pn	05 51 43.5	-0.1
WMOK	Wichita Mounta	1.76	217		Pn	05 51 45.8	-0.4
LOOK	Love County	2.17	173	Pn	Pn	05 51 52.2	+0.4
LOOK				IAmb_Lg		05 52 28.0	
	comp=Z,14nm,0.9s						
X37A	Clayton	2.33	131	Pn	Pn	05 51 53.9	-0.1
R32A	Long Quarter,	2.46	337	Pn	Pn	05 51 56.1	+0.3
R32A				IAmb_Lg		05 52 32.8	
	comp=Z,6.7nm,0.9s						
U38A	Gravette	2.52	83		Pn	05 51 57.1	+0.5
Z35A	Perchaven, San	2.82	176	Pn	Pn	05 52 01.1	+0.4
KSU1	Kansas State U	3.02	13	IAmb_Lg		05 52 53.6	
	comp=Z,5.1nm,0.8s						
CBKS	Cedar Bluff	3.20	327	IAmb_Lg		05 53 04.5	
	comp=Z,6.5nm,0.8s						
AMTX	Amarillo	3.65	251	IAmb_Lg		05 53 15.3	
	comp=Z,6.2nm,0.9s						
S39A	Bolivar	3.67	64	Pn	Pn	05 52 12.3	-0.1
X40A	Basin Creek Fa	4.15	112	IAmb_Lg		05 53 29.3	
	comp=Z,11nm,0.9s						
CCM	Cathedral Cave	5.34	67	IAmb_Lg		05 54 08.1	
	comp=Z,4.9nm,0.8s						

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*IDC **07** 05:56:32.9±0.5, 5.°90S×105.°28E, h0^{km}, mb4.5/19, mb1 4.6/20, mb1mx4.4/49, mbtmp4.5/20, ML4.5/1, MS3.6/11, Ms1 3.6/11, ms1mx3.4/39, Error ellipse: s-maj=19.5km s-min=11.5km az=51.0*

*DJA **07** 05:56:35.8±0.2, 6°S±3°×10°5E±°, h10^{km}, M4.6/18, mb4.7/6, mB5.0/4, MLv4.7/18, Mw(mB)4.4/4*

*NEIC **07** 05:56:38.6±2.4, 6.°09S±0.°08×105.°23E±0.°08, h40^{km}±6^{km}, mb4.9/41, Error ellipse: s-maj=14.0km s-min=8.2km az=220.0*

*KLM **07** 05:56:39, 6.°49S×105.°03E, h44^{km}, mb4.9*

ISC 07 05:56:37.0±0.3**, 6.°15S**±0.°04×**105.°28E**±0.°04**, h26**^{km}**, n161,**
σ**1^{s}76**/160**, mb4.8**/38**, MS3.7**/18**, 9C-5D, Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CGJI	Cibinong	0.62	138	P	Pb	05 56 46.0	-3.2
BLSI	Bandar Lampung	0.78	358	P	Pb	05 56 49.0	-3.0
SBJI	Serang	0.85	88	P	Pb	05 56 49.1	-4.0
KASI	Kota Agung	1.00	309	P	Pn	05 56 54.1	-1.2
KLI	Kotabumi	1.35	342	P	Pn	05 56 59.9	-0.3
TNG	Tangerang	1.36	91	P	Pn	05 56 59.3	-1.0
TNG				P	Pb	05 57 00.1	-1.7
DBJI	Dramaga	1.52	105	P	Pn	05 57 01.6	-0.9
KLSI		1.55	339	P	Pn	05 57 03.5	+0.5
CBJI	Citeko	1.59	100	P	Pn	05 57 04.4	+1.0
LWLI	Liwa	1.66	313	P	Pb	05 57 05.8	-1.1
MDSI	Maura Dua	1.98	326	P	Pn	05 57 09.8	+0.9
CNJI	Cibinong	2.17	122	P	Pn	05 57 11.0	-0.4
LEM	Lembang	2.42	106	Pn	Pn	05 57 16.9	+1.9
	100nm,0.3s,baz=186,slow=18,SNR=18						
LEM	Lembang	2.42	106	P	Pn	05 57 16.9	+1.9
CISI	Cisompet, Garu	2.88	119	P	Pn	05 57 22.0	+0.7
CISI	Cisompet, Garu	2.88	119	Pn	Pn	05 57 22.4	+1.1
CISI	Cisompet, Garu	2.88	119	P	Pn	05 57 22.4	+1.1
LHSI	Lahat	2.90	323	P	Pn	05 57 24.4	+2.9
MNAI	Manna	2.92	308	P	Pn	05 57 24.4	+2.6
MNAI	Manna	2.92	308	Pn	Pn	05 57 22.5	+0.7
MNAI	Manna	2.92	308	P	Pn	05 57 24.4	+2.6
PMBI	Palembang	3.25	351		Pn	05 57 27.6	+1.4
CMJI	Cimerak	3.54	117	P	Pn	05 57 30.2	-0.1
KPJI	Karang Pucung	3.81	108	P	Pn	05 57 37.4	+3.3
PPBI	Pangkal Pinang	4.06	12	P	Pn	05 57 37.9	+0.5
XMI	Christmas Isla	4.29	175	P	Pn	05 57 39.5	-1.1
XMIS	Christmas Isla	4.32	175	P	Pn	05 57 38.5	-2.5
SMRI	Semarang	5.21	100	Pn	Pn	05 57 55.0	+1.7
UGM	Wanagama	5.49	109		Pn	05 57 59.1	+1.9
UGM	Wanagama	5.49	109	P	Pn	05 58 00.0	+2.8
DSRI	Dabo	5.68	353	P	Pn	05 58 00.4	+0.6
	0.9nm922nm46nm,0.6s						
PCJI	Pacitan	6.20	109	P	Pn	05 58 06.4	-0.4
	0.7nm226nm,1.0s						
PPI	Padang Panjang	7.47	319	P	Pn	05 58 25.7	+1.4
	9.0nm,0.4s						
BKNI	Bangkinang	7.70	327	Pn	Pn	05 58 26.4	-1.2
GMJI	Gumukmas	8.37	105	P	Pn	05 58 37.6	+0.9
	62nm,1.1s						
JAGI	Jajag, Banyuwa	9.10	105	Pn	Pn	05 58 49.0	+2.3
JAGI	Jajag, Banyuwa	9.10	105	P	Pn	05 58 49.2	+2.5
PLAI	Plampang	12.67	103	P	Pn	05 59 33.7	-2.0
	45nm,1.0s						
BKSI	Bulukumba	14.79	88	P	Pn	06 00 04.6	-0.1
	848nm35nm,1.6s						
BNSI	Bone	14.87	84	P	Pn	06 00 06.7	+1.0
SPMM	Sapulut	15.53	46	P	P	06 00 22.0	+3.4
MMRI	Maumere	17.00	99	P	Pn	06 00 33.2	+0.1
MMRI				IAmb	IAmb	06 00 47.6	
	comp=Z,89nm,1.1s						
TOLI2	Tolitoli	17.08	66		P	06 00 35.8	+0.1
TOLI2				IAmb	IAmb	06 00 39.2	
	comp=Z,77nm,1.4s						
LUWI	Luwuk	18.18	74		P	06 00 48.5	+0.6
LUWI				IAmb	IAmb	06 00 54.6	
	comp=Z,140nm,1.2s						
MBWA	Marble Bar	20.46	138	P	P	06 01 13.1	+0.3
PSA00	Pilbara Seismi	20.83	139	P	P	06 01 17.0	+0.2
PSA00				IAmb	IAmb	06 01 22.7	
	comp=Z,90nm,1.4s						
PSA00	Pilbara Seismi	20.83	139		P	06 01 15.8	-0.9
PSA00				IAmb	IAmb	06 01 23.6	
	comp=Z,32nm,1.1s						
UBPT	Khong Chiam	21.30	1	P	P	06 01 20.2	-1.6
UBPT				IAmb	IAmb	06 01 30.0	
	comp=Z,98nm,1.5s						
TNTI	Ternate	23.10	73	P	P	06 01 41.7	+0.6
FITZ	Fitzroy Crossi	23.15	123	P	P	06 01 41.7	+0.2
	comp=Z,8.1nm,0.8s,baz=294,slow=6.4,SNR=20						
FITZ				LR	LR	06 11 08.3	
	comp=Z,131nm,20.2s,baz=307,slow=38						
FITZ	Fitzroy Crossi	23.15	123	P	P	06 01 40.8	-0.7
FITZ				IAmb	IAmb	06 01 47.6	
	comp=Z,42nm,1.2s						
FITZ	Fitzroy Crossi	23.15	123	P	P	06 01 41.8	+0.3
KNRA	Kununurra	24.90	114	P	P	06 01 57.2	-0.8
KNRA	Kununurra	24.90	114	P	P	06 01 58.4	+0.4
CMAR	Chiang Mai Arr	25.24	346	P	P	06 01 59.4	-1.7
	comp=Z,0.9nm,0.3s,baz=174,slow=10.0,SNR=1.6						
CMAR				PcP	PcP	06 05 32.8	-1.5
	comp=Z,1.1nm,0.3s,baz=190,slow=2.5,SNR=2.2						
CMAR				LR	LR	06 14 16.3	
	comp=Z,146nm,18.2s,baz=192,slow=42						
QIZ	Qiongzhong	25.43	10	P	P	06 02 05.2	+2.5
QIZ				S	S	06 06 32.7	+4.5
QIZ				sS	sS	06 06 51.8	+11
QIZ				pmax	pmax		
	comp=Z,230nm,4.2s						
QIZ				LR	LR		
	comp=N,420nm,9.2s						
QIZ				LR	LR		
	comp=E,600nm,14.3s						
QIZ				LR	LR		
	comp=Z,300nm,8.2s						
MTN	Manton Dam	26.34	107	P	P	06 02 08.7	-2.4
MTN				IAmb	IAmb	06 02 14.8	
	comp=Z,21nm,0.7s						
MTN	Manton Dam	26.34	107	P	P	06 02 12.2	+1.1
FAKI	Fak Fak	27.07	84	P	P	06 02 16.1	-1.7
KMI	Kunming	31.19	356	⇓P	P	06 02 57.3	+2.9
KMI				pmax	pmax		
	comp=Z,11nm,0.8s						
KMI				LR	LR		
	comp=N,890nm,10.9s						
KMI				LR	LR		
	comp=E,640nm,13.6s						
KMI				LR	LR		
	comp=Z,880nm,9.6s						
WB0	Warramunga Arr	31.36	118	P	P	06 02 55.4	-0.4
WB0				IAmb	IAmb	06 02 58.7	
	comp=Z,54nm,1.6s						
WRA	Warramunga Arr	31.38	119	P	P	06 02 55.6	-0.4
	comp=Z,9.9nm,0.7s,baz=295,slow=9.8,SNR=68						
WRA				LR	LR	06 16 09.5	
	comp=Z,78nm,21.8s,baz=285,slow=37						
WRA	Warramunga Arr	31.38	119	P	P	06 02 55.8	-0.2
WRAB	Tennant Creek	31.38	119	P	P	06 02 55.5	-0.5
WRAB				IAmb	IAmb	06 02 57.8	
	comp=Z,16nm,0.6s						
WRAB	Tennant Creek	31.38	119	P	P	06 02 56.1	+0.1
GYA	Guiyang	32.45	2	⇑P	P	06 03 05.6	+0.3
GYA				pmax	pmax		
	comp=Z,120nm,3.5s						
GYA				LR	LR		
	comp=N,480nm,16.8s						
GYA				LR	LR		
	comp=E,580nm,10.2s						
GYA				LR	LR		
	comp=Z,380nm,10.5s						
ASAR	Alice Springs	32.57	125	P	P	06 03 06.5	+0.1
	comp=Z,6.0nm,0.5s,baz=300,slow=8.0,SNR=86						
ASAR				PcP	PcP	06 05 53.4	+0.6
	comp=Z,1.5nm,0.8s,baz=312,slow=3.1,SNR=5.6						
ASAR				S	S	06 08 20.1	-0.6
	comp=Z,1.0nm,0.9s,baz=290,slow=14,SNR=5.0						
ASAR				LR	LR	06 17 04.9	
	comp=Z,104nm,21.3s,baz=302,slow=38						
AS31	Alice Springs	32.57	125	P	P	06 03 06.8	+0.3
H08S2	Diego Garcia H	32.58	265	T	T	06 37 29.9	
	baz=90,slow=74,SNR=6.9						
H08S3	Diego Garcia H	32.59	265	T	T	06 37 29.5	
	baz=90,slow=74,SNR=14						
H08S1	Diego Carcia H	32.59	265	T	T	06 37 29.7	
	baz=90						
SSLB	Suanglung	33.46	27	P	P	06 03 16.0	+1.8
SSLB				IAmb	IAmb	06 03 19.6	
	comp=Z,18nm,0.9s						
OOD	Oodnadatta	35.99	130	P	P	06 03 36.5	+0.5
MULG	Mulgathing	36.17	135	P	P	06 03 38.1	+0.6
QIS	Mount Isa	36.23	117	P	P	06 03 37.9	-0.3
COEN	Coen	38.07	105	P	P	06 03 52.2	-1.7
COEN				IAmb	IAmb	06 03 54.1	
	comp=Z,23nm,0.8s						
COEN	Coen	38.07	105	P	P	06 03 53.4	-0.5
NJ2	Nanjing	40.14	18	*e*P	P	06 04 13.4	+2.6
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
PMG	Port Moresby	41.60	97	P	P	06 04 22.8	-0.4
	comp=Z,13nm,0.7s,baz=292,slow=7.4,SNR=7.0						
PMG	Port Moresby	41.60	97	P	P	06 04 21.9	-1.3
CTA	Charters Tower	42.10	113	P	P	06 04 27.4	+0.1
	comp=Z,10nm,0.8s,baz=282,slow=11,SNR=18						
CTAO	Charters Tower	42.10	113	P	P	06 04 27.6	+0.3
CTAO				IAmb	IAmb	06 04 31.7	
	comp=Z,24nm,1.1s						
STKA	Stephens Creek	42.48	132	P	P	06 04 31.3	+1.2
	comp=Z,23nm,0.6s,baz=306,slow=8.5,SNR=68						
STKA				LR	LR	06 25 57.7	
	comp=Z,73nm,18.0s,baz=229,slow=41						
STKA	Stephens Creek	42.48	132	P	P	06 04 30.1	-0.1
STKA	Stephens Creek	42.48	132	P	P	06 04 31.4	+1.2
CMSA	Cobar Meteorol	45.43	129	P	P	06 04 55.0	+1.1
GTA	Gaotai	45.62	354	⇑P	P	06 04 55.3	0.0
GTA				pP	sP	06 05 07.1	+0.8
GTA				sP	pP	06 05 11.4	+8.2
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,52nm,4.3s						
GTA				LR	LR		
	comp=N,160nm,18.2s						
GTA				LR	LR		
	comp=E,300nm,18.9s						
GTA				LR	LR		
	comp=Z,110nm,17.1s						
BJI	Beijing	47.05	11	P	P	06 05 09.9	+3.5
BJI				pmax	pmax		
	comp=Z,8.0nm,1.6s						
HHC	Hu-ho-hao-te	47.13	7	*e*P	P	06 05 11.3	+4.2
HHC				pmax	pmax		
	comp=Z,8.0nm,1.2s						
HHC				pmax	pmax		
	comp=Z,120nm,8.6s						
EIDS	Eidsvold	47.74	119	P	P	06 05 12.5	+0.4
EIDS				IAmb	IAmb	06 05 16.9	
	comp=Z,20nm,1.2s						
YNG	Young	48.66	131	P	P	06 05 19.0	-0.1
CAN	Canberra	49.54	132	P	P	06 05 26.0	+0.1
MGCD	Mangrove Creek	50.29	129	P	P	06 05 31.9	+0.3
JHJ	Hachijo jima 2	50.97	38	LR	LR	06 26 18.4	
	comp=Z,31nm,20.2s,baz=290,slow=35						
WMQ	Urumqi	52.22	344	*e*P	P	06 05 48.9	+3.0
WMQ				pP	sP	06 06 00.6	+3.6
WMQ				LR	LR		
	comp=N,590nm,28.9s						
WMQ				LR	LR		
	comp=E,320nm,29.2s						
WMQ				LR	LR		
	comp=Z,83nm,23.7s						
MJAR	Matsushiro Arr	52.49	34	P	P	06 05 47.3	-0.6
	comp=Z,4.2nm,1.0s,baz=208,slow=8.7,SNR=5.3						
MJAR	Matsushiro Arr	52.49	34	IAmb	IAmb	06 07 08.2	
	comp=Z,12nm,1.8s						
KSH	Kashi	52.90	332	P	P	06 05 47.9	-3.1
KSH				pmax	pmax		
	comp=Z,5.0nm,0.4s						
SONM	Songino Array	53.77	1	P	P	06 05 56.1	-1.1
	comp=Z,2.3nm,0.7s,baz=178,slow=8.7,SNR=15						
SONM				PcP	PcP	06 07 02.1	-0.9
	comp=Z,2.0nm,0.8s,baz=178,slow=3.2,SNR=5.3						
SONM	Songino Array	53.77	1	IAmb	IAmb	06 05 57.5	
	comp=Z,6.5nm,1.2s						
GAR	Garm	55.37	327	P	P	06 06 07.2	-1.9
GAR				IAmb	IAmb	06 06 12.9	
	comp=Z,30nm,1.7s						
USRK	Ussuriysk Ar.	55.61	23	P	P	06 06 09.8	-0.7
	comp=Z,4.6nm,0.7s,baz=213,slow=5.3,SNR=8.9						
CHGR	Chuyangaron	55.76	326	P	P	06 06 09.2	-2.7
CHGR				IAmb	IAmb	06 06 11.3	
	comp=Z,27nm,1.3s						
BTK	Batken	55.88	328	P	P	06 06 10.9	-1.7
BTK				IAmb	IAmb	06 06 34.8	
	comp=Z,6.0nm,0.5s						
MKAR	Makanchi Array	56.53	341	P	P	06 06 14.5	-2.6
	comp=Z,1.2nm,0.5s,baz=169,slow=7.6,SNR=7.2						
MKAR				LR	LR	06 33 00.5	
	comp=Z,63nm,18.9s,baz=168,slow=39						
GEYT	Alibeck	62.00	319	LR	LR	06 36 03.4	
	comp=Z,38nm,19.9s,baz=160,slow=38						
ZAA0	Zalesovo Array	62.30	347	P	P	06 06 53.7	-3.1
ZALV	Zalesovo Beam	62.30	347	P	P	06 06 53.5	-3.3
	comp=Z,2.2nm,0.6s,baz=134,slow=4.3,SNR=12						
ZALV				LR	LR	06 35 17.4	
	comp=Z,70nm,18.1s,baz=291,slow=38						
ZALV	Zalesovo Beam	62.30	347	P	P	06 06 53.8	-3.0
MAW	Mawson	67.69	196	P	P	06 07 33.8	+2.2
	comp=Z,2.9nm,0.6s,baz=58,slow=5.1,SNR=9.8						
MAW	Mawson	67.69	196	P	P	06 07 34.8	+3.2
ABKAR	Akbulak array	67.82	330	P	P	06 07 29.6	-3.1
ABKAR	Akbulak array	67.82	330	P	P	06 07 30.2	-2.5
ABKAR				IAmb	IAmb	06 07 31.9	
	comp=Z,4.5nm,0.8s						
URZ	Urewera	71.96	128	LR	LR	06 43 01.4	
	comp=Z,98nm,18.1s,baz=31,slow=39						
GURO	Guroymak-BITLI	73.45	313	P	P	06 08 06.9	-0.6
KBZ	Khabaz	74.88	318	P	P	06 08 14.6	-0.9
	comp=Z,5.5nm,0.9s,baz=88,slow=3.7,SNR=10						
RAO	Raoul Island	75.52	119	LR	LR	06 40 07.4	
	comp=Z,689nm,18.7s,baz=246,slow=35						
VNDA	Vanda	77.11	169	P	P	06 08 29.2	+1.5
	comp=Z,2.1nm,0.6s,baz=320,slow=5.6,SNR=28						
VNDA	Vanda	77.11	169	P	P	06 08 29.2	+1.5
BOSA	Boshof	78.33	242	P	P	06 08 36.9	+1.2
	comp=Z,2.0nm,0.7s,baz=103,slow=0.7,SNR=5.7						
BR131	Keskin Array S	79.99	312	P	P	06 08 43.1	-1.4
BR131				IAmb	IAmb	06 08 51.2	
	comp=Z,14nm,1.2s						
BRTR	Keskin Array B	79.99	312	P	P	06 08 43.3	-1.2
	comp=Z,3.1nm,0.9s,baz=129,slow=4.9,SNR=15						
BRTR				LR	LR	06 47 15.7	
	comp=Z,31nm,18.8s,baz=112,slow=38						
BRTR	Keskin Array B	79.99	312	P	P	06 08 42.7	-1.8
MDUB	Mudurnu	82.00	312	P	P	06 08 52.4	-2.7
QSPA	South Pole Qui	83.83	180	P	P	06 09 04.0	-0.2
KLMR	Klimovskoe	83.86	333	*e*P	P	06 09 01.9	-2.2
KLMR				AMP		06 09 04.5	
	comp=Z,22nm,1.5s						
AKASG	Malin Array Be	85.97	322	P	P	06 09 13.5	-1.5
	comp=Z,3.0nm,0.8s,baz=85,slow=4.6,SNR=18						
AKASG	Malin Array Be	85.97	322	P	P	06 09 12.8	-2.1
AKASG				IAmb	IAmb	06 09 16.0	
	comp=Z,18nm,1.8s						
AKBB	Malin Array Si	85.97	322	P	P	06 09 13.1	-1.9
VRI	Vrincioaia	86.46	317	⇑P	P	06 09 17.8	+0.3
PLOR	Plostina	86.51	317	⇑P	P	06 09 19.2	+1.4
TESR	Tescani	86.65	317	⇓P	P	06 09 19.3	+0.8
MLR	Muntele Rosu	86.92	316	⇑P	P	06 09 20.1	+0.2
MLR	Muntele Rosu	86.92	316	P	P	06 09 19.2	-0.7
PLVB	Pleven	87.43	314	⇑P	P	06 09 23.1	+0.8
MNK	Minsk	87.70	325	*i* P	P	06 09 22.0	-1.3
	comp=E,3.0nm,0.9s						
MNK				*i* P	P	06 09 22.0	-1.3
	comp=N,9.0nm,0.9s						
MNK				*i* P	P	06 09 22.0	-1.3
	comp=Z,18nm,0.9s,baz=104						
MNK				*i* pP	sP	06 09 36.6	+2.2
MNK				*i* sP	pP	06 09 42.4	+11
MNK				*i* PPP	PPP	06 15 50.9	
MNK				*i* S	SKSac	06 19 45.8	-3.8
MNK				*i* sS	ScS	06 20 10.9	+0.5
MNK				*i* SSS	SSS	06 28 50.4	
MNK				*i* LQ	LQ	06 39 23.7	
MNK				*i* LR	LR	06 43 13.1	
MNK				*i* LRM	MLR	06 49 36.3	
	comp=Z,99nm,19.4s						
MNK				*i* LRM	MLR	06 49 47.2	
	comp=E,18nm,19.5s						
MNK				*i* LRM	MLR	06 49 55.2	
	comp=N,312nm,19.7s						
BURAR	Bucovina Array	87.84	318	⇓P	P	06 09 25.1	+0.8
BURAR	Bucovina Array	87.84	318	P	P	06 09 24.1	-0.2
BUR08	Bucovina Ar. S	87.86	318	P	P	06 09 22.7	-1.7
BUR08				IAmb	IAmb	06 09 29.1	
	comp=Z,9.4nm,0.9s						
VTS	Vitosha	88.29	313	P	P	06 09 24.5	-2.2
NACGM	Naroch	88.42	326	*i* P	P	06 09 26.5	-0.2
BAIL	Bailesti	88.46	314	⇑P	P	06 09 16.6	-11
GZR	Gura Zlata	89.09	316	⇑P	P	06 09 28.8	-1.4
HERR	Herculane	89.26	315	⇑P	P	06 09 24.3	-6.6
DRGR		89.37	317	⇓P	P	06 09 31.1	-0.4
TRPA	Tarpa	89.70	318	*e*P	P	06 09 33.2	+0.3
SNAA	Sanae	89.82	198	P	P	06 09 36.3	+3.2
BZS	Buzias	89.93	316	⇓P	P	06 09 34.3	+0.3
KOLS	Kolonicke sedl	90.01	319	*e*P	P	06 09 35.7	+1.3
FINES	FINESS Array B	90.22	332	P	P	06 09 34.0	-1.0
	comp=Z,5.3nm,0.9s,baz=45,slow=0.3,SNR=5.8						
CRVS	Cervenica-Dubn	90.53	319	*e*P	P	06 09 39.0	+2.2
DIVS	Divibare	90.86	314	P	P	06 09 34.8	-3.7
DIVS				IAmb	IAmb	06 09 41.6	
	comp=Z,14nm,1.4s						
VNA2	Neumayer--Watz	91.46	198	P	P	06 09 43.3	+2.7
VNA3	Neumayer Olymp	92.00	197	P	P	06 09 46.3	+3.1
NVAR	Mina Array Bea	129.17	44	PKP	PKiKP	06 15 45.3	+1.0
	comp=Z,0.3nm,0.6s,baz=260,slow=2.7,SNR=4.1						
PDAR	Pinedale Array	132.30	35	PKP	PKiKP	06 15 50.5	-0.1
	comp=Z,0.4nm,0.6s,baz=180,slow=0.7,SNR=4.6						
CPUP	Villa Florida	143.57	207	PKP	PKPdf	06 16 11.6	+1.3
	comp=Z,1.6nm,0.7s,baz=103,slow=2.8,SNR=3.3						
TXAR	Lajitas Array	144.26	46	PKP	PKPbc	06 16 09.8	0.0

	comp=Z,1.4nm,0.6s,baz=256,slow=1.0,SNR=13						
BDFB	Brasilia	145.81	230	PKPbc	PKPab	06 16 16.0	+0.5
	comp=Z,3.0nm,0.8s,baz=222,slow=1.1,SNR=5.5						
T42A	Van Buren	145.82	24		PKPdf	06 16 12.9	-1.0
O56A	Blue Knob Stat	145.86	5		PKPdf	06 16 13.0	-0.9

IDC 07 05:57:51.2±3.9**, 5°.95S×152°.66E, h0^{km}, mb4.0**/2**, mb1 4.2**/2**, mb1mx3.6**/43**, mbtmp4.0**/2**, Error ellipse: s-maj=155.9km s-min=80.4km az=147.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	6.44	237	Sn	Sn	06 00 40.0	-1.7
	1.8nm,0.3s,baz=259,slow=16,SNR=1.9						
ZALV	Zalesovo Beam	82.02	326	P	P	06 10 13.3	+0.1
	0.8nm,0.5s,baz=120,slow=5.4,SNR=2.0						
ILAR	Eielson Array	83.27	22	P	P	06 10 19.5	0.0
	0.8nm,0.9s,baz=250,slow=5.1,SNR=7.0						
TORD	Torodi Ar. Bea	150.51	286	PKPbc	PKPbc	06 17 45.7	-0.4
	0.5nm,0.5s,baz=50,slow=2.4,SNR=3.4						

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*IDC **07** 05:58:06.6±4.0, 30°.58S×178°.28W, h35^{km}±31^{km}, mb4.0/2, mb1 4.2/3, mb1mx3.6/38, mbtmp4.1/3, ML3.2/1, Error ellipse: s-maj=52.5km s-min=19.4km az=120.0*

ISC 07 05:58:06.5±1.6**, 30°.6S**±0°.1×**178°.1W**±0°.4**, h46^{km}, n7, σ1^{s}02**/9**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.36	8	Pn	Pn	05 58 29.7	+0.6
	256nm,0.3s,baz=226,slow=23,SNR=9.5						
RAO				Sn	Sn	05 58 45.0	-1.0
	1μm,0.3s,baz=285,slow=23,SNR=11						
URZ	Urewera	8.59	206	Pn	Pn	06 00 06.9	-1.2
	0.3nm,0.3s,baz=127,slow=20,SNR=2.5						
URZ				Sn	Sn	06 01 44.6	+0.9
	2.5nm,0.3s,baz=194,slow=20,SNR=6.7						
ASAR	Alice Springs	42.98	267	P	P	06 06 01.8	+0.2
	0.8nm,0.4s,baz=106,slow=7.3,SNR=8.5						
WRA	Warramunga Arr	43.99	272	P	P	06 06 09.6	-0.1
	2.6nm,0.4s,baz=111,slow=8.0,SNR=14						
FINES	FINESS Array B	145.30	340	PKPbc	PKPbc	06 17 37.5	-0.8
	2.3nm,0.3s,baz=44,slow=4.1,SNR=25						
NOA	NORSAR Array B	148.93	351	PKPbc	PKiKP	06 17 50.3	+0.3
	0.7nm,0.8s,baz=14,slow=4.1,SNR=2.3						
AKASG	Malin Array Be	151.39	322	PKPbc	PKiKP	06 17 56.6	+1.3
	1.0nm,0.5s,baz=53,slow=2.4,SNR=3.2						

IDC 07 06:23:57.0±2.2**, 5°.07S×152°.59E, h0^{km}, mb3.8**/4**, mb1 4.0**/4**, mb1mx3.7**/32**, mbtmp3.8**/4**, Error ellipse: s-maj=124.8km s-min=28.5km az=129.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	23.11	229	P	P	06 29 04.4	-0.4
	1.1nm,0.5s,baz=54,slow=9.4,SNR=10						
ASAR	Alice Springs	25.81	222	P	P	06 29 30.6	+0.4
	0.9nm,0.5s,baz=58,slow=9.0,SNR=33						
FITZ	Fitzroy Crossi	29.34	242	P	P	06 30 01.4	-0.5
	1.5nm,0.5s,baz=52,slow=7.2,SNR=12						
ILAR	Eielson Array	82.49	22	P	P	06 36 21.5	+0.3
	0.3nm,0.6s,baz=260,slow=4.5,SNR=2.8						
TORD	Torodi Ar. Bea	150.19	288	PKPbc	PKPbc	06 43 50.8	-0.3
	0.6nm,0.7s,baz=51,slow=1.7,SNR=3.7						

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*NOU **07** 06:26:28.8, 17°.67S×167°.67E, h4^{km}, MLv4.8/13, Vanuatu Islands*

*NEIC **07** 06:26:35.5±1.5, 17°.98S±0°.03×167°.6E±0°.1, h46^{km}±10^{km}, mb4.2/10, Error ellipse: s-maj=17.6km s-min=3.7km az=91.0*

*IDC **07** 06:26:37.7±4.1, 18°.19S×167°.78E, h93^{km}±48^{km}, mb3.8/7, mb1 3.9/9, mb1mx3.7/30, mbtmp4.1/9, MS3.6/11, Ms1 3.6/11, ms1mx3.4/34, Error ellipse: s-maj=63.9km s-min=22.6km az=154.0*

ISC 07 06:26:31.7±0.8**, 17°.79S**±0°.08×**167°.52E**±0°.09**, h23^{km}, n42, σ1^{s}18**/35**, mb4.1**/10**, MS3.6**/8**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	0.64	84	P	Pb	06 26 38.8	-5.4
RTV	Rentapao	0.86	90	P	Pb	06 26 43.0	-5.0
LIFNC	LIFOU	2.98	185	Pn	Pn	06 27 16.6	-0.9
LIFNC	LIFOU	2.98	185	P	Pn	06 27 18.9	+1.3
MARNC	Mare, Loyalty	3.70	173	Pn	Pn	06 27 27.0	-0.5
MARNC	Mare, Loyalty	3.70	173	P	Pn	06 27 28.2	+0.7
KOUNC	Koumac, New Ca	4.11	228	P	Pn	06 27 34.9	+1.8
YATNC	Mamie plateau,	4.29	188	P	Pn	06 27 36.3	+0.7
DZM	Mont Dzumac	4.37	193	*e*Pn	Pn	06 27 36.9	0.0
	20nm,0.2s						
DZM				*e*Sn	Sn	06 28 26.0	-1.2
	29nm,0.2s						
DZM	Mont Dzumac	4.37	193	P	Pn	06 27 36.5	-0.4
	2.3nm,0.3s,baz=344,slow=15,SNR=39						
DZM				S	Sn	06 28 27.4	+0.2
	6.1nm,0.3s,baz=119,slow=21,SNR=9.7						
DZM				LR	LR	06 28 29.3	
	comp=Z,131nm,21.2s,baz=32,slow=28						
DZM	Mont Dzumac	4.37	193		Pn	06 27 37.4	+0.5
DZM	Mont Dzumac	4.37	193	P	Pn	06 27 37.9	+1.0
NOUC	Port Laguerre	4.44	195	P	Pn	06 27 39.3	+1.7
ONTNC	Ouen Toro	4.60	192	Pn	Pn	06 27 41.2	+1.3
ONTNC	Ouen Toro	4.60	192	P	Pn	06 27 41.4	+1.5
OUENC	Ouen Island, N	4.64	188	Pn	Pn	06 27 41.5	+0.9
OUENC	Ouen Island, N	4.64	188	P	Pn	06 27 42.0	+1.5
PINNC	Pines Island,	4.79	181	Pn	Pn	06 27 41.6	-0.9
MSVF	Nonsavu	10.03	91	P	Pn	06 28 56.7	+2.1
	baz=270,slow=20,SNR=4.4						
MSVF				LR	LR	06 31 55.5	
	comp=Z,879nm,19.3s,baz=217,slow=32						
HNR	Honiara	11.10	318	LR	LR	06 33 00.4	
	comp=Z,310nm,18.7s,baz=154,slow=33						
CTA	Charters Tower	20.25	260	P	Pn	06 31 08.0	+0.3
	4.7nm,0.8s,baz=79,slow=14,SNR=6.2						
CTAO	Charters Tower	20.25	260	P	P	06 31 06.3	+0.7
CTAO				IAmb	IAmb	06 31 12.9	
	comp=Z,9.6nm,1.1s						
AFI	Afiamalu	20.28	82	LR	LR	06 36 56.8	
	comp=Z,260nm,18.5s,baz=160,slow=31						
PMG	Port Moresby	21.46	290	LR	LR	06 38 34.1	
	comp=Z,142nm,21.2s,baz=116,slow=33						
BKZ	Black Stump Fm	22.68	162	P	P	06 31 32.2	+0.6
BKZ				IAmb	IAmb	06 31 37.3	
	comp=Z,26nm,1.5s						
STKA	Stephens Creek	27.30	234	P	P	06 32 14.8	+0.1
	comp=Z,2.6nm,0.6s,baz=46,slow=11,SNR=8.6						
STKA				LR	LR	06 42 43.7	
	comp=Z,98nm,18.6s,baz=33,slow=35						
JAY	Jayapura	30.38	297	LR	LR	06 45 22.1	
	comp=Z,116nm,18.2s,baz=86,slow=36						
WB0	Warramunga Arr	31.40	261	P	P	06 32 51.2	-0.1
WB0				IAmb	IAmb	06 33 04.9	
	comp=Z,3.4nm,1.1s						
WRA	Warramunga Arr	31.45	261	P	P	06 32 50.9	-0.8
	comp=Z,1.3nm,0.8s,baz=88,slow=8.5,SNR=9.5						
WRA				LR	LR	06 44 39.7	
	comp=Z,146nm,19.5s,baz=80,slow=34						
AS31	Alice Springs	31.93	254	P	P	06 32 55.7	-0.2
AS31				IAmb	IAmb	06 32 56.9	
	comp=Z,1.5nm,0.7s						
ASAR	Alice Springs	31.93	254	P	P	06 32 55.6	-0.4
	comp=Z,4.2nm,0.8s,baz=79,slow=8.9,SNR=43						
ASAR				LR	LR	06 45 14.0	
	comp=Z,233nm,20.0s,baz=92,slow=35						
BBOO	Buckleboo	31.99	236	P	P	06 32 55.6	-0.7
BBOO				IAmb	IAmb	06 33 14.0	
	comp=Z,7.1nm,1.1s						
KNRA	Kununurra	37.13	267	P	P	06 33 40.7	-0.3
FITZ	Fitzroy Crossi	39.78	263	P	P	06 34 03.6	+0.4
	comp=Z,5.0nm,0.9s,baz=149,slow=8.1,SNR=9.2						
FITZ	Fitzroy Crossi	39.78	263	P	P	06 34 03.2	0.0
FITZ				IAmb	IAmb	06 34 08.9	
	comp=Z,12nm,1.2s						
PPT	Papeete	40.81	96	LR	LR	06 49 35.2	
	comp=Z,124nm,18.8s,baz=282,slow=34						
KAPI	Kappang	48.37	279	LR	LR	06 55 44.4	
	comp=Z,54nm,18.1s,baz=142,slow=36						
QSPA	South Pole Qui	72.25	180	P	P	06 37 54.8	-0.2
CMAR	Chiang Mai Arr	76.43	295	P	P	06 38 20.2	+0.3
	comp=Z,0.5nm,0.3s,baz=129,slow=5.3,SNR=4.2						
SONM	Songino Array	85.09	324	P	P	06 39 06.0	+0.1
	comp=Z,0.8nm,0.8s,baz=144,slow=5.6,SNR=4.6						
ARCES	ARCESS Array B	123.26	345	PKP	PKPdf	06 45 22.0	-4.1
	comp=Z,4.8nm,1.0s,baz=74,slow=1.3,SNR=3.6						
TUE	Stuetta	146.18	333		PKPdf	06 46 08.9	-0.6

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*IDC **07** 06:58:27.0±0.3, 8°.46N×71°.32W, h0^{km}, mb5.3/26, mb1 5.4/32, mb1mx5.4/35, mbtmp5.3/32, ML4.0/5, MS4.8/8, Ms1 4.8/8, ms1mx4.4/44, Error ellipse: s-maj=11.2km s-min=9.3km az=104.0*

*MOS **07** 06:58:28.2±0.9, 8°.45N×71°.52W, h16^{km}, mb5.7/57, MS5.2/8, Error ellipse: s-maj=6.8km s-min=5.3km az=96.9*

*FUNV **07** 06:58:30.5, 8°.50N×71°.42W, h1^{km}, MW5.1*

*NEIC **07** 06:58:30.3±1.1, 8°.47N±0°.05×71°.40W±0°.05, h15^{km}±3^{km}, mb5.6/310, Ms_20 5.6/214, Mww5.3, Mwr5.1(CAR), Error ellipse: s-maj=8.4km s-min=6.3km az=151.0*

*VAO **07** 06:58:30.2±0.2, 8°.40N×71°.41W, h14^{km}, mb5.3*

*CAR **07** 06:58:30.9±1.3, 8°.49N±0°.05×71°.44W±0°.04, h5^{km}±3^{km}, Error ellipse: s-maj=7.4km s-min=4.6km az=147.0*

*NEIC **07** 06:58:31, 8°.46N×71°.47W, h12^{km}, Moment Tensor Solution. Duration: 3^{s}2 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.10; $M_{\theta\theta}$0.84; $M_{\phi\phi}$-0.74; $M_{r\theta}$-0.39; $M_{\theta\phi}$-0.56; $M_{\phi r}$0.37; Fault plane solution: $M_0$1.11000×10^{17} NP1: ϕ_s241.00000°, δ63.00000°, λ177.00000°. NP2: ϕ_s332.00000°, δ87.00000°, λ27.00000°. Principal axes: T 1.2020, Plg21.0000°, Azm200.0000°; N -0.2058, Plg63.0000°, Azm338.0000°; P -0.9962, Plg17.0000°, Azm104.0000°;*

*BGR **07** 06:58:33.6±0.0, 8°.43N×70°.99W, h33^{km}, mb5.3, Ms6.4*

*GCMT **07** 06:58:33.3±0.2, 8°.50N±0°.01×71°.51W±0°.01, h18^{km}±1^{km}, MW5.4/83, Moment Tensor Solution. s67,c104; s83,c145; Duration: 1^{s}2 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.27±.03; $M_{\theta\theta}$1.19±.03; $M_{\phi\phi}$-0.91±.04; $M_{r\theta}$-0.62±.09; $M_{\theta\phi}$-0.75±.03; $M_{\phi r}$-0.18±.07; Best double couple: $M_0$1.44600×10^{17} NP1: ϕ_s333.00000°, δ63.00000°, λ-4.00000°. NP2: ϕ_s65.00000°, δ87.00000°, λ-153.00000°. Principal axes: T 1.5910, Plg16.0000°, Azm196.0000°; N -0.2900, Plg63.0000°, Azm71.0000°; P -1.3010, Plg21.0000°, Azm292.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 06:58:28.7±0.5**, 8°.50N**±0°.02×**71°.41W**±0°.02**, h10^{km}**±3^{km}**, h10^{km}:pP-P, n1257, σ1^{s}32**/1247**, mb5.5**/276**, MS5.5**/110**, 35C-47D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	Socops	0.59	111	⇓*i*P	Pb	06 58 41.2	+0.1
SOCV				*e*S	Sb	06 58 50.3	+0.7
SDV	Santo Domingo	0.86	63	Pg	Pg	06 58 40.4	-4.9
	97nm,0.3s,baz=244,slow=7.2,SNR=102						
SDV	Santo Domingo	0.86	63	*e*P	Pn	06 58 47.4	+0.4
SDV				*e*S	Sb	06 58 58.3	+0.8
SDV	Santo Domingo	0.86	63	*e*P	Pn	06 58 46.9	-0.2
SDV	Santo Domingo	0.86	63		Pn	06 58 46.8	-0.2
SDV					Sn	06 58 58.8	-1.0
PAMC	Pamplona, Colo	1.72	228	*e*P	Pn	06 58 56.2	-2.9
PAMC				*e*S	Sg	06 59 24.9	+0.7
MCQV	Machiques	1.90	324	⇓*i*P	Pb	06 59 02.7	-0.8
MCQV				*e*S	Sb	06 59 27.1	-0.1
OCAC	Ocana	1.91	262	*e*P	Pb	06 59 02.6	-1.0
OCAC				*e*S	Sb	06 59 27.5	-0.1
OCAC	Ocana	1.91	262		Pb	06 59 03.0	-0.7
OCAC				Sn	Sb	06 59 27.1	-0.5
TAMC	Tame, Arauca	2.09	190	*e*P	Pb	06 59 06.2	-0.5
TAMC				*e*S	Sg	06 59 35.7	-0.1
ELOV	Elorza	2.42	128	*e*P	Pb	06 59 11.3	-1.1
ELOV				*e*S	Sb	06 59 42.9	+0.5
ELOV	Elorza	2.42	128	*e*P	Pb	06 59 10.7	-1.7
ELOV				*e*S	Sn	06 59 40.0	+1.9
DABV	Dabajuro	2.52	18	*e*P	Pb	06 59 12.2	-1.9
DABV				*e*S	Sn	06 59 42.6	+2.0
BARC	Barichara	2.58	223	*e*P	Pn	06 59 09.2	-1.6
BARC				*e*S	Sg	06 59 50.5	-1.4
SMLC	San Martn de	2.65	277	*e*P	Pb	06 59 16.0	-0.2
SMLC				*e*S	Sb	06 59 49.5	+0.6
SIQV	Siquisique	2.66	36	*e*P	Pn	06 59 13.5	+1.8
SIQV				*e*S	Sn	06 59 45.5	+1.5
BRRC	Barranca, Sant	2.67	239	*e*P	Pn	06 59 13.6	+1.9
BRRC				*e*S	Sb	06 59 51.1	+1.7
RUSC	La Rusia	3.08	213	*e*P	Pn	06 59 20.6	+2.8
ARGC	Ariguani, Magd	3.11	296	*e*P	Pn	06 59 18.1	+0.2
ARGC				*e*S	Sg	07 00 05.7	-2.9
URIC	Uribia, Colomb	3.23	350	*e*P	Pn	06 59 21.4	+1.9
URIC				*e*S	Sn	06 59 56.7	-1.4
URIC	Uribia, Colomb	3.23	350	Pn	Pn	06 59 19.9	+0.4
BAUV	El Baul	3.36	82	*e*P	Pn	06 59 23.5	+2.3
BAUV				*e*S	Sn	07 00 01.2	0.0
ZARC	Zaragoza, Cauc	3.56	254	*e*P	Pn	06 59 25.2	+1.2
ZARC				*e*S	Sb	07 00 18.6	+3.5
ZARC	Zaragoza, Cauc	3.56	254		Pn	06 59 24.9	+0.9
JACV	Jacura	3.62	44	*e*P	Pn	06 59 27.3	+2.5
MONV	Montecano	3.71	22	*e*P	Pn	06 59 27.9	+1.7
MONV				*e*S	Sn	07 00 10.4	+0.4
SMRC	Santa Marta, M	3.83	314	*e*P	Pn	06 59 27.4	-0.3
SPBC	San Pablo de B	3.87	223	*e*P	Pn	06 59 31.7	+3.4
SJCC	San Jacinto, C	3.97	291	*e*P	Pn	06 59 32.0	+2.3
SJCC	San Jacinto, C	3.97	291		Pn	06 59 31.3	+1.6
TURV	Turiamo	4.02	61	*e*P	Pn	06 59 32.5	+2.1
TURV				*e*S	Sn	07 00 18.0	+0.5
BENV	Beln	4.03	69	*e*P	Pn	06 59 32.8	+2.2
BENV				*e*S	Sn	07 00 17.8	-0.2
UREC	San Jos de Ur	4.15	260	*e*P	Pn	06 59 35.7	+3.6
UREC				*e*S	Sn	07 00 23.3	+2.6
MOTC	Monteria, Cord	4.21	274	*e*P	Pn	06 59 34.7	+1.6
MOTC				*e*S	Sn	07 00 22.8	+0.4
MOTC	Monteria, Cord	4.21	274	Pn	Pn	06 59 34.3	+1.3
PTGC	Puerto Gaitan,	4.33	190	*e*P	Pn	06 59 35.7	+1.0
PTGC				*e*S	Sb	07 00 42.4	+5.0
HATO	Hato, Curacao	4.38	33		Pn	06 59 36.7	+1.4
CHIC	Chingaza	4.48	211	*e*P	Pn	06 59 33.0	-4.1
CHIC				*e*S	Sn	07 00 31.6	+2.0
NORC	Norcasia	4.50	230	*e*P	Pn	06 59 37.4	+0.3
NORC				*e*S	Sn	07 00 33.2	+3.6
TACV	Tcata	4.62	69	*e*P	Pn	06 59 40.4	+1.6
ROSC	El Rosal	4.64	219	Pn	Pn	06 59 37.2	-2.1
	24nm,0.3s,baz=126,slow=6.4,SNR=36						
ROSC				Sn	Sb	07 00 42.2	-4.5
	329nm,0.3s,baz=30,slow=20,SNR=2.1						
ROSC				Lg	Lg	07 00 56.9	
	348nm,0.3s,baz=21,slow=21,SNR=6.1						
ROSC	El Rosal	4.64	219	P	Pn	06 59 41.9	+2.6
ROSC	El Rosal	4.64	219	*e*P	Pn	06 59 42.9	+3.6
ROSC	El Rosal	4.64	219		Pn	06 59 41.9	+2.6
HELC	Santa Helena	4.68	241	*e*P	Pn	06 59 41.8	+2.0
HELC				*e*S	Sn	07 00 39.5	+5.0
CARV	Caracas	4.85	65	*e*P	Pn	06 59 43.7	+1.8
CACV	CAICARA DEL OR	4.91	101	⇓*i*P	Pb	06 59 50.8	-4.0
LCBC	Los crdobas,	4.91	275	*e*P	Pn	06 59 43.8	+1.2
LCBC				*e*S	Sn	07 00 42.7	+3.1
VILC	Villavicencio,	4.91	208	*e*P	Pn	06 59 44.3	+1.5
VILC				*e*S	Sn	07 00 41.4	+1.6
GUY2C	Guyana, Caldas	5.10	231	*e*P	Pn	06 59 47.0	+1.4
GUY2C				*e*S	Sg	07 01 07.3	-5.3
MERV	Las Mercedes	5.11	81	⇓*i*P	Pn	06 59 47.5	+2.1
CBOC	Ciudad Bolivar	5.26	240	*e*P	Pn	06 59 51.4	+3.8
CBOC				*e*S	Sg	07 01 13.6	-4.3
BIRV	Birongo	5.44	68	*e*P	Pn	06 59 51.7	+1.8
ANIL	Santa Ana	5.62	225	*e*P	Pn	06 59 55.7	+3.1
ANIL				*e*P	Sn	07 00 59.1	+1.7
CAPC	Capurgana	5.88	272	*e*P	Pn	06 59 53.5	-2.4
CAP2	Capurgana	5.88	272	Pn	Pn	06 59 54.9	-1.1
ORTC	Ortega, Tolima	5.94	220	*e*P	Pn	06 59 58.6	+1.7
ORTC				*e*S	Sn	07 01 06.2	+1.1
PLMC	San Jos del P	6.01	234	*e*P	Pn	06 59 59.2	+1.4
PLMC				*e*S	Sn	07 01 11.2	+4.4
GUVC	San Jose del G	6.04	192	*e*P	Pn	06 59 53.1	-5.1
GUVC				*e*S	Sn	07 01 06.2	-1.2
SOLC	Bahia Solano	6.36	250	*e*P	Pn	07 00 05.8	+3.2
PTAC	Punta Ardita,	6.48	258	*e*P	Pn	07 00 04.8	+0.6
PTAC				*e*S	Sn	07 01 14.9	-3.3
YOTC	Yotoco, Valle	6.65	228	*e*P	Pn	07 00 06.2	-0.4
PRGV	PARIAGUAN	6.70	87	⇓*e*P	Pn	07 00 08.6	+1.4
MACC	Macarena, Meta	6.76	201	*e*P	Pn	07 00 07.5	-0.7
MACC				*e*S	Sn	07 01 25.6	+0.4
PIZC	Pizarro, Choco	6.87	240	*e*P	Pn	07 00 12.9	+3.3
PIZC				*e*S	Sn	07 01 30.9	+3.0
PCRV	Puerto La Cruz	6.89	75	Pn	Pn	07 00 07.4	-2.5
	2.9nm,0.3s,baz=339,slow=3.3,SNR=26						
PCRV				Sn	Sn	07 01 32.3	+3.9
	170nm,0.3s,baz=102,slow=19,SNR=8.3						
PCRV				LR	LR	07 02 36.5	
	comp=Z,4μm,21.8s,slow=36						
PCRV	Puerto La Cruz	6.89	75	*e*P	Pn	07 00 11.6	+1.7
BETC	Betania	7.04	215	*e*P	Pn	07 00 11.9	0.0
MARP	Paez Belalcaza	7.21	219	*e*P	Pn	07 00 14.0	-0.5
MARP				*e*S	Sn	07 01 36.4	-0.3
CUMV	Cumana_UDO	7.37	74	*e*P	Pn	07 00 17.5	+1.1
GARC	Garzon, Huila	7.47	213	*e*P	Pn	07 00 18.3	+0.3
GARC				*e*S	Sn	07 01 43.3	+0.2
PCON	Cinco Dias	7.89	219	*e*P	Pn	07 00 24.3	+0.3
PCON				*e*S	Sb	07 02 27.2	+7.0
SOTA	Rioblanco	8.17	220	*e*P	Pn	07 00 30.9	+3.1
CRUV	Carupano	8.35	74	*e*P	Pn	07 00 31.0	+1.1
BCIP	Isla Barro Col	8.35	275	P	Pn	07 00 29.1	-0.8
BCIP	Isla Barro Col	8.35	275	*e*P	Pn	07 00 28.4	-1.5
BCIP				*e*S	Sn	07 01 59.9	-4.5
BCIP	Isla Barro Col	8.35	275		Pn	07 00 29.1	-0.8
JAKH	Jacmel	9.74	354	Pn	Pn	07 00 49.7	+0.8
SDD	Santo Domingo	10.01	8		Pn	07 00 53.4	+0.8
LGNH	Logne	10.02	353		Pn	07 00 53.1	+0.4
GRGR	Grenville	10.26	69	*e*P	Pn	07 00 54.0	-2.1
GRGR	Grenville	10.26	69	Pn	Pn	07 00 57.1	+1.0
CRPR	Cabo Rojo, PR	10.33	23		Pn	07 00 56.2	-0.8
PCDR	Punta Cana, DR	10.38	16	Pn	Pn	07 00 58.2	+0.5
DR12	Loma Pena Alta	10.41	11		Pn	07 00 57.4	-0.8
SDDR	Presa de Saban	10.42	1		Pn	07 00 59.8	+1.5
PRSN	Puerto Rico Se	10.51	23		Pn	07 00 58.6	-0.9
OBIP	Obispado Ponce	10.57	26		Pn	07 00 59.5	-0.8
GCMP	Grenada, Carri	10.59	67	*e*P	Pn	07 01 03.0	+2.4
CELP	Cerrillos	10.61	26	Pn	Pn	07 01 00.5	-0.4
AGPR	Aguadilla, PR	10.75	22		Pn	07 01 02.9	+0.1
HOJ	Hope	10.78	332	*i* P	Pn	07 01 03.6	+0.4
AOPR	Arecibo Observ	10.78	24	Pn	Pn	07 01 02.2	-1.1
OTAV	Otavalo	10.80	221	P	Pn	07 01 04.9	+1.0
OTAV	Otavalo	10.80	221	*e*P	Pn	07 01 04.6	+0.8
OTAV	Otavalo	10.80	221		Pn	07 01 04.9	+1.0
PDPR	Patillas Dam,	10.81	28		Pn	07 01 03.4	-0.3
GWJ	Greenwich	10.83	332	*i* P	Pn	07 01 03.3	-0.7
SJG	San Juan	10.84	28	Pn	Pn	07 01 03.8	-0.2
	49nm,0.3s,baz=196,slow=11,SNR=68						
SJG				Sn	Sn	07 02 58.5	-6.8
	11nm,0.3s,baz=31,slow=19,SNR=1.8						
SJG				LR	LR	07 05 41.6	
	comp=Z,10μm,19.8s,baz=196,slow=40						
SJG	San Juan	10.84	28	P	Pn	07 01 04.0	0.0
SJG	San Juan	10.84	28		Pn	07 01 04.0	0.0
STH	Stony Hill	10.87	332	*i* P	Pn	07 01 05.1	+0.6
STH				*i* S	Sn	07 03 01.6	-4.7
SC01	Santiago de lo	10.88	3		Pn	07 01 07.2	+2.5
PRVC	Isla de Provid	10.91	297	*e*P	Pn	07 01 02.8	-2.2
PRVC				*e*S	Sn	07 02 58.8	-8.3
EMPR	Esperanza - Ma	10.99	25		Pn	07 01 06.5	+0.4
HUMP	Col San Antoni	11.00	29		Pn	07 01 06.1	-0.2
GCPR	Guaynabo City	11.04	27		Pn	07 01 06.5	-0.2
SVB	Belmont	11.04	64		Pn	07 01 07.2	+0.3
TOSP	Speyside	11.07	75		Pn	07 01 06.2	-0.9
MTP	Monte Pirata	11.11	30		Pn	07 01 06.5	-1.2
CBYP	Canovanas	11.11	29		Pn	07 01 07.2	-0.6
BRU2	Volcan	11.16	272		Pn	07 01 09.0	+0.5
CDVI	St. Croix	11.24	34		Pn	07 01 09.6	+0.1
MTDJ	Mount Denham	11.35	329	Pn	Pn	07 01 10.9	-0.3
CUPR	Culebra, Puert	11.42	31	Pn	Pn	07 01 12.3	+0.3
STVI	Saint Thomas	11.63	32		Pn	07 01 15.1	+0.3
BIM	Bigot	11.76	59		Pn	07 01 16.3	-0.4
FDF	Fort de France	11.80	57	P	Pn	07 01 17.0	-0.3
FDF	Fort de France	11.80	57		Pn	07 01 17.0	-0.3
SRBA	San Rafael, Bu	11.83	274	Pn	Pn	07 01 17.4	-0.3
MPOM	Morne Pois Mar	11.91	59		Pn	07 01 18.6	0.0
GTBY	Guantanamo Bay	11.91	343	Pn	Pn	07 01 18.4	-0.2
BATAN	Batan	11.91	279		Pn	07 01 17.4	-1.3
RIOS	Rincon, Osa	11.97	272		Pn	07 01 21.3	+1.7
PEZE	Perez Zeledon,	12.15	275		Pn	07 01 22.1	0.0
CBE	Ff, Capester	12.18	51	*e*P	P	07 01 34.2	-0.8
RIMA	Rio Macho	12.36	277		Pn	07 01 24.5	-0.6
BOAV	Boa Vista	12.42	119	*e*P	Pn	07 01 24.6	-1.0
BOAV	Boa Vista	12.42	119	Pn	Pn	07 01 25.6	0.0
BCHC	Barbados, Cave	12.45	67	*e*P	Pn	07 01 26.0	-0.1
BBGH	Gun Hill	12.52	67	*e*P	Pn	07 01 31.9	+4.8
ANBD	Bethesda, Anti	12.67	47	*e*P	P	07 01 42.0	+1.6
TBTG	Tabatinga, AM	12.69	173	*e*P	Pn	07 01 28.1	-1.3
TBTG				*e*S	Sn	07 03 43.3	-7.6
TBTG	Tabatinga, AM	12.69	173	*e*P	Pn	07 01 28.5	-0.9
TBTG	Tabatinga, AM	12.69	173		Pn	07 01 27.7	-1.7
GRTK	Grand Turk	12.94	1		Pn	07 01 33.8	+1.1
COVE	Coope Vega, Sa	13.00	281		Pn	07 01 32.4	-1.2
ANWB	Willy Bob	13.07	45	*e*P	P	07 01 45.2	+0.3
JTS	Las Juntas de	13.48	279	P	Pn	07 01 40.0	-0.2
JTS	Las Juntas de	13.48	279		Pn	07 01 40.0	-0.2
LCCY	Blossom Villag	13.92	324	Pn	Pn	07 01 45.1	-1.1
ACON	Acoyapa	13.97	285		Pn	07 01 45.9	-1.1
ORTG	Ortega, Santa	13.98	279		Pn	07 01 47.2	+0.1
PTGA	Pitinga	14.63	128	Pn	Pn	07 01 54.4	-1.6
	4.0nm,0.3s,baz=308,slow=14,SNR=45						
PTGA				Sn	Sn	07 04 28.6	-10
	9.6nm,0.3s,baz=40,slow=13,SNR=5.6						
PTGA				Lg	Lg	07 06 04.1	
	30nm,0.3s,baz=33,slow=22,SNR=5.6						
PTGA				LR	LR	07 08 27.4	
	comp=Z,3μm,18.8s,baz=308,slow=41						
PTGA	Pitinga	14.63	128		Pn	07 01 54.2	-1.8
MACA	Manacapuru-AM	15.77	137		Pn	07 02 08.4	-2.6
MACA				IAmb	IAmb	07 02 24.1	
	comp=Z,315nm,0.7s						
CRIN	San Cristobal	15.93	287		Pn	07 02 12.7	-0.4
CRIN				IAmb	IAmb	07 02 21.8	
	comp=Z,435nm,1.1s						
CZSB	Cruzeiro do Su	16.17	185		Pn	07 02 14.4	-1.8
CZSB				IAmb	IAmb	07 02 22.4	
	comp=Z,732nm,1.1s						
TGUH	Tegucigalpa,Un	16.50	291		Pn	07 02 18.9	-1.7
TGUH				IAmb	IAmb	07 02 26.4	
	comp=Z,790nm,1.4s						
ATAH	Atahualpa	17.02	204	P	Pn	07 02 26.4	-1.1
	comp=Z,1.1nm,0.3s,baz=19,slow=7.6,SNR=23						
SOR	Soroa	18.05	323	P	Pn	07 02 39.7	-0.1
SOR				pmax	pmax		
	comp=Z,186nm,1.2s						
SOR	Soroa	18.05	323	P	Pn	07 02 39.7	-0.1
MTO3	Montecristo	18.54	290	P	P	07 02 44.5	-1.4
ETMB	Extrema	18.92	164	*e*P	P	07 02 47.4	-2.3
ETMB	Extrema	18.92	164	P	P	07 02 48.3	-1.5
MDP	Montagnes des	18.94	99	P	P	07 02 46.7	-3.3
	comp=Z,0.4nm,0.3s,baz=291,slow=14,SNR=12						
MDP				S	Sn	07 06 18.4	-4.5
	comp=Z,4.5nm,0.3s,baz=165,slow=13,SNR=5.0						
MDP				LR	LR	07 11 42.7	
	comp=Z,1μm,20.1s,baz=282,slow=42						
SAML	Samuel	19.17	155	P	P	07 02 52.2	-0.4
SAML				pmax	pmax		
	comp=Z,186nm,1.1s						
SAML	Samuel	19.17	155	P	P	07 02 52.2	-0.4
061Z	Ochoppi	19.49	334		P	07 02 55.4	-0.6
061Z				IAmb	IAmb	07 03 00.1	
	comp=Z,250nm,0.9s						
MALB	Monte Alegre	19.95	120	*e*P	P	07 03 01.3	+0.2
ITTB	Itaituba	20.19	129	*e*P	P	07 03 04.1	+0.4
MCPB	Macapa, AP	21.20	114	*e*P	P	07 03 13.4	-1.3
CCIG	Comitan	21.66	293	P	P	07 03 19.3	-0.4
CCIG				IAmb	IAmb	07 03 41.6	
	comp=Z,428nm,1.3s						
DWPF	Disney Wildern	21.68	335	P	P	07 03 20.7	+1.0
	baz=152						
DWPF	Disney Wildern	21.68	335	P	P	07 03 19.8	+0.1
NPGB	Novo Progresso	22.24	134	*e*P	P	07 03 25.9	+0.1
656A	Willston	23.24	335	P	P	07 03 37.3	+1.1
VILB	Vilhena	24.05	152	*e*P	P	07 03 44.4	+0.1
VILB	Vilhena	24.05	152	P	P	07 03 44.9	+0.7
CMIG	Matias Romero	24.41	293	P	P	07 03 44.7	-2.9
	comp=Z,1.6nm,0.3s,baz=85,slow=7.1,SNR=6.9						
CMIG				LR	LR	07 14 38.6	
	comp=Z,3μm,19.5s,baz=100,slow=40						
CLDB	Colider	24.73	141	*e*P	P	07 03 50.5	0.0
PDRB	Porto dos Gac	24.75	144	*e*P	P	07 03 50.5	-0.1
553A	Crawfordville	24.78	332	P	P	07 03 52.2	+1.4
LPAZ	La Paz	24.84	172	P	P	07 03 52.5	+0.4
	comp=Z,280nm,1.2s,baz=1.3,slow=9.2,SNR=56						

LPAZ	La Paz	24.84	172	P	P	07 03 52.3	+0.2
LPAZ				pmax	pmax		
	comp=Z,360nm,1.2s						
LPAZ	La Paz	24.84	172	*e*P	P	07 03 51.9	-0.3
LPAZ	La Paz	24.84	172	P	P	07 03 52.3	+0.2
255A	Hazlehurst	25.48	338	P	P	07 03 58.5	+1.5
TIGA	Tifton	25.49	335	P	P	07 03 59.2	+2.0
	baz=151,SNR=21						
TIGA	Tifton	25.49	335	P	P	07 03 58.9	+1.7
TIGA				IAmb	IAmb	07 04 01.3	
	comp=Z,278nm,1.4s						
TMAB	Tom-Au,PA,Br	25.63	114	*e*P	P	07 03 59.2	+0.5
CSU	Charleston Sou	25.65	343	P	P	07 04 00.6	+1.9
451A	Vernon	25.76	331	P	P	07 04 00.9	+1.2
NHSC	New Hope	25.80	343	P	P	07 04 01.9	+2.0
	baz=160,SNR=33						
NHSC	New Hope	25.80	343	P	P	07 04 00.7	+0.8
PRPB	Parauapebas	26.00	123	*e*P	P	07 04 02.1	+0.1
352A	Blakely	26.10	333	P	P	07 04 04.2	+1.4
Y60A	Bolivia	26.15	347	P	P	07 04 03.6	+0.5
Y59A	Loris	26.28	346	P	P	07 04 05.1	+0.8
154A	Montrose	26.33	337	P	P	07 04 05.6	+0.7
SIV	San Ignacio	26.40	157	P	P	07 04 05.8	+0.2
	comp=Z,271nm,1.1s,baz=333,slow=8.3,SNR=133						
Y58A	Scranton	26.40	344	P	P	07 04 06.0	+0.5
Y57A	Sumter	26.71	343	P	P	07 04 08.7	+0.5
Y57A				IAmb	IAmb	07 04 10.8	
	comp=Z,119nm,1.3s						
PTLB	Pontes e Lacer	26.72	153	*e*P	P	07 04 08.7	+0.2
PTLB	Pontes e Lacer	26.72	153	P	P	07 04 08.4	-0.1
BRAL	Brewton	26.86	329	P	P	07 04 11.6	+2.0
	baz=144						
X58A	Rowland	26.94	345	P	P	07 04 10.8	+0.5
X58A				IAmb	IAmb	07 04 15.2	
	comp=Z,168nm,1.5s						
152A	Waverly Hall	27.03	335	P	P	07 04 12.1	+0.9
152A				IAmb	IAmb	07 04 14.4	
	comp=Z,167nm,1.2s						
250A	Grady	27.14	331	P	P	07 04 12.6	+0.5
GOGA	Godfrey	27.18	338	P	P	07 04 13.4	+1.0
GOGA				pmax	pmax		
	comp=Z,87nm,1.1s						
GOGA				MLR	MLR		
	comp=Z,2µm,22.0s						
GOGA	Godfrey	27.18	338	P	P	07 04 13.9	+1.5
	baz=153,SNR=29						
GOGA	Godfrey	27.18	338	P	P	07 04 13.4	+1.0
GOGA				IAmb	IAmb	07 04 21.7	
	comp=Z,87nm,1.1s						
JSC	Jenkinsville	27.21	342	P	P	07 04 13.3	+0.5
JSC				pmax	pmax		
	comp=Z,229nm,1.6s						
JSC	Jenkinsville	27.21	342	P	P	07 04 13.3	+0.5
JSC				IAmb	IAmb	07 04 18.0	
	comp=Z,228nm,1.6s						
CNNC	Cliffs of the	27.27	348	P	P	07 04 14.7	+1.5
	baz=166						
CNNC	Cliffs of the	27.27	348	P	P	07 04 13.7	+0.5
CNNC				IAmb	IAmb	07 04 21.6	
	comp=Z,116nm,0.9s						
BIRD	Birdtown, Kers	27.32	344	P	P	07 04 13.7	0.0
HODGE	Hodges	27.49	340	P	P	07 04 16.2	+1.0
HODGE				IAmb	IAmb	07 04 20.8	
	comp=Z,129nm,1.1s						
W57A	Gilead	27.67	345	P	P	07 04 17.1	+0.3
Z51A	Franklin	27.78	335	P	P	07 04 18.4	+0.5
Z51A				IAmb	IAmb	07 04 21.2	
	comp=Z,140nm,1.1s						
PAULI	Pauline	27.88	341	P	P	07 04 19.2	+0.4
TLIG	Tlapa	27.91	292	P	P	07 04 19.3	-0.1
PSGCX	Pisagua	27.95	177	P	P	07 04 17.8	-1.8
PSGCX				IAMs_20	IAMs_20	07 16 09.6	
	comp=Z,28µm,19.0s						
KMSC	Kings Mountain	28.03	343	P	P	07 04 21.1	+1.0
	baz=159,SNR=10						
KMSC	Kings Mountain	28.03	343	P	P	07 04 20.3	+0.2
V58A	Windy Hill, Pi	28.07	347	P	P	07 04 20.2	-0.2
PB11	IPOC Station P	28.14	176	P	P	07 04 19.3	-2.0
346A	Big Creek Wild	28.31	326	P	P	07 04 22.4	-0.2
346A				IAmb	IAmb	07 04 25.8	
	comp=Z,85nm,0.8s						
SNDB	Serra Nova Dou	28.53	135	*e*P	P	07 04 25.4	+0.7
PB08	IPOC Station P	28.55	176	P	P	07 04 24.3	-0.9
TA02	Huaiquique	28.62	177	P	P	07 04 25.0	-0.4
V55A	Taylorsville	28.66	343	P	P	07 04 26.0	+0.3
X51A	Calhoun	28.73	336	P	P	07 04 27.7	+1.3
Y49A	Blount Mountai	28.78	333	P	P	07 04 27.0	+0.2
SALV	Santo Antonio	28.81	147	*e*P	P	07 04 27.0	-0.2
W52A	Murphy	28.85	338	P	P	07 04 28.2	+0.8
W52A				IAmb	IAmb	07 04 34.5	
	comp=Z,66nm,0.9s						
T59A	Double "B" Far	28.89	350	P	P	07 04 27.7	+0.1
T59A				IAmb	IAmb	07 04 32.6	
	comp=Z,60nm,0.8s						
U56A	King	28.90	345	P	P	07 04 28.3	+0.5
TA01	Diego Aracena	28.91	178	P	P	07 04 26.7	-1.3
UNM	Universidad Na	28.97	295	IAMs_20	IAMs_20	07 17 51.6	
	comp=Z,4µm,20.0s						
V53A	Saluda	28.98	341	P	P	07 04 28.8	+0.2
V53A				IAmb	IAmb	07 04 35.9	
	comp=Z,119nm,1.7s						
Z47A	Carrollton	29.00	330	P	P	07 04 29.5	+0.7
Z47A				IAmb	IAmb	07 04 31.9	
	comp=Z,130nm,0.8s						
FPAL	Fort Paine	29.02	335	P	P	07 04 29.4	+0.4
FPAL				IAmb	IAmb	07 04 31.9	
	comp=Z,86nm,1.2s						
344A	Westbrook Farm	29.07	324	P	P	07 04 30.8	+1.4
T57A	Hurt	29.25	347	P	P	07 04 31.2	+0.3
T57A				IAmb	IAmb	07 04 36.5	
	comp=Z,80nm,1.0s						
TKL	Tuckaleechee C	29.30	339	P	P	07 04 32.6	+1.2
	comp=Z,22nm,1.0s,baz=162,slow=13,SNR=18						
TKL				LR	LR	07 18 34.3	
	comp=Z,2µm,18.1s,baz=154,slow=41						
TKL	Tuckaleechee C	29.30	339	P	P	07 04 32.6	+1.2
TKL				pmax	pmax		
	comp=Z,84nm,1.6s						
TKL	Tuckaleechee C	29.30	339	P	P	07 04 32.6	+1.2
SMTB	Santa Maria do	29.34	125	*e*P	P	07 04 32.1	+0.2
CPCT	Cooper Cave	29.39	338	P	P	07 04 32.6	+0.5
V52A	Sevierville	29.40	340	P	P	07 04 32.8	+0.5
PB01	IPOC Station P	29.42	176	P	P	07 04 32.3	-0.3
U54A	Nelsons Funny	29.46	343	P	P	07 04 34.0	+1.1
U54A				IAmb	IAmb	07 04 38.4	
	comp=Z,106nm,1.2s						
W50A	Signal Mountai	29.47	336	P	P	07 04 33.6	+0.7
W50A				IAmb	IAmb	07 04 40.2	
	comp=Z,71nm,0.9s						
VBMS	Vicksburg	29.52	326	P	P	07 04 35.0	+1.6
	baz=139,SNR=10						
VBMS	Vicksburg	29.52	326	P	P	07 04 34.6	+1.2
VBMS				IAmb	IAmb	07 04 36.4	
	comp=Z,112nm,0.9s						
X48A	Hartselle	29.56	333	P	P	07 04 34.6	+0.9
X48A				IAmb	IAmb	07 04 36.6	
	comp=Z,74nm,0.9s						
V51A	Loudon	29.64	338	P	P	07 04 35.8	+1.4
V51A				IAmb	IAmb	07 04 40.7	
	comp=Z,74nm,0.8s						
BLA	Blacksburg	29.73	345	P	P	07 04 35.4	+0.2
BLA				pmax	pmax		
	comp=Z,68nm,1.0s						
BLA				MLR	MLR		
	comp=Z,1µm,20.0s						
BLA	Blacksburg	29.73	345	P	P	07 04 36.5	+1.3
	baz=162,SNR=13						
BLA	Blacksburg	29.73	345	P	P	07 04 35.4	+0.2
BLA				IAmb	IAmb	07 04 40.7	
	comp=Z,68nm,1.0s						
R58B	Mineral	29.91	350	P	P	07 04 36.6	-0.2
S57A	Dark Hollow, R	29.92	348	P	P	07 04 37.1	+0.3
S57A				IAmb	IAmb	07 04 42.0	
	comp=Z,63nm,1.1s						
342A	Flagon Creek P	29.96	322	P	P	07 04 37.9	+0.7
TZTN	Tazewell	30.02	340	P	P	07 04 39.9	+2.1
	baz=156,SNR=16						
TZTN	Tazewell	30.02	340	P	P	07 04 36.7	-1.1
TZTN				IAmb	IAmb	07 04 43.4	
	comp=Z,79nm,1.1s						
TZTN				IAMs_20	IAMs_20	07 18 25.8	
	comp=Z,3µm,19.0s						
441A	DeRidder	30.06	320	P	P	07 04 38.9	+0.7
441A				IAmb	IAmb	07 04 41.6	
	comp=Z,81nm,0.8s						
CBN	Corbin Frederi	30.06	351	P	P	07 04 39.7	+1.7
	baz=168,SNR=9.0						
CBN	Corbin Frederi	30.06	351	P	P	07 04 38.6	+0.5
CBN				IAmb	IAmb	07 04 43.3	
	comp=Z,100nm,1.1s						
PB07	IPOC Station P	30.08	177	P	P	07 04 37.9	-0.7
Y45A	Yeager Farm, C	30.27	329	P	P	07 04 40.5	+0.5
143A	Socs Landing,	30.38	325	P	P	07 04 40.5	-0.4
143A				IAmb	IAmb	07 04 46.0	
	comp=Z,66nm,0.8s						
Q61A	Milford	30.45	354	P	P	07 04 43.3	+1.8
	baz=172						
PLAL	Pickwick Lake	30.47	332	P	P	07 04 42.0	+0.3
PLAL				IAmb	IAmb	07 04 44.5	
	comp=Z,114nm,0.9s						
PLAL				IAMs_20	IAMs_20	07 19 04.5	
	comp=Z,3µm,20.0s						
V48A	Smith Brothers	30.55	335	P	P	07 04 43.2	+0.7
V48A				IAmb	IAmb	07 04 45.6	
	comp=Z,124nm,1.1s						
PP1B	Ponte de Pedra	30.65	148	*e*P	P	07 04 44.0	+0.5
CLTN	Cedars of Leba	30.65	336	P	P	07 04 43.8	+0.5
CLTN				IAmb	IAmb	07 04 46.4	
	comp=Z,84nm,1.2s						
PB04	IPOC Station P	30.67	178	P	P	07 04 42.9	-0.9
PEXB	Peixe	30.77	131	*e*P	P	07 04 44.8	+0.1
U49A	Red Boiling Sp	30.80	337	P	P	07 04 45.1	+0.5
T50A	Nancy	30.90	339	P	P	07 04 46.5	+0.9
T50A				IAmb	IAmb	07 04 51.3	
	comp=Z,99nm,1.2s						
ARAG	Araguaiana, MT	30.91	141	*e*P	P	07 04 45.9	+0.1
LVC	Limon Verde	31.02	176	P	P	07 04 45.8	-1.2
	comp=Z,17nm,0.6s,baz=17,slow=3.4,SNR=19						
LVC	Limon Verde	31.02	176	P	P	07 04 47.3	+0.2
LVC				pmax	pmax		
	comp=Z,48nm,0.8s						
LVC	Limon Verde	31.02	176	*e*P	P	07 04 46.9	-0.2
LVC	Limon Verde	31.02	176	P	P	07 04 47.3	+0.2
S51A	Beattyville	31.03	341	P	P	07 04 47.2	+0.5
PB06	IPOC Station P	31.07	177	P	P	07 04 46.1	-1.2
W45A	Hickory Valley	31.13	331	P	P	07 04 48.1	+0.5
SDMD	Soldier's Deli	31.16	352	P	P	07 04 48.8	+1.0
R53A	Hurricane	31.18	344	P	P	07 04 49.0	+1.0
Q56A	Snyder Ridge,	31.20	348	P	P	07 04 47.7	-0.5
Q56A				IAmb	IAmb	07 04 54.2	
	comp=Z,53nm,0.9s						
HKT	Hockley	31.28	316	*d i*P	P	07 04 50.0	+1.1
HKT				pmax	pmax		
	comp=Z,117nm,1.3s						
HKT	Hockley	31.28	316	P	P	07 04 48.8	-0.1
HKT				IAmb	IAmb	07 04 51.6	
	comp=Z,115nm,1.2s						
WVT	Waverly	31.31	334	P	P	07 04 49.6	+0.4
WVT				pmax	pmax		
	comp=Z,103nm,1.0s						
WVT				MLR	MLR		
	comp=Z,3µm,20.0s						
WVT	Waverly	31.31	334	P	P	07 04 50.1	+1.0
	baz=148						
WVT	Waverly	31.31	334	P	P	07 04 49.6	+0.4
WVT				IAmb	IAmb	07 04 51.6	
	comp=Z,103nm,1.0s						
WVT	Waverly	31.31	334	IAMs_20	IAMs_20	07 19 13.0	
	comp=Z,3µm,20.0s						
P60A	Greenville	31.41	354	P	P	07 04 51.2	+1.2
	baz=172						
P57A	Homestead Farm	31.41	350	P	P	07 04 50.0	0.0
P57A				IAmb	IAmb	07 04 56.0	
	comp=Z,86nm,1.2s						
AF01	San Pedro de A	31.42	174	P	P	07 04 49.7	-0.9
CCAR	Cane Creek	31.49	326	P	P	07 04 51.8	+1.0
Z41A	Richland Creek	31.59	324	P	P	07 04 52.7	+1.1
	baz=137,SNR=41						
NATX	Nacogdoches	31.67	320	P	P	07 04 53.6	+1.2
	baz=132,SNR=20						
NATX	Nacogdoches	31.67	320	P	P	07 04 52.4	0.0
MVL	Millersville	31.68	353	P	P	07 04 53.5	+1.2
MVL				IAmb	IAmb	07 04 57.9	
	comp=Z,62nm,1.0s						
T47A	Sharon Grove	31.74	336	P	P	07 04 53.5	+0.6
T47A				IAmb	IAmb	07 04 59.5	
	comp=Z,85nm,0.9s						
HALT	Halls	31.82	332	P	P	07 04 53.9	+0.3
R50A	Paris	31.86	341	P	P	07 04 55.3	+1.4
R50A				IAmb	IAmb	07 05 00.1	
	comp=Z,103nm,1.1s						
Q52A	Bidwell	31.86	344	P	P	07 04 55.4	+1.4
Q52A				IAmb	IAmb	07 04 59.6	
	comp=Z,110nm,1.1s						
MCWV	Mont Chateau	31.93	348	P	P	07 04 56.7	+2.1
	baz=164,SNR=15						
MCWV	Mont Chateau	31.93	348	P	P	07 04 56.4	+1.8
MCWV				IAmb	IAmb	07 05 00.6	
	comp=Z,102nm,1.1s						
PAGS	Pennsylvania G	31.95	352	P	P	07 04 55.3	+0.6
PAGS				IAmb	IAmb	07 05 00.2	
	comp=Z,68nm,1.2s						
UTMT	University of	31.95	333	P	P	07 04 56.0	+1.2
LPAR	Lepanto	32.03	330	P	P	07 04 55.0	-0.5
735A	Kenedy	32.03	313	P	P	07 04 56.0	+0.4
LNXT	Lenox	32.04	332	P	P	07 04 56.3	+0.7
WLAR	White Oak Lake	32.07	325	P	P	07 04 56.9	+1.0
GLAT	Glass	32.08	332	P	P	07 04 56.2	+0.2
P53A	Whipple	32.12	345	P	P	07 04 57.0	+0.7
P53A				IAmb	IAmb	07 05 01.9	
	comp=Z,80nm,1.1s						
LUPA	Lehigh Univers	32.16	354	P	P	07 04 58.0	+1.4
BRNJ	Basking Ridge	32.17	355	P	P	07 04 57.4	+0.8
GNAR	Gosnell	32.18	331	P	P	07 04 57.4	+0.6
PEBM	Pemiscott Bayo	32.23	331	P	P	07 04 57.5	+0.3
Q51A	Peebles	32.23	342	P	P	07 04 57.9	+0.7
Q51A				IAmb	IAmb	07 05 03.1	
	comp=Z,77nm,1.2s						
O56A	Blue Knob Stat	32.27	350	P	P	07 04 59.6	+2.0
	baz=167,SNR=22						
O56A	Blue Knob Stat	32.27	350	P	P	07 04 58.2	+0.5
O56A				IAmb	IAmb	07 05 03.7	
	comp=Z,82nm,0.9s						
HICK	Hickman	32.28	333	P	P	07 04 58.4	+0.8
PENMO	Penman	32.39	332	P	P	07 04 59.7	+1.0
PAL	Palisades	32.45	356	P	P	07 05 00.8	+1.7
	baz=175						
P52A	Corning	32.45	344	P	P	07 05 00.6	+1.4
	baz=160,SNR=22						
X40A	Basin Creek Fa	32.50	326	P	P	07 05 00.2	+0.6
	baz=138,SNR=24						
X40A	Basin Creek Fa	32.50	326	P	P	07 04 59.5	-0.1
X40A				IAmb	IAmb	07 05 01.7	
	comp=Z,48nm,1.0s						
WCI	Wyandotte Cave	32.50	338	P	P	07 05 00.9	+1.3
	baz=152						
WCI	Wyandotte Cave	32.50	338	IAMs_20	IAMs_20	07 18 43.4	
	comp=Z,2µm,19.0s						
NBPS	Pedro II - PI	32.51	112	*e*P	P	07 05 00.0	-0.1
N59A	State Game Lan	32.51	354	P	P	07 05 01.8	+2.0
	baz=172,SNR=17						
SSPA	Standing Stone	32.52	351	P	P	07 05 01.4	+1.7
	baz=168						
PARMO	Parma	32.62	332	P	P	07 05 01.3	+0.6
AQDB	Aquidauana	32.68	152	*e*P	P	07 05 01.5	+0.2
AQDB	Aquidauana	32.68	152	P	P	07 05 01.2	-0.1
AQDB				IAmb	IAmb	07 05 06.6	
	comp=Z,76nm,1.1s						
W41B	Gary Mavity, V	32.70	327	P	P	07 05 02.3	+1.0
	baz=140,SNR=46						
O53A	New Philadelph	32.80	346	P	P	07 05 03.8	+1.6
	baz=162,SNR=19						
833A	Chaparral WMA,	32.92	310	P	P	07 05 02.8	-0.6
	baz=122,SNR=13						
MIAR	Mount Ida	32.96	325	P	P	07 05 04.1	+0.4
	baz=137,SNR=41						
435B	Jarrell	32.99	316	P	P	07 05 05.0	+1.0
	baz=127,SNR=32						
P49A	Miami Univ. Ec	33.12	341	P	P	07 05 06.3	+1.3
	baz=156,SNR=13						
P49A	Miami Univ. Ec	33.12	341	IAMs_20	IAMs_20	07 21 04.8	
	comp=Z,2µm,18.0s						
N54A	Moraine State	33.21	348	P	P	07 05 07.7	+1.9
	baz=164,SNR=30						
ACSO	Alum Creek Sta	33.24	344	P	P	07 05 07.8	+1.7
	baz=159,SNR=16						
ACSO	Alum Creek Sta	33.24	344	IAMs_20	IAMs_20	07 20 44.1	
	comp=Z,2µm,18.0s						
SIUC	Southern Illin	33.25	334	P	P	07 05 06.7	+0.5
BDFB	Brasilia	33.35	136	P	P	07 05 09.1	+1.7
	comp=Z,36nm,0.9s,baz=300,slow=12,SNR=23						
BDFB	Brasilia	33.35	136	P	P	07 05 07.8	+0.4
BDFB				pmax	pmax		
	comp=Z,92nm,1.2s						
BDFB	Brasilia	33.35	136	P	P	07 05 07.8	+0.4
BDFB				IAmb	IAmb	07 05 13.1	
	comp=Z,92nm,1.2s						
NBMO	Morrinhos-CE	33.41	109	*e*P	P	07 05 10.1	+2.3
SDBA	SAO DESIDERIO	33.55	128	*e*P	P	07 05 09.1	0.0
T42A	Van Buren	33.55	331	P	P	07 05 09.1	+0.3
T42A				IAmb	IAmb	07 05 10.9	
	comp=Z,64nm,0.7s						
W39A	Magazine	33.55	326	P	P	07 05 09.9	+1.1
	baz=137,SNR=73						
W39A	Magazine	33.55	326	P	P	07 05 09.1	+0.3
WHTX	Lake Whitney,	33.64	318	P	P	07 05 10.2	+0.6
	baz=128,SNR=15						
M54A	Oil Creek Stat	33.68	349	P	P	07 05 11.6	+1.7
	baz=165,SNR=18						
BINY	Binghamton	33.81	354	P	P	07 05 12.7	+1.7
	baz=172,SNR=12						
BINY	Binghamton	33.81	354	P	P	07 05 12.0	+1.0
BINY				IAmb	IAmb	07 05 14.1	
	comp=Z,61nm,1.0s						
L61B	Northampton	33.83	358	P	P	07 05 12.9	+1.7
	baz=178						
HRV	Adam Dziewonsk	33.87	360	P	P	07 05 11.6	+0.1
HRV				pmax	pmax		
	comp=Z,85nm,1.1s						
HRV	Adam Dziewonsk	33.87	360	P	P	07 05 13.7	+2.2
	baz=180						
HRV	Adam Dziewonsk	33.87	360	P	P	07 05 11.6	+0.1
HRV				IAmb	IAmb	07 05 17.2	
	comp=Z,85nm,1.1s						
ALLY	Alegheny Colle	33.91	348	P	P	07 05 10.3	-1.5
U40A	Yellville	33.91	328	P	P	07 05 12.9	+0.9
	baz=140,SNR=122						
U40A	Yellville	33.91	328	P	P	07 05 12.8	+0.8
K62A	Royalston	34.04	359	P	P	07 05 13.1	+0.1
K62A				IAmb	IAmb	07 05 18.4	
	comp=Z,118nm,1.2s						
P46A	Rosedale	34.06	338	P	P	07 05 14.5	+1.3
TRY	Troy	34.15	357	P	P	07 05 15.1	+1.2
Q44A	Meyer Farm, Va	34.16	335	P	P	07 05 15.3	+1.3
N49A	Columbus Grove	34.23	343	P	P	07 05 15.2	+0.6
ERPA	Erie	34.33	349	P	P	07 05 17.7	+2.2
	baz=165						
ERPA	Erie	34.33	349	P	P	07 05 16.6	+1.1
ERPA				IAmb	IAmb	07 05 21.0	
	comp=Z,72nm,0.9s						
WVNY	West Valley, N	34.36	351	P	P	07 05 17.1	+1.3
JCT	Junction City	34.38	313	P	P	07 05 16.3	+0.2
	baz=124,SNR=12						
CCM	Cathedral Cave	34.44	332	P	P	07 05 17.0	+0.4
CCM				pmax	pmax		
	comp=Z,88nm,0.8s						
CCM				MLR	MLR		
	comp=Z,2µm,18.0s						
CCM	Cathedral Cave	34.44	332	P	P	07 05 17.3	+0.7
	baz=144						
CCM	Cathedral Cave	34.44	332	P	P	07 05 17.0	+0.4
CCM				IAmb	IAmb	07 05 19.1	
	comp=Z,88nm,0.8s						
CCM	Cathedral Cave	34.44	332	IAMs_20	IAMs_20	07 21 26.8	
	comp=Z,3µm,18.0s						
NBPB	Pedra_Branca-C	34.67	113	*e*P	P	07 05 19.0	+0.2
SFIN	Lafayette	34.69	339	P	P	07 05 19.8	+1.2
	baz=152,SNR=13						
FFD	Franklin Falls	34.84	360	IAMs_20	IAMs_20	07 16 20.3	
	comp=Z,2µm,22.0s						
ITRB	Iturama	34.86	144	*e*P	P	07 05 20.7	+0.3
IPMB	Ipameri, GO	34.89	139	*e*P	P	07 05 20.8	+0.1
R40A	Maddies Statio	35.12	331	P	P	07 05 22.4	0.0
R40A				IAmb	IAmb	07 05 24.1	
	comp=Z,74nm,0.9s						
AC02	Maricunga	35.19	176	P	P	07 05 23.5	-0.2
TUL1	Leonard	35.20	324	P	P	07 05 23.2	0.0
	baz=135,SNR=54						
AAM	Ann Arbor	35.35	344	P	P	07 05 25.7	+1.4
	baz=159						
NBCL	Cascavel-CE	35.37	110	*e*P	P	07 05 25.2	+0.4
ABTX	Abilene, Hawle	35.49	317	P	P	07 05 26.3	+0.6
	baz=126,SNR=66						
LBNH	Lisbon	35.61	359	P	P	07 05 28.4	+1.9
	baz=179,SNR=10						
JANB	Januaria	35.63	131	*e*P	P	07 05 26.9	-0.2
HDIL	Hopedale	35.67	336	P	P	07 05 27.9	+0.7
	baz=149,SNR=19						
HDIL	Hopedale	35.67	336	IAMs_20	IAMs_20	07 21 50.4	
	comp=Z,2µm,18.0s						
PCMB	Pacaembu	35.87	147	*e*P	P	07 05 29.9	+1.0
OK025	Westminster Rd	35.88	323		P	07 05 29.0	-0.1
WVL	Waterville	35.96	2	IAMs_20	IAMs_20	07 20 00.1	
	comp=Z,2µm,20.0s						
LONY	Lake Ozonia	36.09	356	P	P	07 05 32.3	+1.6
	baz=175						
TRCB	Terra Rica	36.13	150	*e*P	P	07 05 31.4	+0.1
TRCB	Terra Rica	36.13	150	P	P	07 05 31.0	-0.3
TRCB				IAmb	IAmb	07 05 33.3	
	comp=Z,185nm,1.7s						
NBMA	Muriti-CE	36.16	115	*e*P	P	07 05 31.9	+0.3
WMOK	Wichita Mounta	36.22	320	P	P	07 05 31.5	-0.5
	baz=130,SNR=76						
EMMW	East Machias	36.23	5	IAMs_20	IAMs_20	07 19 35.3	
	comp=Z,2µm,19.0s						
NBPN	Ponto Novo - B	36.52	121	*e*P	P	07 05 34.8	+0.1
L44A	Lake County Fo	36.56	339	P	P	07 05 36.0	+1.2
	baz=152,SNR=6.3						
L44A	Lake County Fo	36.56	339	IAMs_20	IAMs_20	07 21 20.0	
	comp=Z,2µm,22.0s						
G62A	West of Eustis	36.59	1	P	P	07 05 36.9	+1.9
G62A				IAmb	IAmb	07 05 40.7	
	comp=Z,69nm,0.8s						
PKME	Peaks-Kenny Pk	36.67	3	P	P	07 05 37.2	+1.6
	baz=184						
PKME	Peaks-Kenny Pk	36.67	3	P	P	07 05 36.9	+1.3
PKME				IAMs_20	IAMs_20	07 19 56.9	
	comp=Z,2µm,20.0s						
TXAR	Lajitas Array	36.68	309	P	P	07 05 36.1	+0.1
	comp=Z,7.1nm,0.7s,baz=128,slow=8.9,SNR=62						
TXAR				PcP	PcP	07 08 00.1	+1.2
	comp=Z,11nm,0.6s,baz=139,slow=5.4,SNR=20						
G65A	Princeton	36.72	5	P	P	07 05 36.3	+0.4
MC01	Montes Claros	36.96	133	*e*P	P	07 05 38.9	+0.5
BB19B	Bebedouro	37.00	143	*e*P	P	07 05 39.1	+0.4
NBPA	Parau_RN	37.02	111	*e*P	P	07 05 39.3	+0.4
CPUP	Villa Florida	37.23	159	P	P	07 05 39.1	-1.4
	comp=Z,13nm,0.8s,baz=334,slow=8.6,SNR=12						
CPUP	Villa Florida	37.23	159	*e*P	P	07 05 39.6	-0.9
NBLV	Livramento - P	37.82	114	*e*P	P	07 05 46.1	+0.3
KSU1	Kansas State U	37.94	327	P	P	07 05 46.0	-0.4
	baz=137,SNR=64						
KSU1	Kansas State U	37.94	327	IAMs_20	IAMs_20	07 22 51.3	
	comp=Z,2µm,20.0s						
GLMI	Grayling	37.96	345	P	P	07 05 48.6	+2.1
	baz=158						
PTGB	Pitanga	38.02	151	*e*P	P	07 05 47.6	+0.2
JFWS	Jewell Farm	38.06	337	P	P	07 05 47.9	+0.5
	baz=149,SNR=56						
JFWS	Jewell Farm	38.06	337	IAMs_20	IAMs_20	07 21 55.5	
	comp=Z,2µm,20.0s						
PQI	Presque Isle	38.15	4	P	P	07 05 49.4	+1.3
PQI				IAMs_20	IAMs_20	07 20 30.9	
	comp=Z,2µm,19.0s						
FRTB	Fartura	38.19	146	*e*P	P	07 05 48.5	-0.3
DIAM	Diamantina, MG	38.19	134	*e*P	P	07 05 48.8	-0.1
AMTX	Amarillo	38.19	318	P	P	07 05 49.4	+0.7
	baz=126						
MSTX	Muleshoe	38.41	316	P	P	07 05 50.8	+0.1
	baz=124,SNR=49						
SCIA	State Center	38.44	334	P	P	07 05 51.1	+0.5
	baz=144,SNR=19						
SCIA	State Center	38.44	334	IAMs_20	IAMs_20	07 23 08.6	
	comp=Z,2µm,18.0s						
D62A	Allapoint, All	38.50	3	P	P	07 05 52.0	+0.9
GDU01	Guandu, BA	38.55	125	*e*P	P	07 05 52.0	+0.2
R32A	Long Quarter,	38.62	325	P	P	07 05 52.2	-0.1
R32A				IAmb	IAmb	07 05 53.5	
	comp=Z,107nm,0.8s						
RCLB	Rio Claro- Sao	38.62	143	*e*P	P	07 05 52.4	0.0
NBPV	Pedro Velho	38.94	111	*e*P	P	07 05 58.0	+2.8
MNTX	Cornudas Mount	39.10	311	P	P	07 05 56.8	+0.4
	baz=119,SNR=78						
BSCB	Bom Sucesso	39.30	139	*e*P	P	07 05 58.1	-0.1

NBIT	Itapeh - BA	39.33	126	eP	P	07 05 58.9	+0.5
NBAN	Anadia - AL	39.37	117	eP	P	07 05 59.1	+0.3
VAO	Valinhos	39.41	143	eP	P	07 06 00.1	+1.1
CBKS	Cedar Bluff	39.48	324	P	P	07 05 59.4	0.0
	baz=133,SNR=33						
CMC01	Camacan, BA	39.51	127	eP	P	07 06 00.1	+0.3
SPB	Sao Paulo	39.58	144	eP	P	07 06 00.6	+0.2
SPB	Sao Paulo	39.58	144	P	P	07 06 00.4	+0.1
SPB				IAmb	IAmb	07 06 04.1	
	comp=Z,149nm,1.8s						
SPB				IAMs_20	IAMs_20	07 16 55.2	
	comp=Z,19µm,20.0s						
SLBS	Sierra La Lagu	39.83	297	P	P	07 06 03.4	+0.8
NBRF	Rio Formoso -	39.97	114	eP	P	07 06 04.2	+0.4
GUA01	Guaratinga, BA	39.99	129	eP	P	07 06 04.5	+0.7
G40A	Rib Lake	40.07	339	P	P	07 06 04.9	+0.7
G40A				IAmb	IAmb	07 06 06.5	
	comp=Z,95nm,1.1s						
TIJ01	Guaruva-PR	40.08	148	eP	P	07 06 05.0	+0.4
PET01	Itanhaem-SP	40.21	145	eP	P	07 06 06.8	+1.2
SJMB	Sao Joao De Ma	40.24	132	eP	P	07 06 07.3	+1.3
BGNE	Belgrade	40.43	329	P	P	07 06 07.1	-0.2
	baz=137,SNR=23						
PARB	Paraibuna	40.47	142	eP	P	07 06 07.8	0.0
NAN01	Guarapari, ES	40.50	130	eP	P	07 06 09.2	+1.1
ITQB	Itaqui	40.53	160	eP	P	07 06 07.1	-1.0
ITQB	Itaqui	40.53	160	P	P	07 06 06.6	-1.6
ITQB				IAmb	IAmb	07 06 10.7	
	comp=Z,177nm,1.1s						
BSFB	Barra de Sao F	40.57	132	eP	P	07 06 09.3	+0.6
SPMN	Marine on St.	40.99	337	P	P	07 06 12.1	+0.2
	baz=147,SNR=16						
VAS01	Vassouras-RJ	41.08	139	eP	P	07 06 12.9	0.0
MAN01	Angra dos Reis	41.16	140	eP	P	07 06 13.6	+0.1
RIB01	Linhares ES	41.21	132	eP	P	07 06 14.1	+0.1
121A	Cookes Peak, D	41.29	311	P	P	07 06 16.0	+1.3
	baz=117,SNR=19						
T25A	Trinidad	41.30	319	P	P	07 06 16.5	+1.7
	baz=125,SNR=63						
T25A	Trinidad	41.30	319	IAMs_20	IAMs_20	07 25 54.4	
	comp=Z,2µm,21.0s						
KSCO	Kaye Shedlock'	41.31	322	P	P	07 06 15.2	+0.4
	baz=129,SNR=5.8						
ECSD	EROS Data Cent	41.42	332	P	P	07 06 14.1	-1.3
	baz=141,SNR=26						
ECSD	EROS Data Cent	41.42	332	IAMs_20	IAMs_20	07 26 25.4	
	comp=Z,3µm,18.0s						
ANMO	Albuquerque	41.50	315	d iP	P	07 06 17.3	+0.9
ANMO				pmax	pmax		
	comp=Z,63nm,2.5s						
ANMO	Albuquerque	41.50	315	P	P	07 06 17.2	+0.7
	baz=121						
DUB01	Friburgo-RJ	41.65	137	eP	P	07 06 17.7	+0.1
ALF01	Guarapari-ES	41.80	134	eP	P	07 06 19.3	+0.5
CAM01	Campos-RJ	41.96	136	eP	P	07 06 20.2	+0.2
OGNE	Ogallala	42.21	325	P	P	07 06 22.3	+0.2
	baz=132,SNR=14						
DRLN	Deer Lake	42.27	14	P	P	07 06 23.1	+0.9
CPSB	Cacapava Do Su	42.36	157	eP	P	07 06 22.2	-1.0
SDCO	Great Sand Dun	42.36	319	P	P	07 06 25.0	+1.5
	baz=125,SNR=148						
TER01	Tubaro-SC	42.64	150	eP	P	07 06 25.5	-0.1
EYMN	Ely	42.84	340	P	P	07 06 26.9	0.0
	baz=150,SNR=16						
Q24A	Divide	42.84	320	P	P	07 06 28.1	+0.7
	baz=126,SNR=16						
SUSD	Miller	43.06	331	P	P	07 06 28.3	-0.4
	baz=138,SNR=20						
S22A	4UR Ranch, Cre	43.24	318	P	P	07 06 32.1	+1.4
	baz=123,SNR=72						
TUC	Tucson	43.48	309	P	P	07 06 32.9	+0.4
	baz=114						
PLTB	Pedras Altas	43.51	158	eP	P	07 06 31.7	-0.8
PLTB	Pedras Altas	43.51	158	P	P	07 06 31.2	-1.3
PLTB				IAmb	IAmb	07 06 35.1	
	comp=Z,75nm,1.0s						
ISCO	Idaho Springs	43.62	321	P	P	07 06 34.9	+1.1
	baz=126,SNR=121						
W18A	Petrified Fore	43.92	313	P	P	07 06 37.2	+1.1
	baz=118,SNR=52						
MVCO	Mesa Verde	44.08	316	P	P	07 06 38.4	+1.0
	baz=121,SNR=33						
N23A	Red Feather La	44.48	322	P	P	07 06 41.5	+0.9
	baz=127,SNR=22						
AGMN	Agassiz Nation	44.72	337	P	P	07 06 42.3	+0.2
	baz=144,SNR=21						
AGMN	Agassiz Nation	44.72	337	IAMs_20	IAMs_20	07 27 35.7	
	comp=Z,2µm,18.0s						
214A	Organ Pipe Nat	44.92	307	P	P	07 06 44.6	+0.6
	baz=112,SNR=6.9						
WUAZ	Wupatki	45.30	313	P	P	07 06 48.1	+1.1
	baz=117,SNR=34						
RSSD	Black Hills	45.42	327	P	P	07 06 48.9	+0.9
RSSD				pmax	pmax		
	comp=Z,144nm,1.6s						
RSSD	Black Hills	45.42	327	P	P	07 06 48.1	+0.1
	baz=132						
RSSD	Black Hills	45.42	327	P	P	07 06 48.9	+0.9
RSSD				IAmb	IAmb	07 06 49.7	
	comp=Z,144nm,1.6s						
O20A	White River Ci	45.47	320	P	P	07 06 49.9	+1.4
	baz=124,SNR=25						
Y14A	Wickenburg	45.84	310	P	P	07 06 51.8	+0.5
K22A	Casper	45.89	324	P	P	07 06 52.2	+0.6
	baz=128,SNR=24						
MDND	Maddock	45.91	334	P	P	07 06 52.4	+0.8
	baz=140,SNR=8.9						
ULM	Lac du Bonnet	46.32	338	P	P	07 06 54.5	-0.3
	comp=Z,98nm,0.8s,baz=145,slow=8.3,SNR=81						
ULM				LR	LR	07 28 25.0	
	comp=Z,1µm,18.4s,baz=150,slow=39						
ULM	Lac du Bonnet	46.32	338	P	P	07 06 54.4	-0.3
ULM				pmax	pmax		
	comp=Z,102nm,0.7s						
ULM	Lac du Bonnet	46.32	338	P	P	07 06 54.4	-0.3
SCHQ	Schefferville	46.35	4	P	P	07 06 55.6	+0.8
	comp=Z,42nm,0.6s,baz=190,slow=6.7,SNR=20						
SCHQ				LR	LR	07 25 45.6	
	comp=Z,1µm,19.2s,baz=206,slow=35						
SCHQ	Schefferville	46.35	4	P	P	07 06 55.6	+0.8
SCHQ				IAmb	IAmb	07 06 57.0	
	comp=Z,42nm,0.7s						
P18A	Preston Nutter	46.50	318	P	P	07 06 57.1	+0.4
P18A				IAmb	IAmb	07 06 59.4	
	comp=Z,108nm,1.5s						
RDMU	Red Mountain	46.56	320	P	P	07 06 57.5	+0.4
RDMU				IAmb	IAmb	07 06 59.2	
	comp=Z,62nm,1.2s						
P17A	Butcher Ranch,	46.75	318	P	P	07 06 59.4	+0.9
P17A				IAmb	IAmb	07 07 01.0	
	comp=Z,61nm,1.0s						
Q16A	Castle Valley	46.76	317	P	P	07 06 59.1	+0.6
Q16A				IAmb	IAmb	07 07 00.9	
	comp=Z,87nm,1.7s						
PKCU	Pink Cliffs	46.84	314	P	P	07 07 00.2	+0.8
PKCU				IAmb	IAmb	07 07 03.7	
	comp=Z,69nm,1.4s						
PDMCI	Parker Dam,Lak	46.85	310	P	P	07 06 59.9	+0.8
	baz=113,SNR=5.4						
GLA	Glamis	46.91	308	P	P	07 07 00.4	+0.7
GLA				pmax	pmax		
	comp=Z,98nm,1.6s						
GLA	Glamis	46.91	308	P	P	07 07 00.3	+0.6
	baz=112						
GLA	Glamis	46.91	308	P	P	07 07 00.4	+0.7
GLA				IAmb	IAmb	07 07 01.7	
	comp=Z,98nm,1.6s						
TMUT	Trail Mountain	46.97	317	P	P	07 07 01.2	+0.9
TMUT				IAmb	IAmb	07 07 06.5	
	comp=Z,110nm,1.9s						
W13A	Hualapai Mount	46.98	311	P	P	07 07 01.4	+1.0
MSU	Marysvale	47.25	316	P	P	07 07 03.3	+0.8
MSU	Marysvale	47.25	316	P	P	07 07 03.3	+0.8
MVU	Marysvale	47.27	316	P	P	07 07 03.7	+1.1
LCMT	Little Creek M	47.32	313	P	P	07 07 03.8	+0.9
LCMT				IAmb	IAmb	07 07 05.5	
	comp=Z,46nm,1.1s						
TCRU	Three Creeks R	47.48	316	P	P	07 07 05.2	+0.9
TCRU				IAmb	IAmb	07 07 07.0	
	comp=Z,57nm,1.0s						
IRM	Iron Mountain	47.56	309	P	P	07 07 05.5	+0.7
	baz=112,SNR=16						
MPU	Maple Canyon	47.62	318	P	P	07 07 06.0	+0.7
MPU				IAmb	IAmb	07 07 07.6	
	comp=Z,112nm,1.4s						
BC3	Big Chuckawall	47.62	308	P	P	07 07 05.7	+0.4
	baz=112,SNR=6.8						
SWSC	Sam W. Stewart	47.63	307	P	P	07 07 05.8	+0.6
	baz=111,SNR=6.0						
BW06	Boulder Array	47.76	322	P	P	07 07 07.0	+0.6
	baz=124,SNR=111						
BW06	Boulder Array	47.76	322	P	P	07 07 06.5	0.0
PD31	Pinedale Array	47.76	322	P	P	07 07 06.6	+0.2
PD31				IAmb	IAmb	07 07 08.4	
	comp=Z,61nm,0.8s						
PDAR	Pinedale Array	47.76	322	P	P	07 07 07.0	+0.6
	comp=Z,38nm,0.6s,baz=122,slow=8.5,SNR=229						
PDAR	Pinedale Array	47.76	322	P	P	07 07 06.6	+0.2
IKP	In-Ko-Pah, Jac	47.78	307	P	P	07 07 07.0	+0.5
	baz=110						
NLU	North Lily Min	47.88	318	P	P	07 07 07.9	+0.6
NLU				IAmb	IAmb	07 07 09.8	
	comp=Z,34nm,1.0s						
TCUT	Toone Canyon	48.03	319	P	P	07 07 09.2	+0.7
MONP2	Monument Peak	48.11	307	P	P	07 07 09.5	+0.3
	baz=110						
BELC	Belle Mtn. Jos	48.17	308	P	P	07 07 10.8	+1.2
	baz=111,SNR=6.9						
GMRC	Granite Mounta	48.20	310	P	P	07 07 10.5	+0.8
	baz=112,SNR=8.5						
LAO	LASA Array	48.27	328	P	P	07 07 11.0	+0.9
	baz=131,SNR=8.1						
LAO	LASA Array	48.27	328	P	P	07 07 10.4	+0.3
LAO				IAmb	IAmb	07 07 11.6	
	comp=Z,41nm,0.9s						
TPFO	Pinon Flats	48.38	308	P	P	07 07 11.8	+0.6
	baz=111,SNR=6.0						
HWUT	Hardware Ranch	48.39	320	P	P	07 07 11.1	0.0
PFO	Pinyon Flats O	48.39	308	P	P	07 07 12.4	+1.2
	baz=111						
PSUT	Pine Spring	48.43	315	P	P	07 07 12.1	+0.5
DGMT	Dagmar	48.47	331	P	P	07 07 12.7	+1.2
	baz=134,SNR=55						
DGMT	Dagmar	48.47	331	P	P	07 07 12.1	+0.6
DUG	Dugway, Tooele	48.49	317	P	P	07 07 12.8	+0.8
DUG				pmax	pmax		
	comp=Z,115nm,1.6s						
DUG	Dugway, Tooele	48.49	317	P	P	07 07 13.3	+1.3
	baz=119,SNR=34						
DUG	Dugway, Tooele	48.49	317	P	P	07 07 12.8	+0.8
DUG				IAmb	IAmb	07 07 14.7	
	comp=Z,114nm,1.6s						
SHPR	Sheep Range	48.49	312	P	P	07 07 12.4	+0.4
TUQ	Turquoise Moun	48.64	310	P	P	07 07 14.1	+0.9
	baz=113						
109C	Camp Elliot, M	48.65	307	P	P	07 07 14.1	+1.0
	baz=110						
AHID	Auburn Hatcher	48.71	321	P	P	07 07 13.9	+0.2
AHID				IAmb	IAmb	07 07 15.7	
	comp=Z,79nm,1.1s						
HEC	Hector,Ludlow	48.73	309	P	P	07 07 14.9	+1.1
	baz=112,SNR=18						
SPUT	South Promonto	48.80	319	P	P	07 07 14.6	+0.2
SPUT				IAmb	IAmb	07 07 16.5	
	comp=Z,125nm,1.7s						
LOHW	Long Hollow	48.87	322	P	P	07 07 15.7	+0.8
RLMT	Red Lodge	48.96	325	P	P	07 07 16.3	+0.8
	baz=126,SNR=45						
MURC	Murrieta	48.96	308	P	P	07 07 16.7	+1.2
	baz=110,SNR=6.2						
SPR3	Spring Creek 3	48.97	315	P	P	07 07 16.1	+0.3
SPR3				IAmb	IAmb	07 07 18.2	
	comp=Z,78nm,1.5s						
BGU	Big Grassy Mou	48.99	318	P	P	07 07 16.0	+0.2
BGU				IAmb	IAmb	07 07 18.0	
	comp=Z,38nm,0.7s						
PLCA	Paso Flores	48.99	179	eP	P	07 07 14.4	-1.2
TPAW	Teton Pass	49.01	322	P	P	07 07 16.5	+0.4
MOOW	Moose Ponds	49.03	323	P	P	07 07 16.6	+0.5
MOOW				IAmb	IAmb	07 07 18.4	
	comp=Z,58nm,1.0s						
SHOC	Shoshone, Teco	49.08	311	P	P	07 07 17.9	+1.4
	baz=113,SNR=14						
FXWY	Fox Creek	49.14	322	P	P	07 07 17.3	+0.3
FXWY				IAmb	IAmb	07 07 19.2	
	comp=Z,43nm,0.9s						
LL04	Puerto Octay	49.17	181	P	P	07 07 15.7	-1.2
FLWY	Flagg Ranch	49.19	323	P	P	07 07 17.7	+0.4
FLWY				IAmb	IAmb	07 07 26.1	
	comp=Z,37nm,0.9s						
RRX	Edison Barstow	49.25	309	P	P	07 07 19.6	+1.9
	baz=111						
HVU	Hansel Valley	49.25	319	P	P	07 07 17.6	-0.2
HVU				pmax	pmax		
	comp=Z,21nm,0.8s						
HVU	Hansel Valley	49.25	319	P	P	07 07 17.6	-0.2
GSC	Goldstone, Bar	49.26	310	P	P	07 07 18.9	+1.1
	baz=112,SNR=5.1						
LKWY	Lake	49.29	324	P	P	07 07 18.9	+0.7
LKWY				pmax	pmax		
	comp=Z,45nm,1.2s						
LKWY	Lake	49.29	324	P	P	07 07 18.9	+0.7
H17A	Grant Village	49.30	323	P	P	07 07 19.2	+1.0
	baz=125,SNR=17						
LL03	Petrohue	49.40	181	P	P	07 07 18.1	-0.5
R11A	Troy Canyon, C	49.57	314	P	P	07 07 21.3	+1.0
	baz=115,SNR=32						
YHH	Holmes Hill	49.68	324	P	P	07 07 21.6	+0.4
YHH				IAmb	IAmb	07 07 25.6	
	comp=Z,109nm,1.6s						
YMR	Madison River	49.68	323	P	P	07 07 22.3	+1.2
YMR				IAmb	IAmb	07 07 24.6	
	comp=Z,66nm,0.9s						
FURC	Furnace Creek,	49.74	311	P	P	07 07 22.8	+1.4
	baz=113,SNR=19						
MWC	Mount Wilson	49.84	308	P	P	07 07 22.6	+0.1
MWC				pmax	pmax		
	comp=Z,25nm,1.4s						
MWC	Mount Wilson	49.84	308	P	P	07 07 22.6	+0.1
LRMC	Laurel Mtn Rad	49.99	310	P	P	07 07 23.9	+0.4
	baz=111,SNR=15						
EDW2	Edwards Air Fo	50.02	309	P	P	07 07 23.8	+0.2
	baz=110,SNR=17						
GRAC	Grapevine Rang	50.32	312	P	P	07 07 26.8	+1.0
	baz=113,SNR=8.3						
ELK	Elko	50.38	317	P	P	07 07 26.6	+0.1
ELK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ELK	Elko	50.38	317	P	P	07 07 26.6	+0.1
BOZ	Bozeman (W)	50.59	324	P	P	07 07 28.5	+0.6
BOZ				pmax	pmax		
	comp=Z,40nm,0.9s						
BOZ	Bozeman (W)	50.59	324	P	P	07 07 29.0	+1.1
	baz=124,SNR=47						
BOZ	Bozeman (W)	50.59	324	P	P	07 07 28.5	+0.6
BOZ				IAmb	IAmb	07 07 30.4	
	comp=Z,40nm,0.8s						
LCH	Last Change Ra	50.61	312	P	P	07 07 28.1	-0.1
TPH	Tonopah	50.63	313	P	P	07 07 28.5	+0.1
TPH				pmax	pmax		
	comp=Z,72nm,0.9s						
TPH	Tonopah	50.63	313	P	P	07 07 28.5	+0.1
TPH				IAmb	IAmb	07 07 30.5	
	comp=Z,72nm,0.9s						
LL01	San Ignacio de	50.64	181	P	P	07 07 27.1	-0.9
CWC	Cottonwood Cre	50.64	311	P	P	07 07 29.1	+0.7
	baz=112						
ISA	Isabella, Lake	50.66	310	P	P	07 07 29.0	+0.5
	baz=111,SNR=7.9						
ARVC	Arvin	50.75	309	P	P	07 07 29.7	+0.6
	baz=110,SNR=6.4						
MCMT	McKenzie Canyo	50.89	323	P	P	07 07 30.2	-0.1
BCYI	Bear Canyon	50.95	322	P	P	07 07 31.9	+1.2
EGMT	Eagleton	50.98	328	P	P	07 07 31.6	+0.9
	baz=128,SNR=32						
EGMT	Eagleton	50.98	328	P	P	07 07 31.4	+0.7
EGMT				IAmb	IAmb	07 07 33.5	
	comp=Z,82nm,0.8s						
TIN	Tinemaha, Big	50.98	311	P	P	07 07 31.9	+1.0
	baz=112,SNR=7.6						
DLMT	Dillon	51.03	323	P	P	07 07 31.9	+0.7
DLMT				IAmb	IAmb	07 07 33.9	
	comp=Z,88nm,1.1s						
RPN	Rapa Nui	51.04	225	P	P	07 07 29.8	-1.5
	comp=Z,93nm,0.9s,baz=48,slow=7.1,SNR=4.3						
RPN	Rapa Nui	51.04	225	P	P	07 07 29.8	-1.5
RPN				pmax	pmax		
	comp=Z,163nm,1.1s						
RPN	Rapa Nui	51.04	225	IAMs_20	IAMs_20	07 21 23.7	
	comp=Z,11µm,18.0s						
RPN	Rapa Nui	51.04	225	IAmb	IAmb	07 07 33.3	
	comp=Z,163nm,1.1s						
VES	Vestal, Richgr	51.19	310	P	P	07 07 33.4	+1.1
	baz=110,SNR=26						
HLID	Hailey	51.19	320	P	P	07 07 33.5	+1.0
	baz=120,SNR=48						
HLID	Hailey	51.19	320	P	P	07 07 33.0	+0.5
HLID				IAmb	IAmb	07 07 35.0	
	comp=Z,72nm,1.4s						
LRM	Limekiln Ridge	51.19	324	P	P	07 07 33.2	+0.6
HRY	Holter Researc	51.34	325	P	P	07 07 34.1	+0.7
GO07	Milladeo Hill,	51.41	182	P	P	07 07 33.6	-0.2
PKM	Mcpherson Peak	51.43	308	P	P	07 07 34.8	+0.4
	baz=109						
NVAR	Mina Array Bea	51.55	313	P	P	07 07 35.9	+0.6
	comp=Z,8.3nm,0.6s,baz=115,slow=6.9,SNR=82						
NVAR				PcP	PcP	07 08 49.5	+0.2
	comp=Z,9.6nm,0.8s,baz=127,slow=4.5,SNR=5.5						
NVAR	Mina Array Bea	51.55	313	P	P	07 07 35.4	+0.1
SMMC	Simmler	51.71	309	P	P	07 07 37.2	+0.8
	baz=109,SNR=6.2						
MDPB	Devils Postpil	51.82	312	P	P	07 07 37.8	+0.4
MFID	Camas Ranch	52.02	320	P	P	07 07 39.0	+0.4
PAGB	Antelope Grade	52.04	309	P	P	07 07 39.2	+0.4
MSO	Missoula	52.61	324	P	P	07 07 43.6	+0.7
	baz=123,SNR=22						
PNTR	Pine Nut	52.74	313	P	P	07 07 44.7	+0.5
PAHR	Pah Rah Range	52.82	314	P	P	07 07 44.7	+0.1
CMB	Columbia Colle	52.93	312	P	P	07 07 45.1	-0.3
CMB				pmax	pmax		
	comp=Z,7.0nm,1.1s						
CMB	Columbia Colle	52.93	312	P	P	07 07 45.1	-0.3
EMB	Emerald Bay	53.06	313	P	P	07 07 46.8	+0.2
SAO	San Andreas Ge	53.29	310	P	P	07 07 47.9	-0.1
SAO				pmax	pmax		
	comp=Z,30nm,1.2s						
SAO	San Andreas Ge	53.29	310	P	P	07 07 47.9	-0.1
COYC	Coyhaique	53.83	181	P	P	07 07 50.9	-0.7
F10A	Beach Ranch, E	54.12	322	P	P	07 07 53.6	-0.5
F10A				IAmb	IAmb	07 07 55.7	
	comp=Z,47nm,0.7s						
O03E	Paynes Creek	54.76	314	P	P	07 07 58.3	-0.5
	baz=111,SNR=13						
E09A	Wood Farm, Sta	54.94	322	P	P	07 08 00.1	+0.2
E09A				IAmb	IAmb	07 08 01.8	
	comp=Z,71nm,1.1s						
K05A	Summer Lake	55.05	317	P	P	07 08 01.2	+0.2
NEW	Newport	55.20	324	P	P	07 08 01.9	+0.1
	baz=120,SNR=41						
NEW	Newport	55.20	324	IAMs_20	IAMs_20	07 34 55.0	
	comp=Z,3µm,18.0s						
M04C	Macdoel	55.34	316	P	P	07 08 03.4	+0.4
	baz=112,SNR=18						
O02D	Mt. Diablo Mer	55.43	313	P	P	07 08 02.5	-1.2
	baz=110,SNR=8.1						
J05D	Fort Rock, OR	55.51	317	P	P	07 08 05.1	+0.9
	baz=114,SNR=26						
PMOZ	Porto Moniz, M	55.51	56	eP	P	07 08 08.7	+4.3
	comp=Z,166nm,2.6s						
PMOZ	Porto Moniz, M	55.51	56	P	P	07 08 03.8	-0.6
PINE	Pine Mountain	55.52	318	P	P	07 08 04.9	+0.6
PINE				IAmb	IAmb	07 08 06.9	
	comp=Z,66nm,1.0s						
K04D	Chiloquin, OR	55.60	316	P	P	07 08 05.6	+0.7
	baz=113,SNR=11						
C09A	Chrisman Ranch	55.64	323	P	P	07 08 05.3	+0.4
N02D	Trinity Center	55.65	314	P	P	07 08 03.8	-1.4
	baz=111,SNR=9.5						
PMAR	Madeira	55.72	56	eP	P	07 08 08.8	+2.8
L04D	Klamath Falls	55.82	316	P	P	07 08 06.6	+0.1
	baz=112,SNR=26						
M02C	Callahan	55.90	315	P	P	07 08 06.2	-0.7
	baz=111,SNR=11						
I05D	Terrebonne, OR	56.00	319	P	P	07 08 09.2	+1.6
	baz=114						
E07A	Sunnyside	56.01	321	P	P	07 08 07.9	+0.3
J04D	Umpqua Nationa	56.08	317	P	P	07 08 09.6	+1.2
	baz=113						
KMRM	Mail Ridge	56.11	313	P	P	07 08 08.5	0.0
KMRM				IAmb	IAmb	07 08 30.6	
	comp=Z,100nm,1.2s						
PMPST	Porto Santo, M	56.28	56	eP	P	07 08 12.7	+3.0
KHMM	Horse Mountain	56.34	314	P	P	07 08 10.7	+0.4
G05D	Wamic, OR	56.36	320	P	P	07 08 12.5	+2.4
	baz=115						
I04A	Tendick Farm,	56.49	318	P	P	07 08 11.7	+0.6
	baz=113,SNR=10						
B08A	Colville Reser	56.53	324	P	P	07 08 11.6	+0.3
B08A				IAmb	IAmb	07 08 13.0	
	comp=Z,79nm,0.9s						
HOOD	Mount Hood Mea	56.61	319	P	P	07 08 13.2	+1.2
HOOD				IAmb	IAmb	07 08 21.6	
	comp=Z,78nm,1.0s						
L02E	Cave Junction	56.70	315	P	P	07 08 13.1	+0.5
	baz=111						
F05D	White Salmon	56.72	320	P	P	07 08 14.4	+1.7
	baz=115,SNR=9.9						
K02D	Willamette Mer	56.93	316	P	P	07 08 14.6	+0.3
	baz=111,SNR=9.8						
H04D	Lebanon	56.99	318	P	P	07 08 15.3	+0.7
	baz=113						
I03D	Drain, OR	57.08	317	P	P	07 08 15.9	+0.7
	baz=112,SNR=12						
C06D	Leavenworth	57.26	323	P	P	07 08 17.4	+0.9
	baz=117						
J01E	Myrtle Point	57.28	316	P	P	07 08 17.9	+1.2
	baz=111,SNR=6.4						
LON	Longmire	57.30	321	P	P	07 08 17.0	+0.1
LON				pmax	pmax		
	comp=Z,31nm,1.0s						
LON	Longmire	57.30	321	P	P	07 08 17.0	+0.1
KEBM	Edson Butte	57.46	316	P	P	07 08 19.0	+1.0
KEBM				IAmb	IAmb	07 08 21.2	
	comp=Z,114nm,1.3s						
I02E	Swisshome, OR	57.57	317	P	P	07 08 20.5	+1.8
	baz=112						
D05A	Enumclaw	57.60	321	P	P	07 08 19.1	+0.2
G03D	McMinnville, O	57.60	319	P	P	07 08 20.6	+1.7
	baz=113						
E04D	Cinebar	57.70	321	P	P	07 08 20.8	+1.2
	baz=114,SNR=5.5						
D04E	Lakebay	58.08	321	P	P	07 08 23.8	+1.6
	baz=114						
B05A	Bryant	58.13	323	P	P	07 08 22.6	+0.1
	baz=116						
D03D	Eldon	58.43	321	P	P	07 08 25.2	+0.5
	baz=114,SNR=10.0						
WISH	Wishkah	58.68	321	P	P	07 08 26.8	+0.4
PGC	Sidney	59.11	322	P	P	07 08 30.7	+1.4
ASCN	Ascension	59.15	104	P	P	07 08 30.3	+0.1
ASCN				IAMs_20	IAMs_20	07 36 13.4	
	comp=Z,10µm,21.0s						
GO09	Cerro Castillo	59.53	181	P	P	07 08 31.5	-0.6
MG05	Puerto Natales	59.94	181	P	P	07 08 34.6	-0.2
SFJD	Kangerlussuaq	60.10	9	i P	P	07 08 36.6	+0.8
DY2G	Dye2	60.40	11	i P	P	07 08 37.8	-0.5
DY2G				AMP		07 08 39.5	
	comp=Z,114nm,0.7s						
CBB	Campbell River	60.82	323	P	P	07 08 42.2	+1.1
EFI	East Falkland	61.03	171	⇑iP	P	07 08 42.6	+0.3
EFI				pmax	pmax		
	comp=Z,140nm,1.4s						
EFI	East Falkland	61.03	171	P	P	07 08 42.2	-0.1
GO10	Punta Arenas	61.41	180	P	P	07 08 45.4	+0.4
ILULI	Ilulissat	62.07	8	P	P	07 08 49.0	-0.2
ILULI				pmax	pmax		
	comp=Z,50nm,0.7s						
ILULI	Ilulissat	62.07	8	i P	P	07 08 49.0	-0.2
ILULI				AMP		07 08 50.1	
	comp=Z,178nm,0.7s						
ILULI	Ilulissat	62.07	8	P	P	07 08 49.0	-0.2
YKA	Yellowknife Ar	62.30	339	P	P	07 08 51.1	+0.3
	comp=Z,8.2nm,0.4s,baz=46,slow=3.5,SNR=41						
YKA	Yellowknife Ar	62.30	339	ceP	P	07 08 51.0	+0.2
YKA				pmax	pmax		
	comp=Z,8.0nm,0.4s						
YKA	Yellowknife Ar	62.30	339	P	P	07 08 50.9	0.0
OUK	Oukaimeden	63.05	59	P	P	07 08 59.0	+2.1
PFVI	Vila Bisbo	63.11	53	eP	P	07 08 59.0	+2.2
	comp=Z,101nm,2.2s						
USHA	Ushuaia	63.14	178	P	P	07 08 56.6	+0.1
	comp=Z,53nm,0.9s,baz=2.1,slow=6.2,SNR=16						
LIS	Lisbon	63.15	51	eP	P	07 08 58.6	+1.6
LIS				IAmb	IAmb	07 09 04.4	
	comp=Z,64nm,0.8s						
LIS	Lisbon	63.15	51	eP	P	07 08 58.6	+1.6

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SRHM  Skhour des Reh  63.17  58  P         P         07 08 59.0 +1.7
PTEO  Sao Teotonio    63.27  52  eP        P         07 09 00.0 +2.2
      comp=Z,78nm,1.1s
MORF  Marmelete       63.28  53  eP        P         07 08 59.6 +1.6
MORF                             IAmb      IAmb      07 09 06.3
      comp=Z,77nm,1.0s
MORF  Marmelete       63.28  53  eP        P         07 08 59.5 +1.6
MORF  Marmelete       63.28  53  eP        P         07 08 59.7 +1.8
      comp=Z,155nm,1.3s
PNCL  Nicolau / Gran  63.52  52  eP        P         07 09 00.7 +1.3
      comp=Z,117nm,1.3s
PSBE  So Bento        63.58  50  eP        P         07 09 00.5 +0.7
      comp=Z,96nm,1.2s
MESJ  Messejana       63.71  52  eP        P         07 09 02.3 +1.6
MESJ                             IAmb      IAmb      07 09 09.0
      comp=Z,29nm,0.6s
MESJ  Messejana       63.71  52  eP        P         07 09 02.3 +1.6
MESJ  Messejana       63.71  52  eP        P         07 09 02.1 +1.4
      comp=Z,61nm,1.0s
PCVE  Castro Verde    63.82  52  eP        P         07 09 02.9 +1.5
      comp=Z,55nm,1.3s
PBDV  Barranco-do-Ve  63.84  53  eP        P         07 09 02.2 +0.6
      comp=Z,84nm,2.4s
PCAS  Casmilo, Conde  63.91  50  eP        P         07 09 03.8 +1.8
      comp=Z,104nm,1.2s
PMTG  Montargil       63.93  51  eP        P         07 09 03.1 +1.0
      comp=Z,66nm,1.2s
ICESG Greenland Ices  63.96  12  i P       P         07 09 01.3 -0.9
ICESG                            AMP                 07 09 03.2
      comp=Z,142nm,0.6s
EVO   Evora           63.99  51  eP        P         07 09 03.7 +1.1
      comp=Z,61nm,1.1s
PBEJ  Beja            64.02  52  eP        P         07 09 03.9 +1.2
      comp=Z,49nm,1.1s
PVAQ  Vaqueiros       64.03  53  eP        P         07 09 05.0 +2.2
ZHG   ZHG             64.34  57  P         P         07 09 07.0 +2.0
PESTR Estremoz        64.38  51  eP        P         07 09 06.4 +1.3
      comp=Z,92nm,1.2s
PESTR Estremoz        64.38  51  P         P         07 09 05.4 +0.3
PESTR                            IAmb      IAmb      07 09 12.4
      comp=Z,39nm,1.2s
PESTR Estremoz        64.38  51  P         P         07 09 06.6 +1.5
PGAV  Gavieira, Arco  64.46  48  eP        P         07 09 05.9 +0.2
PVIS  Viseu           64.49  49  eP        P         07 09 06.4 +0.6
      comp=Z,58nm,1.6s
PCAB  Cabril          64.59  48  eP        P         07 09 07.5 +1.0
      comp=Z,78nm,1.3s
PMRV  Marv??o         64.63  50  eP        P         07 09 06.8 +0.1
      comp=Z,46nm,1.5s
PCBR  Castelo Branco  64.64  50  eP        P         07 09 07.9 +1.1
      comp=Z,68nm,1.3s
PBAR  Barrancos       64.69  52  eP        P         07 09 08.1 +1.0
      comp=Z,55nm,1.1s
MTE   Manteigas       64.69  49  eP        P         07 09 07.5 +0.3
      comp=Z,59nm,1.7s
MTE   Manteigas       64.69  49  P         P         07 09 07.5 +0.3
MTE                              IAMs_20   IAMs_20   07 30 17.9
      comp=Z,2μm,21.0s
POLO  Lamas de Olo    64.69  48  eP        P         07 09 08.0 +0.8
      comp=Z,51nm,1.3s
PVRL  Vila Real       64.73  48  eP        P         07 09 08.7 +1.3
      comp=Z,80nm,1.3s
ZGR   Zagora          64.86  61  P         P         07 09 10.0 +1.4
TZRR  Tazzarine       64.97  60  P         P         07 09 11.0 +1.8
SFS   San Fernando    65.08  54  IAMs_20   IAMs_20   07 30 15.6
      comp=Z,4μm,20.0s
MVO   Moncorvo        65.22  49  eP        P         07 09 11.7 +1.1
      comp=Z,73nm,1.2s
RUBB  Prince Rupert   65.24 326  P         P         07 09 10.8 +0.4
RUBB                             IAmb      IAmb      07 09 13.1
      comp=Z,54nm,1.1s
PBRG  Braganca        65.55  48  eP        P         07 09 13.2 +0.5
      comp=Z,26nm,1.5s
CZD   Col de Zad      65.62  58  P         P         07 09 16.0 +2.3
TIC   Toumodi         65.77  87  ePKIKP    P         07 09 16.7 +2.1
LIC   Lamto           65.81  87  ePKIKP    P         07 09 17.1 +2.3
      comp=Z,141nm,0.9s
DBIC  Dimbokro        65.93  86  P         P         07 09 15.3 -0.3
      comp=Z,44nm,0.9s,baz=297,slow=5.3,SNR=12
DBIC  Dimbokro        65.93  86  P         P         07 09 15.5 -0.1
DBIC                             pmax      pmax
      comp=Z,41nm,0.8s
DBIC  Dimbokro        65.93  86  P         P         07 09 15.5 -0.1
DBIC                             IAmb      IAmb      07 09 19.2
      comp=Z,41nm,0.8s
MDT   Midelt          65.97  58  P         P         07 09 17.2 +1.6
WRGLY Wrigley         66.02 337  P         P         07 09 16.7 +1.4
      baz=121,SNR=15
KIC   Kosan Boka      66.08  87  ePKIKP    P         07 09 16.8 +0.2
      comp=Z,124nm,0.8s
KOWA  Kowa            66.12  78  P         P         07 09 17.2 +0.4
KOWA  Kowa            66.12  78  P         P         07 09 17.9 +1.1
PTCN  Pitcairn Islan  66.15 238  IAMs_20   IAMs_20   07 29 08.7
      comp=Z,10μm,20.0s
DLBC  Dease Lake      66.68 331  P         P         07 09 20.9 +1.2
DLBC                             IAmb      IAmb      07 09 22.3
      comp=Z,53nm,0.9s
WTLY  Watson Lake, Y  66.79 333  P         P         07 09 22.0 +1.7
      baz=115
PAB   San Pablo       66.97  51  P         P         07 09 22.3 +0.3
PAB                              pmax      pmax
      comp=Z,32nm,1.1s
PAB   San Pablo       66.97  51  P         P         07 09 22.3 +0.3
PAB                              IAmb      IAmb      07 09 29.0
      comp=Z,32nm,1.1s
PAB   San Pablo       66.97  51  IAMs_20   IAMs_20   07 30 37.4
      comp=Z,2μm,20.0s
PAB   San Pablo       66.97  51  P         P         07 09 22.6 +0.6
SUMG  Summit          67.04  10  P         P         07 09 22.7 +0.6
SUMG                             pmax      pmax
      comp=Z,92nm,0.8s
SUMG  Summit          67.04  10  i P       P         07 09 22.5 +0.4
SUMG                             AMP                 07 09 23.5
      comp=Z,588nm,0.4s
SUMG                             IAmb      IAmb      07 09 23.8
      comp=Z,90nm,0.8s
SUMG  Summit          67.04  10  P         P         07 09 22.7 +0.6
TGTN  Hyland Airport  67.17 334  P         P         07 09 24.3 +1.6
      baz=116
ESDC  Sonseca Array   67.28  51  P         P         07 09 24.4 +0.6
      comp=Z,19nm,1.1s,baz=264,slow=6.6,SNR=44
ESDC                             PKP2bc              07 37 51.6
      comp=Z,1.2nm,0.9s,baz=78,slow=2.5,SNR=5.5
ESBB  Sonseca Array   67.28  51  P         P         07 09 24.4 +0.5
ESBB                             IAmb      IAmb      07 09 31.1
      comp=Z,42nm,1.2s
RES   Resolute Bay    67.50 353  P         P         07 09 24.4 -0.1
RES                              pmax      pmax
      comp=Z,32nm,1.2s
RES   Resolute Bay    67.50 353  P         P         07 09 24.4 -0.1
JBK   JBK             67.80  56  P         P         07 09 29.0 +1.5
TULEG Thule           68.02   1  i P       P         07 09 27.8 +0.1
TULEG                            AMP                 07 09 29.0
      comp=Z,219nm,0.6s
TULEG                            IAmb      IAmb      07 09 29.1
      comp=Z,72nm,0.8s
TULEG Thule           68.02   1  P         P         07 09 28.5 +0.7
TULEG                            IAMs_20   IAMs_20   07 38 50.2
      comp=Z,2μm,19.0s
P33M  Teslin, Yukon   68.68 332  P         P         07 09 33.6 +1.3
      baz=111,SNR=26
FIGM  Figuig          68.73  59  P         P         07 09 35.0 +1.7
MMPY  Sheldon Lake,   68.91 335  P         P         07 09 34.8 +1.1
      baz=114
SKAG  Skagway         69.61 331  P         P         07 09 39.1 +1.2
      baz=109
FARO  Faro, Yukon     69.65 334  P         P         07 09 39.4 +1.2
      baz=112
NEEM  North Greenlan  69.75   5  i P       P         07 09 39.2 +0.4
NEEM                             IAmb      IAmb      07 09 40.4
      comp=Z,110nm,0.7s
GAL1  Galloway        69.76  34  eP        P         07 09 38.1 -0.8
GAL1                             IAmb      IAmb      07 09 41.0
      comp=Z,66nm,1.2s
WHY   Whitehorse      69.79 332  P         P         07 09 40.3 +1.1
      baz=110,SNR=7.3
WHY   Whitehorse      69.79 332  P         P         07 09 39.8 +0.6
NEWG  New Galloway    70.09  34  eP        P         07 09 40.9 -0.1
NEWG                             IAmb      IAmb      07 09 45.9
      comp=Z,35nm,0.9s
MCH1  Michaelchurch   70.10  38  eP        P         07 09 41.4 +0.3
MCH1                             IAmb      IAmb      07 09 45.6
      comp=Z,46nm,0.9s
M31M  Drury Creek, Y  70.10 334  P         P         07 09 42.5 +1.6
      baz=110,SNR=18
KAC   Achnashellach   70.13  32  eP        P         07 09 41.3  0.0
N31M  Braeburn, Yuko  70.48 333  P         P         07 09 44.8 +1.5
      baz=109,SNR=26
ESK   Eskdalemuir     70.71  34  eP        P         07 09 45.1 +0.3
CHIF  Chize           70.77  44  eP        P         07 09 46.1 +0.9
EBL   Broad Law       70.90  34  eP        P         07 09 46.5 +0.5
HYT   Haines Junctio  71.07 332  P         P         07 09 49.0 +2.0
      baz=107,SNR=15
HYT   Haines Junctio  71.07 332  P         P         07 09 48.6 +1.5
HYT                              IAmb      IAmb      07 09 54.2
      comp=Z,68nm,1.2s
LBWR  Ladybower, Pea  71.14  36  eP        P         07 09 48.3 +0.8
LBWR                             IAmb      IAmb      07 09 52.5
      comp=Z,77nm,1.0s
MAYO  Mayo, Yukon     71.22 335  P         P         07 09 49.5 +1.7
      baz=110
CWF   Charnwood Fore  71.26  37  eP        P         07 09 47.1 -1.1
CWF                              IAmb      IAmb      07 09 49.5
      comp=Z,27nm,1.0s
A36M  Sachs Harbour   71.27 345  P         P         07 09 47.8  0.0
      baz=122,SNR=77
A36M  Sachs Harbour   71.27 345  P         P         07 09 48.2 +0.3
A36M                             IAMs_20   IAMs_20   07 46 10.3
      comp=Z,1μm,18.0s
M30M  Minto, Yukon    71.28 334  P         P         07 09 49.2 +1.0
      baz=108,SNR=42
YUK6  Outpost Mounta  71.51 332  P         P         07 09 51.9 +2.1
      baz=106,SNR=8.6
TORD  Torodi Ar. Bea  71.75  79  P         P         07 09 51.2 -0.6
      comp=Z,31nm,0.9s,baz=284,slow=5.5,SNR=46
TORD                             PKPPKP    P'P'df    07 37 45.2 +0.4
      comp=Z,0.8nm,0.9s,baz=57,slow=1.8,SNR=3.7
TORD  Torodi Ar. Bea  71.75  79  P         P         07 09 51.5 -0.4
TORD                             IAmb      IAmb      07 09 55.3
      comp=Z,26nm,0.8s
YUK4  Talbot Arm      71.75 332  P         P         07 09 53.1 +1.8
      baz=106,SNR=16
GDLE  Glaisdale, N Y  71.87  35  eP        P         07 09 52.5 +0.7
GDLE                             IAmb      IAmb      07 09 56.7
      comp=Z,49nm,0.8s
EUNU  Eureka          71.90 357  P         P         07 09 52.3 +0.6
DBG   Daneborg        71.94  13  eP        P         07 09 52.3 +0.4
DBG                              AMP                 07 09 53.8
      comp=Z,29nm,0.8s
INK   Inuvik          72.04 340  P         P         07 09 53.3 +0.7
INK   Inuvik          72.04 340  P         P         07 09 52.9 +0.4
      baz=113,SNR=29
INK   Inuvik          72.04 340  P         P         07 09 53.2 +0.7
J29M  Klondike Camp   72.47 335  P         P         07 09 57.4 +2.0
      baz=108,SNR=6.3
EPYK  Eagle Plains    72.49 337  P         P         07 09 56.2 +0.9
      baz=110,SNR=28
EPYK  Eagle Plains    72.49 337  P         P         07 09 56.3 +0.9
EPYK                             IAmb      IAmb      07 09 57.5
      comp=Z,71nm,1.1s
YUK3  Moose Creek     72.70 332  P         P         07 09 58.3 +1.3
      baz=105,SNR=24
I29M  Ogilvie Camp,   72.78 336  P         P         07 09 58.2 +1.1
      baz=108,SNR=6.9
CLF   Chambon-Foret   72.81  42  P         P         07 09 58.2 +0.6
CLF                              IAmb      IAmb      07 10 02.4
      comp=Z,74nm,1.1s
DAWY  Dawson          72.84 335  P         P         07 09 58.1 +0.6
      baz=106,SNR=9.2
DAWY  Dawson          72.84 335  P         P         07 09 57.3 -0.2
CTG   Chitna Glacier  72.92 331  P         P         07 09 59.9 +1.8
      baz=104,SNR=9.4
BVCY  Beaver Creek    73.05 333  P         P         07 10 00.5 +1.7
      baz=104,SNR=10.0
PMSA  Palmer Station  73.28 177  P         P         07 10 00.5 +0.7
      comp=Z,36nm,0.9s,baz=3.9,slow=2.0,SNR=14
PMSA  Palmer Station  73.28 177  eP        P         07 10 00.1 +0.2
PMSA  Palmer Station  73.28 177  P         P         07 09 59.9 +0.1
M27K  Edge Creek, AK  73.49 333  P         P         07 10 03.4 +1.9
      baz=104
L27K  Beaver Creek,   73.64 333  P         P         07 10 03.9 +1.7
      baz=104,SNR=28
L27K  Beaver Creek,   73.64 333  P         P         07 10 02.4 +0.2
L27K                             IAmb      IAmb      07 10 05.0
      comp=Z,62nm,1.2s
DAG   Danmarks Havn   73.69  11  i P       P         07 10 01.7 -0.6
DAG                              AMP                 07 10 03.1
      comp=Z,81nm,0.6s
DAG                              IAmb      IAmb      07 10 03.2
      comp=Z,27nm,0.8s
CRQE  Cirque          73.70 331  P         P         07 10 03.3 +0.6
      baz=102
CRQM  Cirque          73.73 331  P         P         07 10 02.4 -0.6
CRQM                             IAmb      IAmb      07 10 50.7
      comp=Z,82nm,1.3s
EGAK  Eagle           73.78 335  P         P         07 10 04.2 +1.2
      baz=105,SNR=22
EGAK  Eagle           73.78 335  P         P         07 10 03.8 +0.8
EGAK                             IAmb      IAmb      07 10 21.6
      comp=Z,49nm,1.1s
EGAK                             IAMs_20   IAMs_20   07 45 07.9
      comp=Z,2μm,18.0s
MCARA McCarthy VSAT   73.80 332  P         P         07 10 05.8 +2.5
      baz=102,SNR=10.0
M26K  Nabesna, AK     74.01 333  P         P         07 10 06.1 +1.6
      baz=102,SNR=15
M26K  Nabesna, AK     74.01 333  P         P         07 10 05.4 +1.0
M26K                             IAmb      IAmb      07 10 23.9
      comp=Z,40nm,1.1s
SSB   Saint Sauveur   74.13  45  IAMs_20   IAMs_20   07 45 41.5
      comp=Z,2μm,19.0s
L26K  Log Cabin Wild  74.30 333  P         P         07 10 07.7 +1.6
      baz=102,SNR=34
L26K  Log Cabin Wild  74.30 333  IAMs_20   IAMs_20   07 46 13.0
      comp=Z,2μm,18.0s
SNF   Seneffe         74.39  40  dP        P         07 10 07.5 +0.7
BMRM  Bremner River   74.47 331  P         P         07 10 08.8 +1.6
      baz=101,SNR=11
DOU   Dourbes         74.55  40  eP        P         07 10 07.7  0.0
DOU   Dourbes         74.55  40  dP        P         07 10 07.7  0.0
      comp=Z,14nm,1.0s
N25K  Chitina, Valde  74.59 332  P         P         07 10 09.8 +1.9
      baz=101,SNR=6.5
BMRD  Maredsous       74.68  40  dP        P         07 10 08.2 -0.2
      comp=Z,14nm,1.0s
J26L  Joseph Creek    74.72 335  P         P         07 10 09.8 +1.2
      baz=103,SNR=9.4
DOT   Dot Lake        74.75 334  P         P         07 10 09.6 +0.9
DOT                              IAmb      IAmb      07 10 11.3
      comp=Z,54nm,1.0s
SCRK  Sand Creek      74.78 334  P         P         07 10 10.2 +1.2
      baz=102,SNR=32
SCRK  Sand Creek      74.78 334  P         P         07 10 09.0  0.0
SCRK                             IAmb      IAmb      07 10 11.5
      comp=Z,50nm,1.0s
BGES  Gesves          74.89  40  dP        P         07 10 10.4 +0.7
EYAK  Cordova Ski Ar  74.95 330  P         P         07 10 12.1 +2.2
      baz=100
RCHB  Rochefort       74.96  40  dP        P         07 10 10.1 -0.1
      comp=Z,21nm,1.0s
HARP  HAARP           75.00 332  P         P         07 10 12.0 +1.9
      baz=101
BCLA  Clavier         75.03  40  dP        P         07 10 11.4 +0.9
RIDG  Independent Ri  75.11 334  P         P         07 10 12.3 +1.5
      baz=101,SNR=29
RIDG  Independent Ri  75.11 334  P         P         07 10 11.8 +1.0
RIDG                             IAmb      IAmb      07 10 17.3
      comp=Z,84nm,1.1s
RIDG                             IAMs_20   IAMs_20   07 46 17.0
      comp=Z,2μm,18.0s
KLU   Klutina         75.19 331  P         P         07 10 12.3 +1.0
      baz=100,SNR=9.0
PAX   Paxson          75.24 333  P         P         07 10 12.9 +1.2
      baz=100,SNR=21
BEBN  Eben Emael      75.30  40  dP        P         07 10 13.0 +1.0
M24K  Tolsona, Glenn  75.41 332  P         P         07 10 14.4 +1.8
      baz=100,SNR=9.0
BHOU  Houvegnez       75.47  40  dP        P         07 10 14.1 +1.0
      comp=Z,27nm,1.1s
MEM   Membach         75.50  40  dP        P         07 10 13.9 +0.7
      comp=Z,16nm,1.0s
J25K  Salcha River,   75.50 335  P         P         07 10 13.9 +0.8
      baz=101,SNR=17
WLF   Walferdange     75.52  41  dP        P         07 10 13.5 +0.1
      comp=Z,24nm,0.7s
WLF   Walferdange     75.52  41  P         P         07 10 13.5 +0.1
WLF                              pmax      pmax
      comp=Z,38nm,0.9s
WLF                              MLR       MLR
      comp=Z,1μm,22.0s
WLF   Walferdange     75.52  41  eP        P         07 10 14.0 +0.7
      comp=Z,58nm,1.2s,baz=269,slow=5.5
WLF   Walferdange     75.52  41  P         P         07 10 13.5 +0.1
WLF                              IAmb      IAmb      07 10 15.4
      comp=Z,38nm,0.9s
WLF                              IAMs_20   IAMs_20   07 45 55.1
      comp=Z,1μm,22.0s
BTNL  Ternell         75.57  40  dP        P         07 10 14.1 +0.4
      comp=Z,10nm,1.2s
BNI   Bardonecchia    75.62  46  IAMs_20   IAMs_20   07 45 47.1
      comp=Z,2μm,19.0s
PRP   Porcupine Dome  75.74 336  P         P         07 10 14.9 +0.4
      baz=101,SNR=25
PRP   Porcupine Dome  75.74 336  P         P         07 10 15.0 +0.5
PRP                              IAmb      IAmb      07 10 16.2
      comp=Z,36nm,0.8s
PRP                              IAMs_20   IAMs_20   07 46 53.9
      comp=Z,2μm,20.0s
BMAR  Burnt Mountain  75.76 338  P         P         07 10 15.6 +1.1
FYU   Fort Yukon      75.83 337  IAMs_20   IAMs_20   07 34 38.2
      comp=Z,1μm,20.0s
SCM   Sheep Creek Mo  75.91 332  P         P         07 10 16.8 +1.3
      baz=98,SNR=12
ECH   Echery          76.10  42  IAMs_20   IAMs_20   07 45 55.5
      comp=Z,1μm,21.0s
SENIN Lac Senin/Sane  76.11  44  P         P         07 10 17.1  0.0
SENIN                            IAmb      IAmb      07 10 22.0
      comp=Z,30nm,0.8s
SENIN                            IAMs_20   IAMs_20   07 49 47.9
      comp=Z,1μm,21.0s
DHY   Denali Highway  76.12 333  P         P         07 10 17.7 +1.0
      baz=99
HDA   Harding Lake    76.14 334  P         P         07 10 17.3 +0.6
      baz=99,SNR=15
HDA   Harding Lake    76.14 334  P         P         07 10 17.2 +0.6
HDA                              IAmb      IAmb      07 10 18.4
      comp=Z,38nm,1.0s
AHRW  Bad Neuenahr-A  76.17  40  eP        P         07 10 18.1 +1.0
      comp=Z,49nm,1.2s,baz=269,slow=5.5
IL31                  76.17 335  P         P         07 10 17.2 +0.5
IL31                             IAmb      IAmb      07 10 21.7
      comp=Z,56nm,1.4s
ILAR  Eielson Array   76.17 335  P         P         07 10 16.9 +0.1
      comp=Z,15nm,0.9s,baz=108,slow=4.8,SNR=117
ILAR                             PP        PP        07 13 07.2 -0.5
      comp=Z,4.5nm,0.9s,baz=97,slow=5.5,SNR=6.1
ILAR  Eielson Array   76.17 335  P         P         07 10 17.1 +0.3
ILAR  Eielson Array   76.17 335  P         P         07 10 17.1 +0.3
WAT6  Susitna Watana  76.21 332  P         P         07 10 18.2 +0.9
      baz=98,SNR=21
PWL   Port Wells      76.26 331  P         P         07 10 18.6 +1.2
      baz=97,SNR=8.1
BUG   Bochum--Univer  76.35  39  eP        P         07 10 18.7 +0.7
      comp=Z,30nm,1.0s,baz=269,slow=5.5
SML   Sawmill         76.38 332  P         P         07 10 19.3 +1.2
      baz=98,SNR=8.4
KNK   Knik Glacier    76.39 331  P         P         07 10 19.3 +1.2
      baz=97,SNR=5.5
POKR  Poker Plat Res  76.46 335  P         P         07 10 19.5 +1.0
      baz=99,SNR=24
POKR  Poker Plat Res  76.46 335  P         P         07 10 19.0 +0.5
POKR                             IAmb      IAmb      07 10 24.4
      comp=Z,60nm,1.2s
POKR                             IAMs_20   IAMs_20   07 46 35.9
      comp=Z,922nm,18.0s
CCB   Clear Creek Bu  76.54 335  P         P         07 10 19.2 +0.3
COLA  College         76.60 335⇓ eP        P         07 10 19.4 +0.2
COLA                             pmax      pmax
      comp=Z,30nm,1.2s
COLA  College         76.60 335  P         P         07 10 20.2 +1.0
      baz=99
COLA  College         76.60 335  P         P         07 10 19.4 +0.2
COLA                             IAMs_20   IAMs_20   07 46 36.6
      comp=Z,2μm,18.0s
TCOL  CIGO, UAF Yank  76.60 335  P         P         07 10 19.2  0.0
IBBN  Ibbenburen      76.70  38  eP        P         07 10 20.7 +0.7
      comp=Z,47nm,1.0s,baz=269,slow=5.5
SEW   Seward          76.72 330  P         P         07 10 20.6 +0.6
      baz=96
PMR   Palmer          76.73 331  P         P         07 10 21.0 +1.0
      baz=97
NOR   Nord            76.75   7  i P       P         07 10 19.8  0.0
NOR                              IAmb      IAmb      07 10 21.1
      comp=Z,30nm,0.8s
H24K  Noodor Dome     76.76 336  P         P         07 10 21.2 +1.1
      baz=99
RND   Reindeer        76.83 333  P         P         07 10 21.6 +1.0
RND                              pmax      pmax
      comp=Z,153nm,1.1s
RND   Reindeer        76.83 333  P         P         07 10 21.6 +1.0
BFO   Black Forest    76.88  42  P         P         07 10 21.3 +0.1
BFO                              pmax      pmax
      comp=Z,23nm,1.1s
BFO                              MLR       MLR
      comp=Z,1μm,19.0s
BFO   Black Forest    76.88  42  eP        P         07 10 21.1 -0.1
      comp=Z,26nm,1.1s,baz=269,slow=5.5
BFO   Black Forest    76.88  42  P         P         07 10 21.3 +0.1
BFO                              IAMs_20   IAMs_20   07 45 58.2
      comp=Z,1μm,19.0s
MCK   McKinley        76.90 334  P         P         07 10 21.8 +0.8
MCK                              pmax      pmax
      comp=Z,63nm,1.1s
MCK                              MLR       MLR
      comp=Z,2μm,18.0s
MCK   McKinley        76.90 334  P         P         07 10 22.4 +1.4
      baz=98,SNR=14
MCK   McKinley        76.90 334  P         P         07 10 21.8 +0.8
MCK                              IAmb      IAmb      07 10 33.3
      comp=Z,63nm,1.1s
MCK                              IAMs_20   IAMs_20   07 46 24.7
      comp=Z,2μm,18.0s
RC01  Rabbit Creek A  76.96 331  P         P         07 10 22.8 +1.4
      baz=96
TNS   Taunus Mts      77.03  40  eP        P         07 10 22.5 +0.5
      comp=Z,37nm,0.9s,baz=269,slow=5.5
NEA2  Nenana          77.08 334  P         P         07 10 22.8 +0.9
      baz=98,SNR=39
NEA2  Nenana          77.08 334  P         P         07 10 22.3 +0.4
NEA2                             IAmb      IAmb      07 10 27.8
      comp=Z,77nm,1.1s
NEA2                             IAMs_20   IAMs_20   07 47 01.2
      comp=Z,1μm,20.0s
AKN   Aaknes          77.12  28  eP        P         07 10 23.6 +1.4
BWN   Browne          77.19 334  P         P         07 10 23.1 +0.6
BWN                              IAMs_20   IAMs_20   07 47 18.4
      comp=Z,2μm,20.0s
M22K  Willow          77.22 331  P         P         07 10 24.8 +2.1
      baz=96
I23K  Minto, Yukon-K  77.27 335  P         P         07 10 23.9 +0.9
      baz=97,SNR=18
I23K  Minto, Yukon-K  77.27 335  IAMs_20   IAMs_20   07 40 57.3
      comp=Z,2μm,20.0s
BRSE  Bradley Lake S  77.33 329  P         P         07 10 24.5 +1.0
      baz=95
CUT   Chulitna        77.35 332  P         P         07 10 24.8 +1.4
      baz=96
H23K  Yukon River     77.43 336  P         P         07 10 25.2 +1.2
      baz=97
H23K  Yukon River     77.43 336  IAMs_20   IAMs_20   07 51 17.6
      comp=Z,3μm,22.0s
STU   Stuttgart       77.47  42  P         P         07 10 24.6 +0.1
STU                              pmax      pmax
      comp=Z,43nm,0.9s
STU   Stuttgart       77.47  42  eP        P         07 10 24.5 +0.1
      comp=Z,115nm,0.9s,baz=269,slow=5.5
STU   Stuttgart       77.47  42  P         P         07 10 24.6 +0.1
STU                              IAmb      IAmb      07 10 26.4
      comp=Z,43nm,0.9s
STU                              IAMs_20   IAMs_20   07 50 19.8
      comp=Z,2μm,21.0s
TRF   Thorofare Moun  77.47 333  P         P         07 10 25.7 +1.3
      baz=96,SNR=15
TRF   Thorofare Moun  77.47 333  IAMs_20   IAMs_20   07 51 11.7
      comp=Z,3μm,20.0s
SUA   Susitna One     77.48 331  P         P         07 10 25.5 +1.1
      baz=95
SUA   Susitna One     77.48 331  IAMs_20   IAMs_20   07 51 07.8
      comp=Z,5μm,21.0s
TUE   Stuetta         77.53  44  P         P         07 10 25.6 +0.5
TUE                              IAmb      IAmb      07 10 32.4
      comp=Z,45nm,0.9s
TUE                              IAMs_20   IAMs_20   07 45 57.5
      comp=Z,2μm,21.0s
VSL   Villasalto      77.55  51  P         P         07 10 25.1  0.0
VSL                              IAmb      IAmb      07 10 29.8
      comp=Z,36nm,1.0s
CNPM  China Poot      77.56 329  P         P         07 10 25.5 +0.7
CNPM                             IAmb      IAmb      07 10 26.7
      comp=Z,81nm,1.1s
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SKAR	Skarslia	77.60	30	eP	P	07 10 26.6	+1.6
KEST	Kesra	77.61	55	P	P	07 10 26.5	+0.9
	comp=Z,20nm,0.9s,baz=237,slow=6.7,SNR=7.8						
MUD	Monsted U'grnd	77.76	34	eP	P	07 10 27.0	+1.1
MUD				IAmb	IAmb	07 10 28.5	
	comp=Z,36nm,0.8s						
KTH	Kantishna Hill	77.77	333	IAMs_20	IAMs_20	07 51 15.5	
	comp=Z,4µm,20.0s						
TOLK	Toolik Lake Re	77.82	338	P	P	07 10 26.8	+0.7
	baz=98,SNR=12						
TOLK	Toolik Lake Re	77.82	338	IAMs_20	IAMs_20	07 51 23.7	
	comp=Z,3µm,21.0s						
MLY	Manley	77.84	335	P	P	07 10 27.1	+0.9
	baz=96,SNR=30						
MLY	Manley	77.84	335	P	P	07 10 27.0	+0.8
MLY				IAmb	IAmb	07 10 32.1	
	comp=Z,64nm,1.2s						
BPAW	Bear Paw Mtn.	77.85	334	P	P	07 10 27.2	+1.0
	baz=96,SNR=18						
BPAW	Bear Paw Mtn.	77.85	334	P	P	07 10 26.8	+0.5
BPAW				IAmb	IAmb	07 10 28.3	
	comp=Z,63nm,1.0s						
BPAW				IAMs_20	IAMs_20	07 51 15.6	
	comp=Z,3µm,20.0s						
COLD	Coldfoot	77.87	337	P	P	07 10 27.9	+1.5
	baz=97,SNR=16						
COLD	Coldfoot	77.87	337	P	P	07 10 27.1	+0.7
SKT	Skwentna	77.90	332	P	P	07 10 27.6	+1.0
	baz=95,SNR=6.9						
SKT	Skwentna	77.90	332	P	P	07 10 27.2	+0.6
SKT				IAmb	IAmb	07 10 28.7	
	comp=Z,67nm,1.4s						
SKT				IAMs_20	IAMs_20	07 51 11.8	
	comp=Z,4µm,22.0s						
DAVA	Damuels	77.91	43	i P	P	07 10 28.0	+0.9
	comp=Z,63nm,1.0s,SNR=20						
GTTG	Gottingen	78.03	39	eP	P	07 10 28.1	+0.5
	comp=Z,47nm,1.2s,baz=269,slow=5.5						
UBBA	Unterbreizbach	78.04	40	eP	P	07 10 28.2	+0.8
	comp=Z,22nm,1.3s,baz=269,slow=5.5						
UBR	Ueberruh	78.06	43	eP	P	07 10 28.3	+0.4
	comp=Z,48nm,1.3s,baz=269,slow=5.5						
DOMB	Dombas	78.07	28	eP	P	07 10 28.9	+1.3
NRDL	Niedersach Rie	78.15	38	eP	P	07 10 29.1	+1.1
	comp=Z,44nm,1.4s,baz=269,slow=5.5						
KONO	Kongsberg	78.17	31	IAMs_20	IAMs_20	07 38 05.8	
	comp=Z,1µm,21.0s						
CAST	Castle Rocks	78.27	333	P	P	07 10 29.4	+0.7
	baz=94,SNR=16						
CAST	Castle Rocks	78.27	333	IAMs_20	IAMs_20	07 51 16.9	
	comp=Z,3µm,20.0s						
PPLA	Purkeypile	78.28	333	P	P	07 10 29.7	+0.8
	baz=94,SNR=12						
CLZ	Clausthal	78.30	39	eP	P	07 10 29.8	+0.8
	comp=Z,25nm,0.9s,baz=269,slow=5.5						
BSEG	Bad Segeberg	78.31	37	eP	P	07 10 29.5	+0.5
	comp=Z,35nm,1.1s,baz=269,slow=5.5						
I21K	Tanana	78.37	335	P	P	07 10 30.0	+0.8
	baz=95,SNR=31						
I21K	Tanana	78.37	335	IAMs_20	IAMs_20	07 51 22.5	
	comp=Z,3µm,21.0s						
CHUM	Lake Minchumin	78.41	334	P	P	07 10 30.4	+1.1
	baz=94,SNR=19						
FETA	Feichten	78.48	44	eP	P	07 10 31.1	+0.8
	comp=Z,63nm,0.9s,SNR=43						
RETA	Reutte	78.51	43	eP	P	07 10 31.1	+0.7
	comp=Z,23nm,0.9s,SNR=10						
ZCCA	Zocca	78.68	46	P	P	07 10 31.1	-0.2
TBLU	Trondheim	78.71	27	eP	P	07 10 32.7	+1.7
MOTA	Moosalm	78.74	43	i P	P	07 10 32.1	+0.4
	comp=Z,22nm,0.9s,SNR=15						
OSL	Oslo	78.75	31	eP	P	07 10 32.6	+1.3
H21K	Melozitna Rive	78.76	335	P	P	07 10 32.2	+1.0
	baz=94						
SQTA	Sankt Quirin	78.81	44	i P	P	07 10 32.5	+0.4
	comp=Z,38nm,1.0s,SNR=13						
GRF	Grafenberg Arr	78.81	41	eL	L	08 38 39.4	
	comp=Z,12µm,18.3s						
NC204	NORSAR Array S	78.83	29	P	P	07 10 32.6	+0.7
FLTG	Flechtingen	78.84	38	eP	P	07 10 32.2	+0.2
	comp=Z,35nm,1.1s,baz=269,slow=5.5						
L20K	Farewell, AK	79.03	332	P	P	07 10 33.6	+0.7
	baz=93,SNR=8.2						
NB2	NORSAR Subarra	79.04	29	P	P	07 10 33.6	+0.6
	comp=Z,32nm,1.1s,baz=269,slow=5.6						
NB2	NORSAR Subarra	79.04	29	P	P	07 10 33.6	+0.6
	baz=269,slow=5.6						
NOA	NORSAR Array B	79.04	29	P	P	07 10 33.6	+0.6
	comp=Z,18nm,1.0s,baz=267,slow=5.6,SNR=24						
WATA	Walderalm	79.06	43	i P	P	07 10 33.7	+0.2
	comp=Z,20nm,1.1s,SNR=9.5						
MOX	Moxa	79.06	40	eL	L	08 35 27.9	
	comp=Z,30µm,20.3s						
WTTA	Wattenberg	79.10	44	i P	P	07 10 34.1	+0.3
	comp=Z,17nm,0.8s,SNR=7.3						
CTI	Castel Tesino	79.13	45	P	P	07 10 34.0	+0.2
CTI				pmax	pmax		
	comp=Z,21nm,0.9s						
CTI	Castel Tesino	79.13	45	P	P	07 10 34.0	+0.2
O19K	Port Alsworth	79.15	330	P	P	07 10 34.0	+0.5
	baz=92						
TEOL	Teolo	79.16	45	P	P	07 10 33.5	-0.4
IMAR	Indian Mountai	79.17	336	P	P	07 10 34.2	+0.7
NEUB	Neuenburg	79.17	39	eP	P	07 10 34.2	+0.5
	comp=Z,72nm,1.5s,baz=269,slow=5.5						
NC602	NORSAR Array S	79.19	30	eP	P	07 10 35.1	+1.4
J20K	Nowinta River	79.23	334	P	P	07 10 34.7	+0.8
	baz=93,SNR=29						
J20K	Nowinta River	79.23	334	IAMs_20	IAMs_20	07 51 25.3	
	comp=Z,3µm,21.0s						
M19K	Big River Lodg	79.25	331	P	P	07 10 34.6	+0.6
	baz=92						
M19K	Big River Lodg	79.25	331	IAMs_20	IAMs_20	07 51 37.4	
	comp=Z,5µm,22.0s						
N19K	Bonanza Creek	79.25	330	P	P	07 10 34.4	+0.2
	baz=92,SNR=7.1						
N19K	Bonanza Creek	79.25	330	IAMs_20	IAMs_20	07 51 18.0	
	comp=Z,3µm,18.0s						
MANZ	Manzenberg	79.38	41	eP	P	07 10 35.8	+0.7
	comp=Z,11nm,1.1s,baz=269,slow=5.5						
ROTZ	Rotzenmuhle	79.45	41	eP	P	07 10 36.0	+0.6
	comp=Z,6.4nm,1.5s,baz=269,slow=5.5						
L19K	White Mountain	79.47	332	P	P	07 10 36.3	+1.0
	baz=92,SNR=10.0						
WERD	Werda	79.51	40	eP	P	07 10 36.3	+0.6
	comp=Z,38nm,1.1s,baz=269,slow=5.5						
GUNZ	Gunzen	79.52	40	eP	P	07 10 36.2	+0.4
	comp=Z,34nm,1.3s,baz=269,slow=5.5						
NSS	Namsos	79.53	26	eP	P	07 10 35.9	+0.5
WERN	Wernitzgruen	79.55	40	eP	P	07 10 36.3	+0.3
	comp=Z,26nm,1.1s,baz=269,slow=5.5						
O18K	Koktuh Hills	79.59	329	P	P	07 10 36.9	+0.9
	baz=91						
NKC	Novy Kostel	79.60	40	eP	P	07 10 37.6	+1.4
NKC				MLR	MLR		
	comp=Z,32µm,23.0s						
NKC	Novy Kostel	79.60	40	eP	P	07 10 37.6	+1.4
TANN	Tannenbergstha	79.61	40	eP	P	07 10 37.0	+0.7
	comp=Z,42nm,1.2s,baz=269,slow=5.5						
ABTA	Abfaltersbach	79.71	44	i P	P	07 10 37.5	+0.5
	comp=Z,37nm,1.0s,SNR=17						
MURB	Monte Urbino	79.83	48	P	P	07 10 37.1	-0.5
STAL	STALIGIAL	79.86	45	P	P	07 10 38.0	+0.3
RJOB	Jochberg	79.88	43	eP	P	07 10 38.2	+0.4
	comp=Z,21nm,1.1s,baz=269,slow=5.5						
WET	Wettzell	79.90	42	eP	P	07 10 38.4	+0.5
	comp=Z,24nm,1.1s,baz=269,slow=5.5						
CLL	Collm	79.94	39	eP	P	07 10 38.0	0.0
CLL				pmax	pmax		
	comp=Z,16nm,0.9s						
CLL	Collm	79.94	39	eP	P	07 10 38.0	0.0
	comp=Z,16nm,0.9s						
CLL	Collm	79.94	39	eP	P	07 10 38.4	+0.5
	comp=Z,18nm,0.9s,baz=269,slow=5.5						
CLL	Collm	79.94	39	IAMs_20	IAMs_20	07 50 31.8	
	comp=Z,2µm,21.0s						
TTA	Tatalina	80.03	332	P	P	07 10 39.0	+0.7
TTA				pmax	pmax		
	comp=Z,43nm,1.2s						
TTA	Tatalina	80.03	332	P	P	07 10 39.0	+0.7
	baz=91,SNR=10						
TTA	Tatalina	80.03	332	P	P	07 10 39.0	+0.7
STOK	Stokkvaagen	80.03	24	eP	P	07 10 39.7	+1.5
ZOU	Zoufplan	80.03	44	P	P	07 10 39.1	+0.2
KONS	Konsvik	80.08	24	eP	P	07 10 39.9	+1.5
RGN	Rugen	80.08	36	IAMs_20	IAMs_20	07 52 18.4	
	comp=Z,1µm,20.0s						
FBE	Freiberg	80.17	40	eP	P	07 10 40.1	+0.8
	comp=Z,28nm,1.1s,baz=269,slow=5.5						
KBA	Koelnbreinsper	80.27	44	i P	P	07 10 40.5	+0.4
	comp=Z,28nm,1.1s,SNR=13						
LOF	Lofoten	80.28	22	eP	P	07 10 40.4	+0.9
KHC	Kasperske Hory	80.36	42	eP	P	07 10 40.7	+0.3
KHC				eS	S	07 20 48.7	+2.3
KHC	Kasperske Hory	80.36	42	eP	P	07 10 40.7	+0.3
KHC				ex	x	07 11 41.5	
KHC				eS	S	07 20 48.7	+2.3
DEL	Delary	80.37	34	i P	P	07 10 40.0	-0.2
RUE	Ruedersdorf	80.39	38	eP	P	07 10 41.8	+1.5
KBS	Kingsbay	80.43	11	eP	P	07 10 41.9	+1.7
KBS	Kingsbay	80.43	11	IAMs_20	IAMs_20	07 52 08.1	
	comp=Z,4µm,21.0s						
GCSA	Galena City Sc	80.44	334	P	P	07 10 41.5	+1.1
	baz=90						
GEC2	GERESS Array S	80.45	42	eP	P	07 10 41.1	+0.2
	comp=Z,24nm,1.0s,baz=269,slow=5.5						
GEC2	GERESS Array S	80.45	42	P	P	07 10 41.0	+0.1
GERES	GERESS Array B	80.45	42	P	P	07 10 41.1	+0.2
	comp=Z,13nm,0.9s,baz=258,slow=3.8,SNR=51						
MYKA	Terra Mystica	80.49	44	eP	P	07 10 41.5	+0.3
	comp=Z,16nm,0.7s,SNR=6.6						
BRG	Berggiesshubel	80.54	40	eP	P	07 10 41.9	+0.6
	comp=Z,18nm,1.0s,baz=269,slow=5.5						
BRG	Berggiesshubel	80.54	40	⇑iP	P	07 10 42.4	+1.2
BRG				Amp		07 10 45.6	
	comp=Z,16nm,1.0s						
CADS	Cadrg	80.57	45	eP	P	07 10 41.8	+0.2
MOR8	Moi Rana	80.61	24	eP	P	07 10 43.2	+1.9
CKRC	Cesky Krumlov	80.85	42	eP	P	07 10 43.9	+0.9
MOA	Molln	80.86	43	i P	P	07 10 43.3	+0.2
	comp=Z,43nm,1.3s,SNR=16						
STEI	Steigen	80.92	22	eP	P	07 10 44.5	+1.6
FAUS	Fauske	80.94	23	eP	P	07 10 44.1	+1.1
PVCC	Panska Ves	80.95	40	eP	P	07 10 45.1	+1.7
PVCC				MLR	MLR		
	comp=Z,22µm,22.0s						
PVCC	Panska Ves	80.95	40	eP	P	07 10 45.1	+1.7
PRU	Pruhonice	80.95	41	eP	P	07 10 44.4	+0.9
PRU				MLR	MLR		
	comp=Z,15µm,20.7s						
PRU	Pruhonice	80.95	41	eP	P	07 10 44.4	+0.9
CEY	Cerknica	81.08	45	⇑iP	P	07 10 44.5	+0.3
CEY	Cerknica	81.08	45	eP	P	07 10 44.6	+0.3
CEY				i		07 10 49.0	
CEY				eS	S	07 20 51.7	-2.3
OBKA	Obir	81.12	44	eP	P	07 10 45.0	+0.4
	comp=Z,16nm,1.1s						
LJU	Ljubljana	81.13	45	⇑iP	P	07 10 44.6	+0.1
LJU	Ljubljana	81.13	45	i P	P	07 10 45.2	+0.6
	comp=Z,62nm,0.9s						
RIY	Rijeka	81.14	45	eP	P	07 10 45.3	+0.7
VNDS	Vrh nad Dolski	81.25	45	i P	P	07 10 45.7	+0.5
SPA0	Spitsbergen Ar	81.28	12	eP	P	07 10 46.2	+1.5
SPB2	Spitsbergen Ar	81.28	12	P	P	07 10 45.7	+1.0
SPB2				IAmb	IAmb	07 10 51.9	
	comp=Z,55nm,1.1s						
SOKA	Soboth	81.45	44	i P	P	07 10 46.0	-0.3
	comp=Z,7.0nm,1.0s						
TREC	Trest	81.60	41	eP	P	07 10 47.6	+0.6
TREC	Trest	81.60	41	eP	P	07 10 47.6	+0.6
ARSA	Arzberg	81.75	43	i P	P	07 10 48.0	+0.2
	comp=Z,15nm,1.1s,SNR=8.7						
CRES	Cresnjev	81.79	45	⇑iP	P	07 10 48.1	+0.1
UPC	Upice	81.87	40	eP	P	07 10 49.4	+1.1
UPC	Upice	81.87	40	eP	P	07 10 49.4	+1.1
CHVC	Chvalec	81.89	40	eP	P	07 10 49.1	+0.6
CONA	Conrad Observa	81.93	43	i P	P	07 10 49.5	+0.7
	comp=Z,24nm,0.9s,SNR=14						
OSTC	Ostas	82.00	40	eP	P	07 10 50.2	+1.2
KSP	Ksiaz	82.03	40	eP	P	07 10 49.9	+0.8
DPC	Dobruska-Polom	82.08	40	eP	P	07 10 50.2	+0.7
DPC	Dobruska-Polom	82.08	40	eP	P	07 10 50.2	+0.7
KRUC	Moravsky	82.21	42	eP	P	07 10 50.6	+0.4
TRO	Tromso	82.21	21	eP	P	07 10 50.9	+1.2
UPP	Uppsala	82.23	31	eP	P	07 10 50.9	+0.9
VRAC	Vranov	82.32	41	⇑P	P	07 10 51.8	+1.0
VRAC	Vranov	82.32	41	⇑P	P	07 10 51.8	+1.0
VRAC	Vranov	82.32	41	eP	P	07 10 51.4	+0.6
KRLC	Kraliky	82.39	41	eP	P	07 10 52.1	+1.0
KRLC	Kraliky	82.39	41	eP	P	07 10 52.1	+1.0
SOP	Sopron	82.42	43	eP	P	07 10 52.9	+1.7
GKP	Gorka Klasztor	82.45	37	eP	P	07 10 52.8	+1.5
BEHE	Becsehely	82.66	44	eP	P	07 10 54.6	+2.0
BEHE	Becsehely	82.66	44	⇑iP	P	07 10 54.1	+1.5
JETT	Jettan, Norway	82.74	21	eP	P	07 10 54.3	+1.8
RDOG	Red Dog Mine	82.74	338	P	P	07 10 59.1	+6.6
	baz=85,SNR=9.6						
RDOG	Red Dog Mine	82.74	338	IAMs_20	IAMs_20	07 52 37.8	
	comp=Z,2µm,18.0s						
ZST	Bratislava	82.74	42	eP	P	07 10 53.9	+1.0
ZST				pmax	pmax		
	comp=Z,100nm,1.3s						
ZST	Bratislava	82.74	42	eP	P	07 10 53.9	+1.0
ZST				e		08 00 28.4	
MODS	Modra-Piesok	82.85	42	eP	P	07 10 53.5	0.0
MODS				pmax	pmax		
	comp=Z,40nm,1.0s						
MODS	Modra-Piesok	82.85	42	eP	P	07 10 53.5	0.0
MODS				e		08 00 27.4	
MODS				eL	L	08 33 07.8	
MRAK	Mrakovica	82.87	46	⇑iP	P	07 10 53.9	+0.1
MORC	Moravsky Berou	82.91	41	⇑P	P	07 10 54.5	+0.7
MORC	Moravsky Berou	82.91	41	⇑P	P	07 10 54.5	+0.7
MORC	Moravsky Berou	82.91	41	eP	P	07 10 54.7	+0.9
MORC	Moravsky Berou	82.91	41	P	P	07 10 54.4	+0.6
SMOL	Smolenice	82.94	42	eP	P	07 10 55.1	+1.1
SMOL				pmax	pmax		
	comp=Z,8.0nm,1.3s						
SMOL	Smolenice	82.94	42	eP	P	07 10 55.1	+1.1
MGRS	Mrkonjic Grad	83.05	46	eP	P	07 10 54.2	-0.5
JAVC	Velka Javorina	83.07	42	eP	P	07 10 56.0	+1.3
BLY	Banja Luka	83.09	46	⇑iP	P	07 10 56.0	+1.2
MPLH	Magyarpolny	83.12	43	eP	P	07 10 56.6	+1.6
HOPEN	Hopen	83.29	14	eP	P	07 10 56.4	+1.2
AAL	Aland	83.39	30	eP	P	07 10 56.8	+0.8
STON	Ston	83.64	48	⇑iP	P	07 10 57.6	0.0
KTK1	Kautokeino	83.79	21	eP	P	07 10 59.0	+1.0
VYHS	Vyhne	83.87	42	eP	P	07 10 59.7	+0.9
VYHS	Vyhne	83.87	42	eP	P	07 10 59.7	+0.9
MORH	Mrgy, Hungar	83.97	44	⇑iP	P	07 10 59.6	+0.3
LANS	Liptovska Anna	84.22	41	eP	P	07 11 02.6	+2.0
LANS				pmax	pmax		
	comp=Z,9.0nm,1.2s						
LANS	Liptovska Anna	84.22	41	eP	P	07 11 02.6	+2.0
BRY	Bratogost	84.25	48	eP	P	07 11 00.8	-0.2
OJC	Ojcow	84.31	40	eP	P	07 11 02.2	+1.2
OJC	Ojcow	84.31	40	P	P	07 11 01.4	+0.4
OJC				pmax	pmax		
	comp=Z,35nm,1.2s						
OJC	Ojcow	84.31	40	P	P	07 11 01.4	+0.4
OJC				IAmb	IAmb	07 11 08.4	
	comp=Z,35nm,1.2s						
HAPS	Han Pijesak,Bl	84.42	46	⇑iP	P	07 11 01.8	0.0
ARA0	ARCESS Array S	84.52	21	eP	P	07 11 02.7	+1.1
ARCES	ARCESS Array B	84.52	21	P	P	07 11 01.9	+0.3
	comp=Z,14nm,1.0s,baz=285,slow=4.9,SNR=25						
ARCES	ARCESS Array B	84.52	21	P	P	07 11 01.8	+0.1
ARCES				pmax	pmax		
	comp=Z,78nm,1.7s						
ARCES	ARCESS Array B	84.52	21	P	P	07 11 01.8	+0.1
ARCES				IAmb	IAmb	07 11 13.1	
	comp=Z,78nm,1.6s						
PSZ	Piszkesteto	84.64	42	eP	P	07 11 05.3	+2.6
PSZ	Piszkesteto	84.64	42	P	P	07 11 03.1	+0.4
PSZ				pmax	pmax		
	comp=Z,33nm,1.3s						
PSZ	Piszkesteto	84.64	42	P	P	07 11 03.1	+0.4
PSZ				IAmb	IAmb	07 11 10.1	
	comp=Z,33nm,1.3s						
NIE	Niedzica	84.73	41	eP	P	07 11 05.8	+2.6
BEL	Belsk	84.75	39	eP	P	07 11 04.3	+1.2
BBLS	Lazići	84.77	47	eP	P	07 11 03.8	+0.3
RUDO	Rudo	84.77	47	eP	P	07 11 02.9	-0.6
PDG	Podgorica	84.83	48	⇑P	P	07 11 04.6	+0.9
PBUR	Paburge	84.89	34	eP	P	07 11 05.4	+1.7
FRGS	Fruska Gora	84.90	45	⇑iP	P	07 11 04.3	+0.2
KECS	Kecovo	84.96	42	eP	P	07 11 05.4	+1.1
KECS	Kecovo	84.96	42	eP	P	07 11 05.4	+1.1
KEV	Kevo	84.99	20	IAMs_20	IAMs_20	07 52 04.8	
	comp=Z,3µm,20.0s						
DIVS	Divibare	85.16	46	⇑iP	P	07 11 05.6	+0.1
CRVS	Cervenica-Dubn	85.55	41	eP	P	07 11 09.0	+1.8
CRVS				pmax	pmax		
	comp=Z,39nm,1.3s						
CRVS	Cervenica-Dubn	85.55	41	eP	P	07 11 09.0	+1.8
CRVS				e		08 00 55.4	
CRVS				eL	L	08 34 54.6	
XMAS	Kiritimati	85.78	271	IAMs_20	IAMs_20	07 57 15.7	
	comp=Z,9µm,22.0s						
SUW	Suwalki	85.88	36	eP	P	07 11 10.0	+1.3
SIRR	Siria	86.04	44	⇓P	P	07 11 10.6	+0.8
KOLS	Kolonicke sedl	86.07	41	eP	P	07 11 12.4	+2.6
KOLS	Kolonicke sedl	86.07	41	eP	P	07 11 12.4	+2.6
PABE	Paberze	86.10	35	eP	P	07 11 11.3	+1.6
BZS	Buzias	86.11	45	⇓P	P	07 11 11.0	+1.0
BZS	Buzias	86.11	45	⇓P	P	07 11 11.0	+1.0
UZH	Uzhgorod	86.13	42	eP	P	07 11 11.3	+1.2
UZH				e		07 11 15.8	
FINES	FINESS Array B	86.17	29	P	P	07 11 09.8	-0.2
	comp=Z,11nm,0.8s,baz=272,slow=3.8,SNR=25						
FINES	FINESS Array B	86.17	29	P	P	07 11 10.4	+0.4
FINES	FINESS Array B	86.17	29	P	P	07 11 10.4	+0.4
KWP	Kalwaria Pacla	86.25	41	eP	P	07 11 12.2	+1.5
MDVR	Moldovita	86.29	45	⇑P	P	07 11 11.2	+0.2
BOVS	Bovan	86.45	47	⇑P	P	07 11 12.2	+0.4
FNA	Florina	86.62	49	P	P	07 11 12.4	-0.3
FNA				pmax	pmax		
	comp=Z,22nm,0.8s						
FNA	Florina	86.62	49	P	P	07 11 12.4	-0.3
FNA				IAmb	IAmb	07 11 17.1	
	comp=Z,22nm,0.8s						
DRGR		86.68	43	⇓P	P	07 11 13.5	+0.5
DRGR		86.68	43	⇓P	P	07 11 13.5	+0.5
HERR	Herculane	86.77	45	⇑P	P	07 11 13.4	0.0
GZR	Gura Zlata	86.94	45	⇓P	P	07 11 15.0	+0.7
GZR	Gura Zlata	86.94	45	⇓P	P	07 11 15.0	+0.7
VSU	Vasula	87.06	31	eP	P	07 11 15.7	+1.2
VSU	Vasula	87.06	31	d iP	P	07 11 14.5	+0.1
VSU				pmax	pmax		
	comp=Z,232nm,0.9s						
ISAL	Salakas	87.30	34	eP	P	07 11 17.8	+2.2
VTS	Vitosha	87.71	47	⇓P	P	07 11 19.7	+1.5
VTS	Vitosha	87.71	47	⇓P	P	07 11 19.7	+1.5
APA	Apatity	87.79	22	⇓iP	P	07 11 16.5	-1.3
APA				i		07 14 52.5	
APA				i		07 21 43.0	
APA				pmax	pmax		
	comp=Z,16nm,1.0s						
NACGM	Naroch	87.80	35	i P	P	07 11 19.3	+1.3
LVZ	Lovozero	88.15	21	ceP	P	07 11 20.5	+1.0
LVZ				pmax	pmax		
	comp=Z,92nm,1.7s						
LVZ	Lovozero	88.15	21	IAMs_20	IAMs_20	07 52 29.2	
	comp=Z,7µm,22.0s						
BURAR	Bucovina Array	88.23	42	⇑P	P	07 11 21.1	+0.6
BURAR	Bucovina Array	88.23	42	⇑P	P	07 11 21.1	+0.6
BURAR	Bucovina Array	88.23	42	P	P	07 11 21.0	+0.6
ARR	Arges	88.24	45	⇑P	P	07 11 20.9	+0.4
MNK	Minsk	88.50	35	i P	P	07 11 19.5	-1.9
MNK				i S	SKSac	07 21 51.2	+0.6
MNK				i SSS	SSS	07 31 31.5	
MNK				pmax	pmax		
	comp=E,2.0nm,1.0s						
MNK				pmax	pmax		
	comp=N,8.0nm,1.0s						
MNK				pmax	pmax		
	comp=Z,60nm,1.0s						
MNK				MLR	MLR		
	comp=E,110nm,20.0s						
MNK				MLR	MLR		
	comp=Z,2µm,19.0s						
MNK				MLR	MLR		
	comp=N,379nm,19.0s						
MNK	Minsk	88.50	35	i P	P	07 11 19.6	-1.9
	comp=E,2.0nm,1.0s						
MNK				i P	P	07 11 19.6	-1.9
	comp=N,8.0nm,1.0s,baz=282						
MNK				i P	P	07 11 22.2	+0.8
	comp=Z,60nm,1.0s						
MNK				i PPP	PPP	07 15 59.0	
MNK				i S	SKSac	07 21 51.2	+0.6
MNK				i SSS	SSS	07 31 31.5	
MNK				i LQ	LQ	07 42 47.1	
MNK				i LR	LR	07 45 51.1	
MNK				i LRM	MLR	07 51 48.4	
	comp=E,110nm,19.5s						
MNK				i LRM	MLR	07 51 55.9	
	comp=Z,2µm,19.3s						
MNK				i LRM	MLR	07 52 06.4	
	comp=N,379nm,19.4s						
VOIR		88.52	44	⇑P	P	07 11 22.9	+1.1
VOIR		88.52	44	⇑P	P	07 11 22.9	+1.1
DOPR	Dopca	88.65	44	⇑P	P	07 11 23.3	+0.9
MLR	Muntele Rosu	89.12	44	⇑P	P	07 11 25.9	+1.1
MLR	Muntele Rosu	89.12	44	⇑P	P	07 11 25.9	+1.1
MLR	Muntele Rosu	89.12	44	P	P	07 11 25.2	+0.5
MLR				IAmb	IAmb	07 11 26.8	
	comp=Z,39nm,1.1s						
MLR				IAMs_20	IAMs_20	07 53 30.2	
	comp=Z,2µm,21.0s						
COVR	Voineasa-Covas	89.23	44	⇓P	P	07 11 26.8	+1.6
VNA3	Neumayer Olymp	89.28	163	P	P	07 11 25.1	+0.4
VNA1	Neumayer--Stat	89.40	163	P	P	07 11 26.0	+0.9
VNA1	Neumayer--Stat	89.40	163	PcP	PcP	07 11 29.1	+2.6
VNA1	Neumayer--Stat	89.40	163	sP	sP	07 11 33.7	+3.0
VRI	Vrincioaia	89.59	44	⇓P	P	07 11 28.8	+2.0
VRI	Vrincioaia	89.59	44	⇓P	P	07 11 28.8	+2.0
BISRR	Bisoca	89.64	44	⇑P	P	07 11 28.3	+1.2
VNA2	Neumayer--Watz	89.78	163	P	P	07 11 27.3	+0.3
	baz=302,slow=4.7						
VNA2	Neumayer--Watz	89.78	163	PcP	PcP	07 11 29.8	+1.5
VNA2	Neumayer--Watz	89.78	163	pP	pP	07 11 33.6	+2.6
VNA2	Neumayer--Watz	89.78	163	sP	sP	07 11 36.2	+3.6
AKASG	Malin Array Be	90.16	39	P	P	07 11 28.7	-0.6
	comp=Z,6.0nm,0.8s,baz=263,slow=4.4,SNR=11						
AKASG	Malin Array Be	90.16	39	i P	P	07 11 29.1	-0.2
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
AKASG	Malin Array Be	90.16	39	P	P	07 11 28.9	-0.4
AKBB	Malin Array Si	90.16	39	⇓iP	P	07 11 29.0	-0.3
AKBB				pmax	pmax		
	comp=Z,12nm,1.1s						
AKBB	Malin Array Si	90.16	39	P	P	07 11 28.6	-0.7
SORM	Soroca	90.19	41	⇓P	P	07 11 29.8	+0.3
SORM	Soroca	90.19	41	⇓P	P	07 11 29.8	+0.3
MILM	Milestii Mici	90.77	42	eP	P	07 11 32.0	-0.2
MILM				pmax	pmax		
	comp=Z,40nm,0.9s						
MILM				pmax	pmax		
	comp=Z,800nm,15.0s						
SNAA	Sanae	91.43	163	P	P	07 11 34.9	+0.1
SNAA	Sanae	91.43	163	PcP	PcP	07 11 37.6	+1.9
SNAA	Sanae	91.43	163	pP	pP	07 11 41.3	+2.5
SNAA	Sanae	91.43	163	P	P	07 11 34.8	+0.1
	comp=Z,11nm,1.0s,baz=295,slow=3.7,SNR=34						
SNAA	Sanae	91.43	163	ceP	P	07 11 34.9	+0.1
SNAA				pmax	pmax		
	comp=Z,56nm,1.8s						
SNAA	Sanae	91.43	163	P	P	07 11 34.9	+0.1
TSUM	Tsumeb	91.81	109	IAMs_20	IAMs_20	07 55 52.8	
	comp=Z,9µm,21.0s						
KLMR	Klimovskoe	92.58	27	eP	P	07 11 39.0	-1.3
KLMR				e		07 15 19.6	
KLMR				pmax	pmax		
	comp=Z,31nm,1.2s						
KLMR	Klimovskoe	92.58	27	eP	P	07 11 39.0	-1.3
KLMR				AMP		07 11 46.8	
	comp=Z,31nm,1.2s						
KLMR				ePP	PP	07 15 19.6	-1.7
OBN	Obninsk	93.17	33	⇓eP	P	07 11 43.4	+0.3
OBN				e*PP	pP	07 11 46.6	-0.5
OBN				e		07 22 51.4	
OBN				ePS	PS	07 24 13.8	+10
OBN				SS	SS	07 29 11.0	+6.6
OBN				pmax	pmax		
	comp=Z,44nm,1.3s						
OBN				MLR	MLR		
	comp=Z,1µm,15.0s						
OBN	Obninsk	93.17	33	IAMs_20	IAMs_20	07 56 30.2	
	comp=Z,1µm,20.0s						
BILL	Bilibino	93.60	341	d iP	P	07 11 46.2	+1.3
BILL				e*PP	pP	07 11 48.6	-0.1
BILL				e*SP	sP	07 11 51.7	+1.6

BILL				S	S	07 22 22.0	-31
BILL				pmax	pmax		
	comp=Z,25nm,1.1s						
BILL				MLR	MLR		
	comp=Z,877nm,13.0s						
BILL	Bilibino	93.60	341	IAMs_20	IAMs_20	07 56 13.8	
	comp=Z,1µm,20.0s						
ISP	Isparta	94.15	51	IAMs_20	IAMs_20	08 02 35.3	
	comp=Z,3µm,22.0s						
PRGR	Permogore	94.92	25	*e*P	P	07 11 51.4	+0.4
PRGR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
JOHN	Johnston Islan	95.27	288	IAMs_20	IAMs_20	08 01 18.6	
	comp=Z,6µm,21.0s						
LPSR	Galich'ya Gora	95.36	35	*e*P	P	07 11 52.2	-1.0
LPSR				pmax	pmax		
	comp=Z,20nm,1.0s						
VSR	Storozhevoye	96.00	36	*e*P	P	07 11 54.9	-1.3
VSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BRTR	Keskin Array B	96.00	48	P	P	07 11 56.4	-0.3
	comp=Z,1.7nm,1.0s,baz=272,slow=5.9,SNR=5.7						
BRTR	Keskin Array B	96.00	48	P	P	07 11 55.6	-1.1
BRTR	Keskin Array B	96.00	48	P	P	07 11 55.6	-1.1
VORD	Divnogorie	96.16	37	*e*P	P	07 11 54.1	-2.8
VORD				pmax	pmax		
	comp=Z,7.0nm,0.6s						
QSPA	South Pole Qui	98.50	180	P	Pdif	07 12 07.6	+0.4
	comp=Z,8.6nm,1.0s,baz=158,slow=3.3,SNR=11						
QSPA	South Pole Qui	98.50	180	P	P	07 12 06.9	-0.3
TIXI	Tiksi	98.89	354	⇓*i*P	Pdif	07 12 09.6	+0.8
TIXI	Tiksi	98.89	354	IAMs_20	IAMs_20	07 53 57.3	
	comp=Z,4µm,21.0s						
SOC	Sochi	99.10	43	*e*P	Pdif	07 12 08.2	-2.2
SOC				*e*		07 16 13.3	
SOC				*e*PPP	PPP	07 18 17.4	
SOC				*e*S	S	07 22 46.6	-55
SOC				pmax	pmax		
	comp=Z,15nm,0.7s						
GHAJ	Ghor Haditha	99.86	56	IAMs_20	IAMs_20	08 03 23.6	
	comp=Z,4µm,20.0s						
KNTN	Kanton	100.59	269	IAMs_20	IAMs_20	07 58 03.3	
	comp=Z,7µm,19.0s						
KIV	Kislovodsk	100.96	42	*e*P	Pdif	07 12 18.0	-0.8
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KIV	Kislovodsk	100.96	42	IAMs_20	IAMs_20	08 04 12.3	
	comp=Z,3µm,18.0s						
KBZ	Khabaz	101.19	42	P	Pdif	07 12 20.1	+0.5
	comp=Z,1.4nm,0.3s,baz=321,slow=6.5,SNR=4.1						
SEY	Seymchan	101.31	341	⇓*e*P	Pdif	07 12 20.3	+0.6
ARU	Arti	103.35	26	IAMs_20	IAMs_20	08 07 12.4	
	comp=Z,4µm,18.0s						
GNI	Garni	103.88	45	IAMs_20	IAMs_20	07 53 27.8	
	comp=Z,5µm,22.0s						
MAK	Makhachkala	104.56	42	*i* P	Pdif	07 12 27.1	-7.5
MAK				*e*		07 23 06.8	
MAK				*e*PS	PS	07 26 05.3	-1.4
MAK				*e*SS	SS	07 31 45.8	+1.2
MAK				*e*SSS	SSS	07 35 38.3	
MAK				pmax	pmax		
	comp=Z,203nm,1.6s						
SYO	Syowa Base	105.35	160	⇓*e*PKiKP	PKiKP	07 16 50.4	-0.8
PET	Petropavlovsk	105.46	331	IAMs_20	IAMs_20	08 09 22.8	
	comp=Z,3µm,22.0s						
BRVK	Borovoye	110.58	24	IAMs_20	IAMs_20	07 51 55.2	
	comp=Z,7µm,21.0s						
RAYN	Ar Rayn	110.65	61	IAMs_20	IAMs_20	08 05 23.8	
	comp=Z,6µm,20.0s						
ZALV	Zalesovo Beam	114.62	15	PKP	PKiKP	07 17 07.5	-1.7
	comp=Z,1.9nm,0.6s,baz=318,slow=2.0,SNR=8.4						
KURK	Kurchatov	115.56	21	⇓*i*PKIKP	PKiKP	07 17 09.7	-1.4
KURK	Kurchatov	115.56	21	IAMs_20	IAMs_20	08 15 28.8	
	comp=Z,4µm,22.0s						
DGZ	Jazzator, Alta	119.16	16	⇓*i*PKIKP	PKiKP	07 17 18.7	+0.3
TLY	Talaya	119.91	4	IAMs_20	IAMs_20	07 52 21.4	
	comp=Z,5µm,19.0s						
MAKZ	Makanchi	120.05	21	IAMs_20	IAMs_20	07 51 49.7	
	comp=Z,6µm,19.0s						
MKAR	Makanchi Array	120.17	21	PKP	PKPdf	07 17 18.9	-1.3
	comp=Z,1.3nm,0.7s,baz=287,slow=3.2,SNR=6.3						
AAK	Ala-Archa	120.36	29	⇑*i*PKIKP	PKiKP	07 17 21.5	+0.5
AAK	Ala-Archa	120.36	29	IAMs_20	IAMs_20	08 05 55.9	
	comp=Z,6µm,22.0s						
ERM	Erimo	120.60	331	IAMs_20	IAMs_20	08 20 42.2	
	comp=Z,6µm,21.0s						
SOCY	Socotra	121.97	70	IAMs_20	IAMs_20	08 17 21.6	
	comp=Z,6µm,22.0s						
USRK	Ussuriysk Ar.	123.43	340	PKP	PKPdf	07 17 26.2	-0.3
	comp=Z,4.7nm,0.7s,baz=264,slow=3.8,SNR=7.3						
KSH	Kashi	123.47	30	PKP	PKiKP	07 17 28.3	+1.2
KSH				PP	PP	07 19 17.0	+10
KSH				SKKS		07 26 05.7	
ULN	Ulaanbaatar	123.87	1	⇑*i*PKIKP	PKPdf	07 17 27.3	-0.2
ULN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SONM	Songino Array	123.88	2	PKP	PKPdf	07 17 27.3	-0.2
	comp=Z,2.4nm,0.7s,baz=325,slow=1.9,SNR=9.0						
WMQ	Urumqi	124.58	18	*e*PKP	PKiKP	07 17 29.4	+0.3
MSEY	Mahe Island	127.14	89	IAMs_20	IAMs_20	08 08 33.5	
	comp=Z,5µm,22.0s						
MJAR	Matsushiro Arr	127.26	330	PKP	PKiKP	07 17 34.8	+0.1
	comp=Z,3.0nm,0.7s,baz=109,slow=1.8,SNR=7.1						
MAJO	Matsushiro	127.26	330	⇓*e*PKIKP	PKPdf	07 17 33.9	-0.2
MAJO	Matsushiro	127.26	330	IAMs_20	IAMs_20	08 05 57.8	
	comp=Z,4µm,22.0s						
MAT	Matsushiro	127.26	330	*e*PKP	PKPdf	07 17 34.0	-0.1
INU	Inuyama	128.79	330	IAMs_20	IAMs_20	08 04 53.9	
	comp=Z,3µm,22.0s						
HHC	Hu-ho-hao-te	130.82	357	*e*PKP	PKPdf	07 17 37.7	-3.2
KSRS	Korea Array	130.83	340	PKP	PKPdf	07 17 41.1	+0.3
	comp=Z,4.6nm,1.0s,baz=2.3,slow=1.1,SNR=4.9						
BJI	Beijing	131.20	352	PKP	PKPdf	07 17 40.3	-1.1
BJI				PP	PP	07 20 02.3	+4.9
INCN	Inchon	131.24	341	IAMs_20	IAMs_20	08 07 47.1	
	comp=Z,4µm,21.0s						
GTA	Gaotai	131.64	9	PKP	PKiKP	07 17 43.1	-0.4
GTA				PP	PP	07 20 02.7	+2.2
GTA				AMB	AMB		
	comp=Z,160nm,4.4s						
LZH	Lanzhou	135.43	5	*e*PKP	PKiKP	07 17 50.6	-0.7
LZH				AMB	AMB		
	comp=Z,200nm,8.1s						
XAN	Xi'an	137.69	360	PKP	PKPdf	07 17 54.0	+0.1
LSA	Lhasa	138.48	23	IAMs_20	IAMs_20	08 19 06.5	
	comp=Z,4µm,20.0s						
NJ2	Nanjing	138.50	347	*e*PKP	PKPdf	07 17 55.3	0.0
STKA	Stephens Creek	141.53	228	PKP	PKPdf	07 17 58.9	-1.9
	comp=Z,4.9nm,0.8s,baz=122,slow=5.3,SNR=11						
STKA	Stephens Creek	141.53	228	⇓*i*PKIKP	PKPdf	07 18 00.2	-0.6
PMG	Port Moresby	141.90	266	PKP	PKPdf	07 18 00.3	-1.6
	comp=Z,4.2nm,0.3s,baz=166,slow=3.1,SNR=1.8						
KAAM	Kaadhehdhoo	143.42	78	IAMs_20	IAMs_20	08 35 20.8	
	comp=Z,4µm,20.0s						
NACB	Ninganchiao	145.13	339		PKPbc	07 18 04.8	-1.9
GYA	Guiyang	145.20	3	⇓*i*PKPbc	PKPbc	07 18 06.9	-0.2
GYA				sPKP		07 18 16.4	
GYA				PP	PP	07 21 24.4	-0.2
GYA				AMB	AMB		
	comp=Z,120nm,8.0s						
KMI	Kunming	146.10	10	⇓PKPbc	PKPdf	07 18 09.5	+0.2
KMI				pPKP	pPKPab	07 18 14.8	+0.1
PALK	Pallekele	148.09	61	IAMs_20	IAMs_20	08 32 23.3	
	comp=Z,3µm,19.0s						
ASAR	Alice Springs	151.46	235	PKP	PKPdf	07 18 16.9	-0.9
	comp=Z,3.2nm,0.8s,baz=121,slow=1.7,SNR=24						
ASAR				PKPbc	pPKPdf	07 18 22.6	+0.6
	comp=Z,23nm,0.7s,baz=114,slow=2.4,SNR=89						
CMAR	Chiang Mai Arr	151.57	20	PKP	PKPdf	07 18 18.6	+0.6
	comp=Z,1.7nm,0.3s,baz=312,slow=2.6,SNR=2.0						
CMAR				PKPbc	PKPbc	07 18 24.2	0.0
	comp=Z,13nm,0.8s,baz=317,slow=3.3,SNR=35						
WRAB	Tennant Creek	152.61	243	PKIKP	PKPbc	07 18 26.0	-0.5
WRAB	Tennant Creek	152.61	243	PKPdf	PKPdf	07 18 18.8	-0.7
WRAB				PKPbc	PKPbc	07 18 26.0	-0.5
QIZ	Qiongzhong	152.62	357	PKPbc	PKPdf	07 18 18.7	-0.9
QIZ				PP	PP	07 22 08.3	+0.7
QIZ				SS	SS	07 41 38.0	+0.6
WRA	Warramunga Arr	152.62	243	PKP	PKPdf	07 18 19.2	-0.3
	comp=Z,8.6nm,1.0s,baz=88,slow=1.3,SNR=20						
WRA				PKPbc	sPKPdf	07 18 25.5	+0.2
	comp=Z,54nm,0.8s,baz=110,slow=2.2,SNR=71						
FITZ	Fitzroy Crossi	160.88	238	PKP	PKPdf	07 18 28.8	-1.4
	comp=Z,6.0nm,1.0s,baz=124,slow=4.5,SNR=6.0						
FITZ				PKPab	PKPab	07 19 11.7	-0.8
	comp=Z,9.7nm,0.9s,baz=108,slow=0.8,SNR=7.6						

NEIC 07 06:59:46.5±0.6**,37°.42N**±0°.02×**97°.98W**±0°.02**,h1**^{km}±7^{km}**,**
mb_Lg2.9/11**,Error ellipse: s-maj=2.9km s-min=1.5km**
az=218.0,Kansas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAN12	Harper NE Stat	0.12	188		Pg	06 59 48.9	+0.1
KAN12				Sg	Sg	06 59 50.8	+0.4
KAN08	Anthony NE Sta	0.19	178		Pg	06 59 50.1	0.0
KAN06	Argonia West S	0.19	151		Pg	06 59 50.3	+0.1
KAN16	Harper SW Stat	0.20	200	Pg	Pg	06 59 50.3	-0.1
KAN16				Sg	Sg	06 59 53.2	+0.2
KAN10	Anthony SW Sta	0.31	198	Pg	Pg	06 59 52.3	-0.1
KAN10				Sg	Sg	06 59 56.7	+0.3
KAN01	Argonia South	0.32	146		Pg	06 59 52.5	0.0
KAN01				Sg	Sg	06 59 57.1	+0.4
KAN05	Bluff City Nor	0.32	165		Pg	06 59 52.6	0.0
KS20	Mayfield South	0.39	119		Pg	06 59 54.0	+0.1
KAN09	Caldwell North	0.40	134	Pg	Pg	06 59 54.2	0.0
KAN17	Caldwell West	0.41	155	Pg	Pg	06 59 54.2	-0.1
KAN14	Manchester OK	0.46	179		Pg	06 59 55.1	-0.2
KAN13	South Haven SW	0.57	135		Pg	06 59 57.2	-0.1
GC02	Grant County #	0.57	170	Pg	Pg	06 59 57.1	-0.3
OK032	Salt Plains WL	0.64	197		Pg	06 59 58.4	-0.4
BLOK	Blackwell	0.90	137	Pg	Pg	07 00 03.1	-0.5
CROK	Carrier	0.91	180	Pg	Pg	07 00 03.2	-0.7
R32A	Long Quarter,	1.16	330	Pg	Pg	07 00 08.2	-0.5
T35A	Sooner Cattle	1.27	113		Pg	07 00 09.9	-0.9
U32A	Winter Ranch,	1.32	219	Pn	Pg	07 00 10.8	-1.0
QUOK	Quay	1.61	140	Pn	Pn	07 00 15.8	-0.2
OK029	Liberty Lake	1.67	165	Pn	Pn	07 00 16.8	-0.1
OK031	S. Brethren Rd	1.73	148	Pn	Pn	07 00 17.3	-0.3
OK030	Cody Creek RV	1.77	147	Pn	Pn	07 00 18.2	0.0
OK025	Westminster Rd	1.90	164	Pn	Pn	07 00 20.5	+0.4
CBKS	Cedar Bluff	1.97	316	Pn	Pn	07 00 21.9	+1.0
TUL1	Leonard	2.31	130	Pn	Pn	07 00 26.5	+0.8
U38A	Gravette	3.04	108	Pn	Pn	07 00 36.2	+0.5
N33A	J Bar K, Exete	3.34	7	IAmb_Lg		07 01 36.9	
	comp=Z,20nm,0.7s						
X37A	Clayton	3.53	142	Pn	Pn	07 00 42.5	+0.2
N35A	Tabor	3.89	27	IAmb_Lg		07 01 54.3	
	comp=Z,8.2nm,0.7s						
U40A	Yellville	4.24	103	IAmb_Lg		07 02 06.4	
	comp=Z,7.1nm,1.1s						
344A	Westbrook Farm	8.44	133	IAmb_Lg		07 04 37.3	
	comp=Z,210nm,0.9s						
146A	Union	8.73	120	IAmb_Lg		07 04 33.4	
	comp=Z,36nm,0.9s						
Z47A	Carrollton	9.12	115	IAmb_Lg		07 04 36.2	
	comp=Z,116nm,0.9s						
346A	Big Creek Wild	9.25	128	IAmb_Lg		07 04 59.6	
	comp=Z,71nm,1.0s						

SJA ***07*** *07:04:30.0,29°.41S×72°.64W,h10^{km},ML5.9*

NEIC ***07*** *07:04:31.4,29°.47S×72°.30W,h10^{km},Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M$_{rr}$1.27; M$_{\theta\theta}$-0.16; M$_{\phi\phi}$-1.11; M$_{r\theta}$0.21; M$_{\theta\phi}$-0.14; M$_{\phi r}$-0.73; Fault plane solution: M$_0$1.43000×10^{18} NP1:φ$_s$176.58000°, δ61.07000°,λ79.94000°. NP2:φ$_s$16.71000°,δ30.48000°, λ107.53000°. Principal axes: T 1.5118, Plg72.0000°, Azm63.0000°; N -0.1900, Plg9.0000°, Azm181.0000°; P -1.3218, Plg16.0000°, Azm274.0000°;*

GUC ***07*** *07:04:31.0±0.6,29°.47S×72°.35W,h15^{km},ML6.0*

NEIC ***07*** *07:04:31.4±1.6,29°.46S±0°.04×72°.30W±0°.09,h13^{km}±1^{km}, mb5.8/92,Ms_20 6.0/297,Mwr6.0/92,Mww6.2,ML6.0(GUC), Mwc6.1(GCMT),Error ellipse: s-maj=12.8km s-min=7.5km az=269.0*

IDC ***07*** *07:04:32.6±0.4,29°.52S×72°.01W,h0^{km},mb4.8/18, mb1 5.0/22,mb1mx4.9/31,mbtmp4.9/22,ML4.7/4,MS5.7/6, Ms1 5.7/6,ms1mx5.2/42,Error ellipse: s-maj=18.6km s-min=11.4km az=87.0*

BJI ***07*** *07:04:36.0±0.0,29°.40S×72°.50W,h10^{km},mB6.0/47, Ms6.6/49,Ms7 6.5/47*

MOS ***07*** *07:04:38.3±1.5,29°.15S×71°.79W,h33^{km},mb5.8/24, MS5.9/12,Error ellipse: s-maj=17.6km s-min=11.3km az=50.9*

VAO ***07*** *07:04:39.6±0.3,29°.17S×71°.54W,h12^{km},mb5.4*

NEIC ***07*** *07:04:40,29°.47S×72°.43W,h12^{km},Moment Tensor Solution. Duration: 18^{s}0 Moment tensor: Scale 10^{18}Nm; M$_{rr}$1.33; M$_{\theta\theta}$-0.10; M$_{\phi\phi}$-1.23; M$_{r\theta}$-0.44; M$_{\theta\phi}$-0.27; M$_{\phi r}$-1.81; Fault plane solution: M$_0$2.28000×10^{18} NP1: φ$_s$12.00000°,δ18.00000°,λ89.00000°. NP2:φ$_s$194.00000°, δ72.00000°,λ90.00000°. Principal axes: T 2.2977, Plg63.0000°, Azm104.0000°; N -0.0396, Plg0.0000°, Azm13.0000°; P -2.2582, Plg27.0000°, Azm283.0000°;*

NEIC ***07*** *07:04:41,29°.59S×72°.39W,h12^{km},Moment Tensor Solution. Duration: 5^{s}2 Moment tensor: Scale 10^{18}Nm; M$_{rr}$1.10; M$_{\theta\theta}$0.01; M$_{\phi\phi}$-1.12; M$_{r\theta}$-0.27; M$_{\theta\phi}$-0.20; M$_{\phi r}$-1.06; Fault plane solution: M$_0$1.57000×10^{18} NP1:φ$_s$6.00000°, δ23.00000°,λ84.00000°. NP2:φ$_s$193.00000°,δ67.00000°, λ93.00000°. Principal axes: T 1.5468, Plg68.0000°, Azm107.0000°; N 0.0459, Plg2.0000°, Azm12.0000°; P -1.5927, Plg22.0000°, Azm281.0000°;*

GCMT ***07*** *07:04:41.4±0.1,29°.54S±0°.01×72°.33W±0°.01,h12^{km}, MW6.0/146,Moment Tensor Solution. s144,c296; s146,c427; Duration: 2^{s}6 Moment tensor: Scale 10^{18} Nm; M$_{rr}$1.12±.01; M$_{\theta\theta}$-0.00±.01; M$_{\phi\phi}$-1.12±.01; M$_{r\theta}$-0.28±.02; M$_{\theta\phi}$-0.15±.01; M$_{\phi r}$-0.91±.02; Best double couple: M$_0$1.47600×10^{18} NP1:φ$_s$1.00000°,δ25.00000°, λ79.00000°. NP2:φ$_s$193.00000°,δ65.00000°,λ95.00000°. Principal axes: T 1.4730, Plg69.0000°, Azm114.0000°; N 0.0030, Plg5.0000°, Azm11.0000°; P -1.4790, Plg20.0000°, Azm280.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 07 07:04:37.8±0.2**,29°.67S**±0°.03×**71°.92W**±0°.03**,h25**^{km}**,n883,** σ**2^{s}89**/746**,mb5.7**/66**,MS6.0**/167**,115C-34D,Fault plane solution: NP1:**φ$_s$192.27385°**,**δ53.56927°**,**λ116.87455°. **NP2:**φ$_s$331.79761°**,**δ44.13673°**,**λ58.51494°. **Principal axes:** T Plg68.0319°**,** Azm160.9722°**;** N Plg21.3275°**,** Azm355.5249°**;** P Plg5.0233°**,** Azm263.5582°**; Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO05	La Serena	0.64	113	*e*P	Pb	07 04 50.1	-0.4
CO05				IAML		07 05 10.9	
	comp=N,323µm,0.6s						
CO05	La Serena	0.64	113		Pb	07 04 50.7	+0.2
CO06	Fray Jorge	1.03	166	⇑*i*P	Pn	07 04 54.5	-2.2
CO06				*e*S	Sn	07 05 12.3	+1.9
CO06	Fray Jorge	1.03	166		Pn	07 04 54.7	-2.0
GO04	Tololo Observa	1.10	118	⇑*i*P	Pn	07 04 57.5	-0.3
GO04				*e*S	Sb	07 05 18.4	+6.1
GO04	Tololo Observa	1.10	118		Pn	07 04 57.7	-0.1
GO04	Tololo Observa	1.10	118	*i* P	Pn	07 04 57.0	-0.8
LCO	Las Campanas	1.25	59	P	Pn	07 04 58.0	-1.9
LCO	Las Campanas	1.25	59	⇑P	Pn	07 04 57.5	-2.5
LCO	Las Campanas	1.25	59		Pn	07 04 58.0	-1.9
LCO	Las Campanas	1.25	59	*i* P	Pn	07 04 57.0	-2.9
CO03	El Pedregal	1.58	138	*e*P	Pn	07 05 04.3	-0.1
CO03				*e*S	Sb	07 05 30.1	+4.0
CO03	El Pedregal	1.58	138		Pn	07 05 04.4	+0.1
CO03	El Pedregal	1.58	138	*i* P	Pn	07 05 04.0	-0.3
AC04	Llanos de Chal	1.64	27	*e*P	Pn	07 04 59.4	-5.5
AC04	Llanos de Chal	1.64	27	Pn	Pn	07 04 59.5	-5.5
AC04	Llanos de Chal	1.64	27	*i* P	Pn	07 04 59.0	-6.0
AROD	Rodeo	2.18	104	*i* P	Pn	07 05 15.0	+2.2
ACDV	Cuesta del Vie	2.48	102	*i* P	Pn	07 05 19.0	+2.2
GO03	Copiap	2.54	36	⇑*i*P	Pn	07 05 13.3	-4.3
GO03	Copiap	2.54	36	⇑P	Pn	07 05 13.4	-4.1
GO03	Copiap	2.54	36	Pn	Pn	07 05 13.7	-3.8
GO03	Copiap	2.54	36	*i* P	Pn	07 05 14.0	-3.5
ACCO	Cerro Coronel	2.64	111	*i* P	Pn	07 05 22.0	+2.9
VA06	Catapilco	2.94	170	*e*P	Pn	07 05 21.3	-1.6
VA06				IAML		07 06 31.1	
	comp=E,57µm,0.7s						
AGUA	GUANDACOL	2.99	87	*i* P	Pn	07 05 27.0	+3.2
RTLS	Leoncito	3.10	134	*i* P	Pn	07 05 29.0	+3.6
VA03	San Esteban	3.30	160	*e*P	Pn	07 05 28.8	+0.7
VA03	San Esteban	3.30	160	Pn	Pn	07 05 28.4	+0.4
VA03	San Esteban	3.30	160	*i* P	Pn	07 05 29.0	+1.0
AUSP	Uspallata	3.35	140	*i* P	Pn	07 05 32.0	+3.1
VA01	Torpederas	3.35	176	Pn	Pn	07 05 26.6	-2.0
VCA	Vinchina	3.38	75	*i* P	Pn	07 05 32.0	+2.9
ROCH	El Roble	3.39	167	⇑*i*P	Pn	07 05 27.8	-1.5
ROC1	El Roble	3.39	167	*i* P	Pn	07 05 28.0	-1.3
PEL	Peldehue	3.62	163	*i* P	Pn	07 05 31.4	-1.0
PEL	Peldehue	3.62	163	*i* P	Pn	07 05 33.0	+0.6
RTCV	Cerro Valdivia	3.64	128	*i* P	Pn	07 05 36.0	+3.4
MT02	Curacav	3.64	170	*i* P	Pn	07 05 30.0	-2.7
MT02	Curacav	3.64	170		Pn	07 05 31.6	-1.0
MT02	Curacav	3.64	170	*i* P	Pn	07 05 31.0	-1.6
AC02	Maricunga	3.74	42	*i* P	Pn	07 05 31.2	-3.2
AC02	Maricunga	3.74	42	Pn	Pn	07 05 32.0	-2.4
MT05	Renca	3.85	165	*i* P	Pn	07 05 34.3	-1.2
MT05	Renca	3.85	165	Pn	Pn	07 05 34.1	-1.4
MT05	Renca	3.85	165	*i* P	Pn	07 05 36.0	+0.5
ASAL	Salagasta	3.94	139	*i* P	Pn	07 05 41.0	+4.3
VA05	Santo Domingo	3.99	176	*e*P	Pn	07 05 35.9	-1.4
ARCO	CERRO ARCO	4.07	142	*i* P	Pn	07 05 43.0	+4.4
MT09	Talagante	4.17	169	*i* P	Pn	07 05 38.4	-1.6
MT09	Talagante	4.17	169	Pn	Pn	07 05 39.4	-0.7
MT01	Popeta	4.22	172	*i* P	Pn	07 05 37.9	-2.7
MT01	Popeta	4.22	172	Pn	Pn	07 05 38.8	-1.8
MT01	Popeta	4.22	172	*i* P	Pn	07 05 39.0	-1.6
AAGR	Agrelo	4.31	143	*i* P	Pn	07 05 46.0	+4.1
ACLC	CERRO LA CRUZ	4.34	88	*i* P	Pn	07 05 44.0	+1.7
BO04	La Punta	4.45	166	*i* P	Pn	07 05 42.7	-1.1
APLL	PUNTA DE LOS L	4.73	100	*i* P	Pn	07 05 50.0	+2.4
BO01	Tunca	4.76	172		Pn	07 05 46.1	-2.0
BO01	Tunca	4.76	172	*i* P	Pn	07 05 47.0	-1.0
PB14	IPOC Station P	5.20	15	Pn	Pn	07 05 46.5	-7.9
PB14	IPOC Station P	5.20	15	*i* P	Pn	07 05 47.0	-7.3
BO02	Sierra Bellavi	5.20	170	Pn	Pn	07 05 52.7	-1.4
BO02	Sierra Bellavi	5.20	170	*i* P	Pn	07 05 53.0	-1.1
GO05	Huala	5.33	180	Pn	Pn	07 05 53.0	-2.8
GO05	Huala	5.33	180	*i* P	Pn	07 05 53.0	-2.8
RFA	San Rafael	5.87	151	*i* P	Pn	07 06 04.0	+0.7
ML02	Panimavida	6.09	176	Pn	Pn	07 06 04.5	-1.8
PB10	IPOC Station P	6.25	12		Pn	07 06 00.2	-8.2
PB10	IPOC Station P	6.25	12	*i* P	Pn	07 06 01.0	-7.5
AHML	Horco Molle	6.48	65	*i* P	Pn	07 06 14.0	+2.3
PB15	IPOC Station P	6.80	19	*i* P	Pn	07 06 12.0	-4.2
PB05	IPOC Station P	6.96	13	*i* P	Pn	07 06 11.0	-7.3
H03N1	Juan Fernandez	7.05	236	T	T	07 14 02.0	
	baz=64,slow=71,SNR=259						
H03N2	Juan Fernandez	7.07	236	T	T	07 14 01.0	
	baz=64,slow=71,SNR=297						
H03N3	Juan Fernandez	7.07	236	T	T	07 13 59.3	
	baz=64,slow=71,SNR=220						
PB06	IPOC Station P	7.25	17	Pn	Pn	07 06 15.3	-6.9
PB06	IPOC Station P	7.25	17	*i* P	Pn	07 06 16.0	-6.3
H03S3	Juan Fernandez	7.25	233	T	T	07 14 33.7	
	baz=88,slow=74,SNR=4.3						
H03S1	Juan Fernandez	7.26	233	T	T	07 14 22.6	
	baz=88,slow=74,SNR=4.1						
H03S2	Juan Fernandez	7.27	233	T	T	07 14 25.0	
	baz=88,slow=74,SNR=7.3						
PB04	IPOC Station P	7.47	13	*i* P	Pn	07 06 17.0	-8.4
LVC	Limon Verde	7.53	22	Pn	Pn	07 06 20.9	-5.4
	comp=E,4.1nm,0.3s,baz=169,slow=11,SNR=19						
LVC				Sn	Sn	07 07 48.0	-3.2
	comp=E,24nm,0.3s,baz=168,slow=20,SNR=3.8						
LVC				LR	LR	07 09 17.1	
	comp=E,29µm,19.0s,baz=214,slow=38						
LVC	Limon Verde	7.53	22	P	Pn	07 06 20.9	-5.4
LVC						07 07 48.0	
LVC	Limon Verde	7.53	22	⇑P	Pn	07 06 22.9	-3.4
LVC	Limon Verde	7.53	22	*e*P	Pn	07 06 21.0	-5.4
LVC	Limon Verde	7.53	22	Pn	Pn	07 06 20.8	-5.6
LVC	Limon Verde	7.53	22	*i* P	Pn	07 06 21.0	-5.4
LC01	Cunco	9.21	180		Pn	07 06 46.4	-2.6
LC01	Cunco	9.21	180	*i* P	Pn	07 06 47.0	-2.0
LR03	Panguipulli	9.95	182		Pn	07 06 56.5	-2.7
PSGCX	Pisagua	10.16	10	Pn	Pn	07 06 54.4	-7.7
PLCA	Paso Flores	11.10	175	Pn	Pn	07 07 13.4	-1.5
	comp=E,3.3nm,0.3s,baz=348,slow=11,SNR=138						
PLCA				LR	LR	07 11 29.9	
	comp=E,48µm,18.1s,baz=350,slow=37						
LL05	Los Muermos	11.78	186	Pn	Pn	07 07 20.4	-3.8
LPA	La Plata	12.93	117	*i* P	Pn	07 07 40.5	+0.5
LPA				sP	P	07 07 46.9	-3.5
LPA				pPP		07 07 53.4	
LPA				PP	PbPb	07 08 21.3	-1.7
LPA				PPP	PPP	07 08 49.1	
LPA				S	Sn	07 10 10.2	+7.1
LPA				SS	SbSb	07 11 10.0	+12
LPA				SSS	SSS	07 11 55.3	
LPA				PCP	PcP	07 13 05.1	-8.2
LPA				PKIKP	PKiKP	07 21 03.3	-7.1
LPA				SKIKP		07 24 31.5	
LPA				PKIKS		07 24 37.5	
LPA				SKIKS		07 28 00.9	
ITQB	Itaqui	13.30	94	*e*P	Pn	07 07 43.2	-1.8
ITQB	Itaqui	13.30	94		Pn	07 07 44.3	-0.7
CPUP	Villa Florida	13.31	79	Pn	Pn	07 07 46.5	+1.3
	comp=E,0.3nm,0.3s,baz=249,slow=17,SNR=1.6						
CPUP				Sn	S	07 10 28.4	-7.9
	comp=E,0.6nm,0.3s,baz=258,slow=8.4,SNR=3.2						
CPUP	Villa Florida	13.31	79	P	Pn	07 07 46.5	+1.3
CPUP	Villa Florida	13.31	79	⇓P	Pn	07 07 47.4	+2.2
CPUP	Villa Florida	13.31	79	*e*P	Pn	07 07 45.3	0.0
LPAZ	La Paz	13.76	15	Pn	Pn	07 07 47.7	-4.3
	comp=E,1.0nm,0.3s,baz=179,slow=8.3,SNR=1.9						
LPAZ				Sn	S	07 10 36.5	-10
	comp=E,0.9nm,0.3s,baz=50,slow=16,SNR=2.9						
LPAZ	La Paz	13.76	15	P	Pn	07 07 47.7	-4.3
LPAZ	La Paz	13.76	15	*e*P	Pn	07 07 45.3	-6.7
PLTB	Pedras Altas	15.89	102	*e*P	Pn	07 08 18.8	-1.1
CPSB	Cacapava Do Su	16.03	97	*e*P	Pn	07 08 19.4	-2.2
SIV	San Ignacio	16.87	39	Pn	Pn	07 08 30.8	-1.6
	comp=E,2.7nm,0.3s,baz=231,slow=12,SNR=9.2						
SIV				Sn	Sn	07 11 37.8	-1.5
	baz=252,slow=18,SNR=2.1						
AQDB	Aquidauana	17.30	62	*e*P	Pn	07 08 34.4	-3.3
PTGB	Pitanga	18.33	79	*e*P	P	07 08 49.4	-1.1
PTLB	Pontes e Lacer	18.41	43	*e*P	P	07 08 47.6	-3.5
TRCB	Terra Rica	18.59	73	*e*P	P	07 08 52.9	-0.4
TRCB	Terra Rica	18.59	73	P	P	07 08 49.9	-3.4
TRCB				IAmb	IAmb	07 09 18.6	
	comp=Z,1µm,1.7s						
PP1B	Ponte de Pedra	19.67	56	*e*P	P	07 09 02.6	-2.4
VILB	Vilhena	19.87	36	*e*P	P	07 09 02.2	-5.1
TER01	Tubaro-SC	19.95	92	*e*P	P	07 09 06.6	-1.5
SALV	Santo Antonio	20.25	51	*e*P	P	07 09 07.7	-3.7
PCMB	Pacaembu	20.26	71	*e*P	P	07 09 10.1	-1.4
FRTB	Fartura	20.96	78	*e*P	P	07 09 17.6	-1.4
ITRB	Iturama	21.93	68	*e*P	P	07 09 26.7	-2.8
MG05	Puerto Natales	21.99	181	P	P	07 09 25.4	-4.4
MG05				IAmb	IAmb	07 09 55.1	
	comp=Z,289nm,1.0s						
PET01	Itanhaem-SP	22.59	82	*e*P	P	07 09 36.6	+0.1
SPB	Sao Paulo	22.69	80	⇑P	P	07 09 37.6	0.0
SPB	Sao Paulo	22.69	80	*e*P	P	07 09 37.8	+0.2
SPB	Sao Paulo	22.69	80	P	P	07 09 34.0	-3.6
BB19B	Bebedouro	22.77	73	*e*P	P	07 09 36.3	-2.3
PDRB	Porto dos Gac	22.86	41	*e*P	P	07 09 36.9	-2.6
RCLB	Rio Claro- Sao	23.04	77	*e*P	P	07 09 39.8	-1.6
ARAG	Araguaiana, MT	23.13	57	*e*P	P	07 09 40.4	-1.8
MG02	Cerro Sombrero	23.18	176	P	P	07 09 38.9	-3.5
ATAH	Atahualpa	23.23	344	LR	LR	07 16 55.8	
	comp=Z,18µm,18.0s,baz=184,slow=32						
VAO	Valinhos	23.30	79	*e*P	P	07 09 44.5	+0.5
CLDB	Colider	24.00	42	*e*P	P	07 09 48.5	-2.1
EFI	East Falkland	24.29	159	*ce*P	P	07 09 51.4	-1.6
EFI				pmax	pmax		
	comp=Z,271nm,1.4s						
EFI				MLR	MLR		
	comp=Z,101µm,12.0s						
EFI	East Falkland	24.29	159	⇑P	P	07 09 55.9	+3.0
PARB	Paraibuna	24.34	81	*e*P	P	07 09 54.1	+0.3
IPMB	Ipameri, GO	24.56	67	*e*P	P	07 09 55.0	-0.9
USHA	Ushuaia	25.27	175	P	P	07 10 00.9	-1.0
	comp=Z,33nm,0.7s,baz=352,slow=12,SNR=3.4						
TBTG	Tabatinga, AM	25.41	5	*e*P	P	07 10 03.4	-0.1
MAN01	Angra dos Reis	25.93	81	*e*P	P	07 10 09.5	+1.3
BSCB	Bom Sucesso	25.96	77	*e*P	P	07 10 09.5	+0.9
SNDB	Serra Nova Dou	26.03	52	*e*P	P	07 10 07.5	-1.6
BDFB	Brasilia	26.04	63	P	P	07 10 07.8	-1.5
	comp=Z,61nm,0.8s,baz=240,slow=7.9,SNR=18						
BDFB				LR	LR	07 20 33.6	
	comp=Z,13µm,18.2s,baz=247,slow=37						

BDFB	Brasilia	26.04	63	P	P	07 10 06.1	-3.2
BDFB				pmax	pmax		
	comp=Z,401nm,1.4s						
BDFB	Brasilia	26.04	63	P	P	07 10 06.1	-3.2
BDFB				IAmb	IAmb	07 10 31.9	
	comp=Z,401nm,1.4s						
VAS01	Vassouras-RJ	26.59	81	*e*P	P	07 10 15.4	+1.2
DUB01	Friburgo-RJ	27.58	81	*e*P	P	07 10 24.7	+1.5
PEXB	Peixe	28.05	56	*e*P	P	07 10 26.4	-0.9
DIAM	Diamantina, MG	28.11	73	*e*P	P	07 10 27.0	-1.0
CAM01	Campos-RJ	28.30	81	*e*P	P	07 10 28.5	-1.0
MC01	Montes Claros	28.68	70	*e*P	P	07 10 32.3	-0.8
JANB	Januaria	29.28	66	*e*P	P	07 10 36.6	-1.7
ITTB	Itaituba	29.46	34	*e*P	P	07 10 37.5	-2.3
ALF01	Guarapari-ES	29.57	80	*e*P	P	07 10 41.3	+0.6
SJMB	Sao Joao De Ma	30.00	76	*e*P	P	07 10 45.1	+0.5
BSFB	Barra de Sao F	30.23	76	*e*P	P	07 10 47.1	+0.5
OTAV	Otavalo	30.38	347	*e*P	P	07 10 46.8	-1.6
SDBA	SAO DESIDERIO	30.39	61	*e*P	P	07 10 46.2	-1.9
RIB01	Linhares ES	30.40	77	*e*P	P	07 10 48.6	+0.5
SMTB	Santa Maria do	30.79	53	*e*P	P	07 10 50.0	-1.6
NAN01	Guarapari, ES	31.29	75	*e*P	P	07 10 55.0	-1.0
PRPB	Parauapebas	31.31	46	*e*P	P	07 10 55.0	-1.2
GUA01	Guaratinga, BA	32.16	73	*e*P	P	07 11 03.7	+0.1
MALB	Monte Alegre	32.36	35	*e*P	P	07 11 04.6	-0.7
CMC01	Camacan, BA	33.01	72	*e*P	P	07 11 10.2	-1.0
NBIT	Itapeh - BA	33.30	71	*e*P	P	07 11 12.8	-0.9
PAYG	Puerto Ayora	33.73	325	IAMs_20	IAMs_20	07 23 20.3	
	comp=Z,23µm,18.0s						
GDU01	Guandu, BA	33.84	69	*e*P	P	07 11 16.6	-1.8
NBPN	Ponto Novo - B	34.98	64	*e*P	P	07 11 25.9	-2.4
TMAB	Tom-Au,PA,Br	35.34	44	*e*P	P	07 11 29.4	-1.9
PMSA	Palmer Station	35.47	174	P	P	07 11 32.2	+0.3
	comp=Z,16nm,0.7s,baz=336,slow=7.3,SNR=2.4						
PMSA	Palmer Station	35.47	174	⇓P	P	07 11 38.3	+6.4
PMSA	Palmer Station	35.47	174	*e*P	P	07 11 39.3	+7.4
ZARC	Zaragoza, Cauc	37.05	355	P	P	07 11 40.9	-5.0
ZARC				IAmb	IAmb	07 12 02.0	
	comp=Z,184nm,1.2s						
ROSB	Rosrio	37.47	50	*e*P	P	07 11 48.3	-1.2
NBMA	Muriti-CE	38.24	61	*e*P	P	07 11 55.0	-1.1
NBPS	Pedro II - PI	38.24	55	*e*P	P	07 11 54.5	-1.7
SDV	Santo Domingo	38.35	2	*e*P	P	07 11 57.7	+0.6
CAP2	Capurgana	38.45	351	P	P	07 11 50.0	-7.7
NBAN	Anadia - AL	38.78	67	*e*P	P	07 11 58.5	-2.1
NBPB	Pedra_Branca-C	38.81	58	*e*P	P	07 11 59.4	-1.4
MDP	Montagnes des	39.21	31	P	P	07 12 02.8	-1.4
	comp=Z,76nm,0.9s,baz=209,slow=10,SNR=1.2						
NBLV	Livramento - P	39.66	63	*e*P	P	07 12 06.7	-1.4
NBMO	Morrinhos-CE	39.99	55	*e*P	P	07 12 10.2	-0.5
NBPA	Parau_RN	40.53	61	*e*P	P	07 12 14.3	-0.9
NBCL	Cascavel-CE	40.64	58	*e*P	P	07 12 15.7	-0.4
NBPV	Pedro Velho	41.51	63	*e*P	P	07 12 22.1	-1.1
BBGH	Gun Hill	44.20	17	IAMs_20	IAMs_20	07 34 05.1	
	comp=Z,19µm,20.0s						
SVN	Savane Anatole	45.45	15	IAMs_20	IAMs_20	07 33 04.6	
	comp=Z,12µm,19.0s						
TGUH	Tegucigalpa,Un	45.92	339	⇑P	P	07 12 56.4	-2.4
TGUH	Tegucigalpa,Un	45.92	339	P	P	07 12 51.8	-6.9
TGUH				IAmb	IAmb	07 13 07.6	
	comp=Z,216nm,1.2s						
CRPR	Cabo Rojo, PR	47.62	6	P	P	07 13 04.0	-7.8
OBIP	Obispado Ponce	47.71	7	P	P	07 13 06.0	-6.5
CELP	Cerrillos	47.74	7	P	P	07 13 06.0	-6.8
PDPR	Patillas Dam,	47.75	8	P	P	07 13 05.5	-7.3
PDPR				IAmb	IAmb	07 13 25.8	
	comp=Z,81nm,1.0s						
SJG	San Juan	47.83	7	⇑P	P	07 13 11.2	-2.2
MTDJ	Mount Denham	47.92	353	P	P	07 13 06.8	-7.5
AOPR	Arecibo Observ	47.99	7	P	P	07 13 08.2	-6.6
CBYP	Canovanas	48.02	8	P	P	07 13 07.8	-7.1
CBYP				IAmb	IAmb	07 13 24.1	
	comp=Z,115nm,1.1s						
GCPR	Guaynabo City	48.03	7	P	P	07 13 08.2	-6.8
GCPR				IAmb	IAmb	07 13 24.0	
	comp=Z,130nm,1.4s						
DR12	Loma Pena Alta	48.23	3	P	P	07 13 08.8	-7.9
SC01	Santiago de lo	48.82	1	P	P	07 13 13.2	-7.9
CMIG	Matias Romero	51.49	332	P	P	07 13 39.5	-2.0
	comp=Z,3.6nm,0.2s,baz=149,slow=7.8,SNR=138						
SOR	Soroa	53.23	347	P	P	07 13 47.6	-6.7
SOR				pmax	pmax		
	comp=Z,130nm,1.4s						
SOR	Soroa	53.23	347	P	P	07 13 47.6	-6.7
SOR				IAmb	IAmb	07 14 00.4	
	comp=Z,130nm,1.4s						
VNA3	Neumayer Olymp	53.34	159	P	P	07 13 55.8	+1.2
TLIG	Tlapa	53.53	328	P	P	07 13 48.2	-8.4
VNA1	Neumayer--Stat	53.63	158	P	P	07 13 58.7	+2.1
VNA2	Neumayer--Watz	53.98	158	P	P	07 14 00.9	+1.7
	baz=285,slow=8.7						
UNM	Universidad Na	55.35	328	IAMs_20	IAMs_20	07 32 06.5	
	comp=Z,11µm,21.0s						
SNAA	Sanae	55.57	159	P	P	07 14 11.9	+1.1
SNAA	Sanae	55.57	159	P	P	07 14 09.8	-1.0
	comp=Z,20nm,0.9s,baz=288,slow=9.1,SNR=15						
SNAA	Sanae	55.57	159	P	P	07 14 09.8	-1.0
SNAA	Sanae	55.57	159	⇓P	P	07 14 10.2	-0.6
SNAA	Sanae	55.57	159	P	P	07 14 09.8	-1.0
ASCN	Ascension	58.00	80	IAMs_20	IAMs_20	07 36 12.7	
	comp=Z,10µm,21.0s						
ZAIG	Zacatecas	59.89	327	P	P	07 14 34.8	-7.2
ZAIG				IAmb	IAmb	07 15 39.1	
	comp=Z,96nm,1.6s						
QSPA	South Pole Qui	60.56	180	P	P	07 14 45.0	-0.9
	comp=Z,7.1nm,0.7s,baz=102,slow=0.8,SNR=10						
QSPA	South Pole Qui	60.56	180	P	P	07 14 45.0	-0.9
QSPA				IAmb	IAmb	07 14 54.1	
	comp=Z,160nm,1.4s						
QSPA	South Pole Qui	60.56	180	IAMs_20	IAMs_20	07 42 29.3	
	comp=Z,9µm,20.0s						
456A	Hilliard	60.82	350	P	P	07 14 40.4	-7.4
456A				IAmb	IAmb	07 14 53.4	
	comp=Z,88nm,0.8s						
TIGA	Tifton	61.77	349	P	P	07 14 52.1	-2.2
	baz=169						
TIGA				S	S	07 23 16.8	+0.9
	baz=169						
TIGA	Tifton	61.77	349	P	P	07 14 47.4	-6.8
TIGA				IAmb	IAmb	07 15 00.4	
	comp=Z,113nm,1.4s						
SHEL	Horse Pasture	61.79	93	IAMs_20	IAMs_20	07 42 18.1	
	comp=Z,13µm,21.0s						
352A	Blakely	62.05	347	P	P	07 14 50.4	-5.7
255A	Hazlehurst	62.07	350	P	P	07 14 50.8	-5.4
255A				IAmb	IAmb	07 15 04.6	
	comp=Z,156nm,1.5s						
BBSR	BB Station	62.08	7	IAMs_20	IAMs_20	07 42 39.9	
	comp=Z,7µm,19.0s						
BRAL	Brewton	62.19	345	P	P	07 14 53.8	-3.3
	baz=166						
BRAL				S	S	07 23 20.5	-0.6
	baz=166						
BRAL	Brewton	62.19	345	P	P	07 14 52.2	-4.9
154A	Montrose	62.84	349	P	P	07 14 55.8	-5.6
NHSC	New Hope	62.92	352	P	P	07 15 00.6	-1.3
	baz=172,SNR=9.0						
NHSC				S	S	07 23 35.1	+4.9
	baz=172						
NHSC	New Hope	62.92	352	P	P	07 14 55.1	-6.8
346A	Big Creek Wild	62.97	343	P	P	07 14 56.9	-5.4
346A				IAmb	IAmb	07 15 12.0	
	comp=Z,107nm,0.9s						
152A	Waverly Hall	63.17	348	P	P	07 14 56.3	-7.3
344A	Westbrook Farm	63.36	342	P	P	07 14 58.7	-6.1
833A	Chaparral WMA,	63.36	333	P	P	07 15 03.3	-1.7
	baz=154,SNR=22						
833A				S	S	07 23 38.6	+2.7
	baz=154						
HKT	Hockley	63.52	337	⇓*e*P	P	07 15 02.7	-3.1
HKT				pmax	pmax		
	comp=Z,105nm,1.5s						
HKT				MLR	MLR		
	comp=Z,6µm,18.0s						
HKT	Hockley	63.52	337	⇑P	P	07 15 04.1	-1.7
HKT	Hockley	63.52	337	P	P	07 14 59.7	-6.1
HKT				IAmb	IAmb	07 15 15.5	
	comp=Z,73nm,1.2s						
GOGA	Godfrey	63.68	349	P	P	07 14 59.2	-7.7
GOGA				pmax	pmax		
	comp=Z,42nm,1.2s						
GOGA				MLR	MLR		
	comp=Z,4µm,21.0s						
GOGA	Godfrey	63.68	349	P	P	07 15 05.2	-1.8
	baz=169						
GOGA				S	S	07 23 38.1	-1.6
	baz=169						
GOGA	Godfrey	63.68	349	P	P	07 14 59.2	-7.8
342A	Flagon Creek P	63.73	341	P	P	07 15 01.1	-6.1
Y57A	Sumter	63.84	352	P	P	07 15 01.4	-6.6
Y57A				IAmb	IAmb	07 15 14.5	
	comp=Z,154nm,1.8s						
VBMS	Vicksburg	64.03	343	P	P	07 15 08.9	-0.3
	baz=162,SNR=13						
VBMS				S	S	07 23 45.0	+0.9
	baz=162						
VBMS	Vicksburg	64.03	343	IAMs_20	IAMs_20	07 42 56.5	
	comp=Z,9µm,19.0s						
X58A	Rowland	64.26	353	P	P	07 15 04.4	-6.3
X58A				IAmb	IAmb	07 15 16.2	
	comp=Z,54nm,0.7s						
SACV	Santiago Islan	64.34	53	IAMs_20	IAMs_20	07 42 47.7	
	comp=Z,10µm,19.0s						
Z47A	Carrollton	64.37	345	P	P	07 15 05.4	-6.0
Z47A				IAmb	IAmb	07 15 20.0	
	comp=Z,56nm,0.9s						
SLBS	Sierra La Lagu	64.42	321	P	P	07 15 04.0	-8.1
SLBS	Sierra La Lagu	64.42	321	IAMs_20	IAMs_20	07 42 54.6	
	comp=Z,11µm,18.0s						
NATX	Nacogdoches	64.80	339	P	P	07 15 12.7	-1.6
	baz=158						
NATX				S	S	07 23 58.6	+5.0
	baz=158						
NATX	Nacogdoches	64.80	339	IAMs_20	IAMs_20	07 43 15.0	
	comp=Z,7µm,21.0s						
CNNC	Cliffs of the	64.80	355	S	S	07 23 59.6	+6.0
	baz=175						
435B	Jarrell	64.89	336	P	P	07 15 14.1	-0.9
	baz=156						
435B				S	S	07 23 56.4	+1.5
	baz=156						
W57A	Gilead	64.92	353	P	P	07 15 09.0	-6.0
KMSC	Kings Mountain	65.07	352	P	P	07 15 14.7	-1.3
	baz=171,SNR=8.6						
KMSC				S	S	07 23 57.4	+0.5
	baz=171						
Y45A	Yeager Farm, C	65.35	344	P	P	07 15 11.4	-6.4
X48A	Hartselle	65.35	346	P	P	07 15 11.4	-6.4
X48A				IAmb	IAmb	07 15 26.9	
	comp=Z,88nm,0.9s						
JCT	Junction City	65.44	334	P	P	07 15 16.5	-2.1
	baz=154,SNR=35						
JCT				S	S	07 24 04.3	+2.6
	baz=154						
Z41A	Richland Creek	65.63	341	P	P	07 15 19.3	-0.4
	baz=160						
Z41A				S	S	07 24 07.7	+3.9
	baz=160						
TKL	Tuckaleechee C	65.93	349	P	P	07 15 18.6	-3.0
	comp=Z,24nm,1.0s,baz=169,slow=7.8,SNR=13						
TKL	Tuckaleechee C	65.93	349	P	P	07 15 14.5	-7.1
TKL				pmax	pmax		
	comp=Z,89nm,1.2s						
TKL	Tuckaleechee C	65.93	349	P	P	07 15 14.5	-7.0
TKL				IAmb	IAmb	07 15 40.2	
	comp=Z,89nm,1.1s						
WHTX	Lake Whitney,	65.94	336	P	P	07 15 20.6	-1.2
	baz=156,SNR=10						
WHTX				S	S	07 24 08.9	+1.2
	baz=156						
WHTX	Lake Whitney,	65.94	336	P	P	07 15 15.1	-6.7
TXAR	Lajitas Array	66.03	330	P	P	07 15 19.9	-2.6
	comp=Z,5.8nm,0.9s,baz=149,slow=8.1,SNR=18						
TXAR	Lajitas Array	66.03	330	P	P	07 15 15.0	-7.5
TXAR	Lajitas Array	66.03	330	P	P	07 15 15.0	-7.5
V52A	Sevierville	66.08	350	P	P	07 15 15.9	-6.6
PLAL	Pickwick Lake	66.08	346	P	P	07 15 16.3	-6.3
PLAL				IAmb	IAmb	07 15 48.5	
	comp=Z,69nm,1.2s						
PLAL				IAMs_20	IAMs_20	07 42 40.1	
	comp=Z,10µm,18.0s						
WLAR	White Oak Lake	66.12	341	P	P	07 15 16.6	-6.2
T59A	Double "B" Far	66.50	355	P	P	07 15 19.2	-5.9
TZTN	Tazewell	66.76	350	P	P	07 15 25.5	-1.4
	baz=169						
TZTN				S	S	07 24 16.8	-0.6
	baz=169						
TZTN	Tazewell	66.76	350	P	P	07 15 20.1	-6.8
TZTN				IAmb	IAmb	07 15 45.6	
	comp=Z,63nm,1.1s						
TAOE	Nuku Hiva Isla	66.78	273	*e*S	S	07 24 06.3	-13
	comp=Z,13µm,27.7s						
TAOE	Nuku Hiva Isla	66.78	273	*e*LR	LR	07 35 01.6	
	comp=Z,11µm,28.1s						
X40A	Basin Creek Fa	66.80	341	S	S	07 24 19.6	+1.7
	baz=161						
X40A	Basin Creek Fa	66.80	341	IAMs_20	IAMs_20	07 42 45.2	
	comp=Z,9µm,18.0s						
BLA	Blacksburg	67.00	353	S	S	07 24 20.8	+0.4
	baz=172						
MIAR	Mount Ida	67.06	341	P	P	07 15 27.9	-1.0
	baz=160,SNR=12						
MIAR				S	S	07 24 23.8	+2.7
	baz=160						
U49A	Red Boiling Sp	67.11	348	P	P	07 15 23.6	-5.5
U49A				IAmb	IAmb	07 15 37.5	
	comp=Z,64nm,1.1s						
WVT	Waverly	67.14	346	P	P	07 15 22.2	-7.1
WVT				pmax	pmax		
	comp=Z,65nm,1.0s						
WVT	Waverly	67.14	346	P	P	07 15 26.0	-3.2
	baz=165						
WVT				S	S	07 24 21.8	-0.2
	baz=165						
WVT	Waverly	67.14	346	P	P	07 15 22.2	-7.1
WVT				IAmb	IAmb	07 15 37.6	
	comp=Z,65nm,1.0s						
WVT	Waverly	67.14	346	IAMs_20	IAMs_20	07 43 11.1	
	comp=Z,9µm,22.0s						
W41B	Gary Mavity, V	67.28	342	P	P	07 15 27.3	-2.8
	baz=161						
W41B				S	S	07 24 24.4	+0.7
	baz=161						
ABTX	Abilene, Hawle	67.30	335	P	P	07 15 29.2	-1.2
	baz=154,SNR=19						
ABTX				S	S	07 24 26.5	+2.4
	baz=154						
ABTX	Abilene, Hawle	67.30	335	P	P	07 15 23.2	-7.2
SBA	Scott Base	67.33	191	P	P	07 15 27.0	-3.1
SBA				pmax	pmax		
	comp=Z,70nm,1.5s						
SBA	Scott Base	67.33	191	P	P	07 15 27.0	-3.1
SBA	Scott Base	67.33	191	IAMs_20	IAMs_20	07 42 33.5	
	comp=Z,8µm,19.0s						
WHAR	Wooly Hollow	67.40	342	P	P	07 15 23.9	-7.0
X37A	Clayton	67.64	339	IAMs_20	IAMs_20	07 42 50.3	
	comp=Z,10µm,20.0s						
CBN	Corbin Frederi	67.71	355	P	P	07 15 30.3	-2.6
	baz=175						
CBN				S	S	07 24 32.1	+3.3
	baz=175						
CBN	Corbin Frederi	67.71	355	IAMs_20	IAMs_20	07 43 02.4	
	comp=Z,6µm,18.0s						
W39A	Magazine	67.73	341	P	P	07 15 32.0	-1.0
	baz=160,SNR=18						
W39A				S	S	07 24 30.3	+1.2
	baz=160						
W39A	Magazine	67.73	341	P	P	07 15 25.9	-7.1
W39A				IAmb	IAmb	07 15 42.5	
	comp=Z,107nm,1.1s						
LCAR	Lake Charles	67.84	343	P	P	07 15 27.2	-6.6
LCAR				IAmb	IAmb	07 15 42.2	
	comp=Z,59nm,0.9s						
R55A	Marlinton	68.03	353	P	P	07 15 28.1	-6.9
VNDA	Vanda	68.36	191	P	P	07 15 37.5	+0.9
	comp=Z,6.1nm,1.1s,baz=137,slow=5.5,SNR=10.0						
VNDA	Vanda	68.36	191	P	P	07 15 33.3	-3.3
VNDA				pmax	pmax		
	comp=Z,38nm,1.4s						
VNDA	Vanda	68.36	191	P	P	07 15 33.3	-3.3
TBI	Tubuai	68.49	255	*e*S	S	07 24 28.2	-11
	comp=Z,3µm,23.5s						
TBI				*e*LQ	LQ	07 32 58.3	
	comp=Z,4µm,35.2s						
TBI				*e*LR	LR	07 35 50.0	
	comp=Z,12µm,28.8s						
TBI	Tubuai	68.49	255	*e*T	T	08 28 51.6	
	comp=Z,6.6nm,0.2s						
U40A	Yellville	68.56	342	P	P	07 15 35.5	-2.7
	baz=161,SNR=18						
U40A				S	S	07 24 39.2	+0.2
	baz=161						
MBO	M'Bour	68.74	58	IAMs_20	IAMs_20	07 46 56.2	
	comp=Z,10µm,18.0s						
HHAR	Hobbs	68.79	341	P	P	07 15 33.3	-6.4
HHAR				IAmb	IAmb	07 15 48.4	
	comp=Z,64nm,1.0s						
MNTX	Cornudas Mount	68.81	330	P	P	07 15 36.7	-3.2
	baz=149,SNR=19						
MNTX				S	S	07 24 45.7	+3.4
	baz=149						
MNTX	Cornudas Mount	68.81	330	P	P	07 15 33.7	-6.3
MNTX				IAMs_20	IAMs_20	07 43 24.6	
	comp=Z,10µm,19.0s						
WCI	Wyandotte Cave	68.87	348	P	P	07 15 32.4	-7.7
WCI				pmax	pmax		
	comp=Z,69nm,1.1s						
WCI	Wyandotte Cave	68.87	348	P	P	07 15 36.4	-3.7
	baz=167						
WCI				S	S	07 24 41.1	-1.4
	baz=167						
WCI	Wyandotte Cave	68.87	348	P	P	07 15 32.4	-7.7
WCI				IAmb	IAmb	07 16 07.0	
	comp=Z,69nm,1.1s						
WMOK	Wichita Mounta	68.89	336	P	P	07 15 38.7	-1.7
	baz=155,SNR=18						
WMOK				S	S	07 24 45.9	+2.8
	baz=155						
WMOK	Wichita Mounta	68.89	336	IAMs_20	IAMs_20	07 42 57.2	
	comp=Z,8µm,20.0s						
TUL1	Leonard	68.99	339	P	P	07 15 38.0	-2.9
	baz=158,SNR=15						
TUL1				S	S	07 24 45.1	+1.0
	baz=158						
TUL1	Leonard	68.99	339	P	P	07 15 33.2	-7.7
TUL1				IAmb	IAmb	07 15 50.0	
	comp=Z,81nm,0.9s						
OKCFA	Oklahoma City	69.06	338	P	P	07 15 36.1	-5.3
OKCFA				IAmb	IAmb	07 15 50.5	
	comp=Z,71nm,1.1s						
U38A	Gravette	69.06	341	P	P	07 15 37.1	-4.3
OK025	Westminster Rd	69.17	338		P	07 15 34.9	-7.2
OK025				IAmb	IAmb	07 15 51.0	
	comp=Z,103nm,1.0s						
P60A	Greenville	69.21	357	S	S	07 24 52.2	+5.7
	baz=177						
OK030	Cody Creek RV	69.31	339	P	P	07 15 36.5	-6.4
OK030				IAmb	IAmb	07 15 51.4	
	comp=Z,74nm,1.1s						
OK031	S. Brethren Rd	69.36	339		P	07 15 35.6	-7.6
OK031				IAmb	IAmb	07 15 49.5	
	comp=Z,90nm,1.1s						
MCWV	Mont Chateau	69.36	353	P	P	07 15 40.2	-2.9
	baz=173						
MCWV				S	S	07 24 52.8	+4.4
	baz=173						
MCWV	Mont Chateau	69.36	353	IAMs_20	IAMs_20	07 49 04.9	
	comp=Z,6µm,20.0s						
EPT	El Paso	69.37	329	IAMs_20	IAMs_20	07 43 25.4	
	comp=Z,9µm,21.0s						
OK029	Liberty Lake	69.41	338		P	07 15 36.6	-6.9
OK029				IAmb	IAmb	07 15 52.6	
	comp=Z,77nm,1.1s						
P52A	Corning	69.60	352	P	P	07 15 43.2	-1.4
	baz=171,SNR=9.5						
P52A				S	S	07 24 51.7	+0.5
	baz=171						
P52A	Corning	69.60	352	IAMs_20	IAMs_20	07 43 00.9	
	comp=Z,10µm,20.0s						
MSTX	Muleshoe	69.69	333	P	P	07 15 43.0	-2.4
	baz=152,SNR=28						
MSTX				S	S	07 24 56.3	+3.6
	baz=152						
OLIL	Olney	69.70	347	P	P	07 15 38.1	-7.1
CCM	Cathedral Cave	69.75	344	P	P	07 15 42.9	-2.7
	baz=162						
CCM				S	S	07 24 54.2	+1.2
	baz=162						
CCM	Cathedral Cave	69.75	344	IAMs_20	IAMs_20	07 42 53.1	
	comp=Z,6µm,18.0s						
O56A	Blue Knob Stat	69.85	355	P	P	07 15 44.6	-1.6
	baz=174						
O56A				S	S	07 25 00.1	+5.8
	baz=174						
SYO	Syowa Base	69.86	159	⇑*e*pP	P	07 15 43.5	-2.4
SYO	Syowa Base	69.86	159	⇓*e*X	P	07 15 50.8	+4.9
P49A	Miami Univ. Ec	69.87	349	P	P	07 15 43.5	-2.8
	baz=168						
P49A				S	S	07 24 53.9	-0.4
	baz=168						
AMTX	Amarillo	70.08	334	P	P	07 15 47.0	-0.8
	baz=153						
AMTX				S	S	07 24 59.2	+2.0
	baz=153						
O53A	New Philadelph	70.09	352	P	P	07 15 46.1	-1.5
	baz=172						
O53A				S	S	07 24 59.6	+2.6
	baz=172						
O53A	New Philadelph	70.09	352	IAMs_20	IAMs_20	07 45 50.1	
	comp=Z,7µm,22.0s						
SSPA	Standing Stone	70.17	355	P	P	07 15 47.5	-0.6
	baz=175						
SSPA				S	S	07 25 00.8	+3.0
	baz=175						
SSPA	Standing Stone	70.17	355	⇑P	P	07 15 47.8	-0.2
SSPA	Standing Stone	70.17	355	IAMs_20	IAMs_20	07 43 00.3	
	comp=Z,6µm,18.0s						
ACSO	Alum Creek Sta	70.30	351	P	P	07 15 46.0	-2.9
	baz=170						
ACSO				S	S	07 24 58.1	-1.3
	baz=170						
ACSO	Alum Creek Sta	70.30	351	IAMs_20	IAMs_20	07 43 05.3	
	comp=Z,9µm,22.0s						
N59A	State Game Lan	70.32	357	P	P	07 15 48.7	-0.3
	baz=177						
N59A				S	S	07 25 05.5	+5.9
	baz=177						
N59A	State Game Lan	70.32	357	IAMs_20	IAMs_20	07 43 06.6	
	comp=Z,12µm,20.0s						
PAL	Palisades	70.34	358	S	S	07 25 04.9	+5.1
	baz=178						
121A	Cookes Peak, D	70.59	328	P	P	07 15 49.7	-1.4
	baz=148,SNR=8.8						
121A				S	S	07 25 05.7	+2.1
	baz=148						
YLE	Yale	70.63	359	IAMs_20	IAMs_20	07 43 20.4	
	comp=Z,6µm,18.0s						
N54A	Moraine State	70.67	354	P	P	07 15 50.0	-1.1
	baz=173						
N54A				S	S	07 25 05.0	+1.4
	baz=173						
N54A	Moraine State	70.67	354	IAMs_20	IAMs_20	07 43 34.5	
	comp=Z,6µm,19.0s						
TIAR	Tiarei	70.83	260	*e*P	P	07 15 47.5	-5.3
	comp=Z,13nm,1.0s						
PAE	Paea	70.98	260	*e*P	P	07 15 48.0	-5.7
	comp=Z,50nm,1.2s						
PPTF	Pamatai, Papee	71.00	260	IAMs_20	IAMs_20	07 52 28.2	
	comp=Z,11µm,22.0s						
PPT2	Papeete2	71.01	260	*e*P	P	07 15 48.3	-5.7
	comp=Z,220nm,1.3s						
PPT2				*e*S	S	07 24 57.1	-12
	comp=Z,5µm,24.2s						
PPT2				*e*LQ	LQ	07 33 59.1	
	comp=Z,4µm,28.2s						
PPT2				*e*LR	LR	07 36 59.3	
	comp=Z,18µm,23.2s						
SFIN	Lafayette	71.10	348	P	P	07 15 51.9	-1.9
	baz=166						
SFIN				S	S	07 25 05.1	-3.5
	baz=166						
O44A	Mansfield	71.14	347	P	P	07 15 47.5	-6.6
O44A				IAmb	IAmb	07 16 19.8	
	comp=Z,86nm,1.2s						
N49A	Columbus Grove	71.15	350	P	P	07 15 47.4	-6.6
M54A	Oil Creek Stat	71.18	354	P	P	07 15 53.4	-0.9
	baz=173						
M54A				S	S	07 25 11.3	+1.7
	baz=173						
M53A	WI Miller and	71.21	353	P	P	07 15 53.4	-1.0
	baz=172						
M53A				S	S	07 25 12.8	+2.8
	baz=172						
M53A	WI Miller and	71.21	353	IAMs_20	IAMs_20	07 43 10.8	
	comp=Z,9µm,18.0s						
BRYW	Bryant College	71.23	0	IAMs_20	IAMs_20	07 43 12.2	
	comp=Z,12µm,22.0s						
N47A	Urbana	71.34	349	P	P	07 15 48.5	-6.8

N47A				IAmb	IAmb	07 16 00.9	
	comp=Z,182nm,1.4s						
Y22D	**IRIS PASSCAL I**	**71.51**	**330**	S	**S**	**07 25 21.5**	**+7.5**
	baz=149						
Y22D	**IRIS PASSCAL I**	**71.51**	**330**	IAMs_20	IAMs_20	07 43 44.0	
	comp=Z,10µm,21.0s						
BINY	**Binghamton**	**71.61**	**357**	P	**P**	**07 15 56.5**	**-0.4**
	baz=177						
BINY				S	**S**	**07 25 19.2**	**+4.7**
	baz=177						
L56A	**Greenwood**	**71.64**	**356**	P	P	07 15 50.4	-6.6
BCX	**Boston College**	**71.65**	**1**	IAMs_20	IAMs_20	07 43 14.3	
	comp=Z,10µm,19.0s						
HDIL	**Hopedale**	**71.70**	**346**	P	**P**	**07 15 54.8**	**-2.6**
	baz=164						
HDIL				S	**S**	**07 25 15.6**	**0.0**
	baz=164						
HDIL	**Hopedale**	**71.70**	**346**	IAMs_20	IAMs_20	07 53 05.9	
	comp=Z,6µm,20.0s						
L61B	**Northampton**	**71.76**	**359**	P	**P**	**07 15 56.0**	**-1.7**
	baz=180						
L61B				S	**S**	**07 25 21.7**	**+5.5**
	baz=180						
ERPA	**Erie**	**71.81**	**354**	S	**S**	**07 25 18.0**	**+1.2**
	baz=173						
HRV	**Adam Dziewonsk**	**71.82**	**0**	P	**P**	**07 15 58.5**	**+0.5**
	baz=181						
HRV				S	**S**	**07 25 23.1**	**+6.3**
	baz=181						
HRV	**Adam Dziewonsk**	**71.82**	**0**	IAMs_20	IAMs_20	07 52 44.7	
	comp=Z,8µm,21.0s						
TUC	**Tucson**	**71.83**	**326**	P	**P**	**07 15 56.8**	**-1.7**
	baz=145						
TUC				S	**S**	**07 25 19.7**	**+2.1**
	baz=145						
TUC	**Tucson**	**71.83**	**326**	⇑P	**P**	**07 15 58.4**	**0.0**
TUC	**Tucson**	**71.83**	**326**	IAMs_20	IAMs_20	07 43 41.1	
	comp=Z,6µm,22.0s						
WVNY	**West Valley, N**	**71.98**	**355**	P	P	07 15 52.5	-6.6
WVNY				IAmb	IAmb	07 16 18.9	
	comp=Z,119nm,1.1s						
ANMO	**Albuquerque**	**72.05**	**331**	*de*P	**P**	**07 15 59.1**	**-0.8**
ANMO				pmax	pmax		
	comp=Z,42nm,1.3s						
ANMO				MLR	MLR		
	comp=Z,6µm,13.0s						
ANMO	**Albuquerque**	**72.05**	**331**	P	**P**	**07 15 58.6**	**-1.3**
	baz=149						
ANMO				S	**S**	**07 25 22.3**	**+2.0**
	baz=149						
ANMO	**Albuquerque**	**72.05**	**331**	⇑P	**P**	**07 15 59.4**	**-0.5**
ANMO	**Albuquerque**	**72.05**	**331**	P	P	07 15 52.5	-7.3
ANMO	**Albuquerque**	**72.05**	**331**	IAMs_20	IAMs_20	07 43 58.4	
	comp=Z,8µm,19.0s						
TRY	**Troy**	**72.06**	**359**	IAMs_20	IAMs_20	07 43 16.9	
	comp=Z,11µm,21.0s						
KSU1	**Kansas State U**	**72.18**	**340**	S	**S**	**07 25 20.6**	**-0.7**
	baz=158						
KSU1	**Kansas State U**	**72.18**	**340**	P	P	07 15 52.6	-7.8
AAM	**Ann Arbor**	**72.42**	**351**	P	**P**	**07 16 00.2**	**-1.5**
	baz=170						
AAM				S	**S**	**07 25 24.3**	**+0.5**
	baz=170						
AAM	**Ann Arbor**	**72.42**	**351**	IAMs_20	IAMs_20	07 43 12.6	
	comp=Z,7µm,22.0s						
214A	**Organ Pipe Nat**	**72.55**	**324**	P	**P**	**07 16 03.2**	**+0.5**
	baz=144						
214A				S	**SKiKP**	**07 25 30.7**	**-5.4**
	baz=144						
214A	**Organ Pipe Nat**	**72.55**	**324**	P	P	07 15 55.6	-7.1
214A				IAmb	IAmb	07 16 10.6	
	comp=Z,99nm,1.4s						
CBKS	**Cedar Bluff**	**72.90**	**338**	P	**P**	**07 16 01.9**	**-2.8**
	baz=155						
CBKS				S	**S**	**07 25 32.1**	**+2.5**
	baz=155						
L44A	**Lake County Fo**	**72.99**	**348**	S	**S**	**07 25 32.4**	**+2.1**
	baz=166						
T25A	**Trinidad**	**73.11**	**333**	P	**P**	**07 16 04.7**	**-1.4**
	baz=151,SNR=18						
T25A				S	**SKiKP**	**07 25 37.9**	**+1.0**
	baz=151						
T25A	**Trinidad**	**73.11**	**333**	IAMs_20	IAMs_20	07 54 06.5	
	comp=Z,8µm,18.0s						
LIC	**Lamto**	**73.35**	**73**	*e*PKP2	**P**	**07 16 05.2**	**-2.7**
	comp=Z,122nm,1.3s						
LBNH	**Lisbon**	**73.55**	**360**	P	**P**	**07 16 08.7**	**+0.4**
	baz=180						
LBNH				S	**SKiKP**	**07 25 42.4**	**+5.3**
	baz=180						
TIC	**Toumodi**	**73.58**	**72**	*e*PKP2	**P**	**07 16 06.3**	**-3.0**
W18A	**Petrified Fore**	**73.64**	**328**	P	**P**	**07 16 08.3**	**-1.0**
	baz=146						
W18A				S	**S**	**07 25 43.8**	**+5.4**
	baz=146						
KIC	**Kosan Boka**	**73.66**	**73**	*e*PKP2	**P**	**07 16 06.5**	**-3.2**
	comp=Z,54nm,0.8s						
DBIC	**Dimbokro**	**73.73**	**72**	P	**P**	**07 16 09.0**	**-1.1**
	comp=Z,13nm,0.6s,baz=253,slow=5.6,SNR=16						
DBIC	**Dimbokro**	**73.73**	**72**	P	**P**	**07 16 06.7**	**-3.4**
DBIC				pmax	pmax		
	comp=Z,82nm,1.1s						
DBIC	**Dimbokro**	**73.73**	**72**	⇑P	**P**	**07 16 11.3**	**+1.2**
DBIC	**Dimbokro**	**73.73**	**72**	P	**P**	**07 16 06.7**	**-3.4**
DBIC				IAmb	IAmb	07 16 34.0	
	comp=Z,82nm,1.1s						
SCIA	**State Center**	**73.88**	**344**	S	**S**	**07 25 42.1**	**+1.7**
	baz=161						
SCIA	**State Center**	**73.88**	**344**	IAMs_20	IAMs_20	07 43 27.5	
	comp=Z,11µm,22.0s						
LONY	**Lake Ozonia**	**73.97**	**358**	P	**P**	**07 16 10.3**	**-0.5**
	baz=178						
LONY				S	**S**	**07 25 45.4**	**+4.1**
	baz=178						
LONY	**Lake Ozonia**	**73.97**	**358**	IAMs_20	IAMs_20	07 43 28.4	
	comp=Z,10µm,19.0s						
SDCO	**Great Sand Dun**	**74.06**	**333**	P	**P**	**07 16 10.4**	**-1.5**
	baz=150,SNR=15						
SDCO				S	**S**	**07 25 43.8**	**+0.5**
	baz=150						
SDCO	**Great Sand Dun**	**74.06**	**333**	P	P	07 16 05.0	-6.8
SDCO				IAMs_20	IAMs_20	07 43 29.8	
	comp=Z,8µm,20.0s						
KSCO	**Kaye Shedlock’**	**74.08**	**336**	P	**P**	**07 16 11.8**	**+0.1**
	baz=153						
KSCO				S	**S**	**07 25 46.3**	**+3.2**
	baz=153						
EMMW	**East Machias**	**74.13**	**3**	IAMs_20	IAMs_20	07 46 42.4	
	comp=Z,5µm,20.0s						
JFWS	**Jewell Farm**	**74.17**	**346**	P	**P**	**07 16 11.3**	**-0.6**
	baz=164						
JFWS				S	**S**	**07 25 45.3**	**+1.7**
	baz=164						
JFWS	**Jewell Farm**	**74.17**	**346**	IAMs_20	IAMs_20	07 53 08.1	
	comp=Z,7µm,21.0s						
SADO	**Sadowa**	**74.37**	**355**	⇑P	**P**	**07 16 12.5**	**-0.6**
GLA	**Glamis**	**74.45**	**324**	S	**S**	**07 25 52.4**	**+5.1**
	baz=142						
S22A	**4UR Ranch, Cre**	**74.60**	**332**	P	**P**	**07 16 14.8**	**-0.2**
	baz=149,SNR=10						
S22A				S	**S**	**07 25 53.3**	**+4.1**
	baz=149						
PKME	**Peaks-Kenny Pk**	**74.61**	**2**	S	**S**	**07 25 55.1**	**+6.7**
	baz=183						
WUAZ	**Wupatki**	**74.73**	**327**	P	**P**	**07 16 14.2**	**-1.4**
	baz=145,SNR=13						
WUAZ				S	**S**	**07 25 54.5**	**+4.0**
	baz=145						
WUAZ	**Wupatki**	**74.73**	**327**	⇑P	**P**	**07 16 15.9**	**+0.3**
BGNE	**Belgrade**	**74.76**	**340**	P	**P**	**07 16 15.1**	**-0.4**
	baz=157						
BGNE				S	**S**	**07 25 53.4**	**+2.9**
	baz=157						
IKP	**In-Ko-Pah, Jac**	**74.81**	**322**	P	**P**	**07 16 16.4**	**+0.3**
	baz=141						
IKP				S	**S**	**07 25 57.7**	**+6.4**
	baz=141						
MVCO	**Mesa Verde**	**74.84**	**330**	P	**P**	**07 16 15.7**	**-0.6**
	baz=148,SNR=17						
MVCO				S	**S**	**07 25 56.2**	**+4.3**
	baz=148						
MVCO	**Mesa Verde**	**74.84**	**330**	IAMs_20	IAMs_20	07 44 35.3	
	comp=Z,6µm,19.0s						
SWSC	**Sam W. Stewart**	**74.87**	**323**	P	**P**	**07 16 16.8**	**+0.5**
	baz=142						
Q24A	**Divide**	**74.98**	**334**	P	**P**	**07 16 15.8**	**-1.4**
	baz=151,SNR=17						
Q24A				S	**S**	**07 25 57.5**	**+4.0**
	baz=151						
PDMCI	**Parker Dam,Lak**	**75.09**	**325**	S	**S**	**07 26 01.2**	**+6.9**
	baz=143						
MONP2	**Monument Peak**	**75.16**	**322**	P	**P**	**07 16 15.9**	**-2.3**
	baz=141						
MONP2				S	**S**	**07 25 60.0**	**+4.4**
	baz=141						
BC3	**Big Chuckawall**	**75.25**	**324**	P	**P**	**07 16 17.8**	**-0.8**
	baz=142						
BC3				S	**S**	**07 26 03.5**	**+7.2**
	baz=142						
IRM	**Iron Mountain**	**75.48**	**324**	P	**P**	**07 16 18.4**	**-1.4**
	baz=142						
IRM				S	**S**	**07 26 02.7**	**+4.0**
	baz=142						
109C	**Camp Elliot, M**	**75.52**	**322**	S	**S**	**07 26 04.6**	**+5.5**
	baz=141						
109C	**Camp Elliot, M**	**75.52**	**322**	IAMs_20	IAMs_20	07 43 36.8	
	comp=Z,7µm,19.0s						
OGNE	**Ogallala**	**75.59**	**337**	S	**S**	**07 26 06.8**	**+7.1**
	baz=154						
NEE2	**Needles Airpor**	**75.70**	**325**	S	**S**	**07 26 06.5**	**+5.5**
	baz=143						
TPFO	**Pinon Flats**	**75.73**	**323**	P	**P**	**07 16 21.7**	**+0.3**
	baz=141						
PFO	**Pinyon Flats O**	**75.74**	**323**	P	**P**	**07 16 21.8**	**+0.4**
	baz=141						
PFO				S	**S**	**07 26 07.5**	**+5.8**
	baz=141						
PFO	**Pinyon Flats O**	**75.74**	**323**	IAMs_20	IAMs_20	07 44 03.4	
	comp=Z,6µm,19.0s						
BELC	**Belle Mtn. Jos**	**75.80**	**323**	P	**P**	**07 16 21.6**	**-0.2**
	baz=142						
BELC				S	**S**	**07 26 10.0**	**+7.5**
	baz=142						
SMCO	**Snowmass**	**75.88**	**333**	⇑P	**P**	**07 16 21.4**	**-1.1**
SMCO	**Snowmass**	**75.88**	**333**	IAMs_20	IAMs_20	07 55 17.9	
	comp=Z,5µm,18.0s						
ISCO	**Idaho Springs**	**75.88**	**334**	P	**P**	**07 16 21.1**	**-1.3**
	baz=150,SNR=19						
ISCO				S	**S**	**07 26 09.6**	**+6.1**
	baz=150						
MURC	**Murrieta**	**76.12**	**322**	P	**P**	**07 16 22.2**	**-1.3**
	baz=141						
MURC				S	**S**	**07 26 10.5**	**+4.7**
	baz=141						
GMRC	**Granite Mounta**	**76.24**	**324**	P	**P**	**07 16 24.4**	**+0.1**
	baz=142,SNR=8.9						
GMRC				S	**S**	**07 26 11.9**	**+4.7**
	baz=142						
D62A	**Allapoint, All**	**76.44**	**2**	P	P	07 16 19.6	-5.3
ECSD	**EROS Data Cent**	**76.47**	**342**	P	**P**	**07 16 22.8**	**-2.4**
	baz=158,SNR=22						
ECSD				S	**S**	**07 26 10.7**	**+1.6**
	baz=158						
ECSD	**EROS Data Cent**	**76.47**	**342**	P	P	07 16 18.7	-6.5
ECSD				IAmb	IAmb	07 16 31.9	
	comp=Z,145nm,1.4s						
BBRC	**Big Bear Solar**	**76.48**	**323**	S	**S**	**07 26 15.1**	**+5.0**
	baz=141						
HEC	**Hector,Ludlow**	**76.62**	**324**	P	**P**	**07 16 25.3**	**-1.1**
	baz=142,SNR=25						
HEC				S	**S**	**07 26 17.0**	**+5.7**
	baz=142						
CIS	**Catalina Islan**	**76.62**	**321**	S	**S**	**07 26 15.2**	**+3.9**
	baz=140						
FMP	**Fort Macarthur**	**76.79**	**322**	S	S	07 26 23.6	+11
	baz=140						
BFSC	**Mount Baldy Ra**	**76.85**	**322**	P	**P**	**07 16 27.5**	**-0.2**
	baz=140						
BFSC				S	S	07 26 23.4	+9.3
	baz=140						
SUR	**Sutherland**	**76.86**	**120**	IAMs_20	IAMs_20	07 43 21.2	
	comp=Z,12µm,21.0s						
TUQ	**Turquoise Moun**	**76.88**	**324**	S	**S**	**07 26 21.3**	**+7.1**
	baz=142						
SPMN	**Marine on St.**	**76.92**	**345**	P	**P**	**07 16 26.8**	**-0.9**
	baz=162						
SPMN				S	**S**	**07 26 16.8**	**+2.8**
	baz=162						
N23A	**Red Feather La**	**76.96**	**334**	P	**P**	**07 16 26.9**	**-1.5**
	baz=150						
N23A				S	**S**	**07 26 21.6**	**+6.4**
	baz=150						
RRX	**Edison Barstow**	**77.00**	**323**	S	**S**	**07 26 21.8**	**+6.5**
	baz=141						
COWI	**Conover**	**77.01**	**348**	IAMs_20	IAMs_20	07 53 36.6	
	comp=Z,6µm,21.0s						
PASC	**Pasadena Art C**	**77.08**	**322**	IAMs_20	IAMs_20	07 47 18.1	
	comp=Z,5µm,19.0s						
O20A	**White River Ci**	**77.21**	**332**	P	**P**	**07 16 29.7**	**0.0**
	baz=148,SNR=16						
O20A				S	**S**	**07 26 24.4**	**+6.6**
	baz=148						
DECC	**Green Verdugo**	**77.22**	**322**	S	**S**	**07 26 24.1**	**+6.3**
	baz=140						
GSC	**Goldstone, Bar**	**77.23**	**324**	P	**P**	**07 16 30.2**	**+0.4**
	baz=141						
MAW	**Mawson**	**77.30**	**164**	P	**P**	**07 16 28.7**	**-1.0**
	comp=Z,8.4nm,1.2s,baz=217,slow=5.6,SNR=8.0						
MAW	**Mawson**	**77.30**	**164**	P	**P**	**07 16 25.9**	**-3.8**
MAW				pmax	pmax		
	comp=Z,19nm,1.4s						
MAW	**Mawson**	**77.30**	**164**	⇓P	**P**	**07 16 29.2**	**-0.5**
MAW	**Mawson**	**77.30**	**164**	P	**P**	**07 16 25.9**	**-3.8**
SHOC	**Shoshone, Teco**	**77.42**	**324**	P	**P**	**07 16 31.1**	**+0.3**
	baz=142						
SHOC				S	**S**	**07 26 23.1**	**+3.2**
	baz=142						
EDW2	**Edwards Air Fo**	**77.52**	**323**	P	**P**	**07 16 30.9**	**-0.5**
	baz=140						
EDW2				S	**S**	**07 26 23.6**	**+2.5**
	baz=140						
OSI	**Osito Audit: C**	**77.71**	**322**	S	**S**	**07 26 28.7**	**+5.6**
	baz=140						
SUSD	**Miller**	**77.78**	**341**	P	**P**	**07 16 34.8**	**+2.2**
	baz=156						
SUSD				S	**S**	**07 26 28.6**	**+5.2**
	baz=156						
LRMC	**Laurel Mtn Rad**	**77.82**	**323**	P	**P**	**07 16 32.7**	**-0.4**
	baz=141						
LRMC				S	**S**	**07 26 28.8**	**+4.4**
	baz=141						
PRN	**Pahroc Range**	**78.00**	**326**	⇑P	**P**	**07 16 33.3**	**-0.8**
RAR	**Rarotonga**	**78.02**	**252**	LR	LR	07 42 18.1	
	comp=Z,5µm,19.3s,baz=118,slow=29						
RAR	**Rarotonga**	**78.02**	**252**	IAMs_20	IAMs_20	07 54 25.7	
	comp=Z,12µm,18.0s						
SBC	**Santa Barbara**	**78.11**	**321**	S	**S**	**07 26 31.0**	**+3.7**
	baz=139						
ARVC	**Arvin**	**78.15**	**322**	S	**S**	**07 26 33.7**	**+5.9**
	baz=140						
FURC	**Furnace Creek,**	**78.16**	**324**	P	**P**	**07 16 35.3**	**+0.5**
	baz=141,SNR=9.8						
ISA	**Isabella, Lake**	**78.37**	**323**	P	**P**	**07 16 36.5**	**+0.4**
	baz=140,SNR=15						
ISA				S	**S**	**07 26 37.2**	**+7.0**
	baz=140						
PKM	**Mcpherson Peak**	**78.50**	**322**	P	**P**	**07 16 35.8**	**-1.3**
	baz=139						
PKM				S	**S**	**07 26 38.3**	**+6.4**
	baz=139						
K22A	**Casper**	**78.69**	**335**	P	**P**	**07 16 38.1**	**+0.2**
	baz=150,SNR=18						
K22A				S	**S**	**07 26 39.9**	**+6.3**
	baz=150						
CWC	**Cottonwood Cre**	**78.76**	**324**	P	**P**	**07 16 37.3**	**-1.1**
	baz=140						
CWC				S	**S**	**07 26 37.7**	**+3.1**
	baz=140						
KOWA	**Kowa**	**78.78**	**66**	⇑P	**P**	**07 16 37.4**	**-1.3**
KOWA	**Kowa**	**78.78**	**66**	P	P	07 16 33.7	-5.0
KOWA				IAmb	IAmb	07 17 10.8	
	comp=Z,109nm,1.1s						
GRAC	**Grapevine Rang**	**78.83**	**324**	P	**P**	**07 16 38.9**	**+0.3**
	baz=141						
GRAC				S	**S**	**07 26 42.8**	**+7.7**
	baz=141						
VES	**Vestal, Richgr**	**78.83**	**323**	P	**P**	**07 16 38.5**	**-0.1**
	baz=140,SNR=14						
VES				S	**S**	**07 26 41.8**	**+6.8**
	baz=140						
SMMC	**Simmler**	**78.92**	**322**	P	**P**	**07 16 39.4**	**+0.3**
	baz=139						
SMMC				S	**S**	**07 26 42.2**	**+6.1**
	baz=139						
R11A	**Troy Canyon, C**	**79.00**	**326**	P	**P**	**07 16 38.4**	**-1.2**
	baz=142,SNR=19						
R11A				S	**S**	**07 26 41.2**	**+4.1**
	baz=142						
RSSD	**Black Hills**	**79.09**	**337**	P	**P**	**07 16 38.1**	**-1.9**
	baz=152						
RSSD				S	**S**	**07 26 42.1**	**+4.2**
	baz=152						
DUG	**Dugway, Tooele**	**79.20**	**329**	P	**P**	**07 16 39.2**	**-1.5**
	baz=145,SNR=15						
DUG				S	**S**	**07 26 44.3**	**+5.3**
	baz=145						
DUG	**Dugway, Tooele**	**79.20**	**329**	IAMs_20	IAMs_20	07 47 23.5	
	comp=Z,9µm,22.0s						
EYMN	**Ely**	**79.23**	**347**	S	**S**	**07 26 38.1**	**-0.7**
	baz=163						
TIN	**Tinemaha, Big**	**79.31**	**324**	P	**P**	**07 16 41.3**	**0.0**
	baz=140						
TIN				S	**S**	**07 26 44.4**	**+4.1**
	baz=140						
HWUT	**Hardware Ranch**	**79.81**	**331**	IAMs_20	IAMs_20	07 47 41.8	
	comp=Z,6µm,21.0s						
BW06	**Boulder Array**	**79.96**	**333**	P	**P**	**07 16 42.3**	**-2.5**
	baz=148,SNR=14						
BW06				S	**S**	**07 26 49.2**	**+2.0**
	baz=148						
BW06	**Boulder Array**	**79.96**	**333**	IAMs_20	IAMs_20	07 44 00.8	
	comp=Z,8µm,22.0s						
PD31	**Pinedale Array**	**79.96**	**333**	⇓p	P	07 16 48.9	+4.1
PDAR	**Pinedale Array**	**79.96**	**333**	P	**P**	**07 16 42.2**	**-2.6**
	comp=Z,1.7nm,0.6s,baz=140,slow=7.7,SNR=11						
MLAC	**Mammoth, Mammo**	**80.06**	**324**	P	**P**	**07 16 44.4**	**-1.1**
	baz=140						
TSUM	**Tsumeb**	**80.32**	**107**	⇑P	**P**	**07 16 50.5**	**+3.1**
TSUM	**Tsumeb**	**80.32**	**107**	P	**P**	**07 16 43.6**	**-3.7**
TSUM				IAmb	IAmb	07 17 12.4	
	comp=Z,114nm,1.3s						
TSUM	**Tsumeb**	**80.32**	**107**	IAMs_20	IAMs_20	07 55 53.5	
	comp=Z,9µm,21.0s						
NVAR	**Mina Array Bea**	**80.40**	**325**	P	**P**	**07 16 45.8**	**-1.6**
	comp=Z,4.5nm,0.9s,baz=172,slow=3.5,SNR=14						
AGMN	**Agassiz Nation**	**80.53**	**344**	P	**P**	**07 16 44.8**	**-2.7**
	baz=159						
AGMN				S	**S**	**07 26 50.8**	**-1.6**
	baz=159						
AHID	**Auburn Hatcher**	**80.58**	**332**	IAMs_20	IAMs_20	07 44 04.2	
	comp=Z,8µm,22.0s						
ELK	**Elko**	**80.74**	**328**	LR	LR	07 48 59.3	
	comp=Z,4µm,19.0s,baz=130,slow=33						
SAO	**San Andreas Ge**	**80.78**	**322**	IAMs_20	IAMs_20	07 55 36.0	
	comp=Z,9µm,20.0s						
PMOZ	**Porto Moniz, M**	**80.93**	**44**	*e*S	S	07 27 11.4	+14
REDW	**Red Top Meadow**	**80.97**	**332**	IAMs_20	IAMs_20	07 54 21.7	
	comp=Z,4µm,18.0s						
SNOW	**Snow King Moun**	**81.02**	**332**	IAMs_20	IAMs_20	07 44 06.9	
	comp=Z,9µm,22.0s						
MDND	**Maddock**	**81.07**	**342**	P	**P**	**07 16 48.2**	**-2.2**
	baz=156						
MDND				S	**S**	**07 26 59.7**	**+1.5**
	baz=156						
LOHW	**Long Hollow**	**81.08**	**333**	IAMs_20	IAMs_20	07 55 51.6	
	comp=Z,8µm,19.0s						
TPAW	**Teton Pass**	**81.12**	**332**	IAMs_20	IAMs_20	07 44 06.6	
	comp=Z,7µm,18.0s						
CMB	**Columbia Colle**	**81.17**	**323**	IAMs_20	IAMs_20	07 44 08.3	
	comp=Z,6µm,18.0s						
FXWY	**Fox Creek**	**81.28**	**332**	IAMs_20	IAMs_20	07 54 27.7	
	comp=Z,6µm,18.0s						
FLWY	**Flagg Ranch**	**81.51**	**333**	IAMs_20	IAMs_20	07 49 49.0	
	comp=Z,4µm,19.0s						
H17A	**Grant Village**	**81.73**	**333**	P	**P**	**07 16 53.0**	**-1.3**
	baz=147						
H17A				S	**S**	**07 27 08.3**	**+2.7**
	baz=147						
RLMT	**Red Lodge**	**81.83**	**334**	P	**P**	**07 16 53.3**	**-1.4**
	baz=148						
RLMT				S	**S**	**07 27 07.0**	**+0.4**
	baz=148						
RLMT	**Red Lodge**	**81.83**	**334**	P	P	07 16 47.8	-7.0
RLMT				IAMs_20	IAMs_20	07 55 25.5	
	comp=Z,7µm,18.0s						
BOSA	**Boshof**	**82.01**	**118**	P	**P**	**07 16 56.6**	**+0.5**
	comp=Z,4.8nm,0.8s,baz=265,slow=5.5,SNR=6.8						
BOSA	**Boshof**	**82.01**	**118**	P	**P**	**07 16 56.7**	**+0.5**
BOSA	**Boshof**	**82.01**	**118**	⇓P	P	07 17 01.1	+4.9
LAO	**LASA Array**	**82.08**	**337**	P	**P**	**07 16 54.3**	**-1.6**
	baz=151						
LAO				S	**S**	**07 27 12.5**	**+3.8**
	baz=151						
LAO	**LASA Array**	**82.08**	**337**	IAMs_20	IAMs_20	07 55 51.4	
	comp=Z,6µm,19.0s						
ULM	**Lac du Bonnet**	**82.35**	**345**	P	**P**	**07 16 55.2**	**-1.8**
	comp=Z,13nm,0.8s,baz=130,slow=1.7,SNR=9.3						
ULM	**Lac du Bonnet**	**82.35**	**345**	P	P	07 16 50.2	-6.9
ULM				pmax	pmax		
	comp=Z,95nm,1.4s						
ULM	**Lac du Bonnet**	**82.35**	**345**	P	P	07 16 50.1	-6.9
ULM				IAmb	IAmb	07 17 03.5	
	comp=Z,95nm,1.4s						
MCCM	**Marconi Confer**	**82.57**	**322**	IAMs_20	IAMs_20	08 00 43.3	
	comp=Z,6µm,18.0s						
HLID	**Hailey**	**82.63**	**330**	P	**P**	**07 16 57.3**	**-1.6**
	baz=144,SNR=16						
HLID				S	**S**	**07 27 17.1**	**+2.3**
	baz=144						
HLID	**Hailey**	**82.63**	**330**	IAMs_20	IAMs_20	07 44 16.3	
	comp=Z,8µm,22.0s						
TORD	**Torodi Ar. Bea**	**82.65**	**70**	P	**P**	**07 16 58.1**	**-1.4**
	comp=Z,33nm,1.0s,baz=254,slow=5.0,SNR=27						
TORD				PKKPbc	**PKKPbc**	**07 35 27.7**	**+4.0**
	comp=Z,1.9nm,1.1s,baz=53,slow=0.9,SNR=4.4						
TORD	**Torodi Ar. Bea**	**82.65**	**70**	P	**P**	**07 16 56.4**	**-3.1**
TORD				IAmb	IAmb	07 17 14.6	
	comp=Z,97nm,0.9s						
ORV	**Oroville**	**82.88**	**324**	IAMs_20	IAMs_20	07 55 49.6	
	comp=Z,9µm,22.0s						
DGMT	**Dagmar**	**82.98**	**339**	P	**P**	**07 16 58.8**	**-1.6**
	baz=152,SNR=13						
DGMT				S	**S**	**07 27 20.8**	**+3.0**
	baz=152						
MFID	**Camas Ranch**	**83.13**	**329**	IAMs_20	IAMs_20	07 50 17.5	
	comp=Z,5µm,19.0s						
BOZ	**Bozeman (W)**	**83.14**	**333**	S	S	07 27 30.1	+10
	baz=146						
O03E	**Paynes Creek**	**83.58**	**324**	P	**P**	**07 17 02.3**	**-1.5**
	baz=138,SNR=8.9						
O03E				S	**S**	**07 27 26.6**	**+2.2**
	baz=138						
WVOR	**Wild Horse Val**	**83.64**	**327**	⇓P	**P**	**07 17 04.3**	**+0.2**
WVOR	**Wild Horse Val**	**83.64**	**327**	IAMs_20	IAMs_20	07 44 20.0	
	comp=Z,5µm,18.0s						
O02D	**Mt. Diablo Mer**	**84.01**	**323**	P	**P**	**07 17 03.8**	**-2.2**
	baz=138						
O02D				S	**S**	**07 27 32.3**	**+3.6**
	baz=138						
WDC	**Whiskeytown Da**	**84.17**	**324**	P	P	07 17 01.2	-5.5
WDC				pmax	pmax		
	comp=Z,27nm,1.2s						
WDC				MLR	MLR		
	comp=Z,5µm,20.0s						
WDC	**Whiskeytown Da**	**84.17**	**324**	P	P	07 17 01.2	-5.5
WDC				IAMs_20	IAMs_20	07 56 29.9	
	comp=Z,5µm,20.0s						
EGMT	**Eagleton**	**84.47**	**336**	S	**S**	**07 27 33.7**	**+0.8**
	baz=148						
EGMT	**Eagleton**	**84.47**	**336**	IAMs_20	IAMs_20	07 44 24.3	
	comp=Z,6µm,18.0s						
N02D	**Trinity Center**	**84.55**	**324**	P	**P**	**07 17 07.4**	**-1.3**
	baz=138						
N02D				S	**S**	**07 27 36.0**	**+2.0**
	baz=138						
M04C	**Macdoel**	**84.71**	**325**	P	**P**	**07 17 09.0**	**-0.5**
	baz=138,SNR=20						
M04C				S	**S**	**07 27 41.0**	**+5.3**
	baz=138						
BMO	**Blue Mountains**	**84.91**	**329**	IAMs_20	IAMs_20	07 44 25.8	
	comp=Z,5µm,18.0s						
M02C	**Callahan**	**84.93**	**324**	P	**P**	**07 17 09.2**	**-1.4**
	baz=138						
M02C				S	**S**	**07 27 40.8**	**+3.0**
	baz=138						
MSO	**Missoula**	**85.07**	**333**	P	**P**	**07 17 11.9**	**+0.7**
	baz=144						
MSO				S	**S**	**07 27 39.2**	**+0.2**
	baz=144						
MSO	**Missoula**	**85.07**	**333**	IAMs_20	IAMs_20	07 56 38.1	
	comp=Z,5µm,20.0s						
YBH	**Yreka Blue Hor**	**85.11**	**324**	P	P	07 17 05.4	-6.2
YBH				pmax	pmax		
	comp=Z,26nm,1.4s						

YBH				MLR	MLR		
	comp=Z,5µm,20.0s						
YBH	Yreka Blue Hor	85.11	324	P	P	07 17 05.4	-6.1
YBH				IAMs_20	IAMs_20	07 55 25.7	
	comp=Z,5µm,20.0s						
JCC	Jacoby Creek,	85.12	323	IAMs_20	IAMs_20	07 56 40.9	
	comp=Z,7µm,20.0s						
L04D	Klamath Falls	85.26	325	P	P	07 17 10.2	-2.2
	baz=138						
L04D				S	S	07 27 41.6	+0.4
	baz=138						
K04D	Chiloquin, OR	85.29	326	P	P	07 17 11.0	-1.4
	baz=138						
K04D				S	S	07 27 42.0	+0.6
	baz=138						
J05D	Fort Rock, OR	85.53	326	P	P	07 17 13.4	-0.3
	baz=139,SNR=7.6						
J05D				S	S	07 27 48.1	+4.2
	baz=139						
F10A	Beach Ranch, E	85.76	330	⇑P	P	07 17 19.2	+4.5
L02E	Cave Junction	85.87	324	P	P	07 17 14.3	-0.9
	baz=137						
L02E				S	S	07 27 45.5	-1.4
	baz=137						
HUMO	Hull Mountain	85.88	325	⇑P	P	07 17 19.5	+4.2
HUMO	Hull Mountain	85.88	325	IAMs_20	IAMs_20	07 55 34.0	
	comp=Z,7µm,18.0s						
J04D	Umpqua Nationa	85.92	326	P	P	07 17 15.7	0.0
	baz=138						
J04D				S	S	07 27 46.8	-1.0
	baz=138						
K02D	Willamette Mer	86.30	325	P	P	07 17 16.6	-0.8
	baz=137,SNR=16						
K02D				S	S	07 27 51.2	-0.1
	baz=137						
I05D	Terrebonne, OR	86.37	327	P	P	07 17 16.0	-1.7
	baz=139						
I05D				S	S	07 27 49.0	-2.8
	baz=139						
I04A	Tendick Farm,	86.48	326	P	P	07 17 17.4	-0.9
	baz=138						
I04A				S	S	07 27 47.9	-4.9
	baz=138						
URZ	Urewera	86.65	227	⇓P	P	07 17 25.8	+6.4
URZ	Urewera	86.65	227	IAMs_20	IAMs_20	07 55 03.7	
	comp=Z,9µm,20.0s						
OXZ	Oxford	86.68	221	IAMs_20	IAMs_20	08 00 38.3	
	comp=Z,7µm,18.0s						
J01E	Myrtle Point	86.77	325	P	P	07 17 19.0	-0.6
	baz=137						
J01E				S	S	07 27 54.1	-1.4
	baz=137						
WALA	Waterton Lakes	86.87	334	P	P	07 17 12.6	-7.5
I03D	Drain, OR	86.87	325	P	P	07 17 19.1	-1.0
	baz=137						
I03D				S	S	07 27 54.3	-2.2
	baz=137						
LTZ	Lake Taylor	86.89	222	IAMs_20	IAMs_20	07 55 53.7	
	comp=Z,7µm,18.0s						
RPZ	Rata Peaks	87.00	220	IAMs_20	IAMs_20	08 01 36.8	
	comp=Z,7µm,19.0s						
H04A	Detroit Lake	87.03	327	P	P	07 17 15.1	-5.8
G05D	Wamic, OR	87.04	328	S	S	07 28 04.8	+6.6
	baz=139						
HAWA	Hanford	87.09	329	⇑P	P	07 17 20.9	-0.2
HAWA	Hanford	87.09	329	IAMs_20	IAMs_20	07 56 25.5	
	comp=Z,6µm,18.0s						
THZ	Tophouse	87.15	223	IAMs_20	IAMs_20	07 55 07.4	
	comp=Z,9µm,21.0s						
H04D	Lebanon	87.18	326	P	P	07 17 24.6	+3.0
	baz=138						
H04D				S	S	07 27 59.4	-0.1
	baz=138						
NNZ	Nelson	87.20	223	IAMs_20	IAMs_20	07 55 05.7	
	comp=Z,9µm,22.0s						
I02E	Swisshome, OR	87.42	325	S	S	07 27 59.2	-2.5
	baz=137						
AVE	Averroes	87.44	49	P	P	07 17 24.6	+1.5
AVE				S	S	07 27 55.3	-7.2
COR	Corvallis	87.50	326	IAMs_20	IAMs_20	07 56 42.0	
	comp=Z,8µm,22.0s						
NEW	Newport	87.51	332	P	P	07 17 25.5	+2.3
	baz=142						
NEW	Newport	87.51	332	IAMs_20	IAMs_20	07 44 37.7	
	comp=Z,5µm,18.0s						
MLZ	Mavora Lakes	87.54	218	IAMs_20	IAMs_20	07 56 42.9	
	comp=Z,9µm,22.0s						
F05D	White Salmon	87.59	328	S	S	07 28 05.5	+2.2
	baz=139						
FOZ	Fox Glacier	87.81	220	IAMs_20	IAMs_20	07 49 43.2	
	comp=Z,6µm,19.0s						
G03D	McMinnville, O	87.94	326	S	S	07 28 09.1	+2.4
	baz=137						
FFC	Flin Flon	87.94	343	IAMs_20	IAMs_20	08 04 17.5	
	comp=Z,5µm,19.0s						
QRZ	Quartz Range	87.95	223	IAMs_20	IAMs_20	07 55 11.5	
	comp=Z,8µm,22.0s						
RAO	Raoul Island	88.29	237	IAMs_20	IAMs_20	07 57 12.4	
	comp=Z,14µm,21.0s						
F04D	Rainier, OR	88.46	327	S	S	07 28 16.0	+4.4
	baz=138						
E04D	Cinebar	88.60	328	S	S	07 28 19.0	+6.1
	baz=138						
CRZF	Crozet Islands	88.80	145	IAMs_20	IAMs_20	07 44 31.5	
	comp=Z,5µm,20.0s						
C06D	Leavenworth	88.86	330	S	S	07 28 21.9	+6.4
	baz=139						
MORF	Marmelete	89.14	45	*e*SKSac	SKSac	07 27 56.8	-2.6
PTEO	Sao Teotonio	89.25	45	*e*P	P	07 17 34.1	+2.5
D03D	Eldon	89.56	328	S	S	07 28 29.3	+7.3
	baz=138						
B05A	Bryant	89.65	329	S	S	07 28 28.1	+5.4
	baz=138						
LIS	Lisbon	89.73	44	*e*SKSac	SKSac	07 27 59.7	-2.9
MESJ	Messejana	89.74	45	*e*SKSac	SKSac	07 27 59.9	-2.8
PVAQ	Vaqueiros	89.78	46	*e*S	S	07 28 36.4	+12
NLWA	Neilton Lookou	89.82	328	IAMs_20	IAMs_20	07 57 37.4	
	comp=Z,6µm,22.0s						
SFS	San Fernando	90.16	47	P	P	07 17 39.4	+3.5
SFS				S	S	07 28 15.8	-12
ARNO	Arenosillo	90.22	47	P	P	07 17 37.1	+1.1
ARNO				S	S	07 28 15.3	-13
EVO	Evora	90.30	45	P	P	07 17 39.0	+2.5
EVO				S	S	07 28 13.1	-16
CEU	Ceuta	90.36	48	P	P	07 17 38.6	+1.9
CEU				S	S	07 28 15.7	-14
PMTG	Montargil	90.51	44	*e*P	P	07 17 37.5	+0.1
	comp=Z,31nm,1.9s						
PVLZ	Peæn de	90.62	49	P	P	07 17 39.0	+1.0
PVLZ				S	S	07 28 12.8	-20
PBAR	Barrancos	90.68	46	*e*P	P	07 17 40.4	+2.1
OUZ	Omahuta	90.72	228	IAMs_20	IAMs_20	08 03 43.5	
	comp=Z,7µm,19.0s						
PMRV	Marv??o	91.24	44	*e*S	S	07 28 47.5	+10
EMAL	Malaga-Limoner	91.48	48	P	P	07 17 42.4	+0.4
EMAL				S	S	07 28 17.1	-23
MTE	Manteigas	91.75	44	*e*S	S	07 28 52.2	+10
MTE	Manteigas	91.75	44	IAMs_20	IAMs_20	08 03 00.8	
	comp=Z,6µm,18.0s						
CHAS	Isla Isabel II	91.87	50	P	P	07 17 44.9	+1.0
CHAS				S	S	07 28 24.8	-19
PGAV	Gavieira, Arco	92.29	42	*e*S	S	07 28 56.0	+8.6
MVO	Moncorvo	92.53	43	*e*S	S	07 28 32.6	-17
ESDC	Sonseca Array	93.50	46	P	P	07 17 50.3	-1.1
	comp=Z,0.8nm,0.8s,baz=265,slow=5.8,SNR=3.2						
CART	Cartagena	94.19	49	P	P	07 17 53.2	-1.3
CART				S	SKSac	07 28 30.2	+2.4
POHA	Pohakuloa	94.26	290	IAMs_20	IAMs_20	08 06 42.1	
	comp=Z,7µm,22.0s						
UCM	Universidad Co	94.32	46	P	P	07 17 56.0	+0.9
UCM				S	S	07 28 37.2	-28
MSVF	Nonsavu	97.76	245	IAMs_20	IAMs_20	07 58 40.1	
	comp=Z,11µm,22.0s						
MAHO	Mahon	98.90	49	P	Pdif	07 18 19.0	+3.2
MAHO				S	SKSac	07 28 59.1	+6.8
TAU	Tasmania Unive	99.28	208	IAMs_20	IAMs_20	08 04 18.5	
	comp=Z,6µm,18.0s						
MBAR	Mbarara	100.69	97	IAMs_20	IAMs_20	07 59 09.4	
	comp=Z,9µm,18.0s						
VOI	Vohitsoka	101.87	124	IAMs_20	IAMs_20	08 05 39.6	
	comp=Z,6µm,18.0s						
ESK	Eskdalemuir	102.91	33	IAMs_20	IAMs_20	08 03 15.1	
	comp=Z,4µm,20.0s						
DZM	Mont Dzumac	103.86	234	*e*PS	PS	07 31 56.8	-10
	comp=Z,1µm,26.8s						
DZM				*e*SS	SS	07 37 31.8	-8.9
	comp=Z,4µm,27.1s						
DZM	Mont Dzumac	103.86	234	*e*LQ	LQ	07 47 58.9	
	comp=Z,5µm,35.5s						
DZM				*e*LR	LR	07 52 19.7	
	comp=Z,7µm,29.2s						
LIFNC	LIFOU	104.11	236	IAMs_20	IAMs_20	08 07 57.6	
	comp=Z,5µm,20.0s						
CAN	Canberra	104.74	214	IAMs_20	IAMs_20	08 15 53.0	
	comp=Z,5µm,20.0s						
WLF	Walferdange	104.92	41	IAMs_20	IAMs_20	08 08 29.8	
	comp=Z,5µm,20.0s						
KMBO	Kilima Mbogo	106.03	101	IAMs_20	IAMs_20	08 02 53.8	
	comp=Z,5µm,21.0s						
KIBK	Kibwezi	106.08	102	IAMs_20	IAMs_20	08 07 24.8	
	comp=Z,7µm,20.0s						
AQU	L'Aquila	106.14	50	IAMs_20	IAMs_20	08 07 23.1	
	comp=Z,6µm,22.0s						
FETA	Feichten	106.44	45	*e*P	PKiKP	07 22 59.0	-1.4
	comp=Z,6.3nm,1.3s						
RETA	Reutte	106.66	45	*e*P	Pdif	07 18 53.4	+3.2
	comp=Z,4.5nm,1.1s						
RETA				*e*P	PKiKP	07 23 02.0	+1.3
	comp=Z,11nm,1.6s						
LODK	Lodwar	106.70	96	IAMs_20	IAMs_20	08 00 52.4	
	comp=Z,7µm,20.0s						
MOTA	Moosalm	106.81	45	*e*P	Pdif	07 18 54.4	+3.4
	comp=Z,8.8nm,1.0s						
MOTA				*e*P	PKiKP	07 23 02.7	+1.7
	comp=Z,7.9nm,1.3s						
SQTA	Sankt Quirin	106.82	45	*e*P	Pdif	07 18 55.5	+4.5
	comp=Z,9.9nm,1.4s						
SQTA				*e*P	PKiKP	07 23 03.0	+2.0
	comp=Z,13nm,1.5s						
WTTA	Wattenberg	107.10	45	*e*P	Pdif	07 18 53.5	+1.2
	comp=Z,5.5nm,1.1s						
WTTA				*e*P	PKiKP	07 23 05.1	+3.6
	comp=Z,17nm,1.8s						
ABTA	Abfaltersbach	107.43	46	P	PKiKP	07 23 04.5	+2.4
	comp=Z,6.5nm,1.3s						
CADS	Cadrg	107.98	47	*e*PP	PP	07 23 25.2	-0.7
CEY	Cerknica	108.22	47	*e*Pdiff	Pdif	07 19 00.6	+3.4
CEY				*e*PP	PP	07 23 26.4	-1.2
CEY				*e*SKSac	SKSac	07 29 41.6	+6.2
CEY				*e*Sdiff	Sdif	07 31 16.7	+15
CEY				*e*		07 32 58.4	
CEY				*e*SS	SS	07 38 42.3	+1.6
LJU	Ljubljana	108.41	47	*e*PP	PP	07 23 27.4	-1.6
MOA	Molln	108.97	45	*e*P	PKiKP	07 23 06.5	+1.7
	comp=Z,8.0nm,1.7s						
SOKA	Soboth	108.98	47	*i* P	PKiKP	07 23 05.7	+0.7
	comp=Z,6.3nm,1.0s						
GERES	GERESS Array B	109.02	44	PKiKP	PKiKP	07 23 04.6	-0.4
	comp=Z,2.5nm,0.8s,baz=197,slow=3.0,SNR=5.0						
KHC	Kasperske Hory	109.05	44	*e*PP	PP	07 23 30.5	-3.1
KHC				*e*SKS	SKSac	07 29 44.7	+5.9
CKRC	Cesky Krumlov	109.37	44	*e*PP	PP	07 23 32.3	-3.7
CKRC				*e*SKS	SKSac	07 29 50.5	+10
ARSA	Arzberg	109.52	46	*e*P	PKiKP	07 23 10.5	+4.6
	comp=Z,6.9nm,1.2s						
CLL	Collm	109.57	42	*e*P	Pdif	07 19 01.0	-2.0
CLL				*e*		07 23 33.0	
CLL				*e*		07 29 40.0	
CLL	Collm	109.57	42	*e*Pdif	Pdif	07 19 01.0	-2.0
CLL				*e*PP	PP	07 23 33.0	-4.3
CLL				*e*PPP	PPP	07 25 54.0	
CLL				*e*SKSac	SKSac	07 29 40.0	-0.7
CLL				*e*Sdif	Sdif	07 31 14.0	+0.9
CLL				*e*(PS)		07 32 53.0	
CLL				*e*		07 33 14.0	
CLL				*e*		07 33 42.0	
CLL				*e*PPS	PPS	07 34 07.0	
CLL				*e*		07 36 48.0	
CLL				*e*SS	SS	07 39 00.0	+1.5
CLL	Collm	109.57	42	IAMs_20	IAMs_20	08 14 49.1	
	comp=Z,4µm,19.0s						
PRA	Prague	109.93	43	*e*PP	PP	07 23 37.7	-2.2
BRG	Berggiesshubel	109.95	42	⇓Pif		07 19 08.0	
BRG	Berggiesshubel	109.95	42	*e*PKP	PKiKP	07 23 13.1	+6.5
BRG				Amp		07 23 17.2	
	comp=Z,4.2nm,0.9s						
BRG	Berggiesshubel	109.95	42	PP	PP	07 23 37.0	-3.0
BRG	Berggiesshubel	109.95	42	PS	PS	07 33 13.0	+4.1
PRU	Pruhonice	109.97	43	*e*PP	PP	07 23 36.2	-4.0
PRU				*e*x	x	07 29 52.6	
CONA	Conrad Observa	109.99	46	*i* P	PKiKP	07 23 09.6	+2.8
	comp=Z,7.9nm,1.5s						
PDG	Podgorica	110.14	52	IAMs_20	IAMs_20	08 10 04.3	
	comp=Z,4µm,20.0s						
ILAR	Eielson Array	110.38	334	PKiKP	PKiKP	07 23 07.2	+0.3
	comp=Z,0.4nm,1.0s,baz=82,slow=1.9,SNR=1.6						
ILAR				PKKPbc	PKKPbc	07 34 10.4	+1.2
	comp=Z,0.5nm,0.7s,baz=303,slow=3.7,SNR=5.0						
POKR	Poker Plat Res	110.74	334	IAMs_20	IAMs_20	08 09 22.9	
	comp=Z,5µm,20.0s						
KRUC	Moravsky	110.74	45	*e*PP	PP	07 23 44.0	-1.8
KRUC				*e*		07 31 34.1	
KRUC				*e*PS	PS	07 33 20.6	+4.3
VRAC	Vranov	110.95	44	*e*PP	PP	07 23 45.6	-1.7
VRAC				*e*		07 31 36.0	
VRAC				*e*PS	PS	07 33 22.1	+3.9
RGN	Rugen	110.99	38	IAMs_20	IAMs_20	08 08 42.8	
	comp=Z,4µm,21.0s						
STKA	Stephens Creek	111.01	210	PKKPab	PKKPab	07 34 16.1	-3.0
	comp=Z,1.4nm,0.8s,baz=342,slow=9.6,SNR=3.2						
MODS	Modra-Piesok	111.03	46	*e*PP	PP	07 23 39.3	-8.6
NEA2	Nenana	111.15	333	IAMs_20	IAMs_20	08 07 40.7	
	comp=Z,5µm,19.0s						
DPC	Dobruska-Polom	111.16	43	*e*PKIKP	PKiKP	07 23 13.5	+4.6
DPC				*e*		07 23 46.7	
DPC	Dobruska-Polom	111.16	43	*e*PKP	PKiKP	07 23 13.5	+4.6
DPC				*e*PP	PP	07 23 46.7	-2.2
OSTC	Ostas	111.17	43	*e*PKP	PKiKP	07 23 10.7	+1.8
OSTC				*e*PP	PP	07 23 48.5	-0.4
H24K	Noodor Dome	111.21	335	IAMs_20	IAMs_20	08 07 33.3	
	comp=Z,5µm,21.0s						
KRLC	Kraliky	111.34	44	*e*PKIKP	PKiKP	07 23 13.9	+4.6
KRLC				MLR	MLR		
	comp=Z,17µm,22.3s						
KRLC	Kraliky	111.34	44	*e*PKP	PKiKP	07 23 13.9	+4.6
JAVC	Velka Javorina	111.45	45	*e*PP	PP	07 23 48.5	-2.5
KTH	Kantishna Hill	111.47	332	IAMs_20	IAMs_20	08 01 52.1	
	comp=Z,3µm,19.0s						
I23K	Minto, Yukon-K	111.49	334	IAMs_20	IAMs_20	08 08 54.7	
	comp=Z,4µm,21.0s						
MORC	Moravsky Berou	111.69	44	*e*PP	PP	07 23 51.6	-1.1
MORC				*e*		07 31 44.6	
MORC				*e*PS	PS	07 33 30.7	+5.5
P18K	Big Mountain,	111.79	327	IAMs_20	IAMs_20	08 02 43.5	
	comp=Z,4µm,20.0s						
H23K	Yukon River	111.83	334	IAMs_20	IAMs_20	08 11 21.6	
	comp=Z,5µm,18.0s						
CAST	Castle Rocks	111.89	331	IAMs_20	IAMs_20	08 19 01.4	
	comp=Z,3µm,20.0s						
O18K	Koktuh Hills	111.95	327	IAMs_20	IAMs_20	08 02 42.7	
	comp=Z,5µm,20.0s						
MLY	Manley	111.98	333	IAMs_20	IAMs_20	08 08 12.7	
	comp=Z,4µm,21.0s						
VYHS	Vyhne	112.05	46	*e*PKIKP	PKiKP	07 23 21.1	+10
VYHS	Vyhne	112.05	46	*e*PKP	PKiKP	07 23 21.1	+10
ALE	Alert	112.05	1	IAMs_20	IAMs_20	08 13 09.1	
	comp=Z,4µm,19.0s						
OKC	Ostrava-Krasne	112.08	44	*e*PP	PP	07 23 55.1	-0.3
FURI	Furi	112.22	92	IAMs_20	IAMs_20	08 01 01.8	
	comp=Z,13µm,22.0s						
M19K	Big River Lodg	112.32	330	IAMs_20	IAMs_20	08 02 47.3	
	comp=Z,5µm,20.0s						
CNBA	Chernabura Isl	112.40	321	IAMs_20	IAMs_20	07 58 49.7	
	comp=Z,5µm,22.0s						
TARA	Tarawa	112.42	258	IAMs_20	IAMs_20	08 09 36.0	
	comp=Z,5µm,19.0s						
PSZ	Piszkesteto	112.52	47	IAMs_20	IAMs_20	08 12 36.0	
	comp=Z,5µm,18.0s						
I21K	Tanana	112.52	333	IAMs_20	IAMs_20	08 07 60.0	
	comp=Z,4µm,22.0s						
TOLK	Toolik Lake Re	112.96	337	IAMs_20	IAMs_20	08 02 29.7	
	comp=Z,4µm,22.0s						
H21K	Melozitna Rive	113.02	334	IAMs_20	IAMs_20	08 18 37.8	
	comp=Z,4µm,18.0s						
J20K	Nowinta River	113.03	332	IAMs_20	IAMs_20	08 14 07.3	
	comp=Z,3µm,21.0s						
CRVS	Cervenica-Dubn	113.82	46	*e*PP	PP	07 24 08.0	+0.1
MIDW	Midway	115.86	289	IAMs_20	IAMs_20	08 19 16.4	
	comp=Z,5µm,19.0s						
SUW	Suwalki	116.31	41	*e*P	PKiKP	07 23 24.1	+5.6
SUW	Suwalki	116.31	41	IAMs_20	IAMs_20	08 14 58.1	
	comp=Z,3µm,20.0s						
ISP	Isparta	116.69	60	IAMs_20	IAMs_20	08 03 01.3	
	comp=Z,5µm,20.0s						
HNR	Honiara	116.75	240	IAMs_20	IAMs_20	08 02 52.6	
	comp=Z,5µm,21.0s						
PABE	Paberze	117.11	39	*e*P	PKiKP	07 23 26.2	+6.2
KBS	Kingsbay	117.72	13	IAMs_20	IAMs_20	08 01 39.1	
	comp=Z,4µm,22.0s						
ANM	Nome	117.83	331	IAMs_20	IAMs_20	08 01 50.1	
	comp=Z,4µm,22.0s						
CSS	Mathiatis	117.97	64	IAMs_20	IAMs_20	08 03 27.4	
	comp=Z,7µm,19.0s						
MILM	Milestii Mici	118.01	50	*i* P	Pdif	07 19 43.0	+2.4
MILM				*e*		07 23 24.0	
MILM				*e*		07 23 34.0	
MILM				*e*		07 24 34.0	
MILM				*e*PS	PS	07 34 21.0	-1.8
MILM				pmax	pmax		
	comp=Z,500nm,9.0s						
KIS	Kishinev	118.03	50	*e*PKIKP	PKiKP	07 23 25.0	+2.9
KIS				*e*		07 24 35.0	
KIS				*e*PS	PS	07 34 21.0	-2.1
KIS				pmax	pmax		
	comp=Z,180nm,8.4s						
NACGM	Naroch	118.56	41	*i* PKP	PKiKP	07 23 26.4	+3.5
GHAJ	Ghor Haditha	118.58	68	IAMs_20	IAMs_20	08 21 56.1	
	comp=Z,4µm,20.0s						
ANTO	Ankara	118.98	58	IAMs_20	IAMs_20	08 03 35.2	
	comp=Z,7µm,21.0s						
MNK	Minsk	119.11	41	*i* PKIKP	PKiKP	07 23 23.8	-0.2
MNK				*i*		07 24 51.4	
MNK				*i* SS	SS	07 41 02.7	-1.3
MNK				pmax	pmax		
	comp=N,17nm,1.0s						
MNK				pmax	pmax		
	comp=Z,40nm,0.9s						
MNK				pmax	pmax		
	comp=E,2.0nm,1.0s						
MNK	Minsk	119.11	41	*i* PKP	PKiKP	07 23 23.9	-0.1
	comp=E,2.0nm,1.0s						
MNK				*i* PKP	PKiKP	07 23 23.9	-0.1
	comp=N,17nm,1.0s						
MNK				*i* PKP	PKiKP	07 23 23.9	-0.1
	comp=Z,40nm,0.9s,baz=260						
MNK				*i* PP	PP	07 24 51.4	+6.8
MNK				*i* SKP		07 26 42.0	
MNK				*i* PKS	PKSdf	07 26 57.5	-2.8
MNK				*i* PPP	PPP	07 27 24.8	
MNK				*i* SS	SS	07 41 02.7	-1.2
MNK				*i* SSS	SSS	07 44 44.2	
MNK				*i* LR	LR	08 08 22.1	
MNK				*i* LRM	MLR	08 17 44.4	
	comp=Z,4µm,19.5s						
MNK				*i* LRM	MLR	08 17 45.4	
	comp=E,732nm,19.8s						
MNK				*i* LRM	MLR	08 18 00.9	
	comp=N,1µm,19.5s						
AKASG	Malin Array Be	119.14	46	PKP	PKPdf	07 23 22.0	-2.1
	comp=N,9.0nm,0.8s,baz=267,slow=2.7,SNR=8.6						
AKASG	Malin Array Be	119.14	46	PKIKP	PKPdf	07 23 22.0	-2.1
AKBB	Malin Array Si	119.14	46	⇓*i*PKIKP	PKPdf	07 23 22.0	-2.1
AKBB				MLR	MLR		
	comp=Z,3µm,22.0s						
MSEY	Mahe Island	119.15	115	IAMs_20	IAMs_20	08 08 32.9	
	comp=Z,5µm,22.0s						
VSU	Vasula	119.19	37	*e*P	PKiKP	07 23 25.5	+1.5
VSU	Vasula	119.19	37	⇓*i*PKIKP	PKiKP	07 23 23.7	-0.3
VSU				MLR	MLR		
	comp=Z,7µm,19.0s						
FINES	FINESS Array B	119.34	33	PKP	PKPdf	07 23 23.2	-0.9
	comp=Z,5.0nm,0.8s,baz=343,slow=6.0,SNR=3.9						
FINES	FINESS Array B	119.34	33	PKIKP	PKPdf	07 23 23.3	-0.9
BRTR	Keskin Array B	119.57	59	PKP	PKPdf	07 23 25.1	-0.5
	comp=Z,1.6nm,0.8s,baz=197,slow=3.8,SNR=8.2						
BRTR	Keskin Array B	119.57	59	PKIKP	PKPdf	07 23 25.1	-0.5
ARCES	ARCESS Array B	120.04	24	PKP	PKiKP	07 23 25.6	+0.2
	comp=Z,3.9nm,1.0s,baz=227,slow=3.3,SNR=2.1						
ARCES	ARCESS Array B	120.04	24	PKIKP	PKiKP	07 23 25.6	+0.2
GAMB	Gambell	120.46	329	IAMs_20	IAMs_20	08 02 11.6	
	comp=Z,4µm,22.0s						
KEV	Kevo	120.58	24	IAMs_20	IAMs_20	08 03 42.8	
	comp=Z,3µm,21.0s						
KWAJ	Kwajalein Atol	120.73	262	IAMs_20	IAMs_20	08 02 04.0	
	comp=Z,10µm,20.0s						
ASAR	Alice Springs	121.45	208	PKP	PKPdf	07 23 27.1	-2.5
	comp=Z,5.2nm,0.9s,baz=138,slow=2.1,SNR=4.5						
ASAR				PKKPab	PKKPbc	07 33 29.8	+0.1
	comp=Z,1.7nm,0.7s,baz=336,slow=3.7,SNR=10						
ASAR				PKPPKP	P'P'df	07 42 13.8	-5.5
	comp=Z,0.5nm,1.0s,baz=329,slow=1.1,SNR=2.1						
ASAR	Alice Springs	121.45	208	PKIKP	PKPdf	07 23 27.2	-2.5
APA	Apatity	122.89	26	⇓*i*PKIKP	PKPdf	07 23 27.3	-3.5
APA				*i*		07 25 10.0	
APA				*i* PPS	PPS	07 36 26.0	
APA				pmax	pmax		
	comp=Z,12nm,0.8s						
LVZ	Lovozero	123.35	26	⇓*i*PKIKP	PKPdf	07 23 30.1	-1.7
LVZ				MLR	MLR		
	comp=Z,3µm,19.0s						
LVZ	Lovozero	123.35	26	IAMs_20	IAMs_20	08 03 49.5	
	comp=Z,4µm,20.0s						
ANN	Anapa	123.45	54	*i* PKIKP	PKPdf	07 23 29.3	-3.3
ANN				*e*		07 25 13.0	
ANN				*e*		07 30 30.0	
ANN				*e*SS	SS	07 41 59.2	-0.8
ANN				pmax	pmax		
	comp=Z,38nm,1.0s						
OBN	Obninsk	124.17	41	⇑*i*PKIKP	PKPdf	07 23 30.4	-3.2
OBN				*e*		07 30 39.9	
OBN				pmax	pmax		
	comp=Z,29nm,1.4s						
OBN				MLR	MLR		
	comp=Z,4µm,19.0s						
WRA	Warramunga Arr	124.56	210	PKP	PKPdf	07 23 33.5	-2.1
	comp=Z,15nm,1.0s,baz=161,slow=1.6,SNR=5.8						
WRA	Warramunga Arr	124.56	210	PKIKP	PKPdf	07 23 33.5	-2.1
WRAB	Tennant Creek	124.57	210	⇓*i*PKIKP	PKPdf	07 23 34.1	-1.5
MOS	Moscow	124.81	40	*i* PKIKP	PKPdf	07 23 33.8	-1.0
MOS				*e*		07 25 23.8	
MOS				*e*		07 30 34.9	
MOS				pmax	pmax		
	comp=Z,57nm,1.2s						
MOS				pmax	pmax		
	comp=N,40nm,0.7s						
SOC	Sochi	124.86	55	*i* PKIKP	PKPdf	07 23 32.3	-3.0
SOC				*e*		07 25 19.3	
SOC				*e*PPP	PPP	07 28 02.9	
SOC				*e*PS	PS	07 35 17.8	-6.2
SOC				*e*SSS	SSS	07 46 46.9	
SOC				pmax	pmax		
	comp=Z,19nm,0.8s						
LPSR	Galich'ya Gora	125.39	44	*e*PKIKP	PKPdf	07 23 35.0	-1.1
LPSR				pmax	pmax		
	comp=Z,50nm,1.0s						
VSR	Storozhevoye	125.44	46	*e*PKIKP	PKPdf	07 23 33.7	-2.5
VSR				pmax	pmax		
	comp=Z,50nm,1.2s						
VORD	Divnogorie	125.50	46	*e*PKIKP	PKPdf	07 23 35.0	-1.3
VORD				pmax	pmax		
	comp=Z,40nm,1.5s						
KLMR	Klimovskoe	125.81	34	*e*PKIKP	PKPdf	07 23 33.5	-3.1
KLMR				pmax	pmax		
	comp=Z,130nm,1.1s						
KLMR	Klimovskoe	125.81	34	*e*PKPdf	PKPdf	07 23 33.5	-3.1
KLMR				AMP		07 23 48.0	
	comp=Z,130nm,1.1s						
KLMR				*e*SKKPbc	SKKPbc	07 36 59.1	-5.6
H11S2	WAKE ISLAND Hy	125.82	272	T	T	09 42 45.6	
	baz=115,slow=74,SNR=46						
H11S1	WAKE ISLAND Hy	125.83	272	T	T	09 42 46.5	
	baz=115,slow=74,SNR=40						
H11S3	WAKE ISLAND Hy	125.84	272	T	T	09 42 40.8	
	baz=115,slow=74,SNR=36						
H11N3	WAKE ISLAND Hy	126.12	274	T	T	09 43 07.1	
	baz=116,slow=74,SNR=4.5						
H11N1	WAKE ISLAND Hy	126.14	274	T	T	09 43 10.4	
	baz=116						
H11N2	WAKE ISLAND Hy	126.14	274	T	T	09 43 10.9	
	baz=116,slow=74,SNR=8.7						
WAKE	Wake Island	126.18	273	IAMs_20	IAMs_20	08 07 45.7	
	comp=Z,5µm,20.0s						
NEY	Neytrino	126.97	56	⇓*i*PKIKP	PKPdf	07 23 37.5	-2.2
KIV	Kislovodsk	127.04	55	*i* P	Pdif	07 20 19.8	-1.2
KIV				*i*		07 23 38.1	
KIV				*e*		07 25 37.4	

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KIV                                ePS       PS        07 35 42.1 -1.3
KIV                                 pmax     pmax
         comp=Z,19nm,1.0s
KIV                                 MLR      MLR
         comp=Z,3µm,23.0s
KIV   Kislovodsk       127.04  55   IAMs_20  IAMs_20   08 04 11.7
         comp=Z,3µm,18.0s
VRH   Novokhopyorsk    127.04  46  ePKIKP    PKPdf     07 23 36.9 -2.3
VRH                                 pmax     pmax
         comp=Z,30nm,1.0s
KBZ   Khabaz           127.16  56   PKP      PKPdf     07 23 39.2 -0.5
         comp=Z,4.7nm,0.9s,baz=160,slow=1.0,SNR=7.2
KBZ   Khabaz           127.16  56⇑iPKIKP     PKPdf     07 23 39.4 -0.3
NCK   Nalchik          127.63  56⇓iPKIKP     PKPdf     07 23 39.7 -1.0
ZEI   Tsey             127.76  57 i PKHKP    PKPpre    07 23 29.5
ZEI                                 pmax     pmax
         comp=Z,5.0nm,1.6s
GNI   Garni            128.00  60⇓iPKIKP     PKPdf     07 23 39.9 -1.8
GNI   Garni            128.00  60   IAMs_20  IAMs_20   08 03 44.7
         comp=Z,2µm,21.0s
MBWA  Marble Bar       128.24 194   IAMs_20  IAMs_20   08 32 09.2
         comp=Z,3µm,19.0s
PRGR  Permogore        128.67  33  ePKIKP    PKiKP     07 23 45.0 +2.3
PRGR                                pmax     pmax
         comp=Z,90nm,0.4s
BILL  Bilibino         128.96 336⇓iPKIKP     PKPdf     07 23 39.1 -3.4
BILL                               e                   07 23 43.5
BILL                               e                   07 23 55.3
BILL                                pmax     pmax
         comp=Z,35nm,3.1s
BILL                                MLR      MLR
         comp=Z,1µm,15.0s
BILL  Bilibino         128.96 336   IAMs_20  IAMs_20   08 26 41.7
         comp=Z,2µm,21.0s
GROC  Groznyy          129.19  57 i PKIKP    PKPdf     07 23 40.0 -3.6
GROC                               e                   07 25 48.9
GROC                                pmax     pmax
         comp=Z,18nm,0.4s
DGAR  Diego Garcia     129.68 131   IAMs_20  IAMs_20   08 12 27.1
         comp=Z,3µm,21.0s
MAK   Makhachkala      130.41  57 i P        Pdif      07 20 29.3 -6.5
MAK                                ePPP      PPP       07 28 45.4
MAK                                e                   07 30 49.0
MAK                                eSS       SS        07 43 24.6 -2.4
MAK                                eSSS      SSS       07 48 14.9
MAK                                 pmax     pmax
         comp=Z,116nm,1.2s
BELG  Belogornoye      130.70  45   PKP      PKPdf     07 23 45.1 -1.1
         comp=Z,21nm,0.9s,baz=96,slow=12,SNR=5.6
BELG  Belogornoye      130.70  45   PKIKP    PKPdf     07 23 45.1 -1.1
KIRV  Kirov            131.04  36   PKP      PKPdf     07 23 44.6 -2.0
         comp=Z,7.4nm,0.4s,baz=207,slow=6.8,SNR=3.9
KIRV  Kirov            131.04  36⇑iPKIKP     PKPdf     07 23 44.5 -2.1
UOSS  Minazif          133.97  83   IAMs_20  IAMs_20   08 06 23.3
         comp=Z,7µm,21.0s
SEY   Seymchan         136.29 332⇓iPKIKP     PKPdf     07 23 55.7 -0.7
ARU   Arti             136.33  38   PKP      PKPdf     07 23 56.2 -0.5
         comp=Z,2.2nm,0.5s,baz=307,slow=1.4,SNR=10
ARU   Arti             136.33  38 i PKIKP    PKPdf     07 23 54.3 -2.4
ARU                                                    07 26 34.0
ARU                                 SS       SS        07 44 33.4 -4.2
TIXI  Tiksi            136.45 351   PKhKP    PKPpre    07 23 51.2
         comp=Z,2.8nm,0.8s,baz=19,slow=3.3,SNR=5.7
TIXI  Tiksi            136.45 351⇑ePKIKP     PKPdf     07 23 52.0 -4.5
PET   Petropavlovsk    136.58 317  ePKIKP    PKiKP     07 24 10.2 +11
PET   Petropavlovsk    136.58 317   IAMs_20  IAMs_20   08 13 23.9
         comp=Z,3µm,19.0s
PETK  Petropavlovsk-   137.12 318   PKP      PKiKP     07 23 59.5 -0.7
         comp=Z,12nm,1.0s,baz=126,slow=6.3,SNR=3.9
SVE   Sverdlovsk       137.30  37 i PKIKP    PKPdf     07 23 57.8 -0.7
SVE                                 pmax     pmax
         comp=Z,32nm,1.1s
AKTO  Aktyubinsk       137.38  46   PKP      PKPdf     07 23 57.3 -1.5
         comp=Z,8.6nm,0.9s,baz=337,slow=4.5,SNR=11
AKTO  Aktyubinsk       137.38  46   PKIKP    PKPdf     07 23 57.3 -1.5
GEYT  Alibeck          138.09  65   PKP      PKPdf     07 23 58.3 -2.3
         comp=Z,2.4nm,0.6s,baz=341,slow=7.9,SNR=2.0
NRIK  Noril'sk         138.56  11   PKP      PKPdf     07 23 59.8 -0.6
         comp=Z,1.7nm,0.3s,baz=95,slow=3.1,SNR=3.0
NRIK  Noril'sk         138.56  11⇑ePKIKP     PKPdf     07 23 58.2 -2.2
AB31  Akbulak array    138.81  48 i PKIKP    PKPdf     07 23 55.5 -6.0
FAKI  Fak Fak          140.19 220   IAMs_20  IAMs_20   08 06 25.3
         comp=Z,4µm,22.0s
GUMO  Guam             142.44 253   PKP      PKPdf     07 24 08.6 -0.4
         comp=Z,63nm,0.8s,baz=45,slow=10.0,SNR=3.8
GUMO  Guam             142.44 253   PKIKP    PKPdf     07 24 08.6 -0.4
KAPI  Kappang          143.74 200c iPKIKP    PKPdf     07 24 12.3 +0.8
BRVK  Borovoye         143.88  39dePKIKP     PKPbc     07 24 07.8 -0.4
BRVK                                MLR      MLR
         comp=Z,4µm,21.0s
BVAR  Borovoye Array   143.95  39   PKP      PKPdf     07 24 09.6 -1.0
         comp=Z,7.8nm,0.8s,baz=241,slow=4.5,SNR=13
BVAR  Borovoye Array   143.95  39   PKIKP    PKPdf     07 24 09.6 -1.0
YAK   Yakutsk          144.66 343   PKP      PKPbc     07 24 10.1 -0.2
         comp=Z,13nm,0.5s,baz=104,slow=1.1,SNR=7.6
YAK   Yakutsk          144.66 343  ePKIKP    PKPdf     07 24 10.6 -0.9
YAK                                e                   07 27 26.5
YAK                                 pmax     pmax
         comp=Z,237nm,1.1s
YAK                                 pmax     pmax
         comp=N,53nm,1.6s
YAK                                 pmax     pmax
         comp=E,19nm,1.6s
YAK                                 pmax     pmax
         comp=Z,1µm,6.2s
YAK                                 pmax     pmax
         comp=N,922nm,5.4s
YAK                                 pmax     pmax
         comp=E,380nm,2.7s
KUR   Kuril'sk         145.19 308 i PKIKP    PKPdf     07 24 12.9  0.0
KUR                                 SS       SS        07 46 14.5 -7.2
KUR                                 pmax     pmax
         comp=Z,488nm,1.3s
KUR                                 pmax     pmax
         comp=E,189nm,1.2s
KUR                                 pmax     pmax
         comp=N,119nm,1.1s
KUR                                 pmax     pmax
         comp=Z,3µm,5.9s
PALK  Pallekele        145.96 125   PKPbc    PKPdf     07 24 15.3  0.0
         comp=Z,6.3nm,0.9s,baz=342,slow=3.6,SNR=2.7
PALK  Pallekele        145.96 125   PKIKP    PKPdf     07 24 15.3  0.0
BRZS  Berezniki        146.52  43  ePKP      PKPdf     07 24 14.3 -0.8
         baz=42
BRZS  Berezniki        146.52  43  ePKIKP    PKPdf     07 24 14.3 -0.8
NKL   Nikolayevsk      146.59 324 i PKP2     PKPbc     07 24 16.4 -0.2
NKL                                e                   07 27 42.6
BRLS  Borolday         146.73  56  ePKP      PKPdf     07 24 15.2 -0.6
         baz=56
BRLS  Borolday         146.73  56  ePKIKP    PKPdf     07 24 15.1 -0.6
IUG   Iuzhnay          147.03  57  ePKP      PKPdf     07 24 14.5 -1.9
         baz=57
IUG   Iuzhnay          147.03  57  ePKIKP    PKPdf     07 24 14.4 -1.9
KK31  Karatay Array    147.20  56 i PKIKP    PKPdf     07 24 15.8 -0.7
UGL   Uglegorsk        147.73 316  ePKP2     PKPbc     07 24 18.6 -1.4
DZA   Taraz            147.83  56  ePKP      PKPdf     07 24 17.0 -0.7
         baz=55
DZA   Taraz            147.83  56  ePKIKP    PKPdf     07 24 16.9 -0.7
YSS   Yuzh-Sakhalins   148.11 312 i PKP2     PKPbc     07 24 20.5 -0.6
YSS                                 pmax     pmax
         comp=Z,50nm,1.2s
ASAJ  Asahikawa        149.11 307   PKPbc    PKPbc     07 24 21.4 -2.3
         comp=Z,21nm,1.0s,baz=255,slow=10,SNR=3.1
ASAJ  Asahikawa        149.11 307   PKIKP    PKPbc     07 24 21.4 -2.3
TOLI2 Tolitoli         149.13 205   IAMs_20  IAMs_20   08 35 16.6
         comp=Z,3µm,21.0s
BTLS  Baital           149.16  51  ePKP      PKPdf     07 24 18.8 -0.8
         baz=50
BTLS  Baital           149.16  51  ePKIKP    PKPdf     07 24 18.8 -0.8
KURK  Kurchatov        149.53  38c iPKP2     PKPbc     07 24 22.7 -1.8
KURBB Kurchatov Arra   149.53  38   PKPbc    PKPbc     07 24 22.4 -2.1
         comp=Z,25nm,1.0s,baz=301,slow=3.1,SNR=19
GRNR  Gornyy           150.09 323⇓iPKP2      PKPbc     07 24 25.4 -0.6
GRNR                                pmax     pmax
         comp=Z,8.0nm,1.0s
AAK   Ala-Archa        150.16  55   PKPbc    PKPdf     07 24 23.6 +2.1
         comp=Z,22nm,0.8s,baz=216,slow=2.6,SNR=13
AAK   Ala-Archa        150.16  55c iPKP2     PKPbc     07 24 25.9 -0.7
HYB   Hyderabad        150.40 108 i PKP      PKPbc     07 24 26.0 -1.7
HYB                                esPKP               07 24 36.0
HYB                                ePP       PP        07 28 02.0 -1.5
ZALV  Zalesovo Beam    150.44  28   PKPbc    PKPbc     07 24 25.0 -1.7
         comp=Z,24nm,0.5s,baz=35,slow=5.4,SNR=8.0
ZALV  Zalesovo Beam    150.44  28   PKHKP    PKPpre    07 24 25.0
SEM   Semipalatinsk    150.57  37  ePKP      PKPdf     07 24 23.0 +1.0
         baz=37
SEM   Semipalatinsk    150.57  37  ePKIKP    PKPdf     07 24 22.9 +1.0
TKM2  Tokmak 2         150.86  54   PKIKP    PKPdf     07 24 24.1 +1.4
KUU   Kurty            151.09  52  ePKP      PKPdf     07 24 19.2 -3.5
         baz=52
KUU   Kurty            151.09  52  ePKIKP    PKPdf     07 24 19.2 -3.5
CHKK  Chushkaly        151.54  52  ePKP      PKPdf     07 24 23.5  0.0
         baz=51
BOD   Bodaibo          151.56 353  ePKIKP    PKPbc     07 24 28.5 -0.6
BOD                                 pmax     pmax
         comp=Z,121nm,1.8s
MDOK  Medeo            151.81  53  ePKP      PKPdf     07 24 24.3 +0.3
         baz=53
MDOK  Medeo            151.81  53  ePKIKP    PKPdf     07 24 24.3 +0.3
KSH   Kashi            151.93  61   PKPbc    PKPdf     07 24 24.8 +0.5
KSH                                 PP       PP        07 28 12.8 +0.7
KSH                                 SKKS               07 35 04.5
KSH                                 AMB      AMB
         comp=Z,2µm,10.7s
KSH                                 LR       LR
         comp=Z,4µm,21.4s
KSH                                 LR       LR
         comp=Z,5µm,23.4s
KSH                                 LR       LR
         comp=Z,11µm,32.3s
TDK   Taldyqorghan     152.07  49  ePKP      PKPdf     07 24 23.9 -0.3
         baz=48
TDK   Taldyqorghan     152.07  49  ePKIKP    PKPdf     07 24 23.9 -0.3
ZEA   Zeya             152.19 335  ePKIKP    PKPbc     07 24 29.4 -1.3
ZEA                                e                   07 28 16.0
ZEA                                 pmax     pmax
         comp=E,200nm,3.2s
ZEA                                 pmax     pmax
         comp=N,200nm,4.0s
ZEA                                 pmax     pmax
         comp=Z,600nm,7.3s
ZEA                                 pmax     pmax
         comp=Z,30nm,1.1s
ZEA                                 pmax     pmax
         comp=N,200nm,3.8s
ZEA                                 pmax     pmax
         comp=Z,500nm,5.9s
SATY  Saty             152.78  52  ePKP      PKPdf     07 24 26.1 +0.6
         baz=52
SATY  Saty             152.78  52  ePKIKP    PKPdf     07 24 26.0 +0.6
TEY   Ternei           152.81 312  ePKIKP    PKPdf     07 24 25.2  0.0
KPKS  Kokpek           152.83  52  ePKP      PKPdf     07 24 25.1 -0.3
         baz=51
KPKS  Kokpek           152.83  52  ePKIKP    PKPdf     07 24 25.1 -0.3
PDGK  Podgornoye       153.43  51   PKIKP    PKPdf     07 24 25.4 -1.0
KLR   Kul'dur          153.43 324   PKPbc    PKPbc     07 24 32.1 -1.5
         comp=Z,23nm,1.1s,baz=7.5,slow=3.9,SNR=12
KLR   Kul'dur          153.43 324⇓iPKIKP     PKPdf     07 24 28.7 +2.7
SHLS  Shalkode         153.47  52  ePKP      PKPdf     07 24 29.1 +2.7
         baz=51
SHLS  Shalkode         153.47  52  ePKIKP    PKPdf     07 24 29.1 +2.7
MK31  Makanchi Array   153.67  42 i PKIKP    PKPdf     07 24 29.4 +2.9
MKAR  Makanchi Array   153.67  42   PKP      PKPdf     07 24 27.1 +0.7
         comp=Z,2.8nm,0.7s,baz=299,slow=3.1,SNR=3.4
MKAR                                PKPbc    pPKPdf    07 24 31.9 -2.1
         comp=Z,3.6nm,0.7s,baz=270,slow=3.6,SNR=4.2
MKAR  Makanchi Array   153.67  42   PKIKP    PKPdf     07 24 27.2 +0.7
MKAR                                                   07 24 31.9
MJAR  Matsushiro Arr   153.92 293   PKP      PKPdf     07 24 27.2 +0.1
         comp=Z,3.7nm,0.9s,baz=189,slow=1.6,SNR=2.9
MJAR                                PKPbc    pPKPdf    07 24 32.4 -2.0
         comp=Z,8.8nm,1.0s,baz=159,slow=1.0,SNR=11
MJAR  Matsushiro Arr   153.92 293   PKIKP    PKPdf     07 24 27.2 +0.1
MJAR                                                   07 24 32.4
MAT   Matsushiro       153.92 293  ePKP      PKPdf     07 24 26.2 -0.9
USRK  Ussuriysk Ar.    156.12 314   PKPbc    PKPdf     07 24 36.4 +6.5
         comp=Z,11nm,1.3s,baz=207,slow=3.8,SNR=6.4
CIT   Chita            157.30 351  ePKIKP    PKPdf     07 24 35.4 +4.2
CIT                                e                   07 24 58.4
TLY   Talaya           157.76   7   PKP      PKPdf     07 24 30.0 -1.8
         comp=Z,2.4nm,0.5s,baz=295,slow=4.0,SNR=3.9
TLY   Talaya           157.76   7   PKIKP    PKPdf     07 24 30.0 -1.8
WMQ   Urumqi           158.48  43   PKP      PKPdf     07 24 30.9 -2.1
WMQ                                 pPKP     pPKPdf    07 24 36.0 -4.5
WMQ                                 PKPab    PKPab     07 25 06.4 -1.4
WMQ                                 PP       PP        07 28 54.9 +6.8
WMQ                                 AMB      AMB
         comp=Z,2µm,8.9s
WMQ                                 LR       LR
         comp=Z,14µm,24.3s
WMQ                                 LR       LR
         comp=Z,15µm,21.5s
WMQ                                 LR       LR
         comp=Z,20µm,21.5s
ZAK   Zakamensk        158.99   9  ePKP2     PKPab     07 25 13.9 +4.1
ZAK                                 pmax     pmax
         comp=Z,22nm,1.4s
CN2   Changchun        160.24 320  ePKP      PKPdf     07 24 25.9 -9.0
CN2                                ePP       PP        07 28 49.4 -8.0
KSRS  Korea Array      161.75 300   PKP      PKPdf     07 24 36.1 -0.5
         comp=Z,0.9nm,0.5s,baz=127,slow=0.6,SNR=2.3
KSRS  Korea Array      161.75 300   PKIKP    PKPdf     07 24 36.2 -0.5
SONM  Songino Array    161.81   4   PKP      PKPdf     07 24 36.7 +0.1
         comp=Z,2.1nm,1.0s,baz=341,slow=3.1,SNR=2.1
SONM                                PKPab    PKPab     07 25 20.6 -1.6
         comp=Z,1.7nm,0.7s,baz=1.8,slow=4.5,SNR=1.6
SONM  Songino Array    161.81   4   PKIKP    PKPdf     07 24 36.7 +0.1
SONM                                                   07 25 20.6
SNY   Shenyang         162.55 318 ⇑PKP       PKPdf     07 24 40.5 +3.1
SNY                                 AMB      AMB
         comp=Z,1µm,9.3s
SNY                                 LR       LR
         comp=Z,4µm,22.7s
SNY                                 LR       LR
         comp=Z,12µm,22.5s
SNY                                 LR       LR
         comp=Z,13µm,25.0s
DL2   Dalian           165.51 313   PKP      PKPdf     07 24 46.3 +6.2
CMAR  Chiang Mai Arr   166.08 141   PKP      PKPdf     07 24 42.2 +1.0
         comp=Z,1.0nm,0.3s,baz=297,slow=2.9,SNR=2.2
CMAR                                PKPab    PKPab     07 25 43.1 +1.6
         comp=Z,1.3nm,0.3s,baz=241,slow=3.0,SNR=2.0
CMAR  Chiang Mai Arr   166.08 141   PKIKP    PKPdf     07 24 42.3 +1.0
CMAR                                                   07 25 43.1
BJI   Beijing          167.71 329   PKP      PKPdf     07 24 37.6 -4.2
BJI                                 PP       PP        07 29 35.2 -1.1
BJI                                 SS       SS        07 50 15.4 -7.0
BJI                                 LR       LR
         comp=Z,8µm,22.7s
BJI                                 LR       LR
         comp=Z,13µm,22.6s
BJI                                 LR       LR
         comp=Z,24µm,25.2s
GTA   Gaotai           168.14  33  ePKP      PKPdf     07 24 41.7 -0.6
GTA                                 PKPab    PKPab     07 25 49.8 -0.5
GTA                                 PP       PP        07 29 40.1 +1.3
GTA                                 SS       SS        07 50 30.0 +2.8
GTA                                 AMB      AMB
         comp=Z,960nm,7.7s
GTA                                 LR       LR
         comp=Z,2µm,22.5s
GTA                                 LR       LR
         comp=Z,2µm,24.4s
GTA                                 LR       LR
         comp=Z,6µm,24.4s
HHC   Hu-ho-hao-te     168.49 347  ePKP      PKPdf     07 24 33.7 -8.8
HHC                                 PP       PP        07 29 34.0 -6.0
BTO   Baotou           168.97 352  ePKP      PKPdf     07 24 47.0 +4.2
BTO                                 LR       LR
         comp=Z,17µm,24.1s
BTO                                 LR       LR
         comp=Z,13µm,23.1s
QIZ   Qiongzhong       169.29 189   PKP      PKPdf     07 24 38.7 -4.8
QIZ                                 SS       SS        07 50 39.1 +1.7
QIZ                                 AMB      AMB
         comp=Z,360nm,6.3s
QIZ                                 LR       LR
         comp=Z,5µm,17.8s
QIZ                                 LR       LR
         comp=Z,4µm,16.7s
QIZ                                 LR       LR
         comp=Z,5µm,34.3s
QZH   Quanzhou         169.54 246 i PKP      PKPdf     07 24 47.5 +4.0
QZH                                 PP       PP        07 29 47.3 +0.5
QZH                                 AMB      AMB
         comp=Z,1µm,9.5s
QZH                                 LR       LR
         comp=Z,6µm,30.6s
QZH                                 LR       LR
         comp=Z,7µm,27.7s
QZH                                 LR       LR
         comp=Z,5µm,21.8s
NJ2   Nanjing          170.44 287  ePKP      PKPdf     07 24 40.0 -3.8
NJ2                                 pPKP     pPKPdf    07 24 50.6 -0.4
NJ2                                 PP       PP        07 29 54.1 +2.6
NJ2                                 SKKS               07 36 40.8
NJ2                                 AMB      AMB
         comp=Z,1µm,7.4s
NJ2                                 LR       LR
         comp=Z,5µm,23.5s
NJ2                                 LR       LR
         comp=Z,5µm,19.4s
NJ2                                 LR       LR
         comp=Z,10µm,24.5s
TIY   Taiyuan          171.19 337   PKP      PKPdf     07 24 49.3 +5.2
TIY                                 LR       LR
         comp=Z,5µm,20.0s
TIY                                 LR       LR
         comp=Z,12µm,29.2s
TIY                                 LR       LR
         comp=Z,11µm,30.7s
LZH   Lanzhou          172.67  28  ePKP      PKPdf     07 24 46.7 +1.7
LZH                                 AMB      AMB
         comp=Z,1µm,9.8s
LZH                                 LR       LR
         comp=Z,5µm,17.9s
LZH                                 LR       LR
         comp=Z,5µm,19.7s
LZH                                 LR       LR
         comp=Z,5µm,20.1s
KMI   Kunming          173.44 132 ⇑PKP       PKPdf     07 24 43.9 -1.8
KMI                                 sPKP               07 24 52.1
KMI                                 PP       PP        07 30 07.4 +1.5
KMI                                 SKKS               07 36 58.0
KMI                                 SS       SS        07 51 23.2 +2.5
KMI                                 AMB      AMB
         comp=Z,1µm,13.7s
KMI                                 LR       LR
         comp=Z,2µm,23.5s
KMI                                 LR       LR
         comp=Z,12µm,23.5s
KMI                                 LR       LR
         comp=Z,14µm,28.9s
WHN   Wuhan            174.50 281 ⇑PKP       PKPdf     07 24 47.7 +2.1
WHN                                 PP       PP        07 30 15.4 +3.8
WHN                                 SKKS               07 36 58.2
WHN                                 AMB      AMB
         comp=Z,1µm,4.7s
WHN                                 LR       LR
         comp=Z,13µm,23.3s
WHN                                 LR       LR
         comp=Z,16µm,15.4s
WHN                                 LR       LR
         comp=Z,35µm,28.3s
XAN   Xi'an            175.58 351   PKP      PKPdf     07 24 49.4 +3.5
GYA   Guiyang          176.57 158 ⇑PKP       PKPdf     07 24 46.6 +0.2
GYA                                 PP       PP        07 30 21.8 +1.9
GYA                                 SS       SS        07 51 51.2 +2.3
GYA                                 LR       LR
         comp=Z,6µm,24.0s
GYA                                 LR       LR
         comp=Z,12µm,23.4s
GYA                                 LR       LR
         comp=Z,26µm,26.4s
```

LJU 07 07:09:38.8, 46.°32N×13.°60E, h8km, ML0.6, 1D, Austria

```
Code  Station Name       Δ°  AZ°    Phase ID            Time     Res
                                  Op        ISC       h  m  s   ISC
ROBS  Robic             0.10 222⇓iPg       Pg        07 09 41.3 +0.1
ROBS                             i Sg      Sg        07 09 43.0 +0.2
ROBS                               IAML              07 09 43.1
         comp=Z,9.1nm,0.1s
CADS  Cadrg             0.13 134 i Pg      Pg        07 09 41.9 +0.2
CADS                             i Sg      Sg        07 09 44.0 +0.3
CADS                               IAML              07 09 44.0
         comp=Z,4.2nm,0.1s
```

IDC 07 07:27:27.3±1.7**, 2.°35N×125.°17E, h0km, mb3.7**/4**, mb1 3.8**/4**, mb1mx3.5**/58**, mbtmp3.7**/4**, Error ellipse: s-maj=170.3km s-min=23.5km az=64.0, Talaud Islands**

```
Code  Station Name       Δ°  AZ°    Phase ID            Time     Res
                                  Op        ISC       h  m  s   ISC
WRA   Warramunga Arr   23.92 158  P         P         07 32 43.1 -0.1
         1.7nm,0.4s,baz=337,slow=11,SNR=17
ASAR  Alice Springs    27.23 162  P         P         07 33 14.5 +1.3
         0.2nm,0.4s,baz=343,slow=7.7,SNR=2.1
STKA  Stephens Creek   37.45 157  P         P         07 34 42.1 -0.5
         1.4nm,0.4s,baz=339,slow=11,SNR=6.2
MKAR  Makanchi Array   57.81 326  P         P         07 37 20.2 -0.4
         0.4nm,0.4s,baz=123,slow=8.7,SNR=7.4
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*IDC **07** 07:31:09.6±0.7, 8.°60N×71.°44W, h0km, mb4.2/23, mb1 4.5/28, mb1mx4.4/52, mbtmp4.3/28, ML4.4/5, Error ellipse: s-maj=19.2km s-min=8.0km az=175.0*
*NEIC **07** 07:31:10.6±1.4, 8.°60N±0.°05×71.°44W±0.°04, h9km±4km, mb4.7/75, Mwr4.3(CAR), Error ellipse: s-maj=8.0km s-min=4.7km az=152.0*
*FUNV **07** 07:31:11.4, 8.°52N×71.°38W, h2km, MW4.2*
*CAR **07** 07:31:12.1±1.8, 8.°50N±0.°06×71.°38W±0.°04, h5km±4km, Error ellipse: s-maj=9.0km s-min=4.8km az=155.0*
*VAO **07** 07:31:13.7±0.9, 8.°50N×71.°19W, h10km, mb4.9*
ISC 07 07:31:09.7±1.1**, 8.°57N**±0.°02**×71.°43W**±0.°02**, h4**km±7km**, n243, σ1.ˢ67**/279**, mb4.7**/67**, 3C-10D, Fault plane solution: NP1:**φs64.21890°**,**δ58.73870°**,**λ-102.21497°. **NP2:** φs266.86279°**,**δ33.33653°**,**λ-70.78561°. **Principal axes:** T Plg12.9329°, Azm163.0489°**;** N Plg10.4199°, Azm70.6287°**;** P Plg73.2765°, Azm302.8917°**; Fault plane solution: NP1:**φs138.71516°**,**δ68.70025°, λ-4.92776°. **NP2:**φs230.50900°**,**δ85.40959°, λ-158.62834°. **Principal axes:** T Plg11.5524°, Azm2.7383°**;** N Plg68.1635°, Azm242.0675°**;** P Plg18.2670°, Azm96.6069°**; Fault plane solution: NP1:**φs90.00060°**,**δ71.54244°**,**λ-65.19990°. **NP2:** φs214.41902°**,**δ30.56202°**,**λ-141.48969°. **Principal axes:** T Plg22.6440°, Azm161.2547°**;** N Plg23.4455°, Azm261.6778°**;** P Plg56.3819°, Azm32.3927°**; Fault plane solution: NP1:**φs312.47235°**,**δ76.04845°, λ4.88255°. **NP2:**φs221.29247°**,**δ85.26182°**,**λ165.99963°. **Principal axes:** T Plg13.2319°, Azm176.1069°**;** N Plg75.2348°, Azm22.9628°**;** P Plg6.4350°, Azm267.6266°**; Venezuela**

```
Code  Station Name       Δ°  AZ°    Phase ID            Time     Res
                                  Op        ISC       h  m  s   ISC
SOCV  Socops            0.63 117 eP        Pg        07 31 19.5 -2.4
SOCV                             eS        Sg        07 31 29.5 -0.5
SOCV  Socops            0.63 117⇓iP        Pg        07 31 21.6 -0.3
SOCV                             eS        Sg        07 31 30.7 +0.6
SDV   Santo Domingo     0.84  68  Pg       Pg        07 31 27.1 +1.2
         2µm,0.3s,baz=226,slow=4.8,SNR=879
SDV                               Lg       Lg        07 31 38.5
         3µm,0.3s,baz=53,slow=15,SNR=19
SDV   Santo Domingo     0.84  68 eP        Pg        07 31 25.5 -0.4
SDV                              eS        Sg        07 31 37.6 +0.7
SDV   Santo Domingo     0.84  68 eP        Pg        07 31 26.8 +0.8
SDV   Santo Domingo     0.84  68  Pg       Pg        07 31 26.7 +0.8
SDV                               Sg       Sg        07 31 38.1 +1.2
PAMC  Pamplona, Colo    1.76 226 eP        Pn        07 31 41.6 +0.3
PAMC                             eS        Sb        07 32 05.8 +0.5
MCQV  Machiques         1.83 323⇑iP        Pb        07 31 43.6 -0.2
MCQV                             eS        Sg        07 32 08.8 +0.2
OCAC  Ocana             1.90 260 eP        Pn        07 31 43.6 +0.6
OCAC                             eS        Sn        07 32 07.8 +0.3
OCAC  Ocana             1.90 260           Pn        07 31 43.2 +0.2
TAMC  Tame, Arauca      2.15 190 eP        Pn        07 31 47.7 +1.3
TAMC                             eP        Sg        07 32 17.9 -1.0
DABV  Dabajuro          2.46  18 eP        Pb        07 31 53.0 -1.5
DABV                             eS        Sn        07 32 22.3 +1.0
ELOV  Elorza            2.48 129 eP        Pb        07 31 53.7 -1.1
ELOV                             eS        Sn        07 32 23.9 +2.4
ELOV  Elorza            2.48 129 eP        Pn        07 31 51.6 +0.7
ELOV                             eS        Sn        07 32 20.5 -1.1
SIQV  Siquisique        2.61  38 eP        Pn        07 31 54.4 +1.6
SIQV                             eS        Sn        07 32 25.6 +0.6
BARC  Barichara         2.62 222 eP        Pb        07 31 57.0 -0.5
BARC                             eS        Sb        07 32 32.4 +2.2
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SMLC	San Martn de	2.62	275	eP	Pn	07 31 53.7	+0.8
SMLC				eS	Sb	07 32 30.0	+0.1
BRRC	Barranca, Sant	2.69	237	eP	Pn	07 31 55.5	+1.7
BRRC				eS	Sb	07 32 33.8	+2.0
ARGC	Ariguani, Magd	3.06	295	eP	Pn	07 31 59.8	+0.9
ARGC				eS	Sg	07 32 46.1	-2.1
RUSC	La Rusia	3.13	212	eP	Pn	07 31 57.8	-2.5
RUSC				eS	Sb	07 32 46.1	+1.3
URIC	Uribia, Colomb	3.16	350	eP	Pn	07 32 01.8	+1.5
URIC	Uribia, Colomb	3.16	350	Pn	Pn	07 31 59.6	-0.7
BAUV	El Baul	3.37	83	eP	Pn	07 32 04.2	+1.1
BAUV				eS	Sn	07 32 41.6	-1.9
BAUV	El Baul	3.37	83	Pn	Pn	07 32 04.2	+1.1
ZARC	Zaragoza, Cauc	3.56	253		Pn	07 32 05.7	-0.1
JACV	Jacura	3.58	45	eP	Pn	07 32 07.5	+1.5
MONV	Montecano	3.66	23	eP	Pn	07 32 08.4	+1.3
MONV				eS	Sn	07 32 50.4	-0.3
SMRC	Santa Marta, M	3.77	313	eP	Pn	07 32 11.9	+3.2
SMRC				eS	Sn	07 32 56.2	+2.6
SPBC	San Pablo de B	3.91	222	eP	Pn	07 32 13.9	+3.2
SPBC				eS	Sg	07 33 14.3	-1.1
SJCC	San Jacinto, C	3.93	290	eP	Pn	07 32 11.9	+0.9
SJCC				eS	Sn	07 33 00.2	+2.6
SJCC	San Jacinto, C	3.93	290		Pn	07 32 12.6	+1.6
TURV	Turiamo	4.00	62	eP	Pn	07 32 11.7	-0.1
BENV	Beln	4.02	70	⇓eP	Pn	07 32 13.7	+1.4
BENV				eS	Sn	07 32 58.0	-1.9
UREC	San Jos de Ur	4.14	259	eP	Pn	07 32 11.9	-2.0
UREC				eP	Sn	07 33 02.2	-0.5
MOTC	Monteria, Cord	4.20	273	eP	Pn	07 32 17.9	+3.4
MOTC				eS	Sn	07 33 04.3	+0.2
MOTC	Monteria, Cord	4.20	273	Pn	Pn	07 32 14.9	+0.4
HATO	Hato, Curacao	4.33	34	Pn	Pn	07 32 16.2	-0.2
PTGC	Puerto Gaitan,	4.40	189	eP	Pb	07 32 30.0	+2.4
PTGC				eS	Sb	07 33 24.4	+3.4
CHIC	Chingaza	4.54	210	eP	Pn	07 32 19.4	-0.2
CHIC				eS	Sn	07 33 10.7	-2.2
NORC	Norcasia	4.54	229	eP	Pn	07 32 19.9	+0.7
NORC				eS	Sn	07 33 14.3	+1.8
TACV	Tcata	4.61	70	eP	Pn	07 32 21.1	+0.7
ROSC	El Rosal	4.69	218	Pn	Pn	07 32 24.2	+2.6
	122nm,0.3s,baz=74,slow=8.0,SNR=85						
ROSC				Sn	Sn	07 33 19.4	+2.7
	57nm,0.3s,baz=17,slow=19,SNR=1.7						
ROSC	El Rosal	4.69	218	eP	Pn	07 32 26.0	+4.3
ROSC				eS	Sn	07 33 18.4	+1.6
ROSC	El Rosal	4.69	218		Pn	07 32 23.8	+2.1
HELC	Santa Helena	4.71	240	eS	Sb	07 33 32.5	+2.3
CARV	Caracas	4.83	66	eP	Pn	07 32 24.0	+0.6
LCBC	Los crdobas,	4.89	274	eP	Pn	07 32 23.9	-0.1
LCBC				eS	Sn	07 33 22.4	+1.2
CACV	CAICARA DEL OR	4.94	101	eP	Pb	07 32 31.9	-4.9
VILC	Villavicencio,	4.97	207	eP	Pn	07 32 23.9	-1.3
DBBC	Dabeiba	4.98	252	eP	Pb	07 32 32.0	-5.6
DBBC				eS	Sb	07 33 42.6	+4.6
MERV	Las Mercedes	5.11	82	⇓eP	Pn	07 32 27.4	+0.3
GUY2C	Guyana, Caldas	5.13	230	eP	Pn	07 32 30.0	+2.2
GUY2C				eP	Pn	07 32 30.0	+2.2
GUY2C				eS	Sb	07 33 42.6	0.0
CBOC	Ciudad Bolivar	5.28	240	eP	Pn	07 32 32.4	+2.7
BIRV	Birongo	5.43	69	⇓eP	Pn	07 32 31.8	+0.4
BIRV	Birongo	5.43	69	Pn	Pn	07 32 33.0	+1.5
ANIL	Santa Ana	5.66	225	eP	Pn	07 32 36.7	+1.8
ANIL				eS	Sn	07 33 43.2	+2.7
CAPC	Capurgana	5.86	271	eP	Pn	07 32 36.7	-0.7
CAPC				eS	Sn	07 33 41.8	-3.3
CAP2	Capurgana	5.87	271	Pn	Pn	07 32 35.8	-1.7
ORTC	Ortega, Tolima	5.99	220	eP	Pn	07 32 38.1	-1.1
ORTC				eS	Sn	07 33 48.6	+0.3
PLMC	San Jos del P	6.04	233	eP	Pn	07 32 40.1	+0.1
GUVC	San Jose del G	6.10	191	eP	Pn	07 32 40.1	-0.7
GUVC				eS	Sn	07 33 46.6	-4.5
SOLC	Bahia Solano	6.37	249	eP	Pn	07 32 46.1	+1.7
YOTC	Yotoco, Valle	6.68	227	eP	Pn	07 32 50.2	+1.3
MACC	Macarena, Meta	6.82	201	eP	Pn	07 32 48.1	-2.5
MACC				eS	Sn	07 34 04.7	-4.1
PCRV	Puerto La Cruz	6.89	76	Pn	Pn	07 32 53.0	+1.4
	18nm,0.3s,baz=296,slow=4.3,SNR=113						
PCRV				Sn	Sn	07 34 10.8	+0.3
	28nm,0.3s,baz=266,slow=23,SNR=9.3						
PIZC	Pizarro, Choco	6.89	239	eP	Pn	07 32 54.2	+2.6
PLCV	Puerto La Cruz	6.93	76		Pn	07 32 53.0	+0.9
BETC	Betania	7.08	215	eP	Pn	07 32 54.8	+0.5
GARC	Garzon, Huila	7.52	213	eP	Pn	07 32 58.2	-2.3
GARC				eS	Sn	07 34 24.9	-1.5
PCON	Cinco Dias	7.93	219	eP	Pn	07 33 06.3	-0.1
SOTA	Rioblanco	8.21	219	eP	Pn	07 33 10.3	+0.1
BCIP	Isla Barro Col	8.33	275	eP	Pn	07 33 12.2	+0.8
BCIP				eS	Sn	07 34 42.5	-3.5
BCIP	Isla Barro Col	8.33	275		Pn	07 33 10.6	-0.8
PTLC	Puerto Leguiza	8.99	202	eP	Pn	07 33 24.4	+3.9
PTLC				eS	Sg	07 35 57.6	-1.0
JAKH	Jacmel	9.67	354	Pn	Pn	07 33 29.8	+0.1
LGNH	Logne	9.95	354		Pn	07 33 34.2	+0.7
GRGR	Grenville	10.24	69	Pn	Pn	07 33 37.7	0.0
CRPR	Cabo Rojo, PR	10.28	24		Pn	07 33 36.8	-1.2
PCDR	Punta Cana, DR	10.32	16	Pn	Pn	07 33 37.6	-1.0
DR12	Loma Pena Alta	10.35	11		Pn	07 33 37.8	-1.3
SDDR	Presa de Saban	10.35	1		Pn	07 33 41.3	+2.2
PRSN	Puerto Rico Se	10.45	23		Pn	07 33 39.0	-1.5
OBIP	Obispado Ponce	10.52	26		Pn	07 33 40.7	-0.6
CELP	Cerrillos	10.56	26	Pn	Pn	07 33 40.8	-1.1
AGPR	Aguadilla, PR	10.70	23		Pn	07 33 43.1	-0.6
AOPR	Arecibo Observ	10.73	25		Pn	07 33 43.1	-1.1
PDPR	Patillas Dam,	10.76	29		Pn	07 33 43.8	-0.9
SJG	San Juan	10.78	28	Pn	Pn	07 33 44.2	-0.7
	22nm,0.3s,baz=206,slow=12,SNR=75						
SJG				Sn	Sn	07 35 38.1	-8.1
	4.5nm,0.3s,baz=61,slow=19,SNR=2.5						
SJG	San Juan	10.78	28		Pn	07 33 44.6	-0.4
SC01	Santiago de lo	10.81	4		Pn	07 33 45.1	-0.3
OTAV	Otavalo	10.84	221	eP	Pn	07 33 50.7	+4.5
OTAV	Otavalo	10.84	221		Pn	07 33 45.8	-0.4
PRVC	Isla de Provid	10.86	297	eP	Pn	07 33 44.6	-1.5
PRVC				eS	Sn	07 35 41.5	-6.7
EMPR	Esperanza - Ma	10.94	25		Pn	07 33 47.3	+0.2
HUMP	Col San Antoni	10.95	29		Pn	07 33 47.2	-0.1
GCPR	Guaynabo City	10.99	28		Pn	07 33 47.2	-0.6
SVB	Belmont	11.03	64		Pn	07 33 48.6	+0.3
CBYP	Canovanas	11.06	29		Pn	07 33 48.3	-0.5
MTP	Monte Pirata	11.06	30		Pn	07 33 48.5	-0.2
BRU2	Volcan	11.14	272		Pn	07 33 49.3	-0.7
CDVI	St. Croix	11.19	35	Pn	Pn	07 33 51.4	+0.8
MTDJ	Mount Denham	11.29	329	Pn	Pn	07 33 52.0	0.0
STVI	Saint Thomas	11.58	32		Pn	07 33 56.2	+0.3
FDF	Fort de France	11.78	58	Pn	Pn	07 33 57.9	-0.8
SRBA	San Rafael, Bu	11.81	274		Pn	07 34 00.0	+0.8
GTBY	Guantanamo Bay	11.84	343	Pn	Pn	07 33 59.9	+0.5
BATAN	Batan	11.89	278	Pn	Pn	07 33 59.2	-1.0
BOAV	Boa Vista	12.46	119	Pn	Pn	07 34 07.7	-0.4
TBTG	Tabatinga, AM	12.76	173	Pn	Pn	07 34 10.3	-1.8
COVE	Coope Vega, Sa	12.97	281	Pn	Pn	07 34 13.9	-1.0
ACON	Acoyapa	13.94	285		Pn	07 34 27.0	-1.2
PTGA	Pitinga	14.69	128	Pn	Pn	07 34 36.4	-2.1
	2.7nm,0.3s,baz=316,slow=21,SNR=29						
PTGA	Pitinga	14.69	128		Pn	07 34 36.2	-2.3
MACA	Manacapuru-AM	15.83	137	Pn	Pn	07 34 51.7	-1.9
MACA				IAmb	IAmb	07 35 05.7	
	comp=Z,54nm,1.0s						
CRIN	San Cristobal	15.89	286		Pn	07 34 54.0	-0.5
CRIN				IAmb	IAmb	07 35 03.6	
	comp=Z,114nm,1.1s						
CZSB	Cruzeiro do Su	16.24	185	Pn	Pn	07 34 57.2	-1.7
CZSB				IAmb	IAmb	07 35 09.7	
	comp=Z,36nm,0.8s						
TGUH	Tegucigalpa,Un	16.46	291		Pn	07 35 01.3	-0.5
TGUH				IAmb	IAmb	07 35 10.9	
	comp=Z,71nm,1.1s						
ATAH	Atahualpa	17.08	204	P	Pn	07 35 11.0	+1.1
	comp=Z,0.2nm,0.3s,baz=55,slow=11,SNR=4.9						
MDP	Montagnes des	18.96	99	P	P	07 35 31.3	-0.9
	comp=Z,1.6nm,0.3s,baz=289,slow=15,SNR=25						
ETMB	Extrema	18.99	164	eP	Pn	07 35 33.3	+0.2
SAML	Samuel	19.24	155	P	P	07 35 34.7	-0.5
CCIG	Comitan	21.61	293	P	P	07 36 00.3	-0.9
CCIG				IAmb	IAmb	07 36 07.6	
	comp=Z,24nm,0.9s						
NPGB	Novo Progresso	22.30	134	eP	P	07 36 10.3	+2.0
CMIG	Matias Romero	24.37	293	P	P	07 36 30.4	+1.3
	comp=Z,2.2nm,0.8s,baz=85,slow=4.3,SNR=5.3						
CLDB	Colider	24.80	141	eP	P	07 36 33.9	+0.8
PDRB	Porto dos Gac	24.81	144	eP	P	07 36 32.9	-0.3
PRPB	Parauapebas	26.05	124	eP	P	07 36 46.5	+2.0
Y60A	Bolivia	26.07	347	P	P	07 36 42.8	-1.6
Y59A	Loris	26.21	346	P	P	07 36 43.5	-2.1
152A	Waverly Hall	26.96	335	P	P	07 36 51.2	-1.3
152A				IAmb	IAmb	07 37 00.7	
	comp=Z,13nm,0.8s						
GOGA	Godfrey	27.11	337	P	P	07 36 51.9	-1.8
GOGA				IAmb	IAmb	07 37 04.3	
	comp=Z,14nm,1.1s						
JSC	Jenkinsville	27.14	342	P	P	07 36 52.8	-1.2
JSC				IAmb	IAmb	07 37 00.5	
	comp=Z,13nm,1.1s						
HODGE	Hodges	27.42	340	P	P	07 36 55.7	-0.8
HODGE				IAmb	IAmb	07 37 03.3	
	comp=Z,9.3nm,0.9s						
Z47A	Carrollton	28.94	330	P	P	07 37 07.8	-2.3
Z47A				IAmb	IAmb	07 37 22.2	
	comp=Z,18nm,0.8s						
344A	Westbrook Farm	29.01	324	P	P	07 37 08.6	-2.2
TKL	Tuckaleechee C	29.23	339	P	P	07 37 13.0	+0.3
	comp=Z,1.7nm,0.7s,baz=159,slow=14,SNR=1.8						
TKL	Tuckaleechee C	29.23	339	IAmb	IAmb	07 37 18.0	
	comp=Z,2.7nm,0.9s						
X48A	Hartselle	29.49	333	P	P	07 37 12.9	-2.1
PLAL	Pickwick Lake	30.40	332	P	P	07 37 20.9	-2.2
PLAL				IAmb	IAmb	07 37 33.5	
	comp=Z,11nm,0.9s						
T50A	Nancy	30.83	339	P	P	07 37 25.9	-1.0
T50A				IAmb	IAmb	07 37 29.5	
	comp=Z,8.5nm,1.1s						
W45A	Hickory Valley	31.06	331	P	P	07 37 27.8	-1.1
WVT	Waverly	31.25	334	P	P	07 37 29.1	-1.4
WVT				IAmb	IAmb	07 37 37.3	
	comp=Z,15nm,1.2s						
WHAR	Wooly Hollow	32.74	327	P	P	07 37 42.7	-1.0
WHAR				IAmb	IAmb	07 37 49.3	
	comp=Z,8.9nm,0.7s						
LCAR	Lake Charles	32.75	330	P	P	07 37 42.4	-1.4
LCAR				IAmb	IAmb	07 37 50.5	
	comp=Z,14nm,1.3s						
PBMO	Poplar Bluff	32.96	331	P	P	07 37 44.0	-1.6
PBMO				IAmb	IAmb	07 38 02.8	
	comp=Z,23nm,1.5s						
FCAR	Ozark Folk Cen	33.11	328	P	P	07 37 44.6	-2.3
S44A	Carbondale	33.18	334	P	P	07 37 46.6	-0.9
T42A	Van Buren	33.48	331	P	P	07 37 48.9	-1.2
W39A	Magazine	33.48	326	P	P	07 37 48.8	-1.4
W39A				IAmb	IAmb	07 38 03.9	
	comp=Z,17nm,1.2s						
U40A	Yellville	33.84	328	P	P	07 37 51.7	-1.6
FVM	French Village	33.94	333	P	P	07 37 52.4	-1.8
HHAR	Hobbs	34.37	327	P	P	07 37 56.1	-1.8
HHAR				IAmb	IAmb	07 38 01.6	
	comp=Z,11nm,1.2s						
CCM	Cathedral Cave	34.38	332	P	P	07 37 58.1	+0.2
CCM				IAmb	IAmb	07 38 07.1	
	comp=Z,9.9nm,0.9s						
P43A	Skaggs, Pawnee	34.92	335	P	P	07 38 02.5	0.0
S39A	Bolivar	35.10	329	P	P	07 38 03.3	-0.9
S39A				IAmb	IAmb	07 38 09.9	
	comp=Z,8.1nm,0.7s						
ABTX	Abilene, Hawle	35.43	317	P	P	07 38 05.7	-1.5
ABTX				IAmb	IAmb	07 38 15.8	
	comp=Z,16nm,0.9s						
OK029	Liberty Lake	36.03	323		P	07 38 11.8	-0.5
WMOK	Wichita Mounta	36.16	320	P	P	07 38 12.2	-1.2
WMOK				IAmb	IAmb	07 38 16.5	
	comp=Z,7.0nm,0.8s						
TX32	Lajitas Array	36.62	309	P	P	07 38 16.4	-1.1
TXAR	Lajitas Array	36.62	309	P	P	07 38 17.5	0.0
	comp=Z,1.4nm,0.7s,baz=94,slow=10,SNR=11						
TXAR				PcP	PcP	07 40 41.2	+0.5
	comp=Z,0.6nm,0.5s,baz=138,slow=5.2,SNR=5.5						
TX31	Lajitas Ar. Si	36.62	309	P	P	07 38 16.1	-1.4
TX31				IAmb	IAmb	07 38 35.4	
	comp=Z,16nm,1.3s						
KSU1	Kansas State U	37.87	327	P	P	07 38 26.4	-1.4
KSU1				IAmb	IAmb	07 38 31.0	
	comp=Z,12nm,0.7s						
MSTX	Muleshoe	38.35	316	P	P	07 38 31.6	-0.5
MSTX				IAmb	IAmb	07 38 40.7	
	comp=Z,12nm,0.8s						
SCIA	State Center	38.37	333	P	P	07 38 31.2	-0.8
SCIA				IAmb	IAmb	07 38 38.6	
	comp=Z,19nm,0.8s						
N35A	Tabor	38.69	330	P	P	07 38 34.0	-0.7
CBKS	Cedar Bluff	39.41	324	P	P	07 38 39.4	-1.4
L34A	Svendsen Farm,	39.88	331	P	P	07 38 43.8	-0.9
T25A	Trinidad	41.24	319	P	P	07 38 53.6	-2.6
ANMO	Albuquerque	41.44	315	P	P	07 38 58.9	+1.1
	comp=Z,0.7nm,0.4s,baz=125,slow=12,SNR=2.0						
K31A	O'Neill	41.55	329	P	P	07 38 58.0	-0.5
SDCO	Great Sand Dun	42.30	319	P	P	07 39 04.2	-0.9
ISCO	Idaho Springs	43.56	321	P	P	07 39 13.2	-2.0
SMCO	Snowmass	44.06	319	P	P	07 39 18.0	-1.4
SMCO				IAmb	IAmb	07 39 28.2	
	comp=Z,7.2nm,0.8s						
E28A	Huff	45.39	332	P	P	07 39 28.3	-1.1
ULM	Lac du Bonnet	46.25	338	P	P	07 39 35.9	-0.2
	comp=Z,9.7nm,0.6s,baz=146,slow=7.8,SNR=9.1						
ULM	Lac du Bonnet	46.25	338	IAmb	IAmb	07 39 40.3	
	comp=Z,10nm,0.7s						
SCHQ	Schefferville	46.28	4	P	P	07 39 36.5	+0.1
	comp=Z,6.2nm,0.8s,baz=208,slow=13,SNR=1.6						
PD31	Pinedale Array	47.70	322	P	P	07 39 47.9	+0.1
PD31				IAmb	IAmb	07 39 54.9	
	comp=Z,13nm,1.2s						
PDAR	Pinedale Array	47.70	322	P	P	07 39 48.0	+0.1
	comp=Z,2.9nm,0.4s,baz=121,slow=11,SNR=48						
PDAR	Pinedale Array	47.70	322	P	P	07 39 47.9	0.0
BW06	Boulder Array	47.70	322	P	P	07 39 47.2	-0.6
BW06				IAmb	IAmb	07 39 54.9	
	comp=Z,14nm,1.2s						
DGMT	Dagmar	48.40	331	P	P	07 39 52.0	-1.0
LOHW	Long Hollow	48.81	322	P	P	07 39 55.8	-0.6
LOHW				IAmb	IAmb	07 40 03.7	
	comp=Z,9.0nm,0.9s						
RLMT	Red Lodge	48.89	325	P	P	07 39 57.1	+0.1
YHH	Holmes Hill	49.61	324	P	P	07 40 01.8	-0.9
YHL	Hebgen Lake	49.84	323	P	P	07 40 03.6	-0.8
YHL				IAmb	IAmb	07 40 18.5	
	comp=Z,18nm,1.2s						
ELK	Elko	50.32	317	P	P	07 40 09.7	+1.6
	comp=Z,0.7nm,0.6s,baz=120,slow=7.9,SNR=3.5						
LCH	Last Change Ra	50.55	312	P	P	07 40 09.0	-0.7
MCMT	McKenzie Canyo	50.82	323	P	P	07 40 11.0	-0.8
HLID	Hailey	51.13	320	P	P	07 40 13.2	-0.8
HRY	Holter Researc	51.27	325	P	P	07 40 13.8	-1.1
NVAR	Mina Array Bea	51.49	313	P	P	07 40 16.6	-0.3
	comp=Z,0.6nm,0.5s,baz=122,slow=6.5,SNR=9.6						
KVN	Kaiserville	51.59	314	P	P	07 40 17.2	-0.3
JTMT	Jette	53.24	325	P	P	07 40 29.5	0.0
JTMT				IAmb	IAmb	07 40 34.3	
	comp=Z,7.5nm,0.9s						
NEW	Newport	55.13	324	P	P	07 40 43.4	+0.2
	comp=Z,2.7nm,0.6s,baz=152,slow=5.0,SNR=9.0						
NEW	Newport	55.13	324	P	P	07 40 42.9	-0.4
NEW				IAmb	IAmb	07 40 49.2	
	comp=Z,4.9nm,0.8s						
YBH	Yreka Blue Hor	55.86	315	P	P	07 40 49.1	+0.4
	comp=Z,1.3nm,0.8s,baz=89,slow=6.9,SNR=4.5						
YBH	Yreka Blue Hor	55.86	315	IAmb	IAmb	07 40 58.9	
	comp=Z,2.6nm,1.1s						
YKA	Yellowknife Ar	62.23	339	P	P	07 41 31.6	-0.8
	comp=Z,3.3nm,0.8s,baz=121,slow=8.0,SNR=6.7						
DBIC	Dimbokro	65.94	87	P	P	07 41 58.1	+0.5
	comp=Z,6.1nm,0.9s,baz=296,slow=6.8,SNR=3.8						
MDT	Midelt	65.94	58	P	P	07 42 01.1	+3.6
	comp=Z,3.1nm,1.0s,baz=296,slow=4.8,SNR=5.0						
KOWA	Kowa	66.12	78	P	P	07 41 58.1	-0.8
KOWA				IAmb	IAmb	07 42 02.3	
	comp=Z,6.8nm,0.9s						
DLBC	Dease Lake	66.61	331	P	P	07 42 02.5	+1.2
	comp=Z,7.5nm,0.9s,baz=88,slow=4.4,SNR=7.5						
DLBC	Dease Lake	66.61	331	IAmb	IAmb	07 42 07.2	
	comp=Z,17nm,1.2s						
SUMG	Summit	66.98	10	iP	P	07 42 04.3	+0.6
SUMG	Summit	66.98	10	P	P	07 42 03.2	-0.5
ESDC	Sonseca Array	67.25	51	P	P	07 42 05.8	+0.1
	comp=Z,1.4nm,0.6s,baz=273,slow=4.9,SNR=6.6						
ESDC	Sonseca Array	67.25	51	IAmb	IAmb	07 42 11.9	
	comp=Z,8.1nm,1.4s						
TULEG	Thule	67.95	1	eP	P	07 42 09.8	+0.5
TULEG				IAmb	IAmb	07 42 14.2	
	comp=Z,15nm,1.0s						
NEEM	North Greenlan	69.68	5	iP	P	07 42 20.8	+0.3
NEEM				IAmb	IAmb	07 42 25.1	
	comp=Z,19nm,0.8s						
A36M	Sachs Harbour	71.20	345	P	P	07 42 28.7	-0.8
TORD	Torodi Ar. Bea	71.75	79	P	P	07 42 32.5	-1.3
	comp=Z,2.4nm,0.8s,baz=283,slow=5.4,SNR=11						
TORD	Torodi Ar. Bea	71.75	79	IAmb	IAmb	07 42 37.1	
	comp=Z,3.5nm,0.9s						
INK	Inuvik	71.97	340	P	P	07 42 34.2	+0.1
	comp=Z,2.8nm,0.7s,baz=158,slow=2.1,SNR=12						
INK	Inuvik	71.97	340	IAmb	IAmb	07 42 39.6	
	comp=Z,4.9nm,0.9s						
DAG	Danmarks Havn	73.63	11	iP	P	07 42 47.0	+3.1
L26K	Log Cabin Wild	74.23	333	P	P	07 42 46.5	-1.2
L26K				IAmb	IAmb	07 42 58.5	
	comp=Z,10nm,1.1s						
IL31		76.10	335	P	P	07 42 57.4	-1.0
ILAR	Eielson Array	76.10	335	P	P	07 42 58.1	-0.3
	comp=Z,1.1nm,0.7s,baz=110,slow=4.5,SNR=11						
ILAR	Eielson Array	76.10	335	P	P	07 42 58.0	-0.4
NOR	Nord	76.68	7	iP	P	07 43 04.3	+2.8
NOR				IAmb	IAmb	07 43 05.9	
	comp=Z,4.0nm,0.9s						
DAVA	Damuels	77.87	43	eP	P	07 43 09.4	+0.5
	comp=Z,16nm,1.6s						
FETA	Feichten	78.44	44	eP	P	07 43 13.6	+1.5
	comp=Z,13nm,1.0s						
RETA	Reutte	78.47	43	eP	P	07 43 12.7	+0.5
	comp=Z,9.7nm,1.4s						
MOTA	Moosalm	78.70	43	eP	P	07 43 15.5	+2.0
	comp=Z,6.4nm,1.0s						
SQTA	Sankt Quirin	78.77	44	eP	P	07 43 15.0	+1.1
	comp=Z,8.5nm,1.0s						
NB2	NORSAR Subarra	78.99	29	P	P	07 43 18.0	+3.3
	comp=Z,0.6nm,0.6s,baz=269,slow=5.9						
NOA	NORSAR Array B	78.99	29	P	P	07 43 15.0	+0.3
	comp=Z,1.7nm,0.8s,baz=268,slow=5.6,SNR=5.2						
WATA	Walderalm	79.02	43	eP	P	07 43 16.4	+1.1
	comp=Z,3.4nm,0.7s						
WTTA	Wattenberg	79.06	44	eP	P	07 43 17.0	+1.4
	comp=Z,4.8nm,0.6s						
ABTA	Abfaltersbach	79.67	44	eP	P	07 43 19.8	+1.0
	comp=Z,5.6nm,1.0s						
KHC	Kasperske Hory	80.32	42	eP	P	07 43 25.0	+2.8
GERES	GERESS Array B	80.41	42	P	P	07 43 22.1	-0.6
	comp=Z,1.3nm,0.7s,baz=298,slow=2.9,SNR=7.6						
GERES	GERESS Array B	80.41	42	P	P	07 43 20.3	-2.5
MOA	Molln	80.83	43	eP	P	07 43 26.2	+1.3
	comp=Z,3.0nm,0.9s						
ARSA	Arzberg	81.71	43	eP	P	07 43 30.4	+0.7
	comp=Z,1.4nm,0.5s						
CHVC	Chvalec	81.85	40	eP	P	07 43 34.0	+3.7
CONA	Conrad Observa	81.89	43	eP	P	07 43 32.1	+1.4
	comp=Z,9.3nm,1.5s						
DPC	Dobruska-Polom	82.04	40	eP	P	07 43 34.8	+3.5
ARCES	ARCESS Array B	84.46	21	P	P	07 43 43.1	-0.3
	comp=Z,4.4nm,1.0s,baz=303,slow=12,SNR=2.4						
FINES	FINESS Array B	86.11	29	P	P	07 43 51.9	+0.1
	comp=Z,3.0nm,0.8s,baz=270,slow=1.9,SNR=7.2						
AKASG	Malin Array Be	90.11	39	P	P	07 44 13.4	+2.3
	comp=Z,0.2nm,0.3s,baz=286,slow=3.8,SNR=2.4						
CMAR	Chiang Mai Arr	151.51	19	PKPbc	PKiKP	07 51 08.2	+1.7
	comp=Z,2.9nm,0.6s,baz=310,slow=3.3,SNR=9.9						

IDC ***07*** *07:31:36.3±0.3, 30°.90S×71°.32W, h0^{km}, mb5.9/38, mb1 5.9/43, mb1mx5.9/46, mbtmp5.9/43, ML5.7/5, MS6.6/21, Ms1 6.5/21, ms1mx6.4/26 Error ellipse: s-maj=10.8km s-min=7.4km az=93.0*

SJA ***07*** *07:31:38.9±0.7, 30°.86S×71°.78W, h25^{km}±4^{km}, ML6.9, MW6.6*

BJI ***07*** *07:31:40.0±0.0, 30°.91S×71°.46W, h30^{km}, mB6.6/68, Ms6.8/89, Ms7 6.9/84*

GUC ***07*** *07:31:41.5±0.7, 30°.87S×71°.43W, h48^{km}±4^{km}, MW6.8*

MOS ***07*** *07:31:42.0±0.9, 30°.78S×71°.28W, h44^{km}, mb6.4/30, MS6.5/18, Error ellipse: s-maj=11.9km s-min=6.7km az=90.4*

NEIC ***07*** *07:31:43.9±1.5, 30°.88S±0°.04×71°.45W±0°.05, h46^{km}±1^{km}, mb6.6/307, Ms_20 6.6/339, Mwb6.8/59, Mwc6.7/107, Mww6.8, Mwc6.7(GCMT), Mwr6.8(GUC), Error ellipse: s-maj=8.2km s-min=5.4km az=245.0*

VAO ***07*** *07:31:43.6±0.2, 30°.88S×71°.20W, h42^{km}, mb6.3*

NEIC ***07*** *07:31:43.8, 30°.89S×71°.47W, h48^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M_{rr}1.60; $M_{\theta\theta}$0.23; $M_{\phi\phi}$-1.83; $M_{r\theta}$0.24; $M_{\theta\phi}$0.23; $M_{\phi r}$-0.35; Fault plane solution: $M_0$1.80000×10^{19} NP1:ϕ_s165.86000°, δ51.60000°, λ79.68000°. NP2:ϕ_s2.20000°, δ39.56000°, λ102.73000°. Principal axes: T 1.6699, Plg80.0000°, Azm30.0000°; N 0.2285, Plg8.0000°, Azm172.0000°; P -1.8983, Plg6.0000°, Azm263.0000°;*

GCMT ***07*** *07:31:47.8±0.1, 30°.99S×71°.66W, h43^{km}, MW6.7/161, Moment Tensor Solution. s161,c428; s158,c706; Duration: $5^{s}5$ Moment tensor: Scale 10^{19}Nm; M_{rr}1.29±.01; $M_{\theta\theta}$0.08±.00; $M_{\phi\phi}$-1.37±.01; $M_{r\theta}$0.15±.01; $M_{\theta\phi}$0.14±.00; $M_{\phi r}$-0.61±.01; Best double couple: $M_0$1.47700×10^{19} NP1:ϕ_s359.00000°, δ33.00000°, λ97.00000°. NP2:ϕ_s171.00000°, δ58.00000°, λ86.00000°. Principal axes: T 1.4330, Plg77.0000°, Azm67.0000°; N 0.0860, Plg4.0000°, Azm173.0000°; P -1.5210, Plg12.0000°, Azm264.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***07*** *07:31:49, 31°.03S×71°.72W, h44^{km}, Moment Tensor Solution. Duration: $11^{s}0$ Moment tensor: Scale 10^{19}Nm; M_{rr}1.21; $M_{\theta\theta}$0.11; $M_{\phi\phi}$-1.32; $M_{r\theta}$0.13; $M_{\theta\phi}$0.11; $M_{\phi r}$-0.63; Fault plane solution: $M_0$1.43000×10^{19} NP1: ϕ_s360.00000°, δ32.00000°, λ97.00000°. NP2: ϕ_s172.00000°, δ59.00000°, λ86.00000°. Principal axes: T 1.3687, Plg76.0000°, Azm70.0000°; N 0.1123, Plg3.0000°, Azm174.0000°; P -1.4809, Plg13.0000°, Azm265.0000°;*

NEIC ***07*** *07:31:50, 31°.11S×71°.08W, h50^{km}, Moment Tensor Solution. Duration: $15^{s}0$ Moment tensor: Scale 10^{19}Nm; M_{rr}1.23; $M_{\theta\theta}$0.13; $M_{\phi\phi}$-1.36; $M_{r\theta}$0.18; $M_{\theta\phi}$0.07; $M_{\phi r}$-1.45; Fault plane solution: $M_0$1.95000×10^{19} NP1:ϕ_s2.00000°, δ21.00000°, λ98.00000°. NP2:ϕ_s174.00000°, δ69.00000°, λ87.00000°. Principal axes: T 1.8870, Plg66.0000°, Azm79.0000°; N 0.1293, Plg3.0000°, Azm175.0000°; P -2.0164, Plg24.0000°, Azm266.0000°;*

NEIC ***07*** *07:31:56.7, 31°.54S×71°.44W, h44^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M_{rr}1.44; $M_{\theta\theta}$-0.08; $M_{\phi\phi}$-1.36; $M_{r\theta}$0.32; $M_{\theta\phi}$0.08; $M_{\phi r}$-0.86; Fault plane solution: $M_0$1.67000×10^{19} NP1:ϕ_s167.66000°, δ61.63000°, λ81.89000°. NP2:ϕ_s4.35000°, δ29.42000°, λ104.64000°. Principal axes: T 1.7298, Plg72.0000°, Azm59.0000°; N -0.1098, Plg7.0000°, Azm172.0000°; P -1.6200, Plg16.0000°, Azm264.0000°;*

ISC 07 07:31:42.0±0.2**, 30°.89S**±0°.02×**71°.44W**±0°.03**, h36**^{km}**, h37**^{km}**:pP-P, n1838,** σ**2^{s}13**/1943**, mb6.5**/248**, MS6.6**/243**, 672C-65D, Fault plane solution: NP1:**ϕ_s171.42006°**,** δ49.39051°**,** λ90.32580°. **NP2:**ϕ_s350.91953°**,** δ40.61057°**,** λ89.62002°. **Principal axes:** T Plg85.6030°**,** Azm84.4263°**;** N Plg0.2473°**,** Azm351.2080°**;** P Plg4.3900°**,** Azm261.1890°**; Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.27	322	⇑iP	Pn	07 31 50.8	+0.6
CO06				eS	Sn	07 31 57.1	-0.4
CO06	Fray Jorge	0.27	322		Pn	07 31 50.8	+0.6
CO03	El Pedregal	0.65	86	⇓iP	Pn	07 31 55.8	+0.8
CO03				eS	Sn	07 32 06.2	+2.3
CO03	El Pedregal	0.65	86		Pn	07 31 56.0	+1.1
GO04	Tololo Observa	0.91	38	iP	Pn	07 31 59.3	+0.9
GO04				eS	Sn	07 32 12.8	+2.3
GO04	Tololo Observa	0.91	38		Pn	07 31 59.6	+1.1
GO04	Tololo Observa	0.91	38	eP	Pn	07 32 00.0	+1.6
GO04				eS	Sn	07 32 14.2	+3.7
CO05	La Serena	0.98	10	eP	Pn	07 32 00.1	+0.9
CO05				eS	Sn	07 32 13.6	+1.6
CO05	La Serena	0.98	10		Pn	07 32 00.9	+1.6
VA06	Catapilco	1.67	176	eP	Pn	07 32 09.8	+1.1
VA06				eS	Sn	07 32 26.5	-2.4
AROD	Rodeo	1.84	67	eP	Pn	07 32 15.6	+4.1
LCO	Las Campanas	1.98	19	P	Pn	07 32 15.2	+2.0

LCO	Las Campanas	1.98	19	⇓iP	Pn	07 32 15.0	+1.7
LCO	Las Campanas	1.98	19	⇑P	Pn	07 32 14.8	+1.6
LCO	Las Campanas	1.98	19	Pn	Pn	07 32 15.2	+2.0
LCO	Las Campanas	1.98	19	eP	Pn	07 32 15.2	+2.0
VA03	San Esteban	2.02	158	⇓iP	Pn	07 32 15.5	+2.0
VA03				eS	Sn	07 32 41.5	+4.0
VA03	San Esteban	2.02	158		Pn	07 32 15.8	+2.3
VA03	San Esteban	2.02	158	eP	Pn	07 32 15.8	+2.3
RTLS	Leoncito	2.04	117	eP	Pn	07 32 18.7	+4.6
ACCO	Cerro Coronel	2.07	82	eP	Pn	07 32 19.0	+4.5
ROCH	El Roble	2.11	170	⇑iP	Pn	07 32 16.5	+1.6
ROC1	El Roble	2.11	170	eP	Pn	07 32 17.7	+2.7
ACDV	Cuesta del Vie	2.13	71	eP	Pn	07 32 20.0	+4.8
VA01	Torpederas	2.13	185	i P	Pn	07 32 15.6	+0.5
VA01	Torpederas	2.13	185	Pn	Pn	07 32 15.6	+0.5
VA01	Torpederas	2.13	185	eP	Pn	07 32 15.7	+0.6
AUSP	Uspallata	2.20	128	eP	Pn	07 32 20.4	+4.1
PEL	Peldehue	2.33	164	i P	Pn	07 32 20.1	+2.2
PEL	Peldehue	2.33	164	eP	Pn	07 32 20.3	+2.3
MT02	Curacav	2.38	174	i P	Pn	07 32 19.6	+1.2
MT02	Curacav	2.38	174		Pn	07 32 19.9	+1.5
MT02	Curacav	2.38	174	eP	Pn	07 32 20.1	+1.6
ZON	Zonda	2.46	106	P	Pn	07 32 24.0	+4.4
ZON	Zonda	2.46	106	Pn	Pn	07 32 24.0	+4.4
ZON	Zonda	2.46	106	eP	Pn	07 32 24.4	+4.8
MT05	Renca	2.56	167	⇑iP	Pn	07 32 23.1	+2.0
MT05	Renca	2.56	167	Pn	Pn	07 32 23.1	+2.0
RTLL	Cerro Villicun	2.58	100	eP	Pn	07 32 24.9	+3.6
RTCV	Cerro Valdivia	2.66	112	eP	Pn	07 32 26.7	+4.3
AC04	Llanos de Chal	2.70	7	eP	Pn	07 32 24.0	+1.2
AC04	Llanos de Chal	2.70	7	Pn	Pn	07 32 25.0	+2.1
AC04	Llanos de Chal	2.70	7	eP	Pn	07 32 20.1	-2.8
AC04				eP	Pn	07 32 23.8	+0.9
AC04				IAML		07 33 14.1	
	comp=Z,262µm,0.8s						
VA05	Santo Domingo	2.76	183	i P	Pn	07 32 24.1	+0.3
VA05	Santo Domingo	2.76	183		Pn	07 32 24.4	+0.7
ASAL	Salagasta	2.79	128	eP	Pn	07 32 29.0	+4.8
ARCO	CERRO ARCO	2.89	133	eP	Pn	07 32 31.2	+5.6
ARCO				eS	Sn	07 33 12.1	+13
ARCO				IAML		07 33 18.3	
	comp=Z,177µm,0.8s						
MT09	Talagante	2.90	173	i P	Pn	07 32 27.5	+1.7
MT09	Talagante	2.90	173		Pn	07 32 27.7	+1.9
AGUA	GUANDACOL	2.91	62	eP	Pn	07 32 31.5	+5.5
AGUA				eS	Sn	07 33 15.7	+16
AGUA				IAML		07 33 31.2	
	comp=Z,260µm,1.3s						
MT01	Popeta	2.97	177	i P	Pn	07 32 27.8	+1.2
MT01	Popeta	2.97	177		Pn	07 32 28.3	+1.7
AAGR	Agrelo	3.12	135	eP	Pn	07 32 33.8	+5.1
LMEL	Las Melosas	3.13	161	i P	Pn	07 32 31.9	+3.0
BO04	La Punta	3.17	167	⇑iP	Pn	07 32 31.1	+1.8
GO03	Copiap	3.45	18	i P	Pn	07 32 34.9	+1.6
GO03	Copiap	3.45	18	⇓P	Pn	07 32 34.9	+1.6
GO03	Copiap	3.45	18	Pn	Pn	07 32 35.9	+2.6
GO03	Copiap	3.45	18	eP	Pn	07 32 35.0	+1.6
BO01	Tunca	3.50	175	i P	Pn	07 32 35.2	+1.3
BO01	Tunca	3.50	175		Pn	07 32 35.5	+1.6
VCA	Vinchina	3.54	53	eP	Pn	07 32 40.3	+5.7
VCA				IAML		07 33 41.0	
	comp=Z,189µm,1.1s						
BO02	Sierra Bellavi	3.93	172		Pn	07 32 41.9	+2.0
BO02	Sierra Bellavi	3.93	172	eP	Pn	07 32 41.9	+2.0
GO05	Huala	4.13	186	Pn	Pn	07 32 42.9	+0.3
GO05	Huala	4.13	186	eP	Pn	07 32 42.6	+0.1
ACLC	CERRO LA CRUZ	4.15	71	eP	Pn	07 32 47.0	+3.9
ACLC				eS	Sn	07 33 34.6	+4.1
ACLC				IAML		07 33 45.1	
	comp=Z,361µm,1.1s						
APLL	PUNTA DE LOS L	4.26	85	eP	Pn	07 32 47.8	+3.4
TINO	Tinogasta	4.40	51	eP	Pn	07 32 51.0	+4.6
AC02	Maricunga	4.52	27	Pn	Pn	07 32 51.2	+2.8
AC02	Maricunga	4.52	27	eP	Pn	07 32 51.5	+3.2
AC02				eS	Sn	07 33 45.1	+5.1
AC02				IAML		07 34 15.0	
	comp=Z,168µm,1.2s						
RFA	San Rafael	4.61	148	eP	Pn	07 32 52.0	+2.8
ML02	Panimavida	4.86	180	Pn	Pn	07 32 53.5	+0.9
PB14	IPOC Station P	6.31	9		Pn	07 33 13.8	+1.0
PB14	IPOC Station P	6.31	9	eP	Pn	07 33 13.8	+1.0
AHML	Horco Molle	6.74	54	eP	Pn	07 33 20.0	+1.5
FSA	Cafayete	6.76	47	eP	Pn	07 33 21.7	+2.7
I14CL	ROBINSON CRUSO	6.81	244	i		08 12 20.0	
	baz=76,slow=329,SNR=0.4						
H03N1	Juan Fernandez	6.83	246	Pn	Pn	07 33 19.0	-0.3
	baz=113,slow=19						
H03N1				T	T	07 40 16.6	
	baz=72,slow=72,SNR=1395						
VA04	Juan Fernndez	6.83	244		Pn	07 33 18.4	-1.3
H03N3	Juan Fernandez	6.84	246	Pn	Pn	07 33 18.7	-0.9
	baz=113,slow=19						
H03N3				T	T	07 40 13.9	
	baz=72,slow=72,SNR=1656						
H03N2	Juan Fernandez	6.84	246	Pn	Pn	07 33 19.2	-0.3
	baz=113,slow=19						
H03N2				T	T	07 40 15.2	
	baz=72,slow=72,SNR=1614						
H03S3	Juan Fernandez	6.96	243	Pn	Pn	07 33 20.3	-0.9
	baz=313						
H03S3				T	T	07 40 25.9	
	baz=83,slow=76,SNR=90						
H03S1	Juan Fernandez	6.97	243	Pn	Pn	07 33 20.1	-1.1
	baz=313						
H03S1				T	T	07 40 27.6	
	baz=83,slow=76,SNR=98						
H03S2	Juan Fernandez	6.98	243	Pn	Pn	07 33 20.5	-1.0
	baz=313						
H03S2				T	T	07 40 28.2	
	baz=83,slow=76,SNR=102						
PB10	IPOC Station P	7.39	6		Pn	07 33 25.9	-1.4
PB10	IPOC Station P	7.39	6	eP	Pn	07 33 26.6	-0.8
PB15	IPOC Station P	7.85	13		Pn	07 33 33.5	-0.4
LC01	Cunco	8.00	182		Pn	07 33 35.2	-0.4
LC01	Cunco	8.00	182	eP	Pn	07 33 35.3	-0.4
PB05	IPOC Station P	8.08	8	eP	Pn	07 33 36.4	-0.6
AF01	San Pedro de A	8.43	21		Pn	07 33 42.1	+0.2
LVC	Limon Verde	8.55	16	Pn	Pn	07 33 42.2	-1.5
	comp=Z,29nm,0.3s,baz=174,slow=9.1,SNR=99						
LVC				Sn	Sn	07 35 13.5	-5.6
	comp=Z,244nm,0.3s,baz=199,slow=13,SNR=3.7						
LVC				LR	LR	07 37 19.1	
	comp=Z,465µm,21.3s,baz=212,slow=40						
LVC	Limon Verde	8.55	16	eP	Pn	07 33 42.4	-1.3
AZAP	Zapla	8.72	42	eP	Pn	07 33 48.0	+2.1
LR03	Panguipulli	8.75	185		Pn	07 33 45.2	-0.8
PB03	IPOC Station P	8.94	10	eP	Pn	07 33 48.3	-0.4
PB07	IPOC Station P	9.23	9	eP	Pn	07 33 53.3	+0.5
PB07				eP	Pn	07 33 53.3	+0.5
ASTB	Santa Barbara	9.29	44	eP	Pn	07 33 54.2	+0.6
HJA	Humahuaca	9.35	37	eP	Pn	07 33 57.0	+2.4
PB02	IPOC Station P	9.63	9	eP	Pn	07 33 57.1	-1.1
PB02				eP	Pn	07 33 57.1	-1.1
ALOL	LOMAS DE OLMED	9.67	45	eP	Pn	07 33 59.5	+0.8
PLCA	Paso Flores	9.85	176	Pn	Pn	07 34 00.9	-0.1
	comp=Z,18nm,0.3s,baz=344,slow=13,SNR=222						
PLCA				Sn	Sn	07 35 57.9	+7.5
	comp=Z,2.5nm,0.3s,baz=35,slow=9.9,SNR=2.0						
PLCA				LR	LR	07 38 26.3	
	comp=Z,214µm,20.9s,baz=348,slow=42						
PLCA	Paso Flores	9.85	176	P	Pn	07 34 01.0	-0.1
PLCA	Paso Flores	9.85	176	⇑P	Pn	07 34 01.6	+0.6
PLCA	Paso Flores	9.85	176	eP	Pn	07 34 01.8	+0.7
PLCA	Paso Flores	9.85	176		Pn	07 34 01.7	+0.6
LL04	Puerto Octay	10.03	184		Pn	07 34 03.0	-0.5
YJA	Yavi	10.17	33	eP	Pn	07 34 06.7	+0.8
LL03	Petrohue	10.26	184		Pn	07 34 06.1	-0.5
TA01	Diego Aracena	10.35	7		Pn	07 34 07.2	-0.7
LL05	Los Muermos	10.62	188		Pn	07 34 09.7	-1.9
TA02	Huaiquique	10.64	7		Pn	07 34 10.5	-1.4
PB08	IPOC Station P	10.90	11		Pn	07 34 14.5	-1.3
PB08	IPOC Station P	10.90	11	eP	Pn	07 34 15.1	-0.7
PSGCX	Pisagua	11.31	6	eP	Pn	07 34 20.4	-0.8
LPA	La Plata	12.04	113	i P	Pn	07 34 32.2	+1.2
LPA				PP	P	07 34 44.8	+1.5
LPA				sP		07 34 51.7	
LPA				S	Sn	07 36 38.1	-5.8
LPA				SS	SnSn	07 36 55.5	-0.4
LPA				PCP	PcP	07 40 10.3	-4.5
LPA				SCS	ScS	07 47 14.1	-6.6
LPA				PKIKP	PKiKP	07 48 16.4	+3.7
LPA				SKIKP		07 51 39.3	
LPA				PKIKS		07 51 51.3	
LPA				SKIKS		07 55 08.7	
GO07	Milladeo Hill,	12.33	188		Pn	07 34 33.0	-1.9
PB16	IPOC Station P	12.62	8		Pn	07 34 42.7	+3.1
ITQB	Itaqui	12.87	88	eP	Pn	07 34 40.9	-1.5
ITQB	Itaqui	12.87	88		Pn	07 34 42.4	0.0
CPUP	Villa Florida	13.20	73	Pn	Pn	07 34 45.2	-1.7
	comp=Z,18nm,0.3s,baz=258,slow=12,SNR=88						
CPUP				Sn	Sn	07 37 10.9	-1.5
	comp=Z,28nm,0.3s,baz=253,slow=18,SNR=3.9						
CPUP				LR	LR	07 40 25.2	
	comp=Z,498µm,19.5s,baz=252,slow=40						
CPUP	Villa Florida	13.20	73	⇑P	Pn	07 34 43.9	-3.0
CPUP	Villa Florida	13.20	73		Pn	07 34 46.1	-0.9
I41PY	VILLA FLORIDA	13.21	73	Sn	Sn	07 37 15.0	+2.3
	baz=238,slow=29,SNR=4.1						
I41PY				i		08 16 50.0	
	baz=248,slow=323,SNR=4.5						
COYC	Coyhaique	14.67	182	⇑P	Pn	07 35 07.7	+1.0
COYC	Coyhaique	14.67	182		Pn	07 35 07.7	+1.0
LPAZ	La Paz	14.85	12	Pn	Pn	07 35 08.6	-1.3
	comp=Z,10.0nm,0.3s,baz=187,slow=9.7,SNR=129						
LPAZ				Sn	Sn	07 37 54.8	+1.2
	baz=149,slow=13,SNR=2.3						
LPAZ	La Paz	14.85	12	⇓P	Pn	07 35 08.2	-1.8
LPAZ	La Paz	14.85	12	eP	Pn	07 35 08.4	-1.6
LPAZ	La Paz	14.85	12		Pn	07 35 08.9	-1.0
I08BO	LAS PENAS INFR	14.86	11	Pn	P	07 35 15.1	-0.3
	baz=194,slow=28,SNR=1.5						
I08BO				i		08 34 00.0	
	baz=180,slow=332,SNR=1.8						
PLTB	Pedras Altas	15.27	98	eP	Pn	07 35 11.6	-3.4
CPSB	Cacapava Do Su	15.51	93	eP	Pn	07 35 14.3	-3.6
AQDB	Aquidauana	17.55	57	eP	Pn	07 35 42.1	-1.8
AQDB	Aquidauana	17.55	57	P	Pn	07 35 43.2	-0.7
SIV	San Ignacio	17.60	35	P	Pn	07 35 43.5	-1.1
	comp=Z,36nm,0.3s,baz=216,slow=9.6,SNR=130						
SIV				S	Sn	07 38 59.7	+0.1
	comp=Z,6.8nm,0.3s,baz=185,slow=17,SNR=1.5						
SIV				LR	LR	07 43 53.9	
	comp=Z,187µm,20.0s,baz=220,slow=42						
SIV				P3KP		08 11 16.3	
	comp=Z,0.0nm,0.3s,baz=59,slow=1.6,SNR=4.5						
PTGB	Pitanga	18.20	75	eP	Pn	07 35 52.1	+0.2
TRCB	Terra Rica	18.60	69	eP	P	07 35 55.4	-0.9
TRCB	Terra Rica	18.60	69	P	Pn	07 35 56.8	0.0
TRCB				IAmb	IAmb	07 36 17.3	
	comp=Z,8µm,1.6s						
PTLB	Pontes e Lacer	19.06	39	eP	P	07 36 01.5	+0.2
PTLB	Pontes e Lacer	19.06	39	P	Pn	07 36 01.9	-0.4
TER01	Tubaro-SC	19.52	89	eP	Pn	07 36 06.9	-0.8
PP1B	Ponte de Pedra	20.04	52	eP	P	07 36 12.1	0.0
PCMB	Pacaembu	20.30	68	eP	P	07 36 15.2	+0.4
TIJ01	Guaruva-PR	20.54	80	eP	P	07 36 14.9	-2.6
VILB	Vilhena	20.65	33	eP	P	07 36 18.9	+0.3
VILB	Vilhena	20.65	33		P	07 36 19.0	+0.4
VILB				IAmb	IAmb	07 36 42.0	
	comp=Z,5µm,1.4s						
SALV	Santo Antonio	20.73	48	eP	P	07 36 19.3	-0.2
MG05	Puerto Natales	20.78	182	P	P	07 36 20.4	+0.6
MG05				IAmb	IAmb	07 36 41.0	
	comp=Z,5µm,1.4s						
FRTB	Fartura	20.85	74	eP	P	07 36 21.0	+0.2
ETMB	Extrema	21.53	14	eP	P	07 36 29.3	+1.3
MG02	Cerro Sombrero	21.93	176	P	P	07 36 31.6	-0.4
MG02				IAmb	IAmb	07 37 02.7	
	comp=Z,4µm,1.2s						
MG04	Isla Riesco	21.95	180	P	P	07 36 32.7	+0.4
ITRB	Iturama	22.04	65	eP	P	07 36 32.9	-0.6
GO10	Punta Arenas	22.25	179	P	P	07 36 37.1	+1.5
GO10				IAmb	IAmb	07 36 53.6	
	comp=Z,4µm,1.1s						
PET01	Itanhaem-SP	22.38	79	eP	P	07 36 36.1	-1.1
SPB	Sao Paulo	22.52	77	⇑P	P	07 36 38.1	-0.6
SPB	Sao Paulo	22.52	77	eP	P	07 36 37.9	-0.8
SPB	Sao Paulo	22.52	77	P	P	07 36 38.4	-0.3
SPB				IAmb	IAmb	07 36 57.3	
	comp=Z,2µm,1.0s						
BB19B	Bebedouro	22.77	70	eP	P	07 36 40.0	-1.3
RCLB	Rio Claro- Sao	22.94	74	eP	P	07 36 41.9	-1.3
EFI	East Falkland	23.00	158	c iP	P	07 36 42.2	-1.2
EFI				pmax	pmax		
	comp=Z,2µm,1.1s						
EFI				MLR	MLR		
	comp=Z,115µm,14.0s						
EFI	East Falkland	23.00	158	P	P	07 36 42.3	-1.2
EFI				IAmb	IAmb	07 37 02.4	
	comp=Z,2µm,1.0s						
CZSB	Cruzeiro do Su	23.07	357	eP	P	07 36 45.5	+1.0
CZSB	Cruzeiro do Su	23.07	357	P	P	07 36 44.5	+0.1
SAML	Samuel	23.15	21	IAMs_20	IAMs_20	07 46 32.9	
	comp=Z,210µm,20.0s						
VAO	Valinhos	23.16	76	eP	P	07 36 44.7	-0.7
ARAG	Araguaiana, MT	23.47	54	eP	P	07 36 46.5	-1.9
PDRB	Porto dos Gac	23.53	39	eP	P	07 36 46.8	-2.2
USHA	Ushuaia	24.02	176	P	P	07 36 54.0	+0.7
	comp=Z,581nm,0.6s,baz=357,slow=6.5,SNR=158						
USHA				S	S	07 41 15.3	+7.5
	comp=Z,32nm,0.8s,baz=48,slow=12,SNR=1.5						
USHA				LR	LR	07 46 46.0	
	comp=Z,138µm,21.2s,baz=358,slow=38						
PARB	Paraibuna	24.14	78	eP	P	07 36 53.2	-1.6
MG01	Puerto William	24.18	175	P	P	07 36 53.9	-0.8
MG01				IAmb	IAmb	07 37 34.2	
	comp=Z,2µm,1.1s						
ATAH	Atahualpa	24.52	343	P	P	07 37 00.3	+1.7
	comp=Z,184nm,1.1s,baz=160,slow=5.6,SNR=20						
ATAH				S	S	07 41 25.6	+8.5
	comp=Z,33nm,0.9s,baz=52,slow=19,SNR=1.6						
ATAH				LR	LR	07 45 42.3	
	comp=Z,72µm,19.6s,baz=195,slow=34						
CLDB	Colider	24.65	39	eP	P	07 36 58.3	-1.0
IPMB	Ipameri, GO	24.68	64	eP	P	07 36 58.6	-1.1
MAN01	Angra dos Reis	25.73	79	eP	P	07 37 09.1	-0.1
BSCB	Bom Sucesso	25.87	74	eP	P	07 37 10.0	-0.5
BDFB	Brasilia	26.25	60	P	P	07 37 13.8	-0.3
	comp=Z,747nm,0.7s,baz=231,slow=8.4,SNR=437						
BDFB				S	S	07 41 44.8	+0.5
	comp=Z,95nm,0.9s,baz=342,slow=20,SNR=1.5						
BDFB				LR	LR	07 49 02.4	
	comp=Z,348µm,19.2s,baz=233,slow=40						
BDFB				P3KPbc		08 10 03.3	
	comp=Z,3.5nm,0.8s,baz=72,slow=3.2,SNR=4.1						
BDFB	Brasilia	26.25	60	P	P	07 37 13.4	-0.7
BDFB				pmax	pmax		
	comp=Z,965nm,0.8s						
BDFB	Brasilia	26.25	60	P	P	07 37 13.4	-0.7
BDFB				IAmb	IAmb	07 37 16.0	
	comp=Z,965nm,0.8s						
VAS01	Vassouras-RJ	26.41	78	eP	P	07 37 14.5	-0.8
SNDB	Serra Nova Dou	26.49	49	eP	P	07 37 15.9	-0.2
TBTG	Tabatinga, AM	26.60	3	eP	P	07 37 18.2	+1.2
TBTG	Tabatinga, AM	26.60	3	eP	P	07 37 17.9	+0.9
TBTG	Tabatinga, AM	26.60	3	P	P	07 37 17.3	+0.3
DUB01	Friburgo-RJ	27.39	78	eP	P	07 37 24.4	+0.2
NPGB	Novo Progresso	28.10	36	eP	P	07 37 29.6	-0.9
CAM01	Campos-RJ	28.10	78	eP	P	07 37 30.3	-0.2
DIAM	Diamantina, MG	28.11	70	eP	P	07 37 30.6	-0.1
PEXB	Peixe	28.41	54	eP	P	07 37 30.5	-2.7
MC01	Montes Claros	28.75	67	eP	P	07 37 35.4	-0.9
MACA	Manacapuru-AM	29.39	22	eP	P	07 37 40.0	-1.9
MACA	Manacapuru-AM	29.39	22	P	P	07 37 41.4	-0.6
MACA				IAmb	IAmb	07 38 02.6	
	comp=Z,3µm,1.6s						
ALF01	Guarapari-ES	29.41	77	eP	P	07 37 40.8	-1.3
JANB	Januaria	29.42	64	eP	P	07 37 42.0	-0.3
SJMB	Sao Joao De Ma	29.93	73	eP	P	07 37 46.5	-0.2
BSFB	Barra de Sao F	30.14	74	eP	P	07 37 47.8	-0.9
ITTB	Itaituba	30.25	32	eP	P	07 37 48.7	-0.9
RIB01	Linhares ES	30.29	75	eP	P	07 37 49.3	-0.6
SDBA	SAO DESIDERIO	30.64	59	eP	P	07 37 53.0	0.0
PTLC	Puerto Leguiza	31.06	353	eP	P	07 37 56.5	-0.2
SMTB	Santa Maria do	31.22	50	eP	P	07 37 58.8	+0.6
NAN01	Guarapari, ES	31.23	73	eP	P	07 37 57.4	-0.8
OTAV	Otavalo	31.67	347	eP	P	07 38 02.6	0.0
OTAV	Otavalo	31.67	347	⇑P	P	07 38 04.8	+2.2
OTAV	Otavalo	31.67	347	eP	P	07 38 05.5	+2.9
CUSE	Cuicocha Este	31.72	347	eP	P	07 38 06.6	+3.6
PAC1	Pacto, Paraso	31.76	346	eP	P	07 38 06.6	+3.5
PAC1				eP	P	07 38 06.6	+3.5
PRPB	Parauapebas	31.88	44	eP	P	07 38 03.3	-0.6
PTGA	Pitinga	31.91	22	P	P	07 38 04.3	+0.1
	comp=Z,391nm,1.0s,baz=199,slow=9.9,SNR=27						
PTGA	Pitinga	31.91	22	IAmb	IAmb	07 38 08.2	
	comp=Z,833nm,1.1s						
PTGA				IAMs_20	IAMs_20	07 52 50.1	
	comp=Z,154µm,19.0s						
GUA01	Guaratinga, BA	32.14	71	eP	P	07 38 06.0	-0.2
CMC01	Camacan, BA	33.03	69	eP	P	07 38 13.6	-0.4
GARC	Garzon, Huila	33.12	353	eP	P	07 38 20.7	+5.7
MALB	Monte Alegre	33.14	33	eP	P	07 38 14.5	-0.5
SOTA	Rioblanco	33.21	351	eP	P	07 38 14.7	-1.5
RPN	Rapa Nui	33.25	267	P	P	07 38 16.6	+0.7
	comp=Z,157nm,0.9s,baz=106,slow=2.9,SNR=8.5						
RPN	Rapa Nui	33.25	267	P	P	07 38 14.5	-1.3
RPN				pmax	pmax		
	comp=Z,7µm,2.0s						
RPN	Rapa Nui	33.25	267	P	P	07 38 14.5	-1.3
RPN	Rapa Nui	33.25	267	IAMs_20	IAMs_20	07 47 55.8	
	comp=Z,95µm,20.0s						
VA02	Isla de Pascua	33.32	267	P	P	07 38 14.8	-1.8
NBIT	Itapeh - BA	33.33	69	eP	P	07 38 17.1	+0.4
PCON	Cinco Dias	33.37	351	eP	P	07 38 24.7	+7.1
BETC	Betania	33.60	353	eP	P	07 38 22.5	+3.4
MARP	Paez Belalcaza	33.82	352	eP	P	07 38 24.7	+3.5
GDU01	Guandu, BA	33.91	67	eP	P	07 38 21.0	-0.7
HOPE	Hope Point	34.21	143	⇓P	P	07 38 25.1	+1.3
HOPE	Hope Point	34.21	143	IAMs_20	IAMs_20	07 51 40.1	
	comp=Z,124µm,20.0s						
PMSA	Palmer Station	34.22	174	P	P	07 38 24.7	+1.0
	comp=Z,218nm,1.0s,baz=355,slow=7.9,SNR=28						
PMSA				S	S	07 43 49.5	+1.8
	comp=Z,19nm,1.1s,baz=51,slow=7.1,SNR=1.9						
PMSA				LR	LR	07 52 03.0	
	comp=Z,140µm,21.4s,baz=347,slow=36						
PMSA	Palmer Station	34.22	174	⇑P	P	07 38 24.9	+1.1
PMSA	Palmer Station	34.22	174	eP	P	07 38 25.1	+1.3
PMSA	Palmer Station	34.22	174	P	P	07 38 24.7	+1.0
PMSA				IAmb	IAmb	07 38 46.7	
	comp=Z,1µm,1.4s						
PMSA	Palmer Station	34.22	174	IAMs_20	IAMs_20	07 51 29.4	
	comp=Z,146µm,22.0s						
RAC02	Cali,SGC	34.42	351	eP	P	07 38 32.8	+6.6
BOAV	Boa Vista	34.70	19	eP	P	07 38 29.3	+0.9
VILC	Villavicencio,	34.87	356	eP	P	07 38 35.3	+5.1
PAYG	Puerto Ayora	34.97	326	⇑P	P	07 38 33.3	+2.5
PAYG	Puerto Ayora	34.97	326	P	P	07 38 32.4	+1.5
PAYG	Puerto Ayora	34.97	326	IAMs_20	IAMs_20	07 49 03.5	
	comp=Z,116µm,20.0s						
YOTC	Yotoco, Valle	34.99	351	eP	P	07 38 34.3	+3.2
NBPN	Ponto Novo - B	35.16	62	eP	P	07 38 32.4	-0.2
ANIL	Santa Ana	35.39	353	eP	P	07 38 43.4	+8.7
CHIC	Chingaza	35.39	356	eP	P	07 38 36.4	+1.6
MCPB	Macapa, AP	35.50	35	eP	P	07 38 35.2	-0.2
ROSC	El Rosal	35.64	355	P	P	07 38 39.5	+2.5
	comp=Z,293nm,0.8s,baz=53,slow=5.0,SNR=14						
ROSC				S	S	07 44 11.8	+0.6
	comp=Z,40nm,1.0s,baz=73,slow=20,SNR=1.5						
ROSC	El Rosal	35.64	355	P	P	07 38 39.5	+2.5
ROSC				pmax	pmax		
	comp=Z,718nm,1.0s						
ROSC	El Rosal	35.64	355	eP	P	07 38 42.5	+5.5
ROSC	El Rosal	35.64	355	IAmb	IAmb	07 39 04.5	
	comp=Z,718nm,1.0s						
PLMC	San Jos del P	35.89	352	eP	P	07 38 42.6	+3.8
TMAB	Tom-Au,PA,Br	35.94	42	eP	P	07 38 39.8	+0.6
MAPC	Malpelo	36.03	343	eP	P	07 38 42.9	+2.9
GUY2C	Guyana, Caldas	36.11	353	eP	P	07 38 42.9	+1.8
GUY2C				eP	pP	07 38 44.9	-6.8
NORC	Norcasia	36.40	354	eP	P	07 38 46.9	+3.8
RUSC	La Rusia	36.61	357	eP	P	07 38 47.8	+2.4
CBOC	Ciudad Bolivar	36.81	352	eP	P	07 38 48.4	+1.7
SOLC	Bahia Solano	37.35	350	eP	P	07 38 59.0	+7.9
ROSB	Rosrio	37.96	48	eP	P	07 38 56.0	-0.3
PTAC	Punta Ardita,	38.31	350	eP	P	07 39 03.0	+3.8
NBMA	Muriti-CE	38.49	59	eP	P	07 39 00.4	-0.4
NBPS	Pedro II - PI	38.63	53	eP	P	07 39 01.6	-0.5
NBAN	Anadia - AL	38.91	65	eP	P	07 39 03.5	-0.9
NBPB	Pedra_Branca-C	39.12	56	eP	P	07 39 05.9	-0.3
SDV	Santo Domingo	39.56	1	P	P	07 39 09.8	-0.1
	comp=Z,863nm,1.1s,baz=211,slow=5.8,SNR=5.4						
SDV				S	S	07 45 14.8	+4.5
	comp=Z,15nm,0.8s,baz=0.0,slow=15,SNR=1.6						
SDV	Santo Domingo	39.56	1	eP	P	07 39 10.7	+0.8
SDV	Santo Domingo	39.56	1	IAMs_20	IAMs_20	07 58 07.4	
	comp=Z,74µm,20.0s						
CAP2	Capurgana	39.72	351	P	P	07 39 10.9	-0.2
CAP2				IAmb	IAmb	07 39 33.3	
	comp=Z,2µm,1.6s						
NBLV	Livramento - P	39.87	61	eP	P	07 39 12.2	-0.2
MDP	Montagnes des	40.05	30	P	P	07 39 13.7	-0.1
	comp=Z,183nm,0.8s,baz=201,slow=9.1,SNR=52						
NBMO	Morrinhos-CE	40.37	53	eP	P	07 39 16.1	-0.4
NBRF	Rio Formoso -	40.41	65	eP	P	07 39 15.8	-1.0
BCIP	Isla Barro Col	40.63	347	P	P	07 39 19.7	+1.1
BCIP				pmax	pmax		
	comp=Z,3µm,1.9s						
BCIP	Isla Barro Col	40.63	347	eP	P	07 39 21.3	+2.7
BCIP	Isla Barro Col	40.63	347	⇑P	P	07 39 20.4	+1.8
BCIP	Isla Barro Col	40.63	347	P	P	07 39 19.7	+1.1
BCIP				IAmb	IAmb	07 39 42.5	
	comp=Z,3µm,1.9s						
SJCC	San Jacinto, C	40.71	354	P	P	07 39 20.2	+0.9
SJCC				IAmb	IAmb	07 39 48.4	
	comp=Z,1µm,1.1s						
CDITO	Canoas	40.74	343	P	P	07 39 20.9	+1.3
CDITO				IAmb	IAmb	07 39 51.3	
	comp=Z,1µm,1.1s						
NBPA	Parau_RN	40.78	59	eP	P	07 39 19.8	-0.1
BRU2	Volcan	40.91	343	P	P	07 39 22.8	+1.7
NBCL	Cascavel-CE	40.96	56	eP	P	07 39 21.3	-0.1
RIOS	Rincon, Osa	41.03	342	P	P	07 39 22.8	+0.9
RIOS				IAmb	IAmb	07 39 46.7	
	comp=Z,962nm,1.1s						
PLCV	Puerto La Cruz	41.35	10	P	P	07 39 25.1	+0.6
PCRV	Puerto La Cruz	41.35	10	P	P	07 39 25.1	+0.5
	comp=Z,376nm,0.9s,baz=177,slow=6.4,SNR=16						
PCRV	Puerto La Cruz	41.35	10	eP	P	07 39 25.2	+0.6
SRBA	San Rafael, Bu	41.50	342	P	P	07 39 27.1	+1.2
NBPV	Pedro Velho	41.70	62	eP	P	07 39 27.9	+0.4
PEZE	Perez Zeledon,	41.73	342	P	P	07 39 28.7	+1.0
SMRC	Santa Marta, M	41.90	356	eP	P	07 39 29.2	+0.2
TPP	Pointe-a-Pierr	42.08	15	eP	P	07 39 29.6	-0.9
RIMA	Rio Macho	42.15	342	P	P	07 39 32.4	+1.1
TBH	Brigand Hill	42.33	15	eP	P	07 39 34.0	+1.5
TBH	Brigand Hill	42.33	15	e	P	07 39 34.3	+1.8
TRN	Trinidad (W)	42.41	15	eP	P	07 39 29.7	-3.4
TRN	Trinidad (W)	42.41	15	eP	P	07 39 33.0	-0.2
CAO2	Cobano, Puntar	42.43	340	P	P	07 39 34.0	+0.7
CAO2				IAmb	IAmb	07 39 55.2	
	comp=Z,2µm,1.9s						
HDC	Heredia	42.44	341	⇑P	P	07 39 36.1	+2.5
HDC	Heredia	42.44	341	P	P	07 39 35.6	+2.0
HDC				IAmb	IAmb	07 39 54.7	
	comp=Z,1µm,1.4s						
HATO	Hato, Curacao	42.89	4	P	P	07 39 36.4	-0.6
HATO				IAMs_20	IAMs_20	07 59 28.8	
	comp=Z,78µm,20.0s						
JTS	Las Juntas de	42.95	340	P	P	07 39 39.0	+1.4
JTS				pmax	pmax		
	comp=Z,1µm,1.8s						
JTS	Las Juntas de	42.95	340	P	P	07 39 39.0	+1.4
JTS				IAmb	IAmb	07 39 59.8	
	comp=Z,1µm,1.8s						
BOT	Bacolet	43.07	16	eP	P	07 39 39.8	+1.3
ORTG	Ortega, Santa	43.17	340	P	P	07 39 41.0	+1.6
COVE	Coope Vega, Sa	43.20	341	P	P	07 39 40.9	+1.3
COVE				IAmb	IAmb	07 40 04.6	
	comp=Z,2µm,1.2s						
TOSP	Speyside	43.24	16	eP	P	07 39 37.3	-2.6
TOSP	Speyside	43.24	16	eP	P	07 39 38.9	-0.9
TOSP	Speyside	43.24	16	P	P	07 39 39.8	0.0
TOSP				IAmb	IAmb	07 39 44.4	
	comp=Z,2µm,1.3s						
GRFF	Grenada Fort F	43.70	14	eP	P	07 39 42.2	-1.4
GRFF	Grenada Fort F	43.70	14	eP	P	07 39 42.4	-1.2
GRGR	Grenville	43.80	14	eP	P	07 39 40.7	-3.7
GRGR	Grenville	43.80	14	eP	P	07 39 44.0	-0.4
GRGR	Grenville	43.80	14	⇑P	P	07 39 44.0	-0.4
GRGR	Grenville	43.80	14	P	P	07 39 43.9	-0.5
GRGR				IAmb	IAmb	07 40 32.9	
	comp=Z,934nm,0.9s						
GRGR				IAMs_20	IAMs_20	08 01 13.0	
	comp=Z,87µm,21.0s						
GCMP	Grenada, Carri	44.19	14	eP	P	07 39 46.8	-0.7
GCMP	Grenada, Carri	44.19	14	eP	P	07 39 48.5	+1.0

ACON	Acoyapa	44.61	341	P	P	07 39 51.7	+0.8
SVB	Belmont	44.99	14	*e*P	P	07 39 50.6	-3.3
SVB	Belmont	44.99	14	*e*P	P	07 39 53.0	-0.9
SVB	Belmont	44.99	14	P	P	07 39 52.9	-0.9
SVB				IAmb	IAmb	07 40 19.2	
	comp=Z,2µm,1.5s						
PRVC	Isla de Provid	45.03	346	*e*P	P	07 39 57.4	+3.2
PRVC	Isla de Provid	45.03	346	P	P	07 39 55.2	+0.9
SVV	Soufriere Volc	45.04	14	*e*P	P	07 39 53.6	-0.7
SSV	Crater Summit	45.05	14	*e*P	P	07 39 53.1	-1.4
BCHC	Barbados, Cave	45.22	16	*e*P	P	07 39 48.8	-6.9
BCHC	Barbados, Cave	45.22	16	*e*	P	07 40 00.7	+5.0
BBSP	Saint Philip	45.23	17	*e*P	P	07 39 44.0	-12
BBSP	Saint Philip	45.23	17	*e*P	P	07 39 51.9	-3.9
BBGH	Gun Hill	45.25	16	*e*P	P	07 39 54.5	-1.4
BBGH	Gun Hill	45.25	16	*e*P	P	07 39 54.6	-1.4
BBGH	Gun Hill	45.25	16	⇑P	P	07 39 57.4	+1.5
BBGH	Gun Hill	45.25	16	P	P	07 39 54.5	-1.4
BBGH				IAMs_20	IAMs_20	08 00 44.5	
	comp=Z,83µm,20.0s						
MCLT	Moule a Chique	45.48	14	*e*P	P	07 39 52.9	-4.9
MCLT	Moule a Chique	45.48	14	*e*P	P	07 39 54.2	-3.6
MCLT	Moule a Chique	45.48	14	P	P	07 39 57.0	-0.8
CNGN	Cerro Negro	45.57	339	P	P	07 39 60.0	+1.4
SLBI	Saint Lucia, B	45.78	14	*e*P	P	07 39 58.1	-2.0
SLBI	Saint Lucia, B	45.78	14	*e*P	P	07 40 06.3	+6.2
CRIN	San Cristobal	45.87	339	P	P	07 40 01.6	+0.7
H05S1	Guadeloupe/Mar	46.20	14	P	P	07 40 02.6	-0.8
	SNR=139						
MPOM	Morne Pois Mar	46.21	14	*e*P	P	07 40 02.0	-1.5
MPOM	Morne Pois Mar	46.21	14	P	P	07 40 02.4	-1.2
BIM	Bigot	46.23	14	*e*P	P	07 39 58.1	-5.6
BIM	Bigot	46.23	14	P	P	07 40 02.5	-1.2
FDF	Fort de France	46.43	14	P	P	07 40 04.1	-1.2
FDF				pmax	pmax		
	comp=Z,3µm,1.5s						
FDF				MLR	MLR		
	comp=Z,68µm,21.0s						
FDF	Fort de France	46.43	14	*e*P	P	07 39 59.7	-5.6
FDF	Fort de France	46.43	14	*e*P	P	07 40 01.0	-4.3
FDF	Fort de France	46.43	14	⇑P	P	07 40 04.0	-1.4
FDF	Fort de France	46.43	14	P	P	07 40 04.1	-1.2
FDF				IAMs_20	IAMs_20	08 02 43.8	
	comp=Z,68µm,21.0s						
ILAM	Ilet Lapin Mar	46.53	14	*e*P	P	07 39 58.6	-7.4
ILAM	Ilet Lapin Mar	46.53	14	*e*P	P	07 40 01.2	-4.8
ILAM	Ilet Lapin Mar	46.53	14	P	P	07 40 05.6	-0.4
ILAM				IAmb	IAmb	07 40 23.4	
	comp=Z,1µm,1.0s						
SVN	Savane Anatole	46.53	14	P	P	07 40 05.3	-0.8
SVN				IAmb	IAmb	07 40 30.1	
	comp=Z,1µm,1.0s						
SVN				IAMs_20	IAMs_20	08 02 46.4	
	comp=Z,81µm,21.0s						
MDN	Morne-Daniel	46.95	13	*e*P	P	07 40 07.3	-2.0
MDN	Morne-Daniel	46.95	13	*e*P	P	07 40 10.2	+0.9
DLPL	La Plaine	46.99	14	*e*P	P	07 40 05.5	-4.2
DLPL	La Plaine	46.99	14	*e*P	P	07 40 05.9	-3.8
DSLB	Salisbury	47.06	13	*e*P	P	07 40 08.3	-1.9
DWS	Wesley	47.21	13	*e*P	P	07 40 04.9	-6.4
TGUH	Tegucigalpa,Un	47.21	339	⇑P	P	07 40 12.1	+0.6
TGUH	Tegucigalpa,Un	47.21	339	P	P	07 40 11.9	+0.3
TGUH				IAmb	IAmb	07 40 16.8	
	comp=Z,876nm,1.0s						
MDCT	Cottage Hill,	47.23	13	*e*P	P	07 40 06.1	-5.3
MDVC	Dominica, Viel	47.23	13	*e*P	P	07 40 09.8	-1.7
MDVC	Dominica, Viel	47.23	13	*e*P	P	07 40 10.2	-1.3
TDBA	Terre de Bas,	47.42	13	*e*P	P	07 40 03.6	-9.4
TDBA	Terre de Bas,	47.42	13	*e*P	P	07 40 07.0	-6.0
MAGL	Barre de l’ile	47.59	13	*e*P	P	07 40 11.3	-2.9
MAGL	Barre de l’ile	47.59	13	*e*P	P	07 40 14.2	0.0
CBE	Ff, Capester	47.64	13	*e*P	P	07 40 09.7	-5.0
CBE	Ff, Capester	47.64	13	*e*P	P	07 40 13.3	-1.4
H05N1	Guadeloupe/Mar	47.99	13	P	P	07 40 15.9	-1.5
	SNR=51						
ANBD	Bethesda, Anti	48.56	12	*e*P	P	07 40 16.1	-5.7
H09W1	TRISTAN DA CUN	48.72	114	P	P	07 40 23.7	+0.7
	SNR=6.8						
H09N1	TRISTAN DA CUN	48.74	114	P	P	07 40 23.9	+0.8
	SNR=2.3						
CDVI	St. Croix	48.79	8	*e*P	P	07 40 21.7	-1.8
CDVI	St. Croix	48.79	8	P	P	07 40 23.1	-0.4
CDVI				IAmb	IAmb	07 40 27.5	
	comp=Z,456nm,0.9s						
SEUS	St. Eustatius	48.79	11	*e*P	P	07 40 19.7	-3.8
SEUS	St. Eustatius	48.79	11	IAMs_20	IAMs_20	08 02 34.2	
	comp=Z,82µm,21.0s						
CRPR	Cabo Rojo, PR	48.79	5	P	P	07 40 23.2	-0.3
JAKH	Jacmel	48.86	359	P	P	07 40 23.9	-0.2
JAKH				IAmb	IAmb	07 41 02.1	
	comp=Z,530nm,1.0s						
SABA	Saba	48.87	10	P	P	07 40 24.1	-0.1
SABA				IAMs_20	IAMs_20	08 04 16.4	
	comp=Z,85µm,21.0s						
OBIP	Obispado Ponce	48.87	6	P	P	07 40 23.4	-0.8
HOJ	Hope	48.88	353	*i* P	P	07 40 24.9	+0.7
PDPR	Patillas Dam,	48.91	7	P	P	07 40 23.9	-0.6
CELP	Cerrillos	48.91	6	P	P	07 40 23.9	-0.6
STH	Stony Hill	48.96	353	*i* P	P	07 40 25.1	+0.2
SJG	San Juan	48.99	7	P	P	07 40 24.2	-0.8
	comp=Z,932nm,0.9s,baz=178,slow=2.9,SNR=87						
SJG				S	S	07 47 22.2	-4.7
	comp=Z,7.8nm,0.7s,baz=151,slow=19,SNR=1.4						
SJG	San Juan	48.99	7	*e*P	P	07 40 23.6	-1.4
SJG	San Juan	48.99	7	⇑P	P	07 40 24.0	-1.0
SJG	San Juan	48.99	7	P	P	07 40 24.7	-0.3
MTP	Monte Pirata	49.03	7	P	P	07 40 24.2	-1.3
MTP				IAmb	IAmb	07 40 28.4	
	comp=Z,530nm,1.1s						
ANWB	Willy Bob	49.16	12	*e*P	P	07 40 23.8	-2.6
ANWB	Willy Bob	49.16	12	*e*P	P	07 40 24.6	-1.8
ANWB	Willy Bob	49.16	12	⇑P	P	07 40 24.2	-2.2
ANWB	Willy Bob	49.16	12	IAMs_20	IAMs_20	08 04 09.2	
	comp=Z,61µm,22.0s						
MTDJ	Mount Denham	49.19	352	⇑P	P	07 40 27.4	+0.7
MTDJ	Mount Denham	49.19	352	P	P	07 40 27.0	+0.3
MTDJ				IAmb	IAmb	07 40 31.7	
	comp=Z,795nm,1.1s						
GCPR	Guaynabo City	49.19	7	P	P	07 40 26.0	-0.5
GCPR				IAmb	IAmb	07 40 29.5	
	comp=Z,644nm,0.9s						
SMRT	St. Maarten	49.32	11	*e*P	P	07 40 24.7	-2.9
SMRT	St. Maarten	49.32	11	IAMs_20	IAMs_20	08 04 38.3	
	comp=Z,62µm,20.0s						
STVI	Saint Thomas	49.35	8	P	P	07 40 28.9	+1.1
STVI				IAmb	IAmb	07 40 49.1	
	comp=Z,772nm,1.4s						
DR12	Loma Pena Alta	49.43	3	P	P	07 40 30.5	+2.0
SDDR	Presa de Saban	49.59	0	⇑P	P	07 40 29.7	0.0
SC01	Santiago de lo	50.03	1	P	P	07 40 34.3	+1.2
GTBY	Guantanamo Bay	50.65	356	⇑P	P	07 40 38.1	+0.4
GTBY	Guantanamo Bay	50.65	356	P	P	07 40 38.4	+0.8
GTBY				IAmb	IAmb	07 40 42.2	
	comp=Z,685nm,0.9s						
FSCY	Frank Sound, G	50.79	348	P	P	07 40 38.6	-0.1
CCIG	Comitan	50.95	334	P	P	07 40 41.1	+0.9
VNA3	Neumayer Olymp	52.05	159	P	P	07 40 48.0	+0.3
VNA3	Neumayer Olymp	52.05	159	pP	pP	07 40 59.1	+0.4
VNA3	Neumayer Olymp	52.05	159	sP	sP	07 41 03.7	+0.6
GRTK	Grand Turk	52.10	0	⇑P	P	07 40 48.7	+0.2
GRTK	Grand Turk	52.10	0	P	P	07 40 49.2	+0.7
GRTK				IAMs_20	IAMs_20	08 04 59.9	
	comp=Z,52µm,21.0s						
VNA1	Neumayer--Stat	52.34	158	P	P	07 40 50.5	+0.7
VNA1	Neumayer--Stat	52.34	158	sP	sP	07 41 05.2	0.0
VNA2	Neumayer--Watz	52.69	158	P	P	07 40 52.8	+0.4
	baz=290,slow=8.4						
VNA2	Neumayer--Watz	52.69	158	pP	pP	07 41 04.1	+0.7
VNA2	Neumayer--Watz	52.69	158	sP	sP	07 41 08.6	+0.8
CMIG	Matias Romero	52.77	331	P	P	07 40 54.5	+1.0
	comp=Z,189nm,0.9s,baz=163,slow=5.8,SNR=79						
CMIG				S	S	07 48 22.3	+2.9
	comp=Z,4.3nm,1.0s,baz=66,slow=20,SNR=1.2						
CMIG				LR	LR	07 58 14.5	
	comp=Z,37µm,21.3s,baz=179,slow=30						
SNAA	Sanae	54.28	159	P	P	07 41 04.4	+0.3
SNAA	Sanae	54.28	159	pP	pP	07 41 15.3	+0.1
SNAA	Sanae	54.28	159	P	P	07 41 04.2	+0.1
	comp=Z,352nm,1.1s,baz=278,slow=6.6,SNR=637						
SNAA				S	S	07 48 33.7	-5.2
	comp=Z,5.5nm,1.0s,baz=268,slow=10.0,SNR=1.4						
SNAA				LR	LR	08 04 14.7	
	comp=Z,30µm,19.0s,baz=287,slow=36						
SNAA				PKPPKP	P'P'df	08 11 07.2	-17
	comp=Z,4.5nm,1.1s,baz=342,slow=2.9,SNR=5.1						
SNAA	Sanae	54.28	159*c*	*i*P	P	07 41 03.9	-0.2
SNAA				pmax	pmax		
	comp=Z,1µm,1.4s						
SNAA	Sanae	54.28	159	⇑P	P	07 41 04.1	-0.1
SNAA	Sanae	54.28	159	P	P	07 41 04.7	+0.6
SNAA				IAmb	IAmb	07 41 21.2	
	comp=Z,1µm,1.2s						
SOR	Soroa	54.52	347	P	P	07 41 06.3	0.0
SOR				pmax	pmax		
	comp=Z,682nm,1.0s						
SOR	Soroa	54.52	347	P	P	07 41 06.3	0.0
SOR				IAmb	IAmb	07 41 10.6	
	comp=Z,682nm,1.0s						
TLIG	Tlapa	54.78	328	P	P	07 41 10.4	+1.9
061Z	Ochoppi	57.16	350	P	P	07 41 26.1	+0.9
061Z				IAmb	IAmb	07 41 29.9	
	comp=Z,990nm,1.2s						
NVL	N'lazarevskaya	58.98	157	*e*P	P	07 41 55.2	+18
NVL				pmax	pmax		
	comp=Z,18nm,0.9s						
QSPA	South Pole Qui	59.34	180	P	P	07 41 40.6	+0.5
	comp=Z,146nm,0.7s,baz=147,slow=2.9,SNR=410						
QSPA	South Pole Qui	59.34	180	P	P	07 41 40.7	+0.5
DWPF	Disney Wildern	59.44	350	P	P	07 41 41.3	+0.2
	baz=170						
DWPF				S	S	07 49 48.5	+0.8
	baz=170						
DWPF	Disney Wildern	59.44	350	⇑P	P	07 41 41.2	+0.2
ZAIG	Zacatecas	61.14	327	P	P	07 41 55.2	+2.1
SHEL	Horse Pasture	61.32	92	P	P	07 41 55.2	+0.9
SHEL				pmax	pmax		
	comp=Z,2µm,1.9s						
SHEL	Horse Pasture	61.32	92	⇑P	P	07 41 55.1	+0.8
SHEL	Horse Pasture	61.32	92	P	P	07 41 55.2	+0.9
553A	Crawfordville	61.99	347	P	P	07 41 59.1	+0.8
456A	Hilliard	62.10	350	P	P	07 41 59.9	+0.8
456A				IAmb	IAmb	07 42 03.7	
	comp=Z,723nm,0.8s						
H06S1	SOCORRO T	62.27	317	T	T	08 49 31.1	
	SNR=40						
H06E1	SOCORRO T-PHAS	62.28	317	T	T	08 49 29.1	
	SNR=220						
451A	Vernon	62.66	346	P	P	07 42 03.2	+0.4
TIGA	Tifton	63.05	348	P	P	07 42 05.5	+0.1
	baz=168,SNR=27						
TIGA				S	S	07 50 32.5	-1.0
	baz=168						
TIGA	Tifton	63.05	348	P	P	07 42 05.7	+0.3
TIGA				IAmb	IAmb	07 42 09.7	
	comp=Z,1µm,1.4s						
257A	Skidaway Islan	63.18	351	P	P	07 42 06.7	+0.5
BBSR	BB Station	63.24	6	⇑P	P	07 42 06.9	+0.3
BBSR	BB Station	63.24	6	P	P	07 42 06.7	+0.1
BBSR				IAmb	IAmb	07 42 29.8	
	comp=Z,903nm,1.6s						
352A	Blakely	63.34	347	P	P	07 42 07.3	0.0
255A	Hazlehurst	63.35	350	P	P	07 42 07.2	-0.1
255A				IAmb	IAmb	07 42 27.7	
	comp=Z,1µm,1.4s						
KVTX	Kingsville	63.36	334	⇑P	P	07 42 09.9	+2.3
KVTX	Kingsville	63.36	334	P	P	07 42 09.7	+2.2
BRAL	Brewton	63.48	345	P	P	07 42 08.7	+0.4
	baz=165,SNR=32						
BRAL				S	S	07 50 38.7	-0.1
	baz=165						
BRAL	Brewton	63.48	345	⇑P	P	07 42 08.7	+0.4
BRAL	Brewton	63.48	345	P	P	07 42 08.6	+0.4
RGRS	Roger Stewart	63.99	352	P	P	07 42 12.1	+0.5
CSU	Charleston Sou	64.06	352	P	P	07 42 12.8	+0.8
250A	Grady	64.09	346	P	P	07 42 12.1	-0.2
250A				IAmb	IAmb	07 42 16.4	
	comp=Z,2µm,1.6s						
154A	Montrose	64.12	349	P	P	07 42 12.6	+0.2
154A				IAmb	IAmb	07 42 16.5	
	comp=Z,764nm,1.0s						
NHSC	New Hope	64.19	352	P	P	07 42 13.5	+0.7
	baz=172,SNR=64						
NHSC				S	S	07 50 47.9	+0.4
	baz=172						
NHSC	New Hope	64.19	352	P	P	07 42 13.9	+1.0
NHSC				IAmb	IAmb	07 42 17.7	
	comp=Z,993nm,1.0s						
346A	Big Creek Wild	64.26	343	P	P	07 42 14.6	+1.2
152A	Waverly Hall	64.45	348	P	P	07 42 14.4	-0.3
735A	Kenedy	64.51	334	P	P	07 42 16.7	+1.6
833A	Chaparral WMA,	64.64	333	P	P	07 42 17.5	+1.5
	baz=154,SNR=94						
833A				S	S	07 50 56.5	+3.2
	baz=154						
344A	Westbrook Farm	64.65	342	P	P	07 42 17.4	+1.5
441A	DeRidder	64.69	339	P	P	07 42 17.8	+1.6
441A				IAmb	IAmb	07 42 22.4	
	comp=Z,762nm,1.4s						
SACV	Santiago Islan	64.75	52	P	P	07 42 16.9	-0.1
SACV				IAmb	IAmb	07 42 19.1	
	comp=Z,492nm,1.0s						
HKT	Hockley	64.80	337*c*	*i*P	P	07 42 18.0	+1.1
HKT				MLR	MLR		
	comp=Z,9µm,19.0s						
HKT	Hockley	64.80	337	⇑P	P	07 42 18.0	+1.1
HKT	Hockley	64.80	337	P	P	07 42 17.9	+1.0
HKT				IAmb	IAmb	07 42 22.7	
	comp=Z,805nm,1.5s						
Y60A	Bolivia	64.86	354	P	P	07 42 17.5	+0.2
Y60A				IAmb	IAmb	07 42 21.9	
	comp=Z,660nm,0.8s						
Y59A	Loris	64.91	353	P	P	07 42 17.6	0.0
Y58A	Scranton	64.92	352	P	P	07 42 17.7	+0.1
Y58A				IAmb	IAmb	07 42 22.2	
	comp=Z,602nm,0.8s						
GOGA	Godfrey	64.96	349	P	P	07 42 17.7	-0.2
GOGA				pmax	pmax		
	comp=Z,843nm,1.7s						
GOGA	Godfrey	64.96	349	P	P	07 42 17.8	-0.2
	baz=169,SNR=84						
GOGA				S	S	07 50 54.9	-2.1
	baz=169						
GOGA	Godfrey	64.96	349	P	P	07 42 17.7	-0.2
GOGA				IAmb	IAmb	07 42 21.9	
	comp=Z,843nm,1.6s						
342A	Flagon Creek P	65.02	340	P	P	07 42 19.7	+1.3
Y57A	Sumter	65.11	352	P	P	07 42 18.7	-0.2
Z51A	Franklin	65.17	347	P	P	07 42 19.2	-0.1
Z51A				IAmb	IAmb	07 42 23.6	
	comp=Z,1µm,1.8s						
VBMS	Vicksburg	65.32	342	P	P	07 42 21.6	+1.3
	baz=162,SNR=86						
VBMS				S	S	07 51 02.6	+1.1
	baz=162						
VBMS	Vicksburg	65.32	342	P	P	07 42 21.7	+1.5
146A	Union	65.35	344	P	P	07 42 21.0	+0.5
JSC	Jenkinsville	65.48	351	P	P	07 42 21.5	+0.2
JSC				pmax	pmax		
	comp=Z,181nm,0.8s						
JSC	Jenkinsville	65.48	351	P	P	07 42 21.5	+0.2
X58A	Rowland	65.52	353	P	P	07 42 22.0	+0.5
X58A				IAmb	IAmb	07 42 26.0	
	comp=Z,579nm,0.7s						
HODGE	Hodges	65.57	350	P	P	07 42 22.1	+0.2
HODGE				IAmb	IAmb	07 42 42.5	
	comp=Z,722nm,1.7s						
SLBS	Sierra La Lagu	65.63	321	⇑P	P	07 42 24.2	+1.6
SLBS	Sierra La Lagu	65.63	321	P	P	07 42 24.1	+1.6
SLBS				IAmb	IAmb	07 42 46.2	
	comp=Z,529nm,1.3s						
Z47A	Carrollton	65.66	345	P	P	07 42 22.6	+0.1
Z47A				IAmb	IAmb	07 42 26.9	
	comp=Z,2µm,1.6s						
CNNC	Cliffs of the	66.06	354	P	P	07 42 25.8	+0.8
	baz=174,SNR=37						
CNNC				S	S	07 51 11.6	+1.2
	baz=174						
CNNC	Cliffs of the	66.06	354	⇑P	P	07 42 25.4	+0.4
NATX	Nacogdoches	66.09	338	P	P	07 42 26.7	+1.5
	baz=158,SNR=81						
NATX				S	S	07 51 14.2	+3.2
	baz=158						
NATX	Nacogdoches	66.09	338	P	P	07 42 26.5	+1.3
LPIG	La Paz	66.16	321	P	P	07 42 27.0	+1.2
	comp=Z,129nm,1.1s,baz=186,slow=4.9,SNR=12						
LPIG				S	S	07 51 10.4	-1.7
	comp=Z,27nm,0.3s,baz=16,slow=1.8,SNR=13						
435B	Jarrell	66.17	336	P	P	07 42 27.0	+1.2
	baz=156,SNR=31						
435B				S	S	07 51 13.5	+1.4
	baz=156						
SBA	Scott Base	66.21	191	P	P	07 42 27.3	+1.7
SBA				pmax	pmax		
	comp=Z,983nm,2.0s						
SBA	Scott Base	66.21	191	P	P	07 42 27.3	+1.7
SBA				IAmb	IAmb	07 42 41.2	
	comp=Z,983nm,2.0s						
KMSC	Kings Mountain	66.34	351	P	P	07 42 27.0	+0.2
	baz=171,SNR=93						
KMSC				S	S	07 51 13.1	-0.8
	baz=171						
X48A	Hartselle	66.64	346	P	P	07 42 28.6	-0.1
X48A				IAmb	IAmb	07 42 33.2	
	comp=Z,664nm,1.1s						
237A	Washetta, Mont	66.68	338	P	P	07 42 30.2	+1.1
237A				IAmb	IAmb	07 42 34.8	
	comp=Z,1µm,1.3s						
W52A	Murphy	66.68	349	P	P	07 42 29.2	+0.1
W52A				IAmb	IAmb	07 42 33.5	
	comp=Z,535nm,1.1s						
JCT	Junction City	66.72	333	P	P	07 42 30.4	+1.0
JCT				pmax	pmax		
	comp=Z,2µm,1.7s						
JCT	Junction City	66.72	333	P	P	07 42 30.4	+1.0
	baz=154,SNR=233						
JCT				S	S	07 51 21.1	+2.3
	baz=154						
JCT	Junction City	66.72	333	⇑P	P	07 42 30.1	+0.7
JCT	Junction City	66.72	333	P	P	07 42 30.4	+1.0
V58A	Windy Hill, Pi	66.72	353	P	P	07 42 29.4	+0.1
V58A				IAmb	IAmb	07 42 33.0	
	comp=Z,2µm,1.9s						
Z41A	Richland Creek	66.92	341	P	P	07 42 31.8	+1.2
	baz=160,SNR=75						
Z41A				S	S	07 51 23.7	+2.7
	baz=160						
V55A	Taylorsville	67.02	351	P	P	07 42 31.5	+0.3
V55A				IAmb	IAmb	07 42 35.6	
	comp=Z,2µm,1.9s						
W50A	Signal Mountai	67.03	348	P	P	07 42 31.5	+0.3
W50A				IAmb	IAmb	07 42 35.7	
	comp=Z,1µm,1.4s						
V53A	Saluda	67.07	350	P	P	07 42 31.2	-0.3
V53A				IAmb	IAmb	07 42 35.7	
	comp=Z,1µm,1.7s						
CPCT	Cooper Cave	67.13	348	P	P	07 42 31.4	-0.4
SWET	Sewanee	67.16	347	P	P	07 42 32.0	0.0
TKL	Tuckaleechee C	67.21	349	P	P	07 42 32.5	+0.1
	comp=Z,252nm,0.8s,baz=167,slow=7.0,SNR=124						
TKL	Tuckaleechee C	67.21	349	P	P	07 42 32.4	+0.1
TKL				pmax	pmax		
	comp=Z,2µm,1.9s						
TKL	Tuckaleechee C	67.21	349	P	P	07 42 32.4	0.0
WHTX	Lake Whitney,	67.23	336	P	P	07 42 33.4	+0.9
	baz=156,SNR=77						
WHTX				S	S	07 51 26.2	+1.5
	baz=156						
WHTX	Lake Whitney,	67.23	336	P	P	07 42 33.2	+0.7
VNDA	Vanda	67.24	191	P	P	07 42 33.4	+1.3
	comp=Z,42nm,1.0s,baz=131,slow=5.5,SNR=91						
VNDA				LR	LR	08 08 17.4	
	comp=Z,10µm,20.1s,baz=138,slow=33						
VNDA				PKPPKP	P'P'df	08 10 48.9	-14
	comp=Z,2.6nm,1.0s,baz=315,slow=4.2,SNR=5.7						
VNDA	Vanda	67.24	191	P	P	07 42 33.4	+1.3
TAOE	Nuku Hiva Isla	67.25	273	*e*P	P	07 42 35.7	+2.4
	comp=Z,756nm,1.6s						
TAOE				*e*S	S	07 51 26.0	-0.1
	comp=Z,71µm,31.2s						
TAOE	Nuku Hiva Isla	67.25	273	*e*LR	LR	08 02 49.4	
	comp=Z,79µm,31.1s,baz=135						
CCAR	Cane Creek	67.26	342	P	P	07 42 33.8	+1.1
TXAR	Lajitas Array	67.29	330	P	P	07 42 34.0	+0.8
	comp=Z,53nm,0.7s,baz=151,slow=8.1,SNR=112						
TXAR				S	S	07 51 26.5	+0.6
	comp=Z,2.5nm,1.1s,baz=75,slow=10,SNR=1.6						
TXAR				LR	LR	08 07 47.1	
	comp=Z,40µm,18.9s,baz=0.0,slow=32						
TXAR				PKPPKP	P'P'df	08 10 59.0	+5.0
	comp=Z,6.2nm,1.1s,baz=252,slow=0.8,SNR=8.9						
TXAR	Lajitas Array	67.29	330	P	P	07 42 33.8	+0.6
TXAR	Lajitas Array	67.29	330	P	P	07 42 33.8	+0.6
TX31	Lajitas Ar. Si	67.30	330	⇑P	P	07 42 34.0	+0.8
TX32	Lajitas Array	67.30	330	P	P	07 42 33.8	+0.6
TX32				IAmb	IAmb	07 42 38.8	
	comp=Z,950nm,1.8s						
V52A	Sevierville	67.36	349	P	P	07 42 33.2	-0.1
PLAL	Pickwick Lake	67.37	345	P	P	07 42 33.2	-0.1
PLAL				IAmb	IAmb	07 42 37.4	
	comp=Z,1µm,1.7s						
Z38A	Mt. Pleasant	67.58	339	P	P	07 42 35.5	+0.8
Z38A				IAmb	IAmb	07 42 40.2	
	comp=Z,2µm,1.7s						
U54A	Nelsons Funny	67.76	351	P	P	07 42 35.9	0.0
U54A				IAmb	IAmb	07 42 41.1	
	comp=Z,368nm,0.8s						
W45A	Hickory Valley	67.79	344	P	P	07 42 36.1	+0.1
W45A				IAmb	IAmb	07 42 56.7	
	comp=Z,877nm,1.2s						
V48A	Smith Brothers	67.84	347	P	P	07 42 36.5	+0.2
T60A	Surry	67.86	355	P	P	07 42 37.4	+1.0
T60A				IAmb	IAmb	07 42 51.2	
	comp=Z,474nm,1.0s						
T57A	Hurt	67.93	353	P	P	07 42 37.3	+0.4
MET	Memphis--Engin	67.93	344	P	P	07 42 37.2	+0.3
TZTN	Tazewell	68.04	350	P	P	07 42 37.5	-0.1
	baz=169,SNR=92						
TZTN				S	S	07 51 32.8	-1.5
	baz=169						
TZTN	Tazewell	68.04	350	P	P	07 42 37.6	0.0
TZTN				IAmb	IAmb	07 42 41.8	
	comp=Z,1µm,1.8s						
CLTN	Cedars of Leba	68.08	347	P	P	07 42 38.1	+0.3
X40A	Basin Creek Fa	68.09	341	P	P	07 42 38.0	+0.2
	baz=160,SNR=48						
X40A				S	S	07 51 34.8	-0.2
	baz=160						
X40A	Basin Creek Fa	68.09	341	P	P	07 42 37.9	0.0
X40A				IAmb	IAmb	07 42 41.6	
	comp=Z,821nm,2.0s						
BLA	Blacksburg	68.27	352	P	P	07 42 39.5	+0.4
	baz=172,SNR=46						
BLA				S	S	07 51 36.8	-0.3
	baz=172						
MIAR	Mount Ida	68.35	340	P	P	07 42 39.9	+0.3
MIAR				pmax	pmax		
	comp=Z,572nm,1.4s						
MIAR	Mount Ida	68.35	340	P	P	07 42 39.9	+0.3
	baz=160,SNR=115						
MIAR				S	S	07 51 38.9	+0.8
	baz=160						
MIAR	Mount Ida	68.35	340	⇑P	P	07 42 39.8	+0.3
MIAR	Mount Ida	68.35	340	P	P	07 42 39.9	+0.3
MIAR				IAmb	IAmb	07 42 53.9	
	comp=Z,572nm,1.4s						
Z35A	Perchaven, San	68.38	337	P	P	07 42 40.1	+0.3
Z35A				IAmb	IAmb	07 42 46.2	
	comp=Z,941nm,1.0s						
WVT	Waverly	68.42	346	P	P	07 42 40.1	+0.1
WVT				pmax	pmax		
	comp=Z,2µm,1.4s						
WVT	Waverly	68.42	346	P	P	07 42 40.1	+0.1
	baz=165						
WVT				S	S	07 51 36.7	-2.1
	baz=165						
WVT	Waverly	68.42	346	⇑P	P	07 42 39.6	-0.3
WVT	Waverly	68.42	346	P	P	07 42 40.1	+0.1
WVT				IAmb	IAmb	07 42 44.3	
	comp=Z,2µm,1.4s						
LPAR	Lepanto	68.48	344	P	P	07 42 40.8	+0.5
LPAR				IAmb	IAmb	07 42 48.2	
	comp=Z,1µm,1.5s						
HBAR	Harrisburg	68.52	343	P	P	07 42 41.2	+0.6
HBAR				IAmb	IAmb	07 42 47.4	
	comp=Z,2µm,1.8s						
HALT	Halls	68.55	344	P	P	07 42 41.4	+0.7
SYO	Syowa Base	68.57	159	⇑*i*P	P	07 42 40.0	-0.5
SYO	Syowa Base	68.57	159	⇓*i*pP	pP	07 42 52.6	+0.6
SYO	Syowa Base	68.57	159	⇓*i*sP	sP	07 42 57.8	+1.4
W41B	Gary Mavity, V	68.57	342	P	P	07 42 41.3	+0.4
	baz=161,SNR=103						
W41B				S	S	07 51 40.3	-0.3
	baz=161						
TBI	Tubuai	68.57	255	*e*P	P	07 42 43.4	+2.0

	comp=Z,609nm,1.1s						
TBI				*e*S	S	07 51 42.8	+1.3
	comp=Z,30µm,31.8s						
TBI				*e*LQ	LQ	08 00 35.5	
	comp=Z,26µm,29.8s						
TBI				*e*LR	LR	08 03 29.0	
	comp=Z,88µm,26.8s,baz=109						
TBI	Tubuai	68.57	255	*e*T	T	08 57 06.9	
	comp=Z,120nm,0.2s						
ABTX	Abilene, Hawle	68.58	335	P	P	07 42 42.0	+0.9
	baz=154,SNR=144						
ABTX				S	S	07 51 42.7	+1.7
	baz=154						
ABTX	Abilene, Hawle	68.58	335	P	P	07 42 41.6	+0.5
CBN	Corbin Frederi	68.96	355	P	P	07 42 44.2	+0.9
	baz=175,SNR=20						
CBN				S	S	07 51 48.1	+2.9
	baz=175						
CBN	Corbin Frederi	68.96	355	IAMs_20	IAMs_20	08 14 02.4	
	comp=Z,31µm,22.0s						
W39A	Magazine	69.02	341	P	P	07 42 44.6	+1.0
	baz=160,SNR=242						
W39A				S	S	07 51 47.9	+1.9
	baz=160						
MBO	M'Bour	69.04	58	P	P	07 42 44.9	+0.6
T47A	Sharon Grove	69.10	347	P	P	07 42 44.1	-0.1
PVMO	Portageville	69.11	344	P	P	07 42 45.0	+0.7
S51A	Beattyville	69.12	350	P	P	07 42 44.4	+0.1
S51A				IAmb	IAmb	07 42 47.8	
	comp=Z,1µm,1.7s						
HICK	Hickman	69.12	345	P	P	07 42 44.8	+0.5
PENMO	Penman	69.13	344	P	P	07 42 44.9	+0.6
LCAR	Lake Charles	69.13	343	P	P	07 42 44.8	+0.4
LCAR				IAmb	IAmb	07 42 47.8	
	comp=Z,2µm,1.7s						
FCAR	Ozark Folk Cen	69.21	342	P	P	07 42 45.2	+0.3
FCAR				IAmb	IAmb	07 42 48.6	
	comp=Z,1µm,1.7s						
R55A	Marlinton	69.29	353	P	P	07 42 45.7	+0.3
R55A				IAmb	IAmb	07 42 50.4	
	comp=Z,2µm,2.0s						
HENM	Henderson Moun	69.35	345	P	P	07 42 46.3	+0.6
PARMO	Parma	69.36	344	P	P	07 42 46.4	+0.6
Q61A	Milford	69.51	357	P	P	07 42 48.1	+1.5
	baz=176,SNR=7.1						
Q61A				S	S	07 51 55.0	+3.4
	baz=176						
R53A	Hurricane	69.56	351	P	P	07 42 47.1	+0.1
PBMO	Poplar Bluff	69.63	344	P	P	07 42 47.6	+0.2
PBMO				IAmb	IAmb	07 43 08.2	
	comp=Z,1µm,1.6s						
X34A	Smith Ranch, M	69.73	337		P	07 42 48.7	+0.6
X34A				IAmb	IAmb	07 42 53.3	
	comp=Z,2µm,1.7s						
MEH	Mehetia	69.80	261	*e*P	P	07 42 51.3	+2.2
	comp=Z,151nm,1.1s						
MEH	Mehetia	69.80	261	*e*T	T	08 58 37.6	
	comp=Z,334nm,0.2s						
U40A	Yellville	69.85	342	P	P	07 42 49.1	+0.3
	baz=161,SNR=220						
U40A				S	S	07 51 56.1	+0.3
	baz=161						
R50A	Paris	69.86	349	P	P	07 42 48.5	-0.3
R50A				IAmb	IAmb	07 42 53.0	
	comp=Z,777nm,1.7s						
Q56A	Snyder Ridge,	69.95	354	P	P	07 42 50.2	+0.8
Q56A				IAmb	IAmb	07 42 54.9	
	comp=Z,2µm,2.0s						
R49A	Shelbyville	70.01	349	P	P	07 42 49.3	-0.5
T42A	Van Buren	70.03	343	P	P	07 42 49.8	-0.1
T42A				IAmb	IAmb	07 42 54.3	
	comp=Z,1µm,1.9s						
MNTX	Cornudas Mount	70.08	330	P	P	07 42 50.2	-0.2
	baz=149,SNR=169						
MNTX				S	S	07 51 59.9	+1.2
	baz=149						
MNTX	Cornudas Mount	70.08	330	P	P	07 42 49.8	-0.5
HHAR	Hobbs	70.08	341	P	P	07 42 50.1	-0.2
HHAR				IAmb	IAmb	07 42 55.7	
	comp=Z,430nm,0.9s						
WCI	Wyandotte Cave	70.15	348	P	P	07 42 50.0	-0.6
WCI				pmax	pmax		
	comp=Z,1µm,1.7s						
WCI				MLR	MLR		
	comp=Z,24µm,22.0s						
WCI	Wyandotte Cave	70.15	348	P	P	07 42 50.2	-0.4
	baz=166						
WCI				S	S	07 51 57.1	-2.0
	baz=166						
WCI	Wyandotte Cave	70.15	348	⇑P	P	07 42 49.9	-0.7
WCI	Wyandotte Cave	70.15	348	P	P	07 42 50.0	-0.6
WCI				IAmb	IAmb	07 42 53.5	
	comp=Z,1µm,1.7s						
WMOK	Wichita Mounta	70.18	336	P	P	07 42 50.9	0.0
	baz=155,SNR=101						
WMOK				S	S	07 52 00.5	+0.7
	baz=155						
WMOK	Wichita Mounta	70.18	336	⇑P	P	07 42 50.8	-0.2
FNO	Franklin	70.19	338		P	07 42 50.8	-0.1
FNO				IAmb	IAmb	07 42 55.5	
	comp=Z,2µm,1.9s						
Q52A	Bidwell	70.22	351	P	P	07 42 50.6	-0.4
Q52A				IAmb	IAmb	07 42 55.1	
	comp=Z,522nm,1.1s						
S44A	Carbondale	70.23	345	P	P	07 42 51.2	+0.1
TUL1	Leonard	70.28	339	P	P	07 42 51.7	+0.2
	baz=158,SNR=161						
TUL1				S	S	07 52 00.9	+0.1
	baz=158						
P60A	Greenville	70.45	357	P	P	07 42 53.4	+1.0
	baz=176,SNR=36						
P60A				S	S	07 52 04.2	+1.6
	baz=176						
MCWV	Mont Chateau	70.62	353	P	P	07 42 54.0	+0.5
	baz=172,SNR=54						
MCWV				S	S	07 52 05.4	+0.7
	baz=172						
VAH	Vaihoa	70.64	264	*e*P	P	07 42 56.2	+2.0
	comp=Z,259nm,1.1s						
QUOK	Quay	70.80	339		P	07 42 55.0	+0.4
QUOK				IAmb	IAmb	07 42 59.4	
	comp=Z,2µm,1.7s						
P51A	Williamsport	70.84	351	P	P	07 42 54.7	-0.1
P52A	Corning	70.87	351	P	P	07 42 54.8	-0.2
	baz=170,SNR=69						
P52A				S	S	07 52 05.3	-2.3
	baz=170						
P52A	Corning	70.87	351	P	P	07 42 54.4	-0.5
P52A				IAmb	IAmb	07 42 58.9	
	comp=Z,2µm,1.8s						
P52A				IAMs_20	IAMs_20	08 12 42.7	
	comp=Z,13µm,22.0s						
MSTX	Muleshoe	70.97	333	P	P	07 42 56.2	+0.4
	baz=152,SNR=146						
MSTX				S	S	07 52 10.0	+0.9
	baz=152						
PMOR	Pomariorio Ree	70.97	264	*e*P	P	07 42 58.6	+2.4
	comp=Z,166nm,1.0s						
TIAR	Tiarei	71.03	261	*e*P	P	07 42 58.8	+2.2
	comp=Z,25nm,1.0s						
TIAR	Tiarei	71.03	261	*e*T	T	09 00 10.2	
	comp=Z,42nm,0.2s						
CCM	Cathedral Cave	71.04	344	P	P	07 42 56.5	+0.4
	baz=162						
CCM				S	S	07 52 09.6	0.0
	baz=162						
CCM	Cathedral Cave	71.04	344	⇑P	P	07 42 56.2	+0.1
O56A	Blue Knob Stat	71.11	354	P	P	07 42 57.3	+0.8
	baz=174,SNR=40						
O56A				S	S	07 52 11.4	+1.0
	baz=174						
P49A	Miami Univ. Ec	71.15	349	P	P	07 42 56.3	-0.4
	baz=168,SNR=54						
P49A				S	S	07 52 08.5	-2.2
	baz=168						
P49A	Miami Univ. Ec	71.15	349	P	P	07 42 56.1	-0.5
P49A				IAmb	IAmb	07 42 59.7	
	comp=Z,2µm,1.8s						
PAE	Paea	71.18	260	*e*P	P	07 42 59.8	+2.3
	comp=Z,88nm,1.0s						
PAE	Paea	71.18	260	*e*T	T	09 00 21.6	
	comp=Z,8.4nm,0.3s						
P48A	Milroy	71.19	349	P	P	07 42 56.4	-0.6
O54A	Avella	71.20	353	P	P	07 42 56.9	-0.1
PPTF	Pamatai, Papee	71.20	260	⇓P	P	07 43 13.3	+16
PPTF	Pamatai, Papee	71.20	260	IAMs_20	IAMs_20	08 05 36.3	
	comp=Z,31µm,22.0s						
PPT2	Papeete2	71.21	260	*e*P	P	07 43 00.0	+2.2
	comp=Z,405nm,1.0s						
PPT2				*e*S	S	07 52 13.2	+0.4
	comp=Z,55µm,30.8s						
PPT2	Papeete2	71.21	260	*e*LR	LR	08 04 42.7	
	comp=Z,84µm,24.5s,baz=118						
PPT2	Papeete2	71.21	260	*e*T	T	09 00 20.8	
	comp=Z,17nm,0.3s						
LUPA	Lehigh Univers	71.22	357	P	P	07 42 57.7	+0.6
PPT	Papeete	71.22	260	P	P	07 42 59.0	+1.2
	comp=Z,102nm,0.9s,baz=98,slow=4.2,SNR=5.0						
PPT				LR	LR	08 06 49.7	
	comp=Z,19µm,18.6s,baz=118,slow=30						
PPT	Papeete	71.22	260	P	P	07 42 59.0	+1.2
S39A	Bolivar	71.23	342	P	P	07 42 57.7	+0.5
AMTX	Amarillo	71.36	334	P	P	07 42 58.9	+0.8
	baz=153						
AMTX				S	S	07 52 14.7	+1.1
	baz=153						
SLM	Saint Louis	71.36	345	P	P	07 42 57.8	-0.1
SLM				pmax	pmax		
	comp=Z,3µm,2.0s						
SLM	Saint Louis	71.36	345	P	P	07 42 57.8	-0.1
O53A	New Philadelph	71.36	352	P	P	07 42 57.9	0.0
	baz=171,SNR=43						
O53A				S	S	07 52 10.8	-2.4
	baz=171						
SSPA	Standing Stone	71.42	355	P	P	07 42 59.1	+0.8
	baz=174						
SSPA				S	S	07 52 15.1	+1.2
	baz=174						
SSPA	Standing Stone	71.42	355	⇑P	P	07 42 58.8	+0.6
SSPA	Standing Stone	71.42	355	IAMs_20	IAMs_20	08 15 25.3	
	comp=Z,29µm,22.0s						
N59A	State Game Lan	71.56	357	P	P	07 43 00.6	+1.4
	baz=176,SNR=65						
N59A				S	S	07 52 19.0	+3.4
	baz=176						
ACSO	Alum Creek Sta	71.57	351	P	P	07 42 59.2	0.0
	baz=170,SNR=139						
ACSO				S	S	07 52 13.4	-2.2
	baz=170						
PAL	Palisades	71.57	358	P	P	07 42 59.8	+0.6
	baz=178,SNR=11						
PAL				S	S	07 52 18.8	+3.3
	baz=178						
121A	Cookes Peak, D	71.85	328	P	P	07 43 03.0	+1.7
	baz=148,SNR=139						
YLE	Yale	71.86	359	P	P	07 43 01.9	+1.0
YLE				IAmb	IAmb	07 43 24.0	
	comp=Z,1µm,1.3s						
YLE				IAMs_20	IAMs_20	08 15 28.1	
	comp=Z,27µm,22.0s						
KAN14	Manchester OK	71.92	338	P	P	07 43 01.8	+0.4
KAN14				IAmb	IAmb	07 43 19.4	
	comp=Z,926nm,1.5s						
N54A	Moraine State	71.93	353	P	P	07 43 01.9	+0.5
	baz=172,SNR=42						
N54A				S	S	07 52 19.3	-0.5
	baz=172						
N54A	Moraine State	71.93	353	P	P	07 43 01.8	+0.5
N54A				IAmb	IAmb	07 43 05.3	
	comp=Z,1µm,1.7s						
M63A	Gales Ferry	71.94	360	P	P	07 43 02.6	+1.3
KAN17	Caldwell West	71.94	338		P	07 43 02.0	+0.5
KAN17				IAmb	IAmb	07 43 06.5	
	comp=Z,2µm,1.8s						
KS20	Mayfield South	72.04	338	P	P	07 43 02.8	+0.7
M57A	Sunshine Farm,	72.06	356	P	P	07 43 02.6	+0.5
M57A				IAmb	IAmb	07 43 06.6	
	comp=Z,734nm,1.6s						
M65A	Busby, Falmout	72.10	1	P	P	07 43 03.0	+0.7
	baz=181						
M65A				S	S	07 52 24.3	+2.7
	baz=181						
KAN06	Argonia West S	72.16	338	P	P	07 43 03.5	+0.7
P43A	Skaggs, Pawnee	72.16	345	P	P	07 43 02.7	0.0
N51A	Ashland	72.16	351	P	P	07 43 02.6	-0.1
N51A				IAmb	IAmb	07 43 06.7	
	comp=Z,2µm,1.9s						
KAN08	Anthony NE Sta	72.17	338	P	P	07 43 03.3	+0.4
KAN08				IAmb	IAmb	07 43 08.8	
	comp=Z,735nm,1.0s						
KSPA	Keystone Colle	72.20	357	P	P	07 43 03.7	+0.8
KAN16	Harper SW Stat	72.20	338		P	07 43 03.8	+0.7
KAN16				IAmb	IAmb	07 43 09.0	
	comp=Z,672nm,1.0s						
KAN12	Harper NE Stat	72.24	338	P	P	07 43 03.9	+0.5
KSCT	Kent School, K	72.28	358	P	P	07 43 04.4	+1.0
M55A	Ridgway	72.32	354	P	P	07 43 04.0	+0.3
UCCT	U. Connecticut	72.33	359	P	P	07 43 04.0	+0.3
SFIN	Lafayette	72.38	348	P	P	07 43 03.3	-0.7
	baz=166,SNR=39						
SFIN				S	S	07 52 21.6	-3.3
	baz=166						
SFIN	Lafayette	72.38	348	P	P	07 43 03.1	-0.9
SFIN				IAmb	IAmb	07 43 20.9	
	comp=Z,809nm,1.6s						
N49A	Columbus Grove	72.42	350	P	P	07 43 04.2	-0.1
M54A	Oil Creek Stat	72.44	354	P	P	07 43 04.7	+0.2
	baz=173,SNR=31						
M54A				S	S	07 52 25.1	-0.5
	baz=173						
M54A	Oil Creek Stat	72.44	354	IAMs_20	IAMs_20	08 16 19.3	
	comp=Z,27µm,22.0s						
M53A	WI Miller and	72.47	353	P	P	07 43 04.8	+0.2
	baz=172,SNR=21						
M53A				S	S	07 52 24.6	-1.4
	baz=172						
Y22D	IRIS PASSCAL I	72.77	330	P	P	07 43 08.6	+1.9
	baz=149						
Y22D				S	SKiKP	07 52 35.7	-2.0
	baz=149						
L59A	Walton	72.80	357	P	P	07 43 07.0	+0.5
L59A				IAmb	IAmb	07 43 22.7	
	comp=Z,547nm,1.1s						
QUA2	Belchertown	72.81	359	P	P	07 43 07.4	+0.8
BINY	Binghamton	72.85	356	P	P	07 43 07.7	+0.8
	baz=176,SNR=28						
BINY				S	S	07 52 32.2	+1.9
	baz=176						
BINY	Binghamton	72.85	356	P	P	07 43 07.2	+0.3
LENM	Lemitar	72.87	330	P	P	07 43 08.4	+1.0
L56A	Greenwood	72.89	355	P	P	07 43 07.4	+0.3
L56A				IAmb	IAmb	07 43 22.9	
	comp=Z,708nm,1.2s						
HDIL	Hopedale	72.99	346	P	P	07 43 07.6	-0.1
	baz=164,SNR=77						
HDIL				S	S	07 52 29.8	-2.0
	baz=164						
L61B	Northampton	72.99	359	P	P	07 43 08.5	+0.9
	baz=179,SNR=28						
L61B				S	SKiKP	07 52 35.3	-2.2
	baz=179						
HRV	Adam Dziewonsk	73.04	360	P	P	07 43 08.6	+0.7
HRV				pmax	pmax		
	comp=Z,837nm,1.6s						
HRV				MLR	MLR		
	comp=Z,17µm,21.0s						
HRV	Adam Dziewonsk	73.04	360	P	P	07 43 09.2	+1.3
	baz=180						
HRV				S	SKiKP	07 52 36.1	-1.5
	baz=180						
HRV	Adam Dziewonsk	73.04	360	⇑P	P	07 43 08.8	+0.9
HRV	Adam Dziewonsk	73.04	360	P	P	07 43 08.6	+0.7
HRV				IAmb	IAmb	07 43 30.9	
	comp=Z,837nm,1.6s						
TUC	Tucson	73.07	326	P	P	07 43 09.8	+1.3
	baz=145						
TUC				S	SKiKP	07 52 36.2	-1.9
	baz=145						
TUC	Tucson	73.07	326	⇑P	P	07 43 09.5	+1.1
TUC	Tucson	73.07	326	IAMs_20	IAMs_20	08 10 42.5	
	comp=Z,27µm,19.0s						
ERPA	Erie	73.07	353	P	P	07 43 08.3	+0.2
	baz=172,SNR=12						
ERPA				S	S	07 52 31.6	-1.2
	baz=172						
ERPA	Erie	73.07	353	P	P	07 43 08.4	+0.2
ERPA				IAMs_20	IAMs_20	08 16 16.2	
	comp=Z,26µm,22.0s						
P38A	Dawn	73.10	342	P	P	07 43 08.2	-0.2
P38A				IAmb	IAmb	07 43 12.6	
	comp=Z,2µm,1.9s						
WVNY	West Valley, N	73.23	354	P	P	07 43 09.4	+0.3
TRY	Troy	73.29	358	IAMs_20	IAMs_20	08 14 32.9	
	comp=Z,25µm,22.0s						
ANMO	Albuquerque	73.32	331	P	P	07 43 11.2	+1.2
	comp=Z,19nm,0.6s,baz=149,slow=6.5,SNR=142						
ANMO	Albuquerque	73.32	331	P	P	07 43 11.6	+1.6
	baz=149						
ANMO				S	SKiKP	07 52 39.2	+0.6
	baz=149						
ANMO	Albuquerque	73.32	331	⇑P	P	07 43 11.2	+1.2
LIC	Lamto	73.32	72	*e*P	P	07 43 10.2	-0.1
	comp=Z,2µm,0.8s						
KSU1	Kansas State U	73.47	340	P	P	07 43 10.6	+0.1
	baz=158,SNR=38						
KSU1				S	S	07 52 36.4	-1.0
	baz=158						
KSU1	Kansas State U	73.47	340	⇑P	P	07 43 10.3	-0.2
TIC	Toumodi	73.57	72	*e*P	P	07 43 11.7	-0.1
KIC	Kosan Boka	73.64	72	*e*P	P	07 43 12.2	+0.1
	comp=Z,905nm,0.8s						
AAM	Ann Arbor	73.70	351	P	P	07 43 11.7	-0.1
	baz=169,SNR=21						
AAM				S	SKiKP	07 52 37.0	-1.6
	baz=169						
DBIC	Dimbokro	73.72	72	P	P	07 43 12.7	+0.1
	comp=Z,770nm,0.6s,baz=232,slow=5.6,SNR=400						
DBIC				LR	LR	08 12 56.1	
	comp=Z,81µm,20.4s,baz=240,slow=34						
DBIC	Dimbokro	73.72	72	⇑P	P	07 43 12.5	-0.1
DBIC				⇑P	P	07 43 12.7	+0.1
DBIC	Dimbokro	73.72	72	P	P	07 43 12.9	+0.3
DBIC				IAmb	IAmb	07 43 14.5	
	comp=Z,898nm,0.7s						
214A	Organ Pipe Nat	73.78	324	P	P	07 43 14.4	+1.8
	baz=144,SNR=82						
214A				S	S	07 52 44.9	+3.6
	baz=144						
J56A	Wolcott	73.97	356	P	P	07 43 13.4	0.0
J58A	Remsen	73.97	357	P	P	07 43 13.4	0.0
MEDO	Medina	73.98	355	P	P	07 43 12.8	-0.6
FFD	Franklin Falls	74.00	360	P	P	07 43 14.3	+0.7
FFD				IAmb	IAmb	07 43 36.8	
	comp=Z,1µm,1.6s						
J55A	Hilton	74.03	355	P	P	07 43 13.6	-0.1
J59A	Piesco	74.05	358	P	P	07 43 14.1	+0.2
J57A	Williamstown	74.06	357	P	P	07 43 13.9	0.0
J54A	Appleton	74.10	355	P	P	07 43 14.2	+0.1
N38A	Joes South For	74.12	343	P	P	07 43 14.2	-0.2
CBKS	Cedar Bluff	74.19	337	P	P	07 43 15.5	+0.7
CBKS				pmax	pmax		
	comp=Z,388nm,0.9s						
CBKS	Cedar Bluff	74.19	337	P	P	07 43 15.7	+0.9
	baz=155,SNR=92						
CBKS	Cedar Bluff	74.19	337	⇑P	P	07 43 15.6	+0.8
CBKS	Cedar Bluff	74.19	337	P	P	07 43 15.5	+0.7
HNH	Hanover	74.24	359	P	P	07 43 15.9	+1.0
L44A	Lake County Fo	74.28	347	P	P	07 43 15.1	-0.1
	baz=165,SNR=14						
L44A				S	S	07 52 44.1	-2.2
	baz=165						
L44A	Lake County Fo	74.28	347	P	P	07 43 14.8	-0.4
L44A				IAmb	IAmb	07 43 19.2	
	comp=Z,2µm,1.9s						
T25A	Trinidad	74.38	333	P	P	07 43 17.8	+1.6
	baz=151,SNR=180						
T25A				S	S	07 52 52.2	+3.9
	baz=151						
L42A	Oliver, Polo	74.46	346	P	P	07 43 16.0	-0.2
X18A	Snowflake	74.51	328	P	P	07 43 18.1	+1.2
I63A	Otisfield	74.58	1	P	P	07 43 18.2	+1.3
I63A				IAmb	IAmb	07 43 40.4	
	comp=Z,704nm,1.3s						
LBNH	Lisbon	74.77	360	P	P	07 43 19.2	+1.1
	baz=180,SNR=25						
LBNH				S	S	07 52 56.1	+4.3
	baz=180						
J47A	Sunmer	74.78	350	P	P	07 43 17.5	-0.6
J47A				IAmb	IAmb	07 43 21.9	
	comp=Z,2µm,1.9s						
N35A	Tabor	74.83	341	P	P	07 43 18.2	-0.2
N35A				IAmb	IAmb	07 43 33.6	
	comp=Z,592nm,0.8s						
L40A	Anamosa	74.85	345	P	P	07 43 18.5	0.0
L40A				IAmb	IAmb	07 43 32.4	
	comp=Z,866nm,1.1s						
K43A	Burlington	74.86	347	P	P	07 43 18.4	-0.2
VT1	Waterbury	74.87	359	P	P	07 43 19.1	+0.5
W18A	Petrified Fore	74.90	328	P	P	07 43 20.8	+1.6
	baz=147,SNR=104						
W18A				S	S	07 52 57.5	+3.5
	baz=147						
W18A	Petrified Fore	74.90	328	P	P	07 43 19.8	+0.6
W18A				IAmb	IAmb	07 43 41.9	
	comp=Z,1µm,1.4s						
113A	Mohawk Valley,	74.91	324	P	P	07 43 19.6	+0.5
X16A	Lo Mia Camp, P	75.11	327	P	P	07 43 21.9	+1.4
SCIA	State Center	75.17	343	P	P	07 43 20.6	+0.2
	baz=161,SNR=21						
SCIA				S	S	07 52 55.6	-0.7
	baz=161						
LONY	Lake Ozonia	75.20	358	P	P	07 43 21.2	+0.7
	baz=177,SNR=48						
LONY				S	S	07 52 58.5	+1.9
	baz=177						
LONY	Lake Ozonia	75.20	358	IAMs_20	IAMs_20	08 15 43.6	
	comp=Z,24µm,22.0s						
SDCO	Great Sand Dun	75.34	333	P	P	07 43 23.2	+1.4
	baz=150,SNR=166						
SDCO				S	S	07 53 02.5	+3.5
	baz=150						
SDCO	Great Sand Dun	75.34	333	IAMs_20	IAMs_20	08 12 48.2	
	comp=Z,23µm,19.0s						
KSCO	Kaye Shedlock'	75.36	335	P	P	07 43 23.1	+1.4
	baz=153,SNR=37						
KSCO				S	S	07 53 01.1	+2.2
	baz=153						
JFWS	Jewell Farm	75.45	346	P	P	07 43 22.2	+0.2
	baz=163,SNR=70						
JFWS				S	S	07 52 58.4	-1.0
	baz=163						
JFWS	Jewell Farm	75.45	346	IAMs_20	IAMs_20	08 22 05.0	
	comp=Z,22µm,19.0s						
SADO	Sadowa	75.63	354	P	P	07 43 22.9	0.0
	comp=Z,174nm,1.0s,baz=228,slow=2.1,SNR=45						
SADO				S	S	07 52 59.9	-1.4
	comp=Z,3.4nm,0.4s,baz=260,slow=19,SNR=1.5						
SADO	Sadowa	75.63	354	⇑P	P	07 43 22.9	0.0
GLA	Glamis	75.68	323	P	P	07 43 25.0	+1.5
	baz=143,SNR=16						
GLA				S	S	07 53 07.4	+4.9
	baz=143						
PKME	Peaks-Kenny Pk	75.82	2	P	P	07 43 24.9	+0.9
	baz=182,SNR=15						
PKME				S	S	07 53 07.4	+4.1
	baz=182						
S22A	4UR Ranch, Cre	75.87	332	P	P	07 43 26.4	+1.5
	baz=149,SNR=114						
S22A				S	S	07 53 08.3	+3.4
	baz=149						
SUR	Sutherland	75.90	119	P	P	07 43 26.5	+1.2
SUR				IAmb	IAmb	07 43 49.4	
	comp=Z,482nm,1.1s						
SUR	Sutherland	75.90	119	IAMs_20	IAMs_20	08 14 36.8	
	comp=Z,27µm,19.0s						
SUR	Sutherland	75.90	119	P	P	07 43 26.2	+0.9
WUAZ	Wupatki	75.98	327	P	P	07 43 26.9	+1.5
	baz=146,SNR=176						
WUAZ				S	S	07 53 10.6	+4.7
	baz=146						
WUAZ	Wupatki	75.98	327	⇑P	P	07 43 26.8	+1.5
WUAZ	Wupatki	75.98	327	IAMs_20	IAMs_20	08 11 48.5	
	comp=Z,33µm,22.0s						
MAW	Mawson	76.01	164	P	P	07 43 25.2	+0.2
	comp=Z,125nm,0.8s,baz=216,slow=6.7,SNR=196						
MAW				PKPPKP	P'P'df	08 10 33.6	-14
	comp=Z,1.5nm,0.9s,baz=353,slow=8.7,SNR=3.7						
MAW				LR	LR	08 19 01.3	
	comp=Z,38µm,19.9s,baz=232,slow=37						
MAW	Mawson	76.01	164	⇑P	P	07 43 25.2	+0.2
MAW	Mawson	76.01	164	P	P	07 43 25.6	+0.7
IKP	In-Ko-Pah, Jac	76.03	322	P	P	07 43 27.3	+1.7
	baz=142,SNR=43						
IKP				S	S	07 53 10.9	+4.6
	baz=142						
BGNE	Belgrade	76.05	340	P	P	07 43 26.0	+0.6
	baz=157,SNR=26						
BGNE				S	S	07 53 06.8	+0.6

	baz=157						
MNTQ	**Montreal, Queb**	76.06	358	⇑P	P	07 43 25.8	+0.5
SWSC	**Sam W. Stewart**	76.10	323	P	P	07 43 27.4	+1.5
	baz=142,SNR=27						
SWSC				S	S	07 53 12.5	+5.6
	baz=142						
MVCO	**Mesa Verde**	76.11	330	P	P	07 43 27.5	+1.3
	baz=148,SNR=117						
MVCO				S	S	07 53 11.9	+4.5
	baz=148						
MVCO	**Mesa Verde**	76.11	330	IAMs_20	IAMs_20	08 12 54.5	
	comp=Z,36µm,19.0s						
Q24A	**Divide**	76.26	334	P	P	07 43 28.4	+1.4
	baz=151,SNR=203						
Q24A				S	S	07 53 13.3	+4.1
	baz=151						
GLMI	**Grayling**	76.31	350	P	P	07 43 26.6	-0.2
	baz=168,SNR=12						
GLMI				S	S	07 53 07.5	-1.3
	baz=168						
GLMI	**Grayling**	76.31	350	IAMs_20	IAMs_20	08 22 04.7	
	comp=Z,21µm,20.0s						
GAC	**Glen Almond**	76.32	357	⇑P	P	07 43 27.3	+0.5
GAC				⇑P	pP	07 43 27.4	-11
PDMCI	**Parker Dam,Lak**	76.33	325	P	P	07 43 28.6	+1.4
	baz=143,SNR=26						
PDMCI				S	S	07 53 13.4	+4.0
	baz=143						
MONP2	**Monument Peak**	76.38	322	P	P	07 43 29.3	+1.5
	baz=141,SNR=46						
MONP2				S	S	07 53 14.6	+4.0
	baz=141						
BC3	**Big Chuckawall**	76.47	323	P	P	07 43 29.6	+1.4
	baz=142,SNR=78						
BC3				S	S	07 53 16.5	+5.2
	baz=142						
IRM	**Iron Mountain**	76.71	324	P	P	07 43 30.9	+1.5
	baz=142,SNR=31						
IRM				S	S	07 53 16.7	+3.0
	baz=142						
109C	**Camp Elliot, M**	76.74	322	P	P	07 43 30.9	+1.3
	baz=141,SNR=11						
109C				S	S	07 53 17.2	+3.3
	baz=141						
OGNE	**Ogallala**	76.88	337	P	P	07 43 31.3	+1.1
	baz=153,SNR=26						
OGNE				S	S	07 53 18.2	+2.9
	baz=153						
NEE2	**Needles Airpor**	76.93	325	P	P	07 43 31.9	+1.3
	baz=143						
NEE2				S	S	07 53 20.3	+4.2
	baz=143						
TPFO	**Pinon Flats**	76.95	323	P	P	07 43 32.7	+1.8
	baz=142,SNR=99						
TPFO				S	S	07 53 22.4	+5.8
	baz=142						
PFO	**Pinyon Flats O**	76.96	323	P	P	07 43 32.3	+1.4
	comp=Z,51nm,0.9s,baz=127,slow=5.2,SNR=86						
PFO	**Pinyon Flats O**	76.96	323	P	P	07 43 32.7	+1.7
	baz=142,SNR=81						
PFO				S	S	07 53 22.7	+6.0
	baz=142						
PFO	**Pinyon Flats O**	76.96	323	IAMs_20	IAMs_20	08 10 48.1	
	comp=Z,35µm,20.0s						
BELC	**Belle Mtn. Jos**	77.03	323	P	P	07 43 32.9	+1.6
	baz=142,SNR=44						
BELC				S	S	07 53 22.4	+5.0
	baz=142						
KUKU	**Kukurantumi**	77.14	75	P	P	07 43 31.7	-0.6
U15A	**North Rim**	77.15	327	P	P	07 43 33.4	+1.2
SMCO	**Snowmass**	77.16	332	⇑P	P	07 43 33.8	+1.5
SMCO	**Snowmass**	77.16	332	P	P	07 43 33.7	+1.5
SMCO				IAmb	IAmb	07 43 55.1	
	comp=Z,634nm,1.0s						
ISCO	**Idaho Springs**	77.16	334	P	P	07 43 33.5	+1.3
	baz=150,SNR=170						
ISCO				S	S	07 53 22.0	+3.1
	baz=150						
ISCO	**Idaho Springs**	77.16	334	IAMs_20	IAMs_20	08 14 03.5	
	comp=Z,25µm,22.0s						
E62A	**Clayton Lake**	77.17	1	P	P	07 43 32.7	+1.0
E62A				IAmb	IAmb	07 43 36.1	
	comp=Z,338nm,0.8s						
MURC	**Murrieta**	77.34	322	P	P	07 43 34.6	+1.7
	baz=141,SNR=49						
MURC				S	S	07 53 25.0	+4.4
	baz=141						
GMRC	**Granite Mounta**	77.47	324	P	P	07 43 35.4	+1.7
	baz=142,SNR=167						
GMRC				S	S	07 53 26.2	+4.1
	baz=142						
WIN	**Windhoek**	77.58	109	P	P	07 43 35.1	+0.2
WIN				pmax	pmax		
	comp=Z,2µm,1.8s						
WIN	**Windhoek**	77.58	109	P	P	07 43 35.1	+0.2
WIN				IAmb	IAmb	07 43 56.3	
	comp=Z,2µm,1.8s						
WIN	**Windhoek**	77.58	109	P	P	07 43 35.1	+0.2
SCI2	**San Clemente I**	77.58	321	P	P	07 43 35.9	+1.6
	baz=140,SNR=8.5						
SCI2				S	S	07 53 28.6	+5.5
	baz=140						
BBRC	**Big Bear Solar**	77.71	323	P	P	07 43 37.2	+2.0
	baz=141						
BBRC				S	S	07 53 29.6	+4.7
	baz=141						
ECSD	**EROS Data Cent**	77.76	342	P	P	07 43 35.3	+0.3
	baz=158,SNR=291						
ECSD				S	S	07 53 24.4	-0.2
	baz=158						
CIS	**Catalina Islan**	77.83	321	P	P	07 43 37.2	+1.5
	baz=140,SNR=17						
CIS				S	S	07 53 31.0	+5.0
	baz=140						
HEC	**Hector,Ludlow**	77.85	324	P	P	07 43 37.6	+1.8
	baz=142,SNR=128						
HEC				S	S	07 53 31.6	+5.4
	baz=142						
FMP	**Fort Macarthur**	78.01	322	P	P	07 43 38.3	+1.7
	baz=140						
FMP				S	S	07 53 32.8	+5.2
	baz=140						
RAR	**Rarotonga**	78.05	252	P	P	07 43 37.1	-0.1
	comp=Z,38nm,0.8s,baz=179,slow=2.8,SNR=6.6						
RAR	**Rarotonga**	78.05	252	⇑P	P	07 43 38.1	+0.8
RAR	**Rarotonga**	78.05	252	P	P	07 43 37.4	+0.2
RAR	**Rarotonga**	78.05	252	IAMs_20	IAMs_20	08 09 42.2	
	comp=Z,25µm,22.0s						
BFSC	**Mount Baldy Ra**	78.07	322	P	P	07 43 38.6	+1.4
	baz=141,SNR=80						
BFSC				S	S	07 53 33.2	+4.5
	baz=141						
TUQ	**Turquoise Moun**	78.11	324	P	P	07 43 39.0	+1.7
	baz=142,SNR=19						
TUQ				S	S	07 53 33.1	+4.0
	baz=142						
SPMN	**Marine on St.**	78.21	345	P	P	07 43 37.0	-0.4
	baz=161,SNR=59						
SPMN				S	S	07 53 27.9	-1.5
	baz=161						
RRX	**Edison Barstow**	78.22	323	P	P	07 43 39.7	+1.9
	baz=141,SNR=19						
RRX				S	S	07 53 34.8	+4.7
	baz=141						
N23A	**Red Feather La**	78.24	334	P	P	07 43 39.5	+1.4
	baz=150,SNR=92						
N23A				S	S	07 53 33.5	+3.1
	baz=150						
SNCC	**San Nicolas Is**	78.32	320	P	P	07 43 39.5	+1.1
	baz=139						
SNCC				S	S	07 53 36.6	+5.5
	baz=139						
DECC	**Green Verdugo**	78.44	322	P	P	07 43 40.8	+1.8
	baz=140,SNR=28						
DECC				S	S	07 53 37.3	+4.9
	baz=140						
GSC	**Goldstone, Bar**	78.46	324	P	P	07 43 40.7	+1.5
	baz=142,SNR=77						
GSC				S	S	07 53 35.2	+2.5
	baz=142						
O20A	**White River Ci**	78.48	332	P	P	07 43 40.5	+1.2
	baz=148,SNR=99						
O20A				S	S	07 53 35.8	+2.8
	baz=148						
SHOC	**Shoshone, Teco**	78.66	324	P	P	07 43 41.7	+1.6
	baz=142,SNR=7.9						
SHOC				S	S	07 53 39.7	+5.1
	baz=142						
EDW2	**Edwards Air Fo**	78.74	323	P	P	07 43 41.8	+1.1
	baz=141,SNR=86						
EDW2				S	S	07 53 38.8	+3.0
	baz=141						
KOWA	**Kowa**	78.90	66	PKPPKP	P'P'df	08 10 37.7	0.0
	comp=Z,0.7nm,0.3s,baz=90,slow=5.1,SNR=2.2						
KOWA	**Kowa**	78.90	66	⇑P	P	07 43 40.6	-1.3
KOWA	**Kowa**	78.90	66	P	P	07 43 42.1	+0.1
KOWA				IAmb	IAmb	07 44 04.9	
	comp=Z,994nm,1.1s						
KOWA	**Kowa**	78.90	66	P	P	07 43 42.1	+0.1
OSI	**Osito Audit: C**	78.92	322	P	P	07 43 43.2	+1.4
	baz=140,SNR=16						
OSI				S	S	07 53 41.8	+4.2
	baz=140						
SCZ2	**Santa Cruz Isl**	78.94	321	P	P	07 43 43.5	+1.7
	baz=139,SNR=11						
SCZ2				S	S	07 53 42.8	+5.0
	baz=139						
LRMC	**Laurel Mtn Rad**	79.04	323	P	P	07 43 43.8	+1.3
	baz=141,SNR=88						
LRMC				S	S	07 53 44.3	+5.3
	baz=141						
SUSD	**Miller**	79.07	340	P	P	07 43 42.4	+0.1
	baz=156						
SUSD				S	S	07 53 39.2	+0.5
	baz=156						
PRN	**Pahroc Range**	79.24	326	⇑P	P	07 43 45.1	+1.6
PRN				⇑P	P	07 43 45.2	+1.6
PRN				⇓P	P	07 43 50.4	+6.9
SOE	**Somerset East**	79.26	122	P	P	07 43 43.2	-0.7
H07S1	**FLORES T-PHASE**	79.29	31	*e*P	P	07 43 45.7	+2.1
H07S1	**FLORES T-PHASE**	79.29	31	*e*LR	LR	08 10 17.3	
SBC	**Santa Barbara**	79.32	321	P	P	07 43 45.3	+1.5
	baz=139						
SBC				S	S	07 53 46.5	+4.8
	baz=139						
ARVC	**Arvin**	79.37	322	P	P	07 43 45.6	+1.5
	baz=140,SNR=19						
ARVC				S	S	07 53 46.6	+4.3
	baz=140						
FURC	**Furnace Creek,**	79.39	324	P	P	07 43 45.8	+1.6
	baz=142,SNR=103						
FURC				S	S	07 53 47.9	+5.5
	baz=142						
RWWY	**Rawlins**	79.40	334	IAMs_20	IAMs_20	08 15 24.8	
	comp=Z,25µm,20.0s						
TSUM	**Tsumeb**	79.58	106	⇑P	P	07 43 46.3	+0.4
TSUM				⇑P	P	07 43 46.3	+0.4
TSUM	**Tsumeb**	79.58	106	P	P	07 43 46.5	+0.5
TSUM				IAmb	IAmb	07 44 07.3	
	comp=Z,1µm,1.6s						
TSUM	**Tsumeb**	79.58	106	P	P	07 43 45.8	-0.2
H07N1	**FLORES T-PHASE**	79.59	31	*e*P	P	07 43 49.8	+4.6
ISA	**Isabella, Lake**	79.60	323	P	P	07 43 47.1	+1.7
	baz=140,SNR=148						
ISA				S	S	07 53 49.9	+5.1
	baz=140						
PKM	**Mcpherson Peak**	79.72	321	P	P	07 43 48.0	+1.7
	baz=139,SNR=78						
PKM				S	S	07 53 50.5	+4.2
	baz=139						
HOR	**Horta**	79.76	33	*e*P	P	07 43 55.2	+9.1
	comp=Z,621nm,2.4s						
CALA	**Caldeira**	79.77	33	*e*P	P	07 43 49.8	+3.5
	comp=Z,733nm,2.0s						
CALA	**Caldeira**	79.77	33	*e*LR	LR	08 11 08.5	
	comp=Z,2µm,17.4s						
PCAN	**Candelaria**	79.78	33	*e*P	P	07 43 49.5	+3.2
	comp=Z,356nm,1.0s						
PCED	**Cedros**	79.81	33	*e*P	P	07 43 52.1	+5.7
	comp=Z,433nm,1.7s						
PICO	**Pico**	79.84	33	*e*P	P	07 43 51.6	+5.0
	comp=Z,545nm,1.8s						
PICO	**Pico**	79.84	33	*e*LR	LR	08 10 42.0	
	comp=Z,2µm,10.9s						
PPNO	**Prainha do Nor**	79.89	33	*e*P	P	07 43 52.4	+5.5
	comp=Z,462nm,1.3s						
K22A	**Casper**	79.97	334	P	P	07 43 48.3	+0.9
	baz=150,SNR=110						
K22A				S	S	07 53 52.2	+3.6
	baz=150						
CWC	**Cottonwood Cre**	79.99	323	P	P	07 43 49.1	+1.5
	baz=141						
CWC				S	S	07 53 53.6	+4.5
	baz=141						
VES	**Vestal, Richgr**	80.05	322	P	P	07 43 49.1	+1.4
	baz=140,SNR=131						
VES				S	S	07 53 54.2	+4.8
	baz=140						
GRAC	**Grapevine Rang**	80.06	324	P	P	07 43 49.7	+1.8
	baz=141,SNR=25						
GRAC				S	S	07 53 55.2	+5.6
	baz=141						
ROSA	**Rosais**	80.10	33	*e*P	P	07 43 53.7	+5.7
	comp=Z,749nm,1.8s						
ROSA	**Rosais**	80.10	33	*e*LR	LR	08 10 36.7	
	comp=Z,2µm,19.2s						
PMAN	**Manadas**	80.10	33	*e*P	P	07 43 54.3	+6.3
	comp=Z,636nm,1.5s						
SMMC	**Simmler**	80.13	322	P	P	07 43 50.2	+1.9
	baz=139,SNR=34						
SMMC				S	S	07 53 56.0	+5.6
	baz=139						
R11A	**Troy Canyon, C**	80.25	326	P	P	07 43 50.6	+1.6
	baz=143,SNR=207						
R11A				S	S	07 53 56.5	+4.7
	baz=143						
PSMA	**Santa Maria**	80.25	36	*e*P	P	07 43 52.2	+3.4
	comp=Z,370nm,1.3s						
PSMN	**Pico do Norte,**	80.29	36	*e*P	P	07 43 51.0	+2.0
	comp=Z,264nm,1.3s						
PSMN	**Pico do Norte,**	80.29	36	*e*LR	LR	08 09 45.3	
	comp=Z,3µm,20.5s						
RSSD	**Black Hills**	80.38	337	P	P	07 43 50.3	+0.7
	baz=152						
RSSD				S	S	07 53 55.4	+2.4
	baz=152						
RSSD	**Black Hills**	80.38	337	⇑P	P	07 43 50.1	+0.5
DUG	**Dugway, Tooele**	80.46	329	P	P	07 43 51.2	+1.1
	baz=145,SNR=136						
DUG				S	S	07 53 56.8	+2.9
	baz=145						
PGRA	**Graciosa**	80.47	33	*e*P	P	07 43 52.8	+2.9
	comp=Z,170nm,0.9s						
PGRA	**Graciosa**	80.47	33	*e*LR	LR	08 10 14.5	
	comp=Z,2µm,17.7s						
EYMN	**Ely**	80.52	346	P	P	07 43 49.7	-0.3
	baz=163,SNR=26						
EYMN				S	S	07 53 51.5	-2.3
	baz=163						
ADH	**Angra Heroismo**	80.52	34	*e*P	P	07 43 51.2	+1.0
	comp=Z,546nm,1.7s						
TIN	**Tinemaha, Big**	80.54	324	P	P	07 43 52.2	+1.7
	baz=141,SNR=12						
TIN				S	S	07 53 58.9	+4.1
	baz=141						
PDA	**Ponta Delgada**	80.57	35	*e*P	P	07 43 51.6	+1.1
	comp=Z,721nm,1.9s						
VOG	**Valley Oaks Go**	80.57	323	P	P	07 43 50.8	+0.3
	baz=140						
VOG				S	S	07 53 58.3	+3.5
	baz=140						
PSET	**Sete Cidades**	80.60	35	*e*P	P	07 43 51.8	+1.1
	comp=Z,580nm,1.5s						
PSET	**Sete Cidades**	80.60	35	*e*LR	LR	08 10 05.3	
	comp=Z,2µm,18.9s						
PSCM	**Serra do Cume**	80.61	34	*e*P	P	07 43 52.9	+2.2
	comp=Z,436nm,1.3s						
PAGU	**Agualva, Azore**	80.63	34	*e*P	P	07 43 55.1	+4.3
	comp=Z,396nm,1.3s						
PAGU	**Agualva, Azore**	80.63	34	*e*LR	LR	08 10 38.5	
	comp=Z,2µm,20.1s						
GRON	**Grota Negra**	80.65	35	*e*P	P	07 43 55.1	+4.1
	comp=Z,991nm,2.1s						
CMLA	**Cha da Macela**	80.65	35	*e*P	P	07 43 54.6	+3.6
	comp=Z,435nm,1.4s						
CMLA	**Cha da Macela**	80.65	35	*e*LR	LR	08 10 00.5	
	comp=Z,2µm,14.7s						
PCALD	**Caldeiras da R**	80.70	35	*e*P	P	07 43 55.1	+3.9
	comp=Z,635nm,1.5s						
BART	**Pico Bartolome**	80.84	35	*e*P	P	07 43 55.8	+3.7
	comp=Z,340nm,1.2s						
NEPA	**Kaukuwa**	81.00	105	P	P	07 43 50.8	-2.8
BOSA	**Boshof**	81.07	118	P	P	07 43 53.5	-0.2
	comp=Z,115nm,0.9s,baz=246,slow=4.0,SNR=83						
BOSA				LR	LR	08 15 18.1	
	comp=Z,44µm,21.2s,baz=250,slow=32						
BOSA	**Boshof**	81.07	118	*i* P	P	07 43 54.2	+0.4
BOSA	**Boshof**	81.07	118	*i* P	P	07 43 54.2	+0.4
BOSA	**Boshof**	81.07	118	P	P	07 43 53.6	-0.2
BOSA	**Boshof**	81.07	118	P	P	07 43 52.1	-1.7
HWUT	**Hardware Ranch**	81.08	331	P	P	07 43 53.6	+0.2
HWUT				IAmb	IAmb	07 44 11.7	
	comp=Z,2µm,1.9s						
BW06	**Boulder Array**	81.23	333	P	P	07 43 54.4	+0.1
	baz=148,SNR=70						
BW06				S	S	07 54 03.5	+1.5
	baz=148						
BW06	**Boulder Array**	81.23	333	IAMs_20	IAMs_20	08 16 25.2	
	comp=Z,35µm,21.0s						
PD31	**Pinedale Array**	81.23	333	⇑P	P	07 43 54.2	0.0
PD31				⇑P	PcP	07 43 54.3	-6.0
PD31				⇑P	pP	07 43 58.0	-7.7
PDAR	**Pinedale Array**	81.23	333	P	P	07 43 54.2	0.0
	comp=Z,28nm,0.9s,baz=151,slow=3.4,SNR=62						
PDAR				PKKPbc	PKKPbc	08 02 28.9	-2.6
	comp=Z,2.7nm,0.5s,baz=115,slow=1.7,SNR=24						
PDAR				PKPPKP	P'P'df	08 10 26.9	-2.8
	comp=Z,1.5nm,0.9s,baz=45,slow=2.3,SNR=6.1						
PDAR				LR	LR	08 16 46.7	
	comp=Z,27µm,20.5s,baz=150,slow=33						
MLAC	**Mammoth, Mammo**	81.29	324	P	P	07 43 56.2	+1.5
	baz=140						
MLAC				S	S	07 54 07.2	+4.4
	baz=140						
PMOZ	**Porto Moniz, M**	81.53	44	*e*P	P	07 43 56.5	+0.6
	comp=Z,456nm,2.2s						
PMOZ	**Porto Moniz, M**	81.53	44	*e*S	S	07 54 07.5	+2.3
PMOZ	**Porto Moniz, M**	81.53	44	*e*LQ	LQ	08 06 11.4	
PMOZ				*e*LR	LR	08 10 51.0	
	comp=Z,25µm,22.0s						
PMOZ	**Porto Moniz, M**	81.53	44	⇑P	P	07 43 56.7	+0.8
PMOZ	**Porto Moniz, M**	81.53	44	P	P	07 43 56.2	+0.3
FUL	**Funchal**	81.58	44	*e*P	P	07 43 56.6	+0.6
	comp=Z,509nm,1.8s						
PMAR	**Madeira**	81.62	44	*e*P	P	07 43 56.9	+0.4
	comp=Z,818nm,1.9s						
NVAR	**Mina Array Bea**	81.64	325	P	P	07 43 57.4	+0.9
	comp=Z,60nm,1.0s,baz=154,slow=6.1,SNR=98						
NVAR				PKKP	PKKPdf	08 02 23.8	+2.6
	comp=Z,3.1nm,0.8s,baz=235,slow=3.0,SNR=4.3						
NVAR				PKPPKP	P'P'df	08 10 34.1	+4.5
	comp=Z,1.6nm,0.9s,baz=261,slow=0.5,SNR=5.1						
NVAR				LR	LR	08 13 52.7	
	comp=Z,18µm,21.2s,baz=142,slow=31						
AGMN	**Agassiz Nation**	81.81	344	P	P	07 43 56.8	-0.1
	baz=159,SNR=65						
AGMN				S	S	07 54 05.0	-2.3
	baz=159						
AGMN	**Agassiz Nation**	81.81	344	P	P	07 43 56.8	-0.1
AGMN				IAmb	IAmb	07 44 13.6	
	comp=Z,728nm,1.4s						
AHID	**Auburn Hatcher**	81.85	332	IAMs_20	IAMs_20	08 16 54.6	
	comp=Z,35µm,21.0s						
ELK	**Elko**	81.99	328	P	P	07 43 58.9	+0.6
	comp=Z,62nm,0.8s,baz=144,slow=3.1,SNR=113						
ELK	**Elko**	81.99	328	IAMs_20	IAMs_20	08 16 05.2	
	comp=Z,28µm,20.0s						
PMPS	**Porto Santo**	82.21	44	*e*P	P	07 44 00.6	+1.3
	comp=Z,770nm,2.0s						
PMPST	**Porto Santo, M**	82.22	44	*e*P	P	07 44 00.3	+0.9
	comp=Z,920nm,2.0s						
REDW	**Red Top Meadow**	82.25	332	IAMs_20	IAMs_20	08 16 44.1	
	comp=Z,27µm,21.0s						
SNOW	**Snow King Moun**	82.29	332	IAMs_20	IAMs_20	08 16 57.3	
	comp=Z,35µm,21.0s						
MDND	**Maddock**	82.36	341	P	P	07 44 00.3	+0.5
	baz=156,SNR=66						
MDND				S	S	07 54 13.1	+0.1
	baz=156						
TPAW	**Teton Pass**	82.39	332	IAMs_20	IAMs_20	08 16 49.0	
	comp=Z,24µm,22.0s						
FXWY	**Fox Creek**	82.55	332	IAMs_20	IAMs_20	08 17 05.0	
	comp=Z,25µm,21.0s						
TORD	**Torodi Ar. Bea**	82.68	70	P	P	07 44 01.9	-0.2
	comp=Z,296nm,0.8s,baz=252,slow=4.0,SNR=346						
TORD				PKKP	PKKPdf	08 02 02.9	-15
	comp=Z,1.3nm,0.9s,baz=39,slow=2.2,SNR=3.7						
TORD				PKKPbc	PKKPbc	08 02 28.8	+2.7
	comp=Z,1.6nm,0.7s,baz=51,slow=2.3,SNR=5.5						
TORD				PKPPKP	P'P'df	08 10 32.5	+1.1
	comp=Z,1.2nm,1.0s,baz=1.7,slow=3.8,SNR=3.8						
TORD				LR	LR	08 18 40.8	
	comp=Z,77µm,19.8s,baz=235,slow=34						
TORD	**Torodi Ar. Bea**	82.68	70	P	P	07 44 02.0	-0.2
FLWY	**Flagg Ranch**	82.79	333	P	P	07 44 03.1	+0.7
FLWY				IAmb	IAmb	07 44 21.0	
	comp=Z,2µm,2.0s						
EMB	**Emerald Bay**	82.96	324	P	P	07 44 04.9	+1.5
VCNR	**Virginia City**	82.98	324	P	P	07 44 04.4	+1.0
H17A	**Grant Village**	83.00	333	P	P	07 44 05.0	+1.4
	baz=147,SNR=20						
H17A				S	S	07 54 24.2	+4.1
	baz=147						
H17A	**Grant Village**	83.00	333	P	P	07 44 04.6	+1.1
RUBR	**Rubicon Trail**	83.04	324	P	P	07 44 04.5	+0.7
RUBR				IAmb	IAmb	07 44 23.1	
	comp=Z,948nm,1.5s						
LKWY	**Lake**	83.08	333	P	P	07 44 05.1	+1.2
LKWY				pmax	pmax		
	comp=Z,623nm,2.0s						
LKWY	**Lake**	83.08	333	P	P	07 44 05.1	+1.2
RLMT	**Red Lodge**	83.11	334	P	P	07 44 04.5	+0.5
	baz=148,SNR=46						
RLMT				S	S	07 54 21.8	+0.7
	baz=148						
RLMT	**Red Lodge**	83.11	334	P	P	07 44 04.3	+0.3
RLMT				IAmb	IAmb	07 44 19.0	
	comp=Z,1µm,2.0s						
RLMT				IAMs_20	IAMs_20	08 18 51.0	
	comp=Z,21µm,21.0s						
YMP	**Mirror Lake Pl**	83.13	333	P	P	07 44 05.1	+0.9
CASY	**Casey**	83.13	181	⇑P	P	07 44 04.1	+0.4
CASY	**Casey**	83.13	181	P	P	07 44 04.1	+0.4
CASY				IAmb	IAmb	07 44 19.6	
	comp=Z,393nm,1.0s						
CASY	**Casey**	83.13	181	IAMs_20	IAMs_20	08 19 37.7	
	comp=Z,25µm,22.0s						
PAHR	**Pah Rah Range**	83.16	325	P	P	07 44 05.2	+0.9
YUF	**Upper Falls**	83.24	333	P	P	07 44 05.4	+0.7
YNR	**Norris Junctio**	83.31	333	P	P	07 44 06.2	+1.1
LAO	**LASA Array**	83.37	337	P	P	07 44 05.4	+0.3
	baz=150,SNR=49						
LAO				S	S	07 54 23.9	+0.6
	baz=150						
YHH	**Holmes Hill**	83.44	333	P	P	07 44 06.4	+0.6
YHL	**Hebgen Lake**	83.62	333	P	P	07 44 07.9	+1.2
ULM	**Lac du Bonnet**	83.64	345	P	P	07 44 05.9	-0.4
	comp=Z,113nm,0.8s,baz=159,slow=4.3,SNR=61						
ULM				PKKPbc	PKKPdf	08 02 21.8	+3.6
	comp=Z,5.4nm,0.7s,baz=313,slow=4.3,SNR=7.4						
ULM	**Lac du Bonnet**	83.64	345	P	P	07 44 06.0	-0.4
ULM				IAmb	IAmb	07 44 20.1	
	comp=Z,646nm,1.2s						
GCMT	**Greycliff**	83.83	334	P	P	07 44 08.1	+0.6
HLID	**Hailey**	83.89	330	P	P	07 44 09.0	+1.0
	baz=144,SNR=138						
HLID				S	S	07 54 32.9	+3.9
	baz=144						
HLID	**Hailey**	83.89	330	P	P	07 44 08.4	+0.4
HLID				IAmb	IAmb	07 44 28.4	
	comp=Z,505nm,1.6s						
HLID				IAMs_20	IAMs_20	08 17 01.5	
	comp=Z,32µm,21.0s						
MCMT	**McKenzie Canyo**	84.27	332	P	P	07 44 11.2	+1.2
DGMT	**Dagmar**	84.27	339	P	P	07 44 10.4	+0.8
	baz=152,SNR=114						
DGMT				S	S	07 54 33.3	+1.1
	baz=152						
DGMT	**Dagmar**	84.27	339	P	P	07 44 10.3	+0.7
MFID	**Camas Ranch**	84.39	329	P	P	07 44 11.2	+0.8
MFID				IAmb	IAmb	07 44 28.0	
	comp=Z,1µm,2.0s						
BOZ	**Bozeman (W)**	84.42	333	P	P	07 44 10.9	+0.3
BOZ				pmax	pmax		
	comp=Z,500nm,1.8s						
BOZ	**Bozeman (W)**	84.42	333	P	P	07 44 11.0	+0.3
	baz=146,SNR=23						
BOZ				S	S	07 54 33.7	-0.4
	baz=146						
BOZ	**Bozeman (W)**	84.42	333	P	P	07 44 10.8	+0.3
BOZ				IAMs_20	IAMs_20	08 18 30.5	
	comp=Z,25µm,20.0s						

HOPS	Hopland Field	84.51	322	P	P	07 44 12.7	+1.6
HOPS				IAmb	IAmb	07 44 36.4	
	comp=Z,1µm,2.0s						
DLMT	Dillon	84.61	332	P	P	07 44 12.2	+0.7
DLMT				IAmb	IAmb	07 44 30.3	
	comp=Z,587nm,1.6s						
DLMT				IAMs_20	IAMs_20	08 18 22.5	
	comp=Z,24µm,21.0s						
O03E	Paynes Creek	84.81	324	P	P	07 44 12.5	-0.1
	baz=138,SNR=70						
O03E				S	S	07 54 38.3	+0.1
	baz=138						
WVOR	Wild Horse Val	84.89	327	P	P	07 44 13.7	+0.6
WVOR				pmax	pmax		
	comp=Z,763nm,1.8s						
WVOR	Wild Horse Val	84.89	327	⇑P	P	07 44 13.4	+0.4
WVOR				⇓P	PcP	07 44 17.4	+1.1
WVOR	Wild Horse Val	84.89	327	P	P	07 44 13.7	+0.6
WVOR				IAmb	IAmb	07 44 31.7	
	comp=Z,763nm,1.8s						
LRM	Limekiln Ridge	84.93	333	P	P	07 44 14.0	+0.7
BFZ	Birch Farm	85.21	225	P	P	07 44 14.6	-0.2
O02D	Mt. Diablo Mer	85.23	323	P	P	07 44 15.1	+0.4
	baz=138,SNR=57						
O02D				S	S	07 54 43.8	+1.5
	baz=138						
MOD	Modoc Plateau	85.28	326	P	P	07 44 15.9	+0.8
MOD				IAmb	IAmb	07 44 33.8	
	comp=Z,1µm,1.8s						
KCPM	Cahto Peak	85.29	322	P	P	07 44 16.3	+1.2
HRY	Holter Researc	85.42	333	P	P	07 44 16.4	+0.9
MQZ	McQueen's Vall	85.45	221	P	P	07 44 18.6	+2.7
MQZ	McQueen's Vall	85.45	221	P	P	07 44 16.4	+0.5
EAH	EAH	85.47	49	P	P	07 44 18.0	+2.0
SCHQ	Schefferville	85.47	3	P	P	07 44 15.2	-0.3
	comp=Z,140nm,1.0s,baz=170,slow=3.7,SNR=30						
SCHQ				LR	LR	08 22 22.1	
	comp=Z,16µm,21.3s,baz=188,slow=36						
SCHQ	Schefferville	85.47	3	P	P	07 44 15.6	+0.2
SCHQ				IAmb	IAmb	07 44 33.0	
	comp=Z,429nm,1.1s						
TTIG	Tnine Tigouga,	85.51	50	P	P	07 44 18.0	+1.6
J08A	Circle Bar Ran	85.53	328	P	P	07 44 16.7	+0.5
BHW	Baring Head	85.59	224	P	P	07 44 18.3	+1.7
GVZ	Greta Valley S	85.70	222	P	P	07 44 19.3	+2.1
ODZ	Otahua Downs	85.70	219	⇑P	P	07 44 18.1	+1.0
ODZ				⇑P	PcP	07 44 18.2	-1.8
ODZ	Otahua Downs	85.70	219	IAMs_20	IAMs_20	08 15 55.0	
	comp=Z,29µm,19.0s						
EGMT	Eagleton	85.75	335	P	P	07 44 17.1	-0.1
	baz=148,SNR=18						
EGMT				S	S	07 54 46.2	-0.9
	baz=148						
EGMT	Eagleton	85.75	335	IAMs_20	IAMs_20	08 19 00.8	
	comp=Z,18µm,22.0s						
KHZ	Kahutara	85.75	222	P	P	07 44 19.0	+1.6
KHZ	Kahutara	85.75	222	⇑P	P	07 44 18.6	+1.2
KHZ				⇑P	PcP	07 44 18.7	-1.5
SNZO	South Karori	85.75	224	⇑P	P	07 44 18.7	+1.3
MXZ	Matakaoa Point	85.78	228	IAMs_20	IAMs_20	08 12 31.6	
	comp=Z,35µm,22.0s						
N02D	Trinity Center	85.78	324	P	P	07 44 17.6	+0.2
	baz=138,SNR=48						
N02D				S	S	07 54 48.3	+0.7
	baz=138						
TMZ	Timaru	85.93	220	P	P	07 44 19.9	+1.6
M04C	Macdoel	85.94	325	P	P	07 44 19.0	+0.7
	baz=138,SNR=69						
BKZ	Black Stump Fm	85.97	226	IAMs_20	IAMs_20	08 13 00.6	
	comp=Z,58µm,21.0s						
ARCZ	Arundel	86.12	220	P	P	07 44 22.4	+3.1
URZ	Urewera	86.12	227	P	P	07 44 20.1	+0.7
	comp=Z,58nm,1.0s,baz=129,slow=23,SNR=17						
URZ	Urewera	86.12	227	⇑P	P	07 44 20.4	+1.1
URZ				⇑P	PcP	07 44 20.7	-1.2
URZ	Urewera	86.12	227	IAMs_20	IAMs_20	08 13 06.8	
	comp=Z,37µm,22.0s						
M02C	Callahan	86.16	324	P	P	07 44 19.8	+0.4
	baz=138,SNR=54						
M02C				S	S	07 54 52.3	+0.9
	baz=138						
KHMM	Horse Mountain	86.23	323	P	P	07 44 20.4	+0.7
KHMM				IAmb	IAmb	07 44 39.0	
	comp=Z,1µm,2.0s						
OUK	Oukaimeden	86.31	50	P	P	07 44 22.0	+1.4
RPZ	Rata Peaks	86.33	220	P	P	07 44 22.3	+2.0
RPZ	Rata Peaks	86.33	220	P	P	07 44 20.9	+0.6
RPZ				IAmb	IAmb	07 44 40.7	
	comp=Z,375nm,1.0s						
YBH	Yreka Blue Hor	86.34	324	P	P	07 44 20.0	-0.2
	comp=Z,58nm,1.0s,baz=120,slow=3.2,SNR=64						
YBH	Yreka Blue Hor	86.34	324	P	P	07 44 20.0	-0.2
MSO	Missoula	86.34	332	P	P	07 44 20.8	+0.7
	baz=144,SNR=24						
MSO				S	S	07 54 55.5	+2.5
	baz=144						
MSO	Missoula	86.34	332	P	P	07 44 21.2	+1.0
MSO				IAmb	IAmb	07 44 37.8	
	comp=Z,786nm,2.0s						
LBZ	Lake Benmore	86.38	219	P	P	07 44 21.5	+1.0
L04D	Klamath Falls	86.50	325	P	P	07 44 21.5	+0.5
	baz=138,SNR=42						
L04D				S	S	07 54 55.8	+1.1
	baz=138						
THZ	Tophouse	86.53	223	P	P	07 44 23.2	+1.9
THZ	Tophouse	86.53	223	P	P	07 44 21.7	+0.3
THZ				IAmb	IAmb	07 44 24.9	
	comp=Z,358nm,0.9s						
K04D	Chiloquin, OR	86.53	325	P	P	07 44 22.0	+0.8
	baz=139,SNR=28						
K04D				S	S	07 54 57.1	+2.1
	baz=139						
WHZ	Wether Hill Ro	86.57	217	P	P	07 44 21.9	+0.5
WHZ				IAmb	IAmb	07 44 27.0	
	comp=Z,452nm,1.6s						
I07A	Izee	86.57	328	P	P	07 44 21.5	+0.2
POGA	Pongola	86.59	120	P	P	07 44 18.7	-3.2
NNZ	Nelson	86.59	223	P	P	07 44 22.9	+1.3
NNZ	Nelson	86.59	223	P	P	07 44 22.6	+1.0
NNZ				IAmb	IAmb	07 44 27.7	
	comp=Z,316nm,1.0s						
LESE	Lesego, Limpop	86.68	116	P	P	07 44 26.2	+3.8
WKZ	Wanaka	86.71	218	P	P	07 44 22.1	-0.1
WKZ				IAmb	IAmb	07 45 00.7	
	comp=Z,458nm,1.5s						
INZ	Inchbonnie	86.75	221	P	P	07 44 25.4	+3.0
J05D	Fort Rock, OR	86.78	326	P	P	07 44 23.4	+1.0
	baz=139,SNR=105						
J05D				S	S	07 54 59.3	+1.9
	baz=139						
KRMB	Red Mountain	86.80	323	P	P	07 44 23.2	+0.7
KRMB				IAmb	IAmb	07 44 41.6	
	comp=Z,774nm,1.5s						
MLZ	Mavora Lakes	86.83	217	P	P	07 44 23.3	+0.6
OUZM	OUZ	86.86	51	P	P	07 44 24.0	+0.9
WVZ	Waitaha Valley	86.92	220	P	P	07 44 25.3	+2.1
GCSZ	Gaunt Creek Bo	87.00	220	P	P	07 44 26.7	+3.2
PINE	Pine Mountain	87.02	327	P	P	07 44 24.2	+0.5
SRHM	Skhour des Reh	87.09	49	P	P	07 44 25.0	+0.9
L02E	Cave Junction	87.11	324	P	P	07 44 24.9	+1.0
	baz=137,SNR=55						
L02E				S	S	07 55 02.4	+2.1
	baz=137						
HUMO	Hull Mountain	87.11	325	P	P	07 44 24.1	+0.2
HUMO				IAmb	IAmb	07 44 43.7	
	comp=Z,630nm,1.8s						
ZGR	Zagora	87.13	52	P	P	07 44 25.4	+1.0
J04D	Umpqua Nationa	87.17	326	P	P	07 44 25.2	+0.9
	baz=138,SNR=18						
J04D				S	S	07 55 02.7	+1.5
	baz=138						
DSZ	Denniston Nort	87.17	222	P	P	07 44 24.9	+0.4
G08A	Pilot Rock	87.25	329	P	P	07 44 24.6	0.0
G08A				IAmb	IAmb	07 44 43.1	
	comp=Z,1000nm,1.9s						
DCZ	Deep Cove	87.27	217	IAMs_20	IAMs_20	08 13 37.3	
	comp=Z,35µm,22.0s						
QRZ	Quartz Range	87.34	223	P	P	07 44 25.4	+0.2
HIZ	Hauiti	87.38	226	IAMs_20	IAMs_20	08 14 18.0	
	comp=Z,38µm,21.0s						
K02D	Willamette Mer	87.53	324	P	P	07 44 27.1	+1.1
	baz=137,SNR=70						
K02D				S	S	07 55 06.3	+1.7
	baz=137						
TZRR	Tazzarine	87.58	52	P	P	07 44 28.0	+1.5
I05D	Terrebonne, OR	87.62	327	P	P	07 44 27.4	+1.0
	baz=139,SNR=69						
I05D				S	S	07 55 06.8	+1.5
	baz=139						
DBO	Dodson Butte	87.63	325	P	P	07 44 27.3	+0.8
I04A	Tendick Farm,	87.72	326	P	P	07 44 27.0	+0.2
	baz=138,SNR=29						
I04A				S	S	07 55 06.1	-0.2
	baz=138						
MATP	Matopo	87.82	112	*i* P	P	07 44 28.9	+0.9
MATP	Matopo	87.82	112	*i* P	P	07 44 28.9	+0.9
E09A	Wood Farm, Sta	87.84	330	P	P	07 44 26.3	-0.9
E09A				IAmb	IAmb	07 44 49.7	
	comp=Z,438nm,1.9s						
AVE	Averroes	87.93	49	P	P	07 44 27.7	-0.3
AVE				S	S	07 55 07.0	-1.6
AVE	Averroes	87.93	49	P	P	07 44 29.8	+1.8
RAO	Raoul Island	87.98	237	IAMs_20	IAMs_20	08 13 25.8	
	comp=Z,33µm,22.0s						
KEBM	Edson Butte	88.00	324	P	P	07 44 28.6	+0.4
KEBM				IAmb	IAmb	07 44 47.3	
	comp=Z,736nm,1.4s						
MSNA	Messina	88.00	115	*i* P	P	07 44 29.8	+1.0
MSNA	Messina	88.00	115	*i* P	P	07 44 29.8	+1.0
J01E	Myrtle Point	88.01	324	P	P	07 44 29.0	+0.9
	baz=137,SNR=11						
J01E				S	S	07 55 10.8	+2.0
	baz=137						
BLWY	Bulawayo	88.06	112	*i* P	P	07 44 29.4	+0.2
BLWY	Bulawayo	88.06	112	*i* P	P	07 44 29.4	+0.2
I03D	Drain, OR	88.11	325	P	P	07 44 29.4	+0.8
	baz=138,SNR=22						
I03D				S	S	07 55 11.6	+1.8
	baz=138						
F07A	Phinny Hill Vi	88.15	328	P	P	07 44 29.4	+0.7
F07A				IAmb	IAmb	07 44 47.7	
	comp=Z,495nm,1.4s						
E08A	Dider Farm, El	88.22	329	P	P	07 44 28.7	-0.3
E08A				IAmb	IAmb	07 44 47.2	
	comp=Z,885nm,1.8s						
G05D	Wamic, OR	88.29	327	P	P	07 44 30.6	+1.2
	baz=139,SNR=33						
G05D				S	S	07 55 15.0	+3.5
	baz=139						
HAWA	Hanford	88.36	329	⇑P	P	07 44 30.2	+0.6
HAWA				⇑P	P	07 44 30.2	+0.6
HAWA				⇑P	PcP	07 44 33.6	+2.3
H04D	Lebanon	88.42	326	P	P	07 44 30.5	+0.4
	baz=138,SNR=16						
H04D				S	S	07 55 13.1	+0.3
	baz=138						
MOPA	Mopani	88.43	116	*i* P	P	07 44 32.7	+1.9
MOPA	Mopani	88.43	116	*i* P	P	07 44 32.7	+1.9
ZHG	ZHG	88.52	49	P	P	07 44 32.0	+1.1
GOLM	Goulmima	88.56	51	P	P	07 44 33.0	+1.8
I02E	Swisshome, OR	88.66	325	P	P	07 44 32.3	+1.2
	baz=137						
I02E				S	S	07 55 17.6	+2.7
	baz=137						
NEW	Newport	88.78	331	P	P	07 44 31.1	-0.6
	comp=Z,20nm,0.9s,baz=130,slow=5.5,SNR=31						
NEW	Newport	88.78	331	P	P	07 44 31.1	-0.6
	baz=142,SNR=32						
NEW				S	S	07 55 14.0	-2.2
	baz=142						
F05D	White Salmon	88.84	328	P	P	07 44 32.9	+0.9
	baz=139,SNR=37						
F05D				S	S	07 55 19.4	+2.8
	baz=139						
G03D	McMinnville, O	89.19	326	P	P	07 44 34.7	+1.1
	baz=138,SNR=7.6						
G03D				S	S	07 55 21.0	+1.1
	baz=138						
FFC	Flin Flon	89.23	343	IAMs_20	IAMs_20	08 31 35.7	
	comp=Z,17µm,19.0s						
CZD	Col de Zad	89.32	50	P	P	07 44 36.0	+1.1
MDT	Midelt	89.47	51	P	P	07 44 37.3	+1.9
PFVI	Vila Bisbo	89.49	45	*e*P	P	07 44 35.3	+0.1
	comp=Z,178nm,1.8s						
MORF	Marmelete	89.71	45	*e*P	P	07 44 36.0	-0.3
MORF				IAMs_20	IAMs_20	08 20 47.7	
	comp=Z,49µm,26.0s						
MORF	Marmelete	89.71	45	*e*P	P	07 44 36.0	-0.3
MORF	Marmelete	89.71	45	*e*P	P	07 44 35.3	-1.0
	comp=Z,194nm,1.6s						
F04D	Rainier, OR	89.71	327	P	P	07 44 37.2	+1.2
	baz=138,SNR=6.5						
F04D				S	S	07 55 26.0	+1.3
	baz=138						
PTEO	Sao Teotonio	89.82	45	*e*P	P	07 44 36.8	+0.1
	comp=Z,297nm,1.1s						
LCRM	LCR	89.84	50	P	P	07 44 39.0	+1.8
E04D	Cinebar	89.85	328	P	P	07 44 37.1	+0.4
	baz=138,SNR=12						
E04D				S	S	07 55 26.5	+0.4
	baz=138						
RSA	Sarsar	89.95	48	P	P	07 44 39.1	+1.6
PBDV	Barranco-do-Ve	90.11	46	*e*P	P	07 44 38.3	+0.1
	comp=Z,283nm,1.6s						
C06D	Leavenworth	90.12	329	P	P	07 44 37.6	-0.4
	baz=139						
C06D				S	S	07 55 27.5	-1.1
	baz=139						
OUZ	Omahuta	90.21	228	IAMs_20	IAMs_20	08 15 22.1	
	comp=Z,20µm,20.0s						
LSZ	Lusaka	90.29	108	P	P	07 44 40.5	+0.8
LSZ	Lusaka	90.29	108	P	P	07 44 40.5	+0.8
LSZ	Lusaka	90.29	108	P	P	07 44 44.0	+4.2
PCVE	Castro Verde	90.29	45	*e*P	P	07 44 39.4	+0.4
	comp=Z,183nm,2.1s						
PNCL	Nicolau / Gran	90.30	45	*e*P	P	07 44 38.8	-0.2
	comp=Z,138nm,1.2s						
E03A	Lebam	90.31	327	P	P	07 44 39.0	+0.2
E03A				IAmb	IAmb	07 44 58.9	
	comp=Z,306nm,1.1s						
PMST	Lisbon--Monsan	90.31	44	*e*P	P	07 44 39.4	+0.4
	comp=Z,174nm,1.7s						
MESJ	Messejana	90.31	45	*e*P	P	07 44 38.9	-0.1
MESJ				IAMs_20	IAMs_20	08 20 54.5	
	comp=Z,43µm,22.4s						
MESJ	Messejana	90.31	45	*e*P	P	07 44 38.9	-0.1
MESJ	Messejana	90.31	45	*e*P	P	07 44 38.3	-0.8
	comp=Z,151nm,1.7s						
LIS	Lisbon	90.32	44	*e*P	P	07 44 38.9	-0.2
LIS				IAMs_20	IAMs_20	08 20 55.4	
	comp=Z,71µm,33.9s						
LIS	Lisbon	90.32	44	*e*P	P	07 44 38.8	-0.2
LIS	Lisbon	90.32	44	*e*P	P	07 44 39.0	0.0
	comp=Z,242nm,2.0s						
PVAQ	Vaqueiros	90.34	46	*e*P	P	07 44 38.7	-0.5
	comp=Z,270nm,1.5s						
PVAQ	Vaqueiros	90.34	46	*e*S	S	07 55 43.3	+12
PVAQ	Vaqueiros	90.34	46	*e*LQ	LQ	08 08 24.9	
PVAQ				*e*LR	LR	08 15 21.4	
	comp=Z,35µm,18.0s						
PVAQ	Vaqueiros	90.34	46	P	P	07 44 39.0	-0.2
PMAFR	Mafra	90.39	44	*e*P	P	07 44 39.3	-0.1
	comp=Z,196nm,1.6s						
CHEFC	Chefchaouen	90.40	49	P	P	07 44 42.0	+2.4
D04E	Lakebay	90.41	328	P	P	07 44 40.3	+1.1
	baz=138						
PBEJ	Beja	90.65	45	*e*P	P	07 44 40.3	-0.3
	comp=Z,205nm,1.6s						
SFS	San Fernando	90.69	47	P	P	07 44 39.8	-1.1
SFS				S	S	07 55 33.4	-0.8
ARNO	Arenosillo	90.76	46	P	P	07 44 38.5	-2.6
ARNO				S	S	07 55 27.8	-7.0
D03D	Eldon	90.82	328	P	P	07 44 41.8	+0.6
	baz=138,SNR=16						
D03D				S	S	07 55 33.7	-1.2
	baz=138						
CEU	Ceuta	90.86	48	P	P	07 44 41.7	0.0
CEU				S	S	07 55 33.9	-2.0
EVO	Evora	90.88	45	P	P	07 44 41.0	-0.7
EVO				S	S	07 55 30.8	-5.1
EVO	Evora	90.88	45	*e*P	P	07 44 41.9	+0.2
	comp=Z,111nm,1.6s						
B05A	Bryant	90.91	329	P	P	07 44 41.3	-0.2
	baz=138,SNR=20						
B05A				S	S	07 55 32.6	-3.1
	baz=138						
PSBE	So Bento	91.04	43	*e*P	P	07 44 42.6	+0.1
	comp=Z,254nm,1.7s						
NLWA	Neilton Lookou	91.07	327	⇑P	P	07 44 42.9	+0.5
NLWA	Neilton Lookou	91.07	327	P	P	07 44 41.5	-1.0
NLWA				IAmb	IAmb	07 45 01.0	
	comp=Z,274nm,1.4s						
PMTG	Montargil	91.09	44	*e*P	P	07 44 42.4	-0.3
	comp=Z,288nm,1.4s						
PVLZ	Peæn de	91.11	49	P	P	07 44 41.9	-0.9
PVLZ				S	S	07 55 31.8	-6.4
PBAR	Barrancos	91.24	45	*e*P	P	07 44 42.8	-0.6
	comp=Z,122nm,1.4s						
FIGM	Figuig	91.32	53	P	P	07 44 45.1	+1.0
TDRA	Tendrara	91.34	52	P	P	07 44 45.0	+0.8
PESTR	Estremoz	91.35	45	*e*P	P	07 44 44.0	+0.1
	comp=Z,176nm,1.3s						
A04D	Lummi Island	91.52	329	P	P	07 44 44.8	+0.4
	baz=138						
PCAS	Casmilo, Conde	91.56	43	*e*P	P	07 44 44.3	-0.6
	comp=Z,130nm,2.1s						
JBK	JBK	91.74	51	P	P	07 44 47.0	+0.9
PMRV	Marv??o	91.82	44	*e*P	P	07 44 45.3	-0.8
	comp=Z,95nm,1.4s						
PMRV	Marv??o	91.82	44	*e*S	S	07 55 38.3	-6.2
PMRV	Marv??o	91.82	44	*e*LQ	LQ	08 11 32.3	
PMRV				*e*LR	LR	08 16 03.3	
	comp=Z,38µm,22.0s						
EMAL	Malaga-Limoner	92.00	48	P	P	07 44 45.9	-1.0
EMAL				S	S	07 55 36.1	-10
PCBR	Castelo Branco	92.03	44	*e*P	P	07 44 46.0	-1.0
	comp=Z,127nm,1.3s						
TAF	Taforalt	92.13	50	P	P	07 44 50.0	+2.3
CHAS	Isla Isabel II	92.34	50	P	P	07 44 48.0	-0.5
CHAS				S	S	07 55 40.1	-9.1
PVIS	Viseu	92.34	43	*e*P	P	07 44 47.6	-0.9
	comp=Z,102nm,1.6s						
MTE	Manteigas	92.35	43	*e*P	P	07 44 47.9	-0.6
	comp=Z,137nm,1.3s						
MTE	Manteigas	92.35	43	*e*S	S	07 55 41.9	-7.3
MTE	Manteigas	92.35	43	*e*LQ	LQ	08 12 00.1	
MTE				*e*LR	LR	08 15 44.4	
	comp=Z,45µm,22.0s						
MTE	Manteigas	92.35	43	⇑P	P	07 44 48.1	-0.4
PVRL	Vila Real	92.80	43	*e*P	P	07 44 51.1	+0.5
	comp=Z,180nm,1.4s						
POLO	Lamas de Olo	92.82	42	*e*P	P	07 44 49.7	-1.0
	comp=Z,73nm,1.5s						
PCAB	Cabril	92.90	42	*e*P	P	07 44 50.1	-0.9
	comp=Z,149nm,1.5s						
PGAV	Gavieira, Arco	92.92	42	*e*P	P	07 44 50.3	-0.9
	comp=Z,118nm,1.7s						
PGAV	Gavieira, Arco	92.92	42	*e*S	S	07 55 43.0	-11
PGAV	Gavieira, Arco	92.92	42	*e*LQ	LQ	08 09 35.9	
PGAV				*e*LR	LR	08 16 23.3	
	comp=Z,59µm,22.0s						
MVO	Moncorvo	93.13	43	*e*P	P	07 44 51.6	-0.6
	comp=Z,158nm,1.4s						
MVO	Moncorvo	93.13	43	*e*S	S	07 55 47.4	-8.8
MVO	Moncorvo	93.13	43	*e*LQ	LQ	08 11 55.4	
MVO				*e*LR	LR	08 16 00.7	
	comp=Z,48µm,22.0s						
PBRG	Braganca	93.70	43	*e*P	P	07 44 54.0	-0.8
	comp=Z,138nm,1.5s						
PAB	San Pablo	93.74	46	P	P	07 44 54.7	-0.3
PAB				pmax	pmax		
	comp=Z,83nm,1.3s						
PAB	San Pablo	93.74	46	P	P	07 44 54.7	-0.3
ESDC	Sonseca Array	94.06	46	P	P	07 44 56.0	-0.5
	comp=Z,13nm,0.9s,baz=246,slow=4.2,SNR=45						
ESDC				LR	LR	08 26 39.1	
	comp=Z,26µm,18.8s,baz=250,slow=35						
ESDC	Sonseca Array	94.06	46	P	P	07 44 56.2	-0.2
ESBB	Sonseca Array	94.06	46	P	P	07 44 55.6	-0.8
NRS	Narsarsuaq	94.14	12	IAMs_20	IAMs_20	08 25 39.7	
	comp=Z,28µm,22.0s						
TETE	Tete	94.18	111	P	P	07 44 59.4	+1.8
FRB	Frobisher Bay	94.34	1	P	P	07 44 57.0	0.0
	comp=Z,21nm,0.9s,baz=281,slow=3.8,SNR=1.9						
FRB	Frobisher Bay	94.34	1	P	P	07 44 57.0	0.0
CART	Cartagena	94.68	49	P	P	07 44 56.6	-2.6
CART				S	S	07 55 47.0	-23
CART	Cartagena	94.68	49	⇑P	P	07 44 57.7	-1.5
CART	Cartagena	94.68	49	P	P	07 44 58.3	-1.0
UCM	Universidad Co	94.88	45	P	P	07 44 59.0	-1.2
UCM				S	S	07 55 52.8	-19
EANR	'Ain N'Sour	95.12	51	P	P	07 45 03.0	+1.6
EBNR	Beni Rached	95.61	51	P	P	07 45 08.0	+4.4
ZOMB	Zomba	96.02	112	P	P	07 45 08.2	+2.1
BBB	Bella Bella	96.42	329	P	P	07 45 06.5	-0.2
	comp=Z,27nm,1.0s,baz=143,slow=4.8,SNR=4.1						
BBB	Bella Bella	96.42	329	IAmb	IAmb	07 45 24.6	
	comp=Z,266nm,1.5s						
EMHD	Djebel Mahouad	96.51	52	P	P	07 45 08.7	+0.9
ADJB	Djebel Djouab	96.81	52	P	P	07 45 10.2	+1.0
ABA	Alger-Bouzarea	96.89	51	P	P	07 45 10.9	+1.5
AKET	Djebel Ketaf	97.05	52	P	Pdif	07 45 12.1	+1.7
ABMS	Boumerdes	97.17	51	P	Pdif	07 45 11.2	+0.5
ATAF	Djebel Tarf	97.23	53	P	Pdif	07 45 12.7	+1.6
KNTN	Kanton	97.39	262	IAMs_20	IAMs_20	08 18 36.3	
	comp=Z,27µm,22.0s						
MSVF	Nonsavu	97.61	244	P	Pdif	07 45 16.7	+3.4
	comp=Z,11nm,0.9s,baz=176,slow=18,SNR=3.7						
KIP	Kipapa	97.91	290	IAMs_20	IAMs_20	08 18 04.8	
	comp=Z,18µm,20.0s						
SET	Setif	98.17	53	P	Pdif	07 45 17.0	+1.7
TAU	Tasmania Unive	98.39	208	IAMs_20	IAMs_20	08 21 50.1	
	comp=Z,16µm,18.0s						
DFRA	Djebel Bou Aff	98.68	53	P	Pdif	07 45 19.2	+1.6
SKRH	Sakahara	98.79	123	P	Pdif	07 45 25.6	+7.1
CKFL	Kef-Lekhel	99.18	53	P	Pdif	07 45 21.6	+1.8
YKA	Yellowknife Ar	99.28	341	P	Pdif	07 45 18.6	-0.9
	comp=Z,2.7nm,0.5s,baz=259,slow=5.4,SNR=11						
YKA	Yellowknife Ar	99.28	341		Pdif	07 45 18.9	-0.6
MAHO	Mahon	99.39	49	P	Pdif	07 45 18.9	-1.6
MAHO				S	SKSac	07 56 01.3	+5.4
ABSA	Djebel Ababsia	99.64	54	P	Pdif	07 45 23.3	+1.5
ANGG	Ammassalik, Gr	99.68	14	IAMs_20	IAMs_20	08 29 51.2	
	comp=Z,25µm,21.0s						
CCA1	Carnmenellis	99.70	37	*e*P	Pdif	07 45 17.2	-4.4
CCA1				IAMs_20	IAMs_20	08 25 09.9	
	comp=Z,30µm,22.1s						
CMAH	Djebel Manchou	99.78	53	P	Pdif	07 45 24.0	+1.6
TATN	Tataouine	99.93	58	⇑P	Pdif	07 45 24.7	+1.6
MBAR	Mbarara	100.14	97	⇓P	Pdif	07 45 26.9	+2.2
DYA	Yadsworthy	100.51	37	*e*P	Pdif	07 45 25.0	-0.2
DYA				IAMs_20	IAMs_20	08 30 15.0	
	comp=Z,35µm,20.2s						
KEST	Kesra	100.66	55	P	Pdif	07 45 27.2	+0.8
	comp=Z,6.3nm,0.8s,baz=132,slow=3.8,SNR=5.9						
VOI	Vohitsoka	100.85	124	IAMs_20	IAMs_20	08 27 58.6	
	comp=Z,16µm,19.0s						
ILULI	Ilulissat	100.92	7	IAMs_20	IAMs_20	08 33 30.7	
	comp=Z,16µm,19.0s						
DSB	Dublin	100.98	34	IAMs_20	IAMs_20	08 27 08.5	
	comp=Z,25µm,22.0s						
RSBS	Rosebush, Pemb	101.00	35	*e*P	Pdif	07 45 27.9	+0.6
RSBS				IAMs_20	IAMs_20	08 25 38.9	
	comp=Z,24µm,24.1s						
WRAK	Wrangell Islan	101.10	330	IAMs_20	IAMs_20	08 27 26.6	
	comp=Z,15µm,20.0s						
TAMR	Tamra	101.16	54	⇑P	Pdif	07 45 29.5	+1.0
DODT	Dodoma, Tanzan	101.41	104	⇓P	Pdif	07 45 26.8	-3.6
DLBC	Dease Lake	101.47	333	P	Pdif	07 45 29.8	+0.4
	comp=Z,19nm,1.0s,baz=132,slow=3.3,SNR=7.7						
MCH1	Michaelchurch	101.90	36	*e*P	Pdif	07 45 30.7	-0.7
MCH1				IAMs_20	IAMs_20	08 27 45.3	
	comp=Z,36µm,23.2s						
TEBE	Entebbe	101.96	97	⇓P	Pdif	07 45 33.2	+0.4
WLF1	Llynfaes	101.96	34	*e*P	Pdif	07 45 28.1	-3.5
WLF1				IAMs_20	IAMs_20	08 25 30.6	
	comp=Z,82µm,25.1s						
WTLY	Watson Lake, Y	102.12	334	Pdiff	Pdif	07 45 33.0	+0.8
	baz=132						
STRD	Stroud	102.20	36	*e*P	Pdif	07 45 28.5	-4.2
STRD				IAMs_20	IAMs_20	08 27 54.2	
	comp=Z,37µm,22.9s						
CLGH	Cloghs, Cushen	102.22	32	*e*P	Pdif	07 45 26.6	-6.1
CLGH				IAMs_20	IAMs_20	08 25 29.1	
	comp=Z,32µm,25.3s						
HLM1	Long Mynd	102.26	36	*e*P	Pdif	07 45 30.8	-2.2
HLM1				IAMs_20	IAMs_20	08 28 17.6	
	comp=Z,24µm,22.3s						
FOEL	Foel Wylfa	102.32	35	*e*P	Pdif	07 45 29.5	-3.7
FOEL				IAMs_20	IAMs_20	08 26 54.0	
	comp=Z,29µm,23.0s						
IOMK	Kirk Michael	102.45	34	*e*P	Pdif	07 45 27.6	-6.1
IOMK				IAMs_20	IAMs_20	08 28 04.8	
	comp=Z,62µm,22.1s						
VSL	Villasalto	102.56	51	⇑P	Pdif	07 45 35.2	+0.5
VSL	Villasalto	102.56	51	IAMs_20	IAMs_20	08 31 04.2	

	comp=Z,22µm,20.0s						
TGTN	**Hyland Airport**	**102.89**	**336**	Pdiff	**Pdif**	**07 45 36.6**	**+0.9**
	baz=132						
ABPO	**Ambohimpanom**	**102.98**	**122**	⇓P	**Pdif**	**07 45 43.9**	**+6.6**
BORG	**Borgarnes**	**103.00**	**20**	IAMs_20	IAMs_20	08 28 45.2	
	comp=Z,21µm,21.0s						
NEWG	**New Galloway**	**103.11**	**33**	*e*P	**Pdif**	**07 45 33.7**	**-3.0**
NEWG				IAMs_20	IAMs_20	08 25 56.0	
	comp=Z,32µm,25.2s						
JIS	**Juneau Island**	**103.13**	**331**	IAMs_20	IAMs_20	08 29 44.3	
	comp=Z,19µm,20.0s						
CWF	**Charnwood Fore**	**103.18**	**36**	*e*P	**Pdif**	**07 45 33.4**	**-3.6**
CWF				IAMs_20	IAMs_20	08 28 33.4	
	comp=Z,34µm,24.5s						
LAWE	**Loch Awe, Argy**	**103.25**	**32**	*e*P	**Pdif**	**07 45 38.6**	**+1.4**
LAWE				IAMs_20	IAMs_20	08 24 28.8	
	comp=Z,46µm,32.8s						
LBWR	**Ladybower, Pea**	**103.34**	**35**	*e*P	**Pdif**	**07 45 35.0**	**-2.7**
LBWR				IAMs_20	IAMs_20	08 27 25.0	
	comp=Z,28µm,23.9s						
DZM	**Mont Dzumac**	**103.48**	**234**	*e*PP	**PKiKP**	**07 49 53.5**	**-4.6**
	comp=Z,4µm,27.6s						
DZM				*e*SKSac	**SKSac**	**07 56 15.2**	**-1.8**
	comp=Z,7µm,25.5s						
DZM	**Mont Dzumac**	**103.48**	**234**	*e*PS	PS	07 58 57.4	-8.0
	comp=Z,12µm,28.4s						
DZM				*e*SS	SS	08 04 36.7	-0.3
	comp=Z,62µm,29.2s						
DZM	**Mont Dzumac**	**103.48**	**234**	*e*LQ	LQ	08 15 17.6	
	comp=Z,32µm,36.8s						
DZM				*e*LR	LR	08 19 36.7	
	comp=Z,97µm,27.8s,baz=133						
HPK	**Haverah Park**	**103.70**	**35**	*e*P	**Pdif**	**07 45 39.3**	**0.0**
HPK				IAMs_20	IAMs_20	08 26 33.8	
	comp=Z,41µm,25.9s						
ESK	**Eskdalemuir**	**103.71**	**33**	*e*P	**Pdif**	**07 45 39.0**	**-0.3**
ESK				IAMs_20	IAMs_20	08 26 12.4	
	comp=Z,31µm,25.7s						
ESK	**Eskdalemuir**	**103.71**	**33**	IAMs_20	IAMs_20	08 34 33.5	
	comp=Z,19µm,19.0s						
P33M	**Teslin, Yukon**	**103.71**	**333**	Pdiff	**Pdif**	**07 45 40.2**	**+0.8**
	baz=129						
EKA	**Eskdalemuir Ar**	**103.74**	**33**	PKKPbc	PKKPbc	08 01 31.8	-0.4
	comp=Z,3.2nm,0.7s,baz=47,slow=3.6,SNR=7.2						
EKA				PKKP	**PKKPdf**	**08 01 44.2**	**+2.7**
	comp=Z,2.6nm,0.7s,baz=61,slow=3.9,SNR=5.2						
INVG	**Invergeldie, C**	**103.96**	**32**	*e*P	**Pdif**	**07 45 34.1**	**-6.2**
INVG				IAMs_20	IAMs_20	08 31 34.4	
	comp=Z,34µm,20.1s						
ELMS	**Elmsett, Ipswi**	**104.00**	**37**	*e*P	**Pdif**	**07 45 39.6**	**-1.1**
ELMS				IAMs_20	IAMs_20	08 32 23.0	
	comp=Z,31µm,19.7s						
EDMD	**Edmundbyers**	**104.02**	**34**	*e*P	**Pdif**	**07 45 34.0**	**-6.8**
EDMD				IAMs_20	IAMs_20	08 28 07.2	
	comp=Z,32µm,22.5s						
EDI	**Edinburgh**	**104.06**	**33**	*e*P	**Pdif**	**07 45 39.2**	**-1.7**
EDI				IAMs_20	IAMs_20	08 26 34.5	
	comp=Z,36µm,24.9s						
WACR	**West Acre**	**104.15**	**37**	*e*P	**Pdif**	**07 45 40.1**	**-1.2**
WACR				IAMs_20	IAMs_20	08 32 57.2	
	comp=Z,33µm,19.5s						
MMPY	**Sheldon Lake,**	**104.67**	**336**	Pdiff	**Pdif**	**07 45 44.3**	**+0.8**
	baz=130						
WHY	**Whitehorse**	**104.79**	**333**	Pdiff	**Pdif**	**07 45 44.8**	**+0.6**
	baz=127						
DOU	**Dourbes**	**104.91**	**40**	*d*Pdif	**Pdif**	**07 45 44.2**	**-0.6**
DOU				*d*PP	**PP**	**07 50 05.7**	**0.0**
NBI	**Nairobi**	**104.94**	**101**	P	**Pdif**	**07 45 53.4**	**+7.2**
BMRD	**Maredsous**	**105.11**	**40**	*d*Pdif	**Pdif**	**07 45 45.8**	**+0.1**
FARO	**Faro, Yukon**	**105.17**	**335**	Pdiff	**Pdif**	**07 45 46.0**	**+0.3**
	baz=128						
JOHN	**Johnston Islan**	**105.19**	**281**	IAMs_20	IAMs_20	08 23 45.9	
	comp=Z,21µm,20.0s						
BGES	**Gesves**	**105.32**	**40**	*d*Pdif	**Pdif**	**07 45 48.8**	**+2.2**
KMBO	**Kilima Mbogo**	**105.40**	**101**	Pdiff	**Pdif**	**07 45 50.9**	**+2.7**
	comp=Z,0.5nm,0.3s,baz=170,slow=3.8,SNR=3.4						
KMBO	**Kilima Mbogo**	**105.40**	**101**	P	**Pdif**	**07 45 53.2**	**+5.0**
ECH	**Echery**	**105.44**	**43**	IAMs_20	IAMs_20	08 32 17.8	
	comp=Z,20µm,20.0s						
VLC	**Villacollemand**	**105.47**	**48**	IAMs_20	IAMs_20	08 33 32.9	
	comp=Z,15µm,21.0s						
WLF	**Walferdange**	**105.56**	**41**	*d*Pdif	**Pdif**	**07 45 48.5**	**+0.8**
N31M	**Braeburn, Yuko**	**105.64**	**333**	Pdiff	**Pdif**	**07 45 48.1**	**+0.3**
	baz=126						
SUMG	**Summit**	**105.66**	**10**	*i* P	PKiKP	07 50 12.3	+11
SUMG	**Summit**	**105.66**	**10**	IAMs_20	IAMs_20	08 33 05.9	
	comp=Z,23µm,22.0s						
BFO	**Black Forest**	**106.18**	**43**	IAMs_20	IAMs_20	08 32 09.4	
	comp=Z,20µm,22.0s						
DAVOX	**Davos/Dischmat**	**106.38**	**45**	PKKPbc	PKKPbc	08 01 24.6	+0.4
	comp=Z,7.6nm,0.7s,baz=99,slow=6.1,SNR=10						
DAVOX				PKKPab	**PKKPdf**	**08 01 36.7**	**+0.2**
	comp=Z,13nm,0.9s,baz=56,slow=11,SNR=7.9						
RES	**Resolute Bay**	**106.44**	**354**	Pdiff	**Pdif**	**07 45 52.8**	**+1.8**
	comp=Z,4.3nm,1.0s,baz=192,slow=8.8,SNR=4.5						
RES				PP	**PP**	**07 50 15.8**	**-0.6**
	comp=Z,5.2nm,0.9s,baz=164,slow=6.7,SNR=5.8						
DAVA	**Damuels**	**106.61**	**45**	*e*P	**Pdif**	**07 45 52.6**	**-0.1**
	comp=Z,18nm,1.8s						
DAVA				*e*P	**PKKPbc**	**08 01 18.3**	**-5.1**
	comp=Z,6.6nm,1.5s						
M30M	**Minto, Yukon**	**106.67**	**334**	Pdiff	**Pdif**	**07 45 51.8**	**-0.6**
	baz=125						
YUK4	**Talbot Arm**	**106.68**	**332**	Pdiff	**Pdif**	**07 45 53.2**	**+0.5**
	baz=124						
STU	**Stuttgart**	**106.89**	**43**	IAMs_20	IAMs_20	08 34 39.3	
	comp=Z,17µm,20.0s						
FETA	**Feichten**	**107.01**	**45**	*e*P	**Pdif**	**07 45 54.4**	**0.0**
	comp=Z,24nm,1.3s						
FETA				*e*P	**PKKPbc**	**08 01 20.1**	**-2.1**
	comp=Z,7.2nm,1.0s						
SCO	**Scoresbysund**	**107.07**	**16**	*i* P	PKiKP	07 50 14.0	+11
SCO	**Scoresbysund**	**107.07**	**16**	IAMs_20	IAMs_20	08 31 12.4	
	comp=Z,17µm,22.0s						
TULEG	**Thule**	**107.19**	**1**	IAMs_20	IAMs_20	08 36 15.1	
	comp=Z,13µm,21.0s						
TABL	**Table Mountain**	**107.20**	**331**	IAMs_20	IAMs_20	08 30 16.1	
	comp=Z,16µm,20.0s						
RETA	**Reutte**	**107.24**	**45**	*e*P	**Pdif**	**07 45 55.6**	**+0.3**
	comp=Z,11nm,1.2s						
RETA				*e*P	**PKKPbc**	**08 01 17.6**	**-3.7**
	comp=Z,9.2nm,1.5s						
LOGN	**Logan Glacier**	**107.35**	**331**	IAMs_20	IAMs_20	08 29 49.1	
	comp=Z,12µm,21.0s						
MOTA	**Moosalm**	**107.38**	**45**	*e*P	**Pdif**	**07 45 56.0**	**-0.1**
	comp=Z,28nm,1.9s						
MOTA				*e*P	**PKKPbc**	**08 01 17.1**	**-3.8**
	comp=Z,9.5nm,1.1s						
SQTA	**Sankt Quirin**	**107.39**	**45**	*i* P	**Pdif**	**07 45 56.4**	**+0.3**
	comp=Z,18nm,1.4s						
SQTA				*e*P	**PKKPbc**	**08 01 19.2**	**-1.7**
	comp=Z,13nm,1.1s						
MESA	**MESA**	**107.41**	**330**	IAMs_20	IAMs_20	08 30 06.4	
	comp=Z,22µm,22.0s						
YAH	**Yahtse**	**107.42**	**331**	IAMs_20	IAMs_20	08 30 18.7	
	comp=Z,19µm,22.0s						
RER	**Riviere de l'E**	**107.56**	**129**	IAMs_20	IAMs_20	08 27 25.3	
	comp=Z,15µm,20.0s						
GRNC	**Granite Creek**	**107.62**	**331**	IAMs_20	IAMs_20	08 30 28.0	
	comp=Z,17µm,21.0s						
WATA	**Walderalm**	**107.66**	**45**	*e*P	**Pdif**	**07 45 56.6**	**-0.7**
	comp=Z,19nm,1.3s						
WATA				*e*P	**PKKPbc**	**08 01 18.0**	**-2.1**
	comp=Z,16nm,1.1s						
WTTA	**Wattenberg**	**107.67**	**45**	*e*P	**Pdif**	**07 45 57.2**	**-0.2**
	comp=Z,13nm,1.4s						
WTTA				*e*P	**PKKPbc**	**08 01 14.8**	**-5.3**
	comp=Z,8.3nm,0.8s						
BARN	**Barnard Glacie**	**107.75**	**331**	IAMs_20	IAMs_20	08 36 43.6	
	comp=Z,12µm,22.0s						
SNH	**Sunshine Point**	**107.78**	**330**	IAMs_20	IAMs_20	08 32 33.4	
	comp=Z,14µm,22.0s						
ISLE	**Juniper Island**	**107.79**	**331**	IAMs_20	IAMs_20	08 30 29.7	
	comp=Z,18µm,21.0s						
WAX	**Waxell Ridge**	**107.93**	**330**	IAMs_20	IAMs_20	08 33 29.3	
	comp=Z,12µm,19.0s						
ABTA	**Abfaltersbach**	**107.98**	**46**	*e*P	**Pdif**	**07 45 59.0**	**+0.3**
	comp=Z,18nm,1.2s						
TGL	**Tana Glacier**	**108.08**	**331**	IAMs_20	IAMs_20	08 30 39.2	
	comp=Z,17µm,21.0s						
CRQM	**Cirque**	**108.21**	**331**	IAMs_20	IAMs_20	08 30 42.1	
	comp=Z,15µm,22.0s						
GIDAE	**Health Center,**	**108.30**	**90**	⇓P	**Pdif**	**07 46 03.4**	**+2.3**
HMT	**Hamilton**	**108.47**	**330**	IAMs_20	IAMs_20	08 28 55.7	
	comp=Z,15µm,22.0s						
DAWY	**Dawson**	**108.48**	**335**	Pdiff	**Pdif**	**07 46 02.8**	**+2.3**
	baz=123						
MCARA	**McCarthy VSAT**	**108.48**	**331**	IAMs_20	IAMs_20	08 30 46.1	
	comp=Z,13µm,22.0s						
GRFO	**Grafenberg**	**108.49**	**43**	IAMs_20	IAMs_20	08 32 20.6	
	comp=Z,15µm,22.0s						
GRA1	**Grafenberg Arr**	**108.49**	**43**	IAMs_20	IAMs_20	08 38 19.6	
	comp=Z,13µm,19.0s						
CADS	**Cadrg**	**108.52**	**47**	*i* Pdiff	**Pdif**	**07 46 01.5**	**+0.5**
M27K	**Edge Creek, AK**	**108.52**	**332**	Pdiff	**Pdif**	**07 46 00.4**	**-0.4**
	baz=121						
M27K	**Edge Creek, AK**	**108.52**	**332**	IAMs_20	IAMs_20	08 33 02.1	
	comp=Z,18µm,22.0s						
VRDI	**Verde Repeater**	**108.58**	**331**	IAMs_20	IAMs_20	08 30 56.6	
	comp=Z,13µm,20.0s						
MYKA	**Terra Mystica**	**108.63**	**46**	*e*P	**Pdif**	**07 46 05.6**	**+4.1**
	comp=Z,12nm,1.2s						
MYKA				*e*P	**PKKPbc**	**08 01 17.3**	**+0.5**
	comp=Z,8.5nm,1.1s						
KBA	**Koelnbreinsper**	**108.64**	**46**	*e*P	**Pdif**	**07 46 05.3**	**+3.6**
	comp=Z,8.9nm,0.9s						
RAGM	**Ragged Mountai**	**108.68**	**330**	IAMs_20	IAMs_20	08 30 01.1	
	comp=Z,13µm,21.0s						
CEY	**Cerknica**	**108.74**	**48**	*e*Pdiff	**Pdif**	**07 46 02.5**	**+0.5**
CEY				*i* PP	**PP**	**07 50 31.9**	**-2.2**
CEY				*e*SKSac	SKSac	07 56 59.5	+21
CEY				*e*		07 57 53.7	
CEY				*e*		07 58 32.2	
I29M	**Ogilvie Camp,**	**108.80**	**336**	Pdiff	**Pdif**	**07 46 01.0**	**-0.7**
	baz=123						
EPYK	**Eagle Plains**	**108.82**	**337**	Pdiff	**Pdif**	**07 46 02.3**	**+0.4**
	baz=124						
L27K	**Beaver Creek,**	**108.87**	**333**	Pdiff	**Pdif**	**07 46 02.5**	**+0.3**
	baz=121						
LJU	**Ljubljana**	**108.93**	**47**	*e*Pdiff	**Pdif**	**07 46 02.5**	**-0.4**
LJU				*e*		07 49 50.1	
LJU				*e*		07 50 19.5	
LJU				*e*PP	**PP**	**07 50 33.0**	**-2.4**
LJU				*e*SKSac	SKSac	07 57 01.2	+22
LJU				*e*		07 58 37.8	
LJU				*e*		07 59 52.6	
LJU				*e*		08 01 36.4	
LJU				*e*SS	**SS**	**08 05 57.1**	**+5.2**
BMRM	**Bremner River**	**108.94**	**330**	IAMs_20	IAMs_20	08 38 34.9	
	comp=Z,12µm,22.0s						
INK	**Inuvik**	**108.94**	**340**	Pdiff	**Pdif**	**07 46 02.5**	**+0.2**
	comp=Z,7.9nm,1.1s,baz=134,slow=4.8,SNR=6.9						
INK				PKKPbc	**PKKPbc**	**08 01 13.3**	**-3.1**
	comp=Z,6.7nm,0.9s,baz=312,slow=8.9,SNR=5.6						
INK				PKKPab	**PKKPab**	**08 01 24.7**	**+0.2**
	comp=Z,17nm,0.9s,baz=299,slow=2.9,SNR=10						
INK	**Inuvik**	**108.94**	**340**	Pdiff	**Pdif**	**07 46 02.6**	**+0.2**
	baz=127						
M26K	**Nabesna, AK**	**108.99**	**332**	IAMs_20	IAMs_20	08 32 39.4	
	comp=Z,15µm,20.0s						
A36M	**Sachs Harbour**	**109.12**	**345**	Pdiff	**Pdif**	**07 46 03.3**	**+0.3**
	baz=133						
A36M	**Sachs Harbour**	**109.12**	**345**	IAMs_20	IAMs_20	08 39 11.4	
	comp=Z,19µm,21.0s						
SHERE	**Police Station**	**109.24**	**89**	P	**Pdif**	**07 46 03.4**	**-1.6**
NKC	**Novy Kostel**	**109.44**	**43**	*e*PP	**PP**	**07 50 34.3**	**-4.8**
NKC				AMS	AMS	08 32 30.0	
	comp=Z,32µm,23.0s						
L26K	**Log Cabin Wild**	**109.45**	**333**	IAMs_20	IAMs_20	08 34 11.4	
	comp=Z,16µm,20.0s						
HIN	**Hinchinbrook I**	**109.48**	**329**	IAMs_20	IAMs_20	08 32 37.2	
	comp=Z,11µm,19.0s						
EGAK	**Eagle**	**109.51**	**335**	Pdiff	**Pdif**	**07 46 04.9**	**0.0**
	baz=121						
EGAK	**Eagle**	**109.51**	**335**	IAMs_20	IAMs_20	08 35 51.0	
	comp=Z,13µm,20.0s						
MOA	**Molln**	**109.53**	**45**	*e*P	**Pdif**	**07 46 14.7**	**+9.3**
	comp=Z,14nm,1.5s						
GERES	**GERESS Array B**	**109.60**	**44**	Pdiff	**Pdif**	**07 46 06.4**	**+0.6**
	comp=Z,0.6nm,0.7s,baz=289,slow=4.1,SNR=4.0						
GERES				PKiKP	**PKiKP**	**07 50 08.9**	**+0.4**
	comp=Z,1.9nm,0.7s,baz=199,slow=3.7,SNR=4.5						
GERES				PKKPbc	**PKKPbc**	**08 01 13.7**	**-0.1**
	comp=Z,2.1nm,0.8s,baz=45,slow=2.5,SNR=6.6						
GERES				PKKPab	**PKKPab**	**08 01 25.6**	**+3.0**
	comp=Z,2.9nm,0.8s,baz=66,slow=3.3,SNR=7.7						
GERES				PKPPKP		08 09 51.4	
	comp=Z,1.0nm,0.9s,baz=126,slow=1.3,SNR=4.2						
KHC	**Kasperske Hory**	**109.64**	**44**	*e*PP	**PP**	**07 50 38.2**	**-2.4**
KHC				*e*PKKP	**PKKPbc**	**08 01 13.1**	**-0.5**
KHC				AMS	AMS	08 33 40.0	
	comp=Z,18µm,22.4s						
KLU	**Klutina**	**109.75**	**331**	Pdiff	**Pdif**	**07 46 06.4**	**+0.3**
	baz=118						
CKRC	**Cesky Krumlov**	**109.95**	**45**	*e*PP	**PP**	**07 50 39.8**	**-3.0**
CKRC				*e*SP	SP	08 00 03.1	-3.8
CKRC				*e*PKKP	**PKKPbc**	**08 01 13.1**	**+0.5**
CKRC				AMS	AMS	08 32 00.0	
	comp=Z,34µm,23.9s						
GUBA	**Police Station**	**110.00**	**89**	P	**Pdif**	**07 46 09.8**	**+1.4**
DEBR	**School, Debre**	**110.01**	**89**	P	**Pdif**	**07 46 18.9**	**+10**
ARSA	**Arzberg**	**110.06**	**46**	*e*P	**Pdif**	**07 46 16.8**	**+9.0**
	comp=Z,7.8nm,1.1s						
ARSA				P	**PKKPbc**	**08 01 12.4**	**+0.2**
	comp=Z,12nm,1.2s						
M24K	**Tolsona, Glenn**	**110.15**	**331**	IAMs_20	IAMs_20	08 45 25.9	
	comp=Z,12µm,20.0s						
STKA	**Stephens Creek**	**110.16**	**210**	PKiKP	**PKiKP**	**07 50 10.0**	**-0.2**
	comp=Z,1.8nm,0.7s,baz=50,slow=2.9,SNR=4.8						
STKA				PKKPbc	**PKKPbc**	**08 01 09.3**	**-2.1**
	comp=Z,2.9nm,0.8s,baz=336,slow=8.5,SNR=5.4						
STKA				PKKPab	**PKKPab**	**08 01 21.8**	**-3.7**
	comp=Z,4.4nm,0.8s,baz=326,slow=8.3,SNR=5.1						
STKA	**Stephens Creek**	**110.16**	**210**	⇑*i*PKIKP	**PKiKP**	**07 50 04.2**	**-6.0**
SCRK	**Sand Creek**	**110.17**	**333**	Pdiff	**Pdif**	**07 46 08.1**	**+0.1**
	baz=119						
SNART	**Snartemo**	**110.17**	**33**	*e*Pdif	**Pdif**	**07 46 04.0**	**-4.0**
SNART				*e*PP	**PP**	**07 50 43.8**	**-0.2**
SNART				*e*SP	SP	08 00 09.4	+1.0
HARO	**School, Haroo**	**110.19**	**90**	P	**Pdif**	**07 46 11.1**	**+1.6**
ASK	**Askoy**	**110.21**	**31**	*e*PP	**PP**	**07 50 42.5**	**-1.7**
ASK				*e*SP	SP	08 00 10.6	+1.9
CLL	**Collm**	**110.21**	**42**	*e*P	**Pdif**	**07 46 09.0**	**+0.7**
CLL				*e*		07 50 10.0	
CLL				*i*		07 50 42.3	
CLL				*i*		08 01 22.1	
CLL				MLR	MLR		
	comp=Z,25µm,19.8s						
CLL	**Collm**	**110.21**	**42**	*e*Pdif	**Pdif**	**07 46 09.0**	**+0.7**
CLL				*e*pPdif	**sPdif**	**07 46 24.0**	**-0.3**
CLL				*e*		07 49 52.0	
CLL				*e*PKiKP	**PKiKP**	**07 50 10.0**	**+0.5**
CLL				*e*		07 50 30.0	
CLL				*i* PP	**PP**	**07 50 42.3**	**-2.2**
CLL				*i* pPP		07 50 57.3	
	comp=Z,970nm,3.2s						
CLL				*e*		07 55 30.0	
CLL				*e*SKSac	**SKSac**	**07 56 54.0**	**+9.4**
CLL				*e*SKKSac	**SKKSac**	**07 57 48.0**	**+4.1**
CLL				*e*		07 59 12.0	
CLL				*e*PS	PS	08 00 11.0	-3.0
CLL				*e*PPS	PPS	08 01 12.0	
CLL				*i* PKKPab	**PKKPab**	**08 01 22.1**	**+2.4**
	comp=Z,74nm,1.8s						
CLL				*i* PKKPdf	**PKKPdf**	**08 01 25.9**	**-3.2**
	comp=Z,49nm,1.5s						
CLL				*e*		08 01 45.0	
CLL				*e*(SS)		08 06 30.0	
CLL				*e*SSS	SSS	08 10 12.0	
CLL				*e*		08 11 24.0	
CLL				*e*SSSS		08 13 54.0	
CLL				Lm	MLR	08 36 00.0	
	comp=N,9µm,21.9s						
CLL				Lm	MLR	08 36 00.0	
	comp=E,21µm,19.9s						
CLL				Lm	MLR	08 36 00.0	
	comp=Z,25µm,19.8s						
CLL				Lmax		08 36 00.0	
BER	**Bergen**	**110.22**	**31**	*e*Pdif	**Pdif**	**07 46 09.8**	**+1.7**
BER				IVmBBB		07 46 10.4	
	comp=Z,1µm,5.1s						
BER				*e*PP	**PP**	**07 50 44.0**	**-0.4**
BER				*e*SP	SP	08 00 08.7	-0.1
BER				IVMs_BB	IVMs_BB	08 29 19.5	
	comp=Z,6µm,27.8s						
J26L	**Joseph Creek**	**110.26**	**334**	Pdiff	**Pdif**	**07 46 08.0**	**-0.4**
	baz=119						
PAX	**Paxson**	**110.27**	**332**	Pdiff	**Pdif**	**07 46 08.0**	**-0.4**
	baz=118						
SUE	**Sulen**	**110.28**	**30**	*e*PP	**PP**	**07 50 44.3**	**-0.4**
SUE				*e*SP	SP	08 00 10.2	+0.9
SUE				IVMs_BB	IVMs_BB	08 29 09.3	
	comp=Z,7µm,32.6s						
BLS5	**Blasjo**	**110.30**	**32**	*e*Pdif	**Pdif**	**07 46 08.3**	**-0.3**
BLS5				*e*PP	**PP**	**07 50 44.0**	**-1.0**
BLS5				*e*SP	SP	08 00 07.4	-2.3
BLS5				IVMs_BB	IVMs_BB	08 36 10.6	
	comp=Z,8µm,20.2s						
RIDG	**Independent Ri**	**110.39**	**333**	Pdiff	**Pdif**	**07 46 09.1**	**+0.2**
	baz=118						
RIDG	**Independent Ri**	**110.39**	**333**	IAMs_20	IAMs_20	08 34 50.3	
	comp=Z,19µm,20.0s						
ABMD	**Abulta/Almeha**	**110.52**	**88**	P	**Pdif**	**07 46 17.3**	**+6.7**
CONA	**Conrad Observa**	**110.54**	**46**	*e*P	**Pdif**	**07 46 19.4**	**+9.4**
	comp=Z,7.0nm,1.4s						
CONA				P	**PKKPbc**	**08 01 08.6**	**-2.2**
	comp=Z,26nm,2.1s						
PRU	**Pruhonice**	**110.57**	**43**	*e*PP	**PP**	**07 50 43.5**	**-3.7**
PRU				*e*SP	SP	08 00 03.1	-9.5
PRU				*e*PKKP	**PKKPbc**	**08 01 10.5**	**-0.1**
PRU				AMS	AMS	08 39 30.0	
	comp=Z,15µm,20.7s						
BRG	**Berggiesshubel**	**110.57**	**42**	P	PKiKP	07 50 24.6	+14
BRG				Amp		07 50 28.4	
	comp=Z,13nm,1.1s						
BRG				PP	**PP**	**07 50 43.9**	**-3.2**
BRG				Amp		07 51 01.7	
	comp=Z,148nm,1.9s						
BRG	**Berggiesshubel**	**110.57**	**42**	PS	PS	08 00 10.0	-7.4
BRG				PKKP	**PKKPbc**	**08 01 11.5**	**+0.9**
BRG				Amp		08 01 12.2	
	comp=Z,8.5nm,0.9s						
BRG	**Berggiesshubel**	**110.57**	**42**	⇓*e*Pif		07 46 13.1	
BRG	**Berggiesshubel**	**110.57**	**42**	Amp		07 46 14.6	
	comp=Z,6.8nm,1.1s						
BRG	**Berggiesshubel**	**110.57**	**42**	p	**PKiKP**	**07 50 10.8**	**+0.6**
BRG	**Berggiesshubel**	**110.57**	**42**	Amp		07 50 12.4	
	comp=Z,4.6nm,1.1s						
ODD1	**Odda**	**110.59**	**32**	*e*PP	**PP**	**07 50 46.5**	**-0.7**
ODD1				*e*SP	SP	08 00 13.8	+1.4
FOO	**Floro**	**110.65**	**30**	*e*Pdif	**Pdif**	**07 46 11.5**	**+1.5**
FOO				*e*PP	**PP**	**07 50 46.3**	**-1.1**
FOO				*e*SP	SP	08 00 11.1	-1.5
KIRE	**School, Kiremu**	**110.72**	**91**	P	**Pdif**	**07 46 18.9**	**+7.1**
NGLE	**Hospital, Nege**	**110.74**	**96**	P	**Pdif**	**07 46 20.4**	**+8.6**
HOMB	**Homborsund**	**110.76**	**34**	*e*Pdif	**Pdif**	**07 46 10.6**	**+0.1**
HOMB				*e*PP	**PP**	**07 50 47.3**	**-0.9**
HOMB				*e*SP	SP	08 00 12.8	-1.0
HOMB				IVMs_BB	IVMs_BB	08 30 06.8	
	comp=Z,10µm,27.3s						
JMIC	**Jan Mayen**	**110.76**	**18**	*e*Pdif	**Pdif**	**07 46 09.2**	**-1.1**
JMIC				*e*PP	**PP**	**07 50 45.1**	**-2.9**
JMIC				*e*SP	SP	08 00 15.3	+2.0
JMIC				IVMs_BB	IVMs_BB	08 28 00.9	
	comp=Z,5µm,41.8s						
KNK	**Knik Glacier**	**110.79**	**330**	IAMs_20	IAMs_20	08 45 33.0	
	comp=Z,11µm,19.0s						
PVCC	**Panska Ves**	**110.80**	**43**	*e*PP	**PP**	**07 50 44.6**	**-4.2**
PVCC				*e*SP	SP	08 00 09.9	-4.8
PVCC				AMS	AMS	08 35 30.0	
	comp=Z,22µm,22.0s						
CHGE	**School, Chagni**	**110.90**	**90**	P	**Pdif**	**07 46 13.1**	**+0.5**
O22K	**Cooper Landing**	**110.94**	**329**	IAMs_20	IAMs_20	08 44 09.9	
	comp=Z,12µm,22.0s						
HYA	**Hoyanger**	**110.95**	**30**	*e*Pdif	**Pdif**	**07 46 11.4**	**+0.1**
HYA				*e*PP	**PP**	**07 50 49.7**	**+0.1**
HYA				*e*SP	SP	08 00 15.6	+0.2
J25K	**Salcha River,**	**111.00**	**334**	Pdiff	**Pdif**	**07 46 11.8**	**+0.1**
	baz=118						
MELAE	**School, Dubaba**	**111.11**	**88**	P	**Pdif**	**07 46 13.1**	**-0.2**
RC01	**Rabbit Creek A**	**111.21**	**329**	Pdiff	**Pdif**	**07 46 16.4**	**+3.8**
	baz=116						
CNPM	**China Poot**	**111.22**	**327**	IAMs_20	IAMs_20	08 29 47.8	
	comp=Z,12µm,22.0s						
MUKA	**Police Camp, M**	**111.31**	**88**	P	**Pdif**	**07 46 06.6**	**-7.6**
KRUC	**Moravsky**	**111.31**	**45**	*e*PDIFF	**Pdif**	**07 46 13.5**	**+0.2**
KRUC				*e*PP	**PP**	**07 50 48.1**	**-4.5**
KRUC				*e*SP	SP	08 00 15.5	-3.9
KRUC				*e*		08 17 22.1	
ZST	**Bratislava**	**111.41**	**46**	*e*PP	**PP**	**07 50 50.9**	**-2.4**
SII	**Sitkinak Islan**	**111.43**	**324**	IAMs_20	IAMs_20	08 26 04.4	
	comp=Z,13µm,20.0s						
PRP	**Porcupine Dome**	**111.48**	**334**	Pdiff	**Pdif**	**07 46 14.1**	**+0.3**
	baz=117						
PRP	**Porcupine Dome**	**111.48**	**334**	IAMs_20	IAMs_20	08 34 41.1	
	comp=Z,20µm,21.0s						
HDA	**Harding Lake**	**111.52**	**333**	Pdiff	**Pdif**	**07 46 13.8**	**-0.1**
	baz=117						
HDA	**Harding Lake**	**111.52**	**333**	IAMs_20	IAMs_20	08 35 36.1	
	comp=Z,18µm,22.0s						
VRAC	**Vranov**	**111.53**	**45**	PKKPbc	PKKPbc	08 01 07.8	+0.4
	comp=Z,2.5nm,0.6s,baz=56,slow=6.7,SNR=3.7						
VRAC	**Vranov**	**111.53**	**45**	*e*PDIFF	**Pdif**	**07 46 14.8**	**+0.5**
VRAC				*e*PP	**PP**	**07 50 48.0**	**-6.1**
VRAC				*e*SP	SP	08 00 17.2	-4.2
VRAC				*e*		08 17 24.7	
MODS	**Modra-Piesok**	**111.59**	**46**	*e*PP	**PP**	**07 50 50.3**	**-4.3**
ILAR	**Eielson Array**	**111.65**	**333**	Pdiff	**Pdif**	**07 46 14.4**	**0.0**
	comp=Z,2.5nm,1.0s,baz=139,slow=2.8,SNR=8.2						
ILAR				PKiKP	**PKiKP**	**07 50 11.7**	**-0.1**
	comp=Z,2.8nm,0.9s,baz=237,slow=1.2,SNR=6.8						
ILAR				PP	**PP**	**07 50 53.2**	**-1.4**
	comp=Z,4.8nm,0.8s,baz=106,slow=5.6,SNR=5.3						
ILAR				PKKPbc	**PKKPbc**	**08 01 04.2**	**-3.3**
	comp=Z,3.4nm,0.8s,baz=306,slow=3.8,SNR=12						
SHAW	**Medical Clinic**	**111.67**	**89**	P	**Pdif**	**07 46 17.9**	**+1.8**
SKAR	**Skarslia**	**111.68**	**31**	*e*Pdif	**Pdif**	**07 46 14.0**	**-0.8**
SKAR				*e*PP	**PP**	**07 50 52.1**	**-2.8**
SKAR				*e*PP	**PP**	**07 50 54.2**	**-0.8**
SKAR				*e*SP	SP	08 00 22.7	+0.5
SKAR				IVMs_BB	IVMs_BB	08 36 14.0	
	comp=Z,7µm,19.5s						
RGN	**Rugen**	**111.68**	**39**	IAMs_20	IAMs_20	08 42 35.8	
	comp=Z,18µm,18.0s						
CHVC	**Chvalec**	**111.70**	**43**	*e*PP	**PP**	**07 50 50.0**	**-5.3**
CHVC				AMS	AMS	08 36 10.0	
	comp=Z,12µm,21.3s						
CAPN	**Captain Cook N**	**111.70**	**329**	IAMs_20	IAMs_20	08 45 04.0	
	comp=Z,14µm,21.0s						
SMOL	**Smolenice**	**111.73**	**46**	*e*PP	**PP**	**07 50 51.9**	**-3.7**
AKN	**Aaknes**	**111.73**	**30**	*e*Pdif	**Pdif**	**07 46 13.7**	**-1.2**
AKN				*e*PP	**PP**	**07 50 56.4**	**+1.2**
AKN				*e*SP	SP	08 00 22.9	+0.3
AKN				IVMs_BB	IVMs_BB	08 29 52.3	
	comp=Z,8µm,21.8s						
FURI	**Furi**	**111.76**	**93**	P	**Pdif**	**07 46 28.1**	**+12**
DPC	**Dobruska-Polom**	**111.76**	**44**	*e*PP	**PP**	**07 50 50.7**	**-5.1**
DPC				*e*SP	SP	08 00 19.0	-4.6
DPC				*e*PKKP	**PKKPbc**	**08 01 06.3**	**-0.4**
DPC				AMS	AMS	08 41 50.0	
	comp=Z,12µm,20.0s						
OSTC	**Ostas**	**111.78**	**43**	*e*PP	**PP**	**07 50 49.8**	**-6.1**
OSTC				AMS	AMS	08 33 10.0	
	comp=Z,23µm,25.9s						
SUA	**Susitna One**	**111.81**	**329**	IAMs_20	IAMs_20	08 46 27.0	
	comp=Z,11µm,20.0s						
RND	**Reindeer**	**111.83**	**332**	IAMs_20	IAMs_20	08 31 54.5	
	comp=Z,13µm,22.0s						
KONO	**Kongsberg**	**111.84**	**33**	*e*Pdif	**Pdif**	**07 46 14.8**	**-0.6**
KONO				*e*PP	**PP**	**07 50 53.9**	**-2.1**
KONO				*e*PS	**PS**	**08 00 28.1**	**-0.7**
KONO				IVMs_BB	IVMs_BB	08 35 32.8	
	comp=Z,7µm,19.4s						
FYU	**Fort Yukon**	**111.86**	**336**	IAMs_20	IAMs_20	08 34 55.1	
	comp=Z,15µm,21.0s						
CHIR	**Chirikof Islan**	**111.87**	**323**	IAMs_20	IAMs_20	08 26 27.9	
	comp=Z,18µm,22.0s						
KRLC	**Kraliky**	**111.93**	**44**	*e*PP	**PP**	**07 50 52.8**	**-4.2**
KRLC				*e*PKKP	**PKKPbc**	**08 01 06.0**	**-0.2**
KRLC				AMS	AMS	08 34 50.0	
	comp=Z,17µm,22.3s						
BAHR	**High School, B**	**111.94**	**89**	P	**Pdif**	**07 46 25.0**	**+7.8**
CCB	**Clear Creek Bu**	**111.95**	**333**	IAMs_20	IAMs_20	08 35 58.6	
	comp=Z,16µm,21.0s						
WRH	**Wood River Hil**	**111.99**	**333**	IAMs_20	IAMs_20	08 35 49.6	
	comp=Z,21µm,21.0s						
CUT	**Chulitna**	**112.00**	**330**	IAMs_20	IAMs_20	08 46 31.8	
	comp=Z,14µm,20.0s						
JAVC	**Velka Javorina**	**112.01**	**45**	*e*PDIFF	**Pdif**	**07 46 17.3**	**+0.8**
JAVC				*e*PP	**PP**	**07 50 52.5**	**-5.2**
JAVC				*e*SP	SP	08 00 22.9	-3.1
JAVC				*e*		08 17 37.8	
POKR	**Poker Plat Res**	**112.02**	**334**	IAMs_20	IAMs_20	08 36 00.3	
	comp=Z,19µm,19.0s						
SRO	**Srobarova**	**112.02**	**47**	*e*PP	**PP**	**07 50 53.6**	**-4.0**
COLA	**College**	**112.07**	**333**	Pdiff	**Pdif**	**07 46 18.7**	**+2.5**

	baz=116						
COLA	College	112.07	333	IAMs_20	IAMs_20	08 36 01.8	
	comp=Z,15µm,20.0s						
TCOL	CIGO, UAF Yank	112.07	333	IAMs_20	IAMs_20	08 36 01.8	
	comp=Z,16µm,20.0s						
MOL	Molde	112.13	29	ePP	PP	07 50 58.1	+0.1
MOL				eSKSac	SKSac	07 56 54.2	+2.3
MOL				eSP	SP	08 00 26.9	+0.7
MOL				eSS	SS	08 06 34.5	+0.7
MOL				IVMs_BB	IVMs_BB	08 31 10.7	
	comp=Z,8µm,27.0s						
MDM	Murphy Dome	112.25	333	IAMs_20	IAMs_20	08 36 06.6	
	comp=Z,16µm,20.0s						
MORC	Moravsky Berou	112.28	44	ePDIFF	Pdif	07 46 18.6	+1.0
MORC				ePP	PP	07 50 54.5	-5.0
MORC				eSP	SP	08 00 26.8	-1.5
MORC				e		08 17 42.8	
MERTO	Secondary Scho	112.37	90	P	Pdif	07 46 21.1	+1.9
BWN	Browne	112.40	332	IAMs_20	IAMs_20	08 34 41.8	
	comp=Z,18µm,22.0s						
NEA2	Nenana	112.42	333	Pdiff	Pdif	07 46 18.0	+0.1
	baz=115						
NEA2	Nenana	112.42	333	IAMs_20	IAMs_20	08 36 04.1	
	comp=Z,19µm,21.0s						
TRF	Thorofare Moun	112.44	332	IAMs_20	IAMs_20	08 34 53.5	
	comp=Z,14µm,21.0s						
GOND	University, Go	112.47	88	P	Pdif	07 46 24.3	+4.7
OSL	Oslo	112.48	33	ePP	PP	07 50 59.4	-1.2
OSL				eSKSac	SKSac	07 56 53.0	-0.5
OSL				eSP	SP	08 00 32.7	+3.2
OSL				IVMs_BB	IVMs_BB	08 35 32.2	
	comp=Z,7µm,20.8s						
H24K	Noodor Dome	112.50	334	Pdiff	Pdif	07 46 17.8	-0.4
	baz=115						
H24K	Noodor Dome	112.50	334	IAMs_20	IAMs_20	08 35 10.1	
	comp=Z,22µm,22.0s						
DOMB	Dombas	112.57	30	ePdif	Pdif	07 46 18.2	-0.4
DOMB				ePP	PP	07 51 01.3	+0.1
DOMB				eSKPdf	SKiKP	07 53 48.2	+1.9
DOMB				ePS	PKKPbc	08 00 35.1	-29
DOMB				eSS	SS	08 06 42.8	+3.1
DOMB				IVMs_BB	IVMs_BB	08 30 29.2	
	comp=Z,8µm,28.1s						
TARA	Tarawa	112.57	257	IAMs_20	IAMs_20	08 27 09.4	
	comp=Z,16µm,21.0s						
VYHS	Vyhne	112.59	46	ePKIKP	PKiKP	07 50 27.0	+13
VYHS				e		07 50 56.7	
VYHS	Vyhne	112.59	46	ePKP	PKiKP	07 50 27.0	+13
VYHS				ePP	PP	07 50 56.7	-5.1
VYHS				e		08 00 51.1	
VYHS				eL	L	08 34 04.3	
GINR	Hospital, Gini	112.63	95	P	Pdif	07 46 30.8	+10
KTH	Kantishna Hill	112.74	331	IAMs_20	IAMs_20	08 35 02.4	
	comp=Z,16µm,22.0s						
I23K	Minto, Yukon-K	112.77	333	Pdiff	Pdif	07 46 22.8	+3.4
	baz=114						
I23K	Minto, Yukon-K	112.77	333	IAMs_20	IAMs_20	08 37 01.2	
	comp=Z,15µm,20.0s						
SILA	Clinic, Silare	113.02	89	P	Pdif	07 46 26.5	+4.6
H23K	Yukon River	113.11	334	IAMs_20	IAMs_20	08 37 20.2	
	comp=Z,19µm,19.0s						
NB2	NORSAR Subarra	113.13	32	PKPdf	PKiKP	07 50 27.4	+13
	comp=Z,50nm,2.0s,baz=248,slow=1.9						
NB2	NORSAR Subarra	113.13	32	PP	PP	07 50 27.4	-38
	baz=248,slow=1.9						
NOA	NORSAR Array B	113.13	32	PKiKP	PKiKP	07 50 14.2	-0.6
	comp=Z,1.5nm,1.0s,baz=252,slow=5.1,SNR=2.6						
NOA				PKKPab	PKKPab	08 01 08.7	+2.3
	comp=Z,1.8nm,0.8s,baz=78,slow=4.2,SNR=9.9						
NC602	NORSAR Array S	113.16	32	ePdif	Pdif	07 46 20.2	-1.0
NC602				ePP	PP	07 51 04.3	-1.2
NC602				eSP	SP	08 00 36.8	+1.1
NC602				eSS	SS	08 06 46.2	-1.4
NC602				IVMs_BB	IVMs_BB	08 35 01.1	
	comp=Z,7µm,21.8s						
CAST	Castle Rocks	113.17	331	IAMs_20	IAMs_20	08 37 14.7	
	comp=Z,14µm,22.0s						
N19K	Bonanza Creek	113.22	328	IAMs_20	IAMs_20	08 48 01.2	
	comp=Z,14µm,21.0s						
LANS	Liptovska Anna	113.22	46	ePP	PP	07 51 02.9	-3.4
MLY	Manley	113.25	333	Pdiff	Pdif	07 46 21.4	-0.2
	baz=113						
ALE	Alert	113.26	1	IAMs_20	IAMs_20	08 39 02.7	
	comp=Z,19µm,21.0s						
TBLU	Trondheim	113.54	29	ePdif	Pdif	07 46 24.5	+1.7
TBLU				ePP	PP	07 51 08.6	+0.5
TBLU				eSP	SP	08 00 41.3	+2.2
TBLU				eSS	SS	08 06 55.7	+3.3
TBLU				IVMs_BB	IVMs_BB	08 32 44.3	
	comp=Z,8µm,25.4s						
KECS	Kecovo	113.62	47	ePP	PP	07 51 07.1	-1.9
I21K	Tanana	113.80	333	IAMs_20	IAMs_20	08 36 17.4	
	comp=Z,21µm,21.0s						
L19K	White Mountain	113.89	329	IAMs_20	IAMs_20	08 36 19.8	
	comp=Z,18µm,22.0s						
HFS	Hagfors	113.94	33	PKKPbc	PKKPbc	08 00 57.4	-2.2
	comp=Z,5.3nm,0.6s,baz=77,slow=3.2,SNR=8.8						
GZR	Gura Zlata	114.02	50	⇓P	PKiKP	07 50 38.8	+22
TOLK	Toolik Lake Re	114.24	337	IAMs_20	IAMs_20	08 44 59.0	
	comp=Z,12µm,19.0s						
H21K	Melozitna Rive	114.29	333	IAMs_20	IAMs_20	08 37 11.8	
	comp=Z,15µm,20.0s						
CRVS	Cervenica-Dubn	114.37	46	ePP	PP	07 51 08.7	-5.7
DRGR		114.45	49	⇓P	PKPdf	07 50 16.3	-1.5
DRGR		114.45	49	⇓PKIKP	PKPdf	07 50 16.3	-1.5
NSS	Namsos	114.71	28	ePdif	Pdif	07 46 28.0	0.0
NSS				ePP	PP	07 51 16.2	-0.1
NSS				eSP	SP	08 00 51.3	+1.7
NSS				IVMs_BB	IVMs_BB	08 31 43.0	
	comp=Z,5µm,26.1s						
UZH	Uzhgorod	114.80	47	eP	Pdif	07 46 33.5	+4.7
UZH				i		07 51 13.1	
UZH				ePPP	PPP	07 53 45.6	
UZH				e		07 56 59.9	
UZH				ePS	PKKPbc	08 00 54.3	-2.0
UZH				MLR	MLR		
	comp=N,4µm,22.0s						
UZH				MLR	MLR		
	comp=E,4µm,22.0s						
UZH				MLR	MLR		
	comp=Z,2µm,22.0s						
ARR	Arges	115.24	51	⇑P	PKiKP	07 50 21.0	+1.6
KWP	Kalwaria Pacla	115.38	46	ePKiKP	PKPdf	07 50 19.1	-0.3
KWP				eSS	SS	08 07 21.9	+4.5
KWP				eL	L	08 37 06.2	
	comp=Z,43µm,23.5s						
VOIR		115.54	51	⇑P	PKiKP	07 50 21.2	+1.2
VOIR		115.54	51	⇑PKIKP	PKiKP	07 50 21.2	+1.2
ARCR	ARCALIA	115.61	49	⇑P	PKiKP	07 50 30.2	+10
NWAO	Narrogin (SRO)	116.00	188	PKP	PKiKP	07 50 20.9	-0.5
	comp=Z,5.6nm,0.6s,baz=143,slow=3.2,SNR=5.8						
NWAO	Narrogin (SRO)	116.00	188	IAMs_20	IAMs_20	08 39 32.3	
	comp=Z,9µm,20.0s						
MLR	Muntele Rosu	116.16	51	⇓P	PKPdf	07 50 20.6	-0.6
MLR	Muntele Rosu	116.16	51	PKKPab	PKKPab	08 00 52.5	-1.6
	comp=Z,5.2nm,0.6s,baz=202,slow=3.7,SNR=5.7						
MLR	Muntele Rosu	116.16	51	⇓PKIKP	PKPdf	07 50 20.6	-0.6
MOR8	Moi Rana	116.21	27	IVmB_BB		07 46 34.7	
	comp=Z,867nm,3.3s						
MOR8				ePdif	Pdif	07 46 35.4	+0.6
MOR8				ePP	PP	07 51 27.3	+0.5
MOR8				eSP	SP	08 01 05.6	+2.3
MOR8				eSS	SS	08 07 34.2	+6.8
MOR8				IVMs_BB	IVMs_BB	08 33 34.0	
	comp=Z,6µm,27.4s						
LVV	L'vov	116.25	46	ePKIKP	PKiKP	07 50 27.3	+6.2
LVV				e		08 01 10.2	
LVV				MLR	MLR		
	comp=N,14µm,23.0s						
LVV				MLR	MLR		
	comp=E,26µm,23.0s						
LVV				MLR	MLR		
	comp=Z,29µm,24.0s						
BURAR	Bucovina Array	116.34	49	⇓P	PKPdf	07 50 19.9	-1.5
BURAR	Bucovina Array	116.34	49	⇓PKIKP	PKPdf	07 50 19.9	-1.5
COVR	Voineasa-Covas	116.44	51	⇓P	PKiKP	07 50 49.8	+28
LOF	Lofoten	116.46	25	ePdif	Pdif	07 46 31.7	-4.0
LOF				IVmBBB		07 46 34.4	
	comp=Z,1µm,2.5s						
LOF				ePP	PP	07 51 28.5	0.0
LOF				eSKSac	SKSac	07 57 10.8	+2.4
LOF				ePS	PKKPdf	08 01 09.4	-8.1
LOF				IVMs_BB	IVMs_BB	08 29 38.7	
	comp=Z,5µm,40.5s						
MIDW	Midway	116.65	288	IAMs_20	IAMs_20	08 31 39.2	
	comp=Z,13µm,20.0s						
BISRR	Bisoca	116.69	51	⇓P	PKiKP	07 50 22.2	0.0
PLOR	Plostina	116.74	51	⇓P	PKPdf	07 50 21.1	-1.1
PLOR	Plostina	116.74	51	⇓PKIKP	PKPdf	07 50 21.1	-1.1
VRI	Vrincioaia	116.80	51	⇓P	PKPdf	07 50 21.3	-1.0
VRI	Vrincioaia	116.80	51	⇓PKIKP	PKPdf	07 50 21.3	-1.0
FAUS	Fauske	116.88	26	ePdif	Pdif	07 46 37.8	+0.2
FAUS				ePP	PP	07 51 27.7	-3.8
FAUS				eSP	SP	08 01 11.0	+1.7
FAUS				eSS	SS	08 07 38.2	+2.2
FAUS				IVMs_BB	IVMs_BB	08 31 02.5	
	comp=Z,6µm,31.6s						
TESR	Tescani	116.94	50	⇑P	PKiKP	07 50 23.7	+1.2
SUW	Suwalki	116.95	41	ePKiKP	PKPdf	07 50 21.4	-0.8
SUW				ePP	PP	07 51 30.5	-1.8
SUW				eSP	SP	08 01 11.6	+0.9
SUW				eL	L	08 37 31.6	
	comp=Z,22µm,22.7s						
SUW	Suwalki	116.95	41	eP	PKPdf	07 50 21.6	-0.6
STEI	Steigen	117.01	25	ePdif	Pdif	07 46 38.1	-0.1
STEI				ePP	PP	07 51 29.4	-2.9
STEI				eSP	SP	08 01 12.4	+2.0
STEI				eSS	SS	08 07 40.5	+2.8
STEI				IVMs_BB	IVMs_BB	08 30 14.1	
	comp=Z,6µm,34.7s						
IZVR	Izvoarele	117.39	51	⇑P	PKiKP	07 50 41.1	+18
A21K	Barrow	117.41	339	IAMs_20	IAMs_20	08 47 33.9	
	comp=Z,11µm,21.0s						
TIRR	Tirgusor	117.51	53	⇑P	PKiKP	07 50 23.8	+0.1
TIRR	Tirgusor	117.51	53	⇑PKIKP	PKiKP	07 50 23.8	+0.1
CFR	Carcaliu	117.54	52	⇓P	PKPdf	07 50 22.6	-1.1
CFR	Carcaliu	117.54	52	⇓PKIKP	PKPdf	07 50 22.6	-1.1
TPGR	Topolog	117.63	52	⇑P	PKiKP	07 50 25.0	+1.0
CTA	Charters Tower	117.70	220	PKP	PKPdf	07 50 23.9	-1.0
	comp=Z,5.6nm,0.7s,baz=211,slow=3.2,SNR=9.1						
CTA				PKKPbc	PKKPbc	08 00 47.2	+1.5
	comp=Z,5.2nm,0.8s,baz=336,slow=5.8,SNR=5.9						
CTAO	Charters Tower	117.70	220	PKIKP	PKiKP	07 50 25.2	+0.3
CTAO	Charters Tower	117.70	220	PKPdf	PKiKP	07 50 25.2	+0.3
PABE	Paberze	117.79	40	eP	PKiKP	07 50 23.9	+0.1
MILM	Milestii Mici	118.48	50	⇑P	PKPdf	07 50 22.8	-2.7
MILM	Milestii Mici	118.48	50	eP	Pdif	07 46 47.0	+1.8
MILM				e		07 50 24.0	
MILM				e		07 50 37.0	
MILM				e		07 57 13.0	
MILM				ePS	PS	08 01 25.0	-4.8
MILM				e		08 01 33.0	
MILM				ePPS	PPS	08 02 50.0	
KIS	Kishinev	118.51	50	i P	Pdif	07 46 44.0	-1.3
KIS				e		07 50 23.0	
KIS				ePS	PKKPdf	08 01 20.0	+6.9
KIS				e		08 01 33.0	
KIS				pmax	pmax		
	comp=Z,1µm,8.1s						
SORM	Soroca	118.51	49	⇓P	PKPdf	07 50 24.0	-1.4
SORM	Soroca	118.51	49	⇓PKIKP	PKPdf	07 50 24.0	-1.4
TRO	Tromso	118.72	24	ePdif	Pdif	07 46 45.5	-0.3
TRO				ePKPdf	PKiKP	07 50 26.1	+0.9
TRO				ePP	PP	07 51 43.2	-0.9
TRO				eSKSac	SKSac	07 57 18.6	+2.0
TRO				eSP	SP	08 01 28.2	+2.5
TRO				eSS	SS	08 08 01.6	+2.0
TRO				IVMs_BB	IVMs_BB	08 36 35.5	
	comp=Z,5µm,21.7s						
RDOG	Red Dog Mine	118.80	335	IAMs_20	IAMs_20	08 39 27.7	
	comp=Z,14µm,22.0s						
KBS	Kingsbay	118.82	13	ePKPdf	PKPdf	07 50 24.5	-0.7
KBS				ePP	PP	07 51 44.4	-0.2
KBS				eSP	SP	08 01 26.3	-0.1
KBS				eSS	SS	08 08 05.9	+5.2
KBS				IVMs_BB	IVMs_BB	08 33 26.1	
	comp=Z,4µm,25.2s						
ISAL	Salakas	119.00	40	eP	PKiKP	07 50 26.5	+0.3
ANM	Nome	119.09	330	IAMs_20	IAMs_20	08 38 40.5	
	comp=Z,14µm,22.0s						
MMAI	Mount Meron Ar	119.10	67	PKKPab	PKKPab	08 00 43.2	+1.2
	comp=Z,2.3nm,0.7s,baz=63,slow=3.8,SNR=4.3						
HSPB	Hornsund (broa	119.17	15	ePP	PP	07 51 46.4	-0.6
HSPB				eSP	SP	08 01 30.9	+1.4
HSPB				IVMs_BB	IVMs_BB	08 32 38.4	
	comp=Z,4µm,28.3s						
JETT	Jettan, Norway	119.21	24	ePP	PP	07 51 47.1	-0.5
JETT				e		07 53 49.5	
JETT				eSP	SP	08 01 33.1	+2.8
JETT				IVMs_BB	IVMs_BB	08 31 31.9	
	comp=Z,4µm,43.0s						
NACGM	Naroch	119.21	41	i PKP	PKPdf	07 50 26.2	-0.4
SPA0	Spitsbergen Ar	119.55	14	ePdif	Pdif	07 46 49.5	+0.2
SPA0				ePP	PP	07 51 46.5	-3.1
SPA0				eSP	SP	08 01 32.5	-0.4
SPA0				eSS	SS	08 08 12.1	+1.9
SPITS	Spitsbergen Ar	119.55	14	PKKPbc	PKKPbc	08 00 38.7	-1.4
	comp=Z,20nm,0.9s,baz=84,slow=8.5,SNR=6.1						
BJO1	Bjornoya	119.59	18	ePdif	Pdif	07 46 48.7	-0.9
BJO1				ePP	PP	07 51 49.1	-1.0
BJO1				ePS	PS	08 01 38.6	-0.3
BJO1				eSS	SS	08 08 11.2	+0.4
AKASG	Malin Array Be	119.70	46	PKP	PKPdf	07 50 25.6	-2.1
	comp=Z,5.9nm,0.5s,baz=266,slow=2.7,SNR=20						
AKASG				PP	PP	07 51 48.0	-3.4
	comp=Z,12nm,0.9s,baz=266,slow=3.0,SNR=6.6						
AKASG				PKKPab	PKKPab	08 00 37.0	-1.1
	comp=Z,8.0nm,0.8s,baz=65,slow=4.4,SNR=10						
AKBB	Malin Array Si	119.70	46c	iPKIKP	PKPdf	07 50 25.9	-1.8
MNK	Minsk	119.75	42	i PKIKP	PKPdf	07 50 25.4	-2.2
MNK				i PPP	PPP	07 54 21.2	
MNK				i		07 57 31.1	
MNK				i PS	PKKPdf	08 01 27.0	+16
MNK				i SS	SS	08 08 11.9	-1.9
MNK				pmax	pmax		
	comp=E,3.0nm,1.0s						
MNK				pmax	pmax		
	comp=Z,54nm,1.0s						
MNK				pmax	pmax		
	comp=N,19nm,1.0s						
MNK				MLR	MLR		
	comp=Z,24µm,20.0s						
MNK				MLR	MLR		
	comp=E,3µm,20.0s						
MNK	Minsk	119.75	42	i PKP	PKPdf	07 50 25.5	-2.2
	comp=E,3.0nm,1.0s						
MNK				i PKP	PKPdf	07 50 25.5	-2.2
	comp=N,19nm,1.0s						
MNK				i PKP	PKPdf	07 50 25.5	-2.2
	comp=Z,54nm,1.0s,baz=258						
MNK				i PP	PP	07 51 45.5	-6.2
MNK				i SKP		07 53 57.5	
MNK				i PKS		07 54 02.2	
MNK				i PPP	PPP	07 54 21.3	
MNK				i SKS	SKSdf	07 57 31.1	-5.5
MNK				i SKKS	SKKSac	07 58 49.7	+1.7
MNK				i PS	PKKPdf	08 01 27.0	+16
MNK				i SS	SS	08 08 12.0	-1.9
MNK				i SSS	SSS	08 11 45.6	
MNK				i LR	LR	08 36 47.3	
MNK				i LRM	MLR	08 41 14.1	
	comp=Z,24µm,20.1s						
MNK				i LRM	MLR	08 41 17.4	
	comp=E,3µm,20.1s						
MNK				i LRM	MLR	08 49 11.9	
	comp=N,11µm,20.4s						
BRTR	Keskin Array B	119.85	59	PKP	PKPdf	07 50 27.4	-1.2
	comp=N,6.8nm,0.9s,baz=208,slow=4.2,SNR=10						
BRTR				PP	PP	07 51 48.6	-4.4
	comp=N,13nm,0.8s,baz=205,slow=5.5,SNR=6.4						
VSU	Vasula	119.92	37	eP	PKPdf	07 50 27.4	-0.4
VSU	Vasula	119.92	37	⇓iPKIKP	PKPdf	07 50 26.1	-1.7
ASF	Jabal al Asfar	120.01	68	PKKPab	PKKPab	08 00 40.6	+2.5
	comp=N,2.7nm,0.8s,baz=195,slow=4.1,SNR=4.1						
KTK1	Kautokeino	120.12	25	ePdif	Pdif	07 46 50.3	-1.8
KTK1				ePKPdf	PKiKP	07 50 30.1	+2.1
KTK1				ePP	PP	07 51 53.2	-0.7
KTK1				eSP	SP	08 01 40.4	+2.0
KTK1				eSS	SKKSdf	08 08 23.4	+2.6
KTK1				IVMs_BB	IVMs_BB	08 37 13.0	
	comp=Z,4µm,23.1s						
FINES	FINESS Array B	120.14	33	PKP	PKPdf	07 50 26.4	-1.7
	comp=Z,2.6nm,0.7s,baz=191,slow=5.2,SNR=8.8						
FINES				PKKPbc	PKKPbc	08 00 36.6	-0.8
	comp=Z,11nm,0.7s,baz=96,slow=4.1,SNR=21						
HAMF	Hammerfest	120.48	23	ePdif	Pdif	07 46 53.3	-0.3
HAMF				ePP	PP	07 51 55.7	-0.5
HAMF				eSP	SP	08 01 44.5	+3.0
ASAR	Alice Springs	120.56	207	PKP	PKPdf	07 50 28.6	-1.8
	comp=Z,16nm,0.6s,baz=166,slow=1.0,SNR=4.3						
ASAR				PKKPbc	PKKPbc	08 00 35.5	+0.1
	comp=Z,6.2nm,0.7s,baz=334,slow=3.3,SNR=27						
ARCES	ARCESS Array B	120.98	24	PKP	PKPdf	07 50 27.8	-1.8
	comp=Z,3.3nm,0.7s,baz=306,slow=3.1,SNR=1.9						
ARCES				PKKPab	PKKPab	08 00 31.4	-0.4
	comp=Z,10nm,0.7s,baz=80,slow=3.1,SNR=14						
ARCES	ARCESS Array B	120.98	24	PKPdf	PKiKP	07 50 30.8	+1.0
HOPEN	Hopen	121.28	16	ePP	PP	07 52 00.7	-0.8
HOPEN				eSP	SP	08 01 51.7	+3.3
HOPEN				IVMs_BB	IVMs_BB	08 33 04.6	
	comp=Z,4µm,35.5s						
KEV	Kevo	121.53	24	IAMs_20	IAMs_20	08 42 27.9	
	comp=Z,13µm,21.0s						
SIM	Simferopol'	121.56	53	i PKIKP	PKPdf	07 50 27.7	-3.8
SIM				pmax	pmax		
	comp=Z,26nm,1.1s						
PUL	Pulkovo	121.96	36	⇓iPKIKP	PKPdf	07 50 31.1	-0.6
PUL				MLR	MLR		
	comp=Z,15µm,19.0s						
ADK	Adak	122.75	315	IAMs_20	IAMs_20	08 33 28.1	
	comp=Z,16µm,20.0s						
WRA	Warramunga Arr	123.71	209	PKP	PKPdf	07 50 35.4	-1.1
	comp=Z,34nm,0.5s,baz=163,slow=1.6,SNR=182						
WRA				PKKPbc	PKKPbc	08 00 23.7	+0.4
	comp=Z,6.7nm,0.7s,baz=342,slow=4.3,SNR=19						
WRAB	Tennant Creek	123.72	209d	iPKIKP	PKPdf	07 50 34.3	-2.2
WRAB				pmax	pmax		
	comp=Z,67nm,1.0s						
WRAB	Tennant Creek	123.72	209	IAMs_20	IAMs_20	08 37 47.7	
	comp=Z,12µm,19.0s						
APA	Apatity	123.80	27	⇓iPKIKP	PKPdf	07 50 34.5	-0.5
APA				i		07 52 17.0	
APA				i SS	SS	08 08 57.0	-7.7
APA				pmax	pmax		
	comp=Z,18nm,0.9s						
ANN	Anapa	123.83	54	i PKIKP	PKPdf	07 50 33.9	-1.9
ANN				e		07 52 16.6	
ANN				ePPP	PPP	07 54 57.1	
ANN				e		07 57 31.5	
ANN				eSS	SS	08 08 55.6	-11
ANN				pmax	pmax		
	comp=Z,46nm,1.3s						
RAYN	Ar Rayn	124.08	81	PKPdf	PKPdf	07 50 36.5	-0.5
LVZ	Lovozero	124.27	26	⇑iPKIKP	PKPdf	07 50 35.5	-0.5
LVZ				MLR	MLR		
	comp=Z,8µm,22.0s						
LVZ	Lovozero	124.27	26	IAMs_20	IAMs_20	08 53 04.5	
	comp=Z,13µm,20.0s						
OBN	Obninsk	124.81	42c	iPKIKP	PKPdf	07 50 36.3	-1.0
OBN				i		07 52 23.2	
OBN				i		07 57 37.8	
OBN				i PS	PS	08 02 23.5	-2.4
OBN				i SS	SS	08 09 32.4	+14
OBN				pmax	pmax		
	comp=Z,110nm,1.9s						
SOC	Sochi	125.20	56c	iPKIKP	PKPdf	07 50 37.1	-1.4
SOC				e		07 52 26.0	
SOC				ePPP	PPP	07 55 06.5	
SOC				ePS	PS	08 02 26.9	-2.9
SOC				eSSS	SSS	08 13 56.6	
SOC				pmax	pmax		
	comp=Z,41nm,1.0s						
SOC				MLR	MLR		
	comp=Z,7µm,21.0s						
PMG	Port Moresby	125.45	229	PKP	PKPdf	07 50 39.6	-0.2
	comp=Z,71nm,1.0s,baz=64,slow=2.7,SNR=23						
PMG	Port Moresby	125.45	229	IAMs_20	IAMs_20	08 34 10.6	
	comp=Z,30µm,21.0s						
MOS	Moscow	125.46	41	i PKIKP	PKPdf	07 50 33.9	-4.7
MOS				ePPP	PPP	07 55 07.1	
MOS				eSP	SP	08 02 22.7	-3.7
MOS				eSS	SS	08 09 17.9	-8.4
MOS				pmax	pmax		
	comp=Z,37nm,0.6s						
LPSR	Galich'ya Gora	125.97	45	i PKIKP	PKPdf	07 50 38.7	-0.9
LPSR				ePS	PS	08 02 31.0	-5.2
LPSR				pmax	pmax		
	comp=Z,60nm,1.0s						
VSR	Storozhevoye	125.98	47	i PKIKP	PKPdf	07 50 38.4	-1.3
VSR				ePS	PS	08 02 31.0	-5.3
VSR				pmax	pmax		
	comp=Z,70nm,0.8s						
VSR				MLR	MLR		
	comp=Z,14µm,23.0s						
VORD	Divnogorie	126.03	47	ePKIKP	PKPdf	07 50 38.0	-1.8
VORD				pmax	pmax		
	comp=Z,40nm,1.4s						
BCA	Borcka	126.16	59	⇓P	PKPdf	07 50 39.7	-0.8
BATM	Batumi	126.25	59	⇑P	PKPdf	07 50 36.9	-3.6
BATM	Batumi	126.25	59	⇑PKIKP	PKPdf	07 50 36.9	-3.6
H11S2	WAKE ISLAND Hy	126.27	271	T	T	10 09 31.6	
	baz=116,slow=75						
H11S1	WAKE ISLAND Hy	126.28	271	T	T	10 09 31.9	
	baz=116,slow=75						
H11S3	WAKE ISLAND Hy	126.29	271	T	T	10 09 32.1	
	baz=116,slow=75						
KLMR	Klimovskoe	126.58	35	ePKIKP	PKPdf	07 50 38.1	-2.5
KLMR				pmax	pmax		
	comp=Z,122nm,1.2s						
KLMR				MLR	MLR		
	comp=Z,17µm,20.0s						
KLMR	Klimovskoe	126.58	35	ePKPdf	PKPdf	07 50 38.1	-2.5
KLMR				AMP		07 50 54.5	
	comp=Z,122nm,1.2s						
KLMR				eSKP		07 54 09.2	
KLMR				eSKKPbc	SKKPbc	08 04 06.5	+3.3
KLMR				eSS	SS	08 09 07.9	-32
KLMR				eSS	SS	08 09 07.9	-32
KLMR				LQ	LQ	08 34 57.8	
KLMR				LQ	LQ	08 34 57.8	
KLMR				LR	LR	08 43 12.8	
KLMR				AMP		08 46 20.9	
	comp=Z,17µm,19.5s						
H11N3	WAKE ISLAND Hy	126.61	273	T	T	10 09 56.6	
	baz=117,slow=75,SNR=3371						
H11N1	WAKE ISLAND Hy	126.62	273	T	T	10 09 57.7	
	baz=117,slow=75,SNR=1297						
H11N2	WAKE ISLAND Hy	126.62	273	T	T	10 09 59.4	
	baz=117,slow=75,SNR=7429						
WAKE	Wake Island	126.65	272	IAMs_20	IAMs_20	08 32 18.9	
	comp=Z,9µm,21.0s						
MBWA	Marble Bar	127.15	193	IAMs_20	IAMs_20	08 47 19.1	
	comp=Z,9µm,20.0s						
NEY	Neytrino	127.29	57d	iPKIKP	PKiKP	07 50 43.5	+0.2
NEY				MLR	MLR		
	comp=Z,9µm,20.0s						
KIV	Kislovodsk	127.38	56	i PKPdf	PKPdf	07 50 42.5	-0.3
	SNR=9.8						
KIV	Kislovodsk	127.38	56	i PKIKP	PKPdf	07 50 42.0	-0.8
KIV				e		07 52 42.0	
KIV				ePPP	PPP	07 55 24.7	
KIV				ePS	PS	08 02 47.0	-2.2
KIV				eSS	SS	08 09 50.3	-1.0
KIV				pmax	pmax		
	comp=Z,31nm,1.1s						
KIV	Kislovodsk	127.38	56	IAMs_20	IAMs_20	08 50 26.4	
	comp=Z,11µm,22.0s						
KBZ	Khabaz	127.50	56	PKP	PKPdf	07 50 42.2	-0.6
	comp=Z,17nm,1.1s,baz=242,slow=0.8,SNR=12						
VRH	Novokhopyorsk	127.58	47	i PKIKP	PKPdf	07 50 41.5	-1.2
VRH				ePS	PS	08 02 53.8	+3.5
VRH				pmax	pmax		
	comp=Z,50nm,1.3s						
VRH				MLR	MLR		
	comp=Z,18µm,21.0s						
GOF	Gofitskoye	127.80	55	⇑ePKIKP	PKPdf	07 50 43.2	-0.2
GOF				pmax	pmax		
	comp=Z,91nm,1.3s						
NCK	Nalchik	127.96	57	⇓iPKIKP	PKPdf	07 50 44.0	+0.2
ZEI	Tsey	128.07	58	i PKIKP	PKPdf	07 50 42.3	-2.0
GNI	Garni	128.23	61c	iPKIKP	PKPdf	07 50 44.5	-0.1
GNI	Garni	128.23	61	IAMs_20	IAMs_20	08 50 31.2	
	comp=Z,13µm,22.0s						
DGAR	Diego Garcia	128.56	132	IAMs_20	IAMs_20	08 39 53.9	
	comp=Z,12µm,20.0s						
FITZ	Fitzroy Crossi	128.60	201	PKP	PKPdf	07 50 45.0	-0.8
	comp=Z,39nm,0.7s,baz=193,slow=2.9,SNR=54						
TRNA	Turayna	129.37	82	PKPdf	PKPdf	07 50 46.4	-0.6
PRGR	Permogore	129.47	33	ePKIKP	PKiKP	07 50 46.4	-0.4
PRGR				e		07 52 54.2	
PRGR				pmax	pmax		
	comp=Z,147nm,1.4s						

GROC	Groznyy	129.51	57	i PKIKP	PKiKP	07 50 47.3	-0.2
GROC				e		07 52 52.6	
GROC				pmax	pmax		
	comp=Z,15nm,0.4s						
DOK	Doka	129.52	91	PKPdf	PKPdf	07 50 46.9	-0.6
	SNR=8.1						
SHMA	Al-Shehemyia	129.54	81	PKPdf	PKPdf	07 50 46.9	-0.4
DMTO	DMTO	129.84	92	PKPdf	PKPdf	07 50 47.5	-0.6
BILL	Bilibino	130.25	335d	i PKIKP	PKPdf	07 50 46.4	-1.0
BILL				i		07 51 00.3	
BILL				i		07 51 00.5	
BILL				i		07 53 04.4	
BILL				PPP	PPP	07 55 53.0	
BILL				ePS	PS	08 03 16.4	+3.4
BILL				eSS	SS	08 10 32.4	+7.5
BILL				pmax	pmax		
	comp=Z,41nm,1.1s						
BILL				MLR	MLR		
	comp=Z,9µm,18.0s						
BILL	Bilibino	130.25	335	IAMs_20	IAMs_20	08 49 15.0	
	comp=Z,9µm,20.0s						
SHAO	Shalim	130.55	92	PKPdf	PKPdf	07 50 48.9	-0.6
SHAO	Shalim	130.55	92	PKPdf	PKPdf	07 50 47.5	-2.0
MAK	Makhachkala	130.72	58	i P	Pdif	07 47 34.8	-4.9
MAK				i		07 50 49.3	
MAK				e		07 53 03.7	
MAK				ePPP	PPP	07 55 53.2	
MAK				eSS	SS	08 10 33.9	+1.6
MAK				pmax	pmax		
	comp=Z,251nm,1.7s						
KIRV	Kirov	131.77	37c	i PKIKP	PKPdf	07 50 50.5	0.0
UMZA	Um Al Zommool	132.02	86	PKPdf	PKPdf	07 50 51.5	-0.6
ASUD	Al Ashush, Dub	132.85	84	i PKPdf	PKPdf	07 50 53.5	-0.1
	SNR=12						
ALNE	Al Ain	133.01	85	i PKiKP	PKiKP	07 50 54.6	-0.5
	SNR=11						
FAQ	Al Faqa, Dubai	133.11	84	i PKPdf	PKPdf	07 50 54.0	-0.1
	SNR=8.0						
NAZ	Nazwa, Dubai	133.25	84	i PKPdf	PKPdf	07 50 54.2	-0.1
	SNR=14						
ASHO	Ashiyiah	133.49	84	i PKPdf	PKPdf	07 50 54.3	-0.6
	SNR=9.8						
HATD	Hatta, Dubai	133.60	84	i PKPdf	PKPdf	07 50 53.3	-1.7
	SNR=10						
UOSS	Minazif	133.70	84	PKPdf	PKPdf	07 50 53.6	-1.7
UOSS	Minazif	133.70	84	PKPdf	PKPdf	07 50 54.2	-1.1
UOSS	Minazif	133.70	84	IAMs_20	IAMs_20	08 50 21.0	
	comp=Z,16µm,21.0s						
SOHO	SOHO	133.71	85	i PKPdf	PKPdf	07 50 54.3	-0.9
	SNR=13						
SOHO	SOHO	133.71	85	PKPdf	PKPdf	07 50 54.2	-1.1
MSFE	Esma-Masafi	133.80	83	i PKPdf	PKPdf	07 50 55.2	-0.3
	SNR=5.7						
MDH	Madha	133.90	83	PKPdf	PKPdf	07 50 54.6	-1.0
MDH	Madha	133.90	83	PKPdf	PKPdf	07 50 54.8	-0.7
SHME	Shamm	134.01	82	i PKPdf	PKPdf	07 50 54.4	-1.4
	SNR=8.1						
BANOM	Banah	134.10	83	i PKPdf	PKPdf	07 50 55.8	-0.2
	SNR=7.7						
JAY	Jayapura	134.82	229	PKP	PKPdf	07 50 57.9	+0.1
	comp=Z,23nm,0.8s,baz=168,slow=6.3,SNR=11						
COCO	West Island	135.71	163	IAMs_20	IAMs_20	08 44 50.4	
	comp=Z,12µm,20.0s						
BATI	Baumata	136.64	202	PKP	PKPdf	07 51 01.0	-0.1
	comp=Z,128nm,0.8s,baz=342,slow=2.2,SNR=8.3						
BATI	Baumata	136.64	202	PKP	PKPdf	07 50 58.5	-2.6
SOEI	Soe	136.87	203	PKP	PKPdf	07 50 52.7	-8.9
ARU	Arti	137.04	39	i PKIKP	PKPdf	07 51 00.2	-0.2
ARU						07 53 42.8	
ARU				SSS	SSS	08 16 56.9	
ARU				MLR	MLR		
	comp=Z,32µm,22.0s						
SEY	Seymchan	137.56	332	PKhKP	PKPpre	07 50 55.1	
	comp=Z,5.6nm,0.6s,baz=165,slow=12,SNR=4.6						
SEY				PKP	PKiKP	07 51 02.5	-0.6
	comp=Z,57nm,0.9s,baz=76,slow=3.9,SNR=19						
SEY	Seymchan	137.56	332⇑	ePKIKP	PKPdf	07 50 57.6	-3.6
TIXI	Tiksi	137.73	351	PKhKP	PKPpre	07 50 51.2	
	comp=Z,7.2nm,0.8s,baz=24,slow=4.1,SNR=8.8						
TIXI				PKP	PKPdf	07 51 02.2	+0.9
	comp=Z,10nm,0.8s,baz=1.8,slow=1.9,SNR=7.3						
TIXI	Tiksi	137.73	351c	i PKIKP	PKPdf	07 51 00.2	-1.1
TIXI	Tiksi	137.73	351	IAMs_20	IAMs_20	08 52 38.3	
	comp=Z,11µm,22.0s						
PET	Petropavlovsk	137.75	316	ePKHKP	PKPpre	07 50 40.9	
PET				e		07 53 50.0	
PET				ePPS	PPS	08 05 56.4	
PET				eSS	SS	08 11 52.2	-4.1
PET	Petropavlovsk	137.75	316	IAMs_20	IAMs_20	08 39 23.8	
	comp=Z,13µm,22.0s						
AKTO	Aktyubinsk	137.91	47	PKHKP	PKPpre	07 50 50.9	
SVE	Sverdlovsk	138.03	38	i PKIKP	PKPdf	07 51 02.7	+0.4
SVE				e		07 53 50.5	
SVE				pmax	pmax		
	comp=Z,125nm,2.0s						
SVE				MLR	MLR		
	comp=E,23µm,24.0s						
SVE				MLR	MLR		
	comp=Z,29µm,24.0s						
GEYT	Alibeck	138.22	66	PKhKP	PKPpre	07 50 54.0	
	comp=Z,3.7nm,0.8s,baz=254,slow=14,SNR=3.8						
GEYT				PKP	PKPdf	07 51 03.1	-0.1
	comp=Z,12nm,0.8s,baz=38,slow=5.6,SNR=8.7						
PEA0B	Petropavlovsk-	138.30	317c	i PKIKP	PKPdf	07 51 03.4	+0.5
PETK	Petropavlovsk-	138.30	317	PKhKP	PKPpre	07 50 54.6	
	comp=Z,7.6nm,0.9s,baz=62,slow=6.6,SNR=6.5						
PETK				PKP	PKPdf	07 51 02.2	-0.7
	comp=Z,34nm,1.1s,baz=72,slow=9.5,SNR=8.1						
WBSI	Waikabubak, Su	138.38	196	PKP	PKPdf	07 51 02.6	-1.7
MMRI	Maumere	138.57	201	IAMs_20	IAMs_20	08 45 21.0	
	comp=Z,11µm,22.0s						
EDFI	Ende, Flores	138.62	200	PKP	PKPdf	07 50 55.4	-9.5
BNDI	Bandanaira	139.31	214	PKP	PKPdf	07 50 59.3	-6.7
AB31	Akbulak array	139.31	49	i PKHKP	PKPpre	07 50 54.5	
FAKI	Fak Fak	139.50	218	PKP	PKPdf	07 50 58.4	-8.0
FAKI	Fak Fak	139.50	218	IAMs_20	IAMs_20	08 44 13.9	
	comp=Z,14µm,22.0s						
PLAI	Plampang	139.53	194	PKP	PKPdf	07 50 58.8	-7.6
PLAI				PKP	PKiKP	07 51 05.2	-3.5
NRIK	Noril'sk	139.68	11	PKhKP	PKPpre	07 50 56.4	
	comp=Z,1.1nm,0.4s,baz=341,slow=5.3,SNR=4.6						
NRIK				PKP	PKPdf	07 51 05.1	+0.1
	comp=Z,12nm,1.0s,baz=312,slow=0.8,SNR=12						
TWSI	Taliwang, Sumb	139.80	193	PKP	PKPdf	07 51 00.9	-6.0
MA2	Magadan	139.80	328	PKP	PKPdf	07 51 06.1	+0.7
	comp=Z,42nm,0.9s,baz=34,slow=6.9,SNR=3.3						
MA2	Magadan	139.80	328c	i PKIKP	PKPdf	07 51 05.6	+0.2
MA2	Magadan	139.80	328	IAMs_20	IAMs_20	09 00 21.4	
	comp=Z,13µm,22.0s						
JAGI	Jajag, Banyuwa	140.50	189	IAMs_20	IAMs_20	08 52 59.7	
	comp=Z,7µm,20.0s						
SRBI	Singaraja	140.72	190	PKP	PKPdf	07 51 03.3	-5.2
GMJI	Gumukmas	140.78	188	PKP	PKPdf	07 51 04.0	-4.6
PCJI	Pacitan	141.06	184	PKP	PKPdf	07 51 03.8	-5.3
ABJI	Asem Bagus	141.15	189	PKP	PKPdf	07 51 09.6	+0.3
BLJI	Banyuglugur	141.28	188	PKP	PKPdf	07 51 03.7	-5.8
BLJI				PKP	PKiKP	07 51 04.4	-7.9
UGM	Wanagama	141.37	183	IAMs_20	IAMs_20	08 52 12.8	
	comp=Z,8µm,20.0s						
BSSI	Bau Bau, Buton	141.44	199	PKP	PKPdf	07 51 06.4	-3.5
CMJI	Cimerak	141.54	180	PKP	PKPdf	07 51 05.5	-4.5
CMJI				PKP	PKiKP	07 51 07.6	-5.2
SIJI	Sorong	141.74	219	PKhKP	PKPpre	07 51 04.5	
	comp=Z,72nm,0.6s,baz=73,slow=2.9,SNR=24						
SWI	Sorong	141.75	219	PKP	PKPdf	07 51 04.9	-5.5
CISI	Cisompet, Garu	141.76	179	PKP	PKPdf	07 51 06.6	-3.9
NGJI	Ngawi	141.86	185	PKP	PKPdf	07 51 10.1	-0.5
KMMI	Kalianget	141.92	189	PKP	PKPdf	07 51 07.6	-3.1
KPJI	Karang Pucung	141.99	181	PKP	PKPdf	07 51 05.6	-5.2
CNJI	Cibinong	141.99	178	PKP	PKPdf	07 51 06.3	-4.5
SMRI	Semarang	142.23	183	IAMs_20	IAMs_20	08 52 35.6	
	comp=Z,8µm,20.0s						
BKSI	Bulukumba	142.33	199	PKP	PKPdf	07 51 06.1	-5.3
GUMO	Guam	142.45	251	PKhKP	PKPpre	07 51 05.8	
	comp=Z,92nm,1.1s,baz=105,slow=7.9,SNR=2.2						
GUMO				PKP	PKPdf	07 51 10.5	-1.0
	comp=Z,69nm,0.8s,baz=144,slow=8.9,SNR=3.9						
GUMO	Guam	142.45	251	IAMs_20	IAMs_20	08 46 56.0	
	comp=Z,9µm,19.0s						
LEM	Lembang	142.49	178	PKhKP	PKPpre	07 51 07.0	
	comp=Z,144nm,0.5s,baz=140,slow=4.4,SNR=18						
LEM	Lembang	142.49	178	PKP	PKPdf	07 51 07.4	-4.5
CGJI	Cibinong	142.61	175	PKP	PKPdf	07 51 06.8	-5.1
DBJI	Dramaga	142.73	177	PKP	PKPdf	07 51 07.6	-4.6

KAPI	Kappang	142.73	199	PKhKP	PKPpre	07 51 07.3	
	comp=Z,62nm,0.7s,baz=206,slow=2.7,SNR=25						
KAPI	Kappang	142.73	199	IAMs_20	IAMs_20	08 53 28.2	
	comp=Z,11µm,22.0s						
KDI	Kendari	142.84	204	PKP	PKPdf	07 51 09.5	-2.8
TNG	Tangerang	143.10	177	PKP	PKPdf	07 51 10.6	-2.2
TNG				PKP	PKPbc	07 51 09.4	-0.2
SBJI	Serang	143.12	176	PKP	PKPab	07 51 08.7	+0.4
BNSI	Bone	143.21	199	PKP	PKPbc	07 51 09.9	0.0
BWJI	Bawean	143.26	187	PKP	PKPab	07 51 09.1	+0.3
SANI	Sanana	143.28	210	PKP	PKPab	07 51 08.7	-0.2
KASI	Kota Agung	143.58	173	PKP	PKPab	07 51 10.2	+0.1
BLSI	Bandar Lampung	143.81	174	PKP	PKPab	07 51 10.4	-0.6
LBMI	Labuha	143.84	213	PKP	PKPab	07 51 10.8	-0.3
LWLI	Liwa	144.03	172	PKP	PKPab	07 51 11.5	-0.5
KLI	Kotabumi	144.27	174	PKP	PKPab	07 51 12.2	-0.5
KLSI		144.43	173	PKP	PKPab	07 51 12.9	-0.4
MNAI	Manna	144.54	170	PKP	PKPbc	07 51 14.2	+0.3
BRVK	Borovoye	144.55	40c	i PKIKP	PKPbc	07 51 12.7	-0.1
BRVK	Borovoye	144.55	40		PKPdf	07 51 14.2	+0.1
MDSI	Maura Dua	144.57	172	PKP	PKPab	07 51 13.2	-0.6
TTSI	Tana Toraja	144.59	200	PKP	PKPab	07 51 13.2	-0.7
BVAR	Borovoye Array	144.62	40	PKP	PKPbc	07 51 13.2	+0.2
	comp=Z,96nm,0.7s,baz=236,slow=11,SNR=159						
BHUJ	Bhuj	144.67	93⇑	i P	PKPbc	07 51 14.2	+0.1
BHUJ				IAmb	IAmb	07 51 16.7	
	comp=Z,231nm,0.8s						
GOA	Goa	144.76	108⇑	i P	PKPbc	07 51 14.5	0.0
GOA				IAmb	IAmb	07 51 17.6	
	comp=Z,323nm,0.9s						
PALK	Pallekele	144.91	126	PKP	PKPab	07 51 14.5	-0.6
	comp=Z,306nm,1.0s,baz=349,slow=3.6,SNR=76						
PALK	Pallekele	144.91	126		PKPab	07 51 14.9	-0.3
TNTI	Ternate	145.14	214	PKP	PKPbc	07 51 14.3	-1.5
TNTI	Ternate	145.14	214		PKPbc	07 51 14.4	-1.5
LHSI	Lahat	145.14	171	PKP	PKPbc	07 51 15.5	-0.3
KSI	Kapahiang	145.18	170	PKP	PKPbc	07 51 15.9	-0.2
KBKI	Kotabaru	145.23	193	PKP	PKPbc	07 51 15.6	-0.5
BBKI	Banjar Baru	145.32	191	PKP	PKPbc	07 51 15.4	-1.0
LUWI	Luwuk	145.49	206	PKP	PKPdf	07 51 16.7	-0.3
PPSI	Pulau Pagai	145.56	165	PKP	PKPab	07 51 18.1	+0.7
MASI	Maura Aman, Be	145.62	169	PKP	PKPdf	07 51 16.5	-0.8
YAK	Yakutsk	145.96	342c	i PKIKP	PKPdf	07 51 14.8	-1.4
YAK				e		07 54 38.0	
YAK				pmax	pmax		
	comp=Z,707nm,1.0s						
YAK				pmax	pmax		
	comp=N,68nm,1.3s						
YAK				pmax	pmax		
	comp=E,90nm,1.1s						
YAK				pmax	pmax		
	comp=Z,3µm,3.0s						
YAK				pmax	pmax		
	comp=N,2µm,3.3s						
YAK				pmax	pmax		
	comp=E,490nm,2.7s						
PMBI	Palembang	146.18	173	PKP	PKPdf	07 51 17.2	-0.9
PMBI	Palembang	146.18	173	IAMs_20	IAMs_20	08 53 29.3	
	comp=Z,12µm,21.0s						
KUR	Kuril'sk	146.25	306c	i PKIKP	PKPdf	07 51 16.7	-0.5
KUR				i		07 51 19.3	
KUR				e		07 54 51.6	
KUR				eSS	SS	08 13 37.8	+2.4
KUR				eSSS	SSS	08 19 03.0	
KUR				pmax	pmax		
	comp=E,1µm,2.5s						
KUR				pmax	pmax		
	comp=Z,2µm,2.5s						
KUR				pmax	pmax		
	comp=N,402nm,1.5s						
KUR				pmax	pmax		
	comp=Z,23µm,7.3s						
KUR				pmax	pmax		
	comp=E,7µm,3.4s						
KUR				pmax	pmax		
	comp=N,5µm,2.7s						
POO	Poona	146.29	103⇑	i P	PKPdf	07 51 18.4	+0.2
POO				IAmb	IAmb	07 51 21.7	
	comp=Z,250nm,0.9s						
PBKI	Pangkalan Bun	146.46	186	PKP	PKPbc	07 51 19.3	-0.6
KMSI	Cibinong	146.49	209	PKP	PKPdf	07 51 18.0	-0.7
KRJI	Kerinci	146.51	167	PKP	PKPdf	07 51 18.1	-0.7
KBL	Kabul	146.70	73	PKP2	PKPdf	07 51 19.3	+0.7
KBL	Kabul	146.70	73		PKPdf	07 51 19.3	+0.7
SISI	Saibi	146.72	163	PKP	PKPdf	07 51 19.3	+0.3
TAS	Tashkent	146.86	61	PKP2	PKPbc	07 51 19.5	-0.9
TAS	Tashkent	146.86	61		PKPbc	07 51 19.5	-0.9
JASL	Jaisalmer	146.90	87	eP	PKPbc	07 51 21.0	+0.1
CHGR	Chuyangaron	146.92	66		PKPdf	07 51 18.9	+0.1
GTOI	Gorontalo	146.93	207	PKP	PKPdf	07 51 18.7	-0.7
PPBI	Pangkal Pinang	147.05	176	PKP	PKPdf	07 51 18.4	-1.2
BRLS	Borolday	147.05	57	ePKP	PKPdf	07 51 17.9	-0.9
	baz=58						
BRLS	Borolday	147.05	57	ePKIKP	PKPdf	07 51 17.8	-0.9
BRZS	Berezniki	147.12	44	ePKP	PKPdf	07 51 17.1	-1.6
	baz=44						
BRZS				ePP	PP	07 54 43.5	-2.7
	baz=44						
BRZS	Berezniki	147.12	44	ePKIKP	PKPdf	07 51 17.0	-1.6
BRZS				e		07 54 43.5	
MRSI	Marisa	147.19	205	PKP	PKPdf	07 51 17.3	-2.5
IUG	Iuzhnay	147.32	59	ePKP	PKPdf	07 51 17.5	-1.9
	baz=59						
IUG				ePP	PP	07 54 46.3	-1.6
	baz=59						
IUG	Iuzhnay	147.32	59	ePKIKP	PKPdf	07 51 17.4	-1.9
IUG				e		07 54 46.3	
JMBI	JAMBI	147.32	171	PKP	PKPdf	07 51 19.0	-1.1
PDSI	Padang	147.45	165	PKP	PKPdf	07 51 19.5	-0.8
KK31	Karatay Array	147.53	57	i PKIKP	PKPdf	07 51 19.0	-0.5
KK31	Karatay Array	147.53	57		PKPdf	07 51 19.9	+0.4
KKAR	Karatay Array	147.53	57	PKIKP	PKPdf	07 51 19.6	+0.1
KKAR	Karatay Array	147.53	57		PKPdf	07 51 19.6	+0.1
KKAR	Karatay Array	147.53	57		PKPdf	07 51 20.2	+0.6
MPSI	Mapaga	147.76	202	PKP	PKPdf	07 51 20.3	-0.5
SMKI	Samarinda	147.77	196	PKP	PKPdf	07 51 21.3	+0.5
MTKI	Muara Teweh, K	147.77	192	PKP	PKPdf	07 51 20.5	-0.3
GAR	Garm	147.81	65		PKPdf	07 51 21.1	+0.8
NKL	Nikolayevsk	147.81	323	i PKIKP	PKPdf	07 51 20.3	+0.7
NKL				e		07 54 49.0	
NKL				eSS	SS	08 13 51.2	-0.9
PPI	Padang Panjang	147.87	165	PKP	PKPdf	07 51 19.7	-1.3
YUK	Yuzh-Kuril'sk	147.89	305	i PKHKP	PKPpre	07 51 13.3	
YUK				i		07 54 51.5	
YUK				i PPP	PPP	07 58 12.5	
YUK				i SS	SS	08 13 57.0	+2.9
YUK				pmax	pmax		
	comp=Z,2µm,1.3s						
DZA	Taraz	148.16	57	ePKP	PKPdf	07 51 20.3	-0.4
	baz=57						
DZA	Taraz	148.16	57	ePKIKP	PKPdf	07 51 20.2	-0.4
MDRS	Chennai	148.46	118⇑	i P	PKPdf	07 51 21.9	+0.1
MDRS				IAmb	IAmb	07 51 28.3	
	comp=Z,158nm,0.8s						
DSRI	Dabo	148.57	172	PKP	PKPdf	07 51 20.7	-1.4
BKNI	Bangkinang	148.78	165	PKP	PKPdf	07 51 20.9	-1.6
BKNI	Bangkinang	148.78	165	PKPdf	PKPdf	07 51 20.4	-2.1
BKNI				PKPbc	PKPbc	07 51 25.1	-1.2
BKNI				IAMs_20	IAMs_20	08 52 28.6	
	comp=Z,13µm,21.0s						
GSI	Gunungsitoli	148.79	158	PKP	PKPdf	07 51 21.7	-0.8
MNSI	Mandailing Nat	148.88	162	PKP	PKPdf	07 51 21.2	-1.4
UGL	Uglegorsk	148.90	315	ePKHKP	PKPpre	07 51 20.3	
UGL				pmax	pmax		
	comp=Z,9µm,11.0s						
STKI	Sintang	149.22	186	PKP	PKPdf	07 51 23.0	-0.2
YSS	Yuzh-Sakhalins	149.23	311	i PKHKP	PKPpre	07 51 21.8	
YSS				e		07 54 59.0	
YSS				eSS	SS	08 14 02.8	-5.9
YSS				pmax	pmax		
	comp=Z,360nm,1.4s						
YSS				MLR	MLR		
	comp=Z,6µm,23.0s						
YSS	Yuzh-Sakhalins	149.23	311	IAMs_20	IAMs_20	08 51 24.4	
	comp=Z,14µm,22.0s						
SNSI	Sinabang, Aceh	149.40	155	PKP	PKPdf	07 51 25.2	+1.8
SBSI	Sibolga	149.41	161	PKP	PKPdf	07 51 21.5	-2.0
BTLS	Baital	149.60	53	ePKP	PKPdf	07 51 21.9	-0.9
	baz=52						
BTLS				ePP	PP	07 54 57.9	-3.0
	baz=52						
BTLS	Baital	149.60	53	ePKHKP	PKPpre	07 51 21.8	
BTLS				e		07 54 57.8	

HYB	Hyderabad	149.62	109	i PKP	PKPdf	07 51 22.0	-1.7
	comp=Z,640nm,1.0s						
HYB				esPKP		07 51 47.0	
HYB				ePP	PP	07 55 04.0	+2.5
HYB				ePPP	PPP	07 58 28.0	
HYB				eSKKS		08 01 40.0	
HYB	Hyderabad	149.62	109⇑	eP	PKPdf	07 51 23.4	-0.3
HYB				IAmb	IAmb	07 51 29.0	
	comp=Z,354nm,1.1s						
JMP	Maruseppu	149.66	305	P	PKPdf	07 51 23.3	+0.3
EKS2	Erkin-Say	149.97	57	P	PKPdf	07 51 24.1	+0.4
	SNR=13						
AJM	Ajmer	149.99	90	eP	PKPdf	07 51 23.9	-0.1
AML	Almayashu	150.01	58	P	PKiKP	07 51 29.4	-0.5
	SNR=17						
AML	Almayashu	150.01	58	i PKPdf	PKPdf	07 51 24.2	+0.2
	SNR=77						
ASAJ	Asahikawa	150.17	306	PKP	PKPdf	07 51 22.9	-0.8
	comp=Z,23nm,1.0s,baz=303,slow=5.5,SNR=22						
ASAJ				PKPbc	PKPbc	07 51 27.7	-1.1
	comp=Z,69nm,0.9s,baz=166,slow=1.9,SNR=16						
ASAJ	Asahikawa	150.17	306	P	PKPbc	07 51 26.6	-2.2
KURBB	Kurchatov Arra	150.22	40	PKP	PKPdf	07 51 22.9	-0.6
	comp=Z,16nm,1.1s,baz=298,slow=2.2,SNR=17						
KURBB				PKPbc	PKPbc	07 51 28.8	+0.1
	comp=Z,35nm,0.7s,baz=305,slow=3.0,SNR=33						
KURBB	Kurchatov Arra	150.22	40	PKIKP	PKPdf	07 51 22.5	-1.1
KURK	Kurchatov	150.22	40c	i PKIKP	PKPdf	07 51 23.2	-0.4
ERM	Erimo	150.23	302c	i PKIKP	PKPdf	07 51 23.8	0.0
JEM	Erimo	150.23	302	P	PKiKP	07 51 29.4	-0.4
JWK2	Keihoku	150.31	308	P	PKPbc	07 51 28.4	-0.7
USP	Ospenovka	150.36	56	P	PKPdf	07 51 24.1	0.0
	SNR=8.6						
SGDS	Sogindy	150.41	55	ePKP	PKPdf	07 51 22.7	-1.6
	baz=55						
SGDS				ePP	PP	07 55 03.9	-1.9
	baz=55						
JCJ	Chichijima	150.41	271	PKPbc	PKPbc	07 51 28.8	-1.1
	comp=Z,109nm,0.7s,baz=202,slow=7.4,SNR=4.2						
TPTI		150.49	156	PKP	PKPdf	07 51 23.9	-1.3
AAK	Ala-Archa	150.49	57	P	PKPdf	07 51 24.7	+0.2
	SNR=9.8						
AAK	Ala-Archa	150.49	57	i PKPdf	PKPdf	07 51 24.6	+0.1
	SNR=50						
AAK	Ala-Archa	150.49	57c	i PKIKP	PKPdf	07 51 24.6	+0.1
RPSI	Rantau Prapat	150.51	160		PKPdf	07 51 24.1	-1.1
UCH	Uchtor	150.59	58	P	PKPdf	07 51 25.5	+0.4
	SNR=22						
CHMS	Chumysh	150.60	56	P	PKiKP	07 51 30.3	-0.3
	SNR=26						
PSI	Prapat	150.61	160	PKP	PKPdf	07 51 24.1	-1.4
	comp=Z,12nm,0.8s,baz=200,slow=2.9,SNR=20						
PSI				PKPbc	PKPbc	07 51 29.8	-1.1
	comp=Z,161nm,0.8s,baz=162,slow=2.5,SNR=67						
KSM	Kuching	150.69	184	P	PKPdf	07 51 26.0	+0.5
KBK	Karagaybulak	150.81	57	P	PKPbc	07 51 30.9	+0.2
	SNR=19						
TKM2	Tokmak 2	151.22	56	P	PKPdf	07 51 25.6	-0.1
	SNR=12						
TKM2	Tokmak 2	151.22	56	PKIKP	PKPdf	07 51 25.2	-0.5
SEM	Semipalatinsk	151.27	39⇑	i PKP	PKPdf	07 51 23.9	-1.7
	baz=39						
SEM				ePP	PP	07 55 05.9	-4.5
	baz=39						
SEM	Semipalatinsk	151.27	39c	i PKIKP	PKPdf	07 51 23.8	-1.7
SEM				e		07 55 05.8	
JEW	Eniwo	151.29	304	P	PKPbc	07 51 30.3	-1.2
ZALV	Zalesovo Beam	151.31	30	PKP	PKPdf	07 51 24.3	-0.8
	comp=Z,13nm,0.8s,baz=273,slow=2.5,SNR=22						
ZALV				PKPbc	PKPbc	07 51 30.4	-0.8
	comp=Z,123nm,0.5s,baz=298,slow=3.1,SNR=80						
GRNR	Gornyy	151.31	322⇑	i PKIKP	PKPbc	07 51 31.4	+0.1
GRNR				pmax	pmax		
	comp=Z,40nm,0.8s						
DAV	Davao City (W)	151.44	217	PKP	PKPdf	07 51 26.7	+0.1
	comp=Z,117nm,0.4s,baz=207,slow=2.3,SNR=1.2						
DAV				PKPbc	PKiKP	07 51 34.2	+1.1
	comp=Z,185nm,0.4s,baz=49,slow=7.2,SNR=6.9						
DAV	Davao City (W)	151.44	217	IAMs_20	IAMs_20	08 54 20.3	
	comp=Z,10µm,22.0s						
KUU	Kurty	151.49	54⇑	i PKP	PKPdf	07 51 23.9	-2.0
	baz=54						
KUU				ePP	PP	07 55 08.3	-3.6
	baz=54						
KUU	Kurty	151.49	54c	i PKIKP	PKPdf	07 51 23.8	-2.0
KUU				e		07 55 08.2	
SBUM	Sibu	151.50	188	P	PKPdf	07 51 27.0	+0.3
ULHL	Ulahol	151.84	57	P	PKPdf	07 51 26.4	-0.3
	SNR=9.9						
JOT	Ohata	151.90	301	P	PKPbc	07 51 31.5	-1.4
CHKK	Chushkaly	151.95	54	ePKP	PKPdf	07 51 24.7	-1.9
	baz=54						
JTM	Tenmabayashi	152.00	300	P	PKPbc	07 51 32.2	-1.0
KUDL	Kundal	152.01	87	eP	PKPdf	07 51 26.8	-0.2
JOM	Ohasama	152.03	297	P	PKPbc	07 51 32.1	-1.2
AAA	Alma-Ata	152.08	55	ePKP	PKPdf	07 51 25.8	-1.1
	baz=55						
AAA	Alma-Ata	152.08	55	ePKIKP	PKPdf	07 51 25.7	-1.1
KSH	Kashi	152.14	63	PKPbc	PKPdf	07 51 26.3	-0.8
KSH				pPKP	pPKPdf	07 51 38.2	-0.9
KSH				sPKP		07 51 39.9	
KSH				PKS	PP	07 54 59.6	-16
KSH				PP	PP	07 55 14.8	-1.1
KSH				SKKS		08 01 59.9	
KSH				SS	SS	08 14 36.1	-5.9
KSH				AMB	AMB		
	comp=Z,11µm,9.3s						
KSH				LR	LR		
	comp=Z,11µm,22.0s						
KSH				LR	LR		
	comp=Z,19µm,21.3s						
KSH				LR	LR		
	comp=Z,28µm,21.3s						
TNSS	Tian-Shan	152.15	55	ePKP	PKPdf	07 51 25.1	-2.3
	baz=55						
MDOK	Medeo	152.19	55	ePKP	PKPdf	07 51 23.9	-3.2
	baz=55						
MDOK				ePP	PP	07 55 13.4	-2.6
	baz=55						
MDOK	Medeo	152.19	55	ePKIKP	PKPdf	07 51 23.8	-3.2
MDOK				e		07 55 13.4	
LHMI	Lhok Sumawe	152.23	155	IAMs_20	IAMs_20	08 52 03.0	
	comp=Z,13µm,22.0s						
JSH	Shimam	152.34	304	P	PKPbc	07 51 33.6	-0.3
JRMM	Jerantut	152.53	167	P	PKPdf	07 51 28.0	-0.3
DHRM	DHARAMSHALA	152.53	79⇑	i P	PKPdf	07 51 28.5	+0.4
DHRM				IAmb	IAmb	07 51 38.3	
	comp=Z,55nm,0.8s						
DHRM				i x	x	07 55 17.4	
TDK	Taldyqorghan	152.55	51	ePKP	PKPdf	07 51 25.9	-1.5
	baz=51						
TDK				ePP	PP	07 55 15.1	-2.7
	baz=51						
TDK	Taldyqorghan	152.55	51	ePKIKP	PKPdf	07 51 25.8	-1.5
TDK				e		07 55 15.0	
JMM	Marumori	152.59	293	P	PKPbc	07 51 33.0	-1.6
NDI	New Delhi	152.75	87	eP	PKPdf	07 51 27.3	-0.9
IPM	Ipoh	152.79	163	P	PKPdf	07 51 28.0	-0.7
BOD	Bodaibo	152.82	354	ePKIKP	PKPdf	07 51 26.2	-1.1
BOD				pmax	pmax		
	comp=Z,513nm,1.4s						
SPMM	Sapulut	152.91	198	P	PKPdf	07 51 28.0	-0.9
SATY	Saty	153.17	55⇑	i PKP	PKPdf	07 51 26.3	-2.2
	baz=55						
SATY				ePP	PP	07 55 19.8	-1.7
	baz=55						
SATY	Saty	153.17	55c	i PKIKP	PKPdf	07 51 26.2	-2.2
SATY				e		07 55 19.8	
JYT	Yasato	153.18	290	P	PKiKP	07 51 36.6	+0.5
KPKS	Kokpek	153.24	54⇑	i PKP	PKPdf	07 51 26.7	-1.9
	baz=54						
KPKS				ePP	PP	07 55 20.2	-1.7
	baz=54						
KPKS	Kokpek	153.24	54c	i PKIKP	PKPdf	07 51 26.6	-1.9
KPKS				e		07 55 20.2	
JYA	Atsumi	153.36	295	P	PKPbc	07 51 36.0	-0.3
KULM	Kulim	153.47	162	P	PKPdf	07 51 29.0	-0.6
ZEA	Zeya	153.47	335	i PKIKP	PKPdf	07 51 27.4	-1.0
ZEA				e		07 55 22.0	
ZEA				e		07 58 56.0	
ZEA				e		08 14 50.7	
ZEA				pmax	pmax		
	comp=Z,30nm,1.6s						
ZEA				pmax	pmax		
	comp=E,700nm,8.6s						

ZEA				pmax	pmax		
	comp=N,800nm,6.6s						
ZEA				pmax	pmax		
	comp=Z,4μm,7.8s						
ZEA				pmax	pmax		
	comp=E,800nm,7.4s						
ZEA				pmax	pmax		
	comp=N,1μm,8.9s						
ZEA				pmax	pmax		
	comp=Z,2μm,7.7s						
UZB	**Uzynbulak**	**153.58**	**54**	⇑*i*PKP	**PKPdf**	**07 51 27.1**	**-2.1**
	baz=54						
UZB				*e*PP	**PP**	**07 55 20.6**	**-3.2**
	baz=54						
UZB	**Uzynbulak**	**153.58**	**54**	*c i*PKIKP	**PKPdf**	**07 51 27.0**	**-2.1**
UZB				*e*		07 55 20.6	
VIS	**Vishakhapatnam**	**153.61**	**114**	⇑*i*x	**PKPdf**	**07 51 24.7**	**-4.9**
DDI	**Dehra Dun**	**153.78**	**83**	⇑*i*P	**PKPdf**	**07 51 30.7**	**+1.1**
DDI				IAmb	IAmb	07 51 40.5	
	comp=Z,228nm,1.1s						
PDGK	**Podgornoye**	**153.84**	**54**	PKIKP	**PKPdf**	**07 51 28.1**	**-1.3**
SHLS	**Shalkode**	**153.88**	**54**	⇑*i*PKP	**PKPdf**	**07 51 28.3**	**-1.3**
	baz=54						
SHLS				*e*PP	**PP**	**07 55 23.8**	**-1.7**
	baz=54						
SHLS	**Shalkode**	**153.88**	**54**	*c i*PKIKP	**PKPdf**	**07 51 28.2**	**-1.3**
SHLS				*e*		07 55 23.8	
TEY	**Ternei**	**153.92**	**311**	⇑*e*PKIKP	**PKPdf**	**07 51 28.6**	**-0.7**
TEY				pmax	pmax		
	comp=Z,10.0nm,2.0s						
TEY				pmax	pmax		
	comp=E,100nm,9.1s						
TEY				pmax	pmax		
	comp=Z,200nm,10.0s						
JOD2	**Odawara 2**	**154.10**	**288**	P	**PKPdf**	**07 51 27.4**	**-2.5**
JRY	**Ryogami san**	**154.23**	**290**	P	**PKPdf**	**07 51 29.0**	**-1.1**
MK31	**Makanchi Array**	**154.27**	**44**	*c i*PKIKP	**PKPdf**	**07 51 28.7**	**-1.1**
MKAR	**Makanchi Array**	**154.27**	**44**	PKP	**PKPdf**	**07 51 28.8**	**-1.0**
	comp=Z,6.9nm,0.9s,baz=349,slow=1.2,SNR=15						
MKAR				PKPbc	**PKPbc**	**07 51 37.8**	**-0.3**
	comp=Z,40nm,1.0s,baz=303,slow=1.3,SNR=23						
MKAR				PKPab	**pPKPbc**	**07 51 50.8**	**+0.7**
	comp=Z,94nm,0.8s,baz=306,slow=2.3,SNR=18						
KLR	**Kul'dur**	**154.66**	**323**	PKP	**PKPdf**	**07 51 28.9**	**-1.3**
	comp=Z,14nm,1.0s,baz=340,slow=4.6,SNR=12						
KLR				PKPbc	**PKPbc**	**07 51 37.9**	**-0.9**
	comp=Z,9.9nm,0.9s,baz=336,slow=3.7,SNR=8.9						
KLR				PKPab	**pPKPbc**	**07 51 51.9**	**+1.2**
	comp=Z,17nm,0.7s,baz=58,slow=2.8,SNR=4.1						
MJAR	**Matsushiro Arr**	**154.76**	**291**	PKP	**PKPdf**	**07 51 29.1**	**-1.7**
	comp=Z,11nm,1.0s,baz=128,slow=1.0,SNR=14						
MJAR				PKPab	**sPKPbc**	**07 51 55.2**	**-0.2**
	comp=Z,14nm,0.7s,baz=57,slow=0.7,SNR=7.6						
MAJO	**Matsushiro**	**154.76**	**291**	*c i*PKIKP	**PKPdf**	**07 51 29.2**	**-1.6**
MAJO	**Matsushiro**	**154.76**	**291**	IAMs_20	IAMs_20	09 15 36.3	
	comp=Z,10μm,22.0s						
MAT	**Matsushiro**	**154.76**	**291**	PKP	**PKPdf**	**07 51 28.9**	**-1.9**
MAT	**Matsushiro**	**154.76**	**291**	P	**PKPdf**	**07 51 29.4**	**-1.4**
DGZ	**Jazzator, Alta**	**155.39**	**34**	*c i*PKIKP	**PKPdf**	**07 51 31.0**	**-0.4**
ZSN	**Zaisan**	**155.43**	**41**	*e*PKP	**PKPdf**	**07 51 33.9**	**+2.5**
	baz=41						
ZSN				*e*PP	**PP**	**07 55 35.8**	**+2.1**
	baz=41						
ZSN	**Zaisan**	**155.43**	**41**	*e*PKIKP	**PKPdf**	**07 51 33.8**	**+2.5**
ZSN				*e*		07 55 35.8	
JGN	**Niukaw**	**155.50**	**290**	P	**PKPdf**	**07 51 31.6**	**-0.3**
INU	**Inuyama**	**155.79**	**288**	IAMs_20	IAMs_20	08 49 32.5	
	comp=Z,9μm,21.0s						
PBA	**Port Blair**	**155.90**	**139**	⇑*i*P	**PKPdf**	**07 51 33.0**	**+0.1**
DGPR	**DIGLIPUR**	**157.23**	**137**	⇑*i*P	**PKPdf**	**07 51 34.9**	**+0.3**
DGPR				IAmb	IAmb	07 51 37.1	
	comp=Z,186nm,1.2s						
USA0B	**Ussuriysk Arra**	**157.26**	**312**	PKIKP	**PKPdf**	**07 51 32.8**	**-1.0**
USA0B	**Ussuriysk Arra**	**157.26**	**312**	PKPdf	**PKPdf**	**07 51 32.8**	**-1.0**
USRK	**Ussuriysk Ar.**	**157.26**	**312**	PKP	**PKPdf**	**07 51 32.3**	**-1.5**
	comp=Z,2.5nm,0.9s,baz=180,slow=1.5,SNR=9.0						
USRK				PKPab	**PKPab**	**07 52 04.0**	**-0.9**
	comp=Z,14nm,0.9s,baz=64,slow=2.7,SNR=6.5						
VLA	**Vladivostok**	**157.81**	**310**	*c i*PKIKP	**PKPdf**	**07 51 33.6**	**-0.9**
DANN	**Dangsing**	**158.30**	**90**	*e*P	**PKPdf**	**07 51 34.6**	**-1.4**
IRK	**Irkutsk**	**158.43**	**7**	*e*PKIKP	**PKPdf**	**07 51 34.0**	**-1.0**
IRK				*e*		07 55 48.9	
IRK				pmax	pmax		
	comp=Z,768nm,2.3s						
MOY	**Mondy**	**158.50**	**13**	*e*PKIKP	**PKPdf**	**07 51 35.4**	**+0.1**
MOY				pmax	pmax		
	comp=Z,337nm,2.5s						
MSHR	**Mys Shultsa**	**158.53**	**309**	*c i*PKIKP	**PKPdf**	**07 51 34.4**	**-1.0**
MDJ	**Mudanjiang**	**158.53**	**316**	PKP	**PKPdf**	**07 51 33.3**	**-2.1**
CIT	**Chita**	**158.57**	**352**	*e*PKIKP	**PKPdf**	**07 51 34.9**	**-0.3**
CIT				*e*		07 51 48.7	
CIT				*e*		07 52 11.2	
CIT				*e*		07 55 58.4	
CIT				pmax	pmax		
	comp=Z,1μm,2.5s						
BOK	**Bokaro**	**158.68**	**104**	⇑*i*P	**PKPdf**	**07 51 36.1**	**-0.1**
BOK				IAmb	IAmb	07 51 39.2	
	comp=Z,39nm,1.0s						
TLY	**Talaya**	**158.91**	**9**	*ce*PKIKP	**PKPdf**	**07 51 34.9**	**-0.7**
TLY				*e*		07 51 52.0	
TLY				*e*		07 52 12.0	
TLY				*e*		07 55 49.4	
TLY				*e*PPS	PPS	08 09 19.0	
TLY				*e*SS	SS	08 15 56.3	+4.0
TLY				pmax	pmax		
	comp=Z,185nm,2.5s						
GKN	**Gorkha**	**158.98**	**92**	*e*P	**PKPdf**	**07 51 34.9**	**-1.7**
GKN	**Gorkha**	**158.98**	**92**	*e*P	**PKPdf**	**07 51 35.6**	**-1.0**
WMQ	**Urumqi**	**159.06**	**46**	PKP	**PKPdf**	**07 51 36.0**	**-0.1**
WMQ				pPKP	pPKPdf	07 51 47.8	-0.4
WMQ				PKPab	**PKPab**	**07 52 13.8**	**+0.9**
WMQ				PKS	PP	07 55 09.2	-45
WMQ				PP	PP	07 55 53.2	-0.7
WMQ				AMB	AMB		
	comp=Z,4μm,9.3s						
WMQ				LR	LR		
	comp=Z,17μm,23.9s						
WMQ				LR	LR		
	comp=Z,14μm,19.9s						
WMQ				LR	LR		
	comp=Z,20μm,23.9s						
DMN	**Daman**	**159.28**	**93**	*e*P	**PKPdf**	**07 51 35.5**	**-1.6**
KKN	**Kakani**	**159.48**	**93**	*e*P	**PKPdf**	**07 51 35.6**	**-1.7**
	comp=Z,109nm,1.2s						
PKIN	**Phulchoki**	**159.53**	**93**	*e*P	**PKPdf**	**07 51 35.6**	**-1.8**
	comp=Z,120nm,1.3s						
PKI	**Pulchoki**	**159.53**	**93**	*e*P	**PKPdf**	**07 51 35.5**	**-2.0**
	comp=Z,210nm,1.6s						
HIA	**Hailar**	**159.79**	**338**	PKIKP	**PKPdf**	**07 51 35.5**	**-1.2**
HIA						07 52 15.6	
HIA	**Hailar**	**159.79**	**338**	PKPdf	**PKPdf**	**07 51 35.5**	**-1.2**
HIA				PKPab	**PKPab**	**07 52 15.6**	**-0.2**
HIA	**Hailar**	**159.79**	**338**	IAMs_20	IAMs_20	09 17 34.9	
	comp=Z,11μm,20.0s						
GUN	**Gumba**	**160.02**	**93**	*e*P	**PKPdf**	**07 51 35.9**	**-2.2**
	comp=Z,1μm,2.1s						
ZAK	**Zakamensk**	**160.13**	**10**	*e*PKIKP	**PKPdf**	**07 51 36.1**	**-1.1**
ZAK				pmax	pmax		
	comp=Z,45nm,1.7s						
CN2	**Changchun**	**161.44**	**319**	*e*PKP	**PKPdf**	**07 51 32.9**	**-5.7**
CN2				*e*PP	**PP**	**07 56 04.2**	**-2.2**
CN2				SKKS		08 02 47.1	
CN2				*e*SS	**SS**	**08 16 14.7**	**-5.6**
CN2				AMB	AMB		
	comp=Z,4μm,10.0s						
CN2				LR	LR		
	comp=Z,5μm,21.0s						
CN2				LR	LR		
	comp=Z,13μm,21.0s						
CN2				LR	LR		
	comp=Z,13μm,22.0s						
KSRS	**Korea Array**	**162.70**	**297**	PKP	**PKPdf**	**07 51 39.0**	**-1.2**
	comp=Z,6.0nm,0.8s,baz=119,slow=1.5,SNR=4.3						
KSRS				PKPab	**PKPab**	**07 52 29.1**	**+0.2**
	comp=Z,8.3nm,0.8s,baz=67,slow=2.3,SNR=5.3						
SONM	**Songino Array**	**163.00**	**5**	PKP	**PKPdf**	**07 51 39.2**	**-1.0**
	comp=Z,3.5nm,0.8s,baz=45,slow=0.2,SNR=6.4						
SONM				PKPab	**PKPab**	**07 52 29.3**	**-0.6**
	comp=Z,31nm,1.0s,baz=329,slow=2.3,SNR=8.2						
SONM				PP	**PP**	**07 56 13.7**	**-0.4**
	comp=Z,25nm,1.1s,baz=307,slow=3.2,SNR=5.9						
ULN	**Ulaanbaatar**	**163.01**	**3**	*c i*PKIKP	**PKPdf**	**07 51 38.4**	**-1.9**
SNY	**Shenyang**	**163.73**	**316**	⇑PKP	**PKPdf**	**07 51 40.2**	**-0.7**
SNY				PP	**PP**	**07 56 19.3**	**+0.6**
SNY				AMB	AMB		
	comp=Z,9μm,12.0s						
SNY				LR	LR		
	comp=Z,7μm,24.5s						
SNY				LR	LR		
	comp=Z,7μm,20.8s						
SNY				LR	LR		
	comp=Z,20μm,24.3s						
SHL	**Shillong**	**164.38**	**106**	⇑*i*P	**PKPdf**	**07 51 41.4**	**-0.9**
SHL				IAmb	IAmb	07 51 43.5	
	comp=Z,278nm,2.0s						
CMAR	**Chiang Mai Arr**	**164.86**	**143**	PKP	**PKPdf**	**07 51 41.9**	**-0.8**
	comp=Z,18nm,1.1s,baz=252,slow=2.4,SNR=19						
CMAR				PKPab	**PKPab**	**07 52 37.4**	**-1.3**
	comp=Z,26nm,1.1s,baz=230,slow=4.9,SNR=7.7						
CMAR	**Chiang Mai Arr**	**164.86**	**143**	PKPdf	**PKPdf**	**07 51 42.7**	**0.0**
CMAR				PKPab	**PKPab**	**07 52 37.6**	**-1.1**
DL2	**Dalian**	**166.63**	**310**	PKP	**PKPdf**	**07 51 41.6**	**-1.9**
DL2				PKPab	**PKPab**	**07 52 49.2**	**+3.1**
DL2				PP	**PP**	**07 56 33.7**	**-0.3**
DL2				AMB	AMB		
	comp=Z,6μm,10.0s						
DL2				LR	LR		
	comp=Z,10μm,27.3s						
DL2				LR	LR		
	comp=Z,8μm,19.4s						
DL2				LR	LR		
	comp=Z,10μm,26.1s						
QIZ	**Qiongzhong**	**168.13**	**186**	PKP	**PKPdf**	**07 51 45.3**	**+0.1**
QIZ				PP	**PP**	**07 56 43.7**	**+3.1**
QIZ				SS	SS	08 17 31.3	+4.0
QIZ				LR	LR		
	comp=Z,6μm,19.1s						
QIZ				LR	LR		
	comp=Z,8μm,20.6s						
QIZ				LR	LR		
	comp=Z,10μm,23.5s						
GTA	**Gaotai**	**168.90**	**38**	⇑PKP	**PKPdf**	**07 51 45.2**	**-0.1**
GTA				pPKP	pPKPdf	07 51 54.2	-3.2
GTA				sPKP		07 51 58.4	
GTA				PKPab	**PKPab**	**07 52 56.3**	**+0.1**
GTA				PP	**PP**	**07 56 44.1**	**-1.3**
GTA				SS	SS	08 17 31.5	-5.1
GTA				AMB	AMB		
	comp=Z,5μm,7.6s						
GTA				LR	LR		
	comp=Z,16μm,22.2s						
GTA				LR	LR		
	comp=Z,8μm,21.4s						
GTA				LR	LR		
	comp=Z,19μm,21.1s						
BJI	**Beijing**	**168.97**	**328**	PKP	**PKPdf**	**07 51 44.2**	**-0.9**
BJI				sPKP		07 51 57.7	
BJI				PP	**PP**	**07 56 45.7**	**+0.4**
BJI				SKKS		08 03 30.0	
BJI				SS	**SS**	**08 17 33.5**	**-3.1**
BJI				LR	LR		
	comp=Z,8μm,22.3s						
BJI				LR	LR		
	comp=Z,13μm,22.8s						
BJI				LR	LR		
	comp=Z,24μm,24.2s						
SSE	**Sheshan**	**169.16**	**274**	PKP	**PKPdf**	**07 51 44.4**	**-1.1**
SSE				PP	**PP**	**07 56 47.4**	**-0.3**
SSE				SS	SS	08 17 39.4	-1.7
SSE				AMB	AMB		
	comp=Z,2μm,9.4s						
SSE				LR	LR		
	comp=Z,4μm,21.1s						
SSE				LR	LR		
	comp=Z,4μm,22.4s						
QZH	**Quanzhou**	**169.33**	**239**	*i* PKP	**PKPdf**	**07 51 48.2**	**+2.4**
QZH				PP	**PP**	**07 56 48.7**	**+0.6**
QZH				SKKS		08 03 36.0	
QZH				SS	**SS**	**08 17 45.0**	**+3.1**
QZH				LR	LR		
	comp=Z,4μm,21.0s						
QZH				LR	LR		
	comp=Z,8μm,21.6s						
QZH				LR	LR		
	comp=Z,16μm,24.6s						
HHC	**Hu-ho-hao-te**	**169.77**	**347**	*e*PKP	**PKPdf**	**07 51 46.7**	**+1.0**
HHC				PP	**PP**	**07 56 54.0**	**+4.9**
HHC				SS	SS	08 17 47.0	+3.0
HHC				LR	LR		
	comp=Z,11μm,17.4s						
HHC				LR	LR		
	comp=Z,14μm,17.1s						
HHC				LR	LR		
	comp=Z,11μm,17.5s						
HKC	**Hong Kong Obse**	**170.08**	**212**	⇑P	**PKPdf**	**07 51 45.0**	**-1.3**
BTO	**Baotou**	**170.23**	**353**	*e*PKP	**PKPdf**	**07 51 45.1**	**-0.9**
BTO				LR	LR		
	comp=Z,15μm,23.9s						
BTO				LR	LR		
	comp=Z,20μm,24.4s						
TIA	**Tai'an**	**171.10**	**309**	PKP	**PKPdf**	**07 51 46.3**	**-0.2**
TIA				PP	**PP**	**07 56 55.1**	**-1.6**
TIA				SKKS		08 03 38.7	
TIA				AMB	AMB		
	comp=Z,4μm,12.0s						
TIA				LR	LR		
	comp=Z,10μm,25.5s						
TIA				LR	LR		
	comp=Z,8μm,26.0s						
TIA				LR	LR		
	comp=Z,20μm,27.5s						
NJ2	**Nanjing**	**171.13**	**280**	⇑PKP	**PKPdf**	**07 51 46.7**	**+0.1**
NJ2				pPKP	**pPKPdf**	**07 51 57.2**	**-1.5**
NJ2				sPKP		07 52 00.6	
NJ2				PP	**PP**	**07 56 57.4**	**-0.2**
NJ2				AMB	AMB		
	comp=Z,5μm,9.4s						
NJ2				LR	LR		
	comp=Z,7μm,23.7s						
NJ2				LR	LR		
	comp=Z,11μm,19.9s						
NJ2				LR	LR		
	comp=Z,18μm,20.6s						
KMI	**Kunming**	**172.29**	**137**	⇑PKP	**PKPdf**	**07 51 47.3**	**-0.4**
TIY	**Taiyuan**	**172.48**	**336**	⇑PKP	**PKPdf**	**07 51 47.2**	**0.0**
TIY				PKPab	**PKPab**	**07 53 12.8**	**+0.8**
TIY				PP	**PP**	**07 57 01.5**	**-1.3**
TIY				SKKS		08 03 49.7	
TIY				AMB	AMB		
	comp=Z,4μm,10.2s						
TIY				LR	LR		
	comp=Z,7μm,19.3s						
TIY				LR	LR		
	comp=Z,8μm,17.2s						
TIY				LR	LR		
	comp=Z,26μm,21.0s						
LZH	**Lanzhou**	**173.49**	**36**	*e*PKP	**PKPdf**	**07 51 47.7**	**-0.1**
LZH				pPKP	pPKPdf	07 51 56.8	-3.0
LZH				sPKP		07 52 00.5	
LZH				AMB	AMB		
	comp=Z,7μm,8.1s						
LZH				LR	LR		
	comp=Z,10μm,19.4s						
LZH				LR	LR		
	comp=Z,12μm,19.7s						
LZH				LR	LR		
	comp=Z,12μm,20.0s						
WHN	**Wuhan**	**175.00**	**267**	⇑PKP	**PKPdf**	**07 51 47.7**	**-0.5**
WHN				pPKP	**pPKPdf**	**07 52 00.7**	**+0.4**
WHN				PKPab	**PKPab**	**07 53 25.8**	**+2.2**
WHN				PP	**PP**	**07 57 16.7**	**+0.1**
WHN				SKKS		08 03 56.1	
WHN				AMB	AMB		
	comp=Z,11μm,6.3s						
WHN				LR	LR		
	comp=Z,12μm,19.5s						
WHN				LR	LR		
	comp=Z,25μm,20.0s						
WHN				LR	LR		
	comp=Z,60μm,22.5s						
GYA	**Guiyang**	**175.28**	**159**	⇑*i*PKP	**PKPdf**	**07 51 47.7**	**-0.9**
GYA				pPKP	pPKPdf	07 52 01.4	+0.8
GYA				PKPab	**PKPab**	**07 53 29.3**	**+4.6**
GYA				PP	**PP**	**07 57 15.5**	**-0.9**
GYA				LR	LR		
	comp=Z,4μm,18.0s						
GYA				LR	LR		
	comp=Z,2μm,17.8s						
GYA				LR	LR		
	comp=Z,7μm,19.1s						
XAN	**Xi'an**	**176.85**	**355**	PKP	**PKPdf**	**07 51 48.3**	**-0.3**
XAN				pPKP	pPKPdf	07 52 01.4	+0.7
XAN				PKPab	**PKPab**	**07 53 27.2**	**-4.2**
XAN				SKKS		08 04 09.4	
XAN				AMB	AMB		
	comp=Z,14μm,11.1s						
XAN				LR	LR		
	comp=Z,7μm,24.1s						
XAN				LR	LR		
	comp=Z,17μm,24.1s						
XAN				LR	LR		
	comp=Z,25μm,23.5s						

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*NEIC **07** 07:37:44.9±1.1, 8°.47N±0°.03×71°.39W±0°.04, h4^{km}±9^{km}, Mwr4.3(CAR) Error ellipse: s-maj=7.2km s-min=3.9km az=120.0*

*FUNV **07** 07:37:45.6, 8°.51N×71°.37W, h1^{km}, MW4.3*

*CAR **07** 07:37:46.1±1.4, 8°.50N±0°.08×71°.37W±0°.04, h5^{km}±7^{km}, Error ellipse: s-maj=12.1km s-min=4.6km az=164.0*

ISC 07 07:37:44.9±1.3, **8°.50N**±0°.03×**71°.41W**±0°.03, **h7**^{km}±11^{km}, **n40**, σ**1^{s}.01**/49, **1D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	**Socops**	**0.59**	**111**	*e*P	**Pn**	**07 38 02.6**	**+2.8**
SOCV	**Socops**	**0.59**	**111**	⇓*i*P	**Pg**	**07 37 55.8**	**-0.5**
SOCV				*e*S	**Sg**	**07 38 03.5**	**-0.5**
SDV	**Santo Domingo**	**0.86**	**63**	*e*P	**Pg**	**07 38 01.7**	**+0.3**
SDV				*e*S	**Sg**	**07 38 12.3**	**-0.2**
SDV	**Santo Domingo**	**0.86**	**63**	Pg	**Pg**	**07 38 01.3**	**-0.1**
SDV				Sg	**Sg**	**07 38 12.0**	**-0.6**
PAMC	**Pamplona, Colo**	**1.72**	**228**	*e*P	**Pn**	**07 38 16.0**	**+0.3**
PAMC				*e*S	**Sb**	**07 38 40.0**	**+0.7**
MCQV	**Machiques**	**1.90**	**324**	*e*P	**Pn**	**07 38 18.1**	**+0.4**
MCQV				*e*S	**Sb**	**07 38 43.4**	**-0.5**
OCAC	**Ocana**	**1.91**	**262**	*e*P	**Pn**	**07 38 18.7**	**+0.7**
OCAC				*e*S	**Sn**	**07 38 42.6**	**+0.2**
OCAC	**Ocana**	**1.91**	**262**		**Pn**	**07 38 18.2**	**+0.2**
OCAC				Sn	**Sb**	**07 38 43.8**	**-0.5**
TAMC	**Tame, Arauca**	**2.09**	**190**	*e*P	**Pb**	**07 38 24.1**	**+0.9**
ELOV	**Elorza**	**2.42**	**128**	*e*P	**Pn**	**07 38 25.6**	**+0.7**
ELOV				*e*S	**Sn**	**07 38 54.6**	**-0.3**
DABV	**Dabajuro**	**2.52**	**18**	*e*P	**Pn**	**07 38 26.9**	**+0.6**
DABV				*e*S	**Sn**	**07 38 57.5**	**+0.1**
BARC	**Barichara**	**2.58**	**223**	*e*P	**Pb**	**07 38 30.4**	**-1.3**
SIQV	**Siquisique**	**2.66**	**36**	*e*P	**Pn**	**07 38 28.8**	**+0.6**
SIQV				*e*S	**Sn**	**07 38 59.4**	**-1.4**
BRRC	**Barranca, Sant**	**2.67**	**239**	*e*P	**Pb**	**07 38 32.4**	**-0.6**
ARGC	**Ariguani, Magd**	**3.11**	**296**	*e*P	**Pb**	**07 38 42.4**	**+1.9**
URIC	**Uribia, Colomb**	**3.23**	**350**	*e*P	**Pb**	**07 38 42.7**	**+0.1**
URIC	**Uribia, Colomb**	**3.23**	**350**	Pn	**Pn**	**07 38 36.5**	**+0.4**
BAUV	**El Baul**	**3.36**	**82**	*e*P	**Pn**	**07 38 38.1**	**+0.3**
BAUV				*e*S	**Sn**	**07 39 15.3**	**-2.7**
BAUV	**El Baul**	**3.36**	**82**	Pn	**Pn**	**07 38 38.3**	**+0.5**
ZARC	**Zaragoza, Cauc**	**3.56**	**254**	*e*P	**Pn**	**07 38 42.7**	**+2.1**
ZARC	**Zaragoza, Cauc**	**3.56**	**254**	Pn	**Pn**	**07 38 40.5**	**-0.1**
JACV	**Jacura**	**3.62**	**44**	*e*P	**Pn**	**07 38 42.1**	**+0.7**
MONV	**Montecano**	**3.71**	**22**	*e*P	**Pn**	**07 38 43.0**	**+0.2**
SPBC	**San Pablo de B**	**3.87**	**223**	*e*P	**Pn**	**07 38 46.9**	**+1.9**
SJCC	**San Jacinto, C**	**3.97**	**291**	*e*P	**Pn**	**07 38 46.9**	**+0.5**
SJCC	**San Jacinto, C**	**3.97**	**291**		**Pn**	**07 38 46.9**	**+0.5**
TURV	**Turiamo**	**4.02**	**61**	*e*P	**Pn**	**07 38 46.4**	**-0.6**
BENV	**Beln**	**4.03**	**69**	*e*P	**Pn**	**07 38 47.5**	**+0.3**
UREC	**San Jos de Ur**	**4.15**	**260**	*e*P	**Pn**	**07 38 49.3**	**+0.5**
MOTC	**Monteria, Cord**	**4.22**	**274**	*e*P	**Pn**	**07 38 49.7**	**0.0**
MOTC	**Monteria, Cord**	**4.22**	**274**		**Pn**	**07 38 50.0**	**+0.4**
CACV	**CAICARA DEL OR**	**4.91**	**101**	*e*P	Pb	07 39 05.8	-5.5
LCBC	**Los crdobas,**	**4.92**	**275**	*e*P	Pn	07 38 49.7	-10
DBBC	**Dabeiba**	**4.98**	**253**	*e*P	**Pn**	**07 39 01.0**	**+0.8**
MERV	**Las Mercedes**	**5.11**	**81**	*e*P	**Pn**	**07 39 01.4**	**-0.6**
BIRV	**Birongo**	**5.44**	**68**	*e*P	**Pn**	**07 39 06.3**	**-0.2**
BIRV	**Birongo**	**5.44**	**68**	Pn	**Pn**	**07 39 07.4**	**+0.9**
CAPC	**Capurgana**	**5.88**	**272**	*e*P	**Pn**	**07 39 13.3**	**+0.8**
ORTC	**Ortega, Tolima**	**5.95**	**220**	*e*P	**Pn**	**07 39 15.4**	**+1.9**
MACC	**Macarena, Meta**	**6.76**	**201**	*e*P	**Pn**	**07 39 23.4**	**-1.3**

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*EAF **07** 07:58:06.8±1.0, 25°.53S×29°.38E, h10^{km}, MD3.7*

BUL 07 07:58:07.2±1.1, **25°.51S**×**29°.32E, h10**^{km}**, MD3.9, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOPA	**Mopani**	**2.74**	**44**	*e*P	Pn	07 58 50.8	-0.5
MOPA				*e*S	Sn	07 59 21.6	-2.8
MOPA	**Mopani**	**2.74**	**44**	*e*P	Pn	07 58 50.8	-0.5
MOPA				*e*S	Sn	07 59 21.6	-2.8
MSNA	**Messina**	**3.21**	**12**	*e*P	Pn	07 58 57.6	-0.2
MSNA				*e*S	Sn	07 59 33.3	-2.8
MSNA	**Messina**	**3.21**	**12**	*e*P	Pn	07 58 57.6	-0.2
MSNA				*e*S	Sn	07 59 33.3	-2.8
BOSA	**Boshof**	**4.76**	**229**	*e*P	Pn	07 59 17.6	-1.6
BOSA				*e*S	Sn	08 00 11.4	-3.1
BOSA	**Boshof**	**4.76**	**229**	*e*P	Pn	07 59 17.6	-1.6
BOSA				*e*S	Sn	08 00 11.4	-3.1
MATP	**Matopo**	**5.11**	**351**	*e*P	Pn	07 59 22.9	-1.2
MATP				*e*S	Sn	08 00 19.4	-3.8
MATP	**Matopo**	**5.11**	**351**	*e*P	Pn	07 59 22.9	-1.2
MATP				*e*S	Sn	08 00 19.4	-3.8
BLWY	**Bulawayo**	**5.38**	**353**	*e*P	Pn	07 59 27.3	-0.4
BLWY				*e*S	Sn	08 00 25.5	-4.3
BLWY	**Bulawayo**	**5.38**	**353**	*e*P	Pn	07 59 27.3	-0.4
BLWY				*e*S	Sn	08 00 25.5	-4.3

INET 07 08:04:45.3, 12°.54N×87°.36W, h73^{km}, ML3.6, Near coast of Nicaragua

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*IDC **07** 08:23:59.0±1.1, 6°.56S×104°.63E, h0^{km}, mb3.7/7, mb1 3.8/7, mb1mx3.6/35, mbtmp3.7/7, Error ellipse: s-maj=61.7km s-min=20.6km az=47.0*

*DJA **07** 08:24:05.1±0.3, 7°S±3°×10°5E±°, h10^{km}, M4.3/19, mb4.7/4, MLv4.2/19*

ISC 07 08:24:05.4±0.8, **6°.70S**±0°.09×**104°.78E**±0°.07, **h35**^{km}**, n35,** σ**1^{s}.93**/33, **mb3.5**/7, **Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CGJI	**Cibinong**	**0.91**	**85**	P	**Pn**	**08 24 21.7**	**0.0**
CGJI				S	**Sn**	**08 24 32.1**	**-1.5**
KASI	**Kota Agung**	**1.20**	**346**	P	**Pn**	**08 24 26.8**	**+1.1**
KASI				S	**Sn**	**08 24 41.0**	**+0.2**
BLSI	**Bandar Lampung**	**1.40**	**19**	P	**Pn**	**08 24 28.5**	**0.0**
SBJI	**Serang**	**1.46**	**67**	P	**Pn**	**08 24 29.0**	**-0.3**
LWLI	**Liwa**	**1.82**	**337**	P	**Pn**	**08 24 36.6**	**+2.3**
KLI	**Kotabumi**	**1.83**	**2**	P	**Pn**	**08 24 35.7**	**+1.4**
TNG	**Tangerang**	**1.93**	**74**	P	**Pn**	**08 24 36.0**	**+0.3**
DBJI	**Dramaga**	**1.96**	**86**	P	**Pn**	**08 24 37.2**	**+1.0**
KLSI		**2.00**	**359**	P	**Pn**	**08 24 38.1**	**+1.4**
CBJI	**Citeko**	**2.08**	**82**	P	**Pn**	**08 24 40.7**	**+3.0**
MDSI	**Maura Dua**	**2.28**	**345**	P	**Pn**	**08 24 42.6**	**+2.0**
CNJI	**Cibinong**	**2.41**	**105**	P	**Pn**	**08 24 42.6**	**+0.3**
LEM	**Lembang**	**2.82**	**93**	Pn	**Pn**	**08 24 51.3**	**+3.2**
	28nm,0.3s,baz=117,slow=22,SNR=6.6						
LEM				Sn	**Sn**	**08 25 25.4**	**+4.3**
	14nm,0.3s,baz=344,slow=22,SNR=6.2						
LEM	**Lembang**	**2.82**	**93**	P	**Pn**	**08 24 50.8**	**+2.6**
MNAI	**Manna**	**2.95**	**322**	P	**Pn**	**08 24 52.7**	**+2.9**
CISI	**Cisompet, Garu**	**3.13**	**106**	P	**Pn**	**08 24 54.1**	**+1.8**
CMJI	**Cimerak**	**3.79**	**107**	P	**Pn**	**08 25 03.2**	**+1.8**
UGM	**Wanagama**	**5.82**	**102**	P	**Pn**	**08 25 32.5**	**+3.1**
	0.9nm188nm,1.9s						
PPSI	**Pulau Pagai**	**6.16**	**309**	P	**Pn**	**08 25 35.7**	**+1.8**
	0.7nm132nm,1.0s						
PCJI	**Pacitan**	**6.51**	**104**	P	**Pn**	**08 25 41.6**	**+2.8**
	0.3nm34nm,1.3s						
SISI	**Saibi**	**7.79**	**313**	P	**Pn**	**08 25 56.7**	**+0.3**
FITZ	**Fitzroy Crossi**	**23.28**	**121**	P	**P**	**08 29 10.6**	**+0.4**
	0.9nm,0.7s,baz=307,slow=10,SNR=1.5						
H01W3	**Cape Leeuwin H**	**29.34**	**164**	T	T	09 00 39.7	
	baz=343,slow=76,SNR=6.6						
H01W1	**Cape Leeuwin H**	**29.36**	**164**	T	T	09 01 02.2	
	baz=343,slow=76,SNR=5.1						
H01W2	**Cape Leeuwin H**	**29.36**	**164**	T	T	09 00 39.4	
	baz=343,slow=76,SNR=6.6						
WRA	**Warramunga Arr**	**31.56**	**118**	P	**P**	**08 30 24.1**	**-0.8**
	0.2nm,0.3s,baz=285,slow=10,SNR=3.6						
H08S2	**Diego Garcia H**	**32.05**	**266**	T	T	09 04 17.6	
	baz=89,slow=76,SNR=16						

H08S3	**Diego Garcia H**	**32.05**	**266**	T	T	09 04 17.4	
	baz=89,slow=76,SNR=12						
H08S1	**Diego Carcia H**	**32.06**	**266**	T	T	09 04 16.8	
	baz=89,slow=76,SNR=5.7						
ASAR	**Alice Springs**	**32.67**	**124**	P	**P**	**08 30 34.4**	**-0.2**
	0.4nm,0.6s,baz=302,slow=7.6,SNR=7.6						
ASAR				PcP	**PcP**	**08 33 20.0**	**-0.1**
	0.2nm,0.5s,baz=310,slow=2.7,SNR=2.7						
STKA	**Stephens Creek**	**42.49**	**131**	P	**P**	**08 31 58.0**	**+0.5**
	1.2nm,0.4s,baz=305,slow=9.4,SNR=5.2						
MKAR	**Makanchi Array**	**56.88**	**342**	P	**P**	**08 33 44.0**	**-2.8**
	0.4nm,0.4s,baz=165,slow=9.0,SNR=6.0						
VNDA	**Vanda**	**76.67**	**169**	P	**P**	**08 35 53.2**	**+0.9**
	0.3nm,0.6s,baz=303,slow=6.9,SNR=3.8						
BRTR	**Keskin Array B**	**79.99**	**312**	P	**P**	**08 36 10.0**	**-1.5**
	1.0nm,0.7s,baz=123,slow=5.4,SNR=4.8						
TXAR	**Lajitas Array**	**144.99**	**46**	PKPbc	**PKPab**	**08 43 38.1**	**-1.1**
	0.2nm,0.4s,baz=316,slow=2.5,SNR=4.2						

TAP 07 08:35:39.9, 23°.34N×120°.61E, h11^{km}, ML1.7, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TPUB	**Ta-pu**	**0.04**	**149**	P	Pg	08 35 42.5	+0.5
	baz=148						
TPUB				S	Sg	08 35 44.3	+0.7
	baz=148						
WTP	**Ta-pu**	**0.09**	**175**	P	Pg	08 35 43.2	+0.6
	baz=170						
WTP				S	Sg	08 35 45.5	+1.0
	baz=170						
TWK	**Hsinying**	**0.13**	**237**	P	Pg	08 35 43.6	+0.5
	baz=232						
TWK				S	Sg	08 35 46.2	+0.8
	baz=232						
SNST	**Tainan City**	**0.15**	**220**	*e*P	Pg	08 35 44.1	+0.7
	baz=219						
SNST				S	Sg	08 35 47.1	+1.3
	baz=219						
CHN1	**Nanshi**	**0.17**	**205**	P	Pb	08 35 44.4	-0.6
	baz=204						
CHN1				S	Sg	08 35 47.8	+1.5
	baz=204						
STYH	**Taoyuan**	**0.23**	**137**	P	Pb	08 35 45.6	-0.4
	baz=136						
STYH				S	Sg	08 35 49.7	+1.7
	baz=136						
CHY	**Chiayi**	**0.23**	**314**	*e*P	Pb	08 35 45.5	-0.6
	baz=314						
CHY				*e*S	Sg	08 35 49.5	+1.6
	baz=314						
ALS	**Alishan**	**0.25**	**47**	P	Pb	08 35 46.2	-0.4
	baz=48						
ALS				S	Sb	08 35 50.2	-0.9
	baz=48						
SGST	**Jiashian**	**0.26**	**185**	*e*P	Pb	08 35 46.0	-0.5
	baz=182						
SGST				*e*S	Sb	08 35 50.4	-0.6
	baz=182						
CHN5	**Tsauling**	**0.27**	**15**	P	Pg	08 35 46.0	+0.6
	baz=14						
CHN5				S	Sb	08 35 51.1	-0.3
	baz=14						
ICHU	**Yijhu**	**0.30**	**274**	*e*P	Pb	08 35 46.9	-0.4
	baz=274						
ICHU				*e*S	Sb	08 35 52.1	-0.2
	baz=274						
SLGT	**Liugui**	**0.34**	**174**	*e*P	Pb	08 35 47.7	-0.3
	baz=173						
SLGT				*e*S	Sb	08 35 53.5	-0.1
	baz=173						
WTK	**Tuku**	**0.40**	**330**	*e*P	Pb	08 35 48.8	-0.2
	baz=330						
WTK				*e*S	Sb	08 35 55.2	0.0
	baz=330						
SSLB	**Suanglung**	**0.55**	**36**	*e*P	Pb	08 35 51.3	-0.3
	baz=35						
SSD	**Sandimen**	**0.59**	**178**	*e*P	Pb	08 35 52.0	-0.2
	baz=176						
SSD				*e*S	Sb	08 36 01.1	+0.5
	baz=176						
TYC	**Yuchr**	**0.61**	**22**	*e*P	Pb	08 35 52.6	0.0
	baz=23						
TYC				*e*S	Sb	08 36 02.2	+1.0
	baz=23						
YULB	**Yu-li**	**0.64**	**85**	*e*P	Pb	08 35 52.9	-0.1
	baz=85						
YULB				*e*S	Sb	08 36 02.9	+0.9
	baz=85						
MASBT	**Mashibuluo**	**0.72**	**178**	*e*P	Pg	08 35 54.1	+0.2
	baz=177						
MASBT				*e*S	Sb	08 36 05.5	+1.0
	baz=177						

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*IDC **07** 08:44:12.2±0.8, 8°.47N×71°.42W, h0^{km}, mb3.7/5, mb1 4.1/9, mb1mx3.8/31, mbtmp3.9/9, ML4.1/4, Error ellipse: s-maj=17.8km s-min=9.8km az=152.0*
*NEIC **07** 08:44:13.5±2.8, 8°.50N±0°.06×71°.41W±0°.03, h5^{km}±6^{km}, mb4.2/4, Mwr4.2(CAR), Error ellipse: s-maj=10.0km s-min=1.5km az=155.0*
*FUNV **07** 08:44:14.3, 8°.54N×71°.38W, h2^{km}, MW4.2*
*CAR **07** 08:44:14.5±3.2, 8°.51N±0°.05×71°.38W±0°.04, h1^{km}±3^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=65.0*
ISC 07 08:44:13.1±1.2, **8°.54N**±0°.03×**71°.41W**±0°.03, **h8**^{km}±9^{km}**, n88, σ1^{s}.60**/130**, mb3.8**/5**, 3C-1D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	**Socops**	**0.61**	**115**	*e*P	**Pg**	**08 44 24.4**	**-0.4**
SOCV				*e*S	**Sg**	**08 44 31.9**	**-0.9**
SOCV	**Socops**	**0.61**	**115**	⇓*i*P	**Pg**	**08 44 24.6**	**-0.3**
SOCV				*e*S	**Sg**	**08 44 33.4**	**+0.6**
SDV	**Santo Domingo**	**0.84**	**66**	Pg	**Pb**	**08 44 29.9**	**-0.3**
	196nm,0.3s,baz=338,slow=17,SNR=330						
SDV				Lg	Lg	08 44 41.0	
	568nm,0.3s,baz=299,slow=2.9,SNR=21						
SDV	**Santo Domingo**	**0.84**	**66**	*e*P	**Pb**	**08 44 29.8**	**-0.3**
SDV				*e*S	**Sg**	**08 44 41.6**	**+1.3**
SDV				*i*		08 44 43.1	
	comp=Z,1μm,0.3s						
PAMC	**Pamplona, Colo**	**1.75**	**227**	*e*P	**Pn**	**08 44 45.5**	**+1.3**
PAMC				*e*S	**Sn**	**08 45 07.4**	**+0.5**
PAMC				*i*		08 45 12.2	
	comp=Z,2μm,0.5s						
MCQV	**Machiques**	**1.86**	**324**	⇑*e*P	**Pn**	**08 44 46.5**	**+1.1**
MCQV				*e*S	**Sn**	**08 45 11.1**	**+1.9**
OCAC	**Ocana**	**1.91**	**261**	*e*P	**Pn**	**08 44 46.8**	**+0.6**
OCAC				*e*S	**Sn**	**08 45 12.0**	**+1.6**
OCAC				*i*		08 45 15.0	
	comp=Z,3μm,0.2s						
OCAC	**Ocana**	**1.91**	**261**		**Pn**	**08 44 46.6**	**+0.5**
TAMC	**Tame, Arauca**	**2.12**	**190**	*e*P	**Pn**	**08 44 50.9**	**+1.9**
TAMC				*e*S	**Sn**	**08 45 17.2**	**+1.6**
TAMC				*i*		08 45 30.9	
	comp=Z,735nm,0.6s						
ELOV	**Elorza**	**2.45**	**129**	*e*P	**Pg**	**08 45 00.6**	**+0.5**
ELOV				*e*S	**Sb**	**08 45 27.6**	**-0.2**
ELOV	**Elorza**	**2.45**	**129**	*e*P	**Pn**	**08 44 54.9**	**+1.5**
ELOV				*e*S	**Sn**	**08 45 23.8**	**+0.2**
DABV	**Dabajuro**	**2.49**	**18**	⇑*e*P	**Pn**	**08 44 55.8**	**+1.8**
DABV				*e*S	**Sn**	**08 45 24.9**	**+0.4**
BARC	**Barichara**	**2.61**	**222**	*e*P	**Pn**	**08 44 58.3**	**+2.4**
BARC				*e*S	**Sb**	**08 45 31.4**	**-1.3**
BARC				*i*		08 45 36.6	
	comp=Z,1μm,0.6s						
SIQV	**Siquisique**	**2.62**	**37**	*e*P	**Pn**	**08 44 57.2**	**+1.3**
SIQV				*e*S	**Sn**	**08 45 27.8**	**-0.2**
SMLC	**San Martn de**	**2.64**	**276**	*e*P	**Pn**	**08 44 56.2**	**+0.1**
SMLC				*e*S	**Sb**	**08 45 32.8**	**-0.5**
SMLC				*i*		08 45 34.0	
	comp=Z,767nm,0.4s						
CVALL	**Valledupar, Ce**	**2.67**	**317**	*e*P	**Pn**	**08 44 57.2**	**+0.7**
CVALL				*e*S	**Sn**	**08 45 27.8**	**-1.3**
CVALL				*i*		08 45 38.3	
	comp=Z,438nm,0.4s						
BRRC	**Barranca, Sant**	**2.69**	**238**	*e*P	**Pn**	**08 44 58.6**	**+1.9**
BRRC				*e*S	**Sb**	**08 45 35.0**	**+0.3**
BRRC				*i*		08 45 44.0	
	comp=Z,288nm,0.5s						
ARGC	**Ariguani, Magd**	**3.09**	**295**	*e*P	**Pn**	**08 45 03.9**	**+1.6**
ARGC				*e*S	**Sn**	**08 45 39.2**	**-0.2**
ARGC				*i*		08 45 53.3	
	comp=Z,155nm,0.5s						
RUSC	**La Rusia**	**3.11**	**212**	*e*P	**Pn**	**08 45 04.0**	**+1.0**
RUSC				*e*S	**Sn**	**08 45 41.3**	**+0.7**
RUSC				*i*		08 46 10.6	
	comp=Z,152nm,0.5s						
URIC	**Uribia, Colomb**	**3.19**	**350**	*e*P	**Pn**	**08 45 07.9**	**+4.2**
URIC				*e*S	**Sn**	**08 45 40.2**	**-1.8**
URIC				*i*		08 46 02.3	
	comp=Z,126nm,0.6s						
URIC	**Uribia, Colomb**	**3.19**	**350**	Pn	**Pn**	**08 45 03.7**	**+0.1**
BAUV	**El Baul**	**3.36**	**83**	*e*P	**Pn**	**08 45 06.4**	**+0.5**
BAUV				*e*S	**Sn**	**08 45 44.1**	**-1.9**
BAUV	**El Baul**	**3.36**	**83**	Pn	**Pn**	**08 45 07.1**	**+1.2**
ZARC	**Zaragoza, Cauc**	**3.57**	**253**	*e*P	**Pn**	**08 45 09.3**	**+0.5**
ZARC				*e*S	**Sn**	**08 45 48.8**	**-2.4**
ZARC				*i*		08 46 06.2	
	comp=Z,191nm,0.3s						
ZARC	**Zaragoza, Cauc**	**3.57**	**253**		**Pn**	**08 45 09.2**	**+0.4**
JACV	**Jacura**	**3.59**	**45**	*e*P	**Pn**	**08 45 10.2**	**+1.1**
MONV	**Montecano**	**3.68**	**23**	⇑*e*P	**Pn**	**08 45 11.2**	**+0.8**
SMRC	**Santa Marta, M**	**3.80**	**313**	*e*P	**Pn**	**08 45 12.2**	**+0.1**
SMRC				*e*S	**Sn**	**08 45 54.3**	**-2.7**
SMRC				*i*		08 46 12.9	
	comp=Z,151nm,0.4s						
SPBC	**San Pablo de B**	**3.90**	**223**	*e*P	**Pn**	**08 45 15.0**	**+1.6**
SPBC				*e*S	**Sn**	**08 45 59.6**	**+0.1**
SPBC				*i*		08 46 22.0	
	comp=Z,172nm,0.4s						
SJCC	**San Jacinto, C**	**3.96**	**290**	*e*P	**Pn**	**08 45 16.1**	**+1.9**
SJCC				*e*S	**Sn**	**08 46 02.4**	**+1.5**
SJCC				*i*		08 46 28.2	
	comp=Z,138nm,0.6s						
SJCC	**San Jacinto, C**	**3.96**	**290**		**Pn**	**08 45 15.7**	**+1.4**
TURV	**Turiamo**	**4.00**	**61**	*e*P	**Pn**	**08 45 15.1**	**+0.3**
BENV	**Beln**	**4.02**	**69**	*e*P	**Pn**	**08 45 16.1**	**+0.9**
BENV				*e*S	**Sn**	**08 46 00.9**	**-1.6**
UREC	**San Jos de Ur**	**4.15**	**259**	*e*P	**Pn**	**08 45 18.0**	**+1.1**
UREC				*e*S	**Sn**	**08 46 07.3**	**+1.6**
UREC				*i*		08 46 26.9	
	comp=Z,70nm,0.4s						
MOTC	**Monteria, Cord**	**4.21**	**274**	*e*P	**Pn**	**08 45 18.9**	**+1.2**
MOTC				*e*S	**Sn**	**08 46 08.4**	**+1.3**
MOTC				*i*		08 46 34.7	
	comp=Z,77nm,0.8s						
MOTC	**Monteria, Cord**	**4.21**	**274**		**Pn**	**08 45 18.8**	**+1.2**
PTGC	**Puerto Gaitan,**	**4.37**	**189**	*e*P	**Pn**	**08 45 20.5**	**+0.6**
PTGC				*e*S	**Sn**	**08 46 11.4**	**+0.3**
PTGC				*i*		08 46 37.3	
	comp=Z,309nm,0.4s						
CHIC	**Chingaza**	**4.52**	**211**	*e*P	**Pn**	**08 45 23.5**	**+1.2**
CHIC				*e*S	**Sn**	**08 46 12.9**	**-2.3**
CHIC				*i*		08 46 20.8	
	comp=Z,76nm,0.3s						
NORC	**Norcasia**	**4.53**	**229**	*e*P	**Pn**	**08 45 23.6**	**+1.5**
NORC				*e*S	**Sn**	**08 46 12.2**	**-2.8**
NORC				*i*		08 46 21.9	
	comp=Z,72nm,0.3s						
TACV	**Tcata**	**4.61**	**70**	*e*P	**Pn**	**08 45 23.6**	**+0.4**
ROSC	**El Rosal**	**4.67**	**218**	Pn	**Pn**	**08 45 26.9**	**+2.5**
	comp=Z,11nm,0.3s,baz=29,slow=13,SNR=13						
ROSC				Sn	**Sn**	**08 46 19.1**	**0.0**
	comp=Z,15nm,0.3s,baz=230,slow=18,SNR=4.2						
ROSC	**El Rosal**	**4.67**	**218**	*e*P	**Pn**	**08 45 27.1**	**+2.7**
ROSC				*e*S	**Sn**	**08 46 13.7**	**-5.3**
ROSC				*i*		08 46 49.6	
	comp=Z,82nm,0.5s						
ROSC	**El Rosal**	**4.67**	**218**		**Pn**	**08 45 26.8**	**+2.3**
HELC	**Santa Helena**	**4.70**	**241**	*e*P	**Pn**	**08 45 25.8**	**+1.0**
HELC				*e*S	**Sn**	**08 46 22.2**	**+2.4**
HELC				*i*		08 46 39.4	
	comp=Z,116nm,0.4s						
LCBC	**Los crdobas,**	**4.91**	**274**	*e*P	**Pn**	**08 45 28.1**	**+0.9**
LCBC				*e*S	**Sn**	**08 46 23.9**	**-0.4**
LCBC				*i*		08 46 30.2	
	comp=Z,82nm,0.7s						
CACV	**CAICARA DEL OR**	**4.92**	**101**	*e*P	Pb	08 45 34.8	-4.9
VILC	**Villavicencio,**	**4.95**	**207**	*e*P	**Pn**	**08 45 28.4**	**+0.5**
VILC				*e*S	**Sn**	**08 46 22.0**	**-3.5**
VILC				*i*		08 46 34.6	
	comp=Z,6μm,0.4s						
DBBC	**Dabeiba**	**4.99**	**253**	*e*P	**Pn**	**08 45 31.0**	**+2.6**
MERV	**Las Mercedes**	**5.10**	**82**	*e*P	**Pn**	**08 45 29.7**	**-0.3**
GUY2C	**Guyana, Caldas**	**5.12**	**230**	*e*P	**Pn**	**08 45 31.9**	**+1.3**
GUY2C				*e*S	**Sn**	**08 46 28.7**	**-1.6**
GUY2C				*i*		08 46 42.9	
	comp=Z,71nm,0.4s						
CBOC	**Ciudad Bolivar**	**5.28**	**240**	*e*P	**Pn**	**08 45 35.0**	**+2.4**
CBOC				*e*S	**Sn**	**08 46 33.5**	**-0.3**
CBOC				*i*		08 46 57.1	
	comp=Z,22nm,0.7s						
BIRV	**Birongo**	**5.42**	**69**	*e*P	**Pn**	**08 45 34.8**	**+0.5**
BIRV	**Birongo**	**5.42**	**69**	Pn	**Pn**	**08 45 35.8**	**+1.4**
ANIL	**Santa Ana**	**5.65**	**225**	*e*P	**Pn**	**08 45 39.9**	**+2.1**
ANIL				*e*S	**Sn**	**08 46 43.0**	**0.0**
ANIL				*i*		08 46 49.7	
	comp=Z,172nm,0.4s						
CAPC	**Capurgana**	**5.87**	**271**	*e*P	**Pn**	**08 45 39.1**	**-1.5**
CAPC				*e*S	**Sn**	**08 46 42.2**	**-5.9**
CAPC				*i*		08 46 48.9	
	comp=Z,26nm,0.5s						
CAP2	**Capurgana**	**5.88**	**271**	Pn	**Pn**	**08 45 39.3**	**-1.4**
ORTC	**Ortega, Tolima**	**5.97**	**220**	*e*P	**Pn**	**08 45 42.4**	**+0.4**
ORTC				*e*S	**Sn**	**08 46 48.4**	**-2.3**
ORTC				*i*		08 46 53.6	
	comp=Z,51nm,0.4s						
PLMC	**San Jos del P**	**6.04**	**234**	*e*P	**Pn**	**08 45 44.4**	**+1.5**
PLMC				*e*S	**Sn**	**08 46 51.3**	**-1.0**
PLMC				*i*		08 47 07.6	
	comp=Z,28nm,0.5s						
GUVC	**San Jose del G**	**6.08**	**192**	*e*P	**Pn**	**08 45 43.6**	**+0.2**
GUVC				*e*S	**Sn**	**08 46 50.6**	**-2.6**
YOTC	**Yotoco, Valle**	**6.67**	**228**	*e*P	**Pn**	**08 45 52.5**	**+0.8**
YOTC				*e*S	**Sn**	**08 47 10.4**	**+2.4**
YOTC				*i*		08 47 15.4	
	comp=Z,6.8nm,0.5s						
PRGV	**PARIAGUAN**	**6.70**	**88**	*e*P	**Pn**	**08 45 51.3**	**-0.6**
PCRV	**Puerto La Cruz**	**6.88**	**76**	Pn	**Pn**	**08 45 56.7**	**+2.3**
	comp=Z,3.9nm,0.3s,baz=331,slow=13,SNR=21						
PCRV				Sn	**Sn**	**08 47 15.4**	**+2.4**
	comp=Z,6.8nm,0.3s,baz=281,slow=22,SNR=9.0						
PCRV	**Puerto La Cruz**	**6.88**	**76**	*e*P	**Pn**	**08 45 54.5**	**+0.1**
PLCV	**Puerto La Cruz**	**6.92**	**76**		**Pn**	**08 45 56.7**	**+1.7**
PLCV					**Sn**	**08 47 15.4**	**+1.4**
BCIP	**Isla Barro Col**	**8.35**	**275**	Pn	**Pn**	**08 46 13.2**	**-1.4**
DR12	**Loma Pena Alta**	**10.38**	**11**	Pn	**Pn**	**08 46 41.8**	**-0.7**
CELP	**Cerrillos**	**10.58**	**26**	Pn	**Pn**	**08 46 43.7**	**-1.4**
AOPR	**Arecibo Observ**	**10.75**	**24**	Pn	**Pn**	**08 46 46.6**	**-0.9**
PDPR	**Patillas Dam,**	**10.78**	**29**	Pn	**Pn**	**08 46 46.2**	**-1.7**
SJG	**San Juan**	**10.80**	**28**	Pn	**Pn**	**08 46 47.3**	**-0.8**
	comp=Z,2.3nm,0.3s,baz=205,slow=18,SNR=1.8						
GCPR	**Guaynabo City**	**11.00**	**28**	Pn	**Pn**	**08 46 50.0**	**-1.0**
CBYP	**Canovanas**	**11.08**	**29**	Pn	**Pn**	**08 46 51.2**	**-0.8**
MTDJ	**Mount Denham**	**11.32**	**329**	Pn	**Pn**	**08 46 55.7**	**+0.3**
BOAV	**Boa Vista**	**12.44**	**119**		**Pn**	**08 47 09.7**	**-0.9**
PTGA	**Pitinga**	**14.66**	**128**	Pn	**Pn**	**08 47 39.0**	**-2.1**
	comp=Z,0.4nm,0.3s,baz=314,slow=20,SNR=9.0						
PTGA				Sn	**Sn**	**08 50 23.0**	**-0.9**
	comp=Z,1.0nm,0.3s,baz=342,slow=20,SNR=4.8						
PTGA				Lg	Lg	08 51 52.8	
	comp=Z,1.8nm,0.3s,baz=210,slow=22,SNR=8.1						
PTGA	**Pitinga**	**14.66**	**128**		**Pn**	**08 47 39.1**	**-2.0**
MDP	**Montagnes des**	**18.95**	**99**	P	**Pn**	**08 48 36.2**	**+0.7**
	comp=Z,0.6nm,0.3s,baz=276,slow=17,SNR=10						
ETMB	**Extrema**	**18.96**	**164**	P	**P**	**08 48 35.0**	**+0.1**
LPAZ	**La Paz**	**24.88**	**172**	P	**P**	**08 49 38.5**	**+1.2**
	comp=Z,0.7nm,0.4s,baz=10,slow=11,SNR=1.3						
LPAZ	**La Paz**	**24.88**	**172**	IAmb	IAmb	08 49 56.6	
	comp=Z,2.5nm,0.8s						
SIV	**San Ignacio**	**26.44**	**157**	P	**P**	**08 49 51.1**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=331,slow=15,SNR=2.2						
TXAR	**Lajitas Array**	**36.65**	**309**	P	**P**	**08 51 22.8**	**+2.2**
	comp=Z,0.2nm,0.6s,baz=130,slow=11,SNR=2.9						
BW06	**Boulder Array**	**47.73**	**322**	P	**P**	**08 52 51.4**	**+0.5**
PDAR	**Pinedale Array**	**47.73**	**322**	P	**P**	**08 52 51.2**	**+0.3**
	comp=Z,0.7nm,0.4s,baz=123,slow=11,SNR=13						
PLCA	**Paso Flores**	**49.03**	**179**	P	**P**	**08 52 59.9**	**-0.8**
	comp=Z,2.9nm,1.0s,baz=360,slow=13,SNR=5.1						
PLCA	**Paso Flores**	**49.03**	**179**	IAmb	IAmb	08 53 03.7	
	comp=Z,4.3nm,1.1s						
ASAR	**Alice Springs**	**151.48**	**235**	PKPbc	**PKPbc**	**09 04 08.2**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=119,slow=2.7,SNR=6.9						
WRA	**Warramunga Arr**	**152.63**	**243**	PKPbc	**PKPbc**	**09 04 10.5**	**-0.9**
	comp=Z,0.7nm,0.8s,baz=108,slow=2.8,SNR=9.0						

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*DJA **07** 08:45:16.7±1.0, 8°S±11°×12°5E±°, h10^{km}, M3.9/6, mb4.5/1, MLv3.6/6*
*IDC **07** 08:45:16.9±1.9, 8°.48S×125°.41E, h0^{km}, mb3.7/1, mb1 3.9/5, mb1mx3.6/36, mbtmp3.7/5, ML3.6/4, Error ellipse: s-maj=33.4km s-min=21.0km az=67.0*
ISC 07 08:45:15.5±2.2, **8°.1S**±0°.1×**125°.4E**±0°.1**, h35**^{km}**, n9, σ1^{s}.98**/12**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**2.00**	**214**	P	**Pn**	**08 45 49.0**	**+2.0**
BATI	**Baumata**	**2.72**	**219**	Pn	**Pn**	**08 45 59.1**	**+2.3**
	12nm,0.3s,baz=149,slow=4.7,SNR=3.2						
BATI				Sn	**Sn**	**08 46 28.6**	**+0.1**
	11nm,0.3s,baz=269,slow=23,SNR=4.1						
BATI	**Baumata**	**2.72**	**219**	P	**Pn**	**08 45 57.5**	**+0.7**
MMRI	**Maumere**	**3.18**	**260**	P	**Pn**	**08 45 59.9**	**-3.2**
EDFI	**Ende, Flores**	**3.73**	**260**	P	**Pn**	**08 46 10.0**	**-0.8**
FITZ	**Fitzroy Crossi**	**9.96**	**179**	Pn	**Pn**	**08 47 36.5**	**+0.3**
	0.3nm,0.3s,baz=357,slow=10,SNR=16						
FITZ				Sn	**Sn**	**08 49 25.2**	**-1.5**
	0.9nm,0.3s,baz=149,slow=4.1,SNR=8.6						
WRA	**Warramunga Arr**	**14.62**	**145**	Pn	**Pn**	**08 48 41.2**	**+1.3**
	0.4nm,0.3s,baz=319,slow=13,SNR=17						
WRA				Sn	**Sn**	**08 51 19.4**	**-1.6**
	0.2nm,0.3s,baz=320,slow=26,SNR=3.6						
ASAR	**Alice Springs**	**17.51**	**153**	P	**P**	**08 49 19.9**	**+2.1**
	0.2nm,0.3s,baz=323,slow=11,SNR=23						
ASAR				S	**Sn**	**08 52 29.0**	**-2.0**
	0.1nm,0.3s,baz=317,slow=20,SNR=5.5						
MKAR	**Makanchi Array**	**66.73**	**329**	P	P	08 56 11.6	+8.5
	0.8nm,0.9s,baz=152,slow=7.3,SNR=2.0						

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*IDC **07** 08:48:17.8±5.8, 43°.25N×147°.83E, h0^{km}, mb3.4/2, mb1 3.7/4, mb1mx3.4/33, mbtmp3.7/4, ML3.6/2, Error ellipse: s-maj=130.4km s-min=25.9km az=168.0*
*JMA **07** 08:48:24.4±0.3, 43°.60N×147°.29E, h20^{km}, M4.3*
*MOS **07** 08:48:24.1±1.4, 43°.73N×147°.45E, h53^{km}, mb4.7/1, Error ellipse: s-maj=18.3km s-min=14.6km az=179.4*
*SKHL **07** 08:48:25.2±0.2, 43°.70N×147°.40E, h45^{km}±6^{km}, mb4.9/4*
ISC 07 08:48:24.8±1.2, **43°.66N**±0°.08×**147°.51E**±0°.07**, h45**^{km}**, n34, σ1^{s}.94**/46**, 1C, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YUK	**Yuzh-Kuril'sk**	**1.25**	**288**	*e*PN	**Pn**	**08 48 44.4**	**-1.4**
YUK				*e*S	**Sn**	**08 48 58.3**	**-3.2**
YUK				pmax	pmax		
	comp=Z,1μm,0.2s						
YUK				pmax	pmax		
	comp=N,311nm,0.1s						
YUK				pmax	pmax		
	comp=E,125nm,0.1s						
YUK				smax	smax		
	comp=N,5μm,0.2s						
YUK				smax	smax		
	comp=E,3μm,0.2s						
YUK	**Yuzh-Kuril'sk**	**1.25**	**288**	*e*P	**Pn**	**08 48 44.6**	**-1.2**
YUK				AMB	AMB	08 48 45.0	
	comp=E,7μm,0.4s						
YUK				AMB	AMB	08 48 45.0	
	comp=E,1μm,0.4s						
YUK				*e*S	**Sn**	**08 48 58.8**	**-2.7**
YUK				A	A	08 49 00.0	
	comp=E,2μm,0.4s						
YUK				A	A	08 49 00.0	
	comp=E,6μm,0.4s						
GRPR	**Tuman**	**1.30**	**286**	*e*PN	**Pn**	**08 48 44.5**	**-2.0**
GRPR				*e*S	**Sn**	**08 49 00.5**	**-2.2**
GRPR				pmax	pmax		
	comp=Z,388nm,0.2s						
GRPR				smax	smax		
	comp=N,3μm,0.4s						
GRPR				smax	smax		
	comp=E,1μm,0.2s						
GRPR	**Tuman**	**1.30**	**286**	*e*P	**Pn**	**08 48 44.5**	**-2.0**
GRPR				AMB	AMB	08 48 48.0	
	comp=E,390nm,0.4s						
GRPR				*e*S	**Sn**	**08 49 00.5**	**-2.2**
GRPR				A	A	08 49 04.0	
	comp=E,3μm,0.4s						
GRPR				A	A	08 49 04.0	
	comp=E,1μm,0.4s						
NEM2	**Nemuro 2**	**1.32**	**258**	P	**Pn**	**08 48 45.5**	**-1.2**
NEM2				*e*S	**Sn**	**08 49 00.1**	**-3.0**
NMR	**Nemuro--Hokkai**	**1.33**	**258**	⇑*i*PN	**Pn**	**08 48 45.4**	**-1.5**
NMR				*i* S	**Sn**	**08 49 00.6**	**-2.8**
NMR	**Nemuro--Hokkai**	**1.33**	**258**	*i* P	**Pn**	**08 48 45.4**	**-1.5**
NMR				*i* S	**Sn**	**08 49 00.6**	**-2.8**
GLVR	**Golovnino**	**1.45**	**274**	*e*PN	**Pn**	**08 48 47.8**	**-0.7**
GLVR				*i* S	**Sn**	**08 49 04.8**	**-1.4**
GLVR				pmax	pmax		
	comp=Z,456nm,0.2s						
GLVR				pmax	pmax		
	comp=N,37nm,0.1s						
GLVR				smax	smax		
	comp=E,3μm,0.4s						
GLVR				smax	smax		
	comp=N,7μm,0.3s						
GLVR	**Golovnino**	**1.45**	**274**	*e*P	**Pn**	**08 48 47.8**	**-0.7**
GLVR				AMB	AMB	08 48 48.0	
	comp=N,460nm,0.2s						
GLVR				*i* S	**Sn**	**08 49 04.8**	**-1.4**
GLVR				A	A	08 49 06.0	
	comp=N,7μm,0.4s						
GLVR				A	A	08 49 06.0	
	comp=N,3μm,0.4s						
KUR	**Kuril'sk**	**1.60**	**9**	*e*PN	**Pn**	**08 48 49.6**	**-1.0**
KUR				*i* S	**Sn**	**08 49 07.8**	**-2.1**
KUR				pmax	pmax		
	comp=Z,244nm,0.3s						
KUR				pmax	pmax		
	comp=N,99nm,0.2s						
KUR				pmax	pmax		
	comp=E,147nm,0.2s						
KUR				smax	smax		
	comp=N,1μm,0.2s						
KUR				smax	smax		
	comp=E,2μm,0.2s						
KUR	**Kuril'sk**	**1.60**	**9**	*e*P	**Pn**	**08 48 49.6**	**-1.0**
KUR				AMB	AMB	08 48 53.0	
	comp=E,240nm,0.5s						
KUR				*i* S	**Sn**	**08 49 07.8**	**-2.1**
KUR				A	A	08 49 09.0	
	comp=E,590nm,0.2s						
KUR				A	A	08 49 09.0	
	comp=E,1μm,0.2s						
RUSJ	**Misakicho**	**1.69**	**286**	*e*PN	**Pn**	**08 48 51.9**	**0.0**
RUSJ				*e*S	**Sn**	**08 49 10.4**	**-2.0**
JRA	**Rausu**	**1.75**	**280**	P	**Pn**	**08 48 52.0**	**-0.7**
JKHN	**Kushirohamanak**	**1.81**	**252**	P	**Pn**	**08 48 52.8**	**-0.6**
JKHN				*e*S	**Sn**	**08 49 13.7**	**-1.4**
JNSB	**Nemuroshibetsu**	**1.82**	**275**	P	**Pn**	**08 48 53.3**	**-0.3**
JNK	**Nakash**	**2.03**	**269**	P	**Pn**	**08 48 55.8**	**-0.7**
JNK				*e*S	**Sn**	**08 49 18.6**	**-2.0**
AKK	**Akkeshi**	**2.05**	**253**	*e*P	**Pn**	**08 48 56.0**	**-0.8**
AKK				*e*S	**Sn**	**08 49 19.2**	**-1.9**
JAK	**Akkeshi**	**2.16**	**253**	P	**Pn**	**08 48 57.3**	**-0.9**
JAK				*e*S	**Sn**	**08 49 21.7**	**-2.0**
JTKR	**Abashiri--Toko**	**2.63**	**278**	P	**Pn**	**08 49 04.9**	**+0.2**
JAR	**Ashorobuto**	**2.75**	**264**	P	**Pn**	**08 49 06.5**	**+0.2**
JOB	**Onbets**	**2.79**	**256**	P	**Pn**	**08 49 06.8**	**-0.1**
JOB				*e*S	**Sn**	**08 49 38.1**	**-1.2**
JCH	**Churui**	**3.21**	**252**	P	**Pn**	**08 49 12.5**	**-0.2**
ASAJ	**Asahikawa**	**3.58**	**279**	Pn	**Pn**	**08 49 19.7**	**+1.9**
	comp=E,5.0nm,0.3s,baz=88,slow=12,SNR=17						
ASAJ				Sn	**Sn**	**08 50 05.5**	**+6.6**
	comp=E,5.0nm,0.3s,baz=16,slow=33,SNR=7.2						
JFR	**Furan**	**3.62**	**264**	P	**Pn**	**08 49 19.7**	**+1.4**
JNBK	**Urakawa-nobuka**	**3.75**	**250**	P	**Pn**	**08 49 19.9**	**-0.2**
PETK	**Petropavlovsk-**	**11.62**	**32**	Pn	**Pn**	**08 51 08.6**	**+0.7**
	comp=E,0.6nm,0.3s,baz=206,slow=13,SNR=11						
SONM	**Songino Array**	**28.75**	**293**	P	**P**	**08 54 20.1**	**+2.0**
	comp=E,0.5nm,0.8s,baz=99,slow=8.9,SNR=2.1						
H11N2	**WAKE ISLAND Hy**	**28.86**	**140**	T	T	09 24 59.6	
	baz=330,slow=76,SNR=171						
H11N1	**WAKE ISLAND Hy**	**28.87**	**140**	T	T	09 25 00.7	
	baz=330,slow=76,SNR=152						
H11N3	**WAKE ISLAND Hy**	**28.88**	**140**	T	T	09 25 00.9	
	baz=330,slow=76,SNR=191						
H11S1	**WAKE ISLAND Hy**	**29.83**	**141**	T	T	09 26 20.4	
	baz=331,slow=76,SNR=516						

H11S3	WAKE ISLAND Hy	29.84	141	T	T	09 26 12.2	
	baz=331,slow=76,SNR=352						
H11S2	WAKE ISLAND Hy	29.85	141	T	T	09 26 21.7	
	baz=331,slow=76,SNR=324						
ILAR	Eielson Array	41.41	36	P	P	08 56 06.7	+0.3
	comp=E,0.4nm,0.6s,baz=276,slow=9.1,SNR=7.2						

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*IDC **07** 08:54:10.5±2.0, 30°.93S×71°.51W, h0^{km}, mb3.7/2, mb1 3.9/5, mb1mx3.7/26, mbtmp3.7/5, ML3.6/3, Error ellipse: s-maj=52.6km s-min=42.0km az=23.0*
*SJA **07** 08:54:16.0, 30°.72S×71°.62W, h10^{km}, ML4.0*
*GUC **07** 08:54:17.3±0.8, 30°.74S×71°.41W, h47^{km}±3^{km}, ML3.9*
ISC 07 08:54:17.4±0.9**, 30°.77S**±0°.04×**71°.59W**±0°.05**, h44**^{km}±8^{km}**, n64, σ1^{s}62**/62**, 1C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.10	337	⇑iP	Pn	08 54 24.9	+0.4
CO06				eS	Sn	08 54 30.3	+0.9
CO03	El Pedregal	0.78	96	⇓iP	Pn	08 54 30.3	-1.8
CO03				eS	Sn	08 54 39.1	-3.6
CO03				IAML		08 54 40.7	
	comp=E,8µm,0.2s						
CO03	El Pedregal	0.78	96	iP	Pn	08 54 30.0	-2.1
CO05	La Serena	0.90	20	eP	Pn	08 54 33.2	-0.4
CO05				eS	Sn	08 54 43.8	-1.6
CO05				IAML		08 54 47.5	
	comp=N,6µm,0.4s						
GO04	Tololo Observa	0.90	49	⇓iP	Pn	08 54 32.7	-1.3
GO04				eS	Sn	08 54 43.7	-2.2
VA06	Catapilco	1.81	172	eP	Pn	08 54 46.0	0.0
VA06				IAML		08 55 23.5	
	comp=E,1µm,0.4s						
LCO	Las Campanas	1.91	24	eP	Pn	08 54 47.7	-0.1
LCO				eS	Sn	08 55 10.6	-0.2
LCO	Las Campanas	1.91	24	iP	Pn	08 54 48.0	+0.2
AROD	Rodeo	1.92	72	iP	Pn	08 54 49.0	+1.0
VA03	San Esteban	2.18	156	eP	Pn	08 54 51.8	+0.5
VA03				IAML		08 55 35.4	
	comp=E,1µm,0.6s						
ACCO	Cerro Coronel	2.18	86	iP	Pn	08 54 53.0	+1.5
ACDV	Cuesta del Vie	2.21	75	iP	Pn	08 54 54.0	+2.2
RTLS	Leoncito	2.22	118	iP	Pn	08 54 54.0	+2.0
VA01	Torpederas	2.25	181	iP	Pn	08 54 54.0	+1.8
ROCH	El Roble	2.25	168	eP	Pn	08 54 52.4	0.0
ROCH				IAML		08 55 36.0	
	comp=N,886nm,0.7s						
ROC1	El Roble	2.26	168	iP	Pn	08 54 55.0	+2.5
AUSP	Uspallata	2.38	128	iP	Pn	08 54 56.0	+1.8
PEL	Peldehue	2.49	162	eP	Pn	08 54 56.2	+0.7
PEL				IAML		08 55 40.2	
	comp=N,381nm,0.5s						
PEL	Peldehue	2.49	162	iP	Pn	08 54 58.0	+2.5
MT02	Curacav	2.52	171	eP	Pn	08 54 55.9	+0.1
MT02	Curacav	2.52	171	iP	Pn	08 54 57.0	+1.2
AC04	Llanos de Chal	2.59	10	eP	Pn	08 54 57.2	+0.3
AC04				IAML		08 55 43.1	
	comp=E,884nm,0.2s						
AC04	Llanos de Chal	2.59	10	iP	Pn	08 54 57.0	+0.1
ZON	Zonda	2.61	108	iP	Pn	08 54 59.0	+1.8
MT05	Renca	2.72	165	eP	Pn	08 54 58.9	+0.3
MT05				IAML		08 55 48.0	
	comp=N,1µm,0.3s						
MT05	Renca	2.72	165	iP	Pn	08 55 01.0	+2.4
RTCV	Cerro Valdivia	2.83	114	iP	Pn	08 55 02.6	+2.5
FSR	Penalolen	2.85	162	eP	Pn	08 55 01.6	+1.1
ASAL	Salagasta	2.97	128	iP	Pn	08 55 04.0	+1.9
AGUA	GUANDACOL	2.97	65	iP	Pn	08 55 05.0	+2.8
MT09	Talagante	3.04	171	eP	Pn	08 55 03.8	+0.5
MT09				IAML		08 55 58.6	
	comp=N,319nm,0.4s						
ARCO	CERRO ARCO	3.06	133	iP	Pn	08 55 06.0	+2.5
MT01	Popeta	3.10	175	eP	Pn	08 55 04.8	+0.9
MT01				IAML		08 56 02.4	
	comp=N,232nm,0.4s						
MT01	Popeta	3.10	175	iP	Pn	08 55 05.0	+1.1
LMEL	Las Melosas	3.29	159	eP	Pn	08 55 06.7	+0.1
LMEL				IAML		08 56 02.2	
	comp=E,260nm,0.5s						
AAGR	Agrelo	3.29	135	iP	Pn	08 55 09.0	+2.4
GO03	Copiap	3.38	21	iP	Pn	08 55 08.0	+0.3
VCA	Vinchina	3.57	56	iP	Pn	08 55 13.0	+2.5
BO01	Tunca	3.64	173	iP	Pn	08 55 13.0	+1.7
BO02	Sierra Bellavi	4.07	171	iP	Pn	08 55 18.0	+0.7
ACLC	CERRO LA CRUZ	4.23	73	iP	Pn	08 55 20.0	+0.4
ACHE	Chepes	4.25	97	iP	Pn	08 55 20.0	+0.2
APLL	PUNTA DE LOS L	4.38	86	iP	Pn	08 55 22.0	+0.5
AC02	Maricunga	4.47	29	iP	Pn	08 55 24.0	+0.8
RFA	San Rafael	4.78	147	iP	Pn	08 55 28.0	+1.0
H03N1	Juan Fernandez	6.76	245	T	T	09 02 50.8	
	baz=72,slow=72,SNR=202						
AHML	Horco Molle	6.77	56	iP	Pn	08 55 54.0	-0.3
FSA	Cafayete	6.77	48	iP	Pn	08 55 56.0	+1.5
H03N3	Juan Fernandez	6.78	245	T	T	09 02 53.3	
	baz=72,slow=72,SNR=247						
H03N2	Juan Fernandez	6.78	245	T	T	09 02 53.1	
	baz=72,slow=72,SNR=213						
LVC	Limon Verde	8.47	17	Pn	Pn	08 56 14.7	-3.2
	comp=E,0.3nm,0.3s,baz=247,slow=7.7,SNR=1.5						
LVC				Sn	Sn	08 57 50.9	-1.4
	comp=E,1.2nm,0.3s,baz=190,slow=18,SNR=1.7						
LVC	Limon Verde	8.47	17	iP	Pn	08 56 18.0	+0.1
PLCA	Paso Flores	9.98	175	Pn	Pn	08 56 37.5	-0.8
	comp=E,0.1nm,0.3s,baz=343,slow=16,SNR=1.9						
CPUP	Villa Florida	13.29	74	Pn	Pn	08 57 21.5	-2.0
	comp=E,0.1nm,0.3s,baz=238,slow=13,SNR=1.5						
CPUP				Sn	Sn	08 59 53.6	+3.8
	comp=E,0.3nm,0.3s,baz=76,slow=9.4,SNR=1.7						
LPAZ	La Paz	14.76	13	Pn	Pn	08 57 44.5	+0.6
	comp=E,0.1nm,0.3s,baz=212,slow=1.6,SNR=5.8						
TXAR	Lajitas Array	67.12	330	P	P	09 05 07.6	+0.9
	comp=E,0.4nm,0.6s,baz=156,slow=8.7,SNR=4.6						
TORD	Torodi Ar. Bea	82.75	70	P	P	09 06 36.6	-0.6
	comp=E,0.5nm,0.5s,baz=272,slow=5.5,SNR=7.8						
H11S2	WAKE ISLAND Hy	126.14	271	T	T	11 32 11.4	
	baz=116,slow=75,SNR=31						
H11S1	WAKE ISLAND Hy	126.15	271	T	T	11 32 04.4	
	baz=116,slow=75,SNR=37						
H11S3	WAKE ISLAND Hy	126.16	271	T	T	11 32 08.6	
	baz=116,slow=75,SNR=31						
H11N3	WAKE ISLAND Hy	126.47	273	T	T	11 32 34.1	
	baz=116,slow=74						
H11N1	WAKE ISLAND Hy	126.49	273	T	T	11 32 33.3	
	baz=116						
H11N2	WAKE ISLAND Hy	126.49	273	T	T	11 32 36.0	
	baz=116,slow=74						
ZALV	Zalesovo Beam	151.26	29	PKPbc	PKPbc	09 14 05.1	-0.5
	comp=E,2.6nm,0.7s,baz=296,slow=3.0,SNR=10						

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*FUNV **07** 08:56:01.6, 8°.51N×71°.36W, h8^{km}, MW3.6*
ISC 07 08:55:59.4±1.3**, 8°.55N**±0°.03×**71°.42W**±0°.02**, h9**^{km}±11^{km}**, n29, σ1^{s}62**/52**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.61	115	eP	Pg	08 56 11.2	-0.2
SOCV				eS	Sb	08 56 19.9	-1.3
SDV	Santo Domingo	0.85	66	eP	Pb	08 56 16.5	0.0
SDV				eS	Sg	08 56 26.9	+0.1
SDV				i		08 56 30.3	
	comp=Z,116nm,0.3s						
PAMC	Pamplona, Colo	1.75	227	eP	Pb	08 56 31.9	-0.1
PAMC				eS	Sb	08 56 54.6	+0.4
PAMC				i		08 56 57.1	
	comp=Z,273nm,0.3s						
MCQV	Machiques	1.86	324	eP	Pb	08 56 33.5	-0.1
MCQV				eS	Sb	08 56 57.7	+0.8
OCAC	Ocana	1.91	261	eP	Pn	08 56 33.5	+1.2
OCAC				eS	Sn	08 56 57.6	+1.1
OCAC				i		08 57 00.3	
	comp=Z,1µm,0.4s						
TAMC	Tame, Arauca	2.13	190	eP	Pb	08 56 38.5	+0.3
TAMC				eS	Sg	08 57 06.5	-1.4
TAMC				i		08 57 22.9	
	comp=Z,66nm,0.5s						
ELOV	Elorza	2.46	129	eP	Pg	08 56 47.1	+0.6
ELOV				eS	Sb	08 57 13.9	-0.3
ELOV	Elorza	2.46	129	eP	Pn	08 56 40.8	+1.1
ELOV				eS	Sn	08 57 09.0	-0.9
DABV	Dabajuro	2.48	18	eP	Pn	08 56 42.6	+2.5
DABV				eS	Sn	08 57 11.7	+1.1
BARC	Barichara	2.61	222	eP	Pb	08 56 45.7	-0.9
BARC				eS	Sb	08 57 17.4	-1.5
BARC				i		08 57 22.5	
	comp=Z,70nm,0.3s						
SIQV	Siquisique	2.63	37	eP	Pn	08 56 43.6	+1.5
SIQV				eS	Sn	08 57 14.8	+0.6
SMLC	San Martn de	2.63	276	eP	Pn	08 56 42.3	+0.1
SMLC				eS	Sb	08 57 18.1	-1.3
SMLC				i		08 57 20.2	
	comp=Z,82nm,0.3s						
BRRC	Barranca, Sant	2.68	238	eP	Pb	08 56 48.0	+0.3
BRRC				eS	Sb	08 57 20.2	-0.6
BRRC				i		08 57 26.2	
	comp=Z,35nm,0.5s						
RUSC	La Rusia	3.11	212	eP	Pn	08 56 50.3	+1.2
RUSC				eS	Sn	08 57 27.5	+0.8
RUSC				i		08 57 46.0	
	comp=Z,18nm,0.7s						
URIC	Uribia, Colomb	3.19	350	eP	Pb	08 56 55.9	-0.4
URIC				eS	Sn	08 57 27.1	-0.9
URIC				i		08 57 45.3	
	comp=Z,29nm,0.7s						
BAUV	El Baul	3.36	83	eP	Pn	08 56 53.1	+0.9
BAUV				eS	Sn	08 57 30.4	-1.9
ZARC	Zaragoza, Cauc	3.56	253	eP	Pn	08 56 56.8	+1.8
ZARC				eS	Sn	08 57 36.6	-0.7
SMRC	Santa Marta, M	3.80	313	eP	Pn	08 56 57.8	-0.4
SMRC				eS	Sn	08 57 35.8	-7.2
SPBC	San Pablo de B	3.90	223	eP	Pn	08 57 01.4	+1.8
SPBC				eS	Sn	08 57 43.8	-1.8
SPBC				i		08 58 06.4	
	comp=Z,17nm,0.4s						
BENV	Beln	4.03	69	eP	Pn	08 57 02.5	+1.1
UREC	San Jos de Ur	4.15	259	eP	Pn	08 57 04.8	+1.8
UREC				eS	Sn	08 57 52.1	+0.3
UREC				i		08 58 08.4	
	comp=Z,7.8nm,0.3s						
MOTC	Monteria, Cord	4.21	273	eP	Pn	08 57 05.2	+1.4
MOTC				eS	Sn	08 57 54.7	+1.6
MOTC				i		08 58 22.0	
	comp=Z,6.2nm,0.7s						
PTGC	Puerto Gaitan,	4.38	189	eP	Pn	08 57 05.6	-0.6
CHIC	Chingaza	4.52	211	eP	Pn	08 57 09.5	+1.1
CHIC				eS	Sn	08 58 00.0	-1.3
CHIC				i		08 58 08.2	
	comp=Z,8.3nm,0.6s						
TACV	Tcata	4.62	70	eP	Pn	08 57 09.8	+0.3
HELC	Santa Helena	4.70	240	eS	Sn	08 58 06.6	+0.8
CACV	CAICARA DEL OR	4.93	101	eP	Pb	08 57 20.8	-5.2
GUY2C	Guyana, Caldas	5.12	230	eP	Pn	08 57 18.7	+1.9
GUY2C				eP	Pn	08 57 19.3	+2.5
GUY2C				eS	Sn	08 58 19.3	+2.9
GUY2C				i		08 58 49.7	
	comp=Z,8.3nm,0.4s						
BIRV	Birongo	5.43	69	eP	Pn	08 57 20.3	-0.3

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*IDC **07** 09:00:13.7±2.1, 30°.99S×71°.64W, h0^{km}, mb4.3/3, mb1 3.9/8, mb1mx3.8/31, mbtmp3.9/8, ML3.4/5, Error ellipse: s-maj=59.0km s-min=30.2km az=103.0*
*GUC **07** 09:00:21.1±0.7, 30°.79S×71°.44W, h50^{km}±2^{km}, ML4.1*
*SJA **07** 09:00:23.0, 30°.86S×71°.57W, h90^{km}, ML4.0*
ISC 07 09:00:21.5±0.9**, 30°.77S**±0°.03×**71°.61W**±0°.06**, h46**^{km}±8^{km}**, n60, σ1^{s}57**/61**, mb4.1**/3**, 4C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.10	347	eP	Pn	09 00 28.7	-0.1
CO06				eS	Sn	09 00 35.0	+1.0
CO06				IAML		09 00 35.9	
	comp=N,29µm,0.4s						
CO03	El Pedregal	0.80	95	eP	Pn	09 00 34.3	-2.1
CO03				eS	Sn	09 00 43.8	-3.5
CO05	La Serena	0.90	21	eP	Pn	09 00 37.6	-0.2
CO05				eS	Sn	09 00 50.5	+0.8
GO04	Tololo Observa	0.92	50	eP	Pn	09 00 37.1	-1.1
GO04				eS	Sn	09 00 49.0	-1.4
GO04				IAML		09 00 51.2	
	comp=E,10µm,0.2s						
VA06	Catapilco	1.81	172	⇑eP	Pn	09 00 50.3	+0.1
VA06				eS	Sn	09 01 12.0	+0.1
VA06				IAML		09 01 19.7	
	comp=N,4µm,0.5s						
LCO	Las Campanas	1.92	25	eP	Pn	09 00 51.8	-0.2
LCO				eS	Sn	09 01 16.2	+1.2
LCO	Las Campanas	1.92	25	iP	Pn	09 00 52.3	+0.3
LCO				eS	Sn	09 01 16.8	+1.8
LCO				IAML		09 01 18.1	
	comp=Z,4µm,1.1s						
AROD	Rodeo	1.94	73	iP	Pn	09 00 53.8	+1.6
AROD				⇓eS	Sn	09 01 16.5	+0.9
VA03	San Esteban	2.19	156	⇑eP	Pn	09 00 55.1	-0.4
VA03				eS	Sn	09 01 21.0	-0.4
VA03				IAML		09 01 31.3	
	comp=E,2µm,0.5s						
VA03	San Esteban	2.19	156	iP	Pn	09 00 56.0	+0.6
VA03				IAML		09 01 28.8	
	comp=Z,767nm,0.2s						
RTLS	Leoncito	2.23	118	iP	Pn	09 00 58.0	+1.7
RTLS				IAML		09 01 27.6	
	comp=Z,300nm,0.5s						
VA01	Torpederas	2.25	181	iP	Pn	09 00 55.0	-1.2
VA01				IAML		09 01 30.7	
	comp=Z,379nm,0.6s						
ROCH	El Roble	2.26	167	⇑eP	Pn	09 00 56.8	+0.2
ROCH				eS	Sn	09 01 23.7	+0.4
ROCH				IAML		09 01 28.6	
	comp=N,2µm,0.5s						
ROC1	El Roble	2.26	167	iP	Pn	09 00 58.6	+2.0
ROC1				⇓eS	Sn	09 01 27.0	+3.6
AUSP	Uspallata	2.39	128	iP	Pn	09 00 59.9	+1.4
PEL	Peldehue	2.50	162	iP	Pn	09 01 00.0	+0.3
MT02	Curacav	2.52	171	iP	Pn	09 01 01.0	+1.1
MT02				eS	Sn	09 01 33.2	+3.9
MT02				IAML		09 01 40.8	
	comp=Z,436nm,0.4s						
AC04	Llanos de Chal	2.60	11	⇑eP	Pn	09 01 01.7	+0.7
AC04				eS	Sn	09 01 31.9	+0.6
AC04	Llanos de Chal	2.60	11	iP	Pn	09 01 03.0	+2.0
AC04				IAML		09 01 50.2	
	comp=Z,226nm,0.5s						
ZON	Zonda	2.63	108	iP	Pn	09 01 03.0	+1.5
ZON				IAML		09 01 38.4	
	comp=Z,416nm,0.5s						
MT05	Renca	2.72	164	iP	Pn	09 01 04.0	+1.3
RTLL	Cerro Villicun	2.75	103	iP	Pn	09 01 03.6	+0.5
RTLL				eS	Sn	09 01 38.3	+3.2
RTCV	Cerro Valdivia	2.85	113	iP	Pn	09 01 06.3	+1.8
RTCV				IAML		09 01 58.4	
	comp=Z,146nm,0.8s						
ASAL	Salagasta	2.98	128	iP	Pn	09 01 08.4	+2.0
ASAL				IAML		09 01 53.4	
	comp=Z,247nm,0.5s						
AGUA	GUANDACOL	2.99	66	iP	Pn	09 01 09.7	+3.2
AGUA				IAML		09 02 01.7	
	comp=Z,186nm,0.5s						
ARCO	CERRO ARCO	3.08	133	iP	Pn	09 01 11.5	+3.7
ARCO				IAML		09 01 57.6	
	comp=Z,511nm,0.4s						
MT01	Popeta	3.10	174	iP	Pn	09 01 09.0	+1.1
MT01				IAML		09 01 52.6	
	comp=Z,297nm,0.6s						
GO03	Copiap	3.38	21	iP	Pn	09 01 15.0	+3.2
AVFE	Valle Fertil	3.58	89	iP	Pn	09 01 15.0	+0.4
AVFE				IAML		09 02 06.7	
	comp=Z,344nm,0.6s						
BO01	Tunca	3.64	173	iP	Pn	09 01 16.0	+0.7
BO01				IAML		09 02 13.0	
	comp=Z,182nm,0.7s						
BO02	Sierra Bellavi	4.08	170	iP	Pn	09 01 23.0	+1.7
BO02				IAML		09 02 27.4	
	comp=Z,285nm,0.5s						
GO05	Huala	4.24	184	iP	Pn	09 01 22.0	-1.6
ACHE	Chepes	4.27	97	iP	Pn	09 01 24.0	-0.1
APLL	PUNTA DE LOS L	4.40	86	iP	Pn	09 01 26.0	+0.2
APLL				IAML		09 02 24.3	
	comp=Z,358nm,0.9s						
AC02	Maricunga	4.48	30	iP	Pn	09 01 30.0	+2.7
AC02				IAML		09 02 55.9	
	comp=Z,102nm,1.2s						
RFA	San Rafael	4.79	147	iP	Pn	09 01 31.0	-0.2
RFA				IAML		09 02 52.9	
	comp=Z,56nm,0.8s						
H03N1	Juan Fernandez	6.74	245	T	T	09 08 52.1	
	baz=74,slow=72,SNR=446						
H03N3	Juan Fernandez	6.76	245	T	T	09 08 50.3	
	baz=74,slow=72,SNR=433						
H03N2	Juan Fernandez	6.76	245	T	T	09 08 51.8	
	baz=74,slow=72,SNR=450						
AHML	Horco Molle	6.79	56	iP	Pn	09 02 00.0	+1.4
AHML				IAML		09 03 44.0	
	comp=Z,34nm,0.8s						
FSA	Cafayete	6.79	48	iP	Pn	09 02 00.0	+1.3
H03S3	Juan Fernandez	6.89	242	T	T	09 09 16.5	
	baz=73						
H03S1	Juan Fernandez	6.89	242	T	T	09 09 06.7	
	baz=73						
H03S2	Juan Fernandez	6.91	242	T	T	09 09 20.2	
	baz=73						
LC01	Cunco	8.12	181	iP	Pn	09 02 16.0	-0.7
LC01				IAML		09 04 28.6	
	comp=Z,10nm,1.2s						
LVC	Limon Verde	8.47	17	Pn	Pn	09 02 21.5	-0.5
	comp=Z,0.2nm,0.3s,baz=307,slow=15,SNR=1.9						
LVC				Sn	Sn	09 03 56.1	-0.4
	comp=Z,0.4nm,0.3s,baz=218,slow=12,SNR=1.5						
PLCA	Paso Flores	9.98	175	Pn	Pn	09 02 36.4	-5.9
	comp=Z,0.1nm,0.3s,baz=215,slow=19,SNR=1.1						
CPUP	Villa Florida	13.31	74	Pn	Pn	09 03 27.2	-0.5
	comp=Z,0.2nm,0.3s,baz=200,slow=13,SNR=1.4						
LPAZ	La Paz	14.76	13	Pn	Pn	09 03 49.3	+1.3
	comp=Z,0.0nm,0.3s,baz=190,slow=12,SNR=2.6						
SIV	San Ignacio	17.59	36	P	Pn	09 04 22.7	-0.6
	comp=Z,0.2nm,0.3s,baz=212,slow=11,SNR=5.6						
BDFB	Brasilia	26.32	60	P	P	09 05 51.8	-1.4
	comp=Z,3.5nm,0.7s,baz=239,slow=7.9,SNR=4.6						
DBIC	Dimbokro	73.82	72	P	P	09 11 50.9	-0.6
	comp=Z,3.7nm,0.6s,baz=230,slow=3.7,SNR=5.1						
TORD	Torodi Ar. Bea	82.77	70	P	P	09 12 40.6	-0.4
	comp=Z,0.5nm,0.4s,baz=271,slow=5.7,SNR=8.7						
H11S2	WAKE ISLAND Hy	126.12	271	T	T	11 38 13.4	
	baz=116,slow=75,SNR=27						
H11S1	WAKE ISLAND Hy	126.13	271	T	T	11 38 13.9	
	baz=116,slow=75,SNR=34						
H11S3	WAKE ISLAND Hy	126.14	271	T	T	11 38 07.2	
	baz=116,slow=75,SNR=29						
H11N3	WAKE ISLAND Hy	126.45	273	T	T	11 38 37.7	
	baz=116,slow=74						
H11N1	WAKE ISLAND Hy	126.47	273	T	T	11 38 41.8	
	baz=116						
H11N2	WAKE ISLAND Hy	126.47	273	T	T	11 38 39.1	
	baz=116,slow=74						
ZALV	Zalesovo Beam	151.27	29	PKPbc	PKPbc	09 20 08.8	-0.5
	comp=Z,1.3nm,0.6s,baz=332,slow=4.9,SNR=5.8						

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*PRE **07** 09:03:08.5±1.4, 26°.92S×26°.75E, h2^{km}, ML2.8*
*EAF **07** 09:03:12.1±0.8, 26°.71S×26°.54E, h10^{km}, MD3.7*
*BUL **07** 09:03:12.0±0.8, 26°.71S×26°.55E, h10^{km}, MD3.9*
ISC 07 09:03:08.8±1.5**, 26°.84S**±0°.05×**26°.71E**±0°.05**, h12**^{km}±12^{km}**, n13, σ2^{s}19**/26**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRYS	Parys	0.58	99	eP	Pg	09 03 19.8	-0.4
PRYS				eS	Sg	09 03 27.0	-1.0
PRYS				IAML		09 03 32.7	
	comp=Z,179nm,1.0s						
KLOF	Kloof	0.94	59	eP	Pn	09 03 27.8	-0.2
KLOF				eS	Sb	09 03 40.4	+0.7
KLOF				IAML		09 03 46.7	
	comp=Z,696nm,0.1s						
KSR	Koster	1.00	10	eP	Pn	09 03 29.9	+1.1
KSR				eS	Sn	09 03 43.6	+0.7
KSR				IAML		09 03 50.0	
	comp=Z,454nm,0.2s						
SLR	Silverton	1.79	52	eP	Pn	09 03 40.7	+1.0
SLR				eS	Sg	09 04 05.6	-0.7
SLR				IAML		09 04 09.1	
	comp=Z,164nm,0.3s						
BOSA	Boshof	2.19	216	eP	Pb	09 03 48.7	+0.3
BOSA				eS	Sb	09 04 15.4	-0.3
BOSA	Boshof	2.19	216	eP	Pb	09 03 48.7	+0.3
BOSA				eS	Sb	09 04 15.4	-0.3
POGA	Pongola	4.48	98	eP	Pn	09 04 17.4	+0.8
POGA				eS	Sn	09 05 07.4	-1.2
POGA				IAML		09 05 37.5	
	comp=Z,17nm,1.6s						
MOPA	Mopani	5.38	53	eP	Pn	09 04 31.7	+2.8
MOPA				eS	Sn	09 05 31.3	+0.4
MOPA	Mopani	5.38	53	eP	Pn	09 04 31.7	+2.8
MOPA				eS	Sn	09 05 31.3	+0.4
MSNA	Messina	5.39	35	eP	Pn	09 04 32.2	+3.1
MSNA				eS	Sn	09 05 29.3	-1.9
MSNA	Messina	5.39	35	eP	Pn	09 04 32.2	+3.1
MSNA				eS	Sn	09 05 29.3	-1.9
MATP	Matopo	6.59	15	eP	Pn	09 04 47.7	+2.0
MATP				eS	Sn	09 05 56.0	-4.9
MATP	Matopo	6.59	15	eP	Pn	09 04 47.7	+2.0
MATP				eS	Sn	09 05 56.0	-4.9

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*FUNV **07** 09:07:15.1, 8°.52N×71°.36W, h1^{km}, MW3.0*
ISC 07 09:07:11.1±1.5**, 8°.53N**±0°.03×**71°.33W**±0°.03**, h3**^{km}±12^{km}**, n16, σ1^{s}29**/32**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.53	118	eP	Pn	09 07 25.1	-0.5
SOCV				eS	Sn	09 07 33.6	-1.5
SDV	Santo Domingo	0.77	63	eP	Pn	09 07 30.6	+1.5
SDV				eS	Sn	09 07 41.9	+0.6
SDV				i		09 07 44.2	
	comp=Z,78nm,0.3s						
PAMC	Pamplona, Colo	1.80	229	eP	Pg	09 07 45.8	+0.1
PAMC				eS	Sn	09 08 06.6	-0.5
PAMC				i		09 08 11.0	
	comp=Z,80nm,0.4s						
MCQV	Machiques	1.92	322	eP	Pb	09 07 47.3	+0.5
MCQV				eS	Sg	09 08 12.6	-0.3
OCAC	Ocana	1.99	262	eP	Pb	09 07 47.0	-1.1
OCAC				eS	Sn	09 08 11.5	+0.1
OCAC				i		09 08 13.2	
	comp=Z,331nm,0.5s						
TAMC	Tame, Arauca	2.13	192	eP	Pb	09 07 50.6	+0.2
TAMC				eS	Sg	09 08 19.6	-0.1
TAMC				i		09 08 21.4	
	comp=Z,47nm,0.2s						
ELOV	Elorza	2.38	130	eP	Pb	09 07 55.4	+0.8
ELOV				eS	Sb	09 08 23.4	-1.1
DABV	Dabajuro	2.47	16	eP	Pb	09 07 56.5	+0.4
DABV				eS	Sb	09 08 26.5	-0.6
SIQV	Siquisique	2.58	35	eP	Pb	09 07 58.6	+0.5
SIQV				eS	Sb	09 08 28.4	-2.0
BARC	Barichara	2.66	224	eP	Pb	09 07 59.5	0.0
BARC				eS	Sb	09 08 31.5	-1.3
BARC				i		09 08 36.4	
	comp=Z,22nm,0.3s						
SMLC	San Martn de	2.72	276	eP	Pn	09 07 56.1	+0.3
SMLC				eS	Sb	09 08 31.8	-2.5
SMLC				i		09 08 36.6	
	comp=Z,36nm,0.3s						
BRRC	Barranca, Sant	2.75	239	eP	Pb	09 08 01.8	+0.8
BRRC				eS	Sn	09 08 31.0	+1.1
RUSC	La Rusia	3.15	214	eP	Pn	09 08 04.0	+2.0
RUSC				eS	Sn	09 08 40.1	-0.3
URIC	Uribia, Colomb	3.22	348	eP	Pb	09 08 08.9	0.0
URIC				eS	Sn	09 08 41.0	-0.4
URIC				i		09 09 01.7	
	comp=Z,8.7nm,0.2s						
BAUV	El Baul	3.28	83	eP	Pb	09 08 07.9	-2.0
BAUV				eS	Sn	09 08 45.8	+2.9
ZARC	Zaragoza, Cauc	3.64	254	eP	Pn	09 08 10.7	+2.3
ZARC				eS	Sn	09 08 50.6	-1.4
ZARC				i		09 09 05.6	
	comp=Z,9.4nm,0.3s						

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*FUNV **07** 09:14:02.9, 8°.52N×71°.33W, h2^{km}, MW3.0*
ISC 07 09:14:01.1±3.1**, 8°.49N**±0°.04×**71°.35W**±0°.03**, h8**^{km}±23^{km}**, n15, σ1^{s}45**/29**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.53	113	eP	Pb	09 14 12.3	-0.4
SOCV				eS	Sb	09 14 20.6	+0.1
SDV	Santo Domingo	0.81	61	eP	Pb	09 14 17.6	+0.1

SDV				*e*S	Sn	09 14 29.6	-1.6
SDV				*i*		09 14 31.0	
	comp=Z,27nm,0.3s						
PAMC	Pamplona, Colo	1.77	230	*e*P	Pb	09 14 33.5	-0.5
PAMC				*e*S	Sn	09 14 54.1	-1.2
PAMC				*i*		09 14 59.2	
	comp=Z,26nm,0.4s						
MCQV	Machiques	1.94	323	*e*P	Pb	09 14 35.7	-1.1
MCQV				*e*S	Sb	09 15 00.9	-0.3
OCAC	Ocana	1.97	263	*e*P	Pn	09 14 35.0	+0.1
OCAC				*e*S	Sn	09 14 59.3	-0.6
OCAC				*i*		09 15 01.6	
	comp=Z,124nm,0.3s						
TAMC	Tame, Arauca	2.09	192	*e*P	Pb	09 14 40.7	+1.3
TAMC				*e*S	Sb	09 15 05.7	+0.1
TAMC				*i*		09 15 10.7	
	comp=Z,20nm,0.2s						
ELOV	Elorza	2.37	129	*e*P	Pb	09 14 42.4	-1.7
ELOV				*e*S	Sb	09 15 11.1	-2.3
DABV	Dabajuro	2.51	16	*e*P	Pn	09 14 43.9	+1.6
DABV				*e*S	Sn	09 15 13.7	+0.6
BARC	Barichara	2.62	224	*e*P	Pb	09 14 48.8	+0.2
BARC				*e*S	Sb	09 15 20.2	-0.9
BARC				*i*		09 15 24.1	
	comp=Z,15nm,0.4s						
SIQV	Siquisique	2.62	35	*e*P	Pn	09 14 45.1	+1.3
SIQV				*e*S	Sn	09 15 15.6	-0.4
SMLC	San Martn de	2.71	277	*e*P	Pn	09 14 47.6	+2.5
SMLC				*e*S	Sb	09 15 21.0	-2.4
SMLC				*i*		09 15 23.1	
	comp=Z,31nm,0.3s						
BRRC	Barranca, Sant	2.72	240	*e*P	Pb	09 14 49.3	-0.8
BRRC				*e*S	Sb	09 15 21.8	-1.8
BRRC				*i*		09 15 33.4	
	comp=Z,7.2nm,0.6s						
BAUV	El Baul	3.30	82	*e*P	Pn	09 14 55.2	+2.1
BAUV				*e*S	Sn	09 15 31.6	-0.9
ZARC	Zaragoza, Cauc	3.62	254	*e*P	Pn	09 14 58.5	+0.9
ZARC				*e*S	Sn	09 15 43.0	+2.6
BENV	Beln	3.98	68	*e*P	Pn	09 15 04.0	+1.5

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*FUNV **07** 09:15:47.3, 8°.49N×71°.33W, h3km, MW3.0*
ISC 07 09:15:46.5±1.4, **8°.50N**±0°.04×**71°.36W**±0°.03, **h8**km±11km, **n17, σ1.s31**/31, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	Socops	0.55	113	*e*P	Pg	09 15 56.9	-0.2
SOCV				*e*S	Sg	09 16 04.5	+0.3
SDV	Santo Domingo	0.82	62	*e*P	Pg	09 16 02.2	-0.1
SDV				*e*S	Sb	09 16 14.1	-0.2
SDV				*i*		09 16 15.9	
	comp=Z,59nm,0.4s						
PAMC	Pamplona, Colo	1.76	229	*e*P	Pn	09 16 17.7	+0.1
PAMC				*e*S	Sn	09 16 39.1	-1.3
PAMC				*i*		09 16 43.8	
	comp=Z,52nm,0.3s						
MCQV	Machiques	1.93	323	*e*P	Pn	09 16 20.1	+0.6
MCQV				*e*S	Sn	09 16 45.1	+1.2
OCAC	Ocana	1.95	262	*e*P	Pn	09 16 19.5	-0.5
OCAC				*e*S	Sn	09 16 43.8	-1.1
OCAC				*i*		09 16 46.2	
	comp=Z,212nm,0.3s						
TAMC	Tame, Arauca	2.10	192	*e*P	Pb	09 16 25.3	+0.6
TAMC				*e*S	Sb	09 16 50.3	-0.7
TAMC				*i*		09 16 56.9	
	comp=Z,31nm,0.2s						
ELOV	Elorza	2.38	129	*e*P	Pn	09 16 26.4	+0.5
ELOV				*e*S	Sn	09 16 54.9	-0.4
DABV	Dabajuro	2.51	17	*e*P	Pn	09 16 28.5	+0.9
DABV				*e*S	Sn	09 16 58.2	-0.2
BARC	Barichara	2.62	224	*e*P	Pb	09 16 33.2	-0.6
BARC				*e*S	Sn	09 17 04.6	+3.3
BARC				*i*		09 17 09.3	
	comp=Z,26nm,0.6s						
SIQV	Siquisique	2.63	36	*e*P	Pn	09 16 29.9	+0.6
SIQV				*e*S	Sn	09 17 01.6	+0.2
SMLC	San Martn de	2.69	277	*e*P	Pn	09 16 31.6	+1.5
SMLC				*e*S	Sn	09 17 01.4	-1.6
SMLC				*i*		09 17 06.3	
	comp=Z,49nm,0.5s						
BRRC	Barranca, Sant	2.71	239	*e*P	Pb	09 16 34.2	-0.9
BRRC				*e*S	Sn	09 17 06.5	+3.2
BRRC				*i*		09 17 16.4	
	comp=Z,8.7nm,0.3s						
BAUV	El Baul	3.31	82	*e*P	Pn	09 16 39.6	+0.9
BAUV				*e*S	Sn	09 17 15.8	-2.4
ZARC	Zaragoza, Cauc	3.60	254	*e*P	Pn	09 16 43.2	+0.6
ZARC				*e*S	Sn	09 17 23.4	-2.0
ZARC				*i*		09 17 38.6	
	comp=Z,6.1nm,0.3s						
MONV	Montecano	3.70	22	*e*P	Pn	09 16 44.2	+0.3
BENV	Beln	3.99	68	*e*P	Pn	09 16 48.8	+0.8
TACV	Tcata	4.58	69	*e*P	Pn	09 16 56.5	+0.4

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*SJA **07** 09:16:56.2±1.9, 30°.84S×71°.57W, h17km±13km, ML4.2, MW4.0*
*GUC **07** 09:16:59.7±0.7, 30°.82S×71°.38W, h50km±3km, ML4.4*
*IDC **07** 09:17:00.2±0.6, 30°.85S×71°.28W, h48km±5km, mb3.8/8, mb1 3.9/13, mb1mx3.9/27, mbtmp4.0/13, Error ellipse: s-maj=18.8km s-min=14.4km az=105.0*
*NEIC **07** 09:17:00±1.3, 30°.84S±0°.05×71°.37W±0°.10, h43km±4km, mb4.6/38, ML4.4(GUC), Error ellipse: s-maj=12.2km s-min=6.8km az=89.0*
ISC 07 09:16:59.7±0.5, **30°.81S**±0°.04×**71°.58W**±0°.04, **h50**km±4km, **n137, σ1.s49**/150, **mb4.6**/27, **1C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	Fray Jorge	0.14	341	⇑*i*P	Pn	09 17 08.3	+0.6
CO06				*e*S	Sn	09 17 14.3	+0.9
CO06	Fray Jorge	0.14	341	Pn	Pn	09 17 08.4	+0.6
CO03	El Pedregal	0.77	93	⇓*i*P	Pn	09 17 12.4	-2.0
CO03				*e*S	Sn	09 17 21.2	-4.0
CO03	El Pedregal	0.77	93	Pn	Pn	09 17 12.4	-2.0
GO04	Tololo Observa	0.93	47	*e*P	Pn	09 17 15.8	-0.8
GO04				*e*S	Sn	09 17 27.2	-1.8
GO04	Tololo Observa	0.93	47		Pn	09 17 15.8	-0.8
GO04	Tololo Observa	0.93	47	*i* P	Pn	09 17 14.0	-2.7
GO04				*e*S	Sn	09 17 28.2	-0.8
CO05	La Serena	0.94	19	*e*P	Pn	09 17 16.4	-0.1
VA06	Catapilco	1.76	172	*e*P	Pn	09 17 27.9	+0.1
VA06				IAML		09 18 05.0	
	comp=E,5µm,0.5s						
AROD	Rodeo	1.93	71	*i* P	Pn	09 17 31.0	+0.6
LCO	Las Campanas	1.95	23	*e*P	Pn	09 17 30.6	+0.1
LCO	Las Campanas	1.95	23	Pn	Pn	09 17 31.2	+0.6
LCO	Las Campanas	1.95	23	*i* P	Pn	09 17 31.0	+0.4
LCO				IAML		09 18 12.6	
	comp=Z,6µm,1.1s						
VA03	San Esteban	2.14	156	*e*P	Pn	09 17 33.2	+0.2
VA03				*e*S	Sn	09 17 58.0	-0.4
VA03				IAML		09 18 06.1	
	comp=E,4µm,0.4s						
VA03	San Esteban	2.14	156		Pn	09 17 33.0	0.0
VA03	San Esteban	2.14	156	*i* P	Pn	09 17 33.0	0.0
VA03				IAML		09 18 08.2	
	comp=Z,2µm,0.8s						
ACCO	Cerro Coronel	2.18	85	*i* P	Pn	09 17 35.0	+1.3
ACCO				IAML		09 18 08.7	
	comp=Z,689nm,0.7s						
RTLS	Leoncito	2.19	117	*i* P	Pn	09 17 34.0	+0.1
RTLS				*e*S	Sn	09 18 02.6	+2.6
RTLS				IAML		09 18 05.9	
	comp=Z,477nm,0.8s						
VA01	Torpederas	2.21	181	*i* P	Pn	09 17 33.0	-0.9
VA01				IAML		09 18 07.6	
	comp=Z,879nm,0.6s						
ROCH	El Roble	2.21	167	*e*P	Pn	09 17 34.4	+0.3
ROCH				IAML		09 18 15.4	
	comp=E,3µm,0.6s						
ROC1	El Roble	2.21	168	*i* P	Pn	09 17 35.0	+0.8
AUSP	Uspallata	2.35	128	*i* P	Pn	09 17 37.0	+1.0
AUSP				*e*S	Sn	09 18 08.3	+4.5
PEL	Peldehue	2.45	162	*i* P	Pn	09 17 38.0	+0.8
MT02	Curacav	2.47	171	*e*P	Pn	09 17 37.6	+0.1
MT02	Curacav	2.47	171		Pn	09 17 38.0	+0.5
MT02	Curacav	2.47	171	*i* P	Pn	09 17 38.0	+0.5
MT02				*e*S	Sn	09 18 10.2	+3.7
MT02				IAML		09 18 18.3	
	comp=Z,2µm,0.6s						
ZON	Zonda	2.59	107	*i* P	Pn	09 17 40.0	+0.8
ZON				IAML		09 18 31.9	
	comp=Z,1µm,0.5s						
AC04	Llanos de Chal	2.63	10	*e*P	Pn	09 17 40.6	+0.9
AC04	Llanos de Chal	2.63	10	Pn	Pn	09 17 40.8	+1.1
AC04	Llanos de Chal	2.63	10	*i* P	Pn	09 17 41.0	+1.3
AC04				IAML		09 18 31.3	
	comp=Z,591nm,0.8s						
MT05	Renca	2.67	165	*e*P	Pn	09 17 41.1	+0.8
MT05	Renca	2.67	165	Pn	Pn	09 17 42.4	+2.1
MT05	Renca	2.67	165	*i* P	Pn	09 17 42.0	+1.7
RTCV	Cerro Valdivia	2.81	113	*i* P	Pn	09 17 43.3	+1.2
RTCV				IAML		09 18 36.2	
	comp=Z,324nm,0.9s						
FSR	Penalolen	2.81	162	*e*P	Pn	09 17 45.0	+2.8
ASAL	Salagasta	2.94	128	*i* P	Pn	09 17 46.0	+2.0
ASAL				IAML		09 18 42.0	
	comp=Z,939nm,0.8s						
AGUA	GUANDACOL	2.98	65	*i* P	Pn	09 17 47.0	+2.4
AGUA				IAML		09 18 40.6	
	comp=Z,381nm,1.2s						
MT09	Talagante	3.00	171	*e*P	Pn	09 17 45.3	+0.4
MT09				IAML		09 18 37.8	
	comp=E,2µm,0.3s						
ARCO	CERRO ARCO	3.03	133	*i* P	Pn	09 17 48.0	+2.7
ARCO				IAML		09 18 33.0	
	comp=Z,1µm,0.8s						
MT01	Popeta	3.06	175	*e*P	Pn	09 17 45.4	-0.1
MT01				IAML		09 18 37.6	
	comp=E,860nm,0.4s						
MT01	Popeta	3.06	175	*i* P	Pn	09 17 46.0	+0.4
MT01				IAML		09 18 37.2	
	comp=Z,910nm,0.6s						
LMEL	Las Melosas	3.25	159	*e*P	Pn	09 17 49.8	+1.6
LMEL				IAML		09 18 41.5	
	comp=N,1µm,0.3s						
AAGR	Agrelo	3.26	135	*i* P	Pn	09 17 50.0	+1.6
AAGR				IAML		09 18 51.8	
	comp=Z,605nm,0.7s						
GO03	Copiap	3.41	21	*e*P	Pn	09 17 52.0	+1.5
GO03				IAML		09 18 45.0	
	comp=N,591nm,0.6s						
GO03	Copiap	3.41	21	*i* P	Pn	09 17 52.0	+1.5
AVFE	Valle Fertil	3.56	89	*i* P	Pn	09 17 52.0	-0.4
AVFE				IAML		09 19 03.3	
	comp=Z,516nm,0.5s						
VCA	Vinchina	3.59	56	*i* P	Pn	09 17 56.0	+3.0
VCA				IAML		09 18 53.6	
	comp=Z,564nm,0.4s						
BO01	Tunca	3.60	173		Pn	09 17 52.9	0.0
BO01	Tunca	3.60	173	*i* P	Pn	09 17 54.0	+1.1
BO01				IAML		09 18 51.6	
	comp=Z,370nm,0.5s						
BO02	Sierra Bellavi	4.03	171	*i* P	Pn	09 18 00.0	+1.1
BO02				IAML		09 19 03.1	
	comp=Z,605nm,0.6s						
GO05	Huala	4.20	184	*i* P	Pn	09 18 00.0	-1.2
ACHE	Chepes	4.24	96	*i* P	Pn	09 18 02.0	+0.1
ACLC	CERRO LA CRUZ	4.24	72	*i* P	Pn	09 18 02.0	+0.1
ACLC				IAML		09 19 02.4	
	comp=Z,778nm,0.5s						
APLL	PUNTA DE LOS L	4.38	86	*i* P	Pn	09 18 03.0	-0.7
APLL				IAML		09 19 00.6	
	comp=Z,729nm,0.9s						
AC02	Maricunga	4.50	29		Pn	09 18 06.2	+0.4
AC02	Maricunga	4.50	29	*i* P	Pn	09 18 07.0	+1.1
AC02				IAML		09 19 18.7	
	comp=Z,357nm,1.3s						
RFA	San Rafael	4.74	147	*i* P	Pn	09 18 09.0	+0.3
RFA				IAML		09 19 35.6	
	comp=Z,123nm,1.0s						
ML02	Panimavida	4.94	178		Pn	09 18 12.3	+0.9
H03N1	Juan Fernandez	6.75	245	P	Pn	09 18 36.9	+1.0
	baz=115,slow=19,SNR=64						
H03N1				S	Sn	09 19 48.6	-2.7
H03N1				T	T	09 25 29.4	
	baz=74,slow=72,SNR=2178						
H03N3	Juan Fernandez	6.76	245	P	Pn	09 18 37.0	+0.9
	baz=115,slow=19,SNR=23						
H03N3				T	T	09 25 28.3	
	baz=74,slow=72,SNR=1535						
H03N2	Juan Fernandez	6.76	245	P	Pn	09 18 37.3	+1.2
	baz=115,slow=19,SNR=49						
H03N2				T	T	09 25 30.0	
	baz=74,slow=72,SNR=1662						
H03S3	Juan Fernandez	6.89	242	P	Pn	09 18 37.7	-0.2
	baz=34,slow=19,SNR=12						
H03S3				T	T	09 25 39.2	
	baz=85,slow=75						
H03S1	Juan Fernandez	6.90	242	P	Pn	09 18 38.0	+0.1
	baz=34,slow=19,SNR=10						
H03S1				S	Sn	09 19 49.3	-5.7
H03S1				T	T	09 25 50.3	
	baz=85,slow=75						
H03S2	Juan Fernandez	6.91	242	P	Pn	09 18 38.2	+0.1
	baz=34,slow=19,SNR=11						
H03S2				T	T	09 25 44.0	
	baz=85,slow=75						
LC01	Cunco	8.07	182	Pn	Pn	09 18 54.4	+0.1
LC01	Cunco	8.07	182	*i* P	Pn	09 18 53.0	-1.3
LC01				IAML		09 21 00.1	
	comp=Z,12nm,1.3s						
LVC	Limon Verde	8.51	17	P	Pn	09 18 59.3	-1.3
	comp=Z,0.2nm,0.3s,baz=141,slow=13,SNR=1.4						
LVC				S	Sn	09 20 35.6	+0.2
	comp=Z,0.6nm,0.3s,baz=242,slow=6.5,SNR=4.6						
PLCA	Paso Flores	9.94	175	P	Pn	09 19 20.7	+0.8
	comp=Z,0.2nm,0.3s,baz=336,slow=17,SNR=4.5						
LL04	Puerto Octay	10.10	184		Pn	09 19 21.8	-0.2
ITQB	Itaqui	12.98	89		Pn	09 19 58.0	-3.4
CPUP	Villa Florida	13.29	74	P	Pn	09 20 01.6	-4.1
	comp=Z,0.1nm,0.3s,baz=258,slow=17,SNR=2.0						
CPUP				S	Sn	09 22 30.4	-1.6
	comp=Z,0.3nm,0.3s,baz=267,slow=16,SNR=2.2						
CPUP	Villa Florida	13.29	74	Pn	Pn	09 20 04.1	-1.6
LPAZ	La Paz	14.79	13	P	Pn	09 20 27.5	+1.0
	comp=Z,0.1nm,0.3s,baz=186,slow=6.7,SNR=13						
LPAZ	La Paz	14.79	13	Pn	Pn	09 20 26.4	-0.1
PLTB	Pedras Altas	15.40	98	Pn	Pn	09 20 29.6	-4.1
SIV	San Ignacio	17.61	35	P	P	09 21 01.4	-0.5
	comp=Z,0.5nm,0.3s,baz=212,slow=10,SNR=37						
PTLB	Pontes e Lacer	19.07	39		P	09 21 16.6	-1.5
VILB	Vilhena	20.64	33		P	09 21 34.4	-0.8
MG05	Puerto Natales	20.86	182	P	P	09 21 36.2	-1.0
MG05				IAmb	IAmb	09 21 51.4	
	comp=Z,28nm,1.3s						
ETMB	Extrema	21.48	15	P	P	09 21 43.6	-0.5
ETMB				IAmb	IAmb	09 21 49.2	
	comp=Z,20nm,1.2s						
CZSB	Cruzeiro do Su	22.98	357	P	P	09 21 59.9	-0.3
CZSB				IAmb	IAmb	09 22 07.1	
	comp=Z,12nm,0.9s						
SAML	Samuel	23.12	22	P	P	09 21 59.6	-1.9
BDFB	Brasilia	26.32	60	P	P	09 22 29.1	-2.0
	comp=Z,7.2nm,0.8s,baz=247,slow=9.4,SNR=9.7						
BDFB	Brasilia	26.32	60	P	P	09 22 29.6	-1.4
BDFB				IAmb	IAmb	09 22 31.0	
	comp=Z,14nm,1.1s						
TBTG	Tabatinga, AM	26.53	4	P	P	09 22 33.6	+0.8
TBTG				IAmb	IAmb	09 22 34.8	
	comp=Z,19nm,1.0s						
PTGA	Pitinga	31.88	22	P	P	09 23 20.1	-0.2
PTGA				IAmb	IAmb	09 23 21.6	
	comp=Z,13nm,1.4s						
BOAV	Boa Vista	34.66	20	P	P	09 23 43.2	-1.3
ZARC	Zaragoza, Cauc	38.21	355	P	P	09 24 15.6	+0.9
SDV	Santo Domingo	39.48	1	P	P	09 24 25.6	0.0
SDV				IAmb	IAmb	09 24 26.9	
	comp=Z,14nm,1.4s						
BAUV	El Baul	39.67	5	P	P	09 24 27.6	+0.7
BAUV				IAmb	IAmb	09 24 28.3	
	comp=Z,15nm,0.9s						
SJCC	San Jacinto, C	40.62	355	P	P	09 24 36.7	+1.8
SJCC				IAmb	IAmb	09 24 54.9	
	comp=Z,8.7nm,1.0s						
CRPR	Cabo Rojo, PR	48.72	6	P	P	09 25 39.0	-0.3
CELP	Cerrillos	48.84	6	P	P	09 25 40.9	+0.8
VNA3	Neumayer Olymp	52.17	159	P	P	09 26 04.9	+0.1
SNAA	Sanae	54.40	159	P	P	09 26 21.2	-0.1
SNAA	Sanae	54.40	159	P	P	09 26 21.0	-0.2
SNAA				IAmb	IAmb	09 26 35.1	
	comp=Z,3.3nm,0.7s						
Y58A	Scranton	64.82	353	P	P	09 27 34.3	+1.1
SLBS	Sierra La Lagu	65.49	321	P	P	09 27 39.0	+1.2
143A	Socs Landing,	65.90	342	P	P	09 27 41.6	+1.5
V53A	Saluda	66.96	350	P	P	09 27 48.2	+1.2
V53A				IAmb	IAmb	09 27 49.9	
	comp=Z,9.6nm,1.1s						
SWET	Sewanee	67.05	347	P	P	09 27 48.3	+0.8
SWET				IAmb	IAmb	09 27 50.0	
	comp=Z,7.1nm,0.9s						
TKL	Tuckaleechee C	67.10	349	P	P	09 27 48.6	+0.8
TKL				IAmb	IAmb	09 27 49.9	
	comp=Z,8.8nm,1.1s						
TXAR	Lajitas Array	67.16	330	P	P	09 27 50.4	+2.0
	comp=Z,0.8nm,0.9s,baz=149,slow=8.3,SNR=6.2						
TXAR				pP	pP	09 28 04.1	+1.5
	comp=Z,0.6nm,0.7s,baz=156,slow=6.8,SNR=5.4						
TXAR	Lajitas Array	67.16	330	P	P	09 27 49.6	+1.2
VNDA	Vanda	67.30	191	P	P	09 27 50.0	+1.4
	comp=Z,0.4nm,0.8s,baz=146,slow=3.6,SNR=2.6						
VNDA				pP	pP	09 28 02.9	+0.1
	comp=Z,0.7nm,0.8s,baz=140,slow=4.3,SNR=3.5						
VNDA	Vanda	67.30	191	IAmb	IAmb	09 27 56.2	
	comp=Z,1.7nm,1.3s						
WVT	Waverly	68.31	346		P	09 27 56.7	+1.3
W39A	Magazine	68.90	341	P	P	09 28 00.9	+1.8
LCAR	Lake Charles	69.02	343	P	P	09 28 01.3	+1.5
LCAR				IAmb	IAmb	09 28 01.8	
	comp=Z,5.2nm,0.7s						
U40A	Yellville	69.73	342	P	P	09 28 05.2	+0.9
U40A				IAmb	IAmb	09 28 07.0	
	comp=Z,14nm,1.4s						
HHAR	Hobbs	69.96	341	P	P	09 28 06.5	+0.8
HHAR				IAmb	IAmb	09 28 07.8	
	comp=Z,5.5nm,0.8s						
CCM	Cathedral Cave	70.93	344	P	P	09 28 12.2	+0.8
R40A	Maddies Statio	71.40	343	P	P	09 28 15.6	+1.2
R40A				IAmb	IAmb	09 28 16.5	
	comp=Z,8.8nm,0.8s						
LIC	Lamto	73.41	72	*e*PKP1	P	09 28 26.7	-0.2
	comp=Z,32nm,1.1s						
TIC	Toumodi	73.66	72	*e*PKP1	P	09 28 27.4	-1.0
KIC	Kosan Boka	73.72	72	*e*PKP1	P	09 28 27.8	-1.0
	comp=Z,14nm,0.8s						
DBIC	Dimbokro	73.81	72	P	P	09 28 28.5	-0.7
	comp=Z,6.9nm,0.7s,baz=258,slow=3.8,SNR=8.0						
DBIC				pP	pP	09 28 43.7	0.0
	comp=Z,1.8nm,0.5s,baz=221,slow=4.7,SNR=1.5						
MAW	Mawson	76.12	164	P	P	09 28 41.8	0.0
	comp=Z,1.9nm,0.7s,baz=201,slow=6.1,SNR=8.2						
SMCO	Snowmass	77.03	332	P	P	09 28 49.6	+1.9
SMCO				IAmb	IAmb	09 29 05.1	
	comp=Z,4.6nm,1.1s						
K31A	O'Neill	77.23	340	P	P	09 28 49.1	+0.9
ECSD	EROS Data Cent	77.64	342	P	P	09 28 51.5	+1.0
ECSD				IAmb	IAmb	09 28 52.8	
	comp=Z,6.2nm,0.8s						
PD31	Pinedale Array	81.10	333	P	P	09 29 09.5	-0.2
PDAR	Pinedale Array	81.10	333	P	P	09 29 12.7	+3.0
	comp=Z,0.1nm,0.3s,baz=142,slow=4.6,SNR=2.7						
PDAR				pP	pP	09 29 25.1	+0.8
	comp=Z,0.4nm,0.6s,baz=132,slow=5.2,SNR=3.7						
PDAR	Pinedale Array	81.10	333	P	P	09 29 09.7	0.0
NVAR	Mina Array Bea	81.50	325	P	P	09 29 13.9	+2.1
	comp=Z,0.4nm,0.7s,baz=148,slow=6.9,SNR=4.4						
NVAR				pP	pP	09 29 26.7	+0.5
	comp=Z,0.6nm,0.7s,baz=150,slow=5.1,SNR=4.8						
TORD	Torodi Ar. Bea	82.76	70	P	P	09 29 18.1	-0.6
	comp=Z,2.4nm,0.8s,baz=256,slow=5.0,SNR=11						
TORD				pP	pP	09 29 32.5	-0.8
	comp=Z,1.0nm,0.6s,baz=271,slow=5.2,SNR=4.1						
TORD	Torodi Ar. Bea	82.76	70	P	P	09 29 18.1	-0.6
TORD				IAmb	IAmb	09 29 19.4	
	comp=Z,7.4nm,1.4s						
WRA	Warramunga Arr	123.72	210	PKP	PKPdf	09 35 52.0	-0.5
	comp=Z,0.7nm,0.7s,baz=166,slow=1.5,SNR=8.1						
WRA				pPKP	pPKPdf	09 36 06.8	-0.9
	comp=Z,0.3nm,0.6s,baz=163,slow=1.4,SNR=2.5						
H11S2	WAKE ISLAND Hy	126.15	271	T	T	11 54 55.4	
	baz=116,slow=75,SNR=134						
H11S1	WAKE ISLAND Hy	126.16	271	T	T	11 54 54.5	
	baz=116,slow=75,SNR=91						
H11S3	WAKE ISLAND Hy	126.17	271	T	T	11 54 48.6	
	baz=116,slow=75,SNR=101						
H11N3	WAKE ISLAND Hy	126.48	273	T	T	11 55 19.4	
	baz=116,slow=75,SNR=22						
H11N1	WAKE ISLAND Hy	126.49	273	T	T	11 55 17.6	
	baz=116,slow=75,SNR=9.4						
H11N2	WAKE ISLAND Hy	126.50	273	T	T	11 55 21.5	
	baz=116,slow=75,SNR=42						
KURBB	Kurchatov Arra	150.23	40	PKPbc	PKiKP	09 36 45.3	-0.2
	comp=Z,1.5nm,1.0s,baz=309,slow=3.3,SNR=4.0						
KURK	Kurchatov	150.23	40		PKPdf	09 36 41.4	+1.8
ZALV	Zalesovo Beam	151.30	30	PKPbc	PKiKP	09 36 47.4	-0.2
	comp=Z,5.6nm,0.9s,baz=294,slow=3.5,SNR=10						
ZALV				pPKPbc	pPKPbc	09 37 03.1	+0.7
	comp=Z,2.1nm,0.7s,baz=296,slow=5.3,SNR=3.3						

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*DSN **07** 09:17:29.0±3.0, 28°.31N×57°.93E, h15km, ML3.0/8, Error ellipse: s-maj=89.7km s-min=19.2km az=131.0*
*OMAN **07** 09:17:35.4±1.3, 27°.85N×58°.18E, h33km, mb4.9/1, ml3.5/12, Error ellipse: s-maj=24.2km s-min=10.6km az=23.0*
ISC 07 09:17:31.6±2.7, **27°.8N**±0°.2×**58°.03E**±0°.09, **h10**km, **n22, σ2.s38**/27, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHME	Shamm	2.45	224	*e*P	Pb	09 18 13.9	-1.8
	SNR=15						
SHME				S	Sb	09 18 46.0	-0.1
SHME	Shamm	2.45	224	P	Pb	09 18 14.0	-1.8
SHME				S	Sb	09 18 45.5	-0.5
BANOM	Banah	2.45	219	*e*P	Pb	09 18 13.9	-2.0
	SNR=62						
BANOM				S	Sb	09 18 48.3	+2.1
BANOM	Banah	2.45	219	P	Pb	09 18 13.9	-2.0
BANOM				S	Sb	09 18 49.1	+2.9
MDH	Madha	2.97	212	P	Pn	09 18 19.4	+0.6
MDH	Madha	2.97	212	P	Pb	09 18 20.1	-4.5
MASF	Masafi	2.97	215	P	Pb	09 18 22.6	-2.1
UOSS	Minazif	3.31	210	P	Pb	09 18 27.0	-3.5
HATD	Hatta, Dubai	3.45	210	P	Pb	09 18 29.7	-3.1
ASHO	Ashiyiah	3.61	210	*i* P	Pb	09 18 30.9	-4.6
	SNR=24						
ASHO	Ashiyiah	3.61	210	P	Pb	09 18 31.1	-4.4
	SNR=24						
FAQ	Al Faqa, Dubai	3.78	216	P	Pn	09 18 29.6	-0.3
FAQ	Al Faqa, Dubai	3.78	216	P	Pb	09 18 32.8	-5.7
	SNR=5.7						
SOHO	SOHO	3.93	200	*i* P	Pn	09 18 33.0	+1.0
	SNR=20						
SOHO	SOHO	3.93	200	P	Pn	09 18 32.5	+0.5
SOHO				S	Sn	09 19 19.9	+1.7
ASUD	Al Ashush, Dub	4.01	218	*i* P	Pn	09 18 35.4	+2.3
	SNR=6.2						
ASUD	Al Ashush, Dub	4.01	218	P	Pb	09 18 36.2	-6.2
	SNR=6.2						
HOQ	Hoqain	4.29	189	P	Pn	09 18 38.1	+1.1
	SNR=15						
HOQ				S	Sn	09 19 27.4	+0.3
BIDO	Bidbid	4.30	179	P	Pn	09 18 38.5	+1.4
WSAR	Wadi Sarin	4.62	173	P	Pn	09 18 43.6	+2.1
WBK	Wadi Bani Khal	5.28	170	P	Pn	09 18 52.4	+1.8
	SNR=52						
JLN	Jalan Bani Buh	5.80	167	P	Pn	09 18 58.4	+0.6
	SNR=7.2						
JLN				S	Sn	09 20 03.6	-0.8

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*FUNV **07** 09:20:40.1, 8°.51N×71°.37W, h2km, MW3.0*
ISC 07 09:20:39.4±1.5, **8°.53N**±0°.04×**71°.37W**±0°.03, **h7**km±12km, **n19, σ1.s19**/33, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	Socops	0.56	116	*e*P	Pg	09 20 50.2	-0.2
SOCV				*e*S	Sg	09 20 58.6	+0.9
PAMC	Pamplona, Colo	1.77	228	*e*P	Pn	09 21 11.4	+0.5
PAMC				*e*S	Sn	09 21 32.2	-1.7
PAMC				*i*		09 21 37.8	
	comp=Z,45nm,0.3s						
MCQV	Machiques	1.90	323	*e*P	Pn	09 21 12.7	+0.5
MCQV				*e*S	Sn	09 21 37.4	+1.0
OCAC	Ocana	1.95	262	*e*P	Pn	09 21 12.8	-0.3
OCAC				*e*S	Sn	09 21 37.1	-0.8

OCAC				i		09 21 38.8	
	comp=Z,108nm,0.5s						
TAMC	Tame, Arauca	2.12	191	eP	Pb	09 21 18.5	+0.2
TAMC				eS	Sn	09 21 43.3	+1.2
TAMC				i		09 21 49.1	
	comp=Z,23nm,0.4s						
ELOV	Elorza	2.41	129	eP	Pn	09 21 20.5	+1.2
ELOV				eS	Sn	09 21 48.5	-0.5
DABV	Dabajuro	2.48	17	eP	Pn	09 21 21.0	+0.8
DABV				eS	Sn	09 21 52.2	+1.4
SIQV	Siquisique	2.61	36	eP	Pn	09 21 23.2	+1.2
SIQV				eS	Sn	09 21 53.5	-0.4
BARC	Barichara	2.63	223	eP	Pb	09 21 25.5	-1.6
BARC				eS	Sn	09 21 56.0	+1.1
BARC				i		09 22 01.8	
	comp=Z,24nm,0.4s						
SMLC	San Martn de	2.68	276	eP	Pn	09 21 25.4	+2.4
SMLC				eS	Sn	09 21 57.8	+2.0
SMLC				i		09 22 00.8	
	comp=Z,33nm,0.3s						
BRRC	Barranca, Sant	2.72	239	eS	Sb	09 22 00.8	-1.2
RUSC	La Rusia	3.12	213	eP	Pn	09 21 29.4	-0.1
RUSC				eS	Sn	09 22 07.6	+0.2
URIC	Uribia, Colomb	3.21	349	eP	Pn	09 21 29.1	-1.1
URIC				eS	Sn	09 22 07.2	-1.5
URIC				i		09 22 17.4	
	comp=Z,3.7nm,0.3s						
BAUV	El Baul	3.32	83	eP	Pn	09 21 32.8	+1.1
BAUV				eS	Sn	09 22 09.9	-1.5
ZARC	Zaragoza, Cauc	3.60	254	eP	Pn	09 21 35.5	-0.2
ZARC				eS	Sn	09 22 20.7	+2.1
ZARC				i		09 22 30.4	
	comp=Z,4.2nm,0.3s						
MONV	Montecano	3.67	22	eP	Pn	09 21 37.5	+0.9
BENV	Beln	3.98	69	eP	Pn	09 21 40.7	-0.3
TACV	Tcata	4.57	69	eP	Pn	09 21 49.8	+0.7
BIRV	Birongo	5.39	69	eP	Pn	09 22 00.4	+0.1

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*FUNV **07** 09:25:08.7, 8°.47N×71°.32W, h4km, MW3.1*

ISC 07 09:25:07.9±1.9**, 8°.50N**±0°.03×**71°.32W**±0°.03**, h8**km±13km**,**
n19, σ**1ˢ.41**/32**, 1D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.51	115	⇓iP	Pg	09 25 17.6	-0.1
SOCV				eS	Sb	09 25 25.9	-0.8
PAMC	Pamplona, Colo	1.79	230	eP	Pn	09 25 38.7	-0.9
PAMC				eS	Sn	09 26 00.7	-2.0
MCQV	Machiques	1.95	322	eP	Pn	09 25 42.7	+1.3
MCQV				eS	Sn	09 26 06.9	+0.8
OCAC	Ocana	2.00	263	eP	Pn	09 25 40.2	-1.9
OCAC				eS	Sn	09 26 04.7	-2.6
TAMC	Tame, Arauca	2.10	193	eP	Pn	09 25 44.7	+1.2
TAMC				eS	Sn	09 26 09.8	-0.2
ELOV	Elorza	2.35	129	eP	Pn	09 25 47.7	+0.9
ELOV				eS	Sn	09 26 14.9	-1.1
DABV	Dabajuro	2.50	16	eP	Pn	09 25 49.3	+0.4
DABV				eS	Sn	09 26 20.4	+0.9
SIQV	Siquisique	2.60	35	eP	Pn	09 25 50.9	+0.5
SIQV				eS	Sn	09 26 22.3	0.0
BARC	Barichara	2.65	224	eP	Pn	09 25 52.7	+1.6
SMLC	San Martn de	2.74	276	eP	Pn	09 25 52.2	+0.1
SMLC				eS	Sn	09 26 26.3	+0.9
BRRC	Barranca, Sant	2.75	240	eS	Sn	09 26 28.3	+2.6
RUSC	La Rusia	3.13	214	eP	Pn	09 25 56.7	-1.2
RUSC				eS	Sn	09 26 37.3	+1.6
URIC	Uribia, Colomb	3.25	348	eP	Pn	09 26 00.2	+1.0
URIC				eS	Sn	09 26 34.8	-3.3
BAUV	El Baul	3.27	82	eP	Pn	09 26 00.4	+0.9
BAUV				eS	Sn	09 26 37.6	-1.0
ZARC	Zaragoza, Cauc	3.64	254	eP	Pn	09 26 05.2	+0.6
ZARC				eS	Sn	09 26 49.9	+2.0
MONV	Montecano	3.68	21	eP	Pn	09 26 05.1	0.0
BENV	Beln	3.95	68	eP	Pn	09 26 09.8	+0.8
TACV	Tcata	4.54	69	eP	Pn	09 26 17.3	+0.3
BIRV	Birongo	5.36	68	eP	Pn	09 26 28.5	+0.3

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*NEIC **07** 09:29:27.6±1.0, 23°.4N±0°.1×94°.6E±0°.1, h105km±9km, mb4.3/16, Error ellipse: s-maj=24.3km s-min=10.4km az=222.0*

*IDC **07** 09:29:29.5±3.4, 23°.43N×94°.62E, h126km±33km, mb3.7/13, mb1 3.8/14, mb1mx3.5/53, mbtmp4.0/14, MS4.5/2, Ms1 4.5/2, ms1mx4.0/49, Error ellipse: s-maj=44.7km s-min=11.3km az=59.0*

*NDI **07** 09:29:30.1±1.9, 23°.64N×94°.42E, h133km±19km, ML3.9, mb4.3(NEIC)*

ISC 07 09:29:26.4±0.6**, 23°.41N**±0°.07×**94°.44E**±0°.06**, h99**km**, n63,**
σ**1ˢ.87**/78**, mb4.3**/20**, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IMP	Imphal	1.49	342	eP	Pn	09 29 55.7	+3.1
IMP				eS	Sn	09 30 13.6	+1.2
IMP				IAML		09 30 21.6	
	comp=E,657nm,0.4s						
SILR	SILCHAR	2.03	313	eS	Sn	09 30 27.7	+3.2
SILR				IAML		09 30 30.5	
	comp=E,2µm,0.4s						
KOHI	KOHIMA	2.32	352	eP	Pn	09 30 05.9	+2.6
KOHI				eS	Sn	09 30 31.4	-0.2
KOHI				IAML		09 30 33.0	
	comp=E,1µm,0.7s						
BRDH	Bariadhala	2.68	255	S	Sn	09 30 45.3	+5.5
	comp=E,1.2nm,0.3s,baz=248,slow=24,SNR=48						
SHL	Shillong	3.17	313	eP	Pn	09 30 16.7	+2.1
SHL				IAML		09 30 18.5	
	comp=E,692nm,0.4s						
SHL				eS	Sn	09 30 50.5	-1.3
SHL	Shillong	3.17	313		Pn	09 30 16.7	+2.1
ITAN	ITANAGAR	3.78	350	eP	Pn	09 30 24.1	+1.5
ITAN				eS	Sn	09 31 03.0	-3.1
DHUB	DHUBRI	4.81	304	eP	Pn	09 30 38.0	+1.5
DHUB				eS	Sn	09 31 28.4	-2.7
CHTO	Chiang Mai	6.21	137	Pn	Pn	09 30 56.5	+0.9
CM31	Chiang Mai Arr	6.48	139	Pn	Pn	09 30 59.6	+0.4
CMAR	Chiang Mai Arr	6.48	139	P	Pn	09 31 00.9	+1.7
	comp=E,0.9nm,0.3s,baz=319,slow=13,SNR=9.8						
CMAR	Chiang Mai Arr	6.48	139	Pn	Pn	09 30 58.0	-1.2
LSA	Lhasa	6.92	335		Pn	09 31 06.4	+0.7
TAPN	Taplejung	7.25	304	ePn	Pn	09 31 11.5	+1.6
TAPN				eSn	Sn	09 32 30.1	-0.7
	comp=E,101nm,0.5s						
ODAN	Odare	7.26	300	ePn	Pn	09 31 11.7	+1.7
ODAN				eSn	Sn	09 32 29.1	-1.9
	comp=E,265nm,0.5s						
RAMN	Ramite	7.93	298	ePn	Pn	09 31 21.0	+1.8
RAMN				eSn	Sn	09 32 43.9	-3.6
	comp=E,38nm,0.3s						
JIRN	Jiri	8.57	301	ePn	Pn	09 31 29.7	+1.6
JIRN				eSn	Sn	09 33 00.6	-2.6
	comp=E,80nm,0.4s						
GUN	Gumba	8.93	302	ePn	Pn	09 31 34.0	+1.1
GUN				eSn	Sn	09 33 09.0	-3.0
	comp=E,51nm,0.3s						
SLVN	Son La	8.99	101	Pn	Pn	09 31 33.2	-0.4
PKI	Pulchoki	9.15	299	ePn	Pn	09 31 37.7	+1.8
PKI				eSn	Sn	09 33 14.4	-2.9
	comp=E,25nm,0.4s						
PBKT	Sadao Pong	9.16	137	Pn	Pn	09 31 35.4	-0.3
PKIN	Phulchoki	9.17	299	ePn	Pn	09 31 36.9	+0.9
PKIN				eSn	Sn	09 33 14.7	-2.9
	comp=E,34nm,0.4s						
KKN	Kakani	9.35	300	ePn	Pn	09 31 39.2	+0.7
KKN				eSn	Sn	09 33 19.7	-2.3
	comp=E,18nm,0.2s						
DMN	Daman	9.41	298	ePn	Pn	09 31 40.6	+1.2
DMN				eSn	Sn	09 33 20.3	-3.3
	comp=E,27nm,0.4s						
GKN	Gorkha	9.96	299	ePn	Pn	09 31 47.4	+0.7
GKN				eSn	Sn	09 33 32.7	-3.9
	comp=E,47nm,0.4s						
KOLN	Koldanda	10.71	296	ePn	Pn	09 31 57.1	+0.1
KOLN				eSn	Sn	09 33 50.2	-4.8
	comp=E,50nm,0.5s						
DANN	Dangsing	10.80	299	ePn	Pn	09 31 59.3	+1.0
DANN				eSn	Sn	09 33 53.6	-3.8
	comp=E,37nm,0.4s						
TARG	Taragay, Kyrgy	22.96	327	P	P	09 34 22.7	-0.1
TPUB	Ta-pu	24.03	85	P	P	09 34 29.8	-2.6
TPUB				IAmb	IAmb	09 34 31.3	
	comp=Z,18nm,1.3s						
MK31	Makanchi Array	25.30	340	P	P	09 34 44.6	+0.9
MK31				IAmb	IAmb	09 34 47.1	
	comp=Z,7.4nm,0.5s						
MKAR	Makanchi Array	25.30	340	P	P	09 34 45.2	+1.5
	comp=Z,7.9nm,0.5s,baz=146,slow=12,SNR=60						
MKAR	Makanchi Array	25.30	340	P	P	09 34 44.5	+0.8
AAK	Ala-Archa	25.33	324	P	P	09 34 43.8	-0.4
MAKZ	Makanchi	25.41	340	P	P	09 34 42.7	-2.0
MAKZ				IAmb	IAmb	09 34 45.1	
	comp=Z,13nm,1.2s						
GAR	Garm	25.73	313	P	P	09 34 48.9	+1.1
GAR				IAmb	IAmb	09 34 50.6	
	comp=Z,9.2nm,0.7s						
SONM	Songino Array	26.18	18	P	P	09 34 51.3	-0.4
	comp=Z,0.2nm,0.3s,baz=195,slow=10,SNR=2.1						
SONM	Songino Array	26.18	18	P	P	09 34 50.9	-0.8
KKAR	Karatay Array	27.88	321	P	P	09 35 07.1	+0.2
KURBB	Kurchatov Arra	29.86	339	P	P	09 35 25.2	+0.9
	comp=Z,0.4nm,0.3s,baz=146,slow=11,SNR=5.2						
ZAA0	Zalesovo Array	31.35	349	P	P	09 35 37.4	+0.1
ZAA0				IAmb	IAmb	09 35 38.1	
	comp=Z,3.2nm,1.1s						
ZALV	Zalesovo Beam	31.35	349	P	P	09 35 37.7	+0.3
	comp=Z,1.4nm,0.3s,baz=167,slow=8.9,SNR=8.9						
ZALV	Zalesovo Beam	31.35	349	P	P	09 35 37.6	+0.2
ABKAR	Akbulak array	37.39	322	P	P	09 36 30.3	+0.7
AKTO	Aktyubinsk	39.07	323	P	P	09 36 45.2	+1.5
	comp=Z,1.1nm,0.6s,baz=129,slow=10.0,SNR=4.5						
JCJ	Chichijima	43.14	75	LR	LR	09 54 35.6	
	comp=Z,770nm,21.3s,baz=220,slow=35						
AKASG	Malin Array Be	56.65	316	P	P	09 38 59.6	+0.3
	comp=Z,0.4nm,0.3s,baz=83,slow=6.0,SNR=2.8						
AKASG	Malin Array Be	56.65	316	P	P	09 39 00.5	+1.2
AKASG				IAmb	IAmb	09 39 01.7	
	comp=Z,2.0nm,1.3s						
WB0	Warramunga Arr	57.96	134	P	P	09 39 08.2	-0.6
WRA	Warramunga Arr	58.05	135	P	P	09 39 08.8	-0.7
	comp=Z,2.4nm,0.7s,baz=322,slow=7.5,SNR=34						
WRAB	Tennant Creek	58.05	135	P	P	09 39 08.9	-0.5
WRAB				IAmb	IAmb	09 39 10.0	
	comp=Z,2.3nm,0.6s						
WB2	Warramunga Arr	58.06	135	P	P	09 39 08.8	-0.7
FINES	FINESS Array B	59.39	329	P	P	09 39 18.6	+0.5
	comp=Z,0.4nm,0.3s,baz=69,slow=4.6,SNR=9.6						
NWAO	Narrogin (SRO)	60.09	158	P	P	09 39 23.1	-0.2
	comp=Z,6.8nm,0.9s,baz=8.7,slow=13,SNR=1.7						
COEN	Coen	60.42	123	P	P	09 39 24.7	-1.2
AS31	Alice Springs	60.49	138	P	P	09 39 25.7	-0.5
AS31				IAmb	IAmb	09 39 26.7	
	comp=Z,1.2nm,0.5s						
ASAR	Alice Springs	60.49	138	P	P	09 39 25.9	-0.3
	comp=Z,1.9nm,0.5s,baz=321,slow=6.9,SNR=68						
ASAR	Alice Springs	60.49	138	P	P	09 39 25.3	-1.0
ARCES	ARCESS Array B	60.93	338	P	P	09 39 29.0	+0.4
	comp=Z,2.2nm,0.8s,baz=98,slow=7.3,SNR=8.3						
PMG	Port Moresby	60.99	116	P	P	09 39 29.6	-0.1
NOA	NORSAR Array B	66.56	328	P	P	09 40 05.3	-0.4
	comp=Z,0.8nm,0.7s,baz=90,slow=6.2,SNR=3.6						
GERES	GERESS Array B	66.78	315	P	P	09 40 08.3	+0.8
	comp=Z,0.5nm,0.5s,baz=51,slow=3.9,SNR=2.9						
GERES	GERESS Array B	66.78	315	P	P	09 40 07.9	+0.4
INK	Inuvik	82.06	16	LR	LR	10 24 32.8	
	comp=Z,208nm,18.6s,baz=316,slow=40						

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*NEIC **07** 09:30:59.8±1.5, 30°.93S±0°.04×71°.79W±0°.08, h35km±5km, mb4.6/15, ML4.2(GUC), Error ellipse: s-maj=10.1km s-min=6.0km az=91.0*

*SJA **07** 09:30:59.0, 30°.93S×71°.88W, h10km, ML4.2*

*GUC **07** 09:31:00.2±0.8, 30°.92S×71°.58W, h40km±4km, ML4.2*

*IDC **07** 09:31:01.3±2.8, 30°.92S×71°.45W, h45km±27km, mb3.8/7, mb1 3.8/11, mb1mx3.7/31, mbtmp3.9/11, ML3.5/4, Error ellipse: s-maj=32.8km s-min=17.0km az=93.0*

ISC 07 09:30:59.7±0.5**, 30°.91S**±0°.03×**71°.83W**±0°.06**, h35**km**, n105,**
σ**1ˢ.65**/102**, mb4.4**/13**, 1C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.29	35	⇑iP	Pn	09 31 07.5	0.0
CO06				i S	Sn	09 31 12.7	-0.1
CO06				IAML		09 31 13.8	
	comp=N,27µm,0.4s						
CO06	Fray Jorge	0.29	35		Pn	09 31 07.5	0.0
CO03	El Pedregal	0.98	86	⇓iP	Pn	09 31 14.9	-2.1
CO03				i S	Sn	09 31 25.8	-4.0
CO03				IAML		09 31 26.8	
	comp=N,12µm,0.3s						
CO03	El Pedregal	0.98	86	Pn	Pn	09 31 15.0	-2.1
CO05	La Serena	1.11	27	⇓iP	Pn	09 31 19.0	+0.2
CO05				eS	Sn	09 31 33.1	+0.2
CO05	La Serena	1.11	27		Pn	09 31 19.2	+0.4
GO04	Tololo Observa	1.15	51	eP	Pn	09 31 18.6	-1.0
GO04				eS	Sn	09 31 31.8	-2.4
GO04	Tololo Observa	1.15	51	Pn	Pn	09 31 19.3	-0.3
VA06	Catapilco	1.71	165	eP	Pn	09 31 26.8	-0.2
VA06				eS	Sn	09 31 46.6	-0.9
VA06				IAML		09 31 54.0	
	comp=N,7µm,0.3s						
VA01	Torpederas	2.11	176	Pn	Pn	09 31 32.0	-0.5
LCO	Las Campanas	2.13	28	i P	Pn	09 31 34.0	+0.9
VA03	San Esteban	2.14	150	eP	Pn	09 31 33.4	+0.3
VA03				eS	Sn	09 31 57.9	-0.6
VA03				IAML		09 32 05.1	
	comp=E,3µm,0.7s						
VA03	San Esteban	2.14	150	Pn	Pn	09 31 33.8	+0.7
VA03	San Esteban	2.14	150	i P	Pn	09 31 34.0	+1.0
AROD	Rodeo	2.16	71	i P	Pn	09 31 35.0	+1.5
ROCH	El Roble	2.17	162	eP	Pn	09 31 33.4	-0.1
ROCH				IAML		09 32 04.8	
	comp=N,2µm,0.3s						
ROC1	El Roble	2.17	162	i P	Pn	09 31 34.0	+0.4
RTLS	Leoncito	2.34	113	i P	Pn	09 31 38.0	+2.1
MT02	Curacav	2.41	166		Pn	09 31 36.9	+0.2
PEL	Peldehue	2.43	157	eP	Pn	09 31 37.0	+0.1
PEL				eS	Sn	09 32 04.8	-0.6
PEL				IAML		09 32 12.2	
	comp=E,1µm,0.3s						
PEL	Peldehue	2.43	157	i P	Pn	09 31 38.0	+1.1
ACDV	Cuesta del Vie	2.45	73	i P	Pn	09 31 40.0	+2.7
AUSP	Uspallata	2.46	123	i P	Pn	09 31 39.0	+1.4
MT05	Renca	2.64	160	eP	Pn	09 31 40.4	+0.5
MT05				eS	Sn	09 32 12.7	+2.0
MT05	Renca	2.64	160	Pn	Pn	09 31 40.5	+0.6
MT05	Renca	2.64	160	i P	Pn	09 31 41.0	+1.1
VA05	Santo Domingo	2.74	176	Pn	Pn	09 31 40.7	-0.5
ZON	Zonda	2.77	104	Pn	Pn	09 31 43.4	+1.7
ZON	Zonda	2.77	104	i P	Pn	09 31 44.0	+2.4
AC04	Llanos de Chal	2.78	14	eP	Pn	09 31 42.0	+0.3
AC04	Llanos de Chal	2.78	14	Pn	Pn	09 31 41.8	+0.1
AC04	Llanos de Chal	2.78	14	i P	Pn	09 31 43.0	+1.3
MT09	Talagante	2.94	166	eP	Pn	09 31 44.5	+0.4
MT09				IAML		09 32 35.4	
	comp=N,1µm,0.7s						
RTCV	Cerro Valdivia	2.96	109	i P	Pn	09 31 46.6	+2.3
MT01	Popeta	2.98	171	eP	Pn	09 31 44.5	0.0
MT01				IAML		09 32 31.8	
	comp=E,662nm,0.2s						
MT01	Popeta	2.98	171	i P	Pn	09 31 47.0	+2.5
ASAL	Salagasta	3.05	124	i P	Pn	09 31 48.0	+2.5
ARCO	CERRO ARCO	3.12	129	i P	Pn	09 31 50.0	+3.4
AGUA	GUANDACOL	3.22	65	i P	Pn	09 31 51.0	+3.1
AAGR	Agrelo	3.34	131	i P	Pn	09 31 53.0	+3.4
BO01	Tunca	3.53	170	Pn	Pn	09 31 51.9	0.0
BO01	Tunca	3.53	170	i P	Pn	09 31 53.0	+1.0
GO03	Copiap	3.59	23	Pn	Pn	09 31 53.2	+0.3
GO03	Copiap	3.59	23	i P	Pn	09 31 56.0	+3.1
AVFE	Valle Fertil	3.77	87	i P	Pn	09 31 56.0	+0.6
VCA	Vinchina	3.82	56	i P	Pn	09 32 00.0	+3.8
GO05	Huala	4.09	181	Pn	Pn	09 31 58.5	-1.2
ACHE	Chepes	4.44	95	i P	Pn	09 32 05.0	+0.3
ACLC	CERRO LA CRUZ	4.47	72	i P	Pn	09 32 06.0	+0.8
APLL	PUNTA DE LOS L	4.59	85	i P	Pn	09 32 08.0	+1.3
AC02	Maricunga	4.70	31	i P	Pn	09 32 11.0	+2.4
RFA	San Rafael	4.78	145	i P	Pn	09 32 11.0	+1.8
ML02	Panimavida	4.85	176	Pn	Pn	09 32 09.2	-0.9
H03N1	Juan Fernandez	6.51	245	T	T	09 39 23.1	
	baz=74,slow=72,SNR=112						
H03N3	Juan Fernandez	6.53	245	T	T	09 39 21.5	
	baz=74,slow=72,SNR=124						
H03N2	Juan Fernandez	6.53	245	T	T	09 39 21.5	
	baz=74,slow=72,SNR=97						
H03S3	Juan Fernandez	6.66	242	T	T	09 39 46.0	
	baz=67,slow=74						
H03S1	Juan Fernandez	6.66	242	T	T	09 39 43.5	
	baz=67,slow=74						
H03S2	Juan Fernandez	6.68	242	T	T	09 39 51.9	
	baz=67						
AHML	Horco Molle	7.02	56	i P	Pn	09 32 42.0	+1.9
FSA	Cafayete	7.02	49	i P	Pn	09 32 42.0	+1.8
LC01	Cunco	7.97	180		Pn	09 32 51.8	-1.1
LVC	Limon Verde	8.67	18	P	Pn	09 33 02.2	-0.8
	comp=E,0.2nm,0.3s,baz=1.5,slow=15,SNR=4.1						
LVC				S	Sn	09 34 47.8	+8.1
	comp=E,1.2nm,0.3s,baz=219,slow=21,SNR=1.3						
LVC	Limon Verde	8.67	18	Pn	Pn	09 33 03.1	+0.1
PLCA	Paso Flores	9.85	174	P	Pn	09 33 18.9	0.0
	comp=E,0.1nm,0.3s,baz=56,slow=14,SNR=1.7						
PLCA	Paso Flores	9.85	174	Pn	Pn	09 33 18.1	-0.8
LL04	Puerto Octay	9.99	183	Pn	Pn	09 33 19.0	-1.7
CPUP	Villa Florida	13.53	74	S	Sn	09 36 36.7	-1.4
	comp=E,0.1nm,0.3s,baz=170,slow=20,SNR=3.5						
LPAZ	La Paz	14.94	14	P	Pn	09 34 29.6	+0.6
	comp=E,0.1nm,0.3s,baz=170,slow=8.6,SNR=7.9						
LPAZ	La Paz	14.94	14	Pn	Pn	09 34 28.8	-0.2
SIV	San Ignacio	17.81	36	P	Pn	09 35 04.2	-0.7
	comp=E,0.1nm,0.3s,baz=205,slow=11,SNR=6.3						
BDFB	Brasilia	26.55	60	P	P	09 36 32.9	-1.8
	comp=E,2.1nm,0.5s,baz=237,slow=17,SNR=4.4						
BDFB	Brasilia	26.55	60	P	P	09 36 32.8	-1.8
TBTG	Tabatinga, AM	26.64	4	P	P	09 36 35.4	+0.2
TBTG				IAmb	IAmb	09 36 39.9	
	comp=Z,12nm,0.8s						
OTAV	Otavalo	31.61	347	P	P	09 37 19.1	-0.8
PTGA	Pitinga	32.06	23	P	P	09 37 21.6	-1.6
PMSA	Palmer Station	34.23	174	P	P	09 37 43.4	+1.7
	comp=Z,1.2nm,0.3s,baz=328,slow=9.5,SNR=6.2						
SNAA	Sanae	54.38	159	P	P	09 40 21.9	-0.8
	comp=Z,1.1nm,0.5s,baz=277,slow=8.5,SNR=5.5						
SNAA	Sanae	54.38	159	P	P	09 40 22.1	-0.6
SNAA				IAmb	IAmb	09 40 29.4	
	comp=Z,3.3nm,1.2s						
QSPA	South Pole Qui	59.31	180	P	P	09 40 58.5	+0.6
	comp=Z,1.4nm,0.7s,baz=144,slow=2.5,SNR=1.9						
QSPA	South Pole Qui	59.31	180	P	P	09 40 58.2	+0.3
QSPA				IAmb	IAmb	09 40 59.2	
	comp=Z,2.6nm,0.8s						
TXAR	Lajitas Array	67.15	330	P	P	09 41 51.9	+1.8
	comp=Z,0.3nm,0.5s,baz=159,slow=7.0,SNR=4.6						
TXAR	Lajitas Array	67.15	330	P	P	09 41 50.3	+0.2
WVT	Waverly	68.36	346	P	P	09 41 57.5	+0.1
WVT				IAmb	IAmb	09 41 59.2	
	comp=Z,9.6nm,1.2s						
HBAR	Harrisburg	68.45	344	P	P	09 41 57.4	-0.6
HHAR	Hobbs	69.99	341	P	P	09 42 08.1	+0.5
HHAR				IAmb	IAmb	09 42 09.6	
	comp=Z,4.1nm,0.9s						
KSPA	Keystone Colle	72.20	357	P	P	09 42 20.8	0.0
KSPA				IAmb	IAmb	09 42 24.6	
	comp=Z,20nm,1.4s						
O44A	Mansfield	72.37	347	P	P	09 42 23.4	+1.5
O44A				IAmb	IAmb	09 42 30.0	
	comp=Z,4.5nm,0.8s						
ALLY	Alegheny Colle	72.61	353	P	P	09 42 22.4	-0.8
DBIC	Dimbokro	74.04	72	P	P	09 42 31.0	-1.3
	comp=Z,2.2nm,0.5s,baz=224,slow=3.7,SNR=3.7						
DBIC	Dimbokro	74.04	72	P	P	09 42 31.5	-0.8
JFWS	Jewell Farm	75.39	346	P	P	09 42 39.0	-0.5
JFWS				IAmb	IAmb	09 42 48.3	
	comp=Z,8.5nm,1.1s						
NVAR	Mina Array Bea	81.46	325	P	P	09 43 15.4	+2.0
	comp=Z,0.6nm,0.8s,baz=166,slow=4.6,SNR=4.6						
NVAR	Mina Array Bea	81.46	325	P	P	09 43 13.6	+0.2
BCYI	Bear Canyon	83.93	331	P	P	09 43 24.9	-1.2
ASAR	Alice Springs	120.39	207	PKP	PKPdf	09 49 47.2	-0.7
	comp=Z,0.3nm,0.7s,baz=143,slow=2.0,SNR=1.9						
WRA	Warramunga Arr	123.53	210	PKP	PKPdf	09 49 53.4	-0.7
	comp=Z,0.7nm,0.6s,baz=168,slow=1.5,SNR=8.6						
WRA	Warramunga Arr	123.53	210		PKPdf	09 49 53.5	-0.6
H11S2	WAKE ISLAND Hy	125.94	271	T	T	12 08 44.4	
	baz=116,slow=75,SNR=22						
H11S1	WAKE ISLAND Hy	125.95	271	T	T	12 08 45.3	
	baz=116,slow=75,SNR=25						
H11S3	WAKE ISLAND Hy	125.96	271	T	T	12 08 44.9	
	baz=116,slow=75,SNR=25						
H11N3	WAKE ISLAND Hy	126.28	273	T	T	12 09 15.9	
	baz=115,slow=74						
H11N1	WAKE ISLAND Hy	126.29	273	T	T	12 09 16.5	
	baz=115						
H11N2	WAKE ISLAND Hy	126.29	273	T	T	12 09 15.3	
	baz=115,slow=74						
ZALV	Zalesovo Beam	151.49	29	PKPbc	PKPbc	09 50 49.4	-0.1
	comp=Z,1.1nm,0.6s,baz=315,slow=3.3,SNR=4.3						

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*NEIC **07** 09:31:18.3±1.5, 56°.0S±0°.1×27°.6W±0°.2, h117km±7km, mb4.8/41, Error ellipse: s-maj=19.4km s-min=12.5km az=215.0*

*IDC **07** 09:31:19.5±5.3, 56°.00S×27°.54W, h129km±47km, mb4.3/9, mb1 4.4/11, mb1mx4.0/28, mbtmp4.7/11, Error ellipse: s-maj=26.5km s-min=12.8km az=52.0*

ISC 07 09:31:17.4±0.5**, 55°.97S**±0°.08×**27°.56W**±0°.09**, h112**km**,**
n135, σ**0ˢ.81**/131**, mb4.8**/24**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	5.40	285	Pn	Pn	09 32 36.5	+1.1
HOPE				Sn	Sn	09 33 34.7	-1.6
VNA1	Neumayer--Stat	16.95	158	P	P	09 35 07.6	+0.2
VNA3	Neumayer Olymp	17.14	160	P	P	09 35 09.5	0.0
VNA2	Neumayer--Watz	17.34	158	P	P	09 35 11.7	-0.1
	baz=313,slow=13						
VNA2				S	S	09 38 28.9	+2.7
EFI	East Falkland	18.43	271	P	P	09 35 23.1	-0.6
SNAA	Sanae	18.90	156	P	P	09 35 28.8	-0.1
SNAA	Sanae	18.90	156	P	P	09 35 28.8	-0.1
	3.0nm,0.3s,baz=291,slow=11,SNR=171						
SNAA	Sanae	18.90	156		P	09 35 28.5	-0.3
SNAA				IAmb	IAmb	09 35 32.2	
	comp=Z,26nm,0.8s						
PMSA	Palmer Station	19.80	229	P	P	09 35 39.7	+1.2
	comp=Z,2.8nm,0.3s,baz=67,slow=7.3,SNR=21						
PMSA	Palmer Station	19.80	229	P	P	09 35 39.5	+0.9
PMSA				IAmb	IAmb	09 35 43.5	
	comp=Z,36nm,0.7s						
MG02	Cerro Sombrero	24.21	260	P	P	09 36 21.8	-1.4
MG05	Puerto Natales	26.51	260	P	P	09 36 42.5	-1.5
GO09	Cerro Castillo	26.60	261	P	P	09 36 43.5	-1.4
GO09				IAmb	IAmb	09 36 45.1	
	comp=Z,51nm,1.9s						
PLTB	Pedras Altas	30.29	312	P	P	09 37 18.8	+0.9
LL05	Los Muermos	32.95	277	P	P	09 37 41.8	+0.7
QSPA	South Pole Qui	34.28	180	P	P	09 37 52.6	+0.1
	comp=Z,12nm,0.5s,baz=200,slow=2.0,SNR=188						
QSPA	South Pole Qui	34.28	180	P	P	09 37 52.4	-0.2
BO02	Sierra Bellavi	36.20	287	P	P	09 38 10.3	+1.1
CPUP	Villa Florida	36.60	312	P	P	09 38 12.2	-0.4
CPUP				IAmb	IAmb	09 38 12.9	
	comp=Z,20nm,1.1s						
MAW	Mawson	40.34	144	P	P	09 38 43.5	+0.2
	comp=Z,3.5nm,0.6s,baz=230,slow=8.7,SNR=15						
MAW	Mawson	40.34	144	P	P	09 38 43.5	+0.2
AQDB	Aquidauana	41.20	318	P	P	09 38 50.9	-0.1
LVC	Limon Verde	45.08	300	P	P	09 39 22.5	-0.1
	comp=Z,12nm,0.5s,baz=145,slow=3.8,SNR=10						
LVC	Limon Verde	45.08	300	P	P	09 39 22.8	+0.2
LVC				IAmb	IAmb	09 39 25.4	
	comp=Z,12nm,0.7s						
PB04	IPOC Station P	45.92	299	P	P	09 39 28.7	-0.3
SBA	Scott Base	46.15	184	P	P	09 39 30.7	+0.8
SBA				IAmb	IAmb	09 39 32.0	
	comp=Z,32nm,1.6s						
VNDA	Vanda	46.64	183	P	P	09 39 34.2	+0.4
	comp=Z,12nm,0.6s,baz=188,slow=6.2,SNR=140						
VNDA	Vanda	46.64	183	P	P	09 39 34.1	+0.4
VNDA				IAmb	IAmb	09 39 35.6	
	comp=Z,12nm,0.7s						
PB01	IPOC Station P	46.69	301	P	P	09 39 35.3	+0.4
PB01				IAmb	IAmb	09 39 36.2	
	comp=Z,20nm,0.7s						
PTLB	Pontes e Lacer	47.09	316	P	P	09 39 38.0	0.0
PB08	IPOC Station P	47.30	302	P	P	09 39 40.8	+0.8
PB08				IAmb	IAmb	09 39 41.7	
	comp=Z,9.7nm,0.6s						
SIV	San Ignacio	47.37	314	P	P	09 39 39.2	-0.9
	comp=Z,1.5nm,0.5s,baz=154,slow=7.6,SNR=8.1						

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SIV                                     PcP     PcP       09 41 09.3 +0.2
          comp=Z,1.8nm,0.7s,baz=117,slow=2.3,SNR=6.2
PB11  IPOC Station P     47.87 302      P       P         09 39 44.4 +0.3
PB11                                    IAmb    IAmb      09 39 45.9
          comp=Z,12nm,0.7s
PSGCX Pisagua            48.23 301      P       P         09 39 46.8 -0.1
PSGCX                                   IAmb    IAmb      09 39 47.5
          comp=Z,14nm,0.7s
PB16  IPOC Station P     49.02 303      P       P         09 39 54.2 +0.8
PB16                                    IAmb    IAmb      09 41 05.0
          comp=Z,25nm,1.9s
H10N1 ASCENSION HYDR49.10  17           T       T         10 33 30.6
          baz=200,slow=73,SNR=6.7
H10N3 ASCENSION HYDR49.10  17           T       T         10 33 17.6
          baz=200,slow=73,SNR=23
H10N2 ASCENSION HYDR49.12  17           T       T         10 33 37.5
          baz=200,slow=73,SNR=11
VILB  Vilhena            49.78 316      P       P         09 39 58.7 +0.1
VILB                                    IAmb    IAmb      09 39 59.1
          comp=Z,8.6nm,0.6s
LPAZ  La Paz             50.16 306      P       P         09 40 02.8 +0.7
          comp=Z,6.7nm,0.6s,baz=139,slow=6.1,SNR=38
LPAZ  La Paz             50.16 306      P       P         09 40 02.8 +0.7
LPAZ                                    IAmb    IAmb      09 40 03.6
          comp=Z,7.5nm,0.6s
SAML  Samuel             54.60 315      P       P         09 40 34.3 +0.1
ETMB  Extrema            55.06 311      P       P         09 40 37.4 -0.1
MACA  Manacapuru-AM      58.97 320      P       P         09 41 04.7 -0.4
MACA                                    IAmb    IAmb      09 41 04.8
          comp=Z,8.8nm,0.6s
PTGA  Pitinga            60.98 322      P       P         09 41 17.6 -1.2
PTGA                                    IAmb    IAmb      09 43 31.7
          comp=Z,17nm,1.9s
ATAH  Atahualpa          62.98 300      P       P         09 41 34.5 +1.9
          comp=Z,6.2nm,0.7s,baz=128,slow=12,SNR=3.8
BOAV  Boa Vista          64.09 323      P       P         09 41 38.9 -0.5
OTAV  Otavalo            69.44 304      P       P         09 42 13.8 -0.1
MCQ   Macquarie Isla     69.76 184      P       P         09 42 15.0 +0.2
BAUV  El Baul            72.86 318      P       P         09 42 34.0 +0.1
BAUV                                    IAmb    IAmb      09 42 34.8
          comp=Z,17nm,0.9s
TORD  Torodi Ar. Bea     73.09  30      P       P         09 42 36.1 +0.9
          comp=Z,1.3nm,0.5s,baz=202,slow=5.5,SNR=9.9
TORD  Torodi Ar. Bea     73.09  30      P       P         09 42 36.4 +1.2
MOTC  Monteria, Cord     75.78 311      P       P         09 42 51.3 +0.4
MOTC                                    IAmb    IAmb      09 44 20.1
          comp=Z,29nm,2.0s
SJCC  San Jacinto, C     76.58 312      P       P         09 42 54.0 -1.4
SJCC                                    IAmb    IAmb      09 42 59.4
          comp=Z,18nm,1.4s
TAU   Tasmania Unive     81.39 176      P       P         09 43 20.9 -0.5
ORTG  Ortega, Santa      81.60 303      P       P         09 43 23.3 +0.5
ORTG                                    IAmb    IAmb      09 44 01.5
          comp=Z,30nm,1.5s
ACON  Acoyapa            82.86 304      P       P         09 43 29.0 -0.3
ACON                                    IAmb    IAmb      09 43 29.6
          comp=Z,14nm,1.0s
FORT  Forrest            91.12 159      P       P         09 44 10.2 +0.9
ASAR  Alice Springs      99.13 163      P       Pdif      09 44 44.9 -1.1
          comp=Z,1.6nm,0.6s,baz=184,slow=3.8,SNR=32
ASAR                                    PP      PP        09 48 43.6 -5.0
          comp=Z,0.6nm,0.8s,baz=183,slow=7.0,SNR=5.2
ASAR  Alice Springs      99.13 163      P       Pdif      09 44 45.1 -0.9
AS31  Alice Springs      99.13 163              Pdif      09 44 46.1 +0.1
WRA   Warramunga Arr    102.84 163      P       Pdif      09 45 01.0 -1.5
          comp=Z,0.3nm,0.5s,baz=195,slow=4.3,SNR=5.6
PDAR  Pinedale Array    120.12 303      PKP     PKPdf     09 49 52.8 -1.6
          comp=Z,0.3nm,0.5s,baz=142,slow=4.6,SNR=4.0
NVAR  Mina Array Bea    121.17 293      PKP     PKiKP     09 49 56.9 +0.2
          comp=Z,0.5nm,0.5s,baz=126,slow=2.3,SNR=7.6
O03E  Paynes Creek      124.37 292      P       PKPdf     09 50 02.1 -0.3
          baz=138
FINES FINESS Array B    124.41  28      PKP     PKPdf     09 50 01.0 -0.6
          comp=Z,5.4nm,1.1s,baz=219,slow=1.8,SNR=4.5
FINES FINESS Array B    124.41  28              PKPdf     09 50 01.4 -0.3
MSO   Missoula          125.23 303      P       PKPdf     09 50 03.1 -0.8
          baz=137
CMAR  Chiang Mai Arr    125.29 111      PKP     PKPdf     09 50 04.8 +0.1
          comp=Z,1.2nm,0.8s,baz=214,slow=3.8,SNR=5.6
N02D  Trinity Center    125.34 292      P       PKPdf     09 50 04.2  0.0
          baz=137
M04C  Macdoel           125.48 294      P       PKPdf     09 50 04.5 -0.1
          baz=137
ARCES ARCESS Array B    130.94  22      PKP     PKPdf     09 50 13.8 -0.1
          comp=Z,2.1nm,0.8s,baz=213,slow=3.1,SNR=5.0
ZALV  Zalesovo Beam     142.52  64      PKhKP   PKPpre    09 50 33.0
          comp=Z,0.7nm,0.4s,baz=241,slow=5.1,SNR=2.4
M31M  Drury Creek, Y    143.79 311      P       PKPbc     09 50 36.4 +0.5
          baz=115
A36M  Sachs Harbour     144.03 328      P       PKPbc     09 50 36.4 +0.2
          baz=109
N31M  Braeburn, Yuko    144.09 309      P       PKPbc     09 50 36.7  0.0
          baz=115
M30M  Minto, Yukon      144.96 310      P       PKPbc     09 50 39.3 -0.2
          baz=113
MAYO  Mayo, Yukon       144.97 312      P       PKPab     09 50 39.5 +0.1
          baz=112
YUK4  Talbot Arm        145.29 308      P       PKPbc     09 50 40.9 +0.1
          baz=113
INK   Inuvik            145.61 321      P       PKPbc     09 50 41.1 -0.1
          baz=107
EPYK  Eagle Plains      146.22 317      P       PKPbc     09 50 42.9 -0.3
          baz=108
I29M  Ogilvie Camp,     146.54 315      P       PKPbc     09 50 43.5 -0.7
          baz=108
DAWY  Dawson            146.58 312      P       PKPbc     09 50 43.7 -0.6
          baz=109
BVCY  Beaver Creek      146.66 309      P       PKPbc     09 50 44.4 -0.2
          baz=110
M27K  Edge Creek, AK    147.09 309      P       PKPbc     09 50 45.2 -0.7
          baz=110
L27K  Beaver Creek,     147.30 310      P       PKPbc     09 50 46.2 -0.2
          baz=109
EGAK  Eagle             147.53 313      P       PKPbc     09 50 46.1 -0.8
          baz=107
L26K  Log Cabin Wild    147.95 309      P       PKPbc     09 50 48.0 -0.1
          baz=108,SNR=7.9
N25K  Chitina, Valde    148.06 306      P       PKPbc     09 50 48.6 +0.1
          baz=109
EYAK  Cordova Ski Ar    148.24 304      P       PKPbc     09 50 48.8  0.0
          baz=110
J26L  Joseph Creek      148.45 312      P       PKPbc     09 50 49.4  0.0
          baz=105,SNR=9.4
SCRK  Sand Creek        148.49 311      P       PKPbc     09 50 49.6  0.0
          baz=106,SNR=8.8
HARP  HAARP             148.55 308      P       PKPbc     09 50 49.4 -0.3
          baz=108
KLU   Klutina           148.62 306      P       PKPbc     09 50 50.4 +0.4
          baz=108
RIDG  Independent Ri    148.80 310      P       PKPbc     09 50 50.7 +0.4
          baz=106
PAX   Paxson            148.86 309      P       PKPbc     09 50 50.2 -0.3
          baz=106
J25K  Salcha River,     149.24 312      P       PKPbc     09 50 51.2 -0.1
          baz=104
SCM   Sheep Creek Mo    149.37 306      P       PKPbc     09 50 52.1 +0.3
          baz=107
PRP   Porcupine Dome    149.50 314      P       PKPbc     09 50 51.9 -0.2
          baz=102,SNR=8.8
PWL   Port Wells        149.54 304      P       PKPbc     09 50 52.2  0.0
          baz=108
WAT6  Susitna Watana    149.76 307      P       PKPbc     09 50 53.0 +0.1
          baz=106
KNK   Knik Glacier      149.76 305      P       PKPbc     09 50 52.1 -0.6
          baz=107
SML   Sawmill           149.81 306      P       PKPbc     09 50 52.6 -0.2
          baz=106
HDA   Harding Lake      149.85 311      P       PKPbc     09 50 52.7 -0.1
          baz=103
ILAR  Eielson Array     149.91 312      PKPbc   PKPbc     09 50 52.4 -0.6
          comp=Z,16nm,0.7s,baz=130,slow=1.8,SNR=160
PMR   Palmer            150.12 305      P       PKPbc     09 50 53.3 -0.2
          baz=106
RC01  Rabbit Creek A    150.26 304      P       PKPbc     09 50 54.0 +0.2
          baz=107
COLA  College           150.33 312      P       PKPbc     09 50 53.4 -0.5
          baz=102
TCOL  CIGO, UAF Yank    150.34 312      P       PKPbc     09 50 53.4 -0.5
          baz=102,SNR=5.5
H24K  Noodor Dome       150.52 314      P       PKPbc     09 50 54.2 -0.3
          baz=100,SNR=5.8
MCK   McKinley          150.56 309      P       PKPbc     09 50 54.6  0.0
          baz=103
KDAK  Kodiak Island     150.60 297      P       PKPbc     09 50 54.6 -0.1
          baz=111
M22K  Willow            150.62 305      P       PKPbc     09 50 54.8 +0.1
          baz=105,SNR=5.7
NEA2  Nenana            150.79 311      P       PKPbc     09 50 54.3 -0.7
          baz=101,SNR=9.1
CUT   Chulitna          150.85 306      P       PKPbc     09 50 55.2  0.0
          baz=104,SNR=5.9
SONM  Songino Array     150.93  87      PKPbc   PKPbc     09 50 55.6 -0.4
          comp=Z,5.9nm,0.6s,baz=224,slow=3.7,SNR=34
I23K  Minto, Yukon-K    151.01 312      P       PKPbc     09 50 54.8 -0.7
          baz=100
TRF   Thorofare Moun    151.09 309      P       PKPbc     09 50 55.6 -0.4
          baz=102
H23K  Yukon River       151.19 314      P       PKPbc     09 50 55.7 -0.2
          baz=98
SKT   Skwentna          151.32 305      P       PKPbc     09 50 56.2 -0.1
          baz=104,SNR=8.9
TOLK  Toolik Lake Re    151.49 319      P       PKPbc     09 50 56.6  0.0
          baz=93
BPAW  Bear Paw Mtn.     151.52 310      P       PKPbc     09 50 56.4 -0.4
          baz=100,SNR=8.9
MLY   Manley            151.57 312      P       PKPbc     09 50 56.0 -0.9
          baz=99
COLD  Coldfoot          151.62 316      P       PKiKP     09 50 57.2 -0.1
          baz=95
PPLA  Purkeypile        151.82 307      P       PKPbc     09 50 57.3 -0.4
          baz=102
CAST  Castle Rocks      151.88 308      P       PKPbc     09 50 56.8 -0.8
          baz=101
CHUM  Lake Minchumin    152.06 309      P       PKPbc     09 50 57.5 -0.5
          baz=100,SNR=6.8
I21K  Tanana            152.11 312      P       PKPbc     09 50 57.4 -0.6
          baz=98
O19K  Port Alsworth     152.19 301      P       PKPbc     09 50 57.4 -0.9
          baz=105
P18K  Big Mountain,     152.42 299      P       PKPbc     09 50 58.0 -0.9
          baz=106
N19K  Bonanza Creek     152.42 302      P       PKPbc     09 50 57.9 -1.1
          baz=104
H21K  Melozitna Rive    152.51 313      P       PKPbc     09 50 58.7 -0.2
          baz=96
M19K  Big River Lodg    152.62 305      P       PKPbc     09 50 58.8 -0.5
          baz=102
J20K  Nowinta River     152.90 309      P       PKPbc     09 50 59.6 -0.2
          baz=98
TTA   Tatalina          153.55 306      P       PKiKP     09 51 01.5 +0.1
          baz=99
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*LJU **07** 09:42:53.9, 45°.89N×15°.06E, h0^{km}, ML0.8, Suspected explosion*

VIE 07 09:42:54.9±0.6**, 46°.21N×15°.96E, h0^{km}, ml1.3**/2**, Error ellipse: s-maj=4.3km s-min=2.6km az=94.0 31 km WSW of Varazdin Suspected Mining explosion., Northwestern Balkan Peninsula**

```
Code  Station Name        Δ°  AZ°     Phase ID            Time     Res
                                      Op      ISC       h  m  s    ISC
LOBO  Lobor              0.09 126     ePg     Pg        09 42 55.6 -1.0
LOBO                                  E                 09 42 55.6
LOBO                                  Sg      Sg        09 42 56.9 -0.8
PTJ   Puntijarka         0.30 179     ePg     Pg        09 43 00.2 -0.4
PTJ                                   E                 09 43 00.4
PTJ                                   Sg      Sg        09 43 04.7 +0.2
GOLS  Golise             0.31 230     ePg     Pg        09 43 00.7  0.0
GOLS                                  eSg     Sb        09 43 07.0 -1.9
GOLS                                  IAML              09 43 33.3
          comp=Z,44nm,0.9s
DOBS  Dobrina            0.35 261     i Pg    Pg        09 43 01.7 +0.1
DOBS                                  eSg     Sg        09 43 07.7 +1.7
DOBS                                  IAML              09 43 08.1
          comp=Z,4.0nm,0.1s
KALN  Kalnik             0.35 102     Sg      Sg        09 43 06.3 +0.2
KALN                                  E                 09 43 06.5
GCIS  Gornji Cirnik      0.41 215     ePg     Pg        09 43 02.8  0.0
GCIS                                  eSg     Sg        09 43 08.5 +0.3
GCIS                                  IAML              09 43 10.2
          comp=Z,2.6nm,0.2s
SOKA  Soboth             0.80 307     Pg      Pg        09 43 10.0 -0.1
          comp=Z,0.8nm,0.1s
SOKA                                  eSg     Sg        09 43 20.6 +0.1
          comp=Z,1.6nm,0.3s
MOSL  Moslavina          0.81 137     ePg     Pg        09 43 10.3 -0.1
MOSL                                  E                 09 43 10.5
MOSL                                  Sg      Sg        09 43 20.3 -0.6
ARSA  Arzberg            1.09 344     ePg     Pg        09 43 16.0 +0.3
          comp=Z,0.9nm,0.2s
ARSA                                  Sg      Sg        09 43 29.0 -0.8
          comp=Z,1.4nm,0.2s
```

IDC 07 09:47:48.3±4.1**, 17°.60S×179°.11W, h561^{km}**±18^{km}**, mb2.8**/2**, mb1 3.1**/3**, mb1mx2.7**/37**, mbtmp3.7**/3**, Error ellipse: s-maj=180.0km s-min=41.2km az=148.0, Fiji Islands region**

```
Code  Station Name        Δ°  AZ°     Phase ID            Time     Res
                                      Op      ISC       h  m  s    ISC
MSVF  Nonsavu            2.72 267     P       P         09 49 02.7  0.0
          3.3nm,0.3s,baz=76,slow=4.3,SNR=29
WRA   Warramunga Arr    44.04 259     P       P         09 55 06.5 -0.7
          0.3nm,0.5s,baz=95,slow=7.0,SNR=6.2
ASAR  Alice Springs     44.24 254     P       P         09 55 08.9 +0.2
          1.9nm,0.6s,baz=88,slow=8.1,SNR=47
ASAR                                  PcP     PcP       09 56 40.4 -0.6
          0.1nm,0.4s,baz=102,slow=3.9,SNR=1.1
GERES GERESS Array B   147.14 344     PKPbc   PKPbc     10 06 28.4 -0.6
          0.3nm,0.4s,baz=49,slow=3.1,SNR=2.7
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*NEIC **07** 10:06:14.8±1.8, 18°.23S±0°.10×174°.09W±0°.09, h10^{km}±1^{km}, mb5.3/197, Error ellipse: s-maj=16.1km s-min=14.3km az=183.0*

*BGR **07** 10:06:17.2±0.0, 18°.38S×173°.29W, h33^{km}*

*MOS **07** 10:06:17.5±2.1, 18°.08S×174°.27W, h30^{km}, mb5.4/30, Error ellipse: s-maj=9.8km s-min=9.1km az=48.3*

*NOU **07** 10:06:22.6, 18°.01S×173°.47W, h130^{km}, mb5.4/77, Tonga Islands*

*IDC **07** 10:06:23.0±0.5, 18°.12S×174°.30W, h80^{km}±4^{km}, mb4.7/19, mb1 4.9/19, mb1mx4.8/29, mbtmp5.0/19, MS4.3/5, Ms1 4.3/5, ms1mx4.0/32, Error ellipse: s-maj=15.7km s-min=9.4km az=151.0*

ISC 07 10:06:19.3±0.4**, 18°.27S**±0°.05×**173°.99W**±0°.04**, h51^{km}**±2^{km}**, h51^{km}:pP-P, n847,** σ**1°.37**/803**, mb5.2**/157**, 37C-51D, Tonga Islands**

```
Code  Station Name        Δ°  AZ°     Phase ID            Time     Res
                                      Op      ISC       h  m  s    ISC
NIUE  Niue               3.93 102     Pn      Pn        10 07 15.6 -1.5
NIUE                                  Sn      Sn        10 07 55.4 -6.7
NIUE  Niue               3.93 102     P       Pn        10 07 16.6 -0.6
AFI   Afiamalu           4.83  26     P       Pn        10 07 25.3 -4.2
          72nm,0.3s,baz=204,slow=7.2,SNR=45
AFI                                   S       Sn        10 08 14.0  -10
          348nm,0.3s,baz=120,slow=20,SNR=9.5
MSVF  Nonsavu            7.59 273     P       Pn        10 08 17.5  +10
GLKZ  Green Lake        11.52 197     P       Pn        10 09 06.2 +5.1
GLKZ                                  S       Sn        10 11 04.5 -3.7
RAR   Rarotonga         13.70 105     P       Pn        10 09 29.4 -1.5
          16nm,0.3s,baz=256,slow=9.4,SNR=24
RAR                                   S       Sn        10 11 48.7  -13
          4.9nm,0.3s,baz=66,slow=20,SNR=1.9
RAR                                   LR      LR        10 13 35.1
          comp=Z,1μm,19.9s,baz=282,slow=31
RAR   Rarotonga         13.70 105     P       Pn        10 09 27.8 -3.1
RAR   Rarotonga         13.70 105     Pn      Pn        10 09 27.8 -3.1
KNTN  Kanton            15.56   8     Pn      Pn        10 09 52.0 -3.4
RTV   Rentapao          16.73 269     P       P         10 10 16.0 +4.2
DVP   Devils Point      16.96 269     P       P         10 10 18.4 +4.0
MARNC Mare, Loyalty     17.21 256     P       Pn        10 10 14.6 -1.6
MARNC Mare, Loyalty     17.21 256     P       P         10 10 20.0 +2.9
LIFNC LIFOU             17.87 259     P       Pn        10 10 22.7 -1.6
LIFNC                                 IAmb    IAmb      10 10 28.4
          comp=Z,266nm,0.8s
LIFNC LIFOU             17.87 259     P       P         10 10 25.8 +1.4
PINNC Pines Island,     17.92 253     P       Pn        10 10 21.8 -3.2
PINNC                                 IAmb    IAmb      10 10 31.4
          comp=Z,320nm,1.0s
PINNC Pines Island,     17.92 253     P       P         10 10 28.5 +3.5
YATNC Mamie plateau,    18.34 255     P       Pn        10 10 33.9 +3.9
OUENC Ouen Island, N    18.44 254     P       Pn        10 10 34.4 +3.2
DZM   Mont Dzumac       18.75 255     eP      Pn        10 10 36.0 +0.9
          comp=Z,342nm,0.9s
DZM   Mont Dzumac       18.75 255     P       Pn        10 10 36.0 +0.9
          comp=Z,5.2nm,0.3s,baz=79,slow=15,SNR=35
DZM                                   LR      LR        10 15 51.4
          comp=Z,2μm,21.3s,baz=358,slow=31
DZM   Mont Dzumac       18.75 255     P       Pn        10 10 37.7 +2.6
ONTNC Ouen Toro         18.78 254     P       Pn        10 10 37.9 +2.6
NOUC  Port Laguerre     18.89 255     P       Pn        10 10 38.9 +2.3
NFK   Norfolk Island    19.70 234     P       P         10 10 43.3 -1.1
          baz=20,SNR=12
OUZ   Omahuta           20.16 211     P       Pn        10 10 52.1 +0.5
OUZ   Omahuta           20.16 211     P       Pn        10 10 51.2 -0.4
OUZ   Omahuta           20.16 211     P       Pn        10 10 51.5 -0.2
WCZ   Waipu Caves       20.40 208     P       Pn        10 10 53.9 -0.6
KOUNC Koumac, New Ca    20.61 260     P       Pn        10 10 58.0 +0.9
WIAZ  Waiheke Island    20.79 205     P       Pn        10 10 58.3 -0.8
TWGZ  Tauwhareparae     21.04 198     P       P         10 11 02.3 +3.4
WHRZ  Whale Island      21.06 200     P       P         10 11 02.8 +3.7
CNGZ  Carnagh Statio    21.26 197     P       P         10 11 03.5 +2.3
MARZ  Manawahe          21.27 201     P       P         10 11 04.1 +2.7
MWZ   Matawai           21.32 199     P       P         10 11 03.5 +1.6
TKGZ  Te Karaka         21.32 198     P       P         10 11 04.9 +3.1
EDRZ  Edgecumbe         21.36 200     P       P         10 11 04.2 +1.9
URZ   Urewera           21.38 200     P       P         10 11 02.0 -0.4
          comp=Z,278nm,0.7s,baz=301,slow=22,SNR=155
URZ                                   S       S         10 14 43.6  -13
          comp=Z,5.0nm,0.6s,baz=122,slow=23,SNR=1.8
URZ   Urewera           21.38 200     P       P         10 11 02.1 -0.4
URZ   Urewera           21.38 200     P       P         10 11 02.1 -0.4
URZ   Urewera           21.38 200     P       P         10 11 03.0 +0.5
KMRZ  Kaimai            21.40 202     P       P         10 11 06.6 +3.8
KARZ  Kaharoa           21.45 201     P       P         10 11 06.4 +3.1
MKRZ  Makatiti          21.48 201     P       P         10 11 08.8 +5.1
OMRZ  Omania            21.49 201     P       P         10 11 06.2 +2.5
RAGZ  Rawiri            21.50 199     P       P         10 11 06.0 +2.1
NGRZ  Ngongotaha        21.55 201     P       P         10 11 07.8 +3.4
TARZ  Mount Tarawera    21.56 201     P       P         10 11 07.0 +2.5
RIGZ  Rimuhau           21.59 198     P       P         10 11 06.9 +2.1
UTU   Utuhina           21.61 201     P       P         10 11 07.9 +3.0
HLRZ  Highlands Stat    21.62 201     P       P         10 11 07.8 +2.6
RRRZ  Republican Roa    21.65 201     P       P         10 11 07.5 +2.1
MUGZ  Murupara          21.69 200     P       P         10 11 04.6 -1.2
HSRZ  Hossack Road      21.71 201     P       P         10 11 09.8 +3.7
RTZ   Ruatahuna         21.75 199     P       P         10 11 07.4 +0.9
PRGZ  Paritu Road       21.76 197     P       P         10 11 09.2 +2.7
HRRZ  Handcock Road     21.77 201     P       P         10 11 09.7 +3.0
SNGZ  Shannon Statio    21.79 199     P       P         10 11 08.2 +1.3
PRRZ  Plateau Road      21.83 201     P       P         10 11 08.9 +1.6
ALRZ  Allen Road        21.91 201     P       P         10 11 09.6 +1.5
KNZ   Kokohu            21.91 198     P       P         10 11 10.7 +2.5
MHGZ  Mahia Peninsul    21.97 197     P       P         10 11 11.0 +2.2
TLZ   Tolley Road       21.98 202     P       P         10 11 10.7 +1.7
RAHZ  Arahi             21.99 199     P       P         10 11 09.5 +0.5
MTHZ  Maungataniwha     22.01 199     P       P         10 11 10.8 +1.5
WHHZ  Waihua            22.09 198     P       P         10 11 12.0 +1.9
MRHZ  Matea Rd          22.13 200     P       P         10 11 10.5 -0.1
NMHZ  Naumai            22.24 199     P       P         10 11 13.2 +1.3
ARHZ  Aropaoanui        22.34 199     P       P         10 11 14.3 +1.5
RATZ  Rangitukua        22.38 201     P       P         10 11 12.8 -0.4
HIZ   Hauiti            22.39 203     P       P         10 11 15.5 +2.2
HIZ   Hauiti            22.39 203     P       P         10 11 15.6 +2.2
BKZ   Black Stump Fm    22.41 200     P       P         10 11 12.2 -1.3
BKZ   Black Stump Fm    22.41 200     P       P         10 11 12.5 -1.1
RITZ  Rihia Road        22.44 201     P       P         10 11 15.4 +1.5
KATZ  Kakaramea         22.50 201     P       P         10 11 14.7  0.0
MCHZ  McNeill Hill      22.59 199     P       P         10 11 16.0 +0.5
TMVZ  Te Maari          22.62 201     P       P         10 11 15.0 -0.9
KRVZ  Karewarewa        22.62 201     P       P         10 11 18.1 +2.1
ETVZ  East Tongariro    22.64 201     P       P         10 11 15.0 -1.1
WTVZ  West Tongariro    22.66 201     P       P         10 11 17.8 +1.4
KWHZ  Kaweka Forest     22.66 200     P       P         10 11 16.0 -0.3
KWHZ                                  S       S         10 15 09.2  -12
NNVZ  North Ngauruho    22.67 201     P       P         10 11 16.3 -0.2
TWVZ  Taurewa           22.67 202     P       P         10 11 16.5  0.0
CKHZ  Cape Kidnapper    22.68 198     P       P         10 11 17.1 +0.7
OTVZ  Oturere           22.68 201     P       P         10 11 15.4 -1.1
SNVZ  South Ngauruho    22.71 201     P       P         10 11 16.0 -0.9
NGZ   Ngauruhoe         22.71 201     P       P         10 11 16.8 -0.1
TUVZ  Tukino            22.77 201     P       P         10 11 16.9 -0.6
FWVZ  Far West T-bar    22.80 201     P       P         10 11 17.0 -0.9
WHVZ  Whangaehu Hut     22.81 201     P       P         10 11 17.1 -0.9
BHHZ  Black Hill Sta    22.84 200     P       P         10 11 16.3 -1.9
BHHZ                                  S       S         10 15 14.7 -9.1
TRVZ  Turoa             22.84 201     P       P         10 11 17.5 -0.8
WNVZ  Wahianoa          22.85 201     P       P         10 11 17.2 -1.1
KAHZ  Kahuranaki        22.86 198     P       P         10 11 18.7 +0.4
KAHZ                                  S       S         10 15 19.8 -4.3
MOVZ  Moawhango         22.87 201     P       P         10 11 18.6 +0.1
KRHZ  Kereru            22.88 199     P       P         10 11 18.7 +0.2
KRHZ                                  S       S         10 15 19.8 -4.6
PKVZ  Pokaka            22.90 202     P       P         10 11 18.2 -0.5
VRZ   Vera Road         22.97 203     P       P         10 11 20.9 +1.6
PXZ   Pawanui           23.08 198     P       P         10 11 20.6 +0.1
MHEZ  Mangahewa         23.09 204     P       P         10 11 25.1 +4.5
PNHZ  Pukenui           23.18 199     P       P         10 11 21.7 +0.2
PAE   Paea              23.23  92     eP      P         10 11 21.5 -0.6
          comp=Z,35nm,1.2s
PAE   Paea              23.23  92     eT      T         10 34 51.4
          comp=Z,18nm,0.3s
PPT2  Papeete2          23.23  92     eP      P         10 11 22.2 -0.1
          comp=Z,100nm,1.1s
PPT2  Papeete2          23.23  92     eT      T         10 34 58.9
          comp=Z,21nm,0.3s
PPT   Papeete           23.24  92     P       P         10 11 22.6 +0.3
          comp=Z,107nm,1.0s,baz=332,slow=13,SNR=4.3
WPHZ  Waipukurau        23.24 199     P       P         10 11 22.9 +0.8
PPTF  Pamatai, Papee    23.25  92     P       P         10 11 18.5 -3.9
PKE   Pukeiti           23.32 204     P       P         10 11 25.1 +2.2
NEZ   North Egmont      23.34 204     P       P         10 11 25.2 +2.1
PRHZ  Porangahau        23.37 198     P       P         10 11 25.8 +2.5
PREZ  Palmer Road       23.38 204     P       P         10 11 26.4 +2.9
TSZ   Takapari Road     23.39 200     P       P         10 11 22.9 -0.6
LREZ  Lake Rotokare     23.39 203     P       P         10 11 25.7 +2.2
KHEZ  Kahui Hut         23.40 204     P       P         10 11 25.4 +1.7
NBEZ  Newall Road No    23.43 204     P       P         10 11 26.1 +2.2
WAZ   Wanganui          23.44 202     P       P         10 11 25.2 +1.1
TIAR  Tiarei            23.46  92     eP      P         10 11 24.2 -0.2
          comp=Z,13nm,1.0s
TIAR  Tiarei            23.46  92     eT      T         10 35 09.9
          comp=Z,2.4nm,0.3s
TBI   Tubuai            23.47 107     eP      P         10 11 24.2 -0.2
          comp=Z,533nm,1.4s
TBI   Tubuai            23.47 107     eT      T         10 35 19.8
          comp=Z,28nm,0.3s
DVHZ  Dannevirke        23.54 199     P       P         10 11 25.0 +0.1
NMEZ  Namu Road         23.55 204     P       P         10 11 27.6 +2.6
ANWZ  Angora Road       23.59 198     P       P         10 11 27.1 +1.7
POWZ  Post Office Ro    23.75 200     P       P         10 11 27.8 +0.9
PRWZ  Pori Road         23.83 199     P       P         10 11 29.5 +1.9
BFZ   Birch Farm        23.87 199     P       P         10 11 28.4 +0.5
BFZ   Birch Farm        23.87 199     P       P         10 11 28.7 +0.8
MRZ   Mangatainoka R    24.05 200     P       P         10 11 29.1 -0.6
HOWZ  Holdsworth Sta    24.29 200     P       P         10 11 32.3 +0.4
OGWZ  Otaki Gorge       24.33 200     P       P         10 11 31.8 -0.4
TMWZ  Te Maipa          24.36 199     P       P         10 11 34.6 +2.1
MTW   Mount Morrison    24.53 199     P       P         10 11 34.3 +0.3
CAW   Cannon Point      24.62 200     P       P         10 11 34.9 +0.1
MEH   Mehetia           24.64  93     eP      P         10 11 35.7 +0.4
          comp=Z,78nm,1.2s
TRWZ  Traveller         24.69 199     P       P         10 11 36.6 +1.1
MSWZ  Moikau Station    24.84 200     P       P         10 11 38.4 +1.6
SNZO  South Karori      24.93 201     P       P         10 11 37.5 -0.1
PLWZ  Palliser          24.98 199     P       P         10 11 38.5 +0.4
PMOR  Pomariorio Ree    25.20  87     eP      P         10 11 40.7 +0.3
          comp=Z,339nm,1.2s
PMOR  Pomariorio Ree    25.20  87     eT      T         10 37 23.4
          comp=Z,9.9nm,0.3s
QRZ   Quartz Range      25.29 204     P       P         10 11 41.4 +0.5
TUWZ  Tuamarina         25.29 202     P       P         10 11 43.0 +2.2
VAH   Vaihoa            25.41  87     eP      P         10 11 42.1 -0.2
          comp=Z,218nm,1.2s
VAH   Vaihoa            25.41  87     eT      T         10 37 37.1
          comp=Z,19nm,0.2s
KHZ   Kahutara          26.30 201     P       P         10 11 50.6 +0.6
HNR   Honiara           26.76 286     P       P         10 11 55.9 +1.5
          comp=Z,70nm,0.8s,baz=265,slow=9.1,SNR=4.9
LHI   Lord Howe Isla    27.69 236     P       P         10 12 01.6 -1.1
          baz=28,SNR=3.5
RPZ   Rata Peaks        28.33 203     P       P         10 12 07.8 -0.4
ODZ   Otahua Downs      29.62 202     P       P         10 12 19.6 -0.1
EIDS  Eidsvold          33.12 251     P       P         10 12 49.5 -1.1
          baz=33,SNR=9.8
EIDS  Eidsvold          33.12 251     P       P         10 12 49.6 -1.1
EIDS  Eidsvold          33.12 251     P       P         10 12 49.9 -0.8
ARMA  Armidale          33.45 242     P       P         10 12 53.2 -0.4
          baz=33,SNR=11
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ARMA  Armidale          33.45 242  P      P      10 12 53.2 -0.4
ARMA                               IAmb   IAmb   10 12 55.0
      comp=Z,35nm,0.9s
ARMA  Armidale          33.45 242  P      P      10 12 53.5 -0.1
RK1H  Rockhampton Ha    33.53 255  P      P      10 12 53.9 -0.4
      comp=Z,29nm,0.8s
TAOE  Nuku Hiva Isla    34.15  79 eT      T      10 48 20.8
      comp=Z,133nm,0.2s
MGCD  Mangrove Creek    34.59 238  P      P      10 13 03.8 +0.4
      baz=35,SNR=6.8
MGCD  Mangrove Creek    34.59 238  P      P      10 13 03.9 +0.5
SYDH  Sydney Hard Ro    35.05 237  P      P      10 13 07.9 +0.6
RMQ   Roma              35.30 250  P      P      10 13 09.2 -0.5
      baz=35,SNR=41
RMQ   Roma              35.30 250  P      P      10 13 09.6 -0.1
CNB   Canberra Magne    36.60 235  P      P      10 13 20.0 -0.7
      baz=37,SNR=28
CNB   Canberra Magne    36.60 235  P      P      10 13 20.4 -0.3
CAN   Canberra          36.89 235  P      P      10 13 23.7 +0.6
MILA  Mila              37.33 232  P      P      10 13 25.8 -1.0
      baz=37,SNR=3.8
CTA   Charters Tower    37.53 261  P      P      10 13 27.8 -0.9
      comp=Z,48nm,0.6s,baz=96,slow=11,SNR=80
CTA                                pP     sP     10 13 47.6 -0.2
      comp=Z,29nm,0.7s,baz=96,slow=12,SNR=4.5
CTA   Charters Tower    37.53 261  P      P      10 13 28.5 -0.3
CTAO  Charters Tower    37.53 261  P      P      10 13 27.8 -0.9
CTAO                               pmax   pmax
      comp=Z,60nm,0.7s
CTAO  Charters Tower    37.53 261  P      P      10 13 27.8 -0.9
CTAO  Charters Tower    37.53 261  P      P      10 13 28.4 -0.3
CMSA  Cobar Meteorol    38.67 242  P      P      10 13 36.8 -1.3
      baz=39,SNR=28
CMSA  Cobar Meteorol    38.67 242  P      P      10 13 37.8 -0.3
      comp=Z,55nm,1.0s
PMG   Port Moresby      38.67 278  P      P      10 13 37.3 -1.0
      comp=Z,41nm,0.9s,baz=95,slow=6.0,SNR=12
PMG                                pP     sP     10 13 57.3 -0.1
      comp=Z,43nm,0.9s,baz=84,slow=10,SNR=5.2
PMG                                LR     LR     10 27 44.1
      comp=Z,364nm,22.0s,baz=64,slow=33
PMG   Port Moresby      38.67 278  P      P      10 13 37.5 -0.8
PMG                                IAmb   IAmb   10 14 02.1
      comp=Z,55nm,0.9s
QLP   Quilpie           39.35 250  P      P      10 13 42.5 -1.4
      baz=39,SNR=39
QLP   Quilpie           39.35 250  P      P      10 13 42.8 -1.1
MTSU  Mount Surprise    39.55 263  P      P      10 13 44.0 -1.6
      baz=40,SNR=38
MTSU  Mount Surprise    39.55 263  P      P      10 13 44.1 -1.6
TOO   Toolangi          40.26 233  P      P      10 13 50.1 -1.3
      baz=40,SNR=20
TOO   Toolangi          40.26 233  P      P      10 13 50.4 -0.9
TOO                                pmax   pmax
      comp=Z,39nm,0.9s
TOO   Toolangi          40.26 233  P      P      10 13 50.4 -0.9
TOO                                IAmb   IAmb   10 13 52.2
      comp=Z,39nm,0.8s
TOO   Toolangi          40.26 233  P      P      10 13 51.0 -0.4
TAU   Tasmania Unive    40.86 225  P      P      10 13 56.6 +0.4
COEN  Coen              41.31 269  P      P      10 13 59.1 -1.1
COEN  Coen              41.31 269  P      P      10 13 59.7 -0.5
BRAT  Ballarat          41.44 234  P      P      10 14 01.3 +0.3
KHLU  Kahalu`u          41.61  26  P      P      10 14 02.9 +0.2
H11N3 WAKE ISLAND Hy    42.15 333  T      T      10 59 18.2
      baz=151,slow=76,SNR=6.8
H11N1 WAKE ISLAND Hy    42.15 333  T      T      10 59 16.2
      baz=151,slow=76,SNR=6.8
H11N2 WAKE ISLAND Hy    42.17 333  T      T      10 59 24.9
      baz=151,slow=76,SNR=7.4
STKA  Stephens Creek    42.17 242  P      P      10 14 05.8 -1.2
      comp=Z,29nm,0.9s,baz=86,slow=8.9,SNR=35
STKA  Stephens Creek    42.17 242  P      P      10 14 05.8 -1.2
      baz=42,SNR=32
STKA  Stephens Creek    42.17 242  P      P      10 14 06.4 -0.6
STKA                               pmax   pmax
      comp=Z,9.0nm,1.1s
STKA  Stephens Creek    42.17 242  P      P      10 14 06.4 -0.6
STKA  Stephens Creek    42.17 242  P      P      10 14 06.3 -0.8
INKA  Innaminka         42.52 249  P      P      10 14 09.7 -0.3
ARPS  Mount Arapiles    42.86 235  P      P      10 14 12.6  0.0
      baz=43,SNR=10
ARPS  Mount Arapiles    42.86 235  P      P      10 14 11.6 -1.0
QIS   Mount Isa         43.72 259  P      P      10 14 18.1 -1.7
      baz=44,SNR=7.7
QIS   Mount Isa         43.72 259  P      P      10 14 19.5 -0.3
HTT   Hallett           44.61 241  P      P      10 14 25.2 -1.6
      baz=45,SNR=33
HTT   Hallett           44.61 241  P      P      10 14 25.6 -1.2
LCRK  Leigh Creek       44.90 245  P      P      10 14 28.6 -0.5
TWOA  Tennyson Woods    45.13 239  P      P      10 14 30.2 -0.6
NAPP  Napperby          45.22 241  P      P      10 14 31.1 -0.5
BBOO  Buckleboo         46.93 242  P      P      10 14 43.3 -1.8
      baz=47,SNR=19
BBOO  Buckleboo         46.93 242  P      P      10 14 43.6 -1.4
BBOO  Buckleboo         46.93 242  P      P      10 14 43.7 -1.4
OOD   Oodnadatta        47.00 249  P      P      10 14 45.3 -0.3
MULG  Mulgathing        48.48 245  P      P      10 14 55.7 -1.4
WR0   Warramunga Arr    48.51 259  P      P      10 14 55.8 -1.6
WR0                                IAmb   IAmb   10 14 57.2
      comp=Z,26nm,0.7s
WB0   Warramunga Arr    48.67 259  P      P      10 14 57.0 -1.7
WB2   Warramunga Arr    48.69 259  P      P      10 14 57.4 -1.4
WRAB  Tennant Creek     48.69 259d iP     P      10 14 56.4 -2.5
WRAB                               pmax   pmax
      comp=Z,82nm,1.3s
WRAB  Tennant Creek     48.69 259  P      P      10 14 57.3 -1.5
WRAB  Tennant Creek     48.69 259  P      P      10 14 57.2 -1.7
WRA   Warramunga Arr    48.70 259  P      P      10 14 56.8 -2.2
      comp=Z,34nm,0.7s,baz=97,slow=8.4,SNR=454
WRA                                pP     sP     10 15 17.8 -0.4
      comp=Z,33nm,0.8s,baz=94,slow=7.5,SNR=7.1
WRA                                PcP    PcP    10 16 23.4 -0.2
      comp=Z,4.5nm,0.7s,baz=97,slow=3.6,SNR=1.9
WRA                                ScP    ScP    10 20 15.6 +1.2
      comp=Z,3.0nm,1.1s,baz=92,slow=4.7,SNR=4.6
WRA                                S      S      10 21 49.8 -8.2
      comp=Z,1.9nm,0.8s,baz=97,slow=13,SNR=6.0
WRA                                LR     LR     10 34 14.6
      comp=Z,618nm,20.3s,baz=105,slow=34
WRA   Warramunga Arr    48.70 259  P      P      10 14 57.5 -1.4
AS31  Alice Springs     48.74 254  P      P      10 14 58.0 -1.3
ASAR  Alice Springs     48.74 254  P      P      10 14 57.8 -1.5
      comp=Z,106nm,0.8s,baz=91,slow=8.4,SNR=1198
ASAR                               pP     sP     10 15 19.3 +0.9
      comp=Z,36nm,0.6s,baz=89,slow=8.4,SNR=3.5
ASAR                               PcP    PcP    10 16 23.9 +0.2
      comp=Z,6.9nm,0.6s,baz=93,slow=5.0,SNR=1.4
ASAR                               ScP    ScP    10 20 16.0 +1.5
      comp=Z,2.6nm,0.9s,baz=93,slow=4.1,SNR=5.9
ASAR                               S      S      10 21 52.1 -6.5
      comp=Z,3.1nm,0.8s,baz=90,slow=15,SNR=18
ASAR  Alice Springs     48.74 254  P      P      10 14 58.1 -1.1
KDU   Kakadu            51.75 268  P      P      10 15 20.1 -1.9
      baz=52,SNR=22
KDU   Kakadu            51.75 268  P      P      10 15 21.0 -1.0
MTN   Manton Dam        52.99 267  P      P      10 15 29.3 -1.9
      baz=53,SNR=34
MTN   Manton Dam        52.99 267  P      P      10 15 29.6 -1.7
MTN   Manton Dam        52.99 267  P      P      10 15 29.5 -1.7
DRS   Darwin Rock St    53.30 268  P      P      10 15 32.3 -1.2
FORT  Forrest           53.66 245  P      P      10 15 34.3 -1.7
      baz=54,SNR=40
FORT  Forrest           53.66 245  P      P      10 15 34.7 -1.3
FORT  Forrest           53.66 245  P      P      10 15 34.7 -1.3
WRKA  Warakurna         53.73 252  P      P      10 15 34.8 -1.9
      baz=54,SNR=8.7
WRKA  Warakurna         53.73 252  P      P      10 15 35.6 -1.1
KNRA  Kununurra         54.63 263  P      P      10 15 41.5 -1.7
      baz=55,SNR=76
KNRA  Kununurra         54.63 263  P      P      10 15 42.2 -1.0
KNRA  Kununurra         54.63 263  P      P      10 15 41.9 -1.3
FAKI  Fak Fak           54.78 280  P      P      10 15 43.9 -0.5
FAKI                               IAmb   IAmb   10 16 05.5
      comp=Z,18nm,0.9s
SWI   Sorong            56.43 281  P      P      10 15 56.0 -0.2
      comp=Z,82nm,0.8s
FITZ  Fitzroy Crossi    57.11 260  P      P      10 16 00.0 -0.9
      baz=57,SNR=42
FITZ  Fitzroy Crossi    57.11 260  P      P      10 15 59.7 -1.3
FITZ                               IAmb   IAmb   10 16 01.1
      comp=Z,15nm,0.7s
FITZ  Fitzroy Crossi    57.11 260  P      P      10 16 00.1 -0.9
MSAI  Masohi            57.75 278  P      P      10 16 07.0 +1.5
      comp=Z,10nm,0.7s
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LBMI  Labuha            60.02 280  P      P      10 16 21.7 +0.4
      comp=Z,42nm,0.9s
SOEI  Soe               60.27 269  P      P      10 16 23.6 +0.4
      comp=Z,2µmcomp=Z,273nm,0.9s
SOEI  Soe               60.27 269  P      P      10 16 22.6 -0.5
SOEI  Soe               60.27 269  P      P      10 16 20.6 -2.6
SBA   Scott Base        60.36 185  P      P      10 16 26.5 +3.9
SBA                                pmax   pmax
      comp=Z,26nm,0.9s
SBA   Scott Base        60.36 185  P      P      10 16 26.5 +3.9
SBA                                IAmb   IAmb   10 16 48.0
      comp=Z,26nm,0.9s
VNDA  Vanda             60.48 186  P      P      10 16 26.2 +2.8
      comp=Z,10nm,0.8s,baz=4.1,slow=7.2,SNR=38
VNDA  Vanda             60.48 186  P      P      10 16 26.6 +3.2
TNTI  Ternate           60.64 282  P      P      10 16 25.1 -0.4
      comp=Z,1µmcomp=Z,46nm,0.9s
BATI  Baumata           60.73 268  P      P      10 16 27.8 +1.7
      comp=Z,54nm,0.7s
SANI  Sanana            60.95 278  P      P      10 16 26.7 -0.9
      comp=Z,57nm,1.0s
PSA00 Pilbara Seismi    61.88 255  P      P      10 16 32.4 -1.5
PSA00                              IAmb   IAmb   10 16 34.0
      comp=Z,21nm,0.7s
PSA00 Pilbara Seismi    61.88 255  P      P      10 16 32.4 -1.5
PSA00                              IAmb   IAmb   10 16 35.6
      comp=Z,12nm,0.8s
PSA00 Pilbara Seismi    61.88 255  P      P      10 16 32.5 -1.3
MBWA  Marble Bar        62.06 255  P      P      10 16 33.7 -1.3
MEEK  Meekatharra       62.24 249  P      P      10 16 34.2 -1.9
      baz=62,SNR=15
MEEK  Meekatharra       62.24 249  P      P      10 16 34.3 -1.9
MMRI  Maumere           62.50 270  P      P      10 16 37.5 -0.6
      comp=Z,101nm,0.8s
MMRI  Maumere           62.50 270  P      P      10 16 37.3 -0.8
NWAO  Narrogin (SRO)    62.75 242  P      P      10 16 38.4 -1.0
      baz=63,SNR=4.6
NWAO                               P      P      10 16 38.4 -1.0
      baz=63,SNR=4.6
NWAO  Narrogin (SRO)    62.75 242  P      P      10 16 39.1 -0.4
NWAO                               pmax   pmax
      comp=Z,29nm,1.3s
NWAO  Narrogin (SRO)    62.75 242  P      P      10 16 38.9 -0.6
NWAO                               IAmb   IAmb   10 17 05.5
      comp=Z,33nm,1.2s
NWAO  Narrogin (SRO)    62.75 242  P      P      10 16 39.1 -0.4
NWAO                               IAmb   IAmb   10 17 05.5
      comp=Z,29nm,1.2s
NWAO  Narrogin (SRO)    62.75 242  P      P      10 16 39.1 -0.4
NWAO  Narrogin (SRO)    62.75 242  P      P      10 16 39.2 -0.3
EDFI  Ende, Flores      62.99 269  P      P      10 16 39.9 -1.6
      comp=Z,41nm,1.0s
BLDU  Ballidu           63.42 244  P      P      10 16 43.6 -0.4
      baz=63,SNR=9.6
BLDU  Ballidu           63.42 244  P      P      10 16 43.8 -0.2
MUN   Mundaring         63.70 243  P      P      10 16 45.8  0.0
      baz=64,SNR=8.4
MUN   Mundaring         63.70 243  P      P      10 16 45.3 -0.5
MORW  Morawa            64.18 246  P      P      10 16 47.6 -1.4
      baz=64,SNR=5.2
MORW  Morawa            64.18 246  P      P      10 16 47.7 -1.3
MORW                               IAmb   IAmb   10 16 49.7
      comp=Z,18nm,1.1s
MORW  Morawa            64.18 246  P      P      10 16 47.2 -1.8
LUWI  Luwuk             64.31 278  P      P      10 16 49.6 -0.5
      comp=Z,8µmcomp=Z,57nm,1.1s
LUWI  Luwuk             64.31 278  P      P      10 16 49.1 -1.0
GTOI  Gorontalo         64.66 280  P      P      10 16 52.8 +0.5
      comp=Z,392nmcomp=Z,13nm,0.5s
KAPI  Kappang           65.91 273  P      P      10 16 59.8 -0.6
KAPI                               pmax   pmax
      comp=Z,22nm,1.1s
KAPI  Kappang           65.91 273  P      P      10 16 59.8 -0.6
KAPI                               IAmb   IAmb   10 17 13.4
      comp=Z,22nm,1.1s
PLAI  Plampang          66.69 268  P      P      10 17 04.3 -1.1
PLAI  Plampang          66.69 268  P      P      10 17 02.9 -2.5
GIRL  Giralia           66.81 253  P      P      10 17 05.5 -0.5
      baz=67,SNR=3.4
GIRL  Giralia           66.81 253  P      P      10 17 05.2 -0.8
GIRL  Giralia           66.81 253  P      P      10 17 04.2 -1.9
TOLI2 Tolitoli          66.92 279  P      P      10 17 05.9 -1.0
TOLI2                              IAmb   IAmb   10 17 12.1
      comp=Z,18nm,0.7s
TOLI2 Tolitoli          66.92 279  P      P      10 17 06.1 -0.8
CASY  Casey             67.58 205  P      P      10 17 10.6 +0.5
JAGI  Jajag, Banyuwa    70.23 267  P      P      10 17 26.0 -1.6
MJAR  Matsushiro Arr    70.77 321  P      P      10 17 29.1 -1.3
      comp=Z,4.1nm,0.9s,baz=155,slow=6.7,SNR=9.5
MAJO  Matsushiro        70.78 321⇓eP      P      10 17 29.7 -0.7
MAJO                               pmax   pmax
      comp=Z,10.0nm,1.0s
MAJO  Matsushiro        70.78 321  P      P      10 17 30.1 -0.3
MAT   Matsushiro        70.78 321  P      P      10 17 29.8 -0.6
QSPA  South Pole Qui    71.79 180  P      P      10 17 38.4 +2.2
QSPA                               IAmb   IAmb   10 17 59.8
      comp=Z,41nm,1.1s
ERM   Erimo             71.86 328⇑eP      P      10 17 34.7 -2.0
ERM                                pmax   pmax
      comp=Z,74nm,1.3s
H06S1 SOCORRO T         72.01  63  T      T      11 35 54.7
      SNR=23
SPMM  Sapulut           72.21 281  P      P      10 17 41.0 +1.5
UGM   Wanagama          73.83 267  P      P      10 17 49.2 +0.1
PMPB  Monarch Peak      73.91  42  P      P      10 17 50.1 +0.9
PMPB                               IAmb   IAmb   10 18 01.5
      comp=Z,21nm,1.1s
MWC   Mount Wilson      74.54  45  P      P      10 17 53.0  0.0
MWC                                pmax   pmax
      comp=Z,13nm,0.7s
MWC   Mount Wilson      74.54  45  P      P      10 17 53.0  0.0
ARVC  Arvin             74.54  44  P      P      10 17 53.4 +0.6
      baz=234
KMRM  Mail Ridge        74.66  38  P      P      10 17 54.0 +0.6
KMRM                               IAmb   IAmb   10 18 00.1
      comp=Z,20nm,0.7s
MURC  Murrieta          74.77  46  P      P      10 17 54.7 +0.6
      baz=235
VES   Vestal, Richgr    74.80  44  P      P      10 17 54.9 +0.7
      baz=234,SNR=13
BFSC  Mount Baldy Ra    74.82  46  P      P      10 17 54.9 +0.4
      baz=235
MONP2 Monument Peak     74.91  47  P      P      10 17 55.8 +0.6
      baz=236,SNR=5.5
EDW2  Edwards Air Fo    74.96  45  P      P      10 17 56.1 +0.8
      baz=235,SNR=15
IKP   In-Ko-Pah, Jac    74.99  48  P      P      10 17 56.2 +0.7
      baz=236
ISA   Isabella, Lake    75.09  44  P      P      10 17 56.8 +0.7
      baz=234,SNR=14
SLBS  Sierra La Lagu    75.12  59  P      P      10 17 58.2 +1.7
SLBS                               IAmb   IAmb   10 18 26.2
      comp=Z,22nm,1.1s
O02D  Mt. Diablo Mer    75.17  38  P      P      10 17 57.6 +1.2
      baz=230,SNR=9.8
PEA0B Petropavlovsk-    75.18 343⇑iP      P      10 17 56.4 +0.4
PEA0B Petropavlovsk-    75.18 343  P      P      10 17 55.8 -0.3
PETK  Petropavlovsk-    75.18 343  P      P      10 17 55.2 -0.9
      comp=Z,16nm,0.8s,baz=122,slow=6.3,SNR=13
PETK                               LR     LR     10 46 55.7
      comp=Z,129nm,19.3s,baz=226,slow=32
PETK  Petropavlovsk-    75.18 343  P      P      10 17 56.7 +0.7
PETK  Petropavlovsk-    75.18 343  P      P      10 17 56.7 +0.7
CMB   Columbia Colle    75.28  41  P      P      10 17 57.7 +0.6
CMB                                pmax   pmax
      comp=Z,9.0nm,1.0s
CMB   Columbia Colle    75.28  41  P      P      10 17 57.6 +0.6
PFO   Pinyon Flats O    75.28  47  P      P      10 17 57.8 +0.6
PFO                                pmax   pmax
      comp=Z,16nm,1.4s
PFO   Pinyon Flats O    75.28  47  P      P      10 17 57.9 +0.6
      baz=236
PFO   Pinyon Flats O    75.28  47  P      P      10 17 57.8 +0.6
KRMB  Red Mountain      75.40  37  P      P      10 17 58.5 +0.8
KRMB                               IAmb   IAmb   10 18 20.9
      comp=Z,28nm,1.4s
SBUM  Sibu              75.42 278  P      P      10 18 00.0 +1.7
LRMC  Laurel Mtn Rad    75.51  45  P      P      10 17 59.2 +0.7
      baz=235,SNR=8.6
YSS   Yuzh-Sakhalins    75.69 331 eP      P      10 18 00.2 +1.1
YSS                                pmax   pmax
      comp=Z,30nm,1.0s
N02D  Trinity Center    75.73  38  P      P      10 18 00.7 +1.1
      baz=230,SNR=10
CWC   Cottonwood Cre    75.81  44  P      P      10 18 00.8 +0.6
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      baz=234
BELC  Belle Mtn. Jos    75.82  47  P      P      10 18 01.0 +0.6
      baz=236,SNR=7.0
O03E  Paynes Creek      75.83  39  P      P      10 18 00.5 +0.4
      baz=231,SNR=9.8
MDPB  Devils Postpil    75.86  42  P      P      10 18 01.6 +0.9
M02C  Callahan          75.91  37  P      P      10 18 01.6 +1.0
      baz=230,SNR=8.0
L02E  Cave Junction     75.99  36  P      P      10 18 01.9 +1.0
      baz=229
GSC   Goldstone, Bar    76.00  45  P      P      10 18 01.7 +0.4
      baz=235,SNR=7.5
BC3   Big Chuckawall    76.01  47  P      P      10 18 02.0 +0.6
      baz=237
MLAC  Mammoth, Mammo76.02  42  P      P      10 18 02.6 +1.1
      baz=233
HEC   Hector,Ludlow     76.05  46  P      P      10 18 01.9 +0.4
      baz=236,SNR=16
TIN   Tinemaha, Big     76.07  43  P      P      10 18 02.9 +1.3
      baz=234
GLA   Glamis            76.12  48  P      P      10 18 03.5 +1.5
      baz=237
YBH   Yreka Blue Hor    76.22  37  P      P      10 18 03.2 +0.9
YBH                                pmax   pmax
      comp=Z,14nm,1.0s
YBH   Yreka Blue Hor    76.22  37  P      P      10 18 03.2 +0.9
K02D  Willamette Mer    76.31  36  P      P      10 18 03.7 +0.9
      baz=229
QSM   Queen of Sheba    76.33  45  P      P      10 18 03.9 +0.9
QSM                                IAmb   IAmb   10 18 04.5
      comp=Z,17nm,0.9s
PNTR  Pine Nut          76.41  41  P      P      10 18 04.5 +0.8
PNTR                               IAmb   IAmb   10 18 05.4
      comp=Z,19nm,0.9s
J01E  Myrtle Point      76.47  35  P      P      10 18 04.3 +0.7
      baz=228
GMRC  Granite Mounta    76.49  46  P      P      10 18 04.5 +0.4
      baz=236,SNR=7.9
IRM   Iron Mountain     76.50  47  P      P      10 18 04.8 +0.8
      baz=237,SNR=6.6
GRAC  Grapevine Rang    76.59  43  P      P      10 18 05.6 +1.1
      baz=235,SNR=10
FURC  Furnace Creek,    76.62  44  P      P      10 18 05.3 +0.7
      baz=235,SNR=6.1
HUMO  Hull Mountain     76.64  36  P      P      10 18 06.1 +1.4
SHOC  Shoshone, Teco    76.69  45  P      P      10 18 05.6 +0.5
      baz=236,SNR=8.9
113A  Mohawk Valley,    76.72  49  P      P      10 18 05.6 +0.3
M04C  Macdoel           76.75  37  P      P      10 18 06.3 +0.9
      baz=230,SNR=7.6
L04D  Klamath Falls     76.76  37  P      P      10 18 06.0 +0.6
      baz=230,SNR=7.1
NVAR  Mina Array Bea    76.83  42  P      P      10 18 06.6 +0.5
      comp=Z,12nm,0.8s,baz=226,slow=9.4,SNR=85
NVAR                               pP     sP     10 18 27.2 +1.4
      comp=Z,5.1nm,0.7s,baz=226,slow=8.1,SNR=5.6
NVAR  Mina Array Bea    76.83  42  P      P      10 18 06.3 +0.2
KSM   Kuching           76.90 276  P      P      10 18 07.0 +0.3
NV11  Mina Array Sit    76.92  42  P      P      10 18 07.2 +0.7
NV11                               IAmb   IAmb   10 18 08.2
      comp=Z,21nm,1.1s
214A  Organ Pipe Nat    76.98  50  P      P      10 18 08.0 +1.2
      baz=239,SNR=5.1
214A  Organ Pipe Nat    76.98  50  P      P      10 18 07.7 +0.9
I03D  Drain, OR         77.14  35  P      P      10 18 08.4 +1.1
      baz=229
NEE2  Needles Airpor    77.19  47  P      P      10 18 09.0 +1.1
      baz=237
PDMCI Parker Dam,Lak    77.27  47  P      P      10 18 09.1 +0.8
      baz=237
MOD   Modoc Plateau     77.72  38  P      P      10 18 11.4 +0.6
I04A  Tendick Farm,     77.72  35  P      P      10 18 11.0 +0.3
      baz=230
KSRS  Korea Array       77.81 316  P      P      10 18 11.7 +0.4
      comp=Z,4.3nm,0.9s,baz=120,slow=5.8,SNR=6.5
KDAK  Kodiak Island     77.83  12  P      P      10 18 12.5 +1.6
      comp=Z,17nm,1.0s,baz=133,slow=7.8,SNR=4.2
Y14A  Wickenburg        77.88  48  P      P      10 18 13.0 +1.2
K05A  Summer Lake       77.89  37  P      P      10 18 12.7 +0.9
K05A                               IAmb   IAmb   10 18 13.8
      comp=Z,23nm,0.9s
H04D  Lebanon           78.01  35  P      P      10 18 13.1 +0.9
      baz=229
J05D  Fort Rock, OR     78.05  36  P      P      10 18 13.5 +0.8
      baz=231,SNR=16
G03D  McMinnville, O    78.18  34  P      P      10 18 14.2 +1.0
      baz=229
H04A  Detroit Lake      78.42  35  P      P      10 18 15.2 +0.7
R11A  Troy Canyon, C    78.53  43  P      P      10 18 15.9 +0.4
      baz=236,SNR=11
PINE  Pine Mountain     78.53  36  P      P      10 18 16.4 +1.0
PINE                               IAmb   IAmb   10 18 17.3
      comp=Z,28nm,0.9s
TUC   Tucson            78.64  50  P      P      10 18 17.0 +0.9
TUC                                pmax   pmax
      comp=Z,18nm,1.0s
TUC   Tucson            78.64  50  P      P      10 18 17.4 +1.3
      baz=240
TUC   Tucson            78.64  50  P      P      10 18 17.0 +0.9
TUC                                IAmb   IAmb   10 18 18.5
      comp=Z,18nm,0.9s
I05D  Terrebonne, OR    78.66  36  P      P      10 18 16.6 +0.7
      baz=230,SNR=5.1
BMN   Battle Mountai    78.68  41  P      P      10 18 16.8 +0.5
BMN                                pmax   pmax
      comp=Z,15nm,0.9s
BMN   Battle Mountai    78.68  41  P      P      10 18 16.8 +0.5
P18K  Big Mountain,     78.89  10  P      P      10 18 16.1 -0.6
      baz=198
WVOR  Wild Horse Val    79.02  38  P      P      10 18 18.7 +0.7
WVOR                               pmax   pmax
      comp=Z,16nm,1.0s
WVOR  Wild Horse Val    79.02  38  P      P      10 18 18.7 +0.7
X16A  Lo Mia Camp, P    79.23  48  P      P      10 18 20.6 +1.2
G05D  Wamic, OR         79.25  35  P      P      10 18 19.6 +0.5
      baz=230
O18K  Koktuh Hills      79.33  10  P      P      10 18 18.8 -0.4
      baz=198
USRK  Ussuriysk Ar.     79.34 324  P      P      10 18 20.0 +0.5
      comp=Z,1.2nm,0.9s,baz=11,slow=16,SNR=3.1
LCMT  Little Creek M    79.34  45  P      P      10 18 20.4 +0.5
E04D  Cinebar           79.43  33  P      P      10 18 20.9 +0.9
      baz=229
F05D  White Salmon      79.58  34  P      P      10 18 21.5 +0.7
      baz=230
O19K  Port Alsworth     79.80  10  P      P      10 18 21.1 -0.5
      baz=199
WUAZ  Wupatki           79.84  47  P      P      10 18 23.9 +1.2
      baz=239
BRSE  Bradley Lake S    80.01  12  P      P      10 18 22.2 -0.7
      baz=202
N19K  Bonanza Creek     80.36  10  P      P      10 18 24.2 -0.6
      baz=199
B05A  Bryant            80.79  32  P      P      10 18 28.0 +0.7
      baz=229
ZAIG  Zacatecas         80.82  62  P      P      10 18 28.0 -0.4
ZAIG                               IAmb   IAmb   10 18 31.2
      comp=Z,21nm,1.0s
121A  Cookes Peak, D    80.96  52  P      P      10 18 30.5 +1.7
      baz=242
DUG   Dugway, Tooele    81.34  43  P      P      10 18 30.7 +0.1
      baz=237
M19K  Big River Lodg    81.41   9  P      P      10 18 29.7 -0.5
      baz=199
NJ2   Nanjing           81.45 308 eP      P      10 18 32.3 +1.2
NJ2                                pmax   pmax
      comp=Z,10.0nm,0.7s
RC01  Rabbit Creek A    81.45  12  P      P      10 18 30.4  0.0
      baz=203
PWL   Port Wells        81.52  12  P      P      10 18 32.9 +2.0
      baz=205
SUA   Susitna One       81.61  11  P      P      10 18 30.7 -0.8
      baz=202
GLI   Glacier Island    81.79  13  P      P      10 18 31.6 -0.7
      baz=206
SKT   Skwentna          81.95  10  P      P      10 18 34.7 +1.6
      baz=202
M22K  Willow            81.99  11  P      P      10 18 35.9 +2.7
      baz=203
KNK   Knik Glacier      82.00  12  P      P      10 18 33.1 -0.3
      baz=204
PMR   Palmer            82.03  12  P      P      10 18 33.0 -0.4
      baz=204
PMR   Palmer            82.03  12  IAmb   IAmb   10 18 37.7
      comp=Z,55nm,1.4s
L20K  Farewell, AK      82.03   9  P      P      10 18 33.0 -0.6
      baz=199
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TTA	Tatalina	82.16	8	P	P	10 18 34.7	+0.5
	baz=197						
TTA	Tatalina	82.16	8	IAmb	IAmb	10 18 39.3	
	comp=Z,23nm,1.1s						
HLID	Hailey	82.19	39	P	P	10 18 35.7	+0.6
	baz=236,SNR=19						
GHO	Glory Hole Cre	82.23	12	IAmb	IAmb	10 18 56.1	
	comp=Z,25nm,0.8s						
B08A	Colville Reser	82.27	33	IAmb	IAmb	10 18 35.8	
	comp=Z,15nm,0.9s						
DIV	Divide	82.30	13	IAmb	IAmb	10 18 56.6	
	comp=Z,27nm,0.8s						
MNTX	Cornudas Mount	82.39	53	P	P	10 18 37.2	+1.0
	baz=243						
BMRM	Bremner River	82.42	14	P	P	10 18 35.8	+0.1
	baz=208						
BMRM	Bremner River	82.42	14	IAmb	IAmb	10 19 01.0	
	comp=Z,41nm,1.1s						
LLLB	Lillooet	82.43	30	IAmb	IAmb	10 18 37.0	
	comp=Z,19nm,1.0s						
C09A	Chrisman Ranch	82.49	34	IAmb	IAmb	10 18 37.3	
	comp=Z,15nm,0.7s						
CUT	Chulitna	82.57	11	P	P	10 18 36.1	-0.2
	baz=203						
SCM	Sheep Creek Mo	82.61	12	P	P	10 18 36.0	-0.6
	baz=206						
SCM	Sheep Creek Mo	82.61	12	IAmb	IAmb	10 18 58.1	
	comp=Z,36nm,1.0s						
TX32	Lajitas Array	82.67	56	IAmb	IAmb	10 18 40.6	
	comp=Z,27nm,1.4s						
TXAR	Lajitas Array	82.67	56	P	P	10 18 39.0	+1.2
	comp=Z,13nm,1.1s,baz=223,slow=6.8,SNR=33						
TXAR	Lajitas Array	82.67	56	P	P	10 18 39.0	+1.2
MVCO	Mesa Verde	82.70	47	P	P	10 18 38.5	+0.6
	baz=241						
TCUT	Toone Canyon	82.73	43	IAmb	IAmb	10 19 02.4	
	comp=Z,20nm,0.9s						
N25K	Chitina, Valde	82.99	14	P	P	10 18 38.6	-0.1
	baz=208						
N25K	Chitina, Valde	82.99	14	IAmb	IAmb	10 18 59.9	
	comp=Z,16nm,0.8s						
GLB	Gilahina Butte	83.02	14	IAmb	IAmb	10 19 00.4	
	comp=Z,24nm,1.1s						
ANMO	Albuquerque	83.07	50	⇑iP	P	10 18 40.8	+1.0
ANMO				pmax	pmax		
	comp=Z,22nm,1.7s						
ANMO	Albuquerque	83.07	50	P	P	10 18 40.9	+1.1
	baz=242						
ANMO	Albuquerque	83.07	50	P	P	10 18 40.6	+0.8
ANMO				IAmb	IAmb	10 18 42.1	
	comp=Z,27nm,1.5s						
M24K	Tolsona, Glenn	83.09	13	P	P	10 18 39.4	+0.3
	baz=206						
WAT6	Susitna Watana	83.20	12	P	P	10 18 39.4	-0.4
	baz=205						
NEW	Newport	83.38	34	P	P	10 18 40.5	-0.5
	baz=233						
TRF	Thorofare Moun	83.53	10	P	P	10 18 40.8	-0.7
	baz=203						
TRF	Thorofare Moun	83.53	10	IAmb	IAmb	10 19 02.5	
	comp=Z,22nm,0.8s						
CHUM	Lake Minchumin	83.60	9	P	P	10 18 40.5	-1.1
	baz=201						
J20K	Nowinta River	83.61	9	P	P	10 18 41.8	+0.1
	baz=199						
J20K	Nowinta River	83.61	9	IAmb	IAmb	10 18 46.6	
	comp=Z,37nm,1.2s						
DHY	Denali Highway	83.72	12	IAmb	IAmb	10 19 04.0	
	comp=Z,25nm,1.4s						
GCSA	Galena City Sc	83.79	7	P	P	10 18 42.7	+0.2
	baz=196						
AHID	Auburn Hatcher	83.80	41	IAmb	IAmb	10 18 45.4	
	comp=Z,14nm,1.0s						
MCK	McKinley	84.03	11	P	P	10 18 43.4	-0.4
	baz=204,SNR=8.3						
M26K	Nabesna, AK	84.05	14	P	P	10 18 44.0	-0.1
	baz=210						
M26K	Nabesna, AK	84.05	14	IAmb	IAmb	10 19 06.5	
	comp=Z,26nm,1.1s						
H03S2	Juan Fernandez	84.09	124	T	T	11 51 41.9	
	baz=250,slow=75,SNR=158						
H03S1	Juan Fernandez	84.11	124	T	T	11 51 43.1	
	baz=250,slow=75,SNR=125						
H03S3	Juan Fernandez	84.11	124	T	T	11 51 37.3	
	baz=250,slow=75,SNR=484						
S22A	4UR Ranch, Cre	84.12	47	P	P	10 18 46.5	+1.2
	baz=242,SNR=24						
YUK3	Moose Creek	84.12	15	P	P	10 18 44.5	-0.2
	baz=212						
H03N2	Juan Fernandez	84.21	123	T	T	11 51 36.0	
	baz=257,slow=73,SNR=8.3						
H03N3	Juan Fernandez	84.21	123	T	T	11 51 43.1	
	baz=257,slow=73,SNR=7.9						
H03N1	Juan Fernandez	84.23	123	T	T	11 51 38.7	
	baz=257,slow=73,SNR=7.0						
REDW	Red Top Meadow	84.26	41	IAmb	IAmb	10 19 10.4	
	comp=Z,35nm,1.2s						
TPAW	Teton Pass	84.27	41	IAmb	IAmb	10 19 10.5	
	comp=Z,17nm,0.8s						
DLMT	Dillon	84.27	38	IAmb	IAmb	10 19 13.5	
	comp=Z,28nm,1.1s						
M27K	Edge Creek, AK	84.28	14	P	P	10 18 46.1	+0.9
	baz=210						
FXWY	Fox Creek	84.30	41	IAmb	IAmb	10 19 10.8	
	comp=Z,32nm,1.4s						
MSO	Missoula	84.31	37	P	P	10 18 45.6	-0.2
	baz=236,SNR=7.6						
MSO	Missoula	84.31	37	IAmb	IAmb	10 19 09.7	
	comp=Z,32nm,1.4s						
O20A	White River Ci	84.31	45	P	P	10 18 46.5	+0.5
	baz=240,SNR=6.3						
O20A	White River Ci	84.31	45	IAmb	IAmb	10 19 10.2	
	comp=Z,11nm,0.8s						
MENT	Mentasta	84.36	13	IAmb	IAmb	10 19 11.8	
	comp=Z,17nm,1.1s						
SNOW	Snow King Moun	84.38	41	IAmb	IAmb	10 19 11.1	
	comp=Z,25nm,0.9s						
L26K	Log Cabin Wild	84.52	14	P	P	10 18 46.5	+0.1
	baz=209						
L26K	Log Cabin Wild	84.52	14	IAmb	IAmb	10 18 50.7	
	comp=Z,26nm,1.4s						
LOHW	Long Hollow	84.55	41	IAmb	IAmb	10 19 11.7	
	comp=Z,13nm,1.1s						
DLBC	Dease Lake	84.56	22	P	P	10 18 46.5	-0.3
	comp=Z,4.7nm,0.8s,baz=224,slow=4.7,SNR=5.3						
SMCO	Snowmass	84.70	46	IAmb	IAmb	10 19 17.0	
	comp=Z,16nm,1.2s						
WHY	Whitehorse	84.72	18	P	P	10 18 48.1	+0.5
	baz=217						
FLWY	Flagg Ranch	84.73	40	IAmb	IAmb	10 19 13.1	
	comp=Z,25nm,1.0s						
BW06	Boulder Array	84.77	42	P	P	10 18 48.1	-0.3
	baz=239,SNR=11						
BW06	Boulder Array	84.77	42	P	P	10 18 48.1	-0.3
BW06				IAmb	IAmb	10 19 12.3	
	comp=Z,12nm,0.9s						
PD31	Pinedale Array	84.77	42	P	P	10 18 48.4	0.0
PD31				IAmb	IAmb	10 19 12.3	
	comp=Z,11nm,0.9s						
PDAR	Pinedale Array	84.77	42	P	P	10 18 48.4	0.0
	comp=Z,4.7nm,0.8s,baz=210,slow=3.7,SNR=37						
PDAR				pP	sP	10 19 08.8	+0.5
	comp=Z,11nm,0.8s,baz=221,slow=3.4,SNR=12						
PDAR	Pinedale Array	84.77	42	P	P	10 18 48.2	-0.2
NEA2	Nenana	84.80	11	P	P	10 18 47.2	-0.5
	baz=204						
RIDG	Independent Ri	84.83	13	P	P	10 18 47.7	-0.2
	baz=208						
YHL	Hebgen Lake	84.84	39	P	P	10 18 49.9	+1.1
I21K	Tanana	84.87	9	P	P	10 18 47.9	-0.1
	baz=201						
I21K	Tanana	84.87	9	IAmb	IAmb	10 18 52.5	
	comp=Z,30nm,1.4s						
YMR	Madison River	84.88	40	P	P	10 18 49.6	+0.7
YMR				IAmb	IAmb	10 19 13.6	
	comp=Z,27nm,1.2s						
L27K	Beaver Creek,	84.89	14	P	P	10 18 48.4	+0.1
	baz=210,SNR=7.3						
L27K	Beaver Creek,	84.89	14	P	P	10 18 49.0	+0.8
L27K				IAmb	IAmb	10 18 52.0	
	comp=Z,24nm,1.4s						
BCAR	Beaver Creek A	84.91	14	P	P	10 18 48.2	-0.2
MAW	Mawson	84.91	199	P	P	10 18 49.1	+0.7
	comp=Z,9.4nm,0.7s,baz=130,slow=6.6,SNR=18						
MAW				pP	sP	10 19 10.1	+1.9
	comp=Z,5.6nm,0.7s,baz=133,slow=6.7,SNR=4.5						
MAW	Mawson	84.91	199	P	P	10 18 49.1	+0.7
	baz=85,SNR=15						
MAW	Mawson	84.91	199	P	P	10 18 49.1	+0.7
DOT	Dot Lake	84.91	13	IAmb	IAmb	10 19 10.1	
	comp=Z,20nm,1.0s						
MLY	Manley	84.92	10	P	P	10 18 47.4	-1.0
	baz=202,SNR=14						
MLY	Manley	84.92	10	IAmb	IAmb	10 18 52.2	
	comp=Z,36nm,1.4s						
BOZ	Bozeman (W)	84.97	39	P	P	10 18 49.7	+0.4
	baz=238,SNR=20						
BOZ	Bozeman (W)	84.97	39	IAmb	IAmb	10 19 13.8	
	comp=Z,22nm,1.1s						
H17A	Grant Village	84.97	40	P	P	10 18 51.4	+2.0
	baz=238,SNR=6.1						
YHH	Holmes Hill	85.01	40	IAmb	IAmb	10 19 15.7	
	comp=Z,22nm,1.1s						
HDA	Harding Lake	85.01	11	P	P	10 18 48.5	-0.3
	baz=206,SNR=8.1						
HDA	Harding Lake	85.01	11	IAmb	IAmb	10 19 10.3	
	comp=Z,22nm,0.8s						
SDCO	Great Sand Dun	85.05	48	P	P	10 18 50.2	+0.3
	baz=242,SNR=5.3						
YNR	Norris Junctio	85.08	40	IAmb	IAmb	10 19 16.3	
	comp=Z,14nm,1.0s						
JRMM	Jerantut	85.08	276	P	P	10 18 52.0	+1.7
SEY	Seymchan	85.13	345	P	P	10 18 48.9	-0.5
	comp=Z,17nm,0.7s,baz=153,slow=7.1,SNR=21						
SEY	Seymchan	85.13	345	⇑iP	P	10 18 48.0	-1.4
COYC	Coyhaique	85.18	136	P	P	10 18 49.9	-0.4
H21K	Melozitna Rive	85.20	9	P	P	10 18 49.8	+0.1
	baz=200,SNR=14						
H21K	Melozitna Rive	85.20	9	IAmb	IAmb	10 18 54.8	
	comp=Z,30nm,1.2s						
SCRK	Sand Creek	85.22	13	P	P	10 18 50.0	0.0
	baz=208						
SCRK	Sand Creek	85.22	13	IAmb	IAmb	10 19 11.5	
	comp=Z,12nm,0.8s						
I23K	Minto, Yukon-K	85.26	10	P	P	10 18 49.7	-0.3
	baz=203,SNR=14						
I23K	Minto, Yukon-K	85.26	10	IAmb	IAmb	10 18 54.1	
	comp=Z,38nm,1.2s						
TCOL	CIGO, UAF Yank	85.27	11	P	P	10 18 49.6	-0.4
	baz=205,SNR=10						
COLA	College	85.27	11	deP	P	10 18 49.5	-0.5
COLA				pmax	pmax		
	comp=Z,36nm,0.9s						
COLA	College	85.27	11	P	P	10 18 49.7	-0.3
	baz=205						
COLA	College	85.27	11	P	P	10 18 49.2	-0.8
MDM	Murphy Dome	85.28	11	P	P	10 18 49.7	-0.5
IL31		85.35	11	P	P	10 18 50.0	-0.4
IL31				IAmb	IAmb	10 18 54.7	
	comp=Z,31nm,1.2s						
ILAR	Eielson Array	85.35	11	P	P	10 18 49.9	-0.6
	comp=Z,17nm,1.2s,baz=229,slow=6.1,SNR=27						
ILAR				pP	sP	10 19 10.0	-0.4
	comp=Z,4.9nm,0.6s,baz=234,slow=6.1,SNR=5.5						
ILAR	Eielson Array	85.35	11	P	P	10 18 49.8	-0.7
MSTX	Muleshoe	85.36	52	P	P	10 18 52.2	+0.8
	baz=244,SNR=13						
MSTX	Muleshoe	85.36	52	P	P	10 18 51.4	0.0
MSTX				IAmb	IAmb	10 18 56.5	
	comp=Z,36nm,1.1s						
IMAR	Indian Mountai	85.38	8	P	P	10 18 50.9	+0.4
J25K	Salcha River,	85.50	12	P	P	10 18 51.2	-0.1
	baz=207,SNR=13						
POKR	Poker Plat Res	85.57	11	P	P	10 18 51.5	-0.1
	baz=205						
833A	Chaparral WMA,	85.67	58	P	P	10 18 54.1	+1.2
	baz=247,SNR=10						
M30M	Minto, Yukon	85.74	16	P	P	10 18 52.5	0.0
	baz=215						
J26L	Joseph Creek	85.77	13	P	P	10 18 53.4	+0.7
	baz=209,SNR=16						
H23K	Yukon River	85.85	10	P	P	10 18 52.2	-0.8
	baz=203						
H24K	Noodor Dome	86.14	10	P	P	10 18 53.9	-0.5
	baz=205						
RLMT	Red Lodge	86.15	40	P	P	10 18 55.8	+0.7
	baz=239						
JCT	Junction City	86.20	56	P	P	10 18 56.2	+0.7
	baz=246,SNR=9.9						
JCT	Junction City	86.20	56	IAmb	IAmb	10 19 01.8	
	comp=Z,14nm,0.9s						
PRP	Porcupine Dome	86.28	11	P	P	10 18 55.2	-0.1
	baz=207,SNR=16						
DAWY	Dawson	86.33	14	P	P	10 18 55.8	+0.4
	baz=213,SNR=14						
DAWY	Dawson	86.33	14	IAmb	IAmb	10 19 00.4	
	comp=Z,30nm,1.2s						
FARO	Faro, Yukon	86.42	18	P	P	10 18 55.8	-0.1
	baz=218						
EGAK	Eagle	86.53	13	P	P	10 18 56.4	+0.1
	baz=211						
EGAK	Eagle	86.53	13	IAmb	IAmb	10 19 01.1	
	comp=Z,40nm,1.4s						
AMTX	Amarillo	86.56	52	P	P	10 18 58.2	+0.9
	baz=245						
AMTX	Amarillo	86.56	52	IAmb	IAmb	10 19 21.6	
	comp=Z,18nm,1.1s						
LL04	Puerto Octay	86.64	132	P	P	10 18 58.0	+0.4
LL04				IAmb	IAmb	10 18 59.5	
	comp=Z,13nm,0.8s						
IPM	Ipoh	86.64	276	P	P	10 19 00.0	+2.0
MAYO	Mayo, Yukon	86.81	16	P	P	10 18 58.3	+0.5
	baz=216						
J29M	Klondike Camp	86.93	15	P	P	10 18 59.5	+1.1
	baz=214						
COLD	Coldfoot	87.05	9	P	P	10 18 59.7	+0.9
	baz=203						
ABTX	Abilene, Hawle	87.18	54	P	P	10 19 01.2	+0.9
	baz=246,SNR=32						
KULM	Kulim	87.25	276	P	P	10 19 03.0	+2.0
BILL	Bilibino	87.27	353	⇓iP	P	10 18 59.9	+0.1
BILL				e*PP	PcP	10 19 07.9	+6.1
BILL				*SP	pP	10 19 14.0	-0.4
BILL				pmax	pmax		
	comp=Z,38nm,1.3s						
BILL				MLR	MLR		
	comp=Z,147nm,16.0s						
MMPY	Sheldon Lake,	87.34	18	P	P	10 19 00.9	+0.5
	baz=220						
ZEA	Zeya	87.59	329	eP	P	10 19 02.7	+1.1
ZEA				pmax	pmax		
	comp=N,10.0nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.8s						
KSCO	Kaye Shedlock’	87.64	48	IAmb	IAmb	10 19 29.0	
	comp=Z,18nm,1.4s						
I29M	Ogilvie Camp,	87.67	14	P	P	10 19 01.4	-0.4
	baz=214						
LC01	Cunco	87.75	130	P	P	10 19 03.7	+0.7
LC01				IAmb	IAmb	10 19 05.3	
	comp=Z,18nm,0.9s						
ENH	Enshi	87.98	303	P	P	10 19 04.1	-0.1
PLCA	Paso Flores	88.01	132	P	P	10 19 06.0	+1.8
	comp=Z,4.5nm,0.7s,baz=236,slow=4.5,SNR=26						
PLCA	Paso Flores	88.01	132	P	P	10 19 05.9	+1.6
435B	Jarrell	88.08	57	P	P	10 19 06.2	+1.6
	baz=248						
435B	Jarrell	88.08	57	P	P	10 19 04.8	+0.2
BMAR	Burnt Mountain	88.16	11	P	P	10 19 04.7	+0.5
EDM	Edmonton	88.21	32	P	P	10 19 04.2	-0.5
EDM				pmax	pmax		
	comp=Z,62nm,1.4s						
EDM	Edmonton	88.21	32	P	P	10 19 04.2	-0.5
TOLK	Toolik Lake Re	88.45	9	P	P	10 19 04.8	-0.7
	baz=203						
WHTX	Lake Whitney,	88.64	56	P	P	10 19 08.0	+0.8
GYA	Guiyang	88.89	298	⇓P	P	10 19 10.9	+2.3
GYA				pmax	pmax		
	comp=Z,14nm,0.7s						
RSSD	Black Hills	88.94	43	P	P	10 19 08.4	-0.2
	baz=243						
HIA	Hailar	89.14	323	⇓eP	P	10 19 09.9	+0.8
HIA				pmax	pmax		
	comp=Z,19nm,1.9s						
HKT	Hockley	89.17	58	⇓iP	P	10 19 11.3	+1.7
HKT				pmax	pmax		
	comp=Z,17nm,1.3s						
SYO	Syowa Base	89.69	191	⇑eP	P	10 19 12.0	+0.6
SYO	Syowa Base	89.69	191	⇓esP	P	10 19 18.2	+6.8
XAN	Xi'an	89.84	306	P	P	10 19 23.2	+10
XAN				pP	sP	10 19 35.5	+2.5
XAN				pmax	pmax		
	comp=Z,12nm,1.2s						
OK032	Salt Plains WL	89.91	51	IAmb	IAmb	10 19 19.6	
	comp=Z,13nm,0.9s						
VNA3	Neumayer Olymp	90.06	175	P	P	10 19 14.3	+1.1
SNAA	Sanae	90.08	177	P	P	10 19 14.3	+0.9
SNAA	Sanae	90.08	177	⇑eP	P	10 19 14.0	+0.6
SNAA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
BO02	Sierra Bellavi	90.10	127	IAmb	IAmb	10 19 19.9	
	comp=Z,14nm,1.1s						
R32A	Long Quarter,	90.18	49	IAmb	IAmb	10 19 40.5	
	comp=Z,20nm,1.1s						
MT09	Talagante	90.32	126	IAmb	IAmb	10 19 22.4	
	comp=Z,17nm,1.1s						
VNA2	Neumayer--Watz	90.55	176	P	P	10 19 16.9	+1.5
HHC	Hu-ho-hao-te	90.56	313	eP	P	10 19 17.2	+1.1
HHC				pmax	pmax		
	comp=Z,17nm,1.2s						
HHC				pmax	pmax		
	comp=Z,190nm,8.1s						
VNA1	Neumayer--Stat	90.76	175	P	P	10 19 18.0	+1.6
DGMT	Dagmar	90.81	39	P	P	10 19 18.0	+1.0
	baz=243						
INK	Inuvik	91.17	14	IAmb	IAmb	10 19 22.6	
	comp=Z,16nm,1.3s						
YAK	Yakutsk	91.51	337	eP	P	10 19 18.2	-1.6
YAK				pmax	pmax		
	comp=Z,21nm,1.0s						
CO03	El Pedregal	91.67	123	IAmb	IAmb	10 19 24.3	
	comp=Z,21nm,1.1s						
JTS	Las Juntas de	92.27	80	P	P	10 19 26.7	+2.2
JTS				pmax	pmax		
	comp=Z,34nm,1.0s						
JTS	Las Juntas de	92.27	80	P	P	10 19 26.7	+2.2
MIAR	Mount Ida	92.59	55	P	P	10 19 26.4	+0.8
	baz=250						
MIAR	Mount Ida	92.59	55	IAmb	IAmb	10 19 50.2	
	comp=Z,29nm,1.5s						
W39A	Magazine	92.66	54	P	P	10 19 27.0	+1.2
	baz=250						
W39A	Magazine	92.66	54	P	P	10 19 26.4	+0.6
HHAR	Hobbs	92.92	53	IAmb	IAmb	10 19 28.3	
	comp=Z,7.1nm,0.9s						
CMAR	Chiang Mai Arr	92.97	288	P	P	10 19 28.1	+0.4
	comp=Z,7.7nm,0.9s,baz=102,slow=2.6,SNR=33						
CMAR	Chiang Mai Arr	92.97	288	P	P	10 19 28.4	+0.8
CMAR	Chiang Mai Arr	92.97	288	P	P	10 19 28.4	+0.8
CHTO	Chiang Mai	93.08	289	P	P	10 19 30.1	+1.9
CHTO				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CHTO	Chiang Mai	93.08	289	P	P	10 19 30.1	+1.9
CHTO				IAmb	IAmb	10 19 31.6	
	comp=Z,9.2nm,0.8s						
ECSD	EROS Data Cent	93.67	45	P	P	10 19 31.0	+0.7
	baz=248						
ECSD	EROS Data Cent	93.67	45	IAmb	IAmb	10 19 54.8	
	comp=Z,20nm,1.5s						
U40A	Yellville	93.77	53	P	P	10 19 31.3	+0.4
	baz=250						
U40A	Yellville	93.77	53	IAmb	IAmb	10 19 32.3	
	comp=Z,17nm,1.0s						
W41B	Gary Mavity, V	93.83	54	P	P	10 19 32.4	+1.1
	baz=250						
R40A	Maddies Statio	94.85	51	IAmb	IAmb	10 19 37.1	
	comp=Z,16nm,1.0s						
LCAR	Lake Charles	94.97	54	IAmb	IAmb	10 19 37.7	
	comp=Z,14nm,1.1s						
N38A	Joes South For	94.98	49	IAmb	IAmb	10 19 41.2	
	comp=Z,17nm,1.1s						
T42A	Van Buren	95.33	53	IAmb	IAmb	10 19 39.0	
	comp=Z,10.0nm,0.8s						
CCM	Cathedral Cave	95.54	52	P	P	10 19 38.0	-1.0
CCM				pmax	pmax		
	comp=Z,11nm,1.1s						
CCM	Cathedral Cave	95.54	52	P	P	10 19 38.4	-0.6
	baz=251						
CCM	Cathedral Cave	95.54	52	P	P	10 19 38.0	-1.0
CCM				IAmb	IAmb	10 19 43.9	
	comp=Z,11nm,1.1s						
PBMO	Poplar Bluff	95.75	53	IAmb	IAmb	10 19 44.9	
	comp=Z,8.7nm,1.0s						
A36M	Sachs Harbour	95.81	14	P	P	10 19 39.4	0.0
	baz=226						
FVM	French Village	96.13	52	IAmb	IAmb	10 19 43.0	
	comp=Z,12nm,1.0s						
ULN	Ulaanbaatar	96.19	318	⇓eP	P	10 19 40.9	-1.0
ULN				pmax	pmax		
	comp=Z,12nm,2.6s						
TIXI	Tiksi	97.60	344	⇓eP	Pdif	10 19 48.1	+0.5
TIXI	Tiksi	97.60	344	P	P	10 19 45.8	-1.7
ZALV	Zalesovo Beam	111.12	322	PKiKP	PKiKP	10 24 48.0	+1.1
	comp=Z,1.2nm,0.7s,baz=169,slow=1.5,SNR=4.6						
MKAR	Makanchi Array	112.41	314	PKiKP	PKiKP	10 24 48.8	-0.8
	comp=Z,0.9nm,0.7s,baz=92,slow=2.2,SNR=4.1						
KURK	Kurchatov	114.90	318	⇓iPKIKP	PKPdf	10 24 55.5	+1.3
AAK	Ala-Archa	117.87	309	⇓iPKIKP	PKiKP	10 25 02.4	+1.9
BRVK	Borovoye	119.83	321	⇓iPKIKP	PKiKP	10 25 05.4	+1.7
ARU	Arti	125.45	327	i PKIKP	PKiKP	10 25 14.7	0.0
ARU						10 27 06.9	
ARU						10 32 23.2	
ARU				SP	SP	10 37 01.2	+0.8
ARU				SS	SS	10 43 55.8	-4.5
ARU	Arti	125.45	327		PKPdf	10 25 14.5	+0.2
ABKAR	Akbulak array	127.01	318		PKPdf	10 25 17.4	-0.1
ARCES	ARCESS Array B	127.35	352	PKP	PKPdf	10 25 15.8	-1.8
	comp=Z,4.4nm,0.7s,baz=7.6,slow=2.0,SNR=10.0						
BOSA	Boshof	129.81	202	PKP	PKiKP	10 25 24.3	-0.3
	comp=Z,2.4nm,0.8s,baz=107,slow=3.9,SNR=3.0						
KLMR	Klimovskoe	131.27	339	ePKIKP	PKPdf	10 25 24.5	-0.8
KLMR				pmax	pmax		
	comp=Z,21nm,1.4s						
KLMR	Klimovskoe	131.27	339	ePKPdf	PKPdf	10 25 24.5	-0.8
KLMR				AMP		10 25 30.3	
	comp=Z,21nm,1.4s						
FINES	FINESS Array B	134.60	347	PKhKP	PKPpre	10 25 27.7	
	comp=Z,2.2nm,0.6s,baz=219,slow=1.2,SNR=7.6						
MOS	Moscow	135.61	335	ePKIKP	PKPdf	10 25 33.8	+0.2
OBN	Obninsk	136.48	335	⇑iPKIKP	PKiKP	10 25 37.7	+0.8
OBN				pmax	pmax		
	comp=Z,8.0nm,0.4s						
OBN				MLR	MLR		
	comp=Z,123nm,18.0s						
NB2	NORSAR Subarra	137.12	356	PKP	PKiKP	10 25 37.8	-0.4
	comp=Z,4.2nm,1.2s,baz=14,slow=3.8						
NOA	NORSAR Array B	137.12	356	PKhKP	PKPpre	10 25 32.2	
	comp=Z,0.7nm,0.8s,baz=84,slow=17,SNR=2.2						
MAK	Makhachkala	137.23	314	i P	Pdif	10 22 37.4	-7.1
MAK				i		10 25 38.5	
MAK				e		10 28 22.2	
MAK				pmax	pmax		
	comp=Z,50nm,0.5s						
KBZ	Khabaz	139.96	317	⇓ePKIKP	PKPdf	10 25 42.6	+0.6
KIV	Kislovodsk	139.99	318	ePKIKP	PKiKP	10 25 45.3	+0.7
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
GNI	Garni	140.20	311	⇓iPKIKP	PKiKP	10 25 46.5	+1.2
KLNR	Kaliningrad	142.13	347	⇑iPKIKP	PKiKP	10 25 48.7	+0.2
AKASG	Malin Array Be	142.73	336	PKhKP	PKPpre	10 25 42.5	
	comp=Z,5.2nm,0.8s,baz=38,slow=4.3,SNR=13						
AKASG	Malin Array Be	142.73	336	PKIKP	PKPdf	10 25 47.1	+0.4
AKASG	Malin Array Be	142.73	336	PKPdf	PKPdf	10 25 47.1	+0.4
AKBB	Malin Array Si	142.73	336	⇓ePKIKP	PKPdf	10 25 46.2	-0.5
AKBB	Malin Array Si	142.73	336		PKPdf	10 25 46.4	-0.3
KMBO	Kilima Mbogo	143.72	241	PKP	PKPbc	10 25 48.6	+1.1
	comp=Z,9.5nm,0.8s,baz=59,slow=3.8,SNR=20						
SORM	Soroca	145.09	334	⇓P	PKPbc	10 25 49.7	-0.8
SORM	Soroca	145.09	334	⇓PKIKP	PKPbc	10 25 49.7	-0.8
LVV	L'vov	145.35	339	ePKP2	PKPdf	10 25 51.4	0.0
NRDL	Niedersach Rie	145.69	356	ePKPbc	PKPab	10 25 52.9	+0.4
	baz=8.2,slow=2.7						
FLTG	Flechtingen	145.76	354	ePKPbc	PKPab	10 25 52.8	0.0
	baz=8.2,slow=2.7						
DIKM	Dikmen	145.86	319	⇑P	PKPab	10 25 54.3	+0.7
KWP	Kalwaria Pacla	145.95	341	PKIKP	PKPbc	10 25 52.8	-0.3
KWP	Kalwaria Pacla	145.95	341		PKPbc	10 25 52.8	-0.3
IBBN	Ibbenburen	146.01	358	ePKPbc	PKPab	10 25 54.2	+0.5
	baz=8.2,slow=2.7						
ASSE	Asse, Remlinge	146.01	355	ePKPbc	PKPab	10 25 53.9	+0.2
	baz=8.2,slow=2.7						
OJC	Ojcow	146.26	344	ePKP	PKPbc	10 25 54.2	+0.1
OJC	Ojcow	146.26	344	PKIKP	PKPdf	10 25 52.3	-0.6
OJC						10 25 54.7	
OJC	Ojcow	146.26	344		PKPdf	10 25 52.3	-0.6
OJC				PKPbc	PKPab	10 25 54.7	-0.1
CLZ	Clausthal	146.32	355	ePKPbc	PKPab	10 25 55.3	+0.2
	baz=8.2,slow=2.7						
KSP	Ksiaz	146.48	348	ePKP	PKPab	10 25 55.3	-0.4
VASR	Vaslui	146.49	332	⇑P	PKiKP	10 25 57.6	-0.1

CLL	Collm	146.57	352	i PKP2	PKPab	10 25 55.5	-0.5
CLL				i		10 25 57.3	
CLL				pmax	pmax		
	comp=Z,38nm,0.9s						
CLL	Collm	146.57	352	i PKPbc	PKPab	10 25 55.5	-0.5
	comp=Z,38nm,0.9s						
CLL				i PKPab	PKiKP	10 25 57.3	-0.5
CLL				i PKiKP	PKPbc	10 25 58.3	+3.4
	comp=Z,93nm,1.2s						
CLL				e		10 26 15.0	
CLL				eSKPdf	SKPdf	10 29 24.0	+0.7
CLL	Collm	146.57	352	ePKPbc	PKPab	10 25 55.7	-0.3
	baz=8.2,slow=2.7						
CLL	Collm	146.57	352		PKPdf	10 25 53.9	+0.5
CLL				PKPbc	PKPab	10 25 55.8	-0.2
GTTG	Gottingen	146.65	356	ePKPbc	PKPab	10 25 56.2	-0.1
	baz=8.2,slow=2.7						
KOLS	Kolonicke sedl	146.70	340	ePKP2	PKPbc	10 25 55.8	+0.4
KOLS	Kolonicke sedl	146.70	340	ePKP	PKPbc	10 25 55.8	+0.4
OSTC	Ostas	146.77	348	ePKP	PKPab	10 25 57.2	+0.4
CHVC	Chvalec	146.77	348	ePKP	PKPab	10 25 56.7	-0.1
BURAR	Bucovina Array	146.78	336	⇓P	PKPab	10 25 57.2	+0.1
BURAR	Bucovina Array	146.78	336	⇓PKP2	PKPab	10 25 57.2	+0.1
BURAR	Bucovina Array	146.78	336		PKPbc	10 25 55.2	-0.6
GAZ	Gaziantep	146.79	311		PKPdf	10 25 54.0	-0.3
NEUB	Neuenburg	146.82	353	ePKPbc	PKPab	10 25 56.5	-0.4
	baz=8.2,slow=2.7						
NIE	Niedzica	146.86	343	ePKP	PKPab	10 25 57.2	0.0
UPC	Upice	146.86	348	ePKP2	PKPab	10 25 56.6	-0.6
UPC	Upice	146.86	348	ePKP	PKPab	10 25 56.6	-0.6
BRG	Berggiesshubel	146.86	351	ePKPbc	PKPab	10 25 56.7	-0.4
	baz=8.2,slow=2.7						
BRG	Berggiesshubel	146.86	351	i PKP	PKPab	10 25 56.7	-0.4
BRG				Amp		10 25 57.4	
	comp=Z,14nm,0.9s						
BRG	Berggiesshubel	146.86	351	P	PKiKP	10 25 59.6	+1.3
BRG				Amp		10 26 00.4	
	comp=Z,19nm,0.8s						
BUG	Bochum--Univer	146.89	359	ePKPbc	PKPab	10 25 56.5	-0.6
	baz=8.2,slow=2.7						
FBE	Freiberg	146.90	351	ePKPbc	PKPab	10 25 56.7	-0.6
	baz=8.2,slow=2.7						
DPC	Dobruska-Polom	146.95	348	ePKP2	PKPab	10 25 56.9	-0.7
DPC	Dobruska-Polom	146.95	348	ePKP	PKPab	10 25 56.9	-0.7
UZH	Uzhgorod	146.95	340	ePKP2	PKPab	10 25 57.3	-0.3
BNN	Bunyan	146.96	315		PKPbc	10 25 57.3	+0.6
BNN					PKiKP	10 26 00.3	+1.1
CRVS	Cervenica-Dubn	146.98	341	ePKP2	PKPbc	10 25 56.7	+0.5
CRVS	Cervenica-Dubn	146.98	341	ePKP	PKPbc	10 25 56.7	+0.5
TESR	Tescani	147.09	333	⇑P	PKPab	10 25 57.8	-0.4
PVCC	Panska Ves	147.10	350	ePKP2	PKPab	10 25 58.0	-0.1
PVCC	Panska Ves	147.10	350	ePKP	PKPab	10 25 58.0	-0.1
KRLC	Kraliky	147.11	347	ePKP2	PKPbc	10 25 57.4	+0.8
KRLC	Kraliky	147.11	347	ePKP	PKPbc	10 25 57.4	+0.8
TLCR		147.11	330	⇓P	PKPbc	10 25 57.3	+0.6
TLCR		147.11	330	⇓PKP2	PKPbc	10 25 57.3	+0.6
SCTR	Scanteiesti	147.13	331	⇑P	PKPab	10 25 57.6	-0.8
MORC	Moravsky Berou	147.23	346	⇓P	PKPab	10 25 58.4	-0.3
MORC	Moravsky Berou	147.23	346	⇓PKP2	PKPab	10 25 58.4	-0.3
MORC	Moravsky Berou	147.23	346	ePKIKP	PKPab	10 25 58.2	-0.5
MORC	Moravsky Berou	147.23	346		PKiKP	10 26 01.1	+1.9
LANS	Liptovska Anna	147.33	344	ePKP2	PKPab	10 25 58.5	-0.6
LANS	Liptovska Anna	147.33	344	ePKP	PKPab	10 25 58.5	-0.6
BMR	Baia Mare	147.37	338	⇑P	PKPab	10 25 58.8	-0.4
BMR	Baia Mare	147.37	338	⇑PKP2	PKPab	10 25 58.8	-0.4
MOX	Moxa	147.39	353	ePKPbc	PKPbc	10 25 58.0	+0.7
	baz=8.2,slow=2.7						
JURR	Jurilovca	147.39	329	⇓P	PKPbc	10 25 57.6	+0.2
CFR	Carcaliu	147.44	330	⇑P	PKPbc	10 25 57.7	+0.2
CFR	Carcaliu	147.44	330	⇑PKP2	PKPbc	10 25 57.7	+0.2
WERD	Werda	147.50	353	ePKPbc	PKPbc	10 25 57.9	+0.3
	baz=8.2,slow=2.7						
TANN	Tannenbergstha	147.52	352	ePKPbc	PKPbc	10 25 58.4	+0.7
	baz=8.2,slow=2.7						
TPGR	Topolog	147.55	330	⇑P	PKPbc	10 25 58.4	+0.5
VRI	Vrincioaia	147.56	333	⇑P	PKPbc	10 25 58.2	+0.3
VRI	Vrincioaia	147.56	333	⇑PKP2	PKPbc	10 25 58.2	+0.3
PRA	Prague	147.56	350	ePKP2	PKiKP	10 25 58.8	-1.0
PRA	Prague	147.56	350	ePKP	PKiKP	10 25 58.8	-1.0
GUNZ	Gunzen	147.58	352	ePKPbc	PKiKP	10 25 59.0	-1.0
	baz=8.2,slow=2.7						
PLOR	Plostina	147.60	333	⇓P	PKPbc	10 25 59.0	+0.9
PLOR	Plostina	147.60	333	⇓PKP2	PKPbc	10 25 59.0	+0.9
PRU	Pruhonice	147.62	350	ePKP2	PKPbc	10 25 58.5	+0.6
PRU	Pruhonice	147.62	350	ePKP	PKPbc	10 25 58.5	+0.6
WERN	Wernitzgruen	147.65	352	ePKPbc	PKiKP	10 25 59.3	-0.8
	baz=8.2,slow=2.7						
NKC	Novy Kostel	147.70	352	ePKP2	PKPbc	10 25 58.7	+0.5
NKC	Novy Kostel	147.70	352	ePKP	PKPbc	10 25 58.7	+0.5
LODK	Lodwar	147.70	246		PKPbc	10 25 58.0	-1.3
MEM	Membach	147.73	0	dPKiKP	PKPbc	10 25 59.1	+0.9
BTNL	Ternell	147.76	360	dPKiKP	PKPbc	10 25 59.2	+0.9
COVR	Voineasa-Covas	147.80	333	⇓P	PKiKP	10 25 59.6	-1.0
TIRR	Tirgusor	147.84	329	⇑P	PKiKP	10 25 59.6	-1.0
TIRR	Tirgusor	147.84	329	⇑PKP2	PKiKP	10 25 59.6	-1.0
VRAC	Vranov	147.88	347	⇑P	PKPbc	10 25 59.4	+0.7
VRAC	Vranov	147.88	347	⇑PKP2	PKPbc	10 25 59.4	+0.7
VRAC	Vranov	147.88	347	ePKIKP	PKiKP	10 25 59.9	-0.7
HARR	Harsova	147.90	330	⇓P	PKPbc	10 25 59.2	+0.4
HARR	Harsova	147.90	330	⇓PKP2	PKPbc	10 25 59.2	+0.4
BR131	Keskin Array S	147.95	318	PKIKP	PKPdf	10 25 56.2	-0.1
BR131						10 26 02.8	
BR131	Keskin Array S	147.95	318		PKPdf	10 25 56.2	-0.1
BR131				PKPbc	PKPbc	10 25 58.9	-0.4
BR131				PKPab	PKPab	10 26 02.8	+0.7
BRTR	Keskin Array B	147.95	318	PKPbc	PKPbc	10 25 59.1	-0.3
	comp=Z,12nm,0.9s,baz=139,slow=2.8,SNR=14						
TLBR	Topalu	147.96	330	⇓P	PKPbc	10 25 59.8	+0.8
MANZ	Manzenberg	147.98	353	ePKPbc	PKiKP	10 26 00.1	-0.7
	baz=8.2,slow=2.7						
BMRD	Maredsous	148.03	2	dPKP	PKPbc	10 25 58.2	-0.8
BMRD				dPKiKP	PKiKP	10 26 00.0	-0.8
MFTR	Murfatlar	148.04	329	⇓P	PKPab	10 26 02.6	+0.6
JAVC	Velka Javorina	148.06	345	ePKIKP	PKPab	10 26 01.6	-0.4
TNS	Taunus Mts	148.06	357	ePKPbc	PKPbc	10 25 59.9	+0.7
	baz=8.2,slow=2.7						
VYHS	Vyhne	148.10	344	ePKP2	PKPbc	10 26 00.0	+0.7
VYHS	Vyhne	148.10	344	ePKP	PKPbc	10 26 00.0	+0.7
TREC	Trest	148.12	348	ePKP2	PKiKP	10 26 00.3	-0.8
TREC	Trest	148.12	348	ePKP	PKiKP	10 26 00.3	-0.8
CJR	Cluj-Napoca	148.14	337	⇓P	PKPab	10 26 02.9	+0.5
CJR	Cluj-Napoca	148.14	337	⇓PKP2	PKPab	10 26 02.9	+0.5
KRUC	Moravsky	148.15	347	ePKIKP	PKiKP	10 26 00.6	-0.5
ROTZ	Rotzenmuhle	148.18	352	ePKPbc	PKiKP	10 26 00.3	-0.8
	baz=8.2,slow=2.7						
MLR	Muntele Rosu	148.19	333	⇓P	PKPbc	10 26 00.5	+0.7
MLR	Muntele Rosu	148.19	333	⇓PKP2	PKPbc	10 26 00.5	+0.7
MLR	Muntele Rosu	148.19	333		PKPdf	10 25 56.0	-0.4
MLR				PKPbc	PKPbc	10 26 00.4	+0.7
MLR				PKPab	PKPab	10 26 03.4	+0.6
ISR	Istrita	148.22	332	⇑P	PKiKP	10 26 01.3	-0.1
ISR	Istrita	148.22	332	⇑PKP2	PKiKP	10 26 01.3	-0.1
PSZ	Piszkesteto	148.33	342	⇑P	PKiKP	10 26 01.1	-0.5
PSZ	Piszkesteto	148.33	342	eP	PKiKP	10 26 01.8	+0.2
PSZ	Piszkesteto	148.33	342	⇑PKP2	PKiKP	10 26 01.1	-0.5
PSZ	Piszkesteto	148.33	342		PKPdf	10 25 55.2	-1.4
PSZ				PKPbc	PKiKP	10 26 01.1	-0.5
GRA1	Grafenberg Arr	148.37	354		PKPdf	10 25 56.8	+0.3
GRA1				PKPbc	PKiKP	10 26 01.4	-0.2
GRF	Grafenberg Arr	148.37	354	PKIKP	PKPdf	10 25 56.8	+0.3
GRF						10 26 01.4	
GRFO	Grafenberg	148.37	354		PKPdf	10 25 56.5	+0.1
DRGR		148.40	338	⇑P	PKPbc	10 26 00.4	+0.2
DRGR		148.40	338	⇑PKP2	PKPbc	10 26 00.4	+0.2
ANTO	Ankara	148.41	319		PKPdf	10 25 55.5	-1.4
SMOL	Smolenice	148.44	345	ePKP2	PKiKP	10 26 01.8	+0.1
SMOL	Smolenice	148.44	345	ePKP	PKiKP	10 26 01.8	+0.1
MODS	Modra-Piesok	148.60	346	ePKP2	PKPbc	10 26 00.6	0.0
MODS	Modra-Piesok	148.60	346	ePKP	PKPbc	10 26 00.6	0.0
KHC	Kasperske Hory	148.61	350	ePKP2	PKPbc	10 26 01.0	+0.4
KHC	Kasperske Hory	148.61	350	ePKP	PKPbc	10 26 01.0	+0.4
VOIR		148.62	334	⇓P	PKPbc	10 26 00.2	-0.6
VOIR		148.62	334	⇓PKIKP	PKPbc	10 26 00.2	-0.6
WLF	Walferdange	148.68	360	dPKiKP	PKiKP	10 26 01.9	-0.2
WLF	Walferdange	148.68	360	ePKPbc	PKiKP	10 26 02.0	-0.2
	baz=8.2,slow=2.7						
WLF	Walferdange	148.68	360		PKPdf	10 25 57.3	+0.3
WLF				PKPbc	PKiKP	10 26 02.5	+0.3
CKRC	Cesky Krumlov	148.79	349	ePKP	PKiKP	10 26 02.2	-0.3
ZST	Bratislava	148.81	346	ePKP2	PKiKP	10 26 02.9	+0.4
ZST	Bratislava	148.81	346	ePKP	PKiKP	10 26 02.9	+0.4
ARR	Arges	148.84	334	⇑P	PKPbc	10 26 00.9	-0.5
GEC2	GERESS Array S	148.87	350	ePKPbc	PKiKP	10 26 02.2	-0.5
	baz=8.2,slow=2.7						
GEC2	GERESS Array S	148.87	350		PKPdf	10 25 56.3	-1.1
GEC2				PKPbc	PKiKP	10 26 02.5	-0.2
GERES	GERESS Array B	148.87	350	PKPbc	PKPbc	10 26 01.5	+0.1
	comp=Z,7.9nm,0.8s,baz=29,slow=3.0,SNR=50						
GERES	GERESS Array B	148.87	350		PKPdf	10 25 58.9	+1.5
GERES				PKPbc	PKiKP	10 26 02.6	-0.1
GERES				PKPab	PKPab	10 26 06.0	+0.7
SIRR	Siria	149.22	339	⇓P	PKiKP	10 26 03.2	-0.3
MBAR	Mbarara	149.29	235c	i PKP2	PKiKP	10 26 04.8	0.0
CONA	Conrad Observa	149.34	347	i P	PKiKP	10 26 03.5	-0.2
	comp=Z,25nm,1.1s,SNR=12						
RAZG	Razgrad	149.42	330	⇑P	PKPab	10 26 06.2	-1.5
GZR	Gura Zlata	149.56	336	⇑P	PKiKP	10 26 03.8	-0.4
GZR	Gura Zlata	149.56	336	⇑PKIKP	PKiKP	10 26 03.8	-0.4
MPLH	Magyarpolny	149.66	344	eP	PKiKP	10 26 04.3	+0.1
MOA	Molln	149.73	349	i P	PKPbc	10 26 03.9	+0.5
	comp=Z,9.5nm,0.9s						
BZS	Buzias	149.80	338	⇓P	PKiKP	10 26 04.6	0.0
BZS	Buzias	149.80	338	⇓PKP2	PKiKP	10 26 04.6	0.0
FUR	Furstenfeldbru	149.87	353	ePKPbc	PKPbc	10 26 04.1	+0.3
	baz=8.2,slow=2.7						
BFO	Black Forest	149.96	357	ePKPbc	PKiKP	10 26 04.7	-0.2
	baz=8.2,slow=2.7						
RJOB	Jochberg	150.09	351	ePKPbc	PKiKP	10 26 05.2	-0.1
	baz=8.2,slow=2.7						
HERR	Herculane	150.13	336	⇓P	PKPbc	10 26 04.5	0.0
CLF	Chambon-Foret	150.16	5	PKPdf	PKPdf	10 25 57.7	-1.6
CLF					PKPab	10 26 09.3	-1.2
PLVB	Pleven	150.43	332	⇓P	PKiKP	10 26 06.8	+0.8
UBR	Ueberruh	150.47	354	ePKPbc	PKiKP	10 26 06.4	+0.4
	baz=8.2,slow=2.7						
MDVR	Moldovita	150.48	337	⇓P	PKiKP	10 26 06.0	-0.1
KOVH	Kovagotottos	150.50	343	eP	PKiKP	10 26 06.0	-0.1
CSS	Mathiatis	150.59	310	PKPdf	PKPdf	10 25 59.6	-0.8
CSS					PKPbc	10 26 05.5	-0.4
RETA	Reutte	150.60	353	i P	PKiKP	10 26 06.5	+0.2
	comp=Z,15nm,0.9s,SNR=7.4						
KBA	Koelnbreinsper	150.64	350	eP	PKPbc	10 26 06.0	+0.2
	comp=Z,7.9nm,0.6s,SNR=6.5						
WATA	Walderalm	150.65	352	i P	PKiKP	10 26 06.6	0.0
	comp=Z,20nm,0.8s						
MOTA	Moosalm	150.70	353	i P	PKiKP	10 26 06.7	+0.1
	comp=Z,37nm,1.4s,SNR=15						
SOKA	Soboth	150.71	347	i P	PKPbc	10 26 06.2	+0.3
	comp=Z,21nm,1.1s						
WTTA	Wattenberg	150.72	352	i P	PKPbc	10 26 06.2	+0.2
	comp=Z,26nm,0.8s,SNR=8.8						
PERS	Pernice	150.73	347	i PKPbc	PKPbc	10 26 06.2	+0.2
SQTA	Sankt Quirin	150.81	353	eP	PKiKP	10 26 07.0	+0.2
	comp=Z,14nm,0.8s						
FRGS	Fruska Gora	150.82	340	⇓P	PKPbc	10 26 05.7	-0.4
LEF	Lefka	150.84	310	⇓P	PKPbc	10 26 06.2	-0.2
DAVA	Damuels	150.88	355	i P	PKiKP	10 26 07.5	+0.5
	comp=Z,29nm,1.0s,SNR=8.5						
OBKA	Obir	150.97	348	i P	PKPbc	10 26 05.6	-0.9
	comp=Z,9.9nm,0.9s						
MYKA	Terra Mystica	151.02	349	eP	PKPbc	10 26 06.6	0.0
	comp=Z,15nm,0.8s,SNR=5.8						
FETA	Feichten	151.06	353	eP	PKiKP	10 26 07.8	+0.4
	comp=Z,20nm,0.9s,SNR=8.3						
ABTA	Abfaltersbach	151.10	351	eP	PKPbc	10 26 06.5	-0.3
	comp=Z,38nm,0.8s,SNR=16						
ZOU	Zoufplan	151.21	350	PKPdf	PKPdf	10 26 00.3	-1.0
ZOU					PKPbc	10 26 07.2	0.0
LJU	Ljubljana	151.42	348	i PKPbc	PKiKP	10 26 08.2	+0.2
BOVS	Bovan	151.46	336	⇑P	PKPbc	10 26 07.0	-0.6
STAL	STALIGIAL	151.54	350	PKPdf	PKPdf	10 26 01.3	-0.3
STAL					PKiKP	10 26 08.1	-0.2
VISS	Visnje	151.58	347	i PKPbc	PKiKP	10 26 08.5	+0.2
VTS	Vitosha	151.66	333	⇑P	PKiKP	10 26 09.8	+1.0
VTS	Vitosha	151.66	333	⇑PKIKP	PKiKP	10 26 09.8	+1.0
VTS	Vitosha	151.66	333		PKiKP	10 26 09.2	+0.4
DIVS	Divibare	151.69	338		PKiKP	10 26 09.2	+0.5
TUE	Stuetta	151.74	355		PKiKP	10 26 09.6	+0.7
TRI	Trieste	151.89	348	PKIKP	PKiKP	10 26 09.1	+0.2
TRI	Trieste	151.89	348		PKiKP	10 26 09.1	+0.2
CTI	Castel Tesino	151.91	352	PKIKP	PKPbc	10 26 08.6	-0.1
CTI	Castel Tesino	151.91	352	PKPdf	PKPdf	10 26 01.5	-0.8
CTI					PKPbc	10 26 08.6	-0.1
SALO	Salr	152.47	353	PKPdf	PKPdf	10 26 03.6	+0.6
BNI	Bardonecchia	153.29	359	PKIKP	PKPdf	10 26 04.9	+0.5
BNI	Bardonecchia	153.29	359	PKPdf	PKPdf	10 26 04.9	+0.5
FNA	Florina	153.96	333	PKIKP	PKPdf	10 26 05.3	-0.1
FNA						10 26 13.8	
FNA	Florina	153.96	333	PKPdf	PKPdf	10 26 05.3	-0.1
FNA					PKiKP	10 26 13.8	+0.3
ESDC	Sonseca Array	156.99	20	PKP	PKPdf	10 26 10.1	+0.6
	comp=Z,0.5nm,0.8s,baz=262,slow=40,SNR=2.4						
ESDC				PKPab	PKPab	10 26 38.8	-0.9
	comp=Z,1.0nm,0.7s,baz=308,slow=2.1,SNR=5.7						
ESDC	Sonseca Array	156.99	20	PKPdf	PKPdf	10 26 09.7	+0.2
ESDC				PKPab	PKPab	10 26 40.0	+0.4
TORD	Torodi Ar. Bea	173.43	140	PKP	PKPdf	10 26 22.5	-1.4
	comp=Z,1.3nm,0.8s,baz=336,slow=2.5,SNR=6.1						
TORD				PKPab	PKPab	10 27 53.5	+1.1
	comp=Z,3.2nm,0.9s,baz=244,slow=3.5,SNR=9.5						
TORD				PP	PP	10 31 47.5	+3.9
	comp=Z,1.4nm,1.1s,baz=249,slow=6.4,SNR=3.6						
TORD	Torodi Ar. Bea	173.43	140		PKPdf	10 26 23.4	-0.4

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*NNC **07** 10:13:45.7±4.0, 40°.87N×70°.50E, h0^{km}, mb3.1, mpv2.7, Error ellipse: s-maj=32.0km s-min=17.0km az=35.0*

*KRNET **07** 10:13:45.4±0.1, 41°.23N×70°.11E, mb2.5*

ISC 07 10:13:48.6±1.5, **41°.10N**±0°.05×**70°.35E**±0°.09, **h10^{km}, n8, σ1^{s}.68**/14, **11C-4D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRKS	Terek-Say	0.74	54	⇑iP	Pg	10 14 01.5	-1.4
	baz=73						
TRKS				⇑iS	Sb	10 14 13.6	-0.3
	baz=73						
BTK	Batken	1.10	161	⇑iP	Pn	10 14 10.1	-0.1
	baz=55						
BTK				⇑iS	Sn	10 14 27.9	+2.5
	baz=55						
KK31	Karatay Array	2.01	3	⇓Pn	Pb	10 14 24.5	-0.8
	1.9nm,0.4s,baz=183,slow=15,SNR=19						
KK31				⇑Sn	Sg	10 14 53.2	0.0
	1.6nm,0.3s,baz=192,slow=27,SNR=5.8						
MNAS	Manas	2.13	49	⇑eP	Pn	10 14 25.5	+1.1
	baz=54						
MNAS				⇑iS	Sb	10 14 54.6	+0.7
	baz=54						
AML	Almayashu	2.72	67	⇑eP	Pn	10 14 33.9	+1.2
	baz=70						
AML				⇑iS	Sb	10 15 09.6	-1.4
	baz=70						
UCH	Uchtor	3.32	69	⇑eP	Pn	10 14 42.3	+1.2
	baz=72						
UCH				⇑iS	Sn	10 15 24.1	+3.3
	baz=72						
AAK	Ala-Archa	3.46	62	Pg	Pb	10 14 48.8	-1.3
	1.6nm,0.8s						
AAK				⇓Lg	Lg	10 15 38.9	
	3.6nm,0.8s						
TKM2	Tokmak 2	4.32	63	⇓Pg	Pb	10 15 02.9	-1.8
	3.5nm,1.2s						
TKM2				⇓Lg	Lg	10 16 02.1	
	2.6nm,1.1s						

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*NEIC **07** 10:20:37.0±1.7, 7°.9N±0°.1×127°.1E±0°.1, h57^{km}±7^{km}, mb4.6/20, Error ellipse: s-maj=20.7km s-min=16.3km az=112.0*

*DJA **07** 10:20:44.0±2.5, 8°N±20°×12°7E±1°2, h177^{km}±9^{km}, M4.5/6, mB4.8/4, mb4.2/5, MLv4.7/6, Mw(mB)4.0/4*

*IDC **07** 10:20:47.4±1.5, 7°.51N×126°.58E, h157^{km}±12^{km}, mb3.5/12, mb1 3.6/13, mb1mx3.4/58, mbtmp4.0/13, Error ellipse: s-maj=35.3km s-min=12.5km az=66.0*

*MAN **07** 10:20:48.2, 7°.41N×126°.53E, h141^{km}, mb4.5, ML3.4, MS3.2*

ISC 07 10:20:47.3±0.8, **7°.41N**±0°.06×**126°.62E**±0°.08, **h156**^{km}±6^{km}, **n50, σ1^{s}.25**/56, **mb4.2**/24, **2C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	Bislig	0.81	341	⇓eP	Pn	10 21 12.4	+1.2
BIPH				eS	Sn	10 21 28.7	-0.9
DAV	Davao City (W)	1.09	252	P	Pn	10 21 12.2	-1.2
	77nm,0.3s,baz=358,slow=7.1,SNR=5.6						
DAV				S	Sn	10 21 33.8	+0.4
	86nm,0.3s,baz=322,slow=22,SNR=12						
DMPH	Davao City--Mi	1.15	254	⇑eP	Pn	10 21 13.9	-0.1
DMPH				eS	Sn	10 21 33.2	-1.2
KCP	Kidapawan	1.57	255	⇑iP	Pn	10 21 17.6	-0.5
KCP				i S	Sn	10 21 43.1	+1.3
BUKP	Musuan	1.62	287	⇓iP	Pn	10 21 18.0	-0.6
BUKP				i S	Sn	10 21 42.2	-0.4
GSPH	General Santos	2.12	232	⇓iP	Pn	10 21 23.7	-0.6
GSPH				eS	Sn	10 21 52.9	+0.1
SGSI	Sangihe	3.85	196	P	Pn	10 21 47.1	+1.2
TNTI	Ternate	6.63	174	P	Pn	10 22 21.4	-1.1
	0.3nm21nm,0.8s						
GTOI	Gorontalo	7.63	208	P	Pn	10 22 35.4	-0.4
	0.1nm259nm24nm,1.0s						
TOLI2	Tolitoli	8.55	223		Pn	10 22 46.7	-1.3
SANI	Sanana	9.42	184	P	Pn	10 22 56.2	-3.3
SIJI	Sorong	9.44	150	P	Pn	10 23 01.5	+1.7
	2.5nm,0.3s,baz=328,slow=13,SNR=6.5						
SIJI				S	Sn	10 24 41.6	-3.1
	0.8nm,0.3s,baz=199,slow=22,SNR=1.7						
MTN	Manton Dam	20.61	167	P	P	10 25 15.4	+1.0
KNRA	Kununurra	23.03	175	P	P	10 25 40.5	+1.6
KNRA				IAmb	IAmb	10 25 42.8	
	comp=Z,18nm,1.3s						
FITZ	Fitzroy Crossi	25.36	182	P	P	10 26 00.8	+0.8
	comp=Z,0.7nm,0.3s,baz=9.1,slow=12,SNR=2.0						
WRA	Warramunga Arr	28.22	165	P	P	10 26 28.6	+3.0
	comp=Z,0.2nm,0.5s,baz=340,slow=11,SNR=1.4						
ASAR	Alice Springs	31.69	167	P	P	10 26 57.3	+1.0
	comp=Z,0.2nm,0.4s,baz=346,slow=7.0,SNR=7.3						
ASAR				PcP	PcP	10 29 42.6	-1.8
	comp=Z,0.2nm,0.8s,baz=344,slow=2.2,SNR=5.6						
USRK	Ussuriysk Ar.	36.95	6	P	P	10 27 40.4	-0.7
	comp=Z,1.0nm,0.7s,baz=165,slow=12,SNR=2.1						
ERM	Erimo	37.45	20	P	P	10 27 39.7	-5.8
BBOO	Buckleboo	40.99	168	P	P	10 28 16.4	+1.4
BBOO				IAmb	IAmb	10 28 35.2	
	comp=Z,6.5nm,1.2s						
YSS	Yuzh-Sakhalins	41.76	17	P	P	10 28 16.7	-4.3
YSS				IAmb	IAmb	10 28 26.3	
	comp=Z,16nm,1.2s						
SONM	Songino Array	43.81	340	P	P	10 28 37.9	+0.2
	comp=Z,0.3nm,0.3s,baz=161,slow=9.2,SNR=2.9						
PEA0B	Petropavlovsk-	52.10	23	P	P	10 29 36.3	-4.9
MK31	Makanchi Array	54.52	324	P	P	10 29 59.0	0.0
MK31				IAmb	IAmb	10 30 16.4	
	comp=Z,7.1nm,1.3s						
MKAR	Makanchi Array	54.52	324	P	P	10 29 58.8	-0.2
	comp=Z,2.5nm,0.4s,baz=116,slow=7.2,SNR=29						
MKAR				PcP	PcP	10 31 00.5	+0.2
	comp=Z,1.3nm,0.7s,baz=124,slow=3.7,SNR=5.0						
MKAR	Makanchi Array	54.52	324	P	P	10 29 59.0	0.0
MAKZ	Makanchi	54.71	324	P	P	10 30 00.1	-0.3
MAKZ				IAmb	IAmb	10 30 08.1	
	comp=Z,19nm,1.4s						
NIL	Nilore	55.65	306	P	P	10 30 08.1	+0.7
DGAR	Diego Garcia	55.99	256	P	P	10 30 13.3	+3.3
ZAA0	Zalesovo Array	57.30	332	P	P	10 30 17.5	-1.0
ZALV	Zalesovo Beam	57.30	332	P	P	10 30 17.1	-1.4
	comp=Z,1.2nm,0.3s,baz=124,slow=6.5,SNR=4.4						
ZALV	Zalesovo Beam	57.30	332	P	P	10 30 17.8	-0.7
KURK	Kurchatov	58.62	326	P	P	10 30 27.6	-0.2
KURK				IAmb	IAmb	10 30 28.1	
	comp=Z,9.1nm,1.2s						
KURBB	Kurchatov Arra	58.62	326	P	P	10 30 27.4	-0.4
	comp=Z,2.3nm,0.5s,baz=126,slow=7.0,SNR=9.5						
KBL	Kabul	59.26	306	P	P	10 30 31.9	-0.9
KBL				IAmb	IAmb	10 30 32.6	
	comp=Z,6.7nm,0.6s						
BTK	Batken	59.34	312	P	P	10 30 32.1	-1.0
BTK				IAmb	IAmb	10 30 51.5	
	comp=Z,6.8nm,1.4s						
GAR	Garm	59.40	311	P	P	10 30 32.6	-1.0
KK31	Karatay Array	60.51	316	P	P	10 30 40.3	-0.7
KK31				IAmb	IAmb	10 30 41.1	
	comp=Z,2.3nm,0.8s						
KKAR	Karatay Array	60.51	316	P	P	10 30 40.6	-0.4
BVAR	Borovoye Array	64.21	326	P	P	10 31 04.5	-0.8
	comp=Z,1.5nm,0.5s,baz=182,slow=13,SNR=7.0						
BRVK	Borovoye	64.28	326	P	P	10 31 05.6	-0.2
BRVK				IAmb	IAmb	10 31 06.2	
	comp=Z,6.3nm,1.2s						
ABKAR	Akbulak array	69.27	320	P	P	10 31 36.9	-0.6
ABKAR	Akbulak array	69.27	320	P	P	10 31 36.7	-0.7
AKTO	Aktyubinsk	70.74	321	P	P	10 31 45.8	-0.6
	comp=Z,2.3nm,0.7s,baz=99,slow=7.5,SNR=8.9						
BELG	Belogornoye	77.45	322	P	P	10 32 24.1	-1.2
	comp=Z,12nm,0.8s,baz=149,slow=7.6,SNR=5.1						
GURO	Guroymak-BITLI	81.21	308	P	P	10 32 47.0	+0.9
GURO				IAmb	IAmb	10 32 47.2	
	comp=Z,4.0nm,0.8s						
ILAR	Eielson Array	81.85	26	P	P	10 32 48.4	-0.4
	comp=Z,0.3nm,0.6s,baz=247,slow=6.4,SNR=1.9						
AKASG	Malin Array Be	88.99	321	P	P	10 33 22.9	-1.4
	comp=Z,0.7nm,0.3s,baz=65,slow=4.4,SNR=2.9						
AKASG	Malin Array Be	88.99	321	P	P	10 33 23.8	-0.6
TORD	Torodi Ar. Bea	121.61	290	PKP	PKPdf	10 39 23.1	-0.4
	comp=Z,0.2nm,0.4s,baz=31,slow=2.3,SNR=2.3						

NNC 07 10:22:48.7±10.0, **37°.74N**×**72°.28E, h0^{km}, mb4.2, mpv3.8, 2C-2D, Error ellipse: s-maj=81.5km s-min=62.8km az=166.0, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	4.52	14	P	Pn	10 23 59.7	+1.0
	SNR=19						
UCH	Uchtor	4.80	20	P	Pn	10 24 03.5	+0.9
	SNR=15						
EKS2	Erkin-Say	5.05	13	P	Pn	10 24 06.2	+0.4
	SNR=8.8						
AAK	Ala-Archa	5.18	18	P	Pn	10 24 08.2	+0.7
	SNR=10						
AAK	Ala-Archa	5.18	18	P	Pn	10 24 08.1	+0.5
	6.3nm,0.7s						
AAK				⇑S	Sn	10 25 12.1	+4.0
	7.1nm,0.8s						
KK31	Karatay Array	5.52	346	P	Pn	10 24 11.5	-0.7
	5.7nm,0.6s,baz=153,slow=12,SNR=46						
KK31				⇑S	Sn	10 25 16.1	-0.3
	0.7nm,0.2s,baz=163,slow=22,SNR=7.3						
TKM2	Tokmak 2	5.76	25	P	Pn	10 24 15.3	-0.4
	SNR=13						
TKM2	Tokmak 2	5.76	25	⇓P	Pn	10 24 15.2	-0.5
	7.2nm,0.6s						
TKM2				⇓S	Sn	10 25 22.3	-0.3
	1.6nm,0.8s						

ISK 07 10:23:36.7, 36°.27N×33°.68E, h0^{km}, ML1.4/9, **Suspected Mining explosion., Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IKL	Isikli	0.03	178	PG	Pg	10 23 38.2	+0.9
KARG	Kargicak-Mersi	0.07	164	PG	Pg	10 23 38.9	+0.8
KARG				SG	Sg	10 23 40.3	+1.3
YESI	Yesilovacik-Me	0.08	204	PG	Pg	10 23 39.0	+0.7
TISA	Tisan-Mersin	0.11	182	PG	Pg	10 23 39.6	+0.8
KEBE	Keben-Mersin	0.18	8	PG	Pg	10 23 40.8	+0.7
SILI	Silifke-Mersin	0.22	64	PG	Pg	10 23 41.7	+0.9
SILI				SG	Sg	10 23 45.3	+1.6
TEVE	Tevekalti-Mers	0.25	310	PG	Pg	10 23 42.5	+0.9
BERE	Bereket-Mersin	0.38	282	PG	Pb	10 23 45.4	-1.0
KIZK	Mersin	0.43	61	PG	Pg	10 23 45.3	+0.4
TEKE	Tekeli-Mersin	0.48	255	PG	Pg	10 23 46.4	+0.5

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*TAP **07** 10:30:04.0, 24°.26N×121°.75E, h53^{km}, ML3.0, C*

*JMA **07** 10:30:03.0, 24°.23N×121°.73E, h60^{km}±1^{km}, M2.3*

ISC 07 10:30:04.5±1.3, **24°.25N**±0°.02×**121°.80E**±0°.02, **h39**^{km}±1^{km}, **n101, σ1^{s}.37**/193, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETL	Fush Village	0.18	241	P	Pn	10 30 12.7	-0.1
	baz=242						
ETL				S	Sn	10 30 18.9	-0.8
	baz=242						
ENA	Nanau	0.18	344	P	Pn	10 30 12.6	-0.2
	baz=352						
ENA				S	Sn	10 30 19.3	-0.4

	baz=352						
EWUT	Wuta	0.20	355	P	Pn	10 30 12.8	+0.1
	baz=14						
EWUT				S	Sn	10 30 19.8	+0.3
	baz=14						
NACB	Ninganchiao	0.20	248	P	Pn	10 30 12.4	-0.3
	baz=247						
NACB				S	Sn	10 30 18.8	-0.6
	baz=247						
TWD	Chiawan	0.25	228	*i* P	Pn	10 30 13.1	+0.5
	baz=229						
TWD				*i* S	Sn	10 30 19.4	+0.4
	baz=229						
ETLH	Xiulin Townshi	0.29	262	P	Pn	10 30 13.3	+0.5
	baz=257						
ETLH				S	Sn	10 30 19.5	+0.2
	baz=257						
HWA	Hwalien	0.32	213	P	Pn	10 30 13.9	+1.0
	baz=193						
HWA				S	Sn	10 30 22.3	+3.0
	baz=193						
TWC	Suao	0.36	7	*i* P	Pn	10 30 14.6	+1.3
	baz=20						
TWC				*i* S	Sn	10 30 22.2	+2.4
	baz=20						
NDS	Dongshan	0.39	349	P	Pn	10 30 14.4	+0.7
	baz=348						
NDS				S	Sn	10 30 21.9	+1.6
	baz=348						
NNSB	Datong	0.42	295	P	Pn	10 30 14.4	+0.2
	baz=293						
NNSB				S	Sn	10 30 22.3	+1.1
	baz=293						
NNS	Nan Shan	0.43	296	*i* P	Pn	10 30 14.6	+0.2
	baz=294						
NNS				*i* S	Sn	10 30 22.5	+1.1
	baz=294						
NDT	Datong Townshi	0.44	323	*i* P	Pn	10 30 14.8	+0.4
	baz=324						
NDT				*i* S	Sn	10 30 22.9	+1.6
	baz=324						
ENTT	Nioudou	0.44	331	P	Pn	10 30 14.7	+0.3
	baz=334						
ENTT				S	Sn	10 30 23.1	+1.6
	baz=334						
TWE	Neicheng	0.48	346	*i* P	Pn	10 30 15.4	+0.4
	baz=346						
TWE				*i* S	Sn	10 30 23.9	+1.6
	baz=346						
WHF	Hehuan Shan	0.50	258	*i* P	Pn	10 30 15.7	+0.1
	baz=255						
WHF				*i* S	Sn	10 30 23.6	+0.3
	baz=255						
FUSS	Fushou	0.51	270	*i* P	Pn	10 30 15.8	+0.2
	baz=268						
FUSS				*i* S	Sn	10 30 23.6	+0.3
	baz=268						
ESL	Shilin	0.55	218	*i* P	Pn	10 30 15.2	-0.8
	baz=220						
ESL				S	Sn	10 30 23.6	-0.3
	baz=220						
TWT	Tachien	0.57	270	P	Pn	10 30 16.9	+0.5
	baz=263						
TWT				S	Sn	10 30 25.5	+0.8
	baz=263						
YHNB	Yeheng	0.57	317	P	Pn	10 30 16.2	-0.1
	baz=320						
YHNB				S	Sn	10 30 24.4	-0.2
	baz=320						
NSK	Sanguang	0.58	317	P	Pn	10 30 16.4	-0.2
	baz=320						
NSK				S	Sn	10 30 25.3	+0.4
	baz=320						
TDCB	Techi	0.58	270	P	Pn	10 30 16.9	+0.3
	baz=264						
TDCB				S	Sn	10 30 25.4	+0.4
	baz=264						
NWLT	Wulai	0.59	333	*i* P	Pn	10 30 16.6	+0.1
	baz=336						
NWLT				*i* S	Sn	10 30 25.5	+0.5
	baz=336						
CHGB	Renai	0.60	252	P	Pn	10 30 16.9	0.0
	baz=243						
CHGB				S	Sn	10 30 25.8	+0.3
	baz=243						
NTC	Toucheng	0.60	3	*i* P	Pn	10 30 17.3	+0.6
NTC				*i* S	Sn	10 30 27.2	+2.0
OWD	Renai	0.64	243	*i* P	Pn	10 30 17.1	-0.2
	baz=236						
OWD				*i* S	Sn	10 30 26.6	+0.3
	baz=236						
EGFH	Guangfu	0.67	210	*i* P	Pn	10 30 16.5	-1.1
	baz=213						
EGFH				*i* S	Sn	10 30 27.0	+0.2
	baz=213						
TIPB	Shuangxi	0.72	2	*i* P	Pn	10 30 19.1	+0.9
	baz=1.0						
TIPB				*i* S	Sn	10 30 30.0	+1.9
	baz=1.0						
NHDH	Xindian Distri	0.75	341	*i* P	Pn	10 30 18.7	0.0
	baz=335						
NHDH				*i* S	Sn	10 30 29.5	+0.6
	baz=335						
TWA	Mucha	0.75	345	P	Pn	10 30 18.7	0.0
	baz=338						
TWA				S	Sn	10 30 30.8	+1.8
	baz=338						
TWB1	Santiao Chiao	0.78	13	P	Pn	10 30 19.7	+0.7
	baz=24						
TWB1				S	Sn	10 30 31.2	+1.8
	baz=24						
WHP	Taichung City	0.78	272	*i* P	Pn	10 30 19.8	+0.7
	baz=271						
WHP				*i* S	Sn	10 30 30.4	+0.8
	baz=271						
LIOB	Emei	0.81	299	*i* P	Pn	10 30 20.0	+0.5
	baz=300						
LIOB				*i* S	Sn	10 30 31.7	+1.3
	baz=300						
NWF	Wu-fen Shan	0.82	359	*i* P	Pn	10 30 20.2	+0.6
	baz=354						
NWF				*i* S	Sn	10 30 31.3	+0.6
	baz=354						
NSTT	Nanjuang	0.82	298	P	Pn	10 30 18.5	-1.1
	baz=298						
NSTT				*i* S	Sn	10 30 31.3	+0.8
	baz=298						
HGSD	Ruisui	0.83	205	P	Pn	10 30 19.8	+0.1
	baz=209						
HGSD				S	Sn	10 30 32.3	+1.5
	baz=209						
WCS	Beigang Elemen	0.83	257	P	Pn	10 30 20.3	+0.5
	baz=254						
WCS				S	Sn	10 30 31.4	+0.5
	baz=254						
EHY	Hungye	0.86	211	P	Pn	10 30 18.7	-1.5
	baz=206						
EHY				S	Sn	10 30 30.0	-1.5
	baz=206						
SMLT	Sun Moon Lake	0.90	246	*i* P	Pn	10 30 21.1	+0.3
	baz=236						
SMLT				*i* S	Sn	10 30 35.2	+2.6
	baz=236						
SSLB	Suanglung	0.90	239	P	Pn	10 30 20.7	-0.1
	baz=234						
SSLB				*e*S	Sn	10 30 32.8	+0.2
	baz=234						
NCUH	Zhongli	0.91	322	*i* P	Pn	10 30 20.7	-0.1
	baz=324						
NCUH				*i* S	Sn	10 30 33.6	+0.9
	baz=324						
NCU	National Centr	0.91	322	*i* P	Pn	10 30 21.0	+0.1
	baz=324						
NCU				*i* S	Sn	10 30 33.5	+0.8
	baz=324						
TWS1	Kuangyinshan	0.92	338	P	Pn	10 30 20.6	-0.4
	baz=341						
TWS1				S	Sn	10 30 33.1	+0.3
	baz=341						
SBCB	Hsinchu	0.92	306	*e*P	Pn	10 30 21.4	+0.5
	baz=307						
SBCB				S	Sn	10 30 35.5	+2.5
	baz=307						
YM01	YM01	0.92	347	P	Pn	10 30 20.4	-0.6
	baz=340						
YM01				S	Sn	10 30 32.6	-0.4
	baz=340						
TYC	Yuchr	0.93	248	P	Pn	10 30 21.3	+0.3
	baz=240						
TYC				S	Sn	10 30 34.3	+1.2
	baz=240						
HSN	Hsinchu	0.93	306	S	Sn	10 30 34.2	+0.8
	baz=310						
TWQ1	Liyutan	0.94	276	P	Pn	10 30 22.8	+1.5
	baz=275						
TWQ1				*i* S	Sn	10 30 34.5	+1.0
	baz=275						
NSY	Sanyi	0.96	280	P	Pn	10 30 22.5	+0.9
	baz=279						
NSY				S	Sn	10 30 35.5	+1.4
	baz=279						
NMLH	Miaoli	0.96	288	P	Pn	10 30 20.4	-1.1
	baz=287						
NMLH				S	Sn	10 30 34.8	+0.8
	baz=287						
NTST	Danshui	0.96	341	*e*S	Sn	10 30 34.8	+0.7
	baz=344						
YULB	Yu-li	0.97	208	P	Pn	10 30 20.0	-1.6
	baz=203						
YULB				S	Sn	10 30 33.0	-1.2
	baz=203						
EYUL	Yuli	1.00	206	P	Pn	10 30 21.4	-0.7
	baz=209						
EYUL				*e*S	Sn	10 30 34.6	-0.3
	baz=209						
TCU	Taichung	1.03	265	P	Pn	10 30 22.1	-0.4
	baz=275						
TCU				S	Sn	10 30 37.0	+1.4
	baz=275						
WDJ	Dajia District	1.06	276	P	Pn	10 30 22.8	-0.1
	baz=275						
WDJ				*i* S	Sn	10 30 37.0	+0.6
	baz=275						
JYNG	Yonagunijimaku	1.06	79	P	Pn	10 30 23.4	+0.5
JYNG				*e*S	Sn	10 30 37.7	+1.2
WJS	Zhushan	1.07	247	*i* P	Pn	10 30 23.8	+0.8
	baz=244						
WJS				*i* S	Sn	10 30 39.2	+2.6
	baz=244						
WNT	Mingjian	1.08	250	P	Pn	10 30 24.5	+1.3
	baz=248						
WNT				S	Sn	10 30 39.8	+2.8
	baz=248						
YOJ	Yonaguni jima	1.13	79	P	Pn	10 30 23.8	+0.1
	baz=81						
YOJ				S	Sn	10 30 39.3	+1.3
	baz=81						
YOJ	Yonaguni jima	1.13	79	P	Pn	10 30 24.0	+0.2
YOJ				*e*S	Sn	10 30 38.8	+0.8
ALS	Alishan	1.17	231	*i* P	Pn	10 30 25.5	+0.8
	baz=219						
ALS				*i* S	Sn	10 30 41.2	+1.6
	baz=219						
CHKT	Chengkung	1.21	199	*i* P	Pn	10 30 25.8	+0.8
	baz=183						
CHKT				*i* S	Sn	10 30 41.4	+1.3
	baz=183						
CHN5	Tsauling	1.21	238	P	Pn	10 30 25.8	+0.7
	baz=234						
CHN5				S	Sn	10 30 43.2	+2.9
	baz=234						
ELDTW	Lidau	1.28	214	*i* P	Pn	10 30 25.6	-0.4
	baz=201						
ELDTW				*i* S	Sn	10 30 41.5	-0.4
	baz=201						
WDLH	Douliu	1.28	244	*i* P	Pn	10 30 26.8	+0.9
	baz=242						
WDLH				*i* S	Sn	10 30 45.0	+3.1
	baz=242						
WRL	Guolierlin Hig	1.34	255	P	Pn	10 30 26.8	0.0
	baz=254						
WRL				S	Sn	10 30 43.6	+0.2
	baz=254						
EDH	Donghe	1.35	200	P	Pn	10 30 26.4	-0.5
	baz=194						
EDH				*i* S	Sn	10 30 43.8	+0.2
	baz=194						
WTK	Tuku	1.41	247	*i* P	Pn	10 30 27.6	-0.1
	baz=259						
WTK				*i* S	Sn	10 30 46.8	+1.9
	baz=259						
CHN4	Tsaushan	1.42	231	P	Pn	10 30 27.4	-0.5
	baz=227						
CHN4				S	Sn	10 30 47.2	+1.9
	baz=227						
STYH	Taoyuan	1.43	221	P	Pn	10 30 28.8	+0.9
	baz=217						
STYH				S	Sn	10 30 45.9	+0.5
	baz=217						
TPUB	Ta-pu	1.43	229	P	Pn	10 30 28.6	+0.6
	baz=215						
TPUB				S	Sn	10 30 47.8	+2.2
	baz=215						
CHY	Chiayi	1.46	240	S	Sn	10 30 49.5	+3.1
	baz=249						
LONT	Longtian	1.47	205	*e*P	Pn	10 30 27.7	-0.8
	baz=189						
LONT				*e*S	Sn	10 30 45.5	-1.1
	baz=189						
WTP	Ta-pu	1.48	228	*i* P	Pn	10 30 29.9	+1.3
	baz=223						
WTP				*i* S	Sn	10 30 49.5	+2.8
	baz=223						
TWK	Hsinying	1.55	231	P	Pn	10 30 30.6	+1.0
	baz=228						
TWK				S	Sn	10 30 51.4	+2.8
	baz=228						
TWG	Pinlang	1.57	205	*i* P	Pn	10 30 27.3	-2.6
	baz=188						
TWG				*i* S	Sn	10 30 46.8	-2.2
	baz=188						
TWGBT	Beinan	1.57	205	P	Pn	10 30 28.6	-1.3
	baz=188						
TWGBT				S	Sn	10 30 47.0	-2.0
	baz=188						
SNST	Tainan City	1.57	230	P	Pn	10 30 31.0	+1.0
	baz=226						
SNST				S	Sn	10 30 52.2	+3.2
	baz=226						
CHN1	Nanshi	1.57	228	*i* P	Pn	10 30 31.0	+1.0
	baz=223						
CHN1				*i* S	Sn	10 30 51.2	+2.0
	baz=223						
LDUT	Ludao	1.60	191	*e*P	Pn	10 30 29.1	-1.1
	baz=177						
LDUT				S	Sn	10 30 48.9	-0.7
	baz=177						
SGST	Jiashian	1.61	224	P	Pn	10 30 30.6	+0.1
	baz=211						
SGST				S	Sn	10 30 51.7	+1.7
	baz=211						
SLGT	Liugui	1.64	220	*i* P	Pn	10 30 32.0	+1.2
	baz=206						
SLGT				*i* S	Sn	10 30 53.8	+3.1
	baz=206						
CHN8	Yiju	1.71	239	*e*S	Sn	10 30 56.1	+3.6
	baz=235						
IRIF	Iriomote-Funau	1.76	87	P	Pn	10 30 31.7	-0.8
IRIF				S	Sn	10 30 53.5	-0.3
SSD	Sandimen	1.84	216	*i* P	Pn	10 30 35.4	+1.8
	baz=223						
SSD				*i* S	Sn	10 30 56.6	+0.9
	baz=223						
HATJ	Hateruma jima	1.84	96	P	Pn	10 30 33.5	-0.1
HATJ				*e*S	Sn	10 30 57.3	+1.6
MASBT	Mashibuluo	1.95	214	P	Pn	10 30 35.9	+0.7
	baz=207						
MASBT				S	Sn	10 30 59.4	+1.0
	baz=207						
JKRS	Kuro-shima	2.02	90	P	Pn	10 30 37.1	+1.1
JKRS				S	Sn	10 31 01.3	+1.3
EAST	Anshuo	2.05	205	P	Pn	10 30 36.8	+0.2
	baz=194						
EAST				*e*S	Sn	10 31 00.9	0.0
	baz=194						
JIJ	Ishigaki jima	2.14	86	P	Pn	10 30 37.9	+0.2
JIJ				S	Sn	10 31 02.4	-0.7
SCZT	Fangliau	2.16	210	*e*S	Sn	10 31 07.3	+3.8
	baz=219						
PHUB	P'eng-hu	2.17	251	P	Pn	10 30 35.7	-2.3
	baz=249						
PHUB				S	Sn	10 31 01.9	-1.8
	baz=249						
LAY	Lan-yu	2.21	186	*e*S	Sn	10 31 03.9	-1.0
	baz=175						
SLIU	Shizi	2.22	205	P	Pn	10 30 40.3	+1.4
	baz=197						
JISG	Ishigakijimahi	2.31	81	P	Pn	10 30 40.7	+0.6
JISG				*e*S	Sn	10 31 07.6	+0.3
VCHM	Qimei	2.41	245	P	Pn	10 30 40.3	-1.1
	baz=243						
VCHM				S	Sn	10 31 09.2	-0.4
	baz=243						
MATB	Ma-tsu	2.53	319	P	Pn	10 30 42.4	-0.7
	baz=318						
MATB				*e*S	Sn	10 31 10.2	-2.5
	baz=318						
PTMZ	Houxiangcun	2.56	288	P	Pn	10 30 42.1	-1.4
	baz=288						
PTMZ				*e*S	Sn	10 31 09.3	-4.1
	baz=288						
LYJJ	Jianjiangzhen	2.94	322	*e*S	Sn	10 31 20.7	-2.1
	baz=319						
XPSS	Dashiqiu	3.04	332	*e*P	Pn	10 30 48.3	-1.7
	baz=331						
XPSS				*e*S	Sn	10 31 21.9	-3.3
	baz=331						
MHZQ	Yeshan	3.11	307	*e*S	Sn	10 31 23.5	-3.5
	baz=305						
KNMB	Chin-men Tao	3.12	275	*e*P	Pn	10 30 51.0	-0.1
	baz=275						
KNMB				*e*S	Sn	10 31 24.6	-2.6
	baz=275						

IDC ***07*** *10:31:14.4±0.6, 30°.85S×71°.37W, h0^{km}, mb4.4/11, mb1 4.5/16, mb1mx4.4/27, mbtmp4.3/16, ML4.3/5, Error ellipse: s-maj=23.1km s-min=14.7km az=98.0*

SJA ***07*** *10:31:16.5±0.8, 30°.78S×71°.70W, h22^{km}±6^{km}, ML4.7, MW4.7*

VAO ***07*** *10:31:16.8±0.4, 30°.82S×71°.34W, h10^{km}, mb4.5*

GUC ***07*** *10:31:19.3±0.7, 30°.77S×71°.36W, h47^{km}±4^{km}, ML4.9*

NEIC ***07*** *10:31:19, 30°.77S×71°.36W, h69^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-0.55; $M_{\theta\theta}$-0.21; $M_{\phi\phi}$0.76; $M_{r\theta}$-0.59; $M_{\theta\phi}$-0.35; $M_{\phi r}$-2.21; Fault plane solution: $M_0$2.41000×10^{16} NP1:ϕ_s130.62000°, δ14.51000°, λ-152.02000°. NP2:ϕ_s13.40000°, δ83.25000°, λ-77.13000°. Principal axes: T 2.4096, Plg37.0000°, Azm92.0000°; N -0.0005, Plg13.0000°, Azm192.0000°; P -2.4091, Plg50.0000°, Azm298.0000°;*

NEIC ***07*** *10:31:20.6±1.3, 30°.79S±0°.03×71°.45W±0°.08, h42^{km}±4^{km}, mb4.6/55, Mwr4.9/36, ML4.9(GUC) Error ellipse: s-maj=10.7km s-min=4.4km az=102.0*

ISC 07 10:31:19.1±2.6**, 30°.74S**±0°.03×**71°.45W**±0°.04**, h32**^{km}±18^{km}**, n224,** σ1^{s}**53**/226**, mb4.7**/36**, 1C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	Fray Jorge	0.17	294	⇑*i*P	Pn	10 31 28.0	+2.6
CO06				IAML		10 31 35.3	
	comp=E,126μm,0.2s						
CO06	Fray Jorge	0.17	294		Pn	10 31 28.1	+2.6
CO03	El Pedregal	0.67	98	⇓*i*P	Pn	10 31 33.0	+0.6
CO03				*i* S	Sn	10 31 42.3	+0.5
CO03				IAML		10 31 45.1	
	comp=E,57μm,0.4s						
CO03	El Pedregal	0.67	98		Pn	10 31 33.1	+0.7
CO03	El Pedregal	0.67	98	*e*P	Pn	10 31 33.0	+0.6
CO03				IAML		10 31 47.3	
	comp=Z,14μm,0.3s						
GO04	Tololo Observa	0.80	45	*e*P	Pn	10 31 35.5	+1.1
GO04				*i* S	Sn	10 31 47.6	+2.2
GO04	Tololo Observa	0.80	45	Pn	Pn	10 31 35.8	+1.4
GO04	Tololo Observa	0.80	45	*e*P	Pn	10 31 36.0	+1.6
CO05	La Serena	0.84	13	*e*P	Pn	10 31 36.2	+1.5
CO05				*e*S	Sn	10 31 48.7	+2.6
CO05				IAML		10 31 54.3	
	comp=E,53μm,0.4s						
AROD	Rodeo	1.80	72	*e*P	Pn	10 31 52.0	+3.7
VA06	Catapilco	1.82	176	*e*P	Pn	10 31 48.6	+0.5
VA06				*e*S	Sn	10 32 09.8	-0.2
VA06				IAML		10 32 19.0	
	comp=E,19μm,0.3s						
LCO	Las Campanas	1.85	21	*e*P	Pn	10 31 50.6	+1.8
LCO	Las Campanas	1.85	21	Pn	Pn	10 31 50.9	+2.2
LCO	Las Campanas	1.85	21	*e*P	Pn	10 31 51.0	+2.2
ACCO	Cerro Coronel	2.06	86	*e*P	Pn	10 31 56.0	+4.1
ACDV	Cuesta del Vie	2.10	75	*e*P	Pn	10 31 56.0	+3.9
ACDV				IAML		10 32 41.9	
	comp=Z,2μm,1.9s						
VA03	San Esteban	2.16	159	*e*P	Pn	10 31 54.6	+1.7
VA03				IAML		10 32 29.1	
	comp=E,13μm,0.3s						
VA03	San Esteban	2.16	159		Pn	10 31 54.2	+1.2
ROCH	El Roble	2.25	170	*e*P	Pn	10 31 55.4	+1.0
ROCH				IAML		10 32 28.6	
	comp=N,11μm,0.5s						
VA01	Torpederas	2.28	184	*e*P	Pn	10 31 54.5	0.0
VA01	Torpederas	2.28	184	*e*P	Pn	10 31 55.0	+0.5
VA01				IAML		10 32 29.9	
	comp=Z,3μm,0.5s						
AUSP	Uspallata	2.30	130	*e*P	Pn	10 31 58.0	+2.9
PEL	Peldehue	2.48	165	*i* P	Pn	10 31 58.8	+1.4
PEL				IAML		10 32 35.7	
	comp=E,5μm,0.4s						
PEL	Peldehue	2.48	165	*e*P	Pn	10 31 59.0	+1.6
ZON	Zonda	2.51	109	*e*P	Pn	10 32 02.0	+4.2
ZON				IAML		10 32 58.0	
	comp=Z,2μm,0.7s						
MT02	Curacav	2.52	174	*e*P	Pn	10 31 58.3	+0.4
MT02	Curacav	2.52	174		Pn	10 31 58.8	+0.9
MT02	Curacav	2.52	174	*e*P	Pn	10 31 58.0	+0.1
MT02				IAML		10 32 42.3	
	comp=Z,3μm,0.5s						
AC04	Llanos de Chal	2.55	8	*e*P	Pn	10 32 00.3	+2.0
AC04				IAML		10 32 44.9	
	comp=E,4μm,0.5s						
AC04	Llanos de Chal	2.55	8		Pn	10 32 00.0	+1.7
AC04	Llanos de Chal	2.55	8	*e*P	Pn	10 32 00.3	+2.0
AC04				*e*S	Sn	10 32 42.8	+15
AC04				IAML		10 32 51.0	
	comp=Z,2μm,0.8s						
MT05	Renca	2.71	167	*e*P	Pn	10 32 01.5	+0.9
MT05				IAML		10 32 41.3	
	comp=E,14μm,0.3s						
MT05	Renca	2.71	167	*e*P	Pn	10 32 02.0	+1.5
RTCV	Cerro Valdivia	2.73	115	*e*P	Pn	10 32 04.9	+4.1
ASAL	Salagasta	2.90	130	*e*P	Pn	10 32 07.0	+3.9
VA05	Santo Domingo	2.91	183	*e*P	Pn	10 32 02.9	-0.3
VA05				IAML		10 32 59.4	
	comp=E,8μm,0.5s						
ARCO	CERRO ARCO	3.00	135	*e*P	Pn	10 32 09.0	+4.4
ARCO				IAML		10 32 58.3	
	comp=Z,2μm,0.6s						
MT09	Talagante	3.05	173	*i* P	Pn	10 32 06.2	+1.0
MT09				IAML		10 32 50.1	
	comp=E,6μm,0.4s						
MT01	Popeta	3.12	177	*e*P	Pn	10 32 06.4	+0.3
MT01				IAML		10 32 59.0	
	comp=E,3μm,0.3s						
MT01	Popeta	3.12	177	*e*P	Pn	10 32 06.0	0.0
MT01				*e*S	Sn	10 32 49.6	+7.4
MT01				IAML		10 32 54.2	
	comp=Z,2μm,0.6s						
AAGR	Agrelo	3.23	137	*e*P	Pn	10 32 12.2	+4.5
LMEL	Las Melosas	3.27	161	*e*P	Pn	10 32 10.8	+2.5
LMEL				IAML		10 33 00.7	
	comp=N,4μm,0.2s						
GO03	Copiap	3.31	19	*e*P	Pn	10 32 11.6	+2.8
GO03				IAML		10 33 04.3	
	comp=N,3μm,0.6s						
GO03	Copiap	3.31	19		Pn	10 32 11.4	+2.5
GO03	Copiap	3.31	19	*e*P	Pn	10 32 11.8	+3.0
GO03				*e*P	Pn	10 32 12.0	+3.2
GO03				*e*S	Sn	10 32 48.0	+0.8
BO04	La Punta	3.31	168	*e*P	Pn	10 32 10.1	+1.3
AVFE	Valle Fertil	3.44	90	*e*P	Pn	10 32 13.0	+2.4
AVFE				IAML		10 33 27.0	
	comp=Z,1μm,0.5s						
VCA	Vinchina	3.46	56	*e*P	Pn	10 32 16.0	+5.1
VCA				IAML		10 33 13.6	
	comp=Z,2μm,1.0s						
BO01	Tunca	3.65	175	*i* P	Pn	10 32 13.7	+0.3
BO01	Tunca	3.65	175		Pn	10 32 13.9	+0.6
BO01	Tunca	3.65	175	*e*P	Pn	10 32 14.0	+0.6
BO01				*e*S	Sn	10 32 57.5	+2.1
BO01				IAML		10 33 10.8	

	comp=Z,1μm,1.6s						
BO02	Sierra Bellavi	4.08	172	i P	Pn	10 32 19.9	+0.6
BO02	Sierra Bellavi	4.08	172	eP	Pn	10 32 20.0	+0.6
BO02				eS	Sn	10 33 06.0	0.0
BO02				IAML		10 33 22.6	
	comp=Z,3μm,0.6s						
ACLC	CERRO LA CRUZ	4.12	73	eP	Pn	10 32 23.0	+3.0
ACLC				IAML		10 33 36.0	
	comp=Z,1μm,0.4s						
ACHE	Chepes	4.14	97	eP	Pn	10 32 23.0	+2.8
APLL	PUNTA DE LOS L	4.26	87	eP	Pn	10 32 25.0	+3.1
GO05	Huala	4.27	185	eP	Pn	10 32 21.1	-0.9
TINO	Tinogasta	4.32	53	eP	Pn	10 32 28.0	+5.4
AC02	Maricunga	4.39	28		Pn	10 32 27.3	+3.2
AC02	Maricunga	4.39	28	eP	Pn	10 32 27.0	+2.9
AC02				eS	Sn	10 33 15.5	+1.1
AC02				IAML		10 34 03.0	
	comp=Z,986nm,0.8s						
RFA	San Rafael	4.74	149	eP	Pn	10 32 30.0	+1.6
RFA				IAML		10 33 52.7	
	comp=Z,601nm,1.8s						
ML02	Panimavida	5.01	180	Pn	Pn	10 32 31.8	-0.3
PB14	IPOC Station P	6.16	9	Pn	Pn	10 32 48.0	-0.3
PB14	IPOC Station P	6.16	9	eP	Pn	10 32 49.0	+0.8
PB14				IAML		10 34 38.8	
	comp=Z,387nm,0.6s						
AHML	Horco Molle	6.66	55	eP	Pn	10 32 57.1	+2.3
AHML				eS	Sn	10 34 12.0	+2.3
AHML				IAML		10 34 43.5	
	comp=Z,190nm,0.9s						
FSA	Cafayete	6.67	48	eP	Pn	10 32 58.0	+2.9
FSA				eS	Sn	10 34 21.0	+11
H03N1	Juan Fernandez	6.88	245	Pn	Pn	10 32 57.2	-0.3
	baz=114,slow=18,SNR=146						
H03N1				T	T	10 39 48.1	
	baz=73,slow=72,SNR=1864						
VA04	Juan Fernndez	6.89	243	Pn	Pn	10 32 57.3	-0.5
H03N3	Juan Fernandez	6.89	245	Pn	Pn	10 32 57.1	-0.6
	baz=114,slow=18,SNR=258						
H03N3				T	T	10 39 49.5	
	baz=73,slow=72,SNR=1683						
H03N2	Juan Fernandez	6.89	245	Pn	Pn	10 32 57.5	-0.2
	baz=114,slow=18,SNR=302						
H03N2				T	T	10 39 50.8	
	baz=73,slow=72,SNR=1912						
H03S3	Juan Fernandez	7.02	242	Pn	Pn	10 32 58.6	-0.9
	baz=266,slow=76,SNR=50						
H03S3				T	T	10 39 55.8	
	baz=83,slow=75,SNR=38						
H03S1	Juan Fernandez	7.03	242	Pn	Pn	10 32 58.1	-1.4
	baz=274,slow=76,SNR=39						
H03S1				T	T	10 39 55.8	
	baz=83,slow=75,SNR=36						
H03S2	Juan Fernandez	7.04	242	Pn	Pn	10 32 58.4	-1.3
	SNR=56						
H03S2				T	T	10 39 55.8	
	baz=83,slow=75,SNR=33						
PB10	IPOC Station P	7.25	7	eP	Pn	10 33 04.0	+1.2
PB15	IPOC Station P	7.71	14	Pn	Pn	10 33 10.1	+0.6
PB15	IPOC Station P	7.71	14	eP	Pn	10 33 10.0	+0.6
PB05	IPOC Station P	7.94	8	eP	Pn	10 33 12.0	-0.4
LC01	Cunco	8.14	182	Pn	Pn	10 33 13.7	-1.4
LC01	Cunco	8.14	182	eP	Pn	10 33 14.0	-1.1
LVC	Limon Verde	8.41	16	Pn	Pn	10 33 19.6	+0.4
	comp=Z,1.1nm,0.3s,baz=188,slow=8.8,SNR=11						
LVC				Sn	Sn	10 34 51.6	-1.6
	comp=Z,4.4nm,0.3s,baz=164,slow=18,SNR=1.5						
LVC	Limon Verde	8.41	16	eP	Pn	10 33 19.2	0.0
LVC	Limon Verde	8.41	16	Pn	Pn	10 33 19.9	+0.7
LR03	Panguipulli	8.90	184	Pn	Pn	10 33 23.2	-2.2
PLCA	Paso Flores	9.99	176	Pn	Pn	10 33 39.6	-0.9
	comp=Z,1.1nm,0.3s,baz=341,slow=11,SNR=33						
PLCA				Sn	Sn	10 35 36.0	+4.5
	comp=Z,0.4nm,0.3s,baz=30,slow=13,SNR=1.5						
PLCA	Paso Flores	9.99	176	eP	Pn	10 33 39.6	-0.9
PLCA	Paso Flores	9.99	176	Pn	Pn	10 33 40.3	-0.3
LL04	Puerto Octay	10.18	184	Pn	Pn	10 33 41.1	-1.8
PSGCX	Pisagua	11.16	6	Pn	Pn	10 33 54.7	-1.9
ITQB	Itaqui	12.87	89	eP	Pn	10 34 18.2	-1.7
ITQB	Itaqui	12.87	89		Pn	10 34 18.7	-1.2
CPUP	Villa Florida	13.17	74	Pn	Pn	10 34 23.3	-0.6
	comp=Z,0.7nm,0.3s,baz=258,slow=9.9,SNR=4.3						
CPUP				Sn	Sn	10 36 44.8	-4.6
	comp=Z,1.0nm,0.3s,baz=227,slow=16,SNR=1.4						
CPUP	Villa Florida	13.17	74	eP	Pn	10 34 22.5	-1.4
CPUP	Villa Florida	13.17	74		Pn	10 34 23.0	-0.9
LPAZ	La Paz	14.71	13	Pn	Pn	10 34 47.5	+2.0
	comp=Z,0.3nm,0.3s,baz=182,slow=8.4,SNR=32						
LPAZ	La Paz	14.71	13	eP	Pn	10 34 46.8	+1.3
LPAZ	La Paz	14.71	13	Pn	Pn	10 34 48.2	+2.7
PLTB	Pedras Altas	15.30	98	Pn	Pn	10 34 49.7	-3.1
CPSB	Cacapava Do Su	15.52	93	eP	Pn	10 34 53.4	-2.3
AQDB	Aquidauana	17.48	58	eP	Pn	10 35 19.9	-0.7
AQDB	Aquidauana	17.48	58	P	Pn	10 35 19.3	-1.2
SIV	San Ignacio	17.49	35	P	P	10 35 22.1	+0.5
	comp=Z,0.9nm,0.3s,baz=212,slow=9.3,SNR=27						
PTGB	Pitanga	18.18	75	eP	P	10 35 30.0	+0.8
TRCB	Terra Rica	18.56	69	eP	P	10 35 33.2	-0.2
PTLB	Pontes e Lacer	18.95	39	eP	P	10 35 38.1	+0.5
PTLB	Pontes e Lacer	18.95	39	P	P	10 35 37.9	+0.2
TER01	Tubaro-SC	19.53	89	eP	P	10 35 44.7	+0.7
PP1B	Ponte de Pedra	19.96	53	eP	P	10 35 49.4	+0.6
PCMB	Pacaembu	20.25	68	eP	P	10 35 52.0	+0.1
GO09	Cerro Castillo	20.52	182	P	P	10 35 54.6	+0.1
GO09				IAmb	IAmb	10 35 56.9	
	comp=Z,20nm,0.9s						
TIJ01	Guaruva-PR	20.53	80	eP	P	10 35 52.5	-2.4
VILB	Vilhena	20.53	33	eP	P	10 35 55.8	+0.9
VILB	Vilhena	20.53	33	P	P	10 35 54.1	-0.9
VILB				IAmb	IAmb	10 36 02.0	
	comp=Z,19nm,0.8s						
SALV	Santo Antonio	20.64	48	eP	P	10 35 56.2	0.0
FRTB	Fartura	20.82	75	eP	P	10 35 58.1	0.0
MG05	Puerto Natales	20.93	182	P	P	10 35 58.6	-0.3
ETMB	Extrema	21.39	14	eP	P	10 36 05.2	+1.1
ETMB	Extrema	21.39	14	P	P	10 36 05.0	+0.8
ITRB	Iturama	21.98	65	eP	P	10 36 10.2	-0.3
PET01	Itanhaem-SP	22.36	79	eP	P	10 36 15.6	+1.0
SPB	Sao Paulo	22.50	77	eP	P	10 36 17.6	+1.5
SPB	Sao Paulo	22.50	77	P	P	10 36 15.3	-0.7
BB19B	Bebedouro	22.73	70	eP	P	10 36 18.0	-0.5
RCLB	Rio Claro- Sao	22.91	75	eP	P	10 36 21.5	+1.0
CZSB	Cruzeiro do Su	22.93	357	eP	P	10 36 23.5	+2.9
SAML	Samuel	23.02	21	eP	P	10 36 22.0	+0.5
SAML	Samuel	23.02	21	P	P	10 36 21.9	+0.4
VAO	Valinhos	23.13	76	eP	P	10 36 24.3	+1.6
ARAG	Araguaiana, MT	23.39	55	eP	P	10 36 23.6	-1.6
PDRB	Porto dos Gac	23.42	39	eP	P	10 36 26.4	+0.8
USHA	Ushuaia	24.17	176	P	P	10 36 32.3	0.0
	comp=Z,20nm,0.7s,baz=360,slow=10,SNR=14						
CLDB	Colider	24.54	40	eP	P	10 36 36.9	+0.9
IPMB	Ipameri, GO	24.63	64	eP	P	10 36 36.1	-0.8
BDFB	Brasilia	26.19	60	P	P	10 36 50.8	-0.3
	comp=Z,14nm,0.9s,baz=249,slow=7.4,SNR=12						
BDFB	Brasilia	26.19	60	P	P	10 36 50.2	-0.9
BDFB				IAmb	IAmb	10 36 53.1	
	comp=Z,18nm,1.0s						
SNDB	Serra Nova Dou	26.40	49	eP	P	10 36 54.1	+1.3
TBTG	Tabatinga, AM	26.46	3	P	P	10 36 53.6	+0.3
TBTG				IAmb	IAmb	10 36 58.6	
	comp=Z,15nm,0.7s						
DIAM	Diamantina, MG	28.07	70	eP	P	10 37 07.9	-0.1
PEXB	Peixe	28.33	54	eP	P	10 37 10.1	-0.1
JANB	Januaria	29.37	64	eP	P	10 37 19.0	-0.5
SJMB	Sao Joao De Ma	29.89	73	eP	P	10 37 23.9	-0.2
BSFB	Barra de Sao F	30.11	74	eP	P	10 37 25.4	-0.6
SMTB	Santa Maria do	31.14	51	eP	P	10 37 36.8	+1.7
OTAV	Otavalo	31.52	347	P	P	10 37 37.6	-1.3
PTGA	Pitinga	31.78	22	P	P	10 37 40.7	+0.1
	comp=Z,7.9nm,1.0s,baz=204,slow=9.7,SNR=12						
PTGA	Pitinga	31.78	22	P	P	10 37 40.1	-0.6
PTGA				IAmb	IAmb	10 37 42.9	
	comp=Z,8.4nm,0.9s						
MALB	Monte Alegre	33.02	33	eP	P	10 37 50.8	-0.8
GDU01	Guandu, BA	33.86	67	eP	P	10 37 58.0	-0.9
BOAV	Boa Vista	34.56	20	eP	P	10 38 05.1	+0.2
BOAV	Boa Vista	34.56	20	P	P	10 38 05.1	+0.2
BOAV				IAmb	IAmb	10 38 07.3	
	comp=Z,6.1nm,0.8s						
NBPN	Ponto Novo - B	35.10	62	eP	P	10 38 09.0	-0.7
MCPB	Macapa, AP	35.39	35	eP	P	10 38 12.1	0.0
ZARC	Zaragoza, Cauc	38.16	355	P	P	10 38 35.3	-0.3
ZARC				IAmb	IAmb	10 38 51.6	
	comp=Z,5.6nm,1.0s						
NBMA	Muriti-CE	38.42	60	eP	P	10 38 38.3	+0.3
NBPS	Pedro II - PI	38.55	53	eP	P	10 38 39.9	+0.8
MOTC	Monteria, Cord	39.50	353	P	P	10 38 47.5	+0.6
BAUV	El Baul	39.59	5	P	P	10 38 47.8	+0.1
OBIP	Obispado Ponce	48.73	6	P	P	10 40 00.4	-0.3
PRSN	Puerto Rico Se	48.85	5	P	P	10 40 01.7	0.0
VNA3	Neumayer Olymp	52.19	159	P	P	10 40 26.2	-0.3
VNA2	Neumayer--Watz	52.83	158	P	P	10 40 30.9	-0.2
	baz=286,slow=8.4						
SNAA	Sanae	54.42	159	P	P	10 40 42.4	-0.4
SNAA	Sanae	54.42	159	P	P	10 40 42.3	-0.5
SNAA				IAmb	IAmb	10 40 43.3	
	comp=Z,8.1nm,0.8s						
QSPA	South Pole Qui	59.48	180	P	P	10 41 18.9	0.0
QSPA				IAmb	IAmb	10 41 37.6	
	comp=Z,7.5nm,1.0s						
H06E1	SOCORRO T-PHAS	62.17	317	T	T	11 49 04.7	
	SNR=7.8						
143A	Socs Landing,	65.87	342	P	P	10 42 01.4	-0.1
X48A	Hartselle	66.49	346	P	P	10 42 04.7	-0.8
X48A				IAmb	IAmb	10 42 22.1	
	comp=Z,7.0nm,1.0s						
JCT	Junction City	66.58	333	P	P	10 42 07.2	+1.0
SWET	Sewanee	67.01	347	P	P	10 42 09.4	+0.6
SWET				IAmb	IAmb	10 42 11.8	
	comp=Z,7.2nm,0.9s						
TX32	Lajitas Array	67.16	330	P	P	10 42 10.6	+0.6
TXAR	Lajitas Array	67.16	330	P	P	10 42 11.3	+1.3
	comp=Z,0.7nm,0.7s,baz=156,slow=7.5,SNR=11						
TX31	Lajitas Ar. Si	67.16	330	P	P	10 42 10.5	+0.5
TX31				IAmb	IAmb	10 42 25.6	
	comp=Z,6.1nm,0.9s						
V52A	Sevierville	67.21	349	P	P	10 42 10.5	+0.4
V52A				IAmb	IAmb	10 42 11.7	
	comp=Z,4.4nm,0.8s						
VNDA	Vanda	67.38	191	P	P	10 42 11.1	+0.4
	comp=Z,1.1nm,1.0s,baz=131,slow=5.6,SNR=5.5						
VNDA	Vanda	67.38	191	P	P	10 42 11.7	+1.0
U54A	Nelsons Funny	67.61	351	P	P	10 42 13.3	+0.7
U54A				IAmb	IAmb	10 42 14.1	
	comp=Z,11nm,1.2s						
V48A	Smith Brothers	67.69	347	P	P	10 42 13.4	+0.3
V48A				IAmb	IAmb	10 42 15.6	
	comp=Z,8.2nm,1.1s						
U49A	Red Boiling Sp	68.24	348	P	P	10 42 16.8	+0.3
U49A				IAmb	IAmb	10 42 17.7	
	comp=Z,10nm,1.5s						
WVT	Waverly	68.28	346	P	P	10 42 17.0	+0.2
ABTX	Abilene, Hawle	68.44	335	P	P	10 42 18.8	+0.9
ABTX				IAmb	IAmb	10 42 21.0	
	comp=Z,11nm,1.3s						
LCAR	Lake Charles	68.99	343	P	P	10 42 21.9	+0.8
LCAR				IAmb	IAmb	10 42 40.2	
	comp=Z,5.7nm,0.9s						
HHAR	Hobbs	69.93	341	P	P	10 42 26.7	-0.4
HHAR				IAmb	IAmb	10 42 46.2	
	comp=Z,4.7nm,0.8s						
MNTX	Cornudas Mount	69.94	330	P	P	10 42 27.2	0.0
CCM	Cathedral Cave	70.90	344	P	P	10 42 32.9	0.0
CCM				IAmb	IAmb	10 42 52.2	
	comp=Z,6.6nm,0.8s						
R40A	Maddies Statio	71.37	343	P	P	10 42 35.9	+0.1
R40A				IAmb	IAmb	10 42 55.0	
	comp=Z,9.4nm,0.8s						
P40A	Paris	72.49	343	P	P	10 42 42.6	+0.2
LIC	Lamto	73.29	72	eP	P	10 42 46.8	-1.0
	comp=Z,58nm,1.2s						
TIC	Toumodi	73.53	72	eP	P	10 42 49.0	-0.2
KIC	Kosan Boka	73.60	72	eP	P	10 42 48.9	-0.7
	comp=Z,26nm,0.8s						
DBIC	Dimbokro	73.68	72	P	P	10 42 50.0	-0.1
	comp=Z,10.0nm,0.5s,baz=230,slow=5.9,SNR=21						
DBIC	Dimbokro	73.68	72	P	P	10 42 49.5	-0.5
MAW	Mawson	76.16	164	P	P	10 43 03.4	-0.1
	comp=Z,3.8nm,0.5s,baz=203,slow=7.0,SNR=24						
MAW	Mawson	76.16	164	P	P	10 43 02.7	-0.8
K31A	O'Neill	77.20	340	P	P	10 43 10.4	+0.7
ECSD	EROS Data Cent	77.61	342	P	P	10 43 12.3	+0.4
ECSD				IAmb	IAmb	10 43 31.3	
	comp=Z,8.3nm,0.9s						
P17A	Butcher Ranch,	78.83	330	P	P	10 43 19.7	+0.7
P17A				IAmb	IAmb	10 43 22.7	
	comp=Z,6.4nm,1.1s						
KOWA	Kowa	78.85	66	P	P	10 43 19.0	-0.3
KOWA				IAmb	IAmb	10 43 20.9	
	comp=Z,16nm,1.4s						
TSUM	Tsumeb	79.63	106	P	P	10 43 22.8	-1.1
TSUM				IAmb	IAmb	10 43 25.6	
	comp=Z,9.7nm,1.2s						
SPR3	Spring Creek 3	80.05	327	P	P	10 43 26.1	+0.3
HWUT	Hardware Ranch	80.95	331	P	P	10 43 30.8	+0.3
HWUT				IAmb	IAmb	10 43 45.2	
	comp=Z,3.5nm,0.8s						
PDAR	Pinedale Array	81.10	333	P	P	10 43 33.6	+2.3
	comp=Z,0.2nm,0.5s,baz=153,slow=6.1,SNR=2.4						
BOSA	Boshof	81.15	118	P	P	10 43 31.6	-0.3
	comp=Z,3.4nm,0.9s,baz=292,slow=2.2,SNR=8.1						
BOSA	Boshof	81.15	118	P	P	10 43 31.3	-0.6
BOSA				IAmb	IAmb	10 43 38.3	
	comp=Z,13nm,1.2s						
B35A	Bob, Littlefor	81.24	345	P	P	10 43 31.8	+0.3
NVAR	Mina Array Bea	81.51	325	P	P	10 43 35.1	+1.6
	comp=Z,0.7nm,0.8s,baz=134,slow=6.4,SNR=4.6						
TORD	Torodi Ar. Bea	82.64	70	P	P	10 43 39.7	0.0
	comp=Z,2.8nm,0.4s,baz=280,slow=6.5,SNR=64						
TORD	Torodi Ar. Bea	82.64	70	P	P	10 43 39.7	0.0
TORD				IAmb	IAmb	10 43 57.7	
	comp=Z,4.4nm,0.9s						
J08A	Circle Bar Ran	85.40	328	P	P	10 43 54.4	+1.2
J08A				IAmb	IAmb	10 44 13.3	
	comp=Z,6.3nm,1.2s						
PLID	Pearl Lake	85.66	330	P	P	10 43 55.0	+0.4
K05A	Summer Lake	86.06	326	P	P	10 43 57.4	+0.8
ASAR	Alice Springs	120.69	207	PKP	PKPdf	10 50 06.4	-2.0
	comp=Z,0.2nm,0.3s,baz=174,slow=3.8,SNR=4.1						
WRA	Warramunga Arr	123.84	210	PKP	PKPdf	10 50 13.2	-1.3
	comp=Z,0.5nm,0.4s,baz=170,slow=1.6,SNR=17						
H11S2	WAKE ISLAND Hy	126.26	271	T	T	13 09 06.2	
	baz=116,slow=75,SNR=316						
H11S1	WAKE ISLAND Hy	126.27	271	T	T	13 09 09.9	
	baz=116,slow=75,SNR=465						
H11S3	WAKE ISLAND Hy	126.27	271	T	T	13 09 05.8	
	baz=116,slow=75,SNR=299						
H11N3	WAKE ISLAND Hy	126.59	273	T	T	13 09 31.2	
	baz=116,slow=75,SNR=90						
H11N1	WAKE ISLAND Hy	126.60	273	T	T	13 09 32.3	
	baz=116,slow=75,SNR=24						
H11N2	WAKE ISLAND Hy	126.60	273	T	T	13 09 32.6	
	baz=116,slow=75,SNR=9.6						
ZALV	Zalesovo Beam	151.19	30	PKPbc	PKPbc	10 51 08.2	-0.5
	comp=Z,5.1nm,0.6s,baz=300,slow=3.0,SNR=21						
KSH	Kashi	152.08	63	PKPbc	PKPdf	10 51 05.8	+1.1
KSH				pPKP	sPKPdf	10 51 19.6	+0.6
MKAR	Makanchi Array	154.17	44	PKPab	PKPab	10 51 29.8	+0.3
	comp=Z,2.7nm,1.0s,baz=264,slow=3.5,SNR=4.4						
WMQ	Urumqi	158.96	46	eP	PKPdf	10 51 13.2	-0.5
CMAR	Chiang Mai Arr	164.98	142	PKPab	PKPab	10 52 15.8	-1.1
	comp=Z,0.5nm,0.4s,baz=233,slow=4.8,SNR=4.3						
HHC	Hu-ho-hao-te	169.62	347	eP	PKPdf	10 51 23.7	+0.3
NJ2	Nanjing	171.09	281	eP	PKPdf	10 51 23.7	-0.6
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.5s						

GUC ***07*** *10:38:24.9±0.7, 30°.78S×71°.40W, h55^{km}±7^{km}, ML4.3*

NEIC ***07*** *10:38:24.9±2.2, 30°.76S±0°.03×71°.70W±0°.09, h39^{km}±10^{km}, mb4.0/2, ML4.3(GUC), Error ellipse: s-maj=11.5km s-min=2.6km az=67.0*

SJA ***07*** *10:38:24.0, 30°.79S×71°.60W, h10^{km}, ML4.3*

ISC 07 10:38:24.9±1.1**, 30°.77S**±0°.03×**71°.63W**±0°.06**, h45**^{km}±10^{km}**, n61, σ1^{s}45**/68**, 3C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.09	359		Pn	10 38 33.0	+0.9
CO03	El Pedregal	0.81	95	eS	Sn	10 38 47.5	-3.7
CO03				IAML		10 38 49.9	
	comp=N,14μm,0.1s						
CO03	El Pedregal	0.81	95		Pn	10 38 38.2	-2.0
CO03	El Pedregal	0.81	95	i P	Pn	10 38 38.0	-2.1
CO05	La Serena	0.91	22	eS	Sn	10 38 53.4	+0.1
CO05	La Serena	0.91	22		Pn	10 38 41.5	+0.1
GO04	Tololo Observa	0.93	51	eS	Sn	10 38 52.4	-1.8
GO04				IAML		10 38 54.2	
	comp=E,16μm,0.3s						
GO04	Tololo Observa	0.93	51		Pn	10 38 41.1	-0.7
GO04	Tololo Observa	0.93	51	i P	Pn	10 38 41.0	-0.8
VA06	Catapilco	1.81	171	eP	Pn	10 38 53.9	+0.3
VA06				eS	Sn	10 39 15.9	+0.5
VA06				IAML		10 39 22.2	
	comp=E,3μm,0.3s						
VA06				IAML		10 39 23.4	
	comp=N,3μm,0.4s						
LCO	Las Campanas	1.93	25	eP	Pn	10 38 55.6	+0.1
LCO				eS	Sn	10 39 18.4	-0.3
LCO	Las Campanas	1.93	25	Pn	Pn	10 38 55.9	+0.4
LCO	Las Campanas	1.93	25	i P	Pn	10 38 56.0	+0.5
AROD	Rodeo	1.96	73	i P	Pn	10 38 57.0	+1.0
VA03	San Esteban	2.19	155		Pn	10 38 59.5	+0.5
VA03	San Esteban	2.19	155	i P	Pn	10 39 00.0	+1.0
ACCO	Cerro Coronel	2.22	86	i P	Pn	10 39 01.0	+1.4
ACDV	Cuesta del Vie	2.25	75	i P	Pn	10 39 02.0	+2.2
RTLS	Leoncito	2.25	118	i P	Pn	10 39 01.0	+1.1
VA01	Torpederas	2.25	180⥣	eP	Pn	10 38 60.0	+0.3
VA01				eS	Sn	10 39 27.5	+1.3
VA01				IAML		10 39 35.0	
	comp=E,1μm,0.2s						
VA01	Torpederas	2.25	180		Pn	10 38 59.6	0.0
ROCH	El Roble	2.26	167	eP	Pn	10 39 00.4	+0.3
ROCH				eS	Sn	10 39 27.1	+0.2
ROCH				IAML		10 39 33.6	
	comp=E,2μm,0.5s						
ROC1	El Roble	2.27	167	i P	Pn	10 39 01.0	+0.9
AUSP	Uspallata	2.41	128	i P	Pn	10 39 03.0	+0.9
PEL	Peldehue	2.50	161	i P	Pn	10 39 04.0	+0.8
MT02	Curacav	2.52	171		Pn	10 39 03.4	0.0
MT02	Curacav	2.52	171	i P	Pn	10 39 05.0	+1.6
AC04	Llanos de Chal	2.60	11		Pn	10 39 05.2	+0.7
ZON	Zonda	2.65	108		Pn	10 39 05.8	+0.6
ZON	Zonda	2.65	108	i P	Pn	10 39 07.0	+1.8
MT05	Renca	2.73	164	eP	Pn	10 39 07.0	+0.7
MT05				eS	Sn	10 39 37.3	-0.7
MT05				IAML		10 39 53.8	
	comp=E,2μm,0.4s						
MT05	Renca	2.73	164		Pn	10 39 07.0	+0.7
MT05	Renca	2.73	164	i P	Pn	10 39 08.0	+1.7
RTCV	Cerro Valdivia	2.86	113	i P	Pn	10 39 10.3	+2.2
VA05	Santo Domingo	2.88	180		Pn	10 39 07.7	-0.6
ASAL	Salagasta	3.00	128	i P	Pn	10 39 12.0	+2.0
AGUA	GUANDACOL	3.01	66	i P	Pn	10 39 13.0	+2.8
MT09	Talagante	3.05	170⥣	eP	Pn	10 39 11.4	+0.6
MT09				eS	Sn	10 39 46.1	0.0
MT09				IAML		10 39 55.4	
	comp=E,1μm,0.2s						
MT09				IAML		10 40 01.3	
	comp=N,1μm,0.5s						
MT09	Talagante	3.05	170		Pn	10 39 11.6	+0.8
ARCO	CERRO ARCO	3.09	133	i P	Pn	10 39 14.0	+2.6
MT01	Popeta	3.11	174		Pn	10 39 10.5	-0.9
AAGR	Agrelo	3.32	135	i P	Pn	10 39 17.0	+2.5
BO04	La Punta	3.33	165⥣	eP	Pn	10 39 14.6	+0.1
BO04				eS	Sn	10 39 51.9	-1.0
GO03	Copiap	3.39	21		Pn	10 39 16.6	+1.2
GO03	Copiap	3.39	21	i P	Pn	10 39 19.0	+3.6
AVFE	Valle Fertil	3.60	89	i P	Pn	10 39 19.0	+0.7
VCA	Vinchina	3.60	57	i P	Pn	10 39 22.0	+3.6
BO01	Tunca	3.65	173		Pn	10 39 19.2	+0.3
BO01	Tunca	3.65	173	i P	Pn	10 39 20.0	+1.2
BO02	Sierra Bellavi	4.08	170		Pn	10 39 25.7	+0.8
BO02	Sierra Bellavi	4.08	170	i P	Pn	10 39 26.0	+1.1
GO05	Huala	4.24	183		Pn	10 39 25.9	-1.1
ACLC	CERRO LA CRUZ	4.27	73	i P	Pn	10 39 28.0	+0.4
ACHE	Chepes	4.29	97	i P	Pn	10 39 28.0	+0.2
AC02	Maricunga	4.49	30		Pn	10 39 32.3	+1.4
RFA	San Rafael	4.80	147	i P	Pn	10 39 36.0	+1.2
AHML	Horco Molle	6.80	56	i P	Pn	10 40 05.0	+2.7
LC01	Cunco	8.12	181	Pn	Pn	10 40 18.8	-1.4
LL04	Puerto Octay	10.14	183	Pn	Pn	10 40 46.6	-1.3
SNAA	Sanae	54.45	159	P	P	10 47 46.8	-0.7
SNAA				IAmb	IAmb	10 48 10.0	
	comp=Z,1.5nm,0.9s						
TORD	Torodi Ar. Bea	82.79	70	P	P	10 50 44.7	0.0
TORD				IAmb	IAmb	10 50 56.9	
	comp=Z,2.1nm,1.2s						

HEL 07 10:48:57.6±0.4**, 61°.51N**×**34°.65E, h0**^{km}**, ML1.3, Explosion, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOF	Joensuu	2.11	314	ePG	Pb	10 49 35.8	-0.8
JOF				eS	Sn	10 50 00.3	-0.6
JOF				MSG		10 50 03.7	
	comp=Z,0.9nm,0.1s						
KLMR	Klimovskoe	2.45	103	e	Pg	10 49 44.0	-0.5
KLMR				AMP		10 49 48.9	
	comp=Z,12nm,0.6s						
RUFX	Ruokolahti	2.73	271	eP	Pn	10 49 42.2	-0.5
RUFX				eS	Sn	10 50 15.3	-1.1
RUFX				eSG	Sb	10 50 21.2	-0.1
RMF	Romuvaara	3.48	324	eP	Pn	10 49 53.2	+0.3
RMF				eS	Sn	10 50 33.1	-1.5
KAF	Kangasniemi	4.01	282	eP	Pn	10 50 00.3	+0.2
KAF				eSG	Sb	10 51 01.5	+3.6
KAF				MSG		10 51 07.1	
	comp=Z,0.8nm,0.2s						
FIA0	FINESS Array S	4.11	273	eSG	Sb	10 51 04.1	+3.1
SUF	Sumiainen	4.17	291	eP	Pn	10 50 03.1	+0.6
SUF				eSG	Sb	10 51 06.5	+3.8
KU6	Riekki	5.00	337	eSG	Sb	10 51 30.7	+4.2

NOU ***07*** *10:50:42.1, 17°.54S×168°.39E, h118^{km}, ML4.4/6, Vanuatu Islands*

IDC ***07*** *10:50:43.2±14.0, 17°.82S×167°.18E, h0^{km}, mb3.7/3, mb1 3.9/4, mb1mx3.6/26, mbtmp3.7/4, ML3.3/1, MS4.4/1, Ms1 4.4/1, ms1mx3.2/46, Error ellipse: s-maj=239.5km s-min=39.0km az=69.0*

ISC 07 10:50:41.7±3.1**, 17°.6S**±0°.2×**167°.7E**±0°.3**, h19**^{km}**, n9, σ2^{s}01**/9**, mb3.7**/3**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	3.89	175	P	Pn	10 51 40.6	+0.1
DZM	Mont Dzumac	4.62	195	Pn	Pn	10 51 50.0	-0.6
	1.8nm,0.3s,baz=358,slow=16,SNR=22						
DZM				Sn	Sn	10 52 42.1	-1.7
	1.6nm,0.3s,baz=98,slow=23,SNR=9.9						
NOUC	Port Laguerre	4.68	196	P	Pn	10 51 53.6	+2.2
ONTNC	Ouen Toro	4.84	194	P	Pn	10 51 56.8	+3.2
OUENC	Ouen Island, N	4.88	189	P	Pn	10 51 56.1	+2.0
RAO	Raoul Island	17.56	134	LR	LR	10 59 21.9	
	comp=Z,1μm,21.8s,baz=260,slow=29						
STKA	Stephens Creek	27.56	234	P	P	10 56 26.2	-1.4
	0.5nm,0.3s,baz=80,slow=11,SNR=2.0						
WRA	Warramunga Arr	31.64	260	P	P	10 57 03.7	-0.3
	0.6nm,0.9s,baz=92,slow=8.7,SNR=4.4						
ASAR	Alice Springs	32.15	253	P	P	10 57 08.5	0.0
	1.0nm,0.7s,baz=78,slow=9.1,SNR=14						

IDC 07 10:51:56.3±18.0**, 17°.72S**×**166°.13E, h0**^{km}**, mb4.0**/3**, mb1 4.1**/4**, mb1mx3.8**/25**, mbtmp3.9**/4**, ML3.5**/1**, Error ellipse: s-maj=330.3km s-min=46.4km az=53.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.34	176	Pn	Pn	10 53 03.8	+0.1
	2.4nm,0.3s,baz=140,slow=23,SNR=1.8						
DZM				Sn	Sn	10 53 47.1	-7.8
	0.7nm,0.3s,baz=109,slow=23,SNR=1.9						
STKA	Stephens Creek	26.28	233	P	P	10 57 33.4	-0.2
	2.1nm,0.7s,baz=68,slow=9.0,SNR=6.2						
WRA	Warramunga Arr	30.15	261	P	P	10 58 08.5	+0.2
	0.7nm,0.9s,baz=90,slow=9.1,SNR=5.5						
ASAR	Alice Springs	30.68	253	P	P	10 58 12.9	0.0
	2.4nm,0.8s,baz=79,slow=8.6,SNR=10						

IDC ***07*** *10:53:37.1±0.3, 30°.76S×71°.35W, h0^{km}, mb5.6/21, mb1 5.6/26, mb1mx5.6/28, mbtmp5.5/26, ML4.9/5, MS5.1/22, Ms1 5.1/22, ms1mx4.9/32, Error ellipse: s-maj=16.5km s-min=10.3km az=86.0*

SJA *07* 10:53:39.5±0.8, 30°.72S×71°.68W, h18^{km}±3^{km}, ML5.9, MW5.5

MOS *07* 10:53:39.3±0.9, 30°.74S×71°.41W, h22^{km}, mb5.9/51, MS5.1/18, Error ellipse: s-maj=13.8km s-min=5.8km az=93.8

GUC *07* 10:53:42.8±1.1, 30°.72S×71°.37W, h48^{km}±9^{km}, ML6.0, MW5.8

NEIC *07* 10:53:44.1, 30°.73S×71°.39W, h53^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.68; $M_{\theta\theta}$-1.45; $M_{\phi\phi}$-0.23; $M_{r\theta}$0.13; $M_{\theta\phi}$0.19; $M_{\phi r}$-2.75; Fault plane solution: $M_0$3.18000×10^{17} NP1:ϕ_s168.42000°, δ79.50000°, λ99.53000°. NP2:ϕ_s305.77000°, δ14.15000°, λ48.23000°. Principal axes: T 3.6385, Plg55.0000°, Azm90.0000°; N -1.3863, Plg9.0000°, Azm347.0000°; P -2.2522, Plg34.0000°, Azm250.0000°;

NEIC *07* 10:53:44, 30°.93S×71°.34W, h40^{km}, Moment Tensor Solution. Duration: 12^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}3.58; $M_{\theta\theta}$0.19; $M_{\phi\phi}$-3.76; $M_{r\theta}$-0.16; $M_{\theta\phi}$-0.50; $M_{\phi r}$-2.39; Fault plane solution: $M_0$4.41000×10^{17} NP1:ϕ_s9.00000°, δ29.00000°, λ93.00000°. NP2:ϕ_s185.00000°, δ61.00000°, λ88.00000°. Principal axes: T 4.2843, Plg73.0000°, Azm91.0000°; N 0.2461, Plg2.0000°, Azm186.0000°; P -4.5304, Plg16.0000°, Azm277.0000°;

NEIC *07* 10:53:44.2±1.3, 30°.72S±0°.04×71°.39W±0°.08, h42^{km}±1^{km}, mb5.9/283, Ms_20 5.3/96, Mwr5.6/47, Mww5.7, ML6.0(GUC), Mwc5.8(GCMT) Error ellipse: s-maj=12.1km s-min=6.2km az=90.0

VAO *07* 10:53:44.4±0.2, 30°.72S×71°.11W, h38^{km}, mb5.8

GCMT *07* 10:53:48.2±0.2, 30°.88S±0°.01×71°.71W±0°.02, h45^{km}, MW5.8/119, Moment Tensor Solution. s99,c147; s119,c187; Duration: 1^{s}9 Moment tensor: Scale 10^{17} Nm; M_{rr}4.70±.14; $M_{\theta\theta}$0.38±.09; $M_{\phi\phi}$-5.08±.09; $M_{r\theta}$0.19±.08; $M_{\theta\phi}$0.82±.06; $M_{\phi r}$-2.64±.11; Best double couple: $M_0$5.61400×10^{17} NP1:ϕ_s349.00000°, δ31.00000°, λ86.00000°. NP2:ϕ_s174.00000°, δ59.00000°, λ92.00000°. Principal axes: T 5.3670, Plg76.0000°, Azm91.0000°; N 0.4970, Plg2.0000°, Azm353.0000°; P -5.8620, Plg14.0000°, Azm262.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

NEIC *07* 10:53:48, 30°.88S×71°.73W, h46^{km}, Moment Tensor Solution. Duration: 3^{s}6 Moment tensor: Scale 10^{17}Nm; M_{rr}4.30; $M_{\theta\theta}$0.56; $M_{\phi\phi}$-4.86; $M_{r\theta}$0.19; $M_{\theta\phi}$0.52; $M_{\phi r}$-3.14; Fault plane solution: $M_0$5.60000×10^{17} NP1: ϕ_s353.00000°, δ28.00000°, λ88.00000°. NP2: ϕ_s176.00000°, δ62.00000°, λ91.00000°. Principal axes: T 5.2719, Plg73.0000°, Azm89.0000°; N 0.6101, Plg1.0000°, Azm355.0000°; P -5.8820, Plg17.0000°, Azm265.0000°;

ISC 07 10:53:42.0±0.5, **30°.72S**±0°.02×**71°.36W**±0°.03, **h33**^{km}±3^{km}, **h33**^{km}**:pP-P, n1096,** σ**1^{s}41**/1092, **mb5.9**/198, **MS5.3**/89, **375C-69D, Fault plane solution: NP1:**ϕ_s353.51611°, δ44.23823°, λ110.73191°. **NP2:**ϕ_s145.66817°, δ49.27200°, λ70.98064°. **Principal axes:** T Plg75.4590°, Azm349.0595°; N Plg14.2979°, Azm158.3436°; P Plg2.5928°, Azm249.0049°; **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.24	281	⇑iP	Pn	10 53 51.4	+2.2
CO06	Fray Jorge	0.24	281		Pn	10 53 51.5	+2.2
CO06				Sn	Sb	10 53 57.0	+3.3
CO03	El Pedregal	0.59	102	⇓iP	Pn	10 53 56.8	+2.6
CO03				eS	Sn	10 54 06.0	+3.3
CO03	El Pedregal	0.59	102		Pn	10 53 56.8	+2.6
CO03				Sn	Sn	10 54 05.4	+2.6
CO03	El Pedregal	0.59	102	eP	Pn	10 53 56.7	+2.6
CO03				eS	Sn	10 54 06.7	+3.9
CO03				IAML		10 54 08.9	
	comp=Z,286μm,1.1s						
GO04	Tololo Observa	0.73	42	eP	Pb	10 53 58.7	+2.2
GO04				eS	Sn	10 54 10.2	+3.8
GO04	Tololo Observa	0.73	42	Pn	Pb	10 53 59.1	+2.6
GO04				Sn	Sn	10 54 08.7	+2.3
GO04	Tololo Observa	0.73	42	eP	Pb	10 53 59.0	+2.6
GO04				eS	Sn	10 54 09.9	+3.5
CO05	La Serena	0.81	8	eP	Pb	10 53 59.2	+1.6
CO05				eS	Sb	10 54 10.6	+2.4
CO05				IAML		10 54 16.6	
	comp=N,818μm,0.4s						
CO05	La Serena	0.81	8	Pn	Pb	10 53 59.2	+1.6
AROD	Rodeo	1.72	72	eP	Pn	10 53 59.0	-11
AROD				eP	Pb	10 54 15.4	+2.2
LCO	Las Campanas	1.80	19	P	Pb	10 54 13.6	-0.8
LCO	Las Campanas	1.80	19	iP	Pb	10 54 13.6	-0.8
LCO	Las Campanas	1.80	19	Pn	Pb	10 54 13.6	-0.8
LCO	Las Campanas	1.80	19	eP	Pb	10 54 13.7	-0.8
LCO				eS	Sb	10 54 36.5	-0.2
VA06	Catapilco	1.84	178	eP	Pn	10 54 12.9	+1.7
VA06				IAML		10 54 43.5	
	comp=E,124μm,0.3s						
ACCO	Cerro Coronel	1.98	87	eP	Pb	10 54 19.2	+1.6
ACDV	Cuesta del Vie	2.01	75	eP	Pb	10 54 19.5	+1.5
RTLS	Leoncito	2.07	122	eP	Pb	10 54 20.1	+1.0
RTLS				eS	Sb	10 54 48.2	+3.7
RTLS				IAML		10 54 50.7	
	comp=Z,56μm,0.4s						
VA03	San Esteban	2.15	161	eP	Pb	10 54 18.1	-2.2
VA03				IAML		10 54 50.1	
	comp=N,146μm,0.6s						
VA03	San Esteban	2.15	161	Pn	Pb	10 54 18.8	-1.6
AUSP	Uspallata	2.26	132	eP	Pb	10 54 22.1	-0.1
ROCH	El Roble	2.27	173	eP	Pn	10 54 17.2	-0.2
ROCH				IAML		10 55 03.1	
	comp=E,74μm,0.4s						
ROC1	El Roble	2.27	173	eP	Pn	10 54 10.0	-7.4
ROC1				eP	Pb	10 54 19.9	-2.6
ROC1				eS	Sn	10 54 45.7	+1.3
VA01	Torpederas	2.31	186	Pn	Pn	10 54 19.1	+1.4
VA01	Torpederas	2.31	186	eP	Pn	10 54 18.7	+1.0
VA01				eS	Sn	10 54 45.5	+0.5
ZON	Zonda	2.44	110	eP	Pb	10 54 25.1	-0.2
ZON				eS	Sb	10 54 58.5	+3.5
ZON				eS	Sn	10 54 59.0	+11
ZON				IAML		10 55 08.8	
	comp=Z,31μm,1.2s						
PEL	Peldehue	2.48	167	eP	Pn	10 54 23.0	+2.8
PEL				eS	Sb	10 54 56.2	+0.1
AC04	Llanos de Chal	2.52	6	eP	Pn	10 54 22.9	+2.3
AC04	Llanos de Chal	2.52	6	Pn	Pb	10 54 23.8	-2.8
AC04	Llanos de Chal	2.52	6	eP	Pn	10 54 23.3	+2.7
AC04				eS	Sn	10 54 50.5	+0.2
AC04				IAML		10 55 08.1	
	comp=Z,26μm,0.8s						
MT02	Curacav	2.54	176	iP	Pn	10 54 22.5	+1.5
MT02	Curacav	2.54	176	eP	Pn	10 54 23.0	+2.1
MT02				eS	Sb	10 54 54.7	-3.0
MT02				IAML		10 55 07.9	
	comp=Z,26μm,0.7s						
RTLL	Cerro Villicun	2.55	105	eP	Pb	10 54 26.2	-0.9
RTCV	Cerro Valdivia	2.67	116	eP	Pb	10 54 28.1	-1.0
MT05	Renca	2.72	169	eP	Pn	10 54 25.8	+2.3
MT05				IAML		10 55 10.5	
	comp=E,80μm,0.2s						
MT05	Renca	2.72	169	Pn	Pn	10 54 26.0	+2.6
ASAL	Salagasta	2.85	132	eP	Pb	10 54 30.9	-1.4
VA05	Santo Domingo	2.94	184	eP	Pn	10 54 27.0	+0.6
ARCO	CERRO ARCO	2.96	136	eP	Pb	10 54 32.6	-1.5
ARCO				eS	Sb	10 55 10.0	+0.1
ARCO				IAML		10 55 20.1	
	comp=Z,46μm,0.5s						
MT09	Talagante	3.06	174	eP	Pn	10 54 30.2	+1.9
MT09				IAML		10 55 23.4	
	comp=N,41μm,0.4s						
MT09	Talagante	3.06	174	Pn	Pn	10 54 30.8	+2.6
MT01	Popeta	3.14	178	iP	Pn	10 54 30.5	+1.3
MT01	Popeta	3.14	178	Pn	Pn	10 54 31.1	+2.0
MT01	Popeta	3.14	178	eP	Pn	10 54 30.8	+1.7
MT01				eS	Sn	10 55 08.5	+3.0
MT01				IAML		10 55 19.3	
	comp=Z,21μm,0.7s						
AAGR	Agrelo	3.19	138	eP	Pb	10 54 35.6	-2.5
GO03	Copiap	3.27	18	iP	Pn	10 54 33.5	+2.5
GO03	Copiap	3.27	18	Pn	Pn	10 54 34.2	+3.2
GO03	Copiap	3.27	18	eP	Pn	10 54 34.0	+3.0
GO03				eS	Sb	10 55 15.0	-3.7
LMEL	Las Melosas	3.27	163	iP	Pn	10 54 34.5	+3.4
LMEL				IAML		10 55 25.4	
	comp=N,32μm,0.6s						
BO04	La Punta	3.32	169	iP	Pn	10 54 34.0	+2.3
AVFE	Valle Fertil	3.37	90	eP	Pb	10 54 36.8	-4.2
AVFE				eS	Sb	10 55 20.5	-1.0
AVFE				IAML		10 55 28.6	
	comp=Z,44μm,0.5s						
VCA	Vinchina	3.38	55	eP	Pb	10 54 39.3	-2.0
VCA				eS	Sb	10 55 20.5	-1.6
VCA				eS	Sb	10 55 24.0	+1.9
VCA				IAML		10 55 32.7	
	comp=Z,74μm,0.6s						
BO01	Tunca	3.67	176	Pn	Pn	10 54 38.0	+1.5
BO01	Tunca	3.67	176	eP	Pn	10 54 38.1	+1.7
BO01				eS	Sn	10 55 24.0	+5.4
BO01				IAML		10 55 40.1	
	comp=Z,10μm,0.6s						
ACLC	CERRO LA CRUZ	4.03	72	eP	Pn	10 54 46.5	+4.9
ACLC				eS	Sb	10 55 37.8	-3.0
ACLC				IAML		10 55 43.9	
	comp=Z,51μm,0.9s						
ACHE	Chepes	4.06	97	eP	Pn	10 54 46.0	+4.0
BO02	Sierra Bellavi	4.09	173	eP	Pn	10 54 44.6	+2.3
BO02				eS	Sn	10 55 34.0	+4.9
BO02				IAML		10 55 48.2	
	comp=Z,14μm,0.8s						
APLL	PUNTA DE LOS L	4.18	87	eP	Pn	10 54 47.8	+4.3
TINO	Tinogasta	4.24	52	eP	Pn	10 54 49.8	+5.4
TINO				eS	Sb	10 55 43.5	-3.2
GO05	Huala	4.30	186	Pn	Pn	10 54 45.5	+0.3
AC02	Maricunga	4.34	27	Pn	Pn	10 54 50.2	+4.0
AC02	Maricunga	4.34	27	eP	Pn	10 54 49.8	+3.6
AC02				eS	Sn	10 55 37.0	+1.2
AC02				eS	Sb	10 55 44.0	-5.9
AC02				IAML		10 56 00.3	
	comp=Z,19μm,1.1s						
ML02	Panimavida	5.03	181	Pn	Pn	10 54 56.3	+1.1
PB14	IPOC Station P	6.13	8	Pn	Pn	10 55 13.0	+2.4
PB14	IPOC Station P	6.13	8	eP	Pn	10 55 11.0	+0.4
AHML	Horco Molle	6.58	55	eP	Pn	10 55 19.7	+3.1
AHML				eS	Sn	10 56 37.0	+6.4
FSA	Cafayete	6.60	47	eP	Pn	10 55 15.0	-1.9
H03N1	Juan Fernandez	6.96	245	Pn	Pn	10 55 20.6	-0.8
	baz=114,slow=19,SNR=679						
H03N1				T	T	11 02 20.8	
	baz=73,slow=72,SNR=1782						
H03N3	Juan Fernandez	6.97	245	Pn	Pn	10 55 20.7	-0.9
	baz=114,slow=19,SNR=573						
H03N3				T	T	11 02 12.1	
	baz=73,slow=72,SNR=1232						
H03N2	Juan Fernandez	6.97	245	Pn	Pn	10 55 21.0	-0.6
	baz=114,slow=19,SNR=589						
H03N2				T	T	11 02 15.1	
	baz=73,slow=72,SNR=1800						
H03S3	Juan Fernandez	7.10	242	Pn	Pn	10 55 21.5	-1.8
	baz=170,slow=22,SNR=541						
H03S3				T	T	11 02 43.2	
	baz=86,slow=74,SNR=93						
H03S1	Juan Fernandez	7.11	242	Pn	Pn	10 55 21.3	-2.1
	baz=170,slow=22,SNR=502						
H03S1				T	T	11 02 44.0	
	baz=86,slow=74,SNR=98						
H03S2	Juan Fernandez	7.12	242	Pn	Pn	10 55 21.5	-2.0
	baz=170,slow=22,SNR=803						
H03S2				T	T	11 02 44.8	
	baz=86,slow=74,SNR=86						
PB10	IPOC Station P	7.21	6		Pn	10 55 26.9	+1.7
LC01	Cunco	8.17	183	Pn	Pn	10 55 38.0	-0.3
LVC	Limon Verde	8.37	16	Pn	Pn	10 55 41.5	+0.1
	comp=Z,7.0nm,0.3s,baz=194,slow=8.6,SNR=33						
LVC				Sn	Sn	10 57 13.5	-1.5
	comp=Z,32nm,0.3s,baz=219,slow=11,SNR=3.3						
LVC				LR	LR	10 59 13.7	
	comp=Z,14μm,21.8s,baz=211,slow=40						
LVC	Limon Verde	8.37	16	eP	Pn	10 55 41.6	+0.2
LVC	Limon Verde	8.37	16	Pn	Pn	10 55 41.7	+0.3
LR03	Panguipulli	8.93	185		Pn	10 55 48.2	-0.4
PB07	IPOC Station P	9.05	9		Pn	10 55 50.1	-0.5
HJA	Humahuaca	9.17	37	eP	Pn	10 55 58.3	+5.9
PLCA	Paso Flores	10.01	176	Pn	Pn	10 56 03.8	+0.2
	comp=Z,3.2nm,0.3s,baz=336,slow=11,SNR=32						
PLCA				Sn	Sn	10 58 00.2	+5.4
	comp=Z,2.5nm,0.3s,baz=8.6,slow=11,SNR=2.1						
PLCA				LR	LR	11 00 18.4	
	comp=Z,10μm,21.9s,baz=348,slow=40						
PLCA	Paso Flores	10.01	176	eP	Pn	10 56 05.0	+1.5
PLCA	Paso Flores	10.01	176		Pn	10 56 04.3	+0.7
LL04	Puerto Octay	10.20	184		Pn	10 56 05.4	-0.7
LL03	Petrohue	10.43	184	Pn	Pn	10 56 08.8	-0.4
PSGCX	Pisagua	11.13	6		Pn	10 56 19.0	0.0
LPA	La Plata	12.04	114	eP	P	10 56 44.6	+0.8
LPA				S	Sn	10 58 38.8	-5.6
LPA				sS		10 58 55.0	
LPA				PCP	PcP	11 02 15.3	0.0
LPA				SCS	ScS	11 09 17.8	-3.8
LPA				PKIKP	PKiKP	11 10 12.5	-0.7
LPA				SKIKP		11 13 31.2	
LPA				PKIKS		11 13 38.5	
LPA				SKIKS		11 17 06.5	
GO07	Milladeo Hill,	12.51	188	Pn	Pn	10 56 35.5	-2.1
ITQB	Itaqui	12.79	89	eP	Pn	10 56 40.8	-0.7
ITQB	Itaqui	12.79	89	Pn	Pn	10 56 41.3	-0.3
CPUP	Villa Florida	13.09	74	Pn	Pn	10 56 43.9	-1.7
	comp=Z,0.9nm,0.3s,baz=254,slow=11,SNR=16						
CPUP				Sn	Sn	10 59 05.1	-5.0
	comp=Z,7.7nm,0.3s,baz=244,slow=12,SNR=3.1						
CPUP	Villa Florida	13.09	74		Pn	10 56 46.0	+0.4
LPAZ	La Paz	14.67	12	Pn	Pn	10 57 08.3	+0.6
	comp=Z,2.2nm,0.3s,baz=186,slow=9.0,SNR=245						
LPAZ	La Paz	14.67	12	P	Pn	10 57 06.9	-0.9
LPAZ	La Paz	14.67	12	eP	Pn	10 57 07.9	+0.1
LPAZ	La Paz	14.67	12		Pn	10 57 06.8	-0.9
PLTB	Pedras Altas	15.23	98	eP	Pn	10 57 12.4	-2.3
PLTB	Pedras Altas	15.23	98	Pn	Pn	10 57 12.7	-2.0
CPSB	Cacapava Do Su	15.45	93	eP	Pn	10 57 15.7	-1.8
AQDB	Aquidauana	17.41	58	eP	Pn	10 57 41.6	-0.8
AQDB	Aquidauana	17.41	58	P	P	10 57 42.9	-0.5
SIV	San Ignacio	17.42	35	P	Pn	10 57 42.1	-0.6
	comp=Z,13nm,0.3s,baz=222,slow=9.9,SNR=175						
PTGB	Pitanga	18.09	75	eP	P	10 57 51.8	+0.7
TRCB	Terra Rica	18.48	69	eP	P	10 57 54.8	-0.5
PTLB	Pontes e Lacer	18.88	39	eP	P	10 57 59.9	+0.2
PTLB	Pontes e Lacer	18.88	39	P	Pn	10 58 00.9	+0.4
PTLB				IAmb	IAmb	10 58 19.1	
	comp=Z,1μm,1.4s						
TER01	Tubaro-SC	19.45	89	eP	P	10 58 06.2	+0.3
PP1B	Ponte de Pedra	19.89	53	eP	Pn	10 58 11.6	-0.8
PCMB	Pacaembu	20.17	68	eP	P	10 58 14.6	+0.8
TIJ01	Guaruva-PR	20.44	80	eP	P	10 58 15.2	-1.6
VILB	Vilhena	20.47	33	eP	P	10 58 17.6	+0.6
GO09	Cerro Castillo	20.54	182	P	P	10 58 18.7	+1.1
SALV	Santo Antonio	20.57	48	eP	P	10 58 18.4	+0.3
FRTB	Fartura	20.74	75	eP	P	10 58 20.5	+0.5
MG05	Puerto Natales	20.96	182	P	P	10 58 22.3	+0.3
ETMB	Extrema	21.34	14	eP	P	10 58 27.9	+1.4
ETMB	Extrema	21.34	14	P	P	10 58 27.9	+1.4
ETMB				IAmb	IAmb	10 58 48.4	
	comp=Z,698nm,1.3s						
ITRB	Iturama	21.90	65	eP	P	10 58 32.8	+0.4
MG02	Cerro Sombrero	22.10	177	P	P	10 58 35.5	+1.3
MG02				IAmb	IAmb	10 58 59.2	
	comp=Z,423nm,1.0s						
MG04	Isla Riesco	22.12	180	P	P	10 58 35.6	+1.1
MG04				IAmb	IAmb	10 58 50.4	
	comp=Z,511nm,1.1s						
PET01	Itanhaem-SP	22.28	79	eP	P	10 58 36.6	+0.1
SPB	Sao Paulo	22.42	77	eP	P	10 58 38.4	+0.4
SPB	Sao Paulo	22.42	77	P	P	10 58 38.7	+0.7
SPB				IAMs_20	IAMs_20	11 07 58.7	
	comp=Z,13μm,18.0s						
GO10	Punta Arenas	22.42	180	P	P	10 58 39.2	+1.4
GO10				IAmb	IAmb	10 58 51.8	
	comp=Z,450nm,1.0s						
BB19B	Bebedouro	22.64	70	eP	P	10 58 38.1	-2.4
RCLB	Rio Claro- Sao	22.83	74	eP	P	10 58 42.1	-0.3
CZSB	Cruzeiro do Su	22.91	357	eP	P	10 58 45.0	+1.8
SAML	Samuel	22.97	21	P	P	10 58 44.2	+0.4
SAML				pmax	pmax		
	comp=Z,236nm,1.2s						
SAML				MLR	MLR		
	comp=Z,7μm,20.0s						
SAML	Samuel	22.97	21	eP	P	10 58 42.1	-1.7
SAML	Samuel	22.97	21	eP	P	10 58 44.4	+0.6
SAML	Samuel	22.97	21	P	P	10 58 44.2	+0.4
VAO	Valinhos	23.05	76	eP	P	10 58 44.7	0.0
EFI	East Falkland	23.13	159c	iP	P	10 58 44.3	-0.9
EFI				pmax	pmax		
	comp=Z,330nm,1.3s						
EFI				MLR	MLR		
	comp=Z,6μm,18.0s						
EFI	East Falkland	23.13	159	P	P	10 58 44.5	-0.7
EFI				IAmb	IAmb	10 59 04.0	
	comp=Z,686nm,1.2s						
ARAG	Araguaiana, MT	23.31	55	eP	P	10 58 46.7	-0.6
PDRB	Porto dos Gac	23.35	39	eP	P	10 58 46.7	-1.0
PARB	Paraibuna	24.04	78	eP	P	10 58 53.9	-0.4
USHA	Ushuaia	24.19	176	P	P	10 58 55.9	+0.7
	comp=Z,269nm,0.9s,baz=355,slow=6.7,SNR=61						
USHA				LR	LR	11 09 08.5	
	comp=Z,6μm,19.0s,baz=358,slow=39						
MG01	Puerto William	24.35	175	P	P	10 58 57.1	+0.5
ATAH	Atahualpa	24.37	343	P	P	10 58 59.9	+2.1
	comp=Z,19nm,0.9s,baz=175,slow=7.6,SNR=9.9						
ATAH				LR	LR	11 06 40.8	
	comp=Z,4μm,21.2s,baz=194,slow=32						
CLDB	Colider	24.47	40	eP	P	10 58 58.1	-0.1
IPMB	Ipameri, GO	24.55	64	eP	P	10 58 59.0	0.0
MAN01	Angra dos Reis	25.63	79	eP	P	10 59 08.6	-0.1
BSCB	Bom Sucesso	25.75	74	eP	P	10 59 10.4	+0.5
BDFB	Brasilia	26.11	60	P	P	10 59 13.6	+0.4
	comp=Z,398nm,0.9s,baz=231,slow=8.8,SNR=330						
BDFB				LR	LR	11 10 40.5	
	comp=Z,9μm,21.1s,baz=232,slow=39						
BDFB	Brasilia	26.11	60	P	P	10 59 13.7	+0.5
BDFB				IAmb	IAmb	10 59 14.7	
	comp=Z,384nm,0.8s						
VAS01	Vassouras-RJ	26.31	78	eP	P	10 59 15.2	+0.4
SNDB	Serra Nova Dou	26.32	49	eP	P	10 59 15.5	+0.5
TBTG	Tabatinga, AM	26.43	3	⇑eP	P	10 59 16.9	+1.0
TBTG	Tabatinga, AM	26.43	3	eP	P	10 59 17.3	+1.4
TBTG	Tabatinga, AM	26.43	3	P	P	10 59 17.2	+1.4
DUB01	Friburgo-RJ	27.29	79	eP	P	10 59 24.5	+0.8
NPGB	Novo Progresso	27.92	36	eP	P	10 59 28.4	-0.9
DIAM	Diamantina, MG	27.98	70	eP	P	10 59 30.6	+0.5
CAM01	Campos-RJ	28.00	79	eP	P	10 59 30.9	+0.8
PEXB	Peixe	28.25	54	eP	P	10 59 32.1	-0.2
MC01	Montes Claros	28.62	67	eP	P	10 59 35.7	0.0
MACA	Manacapuru-AM	29.21	22	eP	P	10 59 41.5	+0.8
MACA	Manacapuru-AM	29.21	22	P	P	10 59 41.3	+0.5
MACA				IAmb	IAmb	10 59 42.4	
	comp=Z,218nm,1.0s						
JANB	Januaria	29.29	64	eP	P	10 59 41.8	+0.3
ALF01	Guarapari-ES	29.30	77	eP	P	10 59 41.5	-0.1
SJMB	Sao Joao De Ma	29.81	73	eP	P	10 59 46.3	+0.2
BSFB	Barra de Sao F	30.03	74	eP	P	10 59 47.7	-0.4
ITTB	Itaituba	30.07	32	eP	P	10 59 47.8	-0.6
RIB01	Linhares ES	30.18	75	eP	P	10 59 49.0	-0.3
SDBA	SAO DESIDERIO	30.49	59	eP	P	10 59 52.5	+0.3
PTLC	Puerto Leguiza	30.89	353	⇑eP	P	10 59 54.8	-0.8
SMTB	Santa Maria do	31.06	51	eP	P	10 59 58.1	+0.9
NAN01	Guarapari, ES	31.11	73	eP	P	10 59 57.0	-0.6
OTAV	Otavalo	31.52	346	P	P	11 00 02.7	+1.0
OTAV				pmax	pmax		
	comp=Z,81nm,1.3s						
OTAV				MLR	MLR		
	comp=Z,2μm,22.0s						
OTAV	Otavalo	31.52	346	eP	P	11 00 04.0	+2.3
OTAV	Otavalo	31.52	346	eP	P	11 00 02.8	+1.2
OTAV	Otavalo	31.52	346	P	P	11 00 02.7	+1.0
CUSE	Cuicocha Este	31.57	346	eP	P	11 00 02.5	+0.3
PAC1	Pacto, Paraso	31.61	346	eP	P	11 00 16.9	+15
PRPB	Parauapebas	31.71	44	eP	P	11 00 02.9	0.0
PTGA	Pitinga	31.73	22	P	P	11 00 03.3	+0.3
	comp=Z,168nm,1.0s,baz=202,slow=10,SNR=242						
PTGA	Pitinga	31.73	22	P	P	11 00 03.3	+0.3
PTGA				IAmb	IAmb	11 00 04.7	
	comp=Z,258nm,1.1s						
PTGA				IAMs_20	IAMs_20	11 14 45.1	
	comp=Z,5μm,20.0s						
TULM	Tulcn-Chalpat	31.86	348	eP	P	11 00 03.7	-0.9
GUA01	Guaratinga, BA	32.02	71	eP	P	11 00 04.4	-1.2
GCUF	Volcan Galeras	32.28	349	eP	P	11 00 10.8	+2.4
MACC	Macarena, Meta	32.77	355	eP	P	11 00 13.6	+1.5
CMC01	Camacan, BA	32.91	70	eP	P	11 00 12.5	-0.9
GARC	Garzon, Huila	32.96	352	eP	P	11 00 14.9	+0.8
MALB	Monte Alegre	32.96	33	eP	P	11 00 13.4	-0.4
SOTA	Rioblanco	33.05	350	⇑eP	P	11 00 18.3	+3.2
TUMC	Tumaco	33.12	346	eP	P	11 00 17.3	+2.1
NBIT	Itapeh - BA	33.21	69	eP	P	11 00 17.0	+1.0
PCON	Cinco Dias	33.21	351	⇑eP	P	11 00 20.0	+3.3
BETC	Betania	33.44	353	eP	P	11 00 20.7	+2.6
MARP	Paez Belalcaza	33.66	352	eP	P	11 00 22.8	+2.6
GDU01	Guandu, BA	33.78	67	eP	P	11 00 21.2	+0.2
HOPE	Hope Point	34.31	143	P	P	11 00 25.7	+0.6
HOPE				pmax	pmax		
	comp=Z,127nm,1.1s						
HOPE	Hope Point	34.31	143	P	P	11 00 25.7	+0.6
HOPE				IAmb	IAmb	11 00 27.6	
	comp=Z,127nm,1.1s						
PMSA	Palmer Station	34.38	174	P	P	11 00 26.8	+1.2
	comp=Z,66nm,1.1s,baz=5.3,slow=7.0,SNR=20						
PMSA	Palmer Station	34.38	174	eP	P	11 00 27.2	+1.6
PMSA	Palmer Station	34.38	174	P	P	11 00 27.0	+1.3
PMSA	Palmer Station	34.38	174	IAMs_20	IAMs_20	11 13 43.8	
	comp=Z,5μm,20.0s						
BOAV	Boa Vista	34.52	19	eP	P	11 00 27.8	+0.5
BOAV	Boa Vista	34.52	19	P	P	11 00 28.2	+0.9
BOAV				IAmb	IAmb	11 00 29.1	
	comp=Z,189nm,1.1s						
ORTC	Ortega, Tolima	34.63	353	eP	P	11 00 31.2	+2.8
VILC	Villavicencio,	34.71	356	eP	P	11 00 32.0	+2.9
PTGC	Puerto Gaitan,	34.73	359	eP	P	11 00 29.8	+0.6
YOTC	Yotoco, Valle	34.84	351	⇑eP	P	11 00 31.7	+1.4
PAYG	Puerto Ayora	34.86	325	eP	P	11 00 45.2	+15
PAYG	Puerto Ayora	34.86	325	IAMs_20	IAMs_20	11 10 59.5	
	comp=Z,4μm,21.0s						
NBPN	Ponto Novo - B	35.02	62	eP	P	11 00 31.1	-0.6
CHIC	Chingaza	35.22	356	eP	P	11 00 35.5	+1.6
ANIL	Santa Ana	35.23	353	eP	P	11 00 35.9	+2.1
ANIL				eP	pP	11 00 36.4	-7.0
ANIL				eP	sP	11 00 38.5	-8.8
MCPB	Macapa, AP	35.32	35	eP	P	11 00 34.4	+0.1
ROSC	El Rosal	35.47	355	P	P	11 00 38.1	+2.1
	comp=Z,82nm,0.9s,baz=17,slow=1.5,SNR=16						
ROSC	El Rosal	35.47	355	⇑eP	P	11 00 38.8	+2.8
PLMC	San Jos del P	35.73	352	⇑eP	P	11 00 39.4	+1.5
TMAB	Tom-Au,PA,Br	35.77	42	eP	P	11 00 38.6	+0.5
NORC	Norcasia	36.23	354	eP	P	11 00 43.4	+1.2
SPBC	San Pablo de B	36.26	355	eP	P	11 00 42.9	+0.5
RUSC	La Rusia	36.44	357	⇑eP	P	11 00 46.5	+2.1
CBOC	Ciudad Bolivar	36.65	352	eP	P	11 00 45.4	-0.5
HELC	Santa Helena	36.92	353	eP	P	11 00 49.5	+1.1
TAMC	Tame, Arauca	36.95	359	⇑eP	P	11 00 49.1	+0.9
ELOV	Elorza	37.55	3	eP	P	11 00 51.0	-2.2
BRRC	Barranca, Sant	37.68	356	eP	P	11 00 52.0	-2.4
ROSB	Rosrio	37.79	48	eP	P	11 00 55.8	+0.4
DBBC	Dabeiba	37.81	352	eP	P	11 00 56.9	+1.3
ZARC	Zaragoza, Cauc	38.14	354	⇑eP	P	11 00 59.0	+0.7
ZARC	Zaragoza, Cauc	38.14	354	P	P	11 00 58.9	+0.7
NBMA	Muriti-CE	38.34	59	eP	P	11 01 00.0	-0.1
UREC	San Jos de Ur	38.46	353	⇑eP	P	11 01 01.6	+0.7
NBPS	Pedro II - PI	38.47	53	eP	P	11 01 00.9	-0.3
NBAN	Anadia - AL	38.77	65	eP	P	11 01 03.6	-0.1
NBPB	Pedra_Branca-C	38.97	56	eP	P	11 01 05.7	+0.4
SMLC	San Martn de	39.38	356	⇑eP	P	11 01 08.0	-0.6
SDV	Santo Domingo	39.38	1	eP	P	11 01 09.1	+0.1
SDV	Santo Domingo	39.38	1	eP	P	11 01 15.3	+6.4
SDV	Santo Domingo	39.38	1	P	P	11 01 09.2	+0.3
MOTC	Monteria, Cord	39.49	353	eP	P	11 01 10.9	+1.4
CAPC	Capurgana	39.55	351	eP	P	11 01 11.7	+1.6
BAUV	El Baul	39.56	5	eP	P	11 01 19.4	+9.2
BAUV	El Baul	39.56	5	P	P	11 01 10.5	+0.3
NBLV	Livramento - P	39.73	61	eP	P	11 01 12.0	+0.3
NBMO	Morrinhos-CE	40.22	53	eP	P	11 01 16.2	+0.6
NBRF	Rio Formoso -	40.27	65	eP	P	11 01 16.2	+0.1
BCIP	Isla Barro Col	40.48	347	P	P	11 01 18.3	+0.5
BCIP				pmax	pmax		
	comp=Z,130nm,1.2s						
BCIP	Isla Barro Col	40.48	347	eP	P	11 01 18.6	+0.8
BCIP				eP	pP	11 01 26.7	-0.9
BCIP				eP	sP	11 01 30.2	-1.2
BCIP	Isla Barro Col	40.48	347	P	P	11 01 18.3	+0.5
SJCC	San Jacinto, C	40.55	354	eP	P	11 01 19.4	+1.0
SJCC	San Jacinto, C	40.55	354	P	P	11 01 19.5	+1.1

SJCC				IAmb	IAmb	11 01 23.0	
	comp=Z,181nm,1.1s						
NBPA	Parau_RN	40.63	59	eP	P	11 01 20.4	+1.3
BRU2	Volcan	40.77	343	eP	P	11 01 20.9	+0.6
NBCL	Cascavel-CE	40.81	56	eP	P	11 01 20.1	-0.4
PCRV	Puerto La Cruz	41.17	10	P	P	11 01 24.2	+0.7
	comp=Z,93nm,1.0s,baz=172,slow=1.5,SNR=21						
PCRV				LR	LR	11 20 21.3	
	comp=Z,5µm,21.0s,slow=39						
BIRV	Birongo	41.25	8	P	P	11 01 24.7	+0.5
BIRV				IAmb	IAmb	11 01 26.0	
	comp=Z,267nm,1.0s						
SRBA	San Rafael, Bu	41.36	342	P	P	11 01 24.7	-0.4
NBPV	Pedro Velho	41.56	62	eP	P	11 01 27.4	+0.5
SMRC	Santa Marta, M	41.73	356⇑	eP	P	11 01 28.4	+0.3
URIC	Uribia, Colomb	42.18	359⇑	eP	P	11 01 29.4	-2.3
TRN	Trinidad (W)	42.23	15	eP	P	11 01 32.7	+0.6
JTS	Las Juntas de	42.81	340	eP	P	11 01 51.2	+14
TOSP	Speyside	43.05	16	eP	P	11 01 37.0	-1.8
TOSP	Speyside	43.05	16	P	P	11 01 39.2	+0.4
TOSP				IAmb	IAmb	11 01 41.0	
	comp=Z,253nm,1.1s						
COVE	Coope Vega, Sa	43.06	341	P	P	11 01 40.1	+1.2
COVE				IAmb	IAmb	11 01 55.5	
	comp=Z,332nm,1.2s						
GRGR	Grenville	43.62	14	P	P	11 01 42.7	-0.7
GRGR				IAmb	IAmb	11 01 44.5	
	comp=Z,256nm,0.9s						
ACON	Acoyapa	44.47	341	P	P	11 01 50.8	+0.6
SVB	Belmont	44.81	14	eP	P	11 01 52.2	-0.7
SVB	Belmont	44.81	14	P	P	11 01 52.6	-0.3
SVB				IAmb	IAmb	11 01 54.1	
	comp=Z,156nm,0.8s						
BBGH	Gun Hill	45.06	16	eP	P	11 01 51.6	-3.3
BBGH	Gun Hill	45.06	16	IAMs_20	IAMs_20	11 23 39.5	
	comp=Z,4µm,21.0s						
MCLT	Moule a Chique	45.30	14	eP	P	11 01 55.1	-1.7
MCLT	Moule a Chique	45.30	14	P	P	11 01 56.1	-0.7
MPOM	Morne Pois Mar	46.03	14	eP	P	11 01 58.1	-4.5
MPOM	Morne Pois Mar	46.03	14	P	P	11 02 01.6	-0.9
BIM	Bigot	46.05	14	eP	P	11 02 05.4	+2.6
BIM	Bigot	46.05	14	P	P	11 02 02.1	-0.7
FDF	Fort de France	46.25	14	P	P	11 02 03.2	-1.1
FDF				pmax	pmax		
	comp=Z,168nm,0.7s						
FDF				MLR	MLR		
	comp=Z,2µm,21.0s						
FDF	Fort de France	46.25	14	P	P	11 02 03.2	-1.1
ILAM	Ilet Lapin Mar	46.34	14	eP	P	11 02 06.7	+1.7
MDN	Morne-Daniel	46.77	13	eP	P	11 02 14.5	+6.1
DLPL	La Plaine	46.81	13	eP	P	11 01 59.6	-9.1
DWS	Wesley	47.03	13	eP	P	11 02 10.7	+0.3
TGUH	Tegucigalpa,Un	47.08	339⇑	eP	P	11 02 11.4	+0.4
TGUH	Tegucigalpa,Un	47.08	339	P	P	11 02 11.9	+0.9
TDBA	Terre de Bas,	47.24	13	eP	P	11 02 14.0	+2.0
MAGL	Barre de l’ile	47.40	13	eP	P	11 02 13.1	-0.2
CBE	Ff, Capester	47.46	13	eP	P	11 02 15.6	+1.8
CDVI	St. Croix	48.61	8	eP	P	11 02 24.0	+1.5
SEUS	St. Eustatius	48.61	11	eP	P	11 02 24.3	+1.7
SEUS	St. Eustatius	48.61	11	IAMs_20	IAMs_20	11 24 28.4	
	comp=Z,2µm,20.0s						
CRPR	Cabo Rojo, PR	48.62	5	P	P	11 02 23.2	+0.6
SABA	Saba	48.69	10	P	P	11 02 23.1	-0.1
SABA				IAMs_20	IAMs_20	11 26 19.6	
	comp=Z,3µm,19.0s						
OBIP	Obispado Ponce	48.70	6	P	P	11 02 23.7	+0.4
SJG	San Juan	48.81	7	P	P	11 02 23.9	-0.2
SJG				pmax	pmax		
	comp=Z,406nm,1.0s						
SJG	San Juan	48.81	7⇑	eP	P	11 02 23.8	-0.4
SJG	San Juan	48.81	7	P	P	11 02 23.9	-0.2
SDD	Santo Domingo	48.91	2	P	P	11 02 25.4	+0.5
ANWB	Willy Bob	48.98	12	eP	P	11 02 22.6	-2.9
MTDJ	Mount Denham	49.02	352	eP	P	11 02 26.7	+0.7
SMRT	St. Maarten	49.14	10	eP	P	11 02 26.3	-0.4
SMRT	St. Maarten	49.14	10	P	P	11 02 25.8	-1.0
SMRT				IAmb	IAmb	11 02 26.4	
	comp=Z,149nm,0.9s						
DR12	Loma Pena Alta	49.26	2	P	P	11 02 27.5	-0.1
SDDR	Presa de Saban	49.41	0⇑	eP	P	11 02 28.5	-0.3
CCIG	Comitan	50.83	334	P	P	11 02 39.5	-0.2
CCIG				IAmb	IAmb	11 02 55.5	
	comp=Z,149nm,1.5s						
VNA3	Neumayer Olymp	52.19	159	P	P	11 02 49.6	+0.4
VNA3	Neumayer Olymp	52.19	159	pP	pP	11 03 03.3	+4.1
VNA3	Neumayer Olymp	52.19	159	sP	sP	11 03 07.8	+4.8
VNA1	Neumayer--Stat	52.48	158	P	P	11 02 52.2	+1.0
VNA1	Neumayer--Stat	52.48	158	pP	pP	11 03 04.1	+2.8
VNA1	Neumayer--Stat	52.48	158	sP	sP	11 03 08.3	+3.3
CMIG	Matias Romero	52.65	331	LR	LR	11 20 20.5	
	comp=Z,1µm,21.4s,baz=158,slow=30						
VNA2	Neumayer--Watz	52.82	158	P	P	11 02 54.3	+0.4
	baz=284,slow=7.8						
VNA2	Neumayer--Watz	52.82	158	pP	pP	11 03 05.3	+1.4
VNA2	Neumayer--Watz	52.82	158	sP	sP	11 03 09.8	+2.1
SOR	Soroa	54.37	347	P	P	11 03 05.9	+0.2
SOR				pmax	pmax		
	comp=Z,132nm,1.2s						
SOR	Soroa	54.37	347	P	P	11 03 05.9	+0.2
SOR				IAmb	IAmb	11 03 30.2	
	comp=Z,132nm,1.2s						
SNAA	Sanae	54.41	159	P	P	11 03 05.9	+0.3
SNAA	Sanae	54.41	159	pP	pP	11 03 17.5	+1.9
SNAA	Sanae	54.41	159	sP	sP	11 03 21.8	+2.4
SNAA	Sanae	54.41	159	P	P	11 03 05.7	+0.2
	comp=Z,118nm,0.9s,baz=280,slow=6.3,SNR=220						
SNAA	Sanae	54.41	159c	iP	P	11 03 05.6	0.0
SNAA				pmax	pmax		
	comp=Z,246nm,1.3s						
SNAA				MLR	MLR		
	comp=Z,997nm,11.0s						
SNAA	Sanae	54.41	159	P	P	11 03 05.8	+0.2
TLIG	Tlapa	54.68	328	P	P	11 03 08.9	+0.8
UNM	Universidad Na	56.49	328	IAMs_20	IAMs_20	11 22 48.8	
	comp=Z,3µm,20.0s						
MOIG	Morelia	57.73	326	P	P	11 03 31.3	+1.2
DWPF	Disney Wildern	59.29	350	P	P	11 03 40.4	0.0
	baz=170						
QSPA	South Pole Qui	59.51	180	P	P	11 03 42.1	+0.2
QSPA				IAmb	IAmb	11 03 43.9	
	comp=Z,136nm,1.1s						
656A	Willston	60.70	349	P	P	11 03 50.5	+0.5
553A	Crawfordville	61.84	347	P	P	11 03 59.1	+1.3
H06E1	SOCORRO T-PHAS	62.20	317	T	T	12 11 30.4	
	SNR=9.7						
TIGA	Tifton	62.90	348	P	P	11 04 05.1	+0.2
	baz=168,SNR=14						
352A	Blakely	63.19	347	P	P	11 04 07.2	+0.5
BRAL	Brewton	63.33	345	P	P	11 04 08.5	+0.7
	baz=165,SNR=9.9						
BRAL	Brewton	63.33	345	P	P	11 04 08.1	+0.4
BRAL				IAmb	IAmb	11 04 09.7	
	comp=Z,132nm,0.9s						
NHSC	New Hope	64.03	352	P	P	11 04 13.3	+1.0
	baz=172,SNR=30						
833A	Chaparral WMA,	64.52	333	P	P	11 04 17.3	+1.7
	baz=154,SNR=108						
HKT	Hockley	64.67	337c	iP	P	11 04 18.0	+1.5
HKT				pmax	pmax		
	comp=Z,68nm,1.4s						
HKT				MLR	MLR		
	comp=Z,333nm,17.0s						
GOGA	Godfrey	64.80	349	P	P	11 04 17.7	+0.3
	baz=169,SNR=25						
VBMS	Vicksburg	65.18	342	P	P	11 04 21.4	+1.6
	baz=162,SNR=17						
VBMS	Vicksburg	65.18	342	P	P	11 04 21.0	+1.2
JSC	Jenkinsville	65.33	351	P	P	11 04 21.3	+0.6
JSC				pmax	pmax		
	comp=Z,79nm,0.9s						
JSC	Jenkinsville	65.33	351	P	P	11 04 21.3	+0.6
JSC				IAmb	IAmb	11 04 22.4	
	comp=Z,79nm,0.9s						
BIRD	Birdtown, Kers	65.58	352	P	P	11 04 22.8	+0.4
CNNC	Cliffs of the	65.90	354	P	P	11 04 25.4	+1.0
	baz=174,SNR=21						
NATX	Nacogdoches	65.95	338	P	P	11 04 26.4	+1.5
	baz=158,SNR=6.9						
435B	Jarrell	66.05	335	P	P	11 04 26.8	+1.3
	baz=156,SNR=11						
LPIG	La Paz	66.07	321	LR	LR	11 28 27.5	
	comp=Z,384nm,18.8s,baz=118,slow=32						
KMSC	Kings Mountain	66.18	351	P	P	11 04 26.8	+0.5
	baz=171,SNR=18						
SBA	Scott Base	66.39	191	P	P	11 04 28.7	+1.5
SBA				pmax	pmax		
	comp=Z,85nm,1.4s						
SBA	Scott Base	66.39	191	P	P	11 04 28.7	+1.5
JCT	Junction City	66.60	333	P	P	11 04 30.3	+1.2
JCT				pmax	pmax		
	comp=Z,126nm,1.1s						
JCT	Junction City	66.60	333	P	P	11 04 30.4	+1.2
	baz=154,SNR=52						
JCT	Junction City	66.60	333	P	P	11 04 30.3	+1.2
JCT				IAmb	IAmb	11 04 31.6	
	comp=Z,126nm,1.1s						
Z41A	Richland Creek	66.78	341	P	P	11 04 31.4	+1.3
	baz=160,SNR=14						
V55A	Taylorsville	66.86	351	P	P	11 04 31.4	+0.8
V55A				IAmb	IAmb	11 04 32.5	
	comp=Z,127nm,0.9s						
W50A	Signal Mountai	66.87	348	P	P	11 04 31.2	+0.5
V53A	Saluda	66.91	350	P	P	11 04 31.2	+0.2
V53A				IAmb	IAmb	11 04 32.6	
	comp=Z,122nm,0.9s						
U59A	Littleton	66.99	354	P	P	11 04 32.6	+1.2
U59A				IAmb	IAmb	11 04 33.8	
	comp=Z,160nm,1.1s						
TKL	Tuckaleechee C	67.05	349	P	P	11 04 32.3	+0.4
TKL				pmax	pmax		
	comp=Z,135nm,0.9s						
TKL	Tuckaleechee C	67.05	349	P	P	11 04 32.3	+0.4
TKL				IAmb	IAmb	11 04 33.2	
	comp=Z,135nm,0.9s						
WHTX	Lake Whitney,	67.10	336	P	P	11 04 33.1	+1.0
	baz=156,SNR=11						
TXAR	Lajitas Array	67.18	330	P	P	11 04 34.0	+1.1
	comp=Z,17nm,0.8s,baz=151,slow=8.0,SNR=172						
TXAR				LR	LR	11 29 42.3	
	comp=Z,1µm,19.1s,baz=0.0,slow=32						
TXAR				PKP2bc		11 33 00.1	
	comp=Z,2.5nm,1.1s,baz=318,slow=1.7,SNR=9.4						
TXAR	Lajitas Array	67.18	330	P	P	11 04 33.5	+0.6
TXAR	Lajitas Array	67.18	330	P	P	11 04 33.5	+0.6
TX32	Lajitas Array	67.18	330	P	P	11 04 33.7	+0.8
V52A	Sevierville	67.20	349	P	P	11 04 33.2	+0.4
PLAL	Pickwick Lake	67.22	345	P	P	11 04 33.3	+0.4
PLAL				IAmb	IAmb	11 04 34.3	
	comp=Z,94nm,1.1s						
TAOE	Nuku Hiva Isla	67.31	273	eS	S	11 13 27.8	+0.1
	comp=Z,1µm,29.0s						
TAOE	Nuku Hiva Isla	67.31	273	eLR	LR	11 24 50.6	
	comp=Z,3µm,32.0s,baz=131						
VNDA	Vanda	67.42	191	P	P	11 04 35.2	+1.5
	comp=Z,15nm,1.0s,baz=143,slow=5.3,SNR=54						
VNDA				LR	LR	11 30 10.1	
	comp=Z,437nm,20.4s,baz=134,slow=32						
VNDA	Vanda	67.42	191	P	P	11 04 35.1	+1.4
VNDA				pmax	pmax		
	comp=Z,51nm,1.3s						
VNDA	Vanda	67.42	191	P	P	11 04 35.1	+1.4
T59A	Double "B" Far	67.59	355	P	P	11 04 36.3	+1.2
V48A	Smith Brothers	67.69	346	P	P	11 04 36.7	+0.8
T57A	Hurt	67.77	353	P	P	11 04 37.1	+0.8
TZTN	Tazewell	67.88	349	P	P	11 04 36.9	-0.1
	baz=169,SNR=19						
TZTN	Tazewell	67.88	349	P	P	11 04 37.5	+0.4
TZTN				IAmb	IAmb	11 04 57.5	
	comp=Z,173nm,1.4s						
CLTN	Cedars of Leba	67.93	347	P	P	11 04 37.8	+0.4
CLTN				IAmb	IAmb	11 04 39.1	
	comp=Z,131nm,0.9s						
X40A	Basin Creek Fa	67.95	341	P	P	11 04 37.8	+0.3
	baz=160,SNR=7.9						
BLA	Blacksburg	68.11	352	P	P	11 04 39.2	+0.7
BLA				pmax	pmax		
	comp=Z,66nm,1.1s						
BLA	Blacksburg	68.11	352	P	P	11 04 38.9	+0.4
	baz=172,SNR=15						
BLA	Blacksburg	68.11	352	P	P	11 04 39.2	+0.7
MIAR	Mount Ida	68.21	340	P	P	11 04 40.0	+0.8
MIAR				pmax	pmax		
	comp=Z,99nm,1.2s						
MIAR	Mount Ida	68.21	340	P	P	11 04 39.6	+0.4
	baz=160,SNR=32						
MIAR	Mount Ida	68.21	340	P	P	11 04 40.0	+0.8
MIAR				IAmb	IAmb	11 04 55.0	
	comp=Z,99nm,1.2s						
U49A	Red Boiling Sp	68.23	348	P	P	11 04 39.6	+0.3
U49A				IAmb	IAmb	11 04 40.8	
	comp=Z,87nm,1.0s						
Z35A	Perchaven, San	68.25	337	P	P	11 04 40.6	+1.2
WVT	Waverly	68.27	346	P	P	11 04 39.8	+0.3
WVT				pmax	pmax		
	comp=Z,240nm,1.1s						
WVT	Waverly	68.27	346	P	P	11 04 39.7	+0.3
	baz=165						
WVT	Waverly	68.27	346	P	P	11 04 39.8	+0.3
LPAR	Lepanto	68.33	343	P	P	11 04 40.6	+0.7
HBAR	Harrisburg	68.38	343	P	P	11 04 40.7	+0.6
HBAR				IAmb	IAmb	11 04 42.0	
	comp=Z,118nm,1.0s						
W41B	Gary Mavity, V	68.43	342	P	P	11 04 41.2	+0.7
	baz=161,SNR=22						
ABTX	Abilene, Hawle	68.45	335	P	P	11 04 41.6	+0.8
	baz=154,SNR=51						
TBI	Tubuai	68.68	255	eS	S	11 13 43.7	+0.1
	comp=Z,648nm,26.2s						
TBI	Tubuai	68.68	255	eLR	LR	11 25 31.8	
	comp=Z,3µm,28.5s,baz=106						
TBI	Tubuai	68.68	255	eT	T	12 19 01.4	
	comp=Z,54nm,0.3s						
SYO	Syowa Base	68.70	159⇑	iP	P	11 04 41.0	-0.9
SYO	Syowa Base	68.70	159⇓	epP	pP	11 04 53.6	+1.5
SYO	Syowa Base	68.70	159⇓	esP	sP	11 04 56.6	+0.7
CBN	Corbin Frederi	68.80	355	P	P	11 04 43.8	+1.1
	baz=174,SNR=8.9						
W39A	Magazine	68.88	340	P	P	11 04 44.5	+1.2
	baz=160,SNR=113						
FCAR	Ozark Folk Cen	69.07	342	P	P	11 04 44.6	+0.1
Q61A	Milford	69.34	357	P	P	11 04 47.9	+1.9
	baz=176,SNR=5.5						
U40A	Yellville	69.71	342	P	P	11 04 48.9	+0.4
	baz=160,SNR=96						
Q56A	Snyder Ridge,	69.79	354	P	P	11 04 49.9	+1.1
Q56A				IAmb	IAmb	11 04 51.5	
	comp=Z,90nm,1.0s						
MEH	Mehetia	69.90	261	eP	P	11 04 53.3	+3.1
	comp=Z,38nm,1.0s						
MEH	Mehetia	69.90	261	eT	T	12 20 32.4	
	comp=Z,81nm,0.2s						
MNTX	Cornudas Mount	69.96	329	P	P	11 04 50.0	-0.2
	baz=149,SNR=69						
MNTX	Cornudas Mount	69.96	329	P	P	11 04 50.0	-0.2
MNTX				IAMs_20	IAMs_20	11 31 11.4	
	comp=Z,2µm,19.0s						
WCI	Wyandotte Cave	70.00	348	P	P	11 04 49.9	-0.3
	baz=166						
WMOK	Wichita Mounta	70.05	336	P	P	11 04 50.8	+0.2
	baz=155,SNR=29						
FNO	Franklin	70.05	338		P	11 04 50.8	+0.2
FNO				IAmb	IAmb	11 05 06.0	
	comp=Z,173nm,1.4s						
Q52A	Bidwell	70.07	351	P	P	11 04 50.6	+0.1
Q52A				IAmb	IAmb	11 04 52.0	
	comp=Z,158nm,1.0s						
S44A	Carbondale	70.09	345	P	P	11 04 51.6	+0.9
SIUC	Southern Illin	70.10	345	P	P	11 04 51.1	+0.3
TUL1	Leonard	70.14	339	P	P	11 04 51.5	+0.4
	baz=158,SNR=69						
TUL1	Leonard	70.14	339		P	11 04 51.6	+0.5
OKCFA	Oklahoma City	70.22	338	P	P	11 04 52.0	+0.4
OKCFA				IAmb	IAmb	11 04 53.2	
	comp=Z,110nm,1.0s						
P60A	Greenville	70.29	357	P	P	11 04 53.0	+1.1
	baz=176,SNR=14						
P60A	Greenville	70.29	357	P	P	11 04 52.7	+0.8
P60A				IAmb	IAmb	11 04 54.3	
	comp=Z,84nm,0.9s						
MGMO	Mountain Grove	70.30	342	P	P	11 04 52.5	+0.4
MGMO				IAmb	IAmb	11 04 54.0	
	comp=Z,88nm,0.9s						
MCWV	Mont Chateau	70.46	353	P	P	11 04 53.6	+0.6
	baz=172,SNR=21						
P53A	Whipple	70.47	352	P	P	11 04 53.4	+0.4
P53A				IAmb	IAmb	11 04 54.7	
	comp=Z,111nm,1.1s						
BCOK	Bluff Creek, N	70.49	338		P	11 04 53.6	+0.4
BCOK				IAmb	IAmb	11 04 54.9	
	comp=Z,109nm,0.9s						
OK031	S. Brethren Rd	70.51	338		P	11 04 53.8	+0.4
OK031				IAmb	IAmb	11 04 55.0	
	comp=Z,162nm,1.0s						
MVL	Millersville	70.51	356	P	P	11 04 53.8	+0.6
MVL				IAmb	IAmb	11 04 56.0	
	comp=Z,105nm,1.1s						
EPT	El Paso	70.52	329	IAMs_20	IAMs_20	11 30 57.5	
	comp=Z,2µm,21.0s						
P51A	Williamsport	70.69	350	P	P	11 04 54.3	0.0
P51A				IAmb	IAmb	11 04 55.6	
	comp=Z,153nm,0.9s						
P52A	Corning	70.71	351	P	P	11 04 54.5	0.0
	baz=170,SNR=32						
P52A	Corning	70.71	351	P	P	11 04 54.6	0.0
P52A				IAmb	IAmb	11 04 55.8	
	comp=Z,166nm,1.0s						
OLIL	Olney	70.84	346	P	P	11 04 54.9	-0.3
OLIL				IAmb	IAmb	11 04 56.4	
	comp=Z,156nm,1.1s						
MSTX	Muleshoe	70.85	333	P	P	11 04 56.2	+0.6
	baz=152,SNR=48						
MSTX	Muleshoe	70.85	333	P	P	11 04 55.8	+0.2
MSTX				IAmb	IAmb	11 04 57.5	
	comp=Z,138nm,1.0s						
CCM	Cathedral Cave	70.90	343	P	P	11 04 56.6	+0.9
CCM				pmax	pmax		
	comp=Z,195nm,0.9s						
CCM	Cathedral Cave	70.90	343	P	P	11 04 56.2	+0.5
	baz=162						
CCM	Cathedral Cave	70.90	343	P	P	11 04 56.6	+0.9
O56A	Blue Knob Stat	70.94	354	P	P	11 04 57.0	+1.0
	baz=174,SNR=14						
O56A	Blue Knob Stat	70.94	354	P	P	11 04 56.8	+0.9
BLO	Bloomington	70.95	348	P	P	11 04 55.6	-0.4
BLO				pmax	pmax		
	comp=Z,89nm,0.8s						
BLO	Bloomington	70.95	348	P	P	11 04 55.6	-0.4
BLO				IAmb	IAmb	11 04 57.8	
	comp=Z,89nm,0.8s						
P49A	Miami Univ. Ec	70.99	349	P	P	11 04 55.9	-0.3
	baz=168,SNR=26						
P49A	Miami Univ. Ec	70.99	349	P	P	11 04 56.0	-0.2
P49A				IAmb	IAmb	11 04 57.2	
	comp=Z,124nm,1.0s						
O54A	Avella	71.04	353	P	P	11 04 56.4	-0.1
P48A	Milroy	71.04	349	P	P	11 04 56.1	-0.4
P48A				IAmb	IAmb	11 04 57.4	
	comp=Z,133nm,0.8s						
LUPA	Lehigh Univers	71.06	357	P	P	11 04 57.7	+1.1
LUPA				IAmb	IAmb	11 04 59.2	
	comp=Z,92nm,1.0s						
S39A	Bolivar	71.09	342	P	P	11 04 57.3	+0.4
S39A				IAmb	IAmb	11 04 58.7	
	comp=Z,171nm,1.1s						
TIAR	Tiarei	71.13	260	eT	T	12 22 04.9	
	comp=Z,11nm,0.2s						
O52A	Adamsville	71.14	352	P	P	11 04 57.2	+0.1
O52A				IAmb	IAmb	11 04 58.5	
	comp=Z,101nm,0.9s						
CPNY	Central Park	71.19	358	P	P	11 04 58.4	+1.0
O53A	New Philadelph	71.20	352	P	P	11 04 57.6	+0.2
	baz=171,SNR=12						
AMTX	Amarillo	71.23	334	P	P	11 04 58.7	+0.8
	baz=153						
SSPA	Standing Stone	71.25	355	P	P	11 04 58.7	+0.9
	baz=174						
SSPA	Standing Stone	71.25	355	P	P	11 04 59.0	+1.2
SSPA				IAmb	IAmb	11 05 18.1	
	comp=Z,165nm,1.3s						
PAE	Paea	71.28	260	eP	P	11 05 01.6	+3.1
	comp=Z,23nm,1.1s						
T35A	Sooner Cattle	71.29	339		P	11 04 58.8	+0.6
T35A				IAmb	IAmb	11 05 00.2	
	comp=Z,162nm,1.1s						
PPT2	Papeete2	71.31	260	eP	P	11 05 02.0	+3.2
	comp=Z,143nm,1.3s						
PPT2				eS	S	11 14 14.7	0.0
	comp=Z,2µm,31.5s						
PPT2	Papeete2	71.31	260	eLR	LR	11 26 43.9	
	comp=Z,3µm,25.0s,baz=116						
PPT2	Papeete2	71.31	260	eT	T	12 22 17.8	
	comp=Z,4.1nm,0.3s						
N62A	Caumsett State	71.32	358	P	P	11 04 59.0	+0.8
PPT	Papeete	71.32	260	LR	LR	11 28 49.1	
	comp=Z,557nm,19.9s,baz=114,slow=30						
BLOK	Blackwell	71.37	338		P	11 04 59.2	+0.7
BLOK				IAmb	IAmb	11 05 00.6	
	comp=Z,117nm,1.0s						
N59A	State Game Lan	71.39	356	P	P	11 05 00.2	+1.6
	baz=176,SNR=35						
PAL	Palisades	71.41	358	P	P	11 04 59.3	+0.7
	baz=178,SNR=7.6						
ACSO	Alum Creek Sta	71.41	351	P	P	11 04 58.9	+0.2
	baz=170,SNR=59						
U32A	Winter Ranch,	71.61	337		P	11 05 00.6	+0.5
U32A				IAmb	IAmb	11 05 02.2	
	comp=Z,99nm,0.9s						
GC02	Grant County #	71.66	338		P	11 05 00.6	+0.3
121A	Cookes Peak, D	71.74	328	P	P	11 05 03.0	+1.8
	baz=148,SNR=78						
N54A	Moraine State	71.77	353	P	P	11 05 01.4	+0.6
	baz=172,SNR=18						
KAN14	Manchester OK	71.79	338	P	P	11 05 01.8	+0.7
KAN01	Argonia South	71.90	338	P	P	11 05 02.5	+0.7
KAN01				IAmb	IAmb	11 05 04.0	
	comp=Z,158nm,1.0s						
KAN10	Anthony SW Sta	71.98	338		P	11 05 03.0	+0.7
P43A	Skaggs, Pawnee	72.01	345	P	P	11 05 02.7	+0.4
P43A				IAmb	IAmb	11 05 03.7	
	comp=Z,181nm,0.9s						
KAN06	Argonia West S	72.02	338	P	P	11 05 03.2	+0.7
KAN06				IAmb	IAmb	11 05 04.7	
	comp=Z,165nm,1.0s						
KSPA	Keystone Colle	72.03	357	P	P	11 05 03.4	+1.0
KAN08	Anthony NE Sta	72.04	338	P	P	11 05 03.3	+0.7
KAN16	Harper SW Stat	72.07	338		P	11 05 03.4	+0.7
KAN12	Harper NE Stat	72.11	338	P	P	11 05 03.7	+0.7
M55A	Ridgway	72.15	354	P	P	11 05 03.7	+0.5
M55A				IAmb	IAmb	11 05 05.2	
	comp=Z,152nm,0.9s						
SFIN	Lafayette	72.23	347	P	P	11 05 03.2	-0.4
	baz=166,SNR=7.0						
N49A	Columbus Grove	72.26	350	P	P	11 05 04.4	+0.5
M54A	Oil Creek Stat	72.28	353	P	P	11 05 04.2	+0.2
	baz=172,SNR=14						
M54A	Oil Creek Stat	72.28	353	P	P	11 05 04.6	+0.7
M54A				IAmb	IAmb	11 05 05.6	
	comp=Z,91nm,0.9s						
BRYW	Bryant College	72.28	360	P	P	11 05 05.4	+1.5
BRYW				IAmb	IAmb	11 05 06.6	
	comp=Z,145nm,1.0s						
O44A	Mansfield	72.28	346	P	P	11 05 03.9	0.0
O44A				IAmb	IAmb	11 05 04.8	
	comp=Z,105nm,0.9s						
M53A	WI Miller and	72.31	353	P	P	11 05 04.5	+0.3
	baz=172,SNR=15						
M53A	WI Miller and	72.31	353	P	P	11 05 04.7	+0.5
M53A				IAmb	IAmb	11 05 05.7	
	comp=Z,122nm,0.9s						
ALLY	Alegheny Colle	72.47	353	P	P	11 05 05.3	+0.3
ALLY				IAmb	IAmb	11 05 06.7	
	comp=Z,104nm,0.9s						
N47A	Urbana	72.47	349	P	P	11 05 04.7	-0.3
N47A				IAmb	IAmb	11 05 05.8	
	comp=Z,178nm,0.9s						
P40A	Paris	72.49	343	P	P	11 05 05.8	+0.6
Y22D	IRIS PASSCAL I	72.66	330	P	P	11 05 08.6	+2.1
	baz=148						
Y22D	IRIS PASSCAL I	72.66	330	IAMs_20	IAMs_20	11 32 18.9	
	comp=Z,2µm,21.0s						
BINY	Binghamton	72.68	356	P	P	11 05 07.2	+0.9
	baz=176,SNR=13						
WES	Weston	72.74	0	P	P	11 05 07.4	+0.8
WES				pmax	pmax		
	comp=Z,48nm,1.0s						
WES	Weston	72.74	0	P	P	11 05 07.4	+0.8
LENM	Lemitar	72.76	330	P	P	11 05 08.3	+1.1
L61B	Northampton	72.82	359	P	P	11 05 08.2	+1.1
	baz=179,SNR=18						
HDIL	Hopedale	72.84	346	P	P	11 05 07.3	+0.1
	baz=164,SNR=25						
HDIL	Hopedale	72.84	346	P	P	11 05 07.6	+0.3
HDIL				IAmb	IAmb	11 05 08.6	
	comp=Z,117nm,0.9s						
HRV	Adam Dziewonsk	72.87	360	P	P	11 05 08.7	+1.3
	baz=180						

ERPA	**Erie**	**72.91**	**353**	P	**P**	**11 05 08.0**	**+0.4**
	baz=172						
TUC	**Tucson**	**72.97**	**326**	P	**P**	**11 05 09.0**	**+0.6**
TUC				pmax	pmax		
	comp=Z,129nm,1.7s						
TUC	**Tucson**	**72.97**	**326**	P	**P**	**11 05 09.6**	**+1.2**
	baz=145						
TUC	**Tucson**	**72.97**	**326**	P	**P**	**11 05 08.9**	**+0.6**
K62A	**Royalston**	**73.03**	**359**	P	**P**	**11 05 09.5**	**+1.1**
K62A				IAmb	IAmb	11 05 29.2	
	comp=Z,119nm,1.2s						
WVNY	**West Valley, N**	**73.07**	**354**	P	**P**	**11 05 09.4**	**+0.8**
TRY	**Troy**	**73.12**	**358**	P	**P**	**11 05 10.1**	**+1.2**
TRY				IAmb	IAmb	11 05 11.8	
	comp=Z,194nm,1.0s						
ANMO	**Albuquerque**	**73.20**	**330**	LR	LR	11 33 10.6	
	comp=Z,1µm,20.1s,baz=156,slow=32						
ANMO	**Albuquerque**	**73.20**	**330***c*	*i*P	**P**	**11 05 11.3**	**+1.5**
ANMO				pmax	pmax		
	comp=Z,44nm,1.2s						
ANMO	**Albuquerque**	**73.20**	**330**	P	**P**	**11 05 11.4**	**+1.6**
	baz=149						
ANMO	**Albuquerque**	**73.20**	**330**	P	**P**	**11 05 10.9**	**+1.1**
ANMO	**Albuquerque**	**73.20**	**330**	IAMs_20	IAMs_20	11 32 59.2	
	comp=Z,2µm,19.0s						
LIC	**Lamto**	**73.21**	**72**	*e*P	**P**	**11 05 10.3**	**+0.2**
	comp=Z,716nm,1.1s						
KSU1	**Kansas State U**	**73.33**	**340**	P	**P**	**11 05 10.4**	**+0.1**
	baz=158,SNR=22						
TIC	**Toumodi**	**73.45**	**72**	*e*P	**P**	**11 05 11.8**	**+0.3**
KIC	**Kosan Boka**	**73.52**	**72**	*e*P	**P**	**11 05 12.2**	**+0.3**
	comp=Z,620nm,0.9s						
AAM	**Ann Arbor**	**73.54**	**351**	P	**P**	**11 05 11.2**	**-0.1**
	baz=169						
DBIC	**Dimbokro**	**73.60**	**72**	P	**P**	**11 05 12.9**	**+0.5**
	comp=Z,311nm,0.9s,baz=234,slow=5.8,SNR=195						
DBIC				LR	LR	11 35 03.7	
	comp=Z,2µm,19.7s,baz=238,slow=34						
214A	**Organ Pipe Nat**	**73.68**	**324**	P	**P**	**11 05 14.3**	**+1.8**
	baz=144,SNR=21						
CBKS	**Cedar Bluff**	**74.06**	**337**	P	**P**	**11 05 15.2**	**+0.6**
CBKS				pmax	pmax		
	comp=Z,160nm,0.9s						
CBKS	**Cedar Bluff**	**74.06**	**337**	P	**P**	**11 05 15.6**	**+1.1**
	baz=155,SNR=27						
CBKS	**Cedar Bluff**	**74.06**	**337**	P	**P**	**11 05 15.2**	**+0.6**
CBKS				IAmb	IAmb	11 05 16.9	
	comp=Z,160nm,0.9s						
L44A	**Lake County Fo**	**74.12**	**347**	P	**P**	**11 05 14.7**	**-0.1**
	baz=165,SNR=8.4						
T25A	**Trinidad**	**74.26**	**333**	P	**P**	**11 05 17.8**	**+1.7**
	baz=151,SNR=88						
T25A	**Trinidad**	**74.26**	**333**	P	**P**	**11 05 17.4**	**+1.3**
T25A				IAmb	IAmb	11 05 19.1	
	comp=Z,133nm,1.0s						
L42A	**Oliver, Polo**	**74.31**	**346**	P	**P**	**11 05 16.1**	**+0.3**
L42A				IAmb	IAmb	11 05 17.2	
	comp=Z,131nm,1.1s						
LBNH	**Lisbon**	**74.60**	**360**	P	**P**	**11 05 19.0**	**+1.5**
	baz=180,SNR=9.9						
N35A	**Tabor**	**74.69**	**341**	P	**P**	**11 05 18.4**	**+0.3**
W18A	**Petrified Fore**	**74.79**	**328**	P	**P**	**11 05 20.6**	**+1.5**
	baz=146,SNR=34						
SCIA	**State Center**	**75.03**	**343**	P	**P**	**11 05 20.5**	**+0.5**
	baz=161,SNR=11						
LONY	**Lake Ozonia**	**75.04**	**358**	P	**P**	**11 05 20.9**	**+0.9**
	baz=177,SNR=18						
SDCO	**Great Sand Dun**	**75.22**	**333**	P	**P**	**11 05 23.1**	**+1.5**
	baz=150,SNR=65						
KSCO	**Kaye Shedlock’**	**75.24**	**335**	P	**P**	**11 05 23.0**	**+1.5**
	baz=153,SNR=31						
KSCO	**Kaye Shedlock’**	**75.24**	**335**	P	**P**	**11 05 22.6**	**+1.1**
JFWS	**Jewell Farm**	**75.30**	**346**	P	**P**	**11 05 22.1**	**+0.5**
JFWS				pmax	pmax		
	comp=Z,173nm,1.1s						
JFWS	**Jewell Farm**	**75.30**	**346**	P	**P**	**11 05 21.9**	**+0.3**
	baz=163,SNR=23						
JFWS	**Jewell Farm**	**75.30**	**346**	P	**P**	**11 05 22.1**	**+0.5**
JFWS				IAmb	IAmb	11 05 23.3	
	comp=Z,173nm,1.1s						
SADO	**Sadowa**	**75.46**	**354**	P	**P**	**11 05 22.7**	**+0.2**
SADO				IAmb	IAmb	11 05 24.1	
	comp=Z,128nm,1.0s						
PLVO	**Plevna**	**75.58**	**356**	P	**P**	**11 05 24.2**	**+1.1**
G62A	**West of Eustis**	**75.58**	**1**	P	**P**	**11 05 24.1**	**+1.0**
G62A				IAmb	IAmb	11 05 26.0	
	comp=Z,147nm,1.0s						
GLA	**Glamis**	**75.58**	**323**	P	**P**	**11 05 24.5**	**+1.0**
GLA				pmax	pmax		
	comp=Z,245nm,1.9s						
GLA	**Glamis**	**75.58**	**323**	P	**P**	**11 05 25.1**	**+1.6**
	baz=142,SNR=6.3						
GLA	**Glamis**	**75.58**	**323**	P	**P**	**11 05 24.5**	**+1.0**
GLA				IAmb	IAmb	11 05 39.3	
	comp=Z,245nm,1.9s						
GGN	**Saint George**	**75.59**	**3**	P	**P**	**11 05 24.3**	**+1.1**
GGN				IAmb	IAmb	11 05 44.1	
	comp=Z,146nm,1.1s						
K38A	**Parkersburg**	**75.62**	**344**	P	**P**	**11 05 24.0**	**+0.6**
K38A				IAmb	IAmb	11 05 24.7	
	comp=Z,136nm,0.9s						
PKME	**Peaks-Kenny Pk**	**75.65**	**2**	P	**P**	**11 05 24.7**	**+1.3**
	baz=182,SNR=5.7						
S22A	**4UR Ranch, Cre**	**75.75**	**332**	P	**P**	**11 05 26.3**	**+1.6**
	baz=149,SNR=38						
WUAZ	**Wupatki**	**75.87**	**327**	P	**P**	**11 05 27.1**	**+1.8**
	baz=145,SNR=65						
WUAZ	**Wupatki**	**75.87**	**327**	P	**P**	**11 05 27.0**	**+1.8**
WUAZ				IAmb	IAmb	11 05 42.2	
	comp=Z,183nm,1.4s						
RMX	**La Rumorosa**	**75.88**	**322**	P	**P**	**11 05 26.1**	**+0.8**
RMX				IAmb	IAmb	11 05 41.9	
	comp=Z,146nm,1.5s						
MNTQ	**Montreal, Queb**	**75.89**	**358**	P	**P**	**11 05 25.8**	**+0.9**
MNTQ				IAmb	IAmb	11 05 45.9	
	comp=Z,170nm,1.4s						
L34A	**Svendsen Farm,**	**75.92**	**341**	P	**P**	**11 05 25.4**	**+0.2**
BGNE	**Belgrade**	**75.92**	**340**	P	**P**	**11 05 26.0**	**+0.8**
	baz=156,SNR=20						
BGNE	**Belgrade**	**75.92**	**340**	P	**P**	**11 05 26.1**	**+0.8**
SUR	**Sutherland**	**75.92**	**119**	P	**P**	**11 05 27.1**	**+1.2**
IKP	**In-Ko-Pah, Jac**	**75.93**	**322**	P	**P**	**11 05 27.4**	**+1.8**
	baz=142,SNR=15						
CBX	**Cerro Bola**	**75.97**	**322**	P	**P**	**11 05 26.7**	**+0.9**
I42A	**Draeger Farm,**	**75.97**	**347**	P	**P**	**11 05 26.2**	**+0.8**
I42A				IAmb	IAmb	11 05 27.1	
	comp=Z,125nm,1.1s						
MVCO	**Mesa Verde**	**75.99**	**330**	P	**P**	**11 05 27.4**	**+1.4**
	baz=148,SNR=64						
MVCO	**Mesa Verde**	**75.99**	**330**	P	**P**	**11 05 27.5**	**+1.4**
MVCO				IAMs_20	IAMs_20	11 34 51.1	
	comp=Z,1µm,19.0s						
SWSC	**Sam W. Stewart**	**76.00**	**323**	P	**P**	**11 05 27.6**	**+1.7**
	baz=142,SNR=7.3						
F63A	**Nahmakanta, Br**	**76.09**	**2**	P	**P**	**11 05 27.5**	**+1.5**
F63A				IAmb	IAmb	11 05 47.8	
	comp=Z,248nm,1.7s						
TKX	**Tecate**	**76.13**	**322**	P	**P**	**11 05 28.1**	**+1.4**
Q24A	**Divide**	**76.14**	**333**	P	**P**	**11 05 28.5**	**+1.6**
	baz=151,SNR=40						
GLMI	**Grayling**	**76.15**	**350**	P	**P**	**11 05 26.4**	**0.0**
	baz=168,SNR=5.2						
GLMI	**Grayling**	**76.15**	**350**	P	**P**	**11 05 26.7**	**+0.3**
GLMI				IAmb	IAmb	11 05 27.7	
	comp=Z,120nm,0.9s						
MAW	**Mawson**	**76.15**	**164**	P	**P**	**11 05 26.7**	**+0.4**
	comp=Z,58nm,0.9s,baz=217,slow=7.1,SNR=120						
MAW				LR	LR	11 41 04.1	
	comp=Z,2µm,19.7s,baz=235,slow=37						
MAW	**Mawson**	**76.15**	**164**	P	**P**	**11 05 26.9**	**+0.6**
PDMCI	**Parker Dam,Lak**	**76.23**	**325**	P	**P**	**11 05 28.5**	**+1.4**
	baz=143,SNR=8.0						
BAR	**Barrett**	**76.25**	**322**	P	**P**	**11 05 27.7**	**+0.4**
F62A	**Pittston Farm,**	**76.27**	**1**	P	**P**	**11 05 28.4**	**+1.3**
F62A				IAmb	IAmb	11 05 29.9	
	comp=Z,151nm,1.2s						
F64A	**Sherman**	**76.27**	**2**	P	**P**	**11 05 28.1**	**+1.1**
F64A				IAmb	IAmb	11 05 29.9	
	comp=Z,108nm,1.0s						
MONP2	**Monument Peak**	**76.29**	**322**	P	**P**	**11 05 29.3**	**+1.6**
	baz=141,SNR=13						
H43A	**Windswept, Lux**	**76.31**	**348**	P	**P**	**11 05 27.6**	**+0.3**
H43A				IAmb	IAmb	11 05 28.9	
	comp=Z,126nm,0.9s						
I40A	**Norwalk**	**76.31**	**346**	P	**P**	**11 05 27.4**	**0.0**
I40A				IAmb	IAmb	11 05 28.9	
	comp=Z,120nm,1.0s						
BC3	**Big Chuckawall**	**76.38**	**323**	P	**P**	**11 05 29.8**	**+1.7**
	baz=142,SNR=19						
IRM	**Iron Mountain**	**76.62**	**324**	P	**P**	**11 05 31.0**	**+1.6**
	baz=142,SNR=17						
TRQ	**Mont Tremblant**	**76.64**	**358**	P	**P**	**11 05 29.6**	**+0.4**
TRQ				IAmb	IAmb	11 05 31.0	
	comp=Z,140nm,1.0s						
109C	**Camp Elliot, M**	**76.65**	**322**	P	**P**	**11 05 31.0**	**+1.5**
	baz=141						
109C	**Camp Elliot, M**	**76.65**	**322**	P	**P**	**11 05 30.4**	**+0.9**
W13A	**Hualapai Mount**	**76.73**	**325**	P	**P**	**11 05 31.5**	**+1.2**
OGNE	**Ogallala**	**76.75**	**337**	P	**P**	**11 05 31.1**	**+1.0**
	baz=153,SNR=6.3						
OGNE	**Ogallala**	**76.75**	**337**	P	**P**	**11 05 31.0**	**+1.0**
OGNE				IAmb	IAmb	11 05 46.4	
	comp=Z,150nm,1.4s						
NEE2	**Needles Airpor**	**76.83**	**325**	P	**P**	**11 05 31.9**	**+1.4**
	baz=143,SNR=7.2						
TPFO	**Pinon Flats**	**76.86**	**323**	P	**P**	**11 05 32.8**	**+2.0**
	baz=141,SNR=23						
PFO	**Pinyon Flats O**	**76.87**	**323**	P	**P**	**11 05 32.1**	**+1.2**
PFO				pmax	pmax		
	comp=Z,88nm,1.3s						
PFO	**Pinyon Flats O**	**76.87**	**323**	P	**P**	**11 05 32.8**	**+1.9**
	baz=141,SNR=30						
PFO	**Pinyon Flats O**	**76.87**	**323**	P	**P**	**11 05 32.1**	**+1.2**
BELC	**Belle Mtn. Jos**	**76.93**	**323**	P	**P**	**11 05 33.0**	**+1.7**
	baz=142,SNR=8.1						
E62A	**Clayton Lake**	**77.00**	**1**	P	**P**	**11 05 32.2**	**+1.1**
E62A				IAmb	IAmb	11 05 34.0	
	comp=Z,162nm,1.0s						
SMCO	**Snowmass**	**77.03**	**332**	P	**P**	**11 05 33.6**	**+1.5**
SMCO				IAmb	IAmb	11 05 35.4	
	comp=Z,128nm,1.0s						
ISCO	**Idaho Springs**	**77.04**	**334**	P	**P**	**11 05 33.3**	**+1.4**
ISCO				pmax	pmax		
	comp=Z,120nm,1.4s						
ISCO	**Idaho Springs**	**77.04**	**334**	P	**P**	**11 05 33.4**	**+1.4**
	baz=150,SNR=46						
ISCO	**Idaho Springs**	**77.04**	**334**	P	**P**	**11 05 33.3**	**+1.4**
ISCO				IAmb	IAmb	11 05 48.6	
	comp=Z,120nm,1.4s						
U15A	**North Rim**	**77.04**	**327**	P	**P**	**11 05 33.5**	**+1.5**
I37A	**Lemond, Waseca**	**77.06**	**344**	P	**P**	**11 05 31.6**	**0.0**
PQI	**Presque Isle**	**77.09**	**2**	P	**P**	**11 05 32.9**	**+1.2**
PQI				IAmb	IAmb	11 05 34.3	
	comp=Z,107nm,1.0s						
K31A	**O'Neill**	**77.21**	**340**	P	**P**	**11 05 33.4**	**+0.9**
MURC	**Murrieta**	**77.24**	**322**	P	**P**	**11 05 34.8**	**+1.8**
	baz=141,SNR=20						
GMRC	**Granite Mounta**	**77.37**	**324**	P	**P**	**11 05 35.4**	**+1.7**
	baz=142,SNR=70						
D62A	**Allapoint, All**	**77.47**	**2**	P	**P**	**11 05 35.1**	**+1.4**
WIN	**Windhoek**	**77.57**	**109**	P	**P**	**11 05 35.9**	**+0.6**
WIN				pmax	pmax		
	comp=Z,161nm,1.1s						
WIN	**Windhoek**	**77.57**	**109**	P	**P**	**11 05 35.9**	**+0.6**
WIN				IAmb	IAmb	11 05 37.5	
	comp=Z,161nm,1.1s						
BBRC	**Big Bear Solar**	**77.61**	**323**	P	**P**	**11 05 37.2**	**+2.0**
	baz=141						
E46A	**Sault Ste Mari**	**77.62**	**351**	P	**P**	**11 05 35.2**	**+0.6**
ECSD	**EROS Data Cent**	**77.62**	**342**	P	**P**	**11 05 35.2**	**+0.5**
	baz=158,SNR=154						
ECSD	**EROS Data Cent**	**77.62**	**342**	P	**P**	**11 05 35.2**	**+0.5**
CIS	**Catalina Islan**	**77.74**	**321**	P	**P**	**11 05 37.3**	**+1.6**
	baz=140						
HEC	**Hector,Ludlow**	**77.75**	**323**	P	**P**	**11 05 37.7**	**+2.0**
	baz=142,SNR=24						
BATG	**Bathurst New B**	**77.78**	**4**	P	**P**	**11 05 36.6**	**+1.1**
BATG				IAmb	IAmb	11 05 56.2	
	comp=Z,150nm,1.2s						
LMQ	**La Malbaie**	**77.91**	**1**	P	**P**	**11 05 37.3**	**+1.1**
LMQ				IAmb	IAmb	11 05 38.5	
	comp=Z,116nm,1.1s						
FMP	**Fort Macarthur**	**77.92**	**321**	P	**P**	**11 05 38.3**	**+1.8**
	baz=140						
LCMT	**Little Creek M**	**77.96**	**327**	P	**P**	**11 05 38.5**	**+1.5**
BFSC	**Mount Baldy Ra**	**77.98**	**322**	P	**P**	**11 05 38.5**	**+1.4**
	baz=141,SNR=22						
TUQ	**Turquoise Moun**	**78.02**	**324**	P	**P**	**11 05 39.0**	**+1.7**
	baz=142,SNR=8.3						
E43A	**Lone Tree Farm**	**78.03**	**349**	P	**P**	**11 05 37.5**	**+0.6**
E43A				IAmb	IAmb	11 05 38.6	
	comp=Z,114nm,0.9s						
SPMN	**Marine on St.**	**78.06**	**345**	P	**P**	**11 05 37.1**	**0.0**
	baz=161,SNR=32						
SPMN	**Marine on St.**	**78.06**	**345**	P	**P**	**11 05 37.1**	**0.0**
SPMN				IAmb	IAmb	11 05 38.3	
	comp=Z,96nm,0.9s						
N23A	**Red Feather La**	**78.11**	**334**	P	**P**	**11 05 39.4**	**+1.5**
	baz=150,SNR=30						
RRX	**Edison Barstow**	**78.13**	**323**	P	**P**	**11 05 39.7**	**+2.0**
	baz=141						
MTPU	**Mount Pierson**	**78.31**	**328**	P	**P**	**11 05 40.3**	**+1.1**
DECC	**Green Verdugo**	**78.35**	**322**	P	**P**	**11 05 40.8**	**+1.8**
	baz=140						
GSC	**Goldstone, Bar**	**78.36**	**323**	P	**P**	**11 05 40.9**	**+1.7**
	baz=141,SNR=30						
O20A	**White River Ci**	**78.36**	**332**	P	**P**	**11 05 40.6**	**+1.5**
	baz=148,SNR=42						
SZCU	**Shurtz Canyon**	**78.36**	**327**	P	**P**	**11 05 40.7**	**+1.4**
SZCU				IAmb	IAmb	11 05 56.3	
	comp=Z,192nm,1.6s						
SRU	**San Rafael Swe**	**78.45**	**330**	P	**P**	**11 05 40.7**	**+1.0**
SRU				pmax	pmax		
	comp=Z,64nm,1.0s						
SRU	**San Rafael Swe**	**78.45**	**330**	P	**P**	**11 05 40.7**	**+1.0**
SHOC	**Shoshone, Teco**	**78.56**	**324**	P	**P**	**11 05 41.5**	**+1.4**
	baz=142,SNR=9.6						
EDW2	**Edwards Air Fo**	**78.65**	**322**	P	**P**	**11 05 42.0**	**+1.2**
	baz=140,SNR=34						
MVU	**Marysvale**	**78.70**	**328**	P	**P**	**11 05 42.4**	**+1.3**
KOWA	**Kowa**	**78.77**	**66**	P	**P**	**11 05 41.8**	**+0.1**
KOWA				IAMs_20	IAMs_20	11 40 56.5	
	comp=Z,2µm,18.0s						
P18A	**Preston Nutter**	**78.77**	**330**	P	**P**	**11 05 42.8**	**+1.2**
P18A				IAmb	IAmb	11 05 58.2	
	comp=Z,239nm,1.3s						
F36A	**Milaca**	**78.83**	**344**	P	**P**	**11 05 41.3**	**-0.1**
F36A				IAmb	IAmb	11 05 42.6	
	comp=Z,107nm,0.9s						
OSI	**Osito Audit: C**	**78.83**	**322**	P	**P**	**11 05 43.5**	**+1.8**
	baz=140						
OSI	**Osito Audit: C**	**78.83**	**322**	P	**P**	**11 05 42.9**	**+1.1**
P17A	**Butcher Ranch,**	**78.85**	**330**	P	**P**	**11 05 43.0**	**+1.1**
P17A				IAmb	IAmb	11 05 58.1	
	comp=Z,168nm,1.4s						
TCRU	**Three Creeks R**	**78.89**	**328**	P	**P**	**11 05 43.9**	**+1.7**
TMUT	**Trail Mountain**	**78.91**	**330**	P	**P**	**11 05 43.3**	**+0.9**
TMUT				IAmb	IAmb	11 07 53.6	
	comp=Z,137nm,1.0s						
QSM	**Queen of Sheba**	**78.91**	**324**	P	**P**	**11 05 43.0**	**+0.9**
SUSD	**Miller**	**78.93**	**340**	P	**P**	**11 05 42.3**	**+0.3**
	baz=156,SNR=8.9						
SUSD	**Miller**	**78.93**	**340**	P	**P**	**11 05 42.2**	**+0.3**
SUSD				IAmb	IAmb	11 05 43.6	
	comp=Z,132nm,0.9s						
LRMC	**Laurel Mtn Rad**	**78.95**	**323**	P	**P**	**11 05 44.0**	**+1.5**
	baz=141,SNR=23						
D41A	**Chassel**	**78.96**	**348**	P	**P**	**11 05 42.8**	**+0.8**
GWY	**Greenwater Val**	**78.98**	**324**	P	**P**	**11 05 43.5**	**+0.9**
E38A	**The Farm, Brul**	**79.10**	**346**	P	**P**	**11 05 42.9**	**+0.1**
PRN	**Pahroc Range**	**79.14**	**326**	P	**P**	**11 05 45.0**	**+1.5**
RDMU	**Red Mountain**	**79.27**	**331**	P	**P**	**11 05 45.1**	**+0.9**
RDMU				IAmb	IAmb	11 06 00.3	
	comp=Z,165nm,1.3s						
ARVC	**Arvin**	**79.28**	**322**	P	**P**	**11 05 45.7**	**+1.7**
	baz=140						
RWWY	**Rawlins**	**79.28**	**333**	P	**P**	**11 05 44.6**	**+0.4**
RWWY				IAmb	IAmb	11 05 45.9	
	comp=Z,110nm,1.0s						
FURC	**Furnace Creek,**	**79.30**	**324**	P	**P**	**11 05 45.9**	**+1.8**
	baz=142,SNR=31						
ISA	**Isabella, Lake**	**79.50**	**323**	P	**P**	**11 05 47.5**	**+2.1**
ISA				pmax	pmax		
	comp=Z,58nm,1.0s						
ISA	**Isabella, Lake**	**79.50**	**323**	P	**P**	**11 05 47.2**	**+1.9**
	baz=140,SNR=56						
ISA	**Isabella, Lake**	**79.50**	**323**	P	**P**	**11 05 47.5**	**+2.1**
TSUM	**Tsumeb**	**79.56**	**106**	P	**P**	**11 05 46.8**	**+0.5**
TSUM	**Tsumeb**	**79.56**	**106**	IAMs_20	IAMs_20	11 36 13.7	
	comp=Z,2µm,20.0s						
PKM	**Mcpherson Peak**	**79.62**	**321**	P	**P**	**11 05 48.0**	**+1.8**
	baz=139,SNR=33						
K22A	**Casper**	**79.85**	**334**	P	**P**	**11 05 48.5**	**+1.3**
	baz=150,SNR=31						
CWC	**Cottonwood Cre**	**79.89**	**323**	P	**P**	**11 05 49.2**	**+1.6**
	baz=141						
VES	**Vestal, Richgr**	**79.96**	**322**	P	**P**	**11 05 49.4**	**+1.7**
	baz=140,SNR=50						
GRAC	**Grapevine Rang**	**79.96**	**324**	P	**P**	**11 05 49.8**	**+1.9**
	baz=141						
SMMC	**Simmler**	**80.04**	**321**	P	**P**	**11 05 50.3**	**+2.0**
	baz=139,SNR=15						
R11A	**Troy Canyon, C**	**80.14**	**326**	P	**P**	**11 05 50.5**	**+1.6**
	baz=143,SNR=67						
RSSD	**Black Hills**	**80.25**	**337**	P	**P**	**11 05 50.3**	**+0.9**
RSSD				pmax	pmax		
	comp=Z,67nm,1.0s						
RSSD	**Black Hills**	**80.25**	**337**	P	**P**	**11 05 50.3**	**+0.9**
	baz=152						
RSSD	**Black Hills**	**80.25**	**337**	P	**P**	**11 05 50.3**	**+0.9**
DUG	**Dugway, Tooele**	**80.35**	**329**	P	**P**	**11 05 51.2**	**+1.2**
	baz=145,SNR=36						
DUG	**Dugway, Tooele**	**80.35**	**329**	IAMs_20	IAMs_20	11 37 06.4	
	comp=Z,2µm,20.0s						
EYMN	**Ely**	**80.37**	**346**	P	**P**	**11 05 49.6**	**-0.1**
	baz=163,SNR=17						
TIN	**Tinemaha, Big**	**80.44**	**324**	P	**P**	**11 05 52.5**	**+2.0**
	baz=141,SNR=11						
VOG	**Valley Oaks Go**	**80.48**	**323**	P	**P**	**11 05 51.0**	**+0.5**
	baz=140						
DRLN	**Deer Lake**	**80.57**	**9**	P	**P**	**11 05 52.1**	**+1.4**
DRLN				IAmb	IAmb	11 05 52.6	
	comp=Z,93nm,0.9s						
HWUT	**Hardware Ranch**	**80.97**	**331**	P	**P**	**11 05 53.9**	**+0.6**
HWUT				IAMs_20	IAMs_20	11 38 31.9	
	comp=Z,1µm,20.0s						
BOSA	**Boshof**	**81.09**	**118**	P	**P**	**11 05 54.5**	**+0.1**
	comp=Z,124nm,0.9s,baz=241,slow=5.2,SNR=104						
BOSA				LR	LR	11 37 28.9	
	comp=Z,1µm,20.6s,baz=247,slow=32						
BOSA	**Boshof**	**81.09**	**118**	*e*P	**P**	**11 05 54.9**	**+0.5**
BOSA	**Boshof**	**81.09**	**118**	*e*P	**P**	**11 05 54.9**	**+0.5**
BOSA	**Boshof**	**81.09**	**118**	P	**P**	**11 05 54.5**	**+0.1**
BOSA				IAmb	IAmb	11 05 55.8	
	comp=Z,155nm,1.0s						
BW06	**Boulder Array**	**81.11**	**333**	P	**P**	**11 05 54.5**	**+0.4**
	baz=148,SNR=24						
PDAR	**Pinedale Array**	**81.11**	**333**	P	**P**	**11 05 54.4**	**+0.3**
	comp=Z,11nm,0.9s,baz=145,slow=5.4,SNR=56						
PDAR				LR	LR	11 38 42.0	
	comp=Z,829nm,20.5s,baz=153,slow=33						
MLAC	**Mammoth, Mammo**	**81.19**	**324**	P	**P**	**11 05 56.3**	**+1.7**
	baz=140,SNR=25						
PMOZ	**Porto Moniz, M**	**81.36**	**44**	*e*S	S	11 16 27.9	+24
PMOZ	**Porto Moniz, M**	**81.36**	**44**	*e*LR	LR	11 33 14.8	
	comp=Z,752nm,18.0s						
PMAR	**Madeira**	**81.45**	**44**	*e*P	**P**	**11 05 58.4**	**+2.3**
	comp=Z,126nm,1.3s						
NVAR	**Mina Array Bea**	**81.54**	**325**	P	**P**	**11 05 57.7**	**+1.2**
	comp=Z,18nm,0.8s,baz=154,slow=6.0,SNR=100						
NVAR				LR	LR	11 35 48.1	
	comp=Z,743nm,21.3s,baz=140,slow=31						
AGMN	**Agassiz Nation**	**81.67**	**344**	P	**P**	**11 05 56.7**	**+0.1**
	baz=159,SNR=34						
ELK	**Elko**	**81.89**	**328**	LR	LR	11 37 40.1	
	comp=Z,992nm,22.0s,baz=152,slow=32						
PMPST	**Porto Santo, M**	**82.05**	**44**	*e*P	**P**	**11 06 01.7**	**+2.7**
	comp=Z,160nm,1.3s						
MDND	**Maddock**	**82.22**	**341**	P	**P**	**11 06 00.3**	**+0.8**
	baz=156,SNR=55						
TORD	**Torodi Ar. Bea**	**82.55**	**70**	P	**P**	**11 06 02.1**	**+0.1**
	comp=Z,142nm,1.0s,baz=255,slow=4.3,SNR=376						
TORD				ScS	**ScS**	**11 16 32.6**	**+0.4**
	comp=Z,1.8nm,1.1s,baz=261,slow=15,SNR=3.7						
TORD				LR	LR	11 40 09.1	
	comp=Z,3µm,20.4s,baz=235,slow=34						
TORD	**Torodi Ar. Bea**	**82.55**	**70**	P	**P**	**11 06 02.4**	**+0.4**
FLWY	**Flagg Ranch**	**82.67**	**333**	IAMs_20	IAMs_20	11 39 30.8	
	comp=Z,1µm,18.0s						
H17A	**Grant Village**	**82.88**	**333**	P	**P**	**11 06 04.8**	**+1.4**
	baz=147						
RLMT	**Red Lodge**	**82.99**	**334**	P	**P**	**11 06 04.6**	**+0.7**
	baz=148,SNR=15						
MPK	**Martis Peak**	**83.07**	**324**	P	**P**	**11 06 06.0**	**+1.5**
YNR	**Norris Junctio**	**83.19**	**333**	P	**P**	**11 06 06.2**	**+1.3**
LAO	**LASA Array**	**83.24**	**337**	P	**P**	**11 06 05.5**	**+0.6**
	baz=150,SNR=14						
LAO	**LASA Array**	**83.24**	**337**	P	**P**	**11 06 05.1**	**+0.2**
LAO				IAmb	IAmb	11 06 06.8	
	comp=Z,73nm,0.9s						
YMR	**Madison River**	**83.26**	**333**	P	**P**	**11 06 06.5**	**+1.2**
YMR				IAmb	IAmb	11 06 21.0	
	comp=Z,253nm,1.6s						
CASY	**Casey**	**83.30**	**181**	P	**P**	**11 06 06.2**	**+1.2**
CASY				IAmb	IAmb	11 06 07.0	
	comp=Z,123nm,0.9s						
YHH	**Holmes Hill**	**83.32**	**333**	P	**P**	**11 06 06.5**	**+0.8**
ULM	**Lac du Bonnet**	**83.50**	**344**	P	**P**	**11 06 05.9**	**-0.1**
	comp=Z,114nm,0.9s,baz=160,slow=4.4,SNR=75						
ULM	**Lac du Bonnet**	**83.50**	**344**	P	**P**	**11 06 05.9**	**-0.1**
ULM				IAmb	IAmb	11 06 07.3	
	comp=Z,144nm,0.9s						
YHL	**Hebgen Lake**	**83.50**	**333**	P	**P**	**11 06 07.8**	**+1.2**
QLMT	**Earthquake Lak**	**83.58**	**333**	P	**P**	**11 06 08.4**	**+1.5**
HLID	**Hailey**	**83.78**	**330**	P	**P**	**11 06 09.2**	**+1.2**
	baz=144,SNR=60						
HLID	**Hailey**	**83.78**	**330**	P	**P**	**11 06 08.7**	**+0.8**
HLID				IAmb	IAmb	11 06 23.7	
	comp=Z,149nm,1.8s						
BCYI	**Bear Canyon**	**83.96**	**331**	P	**P**	**11 06 09.9**	**+1.0**
ORV	**Oroville**	**84.01**	**323**	P	**P**	**11 06 10.0**	**+1.0**
ORV				pmax	pmax		
	comp=Z,165nm,1.4s						
ORV	**Oroville**	**84.01**	**323**	P	**P**	**11 06 10.0**	**+1.0**
ORV				IAmb	IAmb	11 06 25.7	
	comp=Z,165nm,1.4s						
GDXM	**Geysers**	**84.13**	**322**	P	**P**	**11 06 10.9**	**+1.2**
DGMT	**Dagmar**	**84.14**	**339**	P	**P**	**11 06 10.3**	**+0.9**
	baz=152,SNR=67						
DGMT	**Dagmar**	**84.14**	**339**	P	**P**	**11 06 10.6**	**+1.1**
MFID	**Camas Ranch**	**84.28**	**329**	P	**P**	**11 06 11.1**	**+0.7**
MFID				IAmb	IAmb	11 06 25.8	
	comp=Z,111nm,1.6s						
BOZ	**Bozeman (W)**	**84.30**	**333**	P	**P**	**11 06 11.4**	**+0.9**
BOZ				pmax	pmax		
	comp=Z,46nm,1.5s						
BOZ	**Bozeman (W)**	**84.30**	**333**	P	**P**	**11 06 11.1**	**+0.6**
	baz=146,SNR=10.0						
BOZ	**Bozeman (W)**	**84.30**	**333**	P	**P**	**11 06 11.3**	**+0.9**
HOPS	**Hopland Field**	**84.42**	**322**	P	**P**	**11 06 12.9**	**+1.9**
HOPS				IAmb	IAmb	11 06 27.3	
	comp=Z,144nm,1.6s						
DLMT	**Dillon**	**84.49**	**332**	P	**P**	**11 06 12.6**	**+1.1**
DLMT				IAmb	IAmb	11 06 27.7	
	comp=Z,106nm,1.4s						
O03E	**Paynes Creek**	**84.72**	**324**	P	**P**	**11 06 12.6**	**0.0**
	baz=138,SNR=18						
WVOR	**Wild Horse Val**	**84.79**	**327**	P	**P**	**11 06 13.7**	**+0.7**
WVOR				pmax	pmax		
	comp=Z,86nm,1.6s						
WVOR	**Wild Horse Val**	**84.79**	**327**	P	**P**	**11 06 13.7**	**+0.7**
LRM	**Limekiln Ridge**	**84.81**	**333**	P	**P**	**11 06 14.2**	**+1.0**
O02D	**Mt. Diablo Mer**	**85.14**	**323**	P	**P**	**11 06 15.5**	**+0.7**
	baz=138,SNR=9.3						
MOD	**Modoc Plateau**	**85.18**	**326**	P	**P**	**11 06 15.8**	**+0.8**
MOD				IAmb	IAmb	11 06 30.6	
	comp=Z,136nm,1.6s						
KCPM	**Cahto Peak**	**85.19**	**322**	P	**P**	**11 06 16.5**	**+1.4**
SCHQ	**Schefferville**	**85.29**	**3**	P	**P**	**11 06 15.5**	**+0.4**
	comp=Z,80nm,1.0s,baz=166,slow=4.8,SNR=15						
SCHQ	**Schefferville**	**85.29**	**3**	P	**P**	**11 06 15.2**	**+0.1**
WDC	**Whiskeytown Da**	**85.31**	**323**	P	**P**	**11 06 15.6**	**+0.1**
WDC				pmax	pmax		
	comp=Z,114nm,1.7s						
WDC	**Whiskeytown Da**	**85.31**	**323**	P	**P**	**11 06 15.6**	**+0.1**
WDC				IAmb	IAmb	11 06 29.8	
	comp=Z,114nm,1.7s						
TTIG	**Tnine Tigouga,**	**85.35**	**50**	P	**P**	**11 06 18.0**	**+1.9**
J08A	**Circle Bar Ran**	**85.43**	**328**	P	**P**	**11 06 17.0**	**+0.9**
EGMT	**Eagleton**	**85.62**	**335**	P	**P**	**11 06 17.0**	**0.0**
	baz=148,SNR=6.3						
EGMT	**Eagleton**	**85.62**	**335**	P	**P**	**11 06 17.6**	**+0.6**
EGMT				IAmb	IAmb	11 06 31.5	
	comp=Z,114nm,1.4s						
KMRM	**Mail Ridge**	**85.65**	**323**	P	**P**	**11 06 19.0**	**+1.7**
PLID	**Pearl Lake**	**85.68**	**330**	P	**P**	**11 06 18.3**	**+0.7**
N02D	**Trinity Center**	**85.68**	**324**	P	**P**	**11 06 17.9**	**+0.4**
	baz=138,SNR=12						

M04C	Macdoel	85.84	325	P	P	11 06 19.2	+0.9
	baz=138,SNR=31						
KHZ	Kahutara	85.92	222	P	P	11 06 19.3	+0.5
BMO	Blue Mountains	86.06	329	P	P	11 06 19.8	+0.5
BMO				pmax	pmax		
	comp=Z,80nm,1.7s						
BMO	Blue Mountains	86.06	329	P	P	11 06 19.8	+0.5
M02C	Callahan	86.07	324	P	P	11 06 19.8	+0.4
	baz=138,SNR=15						
K05A	Summer Lake	86.09	326	P	P	11 06 20.7	+1.1
KHMM	Horse Mountain	86.14	323	P	P	11 06 20.9	+1.1
OUK	Oukaimeden	86.15	50	P	P	11 06 22.0	+1.6
MSO	Missoula	86.22	332	P	P	11 06 20.9	+0.9
	baz=144,SNR=9.1						
MSO	Missoula	86.22	332	P	P	11 06 20.6	+0.5
MSO				IAMs_20	IAMs_20	11 41 41.9	
	comp=Z,1µm,19.0s						
YBH	Yreka Blue Hor	86.24	324	LR	LR	11 38 40.3	
	comp=Z,456nm,18.7s,baz=160,slow=31						
YBH	Yreka Blue Hor	86.24	324	P	P	11 06 20.1	-0.1
YBH				pmax	pmax		
	comp=Z,79nm,1.7s						
YBH	Yreka Blue Hor	86.24	324	P	P	11 06 20.1	-0.1
JCC	Jacoby Creek,	86.25	323	P	P	11 06 20.4	+0.3
URZ	Urewera	86.29	227	P	P	11 06 20.2	-0.4
	comp=Z,20nm,1.2s,baz=299,slow=22,SNR=3.5						
URZ	Urewera	86.29	227	P	P	11 06 20.0	-0.7
URZ				IAmb	IAmb	11 06 36.0	
	comp=Z,128nm,1.8s						
URZ				IAMs_20	IAMs_20	11 35 07.4	
	comp=Z,1µm,21.0s						
L04D	Klamath Falls	86.40	325	P	P	11 06 21.4	+0.3
	baz=138,SNR=10						
K04D	Chiloquin, OR	86.43	325	P	P	11 06 22.0	+0.8
	baz=138,SNR=6.2						
I07A	Izee	86.46	327	P	P	11 06 22.4	+1.1
I07A				IAmb	IAmb	11 06 37.8	
	comp=Z,174nm,1.7s						
RPZ	Rata Peaks	86.51	220	P	P	11 06 22.4	+0.7
J05D	Fort Rock, OR	86.67	326	P	P	11 06 23.6	+1.2
	baz=139,SNR=27						
OUZM	OUZ	86.69	51	P	P	11 06 24.0	+1.2
THZ	Tophouse	86.70	222	P	P	11 06 22.5	-0.2
KRMB	Red Mountain	86.70	323	P	P	11 06 23.2	+0.7
KRMB				IAmb	IAmb	11 06 39.1	
	comp=Z,113nm,1.4s						
F10A	Beach Ranch, E	86.91	330	P	P	11 06 23.6	+0.2
F10A				IAmb	IAmb	11 06 38.3	
	comp=Z,81nm,1.6s						
PINE	Pine Mountain	86.91	326	P	P	11 06 24.5	+0.9
ZGR	Zagora	86.97	52	P	P	11 06 26.0	+1.8
L02E	Cave Junction	87.01	324	P	P	11 06 25.1	+1.3
	baz=137,SNR=11						
HUMO	Hull Mountain	87.01	325	P	P	11 06 24.3	+0.4
J04D	Umpqua Nationa	87.06	325	P	P	11 06 25.4	+1.0
	baz=138						
G08A	Pilot Rock	87.14	329	P	P	11 06 25.0	+0.5
G08A				IAmb	IAmb	11 06 39.9	
	comp=Z,79nm,1.5s						
TZRR	Tazzarine	87.42	52	P	P	11 06 28.0	+1.7
K02D	Willamette Mer	87.43	324	P	P	11 06 27.1	+1.1
	baz=137,SNR=20						
I05D	Terrebonne, OR	87.52	327	P	P	11 06 27.5	+1.2
	baz=139,SNR=24						
DBO	Dodson Butte	87.53	325	P	P	11 06 27.6	+1.2
I04A	Tendick Farm,	87.62	326	P	P	11 06 26.8	-0.1
	baz=138,SNR=8.5						
E09A	Wood Farm, Sta	87.73	330	P	P	11 06 27.1	-0.1
J01E	Myrtle Point	87.91	324	P	P	11 06 29.0	+0.9
	baz=137						
MSNA	Messina	88.01	115	*e*P	P	11 06 30.6	+1.2
MSNA	Messina	88.01	115	*e*P	P	11 06 30.6	+1.2
I03D	Drain, OR	88.01	325	P	P	11 06 29.5	+0.9
	baz=137						
F07A	Phinny Hill Vi	88.04	328	P	P	11 06 29.5	+0.8
F07A				IAmb	IAmb	11 06 44.5	
	comp=Z,152nm,1.6s						
BLWY	Bulawayo	88.06	112	*e*P	P	11 06 30.2	+0.5
BLWY	Bulawayo	88.06	112	*e*P	P	11 06 30.2	+0.5
E08A	Dider Farm, El	88.11	329	P	P	11 06 29.4	+0.4
E08A				IAmb	IAmb	11 06 44.0	
	comp=Z,124nm,1.7s						
H04A	Detroit Lake	88.17	326	P	P	11 06 29.4	0.0
G05D	Wamic, OR	88.18	327	P	P	11 06 30.8	+1.4
	baz=139,SNR=8.1						
BUCK	Buck Mountain	88.20	326	P	P	11 06 30.4	+0.8
BUCK				IAmb	IAmb	11 06 45.8	
	comp=Z,114nm,1.2s						
HAWA	Hanford	88.24	329	P	P	11 06 30.5	+0.8
HAWA				IAMs_20	IAMs_20	11 41 23.3	
	comp=Z,1µm,19.0s						
H04D	Lebanon	88.32	326	P	P	11 06 30.4	+0.4
	baz=138						
HOOD	Mount Hood Mea	88.40	327	P	P	11 06 31.7	+1.1
HOOD				IAmb	IAmb	11 06 46.1	
	comp=Z,132nm,1.4s						
GOLM	Goulmima	88.40	51	P	P	11 06 34.0	+3.0
MOPA	Mopani	88.45	116	*e*P	P	11 06 31.1	-0.3
MOPA	Mopani	88.45	116	*e*P	P	11 06 31.1	-0.3
D08A	Wollman Farm,	88.49	330	P	P	11 06 31.2	+0.4
D08A				IAmb	IAmb	11 06 45.9	
	comp=Z,102nm,1.6s						
E07A	Sunnyside	88.52	329	P	P	11 06 31.5	+0.5
E07A				IAmb	IAmb	11 06 46.4	
	comp=Z,102nm,1.7s						
COR	Corvallis	88.64	326	P	P	11 06 32.4	+0.8
COR				pmax	pmax		
	comp=Z,306nm,1.7s						
COR	Corvallis	88.64	326	P	P	11 06 32.4	+0.8
NEW	Newport	88.67	331	LR	LR	11 43 10.5	
	comp=Z,964nm,19.8s,baz=154,slow=34						
NEW	Newport	88.67	331	P	P	11 06 31.5	-0.2
NEW				pmax	pmax		
	comp=Z,68nm,1.6s						
NEW	Newport	88.67	331	P	P	11 06 31.9	+0.2
	baz=142						
NEW	Newport	88.67	331	P	P	11 06 31.5	-0.2
NEW				IAmb	IAmb	11 06 45.9	
	comp=Z,68nm,1.6s						
F05D	White Salmon	88.73	328	P	P	11 06 33.1	+1.1
	baz=139,SNR=17						
C09A	Chrisman Ranch	88.79	330	P	P	11 06 32.5	+0.3
C09A				IAmb	IAmb	11 06 47.9	
	comp=Z,114nm,1.4s						
G03D	McMinnville, O	89.08	326	P	P	11 06 34.7	+1.0
	baz=137						
FFC	Flin Flon	89.09	343	P	P	11 06 33.8	+0.4
FFC				pmax	pmax		
	comp=Z,64nm,1.1s						
FFC	Flin Flon	89.09	343	P	P	11 06 33.8	+0.4
FFC				IAmb	IAmb	11 06 34.6	
	comp=Z,64nm,1.1s						
CZD	Col de Zad	89.15	50	P	P	11 06 37.0	+2.3
MDT	Midelt	89.31	51	P	P	11 06 36.5	+1.4
MORF	Marmelete	89.54	45	*e*P	P	11 06 37.2	+1.1
MORF				IAmb	IAmb	11 06 37.5	
	comp=Z,34nm,1.1s						
MORF	Marmelete	89.54	45	*e*P	P	11 06 37.1	+1.1
MORF	Marmelete	89.54	45	*e*P	P	11 06 37.3	+1.3
PTEO	Sao Teotonio	89.65	45	*e*P	P	11 06 37.5	+1.0
	comp=Z,62nm,1.4s						
E04D	Cinebar	89.75	327	P	P	11 06 37.1	+0.4
	baz=138						
PBDV	Barranco-do-Ve	89.94	46	*e*P	P	11 06 39.0	+1.1
	comp=Z,67nm,1.1s						
PCVE	Castro Verde	90.12	45	*e*P	P	11 06 39.7	+1.0
PNCL	Nicolau / Gran	90.13	45	*e*P	P	11 06 38.7	0.0
	comp=Z,46nm,1.3s						
MESJ	Messejana	90.14	45	*e*P	P	11 06 40.0	+1.2
MESJ				IAmb	IAmb	11 06 40.9	
	comp=Z,80nm,1.7s						
MESJ	Messejana	90.14	45	*e*P	P	11 06 39.9	+1.2
MESJ	Messejana	90.14	45	*e*P	P	11 06 39.8	+1.0
	comp=Z,49nm,1.4s						
PVAQ	Vaqueiros	90.17	46	*e*P	P	11 06 39.7	+0.8
	comp=Z,56nm,2.1s						
PVAQ	Vaqueiros	90.17	46	*e*S	S	11 17 40.7	+10
PVAQ	Vaqueiros	90.17	46	*e*LR	LR	11 37 48.5	
	comp=Z,1µm,22.0s						
LSZ	Lusaka	90.28	108	P	P	11 06 41.1	+0.9
LSZ	Lusaka	90.28	108	P	P	11 06 41.1	+0.9
PBEJ	Beja	90.48	45	*e*P	P	11 06 41.4	+1.1
	comp=Z,41nm,1.6s						
D03D	Eldon	90.71	328	P	P	11 06 41.7	+0.5
	baz=138,SNR=5.3						
EVO	Evora	90.71	45	*e*P	P	11 06 42.3	+0.9
B06A	Marblemount	90.72	329	P	P	11 06 41.7	+0.5
B06A				IAmb	IAmb	11 06 42.1	
	comp=Z,34nm,0.9s						
B05A	Bryant	90.80	329	P	P	11 06 41.6	+0.1
	baz=138,SNR=8.4						
PSBE	So Bento	90.87	43	*e*P	P	11 06 43.1	+0.9
	comp=Z,69nm,1.3s						
PMTG	Montargil	90.92	44	*e*P	P	11 06 42.8	+0.4
	comp=Z,68nm,1.2s						
PBAR	Barrancos	91.08	45	*e*P	P	11 06 43.6	+0.5
	comp=Z,19nm,1.3s						
FIGM	Figuig	91.17	53	P	P	11 06 46.0	+2.1
TDRA	Tendrara	91.18	52	P	P	11 06 46.0	+2.0
PESTR	Estremoz	91.18	44	*e*P	P	11 06 44.6	+1.0
	comp=Z,41nm,1.2s						
PESTR	Estremoz	91.18	44	P	P	11 06 43.9	+0.3
PESTR	Estremoz	91.18	44	P	P	11 06 44.3	+0.7
PCAS	Casmilo, Conde	91.39	43	*e*P	P	11 06 45.0	+0.4
	comp=Z,42nm,1.6s						
PMRV	Marv??o	91.65	44	*e*P	P	11 06 46.1	+0.3
	comp=Z,36nm,1.2s						
PMRV	Marv??o	91.65	44	*e*S	S	11 17 45.9	+2.1
PMRV	Marv??o	91.65	44	*e*LR	LR	11 37 55.9	
	comp=Z,1µm,22.0s						
PCBR	Castelo Branco	91.86	44	*e*P	P	11 06 47.2	+0.5
	comp=Z,27nm,1.2s						
PVIS	Viseu	92.17	43	*e*P	P	11 06 48.3	+0.1
	comp=Z,36nm,2.1s						
MTE	Manteigas	92.18	43	*e*P	P	11 06 48.9	+0.6
	comp=Z,43nm,1.2s						
MTE	Manteigas	92.18	43	*e*S	S	11 17 45.1	-3.5
MTE	Manteigas	92.18	43	*e*LQ	LQ	11 33 57.6	
MTE				*e*LR	LR	11 37 50.2	
	comp=Z,1µm,24.0s						
MTE	Manteigas	92.18	43	P	P	11 06 48.4	+0.1
PVRL	Vila Real	92.63	43	*e*P	P	11 06 50.9	+0.6
	comp=Z,38nm,1.8s						
POLO	Lamas de Olo	92.65	42	*e*P	P	11 06 49.8	-0.7
PCAB	Cabril	92.73	42	*e*P	P	11 06 51.0	+0.3
PGAV	Gavieira, Arco	92.75	42	*e*LR	LR	11 38 13.2	
	comp=Z,2µm,22.0s						
MVO	Moncorvo	92.96	43	*e*P	P	11 06 52.4	+0.5
	comp=Z,55nm,1.2s						
MVO	Moncorvo	92.96	43	*e*S	S	11 17 52.8	-2.8
MVO	Moncorvo	92.96	43	*e*LR	LR	11 38 11.2	
	comp=Z,1µm,22.0s						
PBRG	Braganca	93.53	43	*e*P	P	11 06 54.8	+0.3
	comp=Z,34nm,1.5s						
PAB	San Pablo	93.57	45	P	P	11 06 55.4	+0.6
PAB				pmax	pmax		
	comp=Z,23nm,1.2s						
PAB				MLR	MLR		
	comp=Z,1µm,19.0s						
PAB	San Pablo	93.57	45	P	P	11 06 55.4	+0.6
PAB	San Pablo	93.57	45	IAMs_20	IAMs_20	11 48 30.7	
	comp=Z,1µm,19.0s						
PAB	San Pablo	93.57	45	P	P	11 06 55.3	+0.6
ESDC	Sonseca Array	93.89	46	P	P	11 06 56.2	+0.1
	comp=Z,7.5nm,0.9s,baz=245,slow=4.4,SNR=29						
ESDC				LR	LR	11 48 44.0	
	comp=Z,923nm,18.7s,baz=250,slow=35						
ESDC	Sonseca Array	93.89	46	P	P	11 06 56.4	+0.2
ESBB	Sonseca Array	93.89	46	P	P	11 06 56.3	+0.1
YKA	Yellowknife Ar	99.14	341	P	Pdif	11 07 18.7	-0.7
	comp=Z,7.3nm,0.9s,baz=128,slow=6.0,SNR=5.2						
MBAR	Mbarara	100.09	97	IAMs_20	IAMs_20	11 54 58.3	
	comp=Z,1µm,20.0s						
VOI	Vohitsoka	100.88	124	IAMs_20	IAMs_20	11 45 40.3	
	comp=Z,734nm,21.0s						
CLF	Chambon-Foret	102.34	41	IAMs_20	IAMs_20	11 55 24.6	
	comp=Z,1µm,20.0s						
DZM	Mont Dzumac	103.63	234	*e*SS	SS	11 26 41.8	+1.8
	comp=Z,2µm,31.6s						
DZM	Mont Dzumac	103.63	234	*e*LR	LR	11 41 41.0	
	comp=Z,3µm,24.1s,baz=144						
ECH	Echery	105.26	43	IAMs_20	IAMs_20	11 54 03.0	
	comp=Z,727nm,22.0s						
KMBO	Kilima Mbogo	105.36	101	IAMs_20	IAMs_20	11 54 02.8	
	comp=Z,1µm,20.0s						
LODK	Lodwar	106.11	96	IAMs_20	IAMs_20	11 54 15.0	
	comp=Z,888nm,20.0s						
GRA1	Grafenberg Arr	108.32	43	IAMs_20	IAMs_20	12 00 16.8	
	comp=Z,722nm,20.0s						
A36M	Sachs Harbour	108.98	345	IAMs_20	IAMs_20	11 58 11.4	
	comp=Z,1µm,21.0s						
GERES	GERESS Array B	109.43	44	PKiKP	PKiKP	11 12 08.2	-0.6
	comp=Z,2.8nm,0.9s,baz=202,slow=1.4,SNR=10						
KHC	Kasperske Hory	109.47	44	*e*PKP	PKiKP	11 12 06.7	-2.1
KHC				*e*x	x	11 12 33.5	
KHC				AMS	AMS	12 00 50.0	
	comp=Z,500nm,18.1s						
CLL	Collm	110.04	42	*e*P	Pdif	11 08 09.0	+0.9
CLL				*i*		11 12 09.7	
CLL				*e*		11 23 24.0	
CLL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CLL				MLR	MLR		
	comp=Z,800nm,18.6s						
CLL	Collm	110.04	42	*e*Pdif	Pdif	11 08 09.0	+0.9
CLL				*i* PKiKP	PKiKP	11 12 09.7	0.0
	comp=Z,4.0nm,1.0s						
CLL				*e*PP	PP	11 12 40.0	-3.7
CLL				*e*pPP		11 12 55.0	
CLL				*e*Sdif	Sdif	11 20 36.0	+17
CLL				*e*PS	PS	11 22 11.0	-1.8
CLL				*e*PKKPab	PKKPab	11 23 24.0	+3.0
CLL				*e*PKKSdf	PKKSdf	11 27 03.0	-4.0
CLL				*e*(SS)		11 28 48.0	
CLL				*e*SSS	SSS	11 32 12.0	
CLL				LmH		11 59 00.0	
	comp=N,300nm,18.0s						
CLL				LmH		11 59 00.0	
	comp=E,700nm,20.0s						
CLL				LmV		11 59 00.0	
	comp=Z,800nm,18.6s						
CLL	Collm	110.04	42	IAMs_20	IAMs_20	11 57 55.2	
	comp=Z,844nm,19.0s						
PDG	Podgorica	110.40	52	IAMs_20	IAMs_20	12 01 48.5	
	comp=Z,666nm,20.0s						
KRUC	Moravsky	111.14	45	*e*PKIKP	PKiKP	11 12 11.7	-0.2
KRUC				*e*PP	PP	11 12 47.9	-3.9
VRAC	Vranov	111.36	45	*e*PKIKP	PKiKP	11 12 12.1	-0.2
VRAC				*e*PP	PP	11 12 49.4	-4.0
RGN	Rugen	111.51	39	IAMs_20	IAMs_20	11 58 40.9	
	comp=Z,678nm,21.0s						
CHVC	Chvalec	111.53	43	*e*PKP	PKiKP	11 12 13.1	+0.5
CHVC				AMS	AMS	12 00 50.0	
	comp=Z,500nm,19.5s						
ILAR	Eielson Array	111.53	334	Pdiff	Pdif	11 08 14.4	0.0
	comp=Z,0.9nm,0.9s,baz=161,slow=4.7,SNR=6.3						
ILAR				PKiKP	PKiKP	11 12 11.7	-0.4
	comp=Z,1.2nm,0.9s,baz=189,slow=1.2,SNR=6.3						
ILAR				PKKPbc	PKKPbc	11 23 05.7	-2.7
	comp=Z,1.1nm,0.8s,baz=270,slow=2.9,SNR=4.5						
DPC	Dobruska-Polom	111.59	44	*e*PKIKP	PKiKP	11 12 13.4	+0.7
DPC				MLR	MLR		
	comp=Z,500nm,22.1s						
DPC	Dobruska-Polom	111.59	44	*e*PKP	PKiKP	11 12 13.4	+0.7
DPC				AMS	AMS	12 01 10.0	
	comp=Z,500nm,22.1s						
OSTC	Ostas	111.61	43	*e*PKP	PKiKP	11 12 13.0	+0.3
OSTC				AMS	AMS	11 55 40.0	
	comp=Z,500nm,20.1s						
KONO	Kongsberg	111.67	33	IAMs_20	IAMs_20	11 57 09.7	
	comp=Z,772nm,20.0s						
KRLC	Kraliky	111.76	44	*e*PKIKP	PKiKP	11 12 13.6	+0.5
KRLC				MLR	MLR		
	comp=Z,500nm,19.4s						
KRLC	Kraliky	111.76	44	*e*PKP	PKiKP	11 12 13.6	+0.5
KRLC				AMS	AMS	12 00 20.0	
	comp=Z,500nm,19.4s						
MORC	Moravsky Berou	112.11	44	*e*PKIKP	PKiKP	11 12 14.0	+0.3
MORC				*e*PP	PP	11 12 55.6	-3.2
HNR	Honiara	116.64	239	IAMs_20	IAMs_20	11 48 44.7	
	comp=Z,597nm,22.0s						
SUW	Suwalki	116.78	41	*e*P	PKiKP	11 12 22.5	+0.1
SUW	Suwalki	116.78	41	IAMs_20	IAMs_20	12 01 50.5	
	comp=Z,812nm,20.0s						
ISP	Isparta	116.80	60	IAMs_20	IAMs_20	12 04 08.0	
	comp=Z,740nm,22.0s						
PABE	Paberze	117.62	40	*e*P	PKPdf	11 12 24.0	0.0
CSS	Mathiatis	117.99	64	IAMs_20	IAMs_20	12 02 03.9	
	comp=Z,614nm,22.0s						
MSEY	Mahe Island	118.26	115	IAMs_20	IAMs_20	12 02 13.6	
	comp=Z,887nm,19.0s						
MILM	Milestii Mici	118.32	50	*i* PKIKP	PKPdf	11 12 24.5	-1.1
MILM				pmax	pmax		
	comp=Z,30nm,1.0s						
MILM				pmax	pmax		
	comp=Z,190nm,4.4s						
KIS	Kishinev	118.34	50	*e*PKIKP	PKPdf	11 12 20.0	-5.7
NACGM	Naroch	119.04	41	*i* PKiKP	PKPdf	11 12 23.9	-2.9
AKASG	Malin Array Be	119.53	46	PKP	PKPdf	11 12 26.6	-1.2
	comp=Z,9.7nm,0.8s,baz=275,slow=2.3,SNR=16						
AKBB	Malin Array Si	119.53	46*c*	*i*PKIKP	PKPdf	11 12 26.3	-1.6
AKBB				MLR	MLR		
	comp=Z,385nm,21.0s						
BRTR	Keskin Array B	119.70	59	PKP	PKPdf	11 12 28.3	-0.5
	comp=Z,3.5nm,0.9s,baz=196,slow=3.2,SNR=12						
BRTR				PP	PP	11 13 44.5	-8.0
	comp=Z,4.3nm,0.9s,baz=232,slow=6.1,SNR=4.2						
VSU	Vasula	119.75	37	*e*P	PKiKP	11 12 28.4	+0.3
VSU	Vasula	119.75	37*d*	*i*PKIKP	PKPdf	11 12 27.5	-0.5
VSU				MLR	MLR		
	comp=Z,1µm,20.0s						
FINES	FINESS Array B	119.96	33	PKP	PKPdf	11 12 27.7	-0.6
	comp=Z,5.0nm,0.9s,baz=15,slow=8.1,SNR=6.4						
FINES				PKKPbc	PKKPbc	11 22 38.5	-0.2
	comp=Z,3.7nm,0.9s,baz=90,slow=2.8,SNR=4.0						
ASAR	Alice Springs	120.74	207	PKP	PKPdf	11 12 29.9	-1.4
	comp=Z,5.3nm,1.1s,baz=148,slow=2.4,SNR=21						
ASAR				PKKPbc	PKKPbc	11 22 35.4	+0.1
	comp=Z,3.3nm,0.8s,baz=338,slow=3.4,SNR=27						
ASAR				SKKPbc	SKKPbc	11 26 09.7	-8.7
	comp=Z,1.0nm,0.9s,baz=326,slow=4.1,SNR=4.1						
ARCES	ARCESS Array B	120.80	24	PKKPbc	PKKPbc	11 22 33.6	-2.1
	comp=Z,7.6nm,1.1s,baz=123,slow=4.5,SNR=6.0						
APA	Apatity	123.62	26⇓	*i*PKIKP	PKPdf	11 12 32.5	-2.7
APA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ANN	Anapa	123.67	54	*i* PKIKP	PKPdf	11 12 34.8	-1.2
ANN				*e*		11 19 31.6	
ANN				*e*SSS	SSS	11 35 37.7	
WRA	Warramunga Arr	123.89	209	PKP	PKPdf	11 12 35.9	-1.5
	comp=Z,13nm,1.0s,baz=150,slow=1.5,SNR=38						
WRA				PKKPbc	PKKPbc	11 22 23.4	+0.3
	comp=Z,3.5nm,0.9s,baz=344,slow=4.0,SNR=17						
WRAB	Tennant Creek	123.90	209*d*	*i*PKIKP	PKPdf	11 12 36.8	-0.6
RAYN	Ar Rayn	123.98	81	IAMs_20	IAMs_20	12 00 28.9	
	comp=Z,518nm,21.0s						
LVZ	Lovozero	124.08	26⇑	*i*PKIKP	PKiKP	11 12 36.4	-0.1
OBN	Obninsk	124.64	42⇓	*i*PKIKP	PKPdf	11 12 37.1	-0.4
OBN				*e*		11 12 39.9	
OBN				*e*		11 12 48.6	
OBN				SS	SS	11 31 20.0	+3.2
OBN				pmax	pmax		
	comp=Z,40nm,1.0s						
OBN				MLR	MLR		
	comp=Z,588nm,21.0s						
OBN	Obninsk	124.64	42	IAMs_20	IAMs_20	12 04 53.3	
	comp=Z,964nm,22.0s						
SOC	Sochi	125.05	56	*i* PKIKP	PKPdf	11 12 36.6	-2.1
SOC				*e*PPP	PPP	11 17 08.6	
SOC				*e*PS	PS	11 24 27.2	-1.7
SOC				*e*SSS	SSS	11 35 59.4	
SOC				pmax	pmax		
	comp=Z,11nm,0.4s						
SOC				MLR	MLR		
	comp=Z,180nm,16.0s						
MOS	Moscow	125.29	41	*e*PKIKP	PKPdf	11 12 36.8	-1.9
MOS				pmax	pmax		
	comp=Z,41nm,0.9s						
LPSR	Galich'ya Gora	125.80	45	*e*PKIKP	PKPdf	11 12 39.3	-0.5
LPSR				pmax	pmax		
	comp=Z,40nm,0.9s						
VSR	Storozhevoye	125.81	47	*e*PKIKP	PKPdf	11 12 38.1	-1.8
VSR				pmax	pmax		
	comp=Z,20nm,1.0s						
VORD	Divnogorie	125.86	47	*e*PKIKP	PKPdf	11 12 38.1	-1.9
VORD				pmax	pmax		
	comp=Z,20nm,1.0s						
H11S2	WAKE ISLAND Hy	126.33	271	T	T	13 31 34.4	
	baz=116,slow=75,SNR=3360						
H11S1	WAKE ISLAND Hy	126.35	271	T	T	13 31 34.3	
	baz=116,slow=75,SNR=961						
H11S3	WAKE ISLAND Hy	126.35	271	T	T	13 31 32.4	
	baz=116,slow=75,SNR=1818						
KLMR	Klimovskoe	126.41	35	*e*PKIKP	PKPdf	11 12 39.0	-1.7
KLMR				pmax	pmax		
	comp=Z,57nm,1.1s						
KLMR	Klimovskoe	126.41	35	*e*PKPdf	PKPdf	11 12 39.1	-1.7
KLMR	Klimovskoe	126.41	35	AMP		11 12 42.0	
	comp=Z,57nm,1.1s						
KLMR	Klimovskoe	126.41	35	LQ	LQ	11 58 02.0	
KLMR	Klimovskoe	126.41	35	LQ	LQ	11 58 02.0	
KLMR	Klimovskoe	126.41	35	LRM	MLR	12 04 56.4	
SOCY	Socotra	126.42	98	IAMs_20	IAMs_20	12 05 25.5	
	comp=Z,789nm,20.0s						
H11N3	WAKE ISLAND Hy	126.67	273	T	T	13 31 57.1	
	baz=117,slow=75,SNR=198						
H11N1	WAKE ISLAND Hy	126.68	273	T	T	13 32 05.9	
	baz=117,slow=75,SNR=53						
H11N2	WAKE ISLAND Hy	126.68	273	T	T	13 32 01.3	
	baz=117,slow=75,SNR=358						
NEY	Neytrino	127.14	57⇑	*i*PKIKP	PKiKP	11 12 44.0	+0.5
KIV	Kislovodsk	127.23	56	*i* PKIKP	PKiKP	11 12 43.4	-0.1
KIV				*e*		11 14 40.5	
KIV				*e*PS	PS	11 24 47.7	-0.6
KIV				*e*SS	SS	11 31 46.1	-4.2
KIV				pmax	pmax		
	comp=Z,13nm,1.1s						
KBZ	Khabaz	127.35	56	PKP	PKiKP	11 12 43.4	-0.2
	comp=Z,7.5nm,1.0s,baz=206,slow=2.2,SNR=10						
KBZ				PP	PP	11 14 47.6	+4.0
	comp=Z,1.8nm,0.5s,baz=322,slow=18,SNR=5.2						
KBZ	Khabaz	127.35	56*c*	*i*PKIKP	PKPdf	11 12 42.9	-0.2
KBZ				MLR	MLR		
	comp=Z,413nm,22.0s						
VRH	Novokhopyorsk	127.41	47	*e*PKIKP	PKPdf	11 12 40.0	-3.0
VRH				pmax	pmax		
	comp=Z,30nm,1.2s						
NCK	Nalchik	127.81	57⇓	*i*PKIKP	PKiKP	11 12 45.5	+0.9
ZEI	Tsey	127.92	58	*i* PKIKP	PKPdf	11 12 43.6	-0.9
ZEI				pmax	pmax		
	comp=Z,2.0nm,1.2s						
GNI	Garni	128.09	61⇓	*i*PKIKP	PKPdf	11 12 44.5	-0.4
PRGR	Permogore	129.29	33	*e*PKIKP	PKPdf	11 12 45.3	-0.9
PRGR				pmax	pmax		
	comp=Z,39nm,1.4s						
GROC	Groznyy	129.36	57	*i* PKIKP	PKPdf	11 12 45.7	-1.2
GROC				*e*		11 14 54.4	
GROC				pmax	pmax		
	comp=Z,17nm,0.4s						
BILL	Bilibino	130.12	335⇑	*i*PKIKP	PKPdf	11 12 47.6	-0.1
BILL				*e*		11 15 00.1	
BILL				pmax	pmax		
	comp=Z,29nm,1.2s						
BILL				MLR	MLR		
	comp=Z,235nm,17.0s						
MAK	Makhachkala	130.57	58*c*	*i*P	Pdif	11 09 37.5	-2.1
MAK				*i*		11 12 50.8	
MAK				*e*		11 15 03.1	
MAK				*e*PPP	PPP	11 17 55.3	
MAK				*e*		11 19 54.2	
MAK				pmax	pmax		
	comp=Z,41nm,0.4s						
KIRV	Kirov	131.59	37*c*	*e*PKIKP	PKPdf	11 12 50.2	-0.4
UOSS	Minazif	133.62	84	IAMs_20	IAMs_20	12 14 46.1	
	comp=Z,549nm,20.0s						
ARU	Arti	136.86	39	PP	PP	11 15 53.3	+9.1
	comp=Z,1.7nm,0.7s,baz=287,slow=6.7,SNR=5.0						
ARU	Arti	136.86	39	*i* PKIKP	PKPdf	11 13 00.8	+0.2
ARU						11 15 40.9	
ARU				SS	SS	11 33 45.0	-1.3
ARU				MLR	MLR		
	comp=Z,937nm,22.0s						
ARU	Arti	136.86	39	IAMs_20	IAMs_20	12 14 55.3	
	comp=Z,714nm,20.0s						
SEY	Seymchan	137.44	332⇓	*e*PKIKP	PKPdf	11 12 59.8	-1.7
TIXI	Tiksi	137.57	351	PKhKP	PKPpre	11 12 48.2	
	comp=Z,1.9nm,0.7s,baz=49,slow=1.7,SNR=6.6						
TIXI				PP	PP	11 15 47.1	-0.9
	comp=Z,2.4nm,0.7s,baz=20,slow=2.3,SNR=3.1						
TIXI	Tiksi	137.57	351⇑	*e*PKIKP	PKPdf	11 13 00.2	-1.3
PET	Petropavlovsk	137.68	317⇓	*i*PKIKP	PKPdf	11 13 02.0	-0.2
AKTO	Aktyubinsk	137.75	47	PP	PP	11 15 47.3	-2.7
	comp=Z,4.4nm,1.1s,baz=245,slow=4.8,SNR=3.9						
SVE	Sverdlovsk	137.85	38	*e*PKIKP	PKPdf	11 13 03.0	+0.5
SVE				pmax	pmax		
	comp=Z,17nm,1.1s						

GEYT	Alibeck	138.08	66	PKP	PKPdf	11 13 02.4	-1.1
	comp=Z,6.3nm,0.8s,baz=248,slow=11,SNR=5.7						
GEYT				PP	PP	11 15 49.4	-3.3
	comp=Z,4.4nm,0.7s,baz=276,slow=1.3,SNR=3.9						
PETK	Petropavlovsk-	138.22	317	PKP	PKPdf	11 13 03.2	-0.1
	comp=Z,11nm,1.1s,baz=130,slow=6.0,SNR=3.6						
EDFI	Ende, Flores	138.81	200	PKP	PKPdf	11 13 04.7	-1.0
AB31	Akbulak array	139.15	49	i PKHKP	PKPpre	11 12 54.5	
BNDI	Bandanaira	139.49	214	PKP	PKPdf	11 13 06.2	-0.6
NRIK	Noril'sk	139.50	11	PKP	PKPdf	11 13 05.6	+0.4
	comp=Z,13nm,1.2s,baz=45,slow=2.7,SNR=6.1						
NRIK				PP	PP	11 16 04.1	+4.1
	comp=Z,2.5nm,0.5s,baz=324,slow=5.7,SNR=3.6						
NRIK	Noril'sk	139.50	11	cePKIKP	PKPdf	11 13 05.2	+0.1
KAPI	Kappang	142.91	199	IAMs_20	IAMs_20	12 14 30.1	
	comp=Z,541nm,20.0s						
BRVK	Borovoye	144.38	40	c iPKIKP	PKPbc	11 13 13.0	+0.2
BRVK				MLR	MLR		
	comp=Z,779nm,20.0s						
MDSI	Maura Dua	144.73	172	PKP	PKPab	11 13 13.7	-1.2
PALK	Pallekele	144.96	126	PKIKP	PKPab	11 13 15.8	0.0
PALK	Pallekele	144.96	126		PKPab	11 13 15.8	0.0
LHSI	Lahat	145.30	171	PKP	PKPbc	11 13 15.8	-1.1
TNTI	Ternate	145.32	214		PKPbc	11 13 15.6	-1.4
KSI	Kapahiang	145.34	169	PKP	PKPbc	11 13 17.0	-0.1
KBKI	Kotabaru	145.42	193	PKP	PKPbc	11 13 17.1	-0.1
BBKI	Banjar Baru	145.50	191	PKP	PKPdf	11 13 17.0	-0.5
LUWI	Luwuk	145.67	206	PKP	PKPab	11 13 18.5	+0.1
PPSI	Pulau Pagai	145.70	165	PKP	PKPab	11 13 19.0	+0.5
MASI	Maura Aman, Be	145.78	169	PKP	PKPab	11 13 19.1	+0.3
YAK	Yakutsk	145.81	342	PKPbc	PKPdf	11 13 16.5	0.0
	comp=Z,230nm,0.8s,baz=122,slow=0.2,SNR=43						
YAK	Yakutsk	145.81	342	c iPKP2	PKPbc	11 13 16.9	-0.1
YAK				e		11 16 38.8	
YAK				pmax	pmax		
	comp=Z,376nm,0.8s						
YAK				pmax	pmax		
	comp=N,33nm,0.9s						
YAK				pmax	pmax		
	comp=E,16nm,1.2s						
YAK				pmax	pmax		
	comp=Z,862nm,4.8s						
YAK				pmax	pmax		
	comp=N,227nm,2.7s						
YAK				pmax	pmax		
	comp=E,210nm,4.4s						
YAK	Yakutsk	145.81	342		PKPbc	11 13 17.3	+0.3
KUR	Kuril'sk	146.21	307	i PKIKP	PKPdf	11 13 17.2	-0.5
KUR				i		11 13 20.2	
KUR				pmax	pmax		
	comp=Z,2µm,3.5s						
KUR				pmax	pmax		
	comp=Z,323nm,1.2s						
POO	Poona	146.26	103	⇑iP	PKPdf	11 13 18.0	-0.7
	comp=Z,170nm,1.6s						
KBL	Kabul	146.58	73	PKIKP	PKPdf	11 13 18.7	-0.3
KBL	Kabul	146.58	73		PKPdf	11 13 18.7	-0.3
KMSI	Cibinong	146.67	209	PKP	PKPdf	11 13 20.3	+0.8
SISI	Saibi	146.86	162	PKP	PKPbc	11 13 22.1	+0.5
BRLS	Borolday	146.90	57	ePKP	PKPbc	11 13 20.6	-0.4
	baz=58						
BRLS	Borolday	146.90	57	ePKP2	PKPbc	11 13 20.6	-0.4
BRZS	Berezniki	146.95	44	ePKP	PKPdf	11 13 17.9	-1.0
	baz=44						
BRZS	Berezniki	146.95	44	ePKIKP	PKPdf	11 13 17.8	-1.0
IUG	Iuzhnay	147.17	59	ePKP	PKPdf	11 13 19.5	-0.2
	baz=59						
IUG	Iuzhnay	147.17	59	ePKIKP	PKPdf	11 13 19.4	-0.2
PPBI	Pangkal Pinang	147.22	175	PKP	PKPdf	11 13 20.2	-0.2
MRSI	Marisa	147.38	205	PKP	PKPdf	11 13 18.9	-1.8
KK31	Karatay Array	147.38	57	i PKIKP	PKPdf	11 13 19.4	-0.4
KK31	Karatay Array	147.38	57	PKPdf	PKPdf	11 13 19.4	-0.4
KK31				PKPbc	PKPbc	11 13 22.4	+0.2
JMBI	JAMBI	147.48	171	PKP	PKPbc	11 13 22.3	-1.0
PDSI	Padang	147.59	165	PKP	PKPbc	11 13 22.9	-0.8
YUK	Yuzh-Kuril'sk	147.85	305	c iPKP2	PKPbc	11 13 23.0	-0.5
MPSI	Mapaga	147.95	202	PKP	PKPdf	11 13 21.0	-0.6
SMKI	Samarinda	147.95	196	PKP	PKPdf	11 13 22.9	+1.3
MTKI	Muara Teweh, K	147.96	192	PKP	PKPdf	11 13 21.9	+0.2
DZA	Taraz	148.01	57	ePKP	PKPdf	11 13 20.4	-0.5
	baz=57						
DZA	Taraz	148.01	57	ePKIKP	PKPdf	11 13 20.4	-0.5
PPI	Padang Panjang	148.02	164	PKP	PKPbc	11 13 23.7	-1.1
DRK	Karamyk	148.79	64	PKPdf	PKPdf	11 13 23.1	+0.5
DRK				PKPbc	PKPbc	11 13 27.0	+0.5
YSS	Yuzh-Sakhalins	149.17	311	ePKP2	PKPbc	11 13 26.1	-0.7
YSS				MLR	MLR		
	comp=Z,300nm,19.0s						
YSS	Yuzh-Sakhalins	149.17	311		PKPbc	11 13 26.9	+0.2
BTLS	Baital	149.44	52	ePKP	PKPdf	11 13 21.5	-1.6
	baz=52						
BTLS	Baital	149.44	52	ePKIKP	PKPdf	11 13 21.5	-1.6
HYB	Hyderabad	149.61	109	i PKP	PKPbc	11 13 27.0	-1.8
HYB				esPKP		11 13 48.0	
AML	Almayashu	149.86	58	P	PKPbc	11 13 29.6	+0.4
	SNR=22						
NIL	Nilore	150.00	75	PKIKP	PKPbc	11 13 28.8	-0.5
NIL	Nilore	150.00	75	PKPdf	PKPdf	11 13 24.5	+0.2
NIL					PKPbc	11 13 28.8	-0.5
KURBB	Kurchatov Arra	150.04	40	PKP	PKPdf	11 13 23.5	-0.3
	comp=Z,7.0nm,1.0s,baz=303,slow=2.8,SNR=0.5						
KURBB				PKPbc	PKPbc	11 13 28.7	-0.1
	comp=Z,59nm,0.8s,baz=305,slow=3.2,SNR=6.9						
KURBB				PP	PP	11 17 11.2	+7.7
	comp=Z,3.5nm,0.8s,baz=276,slow=5.8,SNR=5.5						
KURBB	Kurchatov Arra	150.04	40	PKIKP	PKPdf	11 13 23.9	+0.1
KURK	Kurchatov	150.04	40	cePKIKP	PKPdf	11 13 23.8	0.0
KURK	Kurchatov	150.04	40		PKPdf	11 13 23.1	-0.7
KURK				PKPbc	PKPbc	11 13 28.9	+0.1
JKA	Kamikawa-asahi	150.12	306		PKPbc	11 13 29.7	+0.5
ASAJ	Asahikawa	150.12	306	PKPbc	PKPbc	11 13 29.0	-0.2
	comp=Z,50nm,1.0s,baz=153,slow=1.7,SNR=15						
USP	Ospenovka	150.21	56	P	PKPbc	11 13 29.8	+0.3
	SNR=42						
SGDS	Sogindy	150.25	55	ePKP	PKPdf	11 13 23.8	-0.8
	baz=55						
AAK	Ala-Archa	150.34	57	P	PKiKP	11 13 30.8	0.0
	SNR=48						
AAK	Ala-Archa	150.34	57	PKIKP	PKPdf	11 13 22.7	-2.1
AAK	Ala-Archa	150.34	57		PKPdf	11 13 24.2	-0.6
AAK					PKiKP	11 13 30.8	0.0
AAK	Ala-Archa	150.34	57	IAMs_20	IAMs_20	12 22 31.6	
	comp=Z,653nm,22.0s						
CHMS	Chumysh	150.45	56	P	PKPbc	11 13 30.5	+0.4
	SNR=24						
KBK	Karagaybulak	150.66	57	P	PKiKP	11 13 31.4	-0.1
	SNR=25						
PSI	Prapat	150.75	160	PKPbc	PKPbc	11 13 30.5	-1.3
PSI				PKPab	PKPab	11 13 38.3	-0.4
	comp=Z,153nm,0.9s,baz=199,slow=5.7,SNR=7.3						
TKM2	Tokmak 2	151.07	56	P	PKPdf	11 13 25.8	-0.2
	SNR=5.8						
TKM2	Tokmak 2	151.07	56	PKIKP	PKPbc	11 13 31.5	-0.3
ZAA0	Zalesovo Array	151.13	30	PKPdf	PKPdf	11 13 24.9	-0.5
ZAA0				PKPbc	PKiKP	11 13 31.9	0.0
ZALV	Zalesovo Beam	151.13	30	PKP	PKPdf	11 13 25.1	-0.2
	comp=Z,13nm,0.8s,baz=282,slow=2.9,SNR=30						
ZALV				PKPbc	PKPbc	11 13 31.4	+0.1
	comp=Z,252nm,0.8s,baz=307,slow=2.8,SNR=171						
GRNR	Gornyy	151.22	322	⇑iPKIKP	PKPbc	11 13 31.8	+0.2
GRNR				pmax	pmax		
	comp=Z,30nm,1.0s						
KUU	Kurty	151.34	54	ePKP	PKPdf	11 13 25.0	-1.1
	baz=54						
KUU	Kurty	151.34	54	ePKIKP	PKPdf	11 13 25.0	-1.1
DAV	Davao City (W)	151.62	217	IAMs_20	IAMs_20	12 19 37.3	
	comp=Z,444nm,21.0s						
CHKK	Chushkaly	151.80	53	ePKP	PKPdf	11 13 26.2	-0.6
	baz=54						
MDOK	Medeo	152.03	55	ePKP	PKPdf	11 13 26.5	-0.9
	baz=55						
MDOK	Medeo	152.03	55	ePKIKP	PKPdf	11 13 26.4	-0.9
BOD	Bodaibo	152.65	354	ePKIKP	PKPbc	11 13 33.6	-1.0
BOD				pmax	pmax		
	comp=Z,143nm,1.3s						
ZEA	Zeya	153.35	335	i PKIKP	PKPbc	11 13 36.4	+0.1
ZEA				pmax	pmax		
	comp=Z,200nm,9.7s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.0s						
UZB	Uzynbulak	153.42	54	ePKP	PKPdf	11 13 28.4	-1.0
	baz=54						
UZB	Uzynbulak	153.42	54	ePKIKP	PKPdf	11 13 28.4	-1.0
SHLS	Shalkode	153.72	54	ePKP	PKPdf	11 13 29.2	-0.6
	baz=54						
SHLS				ePP	PP	11 17 25.8	+0.7
	baz=54						
SHLS	Shalkode	153.72	54	ePKIKP	PKPdf	11 13 29.2	-0.6
SHLS				e		11 17 25.8	
TEY	Ternei	153.86	311	ePKIKP	PKPdf	11 13 27.1	-2.6
MK31	Makanchi Array	154.10	44	⇑ePKIKP	PKPdf	11 13 28.4	-1.7
MKAR	Makanchi Array	154.10	44	PKP	PKPdf	11 13 29.7	-0.3
	comp=Z,3.7nm,0.8s,baz=298,slow=2.6,SNR=6.5						
MKAR				PKPbc	PKPbc	11 13 37.6	-0.6
	comp=Z,24nm,0.8s,baz=309,slow=1.9,SNR=35						
MKAR				PKPab	sPKPbc	11 13 52.4	-0.3
	comp=Z,52nm,1.0s,baz=291,slow=3.4,SNR=18						
KLR	Kul'dur	154.57	323	PKP	PKPdf	11 13 29.1	-1.5
	comp=Z,8.2nm,1.0s,baz=27,slow=1.8,SNR=10						
KLR				PKPbc	PKPbc	11 13 38.5	-0.6
	comp=Z,4.8nm,0.8s,baz=355,slow=5.4,SNR=6.0						
KLR				PKPab	sPKPbc	11 13 53.5	0.0
	comp=Z,13nm,1.0s,baz=68,slow=3.0,SNR=7.8						
KLR	Kul'dur	154.57	323	cePKIKP	PKPdf	11 13 28.1	-2.5
MJAR	Matsushiro Arr	154.76	291	PKP	PKPdf	11 13 30.0	-1.3
	comp=Z,4.7nm,1.0s,baz=206,slow=0.7,SNR=9.1						
MJAR				PKPbc	PKPbc	11 13 39.4	-0.5
	comp=Z,4.0nm,0.9s,baz=144,slow=1.7,SNR=7.0						
MJAR				PKPab	PKPab	11 13 55.6	+0.6
	comp=Z,24nm,0.8s,baz=109,slow=2.0,SNR=32						
MAJO	Matsushiro	154.76	291	⇓ePKIKP	PKPdf	11 13 29.8	-1.5
MAJO	Matsushiro	154.76	291	PKPdf	PKPdf	11 13 30.0	-1.3
MAJO					PKPbc	11 13 38.7	-1.2
MAJO				PKPab	PKPab	11 13 55.8	+0.8
MAT	Matsushiro	154.76	291	PKP	PKPdf	11 13 29.9	-1.4
USRK	Ussuriysk Ar.	157.19	313	PKP	PKPdf	11 13 33.5	-0.7
	comp=Z,2.2nm,0.9s,baz=77,slow=6.5,SNR=2.3						
USRK				PKPab	PKPab	11 14 05.6	+0.5
	comp=Z,7.3nm,0.8s,baz=90,slow=3.2,SNR=7.1						
USRK	Ussuriysk Ar.	157.19	313		PKPdf	11 13 34.0	-0.3
KOLN	Koldanda	157.97	91	eP	PKPdf	11 13 35.1	-0.9
DANN	Dangsing	158.24	90	eP	PKPdf	11 13 35.9	-0.5
	comp=Z,67nm,0.9s						
IRK	Irkutsk	158.26	7	ePKP2	PKPab	11 14 07.9	-1.5
IRK				pmax	pmax		
	comp=Z,118nm,2.2s						
MOY	Mondy	158.32	13	ePKIKP	PKPdf	11 13 36.3	+0.7
MOY				pmax	pmax		
	comp=Z,52nm,4.0s						
CIT	Chita	158.41	352	ePKP2	PKPab	11 14 11.2	+1.0
TLY	Talaya	158.73	9	PKPab	PKPab	11 14 12.2	+0.7
	comp=Z,8.9nm,0.6s,baz=317,slow=4.1,SNR=8.6						
TLY	Talaya	158.73	9	ePKP2	PKPab	11 14 13.0	+1.5
TLY				pmax	pmax		
	comp=Z,62nm,0.8s						
WMQ	Urumqi	158.89	46	ePKP	PKPdf	11 13 37.6	+1.2
WMQ				LR	LR		
	comp=Z,430nm,29.1s						
WMQ				LR	LR		
	comp=Z,440nm,28.3s						
WMQ				LR	LR		
	comp=Z,750nm,28.3s						
GKN	Gorkha	158.91	91	eP	PKPdf	11 13 36.3	-0.8
DMN	Daman	159.22	93	eP	PKPdf	11 13 36.9	-0.7
KKN	Kakani	159.42	92	eP	PKPdf	11 13 36.7	-1.1
PKIN	Phulchoki	159.47	93	eP	PKPdf	11 13 36.5	-1.4
PKI	Pulchoki	159.48	93	eP	PKPdf	11 13 36.4	-1.6
HIA	Hailar	159.66	339	IAMs_20	IAMs_20	12 39 14.1	
	comp=Z,449nm,20.0s						
ZAK	Zakamensk	159.95	10	ePKIKP	PKPdf	11 13 36.2	-1.3
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.4s						
GUN	Gumba	159.96	92	eP	PKPdf	11 13 37.6	-0.9
JIRN	Jiri	160.17	93	eP	PKPdf	11 13 37.5	-1.3
RAMN	Ramite	160.34	96	eP	PKPdf	11 13 38.7	-0.2
JNU	Nakatsue	160.97	283	PKP	PKPdf	11 13 38.3	-0.8
	comp=Z,14nm,0.6s,baz=123,slow=0.8,SNR=5.1						
ODAN	Odare	160.99	96	eP	PKPdf	11 13 39.0	-0.6
TAPN	Taplejung	161.40	95	eP	PKPdf	11 13 39.1	-1.0
KSRS	Korea Array	162.69	298	PKP	PKPdf	11 13 39.6	-1.0
	comp=Z,2.3nm,0.9s,baz=133,slow=0.3,SNR=4.1						
KSRS				PKPab	PKPab	11 14 30.2	+0.9
	comp=Z,5.4nm,0.9s,baz=57,slow=4.8,SNR=8.2						
SONM	Songino Array	162.82	5	PKP	PKPdf	11 13 39.8	-0.8
	comp=Z,2.8nm,0.9s,baz=255,slow=0.5,SNR=9.3						
SONM				PKPab	PKPab	11 14 30.4	+0.8
	comp=Z,14nm,1.0s,baz=332,slow=3.8,SNR=18						
SONM				PP	PP	11 18 14.6	+0.9
	comp=Z,14nm,1.1s,baz=306,slow=2.1,SNR=13						
ULN	Ulaanbaatar	162.83	4	PKP2	PKPab	11 14 30.6	+0.9
ULN						12 13 40.3	
ULN	Ulaanbaatar	162.83	4	PKPdf	PKPdf	11 13 40.3	-0.4
ULN					PKPab	11 14 30.6	+0.9
SHL	Shillong	164.36	105	PKP2	PKPab	11 14 36.2	-1.1
SHL						12 13 41.6	
SHL	Shillong	164.36	105	PKPdf	PKPdf	11 13 41.6	-1.2
SHL					PKPab	11 14 36.2	-1.1
UBPT	Khong Chiam	164.36	169	PKPdf	PKPdf	11 13 41.8	-1.0
UBPT					PKPab	11 14 36.2	-0.7
CM31	Chiang Mai Arr	164.95	142		PKPab	11 14 39.0	-0.6
CMAR	Chiang Mai Arr	164.95	142	PKP	PKPdf	11 13 42.7	-0.6
	comp=Z,1.1nm,0.3s,baz=250,slow=2.2,SNR=19						
CMAR				PKPab	PKPab	11 14 39.0	-0.5
	comp=Z,36nm,1.0s,baz=230,slow=5.5,SNR=48						
CMAR	Chiang Mai Arr	164.95	142	PKPdf	PKPdf	11 13 43.1	-0.2
CMAR					PKPab	11 14 39.1	-0.5
CHTO	Chiang Mai	165.25	141	PKIKP	PKPdf	11 13 42.2	-1.3
CHTO						11 14 40.3	
CHTO	Chiang Mai	165.25	141	PKPdf	PKPdf	11 13 42.2	-1.3
CHTO					PKPab	11 14 40.3	-0.6
QIZ	Qiongzhong	168.31	186	PKP	PKPdf	11 13 46.0	+0.2
QIZ				PP	PP	11 18 44.7	+2.7
QIZ				SS	SS	11 39 33.4	+3.5
QIZ				AMB	AMB		
	comp=Z,170nm,3.5s						
QIZ				LR	LR		
	comp=Z,350nm,14.7s						
QIZ				LR	LR		
	comp=Z,330nm,15.7s						
QIZ				LR	LR		
	comp=Z,510nm,24.5s						
GTA	Gaotai	168.72	37	⇑PKP	PKPdf	11 13 45.8	+0.1
GTA				pPKP	sPKPdf	11 13 59.6	-0.6
GTA				sPKP		11 14 06.2	
GTA				PKPab	PKPab	11 14 56.7	+0.8
GTA				PP	PP	11 18 43.9	-1.1
GTA				AMB	AMB		
	comp=Z,460nm,6.9s						
GTA				LR	LR		
	comp=Z,510nm,19.6s						
GTA				LR	LR		
	comp=Z,300nm,21.8s						
GTA				LR	LR		
	comp=Z,740nm,23.6s						
HHC	Hu-ho-hao-te	169.62	348	ePKP	PKPdf	11 13 46.6	+0.4
BTO	Baotou	170.07	354	ePKP	PKPdf	11 13 40.5	-5.9
BTO	Baotou	170.07	354	ePKP	PKPdf	11 13 42.1	-4.3
NJ2	Nanjing	171.17	281	ePKP	PKPdf	11 13 48.8	+1.7
KMI	Kunming	172.37	135	⇑PKP	PKPdf	11 13 47.5	-0.7
KMI				pPKP	pPKPdf	11 13 59.5	+0.4
KMI				sPKP		11 14 06.8	
LZH	Lanzhou	173.31	36	ePKP	PKPdf	11 13 46.1	-2.1
LZH				sPKP		11 14 02.8	
LZH				PKPab	PKPab	11 15 17.1	+0.7
LZH				PP	PP	11 19 05.0	-2.8
LZH				SKKS		11 25 54.5	
LZH				AMB	AMB		
	comp=Z,570nm,7.6s						
LZH				LR	LR		
	comp=Z,840nm,19.0s						
LZH				LR	LR		
	comp=Z,840nm,17.4s						
LZH				LR	LR		
	comp=Z,930nm,18.9s						
GYA	Guiyang	175.41	157	⇓PKP	PKPdf	11 13 48.3	-0.8
GYA				PKPab	PKPab	11 15 25.1	-0.7
GYA				PP	PP	11 19 15.5	-2.0
GYA				SS	SS	11 40 41.5	+1.2
GYA				AMB	AMB		
	comp=Z,310nm,11.5s						
GYA				LR	LR		
	comp=Z,310nm,17.3s						
XAN	Xi'an	176.68	356	PKP	PKPdf	11 13 48.3	-0.8
XAN				pPKP	sPKPdf	11 14 03.0	-0.6

DJA 07 10:58:28.6±1.2,**0°N**±11°×**9°8E**±°,**h43**^{km}±99^{km},**M4.3**/4, **mb5.4**/1,**mB5.5**/1,**MLv3.7**/4,**Mw(mB)4.9**/1,**Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSI	Gunungsitoli	0.91	340	P	Pn	10 58 45.2	+0.2
MNSI	Mandailing Nat	1.74	78	P	Pn	10 58 56.1	-0.2
MNSI				S	Sn	10 59 17.6	+0.4
PPI	Padang Panjang	2.67	109	P	Pn	10 59 09.7	+0.6
MASI	Maura Aman, Be	5.62	129	P	Pn	10 59 49.4	-0.4

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*IDC **07** 11:11:52.7±0.4, 37°.06N×97°.85W, h0^{km}, mb4.2/19, mb1 4.4/27, mb1mx4.2/78, mbtmp4.2/27, ML3.9/10, MS4.5/4, Ms1 4.5/4, ms1mx3.5/52, Error ellipse: s-maj=8.6km s-min=7.3km az=151.0*

*NEIC **07** 11:11:53.8±1.8, 36°.92N±0°.04×97°.82W±0°.05, h5^{km}±4^{km}, Error ellipse: s-maj=6.2km s-min=5.1km az=87.0*

*TUL **07** 11:11:53.9±1.6, 36°.95N±0°.04×97°.86W±0°.04, h5^{km}±1^{km}, ML4.3, mb4.2/15(NEIC), mb_Lg4.4/32(NEIC), ML4.2/23(NEIC), Mwr4.1/56(NEIC), Error ellipse: s-maj=6.3km s-min=5.4km az=347.0*

*NEIC **07** 11:11:53.8±1.3, 36°.94N±0°.04×97°.85W±0°.06, h6^{km}±2^{km}, Error ellipse: s-maj=6.7km s-min=5.1km az=83.0*

*IASPEI **07** 11:11:53.6±1.0, 36°.94N±0°.03×97°.85W±0°.03, h9^{km}±7^{km}, mb4.2/20, MS4.7/3, Error ellipse: s-maj=4.2km s-min=3.7km az=127.9, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*ANF **07** 11:11:53.6±0.3, 36°.92N×97°.83W, h5^{km}, ML5.5/18, Error ellipse: s-maj=4.2km s-min=3.3km az=50.0*

*NEIC **07** 11:11:54, 36°.92N×97°.84W, h3^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$-1.07; M$_{\theta\theta}$1.32; M$_{\phi\phi}$-0.25; M$_{r\theta}$-0.53; M$_{\theta\phi}$0.91; M$_{\phi r}$0.36; Fault plane solution: M$_0$1.65000×10^{15} NP1:ϕ_s215.11000°, δ48.01000°, λ-137.90000°. NP2:ϕ_s93.95000°, δ60.12000°, λ-50.50000°. Principal axes: T 1.7756, Plg7.0000°, Azm157.0000°; N -0.2953, Plg33.0000°, Azm252.0000°; P -1.4803, Plg56.0000°, Azm57.0000°;*

ISC 07 11:11:53.8±0.7,**36°.94N**±0°.02×**97°.86W**±0°.02,**h14**^{km}±4^{km}, **n354**,σ1^{s}**43**/403,**mb4.2**/20,**MS4.7**/3,**Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GC02	Grant County #	0.08	182		Pg	11 11 56.1	-0.7
GC02				Sg	Sg	11 11 57.6	-1.2
KAN14	Manchester OK	0.09	285		Pg	11 11 56.1	-0.8
KAN14				Sg	Sg	11 11 57.6	-1.3
KAN17	Caldwell West	0.13	34	Pg	Pg	11 11 56.8	-0.6
KAN17				Sg	Sg	11 11 58.7	-1.1
KAN05	Bluff City Nor	0.17	356		Pg	11 11 57.6	-0.4
KAN05				Sg	Sg	11 12 00.1	-0.7
KAN01	Argonia South	0.23	19		Pg	11 11 58.5	-0.4
KAN01				Sg	Sg	11 12 01.7	-0.7
KAN10	Anthony SW Sta	0.27	315	Pg	Pg	11 11 59.3	-0.2
KAN09	Caldwell North	0.28	43	Pg	Pg	11 11 59.4	-0.3
KAN09				Sg	Sg	11 12 03.1	-0.6
KAN08	Anthony NE Sta	0.31	342		Pg	11 12 00.0	-0.2
KAN06	Argonia West S	0.31	360		Pg	11 11 60.0	-0.3
KAN13	South Haven SW	0.31	75		Pg	11 12 00.1	-0.2
OK032	Salt Plains WL	0.31	245		Pg	11 12 00.3	0.0
KAN16	Harper SW Stat	0.34	330	Pg	Pg	11 12 00.6	-0.2
KAN12	Harper NE Stat	0.38	343		Pg	11 12 01.3	-0.2
KAN12					Sg	11 12 06.6	-0.1
KS20	Mayfield South	0.38	39		Pg	11 12 01.2	-0.3
KS20					Sg	11 12 06.4	-0.4
KS21	Milan North St	0.38	24	Pg	Pg	11 12 01.3	-0.3
KS21	Milan North St	0.38	24		Sg	11 12 06.5	-0.3
CROK	Carrier	0.44	193	Pg	Pg	11 12 02.7	+0.1
BLOK	Blackwell	0.54	108	Pg	Pg	11 12 04.2	-0.3
U32A	Winter Ranch,	1.07	239		Pb	11 12 14.1	-0.1
U32A	Winter Ranch,	1.07	239	P	Pb	11 12 14.1	-0.1
	baz=58,SNR=128						
T35A	Sooner Cattle	1.08	91		Pb	11 12 13.9	-0.3
T35B	Sooner Cattle	1.08	91	P	Pb	11 12 13.8	-0.4
	baz=272,SNR=1000						
T35B				S	Sb	11 12 27.9	-0.3
	baz=272						
OK029	Liberty Lake	1.18	164	Pg	Pb	11 12 16.1	0.0
QUOK	Quay	1.20	129	Pg	Pn	11 12 16.2	+0.1
OK031	S. Brethren Rd	1.28	140		Pb	11 12 17.6	-0.1
BCOK	Bluff Creek, N	1.29	171		Pb	11 12 17.7	-0.2
OK030	Cody Creek RV	1.32	139		Pb	11 12 18.4	-0.1
OK030				IAmb_Lg		11 12 37.1	
	comp=Z,1µm,0.7s						
OK005	Luther M Schoo	1.39	157		Pb	11 12 19.7	+0.2
OK009	Oakdale Elemen	1.40	165		Pb	11 12 19.9	+0.3
OK025	Westminster Rd	1.41	163		Pb	11 12 20.0	0.0
OK001	Jones High Sch	1.45	161	Pn	Pb	11 12 20.9	+0.4
OKCFA	Oklahoma City	1.55	168		Pb	11 12 22.3	-0.1
OKCFA				IAmb_Lg		11 12 46.2	
	comp=Z,1µm,0.8s						
OKCFA	Oklahoma City	1.55	168	P	Pb	11 12 22.2	-0.1
	baz=348,SNR=169						
OKCFA				Sb	Sg	11 12 43.8	0.0
	baz=348						
OKCSW	OKLAHOMA CITY	1.56	167		Pb	11 12 22.4	-0.2
R32A	Long Quarter,	1.63	336		Pb	11 12 23.8	0.0
R32A				IAmb_Lg		11 12 45.5	
	comp=Z,1µm,0.8s						
R32A	Long Quarter,	1.63	336	P	Pb	11 12 23.8	0.0
	baz=155,SNR=424						
R32A				S	Sb	11 12 44.9	+0.7
	baz=155						
FNO	Franklin	1.71	167		Pb	11 12 24.7	-0.4
FNO				IAmb_Lg		11 12 51.4	
	comp=Z,3µm,0.8s						
OK011	Prague	1.73	146		Pb	11 12 24.9	-0.4
TUL1	Leonard	1.95	121	P	Pn	11 12 27.7	+1.2
	baz=303,SNR=760						
TUL1				Sb	Sg	11 12 55.4	-1.2
	baz=303						
TUL1	Leonard	1.95	121		Pb	11 12 28.0	-1.2
TUL1	Leonard	1.95	121	P	Pn	11 12 27.7	+1.2
	baz=303,SNR=1000						
TUL1				Sb	Sb	11 12 55.0	+1.6
	baz=303						
WMOK	Wichita Mounta	2.32	199	P	Pn	11 12 32.8	+1.2
	baz=18,SNR=216						
WMOK	Wichita Mounta	2.32	199		Pn	11 12 33.1	+1.5
WMOK	Wichita Mounta	2.32	199	P	Pn	11 12 32.6	+1.0
	baz=18,SNR=300						
X34A	Smith Ranch, M	2.33	180	Pn	Pn	11 12 33.7	+2.0
X34A				IAmb_Lg		11 13 08.4	
	comp=Z,903nm,0.7s						
KSU1	Kansas State U	2.38	24	P	Pn	11 12 33.9	+1.5
	baz=205,SNR=625						
KSU1				Sb	Sb	11 13 06.5	+0.9
	baz=205						
KSU1	Kansas State U	2.38	24	Pn	Pn	11 12 33.9	+1.5
KSU1	Kansas State U	2.38	24	P	Pn	11 12 33.6	+1.2
	baz=205,SNR=347						
KSU1				S	Sb	11 13 06.0	+0.5
	baz=205						
CBKS	Cedar Bluff	2.40	322	P	Pn	11 12 34.2	+1.5
	baz=141,SNR=162						
CBKS				Sb	Sb	11 13 07.8	+1.7
	baz=141						
CBKS	Cedar Bluff	2.40	322	Pn	Pn	11 12 34.3	+1.6
CBKS				IAmb_Lg		11 13 16.0	
	comp=Z,799nm,0.7s						
CBKS	Cedar Bluff	2.40	322	P	Pn	11 12 34.2	+1.5
	baz=141,SNR=194						
CBKS				S	Sb	11 13 07.1	+1.0
	baz=141						
U38A	Gravette	2.83	99		Pn	11 12 40.4	+1.7
U38A				IAmb_Lg		11 13 27.3	
	comp=Z,2µm,0.7s						
U38A	Gravette	2.83	99	P	Pn	11 12 40.1	+1.4
	baz=282,SNR=468						
LOOK	Love County	2.99	169	Pn	Pn	11 12 43.2	+2.5
LOOK				IAmb_Lg		11 13 35.5	
	comp=Z,807nm,0.8s						
X37A	Clayton	3.09	138		Pn	11 12 43.6	+1.4
X37A	Clayton	3.09	138	P	Pn	11 12 43.2	+1.0
	baz=320,SNR=284						
HHAR	Hobbs	3.22	101	Pn	Pn	11 12 45.5	+1.6
HHAR	Hobbs	3.22	101	P	Pn	11 12 45.6	+1.6
	baz=283						
Z35A	Perchaven, San	3.63	172		Pn	11 12 51.5	+1.9

Z35A				IAmb_Lg		11 13 54.9	
	comp=Z,518nm,1.0s						
Z35A	Perchaven, San	3.63	172	P	Pn	11 12 50.8	+1.2
	baz=352,SNR=131						
Z35A				S	Sn	11 13 34.8	+2.6
	baz=352						
S39A	Bolivar	3.69	77		Pn	11 12 51.5	+1.0
S39A				IAmb_Lg		11 13 52.6	
	comp=Z,1µm,0.8s						
S39A	Bolivar	3.69	77	P	Pn	11 12 51.2	+0.8
	baz=260,SNR=292						
AMTX	Amarillo	3.72	238	Pn	Pn	11 12 52.9	+2.0
	baz=55						
AMTX				Pb	Pb	11 13 02.1	+2.8
	baz=55						
AMTX				Sb	Sg	11 13 49.7	-3.5
	baz=55						
AMTX	Amarillo	3.72	238	Pn	Pn	11 12 53.2	+2.3
AMTX				IAmb_Lg		11 13 57.6	
	comp=Z,546nm,0.9s						
AMTX	Amarillo	3.72	238	P	Pn	11 12 52.9	+2.0
	baz=55,SNR=32						
W39A	Magazine	3.73	117	Pn	Pn	11 12 52.0	+1.1
	baz=299,SNR=17						
W39A				Pb	Pb	11 13 01.1	+1.7
	baz=299						
W39A				Sb	Sb	11 13 48.4	+4.0
	baz=299						
W39A	Magazine	3.73	117		Pn	11 12 52.3	+1.4
W39A	Magazine	3.73	117	P	Pn	11 12 52.0	+1.1
	baz=299,SNR=94						
N33B	J Bar K, Exete	3.81	5	P	Pn	11 12 52.7	+0.6
	baz=185,SNR=67						
N33A	J Bar K, Exete	3.81	5		Pn	11 12 52.7	+0.6
N33A				IAmb_Lg		11 14 02.6	
	comp=Z,1µm,1.0s						
U40A	Yellville	4.06	97	P	Pn	11 12 56.6	+1.0
	baz=280,SNR=97						
U40A				S	Sn	11 13 43.6	+0.6
	baz=280						
U40A	Yellville	4.06	97		Pn	11 12 56.4	+0.8
U40A	Yellville	4.06	97	P	Pn	11 12 56.7	+1.1
	baz=280,SNR=180						
U40A				P	Pn	11 12 56.7	+1.1
	baz=280,SNR=180						
MIAR	Mount Ida	4.22	123	P	Pn	11 12 59.5	+1.8
	baz=306,SNR=56						
MIAR				Sb	Sg	11 14 04.3	-4.9
	baz=306						
MIAR	Mount Ida	4.22	123	Pn	Pn	11 12 59.8	+2.1
MIAR				IAmb_Lg		11 14 09.5	
	comp=Z,2µm,0.7s						
MIAR	Mount Ida	4.22	123	P	Pn	11 12 58.6	+1.0
	baz=306,SNR=187						
N35A	Tabor	4.28	23		Pn	11 12 59.5	+0.9
N35A	Tabor	4.28	23	P	Pn	11 12 59.5	+0.9
	baz=204,SNR=115						
N35A				S	Sg	11 14 07.4	-3.9
	baz=204						
KSCO	Kaye Shedlock’	4.30	300	P	Pn	11 13 00.4	+1.4
	baz=117,SNR=25						
KSCO	Kaye Shedlock’	4.30	300		Pn	11 13 00.3	+1.4
KSCO				IAmb_Lg		11 14 14.4	
	comp=Z,918nm,1.1s						
KSCO	Kaye Shedlock’	4.30	300	P	Pn	11 13 00.3	+1.4
	baz=117,SNR=70						
KSCO				S	Sg	11 14 08.8	-3.1
	baz=117						
P38A	Dawn	4.33	50	Pn	Pn	11 13 00.1	+0.8
P38A	Dawn	4.33	50	P	Pn	11 13 00.4	+1.1
	baz=233,SNR=149						
Z38A	Mt. Pleasant	4.36	146	Pn	Pn	11 13 00.7	+1.1
Z38A	Mt. Pleasant	4.36	146	P	Pn	11 13 00.6	+1.0
	baz=328,SNR=48						
BGNE	Belgrade	4.47	357	P	Pn	11 13 02.5	+1.3
	baz=177,SNR=48						
BGNE	Belgrade	4.47	357	Pn	Pn	11 13 01.9	+0.6
BGNE				IAmb_Lg		11 14 26.6	
	comp=Z,2µm,0.8s						
BGNE	Belgrade	4.47	357	P	Pn	11 13 02.5	+1.3
	baz=177,SNR=174						
MGMO	Mountain Grove	4.47	86		Pn	11 13 02.5	+1.3
ABTX	Abilene, Hawle	4.54	199	P	Pn	11 13 02.9	+0.6
	baz=18,SNR=18						
ABTX				S	Sn	11 13 56.0	+1.1
	baz=18						
ABTX	Abilene, Hawle	4.54	199	Pn	Pn	11 13 02.8	+0.6
ABTX	Abilene, Hawle	4.54	199	P	Pn	11 13 02.7	+0.5
	baz=18,SNR=41						
R40A	Maddies Statio	4.64	71		Pn	11 13 04.1	+0.7
R40A	Maddies Statio	4.64	71	P	Pn	11 13 04.3	+0.8
	baz=255,SNR=381						
FCAR	Ozark Folk Cen	4.74	101		Pn	11 13 06.3	+1.4
X40A	Basin Creek Fa	4.76	119	P	Pn	11 13 06.5	+1.3
	baz=303,SNR=41						
X40A	Basin Creek Fa	4.76	119		Pn	11 13 06.2	+1.0
X40A	Basin Creek Fa	4.76	119	P	Pn	11 13 06.4	+1.3
	baz=303,SNR=100						
X40A				P	Pn	11 13 06.4	+1.3
	baz=303,SNR=100						
X40A				S	Sn	11 14 02.7	+2.6
	baz=303						
X40A				S	Sn	11 14 02.7	+2.6
	baz=303						
WHAR	Wooly Hollow	4.80	108	Pn	Pn	11 13 06.8	+1.2
W41B	Gary Mavity, V	4.87	109	P	Pn	11 13 07.6	+1.0
	baz=293,SNR=11						
W41B				Sb	Sb	11 14 20.9	+3.6
	baz=293						
W41B	Gary Mavity, V	4.87	109	S	Sn	11 14 03.5	+0.7
	baz=293						
WHTX	Lake Whitney,	4.94	176	P	Pn	11 13 08.5	+0.9
	baz=356,SNR=20						
WHTX				Sn	Sn	11 14 05.6	+1.0
	baz=356						
WHTX				Sb	Sg	11 14 27.8	-4.7
	baz=356						
WHTX	Lake Whitney,	4.94	176	Pn	Pn	11 13 08.5	+0.9
WHTX				IAmb_Lg		11 14 41.6	
	comp=Z,616nm,1.1s						
WHTX	Lake Whitney,	4.94	176	P	Pn	11 13 08.6	+0.9
	baz=356,SNR=115						
MSTX	Muleshoe	4.99	235	P	Pn	11 13 09.7	+1.4
	baz=52,SNR=23						
MSTX	Muleshoe	4.99	235	Pn	Pn	11 13 09.2	+0.9
MSTX	Muleshoe	4.99	235	P	Pn	11 13 09.5	+1.2
	baz=52,SNR=24						
WLAR	White Oak Lake	5.05	128	Pn	Pn	11 13 10.2	+1.1
L34A	Svendsen Farm,	5.15	12		Pn	11 13 11.0	+0.5
OGNE	Ogallala	5.16	322	Pn	Pn	11 13 13.0	+2.3
	baz=140,SNR=37						
OGNE				Pg	Pg	11 13 31.1	-1.5
	baz=140						
OGNE				S	Sn	11 14 12.9	+2.8
	baz=140						
OGNE	Ogallala	5.16	322	Pn	Pn	11 13 12.0	+1.3
OGNE	Ogallala	5.16	322	P	Pn	11 13 12.8	+2.1
	baz=140,SNR=37						
237A	Washetta, Mont	5.20	160		Pn	11 13 11.3	0.0
237A	Washetta, Mont	5.20	160	P	Pn	11 13 11.6	+0.4
	baz=342,SNR=30						
T25A	Trinidad	5.25	274	P	Pn	11 13 13.2	+1.1
	baz=90,SNR=14						
T25A	Trinidad	5.25	274		Pn	11 13 12.5	+0.5
P40A	Paris	5.25	59		Pn	11 13 12.5	+0.6
P40A	Paris	5.25	59	P	Pn	11 13 12.7	+0.8
	baz=242,SNR=19						
N38A	Joes South For	5.28	42		Pn	11 13 13.0	+0.8
CCM	Cathedral Cave	5.38	76	P	Pn	11 13 14.0	+0.4
	baz=260						
CCM	Cathedral Cave	5.38	76	Pn	Pn	11 13 13.8	+0.3
CCM	Cathedral Cave	5.38	76	P	Pn	11 13 14.0	+0.4
	baz=260,SNR=71						
T42A	Van Buren	5.42	87		Pn	11 13 14.8	+0.6
T42A	Van Buren	5.42	87	P	Pn	11 13 15.3	+1.1
	baz=271,SNR=51						
LCAR	Lake Charles	5.47	97	Pn	Pn	11 13 16.0	+1.2
LCAR	Lake Charles	5.47	97	P	Pn	11 13 16.2	+1.4
	baz=281,SNR=29						
Z41A	Richland Creek	5.53	130	P	Pn	11 13 17.5	+1.8
	baz=313						
Z41A				S	Sn	11 14 20.7	+1.6
	baz=313						
K31A	O'Neill	5.72	353		Pn	11 13 19.4	+1.0
K31A	O'Neill	5.72	353	P	Pn	11 13 20.1	+1.7
	baz=173,SNR=77						
NATX	Nacogdoches	5.80	152	S	Sn	11 14 24.1	-1.6
	baz=334						
NATX	Nacogdoches	5.80	152		Pn	11 13 20.2	+0.8
PBMO	Poplar Bluff	5.96	89		Pn	11 13 21.9	+0.3
HBAR	Harrisburg	5.98	101	Pn	Pn	11 13 24.1	+2.3
FVM	French Village	6.00	78		Pn	11 13 22.6	+0.4
FVM	French Village	6.00	78	P	Pn	11 13 22.5	+0.4
	baz=262,SNR=49						
Q24A	Divide	6.11	292	P	Pn	11 13 24.9	+0.9
	baz=107,SNR=16						
Q24A				S	Sn	11 14 34.1	+0.3
	baz=107						
SCIA	State Center	6.13	34	P	Pn	11 13 25.4	+1.5
	baz=217,SNR=13						
SCIA	State Center	6.13	34		Pn	11 13 24.9	+0.9
435B	Jarrell	6.14	178	P	Pn	11 13 24.4	+0.3
	baz=358,SNR=21						
435B				S	Sn	11 14 32.7	-1.4
	baz=358						
435B	Jarrell	6.14	178		Pn	11 13 24.2	+0.1
435B	Jarrell	6.14	178	P	Pn	11 13 24.4	+0.3
	baz=358,SNR=26						
SDCO	Great Sand Dun	6.14	280	P	Pn	11 13 26.5	+2.0
	baz=95,SNR=13						
SDCO	Great Sand Dun	6.14	280	Pn	Pn	11 13 25.7	+1.3
SDCO	Great Sand Dun	6.14	280	P	Pn	11 13 26.2	+1.8
	baz=95,SNR=46						
SLM	Saint Louis	6.27	72		Pn	11 13 25.9	0.0
GNAR	Gosnell	6.39	96	Pn	Pn	11 13 29.6	+2.0
PARMO	Parma	6.51	90	Pn	Pn	11 13 31.4	+2.2
N41A	Harden Midland	6.64	53		Pn	11 13 32.4	+1.5
JCT	Junction City	6.64	195	P	Pn	11 13 31.6	+0.6
	baz=14,SNR=18						
JCT	Junction City	6.64	195		Pn	11 13 31.5	+0.6
JCT	Junction City	6.64	195	P	Pn	11 13 31.2	+0.2
	baz=14,SNR=68						
HENM	Henderson Moun	6.73	89	Pn	Pn	11 13 35.5	+3.3
ISCO	Idaho Springs	6.73	297	P	Pn	11 13 33.8	+1.3
	baz=113,SNR=28						
ISCO	Idaho Springs	6.73	297	Pn	Pn	11 13 33.0	+0.5
ISCO	Idaho Springs	6.73	297	P	Pn	11 13 33.6	+1.1
	baz=113,SNR=48						
143A	Socs Landing,	6.78	127		Pn	11 13 34.4	+1.5
ECSD	EROS Data Cent	6.86	8	P	Pn	11 13 33.7	-0.3
	baz=188,SNR=63						
ECSD				S	Sn	11 14 51.3	-0.5
	baz=188						
ECSD	EROS Data Cent	6.86	8	Pn	Pn	11 13 33.8	-0.1
ECSD	EROS Data Cent	6.86	8	P	Pn	11 13 33.7	-0.3
	baz=188,SNR=119						
S44A	Carbondale	6.90	81		Pn	11 13 35.3	+0.8
S44A	Carbondale	6.90	81	P	Pn	11 13 35.2	+0.8
	baz=266,SNR=42						
K38A	Parkersburg	6.92	33		Pn	11 13 34.6	-0.1
SIUC	Southern Illin	6.93	81		Pn	11 13 35.5	+0.6
P43A	Skaggs, Pawnee	7.09	65		Pn	11 13 37.3	+0.2
P43A	Skaggs, Pawnee	7.09	65	P	Pn	11 13 37.2	0.0
	baz=250,SNR=27						
W45A	Hickory Valley	7.24	102		Pn	11 13 40.2	+1.0
L40A	Anamosa	7.25	43		Pn	11 13 38.9	-0.4
L40A	Anamosa	7.25	43	P	Pn	11 13 39.4	+0.2
	baz=227,SNR=40						
ANMO	Albuquerque	7.25	257	Pn	Pn	11 13 42.1	+2.5
	comp=Z,0.4nm,0.3s,baz=74,slow=14,SNR=7.4						
ANMO				Pg	Pg	11 14 08.3	-4.3
	comp=Z,3.4nm,0.3s,baz=96,slow=16,SNR=13						
ANMO				Lg	Lg	11 15 41.4	
	comp=Z,7.0nm,0.3s,baz=150,slow=22,SNR=11						
ANMO	Albuquerque	7.25	257		Pn	11 13 40.2	+0.6
Q44A	Meyer Farm, Va	7.26	72		Pn	11 13 40.0	+0.5
Q44A	Meyer Farm, Va	7.26	72	P	Pn	11 13 39.8	+0.4
	baz=257,SNR=15						
441A	DeRidder	7.29	146	Pn	Pn	11 13 42.3	+2.4
N23A	Red Feather La	7.44	305	P	Pn	11 13 44.0	+1.8
	baz=120,SNR=8.3						
Y45A	Yeager Farm, C	7.45	112	Pn	Pn	11 13 43.2	+1.2
SMCO	Snowmass	7.53	290	Pn	Pn	11 13 44.5	+0.9
SUSD	Miller	7.55	354	P	Pn	11 13 44.1	+0.7
	baz=173,SNR=9.0						
SUSD				S	Sn	11 15 09.2	+0.4
	baz=173						
SUSD	Miller	7.55	354		Pn	11 13 43.9	+0.5
HDIL	Hopedale	7.60	59	P	Pn	11 13 45.0	+0.8
	baz=244,SNR=63						
HDIL				S	Sn	11 15 07.4	-2.7
	baz=244						
HDIL	Hopedale	7.60	59		Pn	11 13 45.2	+1.0
BNM	Barren Site	7.67	251	Pn	Pn	11 13 47.2	+1.8
I37A	Lemond, Waseca	7.84	24		Pn	11 13 47.3	-0.1
OLIL	Olney	7.93	74	Pn	Pn	11 13 48.7	+0.1
O44A	Mansfield	8.03	64		Pn	11 13 50.8	+0.8
O44A	Mansfield	8.03	64	P	Pn	11 13 50.8	+0.8
	baz=249,SNR=11						
344A	Westbrook Farm	8.04	131	Pn	Pn	11 13 51.9	+1.7
735A	Kenedy	8.06	180		Pn	11 13 52.4	+2.0
L42A	Oliver, Polo	8.11	49		Pn	11 13 51.2	+0.1
L42A	Oliver, Polo	8.11	49	P	Pn	11 13 51.4	+0.3
	baz=234,SNR=42						
WVT	Waverly	8.11	93	P	Pn	11 13 51.9	+0.7
	baz=279						
WVT	Waverly	8.11	93	Pn	Pn	11 13 51.4	+0.3
MNTX	Cornudas Mount	8.12	232	P	Pn	11 13 52.4	+1.0
	baz=48,SNR=42						
MNTX	Cornudas Mount	8.12	232	Pn	Pn	11 13 52.3	+1.0
MNTX	Cornudas Mount	8.12	232	P	Pn	11 13 52.1	+0.7
	baz=48,SNR=64						
PLAL	Pickwick Lake	8.17	101	Pn	Pn	11 13 52.2	+0.3
JFWS	Jewell Farm	8.35	42	P	Pn	11 13 54.3	-0.2
	baz=227,SNR=49						
JFWS	Jewell Farm	8.35	42	Pn	Pn	11 13 54.2	-0.3
JFWS	Jewell Farm	8.35	42	P	Pn	11 13 54.6	+0.2
	baz=227,SNR=50						
RSSD	Black Hills	8.58	329	P	Pn	11 13 59.9	+2.2
	baz=145						
RSSD	Black Hills	8.58	329	Pn	Pn	11 13 58.3	+0.5
RSSD	Black Hills	8.58	329	P	Pn	11 13 59.7	+1.9
	baz=145,SNR=28						
T47A	Sharon Grove	8.61	86		Pn	11 13 59.1	+1.1
RWWY	Rawlins	8.66	306		Pn	11 14 00.2	+1.2
833A	Chaparral WMA,	8.68	189	P	Pn	11 13 59.1	+0.1
	baz=8.1,SNR=6.2						
833A	Chaparral WMA,	8.68	189	P	Pn	11 13 59.1	+0.1
	baz=8.1,SNR=12						
O20A	White River Ci	8.74	295		Pn	11 14 01.1	+1.1
K22A	Casper	8.78	313	P	Pn	11 14 02.6	+2.1
	baz=128						
K22A	Casper	8.78	313		Pn	11 14 01.4	+0.9
P46A	Rosedale	8.79	69		Pn	11 14 00.9	+0.4
M44A	Midewin, Midew	8.82	57		Pn	11 14 01.1	+0.3
M44A	Midewin, Midew	8.82	57	P	Pn	11 14 01.1	+0.3
	baz=243,SNR=15						
Z47A	Carrollton	8.84	112	Pn	Pn	11 14 02.6	+1.5
I40A	Norwalk	8.87	36	Pn	Pn	11 14 02.5	+0.9
V48A	Smith Brothers	8.98	94		Pn	11 14 04.0	+0.9
TX31	Lajitas Ar. Si	9.01	214		Pn	11 14 03.8	+0.2
TX32	Lajitas Array	9.01	214		Pn	11 14 03.6	0.0
TXAR	Lajitas Array	9.01	214	Pn	Pn	11 14 03.3	-0.2
	comp=Z,2.7nm,0.3s,baz=45,slow=12,SNR=102						
TXAR				Sn	Sn	11 15 41.7	-3.2
	comp=Z,2.8nm,0.3s,baz=34,slow=14,SNR=3.9						
TXAR				Lg	Lg	11 16 34.5	
	comp=Z,4.2nm,0.3s,baz=35,slow=20,SNR=3.9						
TXAR	Lajitas Array	9.01	214	Pn	Pn	11 14 03.7	+0.1
SFIN	Lafayette	9.09	64	P	Pn	11 14 05.3	+0.8
	baz=251,SNR=12						
SFIN	Lafayette	9.09	64		Pn	11 14 05.0	+0.4
SPMN	Marine on St.	9.12	23	P	Pn	11 14 04.5	-0.4
	baz=206,SNR=27						
SPMN	Marine on St.	9.12	23		Pn	11 14 04.8	0.0
X48A	Hartselle	9.14	103	Pn	Pn	11 14 06.4	+1.2
BLO	Bloomington	9.21	73		Pn	11 14 06.5	+0.2
WCI	Wyandotte Cave	9.27	78	P	Pn	11 14 07.8	+0.8
	baz=266						
WCI	Wyandotte Cave	9.27	78	Pn	Pn	11 14 08.3	+1.3
WCI	Wyandotte Cave	9.27	78	P	Pn	11 14 07.9	+0.8
	baz=266,SNR=21						
121A	Cookes Peak, D	9.28	245	Pn	Pn	11 14 07.7	+0.4
L44A	Lake County Fo	9.29	53	P	Pn	11 14 07.5	+0.1
	baz=239,SNR=5.8						
L44A				S	Sn	11 15 48.1	-3.5
	baz=239						
L44A	Lake County Fo	9.29	53		Pn	11 14 07.6	+0.3
CLTN	Cedars of Leba	9.32	92		Pn	11 14 08.8	+1.1
K43A	Burlington	9.32	49		Pn	11 14 07.7	0.0
K43A	Burlington	9.32	49	P	Pn	11 14 07.4	-0.2
	baz=235,SNR=23						
U49A	Red Boiling Sp	9.71	89	Pn	Pn	11 14 14.1	+1.1
U49A	Red Boiling Sp	9.71	89	P	Pn	11 14 14.4	+1.4
	baz=276,SNR=10						
I42A	Draeger Farm,	9.73	42		Pn	11 14 12.9	-0.5
I42A	Draeger Farm,	9.73	42	P	Pn	11 14 13.0	-0.3
	baz=227,SNR=48						
SWET	Sewanee	9.80	97		Pn	11 14 15.3	+0.9
E28A	Huff	9.86	348		Pn	11 14 15.2	0.0
P18A	Preston Nutter	10.11	289		Pn	11 14 20.0	+1.2
R49A	Shelbyville	10.15	79		Pn	11 14 20.3	+1.2
FPAL	Fort Paine	10.24	100		Pn	11 14 21.9	+1.5
L46A	Eue Claire	10.27	57		Pn	11 14 19.6	-1.1
T50A	Nancy	10.42	86		Pn	11 14 24.1	+1.3
P49A	Miami Univ. Ec	10.66	72	P	Pn	11 14 25.0	-1.0
	baz=260,SNR=6.8						
P49A	Miami Univ. Ec	10.66	72		Pn	11 14 25.0	-1.0
PD31	Pinedale Array	10.71	307		Pn	11 14 27.0	0.0
PDAR	Pinedale Array	10.71	307	Pn	Pn	11 14 26.2	-0.8
	comp=Z,0.8nm,0.3s,baz=122,slow=15,SNR=17						
PDAR				Lg	Lg	11 17 26.8	
	comp=Z,2.9nm,0.3s,baz=99,slow=33,SNR=3.5						
PDAR				LR	LR	11 18 50.3	
	comp=Z,592nm,18.1s,baz=93,slow=39						
PDAR	Pinedale Array	10.71	307	Pn	Pn	11 14 27.2	+0.2
BW06	Boulder Array	10.71	307	P	Pn	11 14 27.7	+0.7
	baz=119						
BW06	Boulder Array	10.71	307		Pn	11 14 27.1	+0.1
CPCT	Cooper Cave	10.88	94		Pn	11 14 29.8	+0.8
MDND	Maddock	10.98	354	P	Pn	11 14 29.2	-1.3
	baz=173						
TKL	Tuckaleechee C	11.44	92	Pn	Pn	11 14 36.8	+0.1
	comp=Z,4.3nm,0.3s,baz=234,slow=7.0,SNR=40						
TKL				Sn	Sn	11 16 40.4	-3.9
	comp=Z,2.8nm,0.3s,baz=128,slow=14,SNR=2.0						
TKL				Lg	Lg	11 17 48.0	
	comp=Z,8.6nm,0.3s,baz=110,slow=7.7,SNR=19						
TKL	Tuckaleechee C	11.44	92	Pn	Pn	11 14 37.1	+0.3
TKL	Tuckaleechee C	11.44	92	P	Pn	11 14 36.8	+0.1
	baz=281,SNR=14						
AGMN	Agassiz Nation	11.45	7	P	Pn	11 14 34.4	-2.4
	baz=188,SNR=9.9						
TZTN	Tazewell	11.49	88	P	Pn	11 14 38.2	+0.7
	baz=276,SNR=7.4						
TZTN	Tazewell	11.49	88	Pn	Pn	11 14 37.4	0.0
TZTN	Tazewell	11.49	88	P	Pn	11 14 37.9	+0.5
	baz=276,SNR=8.5						
L48A	N Adams	11.52	60	P	Pn	11 14 36.5	-1.4
	baz=249,SNR=27						
L48A				P	Pn	11 14 36.5	-1.4
	baz=249,SNR=27						
LAO	LASA Array	11.57	330	Pn	Pn	11 14 38.1	-0.4
152A	Waverly Hall	11.61	108		Pn	11 14 38.6	-0.4
Q51A	Peebles	11.64	75		Pn	11 14 38.1	-1.4
Q51A	Peebles	11.64	75	P	Pn	11 14 38.0	-1.6
	baz=264,SNR=8.2						
Q51A				P	Pn	11 14 38.0	-1.6
	baz=264,SNR=8.2						
AHID	Auburn Hatcher	11.72	304		Pn	11 14 41.2	+0.4
LOHW	Long Hollow	11.79	308		Pn	11 14 42.4	+0.6
J47A	Sunmer	11.80	54		Pn	11 14 40.3	-1.3
SNOW	Snow King Moun	11.82	307		Pn	11 14 42.0	-0.1
RLMT	Red Lodge	11.87	317	P	Pn	11 14 44.0	+1.1
	baz=130,SNR=6.8						
RLMT	Red Lodge	11.87	317	Pn	Pn	11 14 43.3	+0.4
P51A	Williamsport	11.91	73		Pn	11 14 42.1	-1.1
TPAW	Teton Pass	11.96	307		Pn	11 14 43.9	-0.1
EYMN	Ely	11.96	21	P	Pn	11 14 40.7	-3.1
	baz=205,SNR=5.6						
EYMN	Ely	11.96	21	P	Pn	11 14 40.7	-3.1
	baz=205,SNR=20						
HPIG		11.97	216		Pn	11 14 44.1	-0.1
352A	Blakely	12.00	113		Pn	11 14 44.6	+0.1
FXWY	Fox Creek	12.07	308	Pn	Pn	11 14 47.5	+1.8
ACSO	Alum Creek Sta	12.10	70	P	Pn	11 14 43.6	-2.1
	baz=259,SNR=9.9						
ACSO				S	Sn	11 16 54.9	-5.5
	baz=259						
AAM	Ann Arbor	12.19	60	P	Pn	11 14 45.9	-1.0
	baz=249,SNR=19						
AAM	Ann Arbor	12.19	60		Pn	11 14 46.0	-1.0
V53A	Saluda	12.21	91		Pn	11 14 47.5	+0.2
M50A	Fremont	12.33	64		Pn	11 14 48.1	-0.8
DGMT	Dagmar	12.43	340	P	Pn	11 14 49.2	-1.1
	baz=156,SNR=12						
DGMT	Dagmar	12.43	340	Pn	Pn	11 14 49.3	-0.9
Q52A	Bidwell	12.47	76	P	Pn	11 14 49.3	-1.6
	baz=266,SNR=14						
Q52A				P	Pn	11 14 49.3	-1.6
	baz=266,SNR=14						
P52A	Corning	12.65	73	P	Pn	11 14 51.6	-1.7
	baz=263,SNR=6.0						
P52A				S	Sn	11 17 07.7	-6.1
	baz=263						
GLMI	Grayling	12.73	48	P	Pn	11 14 52.2	-2.2
	baz=236,SNR=34						
YHL	Hebgen Lake	12.80	312		Pn	11 14 55.9	+0.3
U54A	Nelsons Funny	12.87	87	P	Pn	11 14 55.9	-0.6
	baz=277,SNR=7.9						
U54A				P	Pn	11 14 55.9	-0.6
	baz=277,SNR=7.9						
O52A	Adamsville	12.94	71		Pn	11 14 57.3	0.0
HODGE	Hodges	12.98	97		Pn	11 14 57.7	-0.1
PAULI	Pauline	13.18	94		Pn	11 15 00.2	-0.3
S54A	Dingess, Beckl	13.19	81	P	Pn	11 15 00.4	-0.3
	baz=271,SNR=6.5						
S54A				P	Pn	11 15 00.4	-0.3
	baz=271,SNR=6.5						
ULM	Lac du Bonnet	13.39	5	Pn	Pn	11 14 57.4	-5.9
	comp=Z,1.8nm,0.3s,baz=186,slow=12,SNR=26						
ULM				Sn	Sn	11 17 16.9	-15
	comp=Z,1.8nm,0.3s,baz=163,slow=12,SNR=2.1						
ULM				Lg	Lg	11 18 45.4	
	comp=Z,1.8nm,0.3s,baz=285,slow=21,SNR=2.2						
O53A	New Philadelph	13.43	71	P	Pn	11 15 01.6	-2.4
	baz=261,SNR=5.4						
KMSC	Kings Mountain	13.49	93		Pn	11 15 03.5	-1.3
JSC	Jenkinsville	13.76	96		Pn	11 15 07.3	-1.1
MCMT	McKenzie Canyo	13.80	309	Pn	Pn	11 15 09.3	+0.1
BLA	Blacksburg	13.93	84	P	Pn	11 15 10.7	-0.1
	baz=274						
BLA	Blacksburg	13.93	84		Pn	11 15 09.8	-0.9
M53A	WI Miller and	14.06	66	P	Pn	11 15 11.4	-1.1
	baz=257						
M53A				S	Sn	11 17 40.3	-8.0
	baz=257						
ELK	Elko	14.07	291	Pn	Pn	11 15 12.4	-0.5
	comp=Z,0.1nm,0.3s,baz=149,slow=6.7,SNR=1.7						
ELK				Lg	Lg	11 19 13.2	
	comp=Z,0.1nm,0.3s,baz=146,slow=6.3,SNR=3.1						
EGMT	Eagleton	14.12	325	Pn	Pn	11 15 13.1	-0.3
R55A	Marlinton	14.13	79		Pn	11 15 11.9	-1.6
BIRD	Birdtown, Kers	14.30	94		Pn	11 15 13.7	-2.2
MSO	Missoula	15.50	315	Pn	Pn	11 15 31.2	-0.9
MSO				IAmb	IAmb	11 15 41.2	
	comp=Z,16nm,1.3s						
PFO	Pinyon Flats O	15.55	263	Lg	Lg	11 20 01.9	
	comp=Z,0.0nm,0.3s,baz=23,slow=18,SNR=0.8						
SADO	Sadowa	16.16	55	Pn	Pn	11 15 36.2	-4.2
	comp=Z,0.9nm,0.3s,baz=269,slow=13,SNR=6.8						
SADO				Sn	Sn	11 18 25.1	-14
	comp=Z,2.0nm,0.3s,baz=270,slow=14,SNR=2.3						
SADO				Lg	Lg	11 20 13.9	
	comp=Z,3.4nm,0.3s,baz=105,slow=7.0,SNR=7.3						
NVAR	Mina Array Bea	16.26	281	Pn	P	11 15 44.6	-0.4
	comp=Z,0.1nm,0.3s,baz=86,slow=11,SNR=7.0						
BMO	Blue Mountains	16.67	304	P	P	11 15 50.4	+1.0
WVOR	Wild Horse Val	16.90	295	P	Pn	11 15 50.8	+0.8
N58A	Sunbury	16.91	70	P	P	11 15 51.5	-0.4
N58A				IAmb	IAmb	11 15 53.5	
	comp=Z,33nm,1.2s						
F10A	Beach Ranch, E	17.07	308	P	P	11 15 54.2	+0.5
F10A				IAmb	IAmb	11 15 59.1	
	comp=Z,43nm,1.4s						
FFC	Flin Flon	18.02	352	P	P	11 16 04.1	+0.1
NEW	Newport	18.09	315	P	P	11 16 06.0	+1.0
	comp=Z,0.1nm,0.3s,baz=124,slow=12,SNR=6.6						
NEW				Lg	Lg	11 21 06.9	
	comp=Z,0.1nm,0.3s,baz=348,slow=21,SNR=1.7						
NEW	Newport	18.09	315	P	P	11 16 06.9	+1.9
NEW				IAmb	IAmb	11 16 10.0	
	comp=Z,18nm,1.3s						
E08A	Dider Farm, El	18.44	308	P	P	11 16 08.8	+0.1
E08A				IAmb	IAmb	11 16 14.3	
	comp=Z,9.8nm,1.1s						
C09A	Chrisman Ranch	18.53	312		Pn	11 16 11.5	+1.5

HAWA	Hanford	18.70	307		Pn	11 16 12.1	+0.1
HAWA				IAmb	IAmb	11 16 17.2	
	comp=Z,18nm,1.4s						
YBH	Yreka Blue Hor	19.79	292	P	Pn	11 16 25.2	0.0
	comp=Z,0.3nm,0.3s,baz=81,slow=5.6,SNR=12						
YBH	Yreka Blue Hor	19.79	292		P	11 16 21.8	-1.9
YBH				IAmb	IAmb	11 16 29.6	
	comp=Z,6.6nm,0.9s						
FRNY	Flat Rock	19.92	59	P	P	11 16 24.2	-0.8
FRNY				IAmb	IAmb	11 16 25.8	
	comp=Z,27nm,1.1s						
CMIG	Matias Romero	19.94	172	P	Pn	11 16 28.0	+0.9
	comp=Z,3.3nm,0.8s,baz=326,slow=5.8,SNR=5.0						
LLLB	Lillooet	21.96	316	P	P	11 16 45.3	-1.7
LLLB				IAmb	IAmb	11 16 52.7	
	comp=Z,12nm,1.1s						
YKA	Yellowknife Ar	27.61	343	P	P	11 17 40.9	+0.5
	comp=Z,1.1nm,0.5s,baz=140,slow=10,SNR=6.2						
FRB	Frobisher Bay	32.15	24	P	P	11 18 20.5	-0.1
	comp=Z,24nm,1.1s,baz=220,slow=11,SNR=6.4						
INK	Inuvik	37.11	339	P	P	11 19 03.5	0.0
	comp=Z,3.6nm,0.9s,baz=126,slow=11,SNR=5.5						
ILAR	Eielson Array	40.03	330	P	P	11 19 29.8	+1.8
	comp=Z,8.0nm,0.7s,baz=108,slow=6.8,SNR=64						
PCRV	Puerto La Cruz	40.10	123	LR	LR	11 36 59.6	
	comp=Z,536nm,21.7s,slow=38						
H24K	Noodor Dome	40.78	331	P	P	11 19 35.6	+1.4
LPAZ	La Paz	59.90	147	P	P	11 22 02.2	+2.1
	comp=Z,1.2nm,0.9s,baz=287,slow=5.0,SNR=4.5						
LPAZ	La Paz	59.90	147	P	P	11 22 01.2	+1.1
EKA	Eskdalemuir Ar	63.03	40	P	P	11 22 19.9	-0.2
	comp=Z,4.7nm,0.9s,baz=301,slow=5.8,SNR=8.2						
ARCES	ARCESS Array B	66.10	19	P	P	11 22 40.4	+0.4
	comp=Z,4.4nm,0.8s,baz=308,slow=6.7,SNR=12						
NOA	NORSAR Array B	66.72	30	P	P	11 22 44.6	+0.5
	comp=Z,0.6nm,0.8s,baz=302,slow=6.6,SNR=1.9						
HFS	Hagfors	68.24	30	P	P	11 22 53.9	+0.2
	comp=Z,5.2nm,1.0s,baz=245,slow=3.1,SNR=4.8						
ESDC	Sonseca Array	70.22	55	P	P	11 23 07.1	+0.7
	comp=Z,1.8nm,1.0s,baz=299,slow=6.8,SNR=6.3						
FINES	FINESS Array B	71.95	25	P	P	11 23 17.2	+0.8
	comp=Z,2.2nm,0.7s,baz=337,slow=4.4,SNR=4.8						
BRG	Berggiesshubel	74.08	38	*e*P	P	11 23 22.4	-6.8
BRG				Amp		11 23 24.3	
	comp=Z,5.4nm,1.0s						
DAVOX	Davos/Dischmat	74.52	43	P	P	11 23 33.0	+0.9
	comp=Z,0.9nm,0.4s,baz=326,slow=5.4,SNR=4.3						
GERES	GERESS Array B	75.24	39	P	P	11 23 37.0	+0.9
	comp=Z,1.0nm,0.8s,baz=340,slow=3.1,SNR=6.3						
GERES				LR	LR	11 56 22.4	
	comp=Z,431nm,21.7s,baz=242,slow=36						
GERES	GERESS Array B	75.24	39	P	P	11 23 37.8	+1.6
AKASG	Malin Array Be	81.11	31	P	P	11 24 08.2	-0.3
	comp=Z,1.0nm,0.5s,baz=314,slow=4.2,SNR=5.9						
PLCA	Paso Flores	81.25	159	P	P	11 24 11.6	+2.4
	comp=Z,2.3nm,0.8s,baz=21,slow=5.4,SNR=5.2						
ZALV	Zalesovo Beam	89.46	358	P	P	11 24 49.4	-0.7
	comp=Z,0.7nm,0.4s,baz=9.5,slow=4.4,SNR=2.2						
TORD	Torodi Ar. Bea	89.67	74	P	P	11 24 53.4	+1.6
	comp=Z,0.4nm,0.7s,baz=298,slow=10,SNR=2.2						
BRTR	Keskin Array B	91.64	35	LR	LR	12 06 54.3	
	comp=Z,764nm,20.3s,baz=249,slow=36						
SONM	Songino Array	92.87	344	P	P	11 25 07.5	+1.3
	comp=Z,0.6nm,0.7s,baz=18,slow=3.2,SNR=2.3						
HHC	Hu-ho-hao-te	98.03	338	*e*P	P	11 25 29.1	-0.8
HHC				pmax	pmax		
	comp=Z,13nm,0.8s						
HHC				pmax	pmax		
	comp=Z,100nm,8.2s						
VNDA	Vanda	127.96	196	PKP	PKiKP	11 31 00.1	+1.6
	comp=Z,1.3nm,1.0s,baz=338,slow=2.8,SNR=6.1						
WRA	Warramunga Arr	131.68	276	PKP	PKiKP	11 31 07.3	-0.3
	comp=Z,0.4nm,0.7s,baz=58,slow=2.2,SNR=6.8						
ASAR	Alice Springs	133.91	272	PKP	PKPdf	11 31 09.8	-1.0
	comp=Z,0.3nm,0.6s,baz=60,slow=1.3,SNR=4.5						
MAW	Mawson	147.40	166	PKPbc	PKPab	11 31 37.3	-0.7
	comp=Z,8.1nm,0.9s,baz=219,slow=4.2,SNR=18						

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*FUNV **07** 11:16:41.4, 8°.51N×71°.34W, h5^{km}, MW3.1*

ISC 07 11:16:39.8±1.7, **8°.53N**±0°.04×**71°.36W**±0°.03, **h10**^{km}±13^{km}, **n20**, σ**1^{s}.62**/36, **1D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	Socops	0.56	116	⇓*i*P	Pg	11 16 50.8	+0.3
SOCV				*e*S	Sb	11 16 59.6	0.0
SDV	Santo Domingo	0.80	64	*e*P	Pb	11 16 56.2	+0.3
SDV				*e*S	Sb	11 17 08.2	+1.2
SDV				*i*		11 17 08.7	
	comp=Z,238nm,0.2s						
PAMC	Pamplona, Colo	1.77	228	*e*P	Pn	11 17 10.8	-0.2
PAMC				*e*S	Sn	11 17 34.7	+0.8
PAMC				*i*		11 17 38.0	
	comp=Z,298nm,0.3s						
OCAC	Ocana	1.96	262	*e*P	Pn	11 17 12.5	-0.7
OCAC				*e*S	Sn	11 17 37.7	-0.3
OCAC				*i*		11 17 39.4	
	comp=Z,747nm,0.3s						
TAMC	Tame, Arauca	2.12	192	*e*P	Pb	11 17 19.1	+0.7
TAMC				*e*S	Sb	11 17 46.0	+1.2
TAMC				*i*		11 17 56.2	
	comp=Z,82nm,0.3s						
SIQV	Siquisique	2.61	36	*e*P	Pn	11 17 22.9	+0.9
SIQV				*e*S	Sn	11 17 54.7	+0.9
BARC	Barichara	2.64	223	*e*P	Pb	11 17 26.7	-0.6
BARC				*e*S	Sb	11 18 00.5	+0.7
BARC				*i*		11 18 03.2	
	comp=Z,102nm,0.5s						
SMLC	San Martn de	2.69	276	*e*P	Pn	11 17 22.0	-1.2
SMLC				*e*S	Sn	11 17 58.8	+2.8
SMLC				*i*		11 18 02.9	
	comp=Z,116nm,0.2s						
BRRC	Barranca, Sant	2.72	239	*e*P	Pb	11 17 29.6	+0.9
BRRC				*e*S	Sb	11 18 01.5	-0.6
BRRC				*i*		11 18 06.1	
	comp=Z,46nm,0.7s						
RUSC	La Rusia	3.13	213	*e*P	Pn	11 17 30.0	+0.4
RUSC				*e*S	Sb	11 18 14.4	+0.3
RUSC				*i*		11 18 19.5	
	comp=Z,29nm,0.6s						
BAUV	El Baul	3.31	83	*e*P	Pn	11 17 33.1	+1.4
BAUV				*e*S	Sn	11 18 10.7	-0.3
ZARC	Zaragoza, Cauc	3.61	254	*e*S	Sb	11 18 27.4	-0.4
ZARC				*i*		11 18 32.8	
	comp=Z,33nm,0.5s						
MONV	Montecano	3.67	22	*e*P	Pn	11 17 37.8	+1.2
MONV				*e*S	Sn	11 18 19.6	-0.5
SMRC	Santa Marta, M	3.85	313	*e*P	Pn	11 17 39.7	+0.6
SMRC				*e*S	Sn	11 18 19.1	-5.4
SMRC				*i*		11 18 38.5	
	comp=Z,21nm,0.5s						
BENV	Beln	3.98	69	*e*P	Pn	11 17 42.6	+1.6
SJCC	San Jacinto, C	4.01	290	*e*P	Pn	11 17 41.8	+0.5
SJCC				*i*		11 17 52.2	
	comp=Z,36nm,0.3s						
SJCC				*e*S	Sn	11 18 30.7	+2.2
MOTC	Monteria, Cord	4.26	274	*e*P	Pn	11 17 44.7	-0.1
MOTC				*i*		11 17 50.8	
	comp=Z,6.0nm,0.3s						
MOTC				*e*S	Sn	11 18 34.8	+0.1
CHIC	Chingaza	4.53	211	*e*P	Pn	11 17 49.2	+0.3
CHIC				*e*S	Sn	11 18 39.9	-2.0
CACV	CAICARA DEL OR	4.87	101	*e*P	Pb	11 18 00.8	-4.5
BIRV	Birongo	5.38	69	*e*P	Pn	11 18 00.7	+0.4

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*INET **07** 11:17:16.3, 9°.38N×84°.57W, h36^{km}, MW3.3*

UCR 07 11:17:19.5±1.3, **9°.34N×84°.61W, h16**^{km}±5^{km}, **MW3.8, 1D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAFE	Finca La Fe, P	0.55	328	*e*P	Pg	11 17 30.2	-0.2
LAFE				*e*S	Sb	11 17 38.6	+0.1
LCR2	La Lucha 2	0.72	56	*e*P	Pg	11 17 32.4	-1.3
LCR2				*e*S	Sb	11 17 43.7	+0.2
EDDO	Dominical	0.74	97	*e*P	Pg	11 17 33.9	-0.1
EDDO				*e*S	Sb	11 17 45.0	+1.0
SRA1	San Ramn	0.75	10	*e*P	Pg	11 17 32.7	-1.5
RIMA	Rio Macho	0.85	60	*e*P	Pb	11 17 34.5	-1.5
INDI	Punta indio, G	1.02	301	*e*P	Pb	11 17 37.3	-1.6
CASO	Castillo	1.09	354	*i* P	Pb	11 17 38.8	-1.3
ARE1	Arenal 1	1.12	355	*e*P	Pb	11 17 39.5	-1.1
FORC	Fortuna	1.12	357	*i* P	Pb	11 17 39.3	-1.2
CEDE	Laguna Cedeo	1.14	355	*e*P	Pn	11 17 40.0	-1.0
EDPN	Palmar Norte	1.20	108	*e*P	Pn	11 17 40.6	-1.1
GUAI	GUAI	1.28	316	*i* P	Pn	11 17 41.3	-1.5
EDBA	Buenos Aires	1.33	97	*e*P	Pn	11 17 42.6	-0.9
EDBA				*e*S	Sn	11 18 00.7	-0.2
ACAL	Aguas Claras	1.35	342	⇓*i*P	Pn	11 17 43.0	-0.8
COVE	Coope Vega, Sa	1.39	9	*e*P	Pn	11 17 43.3	-1.0
COLC	Colonia	1.44	336	*i* P	Pn	11 17 44.6	-0.5
GUAB	Guayabo de Bag	1.49	336	*i* P	Pn	11 17 45.4	-0.4
VMAR	Armenia, Volca	1.55	341	*e*P	Pn	11 17 46.4	-0.1
BUEV	Buena Vista	1.65	332	*e*P	Pn	11 17 47.8	-0.1
GB1A	Borinquen Arri	1.66	332	*i* P	Pn	11 17 47.7	-0.5
HZTE	Horizontes, Gu	1.67	325	*e*P	Pn	11 17 47.9	-0.3
EDSV	San Vito	1.70	108	*e*P	Pn	11 17 48.6	-0.1

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*TUL **07** 11:17:59±1.4, 36°.947N±0°.009×97°.85W±0°.01, h4^{km}±5^{km}, ML2.9, ML2.8/46(NEIC), Error ellipse: s-maj=1.6km s-min=1.2km az=114.0*

NEIC 07 11:17:59.3±1.1, **36°.939N**±0°.009×**97°.84W**±0°.01, **h5**^{km}±1^{km}, **Error ellipse: s-maj=3.0km s-min=1.8km az=289.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GC02	Grant County #	0.09	192	Pg	Pg	11 18 01.4	+0.2
GC02				Sg	Sg	11 18 03.1	+0.6
KAN14	Manchester OK	0.10	280	Pg	Pg	11 18 01.3	-0.2
KAN14				Sg	Sg	11 18 03.0	+0.1
KAN14				IAML		11 18 03.1	
	comp=E,3μm,0.2s						
KAN17	Caldwell West	0.12	29	Pg	Pg	11 18 02.0	+0.2
KAN17				Sg	Sg	11 18 04.0	+0.6
KAN17				IAML		11 18 04.1	
	comp=N,5μm,0.2s						
KAN05	Bluff City Nor	0.17	350	Pg	Pg	11 18 02.7	-0.1
KAN05				Sg	Sg	11 18 05.5	+0.4
KAN05				IAML		11 18 06.1	
	comp=E,3μm,0.1s						
KAN01	Argonia South	0.22	16	Pg	Pg	11 18 03.7	0.0
KAN01				Sg	Sg	11 18 07.0	+0.4
KAN01				IAML		11 18 07.1	
	comp=N,2μm,0.3s						
KAN09	Caldwell North	0.26	42	Pg	Pg	11 18 04.7	+0.3
KAN09				Sg	Sg	11 18 08.5	+0.6
KAN09				IAML		11 18 10.4	
	comp=N,2μm,0.3s						
KAN10	Anthony SW Sta	0.28	312	Pg	Pg	11 18 04.6	-0.1
KAN10				Sg	Sg	11 18 08.6	+0.1
KAN13	South Haven SW	0.30	75	Pg	Pg	11 18 05.3	+0.2
KAN13				Sg	Sg	11 18 09.7	+0.7
KAN13				IAML		11 18 13.1	
	comp=N,1μm,0.3s						
KAN08	Anthony NE Sta	0.31	340	Pg	Pg	11 18 05.2	-0.1
KAN08				Sg	Sg	11 18 09.7	+0.3
KAN08				IAML		11 18 11.2	
	comp=N,896nm,0.3s						
KAN06	Argonia West S	0.31	357	Pg	Pg	11 18 05.4	0.0
KAN06				Sg	Sg	11 18 09.4	0.0
OK032	Salt Plains WL	0.33	246	Pg	Pg	11 18 05.6	-0.1
OK032				Sg	Sg	11 18 10.4	+0.4
OK032				IAML		11 18 10.6	
	comp=N,864nm,0.2s						
OK032				IAML		11 18 13.4	
	comp=N,740nm,0.2s						
KAN16	Harper SW Stat	0.34	328	Pg	Pg	11 18 05.8	-0.2
KAN16				Sg	Sg	11 18 10.6	+0.2
KS20	Mayfield South	0.37	38	Pg	Pg	11 18 06.6	+0.2
KS20				Sg	Sg	11 18 11.7	+0.4
KS20				IAML		11 18 13.3	
	comp=N,685nm,0.2s						
KAN12	Harper NE Stat	0.38	340	Pg	Pg	11 18 06.6	-0.1
KAN12				Sg	Sg	11 18 11.0	-0.7
KAN12				IAML		11 18 15.4	
	comp=E,1μm,0.3s						
KAN12				IAML		11 18 19.1	
	comp=N,1μm,0.4s						
CROK	Carrier	0.45	195	Pg	Pg	11 18 08.1	+0.1
CROK				Sg	Sg	11 18 14.2	+0.3
BLOK	Blackwell	0.53	109	Pg	Pg	11 18 09.7	+0.1
BLOK				Sg	Sb	11 18 17.8	-1.3
BLOK				IAML		11 18 21.7	
	comp=E,433nm,0.2s						
BLOK				IAML		11 18 22.0	
	comp=N,471nm,0.2s						
T35A	Sooner Cattle	1.06	91	Pg	Pg	11 18 19.2	-0.4
T35A				Sg	Sb	11 18 34.1	-0.3
T35A				IAML		11 18 39.3	
	comp=E,273nm,0.3s						
U32A	Winter Ranch,	1.09	240	Pg	Pg	11 18 20.0	-0.2
U32A				Sg	Sg	11 18 32.9	-1.5
U32A				IAML		11 18 44.4	
	comp=N,188nm,0.8s						
OK029	Liberty Lake	1.18	165	Pg	Pg	11 18 21.4	-0.5
OK029					Sg	11 18 37.3	0.0
OK029				IAML		11 18 41.8	
	comp=N,188nm,1.2s						
OK029				IAML		11 18 43.4	
	comp=N,200nm,0.7s						
QUOK	Quay	1.19	130	Pg	Pg	11 18 21.2	-0.9
QUOK				Sg	Sg	11 18 36.4	-1.1
OK031	S. Brethren Rd	1.27	140	Pg	Pg	11 18 23.0	-0.6
OK031				Sg	Sg	11 18 40.2	0.0
OK031				IAML		11 18 44.8	
	comp=N,183nm,0.8s						
OK031				IAML		11 18 49.5	
	comp=N,193nm,0.9s						
BCOK	Bluff Creek, N	1.29	172	Pn	Pn	11 18 22.9	-1.2
BCOK				IAML		11 18 44.0	
	comp=N,142nm,0.3s						
BCOK				IAML		11 18 47.3	
	comp=E,143nm,1.0s						
OK030	Cody Creek RV	1.32	140	Pn	Pn	11 18 23.3	-1.1
OK025	Westminster Rd	1.41	163	Pn	Pn	11 18 25.2	-0.5
OKCFA	Oklahoma City	1.55	168	Pn	Pn	11 18 27.7	+0.1
OKCSW	OKLAHOMA CITY	1.56	168	Pn	Pn	11 18 27.7	-0.1
R32A	Long Quarter,	1.64	335	Pn	Pn	11 18 28.4	-0.5
FNO	Franklin	1.71	168	Pn	Pn	11 18 29.5	-0.3
TUL1	Leonard	1.94	121	Pn	Pn	11 18 32.1	-0.9
WMOK	Wichita Mounta	2.33	200	Pn	Pn	11 18 37.6	-0.6
KSCO	Kaye Shedlock'	4.31	300	Pn	Pn	11 19 07.7	+2.0
X40A	Basin Creek Fa	4.75	120	Pn	Pn	11 19 11.3	-0.3

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*INMG **07** 11:19:48.5±1.0, 33°.37N×13°.19W, h10^{km}, ML2.5, Error ellipse: s-maj=4.8km s-min=2.1km az=146.0*

*CNRM **07** 11:19:52.2, 32°.81N×12°.48W, h200^{km}, ml3.3*

ISC 07 11:19:45.5±3.2, **33°.52N**±0°.08×**12°.8W**±0°.2, **h10**^{km}, **n24**, σ**2^{s}.24**/34, **Madeira Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMPST	Porto Santo, M	3.04	263	*e*P	Pn	11 20 25.9	-7.7
PMPST				*e*S	Sn	11 20 53.5	-17
PMPST				A	A	11 21 00.1	
	22nm,0.2s						
PMPS	Porto Santo	3.04	262	*e*S	Sn	11 20 54.2	-16
PMPS				A	A	11 21 00.9	
	13nm,0.5s						
PMAR	Madeira	3.59	258	*e*S	Sn	11 21 06.3	-18
PMOZ	Porto Moniz, M	3.80	261	*e*P	Pn	11 20 35.4	-8.7
PMOZ				*e*S	Sn	11 21 11.3	-18
PMOZ				A	A	11 21 17.2	
	24nm,0.4s						
SRHM	Skhour des Reh	4.21	103	P	Pn	11 20 51.7	+1.9
SRHM				S	Sn	11 21 39.9	+0.9
TTIG	Tnine Tigouga,	4.71	128	P	Pn	11 20 53.3	-3.5
TTIG				S	Sn	11 21 42.8	-8.7
OUK	Oukaimeden	4.73	118	P	Pn	11 20 58.5	+1.3
OUK				S	Sn	11 21 50.4	-1.9
PFVI	Vila Bisbo	4.82	41	*e*S	Sn	11 21 52.7	-1.3
MORF	Marmelete	5.04	40	*e*P	Pn	11 21 02.9	+1.7
MORF				*e*S	Sn	11 21 58.9	-0.7
MORF				A	A	11 22 04.1	
	3.4nm,0.2s						
ZHG	ZHG	5.10	89	P	Pn	11 21 03.3	+1.3
ZHG				S	Sn	11 22 01.3	+0.2
PTEO	Sao Teotonio	5.18	38	*e*S	Sn	11 22 02.2	-0.7
PTEO				A	A	11 22 04.9	
	3.4nm,0.8s						
PBDV	Barranco-do-Ve	5.41	45	*e*P	Pn	11 21 07.9	+1.7
PBDV				*e*S	Sn	11 22 08.1	-0.4
PBDV				A	A	11 22 14.8	
	3.6nm,0.8s						
PCVE	Castro Verde	5.61	42	*e*P	Pn	11 21 11.3	+2.3
PCVE				*e*S	Sn	11 22 12.7	-0.9
PCVE				A	A	11 22 14.2	
	2.4nm,0.7s						
PVAQ	Vaqueiros	5.64	45	*e*P	Pn	11 21 11.0	+1.6
PVAQ				*e*S	Sn	11 22 13.0	-1.2
PVAQ				A	A	11 22 17.3	
	1.7nm,0.2s						
MESJ	Messejana	5.67	39	*e*P	Pn	11 21 12.4	+2.7
MESJ				*e*S	Sn	11 22 14.2	-0.7
MESJ				A	A	11 22 21.0	
	2.4nm,0.4s						
OUZM	OUZ	5.70	116	P	Pn	11 21 10.6	+0.2
OUZM				S	Sn	11 22 09.7	-6.3
PNCL	Nicolau / Gran	5.72	36	*e*P	Pn	11 21 13.7	+3.3
PNCL				*e*S	Sn	11 22 14.1	-2.0
PNCL				A	A	11 22 19.1	
	2.1nm,0.4s						
CZD	Col de Zad	6.47	92	P	Pn	11 21 22.6	+1.5
CZD				S	Sn	11 22 34.6	-0.5
PMTG	Montargil	6.63	32	*e*P	Pn	11 21 24.5	+1.6
PMTG				*e*S	Sn	11 22 36.2	-2.4
PMTG				A	A	11 22 46.0	
	1.0nm,0.3s						
MD31	MD31	6.73	93	P	Pn	11 21 25.9	+1.4
MD31				S	Sn	11 22 39.9	-1.3
PESTR	Estremoz	6.77	37	*e*S	Sn	11 22 39.8	-2.2
MDT	Midelt	6.86	94	P	Pn	11 21 27.9	+1.6
MDT				S	Sn	11 22 43.5	-1.0
PMRV	Marv??o	7.30	35	*e*P	Pn	11 21 33.4	+1.2
PMRV				*e*S	Sn	11 22 52.6	-2.6
PMRV				A	A	11 22 57.4	
	1.4nm,0.5s						
PGAV	Gavieira, Arco	9.14	22	*e*S	Sn	11 23 34.7	-5.8

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*MOS **07** 11:22:40.3±0.8, 42°.32N×144°.64E, h42^{km}, mb4.6/2, Error ellipse: s-maj=12.8km s-min=7.2km az=77.1*

*SKHL **07** 11:22:40.5±0.3, 42°.30N×144°.70E, h44^{km}±4^{km}, mb4.7/4*

*JMA **07** 11:22:40.5, 42°.39N×144°.61E, h28^{km}±2^{km}, M3.8*

JMA Felt I J1.

*NEIC **07** 11:22:43.2±1.2, 42°.34N±0°.07×144°.46E±0°.08, h44^{km}±8^{km}, mb4.3/20, Error ellipse: s-maj=12.5km s-min=5.6km az=142.0*

*IDC **07** 11:22:44.2±2.8, 42°.33N×144°.51E, h60^{km}±21^{km}, mb3.7/14, mb1 3.9/16, mb1mx3.6/74, mbtmp4.0/16, ML3.0/2, MS4.5/2, Ms1 4.5/2, ms1mx3.1/52, Error ellipse: s-maj=21.3km s-min=18.1km az=8.0*

ISC 07 11:22:40.8±1.6, **42°.43N**±0°.06×**144°.59E**±0°.04, **h25**^{km}±10^{km}, **n97**, σ**0^{s}.85**/104, **mb4.1**/24, **4C-4D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAK	Akkeshi	0.57	8	⇑P	Pb	11 22 52.5	+0.2
JAK				*e*S	Sn	11 23 02.1	+0.1
AKK	Akkeshi	0.62	17	*e*P	Pb	11 22 53.4	+0.4
AKK				*e*S	Sn	11 23 03.0	-0.1
JOB	Onbets	0.73	311	⇓P	Pb	11 22 55.2	+0.2
JKHN	Kushirohamanak	0.78	32	⇑P	Pb	11 22 55.7	0.0
JCH	Churui	0.93	282	⇓P	Pn	11 22 57.9	-0.3
JCH				*e*S	Sn	11 23 11.1	+0.4
JTHR	Tokachihiroo	0.97	262	⇓P	Pn	11 22 58.2	-0.6
JAR	Ashorobuto	1.06	325	⇑P	Pn	11 22 59.4	-0.7
JAR				*e*S	Sb	11 23 13.6	-0.3
ERM	Erimo	1.14	249	PN	Pn	11 23 00.6	-0.6
ERM	Erimo	1.14	249		Pn	11 23 00.6	-0.6
JNK	Nakash	1.16	5	⇑P	Pn	11 23 00.5	-1.0
JNK				*e*S	Sn	11 23 15.6	-0.9
NMR	Nemuro--Hokkai	1.26	41	⇓*i*PN	Pn	11 23 02.0	-0.8
NMR				*i* S	Sn	11 23 19.1	+0.2
NMR	Nemuro--Hokkai	1.26	41	*i* P	Pn	11 23 02.0	-0.8
NMR				*i* S	Sn	11 23 18.5	-0.4
NEM2	Nemuro 2	1.26	42	P	Pn	11 23 01.8	-1.0
JNBK	Urakawa-nobuka	1.37	265	P	Pn	11 23 04.1	-0.2
GLVR	Golovnino	1.48	27	*e*PN	Pn	11 23 05.6	-0.2
GLVR				*e*S	Sn	11 23 24.6	+0.4
GLVR				pmax	pmax		
	comp=Z,605nm,0.5s						
GLVR				pmax	pmax		
	comp=N,52nm,0.2s						
GLVR				pmax	pmax		
	comp=E,130nm,0.5s						
GLVR				smax	smax		
	comp=N,3μm,0.3s						
GLVR				smax	smax		
	comp=E,3μm,0.3s						
GLVR	Golovnino	1.48	27	*e*P	Pn	11 23 05.6	-0.2
GLVR				AMB	AMB	11 23 07.0	
	comp=E,605nm,0.4s						
GLVR				*e*S	Sn	11 23 24.6	+0.4
GLVR				A	A	11 23 29.0	
	comp=E,3μm,0.3s						
GLVR				A	A	11 23 29.0	
	comp=E,3μm,0.3s						
RUSJ	Misakicho	1.74	16	*e*PN	Pn	11 23 10.1	+0.7
RUSJ				*e*S	Sn	11 23 31.7	+0.9
GRPR	Tuman	1.79	28	*e*PN	Pn	11 23 09.5	-0.5
GRPR				*e*S	Sn	11 23 32.1	+0.2
GRPR				pmax	pmax		
	comp=Z,258nm,0.4s						
GRPR				pmax	pmax		
	comp=N,81nm,0.2s						
GRPR				pmax	pmax		
	comp=E,156nm,0.2s						
GRPR				smax	smax		
	comp=E,1μm,0.4s						
GRPR				smax	smax		
	comp=N,2μm,0.3s						
GRPR	Tuman	1.79	28	*e*P	Pn	11 23 09.5	-0.5
GRPR				AMB	AMB	11 23 18.0	
	comp=N,258nm,0.4s						
GRPR				*e*S	Sn	11 23 31.5	-0.4
GRPR				A	A	11 23 35.0	
	comp=N,2μm,0.4s						
GRPR				A	A	11 23 35.0	
	comp=N,1μm,0.4s						
YUK	Yuzh-Kuril'sk	1.86	30	*e*PN	Pn	11 23 11.5	+0.5
YUK				*e*S	Sn	11 23 33.5	-0.1
YUK				pmax	pmax		
	comp=Z,347nm,0.4s						
YUK				smax	smax		
	comp=N,1μm,0.4s						
YUK				smax	smax		
	comp=E,907nm,0.4s						
YUK	Yuzh-Kuril'sk	1.86	30	*e*P	Pn	11 23 11.0	0.0
YUK				AMB	AMB	11 23 16.0	
	comp=E,347nm,0.4s						
YUK				*e*S	Sn	11 23 33.5	-0.1
YUK				A	A	11 23 38.0	
	comp=E,1μm,0.4s						
YUK				A	A	11 23 38.0	
	comp=E,907nm,0.4s						
JKA	Kamikawa-asahi	2.23	320	*e*P	Pn	11 23 17.7	+1.6
JKA	Kamikawa-asahi	2.23	320	Pn	Pb	11 23 19.1	-1.2
ASAJ	Asahikawa	2.23	320	P	Pn	11 23 17.7	+1.5
	comp=E,7.1nm,0.3s,baz=149,slow=15,SNR=49						
ASAJ				S	Sb	11 23 47.3	-0.3
	comp=E,45nm,0.3s,baz=93,slow=33,SNR=24						
JEW	Eniwo	2.36	281	Pn	Pn	11 23 19.2	+1.3
JTM	Tenmabayashi	3.11	239	Pn	Pn	11 23 29.2	+1.0
KUR	Kuril'sk	3.67	39	PN	Pn	11 23 37.2	+1.3
KUR				*e*S	Sn	11 24 20.9	+2.5
KUR				pmax	pmax		
	comp=Z,79nm,0.5s						
KUR				smax	smax		
	comp=E,163nm,0.5s						
KUR				smax	smax		
	comp=N,35nm,0.3s						
KUR	Kuril'sk	3.67	39	*e*P	Pn	11 23 37.0	+1.1
KUR				AMB	AMB	11 23 40.0	
	comp=N,79nm,0.4s						
KUR				*e*S	Sn	11 24 19.0	+0.6
KUR				A	A	11 24 24.0	
	comp=N,65nm,0.4s						
KUR				A	A	11 24 24.0	
	comp=N,189nm,0.4s						
YSS	Yuzh-Sakhalins	4.71	344	Pn	Pn	11 23 52.0	+1.8
JMM	Marumori	5.41	214	Pn	Pn	11 23 59.0	-0.7
JSD	Sado	6.53	230	Pn	Pn	11 24 15.0	-0.3
MAJO	Matsushiro	7.67	222	PN	Pn	11 24 30.9	0.0

MAJO	Matsushiro	7.67	222	Pn	Pn	11 24 30.9	0.0
MJAR	Matsushiro Arr	7.67	222	P	Pn	11 24 31.3	+0.4
	comp=N,0.0nm,0.3s,baz=35,slow=13,SNR=7.0						
MJAR	Matsushiro Arr	7.67	222	PN	Pn	11 24 31.8	+0.8
MJAR	Matsushiro Arr	7.67	222		Pn	11 24 31.8	+0.8
SONM	Songino Array	27.29	295	P	P	11 28 23.3	+0.1
	comp=N,0.9nm,0.7s,baz=82,slow=7.9,SNR=5.3						
SONM	Songino Array	27.29	295	P	P	11 28 22.6	-0.7
H11N2	WAKE ISLAND Hy	29.44	133	T	T	11 59 54.4	
	baz=326,slow=75,SNR=490						
H11N1	WAKE ISLAND Hy	29.45	133	T	T	11 59 53.9	
	baz=326,slow=75,SNR=506						
H11N3	WAKE ISLAND Hy	29.46	133	T	T	11 59 54.2	
	baz=326,slow=75,SNR=392						
H11S1	WAKE ISLAND Hy	30.34	135	T	T	12 01 02.2	
	baz=327,slow=76,SNR=213						
H11S3	WAKE ISLAND Hy	30.35	135	T	T	12 01 05.4	
	baz=327,slow=76,SNR=386						
H11S2	WAKE ISLAND Hy	30.36	135	T	T	12 01 02.0	
	baz=327,slow=76,SNR=188						
NRIK	Noril'sk	39.52	332	P	P	11 30 07.7	-1.3
	comp=N,2.4nm,0.5s,baz=160,slow=4.1,SNR=5.0						
ZAA0	Zalesovo Array	40.32	308	P	P	11 30 15.7	-0.1
ZAA0				IAmb	IAmb	11 30 17.2	
	comp=Z,3.3nm,0.9s						
ZALV	Zalesovo Beam	40.32	308	P	P	11 30 15.2	-0.6
	comp=Z,2.7nm,0.7s,baz=92,slow=7.6,SNR=10.0						
ZALV				PcP	PcP	11 32 19.1	+0.3
	comp=Z,0.8nm,0.5s,baz=130,slow=2.3,SNR=3.8						
J20K	Nowinta River	40.52	36	P	P	11 30 18.3	+0.9
J20K				IAmb	IAmb	11 30 21.2	
	comp=Z,4.3nm,0.8s						
IMAR	Indian Mountai	40.79	33	P	P	11 30 20.4	+0.9
H21K	Melozitna Rive	41.16	34	P	P	11 30 23.5	+0.9
H21K				IAmb	IAmb	11 30 29.7	
	comp=Z,8.9nm,1.4s						
H23K	Yukon River	42.51	34	P	P	11 30 34.7	+1.1
TOLK	Toolik Lake Re	42.57	30	P	P	11 30 34.5	+0.4
TOLK				IAmb	IAmb	11 30 45.2	
	comp=Z,5.8nm,1.4s						
NEA2	Nenana	42.73	36	P	P	11 30 36.3	+0.9
NEA2				IAmb	IAmb	11 30 39.3	
	comp=Z,5.6nm,0.8s						
MDM	Murphy Dome	43.07	35	P	P	11 30 39.1	+0.8
MKAR	Makanchi Array	43.55	298	P	P	11 30 41.8	-0.5
MKAR	Makanchi Array	43.55	298	P	P	11 30 41.8	-0.5
IL31		43.66	35	P	P	11 30 44.0	+1.1
ILAR	Eielson Array	43.66	35	P	P	11 30 42.8	-0.2
	comp=Z,2.0nm,0.9s,baz=269,slow=6.7,SNR=16						
ILAR	Eielson Array	43.66	35	P	P	11 30 45.1	+2.1
BMAR	Burnt Mountain	44.44	31	P	P	11 30 50.5	+1.2
RIDG	Independent Ri	44.63	37	P	P	11 30 52.2	+1.3
RIDG				IAmb	IAmb	11 30 55.8	
	comp=Z,8.5nm,1.3s						
KURK	Kurchatov	44.72	304	P	P	11 30 52.3	+0.7
KURK	Kurchatov	44.72	304	eP	P	11 30 52.3	+0.7
KURBB	Kurchatov Arra	44.80	304	P	P	11 30 52.3	0.0
	comp=Z,2.0nm,0.9s,baz=79,slow=9.2,SNR=7.0						
L27K	Beaver Creek,	46.07	37	P	P	11 31 04.2	+2.0
L27K				IAmb	IAmb	11 31 06.5	
	comp=Z,5.7nm,0.9s						
BCAR	Beaver Creek A	46.09	37	P	P	11 31 04.1	+1.7
EPYK	Eagle Plains	47.65	32	P	P	11 31 16.7	+2.2
INK	Inuvik	48.48	29	P	P	11 31 21.2	+0.4
	comp=Z,0.9nm,0.5s,baz=274,slow=3.2,SNR=4.1						
INK	Inuvik	48.48	29	P	P	11 31 22.0	+1.2
BVAR	Borovoye Array	48.90	310	P	P	11 31 24.2	-0.1
	comp=Z,0.9nm,0.6s,baz=150,slow=6.3,SNR=5.5						
KKAR	Karatay Array	52.67	298	P	P	11 31 52.8	-0.1
KKAR	Karatay Array	52.67	298	P	P	11 31 52.8	-0.1
EUNU	Eureka	54.48	10	P	P	11 32 05.5	-0.2
ABKAR	Akbulak array	56.42	308	P	P	11 32 19.4	-0.6
ABKAR				IAmb	IAmb	11 32 27.9	
	comp=Z,1.7nm,0.7s						
ABKAR	Akbulak array	56.42	308	P	P	11 32 20.0	0.0
RES	Resolute Bay	56.76	16	P	P	11 32 22.2	+0.2
	comp=Z,7.1nm,0.8s,baz=13,slow=2.2,SNR=7.7						
RES	Resolute Bay	56.76	16	P	P	11 32 22.3	+0.3
ARCES	ARCESS Array B	59.83	339	LR	LR	12 00 25.8	
	comp=Z,530nm,21.6s,baz=245,slow=38						
WRA	Warramunga Arr	62.77	191	LR	LR	11 57 45.9	
	comp=Z,290nm,22.0s,baz=140,slow=34						
FINES	FINESS Array B	65.19	332	P	P	11 33 18.0	-1.4
	comp=Z,1.6nm,0.7s,baz=113,slow=4.4,SNR=5.4						
FINES	FINESS Array B	65.19	332	P	P	11 33 19.2	-0.2
FINES	FINESS Array B	65.19	332	P	P	11 33 19.2	-0.2
SUMG	Summit	65.28	1	P	P	11 33 20.5	+0.2
SUMG				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SUMG	Summit	65.28	1	P	P	11 33 20.5	+0.2
SUMG				IAmb	IAmb	11 33 42.2	
	comp=Z,4.1nm,1.0s						
BOZ	Bozeman (W)	69.22	47	P	P	11 33 45.9	+0.5
BOZ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BOZ	Bozeman (W)	69.22	47	P	P	11 33 45.9	+0.5
BOZ				IAmb	IAmb	11 33 46.8	
	comp=Z,2.6nm,0.7s						
NVAR	Mina Array Bea	69.87	56	P	P	11 33 50.3	+0.6
	comp=Z,0.9nm,0.8s,baz=289,slow=5.9,SNR=6.5						
NVAR	Mina Array Bea	69.87	56	P	P	11 33 50.6	+0.9
NOA	NORSAR Array B	70.14	338	P	P	11 33 49.1	-1.6
	comp=Z,0.4nm,0.6s,baz=41,slow=8.8,SNR=1.7						
AKASG	Malin Array Be	71.52	323	P	P	11 33 58.3	-0.9
	comp=Z,0.2nm,0.3s,baz=39,slow=6.7,SNR=2.0						
PDAR	Pinedale Array	72.19	48	P	P	11 34 04.2	+0.5
	comp=Z,0.9nm,0.7s,baz=240,slow=0.8,SNR=7.4						
PDAR	Pinedale Array	72.19	48	P	P	11 34 03.6	-0.1
BURAR	Bucovina Array	75.57	322	P	P	11 34 23.4	+0.2
TXAR	Lajitas Array	84.94	55	P	P	11 35 14.0	+0.1
	comp=Z,0.7nm,0.7s,baz=297,slow=6.0,SNR=3.6						
H03N2	Juan Fernandez	144.84	90	T	T	14 24 06.7	
	baz=302,slow=74,SNR=11						
H03N3	Juan Fernandez	144.85	90	T	T	14 24 08.9	
	baz=302,slow=74,SNR=13						
H03N1	Juan Fernandez	144.86	90	T	T	14 24 12.8	
	baz=302						

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*TUL **07** 11:22:51.6±1.2, 36°.72N±0°.01×97°.90W±0°.02, h6^{km}±4^{km}, ML2.7, mb_Lg2.5/8(NEIC), Error ellipse: s-maj=2.3km s-min=1.4km az=118.0*

NEIC 07 11:22:51.4±0.8**, 36°.690N**±0°.006×**97°.89W**±0°.02**, h5**^{km}±1^{km}**, Error ellipse: s-maj=3.0km s-min=2.5km az=309.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GC02	Grant County #	0.16	8	Pg	Pg	11 22 54.8	+0.1
GC02				Sg	Sg	11 22 56.8	-0.1
CROK	Carrier	0.20	202	Pg	Pg	11 22 55.9	+0.6
CROK				Sg	Sg	11 22 58.5	+0.5
KAN14	Manchester OK	0.27	348		Pg	11 22 56.7	0.0
KAN14				Sg	Sg	11 23 00.3	-0.1
OK032	Salt Plains WL	0.28	294	Pg	Pg	11 22 56.7	-0.2
OK032				Sg	Sg	11 22 59.8	-0.9
KAN17	Caldwell West	0.37	16	Pg	Pg	11 22 58.8	+0.2
KAN17				Sg	Sg	11 23 03.3	-0.1
KAN05	Bluff City Nor	0.42	2		Pg	11 22 60.0	+0.4
KAN05				Sg	Sg	11 23 04.7	-0.3
KAN13	South Haven SW	0.46	46		Pb	11 23 02.3	+0.2
KAN13				Sg	Sg	11 23 07.1	+0.7
KAN10	Anthony SW Sta	0.46	339	Pg	Pg	11 23 00.4	+0.1
KAN10				Sg	Sg	11 23 05.8	-0.6
KAN01	Argonia South	0.47	13		Pg	11 23 00.8	+0.2
KAN01				Sg	Sg	11 23 06.7	0.0
KAN09	Caldwell North	0.50	26	Pg	Pb	11 23 01.9	-0.8
KAN09				Sg	Sg	11 23 07.3	-0.1
KAN08	Anthony NE Sta	0.54	353		Pg	11 23 02.1	+0.3
KAN08				Sg	Sg	11 23 08.6	-0.3
BLOK	Blackwell	0.55	82	Pg	Pb	11 23 02.9	-0.7
KAN16	Harper SW Stat	0.55	345	Pg	Pg	11 23 01.8	-0.3
KAN16				Sg	Sg	11 23 08.5	-0.8
KAN06	Argonia West S	0.56	3		Pg	11 23 02.3	+0.1
KAN06				Sg	Sg	11 23 08.6	-0.8
KS20	Mayfield South	0.60	26		Pb	11 23 04.0	-0.5
KS20				Sg	Sg	11 23 10.8	0.0
KAN12	Harper NE Stat	0.61	352		Pg	11 23 03.2	0.0
KAN12				Sg	Sg	11 23 10.8	-0.4
U32A	Winter Ranch,	0.95	251	Pg	Pg	11 23 09.8	+0.2
OK029	Liberty Lake	0.96	158	Pg	Pb	11 23 10.3	-0.2
OK029					Sb	11 23 23.4	-0.1
BCOK	Bluff Creek, N	1.05	168		Pg	11 23 11.6	0.0
BCOK				Sg	Sg	11 23 24.5	-0.8
QUOK	Quay	1.08	118		Pg	11 23 12.2	0.0
OK031	S. Brethren Rd	1.12	131		Pg	11 23 12.8	-0.1
T35A	Sooner Cattle	1.13	78	Pn	Pg	11 23 12.6	-0.5
OK030	Cody Creek RV	1.17	130		Pg	11 23 13.9	0.0
OK025	Westminster Rd	1.19	158		Pb	11 23 14.5	0.0
OKCFA	Oklahoma City	1.32	164		Pn	11 23 16.3	-0.3
OKCSW	OKLAHOMA CITY	1.33	164		Pn	11 23 16.4	-0.3
FNO	Franklin	1.48	164		Pn	11 23 18.7	-0.1
R32A	Long Quarter,	1.85	340		Pn	11 23 22.9	-1.0
R32A				IAmb_Lg		11 23 53.3	
	comp=Z,17nm,0.8s						
TUL1	Leonard	1.86	114	Pn	Pb	11 23 25.2	-0.8
TUL1				IAmb_Lg		11 23 52.1	
	comp=Z,36nm,0.7s						
WMOK	Wichita Mounta	2.08	201		Pn	11 23 26.0	-1.0
X34A	Smith Ranch, M	2.08	179		Pn	11 23 28.3	+1.2
CBKS	Cedar Bluff	2.58	326	Pn	Pn	11 23 33.0	-0.9
U38A	Gravette	2.83	94	Pn	Pn	11 23 37.6	+0.3
U38A				IAmb_Lg		11 24 26.4	
	comp=Z,16nm,0.7s						
X37A	Clayton	2.93	135	Pn	Pn	11 23 38.6	-0.1
U40A	Yellville	4.07	93		Pn	11 23 54.2	-0.1
MGMO	Mountain Grove	4.53	82	Pn	Pn	11 24 01.1	+0.5

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*MAN **07** 11:27:10.8, 5°.02N×125°.25E, h173^{km}, mb5.1, ML4.0, MS4.1*

*DJA **07** 11:27:11.7±0.5, 5°N±3°×12°5E±°, h188^{km}±5^{km}, M4.2/9, mB4.8/3, mb3.9/5, MLv4.3/9, Mw(mB)4.0/3*

*IDC **07** 11:27:12.2±0.8, 5°.19N×125°.54E, h194^{km}±8^{km}, mb3.6/8, mb1 3.8/9, mb1mx3.3/52, mbtmp4.2/9, MS3.5/1, Ms1 3.5/1, ms1mx2.8/38, Error ellipse: s-maj=28.5km s-min=11.0km az=77.0*

*NEIC **07** 11:27:12.1±1.6, 5°.15N±0°.06×125°.4E±0°.1, h183^{km}±3^{km}, mb4.4/25, Error ellipse: s-maj=17.8km s-min=9.2km az=84.0*

ISC 07 11:27:11.7±0.5**, 5°.07N**±0°.05×**125°.41E**±0°.09**, h183**^{km}**, n59,** σ**1ˢ31**/64**, mb4.2**/18**, 2C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	1.38	175	P	Pn	11 27 43.7	+0.8
SGSI				S	Sn	11 28 07.7	+0.6
KCP	Kidapawan	1.95	351	⇑iP	Pn	11 27 48.3	-0.2
KCP				i S	Sn	11 28 23.6	+6.3
DAV	Davao City (W)	1.99	5	P	Pn	11 27 49.5	+0.6
	62nm,0.3s,baz=246,slow=6.4,SNR=2.1						
DAV				S	Sn	11 28 18.0	+0.1
	87nm,0.3s,baz=150,slow=23,SNR=9.4						
DAV	Davao City (W)	1.99	5		Pn	11 27 48.6	-0.4
DMPH	Davao City--Mi	2.00	3	⇓eP	Pn	11 27 48.9	-0.1
DMPH				i S	Sn	11 28 17.0	-1.1
BUKP	Musuan	2.81	353	⇑iP	Pn	11 27 57.9	-0.5
BUKP				i S	Sn	11 28 14.9	-20
TNTI	Ternate	4.70	155	P	Pn	11 28 22.1	+0.2
TNTI	Ternate	4.70	155	Pn	Pn	11 28 22.1	+0.2
LBMI	Labuha	6.04	160	P	Pn	11 28 40.1	+0.7
	0.3nm586nm14nm,0.6s						
TOLI2	Tolitoli	6.07	230	Pn	Pn	11 28 40.4	+0.7
APSI	Ampana	7.03	212	P	Pn	11 28 52.7	+0.4
	0.1nm16nm,1.1s						
SANI	Sanana	7.10	175	P	Pn	11 28 50.9	-2.3
BATI	Baumata	15.28	187	P	P	11 30 41.3	+2.4
	14nm,0.3s,baz=60,slow=2.6,SNR=8.3						
JAY	Jayapura	17.04	116	P	Pn	11 31 00.6	+1.1
	2.8nm,0.3s,baz=269,slow=6.0,SNR=12						
MTN	Manton Dam	18.68	162		P	11 31 17.5	+1.3
MTN				IAmb	IAmb	11 31 21.2	
	comp=Z,9.4nm,0.4s						
KNRA	Kununurra	20.88	171		P	11 31 40.8	+1.0
KNRA				IAmb	IAmb	11 31 42.7	
	comp=Z,14nm,0.6s						
FITZ	Fitzroy Crossi	23.02	179	P	P	11 32 01.3	+0.5
	comp=Z,3.7nm,0.3s,baz=5.1,slow=9.8,SNR=63						
FITZ	Fitzroy Crossi	23.02	179	P	P	11 32 01.9	+1.0
COEN	Coen	25.85	137	P	P	11 32 27.5	+1.0
COEN				IAmb	IAmb	11 32 51.1	
	comp=Z,5.9nm,1.1s						
WB0	Warramunga Arr	26.22	161	P	P	11 32 29.7	-0.1
WB0				IAmb	IAmb	11 32 35.1	
	comp=Z,7.3nm,1.3s						
WRAB	Tennant Creek	26.36	161	P	P	11 32 30.8	-0.3
WRAB				IAmb	IAmb	11 32 50.3	
	comp=Z,6.5nm,1.4s						
WRA	Warramunga Arr	26.36	161	P	P	11 32 30.7	-0.4
	comp=Z,1.6nm,0.8s,baz=338,slow=10,SNR=20						
WRA				ScP	ScP	11 39 13.5	-1.5
	comp=Z,0.3nm,0.5s,baz=338,slow=2.8,SNR=5.1						
WRA	Warramunga Arr	26.36	161	P	P	11 32 30.4	-0.7
WB2	Warramunga Arr	26.37	161	P	P	11 32 31.1	0.0
WB2				IAmb	IAmb	11 32 38.2	
	comp=Z,5.3nm,1.1s						
WR0	Warramunga Arr	26.45	160	P	P	11 32 31.3	-0.5
PSA00	Pilbara Seismi	27.04	191	P	P	11 32 36.9	-0.2
PSA00				IAmb	IAmb	11 32 37.7	
	comp=Z,15nm,1.1s						
CMAR	Chiang Mai Arr	29.07	299	P	P	11 32 56.1	+0.9
	comp=Z,0.5nm,0.3s,baz=103,slow=6.0,SNR=5.2						
AS31	Alice Springs	29.74	164	P	P	11 33 01.3	+0.2
ASAR	Alice Springs	29.74	164	P	P	11 33 01.1	0.0
	comp=Z,0.7nm,0.4s,baz=344,slow=7.0,SNR=22						
ASAR				PcP	PcP	11 35 59.1	-1.4
	comp=Z,0.3nm,0.4s,baz=344,slow=2.4,SNR=5.3						
ASAR				ScP	ScP	11 39 23.4	-2.0
	comp=Z,0.3nm,0.5s,baz=345,slow=3.0,SNR=6.3						
ASAR	Alice Springs	29.74	164	P	P	11 33 00.4	-0.7
MORW	Morawa	35.12	194	P	P	11 33 47.3	-0.5
JMM	Marumori	35.53	21	P	P	11 33 50.4	-0.8
FORT	Forrest	35.74	176	P	P	11 33 53.6	+0.6
NWAO	Narrogin (SRO)	38.58	191	P	P	11 34 17.1	+0.2
	comp=Z,7.1nm,0.3s,baz=29,slow=7.4,SNR=26						
NWAO	Narrogin (SRO)	38.58	191	P	P	11 34 17.5	+0.6
NWAO				IAmb	IAmb	11 34 37.5	
	comp=Z,24nm,1.2s						
BBOO	Buckleboo	39.01	166	IAmb	IAmb	11 34 22.2	
	comp=Z,5.0nm,0.8s						
BBOO	Buckleboo	39.01	166	P	P	11 34 21.3	+0.7
BBOO				IAmb	IAmb	11 34 22.2	
	comp=Z,5.0nm,0.8s						
BBOO	Buckleboo	39.01	166	P	P	11 34 21.3	+0.7
STKA	Stephens Creek	39.85	158	P	P	11 34 28.1	+0.6
	comp=Z,2.4nm,0.6s,baz=336,slow=9.8,SNR=9.2						
STKA	Stephens Creek	39.85	158	P	P	11 34 28.8	+1.3
CAN	Canberra	45.89	153	P	P	11 35 17.2	+1.1
TOO	Toolangi	46.36	158	P	P	11 35 21.8	+2.1
TOO				IAmb	IAmb	11 35 28.2	
	comp=Z,9.0nm,1.1s						
MK31	Makanchi Array	55.71	325	P	P	11 36 28.0	-1.3
MK31				IAmb	IAmb	11 36 29.1	
	comp=Z,17nm,1.4s						
MKAR	Makanchi Array	55.71	325	P	P	11 36 28.1	-1.2
	comp=Z,0.6nm,0.5s,baz=133,slow=7.4,SNR=6.6						
MKAR	Makanchi Array	55.71	325	P	P	11 36 28.8	-0.4
MA2	Magadan	57.74	15	LR	LR	12 01 13.6	
	comp=Z,46nm,20.8s,baz=180,slow=35						
BKZ	Black Stump Fm	64.45	138	P	P	11 37 29.1	+0.3
BKZ				IAmb	IAmb	11 37 54.2	
	comp=Z,16nm,1.3s						
ABKAR	Akbulak array	70.29	321	P	P	11 38 03.8	-1.4
N19K	Bonanza Creek	80.77	29	P	P	11 39 05.4	+0.7
IMAR	Indian Mountai	81.66	24	P	P	11 39 09.1	-0.1
BRLK	Bradley Lake	82.47	30	P	P	11 39 13.0	-0.6
TOLK	Toolik Lake Re	83.49	22	P	P	11 39 19.1	+0.5
ILAR	Eielson Array	84.46	25	P	P	11 39 22.4	-1.3
	comp=Z,0.3nm,0.4s,baz=255,slow=4.7,SNR=9.4						
ILAR	Eielson Array	84.46	25	P	P	11 39 21.7	-1.9
VNDA	Vanda	84.92	173	P	P	11 39 26.3	+0.7
BMAR	Burnt Mountain	85.36	23	P	P	11 39 28.7	+0.7
BCAR	Beaver Creek A	86.79	27	P	P	11 39 35.1	-0.1
QSPA	South Pole Qui	94.97	180	P	P	11 40 11.2	-2.0
QSPA				IAmb	IAmb	11 40 28.2	
	comp=Z,2.0nm,1.1s						
TORD	Torodi Ar. Bea	121.25	289	PKP	PKPdf	11 45 41.5	-2.5
	comp=Z,0.1nm,0.3s,baz=104,slow=4.6,SNR=1.6						

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*IASPEI **07** 11:31:18.5±1.0, 36°.93N±0°.02×97°.83W±0°.02, h9^{km}±6^{km}, Error ellipse: s-maj=3.2km s-min=2.8km az=103.1, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*NEIC **07** 11:31:18.7±0.8, 36°.94N±0°.02×97°.84W±0°.02, h6^{km}±5^{km}, Error ellipse: s-maj=2.4km s-min=1.9km az=146.0*

*NEIC **07** 11:31:18.8±0.9, 36°.93N±0°.01×97°.83W±0°.02, h4^{km}±7^{km}, Error ellipse: s-maj=2.2km s-min=1.6km az=139.0*

*TUL **07** 11:31:18.5±1.1, 36°.95N±0°.01×97°.84W±0°.02, h5^{km}±7^{km}, ML3.0, mb_Lg2.8/40(NEIC), ML2.8/24(NEIC), Error ellipse: s-maj=2.0km s-min=1.7km az=148.0*

*ANF **07** 11:31:19.2±0.4, 36°.93N×97°.83W, h5^{km}, ML3.4/7, Error ellipse: s-maj=5.6km s-min=3.2km az=69.0*

ISC 07 11:31:18.7±0.9**, 36°.93N**±0°.02×**97°.83W**±0°.02**, h7**^{km}±6^{km}**, n86,** σ**0ˢ66**/111**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GC02	Grant County #	0.09	198	Pg	Pg	11 31 21.0	+0.2
GC02				Sg	Sg	11 31 22.3	+0.2
KAN14	Manchester OK	0.11	282	Pg	Pg	11 31 21.1	-0.1
KAN14				Sg	Sg	11 31 22.7	-0.1
KAN17	Caldwell West	0.12	24	Pg	Pg	11 31 21.4	+0.1
KAN17				Sg	Sg	11 31 23.2	0.0
KAN05	Bluff City Nor	0.18	348		Pg	11 31 22.2	-0.1
KAN05				Sg	Sg	11 31 24.9	+0.1
KAN01	Argonia South	0.23	14		Pg	11 31 23.3	+0.1
KAN01				Sg	Sg	11 31 26.4	+0.1
KAN09	Caldwell North	0.26	39	Pg	Pg	11 31 24.0	+0.1
KAN09				Sg	Sg	11 31 27.7	+0.3
KAN10	Anthony SW Sta	0.29	312	Pg	Pg	11 31 24.4	0.0
KAN10				Sg	Sg	11 31 27.9	-0.3
KAN13	South Haven SW	0.29	74		Pg	11 31 24.6	+0.2
KAN13				Sg	Sg	11 31 28.7	+0.4
KAN06	Argonia West S	0.32	355		Pg	11 31 24.9	-0.1
KAN06				Sg	Sg	11 31 29.2	+0.1
KAN08	Anthony NE Sta	0.32	339		Pg	11 31 24.9	0.0
KAN08				Sg	Sg	11 31 29.6	+0.4
OK032	Salt Plains WL	0.33	247		Pg	11 31 25.4	+0.2
OK032				Sg	Sg	11 31 29.7	0.0
KAN16	Harper SW Stat	0.35	327	Pg	Pg	11 31 25.4	-0.1
KAN16				Sg	Sg	11 31 29.5	-0.6
KS20	Mayfield South	0.37	36		Pg	11 31 26.0	+0.1
KS20				Sg	Sg	11 31 30.6	-0.2
KS21	Milan North St	0.38	20		Pg	11 31 26.1	0.0
KS21					Sg	11 31 31.3	+0.2
KAN12	Harper NE Stat	0.39	339		Pg	11 31 26.1	-0.2
KAN12				Sg	Sg	11 31 31.4	-0.1
CROK	Carrier	0.45	196	Pg	Pg	11 31 27.7	+0.3
CROK				Sg	Sg	11 31 33.6	+0.5
BLOK	Blackwell	0.52	109	Pg	Pg	11 31 28.9	+0.2
BLOK				Sg	Sg	11 31 35.7	+0.1
T35A	Sooner Cattle	1.05	91		Pg	11 31 38.6	-0.3
T35A				Sg	Sg	11 31 52.4	-0.2
T35B	Sooner Cattle	1.05	91	P	Pg	11 31 38.6	-0.4
	baz=272						
U32A	Winter Ranch,	1.09	240		Pg	11 31 39.2	-0.5
U32A				Sg	Sg	11 31 53.9	-0.1
OK029	Liberty Lake	1.17	165		Pg	11 31 40.8	-0.4
OK029				Sg	Sg	11 31 55.7	-0.7
QUOK	Quay	1.18	130		Pg	11 31 40.8	-0.5
QUOK				Sg	Sg	11 31 56.4	-0.2
OK031	S. Brethren Rd	1.26	141		Pn	11 31 42.3	-0.5
OK031				Sg	Sg	11 31 59.0	-0.2
BCOK	Bluff Creek, N	1.29	172		Pn	11 31 42.7	-0.5
BCOK				Sg	Sg	11 31 59.6	-0.4
OK030	Cody Creek RV	1.31	140		Pn	11 31 43.0	-0.4
OK009	Oakdale Elemen	1.39	166	Pn	Pn	11 31 44.6	0.0
OK025	Westminster Rd	1.41	164		Pn	11 31 44.9	+0.1
OKCFA	Oklahoma City	1.54	169		Pn	11 31 47.0	+0.3
OKCFA	Oklahoma City	1.54	169	P	Pn	11 31 47.2	+0.5
	baz=349						
OKCFA				S	Sg	11 32 08.8	+0.5
	baz=349						
OKCSW	OKLAHOMA CITY	1.56	168		Pn	11 31 47.5	+0.6
R32A	Long Quarter,	1.64	335		Pn	11 31 48.6	+0.5
R32A	Long Quarter,	1.64	335	P	Pb	11 31 48.8	-0.6
	baz=155						
R32A				S	Sb	11 32 10.1	-0.3
	baz=155						
FNO	Franklin	1.71	168		Pn	11 31 49.8	+0.8
TUL1	Leonard	1.93	121		Pn	11 31 52.5	+0.5
TUL1	Leonard	1.93	121	P	Pn	11 31 53.1	+1.1
	baz=303						
TUL1				S	Sb	11 32 18.9	+0.3
	baz=303						
WMOK	Wichita Mounta	2.32	200		Pn	11 31 59.0	+1.5
WMOK	Wichita Mounta	2.32	200	P	Pn	11 31 58.2	+0.7
	baz=19						
X34A	Smith Ranch, M	2.33	180		Pb	11 31 59.4	-1.6
X34A				IAmb_Lg		11 32 33.3	
	comp=Z,27nm,0.7s						
KSU1	Kansas State U	2.37	24		Pn	11 31 58.7	+0.6
KSU1	Kansas State U	2.37	24	P	Pn	11 31 58.6	+0.6
	baz=205						
KSU1				S	Sb	11 32 31.1	-0.1
	baz=205						
CBKS	Cedar Bluff	2.41	322		Pn	11 32 00.2	+1.5
CBKS	Cedar Bluff	2.41	322	S	Sb	11 32 32.5	0.0
	baz=141						
U38A	Gravette	2.81	99		Pn	11 32 05.7	+1.6
LOOK	Love County	2.98	170		Pn	11 32 07.2	+0.7
X37A	Clayton	3.08	139		Pn	11 32 08.9	+1.1
X37A				IAmb_Lg		11 33 00.9	
	comp=Z,33nm,0.8s						
HHAR	Hobbs	3.19	101		Pn	11 32 10.4	+1.0
Z35A	Perchaven, San	3.62	172	Pn	Pn	11 32 16.4	+1.1
Z35A	Perchaven, San	3.62	172	P	Pn	11 32 16.2	+0.9
	baz=353						
Z35A				S	Sn	11 32 59.9	+1.5
	baz=353						
S39A	Bolivar	3.67	77		Pn	11 32 15.2	-0.7
W39A	Magazine	3.71	117		Pn	11 32 18.6	+2.2
AMTX	Amarillo	3.74	238		Pn	11 32 17.7	+0.8
AMTX				IAmb_Lg		11 33 20.7	
	comp=Z,19nm,0.7s						
N33A	J Bar K, Exete	3.81	4	Pn	Pn	11 32 18.0	+0.1
N33A				IAmb_Lg		11 33 29.6	
	comp=Z,32nm,0.9s						
U40A	Yellville	4.04	97	Pn	Pn	11 32 20.5	-0.6
U40A				IAmb_Lg		11 33 28.0	
	comp=Z,21nm,0.7s						
MIAR	Mount Ida	4.20	123		Pn	11 32 23.2	0.0
N35A	Tabor	4.28	23		Pn	11 32 24.1	-0.2
P38A	Dawn	4.32	50		Pn	11 32 24.5	-0.3
P38A				IAmb_Lg		11 33 42.4	
	comp=Z,20nm,0.9s						
KSCO	Kaye Shedlock'	4.32	300		Pn	11 32 24.7	-0.4
KSCO				IAmb_Lg		11 33 44.6	
	comp=Z,20nm,0.8s						
Z38A	Mt. Pleasant	4.34	147		Pn	11 32 25.4	+0.2
Z38A				IAmb_Lg		11 33 44.1	
	comp=Z,20nm,0.7s						
MGMO	Mountain Grove	4.45	85	Pn	Pn	11 32 26.7	0.0
MGMO				IAmb_Lg		11 33 47.7	
	comp=Z,14nm,0.7s						
BGNE	Belgrade	4.48	357		Pn	11 32 27.4	+0.4
ABTX	Abilene, Hawle	4.55	200	Pn	Pn	11 32 28.2	+0.1
R40A	Maddies Statio	4.62	71		Pn	11 32 29.6	+0.6
FCAR	Ozark Folk Cen	4.71	101		Pn	11 32 30.6	+0.3
FCAR				IAmb_Lg		11 33 48.9	
	comp=Z,18nm,0.7s						
X40A	Basin Creek Fa	4.74	120	Pn	Pn	11 32 31.4	+0.8
WHAR	Wooly Hollow	4.77	108	Pn	Pn	11 32 32.3	+1.2
WHAR				IAmb_Lg		11 33 53.6	
	comp=Z,15nm,0.9s						
L34A	Svendsen Farm,	5.15	12	Pn	Pn	11 32 36.1	-0.2
OGNE	Ogallala	5.18	322		Pn	11 32 36.2	-0.6
P40A	Paris	5.24	59	Pn	Pn	11 32 37.8	+0.4
P40A				IAmb_Lg		11 34 16.3	
	comp=Z,12nm,1.0s						
N38A	Joes South For	5.26	42	Pn	Pn	11 32 36.8	-1.0
N38A				IAmb_Lg		11 34 15.9	
	comp=Z,14nm,0.8s						
T25A	Trinidad	5.27	274	Pn	Pn	11 32 39.7	+1.6
T25A				IAmb_Lg		11 34 11.2	
	comp=Z,14nm,1.1s						
CCM	Cathedral Cave	5.35	76	Pn	Pn	11 32 40.0	+1.0
T42A	Van Buren	5.39	87		Pn	11 32 39.6	0.0
LCAR	Lake Charles	5.44	97		Pn	11 32 41.3	+1.0
K31A	O'Neill	5.73	353	Pn	Pn	11 32 44.2	-0.1
PBMO	Poplar Bluff	5.93	89	Pn	Pn	11 32 46.7	-0.3
PBMO				IAmb_Lg		11 34 27.1	
	comp=Z,15nm,0.8s						
FVM	French Village	5.98	78	Pn	Pn	11 32 48.1	+0.4

435B	Jarrell	6.14	178	IAmb_Lg		11 34 36.4	
	comp=Z,16nm,0.9s						
SDCO	Great Sand Dun	6.17	280	Pn	Pn	11 32 50.5	0.0
SDCO				IAmb_Lg		11 34 46.0	
	comp=Z,11nm,1.3s						
JCT	Junction City	6.64	195	IAmb_Lg		11 35 04.2	
	comp=Z,8.8nm,0.7s						
ISCO	Idaho Springs	6.75	297	Pn	Pn	11 32 59.8	+1.2
ISCO				IAmb_Lg		11 34 56.9	
	comp=Z,9.4nm,1.1s						
ECSD	EROS Data Cent	6.86	7	Pn	Pn	11 32 58.4	-1.3
S44A	Carbondale	6.87	81	Pn	Pn	11 33 00.2	+0.3
ANMO	Albuquerque	7.28	257	Pn	Pn	11 33 06.5	+0.8
Y45A	Yeager Farm, C	7.42	112	Pn	Pn	11 33 08.1	+0.6
HDIL	Hopedale	7.58	59	Pn	Pn	11 33 10.7	+1.0
K22A	Casper	8.80	313	IAmb_Lg		11 36 18.9	
	comp=Z,9.4nm,1.0s						

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*TUL **07** 11:34:55.1±1.1, 36°.947N±0°.009×97°.85W±0°.01, h2km±6km, ML2.5, mb_Lg2.2/7(NEIC), Error ellipse: s-maj=1.6km s-min=1.2km az=114.0*

NEIC 07 11:34:55.3±0.7**, 36°.935N**±0°.007×**97°.84W**±0°.01**, h6**km±4km**, Error ellipse: s-maj=1.4km s-min=1.0km az=76.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.08	189	Pg	Pg	11 34 57.4	+0.1
GC02				Sg	Sg	11 34 59.0	+0.5
KAN14	Manchester OK	0.10	283		Pg	11 34 57.4	-0.1
KAN14				Sg	Sg	11 34 58.8	-0.1
KAN17	Caldwell West	0.13	30	Pg	Pg	11 34 57.9	-0.1
KAN17				Sg	Sg	11 34 59.9	+0.1
KAN05	Bluff City Nor	0.17	352		Pg	11 34 58.7	-0.1
KAN05				Sg	Sg	11 35 01.3	+0.1
KAN01	Argonia South	0.23	17		Pg	11 34 59.8	-0.1
KAN01				Sg	Sg	11 35 02.9	0.0
KAN09	Caldwell North	0.27	42	Pg	Pg	11 35 00.4	-0.2
KAN09				Sg	Sg	11 35 04.3	+0.1
KAN10	Anthony SW Sta	0.28	313	Pg	Pg	11 35 00.7	-0.1
KAN10				Sg	Sg	11 35 04.4	0.0
KAN13	South Haven SW	0.30	75	Pg	Pg	11 35 01.3	+0.1
KAN13				Sg	Sg	11 35 05.4	+0.2
KAN08	Anthony NE Sta	0.31	341		Pg	11 35 01.2	-0.1
KAN08				Sg	Sg	11 35 05.3	-0.2
KAN06	Argonia West S	0.31	358		Pg	11 35 01.3	-0.2
KAN06				Sg	Sg	11 35 05.6	0.0
OK032	Salt Plains WL	0.32	246	Pg	Pg	11 35 01.7	0.0
OK032				Sg	Sg	11 35 06.3	+0.4
KAN16	Harper SW Stat	0.34	329	Pg	Pg	11 35 01.8	-0.2
KAN16				Sg	Sg	11 35 07.0	+0.5
KS20	Mayfield South	0.37	38		Pg	11 35 02.4	-0.2
KS20				Sg	Sg	11 35 07.3	-0.3
KAN12	Harper NE Stat	0.38	341		Pg	11 35 01.8	-1.0
KAN12				Sg	Sg	11 35 07.6	-0.3
CROK	Carrier	0.44	195	Pg	Pg	11 35 03.8	-0.1
CROK				Sg	Sg	11 35 10.2	+0.6
BLOK	Blackwell	0.53	109	Pg	Pg	11 35 05.2	-0.4
BLOK				Sg	Sg	11 35 12.7	+0.2
T35A	Sooner Cattle	1.07	91		Pg	11 35 15.2	-0.6
T35A				Sg	Sg	11 35 29.7	+0.1
U32A	Winter Ranch,	1.08	240		Pg	11 35 15.5	-0.6
U32A				Sg	Sg	11 35 29.0	-1.2
OK029	Liberty Lake	1.18	164	Pg	Pg	11 35 17.5	-0.4
OK029				Sg	Sb	11 35 33.5	-0.1
QUOK	Quay	1.19	129	Pg	Pg	11 35 17.9	-0.3
QUOK				Sg	Sg	11 35 33.5	-0.1
OK031	S. Brethren Rd	1.27	140	Pg	Pn	11 35 19.1	-0.5
OK031				Sg	Sb	11 35 36.5	+0.2
BCOK	Bluff Creek, N	1.29	172	Pg	Pn	11 35 19.2	-0.7
BCOK					Sg	11 35 36.5	-0.2
OK030	Cody Creek RV	1.32	139		Pn	11 35 19.8	-0.5
OK025	Westminster Rd	1.41	163	Pn	Pn	11 35 21.8	+0.2
OK025				IAmb_Lg		11 35 43.8	
	comp=Z,16nm,0.8s						
OKCFA	Oklahoma City	1.55	168		Pn	11 35 23.4	-0.1
OKCFA				IAmb_Lg		11 35 48.0	
	comp=Z,14nm,0.7s						
OKCSW	OKLAHOMA CITY	1.56	168		Pn	11 35 23.1	-0.5
R32A	Long Quarter,	1.64	335		Pn	11 35 24.7	0.0
FNO	Franklin	1.71	168	Pn	Pn	11 35 26.3	+0.5
TUL1	Leonard	1.94	121		Pn	11 35 29.0	+0.1
TUL1				IAmb_Lg		11 35 59.3	
	comp=Z,17nm,0.8s						
WMOK	Wichita Mounta	2.32	199	Pn	Pn	11 35 34.9	+0.7
WMOK				IAmb_Lg		11 36 12.8	
	comp=Z,4.9nm,0.8s						
X34A	Smith Ranch, M	2.33	180	Pn	Pn	11 35 34.6	+0.3
KSU1	Kansas State U	2.37	24	Pn	Pn	11 35 35.3	+0.5
CBKS	Cedar Bluff	2.40	322	Pn	Pn	11 35 35.7	+0.4
U38A	Gravette	2.82	99		Pn	11 35 40.4	-0.6
LOOK	Love County	2.98	169	Pn	Pn	11 35 42.9	-0.3
X37A	Clayton	3.08	139	Pn	Pn	11 35 44.3	-0.3
HHAR	Hobbs	3.21	101	Pn	Pn	11 35 46.5	+0.2
Z35A	Perchaven, San	3.63	172	Pn	Pn	11 35 52.6	+0.6
W39A	Magazine	3.72	117		Pn	11 35 53.6	+0.3
AMTX	Amarillo	3.73	238		Pn	11 35 53.9	+0.3
AMTX				IAmb_Lg		11 37 03.9	
	comp=Z,10nm,0.8s						
MIAR	Mount Ida	4.21	123		Pn	11 36 01.2	+1.2
N35A	Tabor	4.28	23		Pn	11 36 01.9	+0.9
KSCO	Kaye Shedlock'	4.31	300		Pn	11 36 01.5	-0.1
P38A	Dawn	4.33	50		Pn	11 36 02.4	+0.8
X40A	Basin Creek Fa	4.75	119	Pn	Pn	11 36 06.7	-0.8

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*IDC **07** 11:44:42.2±9.4, 37°.48N×71°.77E, h143km±64km, mb3.5/2, mb1 3.3/4, mb1mx2.9/55, mbtmp3.7/4, Error ellipse: s-maj=98.0km s-min=66.2km az=141.0*

ISC 07 11:44:44.0±2.6**, 37°.7N**±0°.2×**71°.6E**±0°.2**, h150**km**, n6, σ1§11**/9**, 2C, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	5.43	23	P	Pn	11 46 03.0	-0.3
	0.6nm,0.3s,baz=168,slow=6.7,SNR=6.1						
AAK				S	Sn	11 47 06.6	+1.5
	0.8nm,0.3s,baz=354,slow=19,SNR=7.7						
AAK	Ala-Archa	5.43	23	P	Pn	11 46 01.3	-1.9
	0.8nm,0.3s						
AAK				S	Sn	11 47 05.4	+0.3
	5.7nm,0.8s						
KK31	Karatay Array	5.49	352	⇑P	Pn	11 46 03.0	-0.9
	0.6nm,0.2s,baz=160,slow=10,SNR=34						
KK31				⇑S	Sn	11 47 06.3	-0.1
	2.9nm,0.3s,baz=164,slow=21,SNR=16						
ZALV	Zalesovo Beam	18.65	25	P	P	11 48 50.1	0.0
	0.3nm,0.3s,baz=195,slow=10,SNR=3.2						
FINES	FINESS Array B	36.80	325	P	P	11 51 37.6	+0.7
	1.4nm,0.9s,baz=106,slow=12,SNR=1.4						
ARCES	ARCESS Array B	40.26	337	P	P	11 52 06.3	+0.6
	2.0nm,0.8s,baz=113,slow=9.3,SNR=6.8						

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*IDC **07** 11:51:24.8±0.9, 30°.72S×71°.87W, h0km, mb4.0/7, mb1 4.0/11, mb1mx3.8/36, mbtmp3.9/11, ML3.8/4, Error ellipse: s-maj=34.5km s-min=18.9km az=101.0*
*SJA **07** 11:51:27.0, 30°.60S×72°.12W, h10km, ML4.4*
*NEIC **07** 11:51:28.7±1.7, 30°.67S±0°.02×71°.8W±0°.1, h23km±6km, Error ellipse: s-maj=14.6km s-min=1.1km az=102.0*
*GUC **07** 11:51:29.3±0.9, 30°.70S×71°.63W, h28km±4km, ML4.3*

ISC 07 11:51:28.9±0.9**, 30°.69S**±0°.04×**71°.80W**±0°.05**, h31**km±5km**, n82, σ1§72**/85**, mb4.1**/7**, 1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.14	86	*i* P	Pb	11 51 34.5	-0.2
CO06				*e*S	Sb	11 51 37.9	-0.8
CO06				IAML		11 51 38.7	
	comp=E,109µm,0.4s						
CO06	Fray Jorge	0.14	86		Pb	11 51 34.3	-0.4
CO05	La Serena	0.91	33	*i* P	Pn	11 51 45.6	+0.1
CO05				*e*S	Sn	11 51 57.7	+0.2
CO05	La Serena	0.91	33		Pn	11 51 45.7	+0.2
CO03	El Pedregal	0.97	99	⇓*i*P	Pn	11 51 46.0	-0.4
CO03				*e*S	Sn	11 51 57.6	-1.6
CO03	El Pedregal	0.97	99		Pn	11 51 46.1	-0.4
GO04	Tololo Observa	1.00	60	*e*P	Pn	11 51 47.3	+0.3
GO04				*e*S	Sb	11 52 00.8	-0.1
GO04	Tololo Observa	1.00	60		Pn	11 51 47.3	+0.3
GO04	Tololo Observa	1.00	60	*i* P	Pn	11 51 47.0	-0.1
VA06	Catapilco	1.92	167	*i* P	Pn	11 51 59.8	+0.4
VA06				IAML		11 52 33.9	
	comp=E,3µm,0.4s						
LCO	Las Campanas	1.92	30		Pn	11 52 00.3	+0.6
LCO	Las Campanas	1.92	30	*i* P	Pn	11 52 01.0	+1.3
AROD	Rodeo	2.08	76	*i* P	Pb	11 52 05.0	-1.1
VA03	San Esteban	2.33	153	*e*P	Pn	11 52 06.5	+1.3
VA03				IAML		11 52 45.5	
	comp=E,2µm,0.3s						
VA03	San Esteban	2.33	153		Pn	11 52 06.9	+1.7
VA03	San Esteban	2.33	153	*i* P	Pn	11 52 07.0	+1.8
VA01	Torpederas	2.33	177		Pn	11 52 05.9	+0.8
VA01	Torpederas	2.33	177	*i* P	Pb	11 52 09.0	-1.3
ACCO	Cerro Coronel	2.36	88	*i* P	Pb	11 52 10.0	-0.9
ACDV	Cuesta del Vie	2.37	78	*i* P	Pb	11 52 10.0	-1.0
ROCH	El Roble	2.38	164	*e*P	Pn	11 52 06.6	+0.6
ROCH				IAML		11 52 49.0	
	comp=E,1µm,0.4s						
ROC1	El Roble	2.38	164	*i* P	Pn	11 52 07.0	+1.0
RTLS	Leoncito	2.42	118	*i* P	Pb	11 52 10.3	-1.5
AC04	Llanos de Chal	2.55	15		Pn	11 52 08.4	+0.3
AC04	Llanos de Chal	2.55	15	*i* P	Pn	11 52 08.0	-0.1
AUSP	Uspallata	2.57	127	*i* P	Pb	11 52 12.0	-2.5
MT02	Curacav	2.63	168		Pn	11 52 11.3	+2.2
MT02	Curacav	2.63	168	*i* P	Pn	11 52 10.0	+0.8
PEL	Peldehue	2.63	159	*i* P	Pn	11 52 11.0	+1.7
ZON	Zonda	2.81	109	*i* P	Pb	11 52 16.0	-2.5
MT05	Renca	2.85	162	*e*P	Pn	11 52 14.5	+2.3
MT05	Renca	2.85	162	*i* P	Pn	11 52 15.0	+2.8
RTCV	Cerro Valdivia	3.03	114	*i* P	Pb	11 52 19.0	-3.2
MT09	Talagante	3.16	168	*e*P	Pn	11 52 17.5	+0.9
MT09				IAML		11 53 08.9	
	comp=E,668nm,0.3s						
ASAL	Salagasta	3.16	128	*i* P	Pb	11 52 21.0	-3.5
MT01	Popeta	3.20	172	*i* P	Pn	11 52 19.0	+1.9
ARCO	CERRO ARCO	3.25	132	*i* P	Pb	11 52 23.0	-3.1
GO03	Copiap	3.37	24		Pn	11 52 20.1	+0.7
GO03	Copiap	3.37	24	*i* P	Pn	11 52 21.0	+1.5
LMEL	Las Melosas	3.43	157	*e*P	Pn	11 52 22.7	+2.3
LMEL				IAML		11 53 21.9	
	comp=N,400nm,0.4s						
AAGR	Agrelo	3.48	134	*i* P	Pb	11 52 26.0	-3.9
VCA	Vinchina	3.68	59	*i* P	Pb	11 52 29.0	-4.3
AVFE	Valle Fertil	3.74	91	*i* P	Pn	11 52 27.0	+2.4
BO01	Tunca	3.75	171		Pn	11 52 25.8	+1.2
BO01	Tunca	3.75	171	*i* P	Pn	11 52 26.0	+1.4
BO02	Sierra Bellavi	4.18	168	*i* P	Pn	11 52 32.0	+1.3
GO05	Huala	4.32	181	*i* P	Pn	11 52 35.0	+2.6
ACLC	CERRO LA CRUZ	4.39	75	*i* P	Pn	11 52 37.0	+3.5
ACHE	Chepes	4.44	97	*i* P	Pn	11 52 37.0	+2.8
AC02	Maricunga	4.50	32	*i* P	Pn	11 52 37.0	+1.7
RFA	San Rafael	4.95	146	*i* P	Pn	11 52 44.0	+2.8
PB14	IPOC Station P	6.16	12		Pn	11 52 55.7	-2.3
PB14	IPOC Station P	6.16	12	*i* P	Pn	11 52 57.0	-1.1
H03N1	Juan Fernandez	6.63	244	Pn	Pn	11 53 03.5	-0.5
H03N1				T	T	11 59 58.2	
	baz=72,slow=72,SNR=568						
H03N2	Juan Fernandez	6.65	244	Pn	Pn	11 53 03.5	-0.6
H03N2				T	T	11 59 57.6	
	baz=72,slow=72,SNR=669						
H03N3	Juan Fernandez	6.65	244	Pn	Pn	11 53 03.3	-0.9
	SNR=4.0						
H03N3				T	T	11 59 54.4	
	baz=72,slow=72,SNR=669						
FSA	Cafayete	6.86	50	*i* P	Pn	11 53 11.0	+3.5
AHML	Horco Molle	6.88	57	*i* P	Pn	11 53 10.0	+2.3
LC01	Cunco	8.19	180	Pn	Pn	11 53 23.9	-1.7
LC01	Cunco	8.19	180	*i* P	Pn	11 53 27.0	+1.4
LVC	Limon Verde	8.45	18	Pn	Pn	11 53 31.5	+2.0
	comp=N,0.9nm,0.3s,baz=168,slow=9.1,SNR=2.2						
LVC				Sn	Sn	11 55 02.2	-1.8
	comp=N,0.4nm,0.3s,baz=171,slow=20,SNR=2.1						
LVC	Limon Verde	8.45	18	Pn	Pn	11 53 30.5	+1.0
PLCA	Paso Flores	10.08	175	Pn	Pn	11 53 50.8	-0.8
	comp=N,0.2nm,0.3s,baz=220,slow=23,SNR=1.8						
CPUP	Villa Florida	13.44	75	Pn	Pn	11 54 37.2	-0.3
	comp=N,0.1nm,0.3s,baz=69,slow=5.6,SNR=1.7						
LPAZ	La Paz	14.72	14	Pn	Pn	11 54 57.6	+2.1
	comp=N,0.2nm,0.3s,baz=178,slow=5.5,SNR=5.8						
LPAZ	La Paz	14.72	14		Pn	11 54 53.0	-2.6
BDFB	Brasilia	26.42	61	P	P	11 57 04.4	+1.3
	comp=N,2.2nm,0.6s,baz=194,slow=8.4,SNR=4.0						
SNAA	Sanae	54.58	159	P	P	12 00 54.5	+0.6
	comp=N,0.6nm,0.5s,baz=275,slow=11,SNR=13						
SNAA	Sanae	54.58	159	P	P	12 00 54.1	+0.2
SNAA				IAmb	IAmb	12 01 09.2	
	comp=Z,5.5nm,1.5s						
QSPA	South Pole Qui	59.54	180	P	P	12 01 30.1	+1.0
	comp=Z,0.8nm,0.8s,baz=207,slow=1.4,SNR=6.9						
QSPA	South Pole Qui	59.54	180	P	P	12 01 29.2	0.0
QSPA				IAmb	IAmb	12 01 36.4	
	comp=Z,3.4nm,1.2s						
TXAR	Lajitas Array	66.96	330	P	P	12 02 19.3	+0.7
	comp=Z,0.3nm,0.6s,baz=134,slow=3.9,SNR=2.6						
DBIC	Dimbokro	73.95	72	P	P	12 03 02.0	+0.5
	comp=Z,2.0nm,0.5s,baz=229,slow=7.1,SNR=4.1						
DBIC	Dimbokro	73.95	72	P	P	12 03 01.1	-0.4
DBIC				IAmb	IAmb	12 03 13.0	
	comp=Z,14nm,1.2s						
MAW	Mawson	76.30	164	P	P	12 03 15.3	+1.1
	comp=Z,1.6nm,0.5s,baz=214,slow=5.8,SNR=12						
TORD	Torodi Ar. Bea	82.90	70	P	P	12 03 51.4	+0.5
	comp=Z,0.5nm,0.4s,baz=258,slow=4.9,SNR=2.4						
WRA	Warramunga Arr	123.74	210	PKP	PKPdf	12 10 23.8	-0.4
	comp=Z,0.3nm,0.6s,baz=164,slow=1.7,SNR=7.1						
H11S2	WAKE ISLAND Hy	125.96	271	T	T	14 29 08.7	
	baz=116,slow=75,SNR=44						
H11S1	WAKE ISLAND Hy	125.97	271	T	T	14 29 09.7	
	baz=116,slow=75,SNR=52						
H11S3	WAKE ISLAND Hy	125.97	271	T	T	14 29 10.1	
	baz=116,slow=75,SNR=33						
ZALV	Zalesovo Beam	151.28	29	PKPbc	PKiKP	12 11 19.4	+0.2
	comp=Z,1.6nm,0.5s,baz=312,slow=4.2,SNR=8.4						
ZALV	Zalesovo Beam	151.28	29		PKPdf	12 11 11.7	-1.1
ZALV				PKPbc	PKPbc	12 11 19.1	+0.4

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*TUL **07** 11:54:03.8±1.2, 36°.95N±0°.02×97°.84W±0°.02, h4km±7km, ML2.8, mb_Lg2.4/16(NEIC), Error ellipse: s-maj=2.3km s-min=1.7km az=145.0*

NEIC 07 11:54:04.1±0.9**, 36°.94N**±0°.01×**97°.82W**±0°.01**, h6**km±7km**, Error ellipse: s-maj=2.5km s-min=0.9km az=148.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.09	202	Pg	Pg	11 54 06.2	0.0
KAN17	Caldwell West	0.11	21	Pg	Pg	11 54 06.5	0.0
KAN17				Sg	Sg	11 54 08.4	+0.2
KAN14	Manchester OK	0.12	279		Pg	11 54 06.2	-0.3
KAN14				Sg	Sg	11 54 07.9	-0.4
KAN05	Bluff City Nor	0.18	345		Pg	11 54 07.5	-0.1
KAN05				Sg	Sg	11 54 10.0	0.0
KAN01	Argonia South	0.22	12		Pg	11 54 08.4	0.0
KAN01				Sg	Sg	11 54 11.5	+0.1
KAN09	Caldwell North	0.25	39	Pg	Pg	11 54 09.2	+0.2
KAN13	South Haven SW	0.28	74		Pg	11 54 09.9	+0.3
KAN13				Sg	Sg	11 54 13.9	+0.6
KAN10	Anthony SW Sta	0.29	310	Pg	Pg	11 54 09.4	-0.3
KAN10				Sg	Sg	11 54 13.3	-0.3
KAN06	Argonia West S	0.31	354		Pg	11 54 10.0	-0.2
KAN06				Sg	Sg	11 54 14.2	-0.1
KAN08	Anthony NE Sta	0.31	337		Pg	11 54 10.0	-0.2
KAN08				Sg	Sg	11 54 14.5	+0.2
OK032	Salt Plains WL	0.34	247		Pg	11 54 10.6	-0.2
OK032				Sg	Sg	11 54 15.2	0.0
KAN16	Harper SW Stat	0.35	325	Pg	Pg	11 54 10.6	-0.3
KAN16				Sg	Sg	11 54 15.4	-0.1
KS20	Mayfield South	0.36	36		Pg	11 54 11.1	0.0
KS20				Sg	Sg	11 54 16.1	+0.3
KAN12	Harper NE Stat	0.39	338		Pg	11 54 11.4	-0.2
KAN12				Sg	Sg	11 54 16.6	-0.1
CROK	Carrier	0.45	197	Pg	Pg	11 54 12.8	0.0
CROK				Sg	Sg	11 54 19.2	+0.5
BLOK	Blackwell	0.51	110	Pg	Pg	11 54 14.1	+0.2
BLOK				Sg	Sg	11 54 21.8	+1.1
T35A	Sooner Cattle	1.05	91		Pg	11 54 23.9	-0.2
U32A	Winter Ranch,	1.10	240		Pg	11 54 24.7	-0.6
OK029	Liberty Lake	1.18	166		Pg	11 54 26.1	-0.5
OK029				Sg	Sg	11 54 42.0	+0.2
QUOK	Quay	1.18	130		Pg	11 54 26.2	-0.4
QUOK				Sg	Sg	11 54 41.6	-0.3
OK031	S. Brethren Rd	1.26	141		Pg	11 54 27.6	-0.6
BCOK	Bluff Creek, N	1.29	172		Pn	11 54 27.9	-0.8
OK030	Cody Creek RV	1.31	140	Pn	Pn	11 54 28.5	-0.4
OK025	Westminster Rd	1.41	164		Pn	11 54 30.0	-0.4
OKCFA	Oklahoma City	1.55	169		Pn	11 54 32.4	+0.1
OKCSW	OKLAHOMA CITY	1.56	169		Pn	11 54 32.9	+0.5
R32A	Long Quarter,	1.64	335		Pn	11 54 34.0	+0.4
FNO	Franklin	1.71	169		Pn	11 54 34.4	-0.1
TUL1	Leonard	1.93	122		Pn	11 54 38.1	+0.6
TUL1				IAmb_Lg		11 55 07.3	
	comp=Z,23nm,0.8s						
WMOK	Wichita Mounta	2.33	200		Pn	11 54 43.7	+0.7
X34A	Smith Ranch, M	2.33	180		Pn	11 54 44.0	+0.9
X34A				IAmb_Lg		11 55 21.0	
	comp=Z,14nm,0.8s						
KSU1	Kansas State U	2.36	23		Pn	11 54 43.7	+0.2
KSU1				IAmb_Lg		11 55 20.4	
	comp=Z,18nm,0.8s						
CBKS	Cedar Bluff	2.41	322	Pn	Pn	11 54 43.8	-0.4
U38A	Gravette	2.80	99	Pn	Pn	11 54 50.5	+1.0
LOOK	Love County	2.98	170	Pn	Pn	11 54 52.3	+0.3
X37A	Clayton	3.07	139		Pn	11 54 53.8	+0.6
HHAR	Hobbs	3.19	101		Pn	11 54 54.6	-0.2
S39A	Bolivar	3.66	77	Pn	Pn	11 55 01.8	+0.5
W39A	Magazine	3.70	117	Pn	Pn	11 55 02.2	+0.4
AMTX	Amarillo	3.75	238		Pn	11 55 01.7	-0.9
U40A	Yellville	4.03	97	Pn	Pn	11 55 07.7	+1.3
MIAR	Mount Ida	4.19	123	Pn	Pn	11 55 10.3	+1.7
N35A	Tabor	4.27	23		Pn	11 55 09.7	0.0
P38A	Dawn	4.31	50	Pn	Pn	11 55 10.0	-0.2
P38A				IAmb_Lg		11 56 24.0	
	comp=Z,14nm,1.1s						
KSCO	Kaye Shedlock'	4.33	300		Pn	11 55 09.3	-1.3
KSCO				IAmb_Lg		11 56 22.7	
	comp=Z,7.8nm,0.9s						
Z38A	Mt. Pleasant	4.34	147		Pn	11 55 10.2	-0.5
MGMO	Mountain Grove	4.44	86	Pn	Pn	11 55 13.2	+1.1
MGMO				IAmb_Lg		11 56 30.9	
	comp=Z,6.4nm,0.7s						
BGNE	Belgrade	4.47	357	Pn	Pn	11 55 12.2	-0.3
ABTX	Abilene, Hawle	4.56	200	Pn	Pn	11 55 12.6	-1.1
R40A	Maddies Statio	4.61	71	Pn	Pn	11 55 14.8	+0.5
FCAR	Ozark Folk Cen	4.71	101	Pn	Pn	11 55 16.5	+0.8
X40A	Basin Creek Fa	4.73	120	Pn	Pn	11 55 16.7	+0.6
X40A				IAmb_Lg		11 56 34.8	
	comp=Z,9.1nm,1.1s						
WHTX	Lake Whitney,	4.94	176	Pn	Pn	11 55 18.8	-0.1
OGNE	Ogallala	5.18	322		Pn	11 55 23.6	+1.3
P40A	Paris	5.23	59	Pn	Pn	11 55 21.8	-1.0
P40A				IAmb_Lg		11 56 53.6	
	comp=Z,6.8nm,0.8s						
T25A	Trinidad	5.28	274	Pn	Pn	11 55 22.2	-1.6
CCM	Cathedral Cave	5.34	76	Pn	Pn	11 55 25.2	+0.7
LCAR	Lake Charles	5.44	97	Pn	Pn	11 55 25.4	-0.3
SDCO	Great Sand Dun	6.18	280	Pn	Pn	11 55 35.3	-0.8
ISCO	Idaho Springs	6.76	297	Pn	Pn	11 55 43.8	-0.4
ECSD	EROS Data Cent	6.85	7	Pn	Pn	11 55 44.7	-0.4
S44A	Carbondale	6.87	81	Pn	Pn	11 55 46.5	+1.2

NEIC 07 11:55:43.6±0.6**, 36°.937N**±0°.005×**97°.84W**±0°.01**, h6**km±4km**, ML2.2**/43**, Error ellipse: s-maj=1.6km s-min=0.7km az=71.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.09	193	Pg	Pg	11 55 45.7	+0.2
GC02				Sg	Sg	11 55 47.2	+0.3
KAN14	Manchester OK	0.10	281		Pg	11 55 45.8	-0.1
KAN14				Sg	Sg	11 55 47.3	0.0
KAN14				IAML		11 55 47.8	
	comp=E,2µm,0.1s						
KAN17	Caldwell West	0.12	28	Pg	Pg	11 55 46.2	0.0
KAN17				IAML		11 55 48.3	
	comp=N,2µm,0.2s						
KAN17				Sg	Sg	11 55 48.0	+0.1
KAN05	Bluff City Nor	0.17	350		Pg	11 55 47.1	0.0
KAN05				Sg	Sg	11 55 49.6	+0.2
KAN05				IAML		11 55 50.3	
	comp=E,745nm,0.2s						
KAN01	Argonia South	0.23	16		Pg	11 55 48.1	0.0
KAN01				Sg	Sg	11 55 51.2	+0.1
KAN01				IAML		11 55 51.4	
	comp=N,462nm,0.3s						
KAN01				IAML		11 55 51.4	
	comp=E,393nm,0.4s						
KAN09	Caldwell North	0.26	41	Pg	Pg	11 55 48.9	+0.1
KAN09				Sg	Sg	11 55 52.4	+0.1
KAN09				IAML		11 55 53.2	
	comp=N,590nm,0.2s						
KAN10	Anthony SW Sta	0.28	312	Pg	Pg	11 55 49.0	0.0
KAN10				Sg	Sg	11 55 52.3	-0.5
KAN13	South Haven SW	0.30	75		Pg	11 55 49.4	0.0
KAN13				Sg	Sg	11 55 53.6	+0.3
KAN13				IAML		11 55 53.8	
	comp=E,283nm,0.3s						
KAN13				IAML		11 55 57.2	
	comp=N,261nm,0.2s						
KAN08	Anthony NE Sta	0.31	340		Pg	11 55 49.6	-0.1
KAN08				Sg	Sg	11 55 53.5	-0.3
KAN06	Argonia West S	0.31	357		Pg	11 55 49.7	0.0
KAN06				Sg	Sg	11 55 53.6	-0.2
OK032	Salt Plains WL	0.33	246		Pg	11 55 50.0	+0.1
OK032				Sg	Sg	11 55 54.2	-0.1
OK032				IAML		11 55 54.8	
	comp=N,317nm,0.3s						
OK032				IAML		11 55 55.0	
	comp=N,408nm,0.2s						
KAN16	Harper SW Stat	0.34	328	Pg	Pg	11 55 50.2	0.0
KAN16				Sg	Sg	11 55 54.1	-0.7
KS20	Mayfield South	0.37	38	Pg	Pg	11 55 50.8	+0.1
KS20				Sg	Sg	11 55 55.4	-0.3
KS20				IAML		11 55 56.4	
	comp=N,206nm,0.1s						
KS20				IAML		11 55 56.8	
	comp=N,208nm,0.1s						
KAN12	Harper NE Stat	0.38	340		Pg	11 55 50.8	-0.2
KAN12				Sg	Sg	11 55 55.9	-0.2
KAN12				IAML		11 56 00.5	
	comp=E,243nm,0.3s						
KAN12				IAML		11 56 00.8	
	comp=N,253nm,0.5s						
CROK	Carrier	0.45	195		Pg	11 55 52.2	0.0
CROK				Sg	Sg	11 55 58.2	+0.2
BLOK	Blackwell	0.53	109	Pg	Pg	11 55 53.5	-0.2
BLOK				Sg	Sg	11 55 59.9	-0.7
BLOK				IAML		11 56 06.9	
	comp=N,126nm,0.2s						
BLOK				IAML		11 56 08.2	
	comp=E,119nm,0.2s						
T35A	Sooner Cattle	1.06	91	Pg	Pg	11 56 03.7	-0.3
T35A				Sg	Sg	11 56 17.9	+0.2
T35A				IAML		11 56 23.2	
	comp=E,61nm,0.2s						
T35A				IAML		11 56 23.2	
	comp=N,76nm,0.3s						
OK029	Liberty Lake	1.18	165	Pg	Pg	11 56 05.8	-0.4
OK029				Sg	Sg	11 56 20.6	-0.8
OK029				IAML		11 56 26.1	
	comp=N,42nm,0.3s						
OK029				IAML		11 56 27.0	
	comp=N,50nm,0.1s						
QUOK	Quay	1.19	130	Pg	Pg	11 56 05.9	-0.4
QUOK				Sg	Sg	11 56 21.6	-0.1
OK031	S. Brethren Rd	1.27	140	Pn	Pn	11 56 07.2	-0.7
OK031				IAML		11 56 25.0	
	comp=N,76nm,0.3s						
OK031				IAML		11 56 29.6	
	comp=N,64nm,0.4s						
OK030	Cody Creek RV	1.32	140	Pn	Pn	11 56 08.0	-0.5
OK025	Westminster Rd	1.41	163	Pn	Pn	11 56 09.5	-0.3
R32A	Long Quarter,	1.64	335	Pn	Pn	11 56 13.5	+0.5
FNO	Franklin	1.71	168	Pn	Pn	11 56 13.3	-0.6
TUL1	Leonard	1.94	121	Pn	Pn	11 56 17.7	+0.6
X34A	Smith Ranch, M	2.33	180	Pn	Pn	11 56 21.8	-0.6

NEIC 07 11:57:48.6±0.6**, 36°.938N**±0°.008×**97°.83W**±0°.01**, h5**km±5km**, mb_Lg2.5**/5**, Error ellipse: s-maj=1.6km s-min=1.0km az=121.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.09	197	Pg	Pg	11 57 50.5	-0.1
GC02				Sg	Sg	11 57 52.3	+0.4
KAN14	Manchester OK	0.11	280		Pg	11 57 50.7	-0.3
KAN14				Sg	Sg	11 57 52.3	-0.2
KAN17	Caldwell West	0.12	25	Pg	Pg	11 57 51.1	0.0
KAN17				Sg	Sg	11 57 52.9	+0.1
KAN05	Bluff City Nor	0.17	348		Pg	11 57 52.2	0.0
KAN05				Sg	Sg	11 57 54.6	+0.2
KAN01	Argonia South	0.22	14		Pg	11 57 53.0	-0.1
KAN01				Sg	Sg	11 57 56.0	0.0
KAN09	Caldwell North	0.26	40	Pg	Pg	11 57 52.9	-0.9
KAN09				Sg	Sg	11 57 57.6	+0.5
KAN10	Anthony SW Sta	0.28	311	Pg	Pg	11 57 54.1	-0.1
KAN10				Sg	Sg	11 57 57.8	-0.2
KAN13	South Haven SW	0.29	75		Pg	11 57 54.5	+0.2
KAN13				Sg	Sg	11 57 58.8	+0.7
KAN06	Argonia West S	0.31	355		Pg	11 57 54.8	0.0
KAN06				Sg	Sg	11 57 58.5	-0.3
KAN08	Anthony NE Sta	0.31	338		Pg	11 57 54.7	0.0
KAN08				Sg	Sg	11 57 58.9	+0.1
OK032	Salt Plains WL	0.34	247		Pg	11 57 55.0	-0.1
OK032				Sg	Sg	11 57 59.6	0.0
KAN16	Harper SW Stat	0.34	327	Pg	Pg	11 57 55.1	-0.2
KAN16				Sg	Sg	11 57 59.8	-0.1
KS20	Mayfield South	0.36	37		Pg	11 57 56.1	+0.4
KS20				Sg	Sg	11 58 00.4	-0.1
KAN12	Harper NE Stat	0.38	339		Pg	11 57 55.9	-0.2
KAN12				Sg	Sb	11 58 02.8	-1.4
CROK	Carrier	0.45	196	Pg	Pg	11 57 57.3	-0.1
CROK				Sg	Sg	11 58 03.9	+0.7
BLOK	Blackwell	0.52	110	Pg	Pg	11 57 58.5	-0.2
BLOK				Sg	Sg	11 58 05.8	+0.3
T35A	Sooner Cattle	1.05	91	Pg	Pg	11 58 08.2	-0.6
T35A				Sg	Sg	11 58 22.2	-0.3
OK029	Liberty Lake	1.18	165	Pg	Pg	11 58 11.1	-0.2
OK029					Sn	11 58 28.4	+0.2
QUOK	Quay	1.18	130	Pg	Pg	11 58 10.8	-0.5
QUOK				Sg	Sg	11 58 26.6	0.0
OK031	S. Brethren Rd	1.27	141	Pn	Pg	11 58 12.1	-0.8
BCOK	Bluff Creek, N	1.29	172	Pn	Pn	11 58 12.6	-0.7
OK030	Cody Creek RV	1.31	140		Pn	11 58 13.0	-0.6
OK025	Westminster Rd	1.41	164	Pn	Pn	11 58 14.9	0.0
OKCFA	Oklahoma City	1.55	169	Pn	Pn	11 58 16.8	-0.1
OKCSW	OKLAHOMA CITY	1.56	168	Pn	Pn	11 58 17.2	+0.2
R32A	Long Quarter,	1.64	335		Pn	11 58 17.9	-0.3
FNO	Franklin	1.71	168		Pn	11 58 19.5	+0.4
TUL1	Leonard	1.94	121		Pb	11 58 23.3	-1.1
TUL1				IAmb_Lg		11 58 51.5	
	comp=Z,9.5nm,0.7s						
WMOK	Wichita Mounta	2.33	200		Pn	11 58 27.7	+0.1
X34A	Smith Ranch, M	2.33	180	Pn	Pn	11 58 28.4	+0.8
KSU1	Kansas State U	2.36	24	Pn	Pn	11 58 27.9	-0.2
KSU1				IAmb_Lg		11 59 02.9	
	comp=Z,14nm,1.1s						
S39A	Bolivar	3.67	77	Pn	Pn	11 58 45.3	-0.8
W39A	Magazine	3.71	117	Pn	Pn	11 58 48.3	+1.8
N35A	Tabor	4.27	23		Pn	11 58 53.5	-0.8
LPAR	Lepanto	6.22	100	IAmb_Lg		12 01 00.8	
	comp=Z,28nm,0.8s						

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*ATH **07** 12:01:04.2, 37°.36N×20°.24E, h3^{km}±2^{km}, ML3.3/11, Error ellipse: s-maj=3.3km s-min=1.3km az=48.0*

*THE **07** 12:01:04.7, 37°.36N×20°.24E, h3^{km}±1^{km}, ML3.5/4, Error ellipse: s-maj=1.6km s-min=0.7km az=52.0*

ISC 07 12:01:01.9±1.9**, 37°.30N**±0°.06×**20°.09E**±0°.06**, h14**^{km}±11^{km}**, n49, σ1§88**/62**, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LTHK	Lithakia	0.72	55	P	Pg	12 01 15.6	-0.4
LTHK				S	Sg	12 01 24.3	-1.3
	8µm,0.5s						
LTHK	Lithakia	0.72	55	P	Pg	12 01 15.5	-0.5
LTHK				S	Sg	12 01 23.3	-2.2
ZAK2	Zakynthos	0.81	53	P	Pg	12 01 17.8	+0.2
ZAK2				S	Sg	12 01 27.4	-0.9
PSDA	Pessada-Kefalo	0.90	26	P	Pg	12 01 19.1	-0.3
PSDA				S	Sb	12 01 31.2	0.0
PSDA	Pessada-Kefalo	0.90	26	P	Pg	12 01 18.9	-0.5
KEF3	Kipouria, Keph	0.93	13	P	Pg	12 01 20.5	+0.7
KEF3	Kipouria, Keph	0.93	13	P	Pg	12 01 20.3	+0.5
VLS	Valsamata	0.96	24	P	Pg	12 01 21.0	+0.5
VLS				S	Sb	12 01 33.8	+0.9
	2µm,0.6s						
VLS	Valsamata	0.96	24	P	Pg	12 01 19.9	-0.7
VLS				AML	AML	12 01 37.8	
	comp=E,4001µm,0.4s						
VLS				AML	AML	12 01 44.8	
	comp=N,5331µm,0.5s						
DMLN	Damoulianata-K	0.96	14	P	Pg	12 01 20.6	0.0
KEF4	Livadi, Kephal	0.99	16	P	Pg	12 01 21.7	+0.6
KEF4				S	Sb	12 01 35.3	+1.5
KEF4	Livadi, Kephal	0.99	16	P	Pg	12 01 21.0	-0.2
VTN	Vitineika	1.07	55	P	Pg	12 01 21.5	-1.0
FSK	Fiskardo	1.22	18	P	Pg	12 01 25.4	0.0
FSK				S	Sb	12 01 42.3	+2.1
	comp=N,2µm,1.1s						
FSK	Fiskardo	1.22	18	P	Pg	12 01 25.3	0.0
FSK				S	Sg	12 01 41.0	-0.2
FSK				AML	AML	12 01 48.7	
	comp=N,3365µm,0.8s						
FSK				AML	AML	12 01 53.6	
	comp=E,5905µm,1.3s						
RLS	Riolos of Patr	1.33	55	P	Pg	12 01 27.1	-0.4
RLS	Riolos of Patr	1.33	55	P	Pg	12 01 26.8	-0.8
RLS				AML	AML	12 01 52.2	
	comp=N,1697µm,0.8s						
RLS				AML	AML	12 02 02.4	
	comp=E,1732µm,0.8s						
PYL	PYLOS	1.39	106	P	Pg	12 01 28.9	+0.4
PYL	PYLOS	1.39	106	P	Pg	12 01 28.5	-0.1
PYL				AML	AML	12 01 50.5	
	comp=N,1306µm,0.6s						
PYL				AML	AML	12 01 56.3	
	comp=E,1590µm,0.6s						
EVGI	Lefkada island	1.39	19	P	Pg	12 01 29.0	+0.3
EVGI	Lefkada island	1.39	19	P	Pg	12 01 27.9	-0.9
DRAG	Dragano-Lefkad	1.44	15	P	Pn	12 01 29.8	+2.3
DRAG	Dragano-Lefkad	1.44	15	P	Pn	12 01 29.5	+2.1
DRO	Drossia	1.45	63	P	Pg	12 01 28.9	-0.8
DRO	Drossia	1.45	63	P	Pg	12 01 29.0	-0.8
DRO				AML	AML	12 01 54.1	
	comp=N,3566µm,0.4s						
DRO				AML	AML	12 02 01.4	
	comp=E,1747µm,0.4s						
ITM	Ithomi	1.47	94	P	Pn	12 01 29.6	+1.6
ITM	Ithomi	1.47	94	P	Pn	12 01 29.6	+1.6
NYDR	Nydri-Lefkada	1.49	19	P	Pn	12 01 30.4	+2.2
LKD2	Lefkada island	1.55	17	P	Pn	12 01 31.6	+2.5
LKD2				S	Sb	12 01 51.3	+1.3
	comp=E,1µm,0.5s						
LKD2	Lefkada island	1.55	17	P	Pn	12 01 31.4	+2.3
TSLK	Tsoukalades, L	1.59	16	P	Pn	12 01 32.2	+2.6
PVO	Paravola	1.74	40	P	Pn	12 01 34.0	+2.4
PVO				AML	AML	12 02 03.4	
	comp=N,2489µm,0.6s						
PVO				AML	AML	12 02 04.5	
	comp=E,1810µm,0.7s						
LAKA	Lakka	1.77	57	P	Pn	12 01 34.4	+2.3
LAKA				AML	AML	12 02 16.2	
	comp=N,4169µm,0.7s						
LAKA				AML	AML	12 02 22.7	
	comp=E,4346µm,1.1s						
KLV	Kalavryta, Ach	1.80	65	P	Pn	12 01 34.3	+1.8
KLV				AML	AML	12 02 11.4	
	comp=E,764µm,0.6s						
KLV				AML	AML	12 02 16.4	
	comp=N,744µm,0.6s						
EFP	Efpalio	1.83	51	P	Pn	12 01 35.5	+2.6
EFP				AML	AML	12 02 10.8	
	comp=E,1372µm,0.6s						
EFP				AML	AML	12 02 12.7	
	comp=N,1142µm,0.5s						
TRIZ	Trizonia	1.90	55	P	Pn	12 01 36.0	+2.2
GUR	Goura	1.90	70	P	Pn	12 01 36.2	+2.2
SERG	Sergoula	1.92	54	P	Pn	12 01 36.5	+2.4
SERG				AML	AML	12 02 14.9	
	comp=E,1144µm,0.5s						
SERG				AML	AML	12 02 16.9	
	comp=N,1189µm,0.5s						
EVR	Evrytania	2.11	40	P	Pn	12 01 40.1	+3.2
EVR				AML	AML	12 02 18.3	
	comp=E,881µm,0.8s						
EVR				AML	AML	12 02 20.0	
	comp=N,1121µm,0.8s						
STIP	Stip	4.68	20	*i* Pn	Pn	12 02 15.8	+3.8
DBRK	Dubrovnik	5.56	345	*i* Pn	Pn	12 02 25.1	+0.9
DBRK				Sn	Sn	12 03 21.6	-6.4
STON	Ston	5.86	343	*e*Pn	Pn	12 02 29.2	+1.0
MAKA	Makarska	6.42	340	*e*Pn	Pn	12 02 37.8	+1.8
MAKA				Sn	Sn	12 03 46.5	-2.5
HVAR	Hvar	6.50	336	*e*Pn	Pn	12 02 39.1	+2.1
HVAR				Sn	Sn	12 03 45.7	-5.1
RICI	Ricice	6.58	341	*e*Pn	Pn	12 02 39.9	+1.6
ZIRJ	Zirje	7.19	333	*e*Pn	Pn	12 02 48.5	+2.0
ZIRJ				Sn	Sn	12 04 03.1	-4.9
KIJV	Kijevo	7.26	338	*e*Pn	Pn	12 02 49.8	+2.3
KIJV				Sn	Sn	12 04 05.2	-4.4
MORI	Morici	7.36	334	*e*Pn	Pn	12 02 50.9	+2.1
MORI				Sn	Sn	12 04 08.8	-3.1
DUGI	Dugi Otok	7.70	332	*e*Pn	Pn	12 02 55.8	+2.3
DUGI				Sn	Sn	12 04 16.5	-3.9

WEL 07 12:03:06.6, 38°S±12°×**17°6E**±1°5**, h160**^{km}±23^{km}**, M2.2**/27**, mB4.9**/1**, MLv2.2**/27**, Mw(mB)4.2**/1**, Error ellipse: s-maj=0.0km s-min=0.0km az=119.1, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLZ	Tolley Road	0.49	266	P	Pn	12 03 29.4	+0.4
MUGZ	Murupara	0.52	111	P	Pn	12 03 29.1	0.0
MRHZ	Matea Rd	0.58	159	P	Pn	12 03 30.1	+0.6
RATZ	Rangitukua	0.65	208	P	Pn	12 03 30.4	+0.6
RTZ	Ruatahuna	0.72	117	P	Pn	12 03 30.3	0.0
URZ	Urewera	0.75	88	P	Pn	12 03 29.0	-1.4
TOZ	Tahuroa Road	0.76	317	P	Pn	12 03 29.0	-1.4
KATZ	Kakaramea	0.77	208	P	Pn	12 03 31.5	+0.8
MTHZ	Maungataniwha	0.78	136	P	Pn	12 03 31.3	+0.6
NTVZ	North Tongarir	0.89	205	P	Pn	12 03 32.6	+1.1
TMVZ	Te Maari	0.89	203	P	Pn	12 03 32.4	+0.9
ETVZ	East Tongariro	0.91	202	P	Pn	12 03 32.6	+0.9
BKZ	Black Stump Fm	0.91	163	P	Pn	12 03 32.3	+0.7
WTVZ	West Tongariro	0.93	208	P	Pn	12 03 32.3	+0.5
OTVZ	Oturere	0.95	204	P	Pn	12 03 33.0	+1.0
NMHZ	Naumai	0.95	148	P	Pn	12 03 33.4	+1.5
TWVZ	Taurewa	0.96	216	P	Pn	12 03 32.7	+0.7
RAHZ	Arahi	0.96	131	P	Pn	12 03 32.7	+0.8
SNVZ	South Ngauruho	0.98	204	P	Pn	12 03 33.3	+1.0
RAGZ	Rawiri	1.01	102	P	Pn	12 03 31.9	-0.6
HIZ	Hauiti	1.04	258	P	Pn	12 03 32.3	-0.2
TUVZ	Tukino	1.05	202	P	Pn	12 03 33.1	+0.3
SNGZ	Shannon Statio	1.05	118	P	Pn	12 03 32.8	+0.2
MWZ	Matawai	1.08	93	P	Pn	12 03 31.6	-1.4
WNVZ	Wahianoa	1.12	203	P	Pn	12 03 34.0	+0.6
KWHZ	Kaweka Forest	1.15	170	P	Pn	12 03 34.6	+1.0
WHHZ	Waihua	1.15	133	P	Pn	12 03 34.1	+0.6
MOVZ	Moawhango	1.15	196	P	Pn	12 03 33.9	+0.3
ARHZ	Aropaoanui	1.17	146	P	Pn	12 03 34.7	+1.0
PKVZ	Pokaka	1.18	212	P	Pn	12 03 33.9	+0.1
BHHZ	Black Hill Sta	1.20	183	P	Pn	12 03 34.5	+0.5
MTVZ	Mangateitei	1.21	206	P	Pn	12 03 34.6	+0.5
MCHZ	McNeill Hill	1.22	160	P	Pn	12 03 35.5	+1.3
RUGZ	Raukumara Rang	1.25	75	P	Pn	12 03 31.0	-3.5
RIGZ	Rimuhau	1.33	109	P	Pn	12 03 34.6	-0.6
KRHZ	Kereru	1.36	173	P	Pn	12 03 36.1	+0.7
HAZ	Te Kaha	1.39	68	P	Pn	12 03 32.1	-3.7
KNZ	Kokohu	1.39	122	P	Pn	12 03 35.4	-0.4
PRGZ	Paritu Road	1.49	115	P	Pn	12 03 36.1	-0.7
KAHZ	Kahuranaki	1.60	160	P	Pn	12 03 38.4	+0.5
MHGZ	Mahia Peninsul	1.62	123	P	Pn	12 03 37.5	-0.5
PNHZ	Pukenui	1.62	179	P	Pn	12 03 38.3	+0.2
CNGZ	Carnagh Statio	1.62	97	P	Pn	12 03 36.8	-1.3
ETAZ	East Tamaki Re	1.66	324	P	Pn	12 03 33.7	-4.7
PUZ	Puketiti	1.67	83	P	Pn	12 03 35.9	-2.8
WPHZ	Waipukurau	1.78	173	P	Pn	12 03 39.8	0.0
MRZ	Mangatainoka R	2.41	190	P	Pn	12 03 45.3	-1.6
OGWZ	Otaki Gorge	2.63	196	P	Pn	12 03 47.9	-1.8
KIW	Kapiti Island	2.74	200	P	Pn	12 03 48.6	-2.4
CAW	Cannon Point	2.93	196	P	Pn	12 03 50.8	-2.6
MSWZ	Moikau Station	3.19	192	P	Pn	12 03 53.6	-3.1
TCW	Tory Channel	3.25	206	P	Pn	12 03 54.5	-2.9
TUWZ	Tuamarina	3.56	208	P	Pn	12 03 57.9	-3.5
NNZ	Nelson	3.62	215	P	Pn	12 03 57.5	-4.5
QRZ	Quartz Range	3.77	227	P	Pn	12 03 58.4	-5.7
THZ	Tophouse	4.27	215	P	Pn	12 04 05.2	-5.4
KHZ	Kahutara	4.58	205	P	Pn	12 04 10.1	-4.4
DSZ	Denniston Nort	4.80	223	P	Pn	12 04 10.4	-7.0
GVZ	Greta Valley S	5.24	206	P	Pn	12 04 17.8	-5.4
LTZ	Lake Taylor	5.37	212	P	Pn	12 04 18.9	-6.1
INZ	Inchbonnie	5.70	218	P	Pn	12 04 23.0	-6.3
MQZ	McQueen's Vall	6.02	205	P	Pn	12 04 26.4	-7.0
AKCZ	Akaroa Harbour	6.09	203	P	Pn	12 04 29.6	-4.8
TMZ	Timaru	7.21	211	P	Pn	12 04 41.9	-7.4

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*TUL **07** 12:24:05.1±1.1, 36°.64N±0°.01×97°.694W±0°.008, h7^{km}±7^{km}, ML2.4, mb_Lg2.9/3(NEIC), Error ellipse: s-maj=1.6km s-min=0.8km az=160.0*

NEIC 07 12:24:05.2±0.8**, 36°.63N**±0°.01×**97°.69W**±0°.01**, h8**^{km}±5^{km}**, Error ellipse: s-maj=1.6km s-min=1.3km az=153.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.26	328	Pg	Pg	12 24 11.0	+0.6
GC02				Sg	Sg	12 24 14.2	+0.3
CROK	Carrier	0.27	242		Pg	12 24 10.6	+0.1
CROK				Sg	Sg	12 24 14.6	+0.4
KAN14	Manchester OK	0.39	326	Pg	Pg	12 24 12.7	-0.3
KAN14				Sg	Sg	12 24 18.2	0.0
BLOK	Blackwell	0.40	71		Pg	12 24 13.1	+0.1
BLOK				Sg	Sg	12 24 18.6	+0.2
KAN13	South Haven SW	0.42	24		Pg	12 24 13.3	0.0
KAN13				Sg	Sg	12 24 18.8	-0.1
KAN17	Caldwell West	0.42	352	Pg	Pg	12 24 13.3	0.0
KAN17				Sg	Sg	12 24 19.1	+0.2
OK032	Salt Plains WL	0.45	293		Pg	12 24 13.9	-0.2
OK032				Sg	Sg	12 24 20.3	+0.3
KAN05	Bluff City Nor	0.50	343	Pg	Pg	12 24 14.3	-0.6
KAN05				Sg	Sg	12 24 22.3	+0.8
KAN09	Caldwell North	0.51	6	Pg	Pg	12 24 14.9	-0.1
KAN09				Sg	Sg	12 24 21.9	+0.1
KAN01	Argonia South	0.53	354	Pg	Pg	12 24 15.2	-0.1
KAN01				Sg	Sg	12 24 22.3	0.0
KAN10	Anthony SW Sta	0.59	327	Pg	Pg	12 24 15.0	-1.7
KAN10				Sg	Sg	12 24 24.5	+0.1
KS20	Mayfield South	0.61	10	Pg	Pg	12 24 16.8	-0.2
KS20				Sg	Sg	12 24 25.4	+0.5
KAN06	Argonia West S	0.63	348	Pg	Pg	12 24 17.2	-0.2
KAN06				Sg	Sg	12 24 25.9	+0.2
KAN08	Anthony NE Sta	0.64	339	Pg	Pg	12 24 16.6	-0.9
KAN08				Sg	Sg	12 24 26.1	+0.3
KAN16	Harper SW Stat	0.67	333	Pg	Pg	12 24 18.2	+0.1
KAN16				Sg	Sg	12 24 26.8	0.0
KAN12	Harper NE Stat	0.71	340	Pg	Pg	12 24 17.2	-1.7
KAN12				Sg	Sg	12 24 27.7	-0.5
OK029	Liberty Lake	0.85	167	Pg	Pg	12 24 21.4	-0.2
OK029				Sg	Sg	12 24 32.9	+0.2
QUOK	Quay	0.91	120	Pg	Pg	12 24 22.2	-0.5
QUOK				Sg	Sg	12 24 34.2	-0.4
OK031	S. Brethren Rd	0.96	134	Pg	Pg	12 24 23.4	-0.2
OK031				Sg	Sg	12 24 36.2	0.0
BCOK	Bluff Creek, N	0.97	176	Pg	Pg	12 24 23.9	+0.1
BCOK				Sg	Sb	12 24 37.2	0.0
T35A	Sooner Cattle	0.99	73	Pg	Pg	12 24 23.7	-0.5
T35A				Sg	Sg	12 24 36.8	-0.2
OK030	Cody Creek RV	1.01	133	Pg	Pg	12 24 24.1	-0.5
OK030				Sg	Sg	12 24 38.0	+0.3
OK025	Westminster Rd	1.08	165	Pg	Pb	12 24 26.1	0.0
OK025				Sg	Sb	12 24 40.2	-0.2
U32A	Winter Ranch,	1.09	257	Pg	Pg	12 24 24.8	-1.2
U32A					Sg	12 24 40.2	0.0
OKCFA	Oklahoma City	1.23	171	Pn	Pb	12 24 27.6	-1.0
FNO	Franklin	1.39	170		Pn	12 24 30.4	-0.4
TUL1	Leonard	1.69	115	Pn	Pn	12 24 35.7	+0.7
X34A	Smith Ranch, M	2.03	183	Pn	Pn	12 24 40.6	+1.0
WMOK	Wichita Mounta	2.09	206	Pn	Pn	12 24 40.7	+0.3
KSU1	Kansas State U	2.61	19	Pn	Pn	12 24 47.4	-0.2
W39A	Magazine	3.48	113	Pn	Pn	12 24 58.8	-0.7
X40A	Basin Creek Fa	4.50	117	Pn	Pn	12 25 13.1	-0.5
GLAT	Glass	6.78	91	IAmb_Lg		12 27 57.0	
	comp=Z,35nm,0.9s						
K38A	Parkersburg	7.11	31	IAmb_Lg		12 27 52.1	
	comp=Z,15nm,1.3s						

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*SJA **07** 12:28:31.0, 30°.75S×71°.68W, h10^{km}, ML4.1*

*NEIC **07** 12:28:33.7±2.0, 30°.76S±0°.04×71°.40W±0°.07, h40^{km}±8^{km}, Error ellipse: s-maj=8.9km s-min=6.1km az=78.0*

*GUC **07** 12:28:33.2±0.6, 30°.76S×71°.42W, h51^{km}±2^{km}, ML4.0*

ISC 07 12:28:32.8±0.9**, 30°.74S**±0°.04×**71°.56W**±0°.06**, h45**^{km}±8^{km}**, n59, σ1§71**/66**, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.10	313	*e*P	Pn	12 28 41.3	+1.1
CO06				*i* S	Sn	12 28 47.1	+1.9
CO06				IAML		12 28 47.8	
	comp=E,37µm,0.2s						
CO06	Fray Jorge	0.10	313		Pn	12 28 41.2	+1.1
CO03	El Pedregal	0.75	98	*e*P	Pn	12 28 46.3	-0.9
CO03				*i* S	Sn	12 28 56.0	-1.6
CO03	El Pedregal	0.75	98	Pn	Pn	12 28 46.3	-0.9
CO03	El Pedregal	0.75	98	*i* P	Pn	12 28 46.0	-1.2
CO05	La Serena	0.86	19	*e*P	Pn	12 28 49.1	+0.5
CO05				*i* S	Sn	12 29 01.0	+1.0
CO05				IAML		12 29 06.2	
	comp=E,5µm,0.3s						
CO05	La Serena	0.86	19	Pn	Pn	12 28 49.1	+0.5
GO04	Tololo Observa	0.86	49	*e*P	Pn	12 28 48.7	-0.2
GO04				*i* S	Sn	12 29 00.4	-0.1
GO04				IAML		12 29 01.8	
	comp=N,21µm,0.2s						
GO04	Tololo Observa	0.86	49		Pn	12 28 48.9	+0.1
GO04	Tololo Observa	0.86	49	*i* P	Pn	12 28 49.0	+0.1
VA06	Catapilco	1.83	173	*e*P	Pn	12 29 02.3	+0.5
VA06				*i* S	Sn	12 29 25.0	+1.2
VA06				IAML		12 29 28.4	
	comp=E,2µm,0.4s						
LCO	Las Campanas	1.88	24		Pn	12 29 03.7	+1.0
LCO	Las Campanas	1.88	24	*i* P	Pn	12 29 04.0	+1.3
AROD	Rodeo	1.89	73	*i* P	Pn	12 29 05.0	+2.1
ACCO	Cerro Coronel	2.15	87	*i* P	Pn	12 29 09.0	+2.5
ACDV	Cuesta del Vie	2.18	76	*i* P	Pn	12 29 09.0	+2.2
VA03	San Esteban	2.19	157	*e*P	Pn	12 29 07.9	+1.0
VA03				*i* S	Sn	12 29 33.9	+1.0
VA03				IAML		12 29 43.6	
	comp=N,1µm,0.4s						
VA03	San Esteban	2.19	157		Pn	12 29 08.0	+1.1
VA03	San Esteban	2.19	157	*i* P	Pn	12 29 08.0	+1.1
RTLS	Leoncito	2.20	119	*i* P	Pn	12 29 09.8	+2.6
ROC1	El Roble	2.28	169	*i* P	Pn	12 29 09.0	+0.8
VA01	Torpederas	2.28	182	Pn	Pn	12 29 07.6	-0.4
AUSP	Uspallata	2.37	129	*i* P	Pn	12 29 12.0	+2.5
PEL	Peldehue	2.51	163	*e*P	Pn	12 29 12.1	+0.9
PEL				*i* S	Sn	12 29 41.9	+1.3
PEL				IAML		12 29 58.0	
	comp=E,691nm,0.7s						
PEL	Peldehue	2.51	163	*i* P	Pn	12 29 13.0	+1.8
MT02	Curacav	2.54	172		Pn	12 29 11.8	+0.2
MT02	Curacav	2.54	172	*i* P	Pn	12 29 12.0	+0.4
AC04	Llanos de Chal	2.56	10		Pn	12 29 13.3	+1.5
AC04	Llanos de Chal	2.56	10	*i* P	Pn	12 29 13.0	+1.1
ZON	Zonda	2.59	109	*i* P	Pn	12 29 15.0	+2.6
MT05	Renca	2.73	166	*e*P	Pn	12 29 15.3	+1.0
MT05				*i* S	Sn	12 29 46.5	+0.4
MT05	Renca	2.73	166	*i* P	Pn	12 29 17.0	+2.7
RTCV	Cerro Valdivia	2.81	114	*i* P	Pn	12 29 18.0	+2.6
ASAL	Salagasta	2.96	129	*i* P	Pn	12 29 20.0	+2.5
ARCO	CERRO ARCO	3.06	134	*i* P	Pn	12 29 23.0	+4.1
MT01	Popeta	3.13	175	*i* P	Pn	12 29 20.0	+0.4
AAGR	Agrelo	3.29	136	*i* P	Pn	12 29 26.0	+4.0
LMEL	Las Melosas	3.30	160	*e*P	Pn	12 29 23.3	+1.1
GO03	Copiap	3.34	21	*i* P	Pn	12 29 25.0	+2.4
AVFE	Valle Fertil	3.53	90	*i* P	Pn	12 29 26.0	+0.7
VCA	Vinchina	3.53	56	*i* P	Pn	12 29 29.0	+3.7
BO01	Tunca	3.66	174		Pn	12 29 27.2	+0.2
BO01	Tunca	3.66	174	*i* P	Pn	12 29 28.0	+1.0
BO02	Sierra Bellavi	4.09	171	*i* P	Pn	12 29 34.0	+1.0
ACLC	CERRO LA CRUZ	4.20	73	*i* P	Pn	12 29 36.0	+1.5
ACHE	Chepes	4.22	97	*i* P	Pn	12 29 36.0	+1.2
GO05	Huala	4.27	184	Pn	Pn	12 29 34.5	-0.8
GO05	Huala	4.27	184	*i* P	Pn	12 29 34.0	-1.4
AC02	Maricunga	4.43	29	*i* P	Pn	12 29 40.0	+1.9
RFA	San Rafael	4.79	148	*i* P	Pn	12 29 44.0	+1.5
AHML	Horco Molle	6.73	56	*i* P	Pn	12 30 11.0	+1.8
FSA	Cafayete	6.73	48	*i* P	Pn	12 30 12.0	+2.7
LC01	Cunco	8.14	182	Pn	Pn	12 30 27.8	-0.7
LVC	Limon Verde	8.43	17		Pn	12 30 32.2	-0.6
LL04	Puerto Octay	10.17	184	Pn	Pn	12 30 54.5	-1.7
CPUP	Villa Florida	13.25	74	Pn	Pn	12 31 34.8	-3.6
PLTB	Pedras Altas	15.39	98	Pn	Pn	12 32 03.7	-3.2
PLTB				IAmb	IAmb	12 32 28.6	
	comp=Z,4.2nm,0.9s						
QSPA	South Pole Qui	59.49	180	P	P	12 38 32.9	+1.8
QSPA				IAmb	IAmb	12 39 00.7	
	comp=Z,6.2nm,1.4s						
TORD	Torodi Ar. Bea	82.72	70	P	P	12 40 52.7	+0.5
TORD				IAmb	IAmb	12 41 11.2	
	comp=Z,2.5nm,1.4s						

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*BJI **07** 12:29:10.3±0.0, 5°.08N×125°.79E, h138^{km}, mB5.0/25, mb4.6/49*

*MAN **07** 12:29:12.9, 5°.20N×125°.73E, h136^{km}, mb5.8, ML4.9, MS5.3*

*NEIC **07** 12:29:15.2±1.3, 5°.39N±0°.03×125°.53E±0°.09, h135^{km}±6^{km}, mb4.9/82, Error ellipse: s-maj=13.7km s-min=3.9km az=90.0*

*DJA **07** 12:29:15.9±0.5, 5°N±4°×12°6E±°, h141^{km}±6^{km}, M4.7/12, mB5.0/11, mb4.8/11, MLv5.3/12, Mw(mB)4.3/11*

*IDC **07** 12:29:15.7±0.7, 5°.36N×125°.60E, h151^{km}±5^{km}, mb4.3/26, mb1 4.4/29, mb1mx4.2/40, mbtmp4.8/29, MS3.4/1, Ms1 3.4/1, ms1mx2.8/36, Error ellipse: s-maj=13.2km s-min=6.3km az=79.0*

*KLM **07** 12:29:15, 5°.38N×125°.94E, h156^{km}, mb5.0*

ISC 07 12:29:15.1±0.5**, 5°.35N**±0°.03×**125°.68E**±0°.05**, h140**^{km}±4^{km}**, n296, σ1§38**/315**, mb4.8**/80**, 5C-4D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	1.66	185	P	Pn	12 29 46.3	+0.6
SGSI				S	Sn	12 30 10.5	+1.4
DAV	Davao City (W)	1.71	357	P	Pn	12 29 47.0	+0.7
	93nm,0.3s,baz=100,slow=1.6,SNR=39						
DAV				S	Sn	12 30 11.8	+1.6
	670nm,0.3s,baz=253,slow=22,SNR=8.0						
DAV	Davao City (W)	1.71	357		Pn	12 29 45.4	-0.9
DAV	Davao City (W)	1.71	357	P	Pn	12 29 47.4	+1.1
DMPH	Davao City--Mi	1.73	354	⇓*i*P	Pn	12 29 46.9	+0.4
DMPH				*e*S	Sn	12 30 14.2	+3.6
KCP	Kidapawan	1.75	341	⇑*i*P	Pn	12 29 47.2	+0.4
KCP				*i* S	Sn	12 30 12.1	+1.0
BUKP	Musuan	2.59	346	⇓*i*P	Pn	12 29 57.1	+0.2
BUKP				*i* S	Sn	12 30 18.8	-10
BUKP	Musuan	2.59	346	⇑*e*P	Pn	12 30 07.0	+10
BUKP				*i* S	Sn	12 30 13.6	-16
BIPH	Bislig	2.90	14	⇓*e*P	Pn	12 30 03.5	+2.8
BIPH				*e*S	Sn	12 30 38.1	+2.0
TBP	Tagbilaran	4.67	337	⇑*i*P	Pn	12 30 24.6	+0.5
TBP				*i* S	Sn	12 31 18.6	+0.9
TNTI	Ternate	4.85	160	P	Pn	12 30 25.9	-0.5
TNTI	Ternate	4.85	160	Pn	Pn	12 30 25.4	-1.0
TNTI	Ternate	4.85	160	P	Pn	12 30 26.3	-0.1
KMSI	Cibinong	5.04	200	P	Pn	12 30 29.8	+0.9
	2.4nm4µm382nm,0.8s						
LLP	Lapu-Lapu	5.22	341	*e*P	Pn	12 30 33.6	+2.3
LLP				*i* S	Sn	12 31 34.1	+3.4
GTOI	Gorontalo	5.38	210	P	Pn	12 30 34.2	+0.7
	0.8nm2µm246nm,0.8s						
MRSI	Marisa	6.11	218	P	Pn	12 30 44.2	+1.0
	1.8nm2µm142nm,0.6s						
LBMI	Labuha	6.22	163	P	Pn	12 30 44.4	-0.3
	3.1nm2µm119nm,0.8s						
TOLI2	Tolitoli	6.45	229	Pn	Pn	12 30 46.7	-1.0
TOLI2	Tolitoli	6.45	229	P	Pn	12 30 49.3	+1.5
LUWI	Luwuk	6.98	205	P	Pn	12 30 56.6	+1.7
	1.5nm4µm368nm,1.0s						

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LUWI  Luwuk              6.98 205  Pn     Pn     12 30 54.9  0.0
LUWI  Luwuk              6.98 205  P      Pn     12 30 56.9 +2.0
SANI  Sanana             7.36 178  P      Pn     12 30 56.8 -3.1
      1.0nm4µm160nm,1.0s
APSI  Ampana             7.41 213  P      Pn     12 31 08.8 +8.2
      0.5nm1µm80nm,1.1s
MPSI  Mapaga             7.62 229  P      Pn     12 31 05.9 +2.4
      0.3nm449nm31nm,0.6s
SWI   Sorong             8.32 138  P      Pn     12 31 13.0 +0.2
      832nm41nm,0.8s
SIJI  Sorong             8.33 138  P      Pn     12 31 12.1 -0.9
      2.8nm,0.3s,baz=1.3,slow=14,SNR=9.0
SIJI                               S      Sn     12 32 40.4 -5.1
      2.8nm,0.3s,baz=102,slow=24,SNR=6.0
SPMM  Sapulut            9.20 266  P      Pn     12 31 28.0 +3.3
LQP   Lukban             9.61 335⇓ eP     Pn     12 31 33.7 +3.4
LQP                                eS            12 31 59.6
FAKI  Fak Fak           10.52 141  Pn     Pn     12 31 40.6 -1.6
KAPI  Kappang           11.87 210  P      Pn     12 32 01.6 +1.5
      1.6nm,0.3s,baz=52,slow=6.6,SNR=13
KAPI  Kappang           11.87 210  Pn     Pn     12 32 01.9 +1.8
KAPI  Kappang           11.87 210  P      Pn     12 32 01.6 +1.5
SBUM  Sibu              13.73 258  P      P      12 32 27.0 -1.0
MMRI  Maumere           14.31 194         Pn     12 32 31.0 -0.4
SOEI  Soe               15.07 185         P      12 32 42.6 -0.4
SOEI  Soe               15.07 185  P      P      12 32 42.6 -0.4
BATI  Baumata           15.58 187  P      P      12 32 48.7 +0.2
      22nm,0.3s,baz=16,slow=1.5,SNR=34
BATI                               S      S      12 35 45.5 +1.4
      1.7nm,0.3s,baz=262,slow=19,SNR=4.5
KSM   Kuching           15.81 256  P      P      12 32 55.0 +3.9
PLAI  Plampang          16.14 209  P      P      12 32 56.0 +1.4
JAY   Jayapura          16.92 117  P      Pn     12 33 05.3 +1.6
      3.3nm,0.3s,baz=247,slow=5.2,SNR=19
JAGI  Jajag, Banyuwa    17.90 220         P      12 33 13.4 -0.7
JAGI                               IAmb   IAmb   12 33 21.4
      comp=Z,35nm,0.9s
JAGI  Jajag, Banyuwa    17.90 220  P      Pn     12 33 16.3 +0.9
DRS   Darwin Rock St    18.41 164  P      Pn     12 33 20.7 -0.7
MTN   Manton Dam        18.87 163  P      P      12 33 25.3 +0.7
MTN                                IAmb   IAmb   12 33 26.5
      comp=Z,26nm,0.7s
MTN   Manton Dam        18.87 163  P      Pn     12 33 26.0 -0.8
KDU   Kakadu            19.15 159  P      P      12 33 28.8 +1.1
GUMO  Guam              20.61  65  LR     LR     12 40 27.1
      comp=Z,126nm,21.4s,baz=302,slow=32
KNRA  Kununurra         21.11 172  P      P      12 33 48.8  0.0
KNRA  Kununurra         21.11 172  P      P      12 33 49.2 +0.4
JOW   Kunigami          21.51   6  P      P      12 33 52.9  0.0
      comp=Z,111nm,0.8s,baz=203,slow=9.6,SNR=18
JOW   Kunigami          21.51   6  P      P      12 33 54.2 +1.3
JOW   Kunigami          21.51   6  P      P      12 33 54.0 +1.0
LEM   Lembang           21.70 236  P      P      12 33 57.1 +1.8
      comp=Z,27nm,0.7s,baz=85,slow=7.5,SNR=6.8
MANU  Manus Island      22.88 108  P      P      12 34 07.0 +0.2
MANU                               IAmb   IAmb   12 34 10.1
      comp=Z,148nm,1.4s
FITZ  Fitzroy Crossi    23.30 180  P      P      12 34 11.1 +0.5
      comp=Z,27nm,0.5s,baz=359,slow=10,SNR=97
FITZ  Fitzroy Crossi    23.30 180  P      P      12 34 10.6 +0.1
FITZ                               IAmb   IAmb   12 34 12.5
      comp=Z,30nm,0.6s
FITZ  Fitzroy Crossi    23.30 180  P      P      12 34 11.2 +0.6
COEN  Coen              25.88 138  P      P      12 34 34.4 +0.4
COEN  Coen              25.88 138  P      P      12 34 34.9 +0.9
PMG   Port Moresby      25.95 124  P      P      12 34 34.9 +0.2
      comp=Z,21nm,0.8s,baz=307,slow=5.5,SNR=8.6
PMG                                ScP    ScP    12 41 27.3 +0.7
      comp=Z,4.1nm,0.4s,baz=339,slow=7.4,SNR=3.8
PMG   Port Moresby      25.95 124  P      P      12 34 36.0 +1.3
      comp=Z,29nm,1.1s
PMG   Port Moresby      25.95 124  P      P      12 34 36.0 +1.3
      comp=Z,29nm,1.1s
WB0   Warramunga Arr    26.39 161  P      P      12 34 38.4 -0.3
WRAB  Tennant Creek     26.53 161  P      P      12 34 40.2 +0.3
WRAB  Tennant Creek     26.53 161  P      P      12 34 39.5 -0.4
WRA   Warramunga Arr    26.54 162  P      P      12 34 39.5 -0.5
      comp=Z,1.7nm,0.4s,baz=332,slow=11,SNR=40
WRA                                S      S      12 38 59.4 -4.7
      comp=Z,3.6nm,0.6s,baz=333,slow=15,SNR=7.5
WRA                                ScP    ScP    12 41 27.4 -0.8
      comp=Z,6.7nm,1.0s,baz=338,slow=3.1,SNR=9.1
WRA   Warramunga Arr    26.54 162  P      P      12 34 39.6 -0.4
WB2   Warramunga Arr    26.54 161  P      P      12 34 40.0  0.0
WB2                                IAmb   IAmb   12 35 09.3
      comp=Z,13nm,0.7s
WR0   Warramunga Arr    26.62 161  P      P      12 34 40.9 +0.2
JCJ   Chichijima        26.75  34  P      P      12 34 41.0 -0.7
      comp=Z,162nm,0.5s,baz=240,slow=3.7,SNR=15
PSI   Prapat            26.80 266  P      P      12 34 42.5 -0.1
      comp=Z,4.6nm,0.9s,baz=76,slow=6.1,SNR=3.8
MBWA  Marble Bar        26.98 192  P      P      12 34 43.6 -0.2
NJ2   Nanjing           27.32 347  eP     P      12 34 47.7 +0.9
NJ2                                pmax   pmax
      comp=Z,5.0nm,0.5s
PSA00 Pilbara Seismi    27.36 192  P      P      12 34 47.7 +0.5
PSA00 Pilbara Seismi    27.36 192  P      P      12 34 46.3 -0.9
PSA00                              IAmb   IAmb   12 34 48.6
      comp=Z,22nm,0.8s
PSA00 Pilbara Seismi    27.36 192  P      P      12 34 47.2  0.0
      comp=Z,81nm,0.8s
JNU   Nakatsue          28.05   9  P      P      12 34 52.8 -0.5
      comp=Z,24nm,0.8s,baz=76,slow=5.1,SNR=5.9
ENH   Enshi             29.11 330  P      P      12 35 01.7 -1.1
QIS   Mount Isa         29.16 152  P      P      12 35 04.6 +1.4
CM31  Chiang Mai Arr    29.16 299  P      P      12 35 03.1 -0.3
CMAR  Chiang Mai Arr    29.16 299  P      P      12 35 03.2 -0.2
      comp=Z,1.6nm,0.7s,baz=119,slow=7.3,SNR=14
CMAR                               ScP    ScP    12 41 35.2 -1.1
      comp=Z,0.8nm,0.4s,baz=127,slow=1.3,SNR=13
CMAR  Chiang Mai Arr    29.16 299  P      P      12 35 03.0 -0.3
JMN   Monobe            29.25  14  P      P      12 35 03.5 -0.5
JMN                                IAmb   IAmb   12 35 05.1
      comp=Z,44nm,0.9s
CHTO  Chiang Mai        29.30 299  P      P      12 35 03.7 -0.9
CHTO  Chiang Mai        29.30 299  P      P      12 35 06.0 +1.4
AS31  Alice Springs     29.93 165  P      P      12 35 10.7 +0.6
ASAR  Alice Springs     29.94 165  P      P      12 35 10.2 +0.1
      comp=Z,2.4nm,0.4s,baz=339,slow=7.1,SNR=147
ASAR                               PcP    PcP    12 38 09.6  0.0
      comp=Z,2.1nm,0.8s,baz=336,slow=3.0,SNR=5.5
ASAR                               S      S      12 39 55.5 -1.9
      comp=Z,2.7nm,0.8s,baz=344,slow=16,SNR=9.7
ASAR                               ScP    ScP    12 41 38.0 -0.8
      comp=Z,13nm,0.8s,baz=346,slow=2.8,SNR=36
ASAR  Alice Springs     29.94 165  P      P      12 35 10.8 +0.7
GIRL  Giralia           29.99 202  P      P      12 35 10.8 +0.3
WRKA  Warakurna         30.31 175  P      P      12 35 14.2 +0.8
JWT   Wachi             31.11  16  P      P      12 35 20.7 +0.4
JWT                                IAmb   IAmb   12 35 21.6
      comp=Z,31nm,0.7s
INU   Inuyama           31.64  18  P      P      12 35 25.4 +0.5
INU   Inuyama           31.64  18  P      P      12 35 25.5 +0.6
KSAR  Wonju Array Be    32.01   3  P      P      12 35 28.2 +0.1
KSRS  Korea Array       32.02   3  P      P      12 35 28.6 +0.3
      comp=Z,21nm,0.7s,baz=182,slow=10,SNR=46
KSRS                               PcP    PcP    12 38 14.9 +0.2
      comp=Z,2.6nm,0.7s,baz=199,slow=2.8,SNR=5.8
KS19  Wonju Array Si    32.07   3  P      P      12 35 28.2 -0.4
KS19                               IAmb   IAmb   12 35 29.4
      comp=Z,26nm,0.8s
CTA   Charters Tower    32.38 142  P      P      12 35 32.7 +1.1
      comp=Z,8.2nm,0.7s,baz=327,slow=10,SNR=9.9
CTA                                ScP    ScP    12 41 47.5 +0.5
      comp=Z,5.8nm,0.8s,baz=268,slow=2.7,SNR=6.7
CTA   Charters Tower    32.38 142  P      P      12 35 33.9 +2.3
      comp=Z,14nm,1.0s
CTAO  Charters Tower    32.38 142  P      P      12 35 32.5 +0.9
CTAO                               IAmb   IAmb   12 35 33.6
      comp=Z,8.9nm,0.8s
CTAO  Charters Tower    32.38 142  P      P      12 35 33.8 +2.2
XAN   Xi'an             32.51 334  P      P      12 35 31.1 -1.5
XAN                                pP     pP     12 35 58.8 -4.0
XAN                                pmax   pmax
      comp=Z,21nm,0.8s
MEEK  Meekatharra       32.52 192  P      P      12 35 32.5 -0.3
      comp=Z,54nm,0.7s
MAJO  Matsushiro        33.11  19  P      P      12 35 37.2 -0.5
MAJO                               IAmb   IAmb   12 35 37.7
      comp=Z,21nm,0.8s
MAJO  Matsushiro        33.11  19  P      P      12 35 37.3 -0.5
MAT   Matsushiro        33.11  19  P      P      12 35 36.5 -1.3
MJAR  Matsushiro Arr    33.11  19  P      P      12 35 36.9 -0.8
      comp=Z,17nm,0.8s,baz=192,slow=9.4,SNR=47
MJAR  Matsushiro Arr    33.11  19  P      P      12 35 36.5 -1.2
OOD   Oodnadatta        34.34 164  P      P      12 35 49.1 +0.6
MORW  Morawa            35.45 195  P      P      12 35 58.0  0.0
MORW                               IAmb   IAmb   12 35 58.5
      comp=Z,26nm,0.8s
MORW  Morawa            35.45 195  P      P      12 35 57.9 -0.1
BJI   Beijing           35.58 347  P      P      12 35 57.7 -1.3
BJI                                pmax   pmax
      comp=Z,17nm,0.8s
FORT  Forrest           35.99 177  P      P      12 36 03.0 +0.4
FORT  Forrest           35.99 177  P      P      12 36 03.3 +0.7
LZH   Lanzhou           36.58 330  eP     P      12 36 07.7 -0.1
LZH                                pmax   pmax
      comp=Z,26nm,1.1s
LZH                                pmax   pmax
      comp=Z,140nm,4.9s
LZH                                LR     LR
      comp=Z,200nm,14.0s
LZH                                LR     LR
      comp=Z,240nm,13.6s
LZH                                LR     LR
      comp=Z,250nm,14.1s
BLDU  Ballidu           36.77 193  P      P      12 36 09.1 -0.2
HNR   Honiara           37.18 113  P      P      12 36 13.3 +0.4
      comp=Z,28nm,0.4s,baz=42,slow=4.8,SNR=4.4
HHC   Hu-ho-hao-te      37.55 342  eP     P      12 36 18.0 +2.2
HHC                                pmax   pmax
      comp=Z,13nm,1.0s
HHC                                pmax   pmax
      comp=Z,210nm,9.7s
LCRK  Leigh Creek       37.56 162  P      P      12 36 17.6 +1.7
NWAO  Narrogin (SRO)    38.90 191  P      P      12 36 26.9 -0.2
      comp=Z,29nm,0.7s,baz=25,slow=7.9,SNR=38
NWAO  Narrogin (SRO)    38.90 191  P      P      12 36 27.7 +0.6
NWAO                               IAmb   IAmb   12 36 28.7
      comp=Z,30nm,0.8s
NWAO  Narrogin (SRO)    38.90 191  P      P      12 36 27.8 +0.8
NWAO                               IAmb   IAmb   12 36 28.7
      comp=Z,26nm,0.8s
NWAO  Narrogin (SRO)    38.90 191  P      P      12 36 27.7 +0.6
NWAO  Narrogin (SRO)    38.90 191  P      P      12 36 27.6 +0.6
USA0B Ussuriysk Arra    39.09   7  P      P      12 36 29.1 +0.6
USA0B                              IAmb   IAmb   12 36 29.9
      comp=Z,25nm,0.8s
USRK  Ussuriysk Ar.     39.09   7  P      P      12 36 28.9 +0.4
      comp=Z,24nm,0.7s,baz=191,slow=7.2,SNR=38
USRK  Ussuriysk Ar.     39.09   7  P      P      12 36 29.2 +0.7
BBOO  Buckleboo         39.21 166  P      P      12 36 30.3 +0.6
BBOO                               IAmb   IAmb   12 36 31.5
      comp=Z,17nm,0.5s
BBOO  Buckleboo         39.21 166  P      P      12 36 30.6 +0.9
MDJ   Mudanjiang        39.26   4  P      P      12 36 30.1 +0.2
MDJ                                pmax   pmax
      comp=Z,56nm,0.9s
MDJ                                pmax   pmax
      comp=Z,340nm,3.9s
MDJ   Mudanjiang        39.26   4  P      P      12 36 30.8 +0.8
MDJ                                IAmb   IAmb   12 36 31.9
      comp=Z,42nm,0.9s
MDJ   Mudanjiang        39.26   4  P      P      12 36 30.7 +0.8
      comp=Z,58nm,1.0s
EIDS  Eidsvold          39.27 142  P      P      12 36 30.8 +0.6
ERM   Erimo             39.69  21  P      P      12 36 33.9 +0.3
WHYH  Whyalla           39.81 164  P      P      12 36 37.0 +2.4
      comp=Z,11nm,0.6s
STKA  Stephens Creek    40.01 159  P      P      12 36 37.6 +1.3
      comp=Z,1.9nm,0.3s,baz=331,slow=7.9,SNR=7.0
STKA                               ScP    ScP    12 42 14.2 -0.6
      comp=Z,3.8nm,0.7s,baz=330,slow=7.3,SNR=8.1
GTA   Gaotai            41.18 329 ⇑P      P      12 36 44.9 -1.1
GTA                                pP     pP     12 37 20.8 +3.6
GTA                                ScP    ScP    12 42 17.9 -1.6
GTA                                pmax   pmax
      comp=Z,4.0nm,1.1s
GTA                                LR     LR
      comp=Z,140nm,16.0s
GTA                                LR     LR
      comp=Z,110nm,16.4s
GTA                                LR     LR
      comp=Z,140nm,18.5s
TAPN  Taplejung         42.22 305  eP     P      12 36 55.6 +0.7
      comp=Z,9.6nm,0.5s
ODAN  Odare             42.28 305  eP     P      12 36 55.6 +0.3
      comp=Z,4.8nm,0.3s
H11N1 WAKE ISLAND Hy    42.55  67  T      T      13 23 16.0
      baz=255,slow=75,SNR=9.2
H11N2 WAKE ISLAND Hy    42.56  67  T      T      13 23 21.5
      baz=255,slow=75,SNR=4.5
H11N3 WAKE ISLAND Hy    42.57  67  T      T      13 23 23.4
      baz=255,slow=75,SNR=9.9
RAMN  Ramite            42.97 304  eP     P      12 37 02.3 +1.4
      comp=Z,9.1nm,0.4s
ARMA  Armidale          43.39 147  P      P      12 37 05.1 +1.1
ARMA                               IAmb   IAmb   12 37 31.9
      comp=Z,14nm,0.8s
JIRN  Jiri              43.58 305  eP     P      12 37 06.2 +0.3
      comp=Z,14nm,0.5s
GUN   Gumba             43.93 305  eP     P      12 37 08.8 +0.1
      comp=Z,21nm,0.7s
YSS   Yuzh-Sakhalins    43.99  17  P      P      12 37 08.9 +0.5
YSS                                IAmb   IAmb   12 37 10.5
      comp=Z,17nm,0.7s
YSS   Yuzh-Sakhalins    43.99  17  P      P      12 37 09.4 +1.0
HIA   Hailar            44.05 354  P      P      12 37 08.4 -0.5
HIA                                IAmb   IAmb   12 37 09.4
      comp=Z,15nm,1.0s
SONM  Songino Array     45.44 342  P      P      12 37 18.2 -1.8
      comp=Z,1.8nm,0.7s,baz=156,slow=7.9,SNR=13
SONM                               PcP    PcP    12 38 56.0 -0.8
      comp=Z,1.6nm,0.6s,baz=166,slow=3.6,SNR=4.9
SONM                               ScP    ScP    12 42 34.8 -1.8
      comp=Z,1.3nm,1.0s,baz=158,slow=4.7,SNR=4.5
SONM  Songino Array     45.44 342  P      P      12 37 19.1 -1.0
KOLN  Koldanda          45.75 304  eP     P      12 37 22.2 -0.7
      comp=Z,15nm,0.3s
DANN  Dangsing          45.83 305  eP     P      12 37 22.4 -1.2
      comp=Z,11nm,0.3s
CAN   Canberra          46.02 153  P      P      12 37 25.9 +1.2
CAN                                IAmb   IAmb   12 37 40.4
      comp=Z,32nm,1.2s
PYUN  Piuthan           46.37 304  eP     P      12 37 27.6 -0.2
      comp=Z,25nm,0.7s
TOO   Toolangi          46.52 158  P      P      12 37 31.3 +2.8
TOO                                IAmb   IAmb   12 37 40.0
      comp=Z,35nm,1.5s
DZM   Mont Dzumac       48.33 126  P      P      12 37 44.4 +1.6
DZM                                IAmb   IAmb   12 37 45.0
      comp=Z,24nm,0.9s
DZM   Mont Dzumac       48.33 126  P      P      12 37 44.0 +1.2
YATNC Mamie plateau,    48.68 126  P      P      12 37 47.0 +1.6
WMQ   Urumqi            50.80 325  eP     P      12 38 03.1 +1.9
WMQ                                pmax   pmax
      comp=Z,9.0nm,0.7s
WMQ                                pmax   pmax
      comp=Z,80nm,3.7s
WMQ                                LR     LR
      comp=Z,330nm,29.3s
WMQ                                LR     LR
      comp=Z,360nm,28.3s
WMQ                                LR     LR
      comp=Z,110nm,24.9s
PEA0B Petropavlovsk-    54.35  23  P      P      12 38 28.4 +1.4
PETK  Petropavlovsk-    54.35  23  P      P      12 38 27.5 +0.4
      comp=Z,18nm,0.7s,baz=194,slow=3.4,SNR=42
PETK  Petropavlovsk-    54.35  23  P      P      12 38 27.6 +0.5
PET   Petropavlovsk     54.66  24  P      P      12 38 30.1 +0.8
MK31  Makanchi Array    55.63 325  P      P      12 38 36.2 -0.2
MK31                               IAmb   IAmb   12 38 53.3
      comp=Z,18nm,1.4s
MKAR  Makanchi Array    55.63 325  P      P      12 38 35.5 -1.0
      comp=Z,5.9nm,0.7s,baz=121,slow=7.3,SNR=36
MKAR                               ScP    ScP    12 43 16.9 -3.4
      comp=Z,1.5nm,0.9s,baz=99,slow=5.3,SNR=4.2
MKAR  Makanchi Array    55.63 325  P      P      12 38 35.3 -1.1
MAKZ  Makanchi          55.82 325  P      P      12 38 37.1 -0.7
MAKZ                               IAmb   IAmb   12 38 37.4
      comp=Z,8.0nm,0.8s
KSH   Kashi             56.16 315  P      P      12 38 37.1 -3.4
KSH                                pmax   pmax
      comp=Z,8.0nm,0.4s
YAK   Yakutsk           56.64   2  P      P      12 38 43.2  0.0
MA2   Magadan           57.41  15  P      P      12 38 49.7 +1.0
ZALV  Zalesovo Beam     58.68 333  P      P      12 38 55.8 -1.9
      comp=Z,1.3nm,0.3s,baz=126,slow=5.4,SNR=6.7
KURK  Kurchatov         59.82 327  P      P      12 39 04.6 -1.0
KURK                               IAmb   IAmb   12 39 05.3
      comp=Z,7.5nm,0.8s
GAR   Garm              60.06 312  P      P      12 39 06.6 -1.0
GAR                                IAmb   IAmb   12 39 07.1
      comp=Z,8.0nm,0.9s
KK31  Karatay Array     61.34 317  P      P      12 39 14.5 -1.6
KKAR  Karatay Array     61.34 317  P      P      12 39 14.9 -1.2
KKAR  Karatay Array     61.34 317  P      P      12 39 14.9 -1.2
KKAR                               IAmb   IAmb   12 39 16.9
      comp=Z,3.3nm,0.9s
BRVK  Borovoye          65.47 327  P      P      12 39 42.6 -0.4
TIXI  Tiksi             66.25   1  P      P      12 39 47.4 -0.3
NRIK  Noril'sk          68.62 346  P      P      12 40 01.2 -1.3
      comp=Z,2.7nm,0.5s,baz=150,slow=8.0,SNR=4.9
NRIK  Noril'sk          68.62 346  P      P      12 40 02.4 -0.2
ABKAR Akbulak array     70.24 321  P      P      12 40 11.8 -1.1
ABKAR Akbulak array     70.24 321  P      P      12 40 11.9 -1.0
ABKAR                              IAmb   IAmb   12 40 12.5
      comp=Z,2.0nm,0.8s
SOCY  Socotra           71.02 281  P      P      12 40 17.0 -1.4
SOCY                               IAmb   IAmb   12 40 19.8
      comp=Z,9.0nm,0.9s
UNV   Unalaska Valle    72.70  35  P      P      12 40 27.6  0.0
AKUT  Akutan            73.19  35  P      P      12 40 30.7 +0.2
SDPT  Sand Point        76.45  34  P      P      12 40 50.1 +0.9
CHGN  Chignik           77.76  34  P      P      12 40 56.3 -0.1
      baz=261
CHGN  Chignik           77.76  34  P      P      12 40 56.5  0.0
CHGN                               IAmb   IAmb   12 40 59.6
      comp=Z,41nm,0.8s
GCSA  Galena City Sc    79.83  25  P      P      12 41 08.7 +1.1
      baz=261
SVW2  Sparrevohn        79.90  29  P      P      12 41 09.4 +1.3
SVW2                               IAmb   IAmb   12 41 10.4
      comp=Z,36nm,1.4s
TTA   Tatalina          79.94  27  P      P      12 41 09.4 +1.0
      baz=262
L19K  White Mountain    80.38  28  P      P      12 41 11.8 +1.1
      baz=263
L19K  White Mountain    80.38  28  P      P      12 41 12.0 +1.3
L19K                               IAmb   IAmb   12 41 13.0
      comp=Z,26nm,1.0s
N19K  Bonanza Creek     80.40  29  P      P      12 41 12.3 +1.4
      baz=264
O19K  Port Alsworth     80.41  30  P      P      12 41 11.8 +0.9
      baz=264
M19K  Big River Lodg    80.56  28  P      P      12 41 12.7 +1.0
      baz=264
M19K  Big River Lodg    80.56  28  P      P      12 41 12.5 +0.9
M19K                               IAmb   IAmb   12 41 14.1
      comp=Z,16nm,0.9s
OHAK  Old Harbor        80.67  33  P      P      12 41 13.4 +1.1
      baz=266
L20K  Farewell, AK      80.86  28  P      P      12 41 14.8 +1.5
      baz=264
J20K  Nowinta River     80.93  26  P      P      12 41 14.9 +1.3
      baz=264
KDAK  Kodiak Island     81.09  32  P      P      12 41 15.2 +0.7
      baz=266
IMAR  Indian Mountai    81.30  24  P      P      12 41 16.4 +0.9
H21K  Melozitna Rive    81.66  24  P      P      12 41 18.6 +1.2
      baz=265
PPLA  Purkeypile        81.68  27  P      P      12 41 18.4 +0.7
      baz=266
CHUM  Lake Minchumin    81.70  26  P      P      12 41 18.8 +1.2
      baz=265,SNR=6.9
CAST  Castle Rocks      81.77  27  P      P      12 41 19.0 +1.0
      baz=266,SNR=8.6
SKT   Skwentna          81.92  28  P      P      12 41 19.3 +0.5
      baz=266,SNR=7.4
I21K  Tanana            81.95  25  P      P      12 41 20.5 +1.6
      baz=265,SNR=13
BRSE  Bradley Lake S    82.17  31  P      P      12 41 20.5 +0.3
      baz=267
BPAW  Bear Paw Mtn.     82.30  26  P      P      12 41 21.5 +0.7
      baz=266,SNR=7.3
MLY   Manley            82.47  25  P      P      12 41 22.8 +1.1
      baz=267,SNR=20
M22K  Willow            82.57  29  P      P      12 41 22.4 +0.2
      baz=268,SNR=7.1
TRF   Thorofare Moun    82.58  27  P      P      12 41 22.7 +0.3
      baz=267,SNR=7.7
RC01  Rabbit Creek A    82.73  29  P      P      12 41 23.3 +0.3
      baz=268,SNR=7.6
COLD  Coldfoot          82.82  23  P      P      12 41 24.8 +1.4
      baz=267,SNR=10
SEW   Seward            82.83  30  P      P      12 41 24.1 +0.6
      baz=268,SNR=5.3
H23K  Yukon River       83.01  24  P      P      12 41 25.9 +1.4
      baz=268
H23K  Yukon River       83.01  24  P      P      12 41 25.6 +1.2
H23K                               IAmb   IAmb   12 41 26.8
      comp=Z,28nm,0.9s
PMR   Palmer            83.04  29  P      P      12 41 24.4 -0.1
      baz=268,SNR=9.5
I23K  Minto, Yukon-K    83.06  25  P      P      12 41 25.9 +1.3
      baz=268,SNR=27
TOLK  Toolik Lake Re    83.14  22  P      P      12 41 26.3 +1.3
      baz=267,SNR=14
TOLK  Toolik Lake Re    83.14  22  P      P      12 41 26.2 +1.1
TOLK                               IAmb   IAmb   12 41 26.8
      comp=Z,15nm,0.8s
NEA2  Nenana            83.16  26  P      P      12 41 26.1 +0.9
      baz=268,SNR=13
MCK   McKinley          83.19  27  P      P      12 41 25.7 +0.3
      baz=268,SNR=18
MCK   McKinley          83.19  27  P      P      12 41 25.8 +0.4
KNK   Knik Glacier      83.36  29  P      P      12 41 26.9 +0.6
      baz=269,SNR=7.6
PWL   Port Wells        83.41  29  P      P      12 41 27.0 +0.5
      baz=269,SNR=7.1
SML   Sawmill           83.42  28  P      P      12 41 26.9 +0.2
      baz=269,SNR=5.7
KLMR  Klimovskoe        83.49 331  eP     P      12 41 23.7 -3.2
KLMR                                AMP          12 41 37.8
      comp=Z,15nm,1.3s
KLMR                               esP    sP     12 42 11.0 -6.4
TCOL  CIGO, UAF Yank    83.69  25  P      P      12 41 27.8 -0.1
      baz=269,SNR=8.6
COLA  College           83.69  25  P      P      12 41 27.6 -0.3
      baz=269
H24K  Noodor Dome       83.70  24  P      P      12 41 29.2 +1.2
      baz=269,SNR=22
WAT6  Susitna Watana    83.71  28  P      P      12 41 28.8 +0.5
      baz=270,SNR=12
POKR  Poker Plat Res    83.87  25  P      P      12 41 30.5 +1.7
      baz=270,SNR=5.7
DHY   Denali Highway    83.88  27  P      P      12 41 30.1 +0.9
      baz=270
SCM   Sheep Creek Mo    83.90  28  P      P      12 41 29.6 +0.5
      baz=270
GLI   Glacier Island    84.01  29  P      P      12 41 30.4 +0.8
      baz=270,SNR=10
GLI   Glacier Island    84.01  29  P      P      12 41 30.4 +0.8
HDA   Harding Lake      84.08  26  P      P      12 41 29.4 -0.4
      baz=270,SNR=28
HDA   Harding Lake      84.08  26  P      P      12 41 29.5 -0.4
IL31                    84.10  25  P      P      12 41 29.6 -0.4
IL31                               IAmb   IAmb   12 41 30.6
      comp=Z,11nm,0.8s
ILAR  Eielson Array     84.10  25  P      P      12 41 29.3 -0.7
      comp=Z,11nm,0.8s,baz=247,slow=4.8,SNR=108
ILAR  Eielson Array     84.10  25  P      P      12 41 29.2 -0.8
FID   Port Fidalgo      84.32  30  P      P      12 41 31.8 +0.6
M24K  Tolsona, Glenn    84.44  28  P      P      12 41 33.1 +1.2
      baz=271
KLU   Klutina           84.57  29  P      P      12 41 33.5 +1.0
      baz=271
PRP   Porcupine Dome    84.67  25  P      P      12 41 32.7 -0.4
      baz=271
PAX   Paxson            84.75  27  P      P      12 41 34.5 +1.1
      baz=272,SNR=6.9
PAX   Paxson            84.75  27  P      P      12 41 34.5 +1.1
PAX                                IAmb   IAmb   12 41 34.9
      comp=Z,12nm,0.9s
J25K  Salcha River,     84.76  26  P      P      12 41 33.1 -0.2
      baz=272,SNR=9.9
BMAR  Burnt Mountain    85.00  23  P      P      12 41 36.1 +1.6
RIDG  Independent Ri    85.01  27  P      P      12 41 34.6  0.0
      baz=272,SNR=6.5
VNDA  Vanda             85.16 173  P      P      12 41 35.2 +0.3
      comp=Z,1.1nm,0.8s,baz=318,slow=5.5,SNR=10
DOT   Dot Lake          85.36  27  P      P      12 41 36.8 +0.4
DOT                                IAmb   IAmb   12 41 38.2
      comp=Z,16nm,1.4s
SCRK  Sand Creek        85.38  26  P      P      12 41 37.3 +0.7
      baz=273
SCRK  Sand Creek        85.38  26  P      P      12 41 37.3 +0.7
SCRK                               IAmb   IAmb   12 41 40.3
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	comp=Z,6.7nm,0.9s						
J26L	Joseph Creek	85.54	26	P	P	12 41 37.6	+0.3
	baz=273,SNR=14						
L26K	Log Cabin Wild	85.72	27	P	P	12 41 38.8	+0.7
	baz=273						
L27K	Beaver Creek,	86.41	27	P	P	12 41 42.5	+1.0
	baz=275						
BCAR	Beaver Creek A	86.42	27	P	P	12 41 42.5	+0.9
EGAK	Eagle	86.55	25	P	P	12 41 42.4	+0.2
	baz=275						
EGAK	Eagle	86.55	25	P	P	12 41 42.8	+0.6
EGAK				IAmb	IAmb	12 41 43.4	
	comp=Z,5.7nm,0.8s						
CTG	Chitna Glacier	86.82	29	P	P	12 41 44.4	+0.7
	baz=275						
DAWY	Dawson	87.39	26	P	P	12 41 46.7	+0.4
	baz=277						
I29M	Ogilvie Camp,	87.69	25	P	P	12 41 47.9	+0.3
	baz=278						
BRTR	Keskin Array B	88.19	310	P	P	12 41 47.8	-2.9
	comp=Z,0.9nm,0.8s,baz=139,slow=5.9,SNR=5.3						
EPYK	Eagle Plains	88.19	24	P	P	12 41 49.4	-0.6
	baz=279						
ARCES	ARCESS Array B	88.58	340	P	P	12 41 49.3	-2.4
	comp=Z,2.8nm,0.8s,baz=76,slow=6.4,SNR=7.7						
ARCES	ARCESS Array B	88.58	340	P	P	12 41 51.2	-0.6
ARCES				IAmb	IAmb	12 41 53.6	
	comp=Z,21nm,1.4s						
HYT	Haines Junctio	88.69	29	P	P	12 41 53.2	+0.6
	baz=279						
M30M	Minto, Yukon	88.76	27	P	P	12 41 52.4	-0.3
	baz=279						
INK	Inuvik	89.05	21	P	P	12 41 53.7	-0.2
	baz=282						
N31M	Braeburn, Yuko	89.41	28	P	P	12 41 56.5	+0.6
	baz=280						
FINES	FINESS Array B	89.92	332	P	P	12 41 55.3	-2.8
	comp=Z,1.3nm,0.6s,baz=18,slow=6.6,SNR=6.4						
FINES	FINESS Array B	89.92	332	P	P	12 41 55.5	-2.6
M31M	Drury Creek, Y	89.93	28	P	P	12 41 58.6	+0.4
	baz=281						
WHY	Whitehorse	89.99	29	P	P	12 41 59.5	+0.9
	baz=281						
WHY	Whitehorse	89.99	29	P	P	12 41 59.1	+0.5
WHY				IAmb	IAmb	12 42 00.2	
	comp=Z,12nm,0.8s						
FARO	Faro, Yukon	90.40	27	P	P	12 42 00.9	+0.5
	baz=282						
MMPY	Sheldon Lake,	91.26	27	P	P	12 42 05.2	+0.8
	baz=284						
TGTN	Hyland Airport	92.90	27	P	P	12 42 12.9	+0.8
	baz=287						
SYO	Syowa Base	93.55	201	⇑*e*P	P	12 42 16.4	+1.7
NB2	NORSAR Subarra	96.88	333	P	P	12 42 26.9	-3.3
	comp=Z,2.0nm,0.8s,baz=65,slow=4.4						
NB2	NORSAR Subarra	96.88	333	P	P	12 42 26.9	-3.3
	baz=65,slow=4.4						
NOA	NORSAR Array B	96.88	333	P	P	12 42 27.4	-2.8
	comp=Z,1.3nm,0.8s,baz=65,slow=4.5,SNR=4.6						
NVAR	Mina Array Bea	106.60	47	Pdiff	Pdif	12 43 15.3	+1.1
	comp=Z,0.9nm,0.8s,baz=277,slow=3.3,SNR=5.9						
NVAR				PKiKP	PKiKP	12 47 25.4	+1.1
	comp=Z,0.4nm,0.7s,baz=193,slow=2.4,SNR=3.9						
VNA2	Neumayer--Watz	108.12	195	PKiKP	PKiKP	12 47 33.1	+7.2
TORD	Torodi Ar. Bea	121.41	289	PKP	PKPdf	12 47 51.1	-1.8
	comp=Z,2.2nm,0.7s,baz=49,slow=1.9,SNR=14						
TORD				SKP		12 51 13.9	
	comp=Z,0.7nm,0.7s,baz=36,slow=1.5,SNR=5.0						
TXAR	Lajitas Array	121.42	51	PKP	PKiKP	12 47 52.8	0.0
	comp=Z,1.0nm,0.5s,baz=184,slow=1.2,SNR=7.8						
JCT	Junction City	123.78	48	P	PKiKP	12 47 57.8	+0.4
	baz=302						
U40A	Yellville	125.04	38	P	PKPdf	12 47 59.2	-0.1
	baz=311						
MIAR	Mount Ida	125.75	40	P	PKiKP	12 48 01.5	+0.4
	baz=309						
PLCA	Paso Flores	141.88	160	PKP	PKPdf	12 48 28.4	-2.3
	comp=Z,1.5nm,0.8s,baz=167,slow=4.2,SNR=3.6						
PLCA	Paso Flores	141.88	160		PKPdf	12 48 31.3	+0.6

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*TUL **07** 12:32:01.6±1.3, 36°.71N±0°.01×97°.92W±0°.02, h5^{km}±2^{km}, ML2.6, mb_Lg2.3/8(NEIC), Error ellipse: s-maj=2.1km s-min=1.6km az=98.0*

NEIC 07 12:32:01.9±0.9, 36°.70N±0°.01×97°.90W±0°.02, h5^{km}±5^{km}, Error ellipse: s-maj=2.2km s-min=1.7km az=99.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.16	12	Pg	Pg	12 32 05.1	+0.1
GC02				Sg	Sg	12 32 07.7	+0.5
CROK	Carrier	0.20	199	Pg	Pg	12 32 06.1	+0.3
CROK				Sg	Sg	12 32 09.5	+1.0
KAN14	Manchester OK	0.27	349		Pg	12 32 06.9	-0.2
KAN14				Sg	Sg	12 32 10.9	+0.4
OK032	Salt Plains WL	0.27	293		Pg	12 32 06.9	-0.3
OK032				Sg	Sg	12 32 10.8	+0.1
KAN17	Caldwell West	0.36	17	Pg	Pg	12 32 08.8	-0.1
KAN17				Sg	Sg	12 32 14.1	+0.4
KAN05	Bluff City Nor	0.41	3		Pg	12 32 09.7	-0.2
KAN05				Sg	Sg	12 32 15.3	0.0
KAN10	Anthony SW Sta	0.45	340	Pg	Pg	12 32 10.4	-0.3
KAN10				Sg	Sg	12 32 16.2	-0.4
KAN13	South Haven SW	0.46	47		Pg	12 32 10.8	0.0
KAN13				Sg	Sg	12 32 16.7	-0.1
KAN01	Argonia South	0.47	14		Pg	12 32 10.8	-0.1
KAN01				Sg	Sg	12 32 17.3	+0.2
KAN09	Caldwell North	0.49	27	Pg	Pg	12 32 11.3	-0.1
KAN09				Sg	Sg	12 32 16.9	-0.9
KAN08	Anthony NE Sta	0.53	354		Pg	12 32 11.8	-0.4
KAN08				Sg	Sg	12 32 17.1	-2.0
KAN16	Harper SW Stat	0.54	346	Pg	Pg	12 32 11.9	-0.4
KAN16				Sg	Sg	12 32 19.4	0.0
KAN06	Argonia West S	0.55	3		Pg	12 32 12.2	-0.3
KAN06				Sg	Sg	12 32 19.4	-0.3
BLOK	Blackwell	0.55	83		Pg	12 32 12.8	+0.3
BLOK				Sg	Sg	12 32 20.8	+1.1
KS20	Mayfield South	0.60	27		Pg	12 32 13.0	-0.5
KS20				Sg	Sg	12 32 20.7	-0.5
KAN12	Harper NE Stat	0.60	353		Pg	12 32 13.2	-0.4
KAN12				Sg	Sg	12 32 22.1	+0.7
U32A	Winter Ranch,	0.94	251		Pg	12 32 20.0	0.0
U32A					Sg	12 32 31.7	-0.4
OK029	Liberty Lake	0.97	158		Pg	12 32 20.3	-0.1
OK029				Sg	Sg	12 32 32.7	-0.2
BCOK	Bluff Creek, N	1.06	167		Pg	12 32 21.7	-0.6
BCOK				Sg	Sg	12 32 36.3	+0.2
QUOK	Quay	1.09	118		Pg	12 32 22.7	-0.1
QUOK				Sn	Sb	12 32 38.6	+0.7
OK031	S. Brethren Rd	1.13	131		Pg	12 32 23.3	-0.3
OK031				Sg	Sg	12 32 38.1	-0.2
T35A	Sooner Cattle	1.14	78		Pg	12 32 23.5	-0.1
T35A					Sn	12 32 42.0	+1.5
OK030	Cody Creek RV	1.18	130		Pg	12 32 24.2	-0.4
OK030				Sg	Sb	12 32 40.5	0.0
OK025	Westminster Rd	1.20	158		Pg	12 32 24.5	-0.4
OK025				Sg	Sg	12 32 40.5	-0.1
OKCFA	Oklahoma City	1.33	164		Pn	12 32 26.9	-0.3
OKCSW	OKLAHOMA CITY	1.34	164		Pn	12 32 27.0	-0.3
FNO	Franklin	1.49	164		Pn	12 32 29.5	+0.1
R32A	Long Quarter,	1.84	340		Pn	12 32 34.2	0.0
R32A				IAmb_Lg		12 33 02.0	
	comp=Z,20nm,0.8s						
TUL1	Leonard	1.87	114		Pn	12 32 35.2	+0.6
TUL1				IAmb_Lg		12 33 05.4	
	comp=Z,18nm,0.8s						
WMOK	Wichita Mounta	2.08	200		Pn	12 32 37.5	0.0
X34A	Smith Ranch, M	2.09	178		Pn	12 32 38.8	+1.2
CBKS	Cedar Bluff	2.57	326	Pn	Pn	12 32 45.3	+1.0
KSU1	Kansas State U	2.61	23	Pn	Pn	12 32 46.0	+1.2
U38A	Gravette	2.84	94	Pn	Pn	12 32 49.1	+1.1
X37A	Clayton	2.94	135		Pn	12 32 49.5	+0.2
HHAR	Hobbs	3.22	96		Pn	12 32 53.2	+0.1
AMTX	Amarillo	3.57	241		Pn	12 32 58.2	+0.2
S39A	Bolivar	3.79	73	Pn	Pn	12 33 01.6	+0.6
U40A	Yellville	4.08	93	Pn	Pn	12 33 05.0	+0.1
MIAR	Mount Ida	4.12	120		Pn	12 33 07.5	+1.9
ABTX	Abilene, Hawle	4.31	200	IAmb_Lg		12 34 15.0	
	comp=Z,4.9nm,0.9s						
P38A	Dawn	4.52	48	IAmb_Lg		12 34 26.2	
	comp=Z,6.6nm,0.8s						
N35A	Tabor	4.52	22		Pn	12 33 12.9	+1.9
MGMO	Mountain Grove	4.54	83	Pn	Pn	12 33 11.5	+0.2
FCAR	Ozark Folk Cen	4.73	98	Pn	Pn	12 33 15.8	+1.8
R40A	Maddies Statio	4.75	69	Pn	Pn	12 33 13.8	-0.4
ISCO	Idaho Springs	6.81	299	Pn	Pn	12 33 42.8	0.0

TAP 07 12:32:39.4, 21°.42N×121°.79E, h187^{km}±1^{km}, ML3.1, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAY	Lan-yu	0.66	340	*e*P	Pn	12 33 05.3	-0.4
	baz=340						
LAY				*e*S	Sn	12 33 25.2	-1.0
	baz=340						
TSEB	Hengchuen, Pin	0.95	300	*e*P	Pn	12 33 08.0	+0.5
	baz=298						
TSEB				*e*S	Sn	12 33 28.5	-0.7
	baz=298						
TWKBT	Hengchun	1.04	300	*e*P	Pn	12 33 07.8	-0.4
	baz=299						
TWKBT				*e*S	Sn	12 33 29.0	-1.4
	baz=299						
TWK1	Hengchun	1.05	300	*e*P	Pn	12 33 08.4	+0.3
	baz=299						
TWK1				*e*S	Sn	12 33 30.0	-0.5
	baz=299						
HEN	Hengchun	1.14	301	*e*P	Pn	12 33 08.7	-0.1
	baz=300						
HEN				*e*S	Sn	12 33 30.6	-1.0
	baz=300						
SLIU	Shizi	1.21	311	*e*P	Pn	12 33 08.3	-1.1
	baz=310						
SLIU				*e*S	Sn	12 33 31.5	-1.4
	baz=310						
LDUT	Ludao	1.28	347	*e*P	Pn	12 33 10.4	+0.4
	baz=346						
LDUT				*e*S	Sn	12 33 32.0	-1.9
	baz=346						
EAST	Anshuo	1.30	318	*e*P	Pn	12 33 09.5	-0.7
	baz=317						
EAST				*e*S	Sn	12 33 32.6	-1.5
	baz=317						
ECL	Taimali	1.41	327	*e*P	Pn	12 33 11.0	-0.1
	baz=326						
ECL				*e*S	Sn	12 33 34.2	-1.6
	baz=326						
SCZT	Fangliau	1.44	311	*e*P	Pn	12 33 10.8	-0.5
	baz=311						
SCZT				*e*S	Sn	12 33 34.3	-2.0
	baz=311						
TTN	Taitung	1.46	336	*e*P	Pn	12 33 12.6	+1.1
	baz=336						
TTN				*e*S	Sn	12 33 35.1	-1.5
	baz=336						
TWGBT	Beinan	1.54	335	*e*P	Pn	12 33 12.0	-0.3
	baz=334						
TWGBT				*e*S	Sn	12 33 36.5	-1.5
	baz=334						
TWG	Pinlang	1.54	335	*e*P	Pn	12 33 12.0	-0.3
	baz=334						
TWG				*e*S	Sn	12 33 36.7	-1.4
	baz=334						
MASBT	Mashibuluo	1.60	318	*e*P	Pn	12 33 12.8	-0.1
	baz=317						
MASBT				*e*S	Sn	12 33 37.9	-1.0
	baz=317						
EDH	Donghe	1.61	344	*e*P	Pn	12 33 13.3	+0.4
	baz=343						
EDH				*e*S	Sn	12 33 37.6	-1.6
	baz=343						
TSMG	Majia	1.66	321	*e*P	Pn	12 33 13.6	+0.1
	baz=320						
TSMG				*e*S	Sn	12 33 39.1	-0.9
	baz=320						
SSD	Sandimen	1.70	321	*e*P	Pn	12 33 14.1	+0.2
	baz=321						
CHKT	Chengkung	1.72	347	*e*P	Pn	12 33 13.2	-0.8
	baz=347						
SGLT	Jiouru	1.77	317	*e*P	Pn	12 33 14.4	-0.1
	baz=317						
TWM1	Shoushan	1.89	318	*e*P	Pn	12 33 16.2	+0.4
	baz=317						
TWM1				*e*S	Sn	12 33 42.8	-1.3
	baz=317						
SLGT	Liugui	1.89	326	*e*P	Pn	12 33 16.6	+0.8
	baz=325						
ELDTW	Lidau	1.90	338	*e*P	Pn	12 33 17.5	+1.4
	baz=338						
ELDTW				*e*S	Sn	12 33 43.1	-1.5
	baz=338						
EYUL	Yuli	1.97	347	*e*P	Pn	12 33 16.9	+0.3
	baz=347						
STYH	Taoyuan	1.98	332	*e*P	Pn	12 33 17.8	+1.1
	baz=331						
SGST	Jiashian	2.00	326	*e*P	Pn	12 33 17.4	+0.5
	baz=326						
YULB	Yu-li	2.02	347	*e*P	Pn	12 33 16.6	-0.6
	baz=346						
YULB	Yu-li	2.02	347	P	Pn	12 33 17.7	+0.6
HGSD	Ruisui	2.09	351	*e*P	Pn	12 33 19.4	+1.5
	baz=350						
CHN1	Nanshi	2.11	327	*e*P	Pn	12 33 19.0	+0.9
	baz=326						
WTP	Ta-pu	2.12	329	*e*P	Pn	12 33 19.0	+0.7
	baz=329						
WTP				*e*S	Sn	12 33 45.7	-2.9
	baz=329						
EHY	Hungye	2.12	348	*e*P	Pn	12 33 18.5	+0.3
	baz=348						
SNST	Tainan City	2.15	327	*e*P	Pn	12 33 18.0	-0.6
	baz=326						
TPUB	Ta-pu	2.16	330	*e*P	Pn	12 33 18.9	+0.2
	baz=330						
TPUB	Ta-pu	2.16	330	P	Pn	12 33 19.5	+0.8
TPUB	Ta-pu	2.16	330	P	Pn	12 33 19.2	+0.5
TAI1	Yung-k'ang	2.17	318	*e*P	Pn	12 33 19.0	+0.4
	baz=318						
TWK	Hsinying	2.20	327	*e*P	Pn	12 33 19.2	+0.1
	baz=327						
ALS	Alishan	2.27	337	*e*P	Pn	12 33 20.7	+0.5
	baz=336						
SCLT	Jiali	2.29	320	*e*P	Pn	12 33 20.5	+0.5
	baz=319						
CHN5	Tsauling	2.40	335	*e*P	Pn	12 33 21.8	+0.4
	baz=334						
ESL	Shilin	2.41	352	*e*P	Pn	12 33 21.8	+0.4
	baz=352						
CHN8	Yiju	2.41	323	*e*P	Pn	12 33 22.1	+0.6
	baz=322						
SSLB	Suanglung	2.48	342	*e*P	Pn	12 33 22.6	+0.3
	baz=341						
SSLB	Suanglung	2.48	342	P	Pn	12 33 24.0	+1.7
SSLB	Suanglung	2.48	342	P	Pn	12 33 23.6	+1.3
WDLH	Douliu	2.54	333	*e*P	Pn	12 33 23.1	+0.2
	baz=332						
WJS	Zhushan	2.58	338	*e*P	Pn	12 33 23.7	+0.3
	baz=337						
OWD	Renai	2.59	347	*e*P	Pn	12 33 24.2	+0.6
	baz=347						
SMLT	Sun Moon Lake	2.59	342	*e*P	Pn	12 33 24.2	+0.7
	baz=341						
TYC	Yuchr	2.62	341	*e*P	Pn	12 33 24.5	+0.7
	baz=341						
WNT	Mingjian	2.65	338	*e*P	Pn	12 33 24.5	+0.3
	baz=337						
CHGB	Renai	2.69	348	*e*P	Pn	12 33 25.5	+0.6
	baz=347						
WCS	Beigang Elemen	2.75	343	*e*P	Pn	12 33 26.0	+0.7
	baz=342						
NACB	Ninganchiao	2.75	356	*e*P	Pn	12 33 25.9	+0.6
	baz=356						
WHF	Hehuan Shan	2.76	350	*e*P	Pn	12 33 25.4	-0.4
	baz=350						
ETLH	Xiulin Townshi	2.79	354	*e*P	Pn	12 33 25.6	-0.3
	baz=354						
WRL	Guolierlin Hig	2.79	332	*e*P	Pn	12 33 26.2	+0.3
	baz=332						
FUSS	Fushou	2.86	350	*e*P	Pn	12 33 27.7	+0.8
	baz=349						
PHUB	P'eng-hu	2.92	316	*e*P	Pn	12 33 27.5	+0.1
	baz=315						
WHP	Taichung City	2.95	345	*e*P	Pn	12 33 27.9	0.0
	baz=344						
PNG	Penghu	2.97	316	*e*P	Pn	12 33 28.0	0.0
	baz=316						
NNSB	Datong	3.02	353	*e*P	Pn	12 33 29.0	+0.3
	baz=352						
NNS	Nan Shan	3.03	353	*e*P	Pn	12 33 28.7	-0.2
	baz=352						
ENTT	Nioudou	3.21	356	*e*P	Pn	12 33 30.9	0.0
	baz=356						
YOJ	Yonaguni jima	3.23	20	*e*P	Pn	12 33 32.1	+1.0
	baz=20						
YHNB	Yeheng	3.26	353	*e*P	Pn	12 33 31.8	+0.3
	baz=353						
YHNB	Yeheng	3.26	353	P	Pn	12 33 32.1	+0.6
NSK	Sanguang	3.27	353	*e*P	Pn	12 33 32.1	+0.5
	baz=353						
NSTT	Nanjuang	3.28	347	*e*P	Pn	12 33 32.4	+0.7
	baz=347						
LIOB	Emei	3.29	348	*e*P	Pn	12 33 32.0	+0.1
	baz=347						
TWE	Neicheng	3.29	358	*e*P	Pn	12 33 32.1	+0.2
	baz=358						
ILA	Ilan	3.33	359	*e*P	Pn	12 33 33.0	+0.6
	baz=359						
NWLT	Wulai	3.35	356	*e*P	Pn	12 33 31.2	-1.4
	baz=355						
NTC	Toucheng	3.42	1	*e*P	Pn	12 33 33.6	+0.1
SBCB	Hsinchu	3.44	348	*e*P	Pn	12 33 34.1	+0.4
	baz=347						
TIPB	Shuangxi	3.54	1	*e*P	Pn	12 33 34.5	-0.4
NCUH	Zhongli	3.58	351	*e*P	Pn	12 33 35.8	+0.4
	baz=351						
NWF	Wu-fen Shan	3.63	360	*e*P	Pn	12 33 36.9	+0.7
	baz=359						

TAP 07 12:38:29.0, 23°.95N×121°.67E, h11^{km}, ML2.3, 2C-3D, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	Hwalien	0.07	290	*i* P	Pg	12 38 32.4	+1.0
	baz=290						
HWA				S	Sg	12 38 34.0	+0.9
	baz=290						
TWD	Chiawan	0.14	330	⇓*i*P	Pb	12 38 33.2	-0.5
	baz=333						
TWD				*i* S	Sg	12 38 35.6	+0.7
	baz=333						
ETL	Fush Village	0.21	347	P	Pb	12 38 34.3	-0.6
	baz=346						
ETL				S	Sg	12 38 38.0	+1.3
	baz=346						
NACB	Ninganchiao	0.23	342	⇓P	Pg	12 38 34.4	+0.5
	baz=341						
NACB				S	Sg	12 38 38.4	+1.2
	baz=341						
ESL	Shilin	0.26	238	⇑*i*P	Pg	12 38 34.7	+0.3
	baz=236						
ESL				*i* S	Sg	12 38 38.9	+0.8
	baz=236						
ETLH	Xiulin Townshi	0.31	325	P	Pb	12 38 36.0	-0.6
	baz=325						
ETLH				S	Sb	12 38 41.0	-0.6
	baz=325						
EHP	Heping Village	0.36	10	*e*P	Pb	12 38 37.5	0.0
	baz=10.0						
EGFH	Guangfu	0.36	219	*i* P	Pg	12 38 36.7	+0.4
	baz=218						
EGFH				*i* S	Sb	12 38 43.3	+0.2
	baz=218						
WHF	Hehuan Shan	0.42	297	*i* P	Pb	12 38 38.1	-0.6
	baz=297						
WHF				*i* S	Sb	12 38 44.6	-0.6
	baz=297						
OWD	Renai	0.46	270	*i* P	Pb	12 38 39.4	+0.3
	baz=270						
OWD				S	Sb	12 38 45.4	-0.6
	baz=270						
CHGB	Renai	0.47	283	⇓P	Pb	12 38 39.4	-0.1
	baz=282						
CHGB				S	Sb	12 38 46.4	0.0
	baz=282						
ENA	Nanau	0.48	7	*i* P	Pb	12 38 39.0	-0.5
	baz=8.0						
ENA				*i* S	Sb	12 38 45.9	-0.5
	baz=8.0						
FUSS	Fushou	0.49	307	*i* P	Pb	12 38 39.7	-0.1
	baz=306						
FUSS				S	Sb	12 38 47.4	+0.4
	baz=306						
EWUT	Wuta	0.50	11	*e*P	Pb	12 38 39.5	-0.3
	baz=11						
EWUT				*i* S	Sb	12 38 47.1	+0.1
	baz=11						
HGSD	Ruisui	0.51	207	P	Pb	12 38 39.7	-0.4
	baz=206						
HGSD				S	Sb	12 38 47.6	+0.1
	baz=206						
NNSB	Datong	0.54	331	P	Pb	12 38 40.5	-0.2
	baz=330						
NNSB				S	Sb	12 38 48.5	0.0
	baz=330						
TWT	Tachien	0.54	303	*i* P	Pb	12 38 41.1	+0.4
	baz=302						
TWT				*i* S	Sb	12 38 49.2	+0.6
	baz=302						
EHY	Hungye	0.55	216	*i* P	Pg	12 38 39.8	0.0
	baz=215						
EHY				*i* S	Sb	12 38 48.5	-0.1
	baz=215						
NNS	Nan Shan	0.56	330	*i* P	Pb	12 38 40.8	-0.1
	baz=330						
NNS				*i* S	Sb	12 38 48.8	-0.1
	baz=330						
TDCB	Techi	0.56	302	P	Pb	12 38 41.0	+0.1
	baz=302						
TDCB				S	Sb	12 38 49.5	+0.6
	baz=302						
YULB	Yu-li	0.66	212	P	Pb	12 38 42.5	0.0
	baz=211						
YULB				S	Sb	12 38 52.7	+1.1
	baz=211						
NDT	Datong Townshi	0.66	347	*i* P	Pb	12 38 42.9	+0.3
	baz=347						
NDT				*i* S	Sb	12 38 52.1	+0.3
	baz=347						
TWC	Suao	0.67	14	P	Pb	12 38 42.6	-0.2
	baz=14						
TWC				*i* S	Sb	12 38 53.1	+1.1
	baz=14						
NDS	Dongshan	0.68	3	*e*P	Pb	12 38 42.7	-0.2
	baz=3.0						
NDS				*e*S	Sb	12 38 52.6	+0.4
	baz=3.0						
SSLB	Suanglung	0.68	256	P	Pb	12 38 43.0	+0.1
	baz=255						
SSLB				S	Sb	12 38 52.2	-0.1
	baz=255						
EYUL	Yuli	0.69	208	*e*P	Pb	12 38 43.2	+0.3
	baz=208						
EYUL				*e*S	Sb	12 38 53.0	+0.6
	baz=208						
ENTT	Nioudou	0.69	352	*i* P	Pb	12 38 43.5	+0.5
	baz=352						
ENTT				*i* S	Sb	12 38 53.1	+0.4
	baz=352						
WCS	Beigang Elemen	0.70	279	P	Pb	12 38 43.2	-0.1
	baz=278						
WCS				*e*S	Sb	12 38 53.6	+0.6
	baz=278						
SMLT	Sun Moon Lake	0.71	264	P	Pb	12 38 43.2	-0.2
	baz=264						
SMLT				S	Sg	12 38 52.7	+0.5
	baz=264						
WHP	Taichung City	0.74	296	*e*P	Pb	12 38 44.4	+0.5
	baz=295						
WHP				*e*S	Sb	12 38 55.2	+1.1
	baz=295						
TYC	Yuchr	0.75	266	P	Pg	12 38 43.4	-0.2
	baz=266						
TYC				S	Sb	12 38 54.9	+0.6
	baz=266						
YHNB	Yeheng	0.76	339	P	Pb	12 38 44.9	+0.5
	baz=339						
YHNB				S	Sb	12 38 55.5	+0.7
	baz=339						
TWE	Neicheng	0.76	360	⇑*i*P	Pb	12 38 44.9	+0.5
TWE				*i* S	Sb	12 38 55.7	+1.0
NSK	Sanguang	0.77	338	*i* P	Pb	12 38 44.9	+0.3
	baz=338						
NSK				*i* S	Sb	12 38 55.6	+0.5
	baz=338						
ILA	Ilan	0.81	5	*e*P	Pg	12 38 44.3	-0.4

	baz=5.0						
ILA				eS	Sb	12 38 55.7	-0.3
	baz=5.0						
NWLT	Wulai	0.83	349	P	Pn	12 38 46.2	-0.5
	baz=349						
NWLT				S	Sb	12 38 57.1	+0.3
	baz=349						
WJS	Zhushan	0.88	262	eP	Pg	12 38 46.1	+0.1
	baz=261						
WJS				eS	Sn	12 38 59.1	-0.9
	baz=261						
CHKT	Chengkung	0.90	198	P	Pg	12 38 46.5	+0.1
	baz=197						
CHKT				S	Sn	12 38 59.8	-0.7
	baz=197						
WNT	Mingjian	0.91	265	eS	Sb	12 38 59.3	+0.4
	baz=265						
ALS	Alishan	0.91	241	i P	Pb	12 38 47.3	+0.3
	baz=240						
ALS				S	Sb	12 38 60.0	+0.8
	baz=240						
NSTT	Nanjuang	0.91	318	eP	Pb	12 38 46.9	+0.1
	baz=317						
NSTT				eS	Sb	12 38 59.9	+0.9
	baz=317						
TWQ1	Liyutan	0.91	296	eP	Pb	12 38 47.0	+0.2
	baz=295						
TWQ1				S	Sb	12 38 59.9	+0.9
	baz=295						
LIOB	Emei	0.91	319	eP	Pb	12 38 47.0	+0.1
	baz=318						
LIOB				eS	Sn	12 39 00.4	-0.6
	baz=318						
NSY	Sanyi	0.95	299	P	Pg	12 38 47.2	-0.2
	baz=298						
NSY				eS	Sn	12 39 01.1	-0.8
	baz=298						
ELDTW	Lidau	0.97	218	P	Pb	12 38 47.9	0.0
	baz=217						
ELDTW				S	Sn	12 39 02.0	-0.4
	baz=217						
CHN5	Tsauling	0.98	249	P	Pn	12 38 48.8	0.0
	baz=248						
CHN5				S	Sn	12 39 02.3	-0.3
	baz=248						
WDJ	Dajia District	1.02	293	eP	Pn	12 38 49.4	+0.1
	baz=292						
WDJ				eS	Sn	12 39 03.3	-0.3
	baz=292						
TIPB	Shuangxi	1.02	8	eP	Pg	12 38 48.5	-0.3
	baz=7.0						
TIPB				eS	Sn	12 39 03.3	-0.4
	baz=7.0						
TWA	Mucha	1.02	355	eP	Pg	12 38 49.1	+0.3
	baz=355						
TWA				eS	Sn	12 39 03.1	-0.6
	baz=355						
EDH	Donghe	1.03	199	eP	Pg	12 38 49.1	+0.1
	baz=199						
EDH				eS	Sn	12 39 04.1	+0.2
	baz=199						
TAP	Taipei	1.09	352	eP	Pb	12 38 49.8	-0.1
	baz=352						
TAP				eS	Sn	12 39 05.6	+0.3
	baz=352						
NCU	National Centr	1.10	336	eP	Pb	12 38 49.4	-0.8
	baz=336						
NCU				eS	Sn	12 39 06.3	+0.7
	baz=336						
NWF	Wu-fen Shan	1.12	5	eP	Pb	12 38 50.1	-0.3
	baz=5.0						
NWF				S	Sn	12 39 05.8	-0.2
	baz=5.0						

JMA 07 12:38:47.0±0.1, 24°.02N×122°.81E, h20^{km}±3^{km}, M2.2, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.45	16	P	Pb	12 38 56.0	-0.2
JYNG				S	Sb	12 39 02.0	-0.4
YOJ	Yonaguni jima	0.48	23	P	Pb	12 38 56.5	-0.2
YOJ				eS	Sb	12 39 03.3	0.0
IRIF	Iriomote-Funau	0.90	69	P	Pb	12 39 03.7	-0.2
IRIF				S	Sb	12 39 15.7	+0.3
HATJ	Hateruma jima	0.91	88	P	Pb	12 39 03.6	-0.5
HATJ				eS	Sb	12 39 15.9	+0.1
JKRS	Kuro-shima	1.12	79	P	Pn	12 39 07.3	-0.2
JKRS				eS	Sn	12 39 22.1	-0.2
JIJ	Ishigaki jima	1.26	74	P	Pn	12 39 09.6	+0.1
JIJ				S	Sn	12 39 25.6	-0.3
JISG	Ishigakijimahi	1.48	67	P	Pn	12 39 13.0	+0.5
JISG				S	Sb	12 39 31.8	-0.4

NORS 07 12:48:40.2±0.0, 42°.09N×46°.03E, h18^{km}, MPVA3.1
DRS 07 12:48:40.4±0.0, 42°.14N×45°.95E, h14^{km}, ML2.0/6
ISC 07 12:48:40.0±1.1, 42°.15N±0°.03×45°.94E±0°.03, h7^{km}±11^{km}, n17, σ1^{s}.54/34, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LGD	Lagodekhi	0.39	144	P	Pg	12 48 47.0	-0.6
LGD				S	Sg	12 48 52.2	-0.5
BTLR	Botlikh	0.55	22	ePg	Pg	12 48 50.9	+0.1
	9.0nm,0.6s						
BTLR				eSg	Sg	12 48 58.6	+0.6
	95nm,0.2s						
XNZR	Khunzakh	0.69	55	ePg	Pg	12 48 53.3	-0.1
	17nm,0.4s						
XNZR				eSg	Sg	12 49 02.7	+0.4
	41nm,0.4s						
DDFL	Dedoflistskaro	0.72	169	P	Pn	12 48 57.9	+1.3
DDFL				S	Sn	12 49 12.6	+4.7
GNBR	Gunib	0.80	72	i Pg	Pb	12 48 55.2	-1.0
	28nm,0.1s						
GNBR				eSg	Sg	12 49 06.4	+0.7
	63nm,0.2s						
UNCR	Uncukul	0.85	48	ePg	Pb	12 48 55.8	-1.2
	13nm,0.4s						
UNCR				i Sg	Sb	12 49 07.6	-1.1
	50nm,0.5s						
KMKR	Kumukh	0.86	91	i Pg	Pb	12 48 56.0	-1.4
	90nm,0.2s						
KMKR				eSg	Sg	12 49 07.8	0.0
	28nm,0.4s						
ARKR	Arakani	0.90	60	ePg	Pb	12 48 57.0	-1.1
	17nm,0.2s						
ARKR				eSg	Sg	12 49 09.7	+0.6
	17nm,0.4s						
KRNR	Karanay	0.98	46	i Pg	Pb	12 48 58.7	-0.7
	4.0nm,0.4s						
KRNR				eSg	Sb	12 49 12.1	-0.6
	37nm,0.2s						
GROC	Groznyy	1.06	354	ePg	Pg	12 49 01.6	+1.3
	34nm,0.2s						
GROC				eSg	Sg	12 49 17.1	+3.1
	36nm,0.3s						
DBC	Dubki	1.09	37	ePg	Pb	12 49 00.9	-0.3
	6.0nm,0.5s						
DBC				i Sg	Sg	12 49 16.2	+1.1
	29nm,0.6s						
MTEO	Meteo	1.17	297	P	Pn	12 49 01.3	-1.9
MTEO				S	Sb	12 49 14.8	-3.4
LACR	Lac	1.39	300	ePg	Pn	12 49 05.4	-0.5
	7.2nm,0.1s						
LACR				eSg	Sn	12 49 22.4	-2.2
	21nm,0.4s						
DMNI	Dmanisi	1.54	238	P	Pn	12 49 07.5	-0.5
DMNI				S	Sb	12 49 28.1	-0.7
ZEI	Tsey	1.64	294	ePg	Pn	12 49 10.1	+0.7
	1.2nm,0.3s						
ZEI				eSg	Sb	12 49 33.0	+1.5
	8.6nm,0.3s						
BKRG	Bakuriani	1.84	259	P	Pb	12 49 13.1	-1.1
BKRG				S	Sb	12 49 37.4	0.0
DIGR	Digorskoe uzhe	1.90	294	ePg	Pb	12 49 15.1	+0.1
	1.2nm,0.2s						
DIGR				eSg	Sb	12 49 38.6	-0.4
	3.0nm,0.6s						

NOU 07 13:01:30.7, 16°.84S×167°.38E, h0^{km}, MLv4.8/6, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	1.17	139	P	Pb	13 01 53.5	-0.3

MOS 07 13:05:51.3±1.0, 48°.78N×154°.31E, h69^{km}, mb5.0/31, Error ellipse: s-maj=8.3km s-min=3.4km az=78.3
KRSC 07 13:05:56.2±2.6, 48°.75N×156°.37E, h53^{km}±25^{km}, ML5.2
BJI 07 13:05:57.1±0.0, 49°.42N×154°.77E, h120^{km}, mB5.0/29, mb4.9/54
IDC 07 13:05:59.1±0.4, 49°.37N×154°.41E, h104^{km}±3^{km}, mb4.3/27, mb1 4.4/32, mb1mx4.4/38, mbtmp4.6/32, MS3.6/10, Ms1 3.6/10, ms1mx3.2/52, Error ellipse: s-maj=10.5km s-min=8.0km az=135.0
NEIC 07 13:06:00.8±2.0, 49°.44N±0°.10×154°.4E±0°.1, h114^{km}±6^{km}, mb4.6/99, Error ellipse: s-maj=16.8km s-min=10.0km az=138.0
ISC 07 13:05:59.5±0.4, 49°.28N±0°.05×154°.63E±0°.04, h113^{km}±2^{km}, h113^{km}:pP-P, n547, σ1^{s}.39/598, mb4.7/138, 25C-38D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.70	34	⇓iPN	Pn	13 06 28.8	-0.1
SKR				eS	Sn	13 06 50.9	-0.3
SKR				pmax	pmax		
	comp=Z,964nm,0.5s						
SKR				smax	smax		
	comp=E,1µm,0.4s						
SKR				smax	smax		
	comp=N,2µm,0.4s						
SKR	Severo-Kuril's	1.70	34	eP	Pn	13 06 28.7	-0.1
SKR				eS	Sn	13 06 51.2	0.0
PAU	Pauzhetka	2.60	32	PN	Pn	13 06 40.5	+0.3
PAU				S	Sn	13 07 13.0	+1.5
PAU	Pauzhetka	2.60	32	eP	Pn	13 06 40.5	+0.3
PAU				eS	Sn	13 07 13.0	+1.5
KDTR	Khodutka, Kamc	3.35	40	PN	Pn	13 06 49.2	-1.0
KDTR	Khodutka, Kamc	3.35	40	eP	Pn	13 06 49.2	-1.0
KDTR				eS	Sn	13 07 26.9	-2.4
ASAK	Asacha	3.73	32	PN	Pn	13 06 56.7	+1.3
ASAK	Asacha	3.73	32	eP	Pn	13 06 56.7	+1.3
MTVR	Mutnovka	3.92	34	PN	Pn	13 06 58.6	+0.7
MTVR				S	Sn	13 07 43.6	+0.5
MTVR	Mutnovka	3.92	34	eP	Pn	13 06 58.6	+0.7
MTVR				eS	Sn	13 07 43.6	+0.5
GRL	Gorelyy	3.93	32	PN	Pn	13 06 59.3	+1.2
GRL				S	Sn	13 07 44.8	+1.4
GRL	Gorelyy	3.93	32	eP	Pn	13 06 59.3	+1.2
GRL				eS	Sn	13 07 44.8	+1.4
APC	Apacha	3.98	23	PN	Pn	13 06 59.9	+1.3
APC	Apacha	3.98	23	eP	Pn	13 06 59.9	+1.3
RUS	Russkaya	4.00	36	PN	Pn	13 06 58.1	-0.7
RUS	Russkaya	4.00	36	eP	Pn	13 06 58.1	-0.7
RUS				eS	Sn	13 07 42.4	-2.4
PEA0B	Petropavlovsk-	4.29	26	⇑ePN	Pn	13 07 04.7	+1.9
PEA0B	Petropavlovsk-	4.29	26	Pn	Pn	13 07 04.6	+1.9
PETK	Petropavlovsk-	4.29	26	P	Pn	13 07 03.8	+1.0
	comp=N,23nm,0.3s,baz=184,slow=11,SNR=330						
PETK				S	Sn	13 07 53.2	+1.4
	comp=N,7.7nm,0.3s,baz=142,slow=15,SNR=4.0						
PETK	Petropavlovsk-	4.29	26	PN	Pn	13 07 04.0	+1.3
PETK	Petropavlovsk-	4.29	26	Pn	Pn	13 07 04.0	+1.3
PET	Petropavlovsk	4.52	32	ePN	Pn	13 07 05.8	0.0
PET				pmax	pmax		
	comp=Z,163nm,0.6s						
PET				MLR	MLR		
	comp=Z,400nm,17.0s						
PET	Petropavlovsk	4.52	32	eP	Pn	13 07 06.2	+0.4
PET				eS	Sn	13 07 57.8	+0.4
PET	Petropavlovsk	4.52	32		Pn	13 07 05.8	0.0
DALK	Dalny	4.56	33	PN	Pn	13 07 06.7	+0.3
DALK	Dalny	4.56	33	eP	Pn	13 07 06.7	+0.3
DALK				eS	Sn	13 07 59.6	+1.2
UGLR	Uglovaya	4.73	32	PN	Pn	13 07 10.1	+1.3
UGLR	Uglovaya	4.73	32	eP	Pn	13 07 10.1	+1.3
KOK	Koryaka	4.74	30	PN	Pn	13 07 10.7	+1.9
KOK	Koryaka	4.74	30	eP	Pn	13 07 10.7	+1.9
AVH	Avacha	4.75	31	PN	Pn	13 07 10.7	+1.7
AVH	Avacha	4.75	31	eP	Pn	13 07 10.7	+1.7
SMAR	Somma	4.77	32	PN	Pn	13 07 10.5	+1.1
SMAR	Somma	4.77	32	eP	Pn	13 07 10.5	+1.1
KRER	Koryakskii	4.79	31	PN	Pn	13 07 11.1	+1.5
KRER	Koryakskii	4.79	31	eP	Pn	13 07 11.1	+1.5
SDLR	Sedlovina	4.81	32	PN	Pn	13 07 10.5	+0.7
SDLR	Sedlovina	4.81	32	eP	Pn	13 07 10.5	+0.7
GNL	Ganaly	4.88	24	PN	Pn	13 07 13.0	+2.2
GNL	Ganaly	4.88	24	eP	Pn	13 07 13.0	+2.2
NLC	Nalytchevo	4.89	35	PN	Pn	13 07 09.5	-1.3
NLC	Nalytchevo	4.89	35	eP	Pn	13 07 09.5	-1.3
NLC				eS	Sn	13 08 02.7	-3.6
SPN	Mys Shipunski	5.11	40	PN	Pn	13 07 12.4	-1.3
SPN	Mys Shipunski	5.11	40	eP	Pn	13 07 12.4	-1.3
SPN				eS	Sn	13 08 06.7	-4.8
KII	Karymskiy	5.63	30	PN	Pn	13 07 22.1	+1.3
KII	Karymskiy	5.63	30	eP	Pn	13 07 22.1	+1.3
KUR	Kuril'sk	6.13	231	ePN	Pn	13 07 28.3	+0.7
KUR				pmax	pmax		
	comp=N,60nm,0.7s						
KUR				pmax	pmax		
	comp=E,49nm,0.7s						
KUR				pmax	pmax		
	comp=Z,198nm,0.7s						
KUR				pmax	pmax		
	comp=Z,1µm,3.5s						
MKZ	Mys Kozlova	6.87	37	PN	Pn	13 07 35.4	-2.1
MKZ	Mys Kozlova	6.87	37	eP	Pn	13 07 35.4	-2.1
TUMR	Tumrok	6.90	27	PN	Pn	13 07 39.7	+1.7
TUMR	Tumrok	6.90	27	eP	Pn	13 07 39.7	+1.7
TUMD	Tumrok D	6.91	29	eP	Pn	13 07 38.5	+0.4
ESO	Esso	7.10	19	PN	Pn	13 07 46.1	+5.4
ESO	Esso	7.10	19	eP	Pn	13 07 46.1	+5.4
KMNR	Kamenistaya	7.33	26	PN	Pn	13 07 45.6	+1.7
KMNR	Kamenistaya	7.33	26	eP	Pn	13 07 45.6	+1.7
KPT	Kopyto	7.51	25	PN	Pn	13 07 47.5	+1.2
KPT	Kopyto	7.51	25	eP	Pn	13 07 47.5	+1.2
KIRR	Kirishev	7.53	25	PN	Pn	13 07 47.9	+1.3
KIRR	Kirishev	7.53	25	eP	Pn	13 07 47.9	+1.3
BZWR	Bezymyannyi-We	7.58	26	PN	Pn	13 07 48.8	+1.4
BZWR	Bezymyannyi-We	7.58	26	eP	Pn	13 07 48.8	+1.4
BZGR	Bezymyannyi-Gr	7.62	27	PN	Pn	13 07 49.0	+1.2
BZGR	Bezymyannyi-Gr	7.62	27	eP	Pn	13 07 49.0	+1.2
ZLN	Zelenaya	7.72	27	PN	Pn	13 07 51.1	+2.0
ZLN	Zelenaya	7.72	27	eP	Pn	13 07 51.1	+2.0
LGNR	Loginova	7.74	26	PN	Pn	13 07 51.4	+1.8
LGNR	Loginova	7.74	26	eP	Pn	13 07 51.4	+1.8
CIRR	Tsirk	7.79	26	PN	Pn	13 07 51.4	+1.3
CIRR	Tsirk	7.79	26	eP	Pn	13 07 51.4	+1.3
KRSR	Krestovskiy	7.82	25	PN	Pn	13 07 48.6	-1.9
KRSR	Krestovskiy	7.82	25	eP	Pn	13 07 48.6	-1.9
TYV	Tymovskoe	7.87	286	ePN	Pn	13 07 54.5	+3.4
TYV				pmax	pmax		
	comp=Z,147nm,0.9s						
TYV				pmax	pmax		
	comp=Z,200nm,1.8s						
KLY	Klyuchi	7.93	25	PN	Pn	13 07 53.6	+1.7
KLY	Klyuchi	7.93	25	eP	Pn	13 07 53.6	+1.7
YUK	Yuzh-Kuril'sk	7.99	232	⇓iPN	Pn	13 07 52.3	-0.5
YSS	Yuzh-Sakhalins	8.28	258	ePN	Pn	13 07 59.3	+2.6
YSS				pmax	pmax		
	comp=Z,110nm,1.0s						
YSS	Yuzh-Sakhalins	8.28	258	Pn	Pn	13 07 58.1	+1.4
BDR	Baidarnaya	8.31	26	PN	Pn	13 07 57.4	+0.3
BDR	Baidarnaya	8.31	26	eP	Pn	13 07 57.4	+0.3
SRKR	Sorokina	8.37	26	PN	Pn	13 07 58.8	+0.9
SRKR	Sorokina	8.37	26	eP	Pn	13 07 58.8	+0.9
KBG	Krutoberegovo	8.53	32	PN	Pn	13 07 58.8	-1.1
KBG	Krutoberegovo	8.53	32	eP	Pn	13 07 58.8	-1.1
KBTR	Krutoberegovo	8.53	32	PN	Pn	13 07 58.5	-1.5
KBTR	Krutoberegovo	8.53	32	eP	Pn	13 07 58.5	-1.5
JMP	Maruseppu	9.37	240	P	Pn	13 08 13.0	+1.5
JKA	Kamikawa-asahi	9.74	243	Pn	Pn	13 08 17.8	+1.3
ASAJ	Asahikawa	9.74	243	P	Pn	13 08 17.8	+1.3
	comp=Z,7.3nm,0.3s,baz=66,slow=13,SNR=94						
ASAJ				S	Sn	13 10 06.7	+2.6
	baz=52,slow=12,SNR=1.1						
ASAJ	Asahikawa	9.74	243	P	Pn	13 08 18.3	+1.8
MA2	Magadan	10.56	349	P	Pn	13 08 27.9	+0.5
	comp=Z,0.5nm,0.3s,baz=214,slow=5.7,SNR=4.6						
MA2	Magadan	10.56	349	⇓ePN	Pn	13 08 28.2	+0.8
ERM	Erimo	10.82	232	cePN	Pn	13 08 29.7	-1.4
ERM	Erimo	10.82	232	Pn	Pn	13 08 29.7	-1.4
JEM	Erimo	10.82	232	P	Pn	13 08 28.1	-3.0
JEW	Eniwo	11.19	240	P	Pn	13 08 36.0	0.0
JEW	Eniwo	11.19	240	Pn	Pn	13 08 35.4	-0.6
GRNR	Gornyy	11.81	284	⇓iPN	Pn	13 08 46.8	+2.6
GRNR				pmax	pmax		
	comp=E,20nm,1.2s						
GRNR				pmax	pmax		
	comp=Z,20nm,1.2s						
GRNR				MLR	MLR		
	comp=E,140nm,18.0s						
GRNR				MLR	MLR		
	comp=N,190nm,17.0s						
GRNR				MLR	MLR		
	comp=Z,250nm,17.0s						
JSH	Shimam	12.12	242	P	Pn	13 08 47.3	-1.0
JOT	Ohata	12.38	235	P	Pn	13 08 46.4	-5.4
SMY	Shemya	12.73	67	PN	Pn	13 08 57.1	+0.8
SMY	Shemya	12.73	67	Pn	Pn	13 08 57.1	+0.8
JTM	Tenmabayashi	12.79	234	P	Pn	13 08 51.3	-5.9
TEY	Ternei	12.98	258	⇑ePN	Pn	13 09 01.9	+2.4
TEY				pmax	pmax		
	comp=N,10.0nm,1.0s						
TEY				pmax	pmax		
	comp=E,10.0nm,1.0s						
TEY				pmax	pmax		
	comp=Z,30nm,1.0s						
JOM	Ohasama	13.66	229	P	Pn	13 09 02.3	-6.1
SEY	Seymchan	13.74	356	P	Pn	13 09 09.6	+0.3
	comp=Z,0.4nm,0.3s,baz=171,slow=12,SNR=9.0						
SEY	Seymchan	13.74	356	⇓eP	Pn	13 09 09.3	0.0
KLR	Kul'dur	14.94	279	P	P	13 09 26.0	-1.4
	comp=Z,1.8nm,0.3s,baz=72,slow=12,SNR=25						
KLR	Kul'dur	14.94	279	⇓iP	P	13 09 26.3	-1.1
KLR				pmax	pmax		
	comp=Z,54nm,1.3s						
JSD	Sado	16.29	233	P	Pn	13 09 40.7	-0.9
USA0B	Ussuriysk Arra	16.31	260	P	Pn	13 09 41.6	-0.1
USA0B				pmax	pmax		
	comp=Z,26nm,0.8s						
USA0B	Ussuriysk Arra	16.31	260		Pn	13 09 41.6	-0.1
USA0B				IAmb	IAmb	13 09 45.1	
	comp=Z,26nm,0.8s						
USRK	Ussuriysk Ar.	16.31	260	P	Pn	13 09 41.7	0.0
	baz=61,slow=11,SNR=28						
USRK	Ussuriysk Ar.	16.31	260	P	Pn	13 09 41.2	-0.5
MJAR	Matsushiro Arr	17.46	229	P	P	13 09 53.8	-1.7
	comp=Z,0.3nm,0.3s,baz=26,slow=13,SNR=30						
MJAR	Matsushiro Arr	17.46	229	P	P	13 09 53.7	-1.7
MAJO	Matsushiro	17.47	229	P	P	13 09 54.3	-1.1
MAJO				pmax	pmax		
	comp=Z,31nm,0.9s						
MAJO	Matsushiro	17.47	229	P	P	13 09 54.3	-1.1
MAJO				IAmb	IAmb	13 10 04.6	
	comp=Z,31nm,0.9s						
MAT	Matsushiro	17.47	229	P	P	13 09 54.0	-1.5
MAT	Matsushiro	17.47	229	P	P	13 09 53.9	-1.5
JRY	Ryogami san	17.55	227	P	P	13 09 55.8	-0.6
ZEA	Zeya	17.57	295	eP	Pn	13 09 58.6	+1.6
ZEA				pmax	pmax		
	comp=N,10.0nm,0.9s						
ZEA				pmax	pmax		
	comp=E,20nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.0s						
MDJ	Mudanjiang	17.69	264	P	P	13 09 56.9	-0.9
MDJ				IAmb	IAmb	13 10 03.7	
	comp=Z,44nm,0.9s						
JGN	Niukaw	18.16	231	P	P	13 10 03.3	+0.1
YAK	Yakutsk	18.84	322	P	P	13 10 10.4	+0.1
	comp=Z,0.4nm,0.3s,baz=92,slow=1.0,SNR=24						
YAK	Yakutsk	18.84	322	eP	P	13 10 10.2	-0.1
YAK				eS	S	13 13 37.0	-1.3
YAK				pmax	pmax		
	comp=Z,135nm,1.0s						
YAK				pmax	pmax		
	comp=N,36nm,1.4s						
YAK				pmax	pmax		
	comp=E,97nm,1.6s						
YAK				smax	smax		
	comp=E,208nm,3.6s						
YAK				smax	smax		
	comp=N,399nm,4.0s						
YAK	Yakutsk	18.84	322	P	P	13 10 09.2	-1.0
INU	Inuyama	19.00	229	P	P	13 10 11.5	-0.7
INU				IAmb	IAmb	13 10 15.5	
	comp=Z,33nm,0.9s						
BILL	Bilibino	19.70	13	d iP	P	13 10 18.9	-0.6
BILL				e		13 10 49.0	
BILL				*SS	sS	13 14 47.0	+17
BILL				pmax	pmax		
	comp=Z,17nm,1.0s						
BILL				MLR	MLR		
	comp=Z,187nm,5.0s						
BILL	Bilibino	19.70	13	P	P	13 10 17.0	-2.5
BILL				IAmb	IAmb	13 10 20.1	
	comp=Z,28nm,1.1s						
JWT	Wachi	19.87	232	P	P	13 10 21.4	-0.3
JWT	Wachi	19.87	232	P	P	13 10 20.6	-1.1
JWT				IAmb	IAmb	13 10 29.6	
	comp=Z,24nm,1.1s						
CN2	Changchun	20.73	266	eP	P	13 10 27.9	-3.0
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
JAD	Aida	20.78	234	P	P	13 10 31.0	-0.5
JHS	Saijyo	21.30	236	P	P	13 10 36.8	-0.3
JHS	Saijyo	21.30	236	P	P	13 10 37.5	+0.5
KSRS	Korea Array	22.60	249	P	P	13 10 50.8	+0.2
	comp=Z,20nm,0.6s,baz=50,slow=9.0,SNR=64						
KS19	Wonju Array Si	22.61	249	P	P	13 10 50.8	+0.2
KS19				IAmb	IAmb	13 10 54.0	
	comp=Z,28nm,0.7s						
KSAR	Wonju Array Be	22.64	249	P	P	13 10 51.8	+0.9
KSAR	Wonju Array Be	22.64	249	P	P	13 10 51.8	+0.9
JNU	Nakatsue	23.93	236	P	P	13 11 03.5	+0.4
	comp=Z,28nm,0.9s,baz=52,slow=9.3,SNR=6.1						
BOD	Bodaibo	25.26	305	eP	P	13 11 13.0	-1.8
BOD				pmax	pmax		
	comp=Z,33nm,1.7s						
TIXI	Tiksi	25.36	341	P	P	13 11 14.4	-1.1
	comp=Z,3.2nm,0.4s,baz=125,slow=9.7,SNR=11						
TIXI				pP	pP	13 11 38.6	-1.0
	comp=Z,27nm,1.1s,baz=128,slow=11,SNR=4.7						
TIXI	Tiksi	25.36	341	P	P	13 11 14.5	-1.1
TIXI				pmax	pmax		
	comp=Z,10.0nm,1.1s						
TIXI	Tiksi	25.36	341	P	P	13 11 14.5	-1.1
BJI	Beijing	28.60	266	P	P	13 11 45.2	+0.3
BJI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
TTA	Tatalina	29.87	44	P	P	13 11 57.2	+1.2
TTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
TTA	Tatalina	29.87	44	P	P	13 11 57.2	+1.2
	baz=267						
TTA	Tatalina	29.87	44	P	P	13 11 57.2	+1.2
TTA				IAmb	IAmb	13 11 58.3	
	comp=Z,5.2nm,0.8s						
SVW2	Sparrevohn	30.01	48	P	P	13 11 56.4	-0.7
J20K	Nowinta River	30.79	42	P	P	13 12 05.7	+1.7
	baz=266						
J20K	Nowinta River	30.79	42	P	P	13 12 03.8	-0.2
H11N2	WAKE ISLAND Hy	31.08	157	T	T	13 44 39.1	
	baz=338,slow=74						
H11N1	WAKE ISLAND Hy	31.09	157	T	T	13 44 40.2	
	baz=338,slow=74						
H11N3	WAKE ISLAND Hy	31.09	157	T	T	13 44 41.9	
	baz=338						
ULN	Ulaanbaatar	31.11	286	⇓eP	P	13 12 07.0	-0.1
ULN				pmax	pmax		
	comp=Z,2.0nm,0.7s						
HHC	Hu-ho-hao-te	31.20	271	eP	P	13 12 10.1	+2.1
HHC				pmax	pmax		
	comp=Z,29nm,1.0s						
HHC				pmax	pmax		
	comp=Z,130nm,9.8s						
H21K	Melozitna Rive	31.49	39	P	P	13 12 11.6	+1.5
	baz=265						
H21K	Melozitna Rive	31.49	39	P	P	13 12 10.7	+0.6
SONM	Songino Array	31.53	286	P	P	13 12 09.6	-1.2
	comp=Z,2.0nm,0.4s,baz=71,slow=7.7,SNR=13						
SONM				pP	pP	13 12 33.4	-1.6
	comp=Z,1.1nm,1.0s,baz=79,slow=7.5,SNR=1.2						
SONM				PcP	PcP	13 15 01.3	+0.5

	comp=Z,3.2nm,0.9s,baz=81,slow=1.9,SNR=8.6						
SONM	Songino Array	31.53	286	P	P	13 12 10.1	-0.7
SONM						13 15 01.7	
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SONM	Songino Array	31.53	286	P	P	13 12 10.1	-0.7
SONM				PcP	PcP	13 15 01.6	+0.9
CHUM	Lake Minchumin	31.58	42	P	P	13 12 13.0	+2.1
	baz=268						
NJ2	Nanjing	31.76	251	eP	P	13 12 13.8	+1.0
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
I21K	Tanana	31.79	40	P	P	13 12 14.6	+1.8
	baz=267						
I21K	Tanana	31.79	40	P	P	13 12 13.6	+0.9
I21K				IAmb	IAmb	13 12 16.2	
	comp=Z,5.7nm,0.8s						
BPAW	Bear Paw Mtn.	32.17	42	P	P	13 12 17.5	+1.4
	baz=269						
H11S1	WAKE ISLAND Hy	32.20	158	T	T	13 46 11.3	
	baz=346,slow=76,SNR=402						
H11S3	WAKE ISLAND Hy	32.21	158	T	T	13 46 08.9	
	baz=346,slow=76,SNR=372						
H11S2	WAKE ISLAND Hy	32.22	158	T	T	13 46 12.8	
	baz=346,slow=76,SNR=366						
MLY	Manley	32.31	40	P	P	13 12 18.9	+1.6
	baz=268						
MLY	Manley	32.31	40	P	P	13 12 18.6	+1.3
BTO	Baotou	32.34	272	eP	P	13 12 15.3	-2.6
TRF	Thorofare Moun	32.48	43	P	P	13 12 20.7	+1.8
	baz=271						
COLD	Coldfoot	32.68	36	P	P	13 12 21.6	+1.1
	baz=265,SNR=8.2						
COLD	Coldfoot	32.68	36	P	P	13 12 20.6	+0.1
COLD				IAmb	IAmb	13 12 23.8	
	comp=Z,11nm,0.7s						
H23K	Yukon River	32.84	39	P	P	13 12 23.8	+1.9
	baz=268,SNR=6.5						
H23K	Yukon River	32.84	39	P	P	13 12 22.8	+0.8
H23K				IAmb	IAmb	13 12 26.1	
	comp=Z,8.6nm,0.9s						
I23K	Minto, Yukon-K	32.90	40	P	P	13 12 23.7	+1.4
	baz=269						
I23K	Minto, Yukon-K	32.90	40	P	P	13 12 23.6	+1.2
NEA2	Nenana	33.01	41	P	P	13 12 25.1	+1.6
	baz=270,SNR=12						
NEA2	Nenana	33.01	41	P	P	13 12 24.8	+1.4
TOLK	Toolik Lake Re	33.06	34	P	P	13 12 25.0	+1.1
	baz=264,SNR=8.1						
TOLK	Toolik Lake Re	33.06	34	P	P	13 12 24.9	+1.1
MCK	McKinley	33.08	43	P	P	13 12 25.2	+1.1
	baz=272						
MDM	Murphy Dome	33.37	41	P	P	13 12 27.7	+1.1
MDM				IAmb	IAmb	13 12 29.9	
	comp=Z,9.8nm,0.9s						
KNK	Knik Glacier	33.43	47	P	P	13 12 28.6	+1.4
	baz=276						
KNK	Knik Glacier	33.43	47	P	P	13 12 27.5	+0.4
KNK				IAmb	IAmb	13 12 41.7	
	comp=Z,9.2nm,0.8s						
WRH	Wood River Hil	33.44	41	P	P	13 12 28.6	+1.5
WRH				IAmb	IAmb	13 12 30.1	
	comp=Z,11nm,1.0s						
SML	Sawmill	33.46	46	P	P	13 12 28.8	+1.5
	baz=275						
SML	Sawmill	33.46	46	P	P	13 12 29.0	+1.6
SML				IAmb	IAmb	13 12 32.1	
	comp=Z,14nm,0.8s						
H24K	Noodor Dome	33.53	39	P	P	13 12 29.6	+1.7
	baz=269						
H24K	Noodor Dome	33.53	39	P	P	13 12 29.2	+1.2
TCOL	CIGO, UAF Yank	33.53	41	P	P	13 12 29.5	+1.6
	baz=271,SNR=11						
TCOL	CIGO, UAF Yank	33.53	41	P	P	13 12 29.1	+1.3
COLA	College	33.53	41	⇑iP	P	13 12 29.8	+1.9
COLA				pmax	pmax		
	comp=Z,14nm,0.7s						
COLA	College	33.53	41	P	P	13 12 29.5	+1.6
	baz=271						
COLA	College	33.53	41	P	P	13 12 28.9	+1.1
POKR	Poker Plat Res	33.71	40	P	P	13 12 31.2	+1.7
	baz=271,SNR=6.0						
POKR	Poker Plat Res	33.71	40	P	P	13 12 28.6	-0.9
POKR				IAmb	IAmb	13 12 32.8	
	comp=Z,15nm,1.1s						
HDA	Harding Lake	33.93	42	P	P	13 12 32.4	+1.0
	baz=272,SNR=7.4						
HDA	Harding Lake	33.93	42	P	P	13 12 31.9	+0.5
HDA				IAmb	IAmb	13 12 36.1	
	comp=Z,9.6nm,0.6s						
IL31		33.95	41	P	P	13 12 32.1	+0.6
IL31				IAmb	IAmb	13 12 33.6	
	comp=Z,9.2nm,1.0s						
ILAR	Eielson Array	33.95	41	P	P	13 12 32.0	+0.5
	comp=Z,5.1nm,0.9s,baz=260,slow=8.8,SNR=38						
ILAR				pP	pP	13 12 55.2	-1.4
	comp=Z,2.9nm,0.8s,baz=264,slow=6.0,SNR=4.5						
ILAR	Eielson Array	33.95	41	P	P	13 12 32.4	+0.8
M24K	Tolsona, Glenn	34.45	46	P	P	13 12 35.7	-0.2
PRP	Porcupine Dome	34.51	40	P	P	13 12 38.1	+1.6
	baz=272,SNR=14						
PRP	Porcupine Dome	34.51	40	P	P	13 12 37.3	+0.8
FYU	Fort Yukon	34.61	38	P	P	13 12 38.5	+1.4
J25K	Salcha River,	34.61	41	P	P	13 12 37.5	+0.2
	baz=274,SNR=5.5						
BMAR	Burnt Mountain	34.86	36	P	P	13 12 40.9	+1.5
RIDG	Independent Ri	34.90	43	P	P	13 12 41.0	+1.2
	baz=275						
N25K	Chitina, Valde	35.25	46	P	P	13 12 44.7	+1.9
	baz=278						
DOT	Dot Lake	35.25	43	P	P	13 12 42.1	-0.7
DOT				IAmb	IAmb	13 12 44.7	
	comp=Z,4.3nm,0.7s						
SCRK	Sand Creek	35.26	42	P	P	13 12 43.6	+0.7
	baz=276						
SCRK	Sand Creek	35.26	42	P	P	13 12 43.5	+0.7
SCRK				IAmb	IAmb	13 12 45.4	
	comp=Z,5.1nm,0.7s						
J26L	Joseph Creek	35.39	41	P	P	13 12 44.8	+0.7
	baz=275						
WHN	Wuhan	35.59	253	⇑P	P	13 12 46.1	+0.1
L26K	Log Cabin Wild	35.64	44	P	P	13 12 48.2	+2.1
	baz=277						
M26K	Nabesna, AK	35.88	45	P	P	13 12 50.6	+2.4
	baz=279						
M26K	Nabesna, AK	35.88	45	P	P	13 12 50.6	+2.4
M26K				IAmb	IAmb	13 12 51.9	
	comp=Z,9.3nm,1.1s						
CRQM	Cirque	36.08	48	P	P	13 12 51.8	+1.7
CRQE	Cirque	36.10	48	P	P	13 12 52.0	+1.8
	baz=281						
L27K	Beaver Creek,	36.32	44	P	P	13 12 54.2	+2.2
	baz=279,SNR=13						
BCAR	Beaver Creek A	36.34	43	P	P	13 12 54.4	+2.3
EGAK	Eagle	36.40	41	P	P	13 12 53.5	+1.0
	baz=277						
EGAK	Eagle	36.40	41	P	P	13 12 53.3	+0.8
EGAK				IAmb	IAmb	13 12 54.2	
	comp=Z,11nm,0.8s						
M27K	Edge Creek, AK	36.41	45	P	P	13 12 55.1	+2.3
	baz=280						
M27K	Edge Creek, AK	36.41	45	P	P	13 12 54.7	+2.0
M27K				IAmb	IAmb	13 12 55.8	
	comp=Z,6.2nm,1.0s						
BARN	Barnard Glacie	36.74	47	P	P	13 12 56.8	+1.1
BARN				IAmb	IAmb	13 13 00.3	
	comp=Z,5.1nm,0.8s						
YULB	Yu-li	36.77	238	P	P	13 12 56.4	+0.2
CTGM	Chitina Glacie	36.91	47	P	P	13 12 59.4	+2.3
CTGM				IAmb	IAmb	13 12 59.8	
	comp=Z,6.6nm,0.8s						
QZH	Quanzhou	37.09	242	eP	P	13 13 02.6	+3.8
NRIK	Noril'sk	37.15	327	P	P	13 12 56.9	-1.9
	comp=Z,1.7nm,0.4s,baz=87,slow=7.0,SNR=4.7						
NRIK				PP	PP	13 14 24.0	-1.4
	comp=Z,2.1nm,0.6s,baz=100,slow=15,SNR=1.8						
NRIK				PcP	PcP	13 15 16.5	+0.1
	comp=Z,2.9nm,0.6s,baz=76,slow=5.1,SNR=2.8						
NRIK				LR	LR	13 30 25.1	
	comp=Z,107nm,18.1s,baz=152,slow=40						
NRIK	Noril'sk	37.15	327	⇓eP	P	13 12 59.0	+0.2
NRIK				pmax	pmax		
	comp=Z,11nm,1.3s						
TPUB	Ta-pu	37.21	238	P	P	13 12 59.9	0.0
DAWY	Dawson	37.25	42	P	P	13 13 01.4	+1.6
	baz=279						
I29M	Ogilvie Camp,	37.52	39	P	P	13 13 03.6	+1.6
	baz=278,SNR=9.3						
EPYK	Eagle Plains	38.03	38	P	P	13 13 08.0	+1.7
	baz=278						
EPYK	Eagle Plains	38.03	38	P	P	13 13 07.8	+1.6
EPYK				IAmb	IAmb	13 13 08.6	
	comp=Z,9.0nm,0.8s						
ENH	Enshi	38.86	258	P	P	13 13 12.2	-1.4
ENH				IAmb	IAmb	13 13 17.3	
	comp=Z,12nm,0.7s						
MAYO	Mayo, Yukon	38.86	42	P	P	13 13 15.9	+2.6
	baz=283						
LZH	Lanzhou	38.87	270	eP	P	13 13 14.4	+0.5
LZH				pP	pwP	13 13 41.5	-0.2
LZH				sP	sP	13 13 55.7	+4.4
LZH				pmax	pmax		
	comp=Z,38nm,1.1s						
INK	Inuvik	38.97	34	P	P	13 13 15.6	+1.5
	baz=279,SNR=7.3						
GTA	Gaotai	39.63	277	⇑P	P	13 13 20.1	0.0
GTA				pP	pP	13 13 45.9	+1.0
GTA				sP	sP	13 13 58.2	+0.7
GTA				PcP	PcP	13 15 26.4	+1.6
GTA				pmax	pmax		
	comp=Z,15nm,1.0s						
FARO	Faro, Yukon	40.33	44	P	P	13 13 28.2	+2.7
	baz=286						
A36M	Sachs Harbour	41.13	28	P	P	13 13 33.6	+1.8
	baz=282,SNR=26						
A36M	Sachs Harbour	41.13	28	P	P	13 13 33.1	+1.3
ZAA0	Zalesovo Array	42.00	304	P	P	13 13 36.5	-2.7
ZAA0				IAmb	IAmb	13 13 38.7	
	comp=Z,10nm,0.6s						
ZAA0				PcP	PcP	13 15 33.2	+1.1
ZALV	Zalesovo Beam	42.00	304	P	P	13 13 38.0	-1.2
	comp=Z,12nm,0.5s,baz=61,slow=7.1,SNR=53						
ZALV				PcP	PcP	13 15 32.5	+0.4
	comp=Z,7.2nm,0.5s,baz=76,slow=3.0,SNR=24						
ZALV				LR	LR	13 32 06.9	
	comp=Z,67nm,19.0s,baz=270,slow=38						
ZALV	Zalesovo Beam	42.00	304	P	P	13 13 36.4	-2.7
ZALV				PcP	PcP	13 15 33.2	+1.1
DGZ	Jazzator, Alta	42.31	297	deP	P	13 13 42.9	+1.0
DGZ				pmax	pmax		
	comp=Z,7.0nm,0.7s						
TGTN	Hyland Airport	42.83	43	P	P	13 13 48.8	+2.9
	baz=290						
GYA	Guiyang	43.28	256	⇑P	P	13 13 49.8	-0.2
GYA				sP	sP	13 14 30.6	+2.9
GYA				pmax	pmax		
	comp=Z,14nm,1.1s						
WMQ	Urumqi	45.00	290	eP	P	13 14 05.0	+1.6
WMQ				pmax	pmax		
	comp=Z,8.0nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,110nm,4.7s						
WMQ				LR	LR		
	comp=Z,250nm,28.8s						
WMQ				LR	LR		
	comp=Z,1µm,28.9s						
WMQ				LR	LR		
	comp=Z,90nm,24.9s						
EUNU	Eureka	46.44	12	P	P	13 14 13.4	-0.9
MK31	Makanchi Array	46.72	296	c iP	P	13 14 16.1	-0.8
MK31	Makanchi Array	46.72	296	P	P	13 14 15.7	-1.2
MK31				IAmb	IAmb	13 14 18.0	
	comp=Z,5.8nm,0.6s						
MKAR	Makanchi Array	46.72	296	P	P	13 14 15.9	-1.0
	comp=Z,5.5nm,0.5s,baz=75,slow=11,SNR=50						
MKAR				pP	pP	13 14 42.0	-0.4
	comp=Z,14nm,0.8s,baz=63,slow=8.4,SNR=14						
MKAR				PcP	PcP	13 15 48.4	0.0
	comp=Z,4.7nm,0.7s,baz=60,slow=4.8,SNR=6.1						
MKAR				LR	LR	13 35 04.7	
	comp=Z,57nm,18.3s,baz=28,slow=38						
MKAR	Makanchi Array	46.72	296	i P	P	13 14 16.6	-0.3
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.5s						
MKAR	Makanchi Array	46.72	296	P	P	13 14 15.9	-1.0
MKAR				PcP	PcP	13 15 49.0	+0.5
KMI	Kunming	46.73	258	⇓P	P	13 14 17.1	-0.3
KMI				pmax	pmax		
	comp=Z,16nm,0.8s						
KURK	Kurchatov	46.84	302	P	P	13 14 16.9	-0.8
KURK				pmax	pmax		
	comp=Z,19nm,0.7s						
KURK	Kurchatov	46.84	302	P	P	13 14 16.9	-0.8
MAKZ	Makanchi	46.90	296	P	P	13 14 16.9	-1.3
MAKZ				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MAKZ	Makanchi	46.90	296	P	P	13 14 16.9	-1.3
MAKZ				IAmb	IAmb	13 14 18.9	
	comp=Z,5.8nm,0.6s						
YKA	Yellowknife Ar	48.30	38	P	P	13 14 29.1	+0.3
	comp=Z,5.0nm,0.9s,baz=296,slow=11,SNR=9.2						
YKA				pP	pP	13 14 53.6	-1.5
	comp=Z,7.0nm,1.0s,baz=302,slow=6.6,SNR=3.2						
YKA	Yellowknife Ar	48.30	38	i P	P	13 14 29.6	+0.8
YKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SLVN	Son La	48.71	254	P	P	13 14 32.3	-0.2
SLVN				IAmb	IAmb	13 14 35.2	
	comp=Z,10.0nm,0.8s						
BRVK	Borovoye	50.10	308	d iP	P	13 14 41.6	-1.0
BRVK				pmax	pmax		
	comp=Z,13nm,0.6s						
BRVK	Borovoye	50.10	308	P	P	13 14 41.5	-1.1
BRVK				PcP	PcP	13 16 01.2	+0.7
SHLS	Shalkode	50.38	293	eP	P	13 14 41.9	-3.2
	baz=293						
SHLS	Shalkode	50.38	293	eP	P	13 14 41.8	-3.2
BRZS	Berezniki	50.48	304	eP	P	13 14 43.3	-2.3
	baz=304						
BRZS	Berezniki	50.48	304	eP	P	13 14 43.3	-2.3
UZB	Uzynbulak	50.65	294	eP	P	13 14 45.7	-1.5
	baz=294						
UZB				epP	pP	13 15 13.6	+0.6
	baz=294						
UZB	Uzynbulak	50.65	294	eP	P	13 14 45.6	-1.5
UZB				e*PP	pP	13 15 13.5	+0.6
KPKS	Kokpek	50.67	294	eP	P	13 14 45.6	-1.6
	baz=294						
KPKS				epP	pwP	13 15 15.2	-1.1
	baz=294						
KPKS	Kokpek	50.67	294	eP	P	13 14 45.5	-1.6
KPKS				e*PP	pwP	13 15 15.2	-1.1
SATY	Saty	51.07	294	eP	P	13 14 48.1	-2.2
	baz=294						
SATY				epP	pwP	13 15 17.5	-1.9
	baz=294						
SATY	Saty	51.07	294	eP	P	13 14 48.0	-2.2
SATY				e*PP	pwP	13 15 17.4	-1.9
CHKK	Chushkaly	51.45	295	eP	P	13 14 51.1	-1.9
	baz=295						
CHKK				epP	pP	13 15 19.1	+0.3
	baz=295						
KUU	Kurty	51.82	296	eP	P	13 14 53.6	-2.0
	baz=296						
KUU				epP	pwP	13 15 23.4	-1.5
	baz=296						
KUU	Kurty	51.82	296	eP	P	13 14 53.6	-2.0
KUU				e*PP	pwP	13 15 23.4	-1.5
MDOK	Medeo	51.82	295	eP	P	13 14 54.3	-1.6
	baz=295						
MDOK				epP	pwP	13 15 23.4	-1.7
	baz=295						
MDOK	Medeo	51.82	295	eP	P	13 14 54.2	-1.6
MDOK				e*PP	pwP	13 15 23.3	-1.7
BTLS	Baital	52.49	298	eP	P	13 14 59.0	-1.6
	baz=298						
BTLS				epP	pP	13 15 27.4	+0.9
	baz=298						
BTLS	Baital	52.49	298	eP	P	13 14 58.9	-1.6
BTLS				e*PP	pP	13 15 27.4	+0.9
NEEM	North Greenlan	52.53	7	i P	P	13 14 59.9	-0.9
NEEM				IAmb	IAmb	13 15 01.3	
	comp=Z,12nm,0.7s						
SVE	Sverdlovsk	52.69	316	eP	P	13 15 01.2	-0.6
SVE				pmax	pmax		
	comp=Z,16nm,0.8s						
AAK	Ala-Archa	53.64	295	LR	LR	13 38 52.7	
	comp=Z,55nm,21.1s,baz=20,slow=37						
AAK	Ala-Archa	53.64	295	c iP	P	13 15 09.0	-0.3
AAK				pmax	pmax		
	comp=Z,13nm,0.8s						
AAK	Ala-Archa	53.64	295	P	P	13 15 08.6	-0.7
AAK				IAmb	IAmb	13 15 11.2	
	comp=Z,4.1nm,0.7s						
CHTO	Chiang Mai	53.71	256	P	P	13 15 10.5	+0.7
CHTO				pmax	pmax		
	comp=Z,17nm,0.7s						
CHTO	Chiang Mai	53.71	256	P	P	13 15 10.5	+0.7
EDM	Edmonton	53.84	48	P	P	13 15 12.0	+1.6
EDM				pmax	pmax		
	comp=Z,6.0nm,0.6s						
EDM	Edmonton	53.84	48	P	P	13 15 12.0	+1.6
EDM				IAmb	IAmb	13 15 12.8	
	comp=Z,6.4nm,0.6s						
ARU	Arti	53.85	317	LR	LR	13 41 23.1	
	comp=Z,55nm,18.1s,baz=126,slow=40						
ARU	Arti	53.85	317	d iP	P	13 15 08.8	-1.5
ARU				*PP	pP	13 15 37.3	+0.5
ARU						13 16 14.4	
ARU						13 17 09.6	
ARU				PPP	PPP	13 18 20.3	
ARU				S	S	13 22 35.2	-1.0
ARU				pmax	pmax		
	comp=Z,28nm,0.8s						
ARU	Arti	53.85	317	P	P	13 15 09.4	-0.9
CMAR	Chiang Mai Arr	53.97	256	P	P	13 15 12.9	+1.2
	comp=Z,8.3nm,0.6s,baz=33,slow=7.0,SNR=63						
CMAR				PcP	PcP	13 16 16.6	+1.1
	comp=Z,5.4nm,0.7s,baz=16,slow=2.9,SNR=11						
CMAR				ScP	ScP	13 20 01.7	-1.1
	comp=Z,0.9nm,0.7s,baz=22,slow=3.9,SNR=6.8						
KSH	Kashi	54.65	292	P	P	13 15 21.6	+5.0
KSH				pP	sP	13 15 50.0	-4.9
KSH				pmax	pmax		
	comp=Z,9.0nm,0.8s						
L02E	Cave Junction	54.89	64	P	P	13 15 20.9	+2.7
	baz=308						
J04D	Umpqua Nationa	55.11	62	P	P	13 15 22.9	+3.0
	baz=308						
J05D	Fort Rock, OR	55.59	62	P	P	13 15 26.4	+3.1
	baz=308,SNR=11						
L04D	Klamath Falls	55.62	63	P	P	13 15 26.2	+2.7
	baz=308,SNR=5.5						
YBH	Yreka Blue Hor	55.68	64	P	P	13 15 24.3	+0.4
YBH				pmax	pmax		
	comp=Z,3.0nm,0.7s						
YBH	Yreka Blue Hor	55.68	64	P	P	13 15 24.3	+0.4
YBH				IAmb	IAmb	13 15 27.5	
	comp=Z,3.4nm,0.7s						
KKAR	Karatay Array	55.69	298	P	P	13 15 23.1	-0.8
KKAR	Karatay Array	55.69	298	P	P	13 15 23.1	-0.8
PRGR	Permogore	55.80	327	eP	P	13 15 22.4	-1.9
PRGR				e*PP	pP	13 15 49.5	-1.3
PRGR				pmax	pmax		
	comp=Z,64nm,1.0s						
ARA0	ARCESS Array S	55.80	341	eP	P	13 15 22.8	-1.4
ARCES	ARCESS Array B	55.80	341	P	P	13 15 22.4	-1.8
	comp=Z,1.8nm,0.4s,baz=37,slow=7.4,SNR=29						
ARCES				PcP	PcP	13 16 21.9	+0.1
	comp=Z,3.6nm,0.7s,baz=46,slow=2.6,SNR=3.7						
ARCES				LR	LR	13 42 14.1	
	comp=Z,33nm,18.4s,baz=355,slow=39						
ARCES	ARCESS Array B	55.80	341	P	P	13 15 22.6	-1.6
ARCES	ARCESS Array B	55.80	341	P	P	13 15 22.6	-1.6
M02C	Callahan	55.81	64	P	P	13 15 27.7	+2.9
	baz=309						
GUN	Gumba	55.81	274	eP	P	13 15 25.0	-0.3
	comp=Z,66nm,0.5s						
K05A	Summer Lake	56.13	62	P	P	13 15 29.6	+2.4
K05A				IAmb	IAmb	13 15 31.0	
	comp=Z,7.1nm,0.7s						
N02D	Trinity Center	56.15	65	P	P	13 15 30.0	+2.7
	baz=309						
M04C	Macdoel	56.16	63	P	P	13 15 30.0	+2.7
	baz=309						
KKN	Kakani	56.28	275	eP	P	13 15 28.8	+0.3
	comp=Z,43nm,0.5s						
PKI	Pulchoki	56.35	274	eP	P	13 15 29.3	+0.2
	comp=Z,37nm,0.7s						
PKIN	Phulchoki	56.35	274	eP	P	13 15 29.0	-0.1
	comp=Z,30nm,0.6s						
KIRV	Kirov	56.38	323	⇓eP	P	13 15 28.5	+0.1
DMN	Daman	56.52	275	eP	P	13 15 30.9	+0.7
	comp=Z,73nm,0.7s						
GKN	Gorkha	56.56	275	eP	P	13 15 30.3	-0.1
	comp=Z,77nm,0.6s						
GKN	Gorkha	56.56	275	eP	P	13 15 31.0	+0.6
	comp=Z,83nm,0.6s						
IUG	Iuzhnay	56.56	297	eP	P	13 15 29.8	-0.4
	baz=297						
IUG				epP	pwP	13 15 59.4	-0.5
	baz=297						
IUG	Iuzhnay	56.56	297	eP	P	13 15 29.8	-0.4
IUG				e*PP	pwP	13 15 59.3	-0.5
O02D	Mt. Diablo Mer	56.60	66	P	P	13 15 33.1	+2.7
	baz=309						
KTK1	Kautokeino	56.70	341	eP	P	13 15 29.3	-1.4
JETT	Jettan, Norway	56.84	342	eP	P	13 15 30.9	-0.7
DANN	Dangsing	56.90	276	eP	P	13 15 33.7	+0.7
	comp=Z,88nm,0.6s						
TRO	Tromso	57.06	343	eP	P	13 15 31.8	-1.3
O03E	Paynes Creek	57.12	65	P	P	13 15 35.8	+1.8
	baz=310,SNR=5.1						
PLID	Pearl Lake	57.42	57	P	P	13 15 37.9	+1.5
PLID				IAmb	IAmb	13 15 44.6	
	comp=Z,5.3nm,0.8s						
AB31	Akbulak array	57.60	309	P	P	13 15 36.3	-0.9
ABKAR	Akbulak array	57.60	309	P	P	13 15 36.3	-1.0
ABKAR	Akbulak array	57.60	309	IAmb	IAmb	13 15 37.0	
	comp=Z,16nm,0.6s						
WVOR	Wild Horse Val	57.61	61	IAmb	IAmb	13 15 40.8	
	comp=Z,3.8nm,0.8s						
SUMG	Summit	58.10	5	P	P	13 15 41.3	+0.5
SUMG				pmax	pmax		
	comp=Z,8.0nm,0.6s						
SUMG	Summit	58.10	5	i P	P	13 15 41.4	+0.5
SUMG				IAmb	IAmb	13 15 41.8	
	comp=Z,7.8nm,0.5s						
SUMG	Summit	58.10	5	P	P	13 15 41.3	+0.5
GAR	Garm	58.38	294	P	P	13 15 41.5	-1.5
KLMR	Klimovskoe	58.47	329	eP	P	13 15 40.1	-3.0
KLMR				e*PP	pP	13 16 08.6	-1.4
KLMR				pmax	pmax		
	comp=Z,42nm,1.2s						
KLMR	Klimovskoe	58.47	329	eP	P	13 15 40.2	-2.9
KLMR				AMP		13 15 44.7	
	comp=Z,42nm,1.2s						
KLMR				epP	pP	13 16 08.6	-1.4
PAHR	Pah Rah Range	58.92	64	P	P	13 15 47.9	+1.1
PAHR				IAmb	IAmb	13 15 49.6	
	comp=Z,3.2nm,0.6s						
SBUM	Sibu	58.99	232	P	P	13 15 49.0	+1.7
PNTR	Pine Nut	59.19	65	P	P	13 15 51.1	+2.3
PNTR				IAmb	IAmb	13 15 53.7	
	comp=Z,7.1nm,0.7s						
STEI	Steigen	59.22	343	eP	P	13 15 47.7	-0.4
HLID	Hailey	59.27	58	P	P	13 15 51.1	+2.0
	baz=311						
CHGR	Chuyangaron	59.30	295	P	P	13 15 48.4	-0.9
LOF	Lofoten	59.35	344	eP	P	13 15 46.8	-2.2
BOZ	Bozeman (W)	59.46	54	P	P	13 15 52.8	+2.5
	baz=311,SNR=5.6						
BOZ	Bozeman (W)	59.46	54	IAmb	IAmb	13 15 56.4	
	comp=Z,3.1nm,0.8s						
YERR	Yerington	59.47	65	IAmb	IAmb	13 15 53.7	
	comp=Z,5.6nm,0.7s						
FAUS	Fauske	59.69	343	eP	P	13 15 50.4	-1.0
NIL	Nilore	60.09	288	P	P	13 15 54.1	-0.6
NIL				pmax	pmax		
	comp=Z,16nm,0.7s						
NIL	Nilore	60.09	288	P	P	13 15 54.1	-0.6
KVN	Kaiserville	60.10	64	IAmb	IAmb	13 15 58.0	
	comp=Z,4.8nm,0.7s						
YHL	Hebgen Lake	60.19	55	P	P	13 15 57.4	+1.9
YHL				IAmb	IAmb	13 16 01.8	
	comp=Z,2.5nm,0.7s						
ILULI	Ilulissat	60.31	10	i P	P	13 15 55.2	-0.4
ILULI				IAmb	IAmb	13 15 56.5	
	comp=Z,34nm,0.8s						
NVAR	Mina Array Bea	60.39	64	P	P	13 15 58.6	+1.7
	comp=Z,3.3nm,0.6s,baz=299,slow=7.2,SNR=34						
NVAR				pP	pP	13 16 23.4	-0.8
	comp=Z,3.1nm,0.6s,baz=293,slow=7.5,SNR=8.8						
NV11	Mina Array Sit	60.47	64	P	P	13 15 58.6	+1.1
KONS	Konsvik	60.87	343	eP	P	13 15 58.8	-0.6
MOR8	Moi Rana	60.91	343	eP	P	13 15 57.1	-2.7

MOOW	Moose Ponds	61.15	56	P	P	13 16 03.9	+1.8
ICESG	Greenland Ices	61.48	6	i P	P	13 16 03.8	-0.2
ICESG				IAmb	IAmb	13 16 04.9	
	comp=Z,17nm,0.6s						
CWC	Cottonwood Cre	61.84	66	P	P	13 16 08.5	+1.8
	baz=312						
R11A	Troy Canyon, C	62.04	63	P	P	13 16 10.1	+2.1
	baz=312,SNR=6.6						
HWUT	Hardware Ranch	62.14	58	P	P	13 16 10.3	+1.7
HWUT				IAmb	IAmb	13 16 14.6	
	comp=Z,4.8nm,1.0s						
FINES	FINESS Array B	62.18	335	P	P	13 16 06.9	-1.4
	comp=Z,2.8nm,0.4s,baz=33,slow=7.4,SNR=50						
FINES				PcP	sP	13 16 47.0	-1.0
	comp=Z,3.9nm,0.6s,baz=64,slow=3.2,SNR=7.8						
FINES	FINESS Array B	62.18	335	P	P	13 16 06.8	-1.6
SPR3	Spring Creek 3	62.33	62	P	P	13 16 13.1	+3.0
SPR3				IAmb	IAmb	13 16 13.7	
	comp=Z,4.3nm,0.8s						
DUG	Dugway, Tooele	62.39	60	P	P	13 16 12.7	+2.4
	baz=313						
BW06	Boulder Array	62.45	56	P	P	13 16 13.0	+2.2
	baz=313						
PDAR	Pinedale Array	62.45	56	P	P	13 16 12.5	+1.7
	comp=Z,2.2nm,0.8s,baz=302,slow=2.0,SNR=14						
PDAR				pP	pP	13 16 37.0	-1.2
	comp=Z,5.5nm,0.8s,baz=315,slow=2.3,SNR=13						
SFJD	Kangerlussuaq	62.48	11	i P	P	13 16 10.0	-0.1
FURC	Furnace Creek,	62.55	65	P	P	13 16 13.4	+2.3
	baz=313,SNR=9.1						
LRMC	Laurel Mtn Rad	62.73	67	P	P	13 16 14.3	+1.8
	baz=313						
NSS	Namsos	62.85	343	eP	P	13 16 12.8	+0.1
MOS	Moscow	62.93	326	eP	P	13 16 12.0	-1.4
EDW2	Edwards Air Fo	62.94	67	P	P	13 16 16.0	+2.1
	baz=313						
PRN	Pahroc Range	62.98	63	P	P	13 16 14.1	-0.2
KULM	Kulim	63.08	245	P	P	13 16 17.0	+2.0
JRMM	Jerantut	63.14	242	P	P	13 16 17.0	+1.7
MPU	Maple Canyon	63.18	59	P	P	13 16 15.2	-0.3
DY2G	Dye2	63.48	9	i P	P	13 16 17.1	-0.1
DY2G				IAmb	IAmb	13 16 18.7	
	comp=Z,25nm,0.7s						
OBN	Obninsk	63.80	326	⇑eP	P	13 16 19.1	0.0
OBN				PPP	PPP	13 20 18.0	
OBN				SSS	SSS	13 31 55.0	
OBN				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ULM	Lac du Bonnet	63.95	42	pP	pP	13 16 45.5	-2.2
	comp=Z,4.4nm,0.8s,baz=329,slow=5.9,SNR=3.7						
HEC	Hector,Ludlow	63.98	66	P	P	13 16 22.5	+1.8
	baz=314						
TBLU	Trondheim	64.34	343	eP	P	13 16 21.3	-1.2
RSSD	Black Hills	64.43	52	P	P	13 16 26.1	+2.3
	baz=315						
IRM	Iron Mountain	65.15	66	P	P	13 16 30.1	+1.8
	baz=314						
DOMB	Dombas	65.67	343	eP	P	13 16 31.2	0.0
NB2	NORSAR Subarra	66.16	342	P	P	13 16 33.2	-1.2
	comp=Z,2.5nm,0.6s,baz=27,slow=6.5						
NB2	NORSAR Subarra	66.16	342	P	P	13 16 33.2	-1.2
	baz=27,slow=6.5						
NOA	NORSAR Array B	66.16	342	P	P	13 16 33.2	-1.2
	comp=Z,2.5nm,0.5s,baz=25,slow=6.5,SNR=20						
NOA				LR	LR	13 48 42.6	
	comp=Z,33nm,18.5s,baz=350,slow=39						
GEYT	Alibeck	66.18	301	P	P	13 16 34.0	-0.9
	comp=Z,3.5nm,0.5s,baz=64,slow=6.6,SNR=4.3						
SMCO	Snowmass	66.35	57	P	P	13 16 38.1	+1.7
NC602	NORSAR Array S	66.36	341	eP	P	13 16 34.5	-1.1
HFS	Hagfors	66.44	340	LR	LR	13 50 06.7	
	comp=Z,28nm,18.8s,baz=9.0,slow=40						
ISCO	Idaho Springs	66.65	56	P	P	13 16 40.4	+2.2
	baz=316						
MVCO	Mesa Verde	66.89	60	P	P	13 16 42.0	+2.4
	baz=315						
OSL	Oslo	67.26	341	eP	P	13 16 40.9	-0.4
MNK	Minsk	67.34	330	i P	P	13 16 42.1	+0.2
MNK				i *PP	pP	13 17 11.6	+2.0
MNK				i		13 19 11.7	
MNK				i PPP	PPP	13 20 50.1	
MNK				i S	S	13 25 28.1	+0.2
MNK				i *SS	sS	13 26 19.5	+4.0
MNK				pmax	pmax		
	comp=E,4.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,19nm,0.9s						
MNK				pmax	pmax		
	comp=Z,22nm,0.9s						
MNK				MLR	MLR		
	comp=E,49nm,20.0s						
MNK				MLR	MLR		
	comp=N,305nm,20.0s						
MNK	Minsk	67.34	330	i P	P	13 16 42.1	+0.3
	comp=E,4.0nm,0.9s						
MNK				i P	P	13 16 42.1	+0.3
	comp=N,19nm,0.9s						
MNK				i P	P	13 16 42.1	+0.3
	comp=Z,22nm,0.9s,baz=35						
MNK				i pP	pP	13 17 11.6	+2.1
MNK				i sP	sP	13 17 24.9	+3.2
MNK				i PP	PP	13 19 11.7	+0.7
MNK				i PPP	PPP	13 20 50.1	
MNK				i S	S	13 25 28.2	+0.3
MNK				i sS	sS	13 26 19.6	+4.1
MNK				i SS	SS	13 30 16.4	+28
MNK				i SSS	SSS	13 32 47.3	
MNK				i LRM	MLR	13 47 53.0	
	comp=E,49nm,19.8s						
MNK				i LRM	MLR	13 49 11.7	
	comp=N,305nm,19.6s						
MNK				i LRM	MLR	13 52 31.8	
	comp=Z,179nm,19.6s						
S22A	4UR Ranch, Cre	67.44	58	P	P	13 16 45.9	+2.7
	baz=316						
KONO	Kongsberg	67.76	342	eP	P	13 16 44.0	-0.4
BER	Bergen	67.90	344	eP	P	13 16 45.4	+0.1
HYB	Hyderabad	67.96	271	i P	P	13 16 46.0	-0.4
ECSD	EROS Data Cent	68.41	48	P	P	13 16 48.7	-0.1
ANMO	Albuquerque	69.66	60	⇓eP	P	13 16 58.5	+1.6
ANMO				pmax	pmax		
	comp=Z,9.0nm,2.6s						
ANMO	Albuquerque	69.66	60	P	P	13 16 59.0	+2.1
	baz=317						
NCK	Nalchik	69.68	314	⇑eP	P	13 16 57.8	+1.1
NCK				pmax	pmax		
	comp=Z,12nm,0.3s						
KIV	Kislovodsk	69.76	314	eP	P	13 16 58.0	+0.7
KIV				pmax	pmax		
	comp=Z,11nm,1.1s						
KBZ	Khabaz	69.83	314	P	P	13 16 56.7	-0.8
	comp=Z,8.2nm,0.9s,baz=75,slow=2.4,SNR=20						
KBZ	Khabaz	69.83	314	deP	P	13 16 57.4	-0.1
KBZ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
AKASG	Malin Array Be	70.00	327	P	P	13 16 57.0	-1.5
	comp=Z,6.2nm,0.5s,baz=33,slow=6.4,SNR=21						
AKASG	Malin Array Be	70.00	327	i P	P	13 16 58.0	-0.5
AKASG				pmax	pmax		
	comp=Z,6.0nm,0.5s						
AKBB	Malin Array Si	70.00	327	c iP	P	13 16 58.0	-0.5
AKBB				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ZEI	Tsey	70.07	313	eP	P	13 17 06.6	+7.3
ZEI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
SCHQ	Schefferville	70.58	24	P	P	13 17 02.5	+0.5
	comp=Z,15nm,0.5s,baz=297,slow=8.4,SNR=17						
WB0	Warramunga Arr	71.06	200	P	P	13 17 05.3	+0.2
WR0	Warramunga Arr	71.21	200	P	P	13 17 06.1	+0.1
WRAB	Tennant Creek	71.23	200	P	P	13 17 06.3	+0.1
WRAB				pmax	pmax		
	comp=Z,2.0nm,0.9s						
WRAB	Tennant Creek	71.23	200	P	P	13 17 06.3	+0.1
WB2	Warramunga Arr	71.24	200	P	P	13 17 06.3	+0.1
WRA	Warramunga Arr	71.24	200	P	P	13 17 06.5	+0.2
	comp=Z,1.2nm,0.6s,baz=16,slow=6.7,SNR=17						
WRA				pP	pP	13 17 32.3	-2.1
	comp=Z,4.5nm,0.9s,baz=17,slow=6.3,SNR=10						
WRA	Warramunga Arr	71.24	200	P	P	13 17 06.3	0.0
SOC	Sochi	71.42	316	eP	P	13 17 04.8	-2.4
SOC				e		13 19 44.3	
SOC				ePPP	PPP	13 21 27.4	
SOC				i S	S	13 26 13.9	-2.2
SOC				pmax	pmax		
	comp=Z,17nm,0.7s						
DZM	Mont Dzumac	71.80	168	P	P	13 17 10.8	+1.1
	comp=Z,6.5nm,1.0s,baz=62,slow=9.5,SNR=4.0						
MNTX	Cornudas Mount	72.64	62	P	P	13 17 16.8	+2.1
	baz=318						
OJC	Ojcow	73.59	332	eP	P	13 17 20.7	+0.8
KOLS	Kolonicke sedl	73.91	330	eP	P	13 17 22.4	+0.5
KOLS	Kolonicke sedl	73.91	330	eP	P	13 17 22.4	+0.5
BUR08	Bucovina Ar. S	74.01	327	IAmb	IAmb	13 17 23.5	
	comp=Z,6.7nm,0.7s						
BURAR	Bucovina Array	74.03	327	⇑P	P	13 17 22.1	-0.6
BURAR	Bucovina Array	74.03	327	⇑P	P	13 17 22.1	-0.6
BURAR	Bucovina Array	74.03	327	IAmb	IAmb	13 17 24.0	
	comp=Z,9.2nm,0.7s						
WMOK	Wichita Mounta	74.06	55	P	P	13 17 24.8	+1.8
	baz=320						
UZH	Uzhgorod	74.17	329	eP	P	13 17 30.0	+6.7
UZH				e		13 17 35.2	
CRVS	Cervenica-Dubn	74.20	330	eP	P	13 17 24.2	+0.6
CRVS				pmax	pmax		
	comp=Z,14nm,1.0s						
CRVS	Cervenica-Dubn	74.20	330	eP	P	13 17 24.2	+0.6
OSTC	Ostas	74.36	334	eP	P	13 17 24.8	+0.3
CHVC	Chvalec	74.38	334	eP	P	13 17 25.0	+0.4
TESR	Tescani	74.44	326	⇓P	P	13 17 22.9	-2.1
DPC	Dobruska-Polom	74.52	334	eP	P	13 17 25.9	+0.5
DPC	Dobruska-Polom	74.52	334	eP	P	13 17 25.9	+0.5
TRPA	Tarpa	74.52	329	⇑P	P	13 17 26.6	+1.3
CLL	Collm	74.57	336	eP	P	13 17 26.0	+0.4
CLL				pmax	pmax		
	comp=Z,6.0nm,0.7s						
CLL	Collm	74.57	336	eP	P	13 17 26.0	+0.4
	comp=Z,6.0nm,0.7s						
KRLC	Kraliky	74.63	333	eP	P	13 17 25.8	-0.2
KRLC	Kraliky	74.63	333	eP	P	13 17 25.8	-0.2
LANS	Liptovska Anna	74.63	331	eP	P	13 17 27.6	+1.5
LANS				pmax	pmax		
	comp=Z,23nm,1.7s						
LANS	Liptovska Anna	74.63	331	eP	P	13 17 27.6	+1.5
MORC	Moravsky Berou	74.67	333	⇓P	P	13 17 27.1	+0.8
MORC	Moravsky Berou	74.67	333	⇓P	P	13 17 27.1	+0.8
MORC	Moravsky Berou	74.67	333	eP	P	13 17 26.9	+0.6
TUL1	Leonard	74.74	52	P	P	13 17 28.8	+1.9
	baz=321						
ASAR	Alice Springs	74.93	200	P	P	13 17 29.2	+1.2
	comp=Z,1.1nm,0.5s,baz=13,slow=5.4,SNR=24						
ASAR				pP	pP	13 17 54.9	-1.5
	comp=Z,1.3nm,0.6s,baz=17,slow=5.5,SNR=4.7						
TPGR	Topolog	75.16	324	⇑P	P	13 17 30.0	+0.8
PRU	Pruhonice	75.35	335	eP	P	13 17 30.0	-0.1
PRU	Pruhonice	75.35	335	eP	P	13 17 30.0	-0.1
VRAC	Vranov	75.37	333	⇓P	P	13 17 29.3	-0.9
VRAC	Vranov	75.37	333	⇓P	P	13 17 29.3	-0.9
VRAC	Vranov	75.37	333	eP	P	13 17 31.1	+0.8
TX32	Lajitas Array	75.38	62	P	P	13 17 32.5	+1.7
TX32				IAmb	IAmb	13 17 33.8	
	comp=Z,4.3nm,0.7s						
TXAR	Lajitas Array	75.38	62	P	P	13 17 32.8	+1.9
	comp=Z,4.2nm,0.6s,baz=302,slow=4.3,SNR=47						
TXAR				pP	pP	13 17 57.5	-1.6
	comp=Z,4.5nm,0.6s,baz=300,slow=4.5,SNR=9.7						
VYHS	Vyhne	75.41	331	eP	P	13 17 31.0	+0.5
VYHS				pmax	pmax		
	comp=Z,13nm,1.3s						
VYHS	Vyhne	75.41	331	eP	P	13 17 31.0	+0.5
JAVC	Velka Javorina	75.44	332	eP	P	13 17 32.3	+1.5
MLR	Muntele Rosu	75.57	325	⇓P	P	13 17 32.1	+0.4
MLR	Muntele Rosu	75.57	325	⇓P	P	13 17 32.1	+0.4
DRGR		75.61	328	⇑P	P	13 17 31.4	-0.4
DRGR		75.61	328	⇑P	P	13 17 31.4	-0.4
KRUC	Moravsky	75.64	333	eP	P	13 17 32.6	+0.8
SMOL	Smolenice	75.82	332	eP	P	13 17 34.3	+1.4
SMOL	Smolenice	75.82	332	eP	P	13 17 34.3	+1.4
U40A	Yellville	75.90	50	P	P	13 17 35.0	+1.4
	baz=322						
VOIR		75.94	326	⇓P	P	13 17 32.8	-0.9
VOIR		75.94	326	⇓P	P	13 17 32.8	-0.9
MODS	Modra-Piesok	75.99	332	eP	P	13 17 34.3	+0.4
MODS	Modra-Piesok	75.99	332	eP	P	13 17 34.3	+0.4
ARR	Arges	76.16	326	⇓P	P	13 17 33.8	-1.1
KHC	Kasperske Hory	76.39	335	eP	P	13 17 36.7	+0.6
KHC				e		13 17 41.9	
KHC	Kasperske Hory	76.39	335	eP	P	13 17 36.7	+0.6
KHC				ex	x	13 17 41.9	
SIRR	Siria	76.43	329	⇑P	P	13 17 36.2	-0.2
CKRC	Cesky Krumlov	76.47	334	eP	P	13 17 36.5	0.0
GERES	GERESS Array B	76.62	335	P	P	13 17 37.1	-0.3
	comp=Z,2.7nm,0.5s,baz=37,slow=6.2,SNR=32						
GERES				LR	LR	13 54 29.5	
	comp=Z,53nm,19.1s,baz=28,slow=38						
GZR	Gura Zlata	76.80	327	⇑P	P	13 17 39.1	+0.6
GZR	Gura Zlata	76.80	327	⇑P	P	13 17 39.1	+0.6
CONA	Conrad Observa	76.82	333	i P	P	13 17 40.2	+1.5
	comp=Z,8.4nm,1.1s						
BTNL	Ternell	76.92	340	dP	P	13 17 39.8	+0.7
	comp=Z,8.4nm,0.9s						
MEM	Membach	76.93	340	dP	P	13 17 39.5	+0.5
	comp=Z,9.3nm,0.9s						
MIAR	Mount Ida	76.94	52	P	P	13 17 39.2	-0.2
MIAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MIAR	Mount Ida	76.94	52	P	P	13 17 41.0	+1.6
	baz=322						
MIAR	Mount Ida	76.94	52	P	P	13 17 39.2	-0.2
BZS	Buzias	77.01	328	⇓P	P	13 17 40.4	+0.8
BZS	Buzias	77.01	328	⇓P	P	13 17 40.4	+0.8
BHOU	Houvegnez	77.17	340	dP	P	13 17 40.9	+0.4
BHOU				dPcP	PcP	13 17 50.9	+0.2
BRTR	Keskin Array B	77.23	317	P	P	13 17 41.4	+0.2
	comp=Z,3.5nm,0.9s,baz=46,slow=3.6,SNR=13						
BRTR	Keskin Array B	77.23	317	i P	P	13 17 42.0	+0.8
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BRTR	Keskin Array B	77.23	317	P	P	13 17 40.0	-1.1
BCLA	Clavier	77.26	340	dP	P	13 17 41.1	+0.2
BGES	Gesves	77.34	341	dPcP	PcP	13 17 50.9	-0.5
MOA	Molln	77.36	334	eP	P	13 17 42.2	+0.7
	comp=Z,5.4nm,0.9s						
SNF	Seneffe	77.39	341	dP	P	13 17 42.1	+0.5
	comp=Z,10nm,0.7s						
BMRD	Maredsous	77.49	341	dP	P	13 17 42.5	+0.4
	comp=Z,7.4nm,0.8s						
ARSA	Arzberg	77.53	333	i P	P	13 17 43.8	+1.3
	comp=Z,8.0nm,1.2s						
FRGS	Fruska Gora	78.03	329	⇑P	P	13 17 45.2	-0.1
SOKA	Soboth	78.19	333	i P	P	13 17 47.1	+0.9
	comp=Z,8.4nm,0.9s						
PERS	Pernice	78.20	333	i P	P	13 17 47.0	+0.8
KBA	Koelnbreinsper	78.32	334	eP	P	13 17 48.0	+1.0
	comp=Z,18nm,0.5s,SNR=9.4						
OBKA	Obir	78.49	333	i P	P	13 17 48.6	+0.7
	comp=Z,5.0nm,0.5s						
WATA	Walderalm	78.58	335	i P	P	13 17 49.5	+1.1
	comp=Z,20nm,1.1s						
WTTA	Wattenberg	78.63	335	eP	P	13 17 50.1	+1.3
	comp=Z,16nm,0.7s,SNR=8.4						
MYKA	Terra Mystica	78.64	334	i P	P	13 17 49.0	+0.3
	comp=Z,3.5nm,0.5s						
RETA	Reutte	78.66	336	eP	P	13 17 49.0	+0.2
	comp=Z,8.6nm,0.7s						
MOTA	Moosalm	78.70	336	eP	P	13 17 50.2	+1.1
	comp=Z,18nm,1.0s,SNR=6.8						
BOVS	Bovan	78.71	327	⇓P	P	13 17 48.8	-0.2
SQTA	Sankt Quirin	78.79	336	i P	P	13 17 50.8	+1.2
	comp=Z,12nm,1.0s						
ABTA	Abfaltersbach	78.86	335	i P	P	13 17 50.5	+0.6
	comp=Z,6.0nm,0.6s						
ZOU	Zoufplan	78.90	334	P	P	13 17 49.0	-1.3
VTS	Vitosha	79.04	326	⇑P	P	13 17 51.0	-0.1
VTS	Vitosha	79.04	326	⇑P	P	13 17 51.0	-0.1
DAVA	Damuels	79.08	336	eP	P	13 17 52.0	+0.8
	comp=Z,10nm,0.7s						
FETA	Feichten	79.10	336	i P	P	13 17 52.5	+1.1
	comp=Z,6.0nm,0.7s						
GBRS	Gornja Briga	79.29	333	i P	P	13 17 52.5	+0.2
PDG	Podgorica	80.62	328	⇑P	P	13 17 59.4	0.0
MSSA	Maissana	81.92	336	P	P	13 18 05.3	-1.0
MSSA				IAmb	IAmb	13 18 08.1	
	comp=Z,11nm,0.9s						
BNI	Bardonecchia	81.98	338	P	P	13 18 06.5	-0.2
BNI				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BNI	Bardonecchia	81.98	338	P	P	13 18 06.5	-0.2
BNI				IAmb	IAmb	13 18 08.7	
	comp=Z,9.9nm,0.7s						
TIP	Timpagrande	84.38	328	⇓P	P	13 18 19.6	+0.6
ESDC	Sonseca Array	89.43	344	P	P	13 18 42.9	-0.6
	comp=Z,3.7nm,0.8s,baz=3.6,slow=4.1,SNR=23						
ESDC				LR	LR	14 04 04.6	
	comp=Z,36nm,19.0s,baz=290,slow=39						
ESDC	Sonseca Array	89.43	344	P	P	13 18 43.2	-0.3
ESDC				IAmb	IAmb	13 18 43.9	
	comp=Z,4.1nm,0.8s						
KEST	Kesra	89.92	332	P	P	13 18 45.6	-0.3
	comp=Z,11nm,0.6s,baz=334,slow=1.5,SNR=14						
TORD	Torodi Ar. Bea	113.41	331	PKiKP	PKiKP	13 24 24.5	+0.2
	comp=Z,0.5nm,0.5s,baz=24,slow=1.7,SNR=3.0						
TORD				PP	PP	13 25 13.5	-2.3
	comp=Z,1.5nm,1.1s,baz=13,slow=7.9,SNR=4.5						
VNDA	Vanda	126.61	178	PKP	PKPdf	13 24 47.9	+0.2
	comp=Z,0.3nm,0.7s,baz=234,slow=4.0,SNR=1.5						
BOSA	Boshof	136.50	279	PKhKP	PKPpre	13 24 59.6	
	comp=Z,2.5nm,1.1s,baz=14,slow=8.3,SNR=1.4						
LL05	Los Muermos	145.78	95	PKPdf	PKPbc	13 25 25.2	+0.4
CPUP	Villa Florida	146.31	59	PKPbc	PKPdf	13 25 25.0	-0.4
	comp=Z,2.9nm,0.8s,baz=350,slow=3.5,SNR=7.6						
CPUP				pPKPbc	pPKPdf	13 25 55.4	-0.8
	comp=Z,3.4nm,0.8s,baz=360,slow=1.6,SNR=3.5						
CPUP	Villa Florida	146.31	59	PKP2	PKPdf	13 25 25.0	-0.4
PLCA	Paso Flores	147.35	92	PKPbc	PKPbc	13 25 30.6	+1.1
	comp=Z,2.5nm,0.6s,baz=303,slow=2.4,SNR=10.0						
PLCA				pPKPbc	pPKPdf	13 25 57.4	-0.2
	comp=Z,3.1nm,0.8s,baz=315,slow=2.9,SNR=5.1						
PLCA	Paso Flores	147.35	92	PKP2	PKiKP	13 25 31.0	-0.6
PLCA	Paso Flores	147.35	92		PKiKP	13 25 31.0	-0.6
VNA2	Neumayer--Watz	156.71	195	PKPdf	PKPdf	13 25 38.2	-1.5

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*IDC **07** 13:06:21.1±2.6, 24°.46S×179°.95E, h480^{km}±39^{km}, mb3.1/4, mb1 3.2/6, mb1mx3.0/22, mbtmp4.0/6, Error ellipse: s-maj=53.8km s-min=28.4km az=64.0*

ISC 07 13:06:20.8±1.9**, 24°.4S**±0°.1×**179°.8W**±0°.3**, h500**^{km}**, n6, σ1**^{s}**.37**/7**, mb3.5**/4**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	6.96	343	P	P	13 08 06.5	-0.4
	2.3nm,0.3s,baz=296,slow=23,SNR=14						
URZ	Urewera	14.02	190	P	P	13 09 18.8	-1.7
	0.3nm,0.3s,baz=122,slow=23,SNR=1.4						
URZ				S	S	13 11 49.0	+0.3
	0.1nm,0.3s,baz=301,slow=23,SNR=1.5						
CTA	Charters Tower	31.64	271	P	P	13 12 02.8	+0.4
	2.4nm,0.4s,baz=92,slow=11,SNR=12						
ASAR	Alice Springs	42.10	261	P	P	13 13 28.7	0.0
	0.4nm,0.3s,baz=93,slow=6.7,SNR=15						
WRA	Warramunga Arr	42.53	267	P	P	13 13 31.5	-0.6
	0.9nm,0.3s,baz=98,slow=8.4,SNR=36						
MAW	Mawson	77.30	200	P	P	13 17 24.8	+2.0
	0.6nm,0.6s,baz=108,slow=3.2,SNR=1.9						

JMA 07 13:06:42.6±0.2**, 37°.38N**×**142°.18E, h15**^{km}±3^{km}**, M1.8, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	Kawauchi	1.04	270	P	Pb	13 07 01.8	-0.5
JFK				eS	Sb	13 07 15.5	-0.3
JMST	Minamisoumatoc	1.08	289	eS	Sb	13 07 16.9	-0.1
JIKH	Ishinomakikobu	1.09	329	P	Pb	13 07 02.8	-0.3
ONAJ	Iwakimizuishiy	1.14	256	P	Pb	13 07 03.5	-0.5
ONAJ				eS	Sn	13 07 19.0	-0.4
JIO	Ouri	1.26	329	P	Pn	13 07 05.7	+0.1
JIO				eS	Sb	13 07 21.7	-0.3
JFT	Otama	1.47	276	P	Pb	13 07 09.4	-0.3
JFT				eS	Sb	13 07 29.0	+0.8
JOU	Okura	1.55	310	P	Pb	13 07 10.7	-0.3
JOU				eS	Sb	13 07 30.3	-0.2
JMK	Ichinoseki	1.74	335	eS	Sn	13 07 34.0	-0.2

IDC 07 13:26:17.8±2.0**, 8°.02S**×**125°.40E, h0**^{km}**, mb3.5**/1**, mb1 3.8**/5**, mb1mx3.5**/49**, mbtmp3.6**/5**, ML3.5**/4**, Error ellipse: s-maj=42.3km s-min=26.8km az=85.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	2.77	218	Pn	Pn	13 27 04.2	+0.7
	3.6nm,0.3s,baz=328,slow=10,SNR=1.8						
BATI				Sn	Sn	13 27 38.5	+0.8
	2.7nm,0.3s,baz=143,slow=12,SNR=1.6						
FITZ	Fitzroy Crossi	10.02	179	Pn	Pn	13 28 41.2	-1.9
	0.2nm,0.3s,baz=350,slow=10,SNR=9.1						
FITZ				Sn	Sn	13 30 27.9	-8.4
	0.2nm,0.3s,baz=151,slow=11,SNR=4.2						
WRA	Warramunga Arr	14.68	145	Pn	Pn	13 29 46.6	-0.2
	0.3nm,0.3s,baz=319,slow=13,SNR=25						
WRA				Sn	Sn	13 32 21.2	-9.1
	0.1nm,0.3s,baz=315,slow=26,SNR=2.7						
ASAR	Alice Springs	17.56	153	P	P	13 30 25.7	+0.3
	0.2nm,0.3s,baz=335,slow=13,SNR=28						
ASAR				S	Sn	13 33 31.2	-9.3
	0.0nm,0.3s,baz=319,slow=21,SNR=4.4						
MKAR	Makanchi Array	66.67	329	P	P	13 37 10.4	-0.1
	0.3nm,0.5s,baz=133,slow=6.3,SNR=1.7						

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*BJI **07** 13:44:40.6±0.0, 35°.95N×140°.10E, h110^{km}, mB5.1/45, mb5.4/76*

*MOS **07** 13:44:42.2±1.1, 36°.01N×140°.04E, h100^{km}, mb5.4/61, Error ellipse: s-maj=6.2km s-min=3.6km az=111.6*

*BGR **07** 13:44:43.7±0.0, 36°.55N×141°.29E, h100^{km}, mb5.4*

*NEIC **07** 13:44:44.4, 35°.89N×140°.01E, h110^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}1.05; $M_{\theta\theta}$-2.49; $M_{\phi\phi}$1.44; $M_{r\theta}$1.52; $M_{\theta\phi}$1.85; $M_{\phi r}$1.25; Fault plane solution: $M_0$3.46000×10^{16} NP1:ϕ_s330.92000°, δ53.99000°, λ161.25000°. NP2:ϕ_s72.21000°, δ74.93000°, λ37.51000°. Principal axes: T 3.4658, Plg37.0000°, Azm298.0000°; N -0.0162, Plg50.0000°, Azm91.0000°; P -3.4496, Plg13.0000°, Azm197.0000°;*

*NEIC **07** 13:44:44.7±2.0, 35°.91N±0°.05×139°.97E±0°.07, h108^{km}±4^{km}, mb5.2/95, Mwr5.0/29, Mww5.0 Error ellipse: s-maj=9.1km s-min=6.9km az=123.0*

*IDC **07** 13:44:45.1±0.8, 35°.93N×139°.90E, h111^{km}±6^{km}, mb4.7/43, mb1 4.8/47, mb1mx4.6/62, mbtmp5.1/47, MS3.7/16, Ms1 3.7/16, ms1mx3.5/40, Error ellipse: s-maj=10.0km s-min=5.6km az=78.0*

*NIED **07** 13:44:46.0, 35°.99N×139°.96E, h101^{km}, MW5.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}0.65; $M_{\theta\theta}$-1.99; $M_{\phi\phi}$1.33; $M_{r\theta}$1.71; $M_{\theta\phi}$1.66; $M_{\phi r}$1.00; Fault plane solution: $M_0$3.12000×10^{16} NP1:ϕ_s71.00000°, δ81.00000°, λ41.00000°. NP2:ϕ_s333.00000°, δ50.00000°, λ168.00000°.*

*NEIC **07** 13:44:45, 35°.93N×139°.98E, h110^{km}, Moment Tensor Solution. Duration: 2^{s}2 Moment tensor: Scale 10^{16}Nm; M_{rr}0.60; $M_{\theta\theta}$-2.99; $M_{\phi\phi}$2.39; $M_{r\theta}$1.64; $M_{\theta\phi}$1.71; $M_{\phi r}$1.12; Fault plane solution: $M_0$3.79000×10^{16} NP1: ϕ_s329.00000°, δ57.00000°, λ171.00000°. NP2: ϕ_s64.00000°, δ83.00000°, λ33.00000°. Principal axes: T 3.7052, Plg28.0000°, Azm292.0000°; N 0.1703, Plg57.0000°, Azm75.0000°; P -3.8755, Plg17.0000°, Azm192.0000°;*

*JMA **07** 13:44:45.9±0.1, 35°.99N×139°.96E, h101^{km}±1^{km}, M4.9 Broadband fault plane solution: P waves. NP1: ϕ_s328.00000°, δ52.00000°, λ160.00000°. NP2: ϕ_s71.00000°, δ74.00000°, λ40.00000°. Principal axes: T Plg39.0000°, Azm296.0000°; N Plg48.0000°, Azm89.0000°; P Plg14.0000°, Azm195.0000°;*

JMA Felt IV J1.

*GCMT **07** 13:44:47.7±0.4, 36°.03N±0°.03×139°.98E±0°.04, h115^{km}±5^{km}, MW5.0/70, Moment Tensor Solution. s5,c5; s70,c101; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.19±.25; $M_{\theta\theta}$-3.00±.26; $M_{\phi\phi}$1.81±.26; $M_{r\theta}$2.19±.16; $M_{\theta\phi}$2.64±.23; $M_{\phi r}$1.60±.16; Best double couple: $M_0$4.60000×10^{16} NP1:ϕ_s334.00000°, δ53.00000°, λ164.00000°. NP2:ϕ_s74.00000°, δ77.00000°, λ38.00000°. Principal axes: T 4.6650, Plg36.0000°, Azm300.0000°; N -0.1300, Plg50.0000°, Azm90.0000°; P -4.5350, Plg15.0000°, Azm199.0000°; nsta1 refers to body waves,* *cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 13:44:44.5±0.4,**35°.98N**±0°.03×**139°.92E**±0°.04,**h109**^{km}±2^{km}, **h109**^{km}**:pP-P**,**n810**,σ**1**^{s}**81**/898,**mb5.2**/215,**207C-101D**, **Fault plane solution: NP1:**ϕ_s85.94900°,δ74.26584°, λ62.06772°. **NP2:**ϕ_s328.86096°,δ31.74509°,λ148.97565°. **Principal axes:** T Plg52.4734°, Azm323.0081°; N Plg26.7999°, Azm94.1306°; P Plg24.1780°, Azm197.2384°; **Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYT	Yasato	0.33	42	⇑P	Pn	13 45 00.8	+0.6
JYT				S	Sn	13 45 11.8	-0.2
JYT	Yasato	0.33	42	Pn	Pn	13 45 00.7	+0.4
JAG	Ashikaga	0.58	320	⇓P	Pn	13 45 02.7	+0.9
JRY	Ryogami san	0.83	273	⇑P	Pn	13 45 05.5	+1.6
JRY				S	Sn	13 45 20.2	+1.7
JKT	Katashina	0.95	326	⇓P	Pn	13 45 06.3	+1.1
JKT				S	Sn	13 45 22.2	+1.4
JOD2	Odawara 2	0.99	224	⇓P	Pn	13 45 06.3	+0.8
JOD2				S	Sn	13 45 21.9	+0.6
JYN	Shimob	1.22	247	⇓P	Pn	13 45 09.4	+1.4
JYN				S	Sn	13 45 27.3	+1.5
BSO3	Boso 3	1.27	158	⇑P	Pn	13 45 09.4	+1.1
JFNN	Fujinakano	1.28	232	⇓P	Pn	13 45 10.0	+1.4
JFNN				S	Sn	13 45 28.5	+1.6
JIM2	Oshima 3	1.32	198	⇓P	Pn	13 45 09.8	+0.6
JIM2				*e*S	Sn	13 45 28.3	+0.4
MJAR	Matsushiro Arr	1.49	292	P	Pn	13 45 11.4	+0.3
	86nm,0.3s,baz=115,slow=6.7,SNR=3433						
MJAR				S	Sn	13 45 31.8	+0.5
	120nm,0.3s,baz=350,slow=15,SNR=6.2						
MJAR				LR	LR	13 45 49.3	
	comp=Z,3µm,18.4s,baz=90,slow=44						
MJAR	Matsushiro Arr	1.49	292	Pn	Pn	13 45 11.7	+0.5
MAJO	Matsushiro	1.49	292	*c i*P	Pn	13 45 12.5	+1.4
MAJO	Matsushiro	1.49	292	Pn	Pn	13 45 12.6	+1.5
MAT	Matsushiro	1.49	292	P	Pn	13 45 12.6	+1.5
MAT				S	Sn	13 45 32.3	+0.9
MAT	Matsushiro	1.49	292	P	Pn	13 45 12.6	+1.5
MJB9	Matsu-Tunnel	1.50	293		Pn	13 45 12.5	+1.3
JFT	Otama	1.57	12	⇓P	Pn	13 45 13.0	+0.9
JFT				*e*S	Sn	13 45 33.8	+0.8
BSO1	Boso 1	1.58	147	⇑P	Pn	13 45 12.5	+0.8
JSG	Sagara	1.93	228		Pn	13 45 18.7	+2.2
JMM	Marumori	2.01	20		Pn	13 45 18.1	+0.7
JGF	Kuroka	2.12	260		Pn	13 45 20.8	+1.8
JSD	Sado	2.44	328	Pn	Pn	13 45 23.9	+0.8
INU	Inuyama	2.45	256	Pn	Pn	13 45 24.9	+1.8
JHJ	Hachijo jima 2	2.86	182	P	Pn	13 45 29.1	+0.5
	373nm,0.3s,baz=96,slow=23,SNR=123						
JHJ				S	Sn	13 46 02.0	-0.5
	861nm,0.3s,baz=271,slow=23,SNR=26						
JHJ2	Mitsune	2.87	182	Pn	Pn	13 45 28.6	-0.1
JWT	Wachi	3.75	261	Pn	Pn	13 45 42.1	+1.8
JTM	Tenmabayashi	4.88	10	Pn	Pn	13 45 55.0	-0.6
JMN	Monobe	5.45	247	Pn	Pn	13 46 05.6	+2.2
JHS	Saijyo	5.64	262	Pn	Pn	13 46 08.3	+2.4
ERM	Erimo	6.53	22	*c i*P	Pn	13 46 15.2	-2.7
ERM				pmax	pmax		
	comp=Z,1µm,1.0s						
ERM	Erimo	6.53	22	Pn	Pn	13 46 15.2	-2.7
JEW	Eniwo	6.95	9	Pn	Pn	13 46 21.0	-2.6
JNU	Nakatsue	7.99	252	P	Pn	13 46 39.6	+1.8
	comp=Z,5.5nm,0.3s,baz=133,slow=3.4,SNR=25						
JNU	Nakatsue	7.99	252	Pn	Pn	13 46 40.6	+2.8
ASAJ	Asahikawa	8.38	13	P	Pn	13 46 39.5	-3.6
	comp=Z,37nm,0.3s,baz=232,slow=9.0,SNR=343						
ASAJ				S	Sn	13 48 07.4	-8.4
	comp=Z,7.6nm,0.3s,baz=282,slow=32,SNR=1.6						
ASAJ				LR	LR	13 50 42.4	
	comp=Z,143nm,21.6s,baz=202,slow=42						
ASAJ	Asahikawa	8.38	13	P	Pn	13 46 40.1	-2.9
JKA	Kamikawa-asahi	8.38	13	Pn	Pn	13 46 40.1	-2.9
KSULJ	Uljin	8.51	278	P	Pn	13 46 49.0	+4.1
	SNR=7.9						
UJN	ULJIN	8.52	280	P	Pn	13 46 47.8	+2.8
	SNR=8.8						
KSPHA	Pohang	8.54	275	P	Pn	13 46 48.2	+2.9
	SNR=9.6						
NMR	Nemuro--Hokkai	8.63	29	⇓*i*P	Pn	13 46 42.5	-3.9
NMR				*i* S	Sn	13 48 12.0	-10
KSUSN	Ulsan	8.77	271	P	Pn	13 46 51.1	+2.7
	SNR=16						
KSBUS	Busan	8.83	268	P	Pn	13 46 52.0	+2.8
	SNR=6.0						
GLVR	Golovnino	8.86	27	*e*P	Pn	13 46 46.6	-2.9
GLVR				*e*S	Sn	13 48 18.1	-9.4
GLVR				pmax	pmax		
	comp=N,133nm,0.5s						
GLVR				pmax	pmax		
	comp=Z,742nm,0.5s						
GLVR				pmax	pmax		
	comp=E,123nm,0.4s						
KSADO	Andong	8.88	276	P	Pn	13 46 53.0	+3.2
	SNR=9.2						
KSYOC	YEONGCHEON	8.89	273	P	Pn	13 46 52.8	+2.8
	SNR=15						
YOCB	Yeongcheon	8.89	273	P	Pn	13 46 53.0	+3.0
	SNR=11						
KSTBA	Taebaek	8.90	281	P	Pn	13 46 53.5	+3.3
	SNR=15						
CHYB	Chungyang	8.92	279	P	Pn	13 46 54.0	+3.6
	SNR=22						
OKEB	Okgye-meyeon	8.93	284	P	Pn	13 46 54.0	+3.5
	SNR=6.4						
KSDAG	Daegu	8.95	272	P	Pn	13 46 54.0	+3.2
	SNR=5.5						
KSGWL	Sabuk	9.01	281	P	Pn	13 46 55.7	+4.1
	SNR=7.1						
JSU	Suzuyama	9.06	243	Pn	Pn	13 46 54.2	+1.9
JCJ	Chichijima	9.07	167	P	Pn	13 46 48.2	-4.3
	comp=E,50nm,0.3s,baz=0.1,slow=21,SNR=30						
JCJ				S	Sn	13 48 18.8	-14
	comp=E,20nm,0.3s,baz=293,slow=20,SNR=1.7						
JCJ				LR	LR	13 50 09.5	
	comp=E,560nm,21.1s,baz=84,slow=36						
RUSJ	Misakicho	9.08	25	*e*P	Pn	13 46 49.5	-3.0
RUSJ				S	Sn	13 48 26.4	-6.4
EUSB	Uiseong	9.09	276	P	Pn	13 46 56.0	+3.3
	SNR=11						
KSEUS	ULSEONG	9.09	276	P	Pn	13 46 55.8	+3.1
	SNR=12						
GRPR	Tuman	9.17	28	*e*P	Pn	13 46 50.2	-3.6
GRPR				*e*S	Sn	13 48 25.3	-10
GRPR				pmax	pmax		
	comp=N,372nm,0.4s						
GRPR				pmax	pmax		
	comp=E,155nm,0.4s						
GRPR				pmax	pmax		
	comp=Z,542nm,0.4s						
KSDGY	Daegwallycong	9.18	284	P	Pn	13 46 57.0	+3.1
	SNR=17						
YOJB	Youngju	9.23	279	P	Pn	13 46 58.0	+3.3
	SNR=11						
YUK	Yuzh-Kuril'sk	9.24	28	*e*P	Pn	13 46 51.7	-3.0
YUK				*e*S	Sn	13 48 27.2	-10
YUK				pmax	pmax		
	comp=Z,462nm,0.5s						
YUK				pmax	pmax		
	comp=Z,670nm,1.1s						
YUK				pmax	pmax		
	comp=N,363nm,0.5s						
YUK				pmax	pmax		
	comp=E,418nm,0.6s						
YUK				smax	smax		
	comp=N,2µm,0.6s						
YUK				smax	smax		
	comp=E,739nm,0.3s						
KSMAS	Masan	9.28	268	P	Pn	13 46 58.0	+2.7
	SNR=16						
KSYOW	Yeongwol	9.30	281	P	Pn	13 46 58.9	+3.4
	SNR=56						
TEY	Ternei	9.39	345	⇑*e*P	Pn	13 46 56.8	+0.1
TEY				pmax	pmax		
	comp=N,40nm,0.8s						
TEY				pmax	pmax		
	comp=E,10.0nm,0.8s						
TEY				pmax	pmax		
	comp=Z,40nm,0.8s						
TEY				pmax	pmax		
	comp=N,190nm,2.1s						
TEY				pmax	pmax		
	comp=E,120nm,2.1s						
TEY				pmax	pmax		
	comp=Z,210nm,2.1s						
TEY				pmax	pmax		
	comp=N,140nm,1.0s						
TEY				pmax	pmax		
	comp=E,40nm,1.0s						
TEY				pmax	pmax		
	comp=Z,90nm,1.0s						
VLA	Vladivostok	9.45	321	*c i*P	Pn	13 46 59.4	+1.9
MSHR	Mys Shultsa	9.46	317	*c i*P	Pn	13 46 58.8	+1.2
MSHR				pmax	pmax		
	comp=Z,230nm,1.7s						
EURB	Uiryeong-eup	9.49	269	P	Pn	13 47 02.0	+3.9
	SNR=6.2						
JECH	Jecheon	9.51	281	P	Pn	13 47 02.0	+3.7
	SNR=24						
KSSAJ	Sangju	9.52	276	P	Pn	13 47 01.8	+3.3
	SNR=7.1						
SEHB	SEOHWA	9.59	287	P	Pn	13 47 02.8	+3.3
	SNR=6.3						
KSMGY	Mungyeong	9.59	277	P	Pn	13 47 02.9	+3.3
	SNR=14						
KSWJU	Wonju	9.64	282	P	Pn	13 47 04.0	+3.8
	SNR=45						
KSIJA	INJE	9.66	285	P	Pn	13 47 03.8	+3.4
	SNR=19						
KSCHJ	Chungju	9.67	279	P	Pn	13 47 04.0	+3.4
	SNR=5.7						
KSCPR	CHUPUNGNYEONG	9.67	275	P	Pn	13 47 03.8	+3.2
	SNR=24						
KSRS	Korea Array	9.74	282	P	Pn	13 47 05.2	+3.7
	comp=Z,3.1nm,0.3s,baz=99,slow=14,SNR=231						
KSRS				LR	LR	13 51 04.3	
	comp=Z,261nm,18.7s,baz=74,slow=39						
KSKCH	Geochang	9.76	271	P	Pn	13 47 05.4	+3.6
	SNR=7.8						
KSAR	Wonju Array Be	9.77	282	P	Pn	13 47 05.0	+3.1
KSAR	Wonju Array Be	9.77	282	Pn	Pn	13 47 05.0	+3.1
KS19	Wonju Array Si	9.79	282		Pn	13 47 05.5	+3.3
KSBON	Boeun	9.80	277	P	Pn	13 47 05.7	+3.3
	SNR=19						
OKCB	Cheongsan-myeo	9.81	276	P	Pn	13 47 06.0	+3.5
	SNR=7.1						
KSNAH	Namhae	9.86	267	P	Pn	13 47 05.8	+2.6
	SNR=12						
KSCHC	Chuncheon	9.86	284	P	Pn	13 47 07.0	+3.9
	SNR=33						
EMSB	Eumseong	9.95	279	P	Pn	13 47 08.1	+3.7
	SNR=22						
GAPB	Gapyeong	10.12	284	P	Pn	13 47 10.3	+3.6
	SNR=26						
KSICN	Icheon	10.13	281	P	Pn	13 47 10.4	+3.5
	SNR=14						
KSCWO	Cheorwon	10.13	286	P	Pn	13 47 10.5	+3.6
	SNR=13						
TJN	Taejon	10.16	276	*c i*P	Pn	13 47 10.2	+3.0
USA0B	Ussuriysk Arra	10.21	326	P	Pn	13 47 09.2	+1.4
USA0B	Ussuriysk Arra	10.21	326	Pn	Pn	13 47 09.2	+1.4
USRK	Ussuriysk Ar.	10.21	326	P	Pn	13 47 09.1	+1.3
	baz=140,slow=12,SNR=162						
KSJEO	Jeonju	10.24	273	P	Pn	13 47 13.0	+4.7
	SNR=10						
KSCEA	Cheonan	10.24	278	P	Pn	13 47 11.4	+3.1
	SNR=20						
KOJ2	Gongju-si	10.33	276	P	Pn	13 47 14.3	+4.7
	SNR=9.5						
PYTK	Pyeongtaek	10.37	279	P	Pn	13 47 13.6	+3.6
	SNR=10						
SUCA	Sunchang	10.42	270	P	Pn	13 47 15.0	+4.3
	SNR=6.2						
KSDDC	Dongducheon	10.47	284	P	Pn	13 47 15.3	+3.9
	SNR=11						
KSSWO	Suwon	10.49	281	P	Pn	13 47 14.9	+3.2
	SNR=12						
KSSOD	Songwoldong	10.51	283	P	Pn	13 47 15.4	+3.4
	SNR=6.4						
BUYB	Buyeo	10.52	275	P	Pn	13 47 16.1	+4.0
	SNR=6.4						
KSSEO	Seoul	10.54	282	P	Pn	13 47 15.9	+3.6
	SNR=6.9						
KSSEO	Seoul	10.54	282	P	Pn	13 47 16.0	+3.6
	SNR=6.9						
YNCB	YEONCHEON	10.59	285	P	Pn	13 47 17.0	+3.9
	SNR=17						
HAWB	Hwaseong-si	10.64	280	P	Pn	13 47 17.1	+3.4
	SNR=7.6						
KSGUS	GUNSAN	10.64	274	P	Pn	13 47 18.0	+4.2
	SNR=9.7						
KSMUS	Musan	10.71	284	P	Pn	13 47 18.9	+4.3
	SNR=18						
INCN	Inchon	10.77	282	P	Pn	13 47 19.1	+3.6
KSSES	Seosan	10.89	278	P	Pn	13 47 21.0	+3.9
	SNR=18						
KSGAH	Ganghwa	10.93	283	P	Pn	13 47 21.1	+3.4
	SNR=5.6						
KUR	Kuril'sk	11.03	31	*d i*P	Pn	13 47 16.3	-2.6
KUR				*e*S	Sn	13 49 12.7	-7.5
KUR				pmax	pmax		
	comp=E,68nm,0.6s						
KUR				pmax	pmax		
	comp=Z,428nm,0.6s						
KUR				pmax	pmax		
	comp=N,57nm,0.4s						
KUR				pmax	pmax		
	comp=Z,1µm,1.6s						
KUR				smax	smax		
	comp=E,262nm,0.7s						
KUR				smax	smax		
	comp=N,150nm,0.6s						
KUR				smax	smax		
	comp=N,1µm,3.0s						
KUR				smax	smax		
	comp=E,659nm,2.5s						
YSS	Yuzh-Sakhalins	11.16	10	*e*P	Pn	13 47 17.5	-3.2
YSS				*e*S	Sn	13 49 14.2	-9.2
YSS				pmax	pmax		
	comp=Z,400nm,0.7s						
YSS				smax	smax		
	comp=E,70nm,0.8s						
YSS				MLR	MLR		
	comp=Z,400nm,18.0s						
YSS	Yuzh-Sakhalins	11.16	10	Pn	Pn	13 47 17.4	-3.2
MDJ	Mudanjiang	11.68	321	P	Pn	13 47 28.2	+0.6
MDJ				S	Sn	13 49 39.3	+3.4
MDJ				pmax	pmax		
	comp=Z,140nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,410nm,4.0s						
MDJ				LR	LR		
	comp=Z,930nm,8.0s						
MDJ				LR	LR		
	comp=Z,640nm,8.0s						
MDJ				LR	LR		
	comp=Z,710nm,11.5s						
JOW	Kunigami	13.48	231	P	Pn	13 47 50.5	-0.9
	baz=122,slow=11,SNR=4.1						
CN2	Changchun	13.57	310	*e*P	Pn	13 47 51.4	-1.0
CN2				*e*S	Sn	13 50 20.0	-1.7
CN2				pmax	pmax		
	comp=Z,80nm,1.0s						
CN2				pmax	pmax		
	comp=Z,340nm,6.0s						
CN2				LR	LR		
	comp=Z,480nm,18.0s						
CN2				LR	LR		
	comp=Z,400nm,18.0s						
CN2				LR	LR		
	comp=Z,390nm,20.0s						
SNY	Shenyang	13.99	300	⇑P	Pn	13 47 58.7	+0.8
SNY				S	Sn	13 50 28.7	-3.2
SNY				pmax	pmax		
	comp=Z,61nm,1.0s						
SNY				pmax	pmax		
	comp=Z,820nm,3.6s						
SNY				LR	LR		
	comp=Z,490nm,11.4s						
SNY				LR	LR		
	comp=Z,380nm,5.1s						
SNY				LR	LR		
	comp=Z,460nm,11.3s						
KLR	Kul'dur	14.53	338	P	Pn	13 48 02.6	-2.0
	comp=Z,2.7nm,0.3s,baz=144,slow=12,SNR=46						
KLR	Kul'dur	14.53	338	*c i*P	Pn	13 48 03.1	-1.6
KLR				pmax	pmax		
	comp=Z,22nm,0.6s						
DL2	Dalian	14.82	287	P	P	13 48 10.6	-0.9
DL2				pmax	pmax		
	comp=Z,200nm,1.2s						
GRNR	Gornyy	14.99	351	⇓*i*P	Pn	13 48 07.6	-3.0
GRNR				*e*S	Sn	13 50 49.2	-6.9
GRNR				pmax	pmax		
	comp=E,7.0nm,0.9s						
GRNR				pmax	pmax		
	comp=N,9.0nm,0.8s						
GRNR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GRNR				smax	smax		
	comp=N,7.0nm,0.6s						
GRNR				MLR	MLR		
	comp=E,130nm,19.0s						
GRNR				MLR	MLR		
	comp=N,120nm,13.0s						
GRNR				MLR	MLR		
	comp=Z,150nm,20.0s						
NJ2	Nanjing	17.89	263	*e*P	P	13 48 45.6	+0.1
NJ2				pmax	pmax		
	comp=Z,20nm,0.7s						
TIA	Tai'an	18.42	277	P	P	13 48 50.3	-1.0
TIA				pmax	pmax		
	comp=Z,120nm,1.1s						
BJI	Beijing	19.13	289	P	P	13 48 57.2	-1.7
BJI				S	S	13 52 30.6	+0.7
BJI				pmax	pmax		
	comp=Z,150nm,1.2s						
BJI				pmax	pmax		
	comp=Z,470nm,3.9s						
HIA	Hailar	19.84	318	P	P	13 49 04.0	-2.6
HIA				pmax	pmax		
	comp=Z,122nm,1.0s						
HIA	Hailar	19.84	318	P	P	13 49 04.0	-2.6
HIA				IAmb	IAmb	13 49 06.1	
	comp=Z,122nm,1.0s						
ZEA	Zeya	19.84	337	*e*P	P	13 49 04.9	-1.6
ZEA				*e*S	S	13 52 34.0	-10
ZEA				pmax	pmax		
	comp=N,40nm,0.8s						
ZEA				pmax	pmax		
	comp=E,20nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,70nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,200nm,1.5s						
ZEA				smax	smax		
	comp=E,300nm,2.5s						
ZEA				smax	smax		
	comp=N,300nm,4.2s						
SSLB	Suanglung	20.41	239	P	P	13 49 13.2	+0.2
YULB	Yu-li	20.43	237	P	P	13 49 11.1	-2.1
TPUB	Ta-pu	20.95	238	P	P	13 49 17.1	-1.7
TWG	Pinlang	20.97	236	P	P	13 49 17.9	-1.0
PEA0B	Petropavlovsk-	21.20	31	⇓*e*P	P	13 49 21.9	+0.7
PETK	Petropavlovsk-	21.20	31	P	P	13 49 21.8	+0.6
	comp=N,24nm,0.9s,baz=199,slow=8.8,SNR=14						
PETK	Petropavlovsk-	21.20	31	P	P	13 49 22.1	+0.9
PETK	Petropavlovsk-	21.20	31	P	P	13 49 22.1	+0.9
PET	Petropavlovsk	21.54	32	*e*P	P	13 49 26.0	+1.2
PET				*e**PP	pP	13 49 51.1	+5.6
PET				*e*S	S	13 53 12.6	-4.4
PET				pmax	pmax		
	comp=Z,67nm,1.1s						
PET				MLR	MLR		
	comp=Z,100nm,16.0s						
PET	Petropavlovsk	21.54	32	P	P	13 49 25.8	+1.0
WHN	Wuhan	22.03	263	⇑P	P	13 49 30.2	0.0
WHN				S	S	13 53 17.6	-8.7
WHN				pmax	pmax		
	comp=Z,170nm,0.7s						
WHN				LR	LR		
	comp=Z,650nm,16.0s						
TIY	Taiyuan	22.04	283	*e*P	P	13 49 31.7	+1.4
HHC	Hu-ho-hao-te	22.69	291	*e*P	P	13 49 37.8	+0.8
HHC				pmax	pmax		
	comp=Z,140nm,0.9s						
HHC				pmax	pmax		
	comp=Z,220nm,8.7s						
GUMO	Guam	22.74	167	P	P	13 49 37.2	-0.3
	comp=Z,181nm,1.1s,baz=51,slow=10,SNR=4.8						
BTO	Baotou	23.86	290	*e*P	P	13 49 46.0	-1.8
BTO				LR	LR		
	comp=Z,560nm,4.0s						
BTO				LR	LR		
	comp=Z,810nm,4.9s						
CIT	Chita	24.64	319	*e*P	P	13 49 52.6	-2.1
CIT				*e*		13 50 13.2	
CIT				*e*		13 50 24.6	
CIT				pmax	pmax		
	comp=Z,208nm,1.0s						
MA2	Magadan	24.64	13	P	P	13 49 55.0	+0.4
	comp=Z,43nm,0.8s,baz=211,slow=18,SNR=8.5						
MA2	Magadan	24.64	13	⇑*e*P	P	13 49 55.8	+1.2
MA2				pmax	pmax		
	comp=Z,49nm,0.7s						
MA2	Magadan	24.64	13	P	P	13 49 56.8	+2.2
MA2				IAmb	IAmb	13 50 21.5	
	comp=Z,84nm,0.8s						
XAN	Xi'an	25.41	275	P	P	13 50 00.9	-1.1
XAN				pmax	pmax		
	comp=Z,68nm,1.3s						
ENH	Enshi	26.05	266	P	P	13 50 06.8	-1.0
YAK	Yakutsk	26.85	349	P	P	13 50 14.5	-0.1
	comp=Z,40nm,0.6s,baz=180,slow=0.7,SNR=19						
YAK	Yakutsk	26.85	349	*e*P	P	13 50 15.1	+0.6
YAK				*e**PP	pP	13 50 38.1	-0.3
YAK				*e*		13 51 03.0	
YAK				*e*		13 53 35.0	
YAK				*e*S	S	13 54 44.3	+1.5
YAK				*e**SS	sS	13 55 25.4	+0.9
YAK				*e*		14 00 55.7	
YAK				pmax	pmax		
	comp=Z,50nm,0.8s						
YAK				pmax	pmax		
	comp=N,15nm,0.9s						
YAK				pmax	pmax		
	comp=E,9.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,173nm,3.0s						
YAK				pmax	pmax		
	comp=N,335nm,3.8s						
YAK				pmax	pmax		
	comp=E,245nm,3.3s						
YAK				smax	smax		
	comp=E,881nm,4.6s						
YAK				smax	smax		
	comp=N,290nm,3.3s						
YAK	Yakutsk	26.85	349	P	P	13 50 14.1	-0.5
YAK				IAmb	IAmb	13 50 17.7	
	comp=Z,90nm,0.7s						
ULN	Ulaanbaatar	26.98	306	*c i*P	P	13 50 15.7	-0.3
ULN				pmax	pmax		
	comp=Z,76nm,1.0s						
ULN	Ulaanbaatar	26.98	306	P	P	13 50 15.8	-0.2
ULN	Ulaanbaatar	26.98	306	P	P	13 50 15.9	-0.2
ULN				IAmb	IAmb	13 50 20.6	
	comp=Z,52nm,0.8s						
SONM	Songino Array	27.40	306	P	P	13 50 20.0	+0.2
	comp=Z,36nm,0.6s,baz=105,slow=8.7,SNR=89						
SONM				LR	LR	14 01 36.1	
	comp=Z,277nm,18.4s,baz=101,slow=37						
SONM	Songino Array	27.40	306	P	P	13 50 19.9	+0.1
SONM				IAmb	IAmb	13 50 23.5	
	comp=Z,50nm,0.7s						
BOD	Bodaibo	27.80	330	*e*P	P	13 50 23.6	+0.5
BOD				pmax	pmax		
	comp=Z,124nm,1.3s						
SEY	Seymchan	28.06	12	P	P	13 50 27.4	+2.1
	comp=Z,9.2nm,0.6s,baz=195,slow=7.9,SNR=20						
LZH	Lanzhou	29.07	281	*e*P	P	13 50 35.0	+0.2
LZH				pP	pP	13 51 01.3	+2.4
LZH				sP	sP	13 51 15.6	+4.1
LZH				S	S	13 55 14.3	-4.3
LZH				pmax	pmax		
	comp=Z,81nm,1.2s						
LZH				pmax	pmax		
	comp=Z,150nm,4.9s						
LZH				LR	LR		
	comp=Z,350nm,14.6s						
LZH				LR	LR		
	comp=Z,360nm,15.2s						
LZH				LR	LR		
	comp=Z,470nm,15.4s						
GYA	Guiyang	29.86	261	⇓*i*P	P	13 50 41.4	-0.4
GYA				pP	pP	13 51 10.6	+4.5

GYA				S	**S**	**13 55 26.8**	**-4.2**
GYA				ScS	**ScS**	**14 01 00.2**	**-10**
GYA				pmax	pmax		
	comp=Z,89nm,1.1s						
ZAK	**Zakamensk**	**30.00**	**310**	*e*P	**P**	**13 50 42.3**	**-0.5**
ZAK				pmax	pmax		
	comp=Z,25nm,1.0s						
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.6s						
TLY	**Talaya**	**30.13**	**313**	P	**P**	**13 50 44.9**	**+1.0**
	comp=Z,31nm,0.7s,baz=311,slow=0.9,SNR=22						
TLY	**Talaya**	**30.13**	**313**	*e*P	**P**	**13 50 44.1**	**+0.2**
TLY				*e*		13 51 03.9	
TLY				pmax	pmax		
	comp=Z,83nm,0.8s						
TLY				MLR	MLR		
	comp=Z,405nm,15.0s						
TLY	**Talaya**	**30.13**	**313**	P	**P**	**13 50 44.0**	**+0.1**
TLY	**Talaya**	**30.13**	**313**	P	**P**	**13 50 44.8**	**+0.9**
TLY				IAmb	IAmb	13 50 47.6	
	comp=Z,37nm,0.8s						
QIZ	**Qiongzhong**	**31.40**	**246**	P	**P**	**13 50 55.4**	**+0.1**
QIZ				S	**S**	**13 55 56.1**	**+1.2**
QIZ				LR	LR		
	comp=Z,130nm,6.9s						
MOY	**Mondy**	**31.72**	**312**	*e*P	**P**	**13 50 57.8**	**-0.1**
MOY				pmax	pmax		
	comp=Z,26nm,1.7s						
GTA	**Gaotai**	**31.74**	**288**	⇑P	**P**	**13 50 57.8**	**-0.4**
GTA				pP	pP	13 51 23.6	+1.2
GTA				sP	sP	13 51 35.7	+0.7
GTA				PcP	**PcP**	**13 53 48.4**	**+1.2**
GTA				S	**S**	**13 55 57.6**	**-2.6**
GTA				ScP	**ScP**	**13 57 19.7**	**-0.8**
GTA				PcS	**PcS**	**13 57 32.2**	**+0.3**
GTA				pmax	pmax		
	comp=Z,15nm,1.0s						
GTA				pmax	pmax		
	comp=Z,130nm,5.1s						
GTA				LR	LR		
	comp=Z,110nm,12.0s						
GTA				LR	LR		
	comp=Z,200nm,12.4s						
GTA				LR	LR		
	comp=Z,170nm,12.7s						
KMI	**Kunming**	**33.62**	**262**	⇑P	**P**	**13 51 14.6**	**-0.3**
KMI				pP	pP	13 51 43.4	+4.0
KMI				sP	sP	13 51 53.3	+1.3
KMI				pmax	pmax		
	comp=Z,56nm,0.9s						
KMI				pmax	pmax		
	comp=Z,71nm,3.5s						
SLVN	**Son La**	**34.59**	**255**	P	**P**	**13 51 24.1**	**+0.9**
TIXI	**Tiksi**	**36.20**	**354**	P	**P**	**13 51 36.3**	**+0.1**
	comp=Z,24nm,0.8s,baz=142,slow=7.0,SNR=70						
TIXI	**Tiksi**	**36.20**	**354**	*c* *i*P	**P**	**13 51 36.5**	**+0.3**
TIXI	**Tiksi**	**36.20**	**354**	P	**P**	**13 51 36.4**	**+0.2**
TIXI				IAmb	IAmb	13 51 40.5	
	comp=Z,26nm,0.9s						
SIJI	**Sorong**	**37.54**	**194**	P	**P**	**13 51 46.6**	**-1.5**
	comp=Z,36nm,0.8s,baz=22,slow=8.9,SNR=8.3						
SMPI	**Sarmi**	**37.79**	**182**	P	**P**	**13 51 52.0**	**+1.7**
	comp=Z,16nm,2.2s						
GTOI	**Gorontalo**	**38.52**	**208**	P	**P**	**13 51 54.8**	**-1.6**
	comp=Z,17nm,1.0s						
FAKI	**Fak Fak**	**39.36**	**192**	P	**P**	**13 52 03.6**	**+0.2**
	comp=Z,1µmcomp=Z,156nm,0.9s						
CHTO	**Chiang Mai**	**39.87**	**256**	P	**P**	**13 52 06.2**	**-1.5**
CHTO				pmax	pmax		
	comp=Z,9.0nm,1.0s						
CHTO	**Chiang Mai**	**39.87**	**256**	P	**P**	**13 52 07.5**	**-0.1**
CHTO	**Chiang Mai**	**39.87**	**256**	P	**P**	**13 52 06.2**	**-1.5**
SANI	**Sanana**	**40.01**	**202**	P	**P**	**13 52 06.3**	**-2.5**
	comp=Z,46nm,0.8s						
DGZ	**Jazzator, Alta**	**40.04**	**307**	*c* *i*P	**P**	**13 52 10.5**	**+1.5**
DGZ				pmax	pmax		
	comp=Z,149nm,0.8s						
CMAR	**Chiang Mai Arr**	**40.06**	**255**	P	**P**	**13 52 09.5**	**+0.2**
	comp=Z,2.9nm,0.8s,baz=49,slow=6.4,SNR=22						
CMAR				PcP	**PcP**	**13 54 12.8**	**+0.8**
	comp=Z,3.1nm,0.9s,baz=6.0,slow=1.7,SNR=9.0						
CMAR	**Chiang Mai Arr**	**40.06**	**255**	P	**P**	**13 52 09.6**	**+0.3**
CMAR	**Chiang Mai Arr**	**40.06**	**255**	P	**P**	**13 52 09.6**	**+0.3**
WMQ	**Urumqi**	**40.25**	**298**	*e*P	**P**	**13 52 11.7**	**+1.1**
WMQ				pP	pP	13 52 36.8	+1.3
WMQ				pmax	pmax		
	comp=Z,72nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,440nm,3.6s						
MSAI	**Masohi**	**40.45**	**197**	P	**P**	**13 52 13.2**	**+0.8**
	comp=Z,11nm,1.0s						
LSA	**Lhasa**	**41.11**	**276**	P	**P**	**13 52 19.4**	**+1.1**
LSA	**Lhasa**	**41.11**	**276**	P	**P**	**13 52 18.0**	**-0.3**
LSA				pmax	pmax		
	comp=Z,57nm,0.9s						
LSA	**Lhasa**	**41.11**	**276**	P	**P**	**13 52 19.2**	**+0.8**
LSA	**Lhasa**	**41.11**	**276**	P	**P**	**13 52 18.0**	**-0.3**
LSA				IAmb	IAmb	13 52 21.7	
	comp=Z,57nm,0.9s						
BNDI	**Bandanaira**	**41.37**	**195**	P	**P**	**13 52 20.4**	**+0.4**
	comp=Z,649nm,0.9s						
ZAA0	**Zalesovo Array**	**41.74**	**313**	P	**P**	**13 52 23.1**	**+0.5**
ZALV	**Zalesovo Beam**	**41.74**	**313**	P	**P**	**13 52 23.0**	**+0.4**
	comp=Z,80nm,0.9s,baz=92,slow=6.6,SNR=135						
ZALV				PcP	**PcP**	**13 54 17.1**	**+0.1**
	comp=Z,9.9nm,0.7s,baz=110,slow=4.6,SNR=3.6						
ZALV	**Zalesovo Beam**	**41.74**	**313**	P	**P**	**13 52 23.2**	**+0.6**
ZALV	**Zalesovo Beam**	**41.74**	**313**	P	**P**	**13 52 23.2**	**+0.6**
ZALV				PcP	**PcP**	**13 54 17.2**	**+0.3**
ZSN	**Zaisan**	**41.85**	**304**	⇑*i*P	**P**	**13 52 24.8**	**+1.1**
	comp=Z,67nm,1.0s,baz=303						
ZSN	**Zaisan**	**41.85**	**304**	*c* *i*P	**P**	**13 52 24.7**	**+1.1**
ZSN				pmax	pmax		
	comp=Z,67nm,1.0s						
SHL	**Shillong**	**42.19**	**270**	P	**P**	**13 52 26.2**	**-0.7**
SHL				pmax	pmax		
	comp=Z,19nm,0.8s						
SHL	**Shillong**	**42.19**	**270**	P	**P**	**13 52 26.4**	**-0.4**
SHL	**Shillong**	**42.19**	**270**	P	**P**	**13 52 26.2**	**-0.7**
MK31	**Makanchi Array**	**43.67**	**303**	*c* *i*P	**P**	**13 52 39.1**	**+0.8**
MK31	**Makanchi Array**	**43.67**	**303**	P	**P**	**13 52 39.0**	**+0.6**
MK31				IAmb	IAmb	13 52 40.2	
	comp=Z,59nm,1.0s						
MKAR	**Makanchi Array**	**43.67**	**303**	P	**P**	**13 52 39.1**	**+0.8**
	comp=Z,26nm,0.6s,baz=88,slow=9.0,SNR=150						
MKAR				LR	LR	14 11 48.5	
	comp=Z,139nm,18.5s,baz=76,slow=37						
NRIK	**Noril'sk**	**43.73**	**336**	P	**P**	**13 52 38.9**	**+0.5**
	comp=Z,54nm,0.9s,baz=114,slow=9.1,SNR=46						
NRIK	**Noril'sk**	**43.73**	**336**	*c* *i*P	**P**	**13 52 38.6**	**+0.2**
NRIK				pmax	pmax		
	comp=Z,78nm,0.9s						
NRIK	**Noril'sk**	**43.73**	**336**	P	**P**	**13 52 39.2**	**+0.8**
NRIK				IAmb	IAmb	13 52 40.6	
	comp=Z,67nm,0.9s						
MAKZ	**Makanchi**	**43.88**	**303**	P	**P**	**13 52 40.7**	**+0.7**
MAKZ	**Makanchi**	**43.88**	**303**	P	**P**	**13 52 40.5**	**+0.5**
MAKZ				IAmb	IAmb	13 52 42.0	
	comp=Z,70nm,1.1s						
SEM	**Semipalatinsk**	**44.63**	**308**	⇑*i*P	**P**	**13 52 45.6**	**-0.7**
	comp=Z,27nm,0.8s,baz=308						
SEM	**Semipalatinsk**	**44.63**	**308**	*c* *i*P	**P**	**13 52 45.5**	**-0.7**
SEM				pmax	pmax		
	comp=Z,27nm,0.8s						
TAPN	**Taplejung**	**44.81**	**274**	*e*P	**P**	**13 52 48.3**	**+0.3**
	comp=Z,67nm,0.5s						
KAPI	**Kappang**	**44.95**	**209**	P	**P**	**13 52 48.3**	**-0.5**
	comp=Z,17nm,0.8s,baz=24,slow=6.2,SNR=7.9						
ODAN	**Odare**	**45.28**	**274**	*e*P	**P**	**13 52 51.9**	**+0.3**
	comp=Z,49nm,0.5s						
KURK	**Kurchatov**	**45.64**	**309**	*c* *i*P	**P**	**13 52 54.3**	**+0.4**
KURK				pmax	pmax		
	comp=Z,232nm,1.3s						
KURK	**Kurchatov**	**45.64**	**309**	P	**P**	**13 52 54.1**	**+0.3**
KURK	**Kurchatov**	**45.64**	**309**	P	**P**	**13 52 54.4**	**+0.6**
PMG	**Port Moresby**	**45.66**	**170**	P	**P**	**13 52 54.1**	**-0.2**
	comp=Z,7.2nm,0.4s,baz=31,slow=7.6,SNR=4.0						
KURBB	**Kurchatov Arra**	**45.71**	**309**	P	**P**	**13 52 54.8**	**+0.4**
	comp=Z,49nm,0.4s,baz=86,slow=8.0,SNR=448						
KURBB	**Kurchatov Arra**	**45.71**	**309**	P	**P**	**13 52 54.6**	**+0.2**
RAMN	**Ramite**	**45.88**	**274**	*e*P	**P**	**13 52 56.6**	**+0.2**
	comp=Z,86nm,0.6s						
JIRN	**Jiri**	**45.91**	**275**	*e*P	**P**	**13 52 57.5**	**+0.7**
	comp=Z,116nm,0.7s						
GUN	**Gumba**	**46.06**	**276**	*e*P	**P**	**13 52 58.6**	**+0.7**
	comp=Z,92nm,0.7s						
PDGK	**Podgornoye**	**46.21**	**298**	P	**P**	**13 52 58.7**	**+0.1**
SHLS	**Shalkode**	**46.27**	**298**	⇑*i*P	**P**	**13 52 57.3**	**-1.8**
	comp=Z,72nm,1.2s,baz=298						
SHLS	**Shalkode**	**46.27**	**298**	*c* *i*P	**P**	**13 52 57.2**	**-1.8**
SHLS				pmax	pmax		
	comp=Z,72nm,1.2s						
UZB	**Uzynbulak**	**46.58**	**298**	⇑*i*P	**P**	**13 53 02.0**	**+0.4**
	comp=Z,50nm,0.6s,baz=298						
UZB	**Uzynbulak**	**46.58**	**298**	*c* *i*P	**P**	**13 53 02.0**	**+0.4**
UZB				pmax	pmax		
	comp=Z,50nm,0.6s						
PKI	**Pulchoki**	**46.58**	**276**	*e*P	**P**	**13 53 02.3**	**+0.3**
	comp=Z,42nm,0.6s						
PKIN	**Phulchoki**	**46.59**	**276**	*e*P	**P**	**13 53 02.2**	**+0.2**
	comp=Z,42nm,0.6s						
KKN	**Kakani**	**46.60**	**276**	*e*P	**P**	**13 53 02.4**	**+0.4**
	comp=Z,59nm,0.6s						
TDK	**Taldyqorghan**	**46.63**	**301**	*e*P	**P**	**13 53 02.3**	**+0.5**
	baz=301						
TDK	**Taldyqorghan**	**46.63**	**301**	*e*P	**P**	**13 53 02.2**	**+0.5**
KPKS	**Kokpek**	**46.75**	**299**	⇑*i*P	**P**	**13 53 03.3**	**+0.5**
	comp=Z,48nm,1.0s,baz=299						
KPKS	**Kokpek**	**46.75**	**299**	*c* *i*P	**P**	**13 53 03.3**	**+0.5**
KPKS				pmax	pmax		
	comp=Z,48nm,1.0s						
DMN	**Daman**	**46.81**	**276**	*e*P	**P**	**13 53 04.1**	**+0.4**
	comp=Z,50nm,0.7s						
GKN	**Gorkha**	**47.03**	**277**	*e*P	**P**	**13 53 05.7**	**+0.5**
	comp=Z,263nm,1.0s						
SATY	**Saty**	**47.04**	**298**	⇑*i*P	**P**	**13 53 05.8**	**+0.6**
	comp=Z,22nm,0.6s,baz=298						
SATY	**Saty**	**47.04**	**298**	*c* *i*P	**P**	**13 53 05.7**	**+0.6**
SATY				pmax	pmax		
	comp=Z,22nm,0.6s						
PRZ	**Przheval'sk**	**47.18**	**298**	P	**P**	**13 53 07.4**	**+1.1**
PRZ				pmax	pmax		
	comp=Z,238nm,0.9s						
PRZ	**Przheval'sk**	**47.18**	**298**	P	**P**	**13 53 07.4**	**+1.1**
DANN	**Dangsing**	**47.59**	**277**	*e*P	**P**	**13 53 10.6**	**+0.8**
	comp=Z,353nm,0.8s						
EDFI	**Ende, Flores**	**47.69**	**205**	P	**P**	**13 53 10.3**	**0.0**
	comp=Z,8.6nm,1.0s						
SOEI	**Soe**	**47.83**	**201**	P	**P**	**13 53 11.6**	**+0.2**
	comp=Z,90nm,1.1s						
CHKK	**Chushkaly**	**47.87**	**300**	⇑*i*P	**P**	**13 53 11.9**	**+0.6**
	baz=300						
J20K	**Nowinta River**	**47.88**	**33**	P	**P**	**13 53 13.6**	**+2.5**
	baz=267						
J20K	**Nowinta River**	**47.88**	**33**	P	**P**	**13 53 13.4**	**+2.3**
KOLN	**Koldanda**	**47.96**	**277**	*e*P	**P**	**13 53 12.9**	**+0.4**
	comp=Z,76nm,0.8s						
MDOK	**Medeo**	**47.98**	**299**	*i* P	**P**	**13 53 13.6**	**+1.1**
	baz=299						
MDOK	**Medeo**	**47.98**	**299**	P	**P**	**13 53 13.5**	**+1.1**
AAA	**Alma-Ata**	**48.07**	**299**	*e*P	**P**	**13 53 13.2**	**+0.2**
	baz=299						
AAA	**Alma-Ata**	**48.07**	**299**	*e*P	**P**	**13 53 13.2**	**+0.2**
IMAR	**Indian Mountai**	**48.17**	**30**	P	**P**	**13 53 15.7**	**+2.4**
PYUN	**Piuthan**	**48.31**	**278**	*e*P	**P**	**13 53 16.1**	**+0.9**
	comp=Z,267nm,0.8s						
KUU	**Kurty**	**48.31**	**300**	⇑*i*P	**P**	**13 53 15.0**	**+0.2**
	comp=Z,173nm,1.3s,baz=300						
KUU	**Kurty**	**48.31**	**300**	*c* *i*P	**P**	**13 53 15.0**	**+0.2**
KUU				pmax	pmax		
	comp=Z,173nm,1.3s						
BATI	**Baumata**	**48.43**	**202**	P	**P**	**13 53 15.5**	**-0.4**
	comp=Z,61nm,0.9s,baz=198,slow=7.5,SNR=5.5						
BATI	**Baumata**	**48.43**	**202**	P	**P**	**13 53 15.8**	**-0.1**
	comp=Z,26nm,1.3s						
H21K	**Melozitna Rive**	**48.53**	**31**	P	**P**	**13 53 18.6**	**+2.5**
	baz=267						
CHUM	**Lake Minchumin**	**48.67**	**33**	P	**P**	**13 53 20.0**	**+2.9**
	baz=269						
KDAK	**Kodiak Island**	**48.68**	**41**	P	**P**	**13 53 18.2**	**+0.8**
	comp=Z,11nm,0.8s,baz=286,slow=6.5,SNR=4.3						
ULHL	**Ulahol**	**48.79**	**298**	P	**P**	**13 53 21.7**	**+3.0**
	SNR=7.2						
I21K	**Tanana**	**48.85**	**31**	P	**P**	**13 53 21.3**	**+2.7**
	baz=268						
HNR	**Honiara**	**48.96**	**153**	LR	LR	14 11 58.6	
	comp=Z,91nm,21.8s,baz=17,slow=33						
TKM2	**Tokmak 2**	**49.08**	**299**	P	**P**	**13 53 22.4**	**+1.4**
	SNR=12						
TKM2	**Tokmak 2**	**49.08**	**299**	P	**P**	**13 53 22.3**	**+1.4**
MLY	**Manley**	**49.38**	**32**	P	**P**	**13 53 24.9**	**+2.3**
	baz=269,SNR=6.5						
MLY	**Manley**	**49.38**	**32**	P	**P**	**13 53 24.6**	**+2.0**
MLY				PcP	**PcP**	**13 54 46.0**	**+2.6**
BRZS	**Berezniki**	**49.51**	**308**	⇑*i*P	**P**	**13 53 23.8**	**-0.1**
	comp=Z,38nm,0.6s,baz=308						
BRZS	**Berezniki**	**49.51**	**308**	*c* *i*P	**P**	**13 53 23.7**	**-0.1**
BRZS				pmax	pmax		
	comp=Z,38nm,0.6s						
KBK	**Karagaybulak**	**49.60**	**299**	P	**P**	**13 53 26.0**	**+1.1**
	SNR=140						
SGDS	**Sogindy**	**49.62**	**300**	⇑*i*P	**P**	**13 53 25.4**	**+0.5**
	comp=Z,25nm,0.8s,baz=300						
BTLS	**Baital**	**49.64**	**302**	⇑*i*P	**P**	**13 53 25.3**	**+0.4**
	comp=Z,47nm,0.6s,baz=302						
BTLS	**Baital**	**49.64**	**302**	*c* *i*P	**P**	**13 53 25.2**	**+0.4**
BTLS				pmax	pmax		
	comp=Z,47nm,0.6s						
CHMS	**Chumysh**	**49.66**	**299**	P	**P**	**13 53 25.9**	**+0.8**
	SNR=45						
KSH	**Kashi**	**49.74**	**294**	P	**P**	**13 53 29.9**	**+4.0**
KSH				pP	pP	13 53 53.8	+2.2
KSH				sP	sP	13 54 09.2	+5.4
KSH				PcP	**PcP**	**13 54 47.5**	**+2.2**
KSH				SS	SKiKP	14 03 59.0	-55
KSH				pmax	pmax		
	comp=Z,57nm,0.8s						
USP	**Ospenovka**	**49.76**	**300**	P	**P**	**13 53 26.9**	**+1.0**
	SNR=98						
H23K	**Yukon River**	**49.88**	**31**	P	**P**	**13 53 29.2**	**+2.8**
	baz=270						
AAK	**Ala-Archa**	**49.93**	**299**	P	**P**	**13 53 28.3**	**+1.0**
	SNR=94						
AAK	**Ala-Archa**	**49.93**	**299**	*i* P	**P**	**13 53 28.2**	**+0.8**
	SNR=10						
AAK	**Ala-Archa**	**49.93**	**299**	*c* *i*P	**P**	**13 53 28.1**	**+0.8**
AAK				pmax	pmax		
	comp=Z,216nm,0.8s						
AAK	**Ala-Archa**	**49.93**	**299**	P	**P**	**13 53 28.2**	**+1.0**
AAK	**Ala-Archa**	**49.93**	**299**	P	**P**	**13 53 28.4**	**+1.0**
TOLK	**Toolik Lake Re**	**49.95**	**27**	P	**P**	**13 53 28.7**	**+1.7**
	baz=267						
TOLK	**Toolik Lake Re**	**49.95**	**27**	P	**P**	**13 53 28.7**	**+1.7**
I23K	**Minto, Yukon-K**	**49.96**	**31**	P	**P**	**13 53 29.6**	**+2.7**
	baz=270						
UCH	**Uchtor**	**50.03**	**298**	P	**P**	**13 53 29.9**	**+1.5**
	SNR=36						
NEA2	**Nenana**	**50.09**	**32**	P	**P**	**13 53 30.5**	**+2.5**
	baz=271,SNR=5.4						
PMR	**Palmer**	**50.18**	**36**	P	**P**	**13 53 30.1**	**+1.4**
	baz=273						
EKS2	**Erkin-Say**	**50.44**	**299**	P	**P**	**13 53 31.9**	**+0.8**
	SNR=56						
MDM	**Murphy Dome**	**50.44**	**32**	P	**P**	**13 53 31.9**	**+1.2**
MDM				IAmb	IAmb	13 54 09.4	
	comp=Z,50nm,1.2s						
BRVK	**Borovoye**	**50.45**	**313**	*c* *i*P	**P**	**13 53 30.9**	**0.0**
BRVK				pmax	pmax		
	comp=Z,33nm,1.0s						
BRVK	**Borovoye**	**50.45**	**313**	P	**P**	**13 53 31.4**	**+0.5**
BRVK	**Borovoye**	**50.45**	**313**	P	**P**	**13 53 31.5**	**+0.7**
BRVK				IAmb	IAmb	13 53 38.3	
	comp=Z,31nm,0.9s						
H24K	**Noodor Dome**	**50.57**	**30**	P	**P**	**13 53 34.3**	**+2.7**
	baz=271,SNR=5.0						
TCOL	**CIGO, UAF Yank**	**50.60**	**32**	P	**P**	**13 53 34.1**	**+2.3**
	baz=272						
COLA	**College**	**50.61**	**32**	⇑*e*P	**P**	**13 53 33.6**	**+1.8**
COLA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
COLA	**College**	**50.61**	**32**	P	**P**	**13 53 34.1**	**+2.3**
	baz=272						
AML	**Almayashu**	**50.64**	**298**	P	**P**	**13 53 34.7**	**+1.8**
	SNR=104						
AML	**Almayashu**	**50.64**	**298**	*i* P	**P**	**13 53 34.5**	**+1.6**
	SNR=107						
AML	**Almayashu**	**50.64**	**298**	P	**P**	**13 53 34.8**	**+1.8**
POKR	**Poker Plat Res**	**50.77**	**31**	P	**P**	**13 53 35.9**	**+2.8**
	baz=272,SNR=6.6						
POKR	**Poker Plat Res**	**50.77**	**31**	P	**P**	**13 53 33.6**	**+0.4**
POKR				IAmb	IAmb	13 54 12.7	
	comp=Z,47nm,0.9s						
HDA	**Harding Lake**	**51.02**	**32**	P	**P**	**13 53 36.2**	**+1.3**
	baz=273						
ILAR	**Eielson Array**	**51.02**	**32**	P	**P**	**13 53 35.2**	**+0.2**
	comp=Z,4.0nm,0.9s,baz=273,slow=6.4,SNR=30						
ILAR	**Eielson Array**	**51.02**	**32**	P	**P**	**13 53 36.4**	**+1.4**
ILAR	**Eielson Array**	**51.02**	**32**	P	**P**	**13 53 36.4**	**+1.4**
PRP	**Porcupine Dome**	**51.56**	**31**	P	**P**	**13 53 41.3**	**+2.1**
	baz=273						
BMAR	**Burnt Mountain**	**51.83**	**28**	P	**P**	**13 53 43.8**	**+2.8**
HARP	**HAARP**	**51.98**	**35**	P	**P**	**13 53 44.9**	**+2.7**
	baz=276						
KPJI	**Karang Pucung**	**52.01**	**220**	P	**P**	**13 53 43.1**	**+0.2**
	comp=Z,22nm,1.7s						
DZA	**Taraz**	**52.10**	**300**	*e*P	**P**	**13 53 43.0**	**-0.4**
	baz=300						
DZA	**Taraz**	**52.10**	**300**	*e*P	**P**	**13 53 43.0**	**-0.4**
KLSI		**52.18**	**227**	P	**P**	**13 53 45.3**	**+1.1**
	comp=Z,9.6nm,1.9s						
LHSI	**Lahat**	**52.22**	**229**	P	**P**	**13 53 44.0**	**-0.5**
	comp=Z,3µmcomp=Z,41nm,0.9s						
GSI	**Gunungsitoli**	**52.23**	**238**	P	**P**	**13 53 45.8**	**+1.2**
	comp=Z,37nm,1.2s						
GSI	**Gunungsitoli**	**52.23**	**238**	P	**P**	**13 53 45.5**	**+1.0**
GSI				IAmb	IAmb	13 53 57.7	
	comp=Z,23nm,0.8s						
LEM	**Lembang**	**52.29**	**222**	P	**P**	**13 53 45.2**	**+0.1**
	comp=Z,15nm,0.4s,baz=16,slow=11,SNR=4.5						
SCRK	**Sand Creek**	**52.34**	**33**	P	**P**	**13 53 46.4**	**+1.4**
	baz=276						
SCRK	**Sand Creek**	**52.34**	**33**	P	**P**	**13 53 46.4**	**+1.4**
SCRK				IAmb	IAmb	13 54 23.6	
	comp=Z,36nm,1.1s						
MDSI	**Maura Dua**	**52.35**	**227**	P	**P**	**13 53 45.6**	**+0.2**
	comp=Z,20nm,1.0s						
J26L	**Joseph Creek**	**52.47**	**32**	P	**P**	**13 53 46.9**	**+1.0**
	baz=276						
KK31	**Karatay Array**	**52.61**	**300**	P	**P**	**13 53 47.2**	**0.0**
KKAR	**Karatay Array**	**52.61**	**300**	P	**P**	**13 53 47.8**	**+0.7**
KKAR	**Karatay Array**	**52.61**	**300**	P	**P**	**13 53 47.8**	**+0.7**
L26K	**Log Cabin Wild**	**52.74**	**34**	P	**P**	**13 53 50.1**	**+2.3**
	baz=277						
M26K	**Nabesna, AK**	**52.98**	**35**	P	**P**	**13 53 51.0**	**+1.4**
	baz=278						
BRLS	**Boroldav**	**53.11**	**300**	*e*P	**P**	**13 53 52.7**	**+1.8**
	baz=300						
BRLS	**Boroldav**	**53.11**	**300**	*e*P	**P**	**13 53 52.6**	**+1.8**
MCARA	**McCarthy VSAT**	**53.12**	**36**	P	**P**	**13 53 53.0**	**+2.4**
	baz=279						
IUG	**Iuzhnay**	**53.24**	**299**	⇑*i*P	**P**	**13 53 52.9**	**+1.0**
	baz=299						
IUG	**Iuzhnay**	**53.24**	**299**	*c* *i*P	**P**	**13 53 52.9**	**+1.0**
BTK	**Batken**	**53.34**	**297**	P	**P**	**13 53 53.5**	**+0.9**
BTK				pmax	pmax		
	comp=Z,45nm,1.5s						
BTK	**Batken**	**53.34**	**297**	P	**P**	**13 53 53.5**	**+0.9**
BTK				IAmb	IAmb	13 53 58.0	
	comp=Z,45nm,1.4s						
L27K	**Beaver Creek,**	**53.42**	**34**	P	**P**	**13 53 55.3**	**+2.5**
	baz=278						
L27K	**Beaver Creek,**	**53.42**	**34**	P	**P**	**13 53 55.3**	**+2.5**
L27K				IAmb	IAmb	13 54 32.1	
	comp=Z,35nm,1.2s						
BCAR	**Beaver Creek A**	**53.44**	**34**	P	**P**	**13 53 55.1**	**+2.1**
EGAK	**Eagle**	**53.47**	**32**	P	**P**	**13 53 54.2**	**+1.2**
	baz=278						
EGAK	**Eagle**	**53.47**	**32**	P	**P**	**13 53 54.2**	**+1.2**
EGAK				IAmb	IAmb	13 54 32.2	
	comp=Z,18nm,1.1s						
M27K	**Edge Creek, AK**	**53.50**	**35**	P	**P**	**13 53 55.8**	**+2.3**
	baz=279						
NIL	**Nilore**	**53.80**	**288**	P	**P**	**13 53 55.7**	**-0.3**
NIL				pmax	pmax		
	comp=Z,53nm,1.0s						
NIL	**Nilore**	**53.80**	**288**	P	**P**	**13 53 57.0**	**+1.0**
NIL	**Nilore**	**53.80**	**288**	P	**P**	**13 53 55.7**	**-0.3**
GAR	**Garm**	**54.06**	**296**	P	**P**	**13 53 58.6**	**+0.6**
YUK3	**Moose Creek**	**54.26**	**35**	P	**P**	**13 54 01.0**	**+1.8**
	baz=280						
CHGR	**Chuyangaron**	**55.03**	**296**	P	**P**	**13 54 05.5**	**+0.6**
EPYK	**Eagle Plains**	**55.03**	**29**	P	**P**	**13 54 06.6**	**+2.2**
	baz=280						
EPYK	**Eagle Plains**	**55.03**	**29**	P	**P**	**13 54 06.6**	**+2.2**
SVE	**Sverdlovsk**	**55.14**	**319**	⇓*e*P	**P**	**13 54 06.3**	**+1.0**
SVE				*e*S	**S**	**14 01 44.3**	**+4.7**
SVE				pmax	pmax		
	comp=Z,77nm,0.9s						
FITZ	**Fitzroy Crossi**	**55.46**	**197**	P	**P**	**13 54 08.7**	**+0.8**
	comp=Z,35nm,0.8s,baz=13,slow=12,SNR=14						
FITZ	**Fitzroy Crossi**	**55.46**	**197**	P	**P**	**13 54 07.5**	**-0.4**
INK	**Inuvik**	**55.87**	**27**	P	**P**	**13 54 11.7**	**+1.5**
	comp=Z,5.5nm,0.9s,baz=286,slow=7.6,SNR=11						
INK	**Inuvik**	**55.87**	**27**	P	**P**	**13 54 11.8**	**+1.5**
	baz=282						
INK	**Inuvik**	**55.87**	**27**	P	**P**	**13 54 11.6**	**+1.3**
WRA	**Warramunga Arr**	**55.87**	**186**	P	**P**	**13 54 10.8**	**0.0**
	comp=Z,21nm,0.8s,baz=2.8,slow=7.4,SNR=14						
WRA	**Warramunga Arr**	**55.87**	**186**		**P**	**13 54 10.9**	**0.0**
CTA	**Charters Tower**	**56.09**	**173**	P	**P**	**13 54 12.8**	**+0.4**
	comp=Z,7.5nm,0.9s,baz=351,slow=11,SNR=6.6						
CTAO	**Charters Tower**	**56.09**	**173**	P	**P**	**13 54 10.1**	**-2.3**
CTAO				pmax	pmax		
	comp=Z,12nm,1.0s						
CTAO	**Charters Tower**	**56.09**	**173**	P	**P**	**13 54 10.1**	**-2.3**
ARU	**Arti**	**56.35**	**319**	*c* *i*P	**P**	**13 54 14.4**	**+0.5**
ARU						13 55 06.1	
ARU						13 56 19.3	
ARU				PPP	PPP	13 57 39.0	
ARU				S	**S**	**14 01 58.5**	**+2.8**
ARU				SS	**SS**	**14 05 49.3**	**+5.7**
ARU				pmax	pmax		
	comp=Z,90nm,0.7s						
ARU	**Arti**	**56.35**	**319**	P	**P**	**13 54 14.5**	**+0.5**
HYB	**Hyderabad**	**56.97**	**268**	*i* P	**P**	**13 54 18.0**	**-0.9**
A36M	**Sachs Harbour**	**57.68**	**22**	P	**P**	**13 54 25.1**	**+2.1**
	baz=287						
A36M	**Sachs Harbour**	**57.68**	**22**	IAmb	IAmb	13 55 02.5	
	comp=Z,45nm,1.1s						
A36M				PcP	**PcP**	**13 55 14.0**	**-0.8**
AB31	**Akbulak array**	**57.70**	**310**	P	**P**	**13 54 23.7**	**+0.2**
ABKAR	**Akbulak array**	**57.70**	**310**	P	**P**	**13 54 23.9**	**+0.4**
ABKAR	**Akbulak array**	**57.70**	**310**	P	**P**	**13 54 24.2**	**+0.6**
ABKAR				IAmb	IAmb	13 54 25.1	
	comp=Z,50nm,0.9s						
P33M	**Teslin, Yukon**	**58.25**	**36**	P	**P**	**13 54 28.8**	**+1.4**
	baz=288						
ASAR	**Alice Springs**	**59.60**	**186**	P	**P**	**13 54 37.1**	**+0.2**
	comp=Z,10nm,0.9s,baz=7.0,slow=6.5,SNR=8.9						
TGTN	**Hyland Airport**	**59.92**	**34**	P	**P**	**13 54 41.8**	**+3.0**
	baz=290						
POO	**Poona**	**60.20**	**272**	*e*P	**P**	**13 54 39.0**	**-2.4**
PSA00	**Pilbara Seismi**	**60.31**	**202**	P	**P**	**13 54 42.3**	**+0.5**
PSA00				IAmb	IAmb	13 54 43.3	
	comp=Z,16nm,1.1s						
PSA00	**Pilbara Seismi**	**60.31**	**202**	P	**P**	**13 54 39.9**	**-1.9**
PSA00				IAmb	IAmb	13 54 43.4	
	comp=Z,32nm,1.1s						
KIRV	**Kirov**	**60.36**	**323**	*c* *i*P	**P**	**13 54 42.3**	**+0.6**
PRGR	**Permogore**	**60.99**	**327**	*e*P	**P**	**13 54 46.6**	**+0.7**
PRGR				*e*S	**S**	**14 03 02.0**	**+6.4**
PRGR				pmax	pmax		
	comp=Z,50nm,0.6s						
SPA0	**Spitsbergen Ar**	**61.32**	**349**	*e*P	**P**	**13 54 50.0**	**+2.0**
SPB2	**Spitsbergen Ar**	**61.32**	**349**	P	**P**	**13 54 48.1**	**+0.1**
SPITS	**Spitsbergen Ar**	**61.32**	**349**	P	**P**	**13 54 49.5**	**+1.5**
SPITS				pmax	pmax		
	comp=Z,43nm,1.0s						
EUNU	**Eureka**	**61.40**	**8**	P	**P**	**13 54 49.4**	**+0.8**
HRA	**Herat**	**61.83**	**294**	P	**P**	**13 54 52.3**	**-0.1**
HRA				IAmb	IAmb	13 54 57.6	
	comp=Z,22nm,0.7s						
EIDS	**Eidsvold**	**61.93**	**169**	P	**P**	**13 54 50.2**	**-2.4**
EIDS				IAmb	IAmb	13 54 55.4	
	comp=Z,19nm,1.1s						
NOR	**Nord**	**62.02**	**356**	⇑*i*P	**P**	**13 54 52.9**	**+0.2**
NOR				IAmb	IAmb	13 54 54.3	
	comp=Z,22nm,1.4s						
HSPB	**Hornsund (broa**	**62.22**	**348**	*e*P	**P**	**13 54 55.3**	**+1.4**
LVZ	**Lovozero**	**62.57**	**336**	⇑*e*P	**P**	**13 54 57.1**	**+0.6**
LVZ				pmax	pmax		
	comp=Z,159nm,2.9s						
LVZ	**Lovozero**	**62.57**	**336**	P	**P**	**13 54 56.6**	**+0.1**
LVZ				IAmb	IAmb	13 54 59.4	
	comp=Z,30nm,0.8s						
APA	**Apatity**	**63.15**	**336**	⇓*i*P	**P**	**13 54 58.3**	**-2.0**
APA				*i* *PP	**pP**	**13 55 26.3**	**-0.8**

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APA                                 i              13 55 30.0
APA                                  pmax   pmax
       comp=Z,8.0nm,1.0s
BJO1  Bjornoya          63.17 345  eP      P      13 55 01.0 +0.7
GEYT  Alibeck           63.29 299   P      P      13 55 02.4 +0.6
       comp=Z,28nm,0.9s,baz=195,slow=2.3,SNR=22
GEYT                                LR     LR     14 23 33.7
       comp=Z,62nm,19.5s,baz=120,slow=37
GYA0B ALIBECK ARRAY     63.29 299   P      P      13 55 00.6 -1.2
GYA0B                               IAmb   IAmb   13 55 07.2
       comp=Z,34nm,0.8s
RES   Resolute Bay      63.91  14   P      P      13 55 05.7 +0.5
       comp=Z,7.6nm,0.9s,baz=323,slow=5.0,SNR=9.1
KLMR  Klimovskoe        64.00 328  eP      P      13 55 02.6 -3.4
KLMR                               e              13 57 24.1
KLMR                                pmax   pmax
       comp=Z,57nm,0.7s
KLMR  Klimovskoe        64.00 328  eP      P      13 55 02.6 -3.4
KLMR                                AMP           13 55 07.2
       comp=Z,57nm,0.7s
KLMR                               ePP     PP     13 57 24.1 -3.4
HAMF  Hammerfest        64.41 341  eP      P      13 55 08.9 +0.4
ARA0  ARCESS Array S    64.55 339  eP      P      13 55 10.3 +0.8
ARCES ARCESS Array B    64.55 339   P      P      13 55 10.2 +0.8
       comp=Z,31nm,0.8s,baz=52,slow=7.8,SNR=48
ARCES ARCESS Array B    64.55 339   P      P      13 55 10.3 +0.8
ARCES                               IAmb   IAmb   13 55 11.3
       comp=Z,32nm,0.8s
KTK1  Kautokeino        65.52 339  eP      P      13 55 16.5 +0.8
JETT  Jettan, Norway    65.97 340  eP      P      13 55 20.0 +1.4
TRO   Tromso            66.31 341  eP      P      13 55 20.8  0.0
NEEM  North Greenlan    66.63   3  i P     P      13 55 23.2 +0.1
DAG   Danmarks Havn     66.71 355⇑iP      P      13 55 23.7 +0.5
DAG                                 IAmb   IAmb   13 55 24.9
       comp=Z,26nm,1.0s
FORT  Forrest           67.34 191   P      P      13 55 28.5 +0.8
FORT                                IAmb   IAmb   13 55 29.4
       comp=Z,48nm,0.8s
MOS   Moscow            67.37 323  eP      P      13 55 27.3 -0.4
MOS                                e              13 57 55.4
MOS                                eS      S      14 04 13.0 -1.4
MOS                                 pmax   pmax
       comp=Z,91nm,1.0s
MOS                                 pmax   pmax
       comp=Z,100nm,1.1s
AFI   Afiamalu          67.41 128   LR     LR     14 27 12.4
       comp=Z,24nm,18.0s,baz=331,slow=38
STKA  Stephens Creek    67.52 178   P      P      13 55 29.4 +0.6
       comp=Z,9.1nm,0.8s,baz=360,slow=7.0,SNR=6.4
STKA  Stephens Creek    67.52 178⇓eP      P      13 55 29.3 +0.5
VRH   Novokhopyorsk     67.55 318  eP      P      13 55 28.4 -0.5
VRH                                 pmax   pmax
       comp=Z,100nm,0.7s
MAK   Makhachkala       68.15 308  eP      P      13 55 31.0 -1.8
MAK                                e*PP    PcP    13 55 58.5 +0.4
MAK                                e*SP    sP     13 56 11.0 -0.8
MAK                                eS      S      14 04 23.5 -0.7
MAK                                e*SS    sS     14 05 10.7 -0.6
MAK                                 pmax   pmax
       comp=Z,39nm,0.4s
MAK                                 MLR    MLR
       comp=Z,127nm,16.0s
OBN   Obninsk           68.21 323c iP      P      13 55 33.2 +0.2
OBN                                 S      S      14 04 23.0 -1.4
OBN                                 pmax   pmax
       comp=Z,54nm,0.6s
OBN                                 MLR    MLR
       comp=Z,104nm,15.0s
LPSR  Galich'ya Gora    68.33 320  eP      P      13 55 33.8  0.0
LPSR                                pmax   pmax
       comp=Z,110nm,0.8s
STEI  Steigen           68.46 340  eP      P      13 55 35.0 +0.7
PUL   Pulkovo           68.47 329deP      P      13 55 35.5 +1.0
PUL                                 pmax   pmax
       comp=Z,92nm,0.7s
BBOO  Buckleboo         68.53 183   P      P      13 55 33.0 -2.1
LOF   Lofoten           68.77 341  eP      P      13 55 37.3 +1.1
FAUS  Fauske            68.83 340  eP      P      13 55 37.3 +0.7
VSR   Storozhevoye      68.92 319  eP      P      13 55 37.5  0.0
VSR                                 pmax   pmax
       comp=Z,90nm,0.8s
VORD  Divnogorie        68.99 318  eP      P      13 55 37.9  0.0
VORD                                pmax   pmax
       comp=Z,40nm,0.6s
GROC  Groznyy           69.12 309  eP      P      13 55 36.9 -2.0
GROC                               e              13 55 59.1
GROC                               e*PP    PcP    13 56 00.7 -1.4
GROC                               e*SP    sP     13 56 12.8 -5.1
GROC                                pmax   pmax
       comp=Z,29nm,0.5s
FIA1  FINESS Array S    69.18 332   P      P      13 55 39.3 +0.4
FINES FINESS Array B    69.18 332   P      P      13 55 39.3 +0.4
       comp=Z,75nm,0.9s,baz=79,slow=6.1,SNR=101
FINES                               PP     PP     13 58 13.6 +1.1
       comp=Z,4.5nm,0.6s,baz=36,slow=10,SNR=3.4
FINES                               LR     LR     14 26 52.0
       comp=Z,78nm,19.3s,baz=65,slow=36
JLN   Jalan Bani Buh    69.92 283   P      P      13 55 44.6 +0.5
MOR8  Moi Rana          69.92 339  eP      P      13 55 43.0 -0.5
WBK   Wadi Bani Khal    70.03 284   P      P      13 55 45.9 +1.1
KONS  Konsvik           70.06 340  eP      P      13 55 45.2 +1.0
STOK  Stokkvaagen       70.21 340  eP      P      13 55 45.9 +0.8
BIDO  Bidbid            70.22 285   P      P      13 55 47.5 +1.5
BANOM Banah             70.40 288   P      P      13 55 47.9 +0.9
BANOM Banah             70.40 288   P      P      13 55 48.0 +0.9
B08A  Colville Reser    70.43  44   P      P      13 55 47.0 +0.1
SHME  Shamm             70.45 288  i P     P      13 55 48.0 +0.7
       SNR=15
SHME  Shamm             70.45 288   P      P      13 55 48.1 +0.7
       SNR=15
SMDO  Samad             70.52 285   P      P      13 55 49.0 +1.1
ZEI   Tsey              70.53 309  eP      P      13 55 47.1 -0.7
ZEI                                 pmax   pmax
       comp=Z,10.0nm,1.0s
KBZ   Khabaz            70.67 310   P      P      13 55 49.2 +0.9
       comp=Z,53nm,0.9s,baz=51,slow=3.1,SNR=106
KIV   Kislovodsk        70.68 311  ⇑P      P      13 55 50.9 +2.4
KIV   Kislovodsk        70.68 311  i P     P      13 55 49.3 +0.7
       SNR=26
KIV   Kislovodsk        70.68 311  eP      P      13 55 49.4 +0.9
KIV                                 pmax   pmax
       comp=Z,120nm,1.0s
KIV                                 MLR    MLR
       comp=Z,52nm,18.0s
KIV   Kislovodsk        70.68 311   P      P      13 55 48.0 -0.5
MDH   Madha             70.72 288   P      P      13 55 49.1 +0.1
VSU   Vasula            70.74 329  eP      P      13 55 49.4 +0.9
VSU   Vasula            70.74 329c iP      P      13 55 48.7 +0.2
MASF  Masafi            70.79 288   P      P      13 55 50.4 +0.9
MSFE  Esma-Masafi       70.80 288   P      P      13 55 50.0 +0.5
JMDO  Jabal Madar       70.84 284   P      P      13 55 49.7  0.0
       SNR=7.6
UOSS  Minazif           70.98 287   P      P      13 55 50.9 +0.4
UOSS  Minazif           70.98 287   P      P      13 55 49.7 -0.8
NEY   Neytrino          71.03 310⇓eP      P      13 55 52.6 +1.8
NEY                                 pmax   pmax
       comp=Z,6.0nm,0.9s
HATD  Hatta, Dubai      71.09 287   P      P      13 55 51.7 +0.5
HATD                               i P     PcP    13 55 51.9  -19
       SNR=6.5
HATD  Hatta, Dubai      71.09 287   P      P      13 55 52.2 +1.0
       SNR=6.5
SOHO  SOHO              71.14 286  i P     P      13 55 51.9 +0.3
       SNR=7.6
ASHO  Ashiyiah          71.23 287  i P     P      13 55 52.6 +0.5
       SNR=7.0
ASHO  Ashiyiah          71.23 287   P      P      13 55 52.5 +0.5
       SNR=7.0
BSY   Bisya             71.35 285   P      P      13 55 53.6 +0.8
       SNR=8.4
GNI   Garni             71.36 306   P      P      13 55 54.3 +1.5
GNI   Garni             71.36 306c iP      P      13 55 54.3 +1.5
GNI                                 pmax   pmax
       comp=Z,63nm,1.7s
NAZ   Nazwa, Dubai      71.37 288   P      P      13 55 53.2 +0.3
CAN   Canberra          71.44 172   P      P      13 55 51.7 -1.2
CAN                                 pmax   pmax
       comp=Z,141nm,2.0s
CAN   Canberra          71.44 172   P      P      13 55 51.7 -1.2
CAN                                 IAmb   IAmb   13 56 19.8
       comp=Z,141nm,2.0s
AKH   Akhalkalaki       71.51 308  ⇓P      P      13 55 55.5 +1.8
FAQ   Al Faqa, Dubai    71.56 287   P      P      13 55 54.1 +0.1
CHVG  Ch'k'valeri       71.70 310  ⇓P      P      13 55 56.2 +1.6
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NEW   Newport           71.72  43   P      P      13 55 55.9 +1.2
       baz=304
SUMG  Summit            71.73 359  i P     P      13 55 55.6 +0.8
MTSE  Matsula           71.78 330  eP      P      13 55 55.7 +1.0
ALNE  Al Ain            71.79 287   P      P      13 55 55.9 +0.4
ALNE  Al Ain            71.79 287   P      P      13 55 56.1 +0.6
       SNR=6.2
ASUD  Al Ashush, Dub    71.82 288  i P     P      13 55 56.3 +0.7
       SNR=6.2
ASUD  Al Ashush, Dub    71.82 288   P      P      13 55 56.6 +1.0
       SNR=6.2
NSS   Namsos            71.83 339  eP      P      13 55 55.3 +0.3
L04D  Klamath Falls     71.94  51   P      P      13 55 58.3 +2.1
       baz=302
J05D  Fort Rock, OR     72.03  49   P      P      13 55 59.1 +2.3
       baz=303
N02D  Trinity Center    72.35  52   P      P      13 56 00.9 +2.3
       baz=302
M04C  Macdoel           72.46  51   P      P      13 56 01.8 +2.5
       baz=303
BATM  Batumi            72.55 309  ⇑P      P      13 56 02.2 +2.6
BCA   Borcka            72.68 309  ⇓P      P      13 56 01.6 +1.1
MNK   Minsk             72.68 326  i P     P      13 56 00.4 +0.2
MNK                                i              13 56 17.1
MNK                                i *PP   pP     13 56 28.1 +0.5
MNK                                i *SP   sP     13 56 40.3 +0.9
MNK                                i              13 58 43.1
MNK                                i S     S      14 05 16.9 +0.4
MNK                                i *SS   SKSac  14 05 53.8 -1.3
MNK                                 pmax   pmax
       comp=N,18nm,0.9s
MNK                                 pmax   pmax
       comp=E,6.0nm,0.9s
MNK                                 pmax   pmax
       comp=Z,113nm,0.9s
MNK   Minsk             72.68 326  i P     P      13 56 00.5 +0.3
       comp=E,6.0nm,0.9s
MNK                                i P     P      13 56 00.5 +0.3
       comp=N,18nm,0.9s
MNK                                i P     P      13 56 00.5 +0.3
       comp=Z,113nm,0.9s,baz=52
MNK                                i PcP   PcP    13 56 17.1 +0.1
MNK                                i pP    pP     13 56 28.2 +0.5
MNK                                i sP    sP     13 56 40.3 +0.9
MNK                                i PP    PP     13 58 43.2 +0.5
MNK                                i PPP   PPP    14 00 19.0
MNK                                i S     S      14 05 16.9 +0.5
MNK                                i sS    SKSac  14 05 53.9 -1.2
MNK                                i SS    SS     14 09 28.6  -28
MNK                                i SSS   SSS    14 12 52.1
SOC   Sochi             72.69 311  eP      P      13 56 00.0 -0.5
SOC                                e              13 58 41.9
SOC                                ePPP    PPP    14 00 25.9
SOC                                eS      S      14 05 17.6 +0.6
SOC                                eSSS    SSS    14 13 13.8
SOC                                 pmax   pmax
       comp=Z,43nm,0.8s
O02D  Mt. Diablo Mer    72.72  53   P      P      13 56 03.4 +2.6
       baz=303
ISAL  Salakas           72.81 327  eP      P      13 56 02.3 +1.4
NACGM Naroch            72.93 326  i P     P      13 56 02.9 +1.2
SLIT  Slitere, Latvi    73.10 330  eP      P      13 56 03.1 +0.6
O03E  Paynes Creek      73.29  52   P      P      13 56 05.8 +1.6
       baz=303
TBLU  Trondheim         73.30 339  eP      P      13 56 02.5 -1.1
UPP   Uppsala           73.36 334  eP      P      13 56 04.6 +0.5
ANN   Anapa             73.39 313  eP      P      13 56 04.5  0.0
ANN                                e*PP    pP     13 56 30.1 -1.8
ANN                                eS      S      14 05 26.0 +1.3
ANN                                e*SS    sS     14 06 15.1 +2.9
ANN                                 pmax   pmax
       comp=Z,115nm,1.3s
JTMT  Jette             73.58  43   P      P      13 56 06.0 +0.2
PABE  Paberze           73.79 328  eP      P      13 56 07.8 +1.2
PABE  Paberze           73.79 328   P      P      13 56 06.4 -0.3
KTUT  Trabzon           74.10 309  ⇓P      P      13 56 09.6 +0.8
MSO   Missoula          74.31  43   P      P      13 56 11.2 +1.1
       baz=306
AKASG Malin Array Be    74.39 322   P      P      13 56 10.5 +0.3
       comp=Z,68nm,0.7s,baz=47,slow=6.1,SNR=82
AKASG                               LR     LR     14 31 13.2
       comp=Z,45nm,18.3s,baz=305,slow=38
AKASG Malin Array Be    74.39 322   P      P      13 56 10.6 +0.3
AKASG                               pmax   pmax
       comp=Z,60nm,0.9s
AKASG Malin Array Be    74.39 322   P      P      13 56 10.6 +0.3
AKASG                               IAmb   IAmb   13 56 11.4
       comp=Z,60nm,0.8s
AKBB  Malin Array Si    74.39 322c iP      P      13 56 10.0 -0.2
AKBB                                pmax   pmax
       comp=Z,85nm,0.9s
AKBB  Malin Array Si    74.39 322   P      P      13 56 10.4 +0.2
NC300 NORSAR Array S    74.45 337   P      P      13 56 11.0 +0.6
NC300                               IAmb   IAmb   13 56 12.2
       comp=Z,54nm,1.1s
NC405 NORSAR Array S    74.47 337   P      P      13 56 10.2 -0.4
NC303 NORSAR Array S    74.49 337   P      P      13 56 10.6 -0.1
NC303                               IAmb   IAmb   13 56 12.5
       comp=Z,44nm,1.1s
DOMB  Dombas            74.58 338  eP      P      13 56 11.6 +0.4
MOL   Molde             74.61 339  eP      P      13 56 12.2 +0.8
NB2   NORSAR Subarra    74.68 337   P      P      13 56 12.1 +0.3
       comp=Z,38nm,0.8s,baz=41,slow=5.9
NB2   NORSAR Subarra    74.68 337   P      P      13 56 12.1 +0.3
       baz=41,slow=5.9
NOA   NORSAR Array B    74.68 337   P      P      13 56 12.1 +0.3
       comp=Z,25nm,0.8s,baz=40,slow=5.8,SNR=62
NOA                                 PP     PP     13 59 00.2 +0.7
       comp=Z,3.6nm,0.9s,baz=43,slow=8.9,SNR=3.3
NOA                                 LR     LR     14 33 25.5
       comp=Z,50nm,18.1s,baz=50,slow=39
NC602 NORSAR Array S    74.81 336  eP      P      13 56 12.7 +0.2
NC602 NORSAR Array S    74.81 336   P      P      13 56 12.4 -0.1
SUW   Suwalki           75.12 327  eP      P      13 56 14.7 +0.3
SUW   Suwalki           75.12 327  eP      P      13 56 15.1 +0.7
SIM   Simferopol'       75.22 315  eP      P      13 56 14.4 -0.8
SIM                                 pmax   pmax
       comp=Z,79nm,0.9s
OSL   Oslo              75.68 336  eP      P      13 56 17.8 +0.3
EGMT  Eagleton          75.85  40   P      P      13 56 20.5 +1.6
       baz=308
SKAR  Skarslia          75.87 338  eP      P      13 56 19.9 +1.2
DLMT  Dillon            75.93  44   P      P      13 56 20.2 +0.8
HLID  Hailey            75.97  46   P      P      13 56 21.8 +2.1
       baz=306,SNR=5.8
HYA   Hoyanger          76.12 339  eP      P      13 56 20.9 +1.0
KONO  Kongsberg         76.27 337deP      P      13 56 20.2 -0.6
KONO                                pmax   pmax
       comp=Z,27nm,1.7s
KONO  Kongsberg         76.27 337  eP      P      13 56 21.5 +0.6
KONO  Kongsberg         76.27 337   P      P      13 56 20.4 -0.5
KONO                                IAmb   IAmb   13 56 22.5
       comp=Z,32nm,1.1s
BOZ   Bozeman (W)       76.33  43   P      P      13 56 23.5 +1.8
       baz=308,SNR=6.0
SORM  Soroca            76.43 320  ⇑P      P      13 56 22.3 +0.3
DIKM  Dikmen            76.50 312  ⇑P      P      13 56 24.6 +2.1
NVAR  Mina Array Bea    76.58  52   P      P      13 56 25.3 +2.0
       comp=Z,3.7nm,0.8s,baz=283,slow=5.8,SNR=24
NVAR  Mina Array Bea    76.58  52          P      13 56 25.1 +1.8
PURM  Purcari           76.63 318  ⇓P      P      13 56 23.7 +0.6
MILM  Milestii Mici     76.96 319  ⇑P      P      13 56 25.5 +0.5
ASK   Askoy             76.96 339  eP      P      13 56 25.7 +1.0
ODD1  Odda              76.99 338  eP      P      13 56 25.9 +0.9
SFJD  Kangerlussuaq     77.03   4   P      P      13 56 26.1 +1.1
SFJD                                pmax   pmax
       comp=Z,83nm,1.7s
SFJD  Kangerlussuaq     77.03   4   P      P      13 56 26.1 +1.1
SFJD                                IAmb   IAmb   13 56 30.1
       comp=Z,84nm,1.6s
BZK   Bozkurt           77.07 313  ⇓P      P      13 56 27.6 +1.9
IAS   Iasi              77.44 320  ⇓P      P      13 56 28.5 +0.8
LVV   L'vov             77.51 323  eP      P      13 56 29.2 +1.2
BEL   Belsk             77.66 326  eP      P      13 56 30.1 +1.3
H17A  Grant Village     77.66  44   P      P      13 56 33.2 +3.9
       baz=308,SNR=6.8
VASR  Vaslui            77.67 319  ⇑P      P      13 56 30.0 +1.0
HOMB  Homborsund        77.70 336  eP      P      13 56 29.6 +0.8
DY2G  Dye2              77.76   3  i P     P      13 56 30.0 +0.6
BSD   Bornholm Skovb    77.79 331⇑iP      P      13 56 29.7 +0.2
BSD                                 IAmb   IAmb   13 56 30.5
       comp=Z,55nm,0.8s
RLMT  Red Lodge         77.93  43   P      P      13 56 32.7 +2.0
       baz=309
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TPAW  Teton Pass        78.01  45   P      P      13 56 32.8 +1.5
TLCR                    78.05 318  ⇓P      P      13 56 31.8 +0.7
FRB   Frobisher Bay     78.06  13   P      P      13 56 31.5 +0.8
       comp=Z,31nm,0.9s,baz=349,slow=7.0,SNR=5.6
KWP   Kalwaria Pacla    78.27 324  eP      P      13 56 33.7 +1.4
KWP   Kalwaria Pacla    78.27 324   P      P      13 56 32.4 +0.1
KWP                                 pmax   pmax
       comp=Z,1μm,0.8s
KWP   Kalwaria Pacla    78.27 324   P      P      13 56 32.4 +0.1
JURR  Jurilovca         78.28 317  ⇑P      P      13 56 33.6 +1.3
R11A  Troy Canyon, C    78.36  51   P      P      13 56 35.0 +1.8
       baz=307,SNR=9.2
TESR  Tescani           78.36 320  ⇑P      P      13 56 33.6 +0.8
BUR08 Bucovina Ar. S    78.37 321   P      P      13 56 33.7 +0.7
BUR08                               IAmb   IAmb   13 56 34.9
       comp=Z,32nm,0.8s
BURAR Bucovina Array    78.38 321  ⇑P      P      13 56 34.2 +1.2
BURAR Bucovina Array    78.38 321   P      P      13 56 33.7 +0.7
BURAR                               IAmb   IAmb   13 56 35.2
       comp=Z,41nm,0.8s
IZVR  Izvoarele         78.39 318  ⇓P      P      13 56 33.6 +0.7
CFR   Carcaliu          78.42 318  ⇑P      P      13 56 33.8 +0.7
TPGR  Topolog           78.48 318  ⇓P      P      13 56 34.6 +1.1
ODBI  Odobesti          78.63 319  ⇓P      P      13 56 34.9 +0.6
BR131 Keskin Array S    78.64 311   P      P      13 56 34.8 +0.2
BR131                               pmax   pmax
       comp=Z,34nm,0.9s
BR131 Keskin Array S    78.64 311   P      P      13 56 35.4 +0.8
       SNR=18
BR131 Keskin Array S    78.64 311   P      P      13 56 34.8 +0.2
BR131                               IAmb   IAmb   13 56 36.5
       comp=Z,34nm,0.9s
BRTR  Keskin Array B    78.64 311   P      P      13 56 35.4 +0.7
       comp=Z,21nm,0.9s,baz=99,slow=4.0,SNR=70
BRTR                                PP     PP     13 59 35.4 +2.0
       comp=Z,8.4nm,1.1s,baz=77,slow=6.6,SNR=6.9
BRTR                                LR     LR     14 37 37.4
       comp=Z,37nm,18.0s,baz=36,slow=40
BRTR  Keskin Array B    78.64 311   P      P      13 56 35.2 +0.5
FURC  Furnace Creek,    78.66  53   P      P      13 56 37.2 +2.6
       baz=306
TIRR  Tirgusor          78.73 317  ⇓P      P      13 56 35.8 +0.9
VRI   Vrincioaia        78.74 319  ⇓P      P      13 56 36.3 +1.4
PLOR  Plostina          78.79 319  ⇑P      P      13 56 36.5 +1.2
EDW2  Edwards Air Fo    78.85  55   P      P      13 56 37.6 +1.8
       baz=306
HARR  Harsova           78.85 318  ⇑P      P      13 56 36.5 +1.0
GRER                    78.92 319  ⇑P      P      13 56 37.2 +1.4
DUG   Dugway, Tooele    78.95  48   P      P      13 56 38.4 +2.0
       baz=308,SNR=6.3
BISRR Bisoca            78.95 319  ⇓P      P      13 56 37.9 +1.7
KOLS  Kolonicke sedl    78.96 323  eP      P      13 56 37.1 +1.1
KOLS                                pmax   pmax
       comp=Z,36nm,0.9s
KOLS  Kolonicke sedl    78.96 323  eP      P      13 56 37.1 +1.1
COVR  Voineasa-Covas    79.03 319  ⇓P      P      13 56 37.8 +1.3
OZUR                    79.09 320  ⇓P      P      13 56 38.4 +1.5
STHS  Stebnicka Huta    79.12 324  eP      P      13 56 38.1 +1.2
STHS  Stebnicka Huta    79.12 324  eP      P      13 56 38.1 +1.2
UZH   Uzhgorod          79.15 323  eP      P      13 56 37.7 +0.6
UZH                                e              13 56 47.7
ARCR  ARCALIA           79.17 321  ⇓P      P      13 56 39.3 +2.1
BMR   Baia Mare         79.21 322  ⇓P      P      13 56 39.1 +1.7
OJC   Ojcow             79.23 326  eP      P      13 56 38.5 +1.0
OJC   Ojcow             79.23 326   P      P      13 56 36.8 -0.7
OJC                                 pmax   pmax
       comp=Z,72nm,0.9s
OJC   Ojcow             79.23 326   P      P      13 56 36.8 -0.7
NEHR  Nehoiu            79.25 319  ⇓P      P      13 56 39.2 +1.4
BW06  Boulder Array     79.26  45   P      P      13 56 39.5 +1.4
       baz=309
PDAR  Pinedale Array    79.26  45   P      P      13 56 39.2 +1.1
       comp=Z,1.4nm,0.7s,baz=278,slow=2.9,SNR=14
PDAR  Pinedale Array    79.26  45   P      P      13 56 39.3 +1.2
ISR   Istrita           79.32 319  ⇓P      P      13 56 39.9 +1.8
CRVS  Cervenica-Dubn    79.37 324  eP      P      13 56 39.4 +1.1
CRVS                                pmax   pmax
       comp=Z,49nm,1.1s
CRVS  Cervenica-Dubn    79.37 324  eP      P      13 56 39.3 +1.0
TRPA  Tarpa             79.37 323  ⇓P      P      13 56 39.8 +1.5
TRPA  Tarpa             79.37 323  eP      P      13 56 38.9 +0.6
DOPR  Dopca             79.38 320  ⇓P      P      13 56 40.3 +1.9
MLR   Muntele Rosu      79.40 319  ⇓P      P      13 56 39.0 +0.3
NIE   Niedzica          79.56 325  eP      P      13 56 41.5 +2.1
SECR                    79.63 319  ⇓P      P      13 56 41.1 +1.3
SOCY  Socotra           79.69 278   P      P      13 56 39.1 -1.6
SOCY                                IAmb   IAmb   13 56 40.3
       comp=Z,22nm,0.7s
CJR   Cluj-Napoca       79.81 321  ⇓P      P      13 56 42.8 +2.1
VOIR                    79.91 320  ⇑P      P      13 56 42.2 +0.9
RAYN  Ar Rayn           79.93 292   P      P      13 56 42.4 +0.6
HEC   Hector,Ludlow     79.98  54   P      P      13 56 43.8 +1.9
       baz=307,SNR=5.2
LANS  Liptovska Anna    80.14 325  eP      P      13 56 44.3 +1.8
LANS                                pmax   pmax
       comp=Z,19nm,0.9s
LANS  Liptovska Anna    80.14 325  eP      P      13 56 44.2 +1.8
ARR   Arges             80.17 320  ⇑P      P      13 56 44.7 +1.9
RUE   Ruedersdorf       80.20 330  eP      P      13 56 44.1 +1.5
RUE   Ruedersdorf       80.20 330  eP      P      13 56 43.7 +1.1
       comp=Z,53nm,1.1s,baz=38,slow=5.2
DRGR                    80.20 322  ⇑P      P      13 56 43.8 +0.9
OKC   Ostrava-Krasne    80.25 326  eP      P      13 56 44.2 +1.2
OKC   Ostrava-Krasne    80.25 326  eP      P      13 56 44.2 +1.2
KSP   Ksiaz             80.35 328  eP      P      13 56 44.7 +1.2
BSEG  Bad Segeberg      80.44 332  eP      P      13 56 44.6 +0.7
       comp=Z,47nm,1.1s,baz=38,slow=5.2
GMRC  Granite Mounta    80.45  54   P      P      13 56 46.3 +1.7
       baz=307,SNR=6.8
MORC  Moravsky Berou    80.57 326  ⇑P      P      13 56 45.8 +1.1
MORC  Moravsky Berou    80.57 326   P      P      13 56 45.1 +0.3
MORC                                pmax   pmax
       comp=Z,36nm,1.0s
MORC  Moravsky Berou    80.57 326  eP      P      13 56 45.7 +0.9
MORC                               ePP     PP     13 59 51.3 +2.3
MORC  Moravsky Berou    80.57 326   P      P      13 56 45.1 +0.3
MORC                                IAmb   IAmb   13 56 46.8
       comp=Z,36nm,1.0s
OSTC  Ostas             80.59 327  eP      P      13 56 45.8 +0.9
PFO   Pinyon Flats O    80.62  55   P      P      13 56 46.9 +1.4
       baz=307,SNR=6.0
TPFO  Pinon Flats       80.63  55   P      P      13 56 47.1 +1.6
       baz=307,SNR=7.2
CHVC  Chvalec           80.64 328  eP      P      13 56 46.1 +1.0
RDMU  Red Mountain      80.65  46   P      P      13 56 46.1 +0.5
KRLC  Kraliky           80.69 327  eP      P      13 56 46.2 +0.8
KRLC                               e              13 59 54.0
KRLC  Kraliky           80.69 327  eP      P      13 56 46.2 +0.8
KRLC                               ePP     PP     13 59 54.0 +4.0
DPC   Dobruska-Polom    80.70 327  eP      P      13 56 46.7 +1.3
DPC   Dobruska-Polom    80.70 327  eP      P      13 56 46.7 +1.3
DPC                                ePP     PP     13 59 43.9 -6.1
PSZ   Piszkesteto       80.80 324  ⇓P      P      13 56 47.7 +1.6
PSZ   Piszkesteto       80.80 324  eP      P      13 56 45.0 -1.1
VYHS  Vyhne             80.90 325  eP      P      13 56 47.8 +1.3
VYHS                                pmax   pmax
       comp=Z,43nm,1.3s
VYHS  Vyhne             80.90 325  eP      P      13 56 47.8 +1.3
ULM   Lac du Bonnet     81.04  33   P      P      13 56 47.8 +0.6
       comp=Z,6.0nm,0.8s,baz=298,slow=7.6,SNR=4.5
ULM   Lac du Bonnet     81.04  33   P      P      13 56 46.0 -1.2
ULM                                 IAmb   IAmb   13 56 49.1
       comp=Z,58nm,1.9s
MONP2 Monument Peak     81.08  56   P      P      13 56 49.6 +1.6
       baz=307
SIRR  Siria             81.09 322  ⇓P      P      13 56 48.3 +0.7
GZR   Gura Zlata        81.12 321  ⇓P      P      13 56 48.7 +0.9
IRM   Iron Mountain     81.17  54   P      P      13 56 50.2 +1.9
       baz=308
JAVC  Velka Javorina    81.17 326  eP      P      13 56 50.1 +2.1
JAVC                               ePP     PP     13 59 55.6 +1.6
BC3   Big Chuckawall    81.27  55   P      P      13 56 50.7 +1.8
       baz=308
PVCC  Panska Ves        81.33 328  eP      P      13 56 49.9 +1.2
PVCC  Panska Ves        81.33 328  eP      P      13 56 49.9 +1.2
FLTG  Flechtingen       81.33 331  eP      P      13 56 48.9 +0.2
       comp=Z,53nm,1.1s,baz=38,slow=5.2
BRG   Berggiesshubel    81.33 329  eP      P      13 56 49.4 +0.8
       comp=Z,26nm,0.9s,baz=38,slow=5.2
BRG   Berggiesshubel    81.33 329⇑iP      P      13 56 49.5 +0.8
BRG                                 Amp           13 56 50.6
       comp=Z,23nm,0.9s
BRG                                 PP     PP     13 59 58.9 +3.8
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BRG				Amp		13 59 59.7	
	comp=Z,7.1nm,0.9s						
VRAC	Vranov	81.34	326	⇑P	P	13 56 50.0	+1.2
VRAC	Vranov	81.34	326	eP	P	13 56 49.8	+1.0
VRAC				ePP	PP	13 59 56.5	+1.3
EDRB	Edirne	81.36	316	P	P	13 56 49.7	+0.7
SRE	Strehaia	81.40	320	⇓P	P	13 56 51.3	+2.1
CLL	Collm	81.40	329	⇑iP	P	13 56 49.5	+0.5
CLL				pmax	pmax		
	comp=Z,52nm,0.9s						
CLL	Collm	81.40	329	⇑iP	P	13 56 49.5	+0.5
	comp=Z,52nm,0.9s						
CLL				ePP	PP	13 59 56.0	+0.4
CLL	Collm	81.40	329	eP	P	13 56 49.5	+0.5
	comp=Z,52nm,0.9s,baz=38,slow=5.2						
CLL	Collm	81.40	329	P	P	13 56 48.1	-0.9
CLL				IAmb	IAmb	13 56 50.5	
	comp=Z,44nm,0.8s						
IKP	In-Ko-Pah, Jac	81.44	56	P	P	13 56 51.8	+2.0
	baz=307						
PLVB	Pleven	81.50	318	⇓P	P	13 56 50.8	+1.0
SMOL	Smolenice	81.53	325	eP	P	13 56 51.4	+1.5
SMOL				pmax	pmax		
	comp=Z,20nm,0.9s						
SMOL	Smolenice	81.53	325	eP	P	13 56 51.4	+1.5
FBE	Freiberg	81.54	329	eP	P	13 56 50.8	+0.9
	comp=Z,53nm,0.9s,baz=38,slow=5.2						
BZS	Buzias	81.56	321	⇑P	P	13 56 50.4	+0.4
KRUC	Moravsky	81.61	326	eP	P	13 56 51.1	+0.9
KRUC				ePP	PP	13 59 59.0	+1.6
SRO2	Moca	81.62	324	eP	P	13 56 50.6	+0.3
SRO2	Moca	81.62	324	eP	P	13 56 50.6	+0.3
SRO	Srobarova	81.63	325	eP	P	13 56 52.2	+1.9
SRO	Srobarova	81.63	325	eP	P	13 56 52.2	+1.9
NRDL	Niedersach Rie	81.64	332	eP	P	13 56 50.6	+0.4
	comp=Z,21nm,1.1s,baz=38,slow=5.2						
HERR	Herculane	81.66	320	⇓P	P	13 56 51.3	+0.7
MODS	Modra-Piesok	81.71	325	eP	P	13 56 51.2	+0.4
MODS				pmax	pmax		
	comp=Z,33nm,1.1s						
MODS	Modra-Piesok	81.71	325	eP	P	13 56 51.2	+0.4
O20A	White River Ci	81.71	46	P	P	13 56 53.0	+1.8
	baz=310						
PRA	Prague	81.72	328	eP	P	13 56 52.2	+1.4
PRA	Prague	81.72	328	eP	P	13 56 52.2	+1.4
PDMCI	Parker Dam,Lak	81.73	54	P	P	13 56 53.1	+2.0
	baz=308						
PRU	Pruhonice	81.74	328	eP	P	13 56 51.9	+1.0
PRU				e		14 00 00.1	
PRU	Pruhonice	81.74	328	eP	P	13 56 51.9	+1.0
PRU				ePP	PP	14 00 00.1	+1.6
CSS	Mathiatis	81.75	307	P	P	13 56 51.4	+0.1
CSS				IAmb	IAmb	13 56 55.5	
	comp=Z,29nm,0.7s						
TREC	Trest	81.84	327	eP	P	13 56 52.4	+0.9
TREC	Trest	81.84	327	eP	P	13 56 52.4	+0.9
ZST	Bratislava	81.92	325	eP	P	13 56 53.5	+1.7
ZST	Bratislava	81.92	325	eP	P	13 56 53.5	+1.7
CSKK	Cskako	81.97	324	eP	P	13 56 51.1	-1.1
NEUB	Neuenburg	81.97	330	eP	P	13 56 52.8	+0.7
	comp=Z,61nm,1.0s,baz=38,slow=5.2						
CLZ	Clausthal	82.05	331	eP	P	13 56 53.4	+0.9
	comp=Z,51nm,1.1s,baz=38,slow=5.2						
TANN	Tannenbergstha	82.30	329	eP	P	13 56 54.3	+0.4
	comp=Z,14nm,1.1s,baz=38,slow=5.2						
ALN	Alexandroupoli	82.38	316	P	P	13 56 50.3	-4.1
ALN	Alexandroupoli	82.38	316	P	P	13 56 54.2	-0.2
ALN				pmax	pmax		
	comp=Z,28nm,1.0s						
ALN	Alexandroupoli	82.38	316	P	P	13 56 54.2	-0.2
ALN				IAmb	IAmb	13 56 56.1	
	comp=Z,28nm,1.0s						
GUNZ	Gunzen	82.39	329	eP	P	13 56 55.2	+0.8
	comp=Z,19nm,0.9s,baz=38,slow=5.2						
WERN	Wernitzgruen	82.43	329	eP	P	13 56 55.4	+0.9
	comp=Z,23nm,0.9s,baz=38,slow=5.2						
GTTG	Gottingen	82.44	331	eP	P	13 56 55.2	+0.7
	comp=Z,36nm,1.0s,baz=38,slow=5.2						
NKC	Novy Kostel	82.44	329	eP	P	13 56 55.3	+0.7
NKC	Novy Kostel	82.44	329	eP	P	13 56 55.3	+0.7
MPLH	Magyarpolny	82.45	324	eP	P	13 56 54.9	+0.2
MOX	Moxa	82.47	330	eP	P	13 56 55.2	+0.5
	comp=Z,35nm,1.4s,baz=38,slow=5.2						
RDO	Rodhopi	82.50	316	P	P	13 56 53.6	-1.4
N23A	Red Feather La	82.53	44	P	P	13 56 57.9	+2.3
	baz=312						
SOP	Sopron	82.54	325	eP	P	13 56 55.1	0.0
MORH	Mrgy, Hungar	82.61	323	⇑P	P	13 56 55.9	+0.4
MORH	Mrgy, Hungar	82.61	323	eP	P	13 56 54.3	-1.2
MORH	Mrgy, Hungar	82.61	323	⇑iP	P	13 56 55.7	+0.2
IBBN	Ibbenburen	82.68	333	eP	P	13 56 56.2	+0.5
	comp=Z,37nm,0.8s,baz=38,slow=5.2						
CONA	Conrad Observa	82.68	326	iP	P	13 56 57.2	+1.3
	comp=Z,16nm,0.9s,SNR=15						
CONA				eP	PP	14 00 06.9	+0.5
	comp=Z,12nm,1.3s						
CKRC	Cesky Krumlov	82.71	327	eP	P	13 56 57.0	+1.0
WUAZ	Wupatki	82.76	51	P	P	13 56 59.0	+2.3
	baz=309,SNR=8.1						
MANZ	Manzenberg	82.77	329	eP	P	13 56 57.1	+0.8
	comp=Z,4.5nm,0.9s,baz=38,slow=5.2						
VTS	Vitosha	82.77	318	⇑P	P	13 56 58.2	+1.6
VTS	Vitosha	82.77	318	P	P	13 56 57.0	+0.4
VTS				pmax	pmax		
	comp=Z,37nm,1.0s						
VTS	Vitosha	82.77	318	P	P	13 56 57.0	+0.4
VTS				IAmb	IAmb	13 56 59.0	
	comp=Z,37nm,1.0s						
FRGS	Fruska Gora	82.79	322	⇓P	P	13 56 57.6	+1.1
FRGS	Fruska Gora	82.79	322	⇑iP	P	13 56 56.9	+0.4
KHC	Kasperske Hory	82.80	328	eP	P	13 56 57.1	+0.6
KHC	Kasperske Hory	82.80	328	eP	P	13 56 57.1	+0.6
KHC				ex	x	13 57 15.0	
KHC				ePP	PP	14 00 00.9	-6.3
BOVS	Bovan	82.89	320	⇑P	P	13 56 57.2	+0.2
ROTZ	Rotzenmuhle	82.90	329	eP	P	13 56 58.0	+1.0
	comp=Z,15nm,1.5s,baz=38,slow=5.2						
GEC2	GERESS Array S	82.96	328	eP	P	13 56 57.9	+0.4
	comp=Z,18nm,1.1s,baz=38,slow=5.2						
GERES	GERESS Array B	82.96	328	P	P	13 56 57.8	+0.4
	comp=Z,8.0nm,0.8s,baz=36,slow=5.0,SNR=61						
GERES				PP	PP	14 00 08.6	0.0
	comp=Z,1.8nm,0.9s,baz=41,slow=7.1,SNR=4.4						
GERES				LR	LR	14 37 14.6	
	comp=Z,42nm,18.5s,baz=30,slow=38						
KOVH	Kovagotottos	82.97	323	eP	P	13 56 57.5	+0.1
UBBA	Unterbreizbach	82.99	331	eP	P	13 56 57.6	+0.4
	comp=Z,16nm,1.1s,baz=38,slow=5.2						
WET	Wettzell	83.09	328	eP	P	13 56 58.7	+0.8
	comp=Z,27nm,1.3s,baz=38,slow=5.2						
KAVA	Kavala	83.17	316	P	P	13 56 57.4	-1.1
NVR	Nevrokopi	83.30	317	P	P	13 56 58.5	-0.7
THAS	Thassos island	83.32	316	P	P	13 56 58.9	-0.3
ARSA	Arzberg	83.33	326	iP	P	13 57 00.2	+0.9
	comp=Z,12nm,0.9s,SNR=6.4						
GRF	Grafenberg Arr	83.37	329	eP	P	13 57 00.5	+1.2
	comp=Z,70nm,1.1s,baz=38,slow=5.2						
ISCO	Idaho Springs	83.44	45	P	P	13 57 02.2	+1.9
	baz=312						
DIVS	Divibare	83.45	321	⇑iP	P	13 57 00.5	+0.5
MVCO	Mesa Verde	83.45	48	P	P	13 57 02.4	+2.0
	baz=311,SNR=5.3						
MOA	Molln	83.46	327	iP	P	13 57 00.7	+0.8
	comp=Z,19nm,1.0s,SNR=12						
MOA				eP	PP	14 00 10.4	-2.2
	comp=Z,9.4nm,1.5s						
SRS	Serrai	83.60	317	P	P	13 57 01.0	+0.3
BBLS	Lazići	83.91	321	⇑iP	P	13 57 03.4	+1.1
STIP	Stip	83.97	318	iP	P	13 57 02.5	-0.1
PERS	Pernice	83.98	325	iP	P	13 57 03.1	+0.5
	comp=Z,85nm,0.9s						
HAPS	Han Pijesak,Bl	83.98	322	⇑iP	P	13 57 03.6	+0.8
SOKA	Soboth	83.98	325	iP	P	13 57 03.2	+0.6
	comp=Z,60nm,1.0s,SNR=34						
SOKA				eP	PP	14 00 13.6	-3.4
	comp=Z,7.5nm,1.4s						
VAY	Valandovo	84.02	318	iP	P	13 57 03.8	+1.0
TNS	Taunus Mts	84.07	331	eP	P	13 57 03.4	+0.4
	comp=Z,21nm,1.4s,baz=38,slow=5.2						
S22A	4UR Ranch, Cre	84.10	47	P	P	13 57 06.1	+2.4
	baz=312,SNR=11						
RUDO	Rudo	84.11	321	⇑iP	P	13 57 03.5	+0.3
PLG	Polygyros	84.19	317	P	P	13 57 03.0	-0.8
RJOB	Jochberg	84.19	327	eP	P	13 57 04.6	+0.9
	comp=Z,27nm,1.0s,baz=38,slow=5.2						
MRAK	Mrakovica	84.33	323	⇑iP	P	13 57 04.2	-0.2
OBKA	Obir	84.33	326	iP	P	13 57 04.7	+0.2
	comp=Z,11nm,0.8s,SNR=6.2						
OBKA				eP	PP	14 00 15.3	-4.6
	comp=Z,14nm,1.8s						
GRG	Griva	84.37	318	P	P	13 57 03.4	-1.3
BLY	Banja Luka	84.38	323	⇑iP	P	13 57 05.1	+0.5
CRES	Cresnjev	84.42	325	⇑iP	P	13 57 05.0	+0.2
KBA	Koelnbreinsper	84.45	327	iP	P	13 57 05.3	+0.1
	comp=Z,18nm,0.7s,SNR=11						
KBA				eP	PP	14 00 17.0	-3.9
	comp=Z,16nm,1.2s						
FUR	Furstenfeldbru	84.52	328	eP	P	13 57 06.2	+0.9
	comp=Z,49nm,0.8s,baz=38,slow=5.2						
UPM	Unac-Piva	84.64	321	⇑iP	P	13 57 06.7	+0.5
MYKA	Terra Mystica	84.66	326	iP	P	13 57 05.9	-0.2
	comp=Z,14nm,0.8s,SNR=7.4						
BTNL	Ternell	84.67	332	dP	P	13 57 06.4	+0.5
	comp=Z,14nm,1.0s						
MGRS	Mrkonjic Grad	84.67	323	eP	P	13 57 07.5	+1.4
LJU	Ljubljana	84.69	325	⇑iP	P	13 57 05.8	-0.3
LJU	Ljubljana	84.69	325	iP	P	13 57 06.2	0.0
	comp=Z,38nm,0.9s						
MEM	Membach	84.70	333	dP	P	13 57 06.5	+0.5
	comp=Z,14nm,0.9s						
SDCO	Great Sand Dun	84.89	46	P	P	13 57 09.5	+1.8
	baz=312,SNR=7.0						
STU	Stuttgart	84.92	330	eP	P	13 57 07.9	+0.7
	comp=Z,105nm,1.2s,baz=38,slow=5.2						
CEY	Cerknica	84.97	325	⇑iP	P	13 57 07.4	-0.2
CEY	Cerknica	84.97	325	iP	P	13 57 07.5	0.0
	comp=Z,60nm,1.3s						
PDG	Podgorica	85.01	320	⇑P	P	13 57 08.5	+0.7
PDG	Podgorica	85.01	320	⇑iP	P	13 57 08.2	+0.4
PDG	Podgorica	85.01	320	P	P	13 57 08.1	+0.4
WATA	Walderalm	85.03	328	eP	P	13 57 08.2	+0.2
	comp=Z,8.2nm,1.1s						
BRY	Bratogost	85.04	321	⇑iP	P	13 57 07.9	-0.2
FNA	Florina	85.05	318	P	P	13 57 08.9	+0.8
FNA	Florina	85.05	318	P	P	13 57 08.9	+0.8
FNA				IAmb	IAmb	13 57 09.2	
	comp=Z,21nm,0.9s						
WTTA	Wattenberg	85.06	328	iP	P	13 57 08.5	+0.3
	comp=Z,11nm,1.1s						
ABTA	Abfaltersbach	85.07	327	iP	P	13 57 07.8	-0.3
	comp=Z,17nm,0.9s,SNR=8.7						
ABTA				eP	PP	14 00 25.1	-0.8
	comp=Z,8.6nm,1.6s						
BCLA	Clavier	85.11	333	dP	P	13 57 08.3	+0.2
	comp=Z,13nm,1.0s						
OHR	Ohrid	85.13	319	iP	P	13 57 08.2	-0.3
TUC	Tucson	85.17	53	P	P	13 57 10.5	+1.6
	baz=310						
BGES	Gesves	85.22	333	dP	P	13 57 09.1	+0.4
	comp=Z,13nm,1.0s						
DRME	Dracevica, Mon	85.22	320	⇑iP	P	13 57 09.4	+0.5
MOTA	Moosalm	85.23	328	iP	P	13 57 09.1	+0.1
	comp=Z,17nm,1.2s,SNR=5.5						
RIY	Rijeka	85.25	325	⇑iP	P	13 57 08.6	-0.3
PPT	Papeete	85.25	116	LR	LR	14 26 21.0	
	comp=Z,56nm,21.4s,baz=0.0,slow=29						
RETA	Reutte	85.27	328	iP	P	13 57 09.6	+0.6
	comp=Z,18nm,0.9s,SNR=9.1						
TREB	Trebinje	85.27	321	⇑iP	P	13 57 09.3	+0.2
SQTA	Sankt Quirin	85.28	328	iP	P	13 57 09.3	+0.1
	comp=Z,7.6nm,0.9s						
SQTA				eP	PP	14 00 25.7	-1.9
	comp=Z,6.4nm,1.1s						
TRI	Trieste	85.29	325	P	P	13 57 08.1	-1.0
TRI				pmax	pmax		
	comp=Z,25nm,0.9s						
TRI	Trieste	85.29	325	P	P	13 57 08.1	-1.0
TRI				IAmb	IAmb	13 57 09.6	
	comp=Z,25nm,0.9s						
HCY	Herceg Novi	85.39	321	⇑iP	P	13 57 09.5	-0.2
BMRD	Maredsous	85.41	333	dP	P	13 57 09.9	+0.4
	comp=Z,21nm,1.1s						
WLF	Walferdange	85.41	332	dP	P	13 57 09.3	-0.4
SNF	Seneffe	85.41	333	dP	P	13 57 09.8	+0.1
ECSD	EROS Data Cent	85.48	37	P	P	13 57 10.7	+0.6
	baz=317						
NEST	Nestorio	85.48	318	P	P	13 57 09.5	-0.8
STON	Ston	85.49	321	⇑iP	P	13 57 09.4	-0.7
BFO	Black Forest	85.62	330	P	P	13 57 10.4	-0.3
BFO				pmax	pmax		
	comp=Z,32nm,1.0s						
BFO	Black Forest	85.62	330	eP	P	13 57 11.0	+0.3
	comp=Z,40nm,1.1s,baz=38,slow=5.2						
BFO	Black Forest	85.62	330	P	P	13 57 10.4	-0.3
BFO				IAmb	IAmb	13 57 12.2	
	comp=Z,32nm,1.0s						
DOU	Dourbes	85.64	333	dP	P	13 57 10.7	-0.1
	comp=Z,12nm,1.5s						
FETA	Feichten	85.64	328	iP	P	13 57 11.3	+0.2
	comp=Z,16nm,1.1s,SNR=7.2						
FETA				eP	PP	14 00 30.4	-0.2
	comp=Z,8.2nm,1.8s						
DAVA	Damuels	85.80	328	iP	P	13 57 12.1	+0.2
	comp=Z,34nm,1.2s,SNR=9.3						
LSK	Leskovik	85.91	318	P	P	13 57 11.5	-0.9
T25A	Trinidad	85.94	46	P	P	13 57 14.5	+1.7
	baz=313,SNR=5.1						
ANMO	Albuquerque	86.18	49	⇓iP	P	13 57 15.0	+1.0
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ANMO	Albuquerque	86.18	49	P	P	13 57 16.3	+2.3
	baz=312						
DAVOX	Davos/Dischmat	86.19	328	P	P	13 57 14.1	+0.3
	comp=Z,7.1nm,0.7s,baz=38,slow=2.9,SNR=14						
EVGI	Lefkada island	86.96	317	P	P	13 57 16.7	-0.8
TIP	Timpagrande	88.67	319	⇑P	P	13 57 25.4	-0.3
WMOK	Wichita Mounta	90.87	45	P	P	13 57 36.9	+0.9
	baz=316						
TXAR	Lajitas Array	91.72	51	P	P	13 57 41.4	+1.2
	comp=Z,2.2nm,0.8s,baz=309,slow=2.4,SNR=15						
U40A	Yellville	92.91	40	P	P	13 57 46.0	+0.6
	baz=320						
KEST	Kesra	95.11	322	LR	LR	14 43 46.8	
	comp=Z,36nm,19.4s,baz=317,slow=37						
ESDC	Sonseca Array	97.68	333	P	P	13 58 07.1	0.0
	comp=Z,1.1nm,1.0s,baz=33,slow=5.4,SNR=6.3						
ESDC				PP	PP	14 02 07.4	+2.2
	comp=Z,0.9nm,0.7s,baz=31,slow=8.1,SNR=6.6						
ESDC				LR	LR	14 47 32.9	
	comp=Z,47nm,18.5s,baz=315,slow=39						
TKL	Tuckaleechee C	97.94	35	P	Pdif	13 58 08.3	0.0
	comp=Z,1.7nm,0.6s,baz=175,slow=3.5,SNR=4.3						
TORD	Torodi Ar. Bea	117.19	313	PKP	PKPdf	14 03 16.3	-1.1
	comp=Z,0.8nm,0.5s,baz=5.1,slow=1.5,SNR=5.1						
TORD				PP	PP	14 04 27.6	-0.9
	comp=Z,2.9nm,1.0s,baz=22,slow=7.2,SNR=6.6						
BOSA	Boshof	125.19	258	PKP	PKPdf	14 03 32.6	+0.1
	comp=Z,2.4nm,0.7s,baz=56,slow=8.4,SNR=4.3						
QSPA	South Pole Qui	125.73	180	PKPdf	PKiKP	14 03 32.8	+0.1
DBIC	Dimbokro	126.20	315	PKP	PKiKP	14 03 35.4	+0.2
	comp=Z,4.9nm,0.9s,baz=193,slow=13,SNR=2.8						
VNA2	Neumayer--Watz	140.97	196	PKPdf	PKPdf	14 04 01.8	+1.1
ETMB	Extrema	144.76	49	PKPdf	PKPab	14 04 07.7	-0.4
SAML	Samuel	145.84	44	eP	PKPab	14 04 12.0	-0.2
LPAZ	La Paz	148.26	59	PKPbc	PKPdf	14 04 17.4	+1.7
	comp=Z,4.8nm,0.7s,baz=20,slow=14,SNR=17						
LPAZ	La Paz	148.26	59	eP	PKPdf	14 04 16.7	+1.1

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*IDC **07** 13:46:58.0±1.1,2.°97S×139.°68E,h83^{km}±12^{km},mb4.0/12, mb1 4.1/16,mb1mx3.9/32,mbtmp4.4/16,MS3.4/7, Ms1 3.4/7,ms1mx3.1/32 Error ellipse: s-maj=17.1km s-min=12.8km az=98.0*

*DJA **07** 13:46:57.3±0.6,3°S±4°×14°0E±°,h111^{km}±4^{km},M4.8/12, mB5.0/5,mb4.7/12,MLv5.2/6,Mw(mB)4.3/5*

ISC 07 13:46:58.8±0.5,**3.°01S**±0.°05×**139.°59E**±0.°06,**h100**^{km}**,n56,** σ**2.^{s}18**/59,**mb4.3**/13,**Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	Jayapura	1.22	66	P	Pn	13 47 19.8	-1.9
	47nm,0.3s,baz=234,slow=11,SNR=46						
JAY				S	Sn	13 47 34.1	-5.0
	109nm,0.3s,baz=140,slow=9.9,SNR=13						
JAY				LR	LR	13 47 35.7	
	comp=Z,72nm,18.1s,baz=258,slow=34						
WAMI	Wamena	1.23	225	P	Pn	13 47 22.4	+0.6
WAMI				S	Sn	13 47 41.0	+1.8
SMPI	Sarmi	1.34	319	P	Pn	13 47 22.7	-0.4
SMPI				S	Sn	13 47 41.9	+0.4
SRPI	Serui, Papua	3.53	289	P	Pn	13 47 51.6	-0.1
BAKI	Biak	3.92	297	P	Pn	13 47 56.4	-0.5
MMPI	Merauke	5.48	172	P	Pn	13 48 18.1	+0.1
	3.2nm11µm718nm,0.6s						
FAKI	Fak Fak	7.33	271	P	Pn	13 48 42.8	-0.4
	0.6nm35nm,0.9s						
FAKI	Fak Fak	7.33	271	P	Pn	13 48 29.6	-14
SIJI	Sorong	8.58	284	P	Pn	13 49 00.6	+0.3
	4.2nm,0.3s,baz=238,slow=4.9,SNR=7.2						
SIJI				S	Sn	13 50 28.8	-6.7
	2.7nm,0.3s,baz=258,slow=24,SNR=8.3						
SIJI				LR	LR	13 53 32.8	
	comp=Z,106nm,19.7s,baz=96,slow=46						
SWI	Sorong	8.59	284	P	Pn	13 49 01.5	+1.1
	33nm,0.7s						
PMG	Port Moresby	9.85	131	P	Pn	13 49 16.8	-0.7
	1.8nm,0.3s,baz=269,slow=7.8,SNR=4.0						
PMG				LR	LR	13 53 10.4	
	comp=Z,166nm,20.5s,baz=309,slow=38						
COEN	Coen	11.44	162	P	Pn	13 49 37.0	-2.1
KDU	Kakadu	11.91	216	P	Pn	13 49 42.9	-2.5
DRS	Darwin Rock St	12.71	222	P	Pn	13 49 52.6	-3.4
MTN	Manton Dam	12.86	220	P	Pn	13 49 54.4	-3.5
SGSI	Sangihe	15.55	295	P	Pn	13 50 30.5	-2.0
MTSU	Mount Surprise	15.73	163	P	P	13 50 36.7	0.0
KNRA	Kununurra	16.49	220	P	Pn	13 50 44.1	-0.2
SOEI	Soe	16.63	246	P	Pn	13 50 44.6	-1.5
	63nm,0.9s						
BATI	Baumata	17.35	245	P	Pn	13 50 56.9	+2.0
	2.0nm,0.3s,baz=247,slow=23,SNR=1.8						
QIS	Mount Isa	17.44	180	P	Pn	13 50 55.5	-0.4
WRAB	Tennant Creek	17.58	197	P	Pn	13 50 58.1	+0.6
WRA	Warramunga Arr	17.59	197	P	P	13 50 54.1	-3.2
	1.8nm,0.3s,baz=18,slow=12,SNR=33						
WRA				S	Sn	13 53 54.8	-19
	0.3nm,0.3s,baz=16,slow=22,SNR=4.1						
WRA				LR	LR	13 58 03.4	
	comp=Z,180nm,19.5s,baz=335,slow=38						
CTA	Charters Tower	18.18	160	P	Pn	13 51 04.5	-0.2
	0.1nm,0.3s,baz=356,slow=15,SNR=2.4						
TOLI2	Tolitoli	19.24	282	P	P	13 51 08.0	-7.4
FITZ	Fitzroy Crossi	20.29	221	P	P	13 51 26.9	+0.2
	5.7nm,0.7s,baz=38,slow=9.1,SNR=12						
FITZ				S	S	13 55 00.8	-8.1
	19nm,0.7s,baz=117,slow=12,SNR=6.2						
FITZ	Fitzroy Crossi	20.29	221	P	P	13 51 25.8	-0.9
ASAR	Alice Springs	21.26	195	P	P	13 51 36.9	-0.2
	11nm,0.6s,baz=26,slow=10,SNR=175						
ASAR				S	S	13 55 25.9	-1.9
	2.0nm,0.8s,baz=19,slow=7.0,SNR=4.9						
ASAR				LR	LR	14 00 17.3	
	comp=Z,179nm,18.5s,baz=35,slow=38						
QLP	Quilpie	23.86	170	P	P	13 52 04.9	+1.9
WRKA	Warakurna	24.45	205	P	P	13 52 10.0	+1.5
INKA	Innaminka	24.62	178	P	P	13 52 11.2	+1.3
EIDS	Eidsvold	24.83	155	P	P	13 52 13.6	+1.7
OOD	Oodnadatta	24.92	188	P	P	13 52 14.2	+1.5
RMQ	Roma	24.94	160	P	P	13 52 15.2	+2.3
MULG	Mulgathing	27.62	190	P	P	13 52 39.3	+2.3
STKA	Stephens Creek	28.77	176	P	P	13 52 48.8	+1.5
	2.6nm,0.7s,baz=335,slow=5.1,SNR=7.6						
STKA				LR	LR	14 05 21.0	
	comp=Z,112nm,20.4s,baz=22,slow=38						
FORT	Forrest	29.69	200	P	P	13 52 56.6	+1.3
BBOO	Buckleboo	29.83	186	P	P	13 52 58.1	+1.6
	8.5nm,1.6s						
CNB	Canberra Magne	33.40	165	P	P	13 53 29.3	+1.4
JHJ	Hachijo jima 2	35.94	0	LR	LR	14 07 39.0	
	comp=Z,34nm,19.2s,baz=92,slow=35						
KSRS	Korea Array	41.69	346	P	P	13 54 37.6	0.0
	1.4nm,0.8s,baz=157,slow=9.0,SNR=2.7						
CMAR	Chiang Mai Arr	45.35	300	P	P	13 55 08.8	+1.4
	1.5nm,0.6s,baz=122,slow=6.3,SNR=6.0						
CMAR				pP	pP	13 55 31.8	+0.7
	1.1nm,0.7s,baz=115,slow=6.2,SNR=2.7						
URZ	Urewera	49.03	141	LR	LR	14 15 37.6	
	comp=Z,65nm,18.3s,baz=31,slow=35						
PETK	Petropavlovsk-	57.95	13	P	P	13 56 41.1	+0.5
	3.4nm,0.8s,baz=224,slow=8.1,SNR=2.2						
MKAR	Makanchi Array	70.56	322	P	P	13 58 05.0	+1.9
	4.5nm,0.7s,baz=120,slow=7.4,SNR=9.8						
MKAR				pP	pP	13 58 28.4	-0.2
	2.3nm,0.7s,baz=114,slow=8.2,SNR=3.9						
KSH	Kashi	71.93	313	P	P	13 58 14.4	+2.7
KSH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ZALV	Zalesovo Beam	72.64	330	P	P	13 58 16.0	+0.6
	comp=Z,1.3nm,0.6s,baz=120,slow=5.7,SNR=2.5						
VNDA	Vanda	75.41	175	P	P	13 58 33.1	+1.9
	comp=Z,4.7nm,0.8s,baz=324,slow=6.1,SNR=36						
MAW	Mawson	82.18	202	P	P	13 59 10.0	+1.7
	comp=Z,4.1nm,0.7s,baz=95,slow=5.6,SNR=12						
GEYT	Alibeck	85.11	308	P	P	13 59 26.0	+2.0
	comp=Z,2.8nm,0.7s,baz=49,slow=6.7,SNR=4.5						
ILAR	Eielson Array	85.74	24	P	P	13 59 26.6	0.0
	comp=Z,2.1nm,0.9s,baz=253,slow=4.9,SNR=9.1						
KIC	Kosan Boka	144.30	277	ePKIKP	PKPdf	14 06 23.1	-1.2
	comp=Z,32nm,0.6s						
DBIC	Dimbokro	144.39	277	PKP	PKPdf	14 06 24.4	0.0
	comp=Z,20nm,0.6s,baz=105,slow=3.4,SNR=27						
TIC	Toumodi	144.56	277	ePKIKP	PKPdf	14 06 23.8	-1.0
LIC	Lamto	144.59	276	ePKIKP	PKPbc	14 06 23.5	-0.2
	comp=Z,84nm,1.0s						
LPAZ	La Paz	146.56	126	PKPbc	PKPab	14 06 30.4	-1.2
	comp=Z,3.5nm,0.8s,baz=19,slow=4.3,SNR=3.1						

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*CNRM **07** 13:47:43.3,35.°67N×3.°69W,h21^{km},ml2.3*

*SFS **07** 13:47:44.0,35.°30N×3.°70W,ML2.1,ALBORAN SUR*

*MDD **07** 13:47:46.5±0.6,35.°39N×3.°61W,h12^{km}±11^{km},mbLg2.7/1, Error ellipse: s-maj=9.4km s-min=4.0km az=161.0, PRXIMO*

ISC 07 13:47:44.2±1.2,**35.°47N**±0.°03×**3.°65W**±0.°03,**h15**^{km}±10^{km}, **n22,**σ**1.^{s}34**/40,**Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALE	Palemas	0.34	223	P	Pb	13 47 53.1	+1.0
PALE				S	Sb	13 47 59.7	+2.2
EMEL	Melilla	0.59	107	P	Pg	13 47 56.2	+0.3
	24nm,0.1s,SNR=7.9						
EMEL				S	Sb	13 48 04.4	-0.2
	150nm,0.2s,SNR=7.9						
PVLZ	Peæn de	0.61	241	P	Pn	13 47 58.5	+0.1
PVLZ				S	Sb	13 48 05.9	+1.0
PVLZ	Peæn de	0.61	241	P	Pn	13 47 58.5	+0.1
PVLZ				S	Sb	13 48 05.9	+1.0
EALB	Alboran	0.69	47	P	Pn	13 47 59.5	+0.1
	4.8nm,0.1s,SNR=7.9						
EALB				S	Sn	13 48 09.1	-0.8
	53nm,0.1s,SNR=7.9						
CHAS	Isla Isabel II	1.04	106	P	Pg	13 48 04.8	+0.5
CHAS				S	Sb	13 48 15.9	-1.5
ELGU	Los Guajares,	1.39	1	P	Pb	13 48 10.3	+0.2
	0.8nm,0.1s,SNR=7.9						
ELGU				S	Sn	13 48 27.4	-0.1
	6.4nm,0.1s,SNR=7.9						
SMIR	Smir Dam	1.43	279	P	Pn	13 48 09.0	-0.6
SMIR				S	Sn	13 48 24.5	-3.6
EMAL	Malaga-Limoner	1.43	334	S	Sn	13 48 27.9	-0.4
JBK	JBK	1.44	141	P	Pb	13 48 10.7	-0.2
JBK				S	Sb	13 48 29.7	+0.5
ECEU	Ceuta	1.47	287	P	Pn	13 48 10.2	0.0
	3.3nm,0.1s,SNR=7.9						
ECEU				S	Sn	13 48 27.4	-1.8
	5.7nm,0.1s,SNR=7.9						
EBER	Berja	1.55	23	P	Pg	13 48 13.7	-0.4
	0.9nm,0.2s,SNR=7.9						
EBER				S	Sn	13 48 31.3	-0.2
	8.6nm,0.3s,SNR=7.9						
EGOR	Sierra Gorda,	1.68	347	P	Pg	13 48 15.9	-0.6
	0.4nm,0.3s,SNR=7.9						
EGOR				S	Sg	13 48 38.8	+0.6
	7.3nm,0.4s,SNR=7.9						
EQUE	Quentar	1.74	6	P	Pb	13 48 16.4	+0.4
	0.8nm,0.2s,SNR=4.6						
EQUE				S	Sb	13 48 36.8	-0.8
	4.2nm,0.5s,SNR=7.9						
EQES	Quesada	2.37	11	P	Pb	13 48 26.5	-0.2
	0.5nm,0.2s,SNR=7.9						
EQES				S	Sb	13 48 55.1	-0.8
	6.6nm,0.5s,SNR=7.9						
MD31	MD31	2.75	200	P	Pb	13 48 31.1	-2.2
MD31				S	Sb	13 49 06.3	-0.6
SESP	Santiago Espad	2.79	18	P	Pb	13 48 32.2	-1.6

	0.7nm,0.2s,SNR=7.9						
SESP				S	Sn	13 49 04.5	+2.4
	1.3nm,0.2s,SNR=7.9						
EADA	**Adamuz**	2.79	345	P	Pb	13 48 31.7	-2.1
	0.3nm,0.1s,SNR=7.9						
EADA				S	Sn	13 49 04.5	+2.6
	0.3nm,0.2s,SNR=7.9						
ECAB	**El Cabril**	2.96	332	P	Pn	13 48 33.5	+2.7
	0.5nm,0.4s,SNR=7.9						
ECAB				S	Sn	13 49 06.7	+0.6
	0.2nm,0.2s,SNR=7.9						
PVAQ	**Vaqueiros**	3.80	302	*e*S	Sn	13 49 26.5	-0.3
PVAQ				A	A	13 49 34.6	
	2.1nm,0.5s						
PBAR	**Barrancos**	3.83	316	*e*S	Sn	13 49 28.1	+0.7
PBDV	**Barranco-do-Ve**	3.88	298	*e*S	Sn	13 49 29.8	+1.1

PRU 07 13:56:49.1±0.0, 50°26N×18°95E, h0^{km}, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	0.67	231	*e*SG	Sg	13 57 10.6	+0.1
MORC	**Moravsky Berou**	1.03	242	*e*SG	Sg	13 57 21.3	-0.8
MORC	**Moravsky Berou**	1.03	242	*e*PN	Pg	13 57 09.2	+0.4
LANS	**Liptovska Anna**	1.16	163	*e*PG	Pb	13 57 11.7	-0.3
LANS				*e*SG	Sg	13 57 25.9	-0.4
LANS				*e*LG	Lg	13 57 29.3	
KRLC	**Kraliky**	1.41	263	*e*PG	Pn	13 57 14.5	-1.5
KRLC				*e*SG	Sg	13 57 33.9	-0.4
	comp=Z,3.2nm,0.4s						
DPC	**Dobruska-Polom**	1.69	274	*e*PG	Pn	13 57 19.4	-0.5
DPC				*e*SG	Sg	13 57 43.6	+0.3
VYHS	**Vyhne**	1.77	182	*e*SN	Sn	13 57 42.5	-1.7
VRAC	**Vranov**	1.80	239	*e*SG	Sn	13 57 45.0	+0.1

WEL 07 13:59:37.7±0.6, 33°S±6°×17°8W±1°5, h33^{km}, M4.5/49, mB5.1/41, ML5.0/56, MLv4.8/49, Mw(mB)4.4/41, Error ellipse: s-maj=0.0km s-min=0.0km az=109.5

IDC 07 13:59:44.0±9.0, 33°09S×179°15W, h104^{km}±85^{km}, mb3.2/2, mb1 3.6/3, mb1mx3.3/32, mbtmp3.9/3, ML4.4/1, Error ellipse: s-maj=78.1km s-min=54.2km az=170.0

ISC 07 13:59:39.4±1.9, 33°3S±0°1×178°1W±0°2, h100^{km}, n102, σ1^{s}83/116, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	4.05	2	P	Pn	14 00 33.1	-6.2
GLKZ				S	Sn	14 01 14.0	-12
RIZ	**Raoul Island**	4.07	2	S	Sn	14 01 14.8	-11
MXZ	**Matakaoa Point**	5.15	214	P	Pn	14 00 55.5	+1.3
MXZ				S	Sn	14 01 51.9	-0.4
WMGZ	**Waiomatatini S**	5.31	211	P	Pn	14 00 57.8	+1.5
WMGZ				S	Sn	14 01 56.0	-0.3
PKGZ	**Pakihiroa**	5.52	213	P	Pn	14 01 00.8	+1.6
PKGZ				S	Sn	14 02 04.6	+3.2
HAZ	**Te Kaha**	5.56	216	P	Pn	14 01 01.1	+1.5
HAZ				S	Sn	14 02 05.3	+3.2
PUZ	**Puketiti**	5.59	211	P	Pn	14 01 01.2	+1.0
PUZ				S	Sn	14 02 02.3	-0.7
RUGZ	**Raukumara Rang**	5.77	215	P	Pn	14 01 03.1	+0.4
RUGZ				S	Sn	14 02 08.5	+0.9
TWGZ	**Tauwhareparae**	5.80	212	P	Pn	14 01 03.5	+0.5
TWGZ				S	Sn	14 02 12.4	+4.2
CNGZ	**Carnagh Statio**	5.96	209	P	Pn	14 01 06.9	+1.8
WHRZ	**Whale Island**	6.05	220	P	Pn	14 01 08.8	+2.5
TKGZ	**Te Karaka**	6.08	212	P	Pn	14 01 08.4	+1.8
MWZ	**Matawai**	6.14	214	P	Pn	14 01 07.7	+0.1
MWZ				S	Sn	14 02 18.5	+2.2
URZ	**Urewera**	6.28	217	P	Pn	14 01 11.2	+1.7
	11nm,0.3s,baz=300,slow=24,SNR=83						
URZ				S	Sn	14 02 16.8	-3.0
	4.3nm,0.3s,baz=121,slow=22,SNR=1.8						
URZ	**Urewera**	6.28	217	P	Pn	14 01 08.7	-0.7
URZ				S	Sn	14 02 19.1	-0.6
URZ	**Urewera**	6.28	217	P	Sn	14 02 15.8	-4.0
MARZ	**Manawahe**	6.31	221	P	Pn	14 01 12.0	+2.1
RAGZ	**Rawiri**	6.32	214	P	Pn	14 01 12.1	+2.1
RAGZ				S	Sn	14 02 24.0	+3.2
RIGZ	**Rimuhau**	6.34	211	P	Pn	14 01 11.5	+1.3
RIGZ				S	Sn	14 02 23.2	+2.0
TGRZ	**Tauranga**	6.37	225	P	Pn	14 01 13.2	+2.6
PRGZ	**Paritu Road**	6.47	209	P	Pn	14 01 13.0	+1.0
PRGZ				S	Sn	14 02 26.9	+2.5
MKRZ	**Makatiti**	6.53	221	P	Pn	14 01 15.6	+2.6
OMRZ	**Omania**	6.56	222	P	Pn	14 01 15.6	+2.3
KARZ	**Kaharoa**	6.57	223	P	Pn	14 01 15.5	+2.0
TARZ	**Mount Tarawera**	6.58	220	P	Pn	14 01 15.8	+2.2
SNGZ	**Shannon Statio**	6.58	213	P	Pn	14 01 14.6	+1.0
SNGZ				S	Sn	14 02 29.5	+2.3
MUGZ	**Murupara**	6.62	218	P	Pn	14 01 13.0	-1.1
RTZ	**Ruatahuna**	6.62	216	P	Pn	14 01 14.3	+0.1
KNZ	**Kokohu**	6.64	210	P	Pn	14 01 15.3	+1.0
KNZ				S	Sn	14 02 26.5	-1.9
RRRZ	**Republican Roa**	6.65	220	P	Pn	14 01 16.3	+1.8
MHGZ	**Mahia Peninsul**	6.66	208	P	Pn	14 01 15.2	+0.7
MHGZ				S	Sn	14 02 31.9	+3.0
RAHZ	**Arahi**	6.81	214	P	Pn	14 01 18.8	+2.1
RAHZ				S	Sn	14 02 32.6	-0.1
TOZ	**Tahuroa Road**	6.83	228	P	Pn	14 01 18.4	+1.5
PRRZ	**Plateau Road**	6.83	219	P	Pn	14 01 18.1	+1.1
WHHZ	**Waihua**	6.87	212	P	Pn	14 01 19.9	+2.4
WHHZ				S	Sn	14 02 35.4	+1.3
MTHZ	**Maungataniwha**	6.88	215	P	Pn	14 01 18.9	+1.3
MTHZ				S	Sn	14 02 33.4	-0.9
ALRZ	**Allen Road**	6.91	219	P	Pn	14 01 19.4	+1.5
MRHZ	**Matea Rd**	7.07	217	P	Pn	14 01 19.7	-0.5
MRHZ				S	Sn	14 02 38.1	-1.0
NMHZ	**Naumai**	7.08	214	P	Pn	14 01 21.8	+1.4
ARHZ	**Aropaoanui**	7.13	212	P	Pn	14 01 21.8	+0.8
KUTZ	**Kaahu Road**	7.14	222	P	Pn	14 01 22.8	+1.6
TLZ	**Tolley Road**	7.19	224	P	Pn	14 01 23.4	+1.5
BKZ	**Black Stump Fm**	7.29	215	P	Pn	14 01 21.7	-1.6
WATZ	**Wairara**	7.34	221	P	Pn	14 01 25.2	+1.3
MCHZ	**McNeill Hill**	7.41	213	P	Pn	14 01 25.7	+0.9
CKHZ	**Cape Kidnapper**	7.42	210	P	Pn	14 01 26.5	+1.5
RATZ	**Rangitukua**	7.43	220	P	Pn	14 01 26.4	+1.3
RITZ	**Rihia Road**	7.47	219	P	Pn	14 01 26.8	+1.2
KWHZ	**Kaweka Forest**	7.53	214	P	Pn	14 01 26.0	-0.5
KATZ	**Kakaramea**	7.55	220	P	Pn	14 01 28.3	+1.4
KAHZ	**Kahuranaki**	7.62	211	P	Pn	14 01 27.3	-0.4
TMVZ	**Te Maari**	7.65	219	P	Pn	14 01 28.0	-0.2
NTVZ	**North Tongarir**	7.65	219	P	Pn	14 01 28.6	+0.3
ETVZ	**East Tongariro**	7.66	219	P	Pn	14 01 28.2	-0.1
KRVZ	**Karewarewa**	7.67	220	P	Pn	14 01 29.5	+1.0
OTVZ	**Oturere**	7.71	219	P	Pn	14 01 28.6	-0.4
NNVZ	**North Ngauruho**	7.71	219	P	Pn	14 01 29.8	+0.7
WTVZ	**West Tongariro**	7.71	220	P	Pn	14 01 29.5	+0.5
HIZ	**Hauiti**	7.72	226	P	Pn	14 01 31.0	+2.0
KRHZ	**Kereru**	7.72	214	P	Pn	14 01 29.0	-0.1
SNVZ	**South Ngauruho**	7.74	219	P	Pn	14 01 29.5	0.0
NGZ	**Ngauruhoe**	7.75	219	P	Pn	14 01 30.3	+0.8
BHHZ	**Black Hill Sta**	7.75	216	P	Pn	14 01 29.6	+0.1
TWVZ	**Taurewa**	7.76	221	P	Pn	14 01 30.2	+0.5
TUVZ	**Tukino**	7.79	219	P	Pn	14 01 30.2	+0.1
PXZ	**Pawanui**	7.83	210	P	Pn	14 01 31.0	+0.6
FWVZ	**Far West T-bar**	7.83	219	P	Pn	14 01 30.9	+0.2
WHVZ	**Whangaehu Hut**	7.83	219	P	Pn	14 01 30.7	0.0
MOVZ	**Moawhango**	7.84	218	P	Pn	14 01 30.3	-0.4
WNVZ	**Wahianoa**	7.86	219	P	Pn	14 01 30.5	-0.7
TRVZ	**Turoa**	7.87	219	P	Pn	14 01 31.4	+0.1
PKVZ	**Pokaka**	7.97	220	P	Pn	14 01 32.4	-0.1
MTVZ	**Mangateitei**	7.97	219	P	Pn	14 01 31.3	-1.2
PNHZ	**Pukenui**	8.02	213	P	Pn	14 01 32.0	-1.2
WPHZ	**Waipukurau**	8.03	212	P	Pn	14 01 33.2	-0.1
PRHZ	**Porangahau**	8.12	210	P	Pn	14 01 33.2	-1.2
VRZ	**Vera Road**	8.18	223	P	Pn	14 01 35.7	+0.5
DVHZ	**Dannevirke**	8.35	212	P	Pn	14 01 36.9	-0.7
WAZ	**Wanganui**	8.50	219	P	Pn	14 01 39.2	-0.4
POWZ	**Post Office Ro**	8.60	213	P	Pn	14 01 41.1	+0.1
BFZ	**Birch Farm**	8.63	210	P	Pn	14 01 39.8	-1.6
PRWZ	**Pori Road**	8.64	212	P	Pn	14 01 41.1	-0.5
NEZ	**North Egmont**	8.66	224	P	Pn	14 01 43.1	+1.3
MRZ	**Mangatainoka R**	8.90	213	P	Pn	14 01 41.8	-3.2
HOWZ	**Holdsworth Sta**	9.12	212	P	Pn	14 01 45.4	-2.7
TMWZ	**Te Maipa**	9.13	210	P	Pn	14 01 47.0	-1.2
MTW	**Mount Morrison**	9.34	211	P	Pn	14 01 48.2	-2.8
KIW	**Kapiti Island**	9.37	215	P	Pn	14 01 49.0	-2.4
TRWZ	**Traveller**	9.46	210	P	Pn	14 01 51.2	-1.5
CAW	**Cannon Point**	9.49	213	P	Pn	14 01 50.5	-2.6
MSWZ	**Moikau Station**	9.66	211	P	Pn	14 01 52.9	-2.5
DUWZ	**D'Urville Isla**	9.82	218	P	Pn	14 01 54.4	-3.2
TCW	**Tory Channel**	9.94	215	P	Pn	14 01 55.3	-4.0
TUWZ	**Tuamarina**	10.27	216	P	Pn	14 01 59.8	-3.9
NNZ	**Nelson**	10.40	218	P	Pn	14 02 01.2	-4.3
BSWZ	**Blackbirch Sta**	10.52	215	P	Pn	14 02 03.9	-3.2
THZ	**Tophouse**	11.04	218	P	Pn	14 02 09.4	-4.8
KHZ	**Kahutara**	11.22	214	P	Pn	14 02 12.2	-4.4
DSZ	**Denniston Nort**	11.61	221	P	Pn	14 02 16.3	-5.6
ASAR	**Alice Springs**	42.95	270	P	P	14 07 26.0	-2.7
	0.2nm,0.4s,baz=109,slow=7.3,SNR=5.0						
WRA	**Warramunga Arr**	44.20	275	P	P	14 07 35.6	-3.1
	0.7nm,0.4s,baz=113,slow=7.7,SNR=15						
FINES	**FINESS Array B**	147.84	338	PKPbc	PKPdf	14 19 13.7	+4.8
	4.1nm,0.9s,baz=63,slow=3.4,SNR=7.7						

IDC 07 14:01:25.9±5.0, 18°47N×145°32E, h216^{km}±21^{km}, mb2.9/2, mb1 3.2/4, mb1mx2.9/43, mbtmp3.7/4, Error ellipse: s-maj=245.6km s-min=15.7km az=87.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	4.87	185	P	Pn	14 02 39.4	+0.2
	8.3nm,0.3s,baz=160,slow=7.0,SNR=8.4						
GUMO				S	S	14 03 37.5	+0.6
	8.6nm,0.3s,baz=136,slow=20,SNR=2.0						
MJAR	**Matsushiro Arr**	19.06	342	P	P	14 05 31.9	-0.3
	0.1nm,0.3s,baz=164,slow=10.0,SNR=6.9						
WRA	**Warramunga Arr**	39.67	196	P	P	14 08 37.1	-0.1
	0.6nm,0.4s,baz=19,slow=8.8,SNR=8.8						
ASAR	**Alice Springs**	43.34	195	P	P	14 09 06.7	-0.3
	0.2nm,0.7s,baz=14,slow=6.7,SNR=2.8						

TUL 07 14:08:07.8±1.4, 36°948N±0°007×97°84W±0°01, h6^{km}±4^{km}, ML2.6, mb_Lg2.2/13(NEIC), Error ellipse: s-maj=1.6km s-min=1.0km az=87.0

NEIC 07 14:08:07.8±0.8, 36°946N±0°010×97°82W±0°03, h6^{km}±1^{km}, Error ellipse: s-maj=3.4km s-min=1.1km az=74.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	**Grant County #**	0.10	199	Pg	Pg	14 08 10.0	0.0
GC02				Sg	Sg	14 08 11.8	+0.4
KAN17	**Caldwell West**	0.11	24	Pg	Pg	14 08 10.0	-0.1
KAN14	**Manchester OK**	0.12	275		Pg	14 08 10.3	+0.1
KAN14				Sg	Sg	14 08 12.2	+0.2
KAN05	**Bluff City Nor**	0.17	345		Pg	14 08 11.1	-0.1
KAN05				Sg	Sg	14 08 14.0	+0.5
KAN01	**Argonia South**	0.21	13		Pg	14 08 12.0	0.0
KAN09	**Caldwell North**	0.25	40	Pg	Pg	14 08 13.3	+0.6
KAN10	**Anthony SW Sta**	0.28	309	Pg	Pg	14 08 12.2	-1.1
KAN06	**Argonia West S**	0.30	354		Pg	14 08 13.5	-0.2
KAN08	**Anthony NE Sta**	0.30	336		Pg	14 08 13.5	-0.3
KAN16	**Harper SW Stat**	0.34	325	Pg	Pg	14 08 14.2	-0.3
CROK	**Carrier**	0.46	197	Pg	Pg	14 08 16.8	+0.1
BLOK	**Blackwell**	0.52	111	Pg	Pg	14 08 18.2	+0.4
T35A	**Sooner Cattle**	1.05	91		Pg	14 08 27.7	-0.2
QUOK	**Quay**	1.18	131		Pg	14 08 30.1	-0.4
OK029	**Liberty Lake**	1.18	166		Pg	14 08 30.1	-0.4
OK031	**S. Brethren Rd**	1.27	141	Pn	Pn	14 08 31.7	-0.3
BCOK	**Bluff Creek, N**	1.30	172	Pn	Pn	14 08 31.9	-0.6
OK030	**Cody Creek RV**	1.31	140		Pn	14 08 32.4	-0.3
R32A	**Long Quarter,**	1.64	335	Pn	Pn	14 08 37.4	+0.3
FNO	**Franklin**	1.72	169		Pn	14 08 38.4	+0.2
FNO				IAmb_Lg		14 09 03.8	
	comp=Z,10nm,0.7s						
WMOK	**Wichita Mounta**	2.34	200	IAmb_Lg		14 09 20.8	
	comp=Z,7.0nm,0.7s						
X34A	**Smith Ranch, M**	2.34	180	IAmb_Lg		14 09 25.8	
	comp=Z,14nm,0.7s						
U38A	**Gravette**	2.81	99	IAmb_Lg		14 09 36.2	
	comp=Z,7.4nm,0.8s						
U40A	**Yellville**	4.04	97	IAmb_Lg		14 10 19.1	
	comp=Z,7.9nm,0.8s						
P38A	**Dawn**	4.30	50	IAmb_Lg		14 10 33.5	
	comp=Z,5.7nm,0.7s						
PBMO	**Poplar Bluff**	5.93	89	IAmb_Lg		14 11 16.0	
	comp=Z,4.1nm,0.7s						

KMA 07 14:09:27.6±0.9, 35°75N×129°37E, h16^{km}±3^{km}, Error ellipse: s-maj=9.0km s-min=4.3km az=131.0, South Korea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSUSN	**Ulsan**	0.21	257	P	Pg	14 09 32.5	0.0
	SNR=57						
KSUSN				S	Sg	14 09 35.5	-0.2
KSDAG	**Daegu**	0.39	273	P	Pg	14 09 35.6	+0.1
	SNR=87						
KSDAG				S	Sg	14 09 41.0	+0.1
KSYOC	**YEONGCHEON**	0.41	303	P	Pg	14 09 36.0	+0.2
	SNR=9.8						
YOCB	**Yeongcheon**	0.41	304	P	Pg	14 09 36.0	+0.1
	SNR=5.2						
KSPHA	**Pohang**	0.44	360	P	Pg	14 09 36.7	+0.2
KSBUS	**Busan**	0.54	203	P	Pg	14 09 38.2	-0.1
MIYA	**Miryang-si**	0.57	244	P	Pg	14 09 38.9	0.0
KSMAS	**Masan**	0.87	229	P	Pb	14 09 44.2	-0.1
KSULJ	**Uljin**	0.95	2	P	Pb	14 09 45.7	0.0
	SNR=8.4						
KSGIC	**Gimchen**	1.08	288	P	Pb	14 09 47.9	0.0
	SNR=11						
KSJEO	**Jeonju**	1.70	277	P	Pb	14 09 59.0	+0.5
	SNR=7.1						

IDC 07 14:12:24.5±15.0, 30°89S×179°80W, h348^{km}±185^{km}, mb2.6/2, mb1 3.1/3, mb1mx2.9/31, mbtmp3.7/3, Error ellipse: s-maj=224.3km s-min=39.4km az=1.0

ISC 07 14:12:23.3±1.0, 31°13S±0°09×179°1W±0°2, h350^{km}, n57, σ1^{s}63/75, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	2.10	28	P	Pn	14 13 17.1	+1.7
GLKZ				S	S	14 13 56.5	-0.7
MXZ	**Matakaoa Point**	6.78	198	P	Pn	14 14 08.6	+5.7
MXZ				S	S	14 15 24.8	+0.8
GRZ	**Great Barrier**	6.86	220	P	Pn	14 14 16.7	+13
WMGZ	**Waiomatatini S**	7.00	197	P	Pn	14 14 08.4	+2.9
WMGZ				S	S	14 15 28.4	-0.2
HAZ	**Te Kaha**	7.11	201	P	Pn	14 14 08.4	+1.6
HAZ				S	S	14 15 33.8	+2.8
PKGZ	**Pakihiroa**	7.15	199	P	Pn	14 14 09.6	+2.2
PKGZ				S	S	14 15 31.6	-0.4
PUZ	**Puketiti**	7.27	197	P	Pn	14 14 10.8	+2.0
PUZ				S	S	14 15 34.1	-0.5
WCZ	**Waipu Caves**	7.31	227	P	Pn	14 14 13.2	+4.0
RUGZ	**Raukumara Rang**	7.33	201	P	Pn	14 14 12.2	+2.6
RUGZ				S	S	14 15 34.2	-1.9
WIAZ	**Waiheke Island**	7.43	219	P	Pn	14 14 14.6	+3.9
TWGZ	**Tauwhareparae**	7.45	198	P	Pn	14 14 13.4	+2.6
TWGZ				S	S	14 15 38.8	+0.5
OPRZ	**Ohinepanea**	7.62	207	P	Pn	14 14 18.4	+5.7
CNGZ	**Carnagh Statio**	7.68	196	P	Pn	14 14 16.3	+2.9
MWZ	**Matawai**	7.72	200	P	Pn	14 14 16.0	+1.9
MWZ				S	S	14 15 43.4	-0.9
TKGZ	**Te Karaka**	7.73	198	P	Pn	14 14 15.8	+1.8
TKGZ				S	S	14 15 44.1	-0.2
URZ	**Urewera**	7.79	203	P	Pn	14 14 15.7	+1.0
	3.6nm,0.3s,baz=122,slow=23,SNR=53						
URZ				S	S	14 15 43.8	-1.8
	4.6nm,0.3s,baz=116,slow=22,SNR=4.1						
URZ	**Urewera**	7.79	203	P	Pn	14 14 15.8	+1.0
URZ				S	S	14 15 44.8	-0.8
RAGZ	**Rawiri**	7.90	201	P	Pn	14 14 17.8	+1.6
RAGZ				S	S	14 15 48.2	-0.2
RIGZ	**Rimuhau**	8.00	198	P	Pn	14 14 18.6	+1.2
RIGZ				S	S	14 15 48.9	-1.4
MUGZ	**Murupara**	8.10	204	P	P	14 14 21.5	+0.1
MUGZ				S	S	14 15 53.0	+0.6
PRGZ	**Paritu Road**	8.17	197	P	P	14 14 22.4	+0.1
SNGZ	**Shannon Statio**	8.19	200	P	Pn	14 14 21.2	+1.6
SNGZ				S	S	14 15 53.8	-0.7
KNZ	**Kokohu**	8.32	198	P	Pn	14 14 22.1	+1.0
KNZ				S	S	14 15 53.8	-3.5
MHGZ	**Mahia Peninsul**	8.38	196	P	P	14 14 25.3	+0.6
RAHZ	**Arahi**	8.39	201	P	P	14 14 25.0	+0.2
RAHZ				S	S	14 15 58.0	-0.8
MTHZ	**Maungataniwha**	8.41	202	P	P	14 14 24.8	-0.1
MTHZ				S	S	14 16 00.8	+1.5
TLZ	**Tolley Road**	8.45	210	P	P	14 14 27.9	+2.4
WHHZ	**Waihua**	8.49	200	P	P	14 14 26.8	+1.0
WHHZ				S	S	14 15 59.4	-1.6
MRHZ	**Matea Rd**	8.54	205	P	P	14 14 25.6	-0.8
MRHZ				S	S	14 16 02.3	+0.1
NMHZ	**Naumai**	8.64	202	P	P	14 14 27.8	+0.2
ARHZ	**Aropaoanui**	8.74	201	P	P	14 14 28.8	+0.3
BKZ	**Black Stump Fm**	8.81	203	P	Pn	14 14 27.7	+0.7
HIZ	**Hauiti**	8.91	213	P	P	14 14 33.0	+2.6
MCHZ	**McNeill Hill**	8.99	202	P	P	14 14 31.0	-0.4
NTVZ	**North Tongarir**	9.05	207	P	P	14 14 33.1	+1.0
TMVZ	**Te Maari**	9.05	207	P	P	14 14 32.4	+0.2
KWHZ	**Kaweka Forest**	9.07	203	P	P	14 14 32.2	-0.1
ETVZ	**East Tongariro**	9.07	207	P	Pn	14 14 31.4	+1.3
CKHZ	**Cape Kidnapper**	9.08	199	P	P	14 14 33.0	+0.6
OTVZ	**Oturere**	9.11	207	P	P	14 14 32.2	-0.6
SNVZ	**South Ngauruho**	9.14	207	P	P	14 14 32.6	-0.6
TUVZ	**Tukino**	9.20	207	P	Pn	14 14 32.9	+1.2
FWVZ	**Far West T-bar**	9.23	207	P	Pn	14 14 33.4	+1.2
WHVZ	**Whangaehu Hut**	9.24	207	P	Pn	14 14 33.4	+1.1
BHHZ	**Black Hill Sta**	9.25	204	P	Pn	14 14 32.9	+0.7
KAHZ	**Kahuranaki**	9.26	200	P	Pn	14 14 33.4	+1.1
KRHZ	**Kereru**	9.28	202	P	Pn	14 14 33.2	+0.7
PXZ	**Pawanui**	9.49	199	P	P	14 14 37.0	+0.2
PNHZ	**Pukenui**	9.58	202	P	Pn	14 14 37.0	+0.9
WPHZ	**Waipukurau**	9.64	201	P	P	14 14 38.4	-0.2
PRHZ	**Porangahau**	9.77	200	P	P	14 14 40.0	0.0
DVHZ	**Dannevirke**	9.94	202	P	Pn	14 14 41.2	+0.8
ANWZ	**Angora Road**	9.99	200	P	P	14 14 43.0	+0.5
PRWZ	**Pori Road**	10.24	202	P	P	14 14 45.2	0.0
ASAR	**Alice Springs**	42.17	268	P	P	14 19 38.8	-4.3
	0.2nm,0.7s,baz=106,slow=7.5,SNR=4.9						
WRA	**Warramunga Arr**	43.23	273	P	P	14 19 47.8	-3.6
	0.4nm,0.5s,baz=112,slow=7.7,SNR=12						
FINES	**FINESS Array B**	145.50	339	PKPbc	PKPdf	14 31 19.3	+0.1
	2.5nm,0.4s,baz=52,slow=4.0,SNR=33						

IDC 07 14:21:39.6±1.0, 7°93S×125°09E, h0^{km}, mb4.0/6, mb1 4.1/7, mb1mx3.8/37, mbtmp4.0/7, ML3.7/1, MS3.5/8, Ms1 3.5/8, ms1mx3.1/41, Error ellipse: s-maj=35.9km s-min=18.9km az=86.0

DJA 07 14:21:41.6±2.7, 8°S±21°×12°5E±1°6, h82^{km}±160^{km}, M4.2/4, MLv4.2/4, MwMwp4.5/1, Mwp4.9/1

ISC 07 14:21:42.4±0.7, 8°24S±0°05×125°28E±0°07, h26^{km}, n28, σ2^{s}55/26, mb4.0/6, MS3.5/3, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	**Soe**	1.81	213	P	Pb	14 22 15.3	+0.3
SOEI	**Soe**	1.81	213	P	Pb	14 22 15.0	0.0
BATI	**Baumata**	2.53	219	Pn	Pn	14 22 25.0	+3.2
	12nm,0.3s,baz=31,slow=2.0,SNR=12						
BATI				Sn	Sb	14 22 56.9	-0.9
	21nm,0.3s,baz=141,slow=23,SNR=14						
BATI				LR	LR	14 23 41.4	
	comp=Z,1μm,19.8s,baz=42,slow=46						
BATI	**Baumata**	2.53	219	P	Pn	14 22 25.1	+3.3
BATI				S	Sb	14 22 58.8	+1.0
MMRI	**Maumere**	3.04	262	P	Pn	14 22 30.2	+1.4
MMRI	**Maumere**	3.04	262	P	Pn	14 22 30.2	+1.4
EDFI	**Ende, Flores**	3.59	262	P	Pn	14 22 37.0	+0.5
BSSI	**Bau Bau, Buton**	5.19	293	P	Pn	14 23 06.4	+8.0
SANI	**Sanana**	6.18	7	S	Pn	14 23 13.1	+1.0
SANI	**Sanana**	6.18	7	P	Pn	14 23 13.5	+1.4
KAPI	**Kappang**	6.36	300	Pn	Pn	14 23 14.2	-0.2
	0.4nm,0.3s,baz=107,slow=20,SNR=1.7						
KAPI				Sn	Sn	14 24 11.7	-15
	0.4nm,0.3s,baz=341,slow=20,SNR=1.2						
KAPI				LR	LR	14 25 32.4	
	comp=Z,480nm,19.7s,baz=135,slow=38						
DRS	**Darwin Rock St**	6.92	127	P	Pn	14 23 28.0	+5.8
MTN	**Manton Dam**	7.35	129	P	Pn	14 23 33.3	+5.1
KNRA	**Kununurra**	8.14	156	P	Pn	14 23 42.8	+3.8
KDU	**Kakadu**	8.34	123	P	Pn	14 23 46.6	+4.9
FITZ	**Fitzroy Crossi**	9.81	178	Pn	Pn	14 24 01.9	+0.1
	0.4nm,0.3s,baz=2.9,slow=8.1,SNR=14						
FITZ				Sn	Sn	14 25 45.4	-5.9
	0.5nm,0.3s,baz=70,slow=15,SNR=3.8						
FITZ				LR	LR	14 28 06.1	
	comp=Z,111nm,18.6s,baz=7.5,slow=38						
FITZ	**Fitzroy Crossi**	9.81	178	P	Pn	14 24 04.5	+2.6
WRA	**Warramunga Arr**	14.57	144	Pn	Pn	14 25 05.5	-1.6
	0.5nm,0.3s,baz=318,slow=13,SNR=13						
WRA				Sn	Sn	14 27 44.4	-3.5
	0.3nm,0.3s,baz=317,slow=25,SNR=8.2						
ASAR	**Alice Springs**	17.43	153	P	P	14 25 45.6	+0.7
	0.2nm,0.3s,baz=318,slow=9.7,SNR=28						
ASAR				S	Sn	14 28 53.5	-3.7
	0.2nm,0.3s,baz=316,slow=19,SNR=8.4						
ASAR				LR	LR	14 33 09.8	
	comp=Z,65nm,21.2s,baz=322,slow=39						
LEM	**Lembang**	17.57	273	LR	LR	14 33 33.1	
	comp=Z,486nm,18.2s,baz=78,slow=41						
PMG	**Port Moresby**	21.65	95	LR	LR	14 36 50.9	
	comp=Z,210nm,19.3s,baz=266,slow=42						
STKA	**Stephens Creek**	28.00	149	P	P	14 27 35.5	+4.2
	1.2nm,0.8s,baz=276,slow=11,SNR=2.2						
STKA				LR	LR	14 39 52.2	
	comp=Z,96nm,18.4s,baz=14,slow=38						
PSI	**Prapat**	28.48	292	LR	LR	14 41 47.5	
	comp=Z,139nm,19.1s,baz=121,slow=43						
CMAR	**Chiang Mai Arr**	37.13	316	P	P	14 28 49.6	-1.6
	0.4nm,0.3s,baz=146,slow=7.3,SNR=8.4						
MJAR	**Matsushiro Arr**	46.17	14	P	P	14 30 04.8	-0.2
	2.0nm,0.9s,baz=197,slow=8.6,SNR=5.2						
MKAR	**Makanchi Array**	66.79	329	P	P	14 32 30.4	-1.3
	1.7nm,0.7s,baz=126,slow=8.0,SNR=5.6						
ZALV	**Zalesovo Beam**	70.71	336	P	P	14 32 54.5	-1.4
	0.7nm,0.3s,baz=116,slow=3.4,SNR=4.1						
VNDA	**Vanda**	71.83	172	P	P	14 33 05.6	+3.2
	0.7nm,0.6s,baz=309,slow=7.3,SNR=5.3						

IDC 07 14:27:31.3±2.1, 1°67N×126°86E, h0^{km}, mb3.5/3, mb1 3.8/3, mb1mx3.4/38, mbtmp3.6/3, Error ellipse: s-maj=164.4km s-min=26.7km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	22.70	162	P	P	14 32 35.0	+0.2
	1.1nm,0.4s,baz=340,slow=11,SNR=11						
ASAR	**Alice Springs**	26.10	165	P	P	14 33 06.8	-0.2
	0.4nm,0.4s,baz=346,slow=7.3,SNR=8.4						
MKAR	**Makanchi Array**	59.31	326	P	P	14 37 35.1	0.0
	0.2nm,0.4s,baz=115,slow=8.0,SNR=4.1						

IDC 07 14:34:28.2±0.6, 9°45N×126°88E, h0^{km}, mb4.0/16, mb1 4.2/18, mb1mx4.1/38, mbtmp4.1/18, ML4.5/2, MS3.4/5, Ms1 3.4/5, ms1mx2.9/42, Error ellipse: s-maj=28.4km s-min=11.8km az=83.0

NEIC 07 14:34:30.4±0.7, 9°53N±0°07×126°9E±0°2, h18^{km}±6^{km}, mb4.4/18, Error ellipse: s-maj=23.7km s-min=9.7km az=83.0

MAN 07 14:34:33.2, 9°32N×126°69E, h15^{km}, mb5.1, ML4.1, MS4.2

ISC 07 14:34:32.0±3.2, 9°45N±0°05×126°77E±0°08, h28^{km}±22^{km}, n69, σ1^{s}35/69, mb4.3/34, MS3.5/3, 4C-5D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	**Surigao**	1.31	285	⇓*e*P	Pn	14 34 54.9	+0.4
SCPH				*e*S	Sn	14 35 10.8	-0.3
BUKP	**Musuan**	2.30	227	⇓*i*P	Pn	14 35 06.7	-1.5
BUKP				*i* S	Sn	14 35 34.2	-1.4
DAV	**Davao City (W)**	2.64	207	Pn	Pn	14 35 14.8	+2.0
	53nm,0.3s,baz=61,slow=6.2,SNR=1.9						
DAV				Sn	Sn	14 35 47.9	+3.9
	58nm,0.3s,baz=242,slow=22,SNR=6.3						
DAV				LR	LR	14 36 26.5	
	comp=Z,901nm,19.9s,baz=340,slow=44						
DAV	**Davao City (W)**	2.64	207		Pn	14 35 13.7	+0.8
DMPH	**Davao City--Mi**	2.66	208	⇑*e*P	Pn	14 35 15.4	+2.3
TBP	**Tagbilaran**	2.88	275	*e*P	Pn	14 35 17.1	+1.0
TBP				*i* S	Sn	14 35 52.5	+2.5
LLP	**Lapu-Lapu**	2.90	288	⇑*e*P	Pn	14 35 19.6	+3.3
LLP				*i* S	Sb	14 35 57.0	-1.1
KCP	**Kidapawan**	2.94	215	⇑*e*P	Pn	14 35 18.4	+1.4
KCP				*i* S	Sn	14 35 38.6	-13

DCPH	Dipolog City	3.49	256	⇓eP	Pn	14 35 25.4	+0.9
SNPH	Sibulan	3.49	269	⇓eP	Pn	14 35 26.8	+2.2
SNPH				eS	Sn	14 36 03.2	-1.8
RCP	Roxas	4.48	298	⇓eP	Pn	14 35 42.3	+4.1
LQP	Lukban	6.91	313	⇑eP	Pn	14 36 16.6	+4.9
TOLI2	Tolitoli	10.20	216	Pn	Pn	14 36 57.2	+0.4
GUMO	Guam	18.20	75	LR	LR	14 45 29.2	
	comp=Z,23nm,18.4s,baz=270,slow=36						
BATI	Baumata	19.77	189	P	P	14 39 00.7	+0.5
	2.7nm,0.3s,baz=315,slow=5.9,SNR=3.0						
MTN	Manton Dam	22.56	169	P	P	14 39 27.9	-2.4
MTN				IAmb	IAmb	14 39 39.6	
	comp=Z,17nm,1.4s						
KNRA	Kununurra	25.04	175	P	P	14 39 53.3	-0.8
KNRA				IAmb	IAmb	14 40 15.1	
	comp=Z,10nm,0.8s						
FITZ	Fitzroy Crossi	27.39	182	P	P	14 40 15.3	0.0
	comp=Z,5.5nm,0.8s,baz=221,slow=2.8,SNR=17						
FITZ	Fitzroy Crossi	27.39	182	P	P	14 40 15.5	+0.2
KSRS	Korea Array	27.90	2	LR	LR	14 53 48.1	
	comp=Z,37nm,18.5s,baz=205,slow=42						
CMAR	Chiang Mai Arr	28.42	291	P	P	14 40 25.4	+0.7
	comp=Z,0.9nm,0.9s,baz=100,slow=7.3,SNR=6.3						
MJAR	Matsushiro Arr	28.90	19	P	P	14 40 27.5	-1.2
	comp=Z,1.4nm,1.0s,baz=180,slow=9.2,SNR=2.3						
WRAB	Tennant Creek	30.13	166	P	P	14 40 38.9	-0.8
WRAB				IAmb	IAmb	14 40 51.8	
	comp=Z,2.4nm,0.8s						
WRA	Warramunga Arr	30.14	166	P	P	14 40 39.0	-0.8
	comp=Z,0.6nm,0.7s,baz=348,slow=9.3,SNR=9.7						
WRA				PcP	PcP	14 43 42.0	+1.0
	comp=Z,0.3nm,0.5s,baz=336,slow=2.4,SNR=1.7						
WRA	Warramunga Arr	30.14	166	P	P	14 40 38.3	-1.5
WB2	Warramunga Arr	30.14	166	P	P	14 40 39.0	-0.8
WB2				IAmb	IAmb	14 40 58.5	
	comp=Z,6.6nm,1.4s						
GSI	Gunungsitoli	30.15	256	P	P	14 40 39.8	-0.2
GSI				IAmb	IAmb	14 40 40.8	
	comp=Z,9.0nm,0.8s						
WR0	Warramunga Arr	30.20	165	P	P	14 40 39.5	-0.8
WR0				IAmb	IAmb	14 40 54.7	
	comp=Z,1.7nm,0.7s						
AS31	Alice Springs	33.64	168	P	P	14 41 10.5	0.0
ASAR	Alice Springs	33.64	168	P	P	14 41 10.4	-0.2
	comp=Z,0.3nm,0.4s,baz=351,slow=7.0,SNR=14						
ASAR				PcP	PcP	14 43 51.4	+0.9
	comp=Z,0.4nm,0.6s,baz=353,slow=2.6,SNR=5.3						
ASAR	Alice Springs	33.64	168	P	P	14 41 10.0	-0.5
ERM	Erimo	35.50	21	P	P	14 41 24.6	-1.8
H11S3	WAKE ISLAND Hy	39.69	72	T	T	15 25 10.8	
	baz=262,slow=74,SNR=22						
H11S1	WAKE ISLAND Hy	39.70	72	T	T	15 25 09.8	
	baz=262,slow=74,SNR=22						
H11S2	WAKE ISLAND Hy	39.70	72	T	T	15 25 08.7	
	baz=262,slow=74,SNR=34						
FORT	Forrest	40.01	178	P	P	14 42 03.8	-0.8
TAPN	Taplejung	40.90	301	eP	P	14 42 12.8	+0.3
	comp=Z,4.7nm,0.4s						
ODAN	Odare	41.02	300	eP	P	14 42 13.4	0.0
	comp=Z,18nm,0.6s						
RAMN	Ramite	41.72	300	eP	P	14 42 19.3	+0.1
	comp=Z,6.7nm,0.5s						
SONM	Songino Array	41.96	339	P	P	14 42 21.7	+1.0
	comp=Z,0.5nm,0.5s,baz=155,slow=9.2,SNR=4.3						
SONM	Songino Array	41.96	339	P	P	14 42 18.6	-2.1
JIRN	Jiri	42.27	301	eP	P	14 42 23.8	-0.1
	comp=Z,16nm,0.6s						
GUN	Gumba	42.61	301	eP	P	14 42 26.5	-0.1
	comp=Z,23nm,0.9s						
BBOO	Buckleboo	42.94	168	P	P	14 42 28.3	-0.4
BBOO				IAmb	IAmb	14 42 30.1	
	comp=Z,17nm,1.3s						
KKN	Kakani	43.08	301	eP	P	14 42 30.0	-0.3
NWAO	Narrogin (SRO)	43.11	192	P	P	14 42 30.6	+0.6
	comp=Z,8.5nm,0.6s,baz=12,slow=9.1,SNR=8.8						
NWAO	Narrogin (SRO)	43.11	192	P	P	14 42 29.7	-0.3
STKA	Stephens Creek	43.47	162	P	P	14 42 33.1	+0.1
	comp=Z,0.7nm,0.5s,baz=341,slow=9.9,SNR=4.3						
STKA	Stephens Creek	43.47	162	P	P	14 42 32.2	-0.8
KOLN	Koldanda	44.51	300	eP	P	14 42 41.8	+0.1
	comp=Z,19nm,0.7s						
DANN	Dangsing	44.53	301	eP	P	14 42 41.6	-0.4
	comp=Z,16nm,0.6s						
PYUN	Piuthan	45.12	300	eP	P	14 42 46.5	0.0
	comp=Z,27nm,0.8s						
MK31	Makanchi Array	52.98	323	P	P	14 43 45.2	-1.1
MK31				IAmb	IAmb	14 43 48.7	
	comp=Z,4.2nm,1.0s						
MKAR	Makanchi Array	52.98	323	P	P	14 43 47.5	+1.2
	comp=Z,3.6nm,0.7s,baz=121,slow=8.4,SNR=20						
MKAR	Makanchi Array	52.98	323	P	P	14 43 46.2	-0.1
ZALV	Zalesovo Beam	55.58	331	P	P	14 44 04.9	-0.1
	comp=Z,1.4nm,0.8s,baz=108,slow=9.8,SNR=4.1						
KURK	Kurchatov	57.02	326	P	P	14 44 14.2	-1.2
KURK				IAmb	IAmb	14 44 17.0	
	comp=Z,5.4nm,0.8s						
KKAR	Karatay Array	59.18	315	P	P	14 44 29.4	-1.3
BRVK	Borovoye	62.69	326	P	P	14 44 53.2	-1.1
NRIK	Noril'sk	64.93	346	P	P	14 45 10.5	+1.7
	comp=Z,3.0nm,0.5s,baz=109,slow=5.1,SNR=6.1						
ABKAR	Akbulak array	67.82	319	P	P	14 45 26.7	-1.0
ABKAR				IAmb	IAmb	14 45 32.9	
	comp=Z,4.7nm,1.4s						
ILAR	Eielson Array	79.96	26	P	P	14 46 40.2	+1.7
	comp=Z,0.6nm,0.9s,baz=243,slow=4.5,SNR=9.0						
ARCES	ARCESS Array B	85.13	340	P	P	14 47 05.8	+0.4
	comp=Z,2.8nm,0.6s,baz=65,slow=5.8,SNR=12						
FINES	FINESS Array B	86.85	332	P	P	14 47 14.5	+0.6
	comp=Z,1.8nm,0.8s,baz=270,slow=3.8,SNR=5.3						
AKASG	Malin Array Be	87.51	321	P	P	14 47 16.8	-0.5
	comp=Z,0.2nm,0.3s,baz=64,slow=5.3,SNR=1.9						
VNDA	Vanda	89.06	173	P	P	14 47 23.6	-0.4
	comp=Z,0.5nm,0.9s,baz=308,slow=5.7,SNR=3.0						
NOA	NORSAR Array B	93.71	334	LR	LR	15 32 32.5	
	comp=Z,17nm,20.4s,baz=315,slow=37						
YKA	Yellowknife Ar	94.30	24	LR	LR	15 35 31.3	
	comp=Z,85nm,18.0s,baz=0.0,slow=39						
TORD	Torodi Ar. Bea	121.03	292	PKP	PKiKP	14 53 22.9	-0.4
	comp=Z,0.5nm,0.7s,baz=63,slow=37,SNR=3.0						

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*IDC **07** 14:41:23.5±2.0, 8.°25S×125.°29E, h0^{km}, mb3.6/1, mb1 3.6/5, mb1mx3.4/32, mbtmp3.4/5, ML3.2/4, Error ellipse: s-maj=41.6km s-min=27.0km az=87.0*

ISC 07 14:41:28.9±1.5**, 8.°4S**±0.°1×**125.°44E**±0.°10**, h35^{km}, n11, σ1^s.91**/11**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.77	221	P	Pn	14 41 57.6	+0.4
BATI	Baumata	2.50	224	Pn	Pn	14 42 05.8	-1.4
	4.4nm,0.3s,baz=333,slow=0.6,SNR=3.1						
BATI				Sn	Sn	14 42 38.2	+1.6
	5.4nm,0.3s,baz=313,slow=23,SNR=2.2						
MTN	Manton Dam	7.13	129	P	Pn	14 43 17.4	+6.6
LUWI	Luwuk	7.78	340	P	Pn	14 43 39.2	+19
	124nm,0.5s						
KNRA	Kununurra	7.92	156	P	Pn	14 43 24.5	+2.8
KDU	Kakadu	8.12	122	P	Pn	14 43 31.7	+7.3
FITZ	Fitzroy Crossi	9.64	179	Pn	Pn	14 43 45.1	-0.1
	0.2nm,0.3s,baz=1.5,slow=10.0,SNR=13						
FITZ				Sn	Sn	14 45 29.4	-2.9
	0.3nm,0.3s,baz=110,slow=6.8,SNR=4.0						
FITZ	Fitzroy Crossi	9.64	179	P	Pn	14 43 46.2	+1.0
WRA	Warramunga Arr	14.35	144	Pn	Pn	14 44 49.8	+0.1
	0.1nm,0.3s,baz=318,slow=12,SNR=3.4						
WRA				Sn	Sn	14 47 25.7	-1.9
	0.1nm,0.3s,baz=313,slow=23,SNR=2.5						
ASAR	Alice Springs	17.21	153	P	P	14 45 29.4	+1.3
	0.1nm,0.3s,baz=330,slow=11,SNR=4.3						
MKAR	Makanchi Array	67.02	329	P	P	14 52 17.1	-1.3
	0.6nm,0.9s,baz=144,slow=4.4,SNR=1.4						

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*IDC **07** 14:56:09.5±4.3, 4.°77N×95.°55E, h0^{km}, mb3.3/3, mb1 3.5/5, mb1mx3.3/43, mbtmp3.3/5, ML3.4/2, Error ellipse: s-maj=125.1km s-min=27.8km az=69.0*

*DJA **07** 14:56:15.9±1.4, 5°N±5°×9°6E±1°0, h10^{km}, M4.0/5, MLv4.0/5*

ISC 07 14:56:15.2±1.4**, 4.°90N**±0.°07×**95.°9E**±0.°1**, h29^{km}, n12, σ1^s.04**/12**, mb3.5**/3**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	1.09	72	P	Pn	14 56 34.1	-0.4
LHMI				S	Sn	14 56 47.4	-1.2
TPTI		2.06	142	P	Pn	14 56 46.9	-1.0
TPTI				S	Sn	14 57 11.5	-1.2
TSI	Tuntungan	2.99	118	P	Pn	14 57 00.2	-0.5
PSI	Prapat	3.66	125	Pn	Pn	14 57 11.8	+1.7
	2.1nm,0.3s,baz=328,slow=17,SNR=7.0						
PSI				Sn	Sn	14 57 53.6	+1.3
	2.8nm,0.3s,baz=354,slow=19,SNR=4.0						
GSI	Gunungsitoli	3.94	155	P	Pn	14 57 13.5	-0.3
CMAR	Chiang Mai Arr	13.80	12	Pn	Pn	14 59 29.5	+0.5
	0.1nm,0.3s,baz=198,slow=10,SNR=1.7						
H08S2	Diego Garcia H	26.47	242	T	T	15 29 00.0	
	baz=61,slow=75,SNR=5.6						
H08S3	Diego Garcia H	26.48	242	T	T	15 29 07.9	
	baz=61,slow=75,SNR=5.3						
H08S1	Diego Carcia H	26.49	242	T	T	15 29 02.3	
	baz=61,slow=75,SNR=6.3						
SONM	Songino Array	43.72	10	P	P	15 04 17.8	-0.1
	0.2nm,0.5s,baz=188,slow=8.7,SNR=1.9						
WRA	Warramunga Arr	45.13	124	P	P	15 04 29.1	-0.3
	0.3nm,0.4s,baz=301,slow=9.3,SNR=8.7						
ASAR	Alice Springs	46.68	129	P	P	15 04 42.3	+0.6
	0.4nm,0.7s,baz=300,slow=7.5,SNR=13						

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*TUL **07** 14:58:18.4±0.8, 36.°10N±0.°01×97.°53W±0.°02, h6^{km}±7^{km}, ML2.6, mb_Lg2.5/16(NEIC), Error ellipse: s-maj=2.6km s-min=1.7km az=76.0*

NEIC 07 14:58:18.3±0.7**, 36.°103N**±0.°007×**97.°54W**±0.°02**, h5^{km}**±7^{km}**, Error ellipse: s-maj=2.4km s-min=1.0km az=98.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK029	Liberty Lake	0.31	167	Pg	Pg	14 58 24.6	+0.1
OK029				Sg	Sg	14 58 29.2	+0.7
BCOK	Bluff Creek, N	0.45	187	Pg	Pg	14 58 27.1	+0.1
BCOK				Sg	Sg	14 58 33.5	+0.6
CROK	Carrier	0.54	318	Pg	Pg	14 58 29.1	+0.4
CROK				Sg	Sg	14 58 36.1	+0.4
OK025	Westminster Rd	0.55	163	Pg	Pg	14 58 29.0	+0.2
OK031	S. Brethren Rd	0.59	105	Pg	Pg	14 58 29.7	+0.1
OK030	Cody Creek RV	0.64	106		Pg	14 58 30.6	0.0
QUOK	Quay	0.68	84	Pg	Pg	14 58 31.3	0.0
OKCFA	Oklahoma City	0.69	174		Pg	14 58 31.3	-0.3
OKCSW	OKLAHOMA CITY	0.70	173	Pg	Pg	14 58 31.7	-0.1
BLOK	Blackwell	0.71	22	Pg	Pg	14 58 32.0	+0.1
GC02	Grant County #	0.79	341	Pg	Pg	14 58 33.6	+0.1
FNO	Franklin	0.85	172	Pg	Pg	14 58 34.3	-0.4
OK032	Salt Plains WL	0.89	322	Pg	Pg	14 58 35.3	0.0
KAN13	South Haven SW	0.91	3		Pg	14 58 35.7	-0.1
KAN17	Caldwell West	0.96	349	Pg	Pg	14 58 36.5	-0.2
KAN09	Caldwell North	1.03	356	Pg	Pg	14 58 37.9	-0.2
KAN01	Argonia South	1.06	350		Pg	14 58 38.5	-0.2
KAN10	Anthony SW Sta	1.11	336	Pg	Pg	14 58 39.3	-0.4
KS20	Mayfield South	1.12	359		Pg	14 58 39.6	-0.3
T35A	Sooner Cattle	1.16	45		Pg	14 58 40.0	-0.6
KAN06	Argonia West S	1.17	347	Pg	Pg	14 58 40.5	-0.3
KAN16	Harper SW Stat	1.20	339	Pg	Pg	14 58 41.0	-0.4
U32A	Winter Ranch,	1.21	284		Pg	14 58 41.0	-0.6
KAN12	Harper NE Stat	1.25	343	Pg	Pg	14 58 42.0	-0.3
TUL1	Leonard	1.43	97	Pn	Pn	14 58 44.0	-0.9
X34A	Smith Ranch, M	1.52	189		Pn	14 58 46.6	+0.4
WMOK	Wichita Mounta	1.70	217		Pn	14 58 48.8	+0.1
U38A	Gravette	2.57	82		Pn	14 59 00.2	-0.5
W39A	Magazine	3.19	105		Pn	14 59 08.6	-0.5
CBKS	Cedar Bluff	3.22	328	IAmb_Lg		15 00 07.8	
	comp=Z,9.1nm,0.7s						
AMTX	Amarillo	3.59	251		Sg	15 00 11.0	-2.8
AMTX				IAmb_Lg		15 00 16.4	
	comp=Z,12nm,1.1s						
MIAR	Mount Ida	3.59	114	Pn	Pn	14 59 15.0	+0.3
S39A	Bolivar	3.73	64	IAmb_Lg		15 00 18.1	
	comp=Z,10nm,0.8s						
WHTX	Lake Whitney,	4.10	179	Pn	Pn	14 59 21.6	-0.1
X40A	Basin Creek Fa	4.17	111	IAmb_Lg		15 00 33.2	
	comp=Z,12nm,1.2s						
P38A	Dawn	4.73	41	IAmb_Lg		15 00 50.6	
	comp=Z,7.0nm,0.8s						
CCM	Cathedral Cave	5.40	67	IAmb_Lg		15 01 16.6	
	comp=Z,8.3nm,0.7s						
P40A	Paris	5.53	50	IAmb_Lg		15 01 16.4	
	comp=Z,9.2nm,0.8s						
T25A	Trinidad	5.62	283	IAmb_Lg		15 01 22.1	
	comp=Z,5.7nm,1.2s						

DJA 07 15:04:33.9±0.2**, 2°S**±2°×**12°1E**±°**, h10^{km}, M3.8**/13**, mb4.0**/3**, MLv3.6**/13**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APSI	Ampana	1.57	10	P	Pn	15 05 01.1	-0.8
APSI				S	Sg	15 05 24.6	0.0
TTSI	Tana Toraja	1.65	250	P	Pn	15 05 01.3	-1.7
KDI	Kendari	1.93	140	P	Pb	15 05 08.1	-1.2
LUWI	Luwuk	1.99	45	P	Pn	15 05 07.4	-0.3
MRSI	Marisa	2.98	11	P	Pn	15 05 20.2	-1.1
BKSI	Bulukumba	3.09	204	P	Pn	15 05 22.5	-0.3
MPSI	Mapaga	3.15	332	P	Pn	15 05 23.3	-0.3
GTOI	Gorontalo	3.49	28	P	Pn	15 05 28.6	+0.3
BSSI	Bau Bau, Buton	3.75	193	P	Pn	15 05 32.2	+0.3
SANI	Sanana	4.63	85	P	Pn	15 05 43.7	-0.3
EDFI	Ende, Flores	6.25	177	P	Pn	15 06 05.2	-1.1
	0.0nm2.4nm,0.6s						
LBMI	Labuha	6.39	74	P	Pn	15 06 08.7	+0.5

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*IDC **07** 15:20:21.2±2.7, 24.°98N×61.°40E, h0^{km}, mb3.9/8, mb1 4.0/8, mb1mx3.7/37, mbtmp3.9/8, MS2.5/1, Ms1 2.5/1, ms1mx2.3/40, Error ellipse: s-maj=59.6km s-min=25.5km az=161.0*

*TEH **07** 15:20:28.4, 25.°71N×61.°19E, h10^{km}, ML3.4*

*OMAN **07** 15:20:30.0±0.6, 24.°76N×61.°07E, h35^{km}±234^{km}, ml3.7/13, Error ellipse: s-maj=31.1km s-min=5.1km az=269.0*

*DSN **07** 15:20:32.5±2.8, 24.°94N×60.°63E, h10^{km}, ML3.3/10, Error ellipse: s-maj=38.3km s-min=16.3km az=43.0*

ISC 07 15:20:24.1±0.8**, 24.°94N**±0.°05×**61.°51E**±0.°06**, h35^{km}, n43, σ2^s.28**/51**, mb3.9**/8**, Off coast of Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NGCH	Negor - Chabah	0.53	321	ePg	Pn	15 20 35.8	+0.6
NGCH				e		15 20 48.3	
	comp=Z,870nm,0.5s						
SRVN	Saravan	2.58	18	ePn	Pn	15 21 03.6	+0.1
WSAR	Wadi Sarin	3.13	238	P	Pn	15 21 10.3	-0.7
	SNR=138						
WSAR				S	Sn	15 21 42.7	-4.4
WBK	Wadi Bani Khal	3.28	226	P	Pn	15 21 12.6	-0.6
	SNR=110						
WBK				S	Sn	15 21 47.4	-3.6
	SNR=7.1						
JLN	Jalan Bani Buh	3.38	215	P	Pn	15 21 13.5	-0.9
	SNR=93						
JLN				S	Sn	15 21 50.8	-2.5
	SNR=7.7						
BIDO	Bidbid	3.39	246	P	Pn	15 21 14.5	0.0
	SNR=9.5						
BIDO				S	Sn	15 21 51.4	-2.2
SMDO	Samad	3.67	240	P	Pn	15 21 18.1	-0.5
	SNR=18						
SMDO				S	Sn	15 21 56.3	-4.4
JMDO	Jabal Madar	4.04	231	P	Pn	15 21 23.8	+0.4
	SNR=60						
HOQ	Hoqain	4.06	251	P	Pn	15 21 23.2	-0.6
	SNR=13						
ZHDN	Zahedan	4.48	352	ePn	Pn	15 21 28.6	-1.1
SOHO	SOHO	4.60	261	i P	Pn	15 21 29.9	-1.3
	SNR=34						
MDH	Madha	4.73	275	i P	Pn	15 21 32.5	-0.5
	SNR=9.4						
MDH	Madha	4.73	275	P	Pn	15 21 33.0	0.0
	SNR=9.4						
BANOM	Banah	4.81	283	i P	Pn	15 21 33.6	-0.4
	SNR=14						
BANOM				S	Sn	15 22 22.7	-5.8
BANOM	Banah	4.81	283	P	Pn	15 21 34.2	+0.2
	SNR=13						
BANOM				S	Sn	15 22 25.2	-3.4
UOSS	Minazif	4.81	271	i P	Pn	15 21 33.1	-1.0
	SNR=20						
MSFE	Esma-Masafi	4.86	276	P	Pn	15 21 33.8	-1.1
HATD	Hatta, Dubai	4.88	270	P	Pn	15 21 34.7	-0.3
ASHO	Ashiyiah	4.96	268	i P	Pn	15 21 36.3	+0.2
	SNR=12						
ASHO	Ashiyiah	4.96	268	P	Pn	15 21 36.4	+0.2
	SNR=31						
SHME	Shamm	4.97	284	i P	Pn	15 21 37.5	+1.2
	SNR=6.7						
SHME	Shamm	4.97	284	ePn	Pn	15 21 38.7	+2.4
SHME	Shamm	4.97	284	P	Pn	15 21 37.6	+1.4
	SNR=11						
KBAM	BAM	4.98	328	ePn	Pn	15 21 35.4	-1.1
KBAM				e		15 22 34.2	
	comp=Z,406nm,0.3s						
NAZ	Nazwa, Dubai	5.30	272	P	Pn	15 21 43.2	+2.4
NAZ	Nazwa, Dubai	5.30	272	ePn	Pn	15 21 44.2	+3.4
ALNE	Al Ain	5.32	262	S	Sn	15 22 39.1	-2.0
	SNR=5.0						
FAQ	Al Faqa, Dubai	5.38	269	i P	Pn	15 21 43.2	+1.4
	SNR=18						
FAQ	Al Faqa, Dubai	5.38	269	P	Pn	15 21 44.0	+2.1
	SNR=18						
FAQ				S	Sn	15 22 39.9	-2.6
	SNR=6.2						
GENO	Geno	5.38	298	ePn	Pn	15 21 43.2	+1.1
GENO				e		15 22 46.3	
	comp=Z,599nm,0.3s						
CHMN	Cheshme madani	6.03	325	ePn	Pn	15 21 48.9	-2.3
CHMN				e		15 27 08.4	
	comp=Z,147nm,0.2s						
IRAM	Ramesheh	10.55	312	ePn	Pn	15 22 52.0	-1.0
THW	Thamme Wali	11.90	47	P	Pn	15 23 09.8	-1.5
CEP	Cherat	12.66	43	P	Pn	15 23 20.8	-1.1
CEP				S	Sn	15 25 35.0	-6.7
GEYT	Alibeck	13.26	348	LR	LR	15 28 45.6	
	comp=Z,23nm,21.2s,baz=200,slow=38						
KBZ	Khabaz	24.13	326	P	P	15 25 38.4	+1.7
	comp=Z,1.3nm,0.9s,baz=156,slow=10.0,SNR=2.1						
MKAR	Makanchi Array	27.39	32	P	P	15 26 08.5	+2.3
	comp=Z,2.2nm,0.8s,baz=209,slow=10,SNR=11						
BRTR	Keskin Array B	27.64	309	P	P	15 26 11.1	+2.5
	comp=Z,0.5nm,0.8s,baz=114,slow=6.6,SNR=1.8						
ZALV	Zalesovo Beam	33.79	25	P	P	15 27 04.7	+2.2
	comp=Z,1.5nm,0.4s,baz=226,slow=10,SNR=6.0						
SONM	Songino Array	41.99	45	P	P	15 28 15.0	+3.0
	comp=Z,0.2nm,0.4s,baz=234,slow=6.9,SNR=1.7						
FINES	FINESS Array B	43.68	336	P	P	15 28 26.7	+1.5
	comp=Z,1.8nm,0.5s,baz=138,slow=9.4,SNR=17						
ARCES	ARCESS Array B	49.39	344	P	P	15 29 10.7	+0.8
	comp=Z,5.3nm,1.1s,baz=125,slow=5.6,SNR=2.0						
TORD	Torodi Ar. Bea	57.35	270	P	P	15 30 10.7	+1.5
	comp=Z,0.6nm,0.6s,baz=55,slow=6.5,SNR=5.5						

NOU 07 15:45:31.5, 17.°84S×167.°49E, h0^{km}, ML4.6/6**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	0.67	80	P	Pg	15 45 44.8	+0.4
RTV	Rentapao	0.89	87	P	Pg	15 45 48.6	0.0

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*NEIC **07** 15:53:45.8±1.8, 8.°57N±0.°06×71.°34W±0.°04, h5^{km}±1^{km}, mb4.8/22, Mwr4.5(CAR), Error ellipse: s-maj=10.4km s-min=6.8km az=170.0*

*IDC **07** 15:53:45.8±0.4, 8.°49N×71.°46W, h0^{km}, mb4.3/27, mb1 4.5/30, mb1mx4.5/40, mbtmp4.3/30, ML4.2/3, MS4.0/26, Ms1 4.0/26, ms1mx3.9/35, Error ellipse: s-maj=10.5km s-min=8.6km az=166.0*

*FUNV **07** 15:53:46.4, 8.°45N×71.°43W, h1^{km}, MW4.5*

*CAR **07** 15:53:47.3±2.7, 8.°45N±0.°06×71.°42W±0.°04, h5^{km}±4^{km}, Error ellipse: s-maj=8.9km s-min=5.8km az=164.0*

*VAO **07** 15:53:48.3±0.3, 8.°44N×71.°41W, h10^{km}, mb4.7*

*GCMT **07** 15:53:48.8±0.4, 8.°55N±0.°02×71.°34W±0.°02, h20^{km}±2^{km}, MW4.9/73, Moment Tensor Solution. s10,c12; s73,c96; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.53±.17; $M_{\theta\theta}$2.30±.14; $M_{\phi\phi}$-1.76±.11; $M_{r\theta}$0.40±.20; $M_{\theta\phi}$0.51±.11; $M_{\phi r}$-1.20±.28; Best double couple: $M_0$2.48200×10^{16} NP1:ϕ_s43.00000°,δ64.00000°,λ-161.00000°. NP2: ϕ_s304.00000°,δ73.00000°,λ-27.00000°. Principal axes: T 2.3870, Plg6.0000°, Azm355.0000°; N 0.1990, Plg58.0000°, Azm94.0000°; P -2.5780, Plg31.0000°, Azm261.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 15:53:45.6±1.2**, 8.°52N**±0.°03×**71.°38W**±0.°02**, h0^{km}**±8^{km}**, n235, σ1^s.67**/280**, mb4.6**/47**, MS4.0**/23**, 3C-7D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.56	114	⇓iP	Pg	15 53 57.1	+0.7
SOCV				eS	Sb	15 54 06.0	-1.1
SOCV				i		15 54 06.2	
	comp=Z,149μm,1.2s						
SOCV	Socops	0.56	114	⇓iP	Pg	15 53 57.2	+0.7
SOCV				eS	Sb	15 54 06.3	-0.8
SDV	Santo Domingo	0.82	64	Pg	Pg	15 54 02.8	+1.4
	comp=Z,580nm,0.3s,baz=245,slow=15,SNR=773						
SDV				Lg	Lg	15 54 15.7	
	comp=Z,2μm,0.3s,baz=288,slow=20,SNR=16						
SDV				LR	LR	15 54 47.8	
	comp=Z,6μm,19.2s,baz=350,slow=69						
SDV	Santo Domingo	0.82	64	⇓iP	Pg	15 54 02.5	+1.1
SDV				eS	Sb	15 54 14.5	0.0
SDV				i		15 54 16.2	
	comp=Z,5μm,0.3s						
SDV	Santo Domingo	0.82	64		Pg	15 54 02.5	+1.1
CAPV	Capacho	1.13	235	eP	Pg	15 54 05.7	-1.7
CAPV				eS	Sg	15 54 20.8	-1.3
PAMC	Pamplona, Colo	1.76	228	eP	Pn	15 54 18.1	+0.3
PAMC				eS	Sb	15 54 42.4	+0.6
PAMC				i		15 54 44.2	
	comp=Z,4μm,0.4s						
MCQV	Machiques	1.90	323	⇑iP	Pn	15 54 19.0	-0.3
OCAC	Ocana	1.94	262	eP	Pn	15 54 19.8	-0.2
OCAC				eS	Sn	15 54 45.1	-0.1
OCAC				i		15 54 47.2	
	comp=Z,15μm,0.5s						
OCAC	Ocana	1.94	262		Pn	15 54 19.0	-1.0
TAMC	Tame, Arauca	2.11	191	eP	Pn	15 54 22.9	+0.7
TAMC				eS	Sg	15 54 53.4	-0.1
TAMC				i		15 55 00.5	
	comp=Z,3μm,0.3s						
LL1C	La Loma 1 Cana	2.38	295	eP	Pn	15 54 27.1	+1.2
LL1C				eS	Sn	15 54 57.9	+2.1
LL1C				i		15 55 16.1	
	comp=Z,8μm,0.8s						
ELOV	Elorza	2.41	129	eP	Pn	15 54 28.2	+2.0
ELOV				eS	Sb	15 55 00.4	+0.3
ELOV				i		15 55 08.8	
	comp=Z,45μm,0.8s						
ELOV	Elorza	2.41	129	eP	Pn	15 54 26.5	+0.2
ELOV				eS	Sn	15 54 54.9	-1.6
DABV	Dabajuro	2.50	17	eP	Pn	15 54 28.2	+0.7
BARC	Barichara	2.62	223	eP	Pn	15 54 30.3	+0.9
BARC				eS	Sb	15 55 07.8	+1.3
BARC				i		15 55 09.1	
	comp=Z,2μm,0.5s						
SIQV	Siquisique	2.62	36	eP	Pn	15 54 30.7	+1.4
SIQV				eS	Sn	15 55 02.6	+0.7
SMLC	San Martn de	2.68	276	⇓eP	Pn	15 54 28.4	-1.6
SMLC				eS	Sn	15 55 06.0	+2.7
SMLC				i		15 55 07.0	
	comp=Z,2μm,0.3s						
BRRC	Barranca, Sant	2.71	239	eP	Pn	15 54 30.4	0.0
BRRC				eS	Sb	15 55 08.9	+0.1
BRRC				i		15 55 13.9	
	comp=Z,771nm,0.5s						
RUSC	La Rusia	3.11	213	eP	Pn	15 54 36.9	+0.5
RUSC				eS	Sb	15 55 22.9	+2.1
RUSC				i		15 55 26.9	
	comp=Z,634nm,0.1s						
ARGC	Ariguani, Magd	3.13	295	eP	Pn	15 54 36.0	-0.3
ARGC				eS	Sb	15 55 23.9	+2.9
ARGC				i		15 55 39.2	
	comp=Z,435nm,0.5s						
MAPV	Macapo	3.16	65	eP	Pn	15 54 38.0	+1.3
URIC	Uribia, Colomb	3.22	349	eP	Pn	15 54 36.1	-1.4
URIC				eS	Sn	15 55 13.8	-2.8
URIC				i		15 55 34.6	
	comp=Z,575nm,0.7s						
URIC	Uribia, Colomb	3.22	349	Pn	Pn	15 54 35.7	-1.8

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BAUV  El Baul           3.32  82  eP     Pn     15 54 39.7 +0.8
BAUV                              eS     Sn     15 55 17.6 -1.6
BAUV  El Baul           3.32  82   Pn    Pn     15 54 39.4 +0.5
JACV  Jacura            3.58  44  eP     Pn     15 54 43.5 +1.0
ZARC  Zaragoza, Cauc    3.60 254  eP     Pn     15 54 41.5 -1.1
ZARC                              eS     Sb     15 55 34.1 -0.3
ZARC                              i             15 55 43.0
      comp=Z,562nm,0.5s
ZARC  Zaragoza, Cauc    3.60 254         Pn     15 54 41.5 -1.1
MONV  Montecano         3.68  22  eP     Pn     15 54 44.2 +0.4
MONV                              eS     Sn     15 55 27.2 -0.9
SMRC  Santa Marta, M    3.84 313  eP     Pn     15 54 45.1 -1.0
SMRC                              eS     Sn     15 55 32.1  0.0
SMRC                              i             15 55 54.3
      comp=Z,387nm,0.6s
SPBC  San Pablo de B    3.91 223  eP     Pn     15 54 47.6 +0.6
SPBC                              eS     Sn     15 55 35.1 +1.4
SPBC                              i             15 56 04.5
      comp=Z,359nm,0.7s
TURV  Turiamo           3.98  61  eP     Pn     15 54 48.9 +1.0
BENV  Beln              4.00  69  eP     Pn     15 54 49.1 +0.9
BENV                              eS     Sn     15 55 34.6 -1.3
SJCC  San Jacinto, C    4.00 290⇓eP      Pn     15 54 48.7 +0.4
SJCC                              eS     Sn     15 55 35.1 -0.8
SJCC                              i             15 56 02.2
      comp=Z,347nm,0.5s
SJCC  San Jacinto, C    4.00 290         Pn     15 54 48.6 +0.4
UREC  San Jos de Ur     4.18 260  eP     Pn     15 54 50.6 -0.2
UREC                              eS     Sn     15 55 39.9 -0.6
UREC                              i             15 56 07.3
      comp=Z,196nm,0.7s
MOTC  Monteria, Cord    4.25 274⇓iP      Pn     15 54 51.4 -0.3
MOTC                              eS     Sb     15 55 57.4 +4.3
MOTC                              i             15 56 04.7
      comp=Z,161nm,0.6s
MOTC  Monteria, Cord    4.25 274   Pn    Pn     15 54 51.4 -0.3
PTGC  Puerto Gaitan,    4.36 190  eP     Pn     15 54 54.3 +1.2
PTGC                              eS     Sg     15 56 02.3 -3.4
PTGC                              i             15 56 27.3
      comp=Z,1µm,0.7s
CHIC  Chingaza          4.52 211  eP     Pn     15 54 56.0 +0.3
CHIC                              i             15 55 50.4
      comp=Z,256nm,0.3s
CHIC                              eS     Sb     15 56 05.1 +3.9
NORC  Norcasia          4.54 230  eP     Pn     15 54 56.2 +0.4
NORC                              eS     Sn     15 55 51.4 +2.1
NORC                              i             15 56 18.5
      comp=Z,135nm,0.6s
TACV  Tcata             4.58  69  eP     Pn     15 54 56.8 +0.4
ROSC  El Rosal          4.68 219   Pn    Pn     15 54 59.5 +1.6
      comp=Z,26nm,0.3s,baz=94,slow=2.1,SNR=34
ROSC                               Sn    Sn     15 55 53.3 +0.1
      comp=Z,62nm,0.3s,baz=221,slow=20,SNR=1.9
ROSC                               Lg    Lg     15 56 13.2
      comp=Z,32nm,0.3s,baz=352,slow=19,SNR=7.2
ROSC                               LR    LR     15 56 52.1
      comp=Z,3µm,20.4s,baz=14,slow=40
ROSC  El Rosal          4.68 219  eP     Pn     15 54 59.5 +1.6
ROSC                              i             15 55 60.0
      comp=Z,180nm,0.4s
ROSC                              eS     Sg     15 56 13.2 -2.9
ROSC  El Rosal          4.68 219         Pn     15 54 59.2 +1.2
HELC  Santa Helena      4.72 241  eP     Pn     15 54 59.4 +0.9
HELC                              eS     Sb     15 56 10.0 +2.8
HELC                              i             15 56 13.5
      comp=Z,225nm,0.4s
PAYV  Puerto Ayacuch    4.81 130  eP     Pn     15 54 58.6 -0.7
CARV  Caracas           4.81  65  eP     Pn     15 54 59.9 +0.5
CACV  CAICARA DEL OR    4.88 101  eP     Pb     15 55 07.6 -4.5
LCBC  Los crdobas,      4.95 274  eP     Pn     15 55 01.2 -0.1
LCBC                              eS     Sn     15 55 59.6 +0.4
LCBC                              i             15 56 03.0
      comp=Z,155nm,0.6s
VILC  Villavicencio,    4.95 208  eP     Pn     15 55 01.1 -0.3
VILC                              eS     Sn     15 55 57.6 -1.8
VILC                              i             15 56 07.4
      comp=Z,23µm,0.4s
DBBC  Dabeiba           5.02 253  eP     Pn     15 55 02.2  0.0
DBBC                              eS     Sb     15 56 13.1 -2.3
DBBC                              i             15 56 32.5
      comp=Z,748nm,0.6s
MERV  Las Mercedes      5.07  81⇓eP      Pn     15 55 03.5 +0.5
CBOC  Ciudad Bolivar    5.30 240  eP     Pn     15 55 08.3 +2.0
CBOC                              eS     Sb     15 56 30.0 +6.3
CBOC                              i             15 56 41.4
      comp=Z,99nm,0.6s
BIRV  Birongo           5.40  68  eP     Pn     15 55 07.8 +0.3
BIRV  Birongo           5.40  68   Pn    Pn     15 55 08.9 +1.4
ANIL  Santa Ana         5.66 225  eP     Pn     15 55 12.1 +0.8
ANIL                              eS     Sn     15 56 16.8 -0.4
ANIL                              i             15 56 22.1
      comp=Z,488nm,0.4s
CAP2  Capurgana         5.92 272   Pn    Pn     15 55 12.6 -2.1
ORTC  Ortega, Tolima    5.98 220  eP     Pn     15 55 15.7 +0.2
ORTC                              eS     Sn     15 56 23.7 -1.1
ORTC                              i             15 57 16.6
      comp=Z,76nm,0.7s
PLMC  San Jos del P     6.05 234  eP     Pn     15 55 17.2 +0.7
PLMC                              eS     Sn     15 56 28.6 +2.0
PLMC                              i             15 57 07.1
      comp=Z,52nm,0.7s
GUVC  San Jose del G    6.06 192  eP     Pn     15 55 16.1 -0.6
GUVC                              eS     Sn     15 56 25.1 -1.7
GUVC                              i             15 56 27.1
      comp=Z,441nm,0.3s
SOLC  Bahia Solano      6.40 250  eP     Pn     15 55 22.5 +1.3
PTAC  Punta Ardita,     6.52 258  eP     Pn     15 55 22.7 -0.2
PTAC                              eS     Sn     15 56 34.2 -3.7
PTAC                              i             15 56 46.2
      comp=Z,45nm,0.6s
PRGV  PARIAGUAN         6.66  87  eP     Pn     15 55 24.4 -0.4
YOTC  Yotoco, Valle     6.69 228  eP     Pn     15 55 25.4 +0.1
YOTC                              eS     Sn     15 56 39.0 -3.3
YOTC                              i             15 57 17.7
      comp=Z,20nm,0.6s
PCRV  Puerto La Cruz    6.85  76   Pn    Pn     15 55 29.2 +1.7
      comp=Z,11nm,0.3s,baz=266,slow=3.0,SNR=53
PCRV                               Sn    Sn     15 56 48.8 +2.6
      comp=Z,21nm,0.3s,baz=263,slow=21,SNR=8.0
PCRV                               LR    LR     15 58 56.7
      comp=Z,3µm,18.2s,slow=45
PCRV  Puerto La Cruz    6.85  76  eP     Pn     15 55 27.9 +0.5
BETC  Betania           7.07 215  eP     Pn     15 55 30.8 +0.3
BETC                              i             15 56 20.4
      comp=Z,121nm,0.6s
BETC                              eS     Sg     15 57 26.5 -6.4
GARC  Garzon, Huila     7.51 213  eP     Pn     15 55 36.9 +0.2
GARC                              eS     Sn     15 57 00.0 -2.7
GARC                              i             15 57 24.5
      comp=Z,77nm,0.3s
PCON  Cinco Dias        7.92 219  eP     Pn     15 55 43.6 +1.0
PCON                              i             15 58 45.8
      comp=Z,40nm,0.5s
SOTA  Rioblanco         8.21 220  eP     Pn     15 55 46.4 -0.1
SOTA                              i             15 57 58.3
      comp=Z,66nm,0.9s
SOTA                              eS     Sg     15 58 13.7 +4.3
BCIP  Isla Barro Col    8.39 275         Pn     15 55 49.1 +0.5
PTLC  Puerto Leguiza    8.96 203⇑eP      Pn     15 55 59.7 +3.2
PTLC                              eS     Sg     15 58 41.0 +7.3
GCUF  Volcan Galeras    9.37 220  eP     Pn     15 56 13.6  +11
GCUF                              eS            15 58 53.3
GCUF                              i             15 59 54.6
      comp=Z,22nm,0.8s
DR12  Loma Pena Alta   10.39  11         Pn     15 56 14.1 -1.9
SDDR  Presa de Saban   10.40   0         Pn     15 56 16.5 +0.3
CELP  Cerrillos        10.58  26   Pn    Pn     15 56 16.3 -2.4
AOPR  Arecibo Observ   10.75  24         Pn     15 56 20.1 -0.9
PDPR  Patillas Dam,    10.78  28         Pn     15 56 19.2 -2.2
SJG   San Juan         10.80  28   Pn    Pn     15 56 20.2 -1.5
      comp=Z,9.8nm,0.3s,baz=205,slow=17,SNR=12
SJG                                Sn    Sn     15 58 19.2 -4.2
      comp=Z,5.4nm,0.3s,baz=192,slow=22,SNR=3.1
SJG                                LR    LR     16 00 48.1
      comp=Z,769nm,20.7s,baz=216,slow=39
SJG   San Juan         10.80  28         Pn     15 56 19.6 -2.1
OTAV  Otavalo          10.83 221  eP     Pn     15 56 23.1 +0.6
MTDJ  Mount Denham     11.36 329   Pn    Pn     15 56 27.6 -1.7
BOAV  Boa Vista        12.39 119   Pn    Pn     15 56 42.4 -1.1
TBTG  Tabatinga, AM    12.71 173  eP     Pn     15 56 48.5 +0.8
JTS   Las Juntas de    13.51 279   LR    LR     16 03 08.4
      comp=Z,369nm,18.6s,baz=126,slow=42
PTGA  Pitinga          14.62 128   Pn    Pn     15 57 12.0 -1.9
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      comp=Z,1.9nm,0.3s,baz=309,slow=15,SNR=24
PTGA                               Sn    Sn     15 59 49.0 -7.9
      comp=Z,2.0nm,0.3s,baz=29,slow=16,SNR=7.4
PTGA                               Lg    Lg     16 01 25.2
      comp=Z,8.5nm,0.3s,baz=202,slow=18,SNR=6.8
PTGA                               LR    LR     16 03 36.0
      comp=Z,255nm,21.3s,baz=268,slow=40
PTGA  Pitinga          14.62 128         Pn     15 57 10.5 -3.4
CZSB  Cruzeiro do Su   16.20 185  eP     Pn     15 57 35.1 +0.4
ATAH  Atahualpa        17.05 204   Pn    Pn     15 57 46.0  0.0
      comp=Z,0.1nm,0.3s,baz=20,slow=12,SNR=2.4
ATAH                               LR    LR     16 05 25.6
      comp=Z,950nm,18.0s,baz=358,slow=41
MDP   Montagnes des    18.91  99   P     P      15 58 08.3 +0.3
      comp=Z,1.4nm,0.3s,baz=275,slow=11,SNR=11
MDP                                S     S      16 01 46.9 +2.9
      comp=Z,0.4nm,0.3s,baz=191,slow=16,SNR=2.7
MDP                                Lg    Lg     16 03 36.2
      comp=Z,0.5nm,0.3s,baz=61,slow=9.8,SNR=4.7
ETMB  Extrema          18.93 164  eP     P      15 58 08.2  0.0
ETMB  Extrema          18.93 164         P      15 58 08.3 +0.1
ITTB  Itaituba         20.18 129  eP     P      15 58 22.7 +0.8
MCPB  Macapa, AP       21.18 114  eP     P      15 58 33.5 +0.8
NPGB  Novo Progresso   22.23 134  eP     P      15 58 44.4 +0.3
VILB  Vilhena          24.05 152  eP     P      15 59 03.3 +0.6
CMIG  Matias Romero    24.43 293   P     P      15 59 06.6 +0.4
      comp=Z,0.7nm,0.3s,baz=99,slow=13,SNR=2.0
CMIG                               LR    LR     16 11 09.9
      comp=Z,435nm,18.4s,baz=100,slow=43
CLDB  Colider          24.73 141  eP     P      15 59 09.7 +0.7
PDRB  Porto dos Gac    24.74 144  eP     P      15 59 09.8 +0.8
LPAZ  La Paz           24.86 173   P     P      15 59 10.7  0.0
      comp=Z,21nm,1.0s,baz=6.1,slow=9.8,SNR=24
LPAZ                               Lg    Lg     16 06 56.0
      comp=Z,14nm,1.1s,baz=283,slow=18,SNR=4.1
LPAZ                               LR    LR     16 09 53.9
      comp=Z,704nm,20.3s,baz=334,slow=39
LPAZ  La Paz           24.86 173  eP     P      15 59 10.9 +0.2
TMAB  Tom-Au,PA,Br     25.61 114  eP     P      15 59 17.8 +0.9
PRPB  Parauapebas      25.98 123  eP     P      15 59 21.1 +0.7
SIV   San Ignacio      26.40 157   P     P      15 59 24.6 +0.5
      comp=Z,15nm,1.1s,baz=330,slow=7.7,SNR=19
SIV                                Lg    Lg     16 07 44.8
      comp=Z,25nm,1.0s,baz=249,slow=22,SNR=3.7
SIV                                LR    LR     16 10 36.9
      comp=Z,619nm,19.0s,baz=341,slow=38
PTLB  Pontes e Lacer   26.72 153  eP     P      15 59 27.7 +0.7
PB11  IPOC Station P   28.15 177   P     P      15 59 39.2 -0.8
SNDB  Serra Nova Dou   28.52 135  eP     P      15 59 43.9 +0.8
TKL   Tuckaleechee C   29.30 339   P     P      15 59 50.4 +0.5
      comp=Z,1.8nm,0.7s,baz=168,slow=9.3,SNR=2.2
TKL                                LR    LR     16 11 51.1
      comp=Z,249nm,20.0s,baz=152,slow=37
SMTB  Santa Maria do   29.32 126  eP     P      15 59 52.5 +2.2
ROSB  Rosrio           29.45 112  eP     P      15 59 52.2 +0.9
PP1B  Ponte de Pedra   30.65 148  eP     P      16 00 02.5 +0.6
PEXB  Peixe            30.76 131  eP     P      16 00 03.8 +0.8
ARAG  Araguaiana, MT   30.90 141  eP     P      16 00 04.8 +0.6
LVC   Limon Verde      31.03 176   P     P      16 00 05.2 -0.4
      comp=Z,6.0nm,0.9s,baz=343,slow=11,SNR=2.5
LVC   Limon Verde      31.03 176  eP     P      16 00 05.8 +0.1
WVT   Waverly          31.31 334   P     P      16 00 05.5 -2.1
WVT                                IAmb  IAmb   16 00 12.8
      comp=Z,11nm,0.9s
NBPS  Pedro II - PI    32.49 112  eP     P      16 00 19.1 +0.7
AQDB  Aquidauana       32.68 152  eP     P      16 00 20.4 +0.6
WHAR  Wooly Hollow     32.81 327   P     P      16 00 19.6 -1.2
WHAR                               IAmb  IAmb   16 00 25.6
      comp=Z,14nm,0.9s
BDFB  Brasilia         33.34 136   P     P      16 00 26.5 +0.7
      comp=Z,6.4nm,0.8s,baz=323,slow=8.2,SNR=7.3
BDFB                               Lg    Lg     16 11 25.0
      comp=Z,63nm,1.2s,baz=112,slow=24,SNR=3.2
NBMO  Morrinhos-CE     33.38 109  eP     P      16 00 26.3 +0.2
SDBA  SAO DESIDERIO    33.53 128  eP     P      16 00 28.1 +0.6
NBPB  Pedra_Branca-C   34.64 113  eP     P      16 00 37.8 +0.7
ITRB  Iturama          34.86 144  eP     P      16 00 39.4 +0.6
IPMB  Ipameri, GO      34.88 139  eP     P      16 00 39.6 +0.6
AC02  Maricunga        35.21 177   P     P      16 00 40.3 -2.0
AC02                               IAmb  IAmb   16 00 45.5
      comp=Z,19nm,1.4s
JANB  Januaria         35.62 131  eP     P      16 00 45.3 -0.1
PCMB  Pacaembu         35.86 147  eP     P      16 00 48.0 +0.5
TRCB  Terra Rica       36.13 150  eP     P      16 00 51.2 +1.5
NBMA  Muriti-CE        36.13 115  eP     P      16 00 51.4 +1.4
NBPN  Ponto Novo - B   36.50 121  eP     P      16 00 54.5 +1.4
TXAR  Lajitas Array    36.70 309   P     P      16 00 53.9 -0.8
      comp=Z,1.3nm,0.7s,baz=126,slow=9.6,SNR=6.2
TXAR                               PcP   PcP    16 03 17.8 +0.2
      comp=Z,1.2nm,0.7s,baz=151,slow=5.7,SNR=4.9
TXAR                               LR    LR     16 19 00.7
      comp=Z,90nm,18.3s,baz=0.0,slow=41
SADO  Sadowa           36.74 351   P     P      16 00 55.1 +0.4
      comp=Z,7.9nm,0.9s,baz=178,slow=3.2,SNR=5.2
SADO                               LR    LR     16 16 54.6
      comp=Z,90nm,18.5s,baz=164,slow=38
MC01  Montes Claros    36.94 133  eP     P      16 00 57.9 +1.1
NBPA  Parau_RN         36.99 111  eP     P      16 00 58.9 +1.6
BB19B Bebedouro        36.99 143  eP     P      16 00 58.2 +1.1
CPUP  Villa Florida    37.23 159   P     P      16 00 58.7 -0.3
      comp=Z,2.2nm,0.8s,baz=317,slow=8.6,SNR=5.1
CPUP                               LR    LR     16 16 31.0
      comp=Z,277nm,21.1s,baz=339,slow=37
CPUP  Villa Florida    37.23 159  eP     P      16 00 58.9 -0.1
LCO   Las Campanas     37.32 179   P     P      16 01 01.9 +1.9
LCO                                IAmb  IAmb   16 01 02.7
      comp=Z,38nm,1.3s
PTGB  Pitanga          38.02 151  eP     P      16 01 06.9 +1.0
DIAM  Diamantina, MG   38.18 134  eP     P      16 01 08.5 +1.2
GDU01 Guandu, BA       38.53 125  eP     P      16 01 11.5 +1.3
NBLA  Lagarto - SE     38.63 120  eP     P      16 01 12.3 +1.3
NBPV  Pedro Velho      38.92 111  eP     P      16 01 15.2 +1.7
MNTX  Cornudas Mount   39.12 311   P     P      16 01 12.9 -2.1
BSCB  Bom Sucesso      39.29 139  eP     P      16 01 17.9 +1.3
NBIT  Itapeh - BA      39.31 126  eP     P      16 01 17.3 +0.5
CMC01 Camacan, BA      39.49 127  eP     P      16 01 19.1 +0.9
SPB   Sao Paulo        39.58 144  eP     P      16 01 19.7 +0.9
GUA01 Guaratinga, BA   39.97 129  eP     P      16 01 23.1 +0.8
SJMB  Sao Joao De Ma   40.23 132  eP     P      16 01 25.3 +0.9
RIB01 Linhares ES      41.20 132  eP     P      16 01 33.1 +0.8
ANMO  Albuquerque      41.51 315   P     P      16 01 35.3 +0.3
      comp=Z,0.6nm,0.5s,baz=57,slow=6.1,SNR=3.5
CAM01 Campos-RJ        41.95 136  eP     P      16 01 39.1 +0.7
CPSB  Cacapava Do Su   42.36 157  eP     P      16 01 41.0 -0.8
TER01 Tubaro-SC        42.64 151  eP     P      16 01 44.9 +0.9
PLTB  Pedras Altas     43.51 158  eP     P      16 01 49.2 -1.9
ISCO  Idaho Springs    43.63 321   P     P      16 01 51.1 -1.2
SMCO  Snowmass         44.13 319   P     P      16 01 54.6 -1.9
SMCO                               IAmb  IAmb   16 02 02.0
      comp=Z,13nm,0.9s
ULM   Lac du Bonnet    46.32 338   P     P      16 02 13.2  0.0
      comp=Z,17nm,1.0s,baz=135,slow=5.4,SNR=11
ULM                                LR    LR     16 22 30.6
      comp=Z,238nm,19.0s,baz=139,slow=37
ULM   Lac du Bonnet    46.32 338   P     P      16 02 11.1 -2.1
ULM                                IAmb  IAmb   16 02 16.9
      comp=Z,16nm,0.8s
SCHQ  Schefferville    46.33   4   LR    LR     16 20 10.6
      comp=Z,224nm,21.8s,baz=234,slow=34
LC01  Cunco            47.17 181   P     P      16 02 18.7 -1.3
BW06  Boulder Array    47.77 322   P     P      16 02 24.1 -0.8
BW06                               IAmb  IAmb   16 02 30.6
      comp=Z,9.3nm,0.9s
PD31  Pinedale Array   47.77 322   P     P      16 02 23.7 -1.2
PD31                               IAmb  IAmb   16 02 30.7
      comp=Z,9.2nm,1.0s
PDAR  Pinedale Array   47.77 322   P     P      16 02 23.9 -1.1
      comp=Z,5.1nm,0.5s,baz=127,slow=11,SNR=25
PLCA  Paso Flores      49.01 179   P     P      16 02 34.0 -0.3
      comp=Z,31nm,0.9s,baz=4.1,slow=8.9,SNR=43
PLCA  Paso Flores      49.01 179  eP     P      16 02 33.4 -0.9
PLCA  Paso Flores      49.01 179   P     P      16 02 33.8 -0.5
MOOW  Moose Ponds      49.04 323   P     P      16 02 33.5 -1.3
MOOW                               IAmb  IAmb   16 02 39.4
      comp=Z,7.2nm,0.9s
LL04  Puerto Octay     49.19 181   P     P      16 02 34.1 -1.5
ELK   Elko             50.39 317   P     P      16 02 45.2 +0.1
      comp=Z,1.2nm,0.7s,baz=110,slow=3.0,SNR=5.5
NVAR  Mina Array Bea   51.56 313   P     P      16 02 53.1 -0.8
      comp=Z,1.1nm,0.6s,baz=122,slow=8.3,SNR=10.0
NVAR                               PcP   PcP    16 04 09.7 +1.6
      comp=Z,0.8nm,0.8s,baz=125,slow=4.5,SNR=2.5
NVAR                               LR    LR     16 27 11.2
      comp=Z,207nm,19.8s,baz=114,slow=39
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KVN   Kaiserville      51.66 314   P     P      16 02 53.5 -1.1
PLID  Pearl Lake       52.95 321   P     P      16 03 02.9 -1.2
YKA   Yellowknife Ar   62.29 339   P     P      16 04 09.7 +0.4
      comp=Z,2.1nm,0.7s,baz=120,slow=8.3,SNR=7.0
YKA                                LR    LR     16 31 38.9
      comp=Z,263nm,19.7s,baz=0.0,slow=36
MORF  Marmelete        63.24  53  eP     P      16 04 19.6 +3.3
PNCL  Nicolau / Gran   63.48  52  eP     P      16 04 20.5 +2.8
      comp=Z,27nm,2.0s
PSBE  So Bento         63.54  50  eP     P      16 04 20.6 +2.5
MESJ  Messejana        63.67  52  eP     P      16 04 19.1 +0.1
      comp=Z,32nm,1.7s
PCVE  Castro Verde     63.78  52  eP     P      16 04 22.6 +2.9
PCAS  Casmilo, Conde   63.87  50  eP     P      16 04 22.5 +2.2
PMTG  Montargil        63.89  51  eP     P      16 04 22.6 +2.2
EVO   Evora            63.95  51  eP     P      16 04 19.1 -1.8
PESTR Estremoz         64.34  51  eP     P      16 04 25.8 +2.4
PVIS  Viseu            64.45  49  eP     P      16 04 26.1 +1.9
PBAR  Barrancos        64.65  52  eP     P      16 04 27.9 +2.5
POLO  Lamas de Olo     64.65  48  eP     P      16 04 27.6 +2.1
PVRL  Vila Real        64.69  48  eP     P      16 04 27.7 +2.0
MVO   Moncorvo         65.18  49  eP     P      16 04 30.6 +1.7
DBIC  Dimbokro         65.89  86   P     P      16 04 34.4 +0.4
      comp=Z,3.6nm,0.6s,baz=290,slow=7.7,SNR=5.3
DBIC                               LR    LR     16 31 17.8
      comp=Z,21nm,18.5s,baz=221,slow=34
SUMG  Summit           67.02  10   P     P      16 04 38.7 -1.9
ESDC  Sonseca Array    67.25  51   P     P      16 04 43.6 +1.4
      comp=Z,1.5nm,0.6s,baz=260,slow=6.3,SNR=14
ESDC                               LR    LR     16 29 14.3
      comp=Z,69nm,20.6s,baz=300,slow=32
TAOE  Nuku Hiva Isla   70.64 258  eLR    LR     16 26 38.3
      comp=Z,140nm,24.3s
A36M  Sachs Harbour    71.26 345   P     P      16 05 04.4 -2.0
TORD  Torodi Ar. Bea   71.71  79   P     P      16 05 10.8 +0.6
      comp=Z,3.3nm,0.7s,baz=283,slow=5.1,SNR=19
TORD                               LR    LR     16 36 24.0
      comp=Z,69nm,19.7s,baz=285,slow=36
PMSA  Palmer Station   73.30 177  eP     P      16 05 19.4 +0.9
ILAR  Eielson Array    76.17 335   P     P      16 05 33.8 -1.6
      comp=Z,1.5nm,0.9s,baz=112,slow=4.0,SNR=14
ILAR                               LR    LR     16 41 08.6
      comp=Z,183nm,18.7s,baz=113,slow=37
KEST  Kesra            77.57  55   P     P      16 05 46.1 +2.2
      comp=Z,3.6nm,0.9s,baz=237,slow=15,SNR=2.9
DAVA  Damuels          77.87  43  i P    P      16 05 47.6 +2.0
      comp=Z,7.2nm,0.9s
FETA  Feichten         78.45  44  eP     P      16 05 50.6 +1.9
      comp=Z,15nm,1.0s
RETA  Reutte           78.47  43  i P    P      16 05 50.2 +1.5
      comp=Z,4.7nm,0.9s
MOTA  Moosalm          78.70  43  eP     P      16 05 51.1 +1.0
      comp=Z,8.4nm,1.3s
SQTA  Sankt Quirin     78.77  44  i P    P      16 05 52.0 +1.5
      comp=Z,3.9nm,0.7s
NB2   NORSAR Subarra   79.01  29   P     P      16 05 53.8 +2.4
      comp=Z,3.5nm,0.6s,baz=268,slow=5.6
NOA   NORSAR Array B   79.01  29   P     P      16 05 52.9 +1.5
      comp=Z,0.9nm,0.8s,baz=269,slow=5.6,SNR=3.0
NOA                                LR    LR     16 37 07.2
      comp=Z,35nm,21.6s,baz=265,slow=33
WTTA  Wattenberg       79.06  44  eP     P      16 05 53.0 +0.9
      comp=Z,8.2nm,1.3s
J20K  Nowinta River    79.23 334   P     P      16 05 52.3 -0.1
J20K                               IAmb  IAmb   16 05 56.4
      comp=Z,9.4nm,1.0s
CLL   Collm            79.90  39  e(P)   P      16 05 58.0 +1.6
CLL                                LmV          16 38 00.0
      comp=Z,100nm,18.9s
KHC   Kasperske Hory   80.32  42  eP     P      16 06 00.3 +1.5
GERES GERESS Array B   80.41  42   P     P      16 06 00.2 +0.9
      comp=Z,1.6nm,0.7s,baz=272,slow=3.9,SNR=12
MYKA  Terra Mystica    80.45  44  eP     P      16 06 01.0 +1.4
      comp=Z,4.1nm,0.7s
PRU   Pruhonice        80.92  41  eP     P      16 06 03.7 +1.8
OBKA  Obir             81.08  44  eP     P      16 06 05.3 +2.3
      comp=Z,3.6nm,0.8s
PPT   Papeete          81.44 251   LR    LR     16 34 10.3
      comp=Z,96nm,21.1s,baz=56,slow=30
PPT2  Papeete2         81.45 251  eLR    LR     16 31 40.3
      comp=Z,227nm,27.2s
ARSA  Arzberg          81.71  43  eP     P      16 06 08.2 +2.0
      comp=Z,3.9nm,0.8s
CONA  Conrad Observa   81.90  43  eP     P      16 06 08.5 +1.3
      comp=Z,6.1nm,1.2s
OSTC  Ostas            81.96  40  eP     P      16 06 09.3 +1.9
DPC   Dobruska-Polom   82.04  40  eP     P      16 06 07.9  0.0
TBI   Tubuai           82.55 245  eLR    LR     16 31 58.2
      comp=Z,136nm,33.0s
ARCES ARCESS Array B   84.49  21   P     P      16 06 21.2 +1.1
      comp=Z,3.7nm,0.9s,baz=311,slow=5.6,SNR=6.1
ARCES                              LR    LR     16 38 14.9
      comp=Z,39nm,21.6s,baz=310,slow=32
ARCES ARCESS Array B   84.49  21   P     P      16 06 19.5 -0.6
FINES FINESS Array B   86.14  29   P     P      16 06 28.8 +0.4
      comp=Z,3.8nm,0.9s,baz=295,slow=9.9,SNR=7.0
FINES                              LR    LR     16 39 04.2
      comp=Z,58nm,21.4s,baz=256,slow=32
VNA3  Neumayer Olymp   89.29 163   P     P      16 06 45.3 +2.0
VNA2  Neumayer--Watz   89.79 163   P     P      16 06 47.0 +1.3
      baz=273,slow=4.9
AKASG Malin Array Be   90.12  39   P     P      16 06 48.1 +0.4
      comp=Z,0.4nm,0.4s,baz=265,slow=4.6,SNR=4.7
AKASG                              LR    LR     16 45 42.9
      comp=Z,50nm,19.7s,baz=320,slow=35
SNAA  Sanae            91.44 163   P     P      16 06 54.2 +0.8
BRTR  Keskin Array B   95.97  48   P     P      16 07 15.4 +0.2
      comp=Z,0.5nm,0.7s,baz=314,slow=4.7,SNR=3.1
KMI   Kunming         146.07  10 ⇑PKPbc  PKPdf  16 13 26.1 -1.8
KMI                                sPKP         16 13 30.5
ASAR  Alice Springs   151.50 235   PKPbc PKPbc  16 13 42.3 -0.3
      comp=Z,6.2nm,0.8s,baz=113,slow=2.4,SNR=15
CMAR  Chiang Mai Arr  151.54  20   PKP   PKPdf  16 13 37.1 +0.5
      comp=Z,0.5nm,0.8s,baz=281,slow=2.0,SNR=4.9
CMAR                               PKPbc PKiKP  16 13 43.3 +0.1
      comp=Z,2.4nm,0.9s,baz=312,slow=2.7,SNR=16
WRA   Warramunga Arr  152.66 243   PKPbc PKPbc  16 13 44.7 -0.6
      comp=Z,8.5nm,0.7s,baz=110,slow=1.9,SNR=28
```

IDC 07 15:57:18.4±7.6**, 6°.02S**×**150°.73E, h130**^{km}±50^{km}**, mb2.9**/3**, mb1 3.0**/4**, mb1mx2.9**/38**, mbtmp3.3**/4**, Error ellipse: s-maj=102.0km s-min=55.8km az=123.0, New Britain region**

```
Code  Station Name       Δ°   AZ°    Phase ID          Time     Res
                                   Op    ISC         h  m  s   ISC
PMG   Port Moresby      4.88 226   P     Pn     15 58 29.4 -0.4
      1.1nm,0.3s,baz=66,slow=7.8,SNR=6.7
PMG                                S     Sn     15 59 26.0 +0.6
      1.4nm,0.3s,baz=128,slow=21,SNR=3.6
WRA   Warramunga Arr   21.10 228   P     P      16 01 52.8  0.0
      0.3nm,0.5s,baz=52,slow=11,SNR=7.3
ASAR  Alice Springs    23.87 221   P     P      16 02 19.9 -0.1
      0.2nm,0.6s,baz=56,slow=9.1,SNR=8.5
FITZ  Fitzroy Crossi   27.26 242   P     P      16 02 51.5 +0.8
      1.8nm,1.1s,baz=45,slow=5.7,SNR=1.6
TORD  Torodi Ar. Bea  148.68 285   PKPbc PKPbc  16 16 50.5 -0.9
      0.4nm,0.4s,baz=99,slow=2.8,SNR=4.9
```

NIC ***07*** *16:01:54.7±0.0, 35°.33N×30°.18E, h35*^{km}*±32*^{km}*, Ml3.0/3*

ISK ***07*** *16:01:55.9, 35°.88N×30°.72E, h9*^{km}*, ML2.6/10*

DDA ***07*** *16:01:56.0, 35°.98N×31°.07E, h31*^{km}*±2*^{km}*, ML2.6*

ISC 07 16:01:58.6±1.3**, 35°.96N**±0°.05×**30°.88E**±0°.03**, h29**^{km}±14^{km}**, n35,** σ1^{s}.60/47**, Eastern Mediterranean Sea**

```
Code  Station Name       Δ°   AZ°    Phase ID          Time     Res
                                   Op    ISC         h  m  s   ISC
AKUM  Antalya-Kumluc    0.56 309  i P    Pb     16 02 09.7 -0.3
AKUM                              i S    Sn     16 02 20.5 +1.4
AKUM                               IAML         16 02 23.0
      comp=E,236nm,0.3s
AKUM                               IAML         16 02 24.0
      comp=N,206nm,0.5s
KEMT  Kemer-ANTALYA     0.69 338   PG    Pb     16 02 10.3 -1.8
ANTB  Antalya           0.95 349   PG    Pb     16 02 15.9 -0.6
ANTB                               SG    Sn     16 02 30.1 +1.5
AKAS  Kas               1.07 285  i P    Pn     16 02 17.6 -0.2
AKAS  Kas               1.07 285   PG    Pn     16 02 15.2 -2.6
KSL   Kastellorizon     1.07 280   P     Pn     16 02 11.5 -6.1
KEPZ  Antalya-Kepez     1.10  32  i P    Pn     16 02 15.7 -2.5
ELL   Elmali            1.11 315   PN    Pn     16 02 16.5 -1.8
ELL   Elmali            1.11 315   P     Pn     16 02 18.3  0.0
ELL                                S     Sn     16 02 37.0 +4.3
KORT  Korkueli          1.12 338   PN    Pn     16 02 18.9 +0.4
```

KORT				SN	**Sn**	**16 02 35.5**	**+2.5**
GAZI	**Gazipasa**	**1.19**	**76**	*i* P	Pn	16 02 15.7	-3.7
GAZI				*i* S	**Sn**	**16 02 30.2**	**-4.3**
GAZI				IAML		16 02 32.0	
	comp=N,206nm,0.4s						
GAZI				IAML		16 02 34.0	
	comp=E,311nm,0.3s						
AKMS	**Akamas**	**1.51**	**128**	P	**Pn**	**16 02 24.1**	**+0.3**
AKMS				AML	AML	16 02 47.6	
	comp=E,0.6nm,0.4s						
AKMS				AML	AML	16 02 48.0	
	comp=E,0.4nm,0.4s						
FETY	**Fethiye**	**1.60**	**295**	*i* P	**Pn**	**16 02 24.6**	**-0.4**
FETY				*i* S	**Sn**	**16 02 44.2**	**-0.5**
FETY	**Fethiye**	**1.60**	**295**	PN	**Pn**	**16 02 24.1**	**-0.9**
CAME	**Cameli-Denizli**	**1.61**	**308**	PN	**Pn**	**16 02 24.6**	**-0.6**
ALFC	**Alefka**	**1.61**	**119**	P	**Pn**	**16 02 25.6**	**+0.5**
ALFC				AML	AML	16 02 49.4	
	comp=E,0.3nm,0.3s						
ALFC				AML	AML	16 02 49.4	
	comp=E,0.3nm,0.3s						
ALFC				S	**Sb**	**16 02 50.1**	**+2.4**
ALFC				AML	AML	16 02 50.7	
	comp=E,0.4nm,0.4s						
ALFC				AML	AML	16 02 50.7	
	comp=E,0.4nm,0.4s						
HDMB	**Hadim**	**1.63**	**52**	PN	**Pn**	**16 02 27.9**	**+2.3**
SEDI	**Konya, Seydise**	**1.64**	**25**	*i* P	**Pn**	**16 02 25.0**	**-0.6**
SEDI				*i* S	**Sn**	**16 02 45.6**	**-0.3**
SEDI				IAML		16 02 52.0	
	comp=E,33nm,0.6s						
ERMK	**Ermenek**	**1.77**	**67**	*i* P	**Pn**	**16 02 28.6**	**+1.1**
NATA	**Nata**	**1.82**	**130**	P	**Pn**	**16 02 28.2**	**+0.2**
LEF	**Lefka**	**1.84**	**117**	*i* P	**Pn**	**16 02 27.1**	**-1.1**
DALY	**Dalyan (Mula)**	**1.99**	**296**	PN	**Pn**	**16 02 29.7**	**-0.6**
KKBE	**Karaman, Kazim**	**2.08**	**52**	*i* P	**Pn**	**16 02 31.8**	**+0.2**
KKBE				*i* S	**Sn**	**16 02 57.7**	**+1.1**
KKBE				IAML		16 03 01.0	
	comp=N,47nm,1.1s						
KKBE				IAML		16 03 03.0	
	comp=E,32nm,0.4s						
GULN	**MERSIN_Gulnar**	**2.17**	**83**	*i* P	**Pn**	**16 02 33.0**	**+0.3**
GULN				*i* S	**Sn**	**16 02 57.2**	**-1.4**
GULN				IAML		16 03 00.0	
	comp=N,35nm,0.4s						
GULN				IAML		16 03 01.0	
	comp=E,46nm,0.7s						
TAVA	**DENIZLI_Tavas**	**2.18**	**314**	*i* P	**Pn**	**16 02 33.8**	**+0.8**
DOGA	**KONYA_Doganhis**	**2.23**	**16**	*i* P	**Pn**	**16 02 32.7**	**-1.0**
DOGA				*i* S	**Sn**	**16 02 59.5**	**-0.9**
DOGA				IAML		16 03 06.0	
	comp=N,38nm,0.5s						
CSS	**Mathiatis**	**2.23**	**116**	S	**Sb**	**16 03 06.5**	**+0.9**
ASGA	**Asgata**	**2.26**	**121**	P	**Pn**	**16 02 34.4**	**+0.4**
ASGA				AML	AML	16 03 10.8	
	comp=N,0.2nm,0.5s						
ASGA				AML	AML	16 03 11.8	
	comp=N,0.2nm,0.4s						
TURN	**Turunc**	**2.28**	**292**	PN	**Pn**	**16 02 33.5**	**-0.8**
YVAC	**Isparta, Yalva**	**2.32**	**7**	*i* P	**Pn**	**16 02 35.5**	**+0.5**
YER	**Yerkesik**	**2.40**	**300**	PN	**Pn**	**16 02 35.5**	**-0.5**
PASA	**Karahalli, USA**	**2.63**	**335**	*i* P	**Pn**	**16 02 39.1**	**-0.1**
PASA				*i* S	**Sn**	**16 03 08.7**	**-1.4**
KERG	**Konya-Eregli**	**2.98**	**60**	*i* P	**Pn**	**16 02 45.5**	**+1.4**
KERG				*i* S	**Sn**	**16 03 15.8**	**-3.1**
AYDB	**Zeytinkoy-Aydi**	**3.11**	**310**	PN	**Pn**	**16 02 45.7**	**-0.1**
GULE	**Gulek**	**3.40**	**66**	*i* P	**Pn**	**16 02 51.6**	**+1.8**
GULE				*i* S	**Sn**	**16 03 30.1**	**+0.8**

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*IDC **07** 16:08:28.1±1.2, 2°.91S×137°.48E, h0^{km}, mb3.9/4, mb1 4.0/7, mb1mx3.7/29, mbtmp3.8/7, ML4.2/3, Error ellipse: s-maj=22.7km s-min=21.7km az=29.0*

ISC 07 16:08:31.9±0.8**, 3°.26S**±0°.08×**137°.43E**±0°.07**, h35**^{km}**, n8,** σ**3^s.32**/12**, mb3.7**/3**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	**Jayapura**	**3.35**	**77**	Pn	**Pn**	**16 09 21.2**	**-0.6**
	1.4nm,0.3s,baz=270,slow=18,SNR=12						
JAY				Sn	**Sn**	**16 10 00.3**	**-0.2**
	2.9nm,0.3s,baz=103,slow=21,SNR=6.2						
SIJI	**Sorong**	**6.60**	**291**	Pn	**Pn**	**16 10 07.3**	**+0.8**
	1.8nm,0.3s,baz=59,slow=12,SNR=11						
SIJI				Sn	**Sn**	**16 11 20.0**	**-0.6**
	0.6nm,0.3s,baz=287,slow=19,SNR=1.5						
WRA	**Warramunga Arr**	**16.86**	**190**	P	**P**	**16 12 30.5**	**+3.4**
	2.0nm,0.3s,baz=12,slow=13,SNR=68						
WRA				S	**Sn**	**16 15 26.8**	**-4.8**
	0.2nm,0.3s,baz=8.3,slow=24,SNR=4.2						
FITZ	**Fitzroy Crossi**	**18.73**	**217**	P	**Pn**	**16 12 52.5**	**+4.2**
	0.3nm,0.3s,baz=40,slow=14,SNR=10						
FITZ				S	**Sn**	**16 16 10.7**	**-6.4**
	0.4nm,0.3s,baz=193,slow=16,SNR=8.0						
ASAR	**Alice Springs**	**20.57**	**189**	P	Pn	16 13 11.7	+1.4
	13nm,0.7s,baz=17,slow=10,SNR=144						
ASAR				S	**S**	**16 16 57.9**	**+1.7**
	1.8nm,0.8s,baz=8.4,slow=24,SNR=9.1						
CMAR	**Chiang Mai Arr**	**43.61**	**301**	P	**P**	**16 16 33.6**	**+0.4**
	1.1nm,0.9s,baz=116,slow=6.5,SNR=7.1						
USRK	**Ussuriysk Ar.**	**47.49**	**355**	P	**P**	**16 17 02.0**	**-1.5**
	0.9nm,0.7s,baz=189,slow=9.6,SNR=2.3						
MKAR	**Makanchi Array**	**69.45**	**323**	P	**P**	**16 19 35.9**	**-0.7**
	0.4nm,0.6s,baz=111,slow=8.2,SNR=2.3						

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*IASPEI **07** 16:10:03.9±0.9, 38°.43N±0°.03×25°.99E±0°.03, h14^{km}±5^{km}, Error ellipse: s-maj=4.5km s-min=3.4km az=35.8, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*ISK **07** 16:10:03.3, 38°.44N×25°.97E, h16^{km}, ML2.6/14*

*ATH **07** 16:10:04.7, 38°.42N×26°.01E, h12^{km}±1^{km}, ML2.6/5, Error ellipse: s-maj=2.1km s-min=1.3km az=112.0*

*THE **07** 16:10:04.3, 38°.43N×26°.01E, h12^{km}, ML2.5/5, Error ellipse: s-maj=0.9km s-min=0.5km az=245.0*

*DDA **07** 16:10:05.8, 38°.40N×26°.11E, h7^{km}±2^{km}, ML2.4*

ISC 07 16:10:04.1±0.8**, 38°.43N**±0°.03×**25°.99E**±0°.03**, h13**^{km}±5^{km}**, n43,** σ**0^s.53**/61**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOS	**Chios island**	**0.07**	**133**	P	**Pg**	**16 10 07.0**	**+0.1**
CHOS				S	**Sg**	**16 10 08.4**	**-0.4**
	7µm,0.2s						
CHOS	**Chios island**	**0.07**	**133**	P	**Pg**	**16 10 07.0**	**+0.1**
CHOS				S	**Sg**	**16 10 08.7**	**0.0**
CHOS				AML	AML	16 10 08.9	
	comp=E,16950µm,0.3s						
CHOS				AML	AML	16 10 08.9	
	comp=N,11751µm,0.2s						
CHOS	**Chios island**	**0.07**	**133**	PG	**Pg**	**16 10 06.9**	**+0.1**
CHOS				SG	**Sg**	**16 10 08.6**	**-0.2**
PSRA	**Psara**	**0.35**	**288**	P	**Pg**	**16 10 12.1**	**+0.8**
PSRA				S	**Sg**	**16 10 17.1**	**+1.1**
PSRA				AML	AML	16 10 17.9	
	comp=N,2678µm,0.2s						
PSRA				AML	AML	16 10 19.0	
	comp=E,2305µm,0.2s						
ZEYE	**Izmir, Urla-Ze**	**0.44**	**116**	*i* P	**Pg**	**16 10 12.9**	**0.0**
ZEYE				*i* S	**Sg**	**16 10 18.1**	**-0.7**
KRBN	**Karaburun**	**0.47**	**70**	PG	**Pg**	**16 10 13.8**	**+0.5**
URLA	**Izmir**	**0.48**	**98**	*i* P	**Pg**	**16 10 13.5**	**0.0**
URLA				*i* S	**Sg**	**16 10 20.7**	**+0.8**
URLA	**Izmir**	**0.48**	**98**	PG	**Pg**	**16 10 13.9**	**+0.4**
URLA				SG	**Sb**	**16 10 21.0**	**-0.3**
FOCM	**Foa**	**0.64**	**64**	PG	**Pg**	**16 10 16.6**	**0.0**
SIGR	**SIGRI**	**0.79**	**352**	P	**Pg**	**16 10 19.1**	**-0.2**
SIGR				S	**Sb**	**16 10 30.6**	**+0.5**
	comp=E,300nm,0.3s						
SIGR	**SIGRI**	**0.79**	**352**	P	**Pg**	**16 10 19.1**	**-0.2**
SIGR				AML	AML	16 10 32.2	
	comp=N,682µm,0.2s						
SIGR				AML	AML	16 10 34.0	
	comp=E,389µm,0.3s						
SIGR	**SIGRI**	**0.79**	**352**	PG	**Pg**	**16 10 18.9**	**-0.4**
DGB	**zmir**	**0.80**	**118**	*i* P	**Pg**	**16 10 19.4**	**-0.1**
DGB				*i* S	**Sg**	**16 10 29.7**	**-0.3**
BLCB	**Balcova**	**0.82**	**93**	P	**Pg**	**16 10 20.1**	**+0.1**
BLCB				S	**Sb**	**16 10 31.4**	**+0.2**
BLCB	**Balcova**	**0.82**	**93**	PG	**Pg**	**16 10 20.2**	**+0.2**
PRK	**Paraskevi**	**0.84**	**15**	P	**Pg**	**16 10 20.3**	**-0.1**
PRK				S	**Sb**	**16 10 32.4**	**+0.7**
	comp=E,392nm,0.4s						
PRK	**Paraskevi**	**0.84**	**15**	P	**Pg**	**16 10 20.8**	**+0.5**
PRK				S	**Sb**	**16 10 32.6**	**+0.8**
PRK				AML	AML	16 10 34.5	
	comp=N,894µm,0.5s						
PRK				AML	AML	16 10 35.7	
	comp=E,616µm,0.3s						
DKL	**Dikili**	**0.96**	**48**	PG	**Pg**	**16 10 22.1**	**-0.4**
SMG	**Samos**	**0.98**	**137**	P	**Pb**	**16 10 22.9**	**0.0**
SMG				S	**Sg**	**16 10 36.2**	**+0.4**
	comp=E,452nm,0.4s						
SMG	**Samos**	**0.98**	**137**	P	**Pb**	**16 10 23.0**	**0.0**
SMG				AML	AML	16 10 37.7	
	comp=E,1025µm,0.3s						
SMG				AML	AML	16 10 38.5	
	comp=N,771µm,0.6s						
ZEDA	**zmir-Bergama**	**1.00**	**57**	*i* P	**Pb**	**16 10 23.5**	**+0.3**
ZEDA				*i* S	**Sb**	**16 10 36.7**	**+0.4**
ZEDA				IAML		16 10 38.0	
	comp=N,88nm,0.4s						
ZEDA				IAML		16 10 38.0	
	comp=E,64nm,0.4s						
KOCA	**Canakkale, Ayv**	**1.07**	**6**	*i* P	**Pb**	**16 10 23.8**	**-0.7**
KOCA				*i* S	**Sb**	**16 10 36.9**	**-1.5**
TNSA	**Tinos**	**1.11**	**217**	P	**Pb**	**16 10 24.8**	**-0.2**
SKY	**Skiros Island**	**1.22**	**292**	P	**Pn**	**16 10 27.3**	**+0.6**
GCAM	**G?zelcaml?**	**1.22**	**126**	PN	**Pn**	**16 10 26.9**	**+0.1**
KARY	**Karystos**	**1.29**	**252**	P	**Pn**	**16 10 27.0**	**-0.7**
BUHA	**Balikesir, Bur**	**1.36**	**38**	*i* P	**Pn**	**16 10 28.5**	**-0.3**
BUHA				*i* S	**Sb**	**16 10 46.1**	**-0.5**
BOZC	**Bozcaada**	**1.41**	**2**	PN	**Pn**	**16 10 28.5**	**-0.9**
EZN	**Ezine**	**1.42**	**10**	P	**Pn**	**16 10 28.8**	**-0.7**
EZN				S	**Sn**	**16 10 47.3**	**-0.6**
	comp=E,92nm,0.4s						
EZN	**Ezine**	**1.42**	**10**	PN	**Pn**	**16 10 28.7**	**-0.7**
LIA	**Limnos Island**	**1.59**	**337**	P	**Pn**	**16 10 31.6**	**-0.3**
LIA	**Limnos Island**	**1.59**	**337**	P	**Pb**	**16 10 33.8**	**+0.4**
STEP	**BALIKESIR_Sava**	**1.64**	**54**	*i* P	**Pb**	**16 10 34.8**	**+0.6**
STEP				*i* S	**Sg**	**16 10 58.2**	**+1.2**
STEP				IAML		16 11 03.0	
	comp=E,64nm,0.3s						
BODT	**Bodrum**	**1.72**	**142**	PN	**Pn**	**16 10 33.4**	**-0.3**
GADA	**Gvkgeada**	**1.76**	**358**	PN	**Pn**	**16 10 33.6**	**-0.6**
BALB	**Balikesir**	**1.90**	**50**	PN	**Pn**	**16 10 36.3**	**+0.2**
GELI	**Tayfur-Gelibol**	**2.00**	**11**	PN	**Pn**	**16 10 37.4**	**-0.1**
MANT	**Manisa**	**2.01**	**88**	*i* P	**Pg**	**16 10 43.2**	**+0.5**
LPK	**Lapseki**	**2.03**	**17**	PN	**Pn**	**16 10 37.7**	**-0.2**
SMTH	**Samothraki Isl**	**2.07**	**350**	P	**Pn**	**16 10 37.9**	**-0.6**
KULA	**Kula-Manisa**	**2.10**	**87**	PN	**Pn**	**16 10 39.1**	**+0.2**
KRBG	**Karabiga-Canak**	**2.20**	**27**	PN	**Pn**	**16 10 40.3**	**0.0**
ALN	**Alexandroupoli**	**2.46**	**1**	P	**Pn**	**16 10 43.4**	**-0.5**

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*TUL **07** 16:10:40.9±0.5, 36°.947N±0°.010×97°.84W±0°.03, h3^{km}±6^{km}, ML2.9, mb_Lg2.4/15(NEIC), Error ellipse: s-maj=2.8km s-min=1.3km az=93.0*

NEIC 07 16:10:41.1±0.7**, 36°.931N**±0°.010×**97°.83W**±0°.02**, h7**^{km}±3^{km}**, Error ellipse: s-maj=2.9km s-min=1.4km az=84.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	**Grant County #**	**0.08**	**196**	Pg	Pg	16 10 43.3	+0.1
GC02				Sg	Sg	16 10 44.9	+0.3
KAN14	**Manchester OK**	**0.11**	**284**		Pg	16 10 43.3	-0.2
KAN14				Sg	Sg	16 10 44.9	-0.3
KAN17	**Caldwell West**	**0.12**	**25**	Pg	Pg	16 10 43.8	0.0
KAN05	**Bluff City Nor**	**0.18**	**349**		Pg	16 10 44.7	-0.1
KAN05				Sg	Sg	16 10 47.3	0.0
KAN01	**Argonia South**	**0.23**	**15**		Pg	16 10 45.7	0.0
KAN09	**Caldwell North**	**0.27**	**40**	Pg	Pg	16 10 46.5	+0.1
KAN10	**Anthony SW Sta**	**0.29**	**312**	Pg	Pg	16 10 46.6	-0.2
KAN13	**South Haven SW**	**0.29**	**74**		Pg	16 10 47.1	+0.2
KAN08	**Anthony NE Sta**	**0.32**	**339**		Pg	16 10 47.1	-0.2
OK032	**Salt Plains WL**	**0.33**	**247**		Pg	16 10 47.6	0.0
KAN16	**Harper SW Stat**	**0.35**	**328**	Pg	Pg	16 10 47.6	-0.3
KS20	**Mayfield South**	**0.37**	**37**		Pg	16 10 48.4	0.0
KAN12	**Harper NE Stat**	**0.39**	**340**		Pg	16 10 48.5	-0.2
CROK	**Carrier**	**0.44**	**196**	Pg	Pg	16 10 50.1	+0.4
BLOK	**Blackwell**	**0.52**	**109**	Pg	Pg	16 10 51.5	+0.3
T35A	**Sooner Cattle**	**1.06**	**90**	Pg	Pg	16 11 01.0	-0.4
U32A	**Winter Ranch,**	**1.09**	**240**		Pg	16 11 01.5	-0.5
OK029	**Liberty Lake**	**1.17**	**165**		Pg	16 11 03.4	-0.2
QUOK	**Quay**	**1.18**	**130**	Pg	Pg	16 11 03.5	-0.3
OK031	**S. Brethren Rd**	**1.26**	**140**		Pn	16 11 04.9	-0.2
BCOK	**Bluff Creek, N**	**1.28**	**172**	Pn	Pn	16 11 05.2	-0.3
OK030	**Cody Creek RV**	**1.31**	**140**		Pn	16 11 05.7	-0.1
OK025	**Westminster Rd**	**1.41**	**163**		Pb	16 11 07.7	0.0
R32A	**Long Quarter,**	**1.64**	**335**		Pn	16 11 10.8	+0.3
FNO	**Franklin**	**1.71**	**168**	Pn	Pb	16 11 12.1	-0.7
TUL1	**Leonard**	**1.94**	**121**	Pn	Pn	16 11 14.8	+0.3
TUL1				IAmb_Lg		16 11 45.3	
	comp=Z,20nm,0.8s						
WMOK	**Wichita Mounta**	**2.32**	**200**		Pn	16 11 20.4	+0.6
X34A	**Smith Ranch, M**	**2.33**	**180**	IAmb_Lg		16 11 54.6	
	comp=Z,11nm,0.8s						
KSU1	**Kansas State U**	**2.37**	**24**	IAmb_Lg		16 11 58.9	
	comp=Z,21nm,0.7s						
U40A	**Yellville**	**4.04**	**97**	IAmb_Lg		16 12 46.4	
	comp=Z,6.3nm,1.1s						
P38A	**Dawn**	**4.32**	**50**	IAmb_Lg		16 13 00.6	
	comp=Z,7.4nm,0.9s						
MGMO	**Mountain Grove**	**4.46**	**85**	IAmb_Lg		16 13 08.7	
	comp=Z,8.7nm,0.8s						
R40A	**Maddies Statio**	**4.62**	**71**	IAmb_Lg		16 13 12.5	
	comp=Z,5.8nm,0.8s						
L34A	**Svendsen Farm,**	**5.15**	**12**	IAmb_Lg		16 13 28.4	
	comp=Z,16nm,0.7s						
PBMO	**Poplar Bluff**	**5.94**	**89**	IAmb_Lg		16 13 50.9	
	comp=Z,8.1nm,0.8s						

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*NEIC **07** 16:19:34.8±1.8, 47°.87N±0°.01×121°.63W±0°.02, h14^{km}±4^{km}, Error ellipse: s-maj=2.0km s-min=1.9km az=76.0*

*SEA **07** 16:19:35.5±1.6, 47°.87N±0°.01×121°.65W±0°.02, h10^{km}±4^{km}, ML2.3/63, ML2.1/18(NEIC), Error ellipse: s-maj=1.7km s-min=1.5km az=91.0*

PNSN 07 16:19:35.5, 47°.87N×**121°.65W, h9**^{km}**, MD2.2, Fault plane solution: NP1:**ϕ_s180.00000°**,** δ30.00000°**,** λ-50.00000°.**, Washington**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HTW	**Haystack Looko**	**0.10**	**232**		Pg	16 19 38.1	+0.1
MBPA	**Monroe Substat**	**0.17**	**281**		Pg	16 19 39.0	0.0
MBPA					Sg	16 19 42.0	+0.6
C05A	**Tolt Reservoir**	**0.17**	**189**		Pg	16 19 39.0	-0.1
C05A					Sg	16 19 41.8	+0.1
TTW	**Tolt Reservoir**	**0.17**	**189**		Pg	16 19 39.1	-0.1
TTW					Sg	16 19 41.9	+0.2
BLH	**Bald Hill**	**0.26**	**263**		Pb	16 19 42.5	+0.1
JCW	**Jim Creek**	**0.38**	**330**		Pg	16 19 42.5	-0.4
JCW					Sg	16 19 47.8	-0.1
GPW	**Glacier Peak**	**0.42**	**54**		Pg	16 19 43.4	-0.4
CDMR	**Cedar Moraine**	**0.45**	**189**		Pg	16 19 43.8	-0.5
CDMR					Sg	16 19 50.3	+0.1
RATT	**Rattlesnake La**	**0.45**	**193**		Pg	16 19 43.7	-0.6
B05A	**Bryant**	**0.50**	**323**		Pg	16 19 44.4	-0.8
C06D	**Leavenworth**	**0.51**	**83**		Pg	16 19 44.7	-0.7
C06D					Sg	16 19 51.9	-0.3
SP2	**Seward Park 2**	**0.51**	**233**		Pg	16 19 45.8	+0.4
WRW	**Wenatchee Ridg**	**0.52**	**91**		Pg	16 19 44.9	-0.6
RPW	**Rockport**	**0.59**	**9**		Pg	16 19 46.2	-0.7
B06A	**Marblemount**	**0.66**	**9**		Pg	16 19 47.4	-0.9
B06A					Sg	16 19 56.3	-0.6
B06A	**Marblemount**	**0.66**	**9**	IAML		16 19 56.4	
	comp=N,189nm,0.1s						
B06A				IAML		16 19 57.3	
	comp=E,207nm,0.3s						
GSM	**Grass Mountain**	**0.67**	**188**		Pg	16 19 47.7	-0.7
D05A	**Enumclaw**	**0.72**	**199**		Pg	16 19 48.4	-0.9
D05A				IAML		16 20 03.0	
	comp=E,70nm,1.7s						
SLFW	**Sugar Loaf**	**0.76**	**98**		Pg	16 19 49.2	-1.0
GNW	**Green Mountain**	**0.85**	**250**		Pg	16 19 50.5	-1.3
GNW					Sg	16 20 02.0	-0.9
B013	**Quilcene**	**0.85**	**267**		Pg	16 19 50.4	-1.5
B013	**Quilcene**	**0.85**	**267**		Pg	16 19 50.3	-1.5
LTY	**Liberty**	**0.90**	**132**		Pg	16 19 51.3	-1.5
TWW	**Teanaway**	**0.90**	**144**		Pg	16 19 52.8	0.0
NLW	**Nelson Butte**	**0.91**	**76**		Pg	16 19 52.0	-0.9
ETW	**Entiat**	**0.93**	**106**		Pg	16 19 52.3	-1.0
MBW	**Mount Baker**	**0.93**	**350**		Pg	16 19 52.4	-1.0
FMW	**Mount Fremont**	**0.94**	**181**		Pg	16 19 52.0	-1.5
B941	**Kapowsin**	**0.96**	**204**		Pg	16 19 53.3	-0.6
HDW	**Hoodsport**	**0.97**	**258**		Pg	16 19 52.2	-2.0
SHUK	**Shuksan-Mt. Ba**	**0.99**	**359**		Pg	16 19 53.0	-1.4
TBM	**Table Mountain**	**1.00**	**134**		Pg	16 19 53.6	-1.0
RCS	**Mount Rainier-**	**1.00**	**183**		Pg	16 19 53.3	-1.4
D03D	**Eldon**	**1.03**	**252**		Pg	16 19 53.1	-2.1
REMR	**Mount Rainier-**	**1.06**	**187**		Pg	16 19 54.2	-1.6
LON	**Longmire**	**1.12**	**186**		Pg	16 19 55.0	-2.1
LON				IAML		16 20 10.3	
	comp=E,33nm,0.3s						
LON				IAML		16 20 10.5	
	comp=N,37nm,0.2s						
LON	**Longmire**	**1.12**	**186**		Pg	16 19 55.2	-1.9
WTV	**Waterville**	**1.16**	**98**		Pb	16 19 56.5	-1.2
WPW	**White Pass**	**1.17**	**177**		Pb	16 19 56.0	-2.0
VDB	**Vedder Mountai**	**1.20**	**346**		Pb	16 19 57.2	-1.2
EBG	**Ellensburg**	**1.21**	**142**		Pb	16 19 57.7	-0.8
B04A	**Port Angeles**	**1.26**	**279**		Pn	16 19 57.4	-1.9
B04A	**Port Angeles**	**1.26**	**279**	IAML		16 20 05.8	
	comp=N,32nm,3.9s						
B04A				IAML		16 20 36.1	
	comp=E,26nm,3.1s						
NAC	**Naches**	**1.26**	**153**		Pn	16 19 58.8	-0.6
DHW2	**Dyer Hill 2**	**1.27**	**84**		Pn	16 19 59.2	-0.3
B011	**North Saanich**	**1.44**	**304**		Pn	16 20 00.2	-1.5
PGC	**Sidney**	**1.44**	**304**		Pn	16 20 00.4	-1.3
PGC	**Sidney**	**1.44**	**304**	IAML		16 20 20.2	
	comp=N,37nm,0.7s						
PGC				IAML		16 20 37.6	
	comp=E,32nm,3.0s						
E04D	**Cinebar**	**1.45**	**206**		Pn	16 20 01.1	-0.8
EPH	**Ephrata**	**1.48**	**110**		Pn	16 20 01.9	-0.4
B201	**Coldwater, Mou**	**1.62**	**195**		Pn	16 20 04.2	-0.1
B08A	**Colville Reser**	**1.63**	**72**		Pn	16 20 04.8	+0.5
ERK	**Elk Rock**	**1.63**	**197**		Pn	16 20 04.0	-0.5
TRW	**Toppenish Ridg**	**1.75**	**154**		Pn	16 20 06.5	+0.5
E07A	**Sunnyside**	**1.79**	**136**	Pn	Pn	16 20 05.9	-0.7
LVP	**Lakeview Peak**	**1.87**	**196**		Pn	16 20 08.4	+0.6
BENWA	**Benson Ranch**	**1.89**	**135**		Pn	16 20 07.6	-0.3
CLRS	**Cowichan Lake**	**1.91**	**301**	Pn	Pn	16 20 07.4	-0.8
PNT	**Penticton**	**1.98**	**42**		Pb	16 20 11.1	-0.6
F05D	**White Salmon**	**1.99**	**176**		Pn	16 20 10.1	+0.8
HAWA	**Hanford**	**2.06**	**135**	Pn	Pn	16 20 09.9	-0.4
HAWA				IAML		16 20 43.7	
	comp=E,11nm,3.6s						
HAWA				IAML		16 21 10.2	
	comp=E,12nm,4.7s						
NEW	**Newport**	**3.06**	**81**	Pn	Pn	16 20 22.6	-1.5
NEW				IAML		16 20 55.4	
	comp=E,8.9nm,3.2s						

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*NNC **07** 16:30:49.7±2.6, 41°.82N×79°.59E, h0^{km}, mb3.6, mpv3.5, Error ellipse: s-maj=17.7km s-min=10.0km az=148.0*

*KRNET **07** 16:30:49.5±0.1, 42°.14N×79°.75E, mb2.8*

*SOME **07** 16:30:49.4, 41°.92N×79°.42E, h5^{km}*

ISC 07 16:30:53.6±2.8**, 41°.94N**±0°.08×**79°.57E**±0°.06**, h17**^{km}±15^{km}**, n40,** σ**1^s.60**/69**, 14C-7D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**1.02**	**302**	⇑*i*P	**Pb**	**16 31 09.6**	**-3.3**
	baz=90						
PRZ				⇑*i*S	**Sb**	**16 31 24.5**	**-1.6**
	baz=90						
SHLS	**Shalkode**	**1.22**	**356**	*e*P	**Pn**	**16 31 14.4**	**-1.5**
	27nm,0.1s						
SHLS				*e*S	**Sb**	**16 31 32.4**	**+0.7**
	166nm,0.2s						
SHLS	**Shalkode**	**1.22**	**356**	P	**Pn**	**16 31 14.4**	**-1.5**
	27nm,0.1s						
SHLS				S	**Sb**	**16 31 32.4**	**+0.7**
	166nm,0.2s						
UZB	**Uzynbulak**	**1.27**	**342**	*e*P	**Pn**	**16 31 14.4**	**-2.3**
	27nm,0.2s						
UZB				*e*S	**Sb**	**16 31 32.4**	**-0.8**
	33nm,0.3s						
UZB	**Uzynbulak**	**1.27**	**342**	P	**Pn**	**16 31 14.4**	**-2.3**
	27nm,0.2s						
UZB				S	**Sb**	**16 31 32.4**	**-0.8**
	33nm,0.3s						
PDGK	**Podgornoye**	**1.39**	**358**	P	**Pn**	**16 31 16.5**	**-1.7**
	6.0nm,0.1s						
PDGK				S	**Sn**	**16 31 35.5**	**-0.8**
	17nm,0.1s						
PDGK	**Podgornoye**	**1.39**	**358**	⇓P	**Pn**	**16 31 16.6**	**-1.7**
	3.1nm,0.2s						
PDGK				⇑S	**Sg**	**16 31 41.6**	**+3.2**
	99nm,0.5s						
SATY	**Saty**	**1.41**	**323**	*e*P	**Pn**	**16 31 16.6**	**-1.9**
	6.0nm,0.1s						
SATY				*e*S	**Sn**	**16 31 36.2**	**-0.6**
	61nm,0.1s						
SATY	**Saty**	**1.41**	**323**	P	**Pn**	**16 31 16.6**	**-1.9**
	6.0nm,0.1s						
SATY				S	**Sn**	**16 31 36.2**	**-0.6**
	61nm,0.1s						
KTMS	**Ketmen**	**1.61**	**21**	*e*P	**Pn**	**16 31 20.4**	**-1.0**
	42nm,0.3s						
KTMS				*e*S	**Sn**	**16 31 42.8**	**+0.9**
	34nm,0.2s						
KTMS	**Ketmen**	**1.61**	**21**	P	**Pn**	**16 31 20.4**	**-1.0**
	42nm,0.3s						
KTMS				S	**Sn**	**16 31 42.8**	**+0.9**
	34nm,0.2s						
ANVS	**Anan'yevo**	**1.64**	**302**	⇑*i*P	**Pn**	**16 31 20.6**	**-1.2**
	baz=94						
ANVS				⇑*i*S	**Sn**	**16 31 43.2**	**+0.6**
	baz=94						
TNSS	**Tian-Shan**	**2.22**	**300**	*e*P	**Pn**	**16 31 30.9**	**+0.9**
	3.3nm,0.1s						
TNSS				*e*S	**Sb**	**16 32 00.7**	**-0.2**
	27nm,0.1s						
TNSS	**Tian-Shan**	**2.22**	**300**	Pg	**Pn**	**16 31 30.7**	**+0.7**
	3.3nm,0.1s						
TNSS				Lg	Lg	16 32 00.7	
	27nm,0.1s						
KOTS	**Kotyrbulak**	**2.23**	**306**	*e*P	**Pn**	**16 31 31.2**	**+1.4**
	5.4nm,0.1s						
KOTS				*e*S	**Sb**	**16 32 01.0**	**+0.3**
	35nm,0.2s						
KOTS	**Kotyrbulak**	**2.23**	**306**	Pg	**Pn**	**16 31 31.2**	**+1.4**
	5.4nm,0.1s						
KOTS				Lg	Lg	16 32 01.0	
	35nm,0.2s						
MDOK	**Medeo**	**2.23**	**304**	*e*P	**Pn**	**16 31 31.0**	**+1.2**
	5.5nm,0.2s						
MDOK				*e*S	**Sb**	**16 32 00.3**	**-0.3**
	53nm,0.5s						
MDOK	**Medeo**	**2.23**	**304**	⇑Pn	**Pn**	**16 31 30.7**	**+0.9**
	8.5nm,0.6s						
MDOK				Sn	**Sb**	**16 32 00.4**	**-0.3**
	47nm,0.6s						
MDOK	**Medeo**	**2.23**	**304**	Pg	**Pn**	**16 31 31.0**	**+1.2**
	5.5nm,0.2s						
MDOK				Lg	Lg	16 32 00.4	
	53nm,0.5s						
BLB	**Baldybastay**	**2.30**	**340**	Pg	**Pn**	**16 31 32.7**	**+1.9**
	32nm,0.3s						
BLB				Lg	Lg	16 32 03.7	
	62nm,0.2s						
DJR	**Jarkent**	**2.40**	**4**	*e*P	**Pn**	**16 31 34.2**	**+2.1**
	2.5nm,0.2s						
DJR				*e*S	**Sb**	**16 32 06.5**	**+0.9**
	58nm,0.5s						
DJR	**Jarkent**	**2.40**	**4**	Pg	**Pn**	**16 31 33.7**	**+1.6**
	2.5nm,0.2s						
DJR				Lg	Lg	16 32 06.5	
	58nm,0.5s						
IZV	**Izvestkoviy**	**2.44**	**298**	*e*P	**Pn**	**16 31 34.4**	**+1.6**
	6.3nm,0.1s						
IZV				*e*S	**Sb**	**16 32 06.9**	**-0.1**
	49nm,0.3s						
IZV	**Izvestkoviy**	**2.44**	**298**	Pg	**Pn**	**16 31 34.4**	**+1.6**
	6.3nm,0.1s						
IZV				Lg	Lg	16 32 06.9	
	49nm,0.3s						
ULHL	**Ulahol**	**2.49**	**278**	⇑*i*P	**Pn**	**16 31 34.7**	**+1.2**
	baz=74						
ULHL				⇑*i*S	**Sb**	**16 32 07.4**	**-1.1**
	baz=74						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ARXS	Arharly	2.60	331	eP	Pb	16 31 38.1	-1.7
ARXS				eS	Sb	16 32 12.9	+1.4
ARXS	Arharly	2.60	331	Pg	Pb	16 31 38.1	-1.7
ARXS				Lg	Lg	16 32 12.9	
BOOM	Boomskoye usch	2.75	283	⇑iP	Pn	16 31 38.2	+1.2
	baz=78						
BOOM				⇑iS	Sn	16 32 12.9	+3.0
	baz=78						
KTBS	Karatobe	2.76	311	eP	Pb	16 31 40.7	-1.8
	2.8nm,0.2s						
KTBS				eS	Sb	16 32 17.3	+1.2
	29nm,0.3s						
KTBS	Karatobe	2.76	311	Pg	Pb	16 31 40.9	-1.6
	2.8nm,0.2s						
KTBS				Lg	Lg	16 32 17.3	
	29nm,0.3s						
KST	Kastek	2.88	294	eP	Pb	16 31 42.0	-2.5
	7.0nm,0.2s						
KST				eS	Sb	16 32 20.1	+0.5
	23nm,0.6s						
KST	Kastek	2.88	294	Pg	Pb	16 31 42.1	-2.5
	7.0nm,0.2s						
KST				Lg	Lg	16 32 20.1	
	23nm,0.6s						
KUU	Kurty	3.07	311	eP	Pb	16 31 45.8	-1.9
	2.7nm,0.0s						
KUU				eS	Sb	16 32 26.1	+1.2
	24nm,0.3s						
KUU	Kurty	3.07	311	Pg	Pb	16 31 45.8	-1.9
	2.7nm,0.0s						
KUU				Lg	Lg	16 32 26.1	
	24nm,0.3s						
DGS	Degeres	3.09	296	eP	Pb	16 31 45.1	-3.0
	2.9nm,0.4s						
DGS				eS	Sb	16 32 25.2	-0.3
	18nm,0.5s						
DGS	Degeres	3.09	296	Pg	Pb	16 31 46.0	-2.1
	3.5nm,0.3s						
DGS				Lg	Lg	16 32 25.2	
	18nm,0.5s						
TKM2	Tokmak 2	3.10	290	⇑Pn	Pn	16 31 43.7	+1.8
	1.8nm,0.5s						
TKM2				⇓Sn	Sb	16 32 25.0	-0.8
	10nm,0.4s						
TKM2	Tokmak 2	3.10	290	⇓iP	Pn	16 31 42.4	+0.6
	baz=86						
TKM2				⇓iS	Sn	16 32 20.9	+2.4
	baz=86						
MAKZ	Makanchi	5.16	19	⇑Pn	Pn	16 32 10.6	+0.5
	5.0nm,1.3s						
MAKZ				⇓Sn	Sn	16 33 11.3	+2.1
	3.7nm,1.1s						
MAKZ				⇑Lg	Lg	16 33 30.6	
	5.1nm,1.4s						
MK31	Makanchi Array	5.23	21	⇑Pn	Pn	16 32 11.2	+0.2
	1.4nm,0.6s,baz=207,slow=14,SNR=30						
MK31				⇓Sn	Sn	16 33 12.0	+1.1
	0.4nm,0.3s,baz=207,slow=24,SNR=4.6						
MK31				⇓Lg	Lg	16 33 33.0	
	1.2nm,0.5s						

IDC 07 16:49:49.6±2.1**, 0.°83N×125.°20E, h0^{km}, mb3.1**/3**, mb1 3.3**/3**, mb1mx3.1**/31**, mbtmp3.1**/3**, MS3.6**/2**, Ms1 3.6**/2**, ms1mx2.9**/16**, Error ellipse: s-maj=206.0km s-min=28.2km az=64.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.50	157	P	P	16 54 50.3	-0.7
	0.1nm,0.3s,baz=335,slow=11,SNR=7.8						
PMG	Port Moresby	24.12	115	LR	LR	17 07 25.9	
	comp=Z,82nm,18.3s,baz=230,slow=44						
ASAR	Alice Springs	25.77	161	P	P	16 55 22.9	+0.5
	0.1nm,0.4s,baz=344,slow=9.9,SNR=5.7						
CTA	Charters Tower	29.29	136	LR	LR	17 08 02.0	
	comp=Z,236nm,21.8s,baz=273,slow=37						
MKAR	Makanchi Array	59.10	327	P	P	16 59 51.8	-0.1
	0.3nm,0.7s,baz=130,slow=7.4,SNR=1.6						

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*NNC **07** 17:03:24.9±4.3, 36.°72N×70.°67E, h0^{km}, mb3.8, mpv3.6, Error ellipse: s-maj=34.3km s-min=27.8km az=162.0*

ISC 07 17:03:24.0±1.6**, 36.°28N**±0.°10×**71.°1E**±0.°1**, h200^{km}, n15, σ1.^{s}99**/19**, 1C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.83	356	P	Pn	17 05 02.6	+0.7
	1.4nm,0.3s,baz=186,slow=14,SNR=26						
KK31				⇓S	Sn	17 06 14.8	-4.8
	2.1nm,0.5s,baz=182,slow=23,SNR=9.9						
AAK	Ala-Archa	6.87	22	P	Pn	17 05 02.9	+0.3
	2.7nm,0.6s						
AAK				S	Sn	17 06 20.4	-0.6
	4.6nm,1.1s						
TKM2	Tokmak 2	7.49	26	⇓P	Pn	17 05 10.7	0.0
	2.6nm,0.6s						
TKM2				⇓S	Sn	17 06 37.6	+2.1
	3.4nm,1.3s						
PYUN	Piuthan	12.96	126	eP	Pn	17 06 19.6	-1.7
	21nm,0.4s						
DANN	Dangsing	13.31	123	eP	Pn	17 06 24.0	-1.7
	8.2nm,0.4s						
KOLN	Koldanda	13.58	125	eP	Pn	17 06 27.9	-1.1
	6.3nm,0.5s						
GKN	Gorkha	14.13	122	eP	Pn	17 06 34.3	-1.4
	7.7nm,0.3s						
KKN	Kakani	14.70	121	eP	Pn	17 06 41.7	-1.2
	6.2nm,0.4s						
PKIN	Phulchoki	14.92	122	eP	Pn	17 06 45.4	-0.2
	6.8nm,0.4s						
GUN	Gumba	15.05	120	eP	Pn	17 06 46.4	-0.8
AB31	Akbulak array	15.31	331	⇑P	P	17 06 54.4	+4.3
	0.2nm,0.3s,baz=167,slow=9.8,SNR=23						
AB31				⇓S	S	17 09 37.6	-2.0
	0.9nm,0.7s,baz=146,slow=23,SNR=3.7						
JIRN	Jiri	15.42	120	eP	Pn	17 06 51.0	-0.8
	8.1nm,0.4s						
RAMN	Ramite	16.14	121	eP	Pn	17 07 00.3	-0.1
TAPN	Taplejung	16.68	118	eP	Pn	17 07 07.8	+0.9
	3.0nm,0.3s						
ODAN	Odare	16.75	120	eP	Pn	17 07 07.8	+0.2

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*FUNV **07** 17:07:19.3, 8.°69N×71.°46W, h10^{km}, MW3.2*

ISC 07 17:07:19.4±1.4**, 8.°67N**±0.°06×**71.°39W**±0.°03**, h14^{km}**±11^{km}**, n13, σ1.^{s}93**/23**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.65	126	eP	Pg	17 07 32.7	+0.5
SOCV				eS	Sg	17 07 41.8	+1.0
SDV	Santo Domingo	0.77	74	eP	Pn	17 07 38.4	+2.3
SDV				eS	Sn	17 07 49.7	+2.0
SDV				i		17 07 56.2	
	comp=Z,47nm,0.2s						
CAPV	Capacho	1.22	229	eP	Pb	17 07 41.0	-1.5
CAPV				eS	Sb	17 07 56.7	-1.4
PAMC	Pamplona, Colo	1.86	225	eP	Pb	17 07 52.7	-0.7
PAMC				eS	Sb	17 08 16.3	-0.5
PAMC				i		17 08 18.8	
	comp=Z,80nm,0.4s						
OCAC	Ocana	1.96	257	eP	Pb	17 07 54.7	-0.4
OCAC				eS	Sg	17 08 19.2	-3.3
OCAC				i		17 08 21.9	
	comp=Z,326nm,0.4s						
TAMC	Tame, Arauca	2.26	190	eP	Pn	17 07 57.0	+0.6
TAMC				eS	Sb	17 08 28.8	+0.9
TAMC				i		17 08 32.8	
	comp=Z,30nm,0.3s						
ELOV	Elorza	2.51	131	eP	Pn	17 07 59.7	-0.2
ELOV				eS	Sn	17 08 31.2	+0.8
SMLC	San Martn de	2.66	273	eP	Pn	17 08 03.4	+1.6
SMLC				eS	Sb	17 08 40.0	+0.6
SMLC				i		17 08 49.4	
	comp=Z,28nm,0.3s						
BARC	Barichara	2.73	221	eP	Pb	17 08 08.5	+0.4
BARC				i		17 08 44.7	
	comp=Z,25nm,0.3s						
BAUV	El Baul	3.32	85	eP	Pn	17 08 11.1	+0.1
BAUV				eS	Sn	17 08 49.4	-0.8
ZARC	Zaragoza, Cauc	3.63	251	eP	Pn	17 08 18.1	+2.8
ZARC				i		17 09 11.9	
	comp=Z,7.4nm,0.3s						
MOTC	Monteria, Cord	4.23	272	eP	Pn	17 08 26.9	+3.3
BIRV	Birongo	5.35	70	eP	Pn	17 08 37.9	-1.1
BIRV				eS	Sn	17 09 36.2	-4.4

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*FUNV **07** 17:32:35.5, 8.°52N×71.°44W, h5^{km}, MW3.2*

ISC 07 17:32:35.2±1.3**, 8.°55N**±0.°04×**71.°41W**±0.°03**, h7^{km}**±11^{km}**, n15, σ1.^{s}10**/28**, 1D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.61	115	⇓iP	Pg	17 32 46.5	-0.4
SOCV				eS	Sg	17 32 55.5	+0.7
SDV	Santo Domingo	0.84	66	eP	Pg	17 32 51.8	+0.4
SDV				eS	Sg	17 33 03.3	+1.0
SDV				i		17 33 05.1	
	comp=Z,475nm,0.3s						
CAPV	Capacho	1.12	233	eP	Pg	17 32 54.9	-1.8
CAPV				eS	Sg	17 33 10.9	-0.3
PAMC	Pamplona, Colo	1.75	227	eP	Pn	17 33 06.7	+0.2
PAMC				eS	Sb	17 33 30.4	+0.1
PAMC				i		17 33 32.9	
	comp=Z,430nm,0.4s						
MCQV	Machiques	1.86	324	eP	Pn	17 33 06.9	-0.7
MCQV				eS	Sn	17 33 30.8	-0.6
OCAC	Ocana	1.91	261	eP	Pn	17 33 08.4	+0.1
OCAC				eS	Sn	17 33 33.9	+1.1
OCAC				i		17 33 35.6	
	comp=Z,1µm,0.3s						
LL1C	La Loma 1 Cana	2.34	295	eS	Sb	17 33 46.8	+0.1
ELOV	Elorza	2.45	129	eP	Pn	17 33 15.5	-0.1
ELOV				eS	Sn	17 33 45.4	-0.6
SIQV	Siquisique	2.62	37	eP	Pn	17 33 18.7	+0.7
SIQV				eS	Sn	17 33 50.8	+0.5
SMLC	San Martn de	2.64	276	eP	Pn	17 33 17.8	-0.5
SMLC				eS	Sb	17 33 54.2	-1.3
SMLC				i		17 33 57.0	
	comp=Z,157nm,0.4s						
BRRC	Barranca, Sant	2.69	238	eP	Pn	17 33 19.7	+0.7
BRRC				eS	Sb	17 33 57.5	+0.6
BRRC				i		17 34 01.8	
	comp=Z,63nm,0.5s						
BAUV	El Baul	3.36	83	eP	Pn	17 33 28.4	+0.2
BAUV				eS	Sn	17 34 06.6	-1.7
SJCC	San Jacinto, C	3.95	290	eP	Pn	17 33 37.6	+1.3
SJCC				eS	Sn	17 34 23.5	+0.4
SJCC				i		17 34 49.9	
	comp=Z,28nm,0.5s						
BENV	Beln	4.02	69	eP	Pn	17 33 37.0	-0.3
BENV				eS	Sn	17 34 23.3	-1.4
HELC	Santa Helena	4.71	240	eP	Pn	17 33 50.4	+3.4

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*IDC **07** 17:34:51.0±2.9, 14.°03S×173.°87E, h0^{km}, mb3.9/4, mb1 4.2/5, mb1mx3.8/34, mbtmp3.9/5, ML2.8/1, MS3.4/10, Ms1 3.4/10, ms1mx3.2/35, Error ellipse: s-maj=114.5km s-min=26.9km az=135.0*

ISC 07 17:34:56.0±2.2**, 14.°1S**±0.°3×**173.°9E**±0.°5**, h35^{km}, n13, σ0.^{s}50**/6**, mb3.9**/4**, MS3.6**/7**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.36	132	LR	LR	17 37 49.4	
	comp=Z,60nm,19.2s,baz=266,slow=33						
DZM	Mont Dzumac	10.60	221	Pn	Pn	17 37 25.5	-0.1
	0.1nm,0.3s,baz=81,slow=18,SNR=1.7						
DZM				LR	LR	17 41 00.7	
	comp=Z,457nm,20.8s,baz=64,slow=35						
AFI	Afiamalu	13.91	91	LR	LR	17 41 60.0	
	comp=Z,79nm,20.5s,baz=162,slow=31						
URZ	Urewera	24.20	174	LR	LR	17 48 27.3	
	comp=Z,76nm,18.1s,baz=31,slow=34						
STKA	Stephens Creek	34.40	234	LR	LR	17 55 41.9	
	comp=Z,67nm,18.3s,baz=33,slow=36						
WRA	Warramunga Arr	38.19	256	P	P	17 42 12.1	-0.5
	0.3nm,0.3s,baz=89,slow=8.0,SNR=7.6						
WRA				LR	LR	17 56 39.7	
	comp=Z,120nm,18.9s,baz=120,slow=34						
ASAR	Alice Springs	38.89	250	P	P	17 42 18.9	+0.4
	2.7nm,0.8s,baz=77,slow=9.5,SNR=35						
ASAR				LR	LR	17 57 07.6	
	comp=Z,126nm,19.8s,baz=88,slow=34						
PETK	Petropavlovsk-	68.41	350	LR	LR	18 08 49.6	
	comp=Z,47nm,21.9s,baz=92,slow=30						
MA2	Magadan	75.81	348	LR	LR	18 14 26.9	
	comp=Z,26nm,21.1s,baz=145,slow=31						
SEY	Seymchan	78.63	350	LR	LR	18 16 26.6	
	comp=Z,33nm,20.8s,baz=137,slow=32						
CMAR	Chiang Mai Arr	80.64	292	P	P	17 47 06.0	+0.2
	0.4nm,0.8s,baz=123,slow=3.3,SNR=3.1						
ILAR	Eielson Array	84.10	16	P	P	17 47 22.5	-0.3
	1.8nm,1.0s,baz=226,slow=6.1,SNR=7.2						
ESDC	Sonseca Array	154.49	356	PKPab	PKPab	17 55 08.1	+0.5
	1.6nm,1.1s,baz=342,slow=4.8,SNR=6.7						

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*IDC **07** 17:37:46.2±0.4, 8.°51N×71.°44W, h0^{km}, mb4.4/25, mb1 4.6/31, mb1mx4.5/42, mbtmp4.5/31, ML4.7/6, MS3.8/20, Ms1 3.8/20, ms1mx3.5/53, Error ellipse: s-maj=10.6km s-min=7.8km az=177.0*

*VAO **07** 17:37:47.4±0.4, 8.°58N×71.°52W, h10^{km}, mb4.7*

*NEIC **07** 17:37:48.0±1.4, 8.°50N±0.°05×71.°40W±0.°04, h12^{km}±3^{km}, mb4.8/184, Mwr4.9(CAR), Error ellipse: s-maj=8.6km s-min=4.7km az=148.0*

*FUNV **07** 17:37:48.6, 8.°48N×71.°43W, h2^{km}, MW4.9*

*CAR **07** 17:37:49±1.9, 8.°50N±0.°05×71.°50W±0.°03, h5^{km}±3^{km}, Error ellipse: s-maj=6.5km s-min=4.2km az=167.0*

ISC 07 17:37:46.5±0.8**, 8.°56N**±0.°02×**71.°41W**±0.°02**, h4^{km}**±5^{km}**, n417, σ1.^{s}41**/471**, mb4.8**/125**, MS3.8**/16**, 6C-14D, Fault plane solution: NP1:**ϕ_s152.52530°**,**δ57.84320°**,** λ29.85009°. **NP2:**ϕ_s45.54086°**,**δ65.07841°**,**λ144.06368°. **Principal axes:** T Plg42.4004°**,** Azm6.3734°**;** N Plg47.2462°**,** Azm195.3700°**;** P Plg4.4960°**,** Azm100.4909°**; Fault plane solution: NP1:** ϕ_s319.03680°**,**δ79.29967°**,**λ-9.65094°. **NP2:**ϕ_s50.84525°**,** δ80.51844°**,**λ-169.14967°. **Principal axes:** T Plg0.8485°**,** Azm184.8359°**;** N Plg75.6281°**,** Azm91.5225°**;** P Plg14.3457°**,** Azm275.0529°**; Fault plane solution: NP1:**ϕ_s280.54993°**,**δ57.67814°**,**λ-73.28281°. **NP2:** ϕ_s71.22582°**,**δ35.96825°**,**λ-114.44796°. **Principal axes:** T Plg11.1991°**,** Azm358.5831°**;** N Plg14.0683°**,** Azm91.4270°**;** P Plg71.8720°**,** Azm231.3723°**; Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.61	116	⇓iP	Pg	17 37 59.2	+0.9
SOCV				eS	Sg	17 38 07.5	+1.2
SOCV				i		17 38 10.5	
	comp=Z,140µm,0.4s						
SOCV	Socops	0.61	116	⇓iP	Pb	17 37 59.4	-0.4
SOCV				eS	Sb	17 38 08.2	-0.6
SDV	Santo Domingo	0.84	67	Pg	Pb	17 38 04.5	+0.9
	comp=Z,2µm,0.3s,baz=240,slow=16,SNR=961						
SDV				Lg	Lg	17 38 16.0	
	comp=Z,5µm,0.3s,baz=86,slow=14,SNR=23						
SDV	Santo Domingo	0.84	67	⇓iP	Pb	17 38 04.8	+1.1
SDV				eS	Sb	17 38 16.9	+1.5
SDV				i		17 38 18.1	
	comp=Z,9µm,0.3s						
SDV	Santo Domingo	0.84	67	eP	Pn	17 38 04.9	-0.3
SDV				eS	Sn	17 38 17.4	-0.6
SDV	Santo Domingo	0.84	67		Pb	17 38 04.7	+1.0
SDV				Sg	Sb	17 38 16.6	+1.3
CAPV	Capacho	1.13	232	eP	Pg	17 38 07.9	-0.3
CAPV				eS	Sb	17 38 23.4	-0.3
PAMC	Pamplona, Colo	1.76	227	eP	Pb	17 38 19.5	0.0
PAMC				eS	Sn	17 38 41.0	-0.1
PAMC				i		17 38 48.0	
	comp=Z,15µm,0.4s						
MCQV	Machiques	1.85	323	eS	Sg	17 38 45.9	-0.1
OCAC	Ocana	1.91	261	eP	Pn	17 38 20.7	+0.7
OCAC				⇓iP	Pb	17 38 20.8	-1.2
OCAC				eS	Sb	17 38 46.8	+0.4
OCAC				i		17 38 53.8	
	comp=Z,17µm,0.4s						
OCAC	Ocana	1.91	261		Pn	17 38 20.1	+0.2
OCAC				Sn	Sb	17 38 45.7	-0.6
TAMC	Tame, Arauca	2.14	190	⇑eP	Pn	17 38 24.4	+1.4
TAMC				eS	Sg	17 38 55.2	-0.1
TAMC				i		17 39 00.9	
	comp=Z,6µm,0.5s						
LL1C	La Loma 1 Cana	2.33	295	eP	Pb	17 38 28.9	-0.2
LL1C				eS	Sb	17 38 59.6	+1.4
LL1C				i		17 39 17.1	
	comp=Z,15µm,0.7s						
ELOV	Elorza	2.46	129	⇑eP	Pn	17 38 29.4	+2.0
ELOV				eS	Sb	17 39 01.6	-0.3
ELOV				i		17 39 13.1	
	comp=Z,44µm,0.6s						
ELOV	Elorza	2.46	129	eP	Pn	17 38 29.2	+1.8
ELOV				eS	Sn	17 38 57.1	-0.7
DABV	Dabajuro	2.47	18	eP	Pb	17 38 30.4	-1.1
DABV				eS	Sb	17 39 01.0	-1.3
SIQV	Siquisique	2.61	37	eP	Pn	17 38 31.3	+1.8
SIQV				eS	Sn	17 39 03.7	+2.0
BARC	Barichara	2.62	222	eP	Pn	17 38 31.8	+1.9
BARC				eS	Sg	17 39 09.3	-1.7
BARC				i		17 39 11.4	
	comp=Z,8µm,0.6s						
SMLC	San Martn de	2.64	275	eP	Pn	17 38 30.4	+0.5
SMLC				eS	Sb	17 39 07.4	+0.3
SMLC				i		17 39 09.3	
	comp=Z,4µm,0.4s						
BRRC	Barranca, Sant	2.70	238	⇓iP	Pn	17 38 32.3	+1.7
BRRC				eS	Sg	17 39 10.8	-2.4
BRRC				i		17 39 14.5	
	comp=Z,2µm,0.6s						
ARGC	Ariguani, Magd	3.08	295	eP	Pn	17 38 37.6	+1.7
ARGC				eS	Sg	17 39 24.0	-1.6
ARGC				i		17 39 39.1	
	comp=Z,752nm,0.6s						
RUSC	La Rusia	3.12	212	⇑iP	Pn	17 38 38.1	+1.2
RUSC				eS	Sb	17 39 23.0	+1.5
RUSC				i		17 39 30.4	
	comp=Z,2µm,0.6s						
URIC	Uribia, Colomb	3.18	350	eP	Pn	17 38 37.9	+0.7
URIC				eS	Sn	17 39 16.2	+0.7
URIC				i		17 39 36.0	
	comp=Z,2µm,0.7s						
URIC	Uribia, Colomb	3.18	350	Pn	Pn	17 38 37.1	-0.1
URIC				Sn	Sn	17 39 15.6	0.0
BAUV	El Baul	3.35	83	eP	Pn	17 38 41.9	+2.3
BAUV				eS	Sn	17 39 20.1	+0.1
ZARC	Zaragoza, Cauc	3.57	253	eP	Pn	17 38 43.4	+0.7
ZARC				eS	Sb	17 39 36.5	+2.5
ZARC				i		17 39 47.3	
	comp=Z,1µm,0.6s						
ZARC	Zaragoza, Cauc	3.57	253		Pn	17 38 43.2	+0.5
JACV	Jacura	3.58	45	eP	Pn	17 38 45.2	+2.4
JACV				eS	Sn	17 39 26.6	+1.0
MONV	Montecano	3.66	23	eP	Pn	17 38 46.2	+2.3
MONV				eS	Sn	17 39 28.1	+0.6
SMRC	Santa Marta, M	3.79	313	eP	Pn	17 38 45.8	+0.1
SMRC				eS	Sn	17 39 33.7	+2.9
SMRC				i		17 39 47.1	
	comp=Z,726nm,0.6s						
SPBC	San Pablo de B	3.91	223	eP	Pn	17 38 49.7	+2.3
SPBC				eS	Sg	17 39 53.8	+1.5
SPBC				i		17 39 57.4	
	comp=Z,13µm,1.1s						
SJCC	San Jacinto, C	3.95	290	eP	Pn	17 38 50.3	+2.4
SJCC				eS	Sn	17 39 38.2	+3.5
SJCC				i		17 39 59.0	
	comp=Z,698nm,0.7s						
SJCC	San Jacinto, C	3.95	290		Pn	17 38 49.8	+1.9
BENV	Beln	4.01	69	eP	Pn	17 38 51.3	+2.5
UREC	San Jos de Ur	4.16	259	eP	Pn	17 38 52.4	+1.6
UREC				eS	Sb	17 39 50.0	-0.8
UREC				i		17 40 04.2	
	comp=Z,424nm,0.4s						
MOTC	Monteria, Cord	4.21	273	⇓iP	Pn	17 38 53.2	+1.8
MOTC				eS	Sg	17 39 58.6	-3.2
MOTC				i		17 40 10.3	
	comp=Z,510nm,0.6s						
MOTC	Monteria, Cord	4.21	273	Pn	Pn	17 38 53.0	+1.5
MOTC				Sn	Sn	17 39 41.8	+0.6
HATO	Hato, Curacao	4.33	34		Pn	17 38 54.3	+1.1
PTGC	Puerto Gaitan,	4.39	189	eP	Pn	17 38 55.0	+1.1
PTGC				eS	Sn	17 39 44.5	-1.0
PTGC				i		17 40 25.8	
	comp=Z,2µm,0.4s						
CHIC	Chingaza	4.53	211	eP	Pn	17 38 57.4	+1.1
CHIC				eS	Sn	17 39 48.5	-1.1
CHIC				i		17 40 22.6	
	comp=Z,515nm,0.5s						
NORC	Norcasia	4.54	229	eP	Pn	17 38 57.8	+1.8
NORC				eS	Sn	17 39 50.9	+1.6
NORC				i		17 40 11.2	
	comp=Z,699nm,0.5s						
TACV	Tcata	4.60	70	eP	Pn	17 38 58.8	+1.9
ROSC	El Rosal	4.69	218	Pn	Pn	17 39 01.5	+3.1
	comp=Z,130nm,0.3s,baz=144,slow=1.5,SNR=81						
ROSC				Sn	Sn	17 39 53.9	+0.5
	comp=Z,52nm,0.3s,baz=307,slow=20,SNR=2.3						
ROSC	El Rosal	4.69	218	⇓iP	Pn	17 39 01.4	+3.0
ROSC				eS	Sn	17 39 58.4	+4.9
ROSC				i		17 40 27.0	
	comp=Z,654nm,0.6s						
ROSC	El Rosal	4.69	218		Pn	17 39 00.8	+2.4
HELC	Santa Helena	4.71	240	eP	Pn	17 39 00.1	+1.5
HELC				eS	Sb	17 40 10.4	+3.3
HELC				i		17 40 18.2	
	comp=Z,699nm,0.5s						
CARV	Caracas	4.83	66	eP	Pn	17 39 01.6	+1.5
PAYV	Puerto Ayacuch	4.86	130	eP	Pn	17 39 01.4	+1.0
LCBC	Los crdobas,	4.91	274	eP	Pn	17 39 02.7	+1.6
LCBC				eS	Sn	17 40 02.5	+4.1
LCBC				i		17 40 04.0	
	comp=Z,440nm,0.6s						
CACV	CAICARA DEL OR	4.92	101	⇓eP	Pb	17 39 10.2	-3.1
CACV				eS	Sb	17 40 09.2	-3.7
VILC	Villavicencio,	4.96	207	eP	Pn	17 39 02.8	+0.8
VILC				eS	Sn	17 40 01.7	+1.8
VILC				i		17 40 31.2	
	comp=Z,49µm,0.6s						
DBBC	Dabeiba	4.99	252	eP	Pn	17 39 04.1	+1.8
DBBC				eS	Sg	17 40 24.2	-2.8
DBBC				i		17 40 26.3	
	comp=Z,3µm,0.6s						
MERV	Las Mercedes	5.10	82	⇓iP	Pn	17 39 05.8	+2.1
MERV				eS	Sn	17 40 01.2	-1.9
CBOC	Ciudad Bolivar	5.29	240	eP	Pn	17 39 10.2	+3.7
CBOC				eS	Sb	17 40 29.6	+6.0
CBOC				i		17 40 37.6	
	comp=Z,293nm,0.6s						
ANIL	Santa Ana	5.66	225	eP	Pn	17 39 13.8	+2.2
ANIL				eS	Sn	17 40 17.6	+0.3
ANIL				i		17 40 49.2	
	comp=Z,748nm,0.5s						
CAPC	Capurgana	5.87	271	eP	Pn	17 39 14.7	+0.4
CAPC				eS	Sn	17 40 19.4	-2.7
CAPC				i		17 40 49.8	
	comp=Z,58nm,0.4s						
CAP2	Capurgana	5.88	271		Pn	17 39 13.3	-1.2
ORTC	Ortega, Tolima	5.99	220	eP	Pn	17 39 16.8	+0.8
ORTC				eS	Sn	17 40 26.1	+1.1
ORTC				i		17 41 08.2	
	comp=Z,394nm,0.6s						
PLMC	San Jos del P	6.05	233	eP	Pn	17 39 19.7	+2.9
PLMC				eS	Sn	17 40 28.6	+2.1
PLMC				i		17 40 57.9	
	comp=Z,174nm,0.7s						
GUVC	San Jose del G	6.09	192	⇓eP	Pn	17 39 17.7	+0.3
GUVC				eS	Sn	17 40 25.2	-2.4
GUVC				i		17 41 01.6	
	comp=Z,930nm,0.6s						
SOLC	Bahia Solano	6.38	249	eP	Pn	17 39 24.4	+3.1
SOLC				i		17 40 31.7	
	comp=Z,56nm,0.4s						
SOLC				eS	Sb	17 40 56.3	+1.4
PTAC	Punta Ardita,	6.49	258	eP	Pn	17 39 23.8	+1.0
PTAC				eS	Sn	17 40 33.7	-3.6
PTAC				i		17 41 02.3	
	comp=Z,88nm,0.7s						
YOTC	Yotoco, Valle	6.68	227	eP	Pn	17 39 27.6	+2.0
YOTC				eS	Sn	17 40 48.7	+6.4
YOTC				i		17 41 30.3	
	comp=Z,67nm,0.8s						
PRGV	PARIAGUAN	6.69	88	⇓eP	Pn	17 39 25.8	+0.2
MACC	Macarena, Meta	6.81	201	⇑eP	Pn	17 39 26.0	-1.3
MACC				eS	Sn	17 40 39.9	-5.5
MACC				i		17 41 37.8	
	comp=Z,559nm,0.5s						
PCRV	Puerto La Cruz	6.88	76	Pn	Pn	17 39 30.2	+2.1
	comp=Z,50nm,0.3s,baz=260,slow=5.3,SNR=96						

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PCRV                                 Sn     Sn     17 40 49.9 +3.0
      comp=Z,39nm,0.3s,baz=0.0,slow=20,SNR=2.1
PCRV  Puerto La Cruz      6.88  76  eP     Pn     17 39 29.7 +1.6
BETC  Betania             7.08 215  eP     Pn     17 39 31.2 +0.2
MARP  Paez Belalcaza      7.26 219  eP     Pn     17 39 33.4 -0.2
MARP                                eS     Sn     17 40 54.9 -1.7
MARP                                i             17 40 59.4
      comp=Z,59nm,0.6s
GARC  Garzon, Huila       7.52 213  eP     Pn     17 39 37.6 +0.4
GARC                                eS     Sn     17 41 00.4 -2.6
GARC                                i             17 41 04.2
      comp=Z,146nm,0.3s
PCON  Cinco Dias          7.93 219  eP     Pn     17 39 44.1 +1.0
SOTA  Rioblanco           8.21 219  eP     Pn     17 39 48.0 +1.1
SOTA                                i             17 41 29.1
      comp=Z,101nm,0.7s
CRUV  Carupano            8.33  75  eP     Pn     17 39 49.0 +0.9
BCIP  Isla Barro Col      8.35 275         Pn     17 39 47.0 -1.3
PTLC  Puerto Leguiza      8.99 202  eP     Pn     17 39 59.6 +2.4
PTLC                                eS     Sg     17 42 40.4 +5.2
PTLC                                i             17 43 07.5
      comp=Z,223nm,0.7s
GCUF  Volcan Galeras      9.38 219  eP     Pn     17 40 05.5 +2.6
GCUF                                eS     Sn     17 42 13.1  +24
GCUF                                i             17 43 56.0
      comp=Z,23nm,0.6s
RIOV  Rio Grande          9.51  92  eP     Pn     17 40 04.6 +0.3
BANI  BANI                9.83   6   Pn    Pn     17 40 09.3 +0.5
GRGR  Grenville          10.24  69   Pn    Pn     17 40 12.7 -1.5
CRPR  Cabo Rojo, PR      10.28  24         Pn     17 40 14.1 -0.7
PCDR  Punta Cana, DR     10.33  16   Pn    Pn     17 40 15.0 -0.4
DR12  Loma Pena Alta     10.36  11         Pn     17 40 16.1 +0.1
SDDR  Presa de Saban     10.36   1         Pn     17 40 18.1 +2.1
ICMP  Isla Caja de M     10.42  27   Pn    Pn     17 40 17.0 +0.3
PRSN  Puerto Rico Se     10.46  23   Pn    Pn     17 40 17.6 +0.3
OBIP  Obispado Ponce     10.52  26         Pn     17 40 17.8 -0.3
CELP  Cerrillos          10.56  26   Pn    Pn     17 40 18.4 -0.3
AGPR  Aguadilla, PR      10.70  23   Pn    Pn     17 40 20.5 -0.1
AOPR  Arecibo Observ     10.73  24         Pn     17 40 21.0 -0.1
PDPR  Patillas Dam,      10.77  29   Pn    Pn     17 40 21.1 -0.3
SJG   San Juan           10.79  28   Pn    Pn     17 40 22.4 +0.6
      comp=Z,11nm,0.3s,baz=204,slow=18,SNR=12
SJG                                  Sn    Sn     17 42 16.6 -6.4
      comp=Z,3.1nm,0.3s,baz=53,slow=20,SNR=2.1
SJG                                  LR    LR     17 44 58.4
      comp=Z,410nm,19.4s,baz=200,slow=40
SJG   San Juan           10.79  28         Pn     17 40 21.7 -0.1
OTAV  Otavalo            10.84 221         Pn     17 40 20.9 -2.0
EMPR  Esperanza - Ma     10.94  25   Pn    Pn     17 40 24.9 +1.0
GCPR  Guaynabo City      10.99  28         Pn     17 40 24.9 +0.3
SVB   Belmont            11.02  64         Pn     17 40 25.1  0.0
TOSP  Speyside           11.06  75   Pn    Pn     17 40 24.6 -0.9
MTP   Monte Pirata       11.06  30         Pn     17 40 25.9 +0.3
CBYP  Canovanas          11.06  29         Pn     17 40 25.7 +0.1
CDVI  St. Croix          11.20  35         Pn     17 40 27.8 +0.5
MTDJ  Mount Denham       11.30 329   Pn    Pn     17 40 29.1 +0.1
CDITO Canoas             11.33 271         Pn     17 40 29.0 -0.3
CUPR  Culebra, Puert     11.38  31   Pn    Pn     17 40 30.1 +0.2
STVI  Saint Thomas       11.58  32   Pn    Pn     17 40 33.2 +0.5
BIM   Bigot              11.73  59   Pn    Pn     17 40 34.1 -0.7
FDF   Fort de France     11.77  58         Pn     17 40 34.4 -0.9
SVN   Savane Anatole     11.81  57   Pn    Pn     17 40 34.4 -1.5
SRBA  San Rafael, Bu     11.82 274         Pn     17 40 36.8 +0.7
GTBY  Guantanamo Bay     11.86 343   Pn    Pn     17 40 36.8 +0.4
MPOM  Morne Pois Mar     11.88  60   Pn    Pn     17 40 37.1 +0.3
BATAN Batan              11.91 278   Pn    Pn     17 40 38.1 +1.0
RIMA  Rio Macho          12.35 277   Pn    Pn     17 40 42.5 -0.9
BOAV  Boa Vista          12.45 119   Pn    Pn     17 40 42.9 -1.7
TBTG  Tabatinga, AM      12.75 173  eP     Pn     17 40 49.5 +0.8
ANWB  Willy Bob          13.03  45  e      Pn     17 40 51.1 -1.4
JTS   Las Juntas de      13.47 278   Pn    Pn     17 40 59.3 +0.8
      comp=Z,0.8nm,0.3s,baz=24,slow=20,SNR=2.1
LCCY  Blossom Villag     13.87 324   Pn    Pn     17 41 03.6 -0.4
ACON  Acoyapa            13.96 285         Pn     17 41 04.8 -0.4
FSCY  Frank Sound, G     14.28 319   Pn    Pn     17 41 07.4 -2.2
PTGA  Pitinga            14.67 128   Pn    Pn     17 41 13.9 -1.1
      comp=Z,3.8nm,0.3s,baz=306,slow=15,SNR=12
PTGA                                 Sn    Sn     17 43 48.4  -10
      comp=Z,6.8nm,0.3s,baz=40,slow=18,SNR=9.5
PTGA                                 Lg    Lg     17 45 31.3
      comp=Z,15nm,0.3s,baz=33,slow=22,SNR=10
PTGA                                 LR    LR     17 46 44.2
      comp=Z,258nm,18.1s,baz=304,slow=37
PTGA  Pitinga            14.67 128         Pn     17 41 12.9 -2.1
MACA  Manacapuru-AM      15.81 137  eP     Pn     17 41 31.2 +1.1
MACA  Manacapuru-AM      15.81 137   P     Pn     17 41 26.3 -3.8
CRIN  San Cristobal      15.91 286   P     P      17 41 35.3 +0.1
CRIN                                 IAmb  IAmb   17 41 42.8
      comp=Z,69nm,1.0s
CZSB  Cruzeiro do Su     16.23 185         Pn     17 41 31.9 -3.7
CZSB                                 IAmb  IAmb   17 41 40.6
      comp=Z,83nm,0.7s
TGUH  Tegucigalpa,Un     16.48 291   P     P      17 41 41.7 +0.1
ATAH  Atahualpa          17.07 204   P     Pn     17 41 46.1 -0.4
      comp=Z,1.2nm,0.3s,baz=43,slow=4.2,SNR=8.7
ATAH                                 LR    LR     17 49 03.3
      comp=Z,361nm,21.7s,baz=357,slow=40
SOR   Soroa              18.01 323   P     P      17 41 58.9 +0.6
MTO3  Montecristo        18.52 290   P     Pn     17 42 06.5 +2.2
MDP   Montagnes des      18.95  99   P     Pn     17 42 09.5 +0.2
      comp=Z,4.8nm,0.3s,baz=276,slow=11,SNR=29
MDP                                  S     S      17 45 44.4 -0.3
      comp=Z,1.1nm,0.3s,baz=204,slow=20,SNR=2.6
MDP                                  Lg    Lg     17 47 42.7
      comp=Z,1.4nm,0.3s,baz=191,slow=22,SNR=6.3
MDP                                  LR    LR     17 49 51.6
      comp=Z,197nm,18.7s,baz=300,slow=38
ETMB  Extrema            18.97 164  eP     P      17 42 07.6 -1.3
ETMB  Extrema            18.97 164   P     P      17 42 07.7 -1.3
SAML  Samuel             19.23 155  eP     P      17 42 10.6 -1.2
SAML  Samuel             19.23 155   P     P      17 42 08.6 -3.2
MALB  Monte Alegre       19.98 120  eP     Pn     17 42 21.4 -0.3
ITTB  Itaituba           20.23 129  eP     Pn     17 42 24.2 -0.4
MCPB  Macapa, AP         21.22 114  eP     P      17 42 35.0 +1.4
CCIG  Comitan            21.63 293   P     P      17 42 38.8 +0.6
CCIG                                 IAmb  IAmb   17 42 44.1
      comp=Z,33nm,1.0s
NPGB  Novo Progresso     22.28 134  eP     P      17 42 46.0 +1.1
VILB  Vilhena            24.10 152  eP     P      17 43 04.7 +1.3
VILB  Vilhena            24.10 152   P     P      17 43 02.3 -1.1
VILB                                 IAmb  IAmb   17 43 33.4
      comp=Z,23nm,0.9s
CMIG  Matias Romero      24.38 293   P     P      17 43 06.3 +0.3
      comp=Z,0.9nm,0.3s,baz=90,slow=8.1,SNR=2.0
553A  Crawfordville      24.73 332   P     P      17 43 10.7 +1.7
CLDB  Colider            24.78 141  eP     P      17 43 10.4 +0.8
PDRB  Porto dos Gac      24.79 144  eP     P      17 43 10.5 +0.7
LPAZ  La Paz             24.90 172   P     P      17 43 11.8 +0.5
      comp=Z,7.5nm,0.6s,baz=9.7,slow=10,SNR=32
LPAZ                                 LR    LR     17 53 56.0
      comp=Z,413nm,19.0s,baz=326,slow=39
LPAZ  La Paz             24.90 172  eP     P      17 43 11.9 +0.6
LPAZ  La Paz             24.90 172   P     P      17 43 10.7 -0.6
LPAZ                                 IAmb  IAmb   17 43 28.6
      comp=Z,22nm,0.8s
CSU   Charleston Sou     25.60 343   P     P      17 43 19.1 +2.3
TMAB  Tom-Au,PA,Br       25.66 114  eP     P      17 43 19.1 +1.5
PRPB  Parauapebas        26.04 124  eP     P      17 43 22.2 +1.2
Y60A  Bolivia            26.09 347   P     P      17 43 21.4 +0.1
SIV   San Ignacio        26.45 157   P     P      17 43 25.4 +0.6
      comp=Z,26nm,1.1s,baz=319,slow=8.6,SNR=31
SIV                                  Lg    Lg     17 51 43.5
      comp=Z,29nm,1.0s,baz=222,slow=23,SNR=5.4
PTLB  Pontes e Lacer     26.77 153  eP     P      17 43 28.5 +0.9
PTLB  Pontes e Lacer     26.77 153   P     P      17 43 27.5 -0.1
PB16  IPOC Station P     26.79 176   P     P      17 43 26.9 -1.5
PB16                                 IAmb  IAmb   17 43 31.0
      comp=Z,14nm,0.7s
152A  Waverly Hall       26.98 335   P     P      17 43 29.8 +0.5
BIRD  Birdtown, Kers     27.26 344   P     P      17 43 33.6 +1.7
HODGE Hodges             27.43 340   P     P      17 43 34.6 +1.2
Z51A  Franklin           27.73 335   P     P      17 43 35.8 -0.3
KMSC  Kings Mountain     27.98 342   P     P      17 43 38.5 +0.2
PSGCX Pisagua            28.01 177   P     P      17 43 36.1 -2.6
PSGCX                                IAmb  IAmb   17 43 45.4
      comp=Z,24nm,1.2s
PB11  IPOC Station P     28.19 176   P     P      17 43 39.2 -1.3
346A  Big Creek Wild     28.26 326   P     P      17 43 40.4 -0.5
346A                                 IAmb  IAmb   17 44 15.8
      comp=Z,20nm,0.7s
U59A  Littleton          28.27 349   P     P      17 43 41.4 +0.5
SNDB  Serra Nova Dou     28.57 135  eP     P      17 43 45.3 +1.5
PB08  IPOC Station P     28.60 176   P     P      17 43 42.6 -1.9
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PB08                                 IAmb  IAmb   17 44 25.9
      comp=Z,12nm,0.8s
Y49A  Blount Mountai     28.73 333   P     P      17 43 44.6 -0.4
T59A  Double "B" Far     28.83 350   P     P      17 43 46.6 +0.8
SALV  Santo Antonio      28.86 147  eP     P      17 43 47.2 +0.9
Z47A  Carrollton         28.95 330   P     P      17 43 47.0 -0.1
Z47A                                 IAmb  IAmb   17 44 00.1
      comp=Z,16nm,0.8s
TA01  Diego Aracena      28.97 178   P     P      17 43 46.0 -1.1
TA01                                 IAmb  IAmb   17 43 50.3
      comp=Z,23nm,0.8s
344A  Westbrook Farm     29.03 324   P     P      17 43 47.4 -0.2
TKL   Tuckaleechee C     29.25 339   P     P      17 43 51.4 +1.8
      comp=Z,1.8nm,0.8s,baz=127,slow=5.1,SNR=2.4
TKL                                  LR    LR     17 57 17.3
      comp=Z,139nm,18.7s,baz=160,slow=40
TKL   Tuckaleechee C     29.25 339   P     P      17 43 49.9 +0.3
CPCT  Cooper Cave        29.33 338   P     P      17 43 51.9 +1.5
SMTB  Santa Maria do     29.37 126  eP     P      17 43 52.4 +1.5
W50A  Signal Mountai     29.42 336   P     P      17 43 51.7 +0.5
PB01  IPOC Station P     29.48 176   P     P      17 43 48.6 -3.2
PB01                                 IAmb  IAmb   17 43 55.7
      comp=Z,12nm,0.6s
ROSB  Rosrio             29.49 112  eP     P      17 43 53.4 +1.4
X48A  Hartselle          29.51 333   P     P      17 43 51.7 -0.2
V51A  Loudon             29.58 338   P     P      17 43 53.8 +1.3
BLA   Blacksburg         29.67 345   P     P      17 43 54.6 +1.2
BLA                                  IAmb  IAmb   17 44 00.4
      comp=Z,12nm,1.1s
R61A  Willards           29.85 354   P     P      17 43 55.0 +0.1
PB07  IPOC Station P     30.13 177   P     P      17 43 55.9 -1.9
PB07                                 IAmb  IAmb   17 44 02.6
      comp=Z,19nm,0.9s
PLAL  Pickwick Lake      30.42 332   P     P      17 43 59.6 -0.3
PLAL                                 IAmb  IAmb   17 44 12.1
      comp=Z,10nm,0.8s
S54A  Dingess, Beckl     30.46 344   P     P      17 44 01.3 +0.9
S54A                                 IAmb  IAmb   17 44 17.7
      comp=Z,31nm,1.6s
V48A  Smith Brothers     30.50 335   P     P      17 44 00.1 -0.6
V48A                                 IAmb  IAmb   17 44 19.4
      comp=Z,7.9nm,0.8s
CLTN  Cedars of Leba     30.60 336   P     P      17 44 01.9 +0.3
CLTN                                 IAmb  IAmb   17 44 48.3
      comp=Z,20nm,1.6s
PEXB  Peixe              30.81 131  eP     P      17 44 05.4 +1.7
LVC   Limon Verde        31.07 176  eP     P      17 44 05.6 -0.6
LVC   Limon Verde        31.07 176   P     P      17 44 04.2 -2.1
W45A  Hickory Valley     31.08 331   P     P      17 44 06.5 +0.7
PB06  IPOC Station P     31.12 177   P     P      17 44 05.5 -1.0
PB06                                 IAmb  IAmb   17 44 42.5
      comp=Z,15nm,0.9s
Q56A  Snyder Ridge,      31.15 348   P     P      17 44 05.7 -0.7
Q56A                                 IAmb  IAmb   17 44 31.0
      comp=Z,28nm,1.6s
WVT   Waverly            31.26 334   P     P      17 44 07.2 -0.2
WVT                                  IAmb  IAmb   17 44 18.7
      comp=Z,8.0nm,0.9s
PB10  IPOC Station P     31.89 179   P     P      17 44 12.1 -0.9
WLAR  White Oak Lake     32.03 324   P     P      17 44 14.1 -0.1
LUPA  Lehigh Univers     32.10 354   P     P      17 44 15.7 +1.0
LUPA                                 IAmb  IAmb   17 44 22.8
      comp=Z,16nm,0.8s
NBPS  Pedro II - PI      32.53 112  eP     P      17 44 20.0 +1.1
AQDB  Aquidauana         32.73 152  eP     P      17 44 21.7 +1.3
AQDB  Aquidauana         32.73 152   P     P      17 44 19.5 -0.9
AQDB                                 IAmb  IAmb   17 44 28.7
      comp=Z,17nm,1.2s
WHAR  Wooly Hollow       32.76 327   P     P      17 44 20.2 -0.4
WHAR                                 IAmb  IAmb   17 44 25.5
      comp=Z,14nm,0.8s
LCAR  Lake Charles       32.77 330   P     P      17 44 20.6 -0.1
LCAR                                 IAmb  IAmb   17 44 26.1
      comp=Z,7.3nm,0.8s
MIAR  Mount Ida          32.91 325   P     P      17 44 22.2 +0.3
MIAR                                 IAmb  IAmb   17 44 26.8
      comp=Z,7.1nm,0.8s
435B  Jarrell            32.95 316   P     P      17 44 22.1 -0.2
PBMO  Poplar Bluff       32.98 331   P     P      17 44 23.1 +0.6
PBMO                                 IAmb  IAmb   17 44 29.2
      comp=Z,8.0nm,0.9s
PB14  IPOC Station P     33.00 178   P     P      17 44 20.3 -2.8
M57A  Sunshine Farm,     33.04 352   P     P      17 44 23.1 +0.2
M57A                                 IAmb  IAmb   17 45 03.0
      comp=Z,12nm,1.1s
FCAR  Ozark Folk Cen     33.13 328   P     P      17 44 24.5 +0.7
FCAR                                 IAmb  IAmb   17 44 28.4
      comp=Z,8.6nm,0.9s
S44A  Carbondale         33.19 334   P     P      17 44 24.8 +0.4
S44A                                 IAmb  IAmb   17 44 43.3
      comp=Z,16nm,0.8s
SIUC  Southern Illin     33.20 334   P     P      17 44 25.3 +0.9
BDFB  Brasilia           33.40 136   P     P      17 44 27.6 +1.2
      comp=Z,4.6nm,0.7s,baz=296,slow=7.5,SNR=6.6
BDFB  Brasilia           33.40 136   P     P      17 44 26.8 +0.3
BDFB                                 IAmb  IAmb   17 44 35.4
      comp=Z,19nm,1.4s
M55A  Ridgway            33.42 350   P     P      17 44 27.1 +0.8
M55A                                 IAmb  IAmb   17 44 49.9
      comp=Z,23nm,1.4s
NBMO  Morrinhos-CE       33.43 109  eP     P      17 44 28.1 +1.4
T42A  Van Buren          33.50 331   P     P      17 44 27.1 +0.1
W39A  Magazine           33.50 326   P     P      17 44 26.3 -0.8
W39A                                 IAmb  IAmb   17 44 32.8
      comp=Z,15nm,0.9s
SDBA  SAO DESIDERIO      33.59 128  eP     P      17 44 29.1 +1.0
WHTX  Lake Whitney,      33.59 318   P     P      17 44 27.4 -0.5
WHTX                                 IAmb  IAmb   17 44 36.9
      comp=Z,11nm,0.7s
M54A  Oil Creek Stat     33.62 349   P     P      17 44 29.3 +1.2
L59A  Walton             33.65 355   P     P      17 44 29.0 +0.7
U40A  Yellville          33.86 328   P     P      17 44 30.2  0.0
U40A                                 IAmb  IAmb   17 44 35.2
      comp=Z,14nm,0.8s
L56A  Greenwood          33.88 352   P     P      17 44 29.8 -0.5
FVM   French Village     33.96 333   P     P      17 44 31.6 +0.6
X37A  Clayton            33.98 323   P     P      17 44 31.8 +0.5
X37A                                 IAmb  IAmb   17 44 37.5
      comp=Z,11nm,1.1s
P46A  Rosedale           34.01 338   P     P      17 44 31.8 +0.4
N49A  Columbus Grove     34.17 343   P     P      17 44 33.3 +0.5
MGMO  Mountain Grove     34.18 330   P     P      17 44 33.0  0.0
HHAR  Hobbs              34.39 327   P     P      17 44 34.7 -0.1
HHAR                                 IAmb  IAmb   17 44 40.3
      comp=Z,6.5nm,0.8s
CCM   Cathedral Cave     34.39 332   P     P      17 44 34.6 -0.2
CCM                                  IAmb  IAmb   17 44 40.0
      comp=Z,7.0nm,0.8s
MMNY  Mt. Morris Dam     34.52 352   P     P      17 44 35.8 +0.1
SFIN  Lafayette          34.63 339   P     P      17 44 37.1 +0.2
SFIN                                 IAmb  IAmb   17 44 44.3
      comp=Z,28nm,1.4s
NBPB  Pedra_Branca-C     34.69 113  eP     P      17 44 39.2 +1.5
ITRB  Iturama            34.91 144  eP     P      17 44 40.7 +1.2
P43A  Skaggs, Pawnee     34.94 335   P     P      17 44 39.8 +0.4
R40A  Maddies Statio     35.07 331   P     P      17 44 40.7 +0.1
R40A                                 IAmb  IAmb   17 44 47.9
      comp=Z,10nm,0.9s
S39A  Bolivar            35.12 329   P     P      17 44 41.3 +0.2
S39A                                 IAmb  IAmb   17 44 46.1
      comp=Z,8.5nm,0.8s
TUL1  Leonard            35.15 324   P     P      17 44 41.6 +0.2
TUL1                                 IAmb  IAmb   17 44 45.5
      comp=Z,11nm,0.8s
AC02  Maricunga          35.25 176   P     P      17 44 41.8 -1.0
AC02                                 IAmb  IAmb   17 44 43.3
      comp=Z,19nm,1.6s
ABTX  Abilene, Hawle     35.45 317   P     P      17 44 43.9 -0.1
ABTX                                 IAmb  IAmb   17 44 49.1
      comp=Z,13nm,1.1s
LBNH  Lisbon             35.55 359   P     P      17 44 45.5 +0.9
LBNH                                 IAmb  IAmb   17 45 29.6
      comp=Z,22nm,1.2s
OK030 Cody Creek RV      35.74 323   P     P      17 44 46.3 -0.2
OK031 S. Brethren Rd     35.79 323         P      17 44 46.0 -0.9
QUOK  Quay               35.87 324         P      17 44 47.6  0.0
QUOK                                 IAmb  IAmb   17 44 52.0
      comp=Z,19nm,0.8s
P40A  Paris              35.95 332   P     P      17 44 48.0 -0.2
P40A                                 IAmb  IAmb   17 44 52.4
      comp=Z,14nm,0.9s
OK029 Liberty Lake       36.05 323         P      17 44 48.6 -0.6
OK029                                IAmb  IAmb   17 44 54.1
      comp=Z,17nm,0.8s
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WMOK  Wichita Mounta     36.18 320   P     P      17 44 49.4 -0.9
G62A  West of Eustis     36.53   1   P     P      17 44 53.4 +0.3
NBPN  Ponto Novo - B     36.55 121  eP     P      17 44 54.5 +0.8
BLOK  Blackwell          36.57 324         P      17 44 52.8 -0.8
BLOK                                 IAmb  IAmb   17 44 57.7
      comp=Z,23nm,0.8s
MOQ   Mont Orford        36.63 359   P     P      17 44 54.3 +0.4
TXAR  Lajitas Array      36.64 309   P     P      17 44 55.9 +1.5
      comp=Z,1.4nm,0.7s,baz=131,slow=8.7,SNR=7.8
TXAR                                 PcP   PcP    17 47 19.4 +1.8
      comp=Z,2.0nm,0.6s,baz=133,slow=5.7,SNR=8.4
TXAR  Lajitas Array      36.64 309   P     P      17 44 54.1 -0.3
TX31  Lajitas Ar. Si     36.64 309   P     P      17 44 53.3 -1.1
TX31                                 IAmb  IAmb   17 44 58.3
      comp=Z,43nm,1.8s
TX32  Lajitas Array      36.64 309   P     P      17 44 53.5 -0.9
SADO  Sadowa             36.69 351   P     P      17 44 54.5 +0.1
P38A  Dawn               36.72 331   P     P      17 44 54.3 -0.5
P38A                                 IAmb  IAmb   17 45 00.2
      comp=Z,9.4nm,0.7s
MC01  Montes Claros      36.99 133  eP     P      17 44 58.5 +1.0
BB19B Bebedouro          37.04 143  eP     P      17 44 58.9 +1.1
KAN17 Caldwell West      37.08 324         P      17 44 57.6 -0.3
K43A  Burlington         37.12 339   P     P      17 44 59.0 +0.8
K43A                                 IAmb  IAmb   17 45 13.9
      comp=Z,32nm,1.1s
KAN01 Argonia South      37.16 324   P     P      17 44 56.9 -1.7
OK032 Salt Plains WL     37.18 323   P     P      17 44 58.2 -0.5
OK032                                IAmb  IAmb   17 45 02.6
      comp=Z,17nm,0.6s
CPUP  Villa Florida      37.28 159   P     P      17 45 00.6 +1.0
      comp=Z,1.2nm,0.5s,baz=8.1,slow=6.8,SNR=3.9
CPUP                                 LR    LR     17 59 25.0
      comp=Z,56nm,21.9s,baz=342,slow=35
CPUP  Villa Florida      37.28 159  eP     P      17 45 00.8 +1.1
KSU1  Kansas State U     37.89 327   P     P      17 45 04.9 +0.1
KSU1                                 IAmb  IAmb   17 45 08.8
      comp=Z,20nm,0.7s
PTGB  Pitanga            38.08 151  eP     P      17 45 06.4 -0.1
I42A  Draeger Farm,      38.37 339   P     P      17 45 09.2 +0.6
I42A                                 IAmb  IAmb   17 45 11.8
      comp=Z,27nm,1.2s
MSTX  Muleshoe           38.37 316   P     P      17 45 09.0  0.0
MSTX                                 IAmb  IAmb   17 45 14.0
      comp=Z,14nm,1.0s
SCIA  State Center       38.39 333   P     P      17 45 08.9 +0.1
D62A  Allapoint, All     38.44   3   P     P      17 45 09.6 +0.3
D62A                                 IAmb  IAmb   17 45 49.8
      comp=Z,28nm,1.3s
R32A  Long Quarter,      38.57 325   P     P      17 45 10.3 -0.2
R32A                                 IAmb  IAmb   17 45 16.5
      comp=Z,12nm,0.8s
GDU01 Guandu, BA         38.58 125  eP     P      17 45 12.1 +1.2
I40A  Norwalk            38.98 338   P     P      17 45 13.2 -0.6
I40A                                 IAmb  IAmb   17 45 29.7
      comp=Z,19nm,0.9s
MNTX  Cornudas Mount     39.06 311   P     P      17 45 13.3 -1.4
CO03  El Pedregal        39.18 179   P     P      17 45 13.4 -2.3
E46A  Sault Ste Mari     39.26 346   P     P      17 45 17.0 +0.9
E46A                                 IAmb  IAmb   17 45 46.9
      comp=Z,38nm,1.3s
NBIT  Itapeh - BA        39.37 126  eP     P      17 45 18.1 +0.7
CBKS  Cedar Bluff        39.43 324   P     P      17 45 16.0 -1.7
CMC01 Camacan, BA        39.54 127  eP     P      17 45 19.3 +0.4
SPB   Sao Paulo          39.63 144  eP     P      17 45 20.2 +0.7
L34A  Svendsen Farm,     39.90 331   P     P      17 45 20.8 -0.8
ZON   Zonda              39.96 176   P     P      17 45 19.3 -2.9
SJMB  Sao Joao De Ma     40.28 132  eP     P      17 45 25.6 +0.6
VA03  San Esteban        41.10 179   P     P      17 45 30.0 -1.6
VA03                                 IAmb  IAmb   17 45 39.9
      comp=Z,9.9nm,0.8s
T25A  Trinidad           41.26 319   P     P      17 45 32.9 -0.2
ANMO  Albuquerque        41.46 315   LR    LR     18 04 11.8
      comp=Z,62nm,19.2s,baz=97,slow=38
SDCO  Great Sand Dun     42.32 319   P     P      17 45 40.1 -1.8
TER01 Tubaro-SC          42.69 151  eP     P      17 45 45.0 +0.4
SUSD  Miller             43.01 331   P     P      17 45 47.6 +0.5
BO02  Sierra Bellavi     43.12 179   P     P      17 45 46.2 -1.8
BO02                                 IAmb  IAmb   17 45 56.7
      comp=Z,17nm,1.1s
PLTB  Pedras Altas       43.56 158  eP     P      17 45 50.8 -0.8
ISCO  Idaho Springs      43.58 321   P     P      17 45 52.5 +0.4
SMCO  Snowmass           44.08 319   P     P      17 45 56.4 +0.2
WUAZ  Wupatki            45.26 312   P     P      17 46 05.5  0.0
E28A  Huff               45.40 332   P     P      17 46 06.9 +0.7
RWWY  Rawlins            45.67 322   P     P      17 46 09.4 +0.7
RWWY                                 IAmb  IAmb   17 46 13.1
      comp=Z,9.4nm,0.8s
ULM   Lac du Bonnet      46.27 338   P     P      17 46 13.0 +0.1
      comp=Z,17nm,0.9s,baz=151,slow=8.5,SNR=14
ULM                                  LR    LR     18 06 21.8
      comp=Z,167nm,18.6s,baz=149,slow=37
ULM   Lac du Bonnet      46.27 338   IAmb  IAmb   17 46 17.2
      comp=Z,13nm,0.8s
SCHQ  Schefferville      46.30   4   LR    LR     18 06 43.7
      comp=Z,98nm,18.2s,baz=296,slow=38
P17A  Butcher Ranch,     46.71 318   P     P      17 46 16.5 -0.3
P17A                                 IAmb  IAmb   17 46 38.2
      comp=Z,4.5nm,0.8s
LC01  Cunco              47.21 180   P     P      17 46 18.4 -2.1
MVU   Marysvale          47.23 316   P     P      17 46 21.1  0.0
TCRU  Three Creeks R     47.44 316   P     P      17 46 21.8 -0.9
BW06  Boulder Array      47.72 322   P     P      17 46 24.9 +0.1
BW06                                 IAmb  IAmb   17 46 29.4
      comp=Z,9.1nm,0.9s
PD31  Pinedale Array     47.72 322   P     P      17 46 25.0 +0.3
PD31                                 IAmb  IAmb   17 46 29.3
      comp=Z,8.3nm,0.9s
PDAR  Pinedale Array     47.72 322   P     P      17 46 25.4 +0.7
      comp=Z,5.5nm,0.7s,baz=120,slow=9.0,SNR=26
PDAR  Pinedale Array     47.72 322   P     P      17 46 24.2 -0.5
PDAR                                 PcP   PcP    17 47 53.5 -0.5
NLU   North Lily Min     47.84 317   P     P      17 46 25.8 +0.1
HWUT  Hardware Ranch     48.34 320   P     P      17 46 29.8 +0.3
HWUT                                 IAmb  IAmb   17 47 00.8
      comp=Z,5.0nm,0.8s
DGMT  Dagmar             48.42 331   P     P      17 46 29.6 -0.2
LOHW  Long Hollow        48.83 322   P     P      17 46 32.9 -0.4
LOHW                                 IAmb  IAmb   17 46 38.7
      comp=Z,8.5nm,0.8s
REDW  Red Top Meadow     48.84 322   P     P      17 46 33.2 -0.1
REDW                                 IAmb  IAmb   17 46 38.4
      comp=Z,8.9nm,0.9s
BGU   Big Grassy Mou     48.95 318   P     P      17 46 34.3 +0.1
TPAW  Teton Pass         48.97 322   P     P      17 46 34.8 +0.3
TPAW                                 IAmb  IAmb   17 46 39.8
      comp=Z,6.2nm,0.8s
MOOW  Moose Ponds        48.99 323   P     P      17 46 34.9 +0.4
MOOW                                 IAmb  IAmb   17 46 39.7
      comp=Z,5.5nm,0.8s
PLCA  Paso Flores        49.05 179   P     P      17 46 34.1 -0.7
      comp=Z,12nm,0.7s,baz=354,slow=8.4,SNR=37
PLCA                                 LR    LR     18 06 43.2
      comp=Z,85nm,21.7s,baz=354,slow=35
PLCA  Paso Flores        49.05 179  eP     P      17 46 34.0 -0.7
PLCA  Paso Flores        49.05 179   P     P      17 46 33.1 -1.6
PLCA                                 IAmb  IAmb   17 46 35.2
      comp=Z,12nm,0.7s
FXWY  Fox Creek          49.09 322   P     P      17 46 34.8 -0.5
HVU   Hansel Valley      49.21 319   P     P      17 46 35.8 -0.4
LL04  Puerto Octay       49.23 181   P     P      17 46 34.4 -1.6
R11A  Troy Canyon, C     49.53 314   P     P      17 46 37.4 -1.3
GCMT  Greycliff          49.53 325   P     P      17 46 37.9 -0.7
YHL   Hebgen Lake        49.86 323   P     P      17 46 41.5 +0.2
YHL                                  IAmb  IAmb   17 46 47.9
      comp=Z,14nm,1.2s
BOZ   Bozeman (W)        50.54 324   P     P      17 46 46.2  0.0
MCMT  McKenzie Canyo     50.84 323   P     P      17 46 47.4 -1.2
RPN   Rapa Nui           51.08 225   LR    LR     18 07 09.3
      comp=Z,752nm,18.1s,baz=213,slow=35
HLID  Hailey             51.15 320   P     P      17 46 51.0 +0.2
NVAR  Mina Array Bea     51.51 313   P     P      17 46 54.4 +0.6
      comp=Z,0.8nm,0.6s,baz=119,slow=6.8,SNR=7.8
KVN   Kaiserville        51.61 314   P     P      17 46 54.5  0.0
MFID  Camas Ranch        51.98 320   P     P      17 46 57.4 +0.4
PLID  Pearl Lake         52.89 321   P     P      17 47 04.2 +0.2
COYC  Coyhaique          53.88 181   P     P      17 47 08.3 -2.5
COYC                                 IAmb  IAmb   17 47 11.3
      comp=Z,10nm,0.8s
F10A  Beach Ranch, E     54.08 322   P     P      17 47 12.1 -0.4
F10A                                 IAmb  IAmb   17 47 17.3
      comp=Z,9.5nm,1.1s
E09A  Wood Farm, Sta     54.90 322   P     P      17 47 18.9 +0.7
E09A                                 IAmb  IAmb   17 47 22.8
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	comp=Z,8.3nm,1.0s						
NEW	**Newport**	**55.15**	**324**	P	**P**	**17 47 20.2**	**+0.1**
NEW				IAmb	IAmb	17 47 24.4	
	comp=Z,6.1nm,0.9s						
PINE	**Pine Mountain**	**55.47**	**318**	P	**P**	**17 47 23.1**	**+0.3**
PINE				IAmb	IAmb	17 47 42.5	
	comp=Z,23nm,1.4s						
C09A	**Chrisman Ranch**	**55.59**	**323**	P	**P**	**17 47 23.8**	**+0.5**
EDM	**Edmonton**	**55.91**	**331**	P	**P**	**17 47 26.8**	**+1.3**
B08A	**Colville Reser**	**56.48**	**324**	P	**P**	**17 47 30.4**	**+0.8**
B08A				IAmb	IAmb	17 47 34.5	
	comp=Z,9.4nm,0.8s						
YKA	**Yellowknife Ar**	**62.24**	**339**	P	**P**	**17 48 09.3**	**+0.1**
	comp=Z,1.9nm,0.6s,baz=63,slow=3.2,SNR=4.6						
YKA				LR	LR	18 15 28.2	
	comp=Z,89nm,20.2s,baz=0.0,slow=36						
PNCL	**Nicolau / Gran**	**63.48**	**52**	eP	**P**	**17 48 18.8**	**+0.9**
	comp=Z,31nm,1.8s						
PCVE	**Castro Verde**	**63.78**	**52**	eP	**P**	**17 48 21.6**	**+1.7**
	comp=Z,42nm,1.8s						
PBDV	**Barranco-do-Ve**	**63.80**	**53**	eP	**P**	**17 48 20.7**	**+0.6**
PCAS	**Casmilo, Conde**	**63.87**	**50**	eP	**P**	**17 48 21.3**	**+0.8**
PMTG	**Montargil**	**63.89**	**51**	eP	**P**	**17 48 21.1**	**+0.5**
ICESG	**Greenland Ices**	**63.91**	**12**	iP	**P**	**17 48 20.9**	**+0.4**
EVO	**Evora**	**63.96**	**51**	eP	**P**	**17 48 21.4**	**+0.3**
PESTR	**Estremoz**	**64.34**	**51**	eP	**P**	**17 48 24.4**	**+0.8**
PVIS	**Viseu**	**64.45**	**49**	eP	**P**	**17 48 24.6**	**+0.3**
	comp=Z,30nm,1.9s						
PBAR	**Barrancos**	**64.65**	**52**	eP	**P**	**17 48 26.2**	**+0.6**
POLO	**Lamas de Olo**	**64.65**	**48**	eP	**P**	**17 48 25.9**	**+0.2**
	comp=Z,12nm,1.4s						
PVRL	**Vila Real**	**64.69**	**48**	eP	**P**	**17 48 26.2**	**+0.3**
MVO	**Moncorvo**	**65.18**	**49**	eP	**P**	**17 48 29.3**	**+0.2**
	comp=Z,20nm,1.5s						
DBIC	**Dimbokro**	**65.93**	**87**	P	**P**	**17 48 33.7**	**-0.6**
	comp=Z,3.2nm,0.5s,baz=311,slow=6.3,SNR=6.1						
MDT	**Midelt**	**65.94**	**58**	P	**P**	**17 48 35.0**	**+0.8**
	comp=Z,1.8nm,0.9s,baz=308,slow=4.6,SNR=3.8						
KOWA	**Kowa**	**66.11**	**78**	P	**P**	**17 48 35.8**	**+0.3**
	comp=Z,4.2nm,0.6s,baz=264,slow=4.6,SNR=16						
KOWA	**Kowa**	**66.11**	**78**	P	**P**	**17 48 35.2**	**-0.3**
KOWA				IAmb	IAmb	17 48 43.8	
	comp=Z,6.5nm,0.8s						
SUMG	**Summit**	**66.99**	**10**	iP	**P**	**17 48 40.0**	**-0.5**
SUMG	**Summit**	**66.99**	**10**	P	**P**	**17 48 40.4**	**-0.1**
ESDC	**Sonseca Array**	**67.25**	**51**	P	**P**	**17 48 42.8**	**+0.3**
	comp=Z,1.2nm,0.6s,baz=238,slow=5.1,SNR=8.7						
ESDC				LR	LR	18 14 11.2	
	comp=Z,64nm,20.7s,baz=290,slow=32						
ESDC	**Sonseca Array**	**67.25**	**51**	P	**P**	**17 48 42.1**	**-0.3**
ESDC				IAmb	IAmb	17 48 55.8	
	comp=Z,7.1nm,1.6s						
NEEM	**North Greenlan**	**69.69**	**5**	iP	**P**	**17 48 57.1**	**-0.1**
NEEM				IAmb	IAmb	17 48 59.4	
	comp=Z,6.4nm,0.8s						
EKA	**Eskdalemuir Ar**	**70.69**	**34**	P	**P**	**17 49 03.6**	**+0.2**
	comp=Z,1.1nm,0.8s,baz=279,slow=5.5,SNR=1.6						
A36M	**Sachs Harbour**	**71.21**	**345**	P	**P**	**17 49 05.8**	**-0.5**
TORD	**Torodi Ar. Bea**	**71.74**	**79**	P	**P**	**17 49 09.8**	**-0.7**
	comp=Z,2.1nm,0.7s,baz=289,slow=6.5,SNR=12						
TORD	**Torodi Ar. Bea**	**71.74**	**79**	P	**P**	**17 49 09.2**	**-1.3**
INK	**Inuvik**	**71.99**	**340**	P	**P**	**17 49 11.2**	**+0.2**
	comp=Z,2.6nm,0.6s,baz=46,slow=6.9,SNR=9.4						
PMSA	**Palmer Station**	**73.33**	**177**	eP	**P**	**17 49 18.6**	**-0.3**
DAG	**Danmarks Havn**	**73.64**	**11**	iP	**P**	**17 49 20.4**	**-0.3**
DAG				IAmb	IAmb	17 49 21.2	
	comp=Z,2.5nm,0.9s						
SCRK	**Sand Creek**	**74.73**	**334**	P	**P**	**17 49 28.5**	**+1.0**
SCRK				IAmb	IAmb	17 49 32.6	
	comp=Z,7.1nm,1.0s						
PRP	**Porcupine Dome**	**75.69**	**336**	P	**P**	**17 49 33.4**	**+0.5**
PRP				IAmb	IAmb	17 49 37.6	
	comp=Z,6.3nm,0.7s						
SENIN	**Lac Senin/Sane**	**76.07**	**44**	P	**P**	**17 49 35.5**	**-0.1**
ILAR	**Eielson Array**	**76.12**	**335**	P	**P**	**17 49 35.7**	**+0.4**
	comp=Z,1.8nm,0.7s,baz=105,slow=4.8,SNR=13						
ILAR				LR	LR	18 24 28.7	
	comp=Z,114nm,19.4s,baz=136,slow=37						
NOR	**Nord**	**76.69**	**7**	iP	**P**	**17 49 36.4**	**-1.8**
NEA2	**Nenana**	**77.02**	**334**	P	**P**	**17 49 40.4**	**0.0**
NEA2				IAmb	IAmb	17 50 07.2	
	comp=Z,28nm,1.8s						
I23K	**Minto, Yukon-K**	**77.22**	**335**	P	**P**	**17 49 42.2**	**+0.8**
I23K				IAmb	IAmb	17 49 48.5	
	comp=Z,13nm,1.4s						
SUA	**Susitna One**	**77.43**	**331**	P	**P**	**17 49 42.6**	**-0.3**
TUE	**Stuetta**	**77.49**	**44**	P	**P**	**17 49 42.5**	**-1.2**
TUE				IAmb	IAmb	17 50 08.1	
	comp=Z,5.4nm,0.9s						
VSL	**Villasalto**	**77.52**	**51**	P	**P**	**17 49 43.4**	**-0.3**
VSL				IAmb	IAmb	17 50 01.7	
	comp=Z,15nm,1.2s						
TOLK	**Toolik Lake Re**	**77.77**	**338**	P	**P**	**17 49 44.7**	**+0.2**
TOLK				IAmb	IAmb	17 50 24.1	
	comp=Z,13nm,1.6s						
MLY	**Manley**	**77.78**	**335**	P	**P**	**17 49 45.3**	**+0.6**
MLY				IAmb	IAmb	17 49 49.2	
	comp=Z,5.1nm,0.9s						
DAVA	**Damuels**	**77.86**	**43**	eP	**P**	**17 49 46.3**	**+0.7**
	comp=Z,10nm,1.1s						
I21K	**Tanana**	**78.32**	**335**	P	**P**	**17 49 49.5**	**+1.9**
I21K				IAmb	IAmb	17 50 16.8	
	comp=Z,11nm,1.1s						
FETA	**Feichten**	**78.44**	**44**	eP	**P**	**17 49 49.5**	**+0.6**
	comp=Z,15nm,1.3s						
RETA	**Reutte**	**78.47**	**43**	eP	**P**	**17 49 49.3**	**+0.4**
	comp=Z,7.2nm,1.3s						
MOTA	**Moosalm**	**78.70**	**43**	eP	**P**	**17 49 50.5**	**+0.2**
	comp=Z,2.9nm,0.7s						
SQTA	**Sankt Quirin**	**78.77**	**44**	eP	**P**	**17 49 50.3**	**-0.3**
	comp=Z,4.5nm,0.7s						
NB2	**NORSAR Subarra**	**78.99**	**29**	P	P	17 49 57.1	+5.7
	comp=Z,0.9nm,0.6s,baz=268,slow=5.6						
NOA	**NORSAR Array B**	**78.99**	**29**	P	**P**	**17 49 52.4**	**+0.9**
	comp=Z,1.1nm,0.6s,baz=270,slow=5.5,SNR=2.6						
WATA	**Walderalm**	**79.02**	**43**	eP	**P**	**17 49 52.0**	**0.0**
	comp=Z,4.3nm,1.0s						
WTTA	**Wattenberg**	**79.06**	**44**	eP	**P**	**17 49 52.4**	**+0.1**
	comp=Z,5.4nm,0.9s						
IMAR	**Indian Mountai**	**79.11**	**336**	P	**P**	**17 49 50.6**	**-1.4**
ABTA	**Abfaltersbach**	**79.67**	**44**	eP	**P**	**17 49 54.9**	**-0.6**
	comp=Z,6.3nm,1.0s						
CLL	**Collm**	**79.89**	**39**	eP	**P**	**17 49 56.0**	**-0.5**
HFS	**Hagfors**	**80.20**	**30**	LR	LR	18 27 20.9	
	comp=Z,17nm,18.5s,baz=270,slow=37						
KBA	**Koelnbreinsper**	**80.23**	**44**	eP	**P**	**17 49 58.7**	**+0.1**
	comp=Z,6.3nm,0.8s						
KHC	**Kasperske Hory**	**80.32**	**42**	eP	**P**	**17 49 58.9**	**0.0**
KHC				ex	x	17 50 03.9	
GERES	**GERESS Array B**	**80.41**	**42**	P	**P**	**17 49 59.5**	**+0.1**
	comp=Z,1.6nm,0.7s,baz=242,slow=2.9,SNR=8.7						
SPITS	**Spitsbergen Ar**	**81.23**	**12**	P	**P**	**17 50 03.7**	**+0.5**
	comp=Z,12nm,1.0s,baz=204,slow=3.2,SNR=1.5						
PPT	**Papeete**	**81.42**	**251**	LR	LR	18 19 28.0	
	comp=Z,121nm,20.0s,baz=24,slow=31						
ARSA	**Arzberg**	**81.71**	**43**	eP	**P**	**17 50 06.2**	**-0.2**
	comp=Z,3.4nm,0.8s						
CONA	**Conrad Observa**	**81.89**	**43**	eP	**P**	**17 50 07.2**	**-0.2**
	comp=Z,5.2nm,1.2s						
ARCES	**ARCESS Array B**	**84.46**	**21**	P	**P**	**17 50 21.1**	**+1.0**
	comp=Z,5.1nm,1.0s,baz=258,slow=4.4,SNR=2.1						
ARCES				LR	LR	18 29 50.2	
	comp=Z,11nm,18.0s,baz=125,slow=37						
FINES	**FINESS Array B**	**86.12**	**29**	P	**P**	**17 50 28.7**	**+0.2**
	comp=Z,9.4nm,1.1s,baz=266,slow=5.7,SNR=3.3						
VNA3	**Neumayer Olymp**	**89.34**	**163**	P	**P**	**17 50 45.2**	**+1.5**
VNA2	**Neumayer--Watz**	**89.84**	**163**	P	**P**	**17 50 46.7**	**+0.7**
AKASG	**Malin Array Be**	**90.11**	**39**	LR	LR	18 31 56.0	
	comp=Z,19nm,18.1s,baz=345,slow=36						
SNAA	**Sanae**	**91.49**	**163**	P	**P**	**17 50 54.1**	**+0.3**
RAR	**Rarotonga**	**91.53**	**249**	LR	LR	18 25 54.3	
	comp=Z,81nm,19.0s,baz=136,slow=32						
SONM	**Songino Array**	**123.82**	**2**	PKP	**PKiKP**	**17 56 47.3**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=301,slow=2.1,SNR=1.7						
ASAR	**Alice Springs**	**151.49**	**235**	PKP	**PKPdf**	**17 57 37.4**	**+0.8**
	comp=Z,0.6nm,0.8s,baz=112,slow=2.3,SNR=4.9						
ASAR				PKPbc	**PKPbc**	**17 57 43.2**	**+0.5**
	comp=Z,3.5nm,0.7s,baz=121,slow=2.6,SNR=21						
ASAR	**Alice Springs**	**151.49**	**235**		**PKPdf**	**17 57 34.9**	**-1.7**
ASAR					**sPKPdf**	**17 57 39.2**	**-0.1**
WRA	**Warramunga Arr**	**152.64**	**243**	PKPbc	**PKPbc**	**17 57 44.7**	**-0.6**
	comp=Z,5.1nm,0.7s,baz=117,slow=2.6,SNR=26						
WRA	**Warramunga Arr**	**152.64**	**243**		**PKPdf**	**17 57 41.7**	**+3.4**

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*ISK **07** 17:39:24.5, 35°.15N×26°.81E, h5^{km}, ML3.4/18*
*NIC **07** 17:39:24.2±0.0, 34°.75N×26°.68E, h18^{km}±13^{km}, Ml4.0/2*
*THE **07** 17:39:26.1, 35°.02N×26°.73E, h0^{km}, ML3.4/3, Error ellipse: s-maj=3.1km s-min=0.6km az=163.0*
*ATH **07** 17:39:26.6, 35°.06N×26°.75E, h17^{km}±2^{km}, ML3.5/5, Error ellipse: s-maj=7.3km s-min=1.6km az=166.0*
*IDC **07** 17:39:26.4±2.6, 34°.98N×26°.76E, h24^{km}±19^{km}, mb3.7/7, mb1 3.6/13, mb1mx3.5/51, mbtmp3.6/13, ML3.4/6, MS3.7/2, Ms1 3.7/2, ms1mx2.6/44, Error ellipse: s-maj=21.9km s-min=14.5km az=2.0*
*DDA **07** 17:39:27.3, 35°.31N×27°.06E, h7^{km}±4^{km}, MW3.5*
ISC 07 17:39:25.4±0.7, **34°.88N**±0°.05×**26°.78E**±0°.03, **h21**^{km}±3^{km}, **n77**, σ**1^{s}48**/98, **mb3.8**/7, **1C-1D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.52**	**297**	P	**Pb**	**17 39 35.0**	**-0.8**
ZKR				S	**Sb**	**17 39 42.5**	**-0.4**
	8μm,0.5s						
ZKR	**Zakros**	**0.52**	**297**	P	**Pb**	**17 39 35.2**	**-0.7**
ZKR				S	**Sb**	**17 39 41.8**	**-1.1**
ZKR				AML	AML	17 39 43.4	
	comp=N,11610μm,0.4s						
ZKR				AML	AML	17 39 43.6	
	comp=E,20943μm,0.6s						
ZKR	**Zakros**	**0.52**	**297**	PG	**Pb**	**17 39 35.1**	**-0.8**
ZKR				SG	**Sb**	**17 39 42.6**	**-0.4**
ZKR	**Zakros**	**0.52**	**297**	⇓iP	**Pb**	**17 39 35.0**	**-0.8**
ZKR				S	**Sb**	**17 39 42.7**	**-0.2**
STIA	**Sitia Lasithi**	**0.65**	**300**	P	**Pb**	**17 39 37.2**	**-0.9**
STIA				S	**Sb**	**17 39 46.6**	**-0.2**
FRMA	**Ierapetra Chan**	**0.87**	**279**	P	**Pb**	**17 39 40.2**	**-1.6**
FRMA				S	**Sb**	**17 39 52.1**	**-0.9**
NPS	**Neapolis**	**1.03**	**292**	P	**Pb**	**17 39 44.7**	**+0.1**
NPS				S	**Sn**	**17 39 59.5**	**+1.0**
	comp=E,3μm,0.5s						
NPS	**Neapolis**	**1.03**	**292**	P	**Pb**	**17 39 44.0**	**-0.6**
NPS				S	**Sb**	**17 39 56.6**	**-1.1**
NPS				AML	AML	17 40 05.3	
	comp=N,5866μm,0.8s						
NPS				AML	AML	17 40 05.6	
	comp=E,6524μm,0.7s						
HRKL	**Herakleio**	**1.44**	**288**	PN	**Pb**	**17 39 52.7**	**+1.2**
HRKL				SN	**Sb**	**17 40 12.5**	**+3.0**
KSTL	**Kastelli Herak**	**1.47**	**287**	P	**Pn**	**17 39 48.5**	**-2.1**
KSTL				S	**Sn**	**17 40 05.5**	**-3.7**
IACM	**Heraklion**	**1.47**	**287**	P	**Pb**	**17 39 51.9**	**0.0**
IACM				S	**Sb**	**17 40 10.0**	**-0.1**
IACM				AML	AML	17 40 23.6	
	comp=N,10833μm,0.7s						
IACM				AML	AML	17 40 27.4	
	comp=E,11274μm,0.6s						
IDI	**Anoyia**	**1.60**	**285**	Pg	**Pb**	**17 39 54.9**	**+0.6**
	comp=E,15nm,0.3s,baz=109,slow=13,SNR=70						
IDI				Lg	Lg	17 40 16.8	
	comp=E,33nm,0.3s,baz=303,slow=14,SNR=6.3						
IDI	**Anoyia**	**1.60**	**285**	P	**Pb**	**17 39 54.0**	**-0.4**
IDI				AML	AML	17 40 21.7	
	comp=N,988μm,0.6s						
IDI				AML	AML	17 40 22.4	
	comp=E,1151μm,0.5s						
ARG	**Arkhangelos**	**1.72**	**39**	P	**Pb**	**17 39 55.6**	**-0.7**
ARG				S	**Sb**	**17 40 17.6**	**+0.1**
	comp=E,748nm,0.6s						
ARG	**Arkhangelos**	**1.72**	**39**	P	**Pb**	**17 39 55.2**	**-1.2**
ARG				AML	AML	17 40 22.1	
	comp=E,1850μm,0.5s						
ARG				AML	AML	17 40 24.0	
	comp=N,1154μm,0.5s						
ARG	**Arkhangelos**	**1.72**	**39**	PN	**Pn**	**17 39 53.6**	**-0.6**
ARG				SN	**Sn**	**17 40 15.1**	**-0.5**
ARG	**Arkhangelos**	**1.72**	**39**	⇑eP	**Pb**	**17 39 55.6**	**-0.7**
ARG				S	**Sb**	**17 40 19.6**	**+2.1**
NIS1	**Nisyros Isl.**	**1.75**	**11**	P	**Pn**	**17 39 54.3**	**-0.2**
NIS1	**Nisyros Isl.**	**1.75**	**11**	PN	**Pn**	**17 39 53.0**	**-1.5**
NISR	**Nisiros**	**1.75**	**9**	P	**Pn**	**17 39 54.6**	**+0.1**
THR6	**Thira Island,**	**1.85**	**323**	P	**Pn**	**17 39 55.8**	**-0.1**
THR8	**Santorini-Mono**	**1.85**	**325**	P	**Pn**	**17 39 56.0**	**0.0**
KOSK	**Kos Island**	**1.87**	**5**	PN	**Pn**	**17 39 55.1**	**-1.1**
THR9	**Santorini-Faro**	**1.88**	**322**	P	**Pn**	**17 39 56.4**	**+0.2**
SNT5	**Nea Kammeni, S**	**1.89**	**324**	P	**Pn**	**17 39 56.5**	**0.0**
THR3	**Thira Island,**	**1.89**	**324**	P	**Pn**	**17 39 56.3**	**-0.2**
THR2	**Thira island,**	**1.91**	**325**	P	**Pn**	**17 39 56.8**	**+0.1**
DAT	**Datca**	**1.95**	**19**	P	**Pn**	**17 39 57.4**	**0.0**
DAT	**Datca**	**1.95**	**19**	PN	**Pn**	**17 39 56.3**	**-1.1**
DAT				SN	**Sn**	**17 40 19.5**	**-1.9**
BODT	**Bodrum**	**2.22**	**11**	PN	**Pn**	**17 39 59.8**	**-1.2**
BODT				SN	**Sn**	**17 40 26.0**	**-1.8**
TURN	**Turunc**	**2.23**	**32**	iP	**Pb**	**17 40 02.6**	**-2.4**
TURN	**Turunc**	**2.23**	**32**	PN	**Pn**	**17 40 00.4**	**-0.7**
BDRM	**Kayabasi**	**2.24**	**14**	iP	**Pn**	**17 40 00.7**	**-0.7**
BDRM				iS	**Sn**	**17 40 24.8**	**-3.7**
BDRM				IAML		17 40 37.0	
	comp=N,89nm,0.5s						
BDRM				IAML		17 40 37.0	
	comp=E,89nm,0.6s						
APE	**Apeiranthos**	**2.41**	**335**	iP	Pb	17 40 18.5	+11
APE				iS	**Sb**	**17 40 45.3**	**+8.1**
DALY	**Dalyan (Mula)**	**2.46**	**38**	PN	**Pn**	**17 40 04.5**	**+0.3**
MLSB	**Milas**	**2.54**	**18**	PN	**Pn**	**17 40 05.0**	**-0.4**
YER	**Yerkesik**	**2.56**	**28**	PN	**Pn**	**17 40 04.9**	**-0.8**
FETY	**Fethiye**	**2.56**	**46**	PN	**Pn**	**17 40 05.9**	**+0.2**
AKAS	**Kas**	**2.67**	**59**	iP	**Pn**	**17 40 06.5**	**-0.8**
AKAS				iS	**Sn**	**17 40 39.0**	**0.0**
AKAS				IAML		17 40 41.0	
	comp=N,69nm,0.4s						
AKAS				IAML		17 40 42.0	
	comp=E,49nm,0.4s						
AKAS	**Kas**	**2.67**	**59**	PN	**Pn**	**17 40 08.0**	**+0.7**
MULA	**Mugla, Merkez-**	**2.68**	**27**	iP	**Pn**	**17 40 06.8**	**-0.5**
GCAM	**G?zelcaml?**	**2.83**	**7**	iP	**Pn**	**17 40 10.9**	**+1.5**
GCAM	**G?zelcaml?**	**2.83**	**7**	PN	**Pn**	**17 40 08.9**	**-0.5**
CAME	**Cameli-Denizli**	**2.90**	**44**	PN	**Pn**	**17 40 11.1**	**+0.6**
AYDN	**Tasoluk**	**2.91**	**17**	iP	**Pn**	**17 40 10.5**	**-0.1**
CAEL	**Denizli, Camel**	**3.04**	**42**	iP	**Pb**	**17 40 16.3**	**-2.5**
TAVA	**DENIZLI_Tavas**	**3.10**	**33**	iP	**Pn**	**17 40 13.4**	**+0.2**
TAVA				iS	**Sn**	**17 40 49.6**	**-0.1**
TAVA				IAML		17 41 06.0	
	comp=E,45nm,0.7s						
ELL	**Elmali**	**3.15**	**53**	PN	**Pn**	**17 40 14.6**	**+0.7**
ELL	**Elmali**	**3.15**	**53**	P	**Pn**	**17 40 15.1**	**+1.2**
AYDB	**Zeytinkoy-Aydi**	**3.19**	**16**	PN	**Pn**	**17 40 14.0**	**-0.4**
URLA	**Izmir**	**3.47**	**358**	iP	**Pn**	**17 40 15.2**	**-3.0**
URLA	**Izmir**	**3.47**	**358**	PN	**Pn**	**17 40 17.6**	**-0.7**
BLCB	**Balcova**	**3.50**	**3**	PN	**Pn**	**17 40 18.5**	**-0.1**
CHOS	**Chios island**	**3.55**	**351**	PN	**Pn**	**17 40 18.9**	**-0.4**
KORT	**Korkueli**	**3.58**	**53**	PN	**Pn**	**17 40 20.6**	**+0.7**
BRDR	**BURDUR-Merkez**	**3.86**	**42**	iP	**Pb**	**17 40 31.7**	**-1.1**
KULA	**Kula-Manisa**	**3.93**	**22**	PN	**Pn**	**17 40 24.3**	**-0.2**
PASA	**Karahalli, USA**	**4.09**	**31**	iP	**Pn**	**17 40 26.0**	**-0.7**
AKMS	**Akamas**	**4.56**	**87**	P	**Pn**	**17 40 34.2**	**+1.0**
AKMS				AML	AML	17 41 25.9	
	comp=E,0.3nm,0.4s						
AKMS				AML	AML	17 41 25.9	
	comp=E,0.5nm,0.8s						
ASGA	**Asgata**	**5.32**	**89**	P	**Pn**	**17 40 44.2**	**+0.6**
ASGA				AML	AML	17 41 44.9	
	comp=E,0.3nm,1.0s						
ASGA				AML	AML	17 41 45.5	
	comp=E,0.2nm,0.8s						
CSS	**Mathiatis**	**5.38**	**87**	P	**Pn**	**17 40 45.6**	**+1.1**
MVOU	**Mavrovouni**	**5.63**	**87**	P	**Pn**	**17 40 49.4**	**+1.6**
BRTR	**Keskin Array B**	**7.29**	**46**	Pn	**Pn**	**17 41 12.6**	**+1.8**
	comp=E,0.1nm,0.3s,baz=232,slow=15,SNR=2.1						
BRTR				Sn	**Sn**	**17 42 32.6**	**-0.4**
	comp=E,0.1nm,0.3s,baz=214,slow=28,SNR=2.9						
MMAI	**Mount Meron Ar**	**7.40**	**102**	Pn	**Pn**	**17 41 13.3**	**+1.0**
	comp=E,0.8nm,0.3s,baz=296,slow=12,SNR=5.1						
MMAI				Sn	**Sn**	**17 42 35.6**	**0.0**
	comp=E,2.9nm,0.3s,baz=326,slow=23,SNR=9.0						
EIL	**Elat**	**8.65**	**125**	Pn	**Pn**	**17 41 31.1**	**+1.8**
	comp=E,0.3nm,0.3s,baz=256,slow=4.2,SNR=1.4						
EIL				Sn	**Sn**	**17 43 02.5**	**-3.8**
	comp=E,1.2nm,0.3s,baz=32,slow=6.2,SNR=7.4						
ASF	**Jabal al Asfar**	**8.87**	**105**	Pn	**Pn**	**17 41 33.8**	**+1.4**
	comp=E,0.2nm,0.3s,baz=328,slow=4.0,SNR=2.4						
ASF				Sn	Sn	17 42 59.7	-12
	comp=E,0.7nm,0.3s,baz=6.4,slow=14,SNR=5.6						
AKASG	**Malin Array Be**	**15.91**	**6**	Pn	**Pn**	**17 43 07.2**	**-0.7**
	comp=E,0.6nm,0.3s,baz=194,slow=11,SNR=4.8						
GERES	**GERESS Array B**	**16.98**	**329**	Pn	**Pn**	**17 43 22.1**	**+0.5**
	comp=E,0.1nm,0.3s,baz=142,slow=13,SNR=5.1						
KHC	**Kasperske Hory**	**17.25**	**330**	eP	**P**	**17 43 28.0**	**+1.6**
ESDC	**Sonseca Array**	**24.86**	**290**	P	**P**	**17 44 45.9**	**-0.7**
	comp=E,0.2nm,0.5s,baz=82,slow=9.9,SNR=8.3						
FINES	**FINESS Array B**	**26.58**	**359**	P	**P**	**17 45 01.1**	**-0.7**
	comp=E,2.7nm,1.0s,baz=159,slow=12,SNR=1.1						
EKA	**Eskdalemuir Ar**	**29.04**	**324**	P	**P**	**17 45 23.8**	**-0.1**
	comp=E,0.7nm,0.6s,baz=126,slow=9.7,SNR=1.2						
TORD	**Torodi Ar. Bea**	**31.35**	**233**	P	**P**	**17 45 46.0**	**+1.4**
	comp=E,0.7nm,0.5s,baz=36,slow=8.8,SNR=6.5						
MKAR	**Makanchi Array**	**42.82**	**56**	P	**P**	**17 47 22.0**	**+0.2**
	comp=E,1.2nm,0.6s,baz=265,slow=8.9,SNR=12						
ZALV	**Zalesovo Beam**	**44.24**	**46**	P	**P**	**17 47 32.4**	**-0.6**
	comp=E,2.5nm,0.5s,baz=272,slow=9.1,SNR=8.9						
ZALV				LR	LR	18 10 53.1	
	comp=E,44nm,18.1s,baz=35,slow=43						
SONM	**Songino Array**	**58.63**	**51**	P	**P**	**17 49 21.6**	**+0.5**
	comp=E,0.5nm,0.5s,baz=292,slow=7.6,SNR=2.9						
ANMO	**Albuquerque**	**97.93**	**323**	LR	LR	18 39 27.5	
	comp=E,59nm,18.1s,baz=294,slow=37						

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*NEIC **07** 17:41:52.3±1.7, 30°.56S±0°.04×177°.7W±0°.2, h10^{km}±2^{km}, mb4.6/15, Error ellipse: s-maj=25.8km s-min=6.1km az=93.0*
*IDC **07** 17:42:03.8±0.9, 29°.61S×178°.04W, h82^{km}±14^{km}, mb3.9/6, mb1 4.0/6, mb1mx3.6/39, mbtmp4.2/6, Error ellipse: s-maj=38.5km s-min=25.3km az=29.0*
ISC 07 17:41:57.1±1.4, **30°.33S**±0°.09×**177°.6W**±0°.2, **h50**^{km}, **n32**, σ**1^{s}11**/28, **mb4.5**/12, **Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.11**	**346**	P	**Pn**	**17 42 16.9**	**+0.6**
	85nm,0.3s,baz=301,slow=12,SNR=8.6						
RAO				S	**Sn**	**17 42 28.5**	**-2.0**
	766nm,0.3s,baz=171,slow=22,SNR=17						
RAO	**Raoul Island**	**1.11**	**346**		**Pn**	**17 42 16.8**	**+0.5**
RAO	**Raoul Island**	**1.11**	**346**	Sn	**Sn**	**17 42 30.5**	**0.0**
URZ	**Urewera**	**9.04**	**208**	Pn	Pn	17 43 58.4	-6.4
BKZ	**Black Stump Fm**	**10.06**	**207**	Pn	Pn	17 44 09.3	-10
CTA	**Charters Tower**	**34.13**	**279**	P	**P**	**17 48 38.8**	**+1.4**
	2.5nm,0.5s,baz=116,slow=11,SNR=7.0						
CTAO	**Charters Tower**	**34.13**	**279**	P	**P**	**17 48 37.5**	**+0.2**
CTAO				IAmb	IAmb	17 49 31.1	
	comp=Z,25nm,1.6s						
STKA	**Stephens Creek**	**34.83**	**257**	P	**P**	**17 48 44.9**	**+1.5**
	comp=Z,3.9nm,0.7s,baz=100,slow=9.8,SNR=9.8						
STKA	**Stephens Creek**	**34.83**	**257**	P	**P**	**17 48 42.6**	**-0.8**
BBOO	**Buckleboo**	**39.32**	**254**	P	**P**	**17 49 19.5**	**-1.9**
BBOO				IAmb	IAmb	17 50 29.4	
	comp=Z,32nm,1.9s						
COEN	**Coen**	**39.58**	**286**	P	**P**	**17 49 23.4**	**-0.4**
COEN				IAmb	IAmb	17 50 04.1	
	comp=Z,12nm,1.5s						
AS31	**Alice Springs**	**43.45**	**267**	P	**P**	**17 49 54.1**	**-1.4**
ASAR	**Alice Springs**	**43.46**	**267**	P	**P**	**17 49 55.7**	**+0.2**
	comp=Z,0.9nm,0.5s,baz=105,slow=7.2,SNR=46						
ASAR				PcP	**PcP**	**17 51 44.5**	**+1.5**
	comp=Z,0.1nm,0.4s,baz=117,slow=3.5,SNR=1.2						
ASAR	**Alice Springs**	**43.46**	**267**	P	**P**	**17 49 54.2**	**-1.3**
WR0	**Warramunga Arr**	**44.26**	**272**	P	**P**	**17 50 00.9**	**-1.0**
WR0				IAmb	IAmb	17 50 07.5	
	comp=Z,17nm,1.8s						
WB2	**Warramunga Arr**	**44.43**	**272**	P	**P**	**17 50 01.9**	**-1.4**
WB2				IAmb	IAmb	17 50 03.8	
	comp=Z,3.1nm,0.6s						
WRAB	**Tennant Creek**	**44.43**	**272**	P	**P**	**17 50 02.0**	**-1.3**
WRAB				IAmb	IAmb	17 50 14.1	
	comp=Z,16nm,1.9s						
WRA	**Warramunga Arr**	**44.44**	**272**	P	**P**	**17 50 03.1**	**-0.3**
	comp=Z,1.7nm,0.3s,baz=108,slow=8.0,SNR=61						
WRA	**Warramunga Arr**	**44.44**	**272**	P	**P**	**17 50 01.9**	**-1.5**
WB0	**Warramunga Arr**	**44.46**	**272**	P	**P**	**17 50 03.0**	**-0.6**
WB0				IAmb	IAmb	17 51 28.7	
	comp=Z,13nm,1.6s						
FORT	**Forrest**	**46.40**	**255**	P	**P**	**17 50 18.1**	**-0.7**
MTN	**Manton Dam**	**50.31**	**279**	P	**P**	**17 50 49.2**	**+0.2**
KNRA	**Kununurra**	**51.04**	**274**	P	**P**	**17 50 53.9**	**-0.6**
FITZ	**Fitzroy Crossi**	**52.70**	**270**	P	**P**	**17 51 07.5**	**+0.6**
	comp=Z,2.0nm,1.1s,baz=122,slow=9.5,SNR=2.1						
FITZ	**Fitzroy Crossi**	**52.70**	**270**	P	**P**	**17 51 07.1**	**+0.2**
FITZ				IAmb	IAmb	17 51 08.8	
	comp=Z,8.9nm,1.4s						
QSPA	**South Pole Qui**	**59.78**	**180**	P	P	17 52 05.4	+8.5
	comp=Z,2.5nm,0.7s,baz=36,slow=3.6,SNR=16						
QSPA	**South Pole Qui**	**59.78**	**180**	P	**P**	**17 51 55.5**	**-1.3**
QSPA				IAmb	IAmb	17 52 05.7	
	comp=Z,13nm,1.7s						
H03S2	**Juan Fernandez**	**80.22**	**123**	T	T	19 23 30.8	
	baz=238,slow=74,SNR=9.5						
H03S1	**Juan Fernandez**	**80.23**	**123**	T	T	19 23 36.9	
	baz=238,slow=74,SNR=12						
H03S3	**Juan Fernandez**	**80.23**	**123**	T	T	19 23 40.2	
	baz=238,slow=74,SNR=11						
FINES	**FINESS Array B**	**145.20**	**340**	PKP	**PKPdf**	**18 01 28.9**	**+0.6**
	comp=Z,2.8nm,0.8s,baz=64,slow=3.2,SNR=9.8						
AKASG	**Malin Array Be**	**151.45**	**323**	PKPbc	**PKiKP**	**18 01 46.0**	**+0.5**
	comp=Z,0.8nm,0.5s,baz=46,slow=2.9,SNR=4.7						

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*IDC **07** 18:11:52.7±1.7, 36°.59N×6°.12W, h0^{km}, mb3.9/8, mb1 3.9/14, mb1mx3.7/53, mbtmp3.8/14, ML3.7/6, Error ellipse: s-maj=51.2km s-min=16.3km az=95.0*
*IGIL **07** 18:11:57.9, 36°.71N×5°.50W, h0^{km}, ML3.8*
*LDG **07** 18:11:58.7±0.1, 36°.64N×5°.48W, h8^{km}, Ml3.7/26, Error ellipse: s-maj=1.9km s-min=1.3km az=179.0*
*MDD **07** 18:11:58.9±0.3, 36°.70N×5°.41W, h0^{km}, mbLg4.0/38, Error ellipse: s-maj=3.4km s-min=2.3km az=7.0, PRXIMO*
MDD EMS: III INTENSIDAD MAXIMA.
*INMG **07** 18:11:59.8±1.4, 36°.69N×5°.48W, h23^{km}±2^{km}, MD3.8, ML3.8, Error ellipse: s-maj=1.8km s-min=1.6km az=26.0*
*CNRM **07** 18:11:59.5, 36°.60N×5°.60W, h88^{km}, ml3.5*
ISC 07 18:11:58.7±0.9, **36°.67N**±0°.02×**5°.45W**±0°.02, **h30**^{km}±7^{km}, **n169**, σ**2^{s}07**/278, **mb4.2**/8, **6C-6D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LIJA	**Lijar**	**0.23**	**8**	P	**Pb**	**18 12 04.1**	**-1.4**
LIJA	**Lijar**	**0.23**	**8**	P	**Pb**	**18 12 04.1**	**-1.4**
ESPR	**Espera**	**0.38**	**301**	⇑Pg	**Pn**	**18 12 07.6**	**-0.6**
	1μm,0.4s,SNR=18						
ESPR				Lg	Lg	18 12 12.8	
	11μm,0.3s,SNR=7.9						
CNIL	**Conil**	**0.58**	**239**	P	**Pn**	**18 12 11.0**	**+0.2**
CNIL				S	**Sn**	**18 12 20.0**	**+0.8**
SFS	**San Fernando**	**0.65**	**252**	P	**Pn**	**18 12 12.8**	**+1.1**
SFS				S	**Sn**	**18 12 24.8**	**+3.8**
SFS	**San Fernando**	**0.65**	**252**	P	**Pn**	**18 12 12.7**	**+0.9**
CEU	**Ceuta**	**0.78**	**176**	P	**Pn**	**18 12 13.7**	**+0.2**
CEU				S	**Sn**	**18 12 25.7**	**+1.6**
ECEU	**Ceuta**	**0.78**	**176**	Pg	**Pn**	**18 12 14.0**	**+0.5**
	81nm,0.1s,SNR=94						
ECEU				Lg	Lg	18 12 25.0	
	498nm,0.3s,SNR=13						
CPS	**Cap Spartel**	**0.96**	**203**	P	**Pb**	**18 12 19.9**	**+3.1**
SMIR	**Smir Dam**	**0.99**	**177**	P	**Pb**	**18 12 17.0**	**-0.3**
ARNO	**Arenosillo**	**1.12**	**293**	P	**Pb**	**18 12 19.4**	**-0.1**
ARNO				S	**Sb**	**18 12 34.2**	**+0.6**
EGOR	**Sierra Gorda,**	**1.16**	**67**	⇑Pg	**Pb**	**18 12 20.6**	**+0.4**
	346nm,0.3s,SNR=18						
EGOR				Lg	Lg	18 12 36.7	
	2μm,0.5s,SNR=7.9						
ECAB	**El Cabril**	**1.40**	**1**	Pn	**Pb**	**18 12 22.6**	**-1.7**
	4.7nm,0.1s,SNR=1193						
ECAB				⇑Pg	**Pn**	**18 12 24.9**	**+2.7**
	143nm,0.1s,SNR=18						
ECAB				Lg	Lg	18 12 43.5	
	663nm,0.2s,SNR=5.0						
EMIN	**Mina Concepcio**	**1.47**	**318**	Pn	**Pn**	**18 12 23.2**	**+0.1**
	24nm,0.1s,SNR=194						
EMIN				Pg	**Pb**	**18 12 25.6**	**+0.3**
	90nm,0.1s,SNR=7.9						
EMIN				Lg	Lg	18 12 44.7	
	432nm,0.1s,SNR=26						
ELGU	**Los Guajares,**	**1.47**	**82**	Pn	**Pn**	**18 12 23.6**	**+0.4**
	10nm,0.1s,SNR=7.9						
ELGU				Lg	Lg	18 12 47.3	
	1μm,0.4s,SNR=7.9						
CHEFC	**Chefchaouen**	**1.56**	**177**	P	**Pb**	**18 12 26.2**	**-0.9**
EADA	**Adamuz**	**1.64**	**25**	Pn	**Pb**	**18 12 26.5**	**-1.9**
	3.6nm,0.1s,SNR=160						
EADA				Pg	**Pn**	**18 12 29.2**	**+3.6**
	53nm,0.1s,SNR=7.9						
EADA				Lg	Lg	18 12 51.0	

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         1µm,0.2s,SNR=5.0
EQUE  Quentar           1.69  71 ⇑Pn   Pb    18 12 28.0 -1.3
         31nm,0.3s,SNR=18
EQUE                             Pg    Pn    18 12 30.7 +4.4
         124nm,0.4s,SNR=7.9
EQUE                             Lg    Lg    18 12 55.2
         789nm,0.4s,SNR=5.0
PVLZ  Peæn de           1.76 148  P    Pn    18 12 27.0 -0.1
PVLZ                              S    Sn    18 12 48.4 -0.1
RSA   Sarsar            1.81 190  P    Pb    18 12 28.9 -2.3
EGRO  El Granado        1.84 298 ⇓Pn   Pn    18 12 28.2  0.0
         31nm,0.1s,SNR=18
EGRO                             Pg    Pb    18 12 32.2 +0.5
         226nm,0.3s,SNR=7.9
EGRO                             Sn    Sn    18 12 49.8 -0.7
         304nm,0.3s,SNR=5.2
EGRO                             Lg    Lg    18 12 55.7
         407nm,0.2s,SNR=5.7
PALE  Palemas           1.90 139  P    Pn    18 12 30.0 +0.9
PVAQ  Vaqueiros         1.96 293 ePn   Pn    18 12 29.7 -0.2
PVAQ                             eSn   Sn    18 12 52.6 -0.8
PVAQ                             eSg   Sb    18 13 00.5 +2.8
PVAQ                              A    A     18 13 05.0
         442nm,0.4s
PVAQ  Vaqueiros         1.96 293  P    Pn    18 12 29.3 -0.6
PBAR  Barrancos         1.96 320⇓ePn   Pn    18 12 30.0 +0.1
PBAR                              A    A     18 13 05.0
         468nm,0.3s
EBER  Berja             2.06  83  Pn   Pn    18 12 32.9 +1.4
         10nm,0.3s,SNR=40
EBER                             Pg    Pb    18 12 36.9 +1.3
         64nm,0.3s,SNR=7.9
EBER                             Lg    Lg    18 13 04.7
         493nm,0.5s,SNR=7.9
PBDV  Barranco-do-Ve    2.07 287⇓ePn   Pn    18 12 31.7 +0.3
PBDV                             eSn   Sn    18 12 55.8 -0.4
PBDV                             eSg   Sb    18 13 01.6 +0.6
EALB  Alboran           2.08 110  Pn   Pn    18 12 32.7 +1.2
         39nm,0.4s,SNR=7.9
EALB                             Sn    Sn    18 12 58.0 +1.6
         74nm,0.4s,SNR=7.9
GORA  Gorafe            2.08  67  Pn   Pn    18 12 32.9 +1.3
         42nm,0.3s,SNR=7.9
GORA                             Pg    Pb    18 12 38.4 +2.5
         135nm,0.2s,SNR=7.9
GORA                             Sn    Sn    18 12 58.4 +1.8
         437nm,0.4s,SNR=7.9
GORA                             Lg    Lg    18 13 06.7
         1µm,0.4s,SNR=7.9
EQES  Quesada           2.21  59  Pn   Pn    18 12 34.3 +0.9
         14nm,0.2s,SNR=84
EQES                             Pg    Pb    18 12 40.5 +2.5
         85nm,0.3s,SNR=7.9
EQES                             Sn    Sb    18 13 02.1 -2.8
         159nm,0.2s,SNR=4.6
EQES                             Lg    Lg    18 13 08.9
         268nm,0.2s,SNR=5.0
PCVE  Castro Verde      2.28 296 ePn   Pn    18 12 34.2 -0.1
PCVE                             eSn   Sn    18 13 00.8 -0.6
PCVE                             eSg   Sb    18 13 10.1 +3.1
PCVE                              A    A     18 13 21.2
         420nm,0.5s
PBEJ  Beja              2.35 306 ePn   Pn    18 12 35.4 +0.1
PBEJ                             eSn   Sn    18 13 03.7 +0.5
PBEJ                              A    A     18 13 30.3
         203nm,0.6s
EBAD  Badajoz           2.42 330 ⇓Pn   Pn    18 12 36.6 +0.4
         40nm,0.1s,SNR=18
EBAD                             Sn    Sn    18 13 05.6 +0.8
         133nm,0.2s,SNR=6.0
EBAD                             Lg    Lg    18 13 12.5
         537nm,0.2s,SNR=5.9
EMEL  Melilla           2.44 123  Pn   Pn    18 12 38.4 +1.9
         64nm,0.2s,SNR=7.9
EMEL                             Sn    Sn    18 13 07.0 +1.8
         145nm,0.4s,SNR=7.9
MESJ  Messejana         2.50 299 eP    Pn    18 12 37.3  0.0
MESJ                             eS    Sn    18 13 05.9 -0.9
MESJ                              IAML       18 13 08.2
         comp=N,655nm,0.2s
MESJ  Messejana         2.50 299 ePn   Pn    18 12 37.4  0.0
MESJ                             eSn   Sn    18 13 07.2 +0.4
MESJ                              A    A     18 13 26.3
         comp=N,320nm,0.4s
ENIJ  Nijar             2.62  82  Pn   Pn    18 12 39.6 +0.7
         comp=N,4.1nm,0.3s,SNR=7.9
ENIJ                             Pg    Pb    18 12 47.1 +2.2
         comp=N,124nm,0.4s,SNR=7.9
ENIJ                             Sn    Sn    18 13 10.5 +0.9
         comp=N,86nm,0.4s,SNR=7.9
ENIJ                             Lg    Lg    18 13 21.5
         comp=N,231nm,0.5s,SNR=7.9
MORF  Marmelete         2.64 285 eP    Pn    18 12 39.1 -0.2
MORF                             eS    Sn    18 13 09.4 -0.9
MORF                              IAML       18 13 10.8
         comp=N,381nm,0.3s
MORF  Marmelete         2.64 285 ePn   Pn    18 12 39.1 -0.2
MORF                             eSn   Sn    18 13 10.2 -0.2
MORF                              A    A     18 13 25.6
         comp=N,161nm,0.2s
SESP  Santiago Espad    2.72  57 ⇑Pn   Pn    18 12 41.2 +0.6
         comp=N,7.6nm,0.2s,SNR=18
SESP                             Pg    Pb    18 12 49.4 +2.6
         comp=N,56nm,0.3s,SNR=7.9
SESP                             Sn    Sn    18 13 14.2 +1.7
         comp=N,107nm,0.2s,SNR=7.9
SESP                             Lg    Lg    18 13 24.4
         comp=N,1µm,0.4s,SNR=7.9
PFVI  Vila Bisbo        2.75 281 ePn   Pn    18 12 40.5 -0.3
PFVI                             eSn   Sn    18 13 11.2 -1.7
PFVI                              A    A     18 13 15.5
         comp=N,142nm,0.4s
PFVI  Vila Bisbo        2.75 281  Pn   Pn    18 12 40.4 -0.3
         comp=N,22nm,0.1s,SNR=42
PFVI                             Pg    Pb    18 12 49.4 +2.2
         comp=N,36nm,0.1s,SNR=7.9
PFVI                             Sn    Sn    18 13 10.9 -2.0
         comp=N,105nm,0.2s,SNR=5.8
PFVI                             Lg    Lg    18 13 26.5
         comp=N,192nm,0.2s,SNR=7.9
PFVI  Vila Bisbo        2.75 281  P    Pn    18 12 40.4 -0.3
EVO   Evora             2.76 313  P    Pn    18 12 41.2 +0.4
EVO                               S    Sb    18 13 23.5 +2.8
EVO   Evora             2.76 313⇓ePn   Pn    18 12 41.3 +0.4
EVO                              eSn   Sn    18 13 13.7 +0.6
EVO                              eSg   Sb    18 13 23.8 +3.1
EVO                               A    A     18 13 31.4
         comp=N,427nm,0.3s
PTEO  Sao Teotonio      2.76 289 ePn   Pn    18 12 41.2 +0.3
PTEO                             eSn   Sn    18 13 13.2  0.0
PTEO                              A    A     18 13 30.9
         comp=N,230nm,0.4s
PESTR Estremoz          2.77 323 ePn   Pn    18 12 41.5 +0.4
PESTR                            eSn   Sn    18 13 14.3 +0.8
PESTR                            eSg   Sb    18 13 23.7 +2.6
PESTR                             A    A     18 13 27.0
         comp=N,216nm,0.3s
PESTR Estremoz          2.77 323  P    Pn    18 12 41.3 +0.3
PNCL  Nicolau / Gran    2.84 301 ePn   Pn    18 12 42.2 +0.2
PNCL                             eSn   Sn    18 13 15.2  0.0
PNCL                              A    A     18 13 15.8
         comp=N,344nm,0.2s
CHAS  Isla Isabel II    2.86 120  P    Pn    18 12 42.0 -0.3
CHAS                              S    Sn    18 13 12.1 -3.6
PAB   San Pablo         3.00  16  Pn   Pn    18 12 45.3 +1.1
         comp=N,0.9nm,0.1s,SNR=7.9
PAB                              Sn    Sn    18 13 19.2 +0.1
         comp=N,58nm,0.2s,SNR=7.9
PAB                              Lg    Lg    18 13 30.8
         comp=N,312nm,0.4s,SNR=7.9
PAB   San Pablo         3.00  16  P    Pn    18 12 46.5 +2.3
LCRM  LCR               3.02 171  P    Pn    18 12 45.2 +0.6
TAF   Taforalt          3.08 126  P    Pn    18 12 45.8 +0.4
PMRV  Marv??o           3.15 331 ePn   Pn    18 12 46.8 +0.5
PMRV                             eSn   Sn    18 13 23.8 +1.0
PMRV                              A    A     18 13 27.2
         comp=N,115nm,0.4s
PMRV                             eSg   Sb    18 13 36.5 +4.5
TLOR  Lorca, Murcia     3.16  71  Pn   Pn    18 12 47.3 +0.9
         comp=N,65nm,0.2s,SNR=7.9
TLOR                             Lg    Lg    18 13 40.8
         comp=N,1µm,0.5s,SNR=7.9
ESDC  Sonseca Array     3.22  21  Pn   Pn    18 12 48.5 +1.2
         comp=N,2.6nm,0.3s,baz=187,slow=12,SNR=44
ESDC                             Sn    Sn    18 13 24.4 -0.1
         comp=N,12nm,0.3s,baz=200,slow=16,SNR=4.7
ESDC                             Lg    Lg    18 13 40.2
         comp=N,35nm,0.3s,baz=199,slow=29,SNR=3.7
ESDC  Sonseca Array     3.22  21  Pn   Pn    18 12 48.6 +1.4
         comp=N,3.5nm,0.2s,baz=200,slow=13,SNR=60
ESDC                             Sn    Sn    18 13 25.0 +0.5
         comp=N,33nm,0.3s,baz=199,slow=17,SNR=7.9
ESDC                             Lg    Lg    18 13 41.7
         comp=N,695nm,0.5s,baz=203,slow=28,SNR=39
PMTG  Montargil         3.25 318 ePn   Pn    18 12 47.8 +0.2
PMTG                             eSn   Sn    18 13 25.6 +0.4
PMTG                             eSg   Sb    18 13 38.3 +3.5
PMTG                              A    A     18 13 47.2
         comp=N,242nm,0.5s
JBK   JBK               3.31 134  P    Pn    18 12 49.1 +0.5
ZHG   ZHG               3.37 197  P    Pn    18 12 48.7 -0.6
PCBR  Castelo Branco    3.54 334 ePn   Pn    18 12 52.3 +0.7
PCBR                             eSn   Sn    18 13 31.4 -1.1
PCBR                             eSg   Sb    18 13 50.6 +7.3
PCBR                              A    A     18 13 59.9
         comp=N,208nm,0.5s
EMUR  La Murta          3.55  70  Pn   Pn    18 12 52.4 +0.6
         comp=N,4.1nm,0.3s,SNR=18
EMUR                             Pg    Pb    18 13 04.3 +3.5
         comp=N,16nm,0.3s,SNR=7.9
EMUR                             Lg    Lg    18 13 51.8
         comp=N,136nm,0.5s,SNR=5.0
LIS   Lisbon            3.58 306 ePn   Pn    18 12 52.9 +0.8
LIS                              eSn   Sn    18 13 34.4 +1.1
LIS                               A    A     18 14 13.5
         comp=N,242nm,0.6s
PMST  Lisbon--Monsan    3.61 306 ePn   Pn    18 12 53.3 +0.8
PMST                             eSn   Sn    18 13 35.3 +1.2
PMST                              A    A     18 14 05.6
         comp=N,195nm,0.7s
CZD   Col de Zad        3.65 175  P    Pn    18 12 53.2 -0.2
ETOB  Tobarra           3.67  56  Pn   Pn    18 12 53.6 +0.2
         comp=N,19nm,0.2s,SNR=405
ETOB                             Sn    Sn    18 13 35.2 -0.4
         comp=N,0.9nm,0.5s,SNR=8.1
ETOB                             Lg    Lg    18 13 55.9
         comp=N,235nm,0.5s,SNR=5.0
CART  Cartagena         3.67  74  P    Pn    18 12 53.4 +0.1
CART                              S    Sn    18 13 32.1 -3.4
PMAFR Mafra             3.80 308 ePn   Pn    18 12 55.5 +0.4
PMAFR                            eSn   Sn    18 13 38.8  0.0
PMAFR                             A    A     18 14 08.5
         comp=N,261nm,0.4s
PMAFR Mafra             3.80 308 ⇓Pn   Pn    18 12 55.5 +0.4
         comp=N,37nm,0.2s,SNR=18
PMAFR                            Sn    Sn    18 13 38.3 -0.5
         comp=N,325nm,0.2s,SNR=9.9
PMAFR                            Lg    Lg    18 13 58.8
         comp=N,394nm,0.4s,SNR=5.0
MD31  MD31              3.84 171  P    Pn    18 12 55.8  0.0
PSBE  So Bento          3.88 318 ePn   Pn    18 12 56.9 +0.6
PSBE                             eSn   Sn    18 13 41.4 +0.6
PSBE                             eSg   Sb    18 14 00.1 +7.2
PSBE                              A    A     18 14 17.6
         comp=N,218nm,0.6s
MDT   Midelt            3.91 170  Pn   Pn    18 12 56.5 -0.3
         comp=N,3.7nm,0.3s,baz=190,slow=14,SNR=130
MDT                              Sn    Sn    18 13 39.1 -2.6
         comp=N,11nm,0.3s,baz=49,slow=20,SNR=11
MDT   Midelt            3.91 170  P    Pn    18 12 56.8  0.0
UCM   Universidad Co    4.02  25  PO         18 12 60.0
UCM                               S    Sn    18 13 37.2 -7.1
MTE   Manteigas         4.07 337 ePn   Pn    18 13 00.3 +1.4
MTE                              eSn   Sn    18 13 45.0 -0.5
MTE                              eSg   Sb    18 14 06.5 +8.1
MTE                               A    A     18 14 15.9
         comp=N,274nm,0.4s
PCAS  Casmilo, Conde    4.14 326 ePn   Pn    18 13 00.3 +0.4
PCAS                             eSn   Sn    18 13 45.8 -1.4
PCAS                              A    A     18 14 16.7
         comp=N,235nm,0.5s
COI   Coimbra           4.23 327 ePn   Pn    18 13 02.1 +1.1
COI                              eSn   Sn    18 13 48.4 -1.0
COI                              eSg   Sb    18 14 13.4  +10
COI                               A    A     18 14 23.6
         comp=N,326nm,0.5s
AFON  Font Roja         4.37  61 ⇑Pn   Pn    18 13 03.4 +0.3
         comp=N,16nm,0.3s,SNR=18
AFON                             Sn    Sn    18 13 53.1 +0.1
         comp=N,23nm,0.3s,SNR=7.9
AFON                             Lg    Lg    18 14 19.0
         comp=N,150nm,0.5s,SNR=5.0
PVIS  Viseu             4.47 335 ePn   Pn    18 13 05.3 +0.9
PVIS                             eSn   Sn    18 13 54.1 -1.3
PVIS                              A    A     18 14 37.0
         comp=N,135nm,0.6s
ECHE  Chera             4.58  49  Pn   Pn    18 13 06.1 +0.2
         comp=N,22nm,0.3s,SNR=7.9
ECHE                             Sn    Sn    18 13 57.6 -0.4
         comp=N,14nm,0.4s,SNR=7.9
ECHE                             Lg    Lg    18 14 24.4
         comp=N,224nm,0.5s,SNR=7.9
TDRA  Tendrara          4.58 141  P    Pn    18 13 08.2 +2.0
EBEN2 Beniarda presa    4.62  63  Pn   Pn    18 13 07.0 +0.4
         comp=N,2.8nm,0.1s,SNR=7.9
EBEN2                            Sn    Sn    18 13 59.6 +0.5
         comp=N,26nm,0.3s,SNR=7.9
EBEN2                            Lg    Lg    18 14 26.3
         comp=N,93nm,0.5s,SNR=7.9
MVO   Moncorvo          4.65 345 ePn   Pn    18 13 08.1 +1.2
MVO                              eSn   Sn    18 13 58.5 -1.4
MVO                              eSg   Sb    18 14 25.4  +10
MVO                               A    A     18 14 38.9
         comp=N,177nm,0.4s
MVO   Moncorvo          4.65 345  Pn   Pn    18 13 08.1 +1.2
         comp=N,8.7nm,0.1s,SNR=61
MVO                              Sn    Sn    18 13 58.5 -1.4
         comp=N,23nm,0.2s,SNR=7.5
MVO                              Lg    Lg    18 14 26.1
         comp=N,184nm,0.3s,SNR=8.2
SRHM  Skhour des Reh    4.65 206  P    Pn    18 13 10.6 +3.6
ETOR  Torete            4.92  32  Pn   Pn    18 13 11.7 +1.1
         comp=N,107nm,0.2s,SNR=394
ETOR                             Sn    Sn    18 14 05.4 -1.0
         comp=N,117nm,0.4s,SNR=7.9
ETOR                             Lg    Lg    18 14 34.9
         comp=N,312nm,0.5s,SNR=5.0
PVRL  Vila Real         4.92 340 ePn   Pn    18 13 11.4 +0.7
PVRL                             eSn   Sn    18 14 04.8 -1.8
PVRL                              A    A     18 14 08.2
         comp=N,123nm,0.6s
POLO  Lamas de Olo      5.04 339 ePn   Pn    18 13 13.0 +0.7
POLO                             eSn   Sn    18 14 07.3 -2.2
POLO                             eSg   Sb    18 14 37.6  +11
POLO                              A    A     18 14 41.4
         comp=N,50nm,0.4s
PBRG  Braganca          5.22 349 ePn   Pn    18 13 15.8 +1.0
PBRG                             eSn   Sn    18 14 11.8 -2.2
PBRG                             eSg   Sb    18 14 45.5  +14
PBRG                              A    A     18 14 51.4
         comp=N,110nm,0.7s
ECAL  Calabor           5.36 350  Pn   Pn    18 13 17.9 +1.3
         comp=N,3.7nm,0.1s,SNR=32
ECAL                             Sn    Sn    18 14 14.9 -2.4
         comp=N,29nm,0.3s,SNR=4.8
ECAL                             Lg    Lg    18 14 49.4
         comp=N,306nm,0.4s,SNR=5.0
EMOS  Mosqueruela       5.37  45  Pn   Pn    18 13 17.8 +1.0
         comp=N,5.6nm,0.3s,SNR=33
EMOS                             Sn    Sn    18 14 16.6 -1.0
         comp=N,8.4nm,0.3s,SNR=7.9
EMOS                             Lg    Lg    18 14 48.5
         comp=N,51nm,0.5s,SNR=5.0
PCAB  Cabril            5.42 339 ePn   Pn    18 13 18.0 +0.6
PCAB                             eSn   Sn    18 14 17.4 -1.3
PCAB                             eSg   Sb    18 14 49.6  +13
PCAB                              A    A     18 15 01.7
         comp=N,174nm,0.5s
ELOB  Lobios            5.57 339  Pn   Pn    18 13 20.1 +0.5
         comp=N,4.8nm,0.2s,SNR=40
ELOB                             Sn    Sn    18 14 20.2 -2.4
         comp=N,17nm,0.2s,SNR=6.7
ELOB                             Lg    Lg    18 14 55.0
         comp=N,164nm,0.6s,SNR=5.0
FIGM  Figuig            5.70 141  P    Pn    18 13 24.0 +2.6
PGAV  Gavieira, Arco    5.72 338 ePn   Pn    18 13 22.5 +0.9
PGAV                             eSn   Sn    18 14 24.4 -1.9
PGAV                             eSg   Sb    18 15 01.2  +15
PGAV                              A    A     18 15 08.7
         comp=N,110nm,0.6s
OUK   Oukaimeden        5.81 201  P    Pn    18 13 22.6 -0.5
OUZM  OUZ               5.85 191  P    Pn    18 13 23.6 +0.1
EIBI  Ibiza             5.86  64  Pn   Pn    18 13 22.8 -0.7
         comp=N,5.4nm,0.3s,SNR=33
EIBI                             Sn    Sn    18 14 27.9 -1.8
         comp=N,5.5nm,0.3s,SNR=7.9
TZRR  Tazzarine         5.87 181  P    Pn    18 13 24.7 +0.9
EAH   EAH               6.07 216  P    Pn    18 13 24.6 -1.8
ERTA  Horta de San J    6.22  45  Pn   Pn    18 13 29.0 +0.6
         comp=N,1.3nm,0.3s,SNR=9.0
ERTA                             Sn    Sn    18 14 41.0 +2.6
         comp=N,5.8nm,0.4s,SNR=7.9
ERTA                             Lg    Lg    18 15 13.9
         comp=N,33nm,0.4s,SNR=7.9
TTIG  Tnine Tigouga,    6.60 203  P    Pn    18 13 30.9 -2.9
EARI  Arriondas         6.62   1  Pn   Pn    18 13 35.8 +1.8
         comp=N,0.7nm,0.1s,SNR=24
EARI                             Sn    Sn    18 14 45.5 -2.9
         comp=N,18nm,0.6s,SNR=7.9
EARI                             Lg    Lg    18 15 28.6
         comp=N,57nm,0.6s,SNR=7.9
ELAN  Lanestosa         6.73  13  Pn   Pn    18 13 36.7 +1.3
         comp=N,1.1nm,0.2s,SNR=27
ELAN                             Sn    Sn    18 14 49.4 -1.7
         comp=N,9.7nm,0.4s,SNR=7.9
ELAN                             Lg    Lg    18 15 33.7
         comp=N,149nm,1.1s,SNR=7.9
EPON  Pontenova         6.77 349  Pn   Pn    18 13 37.6 +1.6
         comp=N,3.1nm,0.2s,SNR=26
EPON                             Sn    Sn    18 14 49.1 -3.0
         comp=N,4.8nm,0.2s,SNR=7.9
EPON                             Lg    Lg    18 15 32.9
         comp=N,84nm,0.7s,SNR=7.9
EARA  Aranguren         6.78  25  Pn   Pn    18 13 38.2 +2.1
         comp=N,4.6nm,0.2s,SNR=7.9
EARA                             Sn    Sn    18 14 50.2 -2.0
         comp=N,10nm,0.3s,SNR=7.9
EARA                             Lg    Lg    18 15 34.6
         comp=N,85nm,0.6s,SNR=7.9
EMAZ  Mazaricos         6.83 338  Pn   Pn    18 13 37.2 +0.4
         comp=N,0.9nm,0.2s,SNR=7.9
EMAZ                             Sn    Sn    18 14 48.9 -4.6
         comp=N,6.8nm,0.3s,SNR=7.9
EMAZ                             Lg    Lg    18 15 35.5
         comp=N,88nm,0.9s,SNR=7.9
EPOB  Poblet            6.90  45  Pn   Pn    18 13 38.1 +0.3
         comp=N,2.4nm,0.2s,SNR=27
EPOB                             Sn    Sn    18 14 54.3 -1.0
         comp=N,3.1nm,0.4s,SNR=7.9
EPOB                             Lg    Lg    18 15 36.2
         comp=N,20nm,0.6s,SNR=7.9
EORO  Oroz-Betelu       6.98  26  Pn   Pn    18 13 40.6 +1.7
         comp=N,6.5nm,0.2s,SNR=55
EORO                             Sn    Sn    18 14 54.1 -3.1
         comp=N,9.1nm,0.3s,SNR=7.9
EORO                             Lg    Lg    18 15 40.7
         comp=N,151nm,0.9s,SNR=7.9
ETOS  Mallorca          7.20  62  Pn   Pn    18 13 41.6 -0.2
         comp=N,1.5nm,0.2s,SNR=16
ETOS                             Sn    Sn    18 14 58.8 -3.8
         comp=N,1.7nm,0.3s,SNR=7.9
SJPF  Ste Jean          7.20  25 ePn   Pn    18 13 43.4 +1.5
SJPF                             eSn   Sn    18 15 00.3 -2.4
         comp=N,25nm,0.5s
SJPF                             eSg   Sb    18 15 44.9  +16
         comp=N,17nm,0.5s
ETSF  Etsaut            7.27  30 ePn   Pn    18 13 43.8 +1.0
ETSF                             eSn   Sn    18 15 02.1 -2.2
ETSF                             eSg   Sb    18 15 47.3  +17
         comp=N,12nm,0.5s
ATE   Arette            7.37  28  Pn   Pn    18 13 45.5 +1.3
         comp=N,4.8nm,0.3s,SNR=7.9
ATE                              Sn    Sn    18 15 05.0 -1.8
         comp=N,5.6nm,0.3s,SNR=7.9
ATE                              Lg    Lg    18 15 53.8
         comp=N,42nm,0.8s,SNR=7.9
CSOR  Sort              7.63  40  Pn   Pn    18 13 48.8 +0.9
         comp=N,2.4nm,0.2s,SNR=32
CSOR                             Sn    Sn    18 15 10.2 -3.2
         comp=N,9.5nm,0.5s,SNR=7.9
CSOR                             Lg    Lg    18 15 58.1
         comp=N,67nm,1.4s,SNR=7.9
EPF   Esparros          7.75  33 ePn   Pn    18 13 50.3 +0.8
EPF                              eSn   Sn    18 15 13.4 -2.8
EPF                              eSg   Sb    18 16 03.0  +19
         comp=N,35nm,0.6s
CFON  Fontmartina       7.95  48  Pn   Pn    18 13 51.9 -0.4
         comp=N,3.0nm,0.2s,SNR=7.9
CFON                             Sn    Sn    18 15 16.9 -4.3
         comp=N,3.2nm,0.2s,SNR=7.9
CFON                             Lg    Lg    18 16 12.1
         comp=N,8.9nm,0.4s,SNR=7.9
CLLI  Llivia            8.15  42  Pn   Pn    18 13 55.5 +0.5
         comp=N,2.1nm,0.2s,SNR=29
CLLI                             Sn    Sn    18 15 23.3 -2.8
         comp=N,2.4nm,0.4s,SNR=7.9
EJON  La Jonquera       8.64  46  Pn   Pn    18 14 02.8 +1.1
         comp=N,1.0nm,0.2s,SNR=7.9
EJON                             Sn    Sn    18 15 34.3 -3.7
         comp=N,0.9nm,0.3s,SNR=7.9
EJON                             Lg    Lg    18 16 30.9
         comp=N,25nm,1.0s,SNR=7.9
MTLF  Montolieu         8.88  39 ePn   Pn    18 14 05.4 +0.5
MTLF                             eSn   Sn    18 15 40.3 -3.6
MTLF                             eSg         18 16 37.8
         comp=N,5.9nm,0.5s
LFF   La Frestale       9.49  28 ePn   Pn    18 14 14.3 +1.0
LFF                              eSn   Sn    18 15 55.1 -3.8
         comp=N,6.2nm,0.4s
TANT  Tantan            9.58 212  P    Pn    18 14 13.5 -1.1
CAF   Calviac          10.01  32 ePn   Pn    18 14 20.9 +0.4
CAF                              eSn   Sn    18 16 07.5 -4.2
         comp=N,1.4nm,0.2s
LASF  Ste Croix        10.24  41 ePn   Pn    18 14 23.6  0.0
LASF  Ste Croix        10.24  41 ePg   Pn    18 15 07.2  +44
LASF                             eSg         18 17 20.5
         comp=N,2.6nm,0.4s
MFF   Saint Martin d   10.68  20 ePn   Pn    18 14 30.0 +0.5
MFF                              eSn   Sn    18 16 23.2 -4.8
         comp=N,1.9nm,0.3s
TCF   Toulx Ste Croi   11.19  28 ePn   Pn    18 14 36.9 +0.4
TCF                              eSn   Sn    18 16 36.7 -3.7
         comp=N,2.7nm,0.5s
QUIF  Quistinic        11.36   8 ePn   Pn    18 14 39.2 +0.4
QUIF                             eSn   Sn    18 16 39.0 -5.6
         comp=N,3.4nm,0.3s
ROSF  Rostrenen        11.77   7 ePn   Pn    18 14 44.6 +0.2
ROSF                             eSn   Sn    18 16 48.7 -5.8
         comp=N,2.3nm,0.2s
SGMF  Saint Gilles     11.77  10 ePn   Pn    18 14 44.8 +0.4
SGMF                             eSn   Sn    18 16 49.0 -5.6
         comp=N,4.7nm,0.5s
ORIF  Oris-en-Rattie   11.89  43 ePn   Pn    18 14 46.5 +0.4
KEST  Kesra            11.99  90  Pn   Pn    18 14 53.6 +6.1
         comp=N,0.2nm,0.3s,baz=352,slow=2.5,SNR=1.9
AVF   Avril sur Loir   12.05  30 ePn   Pn    18 14 48.3 +0.1
AVF                              eSn   Sn    18 16 56.1 -5.4
         comp=N,0.8nm,0.5s
SMF   Signal de Mont   12.13  32 ePn   Pn    18 14 49.6 +0.2
SMF                              eSn   Sn    18 16 58.0 -5.6
         comp=N,0.4nm,0.3s
HYF   Humbligny        12.17  27 ePn   Pn    18 14 50.2 +0.3
GRR   Gorron           12.18  15 ePn   Pn    18 14 50.2 +0.1
GRR                              eSn   Sn    18 16 59.0 -5.8
         comp=N,3.0nm,0.3s
MBDF  Montbardon       12.26  45 ePn   Pn    18 14 52.1 +0.7
SSF   Saint Saulge     12.33  30 ePn   Pn    18 14 52.4 +0.3
SSF                              eSn   Sn    18 17 02.7 -5.7
         comp=N,0.5nm,0.4s
LDF   La Druitiere     12.54  16 ePn   Pn    18 14 55.2 +0.3
LDF                              eSn   Sn    18 17 07.5 -5.9
         comp=N,1.1nm,0.3s
FLN   La Foliniere     12.62  15 ePn   Pn    18 14 56.3 +0.3
         baz=196
FLN                              eSn   Sn    18 17 09.4 -6.0
         comp=N,2.1nm,0.4s,baz=195
FLN   La Foliniere     12.62  15  Pn   Pn    18 14 56.3 +0.3
FLN                              Sn    Sn    18 17 09.4 -6.0
         comp=N,1.1nm,0.4s
LOR   Lormes           12.64  30 ePn   Pn    18 14 56.3  0.0
         baz=211
LOR   Lormes           12.64  30 eP    P     18 15 01.5 -5.8
         baz=209
LOR                              eSn   Sn    18 17 10.0 -5.9
         comp=N,1.0nm,0.5s
LOR   Lormes           12.64  30  Pn   Pn    18 14 56.3  0.0
LOR                              Sn    Sn    18 17 10.0 -5.9
         comp=N,0.5nm,0.5s
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LPG	La Plagne	12.73	42	*e*Pn	Pn	18 14 59.7	+1.9
LPG	La Plagne	12.73	42	Pn	Pn	18 14 59.7	+1.9
LPL	La Plagne	12.73	42	*e*Pn	Pn	18 14 58.2	+0.4
LPL	La Plagne	12.73	42	Pn	Pn	18 14 58.2	+0.4
CABF	La Chapelle	13.14	37	*e*Pn	Pn	18 15 03.4	+0.2
CABF				*e*Sn	Sn	18 17 22.2	-6.0
	comp=N,0.3nm,0.2s						
CABF	La Chapelle	13.14	37	Pn	Pn	18 15 03.4	+0.2
CABF				Sn	Sn	18 17 22.2	-6.0
	comp=N,0.2nm,0.2s						
SFTF	Sexfontaines	13.87	31	*e*Pn	Pn	18 15 13.3	+0.2
	baz=209						
SFTF				*e*Sn	Sn	18 17 39.3	-6.6
	comp=N,2.0nm,0.4s,baz=211						
SFTF	Sexfontaines	13.87	31	Pn	Pn	18 15 13.3	+0.2
SFTF				Sn	Sn	18 17 39.3	-6.6
	comp=N,2.0nm,0.4s						
SAVF	Savonnieres en	14.23	30	*e*Pn	Pn	18 15 18.7	+0.7
	baz=214						
CDF	Champ du Feu	14.99	35	*e*P	P	18 15 32.8	-0.8
CDF	Champ du Feu	14.99	35	P	P	18 15 32.8	-0.8
DAVOX	Davos/Dischmat	15.23	44	Pn	P	18 15 35.9	-0.5
	comp=N,0.1nm,0.3s,baz=187,slow=8.1,SNR=2.1						
GERES	GERESS Array B	18.53	43	P	Pn	18 16 15.7	+2.6
	comp=N,0.2nm,0.3s,baz=226,slow=8.8,SNR=7.5						
EKA	Eskdalemuir Ar	18.73	4	P	Pn	18 16 15.9	+0.6
	baz=180,slow=14,SNR=0.9						
VRAC	Vranov	20.39	45	P	Pn	18 16 36.7	+1.6
	comp=N,1.8nm,0.6s,baz=291,slow=5.9,SNR=2.7						
DPC	Dobruska-Polom	20.78	42	*e*P	Pn	18 16 40.4	+0.7
KRLC	Kraliky	20.89	43	*e*P	Pn	18 16 40.8	-0.1
KOWA	Kowa	22.12	176	P	P	18 16 49.9	-1.9
	comp=N,1.2nm,0.6s,baz=353,slow=10,SNR=3.9						
TORD	Torodi Ar. Bea	24.29	163	P	P	18 17 12.4	-1.0
	comp=N,1.5nm,0.8s,baz=337,slow=10,SNR=8.8						
IDI	Anoyia	24.54	84	P	P	18 17 15.8	+0.1
	comp=N,7.8nm,0.7s,baz=267,slow=19,SNR=2.2						
HFS	Hagfors	26.50	22	P	P	18 17 33.6	+0.5
	comp=N,1.1nm,0.5s,baz=216,slow=12,SNR=5.1						
FINES	FINESS Array B	31.70	29	P	P	18 18 21.7	+2.4
	comp=N,6.3nm,1.1s,baz=238,slow=11,SNR=3.9						
ARCES	ARCESS Array B	36.95	18	P	P	18 19 05.5	+0.9
	comp=N,4.9nm,0.9s,baz=210,slow=10,SNR=5.6						
ZALV	Zalesovo Beam	61.48	42	P	P	18 22 13.0	+0.7
	comp=N,0.8nm,0.4s,baz=284,slow=5.8,SNR=2.4						
MKAR	Makanchi Array	63.01	50	P	P	18 22 22.6	-0.1
	comp=N,1.4nm,0.8s,baz=291,slow=5.1,SNR=5.5						

IDC 07 18:12:28.9±1.7**,52.°67S**×**10.°44E,h0**^{km}**,mb4.0**/3**,**
mb1 4.2/4**,mb1mx3.8**/31**,mbtmp4.0**/4**,ML3.5**/1**,MS3.7**/4**,**
Ms1 3.7/4**,ms1mx3.3**/21**,Error ellipse: s-maj=62.2km**
s-min=28.6km az=79.0,Southwest of Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNAA	Sanae	19.95	192	P	P	18 17 01.9	-0.3
	0.1nm,0.3s,baz=16,slow=13,SNR=15						
SUR	Sutherland	21.63	24	LR	LR	18 23 37.2	
	comp=Z,110nm,18.9s,baz=226,slow=31						
BOSA	Boshof	26.43	30	LR	LR	18 27 09.9	
	comp=Z,90nm,19.4s,baz=212,slow=33						
VNDA	Vanda	48.86	172	P	P	18 21 15.5	0.0
	1.6nm,0.7s,baz=230,slow=7.8,SNR=10						
MBAR	Mbarara	54.59	25	LR	LR	18 42 53.3	
	comp=Z,62nm,21.4s,baz=200,slow=33						
TORD	Torodi Ar. Bea	65.98	351	P	P	18 23 16.8	-0.1
	0.6nm,0.9s,baz=184,slow=5.6,SNR=2.8						
LPAZ	La Paz	70.31	269	P	P	18 23 45.1	+0.1
	3.3nm,0.9s,baz=121,slow=5.9,SNR=9.0						
H01W2	Cape Leeuwin H	70.53	122	T	T	19 41 32.3	
	baz=221						
H01W3	Cape Leeuwin H	70.55	122	T	T	19 41 30.9	
	baz=221						
H01W1	Cape Leeuwin H	70.55	122	T	T	19 41 30.7	
	baz=221						
CTA	Charters Tower	98.02	139	LR	LR	19 04 52.6	
	comp=Z,194nm,20.7s,baz=254,slow=32						

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*NEIC **07** 18:18:30.5±1.3,21.°83S±0.°10×171.°8E±0.°1,h73^{km}±10^{km},*
mb4.2/12,Error ellipse: s-maj=18.5km s-min=12.8km
az=63.0

*IDC **07** 18:18:38.1±8.2,21.°58S×171.°10E,h113^{km}±50^{km},mb3.4/5,*
mb1 3.6/6,mb1mx3.3/35,mbtmp3.8/6,Error ellipse:
s-maj=81.7km s-min=60.4km az=156.0

ISC 07 18:18:28.0±1.4**,22.°1S**±0.°2×**171.°8E**±0.°1**,h50**^{km}**,n26,**
σ**2.**^{s}**09**/27**,mb4.1**/10**,Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	3.51	279		Pn	18 19 22.9	+2.9
PINNC	Pines Island,	4.02	262		Pn	18 19 29.9	+2.9
LIFNC	LIFOU	4.40	286	Pn	Pn	18 19 33.9	+1.7
OUENC	Ouen Island, N	4.56	265	Pn	Pn	18 19 37.2	+2.8
ONTNC	Ouen Toro	4.91	266		Pn	18 19 42.4	+3.0
DZM	Mont Dzumac	4.92	269	*e*Pn	Pn	18 19 42.8	+3.2
	18nm,0.2s						
DZM				*e*Sn	Sn	18 20 32.3	-2.9
	163nm,0.2s						
DZM	Mont Dzumac	4.92	269	P	Pn	18 19 42.7	+3.2
	4.9nm,0.3s,baz=120,slow=18,SNR=271						
DZM				S	Sn	18 20 32.3	-2.9
	26nm,0.3s,baz=102,slow=20,SNR=27						
DZM	Mont Dzumac	4.92	269		Pn	18 19 42.6	+3.1
OUZ	Omahuta	13.19	173	Pn	P	18 21 39.4	-1.8
LTZ	Lake Taylor	20.65	179	P	Pn	18 23 05.9	-0.3
LTZ				IAmb	IAmb	18 23 07.7	
	comp=Z,6.9nm,0.8s						
CTA	Charters Tower	23.86	270	P	P	18 23 37.9	+0.9
	comp=Z,0.9nm,0.3s,baz=84,slow=9.2,SNR=2.1						
STKA	Stephens Creek	28.51	244	P	P	18 24 19.5	+0.7
	comp=Z,0.9nm,0.7s,baz=90,slow=10,SNR=1.5						
WR0	Warramunga Arr	34.74	267	P	P	18 25 12.7	-1.0
WR0				IAmb	IAmb	18 25 16.3	
	comp=Z,8.7nm,1.6s						
AS31	Alice Springs	34.84	260	P	P	18 25 14.5	-0.1
ASAR	Alice Springs	34.84	260	P	P	18 25 14.3	-0.2
	comp=Z,1.9nm,0.7s,baz=78,slow=9.3,SNR=37						
ASAR	Alice Springs	34.84	260	P	P	18 25 13.7	-0.9
WB0	Warramunga Arr	34.91	267	P	P	18 25 13.7	-1.5
WB0				IAmb	IAmb	18 25 22.9	
	comp=Z,5.1nm,1.4s						
WB2	Warramunga Arr	34.92	266	P	P	18 25 13.9	-1.4
WRAB	Tennant Creek	34.92	266	P	P	18 25 13.9	-1.4
WRAB				IAmb	IAmb	18 25 32.8	
	comp=Z,6.1nm,1.4s						
WRA	Warramunga Arr	34.93	266	P	P	18 25 14.1	-1.3
	comp=Z,0.3nm,0.4s,baz=100,slow=8.5,SNR=15						
WRA	Warramunga Arr	34.93	266	P	P	18 25 14.2	-1.2
MTN	Manton Dam	39.71	276	P	P	18 25 55.5	-0.4
FITZ	Fitzroy Crossi	43.36	267	P	P	18 26 25.2	-0.5
FITZ				IAmb	IAmb	18 26 44.0	
	comp=Z,7.3nm,1.4s						
MBWA	Marble Bar	48.17	261	P	P	18 27 03.5	-0.2
QSPA	South Pole Qui	67.99	180	P	P	18 29 23.1	+1.3
QSPA				IAmb	IAmb	18 29 24.1	
	comp=Z,2.5nm,1.4s						
CMAR	Chiang Mai Arr	81.80	294	P	P	18 30 40.4	-1.7
	comp=Z,0.2nm,0.7s,baz=126,slow=4.6,SNR=1.7						

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*FUNV **07** 18:28:07.2,8.°41N×71.°38W,h2^{km},MW3.1*

ISC 07 18:28:07.1±1.2**,8.°45N**±0.°04×**71.°37W**±0.°03**,h9**^{km}±10^{km}**,**
n16,σ**0.**^{s}**95**/28**,1D,Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.53	108	⇓*i*P	Pb	18 28 18.1	-0.6
SOCV				*e*S	Sg	18 28 25.0	+0.4
SDV	Santo Domingo	0.85	59	*e*P	Pg	18 28 23.5	0.0
SDV				*e*S	Sg	18 28 34.9	+0.2
SDV				*i*		18 28 36.9	
	comp=Z,101nm,0.2s						
CAPV	Capacho	1.10	238	*e*P	Pg	18 28 26.9	-1.4
CAPV				*e*S	Sg	18 28 41.9	-0.7
PAMC	Pamplona, Colo	1.72	230	*e*P	Pb	18 28 39.3	+0.1
PAMC				*e*S	Sg	18 29 02.9	+0.5
PAMC				*i*		18 29 05.7	
	comp=Z,104nm,0.2s						
OCAC	Ocana	1.94	264	*e*P	Pn	18 28 40.7	+0.2
OCAC				*e*S	Sn	18 29 06.2	+1.1
OCAC				*i*		18 29 07.9	
	comp=Z,328nm,0.3s						
TAMC	Tame, Arauca	2.04	192	*e*P	Pb	18 28 44.2	-0.3
TAMC				*e*S	Sg	18 29 12.5	-0.3
TAMC				*i*		18 29 17.6	
	comp=Z,41nm,0.2s						
ELOV	Elorza	2.36	127	*e*P	Pg	18 28 53.7	+1.3
ELOV				*e*S	Sg	18 29 21.4	-1.6
ELOV	Elorza	2.36	127	*e*P	Pn	18 28 46.4	+0.3
ELOV				*e*S	Sn	18 29 14.4	-0.8
BARC	Barichara	2.57	224	*e*P	Pb	18 28 54.2	+0.5
BARC				*e*S	Sb	18 29 26.1	+0.5
BARC				*i*		18 29 32.0	
	comp=Z,37nm,0.2s						
SIQV	Siquisique	2.68	35	*e*P	Pn	18 28 51.7	+1.2
SIQV				*e*S	Sn	18 29 23.3	+0.2
RUSC	La Rusia	3.05	214	*e*P	Pn	18 28 57.6	+1.5
BAUV	El Baul	3.33	81	*e*P	Pn	18 29 00.1	+0.6
BAUV				*e*S	Sn	18 29 37.5	-1.6
ZARC	Zaragoza, Cauc	3.58	255	*e*P	Pn	18 28 56.2	-6.8
BENV	Beln	4.02	68	*e*P	Pn	18 29 09.5	+0.5
BENV				*e*S	Sn	18 29 55.0	-1.3
SJCC	San Jacinto, C	4.03	291	*e*P	Pn	18 29 09.6	+0.5
SJCC				*e*S	Sn	18 29 55.0	-1.6
MOTC	Monteria, Cord	4.26	275	*e*P	Pn	18 29 12.8	+0.5

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*IDC **07** 18:29:12.7±0.5,37.°02N×97.°82W,h0^{km},mb4.1/15,*
mb1 4.2/25,mb1mx4.0/65,mbtmp4.0/25,ML3.9/10,MS3.4/6,
Ms1 3.4/6,ms1mx3.0/49,Error ellipse: s-maj=8.7km
s-min=7.2km az=164.0

*NEIC **07** 18:29:13.2,36.°92N×97.°79W,h4^{km},Moment Tensor*
Solution. Moment tensor: Scale 10^{14}Nm; M$_{rr}$-3.93;
M$_{\theta\theta}$5.60; M$_{\phi\phi}$-1.67; M$_{r\theta}$-1.27; M$_{\theta\phi}$2.11; M$_{\phi r}$2.31; Fault
plane solution: M$_{0}$6.02000×10^{14} NP1:φ$_{s}$224.41000°,
δ51.64000°,λ-137.83000°. NP2:φ$_{s}$105.06000°,
δ58.24000°,λ-46.88000°. Principal axes: T 6.2122,
Plg4.0000°, Azm166.0000°; N -0.4119, Plg36.0000°,
Azm259.0000°; P -5.8003, Plg54.0000°, Azm71.0000°;

*ANF **07** 18:29:13.6±0.3,36.°94N×97.°82W,h4^{km},ML5.3/18 Error*
ellipse: s-maj=4.3km s-min=3.3km az=35.0

*NEIC **07** 18:29:13.1±2.6,36.°92N±0.°04×97.°78W±0.°06,h7^{km}±2^{km},*
Error ellipse: s-maj=7.0km s-min=4.2km az=60.0

*NEIC **07** 18:29:13.5±2.8,36.°94N±0.°04×97.°84W±0.°05,h6^{km}±4^{km},*
Error ellipse: s-maj=6.1km s-min=5.3km az=61.0

*TUL **07** 18:29:13.4±3.1,36.°95N±0.°04×97.°84W±0.°05,h4^{km}±4^{km},*
ML4.3,mb4.4/36(NEIC),mb_Lg4.2/117(NEIC),
ML4.0/23(NEIC),Mwr3.8/46(NEIC),Error ellipse:
s-maj=0.0km s-min=0.0km az=157.0

ISC 07 18:29:13.1±0.7**,36.°94N**±0.°02×**97.°77W**±0.°02**,h10**^{km}±4^{km}**,**
n415,σ**1.**^{s}**56**/453**,mb4.2**/19**,Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN17	Caldwell West	0.10	2	Pg	Pg	18 29 16.2	+0.5
KAN17				Sg	Sg	18 29 18.0	+0.4
GC02	Grant County #	0.12	218	Pg	Pg	18 29 15.7	-0.2
GC02				Sg	Sg	18 29 17.3	-0.6
KAN14	Manchester OK	0.16	275	Pg	Pg	18 29 16.0	-0.5
KAN14				Sg	Sg	18 29 17.7	-1.2
KAN05	Bluff City Nor	0.18	334	Pg	Pg	18 29 17.2	+0.2
KAN05				Sg	Sg	18 29 20.0	+0.3
KAN01	Argonia South	0.21	2		Pg	18 29 18.1	+0.6
KAN01				Sg	Sg	18 29 21.7	+1.2
KAN09	Caldwell North	0.23	32	Pg	Pg	18 29 18.8	+1.0
KAN09				Sg	Sg	18 29 22.5	+1.5
KAN13	South Haven SW	0.24	73		Pg	18 29 19.4	+1.4
KAN13				Sg	Sg	18 29 23.6	+2.2
KAN06	Argonia West S	0.31	347		Pg	18 29 19.8	+0.4
KAN06				Sg	Sg	18 29 24.0	+0.4
KAN10	Anthony SW Sta	0.32	305	Pg	Pg	18 29 19.2	-0.2
KAN10				Sg	Sg	18 29 23.1	-0.5
KAN08	Anthony NE Sta	0.33	330		Pg	18 29 19.8	+0.1
KAN08				Sg	Sg	18 29 24.1	+0.1
KS20	Mayfield South	0.33	31		Pg	18 29 20.7	+1.0
KS20				Sg	Sg	18 29 25.7	+1.5
KS21	Milan North St	0.35	14	Pg	Pg	18 29 20.7	+0.6
KS21	Milan North St	0.35	14		Sg	18 29 26.2	+1.3
KAN16	Harper SW Stat	0.37	320	Pg	Pg	18 29 20.3	-0.1
KAN16				Sg	Sg	18 29 25.3	+0.1
OK032	Salt Plains WL	0.38	249		Pg	18 29 20.2	-0.4
OK032				Sg	Sg	18 29 24.8	-0.8
KAN12	Harper NE Stat	0.40	333		Pg	18 29 21.1	+0.1
KAN12				Sg	Sg	18 29 26.9	+0.6
CROK	Carrier	0.47	202	Pg	Pg	18 29 22.4	+0.2
CROK				Sg	Sg	18 29 28.9	+0.5
BLOK	Blackwell	0.48	112	Pg	Pb	18 29 23.7	+0.1
T35A	Sooner Cattle	1.01	91		Pn	18 29 33.4	+0.1
T35B	Sooner Cattle	1.01	91	P	Pn	18 29 33.5	+0.2
	baz=272,SNR=663						
T35B				S	Sn	18 29 47.9	+0.3
	baz=272						
U32A	Winter Ranch,	1.14	241		Pb	18 29 33.9	-1.0
U32A	Winter Ranch,	1.14	241	P	Pb	18 29 34.0	-0.8
	baz=58,SNR=148						
U32A				S	Sg	18 29 48.4	-1.3
	baz=58						
QUOK	Quay	1.15	132		Pn	18 29 35.7	+0.4
OK029	Liberty Lake	1.17	167		Pn	18 29 35.6	0.0
OK031	S. Brethren Rd	1.24	142		Pg	18 29 37.2	+0.4
OK030	Cody Creek RV	1.29	142		Pg	18 29 37.9	+0.2
BCOK	Bluff Creek, N	1.29	174		Pg	18 29 37.5	-0.3
OK005	Luther M Schoo	1.37	160		Pg	18 29 39.2	-0.1
OK009	Oakdale Elemen	1.39	168		Pg	18 29 39.6	-0.1
OK025	Westminster Rd	1.40	165		Pg	18 29 39.8	-0.2
OKCFA	Oklahoma City	1.55	170		Pg	18 29 42.1	-0.6
OKCFA	Oklahoma City	1.55	170	P	Pb	18 29 41.9	+0.1
	baz=349,SNR=64						
OKCFA				S	Sg	18 30 03.4	+0.6
	baz=349						
OKCSW	OKLAHOMA CITY	1.56	170		Pg	18 29 42.5	-0.5
R32A	Long Quarter,	1.66	333		Pn	18 29 43.5	+1.2
R32A	Long Quarter,	1.66	333	P	Pn	18 29 43.6	+1.3
	baz=155,SNR=381						
R32A				S	Sn	18 30 04.8	+1.2
	baz=155						
OK011	Prague	1.70	149	Pn	Pb	18 29 44.5	+0.1
FNO	Franklin	1.71	170		Pb	18 29 44.3	-0.3
TUL1	Leonard	1.90	122	P	Pb	18 29 47.5	-0.3
	baz=303,SNR=326						
TUL1				S	Sg	18 30 13.9	-0.2
	baz=303						
TUL1	Leonard	1.90	122		Pb	18 29 47.4	-0.3
TUL1				IAmb_Lg		18 30 18.2	
	comp=Z,2µm,0.8s						
TUL1	Leonard	1.90	122	P	Pb	18 29 47.0	-0.8
	baz=303,SNR=366						
TUL1				S	Sg	18 30 13.4	-0.7
	baz=303						
X34A	Smith Ranch, M	2.34	181	Pn	Pn	18 29 53.4	+1.8
X34A				IAmb_Lg		18 30 28.3	
	comp=Z,1µm,0.7s						
KSU1	Kansas State U	2.34	23	P	Pn	18 29 53.5	+1.8
	baz=205,SNR=112						
KSU1				Sb	Sb	18 30 26.6	+2.2
	baz=205						
KSU1	Kansas State U	2.34	23	Pn	Pn	18 29 53.2	+1.5
KSU1	Kansas State U	2.34	23	P	Pn	18 29 53.5	+1.8
	baz=205,SNR=79						
WMOK	Wichita Mounta	2.35	201	P	Pn	18 29 52.5	+0.7
	baz=19,SNR=180						
WMOK	Wichita Mounta	2.35	201		Pn	18 29 52.4	+0.7
WMOK				IAmb_Lg		18 30 31.8	
	comp=Z,886nm,0.9s						
WMOK	Wichita Mounta	2.35	201	P	Pn	18 29 52.5	+0.7
	baz=19,SNR=329						
WMOK				S	Sn	18 30 22.5	+1.8
	baz=19						
CBKS	Cedar Bluff	2.43	321	P	Pn	18 29 54.1	+1.1
	baz=141,SNR=224						
CBKS				Sb	Sb	18 30 27.5	+0.5
	baz=141						
CBKS	Cedar Bluff	2.43	321	Pn	Pn	18 29 53.9	+1.0
CBKS	Cedar Bluff	2.43	321	P	Pn	18 29 54.0	+1.1
	baz=141,SNR=165						
CBKS				S	Sn	18 30 24.9	+2.1
	baz=141						
U38A	Gravette	2.77	99		Pn	18 29 59.6	+2.1
U38A	Gravette	2.77	99	P	Pb	18 29 59.9	-2.7
	baz=281,SNR=111						
LOOK	Love County	2.98	171	Pn	Pn	18 30 01.9	+1.4
LOOK				IAmb_Lg		18 30 53.1	
	comp=Z,567nm,0.9s						
X37A	Clayton	3.05	140		Pn	18 30 02.9	+1.5
X37A				IAmb_Lg		18 30 59.3	
	comp=Z,1µm,0.9s						
X37A	Clayton	3.05	140	P	Pn	18 30 03.3	+1.9
	baz=320,SNR=256						
HHAR	Hobbs	3.15	101	Pn	Pn	18 30 05.0	+2.2
HHAR				IAmb_Lg		18 31 04.1	
	comp=Z,593nm,0.8s						
HHAR	Hobbs	3.15	101	P	Pn	18 30 05.3	+2.5
	baz=283						
S39A	Bolivar	3.62	77		Pn	18 30 10.6	+1.4
S39A	Bolivar	3.62	77	P	Pn	18 30 10.9	+1.6
	baz=260,SNR=167						
Z35A	Perchaven, San	3.63	173		Pn	18 30 10.5	+1.2
Z35A	Perchaven, San	3.63	173	P	Pn	18 30 11.1	+1.7
	baz=353,SNR=56						
W39A	Magazine	3.67	117	P	Pn	18 30 11.8	+1.9
	baz=299,SNR=17						
W39A	Magazine	3.67	117		Pn	18 30 11.4	+1.6
W39A				IAmb_Lg		18 31 13.6	
	comp=Z,855nm,1.0s						
W39A	Magazine	3.67	117	P	Pn	18 30 11.4	+1.6
	baz=299,SNR=52						
AMTX	Amarillo	3.78	238	P	Pn	18 30 12.7	+1.2
	baz=55						
AMTX				Sb	Sb	18 31 10.3	+4.4
	baz=55						
AMTX	Amarillo	3.78	238	Pn	Pn	18 30 12.4	+0.9
AMTX	Amarillo	3.78	238	P	Pn	18 30 12.9	+1.4
	baz=55						
N33B	J Bar K, Exete	3.80	4	P	Pn	18 30 12.3	+0.6
	baz=185						
U40A	Yellville	4.00	97	P	Pn	18 30 16.2	+1.7
	baz=280,SNR=51						
U40A				S	Sn	18 31 04.1	+2.7
	baz=280						
U40A	Yellville	4.00	97		Pn	18 30 16.1	+1.7
U40A				IAmb_Lg		18 31 26.0	
	comp=Z,503nm,0.8s						
U40A	Yellville	4.00	97	P	Pn	18 30 16.1	+1.7
	baz=280,SNR=126						
U40A				P	Pn	18 30 16.1	+1.7
	baz=280,SNR=126						
MIAR	Mount Ida	4.17	124	P	Pn	18 30 18.8	+2.1
	baz=306,SNR=24						
MIAR				S	Sn	18 31 08.6	+3.2
	baz=306						
MIAR	Mount Ida	4.17	124		Pn	18 30 18.6	+1.9
MIAR				IAmb_Lg		18 31 27.1	
	comp=Z,738nm,1.2s						
MIAR	Mount Ida	4.17	124	P	Pn	18 30 18.8	+2.1
	baz=306,SNR=76						
N35A	Tabor	4.25	22		Pn	18 30 19.4	+1.5
N35A	Tabor	4.25	22	P	Pn	18 30 19.4	+1.5
	baz=204,SNR=40						
P38A	Dawn	4.28	50		Pn	18 30 19.4	+1.1
P38A				IAmb_Lg		18 31 32.0	
	comp=Z,474nm,0.9s						
Z38A	Mt. Pleasant	4.33	147		Pn	18 30 20.0	+1.1
Z38A				IAmb_Lg		18 31 35.1	
	comp=Z,673nm,0.9s						
Z38A	Mt. Pleasant	4.33	147	P	Pn	18 30 20.5	+1.6
	baz=328,SNR=12						
KSCO	Kaye Shedlock'	4.36	300	P	Pn	18 30 20.4	+0.9
	baz=117,SNR=14						
KSCO				Sb	Sb	18 31 27.2	+4.7
	baz=117						
KSCO	Kaye Shedlock'	4.36	300		Pn	18 30 20.5	+0.9
KSCO				IAmb_Lg		18 31 38.4	
	comp=Z,850nm,0.7s						
KSCO	Kaye Shedlock'	4.36	300	P	Pn	18 30 20.4	+0.9
	baz=117,SNR=19						
MGMO	Mountain Grove	4.41	86		Pn	18 30 21.8	+1.8
MGMO				IAmb_Lg		18 31 32.5	
	comp=Z,335nm,0.8s						
BGNE	Belgrade	4.47	356	P	Pn	18 30 22.3	+1.4
	baz=177,SNR=14						
BGNE	Belgrade	4.47	356		Pn	18 30 22.2	+1.3
BGNE	Belgrade	4.47	356	P	Pn	18 30 22.3	+1.4
	baz=177,SNR=65						
R40A	Maddies Statio	4.57	71		Pn	18 30 23.8	+1.5
R40A	Maddies Statio	4.57	71	P	Pn	18 30 23.9	+1.6
	baz=255,SNR=79						
ABTX	Abilene, Hawle	4.58	200	P	Pn	18 30 23.0	+0.6
	baz=18,SNR=9.0						
ABTX	Abilene, Hawle	4.58	200		Pn	18 30 22.9	+0.6
ABTX				IAmb_Lg		18 31 37.5	
	comp=Z,414nm,0.9s						
ABTX	Abilene, Hawle	4.58	200	P	Pn	18 30 22.7	+0.3
	baz=18						
FCAR	Ozark Folk Cen	4.67	101		Pn	18 30 25.2	+1.5
FCAR				IAmb_Lg		18 31 46.8	
	comp=Z,344nm,0.8s						
X40A	Basin Creek Fa	4.70	120	P	Pn	18 30 27.1	+3.0
	baz=303,SNR=18						
X40A	Basin Creek Fa	4.70	120		Pn	18 30 25.9	+1.8
X40A				IAmb_Lg		18 31 44.2	
	comp=Z,342nm,0.7s						
X40A	Basin Creek Fa	4.70	120	P	Pn	18 30 25.9	+1.8
	baz=303,SNR=66						
X40A				P	Pn	18 30 25.9	+1.8
	baz=303,SNR=66						
WHAR	Wooly Hollow	4.73	109		Pn	18 30 25.8	+1.3
W41B	Gary Mavity, V	4.81	110	P	Pn	18 30 27.4	+1.8
	baz=293						
W41B	Gary Mavity, V	4.81	110	P	Pn	18 30 27.2	+1.7
	baz=293,SNR=46						
WHTX	Lake Whitney,	4.95	177	P	Pn	18 30 28.2	+0.7
	baz=356,SNR=14						
WHTX				S	Sn	18 31 23.4	-1.3
	baz=356						
WHTX	Lake Whitney,	4.95	177		Pn	18 30 28.3	+0.9
WHTX				IAmb_Lg		18 31 59.3	
	comp=Z,426nm,1.0s						
WHTX	Lake Whitney,	4.95	177	P	Pn	18 30 28.2	+0.7
	baz=356,SNR=94						
WLAR	White Oak Lake	5.00	129		Pn	18 30 30.4	+2.2
WLAR				IAmb_Lg		18 32 00.9	
	comp=Z,452nm,0.7s						
MSTX	Muleshoe	5.05	235	P	Pn	18 30 30.2	+1.2
	baz=52,SNR=13						
MSTX				Sb	Sb	18 31 48.1	+5.7
	baz=52						
MSTX	Muleshoe	5.05	235		Pn	18 30 29.7	+0.8
L34A	Svendsen Farm,	5.13	12		Pn	18 30 30.5	+0.5
237A	Washetta, Mont	5.19	161		Pn	18 30 31.4	+0.6
237A				IAmb_Lg		18 32 10.2	
	comp=Z,606nm,1.1s						
237A	Washetta, Mont	5.19	161	P	Pn	18 30 31.3	+0.6
	baz=342,SNR=20						
P40A	Paris	5.19	58		Pn	18 30 31.9	+1.0
P40A				IAmb_Lg		18 32 05.2	
	comp=Z,274nm,0.7s						
P40A	Paris	5.19	58	P	Pn	18 30 32.4	+1.6
	baz=242,SNR=28						
OGNE	Ogallala	5.20	322	P	Pn	18 30 33.0	+2.0
	baz=139,SNR=22						
OGNE	Ogallala	5.20	322		Pn	18 30 32.3	+1.3
OGNE	Ogallala	5.20	322	P	Pn	18 30 33.0	+2.0
	baz=139,SNR=12						
N38A	Joes South For	5.22	41		Pn	18 30 32.6	+1.3
N38A				IAmb_Lg		18 32 15.3	
	comp=Z,323nm,0.7s						
N38A	Joes South For	5.22	41	P	Pn	18 30 32.6	+1.3
	baz=224,SNR=52						
CCM	Cathedral Cave	5.31	76	P	Pn	18 30 33.8	+1.4
	baz=260						
CCM	Cathedral Cave	5.31	76		Pn	18 30 33.6	+1.2
CCM				IAmb_Lg		18 32 07.0	
	comp=Z,346nm,0.8s						
CCM	Cathedral Cave	5.31	76	P	Pn	18 30 33.6	+1.2
	baz=260,SNR=26						
T25A	Trinidad	5.32	274	P	Pn	18 30 33.1	+0.3
	baz=90,SNR=14						
T25A	Trinidad	5.32	274		Pn	18 30 33.1	+0.3
T25A				IAmb_Lg		18 32 15.1	
	comp=Z,587nm,0.9s						
T42A	Van Buren	5.35	87		Pn	18 30 35.0	+2.1
LCAR	Lake Charles	5.40	97		Pn	18 30 35.7	+2.0
Z41A	Richland Creek	5.49	131	P	Pn	18 30 37.3	+2.5
	baz=313						
K31A	O'Neill	5.72	353		Pn	18 30 39.3	+1.1
K31A	O'Neill	5.72	353	P	Pn	18 30 39.5	+1.3
	baz=173,SNR=10						
CCAR	Cane Creek	5.75	120	Pn	Pn	18 30 37.3	-1.2
CCAR				IAmb_Lg		18 32 22.0	
	comp=Z,412nm,0.9s						

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NATX  Nacogdoches        5.77 153  S      Sn     18 31 43.9  -1.2
      baz=334
NATX  Nacogdoches        5.77 153  Pn     Pn     18 30 37.6  -1.3
PBMO  Poplar Bluff       5.89  89         Pn     18 30 40.7  +0.3
PBMO                               IAmb_Lg       18 32 22.1
      comp=Z,488nm,1.1s
HBAR  Harrisburg         5.91 101  Pn     Pn     18 30 40.9  +0.1
FVM   French Village     5.93  78         Pn     18 30 41.9  +0.8
FVM   French Village     5.93  78  P      Pn     18 30 42.2  +1.2
      baz=262,SNR=14
SCIA  State Center       6.08  34  P      Pn     18 30 44.9  +1.9
      baz=217,SNR=9.2
SCIA                               S      Sn     18 31 53.4  +0.7
      baz=217
SCIA  State Center       6.08  34         Pn     18 30 43.7  +0.7
SCIA                               IAmb_Lg       18 32 39.1
      comp=Z,462nm,0.8s
435B  Jarrell            6.15 179  P      Pn     18 30 44.1  +0.2
      baz=358,SNR=11
435B  Jarrell            6.15 179         Pn     18 30 44.1  +0.2
435B                               IAmb_Lg       18 32 31.4
      comp=Z,461nm,0.9s
435B  Jarrell            6.15 179  P      Pn     18 30 44.1  +0.2
      baz=358,SNR=15
Q24A  Divide             6.17 291  P      Pn     18 30 44.9  +0.3
      baz=107,SNR=8.8
Q24A                               S      Sn     18 31 54.1  -1.2
      baz=107
LPAR  Lepanto            6.18 100  Pn     Pn     18 30 45.0  +0.6
SLM   Saint Louis        6.20  72  Pn     Pn     18 30 45.4  +0.7
SLM                                       Sn     18 31 55.6  -0.1
SLM                                       LR     18 32 28.1
SLM                                IAmb_Lg       18 32 36.8
      comp=Z,292nm,1.0s
SDCO  Great Sand Dun     6.21 280  P      Pn     18 30 46.6  +1.5
      baz=95,SNR=20
SDCO                               Sb     Sb     18 32 24.7  +8.7
      baz=95
SDCO  Great Sand Dun     6.21 280         Pn     18 30 44.2  -0.9
SDCO                               IAmb_Lg       18 32 37.9
      comp=Z,370nm,1.0s
GNAR  Gosnell            6.32  97  Pn     Pn     18 30 45.9  -0.5
GNAR                               IAmb_Lg       18 32 48.5
      comp=Z,473nm,0.8s
PEBM  Pemiscott Bayo     6.42  95  Pn     Pn     18 30 48.1  +0.4
PARMO Parma              6.44  90  Pn     Pn     18 30 48.3  +0.3
PVMO  Portageville       6.51  92  IAmb_Lg       18 32 46.4
      comp=Z,341nm,0.7s
N41A  Harden Midland     6.58  53         Pn     18 30 51.2  +1.4
N41A                               IAmb_Lg       18 32 42.4
      comp=Z,411nm,0.9s
N41A  Harden Midland     6.58  53  P      Pn     18 30 51.9  +2.0
      baz=238,SNR=14
MET   Memphis--Engin     6.60 104  Pn     Pn     18 30 51.1  +0.9
HENM  Henderson Moun     6.66  89  Pn     Pn     18 30 50.8  -0.2
JCT   Junction City      6.67 195  P      Pn     18 30 50.9  -0.2
      baz=14,SNR=10
JCT   Junction City      6.67 195         Pn     18 30 50.9  -0.2
JCT                                IAmb_Lg       18 32 56.9
      comp=Z,363nm,0.8s
JCT   Junction City      6.67 195  P      Pn     18 30 51.0  -0.2
      baz=14,SNR=15
LNXT  Lenox              6.72  95  Pn     Pn     18 30 52.9  +1.1
143A  Socs Landing,      6.73 127         Pn     18 30 51.8  -0.1
143A                               IAmb_Lg       18 33 04.6
      comp=Z,237nm,1.1s
ISCO  Idaho Springs      6.79 297  P      Pn     18 30 53.6  +0.6
      baz=113,SNR=20
ISCO  Idaho Springs      6.79 297         Pn     18 30 53.7  +0.6
ISCO                               IAmb_Lg       18 32 47.5
      comp=Z,259nm,0.7s
ISCO  Idaho Springs      6.79 297  P      Pn     18 30 53.8  +0.7
      baz=113,SNR=11
S44A  Carbondale         6.83  81         Pn     18 30 54.0  +0.7
S44A                               IAmb_Lg       18 32 48.6
      comp=Z,226nm,0.7s
S44A  Carbondale         6.83  81  P      Pn     18 30 55.1  +1.8
      baz=266,SNR=28
ECSD  EROS Data Cent     6.84   7  P      Pn     18 30 53.7  +0.2
      baz=188,SNR=22
ECSD  EROS Data Cent     6.84   7         Pn     18 30 53.3  -0.2
ECSD                               IAmb_Lg       18 33 00.1
      comp=Z,288nm,0.9s
GLAT  Glass              6.86  93  Pn     Pn     18 30 54.7  +1.0
SIUC  Southern Illin     6.86  81         Pn     18 30 54.2  +0.5
SIUC                               IAmb_Lg       18 33 02.6
      comp=Z,198nm,0.8s
HICK  Hickman            6.87  91  Pn     Pn     18 30 54.6  +0.8
HALT  Halls              6.87  96  Pn     Pn     18 30 56.2  +2.3
K38A  Parkersburg        6.87  32         Pn     18 30 54.2  +0.3
P43A  Skaggs, Pawnee     7.02  65         Pn     18 30 56.6  +0.7
P43A                               IAmb_Lg       18 33 10.4
      comp=Z,247nm,0.7s
P43A  Skaggs, Pawnee     7.02  65  P      Pn     18 30 57.2  +1.2
      baz=250,SNR=24
342A  Flagon Creek P     7.16 139  Pn     Pn     18 30 59.0  +1.2
HKT   Hockley            7.16 166  Pn     Pn     18 30 57.9  +0.1
W45A  Hickory Valley     7.18 102  Pn     Pn     18 30 59.6  +1.5
W45A                               IAmb_Lg       18 33 00.3
      comp=Z,363nm,1.0s
UTMT  University of      7.18  92  Pn     Pn     18 30 59.0  +0.8
Q44A  Meyer Farm, Va     7.19  72         Pn     18 30 59.8  +1.5
Q44A                               IAmb_Lg       18 33 09.7
      comp=Z,376nm,1.0s
Q44A  Meyer Farm, Va     7.19  72  P      Pn     18 30 59.9  +1.7
      baz=257,SNR=8.3
L40A  Anamosa            7.19  43         Pn     18 30 59.1  +0.8
L40A                               IAmb_Lg       18 33 12.0
      comp=Z,348nm,1.1s
ANMO  Albuquerque        7.32 257  Pn     Pn     18 31 02.6  +2.3
      comp=Z,0.4nm,0.3s,baz=80,slow=16,SNR=7.9
ANMO                               Sn     Sn     18 32 26.4  +2.8
      comp=Z,4.7nm,0.3s,baz=98,slow=18,SNR=1.8
ANMO                               Lg     Lg     18 33 02.1
      comp=Z,20nm,0.3s,baz=15,slow=19,SNR=11
ANMO  Albuquerque        7.32 257  P      Pn     18 31 03.6  +3.3
      baz=72
ANMO  Albuquerque        7.32 257  Pn     Pn     18 31 01.6  +1.4
Y45A  Yeager Farm, C     7.38 112         Pn     18 31 01.5  +0.6
Y45A                               IAmb_Lg       18 33 18.8
      comp=Z,272nm,0.9s
N23A  Red Feather La     7.49 304  P      Pn     18 31 04.0  +1.3
      baz=119,SNR=10.0
HDIL  Hopedale           7.54  59  P      Pn     18 31 04.9  +1.9
      baz=244,SNR=19
HDIL  Hopedale           7.54  59         Pn     18 31 04.7  +1.6
HDIL  Hopedale           7.54  59  P      Pn     18 31 04.7  +1.6
      baz=244,SNR=24
SUSD  Miller             7.55 354  P      Pn     18 31 03.5  +0.3
      baz=173
SUSD  Miller             7.55 354         Pn     18 31 03.7  +0.5
SMCO  Snowmass           7.60 290         Pn     18 31 04.9  +0.7
SMCO                               IAmb_Lg       18 33 16.0
      comp=Z,178nm,0.9s
BNM   Barren Site        7.74 252         Pn     18 31 05.6  -0.5
I37A  Lemond, Waseca     7.81  24  Pn     Pn     18 31 08.1  +1.3
I37A                               IAmb_Lg       18 33 31.9
      comp=Z,274nm,0.8s
OLIL  Olney              7.86  74         Pn     18 31 08.7  +1.3
OLIL                               IAmb_Lg       18 33 29.3
      comp=Z,301nm,1.1s
O44A  Mansfield          7.96  63         Pn     18 31 09.6  +0.7
O44A                               IAmb_Lg       18 33 37.7
      comp=Z,180nm,0.7s
Y22D  IRIS PASSCAL I     7.99 252  Pn     Pn     18 31 08.6  -0.8
344A  Westbrook Farm     8.00 131  Pn     Pn     18 31 11.1  +1.8
LENM  Lemitar            8.00 252  Pn     Pn     18 31 08.9  -0.6
WVT   Waverly            8.04  93  P      Pn     18 31 11.8  +1.8
      baz=279
WVT   Waverly            8.04  93         Pn     18 31 10.4  +0.5
L42A  Oliver, Polo       8.05  49         Pn     18 31 10.6  +0.6
L42A                               IAmb_Lg       18 33 32.1
      comp=Z,248nm,1.0s
L42A  Oliver, Polo       8.05  49  P      Pn     18 31 11.4  +1.3
      baz=234,SNR=7.0
735A  Kenedy             8.06 180         Pn     18 31 11.0  +0.7
735A                               IAmb_Lg       18 33 46.1
      comp=Z,267nm,0.9s
PLAL  Pickwick Lake      8.10 101         Pn     18 31 11.9  +1.2
MNTX  Cornudas Mount     8.18 232  P      Pn     18 31 12.5  +0.6
      baz=48,SNR=35
MNTX  Cornudas Mount     8.18 232         Pn     18 31 12.4  +0.4
MNTX                               IAmb_Lg       18 33 42.4
      comp=Z,155nm,0.9s
MNTX  Cornudas Mount     8.18 232  P      Pn     18 31 12.6  +0.6
      baz=48,SNR=13
JFWS  Jewell Farm        8.30  42  P      Pn     18 31 14.2  +0.7
      baz=227,SNR=18
JFWS  Jewell Farm        8.30  42         Pn     18 31 14.2  +0.7
JFWS                               IAmb_Lg       18 33 57.5
      comp=Z,169nm,0.7s
JFWS  Jewell Farm        8.30  42  P      Pn     18 31 14.4  +0.9
      baz=227,SNR=45
146A  Union              8.35 118  Pn     Pn     18 31 17.0  +2.8
T47A  Sharon Grove       8.54  86         Pn     18 31 19.1  +2.4
MVCO  Mesa Verde         8.58 275  Pn     Pn     18 31 16.8  -0.8
RSSD  Black Hills        8.61 328  P      Pn     18 31 19.8  +1.9
      baz=145
RSSD  Black Hills        8.61 328         Pn     18 31 18.6  +0.7
RSSD                               IAmb_Lg       18 33 54.2
      comp=Z,242nm,0.9s
833A  Chaparral WMA,     8.70 190  P      Pn     18 31 20.6  +1.6
      baz=8.2
RWWY  Rawlins            8.72 306         Pn     18 31 19.6  +0.2
RWWY                               IAmb_Lg       18 33 54.3
      comp=Z,330nm,1.1s
P46A  Rosedale           8.72  69  Pn     Pn     18 31 20.5  +1.2
M44A  Midewin, Midew     8.76  57  IAmb_Lg       18 34 00.2
      comp=Z,296nm,1.1s
Z47A  Carrollton         8.78 112         Pn     18 31 22.7  +2.5
O20A  White River Ci     8.80 294  Pn     Pn     18 31 21.8  +1.2
K22A  Casper             8.82 313  Pn     Pn     18 31 20.4  -0.4
I40A  Norwalk            8.82  36         Pn     18 31 20.9  +0.2
I40A  Norwalk            8.82  36  P      Pn     18 31 21.1  +0.5
      baz=221,SNR=33
V48A  Smith Brothers     8.91  94  Pn     Pn     18 31 21.6  -0.4
F33A  5 Mile Ranch,      8.96   7  Pn     Pn     18 31 21.6  -0.9
F33A                               IAmb_Lg       18 33 57.7
      comp=Z,273nm,1.1s
SFIN  Lafayette          9.03  64  P      Pn     18 31 26.0  +2.5
      baz=251
SFIN  Lafayette          9.03  64         Pn     18 31 24.1  +0.7
TX31  Lajitas Ar. Si     9.05 215         Pn     18 31 23.2  -0.7
TX31  Lajitas Ar. Si     9.05 215  P      Pn     18 31 23.8  -0.2
      baz=31,SNR=24
TX32  Lajitas Array      9.05 215         Pn     18 31 23.6  -0.4
TXAR  Lajitas Array      9.05 215  Pn     Pn     18 31 23.3  -0.6
      comp=Z,2.7nm,0.3s,baz=46,slow=11,SNR=40
TXAR                               Sn     Sn     18 33 03.6  -2.4
      comp=Z,3.2nm,0.3s,baz=47,slow=19,SNR=1.5
TXAR                               Lg     Lg     18 33 55.6
      comp=Z,10nm,0.3s,baz=52,slow=24,SNR=7.7
TXAR                               LR     LR     18 35 43.0
      comp=Z,82nm,18.0s,baz=0.0,slow=43
TXAR  Lajitas Array      9.05 215         Pn     18 31 23.5  -0.5
X48A  Hartselle          9.07 103  Pn     Pn     18 31 25.6  +1.5
SPMN  Marine on St.      9.08  23  P      Pn     18 31 24.4  +0.2
      baz=206,SNR=11
SPMN  Marine on St.      9.08  23         Pn     18 31 23.1  -1.1
BLO   Bloomington        9.15  73         Pn     18 31 25.5  +0.4
WCI   Wyandotte Cave     9.20  79  P      Pn     18 31 27.8  +2.0
      baz=266
WCI   Wyandotte Cave     9.20  79         Pn     18 31 26.3  +0.5
L44A  Lake County Fo     9.23  52         Pn     18 31 26.2  -0.1
L44A                               IAmb_Lg       18 34 17.7
      comp=Z,241nm,1.1s
CLTN  Cedars of Leba     9.25  92         Pn     18 31 27.3  +0.8
K43A  Burlington         9.26  49         Pn     18 31 26.7  +0.1
K43A                               IAmb_Lg       18 34 06.8
      comp=Z,226nm,0.9s
121A  Cookes Peak, D     9.34 245  P      Pn     18 31 29.1  +1.2
      baz=59,SNR=6.0
121A  Cookes Peak, D     9.34 245         Pn     18 31 26.2  -1.8
F36A  Milaca             9.46  18  Pn     Pn     18 31 28.0  -1.4
U49A  Red Boiling Sp     9.64  89         Pn     18 31 31.5  -0.3
I42A  Draeger Farm,      9.68  41         Pn     18 31 32.6  +0.2
SWET  Sewanee            9.74  97         Pn     18 31 33.3   0.0
Y49A  Blount Mountai     9.77 105  Pn     Pn     18 31 34.2  +0.5
E28A  Huff               9.87 348  Pn     Pn     18 31 34.0  -0.9
RDMU  Red Mountain       9.90 295  Pn     Pn     18 31 33.6  -2.1
P48A  Milroy            10.04  72         Pn     18 31 36.6  -0.6
R49A  Shelbyville       10.09  79  Pn     Pn     18 31 37.1  -0.9
P18A  Preston Nutter    10.17 289  Pn     Pn     18 31 37.2  -2.2
FPAL  Fort Paine        10.17 100         Pn     18 31 39.6  +0.4
X18A  Snowflake         10.19 260  Pn     Pn     18 31 38.0  -1.6
N47A  Urbana            10.20  64         Pn     18 31 39.2  -0.3
L46A  Eue Claire        10.21  57         Pn     18 31 39.2  -0.5
W50A  Signal Mountai    10.23  96  Pn     Pn     18 31 39.8  -0.3
SRU   San Rafael Swe    10.29 286  Pn     Pn     18 31 40.2  -0.8
T50A  Nancy             10.35  86         Pn     18 31 42.2  +0.7
P49A  Miami Univ. Ec    10.59  72  P      Pn     18 31 44.3  -0.6
      baz=260
P49A  Miami Univ. Ec    10.59  72         Pn     18 31 44.0  -0.9
H43A  Windswept, Lux    10.68  42  Pn     Pn     18 31 45.8  -0.2
250A  Grady             10.71 114  Pn     Pn     18 31 45.3  -1.2
E38A  The Farm, Brul    10.71  24  Pn     Pn     18 31 44.7  -1.8
R50A  Paris             10.75  79         Pn     18 31 46.5  -0.6
X51A  Calhoun           10.76  99  Pn     Pn     18 31 47.4  +0.2
BW06  Boulder Array     10.76 306         Pn     18 31 46.4  -1.1
PD31  Pinedale Array    10.76 306         Pn     18 31 46.5  -1.0
PDAR  Pinedale Array    10.76 306  Pn     Pn     18 31 46.9  -0.5
      comp=Z,0.6nm,0.3s,baz=116,slow=15,SNR=13
PDAR                               Pg            18 32 34.0
      comp=Z,1.2nm,0.3s,baz=113,slow=15,SNR=13
PDAR                               Sn     Sn     18 33 46.0  -2.1
      comp=Z,1.2nm,0.3s,baz=94,slow=15,SNR=1.6
PDAR                               Lg     Lg     18 34 45.9
      comp=Z,3.6nm,0.3s,baz=92,slow=31,SNR=2.0
PDAR                               LR     LR     18 36 20.7
      comp=Z,133nm,20.2s,baz=286,slow=40
Q16A  Castle Valley     10.77 285  Pn     Pn     18 31 45.9  -1.7
CPCT  Cooper Cave       10.81  94         Pn     18 31 48.0  +0.1
V51A  Loudon            10.88  92         Pn     18 31 48.6  -0.2
V51A  Loudon            10.88  92  P      Pn     18 31 50.9  +2.1
      baz=280,SNR=8.2
Z51A  Franklin          10.93 106  Pn     Pn     18 31 49.7  +0.2
MDND  Maddock           10.98 354  Pn     Pn     18 31 49.5  -0.7
O49A  Covington         11.01  69         Pn     18 31 49.9  -0.6
319A  Douglas           11.03 243  Pn     Pn     18 31 50.0  -1.1
COWI  Conover           11.20  33         Pn     18 31 52.0  -1.2
N49A  Columbus Grove    11.30  65  Pn     Pn     18 31 53.3  -1.3
S51A  Beattyville       11.32  82         Pn     18 31 54.5  -0.3
TKL   Tuckaleechee C    11.37  92  Pn     Pn     18 31 56.4  +0.9
      comp=Z,2.1nm,0.3s,baz=230,slow=7.0,SNR=31
TKL                                Sn     Sn     18 34 01.6  -1.0
      comp=Z,0.6nm,0.3s,baz=304,slow=17,SNR=1.7
TKL                                Lg     Lg     18 35 04.6
      comp=Z,1.6nm,0.3s,baz=245,slow=13,SNR=4.0
TKL   Tuckaleechee C    11.37  92         Pn     18 31 55.7  +0.1
F42A  Maple Grove Fa    11.39  36  Pn     Pn     18 31 54.3  -1.5
TZTN  Tazewell          11.42  88  Pn     Pn     18 31 57.2  +0.9
AGMN  Agassiz Nation    11.44   6  Pn     Pn     18 31 53.9  -2.5
L48A  N Adams           11.45  60         Pn     18 31 56.1  -0.6
V52A  Sevierville       11.48  91  Pn     Pn     18 31 57.2  +0.2
Q51A  Peebles           11.57  75         Pn     18 31 57.5  -0.8
LAO   LASA Array        11.59 330  Pn     Pn     18 31 56.9  -1.8
HWUT  Hardware Ranch    11.66 298  Pn     Pn     18 31 58.9  -0.8
J47A  Sunmer            11.74  54  Pn     Pn     18 32 00.5   0.0
AHID  Auburn Hatcher    11.78 304  Pn     Pn     18 32 00.1  -1.2
B35A  Bob, Littlefor    11.79  13         Pn     18 31 58.9  -2.3
LOHW  Long Hollow       11.84 308         Pn     18 32 02.0  -0.3
RLMT  Red Lodge         11.91 317  Pn     Pn     18 32 00.9  -2.2
EYMN  Ely               11.93  21  P      Pn     18 32 00.5  -2.6
      baz=205
EYMN  Ely               11.93  21  Pn     Pn     18 32 00.5  -2.6
352A  Blakely           11.94 113  Pn     Pn     18 32 01.5  -1.9
MOOW  Moose Ponds       12.00 309  Pn     Pn     18 32 02.5  -1.9
TPAW  Teton Pass        12.01 307         Pn     18 32 02.8  -1.7
ACSO  Alum Creek Sta    12.03  70         Pn     18 32 03.4  -1.1
AAM   Ann Arbor         12.12  59         Pn     18 32 05.8   0.0
FXWY  Fox Creek         12.12 308  Pn     Pn     18 32 04.0  -2.0
V53A  Saluda            12.14  92         Pn     18 32 06.0  -0.1
FLWY  Flagg Ranch       12.14 310  Pn     Pn     18 32 04.2  -2.1
YMP   Mirror Lake Pl    12.18 314  Pn     Pn     18 32 05.0  -2.0
D41A  Chassel           12.20  31  Pn     Pn     18 32 04.8  -2.0
SPUT  South Promonto    12.20 295  Pn     Pn     18 32 05.4  -1.7
G45A  Suttons Bay       12.20  45  Pn     Pn     18 32 05.6  -1.3
DUG   Dugway, Tooele    12.21 290  Pn     Pn     18 32 05.6  -1.6
M50A  Fremont           12.26  64         Pn     18 32 07.9  +0.2
E43A  Lone Tree Farm    12.39  37  Pn     Pn     18 32 07.8  -1.6
Q52A  Bidwell           12.40  76         Pn     18 32 09.0  -0.6
DGMT  Dagmar            12.45 340  P      Pn     18 32 11.2  +1.0
      baz=156
DGMT  Dagmar            12.45 340  Pn     Pn     18 32 08.4  -1.8
GCMT  Greycliff         12.56 318         Pn     18 32 11.4  -0.5
HVU   Hansel Valley     12.57 297  Pn     Pn     18 32 11.4  -0.8
P52A  Corning           12.58  73  P      Pn     18 32 11.9  -0.2
      baz=263
P52A  Corning           12.58  73         Pn     18 32 10.7  -1.3
YHH   Holmes Hill       12.62 312  Pn     Pn     18 32 13.1  +0.3
YMR   Madison River     12.62 312  Pn     Pn     18 32 12.1  -0.7
R53A  Hurricane         12.62  79  Pn     Pn     18 32 12.3  -0.3
N51A  Ashland           12.63  67         Pn     18 32 11.3  -1.5
GLMI  Grayling          12.68  48         Pn     18 32 11.2  -2.3
U54A  Nelsons Funny     12.80  87         Pn     18 32 13.8  -1.5
PSUT  Pine Spring       12.83 282  Pn     Pn     18 32 15.2  -0.6
YHL   Hebgen Lake       12.85 312  Pn     Pn     18 32 15.8  -0.3
O52A  Adamsville        12.87  71  Pn     Pn     18 32 15.2  -0.8
HODGE Hodges            12.91  97  Pn     Pn     18 32 15.1  -1.5
TIGA  Tifton            12.96 111  Pn     Pn     18 32 16.0  -1.2
553A  Crawfordville     13.00 117  Pn     Pn     18 32 16.6  -1.2
PAULI Pauline           13.11  95  Pn     Pn     18 32 20.0  +0.6
S54A  Dingess, Beckl    13.12  81         Pn     18 32 19.0  -0.5
P53A  Whipple           13.13  74  Pn     Pn     18 32 18.4  -1.2
I49A  Point Hope        13.35  54  Pn     Pn     18 32 20.6  -1.9
O53A  New Philadelph    13.37  71  Pn     Pn     18 32 20.2  -2.7
ULM   Lac du Bonnet     13.37   5  Pn     Pn     18 32 18.5  -4.4
      comp=Z,1.2nm,0.3s,baz=182,slow=12,SNR=20
ULM                                Sn     Sn     18 34 40.2   -11
      comp=Z,1.3nm,0.3s,baz=190,slow=13,SNR=1.9
ULM                                Lg     Lg     18 36 05.5
      comp=Z,1.8nm,0.3s,baz=284,slow=17,SNR=2.5
ULM                                LR     LR     18 37 27.3
      comp=Z,208nm,19.5s,baz=146,slow=37
ULM   Lac du Bonnet     13.37   5  Pn     Pn     18 32 18.7  -4.1
V55A  Taylorsville      13.38  90  Pn     Pn     18 32 20.4  -2.7
KMSC  Kings Mountain    13.43  93  Pn     Pn     18 32 22.9  -0.7
Q54A  Coxs Mills        13.52  76         Pn     18 32 24.1  -0.8
M52A  Chesterland       13.52  65  Pn     Pn     18 32 23.6  -1.3
N53A  Lisbon            13.74  69         Pn     18 32 26.1  -1.9
E46A  Sault Ste Mari    13.77  43  Pn     Pn     18 32 25.6  -2.7
BLA   Blacksburg        13.86  84  Pn     Pn     18 32 29.1  -0.5
O54A  Avella            13.99  71  Pn     Pn     18 32 30.2  -1.2
M53A  WI Miller and     13.99  66  Pn     Pn     18 32 29.9  -1.5
R55A  Marlinton         14.06  79  Pn     Pn     18 32 31.0  -1.4
ELK   Elko              14.13 291  Pn     Pn     18 32 34.6  +1.0
      comp=Z,0.1nm,0.3s,baz=130,slow=16,SNR=1.8
ELK                                Lg     Lg     18 36 34.0
      comp=Z,0.1nm,0.3s,baz=68,slow=16,SNR=1.5
ELK                                LR     LR     18 38 18.7
      comp=Z,120nm,20.0s,baz=328,slow=39
EGMT  Eagleton          14.15 325  Pn     Pn     18 32 31.6  -2.0
N54A  Moraine State     14.40  68  Pn     Pn     18 32 35.4  -1.6
ALLY  Alegheny Colle    14.43  66  Pn     Pn     18 32 37.6  +0.2
W57A  Gilead            14.49  92  Pn     Pn     18 32 38.0  -0.3
M54A  Oil Creek Stat    14.75  66  Pn     Pn     18 32 39.4  -2.4
Q56A  Snyder Ridge,     14.80  76  Pn     Pn     18 32 39.7  -2.8
T57A  Hurt              14.81  84         Pn     18 32 42.3  -0.2
S57A  Dark Hollow, R    14.99  81  Pn     Pn     18 32 43.6  -1.4
S57A                               IAmb   IAmb   18 32 56.8
      comp=Z,39nm,1.9s
V58A  Windy Hill, Pi    15.08  89  Pn     Pn     18 32 44.6  -1.5
V58A                               IAmb   IAmb   18 33 04.7
      comp=Z,18nm,1.4s
O56A  Blue Knob Stat    15.38  72  Pn     Pn     18 32 48.5  -1.7
M55A  Ridgway           15.40  67  Pn     Pn     18 32 49.6  -0.9
M55A                               IAmb   IAmb   18 33 32.9
      comp=Z,29nm,1.4s
PFO   Pinyon Flats O    15.62 263  Lg     Lg     18 37 24.6
      comp=Z,0.1nm,0.3s,baz=132,slow=15,SNR=2.2
WVNY  West Valley, N    15.72  64  Pn     Pn     18 32 51.4  -3.2
WVNY                               IAmb   IAmb   18 33 48.6
      comp=Z,38nm,1.4s
LCH   Last Change Ra    15.87 277  P      Pn     18 32 57.6  +0.9
J54A  Appleton          15.93  61  Pn     Pn     18 32 54.5  -2.8
J54A                               IAmb   IAmb   18 33 48.1
      comp=Z,46nm,1.4s
SSPA  Standing Stone    15.93  71  Pn     Pn     18 32 54.2  -3.1
SADO  Sadowa            16.09  55  Pn     Pn     18 32 54.9  -4.4
      comp=Z,0.8nm,0.3s,baz=262,slow=12,SNR=1.6
SADO                               Sn     Sn     18 35 48.2   -10
      comp=Z,0.5nm,0.3s,baz=268,slow=20,SNR=1.5
SADO                               Lg     Lg     18 37 31.9
      comp=Z,0.9nm,0.3s,baz=290,slow=16,SNR=2.8
T59A  Double "B" Far    16.16  84  Pn     Pn     18 32 58.3  -1.9
T59A                               IAmb   IAmb   18 33 48.2
      comp=Z,54nm,1.9s
NVAR  Mina Array Bea    16.32 281  Pn     Pn     18 33 03.3  +0.7
      comp=Z,0.1nm,0.3s,baz=88,slow=12,SNR=9.9
NVAR                               Lg     Lg     18 37 39.4
      comp=Z,0.1nm,0.3s,baz=31,slow=34,SNR=1.9
L56A  Greenwood         16.42  65  Pn     Pn     18 33 01.5  -2.1
L56A                               IAmb   IAmb   18 33 23.0
      comp=Z,32nm,1.4s
LHV   Little Huntoon    16.49 281  P      Pn     18 33 04.1  -0.3
RYN   Ryan              16.49 282  P      Pn     18 33 05.0  +0.3
N58A  Sunbury           16.84  70  Pn     Pn     18 33 06.8  -2.1
N58A                               IAmb   IAmb   18 33 42.3
      comp=Z,84nm,2.0s
WVOR  Wild Horse Val    16.96 295  Pn     Pn     18 33 09.3  -1.2
DELO  Deloro Mine       17.02  57  Pn     Pn     18 33 06.5  -4.6
DELO                               IAmb   IAmb   18 33 48.1
      comp=Z,74nm,2.0s
MVL   Millersville      17.05  73  Pn     Pn     18 33 10.8  -0.6
F10A  Beach Ranch, E    17.12 308  Pn     Pn     18 33 11.7  -0.8
PECO  Prince Edward     17.27  60  Pn     Pn     18 33 13.2  -0.9
PECO                               IAmb   IAmb   18 33 34.3
      comp=Z,33nm,1.4s
K57A  Scipio Center     17.30  64  Pn     Pn     18 33 12.8  -1.8
K57A                               IAmb   IAmb   18 34 11.3
      comp=Z,61nm,1.5s
NEW   Newport           18.14 315  P      Pn     18 33 26.0  +1.0
      comp=Z,0.4nm,0.3s,baz=105,slow=19,SNR=2.3
NEW                                Lg     Lg     18 38 37.4
      comp=Z,0.1nm,0.3s,baz=29,slow=16,SNR=1.2
EDM   Edmonton          19.57 331  P      P      18 33 38.9  -2.2
EDM                                IAmb   IAmb   18 33 43.0
      comp=Z,12nm,0.7s
YBH   Yreka Blue Hor    19.85 292  P      P      18 33 45.2  +1.0
      comp=Z,0.2nm,0.3s,baz=76,slow=5.0,SNR=7.1
YBH   Yreka Blue Hor    19.85 292  P      P      18 33 41.9  -2.3
FRNY  Flat Rock         19.86  59  P      P      18 33 42.2  -2.0
CMIG  Matias Romero     19.94 172  P      Pn     18 33 46.7  -0.2
      comp=Z,0.7nm,0.3s,baz=327,slow=7.1,SNR=2.3
CMIG                               S      Sn     18 37 39.5  +8.3
      comp=Z,0.5nm,0.3s,baz=49,slow=20,SNR=1.5
BBB   Bella Bella       26.20 315  P      P      18 34 48.0  +0.3
      comp=Z,8.7nm,0.9s,baz=14,slow=8.0,SNR=1.1
BBB                                LR     LR     18 45 04.4
      comp=Z,265nm,21.7s,baz=278,slow=36
YKA   Yellowknife Ar    27.62 343  P      P      18 35 00.8  +0.4
      comp=Z,3.1nm,0.7s,baz=138,slow=9.9,SNR=5.6
ZARC  Zaragoza, Cauc    35.98 139  P      P      18 36 12.4  -1.8
ZARC                               IAmb   IAmb   18 36 18.6
      comp=Z,2.4nm,0.6s
INK   Inuvik            37.13 339  P      P      18 36 23.9  +0.5
      comp=Z,1.2nm,0.7s,baz=126,slow=8.0,SNR=7.5
INK   Inuvik            37.13 339  IAmb   IAmb   18 37 20.9
      comp=Z,9.9nm,1.6s
RES   Resolute Bay      37.86   1  P      P      18 36 29.1  -0.4
      comp=Z,3.1nm,0.9s,baz=180,slow=10,SNR=2.8
HDA   Harding Lake      39.96 329  P      P      18 36 48.8  +1.4
IL31                    40.05 330  P      P      18 36 49.0  +1.0
ILAR  Eielson Array     40.05 330  P      P      18 36 49.5  +1.4
      comp=Z,9.8nm,0.7s,baz=107,slow=7.1,SNR=83
ILAR                               PcP    PcP    18 38 53.6  +0.9
      comp=Z,0.4nm,0.8s,baz=201,slow=2.4,SNR=4.4
ILAR  Eielson Array     40.05 330  P      P      18 36 49.2  +1.0
ILAR                               PcP    PcP    18 38 54.0  +1.3
CCB   Clear Creek Bu    40.39 329  P      P      18 36 52.3  +1.5
CCB                                IAmb   IAmb   18 36 53.0
      comp=Z,6.8nm,0.7s
H23K  Yukon River       41.45 331  P      P      18 37 00.7  +1.0
MLY   Manley            41.70 329  P      P      18 37 02.9  +1.2
MLY                                IAmb   IAmb   18 37 04.4
      comp=Z,4.7nm,0.7s
MLY                                PcP    PcP    18 38 56.8  -1.3
I21K  Tanana            42.25 329  P      P      18 37 07.4  +1.3
TOLK  Toolik Lake Re    42.41 335  P      P      18 37 08.7  +1.2
H21K  Melozitna Rive    42.70 330  P      P      18 37 11.2  +1.3
H21K                               IAmb   IAmb   18 37 12.2
      comp=Z,6.6nm,0.9s
H21K                               PcP    PcP    18 39 02.6  +1.2
ARCES ARCESS Array B    66.07  19  P      P      18 40 00.1  +0.4
      comp=Z,4.7nm,1.0s,baz=306,slow=6.4,SNR=12
NOA   NORSAR Array B    66.68  30  P      P      18 40 04.2  +0.4
      comp=Z,0.2nm,0.6s,baz=307,slow=6.1,SNR=1.7
ESDC  Sonseca Array     70.16  55  P      P      18 40 27.2  +1.2
      comp=Z,0.5nm,0.9s,baz=308,slow=6.5,SNR=5.0
ESDC  Sonseca Array     70.16  55  IAmb   IAmb   18 40 32.5
      comp=Z,2.4nm,1.5s
FINES FINESS Array B    71.92  25  P      P      18 40 36.8  +0.7
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	comp=Z,3.5nm,0.9s,baz=336,slow=8.4,SNR=5.7						
GERES	GERESS Array B	75.19	39	P	P	18 40 56.9	+1.1
	comp=Z,0.7nm,0.7s,baz=337,slow=5.8,SNR=6.9						
AKASG	Malin Array Be	81.07	31	P	P	18 41 29.1	+1.0
	comp=Z,1.0nm,0.5s,baz=314,slow=4.3,SNR=5.9						
AKASG	Malin Array Be	81.07	31	IAmb	IAmb	18 42 22.1	
	comp=Z,3.5nm,1.5s						
DBIC	Dimbokro	88.36	83	LR	LR	19 15 40.1	
	comp=Z,36nm,20.7s,baz=142,slow=32						
ZALV	Zalesovo Beam	89.45	358	P	P	18 42 10.4	+0.4
	comp=Z,0.7nm,0.4s,baz=343,slow=9.2,SNR=2.2						
TORD	Torodi Ar. Bea	89.60	74	P	P	18 42 12.0	+0.6
	comp=Z,0.2nm,0.4s,baz=301,slow=9.9,SNR=2.2						
SONM	Songino Array	92.88	344	P	P	18 42 28.4	+2.1
	comp=Z,0.8nm,0.7s,baz=3.2,slow=2.8,SNR=5.3						
HHC	Hu-ho-hao-te	98.04	338	*e*P	P	18 42 48.1	-1.8
HHC				pmax	pmax		
	comp=Z,15nm,1.0s						
HHC				pmax	pmax		
	comp=Z,92nm,9.3s						
CMAR	Chiang Mai Arr	122.69	341	PKP	PKPdf	18 48 09.7	+0.1
	comp=Z,0.5nm,1.0s,baz=336,slow=2.0,SNR=2.5						
WRA	Warramunga Arr	131.74	276	PKP	PKiKP	18 48 28.0	+0.2
	comp=Z,0.3nm,0.6s,baz=51,slow=1.8,SNR=2.3						
ASAR	Alice Springs	133.98	272	PKP	PKPdf	18 48 32.0	+1.0
	comp=Z,0.3nm,0.8s,baz=72,slow=1.6,SNR=4.8						
MAW	Mawson	147.40	166	PKPbc	PKPbc	18 48 56.5	+0.5
	comp=Z,4.1nm,0.8s,baz=226,slow=5.7,SNR=11						
MAW	Mawson	147.40	166		PKPbc	18 48 57.4	+1.3

IDC ***07*** *18:30:57.0±5.5, 36°.38N×70°.53E, h194km±51km, mb3.1/5, mb1 3.2/10, mb1mx2.9/56, mbtmp3.7/10, Error ellipse: s-maj=41.9km s-min=25.3km az=27.0*
NNC ***07*** *18:31:02.2±4.5, 37°.10N×70°.32E, h0km, mb4.4, mpv4.0, Error ellipse: s-maj=36.0km s-min=33.9km az=122.0*
ISC 07 18:30:59.0±0.9**, 36°.62N**±0°.07×**70°.3E**±0°.1**, h204km, n30, σ1^{s}31**/34**, mb3.1**/4**, 5C, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	6.09	24	P	Pn	18 32 28.9	+1.2
	SNR=35						
UCH	Uchtor	6.47	29	P	Pn	18 32 33.9	+1.1
	SNR=58						
KK31	Karatay Array	6.47	1	⇑P	Pn	18 32 33.1	+0.8
	2.2nm,0.3s,baz=186,slow=12,SNR=77						
KK31				⇑S	S	18 33 42.4	-3.9
	3.8nm,0.4s,baz=196,slow=25,SNR=7.1						
EKS2	Erkin-Say	6.59	23	P	Pn	18 32 35.5	+1.5
	SNR=12						
AAK	Ala-Archa	6.81	27	P	Pn	18 32 37.9	+1.0
	3.3nm,0.3s,baz=192,slow=6.2,SNR=48						
AAK				S	S	18 33 53.9	-0.6
	0.9nm,0.3s,baz=119,slow=19,SNR=16						
AAK	Ala-Archa	6.81	27	P	Pn	18 32 38.3	+1.4
	SNR=16						
AAK	Ala-Archa	6.81	27	⇑P	Pn	18 32 37.7	+0.8
	9.5nm,0.6s						
AAK				S	S	18 33 54.1	-0.3
	17nm,0.7s						
KBK	Karagaybulak	7.00	29	P	Pn	18 32 40.4	+1.1
	SNR=8.4						
CHMS	Chumysh	7.22	27	P	Pn	18 32 43.1	+1.1
	SNR=7.5						
TKM2	Tokmak 2	7.49	31	P	Pn	18 32 46.4	+0.7
	SNR=29						
TKM2	Tokmak 2	7.49	31	⇑P	Pn	18 32 46.5	+0.9
	14nm,0.6s						
TKM2				⇑S	S	18 34 08.8	-1.7
	6.1nm,0.8s						
MKAR	Makanchi Array	13.52	38	P	Pn	18 34 02.7	0.0
	0.1nm,0.3s,baz=216,slow=16,SNR=4.4						
DANN	Dangsing	14.01	122	*e*P	P	18 34 12.0	+1.0
GKN	Gorkha	14.83	121	*e*P	P	18 34 20.6	+0.7
	12nm,0.6s						
KURBB	Kurchatov Arra	15.19	20	P	Pn	18 34 23.5	+0.4
	0.1nm,0.3s,baz=210,slow=11,SNR=2.3						
DMN	Daman	15.40	122	*e*P	Pn	18 34 26.1	-0.1
	53nm,1.0s						
KKN	Kakani	15.41	121	*e*P	P	18 34 27.1	+0.7
	11nm,0.5s						
PKIN	Phulchoki	15.62	121	*e*P	Pn	18 34 30.0	+1.1
	21nm,0.7s						
PKI	Pulchoki	15.63	121	*e*P	Pn	18 34 30.0	+0.9
	28nm,0.7s						
JIRN	Jiri	16.12	119	*e*P	P	18 34 35.0	+0.6
	22nm,0.6s						
BVAR	Borovoye Array	16.40	0	P	Pn	18 34 38.5	+0.8
	0.5nm,0.3s,baz=191,slow=15,SNR=6.1						
AKTO	Aktyubinsk	16.41	331	P	Pn	18 34 38.9	+1.1
	0.4nm,0.3s,baz=145,slow=11,SNR=12						
RAMN	Ramite	16.85	120	*e*P	P	18 34 42.0	-0.3
	9.5nm,0.6s						
TAPN	Taplejung	17.39	117	*e*P	P	18 34 48.6	+0.4
	8.3nm,0.6s						
ODAN	Odare	17.45	119	*e*P	P	18 34 47.7	-1.2
	15nm,0.9s						
ZALV	Zalesovo Beam	20.04	26	P	P	18 35 16.7	+0.5
	1.4nm,0.4s,baz=213,slow=12,SNR=6.5						
ARCES	ARCESS Array B	40.82	338	P	P	18 38 21.5	+1.3
	4.5nm,0.9s,baz=101,slow=8.3,SNR=2.6						
TORD	Torodi Ar. Bea	65.17	268	P	P	18 41 18.1	-0.5
	0.2nm,0.8s,baz=56,slow=10,SNR=1.7						
WRA	Warramunga Arr	82.52	121	P	P	18 42 56.3	-2.7
	0.3nm,0.7s,baz=318,slow=3.8,SNR=2.9						
ASAR	Alice Springs	84.77	124	P	P	18 43 08.3	-2.1
	0.2nm,0.6s,baz=310,slow=4.9,SNR=4.6						

UPA 07 18:33:11.4±0.4**, 9°.65N×81°.25W, h30km**±8km**, MW3.9, Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHGR2	Aguacate	1.13	231	*e*P	Pn	18 33 30.5	-0.8
CHGR2				*e*S	Sn	18 33 45.2	-0.6
CALO3	Calobre, Verag	1.38	163	*e*P	Pn	18 33 34.6	-0.1
CALO3				*e*S	Sn	18 33 51.4	-0.5
BCIP	Isla Barro Col	1.47	109	*e*P	Pn	18 33 35.6	-0.4
BCIP				*e*S	Sn	18 33 53.9	-0.4
VTON	El Valle, Cocl	1.52	132	*e*P	Pn	18 33 36.7	0.0
VTON				*e*S	Sn	18 33 55.5	-0.1
BCO2	Palmira	1.56	234	*e*P	Pn	18 33 37.2	-0.1
BCO2				*e*S	Sn	18 33 57.1	+0.4
FRIJ	El Hiral	1.56	106	*e*P	Pn	18 33 37.0	-0.1
FRIJ				*e*S	Sn	18 33 56.3	-0.2
CHIT3	Chitre	1.87	154	*e*P	Pn	18 33 41.3	-0.1
CHIT3				*e*S	Sn	18 34 04.1	+0.1
GMAL	Guarumal, Vera	1.87	179	*e*S	Sn	18 34 02.7	-1.4
AZU	Azuero	2.08	152	*e*P	Pn	18 33 44.1	-0.2
AZU				*e*S	Sn	18 34 08.5	-0.8
CACAO	El Cacao, Vera	2.32	170	*e*P	Pn	18 33 47.7	+0.1

TIF ***07*** *18:40:00.6, 43°.14N×41°.42E, h19km±3km*
MOS ***07*** *18:40:02.7±0.0, 43°.17N×41°.64E, h18km, MPVA3.2*
NORS ***07*** *18:40:03.5±0.0, 43°.16N×41°.71E, h7km, MPVA3.2*
ISC 07 18:40:02.5±1.0**, 43°.15N**±0°.03×**41°.62E**±0°.02**, h17km**±9km**, n21, σ1^{s}25**/41**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHVG	Ch'k'valeri	0.55	142	P	Pg	18 40 13.4	0.0
CHVG				S	Sg	18 40 21.1	+0.3
NEY	Neytrino	0.81	83	*e*Pg	Pb	18 40 17.7	-0.5
	31nm,0.4s						
NEY				*e*Sg	Sg	18 40 28.9	-0.2
SHA1	Shidzhatmaz	0.96	52	*i* Pg	Pb	18 40 20.8	+0.1
	7.2nm,0.2s						
SHA1				*i* Sg	Sn	18 40 34.0	-0.6
AHMR	Akhmetovskaya	1.09	338	*e*Pg	Pg	18 40 23.6	-0.1
AHMR				*e*Sg	Sg	18 40 38.0	+0.1
KBZ	Khabaz	1.09	58	*e*Pg	Pn	18 40 23.0	0.0
KBZ				*e*Sg	Sn	18 40 37.5	-0.2
KIV	Kislovodsk	1.12	44	*e*Pg	Pn	18 40 23.6	+0.3
KIV				*e*Sg	Sg	18 40 38.6	-0.1
RPOR	Krasnaya Polya	1.13	300	*e*Pg	Pn	18 40 23.8	+0.3
RPOR				*e*Sg	Sg	18 40 39.9	+0.8
VSLR	Vesyoloye	1.20	286	*e*Pg	Pn	18 40 24.7	+0.3
VSLR				*e*Sg	Sg	18 40 41.6	+0.3
BEYR	Belyy Ugol+	1.22	45	*e*Pg	Pg	18 40 25.9	-0.2
BEYR				*e*Sg	Sg	18 40 41.7	-0.4
TKB	Tkibuli	1.29	128	P	Pg	18 40 27.2	-0.1
TKB				S	Sg	18 40 45.6	+1.5
GUZR	Guzeripl'	1.38	308	*e*Pg	Pb	18 40 28.3	+0.5
GUZR				*e*Sg	Sg	18 40 46.7	-0.4
PYA1	Pyatigorsk	1.41	49	*e*Pg	Pb	18 40 28.3	+0.1
PYA1				*e*Sg	Sg	18 40 47.4	-0.6
DIGR	Digorskoe uzhe	1.46	99	*e*Pg	Pb	18 40 29.7	+0.5
	4.9nm,0.2s						
DIGR				*e*Sg	Sg	18 40 48.9	-0.7
NVNR	Nevinnomyssk	1.48	9	*e*Pg	Pb	18 40 29.4	-0.2
NVNR				*e*Sg	Sg	18 40 49.6	-0.8
LSNR	Lesken	1.62	85	*e*Pg	Pb	18 40 31.4	-0.5
LSNR				*e*Sg	Sb	18 40 51.7	-0.2
ABS	Abastumani	1.65	147	P	Pb	18 40 32.1	-0.3
ABS				S	Sg	18 40 54.8	-0.9
LZRR	Lazarevskoye	1.81	296	*e*Pg	Pb	18 40 35.2	+0.1
LZRR				*e*Sg	Sb	18 40 57.7	+0.2
BKRG	Bakuriani	1.98	134	P	Pb	18 40 37.5	-0.6
BKRG				S	Sg	18 41 04.5	-1.6
LACR	Lac	1.99	98	*e*Pg	Pb	18 40 39.4	+1.1
	9.0nm,0.3s						
LACR				*e*Sg	Sb	18 41 03.8	+1.0
MTEO	Meteo	2.19	101	P	Pg	18 40 44.3	-0.3
MTEO				S	Sg	18 41 19.3	+6.3
DGRG	David-gareji	3.26	120	P	Pg	18 41 02.8	-2.1

TUL ***07*** *18:40:58±1.7, 36°.948N±0°.010×97°.84W±0°.01, h5km±1km, ML3.1, mb_Lg2.6/16(NEIC), Error ellipse: s-maj=2.9km s-min=1.9km az=296.0*
NEIC 07 18:40:58.0±0.9**, 36°.936N**±0°.009×**97°.82W**±0°.02**, h7km**±6km**, Error ellipse: s-maj=2.1km s-min=1.4km az=86.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.09	200	Pg	Pg	18 41 00.4	+0.2
GC02				Sg	Sg	18 41 01.9	+0.2
KAN14	Manchester OK	0.12	280		Pg	18 41 00.6	0.0
KAN14				Sg	Sg	18 41 02.3	-0.1
KAN17	Caldwell West	0.12	23	Pg	Pg	18 41 00.8	+0.2
KAN17				Sg	Sg	18 41 02.6	+0.2
KAN05	Bluff City Nor	0.18	346		Pg	18 41 01.9	+0.2
KAN05				Sg	Sg	18 41 04.3	+0.2
KAN01	Argonia South	0.22	13		Pg	18 41 02.8	+0.3
KAN01				Sg	Sg	18 41 05.8	+0.3
KAN09	Caldwell North	0.26	39	Pg	Pg	18 41 03.5	+0.4
KAN09				Sg	Sg	18 41 06.6	+0.1
KAN13	South Haven SW	0.28	74		Pg	18 41 04.0	+0.4
KAN13				Sg	Sg	18 41 07.9	+0.5
KAN10	Anthony SW Sta	0.29	310	Pg	Pg	18 41 03.8	+0.1
KAN10				Sg	Sg	18 41 07.7	+0.2
KAN06	Argonia West S	0.31	354		Pg	18 41 04.3	+0.2
KAN06				Sg	Sg	18 41 08.5	+0.1
KAN08	Anthony NE Sta	0.31	337		Pg	18 41 04.3	+0.1
KAN08				Sg	Sg	18 41 08.8	+0.4
OK032	Salt Plains WL	0.34	247	Pg	Pg	18 41 04.2	-0.4
OK032				Sg	Sg	18 41 09.3	+0.1
KAN16	Harper SW Stat	0.35	326	Pg	Pg	18 41 04.9	+0.1
KAN16				Sg	Sg	18 41 09.7	+0.2
KS20	Mayfield South	0.36	36		Pg	18 41 05.3	+0.3
KS20				Sg	Sg	18 41 10.2	+0.4
KAN12	Harper NE Stat	0.39	339		Pg	18 41 05.6	+0.1
KAN12				Sg	Sg	18 41 10.8	+0.1
CROK	Carrier	0.45	197	Pg	Pg	18 41 07.0	+0.3
CROK				Sg	Sg	18 41 13.3	+0.7
BLOK	Blackwell	0.52	110	Pg	Pg	18 41 08.3	+0.3
BLOK				Sg	Sg	18 41 14.9	+0.2
T35A	Sooner Cattle	1.05	91	Pg	Pg	18 41 18.1	-0.1
T35A				Sg	Sg	18 41 32.0	+0.3
U32A	Winter Ranch,	1.10	240	Pg	Pg	18 41 18.6	-0.5
U32A				Sg	Sg	18 41 33.4	0.0
OK029	Liberty Lake	1.18	165	Pg	Pg	18 41 20.3	-0.3
OK029				Sg	Sb	18 41 36.2	+0.2
QUOK	Quay	1.18	130	Pg	Pg	18 41 20.3	-0.3
QUOK				Sg	Sb	18 41 36.0	-0.1
OK031	S. Brethren Rd	1.26	141		Pn	18 41 21.7	-0.2
OK031					Sn	18 41 38.9	-0.2
BCOK	Bluff Creek, N	1.29	172		Pn	18 41 22.2	-0.2
BCOK				Sn	Sn	18 41 39.9	0.0
OK030	Cody Creek RV	1.31	140		Pn	18 41 22.5	-0.1
OK030				Sn	Sn	18 41 40.5	+0.1
OK025	Westminster Rd	1.41	164	Pn	Pb	18 41 24.4	-0.2
OK025				Sn	Sg	18 41 44.5	+1.3
OKCFA	Oklahoma City	1.55	169		Pb	18 41 26.7	-0.2
OKCFA				IAmb_Lg		18 41 50.3	
	comp=Z,62nm,0.9s						
OKCSW	OKLAHOMA CITY	1.56	168	Pn	Pn	18 41 26.5	+0.4
R32A	Long Quarter,	1.64	335		Pb	18 41 28.1	-0.5
FNO	Franklin	1.71	168	Pn	Pb	18 41 29.1	-0.6
TUL1	Leonard	1.93	121	Pn	Pb	18 41 32.6	-0.8
TUL1				IAmb_Lg		18 42 01.9	
	comp=Z,48nm,0.8s						
WMOK	Wichita Mounta	2.33	200	Pn	Pn	18 41 38.0	+1.3
X34A	Smith Ranch, M	2.33	180		Pn	18 41 37.1	+0.4
X34A				IAmb_Lg		18 42 12.1	
	comp=Z,24nm,1.2s						
KSU1	Kansas State U	2.36	24	Pn	Pn	18 41 36.6	-0.6
CBKS	Cedar Bluff	2.41	322		Pn	18 41 36.8	-1.1
U38A	Gravette	2.81	99	IAmb_Lg		18 42 35.2	
	comp=Z,11nm,0.8s						
LOOK	Love County	2.98	170	Pn	Pn	18 41 44.2	-1.5
X37A	Clayton	3.07	139	Pn	Pn	18 41 45.6	-1.4
HHAR	Hobbs	3.19	101	Pn	Pn	18 41 47.1	-1.4
Z35A	Perchaven, San	3.63	172	Pn	Pn	18 41 54.5	0.0
S39A	Bolivar	3.66	77	Pn	Pn	18 41 53.4	-1.6
S39A				IAmb_Lg		18 42 59.3	
	comp=Z,8.1nm,0.7s						
W39A	Magazine	3.70	117	Pn	Pn	18 41 54.9	-0.6
AMTX	Amarillo	3.74	238	Pn	Pn	18 41 54.9	-1.4
AMTX				IAmb_Lg		18 42 57.1	
	comp=Z,20nm,1.2s						
MIAR	Mount Ida	4.20	123	Pn	Pn	18 42 01.0	-1.3
N35A	Tabor	4.27	23	Pn	Pn	18 42 04.4	+1.0
Z38A	Mt. Pleasant	4.34	147	Pn	Pn	18 42 05.4	+1.0
ABTX	Abilene, Hawle	4.56	200	Pn	Pn	18 42 05.5	-1.9
R40A	Maddies Statio	4.61	71	Pn	Pn	18 42 06.7	-1.3
X40A	Basin Creek Fa	4.74	120	Pn	Pn	18 42 08.8	-1.0
WHAR	Wooly Hollow	4.77	109	Pn	Pn	18 42 09.4	-0.8
WHTX	Lake Whitney,	4.94	176	Pn	Pn	18 42 12.5	-0.1
OGNE	Ogallala	5.18	322	Pn	Pn	18 42 14.3	-1.6
OGNE				IAmb_Lg		18 43 40.8	
	comp=Z,13nm,0.7s						
P40A	Paris	5.23	59	Pn	Pn	18 42 15.5	-1.1
T25A	Trinidad	5.28	274	Pn	Pn	18 42 15.0	-2.4
CCM	Cathedral Cave	5.35	76	Pn	Pn	18 42 17.5	-0.7
T42A	Van Buren	5.39	87	Pn	Pn	18 42 16.2	-2.5
LCAR	Lake Charles	5.44	97	Pn	Pn	18 42 18.5	-0.9
PBMO	Poplar Bluff	5.93	89	IAmb_Lg		18 44 20.2	
	comp=Z,10nm,1.1s						
FVM	French Village	5.97	78	Pn	Pn	18 42 25.4	-1.4
SDCO	Great Sand Dun	6.17	280	Pn	Pn	18 42 27.7	-2.1

IDC ***07*** *18:51:14.4±4.1, 33°.67N×138°.86E, h113km±71km, mb2.8/3, mb1 2.9/4, mb1mx2.8/37, mbtmp3.1/4, Error ellipse: s-maj=145.0km s-min=30.1km az=61.0*
JMA ***07*** *18:51:15.1±0.2, 34°.03N×139°.62E, h147km±2km, M2.9*
ISC 07 18:51:15.3±1.0**, 34°.00N**±0°.06×**139°.59E**±0°.08**, h147km**±7km**, n19, σ0^{s}51**/26**, mb3.1**/3**, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMKN	Mikurajimanish	0.11	179	P	Pn	18 51 34.6	-0.5
JMKN				*e*S	Sn	18 51 49.6	-0.4
JKO	Kozu shima	0.42	296	P	Pn	18 51 35.6	-0.3
JSKK	Shikinejimakit	0.46	317	P	Pn	18 51 36.6	+0.6
JTHY	Toshimahigashi	0.57	334	P	Pn	18 51 36.7	0.0
JTHY				*e*S	Sn	18 51 53.1	+0.1
JIM2	Oshima 3	0.72	350	P	Pn	18 51 37.4	-0.2
JIM2				*e*S	Sn	18 51 54.6	-0.1
JHJ2	Mitsune	0.91	168	P	Pn	18 51 39.1	+0.1
JHJ2				*e*S	Sn	18 51 57.3	+0.3
JIZS	Izushimoda	0.92	321	P	Pn	18 51 38.9	-0.2
JIZS				S	Sn	18 51 57.2	-0.1
BSO3	Boso 3	1.10	44	P	Pn	18 51 40.8	+0.5
BSO1	Boso 1	1.32	60	P	Pn	18 51 42.4	+0.3
JOD2	Odawara 2	1.32	342	P	Pn	18 51 42.7	-0.1
JOD2				*e*S	Sn	18 52 03.9	0.0
JFNN	Fujinakano	1.40	328	P	Pn	18 51 43.6	0.0
TK04	Tokai 4	1.47	285	P	Pn	18 51 44.4	+0.3
TK02	Tokai 2	1.52	268	P	Pn	18 51 44.8	+0.2
SHZ3	Shizuoka 3	1.55	313	P	Pn	18 51 45.4	+0.2
SHZ3				*e*S	Sn	18 52 09.0	+0.8
JYN	Shimob	1.72	330	P	Pn	18 51 47.2	+0.1
MJAR	Matsushiro Arr	2.77	336	P	Pn	18 51 59.2	-0.5
	0.2nm,0.3s,baz=168,slow=13,SNR=13						
MKAR	Makanchi Array	44.53	304	P	P	18 59 12.1	-0.2
	0.4nm,0.6s,baz=89,slow=9.6,SNR=5.1						
WRA	Warramunga Arr	53.88	186	P	P	19 00 22.1	-1.3
	0.1nm,0.3s,baz=1.0,slow=7.3,SNR=6.5						
ASAR	Alice Springs	57.61	186	P	P	19 00 51.2	+1.3
	0.1nm,0.8s,baz=23,slow=11,SNR=1.8						

FUNV ***07*** *18:52:09.2, 8°.44N×71°.43W, h5km, MW3.0*
ISC 07 18:52:08.4±1.6**, 8°.59N**±0°.06×**71°.39W**±0°.04**, h9km**±13km**, n12, σ1^{s}21**/21**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.61	120	*e*P	Pg	18 52 20.4	+0.1
SOCV				*e*S	Sg	18 52 29.1	+0.8
SDV	Santo Domingo	0.81	69	*e*P	Pn	18 52 25.9	-0.2
SDV				*e*S	Sn	18 52 36.9	-1.5
SDV				*i*		18 52 39.4	
	comp=Z,30nm,0.1s						
PAMC	Pamplona, Colo	1.79	226	*e*P	Pb	18 52 40.9	-0.9
PAMC				*e*S	Sn	18 53 03.3	+0.2
PAMC				*i*		18 53 07.1	
	comp=Z,50nm,0.8s						
OCAC	Ocana	1.94	260	*e*P	Pb	18 52 43.0	-1.0
OCAC				*e*S	Sb	18 53 07.3	-1.0
OCAC				*i*		18 53 10.2	
	comp=Z,129nm,0.3s						
SIQV	Siquisique	2.58	37	*e*P	Pb	18 52 53.1	-1.7
SMLC	San Martn de	2.66	275	*e*P	Pb	18 52 55.0	-1.2
SMLC				*e*S	Sb	18 53 27.9	-1.0
SMLC				*i*		18 53 29.7	
	comp=Z,31nm,0.3s						
BARC	Barichara	2.66	222	*e*P	Pb	18 52 55.6	-0.8
BARC				*e*S	Sb	18 53 30.2	+0.9
BAUV	El Baul	3.33	84	*e*P	Pn	18 53 01.4	+0.7
BAUV				*e*S	Sn	18 53 40.8	+0.3
MONV	Montecano	3.62	23	*e*P	Pn	18 53 07.1	+2.3
MONV				*e*S	Sn	18 53 49.7	+2.0
BENV	Beln	3.99	70	*e*P	Pn	18 53 10.2	+0.5
BENV				*e*S	Sn	18 53 56.2	-0.5
TACV	Tcata	4.58	70	*e*P	Pn	18 53 19.1	+1.2
BIRV	Birongo	5.39	69	*e*P	Pn	18 53 29.9	+0.9

IDC ***07*** *18:57:47.5±4.1, 3°.91S×153°.88E, h82km±41km, mb3.3/4, mb1 3.6/6, mb1mx3.3/32, mbtmp3.8/6, Error ellipse: s-maj=44.2km s-min=26.9km az=150.0*
ISC 07 18:57:49.1±1.4**, 4°.0S**±0°.2×**153°.9E**±0°.1**, h100km, n6, σ1^{s}61**/7**, mb3.4**/4**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	8.05	132	P	Pn	18 59 43.0	-0.3
	8.3nm,0.3s,baz=216,slow=14,SNR=4.3						
PMG	Port Moresby	8.56	231	P	Pn	18 59 51.0	+0.7
	1.2nm,0.3s,baz=13,slow=7.2,SNR=8.6						
PMG				S	Sn	19 01 23.2	-2.1
	0.2nm,0.3s,baz=58,slow=22,SNR=1.4						
WRA	Warramunga Arr	24.77	229	P	P	19 03 02.5	+0.7
	0.7nm,0.5s,baz=55,slow=10.0,SNR=14						
ASAR	Alice Springs	27.46	223	P	P	19 03 26.1	+0.1
	0.3nm,0.7s,baz=58,slow=8.7,SNR=6.0						
FITZ	Fitzroy Crossi	30.99	241	P	P	19 03 59.2	+1.9
	0.8nm,0.5s,baz=60,slow=8.1,SNR=6.0						
SONM	Songino Array	66.27	327	P	P	19 08 25.7	-1.2
	0.2nm,0.4s,baz=130,slow=6.4,SNR=2.1						

FUNV ***07*** *19:06:03.0, 8°.51N×71°.46W, h5km, MW3.1*
ISC 07 19:06:02.7±1.3**, 8°.54N**±0°.05×**71°.43W**±0°.03**, h10km**±11km**, n14, σ1^{s}08**/24**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.62	114	*e*P	Pg	19 06 15.2	+0.3
SOCV				*e*S	Sb	19 06 24.5	-0.1
SDV	Santo Domingo	0.86	67	*e*P	Pb	19 06 20.4	+0.5
SDV				*e*S	Sg	19 06 31.2	+0.6
SDV				*i*		19 06 35.3	
	comp=Z,116nm,0.3s						
CAPV	Capacho	1.10	232	*e*P	Pg	19 06 23.7	-0.3
CAPV				*e*S	Sg	19 06 37.2	-1.1
PAMC	Pamplona, Colo	1.73	226	*e*P	Pg	19 06 36.1	0.0
PAMC				*e*S	Sg	19 06 59.2	+0.6
PAMC				*i*		19 07 02.0	
	comp=Z,145nm,0.3s						
OCAC	Ocana	1.89	261	*e*P	Pb	19 06 37.4	0.0
OCAC				*e*S	Sb	19 07 01.9	+0.7
OCAC				*i*		19 07 04.6	
	comp=Z,473nm,0.3s						
TAMC	Tame, Arauca	2.12	190	*e*P	Pb	19 06 40.6	-0.7
TAMC				*e*S	Sg	19 07 11.3	+0.2
TAMC				*i*		19 07 17.9	
	comp=Z,84nm,0.5s						
BARC	Barichara	2.60	222	*e*P	Pb	19 06 50.8	+1.2
BARC				*e*S	Sg	19 07 24.2	-2.3
BARC				*i*		19 07 27.6	
	comp=Z,96nm,0.7s						
SMLC	San Martn de	2.62	276	*e*P	Pb	19 06 48.1	-1.7
SMLC				*e*S	Sb	19 07 22.6	+0.5
SMLC				*i*		19 07 24.3	
	comp=Z,118nm,0.3s						
SIQV	Siquisique	2.63	37	*e*P	Pn	19 06 46.2	+0.8
BAUV	El Baul	3.38	83	*e*P	Pn	19 06 55.6	+0.1
BAUV				*e*S	Sn	19 07 35.6	0.0
ZARC	Zaragoza, Cauc	3.55	253	*e*P	Pn	19 07 00.2	+2.2
ZARC				*e*S	Sb	19 07 48.9	0.0
BENV	Beln	4.04	69	*e*P	Pn	19 07 04.2	-0.5
BENV				*e*S	Sn	19 07 50.2	-1.9
TACV	Tcata	4.63	70	*e*P	Pn	19 07 13.0	+0.2
CACV	CAICARA DEL OR	4.94	101	*e*P	Pb	19 07 23.4	-6.0

JMA ***07*** *19:06:15.9, 33°.26N×132°.16E, h48km, M3.2*
JMA Felt I J1.
KMA ***07*** *19:06:19.1±99.0, 33°.50N×131°.64E, h0km±999km, Error ellipse: s-maj=24.8km s-min=3.2km az=308.0*
ISC 07 19:06:16.0±1.4**, 33°.26N**±0°.05×**132°.18E**±0°.04**, h46km**±13km**, n20, σ0^{s}31**/28**, 3C-2D, Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UWA2	Uwa jima 2	0.38	96	⇑P	Pn	19 06 25.6	-0.1
UWA2				*e*S	Sn	19 06 32.7	+0.2
JNA	Nagahama	0.39	40	P	Pn	19 06 25.7	-0.1
JNA				S	Sn	19 06 32.7	0.0
JUS	Usuki	0.41	242	P	Pn	19 06 25.7	-0.2
JUS				S	Sn	19 06 32.9	-0.1
JSKE	Saikikamae	0.51	207	⇓P	Pn	19 06 27.2	0.0
JSKE				S	Sn	19 06 35.6	+0.5
JTO	Tosashimizu	0.66	127	⇑P	Pn	19 06 29.0	-0.1
JTO				*e*S	Sn	19 06 38.5	+0.1
JKU	Kubokawa	0.74	86	⇑P	Pn	19 06 30.0	-0.2
JKU				S	Sn	19 06 40.6	+0.1
JET	Tanbara	0.90	54	*e*S	Sn	19 06 43.8	-0.4
JHM	Kurahashi	0.93	18	⇓P	Pn	19 06 32.5	-0.2
JHM				S	Sn	19 06 45.0	+0.1
JIU3	Izumi3	1.35	239	P	Pn	19 06 38.4	0.0
JIU3				*e*S	Sn	19 06 55.0	-0.2
KSBUS	Busan	3.23	309	P	Pn	19 07 04.0	-0.2
	SNR=7.6						
KOHB	KOHEUNG	4.30	290	P	Pn	19 07 18.4	-0.4
	SNR=27						
BOSB	Boseong-gun	4.39	291	P	Pn	19 07 20.0	-0.1
	SNR=8.5						
NAWB	Namwon	4.51	300	P	Pn	19 07 22.0	+0.2
	SNR=12						
KSKWJ	Gwangju	4.70	295	P	Pn	19 07 24.1	-0.3
	SNR=6.8						
KSKWJ	Gwangju	4.70	295	P	Pn	19 07 24.1	-0.3
	SNR=7.1						
KSJEO	Jeonju	4.84	305	P	Pn	19 07 26.2	-0.1
	SNR=16						
KSJEU	Jeongeup	4.88	299	P	Pn	19 07 26.8	-0.1
	SNR=14						
GOCB	Gochang-gun	5.07	296	P	Pn	19 07 29.4	-0.1
	SNR=44						

OYDB	Oeyeondo	5.83	302	P	Pn	19 07 39.7	-0.2
	SNR=14						
SEHB	SEOHWA	5.93	329	P	Pn	19 07 42.4	+1.1
	SNR=7.3						

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*IDC **07** 19:18:37.3±3.2, 38°.20N×142°.22E, h52^{km}±29^{km}, mb3.2/3, mb1 3.5/7, mb1mx3.2/42, mbtmp3.6/7, ML3.0/4, Error ellipse: s-maj=43.1km s-min=24.2km az=89.0*

*JMA **07** 19:18:38.9, 38°.30N×141°.89E, h64^{km}±1^{km}, M3.6 Broadband fault plane solution: P waves. NP1: ϕ_s163.00000°, δ36.00000°, λ111.00000°. NP2: ϕ_s318.00000°, δ56.00000°, λ75.00000°. Principal axes: T Plg74.0000°, Azm187.0000°; N Plg12.0000°, Azm326.0000°; P Plg10.0000°, Azm58.0000°;*

JMA Felt I J1.

ISC 07 19:18:38.4±1.4, **38°.26N**±0°.04×**142°.0E**±0°.1, **h58**^{km}±9^{km}, **n27, σ1^s.38**/37, **mb3.6**/3, **6C-5D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	Ishinomakikobu	0.42	278	⇑P	Pn	19 18 49.7	+0.4
JIKH				S	Sn	19 18 57.4	+0.2
JIO	Ouri	0.54	292	⇑P	Pn	19 18 50.8	+0.2
JIO				S	Sn	19 18 59.2	-0.3
JKMT	Kesennumamotoy	0.69	324	⇑P	Pn	19 18 52.5	+0.1
JKMT				S	Sn	19 19 02.1	-0.4
OFUJ	Ofunato	0.86	343	⇑P	Pn	19 18 54.6	0.0
OFUJ				S	Sn	19 19 06.1	-0.3
JMK	Ichinoseki	0.92	319	⇑P	Pn	19 18 55.4	+0.1
JMK				S	Sn	19 19 07.2	-0.6
JMM	Marumori	1.02	248	⇓P	Pn	19 18 56.3	-0.3
JMM				S	Sn	19 19 09.3	-0.8
JOU	Okura	1.05	276	⇓P	Pn	19 18 56.8	-0.2
JOU				S	Sn	19 19 10.0	-0.8
JFK	Kawauchi	1.25	225	P	Pn	19 18 59.7	-0.1
JFK				S	Sn	19 19 15.1	-0.6
JOM	Ohasama	1.33	336	⇑P	Pn	19 19 00.8	0.0
JOM				S	Sn	19 19 17.3	-0.3
JYK	Kaneyama	1.44	298	⇓P	Pn	19 19 02.0	-0.2
JYK				*e*S	Sn	19 19 18.7	-1.4
JFT	Otama	1.50	241	⇓P	Pn	19 19 03.4	+0.3
JFT				S	Sn	19 19 21.8	+0.2
JYS	Shirataka	1.52	269	⇓P	Pn	19 19 03.2	-0.1
JYS				S	Sn	19 19 21.9	-0.1
JRG	Rokugo	1.56	317	P	Pn	19 19 04.0	+0.2
JRG				*e*S	Sn	19 19 22.2	-0.7
MJAR	Matsushiro Arr	3.46	242	P	Pn	19 19 30.1	+0.3
	0.6nm,0.3s,baz=61,slow=9.9,SNR=56						
MAT	Matsushiro	3.46	242	P	Pn	19 19 31.4	+1.5
MAT				*e*S	Sn	19 20 11.7	+2.0
JHJ	Hachijo jima 2	5.43	200	P	Pn	19 19 55.1	-1.6
	5.5nm,0.3s,baz=15,slow=12,SNR=0.9						
JHJ				S	Sn	19 20 53.2	-4.8
	12nm,0.3s,baz=42,slow=14,SNR=1.9						
ASAJ	Asahikawa	5.87	4	P	Pn	19 20 02.2	-0.6
	0.3nm,0.3s,baz=194,slow=12,SNR=5.8						
ASAJ				S	Sn	19 21 04.8	-3.9
	0.4nm,0.3s,baz=148,slow=19,SNR=1.3						
KSRS	Korea Array	11.15	270	P	Pn	19 21 18.0	+2.9
	0.1nm,0.3s,baz=79,slow=14,SNR=1.9						
H11N2	WAKE ISLAND Hy	28.41	124	T	T	19 54 50.5	
	baz=316,slow=76,SNR=37						
H11N1	WAKE ISLAND Hy	28.42	124	T	T	19 54 48.2	
	baz=316,slow=76,SNR=38						
H11N3	WAKE ISLAND Hy	28.43	124	T	T	19 54 53.4	
	baz=316,slow=76,SNR=40						
H11S1	WAKE ISLAND Hy	29.16	126	T	T	19 55 49.5	
	baz=318,slow=76,SNR=24						
H11S3	WAKE ISLAND Hy	29.17	126	T	T	19 55 49.6	
	baz=318,slow=76,SNR=29						
H11S2	WAKE ISLAND Hy	29.18	126	T	T	19 55 48.8	
	baz=318,slow=76,SNR=22						
MKAR	Makanchi Array	43.87	301	P	P	19 26 39.4	+0.4
	0.4nm,0.7s,baz=72,slow=8.0,SNR=2.6						
WRA	Warramunga Arr	58.33	188	P	P	19 28 26.6	-0.9
	0.4nm,0.4s,baz=5.3,slow=7.3,SNR=16						
ASAR	Alice Springs	62.06	188	P	P	19 28 52.5	-0.5
	0.3nm,0.7s,baz=3.4,slow=7.0,SNR=6.8						

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*TUL **07** 19:20:09.3±0.8, 36°.94N±0°.02×97°.84W±0°.02, h5^{km}±2^{km}, ML3.1, mb_Lg2.7/15(NEIC), Error ellipse: s-maj=3.2km s-min=2.7km az=315.0*

NEIC 07 19:20:09.7±1.1, **36°.919N**±0°.009×**97°.82W**±0°.02, **h3**^{km}±7^{km}, **Error ellipse: s-maj=2.4km s-min=1.0km az=116.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GC02	Grant County #	0.07	204	Pg	Pg	19 20 11.7	+0.4
GC02				Sg	Sg	19 20 13.2	+0.9
KAN14	Manchester OK	0.12	289		Pg	19 20 11.8	-0.2
KAN14				Sg	Sg	19 20 13.5	-0.2
KAN17	Caldwell West	0.13	20	Pg	Pg	19 20 12.2	-0.1
KAN17				Sg	Sg	19 20 14.3	+0.1
KAN05	Bluff City Nor	0.19	348		Pg	19 20 13.2	-0.3
KAN01	Argonia South	0.24	12		Pg	19 20 14.2	-0.2
KAN01				Sg	Sg	19 20 17.4	-0.2
KAN09	Caldwell North	0.27	37	Pg	Pg	19 20 14.9	-0.1
KAN09				Sg	Sg	19 20 18.7	+0.1
KAN13	South Haven SW	0.29	71		Pg	19 20 15.6	+0.2
KAN10	Anthony SW Sta	0.30	313	Pg	Pg	19 20 15.1	-0.4
KAN10				Sg	Sg	19 20 19.0	-0.4
KAN08	Anthony NE Sta	0.33	339		Pg	19 20 15.7	-0.4
KAN06	Argonia West S	0.33	355		Pg	19 20 15.7	-0.4
OK032	Salt Plains WL	0.33	250		Pg	19 20 15.9	-0.1
OK032				Sg	Sg	19 20 20.6	+0.2
KAN16	Harper SW Stat	0.36	328	Pg	Pg	19 20 16.2	-0.5
KS20	Mayfield South	0.38	35		Pg	19 20 16.8	-0.2
KS20				Sg	Sg	19 20 21.9	-0.1
KAN12	Harper NE Stat	0.40	340		Pg	19 20 17.0	-0.5
CROK	Carrier	0.43	197	Pg	Pg	19 20 18.3	+0.3
BLOK	Blackwell	0.51	108	Pg	Pg	19 20 19.8	+0.2
BLOK				Sg	Sg	19 20 27.1	+0.9
T35A	Sooner Cattle	1.05	90	Pg	Pg	19 20 29.5	-0.4
U32A	Winter Ranch,	1.09	241	Pg	Pg	19 20 30.1	-0.5
OK029	Liberty Lake	1.16	165	Pg	Pg	19 20 31.6	-0.3
QUOK	Quay	1.17	129	Pg	Pg	19 20 31.7	-0.4
OK031	S. Brethren Rd	1.25	140	Pn	Pg	19 20 33.2	-0.4
BCOK	Bluff Creek, N	1.27	172	Pn	Pg	19 20 33.5	-0.6
OK030	Cody Creek RV	1.30	139		Pg	19 20 34.1	-0.4
OK025	Westminster Rd	1.39	163		Pn	19 20 35.7	-0.3
OKCFA	Oklahoma City	1.53	169		Pn	19 20 38.1	+0.2
OKCFA				IAmb_Lg		19 21 01.0	
	comp=Z,50nm,0.9s						
OKCSW	OKLAHOMA CITY	1.54	168		Pn	19 20 38.4	+0.3
R32A	Long Quarter,	1.66	335		Pn	19 20 39.2	-0.4
FNO	Franklin	1.69	168		Pn	19 20 40.5	+0.4
TUL1	Leonard	1.92	121		Pn	19 20 43.8	+0.5
WMOK	Wichita Mounta	2.31	200		Pn	19 20 48.6	-0.1
WMOK				IAmb_Lg		19 21 28.0	
	comp=Z,14nm,0.9s						
X34A	Smith Ranch, M	2.31	180		Pn	19 20 50.0	+1.3
X34A				IAmb_Lg		19 21 28.7	
	comp=Z,17nm,0.8s						
KSU1	Kansas State U	2.38	23		Pn	19 20 50.3	+0.7
KSU1				IAmb_Lg		19 21 27.4	
	comp=Z,44nm,0.7s						
CBKS	Cedar Bluff	2.42	322		Pn	19 20 51.2	+1.0
U38A	Gravette	2.80	99	Pn	Pn	19 20 56.0	+0.6
LOOK	Love County	2.97	170	Pn	Pn	19 20 58.3	+0.7
X37A	Clayton	3.06	139		Pn	19 20 59.5	+0.5
HHAR	Hobbs	3.19	100	Pn	Pn	19 21 01.3	+0.6
HHAR				IAmb_Lg		19 21 57.1	
	comp=Z,17nm,0.8s						
S39A	Bolivar	3.67	77	Pn	Pn	19 21 06.9	-0.4
W39A	Magazine	3.70	117		Pn	19 21 08.9	+1.2
AMTX	Amarillo	3.73	238		Pn	19 21 08.9	+0.7
U40A	Yellville	4.04	97	Pn	Pn	19 21 13.0	+0.7
MIAR	Mount Ida	4.19	123	Pn	Pn	19 21 15.6	+1.2
MGMO	Mountain Grove	4.45	85	Pn	Pn	19 21 18.2	+0.2
BGNE	Belgrade	4.49	357	IAmb_Lg		19 22 38.1	
	comp=Z,24nm,0.8s						
R40A	Maddies Statio	4.62	71	Pn	Pn	19 21 20.8	+0.5
FCAR	Ozark Folk Cen	4.71	101	Pn	Pn	19 21 22.8	+1.2
X40A	Basin Creek Fa	4.73	119	Pn	Pn	19 21 22.4	+0.6
WHTX	Lake Whitney,	4.92	176	Pn	Pn	19 21 22.7	-1.8
L34A	Svendsen Farm,	5.16	12	Pn	Pn	19 21 27.6	-0.2
L34A				IAmb_Lg		19 22 56.6	
	comp=Z,19nm,0.7s						
N38A	Joes South For	5.27	41	Pn	Pn	19 21 28.8	-0.6
T42A	Van Buren	5.39	87	Pn	Pn	19 21 31.7	+0.8
LCAR	Lake Charles	5.44	97	IAmb_Lg		19 23 06.8	
	comp=Z,11nm,1.3s						

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*TUL **07** 19:27:33.1±1.1, 36°.66N±0°.02×98°.72W±0°.05, h3^{km}±7^{km}, ML3.0, mb_Lg3.0/55(NEIC), Error ellipse: s-maj=5.6km s-min=2.9km az=85.0*

NEIC 07 19:27:34.3±1.6, **36°.65N**±0°.01×**98°.67W**±0°.05, **h8**^{km}±7^{km}, **Error ellipse: s-maj=5.6km s-min=0.8km az=72.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
U32A	Winter Ranch,	0.38	225	Pg	Pg	19 27 40.3	-1.4
U32A				Sg	Sg	19 27 45.7	-1.0
OK032	Salt Plains WL	0.40	67		Pg	19 27 41.8	-0.4
OK032				Sg	Sg	19 27 48.0	+0.5
CROK	Carrier	0.57	104	Pg	Pg	19 27 45.0	-0.4
KAN14	Manchester OK	0.65	61		Pg	19 27 46.3	-0.6
KAN10	Anthony SW Sta	0.66	44	Pg	Pg	19 27 46.4	-0.7
GC02	Grant County #	0.68	72	Pg	Pg	19 27 47.0	-0.5
KAN16	Harper SW Stat	0.76	40	Pg	Pg	19 27 48.0	-0.9
KAN16				Sg	Sg	19 27 58.8	+0.1
KAN05	Bluff City Nor	0.79	54	Pg	Pg	19 27 48.0	-1.6
KAN08	Anthony NE Sta	0.81	44		Pg	19 27 48.8	-1.1
KAN17	Caldwell West	0.83	61	Pg	Pg	19 27 49.3	-1.0
KAN12	Harper NE Stat	0.84	40		Pg	19 27 49.6	-0.9
KAN06	Argonia West S	0.89	47	Pg	Pg	19 27 50.6	-0.8
KAN01	Argonia South	0.89	55		Pg	19 27 50.6	-0.9
KAN09	Caldwell North	0.97	60	Pg	Pg	19 27 52.3	-0.7
KAN13	South Haven SW	1.02	69		Pg	19 27 53.1	-0.9
KS20	Mayfield South	1.07	57		Pg	19 27 53.9	-0.9
BLOK	Blackwell	1.18	84	Pg	Pg	19 27 55.7	-1.2
OK029	Liberty Lake	1.30	130		Pn	19 27 57.8	-1.1
BCOK	Bluff Creek, N	1.31	139		Pn	19 27 57.8	-1.2
OK025	Westminster Rd	1.52	134	Pn	Pn	19 28 01.6	-0.3
OKCFA	Oklahoma City	1.58	141	Pn	Pn	19 28 02.5	-0.2
OK031	S. Brethren Rd	1.64	115		Pn	19 28 03.4	0.0
QUOK	Quay	1.65	106		Pn	19 28 04.0	+0.3
OK030	Cody Creek RV	1.69	115		Pn	19 28 04.4	+0.3
T35A	Sooner Cattle	1.75	81	Pn	Pn	19 28 05.5	+0.4
T35A				IAmb_Lg		19 28 33.4	
	comp=Z,64nm,0.9s						
R32A	Long Quarter,	1.77	359		Pn	19 28 05.3	-0.1
WMOK	Wichita Mounta	1.91	183		Pn	19 28 06.8	-0.4
X34A	Smith Ranch, M	2.15	161		Pn	19 28 11.3	+0.8
CBKS	Cedar Bluff	2.32	339		Pn	19 28 13.1	+0.1
CBKS				IAmb_Lg		19 28 52.3	
	comp=Z,42nm,0.8s						
TUL1	Leonard	2.44	107		Pn	19 28 14.4	-0.1
TUL1				IAmb_Lg		19 28 53.3	
	comp=Z,46nm,1.0s						
LOOK	Love County	2.92	155	Pn	Pn	19 28 20.8	-0.2
KSU1	Kansas State U	2.94	33		Pn	19 28 21.0	-0.5
AMTX	Amarillo	3.01	235	Pn	Pn	19 28 22.3	-0.2
X37A	Clayton	3.38	126	Pn	Pn	19 28 27.9	+0.5
X37A				IAmb_Lg		19 29 30.9	
	comp=Z,44nm,0.8s						
U38A	Gravette	3.46	92	Pn	Pn	19 28 29.5	+1.0
Z35A	Perchaven, San	3.51	160	Pn	Pn	19 28 29.8	+0.6
HHAR	Hobbs	3.83	94	Pn	Pn	19 28 34.0	+0.4
KSCO	Kaye Shedlock’	3.92	308	IAmb_Lg		19 29 36.4	
	comp=Z,28nm,0.7s						
ABTX	Abilene, Hawle	4.09	192		Pn	19 28 37.6	+0.3
W39A	Magazine	4.22	109		Pn	19 28 39.3	+0.3
W39A				IAmb_Lg		19 29 49.7	
	comp=Z,34nm,0.8s						
MSTX	Muleshoe	4.29	233	IAmb_Lg		19 29 57.5	
	comp=Z,32nm,0.7s						
S39A	Bolivar	4.40	75		Pn	19 28 41.3	-0.2
S39A				IAmb_Lg		19 29 58.4	
	comp=Z,27nm,0.9s						
Z38A	Mt. Pleasant	4.54	137	IAmb_Lg		19 30 03.5	
	comp=Z,26nm,0.8s						
T25A	Trinidad	4.63	278	Pn	Pn	19 28 44.0	-0.8
T25A				IAmb_Lg		19 30 01.2	
	comp=Z,42nm,1.0s						
MIAR	Mount Ida	4.65	115	Pn	Pn	19 28 44.9	0.0
MIAR				IAmb_Lg		19 30 12.4	
	comp=Z,36nm,0.9s						
U40A	Yellville	4.70	92	Pn	Pn	19 28 46.1	+0.6
U40A				IAmb_Lg		19 30 04.3	
	comp=Z,29nm,0.8s						
WHTX	Lake Whitney,	4.75	167	Pn	Pn	19 28 46.5	+0.2
BGNE	Belgrade	4.77	5		Pn	19 28 45.8	-0.8
BGNE				IAmb_Lg		19 30 10.7	
	comp=Z,38nm,0.9s						
P38A	Dawn	5.03	52	IAmb_Lg		19 30 23.5	
	comp=Z,26nm,0.7s						
OGNE	Ogallala	5.03	330	Pn	Pn	19 28 50.8	+0.7
MGMO	Mountain Grove	5.16	82	Pn	Pn	19 28 52.8	+0.9
MGMO				IAmb_Lg		19 30 21.2	
	comp=Z,23nm,0.8s						
X40A	Basin Creek Fa	5.22	113	Pn	Pn	19 28 53.7	+1.0
X40A				IAmb_Lg		19 30 25.5	
	comp=Z,18nm,0.7s						
FCAR	Ozark Folk Cen	5.34	96		Pn	19 28 54.9	+0.5
R40A	Maddies Statio	5.35	70		Pn	19 28 55.1	+0.6
WHAR	Wooly Hollow	5.35	103	Pn	Pn	19 28 54.7	+0.2
WHAR				IAmb_Lg		19 30 28.5	
	comp=Z,20nm,0.9s						
WLAR	White Oak Lake	5.43	121	IAmb_Lg		19 30 31.3	
	comp=Z,20nm,0.9s						
SDCO	Great Sand Dun	5.56	283		Pn	19 28 58.0	+0.3
435B	Jarrell	5.92	171	IAmb_Lg		19 30 47.2	
	comp=Z,23nm,0.7s						
N38A	Joes South For	5.93	44	Pn	Pn	19 29 03.0	+0.5
P40A	Paris	5.96	59	Pn	Pn	19 29 03.0	+0.1
CCM	Cathedral Cave	6.08	74	IAmb_Lg		19 30 49.9	
	comp=Z,28nm,0.7s						
T42A	Van Buren	6.09	84	Pn	Pn	19 29 05.5	+0.8
T42A				IAmb_Lg		19 30 56.9	
	comp=Z,14nm,0.8s						
LCAR	Lake Charles	6.09	93	Pn	Pn	19 29 04.7	0.0
JCT	Junction City	6.22	189	Pn	Pn	19 29 06.4	-0.2
JCT				IAmb_Lg		19 31 05.4	
	comp=Z,20nm,0.8s						
ISCO	Idaho Springs	6.30	302	Pn	Pn	19 29 07.8	-0.1
ISCO				IAmb_Lg		19 30 55.8	
	comp=Z,22nm,1.1s						
FVM	French Village	6.71	76	IAmb_Lg		19 31 10.2	
	comp=Z,25nm,0.7s						
SCIA	State Center	6.74	37	IAmb_Lg		19 31 13.1	
	comp=Z,21nm,0.8s						
LPAR	Lepanto	6.86	96	IAmb_Lg		19 31 13.9	
	comp=Z,26nm,0.9s						
MNTX	Cornudas Mount	7.43	230	IAmb_Lg		19 31 36.7	
	comp=Z,15nm,0.9s						
S44A	Carbondale	7.59	79	IAmb_Lg		19 31 43.0	
	comp=Z,19nm,0.8s						
SIUC	Southern Illin	7.62	79	IAmb_Lg		19 31 49.2	
	comp=Z,20nm,0.8s						

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*FUNV **07** 19:31:05.8, 8°.46N×71°.35W, h9^{km}, MW3.2*

ISC 07 19:31:05.1±1.5, **8°.53N**±0°.04×**71°.36W**±0°.04, **h12**^{km}±11^{km}, **n14, σ1^s.16**/22, **1D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	Socops	0.55	116	⇓*i*P	Pg	19 31 15.4	-0.6
SOCV				*e*S	Sg	19 31 23.0	-0.4
SDV	Santo Domingo	0.80	64	*e*P	Pg	19 31 20.7	0.0
SDV				*e*S	Sg	19 31 32.0	+0.8
SDV				*i*		19 31 41.7	
	comp=Z,124nm,0.3s						
PAMC	Pamplona, Colo	1.78	228	*e*P	Pn	19 31 36.0	-0.1
PAMC				*e*S	Sn	19 31 58.8	-0.1
PAMC				*i*		19 32 01.5	
	comp=Z,174nm,0.3s						
OCAC	Ocana	1.96	262	*e*P	Pn	19 31 37.4	-0.9
OCAC				*e*S	Sn	19 32 02.6	-0.4
OCAC				*i*		19 32 04.9	
	comp=Z,652nm,0.3s						
TAMC	Tame, Arauca	2.12	192	*e*P	Pn	19 31 41.7	+1.2
TAMC				*e*S	Sb	19 32 10.5	+0.6
TAMC				*i*		19 32 18.0	
	comp=Z,119nm,0.4s						
SIQV	Siquisique	2.60	36	*e*P	Pn	19 31 48.6	+1.6
SMLC	San Martn de	2.70	276	*e*P	Pn	19 31 46.8	-1.5
SMLC				*e*S	Sn	19 32 23.0	+2.1
SMLC				*i*		19 32 24.5	
	comp=Z,132nm,0.3s						
RUSC	La Rusia	3.13	213	*e*P	Pn	19 31 55.2	+0.5
RUSC				*e*S	Sn	19 32 32.2	0.0
RUSC				*i*		19 32 45.5	
	comp=Z,26nm,0.3s						
BAUV	El Baul	3.31	83	*e*P	Pn	19 31 57.6	+0.9
BAUV				*e*S	Sn	19 32 33.5	-2.4
MONV	Montecano	3.67	22	*e*P	Pn	19 32 02.6	+0.9
MONV				*e*S	Sn	19 32 43.3	-1.6
BENV	Beln	3.98	69	*e*P	Pn	19 32 06.6	+0.6
TACV	Tcata	4.56	69	*e*P	Pn	19 32 14.6	+0.5
CACV	CAICARA DEL OR	4.87	101	*e*P	Pb	19 32 25.6	-4.8
MERV	Las Mercedes	5.05	81	*e*P	Pn	19 32 20.4	-0.4

NEIC 07 19:39:45.4±0.8, **36°.93N**±0°.01×**97°.82W**±0°.02, **h4**^{km}±7^{km}, **mb_Lg2.6**/15, **Error ellipse: s-maj=3.1km s-min=0.9km az=126.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GC02	Grant County #	0.09	205		Pg	19 39 47.5	+0.3
GC02				Sg	Sg	19 39 49.0	+0.5
KAN14	Manchester OK	0.12	284		Pg	19 39 47.6	-0.2
KAN14				Sg	Sg	19 39 49.4	-0.1
KAN17	Caldwell West	0.12	19	Pg	Pg	19 39 47.9	0.0
KAN17				Sg	Sg	19 39 49.8	+0.2
KAN05	Bluff City Nor	0.18	346		Pg	19 39 49.0	-0.1
KAN05				Sg	Sg	19 39 51.5	0.0
KAN01	Argonia South	0.23	11		Pg	19 39 49.9	0.0
KAN01				Sg	Sg	19 39 53.0	+0.1
KAN09	Caldwell North	0.26	37	Pg	Pg	19 39 50.5	+0.1
KAN09				Sg	Sg	19 39 54.3	+0.4
KAN13	South Haven SW	0.28	73	Pg	Pg	19 39 51.1	+0.2
KAN10	Anthony SW Sta	0.30	311		Pg	19 39 51.0	-0.2
KAN10				Sg	Sg	19 39 54.9	-0.1
KAN06	Argonia West S	0.32	354		Pg	19 39 51.5	-0.2
KAN08	Anthony NE Sta	0.32	337		Pg	19 39 51.5	-0.2
OK032	Salt Plains WL	0.34	249		Pg	19 39 51.7	-0.3
OK032				Sg	Sg	19 39 56.5	+0.1
KAN16	Harper SW Stat	0.36	326		Pg	19 39 52.1	-0.3
KS20	Mayfield South	0.37	35	Pg	Pg	19 39 52.3	-0.2
KAN12	Harper NE Stat	0.40	338		Pg	19 39 52.8	-0.3
CROK	Carrier	0.44	198	Pg	Pg	19 39 54.1	+0.1
BLOK	Blackwell	0.51	109		Pg	19 39 55.4	+0.1
T35A	Sooner Cattle	1.04	90	Pg	Pg	19 40 04.9	-0.5
OK029	Liberty Lake	1.17	165		Pg	19 40 07.2	-0.6
QUOK	Quay	1.17	130	Pg	Pg	19 40 07.3	-0.5
OK031	S. Brethren Rd	1.25	141	Pg	Pg	19 40 08.6	-0.8
BCOK	Bluff Creek, N	1.28	172		Pg	19 40 08.9	-1.0
OK030	Cody Creek RV	1.30	140		Pn	19 40 09.8	-0.5
OK025	Westminster Rd	1.40	164	Pn	Pn	19 40 11.4	-0.3
OKCFA	Oklahoma City	1.54	169		Pn	19 40 13.7	+0.1
OKCFA				IAmb_Lg		19 40 35.6	
	comp=Z,27nm,0.9s						
OKCSW	OKLAHOMA CITY	1.55	169	Pn	Pn	19 40 13.9	+0.2
R32A	Long Quarter,	1.65	335		Pn	19 40 14.9	-0.3
FNO	Franklin	1.70	168	Pn	Pn	19 40 16.2	+0.4
TUL1	Leonard	1.92	121	Pn	Pn	19 40 19.8	+0.9
TUL1				IAmb_Lg		19 40 49.3	
	comp=Z,35nm,0.8s						
KSU1	Kansas State U	2.37	23	IAmb_Lg		19 41 02.5	
	comp=Z,40nm,1.0s						
HHAR	Hobbs	3.19	101	IAmb_Lg		19 41 32.8	
	comp=Z,20nm,1.0s						
Z35A	Perchaven, San	3.62	173	IAmb_Lg		19 41 47.0	
	comp=Z,14nm,0.8s						
S39A	Bolivar	3.66	77	Pn	Pn	19 40 42.4	-0.4
U40A	Yellville	4.03	97	Pn	Pn	19 40 48.5	+0.6
U40A				IAmb_Lg		19 41 56.1	
	comp=Z,14nm,0.8s						
MIAR	Mount Ida	4.19	123	Pn	Pn	19 40 50.8	+0.8
MGMO	Mountain Grove	4.44	85	Pn	Pn	19 40 53.8	+0.2
MGMO				IAmb_Lg		19 42 08.5	
	comp=Z,8.8nm,0.9s						
R40A	Maddies Statio	4.61	71	Pn	Pn	19 40 56.0	+0.2
X40A	Basin Creek Fa	4.73	120	Pn	Pn	19 40 58.5	+1.1
WHAR	Wooly Hollow	4.76	108	Pn	Pn	19 40 59.0	+1.0
WLAR	White Oak Lake	5.02	129	Pn	Pn	19 41 02.5	+1.0
N38A	Joes South For	5.26	41	IAmb_Lg		19 42 34.9	
	comp=Z,12nm,0.8s						
T25A	Trinidad	5.28	274	IAmb_Lg		19 42 36.9	
	comp=Z,6.5nm,1.0s						
CCM	Cathedral Cave	5.34	76	Pn	Pn	19 41 05.6	-0.3

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*MAN **07** 19:40:10.9, 16°.55N×119°.42E, h32^{km}, mb5.8, ML4.8, MS5.2*

*MOS **07** 19:40:11.1±0.9, 16°.46N×119°.85E, h38^{km}, mb5.7/53, MS5.0/35, Error ellipse: s-maj=6.1km s-min=3.6km az=114.4*

*IDC **07** 19:40:12.9±1.1, 16°.45N×119°.86E, h40^{km}±9^{km}, mb5.1/58, mb1 5.1/61, mb1mx5.0/68, mbtmp5.3/61, ML4.7/3, MS4.7/37, Ms1 4.7/37, ms1mx4.6/42, Error ellipse: s-maj=8.6km s-min=5.8km az=70.0*

*BJI **07** 19:40:12.7±0.0, 16°.63N×119°.90E, h38^{km}, mB5.6/65, mb5.3/84, Ms5.1/94, Ms7 5.0/86*

*NEIC **07** 19:40:12.7, 16°.46N×119°.93E, h43^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.97; $M_{\theta\theta}$-1.27; $M_{\phi\phi}$0.30; $M_{r\theta}$-0.89; $M_{\theta\phi}$-0.11; $M_{\phi r}$-1.03; Fault plane solution: $M_0$1.78000×10^{17} NP1:ϕ_s234.62000°, δ72.34000°, λ64.49000°. NP2:ϕ_s112.18000°, δ30.69000°, λ143.53000°. Principal axes: T 1.8620, Plg55.0000°, Azm112.0000°; N -0.1670, Plg24.0000°, Azm243.0000°; P -1.6950, Plg23.0000°, Azm344.0000°;*

*NEIC **07** 19:40:13.6±1.7, 16°.49N±0°.06×119°.85E±0°.07, h37^{km}±1^{km}, mb5.6/264, Ms_20 4.9/79, Mwb5.4/24, Mww5.5, Mwc5.4(GCMT) Error ellipse: s-maj=11.6km s-min=9.6km az=241.0*

*BGR **07** 19:40:14.7±0.0, 16°.94N×120°.99E, h60^{km}, mb4.9*

*GCMT **07** 19:40:14.6±0.1, 16°.62N±0°.01×119°.78E±0°.01, h63^{km}±1^{km}, MW5.4/134, Moment Tensor Solution. s112,c201; s134,c264; Duration: 1^s.3 Moment tensor: Scale 10^{17} Nm; M_{rr}0.55±.03; $M_{\theta\theta}$-1.22±.02; $M_{\phi\phi}$0.67±.03; $M_{r\theta}$-0.88±.02; $M_{\theta\phi}$-0.22±.02; $M_{\phi r}$-1.11±.02; Best double couple: $M_0$1.78000×10^{17} NP1:ϕ_s120.00000°, δ34.00000°, λ161.00000°. NP2:ϕ_s226.00000°, δ79.00000°, λ58.00000°. Principal axes: T 1.7940, Plg46.0000°, Azm103.0000°; N -0.0260, Plg32.0000°, Azm233.0000°; P -1.7660, Plg27.0000°, Azm341.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **07** 19:40:15, 16°.64N×119°.80E, h62^{km}, Moment Tensor Solution. Duration: 2^s.6 Moment tensor: Scale 10^{17}Nm; M_{rr}0.56; $M_{\theta\theta}$-1.27; $M_{\phi\phi}$0.72; $M_{r\theta}$-0.89; $M_{\theta\phi}$-0.22; $M_{\phi r}$-1.12; Fault plane solution: $M_0$1.82000×10^{17} NP1: ϕ_s121.00000°, δ35.00000°, λ161.00000°. NP2: ϕ_s226.00000°, δ79.00000°, λ57.00000°. Principal axes: T 1.8292, Plg45.0000°, Azm103.0000°; N -0.0171, Plg33.0000°, Azm233.0000°; P -1.8121, Plg27.0000°, Azm342.0000°;*

*KLM **07** 19:40:16, 16°.46N×119°.94E, h70^{km}, mb5.4*

*NEIC **07** 19:40:19, 16°.46N×119°.61E, h36^{km}, Moment Tensor Solution. Duration: 14^s.0 Moment tensor: Scale 10^{17}Nm; M_{rr}0.73; $M_{\theta\theta}$-1.18; $M_{\phi\phi}$0.44; $M_{r\theta}$-1.34; $M_{\theta\phi}$-0.27; $M_{\phi r}$-1.14; Fault plane solution: $M_0$2.05000×10^{17} NP1: ϕ_s113.00000°, δ23.00000°, λ149.00000°. NP2: ϕ_s232.00000°, δ78.00000°, λ70.00000°. Principal axes: T 1.9847, Plg53.0000°, Azm119.0000°; N 0.1270, Plg20.0000°, Azm237.0000°; P -2.1117, Plg30.0000°, Azm339.0000°;*

ISC 07 19:40:12.9±0.3, **16°.46N**±0°.02×**119°.86E**±0°.03, **h42**^{km}±2^{km}, **h42**^{km}**:pP-P, n1222, σ1^s.46**/1392, **mb5.5**/349, **MS5.0**/115, **157C-201D, Fault plane solution: NP1:**ϕ_s219.46539°, δ80.42831°, λ59.40210°. **NP2:**ϕ_s113.75993°, δ31.92105°, λ161.67056°. **Principal axes:** T Plg45.8694°, Azm98.3400°; N Plg30.1273°, Azm225.0813°; P Plg28.8552°, Azm333.7297°; **Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIPP	Brgy, Tapao	1.56	21	⇑*i*P	Pn	19 40 39.3	+1.1
SIPP				*i* S	Sn	19 41 08.1	+11
TGY	Tagaytay City	2.56	156	⇑*e*P	Pn	19 40 58.4	+6.4

TGY				*i*S	Sn	19 41 32.5	+11
SGCP	**Mt. Cagua**	**2.74**	**49**	⇑*i*P	**Pn**	**19 40 57.7**	**+3.4**
SGCP				*i*S	**Sn**	**19 41 22.2**	**-4.0**
LQP	**Lukban**	**2.84**	**145**	⇑*i*P	Pn	19 41 00.8	+4.9
LQP				*i*S	**Sn**	**19 41 27.2**	**-1.8**
PGP	**Puerto Galera**	**3.12**	**160**	⇓*e*P	Pn	19 41 03.9	+4.2
PGP				*i*S	**Sn**	**19 41 40.8**	**+5.0**
GQP	**Guinayangan**	**3.56**	**135**	⇑*e*P	Pn	19 41 10.3	+4.6
GQP				*e*S	Sn	19 41 58.2	+12
RCP	**Roxas**	**5.62**	**150**	⇓*e*P	Pn	19 41 39.2	+5.2
TWG	**Pinlang**	**6.43**	**10**		**Pn**	**19 41 44.4**	**-0.7**
PPR	**Puerto Princes**	**6.73**	**190**	⇑*e*P	**Pn**	**19 41 50.1**	**+0.8**
TPUB	**Ta-pu**	**6.84**	**6**	Pn	**Pn**	**19 41 50.8**	**0.0**
TPUB	**Ta-pu**	**6.84**	**6**	P	**Pn**	**19 41 52.4**	**+1.6**
YULB	**Yu-li**	**7.03**	**11**		**Pn**	**19 41 53.4**	**+0.1**
SSLB	**Suanglung**	**7.36**	**8**	Pn	**Pn**	**19 41 58.4**	**+0.5**
SSLB	**Suanglung**	**7.36**	**8**	P	**Pn**	**19 42 01.0**	**+3.1**
TBP	**Tagbilaran**	**7.78**	**149**	⇑*i*P	Pn	19 42 10.0	+6.4
TBP				*i*S	Sn	19 43 46.5	+16
SNPH	**Sibulan**	**7.80**	**155**	*e*P	Pn	19 42 10.2	+6.2
NACB	**Ninganchiao**	**7.84**	**12**	Pn	**Pn**	**19 42 05.7**	**+1.3**
KNMB	**Chin-men Tao**	**8.08**	**350**	Pn	**Pn**	**19 42 06.9**	**-0.8**
MCO	**Taipa Grande**	**8.19**	**314**	P	**Pn**	**19 42 09.0**	**-0.3**
YHNB	**Yeheng**	**8.29**	**10**	Pn	**Pn**	**19 42 11.3**	**+0.6**
YHNB	**Yeheng**	**8.29**	**10**	P	**Pn**	**19 42 14.1**	**+3.4**
YOJ	**Yonaguni jima**	**8.49**	**20**	P	**Pn**	**19 42 14.5**	**+1.2**
YOJ	**Yonaguni jima**	**8.49**	**20**	Pn	**Pn**	**19 42 14.5**	**+1.2**
YOJ	**Yonaguni jima**	**8.49**	**20**	P	**Pn**	**19 42 15.6**	**+2.3**
QZH	**Quanzhou**	**8.52**	**352**	P	**Pn**	**19 42 13.3**	**-0.5**
QZH				S	**Sn**	**19 43 50.4**	**+1.7**
QZH				pmax	pmax		
	comp=Z,190nm,0.9s						
QZH				pmax	pmax		
	comp=Z,1µm,5.1s						
QZH				LR	LR		
	comp=N,6µm,18.7s						
QZH				LR	LR		
	comp=E,4µm,17.2s						
QZH				LR	LR		
	comp=Z,8µm,18.5s						
DCPH	**Dipolog City**	**8.54**	**156**	⇑*e*P	Pn	19 42 22.1	+8.1
TATO	**Taipei**	**8.61**	**10**	P	**Pn**	**19 42 16.4**	**+1.5**
TATO				P	**Pn**	**19 42 16.4**	**+1.5**
TATO				P	**Pn**	**19 42 16.4**	**+1.5**
TATO				S	**Sn**	**19 43 51.7**	**+0.9**
TATO				S	**Sn**	**19 43 51.7**	**+0.9**
TATO				S	**Sn**	**19 43 51.7**	**+0.9**
JMJ	**Miyako jima 2**	**9.74**	**31**	P	**Pn**	**19 42 32.8**	**+2.3**
QIZ	**Qiongzhong**	**9.88**	**286**	P	**Pn**	**19 42 30.9**	**-1.5**
QIZ				S	**Sn**	**19 44 25.3**	**+3.2**
QIZ				pmax	pmax		
	comp=Z,45nm,0.8s						
QIZ				LR	LR		
	comp=N,5µm,16.7s						
QIZ				LR	LR		
	comp=E,6µm,18.8s						
QIZ				LR	LR		
	comp=Z,9µm,22.6s						
QIZ	**Qiongzhong**	**9.88**	**286**	Pn	**Pn**	**19 42 30.6**	**-1.8**
KCP	**Kidapawan**	**10.70**	**151**	⇓*e*P	Pn	19 42 50.5	+6.9
DMPH	**Davao City--Mi**	**10.83**	**149**	⇑*e*P	Pn	19 42 54.7	+9.2
DAV	**Davao City (W)**	**10.88**	**148**	Pn	**Pn**	**19 42 47.8**	**+1.7**
	35nm,0.3s,baz=0.0,slow=5.1,SNR=2.1						
DAV				Sn	**Sn**	**19 44 47.0**	**+0.4**
	14nm,0.3s,baz=90,slow=15,SNR=1.3						
DAV				LR	LR	19 48 33.6	
	comp=Z,16µm,19.6s,baz=307,slow=46						
DAV	**Davao City (W)**	**10.88**	**148**	P	Pn	19 42 50.1	+4.0
DAV				P	Pn	19 42 50.1	+4.0
DAV				S	**Sn**	**19 44 52.2**	**+5.6**
DAV				S	**Sn**	**19 44 52.2**	**+5.6**
SPMM	**Sapulut**	**12.14**	**196**	P	**Pn**	**19 43 06.0**	**+2.5**
JOW	**Kunigami**	**12.94**	**36**	Pn	**Pn**	**19 43 15.2**	**+1.0**
	4.4nm,0.3s,baz=184,slow=7.5,SNR=8.2						
JOW				Sn	Sn	19 45 28.2	-8.8
	1.0nm,0.3s,baz=285,slow=20,SNR=2.0						
JOW	**Kunigami**	**12.94**	**36**	Pn	**Pn**	**19 43 14.8**	**+0.5**
UBPT	**Khong Chiam**	**13.90**	**267**	Pn	**Pn**	**19 43 28.0**	**+0.6**
JMZ	**Minamidaito 2**	**14.10**	**47**	Pn	**Pn**	**19 43 29.9**	**-0.2**
SSE	**Sheshan**	**14.62**	**5**	P	**Pn**	**19 43 37.8**	**+0.8**
SSE				S	**Sn**	**19 46 20.3**	**+2.5**
SSE				pmax	pmax		
	comp=Z,30nm,1.3s						
SSE				pmax	pmax		
	comp=Z,620nm,6.8s						
SSE				LR	LR		
	comp=N,2µm,18.2s						
SSE				LR	LR		
	comp=E,1µm,18.2s						
WHN	**Wuhan**	**14.90**	**341**	⇑P	**Pn**	**19 43 40.2**	**-0.5**
WHN				S	**Sn**	**19 46 20.6**	**-4.0**
WHN				pmax	pmax		
	comp=Z,500nm,1.2s						
WHN				LR	LR		
	comp=N,6µm,11.5s						
WHN				LR	LR		
	comp=E,6µm,14.4s						
WHN				LR	LR		
	comp=Z,16µm,20.4s						
TOLI2	**Tolitoli**	**15.28**	**177**		**P**	**19 43 48.7**	**-1.3**
TOLI2				IAmb	IAmb	19 43 53.8	
	comp=Z,374nm,0.9s						
NJ2	**Nanjing**	**15.55**	**357**	⇓P	**Pn**	**19 43 49.6**	**+0.4**
NJ2				pP	**P**	**19 43 56.4**	**+3.5**
NJ2				PP	**pwP**	**19 44 03.7**	**+0.9**
NJ2				S	**Sn**	**19 46 43.6**	**+3.2**
NJ2				sS	**S**	**19 46 53.5**	**-1.0**
NJ2				SS	**SnSn**	**19 46 59.4**	**+5.5**
NJ2				pmax	pmax		
	comp=Z,67nm,1.6s						
NJ2				pmax	pmax		
	comp=Z,1µm,3.5s						
NJ2				LR	LR		
	comp=Z,4µm,18.5s						
NJ2				LR	LR		
	comp=Z,3µm,16.6s						
NJ2				LR	LR		
	comp=Z,6µm,18.8s						
GYA	**Guiyang**	**15.79**	**311**	⇑P	**Pn**	**19 43 52.9**	**+0.4**
GYA				sP	sP	19 44 07.5	-3.0
GYA				S	**Sn**	**19 46 44.4**	**-2.2**
GYA				pmax	pmax		
	comp=Z,140nm,1.5s						
GYA				pmax	pmax		
	comp=Z,2µm,3.6s						
GYA				LR	LR		
	comp=Z,2µm,12.4s						
GYA				LR	LR		
	comp=Z,2µm,12.5s						
GYA				LR	LR		
	comp=Z,7µm,16.5s						
SBUM	**Sibu**	**15.82**	**209**	P	**P**	**19 43 57.0**	**+0.9**
SLVN	**Son La**	**15.86**	**290**	Pn	**Pn**	**19 43 53.4**	**+0.1**
MRSI	**Marisa**	**16.01**	**172**	P	**P**	**19 43 59.6**	**+1.4**
	comp=Z,6µmcomp=Z,2µmcomp=Z,113nm,1.0s						
MPSI	**Mapaga**	**16.02**	**180**	P	**P**	**19 44 00.2**	**+1.9**
	comp=Z,4µmcomp=Z,2µmcomp=Z,153nm,1.3s						
GTOI	**Gorontalo**	**16.03**	**169**	P	**Pn**	**19 43 55.1**	**-0.3**
	comp=Z,3µmcomp=Z,712nmcomp=Z,42nm,1.0s						
KMSI	**Cibinong**	**16.30**	**165**	P	**P**	**19 44 04.8**	**+3.4**
	comp=Z,2µmcomp=Z,228nm,0.9s						
ENH	**Enshi**	**16.71**	**327**	Pn	**P**	**19 44 04.3**	**-1.5**
ENH				IAmb	IAmb	19 44 10.0	
	comp=Z,404nm,1.1s						
TNTI	**Ternate**	**17.25**	**154**	P	**P**	**19 44 13.0**	**+1.0**
	comp=Z,3µmcomp=Z,1µmcomp=Z,85nm,1.0s						
TNTI	**Ternate**	**17.25**	**154**	Pn	**Pn**	**19 44 11.3**	**+0.4**
APSI	**Ampana**	**17.35**	**174**	P	**P**	**19 44 14.5**	**+1.5**
	comp=Z,3µmcomp=Z,3µmcomp=Z,205nm,1.1s						
KSM	**Kuching**	**17.61**	**213**	P	**P**	**19 44 19.0**	**+3.1**
LUWI	**Luwuk**	**17.63**	**170**	P	**P**	**19 44 18.4**	**+2.4**
	comp=Z,7µmcomp=Z,4µmcomp=Z,457nm,1.0s						
LUWI	**Luwuk**	**17.63**	**170**		**P**	**19 44 17.3**	**+1.3**
LUWI				IAmb	IAmb	19 44 29.8	
	comp=Z,413nm,1.0s						
JSU	**Suzuyama**	**17.82**	**31**		**Pn**	**19 44 17.6**	**-0.1**
MTKI	**Muara Teweh, K**	**17.97**	**196**	P	**P**	**19 44 24.5**	**+4.6**
KMI	**Kunming**	**18.17**	**301**	⇓P	**P**	**19 44 25.4**	**+3.2**
KMI				pP	pwP	19 44 32.6	-1.8
KMI				sP	sP	19 44 36.2	-0.8
KMI				PP	pP	19 44 41.4	+10
KMI				S	**S**	**19 47 46.2**	**-2.1**
KMI				ScP	**ScP**	**19 52 27.1**	**+0.6**
KMI				pmax	pmax		
	comp=Z,2µm,6.2s						
KMI				LR	LR		
	comp=Z,4µm,12.3s						
KMI				LR	LR		
	comp=Z,4µm,23.7s						
KMI				LR	LR		
	comp=Z,6µm,22.2s						
STKI	**Sintang**	**18.27**	**208**	P	**Pn**	**19 44 26.6**	**+3.2**
	comp=Z,36nm,1.3s						
LBMI	**Labuha**	**18.59**	**155**	P	**Pn**	**19 44 29.4**	**+2.2**
	comp=Z,3µmcomp=Z,2µmcomp=Z,171nm,1.0s						
JNU	**Nakatsue**	**19.35**	**29**	P	**Pn**	**19 44 35.9**	**-0.4**
	comp=Z,1.2nm,0.3s,baz=177,slow=6.4,SNR=15						
JNU				S	**Sn**	**19 48 13.0**	**+0.6**
	baz=162,slow=23,SNR=1.6						
JNU				PcP	**PcP**	**19 48 56.8**	**+0.8**
	comp=Z,4.3nm,0.3s,baz=242,slow=0.4,SNR=12						
JNU				LR	LR	19 52 11.3	
	comp=Z,2µm,21.8s,baz=197,slow=37						
JNU	**Nakatsue**	**19.35**	**29**	P	**P**	**19 44 35.4**	**+0.5**
SANI	**Sanana**	**19.36**	**161**	P	**P**	**19 44 33.3**	**-1.8**
	comp=Z,4µmcomp=Z,2µmcomp=Z,167nm,0.9s						
TTSI	**Tana Toraja**	**19.38**	**180**	P	**Pn**	**19 44 37.3**	**+0.6**
	comp=Z,4µmcomp=Z,3µmcomp=Z,209nm,1.0s						
TIA	**Tai'an**	**19.82**	**353**	⇓P	**Pn**	**19 44 41.8**	**-0.1**
TIA				pmax	pmax		
	comp=Z,280nm,0.8s						
TIA				pmax	pmax		
	comp=Z,2µm,3.5s						
TIA				LR	LR		
	comp=Z,3µm,20.4s						
TIA				LR	LR		
	comp=Z,2µm,17.3s						
TIA				LR	LR		
	comp=Z,4µm,21.1s						
JTU	**Tsushima**	**19.92**	**24**	P	**P**	**19 44 41.4**	**+0.3**
KBKI	**Kotabaru**	**19.97**	**191**	P	**Pn**	**19 44 44.6**	**+0.9**
	comp=Z,961nmcomp=Z,90nm,0.9s						
CM31	**Chiang Mai Arr**	**20.05**	**279**	P	**Pn**	**19 44 45.0**	**+0.3**
	SNR=88						
CM31				P	**Pn**	**19 44 45.0**	**+0.3**
	SNR=88						
CM31	**Chiang Mai Arr**	**20.05**	**279**	P	**Pn**	**19 44 44.7**	**0.0**
CM31				IAmb	IAmb	19 44 49.7	
	comp=Z,209nm,1.1s						
CMAR	**Chiang Mai Arr**	**20.05**	**279**	P	**Pn**	**19 44 44.7**	**0.0**
	comp=Z,126nm,1.0s,baz=104,slow=8.4,SNR=169						
CMAR				PcP	**PcP**	**19 48 59.1**	**+1.7**
	comp=Z,8.0nm,0.8s,baz=73,slow=0.4,SNR=14						
CMAR				LR	LR	19 52 27.6	
	comp=Z,4µm,20.4s,baz=136,slow=37						
CMAR				ScP	**ScP**	**19 52 31.1**	**+0.6**
	comp=Z,4.6nm,1.0s,baz=54,slow=1.8,SNR=11						
CMAR				P3KPbc		20 19 02.6	
	comp=Z,1.1nm,1.0s,baz=273,slow=5.7,SNR=7.1						
CMAR	**Chiang Mai Arr**	**20.05**	**279**		**Pn**	**19 44 44.9**	**+0.2**
CMAR				ScP	**ScP**	**19 52 31.2**	**+0.7**
CHTO	**Chiang Mai**	**20.07**	**280**	P	**Pn**	**19 44 44.5**	**-0.4**
CHTO				pmax	pmax		
	comp=Z,88nm,1.2s						
CHTO				MLR	MLR		
	comp=Z,4µm,20.0s						
CHTO	**Chiang Mai**	**20.07**	**280**	P	**Pn**	**19 44 44.5**	**-0.4**
CHTO				P	**Pn**	**19 44 44.5**	**-0.4**
CHTO	**Chiang Mai**	**20.07**	**280**		**Pn**	**19 44 44.5**	**-0.4**
CHTO	**Chiang Mai**	**20.07**	**280**	IAMs_20	IAMs_20	19 52 16.9	
	comp=Z,4µm,20.0s						
XAN	**Xi'an**	**20.08**	**333**	P	**Pn**	**19 44 44.1**	**-0.9**
XAN				pmax	pmax		
	comp=Z,190nm,1.4s						
XAN				pmax	pmax		
	comp=Z,1µm,3.5s						
XAN				LR	LR		
	comp=Z,4µm,16.1s						
XAN				LR	LR		
	comp=Z,4µm,18.1s						
XAN				LR	LR		
	comp=Z,6µm,18.0s						
BBKI	**Banjar Baru**	**20.41**	**195**	P	Pn	19 44 49.7	+0.8
	comp=Z,2µmcomp=Z,145nm,1.0s						
SWI	**Sorong**	**20.56**	**146**	P	**P**	**19 44 49.7**	**+1.5**
	comp=Z,8µmcomp=Z,3µmcomp=Z,171nm,0.9s						
SIJI	**Sorong**	**20.57**	**146**	P	**P**	**19 44 48.7**	**+0.4**
	comp=Z,48nm,0.5s,baz=339,slow=11,SNR=50						
SIJI				S	**S**	**19 48 37.8**	**+1.6**
	comp=Z,1.7nm,0.3s,baz=221,slow=19,SNR=1.4						
SIJI				LR	LR	19 53 25.5	
	comp=Z,4µm,21.8s,baz=332,slow=38						
PBKI	**Pangkalan Bun**	**20.69**	**204**	P	Pn	19 44 53.7	+1.5
	comp=Z,2µmcomp=Z,210nm,1.0s						
TJN	**Taejon**	**20.93**	**17**	*c* *i*P	**P**	**19 44 52.6**	**+0.6**
JRMM	**Jerantut**	**21.16**	**236**	P	**P**	**19 44 59.0**	**+4.3**
JMN	**Monobe**	**21.33**	**34**	P	**P**	**19 44 56.6**	**+0.2**
JMN				IAmb	IAmb	19 45 15.9	
	comp=Z,312nm,1.3s						
KAPI	**Kappang**	**21.34**	**180**	P	**P**	**19 44 57.2**	**+0.7**
	comp=Z,57nm,0.8s,baz=28,slow=7.7,SNR=33						
KAPI				S	**S**	**19 48 55.1**	**+3.7**
	comp=Z,5.1nm,0.8s,baz=72,slow=19,SNR=5.6						
KAPI				LR	LR	19 53 59.2	
	comp=Z,1µm,20.3s,baz=22,slow=39						
KAPI	**Kappang**	**21.34**	**180**	P	**P**	**19 44 57.4**	**+0.9**
KAPI				pmax	pmax		
	comp=Z,119nm,1.0s						
KAPI				MLR	MLR		
	comp=Z,2µm,20.0s						
KAPI	**Kappang**	**21.34**	**180**	P	**P**	**19 44 57.6**	**+1.1**
KAPI				P	**P**	**19 44 57.6**	**+1.1**
KAPI				S	**S**	**19 48 52.7**	**+1.4**
KAPI				S	**S**	**19 48 52.7**	**+1.4**
KAPI	**Kappang**	**21.34**	**180**	P	**P**	**19 44 57.4**	**+0.9**
MSAI	**Masohi**	**21.62**	**155**	P	**P**	**19 45 03.4**	**+3.8**
	comp=Z,943nmcomp=Z,96nm,1.0s						
BKSI	**Bulukumba**	**21.64**	**179**	P	**P**	**19 45 01.6**	**+1.8**
	comp=Z,4µmcomp=Z,2µmcomp=Z,136nm,1.0s						
INCN	**Inchon**	**21.78**	**15**	P	**P**	**19 45 01.2**	**0.0**
INCN				pmax	pmax		
	comp=Z,117nm,0.9s						
INCN				MLR	MLR		
	comp=Z,3µm,22.0s						
INCN	**Inchon**	**21.78**	**15**	P	**P**	**19 45 01.1**	**0.0**
KULM	**Kulim**	**21.86**	**242**	P	**P**	**19 45 05.0**	**+2.8**
JHS	**Saijyo**	**21.95**	**30**	P	**P**	**19 45 03.2**	**+0.2**
IPM	**Ipoh**	**21.99**	**239**	P	**P**	**19 45 05.0**	**+1.4**
KSAR	**Wonju Array Be**	**22.07**	**17**	P	**P**	**19 45 04.0**	**-0.2**
KSAR	**Wonju Array Be**	**22.07**	**17**	P	**P**	**19 45 04.0**	**-0.2**
KSRS	**Korea Array**	**22.09**	**17**	P	**P**	**19 45 04.2**	**-0.2**
	comp=Z,54nm,0.9s,baz=201,slow=11,SNR=39						
KSRS				PcP	**PcP**	**19 49 01.9**	**+1.0**
	comp=Z,8.8nm,1.0s,baz=190,slow=1.8,SNR=6.9						
KSRS				ScP	**ScP**	**19 52 36.4**	**+1.3**
	comp=Z,0.6nm,0.7s,baz=143,slow=3.0,SNR=4.9						
KSRS				LR	LR	19 54 21.5	
	comp=Z,2µm,19.5s,baz=197,slow=38						
KS19	**Wonju Array Si**	**22.12**	**17**	P	**P**	**19 45 04.1**	**-0.7**
KS19				IAmb	IAmb	19 45 12.1	
	comp=Z,459nm,1.8s						
TIY	**Taiyuan**	**22.16**	**344**	⇓*i*P	**P**	**19 45 06.8**	**+1.5**
TIY				pP	**pP**	**19 45 13.0**	**-2.4**
TIY				sP	**sP**	**19 45 22.1**	**+1.6**
TIY				SS	Sn	19 49 41.6	+22
TIY				pmax	pmax		
	comp=Z,180nm,0.9s						
TIY				LR	LR		
	comp=Z,2µm,13.7s						
TIY				LR	LR		
	comp=Z,2µm,15.4s						
TIY				LR	LR		
	comp=Z,3µm,20.3s						
DL2	**Dalian**	**22.42**	**4**	P	**P**	**19 45 08.6**	**+0.7**
DL2				S	**S**	**19 49 11.5**	**0.0**
DL2				pmax	pmax		
	comp=Z,130nm,1.2s						
DL2				LR	LR		
	comp=Z,3µm,17.1s						
DL2				LR	LR		
	comp=Z,3µm,19.1s						
BSSI	**Bau Bau, Buton**	**22.47**	**178**	P	**P**	**19 45 09.1**	**+0.4**
	comp=Z,2µmcomp=Z,3µmcomp=Z,197nm,1.4s						
DSRI	**Dabo**	**22.60**	**223**	P	**P**	**19 45 11.3**	**+1.2**
	comp=Z,616nmcomp=Z,28nm,1.3s						
FAKI	**Fak Fak**	**22.82**	**146**	P	**P**	**19 45 12.2**	**-0.2**
	comp=Z,5µmcomp=Z,5µmcomp=Z,522nm,1.2s						
FAKI	**Fak Fak**	**22.82**	**146**	P	**P**	**19 45 12.6**	**+0.1**
PPBI	**Pangkal Pinang**	**22.94**	**217**	P	**P**	**19 45 14.8**	**+1.2**
	comp=Z,5µmcomp=Z,86nm,1.0s						
BNDI	**Bandanaira**	**23.09**	**154**	P	**P**	**19 45 15.8**	**+0.6**
	comp=Z,6µmcomp=Z,15µmcomp=Z,1µm,0.9s						
JCJ	**Chichijima**	**23.24**	**59**	P	**P**	**19 45 15.0**	**-1.6**
	comp=Z,302nm,1.0s,baz=304,slow=7.3,SNR=5.1						
JCJ				LR	LR	19 52 49.4	
	comp=Z,713nm,21.5s,baz=266,slow=32						
JCJ	**Chichijima**	**23.24**	**59**	P	**P**	**19 45 15.0**	**-1.6**
JWT	**Wachi**	**23.33**	**34**		**P**	**19 45 18.2**	**+0.8**
BJT	**Baijiatuau**	**23.69**	**353**	P	**P**	**19 45 21.3**	**+0.5**
BJT				pmax	pmax		
	comp=Z,259nm,1.1s						
BJT	**Baijiatuau**	**23.69**	**353**	P	**P**	**19 45 21.3**	**+0.5**
BJT				IAmb	IAmb	19 45 24.5	
	comp=Z,259nm,1.1s						
BJI	**Beijing**	**23.71**	**353**	P	**P**	**19 45 22.0**	**+1.0**
BJI				S	**S**	**19 49 32.8**	**-0.3**
BJI				pmax	pmax		
	comp=Z,330nm,1.7s						
BJI				pmax	pmax		
	comp=Z,2µm,3.6s						
BJI				LR	LR		
	comp=Z,2µm,26.1s						
BJI				LR	LR		
	comp=Z,2µm,19.4s						
BJI				LR	LR		
	comp=Z,3µm,22.3s						
KMMI	**Kalianget**	**24.08**	**194**	P	**P**	**19 45 26.2**	**+1.7**
	comp=Z,3µmcomp=Z,226nm,0.9s						
JMBI	**JAMBI**	**24.08**	**223**	P	**P**	**19 45 28.1**	**+3.5**
	comp=Z,3µmcomp=Z,324nm,1.1s						
LZH	**Lanzhou**	**24.19**	**327**	⇓P	**P**	**19 45 27.5**	**+1.8**
LZH				pP	pP	19 45 35.9	-0.6
LZH				sP	sP	19 45 39.5	-1.8
LZH				S	**S**	**19 49 37.0**	**-4.3**
LZH				sS	sS	19 49 55.0	-5.0
LZH				ScS	**ScS**	**19 56 27.5**	**-0.9**
LZH				pmax	pmax		
	comp=Z,670nm,1.2s						
LZH				pmax	pmax		
	comp=Z,4µm,4.9s						
LZH				LR	LR		
	comp=Z,4µm,17.9s						
LZH				LR	LR		
	comp=Z,6µm,17.9s						
LZH				LR	LR		
	comp=Z,5µm,19.5s						
INU	**Inuyama**	**24.26**	**36**	P	**P**	**19 45 25.5**	**-0.6**
GUMO	**Guam**	**24.32**	**93**	P	**P**	**19 45 26.7**	**-0.1**
	comp=Z,143nm,1.0s,baz=228,slow=15,SNR=4.9						
GUMO				LR	LR	19 53 00.5	
	comp=Z,2µm,21.6s,baz=258,slow=32						
GUMO	**Guam**	**24.32**	**93**	P	**P**	**19 45 26.6**	**-0.2**
GUMO				IAmb	IAmb	19 45 32.2	
	comp=Z,310nm,1.3s						
SRPI	**Serui, Papua**	**24.36**	**137**	P	**P**	**19 45 27.1**	**-0.1**
	comp=Z,2µmcomp=Z,3µmcomp=Z,407nm,1.0s						
PMBI	**Palembang**	**24.36**	**219**	P	**P**	**19 45 30.1**	**+2.9**
	comp=Z,3µmcomp=Z,324nm,1.1s						
PMBI	**Palembang**	**24.36**	**219**	P	**P**	**19 45 28.5**	**+1.3**
JHJ	**Hachijo jima 2**	**24.47**	**44**	P	**P**	**19 45 29.3**	**+1.3**
	comp=Z,189nm,0.8s,baz=200,slow=1.7,SNR=1.7						
JHJ				LR	LR	19 53 20.0	
	comp=Z,591nm,20.5s,baz=268,slow=32						
JHJ2	**Mitsune**	**24.48**	**44**	P	**P**	**19 45 28.1**	**-0.1**
BKNI	**Bangkinang**	**24.52**	**231**	P	**P**	**19 45 31.2**	**+2.5**
	comp=Z,150nm,0.9s						
BKNI	**Bangkinang**	**24.52**	**231**	P	**P**	**19 45 28.9**	**+0.2**
BKNI				IAmb	IAmb	19 45 31.9	
	comp=Z,99nm,0.8s						
TSI	**Tuntungan**	**24.57**	**241**	P	**P**	**19 45 32.3**	**+3.2**
	comp=Z,2µmcomp=Z,158nm,0.9s						
JGF	**Kuroka**	**24.64**	**36**	P	**P**	**19 45 29.9**	**+0.3**
PSI	**Prapat**	**24.66**	**239**	P	**P**	**19 45 30.6**	**+0.5**
	comp=Z,28nm,0.8s,baz=44,slow=6.6,SNR=27						
PSI				PcP	**PcP**	**19 49 07.9**	**+1.0**
	comp=Z,25nm,1.0s,baz=25,slow=0.1,SNR=10						
PSI				ScP	**ScP**	**19 52 42.4**	**-0.2**
	comp=Z,2.1nm,0.3s,baz=129,slow=5.3,SNR=4.5						
PSI				LR	LR	19 54 52.8	
	comp=Z,1µm,20.5s,baz=64,slow=36						
RPSI	**Rantau Prapat**	**24.72**	**239**	P	**P**	**19 45 30.6**	**+0.1**
ABJI	**Asem Bagus**	**24.73**	**193**	P	**P**	**19 45 34.7**	**+4.2**
	comp=Z,2µmcomp=Z,115nm,1.0s						
SRBI	**Singaraja**	**24.82**	**191**	P	**P**	**19 45 33.9**	**+2.6**
	comp=Z,3µmcomp=Z,246nm,1.3s						
BLJI	**Banyuglugur**	**24.84**	**195**	P	**P**	**19 45 33.6**	**+2.1**
	comp=Z,1µmcomp=Z,140nm,1.0s						
MMRI	**Maumere**	**25.05**	**174**	P	**P**	**19 45 35.5**	**+2.1**
	comp=Z,3µmcomp=Z,5µmcomp=Z,320nm,1.0s						
MMRI	**Maumere**	**25.05**	**174**	P	**P**	**19 45 34.4**	**+1.1**
LHMI	**Lhok Sumawe**	**25.09**	**246**	P	**P**	**19 45 38.0**	**+4.2**
	comp=Z,96nm,1.0s						
LHMI	**Lhok Sumawe**	**25.09**	**246**	P	**P**	**19 45 34.2**	**+0.4**
NGJI	**Ngawi**	**25.09**	**200**	P	**P**	**19 45 37.0**	**+3.2**
	comp=Z,621nmcomp=Z,74nm,1.0s						
EDFI	**Ende, Flores**	**25.11**	**176**	P	**P**	**19 45 34.6**	**+0.5**
	comp=Z,2µmcomp=Z,4µmcomp=Z,278nm,1.2s						
SMRI	**Semarang**	**25.15**	**202**	P	**P**	**19 45 37.0**	**+2.7**
	comp=Z,168nm,1.4s						
SMRI	**Semarang**	**25.15**	**202**	P	**P**	**19 45 35.9**	**+1.6**
SMRI				IAmb	IAmb	19 45 38.0	
	comp=Z,351nm,1.4s						
TWSI	**Taliwang, Sumb**	**25.21**	**187**	P	**P**	**19 45 38.1**	**+3.3**
	comp=Z,2µmcomp=Z,2µmcomp=Z,141nm,1.0s						
PLAI	**Plampang**	**25.21**	**185**	P	**P**	**19 45 36.3**	**+1.4**
	comp=Z,3µmcomp=Z,8µmcomp=Z,792nm,1.1s						
MNSI	**Mandailing Nat**	**25.33**	**234**	P	**P**	**19 45 38.1**	**+2.1**
	comp=Z,856nmcomp=Z,75nm,1.0s						
HHC	**Hu-ho-hao-te**	**25.34**	**345**	*e*P	**P**	**19 45 38.0**	**+2.0**
HHC				PP	**PnPn**	**19 46 17.2**	**+5.0**
HHC				S	**S**	**19 49 59.9**	**+0.4**
HHC				pmax	pmax		
	comp=Z,310nm,1.2s						
HHC				pmax	pmax		
	comp=Z,1µm,7.6s						
HHC				LR	LR		
	comp=Z,4µm,17.9s						
HHC				LR	LR		
	comp=Z,1µm,14.6s						
HHC				LR	LR		
	comp=Z,4µm,19.0s						
GMJI	**Gumukmas**	**25.38**	**195**	P	**P**	**19 45 38.7**	**+2.3**
	comp=Z,114nm,1.5s						
DNP	**Denpasar**	**25.40**	**191**	P	**P**	**19 45 39.7**	**+3.2**
	comp=Z,426nm,1.1s						
JAGI	**Jajag, Banyuwa**	**25.41**	**193**	P	**P**	**19 45 38.8**	**+2.2**
	comp=Z,107nm,1.1s						
JAGI	**Jajag, Banyuwa**	**25.41**	**193**	P	**P**	**19 45 36.9**	**+0.3**
JAGI				PcP	**PcP**	**19 49 08.1**	**-0.3**
SNY	**Shenyang**	**25.48**	**6**	⇓P	**P**	**19 45 37.1**	**0.0**
SNY				pP	**sP**	**19 45 50.7**	**-2.4**
SNY				S	**S**	**19 49 59.6**	**-1.8**
SNY				pmax	pmax		
	comp=Z,82nm,1.0s						
SNY				pmax	pmax		
	comp=Z,690nm,3.5s						
SNY				LR	LR		
	comp=Z,1µm,17.3s						
SNY				LR	LR		
	comp=Z,2µm,12.2s						
SNY				LR	LR		
	comp=Z,3µm,16.8s						
PPI	**Padang Panjang**	**25.52**	**231**	P	**P**	**19 45 39.6**	**+1.9**
	comp=Z,213nmcomp=Z,26nm,1.0s						
BTO	**Baotou**	**25.53**	**342**	*e*P	**P**	**19 45 39.5**	**+1.8**
BTO				S	**S**	**19 50 09.1**	**+6.6**
IGBI	**Denpasar**	**25.55**	**191**	P	**P**	**19 45 41.1**	**+3.2**
	comp=Z,2µmcomp=Z,320nm,1.1s						
PDSI	**Padang**	**25.78**	**230**	P	**P**	**19 45 42.9**	**+2.8**
	comp=Z,433nmcomp=Z,24nm,1.2s						
MAJO	**Matsushiro**	**25.79**	**36**	⇓*e*P	**P**	**19 45 42.0**	**+2.0**
MAJO				pmax	pmax		
	comp=Z,28nm,1.0s						
MAJO	**Matsushiro**	**25.79**	**36**	P	**P**	**19 45 39.9**	**-0.1**
MAT	**Matsushiro**	**25.79**	**36**	P	**P**	**19 45 40.4**	**+0.4**
MAT				S	**S**	**19 50 01.0**	**-5.5**
MJAR	**Matsushiro Arr**	**25.79**	**36**	P	**P**	**19 45 39.2**	**-0.8**
	comp=Z,11nm,0.9s,baz=190,slow=7.9,SNR=21						
MJAR				PcP	**PcP**	**19 49 09.4**	**+0.4**
	comp=Z,15nm,1.1s,baz=196,slow=3.2,SNR=12						
MJAR				S	**S**	**19 50 09.6**	**+3.1**
	comp=Z,1.0nm,0.8s,baz=215,slow=11,SNR=2.0						
MJAR				ScP	**ScP**	**19 52 45.5**	**+0.3**
	comp=Z,1.7nm,1.0s,baz=184,slow=3.7,SNR=4.1						
MJAR	**Matsushiro Arr**	**25.79**	**36**	P	**P**	**19 45 39.7**	**-0.3**
MJAR				PcP	**PcP**	**19 49 09.2**	**+0.2**

KLSI		**25.80**	**217**	P	**P**	**19 45 42.1**	**+1.9**
	comp=Z,730nmcomp=Z,81nm,1.1s						
LHSI	**Lahat**	**25.83**	**220**	P	**P**	**19 45 43.5**	**+3.0**
	comp=Z,2µmcomp=Z,122nm,0.9s						
KLI	**Kotabumi**	**25.87**	**216**	P	**P**	**19 45 43.0**	**+2.2**
	comp=Z,2µmcomp=Z,160nm,1.0s						
UGM	**Wanagama**	**25.92**	**202**	P	**P**	**19 45 45.2**	**+3.9**
	comp=Z,219nm,1.4s						
UGM	**Wanagama**	**25.92**	**202**	P	**P**	**19 45 41.8**	**+0.5**
UGM				IAmb	IAmb	19 45 56.0	
	comp=Z,236nm,1.1s						
WBSI	**Waikabubak, Su**	**25.94**	**181**	P	**P**	**19 45 41.8**	**+0.3**
	comp=Z,3µmcomp=Z,317nm,1.0s						
MDSI	**Maura Dua**	**25.95**	**218**	P	**P**	**19 45 43.2**	**+1.6**
	comp=Z,507nmcomp=Z,36nm,1.1s						
PCJI	**Pacitan**	**25.96**	**200**	P	**P**	**19 45 45.7**	**+4.0**
	comp=Z,115nm,1.3s						
KPJI	**Karang Pucung**	**26.00**	**205**	P	**P**	**19 45 45.0**	**+3.0**
	comp=Z,115nm,1.0s						
LEM	**Lembang**	**26.12**	**209**	P	**P**	**19 45 44.0**	**+0.8**
	comp=Z,78nm,0.9s,baz=62,slow=5.1,SNR=15						
MASI	**Maura Aman, Be**	**26.13**	**223**	P	**P**	**19 45 45.6**	**+2.3**
	comp=Z,4µmcomp=Z,603nm,1.0s						
SMPI	**Sarmi**	**26.13**	**133**	P	**P**	**19 45 43.2**	**0.0**
	comp=Z,1µmcomp=Z,66nm,1.4s						
SBJI	**Serang**	**26.23**	**212**	P	**P**	**19 45 46.9**	**+2.8**
	comp=Z,7µmcomp=Z,480nm,1.1s						
KSI	**Kapahiang**	**26.28**	**222**	P	**P**	**19 45 46.5**	**+1.8**
	comp=Z,2µmcomp=Z,62nm,1.0s						
DBJI	**Dramaga**	**26.29**	**211**	P	**P**	**19 45 47.4**	**+2.7**
	comp=Z,3µmcomp=Z,104nm,1.4s						
SOEI	**Soe**	**26.41**	**170**	P	**P**	**19 45 45.3**	**-0.6**
	comp=Z,2µmcomp=Z,199nm,1.2s						
SOEI	**Soe**	**26.41**	**170**	P	**P**	**19 45 44.9**	**-1.0**
SOEI				IAmb	IAmb	19 46 10.2	
	comp=Z,206nm,1.1s						
LWLI	**Liwa**	**26.45**	**218**	P	**P**	**19 45 48.8**	**+2.5**
	comp=Z,3µmcomp=Z,246nm,1.0s						
BASI	**Baing, Sumba**	**26.52**	**178**	P	**P**	**19 45 49.7**	**+3.0**
	comp=Z,2µmcomp=Z,212nm,1.7s						
CMJI	**Cimerak**	**26.60**	**206**	P	**P**	**19 45 51.5**	**+4.0**
	comp=Z,87nm,0.9s						
KASI	**Kota Agung**	**26.61**	**216**	P	**P**	**19 45 49.5**	**+1.9**
	comp=Z,81nm,1.1s						
GSI	**Gunungsitoli**	**26.62**	**238**	P	**P**	**19 45 47.8**	**+0.1**
CISI	**Cisompet, Garu**	**26.67**	**207**	P	**P**	**19 45 52.4**	**+4.2**
	comp=Z,1µmcomp=Z,87nm,1.6s						
CISI	**Cisompet, Garu**	**26.67**	**207**	P	**P**	**19 45 48.8**	**+0.6**
BATI	**Baumata**	**26.76**	**172**	P	**P**	**19 45 48.0**	**-0.9**
	comp=Z,253nm,1.0s,baz=79,slow=0.9,SNR=62						
BATI				PcP	**PcP**	**19 49 13.6**	**+2.1**
	comp=Z,51nm,0.8s,baz=254,slow=1.4,SNR=5.7						
BATI				S	**S**	**19 50 17.6**	**-4.5**
	comp=Z,12nm,0.7s,baz=96,slow=18,SNR=1.5						
BATI	**Baumata**	**26.76**	**172**	P	**P**	**19 45 48.2**	**-0.7**
	comp=Z,1µmcomp=Z,160nm,1.1s						
CNJI	**Cibinong**	**26.77**	**209**	P	**P**	**19 45 52.2**	**+3.2**
	comp=Z,2µmcomp=Z,190nm,0.9s						
CGJI	**Cibinong**	**26.87**	**213**	P	P	19 45 56.8	+6.9
	comp=Z,1µmcomp=Z,81nm,1.3s						
SISI	**Saibi**	**27.07**	**231**	P	P	19 45 58.7	+7.0
	comp=Z,64nm,1.2s						
SHL	**Shillong**	**27.60**	**294**	P	**P**	**19 45 56.6**	**0.0**
SHL				pmax	pmax		
	comp=Z,236nm,1.1s						
SHL	**Shillong**	**27.60**	**294**	P	**P**	**19 45 56.7**	**+0.1**
	SNR=94						
SHL	**Shillong**	**27.60**	**294**	P	**P**	**19 45 56.6**	**0.0**
SHL				IAmb	IAmb	19 45 58.2	
	comp=Z,236nm,1.1s						
CN2	**Changchun**	**27.66**	**9**	*e*P	**P**	**19 45 56.0**	**-0.8**
CN2				*e*PP	**PnPn**	**19 46 46.8**	**+3.1**
CN2				*e*S	**S**	**19 50 32.8**	**-3.1**
CN2				*e*SS	**SnSn**	**19 51 56.9**	**+6.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CN2				LR	LR		
	comp=Z,2µm,18.0s						
CN2				LR	LR		
	comp=Z,720nm,18.0s						
CN2				LR	LR		
	comp=Z,2µm,18.0s						
MSHR	**Mys Shultsa**	**27.77**	**18**	⇓*e*P	**P**	**19 45 59.6**	**+1.9**
MSHR				pmax	pmax		
	comp=Z,55nm,1.2s						
JAY	**Jayapura**	**27.92**	**131**	P	**P**	**19 45 58.1**	**-1.2**
	comp=Z,15nm,0.9s,baz=246,slow=13,SNR=4.5						
JAY				LR	LR	19 55 25.4	
	comp=Z,2µm,21.9s,baz=310,slow=33						
JMM	**Marumori**	**28.19**	**37**	P	**P**	**19 46 01.3**	**-0.2**
JMM				IAmb	IAmb	19 46 05.1	
	comp=Z,148nm,1.5s						
GTA	**Gaotai**	**28.79**	**327**	⇓P	**P**	**19 46 08.6**	**+1.5**
GTA				pP	pwP	19 46 18.2	-2.0
GTA				sP	sP	19 46 22.0	-0.7
GTA				S	**S**	**19 50 54.7**	**+0.7**
GTA				sS	sS	19 51 13.1	+0.1
GTA				ScP	**ScP**	**19 52 53.9**	**-0.5**
GTA				ScS	**ScS**	**19 56 45.4**	**-2.7**
GTA				pmax	pmax		
	comp=Z,210nm,1.3s						
GTA				pmax	pmax		
	comp=Z,760nm,4.9s						
GTA				LR	LR		
	comp=Z,3µm,19.6s						
GTA				LR	LR		
	comp=Z,4µm,20.4s						
GTA				LR	LR		
	comp=Z,6µm,19.6s						
MDJ	**Mudanjiang**	**29.25**	**14**	P	**P**	**19 46 10.9**	**+0.1**
MDJ				sP	pP	19 46 22.7	+0.6
MDJ				S	**S**	**19 51 00.7**	**-0.1**
MDJ				sS	sS	19 51 15.0	-4.7
MDJ				PcS	**PcS**	**19 53 01.0**	**+1.1**
MDJ				ScS	**ScS**	**19 56 50.6**	**+0.9**
MDJ				pmax	pmax		
	comp=Z,31nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,250nm,3.6s						
MDJ				LR	LR		
	comp=Z,2µm,20.1s						
MDJ				LR	LR		
	comp=Z,1µm,19.8s						
MDJ				LR	LR		
	comp=Z,3µm,22.8s						
MDJ	**Mudanjiang**	**29.25**	**14**	P	**P**	**19 46 11.0**	**+0.1**
MDJ				IAMs_20	IAMs_20	19 58 04.4	
	comp=Z,2µm,21.0s						
LSA	**Lhasa**	**29.42**	**302**	*i* P	**P**	**19 46 14.9**	**+1.8**
	SNR=59						
LSA	**Lhasa**	**29.42**	**302**	P	**P**	**19 46 14.1**	**+0.9**
LSA				pmax	pmax		
	comp=Z,160nm,1.1s						
LSA				MLR	MLR		
	comp=Z,3µm,22.0s						
LSA	**Lhasa**	**29.42**	**302**	P	**P**	**19 46 14.1**	**+0.9**
LSA				IAmb	IAmb	19 46 16.4	
	comp=Z,160nm,1.1s						
LSA				IAMs_20	IAMs_20	19 57 51.8	
	comp=Z,3µm,22.0s						
USA0B	**Ussuriysk Arra**	**29.50**	**18**	P	**P**	**19 46 12.7**	**-0.4**
USA0B				pmax	pmax		
	comp=Z,23nm,0.9s						
USA0B	**Ussuriysk Arra**	**29.50**	**18**	P	**P**	**19 46 12.7**	**-0.4**
USRK	**Ussuriysk Ar.**	**29.50**	**18**	P	**P**	**19 46 13.2**	**+0.1**
	comp=Z,9.9nm,0.8s,baz=206,slow=8.1,SNR=17						
USRK				PcP	**PcP**	**19 49 17.5**	**-0.3**
	comp=Z,5.0nm,0.7s,baz=234,slow=2.8,SNR=5.4						
USRK				LR	LR	19 57 44.0	
	comp=Z,1µm,21.9s,baz=182,slow=36						
USRK	**Ussuriysk Ar.**	**29.50**	**18**	P	**P**	**19 46 13.8**	**+0.7**
USRK						19 49 18.1	
USRK	**Ussuriysk Ar.**	**29.50**	**18**	P	**P**	**19 46 13.8**	**+0.7**
USRK					**PcP**	**19 49 18.1**	**+0.3**
MTN	**Manton Dam**	**31.18**	**158**	P	**P**	**19 46 26.4**	**-1.7**
MTN				IAmb	IAmb	19 46 28.0	
	comp=Z,143nm,1.1s						
TAPN	**Taplejung**	**31.65**	**296**	*e*P	**P**	**19 46 33.7**	**+1.0**
	comp=Z,229nm,1.1s						
ODAN	**Odare**	**31.82**	**295**	⇓*i*P	**P**	**19 46 35.0**	**+0.9**
	comp=Z,474nm,0.9s						
ERM	**Erimo**	**32.38**	**33**	IAMs_20	IAMs_20	19 59 40.5	
	comp=Z,2µm,21.0s						
RAMN	**Ramite**	**32.53**	**294**	⇓*i*P	**P**	**19 46 41.5**	**+1.2**
	comp=Z,124nm,0.6s						
HIA	**Hailar**	**32.72**	**360**	IAMs_20	IAMs_20	20 00 50.2	
	comp=Z,3µm,20.0s						
JIRN	**Jiri**	**33.03**	**296**	⇓*i*P	**P**	**19 46 45.9**	**+1.0**
	comp=Z,373nm,1.0s						
ULN	**Ulaanbaatar**	**33.05**	**344**	*d* *i*P	**P**	**19 46 45.1**	**+0.6**
ULN				pmax	pmax		
	comp=Z,231nm,1.7s						
ULN				MLR	MLR		
	comp=Z,1µm,17.0s						
ULN	**Ulaanbaatar**	**33.05**	**344**	P	**P**	**19 46 45.4**	**+0.9**
ULN				P	**P**	**19 46 45.4**	**+0.9**
ULN	**Ulaanbaatar**	**33.05**	**344**	P	**P**	**19 46 45.0**	**+0.5**
ULN				IAmb	IAmb	19 46 46.9	
	comp=Z,130nm,1.1s						
ULN	**Ulaanbaatar**	**33.05**	**344**	IAMs_20	IAMs_20	20 00 48.7	
	comp=Z,2µm,19.0s						
KNRA	**Kununurra**	**33.12**	**164**	P	**P**	**19 46 44.2**	**-1.0**
SONM	**Songino Array**	**33.20**	**343**	P	**P**	**19 46 45.9**	**+0.1**
	comp=Z,72nm,0.9s,baz=160,slow=9.6,SNR=395						
SONM				PcP	**PcP**	**19 49 29.1**	**+1.3**
	comp=Z,0.9nm,0.5s,baz=159,slow=2.4,SNR=1.6						
SONM				ScP	**ScP**	**19 53 07.7**	**-1.2**
	comp=Z,6.2nm,1.1s,baz=167,slow=3.9,SNR=9.6						
SONM				LR	LR	20 01 14.7	
	comp=Z,3µm,19.0s,baz=156,slow=38						
SONM	**Songino Array**	**33.20**	**343**	P	**P**	**19 46 46.3**	**+0.5**
SONM				IAmb	IAmb	19 46 48.0	
	comp=Z,100nm,1.0s						
SONM					**ScP**	**19 53 07.1**	**-1.8**
GUN	**Gumba**	**33.36**	**296**	⇓*i*P	**P**	**19 46 48.7**	**+1.0**
	comp=Z,674nm,1.0s						
PKI	**Pulchoki**	**33.69**	**295**	⇓*i*P	**P**	**19 46 50.8**	**+0.2**
	comp=Z,326nm,1.0s						
PKIN	**Phulchoki**	**33.70**	**295**	⇓*i*P	**P**	**19 46 50.8**	**+0.2**
	comp=Z,249nm,1.1s						
KKN	**Kakani**	**33.85**	**295**	⇓*i*P	**P**	**19 46 52.1**	**+0.3**
	comp=Z,325nm,1.0s						
DMN	**Daman**	**33.96**	**295**	⇓*i*P	**P**	**19 46 53.4**	**+0.5**
	comp=Z,474nm,1.1s						
KLR	**Kul'dur**	**34.09**	**14**	*d* *i*P	**P**	**19 46 54.0**	**+0.7**
KLR				pmax	pmax		
	comp=Z,71nm,1.5s						
KLR				MLR	MLR		
	comp=Z,2µm,21.0s						
GKN	**Gorkha**	**34.45**	**296**	⇓*i*P	**P**	**19 46 57.0**	**0.0**
	comp=Z,438nm,1.0s						
FITZ	**Fitzroy Crossi**	**34.81**	**170**	P	**P**	**19 46 58.8**	**-1.0**
	comp=Z,62nm,1.0s,baz=359,slow=6.0,SNR=85						
FITZ				PcP	**PcP**	**19 49 33.9**	**+1.2**
	comp=Z,4.9nm,0.5s,baz=338,slow=3.8,SNR=5.7						
FITZ				S	S	19 52 19.4	-8.5
	comp=Z,4.8nm,0.9s,baz=348,slow=19,SNR=1.4						
FITZ	**Fitzroy Crossi**	**34.81**	**170**	P	**P**	**19 46 59.0**	**-0.8**
FITZ				IAmb	IAmb	19 47 00.9	
	comp=Z,83nm,1.1s						
YUK	**Yuzh-Kuril'sk**	**35.21**	**33**	⇓*e*P	**P**	**19 47 06.0**	**+3.0**
DANN	**Dangsing**	**35.28**	**296**	⇓*i*P	**P**	**19 47 04.4**	**+0.1**
	comp=Z,565nm,0.9s						
KOLN	**Koldanda**	**35.30**	**295**	⇓*i*P	**P**	**19 47 04.6**	**+0.2**
	comp=Z,392nm,1.1s						
CIT	**Chita**	**35.83**	**353**	*e*P	**P**	**19 47 08.2**	**-0.2**
CIT				*e*		19 47 18.8	
CIT				*e*		19 47 23.6	
CIT				*e*		19 48 50.4	
CIT				pmax	pmax		
	comp=Z,108nm,1.8s						
YSS	**Yuzh-Sakhalins**	**35.84**	**27**	*e*P	**P**	**19 47 07.6**	**-0.8**
YSS				e*SP	**sP**	**19 47 24.6**	**-0.2**
YSS				*e*		19 49 36.2	
YSS				*e*S	**S**	**19 52 42.4**	**-0.8**
YSS				pmax	pmax		
	comp=Z,30nm,1.2s						
YSS				MLR	MLR		
	comp=Z,600nm,16.0s						
YSS	**Yuzh-Sakhalins**	**35.84**	**27**	P	**P**	**19 47 08.5**	**+0.1**
YSS				PcP	**PcP**	**19 49 36.0**	**+0.8**
PYUN	**Piuthan**	**35.90**	**295**	⇓*i*P	**P**	**19 47 10.1**	**+0.6**
	comp=Z,944nm,1.1s						
ZAK	**Zakamensk**	**36.38**	**342**	*e*P	**P**	**19 47 13.2**	**0.0**
ZAK				pmax	pmax		
	comp=Z,69nm,1.3s						
ZAK				pmax	pmax		
	comp=Z,18nm,1.4s						
PMG	**Port Moresby**	**37.28**	**132**	P	**P**	**19 47 19.8**	**-1.3**
	comp=Z,98nm,0.9s,baz=338,slow=6.9,SNR=44						
PMG				LR	LR	20 01 55.0	
	comp=Z,342nm,20.3s,baz=302,slow=35						
PMG	**Port Moresby**	**37.28**	**132**	P	**P**	**19 47 19.8**	**-1.3**
PMG				IAmb	IAmb	19 47 21.6	
	comp=Z,114nm,0.9s						
TLY	**Talaya**	**37.44**	**343**	*d* *i*P	**P**	**19 47 23.0**	**+0.9**
TLY				*e*		19 48 51.4	
TLY				*e*S	**S**	**19 53 14.6**	**+7.0**
TLY				pmax	pmax		
	comp=Z,153nm,1.1s						
TLY				MLR	MLR		
	comp=Z,3µm,18.0s						
TLY	**Talaya**	**37.44**	**343**	P	**P**	**19 47 23.2**	**+1.1**
TLY	**Talaya**	**37.44**	**343**	P	**P**	**19 47 21.4**	**-0.7**
TLY				IAMs_20	IAMs_20	20 03 38.9	
	comp=Z,2µm,19.0s						
ZEA	**Zeya**	**37.65**	**7**	*e*P	**P**	**19 47 24.5**	**+0.8**
ZEA				e*PP	**pP**	**19 47 31.4**	**-3.6**
ZEA				*e*		19 48 53.8	
ZEA				*e*S	**S**	**19 53 07.5**	**-3.1**
ZEA				pmax	pmax		
	comp=E,10.0nm,1.3s						
ZEA				pmax	pmax		
	comp=N,10.0nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.5s						
ZEA				pmax	pmax		
	comp=N,300nm,6.7s						
ZEA				pmax	pmax		
	comp=Z,200nm,6.3s						
ZEA				smax	smax		
	comp=E,300nm,9.3s						
ZEA				MLR	MLR		
	comp=N,800nm,15.0s						
ZEA				MLR	MLR		
	comp=Z,800nm,17.0s						
IRK	**Irkutsk**	**37.78**	**344**	*e*P	**P**	**19 47 22.1**	**-2.8**
IRK				pmax	pmax		
	comp=Z,157nm,2.2s						
PSA00	**Pilbara Seismi**	**37.80**	**180**	P	**P**	**19 47 24.9**	**-0.4**
PSA00	**Pilbara Seismi**	**37.80**	**180**	P	**P**	**19 47 24.8**	**-0.6**
PSA00				IAmb	IAmb	19 47 26.5	
	comp=Z,246nm,1.4s						
RABL	**Rabaul**	**37.96**	**120**	P	**P**	**19 47 27.4**	**+0.5**
COEN	**Coen**	**38.00**	**141**	P	**P**	**19 47 25.5**	**-1.6**
COEN				IAmb	IAmb	19 47 26.7	
	comp=Z,61nm,1.1s						
COEN				PcP	**PcP**	**19 49 43.8**	**+1.6**
MOY	**Mondy**	**38.20**	**341**	*e*P	**P**	**19 47 29.1**	**+0.5**
MOY				pmax	pmax		
	comp=Z,155nm,2.2s						
WMQ	**Urumqi**	**38.53**	**322**	*e*P	**P**	**19 47 32.6**	**+1.1**
WMQ				sP	sP	19 47 50.1	+2.8
WMQ				PP	**PnPn**	**19 49 03.4**	**+1.0**
WMQ				S	**S**	**19 53 26.6**	**+2.1**
WMQ				sS	sS	19 53 47.0	+3.3
WMQ				pmax	pmax		
	comp=Z,41nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,540nm,3.9s						
WMQ				LR	LR		
	comp=Z,3µm,10.5s						
WMQ				LR	LR		
	comp=Z,3µm,11.5s						
WMQ				LR	LR		
	comp=Z,2µm,15.9s						
WB0	**Warramunga Arr**	**38.73**	**158**	P	**P**	**19 47 31.9**	**-1.3**
WRAB	**Tennant Creek**	**38.87**	**158**	*c* *i*P	**P**	**19 47 33.0**	**-1.4**
WRAB				pmax	pmax		
	comp=Z,308nm,1.0s						
WRA	**Warramunga Arr**	**38.87**	**158**	P	**P**	**19 47 32.8**	**-1.6**
	comp=Z,113nm,0.8s,baz=327,slow=10,SNR=475						
WRA				PcP	**PcP**	**19 49 45.5**	**+0.5**
	comp=Z,27nm,1.0s,baz=339,slow=3.5,SNR=6.4						
WRA				S	**S**	**19 53 23.1**	**-6.7**
	comp=Z,7.4nm,0.9s,baz=329,slow=16,SNR=11						
WRA				pScP		19 53 36.9	
	comp=Z,14nm,1.0s,baz=330,slow=4.4,SNR=7.7						
WRA				ScS	**ScS**	**19 57 43.4**	**+2.2**
	comp=Z,1.6nm,1.0s,baz=324,slow=5.8,SNR=5.1						
WRA				LR	LR	20 04 43.8	
	comp=Z,425nm,21.3s,baz=335,slow=38						
WB2	**Warramunga Arr**	**38.88**	**158**	P	**P**	**19 47 33.0**	**-1.4**
GIRL	**Giralia**	**39.25**	**188**	P	**P**	**19 47 38.7**	**+1.2**
PALK	**Pallekele**	**39.33**	**261**	P	**P**	**19 47 40.0**	**+1.6**
PALK				pmax	pmax		
	comp=Z,37nm,1.2s						
PALK				MLR	MLR		
	comp=Z,1µm,22.0s						
PALK	**Pallekele**	**39.33**	**261**	P	**P**	**19 47 40.0**	**+1.6**
HYB	**Hyderabad**	**39.47**	**278**	*i* P	**P**	**19 47 40.0**	**+0.4**
HYB				*e*pP	**pwP**	**19 47 50.5**	**-0.3**
NDI	**New Delhi**	**41.01**	**295**	*e*P	**P**	**19 47 49.8**	**-2.4**
AYAN	**Aya Nagar**	**41.06**	**295**	*e*P	**P**	**19 47 51.2**	**-1.4**
SONA	**Sohna**	**41.07**	**294**	*e*P	**P**	**19 47 51.5**	**-1.1**
BOD	**Bodaibo**	**41.52**	**355**	*e*P	**P**	**19 47 56.5**	**+0.6**
BOD				pmax	pmax		
	comp=Z,37nm,2.0s						
KUDL	**Kundal**	**41.58**	**294**	*e*P	**P**	**19 47 55.5**	**-1.3**
AS31	**Alice Springs**	**42.17**	**161**	P	**P**	**19 48 00.9**	**-0.8**
ASAR	**Alice Springs**	**42.18**	**161**	P	**P**	**19 48 00.9**	**-0.7**
	comp=Z,75nm,0.6s,baz=338,slow=6.7,SNR=1058						
ASAR				PcP	**PcP**	**19 49 56.1**	**+0.6**
	comp=Z,39nm,1.0s,baz=344,slow=2.9,SNR=14						
ASAR				ScP	**ScP**	**19 53 40.6**	**-2.3**
	comp=Z,0.8nm,0.9s,baz=348,slow=4.2,SNR=2.2						
ASAR				pScP		19 53 49.6	
	comp=Z,5.4nm,0.9s,baz=348,slow=3.0,SNR=8.4						
ASAR				S	**S**	**19 54 13.3**	**-5.8**
	comp=Z,5.9nm,1.0s,baz=348,slow=22,SNR=12						
ASAR				LR	LR	20 07 30.5	
	comp=Z,749nm,21.4s,baz=354,slow=39						
ASAR				P4KPbc		20 26 03.6	
	comp=Z,0.4nm,0.8s,baz=348,slow=4.2,SNR=4.2						
ASAR	**Alice Springs**	**42.18**	**161**	P	**P**	**19 48 01.0**	**-0.7**
ZSN	**Zaisan**	**42.24**	**325**	⇓*i*P	**P**	**19 48 02.1**	**0.0**
	baz=324						
ZSN				*e*PP	**PP**	**19 49 41.7**	**+1.3**
	baz=324						
ZSN	**Zaisan**	**42.24**	**325**	*d* *i*P	**P**	**19 48 02.0**	**0.0**
ZSN				*e*		19 49 41.6	
DGZ	**Jazzator, Alta**	**42.27**	**329**	*d* *i*P	**P**	**19 48 03.5**	**+1.2**
DGZ				pmax	pmax		
	comp=Z,48nm,0.9s						
AJM	**Ajmer**	**43.06**	**291**	*e*P	**P**	**19 48 08.1**	**-0.9**
MK31	**Makanchi Array**	**43.35**	**322**	*d* *i*P	**P**	**19 48 11.9**	**+0.9**
MK31	**Makanchi Array**	**43.35**	**322**	P	**P**	**19 48 12.1**	**+1.0**
MK31				IAmb	IAmb	19 48 13.3	
	comp=Z,74nm,0.9s						
MKAR	**Makanchi Array**	**43.35**	**322**	P	**P**	**19 48 12.1**	**+1.0**
	comp=Z,70nm,0.8s,baz=126,slow=8.4,SNR=299						
MKAR				ScP	**ScP**	**19 53 45.5**	**-1.8**
	comp=Z,3.6nm,0.9s,baz=141,slow=4.4,SNR=6.0						
MKAR				S	**S**	**19 54 35.0**	**-1.0**
	comp=Z,0.7nm,0.8s,baz=196,slow=15,SNR=2.4						
MKAR				LR	LR	20 08 04.2	
	comp=Z,2µm,18.1s,baz=113,slow=38						
MKAR	**Makanchi Array**	**43.35**	**322**	P	**P**	**19 48 12.0**	**+0.9**
MKAR				ScP	**ScP**	**19 53 45.7**	**-1.6**
SHLS	**Shalkode**	**43.39**	**316**	⇓*i*P	**P**	**19 48 09.8**	**-1.8**
	comp=Z,58nm,1.1s,baz=316						
SHLS				*e*PP	**PP**	**19 49 54.0**	**+1.0**
	baz=316						
SHLS				*e*S	**S**	**19 54 33.8**	**-3.1**
	comp=Z,49nm,3.1s,baz=316						
SHLS	**Shalkode**	**43.39**	**316**	*d* *i*P	**P**	**19 48 09.7**	**-1.8**
SHLS				*e*		19 49 53.9	
SHLS				*e*S	**S**	**19 54 33.8**	**-3.1**
SHLS				pmax	pmax		
	comp=Z,58nm,1.1s						
SHLS				smax	smax		
	comp=N,49nm,3.1s						
MAKZ	**Makanchi**	**43.54**	**322**	P	**P**	**19 48 13.5**	**+0.9**
MAKZ				pmax	pmax		
	comp=Z,62nm,1.0s						
MAKZ				MLR	MLR		
	comp=Z,2µm,18.0s						
MAKZ	**Makanchi**	**43.54**	**322**	P	**P**	**19 48 13.5**	**+0.9**
MAKZ				IAMs_20	IAMs_20	20 07 50.7	
	comp=Z,2µm,18.0s						
UZB	**Uzynbulak**	**43.68**	**316**	⇓*i*P	**P**	**19 48 15.0**	**+1.0**
	comp=Z,51nm,1.2s,baz=316						
UZB				*e*S	**S**	**19 54 40.6**	**-0.6**
	baz=316						
UZB	**Uzynbulak**	**43.68**	**316**	*d* *i*P	**P**	**19 48 14.9**	**+1.0**
UZB				*e*S	**S**	**19 54 40.5**	**-0.6**
UZB				pmax	pmax		
	comp=Z,51nm,1.2s						
TARG	**Taragay, Kyrgy**	**43.95**	**314**	P	**P**	**19 48 17.5**	**+1.2**
KPKS	**Kokpek**	**44.04**	**316**	⇓*i*P	**P**	**19 48 17.5**	**+0.8**
	comp=Z,75nm,2.1s,baz=316						
KPKS				*e*S	**S**	**19 54 45.3**	**-1.0**
	comp=Z,45nm,3.4s,baz=316						
KPKS	**Kokpek**	**44.04**	**316**	*d* *i*P	**P**	**19 48 17.5**	**+0.8**
KPKS				*e*S	**S**	**19 54 45.2**	**-1.0**
KPKS				pmax	pmax		
	comp=Z,75nm,2.1s						
KPKS				smax	smax		
	comp=N,45nm,3.4s						
SATY	**Saty**	**44.06**	**316**	⇓*i*P	**P**	**19 48 17.9**	**+0.9**
	comp=N,70nm,2.1s,baz=316						
SATY				*e*PP	**PP**	**19 49 59.9**	**-0.1**
	baz=316						
SATY	**Saty**	**44.06**	**316**	*d* *i*P	**P**	**19 48 17.8**	**+0.9**
SATY				*e*		19 49 59.9	
SATY				pmax	pmax		
	comp=Z,70nm,2.1s						
KSH	**Kashi**	**44.49**	**310**	P	**P**	**19 48 22.8**	**+2.4**
KSH				pP	sP	19 48 33.1	-3.3
KSH				sP	pwP	19 48 37.4	+3.7
KSH				PcP	**PP**	**19 50 08.1**	**+3.4**
KSH				PP	PcP	19 50 11.3	+8.0
KSH				S	**S**	**19 54 54.7**	**+1.8**
KSH				sS	sS	19 55 12.9	+0.5
KSH				ScS	**ScS**	**19 58 17.0**	**+1.8**
KSH				pmax	pmax		
	comp=Z,77nm,1.2s						
KSH				pmax	pmax		
	comp=Z,370nm,4.8s						
KSH				LR	LR		
	comp=Z,2µm,17.9s						
KSH				LR	LR		
	comp=Z,3µm,19.4s						
KSH				LR	LR		
	comp=Z,4µm,21.6s						
CTA	**Charters Tower**	**44.62**	**144**	P	**P**	**19 48 20.9**	**-0.5**
	comp=Z,35nm,1.0s,baz=319,slow=11,SNR=31						
CTA				PcP	**PcP**	**19 50 04.6**	**+0.7**
	comp=Z,26nm,0.8s,baz=311,slow=5.3,SNR=8.5						
CTA				S	**S**	**19 54 53.7**	**-1.3**
	comp=Z,2.5nm,0.9s,baz=324,slow=18,SNR=1.4						
CTA				LR	LR	20 07 20.0	
	comp=Z,1µm,22.0s,baz=322,slow=36						
CTAO	**Charters Tower**	**44.62**	**144**	P	**P**	**19 48 21.3**	**-0.2**
CTAO				pmax	pmax		
	comp=Z,50nm,1.0s						
CTAO				MLR	MLR		
	comp=Z,1µm,22.0s						
CTAO	**Charters Tower**	**44.62**	**144**	P	**P**	**19 48 21.3**	**-0.2**
CTAO	**Charters Tower**	**44.62**	**144**	IAMs_20	IAMs_20	20 07 07.0	
	comp=Z,1µm,22.0s						
TDK	**Taldyqorghan**	**44.87**	**318**	*e*P	**P**	**19 48 23.9**	**+0.7**
	comp=Z,69nm,0.8s,baz=318						
TDK				*e*PP	**PP**	**19 50 09.8**	**+1.2**
	baz=318						
TDK	**Taldyqorghan**	**44.87**	**318**	*e*P	**P**	**19 48 23.9**	**+0.7**
TDK				*e*		19 50 09.7	
TDK				pmax	pmax		
	comp=Z,69nm,0.8s						
MDOK	**Medeo**	**45.01**	**315**	*i* P	**P**	**19 48 25.8**	**+1.2**
	baz=315						
MDOK				*e*PP	**PP**	**19 50 11.8**	**+1.6**
	baz=315						
MDOK				*e*S	**S**	**19 55 01.3**	**+0.9**
	baz=315						
MDOK	**Medeo**	**45.01**	**315**	*i* P	**P**	**19 48 25.7**	**+1.2**
MDOK				*e*		19 50 11.7	
MDOK				*e*S	**S**	**19 55 01.3**	**+0.9**
TNSS	**Tian-Shan**	**45.03**	**315**	*i* P	**P**	**19 48 26.2**	**+1.3**
	baz=315						
AAA	**Alma-Ata**	**45.12**	**315**	*e*P	**P**	**19 48 25.4**	**+0.1**
	baz=315						
AAA	**Alma-Ata**	**45.12**	**315**	*e*P	**P**	**19 48 25.4**	**+0.1**
NIL	**Nilore**	**45.16**	**301**	P	**P**	**19 48 25.9**	**+0.2**
NIL				pmax	pmax		
	comp=Z,265nm,1.1s						
NIL				MLR	MLR		
	comp=Z,1µm,20.0s						

NIL	Nilore	45.16	301	P	P	19 48 25.9	+0.2
NIL	Nilore	45.16	301	IAMs_20	IAMs_20	20 08 56.6	
	comp=Z,980nm,20.0s						
ULHL	Ulahol	45.22	314	P	P	19 48 28.0	+1.7
	SNR=15						
CHKK	Chushkaly	45.32	316	⇓iP	P	19 48 27.0	+0.2
	baz=316						
MORW	Morawa	45.41	185	P	P	19 48 27.5	-0.1
MORW				IAmb	IAmb	19 48 29.6	
	comp=Z,85nm,0.9s						
KUU	Kurty	45.77	316	⇓iP	P	19 48 31.3	+0.9
	baz=316						
KUU				eS	S	19 55 11.2	0.0
	baz=316						
KUU	Kurty	45.77	316	d iP	P	19 48 31.3	+0.9
KUU				eS	S	19 55 11.1	0.0
TKM2	Tokmak 2	45.91	314	P	P	19 48 32.9	+1.2
	SNR=21						
TKM2	Tokmak 2	45.91	314	i P	P	19 48 32.6	+0.9
TKM2				pmax	pmax		
	comp=Z,44nm,1.3s						
YAK	Yakutsk	46.05	6	eP	P	19 48 31.9	-0.3
YAK				e*PP	sP	19 48 47.3	-1.4
YAK				e		19 50 20.6	
YAK				eS	S	19 55 13.3	-1.1
YAK				e		19 58 19.2	
YAK				eSSS	SSS	19 59 31.1	
YAK				pmax	pmax		
	comp=Z,59nm,1.0s						
YAK				pmax	pmax		
	comp=N,19nm,1.2s						
YAK				pmax	pmax		
	comp=E,9.0nm,1.5s						
YAK				pmax	pmax		
	comp=Z,197nm,4.0s						
YAK				pmax	pmax		
	comp=N,512nm,4.3s						
YAK				pmax	pmax		
	comp=E,228nm,4.4s						
YAK				smax	smax		
	comp=E,460nm,4.8s						
YAK				smax	smax		
	comp=N,380nm,3.2s						
YAK	Yakutsk	46.05	6	P	P	19 48 31.8	-0.4
YAK				IAmb	IAmb	19 48 32.9	
	comp=Z,49nm,0.8s						
ZAA0	Zalesovo Array	46.25	332	P	P	19 48 33.6	-0.3
ZAA0				IAmb	IAmb	19 48 35.1	
	comp=Z,54nm,1.0s						
ZALV	Zalesovo Beam	46.25	332	P	P	19 48 33.9	0.0
	comp=Z,36nm,0.9s,baz=121,slow=7.1,SNR=90						
ZALV				PcP	PcP	19 50 09.6	+0.7
	comp=Z,1.3nm,0.5s,baz=135,slow=3.9,SNR=1.0						
ZALV				PP	PP	19 50 22.9	-0.1
	comp=Z,5.1nm,0.7s,baz=113,slow=6.2,SNR=4.2						
ZALV				ScP	ScP	19 53 56.6	-2.4
	comp=Z,0.5nm,0.3s,baz=155,slow=4.8,SNR=1.7						
ZALV				LR	LR	20 08 43.0	
	comp=Z,2µm,19.1s,baz=129,slow=37						
ZALV	Zalesovo Beam	46.25	332	P	P	19 48 33.7	-0.2
KBK	Karagaybulak	46.26	314	P	P	19 48 36.1	+1.7
	SNR=27						
UCH	Uchtor	46.42	313	P	P	19 48 37.8	+1.8
	SNR=62						
SEM	Semipalatinsk	46.42	326	⇓iP	P	19 48 34.9	-0.7
	comp=Z,24nm,0.8s,baz=326						
SEM				ePP	PP	19 50 24.5	-0.6
	baz=326						
SEM	Semipalatinsk	46.42	326	d iP	P	19 48 34.9	-0.7
SEM				e		19 50 24.5	
SEM				pmax	pmax		
	comp=Z,24nm,0.8s						
JASL	Jaisalmer	46.42	292	eP	P	19 48 35.8	+0.1
CHMS	Chumysh	46.51	314	P	P	19 48 37.3	+1.0
	SNR=29						
FRU1	Bishkek	46.53	314	P	P	19 48 37.0	+0.6
FRU1				pmax	pmax		
	comp=Z,48nm,1.1s						
FRU1	Bishkek	46.53	314	P	P	19 48 37.0	+0.6
FRU1				IAmb	IAmb	19 48 39.0	
	comp=Z,48nm,1.1s						
AAK	Ala-Archa	46.57	314	ScP	ScP	19 53 57.8	-3.0
	comp=Z,4.4nm,1.0s,baz=52,slow=4.3,SNR=3.9						
AAK	Ala-Archa	46.57	314	P	P	19 48 38.0	+1.2
	SNR=16						
AAK	Ala-Archa	46.57	314	i P	P	19 48 38.2	+1.4
	SNR=19						
AAK	Ala-Archa	46.57	314	P	P	19 48 37.8	+0.9
AAK	Ala-Archa	46.57	314	P	P	19 48 37.3	+0.4
AAK	Ala-Archa	46.57	314	IAMs_20	IAMs_20	20 09 38.9	
	comp=Z,2µm,21.0s						
SGDS	Sogindy	46.76	315	⇓iP	P	19 48 37.9	-0.3
	comp=Z,40nm,2.6s,baz=315						
SGDS				ePP	PP	19 50 26.8	-1.7
	baz=315						
SGDS				eS	S	19 55 25.4	0.0
	baz=315						
USP	Ospenovka	46.78	315	P	P	19 48 39.4	+1.0
	SNR=25						
AML	Almayashu	46.96	313	P	P	19 48 41.7	+1.5
	SNR=33						
AML	Almayashu	46.96	313	i P	P	19 48 41.4	+1.2
	SNR=34						
AML	Almayashu	46.96	313	P	P	19 48 41.0	+0.8
PEA0B	Petropavlovsk-	47.04	30	⇓eP	P	19 48 40.2	+0.1
PEA0B	Petropavlovsk-	47.04	30	P	P	19 48 40.2	+0.1
PEA0B				IAmb	IAmb	19 48 48.2	
	comp=Z,84nm,1.0s						
PETK	Petropavlovsk-	47.04	30	P	P	19 48 40.5	+0.4
	comp=Z,16nm,0.8s,baz=197,slow=4.6,SNR=9.8						
PETK				PcP	PcP	19 50 12.3	+0.5
	comp=Z,4.0nm,0.7s,baz=201,slow=7.4,SNR=2.8						
PETK				PP	PP	19 50 31.0	-0.1
	comp=Z,5.5nm,0.9s,baz=240,slow=10.0,SNR=1.3						
PETK				LR	LR	20 08 59.2	
	comp=Z,589nm,20.1s,baz=225,slow=37						
EKS2	Erkin-Say	47.07	313	P	P	19 48 42.3	+1.5
	SNR=42						
HNR	Honiara	47.27	120	IAMs_20	IAMs_20	20 05 20.3	
	comp=Z,2µm,22.0s						
PET	Petropavlovsk	47.45	31	eP	P	19 48 44.3	+1.0
PET				eS	S	19 55 37.1	+2.3
PET				pmax	pmax		
	comp=Z,64nm,1.3s						
PET				MLR	MLR		
	comp=Z,1µm,17.0s						
PET				MLR	MLR		
	comp=Z,1µm,21.0s						
KURK	Kurchatov	47.46	325	d iP	P	19 48 44.2	+0.7
KURK				pmax	pmax		
	comp=Z,255nm,0.9s						
KURK	Kurchatov	47.46	325	P	P	19 48 43.9	+0.4
KURK	Kurchatov	47.46	325	P	P	19 48 44.2	+0.7
KURK	Kurchatov	47.46	325	IAMs_20	IAMs_20	20 09 41.3	
	comp=Z,1µm,21.0s						
KURBB	Kurchatov Arra	47.47	325	ScP	ScP	19 54 02.1	-2.1
	comp=Z,0.9nm,0.9s,baz=151,slow=2.7,SNR=3.6						
DRK	Karamyk	47.57	309	P	P	19 48 45.9	+1.0
DRK				IAmb	IAmb	19 48 47.5	
	comp=Z,66nm,0.9s						
FORT	Forrest	47.62	170	P	P	19 48 44.1	-0.8
BTLS	Baital	47.72	317	⇓iP	P	19 48 45.7	0.0
	comp=Z,18nm,0.9s,baz=316						
BTLS				ePP	PP	19 50 38.1	+0.6
	baz=316						
BTLS	Baital	47.72	317	d iP	P	19 48 45.6	0.0
BTLS				e		19 50 38.1	
BTLS				pmax	pmax		
	comp=Z,19nm,0.9s						
BTK	Batken	48.45	309	P	P	19 48 51.8	+0.4
BTK				pmax	pmax		
	comp=Z,82nm,1.3s						
BTK	Batken	48.45	309	P	P	19 48 51.8	+0.4
BTK				IAmb	IAmb	19 48 53.8	
	comp=Z,82nm,1.2s						
GAR	Garm	48.58	308	P	P	19 48 53.1	+0.6
MA2	Magadan	48.59	20	⇓iP	P	19 48 54.0	+1.9
MA2				pmax	pmax		
	comp=Z,41nm,1.0s						
MA2	Magadan	48.59	20	P	P	19 48 53.6	+1.6
MA2				IAmb	IAmb	19 48 59.3	
	comp=Z,51nm,1.1s						
KBL	Kabul	48.75	302	P	P	19 48 54.8	+0.9
KBL				pmax	pmax		
	comp=Z,111nm,1.2s						
KBL	Kabul	48.75	302	P	P	19 48 54.3	+0.4
	SNR=39						
KBL	Kabul	48.75	302	P	P	19 48 54.8	+0.9
KBL				IAmb	IAmb	19 48 55.9	
	comp=Z,111nm,1.1s						
DZA	Taraz	48.86	313	eP	P	19 48 53.7	-0.7
	baz=313						
DZA	Taraz	48.86	313	eP	P	19 48 53.7	-0.7
NWAO	Narrogin (SRO)	49.17	183	P	P	19 48 56.3	-0.5
	comp=Z,106nm,1.1s,baz=2.2,slow=9.5,SNR=17						
NWAO				PcP	PcP	19 50 20.1	+0.5
	comp=Z,20nm,0.9s,baz=26,slow=3.2,SNR=3.6						
NWAO	Narrogin (SRO)	49.17	183	P	P	19 48 57.0	+0.2
NWAO				pmax	pmax		
	comp=Z,231nm,1.3s						
NWAO	Narrogin (SRO)	49.17	183	P	P	19 48 57.0	+0.2
NWAO	Narrogin (SRO)	49.17	183	P	P	19 48 56.8	0.0
NWAO				IAmb	IAmb	19 48 58.2	
	comp=Z,186nm,1.3s						
CHGR	Chuyangaron	49.38	307	P	P	19 48 58.8	+0.2
KK31	Karatay Array	49.49	313	P	P	19 48 59.5	+0.2
KK31				pmax	pmax		
	comp=Z,77nm,1.1s						
KK31	Karatay Array	49.49	313	P	P	19 48 59.5	+0.2
KK31				IAmb	IAmb	19 49 01.2	
	comp=Z,77nm,1.1s						
KKAR	Karatay Array	49.49	313	P	P	19 48 59.5	+0.2
KKAR				pmax	pmax		
	comp=Z,77nm,1.1s						
KKAR	Karatay Array	49.49	313	P	P	19 48 59.4	+0.2
KKAR	Karatay Array	49.49	313	P	P	19 48 59.5	+0.2
KKAR				IAmb	IAmb	19 49 01.1	
	comp=Z,77nm,1.1s						
IUG	Iuzhnay	49.57	312	⇓iP	P	19 49 00.8	+0.8
	baz=312						
IUG				eS	S	19 56 03.9	-1.4
	baz=312						
IUG	Iuzhnay	49.57	312	d iP	P	19 49 00.7	+0.8
IUG				eS	S	19 56 03.8	-1.4
TAS	Tashkent	49.89	310	P	P	19 49 02.7	+0.4
TAS				pmax	pmax		
	comp=Z,104nm,1.0s						
TAS	Tashkent	49.89	310	P	P	19 49 02.7	+0.4
TAS				IAmb	IAmb	19 49 04.8	
	comp=Z,104nm,1.0s						
BRLS	Borolday	49.95	313	eP	P	19 49 03.1	+0.3
	comp=Z,20nm,1.4s,baz=312						
BRZS	Berezniki	50.50	322	⇓iP	P	19 49 07.5	+0.6
	comp=Z,43nm,1.1s,baz=322						
BRZS	Berezniki	50.50	322	d iP	P	19 49 07.4	+0.6
BRZS				pmax	pmax		
	comp=Z,43nm,1.1s						
BBOO	Buckleboo	51.38	163	P	P	19 49 12.6	-0.9
BBOO				PcP	PcP	19 50 28.3	+0.5
EIDS	Eidsvold	51.51	143	P	P	19 49 13.2	-1.4
EIDS				IAmb	IAmb	19 49 14.8	
	comp=Z,48nm,1.0s						
SEY	Seymchan	51.65	18	PcP	PcP	19 50 29.4	+1.0
	baz=191,slow=3.7						
SEY	Seymchan	51.65	18	⇑eP	P	19 49 15.7	+0.6
STKA	Stephens Creek	52.39	157	P	P	19 49 20.4	-0.6
	comp=Z,184nm,0.9s,baz=333,slow=7.4,SNR=189						
STKA				PcP	PcP	19 50 32.2	+0.6
	comp=Z,20nm,0.8s,baz=351,slow=8.0,SNR=3.4						
STKA				S	S	19 56 38.1	-5.9
	comp=Z,4.7nm,1.2s,baz=336,slow=19,SNR=2.6						
STKA				LR	LR	20 14 58.1	
	comp=Z,312nm,19.5s,baz=333,slow=40						
STKA	Stephens Creek	52.39	157	P	P	19 49 20.5	-0.6
STKA				IAmb	IAmb	19 49 21.7	
	comp=Z,53nm,1.1s						
BRVK	Borovoye	53.13	325	d iP	P	19 49 26.7	+0.4
BRVK				pmax	pmax		
	comp=Z,145nm,1.0s						
BRVK	Borovoye	53.13	325	P	P	19 49 27.0	+0.7
BRVK	Borovoye	53.13	325	P	P	19 49 26.9	+0.6
BRVK				IAmb	IAmb	19 49 28.2	
	comp=Z,130nm,1.0s						
BRVK	Borovoye	53.13	325	IAMs_20	IAMs_20	20 13 12.1	
	comp=Z,1µm,18.0s						
HRA	Herat	54.32	301	P	P	19 49 35.0	-0.6
HRA				IAmb	IAmb	19 49 37.3	
	comp=Z,60nm,1.4s						
TIXI	Tiksi	55.44	3	d iP	P	19 49 41.8	-1.0
TIXI	Tiksi	55.44	3	P	P	19 49 42.1	-0.7
TIXI				IAmb	IAmb	19 49 43.4	
	comp=Z,59nm,1.0s						
TIXI				IAMs_20	IAMs_20	20 15 30.4	
	comp=Z,1µm,20.0s						
ARMA	Armidale	55.75	147	P	P	19 49 45.8	+0.1
NRIK	Noril'sk	56.56	347	P	P	19 49 50.9	+0.1
	comp=Z,66nm,0.8s,baz=133,slow=7.0,SNR=86						
NRIK				S	S	19 57 35.4	-3.9
	comp=Z,0.9nm,0.3s,baz=143,slow=20,SNR=1.6						
NRIK				LR	LR	20 15 54.2	
	comp=Z,3µm,18.7s,baz=153,slow=38						
NRIK	Noril'sk	56.56	347	d iP	P	19 49 50.8	0.0
NRIK				pmax	pmax		
	comp=Z,109nm,0.9s						
NRIK	Noril'sk	56.56	347	P	P	19 49 51.1	+0.3
NRIK				IAmb	IAmb	19 49 52.2	
	comp=Z,97nm,0.9s						
GEYT	Alibeck	57.89	305	P	P	19 50 01.6	+0.8
	comp=Z,33nm,0.8s,baz=132,slow=6.2,SNR=44						
GEYT				LR	LR	20 17 39.8	
	comp=Z,1µm,20.0s,baz=215,slow=39						
GYA0B	ALIBECK ARRAY	57.89	305	P	P	19 50 01.7	+0.9
GYA0B				IAmb	IAmb	19 50 03.5	
	comp=Z,86nm,1.1s						
BIDO	Bidbid	58.07	288	P	P	19 50 03.4	+1.1
	SNR=5.3						
ABKAR	Akbulak array	58.14	318	P	P	19 50 02.5	+0.2
ABKAR				IAmb	IAmb	19 50 04.0	
	comp=Z,60nm,1.0s						
CAN	Canberra	58.45	152	P	P	19 50 04.5	-0.1
CAN				pmax	pmax		
	comp=Z,224nm,1.7s						
CAN	Canberra	58.45	152		P	19 50 04.5	-0.1
MHTO	MHTO	58.49	285	P	P	19 50 04.7	-0.5
MHTO				P	P	19 50 04.7	-0.5
HOQ	Hoqain	58.81	288	P	P	19 50 07.6	+0.1
	SNR=5.4						
HOQ				P	P	19 50 07.6	+0.1
	SNR=5.4						
TOO	Toolangi	58.91	156	P	P	19 50 07.8	0.0
TOO				pmax	pmax		
	comp=Z,115nm,1.0s						
TOO	Toolangi	58.91	156	P	P	19 50 07.8	0.0
BILL	Bilibino	59.35	18	ceP	P	19 50 11.0	+0.6
BILL				e*PP	sP	19 50 25.3	-1.8
BILL				e		19 50 58.8	
BILL				eS	S	19 58 21.2	+5.3
BILL				SS	SS	20 02 20.0	+9.2
BILL				pmax	pmax		
	comp=Z,33nm,1.3s						
BILL				MLR	MLR		
	comp=Z,300nm,19.0s						
BILL	Bilibino	59.35	18	P	P	19 50 10.7	+0.3
SOHO	SOHO	59.47	289	P	P	19 50 10.9	-1.0
BANOM	Banah	59.52	291	i P	P	19 50 12.9	+0.5
	SNR=7.2						
BANOM	Banah	59.52	291	P	P	19 50 13.3	+0.9
DZM	Mont Dzumac	59.57	129	eP	P	19 50 11.3	-1.4
	comp=Z,58nm,1.2s						
DZM				eS	S	19 58 17.0	-3.1
	comp=Z,336nm,29.0s						
DZM				eLR	LR	20 07 52.7	
	comp=Z,2µm,32.5s						
DZM	Mont Dzumac	59.57	129	P	P	19 50 12.1	-0.7
DZM				IAmb	IAmb	19 51 03.7	
	comp=Z,47nm,1.2s						
MDH	Madha	59.58	290	P	P	19 50 13.3	+0.6
AKTO	Aktyubinsk	59.60	319	P	P	19 50 12.8	+0.3
	comp=Z,28nm,0.9s,baz=98,slow=7.5,SNR=71						
AKTO				PP	PP	19 52 26.2	+2.0
	comp=Z,5.1nm,0.9s,baz=49,slow=14,SNR=2.2						
AKTO				S	S	19 58 17.6	-2.0
	comp=Z,0.5nm,0.4s,baz=167,slow=14,SNR=5.7						
AKTO				PKP2bc		20 19 50.6	
	comp=Z,1.9nm,1.0s,baz=298,slow=2.3,SNR=7.9						
SHME	Shamm	59.66	291	P	P	19 50 14.0	+0.7
SVE	Sverdlovsk	59.66	327	c iP	P	19 50 13.2	+0.5
SVE				eS	S	19 58 17.7	-2.5
SVE				pmax	pmax		
	comp=Z,186nm,1.2s						
SVE				MLR	MLR		
	comp=Z,946nm,21.0s						
UOSS	Minazif	59.69	290	P	P	19 50 13.0	-0.5
UOSS	Minazif	59.69	290	P	P	19 50 13.4	-0.1
UOSS	Minazif	59.69	290	P	P	19 50 13.4	-0.1
UOSS	Minazif	59.69	290	IAMs_20	IAMs_20	20 17 47.3	
	comp=Z,629nm,21.0s						
MASF	Masafi	59.70	290	P	P	19 50 14.7	+1.1
MSFE	Esma-Masafi	59.70	290	P	P	19 50 14.9	+1.3
HATD	Hatta, Dubai	59.77	289	i P	P	19 50 14.1	0.0
	SNR=8.6						
ASHO	Ashiyiah	59.85	289	i P	P	19 50 14.6	0.0
	SNR=10						
ASHO	Ashiyiah	59.85	289	P	P	19 50 15.3	+0.6
	SNR=6.2						
NAZ	Nazwa, Dubai	60.18	290	P	P	19 50 16.9	0.0
ALNE	Al Ain	60.19	289	i P	P	19 50 16.6	-0.4
	SNR=7.2						
ALNE	Al Ain	60.19	289	P	P	19 50 16.6	-0.4
	SNR=10.0						
FAQ	Al Faqa, Dubai	60.27	289	i P	P	19 50 16.9	-0.5
	SNR=6.5						
ASUD	Al Ashush, Dub	60.51	289	i P	P	19 50 19.0	-0.2
	SNR=8.1						
ARU	Arti	60.65	326	P	P	19 50 19.3	-0.2
	comp=Z,11nm,0.6s,baz=108,slow=3.9,SNR=76						
ARU				PP	PP	19 52 34.1	+0.8
	comp=Z,2.8nm,0.8s,baz=125,slow=6.1,SNR=2.4						
ARU				S	S	19 58 29.6	-3.3
	comp=Z,0.2nm,0.3s,baz=114,slow=20,SNR=5.9						
ARU	Arti	60.65	326	d iP	P	19 50 19.1	-0.4
ARU				*PP	sP	19 50 31.8	-4.4
ARU						19 51 02.9	
ARU						19 52 31.1	
ARU				PPP	PPP	19 54 00.5	
ARU				S	S	19 58 34.7	+1.8
ARU						20 00 03.0	
ARU				SS	SS	20 02 30.1	-1.5
ARU				pmax	pmax		
	comp=Z,105nm,1.2s						
ARU				MLR	MLR		
	comp=Z,1µm,19.0s						
ARU	Arti	60.65	326	P	P	19 50 19.3	-0.2
ARU				IAmb	IAmb	19 50 20.5	
	comp=Z,94nm,1.1s						
ARU				IAMs_20	IAMs_20	20 17 50.0	
	comp=Z,2µm,20.0s						
ADK	Adak	60.87	39	P	P	19 50 20.9	-0.2
ADK				pmax	pmax		
	comp=Z,114nm,1.2s						
ADK	Adak	60.87	39	P	P	19 50 20.9	-0.2
ADK				IAmb	IAmb	19 50 23.7	
	comp=Z,114nm,1.2s						
SHAO	Shalim	61.09	282	P	P	19 50 23.3	+0.1
RBK	Rabkut	62.51	281	P	P	19 50 33.3	+0.6
SOCY	Socotra	63.73	276	P	P	19 50 40.5	-0.5
SOCY	Socotra	63.73	276	P	P	19 50 39.5	-1.5
SOCY				IAmb	IAmb	19 50 52.9	
	comp=Z,78nm,1.4s						
SOCY				IAMs_20	IAMs_20	20 16 58.0	
	comp=Z,760nm,20.0s						
TRNA	Turayna	64.22	290	P	P	19 50 44.2	+0.2
NIKH	Nikolski High	65.77	39	P	P	19 50 53.9	+0.4
	baz=265						
GAMB	Gambell	65.86	27	P	P	19 50 55.8	+1.9
	baz=258						
KIRV	Kirov	65.91	327	P	P	19 50 54.1	-0.2
	comp=Z,92nm,0.9s,baz=108,slow=2.6,SNR=46						
KIRV				S	S	19 59 34.4	-4.0
	comp=Z,3.9nm,0.6s,baz=149,slow=19,SNR=8.6						
KIRV	Kirov	65.91	327	d iP	P	19 50 53.7	-0.6
MAK	Makhachkala	66.13	310	eP	P	19 50 55.2	-0.8
MAK				e		19 53 24.1	
MAK				eS	S	19 59 39.2	-2.4
MAK				eSS	SS	20 04 05.2	+7.6
MAK				pmax	pmax		
	comp=Z,123nm,0.9s						
BELG	Belogornoye	66.30	320	P	P	19 50 56.9	0.0
	comp=Z,119nm,1.0s,baz=95,slow=1.7,SNR=41						
QRN	Al-Qurain	66.68	295	eP	P	19 50 59.9	+0.1
UMR	Umm Al-Rimmam	66.76	296	eP	P	19 51 00.0	-0.3
KBD	Kabd	66.83	295	eP	P	19 51 00.6	-0.2
RDF	Al-Radifah	66.98	295	eP	P	19 51 01.6	-0.2
MIB	Mutribah	67.06	296	eP	P	19 51 01.8	-0.5
UNV	Unalaska Valle	67.23	38	P	P	19 51 04.5	+1.7
	baz=267						
UNV	Unalaska Valle	67.23	38	P	P	19 51 02.5	-0.3
UNV				IAmb	IAmb	19 51 07.9	
	comp=Z,47nm,0.8s						
GROC	Groznyy	67.37	310	eP	P	19 51 00.3	-3.7
GROC				e*PP	pP	19 51 12.5	-3.3
GROC				e*SP	sP	19 51 17.5	-3.0
GROC				e		19 51 28.8	
GROC				eS	S	19 59 53.0	-3.7
GROC				pmax	pmax		
	comp=Z,38nm,1.1s						
PRGR	Permogore	68.17	330	eP	P	19 51 08.0	-0.6
PRGR				pmax	pmax		
	comp=Z,44nm,0.8s						
GNI	Garni	68.30	307	P	P	19 51 10.1	+0.1
	comp=Z,33nm,1.1s,baz=156,slow=4.3,SNR=14						
GNI	Garni	68.30	307	P	P	19 51 11.2	+1.1
GNI	Garni	68.30	307	d iP	P	19 51 11.2	+1.1
GNI				pmax	pmax		
	comp=Z,77nm,1.3s						
GNI	Garni	68.30	307	P	P	19 51 11.5	+1.4
GNI	Garni	68.30	307	P	P	19 51 10.3	+0.2
GNI				IAmb	IAmb	19 51 12.8	
	comp=Z,94nm,1.4s						
ANM	Nome	68.72	27	P	P	19 51 14.1	+2.1
	baz=264						
ZEI	Tsey	68.78	310	eP	P	19 51 12.1	-1.0
ZEI				pmax	pmax		
	comp=Z,17nm,1.0s						
NCK	Nalchik	68.97	311	⇑eP	P	19 51 14.5	+0.5
NCK				pmax	pmax		
	comp=Z,44nm,1.1s						
AKH	Akhalkalaki	69.17	309	⇓P	P	19 51 16.2	+0.7
GOF	Gofitskoye	69.28	312	⇑eP	P	19 51 16.6	+0.7
GOF				pmax	pmax		
	comp=Z,36nm,0.9s						
KBZ	Khabaz	69.46	311	P	P	19 51 17.1	+0.2
	comp=Z,36nm,1.0s,baz=94,slow=4.7,SNR=53						
KBZ				PKPPKP	P'P'df	20 19 23.8	-4.3
	comp=Z,9.7nm,1.3s,baz=275,slow=1.6,SNR=12						
KBZ				LR	LR	20 26 20.3	
	comp=Z,1µm,19.5s,baz=74,slow=40						
KBZ	Khabaz	69.46	311	d iP	P	19 51 17.0	+0.1
KBZ				pmax	pmax		
	comp=Z,64nm,1.1s						
KARS	Kars	69.53	308	P	P	19 51 17.7	0.0
KARS				pmax	pmax		
	comp=Z,122nm,1.1s						
KARS	Kars	69.53	308	P	P	19 51 17.7	0.0
KARS				IAmb	IAmb	19 51 20.3	
	comp=Z,122nm,1.1s						
RAYN	Ar Rayn	69.56	289	P	P	19 51 18.4	+0.3
RAYN	Ar Rayn	69.56	289	P	P	19 51 18.1	+0.1
RAYN				pmax	pmax		
	comp=Z,51nm,1.1s						
RAYN				MLR	MLR		
	comp=Z,500nm,22.0s						
RAYN	Ar Rayn	69.56	289	P	P	19 51 18.1	+0.1
RAYN				IAmb	IAmb	19 51 19.9	
	comp=Z,51nm,1.1s						
RAYN				IAMs_20	IAMs_20	20 21 30.7	
	comp=Z,473nm,22.0s						
KVAR	Kislovodsk Arr	69.59	311	P	P	19 51 19.3	+1.4
	comp=Z,19nm,1.0s,baz=90,slow=20,SNR=9.8						
KIV	Kislovodsk	69.60	311	⇓P	P	19 51 18.6	+0.6
KIV	Kislovodsk	69.60	311	i P	P	19 51 18.0	+0.1
	SNR=20						
KIV	Kislovodsk	69.60	311	eP	P	19 51 18.1	+0.1
KIV				eS	S	20 00 24.3	+1.0
KIV				pmax	pmax		
	comp=Z,70nm,1.0s						
KIV				pmax	pmax		
	comp=Z,28nm,3.2s						
KIV				MLR	MLR		
	comp=Z,681nm,17.0s						
KIV	Kislovodsk	69.60	311	P	P	19 51 18.9	+0.9
KIV	Kislovodsk	69.60	311	P	P	19 51 18.4	+0.4
KIV				IAmb	IAmb	19 51 19.8	
	comp=Z,72nm,1.0s						
KIV				IAMs_20	IAMs_20	20 25 40.4	
	comp=Z,782nm,19.0s						
NEY	Neytrino	69.62	311	ceP	P	19 51 20.0	+1.8

NEY				pmax	pmax		
	comp=Z,8.0nm,1.2s						
VRH	Novokhopyorsk	69.94	319	eP	P	19 51 19.0	-0.8
VRH				pmax	pmax		
	comp=Z,100nm,1.2s						
RDOG	Red Dog Mine	70.08	23	P	P	19 51 27.5	+7.1
	baz=264						
CHVG	Ch'k'valeri	70.12	310	⇑P	P	19 51 21.7	+0.6
SIRT	Sirnak	70.31	304	P	P	19 51 22.3	-0.2
GURO	Guroymak-BITLI	70.53	306	P	P	19 51 24.9	+1.1
GURO				IAmb	IAmb	19 51 26.4	
	comp=Z,66nm,1.1s						
BCA	Borcka	70.57	309	⇑P	P	19 51 23.4	-0.5
SDPT	Sand Point	70.76	37	P	P	19 51 24.3	-0.4
	baz=271						
SDPT	Sand Point	70.76	37	P	P	19 51 24.3	-0.4
KLMR	Klimovskoe	71.07	329	eP	P	19 51 24.2	-2.3
KLMR				e		19 54 01.3	
KLMR				pmax	pmax		
	comp=Z,108nm,1.1s						
KLMR	Klimovskoe	71.07	329	eP	P	19 51 24.2	-2.3
KLMR				AMP		19 51 27.2	
	comp=Z,108nm,1.1s						
KLMR				ePP	PP	19 54 01.3	-2.9
KLMR				ePPP	PPP	19 55 39.5	
KLMR				LQ	LQ	20 17 30.4	
KLMR				LQ	LQ	20 17 30.4	
KLMR				LR	LR	20 20 51.8	
CHNA	Chernabura Isl	71.29	37	P	P	19 51 28.2	+0.3
	baz=272						
CNBA	Chernabura Isl	71.29	37	P	P	19 51 27.5	-0.4
CNBA				IAmb	IAmb	19 51 32.9	
	comp=Z,90nm,1.1s						
VORD	Divnogorie	71.48	319	eP	P	19 51 29.0	-0.2
VORD				pmax	pmax		
	comp=Z,30nm,0.7s						
VSR	Storozhevoye	71.55	319	eP	P	19 51 28.9	-0.7
VSR				pmax	pmax		
	comp=Z,70nm,1.4s						
LPSR	Galich'ya Gora	71.62	321	eP	P	19 51 29.4	-0.5
LPSR				pmax	pmax		
	comp=Z,110nm,1.1s						
SOC	Sochi	71.77	311	eP	P	19 51 30.0	-1.1
SOC				eS	S	20 00 49.5	+1.1
SOC				eSS	SS	20 05 21.6	-3.1
SOC				pmax	pmax		
	comp=Z,31nm,0.9s						
SOC				MLR	MLR		
	comp=Z,745nm,19.0s						
CHGN	Chignik	71.89	35	P	P	19 51 31.0	-0.5
	baz=273						
MOS	Moscow	72.21	324	eP	P	19 51 32.0	-1.4
MOS				e		19 54 11.5	
MOS				eS	S	20 00 49.4	-3.6
MOS				pmax	pmax		
	comp=Z,155nm,1.8s						
MOS				pmax	pmax		
	comp=Z,200nm,1.8s						
MOS				MLR	MLR		
	comp=Z,1µm,19.0s						
GCSA	Galena City Sc	72.38	27	P	P	19 51 35.9	+1.6
	baz=271,SNR=18						
TTA	Tatalina	72.82	28	P	P	19 51 38.4	+1.4
TTA				pmax	pmax		
	comp=Z,86nm,1.1s						
TTA	Tatalina	72.82	28	P	P	19 51 38.5	+1.4
	baz=272,SNR=26						
TTA	Tatalina	72.82	28	P	P	19 51 38.4	+1.4
TTA				IAmb	IAmb	19 51 39.7	
	comp=Z,86nm,1.1s						
OBN	Obninsk	72.85	323	P	P	19 51 37.1	-0.1
	comp=Z,5.1nm,0.4s,baz=20,slow=3.9,SNR=17						
OBN	Obninsk	72.85	323	d iP	P	19 51 36.8	-0.4
OBN				e*PP	pP	19 51 49.0	-0.5
OBN				e		19 51 53.4	
OBN				e*SP	PcP	19 51 55.5	+1.3
OBN				ePPP	PPP	19 56 08.6	
OBN				eS	S	20 00 50.2	-10
OBN				e		20 01 27.7	
OBN				eSS	SS	20 05 38.2	-2.3
OBN				pmax	pmax		
	comp=Z,135nm,1.7s						
OBN				MLR	MLR		
	comp=Z,1µm,20.0s						
OBN	Obninsk	72.85	323	P	P	19 51 36.5	-0.7
OBN				IAmb	IAmb	19 51 38.0	
	comp=Z,119nm,1.3s						
OBN				IAMs_20	IAMs_20	20 25 13.8	
	comp=Z,1µm,20.0s						
LVZ	Lovozero	73.08	337	⇓eP	P	19 51 38.2	-0.3
LVZ				pmax	pmax		
	comp=Z,96nm,2.0s						
LVZ	Lovozero	73.08	337	P	P	19 51 37.7	-0.7
LVZ				IAmb	IAmb	19 51 42.4	
	comp=Z,60nm,1.3s						
SVW2	Sparrevohn	73.12	30	P	P	19 51 39.9	+1.1
SVW2				IAmb	IAmb	19 51 41.7	
	comp=Z,73nm,1.0s						
ANN	Anapa	73.28	313	eP	P	19 51 36.6	-3.4
ANN				e*PP	pP	19 51 48.6	-3.7
ANN				e		19 51 52.5	
ANN				ePPP	PPP	19 56 07.3	
ANN				eS	S	20 01 02.2	-3.3
ANN				eSSS	SSS	20 09 08.3	
ANN				pmax	pmax		
	comp=Z,53nm,1.5s						
ANN				MLR	MLR		
	comp=Z,816nm,17.0s						
ANN				MLR	MLR		
	comp=E,479nm,17.0s						
ANN				MLR	MLR		
	comp=N,854nm,20.0s						
O18K	Koktuh Hills	73.39	32	P	P	19 51 42.1	+1.7
	baz=274,SNR=54						
O18K	Koktuh Hills	73.39	32	P	P	19 51 41.5	+1.1
L19K	White Mountain	73.40	29	P	P	19 51 42.1	+1.6
	baz=274,SNR=35						
L19K	White Mountain	73.40	29	P	P	19 51 41.9	+1.4
P18K	Big Mountain,	73.41	32	P	P	19 51 41.6	+1.0
	baz=274,SNR=14						
P18K	Big Mountain,	73.41	32	P	P	19 51 41.5	+1.0
P18K				IAmb	IAmb	19 51 42.6	
	comp=Z,127nm,1.1s						
J20K	Nowinta River	73.59	27	P	P	19 51 43.3	+1.8
	baz=274,SNR=36						
J20K	Nowinta River	73.59	27	P	P	19 51 42.8	+1.4
J20K				IAmb	IAmb	19 51 44.6	
	comp=Z,76nm,0.9s						
M19K	Big River Lodg	73.64	29	P	P	19 51 43.6	+1.8
	baz=274						
M19K	Big River Lodg	73.64	29	P	P	19 51 43.3	+1.5
M19K				IAmb	IAmb	19 51 44.9	
	comp=Z,89nm,1.0s						
IMAR	Indian Mountai	73.64	25	P	P	19 51 42.7	+0.9
N19K	Bonanza Creek	73.67	31	P	P	19 51 43.8	+1.6
	baz=274,SNR=26						
N19K	Bonanza Creek	73.67	31	P	P	19 51 43.6	+1.4
O19K	Port Alsworth	73.81	31	P	P	19 51 44.2	+1.4
	baz=275,SNR=18						
O19K	Port Alsworth	73.81	31	P	P	19 51 43.8	+1.0
L20K	Farewell, AK	73.83	29	P	P	19 51 44.7	+1.7
	baz=274,SNR=11						
H21K	Melozitna Rive	74.05	26	P	P	19 51 45.9	+1.7
	baz=275						
H21K	Melozitna Rive	74.05	26	P	P	19 51 45.4	+1.2
H21K				IAmb	IAmb	19 51 47.2	
	comp=Z,106nm,1.1s						
Q19K	Cape Douglas,	74.27	33	P	P	19 51 44.8	-0.8
	baz=276						
Q19K	Cape Douglas,	74.27	33	P	P	19 51 46.0	+0.4
P19K	Oil Pt	74.40	32	P	P	19 51 47.0	+0.6
	baz=276,SNR=5.2						
P19K	Oil Pt	74.40	32	P	P	19 51 46.9	+0.5
P19K				IAmb	IAmb	19 51 47.7	
	comp=Z,125nm,0.9s						
CHUM	Lake Minchumin	74.42	27	P	P	19 51 48.1	+1.8
	baz=276,SNR=19						
I21K	Tanana	74.44	26	P	P	19 51 48.4	+2.0
	baz=275,SNR=43						
I21K	Tanana	74.44	26	P	P	19 51 47.7	+1.3
I21K				IAmb	IAmb	19 51 49.5	
	comp=Z,103nm,1.1s						
GAZ	Gaziantep	74.49	305	P	P	19 51 46.5	-0.8
ATD	Arta Tunnel	74.50	278	P	P	19 51 48.6	+0.8
	comp=Z,16nm,1.0s,baz=98,slow=2.7,SNR=4.5						
RSO	Redoubt South	74.56	31	P	P	19 51 48.7	+1.2
CAST	Castle Rocks	74.56	28	P	P	19 51 48.8	+1.6
	baz=276,SNR=61						
CAST	Castle Rocks	74.56	28	P	P	19 51 48.6	+1.3
PPLA	Purkeypile	74.57	28	P	P	19 51 48.8	+1.4
	baz=276,SNR=14						
OHAK	Old Harbor	74.64	34	P	P	19 51 48.5	+0.9
	baz=276,SNR=7.2						
OHAK	Old Harbor	74.64	34	P	P	19 51 48.0	+0.3
OHAK				IAmb	IAmb	19 51 49.4	
	comp=Z,134nm,1.0s						
O20K	Slope Mountain	74.66	31	P	P	19 51 48.1	+0.2
	baz=276						
SPCR	Spurr Chakacha	74.74	30	P	P	19 51 49.5	+1.1
	baz=276						
SPU	Mount Spurr	74.82	30	P	P	19 51 49.3	+0.5
COLD	Coldfoot	74.94	24	P	P	19 51 50.9	+1.6
	baz=276,SNR=11						
KDAK	Kodiak Island	74.95	34	P	P	19 51 50.1	+0.6
	comp=Z,105nm,0.9s,baz=324,slow=4.3,SNR=24						
KDAK	Kodiak Island	74.95	34	P	P	19 51 50.4	+0.9
	baz=277						
KDAK	Kodiak Island	74.95	34	P	P	19 51 50.0	+0.5
MLY	Manley	74.97	26	P	P	19 51 51.1	+1.5
	baz=277,SNR=66						
MLY	Manley	74.97	26	P	P	19 51 50.6	+1.0
MLY				IAmb	IAmb	19 51 52.3	
	comp=Z,93nm,0.9s						
SKT	Skwentna	74.97	29	P	P	19 51 50.1	+0.5
	baz=277						
BPAW	Bear Paw Mtn.	74.98	27	P	P	19 51 51.0	+1.4
	baz=277,SNR=46						
TOLK	Toolik Lake Re	75.02	22	P	P	19 51 51.0	+1.2
	baz=277,SNR=12						
QRZ	Quartz Range	75.04	141	P	P	19 51 50.8	+0.5
QRZ				IAmb	IAmb	19 51 52.0	
	comp=Z,74nm,1.1s						
HIZ	Hauiti	75.10	138	P	P	19 51 51.6	+1.0
BNN	Bunyan	75.28	307	P	P	19 51 52.2	+0.2
BNN				IAmb	IAmb	19 51 53.7	
	comp=Z,69nm,1.2s						
TRF	Thorofare Moun	75.36	28	P	P	19 51 53.7	+1.7
	baz=277						
TRF	Thorofare Moun	75.36	28	P	P	19 51 53.2	+1.2
TRF				IAmb	IAmb	19 51 55.8	
	comp=Z,64nm,0.9s						
H23K	Yukon River	75.37	25	P	P	19 51 53.7	+1.9
	baz=278						
SUA	Susitna One	75.41	30	P	P	19 51 52.8	+0.5
	baz=278						
CNPM	China Poot	75.42	32	P	P	19 51 52.6	+0.3
CUT	Chulitna	75.51	29	P	P	19 51 53.5	+0.8
	baz=278,SNR=11						
I23K	Minto, Yukon-K	75.54	26	P	P	19 51 54.3	+1.5
	baz=278,SNR=19						
BRLK	Bradley Lake	75.57	32	P	P	19 51 53.2	+0.1
ASF	Jabal al Asfar	75.59	300	P	P	19 51 54.7	+0.9
	comp=Z,17nm,1.0s,baz=140,slow=1.5,SNR=21						
ASF				PP	PP	19 54 45.6	+2.1
	comp=Z,3.1nm,0.9s,baz=11,slow=14,SNR=2.5						
SIM	Simferopol'	75.59	313	eP	P	19 51 51.9	-1.6
SIM				pmax	pmax		
	comp=Z,41nm,1.1s						
BWN	Browne	75.63	27	P	P	19 51 54.6	+1.3
BRSE	Bradley Lake S	75.64	32	P	P	19 51 54.0	+0.4
	baz=278,SNR=9.0						
M22K	Willow	75.67	29	P	P	19 51 54.2	+0.7
	baz=278,SNR=22						
KEV	Kevo	75.68	339	P	P	19 51 53.8	+0.3
KEV				pmax	pmax		
	comp=Z,58nm,1.1s						
KEV				MLR	MLR		
	comp=Z,1µm,19.0s						
KEV	Kevo	75.68	339	P	P	19 51 53.8	+0.3
KEV				IAmb	IAmb	19 51 54.8	
	comp=Z,58nm,1.1s						
KEV				IAMs_20	IAMs_20	20 30 34.8	
	comp=Z,1µm,19.0s						
PUL	Pulkovo	75.71	329	⇑eP	P	19 51 54.3	+0.5
PUL				pmax	pmax		
	comp=Z,82nm,0.6s						
NEA2	Nenana	75.74	26	P	P	19 51 54.8	+0.8
	baz=278,SNR=47						
NEA2	Nenana	75.74	26	P	P	19 51 55.2	+1.2
NEA2				IAmb	IAmb	19 51 56.6	
	comp=Z,69nm,0.8s						
NNZ	Nelson	75.79	141	P	P	19 51 54.7	+0.2
NNZ				IAmb	IAmb	19 51 55.4	
	comp=Z,95nm,1.3s						
THZ	Tophouse	75.83	142	P	P	19 51 55.1	+0.3
MCK	McKinley	75.92	27	P	P	19 51 55.7	+0.7
	baz=278,SNR=57						
LBZ	Lake Benmore	75.94	145	P	P	19 51 55.8	+0.5
LBZ				IAmb	IAmb	19 51 56.9	
	comp=Z,98nm,1.1s						
RC01	Rabbit Creek A	75.95	30	P	P	19 51 55.7	+0.6
	baz=278,SNR=16						
RPZ	Rata Peaks	75.99	144	P	P	19 51 55.6	0.0
RPZ				IAmb	IAmb	19 51 56.7	
	comp=Z,42nm,0.9s						
RND	Reindeer	76.01	28	P	P	19 51 56.1	+0.5
RND				pmax	pmax		
	comp=Z,137nm,0.8s						
RND	Reindeer	76.01	28	P	P	19 51 56.1	+0.5
O22K	Cooper Landing	76.04	31	P	P	19 51 56.0	+0.3
	baz=279,SNR=10.0						
H24K	Noodor Dome	76.05	25	P	P	19 51 57.5	+1.7
	baz=279						
H24K	Noodor Dome	76.05	25	P	P	19 51 57.1	+1.3
H24K				IAmb	IAmb	19 51 58.7	
	comp=Z,64nm,1.1s						
LTZ	Lake Taylor	76.09	143	P	P	19 51 56.7	+0.4
PMR	Palmer	76.16	30	P	P	19 51 56.8	+0.4
PMR				pmax	pmax		
	comp=Z,128nm,0.9s						
PMR	Palmer	76.16	30	P	P	19 51 56.8	+0.4
	baz=279,SNR=31						
PMR	Palmer	76.16	30	P	P	19 51 56.8	+0.4
WRH	Wood River Hil	76.18	26	P	P	19 51 57.5	+1.1
WRH				IAmb	IAmb	19 51 59.1	
	comp=Z,69nm,0.9s						
TCOL	CIGO, UAF Yank	76.21	26	P	P	19 51 57.0	+0.4
	baz=279						
TCOL	CIGO, UAF Yank	76.21	26	P	P	19 51 56.8	+0.2
TCOL				IAmb	IAmb	19 51 59.8	
	comp=Z,37nm,0.9s						
COLA	College	76.21	26	c iP	P	19 51 56.8	+0.2
COLA				pmax	pmax		
	comp=Z,48nm,1.1s						
COLA	College	76.21	26	P	P	19 51 56.9	+0.2
COLA				IAmb	IAmb	19 51 59.8	
	comp=Z,38nm,0.9s						
GHO	Glory Hole Cre	76.23	29	P	P	19 51 57.4	+0.5
GHO				IAmb	IAmb	19 51 58.6	
	comp=Z,108nm,1.0s						
ARA0	ARCESS Array S	76.23	339	⇓iP	P	19 51 56.9	+0.2
ARCES	ARCESS Array B	76.23	339	P	P	19 51 56.8	+0.1
	comp=Z,32nm,0.8s,baz=72,slow=7.8,SNR=30						
ARCES				LR	LR	20 29 21.5	
	comp=Z,1µm,20.2s,baz=75,slow=39						
ARCES	ARCESS Array B	76.23	339	P	P	19 51 56.9	+0.2
ARCES				pmax	pmax		
	comp=Z,61nm,1.1s						
ARCES	ARCESS Array B	76.23	339	P	P	19 51 56.9	+0.2
ARCES				IAmb	IAmb	19 51 58.1	
	comp=Z,61nm,1.1s						
SEW	Seward	76.23	31	P	P	19 51 56.8	0.0
	baz=279,SNR=10						
SEW	Seward	76.23	31	P	P	19 51 57.1	+0.3
TUWZ	Tuamarina	76.25	141	P	P	19 51 56.9	-0.2
CCB	Clear Creek Bu	76.27	26	P	P	19 51 57.0	0.0
OXZ	Oxford	76.30	144	P	P	19 51 57.4	0.0
POKR	Poker Plat Res	76.35	26	P	P	19 51 58.7	+1.3
	baz=280,SNR=7.8						
POKR	Poker Plat Res	76.35	26	P	P	19 51 58.4	+0.9
URZ	Urewera	76.41	137	P	P	19 51 57.9	-0.2
URZ				IAmb	IAmb	19 51 59.9	
	comp=Z,49nm,1.1s						
SML	Sawmill	76.50	29	P	P	19 51 59.5	+1.1
	baz=280,SNR=31						
SML	Sawmill	76.50	29	P	P	19 51 59.0	+0.6
KNK	Knik Glacier	76.50	30	P	P	19 51 59.3	+0.9
	baz=280,SNR=27						
BKZ	Black Stump Fm	76.52	138	P	P	19 51 59.1	+0.3
IL31		76.64	26	P	P	19 51 58.7	-0.3
ILAR	Eielson Array	76.64	26	P	P	19 51 58.7	-0.3
	comp=Z,13nm,0.9s,baz=285,slow=3.4,SNR=40						
ILAR				PKKPbc	PKKPbc	20 11 09.6	-2.1
	comp=Z,0.9nm,0.9s,baz=154,slow=1.0,SNR=5.6						
ILAR				PKPPKP		20 19 09.9	
	comp=Z,1.9nm,1.2s,baz=160,slow=0.9,SNR=5.1						
ILAR				LR	LR	20 28 35.4	
	comp=Z,206nm,18.1s,baz=308,slow=38						
HAMF	Hammerfest	76.64	340	eP	P	19 51 59.7	+0.8
WAT6	Susitna Watana	76.64	28	P	P	19 52 00.0	+0.7
	baz=280,SNR=45						
PWL	Port Wells	76.66	30	P	P	19 51 59.8	+0.6
	baz=280,SNR=22						
MMAI	Mount Meron Ar	76.67	301	P	P	19 51 59.9	0.0
	comp=Z,10nm,0.9s,baz=77,slow=9.5,SNR=19						
HDA	Harding Lake	76.68	26	P	P	19 51 59.0	-0.2
	baz=280,SNR=20						
DHY	Denali Highway	76.72	28	P	P	19 52 00.2	+0.5
	baz=280						
SPB2	Spitsbergen Ar	76.74	348	P	P	19 51 59.8	+0.4
SPB2				IAmb	IAmb	19 52 01.1	
	comp=Z,102nm,0.9s						
SPA0	Spitsbergen Ar	76.74	348	⇓iP	P	19 51 60.0	+0.5
SPITS	Spitsbergen Ar	76.74	348	P	P	19 52 00.1	+0.7
SPITS				pmax	pmax		
	comp=Z,135nm,1.0s						
MXZ	Matakaoa Point	76.82	136	P	P	19 52 00.6	+0.2
MXZ				IAmb	IAmb	19 52 02.1	
	comp=Z,107nm,0.9s						
BR131	Keskin Array S	76.82	308	P	P	19 52 00.4	-0.3
BR131				pmax	pmax		
	comp=Z,18nm,1.3s						
BR131	Keskin Array S	76.82	308	P	P	19 52 00.8	+0.1
	SNR=5.7						
BR131	Keskin Array S	76.82	308	P	P	19 52 00.4	-0.3
BRTR	Keskin Array B	76.82	308	P	P	19 51 59.7	-1.1
	comp=Z,3.1nm,0.9s,baz=114,slow=6.0,SNR=17						
BRTR				PP	PP	19 54 54.9	+1.1
	comp=Z,3.8nm,1.0s,baz=91,slow=5.4,SNR=4.9						
BRTR				LR	LR	20 31 02.6	
	comp=Z,417nm,21.5s,baz=71,slow=40						
BRTR	Keskin Array B	76.82	308	i P	P	19 52 00.5	-0.3
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BRTR	Keskin Array B	76.82	308	P	P	19 52 00.2	-0.6
GHAJ	Ghor Haditha	76.86	299	P	P	19 52 01.6	+0.7
GHAJ				IAmb	IAmb	19 52 03.3	
	comp=Z,46nm,1.0s						
SCM	Sheep Creek Mo	76.97	29	P	P	19 52 01.6	+0.6
SCM				pmax	pmax		
	comp=Z,247nm,1.0s						
SCM	Sheep Creek Mo	76.97	29	P	P	19 52 02.0	+1.0
	baz=280,SNR=36						
SCM	Sheep Creek Mo	76.97	29	P	P	19 52 01.6	+0.6
FYU	Fort Yukon	76.98	24	P	P	19 52 02.1	+1.2
FYU				IAmb	IAmb	19 52 03.8	
	comp=Z,59nm,1.1s						
KIP	Kipapa	77.01	71	⇓eP	P	19 52 03.8	+1.9
KIP				pmax	pmax		
	comp=Z,149nm,1.7s						
MSWZ	Moikau Station	77.03	141	P	P	19 52 02.0	+0.4
BMAR	Burnt Mountain	77.06	23	P	P	19 52 02.8	+1.3
PRP	Porcupine Dome	77.07	25	P	P	19 52 02.0	+0.4
	baz=281,SNR=14						
KTK1	Kautokeino	77.13	338	⇓iP	P	19 52 01.8	+0.1
BFZ	Birch Farm	77.22	140	P	P	19 52 02.6	-0.1
GLI	Glacier Island	77.25	30	P	P	19 52 03.5	+1.0
	baz=281,SNR=16						
GLI	Glacier Island	77.25	30	P	P	19 52 03.0	+0.4
HSPB	Hornsund (broa	77.26	347	eP	P	19 52 02.8	+0.5
J25K	Salcha River,	77.31	26	P	P	19 52 02.3	-0.6
	baz=282,SNR=12						
KBS	Kingsbay	77.34	349	⇑eP	P	19 52 03.6	+0.9
KBS				pmax	pmax		
	comp=Z,32nm,1.0s						
ANTO	Ankara	77.43	308	P	P	19 52 03.3	-0.8
ANTO				pmax	pmax		
	comp=Z,18nm,1.0s						
ANTO	Ankara	77.43	308	P	P	19 52 03.3	-0.8
M24K	Tolsona, Glenn	77.45	29	P	P	19 52 05.3	+1.6
	baz=281,SNR=20						
M24K	Tolsona, Glenn	77.45	29	P	P	19 52 04.7	+0.9
BR231	Keskin MP Arra	77.45	308	P	P	19 52 03.5	-0.7
FIA1	FINESS Array S	77.49	331	P	P	19 52 03.6	-0.2
FIA1				IAmb	IAmb	19 52 05.0	
	comp=Z,124nm,1.4s						
FINES	FINESS Array B	77.49	331	P	P	19 52 03.8	-0.1
	comp=Z,27nm,0.9s,baz=54,slow=6.0,SNR=51						
FINES				LR	LR	20 29 25.2	
	comp=Z,1µm,19.3s,baz=77,slow=38						
FINES	FINESS Array B	77.49	331	P	P	19 52 03.4	-0.5
FID	Port Fidalgo	77.57	30	P	P	19 52 04.2	-0.2
PAX	Paxson	77.60	28	P	P	19 52 04.9	+0.3
PAX				pmax	pmax		
	comp=Z,84nm,1.0s						
PAX	Paxson	77.60	28	P	P	19 52 05.6	+1.0
	baz=282,SNR=32						
PAX	Paxson	77.60	28	P	P	19 52 04.9	+0.3
PAX				IAmb	IAmb	19 52 06.8	
	comp=Z,84nm,1.0s						
HIN	Hinchinbrook I	77.63	30	P	P	19 52 05.1	+0.4
KLU	Klutina	77.69	29	P	P	19 52 06.2	+1.1
	baz=282,SNR=17						
KLU	Klutina	77.69	29	P	P	19 52 05.6	+0.5
KLU				IAmb	IAmb	19 52 07.2	
	comp=Z,83nm,0.9s						
RIDG	Independent Ri	77.71	27	P	P	19 52 05.6	+0.4
	baz=282,SNR=30						
RIDG	Independent Ri	77.71	27	P	P	19 52 05.1	0.0
RIDG				IAmb	IAmb	19 52 06.8	
	comp=Z,109nm,1.0s						
EIL	Elat	77.72	297	P	P	19 52 05.9	+0.1
	comp=Z,24nm,1.0s,baz=140,slow=4.1,SNR=17						
VSU	Vasula	77.76	328	eP	P	19 52 05.7	+0.4
VSU	Vasula	77.76	328	d iP	P	19 52 05.2	-0.2
AKASG	Malin Array Be	77.85	319	P	P	19 52 05.3	-0.7
	comp=Z,17nm,0.9s,baz=64,slow=5.5,SNR=58						
AKASG				PP	PP	19 54 59.9	-1.9
	comp=Z,0.8nm,0.6s,baz=70,slow=7.2,SNR=4.1						
AKASG				LR	LR	20 29 57.0	
	comp=Z,812nm,19.9s,baz=95,slow=38						
AKASG	Malin Array Be	77.85	319	P	P	19 52 05.3	-0.7
AKBB	Malin Array Si	77.85	319	d iP	P	19 52 05.0	-1.1
AKBB				pmax	pmax		
	comp=Z,38nm,1.1s						
AKBB	Malin Array Si	77.85	319	P	P	19 52 05.3	-0.8
HARP	HAARP	77.86	28	P	P	19 52 07.4	+1.4
	baz=282,SNR=17						
MNK	Minsk	77.91	323	i P	P	19 52 07.1	+0.8
MNK				i		19 52 16.4	
MNK				i *PP	sP	19 52 23.7	+0.3
MNK				i		19 55 03.5	
MNK				i PPP	PPP	19 56 51.4	
MNK				i S	S	20 01 57.4	+1.0
MNK				i *SS	ScS	20 02 35.9	+14
MNK				pmax	pmax		
	comp=N,12nm,1.0s						
MNK				pmax	pmax		
	comp=E,5.0nm,1.0s						
MNK				pmax	pmax		
	comp=Z,56nm,1.0s						
MNK				MLR	MLR		
	comp=Z,1µm,19.0s						
MNK				MLR	MLR		
	comp=E,117nm,19.0s						
MNK				MLR	MLR		
	comp=N,416nm,19.0s						
MNK	Minsk	77.91	323	i P	P	19 52 07.1	+0.8
	comp=E,5.0nm,1.0s						
MNK				i P	P	19 52 07.1	+0.8
	comp=N,12nm,1.0s						
MNK				i P	P	19 52 07.1	+0.8
	comp=Z,56nm,1.0s,baz=79						
MNK				i PcP	PcP	19 52 16.4	+0.3
MNK				i pP	sP	19 52 23.8	+0.4
MNK				i sP	pP	19 52 40.5	+22
MNK				i PP	PP	19 55 03.6	+1.3
MNK				i PPP	PPP	19 56 51.4	
MNK				i S	S	20 01 57.4	+1.0
MNK				i sS	ScS	20 02 35.9	+14
MNK				i SS	SS	20 06 37.1	-20
MNK				i SSS	SSS	20 08 55.3	
MNK				i LQ	LQ	20 18 07.1	
MNK				i LR	LR	20 22 19.7	
MNK				i LRM	MLR	20 28 09.7	
	comp=Z,1µm,19.0s						

MNK				*i* LRM	MLR	20 28 32.5	
	comp=E,117nm,19.2s						
MNK				*i* LRM	MLR	20 28 32.9	
	comp=N,416nm,19.2s						
EYAK	**Cordova Ski Ar**	**77.96**	**30**	P	**P**	**19 52 07.8**	**+1.3**
	baz=282,SNR=10						
EYAK	**Cordova Ski Ar**	**77.96**	**30**	P	**P**	**19 52 07.2**	**+0.7**
EYAK				IAmb	IAmb	19 52 08.9	
	comp=Z,119nm,1.1s						
CSS	**Mathiatis**	**77.97**	**303**	P	**P**	**19 52 07.3**	**+0.2**
CSS				IAmb	IAmb	19 52 08.7	
	comp=Z,53nm,1.0s						
CSS				IAMs_20	IAMs_20	20 31 06.7	
	comp=Z,453nm,22.0s						
JETT	**Jettan, Norway**	**77.98**	**339**	⇓*i*P	**P**	**19 52 06.6**	**+0.1**
SCRK	**Sand Creek**	**78.03**	**27**	P	**P**	**19 52 07.7**	**+0.6**
	baz=283,SNR=16						
J26L	**Joseph Creek**	**78.09**	**26**	P	**P**	**19 52 07.8**	**+0.5**
	baz=283,SNR=15						
N25K	**Chitina, Valde**	**78.28**	**29**	P	**P**	**19 52 09.9**	**+1.5**
	baz=283,SNR=21						
BMRM	**Bremner River**	**78.42**	**30**	P	**P**	**19 52 10.2**	**+1.1**
	baz=283,SNR=12						
NACGM	**Naroch**	**78.45**	**324**	*i* P	**P**	**19 52 09.2**	**-0.1**
TRO	**Tromso**	**78.46**	**339**	⇓*i*P	**P**	**19 52 08.7**	**-0.4**
MDUB	**Mudurnu**	**78.51**	**309**	P	**P**	**19 52 09.8**	**-0.3**
L26K	**Log Cabin Wild**	**78.53**	**28**	P	**P**	**19 52 11.2**	**+1.5**
	baz=284,SNR=32						
L26K	**Log Cabin Wild**	**78.53**	**28**	P	**P**	**19 52 10.8**	**+1.1**
L26K				IAmb	IAmb	19 52 12.3	
	comp=Z,61nm,0.9s						
ISAL	**Salakas**	**78.68**	**325**	*e*P	**P**	**19 52 11.5**	**+0.9**
KAIM	**Kayak Island**	**78.75**	**31**	P	**P**	**19 52 12.1**	**+1.2**
	baz=283						
M26K	**Nabesna, AK**	**78.83**	**28**	P	**P**	**19 52 12.6**	**+1.2**
	baz=284,SNR=56						
M26K	**Nabesna, AK**	**78.83**	**28**	P	**P**	**19 52 12.4**	**+1.0**
MILM	**Milestii Mici**	**78.87**	**316**	*e*P	**P**	**19 52 11.0**	**-0.8**
MILM				pmax	pmax		
	comp=Z,50nm,1.0s						
VRDI	**Verde Repeater**	**78.91**	**29**	P	**P**	**19 52 12.6**	**+0.6**
VRDI				IAmb	IAmb	19 52 14.1	
	comp=Z,63nm,1.0s						
SORM	**Soroca**	**78.92**	**317**	⇑P	**P**	**19 52 11.7**	**-0.3**
BERG	**Berg Lake**	**78.99**	**30**	P	**P**	**19 52 12.8**	**+0.6**
EGAK	**Eagle**	**79.03**	**26**	P	**P**	**19 52 13.2**	**+0.8**
	baz=285,SNR=17						
EGAK	**Eagle**	**79.03**	**26**	P	**P**	**19 52 13.1**	**+0.8**
EGAK				IAmb	IAmb	19 52 14.2	
	comp=Z,37nm,0.8s						
MCARA	**McCarthy VSAT**	**79.07**	**29**	P	**P**	**19 52 14.1**	**+1.5**
	baz=284,SNR=13						
MCARA	**McCarthy VSAT**	**79.07**	**29**	P	**P**	**19 52 13.5**	**+0.9**
MCARA				IAmb	IAmb	19 52 15.2	
	comp=Z,77nm,0.9s						
FURI	**Furi**	**79.13**	**276**	IAMs_20	IAMs_20	20 26 11.9	
	comp=Z,451nm,20.0s						
L27K	**Beaver Creek,**	**79.19**	**27**	P	**P**	**19 52 15.1**	**+1.8**
	baz=285,SNR=59						
CRQE	**Cirque**	**79.19**	**30**	P	**P**	**19 52 14.7**	**+1.3**
	baz=284,SNR=10						
MTSE	**Matsula**	**79.19**	**328**	*e*P	**P**	**19 52 13.1**	**-0.2**
BCAR	**Beaver Creek A**	**79.21**	**27**	P	**P**	**19 52 15.2**	**+1.8**
TLCR		**79.24**	**314**	⇑P	**P**	**19 52 14.2**	**+0.3**
M27K	**Edge Creek, AK**	**79.35**	**28**	P	**P**	**19 52 15.8**	**+1.4**
	baz=285,SNR=20						
KHLU	**Kahalu`u**	**79.36**	**73**	P	**P**	**19 52 16.1**	**+0.9**
HPAH	**Hawaii Prepara**	**79.44**	**72**	P	**P**	**19 52 16.2**	**+0.7**
SNH	**Sunshine Point**	**79.46**	**30**	P	**P**	**19 52 15.9**	**+1.0**
TPGR	**Topolog**	**79.58**	**314**	⇑P	**P**	**19 52 15.2**	**-0.6**
ISP	**Isparta**	**79.59**	**306**	IAMs_20	IAMs_20	20 32 21.3	
	comp=Z,378nm,21.0s						
ISLE	**Juniper Island**	**79.59**	**30**	P	**P**	**19 52 16.6**	**+0.9**
ISLE				IAmb	IAmb	19 52 17.8	
	comp=Z,53nm,1.0s						
VLDR	**Vladesti**	**79.60**	**315**	⇓P	**P**	**19 52 16.1**	**+0.3**
POHA	**Pohakuloa**	**79.66**	**72**	P	**P**	**19 52 18.1**	**+1.2**
TIRR	**Tirgusor**	**79.68**	**313**	⇑P	**P**	**19 52 16.4**	**+0.1**
TIRR	**Tirgusor**	**79.68**	**313**	P	**P**	**19 52 16.1**	**-0.1**
TIRR				pmax	pmax		
	comp=Z,47nm,1.1s						
TIRR				MLR	MLR		
	comp=Z,2µm,21.0s						
TIRR	**Tirgusor**	**79.68**	**313**	P	**P**	**19 52 16.1**	**-0.1**
TIRR				IAmb	IAmb	19 52 17.3	
	comp=Z,47nm,1.1s						
SCTR	**Scanteiesti**	**79.69**	**315**	⇓P	**P**	**19 52 17.1**	**+0.7**
KHU	**Kahuku**	**79.70**	**73**	P	**P**	**19 52 17.8**	**+0.7**
KHU				pmax	pmax		
	comp=Z,502nm,1.1s						
KHU	**Kahuku**	**79.70**	**73**	P	**P**	**19 52 17.8**	**+0.7**
CFR	**Carcaliu**	**79.71**	**314**	⇑P	**P**	**19 52 16.6**	**+0.2**
HMH	**Humu‘ula Sheep**	**79.74**	**73**	P	**P**	**19 52 18.0**	**+0.5**
VARL	**Varlezi**	**79.75**	**315**	⇑P	**P**	**19 52 17.2**	**+0.6**
BARN	**Barnard Glacie**	**79.79**	**29**	P	**P**	**19 52 17.6**	**+0.8**
BARN				IAmb	IAmb	19 52 19.5	
	comp=Z,96nm,0.8s						
BVCY	**Beaver Creek**	**79.79**	**28**	P	**P**	**19 52 18.4**	**+1.9**
	baz=286,SNR=5.9						
AIN	**Ainahou**	**79.81**	**73**	P	**P**	**19 52 18.5**	**+0.8**
GRNC	**Granite Creek**	**79.83**	**30**	P	**P**	**19 52 18.2**	**+1.1**
GRNC				IAmb	IAmb	19 52 19.7	
	comp=Z,166nm,1.4s						
MLH	**Mauna Loa**	**79.85**	**73**	P	**P**	**19 52 18.6**	**+0.6**
NOR	**Nord**	**79.86**	**354**	⇓*i*P	**P**	**19 52 16.2**	**-0.4**
NOR				IAmb	IAmb	19 52 17.2	
	comp=Z,15nm,0.8s						
MESA	**MESA**	**79.89**	**30**	P	**P**	**19 52 19.0**	**+1.7**
	baz=285						
PABE	**Paberze**	**79.89**	**325**	*e*P	**P**	**19 52 17.7**	**+0.5**
PABE	**Paberze**	**79.89**	**325**	P	**P**	**19 52 17.1**	**-0.1**
PABE				IAmb	IAmb	19 52 18.3	
	comp=Z,132nm,1.0s						
TLBR	**Topalu**	**79.91**	**313**	⇑P	**P**	**19 52 18.0**	**+0.5**
HARR	**Harsova**	**79.96**	**314**	⇑P	**P**	**19 52 17.6**	**-0.2**
DAWY	**Dawson**	**79.97**	**26**	P	**P**	**19 52 18.6**	**+1.1**
	baz=287,SNR=25						
DAWY	**Dawson**	**79.97**	**26**	P	**P**	**19 52 18.9**	**+1.3**
DAWY				IAmb	IAmb	19 52 19.8	
	comp=Z,51nm,0.9s						
CTG	**Chitna Glacier**	**79.97**	**29**	P	**P**	**19 52 19.5**	**+1.8**
	baz=286,SNR=31						
HLP	**Hilina Pali**	**79.97**	**73**	P	**P**	**19 52 19.9**	**+1.5**
I29M	**Ogilvie Camp,**	**80.03**	**25**	P	**P**	**19 52 18.9**	**+1.1**
	baz=288,SNR=19						
PUH	**Pauahi**	**80.04**	**73**	P	**P**	**19 52 20.1**	**+1.3**
YUK3	**Moose Creek**	**80.15**	**28**	P	**P**	**19 52 20.7**	**+1.9**
	baz=286,SNR=20						
SLIT	**Slitere, Latvi**	**80.25**	**327**	*e*P	**P**	**19 52 19.0**	**0.0**
STEI	**Steigen**	**80.26**	**338**	⇓*i*P	**P**	**19 52 18.4**	**-0.5**
ELL	**Elmali**	**80.31**	**305**	P	**P**	**19 52 19.9**	**-0.1**
ELL				pmax	pmax		
	comp=Z,86nm,0.9s						
ELL	**Elmali**	**80.31**	**305**	P	**P**	**19 52 19.9**	**-0.1**
ELL				IAmb	IAmb	19 52 30.8	
	comp=Z,86nm,0.9s						
EPYK	**Eagle Plains**	**80.33**	**23**	P	**P**	**19 52 20.3**	**+0.9**
	baz=289,SNR=18						
EPYK	**Eagle Plains**	**80.33**	**23**	P	**P**	**19 52 19.7**	**+0.3**
EPYK				IAmb	IAmb	19 52 21.0	
	comp=Z,51nm,0.8s						
J29M	**Klondike Camp**	**80.34**	**25**	P	**P**	**19 52 21.7**	**+2.2**
	baz=288,SNR=8.9						
TESR	**Tescani**	**80.41**	**316**	⇓P	**P**	**19 52 20.3**	**+0.1**
FAUS	**Fauske**	**80.43**	**338**	⇓*i*P	**P**	**19 52 19.7**	**-0.2**
GRER		**80.46**	**314**	⇑P	**P**	**19 52 21.4**	**+0.9**
VRI	**Vrincioaia**	**80.51**	**315**	⇑P	**P**	**19 52 21.8**	**+1.0**
PLOR	**Plostina**	**80.57**	**315**	⇓P	**P**	**19 52 21.5**	**+0.4**
BISRR	**Bisoca**	**80.60**	**315**	⇑P	**P**	**19 52 21.1**	**-0.2**
SUW	**Suwalki**	**80.71**	**324**	*e*P	**P**	**19 52 21.2**	**-0.4**
SUW	**Suwalki**	**80.71**	**324**	*e*P	**P**	**19 52 21.4**	**-0.2**
SUW	**Suwalki**	**80.71**	**324**	P	**P**	**19 52 21.0**	**-0.6**
SUW				pmax	pmax		
	comp=Z,137nm,1.1s						
SUW				MLR	MLR		
	comp=Z,1µm,19.0s						
SUW	**Suwalki**	**80.71**	**324**	P	**P**	**19 52 21.0**	**-0.6**
SUW				IAmb	IAmb	19 52 22.8	
	comp=Z,137nm,1.1s						
PINM	**Pinnacle**	**80.73**	**30**	P	**P**	**19 52 23.2**	**+1.5**
	baz=287,SNR=5.8						
LOF	**Lofoten**	**80.79**	**339**	*e*P	**P**	**19 52 21.7**	**0.0**
INK	**Inuvik**	**80.83**	**21**	P	**P**	**19 52 22.1**	**+0.1**
	comp=Z,38nm,1.0s,baz=291,slow=6.4,SNR=60						
INK	**Inuvik**	**80.83**	**21**	P	**P**	**19 52 22.5**	**+0.6**
	baz=291,SNR=31						
INK	**Inuvik**	**80.83**	**21**	P	**P**	**19 52 22.1**	**+0.1**
INK				IAmb	IAmb	19 52 23.7	
	comp=Z,56nm,1.1s						
PBUR	**Paburge**	**80.87**	**326**	*e*P	**P**	**19 52 23.4**	**+1.0**
COVR	**Voineasa-Covas**	**80.87**	**315**	⇑P	**P**	**19 52 22.9**	**+0.2**
VOI	**Vohitsoka**	**81.08**	**244**	P	**P**	**19 52 24.5**	**+0.2**
BURAR	**Bucovina Array**	**81.09**	**317**	⇓P	**P**	**19 52 24.4**	**+0.5**
BURAR	**Bucovina Array**	**81.09**	**317**	P	**P**	**19 52 24.0**	**+0.1**
OZUR		**81.09**	**315**	⇑P	**P**	**19 52 24.7**	**+0.8**
BUR08	**Bucovina Ar. S**	**81.10**	**317**	P	**P**	**19 52 24.1**	**+0.1**
YUK4	**Talbot Arm**	**81.11**	**29**	P	**P**	**19 52 25.3**	**+1.4**
	baz=288,SNR=6.1						
SULR		**81.12**	**314**	⇓P	**P**	**19 52 25.0**	**+1.0**
MLR	**Muntele Rosu**	**81.14**	**315**	⇓P	**P**	**19 52 24.7**	**+0.4**
MLR	**Muntele Rosu**	**81.14**	**315**	P	**P**	**19 52 24.0**	**-0.3**
	comp=Z,15nm,0.8s,baz=45,slow=0.6,SNR=17						
MLR				S	**S**	**20 02 26.7**	**-4.6**
	comp=Z,0.8nm,0.3s,baz=142,slow=19,SNR=3.2						
MLR	**Muntele Rosu**	**81.14**	**315**	P	**P**	**19 52 24.2**	**-0.1**
MLR				pmax	pmax		
	comp=Z,121nm,1.8s						
MLR				MLR	MLR		
	comp=Z,1µm,22.0s						
MLR	**Muntele Rosu**	**81.14**	**315**	P	**P**	**19 52 24.2**	**-0.1**
MLR				IAmb	IAmb	19 52 45.3	
	comp=Z,121nm,1.8s						
MOR8	**Moi Rana**	**81.16**	**337**	*e*P	**P**	**19 52 23.1**	**-0.7**
BALB	**Balikesir**	**81.18**	**309**	P	**P**	**19 52 24.3**	**-0.1**
BALB				IAmb	IAmb	19 52 25.5	
	comp=Z,90nm,1.6s						
RAZG	**Razgrad**	**81.22**	**313**	⇑P	**P**	**19 52 24.6**	**0.0**
PNL	**Peninsula**	**81.27**	**30**	P	**P**	**19 52 26.5**	**+2.0**
	baz=288						
LVV	**L'vov**	**81.29**	**319**	*e*P	**P**	**19 52 25.3**	**+0.5**
LVV				*e*S	**S**	**20 02 33.3**	**+0.9**
LVV				*e*		20 03 21.6	
YUK6	**Outpost Mounta**	**81.36**	**29**	P	**P**	**19 52 27.6**	**+2.4**
	baz=288,SNR=8.6						
DOPR	**Dopca**	**81.40**	**315**	⇓P	**P**	**19 52 25.7**	**+0.2**
KONS	**Konsvik**	**81.54**	**337**	*e*P	**P**	**19 52 25.4**	**-0.3**
M30M	**Minto, Yukon**	**81.54**	**27**	P	**P**	**19 52 27.8**	**+1.8**
	baz=289,SNR=37						
MAYO	**Mayo, Yukon**	**81.59**	**26**	P	**P**	**19 52 28.0**	**+1.9**
	baz=290						
STOK	**Stokkvaagen**	**81.64**	**337**	*e*P	**P**	**19 52 27.0**	**+0.7**
VOIR		**81.76**	**315**	⇑P	**P**	**19 52 27.4**	**-0.1**
HYT	**Haines Junctio**	**81.80**	**29**	P	**P**	**19 52 29.4**	**+2.0**
	baz=289,SNR=17						
HYT	**Haines Junctio**	**81.80**	**29**	P	**P**	**19 52 27.7**	**+0.2**
HYT				IAmb	IAmb	19 52 30.4	
	comp=Z,99nm,1.3s						
A36M	**Sachs Harbour**	**81.84**	**17**	P	**P**	**19 52 27.7**	**+0.4**
	baz=298,SNR=15						
A36M	**Sachs Harbour**	**81.84**	**17**	P	**P**	**19 52 27.9**	**+0.7**
UPP	**Uppsala**	**81.92**	**330**	*e*P	**P**	**19 52 28.0**	**+0.1**
COPA	**Copaceanca**	**81.98**	**314**	⇑P	**P**	**19 52 29.0**	**+0.5**
HUMR	**Humele**	**82.04**	**314**	⇓P	**P**	**19 52 28.9**	**0.0**
ARR	**Arges**	**82.06**	**315**	⇓P	**P**	**19 52 29.2**	**+0.1**
KWP	**Kalwaria Pacla**	**82.17**	**319**	*e*P	**P**	**19 52 29.8**	**+0.4**
KWP	**Kalwaria Pacla**	**82.17**	**319**	P	**P**	**19 52 30.1**	**+0.6**
KWP				pmax	pmax		
	comp=Z,429nm,1.0s						
KWP	**Kalwaria Pacla**	**82.17**	**319**	P	**P**	**19 52 30.1**	**+0.6**
BMR	**Baia Mare**	**82.20**	**317**	⇑P	**P**	**19 52 30.8**	**+1.1**
ALN	**Alexandroupoli**	**82.23**	**310**	P	**P**	**19 52 29.7**	**-0.2**
ALN				pmax	pmax		
	comp=Z,20nm,1.2s						
ALN	**Alexandroupoli**	**82.23**	**310**	P	**P**	**19 52 29.7**	**-0.2**
N31M	**Braeburn, Yuko**	**82.36**	**28**	P	**P**	**19 52 32.1**	**+1.8**
	baz=290,SNR=14						
CJR	**Cluj-Napoca**	**82.40**	**316**	⇓P	**P**	**19 52 31.6**	**+0.8**
CBBR	**Cluj-Babes-Bol**	**82.41**	**316**	⇓P	**P**	**19 52 31.4**	**+0.6**
XMAS	**Kiritimati**	**82.42**	**90**	P	**P**	**19 52 32.5**	**+1.1**
PLVB	**Pleven**	**82.60**	**313**	⇑P	**P**	**19 52 32.3**	**+0.5**
LOT	**Lotru**	**82.63**	**315**	⇑P	**P**	**19 52 32.6**	**+0.5**
EUNU	**Eureka**	**82.66**	**4**	P	**P**	**19 52 32.4**	**+0.9**
TRPA	**Tarpa**	**82.69**	**318**	⇑P	**P**	**19 52 32.8**	**+0.6**
UZH	**Uzhgorod**	**82.71**	**318**	*e*P	**P**	**19 52 32.4**	**+0.1**
UZH				*e*		19 52 41.9	
M31M	**Drury Creek, Y**	**82.72**	**27**	P	**P**	**19 52 33.1**	**+0.9**
	baz=292,SNR=21						
NSS	**Namsos**	**82.74**	**335**	*e*P	**P**	**19 52 31.4**	**-0.7**
CASY	**Casey**	**82.79**	**184**	P	**P**	**19 52 33.1**	**+1.0**
CASY				IAmb	IAmb	19 52 34.4	
	comp=Z,73nm,1.0s						
KIBK	**Kibwezi**	**82.81**	**265**	P	**P**	**19 52 33.5**	**-0.1**
DRGR		**82.96**	**317**	⇓P	**P**	**19 52 34.4**	**+0.6**
WHY	**Whitehorse**	**83.07**	**29**	P	**P**	**19 52 35.8**	**+1.7**
	baz=291,SNR=14						
WHY	**Whitehorse**	**83.07**	**29**	P	**P**	**19 52 35.4**	**+1.4**
WHY				IAmb	IAmb	19 52 37.0	
	comp=Z,73nm,1.1s						
CRVS	**Cervenica-Dubn**	**83.16**	**319**	*e*P	**P**	**19 52 35.5**	**+0.9**
CRVS				pmax	pmax		
	comp=Z,52nm,1.2s						
CRVS	**Cervenica-Dubn**	**83.16**	**319**	*e*P	**P**	**19 52 35.5**	**+0.9**
FARO	**Faro, Yukon**	**83.17**	**27**	P	**P**	**19 52 35.7**	**+1.3**
	baz=292						
KMBO	**Kilima Mbogo**	**83.23**	**267**	P	**P**	**19 52 37.6**	**+1.6**
	comp=Z,8.2nm,0.9s,baz=48,slow=7.6,SNR=15						
KMBO				LR	LR	20 26 45.8	
	comp=Z,205nm,21.8s,baz=92,slow=34						
KMBO	**Kilima Mbogo**	**83.23**	**267**	*i* P	**P**	**19 52 37.5**	**+1.5**
	SNR=11						
KMBO	**Kilima Mbogo**	**83.23**	**267**	P	**P**	**19 52 37.1**	**+1.2**
SKAG	**Skagway**	**83.29**	**30**	P	**P**	**19 52 37.3**	**+2.2**
	baz=291						
GZR	**Gura Zlata**	**83.31**	**315**	⇓P	**P**	**19 52 36.0**	**+0.4**
HFS	**Hagfors**	**83.68**	**331**	P	**P**	**19 52 36.5**	**-0.6**
	comp=Z,26nm,1.0s,baz=74,slow=5.4,SNR=15						
NIE	**Niedzica**	**83.73**	**320**	*e*P	**P**	**19 52 39.0**	**+1.4**
LODK	**Lodwar**	**83.77**	**272**	IAMs_20	IAMs_20	20 26 47.1	
	comp=Z,658nm,22.0s						
DAG	**Danmarks Havn**	**83.77**	**351**	⇓*i*P	**P**	**19 52 36.7**	**-0.6**
DAG				IAmb	IAmb	19 52 37.5	
	comp=Z,51nm,0.8s						
VTS	**Vitosha**	**83.78**	**312**	⇓P	**P**	**19 52 38.6**	**+0.4**
VTS	**Vitosha**	**83.78**	**312**	P	**P**	**19 52 38.4**	**+0.2**
VTS				pmax	pmax		
	comp=Z,44nm,1.3s						
VTS	**Vitosha**	**83.78**	**312**	P	**P**	**19 52 38.4**	**+0.2**
VTS				IAmb	IAmb	19 52 39.8	
	comp=Z,44nm,1.3s						
OJC	**Ojcow**	**83.79**	**320**	*e*P	**P**	**19 52 38.1**	**+0.2**
OJC	**Ojcow**	**83.79**	**320**	P	**P**	**19 52 37.6**	**-0.3**
OJC				pmax	pmax		
	comp=Z,30nm,0.9s						
OJC	**Ojcow**	**83.79**	**320**	P	**P**	**19 52 37.6**	**-0.3**
OJC				IAmb	IAmb	19 52 39.3	
	comp=Z,30nm,0.9s						
SIRR	**Siria**	**83.81**	**316**	⇑P	**P**	**19 52 38.5**	**+0.5**
BESE	**Bessie Mountai**	**83.84**	**31**	P	**P**	**19 52 38.9**	**+0.9**
BESE				IAmb	IAmb	19 52 41.0	
	comp=Z,134nm,1.4s						
KECS	**Kecovo**	**83.90**	**319**	*e*P	**P**	**19 52 38.9**	**+0.5**
KECS	**Kecovo**	**83.90**	**319**	*e*P	**P**	**19 52 38.9**	**+0.5**
MMPY	**Sheldon Lake,**	**83.91**	**26**	P	**P**	**19 52 39.9**	**+1.6**
	baz=294						
TBLU	**Trondheim**	**83.94**	**335**	⇓*i*P	**P**	**19 52 37.5**	**-0.8**
BZS	**Buzias**	**84.03**	**316**	⇑P	**P**	**19 52 39.2**	**+0.1**
JIS	**Juneau Island**	**84.18**	**31**	P	**P**	**19 52 40.4**	**+0.8**
P33M	**Teslin, Yukon**	**84.18**	**29**	P	**P**	**19 52 41.3**	**+1.5**
	baz=293						
NC405	**NORSAR Array S**	**84.20**	**332**	P	**P**	**19 52 38.3**	**-1.4**
MDVR	**Moldovita**	**84.21**	**315**	⇓P	**P**	**19 52 40.3**	**+0.1**
GKP	**Gorka Klasztor**	**84.31**	**324**	*e*P	**P**	**19 52 41.0**	**+0.7**
LANS	**Liptovska Anna**	**84.33**	**320**	*e*P	**P**	**19 52 41.7**	**+1.0**
LANS	**Liptovska Anna**	**84.33**	**320**	*e*P	**P**	**19 52 41.7**	**+1.0**
NC602	**NORSAR Array S**	**84.43**	**332**	⇓*i*P	**P**	**19 52 39.7**	**-1.2**
NB2	**NORSAR Subarra**	**84.45**	**332**	P	**P**	**19 52 39.9**	**-1.1**
	comp=Z,38nm,1.1s,baz=66,slow=4.6						
NB2	**NORSAR Subarra**	**84.45**	**332**	P	**P**	**19 52 39.9**	**-1.1**
	baz=66,slow=4.6						
NOA	**NORSAR Array B**	**84.45**	**332**	P	**P**	**19 52 39.6**	**-1.4**
	comp=Z,10nm,0.9s,baz=66,slow=4.8,SNR=26						
NOA				LR	LR	20 32 45.5	
	comp=Z,1µm,20.7s,baz=75,slow=37						
PSZ	**Piszkesteto**	**84.45**	**318**	⇑P	**P**	**19 52 42.0**	**+0.6**
PSZ	**Piszkesteto**	**84.45**	**318**	P	**P**	**19 52 41.6**	**+0.2**
PSZ				pmax	pmax		
	comp=Z,25nm,1.2s						
PSZ				MLR	MLR		
	comp=Z,700nm,19.0s						
PSZ	**Piszkesteto**	**84.45**	**318**	P	**P**	**19 52 41.6**	**+0.2**
PSZ				IAMs_20	IAMs_20	20 35 34.0	
	comp=Z,656nm,19.0s						
BOVS	**Bovan**	**84.56**	**314**	⇑P	**P**	**19 52 41.6**	**-0.3**
VAY	**Valandovo**	**84.64**	**311**	*i* P	**P**	**19 52 41.8**	**-0.5**
STIP	**Stip**	**84.80**	**312**	*i* P	**P**	**19 52 41.5**	**-1.7**
BSD	**Bornholm Skovb**	**84.93**	**326**	*i* P	**P**	**19 52 42.4**	**-1.1**
BSD				IAmb	IAmb	19 52 43.9	
	comp=Z,31nm,0.9s						
VYHS	**Vyhne**	**84.94**	**319**	*e*P	**P**	**19 52 44.1**	**+0.4**
VYHS				pmax	pmax		
	comp=Z,80nm,2.2s						
VYHS	**Vyhne**	**84.94**	**319**	*e*P	**P**	**19 52 44.1**	**+0.4**
DOMB	**Dombas**	**84.96**	**334**	⇓*i*P	**P**	**19 52 43.3**	**-0.2**
DEL	**Delary**	**84.98**	**328**	*i* P	**P**	**19 52 43.0**	**-0.7**
OSL	**Oslo**	**85.13**	**331**	*e*P	**P**	**19 52 44.3**	**-0.1**
BUD	**Budapest**	**85.15**	**318**	*e*P	**P**	**19 52 42.7**	**-2.0**
KOLL	**Kolacno**	**85.18**	**319**	*e*P	**P**	**19 52 45.5**	**+0.6**
MORC	**Moravsky Berou**	**85.31**	**321**	⇑P	**P**	**19 52 46.4**	**+0.8**
MORC	**Moravsky Berou**	**85.31**	**321**	P	**P**	**19 52 45.6**	**0.0**
MORC				pmax	pmax		
	comp=Z,24nm,1.3s						
MORC	**Moravsky Berou**	**85.31**	**321**	*e*P	**P**	**19 52 45.9**	**+0.3**
MORC	**Moravsky Berou**	**85.31**	**321**	P	**P**	**19 52 45.6**	**0.0**
MOL	**Molde**	**85.36**	**335**	*e*P	**P**	**19 52 45.6**	**+0.2**
FRGS	**Fruska Gora**	**85.38**	**316**	⇑P	**P**	**19 52 46.5**	**+0.4**
SRO2	**Moca**	**85.46**	**318**	*e*P	**P**	**19 52 45.8**	**-0.5**
SRO2	**Moca**	**85.46**	**318**	*e*P	**P**	**19 52 45.8**	**-0.5**
AGG	**Agios Georgios**	**85.49**	**309**	P	**P**	**19 52 44.8**	**-1.9**
AGG				pmax	pmax		
	comp=Z,18nm,1.0s						
AGG	**Agios Georgios**	**85.49**	**309**	P	**P**	**19 52 44.8**	**-1.9**
SRO	**Srobarova**	**85.50**	**319**	*e*P	**P**	**19 52 47.5**	**+1.0**
SRO	**Srobarova**	**85.50**	**319**	*e*P	**P**	**19 52 47.5**	**+1.0**
JAVC	**Velka Javorina**	**85.55**	**320**	*e*P	**P**	**19 52 48.3**	**+1.5**
DIVS	**Divibare**	**85.60**	**315**	P	**P**	**19 52 46.7**	**-0.5**
DIVS				IAMs_20	IAMs_20	20 36 56.5	
	comp=Z,437nm,20.0s						
TGTN	**Hyland Airport**	**85.65**	**26**	P	**P**	**19 52 48.5**	**+1.5**
	baz=297						
FNA	**Florina**	**85.66**	**311**	P	**P**	**19 52 46.2**	**-1.3**
FNA				pmax	pmax		
	comp=Z,24nm,1.3s						
FNA	**Florina**	**85.66**	**311**	P	**P**	**19 52 46.2**	**-1.3**
KRLC	**Kraliky**	**85.67**	**321**	*e*P	**P**	**19 52 47.9**	**+0.5**
KRLC				*e*		20 03 06.3	
KRLC				MLR	MLR		
	comp=Z,600nm,20.2s						
KRLC	**Kraliky**	**85.67**	**321**	*e*P	**P**	**19 52 47.9**	**+0.5**
KRLC				*e*SKS	**SKSac**	**20 03 06.3**	**-3.4**
KRLC				AMS	AMS	20 32 20.0	
	comp=Z,600nm,20.2s						
CSKK	**Cskako**	**85.68**	**318**	*e*P	**P**	**19 52 45.2**	**-2.2**
KSP	**Ksiaz**	**85.70**	**322**	*e*P	**P**	**19 52 47.9**	**+0.5**
KONO	**Kongsberg**	**85.77**	**331**	P	**P**	**19 52 46.2**	**-1.4**
KONO				pmax	pmax		
	comp=Z,44nm,1.3s						
KONO	**Kongsberg**	**85.77**	**331**	⇓*i*P	**P**	**19 52 47.0**	**-0.6**
KONO	**Kongsberg**	**85.77**	**331**	P	**P**	**19 52 46.2**	**-1.4**
KONO				IAmb	IAmb	19 53 01.8	
	comp=Z,44nm,1.3s						
AKN	**Aaknes**	**85.77**	**334**	*e*P	**P**	**19 52 48.1**	**+0.6**
MORH	**Mrgy, Hungar**	**85.81**	**317**	⇑P	**P**	**19 52 48.5**	**+0.4**
SMOL	**Smolenice**	**85.81**	**319**	*e*P	**P**	**19 52 48.9**	**+0.8**
SMOL	**Smolenice**	**85.81**	**319**	*e*P	**P**	**19 52 48.9**	**+0.8**
OSTC	**Ostas**	**85.84**	**322**	*e*P	**P**	**19 52 48.8**	**+0.6**
OSTC				AMS	AMS	20 33 00.0	
	comp=Z,1µm,21.4s						
DPC	**Dobruska-Polom**	**85.85**	**321**	*e*P	**P**	**19 52 48.6**	**+0.3**
DPC				*e*		20 03 04.8	
DPC				MLR	MLR		
	comp=Z,1µm,19.4s						
DPC	**Dobruska-Polom**	**85.85**	**321**	*e*P	**P**	**19 52 48.6**	**+0.3**
DPC				*e*SKS	**SKSac**	**20 03 04.8**	**-6.0**
DPC				AMS	AMS	20 33 10.0	
	comp=Z,1µm,19.4s						
SKAR	**Skarslia**	**85.89**	**333**	⇓*i*P	**P**	**19 52 48.5**	**+0.3**
CHVC	**Chvalec**	**85.93**	**322**	*e*P	**P**	**19 52 49.2**	**+0.6**
DBG	**Daneborg**	**85.95**	**350**	*i* P	**P**	**19 52 47.6**	**-0.6**
DBG				IAmb	IAmb	19 52 48.8	
	comp=Z,14nm,0.8s						
MODS	**Modra-Piesok**	**85.96**	**319**	*e*P	**P**	**19 52 48.5**	**-0.3**
MODS	**Modra-Piesok**	**85.96**	**319**	*e*P	**P**	**19 52 48.5**	**-0.3**
UPC	**Upice**	**85.98**	**322**	*e*P	**P**	**19 52 49.6**	**+0.7**
UPC				MLR	MLR		
	comp=Z,1µm,20.8s						
UPC	**Upice**	**85.98**	**322**	*e*P	**P**	**19 52 49.6**	**+0.7**
UPC				AMS	AMS	20 33 10.0	
	comp=Z,1µm,20.8s						
WTLY	**Watson Lake, Y**	**86.05**	**28**	P	**P**	**19 52 51.0**	**+2.0**
	baz=296						
VRAC	**Vranov**	**86.06**	**320**	⇑P	**P**	**19 52 50.0**	**+0.8**
VRAC	**Vranov**	**86.06**	**320**	P	**P**	**19 52 50.0**	**+0.8**
	comp=Z,17nm,0.8s,baz=74,slow=5.9,SNR=23						
VRAC	**Vranov**	**86.06**	**320**	*e*P	**P**	**19 52 50.0**	**+0.8**
ZST	**Bratislava**	**86.13**	**319**	*e*P	**P**	**19 52 49.8**	**+0.2**
ZST	**Bratislava**	**86.13**	**319**	*e*P	**P**	**19 52 49.8**	**+0.2**
NEEM	**North Greenlan**	**86.13**	**358**	⇓*i*P	**P**	**19 52 50.3**	**+0.9**
NEEM				IAmb	IAmb	19 52 51.2	
	comp=Z,69nm,0.9s						
KOVH	**Kovagotottos**	**86.21**	**317**	*e*P	**P**	**19 52 48.0**	**-2.0**
DLBC	**Dease Lake**	**86.22**	**30**	P	**P**	**19 52 51.0**	**+1.0**
	comp=Z,42nm,1.0s,baz=301,slow=6.1,SNR=36						
DLBC	**Dease Lake**	**86.22**	**30**	P	**P**	**19 52 51.5**	**+1.6**
KRUC	**Moravsky**	**86.27**	**320**	*e*P	**P**	**19 52 50.8**	**+0.5**
PUK	**Puka**	**86.32**	**313**	P	**P**	**19 52 50.6**	**-0.2**
PUK				IAmb	IAmb	19 53 12.7	
	comp=Z,89nm,1.5s						
ITM	**Ithomi**	**86.35**	**308**	P	**P**	**19 52 49.7**	**-1.3**
ITM				IAmb	IAmb	19 53 11.9	
	comp=Z,51nm,1.1s						
RES	**Resolute Bay**	**86.45**	**9**	P	**P**	**19 52 51.1**	**+0.4**
	comp=Z,21nm,0.9s,baz=316,slow=5.6,SNR=18						
RES	**Resolute Bay**	**86.45**	**9**	P	**P**	**19 52 50.9**	**+0.2**
RES				IAmb	IAmb	19 52 57.7	
	comp=Z,29nm,1.0s						
RUE	**Ruedersdorf**	**86.55**	**324**	*e*P	**P**	**19 52 52.5**	**+1.0**
RUE	**Ruedersdorf**	**86.55**	**324**	*e*P	**P**	**19 52 51.8**	**+0.2**
	comp=Z,33nm,0.9s,baz=64,slow=4.7						
TIR	**Tirane**	**86.56**	**312**	IAMs_20	IAMs_20	20 36 26.4	
	comp=Z,690nm,21.0s						
PDG	**Podgorica**	**86.64**	**313**	⇑P	**P**	**19 52 51.6**	**-0.7**
PDG	**Podgorica**	**86.64**	**313**	P	**P**	**19 52 52.0**	**-0.3**
PDG				IAMs_20	IAMs_20	20 37 34.2	
	comp=Z,526nm,19.0s						
TREC	**Trest**	**86.74**	**321**	*e*S	**S**	**20 03 27.8**	**+0.7**
TREC				AMS	AMS	20 36 10.0	
	comp=Z,700nm,18.6s						
WRGLY	**Wrigley**	**86.79**	**24**	P	**P**	**19 52 54.1**	**+1.6**
	baz=301						
PVCC	**Panska Ves**	**86.83**	**322**	*e*P	**P**	**19 52 54.1**	**+1.1**
PVCC				MLR	MLR		
	comp=Z,1µm,19.2s						
PVCC	**Panska Ves**	**86.83**	**322**	*e*P	**P**	**19 52 54.1**	**+1.1**
PVCC				AMS	AMS	20 33 50.0	
	comp=Z,1µm,19.2s						
ODD1	**Odda**	**86.99**	**332**	*e*P	**P**	**19 52 54.1**	**+0.5**
CONA	**Conrad Observa**	**87.00**	**319**	*e*P	**P**	**19 52 54.8**	**+0.8**
	comp=Z,16nm,1.3s,SNR=7.3						
TULEG	**Thule**	**87.05**	**2**	*i* P	**P**	**19 52 53.1**	**-0.4**
TULEG				IAmb	IAmb	19 52 55.0	
	comp=Z,18nm,0.9s						
TULEG	**Thule**	**87.05**	**2**	P	**P**	**19 52 53.7**	**+0.1**
PRU	**Pruhonice**	**87.05**	**321**	*e*P	**P**	**19 52 54.4**	**+0.3**
PRU				*e*		20 03 28.1	
PRU				MLR	MLR		
	comp=Z,1µm,18.9s						
PRU	**Pruhonice**	**87.05**	**321**	*e*P	**P**	**19 52 54.4**	**+0.3**
PRU				*e*S	**S**	**20 03 28.1**	**-1.9**
PRU				AMS	AMS	20 33 50.0	
	comp=Z,1µm,18.9s						
BRG	**Berggiesshubel**	**87.07**	**322**	*e*P	**P**	**19 52 54.1**	**-0.1**
	comp=Z,9.6nm,0.9s,baz=64,slow=4.7						
BRG	**Berggiesshubel**	**87.07**	**322**	⇑*i*P	**P**	**19 52 54.7**	**+0.5**
BRG				Amp		19 52 55.6	
	comp=Z,19nm,1.1s						
BRG	**Berggiesshubel**	**87.07**	**322**	S	**SKSac**	**20 03 18.0**	**-0.2**
BRG				Amp		20 34 53.0	
	comp=N,0.3nm,16.1s						
BRG				Amp		20 35 02.0	
	comp=E,0.3nm,19.3s						
BRG				Amp		20 35 06.0	
	comp=Z,0.9nm,18.9s						
SUE	**Sulen**	**87.25**	**334**	*e*P	**P**	**19 52 54.5**	**-0.3**

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FBE   Freiberg          87.39 323  eP       P         19 52 55.9 +0.2
      comp=Z,9.5nm,0.9s,baz=64,slow=4.7
CLL   Collm             87.45 323 i P       P         19 52 55.4 -0.6
CLL                                e*SP     sP        19 53 12.0 -1.1
CLL                                e                  20 03 19.0
CLL                                 pmax    pmax
      comp=Z,11nm,0.9s
CLL                                 MLR     MLR
      comp=Z,500nm,20.7s
CLL   Collm             87.45 323 i P       P         19 52 55.4 -0.6
      comp=Z,11nm,0.9s
CLL                                esP      sP        19 53 12.0 -1.1
CLL                                ePP      PP        19 56 19.0 -1.5
CLL                                eSKSac   SKSac     20 03 19.0 -1.4
CLL                                eSP      ScS       20 04 31.0 +50
CLL                                eSS      SS        20 09 00.0  -19
CLL                                e                  20 14 06.0
CLL                                eSSSS              20 15 36.0
CLL                                 LV                20 38 00.0
      comp=Z,500nm,20.7s
CLL   Collm             87.45 323  eP       P         19 52 55.9 -0.1
      comp=Z,4.8nm,0.8s,baz=64,slow=4.7
CLL   Collm             87.45 323   P       P         19 52 55.1 -0.9
CLL                                 IAMs_20 IAMs_20   20 39 09.8
      comp=Z,664nm,20.0s
ARSA  Arzberg           87.46 319  eP       P         19 52 56.6 +0.4
      comp=Z,8.5nm,1.0s
CKRC  Cesky Krumlov     87.63 320  eP       P         19 52 57.6 +0.6
CKRC                               eSKS     SKSac     20 03 17.2 -4.5
CKRC                                AMS     AMS       20 37 40.0
      comp=Z,900nm,21.0s
BSEG  Bad Segeberg      87.86 326  eP       P         19 52 58.2 +0.3
      comp=Z,14nm,0.9s,baz=64,slow=4.7
KHC   Kasperske Hory    87.96 321  eP       P         19 52 58.8 +0.3
KHC                                e                  20 03 34.9
KHC                                 MLR     MLR
      comp=Z,700nm,17.1s
KHC   Kasperske Hory    87.96 321  eP       P         19 52 58.8 +0.3
KHC                                eS       S         20 03 34.9 -4.0
KHC                                 AMS     AMS       20 34 00.0
      comp=Z,700nm,17.1s
SOKA  Soboth            87.99 318  eP       P         19 52 59.0 +0.2
      comp=Z,8.6nm,1.5s
GEC2  GERESS Array S    88.00 321  eP       P         19 52 58.7  0.0
      comp=Z,18nm,1.4s,baz=64,slow=4.7
GEC2  GERESS Array S    88.00 321   P       P         19 52 58.6 -0.2
GERES GERESS Array B    88.00 321   P       P         19 52 58.8  0.0
      comp=Z,3.7nm,1.0s,baz=64,slow=6.1,SNR=18
GERES                               PKPPKP  P'P'df    20 18 52.3 -2.4
      comp=Z,0.6nm,0.9s,baz=132,slow=2.0,SNR=4.5
GERES                               LR      LR        20 34 53.0
      comp=Z,658nm,21.0s,baz=85,slow=37
GERES GERESS Array B    88.00 321   P       P         19 52 58.4 -0.4
MOA   Molln             88.03 320  eP       P         19 52 59.7 +0.8
      comp=Z,14nm,1.0s,SNR=8.8
FLTG  Flechtingen       88.03 324  eP       P         19 52 57.6 -1.1
      comp=Z,4.6nm,0.8s,baz=64,slow=4.7
GUNZ  Gunzen            88.21 322  eP       P         19 52 59.2 -0.5
      comp=Z,5.9nm,0.9s,baz=64,slow=4.7
WERN  Wernitzgruen      88.22 322  eP       P         19 52 59.7 -0.1
      comp=Z,4.2nm,0.9s,baz=64,slow=4.7
OBKA  Obir              88.36 318  eP       P         19 53 00.8 +0.2
      comp=Z,6.0nm,1.0s
WET   Wettzell          88.38 321  eP       P         19 53 01.0 +0.5
      comp=Z,2.4nm,0.9s,baz=64,slow=4.7
MOX   Moxa              88.52 323  eP       P         19 53 00.9 -0.2
      comp=Z,3.4nm,0.8s,baz=64,slow=4.7
ROTZ  Rotzenmuhle       88.53 322  eP       P         19 53 01.3 +0.1
      comp=Z,1.1nm,0.9s,baz=64,slow=4.7
NRDL  Niedersach Rie    88.59 325  eP       P         19 53 01.6 +0.3
      comp=Z,8.8nm,0.9s,baz=64,slow=4.7
CLZ   Clausthal         88.72 324  eP       P         19 53 02.6 +0.5
      comp=Z,8.8nm,0.9s,baz=64,slow=4.7
MYKA  Terra Mystica     88.89 319  eP       P         19 53 04.5 +1.5
      comp=Z,6.1nm,1.0s
KBA   Koelnbreinsper    88.90 319  eP       P         19 53 03.0 -0.2
      comp=Z,4.3nm,0.7s
RJOB  Jochberg          88.99 320  eP       P         19 53 03.5  0.0
      comp=Z,5.2nm,0.8s,baz=64,slow=4.7
GTTG  Gottingen         89.08 324  eP       P         19 53 02.7 -1.0
      comp=Z,7.2nm,0.9s,baz=64,slow=4.7
ZOU   Zoufplan          89.34 319   P       P         19 53 04.6 -0.7
TIP   Timpagrande       89.53 311   P       P         19 53 05.3 -0.9
TIP                                 IAmb    IAmb      19 53 31.8
      comp=Z,46nm,1.7s
TIP                                 IAMs_20 IAMs_20   20 39 24.1
      comp=Z,478nm,20.0s
ABTA  Abfaltersbach     89.56 319  eP       P         19 53 05.6 -0.6
      comp=Z,13nm,1.3s
STAL  STALIGIAL         89.63 318   P       P         19 53 05.6 -0.9
STAL                                IAmb    IAmb      19 53 23.5
      comp=Z,46nm,1.7s
FUR   Furstenfeldbru    89.75 321  eP       P         19 53 07.6 +0.7
      comp=Z,12nm,0.8s,baz=64,slow=4.7
WATA  Walderalm         89.90 320  eP       P         19 53 07.7 -0.2
      comp=Z,17nm,1.1s,SNR=5.8
SUMG  Summit            90.01 354   P       P         19 53 07.8 -0.3
SUMG                                pmax    pmax
      comp=Z,23nm,1.1s
SUMG  Summit            90.01 354 i P       P         19 53 08.7 +0.6
SUMG                                IAmb    IAmb      19 53 09.8
      comp=Z,15nm,1.0s
SUMG  Summit            90.01 354   P       P         19 53 07.8 -0.3
SUMG                                IAmb    IAmb      19 53 11.1
      comp=Z,23nm,1.1s
MOTA  Moosalm           90.19 320 i P       P         19 53 09.1 -0.1
      comp=Z,20nm,1.0s,SNR=7.7
RETA  Reutte            90.34 320  eP       P         19 53 09.8  0.0
      comp=Z,2.6nm,0.7s
CTI   Castel Tesino     90.39 319   P       P         19 53 09.3 -0.8
CTI                                 pmax    pmax
      comp=Z,30nm,1.6s
CTI   Castel Tesino     90.39 319   P       P         19 53 09.3 -0.8
CEL   Celeste           90.50 310   IAMs_20 IAMs_20   20 40 23.6
      comp=Z,407nm,21.0s
YKA   Yellowknife Ar    90.55  22   P       P         19 53 11.0 +0.7
      comp=Z,26nm,0.9s,baz=326,slow=3.5,SNR=28
YKA                                 LR      LR        20 37 08.3
      comp=Z,109nm,20.6s,baz=0.0,slow=38
YKA   Yellowknife Ar    90.55  22   P       P         19 53 10.7 +0.4
FETA  Feichten          90.56 320  eP       P         19 53 11.3 +0.3
      comp=Z,20nm,1.0s,SNR=9.1
TEOL  Teolo             90.66 318   P       P         19 53 11.0 -0.2
TEOL                                IAmb    IAmb      19 53 14.0
      comp=Z,18nm,1.0s
UBR   Ueberruh          90.66 321  eP       P         19 53 11.2 -0.1
      comp=Z,11nm,0.9s,baz=64,slow=4.7
AQU   L'Aquila          90.72 315   IAMs_20 IAMs_20   20 40 10.9
      comp=Z,613nm,18.0s
STU   Stuttgart         90.74 322  eP       P         19 53 11.6 +0.1
      comp=Z,27nm,1.1s,baz=64,slow=4.7
STU   Stuttgart         90.74 322   IAMs_20 IAMs_20   20 37 26.9
      comp=Z,616nm,20.0s
MURB  Monte Urbino      90.95 316   P       P         19 53 12.9 +0.1
MURB                                IAmb    IAmb      19 53 26.5
      comp=Z,25nm,1.0s
DAVA  Damuels           90.97 320  eP       P         19 53 13.1 +0.2
      comp=Z,14nm,1.2s
DAVOX Davos/Dischmat    91.19 320   P       P         19 53 14.0 +0.1
      comp=Z,15nm,0.9s,baz=74,slow=3.9,SNR=30
DAVOX                               PP      PP        19 56 49.5 -1.3
      comp=Z,4.2nm,1.0s,baz=108,slow=7.1,SNR=3.9
DAVOX                               S       SKSac     20 03 39.1 -4.1
      comp=Z,1.0nm,0.5s,baz=339,slow=12,SNR=4.3
BFO   Black Forest      91.45 322   P       P         19 53 14.8 -0.1
BFO                                 pmax    pmax
      comp=Z,11nm,1.0s
BFO                                 MLR     MLR
      comp=Z,800nm,20.0s
BFO   Black Forest      91.45 322  eP       P         19 53 14.6 -0.3
      comp=Z,5.7nm,0.9s,baz=64,slow=4.7
BFO   Black Forest      91.45 322   P       P         19 53 14.8 -0.1
BFO                                 IAMs_20 IAMs_20   20 37 30.8
      comp=Z,777nm,20.0s
ZCCA  Zocca             91.53 317   P       P         19 53 15.5 +0.2
ZCCA                                IAmb    IAmb      19 53 27.0
      comp=Z,27nm,1.2s
TUE   Stuetta           91.66 320   P       P         19 53 15.8 -0.3
SENIN Lac Senin/Sane    92.97 320   P       P         19 53 21.8 -0.4
SENIN                               IAmb    IAmb      19 53 35.3
      comp=Z,44nm,1.8s
MAW   Mawson            93.43 199   P       P         19 53 23.3  0.0
      comp=Z,17nm,1.0s,baz=46,slow=6.6,SNR=25
MAW                                 PKKPbc  PKKPdf    20 10 30.5 -1.1
      comp=Z,2.6nm,0.8s,baz=260,slow=7.7,SNR=5.7
MAW                                 LR      LR        20 29 35.8
      comp=Z,120nm,21.9s,baz=60,slow=32
MAW   Mawson            93.43 199   P       P         19 53 23.8 +0.5
MAW                                 pmax    pmax
      comp=Z,6.0nm,1.2s
MAW   Mawson            93.43 199   P       P         19 53 23.8 +0.5
ICESG Greenland Ices    93.43 353 i P       P         19 53 23.9  0.0
ICESG                               IAmb    IAmb      19 53 25.7
      comp=Z,20nm,1.1s
BNI   Bardonecchia      93.96 319   P       P         19 53 26.2 -0.5
BNI                                 pmax    pmax
      comp=Z,13nm,1.1s
BNI                                 MLR     MLR
      comp=Z,800nm,21.0s
BNI   Bardonecchia      93.96 319   P       P         19 53 26.2 -0.5
LLLB  Lillooet          94.15  34   P       P         19 53 28.0 +0.7
LLLB                                IAmb    IAmb      19 53 30.0
      comp=Z,36nm,1.1s
VSL   Villasalto        94.67 313   IAMs_20 IAMs_20   20 41 48.8
      comp=Z,348nm,20.0s
D03D  Eldon             95.08  37   P       P         19 53 33.6 +2.0
      baz=301
PPT   Papeete           95.36 107   LR      LR        20 28 00.6
      comp=Z,204nm,21.7s,baz=300,slow=30
PPT2  Papeete2          95.37 107  eS       S         20 04 40.8 -6.2
      comp=Z,305nm,27.5s
PPT2  Papeete2          95.37 107  eLR      LR        20 24 29.8
      comp=Z,981nm,27.2s,baz=290
KEST  Kesra             96.31 310   LR      LR        20 43 33.6
      comp=Z,257nm,20.1s,baz=335,slow=40
B08A  Colville Reser    96.77  35   P       P         19 53 39.9 +0.6
B08A                                IAmb    IAmb      19 53 41.4
      comp=Z,19nm,1.0s
VNDA  Vanda             96.88 172   P       P         19 53 39.5 +0.5
      comp=Z,6.1nm,0.9s,baz=307,slow=5.4,SNR=21
VNDA                                PP      PP        19 57 35.1 +0.4
      comp=Z,3.3nm,1.1s,baz=327,slow=10,SNR=4.4
VNDA                                LR      LR        20 37 02.2
      comp=Z,158nm,21.8s,baz=336,slow=35
VNDA  Vanda             96.88 172   P       P         19 53 39.8 +0.9
VNDA                                pmax    pmax
      comp=Z,38nm,1.9s
VNDA  Vanda             96.88 172   P       P         19 53 39.8 +0.9
VNDA                                IAmb    IAmb      19 53 41.4
      comp=Z,38nm,1.9s
EDM   Edmonton          96.92  29   P       P         19 53 40.3 +0.4
EDM                                 pmax    pmax
      comp=Z,29nm,1.1s
EDM   Edmonton          96.92  29   P       P         19 53 40.3 +0.4
EDM                                 IAmb    IAmb      19 53 42.0
      comp=Z,29nm,1.1s
TBI   Tubuai            96.97 112  eLR      LR        20 25 16.0
      comp=Z,1µm,35.0s,baz=292
SBA   Scott Base        97.83 171   P       Pdif      19 53 44.6 +1.3
SBA                                 pmax    pmax
      comp=Z,41nm,1.9s
SBA   Scott Base        97.83 171   P       Pdif      19 53 44.6 +1.3
SBA                                 IAmb    IAmb      19 53 46.9
      comp=Z,41nm,1.9s
NEW   Newport           98.04  34   P       Pdif      19 53 46.0 +0.9
      comp=Z,7.8nm,0.9s,baz=304,slow=4.4,SNR=8.3
NEW   Newport           98.04  34   P       Pdif      19 53 46.1 +1.0
      baz=306
NEW   Newport           98.04  34   P       P         19 53 45.0 -0.1
YBH   Yreka Blue Hor    98.28  42   P       Pdif      19 53 46.9 +0.6
      comp=Z,2.9nm,0.9s,baz=282,slow=1.6,SNR=5.4
L04D  Klamath Falls     98.30  42   P       Pdif      19 53 47.2 +0.7
      baz=301
J05D  Fort Rock, OR     98.41  40   P       Pdif      19 53 48.4 +1.5
      baz=302
M04C  Macdoel           98.82  42   Pdiff   Pdif      19 53 50.1 +1.3
      baz=301
O02D  Mt. Diablo Mer    99.02  44   Pdiff   Pdif      19 53 51.4 +1.8
      baz=300
SYO   Syowa Base       101.78 201⇓epPdiff   pPdif     19 54 16.2 +2.6
TAOE  Nuku Hiva Isla   101.98  96  eLR      LR        20 27 46.2
      comp=Z,928nm,32.1s
DLMT  Dillon           102.27  35   IAMs_20 IAMs_20   20 47 22.2
      comp=Z,700nm,21.0s
HLID  Hailey           102.35  37   Pdiff   Pdif      19 54 06.4 +1.8
      baz=307
NVAR  Mina Array Bea   102.90  43   Pdiff   Pdif      19 54 08.0 +0.8
      comp=Z,1.1nm,0.7s,baz=293,slow=5.7,SNR=9.6
NVAR                                PKKPbc  PKKPbc    20 10 04.1 -1.3
      comp=Z,0.4nm,0.7s,baz=141,slow=3.1,SNR=3.2
ESDC  Sonseca Array    103.48 319   PP      PKiKP     19 58 23.2 -4.9
      comp=Z,1.7nm,0.9s,baz=45,slow=7.7,SNR=7.0
ESDC                                PKKPbc  PKKPbc    20 10 00.7 -2.8
      comp=Z,0.1nm,0.4s,baz=224,slow=6.6,SNR=2.3
PDAR  Pinedale Array   105.61  36   PKKPbc  PKKPbc    20 09 55.9 -1.6
      comp=Z,0.4nm,0.7s,baz=186,slow=8.1,SNR=3.1
PDAR                                PKKP              20 10 10.8
      comp=Z,2.0nm,0.9s,baz=134,slow=6.4,SNR=8.0
IRM   Iron Mountain    107.39  45   PKiKP   PKiKP     19 58 37.7 +2.2
      baz=305
RSSD  Black Hills      107.61  32   PKiKP   PKiKP     19 58 36.2 +0.4
      baz=316
SCHQ  Schefferville    108.77   4   PKKPbc  PKKPbc    20 09 44.8 -3.0
      comp=Z,5.6nm,0.7s,baz=111,slow=8.6,SNR=2.2
SDCO  Great Sand Dun   111.27  37   PKiKP   PKiKP     19 58 44.1 +1.0
      baz=313
ECSD  EROS Data Cent   111.43  28   PKiKP   PKiKP     19 58 43.7 +0.9
      baz=322
TORD  Torodi Ar. Bea   112.18 292   PKiKP   PKiKP     19 58 44.8 -0.1
      comp=Z,1.8nm,0.8s,baz=7.7,slow=3.3,SNR=10.0
TORD                                PP      PP        19 59 24.3 -5.3
      comp=Z,4.0nm,0.9s,baz=80,slow=5.3,SNR=9.9
TORD                                Sdiff             20 05 17.6
      comp=Z,0.8nm,0.8s,baz=64,slow=3.0,SNR=4.1
TORD                                PKKPbc  PKKPbc    20 09 35.1 -0.4
      comp=Z,1.4nm,0.9s,baz=268,slow=2.6,SNR=6.2
T25A  Trinidad         112.32  37   PKiKP   PKiKP     19 58 46.2 +1.3
      baz=314
ANMO  Albuquerque      112.57  40⇑iPKIKP    PKiKP     19 58 46.6 +1.1
ANMO  Albuquerque      112.57  40   PKiKP   PKiKP     19 58 47.1 +1.7
      baz=311
121A  Cookes Peak, D   113.29  43   PKiKP   PKiKP     19 58 47.9 +1.0
      baz=310
KSU1  Kansas State U   115.06  31   P       PKPdf     19 58 50.3 +0.5
      baz=321
MNTX  Cornudas Mount   115.38  42   P       PKPdf     19 58 51.7 +1.0
      baz=311
MNTX  Cornudas Mount   115.38  42           PKPdf     19 58 51.0 +0.3
SNAA  Sanae            115.54 197⇓iPKIKP    PKiKP     19 58 49.4 -0.4
KAN01 Argonia South    115.97  33           PKiKP     19 58 51.1 -0.5
P38A  Dawn             116.09  28           PKiKP     19 58 51.4 -0.4
KAN13 South Haven SW   116.22  33           PKPdf     19 58 52.0 -0.1
KOWA  Kowa             116.62 296   PKKPbc  PKKPbc    20 09 19.9 -0.5
      comp=Z,8.2nm,1.1s,baz=254,slow=3.5,SNR=7.3
KOWA  Kowa             116.62 296           PKPdf     19 58 53.3 -0.1
KOWA                                IAMs_20 IAMs_20   20 50 30.8
      comp=Z,440nm,21.0s
T35A  Sooner Cattle    116.79  32           PKPdf     19 58 53.2 -0.1
VNA2  Neumayer--Watz   117.19 197   PKPdf   PKiKP     19 58 54.0 +1.1
WMOK  Wichita Mounta   117.22  35   PKIKP   PKPdf     19 58 54.1 -0.1
WMOK  Wichita Mounta   117.22  35   P       PKiKP     19 58 54.3 +0.1
      baz=318
WMOK  Wichita Mounta   117.22  35           PKPdf     19 58 54.0 -0.1
OK025 Westminster Rd   117.38  34   IAMs_20 IAMs_20   20 44 13.0
      comp=Z,591nm,22.0s
OK030 Cody Creek RV    117.41  33           PKPdf     19 58 54.1 -0.4
OK030                               IAMs_20 IAMs_20   20 32 47.7
      comp=Z,472nm,22.0s
VNA1  Neumayer--Stat   117.58 197   PKPdf   PKiKP     19 58 54.7 +1.0
VNA3  Neumayer Olymp   117.65 196   PKPdf   PKiKP     19 58 54.7 +0.9
S39A  Bolivar          117.75  29           PKPdf     19 58 54.7 -0.3
TUL1  Leonard          117.94  32   P       PKiKP     19 58 56.0 +0.5
      baz=321
TUL1  Leonard          117.94  32           PKiKP     19 58 55.6 +0.1
TX31  Lajitas Ar. Si   118.05  43           PKiKP     19 58 56.3 +0.3
TXAR  Lajitas Array    118.05  43   PKP     PKiKP     19 58 56.5 +0.5
      comp=Z,8.0nm,0.9s,baz=270,slow=1.3,SNR=28
TXAR                                PP      PP        20 00 06.6 -3.5
      comp=Z,0.5nm,0.8s,baz=282,slow=2.3,SNR=1.6
TXAR                                PKKPbc  PKKPbc    20 09 15.1 -0.8
      comp=Z,0.3nm,0.6s,baz=102,slow=4.0,SNR=2.4
TXAR  Lajitas Array    118.05  43   PKPdf   PKPdf     19 58 55.9 -0.1
U38A  Gravette         118.23  31           PKPdf     19 58 55.8 -0.3
ABTX  Abilene, Hawle   118.27  38   P       PKiKP     19 58 57.2 +0.9
      baz=316
ABTX  Abilene, Hawle   118.27  38   PKPdf   PKiKP     19 58 56.4 +0.1
CCM   Cathedral Cave   118.41  28   PKIKP   PKPdf     19 58 55.7 -0.6
CCM   Cathedral Cave   118.41  28   P       PKiKP     19 58 56.5 +0.1
      baz=326
CCM   Cathedral Cave   118.41  28   PKPdf   PKPdf     19 58 55.7 -0.6
HHAR  Hobbs            118.58  31   PKPdf   PKPdf     19 58 56.4 -0.3
MGMO  Mountain Grove   118.68  29           PKPdf     19 58 56.7 -0.2
FVM   French Village   118.83  27   PKIKP   PKPdf     19 58 56.7 -0.4
FVM   French Village   118.83  27           PKPdf     19 58 56.7 -0.4
J59A  Piesco           118.93  12           PKiKP     19 58 57.4 +0.2
U40A  Yellville        119.05  30   P       PKPdf     19 58 57.6  0.0
      baz=324
U40A  Yellville        119.05  30           PKPdf     19 58 57.1 -0.5
BLO   Bloomington      119.41  23   PKIKP   PKPdf     19 58 57.7 -0.5
BLO   Bloomington      119.41  23           PKPdf     19 58 57.7 -0.5
W39A  Magazine         119.51  31   P       PKiKP     19 58 58.6  0.0
      baz=322
W39A  Magazine         119.51  31   PKPdf   PKPdf     19 58 58.2 -0.3
SIUC  Southern Illin   119.57  26           PKiKP     19 58 58.8 +0.2
JCT   Junction City    119.71  39   P       PKiKP     19 58 59.8 +0.6
      baz=315
ACSO  Alum Creek Sta   119.72  20   P       PKPdf     19 58 58.8  0.0
      baz=335
ACSO  Alum Creek Sta   119.72  20           PKPdf     19 58 58.6 -0.1
P49A  Miami Univ. Ec   119.75  22   P       PKPdf     19 58 58.6 -0.3
      baz=333
FCAR  Ozark Folk Cen   119.77  30           PKPdf     19 58 58.9 -0.1
PBMO  Poplar Bluff     119.82  28           PKPdf     19 58 58.8 -0.3
BINY  Binghamton       119.83  14   P       PKiKP     19 58 59.3 +0.2
      baz=342
N54A  Moraine State    119.97  17   P       PKiKP     19 58 59.7 +0.3
      baz=338
LCAR  Lake Charles     120.08  29   PKPdf   PKPdf     19 58 59.5 -0.1
MIAR  Mount Ida        120.13  32   PKIKP   PKPdf     19 58 59.6 -0.1
MIAR  Mount Ida        120.13  32   P       PKiKP     19 59 00.4 +0.6
      baz=322
MIAR  Mount Ida        120.13  32           PKPdf     19 58 59.6 -0.1
WHAR  Wooly Hollow     120.17  30           PKPdf     19 58 59.4 -0.4
W41B  Gary Mavity, V   120.29  30   P       PKPdf     19 58 59.9 -0.1
      baz=324
WCI   Wyandotte Cave   120.32  24   PKIKP   PKPdf     19 58 59.7 -0.3
WCI   Wyandotte Cave   120.32  24   P       PKPdf     19 58 60.0  0.0
      baz=331
WCI   Wyandotte Cave   120.32  24   PKPdf   PKPdf     19 58 59.7 -0.3
P52A  Corning          120.54  20   P       PKiKP     19 59 00.6 +0.1
      baz=335
P52A  Corning          120.54  20           PKPdf     19 59 00.4  0.0
X40A  Basin Creek Fa   120.55  31   P       PKiKP     19 59 01.5 +0.9
      baz=323
DBIC  Dimbokro         120.69 288   PKP     PKPdf     19 59 01.1 -0.2
      comp=Z,4.8nm,0.6s,baz=96,slow=1.7,SNR=11
DBIC                                PKKPbc  PKKPbc    20 09 04.2 -1.3
      comp=Z,7.1nm,1.0s,baz=220,slow=5.8,SNR=3.2
KIC   Kosan Boka       120.70 288  ePKP1    PKPdf     19 59 01.2 -0.1
      comp=Z,15nm,0.7s
435B  Jarrell          120.81  38   P       PKiKP     19 59 02.1 +0.9
      baz=317
TIC   Toumodi          120.85 288  ePKP1    PKPdf     19 59 01.1 -0.5
SSPA  Standing Stone   120.85  16   P       PKiKP     19 59 01.2 +0.2
      baz=340
SSPA  Standing Stone   120.85  16           PKiKP     19 59 01.2 +0.2
O56A  Blue Knob Stat   121.01  16   P       PKPdf     19 59 01.4 +0.1
      baz=339
LIC   Lamto            121.02 288  ePKP1    PKPdf     19 59 00.2 -1.7
      comp=Z,30nm,0.8s
N59A  State Game Lan   121.10  14   P       PKiKP     19 59 01.7 +0.1
      baz=342
833A  Chaparral WMA,   121.47  41   P       PKiKP     19 59 03.9 +1.3
      baz=315
WVT   Waverly          121.50  26   PKIKP   PKPdf     19 59 02.0 -0.3
WVT   Waverly          121.50  26   P       PKPdf     19 59 02.3  0.0
      baz=329
WVT   Waverly          121.50  26   PKPdf   PKPdf     19 59 02.0 -0.3
T50A  Nancy            121.93  23           PKPdf     19 59 03.0 -0.1
U49A  Red Boiling Sp   122.01  24   PKPdf   PKPdf     19 59 03.0 -0.3
CLTN  Cedars of Leba   122.16  25           PKPdf     19 59 03.4 -0.1
P60A  Greenville       122.18  14   P       PKiKP     19 59 04.0 +0.3
      baz=342
HKT   Hockley          122.44  37c iPKIKP   PKiKP     19 59 05.3 +0.9
TZTN  Tazewell         122.83  22   P       PKiKP     19 59 05.5 +0.4
      baz=333
TZTN  Tazewell         122.83  22   PKPdf   PKPdf     19 59 05.0 +0.1
SWET  Sewanee          123.07  25           PKPdf     19 59 04.9 -0.5
CBN   Corbin Frederi   123.27  16   P       PKiKP     19 59 06.4 +0.6
      baz=340
BLA   Blacksburg       123.30  19   P       PKPdf     19 59 05.9 +0.1
      baz=337
CPCT  Cooper Cave      123.43  24           PKiKP     19 59 06.3  0.0
V52A  Sevierville      123.44  23   PKPdf   PKPdf     19 59 06.0 -0.1
VBMS  Vicksburg        123.52  31   P       PKiKP     19 59 07.0 +0.5
      baz=325
TKL   Tuckaleechee C   123.53  23   PKIKP   PKiKP     19 59 06.6 +0.1
TKL   Tuckaleechee C   123.53  23   PKPdf   PKiKP     19 59 06.6 +0.1
FPAL  Fort Paine       123.79  25           PKPdf     19 59 06.4 -0.4
KMSC  Kings Mountain   124.88  21   P       PKPdf     19 59 09.0 +0.2
      baz=335
KMSC  Kings Mountain   124.88  21           PKPdf     19 59 08.6 -0.2
PAULI Pauline          125.00  22           PKPdf     19 59 09.1 +0.1
GOGA  Godfrey          125.64  24   PKIKP   PKiKP     19 59 11.1 +0.4
GOGA  Godfrey          125.64  24   P       PKiKP     19 59 11.0 +0.3
      baz=332
GOGA  Godfrey          125.64  24   PKPdf   PKiKP     19 59 11.1 +0.4
BRAL  Brewton          126.04  29   P       PKiKP     19 59 12.5 +1.0
      baz=328
NHSC  New Hope         127.12  21   P       PKiKP     19 59 14.1 +0.5
      baz=336
TIGA  Tifton           127.32  25   P       PKiKP     19 59 14.8 +0.7
      baz=331
DWPF  Disney Wildern   131.13  25   P       PKiKP     19 59 22.7 +0.9
      baz=333
ACON  Acoyapa          142.44  43           PKPdf     19 59 42.0 -0.1
SDDR  Presa de Saban   143.11  18  eP       PKPab     19 59 39.0 +0.3
DR12  Loma Pena Alta   143.81  15           PKPbc     19 59 42.8 +0.7
GO09  Cerro Castillo   143.93 167           PKPdf     19 59 43.2 -0.5
EFI   East Falkland    144.83 182   PKIKP   PKPdf     19 59 45.4 +0.2
EFI   East Falkland    144.83 182   PKPdf   PKPdf     19 59 45.4 +0.2
PRSN  Puerto Rico Se   144.86  12           PKPbc     19 59 45.4 +0.1
GCPR  Guaynabo City    144.96  10           PKPab     19 59 44.5 -1.1
SJG   San Juan         145.14  10   PKPbc   PKPbc     19 59 45.6 -0.6
      comp=Z,22nm,0.6s,baz=46,slow=9.7,SNR=2.3
SJG   San Juan         145.14  10  eP       PKPbc     19 59 40.3 -6.0
BCIP  Isla Barro Col   147.93  39   PKIKP   PKPdf     19 59 50.8 -0.8
BCIP  Isla Barro Col   147.93  39           PKPdf     19 59 50.8 -0.8
SVN   Savane Anatole   148.88   2           PKPbc     19 59 57.3 +0.2
FDF   Fort de France   148.99   2   PKP2    PKPbc     19 59 57.8 +0.4
FDF   Fort de France   148.99   2           PKPbc     19 59 57.8 +0.4
SMRC  Santa Marta, M   149.22  28  eP       PKPdf     19 59 53.8 +0.1
COYC  Coyhaique        149.30 163           PKPdf     19 59 53.5 +0.7
COYC                                PKPbc   PKiKP     19 59 59.2 +0.8
URIC  Uribia, Colomb   149.66  23  eP       PKPdf     19 59 54.9 +0.5
URIC  Uribia, Colomb   149.66  23   PKPdf   PKPdf     19 59 54.9 +0.5
URIC                                PKPbc   PKiKP     19 59 59.8 -0.2
CAP2  Capurgana        149.79  36   PKPdf   PKPdf     19 59 55.1 +0.5
CAP2                                PKPbc   PKPbc     19 59 59.8 +0.4
CAPC  Capurgana        149.80  36  eP       PKPdf     19 59 55.3 +0.6
SJCC  San Jacinto, C   149.88  31  eP       PKPdf     19 59 54.9 +0.1
SJCC  San Jacinto, C   149.88  31           PKPdf     19 59 55.7 +0.9
SJCC                                PKPbc   PKiKP     20 00 00.8 +0.2
MOTC  Monteria, Cord   150.59  33  eP       PKPdf     19 59 56.6 +0.8
MOTC                               eS       pPKPab    20 00 23.5 +2.8
DABV  Dabajuro         150.88  22  eP       PKPdf     19 59 55.2 -1.0
SMLC  San Martn de     151.36  30  eP       PKPdf     19 59 54.9 -2.1
UREC  San Jos de Ur    151.53  33⇑eP        PKPdf     19 59 58.4 +1.0
UREC                               eS       PKPbc     20 00 06.2 +2.7
DBBC  Dabeiba          151.77  36  eP       PKPdf     19 59 59.5 +1.8
ZARC  Zaragoza, Cauc   152.10  33  eP       PKPdf     19 59 58.5 +0.3
ZARC                               eS       PKPbc     20 00 05.9 +1.1
OCAC  Ocana            152.21  29  eP       PKPbc     20 00 00.8 -4.4
SDV   Santo Domingo    152.76  23   PKP     PKPdf     20 00 00.0 +0.6
      comp=Z,39nm,0.8s,baz=352,slow=0.5,SNR=35
SDV                                 PKPbc   PKiKP     20 00 06.9 +0.2
      comp=Z,205nm,0.9s,baz=19,slow=1.6,SNR=30
SDV   Santo Domingo    152.76  23  eP       PKPdf     19 59 59.2 -0.2
SDV   Santo Domingo    152.76  23  eP       PKPdf     20 00 00.4 +1.0
HELC  Santa Helena     152.83  35  eP       PKPbc     20 00 05.0 -1.9
BRRC  Barranca, Sant   153.00  31  eP       PKPdf     20 00 00.8 +1.3
PCRV  Puerto La Cruz   153.16  10   PKP     PKPdf     19 59 59.5 -0.3
      comp=Z,12nm,0.8s,baz=41,slow=12,SNR=3.1
PCRV                                PKPbc   PKPbc     20 00 06.3 -0.9
      comp=Z,43nm,1.0s,baz=352,slow=4.3,SNR=7.4
SOCV  Socops           153.22  24  eP       PKPdf     19 59 59.9  0.0
PAMC  Pamplona, Colo   153.28  29  eP       PKPdf     19 59 59.6 -0.9
PLMC  San Jos del P    153.44  38  eP       PKPdf     20 00 01.9 +1.7
BARC  Barichara        153.71  30  eP       PKPdf     20 00 02.0 +1.2
NORC  Norcasia         153.71  35  eP       PKPdf     20 00 00.8 +0.2
SPBC  San Pablo de B   154.06  33  eP       PKPdf     19 59 59.6 -1.5
YOTC  Yotoco, Valle    154.13  40  eP       PKPdf     20 00 02.0 +0.7
PLCA  Paso Flores      154.19 162   PKP     PKPdf     20 00 00.9 +0.4
      comp=Z,4.1nm,0.9s,baz=169,slow=7.3,SNR=5.5
PLCA                                PKPbc   PKiKP     20 00 09.0 +0.3
      comp=Z,11nm,0.7s,baz=211,slow=2.2,SNR=17
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PLCA				PKPab	sPKPbc	20 00 24.2	-2.3
	comp=Z,14nm,0.7s,baz=235,slow=4.9,SNR=11						
ANIL	Santa Ana	154.29	37	eP	PKPdf	20 00 02.5	+0.8
RUSC	La Rusia	154.36	31	eP	PKPdf	20 00 02.0	-0.1
ROSC	El Rosal	154.61	35	PKP	PKPdf	20 00 03.2	+0.9
	comp=Z,17nm,0.4s,baz=53,slow=1.8,SNR=20						
CHIC	Chingaza	155.10	34	eP	PKPdf	20 00 03.8	+0.8
MARP	Paez Belalcaza	155.26	41	eP	PKPdf	20 00 02.0	-1.0
SOTA	Rioblanco	155.38	43	eP	PKPdf	20 00 02.4	-1.1
OTAV	Otavalo	155.47	49	eP	PKPdf	20 00 04.8	+1.2
VILC	Villavicencio,	155.56	34	eP	PKPdf	20 00 02.0	-1.3
MDP	Montagnes des	157.33	340	PKP	PKPdf	20 00 06.4	+1.0
	comp=Z,7.3nm,0.9s,baz=0.7,slow=5.9,SNR=4.2						
BO01	Tunca	159.62	153	PKPdf	PKPdf	20 00 07.6	0.0
BO01					PKPab	20 00 45.5	-0.3
ATAH	Atahualpa	159.89	65	PKP	PKPdf	20 00 10.5	+1.5
	comp=Z,22nm,1.0s,baz=308,slow=2.9,SNR=18						
ATAH				PKPab	PKPab	20 00 51.0	+2.8
	comp=Z,29nm,1.0s,baz=308,slow=2.4,SNR=9.1						
RIB01	Linhares ES	161.00	258	eP	PKPab	20 00 41.8	-11
BOAV	Boa Vista	161.26	1	PKPdf	PKPdf	20 00 09.9	-0.1
BOAV				PKPab	PKPab	20 00 53.0	-0.4
MCPB	Macapa, AP	162.13	333	eP	PKPdf	20 00 11.5	+0.6
VAS01	Vassouras-RJ	163.22	247	eP	PKPdf	20 00 12.7	+1.0
DIAM	Diamantina, MG	164.18	261	eP	PKPdf	20 00 14.0	+1.2
PTGA	Pitinga	164.37	359	PKP	PKPdf	20 00 13.4	+0.4
	comp=Z,14nm,0.8s,baz=337,slow=1.6,SNR=25						
PTGA				PKPab	PKPab	20 01 07.0	-0.1
	comp=Z,6.7nm,0.7s,baz=5.4,slow=8.7,SNR=10						
PTGA	Pitinga	164.37	359		PKPdf	20 00 12.7	-0.3
PTGA					PKPab	20 01 07.4	+0.4
MC01	Montes Claros	164.47	267	eP	PKPdf	20 00 14.3	+1.3
JANB	Januaria	164.70	273	eP	PKPdf	20 00 12.9	-0.4
SDBA	SAO DESIDERIO	164.71	283	eP	PKPdf	20 00 14.0	+0.7
MACA	Manacapuru-AM	166.77	2		PKPdf	20 00 15.0	0.0
MACA				PKPab	PKPab	20 01 17.4	-0.2
BDFB	Brasilia	168.31	272	PKP	PKPdf	20 00 16.2	+0.1
	comp=Z,7.9nm,0.8s,baz=158,slow=3.5,SNR=9.9						
LVC	Limon Verde	169.72	128	PKP	PKPdf	20 00 18.4	+1.2
	comp=Z,11nm,0.9s,baz=273,slow=1.8,SNR=9.8						
LVC				PKPab	PKPab	20 01 32.8	+1.6
	comp=Z,5.0nm,0.8s,baz=172,slow=6.9,SNR=4.0						
LVC				PP	PP	20 05 18.2	-2.6
	comp=Z,2.7nm,0.8s,baz=262,slow=4.2,SNR=2.0						
CPUP	Villa Florida	169.84	194	PKP	PKPdf	20 00 17.2	+0.6
	comp=Z,3.7nm,0.9s,baz=180,slow=1.0,SNR=5.9						
CPUP				PKPab	PKPab	20 01 31.7	+0.8
	comp=Z,13nm,1.0s,baz=161,slow=5.6,SNR=12						
CPUP				PP	PP	20 05 16.0	-3.5
	comp=Z,2.9nm,0.9s,baz=78,slow=6.2,SNR=2.5						
CPUP	Villa Florida	169.84	194	PKPdf	PKPdf	20 00 16.9	+0.2
CPUP				PKPab	PKPab	20 01 30.1	-0.8
ETMB	Extrema	171.14	43	PKPdf	PKPdf	20 00 17.4	-0.3
ETMB				PKPab	PKPab	20 01 35.2	-1.9
SAML	Samuel	171.97	22	PKP2	PKPab	20 01 39.6	-1.0
SAML						21 00 18.3	
SAML	Samuel	171.97	22	eP	PKPdf	20 00 17.8	-0.3
SAML	Samuel	171.97	22	PKPdf	PKPdf	20 00 18.3	+0.2
SAML				PKPab	PKPab	20 01 39.6	-1.0
LPAZ	La Paz	172.33	90	PKP	PKPdf	20 00 20.0	+1.0
	comp=Z,12nm,1.0s,baz=225,slow=2.9,SNR=30						
LPAZ				PKPab	PKPab	20 01 46.0	+2.7
	comp=Z,21nm,0.9s,baz=302,slow=3.6,SNR=20						
LPAZ				PP	PP	20 05 28.2	-6.9
	comp=Z,1.9nm,0.9s,baz=268,slow=7.7,SNR=4.1						
LPAZ	La Paz	172.33	90	PKIKP	PKPdf	20 00 19.2	+0.2
LPAZ	La Paz	172.33	90	eP	PKPdf	20 00 19.0	+0.1
LPAZ	La Paz	172.33	90	PKPdf	PKPdf	20 00 19.1	+0.2
LPAZ				PKPab	PKPab	20 01 44.5	+1.2
AQDB	Aquidauana	174.19	226		PKPdf	20 00 18.4	-0.3
AQDB				PKPab	PKPab	20 01 50.2	-0.4
SIV	San Ignacio	178.99	63	PKP	PKPdf	20 00 20.3	+0.4
	comp=Z,22nm,1.0s,baz=136,slow=1.2,SNR=49						
SIV				PKPab	pPKPab	20 02 11.4	-14
	comp=Z,6.1nm,0.9s,baz=281,slow=4.0,SNR=8.6						
SIV				PP	PP	20 06 02.5	-3.3
	comp=Z,0.6nm,0.3s,baz=273,slow=3.5,SNR=7.1						

FUNV **07** *19:42:03.3, 8°.39N×71°.41W, h3^{km}, MW3.2*

ISC 07 19:42:03.3±1.2, **8°.45N**±0°.05×**71°.39W**±0°.03, **h11**^{km}±10^{km}, **n16**, σ**1**^{s}.**47**/26, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.55	107	eP	Pg	19 42 14.4	+0.4
SOCV				eS	Sg	19 42 22.4	+1.1
SDV	Santo Domingo	0.86	60	eP	Pg	19 42 19.9	-0.1
SDV				eS	Sg	19 42 31.2	-0.2
SDV				i		19 42 31.8	
	comp=Z,123nm,0.4s						
CAPV	Capacho	1.08	238	eP	Pg	19 42 22.5	-1.8
PAMC	Pamplona, Colo	1.70	230	eP	Pg	19 42 35.4	-0.6
PAMC				eS	Sg	19 42 58.9	+0.7
PAMC				i		19 43 01.1	
	comp=Z,205nm,0.4s						
OCAC	Ocana	1.92	264	eP	Pn	19 42 36.9	+0.8
OCAC				eS	Sn	19 43 01.5	+1.2
OCAC				i		19 43 04.2	
	comp=Z,849nm,0.4s						
MCQV	Machiques	1.96	325	eP	Pn	19 42 37.9	+1.5
TAMC	Tame, Arauca	2.04	191	eP	Pb	19 42 40.3	-0.1
TAMC				eS	Sg	19 43 09.8	+1.0
TAMC				i		19 43 17.2	
	comp=Z,92nm,0.3s						
SMLC	San Martn de	2.68	278	eP	Pn	19 42 46.1	-0.2
SMLC				eS	Sn	19 43 22.2	+3.5
SMLC				i		19 43 25.5	
	comp=Z,67nm,0.3s						
SIQV	Siquisique	2.69	35	eP	Pn	19 42 47.8	+1.3
RUSC	La Rusia	3.04	214	eP	Pn	19 42 54.2	+2.4
RUSC				eS	Sb	19 43 31.6	-3.5
RUSC				i		19 43 41.8	
	comp=Z,24nm,0.6s						
BAUV	El Baul	3.34	81	eP	Pn	19 42 56.0	+0.5
BAUV				eS	Sn	19 43 35.2	0.0
MONV	Montecano	3.76	22	eP	Pn	19 43 01.6	+0.4
MONV				eS	Sn	19 43 44.9	-0.6
BENV	Beln	4.03	68	eP	Pn	19 43 05.0	-0.1
BENV				eS	Sn	19 43 50.8	-1.5
MOTC	Monteria, Cord	4.24	275	eP	Pn	19 43 08.7	+0.8
MOTC				eS	Sn	19 43 57.0	-0.5
TACV	Tcata	4.62	68	eP	Pn	19 43 14.1	+0.9
CACV	CAICARA DEL OR	4.88	100	eP	Pn	19 43 23.0	+6.4

ROM **07** *19:53:44.0±0.2, 43°.70N±0°.01×7°.79E±0°.02, h18^{km}±2^{km}, ML2.5/11, Error ellipse: s-maj=1.4km s-min=0.8km az=177.0*

GEN **07** *19:53:44.8, 43°.70N×7°.83E, h9^{km}±2^{km}, Ml2.2*

LDG **07** *19:53:45.3±0.1, 43°.77N×7°.76E, h16^{km}, Md2.4/2, Ml2.2/15, Error ellipse: s-maj=2.2km s-min=1.6km az=170.0*

STR **07** *19:53:45.4±1.0, 44°N±4°×°±°, h6^{km}, MLv2.1/6, preliminary*

ISC 07 19:53:44.0±0.8, **43°.70N**±0°.03×**7°.77E**±0°.02, **h17**^{km}, **n59**, σ**1**^{s}.**52**/96, **2C-5D, Near south coast of France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BURY	Giardini Botan	0.18	298	P	Pg	19 53 49.2	+0.8
BURY				S	Sg	19 53 52.3	+0.8
BURY	Giardini Botan	0.18	298	P	Pg	19 53 49.2	+0.8
BURY				S	Sg	19 53 52.2	+0.8
BURY				AML	AML		
	comp=N,2425μm,0.4s						
BURY				AML	AML		
	comp=E,2040μm,0.5s						
IMI	Imperia	0.23	23	P	Pg	19 53 49.8	+0.5
IMI				S	Sg	19 53 53.2	+0.2
IMI	Imperia	0.23	23	P	Pg	19 53 49.8	+0.5
IMI				S	Sg	19 53 53.0	0.0
IMI				AML	AML		
	comp=N,1765μm,0.6s						
IMI				AML	AML		
	comp=E,2250μm,0.1s						
SBF	Sospel	0.29	304	ePg	Pg	19 53 51.1	+0.7
SBF				eSg	Sg	19 53 55.7	+1.0
	comp=E,550nm,0.3s						
ESCA	l'Escarene	0.32	295	Pg	Pg	19 53 51.3	+0.6
ESCA				Sg	Sg	19 53 56.7	+1.3
SAOF	Saorge	0.33	332	Pg	Pg	19 53 51.4	+0.5
SAOF				Sg	Sg	19 53 55.8	+0.2
SAOF	Saorge	0.33	332	⇓P	Pg	19 53 51.4	+0.5
SAOF				S	Sg	19 53 55.9	+0.2
SAOF				AML	AML		
	comp=E,1515μm,0.4s						
SAOF				AML	AML		
	comp=N,940μm,0.2s						
MGRO	Montegrosso	0.34	4	P	Pg	19 53 51.7	+0.5
MGRO				S	Sg	19 53 56.6	+0.2
MGRO	Montegrosso	0.34	4	⇓P	Pg	19 53 51.8	+0.5
MGRO				S	Sg	19 53 56.5	+0.2
MGRO				AML	AML		
	comp=E,984μm,0.2s						
MGRO				AML	AML		
	comp=N,885μm,0.2s						
TURF	col de Turini	0.39	315	Pg	Pg	19 53 52.6	+0.6
TURF				Sg	Sg	19 53 58.1	+0.6
RORO	Rocca Rossa	0.47	27	P	Pg	19 53 53.7	+0.4
RORO				S	Sg	19 53 59.6	-0.1
RORO	Rocca Rossa	0.47	27	P	Pg	19 53 53.7	+0.4
RORO				S	Sg	19 53 59.6	-0.1
MVIF	Mont Vial	0.49	294	Pg	Pg	19 53 54.6	+0.8
SPIF	crte de Spivo	0.53	313	Pg	Pg	19 53 55.0	+0.5
SPIF				Sg	Sg	19 54 02.3	+0.6
GBOS	Grotte di Boss	0.55	5	P	Pg	19 53 55.2	+0.3
GBOS				S	Sg	19 54 01.9	-0.3
GBOS	Grotte di Boss	0.55	5	⇓P	Pg	19 53 55.2	+0.3
GBOS				S	Sg	19 54 02.1	-0.1
GBOS				AML	AML		
	comp=E,387μm,0.2s						
GBOS				AML	AML		
	comp=N,203μm,0.6s						
ENR	Entracque	0.59	334	P	Pg	19 53 56.1	+0.5
ENR				S	Sg	19 54 03.7	+0.2
ENR	Entracque	0.59	334	⇓P	Pg	19 53 56.1	+0.5
ENR				S	Sg	19 54 03.6	+0.2
ENR				AML	AML		
	comp=E,450μm,0.3s						
ENR				AML	AML		
	comp=N,548μm,0.1s						
CANO	Canova, Maglio	0.61	33	P	Pg	19 53 56.2	+0.2
CANO				S	Sg	19 54 03.9	-0.3
CALF	Calern	0.62	275	Pg	Pg	19 53 56.9	+0.7
CALF				Sg	Sg	19 54 05.1	+0.7
ISO	Isola	0.71	313	Pg	Pg	19 53 58.2	+0.3
ISO				Sg	Sg	19 54 07.3	-0.1
QLNO	Quiliano	0.75	33	P	Pb	19 53 58.6	0.0
QLNO				S	Sg	19 54 08.4	-0.2
QLNO				AML	AML		
	comp=E,188μm,1.0s						
QLNO				AML	AML		
	comp=N,370μm,0.3s						
FRF	La Foret Royal	0.83	261	ePg	Pb	19 53 59.9	0.0
FRF				eSg	Sb	19 54 10.9	+0.2
	comp=N,48nm,0.2s						
PZZ	Stroppo	0.94	330	P	Pb	19 54 01.8	0.0
PZZ				S	Sb	19 54 14.1	0.0
PZZ				AML	AML		
	comp=E,368μm,1.5s						
PZZ				AML	AML		
	comp=N,582μm,0.4s						
PCP	Piancastagn	1.01	33	P	Pb	19 54 02.3	-0.8
PCP				S	Sb	19 54 16.2	+0.1
PCP	Piancastagn	1.01	33	P	Pb	19 54 03.2	+0.1
PCP				S	Sb	19 54 16.1	+0.1
PCP				AML	AML		
	comp=E,139μm,0.3s						
PCP				AML	AML		
	comp=N,88μm,0.4s						
SURF	Saint Ours	1.04	319	Pg	Pb	19 54 04.5	+0.8
SURF				Sg	Sb	19 54 18.0	+0.8
ROTM	Rocchetta Tana	1.22	20	P	Pn	19 54 07.2	+1.0
ROTM				AML	AML		
	comp=E,372μm,0.5s						
ROTM				AML	AML		
	comp=N,444μm,0.7s						
MBDF	Montbardon	1.25	325	ePg	Pn	19 54 07.3	+0.4
MBDF				eSg	Sb	19 54 24.1	+0.9
	comp=N,97nm,0.4s						
BLAF	les Blancs	1.27	282	Pg	Pb	19 54 09.0	+1.5
MONC	Moncucco Torin	1.38	5	P	Pn	19 54 09.3	+0.8
MONC				AML	AML		
	comp=E,163μm,0.4s						
MONC				AML	AML		
	comp=N,151μm,0.5s						
MSSA	Maissana	1.40	63	P	Pn	19 54 07.4	-1.4
PLMA	Palmaria, Port	1.54	76	P	Pn	19 54 12.5	+1.8
GROG	Isola di Gorgo	1.56	99	P	Pn	19 54 09.9	-1.1
SMRF	Simiane la Rot	1.61	281	ePn	Pn	19 54 12.0	+0.3
SMRF				eSg	Sb	19 54 36.1	+2.7
	comp=N,8.9nm,0.2s						
CORF	Corte	1.73	144	P	Pn	19 54 12.0	-1.3
ORIF	Oris-en-Rattie	1.82	313	ePg	Pb	19 54 18.7	+1.8
ORIF				eSg	Sg	19 54 43.0	+0.3
	comp=N,12nm,0.4s						
ORIF	Oris-en-Rattie	1.82	313	Pn	Pb	19 54 18.3	+1.4
AJAC	Base Areonaval	1.91	157	P	Pn	19 54 15.0	-0.7
LPG	La Plagne	1.94	338	ePg	Pb	19 54 20.4	+1.4
LPG				eSg	Sg	19 54 46.1	-0.4
	comp=N,6.6nm,0.3s						
LPL	La Plagne	1.96	338	ePg	Pb	19 54 20.8	+1.4
LPL				eSg	Sg	19 54 46.6	-0.6
	comp=N,7.4nm,0.4s						
CELB	S.Piero in Cam	2.02	117	P	Pn	19 54 15.7	-1.6
LEOD	Capriano del C	2.43	43	P	Pb	19 54 28.6	+1.4
SBPO	S.Benedetto Po	2.63	58	⇑P	Pg	19 54 35.9	+1.5
LASF	Ste Croix	2.85	279	ePn	Pn	19 54 28.4	-0.3
LASF				eSn	Sn	19 54 59.3	-3.4
	comp=N,0.9nm,0.2s						
LASF				eSg	Sb	19 55 13.6	+4.5
	comp=N,0.6nm,0.2s						
CABF	La Chapelle	3.15	338	eP	Pn	19 54 34.1	+1.3
CABF				eSn	Sn	19 55 05.5	-4.5
	comp=N,0.3nm,0.2s						
APEC	Apecchio	3.38	91	S	Sb	19 55 27.0	+2.8
FOSV	Fossato di Vic	3.65	95	P	Pg	19 54 56.5	+2.6
SMF	Signal de Mont	4.05	318	eP	Pn	19 54 46.9	+1.8
SMF				eSn	Sn	19 55 27.9	-4.3
	comp=N,0.7nm,0.3s						
MTLF	Montolieu	4.05	267	ePn	Pn	19 54 44.5	-0.7
MTLF				eSn	Sn	19 55 27.9	-4.4
	comp=N,0.5nm,0.2s						
HINF	Hinteralfeld	4.17	351	eP	Pn	19 54 47.1	+0.3
FIAM	Fiamignano	4.17	108	⇓P	Pg	19 55 04.4	+0.5
PP3	Marolino	4.26	92	⇑P	Pb	19 54 54.4	-3.9
CAF	Calviac	4.28	289	ePn	Pn	19 54 47.7	-0.6
CAF				eSn	Sn	19 55 33.0	-4.8
	comp=N,0.5nm,0.3s						
CAF				eSg	Sg	19 55 59.3	-1.9
	comp=N,0.4nm,0.3s						
HAU	Haudompre	4.42	348	eP	Pn	19 54 51.0	+0.8
LFF	La Frestale	5.20	286	ePn	Pn	19 54 58.9	-1.9
PTRJ	Pietraroja	5.51	113	P	Pn	19 55 09.9	+4.6
ERC	Erice	6.73	146	P	Pn	19 55 28.4	+6.3

MAN 07 20:00:14.8, 7°.23N×126°.41E, h16^{km}, mb4.7, ML3.6, MS3.4, Mindanao

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INMG **07** *20:01:14.2±0.8, 27°.63N×18°.04W, h0^{km}, ML3.2, Error ellipse: s-maj=3.2km s-min=1.7km az=24.0*

MDD **07** *20:01:14.1±0.6, 27°.70N×18°.06W, h12^{km}±4^{km}, mbLg3.8/14, Error ellipse: s-maj=6.1km s-min=2.0km az=164.0, PRXIMO*

MDD EMS: III INTENSIDAD MAXIMA.

CNRM **07** *20:01:15.0, 28°.16N×17°.65W, h0^{km}, ml4.1*

ISC 07 20:01:10.7±1.4, **27°.75N**±0°.09×**18°.05W**±0°.07, **h30**^{km}±8^{km}, **n24**, σ**1**^{s}.**89**/47, **6D, Canary Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTAN	El Hierro	0.01	328	⇓P	Pb	20 01 16.4	+0.7
	1μm,0.1s,SNR=18						
CTAN				S	Sb	20 01 18.1	-1.0
	44μm,0.3s,SNR=7.9						
CTAD	Las Tabladas,	0.03	277	⇓P	Pb	20 01 16.3	+0.6
	2μm,0.1s,SNR=18						
CTAD				S	Sb	20 01 18.3	-0.9
	26μm,0.1s,SNR=7.9						
CJUL	El Julan, El H	0.03	243	⇓P	Pb	20 01 16.4	+0.5
	1μm,0.1s,SNR=18						
CJUL				S	Sb	20 01 18.1	-1.4
	54μm,0.2s,SNR=7.9						
CHIE	El Hierro	0.08	103	⇓P	Pb	20 01 16.7	+0.8
	50nm,0.2s,SNR=18						
CORC	Orchilla, El H	0.10	245	⇓P	Pb	20 01 16.5	+0.6
	4μm,0.1s,SNR=18						
CORC				S	Sb	20 01 18.1	-1.5
	80μm,0.2s,SNR=7.9						
CTIG	El Hierro	0.12	69	⇓P	Pb	20 01 17.5	+1.3
	134nm,0.1s,SNR=18						
CTIG				S	Sb	20 01 19.7	-0.1
	3μm,0.1s,SNR=7.9						
EGOM	La Gomera	0.85	61	P	Pn	20 01 27.6	+1.0
	16nm,0.1s,SNR=89						
EGOM				S	Sn	20 01 38.3	+0.2
	647nm,0.1s,SNR=12						
MACI	Morro de la Ar	1.45	69	P	Pn	20 01 36.0	+0.9
	2.7nm,0.1s,SNR=7.9						
MACI				S	Sn	20 01 53.0	-0.2
	108nm,0.2s,SNR=7.9						
CGUI	Guimar, Teneri	1.53	68	P	Pn	20 01 37.4	+1.3
	20nm,0.1s,SNR=7.9						
CGUI				S	Sn	20 01 55.4	+0.4
	898nm,0.3s,SNR=7.9						
EBAJ	Bajamar	1.70	62	P	Pn	20 01 39.8	+1.5
	1.8nm,0.1s,SNR=10						
EBAJ				S	Sn	20 01 59.1	0.0
	124nm,0.2s						
EOSO	Osorio	2.23	81	P	Pn	20 01 48.0	+2.3
	4.3nm,0.1s,SNR=13						
EOSO				S	Sn	20 02 09.7	-2.6
	21nm,0.1s,SNR=7.9						
CGIN	Giniginamar, F	3.54	82	P	Pn	20 02 05.4	+1.9
	SNR=7.9						
CGIN				S	Sn	20 02 41.4	-3.0
	20nm,0.1s,SNR=7.9						
CFUE	Fuerteventura	3.74	75	P	Pn	20 02 08.6	+2.3
	6.3nm,0.2s,SNR=7.9						
CFUE				S	Sn	20 02 45.1	-4.3
	64nm,0.2s,SNR=7.9						
EFAM	Famara	4.21	70	P	Pn	20 02 14.7	+1.9
	2.9nm,0.1s,SNR=7.9						
EFAM				S	Sn	20 02 56.6	-4.4
	11nm,0.2s,SNR=7.9						
PMAR	Madeira	5.06	11	ePn	Pn	20 02 25.0	+0.3
PMAR				eSn	Sn	20 03 20.9	-1.3
PMAR				A	A	20 03 26.1	
	43nm,0.3s						
PMAR	Madeira	5.06	11	P	Pn	20 02 25.3	+0.6
PMAR				S	Sn	20 03 21.3	-0.9
PMOZ	Porto Moniz, M	5.11	8	ePn	Pn	20 02 26.7	+1.3
PMOZ				eSn	Sn	20 03 21.8	-1.6
PMOZ				A	A	20 03 26.1	
	69nm,0.3s						
PMOZ	Porto Moniz, M	5.11	8	P	Pn	20 02 27.6	+2.3
	22nm,0.2s,SNR=7.9						
PMOZ				S	Sn	20 03 21.6	-1.9
	103nm,0.3s,SNR=7.9						
PMOZ	Porto Moniz, M	5.11	8	P	Pn	20 02 26.6	+1.2
PMOZ				S	Sn	20 03 22.1	-1.3
PMPS	Porto Santo	5.50	15	ePn	Pn	20 02 32.4	+1.9
PMPS				eSn	Sn	20 03 30.9	-1.8
PMPS				A	A	20 03 36.3	
	11nm,0.2s						
PMPST	Porto Santo, M	5.52	15	ePn	Pn	20 02 32.3	+1.5
PMPST				eSn	Sn	20 03 32.6	-0.7
TANT	Tantan	6.06	82	P	Pn	20 02 40.9	+2.7
TANT				S	Sn	20 03 43.9	-2.7
TTIG	Tnine Tigouga,	8.85	69	P	Pn	20 03 19.8	+3.1
TTIG				S	Sn	20 04 55.1	-0.4
ZHG	ZHG	11.35	57	P	Pn	20 03 50.6	-0.3
ZHG				S	Sn	20 05 53.1	-3.6

ROM **07** *20:02:49.1±0.2, 43°.70N±0°.02×7°.80E±0°.02, h20^{km}±1^{km}, ML2.6/11, Error ellipse: s-maj=1.6km s-min=1.1km az=334.0*

LDG **07** *20:02:49.1±0.2, 43°.70N×7°.82E, h15^{km}, Md2.6/2, Ml2.4/22, Error ellipse: s-maj=3.0km s-min=1.9km az=154.0*

STR **07** *20:02:50.4±0.8, 44°N±3°×°±°, h0^{km}, MLv2.2/9, preliminary*

GEN **07** *20:02:50.3, 43°.71N×7°.81E, h11^{km}±3^{km}, Ml2.4*

ISC 07 20:02:48.5±0.8, **43°.69N**±0°.02×**7°.81E**±0°.02, **h17**^{km}, **n68**, σ**2**^{s}.**04**/116, **2C-4D, Near south coast of France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BURY	Giardini Botan	0.21	298	P	Pg	20 02 54.4	+1.0
BURY				S	Sg	20 02 57.5	+0.7
BURY	Giardini Botan	0.21	298	P	Pg	20 02 54.5	+1.0
BURY				S	Sg	20 02 57.5	+0.7
BURY				AML	AML		
	comp=E,2580μm,0.2s						
BURY				AML	AML		
	comp=N,3685μm,0.4s						
BURY				AML	AML		
	comp=E,2575μm,0.2s						
IMI	Imperia	0.23	14	P	Pg	20 02 55.1	+1.2
IMI				S	Sg	20 02 58.4	+0.8
IMI	Imperia	0.23	14	P	Pg	20 02 55.1	+1.2
IMI				S	Sg	20 02 58.3	+0.7
SBF	Sospel	0.33	303	ePg	Pg	20 02 56.3	+0.8
SBF				eSg	Sg	20 03 00.9	+0.7
	comp=E,509nm,0.2s						
ESCA	l'Escarene	0.35	295	Pg	Pg	20 02 56.5	+0.7
ESCA				Sg	Sg	20 03 01.9	+1.0
SAOF	Saorge	0.35	328	Pg	Pg	20 02 56.7	+0.7
SAOF				Sg	Sg	20 03 01.2	+0.2
SAOF	Saorge	0.35	328	P	Pg	20 02 56.6	+0.7
SAOF				S	Sg	20 03 01.2	+0.2
SAOF	Saorge	0.35	328	AML	AML		
	comp=N,2735μm,0.1s						
SAOF				AML	AML		
	comp=E,3880μm,0.2s						
MGRO	Montegrosso	0.36	359	P	Pg	20 02 57.0	+1.0
MGRO				S	Sg	20 03 01.9	+0.7
MGRO	Montegrosso	0.36	359	⇓P	Pg	20 02 57.0	+1.0
MGRO				S	Sg	20 03 01.9	+0.7
MGRO				AML	AML		
	comp=N,1405μm,0.2s						
MGRO				AML	AML		
	comp=E,1375μm,0.6s						
TURF	col de Turini	0.42	314	Pg	Pg	20 02 57.9	+0.8
TURF				Sg	Sg	20 03 03.4	+0.4
RORO	Rocca Rossa	0.47	23	P	Pg	20 02 58.9	+1.0
RORO				S	Sg	20 03 04.9	+0.6
RORO	Rocca Rossa	0.47	23	P	Pg	20 02 58.9	+1.0
RORO				S	Sg	20 03 04.8	+0.6
EILF	Villa Eilenroc	0.51	255	Pg	Pg	20 02 59.8	+1.0
EILF				Sg	Sg	20 03 06.6	+0.9
MVIF	Mont Vial	0.52	294	Pg	Pg	20 02 59.6	+0.6
GBOS	Grotte di Boss	0.56	2	P	Pg	20 03 00.5	+0.8
GBOS				S	Sg	20 03 07.4	+0.3
GBOS	Grotte di Boss	0.56	2	⇓P	Pg	20 03 00.5	+0.8
GBOS				S	Sg	20 03 07.5	+0.4
SPIF	crte de Spivo	0.56	312	Pg	Pg	20 03 00.3	+0.6
SPIF				Sg	Sg	20 03 07.5	+0.3
CANO	Canova, Maglio	0.61	30	P	Pg	20 03 01.5	+1.0
CANO				S	Sg	20 03 09.1	+0.5
ENR	Entracque	0.61	333	P	Pg	20 03 01.4	+0.7
ENR				S	Sg	20 03 08.7	-0.1
ENR	Entracque	0.61	333	⇓P	Pg	20 03 01.4	+0.7
ENR				S	Sg	20 03 08.9	0.0
ENR				AML	AML		
	comp=N,984μm,0.3s						
ENR				AML	AML		
	comp=E,910μm,0.7s						
CALF	Calern	0.65	276	Pg	Pg	20 03 02.2	+0.8
ISO	Isola	0.74	312	Pg	Pb	20 03 03.5	+0.5
ISO				Sg	Sg	20 03 12.6	-0.4
QLNO	Quiliano	0.75	31	⇑P	Pb	20 03 04.0	+0.9
QLNO				S	Sg	20 03 13.3	+0.3
QLNO				AML	AML		
	comp=E,236μm,1.0s						
QLNO				AML	AML		
	comp=N,483μm,0.3s						
FRF	La Foret Royal	0.86	262	ePg	Pb	20 03 05.2	+0.3
FRF				eSg	Sb	20 03 16.2	+0.1
	comp=N,70nm,0.2s						
PZZ	Stroppo	0.96	329	P	Pb	20 03 07.1	+0.3
PZZ				S	Sb	20 03 19.3	0.0
PZZ				AML	AML		
	comp=E,573μm,1.5s						
PZZ				AML	AML		
	comp=N,940μm,0.4s						
PCP	Piancastagn	1.01	31	P	Pb	20 03 07.7	+0.2
PCP				S	Sb	20 03 22.0	+1.5
PCP				AML	AML		

	comp=N,124μm,0.7s						
PCP				AML	AML		
	comp=E,170μm,1.4s						
SURF	**Saint Ours**	**1.07**	**318**	Pg	**Pb**	**20 03 09.6**	**+0.8**
SURF				Sg	**Sb**	**20 03 23.3**	**+0.7**
OGDI	**Digne**	**1.17**	**292**	Pg	**Pn**	**20 03 11.7**	**+1.5**
OGAG	**Argentiere**	**1.20**	**310**	Pg	**Pg**	**20 03 16.0**	**+4.4**
OGAG				Sg	**Sg**	**20 03 34.5**	**+7.2**
BHB	**Bricherasio**	**1.22**	**341**	⇓P	**Pn**	**20 03 10.1**	**-0.7**
BHB				S	**Sb**	**20 03 26.1**	**-0.6**
ROTM	**Rocchetta Tana**	**1.23**	**18**	⇑P	**Pb**	**20 03 13.0**	**+1.8**
ROTM				AML	AML		
	comp=E,452μm,0.6s						
ROTM				AML	AML		
	comp=N,608μm,0.3s						
MBDF	**Montbardon**	**1.28**	**325**	*e*Pg	**Pn**	**20 03 12.6**	**+0.8**
MBDF				*e*Sg	**Sb**	**20 03 29.3**	**+0.7**
	comp=N,144nm,0.4s						
MSSA	**Maissana**	**1.38**	**62**	P	**Pn**	**20 03 12.6**	**-0.5**
MONC	**Moncucco Torin**	**1.39**	**3**	P	**Pn**	**20 03 15.1**	**+1.9**
MONC				AML	AML		
	comp=E,245μm,0.9s						
MONC				AML	AML		
	comp=N,196μm,0.5s						
RRL	**Rocca Remolon**	**1.44**	**330**	P	**Pn**	**20 03 15.1**	**+1.1**
RRL				AML	AML		
	comp=N,71μm,0.5s						
RRL				AML	AML		
	comp=E,79μm,1.1s						
PLMA	**Palmaria, Port**	**1.52**	**75**	P	**Pn**	**20 03 15.8**	**+1.0**
GROG	**Isola di Gorgo**	**1.53**	**99**	P	**Pn**	**20 03 15.2**	**+0.1**
SMRF	**Simiane la Rot**	**1.65**	**281**	*e*P	**Pn**	**20 03 17.3**	**+0.6**
SMRF				*e*Sg	**Sb**	**20 03 41.3**	**+2.4**
	comp=E,10nm,0.2s						
CORF	**Corte**	**1.70**	**144**	P	**Pn**	**20 03 17.2**	**-0.2**
CORF				S	**Sn**	**20 03 37.0**	**-1.7**
ORIF	**Oris-en-Rattie**	**1.86**	**312**	*e*P	**Pn**	**20 03 20.7**	**+1.1**
ORIF	**Oris-en-Rattie**	**1.86**	**312**	*e*Pg	**Pb**	**20 03 23.5**	**+1.5**
ORIF				*e*Sg	**Sb**	**20 03 47.2**	**+2.2**
	comp=E,12nm,0.3s						
ORIF	**Oris-en-Rattie**	**1.86**	**312**	Pn	**Pb**	**20 03 23.5**	**+1.5**
AJAC	**Base Areonaval**	**1.89**	**158**	P	**Pn**	**20 03 20.2**	**+0.3**
SMPL	**Sampolo**	**1.92**	**145**	P	**Pn**	**20 03 20.1**	**-0.3**
SMPL				S	**Sn**	**20 03 42.8**	**-1.4**
CIRO	**Champorcher**	**1.93**	**355**	P	**Pn**	**20 03 20.1**	**-0.7**
CIRO				AML	AML		
	comp=N,39μm,1.6s						
CIRO				AML	AML		
	comp=E,23μm,1.1s						
LPG	**La Plagne**	**1.96**	**338**	*e*Pg	**Pb**	**20 03 25.2**	**+1.2**
LPG				*e*Sg	**Sb**	**20 03 51.2**	**+2.9**
	comp=E,8.8nm,0.3s						
LPL	**La Plagne**	**1.99**	**338**	*e*Pg	**Pb**	**20 03 25.6**	**+1.3**
LPL				*e*Sg	**Sb**	**20 03 51.8**	**+2.9**
	comp=E,11nm,0.3s						
CELB	**S.Piero in Cam**	**1.99**	**117**	P	**Pn**	**20 03 21.3**	**-0.1**
OGSM	**Saint Maurice**	**2.45**	**323**	Pn	**Pn**	**20 03 29.5**	**+1.9**
OSSC	**Osservatorio P**	**2.50**	**93**	P	**Pb**	**20 03 33.4**	**+0.4**
LASF	**Ste Croix**	**2.89**	**279**	*e*Pn	**Pn**	**20 03 33.1**	**-0.6**
LASF				*e*Sn	**Sn**	**20 04 04.5**	**-3.5**
	comp=E,1.3nm,0.2s						
MAGA	**Magasa**	**2.90**	**43**	S	**Sb**	**20 04 15.0**	**0.0**
CABF	**La Chapelle**	**3.17**	**338**	*e*P	**Pn**	**20 03 39.3**	**+1.6**
CABF				*e*Sn	**Sn**	**20 04 10.7**	**-4.4**
	comp=E,0.9nm,0.3s						
CABF				*e*Sg	**Sg**	**20 04 28.5**	**-1.8**
	comp=E,0.9nm,0.3s						
FRON	**Frontone**	**3.57**	**91**	S	**Sn**	**20 04 28.0**	**+3.0**
FDMO	**Fiordimonte**	**3.90**	**98**	S	**Sb**	**20 04 41.0**	**-2.7**
SMF	**Signal de Mont**	**4.08**	**318**	*e*P	**Pn**	**20 03 52.2**	**+2.1**
SMF				*e*Sn	**Sn**	**20 04 33.1**	**-4.4**
	comp=E,0.4nm,0.3s						
MTLF	**Montolieu**	**4.08**	**267**	*e*Pn	**Pn**	**20 03 50.2**	**0.0**
MTLF				*e*Sn	**Sn**	**20 04 33.1**	**-4.5**
	comp=E,0.7nm,0.2s						
HINF	**Hinteralfeld**	**4.19**	**351**	*e*P	**Pn**	**20 03 52.7**	**+1.1**
HINF				*e*Sn	**Sn**	**20 04 35.2**	**-4.9**
	comp=E,1.4nm,0.3s						
CAF	**Calviac**	**4.31**	**289**	*e*Pn	**Pn**	**20 03 53.3**	**0.0**
CAF				*e*Sn	**Sn**	**20 04 38.2**	**-4.9**
	comp=E,0.5nm,0.3s						
AVF	**Avril sur Loir**	**4.42**	**316**	*e*P	**Pn**	**20 03 56.7**	**+1.9**
AVF				*e*Sn	**Sn**	**20 04 42.6**	**-3.3**
	comp=E,0.2nm,0.2s						
HAU	**Haudompre**	**4.44**	**347**	*e*P	**Pn**	**20 03 56.1**	**+1.0**
HAU				*e*Sn	**Sn**	**20 04 41.4**	**-5.0**
	comp=E,2.9nm,0.3s						
LOR	**Lormes**	**4.54**	**324**	*e*P	**Pn**	**20 03 58.1**	**+1.7**
	baz=143						
LOR	**Lormes**	**4.54**	**324**	*e*Pg	**Pg**	**20 04 13.2**	**-2.1**
	baz=147						
LOR				*e*Sn	**Sn**	**20 04 44.2**	**-4.5**
	comp=E,0.7nm,0.3s,baz=155						
SSF	**Saint Saulge**	**4.54**	**320**	*e*P	**Pn**	**20 03 59.0**	**+2.6**
SSF				*e*Sn	**Sn**	**20 04 43.6**	**-5.2**
SSF				*e*Sg	**Sg**	**20 05 11.7**	**-2.5**
	comp=E,0.6nm,0.3s						
PAGF	**Fort de Pagny**	**5.08**	**344**	*e*P	**Pn**	**20 04 05.3**	**+1.4**
PAGF				*e*Sn	**Sn**	**20 04 57.6**	**-4.5**
	comp=E,0.4nm,0.2s						
SAVF	**Savonnieres en**	**5.27**	**340**	*e*P	**Pn**	**20 04 08.9**	**+2.4**
	baz=152						
SAVF				*e*Sn	**Sn**	**20 05 01.5**	**-5.3**
	comp=E,0.6nm,0.2s						

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*TUL **07** 20:10:55.8±0.9, 36.°94N±0.°02×97.°84W±0.°02, h2^{km}±7^{km}, ML3.0, mb_Lg2.5/23(NEIC), Error ellipse: s-maj=2.6km s-min=1.3km az=137.0*

NEIC 07 20:10:56.2±0.9**, 36.°92N**±0.°02×**97.°82W**±0.°02**, h3**^{km}±7^{km}**, Error ellipse: s-maj=2.7km s-min=1.4km az=136.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GC02	**Grant County #**	**0.08**	**204**		Pg	20 10 58.2	+0.4
GC02				Sg	Sg	20 10 59.7	+0.8
KAN14	**Manchester OK**	**0.12**	**287**		Pg	20 10 58.4	-0.3
KAN14				Sg	Sg	20 11 00.0	-0.2
KAN17	**Caldwell West**	**0.13**	**20**	Pg	Pg	20 10 58.8	0.0
KAN17				Sg	Sg	20 11 00.7	+0.2
KAN05	**Bluff City Nor**	**0.19**	**347**		Pg	20 10 59.7	-0.3
KAN01	**Argonia South**	**0.24**	**12**	Pg	Pg	20 11 00.6	-0.2
KAN01				Sg	Sg	20 11 03.8	-0.1
KAN09	**Caldwell North**	**0.27**	**37**	Pg	Pg	20 11 01.4	0.0
KAN09				Sg	Sg	20 11 05.1	+0.1
KAN13	**South Haven SW**	**0.29**	**72**		Pg	20 11 02.0	+0.2
KAN13				Sg	Sg	20 11 06.3	+0.7
KAN10	**Anthony SW Sta**	**0.30**	**312**		Pg	20 11 01.6	-0.4
KAN10				Sg	Sg	20 11 05.5	-0.4
KAN06	**Argonia West S**	**0.33**	**355**		Pg	20 11 02.2	-0.3
KAN08	**Anthony NE Sta**	**0.33**	**338**		Pg	20 11 02.2	-0.4
OK032	**Salt Plains WL**	**0.34**	**249**		Pg	20 11 02.4	-0.3
OK032				Sg	Sg	20 11 07.0	-0.1
KAN16	**Harper SW Stat**	**0.36**	**327**	Pg	Pg	20 11 02.8	-0.4
KS20	**Mayfield South**	**0.37**	**35**		Pg	20 11 03.3	-0.2
KS20				Sg	Sg	20 11 08.3	0.0
KAN12	**Harper NE Stat**	**0.40**	**339**		Pg	20 11 03.5	-0.5
CROK	**Carrier**	**0.44**	**198**	Pg	Pg	20 11 04.7	+0.1
BLOK	**Blackwell**	**0.51**	**108**	Pg	Pg	20 11 06.2	+0.2
T35A	**Sooner Cattle**	**1.05**	**90**		Pg	20 11 15.8	-0.5
U32A	**Winter Ranch,**	**1.09**	**241**	Pg	Pg	20 11 16.6	-0.6
OK029	**Liberty Lake**	**1.16**	**165**	Pg	Pg	20 11 18.0	-0.5
QUOK	**Quay**	**1.17**	**130**	Pg	Pg	20 11 18.1	-0.5
OK031	**S. Brethren Rd**	**1.25**	**140**	Pg	Pg	20 11 19.7	-0.4
BCOK	**Bluff Creek, N**	**1.27**	**172**	Pg	Pg	20 11 19.8	-0.8
OK030	**Cody Creek RV**	**1.30**	**140**		Pg	20 11 20.6	-0.5
OK025	**Westminster Rd**	**1.39**	**164**	Pn	Pn	20 11 22.3	-0.2
OKCFA	**Oklahoma City**	**1.53**	**169**		Pn	20 11 24.5	0.0
OKCFA				IAmb_Lg		20 11 47.7	
	comp=Z,33nm,0.9s						
OKCSW	**OKLAHOMA CITY**	**1.54**	**168**	Pn	Pn	20 11 24.7	+0.1
R32A	**Long Quarter,**	**1.66**	**335**	Pn	Pn	20 11 25.7	-0.5
FNO	**Franklin**	**1.70**	**168**		Pn	20 11 26.7	0.0
FNO				IAmb_Lg		20 11 52.1	
	comp=Z,27nm,0.7s						
TUL1	**Leonard**	**1.92**	**121**		Pn	20 11 30.3	+0.5
WMOK	**Wichita Mounta**	**2.31**	**200**		Pn	20 11 35.8	+0.6
X34A	**Smith Ranch, M**	**2.32**	**180**		Pb	20 11 37.0	-1.6
KSU1	**Kansas State U**	**2.38**	**23**		Pn	20 11 35.7	-0.4
KSU1				IAmb_Lg		20 12 11.0	
	comp=Z,26nm,0.8s						
CBKS	**Cedar Bluff**	**2.42**	**322**	Pn	Pn	20 11 37.2	+0.5
U38A	**Gravette**	**2.80**	**99**	Pn	Pn	20 11 42.4	+0.5
X37A	**Clayton**	**3.06**	**139**		Pn	20 11 45.4	-0.1
HHAR	**Hobbs**	**3.19**	**100**	IAmb_Lg		20 12 43.1	
	comp=Z,15nm,0.8s						
S39A	**Bolivar**	**3.67**	**77**	Pn	Pn	20 11 53.4	-0.3
S39A				IAmb_Lg		20 12 52.7	
	comp=Z,7.3nm,0.7s						
W39A	**Magazine**	**3.70**	**117**		Pn	20 11 55.5	+1.3
W39A				IAmb_Lg		20 12 57.1	
	comp=Z,14nm,0.8s						
AMTX	**Amarillo**	**3.74**	**238**	Pn	Pn	20 11 55.1	+0.3
AMTX				IAmb_Lg		20 12 57.6	
	comp=Z,7.9nm,0.7s						
U40A	**Yellville**	**4.03**	**97**	Pn	Pn	20 11 59.4	+0.6
MIAR	**Mount Ida**	**4.19**	**123**	Pn	Pn	20 12 02.2	+1.2
P38A	**Dawn**	**4.32**	**50**	Pn	Pn	20 12 02.7	-0.1
P38A				IAmb_Lg		20 13 11.4	
	comp=Z,7.4nm,0.7s						
KSCO	**Kaye Shedlock’**	**4.33**	**300**	IAmb_Lg		20 13 18.5	
	comp=Z,9.4nm,0.7s						
ABTX	**Abilene, Hawle**	**4.54**	**200**	IAmb_Lg		20 13 22.2	
	comp=Z,4.7nm,0.7s						
R40A	**Maddies Statio**	**4.62**	**71**	Pn	Pn	20 12 07.3	+0.5
X40A	**Basin Creek Fa**	**4.73**	**119**	Pn	Pn	20 12 09.4	+1.0
X40A				IAmb_Lg		20 13 25.9	
	comp=Z,7.5nm,0.7s						
P40A	**Paris**	**5.24**	**58**	IAmb_Lg		20 13 52.7	
	comp=Z,12nm,1.2s						
PBMO	**Poplar Bluff**	**5.93**	**89**	IAmb_Lg		20 14 04.6	
	comp=Z,11nm,0.8s						

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*ISK **07** 20:30:13.3, 36.°63N×28.°16E, h69^{km}±1^{km}, ML2.9/20*

*DDA **07** 20:30:14.0, 36.°71N×28.°11E, h59^{km}±5^{km}, ML2.7*

*NIC **07** 20:30:15.6±0.0, 36.°15N×28.°40E, h66^{km}±2^{km}, Ml3.4/2*

ISC 07 20:30:12.7±1.3**, 36.°60N**±0.°04×**28.°16E**±0.°03**, h73**^{km}±7^{km}**, n47,** σ**1.^{s}00**/66**, 1C, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRSB	**Marmaris-Mugla**	**0.12**	**13**	PG	**Pn**	**20 30 24.0**	**+0.5**
TURN	**Turunc**	**0.18**	**21**	*i* P	**Pn**	**20 30 24.0**	**+0.4**
TURN				*i* S	**Sn**	**20 30 30.3**	**-1.3**
TURN				IAML		20 30 32.0	
	comp=N,798nm,0.3s						
TURN				IAML		20 30 32.0	
	comp=E,2μm,0.2s						
TURN	**Turunc**	**0.18**	**21**	PG	**Pn**	**20 30 24.3**	**+0.7**
TURN				SG	**Sn**	**20 30 31.5**	**-0.1**
ARG	**Arkhangelos**	**0.39**	**185**	PG	**Pn**	**20 30 25.8**	**+0.9**
ARG	**Arkhangelos**	**0.39**	**185**	P	**Pn**	**20 30 25.6**	**+0.7**
ARG				S	**Sn**	**20 30 34.2**	**+0.4**
DALY	**Dalyan (Mula)**	**0.45**	**61**	*i* P	**Pn**	**20 30 25.9**	**+0.6**
DALY				*i* S	**Sn**	**20 30 34.4**	**-0.2**
DALY				IAML		20 30 35.0	
	comp=N,1μm,0.2s						
DALY	**Dalyan (Mula)**	**0.45**	**61**	PG	**Pn**	**20 30 26.2**	**+0.9**
DALY				SG	**Sn**	**20 30 34.8**	**+0.2**
DAT	**Datca**	**0.49**	**285**	*i* P	**Pn**	**20 30 25.9**	**+0.1**
DAT				*i* S	**Sn**	**20 30 34.2**	**-1.3**
DAT				IAML		20 30 36.0	
	comp=N,235nm,0.2s						
DAT	**Datca**	**0.49**	**285**	PG	**Pn**	**20 30 26.2**	**+0.3**
DAT				SG	**Sn**	**20 30 35.5**	**0.0**
YER	**Yerkesik**	**0.54**	**10**	PG	**Pn**	**20 30 27.5**	**+1.2**
MULA	**Mugla, Merkez-**	**0.66**	**11**	*i* P	**Pn**	**20 30 28.6**	**+1.0**
MULA				*i* S	**Sn**	**20 30 38.8**	**+0.3**
BDRM	**Kayabasi**	**0.74**	**309**	*i* P	**Pn**	**20 30 27.7**	**-0.6**
BDRM				*i* P	**Pn**	**20 30 27.9**	**-0.4**
BDRM				*i* S	**Sn**	**20 30 37.5**	**-2.3**
BDRM				*i* S	**Sn**	**20 30 38.4**	**-1.4**
BDRM				IAML		20 30 40.0	
	comp=N,328nm,0.3s						
BDRM				IAML		20 30 40.0	
	comp=E,238nm,0.2s						
BDRM				IAML		20 30 40.0	
	comp=E,246nm,0.2s						
FETY	**Fethiye**	**0.74**	**87**	PG	**Pn**	**20 30 28.9**	**+0.6**
MLSB	**Milas**	**0.76**	**336**	PG	**Pn**	**20 30 29.4**	**+0.8**
BODT	**Bodrum**	**0.82**	**304**	PG	**Pn**	**20 30 30.0**	**+0.7**
YKAV	**Yalikavak-Bodr**	**0.88**	**306**	PG	**Pn**	**20 30 30.5**	**+0.6**
KOSK	**Kos Island**	**0.96**	**279**	PG	**Pn**	**20 30 32.1**	**+1.2**
CAME	**Cameli-Denizli**	**0.97**	**69**	PG	**Pn**	**20 30 32.1**	**+0.9**
TAVA	**DENIZLI_Tavas**	**1.05**	**35**	*i* P	**Pn**	**20 30 31.8**	**-0.3**
TAVA				*i* S	**Sn**	**20 30 46.0**	**-0.6**
CAEL	**Denizli, Camel**	**1.06**	**60**	*i* P	**Pn**	**20 30 32.9**	**+0.6**
CAEL				*i* S	**Sn**	**20 30 48.0**	**+1.1**
CAEL				IAML		20 30 59.0	
	comp=N,162nm,1.0s						
AYDN	**Tasoluk**	**1.08**	**348**	*i* P	**Pn**	**20 30 33.5**	**+1.0**
AYDN				*i* S	**Sn**	**20 30 47.8**	**+0.7**
DDIM	**Aydin, Didim**	**1.13**	**319**	*i* P	**Pn**	**20 30 33.4**	**+0.4**
DDIM				IAML		20 30 47.0	
	comp=N,106nm,1.7s						
DDIM				*i* S	**Sn**	**20 30 47.5**	**-0.5**
AKAS	**Kas**	**1.22**	**107**	*i* P	**Pn**	**20 30 34.9**	**+0.6**
AKAS	**Kas**	**1.22**	**107**	PN	**Pn**	**20 30 34.7**	**+0.4**
KSL	**Kastellorizon**	**1.23**	**111**	P	**Pn**	**20 30 33.7**	**-0.6**
KSL				S	**Sn**	**20 30 47.5**	**-2.9**
GCAM	**G?zelcaml?**	**1.32**	**326**	*i* P	**Pn**	**20 30 36.1**	**+0.6**
GCAM				*i* S	**Sn**	**20 30 51.7**	**-0.8**
GCAM				IAML		20 30 53.0	
	comp=N,116nm,0.2s						
GCAM				IAML		20 30 54.0	
	comp=E,335nm,0.2s						
GCAM	**G?zelcaml?**	**1.32**	**326**	PN	**Pn**	**20 30 36.4**	**+0.9**
AYDB	**Zeytinkoy-Aydi**	**1.36**	**351**	PN	**Pn**	**20 30 36.9**	**+0.8**
ELL	**Elmali**	**1.41**	**84**	PN	**Pn**	**20 30 38.1**	**+1.4**
DEMR	**Demre-Antalya**	**1.45**	**104**	PN	**Pn**	**20 30 38.4**	**+1.2**
DGB	**zmir**	**1.77**	**325**	*i* P	**Pn**	**20 30 40.8**	**-0.5**
KORT	**Korkueli**	**1.80**	**77**	*i* P	**Pn**	**20 30 43.8**	**+2.0**
KORT	**Korkueli**	**1.80**	**77**	PN	**Pn**	**20 30 43.1**	**+1.2**
BRDR	**BURDUR-Merkez**	**1.87**	**54**	*i* P	**Pn**	**20 30 43.4**	**+0.7**
MANT	**Manisa**	**1.91**	**9**	*i* P	**Pn**	**20 30 43.2**	**-0.2**
MANT				*i* S	**Sn**	**20 31 05.3**	**-1.5**
KULA	**Kula-Manisa**	**1.95**	**12**	PN	**Pn**	**20 30 44.6**	**+0.8**
BLCB	**Balcova**	**1.99**	**334**	PN	**Pn**	**20 30 44.9**	**+0.6**
BASM	**Basmaki-Afyon**	**2.00**	**48**	PN	**Pn**	**20 30 45.7**	**+1.2**
ANTB	**Antalya**	**2.02**	**81**	PN	**Pn**	**20 30 46.5**	**+1.8**
BCK	**Bucak**	**2.12**	**65**	PN	**Pn**	**20 30 47.5**	**+1.4**
URLA	**Izmir**	**2.15**	**325**	PN	**Pn**	**20 30 47.3**	**+0.8**
ZKR	**Zakros**	**2.17**	**227**	P	**Pn**	**20 30 48.4**	**+1.6**
ZKR				S	**Sn**	**20 31 13.7**	**+0.9**
AKMS	**Akamas**	**3.74**	**114**	⇑*e*P	**Pn**	**20 31 07.7**	**-0.4**
AKMS				AML	AML	20 31 49.1	
	comp=E,0.3nm,0.9s						
AKMS				AML	AML	20 31 49.5	
	comp=E,0.3nm,0.4s						
ALFC	**Alefka**	**3.88**	**111**	P	**Pn**	**20 31 09.4**	**-0.6**
ALFC				AML	AML	20 31 53.0	
	comp=E,0.1nm,0.2s						
ALFC				AML	AML	20 31 53.3	
	comp=E,0.1nm,0.3s						
NATA	**Nata**	**4.02**	**116**	P	**Pn**	**20 31 11.7**	**-0.3**
CSS	**Mathiatis**	**4.51**	**110**	P	**Pn**	**20 31 17.8**	**-0.8**
ASGA	**Asgata**	**4.52**	**112**	P	**Pn**	**20 31 18.1**	**-0.6**

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*BJI **07** 20:57:48.0±0.0, 10.°30S×111.°20E, h10^{km}, mB5.1/40, mb5.1/68, Ms4.6/33, Ms7 4.3/35*

*IDC **07** 20:57:49.2±0.3, 10.°14S×111.°24E, h0^{km}, mb4.9/29, mb1 4.9/32, mb1mx4.9/34, mbtmp4.9/32, ML4.8/3, MS4.0/23, Ms1 4.0/23, ms1mx3.9/31, Error ellipse: s-maj=13.6km s-min=10.2km az=67.0*

*NEIC **07** 20:57:51.8±2.7, 10.°18S±0.°06×111.°20E±0.°06, h10^{km}±1^{km}, mb5.3/119, Mww5.0, Error ellipse: s-maj=10.6km s-min=9.1km az=224.0*

*DJA **07** 20:57:52.6±0.7, 10°S±2°×11°1E±°, h17^{km}±5^{km}, M5.0/77, mB5.5/47, mb5.3/77, MLv5.5/25, Mw(mB)5.0/47, MwMwp4.8/4, Mwp5.1/4*

*GCMT **07** 20:57:53.8±0.3, 10.°34S±0.°02×111.°26E±0.°03, h24^{km}, MW4.9/79, Moment Tensor Solution. s39,c55; s79,c111; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.62±.15; $M_{\theta\theta}$3.16±.09; $M_{\phi\phi}$-0.53±.11; $M_{r\theta}$-0.38±.12; $M_{\theta\phi}$-0.41±.07; $M_{\phi r}$-0.09±.20; Best double couple: $M_0$2.94000×10^{16} NP1:ϕ_s280.00000°, δ41.00000°, λ-85.00000°. NP2: ϕ_s93.00000°, δ49.00000°, λ-95.00000°. Principal axes: T 3.2290, Plg4.0000°, Azm186.0000°; N -0.5730, Plg4.0000°, Azm96.0000°; P -2.6520, Plg85.0000°, Azm322.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MOS **07** 20:57:53.1±1.1, 10.°01S×111.°27E, h35^{km}, mb5.4/34, MS4.4/5 Error ellipse: s-maj=8.3km s-min=4.9km az=117.9*

*NEIC **07** 20:57:54, 10.°29S×111.°16E, h18^{km}, Moment Tensor Solution. Duration: 8.^{s}0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.08; $M_{\theta\theta}$2.58; $M_{\phi\phi}$-0.50; $M_{r\theta}$-1.79; $M_{\theta\phi}$-0.50; $M_{\phi r}$1.54; Fault plane solution: $M_0$3.38000×10^{16} NP1: ϕ_s255.00000°, δ29.00000°, λ-132.00000°. NP2: ϕ_s122.00000°, δ69.00000°, λ-69.00000°. Principal axes: T 3.4448, Plg21.0000°, Azm196.0000°; N -0.1258, Plg20.0000°, Azm294.0000°; P -3.3189, Plg61.0000°, Azm63.0000°;*

ISC 07 20:57:52.3±0.6**, 10.°16S**±0.°03×**111.°18E**±0.°03**, h19**^{km}±2^{km}**, n619,** σ**1.^{s}39**/647**, mb5.2**/156**, MS4.1**/33**, 23C-59D, Fault plane solution: NP1:**ϕ_s310.12134°**,** δ24.18721°**,** λ-98.67098°. **NP2:**ϕ_s139.61224°**,** δ66.10659°**,** λ-86.12620°. **Principal axes:** T Plg21.0159°**,** Azm226.6788°**;** N Plg3.5414°**,** Azm318.0412°**;** P Plg68.6596°**,** Azm57.1554°**; Fault plane solution: NP1:**ϕ_s85.38635°**,** δ47.91744°**,** λ-74.48846°. **NP2:** ϕ_s242.89108°**,** δ44.34474°**,** λ-106.49689°. **Principal axes:** T Plg1.8213°**,** Azm164.4803°**;** N Plg11.4483°**,** Azm254.8493°**;** P Plg78.4039°**,** Azm65.5658°**; South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCJI	**Pacitan**	**1.95**	**360**	P	**Pn**	**20 58 25.1**	**+0.6**
PCJI				S	**Sn**	**20 58 48.7**	**+0.2**
UGM	**Wanagama**	**2.33**	**344**	P	**Pn**	**20 58 30.8**	**+1.2**
UGM				S	**Sn**	**20 58 59.4**	**+1.7**
UGM	**Wanagama**	**2.33**	**344**		**Pn**	**20 58 30.7**	**+1.0**
UGM				Sn	**Sn**	**20 58 59.4**	**+1.7**
UGM	**Wanagama**	**2.33**	**344**	P	**Pn**	**20 58 30.9**	**+1.3**
YOGI	**Yogyakarta**	**2.49**	**339**	P	**Pn**	**20 58 32.5**	**+0.7**
NGJI	**Ngawi**	**2.79**	**6**	P	**Pb**	**20 58 40.2**	**-1.4**
NGJI				S	**Sb**	**20 59 14.9**	**-0.5**
GMJI	**Gumukmas**	**2.92**	**50**	P	**Pn**	**20 58 38.4**	**+0.7**
GMJI				S	**Sn**	**20 59 11.9**	**-0.4**
SMRI	**Semarang**	**3.18**	**347**	P	**Pn**	**20 58 43.9**	**+2.6**
SMRI				S	**Sb**	**20 59 23.5**	**-3.1**
SMRI	**Semarang**	**3.18**	**347**		**Pn**	**20 58 43.6**	**+2.3**
SMRI	**Semarang**	**3.18**	**347**	P	**Pn**	**20 58 44.1**	**+2.8**
JAGI	**Jajag, Banyuwa**	**3.38**	**60**	P	**Pn**	**20 58 45.3**	**+1.2**
JAGI				S	**Sn**	**20 59 21.9**	**-1.8**
JAGI	**Jajag, Banyuwa**	**3.38**	**60**		**Pn**	**20 58 45.0**	**+0.8**
JAGI	**Jajag, Banyuwa**	**3.38**	**60**	P	**Pn**	**20 58 45.9**	**+1.8**
BLJI	**Banyuglugur**	**3.38**	**45**	P	**Pn**	**20 58 46.6**	**+2.4**
BLJI				S	**Sn**	**20 59 24.8**	**+1.0**
KPJI	**Karang Pucung**	**3.58**	**321**	P	**Pn**	**20 58 49.4**	**+2.5**
CMJI	**Cimerak**	**3.59**	**311**	P	**Pn**	**20 58 47.4**	**+0.5**
CMJI				S	**Sn**	**20 59 27.8**	**-1.0**
ABJI	**Asem Bagus**	**3.83**	**52**	P	**Pn**	**20 58 53.2**	**+3.0**
ABJI				S	**Sn**	**20 59 36.5**	**+1.8**
IGBI	**Denpasar**	**4.13**	**71**	P	**Pn**	**20 58 56.2**	**+1.7**
IGBI				S	**Sn**	**20 59 40.6**	**-1.7**
KMMI	**Kalianget**	**4.14**	**42**	P	**Pn**	**20 58 55.4**	**+0.8**
CISI	**Cisompet, Garu**	**4.21**	**308**	P	**Pn**	**20 58 56.2**	**+0.6**
CISI	**Cisompet, Garu**	**4.21**	**308**		**Pn**	**20 58 55.9**	**+0.2**
CISI	**Cisompet, Garu**	**4.21**	**308**	P	**Pn**	**20 58 58.2**	**+2.6**
DNP	**Denpasar**	**4.24**	**70**	P	**Pn**	**20 58 58.5**	**+2.6**
DNP				S	**Sn**	**20 59 46.9**	**+1.9**
SRBI	**Singaraja**	**4.49**	**63**	P	**Pn**	**20 59 01.7**	**+2.4**
BWJI	**Bawean**	**4.53**	**19**	P	**Pn**	**20 59 00.9**	**+1.0**
LEM	**Lembang**	**4.84**	**313**	Pn	**Pn**	**20 59 06.7**	**+2.4**
	13nm,0.3s,baz=54,slow=9.6,SNR=23						
LEM				Sn	**Sn**	**21 00 00.2**	**+0.3**
	28nm,0.3s,baz=256,slow=20,SNR=5.7						
LEM				LR	LR	21 01 36.9	
	comp=Z,3μm,19.1s,baz=182,slow=47						
LEM	**Lembang**	**4.84**	**313**	P	**Pn**	**20 59 06.4**	**+2.1**
CNJI	**Cibinong**	**4.91**	**305**	P	**Pn**	**20 59 06.2**	**+1.1**
XMI	**Christmas Isla**	**5.41**	**266**	P	**Pn**	**20 59 15.1**	**+3.0**
	302nm,0.8s						
XMIS	**Christmas Isla**	**5.45**	**266**		**Pn**	**20 59 11.6**	**-1.0**
DBJI	**Dramaga**	**5.66**	**309**	P	**Pn**	**20 59 18.7**	**+3.2**
	1.9nm4μm227nm,1.1s						
TWSI	**Taliwang, Sumb**	**5.80**	**76**	P	**Pn**	**20 59 18.9**	**+1.5**
	4.5nm10μm565nm,0.7s						
SBJI	**Serang**	**6.41**	**308**	P	**Pn**	**20 59 27.6**	**+1.8**
CGJI	**Cibinong**	**6.47**	**303**	P	**Pn**	**20 59 28.3**	**+1.7**
	1.4nm6μm274nm,0.4s						
PLAI	**Plampang**	**6.64**	**79**	P	**Pn**	**20 59 30.1**	**+1.1**
	4.1nm2μm9μm971nm,0.6s						
PLAI	**Plampang**	**6.64**	**79**	P	**Pn**	**20 59 30.9**	**+1.9**
PBKI	**Pangkalan Bun**	**7.42**	**4**	P	**Pn**	**20 59 42.4**	**+2.7**
	1.4nm4μm405nm,0.9s						
BLSI	**Bandar Lampung**	**7.57**	**309**	P	**Pn**	**20 59 45.6**	**+3.9**
BBKI	**Banjar Baru**	**7.58**	**29**	P	**Pn**	**20 59 44.7**	**+2.8**
	1.0nm4μm308nm,0.7s						
KASI	**Kota Agung**	**8.07**	**304**	P	**Pn**	**20 59 50.1**	**+1.6**
	2μm95nm,0.6s						
WBSI	**Waikabubak, Su**	**8.11**	**87**	P	**Pn**	**20 59 46.2**	**-2.9**
	3μm280nm,0.6s						
KLSI		**8.39**	**310**	P	**Pn**	**20 59 55.0**	**+2.0**
	27nm,0.9s						
KBKI	**Kotabaru**	**8.43**	**36**	P	**Pn**	**20 59 55.4**	**+1.9**
	1μm146nm,0.7s						
LWLI	**Liwa**	**8.71**	**305**	P	**Pn**	**20 59 59.4**	**+1.9**
	3μm154nm,0.6s						
MDSI	**Maura Dua**	**8.94**	**309**	P	**Pn**	**21 00 02.2**	**+1.6**
	32nm,1.0s						
WSI	**Waingapu**	**9.00**	**88**	P	**Pn**	**21 00 02.8**	**+1.5**
	99μm644nm,0.5s						
BASI	**Baing, Sumba**	**9.25**	**91**	P	**Pn**	**21 00 06.1**	**+1.3**
	2μm163nm,0.5s						
PMBI	**Palembang**	**9.60**	**318**	Pn	**Pn**	**21 00 11.7**	**+2.2**
LHSI	**Lahat**	**9.87**	**309**	P	Pn	21 00 31.3	+18
KAPI	**Kappang**	**9.91**	**60**	Pn	**Pn**	**21 00 14.9**	**+1.0**
	3.5nm,0.3s,baz=266,slow=14,SNR=13						
KAPI				Sn	**Sn**	**21 02 00.4**	**-4.4**
	5.0nm,0.3s,baz=270,slow=20,SNR=3.1						
KAPI				LR	LR	21 04 24.2	
	comp=Z,437nm,21.1s,baz=274,slow=40						
KAPI	**Kappang**	**9.91**	**60**	P	**Pn**	**21 00 14.7**	**+0.8**
KAPI	**Kappang**	**9.91**	**60**		**Pn**	**21 00 14.7**	**+0.8**
KAPI	**Kappang**	**9.91**	**60**	P	**Pn**	**21 00 16.0**	**+2.1**
MNAI	**Manna**	**9.99**	**305**	P	**Pn**	**21 00 16.0**	**+1.1**
	280nm,1.0s						
MNAI	**Manna**	**9.99**	**305**	Pn	**Pn**	**21 00 15.7**	**+0.8**
BSSI	**Bau Bau, Buton**	**10.04**	**67**	P	**Pn**	**21 00 17.5**	**+1.8**
	2μm166nm,0.7s						
BKSI	**Bulukumba**	**10.08**	**62**	P	**Pn**	**21 00 17.8**	**+1.6**
	2μm216nm,0.6s						
STKI	**Sintang**	**10.16**	**2**	P	**Pn**	**21 00 20.7**	**+3.4**
	80nm,1.0s						
EDFI	**Ende, Flores**	**10.46**	**83**	P	**Pn**	**21 00 20.3**	**-1.2**
	1μm82nm,0.5s						
KSI	**Kapahiang**	**10.70**	**307**	P	**Pn**	**21 00 25.7**	**+1.0**
	3μm244nm,0.6s						
MMRI	**Maumere**	**11.02**	**83**	P	**Pn**	**21 00 27.8**	**-1.2**
	3μm260nm,0.7s						
MMRI	**Maumere**	**11.02**	**83**		**Pn**	**21 00 27.3**	**-1.7**
MMRI	**Maumere**	**11.02**	**83**	P	**Pn**	**21 00 29.6**	**+0.6**
TTSI	**Tana Toraja**	**11.12**	**51**	P	Pn	21 00 36.0	+5.7
	1μm86nm,1.0s						
MASI	**Maura Aman, Be**	**11.29**	**308**	P	**Pn**	**21 00 33.5**	**+0.7**
	2μm286nm,1.0s						
DSRI	**Dabo**	**11.65**	**325**	P	Pn	21 00 52.9	+15
BATI	**Baumata**	**12.29**	**91**	Pn	**Pn**	**21 00 45.3**	**-1.2**
	30nm,0.3s,baz=289,slow=12,SNR=21						
BATI				Sn	Sn	21 02 49.8	-13
	16nm,0.3s,baz=274,slow=15,SNR=1.9						
BATI	**Baumata**	**12.29**	**91**	P	**Pn**	**21 00 46.1**	**-0.3**
	1μm140nm,0.7s						
GIRL	**Giralia**	**12.75**	**167**		**Pn**	**21 00 48.8**	**-3.9**
GIRL	**Giralia**	**12.75**	**167**	P	**Pn**	**21 00 51.2**	**-1.5**
	412nm,1.0s						
SOEI	**Soe**	**12.90**	**89**	P	**Pn**	**21 00 54.2**	**-0.7**
	2μm264nm,0.7s						
SOEI	**Soe**	**12.90**	**89**		**Pn**	**21 00 53.7**	**-1.2**
SOEI	**Soe**	**12.90**	**89**	P	**Pn**	**21 00 57.3**	**+2.4**
MPSI	**Mapaga**	**13.57**	**40**	P	**Pn**	**21 01 06.0**	**+2.1**
	930nm87nm,0.8s						
APSI	**Ampana**	**13.88**	**49**	P	**P**	**21 01 14.1**	**-2.3**
	730nm73nm,1.1s						
PSA00	**Pilbara Seismi**	**14.07**	**145**		Pn	21 01 04.8	-5.9
PDSI	**Padang**	**14.07**	**310**	P	**P**	**21 01 18.6**	**+0.1**

LUWI	Luwuk	14.66	53	P	P	21 01 22.3	-2.7
	177nm,1.0s						
LUWI	Luwuk	14.66	53		Pn	21 01 18.6	-0.2
LUWI	Luwuk	14.66	53	P	P	21 01 22.3	-2.7
	179nm,1.1s						
TOLI2	Tolitoli	14.72	41		Pn	21 01 20.1	+0.4
TOLI2	Tolitoli	14.72	41	P	P	21 01 23.2	-2.5
MRSI	Marisa	15.04	46	P	P	21 01 28.8	-0.5
	2µm157nm,1.0s						
MNSI	Mandailing Nat	15.87	313	P	Pn	21 01 31.1	-3.7
	34nm,0.8s						
GTOI	Gorontalo	15.93	48	P	Pn	21 01 36.8	+1.3
	696nm102nm,0.8s						
FITZ	Fitzroy Crossi	16.08	121	Pn	Pn	21 01 35.1	-2.4
	3.4nm,0.3s,baz=315,slow=11,SNR=80						
FITZ				Sn	Sn	21 04 14.3	-21
	1.5nm,0.3s,baz=13,slow=21,SNR=6.1						
FITZ				LR	LR	21 08 13.7	
	comp=Z,579nm,19.2s,baz=302,slow=39						
FITZ	Fitzroy Crossi	16.08	121		Pn	21 01 34.0	-3.6
FITZ	Fitzroy Crossi	16.08	121	P	Pn	21 01 35.7	-1.8
	61nm,0.9s						
KMSI	Cibinong	16.61	51	P	P	21 01 48.7	+2.0
	3µm214nm,0.8s						
SANI	Sanana	16.77	62	P	P	21 01 47.8	-0.7
	841nm68nm,0.9s						
SANI	Sanana	16.77	62	P	P	21 01 48.2	-0.3
RPSI	Rantau Prapat	17.67	316	P	Pn	21 01 56.1	-1.4
GSI	Gunungsitoli	17.70	309	Pn	Pn	21 01 53.8	-4.1
IPM	Ipoh	17.72	325	P	Pn	21 01 58.0	-0.1
PSI	Prapat	17.74	316	P	Pn	21 01 56.1	-2.4
	0.4nm,0.3s,baz=129,slow=8.0,SNR=1.9						
PSI				S	Sn	21 05 07.3	-8.7
	0.3nm,0.3s,baz=104,slow=19,SNR=1.1						
KNRA	Kununurra	17.99	110	P	Pn	21 02 00.7	-0.8
	baz=18,SNR=46						
KNRA	Kununurra	17.99	110	P	Pn	21 02 00.4	-1.1
KNRA	Kununurra	17.99	110	P	P	21 02 02.3	+0.4
	58nm,1.5s						
KULM	Kulim	18.59	325	P	P	21 02 08.0	-0.6
LBMI	Labuha	18.79	61	P	Pn	21 02 12.2	+0.9
	804nm78nm,0.9s						
MSAI	Masohi	18.87	70	P	Pn	21 02 17.4	+5.1
TPTI		19.29	313	P	P	21 02 14.0	-2.2
	4.7nm,1.0s						
MORW	Morawa	19.35	167	P	P	21 02 16.0	-0.8
	baz=19,SNR=28						
MORW	Morawa	19.35	167	P	P	21 02 15.2	-1.6
MORW	Morawa	19.35	167	P	P	21 02 16.4	-0.4
	82nm,1.0s						
BNDI	Bandanaira	19.39	75	P	P	21 02 17.5	+0.1
	532nm,1.1s						
BNDI	Bandanaira	19.39	75	P	Pn	21 02 17.9	-0.6
TNTI	Ternate	19.43	57	P	P	21 02 18.2	+0.4
	904nm62nm,1.0s						
TNTI	Ternate	19.43	57	P	P	21 02 17.3	-0.4
TNTI	Ternate	19.43	57	P	Pn	21 02 20.4	+1.4
DRS	Darwin Rock St	19.47	99	P	Pn	21 02 19.5	0.0
	56nm,0.7s						
MTN	Manton Dam	19.73	100	P	P	21 02 20.3	-0.8
	baz=20,SNR=11						
MTN	Manton Dam	19.73	100	P	P	21 02 19.3	-1.7
MTN				IAmb	IAmb	21 02 48.9	
	comp=Z,57nm,0.6s						
MTN	Manton Dam	19.73	100	P	Pn	21 02 23.0	+0.4
	comp=Z,104nm,0.6s						
BLDU	Ballidu	20.99	167	P	P	21 02 35.1	+0.5
	baz=21,SNR=11						
BLDU	Ballidu	20.99	167	P	P	21 02 35.8	+1.2
	comp=Z,123nm,1.0s						
KDU	Kakadu	21.02	99	P	P	21 02 34.7	-0.4
	baz=21,SNR=23						
KDU	Kakadu	21.02	99	P	P	21 02 34.7	-0.4
	comp=Z,55nm,0.8s						
PPR	Puerto Princes	21.18	21	⇓iP	P	21 02 38.5	+1.7
WRKA	Warakurna	21.98	135	P	P	21 02 45.9	+0.5
	baz=22,SNR=56						
WRKA	Warakurna	21.98	135	P	P	21 02 46.8	+1.4
	comp=Z,65nm,1.2s						
SWI	Sorong	22.00	66	P	P	21 02 45.8	+0.2
	comp=Z,952nmcomp=Z,101nm,1.1s						
SIJI	Sorong	22.00	66	P	P	21 02 45.7	0.0
	comp=Z,31nm,0.3s,baz=282,slow=9.3,SNR=24						
SIJI				S	S	21 06 42.9	-5.0
	comp=Z,9.4nm,0.8s,baz=107,slow=19,SNR=2.6						
SIJI				LR	LR	21 12 53.1	
	comp=Z,140nm,20.2s,baz=12,slow=41						
FAKI	Fak Fak	22.12	72	P	P	21 02 47.1	+0.2
	comp=Z,1µmcomp=Z,92nm,0.7s						
FAKI	Fak Fak	22.12	72	P	P	21 02 43.8	-3.1
FAKI				IAmb	IAmb	21 03 36.1	
	comp=Z,72nm,0.8s						
FAKI	Fak Fak	22.12	72	P	P	21 02 48.0	+1.1
MUN	Mundaring	22.20	169	P	P	21 02 48.0	+0.3
	baz=22,SNR=5.4						
DAV	Davao City (W)	22.33	41	LR	LR	21 13 50.9	
	comp=Z,396nm,18.3s,baz=178,slow=43						
NWAO	Narrogin (SRO)	23.33	167	P	P	21 02 59.3	-0.2
	comp=Z,17nm,0.9s,baz=326,slow=9.4,SNR=7.9						
NWAO				LR	LR	21 13 14.4	
	comp=Z,358nm,18.2s,baz=20,slow=40						
NWAO	Narrogin (SRO)	23.33	167	P	P	21 03 00.9	+1.5
	baz=23,SNR=13						
NWAO				P	P	21 03 00.9	+1.5
	baz=23,SNR=13						
NWAO	Narrogin (SRO)	23.33	167	P	P	21 02 59.1	-0.3
NWAO				pmax	pmax		
	comp=Z,106nm,1.2s						
NWAO	Narrogin (SRO)	23.33	167	P	P	21 02 59.1	-0.3
NWAO				IAmb	IAmb	21 03 06.2	
	comp=Z,106nm,1.2s						
NWAO	Narrogin (SRO)	23.33	167	P	P	21 03 01.5	+2.0
TBP	Tagbilaran	23.41	33	⇓iP	P	21 03 00.6	+0.2
WRA	Warramunga Arr	24.36	116	P	P	21 03 08.7	-0.7
	comp=Z,15nm,0.8s,baz=290,slow=11,SNR=163						
WRA				PcP	PcP	21 06 47.8	-1.0
	comp=Z,4.7nm,0.6s,baz=308,slow=1.7,SNR=5.7						
WRA				S	S	21 07 36.5	+8.4
	comp=Z,6.6nm,0.7s,baz=268,slow=22,SNR=5.6						
WRA				LR	LR	21 12 18.3	
	comp=Z,332nm,21.8s,baz=275,slow=36						
WRA	Warramunga Arr	24.36	116	P	P	21 03 08.6	-0.7
WRA						21 06 49.4	
WRA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
WRA	Warramunga Arr	24.36	116	P	P	21 03 08.6	-0.8
WRA					PcP	21 06 49.4	+0.6
WRAB	Tennant Creek	24.36	116	diP	P	21 03 09.1	-0.3
WRAB				pmax	pmax		
	comp=Z,26nm,0.7s						
WRAB	Tennant Creek	24.36	116	P	P	21 03 09.6	+0.2
WB2	Warramunga Arr	24.37	116	P	P	21 03 08.9	-0.6
RCP	Roxas	24.45	28	⇑eP	P	21 03 10.8	+0.6
ASAR	Alice Springs	25.50	125	P	P	21 03 19.6	-0.1
	comp=Z,6.3nm,0.6s,baz=301,slow=9.0,SNR=86						
ASAR				PcP	PcP	21 06 52.0	+0.6
	comp=Z,6.6nm,0.8s,baz=342,slow=2.9,SNR=6.8						
ASAR				S	S	21 08 00.8	+14
	comp=Z,0.9nm,0.5s,baz=268,slow=22,SNR=2.7						
ASAR				LR	LR	21 13 42.3	
	comp=Z,476nm,19.9s,baz=295,slow=37						
ASAR	Alice Springs	25.50	125	P	P	21 03 19.1	-0.6
ASAR	Alice Springs	25.50	125	P	P	21 03 19.1	-0.6
AS31	Alice Springs	25.50	125	P	P	21 03 19.6	-0.2
FORT	Forrest	25.83	145	P	P	21 03 23.2	+0.6
FORT	Forrest	25.83	145	P	P	21 03 24.7	+2.1
	comp=Z,204nm,0.6s						
LQP	Lukban	26.21	23	⇓eP	P	21 03 26.7	+0.3
PBKT	Sadao Pong	28.42	339	P	P	21 03 46.6	+0.7
OOD	Oodnadatta	28.96	131	P	P	21 03 52.0	+1.2
	comp=Z,33nm,0.9s						
QIZ	Qiongzhong	29.04	357	P	P	21 03 52.9	+1.5
QIZ				S	S	21 08 46.5	+4.5
QIZ				LR	LR		
	comp=Z,300nm,12.6s						
QIZ				LR	LR		
	comp=Z,250nm,13.9s						
QIZ				LR	LR		
	comp=Z,230nm,14.5s						
QIZ	Qiongzhong	29.04	357	P	P	21 03 52.6	+1.2
QIZ				IAmb	IAmb	21 03 59.0	
	comp=Z,63nm,1.7s						
MULG	Mulgathing	29.24	136	P	P	21 03 55.1	+1.9
	comp=Z,25nm,1.2s						
QIS	Mount Isa	29.24	114	P	P	21 03 53.7	+0.3
	baz=29,SNR=6.4						
QIS	Mount Isa	29.24	114	P	P	21 03 54.2	+0.8
	comp=Z,15nm,1.1s						
CM31	Chiang Mai Arr	30.89	337	P	P	21 04 08.5	+0.6
CM31				IAmb	IAmb	21 04 22.8	
	comp=Z,19nm,0.8s						
CMAR	Chiang Mai Arr	30.89	337	P	P	21 04 08.6	+0.7
	comp=Z,10nm,0.7s,baz=173,slow=8.2,SNR=67						
CMAR				PcP	PcP	21 07 06.2	+1.6
	comp=Z,4.0nm,0.6s,baz=191,slow=2.8,SNR=7.8						
CMAR				LR	LR	21 18 19.7	
	comp=Z,231nm,19.0s,baz=206,slow=40						
CMAR	Chiang Mai Arr	30.89	337	P	P	21 04 08.2	+0.3
CMAR	Chiang Mai Arr	30.89	337	P	P	21 04 08.2	+0.3
CHTO	Chiang Mai	31.22	337	P	P	21 04 11.3	+0.5
CHTO				pmax	pmax		
	comp=Z,14nm,0.8s						
CHTO	Chiang Mai	31.22	337	P	P	21 04 11.3	+0.5
CHTO	Chiang Mai	31.22	337	P	P	21 04 12.0	+1.2
COEN	Coen	31.50	100	P	P	21 04 13.1	-0.2
COEN				IAmb	IAmb	21 04 41.5	
	comp=Z,14nm,0.6s						
COEN	Coen	31.50	100	P	P	21 04 14.5	+1.1
	comp=Z,22nm,1.5s						
SLVN	Son La	32.10	347	P	P	21 04 19.8	+1.2
SLVN				IAmb	IAmb	21 04 34.0	
	comp=Z,23nm,0.8s						
BBOO	Buckleboo	32.15	138	P	P	21 04 20.0	+1.1
	baz=32,SNR=8.9						
BBOO	Buckleboo	32.15	138		P	21 04 19.0	+0.2
BBOO				IAmb	IAmb	21 05 21.2	
	comp=Z,18nm,0.8s						
LCRK	Leigh Creek	32.26	133	P	P	21 04 22.1	+2.3
	comp=Z,30nm,0.7s						
INKA	Innaminka	32.84	126	P	P	21 04 26.4	+1.4
	comp=Z,28nm,0.7s						
MTSU	Mount Surprise	33.05	108	P	P	21 04 28.3	+1.4
	baz=33,SNR=20						
MTSU	Mount Surprise	33.05	108	P	P	21 04 28.2	+1.2
	comp=Z,24nm,0.9s						
HTT	Hallett	34.43	136	P	P	21 04 40.7	+1.8
	baz=34,SNR=7.1						
HTT	Hallett	34.43	136	P	P	21 04 41.4	+2.5
	comp=Z,17nm,0.8s						
TPUB	Ta-pu	34.52	15	P	P	21 04 40.0	+0.4
TPUB				IAmb	IAmb	21 04 56.4	
	comp=Z,34nm,1.0s						
TPUB	Ta-pu	34.52	15	P	P	21 04 41.1	+1.5
	comp=Z,34nm,0.8s						
PALK	Pallekele	34.95	299	P	P	21 04 44.2	+0.8
PALK				pmax	pmax		
	comp=Z,17nm,1.0s						
PALK	Pallekele	34.95	299	P	P	21 04 44.2	+0.8
SSLB	Suanglung	35.07	16	P	P	21 04 45.0	+0.7
SSLB				IAmb	IAmb	21 04 58.3	
	comp=Z,54nm,0.9s						
SSLB	Suanglung	35.07	16	P	P	21 04 45.1	+0.8
CTA	Charters Tower	35.20	110	P	P	21 04 45.2	-0.4
	comp=Z,11nm,0.7s,baz=272,slow=11,SNR=19						
CTA	Charters Tower	35.20	110	P	P	21 04 47.1	+1.5
	comp=Z,28nm,1.1s						
CTAO	Charters Tower	35.20	110	P	P	21 04 46.2	+0.6
CTAO				pmax	pmax		
	comp=Z,17nm,0.9s						
CTAO	Charters Tower	35.20	110	P	P	21 04 46.1	+0.6
CTAO	Charters Tower	35.20	110	P	P	21 04 47.1	+1.5
	comp=Z,26nm,1.1s						
QLP	Quilpie	35.22	122	P	P	21 04 45.8	+0.2
	baz=35,SNR=6.7						
QLP	Quilpie	35.22	122	P	P	21 04 47.2	+1.5
	comp=Z,56nm,1.1s						
PMG	Port Moresby	35.45	92	P	P	21 04 48.3	+0.5
PMG				pmax	pmax		
	comp=Z,19nm,0.8s						
PMG	Port Moresby	35.45	92	P	P	21 04 48.3	+0.5
PMG	Port Moresby	35.45	92	P	P	21 04 49.3	+1.5
	comp=Z,26nm,0.8s						
PMG	Port Moresby	35.45	92	P	P	21 04 49.3	+1.5
	comp=Z,26nm,0.8s						
STKA	Stephens Creek	35.47	132	P	P	21 04 46.8	-1.0
	comp=Z,13nm,0.6s,baz=305,slow=8.9,SNR=48						
STKA				PcP	PcP	21 07 18.1	+0.9
	comp=Z,6.6nm,0.8s,baz=214,slow=3.6,SNR=1.9						
STKA				LR	LR	21 20 50.4	
	comp=Z,386nm,18.2s,baz=291,slow=39						
STKA	Stephens Creek	35.47	132	P	P	21 04 48.8	+1.0
	baz=36,SNR=46						
STKA	Stephens Creek	35.47	132	P	P	21 04 48.4	+0.7
STKA	Stephens Creek	35.47	132	P	P	21 04 48.7	+1.0
	comp=Z,11nm,0.8s						
NACB	Ninganchiao	35.61	16	P	P	21 04 48.2	-0.7
NACB				IAmb	IAmb	21 05 04.2	
	comp=Z,30nm,0.8s						
YHNB	Yeheng	36.02	16	P	P	21 04 51.8	-0.8
YHNB				IAmb	IAmb	21 05 10.4	
	comp=Z,33nm,0.9s						
YHNB	Yeheng	36.02	16	P	P	21 04 54.3	+1.7
KMI	Kunming	36.02	347	⇓P	P	21 04 55.5	+2.7
KMI				sP	pwP	21 05 01.2	-0.6
KMI				PP	PP	21 06 20.3	+5.4
KMI				pmax	pmax		
	comp=Z,22nm,0.9s						
KMI				pmax	pmax		
	comp=Z,170nm,6.2s						
KMI				LR	LR		
	comp=Z,590nm,15.5s						
KMI				LR	LR		
	comp=Z,240nm,18.7s						
KMI				LR	LR		
	comp=Z,670nm,17.6s						
YOJ	Yonaguni jima	36.30	18	P	P	21 04 54.6	-0.3
YOJ				pmax	pmax		
	comp=Z,115nm,0.8s						
YOJ	Yonaguni jima	36.30	18	P	P	21 04 54.5	-0.3
GYA	Guiyang	36.66	353	⇑P	P	21 04 59.0	+0.9
GYA				pP	sP	21 05 05.8	+1.4
GYA				sP	pwP	21 05 12.0	+4.5
GYA				S	S	21 10 40.4	-0.2
GYA				pmax	pmax		
	comp=Z,21nm,0.8s						
GYA				pmax	pmax		
	comp=Z,170nm,4.0s						
GYA				LR	LR		
	comp=Z,330nm,19.5s						
H08S2	Diego Garcia H	38.29	271	T	T	21 45 50.1	
	baz=96,slow=74,SNR=6.2						
H08S3	Diego Garcia H	38.30	271	T	T	21 46 04.7	
	baz=96,slow=74,SNR=8.0						
H08S1	Diego Carcia H	38.31	271	T	T	21 46 00.4	
	baz=96,slow=74,SNR=4.7						
ARPS	Mount Arapiles	38.33	139	P	P	21 05 13.5	+1.5
	baz=38,SNR=6.5						
ARPS	Mount Arapiles	38.33	139	P	P	21 05 14.1	+2.1
	comp=Z,59nm,0.8s						
CMSA	Cobar Meteorol	38.38	129	P	P	21 05 12.6	+0.1
	baz=38,SNR=12						
CMSA	Cobar Meteorol	38.38	129	P	P	21 05 14.1	+1.6
	comp=Z,36nm,1.2s						
SHL	Shillong	40.18	332	P	P	21 05 27.8	0.0
SHL				pmax	pmax		
	comp=Z,85nm,0.8s						
SHL	Shillong	40.18	332	P	P	21 05 27.8	0.0
SHL				IAmb	IAmb	21 05 41.7	
	comp=Z,85nm,0.8s						
ENH	Enshi	40.23	358	P	P	21 05 28.0	+0.1
JOW	Kunigami	40.34	24	P	P	21 05 28.1	-0.8
	comp=Z,38nm,1.0s,baz=146,slow=7.5,SNR=4.2						
JOW	Kunigami	40.34	24	P	P	21 05 28.3	-0.6
JOW				IAmb	IAmb	21 05 48.2	
	comp=Z,60nm,0.9s						
JOW	Kunigami	40.34	24	P	P	21 05 31.6	+2.7
WHN	Wuhan	40.59	4	⇓P	P	21 05 32.1	+1.3
WHN				S	S	21 11 39.8	+0.4
WHN				pmax	pmax		
	comp=Z,62nm,1.0s						
WHN				LR	LR		
	comp=Z,700nm,16.0s						
EIDS	Eidsvold	40.72	117	P	P	21 05 31.6	-0.5
TOO	Toolangi	41.19	137	P	P	21 05 35.9	+0.1
	baz=41,SNR=7.9						
TOO	Toolangi	41.19	137	P	P	21 05 37.5	+1.6
TOO				pmax	pmax		
	comp=Z,14nm,1.0s						
TOO	Toolangi	41.19	137	P	P	21 05 37.5	+1.6
YNG	Young	41.63	131	P	P	21 05 38.9	-0.7
	baz=42,SNR=5.9						
YNG	Young	41.63	131	P	P	21 05 41.8	+2.2
	comp=Z,31nm,0.9s						
HYB	Hyderabad	42.31	310	iP	P	21 05 45.0	-0.3
CAN	Canberra	42.53	132	P	P	21 05 47.6	+0.7
CAN				pmax	pmax		
	comp=Z,87nm,1.8s						
CAN	Canberra	42.53	132	P	P	21 05 47.6	+0.7
CAN				IAmb	IAmb	21 06 12.0	
	comp=Z,87nm,1.8s						
NJ2	Nanjing	42.61	10	eP	P	21 05 50.2	+2.8
NJ2				pmax	pmax		
	comp=Z,26nm,0.6s						
ODAN	Odare	43.45	328	eP	P	21 05 54.8	+0.2
	comp=Z,109nm,0.7s						
TAPN	Taplejung	43.69	329	eP	P	21 05 57.1	+0.5
	comp=Z,153nm,0.8s						
RAMN	Ramite	43.93	328	eP	P	21 05 59.4	+0.9
	comp=Z,28nm,0.5s						
XAN	Xi'an	44.01	357	P	P	21 05 58.6	-0.1
XAN				pP	pwP	21 06 07.6	-0.6
XAN				pmax	pmax		
	comp=Z,21nm,0.7s						
LSA	Lhasa	44.08	335	P	P	21 06 01.1	+1.2
LSA	Lhasa	44.08	335	P	P	21 06 00.7	+0.8
LSA				pmax	pmax		
	comp=Z,49nm,0.7s						
LSA	Lhasa	44.08	335	P	P	21 06 00.7	+0.8
LSA				IAmb	IAmb	21 06 14.9	
	comp=Z,49nm,0.7s						
JIRN	Jiri	44.72	328	eP	P	21 06 05.5	+0.6
	comp=Z,68nm,0.5s						
PKI	Pulchoki	45.06	327	eP	P	21 06 07.4	-0.2
PKIN	Phulchoki	45.07	327	eP	P	21 06 07.3	-0.3
GUN	Gumba	45.08	328	eP	P	21 06 08.0	+0.2
	comp=Z,142nm,0.6s						
DMN	Daman	45.26	327	eP	P	21 06 09.2	+0.1
	comp=Z,138nm,0.9s						
KKN	Kakani	45.30	327	eP	P	21 06 09.4	0.0
	comp=Z,110nm,1.1s						
GKN	Gorkha	45.82	327	eP	P	21 06 13.5	+0.1
	comp=Z,155nm,0.9s						
KOLN	Koldanda	46.21	325	eP	P	21 06 16.7	+0.1
	comp=Z,208nm,0.8s						
LZH	Lanzhou	46.52	352	eP	P	21 06 20.1	+1.3
LZH				pP	sP	21 06 24.6	-1.0
LZH				sP	pwP	21 06 28.1	-0.1
LZH				S	S	21 13 09.6	+3.2
LZH				sS	sS	21 13 21.5	+8.0
LZH				pmax	pmax		
	comp=Z,56nm,1.1s						
LZH				pmax	pmax		
	comp=Z,95nm,4.3s						
LZH				LR	LR		
	comp=Z,770nm,14.6s						
LZH				LR	LR		
	comp=Z,690nm,16.3s						
LZH				LR	LR		
	comp=Z,830nm,17.9s						
DANN	Dangsing	46.57	326	eP	P	21 06 19.5	0.0
	comp=Z,149nm,0.6s						
POO	Poona	46.58	308	eP	P	21 06 18.0	-1.4
PYUN	Piuthan	46.81	325	eP	P	21 06 21.3	+0.1
	comp=Z,159nm,0.8s						
TIY	Taiyuan	47.64	1	eP	P	21 06 28.9	+1.5
HNR	Honiara	48.03	94	P	P	21 06 30.7	-0.1
HNR				pmax	pmax		
	comp=Z,75nm,0.9s						
HNR	Honiara	48.03	94	P	P	21 06 30.7	-0.1
JMN	Monobe	48.70	25	P	P	21 06 34.9	-0.7
KSAR	Wonju Array Be	49.88	17	P	P	21 06 44.7	+0.2
KSAR	Wonju Array Be	49.88	17	P	P	21 06 44.7	+0.2
KSRS	Korea Array	49.90	17	P	P	21 06 44.5	-0.1
	comp=Z,9.7nm,0.8s,baz=203,slow=7.6,SNR=19						
KSRS				PcP	PcP	21 08 05.6	+0.7
	comp=Z,1.9nm,0.9s,baz=195,slow=5.2,SNR=1.9						
KSRS				LR	LR	21 31 38.0	
	comp=Z,58nm,18.4s,baz=208,slow=41						
KS19	Wonju Array Si	49.93	17	P	P	21 06 44.7	-0.2
BJT	Baijiatuau	50.14	5	P	P	21 06 46.5	+0.1
BJT				pmax	pmax		
	comp=Z,23nm,0.6s						
BJT	Baijiatuau	50.14	5	P	P	21 06 46.5	+0.1
BJT				IAmb	IAmb	21 07 00.5	
	comp=Z,23nm,0.6s						
BJI	Beijing	50.16	5	P	P	21 06 46.2	-0.4
BJI				pP	pP	21 06 51.0	-0.5
BJI				sP	sP	21 06 53.5	+0.1
BJI				PcP	PcP	21 08 06.5	+0.7
BJI				S	S	21 14 03.1	+5.7
BJI				pmax	pmax		
	comp=Z,12nm,1.1s						
BJI				LR	LR		
	comp=Z,340nm,18.9s						
GTA	Gaotai	50.44	349	eP	P	21 06 49.4	+0.5
GTA				pP	pP	21 06 54.0	+0.1
GTA				sP	sP	21 06 56.8	+1.1
GTA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,85nm,4.4s						
GTA				LR	LR		
	comp=Z,130nm,16.7s						
GTA				LR	LR		
	comp=Z,200nm,18.5s						
GTA				LR	LR		
	comp=Z,190nm,17.8s						
JWT	Wachi	50.67	26	P	P	21 06 49.6	-1.0
JWT				IAmb	IAmb	21 07 05.0	
	comp=Z,27nm,0.7s						
HHC	Hu-ho-hao-te	50.76	0	eP	P	21 06 54.9	+3.7
HHC				pmax	pmax		
	comp=Z,18nm,1.1s						
HHC				pmax	pmax		
	comp=Z,87nm,8.8s						
INU	Inuyama	51.43	27	P	P	21 06 56.1	-0.2
INU				IAmb	IAmb	21 07 11.2	
	comp=Z,48nm,1.3s						
MAJO	Matsushiro	52.96	27	deP	P	21 07 05.3	-2.4
MAJO				pmax	pmax		
	comp=Z,19nm,0.9s						
MAJO	Matsushiro	52.96	27	P	P	21 07 05.4	-2.2
MAJO				IAmb	IAmb	21 07 21.3	
	comp=Z,108nm,1.6s						
MAT	Matsushiro	52.96	27	P	P	21 07 04.9	-2.8
MJAR	Matsushiro Arr	52.96	27	P	P	21 07 05.5	-2.2
	comp=Z,14nm,0.9s,baz=198,slow=7.8,SNR=36						
MJAR				PcP	PcP	21 08 17.5	+1.1
	comp=Z,5.6nm,0.8s,baz=192,slow=4.3,SNR=4.2						
MJAR				LR	LR	21 29 05.0	
	comp=Z,99nm,20.8s,baz=295,slow=35						
MJAR	Matsushiro Arr	52.96	27	P	P	21 07 05.8	-1.8
MJAR				IAmb	IAmb	21 07 20.8	
	comp=Z,17nm,0.7s						
MJAR				PcP	PcP	21 08 17.2	+0.8
DZM	Mont Dzumac	54.14	110	P	P	21 07 15.5	-1.2
DZM				IAmb	IAmb	21 07 25.5	
	comp=Z,34nm,1.4s						
JSD	Sado	54.22	26	P	P	21 07 15.3	-1.6
JSD				IAmb	IAmb	21 07 30.9	
	comp=Z,48nm,1.0s						
JMM	Marumori	55.23	28	P	P	21 07 22.4	-1.7
JMM				IAmb	IAmb	21 07 38.2	
	comp=Z,46nm,0.8s						
CN2	Changchun	55.25	13	eP	P	21 07 22.1	-2.1
CN2				esP	pP	21 07 29.2	0.0
CN2				eS	S	21 15 05.6	-1.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NIL	Nilore	56.56	322	P	P	21 07 32.6	-1.2
NIL				pmax	pmax		
	comp=Z,38nm,0.8s						
NIL	Nilore	56.56	322	P	P	21 07 32.6	-1.2
NIL				IAmb	IAmb	21 07 36.2	
	comp=Z,38nm,0.8s						
USA0B	Ussuriysk Arra	57.31	18	P	P	21 07 38.0	-0.9
USA0B				pmax	pmax		
	comp=Z,24nm,0.9s						
USA0B	Ussuriysk Arra	57.31	18	P	P	21 07 38.0	-0.9
USA0B				IAmb	IAmb	21 07 38.9	
	comp=Z,24nm,0.8s						
USRK	Ussuriysk Ar.	57.31	18	P	P	21 07 37.9	-0.9
	comp=Z,22nm,0.8s,baz=198,slow=4.9,SNR=30						
USRK				LR	LR	21 35 01.1	
	comp=Z,72nm,18.9s,baz=216,slow=39						
USRK	Ussuriysk Ar.	57.31	18	P	P	21 07 38.0	-0.8
WMQ	Urumqi	57.82	340	eP	P	21 07 43.2	+0.6

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WMQ                                   pP     pP       21 07 46.6  -1.1
WMQ                                   sP     pwP      21 07 56.4  +4.3
WMQ                                   pmax   pmax
      comp=Z,37nm,3.6s
WMQ                                   LR     LR
      comp=Z,360nm,29.2s
WMQ                                   LR     LR
      comp=Z,580nm,29.1s
WMQ                                   LR     LR
      comp=Z,130nm,26.5s
ULN   Ulaanbaatar       57.88 357d iP     P        21 07 42.8  -0.3
ULN                                   pmax   pmax
      comp=Z,24nm,1.0s
ULN   Ulaanbaatar       57.88 357     P      P        21 07 42.7  -0.3
ULN                                   IAmb   IAmb     21 07 57.7
      comp=Z,34nm,0.7s
SONM  Songino Array     57.90 356     P      P        21 07 43.0  -0.2
      comp=Z,14nm,0.7s,baz=177,slow=8.2,SNR=113
SONM                                  PcP    PcP      21 08 35.7  +0.3
      comp=Z,4.8nm,0.6s,baz=181,slow=6.3,SNR=5.3
SONM                                  LR     LR       21 34 50.8
      comp=Z,70nm,18.8s,baz=190,slow=38
SONM  Songino Array     57.90 356     P      P        21 07 42.9  -0.2
SONM                                  IAmb   IAmb     21 07 57.8
      comp=Z,23nm,0.7s
SONM                                  PcP    PcP      21 08 35.7  +0.3
KSH   Kashi             59.26 329     P      P        21 07 51.0  -1.8
KSH                                   pP     pP       21 07 56.5  -1.4
KSH                                   sP     sP       21 07 58.2  -1.4
KSH                                   pmax   pmax
      comp=Z,19nm,0.7s
ERM   Erimo             59.64  27     P      P        21 07 57.0  +1.8
ERM                                   pmax   pmax
      comp=Z,74nm,1.2s
ERM   Erimo             59.64  27     P      P        21 07 57.0  +1.8
KBL   Kabul             59.75 320     P      P        21 07 55.1  -1.3
KBL                                   pmax   pmax
      comp=Z,19nm,0.9s
KBL   Kabul             59.75 320     P      P        21 07 55.1  -1.3
KBL                                   IAmb   IAmb     21 07 59.3
      comp=Z,19nm,0.9s
MLZ   Mavora Lakes      59.80 137     P      P        21 07 56.4  -0.1
WHZ   Wether Hill Ro    59.85 138     P      P        21 07 57.1  +0.4
TARG  Taragay, Kyrgy    60.05 332     P      P        21 07 58.9  +0.3
TARG                                  IAmb   IAmb     21 08 24.1
      comp=Z,24nm,1.0s
PRZ   Przheval'sk       60.37 333     P      P        21 08 00.9  +0.4
PRZ                                   pmax   pmax
      comp=Z,65nm,1.3s
PRZ   Przheval'sk       60.37 333     P      P        21 08 00.9  +0.4
UZB   Uzynbulak         60.62 333   eP      P        21 08 02.3  +0.2
ZAK   Zakamensk         60.68 354   eP      P        21 07 59.1  -3.2
ZAK                                   pmax   pmax
      comp=Z,8.0nm,1.1s
LBZ   Lake Benmore      60.94 135     P      P        21 08 03.5  -0.7
DRK   Karamyk           61.45 326     P      P        21 08 08.1  +0.1
KLR   Kul'dur           61.84  15d iP     P        21 08 08.5  -1.6
KLR                                   pmax   pmax
      comp=Z,12nm,1.3s
TLY   Talaya            61.93 355     P      P        21 08 10.9  +0.3
GAR   Garm              61.95 325     P      P        21 08 09.8  -1.4
GAR                                   IAmb   IAmb     21 08 25.6
      comp=Z,30nm,0.8s
ARXS  Arharly           61.99 333   eP      P        21 08 10.5  -0.8
TKM2  Tokmak 2          62.02 331     P      P        21 08 11.8  +0.2
      SNR=54
KBK   Karagaybulak      62.13 330     P      P        21 08 13.1  +0.7
      SNR=30
MOY   Mondy             62.20 353   eP      P        21 08 12.6   0.0
MOY                                   pmax   pmax
      comp=Z,29nm,2.7s
THZ   Tophouse          62.28 132     P      P        21 08 14.0  +0.6
MK31  Makanchi Array    62.30 338d iP     P        21 08 13.1  -0.1
MK31  Makanchi Array    62.30 338     P      P        21 08 12.9  -0.3
MK31                                  IAmb   IAmb     21 08 28.3
      comp=Z,17nm,0.7s
MKAR  Makanchi Array    62.30 338     P      P        21 08 13.2  -0.1
      comp=Z,14nm,0.5s,baz=149,slow=7.5,SNR=111
MKAR                                  LR     LR       21 38 21.1
      comp=Z,103nm,19.1s,baz=148,slow=39
AAK   Ala-Archa         62.34 330     P      P        21 08 14.2  +0.4
      SNR=12
AAK   Ala-Archa         62.34 330   i P      P        21 08 14.2  +0.4
      SNR=14
AAK   Ala-Archa         62.34 330d iP     P        21 08 13.8  +0.1
AAK                                   pmax   pmax
      comp=Z,48nm,1.0s
AAK   Ala-Archa         62.34 330     P      P        21 08 13.5  -0.2
AAK                                   IAmb   IAmb     21 08 18.1
      comp=Z,28nm,1.4s
AML   Almayashu         62.36 329     P      P        21 08 14.3  +0.1
      SNR=13
AML   Almayashu         62.36 329   i P      P        21 08 14.3  +0.1
      SNR=13
CHGR  Chuyangaron       62.38 324     P      P        21 08 12.2  -1.8
BTK   Batken            62.39 326     P      P        21 08 13.5  -0.6
BTK                                   pmax   pmax
      comp=Z,12nm,0.7s
BTK   Batken            62.39 326     P      P        21 08 13.5  -0.6
BTK                                   IAmb   IAmb     21 08 19.4
      comp=Z,12nm,0.7s
FRU1  Bishkek           62.40 330     P      P        21 08 13.9  -0.1
FRU1                                  pmax   pmax
      comp=Z,30nm,0.9s
FRU1  Bishkek           62.40 330     P      P        21 08 13.9  -0.1
FRU1                                  IAmb   IAmb     21 08 15.3
      comp=Z,30nm,0.9s
MAKZ  Makanchi          62.42 338     P      P        21 08 13.4  -0.7
MAKZ                                  pmax   pmax
      comp=Z,8.0nm,0.7s
MAKZ  Makanchi          62.42 338     P      P        21 08 13.4  -0.7
MAKZ                                  IAmb   IAmb     21 08 29.1
      comp=Z,8.5nm,0.7s
CHMS  Chumysh           62.48 331     P      P        21 08 14.4  -0.2
      SNR=6.4
VOI   Vohitsoka         62.60 251     P      P        21 08 16.5  +0.6
VOI                                   IAmb   IAmb     21 09 16.2
      comp=Z,23nm,1.2s
EKS2  Erkin-Say         62.71 330     P      P        21 08 16.6  +0.4
      SNR=23
USP   Ospenovka         62.80 331     P      P        21 08 16.8   0.0
      SNR=14
DGZ   Jazzator, Alta    63.14 343d iP     P        21 08 19.3  +0.4
DGZ                                   pmax   pmax
      comp=Z,43nm,0.9s
SOHO  SOHO              63.31 303     P      P        21 08 24.9  +4.5
YSS   Yuzh-Sakhalins    63.46  24   eP      P        21 08 19.8  -1.1
YSS                                 e                 21 08 34.7
YSS                                 eS      S        21 16 49.5  -3.4
YSS                                   pmax   pmax
      comp=Z,40nm,1.2s
YSS                                   MLR    MLR
      comp=Z,300nm,14.0s
YSS   Yuzh-Sakhalins    63.46  24     P      P        21 08 20.1  -0.7
UOSS  Minazif           63.93 304     P      P        21 08 24.7  +0.2
UOSS  Minazif           63.93 304     P      P        21 08 23.8  -0.7
UOSS                                  IAmb   IAmb     21 08 25.6
      comp=Z,18nm,1.2s
ASHO  Ashiyiah          63.94 304     P      P        21 08 24.8  +0.2
HATD  Hatta, Dubai      63.94 304     P      P        21 08 25.2  +0.6
MDH   Madha             64.01 305     P      P        21 08 26.3  +1.3
TAS   Tashkent          64.10 326     P      P        21 08 25.0  -0.3
TAS                                   pmax   pmax
      comp=Z,55nm,0.9s
TAS   Tashkent          64.10 326     P      P        21 08 25.0  -0.3
HRA   Herat             64.13 316     P      P        21 08 24.5  -1.4
IUG   Iuzhnay           64.27 327   eP      P        21 08 26.3  -0.2
FAQ   Al Faqa, Dubai    64.35 304   i P      P        21 08 27.5  +0.3
      SNR=10
BTLS  Baital            64.35 332   eP      P        21 08 26.1  -0.7
NAZ   Nazwa, Dubai      64.39 304     P      P        21 08 28.0  +0.4
BKZ   Black Stump Fm    64.54 129     P      P        21 08 27.9  -0.5
BKZ                                   IAmb   IAmb     21 08 29.9
      comp=Z,19nm,0.8s
KK31  Karatay Array     64.69 328     P      P        21 08 28.0  -1.1
KK31                                  pmax   pmax
      comp=Z,11nm,1.2s
KK31  Karatay Array     64.69 328     P      P        21 08 28.0  -1.1
KKAR  Karatay Array     64.69 328     P      P        21 08 27.9  -1.2
KKAR  Karatay Array     64.69 328     P      P        21 08 27.9  -1.2
KKAR  Karatay Array     64.69 328     P      P        21 08 28.0  -1.1
KKAR                                  IAmb   IAmb     21 08 33.6
      comp=Z,11nm,1.2s
MSVF  Nonsavu           65.06 105     P      P        21 08 33.3  +1.1
MSVF                                  pmax   pmax
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      comp=Z,27nm,0.9s
MSVF  Nonsavu           65.06 105     P      P        21 08 33.3  +1.1
MSVF                                  IAmb   IAmb     21 08 34.8
      comp=Z,27nm,0.8s
ZEA   Zeya              65.10  10   eP      P        21 08 31.2  -0.3
ZEA                                   pmax   pmax
      comp=N,10.0nm,1.4s
ZEA                                   pmax   pmax
      comp=Z,10.0nm,1.1s
ZEA                                   MLR    MLR
      comp=Z,300nm,18.0s
MAW   Mawson            65.62 198     P      P        21 08 34.4  -0.4
      comp=Z,6.4nm,0.8s,baz=52,slow=7.7,SNR=14
MAW                                   LR     LR       21 33 17.2
      comp=Z,167nm,18.3s,baz=51,slow=32
MAW   Mawson            65.62 198     P      P        21 08 36.0  +1.3
      baz=66,SNR=9.2
MAW   Mawson            65.62 198     P      P        21 08 35.1  +0.4
KURK  Kurchatov         66.91 338d iP     P        21 08 42.8  -0.4
KURK                                  pmax   pmax
      comp=Z,15nm,1.0s
KURK  Kurchatov         66.91 338     P      P        21 08 42.6  -0.6
KURK                                  IAmb   IAmb     21 08 58.2
      comp=Z,13nm,0.7s
ZAA0  Zalesovo Array    67.66 344     P      P        21 08 47.2  -0.7
ZAA0                                  IAmb   IAmb     21 08 48.4
      comp=Z,13nm,0.9s
ZALV  Zalesovo Beam     67.66 344     P      P        21 08 47.1  -0.9
      comp=Z,6.2nm,0.5s,baz=142,slow=4.6,SNR=32
ZALV                                  LR     LR       21 41 02.0
      comp=Z,119nm,18.9s,baz=60,slow=38
ZALV  Zalesovo Beam     67.66 344   i P      P        21 08 47.2  -0.7
ZALV                                  pmax   pmax
      comp=Z,6.0nm,0.4s
BOD   Bodaibo           67.78   2   eP      P        21 08 48.2  -0.4
BOD                                   pmax   pmax
      comp=Z,20nm,0.9s
GEYT  Alibeck           68.87 317     P      P        21 08 56.4  +0.5
      comp=Z,9.5nm,0.8s,baz=167,slow=10,SNR=11
GYA0B ALIBECK ARRAY     68.87 317     P      P        21 08 55.9   0.0
GYA0B                                 IAmb   IAmb     21 09 10.9
      comp=Z,17nm,0.8s
BRVK  Borovoye          71.98 335d iP     P        21 09 14.1  -0.4
BRVK                                  pmax   pmax
      comp=Z,14nm,1.3s
BRVK  Borovoye          71.98 335     P      P        21 09 14.1  -0.4
VNDA  Vanda             72.13 170     P      P        21 09 15.4  +0.2
      comp=Z,8.6nm,0.9s,baz=312,slow=5.6,SNR=45
VNDA  Vanda             72.13 170     P      P        21 09 15.6  +0.4
RAYN  Ar Rayn           72.38 299     P      P        21 09 17.9  +0.3
RAYN  Ar Rayn           72.38 299     P      P        21 09 17.5  -0.2
RAYN                                  pmax   pmax
      comp=Z,14nm,0.9s
RAYN  Ar Rayn           72.38 299     P      P        21 09 17.5  -0.2
RAYN                                  IAmb   IAmb     21 09 19.1
      comp=Z,14nm,0.9s
SBA   Scott Base        73.19 169     P      P        21 09 22.2  +0.8
SBA                                   pmax   pmax
      comp=Z,19nm,1.2s
SBA   Scott Base        73.19 169     P      P        21 09 22.2  +0.8
SBA                                   IAmb   IAmb     21 09 37.2
      comp=Z,19nm,1.2s
YAK   Yakutsk           73.41   9d iP     P        21 09 21.8  -1.0
YAK                                 e*PP    pP       21 09 28.4  +0.5
YAK                                 e                 21 09 34.8
YAK                                 e                 21 12 08.2
YAK                                 ePPP    PPP      21 13 49.9
YAK                                 eS      S        21 18 50.8   0.0
YAK                                 e                 21 19 28.3
YAK                                 eSS     SS       21 23 33.8  +0.2
YAK                                   pmax   pmax
      comp=Z,99nm,0.9s
YAK                                   pmax   pmax
      comp=N,32nm,1.1s
YAK                                   pmax   pmax
      comp=E,14nm,1.1s
YAK                                   pmax   pmax
      comp=Z,361nm,4.8s
YAK                                   pmax   pmax
      comp=N,239nm,4.6s
YAK                                   pmax   pmax
      comp=E,508nm,4.1s
YAK                                   smax   smax
      comp=E,112nm,3.0s
YAK                                   smax   smax
      comp=N,164nm,2.5s
YAK   Yakutsk           73.41   9     P      P        21 09 22.0  -0.8
KMBO  Kilima Mbogo      73.98 272     P      P        21 09 29.0  +1.4
      comp=N,6.6nm,1.1s,baz=52,slow=5.6,SNR=9.2
KMBO  Kilima Mbogo      73.98 272   i P      P        21 09 29.4  +1.8
      SNR=6.6
KMBO  Kilima Mbogo      73.98 272     P      P        21 09 28.1  +0.5
KMBO                                  pmax   pmax
      comp=Z,9.0nm,1.1s
KMBO  Kilima Mbogo      73.98 272     P      P        21 09 28.1  +0.5
ABKAR Akbulak array     74.25 328     P      P        21 09 28.0  -0.1
ABKAR Akbulak array     74.25 328     P      P        21 09 28.2  +0.1
ABKAR                                 IAmb   IAmb     21 09 44.7
      comp=Z,44nm,0.8s
PEA0B Petropavlovsk-    74.42  27⇓eP      P        21 09 28.6  -0.4
PEA0B Petropavlovsk-    74.42  27     P      P        21 09 28.4  -0.6
PETK  Petropavlovsk-    74.42  27     P      P        21 09 28.1  -0.8
      comp=Z,16nm,0.8s,baz=208,slow=8.4,SNR=10
PETK                                  LR     LR       21 42 49.3
      comp=Z,42nm,21.2s,baz=246,slow=36
PETK  Petropavlovsk-    74.42  27     P      P        21 09 27.9  -1.0
MA2   Magadan           76.39  19ceP      P        21 09 40.2   0.0
MA2                                   pmax   pmax
      comp=Z,72nm,1.7s
MA2   Magadan           76.39  19     P      P        21 09 40.0  -0.2
LODK  Lodwar            76.68 276     P      P        21 09 44.1  +1.3
LODK                                  IAmb   IAmb     21 09 46.3
      comp=Z,22nm,1.5s
SVE   Sverdlovsk        78.61 334ceP      P        21 09 52.9  +0.3
SVE                                   pmax   pmax
      comp=Z,31nm,1.1s
ARU   Arti              79.26 333c iP     P        21 09 55.7  -0.5
ARU                                                   21 12 58.6
ARU                                   PPP    PPP      21 14 50.0
ARU                                   S      S        21 19 59.1  +3.8
ARU                                   SS     SS       21 25 04.4  +1.9
ARU                                   pmax   pmax
      comp=Z,24nm,1.4s
ARU   Arti              79.26 333     P      P        21 09 55.9  -0.3
SEY   Seymchan          79.46  18⇓eP      P        21 09 57.3  +0.2
GROC  Groznyy           79.61 317   eP      P        21 09 54.6  -3.8
GROC                                e                 21 10 01.9
GROC                                e                 21 12 53.4
GROC                                  pmax   pmax
      comp=Z,8.0nm,0.5s
MATP  Matopo            79.72 251     P      P        21 10 00.9  +1.2
      comp=Z,1.9nm,0.6s,baz=118,slow=12,SNR=2.4
QSPA  South Pole Qui    79.84 180     P      P        21 09 59.8  +0.3
QSPA                                  IAmb   IAmb     21 10 17.8
      comp=Z,38nm,0.9s
GURO  Guroymak-BITLI    80.44 312     P      P        21 10 03.4  +0.2
KARS  Kars              80.46 314     P      P        21 10 03.9  +0.6
KARS                                  pmax   pmax
      comp=Z,60nm,0.9s
KARS  Kars              80.46 314     P      P        21 10 03.9  +0.6
MBAR  Mbarara           80.49 271     P      P        21 10 04.2  +0.2
MBAR                                  pmax   pmax
      comp=Z,23nm,1.3s
MBAR  Mbarara           80.49 271     P      P        21 10 04.2  +0.2
MBAR                                  IAmb   IAmb     21 10 07.2
      comp=Z,23nm,1.2s
ZEI   Tsey              80.72 317   eP      P        21 10 06.4  +1.7
ZEI                                   pmax   pmax
      comp=Z,7.0nm,1.2s
NRIK  Noril'sk          81.01 352     P      P        21 10 04.7  -0.6
      comp=Z,8.6nm,1.0s,baz=144,slow=4.3,SNR=10
NRIK                                  PP     PP       21 13 07.9  -2.5
      comp=Z,5.1nm,0.9s,baz=169,slow=4.3,SNR=3.4
NRIK                                  LR     LR       21 50 38.7
      comp=Z,113nm,18.3s,baz=153,slow=39
NRIK  Noril'sk          81.01 352d iP     P        21 10 04.6  -0.8
NRIK                                  pmax   pmax
      comp=Z,25nm,1.4s
NRIK  Noril'sk          81.01 352     P      P        21 10 04.7  -0.6
NRIK                                  IAmb   IAmb     21 10 06.2
      comp=Z,24nm,1.2s
NCK   Nalchik           81.20 317⇑eP      P        21 10 08.4  +1.4
NCK                                   pmax   pmax
      comp=Z,29nm,1.9s
BOSA  Boshof            81.66 242     P      P        21 10 10.2  +0.2
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      comp=Z,6.8nm,0.9s,baz=85,slow=5.5,SNR=7.6
BOSA                                  LR     LR       21 40 11.3
      comp=Z,145nm,19.1s,baz=47,slow=31
BOSA  Boshof            81.66 242     P      P        21 10 10.7  +0.7
BOSA                                  IAmb   IAmb     21 12 49.5
      comp=Z,68nm,2.0s
NEY   Neytrino          81.69 317⇓eP      P        21 10 11.3  +1.5
NEY                                   pmax   pmax
      comp=Z,5.0nm,1.0s
KBZ   Khabaz            81.76 317     P      P        21 10 09.9   0.0
      comp=Z,12nm,1.0s,baz=105,slow=2.8,SNR=17
KBZ   Khabaz            81.76 317d iP     P        21 10 10.7  +0.8
KBZ                                   pmax   pmax
      comp=Z,23nm,1.2s
KIV   Kislovodsk        81.98 317     P      P        21 10 12.9  +1.7
KIV   Kislovodsk        81.98 317   eP      P        21 10 12.6  +1.4
KIV                                   pmax   pmax
      comp=Z,12nm,1.1s
KIV   Kislovodsk        81.98 317     P      P        21 10 11.5  +0.3
GOF   Gofitskoye        82.17 318⇑eP      P        21 10 12.7  +0.6
TIXI  Tiksi             82.48   6d iP     P        21 10 12.0  -1.1
TIXI  Tiksi             82.48   6     P      P        21 10 12.1  -1.0
GHAJ  Ghor Haditha      83.18 303     P      P        21 10 18.6  +1.0
GAZ   Gaziantep         83.59 309     P      P        21 10 19.2  -0.5
GAZ                                   IAmb   IAmb     21 10 20.6
      comp=Z,29nm,1.0s
SOC   Sochi             83.86 316   eP      P        21 10 19.3  -1.5
SOC                                 eS      S        21 20 41.8  -1.6
SOC                                   pmax   pmax
      comp=Z,20nm,0.9s
SUR   Sutherland        84.95 238     P      P        21 10 27.3  +0.4
      comp=Z,2.6nm,0.8s,baz=115,slow=14,SNR=1.1
SUR   Sutherland        84.95 238     P      P        21 10 27.2  +0.3
BNN   Bunyan            85.12 311     P      P        21 10 27.8  +0.3
VRH   Novokhopyorsk     85.35 324   eP      P        21 10 26.8  -1.3
VRH                                   pmax   pmax
      comp=Z,10.0nm,1.0s
ANN   Anapa             85.81 317   eP      P        21 10 27.5  -3.1
ANN                                 eS      S        21 20 52.6   -10
ANN                                   pmax   pmax
      comp=Z,37nm,1.2s
CSS   Mathiatis         85.97 306     P      P        21 10 32.7  +1.0
CSS                                   IAmb   IAmb     21 10 34.6
      comp=Z,32nm,1.0s
VSR   Storozhevoye      86.85 323   eP      P        21 10 34.9  -0.7
VSR                                   pmax   pmax
      comp=Z,40nm,1.1s
BR131 Keskin Array S    87.01 311     P      P        21 10 37.0  +0.1
BR131                                 pmax   pmax
      comp=Z,34nm,1.0s
BR131 Keskin Array S    87.01 311     P      P        21 10 37.0  +0.1
BR131                                 IAmb   IAmb     21 10 38.4
      comp=Z,34nm,1.0s
BRTR  Keskin Array B    87.01 311     P      P        21 10 37.2  +0.4
      comp=Z,16nm,0.9s,baz=131,slow=6.4,SNR=80
BRTR                                  LR     LR       21 53 58.1
      comp=Z,75nm,19.4s,baz=162,slow=39
BRTR  Keskin Array B    87.01 311     P      P        21 10 36.9  +0.1
BRTR  Keskin Array B    87.01 311     P      P        21 10 36.9  +0.1
BILL  Bilibino          87.16  18deP      P        21 10 36.6  -0.1
BILL                                e                 21 10 43.8
BILL                                e                 21 10 49.5
BILL                                  pmax   pmax
      comp=Z,11nm,0.7s
BILL                                  MLR    MLR
      comp=Z,52nm,16.0s
BILL  Bilibino          87.16  18     P      P        21 10 35.8  -0.9
BILL                                  IAmb   IAmb     21 10 37.3
      comp=Z,13nm,0.8s
LPSR  Galich'ya Gora    87.47 324   eP      P        21 10 37.8  -0.7
LPSR                                  pmax   pmax
      comp=Z,30nm,1.0s
ANTO  Ankara            87.67 311     P      P        21 10 40.1  +0.2
ANTO                                  pmax   pmax
      comp=Z,27nm,1.2s
ANTO  Ankara            87.67 311     P      P        21 10 40.1  +0.2
ANTO                                  IAmb   IAmb     21 10 41.8
      comp=Z,27nm,1.2s
PRGR  Permogore         87.67 334   eP      P        21 10 37.0  -2.3
PRGR                                  pmax   pmax
      comp=Z,57nm,1.0s
BR231 Keskin MP Arra    87.68 311     P      P        21 10 40.3  +0.3
BR231                                 IAmb   IAmb     21 10 41.9
      comp=Z,20nm,0.9s
SNAA  Sanae             87.74 197     P      P        21 10 41.1  +1.4
SNAA  Sanae             87.74 197     P      P        21 10 40.7  +1.1
      comp=Z,10nm,0.9s,baz=108,slow=4.0,SNR=11
SNAA  Sanae             87.74 197⇑eP      P        21 10 40.4  +0.7
SNAA                                  pmax   pmax
      comp=Z,14nm,1.0s
SNAA  Sanae             87.74 197     P      P        21 10 40.2  +0.5
SNAA                                  IAmb   IAmb     21 12 44.2
      comp=Z,19nm,0.7s
MDUB  Mudurnu           89.01 311     P      P        21 10 46.7  +0.4
ELL   Elmali            89.11 307     P      P        21 10 47.1  +0.2
ELL                                   pmax   pmax
      comp=Z,58nm,0.9s
ELL   Elmali            89.11 307     P      P        21 10 47.1  +0.2
MOS   Moscow            89.25 327   eP      P        21 10 44.2  -2.7
MOS                                 e                 21 10 59.6
MOS                                 e                 21 14 15.0
MOS                                   pmax   pmax
      comp=Z,35nm,1.4s
VNA2  Neumayer--Watz    89.39 197     P      P        21 10 48.1  +0.7
OBN   Obninsk           89.62 326deP      P        21 10 48.6   0.0
OBN                                 e                 21 10 57.6
OBN                                 e                 21 11 06.5
OBN                                   SS     SS       21 27 41.0  +5.7
OBN                                   SSS    SSS      21 31 15.0
OBN                                   pmax   pmax
      comp=Z,50nm,2.5s
OBN                                   MLR    MLR
      comp=Z,58nm,16.0s
OBN   Obninsk           89.62 326     P      P        21 10 48.9  +0.3
VNA3  Neumayer Olymp    89.85 196     P      P        21 10 49.7  +0.1
WIN   Windhoek          89.88 247     P      P        21 10 51.5  +0.5
WIN                                   pmax   pmax
      comp=Z,15nm,0.9s
WIN   Windhoek          89.88 247     P      P        21 10 51.5  +0.5
WIN                                   IAmb   IAmb     21 10 54.1
      comp=Z,15nm,0.9s
KLMR  Klimovskoe        90.07 332   eP      P        21 10 47.4  -3.2
KLMR                                  pmax   pmax
      comp=Z,26nm,1.1s
KLMR  Klimovskoe        90.07 332   eP      P        21 10 47.4  -3.2
KLMR                                  AMP             21 10 51.7
      comp=Z,26nm,1.1s
AKASG Malin Array Be    92.73 321     P      P        21 11 02.5  -0.7
      comp=Z,5.0nm,0.9s,baz=88,slow=4.5,SNR=16
AKASG                                 PP     PP       21 14 42.4  -3.0
      comp=Z,2.4nm,0.7s,baz=86,slow=6.5,SNR=8.5
AKASG Malin Array Be    92.73 321     P      P        21 11 02.1  -1.1
AKASG                                 pmax   pmax
      comp=Z,5.0nm,1.4s
AKASG Malin Array Be    92.73 321     P      P        21 11 02.1  -1.1
AKBB  Malin Array Si    92.73 321⇓eP      P        21 11 02.1  -1.1
AKBB                                  pmax   pmax
      comp=Z,6.0nm,1.1s
APA   Apatity           94.69 338⇓iP      P        21 11 12.8  +0.9
APA                                   pmax   pmax
      comp=Z,7.0nm,1.0s
APA                                   MLR    MLR
      comp=Z,300nm,14.0s
BURAR Bucovina Array    94.71 317     P      P        21 11 12.6  +0.1
BUR08 Bucovina Ar. S    94.73 317     P      P        21 11 12.7   0.0
FINES FINESS Array B    96.51 331     P      P        21 11 20.4  +0.2
      comp=Z,5.6nm,0.9s,baz=96,slow=4.6,SNR=5.3
FINES                                 LR     LR       22 01 42.9
      comp=Z,56nm,18.0s,baz=180,slow=40
FINES FINESS Array B    96.51 331     P      P        21 11 20.6  +0.3
ARCES ARCESS Array B    97.93 339     P      Pdif     21 11 26.8  +0.2
      comp=Z,4.4nm,1.0s,baz=86,slow=7.5,SNR=2.0
ARCES                                 LR     LR       22 00 41.6
      comp=Z,101nm,18.5s,baz=60,slow=38
SPITS Spitsbergen Ar   100.87 348     P      Pdif     21 11 39.1  -0.4
      comp=Z,14nm,0.9s,baz=113,slow=7.0,SNR=2.1
IMAR  Indian Mountai   101.28  25     Pdif   Pdif     21 11 42.2  +0.6
RSO   Redoubt South    101.76  30     Pdif   Pdif     21 11 43.5  -0.6
MLY   Manley           102.56  26     Pdif   Pdif     21 11 47.6  +0.2
NOA   NORSAR Array B   103.65 330     PKiKP  PKiKP    21 16 09.6  -0.9
      comp=Z,1.2nm,0.9s,baz=86,slow=6.5,SNR=3.7
ILAR  Eielson Array    104.22  26     Pdiff  Pdif     21 11 52.6  -2.1
      comp=Z,0.6nm,0.8s,baz=270,slow=3.9,SNR=6.3
ILAR  Eielson Array    104.22  26   i P      Pdif     21 11 54.3  -0.4
ILAR  Eielson Array    104.22  26     Pdif   Pdif     21 11 54.2  -0.4
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BMAR	Burnt Mountain	104.78	23	Pdif	Pdif	21 11 57.5	+0.3
BCAR	Beaver Creek A	106.70	27	Pdif	Pdif	21 12 06.2	+0.3
TORD	Torodi Ar. Bea	111.07	280	PKiKP	PKiKP	21 16 25.3	-0.3
	comp=Z,1.3nm,0.7s,baz=70,slow=1.4,SNR=9.0						
ESDC	Sonseca Array	115.74	309	PKP	PKiKP	21 16 34.1	+0.2
	comp=Z,0.9nm,0.9s,baz=34,slow=2.3,SNR=6.6						
ESDC				PP	PP	21 17 34.7	-2.3
	comp=Z,0.3nm,0.8s,baz=38,slow=6.5,SNR=2.8						
ESDC	Sonseca Array	115.74	309	PKPdf	PKPdf	21 16 33.8	-0.1
DBIC	Dimbokro	116.71	272	PKP	PKPdf	21 16 34.5	-1.9
	comp=Z,3.3nm,0.9s,baz=117,slow=6.8,SNR=2.2						
DBIC	Dimbokro	116.71	272		PKPdf	21 16 36.1	-0.3
HUMO	Hull Mountain	122.96	45	PKPdf	PKiKP	21 16 48.4	+0.4
M02C	Callahan	123.40	47	P	PKiKP	21 16 50.2	+1.3
	baz=287						
O02D	Mt. Diablo Mer	123.80	48	P	PKiKP	21 16 51.0	+1.2
	baz=287						
J05D	Fort Rock, OR	123.94	44	P	PKiKP	21 16 50.9	+0.9
	baz=290						
K05A	Summer Lake	124.36	45	PKPdf	PKiKP	21 16 50.9	0.0
O03E	Paynes Creek	124.49	48	P	PKiKP	21 16 51.1	0.0
	baz=288						
MSO	Missoula	127.19	38	P	PKiKP	21 16 56.1	-0.2
	baz=299						
PKM	Mcpherson Peak	127.53	54	P	PKiKP	21 16 58.8	+1.3
	baz=285						
MFID	Camas Ranch	127.53	42	PKPdf	PKiKP	21 16 57.1	0.0
KVN	Kaiserville	127.59	48	PKIKP	PKiKP	21 16 57.8	+0.3
KVN	Kaiserville	127.59	48	PKPdf	PKiKP	21 16 57.8	+0.3
NVAR	Mina Array Bea	127.65	49	PKP	PKiKP	21 16 58.0	+0.4
	comp=Z,2.4nm,0.9s,baz=272,slow=2.5,SNR=8.9						
NVAR				PP	PP	21 18 54.5	-3.7
	comp=Z,0.1nm,0.5s,baz=262,slow=6.3,SNR=2.7						
HLID	Hailey	128.40	42	P	PKiKP	21 17 00.0	+1.1
	baz=296,SNR=8.5						
HLID	Hailey	128.40	42	PKPdf	PKiKP	21 16 59.5	+0.6
CWC	Cottonwood Cre	128.45	51	P	PKiKP	21 17 00.6	+1.4
	baz=288						
EDW2	Edwards Air Fo	128.97	53	P	PKiKP	21 17 01.1	+1.0
	baz=287						
ELK	Elko	129.02	45	PKIKP	PKiKP	21 17 01.0	+0.7
ELK	Elko	129.02	45	PKPdf	PKiKP	21 17 01.0	+0.7
BFSC	Mount Baldy Ra	129.42	54	P	PKiKP	21 17 02.3	+1.1
	baz=286						
R11A	Troy Canyon, C	129.68	48	P	PKiKP	21 17 03.1	+1.4
	baz=291						
GSC	Goldstone, Bar	129.78	52	P	PKiKP	21 17 03.5	+1.7
	baz=288						
PFO	Pinyon Flats O	130.55	54	PKP	PKiKP	21 17 04.4	+1.0
	comp=Z,3.6nm,0.9s,baz=244,slow=2.1,SNR=4.0						
REDW	Red Top Meadow	130.79	40	PKPdf	PKiKP	21 17 04.0	+0.2
BELC	Belle Mtn. Jos	130.81	54	P	PKiKP	21 17 05.9	+1.9
	baz=287						
GMRC	Granite Mounta	130.83	53	P	PKiKP	21 17 05.2	+1.1
	baz=288						
DUG	Dugway, Tooele	130.94	45	PKIKP	PKiKP	21 17 04.8	+0.7
DUG	Dugway, Tooele	130.94	45	P	PKiKP	21 17 05.7	+1.6
	baz=295						
DUG	Dugway, Tooele	130.94	45	PKPdf	PKiKP	21 17 04.8	+0.7
PDAR	Pinedale Array	131.91	40	PKP	PKPdf	21 17 05.0	0.0
	comp=Z,0.4nm,0.6s,baz=82,slow=3.1,SNR=2.8						
MSU	Marysvale	132.09	47	PKIKP	PKiKP	21 17 07.4	+0.8
MSU	Marysvale	132.09	47		PKiKP	21 17 07.4	+0.8
RSSD	Black Hills	134.50	36	PKIKP	PKPdf	21 17 10.0	+0.1
RSSD	Black Hills	134.50	36	P	PKiKP	21 17 10.7	-0.6
	baz=307						
RSSD	Black Hills	134.50	36	PKPdf	PKPdf	21 17 10.0	+0.1
MVCO	Mesa Verde	135.28	46	P	PKiKP	21 17 14.1	+1.1
	baz=297						
S22A	4UR Ranch, Cre	136.20	45	P	PKiKP	21 17 16.7	+1.7
	baz=299						
CPUP	Villa Florida	142.04	197	PKhKP	PKPpre	21 17 19.7	
	comp=Z,1.3nm,0.7s,baz=146,slow=11,SNR=1.6						
TXAR	Lajitas Array	142.27	55	PKhKP	PKPpre	21 17 19.4	
	comp=Z,3.1nm,0.9s,baz=242,slow=2.7,SNR=12						
WMOK	Wichita Mounta	143.31	44	PKIKP	PKPbc	21 17 23.6	+0.6
WMOK	Wichita Mounta	143.31	44	P	PKPbc	21 17 23.1	0.0
	baz=305						
WMOK	Wichita Mounta	143.31	44	PKPdf	PKPbc	21 17 23.6	+0.5
TRQ	Mont Tremblant	143.73	7	PKPdf	PKPbc	21 17 23.9	0.0
QUOK	Quay	143.81	40		PKPbc	21 17 25.0	+0.6
ABTX	Abilene, Hawle	143.85	47	PKPdf	PKPdf	21 17 25.9	-1.1
P40A	Paris	144.18	31		PKPbc	21 17 25.5	+0.1
LMN	Caledonia Moun	144.27	355	PKPdf	PKPdf	21 17 26.4	-0.9
SADO	Sadowa	144.39	13	PKP	PKPbc	21 17 26.4	+0.5
	comp=Z,5.6nm,0.6s,baz=286,slow=5.0,SNR=4.4						
SADO	Sadowa	144.39	13		PKPbc	21 17 26.2	+0.4
PLVO	Plevna	144.53	10		PKPbc	21 17 26.3	0.0
TUL1	Leonard	144.55	39	P	PKPbc	21 17 27.0	+0.3
	baz=310						
TUL1	Leonard	144.55	39		PKPbc	21 17 27.1	+0.4
F63A	Nahmakanta, Br	144.58	0	PKPdf	PKPdf	21 17 27.5	-0.3
HDIL	Hopedale	144.71	27	P	PKPbc	21 17 26.9	-0.1
	baz=323,SNR=11						
HDIL	Hopedale	144.71	27		PKPbc	21 17 27.0	-0.1
JCT	Junction City	144.80	50	PKIKP	PKPdf	21 17 28.6	-0.1
JCT	Junction City	144.80	50	P	PKPdf	21 17 28.4	-0.3
	baz=298						
JCT	Junction City	144.80	50	PKPdf	PKPdf	21 17 28.6	-0.1
S39A	Bolivar	144.82	35		PKPab	21 17 27.2	-0.3
DELO	Deloro Mine	144.93	11		PKPbc	21 17 27.8	+0.2
R40A	Maddies Statio	144.97	33	PKPbc	PKPbc	21 17 27.9	0.0
PKME	Peaks-Kenny Pk	145.02	1	P	PKPdf	21 17 28.4	-0.2
	baz=359,SNR=5.7						
PKME	Peaks-Kenny Pk	145.02	1	PKPbc	PKPab	21 17 28.1	+0.3
U38A	Gravette	145.07	37	PKPbc	PKPbc	21 17 28.1	-0.3
G65A	Princeton	145.07	358	PKPbc	PKPab	21 17 28.2	+0.1
GGN	Saint George	145.13	358	PKPbc	PKPab	21 17 28.3	0.0
Z35A	Perchaven, San	145.15	44		PKPab	21 17 28.9	+0.1
FRNY	Flat Rock	145.21	6	PKPbc	PKPab	21 17 28.5	-0.1
LONY	Lake Ozonia	145.31	7	P	PKPdf	21 17 29.1	-0.1
	baz=350						
LONY	Lake Ozonia	145.31	7	PKPbc	PKPab	21 17 28.9	0.0
AAM	Ann Arbor	145.44	20	P	PKPab	21 17 30.1	+0.6
	baz=334						
L48A	N Adams	145.50	21		PKPab	21 17 30.0	+0.3
EMMW	East Machias	145.56	358		PKPab	21 17 29.9	0.0
PECO	Prince Edward	145.61	10		PKPab	21 17 30.4	+0.3
H62A	Milan	145.65	3	PKPdf	PKPab	21 17 30.2	0.0
CCM	Cathedral Cave	145.69	32	PKP2	PKPab	21 17 30.5	-0.1
CCM	Cathedral Cave	145.69	32	P	PKPab	21 17 30.4	-0.2
	baz=318						
CCM	Cathedral Cave	145.69	32		PKPab	21 17 30.5	-0.1
WHTX	Lake Whitney,	145.76	46	P	PKPab	21 17 31.8	+0.8
	baz=303						
MGMO	Mountain Grove	145.80	34	PKPdf	PKPdf	21 17 30.2	0.0
SFIN	Lafayette	145.82	25	P	PKPab	21 17 30.8	-0.2
	baz=327,SNR=9.3						
SFIN	Lafayette	145.82	25		PKPbc	21 17 30.6	0.0
LBNH	Lisbon	145.94	4	P	PKPab	21 17 31.4	+0.1
	baz=355						
N47A	Urbana	145.96	23	PKPdf	PKPdf	21 17 30.3	0.0
NCB	Newcomb	145.99	7	PKPdf	PKPbc	21 17 30.9	-0.2
U40A	Yellville	146.03	36	P	PKPbc	21 17 31.1	-0.3
	baz=314						
U40A	Yellville	146.03	36	PKPdf	PKPdf	21 17 30.6	0.0
833A	Chaparral WMA,	146.10	54	P	PKPab	21 17 33.1	+0.6
	baz=296						
FVM	French Village	146.17	32	PKP2	PKPdf	21 17 31.2	+0.4
FVM	French Village	146.17	32	PKPdf	PKPdf	21 17 31.2	+0.4
W39A	Magazine	146.26	38	P	PKPbc	21 17 32.0	-0.1
	baz=312						
P46A	Rosedale	146.40	26	PKPdf	PKPbc	21 17 32.0	-0.4
J58A	Remsen	146.45	9	PKPdf	PKPbc	21 17 32.7	+0.2
J59A	Piesco	146.46	7		PKPdf	21 17 31.6	+0.5
ERPA	Erie	146.69	15	P	PKPab	21 17 34.6	+0.3
	baz=340						
FCAR	Ozark Folk Cen	146.77	36		PKPbc	21 17 33.2	-0.4
J61A	Chester	146.78	5	PKPbc	PKPbc	21 17 33.7	+0.4
MIAR	Mount Ida	146.82	39	P	PKPab	21 17 34.6	-0.4
	baz=311						
PB15	IPOC Station P	146.83	179	PKPbc	PKPbc	21 17 34.2	-0.2
BDFB	Brasilia	147.11	219	PKPbc	PKPdf	21 17 33.0	-0.1
	comp=Z,5.2nm,0.8s,baz=148,slow=4.3,SNR=6.3						
BDFB	Brasilia	147.11	219	PKIKP	PKPdf	21 17 33.0	-0.1
M53A	WI Miller and	147.14	17	P	PKPbc	21 17 34.5	+0.1
	baz=338,SNR=6.0						
LCAR	Lake Charles	147.20	35		PKPbc	21 17 34.6	-0.1
W41B	Gary Mavity, V	147.20	37	P	PKPbc	21 17 34.5	-0.3
	baz=314						
X40A	Basin Creek Fa	147.31	38	P	PKPab	21 17 36.0	-0.9
	baz=312						
M54A	Oil Creek Stat	147.35	15	P	PKPbc	21 17 35.1	0.0
	baz=340,SNR=7.2						
BINY	Binghamton	147.47	10	P	PKPbc	21 17 35.9	+0.5
	baz=347,SNR=7.1						
P49A	Miami Univ. Ec	147.50	23	P	PKPbc	21 17 35.6	+0.1
	baz=330,SNR=9.8						
P49A	Miami Univ. Ec	147.50	23	PKPbc	PKPbc	21 17 35.1	-0.4
ACSO	Alum Creek Sta	147.52	20	P	PKPbc	21 17 35.7	+0.2
	baz=333,SNR=11						
PARMO	Parma	147.52	32	PKPbc	PKPbc	21 17 35.7	0.0
M55A	Ridgway	147.61	14		PKPbc	21 17 35.9	+0.1
L59A	Walton	147.63	9		PKPbc	21 17 36.4	+0.6
L61B	Northampton	147.66	5	P	PKPbc	21 17 36.1	+0.2
	baz=353						
HRV	Adam Dziewonsk	147.69	4	P	PKPbc	21 17 36.3	+0.4
	baz=355						
N54A	Moraine State	147.77	16	P	PKPbc	21 17 36.6	+0.4
	baz=339,SNR=7.2						
N54A	Moraine State	147.77	16		PKPbc	21 17 36.5	+0.2
WCI	Wyandotte Cave	147.95	26	PKP2	PKPbc	21 17 36.9	+0.1
WCI	Wyandotte Cave	147.95	26	P	PKPbc	21 17 37.1	+0.3
	baz=326						
WCI	Wyandotte Cave	147.95	26		PKPbc	21 17 36.9	+0.1
O52A	Adamsville	148.00	19		PKPbc	21 17 36.6	-0.3
O53A	New Philadelph	148.08	18	P	PKPbc	21 17 37.3	+0.3
	baz=336,SNR=5.8						
O53A	New Philadelph	148.08	18		PKPbc	21 17 37.3	+0.3
Z41A	Richland Creek	148.14	40	P	PKiKP	21 17 38.4	-0.8
	baz=311						
PB07	IPOC Station P	148.29	178		PKiKP	21 17 39.9	-0.2
P52A	Corning	148.34	20	P	PKPbc	21 17 37.8	0.0
	baz=334,SNR=12						
P52A	Corning	148.34	20		PKPbc	21 17 37.2	-0.6
T47A	Sharon Grove	148.59	29		PKPbc	21 17 38.8	+0.3
SSPA	Standing Stone	148.60	13	P	PKPbc	21 17 38.7	+0.2
	baz=343						
SSPA	Standing Stone	148.60	13		PKPbc	21 17 37.9	-0.5
N58A	Sunbury	148.66	12		PKPbc	21 17 38.8	+0.3
P53A	Whipple	148.72	19		PKPbc	21 17 38.9	+0.2
N59A	State Game Lan	148.76	10	P	PKPbc	21 17 39.4	+0.5
	baz=347,SNR=8.6						
O56A	Blue Knob Stat	148.79	14	P	PKPbc	21 17 39.3	+0.3
	baz=341,SNR=6.0						
WVT	Waverly	148.92	31	PKP2	PKPbc	21 17 39.5	+0.1
WVT	Waverly	148.92	31	P	PKPbc	21 17 39.8	+0.4
	baz=322						
WVT	Waverly	148.92	31		PKPbc	21 17 39.5	+0.1
PAL	Palisades	148.95	7	P	PKPbc	21 17 39.7	+0.5
	baz=350						
MCWV	Mont Chateau	149.03	17	P	PKPbc	21 17 39.8	+0.2
	baz=339,SNR=10						
P60A	Greenville	149.86	10	P	PKPbc	21 17 41.7	+0.2
	baz=347						
PB08	IPOC Station P	149.89	179		PKPbc	21 17 42.4	-0.4
TZTN	Tazewell	150.54	25	P	PKPbc	21 17 43.3	-0.1
	baz=329						
BLA	Blacksburg	151.10	19	P	PKiKP	21 17 45.0	-0.3
	baz=336						
TKL	Tuckaleechee C	151.20	26	PKP	PKPdf	21 17 40.3	+1.3
	comp=Z,22nm,1.1s,baz=197,slow=4.0,SNR=3.7						
TKL				PKPbc	PKiKP	21 17 45.4	0.0
	comp=Z,22nm,0.7s,baz=134,slow=2.3,SNR=27						
TKL				PKPab	sPKPbc	21 17 51.6	-0.3
	comp=Z,15nm,0.7s,baz=297,slow=9.0,SNR=12						
KMSC	Kings Mountain	152.64	23	P	PKiKP	21 17 48.5	+0.1
	baz=332						
PTLB	Pontes e Lacer	152.81	201	PKPdf	PKPdf	21 17 42.3	+0.4
PTLB				PKPbc	PKiKP	21 17 49.2	-0.1
GOGA	Godfrey	153.23	28	P	PKPdf	21 17 43.5	+1.4
	baz=326						
LPAZ	La Paz	153.71	181	PKP	PKPdf	21 17 44.5	+0.5
	comp=Z,1.1nm,0.8s,baz=256,slow=4.2,SNR=4.3						
LPAZ				PKPbc	PKiKP	21 17 52.0	+0.1
	comp=Z,5.4nm,1.0s,baz=118,slow=1.5,SNR=9.3						
LPAZ				PKPab	PKPab	21 18 02.1	-2.2
	comp=Z,4.6nm,0.8s,baz=233,slow=5.1,SNR=5.8						

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*IDC **07** 21:00:11.8±0.7, 41°.48S×16°.45W, h0^{km}, mb4.2/15, mb1 4.3/15, mb1mx4.2/30, mbtmp4.2/15, MS4.1/5, Ms1 4.1/5, ms1mx3.7/19 Error ellipse: s-maj=27.2km s-min=14.9km az=173.0*

*NEIC **07** 21:00:14.2±1.1, 41°.4S±0°.1×16°.5W±0°.2, h10^{km}±1^{km}, mb4.8/30, Error ellipse: s-maj=22.6km s-min=19.2km az=181.0*

ISC 07 21:00:13.7±0.5, **41°.4S**±0°.1×**16°.50W**±0°.09, **h10**^{km}, **n66**, σ**0^s.86**/56, **mb4.6**/27, **MS4.1**/5, **1D, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUR	Sutherland	30.98	85	P	P	21 06 31.0	-0.4
	5.7nm,0.8s,baz=207,slow=2.3,SNR=4.4						
SUR	Sutherland	30.98	85	P	P	21 06 31.0	-0.4
SUR				IAmb	IAmb	21 06 33.5	
	comp=Z,9.1nm,0.9s						
PLTB	Pedras Altas	31.11	276	P	P	21 06 32.7	+0.4
PLTB				IAmb	IAmb	21 06 34.6	
	comp=Z,18nm,1.3s						
H10S2	ASCENSION HYDR	32.37	3	T	T	21 40 55.9	
	baz=182,slow=74,SNR=27						
H10S3	ASCENSION HYDR	32.37	3	T	T	21 40 57.4	
	baz=38,slow=74,SNR=113						
H10N1	ASCENSION HYDR	33.48	4	T	T	21 42 17.9	
	baz=191,slow=78,SNR=22						
H10N3	ASCENSION HYDR	33.48	4	T	T	21 42 21.3	
	baz=191,slow=78,SNR=98						
H10N2	ASCENSION HYDR	33.50	4	T	T	21 42 30.6	
	baz=191,slow=78,SNR=31						
ITQB	Itaqui	34.40	277	P	P	21 07 01.5	+0.4
PMSA	Palmer Station	35.61	213	P	P	21 07 09.8	-1.3
	comp=Z,10nm,1.0s,baz=97,slow=7.3,SNR=3.3						
BOSA	Boshof	36.17	83	P	P	21 07 15.1	-1.5
	comp=Z,5.5nm,1.0s,baz=244,slow=9.6,SNR=7.7						
BOSA				LR	LR	21 18 46.8	
	comp=Z,190nm,21.2s,baz=252,slow=31						
BOSA	Boshof	36.17	83	P	P	21 07 15.9	-0.6
BOSA				IAmb	IAmb	21 07 16.8	
	comp=Z,15nm,1.1s						
CPUP	Villa Florida	36.73	281	P	P	21 07 21.3	+0.2
	comp=Z,7.5nm,1.0s,baz=116,slow=5.4,SNR=5.1						
CPUP	Villa Florida	36.73	281	P	P	21 07 21.3	+0.2
CPUP				IAmb	IAmb	21 07 24.6	
	comp=Z,17nm,1.4s						
BDFB	Brasilia	37.41	304	P	P	21 07 27.2	+0.1
	comp=Z,1.3nm,0.4s,baz=193,slow=6.7,SNR=2.2						
AQDB	Aquidauana	39.13	290	P	P	21 07 41.5	0.0
SYO	Syowa Base	40.01	152	⇓epP	P	21 07 48.4	+0.2
PLCA	Paso Flores	40.19	252	P	P	21 07 50.4	+0.2
	comp=Z,5.0nm,1.1s,baz=125,slow=7.8,SNR=5.2						
PLCA				LR	LR	21 23 51.9	
	comp=Z,258nm,18.9s,baz=63,slow=35						
PLCA	Paso Flores	40.19	252	P	P	21 07 50.7	+0.5
ZON	Zonda	42.53	266	P	P	21 08 09.2	-0.4
BO01	Tunca	43.03	261	P	P	21 08 13.2	-0.3
MT05	Renca	43.22	262	P	P	21 08 14.9	-0.1
MT09	Talagante	43.23	262	P	P	21 08 14.1	-1.2
MT09				IAmb	IAmb	21 08 16.9	
	comp=Z,17nm,1.0s						
MATP	Matopo	43.33	75	P	P	21 08 15.3	-0.9
	comp=Z,2.8nm,0.9s,baz=238,slow=12,SNR=6.0						
VA03	San Esteban	43.36	263	P	P	21 08 16.3	0.0
VA03				IAmb	IAmb	21 08 23.6	
	comp=Z,17nm,0.9s						
MT01	Popeta	43.39	262	P	P	21 08 15.2	-1.2
MT01				IAmb	IAmb	21 08 16.6	
	comp=Z,18nm,1.1s						
MT02	Curacav	43.58	262	P	P	21 08 17.2	-0.7
MT02				IAmb	IAmb	21 08 25.5	
	comp=Z,27nm,1.1s						
SIV	San Ignacio	45.91	290	P	P	21 08 36.8	+0.1
	comp=Z,0.5nm,0.3s,baz=121,slow=5.5,SNR=8.0						
VILB	Vilhena	47.40	294	P	P	21 08 48.6	+0.3
PB07	IPOC Station P	48.73	277	P	P	21 08 58.7	-0.1
QSPA	South Pole Qui	48.84	180	P	P	21 08 59.5	+0.4
DBIC	Dimbokro	49.03	15	P	P	21 08 59.0	-1.8
	comp=Z,3.4nm,0.8s,baz=203,slow=15,SNR=3.1						
DBIC	Dimbokro	49.03	15	P	P	21 09 00.5	-0.3
PB08	IPOC Station P	49.13	279	P	P	21 09 02.3	+0.1
LPAZ	La Paz	50.80	284	P	P	21 09 13.9	-1.2
	comp=Z,2.3nm,1.2s,baz=100,slow=6.8,SNR=2.8						
LPAZ	La Paz	50.80	284	P	P	21 09 14.2	-0.9
SAML	Samuel	52.29	295	P	P	21 09 25.5	0.0
SAML				IAmb	IAmb	21 09 27.2	
	comp=Z,10.0nm,1.1s						
ETMB	Extrema	53.77	291	P	P	21 09 36.0	-0.5
MACA	Manacapuru-AM	54.92	302	P	P	21 09 45.1	+0.2
MACA				IAmb	IAmb	21 09 46.5	
	comp=Z,15nm,1.1s						
PTGA	Pitinga	56.34	304	P	P	21 09 55.2	+0.1
	comp=Z,0.8nm,0.2s,baz=124,slow=9.5,SNR=4.1						
PTGA	Pitinga	56.34	304	P	P	21 09 54.9	-0.2
PTGA				IAmb	IAmb	21 10 03.9	
	comp=Z,9.6nm,1.2s						
KOWA	Kowa	56.82	14	P	P	21 09 58.0	-0.3
KOWA				IAmb	IAmb	21 10 23.1	
	comp=Z,23nm,1.7s						
TORD	Torodi Ar. Bea	56.83	21	P	P	21 09 57.9	-0.5
	comp=Z,2.1nm,0.9s,baz=193,slow=7.5,SNR=10						
TORD				LR	LR	21 29 49.2	
	comp=Z,94nm,18.7s,baz=285,slow=31						
TORD	Torodi Ar. Bea	56.83	21	P	P	21 09 58.2	-0.3
VNDA	Vanda	61.34	180	P	P	21 10 30.5	+1.6
VNDA				IAmb	IAmb	21 10 37.5	
	comp=Z,8.9nm,1.1s						
ROSC	El Rosal	69.88	296	LR	LR	21 40 32.2	
	comp=Z,421nm,19.7s,baz=120,slow=35						
SDV	Santo Domingo	70.47	302	P	P	21 11 29.5	+0.7
SDV				IAmb	IAmb	21 11 36.7	
	comp=Z,6.7nm,1.0s						
ZARC	Zaragoza, Cauc	72.19	298	P	P	21 11 37.1	-1.9
ZARC				IAmb	IAmb	21 11 45.3	
	comp=Z,4.6nm,0.8s						
MOTC	Monteria, Cord	73.67	298	P	P	21 11 47.2	-0.5
MOTC				IAmb	IAmb	21 11 48.7	
	comp=Z,14nm,1.1s						
KEST	Kesra	80.35	21	P	P	21 12 26.1	+1.1
	comp=Z,2.0nm,0.9s,baz=260,slow=6.1,SNR=2.2						
KEST				LR	LR	21 44 29.2	
	comp=Z,130nm,20.5s,baz=248,slow=33						
ESDC	Sonseca Array	81.51	10	P	P	21 12 32.3	+1.3
	comp=Z,0.6nm,1.0s,baz=241,slow=4.9,SNR=2.9						
H01W2	Cape Leeuwin H	91.56	141	T	T	22 55 51.3	
	baz=216,slow=75,SNR=3.7						
H01W1	Cape Leeuwin H	91.58	141	T	T	22 55 52.3	
	baz=216,slow=75,SNR=4.0						
H01W3	Cape Leeuwin H	91.58	141	T	T	22 55 52.3	
	baz=216,slow=75,SNR=3.7						
BRTR	Keskin Array B	92.74	36	P	P	21 13 27.4	+1.4
	comp=Z,0.5nm,1.0s,baz=242,slow=3.1,SNR=3.1						
BRTR	Keskin Array B	92.74	36	P	P	21 13 26.9	+0.9
CMAR	Chiang Mai Arr	120.94	92	PKP	PKiKP	21 19 07.2	+0.5
	comp=Z,0.5nm,0.7s,baz=195,slow=5.6,SNR=1.7						
MKAR	Makanchi Array	123.91	55	PKP	PKPdf	21 19 09.6	-1.9
	comp=Z,0.4nm,0.7s,baz=191,slow=1.2,SNR=2.8						
MKAR	Makanchi Array	123.91	55	PKPdf	PKiKP	21 19 12.3	+0.5
SONM	Songino Array	139.66	61	PKP	PKPdf	21 19 39.0	-2.3
	comp=Z,1.0nm,0.8s,baz=223,slow=2.6,SNR=7.1						
SONM	Songino Array	139.66	61		PKPdf	21 19 41.3	0.0
BCAR	Beaver Creek A	141.68	323	PKPdf	PKPdf	21 19 45.0	+0.7
ILAR	Eielson Array	143.54	327	PKP	PKPbc	21 19 45.9	+1.0
	comp=Z,0.7nm,0.7s,baz=128,slow=1.7,SNR=5.0						
ILAR	Eielson Array	143.54	327		PKPdf	21 19 48.0	+0.4
IMAR	Indian Mountai	145.82	330	PKPdf	PKPbc	21 19 52.3	+0.2
KSRS	Korea Array	152.36	86	PKPab	PKPab	21 20 19.1	-0.7
	comp=Z,1.3nm,0.7s,baz=246,slow=3.7,SNR=4.3						

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*TIR **07** 21:04:24.4, 41°.43N×20°.24E, h6^{km}±1^{km}, Md2.4, Ml2.0*

*BEO **07** 21:04:25.7±0.3, 41°.87N×20°.91E, h0^{km}, ML1.7/7*

SKO 07 21:04:26.0, 41°.84N×20°.91E, h7^{km}, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PHP	Peshkopia	0.38	246	P	Pg	21 04 30.9	-2.6
	baz=31						
PHP				S	Sg	21 04 35.3	-3.2
	baz=31						
PHP				AMP			
	comp=N,1.0nm,0.2s,baz=31						
OHR	Ohrid	0.73	187	*e*Pg	Pg	21 04 39.1	-1.0
OHR				*e*Sg	Sg	21 04 49.5	-0.1
OHR	Ohrid	0.73	187	*i* Pg	Pg	21 04 39.1	-1.0
OHR				*i* Sg	Sg	21 04 49.9	+0.3
OHR				*e*Lg	Lg	21 04 50.5	
	comp=N,32nm,0.4s						
OHR				*e*Lg	Lg	21 04 51.6	
	comp=E,26nm,0.5s						
PUK	Puka	0.79	285	P	Pg	21 04 38.5	-2.6
	baz=338						
PUK				S	Sg	21 04 47.6	-3.8
	baz=338						
PUK				AMP			
	comp=N,0.3nm,0.1s,baz=338						
STIP	Stip	0.97	98	*i* Pg	Pn	21 04 46.1	+0.1
STIP				*i* Sg	Sn	21 05 02.0	+1.9
FNA	Florina	1.11	161	*i* Pg	Pg	21 04 45.5	-1.8
FNA				*i* Sg	Sg	21 05 01.9	+0.2
FNA	Florina	1.11	161	P	Pg	21 04 45.6	-1.7
	baz=126						
FNA				S	Sg	21 05 01.8	0.0
	baz=126						
BARS	Barje	1.18	34	*e*Pg	Pg	21 04 47.6	-1.2
BARS				*e*Sg	Sg	21 05 03.1	-1.0
BARS	Barje	1.18	34	*i* Pg	Pg	21 04 46.7	-2.1
BARS				*i* Sg	Sb	21 05 04.5	+0.1
BEY	Berane	1.28	324	*i* Pg	Pn	21 04 48.0	-2.4
BOSS	Bosilegrad	1.34	60	*e*Pg	Pn	21 04 50.0	-1.2
BOSS				*e*Sg	Sb	21 05 07.5	-1.4
VAY	Valandovo	1.35	112	*e*Pg	Pn	21 04 51.1	-0.2
VAY				*e*Sg	Sb	21 05 07.6	-1.5
VAY	Valandovo	1.35	112	*i* Pg	Pn	21 04 51.0	-0.3
VAY				*i* Sg	Sb	21 05 08.8	-0.3
VAY				*e*Lg	Lg	21 05 09.1	
	comp=N,11nm,0.7s						
VAY				*e*Lg	Lg	21 05 10.2	
	comp=E,10nm,0.5s						
PDG	Podgorica	1.36	296	*e*Sg	Pg	21 04 50.9	-1.3
PDG	Podgorica	1.36	296	*e*Pg	Sg	21 05 08.1	-1.8
SELS	Selova	1.39	6	*e*Pg	Pn	21 04 49.5	-2.4
SELS				*e*Sg	Sb	21 05 07.3	-3.0
GRG	Griva	1.43	128	*i* Pg	Pn	21 04 52.1	-0.4
GRG				*i* Sg	Sb	21 05 11.1	-0.3
SJES	Sjenica	1.58	334	*e*Pg	Pn	21 04 54.2	-0.4
SJES				*e*Sg	Sn	21 05 14.5	-0.9
KNT	Kendrikon	1.64	114	*i* Pg	Pn	21 04 54.7	-0.7
IVAS	Ivanjica	1.82	342	*e*Pg	Pn	21 04 57.4	-0.5

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*ANF **07** 21:07:30.6±0.9, 36°.65N×97°.69W, h0^{km}±7^{km}, ML3.8/7, Error ellipse: s-maj=3.6km s-min=3.2km az=37.0*

*NEIC **07** 21:07:31.3±1.1, 36°.61N±0°.01×97°.71W±0°.02, h4^{km}±6^{km}, Error ellipse: s-maj=2.1km s-min=1.7km az=65.0*

*TUL **07** 21:07:31±1.2, 36°.62N±0°.01×97°.72W±0°.02, h5^{km}±7^{km}, ML3.4, mb_Lg3.1/54(NEIC), Error ellipse: s-maj=1.9km s-min=1.7km az=60.0*

ISC 07 21:07:31.2±1.0, **36°.61N**±0°.02×**97°.72W**±0°.02, **h9**^{km}±9^{km}, **n100**, σ**0^s.75**/122, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CROK	Carrier	0.23	244	Pg	Pg	21 07 36.1	+0.2
CROK				Sg	Sg	21 07 39.8	+0.6
GC02	Grant County #	0.27	335	Pg	Pg	21 07 36.4	-0.1
GC02				Sg	Sg	21 07 40.1	0.0
KAN14	Manchester OK	0.40	331		Pg	21 07 38.8	-0.1
KAN14				Sg	Sg	21 07 44.4	+0.1
BLOK	Blackwell	0.43	70	Pg	Pg	21 07 39.5	-0.1
BLOK				Sg	Sg	21 07 45.8	+0.4
KAN17	Caldwell West	0.43	356	Pg	Pg	21 07 39.6	-0.1
KAN17				Sg	Sg	21 07 45.1	-0.3
OK032	Salt Plains WL	0.44	296		Pg	21 07 39.6	-0.1
OK032				Sg	Sg	21 07 45.8	+0.3
KAN13	South Haven SW	0.45	26		Pg	21 07 39.8	-0.2
KAN13				Sg	Sg	21 07 45.8	-0.1
KAN05	Bluff City Nor	0.51	346		Pg	21 07 41.0	-0.1
KAN05				Sg	Sg	21 07 48.1	+0.3
KAN09	Caldwell North	0.53	9	Pg	Pg	21 07 41.3	-0.2
KAN09				Sg	Sg	21 07 48.1	-0.4
KAN01	Argonia South	0.54	357		Pg	21 07 41.5	-0.2
KAN10	Anthony SW Sta	0.59	330	Pg	Pg	21 07 42.5	-0.2
KS20	Mayfield South	0.63	12		Pg	21 07 43.1	-0.3
KS20				Sg	Sg	21 07 51.5	-0.2
KAN06	Argonia West S	0.65	350		Pg	21 07 43.4	-0.3
KAN06				Sg	Sg	21 07 52.2	0.0
KAN08	Anthony NE Sta	0.65	342		Pg	21 07 43.5	-0.2
KAN08				Sg	Sg	21 07 51.9	-0.3
KAN16	Harper SW Stat	0.67	336	Pg	Pg	21 07 43.9	-0.3
KAN16				Sg	Sg	21 07 53.0	0.0
KAN12	Harper NE Stat	0.72	342		Pg	21 07 44.7	-0.4
KAN12				Sg	Sg	21 07 54.3	-0.3

OK029	**Liberty Lake**	**0.84**	**165**	Pg	**Pg**	**21 07 47.2**	**-0.1**
OK029				Sg	**Sg**	**21 07 58.8**	**+0.6**
QUOK	**Quay**	**0.93**	**118**	Pg	**Pg**	**21 07 48.7**	**-0.4**
QUOK				Sg	**Sg**	**21 08 01.0**	**-0.1**
BCOK	**Bluff Creek, N**	**0.95**	**174**		**Pg**	**21 07 49.3**	**-0.3**
OK031	**S. Brethren Rd**	**0.97**	**132**	Pg	**Pg**	**21 07 49.6**	**-0.2**
OK031				Sg	**Sg**	**21 08 02.5**	**+0.1**
OK030	**Cody Creek RV**	**1.02**	**132**		**Pg**	**21 07 50.5**	**-0.3**
OK030				Sg	**Sg**	**21 08 04.0**	**0.0**
T35A	**Sooner Cattle**	**1.02**	**72**		**Pg**	**21 07 50.2**	**-0.5**
T35A				Sg	**Sg**	**21 08 03.6**	**-0.4**
T35B	**Sooner Cattle**	**1.02**	**72**	P	**Pg**	**21 07 50.2**	**-0.5**
	baz=254						
T35B				S	**Sg**	**21 08 03.8**	**-0.2**
	baz=254						
U32A	**Winter Ranch,**	**1.06**	**258**		**Pg**	**21 07 50.9**	**-0.6**
U32A				Sg	**Sg**	**21 08 05.3**	**+0.2**
U32A	**Winter Ranch,**	**1.06**	**258**	P	**Pg**	**21 07 50.9**	**-0.6**
	baz=76,SNR=50						
U32A				S	**Sg**	**21 08 05.4**	**+0.2**
	baz=76						
OK025	**Westminster Rd**	**1.07**	**163**		**Pg**	**21 07 51.4**	**-0.3**
OK025					**Sg**	**21 08 06.0**	**+0.3**
OKCFA	**Oklahoma City**	**1.21**	**169**		**Pg**	**21 07 53.9**	**-0.6**
OKCFA				Sg	**Sg**	**21 08 10.5**	**+0.3**
OKCFA	**Oklahoma City**	**1.21**	**169**	P	**Pg**	**21 07 53.8**	**-0.6**
	baz=350,SNR=23						
OKCFA				S	**Sb**	**21 08 10.7**	**+0.6**
	baz=350						
OKCSW	**OKLAHOMA CITY**	**1.22**	**169**		**Pg**	**21 07 54.1**	**-0.6**
OKCSW				Sg	**Sb**	**21 08 11.0**	**+0.6**
FNO	**Franklin**	**1.38**	**169**		**Pn**	**21 07 56.6**	**0.0**
TUL1	**Leonard**	**1.71**	**114**	P	**Pn**	**21 08 02.0**	**+0.8**
	baz=295						
TUL1				S	**Sb**	**21 08 25.0**	**+0.6**
	baz=295						
TUL1	**Leonard**	**1.71**	**114**		**Pn**	**21 08 02.0**	**+0.8**
TUL1	**Leonard**	**1.71**	**114**	P	**Pn**	**21 08 02.0**	**+0.8**
	baz=295,SNR=115						
TUL1				S	**Sb**	**21 08 25.0**	**+0.6**
	baz=295						
R32A	**Long Quarter,**	**1.97**	**337**		**Pb**	**21 08 06.2**	**-1.1**
R32A	**Long Quarter,**	**1.97**	**337**	P	**Pb**	**21 08 06.4**	**-0.9**
	baz=156,SNR=36						
R32A				S	**Sb**	**21 08 32.8**	**+0.7**
	baz=156						
X34A	**Smith Ranch, M**	**2.01**	**183**		**Pn**	**21 08 06.8**	**+1.5**
WMOK	**Wichita Mounta**	**2.06**	**205**	P	**Pn**	**21 08 06.8**	**+0.7**
	baz=24						
WMOK				S	**Sb**	**21 08 34.3**	**-0.2**
	baz=24						
WMOK	**Wichita Mounta**	**2.06**	**205**		**Pn**	**21 08 06.7**	**+0.7**
WMOK	**Wichita Mounta**	**2.06**	**205**	P	**Pn**	**21 08 06.7**	**+0.7**
	baz=24,SNR=116						
KSU1	**Kansas State U**	**2.64**	**19**	Pg	**Pg**	**21 08 20.3**	**-1.5**
	baz=200						
KSU1	**Kansas State U**	**2.64**	**19**		**Pn**	**21 08 14.7**	**+0.7**
KSU1	**Kansas State U**	**2.64**	**19**	P	**Pn**	**21 08 15.0**	**+1.0**
	baz=200						
LOOK	**Love County**	**2.65**	**170**		**Pn**	**21 08 15.3**	**+1.2**
U38A	**Gravette**	**2.69**	**93**		**Pn**	**21 08 15.7**	**+0.9**
U38A	**Gravette**	**2.69**	**93**	P	**Pn**	**21 08 15.8**	**+1.1**
	baz=275,SNR=20						
CBKS	**Cedar Bluff**	**2.72**	**325**	Sb	**Sb**	**21 08 55.2**	**+1.7**
	baz=143						
CBKS	**Cedar Bluff**	**2.72**	**325**		**Pn**	**21 08 16.4**	**+1.3**
X37A	**Clayton**	**2.78**	**136**		**Pn**	**21 08 17.2**	**+1.2**
X37A				IAmb_Lg		21 09 04.2	
	comp=Z,57nm,0.8s						
X37A	**Clayton**	**2.78**	**136**	P	**Pn**	**21 08 17.3**	**+1.4**
	baz=318,SNR=18						
HHAR	**Hobbs**	**3.07**	**95**		**Pn**	**21 08 20.1**	**+0.2**
Z35A	**Perchaven, San**	**3.29**	**173**		**Pn**	**21 08 23.7**	**+0.7**
W39A	**Magazine**	**3.49**	**113**		**Pn**	**21 08 26.8**	**+1.0**
W39A				IAmb_Lg		21 09 31.2	
	comp=Z,50nm,0.9s						
AMTX	**Amarillo**	**3.65**	**243**	Sb	**Sg**	**21 09 25.7**	**-2.8**
	baz=60						
AMTX	**Amarillo**	**3.65**	**243**		**Pn**	**21 08 29.5**	**+1.5**
AMTX				IAmb_Lg		21 09 27.1	
	comp=Z,34nm,0.8s						
S39A	**Bolivar**	**3.68**	**72**		**Pn**	**21 08 29.3**	**+1.0**
S39A				IAmb_Lg		21 09 37.4	
	comp=Z,28nm,0.8s						
U40A	**Yellville**	**3.93**	**92**		**Pn**	**21 08 32.4**	**+0.6**
U40A				IAmb_Lg		21 09 34.3	
	comp=Z,54nm,1.1s						
MIAR	**Mount Ida**	**3.96**	**120**		**Pn**	**21 08 32.6**	**+0.5**
MIAR				IAmb_Lg		21 09 37.9	
	comp=Z,47nm,0.8s						
Z38A	**Mt. Pleasant**	**4.03**	**145**	Pn	**Pn**	**21 08 32.4**	**-0.7**
ABTX	**Abilene, Hawle**	**4.28**	**202**		**Pn**	**21 08 36.4**	**-0.2**
MGMO	**Mountain Grove**	**4.41**	**81**		**Pn**	**21 08 37.6**	**-0.7**
MGMO				IAmb_Lg		21 09 52.4	
	comp=Z,45nm,0.8s						
P38A	**Dawn**	**4.47**	**46**		**Pn**	**21 08 39.7**	**+0.5**
P38A				IAmb_Lg		21 09 52.2	
	comp=Z,41nm,0.8s						
X40A	**Basin Creek Fa**	**4.51**	**117**		**Pn**	**21 08 41.8**	**+2.1**
X40A				IAmb_Lg		21 10 04.8	
	comp=Z,22nm,0.7s						
N35A	**Tabor**	**4.55**	**20**	Pn	**Pn**	**21 08 41.1**	**+0.9**
KSCO	**Kaye Shedlock'**	**4.56**	**303**		**Pn**	**21 08 41.3**	**+0.7**
KSCO				IAmb_Lg		21 10 05.9	
	comp=Z,28nm,0.8s						
FCAR	**Ozark Folk Cen**	**4.58**	**97**		**Pn**	**21 08 41.8**	**+1.1**
WHAR	**Wooly Hollow**	**4.60**	**105**		**Pn**	**21 08 41.7**	**+0.7**
WHAR				IAmb_Lg		21 09 58.1	
	comp=Z,39nm,0.9s						
WHTX	**Lake Whitney,**	**4.61**	**177**	P	**Pn**	**21 08 41.8**	**+0.7**
	baz=357						
WHTX	**Lake Whitney,**	**4.61**	**177**	Pn	**Pn**	**21 08 41.9**	**+0.7**
WHTX	**Lake Whitney,**	**4.61**	**177**	P	**Pn**	**21 08 41.8**	**+0.7**
	baz=357,SNR=13						
R40A	**Maddies Statio**	**4.65**	**67**		**Pn**	**21 08 41.8**	**+0.1**
WLAR	**White Oak Lake**	**4.77**	**126**	Pn	**Pn**	**21 08 43.9**	**+0.6**
WLAR				IAmb_Lg		21 10 08.6	
	comp=Z,28nm,0.8s						
BGNE	**Belgrade**	**4.80**	**356**	P	**Pn**	**21 08 44.1**	**+0.3**
	baz=176						
BGNE	**Belgrade**	**4.80**	**356**		**Pn**	**21 08 43.6**	**-0.1**
BGNE				IAmb_Lg		21 10 13.7	
	comp=Z,47nm,0.8s						
BGNE	**Belgrade**	**4.80**	**356**	P	**Pn**	**21 08 43.9**	**+0.1**
	baz=176,SNR=12						
237A	**Washetta, Mont**	**4.86**	**160**	Pn	**Pn**	**21 08 44.3**	**-0.2**
MSTX	**Muleshoe**	**4.90**	**239**	Pn	**Pn**	**21 08 44.9**	**-0.3**
LCAR	**Lake Charles**	**5.33**	**94**	Pn	**Pn**	**21 08 51.7**	**+0.7**
T42A	**Van Buren**	**5.33**	**84**		**Pn**	**21 08 51.0**	**-0.1**
P40A	**Paris**	**5.34**	**55**		**Pn**	**21 08 52.7**	**+1.6**
P40A				IAmb_Lg		21 10 25.5	
	comp=Z,30nm,0.7s						
CCM	**Cathedral Cave**	**5.36**	**72**		**Pn**	**21 08 52.2**	**+0.8**
CCM				IAmb_Lg		21 10 25.9	
	comp=Z,40nm,0.8s						
T25A	**Trinidad**	**5.39**	**278**		**Pn**	**21 08 52.4**	**+0.4**
T25A				IAmb_Lg		21 10 32.1	
	comp=Z,30nm,0.9s						
L34A	**Svendsen Farm,**	**5.45**	**11**		**Pn**	**21 08 52.7**	**+0.1**
L34A				IAmb_Lg		21 10 32.8	
	comp=Z,20nm,0.7s						
N38A	**Joes South For**	**5.46**	**39**		**Pn**	**21 08 53.5**	**+0.8**
N38A				IAmb_Lg		21 10 36.4	
	comp=Z,39nm,0.8s						
OGNE	**Ogallala**	**5.48**	**323**	Pn	**Pn**	**21 08 54.4**	**+1.2**
OGNE				IAmb_Lg		21 10 31.0	
	comp=Z,36nm,0.7s						
435B	**Jarrell**	**5.81**	**179**	P	**Pn**	**21 08 57.8**	**+0.2**
	baz=359						
435B	**Jarrell**	**5.81**	**179**		**Pn**	**21 08 57.5**	**-0.2**
HBAR	**Harrisburg**	**5.82**	**98**	IAmb_Lg		21 10 43.6	
	comp=Z,42nm,0.8s						
PBMO	**Poplar Bluff**	**5.86**	**86**	IAmb_Lg		21 10 45.4	
	comp=Z,28nm,0.8s						
FVM	**French Village**	**5.98**	**75**		**Pn**	**21 09 00.3**	**+0.4**
FVM				IAmb_Lg		21 10 39.8	
	comp=Z,40nm,0.7s						
K31A	**O'Neill**	**6.06**	**353**	Pn	**Pn**	**21 09 01.8**	**+0.8**
SLM	**Saint Louis**	**6.28**	**69**	IAmb_Lg		21 10 49.7	
	comp=Z,37nm,0.8s						
SDCO	**Great Sand Dun**	**6.31**	**283**	P	**Pn**	**21 09 06.6**	**+1.8**
	baz=98						
SDCO	**Great Sand Dun**	**6.31**	**283**	Pn	**Pn**	**21 09 05.8**	**+1.0**
SCIA	**State Center**	**6.34**	**32**	IAmb_Lg		21 11 06.4	
	comp=Z,33nm,0.8s						
JCT	**Junction City**	**6.36**	**196**	IAmb_Lg		21 11 09.1	
	comp=Z,16nm,0.8s						
PEBM	**Pemiscott Bayo**	**6.36**	**92**	IAmb_Lg		21 11 05.2	
	comp=Z,38nm,0.7s						
143A	**Socs Landing,**	**6.50**	**125**	IAmb_Lg		21 11 03.5	
	comp=Z,14nm,0.8s						
ISCO	**Idaho Springs**	**6.98**	**300**	P	**Pn**	**21 09 14.8**	**+0.9**
	baz=115						
ECSD	**EROS Data Cent**	**7.17**	**6**	P	**Pn**	**21 09 15.4**	**-0.8**
	baz=187						
JFWS	**Jewell Farm**	**8.53**	**40**	IAmb_Lg		21 12 21.6	
	comp=Z,16nm,0.8s						

FUNV ***07*** *21:14:51.1, 8°.42N×71°.40W, h8^{km}, MW3.3*

ISC 07 21:14:50.6±1.1**, 8°.45N**±0°.05×**71°.39W**±0°.03**, h16**^{km}±10^{km}**,**
n13, σ0ˢ.94/23**, 1C, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	**Socops**	**0.55**	**107**	⇑*i*P	**Pg**	**21 15 01.4**	**-0.2**
SOCV				*e*S	**Sg**	**21 15 09.8**	**+0.8**
SDV	**Santo Domingo**	**0.86**	**60**	*e*P	**Pg**	**21 15 06.7**	**-0.8**
SDV				*e*S	**Sg**	**21 15 18.8**	**-0.1**
SDV				*i*		21 15 21.3	
	comp=Z,79nm,0.5s						
CAPV	**Capacho**	**1.09**	**238**	*e*P	**Pg**	**21 15 10.7**	**-1.0**
CAPV				*e*S	**Sg**	**21 15 25.1**	**-0.8**
PAMC	**Pamplona, Colo**	**1.71**	**230**	*e*P	**Pb**	**21 15 22.4**	**+0.6**
PAMC				*e*S	**Sg**	**21 15 46.2**	**+0.5**
PAMC				*i*		21 15 50.9	
	comp=Z,70nm,0.2s						
OCAC	**Ocana**	**1.92**	**264**	*e*P	**Pn**	**21 15 24.1**	**+1.3**
OCAC				*e*S	**Sb**	**21 15 49.7**	**+0.5**
OCAC				*i*		21 15 51.4	
	comp=Z,834nm,0.2s						
TAMC	**Tame, Arauca**	**2.04**	**191**	*e*P	**Pg**	**21 15 29.4**	**-0.5**
TAMC				*e*S	**Sg**	**21 15 56.2**	**-0.2**
DABV	**Dabajuro**	**2.56**	**17**	*e*P	**Pn**	**21 15 33.2**	**+1.7**
SMLC	**San Martn de**	**2.68**	**278**	*e*P	**Pn**	**21 15 33.6**	**+0.5**
SMLC				*e*S	**Sb**	**21 16 10.2**	**-0.6**
SMLC				*i*		21 16 11.1	
	comp=Z,106nm,0.4s						
SIQV	**Siquisique**	**2.68**	**35**	*e*P	**Pn**	**21 15 34.7**	**+1.5**
BAUV	**El Baul**	**3.34**	**81**	*e*P	**Pn**	**21 15 43.0**	**+0.8**
BAUV				*e*S	**Sn**	**21 16 20.3**	**-1.4**
MONV	**Montecano**	**3.75**	**22**	*e*P	**Pn**	**21 15 48.5**	**+0.6**
MONV				*e*S	**Sn**	**21 16 30.5**	**-1.2**
BENV	**Beln**	**4.03**	**68**	*e*P	**Pn**	**21 15 51.9**	**+0.1**
BENV				*e*S	**Sn**	**21 16 37.8**	**-0.9**
TACV	**Tcata**	**4.62**	**68**	*e*P	**Pn**	**21 16 00.0**	**+0.2**

FUNV ***07*** *21:19:41.0, 8°.42N×71°.40W, h1^{km}, MW3.3*

ISC 07 21:19:40.2±1.6**, 8°.50N**±0°.06×**71°.39W**±0°.03**, h3**^{km}±14^{km}**,**
n14, σ1ˢ.06/26**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	**Socops**	**0.57**	**112**	*e*P	**Pb**	**21 19 52.6**	**-0.3**
SOCV				*e*S	**Sg**	**21 19 59.1**	**+0.5**
SDV	**Santo Domingo**	**0.84**	**63**	*e*P	**Pb**	**21 19 57.8**	**+0.2**
SDV				*e*S	**Sb**	**21 20 08.9**	**-0.5**
SDV				*i*		21 20 11.0	
	comp=Z,107nm,0.5s						
CAPV	**Capacho**	**1.11**	**236**	*e*P	**Pg**	**21 20 00.8**	**-0.7**
CAPV				*e*S	**Sg**	**21 20 15.8**	**-0.1**
PAMC	**Pamplona, Colo**	**1.73**	**228**	*e*P	**Pb**	**21 20 13.1**	**+0.2**
PAMC				*e*S	**Sg**	**21 20 36.9**	**+0.9**
PAMC				*i*		21 20 40.0	
	comp=Z,128nm,0.2s						
MCQV	**Machiques**	**1.91**	**324**	*e*P	**Pn**	**21 20 15.1**	**+1.4**
OCAC	**Ocana**	**1.92**	**262**	*e*P	**Pn**	**21 20 15.2**	**+1.2**
OCAC				*e*S	**Sb**	**21 20 40.1**	**-0.5**
OCAC				*i*		21 20 42.1	
	comp=Z,556nm,0.4s						
TAMC	**Tame, Arauca**	**2.09**	**191**	*e*P	**Pb**	**21 20 18.3**	**-0.4**
TAMC				*e*S	**Sg**	**21 20 47.6**	**+0.3**
TAMC				*i*		21 20 50.4	
	comp=Z,97nm,0.3s						
BARC	**Barichara**	**2.59**	**223**	*e*P	**Pb**	**21 20 27.6**	**+0.1**
BARC				*e*S	**Sg**	**21 21 02.5**	**-1.2**
BARC				*i*		21 21 05.5	
	comp=Z,44nm,0.4s						
SIQV	**Siquisique**	**2.65**	**36**	*e*P	**Pn**	**21 20 26.0**	**+2.1**
SMLC	**San Martn de**	**2.67**	**277**	*e*P	**Pn**	**21 20 24.2**	**+0.2**
SMLC				*e*S	**Sb**	**21 21 00.2**	**-1.6**
SMLC				*i*		21 21 01.5	
	comp=Z,77nm,0.3s						
BRRC	**Barranca, Sant**	**2.68**	**239**	*e*P	**Pn**	**21 20 26.0**	**+1.7**
BRRC				*e*S	**Sb**	**21 21 03.5**	**+1.3**
BRRC				*i*		21 21 10.8	
	comp=Z,20nm,0.2s						
BAUV	**El Baul**	**3.34**	**82**	*e*P	**Pn**	**21 20 33.8**	**+0.5**
BAUV				*e*S	**Sn**	**21 21 13.1**	**-0.5**
MONV	**Montecano**	**3.71**	**22**	*e*P	**Pn**	**21 20 39.1**	**+0.6**
MONV				*e*S	**Sn**	**21 21 22.0**	**-0.7**
BENV	**Beln**	**4.02**	**68**	*e*P	**Pn**	**21 20 43.8**	**+1.1**
BENV				*e*S	**Sn**	**21 21 28.7**	**-1.7**

IDC ***07*** *21:21:40.6±1.2, 21°.44S×69°.26W, h130^{km}±13^{km}, mb2.9/2,*
mb1 3.2/3, mb1mx3.0/22, mbtmp3.3/3, Error ellipse:
s-maj=46.7km s-min=14.6km az=91.0

GUC ***07*** *21:21:43.7±0.7, 21°.39S×68°.74W, h121^{km}±5^{km}, ML3.3*

ISC 07 21:21:41.8±1.0**, 21°.40S**±0°.04×**68°.80W**±0°.09**, h134**^{km}±9^{km}**,**
n17, σ1ˢ.03/32**, 4C-5D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.73**	**299**	⇓*i*P	**Pn**	**21 22 03.2**	**+0.3**
PB01				*i* S	**Sn**	**21 22 18.1**	**-0.8**
PB01				IAML		21 22 19.0	
	comp=N,2μm,0.2s						
PB02	**IPOC Station P**	**1.02**	**274**	⇓*i*P	**Pn**	**21 22 06.2**	**+0.8**
PB02				*i* S	**Sn**	**21 22 23.5**	**+0.2**
PB02				IAML		21 22 24.7	
	comp=E,1μm,0.3s						
PB07	**IPOC Station P**	**1.06**	**252**	⇓*i*P	**Pn**	**21 22 06.7**	**+0.9**
PB07				*i* S	**Sn**	**21 22 24.4**	**+0.3**
PB07				IAML		21 22 25.5	
	comp=E,602nm,0.3s						
PB03	**IPOC Station P**	**1.09**	**234**	⇓*i*P	**Pn**	**21 22 07.0**	**+0.8**
PB03				*i* S	**Sn**	**21 22 24.9**	**+0.2**
PB03				IAML		21 22 26.5	
	comp=N,464nm,0.3s						
LVC	**Limon Verde**	**1.21**	**185**	P	**Pn**	**21 22 07.4**	**-0.1**
	comp=N,2.7nm,0.3s,baz=12,slow=9.2,SNR=46						
LVC				S	**Sn**	**21 22 25.1**	**-2.0**
	comp=N,21nm,0.3s,baz=98,slow=22,SNR=149						
LVC	**Limon Verde**	**1.21**	**185**	*e*P	**Pn**	**21 22 07.8**	**+0.3**
LVC				*e*S	**Sn**	**21 22 26.6**	**-0.6**
PB08	**IPOC Station P**	**1.29**	**345**	⇑*i*P	**Pn**	**21 22 09.3**	**+0.8**
PB08				*i* S	**Sn**	**21 22 28.7**	**+0.1**
PB08				IAML		21 22 31.0	
	comp=E,273nm,0.2s						
PB06	**IPOC Station P**	**1.48**	**209**	⇓*e*P	**Pn**	**21 22 11.3**	**+1.2**
PB06				*e*S	**Sn**	**21 22 32.5**	**+0.6**
PB06				IAML		21 22 33.7	
	comp=E,485nm,0.4s						
HMBC	**Humberstone**	**1.51**	**318**	⇑*i*P	**Pn**	**21 22 10.8**	**+0.3**
HMBC				*i* S	**Sn**	**21 22 32.0**	**-0.2**
HMBC				IAML		21 22 33.4	
	comp=N,569nm,0.4s						
TA01	**Diego Aracena**	**1.53**	**303**	⇑*i*P	**Pn**	**21 22 11.2**	**+0.7**
TA01				*e*S	**Sn**	**21 22 32.4**	**0.0**
TA01				IAML		21 22 33.8	
	comp=E,429nm,0.3s						
PB04	**IPOC Station P**	**1.56**	**233**	*e*P	**Pn**	**21 22 12.0**	**+1.0**
PB04				*e*S	**Sn**	**21 22 33.6**	**+0.3**
PB04				IAML		21 22 37.7	
	comp=N,181nm,0.2s						
PB11	**IPOC Station P**	**1.81**	**334**	⇑*e*P	**Pn**	**21 22 14.4**	**+0.4**
PB11				*i* S	**Sn**	**21 22 38.4**	**-0.2**
PB11				IAML		21 22 40.4	
	comp=E,373nm,0.2s						
PB15	**IPOC Station P**	**1.90**	**199**	*e*P	**Pn**	**21 22 16.7**	**+1.6**
PB15				*e*S	**Sn**	**21 22 40.5**	**-0.1**
PB05	**IPOC Station P**	**1.94**	**222**	*e*P	**Pn**	**21 22 16.5**	**+1.1**
PB05				*e*S	**Sn**	**21 22 41.0**	**-0.3**
LPAZ	**La Paz**	**5.12**	**7**	P	**Pn**	**21 22 58.0**	**+0.7**
	comp=E,0.7nm,0.3s,baz=191,slow=18,SNR=12						
LPAZ				S	**Sn**	**21 23 57.2**	**+1.3**
	comp=E,0.1nm,0.3s,baz=207,slow=11,SNR=1.3						
TXAR	**Lajitas Array**	**60.60**	**325**	P	**P**	**21 31 35.6**	**-3.0**
	comp=E,0.2nm,0.3s,baz=152,slow=6.9,SNR=1.7						
TORD	**Torodi Ar. Bea**	**77.23**	**70**	P	**P**	**21 33 23.3**	**+1.7**
	comp=E,0.1nm,0.5s,baz=250,slow=4.8,SNR=1.2						

TUL ***07*** *21:29:49.7±0.9, 36°.421N±0°.009×97°.35W±0°.01, h6^{km}±7^{km},*
ML2.5, mb_Lg2.3/6(NEIC), Error ellipse: s-maj=1.6km
s-min=1.2km az=121.0

NEIC 07 21:29:49.8±0.8**, 36°.42N**±0°.01×**97°.34W**±0°.01**, h5**^{km}±7^{km}**,**
Error ellipse: s-maj=1.7km s-min=1.5km az=199.0,
Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLOK	**Blackwell**	**0.35**	**16**		Pg	21 29 56.9	+0.2
CROK	**Carrier**	**0.53**	**279**		Pg	21 29 60.0	0.0
CROK				Sg	Sg	21 30 07.4	+0.6
QUOK	**Quay**	**0.57**	**116**	Pg	Pg	21 30 00.8	+0.1
GC02	**Grant County #**	**0.60**	**316**		Pg	21 30 01.3	-0.1
GC02				Sg	Sg	21 30 09.4	+0.2
KAN13	**South Haven SW**	**0.60**	**349**		Pg	21 30 01.4	0.0
KAN13				Sg	Sg	21 30 09.8	+0.5
OK029	**Liberty Lake**	**0.63**	**189**	Pg	Pg	21 30 01.9	0.0
OK029				Sg	Sg	21 30 10.5	+0.5
OK030	**Cody Creek RV**	**0.67**	**137**		Pg	21 30 02.6	0.0
KAN17	**Caldwell West**	**0.71**	**331**		Pg	21 30 03.2	-0.3
KAN17				Sg	Sg	21 30 13.1	+0.4
KAN14	**Manchester OK**	**0.73**	**317**		Pg	21 30 03.5	-0.5
KAN09	**Caldwell North**	**0.75**	**343**		Pg	21 30 04.1	-0.1
KAN09				Sg	Sg	21 30 14.3	+0.3
BCOK	**Bluff Creek, N**	**0.79**	**196**		Pg	21 30 04.9	-0.1
BCOK				Sg	Sg	21 30 15.7	+0.4
OK032	**Salt Plains WL**	**0.80**	**299**		Pg	21 30 04.9	-0.3
OK032				Sg	Sg	21 30 15.6	+0.1
KAN01	**Argonia South**	**0.81**	**335**	Pg	Pg	21 30 05.1	-0.2
KAN01				Sg	Sg	21 30 15.9	+0.1
KAN05	**Bluff City Nor**	**0.81**	**328**	Pg	Pg	21 30 05.1	-0.3
KS20	**Mayfield South**	**0.83**	**348**		Pg	21 30 05.4	-0.3
KS20				Sg	Sg	21 30 16.6	+0.1
T35A	**Sooner Cattle**	**0.83**	**53**	Pg	Pg	21 30 05.4	-0.4
T35A				Sg	Sg	21 30 16.6	+0.1
OK025	**Westminster Rd**	**0.84**	**180**		Pg	21 30 05.8	-0.1
KAN06	**Argonia West S**	**0.93**	**333**		Pg	21 30 07.5	-0.1
KAN10	**Anthony SW Sta**	**0.93**	**319**	Pg	Pg	21 30 07.4	-0.2
KAN08	**Anthony NE Sta**	**0.95**	**328**		Pg	21 30 07.7	-0.4
KAN16	**Harper SW Stat**	**0.99**	**324**	Pg	Pg	21 30 08.4	-0.5
OKCFA	**Oklahoma City**	**1.01**	**185**	Pg	Pg	21 30 08.6	-0.5
KAN12	**Harper NE Stat**	**1.02**	**329**		Pg	21 30 09.1	-0.4
FNO	**Franklin**	**1.16**	**183**		Pg	21 30 11.4	-0.7
U32A	**Winter Ranch,**	**1.34**	**269**	Pn	Pn	21 30 15.0	-0.3
TUL1	**Leonard**	**1.35**	**112**		Pn	21 30 14.3	-1.1
X34A	**Smith Ranch, M**	**1.86**	**193**		Pn	21 30 23.0	+0.7
X34A				IAmb_Lg		21 30 52.6	
	comp=Z,41nm,0.9s						
WMOK	**Wichita Mounta**	**2.05**	**215**		Pn	21 30 25.2	+0.2
U38A	**Gravette**	**2.38**	**89**	Pn	Pn	21 30 30.0	+0.5
X37A	**Clayton**	**2.43**	**138**	Pn	Pn	21 30 30.6	+0.3
HHAR	**Hobbs**	**2.75**	**92**	IAmb_Lg		21 31 22.3	
	comp=Z,5.4nm,0.7s						
CBKS	**Cedar Bluff**	**3.06**	**322**	Pn	Pn	21 30 38.3	-0.6
CBKS				IAmb_Lg		21 31 34.2	
	comp=Z,7.6nm,0.9s						
W39A	**Magazine**	**3.14**	**112**	Pn	Pn	21 30 40.3	+0.3
MIAR	**Mount Ida**	**3.59**	**120**	Pn	Pn	21 30 46.3	+0.1
U40A	**Yellville**	**3.62**	**90**	Pn	Pn	21 30 47.3	+0.7
X40A	**Basin Creek Fa**	**4.15**	**116**	Pn	Pn	21 30 55.1	+1.2
P38A	**Dawn**	**4.39**	**42**	Pn	Pn	21 30 57.6	+0.4
R40A	**Maddies Statio**	**4.45**	**64**	Pn	Pn	21 30 57.5	-0.4
MSTX	**Muleshoe**	**5.08**	**243**	IAmb_Lg		21 32 44.2	
	comp=Z,4.4nm,1.1s						

KRSZO ***07*** *21:29:52.1±1.0, 43°.66N×16°.23E, h6^{km}±7^{km}, ML3.3/15,*
Error ellipse: s-maj=3.4km s-min=2.6km az=38.0

RHSSO ***07*** *21:29:53.5±0.4, 43°.67N×16°.20E, h5^{km}±2^{km}, ML3.1/17*

PRU ***07*** *21:29:54.9±0.0, 43°.77N×16°.31E, h0^{km}*

PDG ***07*** *21:29:54.9±0.1, 43°.38N×16°.24E, h5^{km}, ML3.0/13, Error*
ellipse: s-maj=0.3km s-min=0.3km az=0.0

BEO ***07*** *21:29:54.4±0.8, 43°.70N×16°.22E, h0^{km}, ML3.0/8*

LDG ***07*** *21:29:54.8±0.7, 43°.35N×15°.89E, h10^{km}, Ml3.2/17, Error*
ellipse: s-maj=13.5km s-min=8.8km az=137.0

VIE ***07*** *21:29:55.3±0.7, 43°.77N×16°.25E, h10^{km}, mb2.8/18,*
ml3.0/18, ms3.6/1, Error ellipse: s-maj=6.7km s-min=4.0km
az=97.0   33 km NNW of Split

ISC 07 21:29:52.4±1.1**, 43°.67N**±0°.02×**16°.16E**±0°.02**, h6**^{km}±9^{km}**,**
n149, σ1ˢ.93/233**, 9C-11D, Northwestern Balkan**
Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIRJ	**Zirje**	**0.37**	**267**	*i* Pg	**Pb**	**21 30 01.2**	**-0.1**
ZIRJ				Sg	**Sb**	**21 30 07.6**	**+0.2**
KIJV	**Kijevo**	**0.38**	**28**	*e*Pg	**Pg**	**21 29 59.8**	**+0.1**
KIJV				Sg	**Sg**	**21 30 05.2**	**+0.5**
MORI	**Morici**	**0.38**	**301**	*e*Pg	**Pb**	**21 30 01.1**	**-0.4**
MORI				Sg	**Sb**	**21 30 07.5**	**-0.1**
HVAR	**Hvar**	**0.54**	**157**	*e*Pg	**Pg**	**21 30 03.0**	**+0.3**
HVAR				Sg	**Sb**	**21 30 11.7**	**-0.5**
RICI	**Ricice**	**0.73**	**104**	*e*Pg	**Pg**	**21 30 05.2**	**-1.3**
RICI				Sg	**Sg**	**21 30 15.6**	**-0.3**
MAKA	**Makarska**	**0.74**	**121**	*e*Pg	**Pg**	**21 30 05.3**	**-1.2**
MAKA				Sg	**Sg**	**21 30 15.3**	**-0.8**
DUGI	**Dugi Otok**	**0.86**	**292**	*e*Pg	**Pb**	**21 30 10.1**	**+0.5**
DUGI				Sg	**Sn**	**21 30 23.7**	**-0.1**
UDBI	**Udbina**	**0.90**	**342**	*i* Pg	**Pg**	**21 30 10.2**	**+0.5**
UDBI				Sg	**Sn**	**21 30 24.1**	**-0.9**
MGRS	**Mrkonjic Grad**	**1.00**	**42**	*e*Pg	**Pg**	**21 30 11.1**	**-0.5**
MGRS				*e*Sg	**Sg**	**21 30 24.8**	**+0.2**
PLIT	**Plitvice**	**1.26**	**343**	*e*Pg	**Pg**	**21 30 16.3**	**-0.3**
NVLJ	**Novalja**	**1.28**	**314**	*i* Pg	**Pb**	**21 30 17.3**	**+0.4**
NVLJ				Sg	**Sn**	**21 30 36.0**	**+1.8**
BLY	**Banja Luka**	**1.30**	**34**	*e*Pg	**Pn**	**21 30 16.8**	**-0.3**
BLY				*e*Sg	**Sn**	**21 30 35.6**	**+0.8**
BLY	**Banja Luka**	**1.30**	**34**	⇑*i*Pg	**Pn**	**21 30 16.6**	**-0.5**
BLY				*e*Sg	**Sn**	**21 30 34.9**	**+0.1**
BLY	**Banja Luka**	**1.30**	**34**	Pg	**Pn**	**21 30 16.7**	**-0.5**
	comp=Z,0.6nm,SNR=20						
PRIJ	**Prijedor**	**1.36**	**17**	*e*Pg	**Pn**	**21 30 18.3**	**+0.4**
PRIJ				*e*Sg	**Sb**	**21 30 36.1**	**+0.2**
STON	**Ston**	**1.38**	**125**	*e*Pg	**Pn**	**21 30 17.3**	**-0.8**
STON				*e*Sg	**Sn**	**21 30 38.8**	**+2.1**
STON	**Ston**	**1.38**	**125**	⇓*i*Pg	**Pn**	**21 30 17.0**	**-1.2**
STON				*e*Sg	**Sb**	**21 30 36.7**	**+0.2**
STON	**Ston**	**1.38**	**125**	*e*Pn	**Pn**	**21 30 16.9**	**-1.2**
MRAK	**Mrakovica**	**1.44**	**21**	*e*Pg	**Pn**	**21 30 19.3**	**+0.2**
MRAK				*e*Sg	**Sg**	**21 30 38.8**	**+0.1**
RABC	**Rab**	**1.46**	**318**	*e*Pn	**Pb**	**21 30 20.3**	**+0.4**
DOB	**Doboj**	**1.75**	**52**	*e*Pn	**Pn**	**21 30 23.2**	**-0.1**
DOB				*e*Sn	**Sn**	**21 30 46.3**	**+0.4**
DBRK	**Dubrovnik**	**1.77**	**124**	*e*Pn	**Pn**	**21 30 23.5**	**0.0**
TREB	**Trebinje**	**1.87**	**120**	*e*Pg	**Pn**	**21 30 26.1**	**+1.3**
TREB				*e*Sg	**Sb**	**21 30 51.5**	**+1.1**
TREB	**Trebinje**	**1.87**	**120**	⇓*i*Pn	**Pn**	**21 30 25.5**	**+0.7**
TREB				*e*Sn	**Sn**	**21 30 49.7**	**+1.0**
BRY	**Bratogost**	**1.90**	**113**	⇓*i*Pn	**Pn**	**21 30 26.5**	**+1.0**
BRY				*e*Sn	**Sn**	**21 30 50.9**	**+1.1**
BRY	**Bratogost**	**1.90**	**113**	⇑*i*Pn	**Pn**	**21 30 26.8**	**+1.3**
BRY				*i* Sn	**Sb**	**21 30 52.4**	**+0.8**
SMRN	**Sveta Marina**	**1.98**	**314**	*e*Pn	**Pb**	**21 30 28.6**	**-0.2**
MOSL	**Moslavina**	**1.99**	**12**	*e*Pn	**Pn**	**21 30 26.9**	**+0.4**
OZLJ	**Ozalj**	**2.00**	**346**	*e*Pn	**Pb**	**21 30 28.4**	**-0.8**
RIY	**Rijeka**	**2.04**	**325**	*e*Pn	**Pb**	**21 30 29.1**	**-0.7**
RIY				*e*Sn	**Sb**	**21 30 55.0**	**-0.4**
RIY	**Rijeka**	**2.04**	**325**	*e*Pn	**Pb**	**21 30 28.9**	**-0.9**
UPM	**Unac-Piva**	**2.06**	**102**	*e*Pn	**Pn**	**21 30 27.8**	**+0.2**
UPM				*e*Sn	**Sn**	**21 30 53.5**	**-0.2**
UPM	**Unac-Piva**	**2.06**	**102**	⇓*i*Pn	**Pb**	**21 30 29.8**	**-0.4**
UPM				*i* Sn	**Sb**	**21 30 57.2**	**+1.1**
HAPS	**Han Pijesak,Bl**	**2.06**	**77**	⇓*i*Pn	**Pn**	**21 30 28.5**	**+0.9**
HAPS				*e*Sn	**Sn**	**21 30 54.7**	**+1.0**
HCY	**Herceg Novi**	**2.11**	**125**	⇓*i*Pn	**Pn**	**21 30 28.6**	**+0.5**
HCY				*e*Sn	**Sn**	**21 30 55.4**	**+0.8**
HCY	**Herceg Novi**	**2.11**	**125**	⇓*i*Pn	**Pn**	**21 30 28.7**	**+0.6**
HCY				*e*Sn	**Sn**	**21 30 56.0**	**+1.4**
ZAG	**Zagreb**	**2.16**	**357**	*e*Pn	**Pn**	**21 30 30.4**	**+1.6**
ZAG				*e*Sn	**Sn**	**21 30 57.4**	**+1.6**
CRES	**Cresnjev**	**2.21**	**347**	⇑*i*Pn	**Pn**	**21 30 31.1**	**+1.6**
CRES				*e*Sn	**Sn**	**21 30 58.4**	**+1.2**

CRES	**Cresnjev**	2.21	347	Pn	Pn	21 30 31.2	+1.6
	comp=Z,1.1nm,SNR=12						
NKME	**Niksic**	2.24	113	ePn	Pn	21 30 31.6	+1.7
NKME				i Sn	Sb	21 31 00.3	-0.8
PTJ	**Puntijarka**	2.24	357	ePn	Pn	21 30 30.8	+0.7
PTJ	**Puntijarka**	2.24	357	Pg	Pn	21 30 31.1	+1.0
	comp=Z,0.5nm,SNR=20						
NKY	**Niksic**	2.24	112	ePn	Pn	21 30 31.8	+1.7
NKY				i Sn	Sb	21 31 00.7	-0.7
CEME	**Cevo**	2.31	118	⇓iPn	Pn	21 30 32.0	+1.0
CEME				i Sn	Sn	21 31 01.7	+1.9
RUDO	**Rudo**	2.33	90	ePn	Pn	21 30 31.8	+0.5
RUDO				eSn	Sn	21 31 00.1	-0.1
BBLS	**Lazići**	2.36	84	ePn	Pn	21 30 33.5	+1.8
BBLS	**Lazići**	2.36	84	ePn	Pn	21 30 32.1	+0.4
BBLS				eSn	Sn	21 31 01.9	+0.9
BBLS	**Lazići**	2.36	84	Pb	Pn	21 30 33.7	+2.0
	comp=Z,0.9nm,SNR=8.3						
PLE	**Pljevlja**	2.38	97	ePn	Pb	21 30 34.6	-1.0
CEY	**Cerknica**	2.41	330	⇑iPn	Pn	21 30 34.1	+1.8
CEY				eSn	Sn	21 31 03.9	+1.9
AQU	**L'Aquila**	2.41	238	ePn	Pn	21 30 33.8	+1.4
AQU				eSn	Sb	21 31 04.9	-1.3
AQU	**L'Aquila**	2.41	238	Pg	Pn	21 30 33.9	+1.6
	comp=Z,0.1nm,SNR=3.6						
BUM	**Brajici-Budva**	2.43	123	ePn	Pn	21 30 33.8	+1.1
BUM				eSn	Sn	21 31 03.9	+1.2
KALN	**Kalnik**	2.47	5	ePn	Pn	21 30 33.2	+0.1
LOBO	**Lobor**	2.48	359	ePn	Pn	21 30 34.1	+0.8
TEKS	**Tekeris**	2.58	69	ePn	Pn	21 30 36.1	+1.4
KOME	**Kolasin**	2.59	107	⇑iPn	Pn	21 30 36.9	+2.1
KOME				eSn	Sn	21 31 09.3	+2.7
PDG	**Podgorica**	2.59	118	ePn	Pb	21 30 38.5	-0.6
PDG				eSn	Sn	21 31 09.3	+2.8
PDG	**Podgorica**	2.59	118	ePn	Pn	21 30 36.0	+1.3
PDG				eSn	Sn	21 31 07.4	+0.9
TTG	**Podgorica**	2.59	118	ePn	Pn	21 30 36.2	+1.5
TTG				i Sn	Sn	21 31 08.3	+1.8
LJU	**Ljubljana**	2.64	335	⇑iPn	Pn	21 30 36.6	+1.2
LJU				eSn	Sn	21 31 09.1	+1.4
DRME	**Dracevica, Mon**	2.67	123	⇑iPn	Pn	21 30 36.8	+0.9
DRME				eSn	Sn	21 31 09.8	+1.2
DRME	**Dracevica, Mon**	2.67	123	ePn	Pn	21 30 37.0	+1.1
DRME				i Sn	Sn	21 31 09.8	+1.2
KOGS	**Kog**	2.78	1	Pn	Pn	21 30 38.8	+1.5
	comp=Z,0.7nm,SNR=5.7						
KOVH	**Kovagotottos**	2.78	29	ePN	Pn	21 30 37.5	+0.1
KOVH	**Kovagotottos**	2.78	29	eS	Sn	21 31 10.8	-0.5
KOVH	**Kovagotottos**	2.78	29	Pn	Pn	21 30 37.5	+0.1
	comp=Z,0.1nm,SNR=5.7						
KOVH				Sn	Sn	21 31 10.8	-0.5
DIVS	**Divibare**	2.81	80	ePn	Pn	21 30 39.6	+1.8
DIVS	**Divibare**	2.81	80	ePn	Pn	21 30 38.6	+0.8
DIVS				eSn	Sn	21 31 12.4	+0.4
DIVS	**Divibare**	2.81	80	Pn	Pn	21 30 38.8	+1.0
	comp=Z,0.2nm,SNR=9.2						
SJES	**Sjenica**	2.81	97	ePn	Pn	21 30 40.5	+2.6
SJES				eSn	Sb	21 31 15.5	-2.2
BEHE	**Becsehely**	2.83	9	ePN	Pn	21 30 39.3	+1.2
BEHE	**Becsehely**	2.83	9	eS	Sn	21 31 14.0	+1.5
BEHE	**Becsehely**	2.83	9	⇑iPn	Pn	21 30 39.6	+1.5
BEHE				eSn	Sn	21 31 14.2	+1.7
BEHE	**Becsehely**	2.83	9	Pg	Pn	21 30 39.3	+1.2
	comp=Z,0.4nm,SNR=7.1						
BEHE				Lg	Lg	21 31 14.0	
ULC	**Ulcinj**	2.84	126	⇓iPn	Pn	21 30 39.2	+0.9
ULC				i Sn	Sn	21 31 13.6	+0.8
IVA	**Berane**	2.84	105	⇓iPn	Pn	21 30 40.5	+2.2
IVA				i Sn	Sn	21 31 15.8	+2.9
IVAS	**Ivanjica**	2.90	91	ePn	Pn	21 30 40.0	+0.9
IVAS				eSn	Sn	21 31 14.7	+0.3
PVY	**Plav**	2.98	110	⇓iPn	Pn	21 30 42.1	+1.8
PVY				i Sn	Sn	21 31 18.6	+2.1
FRGS	**Fruska Gora**	3.01	59	ePn	Pn	21 30 42.4	+1.8
FRGS	**Fruska Gora**	3.01	59	ePn	Pn	21 30 40.8	+0.2
FRGS				eSg	Sg	21 31 28.4	-0.6
OBKA	**Obir**	3.06	339	ePn	Pn	21 30 43.6	+2.3
	comp=Z,3.6nm,0.2s,SNR=22						
OBKA				eSn	Sn	21 31 20.3	+2.1
	comp=Z,31nm,0.4s						
OBKA	**Obir**	3.06	339	Pg	Pn	21 30 43.5	+2.2
	comp=Z,0.2nm,SNR=5.4						
MORH	**Mrgy, Hungar**	3.10	34	ePN	Pn	21 30 41.7	0.0
MORH	**Mrgy, Hungar**	3.10	34	eS	Sn	21 31 20.0	+1.0
MORH	**Mrgy, Hungar**	3.10	34	⇑iPn	Pn	21 30 42.8	+1.1
MORH				eSn	Sn	21 31 19.1	+0.1
MORH	**Mrgy, Hungar**	3.10	34	Pg	Pn	21 30 41.7	0.0
	comp=Z,0.1nm,SNR=3.3						
MORH				Lg	Lg	21 31 20.0	
SOKA	**Soboth**	3.11	346	ePn	Pn	21 30 43.7	+1.7
	comp=Z,3.4nm,0.3s						
SOKA				i Sn	Sn	21 31 20.2	+0.7
	comp=Z,4.0nm,0.3s						
TRUS	**Trudelj**	3.12	78	ePn	Pn	21 30 43.7	+1.7
TRUS				eSn	Sn	21 31 22.2	+2.6
GRUS	**Gruza**	3.31	85	ePn	Pn	21 30 46.3	+1.7
MYKA	**Terra Mystica**	3.45	330	i Pn	Pn	21 30 48.8	+2.2
	comp=Z,1.3nm,0.2s						
MYKA				i Sn	Sn	21 31 30.8	+2.9
	comp=Z,3.4nm,0.2s						
ARSA	**Arzberg**	3.60	353	ePn	Pn	21 30 50.0	+1.3
	comp=Z,4.9nm,0.5s,SNR=6.0						
ARSA				eSn	Sn	21 31 31.1	-0.5
	comp=Z,2.4nm,0.3s						
MPLH	**Magyarpolny**	3.63	15	ePN	Pn	21 30 50.0	+0.9
MPLH	**Magyarpolny**	3.63	15	Sn	Pn	21 30 50.0	+0.9
	SNR=3.0						
KBA	**Koelnbreinsper**	3.94	331	i Pn	Pn	21 30 56.1	+2.6
	comp=Z,2.3nm,0.3s						
KBA				i Sn	Sn	21 31 39.8	-0.2
	comp=Z,1.9nm,0.3s						
ABTA	**Abfaltersbach**	4.01	321	i Pn	Pn	21 30 55.6	+1.2
	comp=Z,0.4nm,0.1s						
ABTA				eSn	Sn	21 31 44.0	+2.3
	comp=Z,2.1nm,0.2s						
BARS	**Barje**	4.22	100	ePn	Pn	21 31 01.0	+3.8
CONA	**Conrad Observa**	4.26	357	i Pn	Pn	21 30 59.4	+1.6
	comp=Z,1.2nm,0.2s,SNR=5.5						
CONA				i Sn	Sn	21 31 48.3	+0.4
	comp=Z,3.9nm,0.4s						
BZS	**Buzias**	4.36	62	Pn	Pn	21 31 00.4	+1.4
	SNR=2.4						
SRO2	**Moca**	4.38	20	ePN	Pn	21 30 59.7	+0.4
SRO2				eSN	Sn	21 31 51.2	+0.6
MOA	**Molln**	4.38	343	i Pn	Pn	21 31 01.8	+2.4
	comp=Z,3.4nm,0.5s,SNR=9.5						
MOA				i Sn	Sn	21 31 52.9	+2.2
	comp=Z,5.7nm,0.3s						
SRO	**Srobarova**	4.41	19	ePN	Pn	21 31 01.1	+1.4
SRO				eSN	Sn	21 31 51.4	+0.1
ZST	**Bratislava**	4.57	8	eSN	Sn	21 31 55.0	-0.4
ZAPS	**Zavoj**	4.73	93	ePn	Pn	21 31 07.5	+3.3
ZAPS				eSn	Sn	21 31 58.3	-1.1
MODS	**Modra-Piesok**	4.77	9	ePN	Pn	21 31 05.8	+1.1
MODS				eSN	Sn	21 31 58.3	-1.9
WTTA	**Wattenberg**	4.79	320	i Pn	Pn	21 31 07.4	+2.2
	comp=Z,1.7nm,0.2s,SNR=9.0						
WTTA				i Sn	Sn	21 32 03.9	+2.7
	comp=Z,1.6nm,0.3s						
WATA	**Walderalm**	4.88	320	ePn	Pn	21 31 08.7	+2.4
	comp=Z,1.9nm,0.2s,SNR=9.1						
WATA				i Sn	Sn	21 32 07.1	+4.0
	comp=Z,1.7nm,0.2s						
SMOL	**Smolenice**	4.92	10	ePN	Pn	21 31 08.0	+1.2
SMOL				eSN	Sn	21 32 02.9	-1.1
SQTA	**Sankt Quirin**	4.97	317	i Pn	Pn	21 31 10.2	+2.7
	comp=Z,0.7nm,0.1s,SNR=4.8						
SQTA				i Sn	Sn	21 32 10.4	+5.0
	comp=Z,3.5nm,0.4s						
PSZ	**Piszkesteto**	4.99	30	ePN	Pn	21 31 08.3	+0.6
PSZ	**Piszkesteto**	4.99	30	eS	Sn	21 32 04.1	-1.6
PSZ	**Piszkesteto**	4.99	30	Pn	Pn	21 31 08.3	+0.6
	SNR=1.5						
PSZ				Sn	Sn	21 32 04.1	-1.6
FETA	**Feichten**	5.08	313	i Pn	Pn	21 31 10.8	+1.6
	comp=Z,0.2nm,0.1s						
MOTA	**Moosalm**	5.11	318	i Pn	Pn	21 31 12.0	+2.5
	comp=Z,0.6nm,0.1s,SNR=7.5						
MOTA				eSn	Sn	21 32 11.8	+3.0
	comp=Z,2.2nm,0.3s						
KOLL	**Kolacno**	5.15	17	ePN	Pn	21 31 11.4	+1.5
KOLL				eSN	Sn	21 32 07.7	-1.9
VYHS	**Vyhne**	5.17	20	Pn	Pn	21 31 11.8	+1.6
	SNR=2.6						
VYHS	**Vyhne**	5.17	20	ePN	Pn	21 31 11.9	+1.7
VYHS				eSN	Sn	21 32 09.5	-0.7
VTS	**Vitosha**	5.29	99	eSn	Sn	21 32 13.5	+0.3
JAVC	**Velka Javorina**	5.29	11	ePN	Pn	21 31 15.0	+3.0
JAVC				eSN	Sn	21 32 14.5	+1.3
CKRC	**Cesky Krumlov**	5.30	347	ePN	Pn	21 31 13.7	+1.6
CKRC				eSN	Sn	21 32 12.5	-1.0
RETA	**Reutte**	5.37	317	ePn	Pn	21 31 14.9	+1.8
	comp=Z,0.4nm,0.1s						
KRUC	**Moravsky**	5.39	2	ePN	Pn	21 31 13.7	+0.4
KRUC				eSN	Sn	21 32 13.5	-2.1
VRAC	**Vranov**	5.64	3	eSN	Sn	21 32 19.8	-2.1
DAVA	**Damuels**	5.70	312	i Pn	Pn	21 31 21.0	+3.3
	comp=Z,1.5nm,0.2s						
DAVA				i Sn	Sn	21 32 28.0	+4.5
	comp=Z,2.3nm,0.3s						
KHC	**Kasperske Hory**	5.74	343	ePN	Pn	21 31 20.5	+2.4
KHC				ex	x	21 31 40.0	
KHC				eSN	Sn	21 32 23.4	-0.9
MORC	**Moravsky Berou**	6.18	8	eSN	Sn	21 32 34.2	-0.9
SBF	**Sospel**	6.32	275	ePn	Pn	21 31 22.7	-3.3
SBF	**Sospel**	6.32	275	eP	Pn	21 31 26.9	+0.9
SBF				eSn	Sn	21 32 27.2	-11
	comp=Z,9.5nm,0.4s						
SBF				eS	Sb	21 32 37.2	-21
MBDF	**Montbardon**	6.83	282	ePn	Pn	21 31 30.7	-2.4
MBDF	**Montbardon**	6.83	282	eP	Pn	21 31 35.0	+1.9
MBDF				eSn	Sn	21 32 41.5	-10
	comp=Z,4.4nm,0.4s						
FRF	**La Foret Royal**	6.90	272	ePn	Pn	21 31 30.9	-3.1
FRF	**La Foret Royal**	6.90	272	eP	Pn	21 31 35.1	+1.1
FRF				eSn	Sn	21 32 40.7	-12
	comp=Z,3.6nm,0.4s						
FRF				eS	Sb	21 32 51.2	-24
LPL	**La Plagne**	6.98	289	eP	Pn	21 31 39.9	+4.7
LPL				eSn	Sn	21 32 47.7	-7.2
	comp=Z,7.2nm,0.4s						
LPL				eS	Sb	21 32 58.6	-19
ORIF	**Oris-en-Rattie**	7.48	283	eP	Pn	21 31 45.2	+3.2
ORIF				eSn	Sn	21 32 56.9	-10
	comp=Z,4.7nm,0.4s						
ORIF				eS	Sb	21 33 07.7	-24
SMRF	**Simiane la Rot**	7.66	276	eP	Pn	21 31 46.2	+1.8
SMRF				eSn	Sn	21 32 58.7	-13
	comp=Z,0.7nm,0.4s						
CABF	**La Chapelle**	7.70	296	ePn	Pn	21 31 45.1	+0.1
CABF				eSn	Sn	21 33 07.8	-4.8
	comp=Z,1.3nm,0.4s						
HINF	**Hinteralfeld**	7.71	306	ePn	Pn	21 31 46.4	+1.2
HINF				eSn	Sn	21 33 09.9	-2.9
	comp=Z,4.9nm,0.7s						
CDF	**Champ du Feu**	7.78	311	ePn	Pn	21 31 47.0	+0.8
CDF	**Champ du Feu**	7.78	311	eP	Pn	21 31 52.5	+6.3
CDF				eSn	Sn	21 33 15.0	+0.4
	comp=Z,1.1nm,0.3s						
HAU	**Haudompre**	8.10	306	ePn	Pn	21 31 51.5	+1.0
HAU	**Haudompre**	8.10	306	eP	Pn	21 31 57.6	+7.1
HAU				eSn	Sn	21 33 19.3	-3.0
	comp=Z,2.9nm,0.3s						
SFTF	**Sexfontaines**	8.97	304	eP	Pn	21 32 08.7	+6.3
	baz=129						
SMF	**Signal de Mont**	9.19	293	ePn	Pn	21 32 06.0	+0.6
SMF				eSn	Sn	21 33 42.5	-6.7
	comp=Z,2.2nm,0.4s						
LOR	**Lormes**	9.36	297	ePn	Pn	21 32 08.0	+0.3
	baz=120						
LOR	**Lormes**	9.36	297	eP	Pn	21 32 14.5	+6.8
	baz=114						
LOR				eSn	Sn	21 33 47.5	-5.7
	comp=Z,2.7nm,0.4s						
SSF	**Saint Saulge**	9.53	295	eP	Pn	21 32 17.4	+7.4
SSF				eSn	Sn	21 33 50.9	-6.4
	comp=Z,2.5nm,0.5s						
AVF	**Avril sur Loir**	9.56	293	ePn	Pn	21 32 10.2	-0.2
AVF	**Avril sur Loir**	9.56	293	eP	Pn	21 32 16.2	+5.8
AVF				eSn	Sn	21 33 51.4	-6.6
	comp=Z,0.3nm,0.2s						
TCF	**Toulx Ste Croi**	10.22	290	ePn	Pn	21 32 19.1	-0.4
TCF				eSn	Sn	21 34 06.1	-8.3
	comp=Z,0.9nm,0.4s						

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*FUNV **07** 21:45:17.2, 8°.45N×71°.40W, h4^{km}, MW3.9*

ISC 07 21:45:15.4±1.4**, 8°.47N**±0°.04×**71°.43W**±0°.03**, h6**^{km}±12^{km}**,**
n17, σ1^{s}.23/30**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	**Socops**	0.59	108	eP	Pb	21 45 28.0	-0.3
SOCV				eS	Sb	21 45 36.7	-0.3
SDV	**Santo Domingo**	0.89	62	eP	Pb	21 45 33.3	0.0
SDV				eS	Sb	21 45 44.5	-1.0
CAPV	**Capacho**	1.07	236	eP	Pg	21 45 36.4	+0.5
CAPV				eS	Sn	21 45 52.6	+0.2
PAMC	**Pamplona, Colo**	1.69	228	eP	Pg	21 45 48.6	+0.7
PAMC				eS	Sb	21 46 09.5	+0.5
PAMC				i		21 46 14.4	
	comp=Z,285nm,0.7s						
OCAC	**Ocana**	1.89	263	eP	Pn	21 45 49.5	+1.2
OCAC				eS	Sb	21 46 14.5	+0.2
OCAC				i		21 46 16.3	
	comp=Z,718nm,0.4s						
MCQV	**Machiques**	1.91	325	eP	Pb	21 45 50.1	-0.7
MCQV				eS	Sb	21 46 15.3	+0.4
TAMC	**Tame, Arauca**	2.06	190	eP	Pg	21 45 55.4	+0.5
TAMC				eS	Sg	21 46 21.9	+0.4
ELOV	**Elorza**	2.42	127	eP	Pn	21 45 56.3	+0.7
ELOV				eS	Sn	21 46 25.2	-0.3
BARC	**Barichara**	2.55	223	eP	Pb	21 46 01.8	0.0
DABV	**Dabajuro**	2.56	18	eP	Pn	21 45 59.2	+1.7
SMLC	**San Martn de**	2.63	277	eP	Pb	21 46 02.5	-0.6
SMLC				eS	Sb	21 46 35.0	-0.8
SMLC				i		21 46 37.8	
	comp=Z,113nm,0.3s						
BRRC	**Barranca, Sant**	2.64	239	eS	Sg	21 46 39.0	-1.3
SIQV	**Siquisique**	2.69	36	eP	Pn	21 46 01.1	+1.8
SIQV				eS	Sn	21 46 32.6	+0.4
RUSC	**La Rusia**	3.04	213	eP	Pn	21 46 06.8	+2.1
RUSC				eS	Sg	21 46 51.4	-2.0
RUSC				i		21 46 54.5	
	comp=Z,42nm,0.8s						
BAUV	**El Baul**	3.38	82	eP	Pn	21 46 09.7	+0.9
BAUV				eS	Sn	21 46 47.7	-1.5
ZARC	**Zaragoza, Cauc**	3.54	254	eP	Pb	21 46 15.8	-2.6
BENV	**Beln**	4.06	68	eP	Pn	21 46 19.5	+1.3
BENV				eS	Sn	21 47 03.8	-2.3

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*NEIC **07** 21:52:17.2±1.0, 25°.31S±0°.09×176°.9W±0°.2, h98^{km}±11^{km}, mb4.2/13, Error ellipse: s-maj=24.1km s-min=11.8km az=107.0*

*IDC **07** 21:52:21.2±1.0, 25°.42S×177°.05W, h139^{km}±7^{km}, mb3.5/9, mb1 3.8/11, mb1mx3.6/38, mbtmp4.1/11, Error ellipse: s-maj=22.4km s-min=17.8km az=154.0*

ISC 07 21:52:19.3±0.6**, 25°.34S**±0°.06×**176°.95W**±0°.10**, h126**^{km}**,**
n40, σ1^{s}.70/37**, mb4.0**/13**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	3.99	192	P	Pn	21 53 20.4	+1.6
	110nm,0.3s,baz=60,slow=20,SNR=2.4						
RAO				S	Sn	21 54 01.4	-3.6
	156nm,0.3s,baz=37,slow=20,SNR=4.3						
RAO	**Raoul Island**	3.99	192		Pn	21 53 16.2	-2.6
RAO					Sn	21 54 02.8	-2.2
MSVF	**Nonsavu**	8.89	327	P	Pn	21 54 31.2	+6.4
	0.9nm,0.3s,baz=148,slow=17,SNR=6.6						
MSVF				S	Sn	21 56 01.8	-1.6
	3.2nm,0.3s,baz=285,slow=20,SNR=3.5						
NIUE	**Niue**	9.01	48	Pn	Pn	21 54 24.1	-2.4
AFI	**Afiamalu**	12.37	24	P	Pn	21 55 08.0	-3.3
	3.7nm,0.3s,baz=162,slow=3.2,SNR=6.0						
AFI				S	Sn	21 57 14.7	-13
	1.0nm,0.3s,baz=197,slow=20,SNR=1.1						
URZ	**Urewera**	13.83	200	P	Pn	21 55 28.7	-1.2
	1.8nm,0.3s,baz=307,slow=20,SNR=9.5						
URZ				S	Sn	21 57 44.1	-18
	0.5nm,0.3s,baz=301,slow=19,SNR=1.6						
BKZ	**Black Stump Fm**	14.85	200	Pn	Pn	21 55 38.3	-4.7
FUNA	**Funafuti**	17.12	347		P	21 56 09.6	-1.1
EIDS	**Eidsvold**	28.86	263	P	P	21 58 07.2	+1.1
EIDS				IAmb	IAmb	21 58 20.8	
	comp=Z,8.4nm,1.1s						
CTA	**Charters Tower**	34.27	271	P	P	21 58 54.5	+0.8
	comp=Z,1.3nm,0.4s,baz=86,slow=13,SNR=2.3						
CTAO	**Charters Tower**	34.27	271	P	P	21 58 54.7	+1.1
CTAO				IAmb	IAmb	21 58 58.9	
	comp=Z,11nm,1.4s						
STKA	**Stephens Creek**	36.81	250	P	P	21 59 15.0	-0.2
	comp=Z,0.7nm,0.5s,baz=106,slow=11,SNR=4.1						
STKA	**Stephens Creek**	36.81	250	P	P	21 59 15.4	+0.2
AS31	**Alice Springs**	44.55	261	P	P	22 00 18.8	-0.1
AS31				IAmb	IAmb	22 00 20.7	
	comp=Z,1.2nm,0.4s						
ASAR	**Alice Springs**	44.55	261	P	P	22 00 18.9	0.0
	comp=Z,1.8nm,0.4s,baz=91,slow=7.1,SNR=75						
ASAR				pP	pP	22 00 49.5	+2.4
	comp=Z,1.2nm,1.0s,baz=101,slow=9.3,SNR=3.8						
ASAR	**Alice Springs**	44.55	261	P	P	22 00 18.6	-0.3
WR0	**Warramunga Arr**	44.90	267	P	P	22 00 21.2	-0.5
WR0				IAmb	IAmb	22 00 34.3	
	comp=Z,4.1nm,1.4s						
WRA	**Warramunga Arr**	45.09	267	P	P	22 00 22.5	-0.7
	comp=Z,0.8nm,0.4s,baz=102,slow=8.2,SNR=23						
WRA				pP	pwP	22 00 53.9	+0.3
	comp=Z,1.3nm,0.9s,baz=102,slow=8.3,SNR=5.3						
WRA	**Warramunga Arr**	45.09	267	P	P	22 00 22.6	-0.5
KNRA	**Kununurra**	51.46	270	P	P	22 01 11.7	-0.3
SBA	**Scott Base**	53.13	184	P	P	22 01 25.3	+1.8
VNDA	**Vanda**	53.20	186	P	P	22 01 23.6	-0.4
	comp=Z,0.3nm,0.6s,baz=352,slow=9.7,SNR=2.1						
VNDA	**Vanda**	53.20	186	P	P	22 01 25.5	+1.5
FITZ	**Fitzroy Crossi**	53.49	266	P	P	22 01 26.7	-0.3
	comp=Z,1.4nm,0.8s,baz=128,slow=6.5,SNR=6.9						
FITZ	**Fitzroy Crossi**	53.49	266	P	P	22 01 27.2	+0.2
FITZ				IAmb	IAmb	22 01 38.3	
	comp=Z,3.1nm,1.1s						
QSPA	**South Pole Qui**	64.75	180	P	P	22 02 44.9	+0.9
QSPA				IAmb	IAmb	22 02 48.0	
	comp=Z,5.5nm,1.1s						
MAW	**Mawson**	77.36	200	P	P	22 03 59.8	0.0
	comp=Z,2.0nm,0.7s,baz=144,slow=6.4,SNR=6.8						
MAW	**Mawson**	77.36	200	P	P	22 04 00.5	+0.7
MAW				IAmb	IAmb	22 04 01.9	
	comp=Z,1.1nm,1.1s						
H03S2	**Juan Fernandez**	82.48	124	T	T	23 35 27.6	
	baz=243,slow=74,SNR=46						
H03S1	**Juan Fernandez**	82.49	124	T	T	23 35 40.3	
	baz=243,slow=74,SNR=43						
H03S3	**Juan Fernandez**	82.50	124	T	T	23 35 39.1	
	baz=243,slow=74,SNR=45						
H03N2	**Juan Fernandez**	82.65	123	T	T	23 35 43.8	
	baz=241						
H03N3	**Juan Fernandez**	82.65	123	T	T	23 35 53.2	
	baz=241						
H03N1	**Juan Fernandez**	82.66	123	T	T	23 35 41.5	
	baz=241						
NVAR	**Mina Array Bea**	83.90	42	P	P	22 04 35.6	+0.3
	comp=Z,0.5nm,0.6s,baz=215,slow=10.0,SNR=5.2						
NVAR				pP	pP	22 05 12.1	+4.9
	comp=Z,0.1nm,0.4s,baz=219,slow=7.0,SNR=2.1						
PDAR	**Pinedale Array**	91.82	43	P	P	22 05 15.3	+2.0
	comp=Z,0.1nm,0.5s,baz=165,slow=1.8,SNR=1.8						
MKAR	**Makanchi Array**	115.18	312	PKP	PKPdf	22 10 43.6	-2.0
	comp=Z,0.9nm,1.0s,baz=53,slow=9.6,SNR=4.1						
NOA	**NORSAR Array B**	143.88	353	PKP	PKPab	22 11 36.8	+0.1
	comp=Z,2.1nm,1.0s,baz=339,slow=6.2,SNR=3.5						
BRTR	**Keskin Array B**	150.66	307	PKPbc	PKiKP	22 11 58.0	+0.6
	comp=Z,0.6nm,0.7s,baz=66,slow=4.9,SNR=4.8						
TORD	**Torodi Ar. Bea**	167.80	174	PKPab	PKPab	22 13 19.1	+0.6
	comp=Z,0.6nm,0.9s,baz=238,slow=2.5,SNR=3.0						

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*IASPEI **07** 22:13:18.8±1.0, 36°.94N±0°.02×97°.83W±0°.02, h9^{km}±7^{km}, Error ellipse: s-maj=3.6km s-min=3.2km az=130.7, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*NEIC **07** 22:13:18.8±0.9, 36°.94N±0°.04×97°.83W±0°.06, h5^{km}±2^{km}, Error ellipse: s-maj=7.3km s-min=5.6km az=72.0*

*ANF **07** 22:13:18.6±0.4, 36°.91N×97°.83W, h0^{km}, ML4.2/10, Error ellipse: s-maj=4.6km s-min=3.9km az=94.0*

*TUL **07** 22:13:18.7±1.2, 36°.95N±0°.03×97°.84W±0°.05, h3^{km}±7^{km}, ML3.5, mb_Lg3.4/82(NEIC), ML3.4/26(NEIC), Error ellipse: s-maj=6.7km s-min=2.6km az=63.0*

*NEIC **07** 22:13:19.0±1.1, 36°.93N±0°.02×97°.80W±0°.06, h4^{km}±7^{km}, Error ellipse: s-maj=7.5km s-min=2.0km az=68.0*

ISC 07 22:13:19.0±0.8**, 36°.93N**±0°.02×**97°.84W**±0°.02**, h8**^{km}±6^{km}**,**
n123, σ0^{s}.65/133**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	**Grant County #**	0.08	191	Pg	Pg	22 13 21.1	0.0
GC02				Sg	Sg	22 13 22.8	+0.2
KAN14	**Manchester OK**	0.10	284		Pg	22 13 21.1	-0.2
KAN14				Sg	Sg	22 13 22.8	-0.3
KAN17	**Caldwell West**	0.13	28	Pg	Pg	22 13 21.5	-0.3
KAN17				Sg	Sg	22 13 23.3	-0.4
KAN05	**Bluff City Nor**	0.18	352		Pg	22 13 22.4	-0.3
KAN05				Sg	Sg	22 13 24.9	-0.3
KAN01	**Argonia South**	0.23	16		Pg	22 13 23.4	-0.2
KAN01				Sg	Sg	22 13 26.5	-0.2
KAN09	**Caldwell North**	0.27	41	Pg	Pg	22 13 24.1	-0.2
KAN09				Sg	Sg	22 13 27.8	-0.2
KAN10	**Anthony SW Sta**	0.28	313	Pg	Pg	22 13 24.4	-0.1
KAN10				Sg	Sg	22 13 28.4	+0.2
KAN13	**South Haven SW**	0.30	75		Pg	22 13 24.9	0.0
KAN13				Sg	Sg	22 13 29.1	+0.1
KAN08	**Anthony NE Sta**	0.31	340		Pg	22 13 25.0	-0.2
KAN08				Sg	Sg	22 13 29.5	+0.2
KAN06	**Argonia West S**	0.32	357		Pg	22 13 25.0	-0.2
KAN06					Sg	22 13 29.3	-0.2
OK032	**Salt Plains WL**	0.32	247		Pg	22 13 25.4	+0.1
OK032				Sg	Sg	22 13 30.3	+0.6
KAN16	**Harper SW Stat**	0.34	328	Pg	Pg	22 13 25.6	-0.2
KS20	**Mayfield South**	0.37	38		Pg	22 13 26.1	-0.3
KS21	**Milan North St**	0.38	22		Pg	22 13 26.2	-0.3
KS21					Sg	22 13 31.3	-0.2
KAN12	**Harper NE Stat**	0.39	341		Pg	22 13 26.3	-0.3
KAN12					Sg	22 13 31.5	-0.1
CROK	**Carrier**	0.44	195	Pg	Pg	22 13 27.8	+0.2
BLOK	**Blackwell**	0.53	109	Pg	Pg	22 13 29.1	-0.1
T35A	**Sooner Cattle**	1.06	91		Pg	22 13 38.7	-0.7
T35B	**Sooner Cattle**	1.06	91	P	Pg	22 13 38.7	-0.7
	baz=272,SNR=250						
T35B				S	Sg	22 13 53.0	-0.2
	baz=272						
U32A	**Winter Ranch,**	1.08	240		Pg	22 13 39.4	-0.4
U32A	**Winter Ranch,**	1.08	240	P	Pg	22 13 39.5	-0.4
	baz=58,SNR=17						
OK029	**Liberty Lake**	1.18	165		Pg	22 13 41.1	-0.4
QUOK	**Quay**	1.19	130		Pg	22 13 41.2	-0.6
OK031	**S. Brethren Rd**	1.27	140		Pg	22 13 42.6	-0.7
BCOK	**Bluff Creek, N**	1.29	172		Pg	22 13 42.9	-0.8
OK030	**Cody Creek RV**	1.32	139		Pg	22 13 43.4	-0.9
OK009	**Oakdale Elemen**	1.39	166	Pn	Pn	22 13 45.0	+0.3
OK025	**Westminster Rd**	1.41	163		Pn	22 13 45.2	+0.2
OKCFA	**Oklahoma City**	1.55	168		Pn	22 13 47.4	+0.5
OKCFA				IAmb_Lg		22 14 11.8	
	comp=Z,219nm,0.8s						
OKCFA	**Oklahoma City**	1.55	168	P	Pb	22 13 47.6	-0.4
	baz=349,SNR=19						
OKCFA				S	Sg	22 14 09.1	+0.4
	baz=349						
OKCSW	**OKLAHOMA CITY**	1.56	168		Pb	22 13 47.7	-0.4
R32A	**Long Quarter,**	1.64	335		Pn	22 13 48.7	+0.5
R32A	**Long Quarter,**	1.64	335	P	Pn	22 13 48.9	+0.7
	baz=155,SNR=41						
R32A				S	Sn	22 14 10.2	+0.7
	baz=155						
FNO	**Franklin**	1.71	168		Pn	22 13 50.0	+0.8
TUL1	**Leonard**	1.94	121	P	Pn	22 13 52.8	+0.5
	baz=303						
TUL1				S	Sb	22 14 19.3	+0.2
	baz=303						
TUL1	**Leonard**	1.94	121		Pn	22 13 52.9	+0.5
TUL1	**Leonard**	1.94	121	P	Pn	22 13 52.8	+0.5
	baz=303,SNR=102						
WMOK	**Wichita Mounta**	2.32	200	P	Pn	22 13 58.2	+0.6
	baz=19						
WMOK				Sb	Sb	22 14 30.6	+0.6
	baz=19						
WMOK	**Wichita Mounta**	2.32	200		Pn	22 13 58.2	+0.6

WMOK	**Wichita Mounta**	**2.32**	**200**	P	**Pn**	**22 13 58.1**	**+0.6**
	baz=19,SNR=66						
X34A	**Smith Ranch, M**	**2.33**	**180**	Pn	**Pn**	**22 13 58.8**	**+1.1**
KSU1	**Kansas State U**	**2.37**	**24**	P	**Pn**	**22 13 58.9**	**+0.7**
	baz=205						
KSU1				S	**Sb**	**22 14 31.1**	**-0.3**
	baz=205						
KSU1	**Kansas State U**	**2.37**	**24**		**Pn**	**22 13 59.0**	**+0.7**
KSU1	**Kansas State U**	**2.37**	**24**	P	**Pn**	**22 13 58.9**	**+0.7**
	baz=205,SNR=20						
KSU1				S	**Sb**	**22 14 31.1**	**-0.3**
	baz=205						
CBKS	**Cedar Bluff**	**2.40**	**322**	P	**Pn**	**22 13 59.8**	**+1.0**
	baz=141						
CBKS				S	**Sb**	**22 14 32.7**	**+0.3**
	baz=141						
CBKS	**Cedar Bluff**	**2.40**	**322**		**Pn**	**22 13 59.6**	**+0.9**
CBKS	**Cedar Bluff**	**2.40**	**322**	P	**Pn**	**22 13 59.3**	**+0.6**
	baz=141,SNR=18						
CBKS				S	**Sb**	**22 14 32.7**	**+0.3**
	baz=141						
U38A	**Gravette**	**2.82**	**99**		**Pn**	**22 14 05.2**	**+0.8**
U38A	**Gravette**	**2.82**	**99**	P	**Pn**	**22 14 05.3**	**+0.9**
	baz=282,SNR=22						
LOOK	**Love County**	**2.98**	**169**	Pn	**Pn**	**22 14 07.6**	**+0.9**
X37A	**Clayton**	**3.08**	**139**		**Pn**	**22 14 08.4**	**+0.4**
X37A				IAmb_Lg		22 15 02.8	
	comp=Z,130nm,0.8s						
X37A	**Clayton**	**3.08**	**139**	P	**Pn**	**22 14 08.5**	**+0.4**
	baz=320,SNR=93						
HHAR	**Hobbs**	**3.20**	**101**	Pn	**Pn**	**22 14 10.8**	**+1.1**
HHAR				IAmb_Lg		22 15 06.9	
	comp=Z,70nm,0.8s						
HHAR	**Hobbs**	**3.20**	**101**	P	**Pn**	**22 14 10.8**	**+1.1**
	baz=283						
Z35A	**Perchaven, San**	**3.63**	**172**		**Pn**	**22 14 16.4**	**+0.9**
Z35A	**Perchaven, San**	**3.63**	**172**	P	**Pn**	**22 14 16.6**	**+1.1**
	baz=353,SNR=8.4						
S39A	**Bolivar**	**3.68**	**77**		**Pn**	**22 14 16.3**	**+0.1**
S39A	**Bolivar**	**3.68**	**77**	P	**Pn**	**22 14 16.4**	**+0.1**
	baz=260,SNR=30						
W39A	**Magazine**	**3.71**	**117**	Pb	**Pb**	**22 14 25.8**	**+1.0**
	baz=299						
W39A				S	**Sn**	**22 15 02.0**	**+1.4**
	baz=299						
W39A	**Magazine**	**3.71**	**117**	Pn	**Pn**	**22 14 16.9**	**+0.2**
W39A				IAmb_Lg		22 15 24.7	
	comp=Z,144nm,0.8s						
W39A	**Magazine**	**3.71**	**117**	P	**Pn**	**22 14 16.7**	**0.0**
	baz=299,SNR=34						
AMTX	**Amarillo**	**3.73**	**238**	Sb	**Sg**	**22 15 16.0**	**-2.8**
	baz=55						
AMTX	**Amarillo**	**3.73**	**238**		**Pn**	**22 14 18.7**	**+1.7**
AMTX				IAmb_Lg		22 15 27.8	
	comp=Z,102nm,0.8s						
U40A	**Yellville**	**4.05**	**97**	P	**Pn**	**22 14 22.0**	**+0.6**
	baz=280						
U40A				S	**Sn**	**22 15 08.6**	**-0.4**
	baz=280						
U40A	**Yellville**	**4.05**	**97**		**Pn**	**22 14 21.9**	**+0.6**
U40A	**Yellville**	**4.05**	**97**	P	**Pn**	**22 14 21.9**	**+0.6**
	baz=280,SNR=22						
U40A				P	**Pn**	**22 14 21.9**	**+0.6**
	baz=280,SNR=22						
MIAR	**Mount Ida**	**4.21**	**123**		**Pn**	**22 14 24.2**	**+0.8**
MIAR				IAmb_Lg		22 15 35.7	
	comp=Z,82nm,0.7s						
MIAR	**Mount Ida**	**4.21**	**123**	P	**Pn**	**22 14 23.7**	**+0.3**
	baz=306,SNR=12						
N35A	**Tabor**	**4.28**	**23**		**Pn**	**22 14 24.2**	**-0.2**
KSCO	**Kaye Shedlock'**	**4.31**	**300**		**Pn**	**22 14 25.1**	**+0.1**
KSCO				IAmb_Lg		22 15 41.9	
	comp=Z,55nm,0.7s						
P38A	**Dawn**	**4.33**	**50**	Pn	**Pn**	**22 14 25.1**	**0.0**
Z38A	**Mt. Pleasant**	**4.35**	**147**	Pn	**Pn**	**22 14 25.8**	**+0.4**
Z38A				IAmb_Lg		22 15 40.1	
	comp=Z,100nm,0.9s						
MGMO	**Mountain Grove**	**4.46**	**85**		**Pn**	**22 14 27.7**	**+0.7**
MGMO				IAmb_Lg		22 15 46.7	
	comp=Z,60nm,0.9s						
BGNE	**Belgrade**	**4.48**	**357**	P	**Pn**	**22 14 27.7**	**+0.5**
	baz=177						
BGNE	**Belgrade**	**4.48**	**357**	Pn	**Pn**	**22 14 27.4**	**+0.3**
ABTX	**Abilene, Hawle**	**4.55**	**200**		**Pn**	**22 14 28.6**	**+0.4**
R40A	**Maddies Statio**	**4.63**	**71**		**Pn**	**22 14 29.2**	**0.0**
FCAR	**Ozark Folk Cen**	**4.73**	**101**	Pn	**Pn**	**22 14 30.2**	**-0.4**
FCAR				IAmb_Lg		22 15 54.2	
	comp=Z,63nm,0.7s						
X40A	**Basin Creek Fa**	**4.75**	**119**	P	**Pn**	**22 14 31.9**	**+1.0**
	baz=303						
X40A	**Basin Creek Fa**	**4.75**	**119**		**Pn**	**22 14 31.1**	**+0.2**
X40A				IAmb_Lg		22 15 51.0	
	comp=Z,58nm,0.7s						
WHAR	**Wooly Hollow**	**4.78**	**108**	Pn	**Pn**	**22 14 31.1**	**-0.3**
WHAR				IAmb_Lg		22 15 55.3	
	comp=Z,93nm,0.8s						
WHTX	**Lake Whitney,**	**4.94**	**176**	P	**Pn**	**22 14 33.8**	**+0.3**
	baz=356						
WHTX	**Lake Whitney,**	**4.94**	**176**		**Pn**	**22 14 33.3**	**-0.3**
WHTX				IAmb_Lg		22 15 58.7	
	comp=Z,43nm,1.0s						
WHTX	**Lake Whitney,**	**4.94**	**176**	P	**Pn**	**22 14 33.8**	**+0.3**
	baz=356,SNR=19						
WLAR	**White Oak Lake**	**5.04**	**129**		**Pn**	**22 14 36.9**	**+2.0**
WLAR				IAmb_Lg		22 16 04.1	
	comp=Z,47nm,0.8s						
OGNE	**Ogallala**	**5.17**	**322**		**Pn**	**22 14 37.6**	**+0.8**
OGNE				IAmb_Lg		22 16 12.0	
	comp=Z,90nm,0.8s						
237A	**Washetta, Mont**	**5.20**	**161**	Pn	**Pn**	**22 14 36.7**	**-0.3**
P40A	**Paris**	**5.25**	**59**	Pn	**Pn**	**22 14 37.5**	**-0.3**
P40A				IAmb_Lg		22 16 07.4	
	comp=Z,60nm,0.8s						
P40A	**Paris**	**5.25**	**59**	P	**Pn**	**22 14 37.8**	**+0.1**
	baz=242,SNR=6.4						
T25A	**Trinidad**	**5.26**	**274**	Pn	**Pn**	**22 14 38.2**	**+0.1**
T25A				IAmb_Lg		22 16 19.6	
	comp=Z,47nm,0.9s						
N38A	**Joes South For**	**5.27**	**42**		**Pn**	**22 14 37.4**	**-0.7**
N38A				IAmb_Lg		22 16 12.3	
	comp=Z,65nm,0.7s						
CCM	**Cathedral Cave**	**5.36**	**76**	IAmb_Lg		22 16 21.2	
	comp=Z,38nm,0.8s						
T42A	**Van Buren**	**5.40**	**87**	Pn	**Pn**	**22 14 40.0**	**+0.1**
T42A				IAmb_Lg		22 16 19.6	
	comp=Z,42nm,0.9s						
LCAR	**Lake Charles**	**5.45**	**97**	IAmb_Lg		22 16 13.8	
	comp=Z,57nm,1.1s						
PBMO	**Poplar Bluff**	**5.94**	**89**	IAmb_Lg		22 16 31.7	
	comp=Z,70nm,0.8s						
HBAR	**Harrisburg**	**5.96**	**101**	IAmb_Lg		22 16 43.6	
	comp=Z,80nm,0.8s						
FVM	**French Village**	**5.99**	**78**	IAmb_Lg		22 16 30.1	
	comp=Z,66nm,1.0s						
SCIA	**State Center**	**6.12**	**34**	IAmb_Lg		22 16 42.9	
	comp=Z,73nm,0.7s						
435B	**Jarrell**	**6.14**	**178**	P	**Pn**	**22 14 50.0**	**-0.1**
	baz=358						
435B	**Jarrell**	**6.14**	**178**		**Pn**	**22 14 49.8**	**-0.2**
435B				IAmb_Lg		22 16 43.7	
	comp=Z,39nm,0.9s						
SDCO	**Great Sand Dun**	**6.16**	**280**	Pn	**Pn**	**22 14 51.3**	**+0.8**
LPAR	**Lepanto**	**6.23**	**100**	IAmb_Lg		22 16 45.8	
	comp=Z,70nm,0.7s						
SLM	**Saint Louis**	**6.26**	**72**	IAmb_Lg		22 16 34.7	
	comp=Z,36nm,0.8s						
N41A	**Harden Midland**	**6.63**	**53**	Pn	**Pn**	**22 14 55.9**	**-0.8**
N41A				IAmb_Lg		22 16 49.3	
	comp=Z,52nm,0.8s						
JCT	**Junction City**	**6.64**	**195**	Pn	**Pn**	**22 14 56.3**	**-0.7**
JCT				IAmb_Lg		22 17 06.5	
	comp=Z,48nm,0.9s						
ISCO	**Idaho Springs**	**6.75**	**297**	Pn	**Pn**	**22 14 59.1**	**+0.4**
ECSD	**EROS Data Cent**	**6.86**	**7**	P	**Pn**	**22 14 58.9**	**-1.0**
	baz=188						
ECSD	**EROS Data Cent**	**6.86**	**7**	Pn	**Pn**	**22 14 58.6**	**-1.3**
ECSD				IAmb_Lg		22 17 05.2	
	comp=Z,36nm,1.2s						
S44A	**Carbondale**	**6.88**	**81**	IAmb_Lg		22 17 02.0	
	comp=Z,54nm,0.7s						
SIUC	**Southern Illin**	**6.92**	**81**	Pn	**Pn**	**22 15 01.1**	**+0.5**
SIUC				IAmb_Lg		22 17 08.5	
	comp=Z,40nm,0.8s						
W45A	**Hickory Valley**	**7.23**	**102**	IAmb_Lg		22 17 10.7	
	comp=Z,53nm,0.8s						
L40A	**Anamosa**	**7.24**	**43**		**Pn**	**22 15 04.5**	**-0.6**
L40A				IAmb_Lg		22 17 10.6	
	comp=Z,39nm,0.8s						
Y45A	**Yeager Farm, C**	**7.43**	**112**	IAmb_Lg		22 17 34.3	
	comp=Z,33nm,0.9s						
SUSD	**Miller**	**7.55**	**354**	IAmb_Lg		22 17 38.0	
	comp=Z,25nm,0.8s						
HDIL	**Hopedale**	**7.59**	**59**	Pn	**Pn**	**22 15 10.5**	**+0.6**
OLIL	**Olney**	**7.92**	**74**	IAmb_Lg		22 17 35.8	
	comp=Z,33nm,0.7s						
O44A	**Mansfield**	**8.02**	**64**	IAmb_Lg		22 17 35.2	
	comp=Z,34nm,0.7s						
L42A	**Oliver, Polo**	**8.10**	**49**		**Pn**	**22 15 16.2**	**-0.6**
L42A				IAmb_Lg		22 17 40.8	
	comp=Z,43nm,0.8s						
WVT	**Waverly**	**8.10**	**93**	Pn	**Pn**	**22 15 15.8**	**-1.2**
PLAL	**Pickwick Lake**	**8.15**	**101**	Pn	**Pn**	**22 15 17.1**	**-0.6**
JFWS	**Jewell Farm**	**8.35**	**42**		**Pn**	**22 15 19.5**	**-0.8**
JFWS				IAmb_Lg		22 17 45.6	
	comp=Z,34nm,1.0s						
RSSD	**Black Hills**	**8.59**	**329**	Pn	**Pn**	**22 15 23.6**	**-0.3**
K22A	**Casper**	**8.79**	**313**	IAmb_Lg		22 18 20.5	
	comp=Z,32nm,0.9s						

NNC 07 22:14:07.0±4.2**,36°.80N**×**70°.66E,h0^{km},mb3.5,mpv3.2, 2C-1D,Error ellipse: s-maj=34.9km s-min=31.7km az=121.0,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.30**	**359**	P	Pn	22 15 42.8	+1.6
	0.8nm,0.4s,baz=191,slow=14,SNR=12						
KK31				⇑S	Sn	22 16 55.7	+1.9
	0.4nm,0.3s,baz=188,slow=25,SNR=4.3						
AAK	**Ala-Archa**	**6.54**	**26**	P	Pn	22 15 45.6	+1.0
	0.8nm,0.5s						
AAK				S	Sn	22 17 03.2	+3.3
	1.3nm,0.5s						
TKM2	**Tokmak 2**	**7.20**	**30**	⇓P	Pn	22 15 54.0	+0.3
	0.6nm,0.4s						
TKM2				⇑S	Sn	22 17 17.4	+1.1
	1.8nm,0.9s						

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*VAO **07** 22:23:19.9±1.4,34°.29S×75°.04W,h10^{km},mb4.4*
*SJA **07** 22:23:50.1±0.8,31°.43S×72°.30W,h11^{km}±8^{km},ML4.5, MW4.2*
*IDC **07** 22:23:52.2±1.0,31°.45S×71°.78W,h0^{km},mb4.4/6, mb1 4.3/11,mb1mx4.1/27,mbtmp4.2/11,ML3.9/5,MS3.6/4, Ms1 3.6/4,ms1mx3.3/24,Error ellipse: s-maj=31.1km s-min=22.6km az=107.0*
*NEIC **07** 22:23:53.5±2.3,31°.43S±0°.03×72°.03W±0°.08,h8^{km}±3^{km}, mb4.6/27,ML4.3(GUC),Error ellipse: s-maj=10.5km s-min=1.7km az=107.0*
*GUC **07** 22:23:55.7±0.7,31°.45S×71°.85W,h20^{km}±7^{km},ML4.3*
ISC 07 22:23:54.1±0.8**,31°.42S**±0°.02×**72°.07W**±0°.03**,h17**^{km}±4^{km}**, n195,**σ**1§78**/251**,mb4.6**/20**,7C-2D,Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	**0.83**	**27**	*e*P	**Pg**	**22 24 10.6**	**+0.3**
CO06				*e*S	**Sg**	**22 24 21.4**	**+0.2**
CO06	**Fray Jorge**	**0.83**	**27**		**Pg**	**22 24 10.5**	**+0.3**
CO06				Sg	**Sg**	**22 24 21.8**	**+0.6**
VA06	**Catapilco**	**1.31**	**150**	⇓*i*P	**Pn**	**22 24 17.1**	**-0.5**
VA06				*i* S	**Sn**	**22 24 32.9**	**-1.8**
VA06				IAML		22 24 34.4	
	comp=E,12µm,0.5s						
CO03	**El Pedregal**	**1.32**	**64**	⇓*i*P	**Pn**	**22 24 17.0**	**-0.7**
CO03				*e*S	**Sb**	**22 24 32.3**	**-2.7**
CO03				IAML		22 24 36.4	
	comp=N,13µm,0.2s						
CO03	**El Pedregal**	**1.32**	**64**		**Pn**	**22 24 16.9**	**-0.9**
CO03				Sn	**Sb**	**22 24 33.0**	**-1.9**
VA01	**Torpederas**	**1.64**	**168**	⇑*i*P	**Pn**	**22 24 21.7**	**-0.3**
VA01				*e*S	**Sn**	**22 24 43.3**	**+0.6**
VA01	**Torpederas**	**1.64**	**168**		**Pn**	**22 24 21.9**	**-0.2**
VA01	**Torpederas**	**1.64**	**168**	*e*P	**Pn**	**22 24 21.9**	**-0.2**
VA01	**Torpederas**	**1.64**	**168**	*e*P	**Pn**	**22 24 21.9**	**-0.2**
GO04	**Tololo Observa**	**1.65**	**42**	*e*P	**Pn**	**22 24 23.0**	**+0.5**
GO04				*e*S	**Sn**	**22 24 43.3**	**-0.2**
GO04	**Tololo Observa**	**1.65**	**42**		**Pn**	**22 24 21.7**	**-0.9**
GO04	**Tololo Observa**	**1.65**	**42**	*e*P	Pg	22 24 39.6	+14
GO04	**Tololo Observa**	**1.65**	**42**	*e*P	Pg	22 24 39.6	+14
CO05	**La Serena**	**1.66**	**26**	⇑*e*P	**Pn**	**22 24 23.1**	**+0.8**
CO05				*e*S	**Sb**	**22 24 44.3**	**-0.5**
CO05				IAML		22 24 48.1	
	comp=N,6µm,0.5s						
CO05	**La Serena**	**1.66**	**26**		**Pn**	**22 24 23.0**	**+0.6**
ROCH	**El Roble**	**1.79**	**150**	⇑*i*P	**Pn**	**22 24 24.2**	**-0.1**
ROCH				*e*S	**Sn**	**22 24 46.5**	**-0.4**
ROCH				IAML		22 24 53.0	
	comp=N,6µm,0.6s						
ROC1	**El Roble**	**1.79**	**150**	*e*P	**Pn**	**22 24 24.4**	**0.0**
ROC1				*e*S	**Sn**	**22 24 46.4**	**-0.5**
ROC1	**El Roble**	**1.79**	**150**	*e*P	**Pn**	**22 24 24.4**	**0.0**
ROC1				*e*S	**Sn**	**22 24 46.4**	**-0.5**
VA03	**San Esteban**	**1.86**	**137**	*e*P	**Pn**	**22 24 25.3**	**+0.1**
VA03				*e*S	**Sn**	**22 24 47.9**	**-0.5**
VA03				IAML		22 24 52.8	
	comp=E,9µm,0.3s						
VA03	**San Esteban**	**1.86**	**137**		**Pn**	**22 24 25.4**	**+0.1**
VA03	**San Esteban**	**1.86**	**137**	*e*P	**Pn**	**22 24 25.7**	**+0.5**
VA03				*e*S	**Sn**	**22 24 44.6**	**-3.7**
VA03				IAML		22 24 50.8	
	comp=Z,6µm,1.2s						
VA03	**San Esteban**	**1.86**	**137**	*e*P	**Pn**	**22 24 25.7**	**+0.5**
VA03				*e*S	**Sn**	**22 24 44.6**	**-3.7**
VA03				IAML		22 24 50.8	
	comp=Z,6µm,1.2s						
MT02	**Curacav**	**2.00**	**157**	*e*P	**Pn**	**22 24 26.8**	**-0.3**
MT02				*e*S	**Sn**	**22 24 51.5**	**-0.1**
MT02	**Curacav**	**2.00**	**157**		**Pn**	**22 24 26.9**	**-0.1**
MT02	**Curacav**	**2.00**	**157**	*e*P	**Pn**	**22 24 22.6**	**-4.4**
MT02				*e*P	**Pn**	**22 24 26.9**	**-0.1**
MT02				*e*S	**Sb**	**22 24 55.5**	**+1.0**
MT02	**Curacav**	**2.00**	**157**	*e*P	**Pn**	**22 24 22.6**	**-4.4**
MT02				*e*P	**Pn**	**22 24 26.9**	**-0.1**
MT02				*e*S	**Sb**	**22 24 55.5**	**+1.0**
PEL	**Peldehue**	**2.08**	**146**	⇑*i*P	**Pn**	**22 24 28.6**	**+0.4**
PEL				*e*S	**Sn**	**22 24 54.2**	**+0.5**
PEL				IAML		22 25 02.5	
	comp=N,2µm,0.5s						
PEL	**Peldehue**	**2.08**	**146**	*e*P	**Pn**	**22 24 28.6**	**+0.4**
PEL				*e*P	**Pb**	**22 24 28.7**	**-2.7**
PEL				*e*S	**Sb**	**22 24 57.9**	**+1.0**
PEL	**Peldehue**	**2.08**	**146**	*e*P	**Pn**	**22 24 28.6**	**+0.4**
PEL				*e*P	**Pb**	**22 24 28.7**	**-2.7**
PEL				*e*S	**Sb**	**22 24 57.9**	**+1.0**
VA05	**Santo Domingo**	**2.26**	**170**	⇑*e*P	**Pn**	**22 24 30.5**	**-0.2**
VA05				*e*S	**Sb**	**22 25 01.6**	**-0.6**
VA05				IAML		22 25 13.6	
	comp=E,3µm,0.4s						
VA05	**Santo Domingo**	**2.26**	**170**		**Pn**	**22 24 30.2**	**-0.5**
MT05	**Renca**	**2.27**	**151**	*e*P	**Pn**	**22 24 31.2**	**+0.4**
MT05				*e*S	**Sn**	**22 24 59.3**	**+1.0**
MT05				IAML		22 25 09.2	
	comp=E,4µm,0.7s						
MT05	**Renca**	**2.27**	**151**		**Pn**	**22 24 30.8**	**0.0**
MT05	**Renca**	**2.27**	**151**	*e*P	**Pn**	**22 24 31.0**	**+0.2**
MT05	**Renca**	**2.27**	**151**	*e*P	**Pn**	**22 24 31.0**	**+0.2**
RTLS	**Leoncito**	**2.39**	**100**	*e*P	**Pb**	**22 24 35.1**	**-1.7**
RTLS				*e*S	**Sg**	**22 25 09.9**	**-1.2**
RTLS				IAML		22 25 10.8	
	comp=Z,2µm,0.7s						
RTLS	**Leoncito**	**2.39**	**100**	*e*P	**Pb**	**22 24 35.1**	**-1.7**
RTLS				*e*S	**Sg**	**22 25 09.9**	**-1.2**
RTLS				IAML		22 25 10.8	
	comp=Z,2µm,0.7s						
AUSP	**Uspallata**	**2.42**	**110**	*e*P	**Pb**	**22 24 35.5**	**-1.8**
AUSP				*e*S	**Sb**	**22 25 06.9**	**0.0**
AUSP	**Uspallata**	**2.42**	**110**	*e*P	**Pb**	**22 24 35.5**	**-1.8**
AUSP				*e*S	**Sb**	**22 25 06.9**	**0.0**
MT09	**Talagante**	**2.52**	**159**	⇑*i*P	**Pn**	**22 24 35.0**	**+0.6**
MT09				*e*S	**Sn**	**22 25 05.0**	**+0.2**
MT09				IAML		22 25 18.7	
	comp=E,1µm,0.6s						
MT09	**Talagante**	**2.52**	**159**		**Pn**	**22 24 35.1**	**+0.7**
MT01	**Popeta**	**2.53**	**164**		**Pn**	**22 24 34.6**	**+0.1**
MT01	**Popeta**	**2.53**	**164**	*e*P	Pn	22 24 29.1	-5.3
MT01				*e*P	Pb	22 24 34.0	-5.1
MT01				*e*S	**Sn**	**22 25 04.6**	**-0.3**
MT01				IAML		22 25 15.1	
	comp=Z,949nm,0.8s						
MT01	**Popeta**	**2.53**	**164**	*e*P	Pn	22 24 29.1	-5.3
MT01				*e*P	Pb	22 24 34.0	-5.1
MT01				*e*S	**Sn**	**22 25 04.6**	**-0.3**
MT01				IAML		22 25 15.1	
	comp=Z,949nm,0.8s						
AROD	**Rodeo**	**2.56**	**61**	*e*P	**Pb**	**22 24 37.8**	**-1.9**
AROD				*e*S	**Sb**	**22 25 11.1**	**+0.2**
AROD	**Rodeo**	**2.56**	**61**	*e*P	**Pb**	**22 24 37.8**	**-1.9**
AROD				*e*S	**Sb**	**22 25 11.1**	**+0.2**
LCO	**Las Campanas**	**2.68**	**27**	Pn	**Pn**	**22 24 36.9**	**+0.4**
LCO	**Las Campanas**	**2.68**	**27**	*e*P	**Pn**	**22 24 37.0**	**+0.4**
LCO	**Las Campanas**	**2.68**	**27**	*e*P	**Pn**	**22 24 37.0**	**+0.4**
ACCO	**Cerro Coronel**	**2.71**	**73**	*e*P	**Pb**	**22 24 40.0**	**-2.3**
ACCO				*e*S	**Sb**	**22 25 16.2**	**+0.9**
ACCO	**Cerro Coronel**	**2.71**	**73**	*e*P	**Pb**	**22 24 40.0**	**-2.3**
ACCO				*e*S	**Sb**	**22 25 16.2**	**+0.9**
ACDV	**Cuesta del Vie**	**2.83**	**65**	*e*P	**Pb**	**22 24 43.0**	**-1.2**
ACDV				*e*S	**Sn**	**22 25 15.1**	**+2.8**
ACDV				IAML		22 25 26.1	
	comp=Z,1µm,0.5s						
ACDV	**Cuesta del Vie**	**2.83**	**65**	*e*P	**Pb**	**22 24 43.0**	**-1.2**
ACDV				*e*S	**Sn**	**22 25 15.1**	**+2.8**
ACDV				IAML		22 25 26.1	
	comp=Z,1µm,0.5s						
BO04	**La Punta**	**2.84**	**155**	⇑*e*P	**Pn**	**22 24 39.3**	**+0.6**
ZON	**Zonda**	**2.90**	**93**		**Pn**	**22 24 41.2**	**+1.7**
ZON	**Zonda**	**2.90**	**93**	*e*P	**Pb**	**22 24 43.0**	**-2.3**
ZON				*e*S	**Sb**	**22 25 17.6**	**-2.9**
ZON				IAML		22 25 28.6	
	comp=Z,1µm,0.6s						
ZON	**Zonda**	**2.90**	**93**	*e*P	**Pb**	**22 24 43.0**	**-2.3**
ZON				*e*S	**Sb**	**22 25 17.6**	**-2.9**
ZON				IAML		22 25 28.6	
	comp=Z,1µm,0.6s						
ASAL	**Salagasta**	**2.98**	**114**	*e*P	**Pb**	**22 24 44.0**	**-2.8**
ASAL				*e*S	**Sb**	**22 25 20.6**	**-2.4**
ASAL				*e*S	**Sn**	**22 25 21.6**	**+5.5**
ASAL	**Salagasta**	**2.98**	**114**	*e*P	**Pb**	**22 24 44.0**	**-2.8**
ASAL				*e*S	**Sb**	**22 25 20.6**	**-2.4**
ASAL				*e*S	**Sn**	**22 25 21.6**	**+5.5**
ARCO	**CERRO ARCO**	**3.01**	**119**	*e*P	**Pn**	**22 24 39.6**	**-1.5**
ARCO				*e*P	**Pb**	**22 24 44.8**	**-2.6**
ARCO				*e*S	**Sb**	**22 25 22.1**	**-1.8**
ARCO				IAML		22 25 29.9	
	comp=Z,886nm,0.6s						
ARCO	**CERRO ARCO**	**3.01**	**119**	*e*P	**Pn**	**22 24 39.6**	**-1.5**
ARCO				*e*P	**Pb**	**22 24 44.8**	**-2.6**
ARCO				*e*S	**Sb**	**22 25 22.1**	**-1.8**
ARCO				IAML		22 25 29.9	
	comp=Z,886nm,0.6s						
RTCV	**Cerro Valdivia**	**3.04**	**99**	*e*P	**Pn**	**22 24 44.0**	**+2.6**
RTCV				*e*S	**Sb**	**22 25 22.6**	**-2.0**
RTCV	**Cerro Valdivia**	**3.04**	**99**	*e*P	**Pn**	**22 24 44.0**	**+2.6**
RTCV				*e*S	**Sb**	**22 25 22.6**	**-2.0**
BO01	**Tunca**	**3.08**	**165**		**Pn**	**22 24 42.0**	**+0.1**
BO01	**Tunca**	**3.08**	**165**	*e*P	**Pn**	**22 24 42.0**	**+0.1**
BO01				*e*S	**Sn**	**22 25 21.6**	**+3.3**
BO01	**Tunca**	**3.08**	**165**	*e*P	**Pn**	**22 24 42.0**	**+0.1**
BO01				*e*S	**Sn**	**22 25 21.6**	**+3.3**
AAGR	**Agrelo**	**3.21**	**122**	*e*P	**Pn**	**22 24 47.0**	**+3.2**
AAGR				*e*S	**Sb**	**22 25 29.1**	**-0.4**
AAGR	**Agrelo**	**3.21**	**122**	*e*P	**Pn**	**22 24 47.0**	**+3.2**
AAGR				*e*S	**Sb**	**22 25 29.1**	**-0.4**
AC04	**Llanos de Chal**	**3.32**	**15**	Pn	**Pn**	**22 24 45.1**	**-0.1**
AC04	**Llanos de Chal**	**3.32**	**15**	*e*P	**Pn**	**22 24 45.6**	**+0.4**
AC04				*e*P	Pb	22 24 47.0	-5.5
AC04				*e*S	**Sn**	**22 25 22.1**	**-2.1**
AC04				*e*S	**Sb**	**22 25 28.6**	**-3.9**
AC04				IAML		22 25 43.6	
	comp=Z,861nm,0.7s						
AC04	**Llanos de Chal**	**3.32**	**15**	*e*P	**Pn**	**22 24 45.6**	**+0.4**
AC04				*e*P	Pb	22 24 47.0	-5.5
AC04				*e*S	**Sn**	**22 25 22.1**	**-2.1**
AC04				*e*S	**Sb**	**22 25 28.6**	**-3.9**
AC04				IAML		22 25 43.6	
	comp=Z,861nm,0.7s						
BO02	**Sierra Bellavi**	**3.53**	**163**		**Pn**	**22 24 48.4**	**+0.2**
BO02	**Sierra Bellavi**	**3.53**	**163**	*e*P	**Pn**	**22 24 48.9**	**+0.7**
BO02				*e*S	**Sg**	**22 25 46.6**	**-0.9**
BO02				IAML		22 25 48.7	
	comp=Z,783nm,0.8s						
BO02	**Sierra Bellavi**	**3.53**	**163**	*e*P	**Pn**	**22 24 48.9**	**+0.7**
BO02				*e*S	**Sg**	**22 25 46.6**	**-0.9**
BO02				IAML		22 25 48.7	
	comp=Z,783nm,0.8s						
GO05	**Huala**	**3.58**	**178**	Pn	**Pn**	**22 24 48.2**	**-0.7**
GO03	**Copiap**	**4.13**	**23**	Pn	**Pn**	**22 24 56.3**	**-0.2**
GO03	**Copiap**	**4.13**	**23**	*e*P	**Pn**	**22 24 57.9**	**+1.4**
GO03				*e*S	**Sn**	**22 25 43.1**	**-1.3**
GO03	**Copiap**	**4.13**	**23**	*e*P	**Pn**	**22 24 57.9**	**+1.4**
GO03				*e*S	**Sn**	**22 25 43.1**	**-1.3**
RFA	**San Rafael**	**4.51**	**139**	*e*P	**Pn**	**22 25 03.5**	**+1.9**
RFA				*e*S	**Sb**	**22 26 06.6**	**-0.2**
RFA				*e*S	Sg	22 26 08.6	-10
RFA				IAML		22 26 16.3	
	comp=Z,298nm,2.2s						
RFA	**San Rafael**	**4.51**	**139**	*e*P	**Pn**	**22 25 03.5**	**+1.9**
RFA				*e*S	**Sb**	**22 26 06.6**	**-0.2**
RFA				*e*S	Sg	22 26 08.6	-10
RFA				IAML		22 26 16.3	
	comp=Z,298nm,2.2s						
ACHE	**Chepes**	**4.63**	**88**	*e*P	**Pn**	**22 25 07.0**	**+3.6**
ACHE				*e*S	**Sb**	**22 26 06.4**	**-4.2**
ACHE	**Chepes**	**4.63**	**88**	*e*P	**Pn**	**22 25 07.0**	**+3.6**
ACHE				*e*S	**Sb**	**22 26 06.4**	**-4.2**
ACLC	**CERRO LA CRUZ**	**4.84**	**67**	*e*P	**Pn**	**22 25 08.6**	**+2.3**
ACLC				*e*S	**Sn**	**22 26 04.1**	**+2.0**
ACLC	**CERRO LA CRUZ**	**4.84**	**67**	*e*P	**Pn**	**22 25 08.6**	**+2.3**
ACLC				*e*S	**Sn**	**22 26 04.1**	**+2.0**
AC02	**Maricunga**	**5.24**	**30**	Pn	**Pn**	**22 25 12.5**	**+0.4**
AC02	**Maricunga**	**5.24**	**30**	*e*P	Pn	22 25 03.1	-9.0
AC02				*e*S	**Sn**	**22 26 15.1**	**+2.7**
AC02				IAML		22 26 41.5	
	comp=Z,621nm,1.1s						
AC02	**Maricunga**	**5.24**	**30**	*e*P	Pn	22 25 03.1	-9.0
AC02				*e*S	**Sn**	**22 26 15.1**	**+2.7**
AC02				IAML		22 26 41.5	
	comp=Z,621nm,1.1s						
H03N1	**Juan Fernandez**	**6.13**	**249**	T	T	22 32 09.9	
	baz=78,slow=72						
H03N3	**Juan Fernandez**	**6.14**	**249**	T	T	22 32 02.5	
	baz=78,slow=72						
H03N2	**Juan Fernandez**	**6.14**	**249**	T	T	22 32 06.0	
	baz=78,slow=72						
PB14	**IPOC Station P**	**6.93**	**13**	Pn	**Pn**	**22 25 32.4**	**-2.7**
LC01	**Cunco**	**7.46**	**179**	Pn	**Pn**	**22 25 41.4**	**-0.7**
LC01	**Cunco**	**7.46**	**179**	*e*P	**Pn**	**22 25 43.0**	**+0.9**
LC01	**Cunco**	**7.46**	**179**	*e*P	**Pn**	**22 25 43.0**	**+0.9**
AHML	**Horco Molle**	**7.48**	**54**	*e*P	**Pn**	**22 25 39.6**	**-2.9**
AHML				*e*P	Pb	22 25 43.1	-20
AHML				*e*P		22 25 44.7	
AHML				*e*P		22 25 45.5	
AHML				*e*S	**Sn**	**22 27 09.1**	**+2.1**
AHML				*e*S	Sb	22 27 11.1	-21
AHML				IAML		22 27 42.4	
	comp=Z,129nm,0.8s						
AHML	**Horco Molle**	**7.48**	**54**	*e*P	**Pn**	**22 25 39.6**	**-2.9**
AHML				*e*P	Pb	22 25 43.1	-20
AHML				*e*P		22 25 44.7	
AHML				*e*P		22 25 45.5	
AHML				*e*S	**Sn**	**22 27 09.1**	**+2.1**
AHML				*e*S	Sb	22 27 11.1	-21
AHML				IAML		22 27 42.4	
	comp=Z,129nm,0.8s						
FSA	**Cafayete**	**7.52**	**47**	*e*P	Pn	22 25 26.9	-16
FSA				*e*S	**Sn**	**22 27 13.1**	**+5.1**
FSA	**Cafayete**	**7.52**	**47**	*e*P	Pn	22 25 26.9	-16
FSA				*e*S	**Sn**	**22 27 13.1**	**+5.1**
LVC	**Limon Verde**	**9.21**	**19**	Pn	**Pn**	**22 26 05.8**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=225,slow=11,SNR=1.5						
LVC				LR	LR	22 29 35.4	
	comp=Z,306nm,19.1s,baz=216,slow=38						
LVC	**Limon Verde**	**9.21**	**19**	*e*P	Pn	22 26 22.0	+15
LVC	**Limon Verde**	**9.21**	**19**	Pn	**Pn**	**22 26 06.3**	**-0.2**
PLCA	**Paso Flores**	**9.37**	**173**	Pn	**Pn**	**22 26 08.9**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=346,slow=13,SNR=4.7						
PLCA				LR	LR	22 30 16.1	
	comp=Z,272nm,19.4s,baz=348,slow=41						
PLCA	**Paso Flores**	**9.37**	**173**	Pn	**Pn**	**22 26 08.4**	**0.0**

PLCA	Paso Flores	9.37	173	eP	Pn	22 26 09.0	+0.5
PLCA	Paso Flores	9.37	173	eP	Pn	22 26 09.0	+0.5
ITQB	Itaqui	13.43	87	eP	P	22 27 09.1	-4.1
ITQB	Itaqui	13.43	87		Pn	22 27 03.1	-0.7
CPUP	Villa Florida	13.87	72	Pn	Pn	22 27 08.2	-1.7
	comp=Z,0.3nm,0.3s,baz=251,slow=10,SNR=5.4						
CPUP				Sn	Sn	22 29 42.0	-1.5
	comp=Z,0.3nm,0.3s,baz=128,slow=19,SNR=1.7						
CPUP				LR	LR	22 32 51.9	
	comp=Z,228nm,21.6s,baz=244,slow=40						
CPUP	Villa Florida	13.87	72	eP	P	22 27 21.2	+3.1
CPUP	Villa Florida	13.87	72		Pn	22 27 08.6	-1.3
LPAZ	La Paz	15.48	14	Pn	Pn	22 27 33.4	+1.1
	comp=Z,0.2nm,0.3s,baz=190,slow=12,SNR=9.4						
LPAZ	La Paz	15.48	14	eP	P	22 27 41.8	+5.0
LPAZ	La Paz	15.48	14	Pn	Pn	22 27 31.6	-0.7
PLTB	Pedras Altas	15.74	96	eP	Pn	22 27 32.1	-3.0
PLTB	Pedras Altas	15.74	96	Pn	Pn	22 27 35.1	+0.1
CPSB	Cacapava Do Su	16.02	91	eP	Pn	22 27 37.3	-1.4
AQDB	Aquidauana	18.29	57	eP	P	22 28 14.7	+7.6
SIV	San Ignacio	18.34	36	P	Pn	22 28 07.3	-0.5
	comp=Z,0.3nm,0.3s,baz=208,slow=11,SNR=20						
PTGB	Pitanga	18.86	74	eP	Pn	22 28 16.7	+2.6
PTLB	Pontes e Lacer	19.81	40	P	P	22 28 22.3	-1.5
VILB	Vilhena	21.38	33	P	P	22 28 39.7	-1.2
VILB				IAmb	IAmb	22 28 43.5	
	comp=Z,13nm,0.7s						
SALV	Santo Antonio	21.49	48	eP	P	22 28 44.9	+2.9
ETMB	Extrema	22.17	15	eP	P	22 28 50.7	+1.3
ETMB	Extrema	22.17	15	P	P	22 28 48.2	-1.1
ETMB				IAmb	IAmb	22 28 53.4	
	comp=Z,17nm,0.9s						
EFI	East Falkland	22.71	157	P	P	22 28 54.7	-0.1
EFI				IAmb	IAmb	22 29 11.9	
	comp=Z,44nm,1.2s						
CZSB	Cruzeiro do Su	23.58	358	eP	P	22 28 57.1	-6.8
SAML	Samuel	23.84	22	eP	P	22 29 06.8	+0.4
SAML	Samuel	23.84	22	P	P	22 29 05.8	-0.6
ARAG	Araguaiana, MT	24.21	54	eP	P	22 29 09.7	-0.2
CLDB	Colider	25.40	40	eP	P	22 29 21.0	+0.3
BDFB	Brasilia	26.98	60	P	P	22 29 33.9	-1.4
	comp=Z,6.6nm,0.9s,baz=232,slow=9.1,SNR=6.9						
BDFB				LR	LR	22 41 30.7	
	comp=Z,288nm,19.5s,baz=301,slow=40						
BDFB	Brasilia	26.98	60	P	P	22 29 33.8	-1.4
BDFB				IAmb	IAmb	22 29 34.7	
	comp=Z,9.5nm,1.1s						
TBTG	Tabatinga, AM	27.17	5	P	P	22 29 37.0	+0.3
MACA	Manacapuru-AM	30.09	23	eP	P	22 30 01.8	-0.9
NAN01	Guarapari, ES	31.90	72	eP	P	22 30 13.6	-5.1
SMTB	Santa Maria do	31.97	51	eP	P	22 30 18.8	-0.6
PTGA	Pitinga	32.60	23	P	P	22 30 24.0	-0.9
PTGA				IAmb	IAmb	22 30 25.6	
	comp=Z,5.3nm,0.9s						
PRPB	Parauapebas	32.63	44	eP	P	22 30 24.6	-0.6
NBIT	Itapeh - BA	34.02	69	eP	P	22 30 33.8	-3.5
BOAV	Boa Vista	35.38	20	eP	P	22 30 47.9	-1.0
BOAV	Boa Vista	35.38	20	P	P	22 30 48.7	-0.2
NBPN	Ponto Novo - B	35.88	62	eP	P	22 30 49.3	-4.1
MCPB	Macapa, AP	36.24	35	eP	P	22 30 55.4	-1.0
ZARC	Zaragoza, Cauc	38.78	356	P	P	22 31 17.7	-0.2
ZARC				IAmb	IAmb	22 31 20.9	
	comp=Z,5.6nm,0.7s						
NBMA	Muriti-CE	39.22	59	eP	P	22 31 19.0	-2.6
NBPS	Pedro II - PI	39.37	53	eP	P	22 31 21.4	-1.6
BAUV	El Baul	40.32	6	P	P	22 31 30.8	+0.1
BAUV				IAmb	IAmb	22 31 32.5	
	comp=Z,33nm,1.3s						
VNA3	Neumayer Olymp	51.76	159	P	P	22 33 00.8	+0.5
VNA2	Neumayer--Watz	52.40	158	P	P	22 33 04.9	-0.1
QSPA	South Pole Qui	58.81	180	P	P	22 33 52.3	+1.0
QSPA				IAmb	IAmb	22 33 59.5	
	comp=Z,6.6nm,1.4s						
V55A	Taylorsville	67.47	352	P	P	22 34 49.9	+1.1
V55A				IAmb	IAmb	22 35 10.7	
	comp=Z,5.9nm,1.3s						
V53A	Saluda	67.50	351	P	P	22 34 49.7	+0.7
TKL	Tuckaleechee C	67.62	350	P	P	22 34 50.0	+0.2
V52A	Sevierville	67.78	350	P	P	22 34 50.8	+0.1
V52A				IAmb	IAmb	22 35 06.2	
	comp=Z,7.0nm,1.2s						
WVT	Waverly	68.80	346	P	P	22 34 58.0	+0.8
WVT				IAmb	IAmb	22 34 58.8	
	comp=Z,6.8nm,0.9s						
P48A	Milroy	71.61	349	P	P	22 35 14.2	0.0
P48A				IAmb	IAmb	22 35 22.2	
	comp=Z,12nm,1.2s						
LIC	Lamto	74.00	72	ePKP2	P	22 35 27.9	-1.2
	comp=Z,42nm,1.2s						
TIC	Toumodi	74.24	72	ePKP2	P	22 35 29.0	-1.6
KIC	Kosan Boka	74.31	72	ePKP2	P	22 35 29.1	-1.8
	comp=Z,18nm,0.9s						
DBIC	Dimbokro	74.39	72	P	P	22 35 30.9	-0.5
	comp=Z,6.0nm,0.8s,baz=233,slow=5.7,SNR=9.0						
DBIC	Dimbokro	74.39	72	P	P	22 35 31.2	-0.2
DBIC				IAmb	IAmb	22 35 32.1	
	comp=Z,12nm,1.1s						
MAW	Mawson	75.66	164	P	P	22 35 38.2	+0.4
	comp=Z,3.2nm,1.0s,baz=250,slow=7.3,SNR=4.6						
MAW	Mawson	75.66	164	P	P	22 35 38.2	+0.4
SUR	Sutherland	76.11	119	P	P	22 35 41.4	+0.1
E62A	Clayton Lake	77.71	2	P	P	22 35 50.2	+0.7
KOWA	Kowa	79.60	66	P	P	22 36 00.7	0.0
KOWA				IAmb	IAmb	22 36 01.2	
	comp=Z,5.4nm,0.8s						
BOSA	Boshof	81.30	118	P	P	22 36 10.2	+0.3
	comp=Z,3.4nm,1.0s,baz=250,slow=7.0,SNR=3.7						
BOSA	Boshof	81.30	118	P	P	22 36 10.1	+0.2
NVAR	Mina Array Bea	81.76	325	P	P	22 36 14.4	+2.4
	comp=Z,0.7nm,0.8s,baz=147,slow=4.9,SNR=5.4						
TORD	Torodi Ar. Bea	83.36	70	P	P	22 36 20.4	-0.3
	comp=Z,7.9nm,0.8s,baz=263,slow=4.7,SNR=46						
TORD	Torodi Ar. Bea	83.36	70	P	P	22 36 20.3	-0.3
H11S2	WAKE ISLAND Hy	125.74	271	T	T	01 01 45.4	
	baz=112,slow=74						
H11S1	WAKE ISLAND Hy	125.75	271	T	T	01 01 47.7	
	baz=112,slow=74						
H11S3	WAKE ISLAND Hy	125.76	271	T	T	01 01 44.1	
	baz=112,slow=74						
H11N3	WAKE ISLAND Hy	126.09	272	T	T	01 02 08.7	
	baz=116,slow=75						
H11N1	WAKE ISLAND Hy	126.11	272	T	T	01 02 10.5	
	baz=116,slow=75						
H11N2	WAKE ISLAND Hy	126.11	272	T	T	01 02 09.7	
	baz=116,slow=75						
ABKAR	Akbulak array	140.07	49	PKPdf	PKPdf	22 43 22.2	+1.0
BRVK	Borovoye	145.30	40	PKPbc	PKPdf	22 43 30.9	+0.5
YAK	Yakutsk	146.29	342	PKPbc	PKPbc	22 43 33.6	+0.6
CHGR	Chuyangaron	147.62	66	PKPbc	PKPbc	22 43 37.3	-0.3
KKAR	Karatay Array	148.26	58	PKPbc	PKPbc	22 43 39.1	-0.1
KKAR	Karatay Array	148.26	58	PKPbc	PKPbc	22 43 39.2	+0.1
GAR	Garm	148.52	66	PKPbc	PKPbc	22 43 40.8	+0.8
BTK	Batken	148.85	64	PKPbc	PKPbc	22 43 40.9	0.0
HYB	Hyderabad	149.95	111	i PKP	PKPdf	22 43 21.0	-18
NIL	Nilore	150.76	76	PKPbc	PKPbc	22 43 45.8	+0.2
KURK	Kurchatov	150.97	40	PKPbc	PKPbc	22 43 46.1	+0.6
AAK	Ala-Archa	151.23	58	PKPbc	PKiKP	22 43 47.6	+0.5
ZAA0	Zalesovo Array	152.03	30	PKPbc	PKiKP	22 43 48.6	+0.4
ZALV	Zalesovo Beam	152.03	30	PKP	PKPdf	22 43 41.7	+0.5
	comp=Z,0.4nm,0.4s,baz=310,slow=1.2,SNR=4.0						
ZALV				PKPbc	PKiKP	22 43 48.5	+0.3
	comp=Z,19nm,0.8s,baz=296,slow=3.3,SNR=49						
MAKZ	Makanchi	154.82	45	PKPbc	PKPbc	22 43 54.3	+0.1
MK31	Makanchi Array	155.02	45	PKPbc	PKPdf	22 43 54.8	+8.9
MKAR	Makanchi Array	155.02	45	PKP	PKPdf	22 43 46.4	+0.6
	comp=Z,1.0nm,1.1s,baz=18,slow=1.9,SNR=3.1						
MKAR				PKPbc	sPKPdf	22 43 54.1	+1.6
	comp=Z,1.6nm,0.8s,baz=325,slow=1.9,SNR=8.1						
MKAR	Makanchi Array	155.02	45		PKPdf	22 43 46.5	+0.7
MKAR				PKPbc	sPKPdf	22 43 54.8	+2.3

*TEH **07** 22:24:13.2, 30°.21N×51°.33E, h8^{km}, ML3.5*
*DSN **07** 22:24:13.4±1.8, 29°.86N×51°.26E, h10^{km}, ML3.5/5, Error ellipse: s-maj=28.0km s-min=14.8km az=53.0*
*THR **07** 22:24:14.6±0.3, 30°.25N×51°.36E, h16^{km}±9^{km}, ML3.6*
*KISR **07** 22:24:14.8±0.8, 30°.04N×51°.29E, h23^{km}±384^{km}, ML3.9*
*OMAN **07** 22:24:18.4±0.5, 29°.87N×51°.66E, h5^{km}±31^{km}, Error ellipse: s-maj=64.2km s-min=5.2km az=340.0*
ISC 07 22:24:14.1±0.8**, 30°.17N**±0°.04×**51°.40E**±0°.04**, h15^{km}, n68,** σ**1^{s}68**/80**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAZ1	Kazerun	0.58	159	ePg	Pg	22 24 25.0	-0.5
KAZ1				e		22 24 39.4	
	comp=Z,85μm,0.2s						
KLNJ	Kolanjah	0.85	11	ePg	Pb	22 24 29.4	-1.4
KLNJ				eSg	Sb	22 24 42.2	0.0
KLNJ				e		22 24 43.6	
	comp=Z,31μm,0.3s						
ABEH	Behbahan	1.08	294	ePg	Pb	22 24 32.8	-1.7
SHI	Shiraz	1.10	118	ePg	Pb	22 24 35.3	+0.4
SHI				e		22 24 57.5	
	comp=Z,16μm,0.4s						
AHBU	AHRAM	1.30	184	ePg	Pg	22 24 40.1	+0.9
IBRJ	Brojen	1.74	356	ePn	Pn	22 24 45.1	+1.1
SHK1	Shahrekord	2.20	349	ePn	Pn	22 24 51.0	+0.7
SHK1				e		22 25 32.8	
	comp=Z,1μm,0.6s						
QIR1	Qir	2.21	139	ePn	Pn	22 24 52.2	+1.9
QIR1				e		22 25 42.8	
	comp=Z,5μm,0.5s						
AMIS	Naft Sefid	2.35	310	ePn	Pn	22 24 52.4	+0.2
AMIS				e		22 25 48.7	
	comp=Z,5μm,0.6s						
JHRM	Jahrom	2.52	131	ePn	Pn	22 24 57.2	+2.6
IPIR	Pirpir	2.54	350	ePn	Pn	22 24 56.9	+1.8
IPIR				e		22 25 37.1	
	comp=Z,989nm,0.4s						
ISAD	Sadrabad	2.62	48	ePn	Pn	22 24 59.3	+3.2
ISAD				e		22 25 04.8	
	comp=Z,1μm,0.3s						
NASN	Na'in	2.88	24	ePn	Pn	22 25 01.4	+1.6
NASN	Na'in	2.88	24	ePn	Pn	22 25 01.4	+1.6
IMEH	Mehriz	3.02	65	ePn	Pn	22 25 04.9	+3.3
UMR	Umm Al-Rimmam	3.26	260	eP	Pn	22 25 05.9	+1.3
QRN	Al-Qurain	3.35	246	eP	Pn	22 25 07.3	+1.4
QRN				eS	Sn	22 25 45.7	+0.2
QRN				IAML		22 25 54.1	
	comp=Z,256nm,0.2s						
KBD	Kabd	3.38	254	eP	Pn	22 25 07.8	+1.5
KBD				eS	Sn	22 25 47.6	+1.6
KBD				IAML		22 25 51.4	
	comp=Z,440nm,0.4s						
YZKH	Yazd	3.52	50	ePn	Pn	22 25 10.5	+2.2
YZKH	Yazd	3.52	50	ePn	Pn	22 25 10.5	+2.2
MIB	Mutribah	3.54	265	eP	Pn	22 25 10.0	+1.4
QAMS	Qamsar	3.56	360	ePn	Pn	22 25 10.4	+1.4
RDF	Al-Radifah	3.58	251	eP	Pn	22 25 10.7	+1.6
RDF				eS	Sn	22 25 52.4	+1.4
RDF				IAML		22 25 55.3	
	comp=Z,202nm,0.3s						
ANAR	Anarak	3.61	33	ePn	Pn	22 25 11.3	+1.8
LAR1	LAR	3.61	133	ePn	Pn	22 25 10.4	+0.9
KHMZ	Khomeyn	3.76	341	ePn	Pn	22 25 13.1	+1.3
KHMZ	Khomeyn	3.76	341	ePn	Pn	22 25 13.1	+1.3
KRSH	Karshahi	3.84	9	ePn	Pn	22 25 14.5	+1.7
ISFB	Sefidab	4.23	9	ePn	Pn	22 25 20.1	+2.0
GHVR	GHOM	4.30	359	ePn	Pn	22 25 20.2	+1.3
GHVR	GHOM	4.30	359	ePn	Pn	22 25 20.3	+1.3
SHMA	Al-Shehemyia	4.31	185	P	Pn	22 25 21.0	+1.9
SHMA				S	Sn	22 26 10.3	+1.1
KHGB	Koh Gabri	4.40	86	ePn	Pn	22 25 23.0	+2.5
IKFM	Kafar-mosalman	4.51	319	ePn	Pn	22 25 22.3	+0.5
IDOB	Doab	4.53	324	ePn	Pn	22 25 21.9	-0.4
KRBR	Kerman	4.65	91	ePn	Pn	22 25 27.1	+3.1
KRBR	Kerman	4.65	91	ePn	Pn	22 25 27.2	+3.1
IQOM	Qom	4.67	357	ePn	Pn	22 25 25.0	+0.7
HSAM	Samen	4.68	330	ePn	Pn	22 25 25.6	+1.2
IVRN	Varamin	4.82	3	ePn	Pn	22 25 27.3	+1.1
GENO	Geno	5.01	122	ePn	Pn	22 25 30.6	+1.6
HAGD	Aghdareh	5.02	338	ePn	Pn	22 25 30.4	+1.4
IBZA	Bozab	5.23	326	ePn	Pn	22 25 32.5	+0.5
TRNA	Turayna	5.42	182	P	Pn	22 25 36.4	+2.1
TRNA				S	Sn	22 26 37.4	+1.0
IALM	Almabolaq	5.42	331	ePn	Pn	22 25 35.2	+0.7
IFIR	Firoozkooh	5.57	11	ePn	Pn	22 25 39.0	+2.3
QABG	Abgarm-Qazvin	5.73	345	ePn	Pn	22 25 39.4	+0.6
IGHG	Ghaleghazi	5.83	317	ePn	Pn	22 25 41.5	+1.3
ISHM	Shahmirzad	5.84	15	ePn	Pn	22 25 41.0	+0.6
SNGE	Sanandaj	5.98	326	ePn	Pn	22 25 41.4	-0.9
SNGE				IAML		22 26 53.3	
	comp=N,9.5nm,0.7s						
SNGE	Sanandaj	5.98	326	ePn	Pn	22 25 41.4	-0.9
ILIN	Lien	6.04	323	ePn	Pn	22 25 42.4	-0.7
BANOM	Banah	6.05	133	P	Pn	22 25 42.4	-0.7
BANOM				S	Sn	22 26 50.9	-1.2
BANOM	Banah	6.05	133	P	Pn	22 25 43.2	+0.1
	SNR=15						
BANOM				S	Sn	22 26 50.6	-1.6
IDHR	Dehrash	6.19	318	ePn	Pn	22 25 45.9	+0.7
GHWR	Ruwais	6.32	168	P	Pn	22 25 47.4	+0.7
MSFE	Esma-Masafi	6.38	138	P	Pn	22 25 45.0	-2.6
NAZ	Nazwa, Dubai	6.40	143	P	Pn	22 25 46.6	-1.2
NAZ	Nazwa, Dubai	6.40	143	P	Pn	22 25 48.8	+1.0
NAZ				S	Sn	22 26 58.8	-1.8
MDH	Madha	6.51	137	P	Pn	22 25 49.3	0.0
ASUD	Al Ashush, Dub	6.53	147	P	Pn	22 25 51.4	+1.7
	SNR=6.5						
ASUD				S	Sn	22 27 03.8	-0.1
UOSS	Minazif	6.73	140	P	Pn	22 25 50.1	-2.2
UOSS	Minazif	6.73	140	P	Pn	22 25 53.1	+0.7
UOSS				S	Sn	22 27 05.5	-3.3
ASHO	Ashiyiah	6.85	142	P	Pn	22 25 49.8	-4.3
ASHO				S	Sn	22 27 10.2	-1.7
SHRO	Shahrood	6.97	32	ePn	Pn	22 25 58.1	+2.3
SHRO	Shahrood	6.97	32	ePn	Pn	22 25 58.1	+2.3
UMZA	Um Al Zommool	8.15	155	P	Pn	22 26 12.2	+0.3
UMZA				S	Sn	22 27 39.5	-4.3
WSAR	Wadi Sarin	9.45	135	P	Pn	22 26 29.1	-0.7
	SNR=6.6						

*TUL **07** 22:31:51.5±1.1, 36°.95N±0°.02×97°.83W±0°.02, h1^{km}±7^{km}, ML2.7, mb_Lg2.3/10(NEIC), Error ellipse: s-maj=2.8km s-min=2.2km az=59.0*
NEIC 07 22:31:51.7±0.7**, 36°.92N**±0°.02×**97°.82W**±0°.02**, h3**^{km}±7^{km}**, Error ellipse: s-maj=3.1km s-min=1.9km az=196.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.07	203	Pg	Pg	22 31 53.9	+0.7
KAN14	Manchester OK	0.12	288		Pg	22 31 54.1	+0.1
KAN14				Sg	Sg	22 31 55.6	0.0
KAN17	Caldwell West	0.13	21	Pg	Pg	22 31 54.2	-0.1
KAN17				Sg	Sg	22 31 56.0	-0.1
KAN05	Bluff City Nor	0.19	348		Pg	22 31 55.2	-0.3
KAN05				Sg	Sg	22 31 57.7	-0.3
KAN01	Argonia South	0.24	13		Pg	22 31 56.1	-0.2
KAN01				Sg	Sg	22 31 59.2	-0.3
KAN09	Caldwell North	0.27	37	Pg	Pg	22 31 56.9	-0.1
KAN09				Sg	Sg	22 32 00.5	0.0
KAN10	Anthony SW Sta	0.30	313	Pg	Pg	22 31 57.3	-0.2
KAN10				Sg	Sg	22 32 01.2	-0.1
KAN06	Argonia West S	0.33	355		Pg	22 31 57.8	-0.3
KAN08	Anthony NE Sta	0.33	339		Pg	22 31 57.9	-0.2
OK032	Salt Plains WL	0.33	250		Pg	22 31 58.4	+0.3
KAN16	Harper SW Stat	0.36	328	Pg	Pg	22 31 58.5	-0.3
KS20	Mayfield South	0.38	35		Pg	22 31 58.8	-0.2
CROK	Carrier	0.43	197	Pg	Pg	22 32 00.7	+0.6
BLOK	Blackwell	0.51	108	Pg	Pg	22 32 01.9	+0.3
T35A	Sooner Cattle	1.05	90		Pg	22 32 11.5	-0.4
T35A				Sg	Sg	22 32 25.7	+0.2
U32A	Winter Ranch,	1.09	241	Pg	Pg	22 32 12.3	-0.3
OK029	Liberty Lake	1.16	165		Pg	22 32 13.9	-0.1
QUOK	Quay	1.17	129		Pg	22 32 13.9	-0.2
OK031	S. Brethren Rd	1.25	140		Pg	22 32 15.5	-0.2
BCOK	Bluff Creek, N	1.27	172		Pg	22 32 15.9	-0.2
OK030	Cody Creek RV	1.30	139		Pg	22 32 16.3	-0.3
OK025	Westminster Rd	1.39	163		Pn	22 32 18.0	-0.1
OKCFA	Oklahoma City	1.53	169		Pn	22 32 20.2	+0.2
OKCSW	OKLAHOMA CITY	1.54	168		Pn	22 32 20.3	+0.1
R32A	Long Quarter,	1.66	335		Pn	22 32 21.5	-0.3
FNO	Franklin	1.69	168		Pn	22 32 22.6	+0.3
TUL1	Leonard	1.92	121	Pn	Pn	22 32 25.6	+0.2
TUL1				IAmb_Lg		22 32 55.4	
	comp=Z,18nm,0.8s						
WMOK	Wichita Mounta	2.31	200		Pn	22 32 31.3	+0.5
WMOK				IAmb_Lg		22 33 03.8	
	comp=Z,8.0nm,0.8s						
KSU1	Kansas State U	2.38	23		Pn	22 32 31.4	-0.3
KSU1				IAmb_Lg		22 33 07.1	
	comp=Z,26nm,0.9s						
CBKS	Cedar Bluff	2.42	322	Pn	Pn	22 32 32.5	+0.2
CBKS				IAmb_Lg		22 33 05.8	
	comp=Z,6.5nm,0.9s						
U38A	Gravette	2.81	99	IAmb_Lg		22 33 27.7	
	comp=Z,6.4nm,0.8s						
X37A	Clayton	3.06	139		Pn	22 32 41.4	+0.3
HHAR	Hobbs	3.19	100	Pn	Pn	22 32 43.4	+0.5
S39A	Bolivar	3.67	77	Pn	Pn	22 32 50.1	+0.7
W39A	Magazine	3.70	117	Pn	Pn	22 32 51.5	+1.7
AMTX	Amarillo	3.73	238	IAmb_Lg		22 33 59.9	
	comp=Z,9.3nm,0.8s						
U40A	Yellville	4.04	97	Pn	Pn	22 32 54.4	0.0
MIAR	Mount Ida	4.19	123	Pn	Pn	22 32 58.6	+2.1
P38A	Dawn	4.32	50	Pn	Pn	22 32 59.0	+0.6
R40A	Maddies Statio	4.62	71	Pn	Pn	22 33 02.5	0.0
X40A	Basin Creek Fa	4.73	119	Pn	Pn	22 33 05.2	+1.2

JMA 07 22:32:52.3, 36°.01N×137°.34E, h6^{km}, M3.2, 3C-1D
Broadband fault plane solution: P waves. NP1: ϕ_s349.00000°, δ87.00000°, λ-1.00000°. **NP2:** ϕ_s79.00000°, δ89.00000°, λ-177.00000°. **Principal axes:** T Plg1.0000°, Azm214.0000°; N Plg87.0000°, Azm106.0000°; P Plg3.0000°, Azm304.0000°; **Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JGN	Niukaw	0.21	355	⇑P	Pg	22 32 56.8	+0.2
JGN				S	Sg	22 33 00.0	+0.6
JTT	Ttatey	0.59	359	⇑P	Pg	22 33 04.1	+0.3
JTT				S	Sg	22 33 12.4	+0.9
JYTA	Yamagatataniai	0.64	230	⇑P	Pg	22 33 04.5	-0.2
JKG	Kaga	0.86	288	⇓P	Pg	22 33 09.0	+0.2
MAT	Matsushiro	0.88	53	P	Pg	22 33 09.3	+0.1
MAT				S	Sg	22 33 21.1	+0.5

*FUNV **07** 22:32:59.9, 8°.51N×71°.43W, h8^{km}, MW3.9*
ISC 07 22:32:58.6±1.3**, 8°.56N**±0°.04×**71°.40W**±0°.02**, h6**^{km}±11^{km}**, n23,** σ**0^{s}95**/39**, 1D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.61	117	eP	Pg	22 33 10.1	-0.3
SOCV				eS	Sg	22 33 18.4	+0.2
SOCV	Socops	0.61	117	⇓iP	Pg	22 33 10.4	+0.1
SOCV				eS	Sg	22 33 18.9	+0.7
SDV	Santo Domingo	0.83	67	eP	Pb	22 33 15.8	+0.2
SDV				eS	Sb	22 33 26.7	-0.4
SDV				i		22 33 30.4	
	comp=Z,374nm,0.3s						
CAPV	Capacho	1.14	233	eP	Pg	22 33 19.5	-1.0
CAPV				eS	Sg	22 33 34.4	-0.9
PAMC	Pamplona, Colo	1.77	227	eP	Pb	22 33 31.1	-0.7
PAMC				eS	Sg	22 33 55.8	+0.2
PAMC				i		22 33 58.3	
	comp=Z,355nm,0.3s						
MCQV	Machiques	1.85	323	eP	Pn	22 33 32.0	+0.9
MCQV				eS	Sn	22 33 54.9	+0.1
OCAC	Ocana	1.92	261	eP	Pn	22 33 33.1	+1.0
OCAC				eS	Sb	22 33 58.8	+0.2
OCAC				i		22 34 00.5	
	comp=Z,1μm,0.3s						
TAMC	Tame, Arauca	2.15	190	eP	Pn	22 33 36.4	+1.3
TAMC				eS	Sb	22 34 04.7	-0.2
TAMC				i		22 34 10.9	
	comp=Z,286nm,0.6s						
ELOV	Elorza	2.45	129	eP	Pn	22 33 40.8	+1.6
ELOV				eS	Sb	22 34 13.7	0.0
ELOV	Elorza	2.45	129	eP	Pn	22 33 39.8	+0.5
ELOV				eS	Sn	22 34 08.2	-1.4
DABV	Dabajuro	2.46	18	eP	Pn	22 33 41.0	+1.5
DABV				eS	Sn	22 34 10.1	+0.1
SIQV	Siquisique	2.60	37	eP	Pn	22 33 41.6	+0.2
SIQV				eS	Sn	22 34 12.9	-0.5
BARC	Barichara	2.63	222	eP	Pn	22 33 43.8	+1.8
SMLC	San Martn de	2.65	275	eP	Pn	22 33 42.4	+0.4
BRRC	Barranca, Sant	2.71	238	eP	Pn	22 33 44.1	+1.3
RUSC	La Rusia	3.13	212	eP	Pn	22 33 50.1	+1.0
MAPV	Macapo	3.17	66	eP	Pn	22 33 49.9	+0.7
MAPV				eS	Sn	22 34 26.1	-1.3
URIC	Uribia, Colomb	3.17	350	eP	Pn	22 33 49.3	+0.1
BAUV	El Baul	3.34	83	eP	Pn	22 33 52.5	+1.0
BAUV				eS	Sn	22 34 30.8	-0.8
ZARC	Zaragoza, Cauc	3.58	253	eP	Pn	22 33 55.4	+0.6
ZARC				eS	Sb	22 34 47.2	+0.9
BENV	Beln	4.00	69	eP	Pn	22 34 01.6	+0.9
BENV				eS	Sn	22 34 46.5	-1.6
UREC	San Jos de Ur	4.17	259	eP	Pn	22 34 04.5	+1.6
VILC	Villavicencio,	4.97	207	eP	Pn	22 34 14.9	+0.8

*IDC **07** 22:36:02.6±1.4, 37°.35N×15°.93E, h0^{km}, mb3.6/5, mb1 3.8/9, mb1mx3.5/49, mbtmp3.8/9, ML3.9/4, MS3.2/2, Ms1 3.2/2, ms1mx2.4/46, Error ellipse: s-maj=30.8km s-min=11.6km az=177.0*
*ROM **07** 22:36:04.5±0.1, 37°.255N±0°.006×15°.884E±0°.009, h23^{km}, ML3.5/73, Error ellipse: s-maj=0.8km s-min=0.5km az=297.0*
*NEIC **07** 22:36:04.4±1.6, 37°.27N±0°.05×15°.91E±0°.04, h18^{km}±6^{km}, Error ellipse: s-maj=7.8km s-min=4.2km az=163.0*
*PDG **07** 22:36:08.7±0.1, 37°.77N×16°.42E, h10^{km}±1^{km}, ML3.9/11, Error ellipse: s-maj=1.3km s-min=1.0km az=90.0*
ISC 07 22:36:02.9±1.2**, 37°.32N**±0°.03×**16°.01E**±0°.03**, h10**^{km}±8^{km}**, n207,** σ**2^{s}09**/244**, mb3.9**/10**, 18C-23D, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGST	Augusta-Monte	0.63	265	⇑P	Pg	22 36 15.5	+0.4
AGST				S	Sg	22 36 22.4	-1.0
AGST				AML	AML		
	comp=E,20200μm,0.3s						
AGST				AML	AML		
	comp=N,18100μm,1.2s						
MPAZ	Palizzi	0.64	360	⇑P	Pn	22 36 18.8	+0.7
MPAZ				S	Sn	22 36 28.8	+0.5
MPAZ				AML	AML		
	comp=E,4625μm,1.0s						
MPAZ				AML	AML		
	comp=N,3600μm,0.7s						
HAGA	Augusta	0.69	268	⇓P	Pg	22 36 16.4	+0.2
HAGA				S	Sg	22 36 23.7	-1.4
HAGA				AML	AML		
	comp=N,8425μm,0.4s						
HAGA				AML	AML		
	comp=E,8070μm,0.1s						
SOI	Samo	0.75	3	⇑P	Pn	22 36 20.7	+1.0
SOI				S	Sn	22 36 31.8	+0.6
SOI				AML	AML		
	comp=E,2305μm,0.4s						
SOI				AML	AML		
	comp=E,2310μm,0.4s						
SOI				AML	AML		
	comp=N,2310μm,0.3s						
SSY	Sortino	0.77	258	⇑P	Pg	22 36 17.5	-0.3
SSY				S	Sg	22 36 25.8	-2.0
SSY				AML	AML		
	comp=N,23250μm,0.6s						
SSY				AML	AML		
	comp=E,10495μm,0.2s						
HAVL	Avola	0.79	244	⇑P	Pg	22 36 18.0	-0.2
HAVL				S	Sg	22 36 27.0	-1.6
HAVL				AML	AML		
	comp=N,21700μm,0.2s						
HAVL				AML	AML		
	comp=E,16050μm,0.3s						
GMB	Gambarie	0.86	350	⇑P	Pn	22 36 21.9	+0.5
GMB				S	Sn	22 36 34.0	-0.1
GMB				AML	AML		
	comp=N,12450μm,0.4s						
GMB				AML	AML		
	comp=E,13900μm,0.2s						
MEU	Monte Lauro	0.89	256	⇑P	Pg	22 36 20.4	+0.3
MEU				S	Sg	22 36 31.3	-0.4
MEU				AML	AML		
	comp=E,9060μm,0.2s						
MEU				AML	AML		
	comp=N,11700μm,0.3s						
AIO	Antillo	0.90	317	⇓P	Pg	22 36 21.3	+1.0
AIO				S	Sg	22 36 33.4	+1.4

AIO				AML	AML		
	comp=E,2445µm,1.4s						
AIO				AML	AML		
	comp=N,2240µm,1.6s						
ESLN	Serra La Nave	0.91	295	P	Pg	22 36 20.5	+0.1
ESLN				AML	AML		
	comp=N,2125µm,0.7s						
ESLN				AML	AML		
	comp=E,2960µm,0.3s						
HLNI	Lentini	0.91	272	⇓P	Pb	22 36 19.9	-1.0
HLNI				S	Sg	22 36 30.1	-2.2
HLNI				AML	AML		
	comp=N,16550µm,0.7s						
HLNI				AML	AML		
	comp=E,19700µm,1.1s						
MSCL	Scilla	0.93	349	P	Pn	22 36 22.9	+0.7
MSCL				S	Sn	22 36 36.1	+0.4
MSCL				AML	AML		
	comp=N,4950µm,0.5s						
MSCL				AML	AML		
	comp=E,5460µm,0.4s						
CEL	Celeste	0.94	354	P	Pn	22 36 23.1	+0.7
CEL				S	Sn	22 36 36.5	+0.5
CEL				AML	AML		
	comp=E,2075µm,0.5s						
CEL				AML	AML		
	comp=N,1580µm,0.6s						
CEL				AML	AML		
	comp=E,2080µm,0.5s						
CEL				AML	AML		
	comp=N,1965µm,0.6s						
CEL				AML	AML		
	comp=E,2490µm,0.5s						
CEL	Celeste	0.94	354		Pn	22 36 23.1	+0.7
CEL					Sn	22 36 36.9	+0.8
HPAC	Pachino	0.95	230	⇑P	Pb	22 36 21.3	-0.2
HPAC				S	Sb	22 36 32.9	-1.3
HPAC				AML	AML		
	comp=E,4115µm,0.4s						
HPAC				AML	AML		
	comp=N,3945µm,0.2s						
ESML	S. M. di Licod	0.95	289	⇓P	Pg	22 36 21.2	-0.1
MCSR	Castroreale	0.96	321	⇓P	Pg	22 36 22.4	+1.0
MCSR				S	Sb	22 36 35.9	+1.3
MCSR				AML	AML		
	comp=E,5260µm,0.3s						
MCSR				AML	AML		
	comp=N,4965µm,0.3s						
MPNC	Port Mandanici	0.98	328	⇓P	Pg	22 36 22.8	+1.0
MPNC				AML	AML		
	comp=N,5020µm,0.7s						
MPNC				AML	AML		
	comp=E,4485µm,0.3s						
EMSG	Monte Spagnolo	0.98	301	P	Pg	22 36 22.4	+0.6
EMSG				AML	AML		
	comp=E,4005µm,0.5s						
EMSG				AML	AML		
	comp=N,4845µm,0.3s						
NOV	Novara	0.99	316	⇓P	Pg	22 36 22.6	+0.6
NOV				AML	AML		
	comp=E,2950µm,0.5s						
NOV				AML	AML		
	comp=N,1955µm,0.5s						
MSRU	Castanea	1.02	337	⇓P	Pn	22 36 24.1	+0.7
MSRU				S	Sn	22 36 38.4	+0.5
MSRU				AML	AML		
	comp=E,4010µm,0.5s						
MSRU				AML	AML		
	comp=N,3780µm,0.3s						
HMDC	Modica	1.05	250	⇑P	Pn	22 36 21.8	-2.0
HMDC				S	Sb	22 36 33.5	-3.5
HMDC				AML	AML		
	comp=E,4505µm,1.2s						
HMDC				AML	AML		
	comp=N,6100µm,0.1s						
EPZF	Pizzo Felice	1.05	299	P	Pb	22 36 23.5	+0.2
EPZF				AML	AML		
	comp=E,4880µm,1.1s						
EPZF				AML	AML		
	comp=N,6250µm,0.4s						
EPZF				AML	AML		
	comp=E,4875µm,1.1s						
EPZF	Pizzo Felice	1.05	299		Pb	22 36 22.9	-0.4
ECNV	Catenanuova	1.07	285	⇓P	Pb	22 36 23.7	+0.1
ECNV				AML	AML		
	comp=N,4875µm,0.8s						
ECNV				AML	AML		
	comp=E,3810µm,0.3s						
ECNV	Catenanuova	1.07	285		Pb	22 36 23.7	+0.1
MILZ	Milazzo	1.14	327	P	Pb	22 36 25.1	+0.4
MILZ				S	Sn	22 36 40.9	+0.3
MILZ				AML	AML		
	comp=N,3175µm,1.5s						
MILZ				AML	AML		
	comp=E,6810µm,0.4s						
MUCR	Ucria	1.16	309	⇓P	Pb	22 36 25.1	0.0
MUCR				S	Sb	22 36 40.3	0.0
MUCR				AML	AML		
	comp=N,3905µm,0.3s						
MUCR				AML	AML		
	comp=E,3810µm,0.3s						
PLAC	Placanica	1.18	16	⇑P	Pn	22 36 27.5	+1.9
PLAC				S	Sn	22 36 43.5	+1.7
PLAC				AML	AML		
	comp=N,682µm,0.4s						
PLAC				AML	AML		
	comp=E,540µm,0.5s						
PLAC				AML	AML		
	comp=N,576µm,0.5s						
PLAC				AML	AML		
	comp=E,696µm,0.4s						
GALF	Gagliano Caste	1.22	289	⇓P	Pn	22 36 25.9	-0.2
GALF				AML	AML		
	comp=N,2500µm,0.8s						
GALF				AML	AML		
	comp=E,1245µm,0.8s						
GALF	Gagliano Caste	1.22	289		Pn	22 36 25.9	-0.2
CAGR	Agira	1.24	285	⇓P	Pn	22 36 26.6	+0.2
CAGR				AML	AML		
	comp=E,2890µm,0.4s						
CAGR				AML	AML		
	comp=N,3040µm,1.4s						
VAE	Valguarnera	1.28	278	Pg	Pn	22 36 27.7	+0.6
	comp=N,5.1nm,0.3s,baz=125,slow=9.3,SNR=39						
VAE				Lg	Lg	22 36 42.6	
	comp=N,52nm,0.3s,baz=12,slow=7.3,SNR=13						
JOPP	Joppolo	1.29	356	P	Pg	22 36 28.5	+0.8
JOPP				S	Sn	22 36 46.4	+1.9
JOPP				AML	AML		
	comp=N,1450µm,0.6s						
JOPP				AML	AML		
	comp=E,1240µm,0.3s						
RAFF	Raffo Rosso	1.32	266	P	Pn	22 36 26.7	-0.8
RAFF				S	Sn	22 36 42.6	-2.5
RAFF				AML	AML		
	comp=E,3455µm,1.0s						
RAFF				AML	AML		
	comp=N,4055µm,0.6s						
RAFF	Raffo Rosso	1.32	266		Pn	22 36 26.6	-0.8
RAFF					Sn	22 36 42.7	-2.5
MSFR	San Fratello	1.34	303	⇓P	Pn	22 36 28.1	+0.3
MSFR				AML	AML		
	comp=N,1000µm,0.4s						
MSFR				AML	AML		
	comp=E,737µm,0.4s						
MSFR	San Fratello	1.34	303		Pn	22 36 28.8	+1.0
VPL	Vulcano Piano	1.34	323	⇓P	Pn	22 36 28.3	+0.5
VPL				S	Sb	22 36 46.2	+0.8
VPL				AML	AML		
	comp=E,21950µm,0.5s						
VPL				AML	AML		
	comp=N,24600µm,0.7s						
LLI	Lipari	1.41	324	⇓P	Pn	22 36 29.6	+1.0
LLI				S	Sn	22 36 48.5	+1.2
LLI				AML	AML		
	comp=E,22150µm,1.1s						
LLI				AML	AML		
	comp=N,21900µm,0.6s						
GRI	Girifalco	1.54	12	P	Pg	22 36 32.2	-0.3
GRI				AML	AML		
	comp=E,608µm,1.0s						
GRI				AML	AML		
	comp=N,518µm,0.3s						
RESU	Resuttano	1.59	283	P	Pn	22 36 32.1	+0.8
RESU				AML	AML		
	comp=E,634µm,0.5s						
RESU				AML	AML		
	comp=N,848µm,1.6s						
PETRA	Petralia Sopra	1.59	289	⇓P	Pn	22 36 31.8	+0.3
PETRA				AML	AML		
	comp=E,662µm,0.4s						
PETRA				AML	AML		
	comp=N,808µm,0.7s						
IST3	Stromboli F	1.60	338	P	Pn	22 36 31.5	+0.1
IST3				AML	AML		
	comp=E,1990µm,0.5s						
IST3				AML	AML		
	comp=N,2275µm,1.3s						
IST3				AML	AML		
	comp=E,1995µm,0.5s						
ISTR	Stromboli Gino	1.60	336	P	Pn	22 36 31.6	+0.2
ISTR				AML	AML		
	comp=N,2090µm,0.3s						
ISTR				AML	AML		
	comp=E,2000µm,1.3s						
PLLN	Pollina	1.63	295	P	Pn	22 36 33.6	+1.8
CLTA	Licata	1.65	265	⇑P	Pn	22 36 32.1	+0.2
CLTA				AML	AML		
	comp=N,2325µm,0.9s						
CLTA				AML	AML		
	comp=E,1905µm,0.3s						
CSLB	Castelbuono	1.67	292	⇓P	Pn	22 36 32.6	+0.2
CSLB				AML	AML		
	comp=N,256µm,0.7s						
CSLB				AML	AML		
	comp=E,194µm,0.7s						
IFIL	Filicudi I Eol	1.69	318	⇓P	Pn	22 36 32.5	-0.1
IFIL				S	Sn	22 36 53.7	-0.6
IFIL				AML	AML		
	comp=E,8150µm,0.3s						
IFIL				AML	AML		
	comp=N,2430µm,0.4s						
GIB	Gibilmanna	1.71	294	⇓P	Pn	22 36 33.5	+0.5
GIB				AML	AML		
	comp=E,834µm,0.6s						
GIB				AML	AML		
	comp=N,773µm,0.5s						
IACL	Alicudi	1.79	313	P	Pn	22 36 33.4	-0.5
IACL				AML	AML		
	comp=E,947µm,0.6s						
IACL				AML	AML		
	comp=N,1186µm,0.8s						
SERS	Sersale	1.80	17	⇑P	Pg	22 36 36.2	-1.1
SERS				AML	AML		
	comp=N,168µm,1.1s						
SERS				AML	AML		
	comp=E,168µm,1.3s						
ALJA	Alia	1.85	284	P	Pn	22 36 35.8	+1.0
ALJA				AML	AML		
	comp=E,343µm,0.5s						
ALJA				AML	AML		
	comp=N,394µm,0.3s						
FAVR	Favara	1.87	269	P	Pn	22 36 35.9	+0.8
FAVR				AML	AML		
	comp=N,670µm,1.1s						
FAVR				AML	AML		
	comp=E,558µm,0.8s						
WDD	Wied Dalam	1.90	220	P	Pn	22 36 34.5	-0.9
WDD				AML	AML		
	comp=E,1136µm,1.0s						
WDD				AML	AML		
	comp=N,1058µm,0.5s						
WDD				AML	AML		
	comp=E,1310µm,1.0s						
WDD				AML	AML		
	comp=N,1070µm,0.3s						
MCT	Mte Cammarata	1.92	280	P	Pn	22 36 37.8	+1.9
CAR1	CAROLEI	1.94	5	P	Pb	22 36 37.2	-1.2
CAR1				AML	AML		
	comp=N,768µm,0.4s						
CAR1				AML	AML		
	comp=E,872µm,0.9s						
TIP	Timpagrande	1.95	17	P	Pb	22 36 38.0	-0.6
TIP				AML	AML		
	comp=N,147µm,0.6s						
TIP				AML	AML		
	comp=E,138µm,0.4s						
TIP	Timpagrande	1.95	17		Pb	22 36 38.2	-0.4
SPS2	Spezzano della	1.99	7	P	Pb	22 36 38.9	-0.4
SPS2				AML	AML		
	comp=E,162µm,0.2s						
SPS2				AML	AML		
	comp=N,228µm,0.3s						
SOLUN	Solunto	2.11	292	P	Pn	22 36 38.0	-0.4
SOLUN				AML	AML		
	comp=N,91µm,0.4s						
SOLUN				AML	AML		
	comp=E,115µm,1.6s						
CELI	Celico	2.12	10	P	Pb	22 36 41.0	-0.5
CELI				AML	AML		
	comp=N,400µm,0.8s						
CELI				AML	AML		
	comp=E,314µm,0.6s						
CET2	Cetraro	2.21	359	P	Pn	22 36 41.0	+1.2
CET2				AML	AML		
	comp=N,1206µm,0.5s						
CET2				AML	AML		
	comp=E,959µm,0.8s						
CORL	Corleone	2.23	286	⇓P	Pn	22 36 41.5	+1.5
CORL				AML	AML		
	comp=E,555µm,1.0s						
CORL				AML	AML		
	comp=N,600µm,0.4s						
CORL	Corleone	2.23	286		Pn	22 36 41.3	+1.3
CLTB	Caltabellotta	2.24	278	P	Pn	22 36 40.1	-0.2
CLTB				AML	AML		
	comp=E,701µm,0.4s						
CLTB				AML	AML		
	comp=N,1260µm,1.6s						
CLTB	Caltabellotta	2.24	278		Pn	22 36 40.5	+0.2
PIPA	Pietrapaola	2.25	16	P	Pb	22 36 42.5	-1.3
PIPA				AML	AML		
	comp=N,159µm,1.5s						
PIPA				AML	AML		
	comp=E,272µm,0.2s						
TDS	Terranova Siba	2.35	6	P	Pb	22 36 43.9	-1.5
USI	Ustica	2.63	303	P	Pn	22 36 44.0	-1.6
USI				AML	AML		
	comp=E,316µm,1.5s						
USI				AML	AML		
	comp=N,407µm,0.5s						
CUC	Castrocucco	2.68	357	P	Pn	22 36 47.2	+1.0
CUC				AML	AML		
	comp=N,146µm,0.4s						
CUC				AML	AML		
	comp=E,180µm,0.7s						
CUC				AML	AML		
	comp=E,216µm,0.7s						
CUC				AML	AML		
	comp=N,180µm,0.4s						
BULG	Bulgheria - Ca	2.80	350	P	Pn	22 36 48.8	+0.9
MGR	Morigerati	2.84	353	P	Pn	22 36 49.7	+1.3
MGR				AML	AML		
	comp=E,240µm,0.4s						
MGR				AML	AML		
	comp=N,214µm,0.5s						
SIRI	Monte Sirino -	2.86	358	P	Pn	22 36 50.1	+1.3
SIRI				AML	AML		
	comp=N,164µm,0.6s						
SIRI				AML	AML		
	comp=E,262µm,0.3s						
MTSN	Montesano sull	2.95	356	P	Pn	22 36 51.4	+1.4
MTSN				AML	AML		
	comp=E,224µm,0.6s						
MTSN				AML	AML		
	comp=N,178µm,0.8s						
AG11	Viggiano (PZ)	3.01	359	P	Pn	22 36 53.1	+2.3
CRAC	Craco	3.06	6	P	Pb	22 36 54.4	-3.2
CRAC				AML	AML		
	comp=N,224µm,1.4s						
CRAC				AML	AML		
	comp=E,296µm,1.1s						
MIGL	Miglionico	3.30	6	P	Pn	22 36 56.6	+1.9
MIGL				AML	AML		
	comp=E,461µm,1.6s						
MIGL				AML	AML		
	comp=N,364µm,0.4s						
SCTE	Santa Cesarea	3.35	34	P	Pn	22 36 55.8	+0.3
SCTE				AML	AML		
	comp=E,295µm,1.6s						
SCTE				AML	AML		
	comp=N,254µm,0.3s						
SCTE	Santa Cesarea	3.35	34	Pn	Pn	22 36 55.8	+0.3
MATE	Matera	3.37	9	P	Pn	22 36 56.5	+0.9
MATE				AML	AML		
	comp=E,192µm,1.6s						
MATE				AML	AML		
	comp=N,181µm,0.1s						
MRLC	Muro Lucano	3.46	353	P	Pn	22 36 59.8	+2.9
ACER	Acerenza	3.46	359	P	Pn	22 36 59.3	+2.3
ACER				AML	AML		
	comp=E,202µm,0.5s						
ACER				AML	AML		
	comp=N,144µm,0.7s						
KEF3	Kipouria, Keph	3.55	74	P	Pn	22 36 59.3	+1.2
NOCI	Noci	3.56	13	P	Pn	22 36 58.5	+0.2
NOCI				AML	AML		
	comp=E,510µm,0.3s						
NOCI				AML	AML		
	comp=N,491µm,0.2s						
MESG	Mesagne	3.57	23	P	Pn	22 36 58.6	+0.2
MESG				AML	AML		
	comp=E,414µm,0.3s						
MESG				AML	AML		
	comp=N,374µm,0.2s						
DMLN	Damoulianata-K	3.58	74	P	Pn	22 36 59.4	+0.9
PALZ	Palazzo San Ge	3.62	359	P	Pn	22 37 00.9	+1.8
PSDA	Pessada-Kefalo	3.71	76	P	Pn	22 37 01.3	+1.0
VLS	Valsamata	3.73	75	P	Pn	22 37 01.4	+0.8
VLS	Valsamata	3.73	75	P	Pn	22 37 01.4	+0.8
VLS				AML	AML		
	comp=N,91µm,0.7s						
VLS				AML	AML		
	comp=E,103µm,0.1s						
MRVN	Minervino Murg	3.74	2	P	Pn	22 37 02.1	+1.3
MRVN				AML	AML		
	comp=E,128µm,0.3s						
MRVN				AML	AML		
	comp=N,132µm,1.1s						
FSK	Fiskardo	3.77	71	P	Pn	22 37 02.8	+1.6
KEK	Kerkira	3.81	50	P	Pn	22 37 01.8	0.0
KEK	Kerkira	3.81	50	P	Pn	22 37 01.8	0.0
CAPA	Cerignola FG	3.84	358	P	Pn	22 37 03.7	+1.6
DRAG	Dragano-Lefkad	3.85	68	P	Pn	22 37 03.4	+1.1
LTHK	Lithakia	3.85	83	P	Pn	22 37 03.2	+0.9
PAOL	Paolisi	3.88	344	Pn	Pn	22 37 04.4	+1.7
EVGI	Lefkada island	3.89	69	P	Pn	22 37 04.5	+1.6
LKD2	Lefkada island	3.95	67	P	Pn	22 37 04.9	+1.2
NYDR	Nydri-Lefkada	3.95	68	P	Pn	22 37 04.9	+1.2
TSLK	Tsoukalades, L	3.96	66	P	Pn	22 37 04.8	+1.0
VITU	Vitulano (BN)	4.01	345	AML	AML		
	comp=E,40µm,0.5s						
VITU				AML	AML		
	comp=N,40µm,0.5s						
SRN	Sarande	4.04	49	P	Pn	22 37 05.0	+0.2
SRN	Sarande	4.04	49	P	Pn	22 37 04.7	-0.1
SRN				AML	AML		
	comp=N,67µm,0.9s						
SRN				AML	AML		
	comp=E,62µm,0.4s						
IGT	Igoumenitsa	4.05	56	P	Pn	22 37 05.4	+0.4
VLO	Vlora	4.16	40	P	Pn	22 37 07.2	+0.8
VLO	Vlora	4.16	40		Pn	22 37 07.2	+0.8
RLS	Riolos of Patr	4.39	79	P	Pn	22 37 11.6	+1.9
MSAG	Monte S. Angel	4.39	359	P	Pn	22 37 10.6	+0.8
MSAG				AML	AML		
	comp=E,95µm,1.4s						
MSAG				AML	AML		
	comp=N,154µm,0.5s						
MELA	Melanico ??? S	4.44	351	P	Pn	22 37 12.3	+2.0
SGRT	San Giovanni R	4.44	357	P	Pn	22 37 11.3	+0.9
SGRT				AML	AML		
	comp=N,94µm,1.2s						
SGRT				AML	AML		
	comp=E,90µm,1.4s						
SGRT	San Giovanni R	4.44	357	Pn	Pn	22 37 11.8	+1.4
PVO	Paravola	4.54	72	P	Pn	22 37 14.3	+2.5
DRO	Drossia	4.57	80	P	Pn	22 37 14.5	+2.4
LSK	Leskovik	4.57	50	P	Pn	22 37 12.5	+0.3
PYL	PYLOS	4.60	94	P	Pn	22 37 13.6	+1.0
ITM	Ithomi	4.72	90	P	Pn	22 37 16.1	+1.9
ITM	Ithomi	4.72	90		Pn	22 37 16.1	+1.9
KLV	Kalavryta, Ach	4.92	80	P	Pn	22 37 19.2	+2.2
KPRO	Kipourio	4.95	56	P	Pn	22 37 19.0	+1.6
KBN	Korca	4.97	47		Pn	22 37 19.2	+1.5
NEST	Nestorio	5.00	50	P	Pn	22 37 20.0	+1.8
TIR	Tirane	5.01	35	P	Pn	22 37 18.6	+0.4
TIR	Tirane	5.01	35	Pn	Pn	22 37 19.1	+0.9
MAKR	Makrakomi, Fth	5.11	69	P	Pn	22 37 22.8	+3.2
AGG	Agios Georgios	5.26	69	P	Pn	22 37 24.3	+2.6
AGG	Agios Georgios	5.26	69		Pn	22 37 24.3	+2.6
ULC	Ulcinj	5.27	27	⇑*i*Pn	Pn	22 37 21.4	-0.4
ULC				*e*Sn	Sn	22 38 16.4	-6.2
OHR	Ohrid	5.31	43	*i* Pn	Pn	22 37 23.6	+1.3
FNA	Florina	5.42	49		Pn	22 37 25.1	+1.2
DRME	Dracevica, Mon	5.44	26	*e*Pn	Pn	22 37 23.8	-0.3
DRME	Dracevica, Mon	5.44	26	⇑*i*Pn	Pn	22 37 23.9	-0.2
DRME				*i* Sn	Sn	22 38 20.7	-6.1
BUM	Brajici-Budva	5.45	23	⇓*i*Pn	Pn	22 37 24.1	-0.2
BUM				*i* Sn	Sn	22 38 21.0	-6.1
HCY	Herceg Novi	5.47	20	*e*Pn	Pn	22 37 23.6	-0.9
HCY	Herceg Novi	5.47	20	⇓*i*Pn	Pn	22 37 24.1	-0.4
HCY				*i* Sn	Sn	22 38 21.6	-5.9
PUK	Puka	5.59	31	P	Pn	22 37 26.9	+0.7
PUK	Puka	5.59	31		Pn	22 37 26.9	+0.7
DBRK	Dubrovnik	5.59	16	*e*Pn	Pn	22 37 25.6	-0.6
DBRK				Sn	Sn	22 38 23.0	-7.5
KEST	Kesra	5.60	256	Pn	Pn	22 37 26.7	+0.3
	comp=E,1.0nm,0.3s,baz=84,slow=10,SNR=27						
KEST				Sn	Sn	22 38 27.4	-3.4
	comp=E,0.2nm,0.3s,baz=189,slow=19,SNR=1.3						
KEST	Kesra	5.60	256		Pn	22 37 25.9	-0.5
VSL	Villasalto	5.65	295	P	Pn	22 37 26.2	-0.8
VSL	Villasalto	5.65	295	Pn	Pn	22 37 26.5	-0.5
CEME	Cevo	5.68	22	⇑*i*Pn	Pn	22 37 27.2	-0.3
CEME				*i* Sn	Sn	22 38 26.6	-6.2
PDG	Podgorica	5.68	25	*e*Pn	Pn	22 37 25.7	-1.7
PDG	Podgorica	5.68	25		Pn	22 37 27.6	+0.2
TTG	Podgorica	5.68	25	*e*Pn	Pn	22 37 27.3	-0.1
TTG				*i* Sn	Sn	22 38 26.5	-6.2
TREB	Trebinje	5.68	18	*e*Pn	Pn	22 37 26.6	-0.9
STON	Ston	5.70	13	*e*Pn	Pn	22 37 26.5	-1.1
STON	Ston	5.70	13	*e*Pn	Pn	22 37 26.9	-0.7
STON				Sn	Sn	22 38 26.1	-6.9
STON	Ston	5.70	13	P	Pn	22 37 27.2	-0.3
KTHR	Kythira	5.71	99	P	Pn	22 37 30.2	+2.4
HVAR	Hvar	5.86	3	*e*Pn	Pn	22 37 29.5	-0.4
HVAR				Sn	Sn	22 38 31.9	-5.3
NKME	Niksic	5.89	22	⇑*i*Pn	Pn	22 37 30.2	-0.2
NKME				*i* Sn	Sn	22 38 31.7	-6.3
BRY	Bratogost	5.90	18	*e*Pn	Pn	22 37 30.4	-0.2
BRY	Bratogost	5.90	18	*e*Pn	Pn	22 37 30.3	-0.3
BRY				*e*Sn	Sn	22 38 32.2	-6.2
MAKA	Makarska	6.01	7	*e*Pn	Pn	22 37 31.4	-0.5
MAKA				Sn	Sn	22 38 34.5	-6.3
PVY	Plav	6.08	29	⇓*i*Pn	Pn	22 37 32.7	-0.3
PVY				*i* Sn	Sn	22 38 35.9	-6.8
KOME	Kolasin	6.14	25	⇑*i*Pn	Pn	22 37 33.6	-0.3
KOME				*e*Sn	Sn	22 38 37.6	-6.7
RICI	Ricice	6.23	8	*e*Pn	Pn	22 37 34.7	-0.3
RICI				Sn	Sn	22 38 38.9	-7.3
IVA	Berane	6.29	27	⇑*i*Pn	Pn	22 37 35.7	-0.2
IVA				*i* Sn	Sn	22 38 41.1	-6.8
ZIRJ	Zirje	6.34	358	*e*Pn	Pn	22 37 36.9	+0.5
ZIRJ				Sn	Sn	22 38 45.0	-3.8
VAY	Valandovo	6.47	50	*i* Pn	Pn	22 37 38.8	+0.6
STIP	Stip	6.47	46	*i* Pn	Pn	22 37 41.6	+3.3
MORI	Morici	6.55	358	*e*Pn	Pn	22 37 40.6	+1.3
KIJV	Kijevo	6.69	2	*e*Pn	Pn	22 37 42.1	+0.8
KIJV				Sn	Sn	22 38 54.3	-3.2
DUGI	Dugi Otok	6.71	354	*e*Pn	Pn	22 37 42.1	+0.6
RUDO	Rudo	6.79	21	*e*Pn	Pn	22 37 42.6	-0.1
BBLS	Lazići	7.03	20	*e*Pn	Pn	22 37 47.5	+1.5
HAPS	Han Pijesak,Bl	7.12	17	*e*Pn	Pn	22 37 43.6	-3.7
MGRS	Mrkonjic Grad	7.14	6	*e*Pn	Pn	22 37 49.8	+2.3
UDBI	Udbina	7.21	359	*e*Pn	Pn	22 37 50.8	+2.4
NVLJ	Novalja	7.29	354	*e*Pn	Pn	22 37 51.3	+1.8
DIVS	Divibare	7.42	23	*e*Pn	Pn	22 37 51.2	-0.1
DIVS	Divibare	7.42	23		Pn	22 37 51.4	+0.1
IDI	Anoyia	7.45	103	Pn	Pn	22 37 53.0	+1.2
	comp=E,1.3nm,0.3s,baz=315,slow=17,SNR=22						
IDI				Sn	Sn	22 39 12.6	-3.7
	comp=E,6.3nm,0.3s,baz=292,slow=23,SNR=15						
BLY	Banja Luka	7.48	6	*e*Pn	Pn	22 37 53.7	+1.6

RABC	Rab	7.48	353	*e*Pn	Pn	22 37 53.7	+1.6
PLIT	Plitvice	7.56	358	*e*Pn	Pn	22 37 55.4	+2.1
VTS	Vitosha	7.67	44		Pn	22 37 55.3	+0.5
MRAK	Mrakovica	7.72	5	*e*Pn	Pn	22 37 55.7	+0.3
OZLJ	Ozalj	8.30	357	*e*Pn	Pn	22 38 05.7	+2.4
ALN	Alexandroupoli	8.58	62	Pn	Pn	22 38 07.3	+0.2
KALN	Kalnik	8.81	2	*e*Pn	Pn	22 38 10.1	-0.3
TIRR	Tirgusor	11.78	49	Pn	Pn	22 38 50.7	-0.3
BURAR	Bucovina Array	12.32	30	Pn	Pn	22 38 60.0	+1.5
AKASG	Malin Array Be	16.38	31	Pn	Pn	22 39 53.2	+0.5
	comp=E,1.1nm,0.3s,baz=223,slow=11,SNR=2.1						
AKASG	Malin Array Be	16.38	31		P	22 39 56.6	+0.9
AKBB	Malin Array Si	16.38	31	P	P	22 39 56.4	+0.7
MMAI	Mount Meron Ar	16.42	99	Pn	Pn	22 39 52.4	-1.2
	comp=E,1.4nm,0.3s,baz=278,slow=12,SNR=7.4						
MMAI				LR	LR	22 47 22.3	
	comp=E,16nm,18.2s,baz=45,slow=41						
EIL	Elat	17.52	110	P	Pn	22 40 07.7	+0.3
	comp=E,1.0nm,0.3s,baz=225,slow=3.4,SNR=7.1						
KBZ	Khabaz	21.36	64	P	P	22 40 52.9	+2.5
	comp=E,1.1nm,0.6s,baz=296,slow=6.6,SNR=6.1						
EKA	Eskdalemuir Ar	22.23	330	P	P	22 41 00.1	+0.5
	comp=E,0.6nm,0.6s,baz=139,slow=12,SNR=1.7						
HFS	Hagfors	22.88	357	P	P	22 41 06.4	0.0
	comp=E,1.2nm,0.6s,baz=179,slow=11,SNR=1.5						
FINES	FINESS Array B	24.96	11	P	P	22 41 26.7	+0.4
	comp=E,3.7nm,0.9s,baz=213,slow=9.9,SNR=6.1						
FINES	FINESS Array B	24.96	11	P	P	22 41 26.4	+0.1
TORD	Torodi Ar. Bea	27.26	212	P	P	22 41 46.1	-1.4
TORD				IAmb	IAmb	22 41 59.9	
	comp=Z,2.2nm,1.3s						
ABKAR	Akbulak array	33.67	55	P	P	22 42 45.7	+1.8
BRVK	Borovoye	40.33	49	P	P	22 43 42.3	+1.9
BRVK				IAmb	IAmb	22 43 42.9	
	comp=Z,2.6nm,0.7s						
GAR	Garm	42.20	70	P	P	22 43 56.0	-0.2
GAR				IAmb	IAmb	22 43 56.6	
	comp=Z,6.9nm,0.7s						
KURK	Kurchatov	45.64	52	P	P	22 44 24.3	+0.9
KURK				IAmb	IAmb	22 44 30.6	
	comp=Z,1.5nm,0.8s						
MK31	Makanchi Array	48.78	57	P	P	22 44 49.5	+1.5
MK31				IAmb	IAmb	22 44 53.9	
	comp=Z,1.1nm,0.8s						
MKAR	Makanchi Array	48.78	57	P	P	22 44 49.7	+1.7
	comp=Z,0.5nm,0.4s,baz=280,slow=7.1,SNR=7.3						
MKAR	Makanchi Array	48.78	57	P	P	22 44 48.8	+0.8
NRIK	Noril'sk	49.16	26	P	P	22 44 50.5	-0.1
PETK	Petropavlovsk-	84.00	22	LR	LR	23 33 22.2	
	comp=Z,56nm,18.5s,baz=207,slow=41						

BJI **07** *22:53:51.7±0.0, 1°.14N×126°.57E, h66^{km}, mB5.1/43, mb5.0/66, Ms4.4/29, Ms7 4.2/31*

MOS **07** *22:53:52.5±0.9, 1°.60N×126°.47E, h40^{km}, mb5.4/43, MS4.0/7, Error ellipse: s-maj=7.6km s-min=4.2km az=115.9*

KLM **07** *22:53:54, 1°.70N×126°.79E, h60^{km}, mb5.2*

IDC **07** *22:53:54.5±1.4, 1°.54N×126°.53E, h42^{km}±12^{km}, mb4.7/43, mb1 4.7/47, mb1mx4.7/51, mbtmp4.9/47, ML4.5/3, MS3.7/19, Ms1 3.7/19, ms1mx3.6/31, Error ellipse: s-maj=12.0km s-min=7.1km az=78.0*

NEIC **07** *22:53:54.4±1.9, 1°.60N±0°.06×126°.58E±0°.06, h37^{km}±4^{km}, mb5.2/151, Error ellipse: s-maj=9.4km s-min=7.7km az=48.0*

GCMT **07** *22:53:57.4±0.2, 1°.79N±0°.01×126°.59E±0°.01, h46^{km}, MW5.1/98, Moment Tensor Solution. s69,c99; s98,c150; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.48±.17; $M_{\theta\theta}$0.54±.12; $M_{\phi\phi}$-5.02±.13; $M_{r\theta}$1.50±.10; $M_{\theta\phi}$-3.57±.12; $M_{\phi r}$-0.32±.13; Best double couple: $M_0$6.00800×10^{16} NP1:ϕ_s181.00000°, δ49.00000°, λ54.00000°. NP2: ϕ_s50.00000°, δ53.00000°, λ124.00000°. Principal axes: T 5.2390, Plg63.0000°, Azm22.0000°; N 1.5390, Plg27.0000°, Azm207.0000°; P -6.7770, Plg2.0000°, Azm116.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA **07** *22:53:57.0±0.2, 2°N±2°×12°7E±°, h61^{km}±3^{km}, M4.9/48, mb5.2/48, mB5.4/30, MLv5.2/18, Mw(mB)4.8/30, MwMwp4.8/7, Mwp5.1/7*

ISC 07 22:53:54.9±0.3, **1°.54N**±0°.03×**126°.53E**±0°.04, **h48**^{km}±2^{km}, **h48**^{km}**:pP-P, n649,** σ**1^s.62**/685, **mb5.1**/203, **MS4.0**/40, **34C-28D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.14	132	P	Pn	22 54 14.1	-0.4
TNTI				S	Sn	22 54 28.2	-0.7
TNTI	Ternate	1.14	132		Pn	22 54 13.8	-0.6
TNTI				Sn	Sn	22 54 28.0	-0.9
TNTI	Ternate	1.14	132	P	Pn	22 54 14.0	-0.4
SGSI	Sangihe	2.35	335	P	Pn	22 54 33.9	+2.8
SGSI				S	Sn	22 55 04.4	+5.6
LBMI	Labuha	2.37	156	P	Pn	22 54 32.7	+1.3
KMSI	Cibinong	2.72	249	P	Pn	22 54 39.3	+3.1
SANI	Sanana	3.61	189	P	Pn	22 54 49.1	+0.8
SANI	Sanana	3.61	189	P	Pn	22 54 49.5	+1.2
GTOI	Gorontalo	3.63	256	P	Pn	22 54 52.2	+3.6
LUWI	Luwuk	4.55	236	P	Pn	22 55 04.7	+3.4
LUWI	Luwuk	4.55	236	Pn	Pn	22 55 03.6	+2.4
LUWI	Luwuk	4.55	236	P	Pn	22 55 05.7	+4.4
MRSI	Marisa	4.71	257	P	Pn	22 55 08.3	+4.9
SWI	Sorong	5.30	117	P	Pn	22 55 12.7	+1.1
	0.8nm7µm2µm229nm,1.1s						
SIJI	Sorong	5.31	117	P	Pn	22 55 11.2	-0.5
	9.7nm,0.3s,baz=291,slow=12,SNR=23						
MSAI	Masohi	5.42	154	P	Pn	22 55 15.1	+1.9
	0.4nm1µm80nm,0.9s						
APSI	Ampana	5.45	244	P	Pn	22 55 18.2	+4.5
	4.0nm7µm853nm,0.9s						
DAV	Davao City (W)	5.57	350	P	Pn	22 55 16.5	+1.1
	baz=251,slow=22,SNR=1.4						
DAV				S	Sn	22 56 18.3	+0.1
	38nm,0.3s,baz=287,slow=21,SNR=3.9						
DAV	Davao City (W)	5.57	350	Pn	Pn	22 55 16.0	+0.6
DMPH	Davao City--Mi	5.60	350	⇑*e*P	Pn	22 55 19.2	+3.4
DMPH				*e*S	Sn	22 56 25.4	+6.6
KCP	Kidapawan	5.62	345	⇓*e*P	Pn	22 55 19.5	+3.4
KCP				*i* S	Sn	22 56 29.1	+10
TOLI2	Tolitoli	5.76	266	Pn	Pn	22 55 19.0	+1.1
TOLI2	Tolitoli	5.76	266	P	Pn	22 55 19.9	+2.0
KDI	Kendari	6.71	216	P	Pn	22 55 33.9	+2.9
MPSI	Mapaga	6.73	260	P	Pn	22 55 36.1	+4.8
	0.6nm6µm2µm150nm,0.7s						
BNDI	Bandanaira	6.90	151	P	Pn	22 55 37.1	+3.5
	1.6nm19µm324nm,0.7s						
BNDI	Bandanaira	6.90	151	P	Pn	22 55 36.3	+2.7
ZCP	Zamboanga City	6.96	320	⇓*e*P	Pn	22 55 37.6	+3.3
ZCP				*e*S	Sn	22 56 49.1	-3.1
FAKI	Fak Fak	7.24	128	P	Pn	22 55 39.0	+0.8
	1.3nm4µm4µm295nm,1.0s						
FAKI	Fak Fak	7.24	128	Pn	Pn	22 55 39.3	+1.2
FAKI	Fak Fak	7.24	128	P	Pn	22 55 38.8	+0.6
TTSI	Tana Toraja	8.11	236	P	Pn	22 55 53.2	+3.1
	3µm184nm,0.6s						
TBP	Tagbilaran	8.52	342	*e*P	Pn	22 55 52.0	-3.8
BKSI	Bulukumba	9.35	223	P	Pn	22 56 09.9	+2.8
	2µm135nm,0.6s						
KAPI	Kappang	9.39	226	P	Pn	22 56 10.4	+2.7
	24nm,0.3s,baz=57,slow=12,SNR=48						
KAPI				S	Sn	22 57 53.1	+1.0
	5.0nm,0.3s,baz=240,slow=19,SNR=1.5						
KAPI	Kappang	9.39	226	P	Pn	22 56 09.8	+2.1
KAPI	Kappang	9.39	226	Pn	Pn	22 56 09.8	+2.1
KAPI	Kappang	9.39	226	P	Pn	22 56 11.4	+3.7
SMKI	Samarinda	9.52	258	P	Pn	22 56 13.0	+3.4
	3µm4µm93nm,0.8s						
BSSI	Bau Bau, Buton	9.72	218	P	Pn	22 56 15.8	+3.5
	989nm91nm,0.7s						
BAKI	Biak	9.96	106	P	Pn	22 56 19.8	+4.3
SPMM	Sapulut	10.53	288	P	Pn	22 56 27.0	+3.7
SAUI	Saumlaki	10.59	153	Pn	Pn	22 56 25.0	+0.9
SAUI	Saumlaki	10.59	153	P	Pn	22 56 28.6	+4.4
MMRI	Maumere	10.98	203	P	Pn	22 56 33.7	+4.3
	134nm,0.9s						
MMRI	Maumere	10.98	203		Pn	22 56 30.6	+1.2
MMRI	Maumere	10.98	203	P	Pn	22 56 34.3	+4.9
EDFI	Ende, Flores	11.30	205	P	Pn	22 56 37.1	+3.1
	659nm615nm70nm,0.8s						
KBKI	Kotabaru	11.42	245	P	Pn	22 56 37.9	+2.4
	44nm,0.8s						
SOEI	Soe	11.45	191	P	Pn	22 56 42.3	+6.3
	4µm512nm,1.0s						
SOEI	Soe	11.45	191	Pn	Pn	22 56 35.0	-1.0
SOEI	Soe	11.45	191	P	Pn	22 56 41.3	+5.3
MTKI	Muara Teweh, K	11.89	258	P	Pn	22 56 44.3	+2.4
BATI	Baumata	12.01	194	P	Pn	22 56 48.6	+5.0
	4.7nm,0.3s,baz=344,slow=0.6,SNR=6.1						
BATI	Baumata	12.01	194	P	Pn	22 56 46.7	+3.1
	1µm100nm,0.9s						
SMPI	Sarmi	12.68	106	P	Pn	22 56 55.5	+2.8
	57nm,1.2s						
BBKI	Banjar Baru	12.69	247	P	Pn	22 56 56.9	+4.0
	37nm,0.9s						
WSI	Waingapu	12.75	209	P	Pn	22 56 57.9	+4.3
	677nm,0.5s						
BASI	Baing, Sumba	13.10	207	P	Pn	22 57 01.3	+2.9
	1µm136nm,0.7s						
WBSI	Waikabubak, Su	13.19	212	P	Pn	22 57 03.1	+3.4
	1µm110nm,0.8s						
LQP	Lukban	13.43	339	⇓*e*P	Pn	22 57 05.1	+1.9
PLAI	Plampang	13.49	220	P	Pn	22 57 07.5	+3.6
	1µm201nm,0.9s						
PLAI	Plampang	13.49	220	P	P	22 57 09.5	-2.3
TWSI	Taliwang, Sumb	14.02	223	P	P	22 57 14.5	-3.2
	900nm111nm,0.9s						
DRS	Darwin Rock St	14.54	163	P	Pn	22 57 18.1	+0.1
	111nm,0.7s						
JAY	Jayapura	14.74	106	P	Pn	22 57 20.3	-0.3
	0.3nm,0.3s,baz=295,slow=12,SNR=7.1						
SRBI	Singaraja	14.79	230	P	P	22 57 25.2	-1.0
	2µm159nm,1.0s						
MTN	Manton Dam	15.00	162	P	Pn	22 57 23.6	-0.4
	baz=15,SNR=28						
MTN	Manton Dam	15.00	162	Pn	Pn	22 57 22.7	-1.4
MTN	Manton Dam	15.00	162	P	Pn	22 57 23.6	-0.4
	87nm,0.7s						
STKI	Sintang	15.12	265	P	P	22 57 28.2	-1.7
	55nm,2.5s						
KMMI	Kalianget	15.16	236	P	P	22 57 32.6	+2.2
	3µm391nm,0.9s						
IGBI	Denpasar	15.31	228	P	P	22 57 34.2	+2.1
	4µm319nm,0.8s						
KDU	Kakadu	15.32	157	P	Pn	22 57 28.0	-0.1
	baz=15,SNR=91						
ABJI	Asem Bagus	15.37	233	P	P	22 57 34.8	+2.1
	114nm,0.9s						
PBKI	Pangkalan Bun	15.44	254	P	Pn	22 57 30.0	+0.3
	65nm,0.9s						
JAGI	Jajag, Banyuwa	15.85	231	P	P	22 57 41.6	+3.6
	12µm222nm,1.0s						
JAGI	Jajag, Banyuwa	15.85	231	P	P	22 57 39.8	+1.8
JAGI				IAmb	IAmb	22 57 43.2	
	comp=Z,255nm,1.1s						
JAGI	Jajag, Banyuwa	15.85	231	P	P	22 57 40.9	+2.9
GMJI	Gumukmas	16.28	233	P	P	22 57 43.6	+0.8
	comp=Z,7µmcomp=Z,148nm,0.9s						
KNRA	Kununurra	17.25	173	P	Pn	22 57 52.8	+0.3
	baz=17,SNR=51						
KNRA	Kununurra	17.25	173		Pn	22 57 52.8	+0.3
KNRA				IAmb	IAmb	22 57 55.3	
	comp=Z,197nm,1.0s						
KNRA	Kununurra	17.25	173	P	P	22 57 53.1	-0.4
	comp=Z,202nm,0.9s						
PCJI	Pacitan	18.10	237	P	Pn	22 58 05.6	+2.5
	comp=Z,2µmcomp=Z,240nm,0.6s						
SMRI	Semarang	18.18	242	P	P	22 58 03.4	-0.5
SMRI	Semarang	18.18	242	P	Pn	22 58 05.2	+1.2
UGM	Wanagama	18.52	239	P	Pn	22 58 09.2	+1.0
	comp=Z,145nm,1.0s						
UGM	Wanagama	18.52	239	P	Pn	22 58 08.1	0.0
UGM				IAmb	IAmb	22 58 50.5	
	comp=Z,173nm,1.1s						
UGM	Wanagama	18.52	239	P	Pn	22 58 10.4	+2.2
FITZ	Fitzroy Crossi	19.53	183	P	P	22 58 18.2	-0.4
	comp=Z,4.2nm,0.3s,baz=7.5,slow=6.5,SNR=78						
FITZ				S	S	23 01 51.2	-5.6
	comp=Z,0.2nm,0.3s,baz=209,slow=23,SNR=0.8						
FITZ	Fitzroy Crossi	19.53	183	P	P	22 58 18.1	-0.4
	baz=20,SNR=40						
FITZ	Fitzroy Crossi	19.53	183	P	P	22 58 18.3	-0.4
FITZ	Fitzroy Crossi	19.53	183	P	Pn	22 58 19.5	-0.7
	comp=Z,39nm,0.8s						
KPJI	Karang Pucung	19.64	243	P	Pn	22 58 20.7	-0.9
CMJI	Cimerak	20.27	243	P	P	22 58 25.0	-1.7
	comp=Z,70nm,0.7s						
LEM	Lembang	20.62	246	P	P	22 58 30.2	-0.5
	comp=Z,26nm,0.7s,baz=341,slow=5.7,SNR=5.6						
CISI	Cisompet, Garu	20.74	244	P	P	22 58 32.7	+0.9
	comp=Z,515nmcomp=Z,47nm,0.6s						
CISI	Cisompet, Garu	20.74	244	P	P	22 58 30.2	-1.6
CISI	Cisompet, Garu	20.74	244	P	P	22 58 31.3	-0.5
	comp=Z,46nm,0.6s						
MANU	Manus Island	21.14	100	P	P	22 58 35.7	-0.4
CNJI	Cibinong	21.26	245	P	P	22 58 35.7	-1.6
GUMO	Guam	21.74	56	P	P	22 58 41.2	-1.3
	comp=Z,29nm,0.5s,baz=309,slow=4.0,SNR=2.0						
GUMO	Guam	21.74	56	P	P	22 58 40.3	-2.2
TWG	Pinlang	21.81	346	P	P	22 58 40.0	-3.1
TWG				IAmb	IAmb	22 58 52.9	
	comp=Z,46nm,0.6s						
PMBI	Palembang	22.20	258	P	P	22 58 47.4	-0.1
YULB	Yu-li	22.31	347	P	P	22 58 45.0	-3.6
TPUB	Ta-pu	22.38	346	P	P	22 58 47.0	-2.2
TPUB				IAmb	IAmb	22 58 58.1	
	comp=Z,92nm,0.8s						
TPUB	Ta-pu	22.38	346	P	P	22 58 47.5	-1.8
	comp=Z,98nm,0.8s						
WB0	Warramunga Arr	22.54	160	P	P	22 58 50.1	-1.0
COEN	Coen	22.57	134	P	P	22 58 50.2	-1.2
COEN	Coen	22.57	134	P	P	22 58 52.0	+0.6
	comp=Z,40nm,1.1s						
WRAB	Tennant Creek	22.68	161	*c i*P	P	22 58 51.5	-1.0
WRAB				pmax	pmax		
	comp=Z,321nm,1.0s						
WRAB	Tennant Creek	22.68	161	P	P	22 58 51.5	-1.0
WRA	Warramunga Arr	22.68	161	P	P	22 58 51.6	-1.0
	comp=Z,173nm,0.6s,baz=339,slow=10,SNR=452						
WRA				S	S	23 02 55.8	-2.0
	comp=Z,4.1nm,0.7s,baz=342,slow=16,SNR=3.2						
WRA				ScP	ScP	23 06 17.9	0.0
	comp=Z,2.3nm,0.8s,baz=346,slow=3.1,SNR=4.9						
WRA	Warramunga Arr	22.68	161	P	P	22 58 50.6	-2.0
WB2	Warramunga Arr	22.69	161	P	P	22 58 51.2	-1.4
SSLB	Suanglung	22.77	347	P	P	22 58 51.4	-2.1
SSLB				IAmb	IAmb	22 58 57.0	
	comp=Z,49nm,0.8s						
SSLB	Suanglung	22.77	347	P	P	22 58 52.0	-1.4
	comp=Z,56nm,0.8s						
WR0	Warramunga Arr	22.77	160	P	P	22 58 52.4	-1.1
MDSI	Maura Dua	23.12	255	P	P	22 59 00.1	+3.0
	comp=Z,17nm,0.8s						
PMG	Port Moresby	23.25	118	P	P	22 58 58.3	-0.1
	comp=Z,21nm,0.7s,baz=329,slow=8.0,SNR=8.6						
PMG	Port Moresby	23.25	118	P	P	22 58 57.0	-1.4
PMG	Port Moresby	23.25	118	P	P	22 59 01.6	+3.2
	comp=Z,41nm,0.8s						
PMG	Port Moresby	23.25	118	P	P	22 59 01.6	+3.2
	comp=Z,41nm,0.8s						
MBWA	Marble Bar	23.52	196	P	P	22 59 01.4	+0.5
	comp=Z,65nm,0.9s						
YHNB	Yeheng	23.53	348	P	P	22 59 00.4	-0.6
	comp=Z,42nm,0.8s						
PSA00	Pilbara Seismi	23.88	196	P	P	22 59 04.0	-0.2
PSA00				IAmb	IAmb	22 59 07.4	
	comp=Z,34nm,0.6s						
PSA00	Pilbara Seismi	23.88	196	P	P	22 59 03.8	-0.5
PSA00				IAmb	IAmb	22 59 07.7	
	comp=Z,12nm,0.7s						
PSA00	Pilbara Seismi	23.88	196	P	P	22 59 05.5	+1.2
	comp=Z,48nm,0.7s						
XMIS	Christmas Isla	23.96	240	P	P	22 59 04.9	-0.2
XMIS				IAmb	IAmb	22 59 07.1	
	comp=Z,82nm,0.8s						
JRMM	Jerantut	24.13	276	P	P	22 59 08.0	+1.3
QZH	Quanzhou	24.50	342	*e*P	P	22 59 10.8	+1.0
QZH				S	S	23 03 29.4	+2.3
QZH				LR	LR		
	comp=Z,370nm,24.4s						
QZH				LR	LR		
	comp=Z,660nm,27.5s						
UBPT	Khong Chiam	24.86	304	P	P	22 59 13.1	-0.2
JOW	Kunigami	25.20	4	P	P	22 59 17.8	+1.5
	comp=Z,96nm,1.0s,baz=202,slow=7.4,SNR=14						
JOW				LR	LR	23 11 23.7	
	comp=Z,111nm,18.2s,baz=206,slow=42						
JOW	Kunigami	25.20	4	P	P	22 59 16.9	+0.6
JOW				IAmb	IAmb	22 59 19.5	
	comp=Z,101nm,1.0s						
JOW	Kunigami	25.20	4	P	P	22 59 18.2	+1.9
	comp=Z,102nm,1.0s						
QIS	Mount Isa	25.43	150	P	P	22 59 18.5	+0.1
	baz=26,SNR=72						
QIS	Mount Isa	25.43	150	P	P	22 59 19.2	+0.8
	comp=Z,57nm,0.7s						
AS31	Alice Springs	26.06	164	P	P	22 59 23.4	-0.8
AS31				IAmb	IAmb	22 59 29.8	
	comp=Z,41nm,0.6s						
ASAR	Alice Springs	26.06	164	P	P	22 59 24.3	+0.2
	comp=Z,18nm,0.4s,baz=345,slow=7.4,SNR=165						
ASAR				PcP	PcP	23 02 51.6	+0.4
	comp=Z,4.1nm,0.6s,baz=354,slow=1.9,SNR=4.4						
ASAR				S	S	23 03 52.1	0.0
	comp=Z,5.5nm,1.1s,baz=351,slow=24,SNR=4.8						
ASAR				ScP	ScP	23 06 28.0	+0.8
	comp=Z,1.5nm,0.9s,baz=343,slow=2.8,SNR=2.9						
ASAR	Alice Springs	26.06	164	P	P	22 59 23.3	-0.8
RABL	Rabaul	26.25	103	P	P	22 59 25.3	-0.6
RABL	Rabaul	26.25	103	P	P	22 59 27.6	+1.7
	comp=Z,107nm,0.5s						
MTSU	Mount Surprise	26.25	139	P	P	22 59 25.8	-0.1
	baz=26,SNR=30						
MTSU	Mount Surprise	26.25	139	P	P	22 59 26.1	+0.2
	comp=Z,31nm,0.9s						
WRKA	Warakurna	26.48	176	P	P	22 59 28.5	+0.7
	baz=27,SNR=149						
WRKA	Warakurna	26.48	176	P	P	22 59 29.2	+1.3
	comp=Z,214nm,0.8s						
GIRL	Giralia	26.86	206	P	P	22 59 33.6	+2.3
	baz=27,SNR=6.7						
GIRL	Giralia	26.86	206	P	P	22 59 32.2	+1.0
PSI	Prapat	27.61	273	P	P	22 59 37.8	-0.5
	comp=Z,14nm,0.6s,baz=103,slow=3.8,SNR=15						
PSI				LR	LR	23 11 40.0	
	comp=Z,229nm,20.5s,baz=74,slow=39						
CTA	Charters Tower	28.92	139	P	P	22 59 50.2	+0.5
	comp=Z,8.8nm,0.4s,baz=327,slow=12,SNR=12						
CTA				LR	LR	23 12 32.3	
	comp=Z,464nm,20.9s,baz=280,slow=39						
CTAO	Charters Tower	28.92	139	P	P	22 59 49.7	0.0
CTAO				pmax	pmax		
	comp=Z,23nm,1.0s						
CTAO	Charters Tower	28.92	139	P	P	22 59 49.7	0.0
CTAO	Charters Tower	28.92	139	P	P	22 59 53.9	+4.2
	comp=Z,26nm,0.9s						
GSI	Gunungsitoli	28.94	270	P	P	22 59 51.0	+0.9
	comp=Z,43nm,0.8s						
GSI	Gunungsitoli	28.94	270	P	P	22 59 50.5	+0.4
GSI				IAmb	IAmb	22 59 54.5	
	comp=Z,33nm,0.5s						
MEEK	Meekatharra	29.04	195	P	P	22 59 50.4	-0.3
	baz=29,SNR=26						
MEEK	Meekatharra	29.04	195	P	P	22 59 52.0	+1.3
	comp=Z,44nm,0.7s						
JCJ	Chichijima	29.52	29	P	P	22 59 53.6	-1.4
	comp=Z,80nm,0.8s,baz=266,slow=21,SNR=2.2						
JCJ				LR	LR	23 09 42.9	
	comp=Z,126nm,21.9s,baz=191,slow=32						
JCJ	Chichijima	29.52	29	P	P	22 59 54.0	-0.9
SLVN	Son La	29.55	313	P	P	22 59 55.0	-0.4
SSE	Sheshan	29.83	351	P	P	22 59 57.9	+0.3
SSE				S	S	23 04 51.4	+0.2
SSE				pmax	pmax		
	comp=Z,12nm,0.6s						
SSE				pmax	pmax		
	comp=Z,89nm,5.0s						
SSE				LR	LR		
	comp=Z,170nm,22.9s						
SSE				LR	LR		
	comp=Z,160nm,22.9s						
OOD	Oodnadatta	30.47	164	P	P	23 00 04.3	+1.0
	comp=Z,34nm,0.7s						
WHN	Wuhan	31.07	339	⇑P	P	23 00 09.5	+0.9
WHN				S	S	23 05 08.8	-1.9
WHN				LR	LR		
	comp=Z,1µm,19.2s						
NJ2	Nanjing	31.20	347	*e*P	P	23 00 11.4	+1.7
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
GYA	Guiyang	31.28	324	⇑*i*P	P	23 00 11.2	+0.5
GYA				pP	pwP	23 00 24.0	-0.8
GYA				pmax	pmax		
	comp=Z,26nm,0.9s						
GYA				LR	LR		
	comp=Z,520nm,29.0s						
JNU	Nakatsue	31.68	7	P	P	23 00 12.7	-1.3
	comp=Z,22nm,0.9s,baz=191,slow=4.4,SNR=5.8						
CM31	Chiang Mai Arr	31.85	304	P	P	23 00 15.9	+0.2
CMAR	Chiang Mai Arr	31.85	304	P	P	23 00 15.9	+0.2
	comp=Z,5.2nm,0.8s,baz=137,slow=8.9,SNR=15						
CMAR				PcP	PcP	23 03 07.5	+1.7
	comp=Z,0.7nm,0.3s,baz=136,slow=2.3,SNR=5.5						
CMAR				ScP	ScP	23 06 46.6	+1.0
	comp=Z,0.8nm,0.3s,baz=148,slow=3.3,SNR=4.2						
CMAR				LR	LR	23 12 17.1	
	comp=Z,125nm,20.6s,baz=162,slow=35						
CMAR	Chiang Mai Arr	31.85	304	P	P	23 00 15.2	-0.6
CMAR					PcP	23 03 07.3	+1.4
CHTO	Chiang Mai	32.02	304	P	P	23 00 16.8	-0.4
CHTO				pmax	pmax		
	comp=Z,15nm,0.9s						
CHTO	Chiang Mai	32.02	304	P	P	23 00 16.8	-0.4
CHTO	Chiang Mai	32.02	304	P	P	23 00 17.1	-0.1
	comp=Z,11nm,0.8s						
MORW	Morawa	32.05	197	P	P	23 00 17.3	0.0
	baz=32,SNR=14						
MORW	Morawa	32.05	197	P	P	23 00 16.7	-0.6
MORW	Morawa	32.05	197	P	P	23 00 22.6	+5.3
	comp=Z,26nm,1.2s						
INKA	Innaminka	32.16	156	P	P	23 00 21.9	+3.6
	comp=Z,20nm,1.0s						
FORT	Forrest	32.17	178	P	P	23 00 18.4	+0.1
	baz=32,SNR=52						
FORT	Forrest	32.17	178	P	P	23 00 18.1	-0.2
FORT	Forrest	32.17	178	P	P	23 00 19.1	+0.8
	comp=Z,209nm,0.8s						
MULG	Mulgathing	32.45	168	P	P	23 00 21.8	+1.0
	comp=Z,32nm,0.9s						
JMN	Monobe	32.75	11	P	P	23 00 23.4	-0.1
QLP	Quilpie	32.77	150	P	P	23 00 22.6	-1.0
	baz=33,SNR=4.8						
QLP	Quilpie	32.77	150	P	P	23 00 24.6	+1.0
	comp=Z,24nm,1.0s						
KMI	Kunming	32.81	318	⇓P	P	23 00 25.2	+0.9
KMI				pP	sP	23 00 39.9	-2.0
KMI				S	S	23 05 36.9	-1.6
KMI				pmax	pmax		
	comp=Z,18nm,1.3s						
KMI				pmax	pmax		
	comp=Z,72nm,3.5s						
KMI				LR	LR		
	comp=Z,200nm,16.8s						
KMI				LR	LR		
	comp=Z,320nm,26.5s						
KMI				LR	LR		
	comp=Z,610nm,28.3s						
ENH	Enshi	32.84	332	P	P	23 00 23.6	-0.6
ENH				IAmb	IAmb	23 00 27.5	
	comp=Z,52nm,0.9s						
BLDU	Ballidu	33.32	196	P	P	23 00 28.5	+0.2
	baz=34,SNR=20						
BLDU	Ballidu	33.32	196	P	P	23 00 30.0	+1.7
	comp=Z,39nm,0.9s						
LCRK	Leigh Creek	33.70	162	P	P	23 00 32.4	+0.7
	comp=Z,95nm,0.8s						
JHJ	Hachijo jima 2	33.79	20	LR	LR	23 14 06.6	
	comp=Z,174nm,19.7s,baz=268,slow=36						
JHS	Saijyo	33.85	10	P	P	23 00 33.9	+1.0
RK1H	Rockhampton Ha	34.03	138	P	P	23 00 34.7	+0.1
	comp=Z,58nm,0.7s						
JWT	Wachi	34.57	13	P	P	23 00 39.5	+0.3
JWT				IAmb	IAmb	23 00 40.8	
	comp=Z,30nm,0.9s						
MUN	Mundaring	34.74	195	P	P	23 00 41.0	+0.4
	baz=35,SNR=18						
MUN	Mundaring	34.74	195	P	P	23 00 42.4	+1.7
	comp=Z,43nm,0.8s						
INU	Inuyama	35.02	15	P	P	23 00 42.4	-0.6
INU				IAmb	IAmb	23 00 44.8	
	comp=Z,59nm,1.2s						
INU	Inuyama	35.02	15	P	P	23 00 43.9	+0.8
	comp=Z,27nm,1.0s						
RMQ	Roma	35.17	144	P	P	23 00 44.2	-0.2

	baz=35,SNR=4.8						
RMQ	**Roma**	**35.17**	**144**	P	**P**	**23 00 48.3**	**+3.8**
	comp=Z,11nm,1.0s						
BBOO	**Buckleboo**	**35.33**	**166**	P	**P**	**23 00 45.6**	**-0.2**
	baz=36,SNR=83						
BBOO	**Buckleboo**	**35.33**	**166**	P	**P**	**23 00 45.1**	**-0.7**
BBOO				IAmb	IAmb	23 00 50.3	
	comp=Z,27nm,0.8s						
BBOO	**Buckleboo**	**35.33**	**166**	P	**P**	**23 00 45.8**	**0.0**
	comp=Z,40nm,0.9s						
NWAO	**Narrogin (SRO)**	**35.39**	**194**	P	**P**	**23 00 46.6**	**+0.4**
	comp=Z,14nm,0.5s,baz=26,slow=8.6,SNR=28						
NWAO	**Narrogin (SRO)**	**35.39**	**194**	P	**P**	**23 00 46.6**	**+0.4**
	baz=36,SNR=11						
NWAO				P	**P**	**23 00 46.6**	**+0.4**
	baz=36,SNR=11						
NWAO	**Narrogin (SRO)**	**35.39**	**194**	P	**P**	**23 00 46.7**	**+0.4**
NWAO				pmax	pmax		
	comp=Z,26nm,0.9s						
NWAO	**Narrogin (SRO)**	**35.39**	**194**	P	**P**	**23 00 46.7**	**+0.4**
NWAO				IAmb	IAmb	23 00 48.6	
	comp=Z,26nm,0.9s						
NWAO	**Narrogin (SRO)**	**35.39**	**194**	P	**P**	**23 00 48.3**	**+2.0**
	comp=Z,50nm,0.8s						
NWAO	**Narrogin (SRO)**	**35.39**	**194**	P	**P**	**23 00 48.2**	**+2.0**
	comp=Z,50nm,0.8s						
KSAR	**Wonju Array Be**	**35.75**	**2**	P	**P**	**23 00 48.8**	**-0.5**
KSAR	**Wonju Array Be**	**35.75**	**2**	P	**P**	**23 00 48.8**	**-0.5**
KSRS	**Korea Array**	**35.76**	**2**	P	**P**	**23 00 50.2**	**+0.9**
	comp=Z,7.9nm,0.8s,baz=179,slow=9.5,SNR=13						
KSRS				PcP	**PcP**	**23 03 17.1**	**+0.6**
	comp=Z,3.8nm,1.1s,baz=192,slow=3.3,SNR=5.1						
EIDS	**Eidsvold**	**35.79**	**140**	P	**P**	**23 00 49.6**	**-0.1**
	baz=36,SNR=7.6						
EIDS	**Eidsvold**	**35.79**	**140**	P	**P**	**23 00 49.2**	**-0.6**
EIDS	**Eidsvold**	**35.79**	**140**	P	**P**	**23 00 52.2**	**+2.4**
	comp=Z,18nm,1.0s						
KS19	**Wonju Array Si**	**35.81**	**2**	P	**P**	**23 00 49.5**	**-0.3**
WHYH	**Whyalla**	**35.94**	**164**	P	**P**	**23 00 50.7**	**-0.2**
	comp=Z,57nm,0.8s						
STKA	**Stephens Creek**	**36.18**	**158**	P	**P**	**23 00 52.6**	**-0.4**
	comp=Z,33nm,0.9s,baz=333,slow=8.5,SNR=40						
STKA				PcP	**PcP**	**23 03 17.9**	**0.0**
	comp=Z,4.6nm,0.4s,baz=304,slow=3.6,SNR=1.9						
STKA				LR	LR	23 17 28.2	
	comp=Z,183nm,21.4s,baz=6.2,slow=39						
STKA	**Stephens Creek**	**36.18**	**158**	P	**P**	**23 00 52.8**	**-0.3**
	baz=36,SNR=17						
STKA	**Stephens Creek**	**36.18**	**158**	P	**P**	**23 00 52.4**	**-0.6**
STKA	**Stephens Creek**	**36.18**	**158**	P	**P**	**23 00 52.7**	**-0.3**
	comp=Z,6.2nm,0.9s						
XAN	**Xi'an**	**36.28**	**335**	P	**P**	**23 00 53.1**	**-0.9**
XAN				pP	pP	23 01 08.6	+2.5
XAN				pmax	pmax		
	comp=Z,16nm,1.0s						
MJAR	**Matsushiro Arr**	**36.47**	**16**	P	**P**	**23 00 54.1**	**-1.3**
	comp=Z,9.0nm,0.7s,baz=184,slow=9.2,SNR=23						
MJAR				LR	LR	23 14 19.0	
	comp=Z,84nm,19.7s,baz=175,slow=34						
MJAR	**Matsushiro Arr**	**36.47**	**16**	P	**P**	**23 00 54.5**	**-1.0**
MJAR				pmax	pmax		
	comp=Z,14nm,0.9s						
MJAR	**Matsushiro Arr**	**36.47**	**16**	P	**P**	**23 00 54.5**	**-1.0**
MAJO	**Matsushiro**	**36.47**	**16**	*c i*P	**P**	**23 00 54.2**	**-1.3**
MAJO				pmax	pmax		
	comp=Z,38nm,1.4s						
MAJO	**Matsushiro**	**36.47**	**16**	P	**P**	**23 00 54.6**	**-0.8**
MAJO				IAmb	IAmb	23 01 00.5	
	comp=Z,18nm,0.8s						
MAJO	**Matsushiro**	**36.47**	**16**	P	**P**	**23 00 55.3**	**-0.2**
	comp=Z,32nm,1.2s						
MAT	**Matsushiro**	**36.47**	**16**	P	**P**	**23 00 54.3**	**-1.2**
HTT	**Hallett**	**36.70**	**163**	P	**P**	**23 00 57.6**	**+0.1**
	baz=37,SNR=34						
HTT	**Hallett**	**36.70**	**163**	P	**P**	**23 00 59.5**	**+2.0**
	comp=Z,17nm,0.9s						
DL2	**Dalian**	**37.46**	**354**	P	**P**	**23 01 05.4**	**+1.6**
DL2				pmax	pmax		
	comp=Z,57nm,0.8s						
CMSA	**Cobar Meteorol**	**37.59**	**153**	P	**P**	**23 01 05.8**	**+0.7**
	baz=38,SNR=11						
CMSA	**Cobar Meteorol**	**37.59**	**153**	P	**P**	**23 01 07.1**	**+2.0**
	comp=Z,20nm,1.5s						
JSD	**Sado**	**37.89**	**15**	P	**P**	**23 01 06.7**	**-0.7**
JSD				IAmb	IAmb	23 01 09.3	
	comp=Z,37nm,0.9s						
JMM	**Marumori**	**38.46**	**18**	P	**P**	**23 01 12.2**	**0.0**
BJT	**Baijiatuau**	**39.44**	**347**	P	**P**	**23 01 20.4**	**0.0**
BJT				pmax	pmax		
	comp=Z,24nm,1.0s						
BJT	**Baijiatuau**	**39.44**	**347**	P	**P**	**23 01 20.4**	**0.0**
BJI	**Beijing**	**39.46**	**347**	P	**P**	**23 01 20.8**	**+0.2**
BJI				pP	**pP**	**23 01 33.5**	**+0.6**
BJI				PcP	**PcP**	**23 03 29.1**	**+1.3**
BJI				S	**S**	**23 07 21.7**	**+2.4**
BJI				pmax	pmax		
	comp=Z,30nm,1.0s						
BJI				LR	LR		
	comp=Z,200nm,12.6s						
ARMA	**Armidale**	**39.78**	**145**	P	**P**	**23 01 24.4**	**+0.9**
	baz=40,SNR=23						
ARMA	**Armidale**	**39.78**	**145**	P	**P**	**23 01 23.7**	**+0.2**
ARMA	**Armidale**	**39.78**	**145**	P	**P**	**23 01 27.8**	**+4.2**
	comp=Z,38nm,0.7s						
LZH	**Lanzhou**	**40.29**	**331**	*e*P	**P**	**23 01 28.1**	**+0.3**
LZH				pP	pwP	23 01 43.8	+1.5
LZH				sP	sP	23 01 51.0	+5.5
LZH				pmax	pmax		
	comp=Z,21nm,1.0s						
LZH				pmax	pmax		
	comp=Z,100nm,5.4s						
LZH				LR	LR		
	comp=Z,340nm,15.3s						
LZH				LR	LR		
	comp=Z,300nm,14.7s						
LZH				LR	LR		
	comp=Z,340nm,15.7s						
ARPS	**Mount Arapiles**	**40.69**	**161**	P	**P**	**23 01 31.2**	**+0.4**
	baz=41,SNR=43						
ARPS	**Mount Arapiles**	**40.69**	**161**	P	**P**	**23 01 31.1**	**+0.3**
	comp=Z,117nm,0.8s						
SHL	**Shillong**	**41.04**	**309**	P	**P**	**23 01 33.7**	**-0.4**
SHL				pmax	pmax		
	comp=Z,26nm,0.8s						
SHL	**Shillong**	**41.04**	**309**	P	**P**	**23 01 33.7**	**-0.4**
SHL				IAmb	IAmb	23 01 41.4	
	comp=Z,26nm,0.8s						
MSHR	**Mys Shultsa**	**41.07**	**5**	⇓*e*P	**P**	**23 01 33.1**	**-0.8**
MSHR				pmax	pmax		
	comp=Z,34nm,1.1s						
YNG	**Young**	**41.15**	**152**	P	**P**	**23 01 37.6**	**+2.9**
	comp=Z,30nm,1.3s						
JTM	**Tenmabayashi**	**41.23**	**17**	P	**P**	**23 01 35.8**	**+0.5**
JTM				IAmb	IAmb	23 01 37.5	
	comp=Z,74nm,0.9s						
HHC	**Hu-ho-hao-te**	**41.41**	**343**	*e*P	**P**	**23 01 40.2**	**+3.3**
HHC				pmax	pmax		
	comp=Z,15nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,9.0s						
HHC				LR	LR		
	comp=Z,190nm,19.2s						
HHC				LR	LR		
	comp=Z,260nm,16.4s						
HHC				LR	LR		
	comp=Z,520nm,18.4s						
CN2	**Changchun**	**42.09**	**359**	*e*P	**P**	**23 01 42.7**	**+0.5**
BRAT	**Ballarat**	**42.10**	**159**	P	**P**	**23 01 44.3**	**+1.9**
	comp=Z,13nm,0.8s						
CAN	**Canberra**	**42.27**	**152**	P	**P**	**23 01 44.4**	**+0.5**
CAN				pmax	pmax		
	comp=Z,66nm,1.4s						
CAN	**Canberra**	**42.27**	**152**	P	**P**	**23 01 44.4**	**+0.5**
CAN				IAmb	IAmb	23 01 49.5	
	comp=Z,66nm,1.4s						
CAN	**Canberra**	**42.27**	**152**	P	**P**	**23 01 47.6**	**+3.7**
	comp=Z,41nm,1.1s						
CNB	**Canberra Magne**	**42.43**	**152**	P	**P**	**23 01 47.1**	**+1.8**
	baz=42,SNR=7.0						
TOO	**Toolangi**	**42.70**	**158**	P	**P**	**23 01 48.5**	**+1.2**
	baz=43,SNR=11						
TOO	**Toolangi**	**42.70**	**158**	P	**P**	**23 01 48.1**	**+0.8**
TOO				pmax	pmax		
	comp=Z,56nm,1.8s						
TOO	**Toolangi**	**42.70**	**158**	P	**P**	**23 01 48.0**	**+0.8**
USA0B	**Ussuriysk Arra**	**42.75**	**6**	P	**P**	**23 01 48.3**	**+0.7**
USA0B				pmax	pmax		
	comp=Z,40nm,1.1s						
USA0B	**Ussuriysk Arra**	**42.75**	**6**	P	**P**	**23 01 48.3**	**+0.7**
USA0B				IAmb	IAmb	23 01 49.4	
	comp=Z,40nm,1.1s						
USRK	**Ussuriysk Ar.**	**42.75**	**6**	P	**P**	**23 01 48.4**	**+0.8**
	comp=Z,30nm,1.0s,baz=194,slow=7.7,SNR=26						
USRK				LR	LR	23 19 59.6	
	comp=Z,57nm,22.0s,baz=177,slow=37						
USRK	**Ussuriysk Ar.**	**42.75**	**6**	P	**P**	**23 01 48.1**	**+0.5**
MDJ	**Mudanjiang**	**42.98**	**3**	P	**P**	**23 01 49.5**	**+0.1**
MDJ				pmax	pmax		
	comp=Z,33nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,170nm,4.4s						
MDJ	**Mudanjiang**	**42.98**	**3**	P	**P**	**23 01 49.6**	**+0.2**
MDJ	**Mudanjiang**	**42.98**	**3**	P	**P**	**23 01 50.6**	**+1.2**
	comp=Z,35nm,0.9s						
LSA	**Lhasa**	**43.75**	**313**	P	**P**	**23 01 57.0**	**+0.5**
LSA				pmax	pmax		
	comp=Z,16nm,0.7s						
LSA	**Lhasa**	**43.75**	**313**	P	**P**	**23 01 57.0**	**+0.5**
ASAJ	**Asahikawa**	**44.73**	**16**	P	**P**	**23 02 03.9**	**+0.3**
	comp=Z,34nm,1.1s,baz=207,slow=12,SNR=10.0						
ASAJ				LR	LR	23 19 09.0	
	comp=Z,126nm,21.6s,baz=210,slow=34						
JKA	**Kamikawa-asahi**	**44.73**	**16**	P	**P**	**23 02 03.8**	**+0.3**
JKA				IAmb	IAmb	23 02 06.0	
	comp=Z,31nm,1.0s						
GTA	**Gaotai**	**44.87**	**330**	⇓P	**P**	**23 02 04.8**	**-0.1**
GTA				PcP	**PcP**	**23 03 47.3**	**+1.3**
GTA				S	**S**	**23 08 34.8**	**-4.7**
GTA				SS	**ScS**	**23 11 52.9**	**-5.6**
GTA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,49nm,5.5s						
GTA				LR	LR		
	comp=Z,180nm,20.0s						
GTA				LR	LR		
	comp=Z,230nm,18.2s						
GTA				LR	LR		
	comp=Z,320nm,21.1s						
LHI	**Lord Howe Isla**	**45.10**	**140**	P	**P**	**23 02 06.4**	**-0.3**
	baz=45,SNR=3.5						
TAPN	**Taplejung**	**45.17**	**308**	*e*P	**P**	**23 02 06.9**	**-0.8**
	comp=Z,45nm,0.8s						
ODAN	**Odare**	**45.20**	**307**	*e*P	**P**	**23 02 07.3**	**-0.5**
	comp=Z,45nm,0.7s						
DZM	**Mont Dzumac**	**45.48**	**123**	*e*P	**P**	**23 02 10.6**	**+0.7**
	comp=Z,14nm,0.6s						
DZM	**Mont Dzumac**	**45.48**	**123**	*e*LR	LR	23 15 07.7	
	comp=Z,347nm,26.9s						
DZM	**Mont Dzumac**	**45.48**	**123**	P	**P**	**23 02 09.4**	**-0.6**
LIFNC	**LIFOU**	**45.60**	**121**	P	**P**	**23 02 09.5**	**-1.3**
RAMN	**Ramite**	**45.87**	**307**	*e*P	**P**	**23 02 12.8**	**-0.3**
	comp=Z,47nm,0.6s						
PALK	**Pallekele**	**46.02**	**279**	P	**P**	**23 02 14.1**	**-0.2**
	comp=Z,7.6nm,0.8s,baz=180,slow=8.9,SNR=6.5						
PALK	**Pallekele**	**46.02**	**279**	P	**P**	**23 02 14.0**	**-0.2**
PALK				IAmb	IAmb	23 03 16.4	
	comp=Z,85nm,1.9s						
JIRN	**Jiri**	**46.51**	**308**	*e*P	**P**	**23 02 17.6**	**-0.7**
	comp=Z,51nm,0.4s						
MARNC	**Mare, Loyalty**	**46.56**	**122**	P	**P**	**23 02 18.2**	**-0.2**
GUN	**Gumba**	**46.87**	**308**	*e*P	**P**	**23 02 20.8**	**-0.3**
	comp=Z,105nm,0.6s						
PKI	**Pulchoki**	**47.09**	**307**	*e*P	**P**	**23 02 22.4**	**-0.4**
PKIN	**Phulchoki**	**47.10**	**307**	*e*P	**P**	**23 02 21.9**	**-1.0**
	comp=Z,12nm,0.4s						
KKN	**Kakani**	**47.29**	**307**	*e*P	**P**	**23 02 23.6**	**-0.7**
	comp=Z,26nm,0.4s						
DMN	**Daman**	**47.35**	**307**	*e*P	**P**	**23 02 23.9**	**-0.9**
	comp=Z,61nm,0.9s						
YSS	**Yuzh-Sakhalins**	**47.39**	**15**	*e*P	**P**	**23 02 24.2**	**-0.2**
YSS				pmax	pmax		
	comp=Z,30nm,1.2s						
YSS				MLR	MLR		
	comp=Z,200nm,18.0s						
YSS	**Yuzh-Sakhalins**	**47.39**	**15**	P	**P**	**23 02 24.1**	**-0.2**
YSS				IAmb	IAmb	23 02 26.3	
	comp=Z,57nm,1.3s						
YSS	**Yuzh-Sakhalins**	**47.39**	**15**	P	**P**	**23 02 25.5**	**+1.1**
	comp=Z,35nm,1.2s						
KLR	**Kul'dur**	**47.72**	**5**	P	**P**	**23 02 27.4**	**+0.5**
	comp=Z,10nm,0.6s,baz=211,slow=7.3,SNR=26						
KLR				LR	LR	23 23 18.8	
	comp=Z,34nm,20.8s,baz=186,slow=37						
KLR	**Kul'dur**	**47.72**	**5**	*c i*P	**P**	**23 02 26.9**	**0.0**
KLR				pmax	pmax		
	comp=Z,31nm,1.3s						
GKN	**Gorkha**	**47.90**	**307**	*e*P	**P**	**23 02 28.1**	**-0.8**
	comp=Z,34nm,0.6s						
HIA	**Hailar**	**47.90**	**354**	P	**P**	**23 02 28.3**	**-0.1**
HIA				pmax	pmax		
	comp=Z,23nm,1.1s						
HIA	**Hailar**	**47.90**	**354**	P	**P**	**23 02 28.3**	**-0.1**
HIA				IAmb	IAmb	23 02 31.6	
	comp=Z,23nm,1.1s						
KOLN	**Koldanda**	**48.63**	**306**	*e*P	**P**	**23 02 34.0**	**-0.6**
	comp=Z,164nm,0.7s						
DANN	**Dangsing**	**48.74**	**307**	*e*P	**P**	**23 02 34.8**	**-0.8**
	comp=Z,172nm,0.7s						
ULN	**Ulaanbaatar**	**49.13**	**343**	*c i*P	**P**	**23 02 37.9**	**-0.1**
ULN				pmax	pmax		
	comp=Z,14nm,0.8s						
ULN	**Ulaanbaatar**	**49.13**	**343**	P	**P**	**23 02 38.4**	**+0.4**
ULN				IAmb	IAmb	23 02 43.7	
	comp=Z,15nm,0.9s						
PYUN	**Piuthan**	**49.25**	**307**	*e*P	**P**	**23 02 38.7**	**-0.7**
	comp=Z,214nm,0.7s						
SONM	**Songino Array**	**49.30**	**342**	P	**P**	**23 02 39.6**	**+0.3**
	comp=Z,7.5nm,0.7s,baz=161,slow=7.5,SNR=39						
SONM				LR	LR	23 25 17.1	
	comp=Z,152nm,21.7s,baz=162,slow=38						
SONM	**Songino Array**	**49.30**	**342**	P	**P**	**23 02 39.4**	**+0.1**
HYB	**Hyderabad**	**49.69**	**292**	*i* P	**P**	**23 02 42.0**	**-0.7**
GRNR	**Gornyy**	**49.76**	**8**	⇑*i*P	**P**	**23 02 42.9**	**+0.3**
GRNR				pmax	pmax		
	comp=Z,20nm,1.2s						
GRNR				MLR	MLR		
	comp=E,150nm,13.0s						
GRNR				MLR	MLR		
	comp=N,140nm,15.0s						
GRNR				MLR	MLR		
	comp=Z,60nm,18.0s						
CIT	**Chita**	**51.47**	**350**	*e*P	**P**	**23 02 55.8**	**+0.3**
CIT				*e*		23 03 13.3	
CIT				pmax	pmax		
	comp=Z,79nm,1.2s						
ZEA	**Zeya**	**52.03**	**1**	*e*P	**P**	**23 02 58.7**	**-0.8**
ZEA				pmax	pmax		
	comp=N,10.0nm,1.1s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZAK	**Zakamensk**	**52.52**	**341**	*e*P	**P**	**23 03 02.8**	**-0.6**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
MSVF	**Nonsavu**	**54.22**	**113**	⇑*e*P	**P**	**23 03 18.3**	**+1.9**
MSVF	**Nonsavu**	**54.22**	**113**	P	**P**	**23 03 16.6**	**+0.2**
MSVF				IAmb	IAmb	23 03 45.6	
	comp=Z,44nm,1.2s						
MOY	**Mondy**	**54.36**	**341**	*e*P	**P**	**23 03 17.6**	**+0.7**
MOY				pmax	pmax		
	comp=Z,42nm,2.7s						
WMQ	**Urumqi**	**54.40**	**326**	*e*P	**P**	**23 03 18.1**	**+0.8**
WMQ				sP	sP	23 03 41.4	+6.0
WMQ				pmax	pmax		
	comp=Z,33nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,79nm,3.8s						
WMQ				LR	LR		
	comp=Z,460nm,28.9s						
WMQ				LR	LR		
	comp=Z,620nm,29.0s						
WMQ				LR	LR		
	comp=Z,270nm,19.5s						
BOD	**Bodaibo**	**56.99**	**352**	*e*P	**P**	**23 03 35.9**	**+0.4**
BOD				pmax	pmax		
	comp=Z,39nm,1.4s						
PEA0B	**Petropavlovsk-**	**57.52**	**22**	P	**P**	**23 03 39.6**	**+0.2**
PEA0B				pmax	pmax		
	comp=Z,121nm,1.4s						
PEA0B	**Petropavlovsk-**	**57.52**	**22**	P	**P**	**23 03 39.6**	**+0.2**
PETK	**Petropavlovsk-**	**57.52**	**22**	P	**P**	**23 03 40.0**	**+0.7**
	comp=Z,9.5nm,0.8s,baz=185,slow=5.0,SNR=18						
PETK	**Petropavlovsk-**	**57.52**	**22**	P	**P**	**23 03 39.0**	**-0.4**
ZSN	**Zaisan**	**58.23**	**328**	*e*P	**P**	**23 03 43.4**	**-1.2**
	baz=328						
ZSN	**Zaisan**	**58.23**	**328**	*e*P	**P**	**23 03 43.3**	**-1.2**
DGZ	**Jazzator, Alta**	**58.40**	**331**	*de*P	**P**	**23 03 46.0**	**+0.3**
DGZ				pmax	pmax		
	comp=Z,14nm,1.7s						
SHLS	**Shalkode**	**58.90**	**321**	*e*P	**P**	**23 03 47.2**	**-2.2**
	comp=Z,15nm,0.9s,baz=321						
SHLS	**Shalkode**	**58.90**	**321**	*e*P	**P**	**23 03 47.2**	**-2.2**
SHLS				pmax	pmax		
	comp=Z,15nm,0.9s						
NIL	**Nilore**	**59.11**	**309**	P	**P**	**23 03 50.7**	**-0.2**
NIL				pmax	pmax		
	comp=Z,14nm,0.8s						
NIL	**Nilore**	**59.11**	**309**	P	**P**	**23 03 50.7**	**-0.2**
NIL				IAmb	IAmb	23 04 06.3	
	comp=Z,14nm,0.8s						
UZB	**Uzynbulak**	**59.17**	**321**	*e*P	**P**	**23 03 50.2**	**-1.1**
	comp=Z,6.1nm,0.7s,baz=321						
UZB	**Uzynbulak**	**59.17**	**321**	*e*P	**P**	**23 03 50.1**	**-1.1**
UZB				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MK31	**Makanchi Array**	**59.24**	**326**	*d i*P	**P**	**23 03 51.1**	**-0.4**
MK31	**Makanchi Array**	**59.24**	**326**	P	**P**	**23 03 51.1**	**-0.4**
MK31				IAmb	IAmb	23 03 54.4	
	comp=Z,23nm,1.1s						
MKAR	**Makanchi Array**	**59.24**	**326**	P	**P**	**23 03 51.9**	**+0.4**
	comp=Z,14nm,0.4s,baz=119,slow=7.6,SNR=166						
MKAR	**Makanchi Array**	**59.24**	**326**	*i* P	**P**	**23 03 51.2**	**-0.3**
MKAR				pmax	pmax		
	comp=Z,14nm,0.4s						
MKAR	**Makanchi Array**	**59.24**	**326**	P	**P**	**23 03 51.1**	**-0.3**
TARG	**Taragay, Kyrgy**	**59.25**	**319**	P	**P**	**23 03 52.6**	**+0.4**
TARG				IAmb	IAmb	23 04 02.0	
	comp=Z,12nm,0.8s						
QRZ	**Quartz Range**	**59.37**	**141**	P	**P**	**23 03 52.3**	**-0.1**
QRZ				IAmb	IAmb	23 04 14.0	
	comp=Z,44nm,1.2s						
MAKZ	**Makanchi**	**59.42**	**326**	P	**P**	**23 03 52.6**	**-0.2**
MAKZ				pmax	pmax		
	comp=Z,31nm,1.1s						
MAKZ	**Makanchi**	**59.42**	**326**	P	**P**	**23 03 52.6**	**-0.2**
MAKZ				IAmb	IAmb	23 03 55.6	
	comp=Z,31nm,1.1s						
KSH	**Kashi**	**59.45**	**316**	P	**P**	**23 03 54.1**	**+0.8**
KSH				pP	pP	23 04 07.9	+1.7
KSH				PcP	**PcP**	**23 04 41.9**	**+1.3**
KSH				pmax	pmax		
	comp=Z,16nm,0.7s						
SATY	**Saty**	**59.52**	**321**	*e*P	**P**	**23 03 53.0**	**-0.7**
	comp=Z,14nm,0.8s,baz=321						
SATY	**Saty**	**59.52**	**321**	*e*P	**P**	**23 03 52.9**	**-0.7**
SATY				pmax	pmax		
	comp=Z,14nm,0.8s						
KPKS	**Kokpek**	**59.55**	**321**	*e*P	**P**	**23 03 53.6**	**-0.2**
	comp=Z,11nm,0.7s,baz=321						
KPKS	**Kokpek**	**59.55**	**321**	*e*P	**P**	**23 03 53.6**	**-0.2**
KPKS				pmax	pmax		
	comp=Z,11nm,0.7s						
LBZ	**Lake Benmore**	**60.01**	**145**	P	**P**	**23 03 56.7**	**-0.1**
RPZ	**Rata Peaks**	**60.11**	**144**	P	**P**	**23 03 57.2**	**-0.3**
YAK	**Yakutsk**	**60.39**	**2**	P	**P**	**23 03 59.4**	**+0.4**
	comp=Z,14nm,0.6s,baz=60,slow=0.6,SNR=18						
YAK	**Yakutsk**	**60.39**	**2**	*d i*P	**P**	**23 03 59.6**	**+0.6**
YAK				*e**PP	**sP**	**23 04 16.1**	**-0.9**
YAK				*e*		23 04 44.0	
YAK				*e*		23 06 07.5	
YAK				*e*S	**S**	**23 12 10.2**	**0.0**
YAK				*e**SS	**sS**	**23 12 37.9**	**+6.2**
YAK				*e*		23 13 38.3	
YAK				*e*SS	**SS**	**23 16 09.3**	**+0.6**
YAK				pmax	pmax		
	comp=Z,38nm,0.8s						
YAK				pmax	pmax		
	comp=N,26nm,1.3s						
YAK				pmax	pmax		
	comp=E,11nm,1.5s						
YAK				pmax	pmax		
	comp=Z,384nm,3.8s						
YAK				pmax	pmax		
	comp=N,412nm,4.6s						
YAK				pmax	pmax		
	comp=E,493nm,4.3s						
YAK				smax	smax		
	comp=N,333nm,3.3s						
YAK				smax	smax		
	comp=E,232nm,3.7s						
YAK	**Yakutsk**	**60.39**	**2**	P	**P**	**23 03 59.1**	**+0.1**
MDOK	**Medeo**	**60.43**	**320**	*e*P	**P**	**23 03 59.1**	**-0.9**
	baz=320						
MDOK	**Medeo**	**60.43**	**320**	*e*P	**P**	**23 03 59.0**	**-0.9**
TNSS	**Tian-Shan**	**60.44**	**320**	*e*P	**P**	**23 03 58.7**	**-1.6**
	baz=320						
TDK	**Taldyqorghan**	**60.51**	**323**	*e*P	**P**	**23 03 59.7**	**-0.6**
	comp=E,21nm,0.7s,baz=323						
TDK	**Taldyqorghan**	**60.51**	**323**	*e*P	**P**	**23 03 59.7**	**-0.6**
TDK				pmax	pmax		
	comp=Z,21nm,0.7s						
AAA	**Alma-Ata**	**60.54**	**320**	*e*P	**P**	**23 03 59.5**	**-1.1**
	baz=320						
AAA	**Alma-Ata**	**60.54**	**320**	*e*P	**P**	**23 03 59.5**	**-1.1**
CHKK	**Chushkaly**	**60.81**	**321**	*e*P	**P**	**23 04 01.6**	**-0.7**
	baz=321						
MA2	**Magadan**	**60.86**	**14**	⇓*e*P	**P**	**23 04 03.7**	**+1.4**
MA2				pmax	pmax		
	comp=Z,178nm,2.5s						
MA2	**Magadan**	**60.86**	**14**	P	**P**	**23 04 02.9**	**+0.5**
URZ	**Urewera**	**61.10**	**136**	LR	LR	23 28 35.7	
	comp=Z,71nm,21.4s,baz=211,slow=34						
BKZ	**Black Stump Fm**	**61.11**	**137**	P	**P**	**23 04 03.4**	**-1.1**
BKZ				IAmb	IAmb	23 04 07.8	
	comp=Z,12nm,0.8s						
KUU	**Kurty**	**61.24**	**321**	⇓*i*P	**P**	**23 04 05.2**	**-0.1**
	comp=Z,31nm,0.7s,baz=321						
KUU	**Kurty**	**61.24**	**321**	*d i*P	**P**	**23 04 05.1**	**-0.1**
KUU				pmax	pmax		
	comp=Z,31nm,0.7s						
TKM2	**Tokmak 2**	**61.25**	**319**	P	**P**	**23 04 05.8**	**+0.2**
	SNR=27						
UCH	**Uchtor**	**61.65**	**318**	P	**P**	**23 04 08.6**	**0.0**
	SNR=19						
CHMS	**Chumysh**	**61.84**	**319**	P	**P**	**23 04 09.6**	**+0.2**
	SNR=6.9						
AAK	**Ala-Archa**	**61.85**	**319**	P	**P**	**23 04 09.5**	**0.0**
	comp=Z,4.7nm,0.8s,baz=124,slow=3.6,SNR=8.3						
AAK	**Ala-Archa**	**61.85**	**319**	⇓*e*P	**P**	**23 04 09.8**	**+0.3**
AAK				pmax	pmax		
	comp=Z,14nm,0.7s						
AAK	**Ala-Archa**	**61.85**	**319**	P	**P**	**23 04 09.7**	**+0.1**
SGDS	**Sogindy**	**62.13**	**320**	*e*P	**P**	**23 04 10.4**	**-0.9**
	baz=320						
USP	**Ospenovka**	**62.13**	**319**	P	**P**	**23 04 11.3**	**0.0**
	SNR=16						
AML	**Almayashu**	**62.16**	**318**	P	**P**	**23 04 12.4**	**+0.5**
	SNR=20						
EKS2	**Erkin-Say**	**62.33**	**318**	P	**P**	**23 04 13.3**	**+0.6**
	SNR=22						
ZAA0	**Zalesovo Array**	**62.44**	**334**	P	**P**	**23 04 11.8**	**-1.2**
ZALV	**Zalesovo Beam**	**62.44**	**334**	P	**P**	**23 04 12.7**	**-0.4**
	comp=Z,13nm,1.0s,baz=125,slow=6.3,SNR=12						
ZALV				LR	LR	23 33 03.2	
	comp=Z,66nm,21.0s,baz=37,slow=38						
ZALV	**Zalesovo Beam**	**62.44**	**334**	P	**P**	**23 04 12.3**	**-0.8**
SEM	**Semipalatinsk**	**62.44**	**329**	*e*P	**P**	**23 04 11.3**	**-2.2**
	baz=329						
SEM	**Semipalatinsk**	**62.44**	**329**	*e*P	**P**	**23 04 11.2**	**-2.2**
KBL	**Kabul**	**62.70**	**308**	P	**P**	**23 04 14.6**	**-0.9**
KBL				pmax	pmax		
	comp=Z,24nm,0.8s						
KBL	**Kabul**	**62.70**	**308**	P	**P**	**23 04 14.6**	**-0.9**
KBL				IAmb	IAmb	23 04 17.0	
	comp=Z,24nm,0.8s						
BTLS	**Baital**	**63.23**	**321**	*e*P	**P**	**23 04 16.5**	**-2.1**
	baz=321						
BTLS	**Baital**	**63.23**	**321**	*e*P	**P**	**23 04 16.4**	**-2.1**
GAR	**Garm**	**63.26**	**314**	P	**P**	**23 04 18.2**	**-0.8**
BTK	**Batken**	**63.30**	**315**	P	**P**	**23 04 19.0**	**-0.2**
BTK				pmax	pmax		
	comp=Z,18nm,0.8s						
BTK	**Batken**	**63.30**	**315**	P	**P**	**23 04 18.9**	**-0.2**
BTK				IAmb	IAmb	23 04 22.8	
	comp=Z,18nm,0.8s						
KURBB	**Kurchatov Arra**	**63.47**	**328**	P	**P**	**23 04 20.1**	**+0.1**
	comp=Z,25nm,0.6s,baz=128,slow=6.2,SNR=74						
KURK	**Kurchatov**	**63.47**	**328**	*d i*P	**P**	**23 04 20.2**	**+0.2**

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KURK                                pmax      pmax
       comp=Z,48nm,0.7s
KURK   Kurchatov          63.47 328   P         P          23 04 19.8  -0.2
CHGR   Chuyangaron        63.98 313   P         P          23 04 22.8  -0.9
DZA    Taraz              64.06 318  eP         P          23 04 23.0  -1.1
       baz=318
DZA    Taraz              64.06 318  eP         P          23 04 22.9  -1.1
SEY    Seymchan           64.20  13   P         P          23 04 24.9  +0.4
       comp=Z,25nm,1.0s,baz=197,slow=5.4,SNR=8.5
SEY    Seymchan           64.20  13⇑eP         P          23 04 25.8  +1.3
IUG    Iuzhnay            64.65 317  eP         P          23 04 27.8  -0.2
       baz=317
IUG    Iuzhnay            64.65 317  eP         P          23 04 27.8  -0.2
KK31   Karatay Array      64.69 318   P         P          23 04 27.7  -0.5
KK31                                pmax      pmax
       comp=Z,13nm,0.8s
KK31   Karatay Array      64.69 318   P         P          23 04 27.7  -0.5
KK31                                IAmb      IAmb         23 04 32.2
       comp=Z,13nm,0.8s
KKAR   Karatay Array      64.69 318   P         P          23 04 27.6  -0.6
KKAR   Karatay Array      64.69 318   P         P          23 04 27.6  -0.6
BRLS   Borolday           65.12 318  eP         P          23 04 29.5  -1.5
       baz=317
BRLS   Borolday           65.12 318  eP         P          23 04 29.5  -1.5
BRZS   Berezniki          66.35 325  eP         P          23 04 38.5  -0.3
       baz=325
BRZS   Berezniki          66.35 325  eP         P          23 04 38.5  -0.3
HRA    Herat              68.05 307   P         P          23 04 49.4  -0.7
CASY   Casey              68.63 187   P         P          23 04 53.2  +0.5
CASY                                IAmb      IAmb         23 05 50.4
       comp=Z,49nm,1.3s
BRVK   Borovoye           69.11 328c iP         P          23 04 55.5  -0.6
BRVK                                pmax      pmax
       comp=Z,13nm,0.7s
BRVK   Borovoye           69.11 328   P         P          23 04 56.0   0.0
BRVK                                IAmb      IAmb         23 04 59.1
       comp=Z,31nm,1.4s
WSAR   Wadi Sarin         69.12 294   P         P          23 04 57.0  +0.3
       comp=Z,3.0nm,0.6s,baz=135,slow=6.6,SNR=2.6
TIXI   Tiksi              70.02   1   P         P          23 05 01.1  -0.2
       comp=Z,8.2nm,0.7s,baz=163,slow=3.7,SNR=22
TIXI   Tiksi              70.02   1ceP         P          23 05 00.2  -1.1
TIXI   Tiksi              70.02   1   P         P          23 05 00.5  -0.8
TIXI                                IAmb      IAmb         23 05 01.7
       comp=Z,35nm,1.3s
UOSS   Minazif            71.53 296   P         P          23 05 10.8  -0.6
BILL   Bilibino           71.71  15⇓eP         P          23 05 12.1  +0.5
BILL                                e*PP      pP           23 05 26.0  +1.1
BILL                                e                      23 05 28.7
BILL                                pmax      pmax
       comp=Z,58nm,4.0s
BILL                                MLR       MLR
       comp=Z,69nm,17.0s
GEYT   Alibeck            72.11 309   P         P          23 05 14.9  +0.2
       comp=Z,7.7nm,0.8s,baz=188,slow=10,SNR=9.6
GYA0B  ALIBECK ARRAY      72.11 309   P         P          23 05 14.4  -0.3
GYA0B                               IAmb      IAmb         23 05 21.4
       comp=Z,13nm,0.7s
NRIK   Noril'sk           72.50 346   P         P          23 05 16.8  +0.5
       comp=Z,9.4nm,0.6s,baz=132,slow=6.5,SNR=20
NRIK   Noril'sk           72.50 346c iP         P          23 05 16.2  -0.1
NRIK                                pmax      pmax
       comp=Z,32nm,1.2s
NRIK   Noril'sk           72.50 346   P         P          23 05 16.4  +0.2
NRIK                                IAmb      IAmb         23 05 17.6
       comp=Z,26nm,1.1s
SOCY   Socotra            72.61 282   P         P          23 05 16.8  -1.4
SOCY                                IAmb      IAmb         23 05 20.7
       comp=Z,21nm,0.7s
ABKAR  Akbulak array      73.71 321   P         P          23 05 23.3  -0.6
ABKAR  Akbulak array      73.71 321   P         P          23 05 23.8  -0.1
ABKAR                               IAmb      IAmb         23 05 31.4
       comp=Z,15nm,1.1s
UNV    Unalaska Valle     75.33  34   P         P          23 05 32.3  -0.9
SVE    Sverdlovsk         75.71 329d iP         P          23 05 35.4  +0.1
SVE                                 pmax      pmax
       comp=Z,110nm,1.1s
AKUT   Akutan             75.83  34   P         P          23 05 36.2  +0.2
ARU    Arti               76.67 328c iP         P          23 05 40.1  -0.7
ARU                                 *SP       sP           23 06 00.4  +1.0
ARU                                                        23 08 29.3
ARU                                 PPP       PPP          23 10 18.8
ARU                                 S         S            23 15 24.4  +0.6
ARU                                 pmax      pmax
       comp=Z,68nm,1.1s
ARU    Arti               76.67 328   P         P          23 05 40.4  -0.4
FALS   False Pass         77.35  34   P         P          23 05 44.6  +0.1
       baz=254
SDPT   Sand Point         79.11  34   P         P          23 05 54.8  +0.4
       baz=257
VOI    Vohitsoka          81.05 248   P         P          23 06 06.1  +0.4
VOI                                 IAmb      IAmb         23 06 14.1
       comp=Z,20nm,1.0s
RAYN   Ar Rayn            81.16 293   P         P          23 06 05.5  -0.6
RAYN                                pmax      pmax
       comp=Z,14nm,0.8s
RAYN   Ar Rayn            81.16 293   P         P          23 06 05.5  -0.6
VNDA   Vanda              81.29 173   P         P          23 06 06.0  +0.3
       comp=Z,22nm,0.7s,baz=317,slow=6.4,SNR=127
VNDA                                LR        LR           23 41 52.6
       comp=Z,60nm,20.1s,baz=336,slow=35
VNDA   Vanda              81.29 173   P         P          23 06 06.0  +0.3
VNDA   Vanda              81.29 173   P         P          23 06 06.0  +0.3
VNDA                                IAmb      IAmb         23 06 10.1
       comp=Z,24nm,0.8s
RDOG   Red Dog Mine       81.39  21   P         P          23 06 13.7  +7.3
       baz=252
MAW    Mawson             81.64 200   P         P          23 06 08.3  +0.6
       comp=Z,3.4nm,0.4s,baz=91,slow=4.7,SNR=12
MAW                                 LR        LR           23 39 00.9
       comp=Z,41nm,20.4s,baz=60,slow=33
MAW    Mawson             81.64 200   P         P          23 06 08.6  +0.9
       baz=82,SNR=12
MAW    Mawson             81.64 200   P         P          23 06 08.4  +0.7
MAW                                 pmax      pmax
       comp=Z,6.0nm,1.5s
MAW    Mawson             81.64 200   P         P          23 06 08.4  +0.7
BTLR   Botlikh            81.82 313ceP         P          23 06 09.4  +0.1
KIRV   Kirov              81.98 329ceP         P          23 06 09.5  -0.1
GROC   Groznyy            82.19 313  eP         P          23 06 09.1  -2.0
GROC                                e*PP      pP           23 06 22.5  -2.1
GROC                                e*SP      sP           23 06 29.2  -0.5
GROC                                e                      23 09 15.8
GROC                                pmax      pmax
       comp=Z,35nm,1.0s
SBA    Scott Base         82.21 172   P         P          23 06 11.5  +1.0
SBA                                 pmax      pmax
       comp=Z,15nm,0.9s
SBA    Scott Base         82.21 172   P         P          23 06 11.5  +1.0
SBA                                 IAmb      IAmb         23 06 28.0
       comp=Z,15nm,0.8s
GNI    Garni              82.72 310ceP         P          23 06 15.2  +1.0
GNI                                 pmax      pmax
       comp=Z,39nm,1.6s
GNI    Garni              82.72 310   P         P          23 06 14.9  +0.7
GNI                                 IAmb      IAmb         23 06 28.9
       comp=Z,26nm,0.8s
SII    Sitkinak Islan     82.81  33   P         P          23 06 16.7  +2.7
       baz=262
GCSA   Galena City Sc     82.90  25   P         P          23 06 15.5  +1.2
       baz=258
TTA    Tatalina           82.93  27   P         P          23 06 15.6  +0.9
TTA                                 pmax      pmax
       comp=Z,45nm,1.3s
TTA    Tatalina           82.93  27   P         P          23 06 15.8  +1.1
       baz=259
TTA    Tatalina           82.93  27   P         P          23 06 15.6  +0.9
TTA                                 IAmb      IAmb         23 06 17.1
       comp=Z,45nm,1.3s
N19K   Bonanza Creek      83.29  29   P         P          23 06 18.2  +1.6
       baz=261
N19K   Bonanza Creek      83.29  29   P         P          23 06 17.2  +0.7
L19K   White Mountain     83.33  28   P         P          23 06 18.0  +1.3
       baz=261
L19K   White Mountain     83.33  28   P         P          23 06 17.5  +0.9
OHAK   Old Harbor         83.39  33   P         P          23 06 17.8  +0.8
       baz=262
M19K   Big River Lodg     83.50  28   P         P          23 06 18.9  +1.4
       baz=261
M19K   Big River Lodg     83.50  28   P         P          23 06 18.4  +0.9
M19K                                IAmb      IAmb         23 06 20.3
       comp=Z,43nm,1.4s
ZEI    Tsey               83.54 313  eP         P          23 06 17.8  -0.6
ZEI                                 pmax      pmax
       comp=Z,16nm,0.9s
NCK    Nalchik            83.81 313⇑eP         P          23 06 19.8  +0.3
NCK                                 pmax      pmax
       comp=Z,29nm,0.8s
L20K   Farewell, AK       83.83  27   P         P          23 06 20.5  +1.3
       baz=261
KDAK   Kodiak Island      83.84  32   P         P          23 06 19.0  -0.3
       comp=Z,16nm,0.8s,baz=306,slow=6.3,SNR=7.7
KDAK   Kodiak Island      83.84  32   P         P          23 06 19.0  -0.3
J20K   Nowinta River      83.97  26   P         P          23 06 21.7  +1.8
       baz=261
J20K   Nowinta River      83.97  26   P         P          23 06 20.5  +0.7
J20K                                IAmb      IAmb         23 06 22.6
       comp=Z,48nm,1.6s
KARS   Kars               84.02 311   P         P          23 06 21.9  +1.1
KARS                                pmax      pmax
       comp=Z,110nm,0.9s
KARS   Kars               84.02 311   P         P          23 06 21.9  +1.1
GOF    Gofitskoye         84.30 315⇑eP         P          23 06 22.7  +0.7
GOF                                 pmax      pmax
       comp=Z,39nm,1.0s
PRGR   Permogore          84.32 332  eP         P          23 06 21.2  -0.4
PRGR                                pmax      pmax
       comp=Z,90nm,1.2s
KBZ    Khabaz             84.33 314   P         P          23 06 22.1   0.0
       comp=Z,19nm,1.0s,baz=131,slow=2.3,SNR=28
KBZ                                 LR        LR           23 50 05.6
       comp=Z,30nm,18.9s,baz=59,slow=40
KBZ    Khabaz             84.33 314c iP         P          23 06 22.4  +0.3
KBZ                                 pmax      pmax
       comp=Z,29nm,1.1s
A21K   Barrow             84.35  18   P         P          23 06 24.2  +2.6
       baz=258
SIRT   Sirnak             84.37 307   P         P          23 06 23.5  +0.9
IMAR   Indian Mountai     84.41  24   P         P          23 06 22.5  +0.4
NEY    Neytrino           84.43 313⇑eP         P          23 06 23.5  +0.6
NEY                                 pmax      pmax
       comp=Z,14nm,1.8s
KIV    Kislovodsk         84.50 314  eP         P          23 06 23.1   0.0
KIV                                 pmax      pmax
       comp=Z,18nm,1.0s
KIV                                 MLR       MLR
       comp=Z,50nm,19.0s
KIV    Kislovodsk         84.50 314   P         P          23 06 23.2  +0.1
KIV                                 IAmb      IAmb         23 06 25.5
       comp=Z,18nm,1.0s
SPU    Mount Spurr        84.51  29   P         P          23 06 23.0  +0.2
PPT    Papeete            84.64 108   LR        LR         23 44 25.8
       comp=Z,47nm,18.0s,baz=140,slow=36
PPT2   Papeete2           84.64 108  eLR        LR         23 33 03.4
       comp=Z,178nm,26.2s
CHUM   Lake Minchumin     84.72  26   P         P          23 06 25.0  +1.4
       baz=263
GURO   Guroymak-BITLI     84.73 308   P         P          23 06 25.3  +0.8
H21K   Melozitna Rive     84.75  24   P         P          23 06 25.7  +1.9
       baz=262
H21K   Melozitna Rive     84.75  24   P         P          23 06 24.3  +0.5
H21K                                IAmb      IAmb         23 06 26.4
       comp=Z,32nm,1.6s
SKT    Skwentna           84.85  28   P         P          23 06 24.8  +0.4
       baz=264
SKT    Skwentna           84.85  28   P         P          23 06 24.1  -0.3
SKT                                 IAmb      IAmb         23 06 46.4
       comp=Z,12nm,1.0s
I21K   Tanana             85.03  25   P         P          23 06 27.1  +1.9
       baz=263
I21K   Tanana             85.03  25   P         P          23 06 25.2  +0.1
I21K                                IAmb      IAmb         23 06 59.0
       comp=Z,22nm,1.4s
M22K   Willow             85.50  28   P         P          23 06 28.6  +1.1
       baz=265
MLY    Manley             85.54  25   P         P          23 06 29.8  +2.0
       baz=264
MLY    Manley             85.54  25   P         P          23 06 27.9  +0.2
MLY                                 IAmb      IAmb         23 07 04.8
       comp=Z,24nm,1.8s
VRH    Novokhopyorsk      85.54 321  eP         P          23 06 27.2  -0.8
VRH                                 pmax      pmax
       comp=Z,90nm,1.3s
SEW    Seward             85.68  30   P         P          23 06 30.1  +1.6
       baz=266
PMR    Palmer             85.95  28   P         P          23 06 30.0  +0.2
PMR                                 pmax      pmax
       comp=Z,24nm,1.1s
PMR    Palmer             85.95  28   P         P          23 06 30.2  +0.4
       baz=266
PMR    Palmer             85.95  28   P         P          23 06 30.0  +0.2
PMR                                 IAmb      IAmb         23 06 55.9
       comp=Z,24nm,1.1s
H23K   Yukon River        86.11  24   P         P          23 06 31.5  +0.9
       baz=265
H23K   Yukon River        86.11  24   P         P          23 06 30.6   0.0
H23K                                IAmb      IAmb         23 06 36.1
       comp=Z,24nm,1.6s
I23K   Minto, Yukon-K     86.13  25   P         P          23 06 31.6  +1.0
       baz=265
MCK    McKinley           86.20  26   P         P          23 06 32.0  +1.0
       baz=266
KNK    Knik Glacier       86.26  29   P         P          23 06 32.3  +0.9
       baz=266
TOLK   Toolik Lake Re     86.34  21   P         P          23 06 33.1  +1.4
       baz=265
TOLK   Toolik Lake Re     86.34  21   P         P          23 06 32.0  +0.3
TOLK                                IAmb      IAmb         23 06 37.5
       comp=Z,25nm,1.5s
SML    Sawmill            86.35  28   P         P          23 06 33.7  +1.8
       baz=266
SOC    Sochi              86.63 313  eP         P          23 06 30.6  -3.0
SOC                                 e                      23 09 59.4
SOC                                 ePPP      PPP          23 11 47.1
SOC                                 eS        S            23 16 52.0   -15
SOC                                 eSS       SS           23 22 48.4  -0.5
SOC                                 eSSS      SSS          23 26 18.2
SOC                                 pmax      pmax
       comp=Z,25nm,0.9s
SOC                                 MLR       MLR
       comp=Z,103nm,21.0s
WAT6   Susitna Watana     86.67  28   P         P          23 06 34.5  +1.0
       baz=267
CCB    Clear Creek Bu     86.75  25   P         P          23 06 32.8  -0.9
H24K   Noodor Dome        86.79  24   P         P          23 06 35.0  +1.1
       baz=267
H24K   Noodor Dome        86.79  24   P         P          23 06 34.1  +0.2
H24K                                IAmb      IAmb         23 07 47.0
       comp=Z,34nm,1.9s
VORD   Divnogorie         87.07 321  eP         P          23 06 34.8  -0.7
VORD                                pmax      pmax
       comp=Z,20nm,0.7s
HDA    Harding Lake       87.11  26   P         P          23 06 34.3  -1.1
       baz=268
VSR    Storozhevoye       87.15 321  eP         P          23 06 35.6  -0.3
VSR                                 pmax      pmax
       comp=Z,20nm,0.9s
IL31                      87.16  25   P         P          23 06 34.7  -0.9
ILAR   Eielson Array      87.16  25   P         P          23 06 34.6  -1.1
       comp=Z,1.3nm,0.5s,baz=243,slow=4.9,SNR=16
ILAR   Eielson Array      87.16  25   P         P          23 06 35.3  -0.4
ILAR   Eielson Array      87.16  25   P         P          23 06 35.3  -0.4
KLMR   Klimovskoe         87.20 331  eP         P          23 06 33.6  -2.3
KLMR                                pmax      pmax
       comp=Z,23nm,0.9s
KLMR   Klimovskoe         87.20 331  eP         P          23 06 33.6  -2.3
KLMR                                AMP                    23 06 38.8
       comp=Z,23nm,0.9s
LPSR   Galich'ya Gora     87.32 322  eP         P          23 06 36.1  -0.6
LPSR                                pmax      pmax
       comp=Z,30nm,0.9s
PAX    Paxson             87.73  27   P         P          23 06 39.0  +0.4
PAX                                 pmax      pmax
       comp=Z,21nm,1.5s
PAX    Paxson             87.73  27   P         P          23 06 39.9  +1.3
       baz=269
PAX    Paxson             87.73  27   P         P          23 06 39.0  +0.4
PAX                                 IAmb      IAmb         23 06 41.5
       comp=Z,21nm,1.5s
HARP   HAARP              87.86  28   P         P          23 06 41.0  +1.9
       baz=269
RIDG   Independent Ri     88.02  26   P         P          23 06 40.9  +1.0
       baz=269
MOS    Moscow             88.12 326  eP         P          23 06 39.5  -0.9
BMAR   Burnt Mountain     88.16  23   P         P          23 06 40.6  +0.1
ANN    Anapa              88.28 315  eP         P          23 06 40.7  -0.8
ANN                                 e*PP      pP           23 06 54.0  -1.1
ANN                                 e                      23 10 06.8
ANN                                 ePPP      PPP          23 12 06.1
ANN                                 eS        S            23 17 04.8   -18
ANN                                 pmax      pmax
       comp=Z,48nm,0.7s
DOT    Dot Lake           88.37  27   P         P          23 06 40.8  -0.7
DOT                                 IAmb      IAmb         23 07 07.4
       comp=Z,15nm,1.4s
SCRK   Sand Creek         88.40  26   P         P          23 06 41.3  -0.5
SCRK                                IAmb      IAmb         23 09 41.6
       comp=Z,23nm,1.8s
GAZ    Gaziantep          88.53 307   P         P          23 06 41.6  -1.3
GAZ                                 IAmb      IAmb         23 06 46.4
       comp=Z,9.1nm,0.7s
KIBK   Kibwezi            88.54 268   P         P          23 06 43.1  -0.4
KIBK                                IAmb      IAmb         23 06 49.9
       comp=Z,18nm,1.0s
J26L   Joseph Creek       88.58  26   P         P          23 06 42.5  -0.1
       baz=270
OBN    Obninsk            88.72 325deP         P          23 06 43.0  -0.3
OBN                                 *PP       sP           23 07 00.0  -2.1
OBN                                 eS        SKSac        23 17 05.3  -3.4
OBN                                 e*SS      S            23 17 27.7  +1.1
OBN                                 SSS       SSS          23 26 52.0
OBN                                 pmax      pmax
       comp=Z,55nm,1.7s
OBN                                 MLR       MLR
       comp=Z,130nm,21.0s
OBN    Obninsk            88.72 325   P         P          23 06 42.4  -0.9
KMBO   Kilima Mbogo       89.30 269   P         P          23 06 46.3  -1.0
       comp=Z,5.8nm,0.8s,baz=197,slow=20,SNR=11
KMBO                                LR        LR           23 43 46.0
       comp=Z,76nm,20.0s,baz=104,slow=34
KMBO   Kilima Mbogo       89.30 269 i P         P          23 06 46.9  -0.4
KMBO                                pmax      pmax
       comp=Z,6.0nm,0.8s
KMBO   Kilima Mbogo       89.30 269   P         P          23 06 45.0  -2.2
KMBO                                IAmb      IAmb         23 06 53.8
       comp=Z,14nm,1.0s
L27K   Beaver Creek,      89.39  27   P         P          23 06 47.2  +0.8
       baz=272
L27K   Beaver Creek,      89.39  27   P         P          23 06 46.5  +0.2
L27K                                IAmb      IAmb         23 07 41.1
       comp=Z,15nm,1.4s
BCAR   Beaver Creek A     89.41  27   P         P          23 06 47.0  +0.6
BNN    Bunyan             89.58 309   P         P          23 06 47.3  -0.6
BNN                                 IAmb      IAmb         23 06 49.1
       comp=Z,25nm,1.1s
EGAK   Eagle              89.61  25   P         P          23 06 48.3  +1.0
       baz=273
EGAK   Eagle              89.61  25   P         P          23 06 46.8  -0.5
EGAK                                IAmb      IAmb         23 08 40.9
       comp=Z,42nm,1.9s
GHAJ   Ghor Haditha       90.03 301   P         P          23 06 49.7  -0.2
GHAJ                                IAmb      IAmb         23 06 57.1
       comp=Z,20nm,0.8s
BR131  Keskin Array S     91.25 310   P         P          23 06 54.5  -1.2
BR131                               pmax      pmax
       comp=Z,8.0nm,1.1s
BR131  Keskin Array S     91.25 310   P         P          23 06 54.5  -1.2
BR131                               IAmb      IAmb         23 06 55.8
       comp=Z,7.9nm,1.1s
BRTR   Keskin Array B     91.25 310   P         P          23 06 55.0  -0.7
       comp=Z,2.4nm,0.9s,baz=126,slow=5.6,SNR=14
BRTR   Keskin Array B     91.25 310   P         P          23 06 55.0  -0.7
BRTR   Keskin Array B     91.25 310   P         P          23 06 54.4  -1.3
QSPA   South Pole Qui     91.46 180   P         P          23 06 56.2  +0.2
QSPA                                IAmb      IAmb         23 06 59.9
       comp=Z,8.7nm,1.0s
M30M   Minto, Yukon       91.73  27   P         P          23 06 58.3  +1.0
       baz=277
CSS    Mathiatis          91.75 305   P         P          23 06 57.0  -0.9
INK    Inuvik             92.26  21   P         P          23 06 58.7  -0.8
       comp=Z,5.8nm,1.1s,baz=300,slow=7.3,SNR=6.7
INK    Inuvik             92.26  21   P         P          23 06 59.0  -0.5
INK                                 pmax      pmax
       comp=Z,11nm,1.3s
INK    Inuvik             92.26  21   P         P          23 06 59.8  +0.3
       baz=280
INK    Inuvik             92.26  21   P         P          23 06 59.0  -0.5
INK                                 IAmb      IAmb         23 07 00.2
       comp=Z,11nm,1.2s
ARCES  ARCESS Array B     92.42 340   P         P          23 06 59.1  -1.1
       comp=Z,7.8nm,1.0s,baz=84,slow=5.0,SNR=7.9
ARCES                               PKiKP     PKiKP        23 11 48.6  -0.5
       comp=Z,4.9nm,1.0s,baz=225,slow=0.1,SNR=5.3
ARCES                               PKKPbc    PKKPdf       23 24 15.1  +1.0
       comp=Z,3.2nm,0.9s,baz=254,slow=3.4,SNR=4.2
SPITS  Spitsbergen Ar     92.57 349   P         P          23 06 59.6  -1.3
       comp=Z,9.2nm,0.9s,baz=110,slow=6.9,SNR=1.4
M31M   Drury Creek, Y     92.89  28   P         P          23 07 03.0  +0.4
       baz=279
FARO   Faro, Yukon        93.37  28   P         P          23 07 05.5  +0.7
       baz=280
AKASG  Malin Array Be     93.45 321   P         P          23 07 05.5  +0.1
       comp=Z,2.5nm,0.7s,baz=69,slow=4.9,SNR=10
AKASG  Malin Array Be     93.45 321   P         P          23 07 04.2  -1.2
AKBB   Malin Array Si     93.45 321⇑eP         P          23 07 03.7  -1.7
AKBB                                pmax      pmax
       comp=Z,4.0nm,0.7s
AKBB   Malin Array Si     93.45 321   P         P          23 07 05.0  -0.4
PURM   Purcari            93.48 317 ⇓P         P          23 07 04.4  -1.2
TAOE   Nuku Hiva Isla     93.52  99 eLR        LR           23 37 19.0
       comp=Z,191nm,30.2s
FINES  FINESS Array B     93.65 332   P         P          23 07 05.5  -0.5
       comp=Z,2.2nm,0.8s,baz=111,slow=14,SNR=12
MNK    Minsk              93.78 325 i P         P          23 07 06.5  -0.3
MNK                               i *PP       pP           23 07 17.0  -3.5
MNK                               i *SP       sP           23 07 21.2  -4.4
MNK                               i S         SKSac        23 17 35.7  -1.9
MNK                               i *SS       SKKSac       23 18 03.6  +5.8
MNK                               i PS        PS           23 19 25.0  -7.5
MNK                               i SSS       SSS          23 28 15.7
MNK                                 pmax      pmax
       comp=N,7.0nm,0.9s
MNK                                 pmax      pmax
       comp=E,1.0nm,0.9s
MNK                                 pmax      pmax
       comp=Z,10.0nm,0.9s
MNK                                 MLR       MLR
       comp=E,26nm,19.0s
MNK                                 MLR       MLR
       comp=Z,127nm,19.0s
MNK                                 MLR       MLR
       comp=N,150nm,20.0s
MNK    Minsk              93.78 325 i P         P          23 07 06.5  -0.3
       comp=E,1.0nm,0.9s
MNK                               i P         P            23 07 06.5  -0.3
       comp=N,7.0nm,0.9s,baz=82
MNK                               i P         P            23 07 06.5  -0.3
       comp=Z,10.0nm,0.9s
MNK                               i pP        pP           23 07 17.1  -3.4
MNK                               i sP        sP           23 07 21.3  -4.3
MNK                               i PP        PP           23 10 44.5  -7.9
MNK                               i PPP       PPP          23 14 06.6
MNK                               i S         SKSac        23 17 35.7  -1.8
MNK                               i sS        SKKSac       23 18 03.7  +5.9
MNK                               i SP        SP           23 19 11.5   -14
MNK                               i PS        PS           23 19 25.1  -7.4
MNK                               i SS        SS           23 23 44.9   -47
MNK                               i SSS       SSS          23 28 15.7
MNK                               i LQ        LQ           23 42 26.7
MNK                               i LR        LR           23 45 44.4
MNK                               i LRM       MLR          23 49 05.3
       comp=E,26nm,19.4s
MNK                               i LRM       MLR          23 50 32.4
       comp=Z,127nm,19.2s
MNK                               i LRM       MLR          23 51 36.7
       comp=N,150nm,19.5s
A36M   Sachs Harbour      94.12  17   P         P          23 07 07.7  -0.3
       baz=288
MMPY   Sheldon Lake,      94.25  27   P         P          23 07 09.7  +0.8
       baz=282
SORM   Soroca             94.32 318 ⇓P         P          23 07 08.5  -1.0
SORM   Soroca             94.32 318 ⇓P         P          23 07 08.5  -1.0
TESR   Tescani            95.69 317 ⇑P         P          23 07 15.2  -0.6
VRI    Vrincioaia         95.73 316 ⇓P         P          23 07 15.8  -0.2
VRI    Vrincioaia         95.73 316 ⇓P         P          23 07 15.8  -0.2
PLOR   Plostina           95.78 316 ⇓P         P          23 07 16.3   0.0
PLOR   Plostina           95.78 316 ⇓P         P          23 07 16.3   0.0
TGTN   Hyland Airport     95.86  28   P         P          23 07 17.2  +0.9
       baz=284
MLR    Muntele Rosu       96.32 316 ⇓P         P          23 07 17.2  -1.7
MLR    Muntele Rosu       96.32 316 ⇓P         P          23 07 17.2  -1.7
MLR    Muntele Rosu       96.32 316   P         P          23 07 18.4  -0.5
MLR                                 IAmb      IAmb         23 07 42.5
       comp=Z,19nm,1.6s
BURAR  Bucovina Array     96.49 318 ⇑P         P          23 07 20.0  +0.5
BURAR  Bucovina Array     96.49 318 ⇑P         P          23 07 20.0  +0.5
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BURAR	Bucovina Array	96.49	318	P	P	23 07 19.2	-0.3
BURAR	comp=Z,9.4nm,0.7s			IAmb	IAmb	23 07 25.7	
BUR08	Bucovina Ar. S	96.49	318	P	P	23 07 18.6	-1.0
BUR08	comp=Z,6.8nm,0.8s			IAmb	IAmb	23 07 22.3	
BMR	Baia Mare	97.62	318	⇑P	Pdif	23 07 26.5	+1.9
BMR	Baia Mare	97.62	318	⇑P	Pdif	23 07 26.5	+1.9
CJR	Cluj-Napoca	97.73	317	⇑P	Pdif	23 07 25.4	+0.2
CJR	Cluj-Napoca	97.73	317	⇑P	Pdif	23 07 25.4	+0.3
CBBR	Cluj-Babes-Bol	97.75	317	⇑P	Pdif	23 07 26.0	+0.8
KOLS	Kolonicke sedl	98.18	320	*i* P	Pdif	23 07 28.5	+1.5
KOLS	Kolonicke sedl	98.18	320	*e*PDIFF	Pdif	23 07 28.5	+1.5
UZH	Uzhgorod	98.23	319	*e*P	P	23 07 27.0	-0.2
UZH				*e*		23 07 39.8	
UZH				*e*		23 07 46.9	
DRGR		98.31	318	⇑P	P	23 07 27.4	-0.4
DRGR		98.31	318	⇑P	P	23 07 27.4	-0.4
GZR	Gura Zlata	98.54	316	⇑P	P	23 07 27.1	-1.7
GZR	Gura Zlata	98.54	316	⇑P	P	23 07 27.1	-1.7
CRVS	Cervenica-Dubn	98.71	320	*i* P	Pdif	23 07 30.1	+0.7
CRVS	Cervenica-Dubn	98.71	320	*e*PDIFF	Pdif	23 07 30.1	+0.7
VTS	Vitosha	98.72	313	⇓P	P	23 07 29.4	-0.4
VTS	Vitosha	98.72	313	⇓P	P	23 07 29.4	-0.4
VTS	Vitosha	98.72	313		P	23 07 28.9	-0.8
VTS	comp=Z,9.1nm,1.5s			IAmb	IAmb	23 07 32.8	
RES	Resolute Bay comp=Z,3.4nm,0.7s,baz=250,slow=3.7,SNR=7.1	99.99	10	P	Pdif	23 07 33.9	-0.5
RES	Resolute Bay	99.99	10	P	Pdif	23 07 34.0	-0.5
RES	comp=Z,51nm,2.0s			pmax	pmax		
RES	Resolute Bay	99.99	10		Pdif	23 07 34.0	-0.5
NOA	NORSAR Array B comp=Z,1.0nm,1.0s,baz=69,slow=4.6,SNR=2.5	100.64	333	P	Pdif	23 07 36.0	-1.8
NOA	NORSAR Array B	100.64	333	P	Pdif	23 07 36.0	-1.8
GERES	GERESS Array B comp=Z,1.7nm,1.1s,baz=59,slow=5.1,SNR=4.6	103.66	321	Pdiff	Pdif	23 07 53.5	+1.9
VNA2	Neumayer--Watz	104.67	194	Pdiff	Pdif	23 07 56.6	+1.2
VNA3	Neumayer Olymp	104.99	193	Pdiff	Pdif	23 07 58.0	+1.1
PDAR	Pinedale Array comp=Z,0.3nm,0.4s,baz=119,slow=5.5,SNR=4.2	113.12	42	PKKPbc	PKKPbc	23 23 13.3	-1.9
ULM	Lac du Bonnet comp=Z,2.5nm,0.5s,baz=293,slow=2.1,SNR=2.8	116.96	29	PKP	PKPdf	23 12 33.8	-0.8
ESDC	Sonseca Array comp=Z,0.4nm,0.8s,baz=325,slow=2.1,SNR=2.3	118.94	318	PKP	PKPdf	23 12 38.3	-0.5
ECSD	EROS Data Cent baz=307	120.69	35	P	PKiKP	23 12 42.1	0.0
ECSD	EROS Data Cent	120.69	35		PKPdf	23 12 41.5	-0.4
MNTX	Cornudas Mount baz=294	120.78	51	P	PKiKP	23 12 43.9	+1.2
MSTX	Muleshoe baz=297	121.80	48	P	PKiKP	23 12 45.4	+0.7
TXAR	Lajitas Array comp=Z,1.3nm,0.7s,baz=246,slow=1.2,SNR=6.6	123.08	53	PKP	PKiKP	23 12 47.6	+0.3
TORD	Torodi Ar. Bea comp=Z,1.4nm,0.3s,baz=92,slow=1.9,SNR=66	123.38	287	PKP	PKPdf	23 12 47.9	0.0
TORD	comp=Z,0.7nm,0.7s,baz=262,slow=4.1,SNR=5.0			PKKPbc	PKKPbc	23 22 36.2	-0.9
JCT	Junction City baz=297	125.62	50	P	PKiKP	23 12 52.2	0.0
833A	Chaparral WMA, baz=296	126.90	52	P	PKiKP	23 12 55.9	+1.1
CCM	Cathedral Cave baz=310	127.40	37	P	PKiKP	23 12 55.5	0.0
U40A	Yellville baz=307	127.44	40	P	PKiKP	23 12 55.5	-0.2
U40A	Yellville	127.44	40		PKPdf	23 12 54.9	-0.2
MIAR	Mount Ida baz=305	128.03	42	P	PKiKP	23 12 57.7	+0.8
ACSO	Alum Creek Sta baz=320	130.46	30	P	PKiKP	23 13 01.6	0.0
WVT	Waverly baz=312	130.72	37	P	PKiKP	23 13 02.0	-0.2
DBIC	Dimbokro comp=Z,3.6nm,0.8s,baz=349,slow=2.4,SNR=5.3	130.79	280	PKP	PKPdf	23 13 02.4	+0.3
DBIC	Dimbokro	130.79	280		PKPdf	23 13 02.2	+0.2
P52A	Corning baz=320	131.33	30	P	PKiKP	23 13 03.1	-0.3
CMIG	Matias Romero comp=Z,0.7nm,0.3s,baz=325,slow=18,SNR=2.0	135.17	64	PKP	PKiKP	23 13 11.0	-0.7
PLCA	Paso Flores comp=Z,5.7nm,0.9s,baz=196,slow=3.5,SNR=6.1	138.03	161	PKP	PKiKP	23 13 16.1	-0.9
PLCA	Paso Flores	138.03	161	*e*P	PKiKP	23 13 16.4	-0.6
PLCA	Paso Flores	138.03	161	PKPdf	PKPdf	23 13 15.6	+0.6
LC01	Cunco	139.19	158		PKPdf	23 13 16.4	-0.7
JTS	Las Juntas de comp=Z,19nm,1.1s,baz=7.0,slow=14,SNR=6.6	146.54	69	PKPbc	PKPbc	23 13 32.0	-0.2
SRBA	San Rafael, Bu	148.36	70		PKPdf	23 13 33.9	0.0
BRU2	Volcan	149.12	70		PKiKP	23 13 40.2	-0.4
GO03	Copiap	149.52	150		PKiKP	23 13 40.5	-0.5
PLTB	Pedras Altas	149.94	180	PKPbc	PKiKP	23 13 41.6	-0.1
ITQB	Itaqui	151.86	174	*e*P	PKPdf	23 13 40.6	+1.7
ATAH	Atahualpa comp=Z,5.5nm,1.0s,baz=45,slow=4.3	154.55	103	PKP	PKPdf	23 13 44.8	+1.1
CPUP	Villa Florida comp=Z,0.8nm,0.5s,baz=285,slow=1.4,SNR=3.4	155.07	172	PKP	PKPdf	23 13 43.7	+0.2
CPUP	Villa Florida	155.07	172	PKPdf	PKPdf	23 13 43.7	+0.2
CPUP					pPKPdf	23 13 52.8	-4.8
LPAZ	La Paz comp=Z,4.2nm,1.1s,baz=237,slow=1.8,SNR=8.5	159.43	136	PKP	PKPdf	23 13 50.6	+0.5
LPAZ	La Paz	159.43	136		PKPdf	23 13 49.6	-0.5
SDV	Santo Domingo comp=Z,2.8nm,0.3s,baz=301,slow=5.9,SNR=1.4	160.01	59	PKP	PKPdf	23 13 50.0	-0.3
BDFB	Brasilia comp=Z,2.4nm,0.7s,baz=65,slow=2.7,SNR=5.6	164.99	201	PKPab	PKPab	23 14 52.4	+1.1
VILB	Vilhena	166.85	150	*e*P	PKPdf	23 13 56.9	+0.4
SAML	Samuel	167.85	128	*e*P	PKPdf	23 13 56.8	-0.4
NPGB	Novo Progresso	174.22	161	*e*P	PKPdf	23 13 59.8	-0.7
ITTB	Itaituba	176.40	141	*e*P	PKPdf	23 14 00.7	-0.4

IDC ***07*** *23:04:43.1±1.2, 24°.65N×121°.58E, h0km, mb3.5/4,*
mb1 3.7/6, mb1mx3.5/44, mbtmp3.6/6, ML3.7/2, MS3.7/4,
Ms1 3.8/4, ms1mx3.2/25, Error ellipse: s-maj=38.7km
s-min=22.6km az=71.0
JMA ***07*** *23:04:56.3±0.2, 24°.85N×122°.17E, h116km±2km, M3.6*
TAP ***07*** *23:04:56.3, 24°.90N×122°.23E, h117km, ML4.2, C*
ISC 07 23:04:55.8±0.8**, 24°.92N**±0°.03×**122°.20E**±0°.02**, h122**km±4km**,**
n140, σ0s.85/240**, mb3.4**/4**, 31C-3D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	Santiao Chiao baz=288	0.21	294	⇑*i*P	Pn	23 05 12.9	+0.3
TWB1	baz=288			S	Sn	23 05 24.7	-0.7
NTC	Toucheng baz=267	0.34	259	P	Pn	23 05 13.3	+0.1
NTC	baz=267			S	Sn	23 05 24.9	-1.3
TIPB	Shuangxi baz=282	0.34	279	⇑*i*P	Pn	23 05 13.5	+0.3
TIPB	baz=282			*i* S	Sn	23 05 25.4	-0.9
NWF	Wu-fen Shan baz=285	0.41	292	⇑*i*P	Pn	23 05 13.9	+0.4
NWF	baz=285			*i* S	Sn	23 05 26.5	-0.5
WFSB	Wu-fen Shan baz=285	0.41	292	⇑P	Pn	23 05 13.9	+0.5
WFSB	baz=285			S	Sn	23 05 26.3	-0.5
ILA	Ilan baz=260	0.44	249	P	Pn	23 05 13.9	+0.3
ILA	baz=260			S	Sn	23 05 26.8	-0.2
TWC	Suao baz=231	0.45	226	⇑*i*P	Pn	23 05 13.7	+0.1
TWC	baz=231			*i* S	Sn	23 05 25.9	-1.2
TWE	Neicheng baz=252	0.52	248	⇑*i*P	Pn	23 05 14.3	+0.3
TWE	baz=252			S	Sn	23 05 29.0	+1.1
NDS	Dongshan baz=239	0.53	237	P	Pn	23 05 14.5	+0.4
NDS	baz=239			S	Sn	23 05 28.3	+0.3
TWA	Mucha baz=271	0.56	276	⇑*i*P	Pn	23 05 14.6	+0.2
TWA	baz=271			S	Sn	23 05 27.5	-0.9
NHY	Taipei baz=277	0.58	282	*e*P	Pn	23 05 14.8	+0.3
EWUT	Wuta baz=214	0.61	219	P	Pn	23 05 15.2	+0.6
EWUT	baz=214			S	Sn	23 05 28.6	-0.3
NHDH	Xindian Distri baz=276	0.61	274	⇑P	Pn	23 05 15.0	+0.3
NHDH	baz=276			S	Sn	23 05 28.3	-0.7
YM01	YM01 baz=288	0.61	292	⇑*i*P	Pn	23 05 15.2	+0.4
YM01	baz=288			S	Sn	23 05 28.4	-0.7
YM08	YM08 baz=297	0.61	296	*e*P	Pn	23 05 14.8	+0.1
YM08	baz=297			*e*S	Sn	23 05 27.9	-1.1
ENTT	Nioudou baz=245	0.64	244	⇑*i*P	Pn	23 05 15.5	+0.6
ENTT	baz=245			S	Sn	23 05 30.1	+0.8
TAP	Taipei baz=278	0.64	281	*e*P	Pn	23 05 15.2	+0.3
TAP	baz=278			*e*S	Sn	23 05 28.5	-0.8
ENA	Nanau baz=215	0.64	220	⇑*i*P	Pn	23 05 15.5	+0.6
ENA	baz=215			*i* S	Sn	23 05 29.5	+0.2
NWLT	Wulai baz=263	0.65	257	P	Pn	23 05 15.1	+0.1
NWLT	baz=263			S	Sn	23 05 29.2	-0.3
NDT	Datong Townshi baz=254	0.70	243	⇓*i*P	Pn	23 05 16.2	+0.9
NDT	baz=254			S	Sn	23 05 30.7	+0.6
NTST	Danshui baz=295	0.72	290	P	Pn	23 05 15.7	+0.3
NTST	baz=295			S	Sn	23 05 31.9	+1.6
TWS1	Kuangyinshan baz=290	0.73	284	⇑P	Pn	23 05 16.0	+0.4
TWS1	baz=290			S	Sn	23 05 30.3	-0.2
EHP	Heping Village baz=209	0.74	215	*e*P	Pn	23 05 16.0	+0.3
EHP	baz=209			*e*S	Sn	23 05 30.8	+0.2
YHNB	Yeheng baz=253	0.79	252	⇑*i*P	Pn	23 05 16.6	+0.4
YHNB	baz=253			S	Sn	23 05 31.2	-0.4
YHNB	Yeheng	0.79	252	P	Pn	23 05 16.4	+0.2
NSK	Sanguang baz=254	0.80	252	⇑*i*P	Pn	23 05 16.7	+0.4
NSK	baz=254			*i* S	Sn	23 05 31.2	-0.5
JYNG	Yonagunijimaku	0.82	124	P	Pn	23 05 16.5	+0.2
JYNG				S	Sn	23 05 31.4	-0.5
YOJ	Yonaguni jima baz=130	0.87	122	⇓*i*P	Pn	23 05 16.9	+0.2
YOJ	baz=130			S	Sn	23 05 31.9	-0.7
YOJ	Yonaguni jima	0.87	122	P	Pn	23 05 16.9	+0.2
YOJ				*e*S	Sn	23 05 31.7	-0.9
YOJ	Yonaguni jima	0.87	122	P	Pn	23 05 16.8	+0.1
NNSB	Datong baz=245	0.89	237	⇑P	Pn	23 05 17.9	+0.8
NNSB	baz=245			S	Sn	23 05 33.2	0.0
NNS	Nan Shan baz=245	0.89	238	P	Pn	23 05 17.9	+0.8
NNS	baz=245			S	Sn	23 05 33.6	+0.3
NCU	National Centr baz=265	0.92	273	P	Pn	23 05 17.8	+0.5
NCU	baz=265			S	Sn	23 05 33.6	+0.2
ETL	Fush Village baz=210	0.92	215	P	Pn	23 05 17.4	+0.1
ETL	baz=210			S	Sn	23 05 32.9	-0.7
NCUH	Zhongli baz=265	0.92	273	P	Pn	23 05 18.0	+0.8
NCUH	baz=265			S	Sn	23 05 33.8	+0.3
NACB	Ninganchiao baz=212	0.93	217	⇑*i*P	Pn	23 05 17.3	0.0
NACB	baz=212			S	Sn	23 05 32.4	-1.2
ETLH	Xiulin Townshi baz=232	0.97	223	P	Pn	23 05 18.1	+0.3
ETLH	baz=232			S	Sn	23 05 33.5	-0.9
TWD	Chiawan baz=210	1.00	213	⇑*i*P	Pn	23 05 18.1	+0.1
TWD	baz=210			*i* S	Sn	23 05 34.1	-0.7
HWA	Hwalien baz=201	1.08	210	*i* P	Pn	23 05 19.6	+0.7
HWA	baz=201			S	Sn	23 05 36.8	+0.5
FUSS	Fushou baz=226	1.10	233	⇑*i*P	Pn	23 05 20.3	+1.1
FUSS	baz=226			S	Sn	23 05 37.1	+0.1
LIOB	Emei baz=250	1.11	256	⇑*i*P	Pn	23 05 19.8	+0.7
LIOB	baz=250			S	Sn	23 05 36.7	-0.1
SBCB	Hsinchu baz=265	1.11	264	P	Pn	23 05 19.9	+0.8
SBCB	baz=265			S	Sn	23 05 36.7	-0.1
HSN	Hsinchu baz=266	1.12	264	P	Pn	23 05 19.5	+0.3
HSN	baz=266			S	Sn	23 05 36.4	-0.6
NSTT	Nanjuang baz=249	1.13	255	⇑*i*P	Pn	23 05 19.8	+0.6
NSTT	baz=249			*i* S	Sn	23 05 36.8	-0.2
TWT	Tachien baz=229	1.15	235	⇓*i*P	Pn	23 05 21.1	+1.4
TWT	baz=229			S	Sn	23 05 38.0	+0.3
WHF	Hehuan Shan baz=227	1.15	228	⇑*i*P	Pn	23 05 20.5	+0.6
WHF	baz=227			S	Sn	23 05 37.8	-0.4
TDCB	Techi baz=229	1.16	235	⇑*i*P	Pn	23 05 20.9	+1.2
TDCB	baz=229			S	Sn	23 05 38.1	+0.2
CHGB	Renai baz=227	1.27	228	⇑*i*P	Pn	23 05 22.0	+1.0
CHGB	baz=227			S	Sn	23 05 40.2	+0.1
ESL	Shilin baz=217	1.30	213	P	Pn	23 05 20.5	-0.7
ESL	baz=217			S	Sn	23 05 38.5	-1.9
WHP	Taichung City baz=248	1.31	241	⇑*i*P	Pn	23 05 22.4	+1.1
WHP	baz=248			S	Sn	23 05 40.5	-0.1
NMLH	Miaoli baz=254	1.34	254	P	Pn	23 05 22.1	+0.6
NMLH	baz=254			S	Sn	23 05 40.6	-0.4
OWD	Renai baz=219	1.34	224	P	Pn	23 05 22.5	+0.8
OWD	baz=219			S	Sn	23 05 41.0	-0.4
NSY	Sanyi baz=250	1.40	249	⇑*i*P	Pn	23 05 23.2	+1.0
NSY	baz=250			S	Sn	23 05 42.5	+0.1
TWQ1	Liyutan baz=247	1.42	247	⇑*i*P	Pn	23 05 23.1	+0.7
TWQ1	baz=247			*i* S	Sn	23 05 42.4	-0.2
EGFH	Guangfu baz=208	1.43	210	*e*P	Pn	23 05 22.3	-0.3
EGFH	baz=208			S	Sn	23 05 41.2	-1.7
WCS	Beigang Elemen baz=240	1.46	234	P	Pn	23 05 23.9	+1.0
WCS	baz=240			S	Sn	23 05 44.2	+0.9
IRIF	Iriomote-Funau	1.51	112	P	Pn	23 05 23.5	+0.1
IRIF				*e*S	Sn	23 05 44.1	-0.4
WDJ	Dajia District baz=249	1.53	248	P	Pn	23 05 24.6	+0.9
WDJ	baz=249			S	Sn	23 05 44.8	-0.1
SMLT	Sun Moon Lake baz=236	1.57	229	⇑*i*P	Pn	23 05 25.4	+1.1
SMLT	baz=236			*i* S	Sn	23 05 47.8	+1.8
TCU	Taichung baz=248	1.59	241	P	Pn	23 05 25.2	+0.9
TCU	baz=248			S	Sn	23 05 47.3	+1.2
HGSD	Ruisui baz=213	1.59	207	P	Pn	23 05 24.7	+0.3
HGSD	baz=213			S	Sn	23 05 45.5	-0.6
TYC	Yuchr baz=237	1.59	231	P	Pn	23 05 25.4	+1.0
TYC	baz=237			S	Sn	23 05 47.2	+1.1
SSLB	Suanglung baz=227	1.60	225	⇑*i*P	Pn	23 05 25.7	+1.2
SSLB	baz=227			S	Sn	23 05 47.2	+0.7
SSLB	Suanglung	1.60	225	P	Pn	23 05 25.9	+1.3
EHY	Hungye baz=208	1.62	210	P	Pn	23 05 24.3	-0.5
EHY	baz=208			S	Sn	23 05 44.4	-2.4
HATJ	Hateruma jima	1.70	120	P	Pn	23 05 26.1	+0.5
HATJ				*e*S	Sn	23 05 47.8	-0.6
WCHH	Zhanghua baz=249	1.71	241	*e*P	Pn	23 05 26.6	+0.7
WCHH	baz=249			*e*S	Sn	23 05 49.4	+0.7
WNT	Mingjian baz=242	1.73	233	P	Pn	23 05 27.1	+1.1
WNT	baz=242			S	Sn	23 05 49.6	+0.5
YULB	Yu-li baz=208	1.73	209	P	Pn	23 05 25.5	-0.6
WJS	Zhushan baz=230	1.73	231	*e*P	Pn	23 05 26.8	+0.7
WJS	baz=230			S	Sn	23 05 50.0	+0.8
EYUL	Yuli baz=211	1.76	207	*e*P	Pn	23 05 26.4	0.0
JKRS	Kuro-shima	1.78	112	P	Pn	23 05 27.2	+0.5
JKRS				S	Sn	23 05 50.1	-0.1
JIJ	Ishigaki jima	1.85	107	P	Pn	23 05 27.9	+0.4
JIJ				S	Sn	23 05 51.3	-0.5
ALS	Alishan baz=230	1.90	222	P	Pn	23 05 29.4	+1.0
ALS	baz=230			S	Sn	23 05 55.1	+1.9
CHN5	Tsauling baz=225	1.92	227	⇑*i*P	Pn	23 05 29.3	+0.9
CHN5	baz=225			S	Sn	23 05 53.7	+0.4
WRL	Guolierlin Hig baz=246	1.95	239	P	Pn	23 05 28.9	+0.2
WRL	baz=246			S	Sn	23 05 53.0	-0.8
JISG	Ishigakijimahi	1.95	99	P	Pn	23 05 29.3	+0.6
JISG				S	Sn	23 05 53.4	-0.4
WDLH	Douliu baz=231	1.95	231	P	Pn	23 05 29.2	+0.5
CHKT	Chengkung baz=196	1.97	203	⇑P	Pn	23 05 29.0	0.0
CHKT	baz=196			S	Sn	23 05 52.6	-1.7
ELDTW	Lidau baz=205	2.04	212	P	Pn	23 05 30.0	+0.1
ELDTW	baz=205			S	Sn	23 05 55.1	-0.9
WTCT	Ta-ch'eng baz=239	2.04	239	*e*P	Pn	23 05 30.4	+0.5
WTCT	baz=239			*e*S	Sn	23 05 55.8	-0.1
WTK	Tuku baz=242	2.06	234	*e*P	Pn	23 05 30.7	+0.7
WTK	baz=242			*e*S	Sn	23 05 56.0	-0.2
CHN2	Minshiung baz=227	2.10	229	*e*P	Pn	23 05 31.4	+0.9
CHN2	baz=227			*e*S	Sn	23 05 58.5	+1.4
EDH	Donghe baz=206	2.11	203	P	Pn	23 05 30.6	-0.1
EDH	baz=206			S	Sn	23 05 55.8	-1.5
CHN4	Tsaushan baz=220	2.14	224	⇑*i*P	Pn	23 05 30.4	-0.7
CHN4	baz=220			S	Sn	23 05 57.8	-0.4
CHY	Chiayi baz=228	2.15	229	*e*P	Pn	23 05 31.9	+0.7
CHY	baz=228			*e*S	Sn	23 05 58.3	-0.1
TPUB	Ta-pu baz=228	2.16	222	P	Pn	23 05 32.1	+0.7
TPUB	baz=228			S	Sn	23 05 59.2	+0.6
TPUB	Ta-pu	2.16	222	P	Pn	23 05 32.0	+0.6
STYH	Taoyuan baz=208	2.17	217	P	Pn	23 05 32.6	+1.0
STYH	baz=208			S	Sn	23 06 00.6	+1.7
WTP	Ta-pu baz=230	2.21	221	P	Pn	23 05 32.7	+0.7
WTP	baz=230			*e*S	Sn	23 06 00.2	+0.4
WSF	Szhu baz=225	2.21	235	*e*P	Pn	23 05 32.4	+0.5
WSF	baz=225			*e*S	Sn	23 06 00.2	+0.5
LONT	Longtian baz=197	2.23	206	*e*P	Pn	23 05 31.6	-0.6
LONT	baz=197			*e*S	Sn	23 05 58.3	-1.9
TWK	Hsinying baz=220	2.27	224	P	Pn	23 05 33.2	+0.4
TWK	baz=220			S	Sn	23 06 01.6	+0.4
JTJ	Tarama	2.29	96	P	Pn	23 05 34.1	+1.1
JTJ				*e*S	Sn	23 06 01.1	-0.4
SNST	Tainan City baz=219	2.30	223	*e*P	Pn	23 05 34.0	+0.8
SNST	baz=219			*e*S	Sn	23 06 01.7	0.0
CHN1	Nanshi baz=218	2.31	222	P	Pn	23 05 33.7	+0.4
CHN1	baz=218			S	Sn	23 06 02.3	+0.4
TWGBT	Beinan baz=197	2.33	206	*e*P	Pn	23 05 32.9	-0.6
TWGBT	baz=197			S	Sn	23 05 59.6	-2.9
TWG	Pinlang baz=197	2.33	207	P	Pn	23 05 33.2	-0.3
TWG	baz=197			S	Sn	23 06 00.7	-1.8
LDUT	Ludao baz=197	2.33	197	P	Pn	23 05 32.8	-0.8
LDUT	baz=197			S	Sn	23 05 59.9	-2.6
ICHU	Yijhu baz=226	2.34	229	*e*P	Pn	23 05 34.0	+0.4
ICHU	baz=226			*e*S	Sn	23 06 02.4	-0.3
SGST	Jiashian baz=225	2.35	219	*e*P	Pn	23 05 34.0	+0.1
SGST	baz=225			*e*S	Sn	23 06 03.3	+0.4
TTN	Taitung baz=200	2.36	204	*e*S	Sn	23 06 04.3	+1.2
MATB	Ma-tsu baz=302	2.38	302	*e*P	Pn	23 05 34.0	0.0
SLGT	Liugui baz=215	2.39	217	*e*P	Pn	23 05 35.3	+1.1
CHN8	Yiju baz=228	2.40	230	*e*P	Pn	23 05 34.9	+0.6
ECL	Taimali baz=201	2.58	207	*e*P	Pn	23 05 37.3	+0.6

SSD	Sandimen	2.60	214	*e*P	Pn	23 05 38.1	+1.2
	baz=211						
TSMG	Majia	2.62	213	*e*P	Pn	23 05 38.5	+1.2
	baz=222						
XPSS	Dashiqiu	2.70	318	*e*P	Pn	23 05 37.6	-0.5
	baz=317						
JIRB	Irabujima	2.70	91	P	Pn	23 05 39.3	+1.1
JIRB				S	Sn	23 06 10.9	0.0
MASBT	Mashibuluo	2.71	212	*e*P	Pn	23 05 39.5	+1.1
	baz=218						
MASBT				*e*S	Sn	23 06 11.1	-0.1
	baz=218						
LYJJ	Jianjiangzhen	2.73	307	*e*P	Pn	23 05 38.7	+0.1
	baz=306						
PNG	Penghu	2.77	241	*e*P	Pn	23 05 38.6	-0.5
	baz=233						
JIKM	Ikemajima	2.77	89	P	Pn	23 05 40.4	+1.3
JIKM				*e*S	Sn	23 06 12.7	+0.3
PHUB	P'eng-hu	2.78	240	*e*P	Pn	23 05 38.8	-0.4
	baz=240						
PHUB				*e*S	Sn	23 06 10.7	-2.0
	baz=240						
PTMZ	Houxiangcun	2.80	273	*e*P	Pn	23 05 39.7	+0.3
	baz=275						
PTMZ				*e*S	Sn	23 06 11.2	-1.9
	baz=275						
EAST	Anshuo	2.81	206	*e*P	Pn	23 05 41.0	+1.2
	baz=199						
TAW	Tawu	2.82	205	*e*P	Pn	23 05 41.4	+1.6
	baz=197						
TAW				*e*S	Sn	23 06 11.7	-1.9
	baz=197						
JMJ2	Miyako jima3	2.85	93	P	Pn	23 05 41.5	+1.4
JMJ2				*e*S	Sn	23 06 14.8	+0.5
JOGS	Gusukube	2.92	92	*e*S	Sn	23 06 17.5	+1.6
SCZT	Fangliau	2.92	210	P	Pn	23 05 41.7	+0.6
	baz=214						
SCZT				S	Sn	23 06 15.4	-0.6
	baz=214						
SLIU	Shizi	2.98	206	*e*P	Pn	23 05 42.8	+0.8
	baz=212						
VCHM	Qimei	3.05	237	*e*P	Pn	23 05 42.2	-0.6
	baz=226						
VCHM				*e*S	Sn	23 06 17.1	-2.0
	baz=226						
WLCH	Liuqiu	3.06	214	*e*P	Pn	23 05 44.0	+1.2
	baz=220						
MHZQ	Yeshan	3.10	293	*e*P	Pn	23 05 43.4	+0.1
	baz=294						
TWKBT	Hengchun	3.23	204	*e*P	Pn	23 05 45.8	+0.6
	baz=207						
TWKBT				*e*S	Sn	23 06 23.1	-0.2
	baz=207						
KNM	Kinmen	3.46	262	*e*P	Pn	23 05 49.9	+1.7
	baz=264						
KNMB	Chin-men Tao	3.50	263	*e*P	Pn	23 05 48.6	-0.1
	baz=264						
AXDP	Jialang	3.84	271	*e*P	Pn	23 05 53.2	0.0
	baz=271						
ZPLA	Ao Xicun	4.17	257	*e*P	Pn	23 05 57.9	+0.2
	baz=258						
JOW	Kunigami	5.79	70	Pn	Pn	23 06 19.0	-0.4
	5.1nm,0.3s,baz=138,slow=25,SNR=26						
JOW				Sn	Sn	23 07 22.6	-2.1
	3.0nm,0.3s,baz=111,slow=23,SNR=7.0						
KSRS	Korea Array	13.41	20	Pn	Pn	23 08 00.9	-0.3
	0.2nm,0.3s,baz=204,slow=14,SNR=1.5						
SONM	Songino Array	26.07	335	P	P	23 10 18.2	+0.2
	0.5nm,0.6s,baz=138,slow=8.9,SNR=2.9						
MKAR	Makanchi Array	38.47	315	P	P	23 12 05.2	-0.6
	0.3nm,0.7s,baz=119,slow=7.4,SNR=2.1						
WRA	Warramunga Arr	46.13	164	P	P	23 13 08.3	+0.3
	1.1nm,0.8s,baz=346,slow=8.5,SNR=6.7						
ASAR	Alice Springs	49.61	166	P	P	23 13 35.7	+0.8
	0.4nm,0.6s,baz=341,slow=7.1,SNR=5.5						
GEYT	Alibeck	55.23	300	LR	LR	23 39 55.5	
	comp=Z,63nm,19.1s,baz=70,slow=38						
MSVF	Nonsavu	68.97	122	LR	LR	23 42 45.7	
	comp=Z,39nm,21.7s,baz=86,slow=33						
NOA	NORSAR Array B	78.01	332	LR	LR	23 56 11.4	
	comp=Z,67nm,18.9s,baz=55,slow=40						
ESDC	Sonseca Array	98.46	321	LR	LR	00 05 22.3	
	comp=Z,38nm,21.4s,baz=320,slow=37						

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*IDC **07** 23:14:04.3±2.2, 12°.74N×88°.71W, h0^{km}, mb3.7/3, mb1 4.0/5, mb1mx3.7/35, mbtmp3.7/5, ML3.3/2, MS3.9/2, Ms1 3.9/2, ms1mx2.9/40, Error ellipse: s-maj=59.3km s-min=28.7km az=38.0*

*SNET **07** 23:14:04.0±1.1, 12°.38N×88°.93W, h18^{km}±9^{km}, ML3.4*

*UCR **07** 23:14:04.2±1.1, 12°.38N×88°.92W, h20^{km}±4^{km}, ML3.4, mb4.2(NEIC)*

*NEIC **07** 23:14:08.2±1.4, 12°.58N±0°.07×88°.87W±0°.08, h35^{km}±15^{km}, mb4.2/19, Error ellipse: s-maj=13.0km s-min=6.8km az=47.0*

ISC 07 23:14:02.3±1.8**, 12°.38N**±0°.05×**89°.00W**±0°.05**, h3**^{km}±10^{km}**, n62,** σ1^{s}.**13**/75**, mb4.2**/12**, 4C, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JUCU	Jucuar¡n	1.13	40	*e*P	Pg	23 14 24.3	+0.3
JUCU				*e*S	Sg	23 14 39.5	+0.7
JUCU				IAML		23 14 44.9	
	comp=Z,895nm,0.4s						
JUCU	Jucuar¡n	1.13	40	*e*P	Pg	23 14 24.3	+0.3
JUCU				*e*S	Sg	23 14 39.5	+0.7
JUCU				IAML		23 14 44.9	
	comp=Z,895nm,0.4s						
LALI	Alcalda de L	1.15	344	*e*P	Pb	23 14 24.9	+0.2
LALI				*e*S	Sn	23 14 41.2	-0.4
LALI	Alcalda de L	1.15	344	*e*P	Pb	23 14 24.9	+0.2
LALI				*e*S	Sn	23 14 41.2	-0.4
SJTE	Alcalda de S	1.23	359	*e*P	Pg	23 14 25.7	-0.1
SJTE				*e*S	Sb	23 14 42.8	+0.3
SJTE	Alcalda de S	1.23	359	*e*P	Pg	23 14 25.7	-0.1
SJTE				*e*S	Sb	23 14 42.8	+0.3
COEG	Centro de Oper	1.24	5	*e*P	Pg	23 14 25.7	-0.3
COEG				IAML		23 14 51.7	
	comp=Z,500nm,0.5s						
COEG	Centro de Oper	1.24	5	*e*P	Pg	23 14 25.7	-0.3
COEG				IAML		23 14 51.7	
	comp=Z,500nm,0.5s						
SNET	Serv Nac Est T	1.32	350		Pg	23 14 27.0	-0.6
SNET				Sn	Sg	23 14 41.7	-3.0
PAVA	Las Pavas	1.33	2	*e*P	Pg	23 14 27.4	-0.3
PAVA				*e*S	Sn	23 14 46.2	0.0
PAVA	Las Pavas	1.33	2	*e*P	Pg	23 14 27.4	-0.3
PAVA				*e*S	Sn	23 14 46.2	0.0
SCLA	Alcaldia de Sa	1.34	11	*e*P	Pg	23 14 27.8	-0.2
SCLA				*e*S	Sb	23 14 45.8	+0.1
SCLA	Alcaldia de Sa	1.34	11	*e*P	Pg	23 14 27.8	-0.2
SCLA				*e*S	Sb	23 14 45.8	+0.1
JAYA	Jayaque - finc	1.34	341	⇑*i*P	Pg	23 14 27.8	-0.2
JAYA				*e*S	Sn	23 14 47.3	+0.7
JAYA				IAML		23 14 49.8	
	comp=Z,801nm,0.3s						
JAYA	Jayaque - finc	1.34	341	⇑*i*P	Pg	23 14 27.8	-0.2
JAYA				*e*S	Sn	23 14 47.3	+0.7
JAYA				IAML		23 14 49.8	
	comp=Z,801nm,0.3s						
UEES	Universidad Ev	1.35	350	*i* P	Pg	23 14 28.1	-0.1
UEES	Universidad Ev	1.35	350	*i* P	Pg	23 14 28.1	-0.1
LCND	La Caada	1.42	49	*e*P	Pn	23 14 28.2	-0.9
LCND	La Caada	1.42	49	*e*P	Pn	23 14 28.2	-0.9
CEDA	San Andres	1.47	345	*e*P	Pn	23 14 30.3	+0.5
CEDA	San Andres	1.47	345	*e*P	Pn	23 14 30.3	+0.5
CEVE	Cerro Verde	1.56	337	*e*P	Pn	23 14 31.5	+0.2
CEVE	Cerro Verde	1.56	337	*e*P	Pn	23 14 31.5	+0.2
TACO	Tacachico	1.62	348	⇑*i*P	Pn	23 14 31.9	0.0
TACO	Tacachico	1.62	348	⇑*i*P	Pn	23 14 31.9	0.0
CRIN	San Cristobal	1.93	80		Pn	23 14 36.2	+0.1
MTO3	Montecristo	2.04	350		Pn	23 14 38.2	+0.5
ESQI	Esquipulas	2.19	351		Pn	23 14 40.2	+0.4
CNGN	Cerro Negro	2.25	87		Pn	23 14 41.5	+1.0
TGUH	Tegucigalpa,Un	2.36	45		Pn	23 14 42.0	-0.2
HZTE	Horizontes, Gu	3.72	116	Pn	Pn	23 15 01.6	+0.9
ORTG	Ortega, Santa	4.01	120	Pn	Pn	23 15 05.3	+0.6
JTS	Las Juntas de	4.47	117	Pn	Pn	23 15 12.5	+1.3
	comp=Z,1.3nm,0.3s,baz=8.5,slow=19,SNR=3.7						
JTS				Sn	Sn	23 15 59.6	-4.2
	comp=Z,2.1nm,0.3s,baz=328,slow=20,SNR=2.1						
JTS	Las Juntas de	4.47	117		Pn	23 15 12.7	+1.5
RIMA	Rio Macho	5.67	117		Pn	23 15 29.2	+1.5
CMIG	Matias Romero	7.37	310	Pn	Pn	23 15 53.0	+2.0
	comp=Z,0.5nm,0.3s,baz=109,slow=8.9,SNR=4.9						
CMIG				Sn	Sn	23 17 13.3	-1.9
	comp=Z,0.2nm,0.3s,baz=82,slow=18,SNR=1.7						
435B	Jarrell	19.96	338	P	P	23 18 35.5	-0.2
JCT	Junction City	20.60	333	P	P	23 18 42.7	-0.1
JCT				IAmb	IAmb	23 18 43.2	
	comp=Z,8.4nm,0.7s						
Z47A	Carrollton	20.74	2		P	23 18 44.6	+0.4
Z47A				IAmb	IAmb	23 18 47.4	
	comp=Z,7.3nm,0.8s						
GOGA	Godfrey	21.54	13	P	P	23 18 52.6	-0.2
TX32	Lajitas Array	21.70	323	P	P	23 18 55.6	+0.9
TXAR	Lajitas Array	21.70	323	P	P	23 18 56.1	+1.4
	comp=Z,3.0nm,0.7s,baz=149,slow=12,SNR=16						
TXAR	Lajitas Array	21.70	323	P	P	23 18 55.7	+1.0
MIAR	Mount Ida	22.45	350	P	P	23 19 01.8	-0.9
MIAR				IAmb	IAmb	23 19 04.2	
	comp=Z,21nm,1.3s						
W39A	Magazine	23.13	350	P	P	23 19 09.3	-0.3
BIRD	Birdtown, Kers	23.48	18	P	P	23 19 11.4	-1.9
BIRD				IAmb	IAmb	23 19 35.4	
	comp=Z,7.6nm,1.2s						
FCAR	Ozark Folk Cen	23.58	354	P	P	23 19 13.8	-0.5
FCAR				IAmb	IAmb	23 19 14.8	
	comp=Z,9.5nm,0.8s						
TKL	Tuckaleechee C	23.65	11	P	P	23 19 13.2	-1.7
	comp=Z,2.3nm,0.7s,baz=185,slow=11,SNR=4.9						
TKL	Tuckaleechee C	23.65	11	P	P	23 19 13.7	-1.3
HHAR	Hobbs	24.21	350	P	P	23 19 19.4	-0.9
HHAR				IAmb	IAmb	23 19 20.6	
	comp=Z,4.1nm,0.6s						
MGMO	Mountain Grove	24.84	354	P	P	23 19 25.1	-0.9
MGMO				IAmb	IAmb	23 19 27.0	
	comp=Z,7.6nm,0.7s						
V58A	Windy Hill, Pi	24.96	19	P	P	23 19 25.6	-1.5
V58A				IAmb	IAmb	23 19 41.5	
	comp=Z,7.8nm,1.2s						
S39A	Bolivar	25.50	352	P	P	23 19 31.5	-0.5
S39A				IAmb	IAmb	23 19 33.1	
	comp=Z,9.7nm,0.6s						
CCM	Cathedral Cave	25.65	356	P	P	23 19 31.6	-1.7
Q54A	Coxs Mills	27.47	14	P	P	23 19 48.0	-1.8
ETMB	Extrema	31.60	133	P	P	23 20 29.3	+2.6
ETMB				IAmb	IAmb	23 20 30.6	
	comp=Z,2.8nm,0.8s						
SPMN	Marine on St.	32.89	355	P	P	23 20 35.3	-2.4
REDW	Red Top Meadow	36.19	333	P	P	23 21 05.8	-0.7
REDW				IAmb	IAmb	23 21 25.7	
	comp=Z,3.2nm,1.4s						
NVAR	Mina Array Bea	36.77	320	P	P	23 21 13.0	+1.4
	comp=Z,0.4nm,0.7s,baz=126,slow=9.1,SNR=3.6						
DLBC	Dease Lake	55.33	335	LR	LR	23 53 27.6	
	comp=Z,117nm,18.2s,baz=267,slow=43						
GERES	GERESS Array B	88.96	40	LR	LR	00 01 58.8	
	comp=Z,41nm,18.8s,baz=54,slow=32						
WRA	Warramunga Arr	137.80	254	PKP	PKiKP	23 33 32.2	+1.1
	comp=Z,0.3nm,0.6s,baz=87,slow=2.0,SNR=7.4						

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*FUNV **07** 23:35:59.1, 8°.50N×71°.42W, h1^{km}, MW3.6*

ISC 07 23:35:58.6±1.2**, 8°.52N**±0°.03×**71°.39W**±0°.02**, h4**^{km}±10^{km}**, n35,** σ1^{s}.**49**/64**, 1D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.58	114	*e*P	Pg	23 36 10.2	+0.5
SOCV				*e*S	Sg	23 36 18.4	+1.2
SOCV				*i*		23 36 18.9	
	comp=Z,5µm,0.6s						
SOCV	Socops	0.58	114	*e*P	Pg	23 36 10.2	+0.5
SOCV				*e*S	Sg	23 36 19.1	+1.8
SDV	Santo Domingo	0.83	64	⇓*e*P	Pg	23 36 15.7	+1.1
SDV				*e*S	Sb	23 36 27.9	+0.4
SDV				*i*		23 36 37.2	
	comp=Z,179nm,0.4s						
CAPV	Capacho	1.12	235	*e*P	Pg	23 36 19.1	-1.0
CAPV				*e*S	Sb	23 36 34.4	-1.4
PAMC	Pamplona, Colo	1.75	228	*e*P	Pg	23 36 31.8	-0.4
PAMC				*e*S	Sg	23 36 55.6	+0.8
PAMC				*i*		23 36 57.5	
	comp=Z,302nm,0.7s						
MCQV	Machiques	1.89	323	*e*P	Pn	23 36 32.5	+0.7
MCQV				*e*S	Sn	23 36 56.3	+0.2
OCAC	Ocana	1.93	262	*i* Pg	Pb	23 36 33.4	-1.1
OCAC				*e*S	Sb	23 36 58.6	-0.3
OCAC				*i*		23 37 00.4	
	comp=Z,2µm,0.3s						
TAMC	Tame, Arauca	2.11	191	*e*P	Pb	23 36 36.9	-0.6
TAMC				*e*S	Sg	23 37 06.4	0.0
TAMC				*i*		23 37 11.0	
	comp=Z,280nm,0.6s						
LL1C	La Loma 1 Cana	2.37	296	*e*S	Sg	23 37 12.8	-1.9
LL1C				*i*		23 37 28.1	
	comp=Z,680nm,0.5s						
ELOV	Elorza	2.42	128	*e*P	Pg	23 36 46.0	+1.0
ELOV				*e*S	Sb	23 37 13.2	+0.3
ELOV				*i*		23 37 23.6	
	comp=Z,1µm,0.7s						
ELOV	Elorza	2.42	128	*e*P	Pn	23 36 39.8	+0.8
ELOV				*e*S	Sn	23 37 09.1	+0.1
BARC	Barichara	2.61	223	*e*P	Pb	23 36 45.8	-0.4
BARC				*e*S	Sg	23 37 20.2	-2.4
BARC				*i*		23 37 24.2	
	comp=Z,174nm,0.5s						
SIQV	Siquisique	2.63	36	*e*P	Pn	23 36 42.5	+0.6
SIQV				*e*S	Sn	23 37 14.6	+0.2
SMLC	San Martn de	2.67	276	*e*P	Pb	23 36 46.6	-0.3
SMLC				*e*S	Sb	23 37 19.8	-0.2
SMLC				*i*		23 37 20.3	
	comp=Z,304nm,0.3s						
BRRC	Barranca, Sant	2.69	239	*e*P	Pb	23 36 48.1	+0.7
BRRC				*e*S	Sg	23 37 23.4	-1.9
BRRC				*i*		23 37 33.5	
	comp=Z,50nm,0.4s						
RUSC	La Rusia	3.10	213	*e*P	Pn	23 36 50.2	+1.4
RUSC				*e*S	Sg	23 37 36.1	-2.3
RUSC				*i*		23 37 42.1	
	comp=Z,51nm,0.3s						
MAPV	Macapo	3.18	66	*e*P	Pn	23 36 50.1	+0.7
MAPV				*e*S	Sn	23 37 26.3	-1.5
URIC	Uribia, Colomb	3.22	349	*e*P	Pn	23 36 49.5	-0.5
BAUV	El Baul	3.34	83	*e*P	Pn	23 36 52.5	+0.9
BAUV				*e*S	Sn	23 37 30.5	-1.2
ZARC	Zaragoza, Cauc	3.58	254	*e*P	Pn	23 36 55.5	+0.5
SMRC	Santa Marta, M	3.83	313	*e*P	Pn	23 36 57.6	-0.9
SMRC				*e*S	Sn	23 37 45.4	+1.3
SMRC				*i*		23 37 59.3	
	comp=Z,22nm,0.3s						
SPBC	San Pablo de B	3.90	223	*e*P	Pn	23 37 01.0	+1.5
SPBC				*e*S	Sn	23 37 46.9	+1.1
SPBC				*i*		23 38 04.4	
	comp=Z,29nm,0.5s						
SJCC	San Jacinto, C	3.98	290	*e*P	Pn	23 37 02.4	+1.8
SJCC				*e*S	Sn	23 37 48.9	+1.1
SJCC				*i*		23 37 52.3	
	comp=Z,34nm,0.5s						
BENV	Beln	4.01	69	*e*P	Pn	23 37 01.6	+0.7
BENV				*e*S	Sn	23 37 46.9	-1.6
UREC	San Jos de Ur	4.17	260	*e*P	Pn	23 37 04.0	+0.9
UREC				*e*S	Sn	23 37 53.3	+0.9
UREC				*i*		23 38 10.6	
	comp=Z,29nm,0.2s						
MOTC	Monteria, Cord	4.23	274	*e*P	Pn	23 37 05.3	+1.4
MOTC				*e*S	Sn	23 37 55.2	+1.3
MOTC				*i*		23 38 23.0	
	comp=Z,19nm,0.6s						
PTGC	Puerto Gaitan,	4.36	190	*e*P	Pg	23 37 24.4	+2.3
PTGC				*e*S	Sg	23 38 14.7	-3.9
PTGC				*i*		23 38 29.9	
	comp=Z,81nm,0.6s						
NORC	Norcasia	4.53	230	*e*P	Pn	23 37 08.9	+0.8
NORC				*e*S	Sn	23 38 01.5	+0.1
NORC				*i*		23 38 12.1	
	comp=Z,11nm,0.5s						
TACV	Tcata	4.60	69	*e*P	Pn	23 37 08.6	-0.4
TACV				*e*S	Sn	23 38 00.6	-2.3
HELC	Santa Helena	4.71	241	*e*P	Pn	23 37 11.9	+1.0
HELC				*e*S	Sn	23 38 10.7	+4.5
HELC				*i*		23 38 35.6	
	comp=Z,11nm,0.7s						
PAYV	Puerto Ayacuch	4.82	129	*e*P	Pn	23 37 11.6	-0.4
PAYV				*e*S	Sn	23 38 04.6	-3.7
CACV	CAICARA DEL OR	4.90	101	*e*P	Pb	23 37 20.6	-4.4
VILC	Villavicencio,	4.94	208	*e*P	Pn	23 37 14.5	+0.7
VILC				*e*S	Sn	23 38 11.9	+0.4
VILC				*i*		23 38 45.2	
	comp=Z,1µm,0.4s						
ORTC	Ortega, Tolima	5.97	220	*e*P	Pn	23 37 28.7	+0.8
ORTC				*e*S	Sn	23 38 36.3	-0.6
ORTC				*i*		23 38 42.0	
	comp=Z,11nm,0.4s						
PLMC	San Jos del P	6.04	234	*e*P	Pn	23 37 31.8	+2.9

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*TUL **07** 23:43:27.9±1.5, 36°.94N±0°.03×97°.84W±0°.06, h5^{km}±7^{km}, ML3.6, mb_Lg3.5/104(NEIC), Error ellipse: s-maj=6.9km s-min=2.8km az=67.0*

*IDC **07** 23:43:28.1±0.8, 36°.97N×97°.80W, h0^{km}, mb4.0/2, mb1 3.9/8, mb1mx3.7/53, mbtmp3.6/8, ML4.0/4, MS3.3/1, Ms1 3.3/1, ms1mx2.6/47, Error ellipse: s-maj=11.8km s-min=9.8km az=125.0*

*NEIC **07** 23:43:28.2±1.2, 36°.93N±0°.03×97°.80W±0°.05, h5^{km}±7^{km}, Error ellipse: s-maj=6.8km s-min=2.7km az=61.0*

*ANF **07** 23:43:30.3±0.8, 36°.98N×97°.91W, h28^{km}±9^{km}, ML4.4/12, Error ellipse: s-maj=5.0km s-min=4.8km az=81.0*

ISC 07 23:43:28.0±0.8**, 36°.94N**±0°.02×**97°.83W**±0°.02**, h9**^{km}±5^{km}**, n168,** σ1^{s}.**05**/179**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.09	197	Pg	Pg	23 43 30.2	-0.2
KAN14	Manchester OK	0.11	278		Pg	23 43 30.5	-0.2
KAN14				Sg	Sg	23 43 32.2	-0.4
KAN17	Caldwell West	0.11	26	Pg	Pg	23 43 30.9	+0.1
KAN17				Sg	Sg	23 43 32.9	+0.2
KAN05	Bluff City Nor	0.17	348		Pg	23 43 31.8	+0.1
KAN01	Argonia South	0.22	14		Pg	23 43 32.8	+0.2
KAN01				Sg	Sg	23 43 36.0	+0.4
KAN09	Caldwell North	0.26	40	Pg	Pg	23 43 33.5	+0.3
KAN09				Sg	Sg	23 43 37.3	+0.6
KAN10	Anthony SW Sta	0.28	310	Pg	Pg	23 43 33.7	0.0
KAN13	South Haven SW	0.29	75		Pg	23 43 34.2	+0.4
KAN06	Argonia West S	0.31	355		Pg	23 43 34.4	+0.2
KAN08	Anthony NE Sta	0.31	338		Pg	23 43 34.3	+0.1
OK032	Salt Plains WL	0.34	246		Pg	23 43 34.6	-0.1
OK032				Sg	Sg	23 43 39.2	+0.1
KAN16	Harper SW Stat	0.34	326	Pg	Pg	23 43 34.9	0.0
KAN16				Sg	Sg	23 43 40.0	+0.6
KS20	Mayfield South	0.36	37		Pg	23 43 35.4	+0.2
KS20					Sb	23 43 40.5	-1.9
KS21	Milan North St	0.37	21		Pg	23 43 35.5	+0.2
KS21					Sb	23 43 40.8	-1.9
KAN12	Harper NE Stat	0.38	339		Pg	23 43 35.4	-0.1
KAN12					Sg	23 43 41.1	+0.5
CROK	Carrier	0.45	196	Pg	Pg	23 43 36.9	0.0
BLOK	Blackwell	0.52	110	Pg	Pg	23 43 38.3	+0.2
T35A	Sooner Cattle	1.05	91		Pg	23 43 48.0	-0.3
T35B	Sooner Cattle	1.05	91	P	Pg	23 43 48.0	-0.3
	baz=270,SNR=258						
T35B				S	Sg	23 44 01.9	-0.1
	baz=270						
U32A	Winter Ranch,	1.10	240		Pg	23 43 48.2	-0.9
U32A	Winter Ranch,	1.10	240	P	Pg	23 43 48.4	-0.8
	baz=60,SNR=36						
OK029	Liberty Lake	1.18	165		Pg	23 43 50.1	-0.6
QUOK	Quay	1.18	130		Pg	23 43 50.2	-0.5
OK031	S. Brethren Rd	1.27	141		Pn	23 43 51.6	-0.3
BCOK	Bluff Creek, N	1.29	172		Pn	23 43 52.0	-0.3
OK030	Cody Creek RV	1.31	140		Pn	23 43 52.4	-0.2
OK005	Luther M Schoo	1.38	158		Pn	23 43 53.9	+0.4
OK009	Oakdale Elemen	1.40	166		Pn	23 43 53.8	+0.1
OK025	Westminster Rd	1.41	164		Pn	23 43 54.2	+0.3
OK001	Jones High Sch	1.44	162	Pn	Pn	23 43 54.9	+0.6
OKCFA	Oklahoma City	1.55	169		Pn	23 43 56.4	+0.6
OKCFA	Oklahoma City	1.55	169	P	Pn	23 43 56.6	+0.7
	baz=350,SNR=8.7						
OKCFA				S	Sb	23 44 17.8	+1.1
	baz=350						
OKCSW	OKLAHOMA CITY	1.56	168		Pn	23 43 56.7	+0.7
R32A	Long Quarter,	1.64	335		Pb	23 43 58.1	-0.3
R32A	Long Quarter,	1.64	335	P	Pb	23 43 58.0	-0.4
	baz=154,SNR=282						
R32A				S	Sb	23 44 19.3	+0.1
	baz=154						
FNO	Franklin	1.71	168		Pn	23 43 58.9	+0.8
TUL1	Leonard	1.94	121	P	Pn	23 44 02.5	+1.4
	baz=302						
TUL1				S	Sb	23 44 28.8	+1.1
	baz=302						
TUL1	Leonard	1.94	121		Pn	23 44 01.8	+0.7
TUL1	Leonard	1.94	121	P	Pn	23 44 02.5	+1.4
	baz=302,SNR=103						
TUL1				Sb	Sb	23 44 28.9	+1.1
	baz=302						
WMOK	Wichita Mounta	2.33	200	P	Pn	23 44 07.1	+0.5
	baz=20						
WMOK	Wichita Mounta	2.33	200		Pn	23 44 07.2	+0.6
WMOK	Wichita Mounta	2.33	200	P	Pn	23 44 07.2	+0.6
	baz=20,SNR=138						
X34A	Smith Ranch, M	2.33	180	Pn	Pn	23 44 07.7	+1.1
KSU1	Kansas State U	2.36	24	P	Pn	23 44 08.1	+1.0
	baz=204						
KSU1				Sb	Sb	23 44 40.5	+0.5
	baz=204						
KSU1	Kansas State U	2.36	24	Pn	Pn	23 44 07.9	+1.0
KSU1	Kansas State U	2.36	24	P	Pn	23 44 08.0	+1.0
	baz=204,SNR=24						
KSU1				S	Sb	23 44 40.5	+0.5
	baz=204						
CBKS	Cedar Bluff	2.41	322	Pb	Pb	23 44 10.0	-1.5
	baz=140						
CBKS				Sb	Sb	23 44 41.8	+0.5
	baz=140						
CBKS	Cedar Bluff	2.41	322	Pn	Pn	23 44 09.3	+1.7
CBKS	Cedar Bluff	2.41	322	P	Pn	23 44 08.8	+1.2
	baz=140,SNR=20						
CBKS				S	Sb	23 44 41.7	+0.5
	baz=140						
U38A	Gravette	2.81	99		Pn	23 44 14.2	+1.0
U38A	Gravette	2.81	99	P	Pn	23 44 13.6	+0.4
	baz=281,SNR=39						
LOOK	Love County	2.99	170	Pn	Pn	23 44 16.7	+1.1
X37A	Clayton	3.08	139		Pn	23 44 18.0	+1.1
X37A	Clayton	3.08	139	P	Pn	23 44 18.1	+1.3
	baz=320,SNR=90						
HHAR	Hobbs	3.19	101	Pn	Pn	23 44 19.8	+1.4
HHAR				IAmb_Lg		23 45 17.8	
	comp=Z,176nm,0.7s						
Z35A	Perchaven, San	3.63	172		Pn	23 44 25.2	+0.8
Z35A	Perchaven, San	3.63	172	P	Pn	23 44 25.4	+0.9
	baz=353,SNR=11						
Z35A				S	Sn	23 45 08.8	+1.3
	baz=353						
S39A	Bolivar	3.67	77		Pn	23 44 25.4	+0.5
S39A				IAmb_Lg		23 45 29.4	
	comp=Z,95nm,0.7s						
S39A	Bolivar	3.67	77	P	Pn	23 44 25.5	+0.6
	baz=259,SNR=58						
W39A	Magazine	3.71	117	Sb	Sg	23 45 25.8	-1.4
	baz=299						
W39A	Magazine	3.71	117		Pn	23 44 26.9	+1.4
W39A				IAmb_Lg		23 45 32.2	
	comp=Z,174nm,0.8s						
W39A	Magazine	3.71	117	P	Pn	23 44 26.1	+0.6
	baz=299						
AMTX	Amarillo	3.74	238	Sb	Sb	23 45 25.0	+5.2
	baz=56						
AMTX	Amarillo	3.74	238	Pn	Pn	23 44 27.3	+1.3
AMTX				IAmb_Lg		23 45 31.3	
	comp=Z,119nm,0.8s						
N33A	J Bar K, Exete	3.80	4		Pn	23 44 26.3	-0.5
N33A				IAmb_Lg		23 45 35.1	
	comp=Z,180nm,0.8s						
U40A	Yellville	4.04	97	P	Pn	23 44 30.8	+0.7
	baz=280						
U40A				S	Sn	23 45 18.4	+0.9
	baz=280						
U40A	Yellville	4.04	97		Pn	23 44 30.4	+0.3
U40A				IAmb_Lg		23 45 34.6	
	comp=Z,112nm,0.7s						
U40A	Yellville	4.04	97	P	Pn	23 44 30.8	+0.7
	baz=280,SNR=38						
U40A				P	Pn	23 44 30.8	+0.7
	baz=280,SNR=38						
MIAR	Mount Ida	4.20	123	P	Pn	23 44 34.3	+2.0
	baz=306						
MIAR				Sb	Sg	23 45 40.0	-2.9

	baz=306						
MIAR	Mount Ida	4.20	123		Pn	23 44 33.6	+1.3
MIAR				IAmb_Lg		23 45 41.3	
	comp=Z,104nm,0.9s						
MIAR	Mount Ida	4.20	123	P	Pn	23 44 33.3	+1.1
	baz=306,SNR=31						
N35A	Tabor	4.27	23		Pn	23 44 34.0	+0.8
N35A	Tabor	4.27	23	P	Pn	23 44 34.3	+1.1
	baz=204,SNR=5.6						
P38A	Dawn	4.31	50	Pn	Pn	23 44 34.1	+0.3
P38A				IAmb_Lg		23 45 46.3	
	comp=Z,149nm,1.0s						
P38A	Dawn	4.31	50	P	Pn	23 44 34.5	+0.7
	baz=232,SNR=24						
KSCO	Kaye Shedlock’	4.32	300		Pn	23 44 34.4	+0.3
KSCO				IAmb_Lg		23 45 53.2	
	comp=Z,100nm,0.9s						
Z38A	Mt. Pleasant	4.35	147		Pn	23 44 34.5	+0.2
Z38A				IAmb_Lg		23 45 54.5	
	comp=Z,133nm,0.8s						
MGMO	Mountain Grove	4.45	86		Pn	23 44 36.6	+0.9
BGNE	Belgrade	4.47	357	P	Pn	23 44 36.8	+0.8
	baz=176						
BGNE	Belgrade	4.47	357	Pn	Pn	23 44 36.5	+0.5
BGNE				IAmb_Lg		23 45 58.0	
	comp=Z,73nm,0.7s						
BGNE	Belgrade	4.47	357	P	Pn	23 44 36.9	+0.9
	baz=176,SNR=18						
ABTX	Abilene, Hawle	4.56	200	S	Sn	23 45 30.3	0.0
	baz=19						
ABTX	Abilene, Hawle	4.56	200		Pn	23 44 37.9	+0.7
R40A	Maddies Statio	4.61	71		Pn	23 44 38.4	+0.4
R40A	Maddies Statio	4.61	71	P	Pn	23 44 38.7	+0.8
	baz=254,SNR=26						
FCAR	Ozark Folk Cen	4.72	101		Pn	23 44 39.9	+0.5
FCAR				IAmb_Lg		23 45 58.1	
	comp=Z,73nm,0.9s						
X40A	Basin Creek Fa	4.74	120		Pn	23 44 40.8	+1.2
X40A	Basin Creek Fa	4.74	120	P	Pn	23 44 40.9	+1.2
	baz=302,SNR=18						
X40A				P	Pn	23 44 40.9	+1.2
	baz=302,SNR=18						
WHAR	Wooly Hollow	4.78	109		Pn	23 44 40.4	+0.2
WHAR				IAmb_Lg		23 46 09.8	
	comp=Z,161nm,1.1s						
W41B	Gary Mavity, V	4.85	110	P	Pn	23 44 41.9	+0.7
	baz=293						
W41B				Sb	Sb	23 45 57.6	+6.0
	baz=293						
W41B	Gary Mavity, V	4.85	110	P	Pn	23 44 41.9	+0.7
	baz=293,SNR=17						
WHTX	Lake Whitney,	4.95	176	P	Pn	23 44 42.8	+0.3
	baz=357						
WHTX				S	Sn	23 45 38.6	-1.3
	baz=357						
WHTX	Lake Whitney,	4.95	176		Pn	23 44 42.4	-0.1
WHTX				IAmb_Lg		23 46 13.6	
	comp=Z,76nm,1.0s						
WHTX	Lake Whitney,	4.95	176	P	Pn	23 44 42.8	+0.3
	baz=357,SNR=11						
MSTX	Muleshoe	5.01	235		Pn	23 44 44.4	+0.9
WLAR	White Oak Lake	5.04	129	Pn	Pn	23 44 44.9	+1.1
OGNE	Ogallala	5.17	322		Pn	23 44 46.0	+0.4
237A	Washetta, Mont	5.20	161	Pn	Pn	23 44 45.2	-0.8
237A				IAmb_Lg		23 46 09.6	
	comp=Z,76nm,0.9s						
P40A	Paris	5.23	59		Pn	23 44 46.4	0.0
P40A				IAmb_Lg		23 46 12.4	
	comp=Z,89nm,0.8s						
N38A	Joes South For	5.26	42	Pn	Pn	23 44 46.8	0.0
N38A				IAmb_Lg		23 46 24.2	
	comp=Z,148nm,0.7s						
T25A	Trinidad	5.27	274		Pn	23 44 47.2	0.0
T25A				IAmb_Lg		23 46 19.2	
	comp=Z,65nm,0.8s						
CCM	Cathedral Cave	5.35	76	Pn	Pn	23 44 48.0	-0.1
CCM				IAmb_Lg		23 46 25.3	
	comp=Z,64nm,0.8s						
T42A	Van Buren	5.39	87	Pn	Pn	23 44 48.5	-0.1
LCAR	Lake Charles	5.45	97		Pn	23 44 49.8	+0.5
CCAR	Cane Creek	5.79	120	IAmb_Lg		23 46 40.9	
	comp=Z,98nm,0.8s						
PBMO	Poplar Bluff	5.93	89		Pn	23 44 56.3	+0.3
PBMO				IAmb_Lg		23 46 36.9	
	comp=Z,92nm,0.8s						
FVM	French Village	5.98	78		Pn	23 44 56.3	-0.4
FVM				IAmb_Lg		23 46 37.6	
	comp=Z,51nm,0.8s						
SCIA	State Center	6.11	34	Pn	Pn	23 44 59.0	+0.5
435B	Jarrell	6.15	178		Pn	23 44 58.4	-0.6
435B				IAmb_Lg		23 46 55.0	
	comp=Z,93nm,0.8s						
SDCO	Great Sand Dun	6.17	280	Pn	Pn	23 45 00.3	+0.8
SDCO	Great Sand Dun	6.17	280	P	Pn	23 45 01.0	+1.5
	baz=95,SNR=5.8						
SLM	Saint Louis	6.25	72	IAmb_Lg		23 46 48.6	
	comp=Z,64nm,0.8s						
JCT	Junction City	6.65	195		Pn	23 45 05.6	-0.3
JCT				IAmb_Lg		23 47 17.5	
	comp=Z,64nm,0.7s						
ISCO	Idaho Springs	6.75	297		Pn	23 45 07.9	+0.3
143A	Socs Landing,	6.76	127	IAmb_Lg		23 47 17.9	
	comp=Z,47nm,0.8s						
ECSD	EROS Data Cent	6.85	7	Pn	Pn	23 45 07.5	-1.1
ECSD				IAmb_Lg		23 47 14.4	
	comp=Z,63nm,0.9s						
S44A	Carbondale	6.87	81		Pn	23 45 09.3	+0.4
S44A				IAmb_Lg		23 47 11.5	
	comp=Z,54nm,0.8s						
GLAT	Glass	6.90	93	IAmb_Lg		23 47 21.7	
	comp=Z,102nm,0.8s						
SIUC	Southern Illin	6.90	81		Pn	23 45 09.8	+0.5
SIUC				IAmb_Lg		23 47 08.1	
	comp=Z,56nm,0.7s						
HICK	Hickman	6.92	91	Pn	Pn	23 45 10.3	+0.8
HALT	Halls	6.92	96	IAmb_Lg		23 47 15.4	
	comp=Z,75nm,0.8s						
P43A	Skaggs, Pawnee	7.07	65	IAmb_Lg		23 47 13.0	
	comp=Z,96nm,0.8s						
W45A	Hickory Valley	7.22	102	IAmb_Lg		23 47 20.1	
	comp=Z,65nm,0.8s						
L40A	Anamosa	7.23	43		Pn	23 45 13.5	-0.3
L40A				IAmb_Lg		23 47 33.5	
	comp=Z,56nm,0.8s						
Q44A	Meyer Farm, Va	7.23	72	Pn	Pn	23 45 13.6	-0.3
Q44A				IAmb_Lg		23 47 21.5	
	comp=Z,76nm,0.9s						
ANMO	Albuquerque	7.28	257	Pn	Pn	23 45 16.0	+1.3
	comp=Z,0.1nm,0.3s,baz=97,slow=16,SNR=1.4						
ANMO				Lg	Lg	23 47 14.2	
	comp=Z,2.2nm,0.3s,baz=336,slow=19,SNR=9.5						
Y45A	Yeager Farm, C	7.43	112	IAmb_Lg		23 47 36.5	
	comp=Z,63nm,0.9s						
SMCO	Snowmass	7.55	290		Pn	23 45 18.1	-0.6
HDIL	Hopedale	7.58	59		Pn	23 45 19.4	+0.7
BNM	Barren Site	7.70	251	Pn	Pn	23 45 20.4	-0.1
I37A	Lemond, Waseca	7.83	24	Pn	Pn	23 45 21.2	-0.9
I37A				IAmb_Lg		23 47 46.2	
	comp=Z,87nm,0.8s						
OLIL	Olney	7.90	74	Pn	Pn	23 45 22.4	-0.6
OLIL				IAmb_Lg		23 47 43.4	
	comp=Z,61nm,1.1s						
Y22D	IRIS PASSCAL I	7.95	252	IAmb_Lg		23 47 55.8	
	comp=Z,67nm,0.9s						
O44A	Mansfield	8.00	64	Pn	Pn	23 45 24.9	+0.4
O44A				IAmb_Lg		23 47 43.4	
	comp=Z,63nm,0.7s						
L42A	Oliver, Polo	8.08	49	IAmb_Lg		23 47 55.2	
	comp=Z,50nm,0.8s						
WVT	Waverly	8.09	93	Pn	Pn	23 45 25.3	-0.3
PLAL	Pickwick Lake	8.14	101	Pn	Pn	23 45 25.9	-0.5
MNTX	Cornudas Mount	8.15	232	Pn	Pn	23 45 26.3	-0.2
JFWS	Jewell Farm	8.33	42	Pn	Pn	23 45 28.2	-0.7
JFWS				IAmb_Lg		23 48 11.4	
	comp=Z,46nm,0.7s						
146A	Union	8.39	118	IAmb_Lg		23 48 13.2	
	comp=Z,36nm,0.7s						
RSSD	Black Hills	8.59	329	Pn	Pn	23 45 33.5	+0.8
RWWY	Rawlins	8.68	306	IAmb_Lg		23 48 18.0	
	comp=Z,37nm,0.9s						
M44A	Midewin, Midew	8.80	57	Pn	Pn	23 45 34.9	-0.4
M44A				IAmb_Lg		23 48 15.0	
	comp=Z,59nm,0.9s						
I40A	Norwalk	8.85	36	Pn	Pn	23 45 35.2	-0.9
I40A				IAmb_Lg		23 48 08.5	
	comp=Z,30nm,0.9s						
F33A	5 Mile Ranch,	8.96	7	Pn	Pn	23 45 37.3	-0.3
F33A				IAmb_Lg		23 48 08.7	
	comp=Z,32nm,0.7s						
TX31	Lajitas Ar. Si	9.03	214		Pn	23 45 38.6	-0.1
TX32	Lajitas Array	9.03	214		Pn	23 45 38.4	-0.3
TXAR	Lajitas Array	9.03	214	Pn	Pn	23 45 38.2	-0.4
	comp=Z,0.5nm,0.3s,baz=35,slow=11,SNR=13						
TXAR				Sn	Sn	23 47 17.8	-2.6
	comp=Z,0.8nm,0.3s,baz=47,slow=25,SNR=3.6						
TXAR				Lg	Lg	23 48 10.2	
	comp=Z,1.4nm,0.3s,baz=41,slow=28,SNR=6.7						
SFIN	Lafayette	9.07	64	Pn	Pn	23 45 39.7	+0.7
SPMN	Marine on St.	9.10	23		Pn	23 45 38.8	-0.7
WCI	Wyandotte Cave	9.24	79		Pn	23 45 42.2	+0.7
L44A	Lake County Fo	9.27	53	IAmb_Lg		23 48 34.6	
	comp=Z,46nm,0.9s						
I42A	Draeger Farm,	9.71	42	Pn	Pn	23 45 47.2	-0.6
I42A				IAmb_Lg		23 48 55.8	
	comp=Z,29nm,0.8s						
E28A	Huff	9.86	348	IAmb_Lg		23 48 52.9	
	comp=Z,39nm,0.9s						
N47A	Urbana	10.24	64	Pn	Pn	23 45 55.0	-0.1
T50A	Nancy	10.39	86	Pn	Pn	23 45 57.1	-0.1
PD31	Pinedale Array	10.73	306	Pn	Pn	23 46 02.1	+0.1
PDAR	Pinedale Array	10.73	306	Pn	Pn	23 46 03.7	+1.7
	comp=Z,0.3nm,0.3s,baz=118,slow=15,SNR=6.0						
PDAR				Lg	Lg	23 49 02.9	
	comp=Z,0.9nm,0.3s,baz=104,slow=34,SNR=4.3						
CPCT	Cooper Cave	10.86	94	Pn	Pn	23 46 03.2	-0.4
S51A	Beattyville	11.36	82		Pn	23 46 10.5	0.0
TKL	Tuckaleechee C	11.41	92	Pn	Pn	23 46 11.1	-0.1
	comp=Z,0.9nm,0.3s,baz=245,slow=9.9,SNR=12						
TKL				Lg	Lg	23 49 20.7	
	comp=Z,1.0nm,0.3s,baz=1.9,slow=11,SNR=7.7						
TKL	Tuckaleechee C	11.41	92		Pn	23 46 10.5	-0.7
TZTN	Tazewell	11.46	88	Pn	Pn	23 46 11.2	-0.7
ULM	Lac du Bonnet	13.38	5	Pn	Pn	23 46 34.5	-3.4
	comp=Z,0.3nm,0.3s,baz=177,slow=14,SNR=1.9						
ULM				Sn	Sn	23 48 55.5	-11
	comp=Z,0.4nm,0.3s,baz=200,slow=17,SNR=1.8						
ULM				Lg	Lg	23 50 22.1	
	comp=Z,0.5nm,0.3s,baz=12,slow=19,SNR=2.0						
NVAR	Mina Array Bea	16.28	281	Pn	P	23 47 19.9	-0.2
	comp=Z,0.1nm,0.3s,baz=84,slow=9.2,SNR=2.4						
LPIG	La Paz	16.69	223	LR	LR	23 54 05.0	
	comp=Z,96nm,20.6s,baz=276,slow=38						
ILAR	Eielson Array	40.03	330	P	P	23 51 04.2	+1.2
	comp=Z,1.7nm,0.7s,baz=108,slow=7.1,SNR=20						
SONM	Songino Array	92.87	344	P	P	23 56 42.9	+1.6
	comp=Z,0.4nm,0.8s,baz=3.8,slow=4.3,SNR=2.6						

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*FUNV **07** 23:43:44.0, 8°.49N×71°.40W, h1^{km}, MW4.0*

*NEIC **07** 23:43:44.9±1.6, 8°.60N±0°.02×71°.38W±0°.04, h13^{km}±7^{km}, mb4.3/4, Mwr4.0(CAR), Error ellipse: s-maj=5.7km s-min=3.2km az=100.0*

*CAR **07** 23:43:46.2±2.8, 8°.52N±0°.06×71°.36W±0°.04, h5^{km}±1^{km}, Error ellipse: s-maj=9.2km s-min=4.6km az=151.0*

ISC 07 23:43:43.4±1.3**, 8°.54N**±0°.03×**71°.39W**±0°.02**, h9**^{km}±10^{km}**, n49, σ1ˢ.35**/68**, 2D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.58	116	*e*P	Pg	23 43 54.7	+0.1
SOCV				*e*S	Sg	23 44 02.6	+0.3
SOCV	Socops	0.58	116	⇓*i*P	Pg	23 43 54.8	+0.1
SOCV				*e*S	Sg	23 44 03.2	+0.8
SDV	Santo Domingo	0.82	65	*e*P	Pb	23 44 00.2	+0.3
SDV	Santo Domingo	0.82	65	Pg	Pb	23 44 00.2	+0.3
SDV				Sg	Sb	23 44 12.4	+1.2
CAPV	Capacho	1.14	234	⇓*i*P	Pb	23 44 03.7	-1.6
CAPV				*e*S	Sb	23 44 20.1	-0.3
PAMC	Pamplona, Colo	1.77	228	*e*P	Pn	23 44 15.3	+0.7
PAMC				*e*S	Sb	23 44 39.5	+0.9
PAMC				*i*		23 44 41.7	
	comp=Z,921nm,0.5s						
MCQV	Machiques	1.88	323	*e*P	Pn	23 44 17.0	+1.3
MCQV				*e*S	Sb	23 44 41.1	-0.4
OCAC	Ocana	1.94	261	*e*P	Pn	23 44 17.3	+0.6
OCAC				*e*S	Sn	23 44 42.9	+1.7
OCAC				*i*		23 44 44.5	
	comp=Z,3µm,0.5s						
OCAC	Ocana	1.94	261	Pn	Pn	23 44 17.2	+0.6
OCAC				Sn	Sb	23 44 43.1	-0.2
LL1C	La Loma 1 Cana	2.36	295	*e*P	Pb	23 44 25.0	-1.1
ELOV	Elorza	2.43	129	*e*P	Pn	23 44 25.3	+2.0
ELOV	Elorza	2.43	129	*e*P	Pn	23 44 24.2	+0.9
ELOV				*e*S	Sn	23 44 53.1	-0.1
SIQV	Siquisique	2.61	36	*e*P	Pn	23 44 27.2	+1.3
SIQV				*e*S	Sn	23 44 58.9	+1.2
BARC	Barichara	2.63	223	*e*P	Pn	23 44 28.0	+1.8
BARC				*e*S	Sb	23 45 04.5	+1.1
BARC				*i*		23 45 08.7	
	comp=Z,538nm,0.4s						
SMLC	San Martn de	2.67	276	*e*P	Pn	23 44 26.8	+0.2
CVALL	Valledupar, Ce	2.69	317	*e*P	Pn	23 44 27.2	+0.3
BRRC	Barranca, Sant	2.71	238	*e*P	Pn	23 44 28.7	+1.5
BRRC				*e*S	Sb	23 45 07.2	+1.8
BRRC				*i*		23 45 15.8	
	comp=Z,145nm,0.4s						
ARGC	Ariguani, Magd	3.11	295	*e*P	Pn	23 44 34.2	+1.6
RUSC	La Rusia	3.12	213	*e*P	Pb	23 44 38.6	-0.8
MAPV	Macapo	3.16	66	*e*P	Pn	23 44 35.1	+1.6
MAPV				*e*S	Sn	23 45 12.0	+0.6
URIC	Uribia, Colomb	3.20	349	Pn	Pn	23 44 33.5	-0.3
URIC				Sn	Sn	23 45 11.4	-0.7
BAUV	El Baul	3.33	83	*e*P	Pn	23 44 36.8	+1.1
BAUV				*e*S	Sn	23 45 15.1	-0.3
BAUV	El Baul	3.33	83	Pn	Pn	23 44 37.7	+2.0
JACV	Jacura	3.57	45	*e*P	Pn	23 44 40.3	+1.3
JACV				*e*S	Sn	23 45 21.6	+0.2
ZARC	Zaragoza, Cauc	3.59	253	Pn	Pn	23 44 39.8	+0.5
MONV	Montecano	3.67	22	*e*P	Pn	23 44 41.8	+1.4
MONV				*e*S	Sn	23 45 24.0	+0.2
SJCC	San Jacinto, C	3.98	290	*e*P	Pn	23 44 45.3	+0.6
SJCC	San Jacinto, C	3.98	290	Pn	Pn	23 44 46.7	+2.0
BENV	Beln	4.00	69	*e*P	Pn	23 44 46.3	+1.4
BENV				*e*S	Sn	23 45 30.9	-1.0
MOTC	Monteria, Cord	4.24	274	*e*P	Pn	23 44 49.6	+1.4
MOTC	Monteria, Cord	4.24	274	Pn	Pn	23 44 49.8	+1.6
NORC	Norcasia	4.55	230	*e*P	Pn	23 44 53.9	+1.4
TACV	Tcata	4.59	69	*e*P	Pn	23 44 53.6	+0.6
ROSC	El Rosal	4.69	219	Pn	Pn	23 44 58.6	+3.9
PAYV	Puerto Ayacuch	4.83	130	*e*P	Pn	23 44 56.4	+0.1
PAYV				*e*S	Sn	23 45 48.9	-3.6
CACV	CAICARA DEL OR	4.90	101	*e*P	Pb	23 45 05.2	-4.2
MERV	Las Mercedes	5.08	82	*e*P	Pn	23 44 59.7	0.0
CAP2	Capurgana	5.91	271	Pn	Pn	23 45 12.1	+0.9
PRGV	PARIAGUAN	6.67	88	*e*P	Pn	23 45 21.2	-0.4
CRPR	Cabo Rojo, PR	10.29	23	Pn	Pn	23 46 10.5	-0.8
DR12	Loma Pena Alta	10.37	11	Pn	Pn	23 46 11.9	-0.6
PDPR	Patillas Dam,	10.77	28	Pn	Pn	23 46 17.5	-0.4
GCPR	Guaynabo City	10.99	27	Pn	Pn	23 46 20.7	-0.2
BOAV	Boa Vista	12.41	119	Pn	Pn	23 46 40.9	+0.4
PTGA	Pitinga	14.64	128	Pn	Pn	23 47 09.3	-1.6
MACA	Manacapuru-AM	15.78	137	Pn	Pn	23 47 28.2	+2.2
MACA				IAmb	IAmb	23 47 50.8	
	comp=Z,5.8nm,0.7s						
ETMB	Extrema	18.95	164	P	P	23 48 04.9	-0.1
BRAL	Brewton	26.84	329	P	P	23 49 23.7	-0.5
152A	Waverly Hall	27.00	335	P	P	23 49 25.8	0.0
152A				IAmb	IAmb	23 49 43.5	
	comp=Z,17nm,0.8s						

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*IDC **07** 23:50:26.2±0.9, 8°.69N×71°.52W, h0^{km}, mb3.9/4, mb1 4.1/8, mb1mx3.8/40, mbtmp4.0/8, ML3.8/4, Error ellipse: s-maj=20.9km s-min=9.5km az=160.0*

*FUNV **07** 23:50:27.6, 8°.49N×71°.43W, h1^{km}, MW4.2*

*NEIC **07** 23:50:28.3±1.5, 8°.64N±0°.06×71°.42W±0°.04, h10^{km}±6^{km}, mb3.9/5, Mwr4.2(CAR), Error ellipse: s-maj=9.3km s-min=4.8km az=157.0*

*CAR **07** 23:50:28.5±4.1, 8°.52N±0°.06×71°.48W±0°.04, h5^{km}±5^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=68.0*

ISC 07 23:50:26.4±1.2**, 8°.58N**±0°.03×**71°.42W**±0°.02**, h4**^{km}±8^{km}**, n82, σ1ˢ.47**/105**, mb3.9**/4**, 1D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.63	118	*e*P	Pg	23 50 38.8	+0.3
SOCV				*e*S	Sg	23 50 46.9	+0.1
SOCV	Socops	0.63	118	⇓*i*P	Pg	23 50 38.8	+0.3
SOCV				*e*S	Sg	23 50 47.5	+0.7
SDV	Santo Domingo	0.83	69	Pg	Pb	23 50 44.2	+0.6
	312nm,0.3s,baz=210,slow=5.1,SNR=267						
SDV				Lg	Lg	23 50 55.9	
	665nm,0.3s,baz=271,slow=14,SNR=23						
SDV	Santo Domingo	0.83	69	*e*P	Pb	23 50 44.1	+0.6
SDV				*e*S	Sb	23 50 55.6	+0.4
CAPV	Capacho	1.14	231	*e*P	Pg	23 50 47.2	-1.1
CAPV				*e*S	Sg	23 51 02.5	-0.6
PAMC	Pamplona, Colo	1.77	226	*e*P	Pn	23 50 58.9	+0.7
PAMC				*e*S	Sn	23 51 21.3	-0.1
MCQV	Machiques	1.83	323	*e*P	Pg	23 51 00.7	-0.8
MCQV				*e*S	Sg	23 51 24.2	-1.0
OCAC	Ocana	1.91	260	*e*P	Pn	23 51 00.6	+0.6
OCAC				*e*S	Sn	23 51 26.0	+1.5
OCAC	Ocana	1.91	260		Pn	23 51 00.5	+0.6
OCAC				Sn	Sn	23 51 25.1	+0.5
TAMC	Tame, Arauca	2.17	190	*e*P	Pn	23 51 04.0	+0.7
LL1C	La Loma 1 Cana	2.32	294	*e*P	Pg	23 51 09.8	-1.1
ELOV	Elorza	2.48	129	*e*P	Pn	23 51 08.8	+1.2
ELOV				*e*S	Sn	23 51 41.3	+3.0
ELOV	Elorza	2.48	129	*e*P	Pn	23 51 08.2	+0.6
ELOV				*e*S	Sn	23 51 36.7	-1.5
SIQV	Siquisique	2.59	38	*e*P	Pn	23 51 11.4	+2.2
SMLC	San Martn de	2.63	275	*e*P	Pn	23 51 10.0	+0.4
CVALL	Valledupar, Ce	2.64	317	*e*P	Pn	23 51 10.9	+1.1
BARC	Barichara	2.64	222	*e*P	Pn	23 51 11.6	+1.6
BARC				*e*S	Sn	23 51 45.5	+2.9
BARC				*i*		23 51 50.3	
	comp=Z,968nm,0.5s						
BRRC	Barranca, Sant	2.71	237	*e*P	Pn	23 51 12.1	+1.4
BRRC				*e*S	Sb	23 51 49.8	+0.8
BRRC				*i*		23 51 57.6	
	comp=Z,251nm,0.6s						
ARGC	Ariguani, Magd	3.07	295	*e*P	Pn	23 51 17.5	+1.9
RUSC	La Rusia	3.14	212	*e*P	Pn	23 51 18.2	+1.1
URIC	Uribia, Colomb	3.15	350	*e*P	Pn	23 51 17.2	+0.4
URIC	Uribia, Colomb	3.15	350		Pn	23 51 16.7	-0.1
MAPV	Macapo	3.17	67	*e*P	Pn	23 51 19.2	+2.0
BAUV	El Baul	3.36	84	*e*P	Pn	23 51 20.8	+1.2
BAUV				*e*S	Sn	23 51 58.8	-1.2
BAUV	El Baul	3.36	84	Pn	Pn	23 51 21.0	+1.4
JACV	Jacura	3.56	45	*e*P	Pn	23 51 23.7	+1.2
ZARC	Zaragoza, Cauc	3.58	253	*e*P	Pn	23 51 22.9	+0.2
ZARC	Zaragoza, Cauc	3.58	253		Pn	23 51 23.1	+0.4
MONV	Montecano	3.64	23	*e*P	Pn	23 51 25.2	+1.6
MONV				*e*S	Sn	23 52 07.7	+0.7
SMRC	Santa Marta, M	3.77	313	*e*P	Pn	23 51 24.4	-1.0
SPBC	San Pablo de B	3.93	222	*e*P	Pn	23 51 28.5	+0.9
SJCC	San Jacinto, C	3.94	290	*e*P	Pn	23 51 30.0	+2.3
SJCC	San Jacinto, C	3.94	290		Pn	23 51 29.6	+1.9
TURV	Turiamo	3.99	62	*e*P	Pn	23 51 29.7	+1.4
BENV	Beln	4.01	70	*e*P	Pn	23 51 30.6	+1.9
BENV				*e*S	Sn	23 52 15.8	-0.5
UREC	San Jos de Ur	4.16	259	*e*P	Pn	23 51 31.6	+0.9
MOTC	Monteria, Cord	4.20	273	*e*P	Pn	23 51 33.2	+1.9
MOTC				*e*S	Sn	23 52 22.1	+1.2
MOTC	Monteria, Cord	4.20	273		Pn	23 51 32.8	+1.5
CHIC	Chingaza	4.55	210	*e*P	Pn	23 51 37.5	+1.0
CHIC				*e*S	Sn	23 52 28.1	-2.0
CHIC				*i*		23 53 14.3	
	comp=Z,44nm,0.4s						
NORC	Norcasia	4.55	229	*e*P	Pn	23 51 37.8	+1.6
NORC				*e*S	Sn	23 52 30.1	+0.5
TACV	Tcata	4.60	70	*e*P	Pn	23 51 38.0	+1.2
TACV				*e*S	Sn	23 52 28.9	-1.9
ROSC	El Rosal	4.71	218	Pn	Pn	23 51 41.1	+2.6
	comp=Z,23nm,0.3s,baz=58,slow=14,SNR=18						
ROSC				Sn	Sn	23 52 37.5	+3.8
	comp=Z,18nm,0.3s,baz=18,slow=23,SNR=6.6						
ROSC				Lg	Lg	23 52 57.4	
	comp=Z,14nm,0.3s,baz=50,slow=22,SNR=6.1						
ROSC	El Rosal	4.71	218		Pn	23 51 40.8	+2.2
HELC	Santa Helena	4.72	240	*e*P	Pb	23 51 48.9	-1.1
PAYV	Puerto Ayacuch	4.88	130	*e*P	Pn	23 51 40.5	-0.1
VILC	Villavicencio,	4.99	207	*e*P	Pn	23 51 41.7	-0.5
MERV	Las Mercedes	5.10	82	*e*P	Pn	23 51 44.0	+0.3
BIRV	Birongo	5.42	69	*e*P	Pn	23 51 48.9	+0.9
BIRV				*e*S	Sn	23 52 49.0	-1.8
BIRV	Birongo	5.42	69	Pn	Pn	23 51 50.3	+2.3
CAP2	Capurgana	5.88	271	Pn	Pn	23 51 54.9	+0.6
GUVC	San Jose del G	6.12	191	*e*P	Pn	23 51 56.5	-1.1
PRGV	PARIAGUAN	6.70	88	*e*P	Pn	23 52 05.6	-0.1
PCRV	Puerto La Cruz	6.88	76	Pn	Pn	23 52 10.8	+2.8
	comp=Z,2.9nm,0.3s,baz=342,slow=2.1,SNR=33						
PCRV				Sn	Sn	23 53 29.1	+2.3
	comp=Z,4.5nm,0.3s,baz=164,slow=21,SNR=6.7						
PLCV	Puerto La Cruz	6.92	76		Pn	23 52 10.8	+2.2
BCIP	Isla Barro Col	8.34	275	Pn	Pn	23 52 29.4	+1.3
DR12	Loma Pena Alta	10.34	11	Pn	Pn	23 52 54.4	-1.2
SDDR	Presa de Saban	10.34	1	Pn	Pn	23 52 57.7	+2.1
OBIP	Obispado Ponce	10.50	26	Pn	Pn	23 52 57.4	-0.5
PDPR	Patillas Dam,	10.75	29	Pn	Pn	23 53 00.8	-0.3
SJG	San Juan	10.77	28	Pn	Pn	23 53 01.6	+0.2
	comp=Z,1.8nm,0.3s,baz=299,slow=15,SNR=2.1						
SJG	San Juan	10.77	28		Pn	23 53 01.4	0.0
GCPR	Guaynabo City	10.97	28	Pn	Pn	23 53 04.3	0.0
CBYP	Canovanas	11.04	29	Pn	Pn	23 53 05.2	-0.1
MTP	Monte Pirata	11.04	30	Pn	Pn	23 53 05.3	+0.1
MTDJ	Mount Denham	11.28	329	Pn	Pn	23 53 09.1	+0.5
FDF	Fort de France	11.77	58	Pn	Pn	23 53 16.1	+0.9
BOAV	Boa Vista	12.46	119	Pn	Pn	23 53 25.3	+0.6
PTGA	Pitinga	14.69	128	Pn	Pn	23 53 53.6	-1.5
	comp=Z,0.5nm,0.3s,baz=328,slow=22,SNR=1.7						
PTGA				Sn	Sn	23 56 32.7	-5.9
	comp=Z,0.4nm,0.3s,baz=348,slow=22,SNR=2.3						
PTGA				Lg	Lg	23 58 07.6	
	comp=Z,1.0nm,0.3s,baz=243,slow=18,SNR=5.8						
PTGA	Pitinga	14.69	128	Pn	Pn	23 53 53.9	-1.3
MDP	Montagnes des	18.96	99	P	P	23 54 48.6	-0.2
	comp=Z,0.4nm,0.3s,baz=293,slow=13,SNR=1.0						
ETMB	Extrema	19.00	164	P	P	23 54 51.2	+2.0
ETMB				IAmb	IAmb	23 54 58.2	
	comp=Z,3.7nm,0.8s						
LPAZ	La Paz	24.92	172	P	P	23 55 52.3	+0.8
	comp=Z,0.6nm,0.4s,baz=353,slow=16,SNR=2.0						
LPAZ	La Paz	24.92	172	P	P	23 55 51.6	+0.1
LPAZ				IAmb	IAmb	23 56 09.9	
	comp=Z,2.3nm,0.9s						
SDCO	Great Sand Dun	42.30	319	P	P	23 58 23.3	+1.7
SCHQ	Schefferville	46.27	4	P	P	23 58 51.7	-1.2
	comp=Z,7.3nm,0.7s,baz=190,slow=13,SNR=4.6						
SCHQ	Schefferville	46.27	4	P	P	23 58 51.0	-1.8
PD31	Pinedale Array	47.70	322	P	P	23 59 04.8	+0.3
PD31				IAmb	IAmb	23 59 09.5	
	comp=Z,3.4nm,1.3s						
PDAR	Pinedale Array	47.70	322	P	P	23 59 04.5	0.0
	comp=Z,0.5nm,0.5s,baz=126,slow=11,SNR=5.7						
PDAR	Pinedale Array	47.70	322	P	P	23 59 04.3	-0.2
TORD	Torodi Ar. Bea	71.74	79	P	P	00 01 52.2	+1.8
	comp=Z,0.4nm,0.8s,baz=288,slow=6.0,SNR=2.2						
ASAR	Alice Springs	151.50	235	PKPbc	PKPbc	00 10 22.6	-0.1
	comp=Z,0.1nm,0.4s,baz=109,slow=3.0,SNR=4.1						
WRA	Warramunga Arr	152.65	243	PKPbc	PKPbc	00 10 25.0	-0.3
	comp=Z,0.4nm,0.7s,baz=108,slow=2.6,SNR=6.5						

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*IDC **07** 23:54:49.0±1.1, 8°.26S×125°.50E, h0^{km}, mb4.0/4, mb1 4.1/9, mb1mx3.8/37, mbtmp3.9/9, ML3.6/4, MS2.9/2, Ms1 2.9/2, ms1mx2.4/37, Error ellipse: s-maj=35.4km s-min=20.5km az=84.0*

*NEIC **07** 23:54:52.4±3.0, 8°.19S±0°.05×125°.27E±0°.08, h10^{km}±1^{km}, mb4.2/10, Error ellipse: s-maj=13.1km s-min=8.9km az=277.0*

*DJA **07** 23:54:52.4±0.3, 8°S±2°×12°5E±°, h10^{km}, M4.0/11, mb4.3/7, mB6.4/1, MLv3.9/11, Mw(mB)6.2/1*

ISC 07 23:54:53.8±1.6**, 8°.39S**±0°.05×**125°.24E**±0°.06**, h31**^{km}±13^{km}**, n47, σ2ˢ.15**/53**, mb4.2**/8**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.67	215	P	Pb	23 55 23.2	-0.8
SOEI				S	Sn	23 55 42.0	+0.6
SOEI	Soe	1.67	215		Pn	23 55 22.1	+1.1
SOEI				Sn	Sb	23 55 48.6	+3.9
SOEI	Soe	1.67	215	P	Pb	23 55 23.1	-0.9
BATI	Baumata	2.39	221	Pn	Pb	23 55 33.9	-2.3
	14nm,0.3s,baz=116,slow=1.3,SNR=13						
BATI				Sn	Sb	23 56 03.2	-2.0
	6.5nm,0.3s,baz=281,slow=22,SNR=7.9						
BATI	Baumata	2.39	221	P	Pn	23 55 30.3	-0.5

BATI				S	Sn	23 56 00.4	+1.3
MMRI	Maumere	2.98	265	P	Pn	23 55 40.2	+1.2
MMRI				S	Sn	23 56 13.9	+0.2
MMRI	Maumere	2.98	265		Pn	23 55 39.6	+0.6
EDFI	Ende, Flores	3.53	264	P	Pn	23 55 46.3	-0.3
EDFI				S	Sn	23 56 26.2	-1.2
BSSI	Bau Bau, Buton	5.22	295	P	Pn	23 56 08.8	-0.9
	0.1nm16nm,0.5s						
WBSI	Waikabubak, Su	5.91	257	P	Pn	23 56 20.0	+0.7
	21nm,0.7s						
BNDI	Bandanaira	6.01	51	P	Pn	23 56 23.1	+2.4
	4.3nm32µm642nm,0.5s						
SANI	Sanana	6.34	7	P	Pn	23 56 25.7	+0.6
	0.1nm6.9nm,0.8s						
KAPI	Kappang	6.40	301	Pn	Pn	23 56 26.2	+0.2
	0.4nm,0.3s,baz=114,slow=18,SNR=1.7						
KAPI	Kappang	6.40	301	Pn	Pn	23 56 26.8	+0.8
DRS	Darwin Rock St	6.86	126	P	Pn	23 56 37.2	+4.9
	6.8nm,1.0s						
MTN	Manton Dam	7.29	128		Pn	23 56 40.5	+2.4
MTN	Manton Dam	7.29	128	P	Pn	23 56 41.2	+3.0
	15nm,0.5s						
PLAI	Plampang	7.40	266	P	Pn	23 56 40.3	+0.6
	0.1nm27nm,0.8s						
PLAI	Plampang	7.40	266	P	Pn	23 56 43.1	+3.4
	28nm,0.8s						
KNRA	Kununurra	8.02	155		Pn	23 56 49.7	+1.4
KNRA	Kununurra	8.02	155	P	Pn	23 56 49.7	+1.5
	16nm,1.4s						
FITZ	Fitzroy Crossi	9.66	178	Pn	Pn	23 57 10.2	-0.5
	baz=32,slow=7.8						
FITZ				Sn	Sn	23 58 52.7	-5.6
	1.5nm,0.3s,baz=67,slow=21,SNR=9.4						
FITZ	Fitzroy Crossi	9.66	178		Pn	23 57 14.3	+3.6
WB0	Warramunga Arr	14.37	143		Pn	23 58 12.5	-2.7
WRA	Warramunga Arr	14.47	143	Pn	Pn	23 58 13.4	-3.2
	0.5nm,0.3s,baz=319,slow=12,SNR=31						
WRA				Sn	Sn	00 00 52.8	-3.3
	0.2nm,0.3s,baz=323,slow=25,SNR=4.9						
WRA	Warramunga Arr	14.47	143	Pn	Pn	23 58 13.6	-3.0
AS31	Alice Springs	17.31	152	Pn	Pn	23 58 53.3	0.0
ASAR	Alice Springs	17.31	152	P	Pn	23 58 53.2	-0.1
	0.3nm,0.3s,baz=321,slow=11,SNR=21						
ASAR				S	Sn	00 01 59.6	-5.5
	0.1nm,0.3s,baz=323,slow=20,SNR=4.2						
ASAR	Alice Springs	17.31	152		Pn	23 58 52.0	-1.3
LEM	Lembang	17.54	274	LR	LR	00 06 28.1	
	comp=Z,31nm,21.1s,baz=352,slow=39						
COEN	Coen	18.44	109		Pn	23 59 09.2	+2.0
FORT	Forrest	22.43	174	P	P	23 59 54.4	+4.3
FORT				IAmb	IAmb	00 00 02.4	
	comp=Z,14nm,1.1s						
PSI	Prapat	28.50	292	LR	LR	00 12 14.8	
	comp=Z,37nm,18.8s,baz=343,slow=36						
JWT	Wachi	44.48	12	P	P	00 03 02.8	+0.5
MJAR	Matsushiro Arr	46.32	14	P	P	00 03 15.4	-1.5
	comp=Z,2.0nm,0.7s,baz=191,slow=9.2,SNR=5.6						
MJAR	Matsushiro Arr	46.32	14	P	P	00 03 15.0	-1.8
MJAR				IAmb	IAmb	00 03 32.0	
	comp=Z,3.6nm,1.4s						
USRK	Ussuriysk Ar.	52.70	6	P	P	00 04 05.1	-0.2
SONM	Songino Array	58.41	345	P	P	00 04 46.4	-0.2
	comp=Z,1.0nm,0.8s,baz=162,slow=8.5,SNR=6.8						
SONM	Songino Array	58.41	345	P	P	00 04 46.5	0.0
SONM				IAmb	IAmb	00 04 46.8	
	comp=Z,1.2nm,1.0s						
MK31	Makanchi Array	66.90	329	P	P	00 05 42.5	-0.5
MKAR	Makanchi Array	66.90	329	P	P	00 05 42.9	-0.2
	comp=Z,1.8nm,0.8s,baz=128,slow=7.8,SNR=8.6						
MKAR	Makanchi Array	66.90	329	P	P	00 05 42.6	-0.4
ZAA0	Zalesovo Array	70.83	336	P	P	00 06 07.4	+0.1
ZAA0				IAmb	IAmb	00 06 13.8	
	comp=Z,1.8nm,0.6s						
ZALV	Zalesovo Beam	70.83	336	P	P	00 06 07.4	+0.1
	comp=Z,0.7nm,0.6s,baz=108,slow=3.3,SNR=3.6						
ZALV	Zalesovo Beam	70.83	336	P	P	00 06 06.2	-1.1
KURK	Kurchatov	71.33	331	P	P	00 06 09.7	-0.7
KURK				IAmb	IAmb	00 06 11.9	
	comp=Z,2.5nm,1.0s						
VNDA	Vanda	71.69	172	P	P	00 06 15.2	+3.0
VNDA				IAmb	IAmb	00 06 23.6	
	comp=Z,2.2nm,1.4s						

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*IDC **07** 23:56:14.3±0.8, 30°.91S×71°.34W, h0^{km}, mb4.3/9, mb1 4.3/14, mb1mx4.1/35, mbtmp4.1/14, ML3.9/5, MS3.0/1, Ms1 3.1/1, ms1mx2.7/18, Error ellipse: s-maj=24.4km s-min=20.0km az=96.0*

*SJA **07** 23:56:18.6±0.8, 30°.68S×71°.59W, h24^{km}±4^{km}, ML4.2, MW4.1*

*GUC **07** 23:56:21.7±0.5, 30°.71S×71°.39W, h47^{km}±1^{km}, ML4.5*

*NEIC **07** 23:56:21.6±1.4, 30°.74S±0°.04×71°.44W±0°.06, h45^{km}±1^{km}, Error ellipse: s-maj=7.8km s-min=5.6km az=74.0*

ISC 07 23:56:21.2±0.7**, 30°.67S**±0°.02×**71°.45W**±0°.04**, h45**^{km}±6^{km}**, n113,** σ**2^{s}.25**/146**, mb4.3**/10**, 3C-6D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.16	268	⇑iP	Pn	23 56 30.2	+1.5
CO06				i S	Sn	23 56 35.2	+1.2
CO06	Fray Jorge	0.16	268		Pn	23 56 30.2	+1.5
CO06				Sn	Sn	23 56 34.8	+0.8
CO03	El Pedregal	0.68	105	⇓iP	Pn	23 56 34.4	-0.3
CO03				i S	Sn	23 56 43.5	-0.8
CO03				IAML		23 56 45.5	
	comp=E,31µm,0.2s						
CO03	El Pedregal	0.68	105	Pn	Pn	23 56 34.3	-0.3
CO03				Sn	Sn	23 56 43.7	-0.6
CO03	El Pedregal	0.68	105	eP	Pn	23 56 34.0	-0.6
CO03				IAML		23 56 47.4	
	comp=Z,5µm,0.2s						
GO04	Tololo Observa	0.75	49	eP	Pn	23 56 36.2	+0.5
GO04				i S	Sn	23 56 47.2	+1.1
GO04	Tololo Observa	0.75	49	Pn	Pn	23 56 36.4	+0.7
GO04				Sn	Sn	23 56 47.1	+1.1
GO04	Tololo Observa	0.75	49	eP	Pn	23 56 37.6	+1.8
GO04				eP	Sn	23 56 47.3	+1.1
CO05	La Serena	0.77	14	⇓iP	Pn	23 56 37.1	+1.4
CO05				i S	Sn	23 56 48.2	+2.0
CO05	La Serena	0.77	14		Pn	23 56 37.2	+1.5
CO05				Sn	Sn	23 56 48.3	+2.1
LCO	Las Campanas	1.78	22	⇓iP	Pn	23 56 51.2	+1.5
LCO				i S	Sn	23 57 13.8	+2.5
LCO	Las Campanas	1.78	22		Pn	23 56 51.4	+1.7
LCO				Sn	Sn	23 57 13.8	+2.5
LCO	Las Campanas	1.78	22	eP	Pn	23 56 51.0	+1.2
AROD	Rodeo	1.78	74	eP	Pn	23 56 52.6	+2.7
AROD				eS	Sn	23 57 10.4	-1.1
VA06	Catapilco	1.89	176	⇓eP	Pn	23 56 51.6	+0.6
VA06				eS	Sn	23 57 15.3	+1.6
VA06				IAML		23 57 18.2	
	comp=E,4µm,0.5s						
ACCO	Cerro Coronel	2.06	88	eP	Pn	23 56 50.9	-2.8
ACCO				eP		23 56 56.7	
ACDV	Cuesta del Vie	2.08	77	eP	Pn	23 56 57.0	+3.2
ACDV				eS	Sn	23 57 10.4	-8.1
ACDV				IAML		23 57 10.5	
	comp=Z,814nm,0.5s						
RTLS	Leoncito	2.16	122	eP	Pn	23 56 57.0	+1.9
RTLS				eP	Pn	23 56 57.8	+2.7
RTLS				eS	Sn	23 57 26.8	+6.0
RTLS				IAML		23 57 36.6	
	comp=Z,796nm,0.4s						
VA03	San Esteban	2.23	160	⇑iP	Pn	23 56 56.8	+1.0
VA03				i S	Sn	23 57 23.2	+1.1
VA03				IAML		23 57 31.5	
	comp=E,4µm,0.3s						
VA03	San Esteban	2.23	160		Pn	23 56 56.7	+0.9
VA03	San Esteban	2.23	160	eP	Pn	23 56 57.0	+1.2
VA03				eP	Pn	23 56 57.0	+1.2
VA03				eS	Sn	23 57 25.4	+3.3
VA03				IAML		23 57 37.9	
	comp=Z,1µm,0.3s						
ROCH	El Roble	2.33	171	eP	Pn	23 56 58.0	+0.7
ROCH				eS	Sn	23 57 26.3	+1.6
ROCH				IAML		23 57 33.4	
	comp=N,2µm,0.4s						
ROC1	El Roble	2.33	171	eP	Pn	23 56 58.5	+1.2
ROC1				eS	Sn	23 57 26.1	+1.2
AUSP	Uspallata	2.35	132	eP	Pn	23 57 00.0	+2.4
AUSP				eS	Sn	23 57 33.0	+7.6
VA01	Torpederas	2.35	184	eP	Pn	23 56 57.1	-0.3
VA01	Torpederas	2.35	184		Pn	23 56 57.2	-0.2
AC04	Llanos de Chal	2.48	8	eP	Pn	23 57 01.1	+1.9
AC04				eS	Sn	23 57 31.5	+3.4
AC04				IAML		23 57 41.2	
	comp=E,2µm,0.4s						
AC04	Llanos de Chal	2.48	8		Pn	23 57 01.1	+1.9
AC04	Llanos de Chal	2.48	8	eP	Pn	23 57 01.0	+1.9
AC04				eS	Sn	23 57 15.9	-12
AC04				IAML		23 57 40.7	
	comp=Z,973nm,0.6s						
ZON	Zonda	2.54	111	eP	Pn	23 57 02.0	+2.0
ZON				IAML		23 57 52.8	
	comp=Z,597nm,0.4s						
PEL	Peldehue	2.55	165	eP	Pn	23 57 01.2	+1.0
PEL				i S	Sn	23 57 31.0	+1.0
PEL				IAML		23 57 43.6	
	comp=N,1µm,0.5s						
PEL	Peldehue	2.55	165	eP	Pn	23 57 01.0	+0.8
PEL				eP	Pn	23 57 01.4	+1.2
PEL				eS	Sn	23 57 31.9	+1.8
MT02	Curacav	2.60	174	eP	Pn	23 57 01.3	+0.5
MT02				eS	Sn	23 57 32.1	+1.0
MT02	Curacav	2.60	174		Pn	23 57 01.3	+0.5
MT02	Curacav	2.60	174	eP	Pn	23 57 01.8	+1.1
MT02				eP	Pn	23 57 02.0	+1.2
MT02				eS	Sn	23 57 37.1	+6.0
MT02				IAML		23 57 42.6	
	comp=Z,1µm,0.7s						
RTCV	Cerro Valdivia	2.76	116	eP	Pn	23 57 06.0	+2.9
MT05	Renca	2.78	168	eP	Pn	23 57 04.4	+1.0
MT05				eS	Sn	23 57 36.9	+1.1
MT05				IAML		23 57 58.6	
	comp=E,3µm,0.5s						
MT05	Renca	2.78	168		Pn	23 57 03.8	+0.4
MT05	Renca	2.78	168	eP	Pn	23 57 05.0	+1.6
FSR	Penalolen	2.91	165	eP	Pn	23 57 06.2	+1.0
ASAL	Salagasta	2.94	131	eP	Pn	23 57 08.0	+2.4
ASAL				eS	Sn	23 57 47.3	+7.5
VA05	Santo Domingo	2.98	183	eP	Pn	23 57 05.6	-0.4
VA05				IAML		23 58 07.0	
	comp=E,2µm,0.5s						
VA05	Santo Domingo	2.98	183		Pn	23 57 05.5	-0.5
ARCO	CERRO ARCO	3.05	136	eP	Pn	23 57 10.0	+2.9
ARCO				eS	Sn	23 57 56.1	+14
ARCO				IAML		23 57 57.8	
	comp=Z,721nm,0.3s						
MT09	Talagante	3.12	173	⇓eP	Pn	23 57 09.1	+1.0
MT09				eS	Sn	23 57 45.0	+0.7
MT09				IAML		23 57 59.0	
	comp=E,1µm,0.5s						
MT09	Talagante	3.12	173		Pn	23 57 08.4	+0.3
MT01	Popeta	3.19	177	eP	Pn	23 57 09.8	+0.9
MT01				eS	Sn	23 57 45.2	-0.5
MT01				IAML		23 57 57.0	
	comp=N,756nm,0.2s						
MT01	Popeta	3.19	177		Pn	23 57 09.2	+0.3
MT01	Popeta	3.19	177	eP	Pn	23 57 10.0	+1.1
MT01				eS	Sn	23 57 50.9	+5.2
MT01				IAML		23 57 58.3	
	comp=Z,557nm,0.6s						
GO03	Copiap	3.24	19	eP	Pn	23 57 11.7	+2.0
GO03				eS	Sn	23 57 49.8	+2.6
GO03				IAML		23 58 02.8	
	comp=N,1µm,0.4s						
GO03	Copiap	3.24	19	eP	Pn	23 57 11.9	+2.1
GO03				eS	Sn	23 58 00.9	+14
AAGR	Agrelo	3.29	138	eP	Pn	23 57 13.0	+2.7
AAGR				eS	Sn	23 58 02.3	+14
LMEL	Las Melosas	3.34	162	⇓eP	Pn	23 57 13.2	+2.1
LMEL				eS	Sn	23 57 50.0	+0.3
LMEL				IAML		23 58 09.5	
	comp=N,988nm,0.4s						
BO04	La Punta	3.39	168	⇑eP	Pn	23 57 12.5	+0.8
BO04				eS	Sn	23 57 51.1	+0.5
VCA	Vinchina	3.42	57	eP	Pn	23 57 04.9	-7.3
VCA				eS	Sn	23 57 58.9	+7.3
VCA				IAML		23 58 09.7	
	comp=Z,2µm,0.4s						
AVFE	Valle Fertil	3.44	91	eP	Pn	23 56 58.9	-14
AVFE				eP	Pn	23 57 14.0	+1.5
AVFE				eS	Sn	23 58 01.0	+8.9
AVFE				IAML		23 58 04.8	
	comp=Z,734nm,0.5s						
BO01	Tunca	3.73	175	eP	Pn	23 57 16.7	+0.4
BO01	Tunca	3.73	175	eP	Pn	23 57 17.1	+0.9
BO01				eS	Sn	23 58 12.9	+14
BO01				IAML		23 58 18.9	
	comp=Z,207nm,0.8s						
ACHE	Chepes	4.14	98	eP	Pn	23 57 13.9	-8.3
ACHE				eS	Sn	23 58 14.2	+4.7
BO02	Sierra Bellavi	4.15	172		Pn	23 57 22.9	+0.7
BO02	Sierra Bellavi	4.15	172	eP	Pn	23 57 23.1	+1.0
BO02				eS	Sn	23 58 11.9	+2.4
BO02				IAML		23 58 35.2	
	comp=Z,420nm,0.6s						
AC02	Maricunga	4.33	29		Pn	23 57 27.1	+2.1
AC02	Maricunga	4.33	29	eP	Pn	23 57 27.4	+2.4
AC02				eS	Sn	23 58 16.4	+1.9
AC02				IAML		23 58 38.4	
	comp=Z,302nm,0.7s						
GO05	Huala	4.35	185	Pn	Pn	23 57 23.8	-1.0
GO05	Huala	4.35	185	eP	Pn	23 57 24.0	-0.8
GO05				eS	Sn	23 58 21.9	+7.6
RFA	San Rafael	4.80	149	eP	Pn	23 57 31.9	+0.8
RFA				eP	Pn	23 57 32.1	+1.0
RFA				eS	Sn	23 58 45.4	+20
RFA				IAML		23 59 05.1	
	comp=Z,79nm,0.4s						
ML02	Panimavida	5.08	180	Pn	Pn	23 57 35.2	+0.4
PB14	IPOC Station P	6.09	9	Pn	Pn	23 57 48.7	-0.4
AHML	Horco Molle	6.62	56	eP	Pn	23 57 57.0	+0.9
AHML				eS	Sn	23 59 12.9	+2.6
AHML				IAML		23 59 42.0	
	comp=Z,74nm,0.9s						
FSA	Cafayete	6.62	48	eP	Pn	23 57 58.1	+1.9
FSA				eS	Sn	23 59 27.0	+16
H03N1	Juan Fernandez	6.91	244	T	T	00 04 56.4	
	baz=73,slow=72,SNR=1247						
VA04	Juan Fernndez	6.92	243	Pn	Pn	23 57 59.6	-0.5
H03N2	Juan Fernandez	6.92	245	T	T	00 04 50.9	
	baz=73,slow=72,SNR=887						
H03N3	Juan Fernandez	6.92	244	T	T	00 04 49.9	
	baz=73,slow=72,SNR=606						
PB15	IPOC Station P	7.64	14		Pn	23 58 10.0	-0.2
LC01	Cunco	8.22	182		Pn	23 58 17.0	-0.9
LVC	Limon Verde	8.34	16	Pn	Pn	23 58 20.1	+0.1
	comp=Z,1.0nm,0.3s,baz=189,slow=8.2,SNR=13						
LVC	Limon Verde	8.34	16	Pn	Pn	23 58 18.8	-1.2
PLCA	Paso Flores	10.07	176	Pn	Pn	23 58 37.4	-5.9
	comp=Z,0.1nm,0.3s,baz=326,slow=15,SNR=1.4						
PSGCX	Pisagua	11.09	7	Pn	Pn	23 58 55.6	-1.8
ITQB	Itaqui	12.87	89		Pn	23 59 19.2	-2.3
CPUP	Villa Florida	13.15	74	Pn	Pn	23 59 23.9	-1.4
	comp=Z,0.3nm,0.3s,baz=244,slow=17,SNR=2.2						
CPUP				Sn	Sn	00 01 48.3	-1.9
	comp=Z,0.4nm,0.3s,baz=305,slow=6.6,SNR=2.0						
CPUP				LR	LR	00 04 59.3	
	comp=Z,70nm,18.9s,baz=226,slow=40						
CPUP	Villa Florida	13.15	74	Pn	Pn	23 59 23.1	-2.3
LPAZ	La Paz	14.63	13	Pn	Pn	23 59 48.1	+2.0
	comp=Z,0.4nm,0.3s,baz=185,slow=13,SNR=7.6						
LPAZ	La Paz	14.63	13	Pn	Pn	23 59 46.5	+0.4
PLTB	Pedras Altas	15.31	99	Pn	Pn	23 59 53.0	-1.4
SIV	San Ignacio	17.43	35	P	P	00 00 22.2	+0.3
	comp=Z,0.5nm,0.3s,baz=210,slow=9.5,SNR=9.0						
TRCB	Terra Rica	18.53	69	P	P	00 00 33.4	-0.7
TRCB				IAmb	IAmb	00 00 41.4	
	comp=Z,11nm,0.9s						
VILB	Vilhena	20.47	33	P	P	00 00 55.5	+0.3
VILB				IAmb	IAmb	00 01 20.5	
	comp=Z,12nm,1.1s						
BDFB	Brasilia	26.15	60	P	P	00 01 50.6	-1.0
	comp=Z,6.8nm,0.6s,baz=238,slow=7.7,SNR=13						
BDFB	Brasilia	26.15	60	P	P	00 01 51.0	-0.6
BDFB				IAmb	IAmb	00 01 51.7	
	comp=Z,8.4nm,0.7s						
BOAV	Boa Vista	34.49	20	P	P	00 03 04.9	-0.3
BOAV				IAmb	IAmb	00 03 25.2	
	comp=Z,2.9nm,0.9s						
MDP	Montagnes des	39.86	30	P	P	00 03 50.4	-0.3
	comp=Z,3.3nm,0.6s,baz=197,slow=6.2,SNR=2.2						
TKL	Tuckaleechee C	66.99	349	P	P	00 07 09.5	+0.3
	comp=Z,3.2nm,0.8s,baz=183,slow=9.3,SNR=4.2						
TKL	Tuckaleechee C	66.99	349	P	P	00 07 09.0	-0.3
TXAR	Lajitas Array	67.10	330	P	P	00 07 11.8	+1.6
	comp=Z,0.7nm,0.5s,baz=152,slow=8.3,SNR=4.2						
DBIC	Dimbokro	73.66	72	P	P	00 07 50.4	-0.2
	comp=Z,4.4nm,0.5s,baz=220,slow=6.4,SNR=12						
DBIC	Dimbokro	73.66	72	P	P	00 07 50.4	-0.2
MAW	Mawson	76.23	164	P	P	00 08 04.3	-0.2
	comp=Z,1.0nm,0.4s,baz=201,slow=7.7,SNR=6.2						
MAW	Mawson	76.23	164	P	P	00 08 04.5	+0.1
BOSA	Boshof	81.18	118	P	P	00 08 29.4	-3.3
	comp=Z,1.8nm,0.7s,baz=245,slow=3.7,SNR=3.5						
BOSA	Boshof	81.18	118	P	P	00 08 32.1	-0.6
BOSA				IAmb	IAmb	00 08 33.9	
	comp=Z,13nm,1.4s						
NVAR	Mina Array Bea	81.45	325	P	P	00 08 35.1	+1.4
	comp=Z,0.1nm,0.4s,baz=140,slow=7.1,SNR=4.1						
TORD	Torodi Ar. Bea	82.61	70	P	P	00 08 39.7	-0.4
	comp=Z,1.0nm,0.4s,baz=280,slow=6.0,SNR=55						
TORD	Torodi Ar. Bea	82.61	70	P	P	00 08 39.6	-0.5
TORD				IAmb	IAmb	00 08 40.6	
	comp=Z,3.8nm,1.4s						
WRA	Warramunga Arr	123.90	210	PKP	PKPdf	00 15 13.1	-2.0
	comp=Z,0.2nm,0.5s,baz=154,slow=1.5,SNR=5.8						
H11S2	WAKE ISLAND Hy	126.25	271	T	T	02 34 08.0	
	baz=115,slow=75,SNR=82						
H11S1	WAKE ISLAND Hy	126.27	271	T	T	02 34 08.6	
	baz=115,slow=75,SNR=90						
H11S3	WAKE ISLAND Hy	126.27	271	T	T	02 34 11.5	
	baz=115,slow=75,SNR=76						
H11N3	WAKE ISLAND Hy	126.58	273	T	T	02 34 35.4	
	baz=116,slow=76,SNR=11						
H11N1	WAKE ISLAND Hy	126.60	273	T	T	02 34 38.6	
	baz=116,slow=76,SNR=4.8						
H11N2	WAKE ISLAND Hy	126.60	273	T	T	02 34 34.3	
	baz=116,slow=76,SNR=18						
ZALV	Zalesovo Beam	151.12	30	PKPbc	PKPbc	00 16 09.0	+0.1
	comp=Z,5.6nm,0.5s,baz=304,slow=3.2,SNR=21						

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*IDC **07** 23:59:02.8±1.0, 55°.79S×147°.05E, h0^{km}, mb4.0/7, mb1 4.2/7, mb1mx4.0/27, mbtmp4.0/7, MS3.6/11, Ms1 3.6/11, ms1mx3.5/25, Error ellipse: s-maj=37.2km s-min=20.9km az=89.0*

*NEIC **07** 23:59:04.9±1.7, 55°.8S±0°.1×147°.1E±0°.2, h10^{km}±1^{km}, mb4.3/13, Error ellipse: s-maj=23.2km s-min=4.4km az=40.0*

ISC 07 23:59:04.2±0.7**, 55°.76S**±0°.09×**147°.0E**±0°.2**, h9**^{km}**, n40,** σ**0^{s}.88**/26**, mb4.2**/11**, MS3.6**/11**, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WHZ	Wether Hill Ro	16.46	62		P	00 02 57.9	-0.1
WHZ				IAmb	IAmb	00 02 59.6	
	comp=Z,41nm,1.3s						
TOO	Toolangi	18.22	356		P	00 03 19.6	+2.1
TOO				IAmb	IAmb	00 03 44.7	
	comp=Z,27nm,1.2s						
CAN	Canberra	20.48	5	P	P	00 03 43.5	+1.3
VNDA	Vanda	22.49	172	P	P	00 04 04.0	+0.6
	comp=Z,1.3nm,1.0s,baz=335,slow=11,SNR=2.0						
VNDA	Vanda	22.49	172	P	P	00 04 03.8	+0.4
VNDA				IAmb	IAmb	00 04 18.1	
	comp=Z,12nm,1.4s						
STKA	Stephens Creek	24.17	349	P	P	00 04 21.9	+1.3
	comp=Z,6.4nm,0.9s,baz=164,slow=11,SNR=11						
STKA	Stephens Creek	24.17	349	P	P	00 04 21.6	+1.0
BBOO	Buckleboo	24.17	337	P	P	00 04 19.6	-1.1
BBOO				IAmb	IAmb	00 04 32.7	
	comp=Z,11nm,1.1s						
URZ	Urewera	26.68	62	P	P	00 04 42.7	-0.6
	comp=Z,2.4nm,0.4s,baz=126,slow=23,SNR=2.3						
URZ	Urewera	26.68	62	P	P	00 04 42.6	-0.8
H01W1	Cape Leeuwin H	30.65	299	T	T	00 37 40.5	
	baz=142,slow=75,SNR=59						
H01W2	Cape Leeuwin H	30.66	299	T	T	00 37 40.7	
	baz=142,slow=75,SNR=71						
H01W3	Cape Leeuwin H	30.67	299	T	T	00 37 41.5	
	baz=142,slow=75,SNR=62						
NWAO	Narrogin (SRO)	30.78	305	LR	LR	00 14 51.5	
	comp=Z,443nm,20.7s,baz=111,slow=31						
ASAR	Alice Springs	33.47	338	P	P	00 05 44.1	+0.5
	comp=Z,1.6nm,0.8s,baz=166,slow=9.7,SNR=12						
ASAR				LR	LR	00 17 12.8	
	comp=Z,85nm,20.8s,baz=164,slow=32						
ASAR	Alice Springs	33.47	338	P	P	00 05 43.6	0.0
QSPA	South Pole Qui	34.35	180	P	P	00 05 51.6	+0.6
QSPA				IAmb	IAmb	00 05 54.9	
	comp=Z,5.4nm,1.4s						
RAO	Raoul Island	36.38	58	LR	LR	00 19 13.4	
	comp=Z,98nm,21.3s,baz=280,slow=33						
WR0	Warramunga Arr	36.94	340	P	P	00 06 13.3	-0.1
WR0				IAmb	IAmb	00 06 19.5	
	comp=Z,8.0nm,0.9s						
WRA	Warramunga Arr	37.00	340	P	P	00 06 14.3	+0.3
	comp=Z,5.3nm,0.9s,baz=165,slow=7.7,SNR=25						
WRA	Warramunga Arr	37.00	340	P	P	00 06 13.7	-0.2
MAW	Mawson	38.35	218	P	P	00 06 24.3	-0.6
	comp=Z,0.6nm,0.5s,baz=121,slow=12,SNR=2.1						
MAW				LR	LR	00 21 54.5	
	comp=Z,233nm,18.0s,baz=68,slow=36						
MAW	Mawson	38.35	218	P	P	00 06 24.8	0.0
FITZ	Fitzroy Crossi	40.92	328	P	P	00 06 47.4	+0.6
FITZ				IAmb	IAmb	00 06 57.5	
	comp=Z,7.7nm,1.2s						
MSVF	Nonsavu	44.67	44	LR	LR	00 22 53.5	
	comp=Z,96nm,18.2s,baz=88,slow=32						
RAR	Rarotonga	52.25	71	LR	LR	00 28 02.1	
	comp=Z,50nm,18.7s,baz=294,slow=33						
FAKI	Fak Fak	54.00	342	P	P	00 08 27.8	-0.7
PPT	Papeete	60.76	78	LR	LR	00 29 28.4	
	comp=Z,42nm,20.4s,baz=32,slow=30						
DAV	Davao City (W)	65.07	336	LR	LR	00 38 37.3	
	comp=Z,39nm,19.7s,baz=351,slow=36						
GUMO	Guam	69.10	358	LR	LR	00 42 22.4	
	comp=Z,21nm,18.2s,baz=112,slow=38						
H03S2	Juan Fernandez	82.55	143	T	T	01 43 18.9	
	baz=202,slow=74,SNR=13						
H03S1	Juan Fernandez	82.55	143	T	T	01 43 04.3	
	baz=202,slow=74,SNR=14						
H03S3	Juan Fernandez	82.56	143	T	T	01 43 14.1	
	baz=202,slow=74,SNR=16						
CMAR	Chiang Mai Arr	84.30	315	P	P	00 11 36.6	+0.3
	comp=Z,0.6nm,0.3s,baz=184,slow=5.4,SNR=1.7						
CMAR				LR	LR	00 48 34.3	
	comp=Z,32nm,19.2s,baz=190,slow=35						
KSRS	Korea Array	94.26	345	LR	LR	00 50 56.9	
	comp=Z,12nm,21.9s,baz=188,slow=33						
KEST	Kesra	145.02	253	PKPbc	PKPdf	00 18 42.0	+0.6
	comp=Z,2.8nm,1.0s,baz=243,slow=2.3,SNR=2.4						
FINES	FINESS Array B	149.64	305	PKPbc	PKPbc	00 18 52.2	-0.5
	comp=Z,3.7nm,1.0s,baz=157,slow=3.9,SNR=3.4						
GERES	GERESS Array B	151.07	276	PKPbc	PKPbc	00 18 55.0	-1.7
	comp=Z,0.7nm,0.8s,baz=151,slow=2.2,SNR=2.5						
GERES	GERESS Array B	151.07	276		PKiKP	00 18 57.5	+0.3
ARCES	ARCESS Array B	151.16	322	PKPbc	PKPbc	00 18 55.5	-0.6
	comp=Z,3.3nm,0.9s,baz=48,slow=1.3,SNR=1.0						

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*JMA **08** 00:14:31.7±0.2, 24°.66N×122°.59E, h113^{km}±2^{km}, M3.0*

*TAP **08** 00:14:31.8, 24°.72N×122°.63E, h111^{km}, ML3.5, B*

ISC 08 00:14:31.8±1.4**, 24°.70N**±0°.04×**122°.62E**±0°.03**, h112**^{km}±7^{km}**, n107,** σ**0^{s}.67**/168**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.39	130	P	Pn	00 14 48.3	+0.1
JYNG				S	Sn	00 15 00.7	+0.3
YOJ	Yonaguni jima	0.43	124	i P	Pn	00 14 48.5	+0.1
	baz=132						
YOJ				S	Sn	00 15 00.8	0.0
	baz=132						
YOJ	Yonaguni jima	0.43	124	P	Pn	00 14 48.6	+0.2
YOJ				S	Sn	00 15 01.0	+0.2
TWB1	Santiao Chiao	0.65	298	P	Pn	00 14 50.0	+0.1
	baz=297						
TWB1				eS	Sn	00 15 03.0	-0.5
	baz=297						
TWC	Suao	0.71	263	P	Pn	00 14 50.3	0.0
	baz=257						
TWC				eS	Sn	00 15 03.5	-0.8
	baz=257						
NTC	Toucheng	0.73	282	P	Pn	00 14 50.8	+0.3
	baz=279						
NTC				eS	Sn	00 15 04.3	-0.4
	baz=279						
TIPB	Shuangxi	0.77	291	P	Pn	00 14 51.3	+0.4

	baz=284						
TIPB				S	**Sn**	**00 15 04.9**	**-0.5**
	baz=284						
EWUT	**Wuta**	**0.81**	**252**	*e*S	**Sn**	**00 15 05.9**	**0.0**
	baz=251						
NDS	**Dongshan**	**0.82**	**265**	P	**Pn**	**00 14 51.8**	**+0.4**
	baz=263						
NDS				S	**Sn**	**00 15 05.7**	**-0.5**
	baz=263						
ENA	**Nanau**	**0.84**	**251**	*e*P	**Pn**	**00 14 52.0**	**+0.4**
	baz=250						
ENA				*e*S	**Sn**	**00 15 07.0**	**+0.5**
	baz=250						
NWF	**Wu-fen Shan**	**0.84**	**296**	P	**Pn**	**00 14 52.1**	**+0.4**
	baz=290						
NWF				*e*S	**Sn**	**00 15 06.5**	**-0.2**
	baz=290						
WFSB	**Wu-fen Shan**	**0.84**	**296**	*e*P	**Pn**	**00 14 52.1**	**+0.5**
	baz=290						
WFSB				S	**Sn**	**00 15 06.5**	**0.0**
	baz=290						
TWE	**Neicheng**	**0.87**	**271**	*e*P	**Pn**	**00 14 51.8**	**+0.1**
	baz=269						
TWE				*e*S	**Sn**	**00 15 06.5**	**-0.3**
	baz=269						
ENTT	**Nioudou**	**0.96**	**267**	P	**Pn**	**00 14 53.5**	**+0.7**
	baz=272						
TWA	**Mucha**	**0.98**	**287**	P	**Pn**	**00 14 53.1**	**+0.2**
	baz=277						
TWA				S	**Sn**	**00 15 08.6**	**-0.3**
	baz=277						
NDT	**Datong Townshi**	**1.01**	**265**	*e*P	**Pn**	**00 14 54.1**	**+0.9**
	baz=267						
NDT				*e*S	**Sn**	**00 15 10.2**	**+0.8**
	baz=267						
NWLT	**Wulai**	**1.02**	**274**	*e*P	**Pn**	**00 14 53.4**	**0.0**
	baz=279						
NWLT				*e*S	**Sn**	**00 15 09.8**	**+0.2**
	baz=279						
NHDH	**Xindian Distri**	**1.03**	**285**	P	**Pn**	**00 14 53.6**	**+0.3**
	baz=275						
YM01	**YM01**	**1.05**	**295**	P	**Pn**	**00 14 54.0**	**+0.3**
	baz=286						
YM01				S	**Sn**	**00 15 10.0**	**-0.3**
	baz=286						
YM08	**YM08**	**1.05**	**298**	*e*P	**Pn**	**00 14 53.9**	**+0.3**
	baz=289						
YM08				*e*S	**Sn**	**00 15 09.7**	**-0.6**
	baz=289						
ETL	**Fush Village**	**1.06**	**239**	*e*P	**Pn**	**00 14 54.4**	**+0.6**
	baz=238						
TATO	**Taipei**	**1.06**	**285**	*e*P	**Pn**	**00 14 53.7**	**0.0**
	baz=277						
TATO				*e*S	**Sn**	**00 15 09.3**	**-1.0**
	baz=277						
TAP	**Taipei**	**1.07**	**289**	*e*S	**Sn**	**00 15 10.0**	**-0.4**
	baz=280						
NACB	**Ninganchiao**	**1.07**	**241**	*e*P	**Pn**	**00 14 53.9**	**+0.1**
	baz=235						
IRIF	**Iriomote-Funau**	**1.08**	**110**	P	**Pn**	**00 14 54.1**	**+0.2**
IRIF				S	**Sn**	**00 15 10.4**	**-0.2**
TWD	**Chiawan**	**1.12**	**237**	*e*P	**Pn**	**00 14 55.1**	**+0.7**
	baz=232						
TWD				*e*S	**Sn**	**00 15 10.9**	**-0.6**
	baz=232						
YHNB	**Yeheng**	**1.13**	**269**	*e*P	**Pn**	**00 14 55.0**	**+0.4**
	baz=274						
YHNB				*e*S	**Sn**	**00 15 11.8**	**0.0**
	baz=274						
ETLH	**Xiulin Townshi**	**1.15**	**245**	*e*P	**Pn**	**00 14 54.6**	**-0.2**
	baz=244						
NSK	**Sanguang**	**1.15**	**269**	*e*P	**Pn**	**00 14 55.1**	**+0.4**
	baz=274						
NSK				*e*S	**Sn**	**00 15 11.8**	**-0.3**
	baz=274						
NNSB	**Datong**	**1.16**	**257**	*e*P	**Pn**	**00 14 55.2**	**+0.3**
	baz=251						
NNSB				*e*S	**Sn**	**00 15 12.5**	**0.0**
	baz=251						
NTST	**Danshui**	**1.16**	**294**	*e*P	**Pn**	**00 14 55.2**	**+0.5**
	baz=286						
NTST				*e*S	**Sn**	**00 15 11.9**	**-0.2**
	baz=286						
NNS	**Nan Shan**	**1.16**	**257**	P	**Pn**	**00 14 55.5**	**+0.5**
	baz=252						
NNS				*e*S	**Sn**	**00 15 12.4**	**-0.1**
	baz=252						
HWA	**Hwalien**	**1.17**	**232**	*e*P	**Pn**	**00 14 55.7**	**+0.8**
	baz=231						
TEYL	**Yanliau Villag**	**1.25**	**229**	*e*P	**Pn**	**00 14 55.2**	**-0.6**
	baz=226						
TEYL				*e*S	**Sn**	**00 15 13.9**	**0.0**
	baz=226						
HATJ	**Hateruma jima**	**1.26**	**120**	P	**Pn**	**00 14 56.5**	**+0.6**
HATJ				*e*S	**Sn**	**00 15 14.7**	**+0.6**
ETM	**Tongmen**	**1.26**	**235**	*e*P	**Pn**	**00 14 55.7**	**-0.3**
	baz=228						
ETM				*e*S	**Sn**	**00 15 13.4**	**-0.9**
	baz=228						
NCU	**National Centr**	**1.33**	**282**	*e*P	**Pn**	**00 14 57.3**	**+0.6**
	baz=280						
NCUH	**Zhongli**	**1.33**	**282**	*e*P	**Pn**	**00 14 57.2**	**+0.5**
	baz=288						
FUSS	**Fushou**	**1.33**	**250**	*e*P	**Pn**	**00 14 57.5**	**+0.5**
	baz=246						
FUSS				*e*S	**Sn**	**00 15 15.7**	**-0.3**
	baz=246						
JKRS	**Kuro-shima**	**1.35**	**110**	P	**Pn**	**00 14 57.5**	**+0.6**
JKRS				S	**Sn**	**00 15 16.4**	**+0.5**
WHF	**Hehuan Shan**	**1.35**	**246**	*e*P	**Pn**	**00 14 57.5**	**0.0**
	baz=246						
WHF				*e*S	**Sn**	**00 15 16.3**	**-0.5**
	baz=246						
NJD	**Zhudong**	**1.39**	**272**	*e*S	**Sn**	**00 15 16.9**	**0.0**
	baz=271						
TEGC	**Jichi Village**	**1.40**	**225**	*e*S	**Sn**	**00 15 17.2**	**+0.3**
	baz=225						
ESL	**Shilin**	**1.40**	**231**	*e*P	**Pn**	**00 14 56.9**	**-0.6**
	baz=226						
ESL				*e*S	**Sn**	**00 15 15.4**	**-1.6**
	baz=226						
TDCB	**Techi**	**1.40**	**252**	*e*P	**Pn**	**00 14 58.5**	**+0.8**
	baz=246						
TDCB				*e*S	**Sn**	**00 15 17.3**	**-0.1**
	baz=246						
JIJ	**Ishigaki jima**	**1.43**	**103**	P	**Pn**	**00 14 57.9**	**+0.1**
JIJ				S	**Sn**	**00 15 16.9**	**-0.7**
HSN1	**Hsinchu**	**1.46**	**273**	*e*S	**Sn**	**00 15 18.4**	**+0.2**
	baz=273						
LIOB	**Emei**	**1.46**	**268**	*e*P	**Pn**	**00 14 58.6**	**+0.4**
	baz=268						
LIOB				*e*S	**Sn**	**00 15 18.2**	**-0.1**
	baz=268						
CHGB	**Renai**	**1.47**	**244**	*e*P	**Pn**	**00 14 58.9**	**+0.4**
	baz=239						
CHGB				*e*S	**Sn**	**00 15 18.6**	**-0.2**
	baz=239						
NSTT	**Nanjuang**	**1.47**	**268**	*e*P	**Pn**	**00 14 58.8**	**+0.5**
	baz=267						
NSTT				*e*S	**Sn**	**00 15 18.4**	**-0.2**
	baz=267						
SBCB	**Hsinchu**	**1.49**	**274**	*e*S	**Sn**	**00 15 18.8**	**-0.1**
	baz=273						
EGFH	**Guangfu**	**1.50**	**227**	*e*P	**Pn**	**00 14 58.1**	**-0.5**
	baz=224						
OWD	**Renai**	**1.51**	**241**	*e*P	**Pn**	**00 14 59.4**	**+0.4**
	baz=235						
JISG	**Ishigakijimahi**	**1.54**	**94**	P	**Pn**	**00 14 59.5**	**+0.3**
JISG				S	**Sn**	**00 15 19.6**	**-0.4**
NJN	**Zhunan**	**1.59**	**270**	*e*S	**Sn**	**00 15 21.1**	**0.0**
	baz=269						
HGSD	**Ruisui**	**1.63**	**222**	*e*P	**Pn**	**00 15 00.0**	**-0.2**
	baz=222						
HGSD				*e*S	**Sn**	**00 15 21.6**	**-0.3**
	baz=222						
WPL	**Puli Township**	**1.67**	**246**	*e*P	**Pn**	**00 15 01.5**	**+0.8**
	baz=243						
NMLH	**Miaoli**	**1.67**	**265**	*e*P	**Pn**	**00 15 01.2**	**+0.4**
	baz=264						
NMLH				*e*S	**Sn**	**00 15 22.3**	**-0.5**
	baz=264						
WCS	**Beigang Elemen**	**1.68**	**248**	*e*P	**Pn**	**00 15 01.9**	**+1.0**
	baz=248						
WCS				*e*S	**Sn**	**00 15 23.8**	**+0.7**
	baz=248						
TWQ1	**Liyutan**	**1.72**	**259**	*e*P	**Pn**	**00 15 02.2**	**+0.9**
	baz=258						
TWQ1				*e*S	**Sn**	**00 15 23.8**	**0.0**
	baz=258						
ECBN	**Changbin**	**1.75**	**218**	*e*P	**Pn**	**00 15 00.8**	**-0.9**
	baz=218						
SMLT	**Sun Moon Lake**	**1.77**	**243**	*e*P	**Pn**	**00 15 03.0**	**+1.0**
	baz=237						
SSLB	**Suanglung**	**1.77**	**239**	*e*P	**Pn**	**00 15 02.5**	**+0.4**
	baz=237						
SSLB				*e*S	**Sn**	**00 15 26.2**	**+1.1**
	baz=237						
YULB	**Yu-li**	**1.78**	**223**	*e*P	**Pn**	**00 15 01.3**	**-0.8**
	baz=229						
YULB				*e*S	**Sn**	**00 15 23.3**	**-1.9**
	baz=229						
TYC	**Yuchr**	**1.79**	**244**	*e*P	**Pn**	**00 15 03.4**	**+1.2**
	baz=247						
TYC				*e*S	**Sn**	**00 15 26.3**	**+0.8**
	baz=247						
EYUL	**Yuli**	**1.80**	**222**	*e*P	**Pn**	**00 15 03.1**	**+0.8**
	baz=229						
EYUL				*e*S	**Sn**	**00 15 26.0**	**+0.3**
	baz=229						
TWF1	**Yuli**	**1.81**	**222**	*e*P	**Pn**	**00 15 02.1**	**-0.4**
	baz=229						
WDJ	**Dajia District**	**1.84**	**259**	*e*S	**Sn**	**00 15 26.4**	**0.0**
	baz=259						
JTJ	**Tarama**	**1.90**	**91**	P	**Pn**	**00 15 04.2**	**+0.7**
JTJ				S	**Sn**	**00 15 27.2**	**-0.5**
WJS	**Zhushan**	**1.94**	**243**	*e*P	**Pn**	**00 15 04.8**	**+0.8**
	baz=253						
WJS				*e*S	**Sn**	**00 15 29.7**	**+1.0**
	baz=253						
WNT1	**Nantou City**	**1.94**	**246**	*e*S	**Sn**	**00 15 29.0**	**+0.3**
	baz=246						
WNT	**Mingjian**	**1.95**	**245**	*e*P	**Pn**	**00 15 05.2**	**+1.0**
	baz=253						
CHKT	**Chengkung**	**1.97**	**216**	*e*P	**Pn**	**00 15 03.8**	**-0.6**
	baz=211						
CHKT				*e*S	**Sn**	**00 15 27.3**	**-2.0**
	baz=211						
ALS	**Alishan**	**2.04**	**235**	*e*P	**Pn**	**00 15 06.3**	**+0.7**
	baz=230						
ALS				*e*S	**Sn**	**00 15 31.7**	**+0.3**
	baz=230						
CHN5	**Tsauling**	**2.09**	**239**	*e*P	**Pn**	**00 15 07.0**	**+1.0**
	baz=248						
CHN5				*e*S	**Sn**	**00 15 33.2**	**+1.0**
	baz=248						
EDH	**Donghe**	**2.10**	**215**	*e*P	**Pn**	**00 15 05.6**	**-0.6**
	baz=211						
EDH				*e*S	**Sn**	**00 15 30.7**	**-1.7**
	baz=211						
ELDTW	**Lidau**	**2.10**	**225**	*e*P	**Pn**	**00 15 05.9**	**-0.4**
	baz=221						
WDLH	**Douliu**	**2.15**	**242**	*e*P	**Pn**	**00 15 07.8**	**+1.0**
	baz=242						
WDLH				*e*S	**Sn**	**00 15 34.8**	**+1.2**
	baz=242						
WRL	**Guolierlin Hig**	**2.20**	**249**	*e*P	**Pn**	**00 15 07.8**	**+0.5**
	baz=256						
WRL				*e*S	**Sn**	**00 15 34.0**	**-0.5**
	baz=256						
LONT	**Longtian**	**2.25**	**218**	*e*P	**Pn**	**00 15 07.9**	**-0.1**
	baz=223						
STYH	**Taoyuan**	**2.27**	**228**	*e*P	**Pn**	**00 15 09.2**	**+0.9**
	baz=228						
STYH				*e*S	**Sn**	**00 15 36.6**	**+0.3**
	baz=228						
WTK	**Tuku**	**2.27**	**244**	*e*P	**Pn**	**00 15 08.7**	**+0.4**
	baz=244						
LDUT	**Ludao**	**2.28**	**208**	*e*P	**Pn**	**00 15 07.5**	**-0.9**
	baz=213						
LDUT				*e*S	**Sn**	**00 15 34.3**	**-2.2**
	baz=213						
STYT	**Tauyuan**	**2.29**	**228**	*e*P	**Pn**	**00 15 09.5**	**+0.9**
	baz=228						
STYT				*e*S	**Sn**	**00 15 37.1**	**+0.2**
	baz=228						
TPUB	**Ta-pu**	**2.29**	**233**	*e*P	**Pn**	**00 15 09.4**	**+0.8**
	baz=228						
TPUB				*e*S	**Sn**	**00 15 37.9**	**+1.1**
	baz=228						
CHY	**Chiayi**	**2.34**	**240**	*e*S	**Sn**	**00 15 37.7**	**-0.1**
	baz=249						
WTP	**Ta-pu**	**2.34**	**232**	*e*P	**Pn**	**00 15 10.1**	**+0.8**
	baz=232						
TWGBT	**Beinan**	**2.35**	**217**	*e*P	**Pn**	**00 15 09.3**	**0.0**
	baz=217						
TWG	**Pinlang**	**2.35**	**217**	*e*P	**Pn**	**00 15 08.9**	**-0.4**
	baz=217						
TWK	**Hsinying**	**2.42**	**234**	*e*P	**Pn**	**00 15 11.1**	**+0.9**
	baz=234						
TWK				*e*S	**Sn**	**00 15 39.6**	**-0.2**
	baz=234						
WSF	**Szhu**	**2.43**	**245**	*e*S	**Sn**	**00 15 40.0**	**0.0**
	baz=245						
JMJ	**Miyako jima 2**	**2.43**	**87**	*e*P	**Pn**	**00 15 11.8**	**+1.4**
	baz=88						
CHN1	**Nanshi**	**2.44**	**232**	*e*P	**Pn**	**00 15 11.5**	**+1.0**
	baz=232						
CHN1				*e*S	**Sn**	**00 15 40.7**	**+0.5**
	baz=232						
SLGT	**Liugui**	**2.48**	**227**	*e*P	**Pn**	**00 15 12.1**	**+1.0**
	baz=227						
SSD	**Sandimen**	**2.67**	**223**	*e*P	**Pn**	**00 15 14.6**	**+1.2**
	baz=230						
TSMG	**Majia**	**2.69**	**223**	*e*P	**Pn**	**00 15 14.7**	**+0.9**
	baz=223						
TSMG				*e*S	**Sn**	**00 15 46.1**	**+0.1**
	baz=223						
MASBT	**Mashibuluo**	**2.77**	**222**	*e*P	**Pn**	**00 15 15.6**	**+0.8**
	baz=231						
MATB	**Ma-tsu**	**2.82**	**301**	*e*P	**Pn**	**00 15 14.6**	**-0.8**
	baz=299						
EAST	**Anshuo**	**2.82**	**216**	*e*P	**Pn**	**00 15 16.3**	**+0.8**
	baz=212						
LAY	**Lan-yu**	**2.83**	**201**	*e*P	**Pn**	**00 15 14.7**	**-0.9**
	baz=201						
SLIU	**Shizi**	**2.99**	**214**	*e*P	**Pn**	**00 15 18.7**	**+1.1**
	baz=213						
XPSS	**Dashiqiu**	**3.12**	**316**	*e*P	**Pn**	**00 15 18.7**	**-0.6**
	baz=306						
LYJJ	**Jianjiangzhen**	**3.17**	**306**	*e*P	**Pn**	**00 15 19.6**	**-0.5**
	baz=296						
PTMZ	**Houxiangcun**	**3.20**	**277**	*e*P	**Pn**	**00 15 20.1**	**-0.3**
	baz=275						
AXDP	**Jialang**	**4.23**	**274**	*e*P	**Pn**	**00 15 33.6**	**-0.6**
	baz=272						
ZPLA	**Ao Xicun**	**4.51**	**261**	*e*P	**Pn**	**00 15 37.9**	**-0.1**
	baz=260						
JOW	**Kunigami**	**5.52**	**66**	*e*P	**Pn**	**00 15 50.4**	**-1.3**
	baz=68						

NOU 08 00:33:31.1, 16°.74S × 167°.51E, h29^{km}, MLv4.1/11, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**1.17**	**147**	P	Pb	00 33 52.2	-0.6
LIFNC	**LIFOU**	**4.02**	**184**	P	Pn	00 34 30.4	-0.4
MARNC	**Mare, Loyalty**	**4.74**	**174**	P	Pn	00 34 39.5	-1.2
KOUNC	**Koumac, New Ca**	**4.87**	**218**	P	Pn	00 34 43.2	+0.8
YATNC	**Mamie plateau,**	**5.32**	**186**	P	Pn	00 34 47.9	-0.8
DZM	**Mont Dzumac**	**5.40**	**191**	P	Pn	00 34 50.1	+0.3
ONTNC	**Ouen Toro**	**5.63**	**190**	P	Pn	00 34 53.6	+0.8

IDC ***08*** *00:33:43.8±3.1, 5°.67S × 146°.58E, h48^{km}±29^{km}, mb3.5/8, mb1 3.8/12, mb1mx3.7/32, mbtmp3.9/12, ML4.0/3, MS2.9/3, Ms1 2.9/3, ms1mx2.5/33, Error ellipse: s-maj=29.5km s-min=19.4km az=65.0*

ISC 08 00:33:44.1±0.8, **5°.64S**±0°.08 × **146°.6E**±0°.2, **h50^{km}, n16, σ0^{s}.92**/16, **mb3.7**/8, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.78**	**171**	P	**Pn**	**00 34 40.3**	**+0.4**
	15nm,0.3s,baz=24,slow=7.7,SNR=12						
PMG				S	**Sn**	**00 35 22.1**	**-1.1**
	20nm,0.3s,baz=182,slow=21,SNR=7.6						
PMG				LR	LR	00 36 30.4	
	comp=Z,153nm,19.8s,baz=232,slow=44						
CTA	**Charters Tower**	**14.36**	**181**	P	**Pn**	**00 37 06.1**	**+1.4**
	1.0nm,0.3s,baz=357,slow=14,SNR=14						
SIJI	**Sorong**	**16.01**	**287**	P	**Pn**	**00 37 25.9**	**-0.2**
	0.7nm,0.3s,baz=272,slow=23,SNR=1.7						
WRA	**Warramunga Arr**	**18.54**	**219**	P	**P**	**00 37 55.9**	**-0.9**
	0.3nm,0.3s,baz=41,slow=11,SNR=12						
WRA				LR	LR	00 46 36.5	
	comp=Z,36nm,19.5s,baz=150,slow=42						
ASAR	**Alice Springs**	**21.68**	**213**	P	**P**	**00 38 30.1**	**-0.8**
	0.7nm,0.4s,baz=51,slow=8.7,SNR=19						
FITZ	**Fitzroy Crossi**	**23.91**	**237**	P	**P**	**00 38 53.6**	**+0.1**
	1.9nm,0.6s,baz=58,slow=16,SNR=2.0						
STKA	**Stephens Creek**	**26.51**	**190**	P	**P**	**00 39 17.2**	**+0.1**
	0.9nm,0.4s,baz=9.8,slow=8.5,SNR=4.5						
KAPI	**Kappang**	**26.72**	**270**	LR	LR	00 51 14.6	
	comp=Z,24nm,19.4s,baz=121,slow=39						
SONM	**Songino Array**	**63.89**	**331**	P	**P**	**00 44 13.9**	**+2.0**
	0.5nm,0.8s,baz=134,slow=8.3,SNR=3.6						
VNDA	**Vanda**	**72.29**	**177**	P	**P**	**00 45 04.0**	**+0.1**
	0.6nm,0.5s,baz=342,slow=4.2,SNR=6.2						
MKAR	**Makanchi Array**	**76.96**	**321**	P	**P**	**00 45 30.8**	**-0.7**
	0.2nm,0.4s,baz=100,slow=7.2,SNR=4.5						
ZALV	**Zalesovo Beam**	**78.49**	**328**	P	**P**	**00 45 38.9**	**-0.9**
	0.5nm,0.5s,baz=116,slow=6.6,SNR=2.1						
ILAR	**Eielson Array**	**85.32**	**23**	P	**P**	**00 46 15.0**	**-0.5**
	1.0nm,0.8s,baz=248,slow=4.9,SNR=12						
TORD	**Torodi Ar. Bea**	**144.60**	**285**	PKP	**PKPab**	**00 53 14.4**	**-0.4**
	1.1nm,0.8s,baz=57,slow=3.1,SNR=9.4						
SIV	**San Ignacio**	**145.19**	**129**	PKPbc	**PKPdf**	**00 53 17.1**	**-0.2**
	3.0nm,0.5s,baz=234,slow=3.9,SNR=22						
PTGA	**Pitinga**	**152.74**	**103**	PKPbc	**PKPbc**	**00 53 35.9**	**-0.7**
	0.7nm,0.3s,baz=324,slow=22,SNR=1.8						

IDC ***08*** *00:36:51.6±1.9, 1°.42N × 126°.15E, h0^{km}, mb3.7/3, mb1 3.9/4, mb1mx3.5/34, mbtmp3.7/4, ML3.2/1, MS3.7/1, Ms1 3.7/1, ms1mx2.4/39, Error ellipse: s-maj=112.9km s-min=24.9km az=68.0*

DJA ***08*** *00:36:56.6±1.4, 1°N±9° × 12°7E±°, h84^{km}±27^{km}, M3.5/5, MLv3.5/5*

ISC 08 00:36:57.1±1.4, **1°.3N**±0°.2 × **126°.4E**±0°.2, **h47^{km}, n7, σ2^{s}.16**/6, **mb3.8**/3, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.14**	**117**	P	**Pn**	**00 37 16.1**	**-0.6**
LBMI	**Labuha**	**2.23**	**149**	P	**Pn**	**00 37 30.0**	**-1.7**
FITZ	**Fitzroy Crossi**	**19.28**	**182**	P	**Pn**	**00 41 19.1**	**-0.3**
	0.1nm,0.3s,baz=350,slow=11,SNR=2.0						
WRA	**Warramunga Arr**	**22.51**	**160**	P	**P**	**00 41 54.4**	**+1.4**
	2.4nm,0.6s,baz=338,slow=11,SNR=24						
ASAR	**Alice Springs**	**25.87**	**164**	P	**P**	**00 42 27.6**	**+2.9**
	1.3nm,0.5s,baz=351,slow=15,SNR=17						
CTA	**Charters Tower**	**28.85**	**138**	LR	LR	00 54 47.7	
	comp=Z,164nm,21.7s,baz=270,slow=37						
MKAR	**Makanchi Array**	**59.35**	**326**	P	**P**	**00 46 54.0**	**-0.5**
	0.2nm,0.3s,baz=124,slow=7.0,SNR=4.6						

NNC 08 00:41:26.8±4.7, **36°.76N × 71°.05E, h0^{km}, mb3.7, mpv3.3, 5C-1D, Error ellipse: s-maj=36.7km s-min=31.9km az=159.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.34**	**356**	⇑P	Pn	00 43 01.9	+0.4
	0.8nm,0.3s,baz=177,slow=13,SNR=44						
KK31				⇑S	Sn	00 44 15.5	+0.8
	0.5nm,0.3s,baz=174,slow=22,SNR=2.9						
AAK	**Ala-Archa**	**6.44**	**23**	⇑P	Pn	00 43 02.9	0.0
	1.0nm,0.4s						
AAK				⇑S	Sn	00 44 17.4	+0.2
	1.3nm,0.5s						
TKM2	**Tokmak 2**	**7.07**	**28**	⇓P	Pn	00 43 11.1	-0.6
	2.9nm,0.8s						
TKM2				⇑S	Sn	00 44 36.1	+3.2
	0.6nm,0.6s						

WEL 08 00:59:53.9±1.1, **35°S**±19° × **17°9E**±2°8, **h272^{km}**±15^{km}, **M3.4**/8, **ML3.8**/11, **MLv3.4**/8, **Error ellipse: s-maj=0.0km s-min=0.0km az=122.3, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	**2.80**	**195**	P	Pn	01 00 46.1	+0.5
WMGZ				S	S	01 01 27.6	+0.9
HAZ	**Te Kaha**	**2.91**	**205**	P	Pn	01 00 46.1	-0.7
HAZ				S	S	01 01 29.4	+0.5
PKGZ	**Pakihiroa**	**2.94**	**200**	P	Pn	01 00 47.3	+0.1
PKGZ				S	S	01 01 29.3	-0.4
PUZ	**Puketiti**	**3.07**	**196**	P	Pn	01 00 48.2	-0.3
PUZ				S	S	01 01 32.1	+0.1
RUGZ	**Raukumara Rang**	**3.14**	**205**	P	Pn	01 00 49.1	-0.2
RUGZ				S	S	01 01 32.6	-0.8
TWGZ	**Tauwhareparae**	**3.24**	**199**	P	Pn	01 00 51.5	+1.2
TWGZ				S	S	01 01 35.3	+0.1
MWZ	**Matawai**	**3.52**	**204**	P	Pn	01 00 53.9	+0.5
MWZ				S	S	01 01 42.0	+1.3
URZ	**Urewera**	**3.61**	**209**	P	Pn	01 00 53.9	-0.3
URZ				S	S	01 01 42.5	+0.1
RAGZ	**Rawiri**	**3.71**	**204**	P	Pn	01 00 54.7	-0.7
MTHZ	**Maungataniwha**	**4.23**	**207**	P	Pn	01 01 00.7	-0.6
MTHZ				S	S	01 01 54.9	-0.2
NMHZ	**Naumai**	**4.46**	**206**	P	Pn	01 01 04.4	+0.4
NMHZ				S	S	01 02 00.4	+0.4
BKZ	**Black Stump Fm**	**4.63**	**208**	P	Pn	01 01 06.0	0.0
KWHZ	**Kaweka Forest**	**4.88**	**207**	P	Pn	01 01 08.6	-0.5
KWHZ				S	S	01 02 11.1	+2.0
OTVZ	**Oturere**	**4.99**	**215**	P	Pn	01 01 10.6	+0.2
KAHZ	**Kahuranaki**	**5.06**	**202**	P	Pn	01 01 10.9	-0.2
BFZ	**Birch Farm**	**6.07**	**203**	P	Pn	01 01 23.2	0.0
BFZ				S	S	01 02 34.3	-0.7

IDC ***08*** *01:01:58.5±0.9, 27°.63N × 92°.62E, h0^{km}, mb3.6/10, mb1 3.8/11, mb1mx3.6/39, mbtmp3.6/11, MS2.8/3, Ms1 2.9/3, ms1mx2.5/37, Error ellipse: s-maj=39.6km s-min=15.2km az=60.0*

ISC 08 01:02:01.6±0.8, **27°.71N**±0°.08 × **92°.7E**±0°.1, **h18^{km}, n13, σ0^{s}.79**/13, **mb3.5**/8, **Eastern Xizang-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRDH	**Bariadhala**	**5.10**	**191**	Sn	**Sn**	**01 04 16.2**	**+0.7**
	0.1nm,0.3s,baz=209,slow=24,SNR=6.0						
CMAR	**Chiang Mai Arr**	**10.86**	**147**	Pn	**Pn**	**01 04 35.9**	**-0.4**
	baz=322,slow=13,SNR=7.1						
CMAR				Sn	**Sn**	**01 06 38.2**	**+0.9**
	0.6nm,0.3s,baz=1.2,slow=18,SNR=4.3						
CMAR				LR	LR	01 08 42.7	
	comp=Z,18nm,18.4s,baz=170,slow=37						
MKAR	**Makanchi Array**	**20.73**	**340**	P	**P**	**01 06 41.6**	**+0.5**
	0.9nm,0.5s,baz=146,slow=13,SNR=16						
AAK	**Ala-Archa**	**20.98**	**320**	P	**P**	**01 06 45.6**	**+1.6**
	0.4nm,0.3s,baz=180,slow=13,SNR=1.9						
SONM	**Songino Array**	**22.77**	**24**	P	**P**	**01 07 03.0**	**0.0**
	0.4nm,0.4s,baz=219,slow=13,SNR=4.2						
SONM				LR	LR	01 17 06.5	
	comp=Z,42nm,20.2s,baz=92,slow=40						
PALK	**Pallekele**	**23.28**	**211**	LR	LR	01 16 41.3	
	comp=Z,36nm,20.1s,baz=141,slow=38						
KURBB	**Kurchatov Arra**	**25.29**	**339**	P	**P**	**01 07 26.8**	**0.0**
	0.7nm,0.6s,baz=147,slow=10,SNR=6.1						
ZALV	**Zalesovo Beam**	**26.85**	**350**	P	**P**	**01 07 41.3**	**+0.4**
	0.7nm,0.3s,baz=152,slow=6.7,SNR=1.7						
WRA	**Warramunga Arr**	**62.20**	**135**	P	**P**	**01 12 22.0**	**-0.3**
	2.6nm,0.6s,baz=319,slow=7.8,SNR=45						
GERES	**GERESS Array B**	**62.66**	**313**	P	**P**	**01 12 24.7**	**-0.5**
	0.2nm,0.5s,baz=52,slow=6.8,SNR=2.1						
ASAR	**Alice Springs**	**64.73**	**138**	P	**P**	**01 12 38.7**	**-0.3**
	1.0nm,0.5s,baz=322,slow=6.7,SNR=38						
ILAR	**Eielson Array**	**76.97**	**22**	P	**P**	**01 13 53.4**	**+0.6**
	0.2nm,0.8s,baz=297,slow=5.5,SNR=1.9						
TORD	**Torodi Ar. Bea**	**84.85**	**282**	P	**P**	**01 14 34.7**	**-1.0**
	0.3nm,0.9s,baz=64,slow=4.3,SNR=1.7						

NNC ***08*** *01:12:05.3±1.6, 40°.78N × 79°.23E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=11.1km s-min=7.7km az=160.0*

SOME ***08*** *01:12:05.2, 40°.77N × 79°.27E, h10^{km}*

KRNET ***08*** *01:12:07.0±0.1, 40°.73N × 79°.11E, mb2.9*

ISC 08 01:12:09.3±2.1, **40°.92N**±0°.09 × **79°.21E**±0°.05, **h10^{km}, n44, σ1^{s}.38**/66, **20C-4D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TARG	**Taragay, Kyrgy**	**1.33**	**308**	⇑*i*P	**Pn**	**01 12 33.3**	**-1.0**
	baz=16						
TARG				⇑*i*S	**Sg**	**01 12 53.1**	**+0.9**
	baz=16						

PRZ	Przheval'sk baz=44	1.67	339	⇑iP	Pg	01 12 41.3	-0.1
PRZ	baz=44			⇑iS	Sg	01 13 05.5	+2.4
ANVS	Anan'yevo baz=33	2.19	329	⇑iP	Pb	01 12 48.7	-0.4
ANVS	baz=33			⇑iS	Sg	01 13 18.5	-1.1
SATY	Saty 9.9nm,0.5s	2.22	345	eP	Pb	01 12 50.1	+0.6
SATY	39nm,0.3s			eS	Sg	01 13 22.4	+1.9
SATY	Saty 9.9nm,0.5s	2.22	345	Pg	Pb	01 12 50.1	+0.6
SATY	39nm,0.3s			Lg	Lg	01 13 22.4	
UZB	Uzynbulak 3.2nm,0.1s	2.23	356	eP	Pb	01 12 49.1	-0.6
UZB	21nm,0.1s			eS	Sg	01 13 21.0	+0.2
UZB	Uzynbulak 2.9nm,0.3s	2.23	356	Pg	Pb	01 12 49.1	-0.6
UZB	20nm,0.4s			Lg	Lg	01 13 21.0	
SHLS	Shalkode 11nm,0.3s	2.24	5	eP	Pg	01 12 51.0	-1.2
SHLS	59nm,0.6s			eS	Sg	01 13 24.0	+2.8
SHLS	Shalkode 11nm,0.3s	2.24	5	Pg	Pg	01 12 51.0	-1.2
SHLS	59nm,0.6s			Lg	Lg	01 13 24.0	
PDGK	Podgornoye 2.6nm,0.4s	2.41	5	Pg	Pb	01 12 51.5	-1.4
PDGK	17nm,0.5s			Lg	Lg	01 13 25.1	
PDGK	Podgornoye 6.3nm,0.6s	2.41	5	⇑Pg	Pb	01 12 51.2	-1.7
PDGK	46nm,0.9s			⇑Lg	Lg	01 13 25.5	
ULHL	Ulahol baz=6.0	2.59	302	⇑iP	Pn	01 12 52.5	+1.0
ULHL	baz=6.0			⇑iS	Sb	01 13 25.9	-2.0
KTMS	Ketmen 1.6nm,0.1s	2.66	18	eP	Pb	01 12 56.3	-0.8
KTMS	23nm,0.1s			eS	Sg	01 13 33.2	-1.5
KTMS	Ketmen 4.0nm,0.2s	2.66	18	Pg	Pb	01 12 56.3	-0.8
KTMS	23nm,0.4s			Lg	Lg	01 13 33.2	
KURS	Kuram 4.6nm,0.1s	2.68	344	eP	Pb	01 12 57.6	+0.3
KURS	29nm,0.3s			eS	Sg	01 13 35.4	+0.2
KURS	Kuram 7.1nm,0.9s	2.68	344	Pg	Pb	01 12 57.6	+0.3
KURS	29nm,0.6s			Lg	Lg	01 13 35.4	
TNSS	Tian-Shan 5.0nm,0.1s	2.70	322	eP	Pb	01 12 58.0	0.0
TNSS	20nm,0.1s			eS	Sg	01 13 36.2	0.0
TNSS	Tian-Shan 5.0nm,0.2s	2.70	322	Pg	Pb	01 12 58.0	0.0
TNSS	19nm,0.6s			Lg	Lg	01 13 36.2	
MDOK	Medeo 3.7nm,0.1s	2.76	325	eP	Pb	01 12 58.3	-0.4
MDOK	28nm,0.2s			eS	Sg	01 13 36.7	-1.2
MDOK	Medeo 3.9nm,0.5s	2.76	325	Pg	Pb	01 12 57.0	-1.8
MDOK	25nm,0.6s			Lg	Lg	01 13 36.9	
MDOK	Medeo 5.1nm,0.2s	2.76	325	Pg	Pb	01 12 58.3	-0.4
MDOK	29nm,0.8s			Lg	Lg	01 13 36.7	
KNDC	Almaty 7.1nm,0.4s	2.84	325	⇓Pg	Pn	01 12 56.7	+2.0
KNDC	64nm,0.7s			⇓Lg	Lg	01 13 40.9	
IZV	Izvestkoviy 2.3nm,0.1s	2.87	318	eP	Pb	01 13 00.9	+0.3
IZV	35nm,0.3s			eS	Sg	01 13 41.0	-0.3
IZV	Izvestkoviy 5.2nm,0.4s	2.87	318	Pg	Pb	01 13 00.9	+0.3
IZV	33nm,0.4s			Lg	Lg	01 13 41.0	
BOOM	Boomskoye usch baz=8.0	2.91	304	⇑iP	Pn	01 12 57.4	+1.6
BOOM	baz=8.0			⇑iS	Sn	01 13 34.0	+3.1
KST	Kastek 7.0nm,0.3s	3.22	312	eP	Pb	01 13 07.0	+0.4
KST	26nm,0.1s			eS	Sg	01 13 51.4	-1.2
KST	Kastek 7.0nm,0.3s	3.22	312	Pg	Pb	01 13 06.9	+0.4
KST	26nm,0.7s			Lg	Lg	01 13 51.4	
TKM2	Tokmak 2 1.8nm,0.6s	3.35	308	⇑Pg	Pn	01 13 04.0	+2.0
TKM2	8.3nm,0.8s			⇑Lg	Lg	01 13 55.9	
TKM2	Tokmak 2 baz=11	3.35	308	⇑eP	Pn	01 13 03.3	+1.3
TKM2	baz=11			⇑iS	Sn	01 13 44.7	+2.7
CHKK	Chushkaly 0.9nm,0.1s	3.36	331	eP	Pb	01 13 09.2	+0.3
CHKK	17nm,0.1s			eS	Sg	01 13 55.5	-1.7
CHKK	Chushkaly 0.9nm,0.2s	3.36	331	Pg	Pb	01 13 09.2	+0.3
CHKK	14nm,0.6s			Lg	Lg	01 13 55.5	
KTBS	Karatobe 1.3nm,0.1s	3.36	327	eP	Pb	01 13 09.3	+0.4
KTBS	15nm,0.1s			eS	Sg	01 13 55.6	-1.6
KTBS	Karatobe 1.7nm,0.4s	3.36	327	Pg	Pb	01 13 09.3	+0.4
KTBS	14nm,0.5s			Lg	Lg	01 13 55.6	
ARXS	Arharly 2.0nm,0.0s	3.44	343	eP	Pb	01 13 11.2	+0.8
ARXS	23nm,0.2s			eS	Sg	01 13 59.0	-0.8
ARXS	Arharly 2.0nm,0.4s	3.44	343	Pg	Pb	01 13 11.2	+0.8
ARXS	23nm,0.8s			Lg	Lg	01 13 59.0	
DGS	Degeres 4.6nm,0.2s	3.45	313	eP	Pb	01 13 10.3	-0.3
DGS	11nm,0.3s			eS	Sg	01 13 57.2	-2.9
DGS	Degeres 4.5nm,0.2s	3.45	313	Pg	Pb	01 13 10.3	-0.3
DGS				Lg	Lg	01 13 57.2	
KUU	Kurty 2.7nm,0.1s	3.65	325	eP	Pb	01 13 14.3	+0.4
KUU	13nm,0.2s			eS	Sg	01 14 04.0	-2.5
KUU	Kurty 2.7nm,0.1s	3.65	325	Pg	Pb	01 13 14.3	+0.4
KUU	11nm,0.5s			Lg	Lg	01 14 04.0	
KRBS	Karabastau 1.3nm,0.1s	3.81	318	eP	Pb	01 13 17.2	+0.5
KRBS	7.8nm,0.2s			eS	Sg	01 14 09.4	-2.4
KRBS	Karabastau 1.3nm,0.2s	3.81	318	Pg	Pb	01 13 17.2	+0.5
KRBS	7.8nm,0.8s			Lg	Lg	01 14 09.4	
AAK	Ala-Archa 1.2nm,0.6s	3.92	297	⇑Pg	Pg	01 13 21.6	-2.8
AAK	10nm,1.1s			⇑Lg	Lg	01 14 13.6	
EKS2	Erkin-Say baz=98	4.42	295	⇓eP	Pn	01 13 17.1	+0.6
EKS2	baz=98			⇓eS	Sn	01 14 08.3	+0.2
KK31	Karatay Array 1.1nm,0.9s,baz=111,slow=15,SNR=3.7	6.84	291	⇑Pg	Pb	01 14 10.7	+2.5
KK31	0.9nm,0.7s,baz=115,slow=25,SNR=4.6			⇑Lg	Lg	01 15 43.2	

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*IDC **08** 01:29:10.4±24.0, 42°.72N×148°.04E, h0^{km}, mb3.8/6, mb1 3.8/6, mb1mx3.5/45, mbtmp3.8/6, Error ellipse: s-maj=572.8km s-min=61.0km az=160.0*

*SKHL **08** 01:29:21.8±0.1, 43°.20N×147°.40E, h63^{km}±3^{km}, mb4.9/4*

*JMA **08** 01:29:22.0±0.2, 43°.24N×147°.26E, h40^{km}, M3.8*

*NIED **08** 01:29:22.0, 43°.24N×147°.26E, h40^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}1.99; $M_{\theta\theta}$-1.61; $M_{\phi\phi}$-0.38; $M_{r\theta}$1.68; $M_{\theta\phi}$-1.03; $M_{\phi r}$0.32; Fault plane solution: $M_0$2.71000×10^{14} NP1:ϕ_s73.00000°, δ65.00000°, λ101.00000°. NP2:ϕ_s227.00000°, δ27.00000°, λ67.00000°.*

*MOS **08** 01:29:22.3±1.0, 43°.40N×147°.25E, h61^{km}, mb4.1/2 Error ellipse: s-maj=19.7km s-min=12.7km az=38.0*

ISC 08 01:29:22.0±1.9**, 43°.26N**±0°.08×**147°.33E**±0°.08**, h44**^{km}±16^{km}**, n40, σ0^{s}.77**/54**, mb3.7**/6**, 1C-4D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	1.16	276	P	Pn	01 29 41.5	-0.3
NEM2				eS	Sn	01 29 56.1	-0.4
NMR	Nemuro--Hokkai	1.18	276	⇓iPN	Pn	01 29 41.6	-0.3
NMR				i S	Sn	01 29 56.4	-0.3
NMR	Nemuro--Hokkai	1.18	276	i P	Pn	01 29 41.6	-0.3
NMR				i S	Sn	01 29 56.4	-0.3
YUK	Yuzh-Kuril'sk	1.32	307	d iPN	Pn	01 29 43.9	0.0
YUK				i S	Sn	01 30 00.1	-0.2
YUK	comp=E,258nm,0.2s			pmax	pmax		
YUK	comp=Z,816nm,0.2s			pmax	pmax		
YUK	comp=N,33nm,0.1s			pmax	pmax		
YUK	comp=N,1μm,0.3s			smax	smax		
YUK	comp=E,431nm,0.1s			smax	smax		
YUK	Yuzh-Kuril'sk	1.32	307	i P	Pn	01 29 43.9	0.0
YUK	comp=E,816nm,0.3s			AMB	AMB	01 29 44.0	
YUK				i S	Sn	01 30 00.4	+0.1
YUK	comp=E,1μm,0.4s			A	A	01 30 02.0	
YUK	comp=E,431nm,0.4s			A	A	01 30 02.0	
GRPR	Tuman	1.35	303	⇓iPN	Pn	01 29 43.9	-0.4
GRPR				i S	Sn	01 30 00.4	-0.6
GRPR	comp=Z,496nm,0.3s			pmax	pmax		
GRPR	comp=N,201nm,0.1s			pmax	pmax		
GRPR	comp=E,104nm,0.1s			pmax	pmax		
GRPR	comp=N,1μm,0.2s			smax	smax		
GRPR	comp=E,722nm,0.1s			smax	smax		
GRPR	Tuman	1.35	303	i P	Pn	01 29 43.9	-0.4
GRPR	comp=E,496nm,0.3s			AMB	AMB	01 29 44.0	
GRPR				i S	Sn	01 30 00.4	-0.6
GRPR	comp=E,1μm,0.2s			A	A	01 30 02.0	
GRPR	comp=E,722nm,0.2s			A	A	01 30 02.0	
GLVR	Golovnino	1.40	291	ePN	Pn	01 29 44.8	-0.2
GLVR				eS	Sn	01 30 02.2	-0.1
GLVR	comp=Z,253nm,0.1s			pmax	pmax		
GLVR	comp=N,576nm,0.3s			smax	smax		
GLVR	comp=E,991nm,0.2s			smax	smax		
GLVR	Golovnino	1.40	291	eP	Pn	01 29 44.8	-0.2
GLVR	comp=E,253nm,0.3s			AMB	AMB	01 29 46.0	
GLVR				eS	Sn	01 30 02.2	-0.1
GLVR	comp=E,576nm,0.3s			A	A	01 30 04.0	
GLVR	comp=E,991nm,0.3s			A	A	01 30 04.0	
JKHN	Kushirohamanak	1.60	264	P	Pn	01 29 48.2	+0.5
RUSJ	Misakicho	1.73	300	⇑iPN	Pn	01 29 50.0	+0.5
RUSJ				i S	Sn	01 30 12.1	+1.7
JRA	Rausu	1.74	294	P	Pn	01 29 50.0	+0.3
JRA				eS	Sn	01 30 10.8	+0.1
JNSB	Nemuroshibetsu	1.77	288	P	Pn	01 29 50.3	+0.2
JNSB				eS	Sn	01 30 11.4	+0.1
JNK	Nakash	1.93	281	P	Pn	01 29 52.2	-0.1
JNK				eS	Sn	01 30 14.7	-0.6
JAK	Akkeshi	1.95	263	P	Pn	01 29 52.5	0.0
JAK				eS	Sn	01 30 14.9	-0.8
KUR	Kuril'sk	2.01	11	ePN	Pn	01 29 53.7	+0.3
KUR				eS	Sn	01 30 16.1	-1.2
KUR	comp=Z,40nm,0.1s			pmax	pmax		
KUR	comp=N,36nm,0.2s			pmax	pmax		
KUR	comp=E,22nm,0.1s			pmax	pmax		
KUR	comp=E,164nm,0.1s			smax	smax		
KUR	comp=N,133nm,0.2s			smax	smax		
KUR	Kuril'sk	2.01	11	eP	Pn	01 29 53.7	+0.3
KUR	comp=N,40nm,0.1s			AMB	AMB	01 29 58.0	
KUR				eS	Sn	01 30 17.7	+0.4
KUR	comp=N,133nm,0.1s			A	A	01 30 19.0	
KUR	comp=N,164nm,0.1s			A	A	01 30 19.0	
JOB	Onbets	2.59	263	P	Pn	01 30 01.6	+0.3
JOB				eS	Sn	01 30 30.2	-1.2
JTKR	Abashiri--Toko	2.59	287	P	Pn	01 30 02.3	+1.0
JAR	Ashorobuto	2.60	272	P	Pn	01 30 02.1	+0.6
JAR				eS	Sn	01 30 32.0	+0.2
JMP	Maruseppu	2.98	286	P	Pn	01 30 08.0	+1.3
JCH	Churui	2.98	259	P	Pn	01 30 07.0	+0.3
JCH				eS	Sn	01 30 39.5	-1.8
ERM	Erimo	3.32	249	⇓iPN	Pn	01 30 13.9	+2.5
JKK2	Kamakawa 2	3.39	282	P	Pn	01 30 13.8	+1.5
JNBK	Urakawa-nobuka	3.51	255	P	Pn	01 30 14.5	+0.5
JNBK				eS	Sn	01 30 53.3	-0.9
H11N2	WAKE ISLAND Hy baz=330,slow=75,SNR=17	28.64	139	T	T	02 06 04.5	
H11N1	WAKE ISLAND Hy baz=330,slow=75,SNR=16	28.66	139	T	T	02 06 06.1	
H11N3	WAKE ISLAND Hy baz=330,slow=75,SNR=18	28.66	139	T	T	02 06 06.7	
SONM	Songino Array comp=N,0.5nm,0.5s,baz=86,slow=7.7,SNR=3.8	28.78	294	P	P	01 35 15.9	+0.2
H11S1	WAKE ISLAND Hy baz=331,slow=76,SNR=27	29.60	140	T	T	02 07 12.5	
H11S3	WAKE ISLAND Hy baz=331,slow=76,SNR=22	29.61	140	T	T	02 07 14.3	
H11S2	WAKE ISLAND Hy baz=331,slow=76,SNR=17	29.62	140	T	T	02 07 12.7	
MKAR	Makanchi Array comp=N,0.7nm,0.7s,baz=81,slow=7.6,SNR=6.1	44.93	298	P	P	01 37 32.8	+0.4
KURK	Kurchatov	45.91	304	P	P	01 37 40.8	+0.8
KURK	Kurchatov	45.91	304	eP	P	01 37 40.8	+0.8
KURBB	Kurchatov Arra comp=N,0.4nm,0.3s,baz=78,slow=7.7,SNR=2.4	46.00	304	P	P	01 37 40.8	+0.2
FINES	FINESS Array B comp=N,0.9nm,0.7s,baz=46,slow=8.0,SNR=6.4	65.37	333	P	P	01 39 58.7	-0.6
FINES	FINESS Array B	65.37	333	i P	P	01 39 59.2	-0.1
FINES	comp=Z,1.0nm,0.7s			pmax	pmax		
NOA	NORSAR Array B comp=Z,0.5nm,0.4s,baz=42,slow=5.4,SNR=4.9	70.11	339	P	P	01 40 28.2	-1.0
AKASG	Malin Array Be comp=Z,0.3nm,0.4s,baz=42,slow=5.6,SNR=1.8	72.05	324	P	P	01 40 40.7	-0.4

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*GUC **08** 01:33:34.5±0.6, 30°.87S×71°.39W, h54^{km}±2^{km}, ML3.4*

*SJA **08** 01:33:34.0, 30°.88S×71°.49W, h10^{km}, ML4.2*

ISC 08 01:33:34.2±1.6**, 30°.88S**±0°.02×**71°.47W**±0°.05**, h19**^{km}±4^{km}**, n45, σ1^{s}.32**/64**, 9C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.25	326	⇑iP	Pn	01 33 43.7	+0.8
CO06				i S	Sn	01 33 49.9	+1.6
CO06	comp=E,5μm,0.3s			IAML		01 33 53.4	
CO03	El Pedregal	0.67	86	⇓eP	Pg	01 33 47.4	-0.2
CO03				i S	Sg	01 33 56.9	+0.2
CO03	comp=E,5μm,0.1s			IAML		01 33 57.0	
CO03	El Pedregal	0.67	86	i P	Pb	01 33 47.0	-0.4
GO04	Tololo Observa	0.92	39	⇑eP	Pb	01 33 51.1	-0.5
GO04				i S	Sb	01 34 03.1	-0.4
GO04	comp=N,6μm,0.5s			IAML		01 34 05.0	
GO04	Tololo Observa	0.92	39	i P	Pb	01 33 51.0	-0.6
CO05	La Serena	0.98	12	eP	Pb	01 33 52.3	-0.4
CO05				i S	Sb	01 34 05.2	0.0
CO05	comp=N,1μm,0.4s			IAML		01 34 11.8	
VA06	Catapilco	1.68	175	⇑eP	Pn	01 34 02.5	-0.1
VA06				i S	Sn	01 34 23.5	0.0
VA06	comp=E,614nm,0.6s			IAML		01 34 33.7	
AROD	Rodeo	1.87	68	i P	Pb	01 34 07.0	-0.9
LCO	Las Campanas	1.98	20	⇑eP	Pn	01 34 06.2	-0.7
LCO				i S	Sn	01 34 30.4	-1.1
LCO	Las Campanas	1.98	20	i P	Pn	01 34 07.0	0.0
VA03	San Esteban	2.03	158	⇑eP	Pn	01 34 07.6	+0.1
VA03				i S	Sn	01 34 32.1	-0.3
VA03	comp=E,622nm,0.3s			IAML		01 34 39.6	
VA03	San Esteban	2.03	158	i P	Pn	01 34 08.0	+0.5
ACCO	Cerro Coronel	2.09	82	i P	Pn	01 34 10.0	+1.5
ROCH	El Roble	2.12	169	eP	Pn	01 34 08.9	+0.1
ROCH				i S	Sn	01 34 34.8	+0.1
ROCH	comp=N,363nm,0.3s			IAML		01 34 41.5	
ROC1	El Roble	2.12	170	i P	Pn	01 34 10.0	+1.1
VA01	Torpederas	2.14	184	eP	Pn	01 34 08.3	-0.5
VA01				i S	Sb	01 34 40.0	+1.5
VA01	comp=N,177nm,0.5s			IAML		01 34 41.3	
ACDV	Cuesta del Vie	2.15	71	i P	Pb	01 34 11.0	-1.6
AUSP	Uspallata	2.22	127	i P	Pn	01 34 12.0	+1.7
MT02	Curacav	2.38	173	⇑eP	Pn	01 34 12.0	-0.3
MT02				i S	Sn	01 34 40.5	-0.5
MT02	comp=E,133nm,0.3s			IAML		01 34 53.8	
MT02	Curacav	2.38	173	i P	Pn	01 34 13.0	+0.7
ZON	Zonda	2.48	106	i P	Pb	01 34 16.0	-2.2
MT05	Renca	2.58	166	eP	Pn	01 34 15.0	0.0
MT05				i S	Sn	01 34 45.4	-0.4
MT05	comp=E,378nm,0.3s			IAML		01 34 59.9	
MT05	Renca	2.58	166	i P	Pn	01 34 17.0	+2.0
AC04	Llanos de Chal	2.69	7	eP	Pn	01 34 15.9	-0.6
AC04				i S	Sn	01 34 46.5	-2.0
AC04	comp=E,224nm,0.5s			IAML		01 34 58.2	
AC04	Llanos de Chal	2.69	7	i P	Pn	01 34 18.0	+1.5
VA05	Santo Domingo	2.77	182	eP	Pn	01 34 16.7	-0.8
VA05				i S	Sn	01 34 50.0	-0.4
VA05	comp=E,238nm,0.5s			IAML		01 34 59.4	
ASAL	Salagasta	2.82	128	i P	Pn	01 34 20.0	+1.7
MT09	Talagante	2.91	172	⇑eP	Pn	01 34 19.8	+0.1
MT09				i S	Sn	01 34 53.7	-0.5
MT09	comp=N,195nm,0.2s			IAML		01 35 08.6	
MT01	Popeta	2.98	176	eP	Pn	01 34 20.2	-0.3
MT01				i S	Sn	01 34 54.5	-1.1
MT01	comp=E,118nm,0.1s			IAML		01 35 03.9	
MT01	Popeta	2.98	176	i P	Pn	01 34 21.0	+0.6
AAGR	Agrelo	3.14	135	i P	Pn	01 34 25.0	+2.2
LMEL	Las Melosas	3.14	160	⇑eP	Pn	01 34 24.2	+1.3
LMEL				i S	Sn	01 34 58.3	-1.6
LMEL	comp=N,181nm,0.2s			IAML		01 35 12.6	
GO03	Copiap	3.45	19	eP	Pn	01 34 25.7	-1.3
GO03				i S	Sn	01 35 05.1	-2.3
GO03	comp=E,122nm,0.4s			IAML		01 35 19.6	
GO03	Copiap	3.45	19	i P	Pn	01 34 30.0	+3.0
BO01	Tunca	3.51	175	eP	Pn	01 34 27.5	-0.3
BO01				i S	Sn	01 35 07.4	-1.4
BO01	comp=N,44nm,0.6s			IAML		01 35 28.8	
BO01	Tunca	3.51	175	i P	Pn	01 34 30.0	+2.2
VCA	Vinchina	3.55	54	⇑eP	Pn	01 34 31.2	+2.7
VCA				i S	Sn	01 35 08.1	-2.0
VCA	Vinchina	3.55	54	i P	Pn	01 34 31.0	+2.5
BO02	Sierra Bellavi	3.94	172	i P	Pn	01 34 36.0	+2.3
ACLC	CERRO LA CRUZ	4.17	71	i P	Pn	01 34 38.0	+0.9
APLL	PUNTA DE LOS L	4.29	85	i P	Pn	01 34 39.0	+0.5
AC02	Maricunga	4.53	28	i P	Pn	01 34 43.0	+0.8
RFA	San Rafael	4.63	148	i P	Pn	01 34 43.0	-0.2
AHML	Horco Molle	6.76	54	i P	Pn	01 35 14.0	+1.6
FSA	Cafayete	6.78	47	i P	Pn	01 35 15.0	+2.1

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*IDC **08** 01:34:26.9±2.1, 7°.98S×125°.33E, h0^{km}, mb3.6/1, mb1 3.7/3, mb1mx3.4/38, mbtmp3.5/3, ML3.2/2, Error ellipse: s-maj=170.5km s-min=33.0km az=60.0*

*DJA **08** 01:34:28.9±1.9, 8°S±11°×12°5E±1°6, h10^{km}, M3.3/3, MLv3.3/3*

ISC 08 01:34:30.2±1.4**, 8°.4S**±0°.1×**125°.0E**±0°.1**, h24**^{km}**, n5, σ2^{s}.28**/7**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.51	209	P	Pb	01 34 58.1	+0.4
EDFI	Ende, Flores	3.30	264	P	Pn	01 35 20.1	-0.4
WRA	Warramunga Arr 0.1nm,0.3s,baz=317,slow=13,SNR=10	14.58	143	Pn	Pn	01 37 56.1	+1.0
WRA	0.1nm,0.3s,baz=314,slow=22,SNR=5.0			Sn	Sn	01 40 34.8	-1.3
ASAR	Alice Springs 0.1nm,0.3s,baz=330,slow=11,SNR=7.6	17.38	152	P	P	01 38 34.7	+2.2
ASAR	0.0nm,0.3s,baz=320,slow=22,SNR=2.4			S	Sn	01 41 40.8	-3.5
MKAR	Makanchi Array 0.6nm,0.8s,baz=127,slow=8.2,SNR=2.7	66.82	330	P	P	01 45 19.2	-0.8

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*IDC **08** 01:38:55.0±0.5, 0°.31S×96°.78E, h0^{km}, mb4.2/21, mb1 4.3/23, mb1mx4.2/41, mbtmp4.2/23, ML4.4/2, MS3.4/9, Ms1 3.4/9, ms1mx3.1/49, Error ellipse: s-maj=18.3km s-min=12.7km az=61.0*

*DJA **08** 01:38:55.6±0.6, 0°S±3°×9°7E±°, h10^{km}, M4.9/15, mB5.5/5, mb4.9/5, MLv4.9/15, Mw(mB)5.0/5*

*NEIC **08** 01:38:59.7±2.5, 0°.20S±0°.09×97°.06E±0°.07, h25^{km}±5^{km}, mb4.5/23, Error ellipse: s-maj=14.6km s-min=7.2km az=215.0*

ISC 08 01:38:57.8±0.5**, 0°.21S**±0°.05×**96°.81E**±0°.06**, h22**^{km}**, n90, σ2^{s}.10**/88**, mb4.4**/38**, MS3.4**/9**, 1C-1D, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSI	Gunungsitoli	1.69	27	P	Pn	01 39 25.5	-0.6
GSI				S	Sn	01 39 45.6	-1.5
GSI	Gunungsitoli	1.69	27	Pn	Pn	01 39 25.1	-0.9
SISI	Saibi	2.54	116	P	Pn	01 39 35.5	-2.2
SNSI	Sinabang, Aceh	2.65	350	P	Pn	01 39 38.6	-0.6
MNSI	Mandailing Nat	2.95	70	P	Pn	01 39 41.8	-1.5
TPTI		3.47	6	P	Pn	01 39 49.7	-0.8
PPI	Padang Panjang	3.60	94	P	Pn	01 39 50.6	-1.7
PSI	Prapat 18nm,0.3s,baz=292,slow=3.3,SNR=127	3.67	35	Pn	Pn	01 39 51.6	-1.8
PSI	4.6nm,0.3s,baz=320,slow=9.9,SNR=2.1			Sn	Sn	01 40 33.4	-2.6
PDSI	Padang	3.72	101	P	Pn	01 39 51.9	-2.1
PPSI	Pulau Pagai	4.08	128	P	Pn	01 39 56.9	-2.0
TSI	Tuntungan	4.09	25	P	Pn	01 39 59.0	0.0
BKNI	Bangkinang	4.27	83	P	Pn	01 40 00.1	-1.4
BKNI	Bangkinang	4.27	83	Pn	Pn	01 39 59.5	-2.0
KRJI	Kerinci	5.01	112	P	Pn	01 40 09.9	-2.0
LHMI	Lhok Sumawe 1.0nm2μm110nm,0.5s	5.41	1	P	Pn	01 40 17.3	+0.1

LHMI	Lhok Sumawe	5.41	1	Pn	Pn	01 40 16.2	-1.0
MASI	Maura Aman, Be	6.16	118	P	Pn	01 40 24.8	-2.8
	2.1nm3µm186nm,0.5s						
KSI	Kapahiang	6.72	121	P	Pn	01 40 33.4	-1.8
JMBI	JAMBI	6.98	102	P	Pn	01 40 36.8	-2.0
MNAI	Manna	7.40	124	P	Pn	01 40 42.1	-2.4
	4.5nm7µm206nm,1.1s						
MNAI	Manna	7.40	124	Pn	Pn	01 40 40.7	-3.8
MDSI	Maura Dua	8.50	120	P	Pn	01 40 57.8	-1.9
	19nm,0.9s						
KLSI		9.08	119	P	Pn	01 41 05.6	-2.0
KASI	Kota Agung	9.32	125	P	Pn	01 41 08.7	-2.2
LEM	Lembang	12.63	122	LR	LR	01 47 40.3	
	comp=Z,215nm,18.2s,baz=206,slow=42						
UBPT	Khong Chiam	17.61	29	Pn	Pn	01 42 58.1	-3.9
UBPT				IAmb	IAmb	01 43 05.0	
	comp=Z,29nm,1.2s						
PALK	Pallekele	17.70	295	Sn	Sn	01 46 11.2	-8.8
	comp=Z,0.6nm,0.3s,baz=211,slow=0.7,SNR=4.7						
PALK				LR	LR	01 49 05.0	
	comp=Z,111nm,18.5s,baz=219,slow=34						
CM31	Chiang Mai Arr	18.67	6	P	Pn	01 43 14.6	-0.4
CM31				IAmb	IAmb	01 43 18.6	
	comp=Z,24nm,1.1s						
CMAR	Chiang Mai Arr	18.67	6	P	Pn	01 43 15.9	+1.0
	comp=Z,0.7nm,0.3s,baz=197,slow=12,SNR=44						
CMAR				LR	LR	01 51 31.8	
	comp=Z,169nm,19.9s,baz=216,slow=40						
CMAR	Chiang Mai Arr	18.67	6		P	01 43 13.8	-0.7
CHTO	Chiang Mai	19.02	6		Pn	01 43 18.5	-0.8
SLVN	Son La	22.51	18	P	P	01 43 55.2	-1.0
SLVN				IAmb	IAmb	01 44 11.6	
	comp=Z,15nm,0.8s						
QIZ	Qiongzhong	23.01	33	P	P	01 44 01.6	+0.2
QIZ				S	S	01 48 11.8	+0.8
QIZ				LR	LR		
	comp=N,150nm,7.5s						
QIZ				LR	LR		
	comp=E,100nm,10.8s						
QIZ				LR	LR		
	comp=Z,96nm,15.2s						
KAPI	Kappang	23.41	102	P	P	01 44 07.9	+2.4
	comp=Z,2.3nm,0.4s,baz=207,slow=11,SNR=2.0						
KAPI	Kappang	23.41	102	P	P	01 44 04.9	-0.6
KAPI				IAmb	IAmb	01 44 24.0	
	comp=Z,13nm,1.1s						
TOLI2	Tolitoli	24.01	87	P	P	01 44 09.7	-1.7
H08S2	Diego Garcia H	25.34	252	T	T	02 11 54.9	
	baz=73,slow=75,SNR=23						
H08S3	Diego Garcia H	25.34	253	T	T	02 11 55.3	
	baz=73,slow=75,SNR=75						
H08S1	Diego Carcia H	25.36	252	T	T	02 12 08.2	
	baz=73,slow=75,SNR=18						
KMI	Kunming	25.83	12	⇓P	P	01 44 32.2	+4.2
KMI				pP	pwP	01 44 40.1	+0.7
KMI				sP	sP	01 44 45.0	+10
KMI				pmax	pmax		
	comp=Z,15nm,0.8s						
KMI				LR	LR		
	comp=N,130nm,20.1s						
KMI				LR	LR		
	comp=E,220nm,20.1s						
KMI				LR	LR		
	comp=Z,230nm,20.9s						
SHL	Shillong	26.07	350	P	P	01 44 30.8	+0.7
GYA	Guiyang	28.17	19	⇑P	P	01 44 49.4	+0.5
GYA				pmax	pmax		
	comp=Z,10.0nm,1.4s						
DAV	Davao City (W)	29.60	75	LR	LR	01 58 12.3	
	comp=Z,77nm,19.2s,baz=350,slow=39						
TPUB	Ta-pu	32.90	43	P	P	01 45 28.8	-1.9
YULB	Yu-li	33.42	44	P	P	01 45 34.9	-0.3
YULB				IAmb	IAmb	01 45 37.1	
	comp=Z,13nm,1.1s						
SSLB	Suanglung	33.45	43	P	P	01 45 35.1	-0.3
XAN	Xi'an	35.92	17	P	P	01 45 57.2	+0.5
XAN				pP	pP	01 46 01.2	-0.6
XAN				pmax	pmax		
	comp=Z,9.0nm,0.7s						
H01W3	Cape Leeuwin H	38.10	157	T	T	02 26 55.2	
	baz=333,slow=76,SNR=23						
H01W2	Cape Leeuwin H	38.12	157	T	T	02 26 47.2	
	baz=333,slow=76,SNR=21						
H01W1	Cape Leeuwin H	38.12	157	T	T	02 26 56.9	
	baz=333,slow=76,SNR=37						
NJ2	Nanjing	38.27	31	*e*P	P	01 46 18.5	+1.9
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
GTA	Gaotai	39.53	4	*e*P	P	01 46 32.0	+4.8
GTA				pP	pwP	01 46 36.9	-2.0
GTA				sP	sP	01 46 40.4	+5.7
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NIL	Nilore	40.31	329	P	P	01 46 34.0	+0.3
NIL				IAmb	IAmb	01 47 00.7	
	comp=Z,6.0nm,0.6s						
WB0	Warramunga Arr	41.62	120	P	P	01 46 42.5	-2.3
WB0				IAmb	IAmb	01 46 56.6	
	comp=Z,11nm,0.8s						
WRA	Warramunga Arr	41.65	120	P	P	01 46 44.5	-0.4
	comp=Z,3.2nm,1.1s,baz=301,slow=8.8,SNR=12						
WRA				PcP	PcP	01 48 41.5	-0.2
	comp=Z,0.7nm,0.7s,baz=318,slow=2.4,SNR=3.3						
WRA				LR	LR	02 06 30.8	
	comp=Z,14nm,18.5s,baz=40,slow=40						
WRA	Warramunga Arr	41.65	120	P	P	01 46 43.7	-1.2
WB2	Warramunga Arr	41.66	120	P	P	01 46 43.5	-1.4
WB2				IAmb	IAmb	01 46 57.0	
	comp=Z,9.5nm,0.9s						
WR0	Warramunga Arr	41.83	120	P	P	01 46 45.2	-1.2
WR0				IAmb	IAmb	01 46 58.5	
	comp=Z,11nm,0.8s						
AS31	Alice Springs	42.88	126	P	P	01 46 54.8	-0.1
ASAR	Alice Springs	42.88	126	P	P	01 46 54.8	-0.2
	comp=Z,3.4nm,0.8s,baz=297,slow=8.0,SNR=48						
ASAR				PcP	PcP	01 48 45.9	+0.1
	comp=Z,0.9nm,0.7s,baz=296,slow=2.7,SNR=4.4						
ASAR	Alice Springs	42.88	126	P	P	01 46 54.6	-0.4
HHC	Hu-ho-hao-te	43.02	16	*e*P	P	01 46 59.7	+3.8
HHC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,87nm,8.2s						
WMQ	Urumqi	44.59	351	*e*P	P	01 47 12.0	+3.6
BTK	Batken	46.56	332	IAmb	IAmb	01 47 52.7	
	comp=Z,3.8nm,0.7s						
AAK	Ala-Archa	47.14	338	P	P	01 47 30.3	+1.6
	comp=Z,1.1nm,0.7s,baz=174,slow=9.2,SNR=4.0						
KSRS	Korea Array	47.23	34	P	P	01 47 29.6	+0.4
	comp=Z,4.3nm,0.7s,baz=220,slow=8.5,SNR=11						
KSRS				LR	LR	02 09 04.0	
	comp=Z,36nm,19.5s,baz=210,slow=38						
MK31	Makanchi Array	48.51	347	P	P	01 47 41.1	+2.1
MK31				IAmb	IAmb	01 47 52.4	
	comp=Z,3.5nm,0.8s						
MKAR	Makanchi Array	48.51	347	P	P	01 47 40.9	+1.8
	comp=Z,2.5nm,0.5s,baz=167,slow=8.9,SNR=28						
MKAR				LR	LR	02 11 50.1	
	comp=Z,39nm,18.0s,baz=142,slow=41						
SONM	Songino Array	48.58	9	P	P	01 47 41.5	+1.8
	comp=Z,1.0nm,0.7s,baz=196,slow=9.0,SNR=7.1						
KKAR	Karatay Array	49.15	335	P	P	01 47 45.7	+1.6
GEYT	Alibeck	52.05	321	P	P	01 48 08.3	+2.3
	comp=Z,1.3nm,0.4s,baz=100,slow=25,SNR=2.4						
STKA	Stephens Creek	52.72	131	P	P	01 48 11.6	+0.5
	comp=Z,4.9nm,0.7s,baz=308,slow=6.0,SNR=15						
MJAR	Matsushiro Arr	53.00	42	P	P	01 48 16.5	+3.4
	comp=Z,2.0nm,1.0s,baz=219,slow=5.4,SNR=4.2						
MJAR				LR	LR	02 10 49.9	
	comp=Z,20nm,20.9s,baz=110,slow=36						
USRK	Ussuriysk Ar.	54.18	31	P	P	01 48 22.8	+1.2
	comp=Z,3.1nm,0.7s,baz=151,slow=34,SNR=4.1						
ZALV	Zalesovo Beam	54.88	351	P	P	01 48 27.9	+1.4
	comp=Z,4.2nm,0.4s,baz=185,slow=5.4,SNR=16						
ZALV				LR	LR	02 15 24.3	
	comp=Z,37nm,18.3s,baz=40,slow=40						
KLR	Kul'dur	57.69	26	P	P	01 48 52.5	+5.9
	comp=Z,2.3nm,0.5s,baz=244,slow=5.9,SNR=7.1						
ABKAR	Akbulak array	58.57	333	IAmb	IAmb	01 48 54.1	
	comp=Z,3.3nm,0.8s						
KBZ	Khabaz	64.88	320	P	P	01 49 36.8	+1.4
	comp=Z,1.6nm,0.7s,baz=154,slow=6.8,SNR=5.7						
BRTR	Keskin Array B	69.77	313	P	P	01 50 07.2	+0.4
	comp=Z,0.7nm,0.8s,baz=140,slow=8.1,SNR=4.5						
MAW	Mawson	71.26	193	P	P	01 50 16.1	+1.1
	comp=Z,3.1nm,0.9s,baz=13,slow=4.3,SNR=6.4						
BOSA	Boshof	73.74	240	P	P	01 50 31.9	+1.1
	comp=Z,2.2nm,0.8s,baz=123,slow=1.5,SNR=6.0						
AKASG	Malin Array Be	76.13	323	P	P	01 50 43.9	-0.1
	comp=Z,2.5nm,0.9s,baz=84,slow=5.2,SNR=5.6						
MNK	Minsk	78.07	326	*i* P	P	01 50 51.1	-3.6
	comp=E,2.0nm,0.9s						
MNK				*i* P	P	01 50 51.1	-3.6
	comp=N,15nm,1.1s						
MNK				*i* P	P	01 50 51.1	-3.6
	comp=Z,6.0nm,1.1s,baz=108						
MNK				*i* PcP	pP	01 51 00.5	+0.1
MNK				*i* PP	PP	01 53 47.3	-3.9
MNK				*i* PPP	PPP	01 55 42.0	
MNK				*i* S	S	02 00 43.7	-3.9
MNK				*i* SS	SS	02 05 45.9	-3.3
MNK				*i* SSS	SSS	02 09 19.4	
MNK				*i* LR	LR	02 22 15.2	
MNK				*i* LRM	MLR	02 26 23.4	
	comp=Z,100nm,20.3s						
MNK				*i* LRM	MLR	02 26 37.9	
	comp=N,104nm,17.4s						
MNK				*i* LRM	MLR	02 27 15.5	
	comp=E,35nm,28.2s						
FINES	FINESS Array B	81.06	333	P	P	01 51 11.8	+0.8
	comp=E,4.0nm,1.0s,baz=118,slow=4.8,SNR=12						
ARCES	ARCESS Array B	83.72	340	P	P	01 51 24.8	+0.1
	comp=E,1.6nm,0.9s,baz=102,slow=5.6,SNR=5.6						
VNDA	Vanda	84.53	169	P	P	01 51 28.5	-0.2
	comp=E,1.1nm,0.9s,baz=309,slow=5.1,SNR=5.9						
TORD	Torodi Ar. Bea	95.03	283	P	P	01 52 20.9	+1.2
	comp=E,0.3nm,0.7s,baz=104,slow=5.4,SNR=2.5						
NVAR	Mina Array Bea	130.15	36	PKP	PKiKP	01 58 08.3	+0.5
	comp=E,0.3nm,0.5s,baz=321,slow=1.2,SNR=3.3						
CPUP	Villa Florida	143.70	221	PKP	PKPdf	01 58 30.2	-1.8
	comp=E,1.6nm,0.6s,baz=157,slow=4.0,SNR=6.3						
TXAR	Lajitas Array	145.07	32	PKPbc	PKPdf	01 58 34.9	+0.5
	comp=E,2.5nm,0.7s,baz=261,slow=1.6,SNR=18						

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*FUNV **08** 01:47:31.9, 8°.44N×71°.42W, h1^{km}, MW3.2*

ISC 08 01:47:31.5±1.2, **8°.51N**±0°.03×**71°.40W**±0°.02, **h5**^{km}±10^{km}, **n28,** σ**1^{s}.13**/46, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	Socops	0.58	113	*e*P	Pg	01 47 43.3	+0.5
SOCV				*e*S	Sg	01 47 51.4	+1.0
SDV	Santo Domingo	0.84	64	*e*P	Pg	01 47 48.3	+0.5
SDV				*e*S	Sg	01 47 59.8	+1.0
SDV				*i*		01 48 04.6	
	comp=Z,138nm,0.4s						
CAPV	Capacho	1.11	235	*e*P	Pg	01 47 51.7	-1.2
CAPV				*e*S	Sg	01 48 06.5	-0.7
PAMC	Pamplona, Colo	1.73	228	*e*P	Pg	01 48 04.2	-0.6
PAMC				*e*S	Sg	01 48 29.1	+1.7
PAMC				*i*		01 48 30.4	
	comp=Z,410nm,0.4s						
MCQV	Machiques	1.90	324	*e*P	Pn	01 48 05.2	+0.6
MCQV				*e*S	Sn	01 48 30.5	+1.7
OCAC	Ocana	1.92	262	*e*P	Pn	01 48 05.2	+0.2
OCAC				*e*S	Sn	01 48 30.7	+1.1
OCAC				*i*		01 48 34.9	
	comp=Z,578nm,0.3s						
TAMC	Tame, Arauca	2.10	191	*e*P	Pb	01 48 09.9	-0.2
TAMC				*e*S	Sg	01 48 39.3	+0.3
TAMC				*i*		01 48 56.6	
	comp=Z,150nm,0.4s						
ELOV	Elorza	2.42	128	*e*P	Pb	01 48 14.8	-0.8
ELOV				*e*S	Sb	01 48 45.7	-0.1
ELOV				*i*		01 48 55.5	
	comp=Z,688nm,0.5s						
ELOV	Elorza	2.42	128	*e*P	Pn	01 48 11.6	-0.2
ELOV				*e*S	Sn	01 48 41.1	-0.7
BARC	Barichara	2.60	223	*e*P	Pb	01 48 18.0	-0.8
BARC				*e*S	Sb	01 48 49.4	-1.7
BARC				*i*		01 48 55.9	
	comp=Z,292nm,0.9s						
SIQV	Siquisique	2.64	36	*e*P	Pn	01 48 15.5	+0.6
SMLC	San Martn de	2.66	276	*e*P	Pn	01 48 14.8	-0.3
SMLC				*e*S	Sn	01 48 48.5	+0.8
SMLC				*i*		01 48 52.3	
	comp=Z,93nm,0.3s						
BRRC	Barranca, Sant	2.68	239	*e*P	Pn	01 48 16.6	+1.2
BRRC				*e*S	Sb	01 48 51.4	-1.9
BRRC				*i*		01 49 03.7	
	comp=Z,58nm,0.4s						
RUSC	La Rusia	3.09	213	*e*P	Pn	01 48 22.8	+1.3
RUSC				*e*S	Sn	01 49 00.9	+1.8
RUSC				*i*		01 49 12.2	
	comp=Z,52nm,0.7s						
MAPV	Macapo	3.19	65	*e*P	Pn	01 48 23.3	+0.9
URIC	Uribia, Colomb	3.22	350	*e*P	Pn	01 48 22.9	+0.1
URIC				*e*S	Sn	01 48 59.4	-2.3
URIC				*i*		01 49 17.1	
	comp=Z,27nm,0.6s						
BAUV	El Baul	3.35	82	*e*P	Pn	01 48 25.1	+0.5
BAUV				*e*S	Sn	01 49 03.9	-0.8
ZARC	Zaragoza, Cauc	3.57	254	*e*P	Pn	01 48 27.7	0.0
ZARC				*e*S	Sn	01 49 11.7	+1.5
ZARC				*i*		01 49 22.2	
	comp=Z,27nm,0.5s						
MONV	Montecano	3.70	22	*e*P	Pn	01 48 30.1	+0.6
BENV	Beln	4.02	69	*e*P	Pn	01 48 34.0	+0.1
UREC	San Jos de Ur	4.16	260	*e*P	Pn	01 48 36.2	+0.4
MOTC	Monteria, Cord	4.22	274	*e*P	Pn	01 48 37.2	+0.5
MOTC				*i*		01 49 24.3	
	comp=Z,12nm,0.3s						
MOTC				*e*S	Sn	01 49 28.0	+1.6
CHIC	Chingaza	4.50	211	*e*P	Pn	01 48 42.1	+1.4
CHIC				*i*		01 49 30.4	
	comp=Z,11nm,0.3s						
CHIC				*e*S	Sn	01 49 34.0	+0.3
TACV	Tcata	4.61	69	*e*P	Pn	01 48 41.7	-0.3
HELC	Santa Helena	4.70	241	*e*P	Pn	01 48 45.1	+1.6
HELC				*e*S	Sn	01 49 41.0	+2.4
HELC				*i*		01 49 57.7	
	comp=Z,12nm,0.4s						
PAYV	Puerto Ayacuch	4.82	129	*e*P	Pn	01 48 44.0	-0.8
CACV	CAICARA DEL OR	4.90	101	*e*P	Pb	01 48 52.8	-5.1
BIRV	Birongo	5.42	68	*e*P	Pn	01 48 52.0	-1.1

NNC 08 02:00:39.6±5.1, **36°.97N**×**70°.53E, h0**^{km}**, mb3.6, mpv3.2, 4C-2D, Error ellipse: s-maj=40.9km s-min=38.1km az=125.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	Karatay Array	6.13	360	⇓P	Pn	02 02 11.9	+0.4
	0.3nm,0.3s,baz=187,slow=15,SNR=24						
KK31				⇑S	Sn	02 03 23.3	+1.0
	0.7nm,0.4s,baz=189,slow=25,SNR=7.8						
AAK	Ala-Archa	6.43	27	⇑P	Pn	02 02 15.9	+0.1
	0.6nm,0.3s						
AAK				⇑S	Sn	02 03 32.8	+2.7
	2.3nm,0.5s						
TKM2	Tokmak 2	7.11	32	⇑P	Pn	02 02 24.7	-0.4
	2.2nm,0.5s						
TKM2				⇓S	Sn	02 03 46.1	-0.6
	2.2nm,1.1s						

IDC 08 02:14:40.5±1.5, **31°.16N**×**103°.06E, h0**^{km}**, mb3.4**/4, **mb1 3.5**/5, **mb1mx3.2**/47, **mbtmp3.4**/5, **ML3.1**/1, **MS2.8**/1, **Ms1 2.8**/1, **ms1mx2.3**/40, **Error ellipse: s-maj=45.2km s-min=26.9km az=66.0, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	Songino Array	16.85	8	Pn	P	02 18 39.6	-0.5
	0.1nm,0.3s,baz=186,slow=13,SNR=2.5						
SONM				LR	LR	02 26 00.7	
	comp=Z,32nm,18.9s,baz=8.0,slow=40						
KSRS	Korea Array	21.45	66	P	P	02 19 29.4	-0.9
	1.4nm,0.8s,baz=252,slow=10,SNR=4.4						
MKAR	Makanchi Array	22.35	320	P	P	02 19 39.5	-0.5
	0.6nm,0.9s,baz=128,slow=11,SNR=2.8						
WRA	Warramunga Arr	59.03	145	P	P	02 24 42.3	0.0
	0.7nm,0.9s,baz=338,slow=7.7,SNR=8.7						
ASAR	Alice Springs	62.01	148	P	P	02 25 02.9	+0.1
	0.4nm,0.9s,baz=324,slow=6.6,SNR=4.4						

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*SJA **08** 02:47:16±1.7, 22°.40S±0°.08×66°.17W±0°.09, h283^{km}±7^{km}, Md4.3, mb4.2/9(NEIC), Error ellipse: s-maj=11.8km s-min=11.1km az=82.0*

*NEIC **08** 02:47:16.8±1.4, 22°.43S±0°.08×66°.17W±0°.09, h285^{km}±9^{km}, Error ellipse: s-maj=12.7km s-min=11.2km az=75.0*

*IDC **08** 02:47:18.1±0.8, 22°.44S×66°.12W, h245^{km}±10^{km}, mb3.7/5, mb1 3.7/11, mb1mx3.5/29, mbtmp4.3/11, Error ellipse: s-maj=17.1km s-min=12.5km az=130.0*

*VAO **08** 02:47:19.1±0.3, 22°.35S×66°.33W, h286^{km}, mb4.1*

*GUC **08** 02:47:19.4±0.5, 22°.41S×66°.61W, h298^{km}±8^{km}, MW4.5*

ISC 08 02:47:17.0±0.5, **22°.40S**±0°.05×**66°.29W**±0°.04, **h250**^{km}**, n162,** σ**2^{s}.01**/181, **mb4.0**/5, **14C-1D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YJA	Yavi	0.76	73	*i* P	Pn	02 47 54.3	+2.9
YJA				*i* S	S	02 48 22.6	+4.3
YJA				IAML		02 48 22.7	
	comp=Z,96nm,0.7s						
HJA	Humahuaca	1.14	135	*i* P	Pn	02 47 56.4	+3.0
HJA				*i* S	S	02 48 26.1	+4.1
HJA				IAML		02 48 27.9	
	comp=Z,101nm,0.6s						
AF01	San Pedro de A	1.82	252		Pn	02 48 01.7	+3.4
LVC	Limon Verde	2.43	265	P	Pn	02 48 07.4	+3.5
	comp=Z,65nm,0.3s,baz=77,slow=6.8,SNR=912						
LVC				S	S	02 48 44.0	+3.1
	comp=Z,43nm,0.3s,baz=223,slow=21,SNR=46						
LVC	Limon Verde	2.43	265	⇑*i*P	Pn	02 48 07.4	+3.5
LVC				*i* S	S	02 48 43.9	+3.1
LVC	Limon Verde	2.43	265	*e*P	Pn	02 48 07.5	+3.5
LVC	Limon Verde	2.43	265	*i* P	Pn	02 48 07.0	+3.1
LVC				IAML		02 48 49.6	
	comp=Z,117nm,0.1s						
PB15	IPOC Station P	3.04	254	*e*P	Pn	02 48 12.9	+2.7
PB15				*i* S	S	02 48 54.7	+2.6
PB15	IPOC Station P	3.04	254		Pn	02 48 14.0	+3.9
PB15	IPOC Station P	3.04	254	*i* P	Pn	02 48 13.0	+2.9
PB06	IPOC Station P	3.04	264	⇓*i*P	Pn	02 48 12.1	+2.0
PB06				*i* S	S	02 48 54.7	+2.6
PB06	IPOC Station P	3.04	264	Pn	Pn	02 48 13.2	+3.1
PB06	IPOC Station P	3.04	264	*i* P	Pn	02 48 13.0	+2.8
PB06				IAML		02 48 59.2	
	comp=Z,599nm,0.1s						
PB03	IPOC Station P	3.22	276	⇑*i*P	Pn	02 48 15.1	+2.9
PB03				*i* S	S	02 48 57.4	+1.6
PB03	IPOC Station P	3.22	276	*i* P	Pn	02 48 15.0	+2.9
PB03				IAML		02 49 02.4	
	comp=Z,676nm,0.2s						
PB01	IPOC Station P	3.26	294	⇑*i*P	Pn	02 48 15.7	+3.2
PB01				*i* S	S	02 48 58.4	+2.0
PB01	IPOC Station P	3.26	294		Pn	02 48 15.8	+3.2
PB01	IPOC Station P	3.26	294	*i* P	Pn	02 48 15.0	+2.5
PB01				IAML		02 49 00.5	
	comp=Z,559nm,0.2s						
PB07	IPOC Station P	3.40	281	⇑*i*P	Pn	02 48 17.2	+3.1
PB07				*i* S	S	02 49 00.6	+1.3
PB07	IPOC Station P	3.40	281		Pn	02 48 16.6	+2.5
PB07	IPOC Station P	3.40	281	*i* P	Pn	02 48 17.0	+2.9
PB07				IAML		02 49 04.3	
	comp=Z,583nm,0.3s						
PB08	IPOC Station P	3.49	310	⇑*i*P	Pn	02 48 19.5	+4.1
PB08				*i* S	S	02 49 04.5	+3.0
PB08	IPOC Station P	3.49	310	Pn	Pn	02 48 18.9	+3.6
PB08	IPOC Station P	3.49	310	*i* P	Pn	02 48 19.0	+3.6
PB08				IAML		02 49 07.6	
	comp=Z,358nm,0.3s						
PB02	IPOC Station P	3.52	287	⇑*i*P	Pn	02 48 18.3	+3.0
PB02				*i* S	S	02 49 02.6	+1.1
PB02	IPOC Station P	3.52	287	*i* P	Pn	02 48 18.0	+2.6
PB02				IAML		02 49 04.7	
	comp=Z,904nm,0.2s						
PB04	IPOC Station P	3.57	270	⇑*i*P	Pn	02 48 18.9	+2.9
PB04				*i* S	S	02 49 03.6	+0.9
PB04	IPOC Station P	3.57	270		Pn	02 48 18.4	+2.4
PB04	IPOC Station P	3.57	270	*i* P	Pn	02 48 19.0	+3.0
PB05	IPOC Station P	3.64	262	⇑*i*P	Pn	02 48 19.4	+2.7
PB05				*i* S	S	02 49 04.5	+0.4
PB05	IPOC Station P	3.64	262	*i* P	Pn	02 48 19.0	+2.3
PB05				IAML		02 49 10.7	
	comp=Z,355nm,0.2s						
HMBC	Humberstone	3.96	302	⇑*i*P	Pn	02 48 23.1	+2.5
HMBC				*i* S	S	02 49 11.4	+0.5
TA01	Diego Aracena	4.05	296	⇑*i*P	Pn	02 48 23.9	+2.4
TA01				*i* S	S	02 49 12.7	+0.1
TA01	Diego Aracena	4.05	296		Pn	02 48 23.9	+2.4
TA01	Diego Aracena	4.05	296	*i* P	Pn	02 48 24.0	+2.5
PB10	IPOC Station P	4.08	253	⇑*i*P	Pn	02 48 24.1	+2.4
PB10				*i* S	S	02 49 12.7	-0.4
PB10	IPOC Station P	4.08	253		Pn	02 48 24.4	+2.7
PB10	IPOC Station P	4.08	253	*i* P	Pn	02 48 24.0	+2.3
PB10				IAML		02 49 16.5	
	comp=Z,439nm,0.2s						
PB11	IPOC Station P	4.09	309	⇑*i*P	Pn	02 48 24.9	+2.8
PB11				*i* S	S	02 49 14.6	+0.8
PB11	IPOC Station P	4.09	309	Pn	Pn	02 48 24.4	+2.3
PB11	IPOC Station P	4.09	309	*i* P	Pn	02 48 24.0	+1.9
PB11				IAML		02 49 18.0	
	comp=Z,521nm,0.2s						
TA02	Huaiquique	4.16	300	*e*P	Pn	02 48 24.9	+2.1
TA02				*i* S	S	02 49 15.2	+0.3
TA02	Huaiquique	4.16	300		Pn	02 48 24.6	+1.9
TA02	Huaiquique	4.16	300	*i* P	Pn	02 48 25.0	+2.3
PB14	IPOC Station P	4.37	239	⇑*i*P	Pn	02 48 28.0	+2.4
PB14				*i* S	S	02 49 19.6	-0.4
PB14	IPOC Station P	4.37	239	Pn	Pn	02 48 27.8	+2.3
PB14	IPOC Station P	4.37	239	*i* P	Pn	02 48 28.0	+2.4
PB14				IAML		02 49 24.2	
	comp=Z,816nm,0.2s						
AHML	Horco Molle	4.45	169	*i* P	Pn	02 48 27.0	+0.8
AHML				IAML		02 49 50.7	
	comp=Z,8.1nm,2.4s						
PSGC	Pisagua	4.54	307	⇑*i*P	Pn	02 48 29.0	+1.6
PSGC				*i* S	S	02 49 22.9	-0.4
PSGCX	Pisagua	4.54	307	Pn	Pn	02 48 29.1	+1.7
PSGCX	Pisagua	4.54	307	*i* P	Pn	02 48 29.0	+1.7
PSGCX				IAML		02 49 26.4	
	comp=Z,315nm,0.4s						
PB16	IPOC Station P	5.05	323		Pn	02 48 37.2	+3.2
AC02	Maricunga	5.11	210	Pn	Pn	02 48 36.1	+1.4
AC02	Maricunga	5.11	210	*i* P	Pn	02 48 37.0	+2.4
AP01	Chacalluta	5.52	316		Pn	02 48 41.2	+1.9
AP01	Chacalluta	5.52	316	*i* P	Pn	02 48 42.0	+2.7
GO03	Copiap	6.28	214		Pn	02 48 49.3	+0.6
GO03	Copiap	6.28	214	*i* P	Pn	02 48 49.0	+0.3
LPAZ	La Paz	6.33	344	P	Pn	02 48 53.4	+3.5
	comp=Z,2.3nm,0.3s,baz=152,slow=9.7,SNR=62						
LPAZ				S	S	02 50 06.1	+2.0
	comp=Z,1.4nm,0.3s,baz=358,slow=14,SNR=12						
LPAZ	La Paz	6.33	344	*e*P	Pn	02 48 50.8	+0.9
LPAZ	La Paz	6.33	344		Pn	02 48 51.7	+1.8
LPAZ	La Paz	6.33	344	*i* P	Pn	02 48 53.0	+3.1
VCA	Vinchina	6.54	195	*i* P	Pn	02 48 54.0	+2.0
VCA				IAML		02 50 11.1	
	comp=Z,21nm,0.9s						
ACLC	CERRO LA CRUZ	7.02	185	*i* P	Pn	02 48 59.0	+1.0
ACLC				IAML		02 50 18.8	
	comp=Z,24nm,0.4s						
AC04	Llanos de Chal	7.22	216	Pn	Pn	02 49 00.7	+0.3
AC04	Llanos de Chal	7.22	216	*i* P	Pn	02 49 00.0	-0.4
APLL	PUNTA DE LOS L	7.96	181	*i* P	Pn	02 49 09.0	-0.8
SIV	San Ignacio	8.06	39	P	Pn	02 49 11.4	+0.2
	comp=Z,9.1nm,0.3s,baz=224,slow=7.7,SNR=293						
ACDV	Cuesta del Vie	8.14	198	*i* P	Pn	02 49 14.0	+1.8
ACDV				IAML		02 51 24.9	
	comp=Z,14nm,0.4s						
AVFE	Valle Fertil	8.29	187	*i* P	Pn	02 49 13.0	-1.0
AVFE				IAML		02 50 46.5	
	comp=Z,17nm,0.7s						
ACHE	Chepes	8.73	182	*i* P	Pn	02 49 19.0	-0.6
CPUP	Villa Florida	9.06	117	P	Pn	02 49 21.9	-1.8
	comp=Z,0.1nm,0.3s,baz=261,slow=8.5,SNR=3.4						
ZON	Zonda	9.35	193	*i* P	Pn	02 49 28.0	+0.6
ZON				IAML		02 51 54.2	
	comp=Z,28nm,0.4s						
RTCV	Cerro Valdivia	9.63	191	*i* P	Pn	02 49 31.0	+0.1
RTCV				IAML		02 51 56.1	
	comp=Z,12nm,1.2s						
PTLB	Pontes e Lacer	9.68	46		Pn	02 49 30.4	-1.2
AQDB	Aquidauana	10.05	81	*e*P	Pn	02 49 37.6	+1.3
AQDB	Aquidauana	10.05	81		Pn	02 49 32.5	-3.8
ASAL	Salagasta	10.40	192	*i* P	Pn	02 49 41.0	+0.4
ARCO	CERRO ARCO	10.66	192	*i* P	Pn	02 49 45.0	+1.0

AAGR	Agrelo	10.88	191	*i* P	Pn	02 49 48.0	+1.4
VILB	Vilhena	11.04	33	*e*P	Pn	02 49 49.8	+0.9
VILB	Vilhena	11.04	33		Pn	02 49 49.1	+0.2
ITQB	Itaqui	11.31	132	*e*P	P	02 49 54.1	-1.7
MT05	Renca	11.63	199		Pn	02 49 55.6	-0.4
MT02	Curacav	11.63	201	P	Pn	02 49 55.8	-0.1
PP1B	Ponte de Pedra	11.74	68	*e*P	Pn	02 49 58.6	+1.1
SALV	Santo Antonio	11.92	59	*e*P	Pn	02 50 00.1	+0.3
MT09	Talagante	12.06	199		Pn	02 50 01.4	0.0
VA05	Santo Domingo	12.15	202		Pn	02 50 01.6	-0.8
MT01	Popeta	12.22	200		Pn	02 50 02.7	-0.6
ETMB	Extrema	12.52	0	*e*P	Pn	02 50 07.8	+0.8
ETMB	Extrema	12.52	0		Pn	02 50 05.8	-1.3
TRCB	Terra Rica	12.62	94	*e*P	P	02 50 09.3	-1.4
TRCB	Terra Rica	12.62	94	Pn	Pn	02 50 03.9	-4.6
BO02	Sierra Bellavi	12.96	197	P	Pn	02 50 11.8	-0.6
PTGB	Pitanga	13.25	103	*e*P	P	02 50 17.1	-0.5
GO05	Huala	13.49	200		Pn	02 50 16.5	-2.5
SAML	Samuel	13.71	13	*e*P	Pn	02 50 22.1	+0.4
SAML	Samuel	13.71	13		Pn	02 50 19.9	-1.8
PCMB	Pacaembu	13.97	90	*e*P	P	02 50 24.9	-0.6
ML02	Panimavida	14.04	197	P	Pn	02 50 22.8	-2.8
PDRB	Porto dos Gac	14.09	42	*e*P	Pn	02 50 25.5	-0.9
PLTB	Pedras Altas	14.64	132	*e*P	P	02 50 33.0	+0.2
PLTB	Pedras Altas	14.64	132	P	Pn	02 50 30.8	-2.1
ITRB	Iturama	15.12	83	*e*P	Pn	02 50 39.3	+0.6
ARAG	Araguaiana, MT	15.22	67	*e*P	Pn	02 50 40.8	+0.8
CLDB	Colider	15.24	43	*e*P	Pn	02 50 40.9	+0.7
FRTB	Fartura	15.45	97	*e*P	Pn	02 50 42.1	-0.6
BB19B	Bebedouro	16.56	89	*e*P	Pn	02 50 55.7	-0.2
TER01	Tubaro-SC	16.65	115	*e*P	Pn	02 50 55.8	-1.0
LC01	Cunco	17.12	195	P	P	02 50 58.4	-1.6
LC01				IAmb	IAmb	02 51 05.6	
	comp=Z,18nm,1.4s						
RCLB	Rio Claro- Sao	17.35	94	*e*P	Pn	02 51 03.7	-1.4
SPB	Sao Paulo	17.41	98	*e*P	Pn	02 51 04.7	-1.0
IPMB	Ipameri, GO	17.53	79	*e*P	P	02 51 03.9	-0.9
PET01	Itanhaem-SP	17.57	100	*e*P	P	02 51 04.4	-0.6
SNDB	Serra Nova Dou	17.67	57	*e*P	P	02 51 07.2	+1.0
LR03	Panguipulli	17.93	195	P	P	02 51 06.3	-2.5
BDFB	Brasilia	18.54	72	P	Pn	02 51 17.1	-2.0
	comp=Z,1.5nm,0.3s,baz=245,slow=12,SNR=16						
BDFB	Brasilia	18.54	72	P	P	02 51 12.8	-2.8
BDFB				IAmb	IAmb	02 51 18.4	
	comp=Z,12nm,0.8s						
NPGB	Novo Progresso	18.55	36	*e*P	P	02 51 14.7	-1.1
PLCA	Paso Flores	18.63	190	P	P	02 51 18.2	+1.9
	comp=Z,0.8nm,0.3s,baz=3.6,slow=9.6,SNR=12						
PLCA	Paso Flores	18.63	190	*e*P	P	02 51 17.3	+0.9
PLCA	Paso Flores	18.63	190	P	P	02 51 14.7	-1.6
PLCA				IAmb	IAmb	02 51 19.1	
	comp=Z,7.0nm,0.9s						
LL04	Puerto Octay	19.16	194	P	P	02 51 19.4	-2.6
LL04				IAmb	IAmb	02 51 29.4	
	comp=Z,14nm,0.6s						
MACA	Manacapuru-AM	19.89	17	*e*P	P	02 51 29.5	-0.5
PEXB	Peixe	19.98	62	*e*P	P	02 51 29.6	-1.4
BSCB	Bom Sucesso	20.05	90	*e*P	P	02 51 30.9	-0.8
ITTB	Itaituba	20.64	31	*e*P	P	02 51 38.0	0.0
VAS01	Vassouras-RJ	21.14	94	*e*P	P	02 51 41.4	-1.7
DIAM	Diamantina, MG	21.59	83	*e*P	P	02 51 48.0	+0.4
MC01	Montes Claros	21.80	79	*e*P	P	02 51 49.0	-0.5
JANB	Januaria	22.05	74	*e*P	P	02 51 51.7	0.0
PTGA	Pitinga	22.41	17	P	P	02 51 55.9	+1.0
	comp=Z,0.8nm,0.3s,baz=315,slow=19,SNR=2.2						
SMTB	Santa Maria do	22.45	56	*e*P	P	02 51 55.7	+0.4
PRPB	Parauapebas	22.66	47	*e*P	P	02 51 56.4	-0.9
SDBA	SAO DESIDERIO	22.67	68	*e*P	P	02 51 56.2	-1.2
MALB	Monte Alegre	23.54	31	*e*P	P	02 52 03.4	-1.7
SJMB	Sao Joao De Ma	23.79	86	*e*P	P	02 52 07.3	-0.2
BSFB	Barra de Sao F	24.07	86	*e*P	P	02 52 10.2	+0.2
RIB01	Linhares ES	24.39	88	*e*P	P	02 52 12.9	+0.1
NAN01	Guarapari, ES	24.97	84	*e*P	P	02 52 18.2	+0.1
MCPB	Macapa, AP	25.93	34	*e*P	P	02 52 27.1	+0.3
GDU01	Guandu, BA	26.79	76	*e*P	P	02 52 33.9	-0.6
NBPN	Ponto Novo - B	27.47	70	*e*P	P	02 52 40.2	-0.3
NBLA	Lagarto - SE	29.51	72	*e*P	P	02 52 57.3	-1.2
NBPS	Pedro II - PI	29.98	57	*e*P	P	02 53 02.7	-0.1
NBMA	Muriti-CE	30.43	65	*e*P	P	02 53 06.2	-0.5
NBPB	Pedra_Branca-C	30.77	61	*e*P	P	02 53 08.0	-1.7
NBAN	Anadia - AL	31.43	71	*e*P	P	02 53 15.1	-0.3
NBPV	Pedro Velho	33.86	67	*e*P	P	02 53 34.6	-1.9
CNGN	Cerro Negro	40.04	328	P	P	02 54 25.3	-3.0
DBIC	Dimbokro	66.69	72	P	P	02 57 41.7	0.0
	comp=Z,5.2nm,0.8s,baz=219,slow=5.4,SNR=6.3						
TORD	Torodi Ar. Bea	75.39	69	P	P	02 58 34.0	+0.3
	comp=Z,2.0nm,0.4s,baz=257,slow=5.6,SNR=61						
TORD				pP	pP	02 59 34.8	+1.2
	comp=Z,2.1nm,0.8s,baz=254,slow=5.3,SNR=7.5						
TORD	Torodi Ar. Bea	75.39	69	P	P	02 58 29.1	-4.7
BOSA	Boshof	80.88	117	P	P	02 59 03.8	-0.1
	comp=Z,3.0nm,1.0s,baz=244,slow=2.5,SNR=6.2						
ESDC	Sonseca Array	84.80	43	P	P	02 59 25.2	+1.8
	comp=Z,1.5nm,0.9s,baz=246,slow=3.9,SNR=7.5						
ESDC	Sonseca Array	84.80	43	P	P	02 59 18.5	-4.9
ESDC				IAmb	IAmb	02 59 27.1	
	comp=Z,3.1nm,1.4s						
ASAR	Alice Springs	130.17	204	SKPbc	SKPab	03 09 00.0	+2.7
	comp=Z,0.2nm,0.4s,baz=143,slow=3.4,SNR=6.3						
WRA	Warramunga Arr	133.34	207	PKP	PKiKP	03 06 07.0	+1.7
	comp=Z,0.1nm,0.3s,baz=155,slow=2.1,SNR=5.2						
WRA				SKPbc	SKPbc	03 09 09.7	+1.1
	comp=Z,0.2nm,0.4s,baz=151,slow=3.0,SNR=6.7						
MK31	Makanchi Array	144.88	38		PKPbc	03 06 18.4	-5.5
MKAR	Makanchi Array	144.88	38	PKP	PKPdf	03 06 26.6	+2.4
	comp=Z,2.0nm,0.7s,baz=323,slow=3.8,SNR=15						
MKAR	Makanchi Array	144.88	38		PKPbc	03 06 17.8	-6.2

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*IDC **08** 02:49:50.7±1.7, 60°.21S×26°.36W, h0km, mb3.7/2, mb1 3.7/2, mb1mx3.5/22, mbtmp3.6/2, Error ellipse: s-maj=114.4km s-min=56.3km az=101.0*

ISC 08 02:49:54.9±1.6**, 60°.1S**±0°.2×**26°.7W**±0°.5**, h26**km**, n7, σ0s.84**/7**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	13.03	152	P	Pn	02 52 58.7	+0.8
VNA3	Neumayer Olymp	13.16	155	P	Pn	02 53 00.3	+0.5
VNA2	Neumayer--Watz	13.43	152	P	Pn	02 53 03.8	+0.4
SNAA	Sanae	15.03	150	P	Pn	02 53 24.5	-0.7
TORD	Torodi Ar. Bea	76.47	28	P	P	03 01 42.3	+0.2
	0.2nm,0.4s,baz=200,slow=6.0,SNR=4.8						
ASAR	Alice Springs	95.07	162	P	P	03 03 14.5	-0.9
	0.2nm,0.7s,baz=182,slow=5.5,SNR=2.1						
ILAR	Eielson Array	152.83	306	PKPbc	PKPbc	03 09 48.4	+0.6
	0.6nm,0.9s,baz=108,slow=2.9,SNR=3.9						

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*IDC **08** 02:51:28.4±1.5, 30°.23N×51°.23E, h0km, mb3.6/9, mb1 3.8/14, mb1mx3.6/51, mbtmp3.7/14, ML3.5/5, Error ellipse: s-maj=27.5km s-min=23.5km az=1.0*

*TEH **08** 02:51:28.6, 30°.19N×51°.31E, h5km, ML3.7*

*THR **08** 02:51:31.0±0.7, 30°.26N×51°.27E, h18km±9km, ML3.8*

ISC 08 02:51:30.6±0.6**, 30°.15N**±0°.04×**51°.29E**±0°.04**, h15**km**, n95, σ1s.67**/99**, mb3.9**/12**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAZ1	Kazerun	0.61	150	*e*Pg	Pg	02 51 41.3	-1.3
KAZ1				*e*Sg	Sg	02 51 51.3	+0.6
KAZ1				*e*		02 51 55.2	
	comp=Z,9µm,0.5s						
KLNJ	Kolanjah	0.89	17	*e*Pg	Pg	02 51 45.5	-2.6
KLNJ				*e*		02 51 59.7	
	comp=Z,51µm,0.3s						
ABEH	Behbahan	1.00	297	*e*Pg	Pb	02 51 49.3	-0.4
ABEH				*e*Sg	Sn	02 52 05.0	+1.0
SHI	Shiraz	1.18	115	*e*Pg	Pn	02 51 51.7	-1.1
SHI				*e*		02 52 14.0	
	comp=Z,29µm,0.4s						
AHBU	AHRAM	1.28	180	*e*Pg	Pg	02 51 56.6	+1.3
IBRJ	Brojen	1.75	359	*e*Pn	Pn	02 52 01.4	+0.7
IRAM	Ramesheh	1.90	29	*e*Pn	Pn	02 52 03.2	+0.4
IRAM				*e*		02 52 35.8	
	comp=Z,7µm,0.4s						
SHK1	Shahrekord	2.20	351	*e*		02 52 45.7	
	comp=Z,3µm,0.5s						
SHK1				*e*Pn	Pn	02 52 08.1	+1.3
QIR1	Qir	2.27	137	*e*Pn	Pn	02 52 08.7	+1.1
AMIS	Naft Sefid	2.29	312	*e*Pn	Pn	02 52 09.4	+1.5
IGAR	Gharneh	2.34	16	*e*Pn	Pn	02 52 10.6	+1.9
IGAR				*e*		02 52 15.3	
	comp=Z,4µm,0.2s						
IPIR	Pirpir	2.55	352	*e*Pn	Pn	02 52 13.0	+1.3
JHRM	Jahrom	2.59	129	*e*Pn	Pn	02 52 12.9	+0.8
ISAD	Sadrabad	2.71	49	*e*Pn	Pn	02 52 15.3	+1.4
ISAD				*e*		02 52 21.0	
	comp=Z,2µm,0.3s						
IZEF	Zefreh	2.88	18	*e*Pn	Pn	02 52 17.3	+1.1
NASN	Na'in	2.94	26	*e*Pn	Pn	02 52 17.9	+0.7
NASN	Na'in	2.94	26	*e*Pn	Pn	02 52 17.9	+0.7
IMEH	Mehriz	3.12	66	*e*Pn	Pn	02 52 21.3	+1.8
UMR	Umm Al-Rimmam	3.16	260	*e*P	Pn	02 52 22.3	+2.5
IKLH	Kolahrood	3.17	4	*e*Pn	Pn	02 52 21.1	+0.9
QRN	Al-Qurain	3.25	245	*e*P	Pn	02 52 23.7	+2.5
KBD	Kabd	3.27	254	*e*P	Pn	02 52 24.1	+2.6
ICHK	Chekchek	3.39	51	*e*Pn	Pn	02 52 24.1	+0.9
RDF	Al-Radifah	3.48	250	*e*P	Pn	02 52 26.8	+2.6
QAMS	Qamsar	3.58	1	*e*Pn	Pn	02 52 26.8	+1.0
YZKH	Yazd	3.60	51	*e*Pn	Pn	02 52 27.7	+1.7
ANAR	Anarak	3.68	34	*e*Pn	Pn	02 52 27.8	+0.7
KHMZ	Khomeyn	3.75	343	*e*Pn	Pn	02 52 29.3	+1.1
KHMZ	Khomeyn	3.75	343	*e*Pn	Pn	02 52 29.3	+1.1
KRSH	Karshahi	3.87	10	*e*Pn	Pn	02 52 30.7	+0.9
ISFB	Sefidab	4.27	11	*e*Pn	Pn	02 52 36.1	+1.0
GHVR	GHOM	4.32	0	*e*Pn	Pn	02 52 36.6	+0.8
GHVR	GHOM	4.32	0	*e*Pn	Pn	02 52 36.6	+0.8
IKFM	Kafar-mosalman	4.46	320	*e*Pn	Pn	02 52 37.5	-0.2
IDOB	Doab	4.49	325	*e*Pn	Pn	02 52 38.4	+0.1
KHGB	Koh Gabri	4.50	86	*e*Pn	Pn	02 52 40.3	+1.9
ASAO	Ashtian	4.51	347	*e*Pn	Pn	02 52 39.7	+1.1
ASAO	Ashtian	4.51	347	*e*Pn	Pn	02 52 39.7	+1.1
HSAM	Samen	4.64	331	*e*Pn	Pn	02 52 41.6	+1.1
IQOM	Qom	4.68	358	*e*Pn	Pn	02 52 41.1	+0.1
NGRK	Negar Kerman	4.75	95	*e*Pn	Pn	02 52 45.0	+2.9
IVRN	Varamin	4.84	4	*e*Pn	Pn	02 52 43.4	+0.3
HAGD	Aghdareh	5.00	339	*e*Pn	Pn	02 52 46.3	+1.0
GENO	Geno	5.09	121	*e*Pn	Pn	02 52 47.7	+1.1
IBZA	Bozab	5.19	327	*e*Pn	Pn	02 52 48.0	0.0
IRAZ	Razeghan	5.36	348	*e*Pn	Pn	02 52 51.6	+1.3
IALM	Almabolaq	5.38	332	*e*Pn	Pn	02 52 51.2	+0.5
CHMN	Cheshme madani	5.43	91	*e*Pn	Pn	02 52 53.4	+2.0
IDMV	Damavand	5.45	6	*e*Pn	Pn	02 52 52.0	+0.4
KCHF	Cheshme Sefid,	5.46	320	*e*Pn	Pn	02 52 52.1	+0.4
DAMV	Damavand	5.49	6	*e*Pn	Pn	02 52 52.1	-0.1
DAMV	Damavand	5.49	6	*e*Pn	Pn	02 52 52.1	-0.1
KER	Kermanshah	5.50	321	*e*Pn	Pn	02 52 52.6	+0.5
IFIR	Firoozkooh	5.61	12	*e*Pn	Pn	02 52 54.5	+0.7
QABG	Abgarm-Qazvin	5.72	346	*e*Pn	Pn	02 52 56.2	+0.9
CHTH	Charan	5.74	359	*e*Pn	Pn	02 52 56.0	+0.4
CHTH	Charan	5.74	359	*e*Pn	Pn	02 52 56.0	+0.4
IGHG	Ghaleghazi	5.77	317	*e*Pn	Pn	02 52 57.4	+1.4
ISHM	Shahmirzad	5.89	16	*e*Pn	Pn	02 52 58.8	+1.2
TNSJ	Nastanj	5.90	49	*e*Pn	Pn	02 52 59.1	+1.4
SNGE	Sanandaj	5.94	327	*e*Pn	Pn	02 52 57.8	-0.5
SNGE				IAML		02 54 09.5	
	comp=N,20nm,0.5s						
SNGE	Sanandaj	5.94	327	*e*Pn	Pn	02 52 57.8	-0.5
ILIN	Lien	5.99	324	*e*Pn	Pn	02 52 58.4	-0.6
TKDS	Koohdasht(Taba	6.04	54	*e*Pn	Pn	02 53 00.9	+1.3
TABS	Tabas	6.06	53	*e*Pn	Pn	02 53 01.5	+1.7
TABS				*e*Sg	Sb	02 54 36.6	+8.2
TABS	Tabas	6.06	53	*e*Pn	Pn	02 53 01.5	+1.7
IDHR	Dehrash	6.14	319	*e*Pn	Pn	02 53 00.9	-0.1
QALM	Alamut, Qazvin	6.29	355	*e*Pn	Pn	02 53 03.6	+0.6
KBAM	BAM	6.32	97	*e*Pn	Pn	02 53 04.8	+1.4
QSDN	Sirdan	6.58	345	*e*Pn	Pn	02 53 07.7	+0.7
IGLO	Ghaloghah	6.68	18	*e*Pn	Pn	02 53 10.2	+1.8
SHRO	Shahrood	7.04	33	*e*Pn	Pn	02 53 14.3	+1.1
SHRO	Shahrood	7.04	33	*e*Pn	Pn	02 53 14.4	+1.1
ZHSF	Zahedan	8.26	91	*e*Pn	Pn	02 53 32.7	+2.7
ZHSF	Zahedan	8.26	91	*e*Pn	Pn	02 53 32.7	+2.7
IHRS	Heris	8.87	338	*e*Pn	Pn	02 53 38.2	-0.3
WSAR	Wadi Sarin	9.51	135	Pn	Pn	02 53 47.4	+0.3
	comp=N,1.4nm,0.3s,baz=347,slow=9.2,SNR=7.4						
WSAR				Sn	Sn	02 55 27.1	-6.7
	comp=N,0.7nm,0.3s,baz=111,slow=12,SNR=2.9						
ASF	Jabal al Asfar	12.49	283	Pn	Pn	02 54 26.2	-1.8
	comp=N,0.5nm,0.3s,baz=266,slow=2.3,SNR=5.8						
ASF				Sn	Sn	02 56 35.2	-12
	comp=N,0.2nm,0.3s,baz=320,slow=16,SNR=2.1						
MMAI	Mount Meron Ar	13.84	286	Pn	Pn	02 54 49.2	+2.8
	comp=N,0.4nm,0.3s,baz=116,slow=9.9,SNR=1.5						
KBZ	Khabaz	15.11	336	Pn	Pn	02 55 04.3	+0.9
	comp=N,0.1nm,0.3s,baz=229,slow=9.1,SNR=2.6						
KVAR	Kislovodsk Arr	15.38	336	Pn	Pn	02 55 07.0	-0.1
	baz=274,slow=17,SNR=2.0						
BRTR	Keskin Array B	17.31	308	P	Pn	02 55 32.3	+0.5
	comp=N,0.1nm,0.3s,baz=134,slow=12,SNR=3.2						
AKTO	Aktyubinsk	20.88	12	P	P	02 56 12.3	+0.2
	comp=N,0.4nm,0.4s,baz=31,slow=22,SNR=1.8						
IDI	Anoyia	22.76	290	P	P	02 56 31.8	-0.7
	comp=N,8.5nm,0.9s,baz=58,slow=22,SNR=1.6						
MLR	Muntele Rosu	25.06	315	P	P	02 56 54.8	+0.4
	comp=N,0.9nm,0.4s,baz=120,slow=15,SNR=1.8						
AKASG	Malin Array Be	26.34	327	P	P	02 57 04.3	-1.6
	comp=N,0.2nm,0.3s,baz=126,slow=8.3,SNR=2.2						
MKAR	Makanchi Array	29.17	47	P	P	02 57 31.7	+0.5
	comp=N,0.4nm,0.8s,baz=246,slow=11,SNR=2.4						
WTTA	Wattenberg	34.90	311	*e*P	P	02 58 21.4	-0.4
	comp=N,4.7nm,1.2s						
SQTA	Sankt Quirin	35.17	310	*e*P	P	02 58 23.5	-0.5
	comp=N,1.0nm,0.4s						
FINES	FINESS Array B	35.43	339	P	P	02 58 25.3	-0.5
	comp=N,3.6nm,1.0s,baz=145,slow=7.7,SNR=6.4						
FETA	Feichten	35.44	310	*e*P	P	02 58 25.4	-0.9
	comp=N,1.9nm,1.0s						
DAVA	Damuels	36.06	310	*e*P	P	02 58 30.8	-0.9
	comp=N,1.9nm,0.5s						
ARCES	ARCESS Array B	42.09	347	P	P	02 59 19.6	-2.0
	comp=N,2.6nm,1.0s,baz=171,slow=8.2,SNR=1.4						
ESDC	Sonseca Array	45.67	298	P	P	02 59 51.1	+0.2
	comp=N,0.1nm,0.5s,baz=70,slow=7.5,SNR=1.8						
TORD	Torodi Ar. Bea	48.71	261	P	P	03 00 14.0	-0.8
	comp=N,0.7nm,0.6s,baz=54,slow=8.6,SNR=5.7						

IDC 08 03:20:05.1±16.0**, 0°.32N**×**126°.06E, h0**km**, mb3.3**/3**, mb1 3.6**/3**, mb1mx3.3**/36**, mbtmp3.4**/3**, Error ellipse: s-maj=251.8km s-min=164.1km az=160.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.71	159	P	P	03 24 58.3	+0.4
	0.4nm,0.4s,baz=337,slow=11,SNR=9.5						
ASAR	Alice Springs	25.03	163	P	P	03 25 30.1	-1.0
	0.2nm,0.4s,baz=346,slow=7.6,SNR=5.9						
STKA	Stephens Creek	35.23	157	P	P	03 27 02.2	+0.8
	0.4nm,0.3s,baz=342,slow=11,SNR=3.0						

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*IDC **08** 03:45:55.8±2.1, 13°.84N×92°.06W, h0km, mb3.5/4, mb1 3.8/7, mb1mx3.6/38, mbtmp3.5/7, ML3.3/3, MS3.3/1, Ms1 3.3/1, ms1mx2.4/37, Error ellipse: s-maj=114.6km s-min=25.8km az=44.0*

*MEX **08** 03:45:58.0±0.5, 13°.88N×92°.00W, h120km±15km, MD4.3*

*GCG **08** 03:46:06.3±0.3, 14°.06N×91°.88W, h9km, MD4.0*

ISC 08 03:46:00.3±1.2**, 13°.64N**±0°.10×**92°.36W**±0°.08**, h35**km**, n20, σ1s.58**/23**, mb3.6**/4**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.26	4	*i* P	Pn	03 46 19.0	-2.5
THIG				*e*S	Sn	03 46 35.7	-1.6
STG3	Santiaguito 3,	1.31	36	*e*P	Pn	03 46 20.5	-1.8
FUG	Fuego 3	1.68	61	*e*P	Pn	03 46 26.5	-0.9
PCG	Pacaya	1.86	66	*e*P	Pn	03 46 30.0	+0.1
NBG	Las Nubes	2.17	64	*e*P	Pn	03 46 34.8	+0.6
PCIG		2.21	338	*e*P	Pn	03 46 32.2	-2.3
CCIG	Comitan	2.63	5	*e*P	Pn	03 46 42.0	+1.5
CCIG				*e*S	Sn	03 47 13.0	+1.7
TGIG		3.20	347	*e*P	Pn	03 46 47.4	-0.8
TGIG				*e*S	Sn	03 47 24.6	-0.6
CMIG	Matias Romero	4.20	325	Pn	Pn	03 47 01.3	-0.7
	1.3nm,0.3s,baz=157,slow=12,SNR=16						
CMIG				Sn	Sn	03 47 51.6	+1.8
	13nm,0.3s,baz=133,slow=10,SNR=6.7						
CMIG				Lg	Lg	03 48 07.5	
	15nm,0.3s,baz=87,slow=17,SNR=5.8						
CMIG	Matias Romero	4.20	325	*i* P	Pn	03 47 01.3	-0.7
CMIG				*i* S	Sn	03 47 51.2	+1.3
JTS	Las Juntas de	7.98	114	Pn	Pn	03 47 50.1	-3.8
	0.2nm,0.3s,baz=229,slow=20,SNR=1.2						
JTS				Lg	Lg	03 49 59.0	
	0.4nm,0.3s,baz=193,slow=22,SNR=2.4						
H06E1	SOCORRO T-PHAS	18.54	288	T	T	04 09 22.6	
	SNR=6.5						
TXAR	Lajitas Array	18.80	328	P	P	03 50 17.5	+0.5
	0.1nm,0.3s,baz=156,slow=12,SNR=5.5						
TKL	Tuckaleechee C	23.25	18	LR	LR	04 01 33.0	
	comp=Z,61nm,18.2s,baz=201,slow=41						
ANMO	Albuquerque	24.74	331	P	P	03 51 17.6	-1.2
	0.7nm,0.6s,baz=150,slow=14,SNR=3.9						
PDAR	Pinedale Array	32.60	336	P	P	03 52 28.5	-0.3
	0.2nm,0.5s,baz=138,slow=7.0,SNR=2.3						
NVAR	Mina Array Bea	33.73	322	P	P	03 52 40.3	+1.6
	0.7nm,0.6s,baz=126,slow=8.7,SNR=7.8						
ILAR	Eielson Array	63.03	337	P	P	03 56 24.1	+0.6
	0.4nm,0.7s,baz=117,slow=5.1,SNR=4.3						
WRA	Warramunga Arr	134.96	255	PKP	PKPdf	04 05 16.3	-0.3
	0.5nm,1.0s,baz=96,slow=1.6,SNR=1.9						
CMAR	Chiang Mai Arr	146.21	340	PKPbc	PKPbc	04 05 39.0	+1.1
	1.2nm,0.3s,baz=333,slow=3.9,SNR=10.0						

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*NEIC **08** 03:49:01.8±1.9, 23°.4S±0°.1×179°.8W±0°.1, h515km±7km, mb4.5/29, Error ellipse: s-maj=16.0km s-min=14.4km az=207.0*

*IDC **08** 03:49:03.6±1.1, 23°.37S×179°.91W, h535km±11km, mb3.6/14, mb1 3.7/16, mb1mx3.6/30, mbtmp4.4/16, Error ellipse: s-maj=13.7km s-min=12.7km az=86.0*

ISC 08 03:49:02.9±0.4**, 23°.46S**±0°.05×**179°.95W**±0°.07**, h532**km**, n126, σ1s.96**/158**, mb4.4**/29**, 8C-1D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.99	341	P	P	03 50 42.2	+1.4
	2.4nm,0.3s,baz=224,slow=6.3,SNR=15						
MSVF				S	S	03 52 01.0	+0.2
	baz=218,slow=22,SNR=1.0						
MSVF	Nonsavu	5.99	341	P	P	03 50 39.8	-1.1
RIZ	Raoul Island	6.04	163	P	P	03 50 43.1	+2.2
RAO	Raoul Island	6.05	163	P	P	03 50 41.0	-0.1
	169nm,0.3s,baz=68,slow=19,SNR=6.6						
GLKZ	Green Lake	6.06	163	P	P	03 50 41.8	+0.7
GLKZ				S	S	03 52 07.4	+5.9
NIUE	Niue	10.31	67	P	P	03 51 17.8	-6.1
MARNC	Mare, Loyalty	11.29	278	P	P	03 51 36.1	+2.1
AFI	Afiamalu	12.25	41	P	P	03 51 40.3	-3.9
	4.3nm,0.3s,baz=56,slow=20,SNR=5.2						
AFI				S	S	03 53 42.6	-14
	2.9nm,0.3s,baz=311,slow=21,SNR=2.7						
DZM	Mont Dzumac	12.63	274	P	P	03 51 48.5	+0.4
	0.1nm,0.3s,baz=73,slow=23,SNR=1.8						
WCZ	Waipu Caves	13.39	200	P	P	03 51 57.5	+1.8
MXZ	Matakaoa Point	14.14	186	P	P	03 52 07.4	+3.9
WMGZ	Waiomatatini S	14.39	185	P	P	03 52 05.1	-1.0
HAZ	Te Kaha	14.39	187	P	P	03 52 06.6	+0.6
RUGZ	Raukumara Rang	14.61	187	P	P	03 52 09.7	+1.2
RUGZ				S	S	03 54 41.0	-0.6
PUZ	Puketiti	14.65	186	P	P	03 52 10.1	+1.2
PUZ				S	S	03 54 37.2	-5.1
TWGZ	Tauwhareparae	14.78	186	P	P	03 52 11.2	+1.0
TWGZ				S	S	03 54 40.9	-3.9
URZ	Urewera	14.97	189	P	P	03 52 09.8	-2.3
	3.6nm,0.3s,baz=121,slow=23,SNR=20						
URZ				S	S	03 54 42.5	-5.6
	1.5nm,0.3s,baz=300,slow=24,SNR=3.0						
URZ	Urewera	14.97	189	P	P	03 52 10.0	-2.2
URZ				S	S	03 54 42.1	-6.1
URZ	Urewera	14.97	189	P	P	03 52 10.9	-1.3
MWZ	Matawai	14.99	188	P	P	03 52 11.8	-0.6
MWZ				S	S	03 54 44.0	-4.6
TKGZ	Te Karaka	15.05	187	P	P	03 52 07.6	-5.4
RIGZ	Rimuhau	15.33	187	P	P	03 52 15.5	-0.4
RIGZ				S	S	03 54 51.9	-2.9
KNZ	Kokohu	15.65	187	P	P	03 52 19.3	+0.1
HIZ	Hauiti	15.65	195	P	P	03 52 25.5	+6.2
RATZ	Rangitukua	15.79	192	P	P	03 52 21.7	+1.0
BKZ	Black Stump Fm	15.95	190	P	P	03 52 20.0	-2.3
BKZ				S	S	03 55 02.7	-3.1
TMVZ	Te Maari	16.04	192	P	P	03 52 22.0	-1.4
ETVZ	East Tongariro	16.06	192	P	P	03 52 21.8	-1.7
WTVZ	West Tongariro	16.07	193	P	P	03 52 23.1	-0.4
NNVZ	North Ngauruho	16.08	193	P	P	03 52 24.3	+0.6
OTVZ	Oturere	16.10	192	P	P	03 52 21.8	-2.1
OTVZ				S	S	03 55 10.8	+2.4
NGZ	Ngauruhoe	16.12	193	P	P	03 52 25.2	+1.1
SNVZ	South Ngauruho	16.12	192	P	P	03 52 23.9	-0.2
TUVZ	Tukino	16.20	192	P	P	03 52 23.4	-1.5
TUVZ				S	S	03 55 09.0	-1.2
FWVZ	Far West T-bar	16.21	193	P	P	03 52 23.8	-1.2
FWVZ				S	S	03 55 08.2	-2.3
KWHZ	Kaweka Forest	16.21	190	P	P	03 52 22.3	-2.6
KWHZ				S	S	03 55 06.7	-3.6
WHVZ	Whangaehu Hut	16.23	192	P	P	03 52 25.0	-0.2
TRVZ	Turoa	16.25	193	P	P	03 52 25.6	+0.1
TRVZ				S	S	03 55 09.9	-1.3
WNVZ	Wahianoa	16.27	192	P	P	03 52 23.3	-2.3
WNVZ				S	S	03 55 08.0	-3.3
MOVZ	Moawhango	16.32	192	P	P	03 52 26.5	+0.6
MOVZ				S	S	03 55 08.8	-3.2
BHHZ	Black Hill Sta	16.34	191	P	P	03 52 22.7	-3.4
BHHZ				S	S	03 55 10.5	-1.9
KAHZ	Kahuranaki	16.51	189	P	P	03 52 27.1	-0.6
KAHZ				S	S	03 55 09.8	-5.4
PNHZ	Pukenui	16.73	190	P	P	03 52 28.8	-1.0
PNHZ				S	S	03 55 14.4	-4.5
PXZ	Pawanui	16.74	189	P	P	03 52 27.4	-2.5
PXZ				S	S	03 55 17.2	-1.8
TSZ	Takapari Road	16.91	191	P	P	03 52 30.6	-0.9
TSZ				S	S	03 55 18.3	-3.5
PRHZ	Porangahau	17.01	189	P	P	03 52 32.0	-0.4
PRHZ				S	S	03 55 20.6	-2.8
ANWZ	Angora Road	17.22	189	P	P	03 52 34.6	+0.3
ANWZ				S	S	03 55 26.6	-0.3
LTZ	Lake Taylor	20.33	197	P	P	03 53 02.1	-0.6
CTA	Charters Tower	31.52	270	P	P	03 54 43.1	+1.5
	16nm,0.4s,baz=93,slow=12						
CTA				PcP	PcP	03 57 18.6	+0.3
	1.2nm,0.5s,baz=85,slow=12,SNR=1.9						
CTAO	Charters Tower	31.52	270	P	P	03 54 42.6	+1.0
TOO	Toolangi	32.73	236	P	P	03 54 52.8	+1.1
TOO				IAmb	IAmb	03 56 27.0	
	comp=Z,32nm,1.6s						
STKA	Stephens Creek	34.93	248	P	P	03 55 11.1	+0.9
	comp=Z,5.0nm,0.4s,baz=90,slow=10.0,SNR=13						
STKA	Stephens Creek	34.93	248	P	P	03 55 11.2	+0.9
BBOO	Buckleboo	39.66	246	P	P	03 55 49.3	+0.3
BBOO				IAmb	IAmb	03 56 03.1	
	comp=Z,49nm,1.9s						
AS31	Alice Springs	42.15	260	P	P	03 56 09.0	0.0
AS31				IAmb	IAmb	03 56 10.6	
	comp=Z,4.2nm,0.5s						
ASAR	Alice Springs	42.16	260	P	P	03 56 09.5	+0.5
	comp=Z,10nm,0.8s,baz=100,slow=6.9,SNR=147						
ASAR				PcP	PcP	03 57 51.0	-0.1
	comp=Z,0.9nm,0.5s,baz=116,slow=3.6,SNR=6.3						
ASAR				ScP	ScP	04 00 52.3	+1.3
	comp=Z,0.7nm,0.9s,baz=111,slow=5.6,SNR=4.2						
ASAR				S	S	04 01 48.0	-2.7
	comp=Z,1.1nm,0.8s,baz=100,slow=14,SNR=14						
ASAR	Alice Springs	42.16	260	P	P	03 56 09.0	0.0
WR0	Warramunga Arr	42.30	266	P	P	03 56 09.8	-0.4
WB2	Warramunga Arr	42.47	266	P	P	03 56 11.4	-0.1
WB2				IAmb	IAmb	03 56 12.2	
	comp=Z,12nm,0.8s						
WB0	Warramunga Arr	42.48	266	P	P	03 56 11.4	-0.1
WB0				IAmb	IAmb	03 56 12.2	
	comp=Z,14nm,0.7s						
WRAB	Tennant Creek	42.48	266	P	P	03 56 11.1	-0.4
WRAB				IAmb	IAmb	03 56 12.2	
	comp=Z,12nm,0.8s						
WRA	Warramunga Arr	42.48	266	P	P	03 56 11.6	0.0
	comp=Z,6.6nm,0.3s,baz=92,slow=8.4,SNR=216						
WRA				PcP	PcP	03 57 52.2	-0.1
	comp=Z,1.4nm,0.9s,baz=99,slow=3.5,SNR=4.4						
WRA				ScP	ScP	04 00 53.0	+0.6
	comp=Z,0.7nm,0.9s,baz=100,slow=4.3,SNR=3.6						
WRA				S	S	04 01 50.0	-5.4
	comp=Z,1.6nm,1.1s,baz=115,slow=14,SNR=6.8						
FORT	Forrest	46.51	249	P	P	03 56 41.9	-0.6
KNRA	Kununurra	48.74	269	P	P	03 56 59.2	-0.2
KNRA				IAmb	IAmb	03 57 00.6	
	comp=Z,18nm,1.2s						
SBA	Scott Base	54.82	183	P	P	03 57 44.5	+2.3

SBA				IAmb	IAmb	03 57 46.3	
	comp=Z,16nm,1.0s						
VNDA	Vanda	54.82	185	P	P	03 57 44.2	+1.9
	comp=Z,2.1nm,0.5s,baz=8.4,slow=5.8,SNR=19						
VNDA				PcP	PcP	03 58 36.8	+0.4
	comp=Z,1.7nm,0.6s,baz=344,slow=4.5,SNR=7.9						
VNDA	Vanda	54.82	185	P	P	03 57 43.8	+1.6
SOEI	Soe	54.85	275	P	P	03 57 43.4	-0.3
SOEI				IAmb	IAmb	03 57 52.2	
	comp=Z,14nm,0.7s						
PSA00	Pilbara Seismi	55.29	259	P	P	03 57 45.7	-0.7
NWAO	Narrogin (SRO)	55.46	245	P	P	03 57 47.3	-0.2
NWAO				IAmb	IAmb	03 59 26.4	
	comp=Z,34nm,1.6s						
MORW	Morawa	57.07	250	P	P	03 57 58.0	-0.7
MORW				IAmb	IAmb	03 57 59.5	
	comp=Z,11nm,0.8s						
GIRL	Giralia	60.06	257	P	P	03 58 18.9	+0.1
CASY	Casey	60.53	206	P	P	03 58 20.4	-0.8
TOLI2	Tolitoli	62.51	284	P	P	03 58 34.5	-0.6
QSPA	South Pole Qui	66.62	180	P	P	03 59 01.6	+1.3
	comp=Z,16nm,0.6s,baz=0.1,slow=0.5,SNR=115						
QSPA	South Pole Qui	66.62	180	P	P	03 59 01.6	+1.3
QSPA				IAmb	IAmb	03 59 02.5	
	comp=Z,18nm,0.8s						
MAW	Mawson	78.18	200	P	P	04 00 07.6	+0.8
	comp=Z,5.9nm,0.6s,baz=149,slow=11,SNR=25						
MAW	Mawson	78.18	200	P	P	04 00 07.0	+0.2
NVAR	Mina Array Bea	84.40	44	P	P	04 00 40.1	+0.6
	comp=Z,0.6nm,0.8s,baz=232,slow=6.8,SNR=3.8						
SNAA	Sanae	85.11	179	P	P	04 00 41.5	-0.8
COYC	Coyhaique	85.19	138	P	P	04 00 43.2	+0.1
COYC				IAmb	IAmb	04 00 45.3	
	comp=Z,12nm,0.8s						
VNA3	Neumayer Olymp	85.31	177	P	P	04 00 42.4	-0.9
W13A	Hualapai Mount	85.47	49	P	P	04 00 43.9	-1.0
VNA2	Neumayer--Watz	85.73	178	P	P	04 00 44.7	-0.5
VNA1	Neumayer--Stat	85.97	177	P	P	04 00 45.8	-0.5
U15A	North Rim	87.27	48	P	P	04 00 53.5	+0.1
U15A				IAmb	IAmb	04 02 11.6	
	comp=Z,11nm,1.8s						
PLCA	Paso Flores	88.54	134	P	P	04 00 60.0	+0.8
	comp=Z,1.1nm,0.7s,baz=253,slow=7.4,SNR=4.2						
LC01	Cunco	88.56	132	P	P	04 00 59.0	-0.2
LC01				IAmb	IAmb	04 01 00.5	
	comp=Z,5.5nm,0.8s						
CMAR	Chiang Mai Arr	89.42	290	P	P	04 01 05.3	+1.9
	comp=Z,0.8nm,0.3s,baz=136,slow=2.6,SNR=6.7						
CMAR	Chiang Mai Arr	89.42	290	P	P	04 01 03.7	+0.3
HHC	Hu-ho-hao-te	90.14	315	*e*P	P	04 01 08.5	+2.1
HHC				pmax	pmax		
	comp=Z,15nm,0.9s						
HHC				pmax	pmax		
	comp=Z,120nm,8.2s						
TXAR	Lajitas Array	90.16	58	P	P	04 01 07.0	+0.2
	comp=Z,0.2nm,0.6s,baz=216,slow=6.8,SNR=7.5						
TXAR	Lajitas Array	90.16	58	P	P	04 01 07.7	+0.9
ANMO	Albuquerque	90.65	52	P	P	04 01 09.0	0.0
	comp=Z,0.3nm,0.3s,baz=313,slow=6.9,SNR=1.9						
ILAR	Eielson Array	91.59	14	P	P	04 01 12.7	+0.3
	comp=Z,0.1nm,0.4s,baz=224,slow=7.6,SNR=1.3						
PDAR	Pinedale Array	92.34	44	P	P	04 01 16.7	0.0
	comp=Z,0.3nm,0.7s,baz=222,slow=3.6,SNR=2.3						
CO06	Fray Jorge	92.73	125	P	P	04 01 16.7	-1.9
BOSA	Boshof	122.82	206	PKP	PKPdf	04 06 59.0	-0.2
	comp=Z,0.8nm,0.4s,baz=140,slow=2.4,SNR=3.8						
ARCES	ARCESS Array B	131.46	348	PKP	PKPdf	04 07 13.1	-1.1
	comp=Z,3.6nm,0.8s,baz=28,slow=2.1,SNR=7.0						
FINES	FINESS Array B	138.04	342	PKhKP	PKPpre	04 07 17.0	
	comp=Z,3.2nm,1.1s,baz=336,slow=4.2,SNR=3.4						
FINES				PKP	PKPdf	04 07 25.4	-1.2
	comp=Z,1.5nm,0.8s,baz=101,slow=3.9,SNR=4.9						
NOA	NORSAR Array B	141.65	351	PKhKP	PKPpre	04 07 27.4	
	comp=Z,1.0nm,0.8s,baz=14,slow=4.4,SNR=3.9						
AKASG	Malin Array Be	144.62	328	PKP	PKPdf	04 07 37.7	-1.0
	comp=Z,5.1nm,0.6s,baz=45,slow=4.2,SNR=21						
BR131	Keskin Array S	147.35	308		PKPbc	04 07 46.2	-0.9
BRTR	Keskin Array B	147.35	308	PKPbc	PKPbc	04 07 46.4	-0.7
	comp=Z,1.3nm,0.6s,baz=146,slow=5.2,SNR=8.8						
ANTO	Ankara	147.91	308	PKPbc	PKPbc	04 07 48.5	0.0
BURAR	Bucovina Array	148.63	326	PKPbc	PKPbc	04 07 50.5	+0.4
MDUB	Mudurnu	148.81	310	PKPbc	PKPbc	04 07 50.0	-0.8
OJC	Ojcow	149.16	335		PKPbc	04 07 50.8	-0.4
LANS	Liptovska Anna	150.14	334	*e*PKP	PKiKP	04 07 54.6	+0.5
OSTC	Ostas	150.16	339⇑	*e*PKP	PKPbc	04 07 53.3	-0.2
CHVC	Chvalec	150.19	339⇑	*e*PKP	PKPbc	04 07 53.2	-0.4
UPC	Upice	150.27	339⇑	*e*PKP	PKPbc	04 07 53.6	-0.2
DPC	Dobruska-Polom	150.30	339⇑	*e*PKP	PKPbc	04 07 53.6	-0.3
MORC	Moravsky Berou	150.36	337	*e*PKP	PKPbc	04 07 54.0	-0.1
CLL	Collm	150.44	343⇓	*i*PKPbc	PKPbc	04 07 54.0	-0.1
	comp=Z,13nm,0.8s						
CLL				*e*pPKPab	pPKPbc	04 09 59.0	+1.8
CLL	Collm	150.44	343		PKPbc	04 07 53.2	-0.9
BRG	Berggiesshubel	150.58	342	*e*PKP	PKPbc	04 07 54.1	-0.3
BRG				Amp		04 07 55.7	
	comp=Z,5.7nm,0.6s						
PVCC	Panska Ves	150.70	341⇑	*e*PKP	PKPbc	04 07 54.2	-0.5
VRAC	Vranov	151.09	337	*e*PKP	PKPbc	04 07 55.5	-0.2
PRU	Pruhonice	151.19	340⇑	*e*PKP	PKPbc	04 07 55.9	0.0
KRUC	Moravsky	151.37	337	*e*PKP	PKPbc	04 07 55.9	-0.4
KHC	Kasperske Hory	152.24	341⇑	*e*PKP	PKPbc	04 07 58.1	-0.2
CKRC	Cesky Krumlov	152.29	340⇑	*e*PKP	PKPdf	04 07 52.9	+1.8
GERES	GERESS Array B	152.46	340	PKPbc	PKPbc	04 07 58.0	-0.8
	comp=Z,1.1nm,0.9s,baz=67,slow=3.5,SNR=7.3						
DBIC	Dimbokro	162.66	163	PKPab	PKPab	04 08 56.2	-0.4
	comp=Z,2.4nm,0.9s,baz=212,slow=1.8,SNR=1.4						
TORD	Torodi Ar. Bea	169.63	189	PKP	PKPdf	04 08 08.5	-1.7
	comp=Z,1.6nm,1.0s,baz=306,slow=0.9,SNR=5.9						
TORD				PKPab	PKPab	04 09 26.8	-0.5
	comp=Z,2.6nm,1.0s,baz=186,slow=3.9,SNR=9.3						

IDC 08 03:59:59.9±5.2**, 0°.99N**×**25°.62W, h0^{km}, mb3.6**/2**, mb1 3.7**/2**, mb1mx3.3**/47**, mbtmp3.7**/2**, MS3.4**/1**, Ms1 3.3**/1**, ms1mx2.6**/37**, Error ellipse: s-maj=295.5km s-min=43.9km az=145.0, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DBIC	Dimbokro	21.46	74	P	P	04 04 50.2	+0.1
	4.1nm,1.0s,baz=255,slow=10,SNR=4.5						
TORD	Torodi Ar. Bea	29.62	65	P	P	04 06 07.2	0.0
	0.4nm,0.7s,baz=243,slow=11,SNR=3.0						
BOSA	Boshof	56.87	125	LR	LR	04 29 51.5	
	comp=Z,34nm,19.0s,baz=190,slow=32						
ASAR	Alice Springs	149.96	140	PKPbc	PKPbc	04 19 52.9	-0.4
	0.4nm,0.6s,baz=205,slow=2.4,SNR=10						
WRA	Warramunga Arr	152.80	135	PKPbc	PKPbc	04 19 59.8	-0.2
	0.2nm,0.7s,baz=241,slow=2.1,SNR=1.5						

IDC ***08*** *04:04:20.7±0.8, 37°.01N×97°.83W, h0^{km}, mb4.3/2, mb1 4.1/7, mb1mx3.7/52, mbtmp3.8/7, ML3.8/4, Error ellipse: s-maj=12.2km s-min=10.9km az=139.0*

TUL ***08*** *04:04:21.8±1.2, 36°.95N±0°.01×97°.84W±0°.02, h4^{km}±4^{km}, ML3.5, mb_Lg3.5/105(NEIC), ML3.4/27(NEIC), Error ellipse: s-maj=2.1km s-min=1.8km az=78.0*

NEIC ***08*** *04:04:21.9±1.2, 36°.93N±0°.01×97°.83W±0°.02, h3^{km}±4^{km}, Error ellipse: s-maj=2.2km s-min=1.8km az=76.0*

NEIC ***08*** *04:04:21.9±1.1, 36°.95N±0°.02×97°.84W±0°.02, h6^{km}±4^{km}, Error ellipse: s-maj=2.6km s-min=2.1km az=160.0*

ANF ***08*** *04:04:22.1±0.4, 36°.94N×97°.80W, h5^{km}, ML4.5/16, Error ellipse: s-maj=4.8km s-min=4.0km az=29.0*

ISC 08 04:04:22.3±0.7**, 36°.94N**±0°.02×**97°.85W**±0°.02**, h11**^{km}±4^{km}**, n193,** σ1^{s}**35**/232**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.09	185	Pg	Pg	04 04 24.0	-0.9
KAN14	Manchester OK	0.09	279		Pg	04 04 24.3	-0.6
KAN14				Sg	Sg	04 04 26.1	-0.8
KAN17	Caldwell West	0.12	34		Pg	04 04 24.5	-0.9
KAN17				Sg	Sg	04 04 26.4	-1.2
KAN05	Bluff City Nor	0.17	354		Pg	04 04 25.3	-0.8
KAN05				Sg	Sg	04 04 27.8	-0.9
KAN01	Argonia South	0.22	19		Pg	04 04 26.4	-0.6
KAN09	Caldwell North	0.27	44		Pg	04 04 27.1	-0.7
KAN09				Sg	Sg	04 04 30.4	-1.1
KAN10	Anthony SW Sta	0.27	313	Pg	Pg	04 04 27.5	-0.3
KAN10				Sg	Sg	04 04 31.2	-0.3
KAN08	Anthony NE Sta	0.30	341		Pg	04 04 28.1	-0.3
KAN08					Sg	04 04 32.4	-0.1
KAN06	Argonia West S	0.30	359		Pg	04 04 27.4	-1.1
KAN13	South Haven SW	0.31	77		Pg	04 04 28.0	-0.5
KAN13					Sg	04 04 32.0	-0.7
OK032	Salt Plains WL	0.32	244		Pg	04 04 28.6	-0.1
OK032				Sg	Sg	04 04 32.9	-0.2
KAN16	Harper SW Stat	0.33	329	Pg	Pg	04 04 28.5	-0.5
KAN16				Sg	Sg	04 04 32.9	-0.5
KS20	Mayfield South	0.37	39		Pg	04 04 28.6	-1.1
KS20				Sg	Sg	04 04 34.5	-0.2
KAN12	Harper NE Stat	0.37	342		Pg	04 04 29.3	-0.4
KS21	Milan North St	0.37	23		Pg	04 04 29.2	-0.6
KS21					Sg	04 04 34.4	-0.4
CROK	Carrier	0.45	194	Pg	Pg	04 04 30.5	-0.7
BLOK	Blackwell	0.54	109	Pg	Pg	04 04 31.9	-0.9
BLOK				Sg	Sg	04 04 39.0	-1.1
T35A	Sooner Cattle	1.07	91		Pg	04 04 41.5	-1.5
T35A				Sg	Sg	04 04 55.5	-1.4
T35B	Sooner Cattle	1.07	91	P	Pg	04 04 41.9	-1.0
	baz=271,SNR=147						
T35B				S	Sg	04 04 55.8	-1.1
	baz=271						
U32A	Winter Ranch,	1.08	239	Pg	Pg	04 04 42.5	-0.7
U32A				Sg	Sg	04 04 57.0	-0.2
U32A	Winter Ranch,	1.08	239	P	Pg	04 04 42.4	-0.7
	baz=60,SNR=42						
OK029	Liberty Lake	1.19	164		Pg	04 04 43.8	-1.3
QUOK	Quay	1.20	130		Pg	04 04 43.9	-1.5
QUOK				Sg	Sg	04 04 59.5	-1.4
OK031	S. Brethren Rd	1.28	140	Pg	Pg	04 04 45.8	-1.1
BCOK	Bluff Creek, N	1.30	171	Pg	Pn	04 04 45.0	-1.3
BCOK				Sg	Sg	04 05 03.7	-0.4
OK030	Cody Creek RV	1.33	139		Pn	04 04 45.9	-0.8
OK025	Westminster Rd	1.42	163		Pn	04 04 47.7	-0.3
OKCFA	Oklahoma City	1.56	168		Pn	04 04 50.2	+0.3
OKCFA				IAmb_Lg		04 05 14.2	
	comp=Z,393nm,0.9s						
OKCFA	Oklahoma City	1.56	168	P	Pn	04 04 50.7	+0.8
	baz=349,SNR=24						
OKCFA				Sb	Sg	04 05 12.2	-0.2
	baz=349						
OKCSW	OKLAHOMA CITY	1.57	168		Pn	04 04 50.3	+0.3
R32A	Long Quarter,	1.63	335		Pn	04 04 51.6	+0.7
R32A	Long Quarter,	1.63	335	P	Pb	04 04 52.1	-0.2
	baz=154,SNR=186						
R32A				S	Sb	04 05 13.2	+0.4
	baz=154						
FNO	Franklin	1.72	168		Pn	04 04 52.2	+0.1
TUL1	Leonard	1.95	121	P	Pn	04 04 55.9	+0.6
	baz=302,SNR=90						
TUL1				Sb	Sb	04 05 23.2	+1.0
	baz=302						
TUL1	Leonard	1.95	121	Pn	Pn	04 04 56.0	+0.7
TUL1				IAmb_Lg		04 05 25.8	
	comp=Z,374nm,0.8s						
TUL1	Leonard	1.95	121	P	Pn	04 04 56.1	+0.7
	baz=302,SNR=168						
TUL1				Sb	Sb	04 05 22.9	+0.8
	baz=302						
WMOK	Wichita Mounta	2.33	199	P	Pn	04 05 01.1	+0.6
	baz=19,SNR=84						
WMOK				S	Sn	04 05 31.6	+2.5
	baz=19						
WMOK	Wichita Mounta	2.33	199		Pn	04 05 01.0	+0.6
WMOK				IAmb_Lg		04 05 34.1	
	comp=Z,124nm,0.8s						
WMOK	Wichita Mounta	2.33	199	P	Pn	04 05 01.3	+0.8
	baz=19,SNR=120						
WMOK				S	Sn	04 05 31.3	+2.3
	baz=19						
X34A	Smith Ranch, M	2.34	180	Pn	Pn	04 05 01.5	+0.9
X34A				IAmb_Lg		04 05 36.5	
	comp=Z,168nm,1.1s						
KSU1	Kansas State U	2.37	24	P	Pn	04 05 02.0	+1.0
	baz=204,SNR=80						
KSU1				Sb	Sb	04 05 34.4	+0.2
	baz=204						
KSU1	Kansas State U	2.37	24	Pn	Pn	04 05 01.6	+0.6
KSU1	Kansas State U	2.37	24	P	Pn	04 05 02.0	+1.0
	baz=204,SNR=40						
KSU1				S	Sb	04 05 34.3	+0.2
	baz=204						
CBKS	Cedar Bluff	2.39	322	P	Pn	04 05 02.7	+1.3
	baz=141,SNR=46						
CBKS				Sb	Sb	04 05 36.1	+1.3
	baz=141						
CBKS	Cedar Bluff	2.39	322	Pn	Pn	04 05 01.7	+0.3
CBKS	Cedar Bluff	2.39	322	P	Pn	04 05 02.6	+1.2
	baz=141,SNR=59						
CBKS				S	Sb	04 05 35.7	+0.9
	baz=141						
U38A	Gravette	2.83	99		Pn	04 05 08.1	+0.7
LOOK	Love County	2.99	169	Pn	Pn	04 05 10.2	+0.6
X37A	Clayton	3.10	139		Pn	04 05 11.2	+0.2
X37A				IAmb_Lg		04 06 08.4	
	comp=Z,161nm,0.7s						
X37A	Clayton	3.10	139	P	Pn	04 05 12.2	+1.2
	baz=320,SNR=114						
HHAR	Hobbs	3.21	101	Pn	Pn	04 05 13.6	+1.0
HHAR				IAmb_Lg		04 06 10.4	
	comp=Z,99nm,0.8s						
HHAR	Hobbs	3.21	101	P	Pn	04 05 14.0	+1.4
	baz=283						
Z35A	Perchaven, San	3.64	172		Pn	04 05 18.8	+0.3
Z35A	Perchaven, San	3.64	172	P	Pn	04 05 19.7	+1.3
	baz=353						
Z35A				S	Sn	04 06 03.6	+2.3
	baz=353						
S39A	Bolivar	3.69	77		Pn	04 05 19.4	+0.3
S39A				IAmb_Lg		04 06 20.1	
	comp=Z,82nm,0.8s						
S39A	Bolivar	3.69	77	P	Pn	04 05 19.7	+0.6
	baz=259,SNR=12						
W39A	Magazine	3.73	117	P	Pn	04 05 20.6	+0.9
	baz=299						
W39A				Pb	Pb	04 05 28.6	+0.5
	baz=299,SNR=19						
W39A				S	Sn	04 06 05.0	+1.5
	baz=299						
W39A	Magazine	3.73	117		Pn	04 05 19.6	-0.1
W39A				IAmb_Lg		04 06 27.5	
	comp=Z,184nm,0.8s						
AMTX	Amarillo	3.73	238	Pn	Pn	04 05 22.2	+2.4
	baz=56						
AMTX				Pb	Pb	04 05 29.9	+1.8
	baz=56						
AMTX				Sn	Sn	04 06 07.7	+4.0
	baz=56						
AMTX				Sb	Sg	04 06 18.7	-3.3
	baz=56						
AMTX	Amarillo	3.73	238	Pn	Pn	04 05 20.9	+1.2
AMTX				IAmb_Lg		04 06 29.9	
	comp=Z,187nm,0.7s						
N33A	J Bar K, Exete	3.80	5		Pn	04 05 20.7	-0.1
N33A					Pb	04 05 29.6	+0.2
N33A					LR	04 06 23.1	
U40A	Yellville	4.06	97	P	Pn	04 05 25.2	+0.9
	baz=280,SNR=11						
U40A	Yellville	4.06	97		Pn	04 05 24.5	+0.2
U40A	Yellville	4.06	97	P	Pn	04 05 25.1	+0.8
	baz=280,SNR=30						
U40A				P	Pn	04 05 25.1	+0.8
	baz=280,SNR=30						
MIAR	Mount Ida	4.22	123	P	Pn	04 05 28.8	+2.3
	baz=306,SNR=9.0						
MIAR	Mount Ida	4.22	123		Pn	04 05 27.6	+1.2
MIAR				IAmb_Lg		04 06 38.0	
	comp=Z,97nm,0.8s						
N35A	Tabor	4.27	23		Pn	04 05 27.9	+0.6
KSCO	Kaye Shedlock’	4.30	300	P	Pn	04 05 29.2	+1.4
	baz=117						
KSCO	Kaye Shedlock’	4.30	300		Pn	04 05 28.8	+1.0
KSCO				IAmb_Lg		04 06 45.9	
	comp=Z,92nm,0.7s						
P38A	Dawn	4.33	50		Pn	04 05 28.4	+0.4
P38A				IAmb_Lg		04 06 37.1	
	comp=Z,98nm,0.7s						
Z38A	Mt. Pleasant	4.36	147		Pn	04 05 28.5	+0.1
BGNE	Belgrade	4.46	357	P	Pn	04 05 30.7	+0.9
	baz=177,SNR=5.6						
BGNE	Belgrade	4.46	357		Pn	04 05 29.6	-0.3
MGMO	Mountain Grove	4.47	86		Pn	04 05 30.4	+0.5
ABTX	Abilene, Hawle	4.55	199	S	Sn	04 06 24.8	+0.7
	baz=19						
ABTX	Abilene, Hawle	4.55	199	Pn	Pn	04 05 31.5	+0.3
ABTX				IAmb_Lg		04 06 47.4	
	comp=Z,66nm,0.8s						
R40A	Maddies Statio	4.63	71		Pn	04 05 32.4	+0.3
R40A				IAmb_Lg		04 06 51.5	
	comp=Z,77nm,0.8s						
R40A	Maddies Statio	4.63	71	P	Pn	04 05 33.1	+1.0
	baz=254,SNR=24						
FCAR	Ozark Folk Cen	4.74	101		Pn	04 05 36.7	+3.1
FCAR				IAmb_Lg		04 06 52.3	
	comp=Z,82nm,0.8s						
X40A	Basin Creek Fa	4.76	120	P	Pn	04 05 35.0	+1.2
	baz=302,SNR=6.7						
X40A	Basin Creek Fa	4.76	120		Pn	04 05 34.5	+0.6
X40A				IAmb_Lg		04 06 52.5	
	comp=Z,73nm,0.8s						
X40A	Basin Creek Fa	4.76	120	P	Pn	04 05 35.0	+1.2
	baz=302,SNR=23						
X40A				P	Pn	04 05 35.0	+1.2
	baz=302,SNR=23						
WHAR	Wooly Hollow	4.79	108		Pn	04 05 35.3	+0.9
WHAR				IAmb_Lg		04 06 58.1	
	comp=Z,135nm,0.8s						
W41B	Gary Mavity, V	4.87	110	P	Pn	04 05 37.1	+1.7
	baz=293						
WHTX	Lake Whitney,	4.95	176	P	Pn	04 05 36.8	+0.3
	baz=357,SNR=5.1						
WHTX				S	Sn	04 06 33.0	-0.8
	baz=357						
WHTX	Lake Whitney,	4.95	176		Pn	04 05 36.0	-0.6
WHTX				IAmb_Lg		04 07 11.1	
	comp=Z,68nm,0.8s						
WHTX	Lake Whitney,	4.95	176	P	Pn	04 05 36.8	+0.3
	baz=357,SNR=18						
MSTX	Muleshoe	4.99	235		Pn	04 05 38.3	+1.0
WLAR	White Oak Lake	5.05	129	Pn	Pn	04 05 38.0	+0.1
WLAR				IAmb_Lg		04 07 14.5	
	comp=Z,89nm,1.0s						
L34A	Svendsen Farm,	5.14	12	Pn	Pn	04 05 39.9	+0.7
OGNE	Ogallala	5.16	322	P	Pn	04 05 41.4	+2.0
	baz=140,SNR=5.8						
OGNE				Sb	Sb	04 07 01.3	+6.8
	baz=140						
OGNE	Ogallala	5.16	322		Pn	04 05 39.7	+0.3
OGNE				IAmb_Lg		04 07 10.9	
	comp=Z,113nm,0.8s						
237A	Washetta, Mont	5.21	161	Pn	Pn	04 05 38.9	-1.2
237A	Washetta, Mont	5.21	161	P	Pn	04 05 40.2	+0.1
	baz=342,SNR=7.7						
P40A	Paris	5.25	59	Pn	Pn	04 05 41.0	+0.4
P40A				IAmb_Lg		04 07 11.7	
	comp=Z,104nm,0.9s						
T25A	Trinidad	5.25	274	P	Pn	04 05 41.6	+0.7
	baz=90,SNR=5.7						
T25A				Sn	Sn	04 06 42.6	+1.1
	baz=90						
T25A				Sb	Sg	04 07 06.3	-4.6
	baz=90						
T25A	Trinidad	5.25	274		Pn	04 05 40.7	-0.2
T25A				IAmb_Lg		04 07 23.2	
	comp=Z,72nm,1.1s						
N38A	Joes South For	5.27	42		Pn	04 05 40.3	-0.6
N38A				IAmb_Lg		04 07 15.1	
	comp=Z,100nm,0.8s						
CCM	Cathedral Cave	5.37	76	Pn	Pn	04 05 43.0	+0.8
T42A	Van Buren	5.41	87	Pn	Pn	04 05 42.8	0.0
LCAR	Lake Charles	5.46	97	Pn	Pn	04 05 43.7	+0.2
LCAR					Sb	04 07 04.0	+0.8
Z41A	Richland Creek	5.53	130	S	Sn	04 06 46.6	-1.5
	baz=313						
K31A	O'Neill	5.71	353	Pn	Pn	04 05 47.6	+0.5
NATX	Nacogdoches	5.80	152	Pn	Pn	04 05 49.2	+0.9
NATX				IAmb_Lg		04 07 41.4	
	comp=Z,50nm,0.8s						
CCAR	Cane Creek	5.81	120	IAmb_Lg		04 07 37.5	
	comp=Z,84nm,0.9s						
PBMO	Poplar Bluff	5.95	89	Pn	Pn	04 05 50.2	-0.1
PBMO				IAmb_Lg		04 07 45.4	
	comp=Z,82nm,0.7s						
HBAR	Harrisburg	5.97	101	Pn	Pn	04 05 50.7	+0.2
HBAR				IAmb_Lg		04 07 46.7	
	comp=Z,114nm,0.7s						
FVM	French Village	6.00	78	Pn	Pn	04 05 50.6	-0.3
FVM					Sn	04 06 57.1	-2.4
FVM				IAmb_Lg		04 07 34.2	
	comp=Z,79nm,0.8s						
Q24A	Divide	6.11	291	P	Pn	04 05 53.8	+1.1
	baz=107						
Q24A				S	Sn	04 07 02.5	-0.3
	baz=107						
SCIA	State Center	6.12	34	S	Sn	04 07 01.9	-0.6
	baz=217						
SCIA	State Center	6.12	34	Pn	Pn	04 05 53.1	+0.6
SCIA					LR	04 07 35.8	
435B	Jarrell	6.15	178	P	Pn	04 05 53.0	0.0
	baz=358,SNR=6.6						
435B				S	Sn	04 07 02.0	-1.3
	baz=358						
435B	Jarrell	6.15	178		Pn	04 05 51.6	-1.4
435B					LR	04 07 37.9	
435B				IAmb_Lg		04 07 48.2	
	comp=Z,109nm,1.0s						
435B	Jarrell	6.15	178	P	Pn	04 05 53.0	0.0
	baz=358,SNR=6.1						
SDCO	Great Sand Dun	6.15	280	P	Pn	04 05 55.0	+1.8
	baz=95						
SDCO	Great Sand Dun	6.15	280		Pn	04 05 54.6	+1.4
LPAR	Lepanto	6.24	100	IAmb_Lg		04 07 55.4	
	comp=Z,59nm,0.7s						
SLM	Saint Louis	6.26	72	IAmb_Lg		04 07 45.0	
	comp=Z,75nm,0.8s						
GNAR	Gosnell	6.39	96	Pn	Pn	04 05 57.0	+0.7
GNAR					LR	04 07 43.8	
GNAR				IAmb_Lg		04 07 53.3	
	comp=Z,106nm,0.8s						
PEBM	Pemiscott Bayo	6.49	95	Pn	Pn	04 05 57.8	+0.2
PENMO	Penman	6.62	92	Pn	Pn	04 06 00.8	+1.3
N41A	Harden Midland	6.63	53	Pn	Pn	04 05 59.4	-0.1
N41A				IAmb_Lg		04 07 54.5	
	comp=Z,91nm,0.8s						
JCT	Junction City	6.65	195	P	Pn	04 05 59.9	0.0
	baz=14						
JCT	Junction City	6.65	195		Pn	04 05 59.1	-0.8
ISCO	Idaho Springs	6.73	297	P	Pn	04 06 02.1	+0.8
	baz=113,SNR=6.3						
ISCO				Sb	Sb	04 07 49.7	+10
	baz=113						
ISCO	Idaho Springs	6.73	297		Pn	04 06 01.4	+0.1
ISCO	Idaho Springs	6.73	297	P	Pn	04 06 02.1	+0.8
	baz=113,SNR=9.6						
LNXT	Lenox	6.78	95	Pn	Pn	04 06 01.9	+0.2
ECSD	EROS Data Cent	6.85	8	P	Pn	04 06 02.0	-0.6
	baz=188,SNR=6.5						
ECSD				S	Sn	04 07 17.9	-2.5
	baz=188						
ECSD	EROS Data Cent	6.85	8		Pn	04 06 01.7	-0.9
ECSD				IAmb_Lg		04 08 09.0	
	comp=Z,43nm,1.0s						
S44A	Carbondale	6.89	81	Pn	Pn	04 06 03.1	0.0
K38A	Parkersburg	6.91	33	Pn	Pn	04 06 03.7	+0.3
GLAT	Glass	6.92	93	Pn	Pn	04 06 04.3	+0.7
SIUC	Southern Illin	6.92	81	Pn	Pn	04 06 03.3	-0.3
SIUC					Sn	04 07 22.6	+0.3
SIUC				IAmb_Lg		04 08 03.2	
	comp=Z,70nm,0.8s						
HALT	Halls	6.94	96	Pn	Pn	04 06 03.7	-0.1
HALT				IAmb_Lg		04 08 18.5	
	comp=Z,90nm,0.8s						
P43A	Skaggs, Pawnee	7.08	65	Pn	Pn	04 06 05.8	+0.1
L40A	Anamosa	7.24	43		Pn	04 06 07.3	-0.6
L40A				IAmb_Lg		04 08 13.7	
	comp=Z,59nm,0.8s						
W45A	Hickory Valley	7.24	102	Pn	Pn	04 06 07.8	-0.1
W45A				IAmb_Lg		04 08 16.7	
	comp=Z,62nm,0.7s						
UTMT	University of	7.25	92	Pn	Pn	04 06 08.8	+0.7
Q44A	Meyer Farm, Va	7.25	72	Pn	Pn	04 06 07.9	-0.2
ANMO	Albuquerque	7.26	257	Pn	Pn	04 06 08.2	-0.2
	comp=Z,0.1nm,0.3s,baz=345,slow=23,SNR=1.6						
ANMO				Pg	Pb	04 06 28.9	+0.5
	comp=Z,0.5nm,0.3s,baz=76,slow=14,SNR=9.1						
ANMO				Lg	Lg	04 08 07.0	
	comp=Z,2.6nm,0.3s,baz=47,slow=11,SNR=7.5						
ANMO	Albuquerque	7.26	257	Sb	Sg	04 08 07.5	-7.8
	baz=72						
ANMO	Albuquerque	7.26	257	Pn	Pn	04 06 08.5	0.0
T45A	Paducah	7.37	87	Pn	Pn	04 06 09.4	-0.3
T45A					Sn	04 07 35.5	+2.3

N23A	Red Feather La	7.44	304	P	Pn	04 06 13.9	+2.9
	baz=120						
N23A				Sb	Sg	04 08 15.1	-6.0
	baz=120						
Y45A	Yeager Farm, C	7.44	112	Pn	Pn	04 06 11.2	+0.4
Y45A				IAmb_Lg		04 08 27.2	
	comp=Z,39nm,0.8s						
SMCO	Snowmass	7.54	290		Pn	04 06 12.9	+0.5
SUSD	Miller	7.54	354	IAmb_Lg		04 08 34.1	
	comp=Z,54nm,0.8s						
HDIL	Hopedale	7.60	59		Pn	04 06 13.2	+0.4
BNM	Barren Site	7.68	251	Pn	Pn	04 06 14.7	+0.5
I37A	Lemond, Waseca	7.83	24	IAmb_Lg		04 08 43.6	
	comp=Z,71nm,0.9s						
OLIL	Olney	7.92	74	IAmb_Lg		04 08 52.2	
	comp=Z,54nm,0.9s						
Y22D	IRIS PASSCAL I	7.93	252	IAmb_Lg		04 08 44.2	
	comp=Z,69nm,1.1s						
LENM	Lemitar	7.94	252	Pn	Pn	04 06 18.2	+0.6
O44A	Mansfield	8.02	64	Pn	Pn	04 06 18.2	-0.4
O44A				IAmb_Lg		04 08 41.2	
	comp=Z,66nm,0.8s						
L42A	Oliver, Polo	8.10	49		Pn	04 06 18.8	-0.9
L42A					Sn	04 07 51.9	+0.7
WVT	Waverly	8.11	93	Pn	Pn	04 06 20.0	+0.2
MNTX	Cornudas Mount	8.13	232	P	Pn	04 06 21.7	+1.4
	baz=48						
MNTX	Cornudas Mount	8.13	232		Pn	04 06 20.8	+0.6
PLAL	Pickwick Lake	8.16	101	Pn	Pn	04 06 21.6	+0.9
JFWS	Jewell Farm	8.34	42	P	Pn	04 06 23.0	-0.1
	baz=227,SNR=6.5						
JFWS				S	Sn	04 07 53.0	-4.3
	baz=227						
JFWS	Jewell Farm	8.34	42		Pn	04 06 22.0	-1.1
JFWS				IAmb_Lg		04 09 05.6	
	comp=Z,44nm,0.7s						
146A	Union	8.41	118	IAmb_Lg		04 09 06.3	
	comp=Z,35nm,1.1s						
RSSD	Black Hills	8.58	329	P	Pn	04 06 28.3	+1.8
	baz=145						
RSSD	Black Hills	8.58	329		Pn	04 06 27.2	+0.7
RSSD				IAmb_Lg		04 09 01.2	
	comp=Z,29nm,0.9s						
T47A	Sharon Grove	8.60	86	Pn	Pn	04 06 27.6	+1.0
RWWY	Rawlins	8.66	306	Pn	Pn	04 06 28.7	+0.9
RWWY				IAmb_Lg		04 09 13.7	
	comp=Z,40nm,1.1s						
O20A	White River Ci	8.74	295	Pn	Pn	04 06 30.0	+1.3
M44A	Midewin, Midew	8.81	57	Pn	Pn	04 06 30.2	+0.7
M44A				IAmb_Lg		04 09 09.4	
	comp=Z,62nm,1.0s						
I40A	Norwalk	8.86	36		Pn	04 06 28.9	-1.3
F33A	5 Mile Ranch,	8.96	7		Pn	04 06 31.0	-0.6
TX31	Lajitas Ar. Si	9.02	214		Pn	04 06 31.2	-1.2
TX32	Lajitas Array	9.02	214		Pn	04 06 31.8	-0.7
TXAR	Lajitas Array	9.02	214	Pn	Pn	04 06 31.2	-1.3
	comp=Z,0.5nm,0.3s,baz=42,slow=11,SNR=14						
TXAR				Lg	Lg	04 08 60.0	
	comp=Z,0.6nm,0.3s,baz=56,slow=24,SNR=1.3						
TXAR	Lajitas Array	9.02	214	Pn	Pn	04 06 31.8	-0.7
SFIN	Lafayette	9.08	65	Pn	Pn	04 06 34.4	+1.1
SPMN	Marine on St.	9.11	23		Pn	04 06 33.1	-0.4
SPMN				IAmb_Lg		04 09 25.5	
	comp=Z,36nm,1.0s						
121A	Cookes Peak, D	9.28	245	Pn	Pn	04 06 37.7	+1.6
121A				IAmb_Lg		04 09 37.9	
	comp=Z,24nm,1.2s						
L44A	Lake County Fo	9.28	53	IAmb_Lg		04 09 24.1	
	comp=Z,59nm,0.8s						
K43A	Burlington	9.31	49	Pn	Pn	04 06 37.3	+1.0
F36A	Milaca	9.48	19	Pn	Pn	04 06 38.6	-0.1
I42A	Draeger Farm,	9.72	42	Pn	Pn	04 06 42.7	+0.8
E28A	Huff	9.86	348	IAmb_Lg		04 09 51.8	
	comp=Z,43nm,1.1s						
P48A	Milroy	10.10	72	Pn	Pn	04 06 47.7	+0.5
R49A	Shelbyville	10.15	79	Pn	Pn	04 06 47.0	-0.8
N47A	Urbana	10.25	64	Pn	Pn	04 06 49.9	+0.6
PDAR	Pinedale Array	10.71	306	Pn	Pn	04 06 56.1	+0.4
	comp=Z,0.2nm,0.3s,baz=124,slow=15,SNR=6.1						
PDAR				Lg	Lg	04 09 53.5	
	comp=Z,0.5nm,0.3s,baz=115,slow=21,SNR=2.5						
TKL	Tuckaleechee C	11.43	92	Pn	Pn	04 07 04.2	-1.2
	comp=Z,0.4nm,0.3s,baz=245,slow=7.3,SNR=7.8						
TKL				Lg	Lg	04 10 13.3	
	comp=Z,0.5nm,0.3s,baz=166,slow=21,SNR=3.5						
ULM	Lac du Bonnet	13.38	5	Pn	Pn	04 07 25.1	-6.8
	comp=Z,0.2nm,0.3s,baz=174,slow=21,SNR=2.1						
ULM				Sn	Sn	04 09 45.9	-15
	comp=Z,0.2nm,0.3s,baz=165,slow=8.2,SNR=1.5						
ULM				Lg	Lg	04 11 12.3	
	comp=Z,0.1nm,0.3s,baz=216,slow=19,SNR=1.6						
SADO	Sadowa	16.15	55	Lg	Lg	04 12 38.0	
	baz=265,slow=15,SNR=1.3						
NVAR	Mina Array Bea	16.26	281	Pn	Pn	04 08 11.1	+0.3
	comp=Z,0.1nm,0.3s,baz=95,slow=9.6,SNR=4.2						
SCHQ	Schefferville	27.70	40	P	P	04 10 09.6	-0.6
	comp=Z,3.0nm,0.7s,baz=216,slow=17,SNR=1.3						
ILAR	Eielson Array	40.02	330	P	P	04 11 58.4	+1.5
	comp=Z,2.5nm,0.7s,baz=109,slow=7.2,SNR=31						

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*NEIC **08** 04:16:55.5±0.6, 21°.3S±0°.1×170°.2E±0°.2, h161^{km}±12^{km}, mb4.1/7, Error ellipse: s-maj=20.5km s-min=14.6km az=83.0*

*IDC **08** 04:16:56.8±4.9, 21°.11S×170°.17E, h178^{km}±29^{km}, mb3.7/3, mb1 3.8/4, mb1mx3.4/33, mbtmp4.1/4, MS2.6/1, Ms1 2.6/1, ms1mx2.4/25, Error ellipse: s-maj=88.1km s-min=36.6km az=145.0*

*NOU **08** 04:16:57.2, 21°.34S×170°.23E, h18^{km}, mb4.6/10, Southeast of Loyalty Islands*

ISC 08 04:16:53.4±1.4**, 21°.5S**±0°.1×**170°.5E**±0°.1**, h150**^{km}**, n36, σ1**^{s}**38**/37**, mb4.1**/7**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	2.32	270		Pn	04 17 32.2	-0.2
MARNC	Mare, Loyalty	2.32	270	P	Pn	04 17 32.1	-0.2
MARNC	Mare, Loyalty	2.32	270	P	Pn	04 17 32.1	-0.2
PINNC	Pines Island,	3.06	248		Pn	04 17 41.9	+0.5
PINNC	Pines Island,	3.06	248	P	Pn	04 17 42.0	+0.5
PINNC	Pines Island,	3.06	248	P	Pn	04 17 42.2	+0.7
LIFNC	LIFOU	3.15	283		Pn	04 17 40.9	-1.8
LIFNC	LIFOU	3.15	283	P	Pn	04 17 40.8	-1.8
YATNC	Mamie plateau,	3.42	260	P	Pn	04 17 46.3	+0.2
YATNC	Mamie plateau,	3.42	260	P	Pn	04 17 46.5	+0.4
OUENC	Ouen Island, N	3.54	254		Pn	04 17 47.1	-0.5
OUENC	Ouen Island, N	3.54	254	P	Pn	04 17 48.6	+1.0
OUENC	Ouen Island, N	3.54	254	P	Pn	04 17 48.3	+0.7
DZM	Mont Dzumac	3.83	261	*e*Pn	Pn	04 17 52.2	+0.6
	29nm,0.2s						
DZM				*e*Sn	Sn	04 18 40.0	+3.3
	29nm,0.2s						
DZM	Mont Dzumac	3.83	261	P	Pn	04 17 52.0	+0.4
	5.5nm,0.3s,baz=118,slow=4.3,SNR=52						
DZM				S	Sn	04 18 37.4	+0.7
	5.8nm,0.3s,baz=175,slow=15,SNR=4.8						
DZM				LR	LR	04 19 09.8	
	comp=Z,91nm,19.4s,baz=105,slow=37						
DZM	Mont Dzumac	3.83	261		Pn	04 17 51.4	-0.2
DZM	Mont Dzumac	3.83	261	P	Pn	04 17 52.1	+0.5
ONTNC	Ouen Toro	3.86	257		Pn	04 17 50.8	-1.1
ONTNC	Ouen Toro	3.86	257	P	Pn	04 17 52.4	+0.6
ONTNC	Ouen Toro	3.86	257	P	Pn	04 17 52.2	+0.4
RTV	Rentapao	4.18	331	P	Pn	04 17 57.0	+0.9
DVP	Devils Point	4.35	329	P	Pn	04 17 58.9	+0.6
KOUNC	Koumac, New Ca	5.90	278	P	Pn	04 18 20.1	+1.3
CAN	Canberra	23.34	229	P	P	04 21 48.6	+0.2
STKA	Stephens Creek	27.76	242	P	P	04 22 27.9	-0.2
	1.7nm,0.4s,baz=80,slow=11,SNR=7.4						
STKA	Stephens Creek	27.76	242	IAmb	IAmb	04 22 29.4	
	comp=Z,0.7nm,0.9s						
BBOO	Buckleboo	32.53	242	P	P	04 23 09.2	-1.0
BBOO				IAmb	IAmb	04 23 10.3	
	comp=Z,6.5nm,1.0s						
WR0	Warramunga Arr	33.64	266	P	P	04 23 17.8	-2.2
WR0				IAmb	IAmb	04 23 20.0	
	comp=Z,7.1nm,1.4s						
AS31	Alice Springs	33.82	259	P	P	04 23 19.9	-1.7
AS31				IAmb	IAmb	04 23 21.3	
	comp=Z,1.0nm,1.1s						
ASAR	Alice Springs	33.82	259	P	P	04 23 20.1	-1.5
	comp=Z,0.9nm,0.4s,baz=81,slow=8.8,SNR=30						
WRAB	Tennant Creek	33.82	266	P	P	04 23 19.8	-1.8
WRAB				IAmb	IAmb	04 23 20.9	
	comp=Z,5.0nm,1.2s						
WRA	Warramunga Arr	33.83	266	P	P	04 23 19.6	-2.0
	comp=Z,2.0nm,0.8s,baz=98,slow=8.4,SNR=38						
WRA	Warramunga Arr	33.83	266	P	P	04 23 19.6	-2.0
CLL	Collm	145.46	335	*e*PKPbc	PKPbc	04 36 13.0	-0.7
GERES	GERESS Array B	147.04	331	PKPbc	PKPdf	04 36 16.8	+0.5
	comp=Z,1.0nm,0.5s,baz=45,slow=3.1,SNR=6.8						
DAVOX	Davos/Dischmat	150.28	333	PKPbc	PKPdf	04 36 25.7	+3.9
	baz=67,slow=7.3						

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*IDC **08** 04:23:18.0±4.3, 37°.37N×136°.72E, h278^{km}±32^{km}, mb2.5/2, mb1 2.9/3, mb1mx2.5/43, mbtmp3.4/3, Error ellipse: s-maj=145.7km s-min=33.3km az=103.0*

*JMA **08** 04:23:19.3±0.4, 37°.25N×136°.99E, h287^{km}±3^{km}, M2.7*

ISC 08 04:23:19.0±1.4**, 37°.3N**±0°.1×**137°.0E**±0°.1**, h300**^{km}**, n17, σ1**^{s}**21**/18**, Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSZ	Suzu	0.33	55	P	Pn	04 23 56.2	-0.9
MAT	Matsushiro	1.19	127	P	Pn	04 23 59.7	-0.6
MJAR	Matsushiro Arr	1.19	126	P	Pn	04 23 58.9	-1.4
	0.2nm,0.3s,baz=305,slow=6.4,SNR=19						
JSD	Sado	1.25	51	P	Pn	04 24 00.2	-0.4
JYTA	Yamagatataniai	1.68	188	P	Pn	04 24 02.7	-0.7
JRY	Ryogami san	1.95	129	P	Pn	04 24 05.2	-0.2
JAG	Ashikaga	2.12	112	P	Pn	04 24 06.2	-0.5
JHU	Hanno	2.30	127	P	Pn	04 24 07.8	-0.4
JHU				*e*S	S	04 24 45.4	-2.1
JWT	Wachi	2.37	214	P	Pn	04 24 07.1	-1.7
JYT	Yasato	2.75	111	P	Pn	04 24 11.3	-0.9
JIE	Ise	2.87	185	P	Pn	04 24 13.4	-0.1
JHO	Hitachi	2.91	102	P	Pn	04 24 13.4	-0.5
JFK	Kawauchi	3.07	87	P	Pn	04 24 15.8	+0.4
JWY	Kouya	3.25	201	P	Pn	04 24 16.7	-0.6
ASAJ	Asahikawa	8.05	30	P	Pn	04 25 12.3	-0.7
	0.6nm,0.3s,baz=279,slow=30,SNR=2.4						
WRA	Warramunga Arr	56.95	183	P	P	04 32 36.3	+2.8
	0.1nm,0.5s,baz=0.4,slow=7.5,SNR=4.6						
ASAR	Alice Springs	60.67	183	P	P	04 32 59.6	+0.6
	0.2nm,0.8s,baz=351,slow=5.4,SNR=1.7						

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*STR **08** 04:41:04.9±1.3, 46°N±8°×1°3E±1°0, h0^{km}, mB5.0/1, mb3.1/1, MLv2.8/9, Mw(mB)4.3/1, preliminary*

*LDG **08** 04:41:07.9±0.1, 46°.28N×12°.71E, h9^{km}, Ml2.3/17, Error ellipse: s-maj=2.6km s-min=1.9km az=2.0*

*IASPEI **08** 04:41:08.1±0.8, 46°.27N±0°.02×12°.69E±0°.01, h13^{km}±4^{km}, Error ellipse: s-maj=2.8km s-min=2.0km az=166.5, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*ROM **08** 04:41:08.3±0.1, 46°.284N±0°.006×12°.702E±0°.008, h7^{km}, ML2.3/32, Error ellipse: s-maj=0.8km s-min=0.3km az=149.0*

*VIE **08** 04:41:08.8±0.1, 46°.30N×12°.70E, h10^{km}, mb2.2/20, ml2.6/21, Error ellipse: s-maj=1.2km s-min=0.7km az=11.0 15 km SSW of Ampezzo*

*PRU **08** 04:41:10.7±0.0, 46°.35N×12°.81E, h12^{km}*

ISC 08 04:41:08.3±0.7**, 46°.27N**±0°.01×**12°.69E**±0°.01**, h18**^{km}±4^{km}**, n144, σ1**^{s}**86**/216**, 12C-11D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STAL	STALIGIAL	0.02	118	P	Pg	04 41 10.6	-0.9
STAL				S	Sg	04 41 12.3	-1.3
MLNI	Malnisio	0.13	204	⇑*e*Pg	Pg	04 41 11.8	-0.6
MLNI				*e*Sg	Sg	04 41 14.7	-0.3
CIMO	Cimolais	0.18	284	⇓*e*Pg	Pg	04 41 12.2	-0.7
CIMO				*e*Sg	Sg	04 41 15.2	-0.9
CIMO	Cimolais	0.18	284	⇓P	Pg	04 41 12.2	-0.7
CIMO				S	Sg	04 41 15.1	-0.9
CIMO				AML	AML		
	comp=E,1020µm,0.2s						
CIMO				AML	AML		
	comp=N,1885µm,0.2s						
MPRI	Monte Prat	0.21	97	⇑*e*Pg	Pg	04 41 12.9	-0.6
MPRI				*e*Sg	Sg	04 41 16.2	-0.7
MPRI	Monte Prat	0.21	97	⇑P	Pg	04 41 12.9	-0.6
MPRI				S	Sg	04 41 16.5	-0.4
MPRI				AML	AML		
	comp=E,728µm,0.6s						
MPRI				AML	AML		
	comp=N,1170µm,0.4s						
CLUD	Cludinico	0.23	36	⇓*e*Pg	Pg	04 41 13.3	-0.5
CLUD				*e*Sg	Sg	04 41 17.1	-0.4
CLUD	Cludinico	0.23	36	P	Pg	04 41 13.2	-0.5
CLUD				S	Sg	04 41 17.0	-0.4
CLUD				AML	AML		
	comp=N,253µm,1.3s						
CLUD				AML	AML		
	comp=E,338µm,0.7s						
CSMI	Casera Mimoias	0.24	354	⇓*e*Pg	Pg	04 41 13.7	-0.4
CSMI				*e*Sg	Sg	04 41 17.4	-0.5
CSO	Casso	0.25	271	⇓*e*Pg	Pg	04 41 13.4	-0.7
FUSE	Fusea	0.26	56	⇑*e*Pg	Pg	04 41 13.6	-0.6
POLC	Polcenigo	0.28	208	⇑P	Pg	04 41 14.3	-0.1
POLC				S	Sb	04 41 19.8	+0.7
POLC				AML	AML		
	comp=E,1630µm,0.4s						
POLC				AML	AML		
	comp=N,1145µm,0.2s						
BOO	Bordano	0.29	80	⇑*e*Pg	Pg	04 41 14.0	-0.8
BOO				*e*Sg	Sg	04 41 18.5	-0.6
GEPF	Gemona	0.31	89	⇑P	Pg	04 41 14.6	-0.5
GEPF				S	Sb	04 41 19.8	-0.4
GEPF				AML	AML		
	comp=N,562µm,0.3s						
GEPF				AML	AML		
	comp=E,382µm,0.8s						
CAE	Caneva	0.32	214	⇑*e*Pg	Pg	04 41 14.7	-0.4
CAE				*e*Sg	Sg	04 41 20.5	+0.8
FVI	Forni Avoltri	0.33	11	P	Pg	04 41 15.2	-0.3
FVI				S	Sb	04 41 20.6	-0.4
FVI				AML	AML		
	comp=E,1315µm,0.2s						
FVI				AML	AML		
	comp=N,761µm,0.1s						
ZOU	Zoufplan	0.35	35	⇓*e*Pg	Pg	04 41 15.5	-0.4
ZOU				*e*Sg	Sb	04 41 21.2	-0.3
ZOU	Zoufplan	0.35	35	P	Pg	04 41 15.5	-0.4
ZOU				S	Sb	04 41 21.0	-0.5
ZOU				AML	AML		
	comp=N,317µm,0.8s						
ZOU				AML	AML		
	comp=E,372µm,1.3s						
BAD	Bernadia	0.39	95	*e*Pg	Pg	04 41 15.9	-0.5
BAD				*e*Sg	Sb	04 41 22.1	-0.4
VINO	Villanova	0.41	92	*e*Pg	Pg	04 41 16.5	-0.4
VINO				*e*Sg	Sb	04 41 23.1	-0.1
PLRO	Paularo	0.42	49	*e*Pg	Pg	04 41 16.9	-0.2
PLRO				*e*Sg	Sb	04 41 23.8	+0.1
AGOR	Agordo	0.44	272	*e*Pg	Pg	04 41 17.0	-0.4
AGOR				*e*Sg	Sg	04 41 23.9	+0.4
AGOR	Agordo	0.44	272	P	Pg	04 41 17.8	+0.4
AGOR				S	Sg	04 41 24.4	+0.9
AGOR				AML	AML		
	comp=E,216µm,1.2s						
AGOR				AML	AML		
	comp=E,217µm,1.2s						
AGOR				AML	AML		
	comp=N,386µm,0.5s						
TLI	Talmassons	0.45	140	*e*Pg	Pg	04 41 17.5	0.0
PTCC	Patocco-Chiusa	0.48	73	P	Pg	04 41 17.6	-0.5
PTCC				S	Sb	04 41 25.2	0.0
PTCC				AML	AML		
	comp=E,138µm,0.3s						
PTCC				AML	AML		
	comp=N,170µm,0.2s						
VARN	Col Varnada, M	0.49	236	*e*Pg	Pg	04 41 17.8	-0.4
VARN	Col Varnada, M	0.49	236	P	Pg	04 41 18.0	-0.2
VARN				S	Sg	04 41 25.7	+0.9
VARN				AML	AML		
	comp=N,338µm,0.3s						
VARN				AML	AML		
	comp=E,398µm,1.4s						
VARN				AML	AML		
	comp=E,398µm,1.4s						
VARN				AML	AML		
	comp=N,338µm,0.3s						
FAU	Forcella Aurin	0.49	266	*e*Pg	Pg	04 41 18.2	-0.1
ABTA	Abfaltersbach	0.49	346	*e*Pg	Pg	04 41 18.3	-0.1
	comp=N,4.4nm,0.1s,SNR=137						
ABTA				*e*Sg	Sb	04 41 25.4	-0.2
	comp=N,30nm,0.1s						
COLI	Coloredo	0.50	106	⇑*e*Pg	Pg	04 41 18.4	0.0
ED06	Collalto TV	0.53	219	*e*Pg	Pg	04 41 19.1	+0.2
ROBS	Robic	0.57	92	*i* Pg	Pg	04 41 18.9	-0.8
ROBS				*e*Sg	Sb	04 41 28.0	+0.4
ROBS				IAML		04 41 30.5	
	comp=Z,19nm,0.1s						
MTLO	Montello	0.61	222	*e*Pg	Pg	04 41 21.1	+0.6
LSR	Lussari	0.62	70	*e*Pg	Pg	04 41 20.3	-0.3
PRED	Cave del Predi	0.63	74	*e*Pg	Pg	04 41 20.6	-0.3
ACOM	Acomizza, Ital	0.64	64	*e*Pg	Pb	04 41 21.1	0.0
ACOM	Acomizza, Ital	0.64	64	P	Pb	04 41 21.0	-0.1
ACOM				S	Sb	04 41 30.9	+1.2
ACOM				AML	AML		
	comp=E,290µm,0.2s						
ACOM				AML	AML		
	comp=E,291µm,0.2s						
ACOM				AML	AML		
	comp=N,303µm,0.5s						
DRE	Drenchia	0.67	98	*e*Pg	Pg	04 41 21.4	-0.2
SABO	M.te Sabotino	0.70	114	*e*Pg	Pb	04 41 22.2	+0.1
SABO	M.te Sabotino	0.70	114	P	Pb	04 41 22.1	+0.1
SABO				S	Sb	04 41 33.3	+2.0
SABO				AML	AML		
	comp=E,291µm,1.4s						
SABO				AML	AML		
	comp=N,366µm,0.7s						
CGRP	Cima Grappa	0.73	238	*e*Pg	Pg	04 41 23.1	+0.4
CADS	Cadrg	0.73	93	*i* Pg	Pg	04 41 21.8	-0.9
CADS				IAML		04 41 37.3	
	comp=Z,25nm,0.2s						
MYKA	Terra Mystica	0.75	61	*e*Pg	Pb	04 41 23.0	0.0
	comp=Z,1.5nm,0.1s,SNR=9.7						
MYKA				*e*Sg	Sb	04 41 33.5	+0.5
	comp=Z,6.0nm,0.1s						
CTI	Castel Tesino	0.75	253	P	Pg	04 41 23.4	+0.3
CTI				AML	AML		
	comp=E,430µm,1.0s						
CTI				AML	AML		
	comp=N,506µm,0.3s						
CTI				AML	AML		
	comp=E,430µm,1.0s						
IESO	Jesolo	0.76	187	*e*Pg	Pb	04 41 23.9	+1.0
BRES	Bressanone	0.79	303	⇓P	Pg	04 41 23.9	+0.1
RISI	Rein	0.80	329	P	Pg	04 41 24.0	+0.1
RISI				AML	AML		
	comp=E,440µm,0.5s						
RISI				AML	AML		
	comp=N,386µm,1.3s						
GORS	Gorjuse	0.91	87	*e*Pg	Pg	04 41 25.2	-0.8
GORS				*e*Sg	Sb	04 41 38.7	+1.2
GORS				IAML		04 41 42.9	
	comp=Z,26nm,0.1s						
KOSI	Kohlern	0.93	283	P	Pg	04 41 26.4	0.0
KOSI				AML	AML		
	comp=N,104µm,0.6s						
KOSI				AML	AML		
	comp=E,104µm,0.5s						
KBA	Koelnbreinsper	0.93	29	*e*Pg	Pb	04 41 26.5	+0.5
	comp=E,2.3nm,0.1s,SNR=4.2						
KBA				*e*Sg	Sb	04 41 38.5	+0.4
	comp=E,13nm,0.2s						
TRI	Trieste	0.94	126	P	Pg	04 41 26.4	-0.1
TRI				S	Sn	04 41 40.6	+1.0
TRI				AML	AML		
	comp=E,358µm,0.4s						
TRI				AML	AML		
	comp=N,134µm,0.5s						
APPI	Appiano	1.03	282	P	Pg	04 41 28.4	0.0
APPI				AML	AML		
	comp=E,172µm,0.2s						
APPI				AML	AML		
	comp=E,173µm,0.2s						
APPI				AML	AML		
	comp=N,137µm,0.7s						
ABSI	Aberstueckl	1.05	296	P	Pg	04 41 28.6	-0.1
ABSI				AML	AML		
	comp=N,457µm,0.4s						
ABSI				AML	AML		
	comp=E,194µm,0.5s						
ROSI	Rosskopf	1.10	307	P	Pb	04 41 29.8	+0.8
ROSI				AML	AML		
	comp=E,198µm,0.9s						
ROSI				AML	AML		
	comp=N,129µm,1.1s						
TEOL	Teolo	1.15	218	P	Pb	04 41 30.5	+0.7
TEOL				AML	AML		
	comp=N,429µm,0.5s						
TEOL				AML	AML		
	comp=E,486µm,1.2s						
TEOL				AML	AML		
	comp=N,430µm,0.5s						
GAGG	Gaggia	1.22	262	P	Pg	04 41 32.3	+0.5
GAGG				AML	AML		
	comp=N,139µm,1.6s						
GAGG				AML	AML		
	comp=E,156µm,0.4s						
WTTA	Wattenberg	1.23	324	*e*Pn	Pg	04 41 32.5	+0.4
	comp=E,8.8nm,0.2s,SNR=69						
WTTA				*e*Sn	Sn	04 41 49.0	+1.8
	comp=E,29nm,0.4s						
WTTA	Wattenberg	1.23	324	⇓P	Pg	04 41 32.5	+0.4
WTTA				AML	AML		
	comp=E,127µm,0.5s						
WTTA				AML	AML		
	comp=N,60µm,0.7s						
WTTA				AML	AML		
	comp=E,180µm,0.5s						
WTTA				AML	AML		
	comp=N,122µm,0.7s						
ROVR	Rover Verones	1.29	242	P	Pn	04 41 32.7	+1.2
ROVR				S	Sn	04 41 50.7	+2.3
LJU	Ljubljana	1.30	99	P	Pb	04 41 32.7	+0.4
LJU				S	Sn	04 41 53.0	+4.4
LJU				AML	AML		
	comp=E,2000µm,1.3s						
LJU				AML	AML		
	comp=N,1965µm,0.3s						
LJU				AML	AML		
	comp=E,2005µm,1.3s						
OBKA	Obir	1.31	79	*e*Pn	Pg	04 41 33.1	-0.6
	comp=E,1.7nm,0.1s,SNR=16						
OBKA				*e*Sg	Sn	04 41 51.1	+2.1
	comp=E,20nm,0.3s						
WATA	Walderalm	1.31	325	*e*Pn	Pg	04 41 33.9	+0.2
	comp=E,7.2nm,0.3s,SNR=19						
WATA				*e*Sn	Sn	04 41 51.9	+2.8
	comp=E,6.5nm,0.2s						
SQTA	Sankt Quirin	1.39	314	*e*Pn	Pg	04 41 35.0	-0.2
	comp=E,4.6nm,0.2s,SNR=43						
SQTA				*e*Sn	Sg	04 41 53.5	+0.1
	comp=E,14nm,0.3s						
MOSI	Grossmontoni	1.52	284	P	Pb	04 41 37.3	+1.2
MOSI				AML	AML		
	comp=E,212µm,0.2s						
MOSI				AML	AML		
	comp=N,485µm,0.6s						
MABI	Malga Bissina	1.52	263	P	Pb	04 41 37.0	+0.7
MABI				AML	AML		
	comp=E,52µm,0.4s						
MABI				AML	AML		
	comp=N,83µm,0.2s						
MOTA	Moosalm	1.53	315	*e*Pn	Pb	04 41 36.9	+0.6
	comp=N,2.1nm,0.3s,SNR=19						
MOTA				*e*Sn	Sb	04 41 56.5	+1.1
	comp=N,8.4nm,0.3s						
FETA	Feichten	1.54	300	*e*Pn	Pb	04 41 36.9	+0.4
	comp=N,6.8nm,0.2s,SNR=52						
FETA				*e*Sn	Sg	04 41 58.0	-0.2
	comp=N,6.5nm,0.3s						
RIY	Rijeka	1.57	126	*e*Pn	Pn	04 41 36.2	+0.9
RIY				Sn	Sn	04 41 56.4	+1.1
SMRN	Sveta Marina	1.61	140	*e*Pn	Pn	04 41 36.8	+0.9
SMRN				Sn	Sn	04 41 57.1	+1.0
BRMO	Bormio	1.61	278	P	Pb	04 41 38.7	+1.0
BRMO				AML	AML		
	comp=E,53µm,1.0s						
BRMO				AML	AML		
	comp=E,53µm,1.0s						
BRMO				AML	AML		

	comp=N,38µm,1.1s						
SALO	**Salr**	**1.64**	**247**	P	**Pn**	**04 41 38.2**	**+1.8**
SOKA	**Soboth**	**1.67**	**75**	*e*Pn	**Pn**	**04 41 37.6**	**+0.7**
	comp=N,1.3nm,0.2s						
SOKA				*e*Sn	**Sb**	**04 42 00.2**	**+0.8**
	comp=N,2.2nm,0.2s						
RETA	**Reutte**	**1.80**	**313**	*e*Pn	**Pb**	**04 41 40.7**	**-0.1**
	comp=N,1.8nm,0.1s						
RETA				*e*Sn	**Sb**	**04 42 03.6**	**+0.6**
	comp=N,6.7nm,0.3s						
MOA	**Molln**	**1.92**	**34**	*e*Pn	**Pn**	**04 41 41.5**	**+1.3**
	comp=N,1.9nm,0.2s,SNR=14						
MOA				*e*Sn	**Sn**	**04 42 05.7**	**+1.9**
	comp=N,7.9nm,0.3s						
BOJS	**Bojanci**	**1.95**	**112**	S	**Sg**	**04 42 11.0**	**-0.1**
OZLJ	**Ozalj**	**2.05**	**108**	*e*Pn	**Pb**	**04 41 44.2**	**-0.7**
OZLJ				Sn	**Sn**	**04 42 08.3**	**+1.3**
RABC	**Rab**	**2.12**	**135**	*e*Pn	**Pn**	**04 41 43.8**	**+1.0**
RABC				Sn	**Sn**	**04 42 07.8**	**-0.8**
DAVA	**Damuels**	**2.18**	**299**	*e*Pn	**Pn**	**04 41 45.5**	**+1.6**
	comp=N,4.5nm,0.3s						
DAVA				*e*Sn	**Sn**	**04 42 12.9**	**+2.3**
	comp=N,3.5nm,0.5s						
ARSA	**Arzberg**	**2.18**	**62**	*e*Pn	**Pn**	**04 41 45.4**	**+1.5**
	comp=N,1.4nm,0.2s						
ARSA				*e*Sn	**Sn**	**04 42 11.7**	**+1.3**
	comp=N,0.7nm,0.2s						
NVLJ	**Novalja**	**2.30**	**137**	*e*Pn	**Pn**	**04 41 46.0**	**+0.6**
NVLJ				Sn	**Sn**	**04 42 10.6**	**-2.5**
LMD	**Lutirano**	**2.30**	**198**	⇓P	**Pn**	**04 41 46.2**	**+0.8**
LMD				AML	AML		
	comp=E,25µm,0.4s						
LMD				AML	AML		
	comp=N,27µm,0.2s						
PTJ	**Puntijarka**	**2.31**	**98**	*e*Pn	**Pb**	**04 41 48.4**	**-1.2**
LOBO	**Lobor**	**2.35**	**92**	*e*Pn	**Pn**	**04 41 48.6**	**+2.5**
PLIT	**Plitvice**	**2.49**	**123**	*e*Pn	**Pn**	**04 41 48.2**	**+0.2**
FSSB	**Fossombrone**	**2.58**	**179**	⇑P	**Pn**	**04 41 50.1**	**+0.8**
FSSB				AML	AML		
	comp=E,45µm,1.2s						
FSSB				AML	AML		
	comp=N,86µm,0.5s						
NARO	**Abbazia di Nar**	**2.66**	**182**	⇑P	**Pn**	**04 41 51.3**	**+0.9**
NARO				AML	AML		
	comp=E,14µm,1.1s						
NARO				AML	AML		
	comp=N,13µm,1.6s						
APEC	**Apecchio**	**2.72**	**184**	P	**Pn**	**04 41 52.7**	**+1.6**
CONA	**Conrad Observa**	**2.73**	**51**	*e*Pn	**Pn**	**04 41 51.8**	**+0.4**
	comp=N,0.1nm,0.1s						
CONA				*e*Sn	**Sn**	**04 42 26.0**	**+1.9**
	comp=N,0.8nm,0.2s						
PIEI	**Pieia**	**2.73**	**182**	⇓P	**Pn**	**04 41 52.2**	**+0.7**
PIEI				AML	AML		
	comp=N,15µm,1.5s						
PIEI				AML	AML		
	comp=E,19µm,0.5s						
ARVD	**Arcevia**	**2.78**	**176**	⇓P	**Pn**	**04 41 49.9**	**-2.1**
CKRC	**Cesky Krumlov**	**2.78**	**23**	*e*PN	**Pn**	**04 41 53.8**	**+1.8**
CKRC				*e*PG	**Pb**	**04 41 59.1**	**+1.6**
CKRC				*e*SG	**Sg**	**04 42 35.3**	**-2.3**
UDBI	**Udbina**	**2.78**	**128**	*e*Pn	**Pn**	**04 41 53.2**	**+1.1**
DUGI	**Dugi Otok**	**2.83**	**143**	*e*Pn	**Pn**	**04 41 53.4**	**+0.8**
KHC	**Kasperske Hory**	**2.93**	**12**	*e*PN	**Pn**	**04 41 55.3**	**+1.2**
KHC				*e*PG	**Pb**	**04 42 01.4**	**+1.4**
KHC				*e*SN	**Sn**	**04 42 29.9**	**+1.1**
KHC				*e*SG	**Sg**	**04 42 40.9**	**-1.4**
	comp=E,5.3nm,0.8s						
EL6	**Elcito**	**2.95**	**174**	P	**Pn**	**04 41 55.3**	**+0.8**
PII	**Pisa**	**2.97**	**212**	⇑P	**Pn**	**04 41 55.6**	**+1.0**
PII				AML	AML		
	comp=E,18µm,1.2s						
PII				AML	AML		
	comp=N,20µm,0.4s						
GUT	**Gutenstein**	**3.03**	**308**	P	**Pn**	**04 41 58.3**	**+2.8**
MORI	**Morici**	**3.22**	**137**	*e*Pn	**Pn**	**04 41 59.5**	**+1.5**
SLE	**Schleitheim**	**3.24**	**299**	P	**Pn**	**04 42 00.9**	**+2.6**
ZIRJ	**Zirje**	**3.35**	**140**	*e*Pn	**Pn**	**04 42 01.0**	**+1.1**
SULZ	**Cheisacher**	**3.38**	**294**	P	**Pn**	**04 42 03.8**	**+3.5**
KIJV	**Kijevo**	**3.47**	**129**	*e*Pn	**Pn**	**04 42 02.7**	**+1.2**
FELD	**Feldberg im Sc**	**3.58**	**298**	S	**Sn**	**04 42 47.6**	**+2.5**
FELD	**Feldberg im Sc**	**3.58**	**298**	P	**Pn**	**04 42 05.5**	**+2.4**
BALST	**Balsthal**	**3.59**	**289**	P	**Pn**	**04 42 06.1**	**+2.9**
KIZ	**Kirchzarten**	**3.67**	**299**	P	**Pn**	**04 42 06.7**	**+2.5**
OPP	**Oppenau**	**3.78**	**308**	P	**Pn**	**04 42 08.4**	**+2.6**
BOURR	**Bourrignon**	**3.91**	**289**	P	**Pn**	**04 42 10.4**	**+2.8**
PRU	**Pruhonice**	**3.92**	**18**	*e*PN	**Pn**	**04 42 09.1**	**+1.4**
PRU				*e*SG	**Sg**	**04 43 12.1**	**-2.2**
	comp=N,4.5nm,0.8s						
HVAR	**Hvar**	**4.09**	**138**	*e*Pn	**Pn**	**04 42 10.5**	**+0.5**
RICI	**Ricice**	**4.21**	**130**	*e*Pn	**Pn**	**04 42 12.3**	**+0.7**
LPG	**La Plagne**	**4.22**	**262**	*e*P	**Pn**	**04 42 14.6**	**+2.6**
LPG				*e*Sn	**Sn**	**04 42 57.3**	**-3.6**
	comp=N,1.1nm,0.6s						
ECH	**Echery**	**4.24**	**299**	P	**Pn**	**04 42 14.4**	**+2.3**
CDF	**Champ du Feu**	**4.26**	**302**	*e*P	**Pn**	**04 42 14.5**	**+2.1**
CDF	**Champ du Feu**	**4.26**	**302**	*e*Pg	**Pg**	**04 42 28.3**	**-1.6**
CDF				*e*Sn	**Sn**	**04 42 57.6**	**-4.1**
	comp=N,1.1nm,0.5s						
CDF				*e*Sg	**Sg**	**04 43 21.0**	**-4.0**
	comp=N,0.5nm,0.2s						
CHMF	**Charmoille**	**4.26**	**285**	P	**Pn**	**04 42 14.8**	**+2.4**
CHMF				S	**Sn**	**04 43 04.9**	**+3.1**
HINF	**Hinteralfeld**	**4.28**	**293**	*e*P	**Pn**	**04 42 14.8**	**+2.2**
HINF				*e*Sn	**Sn**	**04 42 58.1**	**-4.0**
	comp=N,1.3nm,0.3s						
MAKA	**Makarska**	**4.29**	**132**	*e*Pn	**Pn**	**04 42 12.4**	**-0.3**
BRANT	**Les Verrieres**	**4.33**	**281**	P	**Pn**	**04 42 16.0**	**+2.6**
TURF	**col de Turini**	**4.39**	**240**	P	**Pn**	**04 42 15.9**	**+1.5**
SBF	**Sospel**	**4.43**	**239**	*e*Pn	**Pn**	**04 42 13.4**	**-1.3**
SBF	**Sospel**	**4.43**	**239**	*e*P	**Pn**	**04 42 17.4**	**+2.7**
SBF	**Sospel**	**4.43**	**239**	*e*Pg	**Pb**	**04 42 30.1**	**+4.4**
SBF				*e*Sn	**Sn**	**04 43 02.4**	**-3.5**
	comp=N,6.7nm,0.5s						
SBF				*e*Sg	**Sg**	**04 43 27.0**	**-3.5**
	comp=N,1.7nm,0.4s						
MBDF	**Montbardon**	**4.43**	**252**	*e*Pn	**Pn**	**04 42 14.3**	**-0.6**
MBDF	**Montbardon**	**4.43**	**252**	*e*Pg	**Pg**	**04 42 30.9**	**-2.4**
MBDF				*e*Sn	**Sn**	**04 43 01.9**	**-4.3**
	comp=N,1.0nm,0.5s						
CABF	**La Chapelle**	**4.58**	**277**	*e*P	**Pn**	**04 42 19.4**	**+2.7**
CABF				*e*Sn	**Sn**	**04 43 05.5**	**-4.0**
	comp=N,0.5nm,0.4s						
HAU	**Haudompre**	**4.66**	**294**	*e*P	**Pn**	**04 42 20.0**	**+2.1**
HAU				*e*Sn	**Sn**	**04 43 07.5**	**-4.0**
	comp=N,0.7nm,0.3s						
DPC	**Dobruska-Polom**	**4.75**	**29**	*e*SG	**Sg**	**04 43 37.3**	**-3.4**
	comp=N,2.8nm,1.0s						
UPC	**Upice**	**4.79**	**26**	*e*SG	**Sg**	**04 43 38.7**	**-3.1**
CHVC	**Chvalec**	**4.87**	**26**	*e*SG	**Sg**	**04 43 42.6**	**-1.9**
OSTC	**Ostas**	**4.89**	**27**	*e*SG	**Sg**	**04 43 41.7**	**-3.6**
STON	**Ston**	**4.94**	**132**	*e*Pn	**Pn**	**04 42 23.3**	**+1.7**
ORIF	**Oris-en-Rattie**	**4.96**	**257**	*e*P	**Pn**	**04 42 25.0**	**+2.9**
ORIF				*e*Sn	**Sn**	**04 43 14.8**	**-4.3**
	comp=N,0.2nm,0.3s						
ABH	**Alteburg**	**4.99**	**318**	P	**Pn**	**04 42 25.6**	**+3.2**
CLL	**Collm**	**5.05**	**2**	*e*Sg	**Sg**	**04 43 46.0**	**-4.2**
	comp=Z,10.0nm,1.3s						
FRF	**La Foret Royal**	**5.07**	**240**	*e*P	**Pn**	**04 42 25.9**	**+2.4**
FRF				*e*Sn	**Sn**	**04 43 17.4**	**-4.2**
	comp=Z,0.6nm,0.4s						
PAGF	**Fort de Pagny**	**5.25**	**298**	*e*P	**Pn**	**04 42 28.5**	**+2.6**
PAGF				*e*Sn	**Sn**	**04 43 21.1**	**-4.9**
	comp=Z,0.5nm,0.3s						
SMRF	**Simiane la Rot**	**5.53**	**248**	*e*P	**Pn**	**04 42 33.0**	**+3.2**
SMRF				*e*Sn	**Sn**	**04 43 28.4**	**-4.6**
	comp=Z,1.3nm,0.4s						
SFTF	**Sexfontaines**	**5.56**	**293**	*e*P	**Pn**	**04 42 32.7**	**+2.6**
	baz=113						
SFTF				*e*Sn	**Sn**	**04 43 29.2**	**-4.4**
	comp=Z,2.7nm,0.6s						
SAVF	**Savonnieres en**	**5.64**	**297**	*e*P	**Pn**	**04 42 33.1**	**+1.8**
LOR	**Lormes**	**6.15**	**283**	*e*Pn	**Pn**	**04 42 36.7**	**-1.6**
	baz=103						
LOR				*e*Sn	**Sn**	**04 43 43.2**	**-4.9**
	comp=Z,1.5nm,0.6s						
SSF	**Saint Saulge**	**6.37**	**280**	*e*P	**Pn**	**04 42 44.3**	**+3.0**
AVF	**Avril sur Loir**	**6.46**	**278**	*e*P	**Pn**	**04 42 45.2**	**+2.6**
CAF	**Calviac**	**7.57**	**264**	*e*P	**Pn**	**04 43 01.3**	**+3.5**

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*NEIC **08** 04:43:13.2±2.3, 5°.85S±0°.08×129°.24E±0°.10, h187km±10km, mb4.3/18, Error ellipse: s-maj=14.1km s-min=11.9km*

az=80.0

*DJA **08** 04:43:14.2±0.3, 6°S±2°×13°0E±°, h242km±4km, M4.6/13, mb4.5/10, mB5.1/10, MLv4.8/13, Mw(mB)4.5/10*

*IDC **08** 04:43:17.6±1.8, 5°.76S×129°.54E, h233km±18km, mb3.7/12, mb1 3.9/16, mb1mx3.7/39, mbtmp4.4/16, Error ellipse: s-maj=18.1km s-min=9.8km az=62.0*

ISC 08 04:43:14.3±0.4, **5°.85S**±0°.04×**129°.49E**±0°.06, **h209**km, **n92**, σ**1ˢ.84**/98, **mb4.3**/29, **1C**, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.38**	**17**	P	**Pn**	**04 43 50.2**	**+2.3**
BNDI				S	**S**	**04 44 19.1**	**+5.3**
BNDI	**Bandanaira**	**1.38**	**17**	P	**Pn**	**04 43 50.4**	**+2.5**
MSAI	**Masohi**	**2.55**	**347**	P	**Pn**	**04 44 00.9**	**+1.5**
SAUI	**Saumlaki**	**2.78**	**140**	P	**Pn**	**04 44 04.4**	**+2.5**
SAUI				S	**S**	**04 44 43.1**	**+4.4**
SAUI	**Saumlaki**	**2.78**	**140**	Pn	**Pn**	**04 44 02.7**	**+0.8**
SAUI	**Saumlaki**	**2.78**	**140**	P	**Pn**	**04 44 03.8**	**+1.9**
FAKI	**Fak Fak**	**4.00**	**43**	P	**Pn**	**04 44 15.8**	**-0.8**
FAKI	**Fak Fak**	**4.00**	**43**		**Pn**	**04 44 16.0**	**-0.6**
FAKI	**Fak Fak**	**4.00**	**43**	P	**Pn**	**04 44 15.8**	**-0.8**
SANI	**Sanana**	**5.14**	**317**	P	**Pn**	**04 44 32.5**	**+1.7**
	0.3nm1µm67nm,0.6s						
SANI	**Sanana**	**5.14**	**317**	P	**Pn**	**04 44 32.9**	**+2.1**
SIJI	**Sorong**	**5.26**	**20**	P	**Pn**	**04 44 30.6**	**-1.6**
	baz=221,slow=20						
SIJI				S	**S**	**04 45 27.1**	**-6.5**
	72nm,0.3s,baz=254,slow=23,SNR=16						
SWI	**Sorong**	**5.26**	**20**	P	**Pn**	**04 44 31.5**	**-0.8**
LBMI	**Labuha**	**5.55**	**339**	P	**Pn**	**04 44 36.8**	**+0.8**
	0.9nm201nm,0.5s						
SOEI	**Soe**	**6.47**	**233**	P	**Pn**	**04 44 50.0**	**+2.1**
	0.3nm1µm26nm,0.5s						
SOEI	**Soe**	**6.47**	**233**	Pn	Pn	04 44 42.4	-5.5
DRS	**Darwin Rock St**	**6.68**	**168**	P	**Pn**	**04 44 51.3**	**+0.7**
	505nm,0.5s						
MTN	**Manton Dam**	**7.13**	**167**	Pn	**Pn**	**04 44 57.3**	**+0.9**
MTN	**Manton Dam**	**7.13**	**167**	P	**Pn**	**04 44 56.9**	**+0.5**
BATI	**Baumata**	**7.21**	**233**	P	**Pn**	**04 45 01.8**	**+4.3**
	7.1nm,0.3s,baz=29,slow=0.9,SNR=4.8						
BATI				S	**S**	**04 46 18.9**	**-0.5**
	2.6nm,0.3s,baz=128,slow=9.7,SNR=2.1						
BATI	**Baumata**	**7.21**	**233**	P	**Pn**	**04 44 59.6**	**+2.2**
	0.2nm569nm33nm,0.8s						
KDU	**Kakadu**	**7.40**	**157**	P	**Pn**	**04 45 00.0**	**+0.2**
BAKI	**Biak**	**8.06**	**55**	P	**Pn**	**04 45 06.2**	**-2.3**
LUWI	**Luwuk**	**8.23**	**305**	P	**Pn**	**04 45 10.2**	**-0.5**
	28µm43nm,0.8s						
EDFI	**Ende, Flores**	**8.26**	**249**	P	**Pn**	**04 45 13.1**	**+2.0**
	18nm,0.9s						
KNRA	**Kununurra**	**9.79**	**184**	Pn	**Pn**	**04 45 30.6**	**-0.2**
KNRA	**Kununurra**	**9.79**	**184**	P	**Pn**	**04 45 31.1**	**+0.3**
	118nm,0.9s						
TOLI2	**Tolitoli**	**11.11**	**308**	Pn	**Pn**	**04 45 44.1**	**-3.7**
JAY	**Jayapura**	**11.66**	**74**	P	**Pn**	**04 45 56.0**	**+1.1**
	0.6nm,0.3s,baz=177,slow=16,SNR=1.6						
FITZ	**Fitzroy Crossi**	**12.74**	**197**	P	**Pn**	**04 46 08.6**	**+0.3**
	3.0nm,0.3s,baz=24,slow=10,SNR=52						
FITZ				S	**S**	**04 48 23.9**	**-5.7**
	baz=90,slow=12						
WB0	**Warramunga Arr**	**14.63**	**161**	Pn	**Pn**	**04 46 31.4**	**-0.4**
WRAB	**Tennant Creek**	**14.77**	**162**	Pn	**Pn**	**04 46 33.0**	**-0.5**
WRA	**Warramunga Arr**	**14.78**	**162**	P	**Pn**	**04 46 33.5**	**-0.1**
	2.9nm,0.3s,baz=338,slow=13,SNR=64						
WRA				S	**S**	**04 49 10.4**	**-7.0**
	1.8nm,0.3s,baz=336,slow=22,SNR=5.0						
WRA	**Warramunga Arr**	**14.78**	**162**	Pn	**Pn**	**04 46 32.2**	**-1.4**
WB2	**Warramunga Arr**	**14.78**	**162**	Pn	**Pn**	**04 46 32.8**	**-0.8**
WR0	**Warramunga Arr**	**14.86**	**161**		**Pn**	**04 46 34.4**	**-0.1**
COEN	**Coen**	**15.69**	**122**		**Pn**	**04 46 45.4**	**+0.6**
PMG	**Port Moresby**	**17.86**	**102**	P	**Pn**	**04 47 09.9**	**-0.5**
	1.6nm,0.3s,baz=291,slow=7.4,SNR=10.0						
PMG	**Port Moresby**	**17.86**	**102**	P	**Pn**	**04 47 10.0**	**-0.4**
AS31	**Alice Springs**	**18.21**	**167**		**Pn**	**04 47 13.9**	**-0.6**
ASAR	**Alice Springs**	**18.21**	**167**	P	**Pn**	**04 47 15.0**	**+0.5**
	11nm,0.3s,baz=344,slow=9.4,SNR=138						
ASAR				S	**S**	**04 50 26.6**	**-3.0**
	1.5nm,0.3s,baz=349,slow=18,SNR=30						
ASAR				ScP	**ScP**	**04 54 49.5**	**-1.4**
	baz=339,slow=2.5,SNR=4.0						
ASAR	**Alice Springs**	**18.21**	**167**		**Pn**	**04 47 14.0**	**-0.5**
MANU	**Manus Island**	**18.23**	**79**	P	**Pn**	**04 47 15.0**	**+0.2**
MANU				IAmb	IAmb	04 47 15.8	
	comp=Z,11nm,0.7s						
CTA	**Charters Tower**	**21.58**	**133**	P	**P**	**04 47 50.0**	**+2.2**
	comp=Z,8.1nm,0.6s,baz=307,slow=12,SNR=22						
CTAO	**Charters Tower**	**21.58**	**133**	P	**P**	**04 47 48.8**	**+1.0**
CTAO				IAmb	IAmb	04 47 50.7	
	comp=Z,8.4nm,0.8s						
STKA	**Stephens Creek**	**28.26**	**158**	P	**P**	**04 48 49.9**	**+1.7**
	comp=Z,1.8nm,0.3s,baz=333,slow=8.5,SNR=10						
STKA	**Stephens Creek**	**28.26**	**158**	P	**P**	**04 48 49.5**	**+1.3**
SLVN	**Son La**	**36.88**	**318**	P	**P**	**04 50 03.4**	**+0.2**
SLVN				IAmb	IAmb	04 50 05.1	
	comp=Z,6.4nm,1.1s						
CMAR	**Chiang Mai Arr**	**38.61**	**309**	P	**P**	**04 50 18.4**	**+0.7**
	comp=Z,1.5nm,0.4s,baz=144,slow=7.7,SNR=11						
CMAR	**Chiang Mai Arr**	**38.61**	**309**	P	**P**	**04 50 17.4**	**-0.2**
CHTO	**Chiang Mai**	**38.82**	**310**	P	**P**	**04 50 19.4**	**+0.1**
CHTO				IAmb	IAmb	04 50 21.1	
	comp=Z,4.9nm,0.8s						
KMI	**Kunming**	**40.31**	**321**	⇑P	**P**	**04 50 33.5**	**+1.7**
KMI				pmax	pmax		
	comp=Z,9.0nm,0.6s						
MJAR	**Matsushiro Arr**	**42.95**	**10**	P	**P**	**04 50 51.3**	**-1.5**
	comp=Z,2.1nm,1.0s,baz=200,slow=8.9,SNR=3.1						
KSRS	**Korea Array**	**43.11**	**358**	P	**P**	**04 50 54.5**	**+0.6**
	comp=Z,1.9nm,0.9s,baz=172,slow=9.2,SNR=6.8						
XAN	**Xi'an**	**44.19**	**335**	P	**P**	**04 51 02.4**	**-0.4**
XAN				pmax	pmax		
	comp=Z,8.0nm,0.7s						
HHC	**Hu-ho-hao-te**	**49.30**	**342**	*e*P	**P**	**04 51 45.2**	**+2.9**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,8.4s						
USRK	**Ussuriysk Ar.**	**49.87**	**2**	P	**P**	**04 51 46.9**	**+0.5**
	comp=Z,2.8nm,0.8s,baz=169,slow=8.4,SNR=3.1						
ODAN	**Odare**	**52.13**	**311**	*e*P	**P**	**04 52 04.0**	**+0.2**
TAPN	**Taplejung**	**52.15**	**311**	*e*P	**P**	**04 52 04.3**	**+0.2**
	comp=Z,17nm,0.4s						
GTA	**Gaotai**	**52.73**	**331**	*e*P	**P**	**04 52 08.9**	**+1.0**
GTA				pP	pP	04 52 52.4	-0.4
GTA				sP	PcP	04 53 12.7	-1.9
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
RAMN	**Ramite**	**52.77**	**310**	*e*P	**P**	**04 52 09.3**	**+0.7**
	comp=Z,43nm,0.4s						
JIRN	**Jiri**	**53.46**	**311**	*e*P	**P**	**04 52 14.0**	**+0.3**
PKI	**Pulchoki**	**54.00**	**310**	*e*P	**P**	**04 52 17.6**	**0.0**
PKIN	**Phulchoki**	**54.01**	**310**	*e*P	**P**	**04 52 17.6**	**0.0**
	comp=Z,6.2nm,0.2s						
KKN	**Kakani**	**54.21**	**310**	*e*P	**P**	**04 52 19.2**	**+0.2**
DMN	**Daman**	**54.25**	**310**	*e*P	**P**	**04 52 19.2**	**-0.1**
	comp=Z,11nm,0.4s						
GKN	**Gorkha**	**54.81**	**310**	*e*P	**P**	**04 52 23.4**	**+0.2**
	comp=Z,25nm,0.3s						
KOLN	**Koldanda**	**55.48**	**309**	*e*P	**P**	**04 52 28.4**	**+0.3**
DANN	**Dangsing**	**55.65**	**310**	*e*P	**P**	**04 52 28.8**	**-0.6**
ULN	**Ulaanbaatar**	**57.02**	**342**	P	**P**	**04 52 39.0**	**+0.5**
ULN				IAmb	IAmb	04 52 40.5	
	comp=Z,5.5nm,0.7s						
SONM	**Songino Array**	**57.20**	**342**	P	**P**	**04 52 40.7**	**+1.0**
	comp=Z,1.5nm,0.5s,baz=164,slow=7.6,SNR=12						
SONM	**Songino Array**	**57.20**	**342**	P	**P**	**04 52 40.5**	**+0.8**
SONM				IAmb	IAmb	04 52 41.3	
	comp=Z,4.3nm,1.4s						
WMQ	**Urumqi**	**62.16**	**327**	*e*P	**P**	**04 53 15.4**	**+1.8**
KSH	**Kashi**	**66.84**	**317**	P	**P**	**04 53 45.1**	**+1.1**
KSH				pP	pP	04 54 32.3	+1.2
KSH				sP	sP	04 54 51.2	-1.8
KSH				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MK31	**Makanchi Array**	**66.99**	**327**	P	**P**	**04 53 44.7**	**0.0**
MK31				IAmb	IAmb	04 53 46.6	
	comp=Z,4.1nm,0.7s						
MKAR	**Makanchi Array**	**66.99**	**327**	P	**P**	**04 53 45.7**	**+1.0**
	comp=Z,3.9nm,0.5s,baz=112,slow=8.7,SNR=55						
MKAR	**Makanchi Array**	**66.99**	**327**	P	**P**	**04 53 44.5**	**-0.3**
MAKZ	**Makanchi**	**67.17**	**327**	P	**P**	**04 53 45.3**	**-0.5**
MAKZ				IAmb	IAmb	04 53 48.2	
	comp=Z,9.9nm,1.4s						
AAK	**Ala-Archa**	**69.34**	**320**	P	**P**	**04 54 01.0**	**+1.4**
	comp=Z,1.5nm,0.5s,baz=170,slow=6.7,SNR=4.5						
AAK	**Ala-Archa**	**69.34**	**320**	P	**P**	**04 54 00.5**	**+0.9**
ZAA0	**Zalesovo Array**	**70.34**	**334**	P	**P**	**04 54 04.5**	**-0.6**
ZAA0				IAmb	IAmb	04 54 05.5	
	comp=Z,2.9nm,0.7s						
ZALV	**Zalesovo Beam**	**70.34**	**334**	P	**P**	**04 54 05.2**	**0.0**
	comp=Z,3.0nm,0.3s,baz=121,slow=5.1,SNR=9.7						
GAR	**Garm**	**70.50**	**315**	P	**P**	**04 54 06.1**	**-0.6**
KURK	**Kurchatov**	**71.28**	**329**	P	**P**	**04 54 10.6**	**-0.3**
KURK				IAmb	IAmb	04 54 12.6	
	comp=Z,8.8nm,1.0s						
KK31	**Karatay Array**	**72.15**	**319**	P	**P**	**04 54 16.6**	**+0.3**
KKAR	**Karatay Array**	**72.15**	**319**	P	**P**	**04 54 16.6**	**+0.3**
VNDA	**Vanda**	**73.64**	**173**	P	**P**	**04 54 25.6**	**+1.2**
	comp=Z,0.9nm,0.5s,baz=324,slow=6.5,SNR=11						
ABKAR	**Akbulak array**	**81.30**	**322**	P	**P**	**04 55 06.7**	**-0.6**
AKTO	**Aktyubinsk**	**82.86**	**322**	P	**P**	**04 55 14.7**	**-0.7**
	comp=Z,1.6nm,0.5s,baz=129,slow=3.8,SNR=4.7						
TORD	**Torodi Ar. Bea**	**128.09**	**282**	SKPbc	SKPbc	05 04 54.1	
	comp=Z,1.4nm,1.0s,baz=73,slow=2.5,SNR=7.2						
PLCA	**Paso Flores**	**130.12**	**160**	SKPbc	**SKPbc**	**05 05 01.9**	**-1.2**
	comp=Z,1.3nm,0.9s,baz=175,slow=2.5,SNR=2.9						
LPAZ	**La Paz**	**151.93**	**142**	PKPbc	**PKPbc**	**05 02 45.6**	**-0.7**
	comp=Z,0.6nm,0.4s,baz=233,slow=0.9,SNR=5.5						

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*FUNV **08** 04:54:10.1, 8°.48N×71°.46W, h5km, MW3.4*

ISC 08 04:54:09.7±1.5, **8°.55N**±0°.03×**71°.42W**±0°.03, **h5**km±11km, **n31**, σ**0ˢ.75**/55, **1D**, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	**Socops**	**0.61**	**116**	*e*P	**Pg**	**04 54 21.1**	**-0.4**
SOCV				*e*S	**Sg**	**04 54 28.8**	**-0.7**
SOCV				*i*		04 54 30.4	
	comp=Z,7µm,0.1s						
SOCV	**Socops**	**0.61**	**116**	⇓*i*P	**Pg**	**04 54 21.2**	**-0.3**
SOCV				*e*S	**Sg**	**04 54 30.3**	**+0.9**
SDV	**Santo Domingo**	**0.84**	**67**	*e*P	**Pg**	**04 54 26.6**	**+0.7**
SDV				*e*S	**Sb**	**04 54 38.8**	**+0.1**
SDV				*i*		04 54 40.6	
	comp=Z,149nm,0.3s						
PAMC	**Pamplona, Colo**	**1.75**	**227**	*e*P	**Pn**	**04 54 41.2**	**0.0**
PAMC				*e*S	**Sb**	**04 55 04.9**	**-0.3**
PAMC				*i*		04 55 07.5	
	comp=Z,227nm,0.2s						
MCQV	**Machiques**	**1.86**	**324**	*e*P	**Pn**	**04 54 42.3**	**+0.1**
MCQV				*e*S	**Sn**	**04 55 06.3**	**+0.1**
OCAC	**Ocana**	**1.91**	**261**	*e*P	**Pn**	**04 54 42.4**	**-0.7**
OCAC				*e*S	**Sn**	**04 55 07.7**	**0.0**
OCAC				*i*		04 55 09.2	
	comp=Z,1µm,0.3s						
TAMC	**Tame, Arauca**	**2.13**	**190**	*e*P	**Pn**	**04 54 46.2**	**+0.1**
TAMC				*e*S	**Sn**	**04 55 13.6**	**+0.6**
TAMC				*i*		04 55 22.0	
	comp=Z,109nm,0.4s						
ELOV	**Elorza**	**2.46**	**129**	*e*P	**Pn**	**04 54 51.4**	**+0.9**
ELOV				*e*S	**Sn**	**04 55 22.9**	**+1.9**
ELOV				*i*		04 55 34.4	
	comp=Z,503nm,0.3s						
ELOV	**Elorza**	**2.46**	**129**	*e*P	**Pn**	**04 54 50.0**	**-0.5**
ELOV				*e*S	**Sn**	**04 55 20.0**	**-0.9**
BARC	**Barichara**	**2.62**	**222**	*e*P	**Pn**	**04 54 53.2**	**+0.2**
BARC				*e*S	**Sn**	**04 55 26.6**	**+1.3**
BARC				*i*		04 55 34.7	
	comp=Z,94nm,0.5s						
SIQV	**Siquisique**	**2.62**	**37**	*e*P	**Pn**	**04 54 53.3**	**+0.5**
SIQV				*e*S	**Sn**	**04 55 26.2**	**+1.1**
SMLC	**San Martn de**	**2.64**	**276**	*e*P	**Pn**	**04 54 52.0**	**-1.0**
SMLC				*e*S	**Sn**	**04 55 25.2**	**-0.2**
SMLC				*i*		04 55 33.7	
	comp=Z,131nm,0.1s						
BRRC	**Barranca, Sant**	**2.69**	**238**	*e*P	**Pn**	**04 54 53.8**	**+0.1**
BRRC				*e*S	**Sn**	**04 55 28.1**	**+1.3**
BRRC				*i*		04 55 35.8	
	comp=Z,34nm,0.5s						
ARGC	**Ariguani, Magd**	**3.08**	**295**	*e*P	**Pn**	**04 54 58.6**	**-0.5**
ARGC				*e*S	**Sn**	**04 55 36.8**	**+0.3**
ARGC				*i*		04 55 49.1	
	comp=Z,15nm,0.2s						
RUSC	**La Rusia**	**3.12**	**212**	*e*P	**Pn**	**04 54 59.9**	**-0.2**
RUSC				*e*S	**Sn**	**04 55 37.1**	**-0.8**
RUSC				*i*		04 55 54.0	
	comp=Z,21nm,0.6s						
URIC	**Uribia, Colomb**	**3.18**	**350**	*e*P	**Pn**	**04 55 00.5**	**0.0**
URIC				*e*S	**Sn**	**04 55 38.2**	**-0.7**
URIC				*i*		04 55 53.8	
	comp=Z,18nm,0.3s						
BAUV	**El Baul**	**3.36**	**83**	*e*P	**Pn**	**04 55 03.1**	**+0.2**
BAUV				*e*S	**Sn**	**04 55 42.0**	**-1.2**
ZARC	**Zaragoza, Cauc**	**3.57**	**253**	*e*P	**Pn**	**04 55 05.4**	**-0.4**
ZARC				*e*S	**Sn**	**04 55 50.0**	**+1.6**
ZARC				*i*		04 55 59.2	
	comp=Z,26nm,0.4s						
JACV	**Jacura**	**3.58**	**45**	*e*P	**Pn**	**04 55 06.0**	**0.0**
SPBC	**San Pablo de B**	**3.90**	**223**	*e*P	**Pn**	**04 55 10.6**	**0.0**
SPBC				*e*S	**Sn**	**04 55 58.0**	**+1.1**
SPBC				*i*		04 56 20.3	
	comp=Z,23nm,0.3s						
SJCC	**San Jacinto, C**	**3.95**	**290**	*e*P	**Pn**	**04 55 11.6**	**+0.5**
SJCC				*e*S	**Sn**	**04 55 58.1**	**+0.2**
SJCC				*i*		04 56 02.5	
	comp=Z,22nm,0.8s						
BENV	**Beln**	**4.02**	**69**	*e*P	**Pn**	**04 55 12.2**	**+0.1**
BENV				*e*S	**Sn**	**04 55 58.2**	**-1.4**
UREC	**San Jos de Ur**	**4.15**	**259**	*e*P	**Pn**	**04 55 13.7**	**-0.2**
MOTC	**Monteria, Cord**	**4.21**	**273**	*e*P	**Pn**	**04 55 14.7**	**+0.1**
MOTC				*e*S	**Sn**	**04 56 04.6**	**+0.4**
MOTC				*i*		04 56 14.4	
	comp=Z,5.9nm,0.5s						
CHIC	**Chingaza**	**4.52**	**211**	*i* P	**Pn**	**04 55 19.4**	**+0.1**
CHIC				*e*S	**Sn**	**04 56 11.7**	**-0.9**
CHIC				*i*		04 56 18.0	
	comp=Z,11nm,0.5s						
HELC	**Santa Helena**	**4.71**	**240**	*e*P	**Pn**	**04 55 22.2**	**+0.5**
HELC				*e*S	**Sn**	**04 56 17.0**	**0.0**
HELC				*i*		04 56 38.6	
	comp=Z,8.3nm,0.3s						
CACV	**CAICARA DEL OR**	**4.92**	**101**	*e*P	Pb	04 55 31.6	-5.0
MERV	**Las Mercedes**	**5.11**	**82**	*e*P	**Pn**	**04 55 26.3**	**-0.7**
BIRV	**Birongo**	**5.42**	**69**	*e*P	**Pn**	**04 55 30.1**	**-1.2**
ORTC	**Ortega, Tolima**	**5.98**	**220**	*e*P	**Pn**	**04 55 38.5**	**-0.5**
ORTC				*e*S	**Sn**	**04 56 46.9**	**-1.1**
PCRV	**Puerto La Cruz**	**6.88**	**76**	*e*P	**Pn**	**04 55 50.8**	**-0.6**

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*FUNV **08** 05:02:18.5, 8°.50N×71°.39W, h7km, MW3.6*

ISC 08 05:02:18.0±1.6, **8°.58N**±0°.03×**71°.34W**±0°.03, **h7**km±12km, **n24**, σ**0ˢ.87**/41, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	**Socops**	**0.56**	**122**	*e*P	**Pg**	**05 02 28.7**	**-0.2**
SOCV				*e*S	**Sg**	**05 02 37.0**	**+0.7**
SDV	**Santo Domingo**	**0.76**	**67**	*e*P	**Pb**	**05 02 34.1**	**+0.3**
SDV				*e*S	**Sb**	**05 02 45.4**	**+1.0**
SDV				*i*		05 02 48.8	
	comp=Z,72nm,0.4s						
PAMC	**Pamplona, Colo**	**1.83**	**228**	*e*P	**Pn**	**05 02 50.2**	**-0.2**
PAMC				*e*S	**Sn**	**05 03 14.2**	**+0.1**
PAMC				*i*		05 03 16.8	
	comp=Z,81nm,0.3s						
MCQV	**Machiques**	**1.88**	**321**	*e*P	**Pn**	**05 02 50.2**	**-0.5**
MCQV				*e*S	**Sn**	**05 03 14.8**	**+0.2**
OCAC	**Ocana**	**1.99**	**260**	*e*P	**Pn**	**05 02 51.5**	**-0.8**
OCAC				*e*S	**Sn**	**05 03 17.4**	**-0.2**
OCAC				*i*		05 03 19.0	
	comp=Z,389nm,0.3s						
TAMC	**Tame, Arauca**	**2.18**	**192**	*e*P	**Pb**	**05 02 57.5**	**-0.4**
TAMC				*e*S	**Sb**	**05 03 25.0**	**-0.2**
TAMC				*i*		05 03 25.4	
	comp=Z,52nm,0.4s						
ELOV	**Elorza**	**2.42**	**130**	*e*P	**Pb**	**05 03 00.3**	**-1.6**
ELOV				*e*S	**Sb**	**05 03 31.5**	**-0.5**
ELOV				*i*		05 03 40.0	
	comp=Z,180nm,0.2s						
ELOV	**Elorza**	**2.42**	**130**	*e*P	**Pn**	**05 02 57.6**	**-0.4**
ELOV				*e*S	**Sn**	**05 03 26.7**	**-1.2**
SIQV	**Siquisique**	**2.55**	**36**	*e*P	**Pn**	**05 03 00.9**	**+1.0**
BARC	**Barichara**	**2.69**	**223**	*e*P	**Pn**	**05 03 03.3**	**+1.2**
BARC				*e*S	**Sn**	**05 03 36.5**	**+1.4**
BARC				*i*		05 03 41.0	
	comp=Z,42nm,0.3s						
SMLC	**San Martn de**	**2.71**	**275**	*e*P	**Pn**	**05 03 01.5**	**-0.6**
SMLC				*e*S	**Sn**	**05 03 34.4**	**-0.8**

SMLC				i		05 03 38.8	
	comp=Z,61nm,0.4s						
BRRC	Barranca, Sant	2.77	238	eP	Pn	05 03 03.0	+0.1
BRRC				eS	Sn	05 03 37.5	+0.8
BRRC				i		05 03 52.3	
	comp=Z,13nm,0.4s						
URIC	Uribia, Colomb	3.17	348	eP	Pn	05 03 08.6	+0.2
URIC				eS	Sn	05 03 45.5	-1.0
URIC				i		05 03 57.0	
	comp=Z,7.9nm,0.3s						
RUSC	La Rusia	3.18	213	eP	Pn	05 03 10.3	+1.3
RUSC				eS	Sn	05 03 49.3	+1.8
RUSC				i		05 03 57.5	
	comp=Z,10nm,0.3s						
BAUV	El Baul	3.28	83	eP	Pn	05 03 10.4	+0.5
BAUV				eS	Sn	05 03 48.1	-1.2
MONV	Montecano	3.61	22	eP	Pn	05 03 15.6	+1.1
ZARC	Zaragoza, Cauc	3.65	253	eP	Pn	05 03 14.2	-0.8
ZARC				eS	Sn	05 03 57.4	-1.0
ZARC				i		05 04 14.7	
	comp=Z,9.0nm,0.5s						
BENV	Beln	3.94	69	eP	Pn	05 03 19.9	+0.9
SPBC	San Pablo de B	3.98	223	eP	Pn	05 03 20.4	+0.7
SPBC				eS	Sn	05 04 08.0	+1.4
SPBC				i		05 04 29.2	
	comp=Z,6.6nm,0.5s						
SJCC	San Jacinto, C	4.01	289	eP	Pn	05 03 20.9	+0.8
SJCC				eS	Sn	05 04 07.8	+0.4
SJCC				i		05 04 11.2	
	comp=Z,7.0nm,0.8s						
MOTC	Monteria, Cord	4.28	273	eP	Pn	05 03 23.5	-0.2
MOTC				eS	Sn	05 04 13.8	-0.2
MOTC				i		05 04 41.8	
	comp=Z,3.1nm,0.5s						
TACV	Tcata	4.53	70	eP	Pn	05 03 27.1	-0.1
CACV	CAICARA DEL OR	4.86	102	eP	Pb	05 03 37.9	-5.6
BIRV	Birongo	5.34	69	eP	Pn	05 03 38.8	+0.5

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*IDC **08** 05:04:49.8±0.6, 20°.17S×169°.30E, h0^{km}, mb4.3/17, mb1 4.4/19, mb1mx4.4/25, mbtmp4.3/19, ML3.7/2, MS3.8/14, Ms1 3.8/14, ms1mx3.6/32, Error ellipse: s-maj=18.7km s-min=16.4km az=120.0*

*BGR **08** 05:04:54.8±0.0, 20°.47S×170°.09E, h33^{km}*

*NOU **08** 05:04:54.5, 20°.27S×168°.88E, h0^{km}, MLv4.8/11, Loyalty Islands*

*NEIC **08** 05:04:57.9±2.2, 20°.26S±0°.05×168°.82E±0°.05, h35^{km}±2^{km}, mb4.4/13, Error ellipse: s-maj=10.1km s-min=7.1km az=38.0*

ISC 08 05:04:55.4±0.5**, 20°.27S**±0°.04×**169°.02E**±0°.07**, h31^{km}, n111, σ1^{s}.34**/97**, mb4.3**/22**, MS3.8**/13**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	Mare, Loyalty	1.52	217		Pn	05 05 20.5	+0.1
MARNC				Sn	Sn	05 05 38.7	-0.5
MARNC	Mare, Loyalty	1.52	217	P	Pn	05 05 20.9	+0.4
MARNC	Mare, Loyalty	1.52	217	P	Pn	05 05 20.7	+0.2
LIFNC	LIFOU	1.75	253		Pn	05 05 22.3	-1.3
LIFNC				Sn	Sn	05 05 41.9	-2.9
LIFNC	LIFOU	1.75	253	P	Pn	05 05 22.3	-1.3
LIFNC	LIFOU	1.75	253	P	Pn	05 05 22.2	-1.3
RTV	Rentapao	2.53	347	P	Pn	05 05 35.9	+1.6
RTV	Rentapao	2.53	347	P	Pn	05 05 36.9	+2.6
DVP	Devils Point	2.65	342	P	Pn	05 05 38.0	+2.0
DVP	Devils Point	2.65	342	P	Pb	05 05 40.6	-1.6
YATNC	Mamie plateau,	2.67	228	P	Pn	05 05 36.4	+0.1
YATNC	Mamie plateau,	2.67	228	P	Pn	05 05 37.6	+1.3
PINNC	Pines Island,	2.76	212		Pn	05 05 38.3	+0.9
PINNC	Pines Island,	2.76	212	P	Pn	05 05 38.5	+1.1
PINNC	Pines Island,	2.76	212	P	Pn	05 05 39.1	+1.7
OUENC	Ouen Island, N	2.95	223		Pn	05 05 41.2	+1.1
OUENC	Ouen Island, N	2.95	223	P	Pn	05 05 41.9	+1.8
OUENC	Ouen Island, N	2.95	223	P	Pn	05 05 42.2	+2.1
DZM	Mont Dzumac	3.00	233	ePn	Pn	05 05 41.5	+0.5
	168nm,0.2s						
DZM				eSn	Sn	05 06 14.3	-1.6
	280nm,0.3s						
DZM				eLR	LR	05 06 18.5	
	comp=Z,2µm,23.8s						
DZM	Mont Dzumac	3.00	233	Pn	Pn	05 05 41.4	+0.5
	10.0nm,0.3s,baz=79,slow=10,SNR=585						
DZM				Sn	Sn	05 06 14.3	-1.6
	22nm,0.3s,baz=127,slow=20,SNR=5.7						
DZM				LR	LR	05 06 53.1	
	comp=Z,1µm,20.1s,baz=128,slow=38						
DZM	Mont Dzumac	3.00	233	P	Pn	05 05 41.8	+0.9
NOUC	Port Laguerre	3.13	234	P	Pn	05 05 44.2	+1.7
ONTNC	Ouen Toro	3.14	229		Pn	05 05 43.8	+1.1
ONTNC	Ouen Toro	3.14	229	P	Pn	05 05 44.9	+2.2
ONTNC	Ouen Toro	3.14	229	P	Pn	05 05 44.5	+1.8
KOUNC	Koumac, New Ca	4.45	266	P	Pn	05 06 02.3	+1.5
KOUNC	Koumac, New Ca	4.45	266	P	Pn	05 06 02.3	+1.5
MSVF	Nonsavu	8.90	75	Pn	Pn	05 07 07.1	+5.1
	1.1nm,0.3s,baz=245,slow=13,SNR=16						
MSVF				LR	LR	05 09 57.7	
	comp=Z,2µm,18.2s,baz=231,slow=36						
MSVF	Nonsavu	8.90	75		Pn	05 07 08.2	+6.2
LHI	Lord Howe Isla	14.34	217	Pn	Pn	05 08 16.2	0.0
URZ	Urewera	19.25	160	P	P	05 09 17.5	+0.3
	0.2nm,0.3s,baz=298,slow=24,SNR=2.0						
URZ				LR	LR	05 15 26.8	
	comp=Z,300nm,20.4s,baz=31,slow=33						
CTA	Charters Tower	21.37	267	P	P	05 09 43.2	+2.8
	5.3nm,0.7s,baz=90,slow=11,SNR=10						
PMG	Port Moresby	23.70	294	P	P	05 10 07.3	+2.6
	4.3nm,0.3s,baz=207,slow=4.4,SNR=3.4						
STKA	Stephens Creek	27.14	239	P	P	05 10 38.5	+2.6
	1.4nm,0.7s,baz=357,slow=10.0,SNR=3.1						
STKA				LR	LR	05 21 00.1	
	comp=Z,259nm,20.1s,baz=44,slow=35						
RAR	Rarotonga	29.17	97	LR	LR	05 20 16.3	
	comp=Z,82nm,21.3s,baz=268,slow=32						
WR0	Warramunga Arr	32.35	264	P	P	05 11 22.2	0.0
WR0				IAmb	IAmb	05 11 24.4	
	comp=Z,4.0nm,0.9s						
WB0	Warramunga Arr	32.51	265	P	P	05 11 23.7	+0.1
WB0				IAmb	IAmb	05 11 25.8	
	comp=Z,4.3nm,0.9s						
WB2	Warramunga Arr	32.53	264	P	P	05 11 23.9	+0.1
WB2				IAmb	IAmb	05 11 36.5	
	comp=Z,6.1nm,1.1s						
WRA	Warramunga Arr	32.54	264	P	P	05 11 23.8	-0.1
	comp=Z,1.2nm,0.5s,baz=92,slow=8.5,SNR=23						
WRA				PcP	PcP	05 14 09.1	-1.2
	comp=Z,0.5nm,0.8s,baz=96,slow=3.0,SNR=4.8						
WRA				LR	LR	05 24 31.5	
	comp=Z,197nm,20.0s,baz=90,slow=36						
WRA	Warramunga Arr	32.54	264	P	P	05 11 23.8	-0.1
AS31	Alice Springs	32.70	258	P	P	05 11 26.1	+0.8
ASAR	Alice Springs	32.70	258	P	P	05 11 25.9	+0.7
	comp=Z,7.8nm,0.9s,baz=81,slow=9.0,SNR=80						
ASAR				PcP	PcP	05 14 09.6	-1.1
	comp=Z,1.4nm,0.9s,baz=110,slow=3.7,SNR=5.9						
ASAR				ScP	ScP	05 17 57.6	+5.1
	comp=Z,0.2nm,0.7s,baz=108,slow=3.0,SNR=1.0						
ASAR				LR	LR	05 25 12.6	
	comp=Z,311nm,18.4s,baz=98,slow=37						
FORT	Forrest	38.23	246	P	P	05 12 13.9	+1.1
FORT				IAmb	IAmb	05 12 26.5	
	comp=Z,12nm,1.0s						
TBI	Tubuai	38.57	102	eLR	LR	05 22 53.7	
	comp=Z,201nm,28.8s						
PPT2	Papeete2	39.18	93	eLR	LR	05 23 09.7	
	comp=Z,237nm,24.2s						
GUMO	Guam	41.19	323	LR	LR	05 27 19.0	
	comp=Z,58nm,20.4s,baz=118,slow=33						
BATI	Baumata	44.77	276	LR	LR	05 30 54.1	
	comp=Z,229nm,21.2s,baz=178,slow=35						
VNDA	Vanda	57.40	182	P	P	05 14 38.7	-1.8
	comp=Z,1.0nm,0.9s,baz=353,slow=6.9,SNR=4.2						
VNDA				LR	LR	05 36 08.1	
	comp=Z,43nm,19.1s,baz=338,slow=33						
VNDA	Vanda	57.40	182	P	P	05 14 41.5	+1.1
VNDA				IAmb	IAmb	05 14 56.9	
	comp=Z,2.9nm,1.1s						
SBA	Scott Base	57.64	181	P	P	05 14 43.2	+1.1
LEM	Lembang	60.87	273	LR	LR	05 42 25.0	
	comp=Z,87nm,18.4s,baz=61,slow=37						
MJAR	Matsushiro Arr	63.57	333	P	P	05 15 20.9	-2.2
	comp=Z,3.1nm,0.9s,baz=169,slow=7.0,SNR=5.6						
QSPA	South Pole Qui	69.79	180	P	P	05 16 03.5	+0.9
	comp=Z,9.4nm,1.0s,baz=5.3,slow=3.8,SNR=19						
QSPA	South Pole Qui	69.79	180	P	P	05 16 03.4	+0.8
PSI	Prapat	72.39	280	LR	LR	05 50 40.1	
	comp=Z,43nm,18.3s,baz=156,slow=38						
USRK	Ussuriysk Ar.	72.56	333	P	P	05 16 19.4	+0.1
	comp=Z,2.2nm,0.7s,baz=247,slow=3.9,SNR=4.9						
USRK	Ussuriysk Ar.	72.56	333	P	P	05 16 20.1	+0.7
PETK	Petropavlovsk-	73.73	353	P	P	05 16 26.5	+0.4
	comp=Z,11nm,1.1s,baz=197,slow=4.4,SNR=2.5						
PETK				LR	LR	05 43 46.0	
	comp=Z,60nm,20.2s,baz=154,slow=32						
MAW	Mawson	77.41	202	P	P	05 16 48.2	+1.1
	comp=Z,1.8nm,0.8s,baz=103,slow=11,SNR=3.6						
MAW	Mawson	77.41	202	P	P	05 16 48.3	+1.2
BJT	Baijiatuau	77.60	321	P	P	05 16 48.8	+0.3
CMAR	Chiang Mai Arr	78.74	295	P	P	05 16 56.3	+0.9
	comp=Z,0.8nm,0.3s,baz=144,slow=3.7,SNR=5.5						
CMAR	Chiang Mai Arr	78.74	295	P	P	05 16 56.6	+1.2
SONM	Songino Array	87.92	323	P	P	05 17 42.4	+0.3
	comp=Z,6.4nm,0.9s,baz=136,slow=5.3,SNR=24						
ISA	Isabella, Lake	88.28	51	P	P	05 17 43.6	-0.5
VNA3	Neumayer Olymp	88.73	180	P	P	05 17 45.1	-0.4
VNA2	Neumayer--Watz	89.02	181	P	P	05 17 46.8	-0.1
	baz=185,slow=4.2						
VNA1	Neumayer--Stat	89.31	181	P	P	05 17 48.1	-0.1
RYN	Ryan	89.56	48	P	P	05 17 50.0	-0.1
RYN				IAmb	IAmb	05 17 50.6	
	comp=Z,4.1nm,1.0s						
NVAR	Mina Array Bea	89.63	49	P	P	05 17 49.2	-1.3
	comp=Z,3.5nm,0.9s,baz=225,slow=7.7,SNR=17						
NVAR	Mina Array Bea	89.63	49	P	P	05 17 50.6	+0.1
ILAR	Eielson Array	91.27	17	P	P	05 17 54.4	-2.9
	comp=Z,0.8nm,0.8s,baz=230,slow=4.8,SNR=11						
ILAR				LR	LR	05 54 07.2	
	comp=Z,84nm,18.6s,baz=183,slow=32						
TXAR	Lajitas Array	97.43	62	P	P	05 18 23.3	-3.2
	comp=Z,0.4nm,0.7s,baz=219,slow=7.0,SNR=2.8						
PDAR	Pinedale Array	97.46	47	P	P	05 18 26.5	0.0
	comp=Z,0.4nm,0.7s,baz=236,slow=6.4,SNR=3.0						
ARCES	ARCESS Array B	126.01	345	PKP	PKPdf	05 23 52.1	-1.7
	comp=Z,2.7nm,0.7s,baz=70,slow=2.2,SNR=10.0						
BDFB	Brasilia	129.03	132	PKP	PKPdf	05 23 59.4	-1.8
	comp=Z,2.4nm,0.7s,baz=198,slow=20,SNR=4.0						
AKASG	Malin Array Be	136.20	324	PKhKP	PKPpre	05 24 08.0	
	comp=Z,0.2nm,0.3s,baz=48,slow=1.4,SNR=1.4						
BRTR	Keskin Array B	137.28	307	PKP	PKPdf	05 24 15.6	-0.5
	comp=Z,1.0nm,1.0s,baz=112,slow=3.4,SNR=3.6						
DPC	Dobruska-Polom	143.03	331	ePKP	PKPab	05 24 21.7	+0.4
BRG	Berggiesshubel	143.70	333	ePKPbc	PKPab	05 24 24.1	+0.2
	baz=38,slow=3.0						
CLL	Collm	143.76	334	ePKPbc	PKPbc	05 24 24.6	-0.2
	baz=38,slow=3.0						
FBE	Freiberg	143.91	334	ePKPbc	PKPbc	05 24 25.7	+0.4
	baz=38,slow=3.0						
PRU	Pruhonice	144.09	332	ePKP	PKPab	05 24 25.6	+0.2
CLZ	Clausthal	144.35	337	ePKPbc	PKPbc	05 24 26.7	0.0
	baz=38,slow=3.0						
EKA	Eskdalemuir Ar	144.50	352	PKP	PKPbc	05 24 27.6	+0.6
	comp=Z,0.5nm,0.4s,baz=7.4,slow=2.9,SNR=4.9						
TANN	Tannenbergstha	144.66	334	ePKPbc	PKPbc	05 24 27.9	+0.1
	baz=38,slow=3.0						
WERD	Werda	144.70	334	ePKPbc	PKPbc	05 24 28.1	+0.2
	baz=38,slow=3.0						
GTTG	Gottingen	144.74	337	ePKPbc	PKPbc	05 24 28.2	+0.3
	baz=38,slow=3.0						
GUNZ	Gunzen	144.76	334	ePKPbc	PKPbc	05 24 28.4	+0.4
	baz=38,slow=3.0						
WERN	Wernitzgruen	144.80	334	ePKPbc	PKPbc	05 24 28.6	+0.4
	baz=38,slow=3.0						
NKC	Novy Kostel	144.81	334	ePKP	PKPab	05 24 27.6	-0.5
MOX	Moxa	144.83	335	ePKPbc	PKPab	05 24 28.1	0.0
	baz=38,slow=3.0						
IBBN	Ibbenburen	144.86	340	ePKPbc	PKPab	05 24 28.2	+0.1
	baz=38,slow=3.0						
CKRC	Cesky Krumlov	145.03	330	ePKP	PKPbc	05 24 28.3	-0.7
MANZ	Manzenberg	145.14	334	ePKPbc	PKPab	05 24 29.5	+0.2
	baz=38,slow=3.0						
KHC	Kasperske Hory	145.14	331	ePKP	PKPbc	05 24 28.4	-0.9
ROTZ	Rotzenmuhle	145.26	333	ePKPbc	PKPdf	05 24 30.0	+0.1
	baz=38,slow=3.0						
GEC2	GERESS Array S	145.29	331	ePKPbc	PKPbc	05 24 29.6	-0.3
	baz=38,slow=3.0						
GERES	GERESS Array B	145.29	331	PKPbc	PKPbc	05 24 29.6	-0.3
	comp=Z,8.7nm,0.8s,baz=46,slow=3.9,SNR=40						
UBBA	Unterbreizbach	145.31	336	ePKPbc	PKPbc	05 24 29.7	+0.1
	baz=38,slow=3.0						
WET	Wettzell	145.44	332	ePKPbc	PKPbc	05 24 30.4	+0.2
	baz=38,slow=3.0						
GRF	Grafenberg Arr	145.73	334	ePKPbc	PKPab	05 24 31.5	0.0
	baz=38,slow=3.0						
BUG	Bochum--Univer	145.76	340	ePKPbc	PKPdf	05 24 30.7	+0.1
	baz=38,slow=3.0						
TNS	Taunus Mts	146.38	337	ePKPbc	PKPbc	05 24 32.9	-0.3
	baz=38,slow=3.0						
RJOB	Jochberg	146.52	330	ePKPbc	PKPbc	05 24 33.4	-0.3
	baz=38,slow=3.0						
FUR	Furstenfeldbru	146.88	332	ePKPbc	PKPbc	05 24 34.7	+0.1
	baz=38,slow=3.0						
STU	Stuttgart	147.27	335	ePKPbc	PKPbc	05 24 35.9	+0.3
	baz=38,slow=3.0						
WLF	Walferdange	147.65	339	ePKPbc	PKPbc	05 24 37.3	+0.6
	baz=38,slow=3.0						
UBR	Ueberruh	147.76	333	ePKPbc	PKPbc	05 24 36.5	-0.6
	baz=38,slow=3.0						
BFO	Black Forest	147.97	335	ePKPbc	PKPbc	05 24 37.3	-0.3
	baz=38,slow=3.0						
TORD	Torodi Ar. Bea	165.95	242	PKPab	PKPab	05 25 58.1	0.0
	comp=Z,0.8nm,1.0s,baz=98,slow=6.1,SNR=4.1						

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*IDC **08** 05:10:22.4±2.1, 48°.52S×164°.50E, h0^{km}, mb3.5/2, mb1 3.8/2, mb1mx3.5/24, mbtmp3.5/2, MS3.5/1, Ms1 3.5/1, ms1mx2.8/23, Error ellipse: s-maj=253.3km s-min=52.9km az=34.0*

ISC 08 05:10:27.7±1.4**, 49°.0S**±0°.1×**164°.03E**±0°.10**, h35^{km}, n20, σ1^{s}.35**/33**, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PYZ	Puysegur Point	3.33	34	P	Pn	05 11 16.7	-0.6
PYZ				S	Sn	05 11 55.7	0.0
APZ	The Paps	3.42	53	P	Pn	05 11 18.8	+0.3
APZ				S	Sn	05 11 57.7	-0.1
WHZ	Wether Hill Ro	4.07	42	P	Pn	05 11 27.6	+0.2
WHZ				S	Sn	05 12 12.0	-1.9
DCZ	Deep Cove	4.11	32	P	Pn	05 11 26.8	-1.1
DCZ				S	Sn	05 12 13.3	-1.4
SYZ	Scrubby Hill	4.22	57	P	Pn	05 11 30.4	+0.9
SYZ				S	Sn	05 12 16.0	-1.5
MLZ	Mavora Lakes	4.56	39	P	Pn	05 11 35.3	+1.1
MLZ				S	Sn	05 12 26.8	+0.8
TUZ	Tuapeka	4.85	54	P	Pn	05 11 39.5	+1.3
TUZ				S	Sn	05 12 34.3	+1.2
MSZ	Milford Sound	5.07	33	P	Pn	05 11 43.5	+2.4
MSZ				S	Sn	05 12 39.6	+1.3
EAZ	Earnscleugh	5.20	46	P	Pn	05 11 44.0	+1.0
EAZ				S	Sn	05 12 41.3	-0.3
WKZ	Wanaka	5.38	41	P	Pn	05 11 47.5	+2.1
WKZ				S	Sn	05 12 46.6	+0.5
HHSZ	Highcliff Hill	5.42	58	P	Pn	05 11 48.3	+2.3
HHSZ				S	Sn	05 12 46.5	-0.7
JCZ	Jackson Bay	5.90	36	P	Pn	05 11 54.8	+2.1
JCZ				S	Sn	05 13 00.1	+1.1
ODZ	Otahua Downs	5.99	51	P	Pn	05 11 53.4	-0.4
ODZ				S	Sn	05 12 58.7	-2.5
LBZ	Lake Benmore	6.24	45	P	Pn	05 11 56.6	-0.7
LBZ				S	Sn	05 13 04.9	-2.5
ASAR	Alice Springs	34.63	306	P	P	05 17 12.8	-0.8
	0.5nm,0.6s,baz=141,slow=8.0,SNR=7.4						
WRA	Warramunga Arr	37.48	310	P	P	05 17 37.7	-0.3
	0.7nm,0.9s,baz=141,slow=7.9,SNR=4.0						
RAR	Rarotonga	39.94	59	LR	LR	05 33 29.7	
	comp=Z,64nm,18.8s,baz=268,slow=35						
AKASG	Malin Array Be	151.14	291	PKPbc	PKPbc	05 30 16.7	+0.6
	0.2nm,0.3s,baz=107,slow=2.4,SNR=4.3						
ARCES	ARCESS Array B	151.38	331	PKPbc	PKPbc	05 30 15.8	-0.3
	2.4nm,0.9s,baz=77,slow=4.1,SNR=3.8						
FINES	FINESS Array B	153.48	314	PKPbc	PKPbc	05 30 21.0	-0.1
	2.3nm,0.8s,baz=97,slow=8.3,SNR=5.1						

IDC 08 05:22:27.1±0.9**, 15°.84S**×**174°.85W, h0^{km}, mb3.6**/8**, mb1 3.9**/8**, mb1mx3.8**/33**, mbtmp3.6**/8**, MS3.7**/10**, Ms1 3.7**/10**, ms1mx3.5**/25**, Error ellipse: s-maj=48.3km s-min=22.0km az=142.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	3.53	58	Pn	Pn	05 23 16.7	-6.7
	6.0nm,0.3s,baz=17,slow=3.4,SNR=8.4						
AFI				LR	LR	05 24 29.0	
	comp=Z,884nm,20.7s,baz=196,slow=34						
DZM	Mont Dzumac	18.74	248	eP	Pn	05 26 56.1	+8.0
	40nm,1.2s						
DZM				eLR	LR	05 31 28.8	
	comp=Z,661nm,25.8s						
DZM	Mont Dzumac	18.74	248	LR	LR	05 32 55.2	
	comp=Z,370nm,19.6s,baz=68,slow=34						
PPT2	Papeete2	24.26	98	eLQ	LQ	05 32 30.7	
	395nm,24.5s						
PPT2				eLR	LR	05 33 30.0	
	comp=Z,239nm,26.0s						
TAOE	Nuku Hiva Isla	34.56	83	eLR	LR	05 38 12.8	
	comp=Z,210nm,25.4s						
H11S2	WAKE ISLAND Hy	38.65	331	T	T	06 10 59.5	
	baz=149,slow=76,SNR=62						
H11S3	WAKE ISLAND Hy	38.66	331	T	T	06 11 01.1	
	baz=149,slow=76,SNR=47						
H11S1	WAKE ISLAND Hy	38.66	331	T	T	06 10 59.6	
	baz=149,slow=76,SNR=42						
STKA	Stephens Creek	42.61	240	P	P	05 30 25.4	0.0
	1.6nm,0.9s,baz=89,slow=7.8,SNR=2.4						
STKA				LR	LR	05 45 55.1	
	comp=Z,82nm,20.4s,baz=131,slow=33						
WRA	Warramunga Arr	48.39	257	P	P	05 31 10.9	-0.4
	0.4nm,1.0s,baz=95,slow=6.8,SNR=2.5						
WRA				LR	LR	05 49 38.6	
	comp=Z,60nm,21.7s,baz=180,slow=34						
ASAR	Alice Springs	48.65	252	P	P	05 31 13.2	-0.2
	2.4nm,0.8s,baz=85,slow=8.3,SNR=23						
ASAR				LR	LR	05 50 10.6	
	comp=Z,203nm,21.2s,baz=92,slow=34						
GUMO	Guam	49.41	304	LR	LR	05 49 05.5	
	comp=Z,33nm,19.6s,baz=108,slow=32						
VNDA	Vanda	62.81	186	P	P	05 32 53.8	-0.3
	1.3nm,1.0s,baz=4.2,slow=4.9,SNR=4.2						
PETK	Petropavlovsk-	72.63	343	LR	LR	05 58 24.3	
	comp=Z,34nm,21.3s,baz=130,slow=30						
KSRS	Korea Array	75.50	316	LR	LR	06 02 43.0	
	comp=Z,22nm,18.8s,baz=172,slow=32						
NVAR	Mina Array Bea	75.59	43	P	P	05 34 14.0	-0.2
	0.8nm,0.9s,baz=227,slow=9.3,SNR=2.9						
USRK	Ussuriysk Ar.	76.90	324	LR	LR	06 02 17.6	
	comp=Z,52nm,20.5s,baz=77,slow=31						
TXAR	Lajitas Array	82.01	57	P	P	05 34 50.6	+1.0
	0.1nm,0.5s,baz=218,slow=5.7,SNR=1.6						
ILAR	Eielson Array	83.14	12	P	P	05 34 53.1	-1.5
	0.3nm,0.8s,baz=213,slow=6.2,SNR=2.0						
PDAR	Pinedale Array	83.52	42	P	P	05 34 57.1	-0.2
	0.5nm,0.9s,baz=209,slow=5.2,SNR=2.3						
PDAR				LR	LR	06 08 28.7	
	comp=Z,55nm,18.9s,baz=274,slow=33						
H03S2	Juan Fernandez	86.12	124	T	T	07 10 06.0	
	baz=252,slow=75,SNR=22						
H03S1	Juan Fernandez	86.14	124	T	T	07 10 07.1	
	baz=252,slow=75,SNR=18						
H03S3	Juan Fernandez	86.14	124	T	T	07 10 05.8	
	baz=252,slow=75,SNR=17						
BRTR	Keskin Array B	145.60	319	PKPbc	PKPab	05 42 09.2	+0.8
	1.0nm,0.8s,baz=42,slow=2.3,SNR=2.2						

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*IDC **08** 05:22:25.8±2.1, 1°.01N×127°.35E, h0^{km}, mb3.6/3, mb1 3.9/3, mb1mx3.5/38, mbtmp3.7/3, Error ellipse: s-maj=169.1km s-min=25.4km az=66.0*

*DJA **08** 05:22:27.6±0.4, 1°N±4°×12°7E±°, h10^{km}, M3.6/7, MLv3.6/7*

ISC 08 05:22:27.2±1.7**, 1°.0N**±0°.1×**127°.5E**±0°.2**, h10^{km}, n6,** σ**0^{s}.38**/6**, mb3.8**/3**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	0.29	200	P	Pg	05 22 32.7	-0.3
LBMI	Labuha	1.67	179	P	Pn	05 22 56.8	+0.2
SANI	Sanana	3.41	206	P	Pn	05 23 20.9	+0.4
WRA	Warramunga Arr	21.92	162	P	P	05 27 20.7	-0.2
	2.1nm,0.9s,baz=341,slow=11,SNR=14						
ASAR	Alice Springs	25.34	166	P	P	05 27 54.8	+0.2
	2.0nm,1.0s,baz=345,slow=10,SNR=19						
MKAR	Makanchi Array	60.17	326	P	P	05 32 35.2	-0.1
	0.5nm,0.6s,baz=118,slow=6.2,SNR=5.8						

IDC 08 05:36:55.6±1.9**, 0°.82N**×**127°.08E, h0^{km}, mb3.7**/4**, mb1 3.9**/4**, mb1mx3.5**/31**, mbtmp3.7**/4**, Error ellipse: s-maj=147.8km s-min=26.2km az=65.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	21.83	161	P	P	05 41 50.0	+0.2
	1.5nm,0.6s,baz=340,slow=11,SNR=19						
ASAR	Alice Springs	25.23	165	P	P	05 42 23.1	-0.4
	1.4nm,0.8s,baz=345,slow=7.8,SNR=20						
STKA	Stephens Creek	35.31	158	P	P	05 43 52.9	+0.3
	1.0nm,0.6s,baz=346,slow=12,SNR=2.0						
MKAR	Makanchi Array	60.14	326	P	P	05 47 05.1	0.0
	0.6nm,0.8s,baz=126,slow=7.3,SNR=3.5						

IDC 08 05:44:21.4±2.3**, 1°.11N**×**127°.44E, h0^{km}, mb3.5**/3**, mb1 3.7**/3**, mb1mx3.4**/34**, mbtmp3.5**/3**, Error ellipse: s-maj=173.9km s-min=28.0km az=67.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	21.99	162	P	P	05 49 16.5	-0.8
	0.6nm,0.5s,baz=341,slow=11,SNR=11						
ASAR	Alice Springs	25.42	166	P	P	05 49 51.5	+0.5
	0.8nm,0.6s,baz=346,slow=9.0,SNR=14						
MKAR	Makanchi Array	60.10	326	P	P	05 54 30.5	-0.1
	0.7nm,1.0s,baz=131,slow=5.9,SNR=2.2						

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*FUNV **08** 06:28:02.4, 8°.54N×71°.38W, h2^{km}, MW3.4*

ISC 08 06:28:02.5±1.4**, 8°.53N**±0°.03×**71°.37W**±0°.03**, h15^{km}**±11^{km}**, n24,** σ**1^{s}.32**/42**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	Socops	0.56	115	eP	Pg	06 28 13.0	-0.6
SOCV				eS	Sg	06 28 21.9	+0.7
SDV	Santo Domingo	0.81	64	eP	Pb	06 28 18.9	+0.5
SDV				eS	Sb	06 28 30.1	+0.9
SDV				i		06 28 33.1	
	comp=Z,46nm,0.3s						
PAMC	Pamplona, Colo	1.77	228	eP	Pn	06 28 34.0	+1.0
PAMC				eS	Sb	06 28 58.0	+0.8
PAMC				i		06 28 59.9	
	comp=Z,100nm,0.4s						
MCQV	Machiques	1.90	323	eP	Pn	06 28 34.6	+0.2
MCQV				eS	Sn	06 28 59.4	+1.3
OCAC	Ocana	1.95	262	eP	Pn	06 28 36.0	+0.7
OCAC				eS	Sn	06 28 58.7	-0.9
OCAC				i		06 29 03.0	
	comp=Z,631nm,0.4s						
TAMC	Tame, Arauca	2.12	191	eP	Pn	06 28 39.0	+1.5
TAMC				eS	Sb	06 29 07.0	+0.2
TAMC				i		06 29 15.4	
	comp=Z,54nm,0.4s						
DABV	Dabajuro	2.49	17	eP	Pn	06 28 43.7	+1.2
SIQV	Siquisique	2.61	36	eP	Pn	06 28 44.8	+0.6
SIQV				eS	Sn	06 29 15.6	-0.1
BARC	Barichara	2.63	223	eP	Pb	06 28 49.2	-0.3
BARC				eS	Sb	06 29 21.7	-0.1
BARC				i		06 29 27.0	
	comp=Z,38nm,0.5s						
SMLC	San Martn de	2.69	276	eP	Pn	06 28 44.8	-0.4
SMLC				eS	Sb	06 29 21.4	-1.7
SMLC				i		06 29 22.6	
	comp=Z,77nm,0.3s						
BRRC	Barranca, Sant	2.72	239	eP	Pn	06 28 46.7	+1.1
BRRC				eS	Sb	06 29 23.3	-0.7
BRRC				i		06 29 28.9	
	comp=Z,16nm,0.5s						
RUSC	La Rusia	3.12	213	eP	Pn	06 28 52.5	+0.8
RUSC				i		06 29 00.0	
	comp=Z,12nm,0.4s						
RUSC				eS	Sn	06 29 30.9	+2.0
ARGC	Ariguani, Magd	3.13	295	eP	Pn	06 28 50.6	-0.8
ARGC				eS	Sn	06 29 27.7	-0.9
URIC	Uribia, Colomb	3.21	349	eP	Pn	06 28 55.3	+2.8
URIC				eS	Sn	06 29 29.8	-0.7
URIC				i		06 29 47.3	

	comp=Z,13nm,0.6s						
BAUV	El Baul	3.31	83	eP	Pn	06 28 54.9	+1.0
BAUV				eS	Sn	06 29 33.0	0.0
ZARC	Zaragoza, Cauc	3.61	254	eP	Pn	06 28 59.6	+1.7
ZARC				eS	Sn	06 29 39.6	-0.7
ZARC				i		06 29 54.6	
	comp=Z,14nm,0.3s						
MONV	Montecano	3.67	22	eP	Pn	06 28 59.5	+0.7
BENV	Beln	3.98	69	eP	Pn	06 29 04.0	+0.8
SJCC	San Jacinto, C	4.00	290	eP	Pn	06 29 05.1	+1.7
SJCC				eS	Sn	06 29 51.3	+1.2
SJCC				i		06 30 04.9	
	comp=N,7.3nm,0.4s						
MOTC	Monteria, Cord	4.25	274	eP	Pn	06 29 07.3	+0.5
MOTC				eS	Sn	06 29 54.5	-1.8
MOTC				i		06 30 24.3	
	comp=Z,4.5nm,0.6s						
CHIC	Chingaza	4.53	211	eP	Pn	06 29 12.0	+1.1
CHIC				eS	Sn	06 30 02.0	-1.6
CHIC				i		06 30 06.2	
	comp=Z,4.1nm,0.3s						
TACV	Tcata	4.57	69	eP	Pn	06 29 11.6	+0.3
CACV	CAICARA DEL OR	4.88	101	eP	Pb	06 29 22.7	-5.0
CACV				eS	Sb	06 30 21.9	-4.4
BIRV	Birongo	5.39	69	eP	Pn	06 29 22.2	-0.2

*IDC **08** 06:59:45.6±1.4, 32°.40N×96°.46E, h0^{km}, mb3.5/4, mb1 3.6/6, mb1mx3.4/41, mbtmp3.4/6, ML3.0/2, MS2.6/1, Ms1 2.8/1, ms1mx2.3/46, Error ellipse: s-maj=74.0km s-min=23.1km az=61.0*

ISC 08 06:59:50.7±1.3, **32°.5N**±0°.2×**96°.5E**±0°.3, **h35**^{km}, **n7**, σ**1^{s}.11**/6, **mb3.4**/4, **Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	14.14	170	LR	LR	07 09 20.9	
	comp=Z,25nm,21.7s,baz=214,slow=41						
SONM	Songino Array	17.08	23	P	Pn	07 03 46.6	-0.2
	0.1nm,0.3s,baz=211,slow=11,SNR=2.2						
MKAR	Makanchi Array	17.95	327	P	Pn	07 03 56.5	-0.9
	0.0nm,0.3s,baz=134,slow=14,SNR=2.1						
ZALV	Zalesovo Beam	23.02	342	P	P	07 04 52.8	+0.4
	0.2nm,0.3s,baz=147,slow=8.1,SNR=1.6						
FINES	FINESS Array B	52.77	325	P	P	07 09 02.6	+0.7
	3.7nm,0.9s,baz=106,slow=4.5,SNR=5.1						
WRA	Warramunga Arr	63.48	140	P	P	07 10 18.3	+0.9
	0.2nm,0.6s,baz=312,slow=4.0,SNR=2.4						
ASAR	Alice Springs	66.29	143	P	P	07 10 34.5	-1.2
	0.2nm,0.6s,baz=324,slow=6.6,SNR=1.7						

*IDC **08** 07:33:22.6±1.9, 0°.89N×127°.25E, h0^{km}, mb3.5/3, mb1 3.7/3, mb1mx3.4/32, mbtmp3.6/3, MS2.6/1, Ms1 2.6/1, ms1mx2.1/39, Error ellipse: s-maj=175.6km s-min=22.5km az=67.0*

*DJA **08** 07:33:23.3±0.5, 1°N±4°×12°7E±°, h10^{km}, M3.1/5, MLv3.1/5*

ISC 08 07:33:23.6±1.4, **0°.9N**±0°.1×**127°.6E**±0°.1, **h10**^{km}, **n7**, σ**0^{s}.74**/7, **mb3.7**/4, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.24	227	P	Pg	07 33 28.7	+0.1
TNTI				S	Sg	07 33 32.1	+0.1
LBMI	Labuha	1.57	182	P	Pb	07 33 52.0	-0.7
GUMO	Guam	21.26	53	LR	LR	07 44 12.4	
	comp=Z,16nm,21.7s,baz=108,slow=30						
WRA	Warramunga Arr	21.80	163	P	P	07 38 16.3	+0.4
	0.9nm,0.6s,baz=340,slow=11,SNR=7.7						
ASAR	Alice Springs	25.23	166	P	P	07 38 51.1	+1.2
	0.7nm,0.7s,baz=345,slow=8.8,SNR=9.9						
MKAR	Makanchi Array	60.30	326	P	P	07 43 32.4	-0.2
	1.2nm,0.9s,baz=119,slow=7.0,SNR=4.2						
KURBB	Kurchatov Arra	64.52	328	P	P	07 44 00.3	-0.3
	0.3nm,0.2s,baz=124,slow=6.5,SNR=4.3						

*IDC **08** 07:35:43.6±0.7, 6°.78N×73°.01W, h159^{km}±10^{km}, mb2.8/2, mb1 3.4/5, mb1mx3.0/29, mbtmp3.6/5, Error ellipse: s-maj=30.5km s-min=7.2km az=134.0*

*RSNC **08** 07:35:44.9±0.9, 6°.79N×73°.14W, h147^{km}±3^{km}, ML3.3, Mw3.7, Fault plane solution: NP1:ϕ_s118.00000°, δ38.00000°, λ54.00000°.*

ISC 08 07:35:43.3±0.8, **6°.83N**±0°.03×**73°.11W**±0°.04, **h156**^{km}±6^{km}, **n37**, σ**1^{s}.30**/70, **6C-1D**, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.24	198	⇑iP	Pn	07 36 04.8	0.0
BARC				eS	Sn	07 36 20.2	-1.1
BARC				i		07 36 21.5	
	comp=Z,321nm,0.2s						
PAMC	Pamplona, Colo	0.65	38	⇑eP	Pn	07 36 07.8	+0.9
PAMC				eS	Sn	07 36 24.8	+0.1
PAMC				i		07 36 27.0	
	comp=Z,340nm,0.5s						
BRRC	Barranca, Sant	0.66	295	⇑iP	Pn	07 36 06.8	+0.5
BRRC				eS	Sn	07 36 22.9	-1.0
BRRC				i		07 36 29.0	
	comp=Z,402nm,0.2s						
RUSC	La Rusia	0.93	179	⇑eP	Pn	07 36 08.6	-0.2
RUSC				eS	Sn	07 36 27.1	-1.0
RUSC				i		07 36 28.0	
	comp=Z,251nm,0.3s						
TAMC	Tame, Arauca	1.36	106	⇑iP	Pn	07 36 13.1	+1.0
TAMC				eS	Sn	07 36 32.8	-1.3
TAMC				i		07 36 35.2	
	comp=Z,163nm,0.5s						
OCAC	Ocana	1.42	351	eP	Pn	07 36 13.2	+0.5
OCAC				eS	Sn	07 36 35.3	-0.1
OCAC				i		07 36 40.3	
	comp=Z,606nm,0.4s						
SPBC	San Pablo de B	1.51	220	eP	Pn	07 36 13.7	+0.1
SPBC				eS	Sn	07 36 35.9	-0.9
SPBC				i		07 36 38.2	
	comp=Z,326nm,0.3s						
ZARC	Zaragoza, Cauc	1.86	291	eP	Pn	07 36 17.9	+0.6
ZARC				eS	Sn	07 36 43.0	-0.4
ZARC				i		07 36 49.4	
	comp=Z,402nm,0.6s						
NORC	Norcasia	2.16	235	eP	Pn	07 36 20.8	+0.1
NORC				eS	Sn	07 36 48.3	-1.2
NORC				i		07 36 54.9	
	comp=Z,194nm,0.2s						
SMLC	San Martn de	2.18	334	eP	Pn	07 36 21.4	+0.4
SMLC				eS	Sn	07 36 49.8	-0.3
SMLC				i		07 36 59.0	
	comp=Z,237nm,0.1s						
CHIC	Chingaza	2.27	196	eP	Pn	07 36 22.9	+0.4
CHIC				eS	Sn	07 36 51.7	-0.9
CHIC				i		07 36 55.9	
	comp=Z,60nm,0.4s						
ROSC	El Rosal	2.31	212	P	Pn	07 36 24.4	+1.5
	comp=Z,21nm,0.3s,baz=305,slow=16,SNR=26						
ROSC				S	Sn	07 36 54.6	+1.1
	comp=Z,33nm,0.3s,baz=186,slow=20,SNR=15						
ROSC	El Rosal	2.31	212	eP	Pn	07 36 24.4	+1.5
ROSC				eS	Sn	07 36 52.2	-1.3
ROSC				i		07 37 02.1	
	comp=Z,170nm,0.5s						
HELC	Santa Helena	2.49	255	eP	Pn	07 36 25.7	+0.7
HELC				eS	Sn	07 36 57.3	+0.1
HELC				i		07 37 03.6	
	comp=Z,146nm,0.7s						
UREC	San Jos de Ur	2.58	291	eP	Pn	07 36 25.3	-0.4
UREC				eS	Sn	07 36 57.1	-1.4
UREC				i		07 37 05.9	
	comp=Z,184nm,0.2s						
PTGC	Puerto Gaitan,	2.78	160	⇑eP	Pn	07 36 27.7	-0.6
PTGC				eS	Sn	07 37 00.8	-2.3
PTGC				i		07 37 03.3	
	comp=Z,80nm,0.4s						
CBOC	Ciudad Bolivar	3.04	252	⇓eP	Pn	07 36 32.7	+1.1
CBOC				eS	Sn	07 37 08.2	-0.9
CBOC				i		07 37 17.1	
	comp=Z,48nm,0.4s						
DBBC	Dabeiba	3.09	274	eP	Pn	07 36 32.8	+0.6
DBBC				eS	Sn	07 37 08.4	-1.5
DBBC				i		07 37 37.9	
	comp=Z,222nm,0.7s						
SDV	Santo Domingo	3.19	50	P	Pn	07 36 34.4	+0.9
	comp=Z,13nm,0.3s,baz=231,slow=10,SNR=20						
SDV				S	Sn	07 37 11.9	-0.6
	comp=Z,14nm,0.3s,baz=68,slow=21,SNR=25						
SDV	Santo Domingo	3.19	50	eP	Pn	07 36 34.7	+1.1
SDV				eS	Sn	07 37 11.3	-1.2
SDV				i		07 37 15.1	
	comp=Z,41nm,0.4s						
MOTC	Monteria, Cord	3.19	308	eP	Pn	07 36 32.6	-0.8
MOTC				eS	Sn	07 37 11.4	-0.8
MOTC				i		07 37 27.1	
	comp=Z,41nm,0.4s						
ARGC	Ariguani, Magd	3.22	340	eP	Pn	07 36 34.9	+1.2
ARGC				eS	Sn	07 37 13.9	+1.0
ARGC				i		07 37 29.4	
	comp=Z,27nm,0.4s						
ANIL	Santa Ana	3.26	225	eP	Pn	07 36 36.0	+1.5
ANIL				eS	Sn	07 37 13.6	-0.6
ANIL				i		07 37 25.1	
	comp=Z,222nm,0.3s						
ORTC	Ortega, Tolima	3.60	216	eP	Pn	07 36 38.9	+0.3
ORTC				eS	Sn	07 37 21.5	-0.1
ORTC				i		07 37 28.8	
	comp=Z,58nm,0.6s						
SJCC	San Jacinto, C	3.68	326	eP	Pn	07 36 39.2	-0.5
SJCC				eS	Sn	07 37 20.7	-2.7
SJCC				i		07 37 25.2	
	comp=Z,36nm,0.6s						
PLMC	San Jos del P	3.69	239	eP	Pn	07 36 40.7	+0.8
PLMC				eS	Sn	07 37 22.6	-1.1
PLMC				i		07 37 31.6	
	comp=Z,54nm,0.4s						
GUVC	San Jose del G	4.28	174	eP	Pn	07 36 47.0	-0.5
GUVC				eS	Sn	07 37 35.7	-1.7
GUVC				i		07 37 40.2	
	comp=Z,60nm,0.3s						
YOTC	Yotoco, Valle	4.29	229	eP	Pn	07 36 47.6	-0.1
YOTC				eS	Sn	07 37 37.4	-0.3
SMRC	Santa Marta, M	4.45	346	eP	Pn	07 36 50.0	+0.4
SMRC				eS	Sn	07 37 38.9	-2.5
SMRC				i		07 37 48.4	
	comp=Z,12nm,0.2s						
CAPC	Capurgana	4.58	293	eP	Pn	07 36 50.4	-0.9
CAPC				eS	Sn	07 37 40.1	-4.1
CAPC				i		07 37 52.2	
	comp=Z,22nm,0.3s						
MACC	Macarena, Meta	4.71	189	eP	Pn	07 36 51.6	-1.5
MACC				eS	Sn	07 37 42.8	-4.7
MACC				i		07 37 48.7	
	comp=Z,16nm,0.4s						
URIC	Uribia, Colomb	4.97	13	eP	Pn	07 36 55.7	-0.8
URIC				eS	Sn	07 37 52.0	-1.6
PCRV	Puerto La Cruz	9.01	68	P	Pn	07 37 51.6	+1.3
	comp=Z,0.4nm,0.3s,baz=297,slow=6.8,SNR=1.9						
PCRV				S	Sn	07 39 29.7	-0.8
	comp=Z,0.3nm,0.3s,baz=356,slow=8.8,SNR=1.4						
TXAR	Lajitas Array	36.47	312	P	P	07 42 34.5	+0.9
	comp=Z,0.2nm,0.4s,baz=125,slow=8.9,SNR=5.7						
PDAR	Pinedale Array	48.08	324	P	P	07 44 08.2	+0.8
	comp=Z,0.1nm,0.4s,baz=117,slow=9.2,SNR=2.1						
ASAR	Alice Springs	149.13	234	PKPbc	PKPbc	07 55 13.6	-0.5
	comp=Z,0.6nm,0.5s,baz=120,slow=3.7,SNR=14						
WRA	Warramunga Arr	150.35	241	PKPbc	PKPbc	07 55 16.7	-0.5
	comp=Z,0.5nm,0.4s,baz=109,slow=2.7,SNR=2.7						

*NOU **08** 07:42:08.7, 43°.93S×168°.93E, h0^{km}, MLv4.2/8, Off W. Coast of S. Island, N.Z.*

WEL 08 07:42:01.2±0.5, **44°S**±3°×**16°8E**±°, **h5**^{km}, **M3.9**/24, **mB4.8**/3, **ML4.0**/29, **MLv3.9**/24, **Mw(mB)4.0**/3, **Error ellipse: s-maj=0.0km s-min=0.0km az=123.1, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCZ	Jackson Bay	0.45	68	P	Pb	07 42 10.9	-0.8
JCZ				S	Sg	07 42 16.9	+1.1
MSZ	Milford Sound	0.48	205	P	Pg	07 42 10.8	+0.4
MSZ				S	Sg	07 42 16.7	+0.1
WKZ	Wanaka	0.82	136	P	Pg	07 42 17.3	+0.3
WKZ				S	Sg	07 42 27.7	-0.1
MLZ	Mavora Lakes	1.13	183	P	Pg	07 42 22.2	-0.6
EAZ	Earnscleugh	1.26	142	P	Pg	07 42 25.1	-0.3
EAZ				S	Sg	07 42 40.3	-1.6
FOZ	Fox Glacier	1.36	59	P	Pn	07 42 26.0	-0.8
FOZ				S	Sn	07 42 46.2	+0.9
LBZ	Lake Benmore	1.43	97	P	Pn	07 42 27.8	0.0
DCZ	Deep Cove	1.44	211	P	Pn	07 42 27.3	-0.5
DCZ				S	Sb	07 42 46.1	-0.9
WHZ	Wether Hill Ro	1.66	186	P	Pn	07 42 30.7	-0.3
GCSZ	Gaunt Creek Bo	1.79	60	P	Pn	07 42 31.6	-1.2
ODZ	Otahua Downs	1.92	116	P	Pn	07 42 34.9	+0.4
ODZ	Otahua Downs	1.92	116	P	Pb	07 42 36.7	0.0
TUZ	Tuapeka	1.99	150	P	Pn	07 42 36.6	+1.1
TUZ				S	Sb	07 43 02.8	-0.1
TMZ	Timaru	2.02	95	P	Pn	07 42 36.0	+0.1
RPZ	Rata Peaks	2.12	77	P	Pn	07 42 37.7	+0.4
RPZ	Rata Peaks	2.12	77	P	Pn	07 42 37.3	-0.1
ARCZ	Arundel	2.16	83	P	Pn	07 42 38.1	+0.2
WVZ	Waitaha Valley	2.18	58	P	Pn	07 42 36.8	-1.2
PYZ	Puysegur Point	2.21	209	P	Pn	07 42 39.6	+1.1
HHSZ	Highcliff Hill	2.36	135	P	Pn	07 42 41.1	+0.5
SYZ	Scrubby Hill	2.39	164	P	Pn	07 42 41.7	+0.7
APZ	The Paps	2.60	183	P	Pn	07 42 44.9	+1.0
WACZ	Wakanui South	2.63	85	P	Pn	07 42 44.1	-0.2
INZ	Inchbonnie	2.80	58	P	Pn	07 42 45.5	-1.1
RACZ	Rakaia	2.88	81	P	Pn	07 42 48.2	+0.4
OXZ	Oxford	2.92	73	P	Pn	07 42 47.1	-1.2
MQZ	McQueen's Vall	3.25	82	P	Pn	07 42 51.9	-1.0
LTZ	Lake Taylor	3.30	65	P	Pn	07 42 52.6	-0.9
AKCZ	Akaroa Harbour	3.41	85	P	Pn	07 42 54.3	-0.8
OKCZ	Okains Bay	3.54	83	P	Pn	07 42 57.0	+0.1
DSZ	Denniston Nort	3.63	48	P	Pn	07 42 56.6	-1.5
THZ	Tophouse	4.24	56	P	Pn	07 43 06.2	-0.3
KHZ	Kahutara	4.30	67	P	Pn	07 43 08.1	+0.8
KHZ	Kahutara	4.30	67	P	Pn	07 43 08.6	+1.4
QRZ	Quartz Range	4.67	45	P	Pn	07 43 11.6	-0.8
QRZ	Quartz Range	4.67	45	P	Pn	07 43 11.1	-1.3
NNZ	Nelson	4.86	53	P	Pn	07 43 14.7	-0.3
BSWZ	Blackbirch Sta	4.87	61	P	Pn	07 43 16.4	+1.3
CMWZ	Cape Campbell	5.06	63	P	Pn	07 43 23.2	+5.5
TUWZ	Tuamarina	5.07	58	P	Pn	07 43 18.6	+0.8
TCW	Tory Channel	5.40	58	P	Pn	07 43 22.7	+0.3
DUWZ	D'Urville Isla	5.45	53	P	Pn	07 43 23.1	+0.1
SNZO	South Karori	5.61	61	P	Pn	07 43 26.4	+1.2
	88nm,1.2s						
CAW	Cannon Point	5.95	61	P	Pn	07 43 27.8	-2.1
KIW	Kapiti Island	5.99	58	P	Pn	07 43 29.8	-0.8
OGWZ	Otaki Gorge	6.18	59	P	Pn	07 43 33.8	+0.7
MTW	Mount Morrison	6.20	63	P	Pn	07 43 31.4	-1.9
HOWZ	Holdsworth Sta	6.35	61	P	Pn	07 43 40.6	+5.2
MRZ	Mangatainoka R	6.52	59	P	Pn	07 43 35.8	-2.0
NBEZ	Newall Road No	6.53	42	P	Pn	07 43 37.2	-0.7
KHEZ	Kahui Hut	6.58	43	P	Pn	07 43 38.2	-0.4
PREZ	Palmer Road	6.61	44	P	Pn	07 43 39.0	0.0
NEZ	North Egmont	6.64	44	P	Pn	07 43 39.0	-0.5
PKE	Pukeiti	6.64	43	P	Pn	07 43 38.9	-0.5
LREZ	Lake Rotokare	6.65	46	P	Pn	07 43 41.8	+2.3
VRZ	Vera Road	7.08	46	P	Pn	07 43 45.8	+0.4
TSZ	Takapari Road	7.12	57	P	Pn	07 43 48.6	+2.6
PKVZ	Pokaka	7.28	50	P	Pn	07 43 49.0	+0.8
TRVZ	Turoa	7.38	51	P	Pn	07 43 51.1	+1.3
WNVZ	Wahianoa	7.39	51	P	Pn	07 43 51.1	+1.2
FWVZ	Far West T-bar	7.41	50	P	Pn	07 43 50.5	+0.2
TUVZ	Tukino	7.46	51	P	Pn	07 43 52.1	+1.3
NGZ	Ngauruhoe	7.50	50	P	Pn	07 43 52.5	+1.2
SNVZ	South Ngauruho	7.51	50	P	Pn	07 43 52.8	+1.3
WTVZ	West Tongariro	7.53	50	P	Pn	07 43 53.2	+1.4
NNVZ	North Ngauruho	7.54	50	P	Pn	07 43 52.7	+0.8
OTVZ	Oturere	7.54	50	P	Pn	07 43 52.1	+0.1
NTVZ	North Tongarir	7.59	50	P	Pn	07 43 54.1	+1.5
TMVZ	Te Maari	7.59	50	P	Pn	07 43 54.8	+2.1
HIZ	Hauiti	7.60	43	P	Pn	07 43 52.4	-0.1
HIZ	Hauiti	7.60	43	P	Pn	07 43 52.4	-0.2
KRHZ	Kereru	7.62	56	P	Pn	07 43 51.8	-1.2
TLZ	Tolley Road	8.08	46	P	Pn	07 43 58.7	-0.5
KARZ	Kaharoa	8.68	47	P	Pn	07 44 10.1	+2.7
WHRZ	Whale Island	9.19	49	P	Pn	07 44 16.5	+2.0
WCZ	Waipu Caves	9.53	32	P	Pn	07 44 18.4	-0.6
PKGZ	Pakihiroa	9.79	53	P	Pn	07 44 28.4	+5.8
OUZ	Omahuta	9.92	27	P	Pn	07 44 24.4	0.0
OUZ	Omahuta	9.92	27	P	Pn	07 44 24.3	-0.1
	19nm,2.2s						
MCQ	Macquarie Isla	11.89	207	P	Pn	07 45 07.1	+16
	180nm,1.6s						

*IDC **08** 07:42:35.8±2.3, 0°.90N×127°.10E, h0^{km}, mb3.4/3, mb1 3.6/3, mb1mx3.3/45, mbtmp3.4/3, MS2.9/1, Ms1 2.9/1, ms1mx2.2/26, Error ellipse: s-maj=173.8km s-min=28.1km az=66.0*

*DJA **08** 07:42:35.8±0.5, 1°N±4°×12°7E±°, h10^{km}±4^{km}, M3.2/5, MLv3.2/5*

ISC 08 07:42:37.1±1.5, **0°.9N**±0°.1×**127°.1E**±0°.1, **h10**^{km}, **n6**, σ**0^{s}.73**/6, **mb3.4**/3, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.27	106	P	Pg	07 42 42.3	-0.3
TNTI				S	Sg	07 42 46.6	+0.3
LBMI	Labuha	1.53	165	P	Pb	07 43 05.1	-0.4
JAY	Jayapura	14.00	104	LR	LR	07 50 42.7	
	comp=Z,46nm,20.9s,baz=314,slow=35						
WRA	Warramunga Arr	21.84	161	P	P	07 47 30.1	+0.1
	0.7nm,0.5s,baz=340,slow=11,SNR=11						
ASAR	Alice Springs	25.25	165	P	P	07 48 04.6	+1.1
	0.4nm,0.5s,baz=344,slow=9.5,SNR=12						
MKAR	Makanchi Array	60.13	326	P	P	07 52 44.7	-0.1
	0.4nm,0.7s,baz=120,slow=8.0,SNR=2.7						

*IDC **08** 07:51:27.6±1.5, 31°.82S×71°.95W, h0^{km}, mb3.5/2, mb1 3.7/4, mb1mx3.5/23, mbtmp3.4/4, ML3.6/2, MS3.0/1, Ms1 3.0/1, ms1mx2.6/22, Error ellipse: s-maj=53.9km s-min=33.4km az=94.0*

*GUC **08** 07:51:30.8±0.7, 31°.76S×71°.80W, h36^{km}±2^{km}, ML4.0*

ISC 08 07:51:29.4±3.1, **31°.77S**±0°.03×**71°.90W**±0°.09, **h11**^{km}±21^{km}, **n39**, σ**0^{s}.66**/44, **5D**, **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA06	Catapilco	0.94	147	⇓iP	Pb	07 51 47.6	-0.2
VA06				i S	Sb	07 51 59.5	-0.7
VA06				IAML		07 52 06.0	
	comp=E,10μm,0.3s						
CO06	Fray Jorge	1.11	12	i P	Pb	07 51 50.1	-0.6
CO06				i S	Sb	07 52 04.7	-0.4
VA01	Torpederas	1.27	171	eP	Pn	07 51 53.5	+0.4
VA01				i S	Sb	07 52 09.7	0.0
ROCH	El Roble	1.42	148	⇓iP	Pn	07 51 55.0	-0.3
ROCH				i S	Sn	07 52 13.3	-0.7
ROCH				IAML		07 52 19.0	
	comp=N,4μm,0.4s						
VA03	San Esteban	1.51	131	⇓iP	Pn	07 51 56.1	-0.4
VA03				i S	Sn	07 52 15.5	-0.8
VA03				IAML		07 52 18.0	
	comp=E,6μm,0.8s						
MT02	Curacav	1.62	157	eP	Pn	07 51 58.0	+0.1
MT02				eS	Sn	07 52 18.9	+0.2
PEL	Peldehue	1.71	144	i P	Pn	07 51 59.1	-0.1
PEL				i S	Sn	07 52 20.9	-0.2
PEL				IAML		07 52 23.0	
	comp=N,2μm,0.5s						
GO04	Tololo Observa	1.85	31	eP	Pn	07 52 01.3	+0.1
GO04				i S	Sn	07 52 24.8	+0.1
GO04				IAML		07 52 28.1	
	comp=E,4μm,0.5s						
MT05	Renca	1.89	149	eP	Pn	07 52 02.4	+0.7
MT05				eS	Sn	07 52 25.9	+0.3
MT05				IAML		07 52 33.4	
	comp=N,2μm,0.2s						
VA05	Santo Domingo	1.90	173	eP	Pn	07 52 01.9	+0.1
VA05				i S	Sn	07 52 25.4	-0.2
VA05				IAML		07 52 33.6	
	comp=N,2μm,0.5s						
CO05	La Serena	1.93	17	eP	Pn	07 52 02.6	+0.5
CO05				i S	Sn	07 52 27.2	+0.8
FSR	Penalolen	2.06	146	eS	Sn	07 52 30.0	+0.3
MT09	Talagante	2.14	159	eP	Pn	07 52 06.3	+1.1
MT09				i S	Sn	07 52 31.8	-0.1
MT09				IAML		07 52 39.6	
	comp=N,933nm,0.6s						
MT01	Popeta	2.16	166	⇓iP	Pn	07 52 05.8	+0.4
MT01				i S	Sn	07 52 32.8	+0.6
BO04	La Punta	2.46	154	eP	Pn	07 52 10.5	+0.9
BO04				i S	Sn	07 52 38.9	-0.8
LMEL	Las Melosas	2.52	146	eP	Pn	07 52 11.9	+1.6
LMEL				i S	Sn	07 52 41.6	+0.4
LMEL				IAML		07 52 54.3	
	comp=N,977nm,0.4s						
BO01	Tunca	2.70	166	i P	Pn	07 52 13.4	+0.5
BO01				eS	Sn	07 52 44.2	-1.3
LCO	Las Campanas	2.94	21	eP	Pn	07 52 16.3	0.0
LCO				i S	Sn	07 52 51.5	-0.1
BO02	Sierra Bellavi	3.16	163	eP	Pn	07 52 19.9	+0.8
BO02				i S	Sn	07 52 56.7	-0.1
BO02				IAML		07 53 12.5	
	comp=N,493nm,0.4s						
GO05	Huala	3.23	180	eP	Pn	07 52 19.7	-0.4
GO05				IAML		07 53 28.1	
	comp=N,172nm,0.5s						
AC04	Llanos de Chal	3.62	12	⇓iP	Pn	07 52 24.8	-0.7
AC04				IAML		07 53 36.6	
	comp=E,113nm,0.5s						
H03N1	Juan Fernandez	6.15	252	T	T	07 59 32.5	
	baz=81,slow=72,SNR=897						
H03N3	Juan Fernandez	6.16	252	T	T	07 59 42.5	
	baz=81,slow=72,SNR=878						
H03N2	Juan Fernandez	6.17	252	T	T	07 59 45.1	
	baz=81,slow=72,SNR=788						
H03S3	Juan Fernandez	6.25	249	T	T	07 59 50.7	
	baz=82,slow=75						
H03S1	Juan Fernandez	6.25	249	T	T	07 59 50.0	
	baz=82,slow=75						
H03S2	Juan Fernandez	6.27	249	T	T	07 59 53.2	
	baz=82,slow=75						
PLCA	Paso Flores	9.01	173	Pn	Pn	07 53 40.1	+0.6
	comp=E,0.2nm,0.3s,baz=348,slow=14,SNR=9.0						
CPUP	Villa Florida	13.84	71	LR	LR	08 00 47.9	
	comp=E,65nm,20.0s,baz=209,slow=40						
SIV	San Ignacio	18.54	35	P	Pn	07 55 47.5	+1.1
	comp=E,0.1nm,0.3s,baz=214,slow=12,SNR=6.1						
TXAR	Lajitas Array	67.86	330	P	P	08 02 28.6	+0.8
	comp=E,0.3nm,0.7s,baz=143,slow=9.1,SNR=2.2						
TORD	Torodi Ar. Bea	83.34	70	P	P	08 03 56.7	-0.2
	comp=E,0.5nm,0.8s,baz=240,slow=4.5,SNR=2.9						
WRA	Warramunga Arr	122.76	210	PKP	PKPdf	08 10 24.7	-1.3
	comp=E,0.3nm,0.8s,baz=162,slow=1.5,SNR=2.1						
H11S2	WAKE ISLAND Hy	125.89	271	T	T	10 29 24.3	
	baz=117,slow=75,SNR=11						
H11S1	WAKE ISLAND Hy	125.91	271	T	T	10 29 23.7	
	baz=117,slow=75,SNR=12						
H11S3	WAKE ISLAND Hy	125.91	271	T	T	10 29 25.6	
	baz=117,slow=75,SNR=9.7						
H11N3	WAKE ISLAND Hy	126.25	272	T	T	10 29 46.6	
	baz=117,slow=74						
H11N1	WAKE ISLAND Hy	126.27	272	T	T	10 29 50.1	
	baz=117						
H11N2	WAKE ISLAND Hy	126.27	272	T	T	10 29 47.9	
	baz=117,slow=74						

WEL 08 07:57:31.6±1.0, **38°S**±9°×**18°0E**±°, **h33**^{km}, **M3.4**/17, **ML3.7**/18, **MLv3.4**/17, **Error ellipse: s-maj=0.0km s-min=0.0km az=133.9, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.14	260	P	Pn	07 57 51.1	-0.1
MXZ	Matakaoa Point	1.21	273	P	Pn	07 57 52.2	0.0
PUZ	Puketiti	1.32	250	P	Pn	07 57 53.6	-0.2
PKGZ	Pakihiroa	1.41	259	P	Pn	07 57 54.7	-0.3
TWGZ	Tauwhareparae	1.56	249	P	Pn	07 57 57.4	+0.3
HAZ	Te Kaha	1.63	265	P	Pn	07 57 57.8	-0.2
RUGZ	Raukumara Rang	1.73	258	P	Pn	07 57 59.5	-0.1
TKGZ	Te Karaka	1.76	242	P	Pn	07 57 59.7	-0.1
MWZ	Matawai	1.95	248	P	Pn	07 58 02.3	-0.2
RIGZ	Rimuhau	1.95	236	P	Pn	07 58 02.5	+0.1
RIGZ				S	Sn	07 58 26.9	+1.0
PRGZ	Paritu Road	2.00	229	P	Pn	07 58 03.4	+0.2
PRGZ				S	Sn	07 58 28.2	+1.1
RAGZ	Rawiri	2.09	245	P	Pn	07 58 05.2	+0.7
RAGZ				S	Sn	07 58 29.8	+0.5
MHGZ	Mahia Peninsul	2.14	224	P	Pn	07 58 04.8	-0.3
KNZ	Kokohu	2.19	230	P	Pn	07 58 05.1	-0.6
KNZ				S	Sn	07 58 32.0	+0.3
URZ	Urewera	2.24	253	P	Pn	07 58 06.9	+0.5
URZ				S	Sn	07 58 33.3	+0.5
SNGZ	Shannon Statio	2.27	239	P	Pn	07 58 06.9	0.0

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNGZ				S	Sn	07 58 34.0	+0.2
RTZ	Ruatahuna	2.45	245	P	Pn	07 58 09.7	+0.3
RTZ				S	Sn	07 58 39.2	+1.0
WHHZ	Waihua	2.50	234	P	Pn	07 58 09.4	-0.5
WHHZ				S	Sn	07 58 40.0	+0.7
MUGZ	Murupara	2.56	250	P	Pn	07 58 11.6	+0.8
OPRZ	Ohinepanea	2.60	264	P	Pn	07 58 10.8	-0.6
MTHZ	Maungataniwha	2.65	242	P	Pn	07 58 11.9	-0.1
MTHZ				S	Sn	07 58 43.6	+0.5
TARZ	Mount Tarawera	2.69	256	P	Pn	07 58 13.6	+0.9
ARHZ	Aropaoanui	2.76	233	P	Pn	07 58 13.6	+0.1
NMHZ	Naumai	2.79	237	P	Pn	07 58 14.4	+0.4
NMHZ				S	Sn	07 58 47.6	+1.0
BKZ	Black Stump Fm	3.04	239	P	Pn	07 58 17.3	-0.1
BKZ				S	Sn	07 58 52.6	-0.1
MCHZ	McNeill Hill	3.05	233	P	Pn	07 58 17.5	-0.1
KAHZ	Kahuranaki	3.16	226	P	Pn	07 58 18.2	-0.9
KWHZ	Kaweka Forest	3.21	235	P	Pn	07 58 19.5	-0.3
KRHZ	Kereru	3.37	232	P	Pn	07 58 21.3	-0.7
KUZ	Kuaotunu	3.39	284	P	Pn	07 58 21.5	-0.7
BHHZ	Black Hill Sta	3.49	237	P	Pn	07 58 23.1	-0.5
TMVZ	Te Maari	3.56	244	P	Pn	07 58 24.7	0.0
NTVZ	North Tongarir	3.58	244	P	Pn	07 58 25.7	+0.8
WPHZ	Waipukurau	3.59	226	P	Pn	07 58 23.8	-1.2
OTVZ	Oturere	3.61	244	P	Pn	07 58 25.2	-0.2
SNVZ	South Ngauruho	3.64	243	P	Pn	07 58 25.7	-0.1
PNHZ	Pukenui	3.64	230	P	Pn	07 58 24.5	-1.1
MOVZ	Moawhango	3.66	240	P	Pn	07 58 26.1	+0.2
TUVZ	Tukino	3.66	242	P	Pn	07 58 26.5	+0.4
WNVZ	Wahianoa	3.73	242	P	Pn	07 58 26.6	-0.4
FWVZ	Far West T-bar	3.73	243	P	Pn	07 58 27.4	+0.4
TSZ	Takapari Road	3.87	230	P	Pn	07 58 27.3	-1.6
DVHZ	Dannevirke	3.90	226	P	Pn	07 58 27.3	-2.0
PRWZ	Pori Road	4.19	225	P	Pn	07 58 31.5	-1.7
MRZ	Mangatainoka R	4.48	226	P	Pn	07 58 34.8	-2.4
HOWZ	Holdsworth Sta	4.67	224	P	Pn	07 58 37.2	-2.7
PKE	Pukeiti	4.84	249	P	Pn	07 58 44.7	+2.5
OUZ	Omahuta	5.57	294	P	Pn	07 58 52.8	+0.6
CTZ	Chatham Island	6.67	157	P	Pn	07 59 09.0	+1.8

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*IDC **08** 07:58:12.9±2.0, 30°.12N×139°.07E, h300^{km}±39^{km}, mb3.0/3, mb1 3.1/6, mb1mx2.8/50, mbtmp3.7/6, Error ellipse: s-maj=129.2km s-min=15.9km az=78.0*

*JMA **08** 07:58:12.7±0.2, 30°.28N×139°.90E, h334^{km}±4^{km}, M3.5*

ISC 08 07:58:13.1±0.9**, 30°.21N**±0°.06×**139°.8E**±0°.2**, h300^{km}, n19, σ1^{s}96**/22**, mb3.0**/3**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	2.90	1	eS	S	07 59 54.0	+2.6
JHJ	Hachijo jima 2	2.90	1	P	Pn	07 59 11.0	+3.2
	4.1nm,0.3s,baz=44,slow=23,SNR=6.8						
JHJ				S	S	07 59 54.0	+2.5
	30nm,0.3s,baz=269,slow=23,SNR=8.2						
CBIJ	Chichi jima	3.77	145	P	Pn	07 59 18.5	+1.7
CBIJ				eS	S	08 00 09.6	+1.7
JCJ	Chichijima	3.77	145	P	Pn	07 59 18.6	+1.8
	3.0nm,0.3s,baz=358,slow=21,SNR=7.6						
JCJ				S	S	08 00 10.0	+2.1
	28nm,0.3s,baz=289,slow=21,SNR=19						
BSO1	Boso 1	4.55	13	eS	S	08 00 23.8	+1.3
BSO3	Boso 3	4.63	8	S	S	08 00 25.5	+1.0
BSO4	Boso 4	4.79	6	eS	S	08 00 29.6	+1.4
JIE	Ise	4.90	329	P	Pn	07 59 31.1	+1.7
JAO	Obara	5.46	338	P	Pn	07 59 37.8	+1.8
JHU	Hanno	5.64	356	P	Pn	07 59 38.5	+0.5
JRY	Ryogami san	5.84	353	P	Pn	07 59 41.6	+1.2
JAG	Ashikaga	6.21	358	P	Pn	07 59 44.4	-0.4
JHO	Hitachi	6.42	6	P	Pn	07 59 47.4	0.0
MJAR	Matsushiro Arr	6.45	349	P	Pn	07 59 47.6	-0.1
	0.1nm,0.3s,baz=166,slow=10,SNR=6.7						
JFK	Kawauchi	7.20	7	S	S	08 01 18.3	-2.5
JMK	Ichinoseki	8.81	8	eS	S	08 01 53.3	-3.4
WRA	Warramunga Arr	50.13	187	P	P	08 06 37.2	-1.4
	0.3nm,0.3s,baz=0.6,slow=7.7,SNR=10.0						
ASAR	Alice Springs	53.86	187	P	P	08 07 04.9	-1.0
	0.1nm,0.3s,baz=360,slow=4.4,SNR=1.9						
FINES	FINESS Array B	74.22	333	P	P	08 09 15.4	-1.7
	3.8nm,1.0s,baz=46,slow=4.0,SNR=7.3						

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*IDC **08** 08:06:36.8±3.0, 0°.71S×29°.31E, h0^{km}, mb3.8/4, mb1 4.0/5, mb1mx3.7/44, mbtmp3.8/5, ML3.6/1, Error ellipse: s-maj=93.2km s-min=24.1km az=12.0*

*ECGS **08** 08:06:37.1, 1°.06S±0°.01×29°.24E±0°.01, h0^{km}±5^{km}, ML3.5, Error ellipse: s-maj=2.6km s-min=1.9km az=115.2, smi:local/a9c1dbd3-a3d3-4b24-94f6-9f9526241b46 Note: Depth/Latitude/Longitude errors are calculated from covariance matrix as 1D marginal (Lon/Lat errors as great circle degrees) while OriginUncertainty min/max horizontal errors are calculated from 2D error ellipsoid and are therefore seemingly higher compared to 1D errors. Error estimates can be reconstructed from the following original NonLinLoc error statistics line:STATISTICS ExpectX 26.4446 Y 50.2372 Z 6.9012 CovXX 2.64091 XY -0.500304 XZ 3.25286 YY 1.81345 YZ -0.730463 ZZ 28.3542 EllAz1 210.6 Dip1 2.19446 Len1 2.33919 Az2 300.869 Dip2 6.97695 Len2 2.95651 Len3 1.007975e+01*

ISC 08 08:06:36.5±0.8**, 1°.05S**±0°.05×**29°.21E**±0°.05**, h10^{km}, n19, σ0^{s}71**/22**, mb3.8**/4**, Lake Tanganyika region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RGB	Rumangabo	0.33	151	i P	Pg	08 06 43.5	+0.3
RGB	Rumangabo	0.33	151	i S	Sg	08 06 48.3	+0.7
BUTK	Butaka	0.52	159	i P	Pg	08 06 47.0	+0.4
BUTK	Butaka	0.52	159	i S	Sg	08 06 54.2	+0.6
RSY	Rusayo	0.52	183	i P	Pb	08 06 47.4	-0.4
GOM	Goma	0.62	178	i P	Pg	08 06 48.8	+0.1
IDJ	Idjwi	1.01	188	i P	Pg	08 06 55.7	-0.4
IDJ	Idjwi	1.01	188	i S	Sg	08 07 09.3	0.0
LWI	Lwiro	1.25	199	i S	Sg	08 07 16.6	-0.1
LWI	Lwiro	1.25	199	i P	Pn	08 06 59.5	-0.7
MBAR	Mbarara	1.60	74	i P	Pn	08 07 04.9	-0.1
MBAR	Mbarara	1.60	74	i S	Sn	08 07 25.6	-0.2
MBAR	Mbarara	1.60	74	eP	Pn	08 07 05.2	+0.2
MBAR				eS	Sg	08 07 27.6	-0.4
TEBE	Entebbe	3.44	71	eP	Pn	08 07 29.7	-0.7
TEBE				eS	Sb	08 08 19.1	-0.6
KMBO	Kilima Mbogo	8.04	91	Pn	Pn	08 08 34.1	+0.4
	0.8nm,0.3s,baz=269,slow=19,SNR=7.9						
KMBO				Sn	Sn	08 10 03.4	-1.6
	2.3nm,0.3s,baz=253,slow=20,SNR=2.6						
KMBO				Lg	Lg	08 10 42.2	
	2.5nm,0.3s,baz=213,slow=18,SNR=6.9						
TORD	Torodi Ar. Bea	30.72	298	P	P	08 12 53.2	+1.2
	1.1nm,0.6s,baz=108,slow=8.5,SNR=11						
GERES	GERESS Array B	51.48	347	P	P	08 15 41.1	-1.2
	0.5nm,0.7s,baz=158,slow=8.1,SNR=2.0						
MKAR	Makanchi Array	66.46	37	P	P	08 17 26.8	+0.6
	0.4nm,0.6s,baz=243,slow=7.7,SNR=2.7						
CMAR	Chiang Mai Arr	71.16	70	P	P	08 17 56.9	+0.9
	0.6nm,0.3s,baz=263,slow=7.2,SNR=4.2						

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*TUL **08** 08:08:55.9±1.0, 36°.943N±0°.005×97°.83W±0°.01, h2^{km}±6^{km}, ML2.7, mb_Lg2.3/12(NEIC), Error ellipse: s-maj=1.7km s-min=0.7km az=108.0*

NEIC 08 08:08:56.3±0.6**, 36°.934N**±0°.009×**97°.82W**±0°.01**, h4^{km}**±5^{km}**, Error ellipse: s-maj=1.5km s-min=1.4km az=113.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.09	203	Pg	Pg	08 08 58.3	+0.2
GC02				Sg	Sg	08 08 59.9	+0.5
KAN17	Caldwell West	0.12	20	Pg	Pg	08 08 58.8	+0.1
KAN17				Sg	Sg	08 09 00.7	+0.5
KAN14	Manchester OK	0.12	281		Pg	08 08 58.5	-0.2
KAN14				Sg	Sg	08 09 00.2	-0.2
KAN05	Bluff City Nor	0.18	345		Pg	08 08 59.8	-0.1
KAN05				Sg	Sg	08 09 02.4	+0.2
KAN01	Argonia South	0.22	12		Pg	08 09 00.7	0.0
KAN01				Sg	Sg	08 09 03.9	+0.2
KAN09	Caldwell North	0.26	38	Pg	Pg	08 09 01.5	+0.2
KAN09				Sg	Sg	08 09 05.1	+0.4
KAN13	South Haven SW	0.28	74		Pg	08 09 02.1	+0.3
KAN13				Sg	Sg	08 09 06.2	+0.7
KAN10	Anthony SW Sta	0.29	310	Pg	Pg	08 09 01.8	-0.2
KAN10				Sg	Sg	08 09 05.7	-0.1
KAN06	Argonia West S	0.32	354		Pg	08 09 02.3	-0.1
KAN08	Anthony NE Sta	0.32	337		Pg	08 09 02.3	-0.2
OK032	Salt Plains WL	0.34	248		Pg	08 09 02.7	-0.2
OK032				Sg	Sg	08 09 07.4	0.0
KAN16	Harper SW Stat	0.35	326	Pg	Pg	08 09 02.9	-0.2
KS20	Mayfield South	0.36	35	Pg	Pg	08 09 03.4	+0.1
KS20				Sg	Sg	08 09 08.4	+0.3
KAN12	Harper NE Stat	0.39	338		Pg	08 09 03.6	-0.3
KAN12				Sg	Sg	08 09 08.9	-0.1
CROK	Carrier	0.45	198	Pg	Pg	08 09 05.0	0.0
CROK				Sg	Sg	08 09 11.4	+0.6
BLOK	Blackwell	0.51	110	Pg	Pg	08 09 06.3	+0.2
T35A	Sooner Cattle	1.04	91		Pg	08 09 16.0	-0.3
OK029	Liberty Lake	1.17	166		Pg	08 09 18.2	-0.6
QUOK	Quay	1.17	130		Pg	08 09 18.3	-0.5
OK031	S. Brethren Rd	1.26	141	Pg	Pg	08 09 19.8	-0.6
BCOK	Bluff Creek, N	1.29	172		Pg	08 09 20.1	-0.9
OK030	Cody Creek RV	1.30	140		Pg	08 09 20.7	-0.6
OK025	Westminster Rd	1.40	164		Pn	08 09 22.4	-0.3
OKCFA	Oklahoma City	1.54	169		Pn	08 09 24.6	0.0
OKCFA				IAmb_Lg		08 09 48.3	
	comp=Z,39nm,0.9s						
OKCSW	OKLAHOMA CITY	1.56	169		Pn	08 09 24.9	+0.1
R32A	Long Quarter,	1.65	335		Pn	08 09 26.2	+0.1
FNO	Franklin	1.71	169		Pn	08 09 26.9	+0.1
TUL1	Leonard	1.93	121	IAmb_Lg		08 10 00.0	
	comp=Z,30nm,0.8s						
WMOK	Wichita Mounta	2.33	200		Pn	08 09 35.2	-0.2
KSU1	Kansas State U	2.36	23	Pn	Pn	08 09 36.3	+0.4
KSU1				IAmb_Lg		08 10 13.4	
	comp=Z,21nm,0.8s						
CBKS	Cedar Bluff	2.42	322	Pn	Pn	08 09 36.5	-0.2
CBKS				IAmb_Lg		08 10 14.6	
	comp=Z,6.5nm,0.8s						
X37A	Clayton	3.07	139		Pn	08 09 45.5	-0.1
S39A	Bolivar	3.66	77	Pn	Pn	08 09 53.7	0.0
AMTX	Amarillo	3.75	238	Pn	Pn	08 09 54.7	-0.3
MGMO	Mountain Grove	4.44	86	IAmb_Lg		08 11 21.1	
	comp=Z,5.5nm,0.7s						
WHAR	Wooly Hollow	4.77	108	IAmb_Lg		08 11 25.6	
	comp=Z,3.3nm,0.8s						

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*WEL **08** 08:09:28.6±0.5, 32°S±5°×17°9E±1°1, h33^{km}, M4.1/18, mB4.7/12, ML4.7/31, MLv4.5/18, Mw(mB)3.9/12, Error ellipse: s-maj=0.0km s-min=0.0km az=110.7*

*IDC **08** 08:09:30.4±8.0, 32°.91S×179°.72E, h296^{km}±89^{km}, mb3.3/2, mb1 3.5/3, mb1mx3.1/46, mbtmp4.0/3, Error ellipse: s-maj=101.4km s-min=45.5km az=1.0*

ISC 08 08:09:29.7±1.9**, 33°.1S**±0°.1×**180°.0W**±0°.2**, h300^{km}, n47, σ2^{s}04**/70**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	4.17	25	P	Pn	08 10 28.3	-10
GLKZ				S	S	08 11 14.2	-18
MXZ	Matakaoa Point	4.71	197	S	S	08 11 44.2	+1.0
WMGZ	Waiomatatini S	4.93	195	P	Pn	08 10 49.8	+3.5
WMGZ				S	S	08 11 48.2	+0.4
HAZ	Te Kaha	5.04	201	P	Pn	08 10 48.3	+0.8
HAZ				S	S	08 11 51.2	+1.1
PKGZ	Pakihiroa	5.08	198	P	Pn	08 10 51.7	+3.6
PKGZ				S	S	08 11 53.9	+2.8
PUZ	Puketiti	5.21	196	P	Pn	08 10 49.4	-0.2
PUZ				S	S	08 11 55.0	+1.2
RUGZ	Raukumara Rang	5.26	201	P	Pn	08 10 51.7	+1.4
RUGZ				S	S	08 11 54.1	-0.9
TWGZ	Tauwhareparae	5.37	198	P	Pn	08 10 55.5	+3.9
TWGZ				S	S	08 11 59.8	+2.4
OPRZ	Ohinepanea	5.56	210	P	Pn	08 10 57.6	+3.9
MARZ	Manawahe	5.63	208	P	Pn	08 10 57.8	+3.3
URZ	Urewera	5.71	204	P	Pn	08 10 57.6	+2.2
	1.8nm,0.3s,baz=308,slow=20,SNR=18						
URZ				S	S	08 12 05.0	+0.5
	5.1nm,0.3s,baz=128,slow=20,SNR=7.8						
MTHZ	Maungataniwha	6.33	203	P	Pn	08 11 05.1	+2.1
MTHZ				S	S	08 12 18.9	+0.7
NMHZ	Naumai	6.57	203	P	Pn	08 11 08.2	+2.4
NMHZ				S	S	08 12 26.0	+2.6
ARHZ	Aropaoanui	6.66	201	P	Pn	08 11 08.7	+1.8
ARHZ				S	S	08 12 26.5	+1.2
BKZ	Black Stump Fm	6.74	204	P	Pn	08 11 08.5	+0.6
BKZ				S	S	08 12 26.3	-0.8
HIZ	Hauiti	6.88	216	P	Pn	08 11 14.2	+4.7
MCHZ	McNeill Hill	6.92	202	P	Pn	08 11 12.4	+2.4
MCHZ				S	S	08 12 31.3	+0.2
NTVZ	North Tongarir	6.99	209	P	Pn	08 11 13.4	+2.4
TMVZ	Te Maari	6.99	209	P	Pn	08 11 12.7	+1.7
KWHZ	Kaweka Forest	6.99	204	P	Pn	08 11 12.9	+2.0
KWHZ				S	S	08 12 33.7	+0.9
ETVZ	East Tongariro	7.00	209	P	Pn	08 11 13.2	+2.0
OTVZ	Oturere	7.04	209	P	Pn	08 11 11.9	+0.2
SNVZ	South Ngauruho	7.07	209	P	Pn	08 11 13.6	+1.5
NGZ	Ngauruhoe	7.08	209	P	Pn	08 11 14.8	+2.7
FWVZ	Far West T-bar	7.17	209	P	Pn	08 11 13.6	+0.3
BHHZ	Black Hill Sta	7.17	206	P	Pn	08 11 14.0	+0.8
BHHZ				S	S	08 12 35.8	-1.1
KAHZ	Kahuranaki	7.19	200	P	Pn	08 11 14.2	+0.9
KAHZ				S	S	08 12 35.4	-1.7
KRHZ	Kereru	7.21	203	P	Pn	08 11 14.7	+1.2
KRHZ				S	S	08 12 35.4	-2.0
WNVZ	Wahianoa	7.21	209	P	Pn	08 11 14.6	+0.9
MOVZ	Moawhango	7.22	208	P	Pn	08 11 14.7	+1.0
MOVZ				S	S	08 12 37.0	-0.9
PXZ	Pawanui	7.41	199	P	Pn	08 11 17.7	+1.7
PXZ				S	S	08 12 42.9	+0.9
PNHZ	Pukenui	7.50	203	P	Pn	08 11 17.4	+0.2
PNHZ				S	S	08 12 44.3	+0.1
PRHZ	Porangahau	7.69	200	P	Pn	08 11 20.7	+1.2
TSZ	Takapari Road	7.72	204	P	Pn	08 11 18.7	-1.1
TSZ				S	S	08 12 45.5	-3.4
PKE	Pukeiti	7.84	217	P	Pn	08 11 25.6	+4.3
DVHZ	Dannevirke	7.87	202	P	Pn	08 11 22.3	+0.8
DVHZ				S	S	08 12 50.4	-1.8
PRWZ	Pori Road	8.16	202	P	Pn	08 11 26.6	+1.5
PRWZ				S	S	08 12 56.0	-2.8
BFZ	Birch Farm	8.19	201	P	Pn	08 11 26.8	+1.2
BFZ				S	S	08 12 56.6	-2.9
MRZ	Mangatainoka R	8.38	204	P	Pn	08 11 26.6	-1.3
MRZ				S	S	08 12 59.0	-4.9
HOWZ	Holdsworth Sta	8.62	204	P	Pn	08 11 31.1	+0.4
TMWZ	Te Maipa	8.69	201	P	Pn	08 11 31.5	-0.1
KIW	Kapiti Island	8.80	206	P	Pn	08 11 32.4	-0.6
MTW	Mount Morrison	8.86	203	P	Pn	08 11 32.9	-0.8
CAW	Cannon Point	8.96	205	P	Pn	08 11 33.0	-1.9
ASAR	Alice Springs	41.40	271	P	P	08 16 46.5	-1.1
	1.0nm,0.7s,baz=106,slow=7.9,SNR=16						
WRA	Warramunga Arr	42.63	276	P	P	08 16 55.8	-1.7
	1.4nm,0.4s,baz=115,slow=7.6,SNR=35						
FINES	FINESS Array B	147.01	337	PKPbc	PKPbc	08 28 35.8	-0.6
	2.7nm,0.8s,baz=46,slow=4.0,SNR=4.1						

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*SJA **08** 08:13:34.7±0.5, 17°.34S×69°.79W, h196^{km}±7^{km}, ML5.3, MW5.0*

*MOS **08** 08:13:36.8±1.1, 17°.20S×69°.42W, h166^{km}, mb5.4/17, Error ellipse: s-maj=10.7km s-min=6.7km az=92.6*

*VAO **08** 08:13:37.4±0.2, 17°.27S×69°.30W, h165^{km}, mb5.6*

*NEIC **08** 08:13:37.4, 17°.36S×69°.49W, h178^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.55; $M_{\theta\theta}$-0.89; $M_{\phi\phi}$1.45; $M_{r\theta}$1.16; $M_{\theta\phi}$0.78; $M_{\phi r}$-3.46; Fault plane solution: $M_0$3.94000×10^{17} NP1:ϕ_s341.52000°, δ85.11000°, λ-109.64000°. NP2:ϕ_s238.09000°, δ20.22000°, λ-14.29000°. Principal axes: T 4.0448, Plg37.0000°, Azm89.0000°; N -0.2271, Plg20.0000°, Azm343.0000°; P -3.8178, Plg46.0000°, Azm231.0000°;*

*ARE **08** 08:13:37±3.1, 17°.47S±0°.06×69°.66W±0°.08, h165^{km}±4^{km} Error ellipse: s-maj=0.0km s-min=0.0km az=195.0*

*NEIC **08** 08:13:37.4±1.4, 17°.32S±0°.06×69°.43W±0°.08, h160^{km}±4^{km}, mb5.3/513, Mwb5.7/15, Mww5.7, ML5.1(ARE), Mwc5.7(GCMT), Error ellipse: s-maj=12.0km s-min=8.5km az=111.0*

*GUC **08** 08:13:37.3±0.5, 17°.47S×69°.79W, h194^{km}±4^{km}, ML5.5*

*IDC **08** 08:13:38.8±0.5, 17°.17S×69°.34W, h172^{km}±3^{km}, mb4.7/35, mb1 4.8/37, mb1mx4.8/39, mbtmp5.2/37, MS4.4/13, Ms1 4.4/13, ms1mx4.2/25, Error ellipse: s-maj=9.2km s-min=7.8km az=73.0*

*GCMT **08** 08:13:41.4±0.1, 17°.29S±0°.01×69°.50W±0°.01, h176^{km}, MW5.7/143, Moment Tensor Solution. s124,c233; s143,c276; Duration: 1^{s}7 Moment tensor: Scale 10^{17} Nm; M_{rr}0.03±.04; $M_{\theta\theta}$-0.68±.05; $M_{\phi\phi}$0.65±.06; $M_{r\theta}$1.70±.03; $M_{\theta\phi}$0.33±.05; $M_{\phi r}$-3.89±.04; Best double couple: $M_0$4.30600×10^{17} NP1:ϕ_s243.00000°, δ10.00000°, λ-3.00000°. NP2:ϕ_s336.00000°, δ90.00000°, λ-100.00000°. Principal axes: T 4.4170, Plg44.0000°, Azm75.0000°; N -0.2240, Plg10.0000°, Azm336.0000°; P -4.1940, Plg45.0000°, Azm236.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **08** 08:13:41, 17°.37S×69°.50W, h170^{km}, Moment Tensor Solution. Duration: 8^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}0.24; $M_{\theta\theta}$-1.13; $M_{\phi\phi}$0.89; $M_{r\theta}$1.38; $M_{\theta\phi}$1.14; $M_{\phi r}$-3.24; Fault plane solution: $M_0$3.84000×10^{17} NP1: ϕ_s251.00000°, δ23.00000°, λ5.00000°. NP2:ϕ_s156.00000°, δ88.00000°, λ113.00000°. Principal axes: T 3.8226, Plg42.0000°, Azm89.0000°; N 0.0408, Plg23.0000°, Azm336.0000°; P -3.8634, Plg39.0000°, Azm226.0000°;*

*NEIC **08** 08:13:42, 17°.34S×69°.51W, h178^{km}, Moment Tensor Solution. Duration: 3^{s}4 Moment tensor: Scale 10^{17}Nm; M_{rr}0.14; $M_{\theta\theta}$-0.92; $M_{\phi\phi}$0.78; $M_{r\theta}$1.59; $M_{\theta\phi}$0.70; $M_{\phi r}$-3.99; Fault plane solution: $M_0$4.44000×10^{17} NP1: ϕ_s249.00000°, δ14.00000°, λ2.00000°. NP2:ϕ_s157.00000°, δ90.00000°, λ104.00000°. Principal axes: T 4.5251, Plg44.0000°, Azm81.0000°; N -0.1855, Plg14.0000°, Azm337.0000°; P -4.3396, Plg43.0000°, Azm233.0000°;*

*BGR **08** 08:13:50.3±0.0, 15°.17S×66°.90W, h150^{km}, mb5.6*

ISC 08 08:13:36.9±0.3**, 17°.34S**±0°.03×**69°.44W**±0°.04**, h166^{km}**±2^{km}**, h166^{km}:pP-P, n1017, σ1^{s}84**/883**, mb5.3**/354**, 13C-16D, Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB16	IPOC Station P	0.99	184		Pn	08 14 04.7	+0.9
AP01	Chacalluta	1.34	220	⇑iP	Pn	08 14 05.3	-0.8
AP01				i S	Sn	08 14 27.4	-1.3
AP01				IAML		08 14 28.7	
	comp=N,54μm,0.8s						
AP01	Chacalluta	1.34	220		Pn	08 14 05.2	-0.9
AP01				Sn	Sn	08 14 25.1	-3.6
I08BO	LAS PENAS INFR	1.46	40	P	Pn	08 14 09.4	+1.5
	baz=234,slow=11,SNR=11						
LPAZ	La Paz	1.63	50	P	Pn	08 14 10.8	+1.1
	comp=N,11μm,0.3s,baz=238,slow=6.2						
LPAZ				S	Sn	08 14 35.6	+0.7
	comp=N,346nm,0.3s,baz=98,slow=20,SNR=6.6						
LPAZ				LR	LR	08 14 52.6	
	comp=N,22μm,18.1s,baz=164,slow=51						
LPAZ	La Paz	1.63	50	⇓iP	Pn	08 14 11.1	+1.3
PSGC	Pisagua	2.33	196	⇑iP	Pn	08 14 15.9	-1.0
PSGC				i S	Sn	08 14 45.3	-2.7
PSGC				IAML		08 14 47.1	
	comp=N,15μm,0.3s						
PSGCX	Pisagua	2.33	196		Pn	08 14 16.4	-0.5
PSGCX				Sn	Sn	08 14 45.6	-2.4
PB11	IPOC Station P	2.41	185	⇑iP	Pn	08 14 17.7	-0.2
PB11				i S	Sn	08 14 49.1	-0.7
PB11	IPOC Station P	2.41	185		Pn	08 14 17.8	-0.2
PB08	IPOC Station P	2.79	175	⇑iP	Pn	08 14 23.4	+0.6
PB08				i S	Sn	08 14 58.6	+0.2
PB08				IAML		08 15 01.9	
	comp=E,10μm,0.4s						
PB08	IPOC Station P	2.79	175	Pn	Pn	08 14 23.1	+0.3
PB08	IPOC Station P	2.79	175	eP	Pn	08 14 23.6	+0.9
PB08				eS	Sn	08 14 59.5	+1.1
PB08				IAML		08 15 03.2	
	comp=Z,7μm,0.5s						
HMBC	Humberstone	2.95	188	⇑iP	Pn	08 14 23.6	-0.8
HMBC				eS	Sn	08 14 58.6	-2.8
TA02	Huaiquique	2.98	193	eP	Pn	08 14 23.3	-1.4
TA02				eS	Sn	08 14 58.5	-3.5
TA02				IAML		08 15 03.2	
	comp=E,12μm,0.3s						
TA02	Huaiquique	2.98	193		Pn	08 14 23.8	-0.9
TA01	Diego Aracena	3.28	192	⇑iP	Pn	08 14 27.0	-1.4
TA01				i S	Sn	08 15 04.5	-4.0
TA01				IAML		08 15 09.1	
	comp=E,9μm,0.3s						
TA01	Diego Aracena	3.28	192		Pn	08 14 27.1	-1.3
PATCX	Punta Patache	3.52	191		Pn	08 14 31.6	0.0
PB01	IPOC Station P	3.68	181		Pn	08 14 34.0	+0.4
PB01	IPOC Station P	3.68	181	eP	Pn	08 14 33.3	-0.3
PB01				eS	Sn	08 15 15.3	-2.5
PB01				IAML		08 15 19.9	
	comp=Z,4μm,0.5s						
PB02	IPOC Station P	3.98	186	eP	Pn	08 14 36.9	-0.5
PB02				eS	Sn	08 15 22.0	-2.7
PB07	IPOC Station P	4.38	186		Pn	08 14 42.6	0.0
PB07	IPOC Station P	4.38	186	eP	Pn	08 14 42.0	-0.7
PB07				eS	Sn	08 15 32.1	-2.0
PB03	IPOC Station P	4.69	184	eP	Pn	08 14 45.9	-0.8
PB03				eS	Sn	08 15 39.3	-2.0
PB04	IPOC Station P	5.01	188		Pn	08 14 50.2	-0.7
PB04	IPOC Station P	5.01	188	eP	Pn	08 14 49.6	-1.3
PB04				eS	Sn	08 15 46.5	-2.3
LVC	Limon Verde	5.26	175	P	Pn	08 14 54.5	+0.1
	comp=Z,78nm,0.3s,baz=25,slow=9.0,SNR=525						
LVC				S	Sn	08 15 51.7	-3.3
	comp=Z,104nm,0.3s,baz=229,slow=19,SNR=3.5						
LVC	Limon Verde	5.26	175	P	Pn	08 14 54.6	+0.2
LVC	Limon Verde	5.26	175	eP	Pn	08 14 54.6	+0.2
LVC	Limon Verde	5.26	175	Pn	Pn	08 14 54.6	+0.2
LVC	Limon Verde	5.26	175	eP	Pn	08 14 54.5	+0.1
LVC				eS	Sn	08 15 54.0	-1.1
LVC				IAML		08 15 59.1	
	comp=Z,1μm,0.5s						
PB06	IPOC Station P	5.34	181	Pn	Pn	08 14 54.8	-0.4
PB06	IPOC Station P	5.34	181	eP	Pn	08 14 54.0	-1.2
PB06				eP	Pn	08 14 54.2	-1.0
PB06				eS	Sn	08 15 43.0	-13
PB05	IPOC Station P	5.53	187	eP	Pn	08 14 56.0	-1.7
PB05				eS	Sn	08 15 55.2	-5.8
PB05				eS	Sn	08 15 58.9	-2.1
PB05				IAML		08 16 04.0	
	comp=Z,2μm,0.4s						
AF01	San Pedro de A	5.70	168		Pn	08 15 01.8	+1.7
PB15	IPOC Station P	5.83	180		Pn	08 15 01.4	-0.4
PB15	IPOC Station P	5.83	180	eP	Pn	08 15 00.9	-0.9
PB15				eS	Sn	08 16 07.2	-1.1
YJA	Yavi	6.06	143	eP	Pn	08 15 07.0	+2.0
YJA				eS	Sn	08 16 21.3	+7.2
PB10	IPOC Station P	6.23	190		Pn	08 15 04.9	-1.9
PB10	IPOC Station P	6.23	190	eP	Pn	08 15 04.8	-2.0
PB10				eS	Sn	08 16 06.5	-11
PB10				eS	Sn	08 16 11.5	-5.9
PB10				IAML		08 16 14.9	
	comp=Z,1μm,0.6s						
HJA	Humahuaca	6.95	148	eP	Pn	08 15 17.8	+1.1
HJA				eS	Sn	08 16 41.4	+6.2
HJA				IAML		08 16 44.4	
	comp=Z,287nm,0.4s						
PB14	IPOC Station P	7.30	187	Pn	Pn	08 15 19.2	-2.1
PB14	IPOC Station P	7.30	187	eP	Pn	08 15 19.4	-1.9
PB14				eS	Sn	08 16 37.8	-5.7
PB14				IAML		08 16 45.0	
	comp=Z,802nm,0.5s						
ETMB	Extrema	8.11	23	eP	Pn	08 15 30.7	-1.0
ETMB	Extrema	8.11	23	Pn	Pn	08 15 30.8	-1.0
SIV	San Ignacio	8.13	82	P	Pn	08 15 29.9	-2.1
	comp=Z,72nm,0.3s,baz=262,slow=12,SNR=275						
SIV				S	Sn	08 16 57.5	-5.4
	comp=Z,39nm,0.3s,baz=347,slow=21,SNR=14						
SLA	San Lorenzo	8.21	154	eP	Pn	08 15 33.4	+0.2
SLA				eS	Sn	08 17 06.4	+1.5
SLA				IAML		08 17 08.3	
	comp=Z,102nm,0.7s						
FSA	Cafayete	9.30	160	eP	Pn	08 15 47.2	-0.3
FSA				eS	Sn	08 17 09.3	-22
AC02	Maricunga	9.45	178	Pn	Pn	08 15 48.7	-1.1
VILB	Vilhena	9.93	65	eP	Pn	08 15 53.6	-2.2
VILB	Vilhena	9.93	65		Pn	08 15 54.0	-1.8
PTLB	Pontes e Lacer	10.06	81	eP	Pn	08 15 55.4	-2.1
PTLB	Pontes e Lacer	10.06	81	Pn	Pn	08 15 55.2	-2.3
CZSB	Cruzeiro do Su	10.07	341		Pn	08 15 54.8	-2.9
AHML	Horco Molle	10.13	159	eP	Pn	08 15 56.0	-2.5
AHML				eP	Pn	08 15 57.5	-1.0

AHML				eS	S	08 17 52.6	+0.6
AHML				IAML		08 18 01.7	
	comp=Z,54nm,2.1s						
GO03	Copiap	10.23	184		Pn	08 15 57.0	-2.8
GO03	Copiap	10.23	184	eP	Pn	08 15 56.9	-2.9
GO03				eS	Sn	08 17 42.0	-11
SAML	Samuel	10.33	37	P	Pn	08 15 58.4	-2.6
SAML	Samuel	10.33	37	eP	Pn	08 15 57.6	-3.4
SAML	Samuel	10.33	37	eP	Pn	08 15 58.8	-2.2
SAML	Samuel	10.33	37		Pn	08 15 58.4	-2.6
TINO	Tinogasta	10.81	171	eP	Pn	08 16 07.0	-0.4
TINO				eS	S	08 18 08.0	-0.2
AC04	Llanos de Chal	10.91	188	Pn	Pn	08 16 05.0	-3.7
VCA	Vinchina	11.40	175	eP	Pn	08 16 14.0	-1.1
VCA				eS	Sn	08 18 23.9	+2.5
ACLC	CERRO LA CRUZ	12.24	170	eP	Pn	08 16 24.3	-1.7
ACLC				eS	Sn	08 18 38.9	-2.9
CO05	La Serena	12.63	187		Pn	08 16 29.5	-1.2
TBTG	Tabatinga, AM	13.08	358	eP	Pn	08 16 37.1	+0.4
TBTG	Tabatinga, AM	13.08	358	eP	Pn	08 16 36.0	-0.7
SALV	Santo Antonio	13.25	86	eP	Pn	08 16 36.3	-2.5
APLL	PUNTA DE LOS L	13.26	169	eP	Pn	08 16 34.9	-4.0
APLL				eS	Sn	08 18 58.5	-7.6
AQDB	Aquidauana	13.37	106	eP	Pn	08 16 39.2	-1.1
AQDB	Aquidauana	13.37	106	Pn	Pn	08 16 40.1	-0.1
AVFE	Valle Fertil	13.38	173	eP	Pn	08 16 39.4	-1.0
AVFE				eS	Sn	08 19 02.2	-6.7
ATAH	Atahualpa	13.39	318	P	Pn	08 16 40.1	-0.9
	comp=Z,1.7nm,0.3s,baz=201,slow=5.4,SNR=13						
CO06	Fray Jorge	13.42	188		Pn	08 16 41.4	+0.6
PDRB	Porto dos Gac	13.55	67	eP	Pn	08 16 39.2	-3.5
PP1B	Ponte de Pedra	13.89	93	eP	Pn	08 16 45.0	-1.9
ACHE	Chepes	13.98	170	eP	Pn	08 16 46.2	-1.9
ACHE				eS	Sn	08 19 19.5	-4.1
CPUP	Villa Florida	14.35	131	P	Pn	08 16 50.4	-2.3
	comp=Z,0.7nm,0.3s,baz=306,slow=12,SNR=18						
CPUP				LR	LR	08 23 34.1	
	comp=Z,1µm,18.1s,baz=324,slow=41						
CPUP	Villa Florida	14.35	131	P	Pn	08 16 51.1	-1.5
CPUP	Villa Florida	14.35	131	eP	Pn	08 16 51.0	-1.5
CPUP	Villa Florida	14.35	131	Pn	Pn	08 16 51.0	-1.5
RTCV	Cerro Valdivia	14.48	177	eP	Pn	08 16 52.9	-1.3
TCA	Tanti	14.61	163	eP	Pn	08 16 55.2	-0.7
CLDB	Colider	14.70	66	eP	Pn	08 16 56.5	-0.6
AUSP	Uspallata	14.82	180	eP	Pn	08 16 59.1	+0.5
VA03	San Esteban	15.39	184		Pn	08 17 05.3	-0.2
ROC1	El Roble	15.63	185	eP	P	08 17 09.0	-0.2
PEL	Peldehue	15.77	184	eP	Pn	08 17 07.0	-3.1
MT02	Curacav	15.92	185	P	Pn	08 17 11.3	-0.6
MT02				IAmb	IAmb	08 17 18.1	
	comp=Z,215nm,1.3s						
MT05	Renca	16.02	184	P	Pn	08 17 13.3	+0.1
MT05				IAmb	IAmb	08 17 20.0	
	comp=Z,377nm,1.2s						
AVIZ	Vizcacheras	16.08	177	eP	Pn	08 17 11.5	-2.4
VA05	Santo Domingo	16.36	186	P	Pn	08 17 17.3	+0.1
VA05				IAmb	IAmb	08 17 21.6	
	comp=Z,112nm,0.7s						
MT09	Talagante	16.42	185	P	Pn	08 17 18.8	+0.7
MT09				IAmb	IAmb	08 17 23.5	
	comp=Z,243nm,0.8s						
MACA	Manacapuru-AM	16.50	32	eP	P	08 17 18.0	-0.8
MACA	Manacapuru-AM	16.50	32	P	P	08 17 18.2	-0.6
MT01	Popeta	16.53	185	P	Pn	08 17 19.8	+0.5
MT01				IAmb	IAmb	08 17 24.9	
	comp=Z,233nm,0.8s						
TRCB	Terra Rica	16.68	112	eP	P	08 17 20.9	+0.2
TRCB	Terra Rica	16.68	112	P	P	08 17 20.6	-0.1
ITQB	Itaqui	16.97	139	eP	P	08 17 23.2	-0.6
ITQB	Itaqui	16.97	139	P	P	08 17 23.4	-0.3
ARAG	Araguaiana, MT	16.98	87	eP	P	08 17 24.2	+0.2
BO01	Tunca	17.04	185	P	Pn	08 17 25.6	+0.2
NPGB	Novo Progresso	17.14	55	eP	P	08 17 25.0	-0.7
PCMB	Pacaembu	17.65	107	eP	P	08 17 31.7	+0.3
GO05	Huala	17.73	187	IAmb	IAmb	08 17 40.6	
	comp=Z,85nm,0.8s						
PTGB	Pitanga	17.79	117	eP	P	08 17 33.5	+0.6
H03N1	Juan Fernandez	18.16	206	P	Pn	08 17 40.3	+2.0
	baz=109,slow=14,SNR=79						
H03N2	Juan Fernandez	18.16	206	P	Pn	08 17 40.8	+2.4
	baz=109,slow=14,SNR=80						
H03N3	Juan Fernandez	18.17	206	P	Pn	08 17 40.2	+1.6
	baz=109,slow=14,SNR=117						
PTLC	Puerto Leguiza	18.19	343	eP	P	08 17 31.1	-6.2
ITRB	Iturama	18.24	100	eP	P	08 17 38.5	+0.7
VA04	Juan Fernndez	18.29	206	P	P	08 17 38.8	+0.6
SNDB	Serra Nova Dou	18.34	76	eP	P	08 17 38.7	-0.2
H03S3	Juan Fernandez	18.49	206	P	Pn	08 17 44.7	+2.5
	baz=315,slow=73,SNR=112						
H03S1	Juan Fernandez	18.50	206	P	Pn	08 17 44.6	+2.2
	baz=315,slow=73,SNR=102						
H03S2	Juan Fernandez	18.50	206	P	Pn	08 17 44.7	+2.4
	baz=315,slow=73,SNR=150						
ITTB	Itaituba	18.62	48	eP	P	08 17 41.8	-0.1
PTGA	Pitinga	18.96	30	P	P	08 17 44.8	-0.8
	comp=Z,61nm,0.3s,baz=208,slow=13,SNR=1054						
PTGA				S	S	08 21 07.1	-5.2
	comp=Z,0.4nm,0.3s,baz=166,slow=23,SNR=4.3						
PTGA	Pitinga	18.96	30	P	P	08 17 44.7	-0.8
CPSB	Cacapava Do Su	19.54	135	eP	P	08 17 51.9	+0.1
FRTB	Fartura	19.56	111	eP	P	08 17 52.0	-0.1
OTAV	Otavalo	19.60	332	P	P	08 17 52.9	-0.1
OTAV				pmax	pmax		
	comp=Z,40nm,0.8s						
OTAV	Otavalo	19.60	332	eP	Pn	08 17 55.5	-0.7
OTAV	Otavalo	19.60	332	eP	P	08 17 52.8	-0.1
OTAV	Otavalo	19.60	332	P	P	08 17 52.9	-0.1
TULM	Tulcn-Chalpat	19.74	335	eP	P	08 17 55.8	+1.2
PAC1	Pacto, Paraso	19.78	331	eP	P	08 17 55.6	+1.0
MACC	Macarena, Meta	19.85	347	eP	P	08 17 53.3	-2.0
GUVC	San Jose del G	20.01	351	eP	P	08 17 58.2	+1.2
GCUF	Volcan Galeras	20.03	336	eP	P	08 17 58.4	+0.7
BB19B	Bebedouro	20.09	104	eP	P	08 17 57.1	-0.7
IPMB	Ipameri, GO	20.23	95	eP	P	08 17 58.4	-1.0
LPA	La Plata	20.29	152	eP	P	08 17 53.2	-6.5
LPA				pP	pP	08 18 29.9	+0.4
LPA				sP	sP	08 18 56.6	+5.6
LPA				S	S	08 21 29.4	-8.7
LPA				PCP	PcP	08 21 58.9	-7.4
LPA				sS	sS	08 22 23.9	-4.2
LPA				SCS	ScS	08 29 04.6	-5.6
LPA				PKIKP	PKiKP	08 29 48.9	-5.9
LPA				SKIKP		08 33 00.8	
LPA				PKIKS		08 33 08.2	
LPA				SKIKS		08 36 34.8	
PLTB	Pedras Altas	20.30	138	eP	P	08 17 59.5	-0.4
PLTB	Pedras Altas	20.30	138	P	P	08 17 59.8	-0.1
GARC	Garzon, Huila	20.31	342	eP	P	08 17 57.4	-3.0
SOTA	Rioblanco	20.61	339	eP	P	08 18 02.3	-1.6
BDFB	Brasilia	20.61	88	P	P	08 18 02.5	-1.0
	comp=Z,326nm,0.6s,baz=257,slow=13,SNR=76						
BDFB	Brasilia	20.61	88	P	P	08 18 03.1	-0.4
BDFB				pmax	pmax		
	comp=Z,505nm,1.0s						
BDFB	Brasilia	20.61	88	P	P	08 18 03.1	-0.4
PCON	Cinco Dias	20.72	340	eP	P	08 18 04.9	-0.2
MARP	Paez Belalcaza	21.07	342	eP	P	08 18 08.2	-0.3
PEXB	Peixe	21.09	79	eP	P	08 18 07.9	-0.6
RCLB	Rio Claro- Sao	21.20	107	eP	P	08 18 08.1	-1.6
MALB	Monte Alegre	21.43	46	eP	P	08 18 10.5	-1.6
BOAV	Boa Vista	21.49	25	eP	P	08 18 12.2	-0.6
BOAV	Boa Vista	21.49	25	P	P	08 18 12.0	-0.8
SPB	Sao Paulo	21.52	110	eP	P	08 18 11.7	-1.3
SPB	Sao Paulo	21.52	110	P	P	08 18 12.5	-0.5
SPB				IAmb	IAmb	08 18 15.6	
	comp=Z,167nm,0.7s						
PTGC	Puerto Gaitan,	21.57	353	eP	P	08 18 10.6	-3.0
LC01	Cunco	21.58	185	P	P	08 18 14.1	+0.6
VAO	Valinhos	21.82	109	eP	P	08 18 15.4	-0.9
PET01	Itanhaem-SP	21.82	112	eP	P	08 18 15.9	-0.2
ORTC	Ortega, Tolima	21.88	344	eP	P	08 18 13.8	-3.0
PRPB	Parauapebas	22.16	62	eP	P	08 18 18.8	-0.8
CHIC	Chingaza	22.24	349	eP	P	08 18 18.9	-1.9
YOTC	Yotoco, Valle	22.26	342	eP	P	08 18 18.0	-2.7
LR03	Panguipulli	22.35	186	IAmb	IAmb	08 18 24.6	
	comp=Z,196nm,1.1s						
ANIL	Santa Ana	22.48	344	eP	P	08 18 21.8	-1.2
ROSC	El Rosal	22.56	347	P	P	08 18 23.4	-0.4
	comp=Z,23nm,0.5s,baz=225,slow=7.1,SNR=18						
ROSC				LR	LR	08 28 18.8	
	comp=Z,1µm,19.6s,baz=190,slow=39						
ROSC	El Rosal	22.56	347	eP	P	08 18 20.9	-3.0
SMTB	Santa Maria do	22.87	71	eP	P	08 18 25.5	-0.7
PARB	Paraibuna	23.10	109	eP	P	08 18 27.8	-0.6
PLMC	San Jos del P	23.12	342	eP	P	08 18 22.1	-6.5
SPBC	San Pablo de B	23.30	348	eP	P	08 18 27.8	-2.4
PLCA	Paso Flores	23.33	182	P	P	08 18 31.4	+1.2
	comp=Z,290nm,1.0s,baz=4.3,slow=11,SNR=125						
PLCA				ScP	ScP	08 25 37.0	+2.1
	comp=Z,9.9nm,1.1s,baz=307,slow=3.1,SNR=5.8						
PLCA	Paso Flores	23.33	182	eP	P	08 18 31.5	+1.2
PLCA	Paso Flores	23.33	182	P	P	08 18 31.4	+1.2
RUSC	La Rusia	23.37	351	eP	P	08 18 27.8	-3.4
NORC	Norcasia	23.39	346	eP	P	08 18 27.8	-3.1
BSCB	Bom Sucesso	23.57	103	eP	P	08 18 31.8	-0.9
LL04	Puerto Octay	23.62	186	IAmb	IAmb	08 18 37.0	
	comp=Z,148nm,0.9s						
TAMC	Tame, Arauca	23.74	354	eP	P	08 18 33.4	-0.8
TAMC	Tame, Arauca	23.74	354	eP	P	08 18 32.8	-1.4
LL03	Petrohue	23.85	186	P	P	08 18 35.7	+0.9
CBOC	Ciudad Bolivar	23.96	344	eP	P	08 18 35.3	-1.0
MCPB	Macapa, AP	24.03	47	eP	P	08 18 36.5	-0.3
BARC	Barichara	24.07	351	eP	P	08 18 34.4	-3.0
HELC	Santa Helena	24.15	345	eP	P	08 18 34.4	-3.8
SDBA	SAO DESIDERIO	24.20	82	eP	P	08 18 38.0	-0.4
JANB	Januaria	24.23	88	eP	P	08 18 37.7	-1.0
MC01	Montes Claros	24.38	92	eP	P	08 18 39.3	-0.8
MAN01	Angra dos Reis	24.52	107	eP	P	08 18 41.6	+0.3
DIAM	Diamantina, MG	24.54	96	eP	P	08 18 41.4	-0.2
SOLC	Bahia Solano	24.71	341	eP	P	08 18 39.4	-3.6
PAMC	Pamplona, Colo	24.74	352	eP	P	08 18 39.4	-4.3
VAS01	Vassouras-RJ	24.93	106	eP	P	08 18 45.3	+0.4
DBBC	Dabeiba	25.11	344	eP	P	08 18 42.6	-4.0
ZARC	Zaragoza, Cauc	25.25	347	eP	P	08 18 42.6	-5.2
ZARC	Zaragoza, Cauc	25.25	347	P	P	08 18 45.2	-2.6
ZARC				IAmb	IAmb	08 18 47.1	
	comp=Z,51nm,0.8s						
UREC	San Jos de Ur	25.65	346	eP	P	08 18 47.6	-3.9
TMAB	Tom-Au,PA,Br	25.70	57	eP	P	08 18 51.8	-0.2
OCAC	Ocana	25.71	351	eP	P	08 18 46.8	-5.4
OCAC	Ocana	25.71	351	P	P	08 18 51.8	-0.3
DUB01	Friburgo-RJ	25.89	105	eP	P	08 18 53.8	+0.1
GO07	Milladeo Hill,	25.94	187	P	P	08 18 54.2	+0.5
GO07				IAmb	IAmb	08 18 56.1	
	comp=Z,81nm,0.7s						
SDV	Santo Domingo	26.09	357	P	P	08 18 52.8	-2.8
	comp=Z,17nm,0.4s,baz=197,slow=2.9,SNR=17						
SDV	Santo Domingo	26.09	357	eP	P	08 18 55.1	-0.5
SDV	Santo Domingo	26.09	357	eP	P	08 18 54.4	-1.2
SDV	Santo Domingo	26.09	357	P	P	08 18 53.9	-1.7
SDV				IAmb	IAmb	08 19 37.3	
	comp=Z,160nm,1.1s						
BAUV	El Baul	26.16	3	P	P	08 18 55.1	-0.9
SMLC	San Martn de	26.38	350	eP	P	08 18 55.0	-3.0
CAM01	Campos-RJ	26.53	104	eP	P	08 18 59.9	+0.6
SJMB	Sao Joao De Ma	26.89	97	eP	P	08 19 02.8	+0.2
BSFB	Barra de Sao F	27.20	98	eP	P	08 19 05.4	0.0
ALF01	Guarapari-ES	27.33	101	eP	P	08 19 06.9	+0.5
ARGC	Ariguani, Magd	27.44	350	eP	P	08 19 05.3	-2.2
RIB01	Linhares ES	27.62	99	eP	P	08 19 08.7	-0.5
SJCC	San Jacinto, C	27.66	348	eP	P	08 18 58.3	-11
SJCC	San Jacinto, C	27.66	348	P	P	08 19 08.1	-1.3
SJCC				IAmb	IAmb	08 19 53.8	
	comp=Z,92nm,1.1s						
PCRV	Puerto La Cruz	27.75	10	P	P	08 19 08.9	-1.4
	comp=Z,16nm,0.4s,baz=174,slow=2.7,SNR=32						
MDP	Montagnes des	27.80	38	P	P	08 19 10.1	-0.6
	comp=Z,106nm,0.8s,baz=213,slow=9.3,SNR=76						
NAN01	Guarapari, ES	27.93	95	eP	P	08 19 10.6	-1.2
COYC	Coyhaique	28.23	184	IAmb	IAmb	08 19 17.0	
	comp=Z,36nm,0.8s						
GUA01	Guaratinga, BA	28.34	93	eP	P	08 19 15.8	+0.2
ROSB	Rosrio	28.69	63	eP	P	08 19 17.1	-1.6
SMRC	Santa Marta, M	28.72	350	eP	P	08 19 13.9	-4.9
CMC01	Camacan, BA	28.76	90	eP	P	08 19 18.6	-0.6
NBIT	Itapeh - BA	28.91	90	eP	P	08 19 20.2	-0.3
TRN	Trinidad (W)	28.92	16	eP	P	08 19 17.2	-3.4
URIC	Uribia, Colomb	28.97	355	eP	P	08 19 16.4	-4.6
GDU01	Guandu, BA	28.98	87	eP	P	08 19 20.0	-1.2
SRBA	San Rafael, Bu	29.78	331	P	P	08 19 28.8	+0.5
TOSP	Speyside	29.79	18	P	P	08 19 27.7	-0.6
NBPS	Pedro II - PI	30.29	68	eP	P	08 19 31.7	-1.2
GCMP	Grenada, Carri	30.68	15	eP	P	08 19 40.3	+4.2
JTS	Las Juntas de	31.45	330	LR	LR	08 31 46.2	
	comp=Z,166nm,19.5s,baz=214,slow=35						
JTS	Las Juntas de	31.45	330	*i* P	P	08 19 44.7	+1.8
JTS				pmax	pmax		
	comp=Z,18nm,0.8s						
JTS	Las Juntas de	31.45	330	P	P	08 19 42.6	-0.3
NBPB	Pedra_Branca-C	31.46	72	eP	P	08 19 42.2	-0.9
NBMA	Muriti-CE	31.51	75	eP	P	08 19 42.2	-1.4
BBGH	Gun Hill	31.82	18	eP	P	08 19 45.3	-0.8
SLBI	Saint Lucia, B	32.27	16	eP	P	08 19 43.7	-6.3
MPOM	Morne Pois Mar	32.70	16	P	P	08 19 51.4	-2.4
FDF	Fort de France	32.91	15	P	P	08 19 55.0	-0.6
FDF				pmax	pmax		
	comp=Z,187nm,1.1s						
FDF	Fort de France	32.91	15	eP	P	08 19 51.7	-3.9
FDF	Fort de France	32.91	15	P	P	08 19 55.0	-0.6
ILAM	Ilet Lapin Mar	33.01	15	eP	P	08 20 12.0	+16
NBCL	Cascavel-CE	33.18	70	eP	P	08 19 57.8	-0.3
NBLV	Livramento - P	33.22	77	eP	P	08 19 57.6	-0.9
NBPA	Parau_RN	33.63	74	eP	P	08 20 00.9	-1.1
NBRF	Rio Formoso -	34.47	80	eP	P	08 20 08.0	-1.2
NBPV	Pedro Velho	35.07	76	eP	P	08 20 13.5	-0.8
OBIP	Obispado Ponce	35.27	5	P	P	08 20 15.3	-0.7
OBIP				IAmb	IAmb	08 20 21.2	
	comp=E,40nm,0.6s						
SABA	Saba	35.27	10	eP	P	08 20 15.8	-0.2
PDPR	Patillas Dam,	35.30	6	P	P	08 20 14.1	-2.1
PDPR				IAmb	IAmb	08 20 15.8	
	comp=Z,212nm,1.6s						
MG02	Cerro Sombrero	35.36	180	P	P	08 20 17.3	+1.0
SJG	San Juan	35.38	5	S	S	08 25 31.1	-8.1
	comp=Z,18nm,0.6s,baz=273,slow=18,SNR=8.3						
PRSN	Puerto Rico Se	35.41	4	P	P	08 20 15.5	-1.6
PRSN				IAmb	IAmb	08 20 57.9	
	comp=Z,88nm,1.0s						
EFI	East Falkland	35.42	168	P	P	08 20 18.5	+1.6
EFI				pmax	pmax		
	comp=Z,70nm,0.9s						
EFI	East Falkland	35.42	168	P	P	08 20 18.5	+1.6
EFI				IAmb	IAmb	08 20 20.5	
	comp=Z,70nm,0.9s						
MTP	Monte Pirata	35.42	6	P	P	08 20 14.8	-2.4
MTP				IAmb	IAmb	08 20 15.9	
	comp=Z,48nm,0.7s						
AOPR	Arecibo Observ	35.56	4	P	P	08 20 17.8	-0.6
CUPR	Culebra, Puert	35.66	7	IAmb	IAmb	08 20 21.2	
	comp=Z,32nm,0.6s						
SMRT	St. Maarten	35.73	10	P	P	08 20 17.2	-2.6
TGUH	Tegucigalpa,Un	35.83	329	eP	P	08 20 21.8	+1.0
TGUH	Tegucigalpa,Un	35.83	329	IAmb	IAmb	08 21 04.2	
	comp=Z,63nm,1.2s						
SC01	Santiago de lo	36.56	358	IAmb	IAmb	08 20 27.4	
	comp=Z,123nm,1.2s						
MTO3	Montecristo	37.17	327	IAmb	IAmb	08 21 15.9	
	comp=Z,42nm,1.0s						
ESQI	Esquipulas	37.29	327	IAmb	IAmb	08 21 17.3	
	comp=Z,48nm,0.9s						
USHA	Ushuaia	37.42	179	P	P	08 20 35.9	+2.1
	comp=Z,27nm,0.9s,baz=25,slow=7.1,SNR=8.6						
MG01	Puerto William	37.54	178	P	P	08 20 36.4	+1.6
MG01				IAmb	IAmb	08 20 38.5	
	comp=Z,50nm,0.6s						
SOR	Soroa	42.04	341	P	P	08 21 12.3	0.0
SOR				pmax	pmax		
	comp=Z,52nm,1.3s						
SOR	Soroa	42.04	341	P	P	08 21 12.3	0.0
CMIG	Matias Romero	42.42	322	P	P	08 21 16.2	+0.8
	comp=Z,19nm,0.7s,baz=155,slow=5.9						
TLIG	Tlapa	45.01	319	P	P	08 21 36.3	+0.1
PMSA	Palmer Station	47.53	177	P	P	08 21 58.0	+2.9
	comp=Z,14nm,0.7s,baz=1.0,slow=7.1,SNR=8.8						
PMSA	Palmer Station	47.53	177	eP	P	08 21 56.1	+1.0
456A	Hilliard	49.30	346	IAmb	IAmb	08 22 55.6	
	comp=Z,70nm,0.9s						
BBSR	BB Station	49.64	5	P	P	08 22 10.2	-1.3
BBSR				IAmb	IAmb	08 22 11.1	
	comp=Z,58nm,0.8s						
TIGA	Tifton	50.37	344	P	P	08 22 16.5	-0.6
	baz=162						
TIGA	Tifton	50.37	344	IAmb	IAmb	08 23 03.0	
	comp=Z,39nm,0.8s						
352A	Blakely	50.77	343	IAmb	IAmb	08 23 05.9	
	comp=Z,81nm,0.9s						
BRAL	Brewton	51.12	341	P	P	08 22 22.3	-0.4
	baz=158						
BRAL	Brewton	51.12	341	IAmb	IAmb	08 22 24.0	
	comp=Z,68nm,0.7s						
NHSC	New Hope	51.21	348	P	P	08 22 23.2	-0.1
	baz=167						
NHSC	New Hope	51.21	348	P	P	08 22 23.4	+0.1
154A	Montrose	51.37	345	IAmb	IAmb	08 23 11.0	
	comp=Z,92nm,0.8s						
ZAIG	Zacatecas	51.38	320	P	P	08 22 25.7	+0.5
ZAIG				IAmb	IAmb	08 23 10.1	
	comp=Z,72nm,1.2s						
250A	Grady	51.63	342	IAmb	IAmb	08 23 12.0	
	comp=Z,96nm,1.3s						
152A	Waverly Hall	51.84	344	IAmb	IAmb	08 23 13.6	
	comp=Z,58nm,0.9s						
Y57A	Sumter	52.13	348	IAmb	IAmb	08 23 16.4	
	comp=Z,58nm,0.9s						
346A	Big Creek Wild	52.13	338	IAmb	IAmb	08 23 15.3	
	comp=Z,75nm,1.0s						
GOGA	Godfrey	52.22	345	P	P	08 22 30.2	-0.6
	baz=163						
BIRD	Birdtown, Kers	52.75	349	IAmb	IAmb	08 23 21.0	
	comp=Z,41nm,1.0s						
146A	Union	53.13	339	IAmb	IAmb	08 23 28.2	
	comp=Z,52nm,0.9s						
342A	Flagon Creek P	53.20	335	IAmb	IAmb	08 22 40.5	
	comp=Z,58nm,0.8s						
Z47A	Carrollton	53.32	340	IAmb	IAmb	08 22 39.3	
	comp=Z,21nm,0.6s						
KMSC	Kings Mountain	53.41	348	P	P	08 22 38.9	-0.6
	baz=166,SNR=5.6						
KMSC	Kings Mountain	53.41	348	IAmb	IAmb	08 23 26.2	
	comp=Z,33nm,0.9s						
HKT	Hockley	53.46	331	P	P	08 22 40.3	+0.3
HKT				pmax	pmax		
	comp=Z,25nm,1.1s						
HKT	Hockley	53.46	331	P	P	08 22 40.3	+0.3
735A	Kenedy	53.49	329	IAmb	IAmb	08 22 43.6	
	comp=Z,35nm,0.8s						
X51A	Calhoun	53.67	344	IAmb	IAmb	08 23 27.0	
	comp=Z,34nm,1.0s						
833A	Chaparral WMA,	53.87	327	P	P	08 22 43.9	+0.9
	baz=144,SNR=22						
143A	Socs Landing,	54.02	337	IAmb	IAmb	08 22 46.1	
	comp=Z,30nm,0.6s						
V55A	Taylorsville	54.07	348	IAmb	IAmb	08 23 31.4	
	comp=Z,49nm,1.0s						
X48A	Hartselle	54.17	342	IAmb	IAmb	08 22 50.3	
	comp=Z,57nm,1.5s						
H10N3	ASCENSION HYDR	54.28	87	P	P	08 22 47.2	+1.2
	baz=257,slow=7.5,SNR=4.8						
H10N2	ASCENSION HYDR	54.30	87	P	P	08 22 47.3	+1.2
	baz=257,slow=7.5,SNR=4.9						
H10N1	ASCENSION HYDR	54.30	87	P	P	08 22 47.3	+1.1
	baz=257,slow=7.5,SNR=5.4						
W50A	Signal Mountai	54.39	344	IAmb	IAmb	08 23 33.4	
	comp=Z,38nm,0.9s						
ASCN	Ascension	54.39	87	P	P	08 22 46.0	-1.2
TKL	Tuckaleechee C	54.44	346	P	P	08 22 45.3	-1.7
	comp=Z,17nm,0.9s,baz=164,slow=9.8,SNR=23						
NATX	Nacogdoches	54.49	334	P	P	08 22 49.1	+1.6
	baz=150,SNR=13						
NATX	Nacogdoches	54.49	334	P	P	08 22 48.6	+1.1
NATX				IAmb	IAmb	08 22 50.7	
	comp=Z,83nm,0.9s						
T59A	Double "B" Far	54.56	352	IAmb	IAmb	08 22 49.6	
	comp=Z,50nm,1.2s						
V52A	Sevierville	54.57	346	IAmb	IAmb	08 23 37.4	
	comp=Z,60nm,1.1s						
T57A	Hurt	54.84	350	IAmb	IAmb	08 23 37.2	
	comp=Z,37nm,1.1s						
U54A	Nelsons Funny	54.84	348	IAmb	IAmb	08 23 40.4	
	comp=Z,34nm,0.9s						
435B	Jarrell	54.98	330	P	P	08 22 52.0	+1.0
	baz=147,SNR=9.7						
435B	Jarrell	54.98	330	IAmb	IAmb	08 22 54.1	
	comp=Z,30nm,0.7s						
Z41A	Richland Creek	55.05	336	P	P	08 22 51.7	+0.3
	baz=153						
TZTN	Tazewell	55.23	346	P	P	08 22 52.2	-0.5
	baz=164						
BLA	Blacksburg	55.24	349	P	P	08 22 52.8	-0.1
	baz=167						
V48A	Smith Brothers	55.30	343	IAmb	IAmb	08 22 54.4	
	comp=Z,23nm,0.6s						
W45A	Hickory Valley	55.48	340	IAmb	IAmb	08 22 54.1	
	comp=Z,43nm,0.6s						
CLTN	Cedars of Leba	55.50	343	IAmb	IAmb	08 23 40.0	
	comp=Z,29nm,0.9s						
WLAR	White Oak Lake	55.55	336	IAmb	IAmb	08 23 41.1	
	comp=Z,96nm,1.0s						
U49A	Red Boiling Sp	55.75	344	IAmb	IAmb	08 23 41.6	
	comp=Z,23nm,0.7s						
CBN	Corbin Frederi	55.75	352	P	P	08 22 55.1	-1.2
	baz=171						
JCT	Junction City	55.81	328	P	P	08 22 57.8	+0.7
	baz=144,SNR=25						
JCT	Junction City	55.81	328	IAmb	IAmb	08 23 00.7	
	comp=Z,37nm,0.7s						
WHTX	Lake Whitney,	55.93	331	P	P	08 22 58.8	+1.1
	baz=147,SNR=16						
WVT	Waverly	55.96	342	P	P	08 22 56.0	-1.9
WVT				pmax	pmax		
	comp=Z,19nm,0.7s						
WVT	Waverly	55.96	342	P	P	08 22 56.3	-1.6
	baz=159						
WVT	Waverly	55.96	342	P	P	08 22 56.0	-1.9
WVT				IAmb	IAmb	08 23 01.9	
	comp=Z,19nm,0.7s						
S54A	Dingess, Beckl	55.98	349	IAmb	IAmb	08 22 59.5	
	comp=Z,46nm,0.6s						
T50A	Nancy	55.99	345	IAmb	IAmb	08 23 43.6	
	comp=Z,25nm,0.8s						
X40A	Basin Creek Fa	56.15	337	P	P	08 22 59.1	-0.1
	baz=153,SNR=5.2						
R55A	Marlinton	56.23	350	IAmb	IAmb	08 24 48.8	
	comp=Z,76nm,1.5s						
HPIG		56.34	321	IAmb	IAmb	08 23 45.5	
	comp=Z,79nm,1.5s						
MIAR	Mount Ida	56.48	336	P	P	08 23 01.6	-0.1
	baz=152,SNR=20						
MIAR	Mount Ida	56.48	336	IAmb	IAmb	08 23 46.8	
	comp=Z,22nm,0.8s						
W41B	Gary Mavity, V	56.54	338	P	P	08 23 01.6	-0.4
	baz=154,SNR=10						
T47A	Sharon Grove	56.55	343	IAmb	IAmb	08 23 51.6	
	comp=Z,55nm,1.1s						
R53A	Hurricane	56.61	348	IAmb	IAmb	08 23 03.4	
	comp=Z,26nm,0.6s						
HICK	Hickman	56.76	341	IAmb	IAmb	08 23 09.9	
	comp=Z,55nm,0.8s						
SLBS	Sierra La Lagu	56.81	315	P	P	08 23 04.8	+0.6
Q56A	Snyder Ridge,	56.83	351	IAmb	IAmb	08 23 53.1	
	comp=Z,37nm,1.0s						
LCAR	Lake Charles	56.96	339	IAmb	IAmb	08 23 05.8	
	comp=Z,124nm,1.7s						
TXAR	Lajitas Array	56.97	324	P	P	08 23 05.4	+0.1
	comp=Z,5.3nm,0.8s,baz=145,slow=8.6,SNR=30						
TXAR				pP	pP	08 23 45.9	+0.8
	comp=Z,12nm,1.0s,baz=142,slow=10,SNR=6.3						
TX32	Lajitas Array	56.97	324	IAmb	IAmb	08 23 49.7	
	comp=Z,107nm,1.9s						
Q54A	Coxs Mills	57.04	349	IAmb	IAmb	08 23 06.4	
	comp=Z,23nm,0.6s						
R50A	Paris	57.07	346	IAmb	IAmb	08 23 51.6	
	comp=Z,30nm,0.8s						
W39A	Magazine	57.14	336	P	P	08 23 07.1	+0.9
	baz=152,SNR=15						
W39A	Magazine	57.14	336	IAmb	IAmb	08 23 08.3	
	comp=Z,86nm,1.3s						
LPIG	La Paz	57.34	315	P	P	08 23 08.9	+1.0
	comp=Z,23nm,0.8s,baz=45,slow=3.1,SNR=4.2						
ABTX	Abilene, Hawle	57.48	330	P	P	08 23 09.4	+0.6
	baz=146,SNR=30						
LOOK	Love County	57.49	333	IAmb	IAmb	08 23 12.8	
	comp=Z,60nm,0.9s						
WCI	Wyandotte Cave	57.50	344	P	P	08 23 07.9	-0.8
WCI				pmax	pmax		
	comp=Z,46nm,0.8s						
WCI	Wyandotte Cave	57.50	344	P	P	08 23 06.9	-1.8
	baz=161						
WCI	Wyandotte Cave	57.50	344	P	P	08 23 07.9	-0.8
WCI				IAmb	IAmb	08 23 54.1	
	comp=Z,46nm,0.8s						
MCWV	Mont Chateau	57.53	350	P	P	08 23 08.6	-0.3
	baz=168,SNR=7.7						

MCWV	Mont Chateau	57.53	350	IAmb	IAmb	08 23 10.7	
	comp=Z,23nm,0.7s						
P53A	Whipple	57.63	349	IAmb	IAmb	08 23 11.1	
	comp=Z,52nm,0.7s						
T42A	Van Buren	57.81	340	IAmb	IAmb	08 23 11.5	
	comp=Z,28nm,0.6s						
U40A	Yellville	57.82	338	P	P	08 23 10.5	-0.5
	baz=154,SNR=35						
U40A	Yellville	57.82	338	IAmb	IAmb	08 23 12.1	
	comp=Z,29nm,0.8s						
P52A	Corning	57.91	348	P	P	08 23 10.3	-1.3
	baz=166,SNR=9.2						
P52A	Corning	57.91	348	IAmb	IAmb	08 23 12.5	
	comp=Z,31nm,0.7s						
BRNJ	Basking Ridge	57.92	355	IAmb	IAmb	08 23 11.8	
	comp=Z,31nm,0.9s						
O56A	Blue Knob Stat	57.94	352	P	P	08 23 10.8	-1.0
	baz=170						
O56A	Blue Knob Stat	57.94	352	IAmb	IAmb	08 24 06.0	
	comp=Z,36nm,1.2s						
P51A	Williamsport	57.95	348	IAmb	IAmb	08 24 01.1	
	comp=Z,42nm,1.2s						
O54A	Avella	58.13	350	IAmb	IAmb	08 23 15.2	
	comp=Z,16nm,0.6s						
SSPA	Standing Stone	58.21	352	P	P	08 23 12.5	-1.1
	baz=171						
O52A	Adamsville	58.32	349	IAmb	IAmb	08 23 15.1	
	comp=Z,26nm,0.6s						
MGMO	Mountain Grove	58.33	339	IAmb	IAmb	08 23 15.6	
	comp=Z,38nm,0.6s						
O53A	New Philadelph	58.34	349	P	P	08 23 14.0	-0.5
	baz=167,SNR=8.3						
O53A	New Philadelph	58.34	349	IAmb	IAmb	08 23 15.8	
	comp=Z,35nm,0.7s						
P49A	Miami Univ. Ec	58.35	346	P	P	08 23 13.2	-1.5
	baz=163,SNR=11						
P49A	Miami Univ. Ec	58.35	346	P	P	08 23 12.6	-2.0
P49A				IAmb	IAmb	08 24 00.0	
	comp=Z,32nm,0.8s						
BLO	Bloomington	58.45	344	IAmb	IAmb	08 24 04.7	
	comp=Z,29nm,0.8s						
YLE	Yale	58.45	357	IAmb	IAmb	08 23 16.4	
	comp=Z,81nm,1.1s						
P48A	Milroy	58.45	346	IAmb	IAmb	08 24 00.4	
	comp=Z,29nm,0.8s						
TUL1	Leonard	58.55	335	P	P	08 23 16.4	+0.3
	baz=150,SNR=35						
ACSO	Alum Creek Sta	58.65	348	P	P	08 23 16.3	-0.4
	baz=165,SNR=6.0						
ACSO	Alum Creek Sta	58.65	348	IAmb	IAmb	08 23 18.6	
	comp=Z,25nm,0.8s						
FNO	Franklin	58.66	333		P	08 23 17.3	+0.4
CCM	Cathedral Cave	58.79	340	P	P	08 23 17.1	-0.6
CCM				pmax	pmax		
	comp=Z,51nm,1.0s						
CCM	Cathedral Cave	58.79	340	P	P	08 23 17.1	-0.6
	baz=156						
CCM	Cathedral Cave	58.79	340	P	P	08 23 17.1	-0.6
CCM				IAmb	IAmb	08 23 19.3	
	comp=Z,51nm,1.0s						
OKCSW	OKLAHOMA CITY	58.80	333		P	08 23 18.4	+0.6
M57A	Sunshine Farm,	58.82	353	IAmb	IAmb	08 24 06.7	
	comp=Z,46nm,1.2s						
OKCFA	Oklahoma City	58.82	333	P	P	08 23 18.6	+0.6
OKCFA				IAmb	IAmb	08 23 19.9	
	comp=Z,68nm,0.9s						
N54A	Moraine State	58.83	351	P	P	08 23 17.6	-0.3
	baz=168						
N54A	Moraine State	58.83	351	IAmb	IAmb	08 24 08.1	
	comp=Z,71nm,1.4s						
WMOK	Wichita Mounta	58.83	332	P	P	08 23 17.9	-0.2
	baz=147,SNR=21						
WMOK	Wichita Mounta	58.83	332	IAmb	IAmb	08 23 20.6	
	comp=Z,15nm,0.6s						
Q44A	Meyer Farm, Va	58.88	342	IAmb	IAmb	08 24 03.4	
	comp=Z,31nm,0.8s						
O49A	Covington	58.89	347	IAmb	IAmb	08 24 07.7	
	comp=Z,33nm,0.8s						
OK025	Westminster Rd	58.91	334		P	08 23 18.8	+0.2
SLM	Saint Louis	59.00	341	IAmb	IAmb	08 23 20.7	
	comp=Z,32nm,0.6s						
M55A	Ridgway	59.15	352	IAmb	IAmb	08 24 08.4	
	comp=Z,36nm,1.0s						
QUOK	Quay	59.15	334		P	08 23 20.9	+0.7
S39A	Bolivar	59.18	338	IAmb	IAmb	08 23 21.5	
	comp=Z,36nm,0.8s						
M54A	Oil Creek Stat	59.31	351	P	P	08 23 20.6	-0.7
	baz=169						
M54A	Oil Creek Stat	59.31	351	IAmb	IAmb	08 23 22.4	
	comp=Z,27nm,0.8s						
R40A	Maddies Statio	59.35	339	IAmb	IAmb	08 23 22.4	
	comp=Z,29nm,0.6s						
M53A	WI Miller and	59.40	350	P	P	08 23 21.4	-0.5
	baz=168,SNR=7.6						
WES	Weston	59.45	358	IAmb	IAmb	08 24 34.9	
	comp=Z,58nm,1.3s						
L59A	Walton	59.46	355	IAmb	IAmb	08 23 24.0	
	comp=Z,28nm,0.9s						
BINY	Binghamton	59.55	354	P	P	08 23 22.1	-0.8
	baz=173,SNR=8.3						
BINY	Binghamton	59.55	354	IAmb	IAmb	08 23 24.6	
	comp=Z,39nm,0.9s						
N49A	Columbus Grove	59.56	347	IAmb	IAmb	08 24 09.3	
	comp=Z,58nm,0.8s						
L61B	Northampton	59.57	357	P	P	08 23 21.3	-1.7
	baz=176						
HRV	Adam Dziewonsk	59.58	358	P	P	08 23 22.6	-0.4
HRV				pmax	pmax		
	comp=Z,52nm,0.8s						
HRV	Adam Dziewonsk	59.58	358	P	P	08 23 22.5	-0.4
	baz=178						
HRV	Adam Dziewonsk	59.58	358	P	P	08 23 22.6	-0.4
HRV				IAmb	IAmb	08 23 23.6	
	comp=Z,52nm,0.8s						
L56A	Greenwood	59.65	353	IAmb	IAmb	08 23 24.6	
	comp=Z,22nm,0.7s						
P43A	Skaggs, Pawnee	59.71	342	IAmb	IAmb	08 23 24.5	
	comp=Z,46nm,0.6s						
MNTX	Cornudas Mount	59.73	325	P	P	08 23 24.0	-0.3
	baz=140,SNR=19						
MNTX	Cornudas Mount	59.73	325	IAmb	IAmb	08 24 08.3	
	comp=Z,36nm,1.1s						
SFIN	Lafayette	59.73	344	P	P	08 23 22.7	-1.4
	baz=160,SNR=6.6						
SFIN	Lafayette	59.73	344	P	P	08 23 21.7	-2.4
SFIN				IAmb	IAmb	08 24 09.0	
	comp=Z,26nm,0.8s						
N47A	Urbana	59.86	346	IAmb	IAmb	08 24 10.4	
	comp=Z,36nm,0.8s						
O44A	Mansfield	59.89	343	IAmb	IAmb	08 24 14.0	
	comp=Z,49nm,1.4s						
TRY	Troy	59.90	356	P	P	08 23 25.5	+0.3
TRY				IAmb	IAmb	08 23 26.0	
	comp=Z,54nm,1.1s						
ERPA	Erie	59.96	351	P	P	08 23 25.8	+0.1
	baz=168,SNR=5.6						
WVNY	West Valley, N	60.05	352	IAmb	IAmb	08 24 15.4	
	comp=Z,46nm,1.1s						
MSTX	Muleshoe	60.11	328	P	P	08 23 27.2	+0.3
	baz=143,SNR=30						
MSTX	Muleshoe	60.11	328	IAmb	IAmb	08 24 11.8	
	comp=Z,104nm,1.1s						
K57A	Scipio Center	60.13	354	IAmb	IAmb	08 24 15.2	
	comp=Z,60nm,1.1s						
U32A	Winter Ranch,	60.30	333	IAmb	IAmb	08 23 31.4	
	comp=Z,67nm,1.1s						
AMTX	Amarillo	60.30	330	P	P	08 23 28.2	0.0
	baz=144						
AMTX	Amarillo	60.30	330	IAmb	IAmb	08 23 31.4	
	comp=Z,27nm,0.5s						
KAN14	Manchester OK	60.34	334	IAmb	IAmb	08 23 30.7	
	comp=Z,51nm,0.8s						
P40A	Paris	60.39	340	IAmb	IAmb	08 23 29.5	
	comp=Z,33nm,0.6s						
HDIL	Hopedale	60.49	343	P	P	08 23 27.5	-1.7
	baz=158,SNR=13						
HDIL	Hopedale	60.49	343	IAmb	IAmb	08 23 29.5	
	comp=Z,35nm,0.6s						
FFD	Franklin Falls	60.55	358	IAmb	IAmb	08 25 36.4	
	comp=Z,166nm,1.8s						
L48A	N Adams	60.60	347	P	P	08 23 29.4	-0.6
L48A				IAmb	IAmb	08 24 15.7	
	comp=Z,32nm,0.7s						
J58A	Remsen	60.64	355	IAmb	IAmb	08 24 35.1	
	comp=Z,79nm,1.9s						
J59A	Piesco	60.69	356	IAmb	IAmb	08 23 31.9	
	comp=Z,36nm,0.9s						
SHEL	Horse Pasture	60.78	99	P	P	08 23 32.0	+0.2
SHEL				pmax	pmax		
	comp=Z,266nm,1.1s						
SHEL	Horse Pasture	60.78	99	P	P	08 23 32.0	+0.2
P38A	Dawn	60.98	339	IAmb	IAmb	08 23 34.4	
	comp=Z,35nm,0.7s						
K50A	Casco	61.04	349	IAmb	IAmb	08 23 34.9	
	comp=Z,37nm,0.6s						
L46A	Eue Claire	61.08	346	IAmb	IAmb	08 24 20.3	
	comp=Z,48nm,0.9s						
N41A	Harden Midland	61.09	342	IAmb	IAmb	08 23 33.0	
	comp=Z,31nm,0.7s						
HSIG		61.09	318	P	P	08 23 33.5	-0.1
HSIG				IAmb	IAmb	08 24 18.7	
	comp=Z,117nm,1.8s						
NCB	Newcomb	61.17	356	IAmb	IAmb	08 23 37.6	
	comp=Z,83nm,1.8s						
LBNH	Lisbon	61.33	358	P	P	08 23 34.7	-0.1
	baz=177,SNR=7.2						
LBNH	Lisbon	61.33	358	IAmb	IAmb	08 23 36.4	
	comp=Z,42nm,0.9s						
KSU1	Kansas State U	61.64	336	P	P	08 23 37.2	+0.2
	baz=150,SNR=48						
121A	Cookes Peak, D	61.70	323	P	P	08 23 39.3	+1.5
	baz=138,SNR=11						
319A	Douglas	61.73	322	IAmb	IAmb	08 24 22.6	
	comp=Z,54nm,1.2s						
LONY	Lake Ozonia	61.84	356	P	P	08 23 37.7	-0.6
	baz=174,SNR=7.3						
LONY	Lake Ozonia	61.84	356	IAmb	IAmb	08 23 39.5	
	comp=Z,26nm,0.9s						
R32A	Long Quarter,	61.90	334	IAmb	IAmb	08 24 24.6	
	comp=Z,50nm,0.8s						
J47A	Sunmer	61.92	347	IAmb	IAmb	08 24 24.9	
	comp=Z,54nm,0.8s						
N38A	Joes South For	61.92	340	IAmb	IAmb	08 23 46.5	
	comp=Z,28nm,0.6s						
L42A	Oliver, Polo	61.94	343	IAmb	IAmb	08 23 39.4	
	comp=Z,30nm,0.6s						
FRNY	Flat Rock	61.99	357	IAmb	IAmb	08 23 40.6	
	comp=Z,33nm,1.0s						
DELO	Deloro Mine	62.01	353	IAmb	IAmb	08 24 20.9	
	comp=Z,32nm,1.1s						
GGN	Saint George	62.21	2	IAmb	IAmb	08 23 42.2	
	comp=Z,62nm,1.1s						
G65A	Princeton	62.27	1	IAmb	IAmb	08 23 42.5	
	comp=Z,84nm,1.1s						
PKME	Peaks-Kenny Pk	62.31	0	P	P	08 23 41.0	-0.3
	baz=180,SNR=7.5						
PKME	Peaks-Kenny Pk	62.31	0	IAmb	IAmb	08 23 42.7	
	comp=Z,56nm,0.9s						
L40A	Anamosa	62.44	342	IAmb	IAmb	08 23 43.7	
	comp=Z,122nm,1.8s						
SADO	Sadowa	62.44	352	P	P	08 23 41.5	-0.8
	comp=Z,8.7nm,0.6s,baz=115,slow=2.2,SNR=5.2						
CBKS	Cedar Bluff	62.66	334	P	P	08 23 44.9	+1.0
	baz=147,SNR=16						
F63A	Nahmakanta, Br	62.75	0	IAmb	IAmb	08 23 45.7	
	comp=Z,33nm,1.1s						
ANMO	Albuquerque	62.77	326	P	P	08 23 45.8	+0.9
	comp=Z,6.9nm,0.5s,baz=125,slow=7.5,SNR=34						
ANMO	Albuquerque	62.77	326	*ce*P	P	08 23 45.3	+0.4
ANMO				pmax	pmax		
	comp=Z,11nm,1.0s						
ANMO	Albuquerque	62.77	326	P	P	08 23 46.1	+1.1
	baz=140						
ANMO	Albuquerque	62.77	326	P	P	08 23 45.0	0.0
GBN	Guysborough	62.86	6	IAmb	IAmb	08 23 45.9	
	comp=Z,41nm,0.8s						
F64A	Sherman	62.91	1	P	P	08 23 44.5	-0.8
F64A				IAmb	IAmb	08 23 46.7	
	comp=Z,64nm,1.0s						
SCIA	State Center	62.92	340	P	P	08 23 45.0	-0.5
	baz=154						
JFWS	Jewell Farm	62.94	343	P	P	08 23 44.9	-0.8
	baz=158,SNR=19						
LMN	Caledonia Moun	63.03	4	P	P	08 23 45.4	-0.7
LMN				IAmb	IAmb	08 23 47.0	
	comp=Z,75nm,0.9s						
TUC	Tucson	63.29	321	P	P	08 23 48.5	+0.3
TUC				pmax	pmax		
	comp=Z,19nm,1.1s						
TUC	Tucson	63.29	321	P	P	08 23 49.0	+0.8
	baz=135						
TUC	Tucson	63.29	321	P	P	08 23 48.5	+0.3
N33A	J Bar K, Exete	63.38	336	P	P	08 23 48.8	+0.2
T25A	Trinidad	63.43	329	P	P	08 23 50.5	+1.3
	baz=142,SNR=17						
T25A	Trinidad	63.43	329	P	P	08 23 50.2	+0.9
T25A				IAmb	IAmb	08 24 35.3	
	comp=Z,31nm,1.1s						
TRQ	Mont Tremblant	63.43	356	IAmb	IAmb	08 23 49.9	
	comp=Z,56nm,1.1s						
K38A	Parkersburg	63.45	341	IAmb	IAmb	08 23 49.7	
	comp=Z,41nm,0.6s						
I42A	Draeger Farm,	63.49	344	IAmb	IAmb	08 23 51.6	
	comp=Z,21nm,0.8s						
E62A	Clayton Lake	63.66	360	IAmb	IAmb	08 23 51.5	
	comp=Z,56nm,1.0s						
PQI	Presque Isle	63.73	1	IAmb	IAmb	08 23 52.1	
	comp=Z,45nm,1.0s						
H43A	Windswept, Lux	63.75	345	IAmb	IAmb	08 24 37.1	
	comp=Z,28nm,0.8s						
I40A	Norwalk	63.95	343	IAmb	IAmb	08 24 41.8	
	comp=Z,66nm,1.6s						
KSCO	Kaye Shedlock'	64.09	332	P	P	08 23 54.8	+1.4
	baz=145,SNR=7.4						
KSCO	Kaye Shedlock'	64.09	332	IAmb	IAmb	08 24 39.5	
	comp=Z,66nm,0.9s						
D62A	Allapoint, All	64.13	0	IAmb	IAmb	08 23 54.8	
	comp=Z,73nm,0.9s						
VNA3	Neumayer Olymp	64.16	162	P	P	08 23 54.3	+1.0
BGNE	Belgrade	64.22	336	P	P	08 23 54.8	+0.7
	baz=150,SNR=31						
214A	Organ Pipe Nat	64.27	320	P	P	08 23 56.4	+1.7
	baz=134,SNR=14						
VNA1	Neumayer--Stat	64.35	161	P	P	08 23 56.7	+2.2
X18A	Snowflake	64.39	324	IAmb	IAmb	08 24 41.6	
	comp=Z,40nm,1.3s						
BATG	Bathurst New B	64.39	3	IAmb	IAmb	08 23 56.3	
	comp=Z,59nm,1.0s						
SDCO	Great Sand Dun	64.44	329	P	P	08 23 57.1	+1.2
	baz=142,SNR=29						
W18A	Petrified Fore	64.69	324	P	P	08 23 58.4	+1.0
	baz=137						
VNA2	Neumayer--Watz	64.72	161	P	P	08 23 58.8	+1.9
	baz=301,slow=5.7						
I37A	Lemond, Waseca	64.88	341	IAmb	IAmb	08 24 00.3	
	comp=Z,48nm,0.7s						
S22A	4UR Ranch, Cre	65.11	328	P	P	08 24 01.2	+1.0
	baz=140,SNR=11						
G40A	Rib Lake	65.11	344	IAmb	IAmb	08 24 06.5	
	comp=Z,40nm,1.6s						
Q24A	Divide	65.23	330	P	P	08 24 02.0	+1.0
	baz=142						
E43A	Lone Tree Farm	65.38	347	IAmb	IAmb	08 24 50.1	
	comp=Z,55nm,1.3s						
OGNE	Ogallala	65.41	333	P	P	08 24 02.8	+0.9
	baz=146,SNR=12						
OGNE	Ogallala	65.41	333	IAmb	IAmb	08 24 05.2	
	comp=Z,51nm,0.7s						
113A	Mohawk Valley,	65.42	320	IAmb	IAmb	08 24 48.0	
	comp=Z,110nm,1.8s						
MVCO	Mesa Verde	65.57	326	P	P	08 24 04.2	+1.1
	baz=139,SNR=23						
MVCO	Mesa Verde	65.57	326	IAmb	IAmb	08 24 50.4	
	comp=Z,42nm,1.2s						
COWI	Conover	65.61	345	IAmb	IAmb	08 24 40.6	
	comp=Z,53nm,1.6s						
ECSD	EROS Data Cent	65.68	339	P	P	08 24 03.7	+0.3
	baz=152,SNR=54						
SPMN	Marine on St.	65.80	342	P	P	08 24 04.0	-0.1
	baz=156,SNR=43						
WUAZ	Wupatki	65.91	323	P	P	08 24 07.0	+1.7
	baz=136,SNR=16						
WUAZ	Wupatki	65.91	323	IAmb	IAmb	08 24 51.7	
	comp=Z,43nm,1.1s						
ISCO	Idaho Springs	66.11	330	P	P	08 24 07.7	+1.0
	baz=142,SNR=27						
SMCO	Snowmass	66.28	329	IAmb	IAmb	08 24 53.9	
	comp=Z,23nm,0.8s						
SNAA	Sanae	66.35	162	P	P	08 24 08.4	+0.9
SNAA	Sanae	66.35	162	P	P	08 24 08.8	+1.3
SNAA				pmax	pmax		
	comp=Z,81nm,1.6s						
SNAA	Sanae	66.35	162	P	P	08 24 08.8	+1.3
SNAA				IAmb	IAmb	08 24 52.7	
	comp=Z,81nm,1.6s						
CCX	Cicese	66.66	317	P	P	08 24 10.9	+1.0
PDMCI	Parker Dam,Lak	66.69	321	P	P	08 24 11.6	+1.6
	baz=133						
E38A	The Farm, Brul	66.71	344	IAmb	IAmb	08 24 11.1	
	comp=Z,39nm,0.8s						
RMX	La Rumorosa	66.76	318	IAmb	IAmb	08 24 56.8	
	comp=Z,125nm,1.7s						
IKP	In-Ko-Pah, Jac	66.81	318	P	P	08 24 12.6	+1.6
	baz=131,SNR=10						
CBX	Cerro Bola	66.95	318	P	P	08 24 13.0	+1.1
BC3	Big Chuckawall	67.06	319	P	P	08 24 14.2	+1.7
	baz=132,SNR=25						
W13A	Hualapai Mount	67.08	321	P	P	08 24 13.3	+0.5
N23A	Red Feather La	67.12	331	P	P	08 24 14.4	+1.4
	baz=142,SNR=15						
SUSD	Miller	67.13	337	P	P	08 24 12.9	+0.2
	baz=149,SNR=6.7						
SUSD	Miller	67.13	337	IAmb	IAmb	08 24 14.8	
	comp=Z,85nm,0.8s						
DRLN	Deer Lake	67.14	8	P	P	08 24 11.8	-0.8
DRLN				IAmb	IAmb	08 24 12.8	
	comp=Z,74nm,0.9s						
MONP2	Monument Peak	67.17	318	P	P	08 24 15.2	+1.8
	baz=131,SNR=17						
BAR	Barrett	67.19	318	IAmb	IAmb	08 24 59.5	
	comp=Z,164nm,1.9s						
IRM	Iron Mountain	67.20	320	P	P	08 24 15.2	+1.8
	baz=132,SNR=31						
BELC	Belle Mtn. Jos	67.63	319	P	P	08 24 18.0	+1.8
	baz=132,SNR=16						
O20A	White River Ci	67.64	329	P	P	08 24 17.4	+1.2
	baz=140,SNR=18						
O20A	White River Ci	67.64	329	IAmb	IAmb	08 25 02.3	
	comp=Z,33nm,0.9s						
PFO	Pinyon Flats O	67.66	319	P	P	08 24 18.3	+2.0
	comp=Z,17nm,0.8s,baz=128,slow=6.2,SNR=35						
PFO	Pinyon Flats O	67.66	319	P	P	08 24 18.4	+2.0
	baz=131,SNR=19						
PFO	Pinyon Flats O	67.66	319	P	P	08 24 16.2	-0.1
LIC	Lamto	67.77	76	*e*P	P	08 24 17.0	-0.3
	comp=Z,1µm,1.1s						
KNB	Kanab	67.79	324	P	P	08 24 18.3	+1.1
KNB				pmax	pmax		
	comp=Z,70nm,1.1s						
KNB	Kanab	67.79	324	P	P	08 24 18.3	+1.1
KNB				IAmb	IAmb	08 25 04.3	
	comp=Z,70nm,1.1s						
EYMN	Ely	67.93	344	P	P	08 24 17.4	-0.1
	baz=157,SNR=8.8						
EYMN	Ely	67.93	344	IAmb	IAmb	08 24 18.6	
	comp=Z,42nm,0.8s						
TIC	Toumodi	67.93	75	*e*P	P	08 24 18.1	-0.2
GMRC	Granite Mounta	67.94	320	P	P	08 24 20.0	+2.0
	baz=132,SNR=32						
KIC	Kosan Boka	68.09	76	*e*P	P	08 24 19.0	-0.3
	comp=Z,921nm,0.8s						
DBIC	Dimbokro	68.09	75	P	P	08 24 19.4	+0.1
	comp=Z,618nm,0.7s,baz=254,slow=5.7,SNR=474						
DBIC				LR	LR	08 53 20.1	
	comp=Z,811nm,20.1s,baz=258,slow=35						
DBIC	Dimbokro	68.09	75	P	P	08 24 19.5	+0.2
DBIC				pmax	pmax		
	comp=Z,710nm,0.8s						
DBIC	Dimbokro	68.09	75	P	P	08 24 19.5	+0.2
MURC	Murrieta	68.12	318	P	P	08 24 21.3	+2.2
	baz=131,SNR=7.3						
Q16A	Castle Valley	68.25	326	P	P	08 24 20.6	+0.6
BBRC	Big Bear Solar	68.38	319	P	P	08 24 23.1	+2.2
	baz=131						
HEC	Hector,Ludlow	68.38	320	P	P	08 24 23.0	+2.2
	baz=132,SNR=14						
P17A	Butcher Ranch,	68.42	327	IAmb	IAmb	08 24 26.9	
	comp=Z,50nm,1.2s						
CCUT	Cedar City	68.47	324	P	P	08 24 22.7	+1.2
MVU	Marysvale	68.51	325	P	P	08 24 22.6	+0.9
MVU				IAmb	IAmb	08 25 08.5	
	comp=Z,90nm,0.9s						
TUQ	Turquoise Moun	68.53	320	P	P	08 24 23.5	+1.7
	baz=132,SNR=20						
RDMU	Red Mountain	68.64	328	IAmb	IAmb	08 24 27.2	
	comp=Z,26nm,0.7s						
TCRU	Three Creeks R	68.71	325	P	P	08 24 24.1	+1.1
K22A	Casper	68.77	331	P	P	08 24 24.5	+1.4
	baz=142						
K22A	Casper	68.77	331	IAmb	IAmb	08 24 30.7	
	comp=Z,60nm,1.6s						
CIS	Catalina Islan	68.78	317	P	P	08 24 24.3	+1.2
	baz=130						
BFSC	Mount Baldy Ra	68.83	319	P	P	08 24 25.4	+1.8
	baz=130						
RSSD	Black Hills	68.86	334	P	P	08 24 24.6	+0.9
RSSD				pmax	pmax		
	comp=Z,24nm,0.6s						
RSSD	Black Hills	68.86	334	P	P	08 24 25.0	+1.3
	baz=145						
RSSD	Black Hills	68.86	334	P	P	08 24 24.6	+0.9
RSSD				IAmb	IAmb	08 24 27.9	
	comp=Z,24nm,0.6s						
GSC	Goldstone, Bar	68.98	320	P	P	08 24 26.5	+2.0
	baz=131,SNR=18						
GSC	Goldstone, Bar	68.98	320	IAmb	IAmb	08 25 11.4	
	comp=Z,136nm,1.9s						
SHOC	Shoshone, Teco	69.06	321	P	P	08 24 26.8	+2.0
	baz=132,SNR=11						
MWC	Mount Wilson	69.07	318	IAmb	IAmb	08 25 11.8	
	comp=Z,132nm,1.8s						
TAOE	Nuku Hiva Isla	69.08	267	*e*S	S	08 33 14.8	-3.1
	comp=Z,353nm,24.8s						
TAOE	Nuku Hiva Isla	69.08	267	*e*LR	LR	08 45 33.3	
	comp=Z,644nm,29.1s						
PASC	Pasadena Art C	69.12	318	P	P	08 24 26.4	+1.1
PASC				IAmb	IAmb	08 25 11.9	
	comp=Z,79nm,1.6s						
DECC	Green Verdugo	69.26	318	P	P	08 24 28.4	+2.2
	baz=130,SNR=11						
PRN	Pahroc Range	69.34	323	P	P	08 24 27.6	+0.9
EDW2	Edwards Air Fo	69.45	319	P	P	08 24 29.0	+1.6
	baz=130,SNR=19						
AGMN	Agassiz Nation	69.48	341	P	P	08 24 27.2	+0.1
	baz=153,SNR=43						
JLU	Jordanelle	69.62	327	IAmb	IAmb	08 24 33.3	
	comp=Z,57nm,1.4s						
LRMC	Laurel Mtn Rad	69.64	320	P	P	08 24 30.4	+1.8
	baz=131,SNR=23						
OSI	Osito Audit: C	69.74	318	P	P	08 24 31.0	+1.9
	baz=130						
OSI	Osito Audit: C	69.74	318	IAmb	IAmb	08 25 15.6	
	comp=Z,91nm,1.6s						
FURC	Furnace Creek,	69.79	321	P	P	08 24 31.5	+2.3
	baz=132,SNR=44						
SCZ2	Santa Cruz Isl	69.94	317	P	P	08 24 32.3	+2.0
	baz=129						
DUG	Dugway, Tooele	70.05	326	P	P	08 24 32.5	+1.5
	baz=136,SNR=25						
ARVC	Arvin	70.13	319	P	P	08 24 33.4	+2.0
	baz=130						
ISA	Isabella, Lake	70.25	319	P	P	08 24 33.0	+0.8
ISA				pmax	pmax		
	comp=Z,83nm,1.7s						
ISA	Isabella, Lake	70.25	319	P	P	08 24 34.3	+2.0
	baz=130,SNR=25						
ISA	Isabella, Lake	70.25	319	P	P	08 24 33.0	+0.8
ISA				IAmb	IAmb	08 25 19.2	
	comp=Z,83nm,1.6s						
BW06	Boulder Array	70.28	330	P	P	08 24 32.8	+0.4
	baz=139,SNR=15						
PD31	Pinedale Array	70.28	330	P	P	08 24 32.7	+0.3
PDAR	Pinedale Array	70.28	330	P	P	08 24 33.0	+0.6
	comp=Z,4.8nm,0.5s,baz=122,slow=7.8,SNR=32						
MDND	Maddock	70.29	339	P	P	08 24 33.4	+1.2
	baz=150,SNR=28						
R11A	Troy Canyon, C	70.30	323	P	P	08 24 34.7	+2.1
	baz=133,SNR=15						
GRAC	Grapevine Rang	70.44	321	P	P	08 24 35.1	+1.8
	baz=131,SNR=6.5						
CWC	Cottonwood Cre	70.51	320	P	P	08 24 35.9	+2.0
	baz=131						
PMOZ	Porto Moniz, M	70.57	45	*e*P	P	08 24 34.9	+0.6
	comp=Z,112nm,1.2s						
PKM	Mcpherson Peak	70.61	318	P	P	08 24 36.9	+2.3
	baz=129,SNR=15						
PMAR	Madeira	70.70	45	*e*P	P	08 24 37.0	+1.8
	comp=Z,108nm,1.2s						
VES	Vestal, Richgr	70.75	319	P	P	08 24 37.1	+2.0
	baz=130,SNR=15						
SMMC	Simmler	70.99	318	P	P	08 24 39.0	+2.4
	baz=129,SNR=17						
TIN	Tinemaha, Big	71.00	320	P	P	08 24 38.8	+2.0

	baz=131,SNR=7.9						
ULM	Lac du Bonnet	71.22	342	P	P	08 24 37.5	-0.2
	comp=Z,137nm,0.5s,baz=152,slow=5.9,SNR=251						
ULM				LR	LR	08 58 44.5	
	comp=Z,82nm,19.1s,baz=120,slow=38						
PMPS	Porto Santo	71.29	45	*e*P	P	08 24 39.9	+1.4
	comp=Z,181nm,1.3s						
PMPST	Porto Santo, M	71.31	45	*e*P	P	08 24 40.2	+1.6
	comp=Z,245nm,1.3s						
PAGB	Antelope Grade	71.41	318	P	P	08 24 39.8	+0.6
PAGB				IAmb	IAmb	08 25 26.4	
	comp=Z,93nm,1.5s						
MLAC	Mammoth, Mammo	71.74	321	P	P	08 24 43.4	+2.0
	baz=130,SNR=8.1						
ELK	Elko	71.75	325	P	P	08 24 42.3	+1.0
	comp=Z,3.5nm,0.7s,baz=119,slow=3.6,SNR=15						
FLWY	Flagg Ranch	71.82	330	IAmb	IAmb	08 24 47.2	
	comp=Z,53nm,1.1s						
LAO	LASA Array	71.84	334	P	P	08 24 42.7	+1.1
	baz=143,SNR=9.3						
LAO	LASA Array	71.84	334	IAmb	IAmb	08 24 49.6	
	comp=Z,67nm,1.3s						
NV11	Mina Array Sit	71.85	322	IAmb	IAmb	08 25 29.2	
	comp=Z,76nm,1.9s						
KOWA	Kowa	71.87	68	P	P	08 24 42.3	0.0
SCHQ	Schefferville	71.92	2	P	P	08 24 40.6	-1.2
	comp=Z,18nm,0.7s,baz=198,slow=1.9,SNR=13						
NVAR	Mina Array Bea	71.94	322	P	P	08 24 43.9	+1.4
	comp=Z,6.3nm,0.7s,baz=148,slow=6.1,SNR=53						
RLMT	Red Lodge	71.94	332	P	P	08 24 43.7	+1.3
	baz=140,SNR=12						
RLMT	Red Lodge	71.94	332	IAmb	IAmb	08 24 50.9	
	comp=Z,92nm,1.7s						
LHV	Little Huntoon	71.94	321	IAmb	IAmb	08 25 29.9	
	comp=Z,131nm,2.0s						
H17A	Grant Village	72.00	330	P	P	08 24 44.7	+1.9
	baz=139,SNR=12						
H17A	Grant Village	72.00	330	P	P	08 24 44.5	+1.7
LKWY	Lake	72.04	330	P	P	08 24 43.7	+0.7
LKWY				pmax	pmax		
	comp=Z,26nm,0.9s						
LKWY	Lake	72.04	330	P	P	08 24 43.7	+0.7
PMPB	Monarch Peak	72.06	318	P	P	08 24 44.6	+1.5
PMPB				IAmb	IAmb	08 25 30.3	
	comp=Z,41nm,1.0s						
RYN	Ryan	72.20	322	IAmb	IAmb	08 25 31.1	
	comp=Z,98nm,2.0s						
YHH	Holmes Hill	72.42	330	IAmb	IAmb	08 24 51.2	
	comp=Z,57nm,1.3s						
DGMT	Dagmar	72.48	337	P	P	08 24 46.7	+1.4
	baz=145,SNR=14						
DGMT	Dagmar	72.48	337	IAmb	IAmb	08 24 52.8	
	comp=Z,229nm,1.9s						
QLMT	Earthquake Lak	72.73	330	P	P	08 24 47.9	+0.9
QSPA	South Pole Qui	72.83	180	P	P	08 24 48.9	+1.6
QSPA				IAmb	IAmb	08 24 51.5	
	comp=Z,64nm,1.4s						
PNTR	Pine Nut	73.14	321	P	P	08 24 50.2	+0.6
PNTR				IAmb	IAmb	08 25 37.2	
	comp=Z,221nm,1.9s						
HLID	Hailey	73.28	328	P	P	08 24 52.0	+1.7
	baz=135,SNR=47						
VCNR	Virginia City	73.30	321	P	P	08 24 50.8	+0.3
BOZ	Bozeman (W)	73.39	331	P	P	08 24 52.3	+1.4
	baz=138,SNR=5.7						
PAHR	Pah Rah Range	73.41	322	IAmb	IAmb	08 25 38.7	
	comp=Z,47nm,1.0s						
SFNM	Sidi Ifni	73.64	51	P	P	08 24 55.0	+2.6
MFID	Camas Ranch	73.91	327	IAmb	IAmb	08 25 00.6	
	comp=Z,56nm,1.2s						
EGMT	Eagleton	74.38	333	P	P	08 24 57.3	+0.9
	baz=140,SNR=12						
TBI	Tubuai	74.41	250	*e*S	S	08 34 17.6	-0.8
	comp=Z,215nm,30.2s						
TBI	Tubuai	74.41	250	*e*LQ	LQ	08 44 53.5	
	comp=Z,615nm,30.2s						
TBI				*e*LR	LR	08 48 02.0	
	comp=Z,728nm,26.8s						
O03E	Paynes Creek	75.22	321	P	P	08 25 02.1	+0.7
	baz=129,SNR=5.7						
EAH	EAH	75.26	50	P	P	08 25 04.3	+2.5
MSO	Missoula	75.39	330	P	P	08 25 04.0	+1.7
	baz=136,SNR=6.9						
TTIG	Tnine Tigouga,	75.54	51	P	P	08 25 05.2	+1.6
O02D	Mt. Diablo Mer	75.74	321	P	P	08 25 05.4	+1.0
	baz=128						
PPT2	Papeete2	75.82	256	*e*S	S	08 34 32.0	-2.4
	comp=Z,351nm,26.0s						
PPT2	Papeete2	75.82	256	*e*LQ	LQ	08 45 53.6	
	comp=Z,791nm,26.5s						
PPT2				*e*LR	LR	08 48 39.5	
	comp=Z,309nm,24.0s						
PPT	Papeete	75.83	256	LR	LR	08 52 09.9	
	comp=Z,230nm,18.2s,baz=108,slow=30						
M04C	Macdoel	76.17	322	P	P	08 25 08.3	+1.5
	baz=129,SNR=8.1						
N02D	Trinity Center	76.17	321	P	P	08 25 07.7	+0.8
	baz=128,SNR=8.0						
OUK	Oukaimeden	76.30	51	P	P	08 25 10.0	+1.9
TORD	Torodi Ar. Bea	76.47	71	P	P	08 25 08.8	-0.2
	comp=Z,863nm,1.1s,baz=261,slow=4.9,SNR=1622						
TORD				S	S	08 34 36.5	-4.8
	comp=Z,6.0nm,1.1s,baz=260,slow=9.4,SNR=8.4						
TORD				LR	LR	08 58 27.6	
	comp=Z,2µm,18.9s,baz=265,slow=35						
M02C	Callahan	76.52	322	P	P	08 25 09.9	+1.1
	baz=128						
YBH	Yreka Blue Hor	76.64	322	P	P	08 25 08.9	-0.6
	comp=Z,4.0nm,0.6s,baz=115,slow=2.1,SNR=15						
L04D	Klamath Falls	76.71	323	P	P	08 25 11.1	+1.2
	baz=129						
J05D	Fort Rock, OR	76.77	324	P	P	08 25 12.3	+2.1
	baz=130,SNR=5.7						
SRHM	Skhour des Reh	76.91	50	P	P	08 25 12.2	+1.0
FFC	Flin Flon	76.95	341	P	P	08 25 10.9	+0.1
FFC				pmax	pmax		
	comp=Z,31nm,1.0s						
FFC	Flin Flon	76.95	341	P	P	08 25 10.9	+0.1
OUZM	OUZ	76.97	52	P	P	08 25 13.0	+1.3
ZGR	Zagora	77.45	53	P	P	08 25 16.0	+1.7
I05D	Terrebonne, OR	77.50	325	P	P	08 25 16.6	+2.5
	baz=130,SNR=11						
AVE	Averroes	77.68	49	P	P	08 25 17.4	+2.1
I04A	Tendick Farm,	77.75	324	P	P	08 25 16.9	+1.4
	baz=129						
TZRR	Tazzarine	77.81	52	P	P	08 25 18.0	+1.7
NEW	Newport	77.93	330	P	P	08 25 18.6	+2.2
	comp=Z,4.0nm,0.6s,baz=146,slow=4.6,SNR=9.3						
NEW	Newport	77.93	330	P	P	08 25 18.8	+2.4
	baz=134						
NEW	Newport	77.93	330	P	P	08 25 17.5	+1.1
G05D	Wamic, OR	78.06	325	P	P	08 25 19.7	+2.5
	baz=130						
E07A	Sunnyside	78.14	327	P	P	08 25 18.9	+1.3
C09A	Chrisman Ranch	78.17	329	IAmb	IAmb	08 25 24.0	
	comp=Z,60nm,1.3s						
ZHG	ZHG	78.31	49	P	P	08 25 20.0	+1.1
FCC	Fort Churchill	78.49	347	IAmb	IAmb	08 25 21.4	
	comp=Z,64nm,1.1s						
PFVI	Vila Bisbo	78.67	45	*e*P	P	08 25 22.1	+1.4
	comp=Z,191nm,1.2s						
PFVI	Vila Bisbo	78.67	45	P	P	08 25 22.1	+1.4
GOLM	Goulmima	78.71	52	P	P	08 25 23.0	+1.8
MORF	Marmelete	78.88	45	*e*P	P	08 25 23.0	+1.0
MORF				IAmb	IAmb	08 25 25.1	
	comp=Z,144nm,0.8s						
MORF	Marmelete	78.88	45	*e*P	P	08 25 22.9	+1.0
MORF	Marmelete	78.88	45	*e*P	P	08 25 23.4	+1.5
	comp=Z,191nm,1.0s						
PTEO	Sao Teotonio	78.95	45	*e*P	P	08 25 23.9	+1.7
	comp=Z,389nm,1.0s						
CZD	Col de Zad	79.28	50	P	P	08 25 26.1	+1.6
PMST	Lisbon--Monsan	79.28	44	*e*P	P	08 25 25.3	+1.3
	comp=Z,140nm,1.0s						
LIS	Lisbon	79.29	44	*e*P	P	08 25 25.2	+1.1
LIS				IAmb	IAmb	08 25 26.6	
	comp=Z,142nm,1.2s						
LIS	Lisbon	79.29	44	*e*P	P	08 25 25.1	+1.1
PBDV	Barranco-do-Ve	79.33	46	*e*P	P	08 25 25.7	+1.4
	comp=Z,249nm,1.2s						
PMAFR	Mafra	79.33	43	*e*P	P	08 25 25.3	+1.0
	comp=Z,130nm,2.2s						
PNCL	Nicolau / Gran	79.38	45	*e*P	P	08 25 25.9	+1.4
	comp=Z,195nm,1.0s						
MESJ	Messejana	79.45	45	*e*P	P	08 25 26.0	+1.1
MESJ				IAmb	IAmb	08 25 28.6	
	comp=Z,121nm,1.0s						
MESJ	Messejana	79.45	45	*e*P	P	08 25 26.0	+1.1
MESJ	Messejana	79.45	45	*e*P	P	08 25 26.1	+1.1
	comp=Z,149nm,1.1s						
PCVE	Castro Verde	79.46	45	*e*P	P	08 25 26.5	+1.5
	comp=Z,108nm,1.4s						
MDT	Midelt	79.50	51	P	P	08 25 27.9	+2.4
F04D	Rainier, OR	79.52	325	P	P	08 25 27.6	+2.5
	baz=129						
PVAQ	Vaqueiros	79.56	45	*e*P	P	08 25 26.7	+1.2
	comp=Z,75nm,1.6s						
PVAQ	Vaqueiros	79.56	45	IAmb	IAmb	08 25 29.9	
	comp=Z,31nm,0.8s						
D05A	Enumclaw	79.67	327	IAmb	IAmb	08 25 31.9	
	comp=Z,46nm,0.9s						
LCRM	LCR	79.73	50	P	P	08 25 28.0	+1.3
PBEJ	Beja	79.78	45	*e*P	P	08 25 28.0	+1.3
	comp=Z,115nm,1.0s						
SBA	Scott Base	79.81	190	P	P	08 25 28.8	+2.6
SBA				pmax	pmax		
	comp=Z,34nm,1.2s						
SBA	Scott Base	79.81	190	P	P	08 25 28.8	+2.6
EDM	Edmonton	79.81	335	IAmb	IAmb	08 25 29.6	
	comp=Z,120nm,1.2s						
EVO	Evora	79.95	44	*e*P	P	08 25 28.6	+1.0
	comp=Z,92nm,1.2s						
PSBE	So Bento	79.95	43	*e*P	P	08 25 28.9	+1.3
	comp=Z,145nm,1.0s						
CHEFC	Chefchaouen	80.07	48	P	P	08 25 30.2	+1.8
PMTG	Montargil	80.09	44	*e*P	P	08 25 29.3	+1.0
	comp=Z,175nm,1.0s						
B06A	Marblemount	80.26	328	IAmb	IAmb	08 25 34.5	
	comp=Z,57nm,1.2s						
SMIR	Smir Dam	80.32	48	P	P	08 25 32.0	+2.3
B05A	Bryant	80.41	327	P	P	08 25 31.0	+1.2
	baz=130,SNR=9.3						
PESTR	Estremoz	80.41	44	*e*P	P	08 25 31.1	+1.0
	comp=Z,214nm,1.1s						
PESTR	Estremoz	80.41	44	IAmb	IAmb	08 25 33.3	
	comp=Z,99nm,1.0s						
PESTR	Estremoz	80.41	44	P	P	08 25 31.5	+1.5
PBAR	Barrancos	80.42	45	*e*P	P	08 25 31.1	+1.0
	comp=Z,95nm,1.1s						
WIN	Windhoek	80.42	111	P	P	08 25 31.7	+0.9
WIN				pmax	pmax		
	comp=Z,45nm,0.9s						
WIN	Windhoek	80.42	111	P	P	08 25 31.7	+0.9
WIN				IAmb	IAmb	08 25 34.0	
	comp=Z,45nm,0.9s						
PCAS	Casmilo, Conde	80.43	43	*e*P	P	08 25 31.0	+0.8
	comp=Z,150nm,1.0s						
D03D	Eldon	80.46	326	P	P	08 25 31.9	+1.8
	baz=129						
SYO	Syowa Base	80.55	160⥣	*e*P	P	08 25 30.4	+0.1
SYO	Syowa Base	80.55	160⥣	*e*PcP	PcP	08 25 37.0	+0.3
COI	Coimbra	80.57	43	*e*P	P	08 25 32.0	+1.1
	comp=Z,336nm,1.1s						
NLWA	Neilton Lookou	80.79	326	IAmb	IAmb	08 25 35.1	
	comp=Z,73nm,1.4s						
PMRV	Marv??o	80.83	44	*e*P	P	08 25 32.7	+0.4
	comp=Z,74nm,1.1s						
FRB	Frobisher Bay	80.83	0	P	P	08 25 31.0	-0.7
	comp=Z,26nm,0.8s,baz=179,slow=7.3,SNR=7.9						
VNDA	Vanda	80.84	190	P	P	08 25 34.3	+2.5
	comp=Z,8.7nm,0.7s,baz=129,slow=4.9,SNR=49						
VNDA	Vanda	80.84	190	P	P	08 25 34.8	+3.1
VNDA				pmax	pmax		
	comp=Z,15nm,1.0s						
VNDA	Vanda	80.84	190	P	P	08 25 34.8	+3.1
PCBR	Castelo Branco	80.99	43	*e*P	P	08 25 33.8	+0.7
	comp=Z,114nm,1.1s						
SUR	Sutherland	81.12	121	P	P	08 25 34.1	-0.3
SUR				IAmb	IAmb	08 25 37.8	
	comp=Z,82nm,1.4s						
PVIS	Viseu	81.17	43	*e*P	P	08 25 34.6	+0.5
	comp=Z,110nm,1.3s						
MTE	Manteigas	81.23	43	*e*P	P	08 25 35.2	+0.7
	comp=Z,198nm,1.1s						
PGC	Sidney	81.35	327	IAmb	IAmb	08 26 23.0	
	comp=Z,39nm,1.0s						
TDRA	Tendrara	81.52	52	P	P	08 25 38.0	+1.6
PVRL	Vila Real	81.58	42	*e*P	P	08 25 37.0	+0.7
	comp=Z,143nm,1.1s						
POLO	Lamas de Olo	81.58	42	*e*P	P	08 25 37.0	+0.7
	comp=Z,58nm,0.9s						
PGAV	Gavieira, Arco	81.60	41	*e*P	P	08 25 36.8	+0.4
	comp=Z,104nm,1.6s						
PCAB	Cabril	81.61	42	*e*P	P	08 25 37.0	+0.6
	comp=Z,179nm,1.0s						
FIGM	Figuig	81.69	53	P	P	08 25 39.0	+1.8
JBK	JBK	81.71	50	P	P	08 25 38.1	+0.8
TSUM	Tsumeb	81.73	108	P	P	08 25 38.6	+0.8
TSUM				IAmb	IAmb	08 25 41.1	
	comp=Z,89nm,0.9s						
MVO	Moncorvo	81.97	43	*e*P	P	08 25 39.2	+0.9
	comp=Z,195nm,1.0s						
TAF	Taforalt	82.04	50	P	P	08 25 41.0	+2.1
NUUK	Nuuk	82.41	8	*e*P	P	08 25 40.1	+0.2
PBRG	Braganca	82.48	42	*e*P	P	08 25 41.7	+0.7
	comp=Z,96nm,1.4s						
PAB	San Pablo	82.92	45	P	P	08 25 44.0	+0.6
PAB				pmax	pmax		
	comp=Z,232nm,1.4s						
PAB	San Pablo	82.92	45	P	P	08 25 44.0	+0.6
PAB	San Pablo	82.92	45	P	P	08 25 44.6	+1.3
CBB	Campbell River	83.19	327	P	P	08 25 45.6	+1.3
CBB				IAmb	IAmb	08 26 32.1	
	comp=Z,38nm,1.0s						
ESDC	Sonseca Array	83.25	45	P	P	08 25 45.9	+0.9
	comp=Z,116nm,1.1s,baz=252,slow=5.2,SNR=159						
ESDC				LR	LR	09 02 46.4	
	comp=Z,148nm,18.1s,baz=260,slow=36						
RAR	Rarotonga	84.19	250	P	P	08 25 51.1	+1.0
	comp=Z,9.9nm,0.5s,baz=56,slow=9.4,SNR=2.5						
SFJD	Kangerlussuaq	85.25	7	P	P	08 25 53.4	-0.9
	comp=Z,41nm,1.0s,baz=172,slow=5.0,SNR=8.8						
SFJD	Kangerlussuaq	85.25	7	P	P	08 25 54.1	-0.2
SFJD				pmax	pmax		
	comp=Z,45nm,1.1s						
SFJD	Kangerlussuaq	85.25	7	*i* P	P	08 25 53.2	-1.0
SFJD				IAmb	IAmb	08 25 55.5	
	comp=Z,23nm,0.9s						
SFJD	Kangerlussuaq	85.25	7	P	P	08 25 54.1	-0.2
SFJD				IAmb	IAmb	08 25 55.8	
	comp=Z,45nm,1.1s						
DY2G	Dye2	85.35	9	*i* P	P	08 25 55.3	+0.2
DY2G				IAmb	IAmb	08 25 56.1	
	comp=Z,73nm,0.8s						
ISOG	Isortoq, Green	85.80	12	*i* P	P	08 25 57.4	+0.4
ISOG				IAmb	IAmb	08 25 58.6	
	comp=Z,142nm,0.8s						
BOSA	Boshof	85.84	119	P	P	08 25 59.2	+0.8
	comp=Z,32nm,1.1s,baz=261,slow=5.6,SNR=21						
BOSA				LR	LR	09 02 22.4	
	comp=Z,403nm,18.0s,baz=262,slow=34						
BOSA	Boshof	85.84	119	IAmb	IAmb	08 26 01.5	
	comp=Z,52nm,1.2s						
BBB	Bella Bella	85.86	328	P	P	08 25 58.9	+1.3
	comp=Z,16nm,1.0s,baz=97,slow=6.3,SNR=7.9						
BBB	Bella Bella	85.86	328	P	P	08 25 59.2	+1.5
BBB				IAmb	IAmb	08 28 56.1	
	comp=Z,120nm,1.5s						
ANGG	Ammassalik, Gr	86.13	13	*i* P	P	08 25 59.0	+0.4
ANGG				IAmb	IAmb	08 26 00.1	
	comp=Z,114nm,0.8s						
ANGG	Ammassalik, Gr	86.13	13	P	P	08 25 59.1	+0.4
ABA	Alger-Bouzarea	86.89	50	P	P	08 26 05.6	+2.5
ADJB	Djebel Djouab	86.93	51	P	P	08 26 04.4	+1.0
YKA	Yellowknife Ar	87.12	341	P	P	08 26 04.2	+0.6
	comp=Z,22nm,0.7s,baz=126,slow=6.1,SNR=36						
YKA				LR	LR	09 09 53.6	
	comp=Z,154nm,18.5s,baz=0.0,slow=39						
AKET	Djebel Ketaf	87.21	51	P	P	08 26 06.2	+1.3
ATAF	Djebel Tarf	87.44	51	P	P	08 26 07.2	+1.3
ROSF	Rostrenen	87.89	38	*e*P	P	08 26 07.4	-0.2
CKHR	Kef el Ahmar	88.42	52	P	P	08 26 11.8	+1.3
MAW	Mawson	88.43	164	P	P	08 26 11.6	+1.7
	comp=Z,8.5nm,0.6s,baz=200,slow=4.9,SNR=37						
MAW				pP	pP	08 26 54.4	+1.6
	comp=Z,13nm,1.0s,baz=212,slow=7.9,SNR=3.3						
MAW				LR	LR	09 06 25.7	
	comp=Z,72nm,20.8s,baz=230,slow=36						
MAW	Mawson	88.43	164	P	P	08 26 11.4	+1.6
DSB	Dublin	88.67	32	IAmb	IAmb	08 26 12.9	
	comp=Z,67nm,1.0s						
ICESG	Greenland Ices	88.79	10⥣	*i*P	P	08 26 12.3	+0.6
ICESG				IAmb	IAmb	08 26 14.2	
	comp=Z,111nm,0.9s						
DFRA	Djebel Bou Aff	88.89	51	P	P	08 26 14.2	+1.5
JVM	Valle D.L. Mar	88.93	37	*e*P	P	08 26 12.0	-0.4
CTEI	Djebel Teioual	89.10	52	P	P	08 26 14.3	+0.5
CASM	Ain Smara	89.24	52	P	P	08 26 15.2	+0.9
CKFL	Kef-Lekhel	89.47	52	P	P	08 26 16.4	+1.0
BORG	Borgarnes	89.66	19	P	P	08 26 17.2	+1.7
	comp=Z,19nm,0.8s,baz=267,slow=3.9,SNR=3.8						
WLF1	Llynfaes	89.71	33	*e*P	P	08 26 15.7	-0.2
WLF1				IAmb	IAmb	08 26 17.3	
	comp=Z,177nm,1.0s						
YLL	Llanberis	89.75	33	*e*P	P	08 26 16.1	-0.1
WME	Myndd Eilian	89.81	33	*e*P	P	08 26 15.9	-0.6
ABSA	Djebel Ababsia	89.99	52	P	P	08 26 18.1	+0.3
WIM	Isle of Man	90.00	32	*e*P	P	08 26 17.3	0.0
CMAH	Djebel Manchou	90.07	52	P	P	08 26 18.9	+0.7
HLM1	Long Mynd	90.13	34	*e*P	P	08 26 17.5	-0.5
HLM1				IAmb	IAmb	08 26 19.1	
	comp=Z,46nm,1.0s						
FOEL	Foel Wylfa	90.14	34	*e*P	P	08 26 17.4	-0.6
DLBC	Dease Lake	90.30	333	P	P	08 26 19.5	+0.8
	comp=Z,6.4nm,0.6s,baz=42,slow=1.5,SNR=33						
DLBC	Dease Lake	90.30	333	IAmb	IAmb	08 27 08.6	
	comp=Z,28nm,1.0s						
NEWG	New Galloway	90.71	31	*e*P	P	08 26 20.7	+0.1
NEWG				IAmb	IAmb	08 26 22.3	
	comp=Z,93nm,1.1s						
LAWE	Loch Awe, Argy	90.72	30	*e*P	P	08 26 19.7	-0.9
LAWE				IAmb	IAmb	08 26 20.5	
	comp=Z,43nm,1.1s						
PGBU	Glenifferbraes	90.93	31	*e*P	P	08 26 21.1	-0.5
KESW	Keswick, Cumbr	91.02	32	*e*P	P	08 26 21.9	-0.1
KESW				IAmb	IAmb	08 26 23.7	
	comp=Z,153nm,1.0s						
HMNX	Herstmonceux	91.14	36	*e*P	P	08 26 23.1	+0.5
LBWR	Ladybower, Pea	91.17	34	*e*P	P	08 26 22.6	-0.1
LBWR				IAmb	IAmb	08 26 24.4	
	comp=Z,49nm,0.9s						
KEST	Kesra	91.21	53	P	P	08 26 23.9	+0.3
	comp=Z,43nm,1.0s,baz=203,slow=1.1,SNR=18						
KEST				LR	LR	09 08 06.4	
	comp=Z,302nm,20.5s,baz=217,slow=36						
KEST	Kesra	91.21	53	IAmb	IAmb	08 26 29.1	
	comp=Z,51nm,1.0s						
ESK	Eskdalemuir	91.32	32⥣	*e*P	P	08 26 23.1	-0.4
ESK	Eskdalemuir	91.32	32	P	P	08 26 23.4	0.0
ESK				pmax	pmax		
	comp=Z,57nm,1.2s						
ESK	Eskdalemuir	91.32	32	P	P	08 26 23.4	0.0
ESK				IAmb	IAmb	08 26 25.0	
	comp=Z,57nm,1.1s						
KAC	Achnashellach	91.40	29	*e*P	P	08 26 23.4	-0.4
INVG	Invergeldie, C	91.45	30	*e*P	P	08 26 23.4	-0.6
INVG				IAmb	IAmb	08 26 25.3	
	comp=Z,33nm,1.0s						
HPK	Haverah Park	91.48	33	*e*P	P	08 26 24.1	-0.1
HPK				IAmb	IAmb	08 26 25.5	
	comp=Z,40nm,0.8s						
EDMD	Edmundbyers	91.72	32	*e*P	P	08 26 25.1	-0.2
EDMD				IAmb	IAmb	08 26 27.0	
	comp=Z,81nm,1.1s						
SUMG	Summit	92.05	9	P	P	08 26 27.5	+0.5
SUMG				pmax	pmax		
	comp=Z,44nm,0.9s						
SUMG	Summit	92.05	9	*i* P	P	08 26 28.0	+1.0
SUMG				IAmb	IAmb	08 26 29.9	
	comp=Z,49nm,1.0s						
SUMG	Summit	92.05	9	P	P	08 26 27.5	+0.5
SUMG				IAmb	IAmb	08 26 29.6	
	comp=Z,44nm,0.9s						
WACR	West Acre	92.12	35	*e*P	P	08 26 27.0	-0.1
WACR				IAmb	IAmb	08 26 27.7	
	comp=Z,191nm,1.1s						
VSL	Villasalto	92.54	49	IAmb	IAmb	08 26 32.0	
	comp=Z,49nm,1.3s						
BNI	Bardonecchia	92.67	44	IAmb	IAmb	08 26 33.0	
	comp=Z,33nm,1.1s						
RES	Resolute Bay	93.24	353	P	P	08 26 32.5	+0.7
	comp=Z,6.4nm,0.8s,baz=211,slow=11,SNR=9.6						
RES	Resolute Bay	93.24	353	IAmb	IAmb	08 27 22.4	
	comp=Z,16nm,1.2s						
SNF	Seneffe	93.27	38	*d*P	P	08 26 32.3	-0.2
	comp=Z,24nm,1.1s						
DOU	Dourbes	93.29	38	*d*P	P	08 26 32.6	0.0
	comp=Z,27nm,1.1s						
UCC	Uccle	93.43	38	*d*P	P	08 26 33.5	+0.2
UCC	Uccle	93.43	38	IAmb	IAmb	08 26 35.0	
	comp=Z,32nm,1.4s						
BMRD	Maredsous	93.47	38	κP	P	08 26 33.6	+0.1
	comp=Z,38nm,1.0s						
SENIN	Lac Senin/Sane	93.55	42	IAmb	IAmb	08 26 40.4	
	comp=Z,66nm,1.8s						
TULEG	Thule	93.69	0	*i* P	P	08 26 32.0	-1.9
TULEG				IAmb	IAmb	08 26 36.3	
	comp=Z,23nm,1.0s						
RCHB	Rochefort	93.69	38	*d*P	P	08 26 34.7	+0.2
	comp=Z,20nm,1.1s						
BGES	Gesves	93.69	38	*d*P	P	08 26 34.4	-0.1
	comp=Z,21nm,0.9s						
BCLA	Clavier	93.84	38	κP	P	08 26 34.9	-0.3
	comp=Z,8.6nm,0.9s						
WLF	Walferdange	94.06	39	*d*P	P	08 26 35.6	-0.6
	comp=Z,26nm,1.1s						
WLF	Walferdange	94.06	39	*e*P	P	08 26 36.8	+0.6
	comp=Z,80nm,1.3s,baz=251,slow=4.6						
ECH	Echery	94.14	41	IAmb	IAmb	08 26 38.6	
	comp=Z,38nm,1.1s						
BHOU	Houvegnez	94.23	38	*d*P	P	08 26 37.8	+0.8
	comp=Z,23nm,1.0s						
MSSA	Maissana	94.30	45	IAmb	IAmb	08 26 39.2	
	comp=Z,45nm,1.2s						
MEM	Membach	94.32	38	*d*P	P	08 26 37.8	+0.4
	comp=Z,15nm,1.1s						
BTNL	Ternell	94.39	38	*d*P	P	08 26 37.6	-0.1
	comp=Z,17nm,1.1s						
VLC	Villacollemand	94.83	45	IAmb	IAmb	08 26 41.4	
	comp=Z,32nm,1.0s						
BFO	Black Forest	94.91	41	P	P	08 26 40.0	-0.2
BFO				pmax	pmax		
	comp=Z,17nm,1.1s						
BFO	Black Forest	94.91	41	*e*P	P	08 26 40.0	-0.2
	comp=Z,16nm,1.1s,baz=251,slow=4.6						
BFO	Black Forest	94.91	41	P	P	08 26 40.0	-0.2
BFO				IAmb	IAmb	08 26 41.9	
	comp=Z,16nm,1.1s						
TUE	Stuetta	94.92	43	IAmb	IAmb	08 26 42.7	
	comp=Z,32nm,1.1s						
AHRW	Bad Neuenahr-A	94.93	39	*e*P	P	08 26 40.8	+0.6
	comp=Z,46nm,1.1s,baz=251,slow=4.6						
NEEM	North Greenlan	95.21	4	*i* P	P	08 26 42.2	+0.9
OSSC	Osservatorio P	95.21	46	IAmb	IAmb	08 27 00.9	
	comp=Z,20nm,1.1s						
BUG	Bochum--Univer	95.37	38	*e*P	P	08 26 42.4	+0.3
	comp=Z,70nm,1.2s,baz=251,slow=4.6						
DAVA	Damuels	95.54	42	*i* P	P	08 26 43.5	+0.3
	comp=Z,31nm,1.0s,SNR=9.4						
STU	Stuttgart	95.60	41	*e*P	P	08 26 43.5	+0.2
	comp=Z,168nm,1.1s,baz=251,slow=4.6						
TNS	Taunus Mts	95.64	39	*e*P	P	08 26 43.9	+0.4
	comp=Z,47nm,1.0s,baz=251,slow=4.6						
UBR	Ueberruh	95.81	42	*e*P	P	08 26 44.8	+0.5
	comp=Z,53nm,1.2s,baz=251,slow=4.6						
IBBN	Ibbenburen	95.96	37	*e*P	P	08 26 45.4	+0.6
	comp=Z,60nm,1.0s,baz=251,slow=4.6						
FETA	Feichten	96.00	43	*i* P	P	08 26 45.4	+0.1
	comp=Z,21nm,1.2s,SNR=8.7						
RETA	Reutte	96.17	42	*i* P	P	08 26 46.0	0.0
	comp=Z,31nm,1.2s,SNR=15						
CTI	Castel Tesino	96.29	44	IAmb	IAmb	08 26 56.8	
	comp=Z,24nm,1.3s						
MOTA	Moosalm	96.34	42	*i* P	P	08 26 46.9	0.0
	comp=Z,36nm,1.2s,SNR=11						
SQTA	Sankt Quirin	96.37	43	*i* P	P	08 26 47.0	+0.1
	comp=Z,36nm,1.1s,SNR=24						
A36M	Sachs Harbour	96.58	345	P	P	08 26 47.6	+0.4
	baz=127,SNR=9.8						
A36M	Sachs Harbour	96.58	345	IAmb	IAmb	08 26 49.1	
	comp=Z,14nm,0.8s						
WATA	Walderalm	96.64	43	*i* P	P	08 26 48.4	+0.1
	comp=Z,32nm,1.3s,SNR=14						
WTTA	Wattenberg	96.66	43	*i* P	P	08 26 48.6	+0.2
	comp=Z,49nm,1.3s,SNR=16						
FUR	Furstenfeldbru	96.71	42	*e*P	P	08 26 48.7	+0.3
	comp=Z,77nm,1.2s,baz=251,slow=4.6						
INK	Inuvik	96.89	340	P	P	08 26 49.0	+0.4
	comp=Z,2.4nm,0.6s,baz=73,slow=3.6,SNR=20						

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INK   Inuvik            96.89 340   P       P        08 26 49.0 +0.4
INK   Inuvik            96.89 340   P       P        08 26 49.5 +0.9
      baz=120
INK   Inuvik            96.89 340   IAmb    IAmb     08 27 38.8
      comp=Z,34nm,2.0s
GTTG  Gottingen         96.99  38  eP       P        08 26 50.2 +0.7
      comp=Z,47nm,1.1s,baz=251,slow=4.6
STAL  STALIGIAL         97.06  44   IAmb    IAmb     08 26 51.8
      comp=Z,22nm,1.1s
ABTA  Abfaltersbach     97.07  43  i P      P        08 26 50.0 -0.1
      comp=Z,30nm,1.1s,SNR=25
GRFO  Grafenberg        97.16  40   P       Pdif     08 26 50.9 +0.5
GRFO                                pmax    pmax
      comp=Z,47nm,1.1s
GRFO  Grafenberg        97.16  40   P       Pdif     08 26 50.9 +0.5
GRA1  Grafenberg Arr    97.16  40   P       Pdif     08 26 50.8 +0.4
GRF   Grafenberg Arr    97.16  40   P       Pdif     08 26 50.8 +0.4
GRF                                 pmax    pmax
      comp=Z,48nm,1.1s
GRF   Grafenberg Arr    97.16  40  eP       Pdif     08 26 50.9 +0.5
      comp=Z,50nm,1.1s,baz=251,slow=4.6
ZOU   Zoufplan          97.32  44   P       Pdif     08 26 51.6 +0.2
CLZ   Clausthal         97.33  38  eP       Pdif     08 26 51.7 +0.5
      comp=Z,47nm,1.1s,baz=251,slow=4.6
NRDL  Niedersach Rie    97.38  37  eP       Pdif     08 26 52.3 +1.1
      comp=Z,40nm,1.2s,baz=251,slow=4.6
RJOB  Jochberg          97.55  42  eP       Pdif     08 26 52.5 +0.2
      comp=Z,16nm,1.1s,baz=251,slow=4.6
ROBS  Robic             97.58  44  i P      Pdif     08 26 52.4  0.0
TRI   Trieste           97.59  45   P       P        08 26 52.0 -0.3
TRI                                 pmax    pmax
      comp=Z,20nm,1.2s
TRI   Trieste           97.59  45   P       P        08 26 52.0 -0.3
TRI                                 IAmb    IAmb     08 26 54.3
      comp=Z,20nm,1.2s
ASSE  Asse, Remlinge    97.59  38  eP       Pdif     08 26 53.0 +0.9
      comp=Z,29nm,1.2s,baz=251,slow=4.6
L27K  Beaver Creek,     97.60 334   P       Pdif     08 26 52.9 +0.8
      baz=113
MOX   Moxa              97.69  39  eP       Pdif     08 26 53.3 +0.5
      comp=Z,88nm,2.5s,baz=251,slow=4.6
SKDS  Skadanscina       97.71  45  eP       P        08 26 52.8 -0.1
KBA   Koelnbreinsper    97.72  43  i P      Pdif     08 26 53.3 +0.2
      comp=Z,9.8nm,0.9s,SNR=6.1
MYKA  Terra Mystica     97.78  44  i P      Pdif     08 26 53.9 +0.6
      comp=Z,16nm,0.9s,SNR=12
ROTZ  Rotzenmuhle       97.79  40  eP       Pdif     08 26 53.8 +0.6
      comp=Z,7.6nm,1.2s,baz=251,slow=4.6
MANZ  Manzenberg        97.80  40  eP       Pdif     08 26 53.5 +0.3
      comp=Z,10.0nm,1.1s,baz=251,slow=4.6
KNDS  Knezji Dol        97.95  45  eP       P        08 26 53.8 -0.3
BSEG  Bad Segeberg      97.96  36  eP       Pdif     08 26 54.4 +0.6
      comp=Z,41nm,1.1s,baz=251,slow=4.6
FLTG  Flechtingen       97.99  38  eP       Pdif     08 26 54.3 +0.4
      comp=Z,27nm,1.0s,baz=251,slow=4.6
WET   Wettzell          98.02  41  eP       Pdif     08 26 54.7 +0.4
      comp=Z,22nm,1.2s,baz=251,slow=4.6
GUNZ  Gunzen            98.05  40  eP       Pdif     08 26 55.0 +0.6
      comp=Z,24nm,1.3s,baz=251,slow=4.6
WERN  Wernitzgruen      98.05  40  eP       Pdif     08 26 55.3 +0.9
      comp=Z,22nm,1.1s,baz=251,slow=4.6
NKC   Novy Kostel       98.08  40  i P      Pdif     08 26 55.3 +0.8
NKC   Novy Kostel       98.08  40  ePDIFF   Pdif     08 26 55.3 +0.8
TANN  Tannenbergstha    98.14  40  eP       Pdif     08 26 55.7 +0.9
      comp=Z,38nm,1.2s,baz=251,slow=4.6
MUD   Monsted U'grnd    98.15  33  i P      Pdif     08 26 55.7 +1.2
OBKA  Obir              98.34  44  i P      Pdif     08 26 56.2 +0.3
      comp=Z,11nm,1.0s,SNR=6.2
GEC2  GERESS Array S    98.45  42  eP       Pdif     08 26 56.4 +0.1
      comp=Z,18nm,1.1s,baz=251,slow=4.6
GEC2  GERESS Array S    98.45  42   P       P        08 26 56.0 -0.3
GEC2                                IAmb    IAmb     08 26 58.3
      comp=Z,15nm,1.0s
GERES GERESS Array B    98.45  42   P       P        08 26 55.9 -0.3
      comp=Z,12nm,1.1s,baz=240,slow=2.6,SNR=21
GERES                               LR      LR       09 08 54.9
      comp=Z,84nm,21.0s,baz=250,slow=34
GERES GERESS Array B    98.45  42   P       Pdif     08 26 56.3  0.0
GERES GERESS Array B    98.45  42   P       P        08 26 56.2  0.0
KHC   Kasperske Hory    98.46  41  i P      Pdif     08 26 56.7 +0.5
KHC   Kasperske Hory    98.46  41  ePDIFF   Pdif     08 26 56.7 +0.5
MOA   Molln             98.53  43  eP       Pdif     08 26 57.0 +0.4
      comp=Z,19nm,1.4s
SOKA  Soboth            98.71  44  eP       P        08 26 57.3 -0.2
      comp=Z,6.6nm,1.0s
CLL   Collm             98.73  39⇓iP       Pdif     08 26 58.2 +0.9
CLL                                e        SKSac    08 37 17.0 -2.4
CLL                                eS       ScS      08 38 11.0 -1.3
CLL                                 pmax    pmax
      comp=Z,32nm,1.2s
CLL   Collm             98.73  39⇓iPdif    Pdif     08 26 58.2 +0.9
      comp=Z,32nm,1.2s
CLL                                e                 08 27 44.0
CLL                                ePP      PP       08 30 58.0 -2.9
CLL                                e                 08 31 48.0
CLL                                ePPP     PPP      08 33 05.0
CLL                                e                 08 33 54.0
CLL                                eSKSac   SKSac    08 37 17.0 -2.4
CLL                                eSdif    ScS      08 38 11.0 -1.3
CLL                                eSP      SP       08 39 36.0 -2.7
CLL                                esSP              08 40 26.0
CLL                                eSSS     SSS      08 48 30.0
CLL                                e                 08 50 36.0
CLL                                 Lm      MLR      09 08 00.0
      comp=Z,300nm,20.3s
CLL   Collm             98.73  39  eP       Pdif     08 26 57.8 +0.5
      comp=Z,32nm,1.2s,baz=251,slow=4.6
CLL   Collm             98.73  39   P       Pdif     08 26 57.6 +0.3
CRES  Cresnjev          98.76  45  eP       Pdif     08 26 58.0 +0.3
FBE   Freiberg          98.83  39  eP       Pdif     08 26 58.3 +0.6
      comp=Z,29nm,1.1s,baz=251,slow=4.6
CKRC  Cesky Krumlov     98.83  42  ePDIFF   P        08 26 57.7 -0.2
BRG   Berggiesshubel    99.17  40  eP       Pdif     08 27 00.2 +0.9
      comp=Z,22nm,1.3s,baz=251,slow=4.6
BRG   Berggiesshubel    99.17  40  eP       Pdif     08 27 00.6 +1.3
BRG                                 Amp              08 27 02.1
      comp=Z,20nm,1.2s
BRG                                 Amp              08 40 57.0
      comp=Z,0.3nm,15.1s
BRG                                 Amp              09 09 29.0
      comp=E,0.2nm,17.6s
BRG                                 Amp              09 09 38.0
      comp=Z,0.3nm,17.2s
ARSA  Arzberg           99.19  43  eP       Pdif     08 26 59.6 +0.1
      comp=Z,7.9nm,1.2s
PRU   Pruhonice         99.30  41  i P      Pdif     08 27 00.6 +0.7
PRU   Pruhonice         99.30  41  ePDIFF   Pdif     08 27 00.6 +0.7
CONA  Conrad Observa    99.59  43  eP       Pdif     08 27 01.8 +0.5
      comp=Z,11nm,1.6s
SOP   Sopron            99.98  43  eP       Pdif     08 27 05.8 +2.9
KRUC  Moravsky         100.22  42  ePDIFF   Pdif     08 27 03.8 -0.2
ILAR  Eielson Array    100.30 335   P       Pdif     08 27 04.6 +0.6
      comp=Z,0.5nm,0.9s,baz=153,slow=4.7,SNR=5.7
ILAR                                pP      pPdif    08 27 47.3 -0.1
      comp=Z,1.7nm,1.1s,baz=93,slow=4.1,SNR=3.4
ILAR                                PP      PP       08 31 09.4 -3.0
      comp=Z,1.2nm,0.8s,baz=106,slow=6.8,SNR=8.2
UPC   Upice            100.35  40  eP       Pdif     08 27 05.2 +0.7
UPC   Upice            100.35  40  ePDIFF   Pdif     08 27 05.2 +0.7
CHVC  Chvalec          100.39  40  ePDIFF   Pdif     08 27 05.2 +0.4
VRAC  Vranov           100.41  42  ePDIFF   Pdif     08 27 05.3 +0.4
OSTC  Ostas            100.48  40  ePDIFF   Pdif     08 27 06.3 +1.1
MPLH  Magyarpolny      100.50  44  eP       Pdif     08 27 05.7 +0.4
DPC   Dobruska-Polom   100.50  41  i P      Pdif     08 27 05.7 +0.4
DPC   Dobruska-Polom   100.50  41  ePDIFF   Pdif     08 27 05.7 +0.4
NB2   NORSAR Subarra100.56     29   P       Pdif     08 27 06.1 +0.8
      comp=Z,31nm,1.7s,baz=250,slow=4.4
NB2   NORSAR Subarra100.56     29   P       Pdif     08 27 06.1 +0.8
      baz=250,slow=4.4
NOA   NORSAR Array B 100.56    29   P       Pdif     08 27 05.5 +0.3
      comp=Z,4.4nm,1.0s,baz=252,slow=4.3,SNR=4.5
COLA  College          100.72 335  i P      Pdif     08 27 07.7 +1.9
COLA                                pmax    pmax
      comp=Z,29nm,3.2s
JAVC  Velka Javorina   100.99  42  ePDIFF   Pdif     08 27 09.3 +1.8
MORC  Moravsky Berou   101.12  41  ePDIFF   Pdif     08 27 09.0 +0.9
LANS  Liptovska Anna   102.21  42  i P      Pdif     08 27 15.7 +2.8
LANS  Liptovska Anna   102.21  42  ePDIFF   Pdif     08 27 15.7 +2.8
CRVS  Cervenica-Dubn   103.44  43  i P      Pdif     08 27 20.1 +1.7
CRVS  Cervenica-Dubn   103.44  43  ePDIFF   Pdif     08 27 20.1 +1.7
MILM  Milestii Mici    108.04  46  eP       Pdif     08 27 41.0 +2.2
MILM                                pmax    pmax
      comp=Z,70nm,4.5s
MNK   Minsk            108.16  38  i P      Pdif     08 27 48.0 +8.9
MNK                                i        PP       08 32 10.2 -0.7
MNK                                i PPP    PPP      08 34 28.3
MNK                                i        SKSdf    08 38 39.6 -1.5
MNK                                i SP     SP       08 41 18.3 +1.1
MNK                                i PS     PS       08 41 38.3 +0.4
MNK                                i SS     SS       08 47 13.9 +2.1
MNK                                i SSS    SSS      08 51 19.2
MNK                                 pmax    pmax
      comp=N,16nm,0.8s
MNK                                 pmax    pmax
      comp=E,2.0nm,0.8s
MNK                                 pmax    pmax
      comp=Z,15nm,0.8s
MNK                                 MLR     MLR
      comp=Z,126nm,20.0s
MNK                                 MLR     MLR
      comp=N,811nm,23.0s
MNK                                 MLR     MLR
      comp=E,119nm,23.0s
MNK   Minsk            108.16  38  i P      Pdif     08 27 48.0 +8.9
      comp=E,2.0nm,0.8s
MNK                                i P      Pdif     08 27 48.0 +8.9
      comp=N,16nm,0.8s
MNK                                i P      Pdif     08 27 48.0 +8.9
      comp=Z,15nm,0.8s,baz=85
MNK                                i pP     sPdif    08 28 31.4 -8.6
MNK                                i PP     PP       08 32 10.2 -0.6
MNK                                i PPP    PPP      08 34 28.3
MNK                                i SKS    SKSdf    08 38 39.6 -1.4
MNK                                i SP     SP       08 41 18.3 +1.1
MNK                                i PS     PS       08 41 38.4 +0.5
MNK                                i SS     SS       08 47 13.9 +2.1
MNK                                i SSS    SSS      08 51 19.3
MNK                                i LRM    MLR      09 17 37.5
      comp=Z,126nm,20.2s
MNK                                i LRM    MLR      09 19 03.7
      comp=E,119nm,23.2s
MNK                                i LRM    MLR      09 19 03.7
      comp=N,811nm,23.2s
AKASG Malin Array Be   108.67  42   PP      PP       08 32 14.1 -0.6
      comp=N,0.2nm,0.3s,baz=269,slow=6.3,SNR=4.1
BRTR  Keskin Array B   110.81  53   PP      PP       08 32 30.7  0.0
      comp=N,2.4nm,1.0s,baz=243,slow=5.4,SNR=4.5
BRTR                                PKKPab  PKKPab   08 43 01.4 +2.6
      comp=N,1.4nm,0.9s,baz=130,slow=2.3,SNR=5.4
DZM   Mont Dzumac      112.72 236  eSP      SP       08 41 59.4 -2.5
      comp=N,592nm,28.8s
DZM   Mont Dzumac      112.72 236  eLR      LR       09 05 47.4
      comp=N,303nm,24.9s
KLMR  Klimovskoe       114.22  31  ePKIKP   PKiKP    08 31 56.7 +0.5
KLMR                                pmax    pmax
      comp=Z,13nm,1.3s
KLMR  Klimovskoe       114.22  31  ePKPdf   PKiKP    08 31 56.7 +0.5
KLMR                                AMP              08 32 01.4
      comp=Z,13nm,1.3s
SOC   Sochi            115.55  50  i PKIKP  PKPdf    08 31 58.6 -0.7
SOC                                e        PP       08 33 03.8 -0.2
SOC                                i PPP    PPP      08 35 32.3
SOC                                ePS      PS       08 42 49.2 +2.5
SOC                                eSS      SS       08 49 08.0  +18
SOC                                eSSS     SSS      08 53 08.8
KIV   Kislovodsk       117.69  49  i PKIKP  PKiKP    08 32 04.7 +1.1
KIV                                e        PP       08 33 21.2 +2.2
KIV                                ePS      PS       08 43 08.7 +2.4
KIV                                 pmax    pmax
      comp=Z,9.0nm,1.1s
KBZ   Khabaz           117.85  49   PKP     PKiKP    08 32 05.1 +1.4
      comp=Z,10nm,1.0s,baz=266,slow=1.3,SNR=12
KBZ                                 SKP     SKPdf    08 35 25.7 +2.0
      comp=Z,6.8nm,0.9s,baz=220,slow=2.1,SNR=5.8
KIRV  Kirov            119.59  32  i PKIKP  PKiKP    08 32 06.7 +0.1
STKA  Stephens Creek   122.72 211   PKP     PKiKP    08 32 14.6 +0.8
      comp=Z,1.7nm,0.6s,baz=117,slow=4.2,SNR=9.1
STKA                                PKKPbc  PKKPbc   08 42 07.7 -0.1
      comp=Z,1.3nm,0.6s,baz=337,slow=7.5,SNR=7.0
STKA  Stephens Creek   122.72 211   PKPdf   PKiKP    08 32 14.4 +0.6
TIXI  Tiksi            124.63 353  i PKIKP  PKiKP    08 32 16.5 +0.3
ARU   Arti             124.96  32  i PKIKP  PKiKP    08 32 17.8 +0.5
ARU                                         PP       08 34 11.2 +3.6
ARU                                         SKSdf    08 39 13.2 +0.1
ARU   Arti             124.96  32   PKPdf   PKiKP    08 32 17.7 +0.5
NRIK  Noril'sk         126.09  10   PKP     PKiKP    08 32 19.7 +0.5
      comp=Z,1.2nm,0.2s,baz=37,slow=1.6,SNR=4.9
SEY   Seymchan         126.09 338  i PKIKP  PKPdf    08 32 18.5 -0.4
AB31  Akbulak array    128.38  40  i PKIKP  PKiKP    08 32 24.4  0.0
ABKAR Akbulak array    128.38  40   PKPdf   PKiKP    08 32 24.7 +0.3
ABKAR Akbulak array    128.38  40           PKiKP    08 32 24.6 +0.2
BRVK  Borovoye         132.53  32  i PKIKP  PKPdf    08 32 30.9 -0.6
ASAR  Alice Springs    133.30 210   PKhKP   PKPpre   08 32 18.7
      comp=Z,0.4nm,0.6s,baz=129,slow=2.5,SNR=6.2
ASAR                                PKP     PKiKP    08 32 34.7 -0.5
      comp=Z,2.5nm,0.6s,baz=135,slow=1.9,SNR=5.7
ASAR                                pPKP    pPKPdf   08 33 19.4 +0.4
      comp=Z,2.4nm,0.9s,baz=133,slow=2.2,SNR=2.6
ASAR                                PP      PP       08 35 02.9 +1.2
      comp=Z,9.9nm,1.2s,baz=145,slow=6.4,SNR=13
ASAR                                SKPbc   SKPbc    08 35 47.5 +0.7
      comp=Z,9.8nm,0.9s,baz=147,slow=3.4,SNR=15
ASAR                                PKKP    PKKPdf   08 42 28.8 +5.2
      comp=Z,0.1nm,0.3s,baz=302,slow=1.6,SNR=4.5
ASAR                                SKKPbc  SKKPbc   08 45 02.2 -1.0
      comp=Z,0.7nm,0.9s,baz=328,slow=3.1,SNR=4.3
ASAR  Alice Springs    133.30 210   PKPdf   PKPdf    08 32 34.3 +0.3
WRA   Warramunga Arr   136.21 213   PKhKP   PKPpre   08 32 26.5
      comp=Z,1.4nm,0.9s,baz=136,slow=3.3,SNR=11
WRA                                 PKP     PKiKP    08 32 40.6 -0.6
      comp=Z,6.6nm,0.6s,baz=147,slow=1.9,SNR=23
WRA                                 SKPbc   SKPbc    08 35 56.8 +0.6
      comp=Z,24nm,1.1s,baz=147,slow=2.7,SNR=15
WRA                                 SKKPbc  SKKPbc   08 44 55.0 +2.6
      comp=Z,1.5nm,1.0s,baz=318,slow=2.6,SNR=3.7
WRAB  Tennant Creek    136.21 213  i PKIKP  PKPdf    08 32 39.0 -0.5
KK31  Karatay Array    137.49  44  i PKIKP  PKiKP    08 32 42.4 -0.7
KURK  Kurchatov        138.07  30  i PKIKP  PKPdf    08 32 42.7 +0.8
KURBB Kurchatov Arra   138.09  30   PKIKP   PKPdf    08 32 36.2 -5.7
ZALV  Zalesovo Beam    138.37  23   PKhKP   PKPpre   08 32 32.7
      comp=Z,2.1nm,0.4s,baz=330,slow=3.1,SNR=7.7
ZALV                                PKP     PKPdf    08 32 42.6 +0.3
      comp=Z,35nm,1.0s,baz=294,slow=1.5,SNR=32
ZALV                                SKP     SKPdf    08 36 02.9 +1.2
      comp=Z,9.9nm,0.8s,baz=300,slow=2.8,SNR=9.3
GAR   Garm             138.91  50           PKPdf    08 32 40.9 -3.1
AAK   Ala-Archa        140.32  43   PKIKP   PKPdf    08 32 46.0 -0.5
TKM2  Tokmak 2         140.89  42   PKHKP   PKPpre   08 32 42.6
MDOK  Medeo            141.68  41   PKHKP   PKPpre   08 32 44.5
MAKZ  Makanchi         142.32  33   PKIKP   PKPdf    08 32 49.0 -0.7
MAKZ  Makanchi         142.32  33   PKPdf   PKPdf    08 32 49.0 -0.7
MK31  Makanchi Array   142.49  32  i PKIKP  PKPdf    08 32 48.1 -2.0
MKAR  Makanchi Array   142.49  32   PKhKP   PKPpre   08 32 46.0
      comp=Z,8.3nm,1.0s,baz=5.6,slow=3.3,SNR=19
MKAR                                SKPbc   SKiKP    08 36 13.8  0.0
      comp=Z,5.8nm,0.9s,baz=347,slow=2.6,SNR=6.1
MKAR                                SKKPbc  SKKPab   08 44 29.4 -0.1
      comp=Z,2.1nm,0.9s,baz=151,slow=3.3,SNR=5.7
DGZ   Jazzator, Alta   142.71  25  i PKIKP  PKPdf    08 32 47.8 -2.7
KSH   Kashi            142.75  47   PKP     PKPdf    08 32 48.4 -2.5
KSH                                 PP      PP       08 36 00.3 -0.8
KSH                                 AMB     AMB
      comp=Z,420nm,6.4s
MTN   Manton Dam       143.77 215   PKPdf   PKPbc    08 32 51.8 +0.6
KLR   Kul'dur          143.86 336   SKPbc   SKPbc    08 36 15.2 -0.4
      comp=Z,6.6nm,1.0s,baz=314,slow=4.9,SNR=5.3
KLR   Kul'dur          143.86 336  i PKIKP  PKPab    08 32 50.1 +0.3
IRK   Irkutsk          144.82   7  ePKIKP   PKPbc    08 32 53.6 +0.2
IRK                                 pmax    pmax
      comp=Z,144nm,3.5s
MOY   Mondy            144.92  10  ePKIKP   PKPdf    08 32 55.6 +1.3
MOY                                 pmax    pmax
      comp=Z,174nm,1.2s
POO   Poona            145.09  82  eP       PKPbc    08 32 53.0 -2.3
TLY   Talaya           145.30   8c iPKIKP   PKPab    08 32 56.5 +1.3
TLY                                e                 08 33 40.4
TLY                                 pmax    pmax
      comp=Z,439nm,1.0s
CIT   Chita            145.32 357  ePKP2    PKPab    08 32 56.8 +1.5
CIT                                 pmax    pmax
      comp=Z,131nm,1.6s
ZAK   Zakamensk        146.53   8  ePKP2    PKPbc    08 32 59.3 +0.6
ZAK                                 pmax    pmax
      comp=Z,44nm,1.1s
WMQ   Urumqi           147.29  31  ePKPbc   PKPdf    08 32 58.2 -0.3
WMQ                                 AMB     AMB
      comp=Z,340nm,4.5s
USA0B Ussuriysk Arra   147.71 331   PKP2    PKiKP    08 33 03.7 -0.2
USA0B Ussuriysk Arra   147.71 331           PKiKP    08 33 03.7 -0.2
USRK  Ussuriysk Ar.    147.71 331   PKPbc   PKiKP    08 33 03.6 -0.4
      comp=Z,13nm,0.8s,baz=23,slow=1.5,SNR=17
USRK  Ussuriysk Ar.    147.71 331   PKPdf   PKPdf    08 32 59.6 +0.6
USRK                                PKPab   PKiKP    08 33 03.6 -0.4
JSD   Sado             148.16 316   PKPdf   PKPdf    08 33 00.5 +0.5
JSD                                         PKiKP    08 33 04.8 -0.2
MJAR  Matsushiro Arr   148.98 314   PKPbc   PKiKP    08 33 06.7 -0.2
      comp=Z,4.4nm,0.6s,baz=112,slow=1.6,SNR=14
MJAR                                pPKPbc  pPKPbc   08 33 50.4 -0.2
      comp=Z,9.7nm,0.6s,baz=98,slow=2.7,SNR=2.5
MAJO  Matsushiro       148.98 314  i PKIKP  PKPdf    08 33 01.2 -0.2
MAJO  Matsushiro       148.98 314   PKPdf   PKPdf    08 33 01.5 +0.1
MAJO                                        PKiKP    08 33 07.3 +0.4
MAT   Matsushiro       148.98 314   PKP     PKPbc    08 33 04.5 -1.1
SONM  Songino Array    149.40   6   PKP     PKPdf    08 33 03.4 +1.5
      comp=Z,30nm,0.8s,baz=0.0,slow=1.9,SNR=10.0
SONM                                PKPbc   PKiKP    08 33 07.4 -0.1
      comp=Z,30nm,0.8s,baz=326,slow=1.7,SNR=105
ULN   Ulaanbaatar      149.43   5   PKHKP   PKPpre   08 33 03.1
ULN                                         PKiKP    08 33 08.2 +0.6
ULN   Ulaanbaatar      149.43   5           PKPdf    08 33 03.1 +1.2
ULN                                 PKPbc   PKiKP    08 33 08.2 +0.6
HYB   Hyderabad        149.47  85  i PKP    PKPdf    08 33 04.0 +1.3
HYB                                esPKP    sPKPbc   08 34 10.0 +0.4
HYB                                ePP      PP       08 36 40.0 -1.6
SOEI  Soe              149.86 208   PKPdf   PKPdf    08 33 03.6  0.0
SOEI                                        PKiKP    08 33 11.0 +1.6
CN2   Changchun        150.78 338  ePKPbc   PKPdf    08 33 02.8 -1.2
CN2                                 PP      PP       08 36 48.5 +1.4
CN2                                 AMB     AMB
      comp=Z,100nm,8.2s
CN2                                 LR      LR
      comp=Z,300nm,16.0s
CN2                                 LR      LR
      comp=Z,400nm,16.0s
CN2                                 LR      LR
      comp=Z,200nm,19.0s
KSRS  Korea Array      154.81 326   PKPbc   PKiKP    08 33 20.1 +1.3
      comp=Z,2.7nm,0.8s,baz=357,slow=1.9,SNR=3.5
JNU   Nakatsue         155.89 314   PKPdf   PKPdf    08 33 10.1 -1.7
KAPI  Kappang          156.00 203   PKPab   PKPab    08 33 41.6 +1.5
      baz=178,slow=1.9
KAPI  Kappang          156.00 203   PKP2    PKPab    08 33 41.8 +1.7
KAPI  Kappang          156.00 203           PKPab    08 33 41.8 +1.7
GTA   Gaotai           156.10  21  ePKP     PKPdf    08 33 14.9 +3.0
GTA                                 PP      PP       08 37 22.0 +4.7
HHC   Hu-ho-hao-te     156.56 358  ePKP     PKPdf    08 33 12.3 -0.1
BTO   Baotou           156.81   1  eP       PKPab    08 33 43.1  0.0
XAN   Xi'an            163.31   5   P       PKPab    08 34 09.6 -1.9
XAN                                 pP      sPKPdf   08 34 17.2 -5.7
XAN                                 pmax    pmax
      comp=Z,13nm,1.5s
NJ2   Nanjing          163.54 334  ePKP     PKPdf    08 33 20.2 -0.1
ENH   Enshi            167.09   4   PKPdf   PKPdf    08 33 23.4 -0.1
ENH                                         PKPab    08 34 28.2  0.0
CMAR  Chiang Mai Arr   168.88  83   PKP     PKPdf    08 33 24.9  0.0
      comp=Z,0.7nm,0.3s,baz=320,slow=1.8,SNR=5.9
CMAR                                pPKP    pPKPdf   08 34 11.6 +1.3
      comp=Z,1.1nm,0.3s,baz=292,slow=2.1,SNR=2.4
CMAR                                PKPab   PKPab    08 34 37.0 +0.2
      comp=Z,15nm,1.0s,baz=274,slow=5.4,SNR=28
CMAR                                pPKPab  pPKPab   08 35 20.4 +0.5
      comp=Z,1.9nm,0.3s,baz=282,slow=5.4,SNR=2.8
CMAR                                PP      PP       08 38 27.1 +0.3
      comp=Z,1.6nm,0.3s,baz=290,slow=6.5,SNR=5.8
CMAR  Chiang Mai Arr   168.88  83   PKPab   PKPab    08 34 37.2 +0.4
KMI   Kunming          169.37  42 ⇑PKP     PKPdf    08 33 26.6 +1.3
GYA   Guiyang          170.24  21   PKP     PKPdf    08 33 24.8 -0.9
GYA                                 PKPab   PKPab    08 34 42.9 +0.6
GYA                                 PP      PP       08 38 32.5 +0.9
GYA                                 SKKS    SKKSac   08 45 03.4 -0.4
GYA                                 AMB     AMB
      comp=Z,150nm,5.6s
SLVN  Son La           172.56  57   PKPdf   PKPdf    08 33 26.3 -0.6
SLVN                                PKPab   PKPab    08 34 53.0  0.0
QIZ   Qiongzhong       178.19  22   PKP     PKPdf    08 33 27.2 -1.1
QIZ                                 pPKP    pPKPdf   08 34 10.2 -3.6
QIZ                                 PP      PP       08 39 12.4 +2.5
QIZ                                 SKS     SKSdf    08 40 16.0 -0.1
QIZ                                 SS      SS       09 00 36.3 +2.5
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*TRN **08** 08:21:49.2, 10.°84N×62.°34W, $h29^{km}$, MD3.8*
*FUNV **08** 08:21:50.1, 10.°80N×62.°27W, $h62^{km}$, MW3.8*
ISC 08 08:21:48.7±1.3**, 10.°80N**±0.°04×**62.°33W**±0.°03**, $h76^{km}$**$\pm 14^{km}$**,**
n35, $\sigma 1^{s}35$/55**, 1C, Near coast of Venezuela**

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Code  Station Name       Δ°   AZ°    Phase ID          Time       Res
                                    Op      ISC        h  m  s    ISC
CRUV  Carupano          0.90 262⇑iP      Pn        08 22 07.0 +0.7
CRUV                               eS      Sn        08 22 19.7 +0.3
TRN   Trinidad (W)      0.93  99   eP      Pn        08 22 06.1 -0.6
TRN                                eS      Sn        08 22 19.1 -1.0
TPP   Pointe-a-Pierr    0.99 119   eP      Pn        08 22 08.2 +0.8
TPP                                eS      Sn        08 22 20.9 -0.6
TBH   Brigand Hill      1.28 104   eP      Pn        08 22 12.5 +1.3
TBH                                eS      Sn        08 22 27.7 -0.3
GRFF  Grenada Fort F    1.37  25   eP      Pn        08 22 12.2  0.0
GRFF                               eS      Sn        08 22 29.0 -1.0
GRGR  Grenville         1.48  27   eP      Pn        08 22 13.6 -0.1
GRGR                               eS      Sn        08 22 31.9 -0.6
TPR   Prospect          1.57  76   eP      Pn        08 22 16.4 +1.5
BOT   Bacolet           1.63  77   eP      Pn        08 22 16.7 +1.1
BOT                                eS      Sn        08 22 37.3 +1.4
TOSP  Speyside          1.83  74   eP      Pn        08 22 18.4 +0.1
TOSP                               eS      Sn        08 22 40.5 -0.3
CUMV  Cumana_UDO        1.87 259   eP      Pn        08 22 20.6 +1.8
CUMV                               eS      Sn        08 22 41.4 -0.2
GCMP  Grenada, Carri    1.90  28   eP      Pn        08 22 18.8 -0.4
GCMP                               eS      Sn        08 22 41.0 -1.3
PCRV  Puerto La Cruz    2.35 255   eP      Pn        08 22 26.6 +1.4
PCRV                               eS      Sn        08 22 51.5 -1.8
SVOC  Richmond Hill,    2.58  25   eP      Pn        08 22 29.4 +1.1
SVB   Belmont           2.67  23   eP      Pn        08 22 29.4 -0.3
SVB                                eS      Sn        08 23 00.5 -0.5
SVV   Soufriere Volc    2.73  23   eP      Pn        08 22 31.7 +1.3
SSV   Crater Summit     2.75  24   eP      Pn        08 22 32.2 +1.5
RIOV  Rio Grande        2.76 169   eP      Pn        08 22 31.5 +0.6
RIOV                               eS      Sn        08 23 00.8 -2.4
PRGV  PARIAGUAN         3.05 229   eP      Pn        08 22 35.4 +0.6
PRGV                               eS      Sn        08 23 10.0 -0.2
MCLT  Moule a Chique    3.19  25   eP      Pn        08 22 37.1 +0.3
MCLT                               eS      Sn        08 23 13.7  0.0
SLCP  Castries, St.     3.45  22   eP      Pn        08 22 40.6 +0.4
SLCP                               eS      Sn        08 23 20.5 +0.6
SLBI  Saint Lucia, B    3.47  22   eP      Pn        08 22 41.6 +1.2
SLBI                               eS      Sn        08 23 19.9 -0.4
BIRV  Birongo           3.88 266   eP      Pn        08 22 47.6 +1.5
BIRV                               eS      Sn        08 23 28.2 -2.3
BIM   Bigot             3.89  18   eP      Pn        08 22 47.0 +0.7
BIM                                eS      Sn        08 23 27.6 -3.2
MPOM  Morne Pois Mar    3.90  22   eP      Pn        08 22 47.3 +1.0
MPOM                               eS      Sn        08 23 29.6 -1.2
MERV  Las Mercedes      4.20 249   eP      Pn        08 22 51.0 +0.7
CARV  Caracas           4.53 267   eP      Pn        08 22 56.3 +1.3
DSLB  Salisbury         4.69  11   eP      Pn        08 22 59.4 +2.2
MAGL  Barre de l'ile    5.22  11   e       Pn        08 23 06.0 +1.6
BENV  Beln              5.25 261   eP      Pn        08 23 05.3 +0.5
CACV  CAICARA DEL OR    5.25 233   eP      Pn        08 22 59.1 -5.7
CACV                               eS      Sn        08 23 51.9  -12
CBE   Ff, Capester      5.28   8   eP      Pn        08 23 07.1 +1.9
CBE   Ff, Capester      5.28   8   eS      Sn        08 24 02.3 -2.5
BAUV  El Baul           5.92 252   eP      Pn        08 23 15.3 +1.4
BAUV  El Baul           5.92 252   eP      Pn        08 23 13.7 -0.2
BAUV                               eS      Sn        08 24 17.0 -3.4
ANBD  Bethesda, Anti    6.23   5   eP      Pn        08 23 19.8 +1.7
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*IASPEI **08** 08:28:60.0±0.9, 36.°93N±0.°03×97.°83W±0.°03, $h8^{km}\pm 7^{km}$, Error ellipse: s-maj=4.2km s-min=3.5km az=127.5, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*
*TUL **08** 08:29:00±1.2, 36.°95N±0.°01×97.°84W±0.°04, $h3^{km}\pm 7^{km}$, ML3.4, mb_Lg3.4/30(NEIC), ML3.2/27(NEIC), Error ellipse: s-maj=4.7km s-min=1.0km az=106.0*
*IDC **08** 08:29:00.2±1.0, 37.°00N×97.°85W, $h0^{km}$, mb3.5/1, mb1 3.9/5, mb1mx3.6/43, mbtmp3.6/5, ML3.7/3, Error ellipse: s-maj=13.2km s-min=11.9km az=121.0*

*ANF **08** 08:29:00.1±2.1, 36°.90N×97°.80W, h2^{km}±15^{km}, ML4.3/9, Error ellipse: s-maj=7.0km s-min=5.2km az=91.0*
*NEIC **08** 08:29:00.1±1.0, 36°.94N±0°.04×97°.83W±0°.07, h6^{km}±7^{km}, Error ellipse: s-maj=8.4km s-min=6.0km az=83.0*
*NEIC **08** 08:29:00.3±0.9, 36°.92N±0°.02×97°.81W±0°.06, h5^{km}±7^{km}, Error ellipse: s-maj=6.9km s-min=2.9km az=72.0*
ISC 08 08:29:00.2±0.8**, 36°.93N**±0°.02×**97°.83W**±0°.02**, h9**^{km}±5^{km}**, n102, σ0ˢ.91**/105**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GC02	Grant County #	0.08	197	Pg	Pg	08 29 02.3	-0.1
GC02				Sg	Sg	08 29 03.8	-0.2
KAN14	Manchester OK	0.11	284		Pg	08 29 02.6	-0.2
KAN14				Sg	Sg	08 29 04.3	-0.3
KAN17	Caldwell West	0.12	25	Pg	Pg	08 29 02.9	-0.2
KAN17				Sg	Sg	08 29 04.6	-0.4
KAN05	Bluff City Nor	0.18	349		Pg	08 29 03.9	-0.1
KAN01	Argonia South	0.23	14		Pg	08 29 04.5	-0.3
KAN01				Sg	Sg	08 29 07.9	-0.1
KAN09	Caldwell North	0.27	39	Pg	Pg	08 29 05.5	-0.1
KAN09				Sg	Sg	08 29 08.3	-0.9
KAN10	Anthony SW Sta	0.29	312	Pg	Pg	08 29 05.9	0.0
KAN13	South Haven SW	0.29	74		Pg	08 29 06.1	+0.1
KAN08	Anthony NE Sta	0.32	339		Pg	08 29 06.3	-0.2
KAN06	Argonia West S	0.32	356		Pg	08 29 06.4	-0.1
OK032	Salt Plains WL	0.33	248		Pg	08 29 06.9	+0.2
KAN16	Harper SW Stat	0.35	328	Pg	Pg	08 29 06.9	-0.2
KS20	Mayfield South	0.37	36		Pg	08 29 07.5	0.0
KS21	Milan North St	0.38	21		Pg	08 29 07.5	-0.1
KS21					Sg	08 29 12.8	+0.1
KAN12	Harper NE Stat	0.39	340		Pg	08 29 07.8	-0.1
KAN12					Sg	08 29 13.1	+0.1
CROK	Carrier	0.44	196	Pg	Pg	08 29 09.1	+0.3
BLOK	Blackwell	0.52	109	Pg	Pg	08 29 10.5	+0.2
T35A	Sooner Cattle	1.06	90		Pg	08 29 20.3	-0.2
T35B	Sooner Cattle	1.06	90	P	Pg	08 29 20.1	-0.4
	baz=271,SNR=255						
T35B				S	Sg	08 29 34.3	+0.1
	baz=271						
U32A	Winter Ranch,	1.09	240		Pg	08 29 20.7	-0.4
U32A	Winter Ranch,	1.09	240	P	Pg	08 29 20.7	-0.4
	baz=60,SNR=27						
OK029	Liberty Lake	1.17	165		Pg	08 29 22.4	-0.3
QUOK	Quay	1.18	130		Pg	08 29 22.4	-0.4
OK031	S. Brethren Rd	1.26	140		Pg	08 29 23.9	-0.5
BCOK	Bluff Creek, N	1.28	172		Pg	08 29 24.3	-0.5
OK030	Cody Creek RV	1.31	140		Pg	08 29 24.6	-0.6
OK025	Westminster Rd	1.40	163		Pn	08 29 26.5	+0.5
OKCFA	Oklahoma City	1.54	168		Pn	08 29 28.9	+1.0
OKCFA	Oklahoma City	1.54	168	P	Pn	08 29 28.7	+0.8
	baz=349,SNR=27						
OKCFA				Sb	Sg	08 29 50.7	+0.9
	baz=349						
OKCSW	OKLAHOMA CITY	1.56	168		Pn	08 29 28.8	+0.8
R32A	Long Quarter,	1.65	335		Pb	08 29 30.4	-0.2
R32A	Long Quarter,	1.65	335	P	Pn	08 29 30.3	+1.0
	baz=154,SNR=51						
FNO	Franklin	1.71	168		Pn	08 29 31.3	+1.2
FNO				IAmb_Lg		08 29 57.6	
	comp=Z,219nm,1.1s						
TUL1	Leonard	1.93	121	P	Pn	08 29 34.6	+1.4
	baz=303						
TUL1				S	Sb	08 30 01.0	+1.2
	baz=303						
TUL1	Leonard	1.93	121		Pn	08 29 34.7	+1.4
TUL1	Leonard	1.93	121	P	Pn	08 29 34.5	+1.4
	baz=303,SNR=174						
WMOK	Wichita Mounta	2.32	200	P	Pn	08 29 39.5	+0.9
	baz=20						
WMOK	Wichita Mounta	2.32	200		Pn	08 29 39.5	+0.9
WMOK				IAmb_Lg		08 30 14.8	
	comp=Z,105nm,0.8s						
WMOK	Wichita Mounta	2.32	200	P	Pn	08 29 39.3	+0.7
	baz=20,SNR=126						
X34A	Smith Ranch, M	2.33	180	IAmb_Lg		08 30 17.1	
	comp=Z,214nm,1.0s						
KSU1	Kansas State U	2.37	24	P	Pn	08 29 40.2	+1.0
	baz=204						
KSU1				S	Sb	08 30 12.5	+0.1
	baz=204						
KSU1	Kansas State U	2.37	24		Pn	08 29 40.4	+1.2
KSU1	Kansas State U	2.37	24	P	Pn	08 29 39.8	+0.6
	baz=204,SNR=29						
KSU1				S	Sb	08 30 12.7	+0.3
	baz=204						
CBKS	Cedar Bluff	2.41	322	S	Sb	08 30 13.5	-0.1
	baz=140						
CBKS	Cedar Bluff	2.41	322	IAmb_Lg		08 30 21.6	
	comp=Z,146nm,0.8s						
U38A	Gravette	2.81	99	IAmb_Lg		08 30 36.6	
	comp=Z,88nm,0.8s						
LOOK	Love County	2.98	170	IAmb_Lg		08 30 40.8	
	comp=Z,79nm,0.9s						
X37A	Clayton	3.08	139	P	Pn	08 29 49.8	+0.9
	baz=320,SNR=37						
Z35A	Perchaven, San	3.62	172	S	Sn	08 30 41.4	+2.0
	baz=353						
S39A	Bolivar	3.67	77	IAmb_Lg		08 30 57.0	
	comp=Z,88nm,0.8s						
S39A	Bolivar	3.67	77	P	Pn	08 29 57.6	+0.5
	baz=259						
AMTX	Amarillo	3.73	238	Sb	Sg	08 30 57.6	-2.5
	baz=56						
AMTX	Amarillo	3.73	238	IAmb_Lg		08 31 02.5	
	comp=Z,142nm,1.1s						
N33A	J Bar K, Exete	3.81	4		Pn	08 29 58.5	-0.5
N33A				IAmb_Lg		08 31 08.6	
	comp=Z,151nm,1.0s						
U40A	Yellville	4.04	97	P	Pn	08 30 03.4	+1.1
	baz=280						
U40A	Yellville	4.04	97	IAmb_Lg		08 31 08.3	
	comp=Z,119nm,0.7s						
U40A	Yellville	4.04	97	P	Pn	08 30 03.3	+1.1
	baz=280,SNR=30						
U40A				P	Pn	08 30 03.3	+1.1
	baz=280,SNR=30						
MIAR	Mount Ida	4.20	123	IAmb_Lg		08 31 17.2	
	comp=Z,102nm,1.0s						
N35A	Tabor	4.28	23		Pn	08 30 06.1	+0.7
N35A	Tabor	4.28	23	P	Pn	08 30 06.2	+0.7
	baz=204,SNR=9.1						
P38A	Dawn	4.32	50	Pn	Pn	08 30 06.8	+0.8
P38A				IAmb_Lg		08 31 18.0	
	comp=Z,115nm,0.8s						
P38A	Dawn	4.32	50	P	Pn	08 30 06.9	+0.8
	baz=233,SNR=38						
KSCO	Kaye Shedlock'	4.32	300	IAmb_Lg		08 31 26.7	
	comp=Z,84nm,0.8s						
MGMO	Mountain Grove	4.46	85	Pn	Pn	08 30 09.2	+1.3
BGNE	Belgrade	4.48	357	P	Pn	08 30 08.9	+0.6
	baz=176						
BGNE	Belgrade	4.48	357	Pn	Pn	08 30 08.8	+0.6
ABTX	Abilene, Hawle	4.55	200	Pn	Pn	08 30 09.9	+0.7
ABTX				IAmb_Lg		08 31 24.5	
	comp=Z,60nm,1.1s						
R40A	Maddies Statio	4.62	71	Pn	Pn	08 30 10.6	+0.5
R40A	Maddies Statio	4.62	71	P	Pn	08 30 10.8	+0.7
	baz=254,SNR=74						
FCAR	Ozark Folk Cen	4.72	101	Pn	Pn	08 30 12.5	+1.0
X40A	Basin Creek Fa	4.74	119	Pn	Pn	08 30 13.1	+1.3
WHAR	Wooly Hollow	4.78	108	Pn	Pn	08 30 13.1	+0.8
W41B	Gary Mavity, V	4.85	110	S	Sn	08 31 09.4	-0.2
	baz=293						
WHTX	Lake Whitney,	4.94	176	P	Pn	08 30 15.1	+0.6
	baz=357						
WHTX				S	Sn	08 31 11.1	-0.6
	baz=357						
WHTX	Lake Whitney,	4.94	176	Pn	Pn	08 30 14.8	+0.3
WHTX				IAmb_Lg		08 31 49.9	
	comp=Z,84nm,1.3s						
L34A	Svendsen Farm,	5.15	12	Pn	Pn	08 30 17.7	+0.2
OGNE	Ogallala	5.18	322	Pn	Pn	08 30 19.4	+1.5
237A	Washetta, Mont	5.19	161	Pn	Pn	08 30 18.0	0.0
P40A	Paris	5.24	59	Pn	Pn	08 30 18.5	-0.1
CCM	Cathedral Cave	5.36	76	Pn	Pn	08 30 20.9	+0.6
Z41A	Richland Creek	5.51	130	S	Sn	08 31 24.6	-1.4
	baz=313						
FVM	French Village	5.98	78	Pn	Pn	08 30 29.1	+0.2
435B	Jarrell	6.14	178	P	Pn	08 30 30.8	-0.2
	baz=358						
435B	Jarrell	6.14	178	Pn	Pn	08 30 30.7	-0.3
ECSD	EROS Data Cent	6.86	7	P	Pn	08 30 40.9	0.0
	baz=188						
ANMO	Albuquerque	7.27	257	Lg	Lg	08 32 46.7	
	comp=Z,0.7nm,0.3s,baz=166,slow=19,SNR=7.8						
HDIL	Hopedale	7.59	59	P	Pn	08 30 51.8	+0.9
	baz=244						
JFWS	Jewell Farm	8.34	42	P	Pn	08 31 01.1	-0.1
	baz=227						
JFWS	Jewell Farm	8.34	42		Pn	08 31 00.8	-0.5
TX31	Lajitas Ar. Si	9.02	215	Pn	Pn	08 31 10.6	-0.1
TXAR	Lajitas Array	9.02	215	Pn	Pn	08 31 10.4	-0.2
	comp=Z,0.1nm,0.3s,baz=33,slow=12,SNR=8.2						
TXAR				Lg	Lg	08 33 42.4	
	comp=Z,0.4nm,0.3s,baz=35,slow=31,SNR=5.9						
TXAR	Lajitas Array	9.02	215		Pn	08 31 10.2	-0.5
SPMN	Marine on St.	9.11	23	Pn	Pn	08 31 11.8	0.0
BLO	Bloomington	9.20	72	Pn	Pn	08 31 12.9	-0.1
I42A	Draeger Farm,	9.72	42	Pn	Pn	08 31 19.2	-0.9
P48A	Milroy	10.09	72	Pn	Pn	08 31 25.2	0.0
G40A	Rib Lake	10.12	32	Pn	Pn	08 31 24.8	-0.8
PDAR	Pinedale Array	10.73	306	Pn	Pn	08 31 36.1	+1.9
	comp=Z,0.1nm,0.3s,baz=121,slow=12,SNR=2.8						
PDAR				Lg	Lg	08 34 30.8	
	comp=Z,0.3nm,0.3s,baz=119,slow=30,SNR=5.5						
TKL	Tuckaleechee C	11.42	92	Pn	Pn	08 31 43.8	+0.4
	comp=Z,0.4nm,0.3s,baz=237,slow=9.3,SNR=6.0						
TKL				Sn	Sn	08 33 46.2	-4.9
	comp=Z,0.2nm,0.3s,baz=206,slow=12,SNR=1.8						
TKL				Lg	Lg	08 34 54.3	
	comp=Z,0.9nm,0.3s,baz=16,slow=18,SNR=11						
ULM	Lac du Bonnet	13.39	5	Pn	Pn	08 32 05.2	-5.0
	comp=Z,0.2nm,0.3s,baz=186,slow=10,SNR=3.1						
ULM				Sn	Sn	08 34 27.9	-11
	comp=Z,0.2nm,0.3s,baz=115,slow=16,SNR=1.9						
ULM				Lg	Lg	08 35 52.7	
	comp=Z,0.1nm,0.3s,baz=133,slow=19,SNR=2.1						
SADO	Sadowa	16.14	55	Lg	Lg	08 37 19.7	
	comp=Z,0.2nm,0.3s,baz=270,slow=20,SNR=1.1						
ILAR	Eielson Array	40.04	330	P	P	08 36 36.2	+1.0
	comp=Z,0.5nm,0.6s,baz=107,slow=7.0,SNR=6.5						

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*IDC **08** 08:45:38.3±1.5, 1°.87N×125°.60E, h0^{km}, mb3.9/4, mb1 4.0/5, mb1mx3.7/42, mbtmp3.9/5, Error ellipse: s-maj=103.9km s-min=23.9km az=67.0*
*DJA **08** 08:45:54.2±0.4, 1°N±4°×12°5E±°, h81^{km}±6^{km}, M4.0/10, mb4.6/1, mB5.4/1, MLv3.7/10, Mw(mB)4.8/1*
ISC 08 08:45:52.0±1.0**, 1°.50N**±0°.08×**125°.38E**±0°.07**, h100**^{km}**, n11, σ1ˢ.85**/12**, mb3.7**/4**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	2.18	4	P	Pn	08 46 29.3	+2.3
GTOI	Gorontalo	2.52	250	P	Pn	08 46 34.3	+2.9
LBMI	Labuha	3.00	135	P	Pn	08 46 39.1	+1.3
MRSI	Marisa	3.59	254	P	Pn	08 46 47.3	+1.6
APSI	Ampana	4.44	237	P	Pn	08 46 58.0	+0.9
MSAI	Masohi	5.97	144	P	Pn	08 47 20.2	+2.2
FITZ	Fitzroy Crossi	19.47	179	P	P	08 50 10.4	-0.7
	baz=5.9,slow=10.0						
WRA	Warramunga Arr	23.05	158	P	P	08 50 48.2	-0.7
	2.6nm,0.6s,baz=338,slow=10,SNR=36						
ASAR	Alice Springs	26.35	162	P	P	08 51 18.9	-0.1
	1.3nm,0.5s,baz=340,slow=7.3,SNR=47						
ASAR				PcP	PcP	08 54 41.8	-0.8
	0.2nm,0.5s,baz=353,slow=2.7,SNR=2.0						
STKA	Stephens Creek	36.58	157	P	P	08 52 48.8	+0.3
	1.3nm,0.3s,baz=338,slow=9.7,SNR=15						
MKAR	Makanchi Array	58.64	327	P	P	08 55 36.4	-2.4
	0.2nm,0.3s,baz=113,slow=8.1,SNR=4.2						

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*IDC **08** 08:52:14.3±1.1, 0°.95N×127°.39E, h0^{km}, mb3.7/5, mb1 3.9/5, mb1mx3.6/34, mbtmp3.7/5, MS3.5/1, Ms1 3.5/1, ms1mx2.7/43, Error ellipse: s-maj=72.0km s-min=20.2km az=75.0*
*DJA **08** 08:52:15.8±0.5, 1°N±3°×12°7E±°, h10^{km}, M3.4/5, MLv3.4/5*
ISC 08 08:52:16.1±4.4**, 1°.0N**±0°.1×**127°.5E**±0°.4**, h13**^{km}±29^{km}**, n8, σ0ˢ.72**/8**, mb3.7**/5**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	0.24	220	P	Pg	08 52 21.2	0.0
TNTI				S	Sg	08 52 24.8	+0.1
LBMI	Labuha	1.58	181	P	Pb	08 52 45.0	-0.3
WRA	Warramunga Arr	21.82	163	P	P	08 57 09.0	+0.6
	1.8nm,0.8s,baz=340,slow=11,SNR=12						
ASAR	Alice Springs	25.25	166	P	P	08 57 42.3	+0.1
	1.3nm,0.7s,baz=346,slow=9.6,SNR=19						
JOW	Kunigami	25.74	2	LR	LR	09 08 46.9	
	comp=Z,105nm,20.5s,baz=256,slow=38						
MJAR	Matsushiro Arr	36.77	14	P	P	08 59 23.3	-0.3
	2.2nm,1.1s,baz=190,slow=7.4,SNR=2.6						
SONM	Songino Array	50.16	342	P	P	09 01 12.6	+0.9
	0.6nm,0.9s,baz=157,slow=7.8,SNR=1.9						
MKAR	Makanchi Array	60.27	326	P	P	09 02 23.8	-0.7
	0.9nm,0.6s,baz=116,slow=8.1,SNR=5.8						

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*TRN **08** 09:11:18.7, 13°.99N×58°.45W, h72^{km}, MD3.9*
ISC 08 09:11:16.3±2.5**, 14°.01N**±0°.04×**58°.4W**±0°.1**, h10**^{km}**, n38, σ1ˢ.42**/54**, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBGH	Gun Hill	1.41	232	*e*P	Pn	09 11 43.4	+1.4
BBGH				*e*S	Sb	09 12 02.1	+1.4
BCHC	Barbados, Cave	1.47	234	*e*P	Pn	09 11 44.6	+1.8
MPOM	Morne Pois Mar	2.41	281	*e*P	Pn	09 11 57.7	+1.8
MPOM				*e*S	Sn	09 12 23.9	-1.5
MVM	Montagne Vaucl	2.47	283	*e*P	Pn	09 11 57.4	+0.8
MCLT	Moule a Chique	2.47	263	*e*P	Pn	09 11 57.7	+1.0
MCLT				*e*S	Sn	09 12 26.5	-0.5
SLBI	Saint Lucia, B	2.48	271	*e*P	Pn	09 11 57.0	+0.1
SLBI				*e*S	Sn	09 12 25.9	-1.3
ILAM	Ilet Lapin Mar	2.50	288	*e*P	Pn	09 11 58.9	+1.8
LPMF	Morne Lapointe	2.54	283	*e*P	Pn	09 11 57.5	-0.1
SLB	Belfond	2.56	266	*e*P	Pn	09 11 59.3	+1.4
ZAM	Aeronautique	2.60	283	*e*P	Pn	09 11 58.7	+0.3
TRMF	Trois Ilets	2.61	282	*e*P	Pn	09 11 58.8	+0.2
BIM	Bigot	2.62	281	*e*P	Pn	09 11 59.7	+0.9
BIM				*e*S	Sn	09 12 30.1	-0.7
FDF	Fort de France	2.75	286	*e*P	Pn	09 12 00.3	-0.2
FDF				*e*S	Sn	09 12 34.1	+0.2
GBMF	Grand Be	2.78	287	*e*P	Pn	09 12 02.0	+1.1
SSV	Crater Summit	2.79	256	*e*P	Pn	09 12 02.0	+0.9
SSV				*e*S	Sn	09 12 33.3	-1.5
PML	Morne Lenard	2.79	286	*e*P	Pn	09 12 01.9	+0.8
SVV	Soufriere Volc	2.81	256	*e*P	Pn	09 12 02.2	+0.8
SVV				*e*S	Sn	09 12 34.1	-1.2
PCM	Pelee Case Pet	2.83	287	*e*P	Pn	09 12 02.7	+1.2
SVB	Belmont	2.85	255	*e*P	Pn	09 12 02.1	+0.1
SVB				*e*S	Sn	09 12 35.0	-1.4
MDN	Morne-Daniel	3.16	295	*e*P	Pn	09 12 07.4	+1.2
DWS	Wesley	3.20	299	*e*	Pn	09 12 08.5	+1.7
DSLB	Salisbury	3.24	296	*e*P	Pn	09 12 08.9	+1.6
DSLB				*e*S	Sn	09 12 45.2	-0.7
GCMP	Grenada, Carri	3.30	243	*e*P	Pn	09 12 08.4	+0.3
GCMP				*e*S	Sn	09 12 45.3	-2.1
MAGL	Barre de l'ile	3.38	305	*e*P	Pn	09 12 10.3	+1.2
MAGL				*e*S	Sn	09 12 48.1	-1.2
TOSP	Speyside	3.40	218	*e*P	Pn	09 12 09.8	+0.4
BOT	Bacolet	3.61	219	*e*P	Pn	09 12 14.2	+1.8
TDBA	Terre de Bas,	3.61	301	*e*P	Pn	09 12 15.0	+2.6
TDBA				*e*S	Sn	09 12 54.4	-0.7
TBG	Guadaloupe-3	3.62	301	*e*P	Pn	09 12 14.8	+2.3
GRGR	Grenville	3.67	240	*e*P	Pn	09 12 13.5	+0.4
GRGR				*e*S	Sn	09 12 56.1	-0.4
CBE	Ff, Capester	3.70	304	*e*P	Pn	09 12 15.5	+1.8
CBE				*e*S	Sn	09 12 56.8	-0.6
GRFF	Grenada Fort F	3.78	239	*e*P	Pn	09 12 17.1	+2.4
GRFF				*e*S	Sn	09 12 57.3	-2.0
ANBD	Bethesda, Anti	4.42	314	*e*P	Pn	09 12 24.6	+1.0
ANBD	Bethesda, Anti	4.42	314	*e*S	Sn	09 13 13.2	-1.9
TRN	Trinidad (W)	4.44	222	*e*P	Pn	09 12 24.1	+0.4
TRN	Trinidad (W)	4.44	222	*e*S	Sn	09 13 12.6	-2.8
ANWB	Willy Bob	4.88	319	*e*P	Pn	09 12 30.8	+1.1
ANWB	Willy Bob	4.88	319	*e*S	Sn	09 13 23.4	-2.9
BAUV	El Baul	10.69	243	*e*	Pn	09 13 48.1	-1.5

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*BUL **08** 09:15:41.0±0.4, 16°.85S×27°.04E, h10^{km}, MD3.8*
*LSZ **08** 09:16:05.0±0.3, 17°.16S×26°.75E, h10^{km}, MD2.7, ML2.6*
*EAF **08** 09:16:11.6, 18°.18S×29°.84E, h10^{km}, MD3.9(BUL)*
ISC 08 09:15:50.5±0.9**, 17°.79S**±0°.06×**26°.6E**±0°.1**, h10**^{km}**, n10, σ1ˢ.77**/18**, Zambia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ITZ	Itezhi-Tezhi	2.10	345	*i*	Pb	09 16 29.3	+0.4
	baz=265,slow=7.4						
ITZ				*e*P	Pb	09 16 29.3	+0.4
ITZ				*e*S	Sn	09 16 51.1	-1.1
ITZ				IAML		09 17 02.2	
	comp=Z,134nm,0.2s						
ITZ	Itezhi-Tezhi	2.10	345	*e*P	Pg	09 16 31.9	+1.0
ITZ				*i*		09 16 31.9	
	baz=154,slow=11						
ITZ				*e*S	Sn	09 16 51.6	-0.7
ITZ				IAML		09 17 02.2	
	comp=Z,134nm,0.2s						
ITZ	Itezhi-Tezhi	2.10	345	*e*P	Pg	09 16 31.9	+1.0
ITZ				*i*		09 16 31.9	
	baz=154,slow=11						
ITZ				*e*S	Sn	09 16 51.6	-0.7
ITZ				IAML		09 17 02.2	
	comp=Z,134nm,0.2s						
MATP	Matopo	3.19	145	*i* P	Pn	09 16 39.5	-1.5
MATP				*i* S	Sn	09 17 22.5	+3.3
MATP	Matopo	3.19	145	*e*P	Pg	09 16 52.8	+1.0
MATP				*e*S	Sb	09 17 23.0	-3.5
MSNA	Messina	5.57	145	*i* P	Pn	09 17 11.1	-2.5
MSNA				*i* S	Sn	09 18 16.5	-1.3
MSNA	Messina	5.57	145	*e*P	Pn	09 17 15.5	+1.9
MSNA				*e*S	Sn	09 18 01.4	-16
MOPA	Mopani	7.27	142	*i* P	Pn	09 17 38.6	+1.7
MOPA	Mopani	7.27	142	*e*P	Pn	09 17 37.9	+1.0
MOPA				*e*S	Sn	09 18 40.9	-19
BOSA	Boshof	10.84	186	*i* P	Pn	09 18 26.4	+0.4
BOSA				*i* S	Sn	09 20 27.4	0.0

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*IDC **08** 09:27:29.9±0.8, 6°.84N×94°.56E, h0^{km}, mb3.8/12, mb1 3.9/14, mb1mx3.8/43, mbtmp3.8/14, Error ellipse: s-maj=38.3km s-min=15.8km az=54.0*
*NEIC **08** 09:27:33.2±1.4, 6°.9N±0°.2×94°.6E±0°.2, h10^{km}±2^{km}, mb4.4/14, Error ellipse: s-maj=44.6km s-min=20.7km az=238.0*
ISC 08 09:27:34.5±0.6**, 6°.9N**±0°.1×**94°.7E**±0°.1**, h26**^{km}**, n36, σ0ˢ.70**/35**, mb4.1**/19**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	Prapat	5.87	133	Pn	Pn	09 28 59.2	-0.7
	baz=358,slow=23,SNR=1.0						
CMAR	Chiang Mai Arr	12.25	20	Pn	Pn	09 30 26.6	-0.8
	baz=209,slow=15,SNR=1.5						
H08S3	Diego Garcia H	26.39	237	T	T	09 59 55.4	
	baz=56,slow=74						
H08S2	Diego Garcia H	26.39	237	T	T	09 59 55.6	
	baz=56,slow=74						
H08S1	Diego Carcia H	26.41	237	T	T	09 59 56.3	
	baz=56						
NIL	Nilore	33.21	326	P	P	09 34 09.5	+0.1
GAR	Garm	38.80	329	P	P	09 34 57.2	-0.1
GAR				IAmb	IAmb	09 34 57.8	
	comp=Z,12nm,1.2s						
FITZ	Fitzroy Crossi	39.38	129	P	P	09 35 02.5	+0.3
	comp=Z,0.9nm,0.7s,baz=319,slow=9.3,SNR=1.7						
MK31	Makanchi Array	41.17	347	P	P	09 35 17.9	+1.1
MKAR	Makanchi Array	41.17	347	P	P	09 35 16.3	-0.5
	comp=Z,2.2nm,0.6s,baz=166,slow=8.8,SNR=16						
MKAR	Makanchi Array	41.17	347	P	P	09 35 17.5	+0.6
KKAR	Karatay Array	41.88	333	P	P	09 35 24.3	+1.6
SONM	Songino Array	42.03	12	P	P	09 35 24.0	0.0
	comp=Z,1.1nm,0.8s,baz=189,slow=7.8,SNR=4.6						
SONM	Songino Array	42.03	12	P	P	09 35 24.5	+0.6
WB0	Warramunga Arr	47.22	125	P	P	09 36 05.2	-0.4
WB0				IAmb	IAmb	09 36 33.8	
	comp=Z,3.6nm,1.4s						
WRA	Warramunga Arr	47.27	125	P	P	09 36 05.6	-0.4
	comp=Z,0.3nm,0.6s,baz=304,slow=9.1,SNR=2.8						
WRA				PcP	PcP	09 37 37.8	+0.8
	comp=Z,0.2nm,0.5s,baz=311,slow=2.8,SNR=4.9						
WRA	Warramunga Arr	47.27	125	P	P	09 36 06.6	+0.6
WB2	Warramunga Arr	47.27	125	P	P	09 36 06.3	+0.2
WB2				IAmb	IAmb	09 36 14.6	
	comp=Z,1.9nm,0.9s						
WR0	Warramunga Arr	47.44	125	P	P	09 36 07.8	+0.4
WR0				IAmb	IAmb	09 36 17.6	
	comp=Z,2.9nm,1.1s						
ZALV	Zalesovo Beam	47.61	352	P	P	09 36 07.9	-0.2
	comp=Z,1.2nm,0.4s,baz=177,slow=7.1,SNR=7.2						
ZALV	Zalesovo Beam	47.61	352	P	P	09 36 08.8	+0.6
ASAR	Alice Springs	48.88	130	P	P	09 36 17.5	-1.0
	comp=Z,0.5nm,1.0s,baz=169,slow=7.5,SNR=4.2						
ASAR				PcP	PcP	09 37 42.6	-0.3
	comp=Z,0.6nm,0.8s,baz=306,slow=3.4,SNR=3.5						
ASAR	Alice Springs	48.88	130	P	P	09 36 18.7	+0.2
ABKAR	Akbulak array	51.35	331	P	P	09 36 37.6	+0.8
ABKAR	Akbulak array	51.35	331	P	P	09 36 37.7	+0.9
ABKAR				IAmb	IAmb	09 36 39.0	
	comp=Z,4.5nm,0.6s						
BBOO	Buckleboo	55.73	138	P	P	09 37 10.3	+1.2
BBOO				IAmb	IAmb	09 37 36.1	
	comp=Z,12nm,1.4s						
BRTR	Keskin Array B	63.47	311	P	P	09 38 02.1	-0.5
	comp=Z,0.6nm,0.7s,baz=116,slow=8.1,SNR=2.7						
TIXI	Tiksi	68.11	11	P	P	09 38 32.1	+0.4
TIXI				IAmb	IAmb	09 38 32.6	
	comp=Z,2.9nm,0.7s						
FINES	FINESS Array B	73.83	332	P	P	09 39 05.7	-0.9
	comp=Z,1.3nm,0.5s,baz=79,slow=4.1,SNR=9.3						
FINES	FINESS Array B	73.83	332	P	P	09 39 06.6	0.0
ARCES	ARCESS Array B	76.38	340	P	P	09 39 20.1	-1.1
	comp=Z,2.3nm,0.9s,baz=117,slow=6.9,SNR=9.2						
ARCES	ARCESS Array B	76.38	340	P	P	09 39 21.3	+0.1
GERES	GERESS Array B	78.91	318	P	P	09 39 35.3	-0.6
	comp=Z,0.8nm,0.9s,baz=94,slow=4.1,SNR=3.9						
GERES	GERESS Array B	78.91	318	P	P	09 39 35.6	-0.3
TORD	Torodi Ar. Bea	91.33	283	P	P	09 40 38.5	-0.3
	comp=Z,0.2nm,0.5s,baz=82,slow=4.4,SNR=1.2						
ESDC	Sonseca Array	92.25	310	P	P	09 40 42.0	-0.7
	comp=Z,0.5nm,0.8s,baz=56,slow=5.3,SNR=2.4						

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*TUL **08** 09:33:43.4±1.1, 35°.916N±0°.007×97°.34W±0°.02, h5^{km}±7^{km}, ML2.6, mb_Lg2.1/7(NEIC), Error ellipse: s-maj=2.0km s-min=1.1km az=92.0*
NEIC 08 09:33:43.8±0.8**, 35°.92N**±0°.01×**97°.34W**±0°.02**, h9**^{km}±4^{km}**, Error ellipse: s-maj=2.1km s-min=1.5km az=62.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK029	Liberty Lake	0.16	217	Pg	Pg	09 33 46.9	-0.3
OK029				Sg	Sg	09 33 49.5	0.0
OK025	Westminster Rd	0.34	180	Pg	Pg	09 33 50.4	-0.1
OK025				Sg	Sg	09 33 55.0	0.0
BCOK	Bluff Creek, N	0.34	220	Pg	Pg	09 33 50.4	-0.2
BCOK				Sg	Sg	09 33 55.1	0.0
OK031	S. Brethren Rd	0.41	86	Pg	Pg	09 33 51.8	+0.1
OK031				Sg	Sg	09 33 57.2	+0.2
OK030	Cody Creek RV	0.45	89	Pg	Pg	09 33 52.5	-0.1
OK030				Sg	Sg	09 33 58.7	+0.2
OKCFA	Oklahoma City	0.52	190	Pg	Pg	09 33 53.6	-0.2
OKCFA				Sg	Sg	09 34 00.5	0.0
OKCSW	OKLAHOMA CITY	0.52	189	Pg	Pg	09 33 53.8	-0.1
OKCSW				Sg	Sg	09 34 01.2	+0.5
QUOK	Quay	0.57	64	Pg	Pg	09 33 54.7	-0.1
QUOK				Sg	Sg	09 34 02.7	+0.5
FNO	Franklin	0.67	184	Pg	Pg	09 33 56.2	-0.4
FNO				IAmb_Lg		09 34 04.4	
	comp=Z,18nm,0.7s						
FNO				Sg	Sg	09 34 05.1	-0.3
CROK	Carrier	0.78	318	Pg	Pg	09 33 58.6	-0.2
CROK				Sg	Sg	09 34 09.0	0.0
BLOK	Blackwell	0.84	7	Pg	Pg	09 33 59.9	-0.1
BLOK					Sb	09 34 11.7	-0.4
GC02	Grant County #	1.02	336	Pg	Pg	09 34 03.0	-0.3
GC02				Sg	Sg	09 34 15.5	-1.1
KAN13	South Haven SW	1.09	354	Pg	Pg	09 34 04.2	-0.5
KAN13				Sg	Sg	09 34 19.1	+0.1
OK032	Salt Plains WL	1.13	322		Pg	09 34 05.0	-0.4
OK032				Sg	Sg	09 34 19.7	-0.3
KAN14	Manchester OK	1.15	334	Pg	Pg	09 34 05.4	-0.4
KAN14					Sb	09 34 21.0	+0.1
KAN17	Caldwell West	1.17	343	Pg	Pb	09 34 05.8	-0.4
KAN17				Sg	Sb	09 34 21.8	+0.3

T35A	Sooner Cattle	1.20	34	Pg	Pb	09 34 06.2	-0.4
T35A				Sg	Sg	09 34 22.3	0.0
KAN09	Caldwell North	1.23	350	Pg	Pn	09 34 06.8	-0.4
KAN09				Sg	Sn	09 34 24.0	0.0
KAN05	Bluff City Nor	1.26	340		Pn	09 34 07.5	-0.1
KAN01	Argonia South	1.27	345		Pn	09 34 07.7	-0.1
KAN10	Anthony SW Sta	1.34	333	Pn	Pn	09 34 08.8	+0.1
X34A	Smith Ranch, M	1.38	197	Pn	Pn	09 34 09.4	+0.1
KAN06	Argonia West S	1.39	343	Pn	Pn	09 34 09.4	+0.1
KAN06				IAmb_Lg		09 34 29.0	
	comp=Z,8.2nm,0.7s						
KAN08	Anthony NE Sta	1.40	339	Pn	Pn	09 34 09.6	+0.1
KAN08				IAmb_Lg		09 34 27.5	
	comp=Z,15nm,1.2s						
U32A	Winter Ranch,	1.42	289		Pn	09 34 09.4	-0.4
KAN16	Harper SW Stat	1.43	336	Pn	Pn	09 34 10.0	+0.1
WMOK	Wichita Mounta	1.67	225	Pn	Pb	09 34 14.0	-0.7
LOOK	Love County	1.93	176		Pn	09 34 17.6	+0.8
X37A	Clayton	2.09	129	Pn	Pn	09 34 19.8	+0.8
U38A	Gravette	2.44	77	IAmb_Lg		09 35 06.4	
	comp=Z,9.3nm,0.9s						
Z35A	Perchaven, San	2.59	178	Pn	Pn	09 34 26.8	+1.0
W39A	Magazine	2.99	103	Pn	Pn	09 34 31.8	+0.4
MIAR	Mount Ida	3.37	113		Pn	09 34 36.2	-0.5
U40A	Yellville	3.66	82	Pn	Pn	09 34 39.7	-0.9
S39A	Bolivar	3.67	60		Pn	09 34 39.1	-1.7
ABTX	Abilene, Hawle	3.80	211	Pn	Pn	09 34 42.5	-0.1
X40A	Basin Creek Fa	3.96	110	Pn	Pn	09 34 44.9	+0.2
X40A				IAmb_Lg		09 35 49.6	
	comp=Z,9.4nm,0.8s						
FCAR	Ozark Folk Cen	4.23	89	Pn	Pn	09 34 47.8	-0.6
MGMO	Mountain Grove	4.26	72	Pn	Pn	09 34 47.9	-1.1
R40A	Maddies Statio	4.69	58	Pn	Pn	09 34 55.0	+0.3
P38A	Dawn	4.77	38	Pn	Pn	09 34 55.9	+0.1
P40A	Paris	5.53	48	Pn	Pn	09 35 06.1	-0.1
JCT	Junction City	5.81	202	Pn	Pn	09 35 10.2	+0.1

BJI ***08*** *09:34:53.8±0.0, 0°.54N×99°.06E, h75^{km}, mB5.6/59, mb5.7/76, Ms5.3/93, Ms7 5.1/86*

MOS ***08*** *09:34:55.1±1.0, 0°.78N×98°.93E, h71^{km}, mb6.4/108, Error ellipse: s-maj=6.3km s-min=3.5km az=110.8*

NEIC ***08*** *09:34:56.8, 0°.75N×98°.88E, h71^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-2.64; $M_{\theta\theta}$-0.20; $M_{\phi\phi}$2.84; $M_{r\theta}$2.08; $M_{\theta\phi}$-2.70; $M_{\phi r}$-4.23; Fault plane solution: $M_0$6.09000×10^{17} NP1:ϕ_s334.39000°, δ71.72000°, λ-85.49000°. NP2:ϕ_s140.30000°, δ18.81000°, λ-103.37000°. Principal axes: T 6.7781, Plg27.0000°, Azm61.0000°; N -1.7557, Plg4.0000°, Azm153.0000°; P -5.0224, Plg63.0000°, Azm251.0000°;*

NEIC ***08*** *09:34:57.3±1.8, 0°.79N±0°.06×98°.89E±0°.05, h69^{km}±1^{km}, mb6.1/211, Mwb5.8/47, Mww5.7, Mwc5.8(GCMT) Error ellipse: s-maj=11.2km s-min=8.4km az=207.0*

DJA ***08*** *09:34:57.7±0.1, 1°N±1°×9°9E±°, h78^{km}±1^{km}, M5.7/133, mB6.2/120, mb6.0/133, MLv6.3/25, Mw(mB)5.8/120, MwMwp5.3/56, Mwp5.5/56*

IDC ***08*** *09:34:57.7±0.5, 0°.83N×98°.97E, h81^{km}±4^{km}, mb5.6/43, mb1 5.6/46, mb1mx5.5/48, mbtmp5.9/46, MS4.6/44, Ms1 4.6/44, ms1mx4.6/49, Error ellipse: s-maj=9.8km s-min=7.0km az=60.0*

KLM ***08*** *09:34:58, 0°.67N×98°.75E, h80^{km}, mb6.4*

GCMT ***08*** *09:34:58.3±0.1, 0°.78N±0°.01×98°.78E±0°.01, h87^{km}, MW5.8/141, Moment Tensor Solution. s141,c285; s135,c283; Duration: 1^{s}.8 Moment tensor: Scale 10^{17} Nm; M_{rr}-2.27±.05; $M_{\theta\theta}$-0.92±.05; $M_{\phi\phi}$3.19±.06; $M_{r\theta}$1.55±.04; $M_{\theta\phi}$-3.33±.05; $M_{\phi r}$-3.46±.04; Best double couple: $M_0$5.30000×10^{17} NP1:ϕ_s127.00000°, δ25.00000°, λ-123.00000°. NP2:ϕ_s342.00000°, δ69.00000°, λ-76.00000°. Principal axes: T 6.6500, Plg23.0000°, Azm62.0000°; N -2.6990, Plg13.0000°, Azm157.0000°; P -3.9500, Plg63.0000°, Azm275.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***08*** *09:34:59, 0°.79N×98°.79E, h82^{km}, Moment Tensor Solution. Duration: 3^{s}.8 Moment tensor: Scale 10^{17}Nm; M_{rr}-2.45; $M_{\theta\theta}$-1.34; $M_{\phi\phi}$3.79; $M_{r\theta}$1.72; $M_{\theta\phi}$-3.51; $M_{\phi r}$-3.49; Fault plane solution: $M_0$6.21000×10^{17} NP1: ϕ_s148.00000°, δ23.00000°, λ-96.00000°. NP2: ϕ_s335.00000°, δ67.00000°, λ-87.00000°. Principal axes: T 7.1492, Plg22.0000°, Azm63.0000°; N -3.1203, Plg2.0000°, Azm154.0000°; P -4.0289, Plg68.0000°, Azm250.0000°;*

BGR ***08*** *09:35:01.5±0.0, 0°.73N×97°.59E, h74^{km}±1^{km}, mb6.2, Ms4.7*

NEIC ***08*** *09:35:03, 0°.64N×98°.78E, h100^{km}, Moment Tensor Solution. Duration: 12^{s}.0 Moment tensor: Scale 10^{17}Nm; M_{rr}-2.28; $M_{\theta\theta}$0.48; $M_{\phi\phi}$1.79; $M_{r\theta}$2.02; $M_{\theta\phi}$-3.06; $M_{\phi r}$-2.83; Fault plane solution: $M_0$5.08000×10^{17} NP1: ϕ_s131.00000°, δ22.00000°, λ-104.00000°. NP2: ϕ_s326.00000°, δ68.00000°, λ-84.00000°. Principal axes: T 5.7685, Plg23.0000°, Azm52.0000°; N -1.9745, Plg5.0000°, Azm144.0000°; P -3.7940, Plg66.0000°, Azm246.0000°;*

ISC 08 09:34:57.4±0.2**, 0°.75N**±0°.02×**98°.90E**±0°.03**, h83**^{km}±1^{km}**, h83**^{km}**:pP-P, n1871, σ1^{s}.54**/2245**, mb6.0**/341**, 153C-536D, Fault plane solution: NP1:**ϕ_s320.83334°**,** δ61.04662°**,** λ-98.25679°. **NP2:**ϕ_s157.52007°**,** δ30.00935°**,** λ-75.44849°. **Principal axes:** T Plg15.6646°**,** Azm56.8873°**;** N Plg7.2189°**,** Azm324.8517°**;** P Plg72.6736°**,** Azm210.8970°**; Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNSI	Mandailing Nat	0.68	86	P	Pn	09 35 14.2	+1.2
MNSI				S	Sn	09 35 26.5	+1.8
SBSI	Sibolga	0.79	359	P	Pn	09 35 15.9	+1.6
SBSI				S	Sn	09 35 29.7	+2.8
GSI	Gunungsitoli	1.44	292	⇑P	Pn	09 35 21.3	-0.7
GSI	Gunungsitoli	1.44	292	P	Pn	09 35 21.9	-0.1
GSI	Gunungsitoli	1.44	292	Pn	Pn	09 35 22.0	-0.1
GSI	Gunungsitoli	1.44	292	P	Pn	09 35 22.0	-0.1
PPI	Padang Panjang	1.92	129	P	Pn	09 35 30.0	+1.7
PSI	Prapat	2.04	1	P	Pn	09 35 30.0	0.0
	331nm,0.3s,baz=170,slow=11,SNR=3252						
PSI				S	Sn	09 35 49.8	-5.0
	749nm,0.3s,baz=181,slow=12,SNR=15						
PSI				ScS	ScS	09 50 13.2	-1.6
	0.4nm,0.3s,baz=226,slow=21,SNR=8.1						
SISI	Saibi	2.07	175	P	Pn	09 35 29.3	-1.1
BKNI	Bangkinang	2.18	101	⇑P	Pn	09 35 33.3	+1.5
BKNI	Bangkinang	2.18	101	P	Pn	09 35 33.2	+1.5
BKNI	Bangkinang	2.18	101	Pn	Pn	09 35 33.6	+1.9
BKNI	Bangkinang	2.18	101	P	Pn	09 35 33.0	+1.3
PDSI	Padang	2.27	137	P	Pn	09 35 33.8	+0.8
TSI	Tuntungan	2.75	353	P	Pn	09 35 41.4	+1.9
TPTI		3.03	325	P	Pn	09 35 43.3	+0.1
SNSI	Sinabang, Aceh	3.06	303	P	Pn	09 35 43.6	0.0
RGRI	Rengat	3.60	108	P	Pn	09 35 53.5	+2.6
PPSI	Pulau Pagai	3.66	162	P	Pn	09 35 50.0	-1.8
IPM	Ipoh	4.27	30	P	Pn	09 36 03.0	+3.0
JRMM	Jerantut	4.74	49	P	Pn	09 36 10.0	+3.6
KULM	Kulim	4.83	21	P	Pn	09 36 10.0	+2.3
LHMI	Lhok Sumawe	4.86	336	⇑P	Pn	09 36 08.9	+0.9
LHMI	Lhok Sumawe	4.86	336	P	Pn	09 36 09.3	+1.2
LHMI	Lhok Sumawe	4.86	336	Pn	Pn	09 36 08.6	+0.5
LHMI	Lhok Sumawe	4.86	336	P	Pn	09 36 09.0	+0.9
MYKOM	Kota Tinggi	5.05	78	P	Pn	09 36 13.0	+2.3
MASI	Maura Aman, Be	5.11	139	P	Pn	09 36 12.5	+1.0
	101nm101µm10µm,0.8s						
JMBI	JAMBI	5.30	117	P	Pn	09 36 15.7	+1.7
	25nm30µm2µm,0.8s						
KSI	Kapahiang	5.72	140	P	Pn	09 36 22.3	+2.4
	23nm61µm5µm,0.7s						
DSRI	Dabo	5.80	102	P	Pn	09 36 22.8	+1.8
	8.5nm10µm14µm1µm,0.8s						
LHSI	Lahat	6.48	135	P	Pn	09 36 31.8	+1.6
	11nm10µm27µm2µm,0.6s						
MNAI	Manna	6.49	141	⇓P	Pn	09 36 29.3	-1.1
MNAI	Manna	6.49	141	P	Pn	09 36 29.9	-0.5
	29nm15µm61µm3µm,0.6s						
MNAI	Manna	6.49	141	Pn	Pn	09 36 29.5	-0.9
MNAI	Manna	6.49	141	P	Pn	09 36 31.0	+0.6
PMBI	Palembang	6.91	122	⇑P	Pn	09 36 37.0	+0.9
PMBI	Palembang	6.91	122	P	Pn	09 36 37.2	+1.1
	23nm11µm26µm1µm,1.1s						
PMBI	Palembang	6.91	122		Pn	09 36 36.7	+0.6
MDSI	Maura Dua	7.41	135	P	Pn	09 36 43.7	+0.9
	3.3nm6µm9µm1µm,1.1s						
LWLI	Liwa	7.70	138	P	Pn	09 36 46.9	-0.1
	15nm29µm3µm,0.7s						
PPBI	Pangkal Pinang	7.79	112	P	Pn	09 36 49.6	+1.5
	4.0nm10µm16µm445nm,1.0s						
KLSI		7.94	133	P	Pn	09 36 50.3	+0.1
	2.2nm3µm6µm455nm,0.7s						
KLI	Kotabumi	8.15	133	P	Pn	09 36 52.9	-0.1
	9µm16µm1µm,1.2s						
KASI	Kota Agung	8.37	138	P	Pn	09 36 55.7	-0.3
	9µm21µm2µm,0.6s						
BLSI	Bandar Lampung	8.78	134	P	Pn	09 37 01.1	-0.5
	8µm643nm,0.6s						
SBJI	Serang	9.93	134	P	Pn	09 37 15.8	-1.5
	1µm,1.3s						
CGJI	Cibinong	9.97	137	P	Pn	09 37 14.4	-3.5
	8µm406nm,0.8s						
TNG	Tangerang	10.35	132	P	Pn	09 37 22.0	-1.0
	20µm960nm,0.6s						
TNG				P	Pn	09 37 23.4	+0.4
	13µm651nm,0.6s						
DBJI	Dramaga	10.68	133	P	Pn	09 37 25.5	-2.0
	15µm826nm,1.2s						
KSM	Kuching	11.43	86	P	Pn	09 37 40.0	+2.3
CNJI	Cibinong	11.46	134	P	Pn	09 37 35.3	-2.9
	9µm732nm,0.6s						
LEM	Lembang	11.50	131	P	Pn	09 37 39.1	+0.3
	11nm,0.3s,baz=235,slow=4.9,SNR=42						
LEM				ScS	ScS	09 50 25.6	-0.6
	2.4nm,0.3s,baz=346,slow=23,SNR=7.6						
LEM	Lembang	11.50	131	P	Pn	09 37 36.4	-2.5
	5µm6µm350nm,0.9s						
JCJI	Jatiwangi	11.79	128	P	Pn	09 37 43.6	+0.9
PBA	Port Blair	12.44	331	*e*P	Pn	09 37 51.9	+0.5
STKI	Sintang	12.59	93	P	Pn	09 37 55.9	+2.4
	9µm25µm3µm,0.8s						
CMJI	Cimerak	12.75	132	P	Pn	09 37 52.1	-3.5
	3µm4µm292nm,0.6s						
KPJI	Karang Pucung	12.83	129	P	Pn	09 37 54.6	-2.0
	494nm,0.8s						
COCO	West Island	13.02	189	P	Pn	09 37 58.7	-0.5
COCO	West Island	13.02	189		Pn	09 37 58.7	-0.5
XMIS	Christmas Isla	13.02	149	Pn	Pn	09 37 51.7	-7.6
PBKI	Pangkalan Bun	13.22	105	P	Pn	09 38 01.7	-0.1
	19µm2µm,1.1s						
SBUM	Sibu	13.42	83	P	P	09 38 08.0	-2.9
DGPR	DIGLIPUR	13.69	335	*e*P	Pn	09 38 04.1	-3.9
DGPR				IAmb	IAmb	09 38 13.8	
	comp=Z,192nm,1.2s						
SMRI	Semarang	13.88	124	⇑P	Pn	09 38 11.5	+1.0
SMRI	Semarang	13.88	124	P	Pn	09 38 11.0	+0.5
	comp=Z,11µmcomp=Z,924nm,1.0s						
SMRI	Semarang	13.88	124	Pn	Pn	09 38 10.6	+0.1
SMRI	Semarang	13.88	124	P	Pn	09 38 10.3	-0.2
YOGI	Yogyakarta	14.19	127	P	Pn	09 38 11.7	-2.9
	comp=Z,8µmcomp=Z,456nm,0.8s						
UGM	Wanagama	14.43	127	P	Pn	09 38 15.5	-2.2
	comp=Z,9µmcomp=Z,13µmcomp=Z,621nm,0.9s						
UGM	Wanagama	14.43	127		Pn	09 38 14.8	-3.0
UGM	Wanagama	14.43	127	P	Pn	09 38 15.3	-2.4
DLV	T Lat	14.63	40	Pn	Pn	09 38 22.2	+1.8
DLV	T Lat	14.63	40	P	Pn	09 38 20.8	+0.4
NGJI	Ngawi	14.90	123	P	Pn	09 38 24.5	+0.8
	comp=Z,4µmcomp=Z,541nm,0.9s						
PCJI	Pacitan	15.12	126	P	Pn	09 38 22.6	-4.0
	comp=Z,5µmcomp=Z,325nm,1.0s						
BWJI	Bawean	15.22	116	P	Pn	09 38 28.8	+1.0
	comp=Z,5µmcomp=Z,11µmcomp=Z,916nm,1.0s						
PWJI	Pagerwojo	15.54	124	P	Pn	09 38 30.2	-1.6
UBPT	Khong Chiam	15.82	24	⇑P	Pn	09 38 36.2	+0.7
UBPT	Khong Chiam	15.82	24		Pn	09 38 36.0	+0.5
PBKT	Sadao Pong	15.85	7	P	Pn	09 38 36.5	+0.7
MTKI	Muara Teweh, K	16.08	96	P	P	09 38 40.3	-0.2
	comp=Z,6µmcomp=Z,18µmcomp=Z,857nm,0.7s						
BBKI	Banjar Baru	16.47	105	P	P	09 38 45.5	+0.7
	comp=Z,12µmcomp=Z,1µm,1.0s						
BLJI	Banyuglugur	16.91	120	P	P	09 38 49.9	+0.3
	comp=Z,5µmcomp=Z,394nm,0.7s						
KMMI	Kalianget	16.91	118	P	Pn	09 38 48.7	-0.2
	comp=Z,8µmcomp=Z,11µmcomp=Z,2µm,0.8s						
GMJI	Gumukmas	17.04	122	P	Pn	09 38 50.4	-0.2
	comp=Z,5µmcomp=Z,4µmcomp=Z,304nm,0.9s						
ABJI	Asem Bagus	17.49	119	P	P	09 38 56.6	+0.6
	comp=Z,8µmcomp=Z,10µmcomp=Z,517nm,0.7s						
CM31	Chiang Mai Arr	17.60	0	P	Pn	09 38 58.2	+0.9
	SNR=462						
CM31				P	Pn	09 38 58.2	+0.9
	SNR=462						
CM31	Chiang Mai Arr	17.60	0	P	Pn	09 38 57.7	+0.4
CM31				IAmb	IAmb	09 39 01.8	
	comp=Z,1µm,0.9s						
CMAR	Chiang Mai Arr	17.60	0	P	Pn	09 38 57.6	+0.3
	comp=Z,17nm,0.3s,baz=189,slow=10,SNR=133						
CMAR				PcP	PcP	09 43 34.4	+1.7
	comp=Z,0.6nm,0.3s,baz=206,slow=2.6,SNR=6.8						
CMAR				pPcP		09 43 55.1	
	comp=Z,1.0nm,0.3s,baz=212,slow=1.9,SNR=8.1						
CMAR				LR	LR	09 45 55.9	
	comp=Z,4µm,19.6s,baz=217,slow=38						
CMAR				ScP	ScP	09 47 00.8	+0.3
	comp=Z,0.3nm,0.3s,baz=210,slow=3.3,SNR=15						
KBKI	Kotabaru	17.72	103	P	Pn	09 38 59.7	+0.8
	comp=Z,8µmcomp=Z,1µm,1.0s						
JAGI	Jajag, Banyuwa	17.75	121	⇑P	Pn	09 38 59.5	+0.3
JAGI	Jajag, Banyuwa	17.75	121	P	P	09 38 58.3	-0.6
	comp=Z,4µmcomp=Z,6µmcomp=Z,615nm,0.9s						
JAGI	Jajag, Banyuwa	17.75	121		Pn	09 38 59.6	+0.4
JAGI	Jajag, Banyuwa	17.75	121	P	P	09 38 57.4	-1.5
CHTO	Chiang Mai	17.95	0	P	P	09 39 01.3	+0.2
CHTO				pmax	pmax		
	comp=Z,466nm,0.9s						
CHTO	Chiang Mai	17.95	0	P	P	09 39 01.3	+0.2
CHTO	Chiang Mai	17.95	0	⇑P	P	09 39 01.2	+0.1
CHTO	Chiang Mai	17.95	0	P	P	09 39 01.3	+0.2
CHTO	Chiang Mai	17.95	0	P	Pn	09 39 02.7	+1.1
SPMM	Sapulut	17.97	77	P	Pn	09 39 05.0	+3.0
SMKI	Samarinda	18.34	94	P	Pn	09 39 07.9	+1.5
	comp=Z,16µmcomp=Z,17µmcomp=Z,1µm,0.9s						
SRBI	Singaraja	18.48	119	P	Pn	09 39 08.2	+0.2
	comp=Z,6µmcomp=Z,9µmcomp=Z,1µm,0.9s						
SGKI	Sangatta, Kali	18.74	94	P	Pn	09 39 12.4	+1.2
	comp=Z,18µmcomp=Z,44µmcomp=Z,5µm,0.9s						
IGBI	Denpasar	18.77	121	P	P	09 39 10.1	0.0
	comp=Z,3µmcomp=Z,177nm,1.0s						
PALK	Pallekele	19.27	290	P	Pn	09 39 18.1	+0.6
	comp=Z,18nm,0.3s,baz=214,slow=9.0,SNR=88						
PALK				S	S	09 42 34.5	-15
	comp=Z,23nm,0.3s,baz=306,slow=14,SNR=14						
PALK				LR	LR	09 46 36.3	
	comp=Z,3µm,18.1s,baz=209,slow=36						
PALK	Pallekele	19.27	290	P	Pn	09 39 18.2	+0.7
PALK				P	Pn	09 39 18.2	+0.7
PALK	Pallekele	19.27	290	⇓P	Pn	09 39 18.0	+0.6
PALK				⇑S	S	09 42 38.5	-11
PALK	Pallekele	19.27	290	P	Pn	09 39 17.6	+0.1
TWSI	Taliwang, Sumb	20.24	118	P	P	09 39 24.6	-1.6
	comp=Z,3µmcomp=Z,5µmcomp=Z,660nm,1.0s						
MPSI	Mapaga	21.00	91	P	Pn	09 39 36.5	-1.2
	comp=Z,11µmcomp=Z,9µmcomp=Z,1µm,0.8s						
SLVN	Son La	21.03	13	P	P	09 39 33.7	-1.0
PLAI	Plampang	21.07	117	P	P	09 39 33.0	-2.1
	comp=Z,6µmcomp=Z,5µmcomp=Z,652nm,0.9s						
PLAI	Plampang	21.07	117	P	P	09 39 35.5	+0.4
QIZ	Qiongzhong	21.10	30	P	P	09 39 36.8	+1.5
QIZ				pP	pP	09 39 51.0	-1.1
QIZ				S	S	09 43 27.0	+1.4
QIZ				pmax	pmax		
	comp=Z,32nm,0.9s						
QIZ				pmax	pmax		
	comp=Z,1µm,12.2s						
QIZ				LR	LR		
	comp=Z,3µm,23.5s						
QIZ				LR	LR		
	comp=Z,3µm,11.0s						
QIZ				LR	LR		
	comp=Z,6µm,30.8s						
QIZ	Qiongzhong	21.10	30	P	P	09 39 36.5	+1.2
TTSI	Tana Toraja	21.24	100	P	P	09 39 37.9	+0.9
	comp=Z,6µmcomp=Z,9µmcomp=Z,1µm,0.9s						
KAPI	Kappang	21.60	106	P	P	09 39 41.0	+0.3
	comp=Z,59nm,0.7s,baz=287,slow=7.1,SNR=28						
KAPI				ScP	ScP	09 47 10.0	+0.1
	comp=Z,35nm,1.0s,baz=272,slow=2.0,SNR=7.5						
KAPI				LR	LR	09 48 42.0	
	comp=Z,3µm,19.8s,baz=301,slow=38						
KAPI	Kappang	21.60	106	P	P	09 39 41.0	+0.3
KAPI	Kappang	21.60	106	P	P	09 39 40.9	+0.3
KAPI				P	P	09 39 40.9	+0.3
KAPI	Kappang	21.60	106	⇑P	P	09 39 41.0	+0.3
KAPI	Kappang	21.60	106	P	P	09 39 40.5	-0.2
KAPI				IAmb	IAmb	09 40 16.1	
	comp=Z,807nm,1.0s						
KAPI	Kappang	21.60	106	P	P	09 39 41.0	+0.3
PPR	Puerto Princes	21.66	65	⇑*i*P	P	09 39 43.1	+1.7
TOLI2	Tolitoli	21.88	89	P	P	09 39 45.1	+1.4
TOLI2				IAmb	IAmb	09 39 46.2	
	comp=Z,864nm,0.7s						
TOLI2	Tolitoli	21.88	89	P	P	09 39 45.2	+1.5
BKSI	Bulukumba	22.03	106	P	P	09 39 45.5	+0.1
	comp=Z,7µmcomp=Z,8µmcomp=Z,829nm,0.8s						
MDRS	Chennai	22.17	304	*e*P	P	09 39 49.0	+2.2
MDRS				IAmb	IAmb	09 39 51.8	
	comp=Z,986nm,1.2s						
BSSI	Bau Bau, Buton	22.61	108	P	P	09 39 51.2	-0.4
	comp=Z,7µmcomp=Z,803nm,1.0s						
APSI	Ampana	22.80	94	P	P	09 39 54.8	+1.2
	comp=Z,6µmcomp=Z,9µmcomp=Z,831nm,0.9s						
WBSI	Waikabubak, Su	22.86	117	P	P	09 39 50.8	-3.4
	comp=Z,4µmcomp=Z,481nm,1.1s						
MRSI	Marisa	23.04	91	P	P	09 39 56.2	+0.3
	comp=Z,7µmcomp=Z,14µmcomp=Z,1µm,1.2s						
TRD	Trivandrum	23.18	290	⇓*i*P	P	09 39 59.2	+2.0
WSI	Waingapu	23.68	116	P	P	09 40 02.5	+0.7
	comp=Z,15µmcomp=Z,562nm,0.7s						
LUWI	Luwuk	23.93	94	⇑P	P	09 40 04.8	+0.8
LUWI	Luwuk	23.93	94	P	P	09 40 06.0	+1.9
	comp=Z,22µmcomp=Z,3µm,1.0s						
LUWI	Luwuk	23.93	94	P	P	09 40 04.9	+0.8
LUWI	Luwuk	23.93	94	P	P	09 40 04.9	+0.8
GTOI	Gorontalo	24.11	90	P	P	09 40 05.8	+0.2
	comp=Z,3µmcomp=Z,5µmcomp=Z,597nm,0.9s						
BASI	Baing, Sumba	24.16	117	P	P	09 40 06.7	+0.6
	comp=Z,2µmcomp=Z,4µmcomp=Z,419nm,0.9s						
KMI	Kunming	24.51	8	⇑P	P	09 40 10.1	+0.7
KMI				pP	pP	09 40 25.2	-3.1
KMI				sP	sP	09 40 31.7	-6.5
KMI				PP	PnPn	09 40 52.5	+7.2
KMI				PcP	PcP	09 43 48.1	+2.0
KMI				S	S	09 44 26.3	+2.0
KMI				sS	sS	09 44 56.6	-0.4
KMI				SS	SnSn	09 45 27.6	+10
KMI				ScP	ScP	09 47 18.4	+0.8
KMI				PcS	PcS	09 47 26.4	0.0
KMI				ScS	ScS	09 51 05.9	+0.1
KMI				pmax	pmax		
	comp=Z,390nm,0.9s						
KMI				pmax	pmax		
	comp=Z,710nm,3.5s						
KMI				LR	LR		
	comp=Z,3µm,30.8s						
KMI				LR	LR		
	comp=Z,4µm,21.5s						
KMI				LR	LR		
	comp=Z,4µm,26.5s						
EDFI	Ende, Flores	24.59	113	P	P	09 40 07.7	-2.4
	comp=Z,2µmcomp=Z,2µmcomp=Z,276nm,0.8s						
LUBP	Lubang	24.75	58	⇑*e*P	P	09 40 11.6	+0.1
MMRI	Maumere	25.05	112	⇓P	P	09 40 13.8	-0.5
MMRI	Maumere	25.05	112	P	P	09 40 15.2	+1.0
	comp=Z,3µmcomp=Z,9µmcomp=Z,986nm,1.2s						
MMRI	Maumere	25.05	112	P	P	09 40 13.3	-1.0
MMRI				IAmb	IAmb	09 40 20.8	
	comp=Z,842nm,0.9s						
MMRI	Maumere	25.05	112	P	P	09 40 16.5	+2.3
KMSI	Cibinong	25.08	90	P	P	09 40 19.1	+4.6
	comp=Z,530nmcomp=Z,11µmcomp=Z,2µm,0.9s						
PGP	Puerto Galera	25.24	59	⇑*e*P	P	09 40 16.0	+0.1
CNOP	Candoni, Negro	25.27	68	⇑*i*P	P	09 40 17.6	+1.4
PAGZ	Pagadian	25.39	73	⇑*i*P	P	09 40 19.1	+1.8
TGY	Tagaytay City	25.52	58	⇓*e*P	P	09 40 20.0	+1.5
DCPH	Dipolog City	25.56	72	⇑*e*P	P	09 40 21.4	+2.6
SHL	Shillong	25.58	345	P	P	09 40 19.7	+0.6
SHL				pmax	pmax		
	comp=Z,895nm,0.8s						
SHL	Shillong	25.58	345	*e*P	P	09 40 19.7	+0.6
SHL				IAmb	IAmb	09 40 23.0	
	comp=Z,858nm,1.0s						
SHL	Shillong	25.58	345	P	P	09 40 19.9	+0.8
	SNR=295						
SHL	Shillong	25.58	345	P	P	09 40 19.7	+0.6
SHL				IAmb	IAmb	09 40 22.8	
	comp=Z,895nm,0.8s						
KAAM	Kaadhehdhoo	25.91	270	P	P	09 40 24.3	+2.3
	SNR=6.8						
KAAM	Kaadhehdhoo	25.91	270	⇓P	P	09 40 24.2	+2.2
KAAM	Kaadhehdhoo	25.91	270	P	P	09 40 23.1	+1.0
KAAM				IAmb	IAmb	09 40 25.4	
	comp=Z,699nm,1.0s						
HYB	Hyderabad	25.98	311	*i* P	P	09 40 23.0	+0.3
	comp=Z,340nm,1.0s						
HYB				*e*sP	sP	09 40 49.0	-2.3
HYB	Hyderabad	25.98	311	*i* P	P	09 40 23.3	+0.7
HYB				IAmb	IAmb	09 40 28.8	
	comp=Z,112nm,0.7s						
HYB				*i* x	pP	09 40 44.6	+3.0
HYB				*e*x	x	09 41 05.3	
RCP	Roxas	25.99	65	⇑*e*P	P	09 40 24.4	+1.7
LQP	Lukban	26.03	58	⇑*i*P	P	09 40 24.1	+0.7
BOK	Bokaro	26.16	332	*e*P	P	09 40 26.3	+2.2
BOK				IAmb	IAmb	09 40 27.8	
	comp=Z,666nm,0.7s						
TBP	Tagbilaran	26.37	69	⇑*i*P	P	09 40 27.5	+1.3
TBP				*i* S	S	09 44 48.6	-5.0
GYA	Guiyang	26.63	16	⇓*i*P	P	09 40 29.5	+1.0
GYA				pP	pP	09 40 46.4	-1.1
GYA				PP	PnPn	09 41 11.9	-2.1
GYA				S	S	09 44 56.7	-0.9
GYA				ScP	ScP	09 47 24.1	+0.5
GYA				ScS	ScS	09 51 12.3	-2.1
GYA				pmax	pmax		
	comp=Z,280nm,0.9s						
GYA				LR	LR		
	comp=Z,4µm,21.0s						
GYA				LR	LR		
	comp=Z,3µm,12.8s						
GYA				LR	LR		
	comp=Z,5µm,19.2s						
SGSI	Sangihe	26.76	83	P	P	09 40 32.1	+2.4
	comp=Z,343nm,0.8s						
BATI	Baumata	26.93	114	P	P	09 40 28.8	-2.5
	comp=Z,204nm,0.8s,baz=309,slow=2.8,SNR=28						
BATI	Baumata	26.93	114	P	P	09 40 32.1	+0.8
	comp=Z,2µmcomp=Z,3µmcomp=Z,447nm,0.8s						
BUKP	Musuan	27.01	74	⇓*i*P	P	09 40 33.4	+1.4
JCNP	Jose Panganiba	27.10	59	⇑*e*P	P	09 40 32.3	-0.4
SANI	Sanana	27.22	96	⇑P	P	09 40 33.0	-0.8
SANI	Sanana	27.22	96	P	P	09 40 33.2	-0.6
	comp=Z,5µmcomp=Z,3µmcomp=Z,286nm,1.2s						
SANI	Sanana	27.22	96	P	P	09 40 33.8	0.0
DMPH	Davao City--Mi	27.26	76	⇓*e*P	P	09 40 36.4	+2.1
SOEI	Soe	27.32	113	⇑P	P	09 40 32.5	-2.3
SOEI	Soe	27.32	113	P	P	09 40 34.8	0.0
	comp=Z,6µmcomp=Z,935nm,0.8s						
SOEI	Soe	27.32	113	P	P	09 40 34.1	-0.7
SOEI				IAmb	IAmb	09 40 48.9	
	comp=Z,692nm,0.8s						
SOEI	Soe	27.32	113	P	P	09 40 36.1	+1.3
DAV	Davao City (W)	27.33	76	P	P	09 40 36.2	+1.4
	comp=Z,133nm,0.4s,baz=92,slow=0.7,SNR=18						
MSLP	Maasin	27.44	69	⇑*e*P	P	09 40 36.5	+0.8
DGAR	Diego Garcia	27.60	252	*ce*P	P	09 40 38.5	+1.3
DGAR				pmax	pmax		
	comp=Z,266nm,1.0s						
DGAR	Diego Garcia	27.60	252	P	P	09 40 38.8	+1.5
DGAR	Diego Garcia	27.60	252	P	P	09 40 36.6	-0.6
H08S2	Diego Garcia H	27.63	252	P	P	09 40 38.9	+1.8
	baz=4.5,slow=74						
H08S3	Diego Garcia H	27.63	252	P	P	09 40 38.6	+1.4
	baz=4.5						
GIRL	Giralia	27.64	148	P	P	09 40 38.1	+0.7
	baz=28,SNR=10						
GIRL	Giralia	27.64	148	P	P	09 40 37.1	-0.3
GIRL	Giralia	27.64	148	P	P	09 40 40.3	+2.9
H08S1	Diego Carcia H	27.65	252	P	P	09 40 39.6	+2.3
	baz=4.5,slow=74						
APYP	Conner	27.77	51	⇑*e*P	P	09 40 38.4	-0.3
ODAN	Odare	28.22	338	*e*P	P	09 40 44.2	+1.4
	comp=Z,471nm,1.1s						
TNTI	Ternate	28.46	90	P	P	09 40 46.4	+1.5

	comp=Z,2µmcomp=Z,1µmcomp=Z,119nm,0.7s						
TNTI	**Ternate**	28.46	90	P	P	09 40 45.0	+0.1
TAPN	**Taplejung**	28.55	339	eP	P	09 40 47.6	+1.8
	comp=Z,796nm,0.9s						
RAMN	**Ramite**	28.61	337	eP	P	09 40 47.3	+1.0
	comp=Z,47nm,0.3s						
LBMI	**Labuha**	28.63	93	P	P	09 40 46.6	+0.2
	comp=Z,3µmcomp=Z,5µmcomp=Z,299nm,0.7s						
GOA	**Goa**	28.76	302	eP	P	09 40 49.4	+1.9
GOA				IAmb	IAmb	09 40 50.9	
	comp=Z,185nm,0.8s						
JIRN	**Jiri**	29.40	337	eP	P	09 40 54.9	+1.4
	comp=Z,679nm,1.1s						
PKI	**Pulchoki**	29.64	335	eP	P	09 40 56.5	+0.9
	comp=Z,314nm,1.1s						
PKIN	**Phulchoki**	29.65	335	eP	P	09 40 56.4	+0.8
LSA	**Lhasa**	29.72	346	P	P	09 40 58.3	+2.0
LSA	**Lhasa**	29.72	346	P	P	09 40 58.4	+2.0
LSA				pmax	pmax		
	comp=Z,260nm,1.0s						
LSA	**Lhasa**	29.72	346	P	P	09 40 58.4	+2.0
LSA	**Lhasa**	29.72	346	P	P	09 40 58.4	+2.0
GUN	**Gumba**	29.75	336	eP	P	09 40 58.1	+1.6
	comp=Z,384nm,0.7s						
DMN	**Daman**	29.80	335	eP	P	09 40 58.0	+1.1
	comp=Z,334nm,1.1s						
MBWA	**Marble Bar**	29.81	138	P	P	09 40 55.4	-1.3
MBWA	**Marble Bar**	29.81	138	⇑P	P	09 40 56.6	-0.1
MBWA	**Marble Bar**	29.81	138	P	P	09 40 56.1	-0.7
MBWA	**Marble Bar**	29.81	138	P	P	09 40 56.8	0.0
KKN	**Kakani**	29.89	335	eP	P	09 40 58.8	+1.2
	comp=Z,263nm,0.8s						
PSA00	**Pilbara Seismi**	30.18	139	P	P	09 40 60.0	0.0
PSA00	**Pilbara Seismi**	30.18	139	P	P	09 40 59.6	-0.4
PSA00				IAmb	IAmb	09 41 18.9	
	comp=Z,126nm,1.1s						
PSA00	**Pilbara Seismi**	30.18	139	P	P	09 41 00.4	+0.4
KNMB	**Chin-men Tao**	30.19	37	P	P	09 41 00.1	+0.1
POO	**Poona**	30.28	307	eP	P	09 40 59.0	-2.0
	comp=Z,170nm,1.2s						
POO				⇓iP	P	09 40 59.7	-1.3
POO				IAmb	IAmb	09 41 03.6	
	comp=Z,163nm,1.1s						
MSAI	**Masohi**	30.29	98	P	P	09 41 01.9	+0.8
	comp=Z,941nmcomp=Z,69nm,0.6s						
GKN	**Gorkha**	30.35	334	eP	P	09 41 02.9	+1.3
KOLN	**Koldanda**	30.61	333	eP	P	09 41 05.5	+1.5
	comp=Z,597nm,0.9s						
QZH	**Quanzhou**	30.67	37	⇑iP	P	09 41 04.4	+0.1
QZH				pP	pP	09 41 22.0	-1.6
QZH				PP	PP	09 42 11.6	-3.4
QZH				S	S	09 46 02.1	+1.1
QZH				ScP	ScP	09 47 36.0	-0.1
QZH				pmax	pmax		
	comp=Z,510nm,5.4s						
QZH				LR	LR		
	comp=Z,2µm,15.2s						
QZH				LR	LR		
	comp=Z,2µm,11.8s						
QZH				LR	LR		
	comp=Z,2µm,13.3s						
TWG	**Pinlang**	30.75	43	P	P	09 41 05.9	+0.9
TPUB	**Ta-pu**	30.78	42	P	P	09 41 05.6	+0.3
TPUB	**Ta-pu**	30.78	42	P	P	09 41 05.9	+0.6
DANN	**Dangsing**	31.03	333	eP	P	09 41 09.1	+1.3
	comp=Z,872nm,1.2s						
ENH	**Enshi**	31.03	18	P	P	09 41 06.3	-1.2
ENH				IAmb	IAmb	09 41 09.5	
	comp=Z,347nm,0.8s						
PYUN	**Piuthan**	31.17	332	eP	P	09 41 10.4	+1.5
YULB	**Yu-li**	31.29	42	P	P	09 41 10.4	+0.6
SSLB	**Suanglung**	31.33	41	P	P	09 41 10.5	+0.3
SSLB	**Suanglung**	31.33	41	P	P	09 41 11.0	+0.8
BNDI	**Bandanaira**	31.41	100	P	P	09 41 12.2	+1.2
	comp=Z,4µmcomp=Z,235nm,0.9s						
NACB	**Ninganchiao**	32.02	42	P	P	09 41 16.9	+0.8
YHNB	**Yeheng**	32.22	41	P	P	09 41 18.0	0.0
YHNB	**Yeheng**	32.22	41	P	P	09 41 18.6	+0.6
FITZ	**Fitzroy Crossi**	32.29	127	ScP	ScP	09 47 41.0	-0.7
	comp=Z,26nm,0.9s,baz=256,slow=4.2,SNR=3.7						
FITZ				LR	LR	09 55 58.1	
	comp=Z,684nm,20.7s,baz=310,slow=39						
SWI	**Sorong**	32.39	93	P	P	09 41 19.6	0.0
	comp=Z,3µmcomp=Z,4µmcomp=Z,315nm,0.8s						
SIJI	**Sorong**	32.40	93	LR	LR	09 54 56.5	
	comp=Z,2µm,21.8s,baz=266,slow=37						
TATO	**Taipei**	32.50	40	P	P	09 41 19.7	-0.7
TATO	**Taipei**	32.50	40	P	P	09 41 21.1	+0.7
WHN	**Wuhan**	33.06	25	⇑P	P	09 41 25.8	+0.6
WHN				PP	PP	09 42 41.7	+0.2
WHN				S	S	09 46 38.9	+0.8
WHN				pmax	pmax		
	comp=Z,2µm,2.7s						
WHN				LR	LR		
	comp=Z,5µm,12.5s						
WHN				LR	LR		
	comp=Z,2µm,12.5s						
WHN				LR	LR		
	comp=Z,7µm,22.6s						
YOJ	**Yonaguni jima**	33.16	43	P	P	09 41 26.5	+0.3
MEEK	**Meekatharra**	33.20	147	P	P	09 41 27.5	+1.0
	baz=33,SNR=52						
MEEK	**Meekatharra**	33.20	147	P	P	09 41 27.6	+1.0
FAKI	**Fak Fak**	33.53	96	⇑P	P	09 41 29.0	-0.6
FAKI	**Fak Fak**	33.53	96	P	P	09 41 29.1	-0.5
	comp=Z,3µmcomp=Z,5µmcomp=Z,434nm,1.1s						
FAKI	**Fak Fak**	33.53	96	P	P	09 41 29.2	-0.3
FAKI				IAmb	IAmb	09 41 48.7	
	comp=Z,410nm,1.1s						
FAKI	**Fak Fak**	33.53	96	P	P	09 41 29.3	-0.3
KNRA	**Kununurra**	33.71	120	P	P	09 41 29.1	-1.9
	baz=34,SNR=22						
KNRA	**Kununurra**	33.71	120	P	P	09 41 28.8	-2.2
KNRA	**Kununurra**	33.71	120	P	P	09 41 29.5	-1.5
MORW	**Morawa**	33.88	152	P	P	09 41 34.1	+1.7
	baz=34,SNR=52						
MORW	**Morawa**	33.88	152	P	P	09 41 33.5	+1.1
MORW				IAmb	IAmb	09 41 35.4	
	comp=Z,469nm,1.4s						
MORW	**Morawa**	33.88	152	P	P	09 41 34.5	+2.1
DRS	**Darwin Rock St**	34.35	113	P	P	09 41 35.8	-0.8
SONA	**Sohna**	34.41	325	eP	P	09 41 37.4	+0.6
XAN	**Xi'an**	34.42	15	P	P	09 41 36.0	-1.0
XAN				PP	PnPn	09 42 55.2	+0.6
XAN				S	S	09 46 55.8	-3.4
XAN				pmax	pmax		
	comp=Z,48nm,0.8s						
XAN				LR	LR		
	comp=Z,2µm,15.9s						
XAN				LR	LR		
	comp=Z,4µm,10.0s						
XAN				LR	LR		
	comp=Z,6µm,19.7s						
AYAN	**Aya Nagar**	34.55	325	eP	P	09 41 38.4	+0.2
MERT	**Meerut**	34.58	326	eP	P	09 41 39.6	+1.2
AJM	**Ajmer**	34.63	320	i P	P	09 41 40.3	+1.3
AJM				IAmb	IAmb	09 41 41.5	
	comp=Z,5µm,1.2s						
NDI	**New Delhi**	34.66	325	eP	P	09 41 39.6	+0.5
NDI				eP	P	09 41 40.5	+1.4
KUDL	**Kundal**	34.67	324	eP	P	09 41 39.6	+0.4
MTN	**Manton Dam**	34.71	114	P	P	09 41 38.0	-1.6
	baz=35,SNR=22						
MTN	**Manton Dam**	34.71	114	P	P	09 41 38.1	-1.6
MTN	**Manton Dam**	34.71	114	P	P	09 41 38.5	-1.2
LZH	**Lanzhou**	35.45	7	⇑P	P	09 41 46.5	+0.5
LZH				pP	pP	09 42 03.8	-1.7
LZH				PP	PP	09 43 10.7	+2.6
LZH				PcP	PcP	09 44 16.2	+2.1
LZH				S	S	09 47 14.3	-1.0
LZH				sS	sS	09 47 46.3	-2.4
LZH				ScP	ScP	09 47 53.4	+0.6
LZH				SS	SnSn	09 49 38.5	-4.6
LZH				ScS	ScS	09 51 56.9	-0.6
LZH				pmax	pmax		
	comp=Z,140nm,1.3s						
LZH				pmax	pmax		
	comp=Z,1µm,5.4s						
LZH				LR	LR		
	comp=Z,3µm,13.0s						
LZH				LR	LR		
	comp=Z,3µm,16.3s						
LZH				LR	LR		
	comp=Z,3µm,17.4s						
DDI	**Dehra Dun**	35.46	328	eP	P	09 41 47.2	+1.2
DDI				IAmb	IAmb	09 41 48.7	
	comp=Z,716nm,1.1s						
BLDU	**Ballidu**	35.50	153	P	P	09 41 47.7	+1.4
	baz=36,SNR=27						
BLDU	**Ballidu**	35.50	153	P	P	09 41 48.0	+1.7
KDU	**Kakadu**	35.88	113	P	P	09 41 47.9	-1.8
	baz=36,SNR=19						
KDU	**Kakadu**	35.88	113	P	P	09 41 48.5	-1.3
BHUJ	**Bhuj**	36.15	310	⇓iP	P	09 41 53.9	+2.0
BHUJ				IAmb	IAmb	09 41 55.9	
	comp=Z,182nm,1.1s						
NJ2	**Nanjing**	36.39	29	⇑P	P	09 41 54.3	+0.5
NJ2				pP	pP	09 42 11.7	-1.7
NJ2				S	S	09 47 31.7	+2.4
NJ2				ScP	ScP	09 47 56.7	+0.7
NJ2				ScS	ScS	09 52 04.1	+1.7
NJ2				pmax	pmax		
	comp=Z,65nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,600nm,3.5s						
NJ2				LR	LR		
	comp=Z,2µm,17.1s						
NJ2				LR	LR		
	comp=Z,2µm,17.5s						
NJ2				LR	LR		
	comp=Z,2µm,18.5s						
MUN	**Mundaring**	36.44	155	P	P	09 41 56.4	+2.1
	baz=37,SNR=128						
MUN	**Mundaring**	36.44	155	P	P	09 41 56.7	+2.4
SMLA	**Simla**	36.56	328	⇓iP	P	09 41 55.7	+0.3
SMLA				IAmb	IAmb	09 41 57.5	
	comp=Z,355nm,0.5s						
SSE	**Sheshan**	36.83	33	P	P	09 41 58.4	+0.8
SSE				pP	pP	09 42 16.5	-0.8
SSE				PP	PnPn	09 43 29.0	+4.9
SSE				S	S	09 47 38.3	+2.2
SSE				pmax	pmax		
	comp=Z,44nm,1.0s						
SSE				pmax	pmax		
	comp=Z,350nm,11.5s						
BAKI	**Biak**	37.25	93	P	P	09 42 00.0	-1.5
	comp=Z,3µmcomp=Z,97nm,0.7s						
SRPI	**Serui, Papua**	37.42	94	P	P	09 42 03.3	+0.4
	comp=Z,6µmcomp=Z,229nm,0.7s						
JASL	**Jaisalmer**	37.43	316	eP	P	09 42 04.8	+2.0
NWAO	**Narrogin (SRO)**	37.70	154	P	P	09 42 06.5	+1.6
	comp=Z,492nm,0.8s,baz=324,slow=8.4,SNR=179						
NWAO				LR	LR	09 56 05.4	
	comp=Z,2µm,21.9s,baz=359,slow=34						
NWAO	**Narrogin (SRO)**	37.70	154	P	P	09 42 06.5	+1.6
	baz=38,SNR=124						
NWAO				P	P	09 42 06.5	+1.6
	baz=38,SNR=124						
NWAO	**Narrogin (SRO)**	37.70	154	P	P	09 42 06.7	+1.8
NWAO	**Narrogin (SRO)**	37.70	154	P	P	09 42 06.2	+1.2
NWAO	**Narrogin (SRO)**	37.70	154	P	P	09 42 06.6	+1.6
NWAO	**Narrogin (SRO)**	37.70	154	P	P	09 42 06.8	+1.8
DHRM	**DHARAMSHALA**	37.90	328	⇓iP	P	09 42 07.3	+0.4
H01W3	**Cape Leeuwin H**	38.21	160	P	P	09 42 11.1	+2.2
	baz=322,slow=4.3,SNR=10						
H01W2	**Cape Leeuwin H**	38.22	160	P	P	09 42 11.9	+2.8
	baz=322,slow=4.3,SNR=11						
H01W1	**Cape Leeuwin H**	38.23	160	P	P	09 42 11.8	+2.8
	baz=322,slow=4.3,SNR=14						
WRKA	**Warakurna**	38.30	134	P	P	09 42 09.7	-0.5
	baz=38,SNR=28						
JOW	**Kunigami**	38.33	45	⇑P	P	09 42 10.8	+0.4
JOW	**Kunigami**	38.33	45	P	P	09 42 10.7	+0.4
JOW	**Kunigami**	38.33	45	P	P	09 42 11.5	+1.1
GTA	**Gaotai**	38.48	1	⇑P	P	09 42 12.8	+1.2
GTA				pP	pP	09 42 29.4	-1.9
GTA				sP	sP	09 42 37.6	-3.2
GTA				PP	PnPn	09 43 49.4	+5.4
GTA				PcP	PcP	09 44 24.8	+1.6
GTA				S	S	09 48 00.5	-0.7
GTA				sS	sS	09 48 33.0	-1.9
GTA				ScS	ScS	09 52 12.4	-2.0
GTA				pmax	pmax		
	comp=Z,200nm,1.2s						
GTA				pmax	pmax		
	comp=Z,910nm,6.2s						
GTA				LR	LR		
	comp=Z,1µm,19.6s						
GTA				LR	LR		
	comp=Z,2µm,17.8s						
GTA				LR	LR		
	comp=Z,2µm,20.0s						
TIY	**Taiyuan**	38.84	17	⇓iP	P	09 42 16.1	+1.6
TIY				S	S	09 48 03.9	-2.5
TIY				SS	SS	09 50 55.4	-5.6
TIY				pmax	pmax		
	comp=Z,100nm,0.7s						
TIY				pmax	pmax		
	comp=Z,410nm,4.1s						
TIY				LR	LR		
	comp=Z,1µm,9.8s						
TIY				LR	LR		
	comp=Z,1µm,12.2s						
TIY				LR	LR		
	comp=Z,3µm,24.2s						
TIA	**Tai'an**	39.12	24	⇑P	P	09 42 16.8	-0.1
TIA				S	S	09 48 10.7	0.0
TIA				pmax	pmax		
	comp=Z,230nm,0.8s						
TIA				pmax	pmax		
	comp=Z,640nm,3.5s						
TIA				LR	LR		
	comp=Z,1µm,21.8s						
TIA				LR	LR		
	comp=Z,2µm,11.8s						
TIA				LR	LR		
	comp=Z,2µm,21.6s						
SMPI	**Sarmi**	39.89	94	P	P	09 42 24.5	+0.9
	comp=Z,251nm,1.4s						
WB0	**Warramunga Arr**	40.33	122	P	P	09 42 25.8	-1.3
WB0				IAmb	IAmb	09 42 32.3	
	comp=Z,164nm,0.8s						
WRA	**Warramunga Arr**	40.36	123	P	P	09 42 25.9	-1.5
	comp=Z,68nm,0.7s,baz=301,slow=8.9,SNR=628						
WRA				PcP	PcP	09 44 29.6	+0.3
	comp=Z,31nm,0.7s,baz=309,slow=2.4,SNR=6.2						
WRA				pPcP		09 44 49.1	
	comp=Z,51nm,0.8s,baz=301,slow=3.1,SNR=6.7						
WRA				ScP	ScP	09 48 11.1	-0.4
	comp=Z,17nm,0.8s,baz=306,slow=3.2,SNR=6.1						
WRA				S	S	09 48 22.0	-7.5
	comp=Z,59nm,1.0s,baz=286,slow=16,SNR=14						
WRA	**Warramunga Arr**	40.36	123	P	P	09 42 26.3	-1.1
WRAB	**Tennant Creek**	40.36	123	ceP	P	09 42 26.0	-1.4
WRAB				pmax	pmax		
	comp=Z,203nm,1.3s						
WRAB	**Tennant Creek**	40.36	123	⇓P	P	09 42 25.9	-1.4
WRAB	**Tennant Creek**	40.36	123	P	P	09 42 26.4	-0.9
WRAB				IAmb	IAmb	09 42 44.8	
	comp=Z,267nm,1.1s						
WRAB	**Tennant Creek**	40.36	123	P	P	09 42 26.5	-0.9
WB2	**Warramunga Arr**	40.37	123	P	P	09 42 26.0	-1.4
	baz=40						
WB2	**Warramunga Arr**	40.37	123	P	P	09 42 26.2	-1.3
WB2				IAmb	IAmb	09 42 44.7	
	comp=Z,222nm,1.1s						
WR0	**Warramunga Arr**	40.53	123	P	P	09 42 27.1	-1.7
WR0				IAmb	IAmb	09 42 34.3	
	comp=Z,287nm,0.9s						
NIL	**Nilore**	40.62	326	P	P	09 42 29.9	+0.5
NIL				pmax	pmax		
	comp=Z,836nm,1.1s						
NIL	**Nilore**	40.62	326	P	P	09 42 29.8	+0.5
NIL	**Nilore**	40.62	326	P	P	09 42 29.9	+0.5
BTO	**Baotou**	40.93	13	eP	P	09 42 33.7	+1.8
BTO				S	S	09 48 41.9	+4.1
BTO				LR	LR		
	comp=Z,5µm,18.6s						
BTO				LR	LR		
	comp=Z,10µm,19.6s						
HHC	**Hu-ho-hao-te**	41.53	15	eP	P	09 42 40.6	+3.8
HHC				PP	PnPn	09 44 21.6	+1.8
HHC				S	S	09 48 52.3	+5.7
HHC				pmax	pmax		
	comp=Z,280nm,0.7s						
HHC				pmax	pmax		
	comp=Z,880nm,8.4s						
HHC				LR	LR		
	comp=Z,4µm,18.4s						
HHC				LR	LR		
	comp=Z,2µm,18.3s						
HHC				LR	LR		
	comp=Z,3µm,19.1s						
ASPA	**Alice Springs**	41.77	128	P	P	09 42 38.0	-0.9
	baz=42						
AS31	**Alice Springs**	41.77	128	P	P	09 42 37.8	-1.1
ASAR	**Alice Springs**	41.77	128	P	P	09 42 37.8	-1.2
	comp=Z,66nm,0.7s,baz=300,slow=7.7,SNR=1016						
ASAR				PcP	PcP	09 44 34.5	+0.5
	comp=Z,50nm,0.8s,baz=309,slow=3.6,SNR=8.1						
ASAR				pPcP		09 44 54.8	
	comp=Z,66nm,0.8s,baz=312,slow=3.0,SNR=8.0						
ASAR				ScP	ScP	09 48 17.0	0.0
	comp=Z,21nm,0.8s,baz=310,slow=4.1,SNR=7.3						
ASAR				S	S	09 48 43.1	-7.4
	comp=Z,26nm,0.7s,baz=294,slow=14,SNR=18						
ASAR				ScS	ScS	09 52 33.0	-1.3
	comp=Z,10nm,1.1s,baz=284,slow=6.4,SNR=5.7						
ASAR				LR	LR	10 01 55.7	
	comp=Z,418nm,21.7s,baz=314,slow=39						
FORT	**Forrest**	41.85	141	P	P	09 42 40.2	+0.8
	baz=42,SNR=385						
FORT	**Forrest**	41.85	141	P	P	09 42 40.2	+0.8
FORT	**Forrest**	41.85	141	P	P	09 42 40.9	+1.5
BJT	**Baijiatuau**	42.13	20	P	P	09 42 43.0	+1.5
BJT				pmax	pmax		
	comp=Z,870nm,0.9s						
BJT	**Baijiatuau**	42.13	20	P	P	09 42 43.0	+1.5
BJI	**Beijing**	42.15	20	P	P	09 42 42.6	+0.9
BJI				ScP	ScP	09 48 17.8	-0.3
BJI				S	S	09 48 54.2	-1.3
BJI				ScS	ScS	09 52 33.3	-2.6
BJI				pmax	pmax		
	comp=Z,3µm,6.9s						
BJI				LR	LR		
	comp=Z,940nm,20.4s						
BJI				LR	LR		
	comp=Z,2µm,21.6s						
BJI				LR	LR		
	comp=Z,2µm,21.0s						
JSU	**Suzuyama**	42.73	41	⇑P	P	09 42 46.3	-0.3
JSU	**Suzuyama**	42.73	41	P	P	09 42 46.0	-0.6
AIS	**Amsterdam Isla**	43.12	205	P	P	09 42 50.2	+0.6
MNYD	**Munyeodo**	43.24	33	P	P	09 42 48.9	-1.8
	SNR=17						
DL2	**Dalian**	43.30	26	⇓iP	P	09 42 51.1	+0.1
DL2				pP	pP	09 43 08.8	-2.3
DL2				S	S	09 49 12.7	+0.3
DL2				sS	sS	09 49 41.6	-5.0
DL2				pmax	pmax		
	comp=Z,360nm,0.8s						
DL2				pmax	pmax		
	comp=Z,600nm,3.6s						
DL2				LR	LR		
	comp=Z,2µm,24.6s						
DL2				LR	LR		
	comp=Z,1µm,17.0s						
DL2				LR	LR		
	comp=Z,2µm,26.0s						
KBL	**Kabul**	43.68	323	P	P	09 42 54.1	-0.3
KBL				pmax	pmax		
	comp=Z,139nm,1.1s						
KBL	**Kabul**	43.68	323	P	P	09 42 54.7	+0.3
	SNR=53						
KBL				P	P	09 42 54.7	+0.3
	SNR=53						
KBL	**Kabul**	43.68	323	P	P	09 42 54.1	-0.3
MSEY	**Mahe Island**	43.72	262	i P	P	09 42 57.0	+2.1
	SNR=37						
MSEY	**Mahe Island**	43.72	262	P	P	09 42 56.0	+1.1
MSEY				pmax	pmax		
	comp=Z,591nm,1.5s						
MSEY	**Mahe Island**	43.72	262	P	P	09 42 57.0	+2.1
MSEY	**Mahe Island**	43.72	262	⇓P	P	09 42 56.9	+2.0
MSEY	**Mahe Island**	43.72	262	P	P	09 42 56.0	+1.1
MSEY				IAmb	IAmb	09 42 58.2	
	comp=Z,591nm,1.4s						
KSJEO	**Jeonju**	43.82	34	P	P	09 42 56.2	+0.9
	SNR=12						
DACB	**Daecheong-do R**	43.88	30	P	P	09 42 56.2	+0.5
	SNR=12						
KSH	**Kashi**	43.90	334	P	P	09 42 55.3	-0.7
KSH				pP	pP	09 43 13.9	-2.1
KSH				sP	sP	09 43 22.6	-2.8
KSH				PcP	PP	09 44 40.2	+0.4
KSH				S	S	09 49 17.4	-4.0
KSH				sS	sS	09 49 49.6	-6.0
KSH				SS	SS	09 52 28.1	-13
KSH				ScS	ScS	09 52 41.8	-5.3
KSH				pmax	pmax		
	comp=Z,130nm,1.1s						
KSH				pmax	pmax		
	comp=Z,750nm,4.6s						
KSH				LR	LR		
	comp=Z,880nm,18.4s						
KSH				LR	LR		
	comp=Z,750nm,15.6s						
KSH				LR	LR		
	comp=Z,2µm,23.7s						
JLN	**Jalan Bani Buh**	43.92	302	P	P	09 42 57.5	+1.2
	SNR=63						
WMQ	**Urumqi**	44.03	348	⇓P	P	09 42 58.8	+1.9
WMQ				pP	pP	09 43 16.9	0.0
WMQ				sP	sP	09 43 25.1	-1.3
WMQ				PP	PcP	09 44 43.5	+2.4
WMQ				ScP	ScP	09 48 27.2	+1.5
WMQ				S	S	09 49 24.5	+1.4
WMQ				sS	sS	09 49 54.7	-2.7
WMQ				ScS	ScS	09 52 47.4	-0.3
WMQ				pmax	pmax		
	comp=Z,550nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,1µm,3.8s						
WMQ				LR	LR		
	comp=Z,730nm,24.5s						
WMQ				LR	LR		
	comp=Z,860nm,21.5s						
WMQ				LR	LR		
	comp=Z,1µm,24.5s						
TJN	**Taejon**	44.18	33	ceP	P	09 42 58.2	0.0
TJN	**Taejon**	44.18	33	P	P	09 42 59.1	+0.9
OKCB	**Cheongsan-myeo**	44.40	34	P	P	09 43 00.6	+0.7
	SNR=9.9						
WBK	**Wadi Bani Khal**	44.48	302	P	P	09 43 02.3	+1.5
	SNR=38						
WBK				P	P	09 43 02.3	+1.5
	SNR=38						
INCN	**Inchon**	44.60	32	P	P	09 43 01.8	+0.3
MHTO	**MHTO**	44.72	300	P	P	09 43 03.0	+0.3
	SNR=31						
MHTO				P	P	09 43 03.0	+0.3
	SNR=31						
DQM	**DQM**	44.73	298	P	P	09 43 04.0	+1.3
	SNR=23						
KSMGY	**Mungyeong**	44.77	34	P	P	09 43 02.7	-0.1
	SNR=25						
TARG	**Taragay, Kyrgy**	45.02	338	P	P	09 43 06.7	+1.4
TARG				IAmb	IAmb	09 43 08.6	
	comp=Z,451nm,1.2s						
WSAR	**Wadi Sarin**	45.02	303	P	P	09 43 06.6	+1.5
	comp=Z,114nm,1.1s,baz=141,slow=8.3,SNR=46						
WSAR				LR	LR	09 59 32.1	
	comp=Z,538nm,21.6s,baz=130,slow=33						
WSAR	**Wadi Sarin**	45.02	303	P	P	09 43 06.7	+1.6
	SNR=26						
QIS	**Mount Isa**	45.10	120	P	P	09 43 05.0	-0.8
	baz=45,SNR=79						
QIS	**Mount Isa**	45.10	120	P	P	09 43 05.4	-0.4
JMDO	**Jabal Madar**	45.12	301	P	P	09 43 07.1	+1.1
	SNR=36						
KSAR	**Wonju Array Be**	45.24	33	P	P	09 43 06.5	-0.1
KSAR	**Wonju Array Be**	45.24	33	P	P	09 43 06.5	-0.1
KSRS	**Korea Array**	45.27	33	P	P	09 43 06.8	0.0
	comp=Z,100nm,0.9s,baz=224,slow=8.6,SNR=98						
KSRS				ScP	ScP	09 48 30.4	-0.5
	comp=Z,6.3nm,0.8s,baz=220,slow=5.0,SNR=4.3						
KSRS				LR	LR	10 03 13.5	
	comp=Z,2µm,18.6s,baz=221,slow=38						
KS19	**Wonju Array Si**	45.28	33	P	P	09 43 06.8	0.0
OOD	**Oodnadatta**	45.30	132	P	P	09 43 07.2	0.0
SMDO	**Samad**	45.44	302	P	P	09 43 09.8	+1.3
	SNR=33						
PRZ	**Przheval'sk**	45.45	339	P	P	09 43 10.3	+1.9
PRZ				pmax	pmax		
	comp=Z,597nm,1.3s						

PRZ	Przheval'sk	45.45	339	P	P	09 43 10.3	+1.9
MULG	Mulgathing	45.52	136	P	P	09 43 09.0	+0.1
BIDO	Bidbid	45.56	303	P	P	09 43 10.9	+1.6
	SNR=41						
SHLS	Shalkode	45.66	340	⇓iP	P	09 43 11.0	+0.9
	comp=Z,255nm,1.3s,baz=341						
SHLS				iS	S	09 49 46.7	-0.2
	baz=341						
SHLS	Shalkode	45.66	340	d iP	P	09 43 10.9	+0.9
SHLS				iS	S	09 49 46.7	-0.2
SHLS				pmax	pmax		
	comp=Z,255nm,1.3s						
UZB	Uzynbulak	45.81	340	⇓iP	P	09 43 12.1	+1.0
	comp=Z,218nm,1.4s,baz=340						
UZB				iS	S	09 49 50.3	+1.3
	comp=Z,277nm,4.0s,baz=340						
UZB	Uzynbulak	45.81	340	d iP	P	09 43 12.9	+1.8
UZB				iS	S	09 49 50.3	+1.3
UZB				pmax	pmax		
	comp=Z,218nm,1.4s						
UZB				smax	smax		
	comp=N,277nm,4.0s						
SHAO	Shalim	45.84	295	iP	P	09 43 13.0	+1.4
	SNR=14						
SHAO	Shalim	45.84	295	P	P	09 43 13.1	+1.4
	SNR=17						
SATY	Saty	45.95	339	⇓iP	P	09 43 14.1	+1.9
	comp=N,223nm,1.1s,baz=340						
SATY				eS	S	09 49 51.8	+0.8
	comp=N,385nm,2.6s,baz=340						
SATY	Saty	45.95	339	d iP	P	09 43 14.1	+1.9
SATY				eS	S	09 49 51.7	+0.8
SATY				pmax	pmax		
	comp=Z,223nm,1.1s						
SATY				smax	smax		
	comp=E,385nm,2.6s						
SOCY	Socotra	45.97	286	P	P	09 43 13.5	+0.7
SOCY				IAmb	IAmb	09 43 15.2	
	comp=Z,368nm,1.0s						
BSY	Bisya	46.04	301	P	P	09 43 14.6	+1.5
	SNR=56						
ULHL	Ulahol	46.06	337	P	P	09 43 15.0	+1.8
	SNR=35						
GAR	Garm	46.19	329	P	P	09 43 14.3	+0.1
KPKS	Kokpek	46.20	340	⇓iP	P	09 43 15.9	+1.6
	comp=Z,209nm,1.7s,baz=340						
KPKS				iS	S	09 49 56.1	+1.5
	comp=Z,326nm,3.0s,baz=340						
KPKS	Kokpek	46.20	340	d iP	P	09 43 15.8	+1.6
KPKS				iS	S	09 49 56.1	+1.5
KPKS				pmax	pmax		
	comp=Z,209nm,1.7s						
KPKS				smax	smax		
	comp=E,326nm,3.0s						
COEN	Coen	46.21	110	P	P	09 43 13.8	-0.8
COEN	Coen	46.21	110	P	P	09 43 14.0	-0.6
HOQ	Hoqain	46.27	303	P	P	09 43 16.3	+1.3
	SNR=52						
HOQ				P	P	09 43 16.3	+1.3
	SNR=52						
DMTO	DMTO	46.37	294	P	P	09 43 17.0	+1.2
	SNR=10						
DMTO				P	P	09 43 17.0	+1.2
	SNR=10						
JMN	Monobe	46.37	41	⇑P	P	09 43 16.1	+0.5
JMN	Monobe	46.37	41	P	P	09 43 16.1	+0.5
JMN				IAmb	IAmb	09 43 17.4	
	comp=Z,130nm,0.7s						
TNSS	Tian-Shan	46.46	338	iP	P	09 43 18.3	+1.7
	baz=338						
MDOK	Medeo	46.53	338	iP	P	09 43 18.9	+2.0
	baz=338						
MDOK				iS	S	09 50 01.4	+1.9
	baz=338						
MDOK	Medeo	46.53	338	iP	P	09 43 18.8	+2.0
MDOK				iS	S	09 50 01.3	+1.9
CHGR	Chuyangaron	46.54	328	P	P	09 43 16.8	-0.1
SNY	Shenyang	46.55	25	⇑P	P	09 43 16.6	-0.2
SNY				pP	pP	09 43 34.2	-2.8
SNY				sP	sP	09 43 44.0	-2.4
SNY				PP	PP	09 45 06.0	-1.4
SNY				S	S	09 49 59.0	-0.3
SNY				pmax	pmax		
	comp=Z,140nm,1.4s						
SNY				pmax	pmax		
	comp=Z,440nm,7.0s						
SNY				LR	LR		
	comp=Z,2µm,19.4s						
SNY				LR	LR		
	comp=Z,2µm,19.8s						
SNY				LR	LR		
	comp=Z,3µm,27.5s						
AAA	Alma-Ata	46.62	338	⇓iP	P	09 43 19.5	+2.1
	comp=Z,790nm,1.4s,baz=338						
AAA				iS	S	09 50 03.6	+3.0
	baz=338						
AAA	Alma-Ata	46.62	338	d iP	P	09 43 19.5	+2.1
AAA				iS	S	09 50 03.5	+3.0
AAA				pmax	pmax		
	comp=Z,790nm,1.4s						
JHS	Saijyo	46.66	39	⇑P	P	09 43 18.0	+0.1
JHS	Saijyo	46.66	39	P	P	09 43 18.3	+0.4
JHS				IAmb	IAmb	09 43 20.6	
	comp=Z,254nm,0.8s						
BTK	Batken	46.73	330	P	P	09 43 20.1	+1.7
BTK				pmax	pmax		
	comp=Z,314nm,1.1s						
BTK	Batken	46.73	330	P	P	09 43 20.1	+1.7
BTK				IAmb	IAmb	09 43 21.6	
	comp=Z,314nm,1.1s						
UCH	Uchtor	46.76	335	P	P	09 43 20.7	+1.7
	SNR=253						
ARQ	Araqi	46.84	302	P	P	09 43 20.6	+1.1
	SNR=33						
ARQ				P	P	09 43 20.6	+1.1
	SNR=33						
TKM2	Tokmak 2	46.89	337	P	P	09 43 21.3	+1.6
	SNR=378						
KBK	Karagaybulak	46.93	336	P	P	09 43 22.3	+2.3
	SNR=217						
RBK	Rabkut	46.99	293	P	P	09 43 22.0	+1.3
	SNR=30						
RBK				P	P	09 43 22.0	+1.3
	SNR=30						
AML	Almayashu	47.03	334	P	P	09 43 22.8	+1.7
	SNR=16						
AML	Almayashu	47.03	334	iP	P	09 43 22.7	+1.7
	SNR=62						
AML	Almayashu	47.03	334	P	P	09 43 22.7	+1.7
AAK	Ala-Archa	47.10	335	P	P	09 43 23.2	+1.9
	comp=Z,84nm,0.9s,baz=155,slow=5.4,SNR=110						
AAK				PcP	PcP	09 44 53.9	+1.9
	comp=Z,92nm,0.9s,baz=334,slow=13,SNR=4.0						
AAK				ScP	ScP	09 48 37.4	-1.3
	comp=Z,7.5nm,0.9s,baz=143,slow=5.1,SNR=2.1						
AAK				LR	LR	10 06 11.6	
	comp=Z,641nm,21.1s,baz=157,slow=40						
AAK	Ala-Archa	47.10	335	P	P	09 43 23.2	+1.9
	SNR=129						
AAK	Ala-Archa	47.10	335	iP	P	09 43 23.1	+1.8
	SNR=150						
AAK	Ala-Archa	47.10	335	ceP	P	09 43 23.0	+1.8
AAK				pmax	pmax		
	comp=Z,1µm,1.7s						
AAK	Ala-Archa	47.10	335	P	P	09 43 23.4	+2.1
AAK				P	P	09 43 23.4	+2.1
AAK	Ala-Archa	47.10	335	⇓P	P	09 43 23.1	+1.8
AAK	Ala-Archa	47.10	335	P	P	09 43 22.7	+1.4
AAK				IAmb	IAmb	09 43 25.8	
	comp=Z,224nm,1.1s						
SOHO	SOHO	47.14	303	iP	P	09 43 22.4	+0.7
	SNR=25						
SOHO	SOHO	47.14	303	P	P	09 43 22.6	+0.9
SOHO				P	P	09 43 22.6	+0.9
ARXS	Arharly	47.16	339	eP	P	09 43 22.5	+0.9
FRU1	Bishkek	47.19	336	P	P	09 43 23.7	+1.8
FRU1				pmax	pmax		
	comp=Z,510nm,1.3s						
FRU1	Bishkek	47.19	336	P	P	09 43 23.7	+1.8
FRU1				IAmb	IAmb	09 43 25.2	
	comp=Z,510nm,1.3s						
GUMO	Guam	47.24	72	P	P	09 43 24.3	+1.7
CHMS	Chumysh	47.30	336	P	P	09 43 24.1	+1.4
	SNR=116						
SONM	Songino Array	47.35	7	P	P	09 43 24.8	+1.7
	comp=Z,805nm,0.9s,baz=187,slow=8.0,SNR=1823						
SONM				PcP	PcP	09 44 53.7	+1.0
	comp=Z,32nm,0.8s,baz=196,slow=3.9,SNR=5.2						
SONM				pPcP		09 45 13.7	
	comp=Z,86nm,0.8s,baz=180,slow=3.2,SNR=4.9						
SONM				ScP	ScP	09 48 38.6	-0.9
	comp=Z,43nm,0.9s,baz=201,slow=3.5,SNR=11						
SONM				ScS	ScS	09 53 08.3	-0.8
	comp=Z,3.8nm,0.9s,baz=177,slow=9.4,SNR=3.7						
SONM				LR	LR	10 05 24.6	
	comp=Z,2µm,19.2s,baz=184,slow=39						
DOK	Doka	47.37	295	P	P	09 43 24.6	+1.0
	SNR=52						
EKS2	Erkin-Say	47.42	335	P	P	09 43 25.7	+1.9
	SNR=242						
KUU	Kurty	47.42	338	⇓iP	P	09 43 24.7	+1.0
	comp=Z,596nm,1.3s,baz=338						
KUU				iS	S	09 50 13.1	+1.2
	comp=Z,1µm,2.7s,baz=338						
KUU	Kurty	47.42	338	d iP	P	09 43 24.6	+1.0
KUU				iS	S	09 50 13.0	+1.2
KUU				pmax	pmax		
	comp=Z,597nm,1.3s						
KUU				smax	smax		
	comp=N,1µm,2.7s						
RER	Riviere de l'E	47.46	240	P	P	09 43 26.2	+1.9
RER	Riviere de l'E	47.46	240	P	P	09 43 25.1	+0.8
RER				IAmb	IAmb	09 43 27.6	
	comp=Z,352nm,1.0s						
ULN	Ulaanbaatar	47.46	7	ceP	P	09 43 25.8	+1.8
ULN				pmax	pmax		
	comp=Z,690nm,0.7s						
ULN	Ulaanbaatar	47.46	7	P	P	09 43 26.9	+2.9
ULN	Ulaanbaatar	47.46	7	⇑P	P	09 43 26.0	+2.0
ULN	Ulaanbaatar	47.46	7	P	P	09 43 25.9	+2.0
WHFO	Wadi Hawf	47.50	294	P	P	09 43 25.6	+0.9
	SNR=24						
USP	Ospenovka	47.62	336	P	P	09 43 26.8	+1.7
	SNR=340						
TDK	Taldyqorghan	47.65	340	iP	P	09 43 26.4	+1.1
	comp=Z,266nm,1.2s,baz=341						
TDK				iS	S	09 50 15.0	0.0
	baz=341						
TDK	Taldyqorghan	47.65	340	iP	P	09 43 26.4	+1.1
TDK				iS	S	09 50 14.9	0.0
TDK				pmax	pmax		
	comp=Z,266nm,1.2s						
SGDS	Sogindy	47.72	336	⇓iP	P	09 43 27.2	+1.2
	comp=Z,91nm,1.1s,baz=336						
SGDS				iS	S	09 50 18.0	+1.9
	comp=Z,132nm,2.0s,baz=336						
UOSS	Minazif	47.73	304	iP	P	09 43 26.3	0.0
	SNR=9.8						
UOSS	Minazif	47.73	304	P	P	09 43 26.6	+0.3
UOSS	Minazif	47.73	304	⇓P	P	09 43 26.3	0.0
UOSS	Minazif	47.73	304	P	P	09 43 26.4	0.0
HATD	Hatta, Dubai	47.75	304	iP	P	09 43 27.2	+0.8
	SNR=34						
HATD	Hatta, Dubai	47.75	304	P	P	09 43 27.3	+0.8
	SNR=23						
HATD				P	P	09 43 27.3	+0.8
	SNR=23						
ASHO	Ashiyiah	47.75	303	iP	P	09 43 27.5	+1.0
	SNR=43						
ASHO	Ashiyiah	47.75	303	P	P	09 43 27.6	+1.0
	SNR=27						
ALNE	Al Ain	47.77	302	iP	P	09 43 27.8	+1.2
	SNR=25						
ALNE	Al Ain	47.77	302	P	P	09 43 27.8	+1.2
	SNR=79						
ABTO	Aybut	47.78	293	P	P	09 43 27.9	+1.0
	SNR=27						
MDH	Madha	47.80	304	iP	P	09 43 26.6	-0.2
	SNR=17						
MDH	Madha	47.80	304	P	P	09 43 27.0	+0.2
	SNR=7.4						
HRA	Herat	47.88	318	P	P	09 43 27.5	0.0
MSFE	Esma-Masafi	47.94	304	iP	P	09 43 29.1	+1.1
	SNR=28						
MASF	Masafi	47.94	304	P	P	09 43 29.1	+1.1
	SNR=14						
BANOM	Banah	48.05	305	P	P	09 43 29.3	+0.5
BANOM	Banah	48.05	305	P	P	09 43 29.0	+0.2
ZSN	Zaisan	48.09	347	⇓iP	P	09 43 30.5	+1.8
	comp=Z,135nm,1.0s,baz=348						
ZSN				iS	S	09 50 22.5	+1.4
	comp=Z,484nm,3.5s,baz=348						
ZSN	Zaisan	48.09	347	d iP	P	09 43 30.5	+1.8
ZSN				iS	S	09 50 22.5	+1.4
ZSN				pmax	pmax		
	comp=Z,135nm,1.0s						
ZSN				smax	smax		
	comp=E,484nm,3.5s						
MK31	Makanchi Array	48.10	345	d iP	P	09 43 29.6	+0.8
MK31	Makanchi Array	48.10	345	P	P	09 43 30.0	+1.2
MK31				IAmb	IAmb	09 43 34.6	
	comp=Z,126nm,0.8s						
MKAR	Makanchi Array	48.10	345	P	P	09 43 29.9	+1.1
	comp=Z,196nm,0.8s,baz=158,slow=8.7,SNR=618						
MKAR				S	S	09 50 18.7	-2.6
	comp=Z,3.2nm,0.9s,baz=166,slow=15,SNR=1.9						
MKAR				LR	LR	10 07 16.5	
	comp=Z,1µm,21.8s,baz=156,slow=40						
FAQ	Al Faqa, Dubai	48.17	303	iP	P	09 43 30.6	+0.9
	SNR=32						
FAQ	Al Faqa, Dubai	48.17	303	P	P	09 43 30.6	+0.9
	SNR=40						
MAKZ	Makanchi	48.20	344	P	P	09 43 30.4	+0.8
MAKZ				pmax	pmax		
	comp=Z,161nm,0.8s						
MAKZ	Makanchi	48.20	344	⇓P	P	09 43 30.5	+1.0
MAKZ	Makanchi	48.20	344	P	P	09 43 30.4	+0.8
MAKZ				IAmb	IAmb	09 43 35.1	
	comp=Z,161nm,0.8s						
NAZ	Nazwa, Dubai	48.20	303	iP	P	09 43 30.6	+0.7
	SNR=19						
NAZ	Nazwa, Dubai	48.20	303	P	P	09 43 30.7	+0.7
	SNR=28						
NAZ				P	P	09 43 30.7	+0.7
	SNR=28						
SHME	Shamm	48.23	305	iP	P	09 43 30.8	+0.6
	SNR=12						
SHME	Shamm	48.23	305	P	P	09 43 31.0	+0.8
	SNR=5.7						
JWT	Wachi	48.31	41	⇑P	P	09 43 30.4	-0.1
JWT	Wachi	48.31	41	P	P	09 43 30.4	-0.1
ASUD	Al Ashush, Dub	48.34	303	iP	P	09 43 32.5	+1.5
	SNR=47						
ASUD	Al Ashush, Dub	48.34	303	P	P	09 43 32.5	+1.5
	SNR=52						
BBOO	Buckleboo	48.39	137	P	P	09 43 30.6	-0.7
	baz=48,SNR=476						
BBOO	Buckleboo	48.39	137	P	P	09 43 30.7	-0.5
BBOO				IAmb	IAmb	09 43 51.0	
	comp=Z,270nm,1.2s						
BBOO	Buckleboo	48.39	137	P	P	09 43 31.1	-0.1
UMQ	Umm Al-Quwin	48.42	304	iP	P	09 43 33.0	+1.5
	SNR=5.7						
MTSU	Mount Surprise	48.44	115	P	P	09 43 31.5	-0.3
	baz=48,SNR=116						
MTSU	Mount Surprise	48.44	115	P	P	09 43 31.9	+0.1
TAS	Tashkent	48.45	330	P	P	09 43 32.9	+1.4
TAS				pmax	pmax		
	comp=Z,460nm,0.9s						
TAS	Tashkent	48.45	330	P	P	09 43 32.9	+1.4
MANU	Manus Island	48.53	93	P	P	09 43 33.2	+0.5
MANU				IAmb	IAmb	09 43 52.8	
	comp=Z,239nm,1.4s						
LCRK	Leigh Creek	48.58	133	P	P	09 43 32.9	+0.1
DZA	Taraz	48.68	333	eP	P	09 43 33.7	+0.3
	baz=333						
DZA	Taraz	48.68	333	eP	P	09 43 33.6	+0.3
IUG	Iuzhnay	48.71	331	⇓iP	P	09 43 35.1	+1.4
	baz=332						
IUG				iS	S	09 50 30.4	+0.1
	baz=332						
IUG	Iuzhnay	48.71	331	d iP	P	09 43 35.0	+1.4
IUG				iS	S	09 50 30.3	+0.1
CN2	Changchun	48.95	25	eP	P	09 43 35.2	-0.2
CN2				eS	S	09 50 32.2	-1.1
CN2				pmax	pmax		
	comp=Z,200nm,1.1s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,900nm,20.0s						
CN2				LR	LR		
	comp=Z,1µm,20.0s						
CN2				LR	LR		
	comp=Z,2µm,22.0s						
JCJ	Chichijima	49.09	54	P	P	09 43 35.8	-0.9
JCJ	Chichijima	49.09	54	P	P	09 43 36.1	-0.6
PMG	Port Moresby	49.09	103	P	P	09 43 36.8	-0.1
PMG				pmax	pmax		
	comp=Z,107nm,1.0s						
PMG	Port Moresby	49.09	103	⇑P	P	09 43 36.6	-0.3
PMG	Port Moresby	49.09	103	P	P	09 43 36.8	-0.1
PMG	Port Moresby	49.09	103	P	P	09 43 37.6	+0.7
PMG	Port Moresby	49.09	103	P	P	09 43 37.1	+0.2
INKA	Innaminka	49.14	129	P	P	09 43 37.4	+0.4
KK31	Karatay Array	49.22	333	P	P	09 43 38.2	+0.7
KK31				pmax	pmax		
	comp=Z,371nm,1.4s						
KK31	Karatay Array	49.22	333	P	P	09 43 38.2	+0.7
KK31				IAmb	IAmb	09 43 39.8	
	comp=Z,371nm,1.4s						
KKAR	Karatay Array	49.22	333	P	P	09 43 38.1	+0.7
KKAR				pmax	pmax		
	comp=Z,371nm,1.4s						
KKAR	Karatay Array	49.22	333	⇓P	P	09 43 38.2	+0.7
KKAR	Karatay Array	49.22	333	P	P	09 43 38.1	+0.7
KKAR	Karatay Array	49.22	333	P	P	09 43 38.2	+0.7
KKAR				IAmb	IAmb	09 43 39.8	
	comp=Z,371nm,1.4s						
MZWR	Madinat Zayed	49.25	301	P	P	09 43 38.9	+0.9
BTLS	Baital	49.28	337	⇓iP	P	09 43 38.7	+0.9
	comp=Z,135nm,1.3s,baz=337						
BTLS				iS	S	09 50 35.8	-2.1
	comp=Z,128nm,2.7s,baz=337						
BTLS	Baital	49.28	337	d iP	P	09 43 38.7	+0.9
BTLS				iS	S	09 50 35.7	-2.1
BTLS				pmax	pmax		
	comp=Z,135nm,1.3s						
BTLS				smax	smax		
	comp=E,128nm,2.7s						
INU	Inuyama	49.41	42	⇑P	P	09 43 38.4	-0.6
INU	Inuyama	49.41	42	P	P	09 43 38.7	-0.2
INU	Inuyama	49.41	42	P	P	09 43 38.8	-0.2
BRLS	Borolday	49.48	332	iP	P	09 43 39.0	-0.5
	comp=E,95nm,1.9s,baz=332						
BRLS				eS	S	09 50 37.9	-2.9
	baz=332						
BRLS	Borolday	49.48	332	iP	P	09 43 38.9	-0.5
BRLS				eS	S	09 50 37.9	-2.9
BRLS				pmax	pmax		
	comp=Z,95nm,1.9s						
WHYH	Whyalla	49.55	136	P	P	09 43 40.3	+0.2
ZAK	Zakamensk	49.59	4	eP	P	09 43 41.7	+1.5
ZAK				e	S	09 50 35.8	-6.4
ZAK				pmax	pmax		
	comp=Z,234nm,1.4s						
DGZ	Jazzator, Alta	49.74	350	d iP	P	09 43 43.0	+1.5
DGZ				pmax	pmax		
	comp=Z,522nm,0.8s						
JGF	Kuroka	49.78	42	⇓P	P	09 43 41.7	-0.2
JGF	Kuroka	49.78	42	P	P	09 43 41.7	-0.2
JSG	Sagara	49.81	43	P	P	09 43 42.7	+0.6
JSG				IAmb	IAmb	09 43 43.5	
	comp=Z,236nm,1.1s						
PTPS	Port Pirie	49.92	136	P	P	09 43 43.7	+0.8
JHJ2	Mitsune	50.11	46	P	P	09 43 44.2	-0.2
JHJ2	Mitsune	50.11	46	P	P	09 43 42.8	-1.6
GHWR	Ruwais	50.18	301	P	P	09 43 46.1	+1.1
GHWR				P	P	09 43 46.1	+1.1
SBV	Sambava	50.55	252	P	P	09 43 49.5	+1.6
	SNR=12						
SBV	Sambava	50.55	252	⇓P	P	09 43 49.5	+1.6
SBV	Sambava	50.55	252	P	P	09 43 49.6	+1.6
MSHR	Mys Shultsa	50.70	31	iP	P	09 43 48.5	-0.1
HTT	Hallett	50.71	136	P	P	09 43 48.8	-0.2
	baz=51,SNR=250						
HTT	Hallett	50.71	136	P	P	09 43 49.4	+0.4
MOY	Mondy	50.76	2	eP	P	09 43 51.2	+2.1
MOY				pmax	pmax		
	comp=Z,368nm,2.1s						
CTA	Charters Tower	50.78	117	P	P	09 43 49.7	+0.1
CTAO	Charters Tower	50.78	117	P	P	09 43 49.5	-0.1
CTAO				pmax	pmax		
	comp=Z,232nm,0.9s						
CTAO	Charters Tower	50.78	117	⇑P	P	09 43 49.4	-0.3
CTAO	Charters Tower	50.78	117	P	P	09 43 49.5	-0.1
CTAO				IAmb	IAmb	09 43 55.5	
	comp=Z,232nm,0.8s						
CTAO	Charters Tower	50.78	117	P	P	09 43 49.5	-0.1
MAJO	Matsushiro	50.89	41	c iP	P	09 43 49.0	-1.2
MAJO				pmax	pmax		
	comp=Z,81nm,1.1s						
MAJO	Matsushiro	50.89	41	P	P	09 43 50.5	+0.3
MAT	Matsushiro	50.89	41	P	P	09 43 49.1	-1.1
MAT				S	S	09 50 58.0	-2.6
MJAR	Matsushiro Arr	50.89	41	P	P	09 43 49.5	-0.6
	comp=Z,67nm,1.0s,baz=219,slow=6.6,SNR=107						
MJAR				ScP	ScP	09 48 54.5	-0.3
	comp=Z,8.4nm,1.1s,baz=207,slow=3.6,SNR=4.8						
MJAR				LR	LR	10 04 52.4	
	comp=Z,771nm,21.8s,baz=235,slow=35						
TLY	Talaya	50.90	4	LR	LR	10 07 44.6	
	comp=Z,2µm,19.4s,baz=172,slow=39						
TLY	Talaya	50.90	4	c iP	P	09 43 52.4	+2.4
TLY				eS	S	09 51 02.8	+2.5
TLY				e	ScS	09 53 32.5	-0.2
TLY				pmax	pmax		
	comp=Z,620nm,0.9s						
TLY				MLR	MLR		
	comp=Z,3µm,16.0s						
TLY	Talaya	50.90	4	⇑P	P	09 43 52.2	+2.2
TLY	Talaya	50.90	4	P	P	09 43 52.3	+2.2
TLY				IAmb	IAmb	09 43 54.3	
	comp=Z,219nm,0.9s						
QLP	Quilpie	51.41	125	P	P	09 43 54.4	+0.1
	baz=51,SNR=62						
QLP	Quilpie	51.41	125	P	P	09 43 54.6	+0.3
MDJ	Mudanjiang	51.45	28	P	P	09 43 55.1	+0.9
MDJ				pP	pP	09 44 13.1	-1.6
MDJ				PP	PP	09 45 53.6	+1.4
MDJ				S	S	09 51 12.2	+4.3
MDJ				pmax	pmax		
	comp=Z,87nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,1µm,3.5s						
MDJ				LR	LR		
	comp=Z,2µm,15.7s						
MDJ				LR	LR		
	comp=Z,2µm,12.8s						
MDJ				LR	LR		
	comp=Z,3µm,16.9s						
MDJ	Mudanjiang	51.45	28	P	P	09 43 54.7	+0.5
VLA	Vladivostok	51.46	31	d iP	P	09 43 54.1	-0.2
VLA				pmax	pmax		
	comp=Z,240nm,1.5s						
IRK	Irkutsk	51.51	4	eP	P	09 43 55.9	+1.4
IRK				eS	S	09 51 11.8	+3.3
IRK				pmax	pmax		
	comp=Z,726nm,2.0s						
HIA	Hailar	51.54	17	P	P	09 43 55.8	+1.0
HIA				pmax	pmax		
	comp=Z,190nm,0.9s						
HIA	Hailar	51.54	17	P	P	09 43 55.8	+1.0
HIA				IAmb	IAmb	09 43 56.8	
	comp=Z,190nm,0.9s						
JSD	Sado	51.79	40	⇓P	P	09 43 56.5	-0.4
JSD	Sado	51.79	40	P	P	09 43 57.0	+0.1
STKA	Stephens Creek	51.80	133	P	P	09 43 56.9	-0.2
	comp=Z,122nm,0.7s,baz=307,slow=7.7,SNR=262						
STKA				S	S	09 51 09.8	-3.4
	comp=Z,31nm,0.9s,baz=127,slow=19,SNR=12						
STKA				LR	LR	10 09 04.5	
	comp=Z,573nm,20.0s,baz=301,slow=40						
STKA	Stephens Creek	51.80	133	P	P	09 43 56.7	-0.4
	baz=52,SNR=128						
STKA	Stephens Creek	51.80	133	d iP	P	09 43 56.5	-0.5
STKA	Stephens Creek	51.80	133	P	P	09 43 56.6	-0.4
STKA	Stephens Creek	51.80	133	P	P	09 43 57.3	+0.3
TRNA	Turayna	51.87	301	P	P	09 43 58.6	+1.0
KHOR	Al-Khor Airpor	51.92	302	P	P	09 43 59.1	+1.0
SEM	Semipalatinsk	51.96	345	⇓iP	P	09 43 58.6	+0.4
	baz=345						
SEM	Semipalatinsk	51.96	345	d iP	P	09 43 58.6	+0.4
JYT	Yasato	52.04	43	⇑P	P	09 43 58.8	+0.1
JYT	Yasato	52.04	43	P	P	09 43 58.8	+0.1
USA0B	Ussuriysk Arra	52.29	30	P	P	09 44 01.1	+0.6

USA0B				pmax	pmax		
	comp=Z,315nm,1.0s						
USA0B	**Ussuriysk Arra**	**52.29**	**30**	P	**P**	**09 44 01.1**	**+0.6**
USA0B				IAmb	IAmb	09 44 02.4	
	comp=Z,314nm,1.0s						
USRK	**Ussuriysk Ar.**	**52.29**	**30**	P	**P**	**09 44 00.7**	**+0.2**
	comp=Z,215nm,0.9s,baz=227,slow=5.7,SNR=156						
USRK				LR	LR	10 07 35.3	
	comp=Z,2µm,19.0s,baz=211,slow=38						
USRK	**Ussuriysk Ar.**	**52.29**	**30**	P	**P**	**09 44 01.0**	**+0.5**
USRK	**Ussuriysk Ar.**	**52.29**	**30**	P	**P**	**09 44 00.9**	**+0.5**
SHMA	**Al-Shehemyia**	**52.47**	**302**	P	**P**	**09 44 03.1**	**+1.0**
CIT	**Chita**	**52.55**	**11**	*e*P	**P**	**09 44 05.0**	**+2.7**
CIT				*e*		09 44 22.7	
CIT				*e*	**PcP**	**09 45 10.5**	**-1.1**
CIT				*e*S	**S**	**09 51 25.7**	**+2.8**
CIT				*e*	**ScS**	**09 53 39.6**	**-4.6**
CIT				pmax	pmax		
	comp=Z,1µm,2.4s						
KURBB	**Kurchatov Arra**	**52.62**	**344**	P	**P**	**09 44 03.8**	**+1.1**
	comp=Z,75nm,0.7s,baz=162,slow=6.7,SNR=192						
KURBB				ScP	**ScP**	**09 49 01.5**	**-0.3**
	comp=Z,7.8nm,1.0s,baz=152,slow=4.1,SNR=3.0						
KURBB				S	**S**	**09 51 20.2**	**-3.5**
	comp=Z,1.9nm,0.8s,baz=157,slow=13,SNR=2.3						
GEYT	**Alibeck**	**52.65**	**319**	P	**P**	**09 44 03.7**	**+0.4**
	comp=Z,94nm,0.8s,baz=162,slow=11,SNR=112						
GEYT				LR	LR	10 08 49.2	
	comp=Z,537nm,21.5s,baz=205,slow=39						
GYA0B	**ALIBECK ARRAY**	**52.65**	**319**	P	**P**	**09 44 03.8**	**+0.4**
GYA0B				IAmb	IAmb	09 44 05.0	
	comp=Z,170nm,0.9s						
KURK	**Kurchatov**	**52.68**	**344**	*ce*P	**P**	**09 44 04.1**	**+0.9**
KURK				pmax	pmax		
	comp=Z,372nm,1.7s						
KURK	**Kurchatov**	**52.68**	**344**	P	**P**	**09 44 04.6**	**+1.4**
KURK	**Kurchatov**	**52.68**	**344**	⇓P	**P**	**09 44 04.3**	**+1.1**
KURK	**Kurchatov**	**52.68**	**344**	P	**P**	**09 44 04.3**	**+1.1**
KURK				IAmb	IAmb	09 44 10.8	
	comp=Z,209nm,1.0s						
JMM	**Marumori**	**53.34**	**41**	⇑P	**P**	**09 44 07.8**	**-0.5**
JMM	**Marumori**	**53.34**	**41**	P	**P**	**09 44 08.2**	**0.0**
JMM				IAmb	IAmb	09 44 10.8	
	comp=Z,123nm,0.8s						
RABL	**Rabaul**	**53.44**	**96**	P	**P**	**09 44 10.5**	**+1.0**
RABL				IAmb	IAmb	09 44 12.9	
	comp=Z,104nm,0.7s						
BRZS	**Berezniki**	**53.91**	**339**	⇓*i*P	**P**	**09 44 12.9**	**+0.6**
	comp=Z,97nm,1.2s,baz=340						
BRZS	**Berezniki**	**53.91**	**339**	*d i*P	**P**	**09 44 12.9**	**+0.6**
BRZS				pmax	pmax		
	comp=Z,97nm,1.2s						
ZAA0	**Zalesovo Array**	**54.28**	**350**	P	**P**	**09 44 15.7**	**+0.8**
ZALV	**Zalesovo Beam**	**54.28**	**350**	P	**P**	**09 44 15.6**	**+0.7**
	comp=Z,596nm,0.8s,baz=171,slow=5.8,SNR=294						
ZALV				ScP	**ScP**	**09 49 07.8**	**-1.2**
	comp=Z,15nm,0.9s,baz=172,slow=4.4,SNR=4.3						
ZALV				S	**S**	**09 51 45.9**	**-0.3**
	comp=Z,16nm,0.8s,baz=156,slow=11,SNR=9.4						
ZALV				LR	LR	10 10 46.8	
	comp=Z,722nm,21.3s,baz=171,slow=40						
ZALV	**Zalesovo Beam**	**54.28**	**350**	P	**P**	**09 44 16.3**	**+1.4**
OPO	**Ambohidratompo**	**54.30**	**246**	LR	LR	10 02 17.0	
	comp=Z,509nm,21.2s,baz=187,slow=30						
ARPS	**Mount Arapiles**	**54.55**	**138**	P	**P**	**09 44 17.9**	**+0.8**
	baz=55,SNR=40						
ARPS	**Mount Arapiles**	**54.55**	**138**	P	**P**	**09 44 17.6**	**+0.5**
CMSA	**Cobar Meteorol**	**54.70**	**130**	P	**P**	**09 44 18.4**	**0.0**
	baz=55,SNR=829						
CMSA	**Cobar Meteorol**	**54.70**	**130**	P	**P**	**09 44 18.6**	**+0.2**
RMQ	**Roma**	**55.11**	**123**	P	**P**	**09 44 22.1**	**+0.7**
	baz=55,SNR=8.7						
RMQ	**Roma**	**55.11**	**123**	P	**P**	**09 44 21.6**	**+0.2**
	comp=Z,119nm,0.9s						
JTM	**Tenmabayashi**	**55.16**	**38**	⇑P	**P**	**09 44 21.6**	**+0.1**
JTM	**Tenmabayashi**	**55.16**	**38**	P	**P**	**09 44 21.2**	**-0.3**
TEY	**Ternei**	**55.24**	**32**	⇑*e*P	**P**	**09 44 21.6**	**-0.3**
TEY				*e*		09 47 44.6	
TEY				*e*S	**S**	**09 51 53.8**	**-5.5**
TEY				pmax	pmax		
	comp=Z,300nm,5.0s						
TEY				pmax	pmax		
	comp=N,10.0nm,0.8s						
TEY				pmax	pmax		
	comp=E,10.0nm,0.8s						
TEY				pmax	pmax		
	comp=Z,40nm,0.8s						
TEY				smax	smax		
	comp=N,200nm,3.6s						
RK1H	**Rockhampton Ha**	**55.55**	**119**	P	**P**	**09 44 24.1**	**-0.5**
VOI	**Vohitsoka**	**55.57**	**243**	P	**P**	**09 44 25.9**	**+0.9**
	SNR=21						
VOI	**Vohitsoka**	**55.57**	**243**	⇓P	**P**	**09 44 25.8**	**+0.9**
VOI	**Vohitsoka**	**55.57**	**243**	P	**P**	**09 44 25.2**	**+0.3**
VOI	**Vohitsoka**	**55.57**	**243**	P	**P**	**09 44 25.8**	**+0.9**
PAF	**Port-aux-Franc**	**55.68**	**202**	P	**P**	**09 44 26.6**	**+1.5**
PAF				pmax	pmax		
	comp=Z,686nm,1.0s						
PAF	**Port-aux-Franc**	**55.68**	**202**	⇓P	**P**	**09 44 27.4**	**+2.4**
PAF	**Port-aux-Franc**	**55.68**	**202**	P	**P**	**09 44 26.6**	**+1.5**
KLR	**Kul'dur**	**55.91**	**25**	P	**P**	**09 44 27.8**	**+1.1**
	comp=Z,424nm,0.8s,baz=237,slow=7.0,SNR=628						
KLR				LR	LR	10 10 50.7	
	comp=Z,2µm,18.5s,baz=220,slow=39						
KLR	**Kul'dur**	**55.91**	**25**	*c i*P	**P**	**09 44 27.3**	**+0.6**
KLR				pmax	pmax		
	comp=Z,420nm,0.9s						
HARA	**HARA**	**55.99**	**281**	*e*P	P	09 44 35.4	+7.2
QRN	**Al-Qurain**	**56.02**	**305**	*e*P	**P**	**09 44 27.2**	**-0.7**
KBD	**Kabd**	**56.35**	**305**	*e*P	**P**	**09 44 30.0**	**-0.2**
BRAT	**Ballarat**	**56.37**	**138**	P	**P**	**09 44 31.1**	**+0.9**
RDF	**Al-Radifah**	**56.38**	**305**	*e*P	**P**	**09 44 30.0**	**-0.4**
UMR	**Umm Al-Rimmam**	**56.46**	**305**	*e*P	**P**	**09 44 30.5**	**-0.5**
JEW	**Eniwo**	**56.59**	**37**	P	**P**	**09 44 32.1**	**+0.5**
ATD	**Arta Tunnel**	**56.65**	**283**	P	**P**	**09 44 33.2**	**+0.6**
	comp=Z,123nm,0.9s,baz=82,slow=2.7,SNR=51						
ATD				LR	LR	10 04 04.8	
	comp=Z,185nm,20.7s,baz=92,slow=31						
ATD	**Arta Tunnel**	**56.65**	**283**	P	**P**	**09 44 34.1**	**+1.5**
	SNR=33						
EIDS	**Eidsvold**	**56.69**	**121**	P	**P**	**09 44 32.5**	**-0.2**
	baz=57,SNR=75						
EIDS	**Eidsvold**	**56.69**	**121**	P	**P**	**09 44 32.8**	**+0.1**
EIDS				IAmb	IAmb	09 44 39.1	
	comp=Z,143nm,0.7s						
EIDS	**Eidsvold**	**56.69**	**121**	P	**P**	**09 44 32.9**	**+0.2**
MIB	**Mutribah**	**56.86**	**306**	*e*P	**P**	**09 44 33.8**	**0.0**
ERM	**Erimo**	**57.15**	**38**	*i* P	**P**	**09 44 35.2**	**-0.4**
ERM				pmax	pmax		
	comp=Z,104nm,1.0s						
ERM	**Erimo**	**57.15**	**38**	⇓P	**P**	**09 44 37.0**	**+1.3**
ERM	**Erimo**	**57.15**	**38**	P	**P**	**09 44 37.1**	**+1.5**
BVAR	**Borovoye Array**	**57.24**	**340**	P	**P**	**09 44 36.3**	**+0.2**
	comp=Z,79nm,0.6s,baz=185,slow=14,SNR=314						
BVAR				S	**S**	**09 52 24.8**	**-0.8**
	comp=Z,6.6nm,1.0s,baz=128,slow=13,SNR=5.7						
BRVK	**Borovoye**	**57.30**	**340**	*ce*P	**P**	**09 44 36.5**	**0.0**
BRVK				pmax	pmax		
	comp=Z,211nm,1.3s						
BRVK	**Borovoye**	**57.30**	**340**	P	**P**	**09 44 36.9**	**+0.4**
BRVK	**Borovoye**	**57.30**	**340**	⇓P	**P**	**09 44 36.6**	**0.0**
BRVK	**Borovoye**	**57.30**	**340**	P	**P**	**09 44 36.5**	**0.0**
BRVK				IAmb	IAmb	09 44 37.9	
	comp=Z,268nm,1.3s						
TOO	**Toolangi**	**57.45**	**137**	P	**P**	**09 44 39.1**	**+1.2**
	baz=58,SNR=35						
TOO	**Toolangi**	**57.45**	**137**	P	**P**	**09 44 39.0**	**+1.2**
TOO				pmax	pmax		
	comp=Z,93nm,0.9s						
TOO	**Toolangi**	**57.45**	**137**	P	**P**	**09 44 39.0**	**+1.1**
TOO				IAmb	IAmb	09 44 59.6	
	comp=Z,93nm,0.9s						
TOO	**Toolangi**	**57.45**	**137**	P	**P**	**09 44 39.6**	**+1.7**
ZEA	**Zeya**	**57.77**	**19**	*ce*P	**P**	**09 44 41.4**	**+1.6**
ZEA				*e**SP	**sP**	**09 45 11.8**	**+1.9**
ZEA				*e*	**PcP**	**09 45 27.5**	**-4.1**
ZEA				*e*S	**S**	**09 52 35.8**	**+3.3**
ZEA				*e*	**ScS**	**09 54 18.9**	**-2.5**
ZEA				*e*SS	**SS**	**09 56 29.2**	**+4.8**
ZEA				pmax	pmax		
	comp=N,120nm,0.8s						
ZEA				pmax	pmax		
	comp=E,100nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,280nm,0.8s						
ZEA				pmax	pmax		
	comp=N,100nm,3.1s						
ZEA				pmax	pmax		
	comp=Z,300nm,6.8s						
ZEA				smax	smax		
	comp=E,700nm,6.2s						
ZEA				smax	smax		
	comp=N,900nm,8.6s						
ZEA				MLR	MLR		
	comp=E,300nm,20.0s						
ZEA				MLR	MLR		
	comp=N,500nm,23.0s						
ZEA				MLR	MLR		
	comp=Z,600nm,17.0s						
YNG	**Young**	**57.97**	**132**	P	**P**	**09 44 41.9**	**+0.3**
	baz=58,SNR=24						
YNG	**Young**	**57.97**	**132**	P	**P**	**09 44 42.1**	**+0.5**
ASAJ	**Asahikawa**	**58.01**	**36**	P	**P**	**09 44 42.5**	**+0.9**
ASAJ				pmax	pmax		
	comp=Z,127nm,0.9s						
JKA	**Kamikawa-asahi**	**58.01**	**36**	P	**P**	**09 44 42.5**	**+0.9**
JKA				IAmb	IAmb	09 44 53.2	
	comp=Z,127nm,0.9s						
BOD	**Bodaibo**	**58.15**	**9**	*e*P	**P**	**09 44 44.0**	**+1.6**
BOD				pmax	pmax		
	comp=Z,890nm,1.0s						
TEND	**Ethiopian Broa**	**58.47**	**283**	*e*P	**P**	**09 44 46.3**	**+0.9**
ABKAR	**Akbulak array**	**58.72**	**331**	⇓P	**P**	**09 44 46.4**	**-0.1**
ABKAR	**Akbulak array**	**58.72**	**331**	P	**P**	**09 44 46.3**	**-0.1**
ABKAR	**Akbulak array**	**58.72**	**331**	P	**P**	**09 44 46.4**	**-0.1**
ABKAR				IAmb	IAmb	09 44 47.8	
	comp=Z,446nm,1.0s						
CAN	**Canberra**	**58.87**	**133**	P	**P**	**09 44 47.6**	**-0.2**
CAN				pmax	pmax		
	comp=Z,224nm,1.0s						
CAN	**Canberra**	**58.87**	**133**	P	**P**	**09 44 47.6**	**-0.2**
CAN				IAmb	IAmb	09 45 08.7	
	comp=Z,224nm,1.0s						
CAN	**Canberra**	**58.87**	**133**	P	**P**	**09 44 48.7**	**+0.9**
ARMA	**Armidale**	**58.90**	**127**	P	**P**	**09 44 49.6**	**+1.4**
	baz=59,SNR=24						
ARMA	**Armidale**	**58.90**	**127**	P	**P**	**09 44 49.1**	**+0.9**
ARMA				IAmb	IAmb	09 45 09.2	
	comp=Z,212nm,0.9s						
ARMA	**Armidale**	**58.90**	**127**	P	**P**	**09 44 49.6**	**+1.4**
GRNR	**Gornyy**	**59.09**	**27**	⇑*i*P	**P**	**09 44 50.0**	**+1.0**
GRNR				*e*S	**S**	**09 52 53.5**	**+3.7**
GRNR				pmax	pmax		
	comp=E,20nm,0.8s						
GRNR				pmax	pmax		
	comp=N,30nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,90nm,1.0s						
GRNR				smax	smax		
	comp=N,3.0nm,1.0s						
GRNR				MLR	MLR		
	comp=E,640nm,19.0s						
GRNR				MLR	MLR		
	comp=N,660nm,15.0s						
GRNR				MLR	MLR		
	comp=Z,1µm,15.0s						
CNB	**Canberra Magne**	**59.13**	**133**	P	**P**	**09 44 50.1**	**+0.4**
	baz=59,SNR=14						
CNB	**Canberra Magne**	**59.13**	**133**	P	**P**	**09 44 49.7**	**0.0**
ANKE	**Ethiopia-Afar**	**59.50**	**281**	*e*P	**P**	**09 44 53.5**	**+0.6**
SYDH	**Sydney Hard Ro**	**59.50**	**131**	P	**P**	**09 44 52.4**	**+0.2**
PATS	**Pohnpei**	**59.55**	**83**	P	**P**	**09 44 53.1**	**+0.3**
	baz=60,SNR=3.4						
PATS	**Pohnpei**	**59.55**	**83**	P	**P**	**09 44 51.8**	**-1.0**
MGCD	**Mangrove Creek**	**59.56**	**130**	P	**P**	**09 44 53.5**	**+0.9**
	baz=60,SNR=9.4						
MGCD	**Mangrove Creek**	**59.56**	**130**	P	**P**	**09 44 53.5**	**+0.9**
DESE	**Dese**	**59.73**	**282**	*e*P	**P**	**09 44 54.9**	**+0.4**
MILA	**Mila**	**59.76**	**135**	P	**P**	**09 44 54.6**	**+0.7**
	baz=60,SNR=6.0						
YSS	**Yuzh-Sakhalins**	**59.77**	**33**	*ce*P	**P**	**09 44 54.7**	**+0.9**
YSS				*e**PP	**pP**	**09 45 16.4**	**+1.6**
YSS				*e**SP	**sP**	**09 45 23.8**	**-0.2**
YSS				*e*	**PP**	**09 47 08.2**	**+1.6**
YSS				*e*S	**S**	**09 52 59.3**	**+0.7**
YSS				*e*PS	**PnS**	**09 53 24.1**	**+0.7**
YSS				*e*	**ScS**	**09 54 32.7**	**-3.8**
YSS				*e*SS	**SS**	**09 56 57.1**	**+1.1**
YSS				*e*SSS	SSS	09 59 28.1	
YSS				pmax	pmax		
	comp=Z,900nm,7.9s						
YSS				pmax	pmax		
	comp=Z,510nm,0.9s						
YSS				smax	smax		
	comp=N,500nm,11.6s						
YSS				MLR	MLR		
	comp=Z,600nm,17.0s						
YSS				MLR	MLR		
	comp=N,700nm,15.0s						
YSS	**Yuzh-Sakhalins**	**59.77**	**33**	⇑P	**P**	**09 44 54.3**	**+0.5**
YSS	**Yuzh-Sakhalins**	**59.77**	**33**	P	**P**	**09 44 54.0**	**+0.3**
YSS	**Yuzh-Sakhalins**	**59.77**	**33**	P	**P**	**09 44 55.0**	**+1.2**
RIV	**Riverview**	**59.85**	**130**	P	**P**	**09 44 55.5**	**+0.9**
	baz=60,SNR=9.6						
NTLH	**Newcastle Hard**	**59.90**	**129**	P	**P**	**09 44 56.2**	**+1.3**
AKTO	**Aktyubinsk**	**60.43**	**331**	P	**P**	**09 44 58.1**	**-0.2**
	comp=N,122nm,0.9s,baz=127,slow=7.9,SNR=241						
AKTO				LR	LR	10 13 36.6	
	comp=N,264nm,19.8s,baz=139,slow=38						
UGL	**Uglegorsk**	**60.70**	**31**	*e*P	**P**	**09 45 01.1**	**+1.1**
UGL				*e*S	**S**	**09 53 12.6**	**+2.2**
UGL				pmax	pmax		
	comp=Z,550nm,2.6s						
UGL				pmax	pmax		
	comp=Z,140nm,0.9s						
UGL				smax	smax		
	comp=E,1µm,4.0s						
DILA	**Dilla**	**60.73**	**277**	*e*P	**P**	**09 45 00.8**	**-0.3**
GLAD	**Gladstone**	**60.85**	**139**	P	**P**	**09 45 03.0**	**+1.7**
KIBK	**Kibwezi**	**60.92**	**267**	P	**P**	**09 45 03.8**	**+1.4**
	SNR=42						
KIBK	**Kibwezi**	**60.92**	**267**	P	**P**	**09 45 03.2**	**+0.9**
MOO	**Moorlands**	**61.07**	**141**	P	**P**	**09 45 04.5**	**+1.8**
	baz=61,SNR=4.2						
TAU	**Tasmania Unive**	**61.40**	**141**	P	**P**	**09 45 05.4**	**+0.5**
TAU				pmax	pmax		
	comp=Z,112nm,1.1s						
TAU	**Tasmania Unive**	**61.40**	**141**	⇑P	**P**	**09 45 06.1**	**+1.2**
TAU	**Tasmania Unive**	**61.40**	**141**	P	**P**	**09 45 05.4**	**+0.5**
TAU				IAmb	IAmb	09 45 26.9	
	comp=Z,112nm,1.1s						
TAU	**Tasmania Unive**	**61.40**	**141**	P	**P**	**09 45 06.5**	**+1.6**
HNR	**Honiara**	**61.61**	**101**	P	**P**	**09 45 07.6**	**+0.7**
HNR				pmax	pmax		
	comp=Z,301nm,0.8s						
HNR	**Honiara**	**61.61**	**101**	⇓P	**P**	**09 45 09.4**	**+2.6**
HNR	**Honiara**	**61.61**	**101**	P	**P**	**09 45 07.6**	**+0.7**
KMBO	**Kilima Mbogo**	**61.68**	**268**	P	**P**	**09 45 09.3**	**+1.7**
	comp=Z,142nm,0.8s,baz=66,slow=8.8,SNR=353						
KMBO	**Kilima Mbogo**	**61.68**	**268**	*i* P	**P**	**09 45 09.4**	**+1.7**
	SNR=38						
KMBO	**Kilima Mbogo**	**61.68**	**268**	P	**P**	**09 45 09.5**	**+1.8**
KMBO	**Kilima Mbogo**	**61.68**	**268**	⇓P	**P**	**09 45 09.3**	**+1.7**
KMBO	**Kilima Mbogo**	**61.68**	**268**	P	**P**	**09 45 08.9**	**+1.2**
KMBO				IAmb	IAmb	09 45 10.6	
	comp=Z,198nm,0.9s						
KUR	**Kuril'sk**	**61.76**	**37**	*e*P	**P**	**09 45 07.8**	**+0.5**
KUR				S	**S**	**09 53 25.7**	**+1.6**
KUR				pmax	pmax		
	comp=Z,488nm,1.0s						
KUR				pmax	pmax		
	comp=Z,1µm,2.9s						
TYV	**Tymovskoe**	**62.11**	**30**	*e*P	**P**	**09 45 10.8**	**+1.3**
TYV				*e*S	**S**	**09 53 31.2**	**+3.0**
TYV				pmax	pmax		
	comp=Z,500nm,2.7s						
TYV				pmax	pmax		
	comp=Z,80nm,0.9s						
TYV				smax	smax		
	comp=N,11nm,1.8s						
TYV				smax	smax		
	comp=E,19nm,1.8s						
TYV				smax	smax		
	comp=N,300nm,3.1s						
TYV				smax	smax		
	comp=E,400nm,3.1s						
TYV				MLR	MLR		
	comp=Z,1µm,22.0s						
MAK	**Makhachkala**	**62.17**	**320**	*e*P	**P**	**09 45 08.3**	**-1.8**
MAK				*e**PP	**pP**	**09 45 28.2**	**-3.0**
MAK				*e**SP	**sP**	**09 45 37.4**	**-3.0**
MAK				*e*S	**S**	**09 53 26.8**	**-2.5**
MAK				*e**SS	**sS**	**09 54 04.0**	**-1.3**
MAK				*e*SS	**SS**	**09 57 35.9**	**+2.1**
MAK				pmax	pmax		
	comp=Z,398nm,1.3s						
CUKT	**Cukurca**	**62.48**	**312**	*e*P	**P**	**09 45 11.8**	**-0.7**
CRZF	**Crozet Islands**	**62.49**	**215**	⇓P	**P**	**09 45 14.0**	**+1.8**
CRZF	**Crozet Islands**	**62.49**	**215**	P	**P**	**09 45 13.6**	**+1.4**
CRZF				IAmb	IAmb	09 45 14.6	
	comp=Z,178nm,0.8s						
NKL	**Nikolayevsk**	**62.64**	**27**	*e*P	**P**	**09 45 13.3**	**+0.3**
NKL				*e*S	**S**	**09 53 33.5**	**-1.3**
NKL				pmax	pmax		
	comp=E,3.0nm,0.7s						
NKL				pmax	pmax		
	comp=N,429nm,0.8s						
NKL				pmax	pmax		
	comp=Z,208nm,0.9s						
NKL				MLR	MLR		
	comp=E,164nm,16.0s						
NKL				MLR	MLR		
	comp=N,12µm,13.0s						
NKL				MLR	MLR		
	comp=Z,917nm,13.0s						
GNI	**Garni**	**62.80**	**316**	P	**P**	**09 45 15.3**	**+0.7**
	comp=Z,272nm,1.0s,baz=321,slow=0.1,SNR=134						
GNI	**Garni**	**62.80**	**316**	P	**P**	**09 45 15.4**	**+0.7**
GNI	**Garni**	**62.80**	**316**	*e*P	**P**	**09 45 14.7**	**+0.1**
GNI	**Garni**	**62.80**	**316**	*ce*P	**P**	**09 45 15.2**	**+0.6**
GNI				pmax	pmax		
	comp=Z,565nm,1.3s						
GNI	**Garni**	**62.80**	**316**	⇓P	**P**	**09 45 15.3**	**+0.7**
GNI	**Garni**	**62.80**	**316**	P	**P**	**09 45 15.2**	**+0.6**
CLDR	**Caldiran**	**62.98**	**314**	*i* P	**P**	**09 45 16.6**	**+0.7**
VANB	**Van**	**63.15**	**314**	*i* P	**P**	**09 45 16.6**	**-0.3**
AKDM	**Akdamar-Van**	**63.34**	**313**	*e*P	**P**	**09 45 18.8**	**+0.6**
GROC	**Groznyy**	**63.40**	**319**	⇓*i*P	**P**	**09 45 18.7**	**+0.4**
GROC				*e**PP	**pP**	**09 45 39.6**	**+0.2**
GROC				*e*	**PcP**	**09 45 53.8**	**-0.7**
GROC				*e*S	**S**	**09 53 45.8**	**+1.2**
GROC				*e*		09 54 10.5	
GROC				pmax	pmax		
	comp=Z,498nm,0.8s						
SIRT	**Sirnak**	**63.43**	**312**	*e*P	**P**	**09 45 18.8**	**0.0**
SIRT	**Sirnak**	**63.43**	**312**	P	**P**	**09 45 18.7**	**0.0**
LODK	**Lodwar**	**63.55**	**273**	P	**P**	**09 45 21.8**	**+1.9**
	SNR=65						
LODK	**Lodwar**	**63.55**	**273**	P	**P**	**09 45 21.7**	**+1.8**
LODK				IAmb	IAmb	09 45 23.3	
	comp=Z,298nm,1.1s						
SVE	**Sverdlovsk**	**63.74**	**338**	*c i*P	**P**	**09 45 20.8**	**+0.6**
SVE				*e*S	**S**	**09 53 47.4**	**-1.0**
SVE				pmax	pmax		
	comp=Z,557nm,1.1s						
AGRB	**Hanur-Agry**	**63.81**	**314**	P	**P**	**09 45 21.7**	**+0.4**
MLAZ	**Malazgirt-MUS**	**63.96**	**314**	*e*P	**P**	**09 45 22.7**	**+0.4**
GURO	**Guroymak-BITLI**	**64.11**	**313**	*e*P	**P**	**09 45 24.2**	**+1.0**
GURO	**Guroymak-BITLI**	**64.11**	**313**	P	**P**	**09 45 24.3**	**+1.0**
GURO				IAmb	IAmb	09 45 25.4	
	comp=Z,245nm,1.0s						
KARS	**Kars**	**64.15**	**316**	P	**P**	**09 45 24.4**	**+0.9**
KARS				pmax	pmax		
	comp=Z,1µm,1.0s						
KARS	**Kars**	**64.15**	**316**	P	**P**	**09 45 24.4**	**+0.9**
AKH	**Akhalkalaki**	**64.18**	**317**	*e*P	**P**	**09 45 24.8**	**+1.1**
ARU	**Arti**	**64.26**	**336**	P	**P**	**09 45 23.3**	**-0.4**
	comp=Z,64nm,0.9s,baz=137,slow=4.5,SNR=158						
ARU				LR	LR	10 17 51.7	
	comp=Z,504nm,19.2s,baz=140,slow=40						
ARU	**Arti**	**64.26**	**336**	*d i*P	**P**	**09 45 23.6**	**-0.1**
ARU				*PP	**pP**	**09 45 42.4**	**-2.5**
ARU				*SP	**sP**	**09 45 51.9**	**-2.1**
ARU					**PcP**	**09 45 59.1**	**+1.3**
ARU					**PP**	**09 47 43.8**	**-2.2**
ARU				S	**S**	**09 53 54.7**	**-0.2**
ARU				*SS	**pS**	**09 54 23.7**	**+4.0**
ARU					**SKSac**	**09 55 07.0**	**-3.0**
ARU				SS	**SS**	**09 58 01.6**	**-4.3**
ARU				pmax	pmax		
	comp=Z,330nm,1.1s						
ARU				MLR	MLR		
	comp=Z,646nm,21.0s						
ARU	**Arti**	**64.26**	**336**	⇓P	**P**	**09 45 23.6**	**-0.1**
ARU				⇓P	**P**	**09 45 23.6**	**-0.1**
ARU	**Arti**	**64.26**	**336**	P	**P**	**09 45 23.5**	**-0.2**
ARU				IAmb	IAmb	09 45 24.9	
	comp=Z,264nm,1.0s						
ZEI	**Tsey**	**64.47**	**318**	*e*P	**P**	**09 45 24.1**	**-1.5**
ZEI				pmax	pmax		
	comp=Z,77nm,0.8s						
SVAN	**Silvan-Diyarba**	**64.58**	**312**	*i* P	**P**	**09 45 26.7**	**+0.5**
SENK	**Senkaya-Erzuru**	**64.64**	**315**	*i* P	**P**	**09 45 27.3**	**+0.6**
VRTB	**Varto-Mus**	**64.76**	**314**	*e*P	**P**	**09 45 28.5**	**+1.0**
KOPR	**Koprukoy-ERZUR**	**64.78**	**315**	*i* P	**P**	**09 45 28.1**	**+0.5**
MAZI	**Mazidag**	**64.90**	**312**	*i* P	**P**	**09 45 29.1**	**+0.7**
NCK	**Nalchik**	**64.97**	**319**	*d i*P	**P**	**09 45 28.9**	**+0.3**
NCK				pmax	pmax		
	comp=Z,277nm,0.9s						
BNGB	**Bingl**	**65.26**	**313**	*i* P	**P**	**09 45 31.6**	**+0.9**
LHI	**Lord Howe Isla**	**65.28**	**125**	P	**P**	**09 45 31.6**	**+0.8**
	baz=65,SNR=3.9						
DYBB	**Diyarbakir**	**65.30**	**312**	*i* P	**P**	**09 45 32.0**	**+1.1**
YAK	**Yakutsk**	**65.39**	**15**	P	**P**	**09 45 30.9**	**+0.1**
	comp=Z,90nm,0.5s,baz=207,slow=2.7,SNR=117						
YAK				S	**S**	**09 54 05.8**	**-2.6**
	comp=Z,4.2nm,0.3s,baz=82,slow=22,SNR=18						
YAK	**Yakutsk**	**65.39**	**15**	*c i*P	**P**	**09 45 31.2**	**+0.4**
YAK				*e**PP	**pP**	**09 45 49.3**	**-2.8**
YAK				*e*	**PcP**	**09 46 05.0**	**+2.8**
YAK				*e*		09 48 05.6	
YAK				*e*S	**S**	**09 54 09.6**	**+1.2**
YAK				*e**SS	**sS**	**09 54 40.9**	**-4.4**
YAK				*e*	**SKSac**	**09 55 13.1**	**-5.2**
YAK				*e*SS	**SS**	**09 58 22.3**	**-0.8**
YAK				pmax	pmax		
	comp=Z,615nm,0.9s						
YAK				pmax	pmax		
	comp=N,175nm,1.1s						
YAK				pmax	pmax		
	comp=E,167nm,1.3s						
YAK				pmax	pmax		
	comp=Z,330nm,3.3s						
YAK				pmax	pmax		
	comp=N,166nm,2.8s						
YAK				pmax	pmax		
	comp=E,262nm,3.0s						
YAK				smax	smax		
	comp=E,396nm,2.0s						
YAK				smax	smax		
	comp=N,208nm,1.7s						
YAK	**Yakutsk**	**65.39**	**15**	⇑P	**P**	**09 45 31.2**	**+0.4**
YAK	**Yakutsk**	**65.39**	**15**	P	**P**	**09 45 31.3**	**+0.4**
NEY	**Neytrino**	**65.45**	**318**	*d i*P	**P**	**09 45 33.0**	**+1.1**
NEY				pmax	pmax		
	comp=Z,76nm,1.8s						
BCA	**Borcka**	**65.49**	**316**	*i* P	**P**	**09 45 32.4**	**+0.4**
BATM	**Batumi**	**65.50**	**316**	*i* P	**P**	**09 45 32.1**	**+0.1**
YEDI	**Yedisu-Bingol**	**65.52**	**314**	*i* P	**P**	**09 45 33.3**	**+0.9**
KBZ	**Khabaz**	**65.53**	**319**	P	**P**	**09 45 32.7**	**+0.6**
	comp=Z,252nm,0.9s,baz=117,slow=8.8						
KBZ				LR	LR	10 17 37.3	
	comp=Z,317nm,20.8s,baz=116,slow=39						
KBZ	**Khabaz**	**65.53**	**319**	*ce*P	**P**	**09 45 32.4**	**+0.3**
KBZ				pmax	pmax		
	comp=Z,320nm,0.9s						
PYA1	**Pyatigorsk**	**65.54**	**319**	*d i*P	**P**	**09 45 32.0**	**-0.3**
PYA1				pmax	pmax		
	comp=Z,19nm,1.1s						
SHA1	**Shidzhatmaz**	**65.69**	**319**	*d i*P	**P**	**09 45 33.8**	**+0.3**
KVAR	**Kislovodsk Arr**	**65.75**	**319**	S	**S**	**09 54 12.1**	**-1.9**
	comp=Z,3.6nm,0.6s,baz=152,slow=11,SNR=1.7						
KIV	**Kislovodsk**	**65.76**	**319**	*i* P	**P**	**09 45 34.3**	**+0.5**
	SNR=70						
KIV	**Kislovodsk**	**65.76**	**319**	*e*P	**P**	**09 45 34.2**	**+0.5**
KIV	**Kislovodsk**	**65.76**	**319**	*e*P	**P**	**09 45 34.0**	**+0.3**
KIV				*e*	**PP**	**09 47 58.5**	**-1.0**
KIV				*e*S	**S**	**09 54 13.1**	**-0.8**
KIV				*e*SS	**SS**	**09 58 32.1**	**+2.2**
KIV				pmax	pmax		
	comp=Z,418nm,1.1s						
KIV				pmax	pmax		
	comp=Z,115nm,3.0s						
KIV				MLR	MLR		

	comp=Z,229nm,17.0s						
KIV	Kislovodsk	65.76	319	P	P	09 45 34.3	+0.5
KIV				P	P	09 45 34.3	+0.5
KIV	Kislovodsk	65.76	319	⇓P	P	09 45 34.1	+0.3
KIV				⇓P	P	09 45 34.2	+0.5
KIV	Kislovodsk	65.76	319	P	P	09 45 34.2	+0.4
KIV				IAmb	IAmb	09 45 35.4	
	comp=Z,367nm,1.0s						
CHOM	Cayeli-Rize	65.96	315	i P	P	09 45 35.8	+0.8
GOF	Gofitskoye	65.99	320	⇓iP	P	09 45 35.3	+0.2
GOF				eS	S	09 54 12.3	-4.2
GOF				pmax	pmax		
	comp=Z,433nm,1.1s						
GOF				smax	smax		
	comp=E,22nm,0.9s						
GOF				smax	smax		
	comp=N,38nm,0.9s						
SVRC	Sivrice-ELAZID	66.06	312	i P	P	09 45 36.5	+0.6
URFA	Urfa	66.12	311	i P	P	09 45 37.4	+1.2
PTK	Pertek	66.17	313	i P	P	09 45 48.6	+12
KTUT	Trabzon	66.62	315	eP	P	09 45 39.9	+0.7
MALT	Malatya	66.69	312	i P	P	09 45 40.9	+1.0
BELG	Belogornoye	66.82	329	P	P	09 45 39.8	-0.5
	comp=N,467nm,1.0s,baz=350,slow=0.9,SNR=113						
BELG				LR	LR	10 19 36.4	
	comp=N,469nm,21.8s,baz=131,slow=40						
EIL	Elat	67.14	302	P	P	09 45 43.6	+0.8
	comp=N,333nm,0.9s,baz=126,slow=4.2,SNR=179						
EIL	Elat	67.14	302	⇓P	P	09 45 43.5	+0.8
GAZ	Gaziantep	67.26	310	i P	P	09 45 43.2	-0.3
GAZ	Gaziantep	67.26	310	P	P	09 45 43.0	-0.4
KOUNC	Koumac, New Ca	67.31	113	⇑P	P	09 45 45.1	+1.2
KOUNC				⇑p	pP	09 46 03.7	-1.6
KOUNC				⇑p	PcP	09 46 04.6	-6.5
KOUNC	Koumac, New Ca	67.31	113	P	P	09 45 45.2	+1.3
RCY	Rachaya	67.32	306	eP	P	09 45 45.5	+1.5
MMLI	Mount Malkishu	67.39	305	i P	P	09 45 45.9	+1.6
CASY	Casey	67.40	175	⇓P	P	09 45 44.8	+1.2
CASY	Casey	67.40	175	P	P	09 45 44.6	+1.0
CASY				IAmb	IAmb	09 45 46.3	
	comp=Z,246nm,1.1s						
HWQ	Hawqa	67.43	307	eP	P	09 45 45.8	+1.1
QRWL	Qaraoun	67.46	306	eP	P	09 45 45.9	+1.1
DARE	Darende-Malaty	67.48	312	i P	P	09 45 45.9	+1.1
BHL	Bhannes	67.57	307	eP	P	09 45 46.6	+1.1
DQRL	Deir Qamar	67.59	306	eP	P	09 45 47.1	+1.5
KMRS	Kahramanmaras	67.59	311	i P	P	09 45 46.5	+1.0
SOC	Sochi	67.59	318	eP	P	09 45 42.6	-2.7
SOC				e*PP	pP	09 46 03.9	-2.8
SOC				e*SP	sP	09 46 15.1	-0.7
SOC				ePPP	PPP	09 49 52.6	
SOC				eS	S	09 54 32.2	-3.7
SOC				eSS	SS	09 58 54.0	-4.2
SOC				pmax	pmax		
	comp=Z,378nm,0.7s						
YAYL	Yayladag	67.78	309	i P	P	09 45 47.9	+1.1
TAHT	Tahtakopru-Hat	67.82	309	i P	P	09 45 48.2	+1.3
RSDY	Resadiye-TOKAT	68.17	314	i P	P	09 45 50.1	+1.0
MBAR	Mbarara	68.18	269	d iP	P	09 45 51.1	+1.3
MBAR	Mbarara	68.18	269	P	P	09 45 51.7	+1.9
MBAR	Mbarara	68.18	269	⇓P	P	09 45 51.2	+1.3
MBAR				⇓P	P	09 45 51.3	+1.5
MBAR	Mbarara	68.18	269	P	P	09 45 50.6	+0.9
MBAR				IAmb	IAmb	09 45 52.7	
	comp=Z,304nm,1.1s						
SARI	SarD1z-Kayseri	68.22	311	eP	P	09 45 50.2	+0.6
SVSK	Karacayir	68.25	313	i P	P	09 45 50.7	+1.2
CEYT	Ceyhan	68.33	310	i P	P	09 45 51.3	+1.2
KOZT	Kozan	68.40	310	i P	P	09 45 51.3	+0.7
KRTS	Karatas	68.50	309	i P	P	09 45 52.6	+1.5
TOKT	Tokat	68.71	313	eP	P	09 45 53.3	+0.8
BNN	Bunyan	68.78	312	eP	P	09 45 53.5	+0.4
BNN	Bunyan	68.78	312	P	P	09 45 53.5	+0.4
NRIK	Noril'sk	68.89	356	P	P	09 45 53.1	+0.2
	comp=Z,86nm,0.8s,baz=158,slow=5.6,SNR=70						
NRIK				S	S	09 54 48.6	-1.8
	comp=Z,12nm,1.1s,baz=188,slow=23,SNR=13						
NRIK				PKP2bc		10 14 03.5	
	comp=Z,3.0nm,0.8s,baz=348,slow=1.9,SNR=9.8						
NRIK				LR	LR	10 19 15.3	
	comp=Z,623nm,19.3s,baz=165,slow=39						
NRIK	Noril'sk	68.89	356	ceP	P	09 45 53.0	+0.1
NRIK				pmax	pmax		
	comp=Z,148nm,1.1s						
NRIK	Noril'sk	68.89	356	P	P	09 45 53.1	+0.2
NRIK				IAmb	IAmb	09 46 13.4	
	comp=Z,195nm,1.2s						
KARA	Karaisali	68.93	310	i P	P	09 45 54.6	+0.7
CMRD	Camardi-Nigde	69.09	310	P	P	09 45 56.1	+1.1
SKR	Severo-Kuril's	69.24	35	eP	P	09 45 56.5	+1.1
SKR				pmax	pmax		
	comp=Z,298nm,0.9s						
SKR				pmax	pmax		
	comp=Z,1µm,3.6s						
SKR				pmax	pmax		
	comp=Z,300nm,6.1s						
SKR				MLR	MLR		
	comp=Z,400nm,17.0s						
MERS	Mersin	69.24	309	i P	P	09 45 56.6	+0.8
KVT	Kavak	69.31	314	i P	P	09 45 56.9	+0.8
YOZ	Yozgat	69.40	312	i P	P	09 45 56.9	0.0
NOUC	Port Laguerre	69.42	114	P	P	09 45 58.3	+1.2
KIZK	Mersin	69.43	309	i P	P	09 45 56.9	0.0
KIRV	Kirov	69.43	335	PKP2bc	P'P'bc	10 14 03.7	-0.3
	comp=Z,10nm,0.8s,baz=307,slow=5.1,SNR=11						
KIRV				LR	LR	10 20 18.1	
	comp=Z,333nm,19.0s,baz=127,slow=39						
KIRV	Kirov	69.43	335	d iP	P	09 45 56.0	-0.4
VRH	Novokhopyorsk	69.45	326	eP	P	09 45 56.3	-0.4
VRH				e*PP	pP	09 46 15.5	-2.6
VRH				eS	S	09 54 51.4	-6.1
VRH				pmax	pmax		
	comp=Z,650nm,0.9s						
VRH				pmax	pmax		
	comp=Z,570nm,1.6s						
VRH				smax	smax		
	comp=N,420nm,1.9s						
DZM	Mont Dzumac	69.55	114	eP	P	09 45 58.6	+0.5
	comp=N,245nm,1.1s						
DZM				epP	pP	09 46 17.8	-1.7
	comp=N,746nm,1.2s						
DZM				eS	S	09 54 59.5	-0.5
	comp=N,865nm,30.1s						
DZM				eLQ	LQ	10 04 12.4	
	comp=N,2µm,34.1s						
DZM				eLR	LR	10 07 10.2	
	comp=N,2µm,29.6s						
DZM	Mont Dzumac	69.55	114	⇓P	P	09 45 58.5	+0.5
DZM				⇑p	pP	09 46 17.8	-1.7
DZM				⇑p	PcP	09 46 18.6	-2.1
DZM	Mont Dzumac	69.55	114	P	P	09 45 58.5	+0.5
DZM				IAmb	IAmb	09 46 19.0	
	comp=Z,375nm,1.2s						
DZM	Mont Dzumac	69.55	114	P	P	09 45 59.5	+1.5
ANN	Anapa	69.56	318	d iP	P	09 45 56.4	-1.1
ANN				i *PP	pP	09 46 15.7	-3.3
ANN				i S	S	09 54 55.1	-4.1
ANN				pmax	pmax		
	comp=Z,139nm,1.3s						
ANN				pmax	pmax		
	comp=N,40nm,1.2s						
ANN				pmax	pmax		
	comp=E,36nm,1.5s						
ANN				pmax	pmax		
	comp=E,64nm,1.5s						
ANN				pmax	pmax		
	comp=Z,827nm,4.1s						
ANN				pmax	pmax		
	comp=N,105nm,1.5s						
SILI	Silifke-Mersin	69.57	309	i P	P	09 45 58.1	+0.3
ONTNC	Ouen Toro	69.59	114	P	P	09 45 58.5	+0.4
ONTNC				IAmb	IAmb	09 46 19.0	
	comp=Z,324nm,1.1s						
ONTNC	Ouen Toro	69.59	114	P	P	09 45 59.1	+0.9
LFK	Lefkose	69.61	307	i P	P	09 45 58.9	+0.8
CSS	Mathiatis	69.69	307	i P	P	09 45 59.3	+0.7
CSS	Mathiatis	69.69	307	⇑P	P	09 45 57.6	-1.0
CSS	Mathiatis	69.69	307	P	P	09 45 58.9	+0.3
IKL	Isikli	69.73	309	i P	P	09 45 58.9	+0.2
KEBE	Keben-Mersin	69.76	309	i P	P	09 45 59.6	+0.6
AKKU	Akkuyu-Mersin	69.81	308	i P	P	09 45 59.5	+0.2
YATNC	Mamie plateau,	69.95	114	P	P	09 46 01.0	+0.6
OUENC	Ouen Island, N	69.97	114	P	P	09 46 01.6	+1.2
OUENC				IAmb	IAmb	09 46 21.6	
	comp=Z,302nm,1.0s						
OUENC	Ouen Island, N	69.97	114	P	P	09 46 01.3	+0.8
TEVE	Tevekalti-Mers	69.97	309	i P	P	09 46 00.9	+0.6
DIKM	Dikmen	70.05	314	eP	P	09 46 01.0	+0.4
CORM	Corum	70.07	313	eP	P	09 46 01.1	+0.2
LIFNC	LIFOU	70.07	112	P	P	09 46 01.1	0.0
LIFNC	LIFOU	70.07	112	P	P	09 46 01.4	+0.3
YESY	Yesilyurt	70.08	310	eP	P	09 46 01.4	+0.4
LEF	Lefka	70.08	307	eP	P	09 46 01.1	+0.2
BERE	Bereket-Mersin	70.11	309	eP	P	09 46 01.9	+0.6
TEKE	Tekeli-Mersin	70.15	308	eP	P	09 46 01.5	+0.2
SNOP	Sinop	70.19	315	eP	P	09 46 01.3	-0.2
SNOP	Sinop	70.19	315	P	P	09 46 01.8	+0.3
KRMN	Karaman	70.29	309	i P	P	09 46 02.9	+0.6
SULT	Sultanhani-AKS	70.36	310	eP	P	09 46 03.4	+0.7
SERE	Sereflikochisa	70.52	311	eP	P	09 46 03.7	0.0
KAMT	Kaman	70.52	312	i P	P	09 46 02.9	-0.8
DVP	Devils Point	70.54	109	P	P	09 46 07.0	+3.0
	comp=Z,294µm,0.8s						
PINNC	Pines Island,	70.55	114	P	P	09 46 04.7	+0.7
BR131	Keskin Array S	70.67	312	P	P	09 46 04.3	-0.4
BR131				pmax	pmax		
	comp=Z,350nm,0.9s						
BR131	Keskin Array S	70.67	312	P	P	09 46 04.3	-0.4
	SNR=126						
BR131	Keskin Array S	70.67	312	P	P	09 46 04.3	-0.4
BR131				IAmb	IAmb	09 46 05.4	
	comp=Z,350nm,0.9s						
BRTR	Keskin Array B	70.67	312	P	P	09 46 04.2	-0.4
	comp=Z,158nm,0.8s,baz=130,slow=7.0,SNR=684						
BRTR				PKP2bc	P'P'bc	10 14 02.8	+1.2
	comp=Z,1.1nm,1.0s,baz=298,slow=3.1,SNR=4.1						
BRTR				LR	LR	10 18 29.3	
	comp=Z,286nm,20.5s,baz=119,slow=37						
BRTR	Keskin Array B	70.67	312	eP	P	09 46 03.8	-0.9
VORD	Divnogorie	70.73	325	eP	P	09 46 03.5	-1.1
VORD				e*PP	PcP	09 46 23.3	-1.6
VORD				pmax	pmax		
	comp=Z,270nm,0.9s						
GAZI	Gazipasa	70.80	308	eP	P	09 46 04.6	-0.7
HDMB	Hadim	70.84	309	i P	P	09 46 05.9	+0.1
MARNC	Mare, Loyalty	70.91	113	P	P	09 46 06.6	+0.4
VSR	Storozhevoye	70.91	325	eP	P	09 46 04.5	-1.1
VSR				e*PP	PcP	09 46 23.4	-2.3
VSR				eS	S	09 55 07.1	-7.5
VSR				pmax	pmax		
	comp=Z,370nm,0.9s						
VSR				pmax	pmax		
	comp=Z,520nm,1.0s						
VSR				smax	smax		
	comp=N,790nm,5.2s						
CANT	Cankiri	70.93	313	i P	P	09 46 06.2	+0.1
CHBY	Cihanbeyli	70.93	311	eP	P	09 46 05.2	-1.0
MA2	Magadan	71.01	25	LR	LR	10 18 59.6	
	comp=N,1µm,19.4s,baz=221,slow=37						
MA2	Magadan	71.01	25	ceP	P	09 46 06.7	+0.6
MA2				pmax	pmax		
	comp=Z,354nm,1.7s						
MA2	Magadan	71.01	25	⇑P	P	09 46 07.1	+1.1
MA2	Magadan	71.01	25	P	P	09 46 07.1	+1.1
MA2				IAmb	IAmb	09 46 07.8	
	comp=Z,167nm,0.9s						
AFSR	Afar-Bala (An	71.02	312	i P	P	09 46 06.7	0.0
BZK	Bozkurt	71.03	314	⇑P	P	09 46 07.8	+1.2
BZK	Bozkurt	71.03	314	eP	P	09 46 07.4	+0.8
BZK	Bozkurt	71.03	314	P	P	09 46 07.8	+1.2
VORR	Voronezh	71.07	325	eP	P	09 46 07.0	+0.4
VORR				pmax	pmax		
	comp=Z,750nm,1.4s						
PEA0B	Petropavlovsk-	71.17	33	ceP	P	09 46 07.8	+0.6
PEA0B	Petropavlovsk-	71.17	33	P	P	09 46 08.0	+0.8
PEA0B				IAmb	IAmb	09 46 08.7	
	comp=Z,133nm,0.8s						
PETK	Petropavlovsk-	71.17	33	P	P	09 46 07.3	+0.1
	comp=Z,94nm,0.8s,baz=213,slow=11,SNR=65						
PETK				LR	LR	10 17 42.1	
	comp=Z,793nm,21.1s,baz=240,slow=36						
PETK	Petropavlovsk-	71.17	33	P	P	09 46 07.6	+0.4
PETK	Petropavlovsk-	71.17	33	P	P	09 46 07.6	+0.4
KONT	Konya--Tatoy	71.18	310	i P	P	09 46 07.4	-0.2
LADK	Ladik-KONYA	71.24	310	eP	P	09 46 07.8	-0.3
ANTO	Ankara	71.34	312	i P	P	09 46 08.8	+0.2
ANTO	Ankara	71.34	312	P	P	09 46 08.6	0.0
ANTO				pmax	pmax		
	comp=Z,404nm,1.0s						
ANTO	Ankara	71.34	312	P	P	09 46 08.6	0.0
ANTO				IAmb	IAmb	09 46 09.7	
	comp=Z,404nm,1.0s						
BR231	Keskin MP Arra	71.34	312	P	P	09 46 08.9	+0.2
BR231				IAmb	IAmb	09 46 09.8	
	comp=Z,344nm,0.9s						
LOD	Lodumlu	71.37	312	i P	P	09 46 08.8	0.0
SEYD	Seydisehir-KON	71.45	309	P	P	09 46 09.2	-0.2
LPSR	Galich'ya Gora	71.61	326	eP	P	09 46 09.5	-0.3
LPSR				e*PP	PcP	09 46 28.4	-0.2
LPSR				eS	S	09 55 14.7	-7.9
LPSR				pmax	pmax		
	comp=Z,460nm,0.9s						
LPSR				pmax	pmax		
	comp=Z,580nm,1.0s						
LPSR				smax	smax		
	comp=N,690nm,2.7s						
PET	Petropavlovsk	71.66	33	⇑iP	P	09 46 10.7	+0.7
PET				e*PP	PcP	09 46 29.5	+0.7
PET				e*SP	sP	09 46 37.7	-3.1
PET				eS	S	09 55 23.7	+0.5
PET				ePS	PnS	09 56 00.5	-3.0
PET				pmax	pmax		
	comp=Z,685nm,0.7s						
PET				pmax	pmax		
	comp=Z,200nm,13.6s						
PET	Petropavlovsk	71.66	33	⇑P	P	09 46 10.7	+0.7
PET	Petropavlovsk	71.66	33	P	P	09 46 10.8	+0.7
PET	Petropavlovsk	71.66	33	P	P	09 46 10.8	+0.7
SIM	Simferopol'	71.84	317	d iP	P	09 46 10.6	-0.8
SIM				e		09 46 30.0	
SIM				e	PP	09 48 51.0	-1.0
SIM				pmax	pmax		
	comp=Z,399nm,0.7s						
KURC	Kurucasile-Bar	71.90	314	eP	P	09 46 09.8	-2.0
AUSIV	SIVRIHISAR	72.17	311	eP	P	09 46 13.1	-0.5
SVRH	Sivrihisar-ESK	72.18	311	eP	P	09 46 13.5	-0.2
ANTB	Antalya	72.25	309	eP	P	09 46 12.7	-1.3
YUVA	Yuva-Kibriscik	72.29	312	i P	P	09 46 14.2	-0.2
BCK	Bucak	72.43	309	i P	P	09 46 13.7	-1.5
CIFT	Cifteler, Eski	72.51	311	eP	P	09 46 14.7	-0.9
KORT	Korkueli	72.51	309	i P	P	09 46 15.5	-0.3
ISP	Isparta	72.56	309	i P	P	09 46 15.4	-0.6
ISP	Isparta	72.56	309	P	P	09 46 14.8	-1.2
ISP				pmax	pmax		
	comp=Z,227nm,1.1s						
ISP	Isparta	72.56	309	P	P	09 46 14.8	-1.2
ISP				IAmb	IAmb	09 46 17.7	
	comp=Z,227nm,1.1s						
MAW	Mawson	72.67	194	P	P	09 46 17.5	+1.7
	comp=Z,112nm,0.9s,baz=30,slow=6.0,SNR=190						
MAW				LR	LR	10 14 16.2	
	comp=Z,407nm,18.3s,baz=38,slow=32						
MAW	Mawson	72.67	194	P	P	09 46 17.5	+1.7
	baz=73,SNR=108						
MAW	Mawson	72.67	194	P	P	09 46 17.5	+1.7
MDUB	Mudurnu	72.67	312	i P	P	09 46 16.6	0.0
MDUB	Mudurnu	72.67	312	P	P	09 46 16.6	0.0
KDZE	Karadeniz Ereo	72.70	313	i P	P	09 46 16.4	-0.3
SHUT	Suhut-Afyon	72.70	310	i P	P	09 46 16.8	-0.1
PRGR	Permogore	72.72	336	eP	P	09 46 16.4	+0.1
PRGR				e*PP	PcP	09 46 35.4	+2.2
PRGR				eS	S	09 55 31.8	-3.2
PRGR				pmax	pmax		
	comp=Z,968nm,1.3s						
ELL	Elmali	72.80	308	eP	P	09 46 17.2	-0.3
ELL	Elmali	72.80	308	P	P	09 46 17.5	0.0
ELL				pmax	pmax		
	comp=Z,1µm,1.0s						
ELL	Elmali	72.80	308	P	P	09 46 17.5	0.0
AKAS	Kas	72.94	308	i P	P	09 46 17.2	-1.1
BASM	Basmaki-Afyon	72.95	310	eP	P	09 46 17.2	-1.1
BORA	Eskisehir	73.09	312	eP	P	09 46 18.4	-0.6
GULT	Gulveren	73.17	312	i P	P	09 46 19.3	-0.2
CAME	Cameli-Denizli	73.32	308	i P	P	09 46 19.8	-0.8
TIXI	Tiksi	73.34	10	S	S	09 55 37.5	-4.1
	comp=Z,9.0nm,0.9s,baz=307,slow=23,SNR=4.8						
TIXI				LR	LR	10 22 57.1	
	comp=Z,1µm,18.5s,baz=240,slow=39						
TIXI	Tiksi	73.34	10	ceP	P	09 46 19.8	+0.1
TIXI	Tiksi	73.34	10	⇑P	P	09 46 19.7	0.0
TIXI				⇑P	P	09 46 19.7	0.0
TIXI	Tiksi	73.34	10	P	P	09 46 19.9	+0.2
TIXI				IAmb	IAmb	09 46 40.0	
	comp=Z,376nm,1.1s						
SAUV	Serdivan-Sakar	73.38	312	eP	P	09 46 20.4	-0.2
AUBOZ	BOZOYUK	73.41	312	eP	P	09 46 20.9	0.0
FETY	Fethiye	73.43	308	eP	P	09 46 20.5	-0.5
FETY	Fethiye	73.43	308	P	P	09 46 19.7	-1.3
SEY	Seymchan	73.51	23	c iP	P	09 46 21.8	+0.9
MOS	Moscow	73.59	329	eP	P	09 46 19.0	-2.5
MOS				e*PP	pP	09 46 40.1	-3.1
MOS				e	PP	09 49 05.0	-1.6
MOS				eS	SKiKP	09 55 43.2	-0.7
MOS				e*SS	pS	09 56 13.6	+2.2
MOS				pmax	pmax		
	comp=Z,808nm,1.3s						
MOS				pmax	pmax		
	comp=Z,1µm,1.5s						
MOS				smax	smax		
	comp=N,2µm,3.8s						
MOS				smax	smax		
	comp=E,800nm,3.7s						
MOS				MLR	MLR		
	comp=Z,800nm,20.0s						
CAVI	Cavuskoy	73.62	312	i P	P	09 46 21.2	-0.9
GEDZ	Gediz	73.68	311	eP	P	09 46 22.6	0.0
TVSB	Tavsanli	73.73	311	eP	P	09 46 22.0	-0.9
ADVT	Abdulvahap	73.75	312	eP	P	09 46 22.6	-0.2
DALY	Dalyan (Mula)	73.80	308	eP	P	09 46 22.9	-0.3
HRT	Hereke	73.89	312	eP	P	09 46 23.4	-0.3
OBN	Obninsk	73.89	328	LR	LR	10 22 32.1	
	comp=Z,65nm,21.7s,baz=130,slow=39						
OBN	Obninsk	73.89	328	d iP	P	09 46 23.2	-0.1
OBN				i		09 46 39.8	
OBN				i	PP	09 49 07.6	-1.6
OBN				pmax	pmax		
	comp=Z,690nm,1.3s						
OBN				MLR	MLR		
	comp=Z,721nm,23.0s						
OBN	Obninsk	73.89	328	P	P	09 46 23.5	+0.2
SILT	Sile	73.98	313	eP	P	09 46 23.9	-0.2
TARA	Tarawa	74.01	89	P	P	09 46 26.9	+2.1
SIMA	Simav-Kutahya	74.02	311	i P	P	09 46 24.6	+0.1
YLV	Yalova	74.05	312	i P	P	09 46 24.6	0.0
ARG	Arkhangelos	74.11	307	eP	P	09 46 25.2	+0.2
ARG	Arkhangelos	74.11	307	P	P	09 46 24.9	-0.1
TURN	Turunc	74.12	308	eP	P	09 46 25.2	+0.2
KULA	Kula-Manisa	74.14	310	eP	P	09 46 25.3	0.0
KULA	Kula-Manisa	74.14	310	P	P	09 46 24.8	-0.5
GEMT	Gemlik	74.16	312	eP	P	09 46 25.1	-0.1
YER	Yerkesik	74.16	308	eP	P	09 46 25.2	-0.1
TRML	Termal-Yalova	74.21	312	i P	P	09 46 24.7	-0.8
MDNY	Mudanya-Bursa	74.37	312	eP	P	09 46 25.9	-0.5
KAVV	Kandilli-Istan	74.39	313	eP	P	09 46 26.3	-0.2
ISK	Istanbul-Kandi	74.39	313	i P	P	09 46 26.1	-0.4
ISK	Istanbul-Kandi	74.39	313	P	P	09 46 25.8	-0.7
KLYT	Kilyos	74.45	313	P	P	09 46 26.1	-0.7
MLSB	Milas	74.59	308	eP	P	09 46 27.6	-0.2
AYDB	Zeytinkoy-Aydi	74.62	309	eP	P	09 46 27.5	-0.6
BGKT	Bogazkoy	74.63	313	eP	P	09 46 27.5	-0.4
DAT	Datca	74.64	308	eP	P	09 46 27.8	-0.4
DAT	Datca	74.64	308	P	P	09 46 26.9	-1.3
KCTX	Karacabey (Bur	74.74	312	eP	P	09 46 28.3	-0.3
CTKS	Kestanelik-??a	74.84	313	eP	P	09 46 28.7	-0.4
KLMR	Klimovskoe	74.89	334	eP	P	09 46 27.4	-1.5
KLMR				e*PP	pP	09 46 48.5	-2.1
KLMR				e	PP	09 49 16.8	-0.7
KLMR				ePPP	PPP	09 50 59.7	
KLMR				eS	S	09 55 56.5	-3.0
KLMR				eSS	SS	10 00 47.5	-1.8
KLMR				pmax	pmax		
	comp=Z,388nm,1.4s						
KLMR	Klimovskoe	74.89	334	eP	P	09 46 27.5	-1.5
KLMR				AMP		09 46 31.1	
	comp=Z,388nm,1.4s						
KLMR				epP	pP	09 46 48.6	-2.1
KLMR				ePP	PP	09 49 16.9	-0.6
KLMR				ePPP	PPP	09 50 59.8	
KLMR				eS	S	09 55 56.5	-3.0
KLMR				eS	S	09 55 56.5	-3.0
KLMR				eSS	SS	10 00 47.5	-1.8
KLMR				eSS	SS	10 00 47.5	-1.8
KLMR				eSSS	SSS	10 04 28.6	
KLMR				eSSS	SSS	10 04 28.6	
KLMR				LQ	LQ	10 13 28.6	
KLMR				LQ	LQ	10 13 28.6	
KLMR				LR	LR	10 20 28.8	
BODT	Bodrum	74.91	308	i P	P	09 46 29.3	-0.3
BALB	Balikesir	74.97	311	i P	P	09 46 29.1	-0.8
BALB	Balikesir	74.97	311	P	P	09 46 30.1	+0.2
BALB				IAmb	IAmb	09 46 31.2	
	comp=Z,403nm,1.1s						
CTYL	Yalikoy Yolu	75.05	313	i P	P	09 46 30.1	-0.2
SLVT	Silivri	75.05	313	eP	P	09 46 29.9	-0.4
GCAM	G?zelcaml?	75.09	309	eP	P	09 46 30.3	-0.3
EDC	Edincik	75.13	312	P	P	09 46 30.1	-0.7
PURM	Purcari	75.14	318	⇓P	P	09 46 31.0	+0.3
MANR	Mangalia	75.36	315	⇓P	P	09 46 32.5	+0.5
BLCB	Balcova	75.36	309	P	P	09 46 31.8	-0.4
BLCB	Balcova	75.36	309	P	P	09 46 32.3	+0.1
MRMT	Marmara Adasi	75.38	312	P	P	09 46 31.1	-1.2
KALB	Balgarevo	75.39	315	⇓P	P	09 46 32.5	+0.4
EFOR	EFORIE	75.39	315	⇑P	P	09 46 32.6	+0.4
DCZ	Deep Cove	75.43	138	P	P	09 46 33.2	+0.9
DCZ				IAmb	IAmb	09 46 53.8	
	comp=Z,215nm,1.2s						
TLCR		75.52	317	⇓P	P	09 46 33.2	+0.2
MFTR	Murfatlar	75.56	316	⇑P	P	09 46 33.8	+0.7
KRBG	Karabiga-Canak	75.56	312	eP	P	09 46 33.0	-0.2
DKL	Dikili	75.60	310	eP	P	09 46 33.7	+0.2
GZKV	Gazikoy-Tekird	75.61	312	eP	P	09 46 33.4	-0.1
TIRR	Tirgusor	75.63	316	⇓P	P	09 46 33.7	+0.2
TIRR	Tirgusor	75.63	316	P	P	09 46 33.6	0.0
TIRR				pmax	pmax		
	comp=Z,798nm,1.0s						
TIRR	Tirgusor	75.63	316	⇓P	P	09 46 33.5	-0.1
TIRR				⇓P	P	09 46 33.6	0.0
TIRR	Tirgusor	75.63	316	P	P	09 46 33.5	0.0
PHSR	Pinarhisar	75.64	313	eP	P	09 46 34.1	+0.4
RKY	Sarkoy-Tekirda	75.71	312	eP	P	09 46 34.0	-0.2
TPGR	Topolog	75.72	316	⇓P	P	09 46 34.1	0.0
TLBR	Topalu	75.90	316	⇑P	P	09 46 35.7	+0.6
MILM	Milestii Mici	75.94	318	⇓P	P	09 46 35.1	-0.2
MILM	Milestii Mici	75.94	318	d iP	P	09 46 35.0	-0.3
MILM				i *PP	pP	09 46 55.0	-2.1
MILM				e		09 47 00.0	
MILM				e	PP	09 49 27.0	+0.3
MILM				eS	S	09 56 07.0	-4.6
MILM				e		09 56 39.0	
MILM				pmax	pmax		
	comp=Z,2µm,1.3s						
MILM				pmax	pmax		
	comp=Z,340nm,3.0s						
MILM				smax	smax		
	comp=N,250nm,3.3s						
MILM				MLR	MLR		
	comp=Z,300nm,21.0s						
NPS	Neapolis	75.95	306	P	P	09 46 36.0	+0.4
LPK	Lapseki	75.96	311	eP	P	09 46 35.9	+0.4
KIS	Kishinev	75.96	318	⇓iP	P	09 46 35.0	-0.4
	comp=Z,200nm,1.0s						
KIS				epP	pP	09 46 54.0	-3.2
KIS				LRM	MLR	10 23 19.0	
	comp=Z,150nm,18.0s						
KIS	Kishinev	75.96	318	d iP	P	09 46 35.0	-0.4
KIS				e*PP	pP	09 46 54.0	-3.2
KIS				e		09 56 40.0	
KIS				pmax	pmax		
	comp=Z,200nm,1.0s						
KIS				pmax	pmax		
	comp=E,120nm,1.3s						
KIS				MLR	MLR		
	comp=Z,150nm,18.0s						
CFR	Carcaliu	75.98	317	⇑P	P	09 46 35.3	-0.2
HARR	Harsova	76.02	316	⇑P	P	09 46 35.7	-0.1
BOSA	Boshof	76.04	240	P	P	09 46 37.2	+0.8
	comp=Z,207nm,0.8s,baz=90,slow=5.1,SNR=391						
BOSA				LR	LR	10 14 28.2	

	comp=Z,896nm,21.0s,baz=80,slow=31						
BOSA	Boshof	76.04	240	P	P	09 46 36.7	+0.3
BOSA				IAmb	IAmb	09 46 38.3	
	comp=Z,252nm,0.9s						
MLZ	Mavora Lakes	76.06	137	P	P	09 46 36.6	+0.5
PRK	Paraskevi	76.11	310	P	P	09 46 37.5	+1.1
CHOS	Chios island	76.13	309	P	P	09 46 36.5	-0.1
GELI	Tayfur-Gelibol	76.18	311	P	P	09 46 36.8	0.0
VLDR	Vladesti	76.18	317	⇓P	P	09 46 37.2	+0.6
EZN	Ezine	76.18	311	P	P	09 46 36.0	-0.8
SCTR	Scanteiesti	76.20	317	⇓P	P	09 46 37.2	+0.5
ERIK	Erikli-Kesan	76.20	312	i P	P	09 46 36.0	-0.9
UKOP	Uzunkopru-Edir	76.20	312	P	P	09 46 37.2	+0.3
EDRB	Edirne	76.26	313	eP	P	09 46 36.2	-1.0
EDRB	Edirne	76.26	313	P	P	09 46 36.8	-0.4
IZVR	Izvoarele	76.32	317	⇓P	P	09 46 37.8	+0.3
VARL	Varlezi	76.35	317	⇑P	P	09 46 38.6	+1.0
AMRR	Amara	76.41	316	⇓P	P	09 46 38.8	+0.8
SIGR	SIGRI	76.43	310	P	P	09 46 37.5	-0.7
ENEZ	Enez	76.48	312	P	P	09 46 37.2	-1.3
IDI	Anoyia	76.54	306	P	P	09 46 39.0	0.0
	comp=Z,187nm,0.8s,baz=89,slow=7.4,SNR=48						
IDI	Anoyia	76.54	306	P	P	09 46 38.3	-0.7
SORM	Soroca	76.55	319	⇓P	P	09 46 38.8	+0.2
VASR	Vaslui	76.56	318	⇑P	P	09 46 39.3	+0.5
GADA	Gvkgeada	76.57	311	P	P	09 46 38.2	-0.8
ALN	Alexandroupoli	76.59	312	P	P	09 46 38.2	-0.9
ALN	Alexandroupoli	76.59	312	P	P	09 46 39.1	0.0
ALN				pmax	pmax		
	comp=Z,246nm,1.1s						
ALN	Alexandroupoli	76.59	312	P	P	09 46 39.1	0.0
ALN				IAmb	IAmb	09 46 40.3	
	comp=Z,246nm,1.1s						
AKASG	Malin Array Be	76.65	322	P	P	09 46 38.8	-0.5
	comp=Z,73nm,0.8s,baz=87,slow=4.7,SNR=311						
AKASG				PP	PP	09 49 29.6	-3.0
	comp=Z,17nm,1.1s,baz=88,slow=8.1,SNR=5.1						
AKASG				LR	LR	10 25 14.7	
	comp=Z,200nm,19.4s,baz=65,slow=39						
AKASG	Malin Array Be	76.65	322	P	P	09 46 38.7	-0.5
AKASG				IAmb	IAmb	09 46 40.0	
	comp=Z,194nm,1.1s						
AKBB	Malin Array Si	76.65	322	ceP	P	09 46 38.1	-1.1
AKBB	Malin Array Si	76.65	322	P	P	09 46 38.3	-0.9
AKBB				IAmb	IAmb	09 46 40.0	
	comp=Z,169nm,1.0s						
PGOR	Pogoanele	76.72	316	⇑P	P	09 46 41.9	+2.1
LEHL	Lehliu	76.74	316	⇓P	P	09 46 40.7	+0.9
RAZG	Razgrad	76.78	315	⇓P	P	09 46 40.5	+0.4
IAS	Iasi	76.84	318	⇓P	P	09 46 40.4	0.0
ODBI	Odobesti	76.86	317	⇑P	P	09 46 42.5	+2.0
PRNS	Prines Rethymn	76.86	306	P	P	09 46 41.8	+1.0
SMTH	Samothraki Isl	76.90	311	P	P	09 46 40.0	-0.9
LIA	Limnos Island	77.06	311	P	P	09 46 40.9	-0.8
ISR	Istrita	77.07	316	⇓P	P	09 46 43.1	+1.3
VRI	Vrincioaia	77.10	317	⇑P	P	09 46 42.8	+0.9
VAM	Vamos	77.11	306	P	P	09 46 42.0	-0.2
PLOR	Plostina	77.15	317	⇑P	P	09 46 43.1	+0.9
SULR		77.18	316	⇓P	P	09 46 43.5	+1.2
LBZ	Lake Benmore	77.23	136	P	P	09 46 43.0	+0.3
SGRR	Singureni	77.29	315	⇑P	P	09 46 43.5	+0.6
TESR	Tescani	77.30	318	⇓P	P	09 46 43.7	+0.7
IMMV	Iera Moni Meta	77.30	306	P	P	09 46 42.9	-0.3
NEHR	Nehoiu	77.31	316	⇑P	P	09 46 44.6	+1.5
KARY	Karystos	77.32	309	P	P	09 46 42.7	-0.6
SECR		77.38	316	⇓P	P	09 46 44.8	+1.3
PLAR	PLOIESTI	77.39	316	⇓P	P	09 46 44.9	+1.4
COVR	Voineasa-Covas	77.46	317	⇑P	P	09 46 44.1	+0.2
THAS	Thassos island	77.53	311	P	P	09 46 43.9	-0.5
MLR	Muntele Rosu	77.56	316	⇓P	P	09 46 45.4	+0.7
MLR	Muntele Rosu	77.56	316	LR	LR	10 25 49.4	
	comp=Z,216nm,20.6s,baz=106,slow=39						
MLR	Muntele Rosu	77.56	316	P	P	09 46 45.2	+0.5
MLR				pmax	pmax		
	comp=Z,567nm,1.0s						
MLR	Muntele Rosu	77.56	316	P	P	09 46 45.2	+0.5
KYMI	Kymi, Euboea I	77.68	309	P	P	09 46 44.1	-1.2
RPZ	Rata Peaks	77.69	135	P	P	09 46 45.8	+0.6
RPZ				IAmb	IAmb	09 47 06.0	
	comp=Z,370nm,1.3s						
RPZ	Rata Peaks	77.69	135	P	P	09 46 45.6	+0.4
ODZ	Otahua Downs	77.71	136	P	P	09 46 46.1	+0.8
DION	Dionisos Attik	77.72	309	P	P	09 46 44.2	-1.4
KAVA	Kavala	77.75	312	P	P	09 46 44.9	-0.7
PRAR	RASCA	77.76	318	⇓P	P	09 46 46.1	+0.5
PTL	Penteli	77.77	309	P	P	09 46 44.5	-1.3
OZUR		77.79	317	⇑P	P	09 46 46.2	+0.4
VLY	Voula,Athens	77.80	308	P	P	09 46 44.0	-2.0
ATHU	Athens Univers	77.82	309	P	P	09 46 44.8	-1.3
ANKY	Antikythira Is	77.91	306	P	P	09 46 45.8	-0.8
OUZ	Omahuta	77.96	126	P	P	09 46 47.5	+0.6
OUZ	Omahuta	77.96	126	P	P	09 46 47.5	+0.6
DOPR	Dopca	78.04	317	⇑P	P	09 46 47.1	0.0
OUR	Ouranopolis	78.04	311	P	P	09 46 47.9	+0.7
HUMR	Humele	78.04	315	⇑P	P	09 46 47.3	+0.1
PLVB	Pleven	78.09	314	⇓P	P	09 46 47.8	+0.4
MTUR	Matau	78.12	316	⇓P	P	09 46 47.8	+0.1
STFAR	Stefanesti-Arg	78.12	316	⇓P	P	09 46 48.2	+0.6
QRZ	Quartz Range	78.14	132	P	P	09 46 48.8	+1.0
QRZ	Quartz Range	78.14	132	P	P	09 46 48.6	+0.8
KTHA	Kythira Island	78.15	307	P	P	09 46 46.1	-1.9
VOIR		78.17	316	⇑P	P	09 46 47.7	-0.3
PAIG	Paliouri	78.20	311	P	P	09 46 46.0	-2.1
VILL	Villia	78.22	309	P	P	09 46 46.1	-2.3
NVR	Nevrokopi	78.29	312	P	P	09 46 46.9	-1.8
VLI	Veliai	78.31	307	P	P	09 46 46.1	-2.7
VLAD	Vladila	78.35	315	⇓P	P	09 46 49.3	+0.4
ARR	Arges	78.44	316	⇑P	P	09 46 49.5	0.0
MNK	Minsk	78.45	326	i P	P	09 46 49.7	+0.6
MNK				i *PP	pP	09 47 10.2	-0.8
MNK				i	PP	09 49 51.0	+3.5
MNK				i PPP	PPP	09 51 40.1	
MNK				i S	S	09 56 46.2	+7.7
MNK				i *SS	sS	09 57 22.5	+6.7
MNK				pmax	pmax		
	comp=Z,434nm,0.9s						
MNK				pmax	pmax		
	comp=N,89nm,1.0s						
MNK				pmax	pmax		
	comp=E,48nm,1.1s						
MNK				MLR	MLR		
	comp=Z,231nm,22.0s						
MNK				MLR	MLR		
	comp=N,385nm,22.0s						
MNK				MLR	MLR		
	comp=E,49nm,24.0s						
MNK	Minsk	78.45	326	i P	P	09 46 49.7	+0.6
	comp=E,48nm,1.1s						
MNK				i P	P	09 46 49.7	+0.6
	comp=N,89nm,1.1s						
MNK				i P	P	09 46 49.7	+0.6
	comp=Z,434nm,0.9s,baz=286						
MNK				i pP	pP	09 47 10.2	-0.8
MNK				i PP	PP	09 49 51.0	+3.5
MNK				i PPP	PPP	09 51 40.1	
MNK				i S	S	09 56 46.2	+7.7
MNK				i sS	sS	09 57 22.5	+6.7
MNK				i SS	SS	10 02 01.6	+18
MNK				i SSS	SSS	10 05 22.3	
MNK				i LR	LR	10 19 33.8	
MNK				i LRM	MLR	10 23 50.0	
	comp=Z,231nm,22.4s						
MNK				i LRM	MLR	10 24 05.2	
	comp=N,385nm,22.4s						
MNK				i LRM	MLR	10 24 23.2	
	comp=E,49nm,23.9s						
SRS	Serrai	78.46	312	P	P	09 46 48.2	-1.3
LTK	Loutraki	78.47	309	P	P	09 46 47.2	-2.5
BURAR	Bucovina Array	78.48	318	P	P	09 46 50.5	+0.8
BUR01	Bucovina Ar. S	78.49	318	⇑P	P	09 46 50.9	+1.2
BUR08	Bucovina Ar. S	78.50	319	P	P	09 46 50.8	+1.0
BUR08				IAmb	IAmb	09 46 52.2	
	comp=Z,311nm,1.0s						
SOH	Sokhos	78.59	311	P	P	09 46 48.7	-1.6
THZ	Tophouse	78.61	133	P	P	09 46 50.6	+0.2
THZ				IAmb	IAmb	09 47 11.5	
	comp=Z,311nm,1.0s						
PUL	Pulkovo	78.70	331	eP	P	09 46 50.9	+0.5
PUL	Pulkovo	78.70	331	ceP	P	09 46 51.1	+0.7
PUL				pmax	pmax		
	comp=Z,372nm,0.7s						
THAL	Thalero	78.71	309	P	P	09 46 48.9	-2.1
HORT	Hortiatis	78.75	311	P	P	09 46 49.5	-1.7
MDB	Medias	78.76	317	⇓P	P	09 46 52.6	+1.5
MQZ	McQueen's Vall	78.82	135	P	P	09 46 51.8	+0.4
MQZ				IAmb	IAmb	09 47 12.7	
	comp=Z,273nm,1.3s						
GUR	Goura	78.95	308	P	P	09 46 50.4	-2.0
VTS	Vitosha	78.96	313	⇓P	P	09 46 52.5	0.0
VTS	Vitosha	78.96	313	P	P	09 46 52.4	0.0
VTS				pmax	pmax		
	comp=Z,235nm,1.0s						
VTS	Vitosha	78.96	313	P	P	09 46 52.4	0.0
VTS				IAmb	IAmb	09 46 53.7	
	comp=Z,234nm,1.0s						
KNT	Kendrikon	78.98	312	P	P	09 46 50.2	-2.2
LOT	Lotru	79.06	316	⇓P	P	09 46 52.9	+0.1
AGG	Agios Georgios	79.10	310	P	P	09 46 50.9	-2.3
AGG	Agios Georgios	79.10	310	P	P	09 46 51.7	-1.4
AGG				pmax	pmax		
	comp=Z,92nm,0.9s						
AGG	Agios Georgios	79.10	310	P	P	09 46 51.7	-1.4
BAIL	Bailesti	79.11	315	⇑P	P	09 46 53.8	+0.8
KLV	Kalavryta, Ach	79.11	308	P	P	09 46 50.9	-2.4
NACGM	Naroch	79.17	326	i P	P	09 46 53.6	+0.6
ITM	Ithomi	79.18	308	P	P	09 46 51.6	-2.0
ITM	Ithomi	79.18	308	P	P	09 46 53.1	-0.5
ITM				IAmb	IAmb	09 46 54.3	
	comp=Z,334nm,1.0s						
KHZ	Kahutara	79.20	133	P	P	09 46 53.8	+0.4
KHZ				IAmb	IAmb	09 47 14.0	
	comp=Z,280nm,1.1s						
KHZ	Kahutara	79.20	133	P	P	09 46 53.9	+0.4
TRIZ	Trizonia	79.22	309	P	P	09 46 51.1	-2.6
SERG	Sergoula	79.23	309	P	P	09 46 51.8	-2.1
VAY	Valandovo	79.25	312	i P	P	09 46 53.1	-0.8
MAKR	Makrakomi, Fth	79.26	309	P	P	09 46 52.1	-1.9
LAKA	Lakka	79.27	309	P	P	09 46 52.4	-1.7
PYL	PYLOS	79.29	307	P	P	09 46 52.0	-2.2
SRE	Strehaia	79.32	315	⇓P	P	09 46 54.8	+0.6
GRG	Griva	79.32	311	P	P	09 46 52.2	-2.1
EFP	Efpalio	79.35	309	P	P	09 46 52.8	-1.7
CJR	Cluj-Napoca	79.40	317	⇓P	P	09 46 55.8	+1.2
THL	Klokotos Trika	79.42	310	P	P	09 46 51.3	-3.5
DRO	Drossia	79.44	308	P	P	09 46 54.1	-0.9
EVR	Evrytania	79.49	309	P	P	09 46 53.5	-1.9
HIZ	Hauiti	79.49	129	P	P	09 46 56.1	+0.9
STIP	Stip	79.59	312	i P	P	09 46 54.0	-1.7
BMR	Baia Mare	79.64	318	⇓P	P	09 46 57.0	+1.1
RLS	Riolos of Patr	79.65	308	P	P	09 46 54.4	-1.7
PVO	Paravola	79.67	309	P	P	09 46 55.1	-1.1
LVV	L'vov	79.69	321	eP	P	09 46 56.2	+0.1
LVV				e		09 47 16.2	
LVV				eS	S	09 56 49.4	-2.5
LVV				e		09 57 44.8	
LVV				pmax	pmax		
	comp=Z,600nm,1.4s						
LVV				smax	smax		
	comp=E,480nm,3.3s						
LVV				smax	smax		
	comp=N,460nm,3.0s						
ISAL	Salakas	79.70	327	eP	P	09 46 56.6	+0.6
DEV	Deva	79.73	316	⇓P	P	09 46 57.7	+1.3
GZR	Gura Zlata	79.74	316	⇑P	P	09 46 56.8	+0.3
WAZ	Wanganui	79.80	131	P	P	09 46 58.0	+1.1
LVZ	Lovozero	79.84	340	ceP	P	09 46 56.3	-0.2
LVZ				pmax	pmax		
	comp=Z,193nm,1.7s						
SNZO	South Karori	79.85	132	P	P	09 46 57.8	+0.7
MSVF	Nonsavu	79.89	108	P	P	09 46 58.6	+0.7
MSVF				pmax	pmax		
	comp=Z,268nm,1.5s						
MSVF	Nonsavu	79.89	108	P	P	09 46 58.6	+0.7
MSVF				IAmb	IAmb	09 47 19.4	
	comp=Z,268nm,1.4s						
MSVF	Nonsavu	79.89	108	P	P	09 46 58.7	+0.8
MESR	Meseseni	79.91	318	⇓P	P	09 46 58.7	+1.3
KIW	Kapiti Island	79.93	132	P	P	09 46 58.4	+0.8
KPRO	Kipourio	79.97	310	P	P	09 46 55.4	-2.5
TLZ	Tolley Road	79.99	129	P	P	09 46 58.7	+0.7
DRGR		80.01	317	⇓P	P	09 46 58.7	+0.8
TWVZ	Taurewa	80.03	130	P	P	09 47 00.1	+1.9
FNA	Florina	80.07	311	P	P	09 46 56.8	-1.6
FNA	Florina	80.07	311	P	P	09 46 57.3	-1.1
FNA				pmax	pmax		
	comp=Z,152nm,1.2s						
FNA	Florina	80.07	311	P	P	09 46 57.3	-1.1
CAW	Cannon Point	80.08	132	P	P	09 46 58.2	-0.1
VSU	Vasula	80.09	329	eP	P	09 46 58.2	+0.1
VSU	Vasula	80.09	329	i P	P	09 46 57.4	-0.6
VSU				pmax	pmax		
	comp=Z,457nm,1.0s						
LTHK	Lithakia	80.10	308	P	P	09 46 57.1	-1.4
SYO	Syowa Base	80.11	198	⇓iP	P	09 46 59.4	+1.5
SYO	Syowa Base	80.11	198	⇓eP	P	09 47 01.0	+3.1
SYO	Syowa Base	80.11	198	⇑iPcP	PcP	09 47 05.4	+0.4
SYO	Syowa Base	80.11	198	⇑ipP	pP	09 47 19.0	-0.8
APA	Apatity	80.14	339	⇓iP	P	09 46 57.5	-0.6
APA				i		09 47 19.1	
APA				pmax	pmax		
	comp=Z,89nm,0.9s						
FWVZ	Far West T-bar	80.15	130	P	P	09 46 59.4	+0.3
TRVZ	Turoa	80.15	130	P	P	09 46 59.6	+0.5
WTVZ	West Tongariro	80.16	130	P	P	09 46 59.7	+0.7
NGZ	Ngauruhoe	80.17	130	P	P	09 47 00.5	+1.3
NNVZ	North Ngauruho	80.18	130	P	P	09 46 59.8	+0.7
WHVZ	Whangaehu Hut	80.18	130	P	P	09 47 00.7	+1.5
KRVZ	Karewarewa	80.19	130	P	P	09 47 00.1	+0.9
WNVZ	Wahianoa	80.20	130	P	P	09 47 00.2	+0.9
SNVZ	South Ngauruho	80.21	130	P	P	09 47 01.3	+1.9
KATZ	Kakaramea	80.22	130	P	P	09 47 00.7	+1.4
NTVZ	North Tongarir	80.22	130	P	P	09 47 00.6	+1.3
BOVS	Bovan	80.22	314	⇓P	P	09 46 58.4	-0.7
OTVZ	Oturere	80.22	130	P	P	09 47 00.1	+0.8
TMVZ	Te Maari	80.25	130	P	P	09 47 00.8	+1.3
NEST	Nestorio	80.27	311	P	P	09 46 57.1	-2.4
JAN	Janina	80.32	310	P	P	09 46 58.6	-1.2
NYDR	Nydri-Lefkada	80.33	309	P	P	09 46 58.6	-1.1
PSDA	Pessada-Kefalo	80.35	308	P	P	09 46 58.9	-0.9
EVGI	Lefkada island	80.35	309	P	P	09 46 59.1	-0.8
SUR	Sutherland	80.35	237	P	P	09 47 02.5	+2.3
SUR	Sutherland	80.35	237	P	P	09 47 01.4	+1.1
VLS	Valsamata	80.35	308	P	P	09 46 59.2	-0.7
TRPA	Tarpa	80.35	319	⇓P	P	09 47 00.4	+0.8
TRPA	Tarpa	80.35	319	eP	P	09 46 59.4	-0.3
LKD2	Lefkada island	80.37	309	P	P	09 46 59.2	-0.8
TSLK	Tsoukalades, L	80.37	309	P	P	09 46 58.9	-1.1
HOWZ	Holdsworth Sta	80.39	132	P	P	09 47 00.7	+0.7
MDVR	Moldovita	80.39	315	⇓P	P	09 47 00.0	0.0
FSK	Fiskardo	80.40	309	P	P	09 46 59.2	-0.9
MTW	Mount Morrison	80.42	132	P	P	09 47 00.6	+0.4
DRAG	Dragano-Lefkad	80.42	309	P	P	09 46 59.2	-1.1
KEF4	Livadi, Kephal	80.49	309	P	P	09 46 59.7	-0.9
KWP	Kalwaria Pacla	80.50	320	eP	P	09 47 01.1	+0.6
KWP				eS	S	09 56 59.1	-1.4
KWP	Kalwaria Pacla	80.50	320	P	P	09 47 01.2	+0.7
KWP				pmax	pmax		
	comp=Z,3µm,1.2s						
KWP	Kalwaria Pacla	80.50	320	P	P	09 47 01.2	+0.7
DMLN	Damoulianata-K	80.53	309	P	P	09 46 59.8	-1.0
KEF3	Kipouria, Keph	80.54	308	P	P	09 46 59.7	-1.2
OHR	Ohrid	80.55	311	i P	P	09 46 59.9	-1.1
LSK	Leskovik	80.58	310	P	P	09 47 00.1	-1.1
BZS	Buzias	80.58	316	⇓P	P	09 47 01.4	+0.5
TSZ	Takapari Road	80.59	131	P	P	09 47 01.2	0.0
TRWZ	Traveller	80.59	132	P	P	09 47 02.0	+0.9
UZH	Uzhgorod	80.60	319	eP	P	09 47 00.9	-0.1
UZH				e	PP	09 50 05.9	+0.3
UZH				ePPP	PPP	09 52 03.1	
UZH				eS	S	09 56 57.9	-3.6
UZH				ePS	PnS	09 58 06.1	+8.4
UZH				eSSS	SSS	10 05 47.1	
UZH				pmax	pmax		
	comp=Z,5.0nm,1.2s						
SIRR	Siria	80.65	317	⇓P	P	09 47 02.2	+0.9
KOLS	Kolonicke sedl	80.66	319	eP	P	09 47 02.7	+1.4
KOLS				e		09 47 23.0	
KOLS				pmax	pmax		
	comp=Z,453nm,1.1s						
KOLS	Kolonicke sedl	80.66	319	eP	P	09 47 02.7	+1.4
KOLS				e		09 47 23.0	
PRWZ	Pori Road	80.67	131	P	P	09 47 02.6	+1.0
TMWZ	Te Maipa	80.70	132	P	P	09 47 02.7	+1.0
IGT	Igoumenitsa	80.71	310	P	P	09 47 00.1	-1.7
MRHZ	Matea Rd	80.75	129	P	P	09 47 01.9	-0.2
KRHZ	Kereru	80.83	130	P	P	09 47 03.4	+0.9
KWHZ	Kaweka Forest	80.84	130	P	P	09 47 03.5	+1.0
BKZ	Black Stump Fm	80.86	130	P	P	09 47 02.5	-0.1
BKZ	Black Stump Fm	80.86	130	P	P	09 47 02.3	-0.4
BKZ				IAmb	IAmb	09 47 23.4	
	comp=Z,318nm,0.8s						
BKZ	Black Stump Fm	80.86	130	P	P	09 47 02.6	-0.1
PABE	Paberze	80.88	326	eP	P	09 47 02.6	+0.3
PABE	Paberze	80.88	326	P	P	09 47 02.7	+0.4
BANR	Banloc	80.88	316	⇓P	P	09 47 03.6	+1.1
PHP	Peshkopia	80.89	312	P	P	09 47 01.1	-1.6
BFZ	Birch Farm	80.90	131	P	P	09 47 03.1	+0.3
BILL	Bilibino	80.98	21	d iP	P	09 47 02.6	0.0
BILL				pmax	pmax		
	comp=Z,23nm,1.0s						
BILL				MLR	MLR		
	comp=Z,1µm,18.0s						
SRN	Sarande	81.00	310	P	P	09 47 02.2	-1.1
SUW	Suwalki	81.02	325	eP	P	09 47 03.1	0.0
SUW				epP	pP	09 47 22.6	-2.4
SUW	Suwalki	81.02	325	eP	P	09 47 03.1	0.0
SUW	Suwalki	81.02	325	P	P	09 47 03.1	0.0
SUW				pmax	pmax		
	comp=Z,1µm,1.1s						
SUW	Suwalki	81.02	325	P	P	09 47 03.1	0.0
NMHZ	Naumai	81.09	130	P	P	09 47 05.0	+1.0
KEK	Kerkira	81.14	310	P	P	09 47 02.1	-2.0
FIA1	FINESS Array S	81.18	332	P	P	09 47 03.8	0.0
FIA1				IAmb	IAmb	09 47 05.4	
	comp=Z,202nm,1.1s						
FINES	FINESS Array B	81.18	332	P	P	09 47 04.2	+0.5
	comp=Z,47nm,0.5s,baz=105,slow=5.6,SNR=442						
FINES				pP	pP	09 47 24.9	-0.9
	comp=Z,74nm,0.8s,baz=96,slow=4.8,SNR=8.6						
FINES				PKKPbc	PKKPbc	10 05 39.3	-2.9
	comp=Z,2.7nm,0.6s,baz=243,slow=0.3,SNR=12						
FINES				LR	LR	10 26 58.4	
	comp=Z,438nm,21.4s,baz=108,slow=38						
FINES	FINESS Array B	81.18	332	P	P	09 47 04.0	+0.2
CRVS	Cervenica-Dubn	81.19	319	eP	P	09 47 05.1	+1.0
CRVS				pmax	pmax		
	comp=Z,220nm,1.2s						
CRVS	Cervenica-Dubn	81.19	319	eP	P	09 47 05.1	+1.0
CRVS				e		10 16 16.3	
URZ	Urewera	81.21	129	P	P	09 47 03.2	-1.2
URZ	Urewera	81.21	129	P	P	09 47 04.3	-0.1
TIR	Tirane	81.27	312	P	P	09 47 04.3	-0.5
PUK	Puka	81.33	312	P	P	09 47 04.3	-0.9
STHS	Stebnicka Huta	81.41	320	eP	P	09 47 05.9	+0.6
STHS				e		09 47 26.2	
STHS	Stebnicka Huta	81.41	320	eP	P	09 47 05.9	+0.6
STHS				e		09 47 26.2	
DIVS	Divibare	81.51	314	⇓iP	P	09 47 06.1	+0.1
DIVS	Divibare	81.51	314	P	P	09 47 06.2	+0.1
DIVS				IAmb	IAmb	09 47 07.8	
	comp=Z,284nm,1.2s						
MTSE	Matsula	81.64	329	eP	P	09 47 06.8	+0.6
KECS	Kecovo	81.76	319	eP	P	09 47 07.7	+0.5
KECS				e		09 47 27.5	
KECS				pmax	pmax		
	comp=Z,66nm,1.0s						
KECS	Kecovo	81.76	319	eP	P	09 47 07.7	+0.5
KECS				e		09 47 27.5	
FRGS	Fruska Gora	81.78	315	⇓P	P	09 47 07.3	0.0
FRGS	Fruska Gora	81.78	315	⇓iP	P	09 47 07.3	0.0
PDG	Podgorica	81.85	313	⇓P	P	09 47 07.5	-0.2
PDG	Podgorica	81.85	313	⇓iP	P	09 47 07.4	-0.3
DRME	Dracevica, Mon	81.88	312	⇓iP	P	09 47 07.7	-0.2
TEKS	Tekeris	81.90	315	⇓iP	P	09 47 07.7	-0.3
RUDO	Rudo	81.90	314	⇓iP	P	09 47 07.7	-0.3
BBLS	Lazići	81.91	314	⇓iP	P	09 47 08.6	+0.5
NIE	Niedzica	82.02	320	eP	P	09 47 10.1	+1.6
NIE				epP	pP	09 47 30.1	-0.5
NIE				ePP	PP	09 50 19.0	+1.7
NIE				eS	S	09 57 15.2	-1.0
BEL	Belsk	82.07	322	eP	P	09 47 09.3	+0.7
BEL				epP	pP	09 47 29.3	-1.4
PSZ	Piszkesteto	82.08	318	⇓P	P	09 47 09.5	+0.6
PSZ	Piszkesteto	82.08	318	eP	P	09 47 08.6	-0.3
PBUR	Paburge	82.11	326	eP	P	09 47 08.8	0.0
UPM	Unac-Piva	82.19	313	⇓iP	P	09 47 09.3	-0.5
HAPS	Han Pijesak,Bl	82.26	314	⇓iP	P	09 47 10.6	+0.6
IZAB	Izabela	82.28	319	eP	P	09 47 10.2	+0.3
HCY	Herceg Novi	82.41	313	⇓iP	P	09 47 10.1	-0.6
BRY	Bratogost	82.43	313	⇓iP	P	09 47 10.5	-0.4
OJC	Ojcow	82.45	320	eP	P	09 47 11.0	+0.2
OJC				epP	pP	09 47 31.1	-1.7
LANS	Liptovska Anna	82.52	319	eP	P	09 47 12.3	+1.1
LANS				pmax	pmax		
	comp=Z,38nm,1.1s						
LANS	Liptovska Anna	82.52	319	eP	P	09 47 12.3	+1.1
TREB	Trebinje	82.55	313	eP	P	09 47 10.8	-0.6
BUD	Budapest	82.60	318	eP	P	09 47 07.5	-4.0
DBRK	Dubrovnik	82.69	313	i P	P	09 47 10.2	-1.9
MORH	Mrgy, Hungar	82.71	316	eP	P	09 47 11.3	-0.8
MORH	Mrgy, Hungar	82.71	316	⇓iP	P	09 47 12.2	+0.1
KLNR	Kaliningrad	82.84	325	d iP	P	09 47 13.0	+0.4
KLNR				pmax	pmax		
	comp=Z,681nm,1.0s						
VYHS	Vyhne	82.85	319	eP	P	09 47 13.5	+0.6
VYHS				e		09 47 34.0	
VYHS				pmax	pmax		
	comp=Z,198nm,1.4s						
VYHS	Vyhne	82.85	319	eP	P	09 47 13.5	+0.6
VYHS				e		09 47 34.0	
STON	Ston	83.04	313	⇓iP	P	09 47 13.2	-0.7
STON	Ston	83.04	313	i P	P	09 47 12.5	-1.4
KOVH	Kovagotottos	83.08	316	eP	P	09 47 13.5	-0.5
CSKK	Cskako	83.10	317	eP	P	09 47 14.6	+0.4
SRO	Srobarova	83.12	318	eP	P	09 47 15.2	+1.0
SRO				e		09 47 36.2	
SRO				pmax	pmax		
	comp=Z,247nm,1.2s						
SRO	Srobarova	83.12	318	eP	P	09 47 15.2	+1.0
SRO				e		09 47 36.2	
TIH	Tihany	83.30	317	eP	P	09 47 15.0	-0.2
TIP	Timpagrande	83.43	309	⇓P	P	09 47 17.1	+1.0
TIP	Timpagrande	83.43	309	P	P	09 47 16.8	+0.7
TIP				IAmb	IAmb	09 47 18.4	
	comp=Z,235nm,1.2s						
OKC	Ostrava-Krasne	83.46	320	eP	P	09 47 16.4	+0.5
OKC				e		09 47 36.7	
OKC				e	S	09 57 29.0	-1.8
OKC	Ostrava-Krasne	83.46	320	eP	P	09 47 16.4	+0.5
OKC				epP	pP	09 47 36.7	-1.3
OKC				eSKS	S	09 57 29.0	-1.8
RICI	Ricice	83.51	314	i P	P	09 47 15.6	-0.8
ARCES	ARCESS Array B	83.53	340	P	P	09 47 16.6	+0.7
	comp=Z,20nm,0.4s,baz=104,slow=4.5,SNR=173						
ARCES				pP	pP	09 47 37.2	-0.8
	comp=Z,96nm,0.9s,baz=96,slow=3.8,SNR=9.9						
ARCES				PP	PP	09 50 29.2	0.0
	comp=Z,15nm,1.0s,baz=104,slow=5.9,SNR=3.3						
ARCES				LR	LR	10 30 08.5	
	comp=Z,390nm,18.8s,baz=100,slow=40						
ARCES	ARCESS Array B	83.53	340	P	P	09 47 16.0	+0.1
ARCES				IAmb	IAmb	09 47 38.3	
	comp=Z,182nm,1.1s						
MAKA	Makarska	83.57	313	i P	P	09 47 15.4	-1.2
MPLH	Magyarpolny	83.57	317	eP	P	09 47 17.5	+0.9
BLY	Banja Luka	83.58	315	⇓iP	P	09 47 17.2	+0.5
MATE	Matera	83.59	311	⇓P	P	09 47 17.3	+0.6
MGRS	Mrkonjic Grad	83.62	314	⇓iP	P	09 47 17.0	0.0
JAVC	Velka Javorina	83.66	319	⇓iP	P	09 47 18.4	+1.3
JAVC				epP	pP	09 47 38.3	-0.9
JAVC				eS	S	09 57 30.2	-2.8
SMOL	Smolenice	83.78	319	eP	P	09 47 18.4	+0.8
SMOL				pmax	pmax		
	comp=Z,70nm,1.7s						
SMOL	Smolenice	83.78	319	eP	P	09 47 18.4	+0.8
MRAK	Mrakovica	83.81	315	⇓iP	P	09 47 18.0	+0.1
AAL	Aland	83.83	330	eP	P	09 47 17.8	+0.2
MORC	Moravsky Berou	83.84	320	P	P	09 47 18.2	+0.3
MORC				pmax	pmax		
	comp=Z,155nm,1.1s						
MORC	Moravsky Berou	83.84	320	⇓iP	P	09 47 18.6	+0.6
MORC				epP	pP	09 47 38.8	-1.3
MORC				eS	S	09 57 32.8	-2.0
MORC	Moravsky Berou	83.84	320	P	P	09 47 18.2	+0.3
MORC				IAmb	IAmb	09 47 39.9	

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      comp=Z,155nm,1.1s
MODS  Modra-Piesok      83.87 318  eP        P        09 47 17.8 -0.3
MODS                               e                  09 47 37.6
MODS                                pmax     pmax
      comp=Z,271nm,1.4s
MODS  Modra-Piesok      83.87 318  eP        P        09 47 17.8 -0.3
MODS                               e                  09 47 37.6
MOSL  Moslavina         83.97 316  i P       P        09 47 18.1 -0.5
ZST   Bratislava        83.97 318  eP        P        09 47 19.2 +0.6
ZST                                e                  09 47 39.4
ZST                                 pmax     pmax
      comp=Z,669nm,1.3s
ZST   Bratislava        83.97 318  eP        P        09 47 19.2 +0.6
ZST                                e                  09 47 39.4
HVAR  Hvar              83.98 313  i P       P        09 47 17.9 -0.8
BEHE  Becsehely         84.03 316  eP        P        09 47 19.6 +0.7
BEHE  Becsehely         84.03 316⇓iP         P        09 47 19.8 +0.9
KIJV  Kijevo            84.08 314  i P       P        09 47 18.1 -1.1
KALN  Kalnik            84.22 316  i P       P        09 47 19.6 -0.4
SOP   Sopron            84.28 318  eP        P        09 47 20.6 +0.4
KRLC  Kraliky           84.36 320  eP        P        09 47 21.4 +0.8
KRLC                               e                  09 47 42.0
KRLC  Kraliky           84.36 320  eP        P        09 47 21.4 +0.8
KRLC                               epP       pP       09 47 42.0 -0.7
KOGS  Kog               84.39 316  i P       P        09 47 21.4 +0.7
SGRT  San Giovanni R    84.39 312   P        P        09 47 21.1 +0.1
SGRT                                IAmb     IAmb     09 47 22.2
      comp=Z,152nm,1.0s
GKP   Gorka Klasztor    84.41 323  eP        P        09 47 21.1 +0.5
GKP                                epP       pP       09 47 41.1 -1.7
GKP   Gorka Klasztor    84.41 323  eP        P        09 47 20.9 +0.3
VRAC  Vranov            84.41 319⇓iP         P        09 47 21.2 +0.4
VRAC                               epP       pP       09 47 41.2 -1.7
VRAC                               eS        S        09 57 38.4 -2.0
LOBO  Lobor             84.49 316  i P       P        09 47 21.3  0.0
KRUC  Moravsky          84.52 319⇓iP         P        09 47 21.6 +0.3
KRUC                               epP       pP       09 47 41.7 -1.8
KRUC                               eS        S        09 57 40.7 -0.7
ZAG   Zagreb            84.52 316⇓iP         P        09 47 21.7 +0.3
ZAG   Zagreb            84.52 316   P        P        09 47 22.1 +0.7
PTJ   Puntijarka        84.54 316   P        P        09 47 21.6  0.0
MORI  Morici            84.57 314  i P       P        09 47 20.6 -1.0
UDBI  Udbina            84.58 314  i P       P        09 47 21.2 -0.6
ZIRJ  Zirje             84.60 314  i P       P        09 47 20.8 -1.0
DPC   Dobruska-Polom    84.68 320  eP        P        09 47 22.9 +0.7
DPC                                e         SKSac    09 57 39.9 +0.9
DPC                                 MLR      MLR
      comp=Z,400nm,21.9s
DPC   Dobruska-Polom    84.68 320  eP        P        09 47 22.9 +0.7
DPC                                epP       pP       09 47 43.1 -1.2
DPC                                eSKS      SKSac    09 57 39.9 +0.9
DPC                                 AMS      AMS      10 25 10.0
      comp=Z,400nm,21.9s
PLIT  Plitvice          84.70 315  i P       P        09 47 25.0 +2.5
KSP   Ksiaz             84.74 321  eP        P        09 47 23.4 +0.9
KSP                                epP       pP       09 47 43.4 -1.2
OSTC  Ostas             84.77 321  eP        P        09 47 23.1 +0.5
OSTC                               ex        x        09 47 44.1
OSTC                               eSKS      SKSac    09 57 34.4 -5.1
OSTC                                AMS      AMS      10 25 10.0
      comp=Z,500nm,29.6s
CONA  Conrad Observa    84.77 318  i P       P        09 47 22.7 -0.1
      comp=Z,19nm,1.1s,SNR=29
CONA                               eP        pP       09 47 43.6 -1.4
      comp=Z,24nm,1.0s
CONA                               eS        SKSac    09 57 37.6 -2.3
      comp=Z,2.2nm,1.1s
OZLJ  Ozalj             84.86 316  i P       P        09 47 20.0 -3.1
CHVC  Chvalec           84.87 321  eP        P        09 47 23.9 +0.8
CHVC                               epP       pP       09 47 44.5 -0.8
CHVC                                AMS      AMS      10 25 30.0
      comp=Z,400nm,24.0s
CRES  Cresnjev          84.89 316⇓iP         P        09 47 23.8 +0.5
UPC   Upice             84.89 320  eP        P        09 47 23.8 +0.6
UPC                                e                  09 47 44.6
UPC                                e         SKSac    09 57 43.9 +3.6
UPC                                 MLR      MLR
      comp=Z,600nm,33.9s
UPC   Upice             84.89 320  eP        P        09 47 23.8 +0.6
UPC                                epP       pP       09 47 44.6 -0.8
UPC                                eSKS      SKSac    09 57 43.9 +3.6
UPC                                 AMS      AMS      10 25 20.0
      comp=Z,600nm,33.9s
GROS  Grobnik           84.90 316  i P       P        09 47 23.9 +0.5
GROS                               i pP      pP       09 47 43.8 -1.8
ARSA  Arzberg           84.95 317  i P       P        09 47 24.3 +0.7
      comp=Z,47nm,1.1s,SNR=54
ARSA                               eP        pP       09 47 44.8 -1.0
      comp=Z,46nm,1.1s
ARSA                               eS        SKSac    09 57 41.1 +0.2
      comp=Z,4.4nm,1.1s
UPP   Uppsala           84.96 330  eP        P        09 47 23.8 +0.5
BOJS  Bojanci           85.01 315  i P       P        09 47 24.3 +0.5
BOJS                               epP       pP       09 47 44.4 -1.6
BOJS                               eS        S        09 57 43.2 -3.2
BOJS                               e                  09 58 14.7
BOJS                               e                  10 10 31.2
DUGI  Dugi Otok         85.04 314  i P       P        09 47 22.7 -1.4
VNDA  Vanda             85.06 169   P        P        09 47 24.4 +0.9
      comp=Z,30nm,0.6s,baz=301,slow=5.2,SNR=289
VNDA                                PKKP     PKKPdf   10 05 26.7 +1.4
      comp=Z,2.4nm,0.8s,baz=71,slow=3.0,SNR=4.6
VNDA                                LR       LR       10 19 24.4
      comp=Z,183nm,21.9s,baz=314,slow=31
VNDA  Vanda             85.06 169   P        P        09 47 24.0 +0.6
VNDA                                IAmb     IAmb     09 47 25.9
      comp=Z,324nm,1.6s
TREC  Trest             85.13 319  eP        P        09 47 25.3 +0.9
TREC                               e                  09 47 45.7
TREC                                MLR      MLR
      comp=Z,400nm,26.3s
TREC  Trest             85.13 319  eP        P        09 47 25.3 +0.9
TREC                               epP       pP       09 47 45.7 -0.9
TREC                                AMS      AMS      10 23 20.0
      comp=Z,400nm,26.3s
NVLJ  Novalja           85.22 314  i P       P        09 47 24.0 -0.9
SOKA  Soboth            85.24 317  i P       P        09 47 25.8 +0.7
      comp=Z,210nm,1.2s,SNR=140
SOKA                               eP        pP       09 47 46.0 -1.3
      comp=Z,214nm,1.1s
SOKA                               eS        SKSac    09 57 43.0 +0.2
      comp=Z,14nm,1.9s
RABC  Rab               85.29 315  i P       P        09 47 24.6 -0.7
RIY   Rijeka            85.54 315⇓iP         P        09 47 26.1 -0.4
RIY   Rijeka            85.54 315   P        P        09 47 24.7 -1.8
LJU   Ljubljana         85.55 316⇓iP         P        09 47 27.4 +0.8
LJU   Ljubljana         85.55 316  i P       P        09 47 27.4 +0.8
LJU                                epP       pP       09 47 47.3 -1.4
LJU                                eS        S        09 57 50.1 -1.7
OBKA  Obir              85.56 316  i P       P        09 47 27.2 +0.5
      comp=Z,129nm,1.4s,SNR=43
OBKA                               eP        pP       09 47 47.4 -1.6
      comp=Z,162nm,1.3s
OBKA                               eS        SKSac    09 57 46.1 +1.2
      comp=Z,2.9nm,0.8s
CEY   Cerknica          85.60 316⇓iP         P        09 47 26.8 -0.1
SMRN  Sveta Marina      85.75 315  i P       P        09 47 27.0 -0.5
PRU   Pruhonice         85.79 320  eP        P        09 47 28.1 +0.4
PRU                                e                  09 47 47.8
PRU                                e         SKSac    09 57 49.3 +3.3
PRU   Pruhonice         85.79 320  eP        P        09 47 28.1 +0.4
PRU                                epP       pP       09 47 47.8 -2.1
PRU                                eSKS      SKSac    09 57 49.3 +3.3
PRU                                 AMS      AMS      10 19 30.0
      comp=Z,400nm,35.1s
PVCC  Panska Ves        85.81 320  eP        P        09 47 28.6 +0.8
PVCC                               e                  09 47 49.4
PVCC  Panska Ves        85.81 320  eP        P        09 47 28.6 +0.8
PVCC                               epP       pP       09 47 49.4 -0.6
MOA   Molln             85.84 318  i P       P        09 47 28.0  0.0
      comp=Z,18nm,0.9s,SNR=24
MOA                                eP        pP       09 47 48.4 -1.8
      comp=Z,42nm,1.0s
MOA                                eS        SKSac    09 57 44.8 -1.6
      comp=Z,6.2nm,1.5s
CKRC  Cesky Krumlov     85.87 319  eP        P        09 47 28.7 +0.6
CKRC                               epP       pP       09 47 48.7 -1.6
CKRC                               eSKS      SKSac    09 57 38.4 -8.2
PRA   Prague            85.87 320  eP        P        09 47 28.8 +0.8
PRA                                e                  09 47 48.9
PRA   Prague            85.87 320  eP        P        09 47 28.8 +0.8
PRA                                epP       pP       09 47 48.9 -1.3
BSD   Bornholm Skovb    85.94 325  i P       P        09 47 28.0 -0.3
BSD                                i                  09 47 48.4
SBA   Scott Base        86.15 169   P        P        09 47 30.8 +1.9
SBA                                 pmax     pmax
      comp=Z,113nm,1.0s
SBA   Scott Base        86.15 169   P        P        09 47 30.8 +1.9
SBA                                 IAmb     IAmb     09 47 31.6
      comp=Z,112nm,0.9s
AQU   L'Aquila          86.17 312⇓iP         P        09 47 30.1 +0.3
MYKA  Terra Mystica     86.19 317  i P       P        09 47 30.2 +0.4
      comp=Z,131nm,1.7s,SNR=31
MYKA                               eP        pP       09 47 51.4 -0.6
      comp=Z,87nm,0.9s
MYKA                               eS        SKSac    09 57 47.8 -1.0
      comp=Z,5.2nm,1.0s
BRG   Berggiesshubel    86.23 321  eP        P        09 47 30.6 +0.8
      comp=Z,213nm,1.5s,baz=92,slow=4.8
BRG                                epP       pP       09 47 50.5 -1.6
BRG   Berggiesshubel    86.23 321⇓iP         P        09 47 30.8 +1.0
BRG                                 Amp               09 47 32.2
      comp=Z,91nm,1.1s
BRG                                 pP       pP       09 47 51.1 -0.9
BRG                                 Amp               09 47 52.9
      comp=Z,96nm,1.1s
BRG                                 PP       PP       09 50 50.6 -0.9
BRG                                 Amp               09 50 55.1
      comp=Z,17nm,1.2s
BRG   Berggiesshubel    86.23 321   S        S        09 57 59.0 +0.8
ROBS  Robic             86.27 316  i P       P        09 47 30.1  0.0
ROBS                               epP       pP       09 47 50.0 -2.3
ROBS                               eS        S        09 57 57.4 -1.4
ROBS                               e                  09 58 29.3
GEC2  GERESS Array S    86.27 319  eP        P        09 47 30.8 +0.6
      comp=Z,309nm,1.4s,baz=92,slow=4.8
GEC2                               epP       pP       09 47 50.7 -1.8
GEC2  GERESS Array S    86.27 319   P        P        09 47 30.8 +0.6
GEC2                                IAmb     IAmb     09 47 52.8
      comp=Z,284nm,1.3s
GERES GERESS Array B    86.27 319   P        P        09 47 30.8 +0.6
      comp=Z,66nm,1.1s,baz=98,slow=5.5,SNR=185
GERES                               pP       pP       09 47 51.1 -1.3
      comp=Z,93nm,1.1s,baz=98,slow=5.5,SNR=13
GERES                               LR       LR       10 32 20.5
      comp=Z,79nm,19.5s,baz=101,slow=40
GERES GERESS Array B    86.27 319   P        P        09 47 30.5 +0.3
KHC   Kasperske Hory    86.37 319  eP        P        09 47 30.7 +0.1
KHC                                e                  09 47 51.6
KHC                                e                  09 48 02.0
KHC                                e         SKSac    09 57 45.7 -4.0
KHC                                 MLR      MLR
      comp=Z,400nm,19.9s
KHC   Kasperske Hory    86.37 319  eP        P        09 47 30.7 +0.1
KHC                                epP       pP       09 47 51.6 -1.2
KHC                                esP       sP       09 48 02.0 +0.3
KHC                                ex        x        09 48 12.0
KHC                                eSKS      SKSac    09 57 45.7 -4.0
KHC                                 AMS      AMS      10 23 40.0
      comp=Z,400nm,19.9s
NRCA  Norcia            86.40 313   P        P        09 47 31.2 +0.2
NRCA                                IAmb     IAmb     09 47 53.2
      comp=Z,208nm,1.2s
KBA   Koelnbreinsper    86.42 317  i P       P        09 47 30.8 -0.3
      comp=Z,59nm,1.2s,SNR=29
KBA                                eP        pP       09 47 48.7 -4.6
      comp=Z,79nm,1.2s
KBA                                eS        SKSac    09 57 54.3 +3.9
      comp=Z,7.9nm,1.4s
RUE   Ruedersdorf       86.43 322  eP        P        09 47 31.7 +1.0
RUE   Ruedersdorf       86.43 322  eP        P        09 47 31.5 +0.8
      comp=Z,606nm,1.4s,baz=92,slow=4.8
RUE                                epP       pP       09 47 51.8 -1.1
FBE   Freiberg          86.61 321  eP        P        09 47 32.6 +1.0
      comp=Z,259nm,1.5s,baz=92,slow=4.8
FBE                                epP       pP       09 47 52.4 -1.5
DEL   Delary            86.62 326  i P       P        09 47 31.0 -0.6
ZOU   Zoufplan          86.65 316   P        P        09 47 32.3 +0.1
ZOU                                 IAmb     IAmb     09 47 33.8
      comp=Z,246nm,1.4s
RGN   Rugen             86.82 324  eP        P        09 47 33.1 +0.5
RGN   Rugen             86.82 324  eP        P        09 47 33.6 +1.0
      comp=Z,441nm,1.2s,baz=92,slow=4.8
RJOB  Jochberg          86.82 318  eP        P        09 47 32.6 -0.3
      comp=Z,75nm,1.2s,baz=92,slow=4.8
RJOB                               epP       pP       09 47 52.9 -2.3
WET   Wettzell          86.83 319  eP        P        09 47 33.4 +0.5
      comp=Z,172nm,1.3s,baz=92,slow=4.8
WET                                epP       pP       09 47 53.4 -1.6
CLL   Collm             86.85 321⇓iP         P        09 47 33.0 +0.2
CLL                                i *PP     pP       09 47 53.0 -2.0
CLL                                eS        S        09 58 00.0 -4.1
CLL                                 pmax     pmax
      comp=Z,133nm,1.3s
CLL   Collm             86.85 321⇓iP         P        09 47 33.0 +0.2
      comp=Z,133nm,1.3s
CLL                                i pP      pP       09 47 53.0 -2.0
      comp=Z,150nm,1.3s
CLL                                i                  09 47 58.0
CLL                                ePP       PP       09 50 52.0 -4.5
CLL                                eS        S        09 58 00.0 -4.1
      comp=N,600nm,28.7s
CLL                                eS        S        09 58 00.0 -4.1
      comp=E,300nm,26.7s
CLL                                e                  09 58 45.0
CLL                                ePS       PnS      09 59 08.0 -5.7
CLL                                eSS       SS       10 03 48.0 +0.2
CLL                                eSSS      SSS      10 07 18.0
CLL                                eSKKPdf   SKKPdf   10 08 45.0 -3.7
CLL                                eSSSS              10 10 30.0
CLL   Collm             86.85 321  eP        P        09 47 33.2 +0.4
      comp=E,133nm,1.3s,baz=92,slow=4.8
CLL                                epP       pP       09 47 53.2 -1.8
CLL   Collm             86.85 321   P        P        09 47 33.4 +0.5
ABTA  Abfaltersbach     86.98 317  i P       P        09 47 33.4 -0.3
      comp=E,64nm,1.2s,SNR=26
ABTA                               eP        pP       09 47 53.6 -2.3
      comp=E,78nm,1.1s
ABTA                               eP        PP       09 50 57.4 -0.4
      comp=E,24nm,1.4s
ABTA                               eS        SKSac    09 57 57.4 +3.7
      comp=E,2.9nm,1.2s
TANN  Tannenbergstha    87.15 320  eP        P        09 47 35.0 +0.6
      comp=E,163nm,1.7s,baz=92,slow=4.8
TANN                               epP       pP       09 47 54.8 -1.8
NKC   Novy Kostel       87.15 320  eP        P        09 47 34.8 +0.4
NKC                                e                  09 47 55.1
NKC                                e                  09 57 54.8
NKC                                 MLR      MLR
      comp=Z,300nm,23.2s
NKC   Novy Kostel       87.15 320  eP        P        09 47 34.8 +0.4
NKC                                epP       pP       09 47 55.1 -1.5
NKC                                eSKS      SKSac    09 57 54.8 +0.4
NKC                                 AMS      AMS      10 25 10.0
      comp=Z,300nm,23.2s
WERN  Wernitzgruen      87.20 320  eP        P        09 47 35.3 +0.7
      comp=Z,78nm,1.2s,baz=92,slow=4.8
WERN                               epP       pP       09 47 55.6 -1.3
GUNZ  Gunzen            87.23 320  eP        P        09 47 35.5 +0.7
      comp=Z,184nm,1.6s,baz=92,slow=4.8
GUNZ                               epP       pP       09 47 55.6 -1.4
WERD  Werda             87.25 320  eP        P        09 47 35.4 +0.6
      comp=Z,97nm,1.2s,baz=92,slow=4.8
WERD                               epP       pP       09 47 55.4 -1.7
ROTZ  Rotzenmuhle       87.29 320  eP        P        09 47 35.9 +0.9
      comp=Z,28nm,1.1s,baz=92,slow=4.8
ROTZ                               epP       pP       09 47 55.9 -1.4
MANZ  Manzenberg        87.36 320  eP        P        09 47 36.4 +1.0
      comp=Z,48nm,1.2s,baz=92,slow=4.8
MANZ                               epP       pP       09 47 56.5 -1.2
COP   Copenhagen        87.39 326  i P       P        09 47 36.0 +0.7
COP                                i                  09 47 56.0
WTTA  Wattenberg        87.59 317  i P       P        09 47 36.6 -0.1
      comp=Z,115nm,1.2s,SNR=40
WTTA                               eP        pP       09 47 57.0 -2.0
      comp=Z,82nm,0.9s
WTTA                               eP        PP       09 50 58.0 -4.9
      comp=Z,18nm,1.2s
WTTA                               eS        S        09 58 11.9  0.0
      comp=Z,11nm,1.1s
NEUB  Neuenburg         87.61 321  eP        P        09 47 37.1 +0.6
      comp=Z,274nm,1.2s,baz=92,slow=4.8
NEUB                               epP       pP       09 47 57.4 -1.4
WATA  Walderalm         87.64 317  i P       P        09 47 36.6 -0.3
      comp=Z,128nm,1.6s,SNR=24
WATA                               eP        pP       09 47 56.8 -2.4
      comp=Z,94nm,1.2s
WATA                               eS        S        09 58 14.0 +1.8
      comp=Z,13nm,1.5s
MOX   Moxa              87.70 320  eP        P        09 47 37.8 +0.8
      comp=Z,196nm,1.5s,baz=92,slow=4.8
MOX                                epP       pP       09 47 57.6 -1.7
MOX                                eL        L        10 40 24.1
      comp=Z,265nm,19.8s
SPB2  Spitsbergen Ar    87.73 348   P        P        09 47 37.1 +0.5
SPITS Spitsbergen Ar    87.73 348   P        P        09 47 37.1 +0.5
SPITS                               pmax     pmax
      comp=Z,406nm,1.3s
HSPB  Hornsund (broa    87.78 347  eP        P        09 47 36.7 -0.1
HSPB                               epP       pP       09 47 56.1 -2.9
FUR   Furstenfeldbru    87.86 318  eP        P        09 47 37.9 +0.1
      comp=Z,186nm,1.4s,baz=92,slow=4.8
FUR                                epP       pP       09 47 57.9 -2.2
SQTA  Sankt Quirin      87.88 317  i P       P        09 47 38.0  0.0
      comp=Z,70nm,1.0s,SNR=33
SQTA                               eP        pP       09 47 58.4 -1.9
      comp=Z,66nm,0.8s
SQTA                               eS        S        09 58 15.8 +1.2
      comp=Z,12nm,1.4s
GRF   Grafenberg Arr    87.93 320  eP        P        09 47 39.1 +1.0
      comp=Z,233nm,1.3s,baz=92,slow=4.8
GRF                                epP       pP       09 47 59.2 -1.1
GRF                                eL        L        10 34 58.1
      comp=Z,283nm,19.4s
GRFO  Grafenberg        87.93 320   P        P        09 47 39.3 +1.2
GRFO                                pmax     pmax
      comp=Z,188nm,1.2s
GRFO  Grafenberg        87.93 320   P        P        09 47 39.3 +1.2
GRFO                                IAmb     IAmb     09 47 40.5
      comp=Z,188nm,1.2s
MOTA  Moosalm           87.96 317  i P       P        09 47 38.2 -0.2
      comp=Z,90nm,1.0s,SNR=36
MOTA                               eP        pP       09 47 58.1 -2.7
      comp=Z,145nm,1.1s
MOTA                               eS        SKSac    09 58 00.1 +0.3
      comp=Z,5.5nm,1.5s
FLTG  Flechtingen       87.98 322  eP        P        09 47 38.3 +0.1
      comp=Z,120nm,1.1s,baz=92,slow=4.8
FLTG                               epP       pP       09 47 58.5 -2.0
NC405 NORSAR Array S    87.98 331   P        P        09 47 37.8 -0.3
NC405                               IAmb     IAmb     09 47 58.8
      comp=Z,191nm,1.0s
ZCCA  Zocca             87.99 314   P        P        09 47 40.3 +1.8
ZCCA                                IAmb     IAmb     09 47 45.3
      comp=Z,159nm,1.0s
NC602 NORSAR Array S    88.05 331   P        P        09 47 38.4  0.0
RETA  Reutte            88.19 317  i P       P        09 47 39.7 +0.2
      comp=Z,97nm,1.1s,SNR=49
RETA                               eP        pP       09 47 60.0 -1.8
      comp=Z,107nm,1.1s
RETA                               eS        SKSac    09 58 01.1 +0.1
      comp=Z,13nm,1.6s
FETA  Feichten          88.21 317  i P       P        09 47 39.9 +0.3
      comp=Z,61nm,1.2s,SNR=30
FETA                               eP        pP       09 48 00.3 -1.7
      comp=Z,88nm,1.2s
FETA                               eS        SKSac    09 57 59.4 -1.9
      comp=Z,12nm,1.7s
NB2   NORSAR Subarra    88.22 331   P        P        09 47 39.3  0.0
      comp=Z,166nm,1.4s,baz=96,slow=4.8
NB2   NORSAR Subarra    88.22 331   P        P        09 47 39.3  0.0
      baz=96,slow=4.8
NOA   NORSAR Array B    88.22 331   P        P        09 47 39.3  0.0
      comp=Z,43nm,1.1s,baz=94,slow=4.9,SNR=38
NOA                                 pP       pP       09 48 00.1 -1.4
      comp=Z,21nm,0.9s,baz=77,slow=7.9,SNR=13
NOA                                 PP       PP       09 51 08.5 +1.2
      comp=Z,8.2nm,1.0s,baz=97,slow=7.8,SNR=3.4
NOA                                 LR       LR       10 31 48.7
      comp=Z,346nm,21.6s,baz=75,slow=39
ASSE  Asse, Remlinge    88.32 322  eP        P        09 47 40.5 +0.8
      comp=Z,268nm,1.4s,baz=92,slow=4.8
ASSE                               epP       pP       09 48 00.8 -1.3
CLZ   Clausthal         88.50 322  eP        P        09 47 41.7 +0.9
      comp=Z,407nm,1.4s,baz=92,slow=4.8
CLZ                                epP       pP       09 48 02.0 -1.1
BSEG  Bad Segeberg      88.56 324  eP        P        09 47 42.0 +1.1
      comp=Z,424nm,1.5s,baz=92,slow=4.8
BSEG                               epP       pP       09 48 02.2 -1.0
UBR   Ueberruh          88.64 317  eP        P        09 47 41.7 +0.1
      comp=Z,91nm,1.3s,baz=92,slow=4.8
NRDL  Niedersach Rie    88.67 322  eP        P        09 47 42.8 +1.4
      comp=Z,495nm,1.4s,baz=92,slow=4.8
NRDL                               epP       pP       09 48 02.9 -0.9
KBS   Kingsbay          88.68 349ceP         P        09 47 41.0  0.0
KBS                                 pmax     pmax
      comp=Z,85nm,1.3s
KBS   Kingsbay          88.68 349   P        P        09 47 41.0  0.0
KBS                                 IAmb     IAmb     09 48 03.2
      comp=Z,173nm,1.3s
UBBA  Unterbreizbach    88.73 321  eP        P        09 47 42.7 +1.0
      comp=Z,158nm,1.4s,baz=92,slow=4.8
UBBA                               epP       pP       09 48 02.6 -1.4
GTTG  Gottingen         88.75 321  eP        P        09 47 42.8 +0.9
      comp=Z,358nm,1.3s,baz=92,slow=4.8
GTTG                               epP       pP       09 48 03.1 -1.1
DAVA  Damuels           88.79 317  i P       P        09 47 43.1 +0.7
      comp=Z,185nm,1.2s,SNR=41
DAVA                               eP        pP       09 48 03.3 -1.4
      comp=Z,210nm,1.1s
DAVA                               eP        PP       09 51 13.2 +0.8
      comp=Z,28nm,1.2s
DAVA                               eS        SKSac    09 58 02.4 -2.3
      comp=Z,6.3nm,1.1s
KONO  Kongsberg         89.00 329   P        P        09 47 43.6 +0.7
KONO                                pmax     pmax
      comp=Z,84nm,1.0s
KONO  Kongsberg         89.00 329   P        P        09 47 43.6 +0.7
KONO                                IAmb     IAmb     09 48 05.3
      comp=Z,84nm,1.0s
MSSA  Maissana          89.04 314   P        P        09 47 43.0 -0.5
MSSA                                IAmb     IAmb     09 47 44.5
      comp=Z,229nm,1.5s
TUE   Stuetta           89.15 316   P        P        09 47 44.4 +0.2
TUE                                 IAmb     IAmb     09 48 08.9
      comp=Z,96nm,1.0s
KEST  Kesra             89.21 306   P        P        09 47 46.1 +1.7
      comp=Z,123nm,0.9s,baz=56,slow=0.6,SNR=110
KEST                                LR       LR       10 32 06.8
      comp=Z,167nm,21.1s,baz=18,slow=38
KEST  Kesra             89.21 306   P        P        09 47 46.2 +1.7
      SNR=30
KEST  Kesra             89.21 306   P        P        09 47 45.3 +0.8
MUD   Monsted U'grnd    89.23 326  i P       P        09 47 44.4 +0.5
MUD                                i                  09 48 05.0
STU   Stuttgart         89.25 319  eP        P        09 47 44.9 +0.6
      comp=Z,903nm,2.0s,baz=92,slow=4.8
STU                                epP       pP       09 48 04.7 -1.9
TNS   Taunus Mts        89.72 320  eP        P        09 47 47.5 +1.0
      comp=Z,289nm,1.2s,baz=92,slow=4.8
TNS                                epP       pP       09 48 07.7 -1.2
BFO   Black Forest      89.83 318   P        P        09 47 47.4 +0.3
BFO                                 pmax     pmax
      comp=Z,80nm,0.9s
BFO   Black Forest      89.83 318  eP        P        09 47 47.3 +0.2
      comp=Z,243nm,1.7s,baz=92,slow=4.8
BFO                                epP       pP       09 48 07.4 -2.0
BFO   Black Forest      89.83 318   P        P        09 47 47.4 +0.3
BFO                                 IAmb     IAmb     09 48 08.8
      comp=Z,80nm,0.9s
IBBN  Ibbenburen        90.11 322  eP        P        09 47 49.3 +1.1
      comp=Z,396nm,1.4s,baz=92,slow=4.8
IBBN                               epP       pP       09 48 09.5 -1.0
BUG   Bochum--Univer    90.44 321  eP        P        09 47 50.7 +1.0
      comp=Z,257nm,1.4s,baz=92,slow=4.8
BUG                                epP       pP       09 48 11.0 -1.1
SENIN Lac Senin/Sane    90.57 316   P        P        09 47 51.1 +0.3
SENIN                               IAmb     IAmb     09 48 14.0
      comp=Z,81nm,0.8s
AHRW  Bad Neuenahr-A    90.59 320  eP        P        09 47 51.7 +1.2
      comp=Z,179nm,1.3s,baz=92,slow=4.8
AHRW                               epP       pP       09 48 12.0 -0.9
ECH   Echery            90.61 318   P        P        09 47 51.0 +0.3
ECH                                 pmax     pmax
      comp=Z,118nm,1.0s
ECH   Echery            90.61 318   P        P        09 47 51.0 +0.3
ECH                                 IAmb     IAmb     09 48 13.1
      comp=Z,118nm,1.0s
QSPA  South Pole Qui    90.70 180   P        P        09 47 51.6 +0.8
QSPA                                IAmb     IAmb     09 47 52.7
      comp=Z,68nm,0.7s
ABSA  Djebel Ababsia    90.71 306   P        P        09 47 53.2 +1.6
CMAH  Djebel Manchou    90.75 306   P        P        09 47 53.2 +1.5
BTNL  Ternell           91.19 320  dP        P        09 47 54.0 +0.7
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	comp=Z,66nm,1.1s						
BTNL				*d*pP	pP	09 48 13.9	-1.8
WLF	Walferdange	91.22	320	*d*P	P	09 47 54.8	+1.2
	comp=Z,110nm,1.1s						
WLF				*d*pP	pP	09 48 14.7	-1.1
WLF	Walferdange	91.22	320	*e*P	P	09 47 54.7	+1.2
	comp=Z,234nm,1.3s,baz=92,slow=4.8						
WLF				*e*pP	pP	09 48 14.7	-1.1
MEM	Membach	91.27	320	*d*P	P	09 47 54.3	+0.6
	comp=Z,53nm,1.0s						
MEM				*d*pP	pP	09 48 14.6	-1.4
BHOU	Houvegnez	91.28	320	*d*P	P	09 47 55.1	+1.3
	comp=Z,29nm,1.1s						
BHOU				*d*pP	pP	09 48 15.0	-1.1
CKFL	Kef-Lekhel	91.32	306	P	P	09 47 56.0	+1.6
BEBN	Eben Emael	91.47	321	*d*P	P	09 47 55.2	+0.6
BEBN				*d*pP	pP	09 48 15.4	-1.5
CASM	Ain Smara	91.51	306	P	P	09 47 56.9	+1.7
CTEI	Djebel Teioual	91.59	306	P	P	09 47 57.2	+1.5
BCLA	Clavier	91.73	320	*d*P	P	09 47 56.7	+0.9
	comp=Z,43nm,1.1s						
BCLA				*d*pP	pP	09 48 16.8	-1.3
RCHB	Rochefort	91.79	320	*d*P	P	09 47 56.6	+0.5
	comp=Z,33nm,1.1s						
RCHB				*d*pP	pP	09 48 16.8	-1.6
BGES	Gesves	91.87	320	*d*P	P	09 47 57.3	+0.8
BGES				*d*pP	pP	09 48 17.2	-1.6
DFRA	Djebel Bou Aff	91.99	306	P	P	09 47 59.3	+1.8
BMRD	Maredsous	92.08	320	*d*P	P	09 47 58.4	+0.9
	comp=Z,38nm,1.1s						
BMRD				*d*pP	pP	09 48 18.6	-1.2
DOU	Dourbes	92.20	320	*d*P	P	09 47 58.3	+0.3
	comp=Z,54nm,1.1s						
DOU				*d*pP	pP	09 48 18.7	-1.7
SNF	Seneffe	92.37	320	*d*P	P	09 47 59.7	+1.0
	comp=Z,64nm,1.1s						
SNF				*d*pP	pP	09 48 19.8	-1.3
SSB	Saint Sauveur	92.55	315	P	P	09 48 00.2	+0.4
SSB				pmax	pmax		
	comp=Z,108nm,1.0s						
SSB	Saint Sauveur	92.55	315	P	P	09 48 00.2	+0.4
SSB				IAmb	IAmb	09 48 21.8	
	comp=Z,108nm,1.0s						
NOR	Nord	92.90	352	*i* P	P	09 47 59.4	-1.2
CLF	Chambon-Foret	93.90	318	P	P	09 48 06.4	+0.6
A21K	Barrow	93.91	18	P	P	09 48 06.7	+1.3
	baz=284,SNR=12						
SNAA	Sanae	94.40	198	P	P	09 48 09.2	+1.5
SNAA	Sanae	94.40	198	*ce*P	P	09 48 08.9	+1.1
SNAA				pmax	pmax		
	comp=Z,53nm,1.5s						
SNAA	Sanae	94.40	198	P	P	09 48 08.6	+0.8
GCSA	Galena City Sc	95.37	25	P	P	09 48 13.6	+1.4
	baz=283						
DAG	Danmarks Havn	95.39	348	*i* P	P	09 48 11.4	-0.7
VNA2	Neumayer--Watz	96.00	198	P	P	09 48 16.5	+1.5
TTA	Tatalina	96.17	26	P	P	09 48 17.1	+1.1
	baz=284,SNR=9.6						
IMAR	Indian Mountai	96.32	23	P	P	09 48 17.3	+0.7
VNA1	Neumayer--Stat	96.35	199	P	P	09 48 18.3	+1.7
J20K	Nowinta River	96.66	25	P	P	09 48 19.5	+1.4
	baz=286,SNR=22						
H21K	Melozitna Rive	96.79	23	P	P	09 48 20.1	+1.4
	baz=287						
H21K	Melozitna Rive	96.79	23	P	P	09 48 20.1	+1.4
H21K				IAmb	IAmb	09 48 42.1	
	comp=Z,59nm,0.9s						
TORD	Torodi Ar. Bea	96.85	283	P	P	09 48 20.1	+0.1
	comp=Z,13nm,0.9s,baz=83,slow=5.2,SNR=63						
TORD				PP	PP	09 52 17.8	+1.4
	comp=Z,11nm,1.0s,baz=82,slow=8.1,SNR=9.0						
TORD				PKKPbc	PKKPbc	10 05 02.3	+0.7
	comp=Z,1.8nm,0.8s,baz=305,slow=3.4,SNR=4.7						
TORD				LR	LR	10 29 36.8	
	comp=Z,614nm,20.9s,baz=70,slow=34						
TORD	Torodi Ar. Bea	96.85	283	P	P	09 48 19.4	-0.6
L19K	White Mountain	96.87	27	P	P	09 48 20.5	+1.3
	baz=285,SNR=10						
K20K	Telida	96.91	26	P	P	09 48 20.7	+1.4
	baz=286,SNR=38						
TOLK	Toolik Lake Re	97.02	20	P	Pdif	09 48 20.9	+1.1
	baz=290,SNR=15						
TOLK	Toolik Lake Re	97.02	20	P	Pdif	09 48 20.9	+1.1
M19K	Big River Lodg	97.16	27	P	Pdif	09 48 21.9	+1.4
	baz=285						
M19K	Big River Lodg	97.16	27	P	Pdif	09 48 21.5	+1.0
L20K	Farewell, AK	97.23	27	P	Pdif	09 48 22.1	+1.3
	baz=286,SNR=10						
I21K	Tanana	97.26	24	P	Pdif	09 48 22.2	+1.3
	baz=288,SNR=28						
COLD	Coldfoot	97.29	22	P	Pdif	09 48 21.7	+0.8
	baz=290						
O18K	Koktuh Hills	97.29	29	P	Pdif	09 48 22.1	+1.0
	baz=284						
N19K	Bonanza Creek	97.40	28	P	Pdif	09 48 22.8	+1.1
	baz=285,SNR=14						
N19K	Bonanza Creek	97.40	28	P	Pdif	09 48 22.1	+0.4
N19K				IAmb	IAmb	09 48 26.9	
	comp=Z,72nm,1.1s						
CHUM	Lake Minchumin	97.52	25	P	Pdif	09 48 23.3	+1.3
	baz=287,SNR=20						
O19K	Port Alsworth	97.64	29	P	Pdif	09 48 23.2	+0.6
	baz=285,SNR=5.8						
CAST	Castle Rocks	97.75	25	P	Pdif	09 48 24.2	+1.1
	baz=288,SNR=33						
CAST	Castle Rocks	97.75	25	P	Pdif	09 48 23.8	+0.7
CAST				IAmb	IAmb	09 48 30.0	
	comp=Z,57nm,1.1s						
MLY	Manley	97.81	24	P	Pdif	09 48 24.1	+0.8
	baz=289,SNR=14						
BPAW	Bear Paw Mtn.	98.01	25	P	Pdif	09 48 25.0	+0.8
	baz=289,SNR=38						
H23K	Yukon River	98.01	23	P	Pdif	09 48 25.6	+1.3
	baz=290						
I23K	Minto, Yukon-K	98.32	23	Pdiff	Pdif	09 48 26.7	+1.1
	baz=290						
SPCR	Spurr Chakacha	98.36	28	Pdiff	Pdif	09 48 26.3	+0.3
	baz=287						
SKT	Skwentna	98.43	27	Pdiff	Pdif	09 48 26.4	+0.2
	baz=288,SNR=13						
TRF	Thorofare Moun	98.51	25	Pdiff	Pdif	09 48 27.2	+0.5
	baz=289						
NEA2	Nenana	98.63	24	Pdiff	Pdif	09 48 27.7	+0.7
	baz=290,SNR=6.2						
H24K	Noodor Dome	98.65	22	Pdiff	Pdif	09 48 27.7	+0.6
	baz=292						
CUT	Chulitna	98.86	26	Pdiff	Pdif	09 48 30.6	+2.6
	baz=289						
SUA	Susitna One	98.95	27	Pdiff	P	09 48 27.9	-0.7
	baz=288,SNR=6.3						
MCK	McKinley	98.98	25	Pdiff	Pdif	09 48 28.7	+0.1
	baz=290,SNR=24						
COLA	College	99.02	23	*i* P	Pdif	09 48 28.7	+0.1
COLA				pmax	pmax		
	comp=Z,14nm,1.5s						
M22K	Willow	99.14	27	Pdiff	Pdif	09 48 29.5	+0.2
	baz=289						
EUNU	Eureka	99.22	1		Pdif	09 48 30.4	+0.9
EUNU				IAmb	IAmb	09 48 52.7	
	comp=Z,38nm,0.9s						
BMAR	Burnt Mountain	99.22	20	P	Pdif	09 48 30.2	+0.6
ESDC	Sonseca Array	99.41	310	P	Pdif	09 48 31.4	+0.3
	comp=Z,5.0nm,1.0s,baz=62,slow=4.4,SNR=20						
ESDC				PP	PP	09 52 36.4	+1.1
	comp=Z,3.7nm,0.9s,baz=72,slow=8.6,SNR=4.8						
ESDC				PKKPbc	PKKPbc	10 04 54.9	-0.5
	comp=Z,2.1nm,1.0s,baz=280,slow=3.5,SNR=6.2						
ESDC				LR	LR	10 39 10.9	
	comp=Z,138nm,18.9s,baz=195,slow=39						
ILAR	Eielson Array	99.44	23	P	Pdif	09 48 29.9	-0.7
	comp=Z,4.1nm,1.0s,baz=288,slow=4.8,SNR=18						
ILAR				PP	PP	09 52 35.0	+0.4
	comp=Z,6.2nm,0.8s,baz=290,slow=7.3,SNR=5.7						
ILAR				PKKPbc	PKKPbc	10 04 53.1	-3.0
	comp=Z,8.4nm,0.8s,baz=142,slow=2.6,SNR=44						
ILAR				PKPPKP		10 13 13.5	
	comp=Z,1.0nm,1.0s,baz=80,slow=1.1,SNR=5.1						
RC01	Rabbit Creek A	99.53	27	Pdiff	Pdif	09 48 31.2	+0.1
	baz=289						
HDA	Harding Lake	99.55	24	Pdiff	Pdif	09 48 30.9	-0.2
	baz=292						
PRP	Porcupine Dome	99.67	22	Pdiff	Pdif	09 48 32.0	+0.2
	baz=294						
DHY	Denali Highway	99.88	25	Pdiff	Pdif	09 48 33.5	+0.8
	baz=292						
WAT6	Susitna Watana	99.90	26	Pdiff	Pdif	09 48 33.4	+0.5
	baz=291						
SML	Sawmill	99.92	26	Pdiff	Pdif	09 48 33.7	+0.9
	baz=291						
KNK	Knik Glacier	100.00	27	Pdiff	Pdif	09 48 33.8	+0.6
	baz=290						
J25K	Salcha River,	100.10	23	Pdiff	Pdif	09 48 35.4	+1.8
	baz=294						
NEEM	North Greenlan	100.18	354	*i* P	Pdif	09 48 33.7	-0.3
RIDG	Independent Ri	100.67	24	Pdiff	Pdif	09 48 36.3	+0.2
	baz=294						
PAX	Paxson	100.72	25	Pdiff	Pdif	09 48 37.4	+1.0
	baz=294						
M24K	Tolsona, Glenn	100.76	26	Pdiff	Pdif	09 48 37.8	+1.2
	baz=293						
SCRK	Sand Creek	100.91	24	Pdiff	Pdif	09 48 38.0	+0.7
	baz=295						
MDT	Midelt	100.94	303	PKKPbc	PKKPbc	10 04 52.1	+1.3
	comp=Z,1.6nm,0.8s,baz=233,slow=5.6,SNR=4.1						
HARP	HAARP	101.08	25	Pdiff	Pdif	09 48 39.2	+1.2
	baz=294						
L26K	Log Cabin Wild	101.58	24	Pdiff	Pdif	09 48 41.3	+1.1
	baz=296						
N25K	Chitina, Valde	101.64	26	Pdiff	Pdif	09 48 42.3	+1.8
	baz=294						
POLO	Lamas de Olo	101.98	313	*e*PP	PP	09 52 58.1	+3.4
M26K	Nabesna, AK	101.99	25	Pdiff	Pdif	09 48 43.4	+1.4
	baz=296						
PBAR	Barrancos	102.03	309	*e*P	Pdif	09 48 43.5	+0.8
PBAR	Barrancos	102.03	309	*e*PP	PP	09 52 53.7	-1.3
PCBR	Castelo Branco	102.05	311	*e*PP	PP	09 52 53.7	-1.4
SUMG	Summit	102.07	348	*i* P	Pdif	09 48 42.8	+0.2
A36M	Sachs Harbour	102.17	13	Pdiff	Pdif	09 48 43.1	+0.6
	baz=315						
L27K	Beaver Creek,	102.18	24	Pdiff	Pdif	09 48 43.9	+1.0
	baz=297						
PESTR	Estremoz	102.33	310	*e*PP	PP	09 52 55.2	-2.0
INK	Inuvik	102.39	18	Pdiff	Pdif	09 48 44.1	+0.5
	baz=306						
MCARA	McCarthy VSAT	102.42	26	Pdiff	Pdif	09 48 45.4	+1.4
	baz=295						
EPYK	Eagle Plains	102.45	20	Pdiff	Pdif	09 48 44.4	+0.4
	baz=302						
M27K	Edge Creek, AK	102.48	25	Pdiff	Pdif	09 48 45.6	+1.3
	baz=297						
KIC	Kosan Boka	103.47	277	*e*PKIKP	Pdif	09 48 50.5	+0.9
	comp=Z,38nm,1.2s						
DBIC	Dimbokro	103.58	277	Pdiff	Pdif	09 48 49.9	-0.1
	comp=Z,11nm,1.1s,baz=80,slow=3.7,SNR=4.9						
DBIC				PP	PKiKP	09 53 08.8	+0.3
	comp=Z,19nm,1.2s,baz=146,slow=1.3,SNR=3.4						
TIC	Toumodi	103.74	277	*e*PKIKP	Pdif	09 48 50.8	0.0
LIC	Lamto	103.77	277	*e*PKIKP	Pdif	09 48 50.3	-0.6
	comp=Z,76nm,1.5s						
TBI	Tubuai	110.12	115	*e*PP	PP	09 53 53.7	-1.4
	comp=Z,137nm,27.0s						
TBI				*e*SKSac	SKSac	09 59 49.9	-1.6
	comp=Z,235nm,27.0s						
TBI				*e*SP	SP	10 03 15.9	+0.1
	comp=Z,373nm,28.5s						
TBI	Tubuai	110.12	115	*e*LQ	LQ	10 21 17.4	
	comp=Z,920nm,39.0s						
TBI				*e*LR	LR	10 25 57.9	
	comp=Z,921nm,35.8s						
PPT2	Papeete2	110.72	108	*e*PP	PP	09 53 57.7	-2.0
	comp=Z,163nm,23.5s						
PPT2				*e*SP	SP	10 03 19.8	-1.9
	comp=Z,798nm,33.5s						
PPT2	Papeete2	110.72	108	*e*LQ	LQ	10 21 32.8	
	comp=Z,2µm,37.5s						
PPT2				*e*LR	LR	10 26 15.6	
	comp=Z,3µm,36.5s						
PMAR	Madeira	111.10	306	*e*PP	PP	09 54 01.7	-0.3
YKA	Yellowknife Ar	112.06	16	PKiKP	PKiKP	09 53 22.6	-0.3
	comp=Z,1.5nm,0.8s,baz=350,slow=3.8,SNR=5.8						
YKA				PP	PP	09 54 07.9	+0.6
	comp=Z,21nm,1.0s,baz=335,slow=6.0,SNR=11						
YKA				PKKPbc	PKKPbc	10 04 14.9	-2.5
	comp=Z,6.7nm,0.9s,baz=134,slow=4.1,SNR=8.2						
PMSA	Palmer Station	114.93	188	SKP	SKPdf	09 56 54.6	-2.0
	comp=Z,3.1nm,0.5s,baz=66,slow=17,SNR=1.3						
LLLB	Lillooet	118.19	28		PKiKP	09 53 35.4	+0.3
D03D	Eldon	119.60	31	P	PKiKP	09 53 39.2	+1.2
	baz=310						
B05A	Bryant	119.64	30	P	PKiKP	09 53 38.3	+0.3
	baz=311						
B06A	Marblemount	119.78	30		PKiKP	09 53 38.5	+0.3
EDM	Edmonton	119.87	22	PKIKP	PKPdf	09 53 37.8	-0.5
EDM	Edmonton	119.87	22		PKPdf	09 53 37.8	-0.5
PNT	Penticton	120.14	28	PKIKP	PKiKP	09 53 52.7	+14
D05A	Enumclaw	120.40	31		PKPdf	09 53 39.3	-0.1
E04D	Cinebar	120.50	32	P	PKiKP	09 53 40.1	+0.4
	baz=310						
TAOE	Nuku Hiva Isla	120.67	100	*e*PP	PP	09 55 04.8	-4.9
	comp=Z,842nm,36.3s						
TAOE				*e*SP	SP	10 04 48.7	-3.9
	comp=Z,318nm,28.3s						
TAOE				*e*SS	SS	10 11 33.7	-1.0
	comp=Z,576nm,28.5s						
TAOE	Nuku Hiva Isla	120.67	100	*e*LQ	LQ	10 25 40.5	
	comp=Z,600nm,38.0s						
TAOE				*e*LR	LR	10 30 54.6	
	comp=Z,1µm,35.7s						
LON	Longmire	120.78	31	PKIKP	PKiKP	09 53 40.4	0.0
LON	Longmire	120.78	31		PKiKP	09 53 40.4	0.0
B08A	Colville Reser	120.94	29	PKPdf	PKPdf	09 53 40.5	0.0
F04A	Amboy	120.98	33		PKiKP	09 53 40.8	+0.1
LTY	Liberty	121.03	30		PKPdf	09 53 40.6	-0.1
F05D	White Salmon	121.52	32	P	PKiKP	09 53 42.1	+0.3
	baz=311						
H04D	Lebanon	121.70	34	P	PKiKP	09 53 43.0	+0.9
	baz=309						
HOOD	Mount Hood Mea	121.79	33		PKPdf	09 53 42.2	-0.1
C09A	Chrisman Ranch	121.84	29		PKPdf	09 53 42.2	+0.1
J01E	Myrtle Point	121.85	36	P	PKiKP	09 53 43.2	+0.8
	baz=307						
I03D	Drain, OR	121.86	35	P	PKiKP	09 53 43.4	+0.9
	baz=308						
H04A	Detroit Lake	121.90	34		PKiKP	09 53 42.6	0.0
E07A	Sunnyside	121.91	31		PKiKP	09 53 42.8	+0.3
G05D	Wamic, OR	122.02	33	P	PKiKP	09 53 43.4	+0.6
	baz=310						
D08A	Wollman Farm,	122.04	30		PKiKP	09 53 42.9	+0.1
NEW	Newport	122.05	28	PKIKP	PKiKP	09 53 43.0	+0.2
NEW	Newport	122.05	28	P	PKiKP	09 53 43.0	+0.2
	baz=316						
NEW	Newport	122.05	28	PKPdf	PKiKP	09 53 43.0	+0.2
FFC	Flin Flon	122.09	14	PKIKP	PKPdf	09 53 42.3	-0.1
FFC	Flin Flon	122.09	14	PKPdf	PKPdf	09 53 42.3	-0.1
HAWA	Hanford	122.19	31	PKPdf	PKiKP	09 53 43.6	+0.5
F07A	Phinny Hill Vi	122.32	31		PKiKP	09 53 44.1	+0.8
I04A	Tendick Farm,	122.33	34	P	PKiKP	09 53 43.6	+0.1
	baz=309						
E08A	Dider Farm, El	122.36	30		PKiKP	09 53 43.7	+0.3
I05D	Terrebonne, OR	122.59	33	P	PKiKP	09 53 44.7	+0.7
	baz=310						
L02E	Cave Junction	122.64	37	P	PKiKP	09 53 44.6	+0.5
	baz=307						
HUMO	Hull Mountain	122.75	36	PKPdf	PKiKP	09 53 45.0	+0.6
E09A	Wood Farm, Sta	122.80	30		PKPdf	09 53 44.1	+0.1
J04D	Umpqua Nationa	122.85	35	P	PKiKP	09 53 45.1	+0.4
	baz=309						
WALA	Waterton Lakes	122.89	25		PKPdf	09 53 44.3	0.0
PINE	Pine Mountain	123.16	34		PKiKP	09 53 45.9	+0.5
G08A	Pilot Rock	123.23	31		PKPdf	09 53 45.1	+0.1
J05D	Fort Rock, OR	123.32	34	P	PKiKP	09 53 46.5	+0.9
	baz=310,SNR=9.8						
SCHQ	Schefferville	123.37	350	PKP	PKPdf	09 53 45.0	+0.1
	comp=Z,30nm,0.8s,baz=32,slow=2.7,SNR=15						
SCHQ				PP	PP	09 55 27.6	+1.9
	comp=Z,13nm,0.8s,baz=293,slow=2.5,SNR=3.6						
SCHQ	Schefferville	123.37	350		PKPdf	09 53 44.7	-0.2
L04D	Klamath Falls	123.37	36	P	PKiKP	09 53 46.1	+0.3
	baz=308,SNR=10						
K04D	Chiloquin, OR	123.44	35	P	PKiKP	09 53 46.5	+0.7
	baz=309						
M02C	Callahan	123.55	37	P	PKiKP	09 53 47.0	+1.0
	baz=307,SNR=7.2						
F10A	Beach Ranch, E	123.63	30		PKPdf	09 53 45.9	+0.1
I07A	Izee	123.75	33	PKPdf	PKiKP	09 53 46.5	+0.1
K05A	Summer Lake	123.87	35	PKPdf	PKiKP	09 53 47.0	+0.3
N02D	Trinity Center	123.89	37	P	PKiKP	09 53 47.5	+0.8
	baz=307,SNR=6.5						
M04C	Macdoel	123.91	36	P	PKiKP	09 53 47.2	+0.4
	baz=308,SNR=8.3						
WDC	Whiskeytown Da	124.22	38	PKIKP	PKPdf	09 53 47.1	+0.1
WDC	Whiskeytown Da	124.22	38		PKPdf	09 53 47.1	+0.1
O02D	Mt. Diablo Mer	124.31	38	P	PKiKP	09 53 48.5	+0.9
	baz=306,SNR=5.2						
BMO	Blue Mountains	124.38	31	PKIKP	PKPdf	09 53 47.1	-0.2
BMO	Blue Mountains	124.38	31		PKPdf	09 53 47.1	-0.2
MSO	Missoula	124.56	27	P	PKPdf	09 53 47.7	+0.1
	baz=319						
MSO	Missoula	124.56	27	PKPdf	PKPdf	09 53 47.5	-0.1
MOD	Modoc Plateau	124.73	35		PKiKP	09 53 48.8	+0.4
J08A	Circle Bar Ran	124.79	33		PKPdf	09 53 48.3	+0.1
O03E	Paynes Creek	124.85	37	P	PKiKP	09 53 48.5	-0.1
	baz=308,SNR=7.2						
PLID	Pearl Lake	124.87	30		PKiKP	09 53 48.7	0.0
EGMT	Eagleton	125.41	23	P	PKiKP	09 53 49.8	+0.3
	baz=324						
EGMT	Eagleton	125.41	23		PKPdf	09 53 48.5	-0.7
ORV	Oroville	125.48	38	PKIKP	PKPdf	09 53 49.5	+0.1
ORV	Oroville	125.48	38		PKPdf	09 53 49.5	+0.1
HRY	Holter Researc	125.59	26		PKiKP	09 53 49.9	-0.1
EFI	East Falkland	125.67	197	PKIKP	PKiKP	09 53 49.6	-0.2
EFI	East Falkland	125.67	197		PKiKP	09 53 49.5	-0.2
LRM	Limekiln Ridge	126.00	27		PKPdf	09 53 50.5	-0.1
MFID	Camas Ranch	126.15	31		PKPdf	09 53 50.7	0.0
BOZ	Bozeman (W)	126.54	26	PKIKP	PKiKP	09 53 52.3	+0.3
BOZ	Bozeman (W)	126.54	26	P	PKiKP	09 53 52.2	+0.3
	baz=321,SNR=18						
BOZ	Bozeman (W)	126.54	26		PKiKP	09 53 52.2	+0.3
PAHR	Pah Rah Range	126.67	37		PKiKP	09 53 52.4	0.0
BCYI	Bear Canyon	126.70	29		PKiKP	09 53 52.4	0.0
HLID	Hailey	126.76	30	P	PKiKP	09 53 53.0	+0.6
	baz=317						
HLID	Hailey	126.76	30		PKiKP	09 53 52.8	+0.3
VCNR	Virginia City	126.77	37		PKiKP	09 53 52.8	+0.1
PNTR	Pine Nut	126.93	37		PKPdf	09 53 52.6	+0.2
DGMT	Dagmar	127.04	19	P	PKiKP	09 53 53.0	+0.3
	baz=331						
DGMT	Dagmar	127.04	19		PKiKP	09 53 52.4	-0.2
CMB	Columbia Colle	127.09	39	PKIKP	PKiKP	09 53 53.1	0.0
CMB	Columbia Colle	127.09	39	PKPdf	PKiKP	09 53 53.1	0.0
MG02	Cerro Sombrero	127.21	189		PKiKP	09 53 53.1	+0.4
GCMT	Greycliff	127.24	25		PKiKP	09 53 53.6	+0.3
ULM	Lac du Bonnet	127.64	12	PKP	PKPdf	09 53 52.2	-1.0
	comp=Z,50nm,0.9s,baz=349,slow=2.9,SNR=40						
ULM	Lac du Bonnet	127.64	12	PKIKP	PKPdf	09 53 52.8	-0.4
ULM	Lac du Bonnet	127.64	12	PKPdf	PKPdf	09 53 52.8	-0.4
LAO	LASA Array	127.86	22	P	PKiKP	09 53 55.3	+0.9
	baz=328						
LAO	LASA Array	127.86	22		PKiKP	09 53 55.1	+0.7
RYN	Ryan	127.87	37		PKiKP	09 53 55.5	+0.7
RLMT	Red Lodge	127.94	25	P	PKiKP	09 53 55.3	+0.5
	baz=323						
H17A	Grant Village	127.95	27	P	PKiKP	09 53 56.8	+1.8
	baz=322,SNR=13						
NVAR	Mina Array Bea	128.13	37	PKhKP	PKPpre	09 53 49.1	
	comp=Z,1.6nm,0.8s,baz=258,slow=4.3,SNR=6.3						
NVAR				PKP	PKiKP	09 53 55.7	+0.3
	comp=Z,9.8nm,0.9s,baz=238,slow=4.0,SNR=7.5						
NVAR				SKPbc	SKPbc	09 57 06.1	
	comp=Z,7.5nm,0.8s,baz=280,slow=3.7,SNR=4.9						
NVAR				PKKPab	PKKPab	10 03 17.1	
	comp=Z,0.9nm,0.6s,baz=142,slow=4.3,SNR=5.7						
NVAR				PKKP	PKKPdf	10 04 04.9	-0.4
	comp=Z,0.6nm,0.6s,baz=112,slow=4.0,SNR=2.5						
NV11	Mina Array Sit	128.22	37		PKiKP	09 53 55.8	+0.3
FXWY	Fox Creek	128.33	28		PKPdf	09 53 55.3	+0.3
ELK	Elko	128.34	33	PKIKP	PKiKP	09 53 56.2	+0.4
ELK	Elko	128.34	33	PKPdf	PKiKP	09 53 56.2	+0.4
MOOW	Moose Ponds	128.37	27	PKPdf	PKiKP	09 53 55.9	+0.2
LOHW	Long Hollow	128.54	27		PKiKP	09 53 56.4	+0.3
REDW	Red Top Meadow	128.62	28		PKiKP	09 53 56.5	+0.2
MG05	Puerto Natales	128.74	187		PKiKP	09 53 55.9	0.0
HVU	Hansel Valley	128.89	30	PKIKP	PKiKP	09 53 57.0	+0.2
HVU	Hansel Valley	128.89	30	PKPdf	PKiKP	09 53 57.0	+0.2
AHID	Auburn Hatcher	128.97	28		PKiKP	09 53 56.8	-0.2
SMMC	Simmler	128.97	41	P	PKiKP	09 53 58.5	+1.6
	baz=306,SNR=5.6						
MDND	Maddock	128.98	16	P	PKPdf	09 53 56.1	+0.2
	baz=336						
MDND	Maddock	128.98	16		PKPdf	09 53 55.9	+0.1
TPH	Tonopah	129.01	37	PKIKP	PKiKP	09 53 57.1	-0.1
TPH	Tonopah	129.01	37		PKiKP	09 53 57.0	-0.1
TIN	Tinemaha, Big	129.04	38	P	PKiKP	09 53 58.4	+1.3
	baz=309						
GO09	Cerro Castillo	129.12	187		PKiKP	09 53 56.6	-0.1
VES	Vestal, Richgr	129.25	40	P	PKiKP	09 53 57.3	-0.1
	baz=308						
LCH	Last Change Ra	129.29	38		PKiKP	09 53 58.2	+0.6
PKM	Mcpherson Peak	129.34	42	P	PKiKP	09 53 59.4	+1.5
	baz=306						
AGMN	Agassiz Nation	129.49	13	P	PKPdf	09 53 57.1	+0.3
	baz=341						
AGMN	Agassiz Nation	129.49	13		PKiKP	09 53 57.3	-0.2
CWC	Cottonwood Cre	129.52	39	P	PKiKP	09 53 58.5	+0.3
	baz=309						
BW06	Boulder Array	129.68	27	P	PKiKP	09 53 58.3	-0.1
	baz=322,SNR=14						
BW06	Boulder Array	129.68	27		PKiKP	09 53 58.5	+0.1
PD31	Pinedale Array	129.68	27		PKiKP	09 53 58.1	-0.3
PDAR	Pinedale Array	129.68	27	PKhKP	PKPpre	09 53 53.2	
	comp=Z,1.1nm,0.8s,baz=306,slow=1.3,SNR=4.1						
PDAR				PKP	PKiKP	09 53 58.1	-0.3
	comp=Z,6.7nm,0.8s,baz=335,slow=1.3,SNR=28						
PDAR				pPKP	pPKPdf	09 54 19.6	-1.4
	comp=Z,9.0nm,0.8s,baz=113,slow=3.4,SNR=6.0						
PDAR				PP	PP	09 56 06.9	-1.3
	comp=Z,3.8nm,1.0s,baz=337,slow=2.1,SNR=2.6						
PDAR				SKPbc	SKPab	09 57 10.9	-1.1
	comp=Z,3.1nm,0.7s,baz=46,slow=0.9,SNR=3.7						
PDAR				PKKP	PKKPdf	10 03 59.5	-3.0
	comp=Z,0.5nm,0.7s,baz=133,slow=5.0,SNR=1.9						
PDAR	Pinedale Array	129.68	27		PKPdf	09 53 57.9	+0.2
ISA	Isabella, Lake	129.75	40	PKIKP	PKPdf	09 53 57.9	+0.1
ISA	Isabella, Lake	129.75	40	P	PKiKP	09 53 58.8	+0.2
	baz=308,SNR=8.6						
ISA	Isabella, Lake	129.75	40	PKPdf	PKPdf	09 53 57.9	+0.1
R11A	Troy Canyon, C	129.79	35	P	PKiKP	09 53 59.3	+0.6
	baz=313						
R11A	Troy Canyon, C	129.79	35		PKiKP	09 53 58.6	-0.1
E28A	Huff	129.82	18		PKiKP	09 53 58.6	+0.3
ARVC	Arvin	129.85	41	P	PKiKP	09 53 59.2	+0.6
	baz=307						
B35A	Bob, Littlefor	129.87	11		PKPdf	09 53 57.5	0.0
DUG	Dugway, Tooele	130.03	32	PKIKP	PKiKP	09 53 59.2	+0.1
DUG	Dugway, Tooele	130.03	32	P	PKiKP	09 53 59.1	+0.1
	baz=317						
DUG	Dugway, Tooele	130.03	32	PKPdf	PKiKP	09 53 59.2	+0.1
SPR3	Spring Creek 3	130.06	34	PKPdf	PKiKP	09 53 59.5	+0.1
FURC	Furnace Creek,	130.26	38	P	PKiKP	09 54 00.5	+1.1
	baz=310						
LRMC	Laurel Mtn Rad	130.37	40	P	PKiKP	09 54 00.8	+0.9
	baz=309						
EDW2	Edwards Air Fo	130.54	41	P	PKiKP	09 54 00.5	+0.4
	baz=308,SNR=7.4						
QSM	Queen of Sheba	130.58	39		PKiKP	09 54 00.7	+0.6
EYMN	Ely	130.66	9	P	PKiKP	09 53 59.5	-0.4
	baz=346						
EYMN	Ely	130.66	9	PKPdf	PKiKP	09 53 59.6	-0.4
RSSD	Black Hills	130.85	22	P	PKPdf	09 53 59.0	-0.9
	baz=329						
SHOC	Shoshone, Teco	130.99	38	P	PKiKP	09 54 01.7	+0.7
	baz=310						
GSC	Goldstone, Bar	131.04	39	P	PKiKP	09 54 02.4	+1.2
	baz=310,SNR=7.3						
K22A	Casper	131.10	25	P	PKPdf	09 54 00.1	-0.1
	baz=325						
TUQ	Turquoise Moun	131.51	39	P	PKPdf	09 54 01.7	+0.5
	baz=310						
BBRC	Big Bear Solar	131.62	40	P	PKiKP	09 54 02.7	+0.1
	baz=309						
HEC	Hector,Ludlow	131.64	39	P	PKiKP	09 54 02.1	-0.3
	baz=310						
MURC	Murrieta	131.85	41	P	PKiKP	09 54 02.6	-0.2
	baz=308						
GMRC	Granite Mounta	132.09	39	P	PKiKP	09 54 03.8	+0.5
	baz=310,SNR=9.5						
SUSD	Miller	132.27	17	P	PKPdf	09 54 02.4	+0.2
	baz=336						
PFO	Pinyon Flats O	132.32	41	P	PKPpre	09 53 51.0	
	baz=309						
O20A	White River Ci	132.36	28	P	PKiKP	09 54 03.3	-0.5
	baz=322,SNR=12						
BELC	Belle Mtn. Jos	132.38	40	P	PKPpre	09 53 52.6	
	baz=309						
MONP2	Monument Peak	132.79	42	P	PKPdf	09 54 04.0	+0.2
	baz=308						
N23A	Red Feather La	132.79	26	P	PKPdf	09 54 03.8	+0.2

	baz=325						
IRM	Iron Mountain	132.82	39	P	PKiKP	09 54 06.5	+1.8
	baz=310,SNR=7.1						
BC3	Big Chuckawall	132.95	40	P	PKiKP	09 54 04.9	-0.2
	baz=310						
PKME	Peaks-Kenny Pk	133.00	349	P	PKPdf	09 54 03.6	+0.1
	baz=16						
SPMN	Marine on St.	133.06	11	P	PKPdf	09 54 03.7	0.0
	baz=344						
IKP	In-Ko-Pah, Jac	133.15	42	P	PKiKP	09 54 06.0	+0.5
	baz=308						
SWSC	Sam W. Stewart	133.17	41	P	PKiKP	09 54 06.0	+0.6
	baz=309						
NBRF	Rio Formoso -	133.56	259	*e*P	PKPdf	09 54 05.9	+0.5
ECSD	EROS Data Cent	133.58	16	P	PKPdf	09 54 05.1	+0.4
	baz=338						
GLA	Glamis	133.74	40	P	PKPdf	09 54 04.6	-0.7
	baz=310						
ISCO	Idaho Springs	133.83	26	PKIKP	PKiKP	09 54 06.6	-0.4
ISCO	Idaho Springs	133.83	26	P	PKPdf	09 54 05.4	-0.3
	baz=325						
ISCO	Idaho Springs	133.83	26		PKiKP	09 54 06.6	-0.4
NBPV	Pedro Velho	133.96	262	*e*P	PKiKP	09 54 07.3	-0.2
WUAZ	Wupatki	134.18	35	P	PKPdf	09 54 05.8	-0.5
	baz=316,SNR=6.9						
LONY	Lake Ozonia	134.46	353	P	PKPdf	09 54 06.6	+0.3
	baz=9.1,SNR=6.0						
NBCA	Caruaru-PE	134.48	259	*e*P	PKPdf	09 54 07.8	+0.5
MVCO	Mesa Verde	134.50	31	P	PKPdf	09 54 07.5	+0.6
	baz=320,SNR=6.4						
GLMI	Grayling	134.51	4	P	PKPdf	09 54 06.6	+0.2
	baz=355						
NBAN	Anadia - AL	134.55	257	*e*P	PKPdf	09 54 07.6	+0.3
SADO	Sadowa	134.64	358	SKPbc	SKPbc	09 57 27.2	-2.3
	comp=Z,48nm,1.1s,baz=349,slow=0.7,SNR=5.6						
COYC	Coyhaique	134.66	189		PKPdf	09 54 06.9	+0.2
S22A	4UR Ranch, Cre	134.92	29	P	PKiKP	09 54 09.0	-0.3
	baz=322						
BGNE	Belgrade	135.28	18	P	PKPdf	09 54 07.2	-0.8
	baz=336						
W18A	Petrified Fore	135.39	34	P	PKiKP	09 54 10.3	+0.2
	baz=317						
NBLV	Livramento - P	135.48	260	*e*P	PKPdf	09 54 09.9	+0.8
SDCO	Great Sand Dun	135.55	28	P	PKPpre	09 54 04.7	
	baz=324						
214A	Organ Pipe Nat	135.74	40	P	PKiKP	09 54 10.2	-0.5
	baz=311						
JFWS	Jewell Farm	135.76	10	P	PKPdf	09 54 07.2	-1.6
	baz=347						
NBLA	Lagarto - SE	135.80	255	*e*P	PKPdf	09 54 09.8	+0.2
SCIA	State Center	136.14	13	P	PKPdf	09 54 09.0	-0.5
	baz=342						
L61B	Northampton	136.33	351	P	PKPdf	09 54 10.0	+0.1
	baz=12						
T25A	Trinidad	136.55	27	P	PKiKP	09 54 11.6	-0.8
	baz=325						
L44A	Lake County Fo	136.82	7	P	PKPdf	09 54 11.0	+0.3
	baz=350						
BINY	Binghamton	137.00	354	P	PKPdf	09 54 11.3	+0.2
	baz=7.5,SNR=14						
AAM	Ann Arbor	137.08	3	P	PKPdf	09 54 10.0	-1.3
	baz=356						
ANMO	Albuquerque	137.29	31	PKIKP	PKiKP	09 54 13.5	-0.5
ANMO	Albuquerque	137.29	31	P	PKPpre	09 54 01.7	
	baz=321						
ANMO	Albuquerque	137.29	31	PKPdf	PKiKP	09 54 13.5	-0.5
KSU1	Kansas State U	137.86	18	P	PKPdf	09 54 05.6	-7.2
	baz=337						
M54A	Oil Creek Stat	137.92	358	P	PKPdf	09 54 12.9	0.0
	baz=2.1,SNR=7.6						
PAL	Palisades	137.93	352	P	PKPdf	09 54 13.1	+0.3
	baz=11						
HDIL	Hopedale	138.21	9	P	PKPdf	09 54 13.0	-0.4
	baz=348						
N59A	State Game Lan	138.25	354	P	PKPdf	09 54 14.1	+0.6
	baz=8.0,SNR=8.3						
121A	Cookes Peak, D	138.39	35	P	PKPdf	09 54 15.2	+1.0
	baz=318						
121A	Cookes Peak, D	138.39	35	PKPdf	PKPdf	09 54 14.9	+0.7
N54A	Moraine State	138.47	359	P	PKPdf	09 54 13.8	-0.1
	baz=1.7						
SFIN	Lafayette	138.70	7	P	PKPdf	09 54 14.7	+0.5
	baz=351						
SSPA	Standing Stone	138.70	356	P	PKPdf	09 54 14.7	+0.4
	baz=4.9						
PLCA	Paso Flores	139.07	192	PKhKP	PKPpre	09 54 05.5	
	comp=Z,7.7nm,0.7s,baz=162,slow=3.7,SNR=34						
PLCA				SKPbc	SKPbc	09 57 41.8	-1.2
	comp=Z,12nm,1.1s,baz=256,slow=3.1,SNR=3.3						
PLCA	Paso Flores	139.07	192	PKIKP	PKiKP	09 54 16.3	-1.0
PLCA	Paso Flores	139.07	192		PKiKP	09 54 16.3	-1.0
O56A	Blue Knob Stat	139.11	357	P	PKPdf	09 54 15.7	+0.6
	baz=3.9,SNR=9.2						
ACSO	Alum Creek Sta	139.18	2	P	PKPdf	09 54 15.1	-0.1
	baz=357,SNR=9.4						
O53A	New Philadelph	139.19	0	P	PKPdf	09 54 15.4	+0.2
	baz=360,SNR=7.0						
P60A	Greenville	139.32	354	P	PKPdf	09 54 15.7	+0.3
	baz=8.4						
AMTX	Amarillo	139.65	27	P	PKPpre	09 54 09.1	
	baz=327						
PLTB	Pedras Altas	139.67	217		PKPdf	09 54 16.7	+0.4
MCWV	Mont Chateau	139.77	359	P	PKPdf	09 54 17.1	+0.9
	baz=1.9						
P49A	Miami Univ. Ec	139.77	4	P	PKPpre	09 54 09.2	
	baz=354						
P52A	Corning	139.80	1	P	PKPpre	09 54 10.1	
	baz=358,SNR=9.1						
MSTX	Muleshoe	139.91	28	P	PKPpre	09 54 10.4	
	baz=325						
CCM	Cathedral Cave	140.26	13	P	PKPpre	09 54 09.8	
	baz=344						
MNTX	Cornudas Mount	140.36	33	P	PKPdf	09 54 15.7	-1.9
	baz=320						
WCI	Wyandotte Cave	140.92	6	P	PKPdf	09 54 12.4	-6.0
	baz=352						
WMOK	Wichita Mounta	141.00	23	P	PKPdf	09 54 11.7	-6.9
	baz=331						
TUL1	Leonard	141.04	19	P	PKPdf	09 54 11.8	-6.9
	baz=336						
U40A	Yellville	141.49	15	P	PKPdf	09 54 13.7	-5.8
	baz=341,SNR=23						
BLA	Blacksburg	142.22	359	P	PKPdf	09 54 18.3	-2.5
	baz=1.1						
W39A	Magazine	142.32	17	P	PKPdf	09 54 16.8	-4.2
	baz=339,SNR=6.0						
ABTX	Abilene, Hawle	142.47	26	P	PKPdf	09 54 17.5	-3.9
	baz=329,SNR=14						
W41B	Gary Mavity, V	142.77	15	P	PKPdf	09 54 17.6	-4.2
	baz=342,SNR=8.6						
WVT	Waverly	142.78	9	P	PKPdf	09 54 18.6	-3.1
	baz=349						
TZTN	Tazewell	142.82	3	P	PKPdf	09 54 18.3	-3.5
	baz=356						
ITQB	Itaqui	142.98	217		PKPdf	09 54 19.0	-3.2
MIAR	Mount Ida	142.99	17	P	PKPdf	09 54 19.3	-2.8
	baz=339,SNR=41						
TX31	Lajitas Ar. Si	143.12	34		PKPdf	09 54 21.2	-1.5
TXAR	Lajitas Array	143.12	34	PKP	PKPbc	09 54 20.2	+0.5
	comp=Z,8.9nm,0.8s,baz=304,slow=0.5,SNR=54						
TXAR				SKPbc	SKPbc	09 57 50.8	-3.1
	comp=Z,34nm,0.9s,baz=318,slow=1.7,SNR=12						
X40A	Basin Creek Fa	143.26	16	P	PKPbc	09 54 20.2	+0.4
	baz=340,SNR=18						
TKL	Tuckaleechee C	143.69	4	SKPbc	SKPbc	09 57 53.9	-1.0
	comp=Z,73nm,1.2s,baz=268,slow=0.5,SNR=8.3						
WLAR	White Oak Lake	143.93	17	PKPdf	PKPbc	09 54 22.4	+0.6
WHTX	Lake Whitney,	143.94	24	P	PKPbc	09 54 21.8	-0.1
	baz=332,SNR=7.7						
CNNC	Cliffs of the	144.07	356	P	PKPbc	09 54 22.8	+0.7
	baz=5.5						
BDFB	Brasilia	144.16	244	PKP	PKPbc	09 54 23.9	+0.8
	comp=Z,82nm,0.5s,baz=122,slow=3.3,SNR=174						
JCT	Junction City	144.20	28	P	PKPbc	09 54 22.9	+0.2
	baz=327,SNR=84						
KMSC	Kings Mountain	144.29	0	P	PKPbc	09 54 22.7	-0.2
	baz=360						
Z41A	Richland Creek	144.42	17	P	PKPdf	09 54 24.2	-0.5
	baz=340,SNR=47						
H06N1	SOCORRO T-PHAS	144.76	55	PKP	PKPdf	09 54 25.6	0.0
BIRD	Birdtown, Kers	144.78	359		PKPab	09 54 24.3	0.0
X58A	Rowland	144.84	357		PKPbc	09 54 24.6	0.0
H06S1	SOCORRO T	144.85	55	PKP	PKPdf	09 54 26.0	+0.2
H06E1	SOCORRO T-PHAS	144.85	55	PKP	PKPdf	09 54 26.2	+0.4
435B	Jarrell	144.94	25	P	PKPbc	09 54 25.2	+0.1
	baz=331,SNR=28						
NATX	Nacogdoches	145.20	20	P	PKPdf	09 54 26.2	+0.1
	baz=336,SNR=29						
Y49A	Blount Mountai	145.21	8		PKPbc	09 54 25.2	-0.6
BO01	Tunca	145.25	195		PKPbc	09 54 25.5	-0.4
CPUP	Villa Florida	145.79	220	PKPbc	PKPbc	09 54 27.8	-0.1
	comp=Z,352nm,0.8s,baz=116,slow=2.2,SNR=439						
CPUP	Villa Florida	145.79	220	PKPdf	PKPdf	09 54 27.5	+0.2
GOGA	Godfrey	145.95	4	PKP2	PKPbc	09 54 28.0	-0.1
GOGA	Godfrey	145.95	4	P	PKPab	09 54 28.5	-0.1
	baz=356						
GOGA	Godfrey	145.95	4	PKPab	PKPbc	09 54 28.0	-0.1
VBMS	Vicksburg	146.02	14	P	PKPbc	09 54 28.6	+0.3
	baz=343,SNR=17						
833A	Chaparral WMA,	146.18	30	P	PKPbc	09 54 29.3	+0.4
	baz=326,SNR=44						
NHSC	New Hope	146.31	359	P	PKPbc	09 54 29.2	0.0
	baz=1.7						
H03S1	Juan Fernandez	147.02	183	PKPbc	PKPbc	09 54 30.3	-0.5
	baz=360,slow=6.4,SNR=5.7						
H03S2	Juan Fernandez	147.02	183	PKPbc	PKPbc	09 54 30.2	-0.6
	baz=360,slow=6.4,SNR=12						
H03S3	Juan Fernandez	147.03	183	PKPbc	PKPbc	09 54 30.5	-0.5
	baz=360,slow=6.4,SNR=8.3						
H03N3	Juan Fernandez	147.40	183	PKPbc	PKPbc	09 54 31.5	-0.5
	baz=162,slow=18,SNR=18						
H03N1	Juan Fernandez	147.42	183	PKPbc	PKPbc	09 54 32.0	0.0
	baz=162,slow=18,SNR=21						
H03N2	Juan Fernandez	147.42	183	PKPbc	PKPbc	09 54 31.3	-0.6
	baz=162,slow=18,SNR=26						
BRAL	Brewton	147.75	10	P	PKPbc	09 54 31.9	-1.4
	baz=349						
TIGA	Tifton	147.90	4	P	PKPdf	09 54 31.8	+1.2
	baz=355						
TIGA	Tifton	147.90	4		PKPdf	09 54 31.3	+0.6
MDP	Montagnes des	150.99	282	PKPbc	PKiKP	09 54 42.9	+0.4
	comp=Z,180nm,0.8s,baz=87,slow=1.8,SNR=108						
DWPF	Disney Wildern	151.30	1	P	PKPdf	09 54 37.0	+0.8
	baz=359						
SIV	San Ignacio	155.11	231	PKP	PKPdf	09 54 42.3	+0.3
	comp=Z,27nm,0.8s,baz=122,slow=1.3,SNR=65						
LVC	Limon Verde	155.25	208	PKP	PKPdf	09 54 42.2	-0.3
	comp=Z,14nm,0.9s,baz=157,slow=1.8,SNR=8.2						
LVC				PKPbc	PKPbc	09 54 52.9	
	comp=Z,67nm,0.7s,baz=308,slow=0.1,SNR=33						
SDDR	Presa de Saban	158.15	334	*e*P	PKPab	09 55 21.5	+1.8
PSGCX	Pisagua	158.41	209	PKPdf	PKPdf	09 54 46.2	-0.1
PSGCX				PKPab	PKPab	09 55 21.5	+0.6
PTGA	Pitinga	158.87	270	PKP	PKPdf	09 54 47.3	+0.4
	comp=Z,30nm,1.0s,baz=23,slow=1.0,SNR=40						
PTGA				PKPab	PKPab	09 55 23.5	+0.2
	comp=Z,115nm,1.0s,baz=92,slow=5.6,SNR=30						
PTGA				PP	PP	09 59 05.9	+1.5
	comp=Z,34nm,1.2s,baz=95,slow=7.0,SNR=8.5						
PTGA	Pitinga	158.87	270		PKPdf	09 54 47.3	+0.4
PTGA				PKPab	PKPab	09 55 24.4	+1.1
LPAZ	La Paz	159.96	219	PKP	PKPdf	09 54 49.5	+0.8
	comp=Z,46nm,0.8s,baz=85,slow=1.3,SNR=129						
LPAZ				PKPab	PKPab	09 55 29.6	+1.2
	comp=Z,60nm,0.8s,baz=123,slow=3.7,SNR=12						
LPAZ	La Paz	159.96	219	*e*P	PKPdf	09 54 48.3	-0.5
LPAZ	La Paz	159.96	219	PKPdf	PKPdf	09 54 49.4	+0.7
LPAZ				PKPab	PKPab	09 55 29.1	+0.7
PCRV	Puerto La Cruz	160.35	304	PKP	PKPdf	09 54 47.1	-1.4
	comp=Z,14nm,1.0s,baz=270,slow=2.0,SNR=3.3						
TGUH	Tegucigalpa,Un	164.06	22	*e*P	PKPdf	09 54 50.2	-2.2
URIC	Uribia, Colomb	164.68	324	*e*P	PKPdf	09 54 53.1	+0.3
SDV	Santo Domingo	165.85	313	PKP	PKPdf	09 54 52.3	-1.7
	comp=Z,5.0nm,0.2s,baz=4.3,slow=1.3,SNR=15						
SDV				PKPab	PKPab	09 55 53.7	-0.1
	comp=Z,23nm,0.8s,baz=28,slow=3.6,SNR=7.9						
SDV				PP	PP	09 59 40.9	+0.4
	comp=Z,8.6nm,0.7s,baz=77,slow=4.2,SNR=5.5						
ARGC	Ariguani, Magd	167.45	327	*e*P	PKPdf	09 54 55.5	+0.5
SJCC	San Jacinto, C	167.89	331	*e*P	PKPdf	09 54 55.5	+0.2
OCAC	Ocana	168.17	319	*e*P	PKPdf	09 54 55.5	-0.2
SMLC	San Martn de	168.21	324	*e*P	PKPdf	09 54 54.7	-0.8
TAMC	Tame, Arauca	168.29	308	*e*P	PKPdf	09 54 52.2	-3.4
TBTG	Tabatinga, AM	168.32	253	*e*P	PKPdf	09 54 50.3	-5.3
PAMC	Pamplona, Colo	168.39	314	*e*P	PKPdf	09 54 55.5	-0.7
MOTC	Monteria, Cord	169.09	330	*e*P	PKPdf	09 54 55.5	-0.6
CZSB	Cruzeiro do Su	169.14	230		PKPdf	09 54 55.0	-1.2
CZSB					PKPab	09 56 07.1	-1.0
BARC	Barichara	169.25	313	*e*P	PKPdf	09 54 55.5	-1.0
BRRC	Barranca, Sant	169.27	317	*e*P	PKPdf	09 54 55.5	-0.7
PEZE	Perez Zeledon,	169.61	14	PKPdf	PKPdf	09 54 56.3	-0.2
PEZE					PKPab	09 56 09.8	-0.3
RUSC	La Rusia	169.63	310	*e*P	PKPdf	09 54 55.5	-1.5
PTGC	Puerto Gaitan,	169.78	299	*e*P	PKPdf	09 54 55.5	-1.0
SRBA	San Rafael, Bu	169.83	13	PKPdf	PKPdf	09 54 56.7	0.0
SRBA				PKPab	PKPab	09 56 10.8	-0.3
CAPC	Capurgana	169.96	338	*e*P	PKPdf	09 54 55.5	-1.1
BCIP	Isla Barro Col	170.07	353	*e*P	PKPdf	09 54 54.3	-2.3
BRU2	Volcan	170.38	9	*e*P	PKPdf	09 54 55.8	-1.3
SPBC	San Pablo de B	170.53	312	*e*P	PKPdf	09 54 54.7	-2.4
CHIC	Chingaza	170.91	306	*e*P	PKPdf	09 54 54.7	-3.0
ROSC	El Rosal	171.24	309	PKP	PKPdf	09 54 57.9	+0.1
	comp=Z,76nm,1.0s,baz=119,slow=1.4,SNR=37						
ROSC	El Rosal	171.24	309	*e*P	PKPdf	09 54 53.9	-3.9
MACC	Macarena, Meta	172.20	292	*e*P	PKPdf	09 54 54.7	-3.1
ORTC	Ortega, Tolima	172.54	308	*e*P	PKPdf	09 54 55.5	-2.5
ATAH	Atahualpa	173.11	203	PKP	PKPdf	09 54 59.7	+1.0
	comp=Z,40nm,1.1s,baz=46,slow=1.1,SNR=27						
ATAH				PKPab	PKPab	09 56 27.8	+1.7
	comp=Z,29nm,1.0s,baz=106,slow=2.6,SNR=6.6						
YOTC	Yotoco, Valle	173.32	315	*e*P	PKPdf	09 54 53.1	-5.4
BETC	Betania	173.40	301	*e*P	PKPdf	09 54 55.5	-2.8
GARC	Garzon, Huila	173.68	298	*e*P	PKPdf	09 54 58.0	-0.7
MARP	Paez Belalcaza	173.74	305	*e*P	PKPdf	09 54 57.2	-1.6
PCON	Cinco Dias	174.39	303	*e*P	PKPdf	09 54 53.5	-5.8
SOTA	Rioblanco	174.68	303	*e*P	PKPdf	09 54 56.0	-3.4
GCUF	Volcan Galeras	175.77	298	*e*P	PKPdf	09 54 57.0	-2.7
TULM	Tulcn-Chalpat	176.38	294	*e*P	PKPdf	09 54 54.6	-5.2
CUSE	Cuicocha Este	177.11	291	*e*P	PKPdf	09 54 54.4	-5.4
OTAV	Otavalo	177.18	290	*e*P	PKPdf	09 54 56.3	-3.6
PAC1	Pacto, Paraso	177.48	294	*e*P	PKPdf	09 54 56.8	-2.8

IDC ***08*** *09:45:13.0±0.6, 7°.17N×94°.76E, h0^{km}, mb4.2/22, mb1 4.3/23, mb1mx4.1/56, mbtmp4.2/23, ML4.1/1, MS4.3/1, Ms1 4.3/1, ms1mx3.4/48 Error ellipse: s-maj=26.8km s-min=14.2km az=51.0*

ISC 08 09:45:18.1±0.5**, 7°.1N**±0°.1×**94°.7E**±0°.1**, h35^{km}, n31, σ0^{s}78**/30**, mb4.3**/22**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	5.97	135	Pn	Pn	09 46 44.4	+0.2
	4.5nm,0.3s,baz=342,slow=14,SNR=16						
PSI				LR	LR	09 49 23.5	
	comp=Z,2µm,18.4s,baz=302,slow=41						
CMAR	Chiang Mai Arr	12.02	20	Pn	Pn	09 48 08.2	+1.2
	0.3nm,0.3s,baz=209,slow=14,SNR=0.9						
H08S3	Diego Garcia H	26.57	237	T	T	10 17 31.3	
	baz=56,slow=76,SNR=6.3						
H08S2	Diego Garcia H	26.57	237	T	T	10 17 37.1	
	baz=56,slow=76,SNR=6.2						
H08S1	Diego Carcia H	26.59	237	T	T	10 17 34.8	
	baz=56,slow=76,SNR=5.8						
FITZ	Fitzroy Crossi	39.47	130	P	P	09 52 45.6	+0.2
	3.0nm,0.7s,baz=318,slow=5.8,SNR=2.1						
MKAR	Makanchi Array	40.97	347	P	P	09 52 56.6	-0.9
	0.9nm,0.6s,baz=165,slow=9.0,SNR=1.6						
GEYT	Alibeck	45.16	318	P	P	09 53 31.8	+0.2
	3.2nm,0.6s,baz=148,slow=8.5,SNR=2.4						
KURBB	Kurchatov Arra	45.44	346	P	P	09 53 33.2	-0.3
	2.8nm,0.7s,baz=174,slow=6.9,SNR=5.6						
WRA	Warramunga Arr	47.34	125	P	P	09 53 48.4	-0.5
	2.6nm,0.8s,baz=301,slow=9.4,SNR=3.7						
WRA				PcP	PcP	09 55 19.3	-0.1
	1.3nm,0.9s,baz=311,slow=3.0,SNR=1.8						
ZALV	Zalesovo Beam	47.40	352	P	P	09 53 47.6	-1.2
	1.3nm,0.4s,baz=165,slow=8.1,SNR=1.9						
ASAR	Alice Springs	48.98	130	P	P	09 54 02.1	+0.6
	1.4nm,0.7s,baz=312,slow=8.5,SNR=2.3						
ASAR				PcP	PcP	09 55 25.7	+0.4
	1.3nm,0.9s,baz=316,slow=3.9,SNR=1.9						
MJAR	Matsushiro Arr	49.26	47	P	P	09 54 03.1	-0.4
	0.7nm,0.4s,baz=236,slow=9.5,SNR=2.8						
BVAR	Borovoye Array	49.91	341	P	P	09 54 08.8	+0.6
	1.7nm,0.7s,baz=178,slow=13,SNR=1.4						
AKTO	Aktyubinsk	52.91	331	P	P	09 54 30.6	0.0
	3.5nm,0.6s,baz=120,slow=7.0,SNR=8.4						
KMBO	Kilima Mbogo	57.92	264	P	P	09 55 07.8	+0.2
	1.9nm,0.8s,baz=75,slow=16,SNR=2.3						
BELG	Belogornoye	59.27	329	P	P	09 55 16.2	+0.2
	6.4nm,0.6s,baz=171,slow=4.4,SNR=1.8						
KIRV	Kirov	61.96	335	P	P	09 55 34.1	-0.1
	4.4nm,0.5s,baz=115,slow=19,SNR=1.6						
BRTR	Keskin Array B	63.37	311	P	P	09 55 42.6	-1.7
	1.5nm,0.7s,baz=129,slow=5.4,SNR=4.7						
AKASG	Malin Array Be	69.12	322	P	P	09 56 21.3	+0.6
	2.2nm,0.8s,baz=81,slow=6.3,SNR=1.5						
FINES	FINESS Array B	73.67	332	P	P	09 56 48.4	+0.4
	1.3nm,0.7s,baz=88,slow=3.7,SNR=6.4						
BOSA	Boshof	75.67	238	P	P	09 57 01.5	+1.2
	4.7nm,0.9s,baz=99,slow=3.4,SNR=4.8						
ARCES	ARCESS Array B	76.19	340	P	P	09 57 01.6	-0.8
	5.9nm,1.1s,baz=103,slow=6.8,SNR=1.7						
GERES	GERESS Array B	78.79	318	P	P	09 57 17.8	+0.4
	0.8nm,0.7s,baz=93,slow=5.0,SNR=3.3						
NB2	NORSAR Subarra	80.69	331	P	P	09 57 27.5	+0.1
	comp=Z,14nm,1.4s,baz=92,slow=5.9						
NOA	NORSAR Array B	80.69	331	P	P	09 57 27.8	+0.4
	comp=Z,1.1nm,0.8s,baz=95,slow=5.1,SNR=2.3						
KEST	Kesra	82.16	305	P	P	09 57 36.5	+0.7
	comp=Z,1.6nm,0.5s,baz=90,slow=21,SNR=2.1						
ESDC	Sonseca Array	92.16	310	P	P	09 58 24.9	+0.5
	comp=Z,0.8nm,0.8s,baz=58,slow=4.2,SNR=3.4						
TXAR	Lajitas Array	139.69	25	PKP	PKPdf	10 04 43.0	-0.1
	comp=Z,0.4nm,0.7s,baz=5.4,slow=3.8,SNR=1.3						
LPIG	La Paz	140.53	37	PKP	PKiKP	10 04 45.5	-1.7
	comp=Z,7.9nm,0.7s,baz=334,slow=22,SNR=1.3						
CPUP	Villa Florida	147.24	231	PKPbc	PKPab	10 04 59.0	-1.3
	comp=Z,2.3nm,0.9s,baz=114,slow=6.9,SNR=3.1						

IDC ***08*** *09:50:29.3±0.7, 7°.19N×94°.94E, h0^{km}, mb4.0/16, mb1 4.1/17, mb1mx3.9/58, mbtmp4.0/17, ML3.3/1, MS4.1/1, Ms1 4.1/1, ms1mx3.4/45, Error ellipse: s-maj=28.1km s-min=15.2km az=55.0*

ISC 08 09:50:34.6±0.7**, 7°.1N**±0°.1×**94°.8E**±0°.1**, h35^{km}, n23, σ1^{s}20**/19**, mb4.1**/16**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	5.90	136	Pn	Pn	09 52 00.8	+1.1
	0.7nm,0.3s,baz=328,slow=15,SNR=2.7						
CMAR	Chiang Mai Arr	11.98	19	Pn	Pn	09 53 25.6	+2.5
	0.8nm,0.3s,baz=222,slow=12,SNR=2.1						
H08S3	Diego Garcia H	26.66	237	T	T	10 24 08.6	
	baz=56,slow=75,SNR=11						
H08S2	Diego Garcia H	26.66	237	T	T	10 24 10.8	
	baz=56,slow=75,SNR=10.0						
H08S1	Diego Carcia H	26.68	237	T	T	10 24 08.9	
	baz=56,slow=75,SNR=6.6						
FITZ	Fitzroy Crossi	39.39	130	P	P	09 58 00.5	-0.8
	1.5nm,0.8s,baz=324,slow=8.7,SNR=1.7						
MKAR	Makanchi Array	41.00	347	P	P	09 58 13.1	-1.2
	2.1nm,0.9s,baz=171,slow=7.3,SNR=5.1						
SONM	Songino Array	41.78	12	P	P	09 58 19.8	-1.0
	1.0nm,0.8s,baz=207,slow=8.7,SNR=3.6						
KURBB	Kurchatov Arra	45.47	345	P	P	09 58 49.6	-0.7
	3.1nm,0.9s,baz=164,slow=6.6,SNR=11						
WRA	Warramunga Arr	47.25	125	P	P	09 59 03.8	-1.0
	1.1nm,0.8s,baz=306,slow=9.3,SNR=6.3						
ZALV	Zalesovo Beam	47.42	352	P	P	09 59 04.3	-1.2
	2.4nm,0.9s,baz=160,slow=9.5,SNR=3.6						
ASAR	Alice Springs	48.89	130	P	P	09 59 17.3	-0.1
	0.8nm,0.8s,baz=298,slow=7.4,SNR=7.3						
JHJ	Hachijo jima 2	48.99	52	LR	LR	10 21 37.3	
	comp=Z,202nm,18.8s,baz=86,slow=38						
BVAR	Borovoye Array	49.95	341	P	P	09 59 23.7	-1.3
	1.7nm,0.7s,baz=196,slow=14,SNR=4.5						
AKTO	Aktyubinsk	52.96	331	P	P	09 59 46.8	-0.9
	1.5nm,0.6s,baz=119,slow=11,SNR=2.5						
KMBO	Kilima Mbogo	58.02	264	P	P	10 00 26.1	+1.1
	0.6nm,0.2s,baz=73,slow=17,SNR=1.9						
BRTR	Keskin Array B	63.46	311	P	P	10 01 01.7	+0.3
	1.4nm,1.0s,baz=142,slow=6.3,SNR=4.6						
TIXI	Tiksi	67.86	11	P	P	10 01 28.2	-0.8
	1.2nm,0.3s,baz=297,slow=3.5,SNR=1.6						
AKASG	Malin Array Be	69.19	322	P	P	10 01 38.6	+0.9
	0.2nm,0.3s,baz=86,slow=6.2,SNR=2.3						
FINES	FINESS Array B	73.72	332	P	P	10 02 05.7	+0.9
	6.1nm,1.0s,baz=106,slow=3.0,SNR=3.9						
BOSA	Boshof	75.76	238	P	P	10 02 17.8	+0.4
	3.8nm,1.0s,baz=88,slow=7.0,SNR=4.5						
GERES	GERESS Array B	78.86	318	P	P	10 02 34.2	-0.3
	1.7nm,0.9s,baz=107,slow=7.1,SNR=3.8						
TXAR	Lajitas Array	139.64	25	PKP	PKiKP	10 10 00.2	-1.8
	0.2nm,0.7s,baz=48,slow=2.7,SNR=1.6						

IDC ***08*** *09:51:47.2±0.5, 7°.02N×94°.62E, h0^{km}, mb4.1/21, mb1 4.2/23, mb1mx4.1/59, mbtmp4.1/23, ML4.2/2, MS4.1/6, Ms1 4.1/6, ms1mx3.6/50, Error ellipse: s-maj=23.4km s-min=13.0km az=57.0*

NEIC ***08*** *09:51:51.8±1.4, 7°.0N±0°.2×94°.6E±0°.2, h20^{km}±4^{km}, mb4.6/13, Error ellipse: s-maj=32.6km s-min=17.3km az=52.0*

ISC 08 09:51:51.5±0.5**, 7°.06N**±0°.09×**94°.7E**±0°.1**, h26^{km}, n52, σ0^{s}98**/53**, mb4.3**/26**, MS4.1**/4**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	5.99	135	Pn	Pn	09 53 19.2	+0.6
	1.5nm,0.3s,baz=320,slow=6.7,SNR=2.0						
CMAR	Chiang Mai Arr	12.07	20	Pn	Pn	09 54 40.6	-1.4
	1.2nm,0.3s,baz=226,slow=14,SNR=1.5						
PALK	Pallekele	13.86	272	LR	LR	09 59 34.4	
	comp=Z,1µm,21.2s,baz=179,slow=34						
LEM	Lembang	18.90	137	LR	LR	10 03 18.2	
	comp=Z,950nm,18.3s,baz=300,slow=37						
NIL	Nilore	33.06	326	P	P	09 58 25.2	+0.1
GAR	Garm	38.64	329	P	P	09 59 12.9	-0.1
GAR				IAmb	IAmb	09 59 19.6	
	comp=Z,13nm,0.8s						
FITZ	Fitzroy Crossi	39.49	130	P	P	09 59 19.3	-0.9
	comp=Z,2.1nm,0.9s,baz=310,slow=7.9,SNR=1.8						
MKAR	Makanchi Array	41.00	347	P	P	09 59 31.5	-0.8
	comp=Z,1.6nm,0.6s,baz=168,slow=8.2,SNR=6.3						
MKAR				PcP	PcP	10 01 32.9	+0.8
	comp=Z,0.7nm,1.0s,baz=164,slow=3.5,SNR=1.0						
SONM	Songino Array	41.85	12	P	P	09 59 39.1	-0.3
	comp=Z,0.6nm,0.5s,baz=190,slow=10,SNR=3.7						
SONM				PcP	PcP	10 01 36.0	+1.0
	comp=Z,0.7nm,0.6s,baz=190,slow=4.6,SNR=3.0						
GEYT	Alibeck	45.15	318	P	P	10 00 05.9	-0.2
	comp=Z,2.8nm,0.5s,baz=133,slow=8.1,SNR=3.0						
KURBB	Kurchatov Arra	45.46	346	P	P	10 00 08.2	0.0
	comp=Z,2.9nm,0.7s,baz=172,slow=6.9,SNR=8.1						
KURBB				PcP	PcP	10 01 48.8	+1.7
	comp=Z,1.0nm,0.7s,baz=159,slow=2.8,SNR=2.9						
WB0	Warramunga Arr	47.32	125	P	P	10 00 23.2	-0.2
WB0				IAmb	IAmb	10 00 29.2	
	comp=Z,5.8nm,1.2s						
WRA	Warramunga Arr	47.37	125	P	P	10 00 23.0	-0.7
	comp=Z,1.4nm,0.8s,baz=305,slow=9.1,SNR=3.0						
WRA				PcP	PcP	10 01 54.2	-0.2
	comp=Z,0.7nm,0.6s,baz=298,slow=3.0,SNR=2.3						
WRA				LR	LR	10 21 44.1	
	comp=Z,320nm,19.1s,baz=300,slow=38						
WRA	Warramunga Arr	47.37	125	P	P	10 00 23.3	-0.4
ZALV	Zalesovo Beam	47.43	352	P	P	10 00 24.3	+0.6
	comp=Z,1.2nm,0.4s,baz=165,slow=6.2,SNR=5.3						
ZALV	Zalesovo Beam	47.43	352	P	P	10 00 25.0	+1.3
WR0	Warramunga Arr	47.54	125	P	P	10 00 24.2	-0.9
AS31	Alice Springs	49.00	130	P	P	10 00 36.9	+0.6
ASAR	Alice Springs	49.00	130	P	P	10 00 35.9	-0.4
	comp=Z,1.3nm,0.7s,baz=300,slow=7.8,SNR=6.9						
ASAR				PcP	PcP	10 02 00.8	+0.7
	comp=Z,1.1nm,0.7s,baz=309,slow=4.3,SNR=4.9						
JCJ	Chichijima	49.25	60	LR	LR	10 19 24.9	
	comp=Z,126nm,18.8s,baz=102,slow=34						
FORT	Forrest	49.38	141	P	P	10 00 39.5	+0.4
BVAR	Borovoye Array	49.93	341	P	P	10 00 43.5	+0.6
	comp=Z,1.2nm,0.6s,baz=241,slow=46,SNR=1.9						
ABKAR	Akbulak array	51.19	331	P	P	10 00 53.5	+1.0
ABKAR	Akbulak array	51.19	331	P	P	10 00 53.5	+1.0
ABKAR				IAmb	IAmb	10 01 00.6	
	comp=Z,9.9nm,0.8s						
ATD	Arta Tunnel	51.28	279	LR	LR	10 19 51.2	
	comp=Z,97nm,18.5s,baz=84,slow=33						
AKTO	Aktyubinsk	52.91	331	P	P	10 01 05.2	-0.1
	comp=Z,2.6nm,0.5s,baz=111,slow=6.6,SNR=9.3						
BBOO	Buckleboo	55.86	138	P	P	10 01 26.8	-0.3
BBOO				IAmb	IAmb	10 01 37.3	
	comp=Z,7.3nm,0.9s						
ARU	Arti	56.84	337	P	P	10 01 34.6	+0.9
	comp=Z,1.0nm,0.4s,baz=117,slow=9.6,SNR=3.6						
KMBO	Kilima Mbogo	57.85	264	P	P	10 01 41.5	-0.4
	comp=Z,4.0nm,1.0s,baz=46,slow=11,SNR=5.6						

KMBO				LR	LR	10 24 17.6	
	comp=Z,172nm,18.8s,baz=91,slow=34						
STKA	Stephens Creek	59.17	134	P	P	10 01 49.2	-1.2
	comp=Z,0.9nm,0.3s,baz=311,slow=7.5,SNR=3.2						
BRTR	Keskin Array B	63.35	311	P	P	10 02 18.1	-0.8
	comp=Z,1.0nm,0.6s,baz=132,slow=7.1,SNR=4.9						
BRTR	Keskin Array B	63.35	311	P	P	10 02 19.0	+0.2
TIXI	Tiksi	67.93	11	P	P	10 02 47.6	0.0
	comp=Z,1.6nm,0.2s,baz=132,slow=9.6,SNR=2.1						
AKASG	Malin Array Be	69.11	322	P	P	10 02 54.5	-0.9
	comp=Z,0.1nm,0.3s,baz=82,slow=6.3,SNR=2.0						
FIA1	FINESS Array S	73.67	332	P	P	10 03 23.6	+1.0
FINES	FINESS Array B	73.67	332	P	P	10 03 22.9	+0.2
	comp=Z,2.6nm,0.8s,baz=83,slow=5.2,SNR=6.3						
FINES	FINESS Array B	73.67	332	P	P	10 03 24.1	+1.4
BOSA	Boshof	75.59	238	P	P	10 03 34.7	0.0
	comp=Z,2.1nm,0.6s,baz=100,slow=4.4,SNR=7.4						
BOSA	Boshof	75.59	238	P	P	10 03 35.0	+0.4
BOSA				IAmb	IAmb	10 03 43.0	
	comp=Z,4.1nm,0.9s						
ARCES	ARCESS Array B	76.21	340	P	P	10 03 36.7	-0.5
	comp=Z,5.2nm,1.1s,baz=48,slow=3.6,SNR=5.3						
ARCES	ARCESS Array B	76.21	340	P	P	10 03 39.0	+1.7
ARCES				IAmb	IAmb	10 04 08.3	
	comp=Z,7.3nm,1.1s						
GERES	GERESS Array B	78.78	318	P	P	10 03 50.7	-1.4
	comp=Z,1.1nm,0.8s,baz=79,slow=6.9,SNR=4.2						
GERES	GERESS Array B	78.78	318	P	P	10 03 52.5	+0.4
NB2	NORSAR Subarra	80.69	331	P	P	10 04 01.6	-0.6
	comp=Z,6.3nm,1.0s,baz=91,slow=5.9						
NOA	NORSAR Array B	80.69	331	P	P	10 04 01.2	-1.0
	comp=Z,0.9nm,0.8s,baz=92,slow=5.7,SNR=2.8						
SENIN	Lac Senin/Sane	83.13	316	P	P	10 04 17.2	+1.7
SENIN				IAmb	IAmb	10 04 19.2	
	comp=Z,4.3nm,0.8s						
IMAR	Indian Mountai	92.19	22		P	10 05 02.1	+3.5
NVAR	Mina Array Bea	125.34	32	PKP	PKiKP	10 10 51.4	+0.2
	comp=Z,0.5nm,0.7s,baz=316,slow=2.6,SNR=4.2						
PDAR	Pinedale Array	125.73	22	PKP	PKiKP	10 10 51.6	-0.2
	comp=Z,0.4nm,0.6s,baz=122,slow=2.3,SNR=3.5						
TXAR	Lajitas Array	139.75	25	PKP	PKPdf	10 11 16.5	-1.5
	comp=Z,0.1nm,0.5s,baz=231,slow=0.6,SNR=1.8						
PLCA	Paso Flores	143.96	199	PKP	PKPdf	10 11 25.0	-0.1
	comp=Z,2.4nm,1.0s,baz=230,slow=6.2,SNR=3.0						
CPUP	Villa Florida	147.16	231	PKPbc	PKPbc	10 11 31.9	-1.3
	comp=Z,1.9nm,0.9s,baz=14,slow=6.8,SNR=3.5						

*IDC **08** 09:55:43.6±2.7, 6°.75N×94°.40E, h0^{km}, mb3.5/6, mb1 3.7/6, mb1mx3.4/57, mbtmp3.5/6, Error ellipse: s-maj=119.7km s-min=24.8km az=59.0*

ISC 08 09:55:47.6±2.3**, 6°.8N**±0°.4×**94°.4E**±0°.6**, h26^{km}, n6,** σ**0^{s}.63**/6**,** **mb3.5**/6**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	41.23	347	P	P	10 03 30.1	-0.3
	0.6nm,0.6s,baz=164,slow=8.9,SNR=4.1						
SONM	Songino Array	42.18	12	P	P	10 03 38.2	-0.1
	0.2nm,0.4s,baz=198,slow=9.1,SNR=2.4						
WRA	Warramunga Arr	47.39	125	P	P	10 04 20.7	+0.7
	0.3nm,0.8s,baz=306,slow=8.9,SNR=2.4						
ZALV	Zalesovo Beam	47.69	352	P	P	10 04 21.8	-0.1
	0.6nm,0.5s,baz=168,slow=7.4,SNR=1.9						
ASAR	Alice Springs	48.99	129	P	P	10 04 31.7	-0.7
	0.2nm,0.7s,baz=300,slow=7.8,SNR=2.0						
ARCES	ARCESS Array B	76.40	340	P	P	10 07 34.9	+0.4
	1.5nm,0.8s,baz=99,slow=5.6,SNR=0.9						

*IDC **08** 09:57:40.6±2.7, 7°.40N×95°.46E, h0^{km}, mb3.6/5, mb1 3.7/6, mb1mx3.5/57, mbtmp3.6/6, ML3.7/1, Error ellipse: s-maj=158.9km s-min=21.5km az=57.0*

ISC 08 09:57:45.3±2.3**, 7°.3N**±0°.6×**95°.4E**±0°.8**, h35^{km}, n6,** σ**0^{s}.86**/6**,** **mb3.6**/5**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	Prapat	5.71	141	Pn	Pn	09 59 07.4	-0.4
	1.9nm,0.3s,baz=324,slow=19,SNR=5.8						
MKAR	Makanchi Array	40.92	346	P	P	10 05 24.8	+0.5
	0.5nm,0.6s,baz=170,slow=7.3,SNR=2.5						
WRA	Warramunga Arr	46.95	126	P	P	10 06 14.1	+1.0
	0.5nm,0.8s,baz=307,slow=8.3,SNR=3.0						
ZALV	Zalesovo Beam	47.29	352	P	P	10 06 14.2	-1.0
	0.6nm,0.6s,baz=178,slow=9.4,SNR=1.5						
ASAR	Alice Springs	48.63	130	P	P	10 06 26.1	0.0
	0.4nm,0.8s,baz=307,slow=6.9,SNR=3.2						
AKTO	Aktyubinsk	53.03	331	P	P	10 06 58.9	+0.1
	1.1nm,0.6s,baz=127,slow=5.1,SNR=2.0						

*BJI **08** 10:04:33.5±0.0, 6°.59N×94°.40E, h22^{km}, mB5.1/12, mb4.5/36, Ms4.6/7, Ms7 4.4/7*

*NEIC **08** 10:04:36.6±1.2, 6°.79N±0°.08×94°.4E±0°.1, h20^{km}±2^{km}, mb4.7/45, Error ellipse: s-maj=16.2km s-min=9.9km az=59.0*

*IDC **08** 10:04:37.8±5.7, 6°.93N×94°.54E, h33^{km}±43^{km}, mb4.1/27, mb1 4.2/29, mb1mx4.1/62, mbtmp4.3/29, ML4.0/2, MS4.1/5, Ms1 4.1/5, ms1mx3.6/49, Error ellipse: s-maj=23.3km s-min=11.2km az=53.0*

ISC 08 10:04:36.5±0.4**, 6°.76N**±0°.07×**94°.27E**±0°.06**, h26^{km}, n139,** σ**1^{s}.17**/138**, mb4.6**/74**, MS4.1**/4**, 1C-1D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	Lhok Sumawe	3.07	120	Pn	Pn	10 05 20.8	-2.5
PSI	Prapat	6.08	130	Pn	Pn	10 06 05.4	+0.5
	1.9nm,0.3s,baz=340,slow=10,SNR=6.5						
PSI				Sn	Sn	10 07 16.0	+2.2
	1.7nm,0.3s,baz=343,slow=16,SNR=1.4						
PSI				LR	LR	10 08 53.6	
	comp=Z,1µm,20.3s,baz=302,slow=42						
GSI	Gunungsitoli	6.34	149		Pn	10 06 07.7	-0.7
CM31	Chiang Mai Arr	12.48	21	Pn	Pn	10 07 32.6	0.0
CMAR	Chiang Mai Arr	12.48	21	Pn	Pn	10 07 30.4	-2.2
	0.5nm,0.3s,baz=213,slow=14,SNR=20						
CMAR				LR	LR	10 11 42.6	
	comp=Z,515nm,20.9s,baz=242,slow=35						
CMAR	Chiang Mai Arr	12.48	21	Pn	Pn	10 07 32.6	0.0
CHTO	Chiang Mai	12.81	20	Pn	Pn	10 07 36.0	-1.1
PALK	Pallekele	13.48	273	Sn	Sn	10 10 13.4	-1.9
	0.5nm,0.3s,baz=288,slow=20,SNR=1.6						
SLVN	Son La	17.23	32	Pn	Pn	10 08 34.5	-1.0
SHL	Shillong	18.84	353		P	10 08 54.0	-0.8
LEM	Lembang	18.96	135	LR	LR	10 17 14.9	
	comp=Z,1µm,18.6s,baz=306,slow=40						
QIZ	Qiongzhong	19.45	50		P	10 08 59.9	-1.4
QIZ				IAmb	IAmb	10 09 01.7	
	comp=Z,26nm,1.2s						
KMI	Kunming	19.98	23	⇑P	Pn	10 09 09.0	-0.1
KMI				pP	pwP	10 09 15.7	-0.6
KMI				pmax	pmax		
	comp=Z,19nm,1.6s						
KMI				LR	LR		
	comp=Z,380nm,11.3s						
KMI				LR	LR		
	comp=Z,600nm,8.2s						
KMI				LR	LR		
	comp=Z,620nm,14.4s						
ODAN	Odare	21.03	343	*e*P	P	10 09 21.4	+2.7
	comp=Z,53nm,0.9s						
RAMN	Ramite	21.36	341	*e*P	P	10 09 24.0	+1.7
	comp=Z,42nm,0.6s						
TAPN	Taplejung	21.40	344	*e*P	P	10 09 25.2	+2.4
JIRN	Jiri	22.15	341	*e*P	P	10 09 31.7	+0.8
	comp=Z,66nm,0.9s						
PKI	Pulchoki	22.34	339	*e*P	P	10 09 33.8	+0.9
	comp=Z,72nm,0.6s						
PKIN	Phulchoki	22.35	339	*e*P	P	10 09 34.1	+1.2
	comp=Z,66nm,0.6s						
DMN	Daman	22.48	338	*e*P	P	10 09 34.7	+0.4
	comp=Z,126nm,0.9s						
GUN	Gumba	22.49	340	*e*P	P	10 09 34.6	+0.1
KKN	Kakani	22.59	339	*e*P	P	10 09 36.2	+0.8
	comp=Z,30nm,0.7s						
GYA	Guiyang	22.87	30	⇓P	P	10 09 39.0	+0.7
GYA				sP	sP	10 09 48.1	+0.1
GYA				pmax	pmax		
	comp=Z,16nm,1.2s						
GKN	Gorkha	23.02	338	*e*P	P	10 09 40.3	+0.5
	comp=Z,60nm,0.9s						
KOLN	Koldanda	23.22	335	*e*P	P	10 09 41.3	-0.6
	comp=Z,38nm,0.8s						
DANN	Dangsing	23.66	336	*e*P	P	10 09 45.8	-0.6
	comp=Z,27nm,0.6s						
H08S3	Diego Garcia H	26.01	237	T	T	10 37 36.0	
	baz=58						
H08S2	Diego Garcia H	26.01	237	T	T	10 37 40.4	
	baz=58						
H08S1	Diego Carcia H	26.03	237	T	T	10 37 42.4	
	baz=58						
TOLI2	Tolitoli	27.03	101	P	P	10 10 18.6	+1.7
TOLI2				IAmb	IAmb	10 10 23.9	
	comp=Z,15nm,0.8s						
ENH	Enshi	27.41	30	P	P	10 10 18.3	-1.9
ENH				IAmb	IAmb	10 10 35.8	
	comp=Z,12nm,0.9s						
XAN	Xi'an	30.34	25	P	P	10 10 44.7	-1.5
XAN				pP	pP	10 10 51.1	-2.3
XAN				pmax	pmax		
	comp=Z,12nm,0.9s						
GTA	Gaotai	32.89	8	*e*P	P	10 11 09.8	+1.2
GTA				pP	pP	10 11 13.0	-2.8
GTA				sP	pwP	10 11 16.0	-2.2
GTA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
NIL	Nilore	33.09	327	P	P	10 11 10.9	+0.6
NJ2	Nanjing	34.04	39	*e*P	P	10 11 21.0	+2.4
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KSH	Kashi	36.53	336	P	P	10 11 40.3	+0.1
KSH				pmax	pmax		
	comp=Z,5.0nm,0.4s						
HHC	Hu-ho-hao-te	37.29	22	*e*P	P	10 11 49.5	+2.9
HHC				pmax	pmax		
	comp=Z,15nm,0.9s						
HHC				pmax	pmax		
	comp=Z,390nm,9.2s						
WMQ	Urumqi	37.36	352	*e*P	P	10 11 49.7	+2.6
GAR	Garm	38.69	330	P	P	10 11 58.5	0.0
CHGR	Chuyangaron	39.03	328	P	P	10 12 01.2	0.0
BTK	Batken	39.26	331	P	P	10 12 03.7	+0.5
BTK				IAmb	IAmb	10 12 13.2	
	comp=Z,41nm,1.2s						
FITZ	Fitzroy Crossi	39.61	129	P	P	10 12 06.3	+0.2
	comp=Z,2.8nm,0.6s,baz=322,slow=10,SNR=5.6						
FITZ	Fitzroy Crossi	39.61	129	P	P	10 12 05.5	-0.7
AAK	Ala-Archa	39.77	337	P	P	10 12 07.9	+0.5
	comp=Z,0.9nm,0.3s,baz=160,slow=1.2,SNR=4.2						
AAK	Ala-Archa	39.77	337	P	P	10 12 07.2	-0.3
MK31	Makanchi Array	41.20	347	P	P	10 12 18.6	-0.4
MKAR	Makanchi Array	41.20	347	P	P	10 12 18.6	-0.4
	comp=Z,5.0nm,0.7s,baz=166,slow=7.3,SNR=28						
MKAR	Makanchi Array	41.20	347	P	P	10 12 17.8	-1.2
MAKZ	Makanchi	41.28	347	P	P	10 12 20.4	+0.8
MAKZ				IAmb	IAmb	10 12 25.9	
	comp=Z,5.8nm,0.7s						
KK31	Karatay Array	41.81	334	P	P	10 12 24.3	+0.2
KKAR	Karatay Array	41.81	334	P	P	10 12 24.7	+0.6
SONM	Songino Array	42.22	12	P	P	10 12 25.8	-1.6
	comp=Z,1.5nm,0.7s,baz=196,slow=9.2,SNR=7.3						
SONM				PcP	PcP	10 14 20.7	-0.6
	comp=Z,1.3nm,0.9s,baz=210,slow=3.8,SNR=2.3						
SONM	Songino Array	42.22	12	P	P	10 12 26.7	-0.7
KSRS	Korea Array	43.22	40	LR	LR	10 31 10.6	
	comp=Z,164nm,18.7s,baz=226,slow=37						
GEYT	Alibeck	45.11	319	P	P	10 12 52.0	+1.1
	comp=Z,3.1nm,0.5s,baz=156,slow=7.4,SNR=3.1						
GEYT				LR	LR	10 33 34.7	
	comp=Z,178nm,20.0s,baz=80,slow=38						
KURK	Kurchatov	45.71	346	P	P	10 12 55.1	-0.2
WB0	Warramunga Arr	47.48	125	P	P	10 13 09.1	-0.5
WB0				IAmb	IAmb	10 13 14.1	
	comp=Z,3.3nm,0.7s						
WRA	Warramunga Arr	47.52	125	P	P	10 13 08.1	-1.9
	comp=Z,3.9nm,0.7s,baz=305,slow=8.7,SNR=23						
WRA	Warramunga Arr	47.52	125	P	P	10 13 09.9	-0.1
WRAB	Tennant Creek	47.52	125	P	P	10 13 09.8	-0.2
WRAB				IAmb	IAmb	10 13 15.4	
	comp=Z,6.0nm,0.8s						
WB2	Warramunga Arr	47.53	125	P	P	10 13 09.8	-0.3
WB2				IAmb	IAmb	10 13 15.3	
	comp=Z,5.4nm,0.9s						
ZAA0	Zalesovo Array	47.67	352	P	P	10 13 11.6	+1.0
ZAA0				IAmb	IAmb	10 13 17.5	
	comp=Z,16nm,1.3s						
ZALV	Zalesovo Beam	47.67	352	P	P	10 13 11.3	+0.7
	comp=Z,4.5nm,0.7s,baz=181,slow=6.4,SNR=14						
ZALV	Zalesovo Beam	47.67	352	P	P	10 13 11.0	+0.5
WR0	Warramunga Arr	47.69	125	P	P	10 13 11.0	-0.3
WR0				IAmb	IAmb	10 13 17.1	
	comp=Z,4.6nm,0.8s						
AS31	Alice Springs	49.11	129	P	P	10 13 21.9	-0.3
ASAR	Alice Springs	49.11	129	P	P	10 13 21.0	-1.2
	comp=Z,2.3nm,0.8s,baz=302,slow=7.5,SNR=28						
ASAR				PcP	PcP	10 14 45.1	-0.6
	comp=Z,2.1nm,0.8s,baz=300,slow=2.4,SNR=4.7						
ASAR	Alice Springs	49.11	129	P	P	10 13 22.0	-0.3
FORT	Forrest	49.40	141	P	P	10 13 24.5	+0.3
MJB9	Matsu-Tunnel	49.81	47	P	P	10 13 28.3	+0.9
MJAR	Matsushiro Arr	49.81	47	P	P	10 13 26.7	-0.7
	comp=Z,1.2nm,0.8s,baz=243,slow=6.1,SNR=2.4						
BVAR	Borovoye Array	50.08	341	P	P	10 13 28.8	-0.3
	comp=Z,4.6nm,0.7s,baz=175,slow=8.0,SNR=20						
BRVK	Borovoye	50.14	341	P	P	10 13 29.6	0.0
BRVK				IAmb	IAmb	10 13 36.4	
	comp=Z,9.9nm,0.8s						
ABKAR	Akbulak array	51.26	332	P	P	10 13 38.7	+0.6
ABKAR	Akbulak array	51.26	332	P	P	10 13 38.8	+0.6
ABKAR				IAmb	IAmb	10 13 46.2	
	comp=Z,34nm,1.1s						
AKTO	Aktyubinsk	52.98	332	P	P	10 13 51.1	+0.2
	comp=Z,6.1nm,0.6s,baz=111,slow=7.9,SNR=23						
BBOO	Buckleboo	55.91	137	P	P	10 14 11.9	-0.6
BBOO				IAmb	IAmb	10 14 24.5	
	comp=Z,13nm,1.1s						
ARU	Arti	56.96	337	P	P	10 14 19.2	-0.3
	comp=Z,3.3nm,0.8s,baz=243,slow=11,SNR=3.7						
KMBO	Kilima Mbogo	57.43	264	P	P	10 14 27.0	+3.0
	comp=Z,1.8nm,0.6s,baz=56,slow=13,SNR=6.0						
KMBO	Kilima Mbogo	57.43	264	P	P	10 14 23.4	-0.6
KMBO				IAmb	IAmb	10 14 36.7	
	comp=Z,9.4nm,1.1s						
STKA	Stephens Creek	59.25	133	P	P	10 14 35.8	-0.2
	comp=Z,4.0nm,0.8s,baz=317,slow=7.5,SNR=7.8						
STKA	Stephens Creek	59.25	133	P	P	10 14 35.0	-1.0
BR131	Keskin Array S	63.25	311	P	P	10 15 03.4	+0.2
BR131				IAmb	IAmb	10 15 10.7	
	comp=Z,6.0nm,0.8s						
BRTR	Keskin Array B	63.25	311	P	P	10 15 03.0	-0.1
	comp=Z,2.8nm,0.7s,baz=129,slow=8.4,SNR=11						
TOO	Toolangi	64.96	137	P	P	10 15 15.4	+1.1
KLMR	Klimovskoe	67.51	334	*e*P	P	10 15 23.6	-6.5
KLMR				AMP		10 15 37.3	
	comp=Z,21nm,1.4s						
KLMR				*e*PcP	PcP	10 15 53.1	-4.2
KLMR				*e*PP	PP	10 17 51.0	-8.0
TIXI	Tiksi	68.29	11	P	P	10 15 33.1	-1.7
	comp=Z,5.3nm,0.5s,baz=205,slow=4.2,SNR=17						
TIXI	Tiksi	68.29	11	P	P	10 15 34.3	-0.6
TIXI				IAmb	IAmb	10 15 49.0	
	comp=Z,7.1nm,0.7s						
AKASG	Malin Array Be	69.10	322	P	P	10 15 39.9	-0.5
	comp=Z,0.5nm,0.5s,baz=91,slow=4.8,SNR=5.4						
AKASG	Malin Array Be	69.10	322	P	P	10 15 39.6	-0.7
MLR	Muntele Rosu	70.05	316	P	P	10 15 47.1	+0.6
	comp=Z,3.8nm,0.9s,baz=107,slow=6.5,SNR=4.6						
MNK	Minsk	70.91	326	*i* P	P	10 15 50.3	-1.1
	comp=E,5.0nm,1.0s						
MNK				*i* P	P	10 15 50.3	-1.1
	comp=N,43nm,1.2s						
MNK				*i* P	P	10 15 50.3	-1.1
	comp=Z,17nm,0.9s,baz=106						
MNK				*i* PcP	PcP	10 16 10.3	-1.4
MNK				*i* PP	PP	10 18 27.4	-1.2
MNK				*i* PPP	PPP	10 20 19.8	
MNK				*i* S	S	10 25 06.6	+1.3
MNK				*i* SS	SS	10 29 40.3	+2.2
MNK				*i* SSS	SSS	10 32 59.3	
MNK				*i* LQ	LQ	10 41 57.0	
MNK				*i* LR	LR	10 47 48.1	
MNK				*i* LRM	MLR	10 50 03.8	
	comp=Z,102nm,16.9s						
MNK				*i* LRM	MLR	10 50 05.8	
	comp=E,35nm,19.0s						
MNK				*i* LRM	MLR	10 50 09.9	
	comp=N,170nm,17.6s						
BURAR	Bucovina Array	70.95	318		P	10 15 52.7	+0.8
BURAR				IAmb	IAmb	10 16 00.4	
	comp=Z,2.4nm,0.8s						
FINES	FINESS Array B	73.75	332	P	P	10 16 07.8	-0.3
	comp=Z,3.4nm,0.7s,baz=97,slow=4.7,SNR=17						
JAVC	Velka Javorina	76.12	319	*e*P	P	10 16 29.9	+7.7
MORC	Moravsky Berou	76.30	319	*e*P	P	10 16 30.4	+7.2
ARCES	ARCESS Array B	76.35	340	P	P	10 16 22.8	-0.2
	comp=Z,6.8nm,1.0s,baz=90,slow=7.2,SNR=8.2						
DPC	Dobruska-Polom	77.14	320	*e*P	P	10 16 29.5	+1.6
OSTC	Ostas	77.22	320	*e*pP	pP	10 16 36.6	+0.5
CONA	Conrad Observa	77.25	318	*e*P	P	10 16 30.0	+1.3
	comp=Z,3.6nm,1.4s						
ARSA	Arzberg	77.43	317	*e*P	P	10 16 31.3	+1.6
	comp=Z,8.5nm,1.1s						
SOKA	Soboth	77.73	316	*e*P	P	10 16 32.1	+0.7
	comp=Z,12nm,1.1s						
OBKA	Obir	78.05	316	*e*P	P	10 16 34.4	+1.2
	comp=Z,9.5nm,1.4s						
PRU	Pruhonice	78.25	320	*e*pP	pP	10 16 42.1	+0.3
MOA	Molln	78.31	317	*e*P	P	10 16 35.3	+0.8
	comp=Z,9.0nm,1.5s						
CKRC	Cesky Krumlov	78.33	318	*e*P	P	10 16 41.2	+6.6
BRG	Berggiesshubel	78.68	320	*e*P	P	10 16 43.9	+7.4
BRG				Amp		10 16 45.8	
	comp=Z,7.1nm,1.1s						
MYKA	Terra Mystica	78.69	316	*e*P	P	10 16 37.5	+0.8
	comp=Z,4.3nm,1.1s						
GEC2	GERESS Array S	78.74	318	P	P	10 16 37.5	+0.6
GEC2				IAmb	IAmb	10 16 45.5	
	comp=Z,14nm,1.1s						
GERES	GERESS Array B	78.74	318	P	P	10 16 37.1	+0.1
	comp=Z,2.7nm,0.9s,baz=76,slow=5.6,SNR=12						
KHC	Kasperske Hory	78.83	319	*e*P	P	10 16 37.1	-0.3
KHC				*e*pP	pP	10 16 44.5	-0.6
KBA	Koelnbreinsper	78.91	317	*e*P	P	10 16 39.2	+1.2
	comp=Z,5.4nm,0.9s						
CLL	Collm	79.30	321	*i* pP	pP	10 16 47.0	-0.6
CLL				*e*PP	PP	10 19 39.0	-0.7
CLL				Lm	MLR	10 51 00.0	
	comp=Z,300nm,19.6s						
STAL	STALIGIAL	79.32	316	P	P	10 16 40.4	+0.3
ABTA	Abfaltersbach	79.47	316	*e*P	P	10 16 41.1	+0.2
	comp=Z,5.2nm,1.0s						
HFS	Hagfors	79.48	330	P	P	10 16 40.2	-0.4
	comp=Z,2.0nm,0.5s,baz=113,slow=7.1,SNR=12						
NKC	Novy Kostel	79.61	320	*e*pP	pP	10 16 48.7	-0.6
CTI	Castel Tesino	80.05	315	P	P	10 16 44.5	+0.4
CTI				IAmb	IAmb	10 16 53.3	
	comp=Z,23nm,1.3s						
WTTA	Wattenberg	80.07	317	*e*P	P	10 16 44.7	+0.3
	comp=Z,12nm,1.1s						
WATA	Walderalm	80.12	317	*e*P	P	10 16 44.9	+0.4
	comp=Z,3.2nm,0.8s						
SQTA	Sankt Quirin	80.36	317	*e*P	P	10 16 46.0	+0.2
	comp=Z,3.5nm,0.7s						
MOTA	Moosalm	80.44	317	*e*P	P	10 16 46.0	-0.3
	comp=Z,8.6nm,0.9s						
RETA	Reutte	80.67	317	*e*P	P	10 16 48.0	+0.6
	comp=Z,9.2nm,0.8s						
FETA	Feichten	80.69	316	*e*P	P	10 16 47.6	-0.1
	comp=Z,7.2nm,0.9s						
NB2	NORSAR Subarra	80.76	331	P	P	10 16 46.8	-0.8
	comp=Z,12nm,1.4s,baz=94,slow=5.3						
NOA	NORSAR Array B	80.76	331	P	P	10 16 46.8	-0.8
	comp=Z,1.3nm,0.7s,baz=94,slow=5.4,SNR=4.0						
DAVA	Damuels	81.27	317	*e*P	P	10 16 51.3	+0.5
	comp=Z,5.5nm,1.1s						
DAVOX	Davos/Dischmat	81.28	316	P	P	10 16 51.8	+1.0
	comp=Z,6.2nm,0.8s,baz=97,slow=5.7,SNR=12						
TUE	Stuetta	81.65	316	P	P	10 16 52.0	-0.8
TUE				IAmb	IAmb	10 17 01.9	
	comp=Z,7.0nm,0.9s						
SENIN	Lac Senin/Sane	83.07	316	P	P	10 16 60.0	-0.3
SENIN				IAmb	IAmb	10 17 12.9	
	comp=Z,9.0nm,1.1s						
EKA	Eskdalemuir Ar	88.70	325	P	P	10 17 28.4	+0.8
	comp=Z,3.4nm,0.8s,baz=95,slow=5.8,SNR=4.4						
TORD	Torodi Ar. Bea	90.97	283	P	P	10 17 41.0	+1.9
	comp=Z,0.5nm,0.7s,baz=88,slow=4.4,SNR=3.9						
TORD	Torodi Ar. Bea	90.97	283	P	P	10 17 35.4	-3.7
TORD				IAmb	IAmb	10 17 48.0	
	comp=Z,6.3nm,1.4s						
ESDC	Sonseca Array	92.03	310	P	P	10 17 44.5	+0.9
	comp=Z,1.1nm,0.7s,baz=53,slow=4.1,SNR=7.8						
NVAR	Mina Array Bea	125.80	31	PKP	PKPdf	10 23 36.6	-0.1
	comp=Z,0.6nm,0.8s,baz=336,slow=3.3,SNR=3.6						
PDAR	Pinedale Array	126.15	22	PKP	PKPdf	10 23 37.0	-0.3
	comp=Z,0.3nm,0.6s,baz=72,slow=2.9,SNR=1.6						
PLCA	Paso Flores	143.55	200	PKP	PKPdf	10 24 10.0	+0.5
	comp=Z,2.6nm,0.9s,baz=185,slow=3.3,SNR=5.6						
PLCA	Paso Flores	143.55	200		PKPdf	10 24 09.7	+0.2
CPUP	Villa Florida	146.68	231	PKPbc	PKPab	10 24 18.5	+0.6
	comp=Z,3.0nm,0.7s,baz=88,slow=2.6,SNR=5.4						

*IDC **08** 10:07:18.7±0.7, 7°.19N×94°.86E, h0^{km}, mb4.1/21, mb1 4.2/22, mb1mx4.0/62, mbtmp4.1/22, ML3.7/1, Error ellipse: s-maj=32.1km s-min=15.6km az=52.0*

*NEIC **08** 10:07:21.2±1.6, 7°.15N±0°.09×94°.8E±0°.1, h10^{km}±1^{km}, mb4.7/12, Error ellipse: s-maj=25.7km s-min=13.6km az=249.0*

ISC 08 10:07:24.4±0.5**, 7°.2N**±0°.1×**94°.8E**±0°.1**, h35^{km}, n43,** σ**1^{s}.05**/44**, mb4.3**/27**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	Lhok Sumawe	2.92	132	Pn	Pn	10 08 07.3	-1.0
PSI	Prapat	6.02	136	Pn	Pn	10 08 50.8	-0.4
	1.9nm,0.3s,baz=336,slow=16,SNR=1.7						
PSI				Sn	Sn	10 10 02.7	+3.7
	1.1nm,0.3s,baz=227,slow=18,SNR=1.4						
CMAR	Chiang Mai Arr	11.89	20	Pn	Pn	10 10 16.5	+4.9
	baz=218,slow=12,SNR=1.3						
MK31	Makanchi Array	40.87	347	P	P	10 15 02.6	-0.4
MKAR	Makanchi Array	40.87	347	P	P	10 15 03.5	+0.5
	3.9nm,1.0s,baz=160,slow=9.6,SNR=5.1						
MKAR	Makanchi Array	40.87	347	P	P	10 15 03.1	+0.1
SONM	Songino Array	41.67	12	P	P	10 15 08.9	-0.8
	2.0nm,1.0s,baz=191,slow=14,SNR=2.6						
ZALV	Zalesovo Beam	47.29	352	P	P	10 15 54.4	+0.1
	1.4nm,0.5s,baz=169,slow=8.2,SNR=3.3						
ZALV	Zalesovo Beam	47.29	352	P	P	10 15 56.0	+1.7
WRA	Warramunga Arr	47.36	125	P	P	10 15 53.7	-1.7
	1.3nm,0.8s,baz=304,slow=9.0,SNR=1.7						
WB2	Warramunga Arr	47.37	125	P	P	10 15 54.6	-0.9
WR0	Warramunga Arr	47.53	125	P	P	10 15 56.5	-0.3
WR0				IAmb	IAmb	10 16 13.2	
	comp=Z,9.9nm,1.4s						
ASAR	Alice Springs	49.01	130	P	P	10 16 06.2	-1.9
	comp=Z,1.0nm,0.7s,baz=302,slow=7.8,SNR=3.4						
ASAR				PcP	PcP	10 17 31.4	-0.4
	comp=Z,1.3nm,0.8s,baz=307,slow=3.3,SNR=3.7						
FORT	Forrest	49.43	142	P	P	10 16 10.8	-0.3
BVAR	Borovoye Array	49.82	341	P	P	10 16 12.7	-1.1
	comp=Z,2.9nm,0.9s,baz=172,slow=12,SNR=4.0						
BRVK	Borovoye	49.88	341	P	P	10 16 14.6	+0.3
BRVK				IAmb	IAmb	10 16 24.4	
	comp=Z,4.8nm,0.7s						
ABKAR	Akbulak array	51.11	331	P	P	10 16 24.6	+1.0
ABKAR				IAmb	IAmb	10 16 31.6	
	comp=Z,12nm,0.9s						
ABKAR	Akbulak array	51.11	331	P	P	10 16 24.5	+1.0
AKTO	Aktyubinsk	52.83	331	P	P	10 16 36.2	-0.2
	comp=Z,2.3nm,0.6s,baz=72,slow=4.3,SNR=3.4						
BBOO	Buckleboo	55.90	138	P	P	10 16 58.0	-1.0
BBOO				IAmb	IAmb	10 17 02.5	
	comp=Z,9.4nm,1.2s						
ARU	Arti	56.74	337	P	P	10 17 04.6	0.0
	comp=Z,0.6nm,0.3s,baz=110,slow=12,SNR=1.3						
KMBO	Kilima Mbogo	57.98	264	P	P	10 17 14.3	-0.1
	comp=Z,0.8nm,0.5s,baz=50,slow=18,SNR=2.1						
STKA	Stephens Creek	59.19	134	P	P	10 17 21.1	-1.1
	comp=Z,1.3nm,0.7s,baz=324,slow=8.7,SNR=2.3						
BELG	Belogornoye	59.20	328	P	P	10 17 22.3	+0.4
	comp=Z,9.2nm,0.9s,baz=207,slow=6.8,SNR=2.5						
BRTR	Keskin Array B	63.34	311	P	P	10 17 49.3	-1.1
	comp=Z,0.7nm,0.6s,baz=122,slow=7.8,SNR=3.2						
TIXI	Tiksi	67.75	11	P	P	10 18 17.7	-0.4
	comp=Z,2.5nm,0.5s,baz=199,slow=4.4,SNR=5.3						
TIXI	Tiksi	67.75	11	P	P	10 18 18.6	+0.5
FINES	FINESS Array B	73.59	332	P	P	10 18 53.9	0.0
	comp=Z,4.2nm,1.0s,baz=75,slow=4.8,SNR=6.3						
FINES	FINESS Array B	73.59	332	P	P	10 18 54.3	+0.5
ARCES	ARCESS Array B	76.10	340	P	P	10 19 08.1	-0.2
	comp=Z,5.2nm,1.1s,baz=115,slow=6.1,SNR=4.0						
GERES	GERESS Array B	78.74	318	P	P	10 19 24.4	+0.9

	comp=Z,2.7nm,0.8s,baz=90,slow=4.9,SNR=4.1						
GERES	GERESS Array B	78.74	318	P	P	10 19 23.6	0.0
HFS	Hagfors	79.34	330	P	P	10 19 24.9	-1.5
	comp=Z,4.6nm,0.8s,baz=98,slow=7.6,SNR=6.3						
STAL	STALIGIAL	79.35	316	P	P	10 19 26.5	-0.4
STAL				IAmb	IAmb	10 19 33.6	
	comp=Z,12nm,1.1s						
NB2	NORSAR Subarra	80.61	331	P	P	10 19 35.4	+2.0
	comp=Z,8.7nm,1.1s,baz=93,slow=5.9						
NOA	NORSAR Array B	80.61	331	P	P	10 19 33.3	-0.1
	comp=Z,0.3nm,0.6s,baz=96,slow=5.0,SNR=1.5						
DAVOX	Davos/Dischmat	81.30	316	P	P	10 19 38.6	+1.1
	comp=Z,1.6nm,0.6s,baz=98,slow=14,SNR=3.5						
SENIN	Lac Senin/Sane	83.10	316	P	P	10 19 47.9	+0.9
SENIN				IAmb	IAmb	10 19 55.4	
	comp=Z,3.8nm,0.8s						
TORD	Torodi Ar. Bea	91.36	283	P	P	10 20 28.1	+0.6
	comp=Z,0.7nm,0.7s,baz=60,slow=4.6,SNR=2.5						
IMAR	Indian Mountai	92.00	22	P	P	10 20 30.4	+1.0
ESDC	Sonseca Array	92.12	310	P	P	10 20 31.3	+0.7
	comp=Z,0.5nm,0.6s,baz=61,slow=4.9,SNR=4.0						
VNDA	Vanda	92.16	168	P	P	10 20 29.3	-0.5
NVAR	Mina Array Bea	125.15	32	PKP	PKiKP	10 26 22.8	+0.4
	comp=Z,0.2nm,0.5s,baz=338,slow=2.1,SNR=3.0						

*FUNV **08** 10:09:15.2, 8°.52N×71°.38W, h5^{km}, MW3.8*
ISC 08 10:09:14.6±1.3**, 8°.55N**±0°.03×**71°.40W**±0°.03**, h11**^{km}±10^{km}**, n37, σ1ˢ.47**/62**, 1C-3D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.60	116	⇓*i*P	Pg	10 09 25.4	-0.9
SOCV				*e*S	Sg	10 09 34.0	-0.2
SOCV				*i*		10 09 35.0	
	comp=Z,13μm,0.1s						
SOCV	Socops	0.60	116	⇓*i*P	Pg	10 09 25.4	-0.9
SOCV				*e*S	Sg	10 09 34.5	+0.3
SDV	Santo Domingo	0.82	66	⇓*e*P	Pg	10 09 30.8	+0.1
SDV				*i* P	Pg	10 09 30.8	+0.1
SDV				*e*S	Sb	10 09 43.0	+0.6
SDV				*i*		10 09 45.6	
	comp=Z,364nm,0.4s						
PAMC	Pamplona, Colo	1.76	227	*e*P	Pn	10 09 45.4	-0.2
PAMC				*e*S	Sn	10 10 08.7	+0.3
PAMC				*i*		10 10 12.1	
	comp=Z,341nm,0.3s						
MCQV	Machiques	1.87	323	⇑*i*P	Pn	10 09 46.7	+0.1
MCQV				*e*S	Sn	10 10 11.7	+1.4
OCAC	Ocana	1.93	261	*e*P	Pn	10 09 46.5	-1.0
OCAC				*e*S	Sn	10 10 11.4	-0.6
OCAC				*i*		10 10 13.5	
	comp=Z,2μm,0.3s						
TAMC	Tame, Arauca	2.14	191	*e*P	Pn	10 09 50.3	-0.1
TAMC				*e*S	Sb	10 10 20.0	-0.1
TAMC				*i*		10 10 22.6	
	comp=Z,281nm,0.6s						
DABV	Dabajuro	2.47	18	*e*P	Pn	10 09 56.5	+1.5
DABV				*e*S	Sn	10 10 28.4	+3.2
DABV				*i*		10 10 39.2	
	comp=Z,754nm,0.3s						
DABV	Dabajuro	2.47	18	*e*P	Pn	10 09 55.8	+0.8
DABV				*e*S	Sn	10 10 25.8	+0.6
SIQV	Siquisique	2.61	37	*e*P	Pn	10 09 57.2	+0.3
SIQV				*e*S	Sn	10 10 29.5	+0.9
BARC	Barichara	2.63	222	*e*P	Pn	10 09 59.7	+2.3
BARC				*e*S	Sb	10 10 35.3	+0.8
BARC				*i*		10 10 38.3	
	comp=Z,147nm,0.3s						
SMLC	San Martn de	2.66	276	*e*P	Pn	10 09 56.1	-1.3
SMLC				*e*S	Sn	10 10 33.0	+3.3
SMLC				*i*		10 10 33.4	
	comp=Z,317nm,0.4s						
BRRC	Barranca, Sant	2.71	238	*e*P	Pb	10 10 01.7	-1.4
BRRC				*e*S	Sb	10 10 35.7	-0.7
BRRC				*i*		10 10 43.3	
	comp=Z,72nm,0.4s						
ARGC	Ariguani, Magd	3.10	295	*e*P	Pn	10 10 03.3	-0.3
ARGC				*e*S	Sb	10 10 48.6	+0.9
ARGC				*i*		10 10 52.0	
	comp=Z,43nm,0.2s						
RUSC	La Rusia	3.13	212	*e*P	Pn	10 10 04.2	-0.2
RUSC				*e*S	Sb	10 10 50.0	+1.0
RUSC				*i*		10 10 54.6	
	comp=Z,50nm,0.3s						
MAPV	Macapo	3.17	66	*e*P	Pn	10 10 04.9	+0.3
URIC	Uribia, Colomb	3.19	349	*e*P	Pn	10 10 03.7	-1.1
URIC				*e*S	Sn	10 10 41.5	-1.3
URIC				*i*		10 10 57.5	
	comp=Z,59nm,0.5s						
BAUV	El Baul	3.34	83	*e*P	Pn	10 10 07.2	+0.3
BAUV				*e*S	Sn	10 10 45.5	-1.1
JACV	Jacura	3.57	45	*e*P	Pn	10 10 10.2	+0.1
ZARC	Zaragoza, Cauc	3.58	253	*e*P	Pn	10 10 09.1	-1.2
MONV	Montecano	3.66	22	*e*P	Pn	10 10 11.6	+0.3
MONV				*e*S	Sn	10 10 54.1	-0.5
SMRC	Santa Marta, M	3.81	313	*e*P	Pn	10 10 11.4	-1.9
SMRC				*e*S	Sn	10 10 53.9	-4.3
SMRC				*i*		10 11 12.6	
	comp=Z,36nm,0.5s						
SPBC	San Pablo de B	3.92	223	*e*P	Pn	10 10 14.9	-0.1
SJCC	San Jacinto, C	3.97	290	*e*P	Pn	10 10 16.0	+0.4
SJCC				*e*S	Sn	10 11 02.4	+0.2
SJCC				*i*		10 11 25.5	
	comp=Z,29nm,0.6s						
BENV	Beln	4.00	69	*e*P	Pn	10 10 16.1	0.0
UREC	San Jos de Ur	4.17	259	*e*P	Pn	10 10 19.0	+0.7
UREC				*e*S	Sn	10 11 07.0	-0.1
UREC				*i*		10 11 23.3	
	comp=Z,33nm,0.3s						
MOTC	Monteria, Cord	4.23	273	*e*P	Pn	10 10 18.8	-0.3
MOTC				*e*S	Sn	10 11 08.1	-0.4
MOTC				*i*		10 11 34.9	
	comp=Z,16nm,0.5s						
PTGC	Puerto Gaitan,	4.38	190	*e*P	Pg	10 10 42.2	+3.5
PTGC				*e*S	Sb	10 11 28.2	+3.5
PTGC				*i*		10 11 46.6	
	comp=Z,79nm,0.4s						
CHIC	Chingaza	4.53	211	*e*P	Pn	10 10 23.6	-0.1
CHIC				*e*S	Sn	10 11 13.7	-3.0
CHIC				*i*		10 11 22.9	
	comp=Z,16nm,0.3s						
TACV	Tcata	4.59	70	*e*P	Pn	10 10 23.7	-0.5
HELC	Santa Helena	4.72	240	*e*P	Pn	10 10 27.9	+1.7
CACV	CAICARA DEL OR	4.91	101	*e*P	Pn	10 10 35.0	+6.5
MERV	Las Mercedes	5.09	82	*e*P	Pn	10 10 30.0	-0.9
BIRV	Birongo	5.41	69	*e*P	Pn	10 10 34.9	-0.4
ORTC	Ortega, Tolima	5.99	220	*e*P	Pn	10 10 43.0	-0.5
ORTC				*e*S	Sn	10 11 48.7	-3.5
ORTC				*i*		10 11 53.7	
	comp=Z,9.5nm,0.4s						
PRGV	PARIAGUAN	6.68	88	*e*P	Pn	10 10 51.2	-1.6
PCRV	Puerto La Cruz	6.87	76	*e*P	Pn	10 10 54.9	-0.6

IDC 08 10:12:40.3±8.0**, 7°.19N**×**95°.22E, h0**^{km}**, mb3.3**/3**, mb1 3.5**/3**, mb1mx3.3**/51**, mbtmp3.3**/3**, Error ellipse: s-maj=427.5km s-min=32.5km az=58.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	40.99	346	P	P	10 20 24.9	-0.1
	0.6nm,0.7s,baz=158,slow=8.6,SNR=2.2						
WRA	Warramunga Arr	47.00	126	P	P	10 21 14.4	+0.7
	0.3nm,0.8s,baz=305,slow=8.9,SNR=1.5						
ASAR	Alice Springs	48.66	130	P	P	10 21 25.6	-0.9
	0.3nm,0.7s,baz=308,slow=7.3,SNR=1.9						

IDC 08 10:13:15.0±7.1**, 3°.86S**×**103°.34E, h0**^{km}**, mb3.3**/3**, mb1 3.5**/3**, mb1mx3.3**/46**, mbtmp3.3**/3**, MS3.8**/1**, Ms1 3.7**/1**, ms1mx3.2**/21**, Error ellipse: s-maj=379.5km s-min=32.4km az=51.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	34.18	120	P	P	10 20 03.5	+1.1
	0.3nm,0.8s,baz=302,slow=8.7,SNR=1.4						
ASAR	Alice Springs	35.47	127	P	P	10 20 12.2	-1.3
	0.3nm,0.8s,baz=302,slow=8.2,SNR=2.2						
STKA	Stephens Creek	45.43	132	LR	LR	10 44 08.4	
	comp=Z,94nm,18.1s,baz=316,slow=41						
MKAR	Makanchi Array	53.76	342	P	P	10 22 39.1	-0.1
	0.5nm,0.6s,baz=168,slow=7.4,SNR=2.6						

MAN 08 10:13:22.6, 13°.48N×**123°.55E, h32**^{km}**, mb3.9, ML2.6, MS2.2, Luzon**

*IDC **08** 10:16:16.6±4.4, 40°.59S×176°.48E, h0^{km}, mb4.0/3, mb1 4.1/4, mb1mx3.8/28, mbtmp3.9/4, ML2.9/1, Error ellipse: s-maj=90.7km s-min=27.7km az=128.0*
*NOU **08** 10:16:19.2, 40°.71S×176°.58E, h20^{km}, MLv4.1/10, North Island, New Zealand*
*WEL **08** 10:16:21.9, 41°S±2°×17°6E±°, h20^{km}±3^{km}, M4.0/19, ML4.4/19, MLv4.0/19, Error ellipse: s-maj=0.0km s-min=0.0km az=90.7*
*NEIC **08** 10:16:21.8±0.8, 40°.55S±0°.07×176°.3E±0°.2, h23^{km}±5^{km}, mb4.0/10, Error ellipse: s-maj=19.9km s-min=5.5km az=117.0*
ISC 08 10:16:21.5±0.8**, 40°.57S**±0°.03×**176°.37E**±0°.03**, h29**^{km}±5^{km}**, n158, σ0ˢ.94**/170**, mb3.9**/9**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANWZ	Angora Road	0.13	38	P	Pb	10 16 26.6	-0.3
ANWZ				S	Sb	10 16 30.3	-0.3
BFZ	Birch Farm	0.15	219	P	Pb	10 16 26.9	-0.2
BFZ	Birch Farm	0.15	219		Pb	10 16 26.9	-0.2
BFZ	Birch Farm	0.15	219	P	Pb	10 16 26.5	-0.6
PRWZ	Pori Road	0.30	272	P	Pn	10 16 29.1	-0.9
PRWZ				S	Sn	10 16 34.3	-1.2
DVHZ	Dannevirke	0.31	330	P	Pn	10 16 28.6	-1.5
DVHZ				S	Sn	10 16 33.7	-1.9
PRHZ	Porangahau	0.36	34	P	Pn	10 16 30.5	-0.3
CPWZ	Castlepoint	0.37	200	P	Pn	10 16 31.7	+0.9
TIWZ	Tintock	0.42	240	P	Pn	10 16 31.4	-0.3
POWZ	Post Office Ro	0.49	290	P	Pn	10 16 31.9	-0.6
POWZ				S	Sn	10 16 39.9	-0.2
WPHZ	Waipukurau	0.50	6	P	Pn	10 16 32.7	0.0
WPHZ				S	Sn	10 16 41.5	+1.1
TSZ	Takapari Road	0.59	328	P	Pn	10 16 33.5	-0.5
TSZ				S	Sn	10 16 42.5	-0.2
MRZ	Mangatainoka R	0.61	261	P	Pn	10 16 33.9	-0.3
MRZ				S	Sn	10 16 43.0	0.0
TMWZ	Te Maipa	0.65	214	P	Pn	10 16 35.1	+0.3
PXZ	Pawanui	0.65	35	P	Pn	10 16 34.8	+0.1
PNHZ	Pukenui	0.66	349	P	Pn	10 16 34.9	-0.1
PNHZ				S	Sn	10 16 45.5	+1.1
HOWZ	Holdsworth Sta	0.73	243	P	Pn	10 16 35.9	+0.1
HOWZ				S	Sn	10 16 46.9	+0.9
KAHZ	Kahuranaki	0.86	27	P	Pn	10 16 38.2	+0.5
OHWZ	Ohakea	0.88	294	P	Pn	10 16 39.2	+1.4
MTW	Mount Morrison	0.89	228	P	Pb	10 16 37.8	-0.5
KRHZ	Kereru	0.92	0	P	Pn	10 16 39.0	+0.6
OGWZ	Otaki Gorge	0.95	254	P	Pn	10 16 39.2	+0.4
TRWZ	Traveller	0.98	212	P	Pb	10 16 39.1	-0.8
CKHZ	Cape Kidnapper	1.06	31	P	Pb	10 16 40.4	-0.8
PAWZ	Paruwai Farm	1.08	221	P	Pn	10 16 40.5	-0.2
BHHZ	Black Hill Sta	1.10	348	P	Pb	10 16 41.8	-0.1
CAW	Cannon Point	1.13	241	P	Pn	10 16 41.2	-0.1
KWHZ	Kaweka Forest	1.14	2	P	Pb	10 16 42.3	-0.3
MCHZ	McNeill Hill	1.15	13	P	Pb	10 16 42.5	-0.1
KIW	Kapiti Island	1.15	255	P	Pb	10 16 42.0	-0.7
MSWZ	Moikau Station	1.20	225	P	Pn	10 16 41.8	-0.6
MSWZ	Moikau Station	1.20	225	Pn	Pn	10 16 41.9	-0.4
MOVZ	Moawhango	1.25	338	P	Pb	10 16 44.2	-0.2
PLWZ	Palliser	1.31	220	P	Pn	10 16 43.3	-0.6
PLWZ	Palliser	1.31	220	Pn	Pn	10 16 43.3	-0.6
WAZ	Wanganui	1.33	307	P	Pb	10 16 46.3	+0.4
MTVZ	Mangateitei	1.37	329	P	Pb	10 16 46.8	+0.4
WNVZ	Wahianoa	1.37	334	P	Pb	10 16 46.4	-0.2
ARHZ	Aropaoanui	1.39	21	P	Pb	10 16 45.6	-1.1
BKZ	Black Stump Fm	1.40	4	P	Pb	10 16 45.6	-1.5
BKZ	Black Stump Fm	1.40	4		Pb	10 16 45.6	-1.5
BKZ	Black Stump Fm	1.40	4	P	Pb	10 16 45.5	-1.5
TUVZ	Tukino	1.41	337	P	Pb	10 16 47.0	-0.2
WEL	Wellington	1.41	239	P	Pn	10 16 44.9	-0.2
BHW	Baring Head	1.41	233	P	Pn	10 16 44.7	-0.4
BHW	Baring Head	1.41	233	Pn	Pn	10 16 44.8	-0.4
TRVZ	Turoa	1.41	333	P	Pb	10 16 47.1	-0.2
WHVZ	Whangaehu Hut	1.41	335	P	Pb	10 16 47.1	-0.2
FWVZ	Far West T-bar	1.45	334	P	Pb	10 16 47.6	-0.4
SNZO	South Karori	1.46	239	Pn	Pn	10 16 46.1	+0.2
SNZO	South Karori	1.46	239	P	Pn	10 16 45.4	-0.5
SNVZ	South Ngauruho	1.49	338	P	Pb	10 16 48.2	-0.4
PKVZ	Pokaka	1.50	328	P	Pb	10 16 48.3	-0.4
OTVZ	Oturere	1.50	339	P	Pb	10 16 48.3	-0.5
NMHZ	Naumai	1.50	13	P	Pb	10 16 47.7	-1.0
NGZ	Ngauruhoe	1.51	337	P	Pb	10 16 48.5	-0.4
ETVZ	East Tongariro	1.51	340	P	Pb	10 16 48.6	-0.4
TMVZ	Te Maari	1.54	340	P	Pb	10 16 48.8	-0.5
NNVZ	North Ngauruho	1.54	338	P	Pb	10 16 49.2	-0.3
NTVZ	North Tongarir	1.56	340	P	Pb	10 16 49.1	-0.6
WTVZ	West Tongariro	1.57	337	P	Pb	10 16 49.5	-0.4
KRVZ	Karewarewa	1.57	339	P	Pb	10 16 50.4	+0.4
WHHZ	Waihua	1.63	24	P	Pn	10 16 48.8	+0.6
RITZ	Rihia Road	1.63	346	P	Pb	10 16 50.1	-0.9
TWVZ	Taurewa	1.66	334	P	Pb	10 16 50.4	-1.0
KATZ	Kakaramea	1.67	342	P	Pb	10 16 51.3	-0.3
HATZ	Hinemaiaia	1.69	353	P	Pb	10 16 50.2	-1.7
TCW	Tory Channel	1.71	247	P	Pn	10 16 49.0	-0.3
MRHZ	Matea Rd	1.73	1	P	Pb	10 16 50.7	-1.9
RAHZ	Arahi	1.74	19	P	Pn	10 16 50.5	+0.8
MTHZ	Maungataniwha	1.75	12	P	Pn	10 16 50.5	+0.6
RATZ	Rangitukua	1.76	345	P	Pb	10 16 52.7	-0.4
KNZ	Kokohu	1.84	34	P	Pn	10 16 50.3	-0.7
MHGZ	Mahia Peninsul	1.84	41	P	Pn	10 16 50.8	-0.3
LREZ	Lake Rotokare	1.87	306	P	Pb	10 16 54.3	-0.7
DUWZ	D'Urville Isla	1.88	262	P	Pn	10 16 52.1	+0.5
VRZ	Vera Road	1.90	319	P	Pb	10 16 53.9	-1.6
WATZ	Wairara	1.92	345	P	Pb	10 16 54.0	-1.8
SNGZ	Shannon Statio	1.93	23	P	Pn	10 16 52.6	+0.2
ALRZ	Allen Road	2.00	359	P	Pb	10 16 56.2	-1.0
RTZ	Ruatahuna	2.00	14	P	Pn	10 16 54.8	+1.4
CMWZ	Cape Campbell	2.01	233	P	Pn	10 16 53.7	+0.3
PRGZ	Paritu Road	2.01	36	P	Pn	10 16 52.9	-0.6
TUWZ	Tuamarina	2.03	244	P	Pn	10 16 53.0	-0.6
TUWZ	Tuamarina	2.03	244	Pn	Pn	10 16 53.1	-0.6
PREZ	Palmer Road	2.09	305	P	Pb	10 16 57.9	-0.9
KUTZ	Kaahu Road	2.12	348	P	Pn	10 16 55.9	+1.0
RIGZ	Rimuhau	2.15	31	P	Pn	10 16 55.0	-0.3
DREZ	Durham Road	2.16	309	P	Pb	10 16 58.4	-1.5
NEZ	North Egmont	2.17	306	P	Pb	10 16 58.4	-1.8
BSWZ	Blackbirch Sta	2.21	238	P	Pn	10 16 55.3	-0.8
KHEZ	Kahui Hut	2.21	304	P	Pb	10 16 59.5	-1.3
RAGZ	Rawiri	2.22	22	P	Pn	10 16 56.5	+0.1
NMEZ	Namu Road	2.23	300	P	Pb	10 16 59.5	-1.6
HSRZ	Hossack Road	2.25	358	P	Pb	10 16 59.3	-2.2
PKE	Pukeiti	2.29	306	P	Pb	10 17 00.1	-2.0
NBEZ	Newall Road No	2.32	303	P	Pb	10 17 00.6	-1.9
TLZ	Tolley Road	2.32	344	P	Pn	10 16 58.3	+0.5
TARZ	Mount Tarawera	2.33	3	P	Pn	10 16 59.7	+1.8
NNZ	Nelson	2.36	253	P	Pn	10 16 58.2	0.0
HIZ	Hauiti	2.36	330	P	Pb	10 17 00.4	-2.9
URZ	Urewera	2.37	14	Pn	Pn	10 16 57.8	-0.6
	2.6nm,0.3s,baz=300,slow=23,SNR=23						
URZ				Sn	Sn	10 17 25.7	-0.8
	12nm,0.3s,baz=136,slow=19,SNR=5.8						
URZ	Urewera	2.37	14	P	Pn	10 16 58.4	0.0
URZ	Urewera	2.37	14		Pn	10 16 58.9	+0.5
URZ	Urewera	2.37	14	P	Pn	10 16 58.3	-0.1
MWZ	Matawai	2.40	22	P	Pn	10 16 58.4	-0.5
TKGZ	Te Karaka	2.41	29	P	Pn	10 16 58.4	-0.6
CNGZ	Carnagh Statio	2.52	35	P	Pn	10 16 59.8	-0.6
TWGZ	Tauwhareparae	2.69	28	P	Pn	10 17 03.3	+0.5
WHRZ	Whale Island	2.75	10	P	Pn	10 17 02.5	-1.1
RUGZ	Raukumara Rang	2.79	22	P	Pn	10 17 03.9	-0.4
KHZ	Kahutara	2.82	228	P	Pn	10 17 02.8	-1.7
KHZ	Kahutara	2.82	228	P	Pn	10 17 03.1	-1.4
THZ	Tophouse	2.88	244	P	Pn	10 17 04.2	-1.2
PUZ	Puketiti	2.89	31	P	Pn	10 17 04.1	-1.5
TOZ	Tahuroa Road	2.91	346	P	Pn	10 17 06.6	+0.9
TOZ				P	Pn	10 17 06.7	+0.9
QRZ	Quartz Range	2.93	264	P	Pn	10 17 06.0	0.0
QRZ	Quartz Range	2.93	264	P	Pn	10 17 06.4	+0.3
PKGZ	Pakihiroa	2.98	27	P	Pn	10 17 06.8	-0.1
HAZ	Te Kaha	3.01	22	P	Pn	10 17 07.0	-0.1
WMGZ	Waiomatatini S	3.17	31	P	Pn	10 17 08.4	-0.9
GVZ	Greta Valley S	3.46	225	P	Pn	10 17 13.8	+0.4
DSZ	Denniston Nort	3.64	250	P	Pn	10 17 14.9	-1.1
LTZ	Lake Taylor	3.79	233	P	Pn	10 17 16.1	-1.8
AMCZ	Amberley	3.81	226	P	Pn	10 17 20.2	+2.1
WIAZ	Waiheke Island	3.89	345	P	Pn	10 17 21.6	+2.4
MBAZ	Motutapu North	3.96	343	P	Pn	10 17 21.9	+1.7
OKCZ	Okains Bay	4.00	217	P	Pn	10 17 19.1	-1.8
AKCZ	Akaroa Harbour	4.19	217	P	Pn	10 17 22.1	-1.2
OXZ	Oxford	4.25	228	P	Pn	10 17 22.8	-1.4
INZ	Inchbonnie	4.28	238	P	Pn	10 17 22.9	-1.6
RACZ	Rakaia	4.46	223	P	Pn	10 17 27.2	+0.2
WACZ	Wakanui South	4.76	223	P	Pn	10 17 30.2	-1.0
RPZ	Rata Peaks	5.05	230	P	Pn	10 17 34.7	-0.6
RPZ	Rata Peaks	5.05	230	P	Pn	10 17 34.5	-0.7
ARCZ	Arundel	5.12	227	P	Pn	10 17 36.1	-0.1
TMZ	Timaru	5.50	224	P	Pn	10 17 40.4	-1.0
FOZ	Fox Glacier	5.71	237	P	Pn	10 17 43.8	-0.4
OUZ	Omahuta	5.77	337	P	Pn	10 17 46.5	+1.4
LBZ	Lake Benmore	5.96	228	P	Pn	10 17 46.8	-0.9
CTZ	Chatham Island	6.10	124	P	Pn	10 17 50.0	+0.4
ODZ	Otahua Downs	6.14	221	P	Pn	10 17 48.4	-1.8
ODZ	Otahua Downs	6.14	221	P	Pn	10 17 49.5	-0.7
SYZ	Scrubby Hill	7.95	219	P	Pn	10 18 14.7	-0.2
STKA	Stephens Creek	29.21	276	P	P	10 22 21.1	+0.5
	0.9nm,0.6s,baz=151,slow=12,SNR=2.8						
STKA	Stephens Creek	29.21	276	P	P	10 22 20.6	+0.1
BBOO	Buckleboo	33.01	271	P	P	10 22 53.9	-0.1
BBOO				IAmb	IAmb	10 22 59.7	
	comp=Z,6.6nm,1.4s						
COEN	Coen	39.27	303	P	P	10 23 47.7	0.0
AS31	Alice Springs	39.30	282	P	P	10 23 47.5	-0.4
AS31				IAmb	IAmb	10 23 48.6	
	comp=Z,0.7nm,0.4s						
ASAR	Alice Springs	39.30	282	P	P	10 23 48.0	0.0
	comp=Z,0.9nm,0.3s,baz=123,slow=6.8,SNR=56						
ASAR				PcP	PcP	10 25 55.8	-0.5
	comp=Z,0.2nm,0.7s,baz=134,slow=4.0,SNR=2.1						
ASAR	Alice Springs	39.30	282	P	P	10 23 47.1	-0.8
WR0	Warramunga Arr	41.08	287	P	P	10 24 02.4	-0.2
WR0				IAmb	IAmb	10 24 19.0	
	comp=Z,3.0nm,1.1s						
WB2	Warramunga Arr	41.23	287	P	P	10 24 03.9	0.0
WB2				IAmb	IAmb	10 24 04.5	
	comp=Z,2.4nm,0.5s						
WRA	Warramunga Arr	41.24	287	P	P	10 24 03.9	-0.1
	comp=Z,1.2nm,0.5s,baz=126,slow=8.2,SNR=34						
WRA	Warramunga Arr	41.24	287	P	P	10 24 03.3	-0.7
WB0	Warramunga Arr	41.31	287	P	P	10 24 04.7	+0.2
WB0				IAmb	IAmb	10 24 27.2	
	comp=Z,3.3nm,1.1s						
QSPA	South Pole Qui	49.56	180	P	P	10 25 11.1	+1.6
QSPA				IAmb	IAmb	10 25 11.4	
	comp=Z,1.7nm,1.1s						
MORW	Morawa	49.97	263	P	P	10 25 14.7	+1.8

*TUL **08** 10:17:14±1.1, 36°.95N±0°.02×97°.84W±0°.06, h4^{km}±7^{km}, ML2.5, mb_Lg2.5/3(NEIC), Error ellipse: s-maj=7.1km s-min=2.7km az=72.0*
NEIC 08 10:17:14.4±2.1**, 36°.89N**±0°.03×**97°.83W**±0°.06**, h5**^{km}±7^{km}**, Error ellipse: s-maj=8.0km s-min=2.9km az=66.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.05	214	Pg	Pg	10 17 16.5	+0.9
KAN14	Manchester OK	0.13	301		Pg	10 17 16.4	-0.6
KAN17	Caldwell West	0.16	18	Pg	Pg	10 17 16.9	-0.7
KAN05	Bluff City Nor	0.22	351	Pg	Pg	10 17 17.8	-1.0
KAN01	Argonia South	0.27	12		Pg	10 17 18.7	-1.0
KAN09	Caldwell North	0.30	34	Pg	Pg	10 17 19.5	-0.6
KAN13	South Haven SW	0.30	66		Pg	10 17 20.3	0.0
KAN10	Anthony SW Sta	0.32	317	Pg	Pg	10 17 19.7	-0.8
OK032	Salt Plains WL	0.32	254		Pg	10 17 20.8	+0.2
KAN08	Anthony NE Sta	0.35	341		Pg	10 17 20.3	-1.0
KAN06	Argonia West S	0.36	356		Pg	10 17 20.3	-1.0
KAN16	Harper SW Stat	0.39	330	Pg	Pg	10 17 20.9	-1.0
KS20	Mayfield South	0.40	33		Pg	10 17 21.5	-0.7
CROK	Carrier	0.41	198	Pg	Pb	10 17 23.2	-0.8
KAN12	Harper NE Stat	0.43	341		Pg	10 17 21.6	-1.0
BLOK	Blackwell	0.51	105	Pg	Pg	10 17 24.6	+0.5
T35A	Sooner Cattle	1.05	88		Pg	10 17 34.4	-0.2
U32A	Winter Ranch,	1.07	242		Pg	10 17 35.0	+0.1
OK029	Liberty Lake	1.13	165		Pb	10 17 36.6	+0.1
QUOK	Quay	1.15	128		Pg	10 17 35.6	-0.9
BCOK	Bluff Creek, N	1.24	172	Pg	Pg	10 17 37.9	-0.3
OK030	Cody Creek RV	1.28	138		Pg	10 17 36.1	-2.8
OK025	Westminster Rd	1.36	163		Pg	10 17 41.1	+0.5
OKCFA	Oklahoma City	1.50	168		Pb	10 17 42.5	-0.3
OKCSW	OKLAHOMA CITY	1.52	168		Pb	10 17 43.1	+0.1
FNO	Franklin	1.67	168		Pb	10 17 45.4	-0.2
R32A	Long Quarter,	1.68	336		Pn	10 17 44.3	-0.2
TUL1	Leonard	1.91	120		Pn	10 17 48.4	+0.8
WMOK	Wichita Mounta	2.28	200		Pn	10 17 53.7	+0.9
WMOK				IAmb_Lg		10 18 32.6	
	comp=Z,4.0nm,0.9s						
X34A	Smith Ranch, M	2.28	180		Pn	10 17 52.6	-0.1
X34A				IAmb_Lg		10 18 33.3	
	comp=Z,19nm,1.3s						
KSU1	Kansas State U	2.41	23		Pn	10 17 54.5	0.0
CBKS	Cedar Bluff	2.44	322		Pn	10 17 54.3	-0.7
U38A	Gravette	2.80	98		Pn	10 18 00.0	+0.1
LOOK	Love County	2.94	169	Pn	Pn	10 18 01.5	-0.3
X37A	Clayton	3.04	138		Pn	10 18 03.8	+0.6
S39A	Bolivar	3.68	76	Pn	Pn	10 18 10.8	-1.1
W39A	Magazine	3.69	116		Pn	10 18 11.6	-0.5
AMTX	Amarillo	3.71	239	Pn	Pn	10 18 12.0	-0.5
N33A	J Bar K, Exete	3.85	4		Pn	10 18 16.0	+1.7
U40A	Yellville	4.04	96	Pn	Pn	10 18 17.0	+0.2
MIAR	Mount Ida	4.17	123	Pn	Pn	10 18 19.9	+1.2
P38A	Dawn	4.34	50	Pn	Pn	10 18 21.6	+0.6
R40A	Maddies Statio	4.63	71	Pn	Pn	10 18 25.4	+0.4
FCAR	Ozark Folk Cen	4.71	101	Pn	Pn	10 18 26.9	+0.8
X40A	Basin Creek Fa	4.72	119	Pn	Pn	10 18 25.5	-0.7
WHAR	Wooly Hollow	4.76	108	Pn	Pn	10 18 27.7	+0.9
P40A	Paris	5.26	58	Pn	Pn	10 18 34.1	+0.5
CCM	Cathedral Cave	5.36	75	Pn	Pn	10 18 35.7	+0.6
T42A	Van Buren	5.39	87	Pn	Pn	10 18 36.2	+0.7
PVMO	Portageville	6.55	92	IAmb_Lg		10 20 43.7	
	comp=Z,24nm,0.8s						

NOU 08 10:24:20.3, 15°.50S×**167°.60E, h25**^{km}**, MLv4.7**/4**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	2.28	166	P	Pn	10 24 56.5	+0.1

*MAN **08** 10:32:07.8, 5°.58N×126°.72E, h33^{km}, mb4.5, ML3.4, MS3.2*
*IDC **08** 10:32:36.8±2.1, 2°.42N×127°.70E, h0^{km}, mb3.4/4, mb1 3.6/4, mb1mx3.4/36, mbtmp3.5/4, Error ellipse: s-maj=114.6km s-min=25.9km az=70.0*
ISC 08 10:32:08.4±2.2**, 6°.1N**±0°.3×**127°.3E**±0°.3**, h50**^{km}**, n6, σ2ˢ.56**/7**, mb3.3**/3**, 1C-1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DMPH	Davao City--Mi	2.04	300	⇑*e*P	Pn	10 32 38.5	-1.8
DMPH				*e*S	Sn	10 33 07.9	+3.4
KCP	Kidapawan	2.38	293	⇓*e*P	Pn	10 32 42.5	-2.5
FITZ	Fitzroy Crossi	24.07	184	P	P	10 37 17.9	-1.3
	2.2nm,1.0s,baz=354,slow=6.4,SNR=3.1						
WRA	Warramunga Arr	26.76	165	P	P	10 37 44.8	+1.0
	0.4nm,0.5s,baz=343,slow=10,SNR=7.4						
ASAR	Alice Springs	30.25	168	P	P	10 38 16.4	+1.6
	0.1nm,0.6s,baz=337,slow=6.8,SNR=6.4						
MKAR	Makanchi Array	55.98	324	P	PcP	10 42 40.0	+0.1
	1.5nm,1.0s,baz=140,slow=8.5,SNR=4.2						

*IDC **08** 10:32:35.9±1.1, 7°.39N×95°.30E, h0^{km}, mb3.6/7, mb1 3.7/8, mb1mx3.6/41, mbtmp3.6/8, ML2.8/1, Error ellipse: s-maj=57.0km s-min=19.3km az=55.0*
ISC 08 10:32:41.2±1.0**, 7°.4N**±0°.2×**95°.3E**±0°.3**, h35**^{km}**, n8, σ0ˢ.74**/9**, mb3.6**/7**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	5.81	142	Pn	Pn	10 34 05.4	+0.3
	0.2nm,0.3s,baz=350,slow=16,SNR=1.6						
MKAR	Makanchi Array	40.80	346	P	P	10 40 18.2	-1.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	0.9nm,0.7s,baz=174,slow=8.4,SNR=5.7						
SONM	Songino Array	41.37	11	P	P	10 40 24.4	+0.4
	0.7nm,0.9s,baz=201,slow=7.7,SNR=3.0						
WRA	Warramunga Arr	47.04	126	P	P	10 41 10.0	+0.3
	0.6nm,0.7s,baz=304,slow=8.9,SNR=4.3						
ZALV	Zalesovo Beam	47.17	352	P	P	10 41 10.3	+0.1
	0.5nm,0.3s,baz=175,slow=7.2,SNR=3.6						
ASAR	Alice Springs	48.72	130	P	P	10 41 21.9	-0.8
	0.3nm,0.9s,baz=302,slow=7.1,SNR=2.2						
ASAR				PcP	PcP	10 42 46.9	-0.6
	0.5nm,0.8s,baz=319,slow=4.1,SNR=3.2						
BRTR	Keskin Array B	63.62	311	P	P	10 43 08.9	-0.2
	0.8nm,0.7s,baz=139,slow=7.4,SNR=5.1						
GERES	GERESS Array B	78.95	318	P	P	10 44 42.4	+0.9
	0.5nm,0.7s,baz=115,slow=3.7,SNR=3.9						

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*IDC **08** 10:35:43.6±4.8, 36.°24N×71.°07E, h182km±42km, mb3.2/8, mb1 3.3/9, mb1mx3.0/45, mbtmp3.7/9, Error ellipse: s-maj=36.8km s-min=23.5km az=34.0*

*NNC **08** 10:35:54.4±3.4, 37.°31N×71.°10E, h283km±34km, mb2.7, mpv3.8, Error ellipse: s-maj=32.4km s-min=24.6km az=28.0*

ISC 08 10:35:46.4±1.1, **36.°6N**±0.°1×**71.°1E**±0.°1, **h200**km, **n20**, σ**1^{s}54**/23, **mb3.4**/7, **4C-5D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.88	19	P	Pn	10 37 13.1	+0.7
	SNR=52						
UCH	Uchtor	6.21	24	P	Pn	10 37 17.5	+0.8
	SNR=30						
EKS2	Erkin-Say	6.40	18	P	Pn	10 37 20.2	+1.3
	SNR=14						
KK31	Karatay Array	6.53	356	⇑P	Pn	10 37 20.4	0.0
	2.1nm,0.3s,baz=175,slow=12,SNR=36						
KK31				⇓S	Sn	10 38 30.8	-4.3
	14nm,0.4s,baz=168,slow=19,SNR=14						
AAK	Ala-Archa	6.58	22	P	Pn	10 37 22.5	+1.3
	1.5nm,0.3s,baz=199,slow=7.5,SNR=19						
AAK				S	Sn	10 38 34.3	-2.0
	1.9nm,0.3s,baz=140,slow=22,SNR=18						
AAK	Ala-Archa	6.58	22	P	Pn	10 37 22.5	+1.3
	SNR=8.7						
AAK	Ala-Archa	6.58	22	P	Pn	10 37 21.9	+0.7
	4.5nm,0.6s						
AAK				⇓S	Sn	10 38 34.1	-2.3
	18nm,0.7s						
KBK	Karagaybulak	6.74	25	P	Pn	10 37 25.3	+2.0
	SNR=7.0						
TKM2	Tokmak 2	7.20	27	P	Pn	10 37 30.4	+1.1
	SNR=5.5						
TKM2	Tokmak 2	7.20	27	⇓P	Pn	10 37 29.5	+0.2
	5.3nm,0.5s						
TKM2				⇑S	Sn	10 38 48.5	-2.6
	8.4nm,0.8s						
AB31	Akbulak array	15.07	331	⇓P	Pn	10 39 08.2	-1.0
	4.3nm,0.8s,baz=145,slow=12,SNR=16						
AB31				⇑S	S	10 41 42.6	-14
	1.7nm,0.6s,baz=127,slow=8.6,SNR=10						
AKTO	Aktyubinsk	16.77	330	⇑P	P	10 39 27.6	-1.0
	4.9nm,0.8s						
AKTO				⇓S	S	10 42 17.8	-15
	2.5nm,0.9s						
ZALV	Zalesovo Beam	19.79	24	P	P	10 40 03.9	+2.6
	0.7nm,0.3s,baz=229,slow=10,SNR=3.9						
FINES	FINESS Array B	37.48	326	P	P	10 42 41.8	+1.4
	3.7nm,1.0s,baz=116,slow=9.4,SNR=3.8						
ARCES	ARCESS Array B	41.12	338	P	P	10 43 11.7	+1.4
	3.2nm,0.9s,baz=114,slow=9.0,SNR=4.1						
NOA	NORSAR Array B	44.39	323	P	P	10 43 36.9	+0.2
	0.3nm,0.5s,baz=96,slow=7.7,SNR=1.9						
TORD	Torodi Ar. Bea	65.83	269	P	P	10 46 09.5	-1.2
	0.5nm,0.7s,baz=42,slow=4.7,SNR=3.6						
INK	Inuvik	73.81	9	P	P	10 46 59.2	+0.9
	0.5nm,0.5s,baz=311,slow=7.0,SNR=4.5						
WRA	Warramunga Arr	81.94	122	P	P	10 47 42.9	-1.0
	0.2nm,0.6s,baz=315,slow=5.4,SNR=2.0						
ASAR	Alice Springs	84.20	125	P	P	10 47 53.6	-1.8
	0.2nm,0.8s,baz=321,slow=5.3,SNR=2.4						

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*NEIC **08** 10:42:01.6±1.8, 6.°88N±0.°07×94.°55E±0.°07, h8km±1km, mb5.2/92, Mwb5.4/12, Mww5.5, Mwc5.6(GCMT), Error ellipse: s-maj=13.3km s-min=9.6km az=50.0*

*MOS **08** 10:42:01.1±1.0, 6.°92N×94.°57E, h23km, mb5.3/48, MS5.0/8, Error ellipse: s-maj=7.7km s-min=4.0km az=113.1*

*BGR **08** 10:42:01.1±0.0, 5.°93N×94.°47E, h32km, mb5.2, Ms5.2*

*BJI **08** 10:42:02.8±0.0, 6.°77N×94.°37E, h37km, mB5.2/52, mb5.0/70, Ms5.5/75, Ms7 5.3/68*

*DJA **08** 10:42:02.9±1.1, 7°N±2°×9°5E±°, h12km±7km, M5.2/61, mb5.2/61, mB5.6/38, MLv5.5/7, Mw(mB)5.1/38, MwMwp5.2/6, Mwp5.4/6*

*GCMT **08** 10:42:04.6±0.1, 6.°98N±0.°01×94.°68E±0.°01, h21km, MW5.5/130, Moment Tensor Solution. s83,c134; s130,c239; Duration: 1^{s}4 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.46±.04; M$_{\theta\theta}$-1.94±.04; M$_{\phi\phi}$2.41±.04; M$_{r\theta}$-0.73±.08; M$_{\theta\phi}$0.79±.04; M$_{\phi r}$-0.11±.07; Best double couple: M$_0$2.45600×10^{17} NP1:φ$_s$147.00000°, δ72.00000°, λ-168.00000°. NP2:φ$_s$53.00000°, δ79.00000°, λ-18.00000°. Principal axes: T 2.5690, Plg5.0000°, Azm101.0000°; N -0.2200, Plg69.0000°, Azm203.0000°; P -2.3420, Plg21.0000°, Azm9.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **08** 10:42:04.9, 6.°86N×94.°54E, h8km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.01; M$_{\theta\theta}$-1.21; M$_{\phi\phi}$1.22; M$_{r\theta}$-0.41; M$_{\theta\phi}$0.61; M$_{\phi r}$-0.57; Fault plane solution: M$_0$1.53000×10^{17} NP1:φ$_s$146.27000°, δ65.75000°, λ172.53000°. NP2:φ$_s$239.35000°, δ83.19000°, λ24.43000°. Principal axes: T 1.6235, Plg22.0000°, Azm105.0000°; N -0.2150, Plg65.0000°, Azm254.0000°; P -1.4084, Plg12.0000°, Azm10.0000°;*

*KLM **08** 10:42:04, 6.°90N×94.°66E, h10km, mb5.5*

*IDC **08** 10:42:04.9±1.7, 6.°96N×94.°63E, h33km±12km, mb4.6/45, mb1 4.7/48, mb1mx4.6/60, mbtmp4.8/48, ML4.5/3, MS5.0/21, Ms1 5.0/21, ms1mx4.8/51, Error ellipse: s-maj=10.7km s-min=9.1km az=46.0*

*NEIC **08** 10:42:06, 6.°98N×94.°66E, h26km, Moment Tensor Solution. Duration: 3^{s}0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.31; M$_{\theta\theta}$-2.47; M$_{\phi\phi}$2.78; M$_{r\theta}$-0.09; M$_{\theta\phi}$1.08; M$_{\phi r}$-0.39; Fault plane solution: M$_0$2.88000×10^{17} NP1: φ$_s$146.00000°, δ85.00000°, λ175.00000°. NP2: φ$_s$236.00000°, δ85.00000°, λ5.00000°. Principal axes: T 3.0420, Plg7.0000°, Azm101.0000°; N -0.3580, Plg83.0000°, Azm278.0000°; P -2.6839, Plg0.0000°, Azm11.0000°;*

*NEIC **08** 10:42:07, 6.°78N×94.°45E, h12km, Moment Tensor Solution. Duration: 6^{s}0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.46; M$_{\theta\theta}$-1.68; M$_{\phi\phi}$2.14; M$_{r\theta}$-0.20; M$_{\theta\phi}$0.17; M$_{\phi r}$0.34; Fault plane solution: M$_0$2.00000×10^{17} NP1:φ$_s$47.00000°, δ78.00000°, λ-1.00000°. NP2:φ$_s$138.00000°, δ88.00000°, λ-167.00000°. Principal axes: T 2.1896, Plg7.0000°, Azm272.0000°; N -0.4673, Plg78.0000°, Azm147.0000°; P -1.7223, Plg10.0000°, Azm3.0000°;*

ISC 08 10:42:04.5±0.6, **6.°87N**±0.°03×**94.°46E**±0.°03, **h31**km±3km, **h32**km**:pP-P, n648,** σ**1^{s}74**/753, **mb5.1**/206, **MS5.1**/43, **17C-24D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	2.96	123	P	Pn	10 42 47.8	-1.5
LHMI	Lhok Sumawe	2.96	123	Pn	Pn	10 42 48.0	-1.4
TPTI		4.49	143	P	Pn	10 43 10.3	-0.1
PBA	Port Blair	5.05	340	eP	Pn	10 43 17.9	-0.2
PBA				ex	x	10 44 17.3	
PBA				eS	Sn	10 44 19.8	+4.3
PBA	Port Blair	5.05	340	P	Pn	10 43 18.9	+0.8
PBA	Port Blair	5.05	340		Pn	10 43 18.7	+0.6
TSI	Tuntungan	5.28	129	P	Pn	10 43 19.9	-1.4
	8.3nm15µm10µm347nm,1.0s						
PSI	Prapat	6.01	132	Pn	Pn	10 43 31.0	-0.4
	6.9nm,0.3s,baz=320,slow=12,SNR=29						
PSI				Sn	Sn	10 44 41.1	+1.9
	6.8nm,0.3s,baz=317,slow=14,SNR=4.7						
PSI				LR	LR	10 46 29.8	
	comp=Z,10µm,19.7s,baz=298,slow=44						
GSI	Gunungsitoli	6.34	151	P	Pn	10 43 35.2	-0.7
	1.6nm10µm4µm147nm,0.9s						
GSI	Gunungsitoli	6.34	151	Pn	Pn	10 43 34.7	-1.2
KULM	Kulim	6.35	104	P	Pn	10 43 33.0	-3.0
DGPR	DIGLIPUR	6.45	347	eP	Pn	10 43 39.2	+1.9
DGPR				ex	x	10 44 48.5	
DGPR				eS	Sn	10 44 56.1	+6.2
IPM	Ipoh	6.95	110	P	Pn	10 43 40.0	-4.2
MNSI	Mandailing Nat	7.90	140	P	Pn	10 43 57.8	+0.5
	0.8nm2µm118nm,0.7s						
JRMM	Jerantut	8.51	110	P	Pn	10 44 03.0	-2.7
BKNI	Bangkinang	9.23	134	P	Pn	10 44 16.1	+0.5
	5µm335nm,1.2s						
BKNI	Bangkinang	9.23	134	Pn	Pn	10 44 15.4	-0.2
PPI	Padang Panjang	9.38	141	P	Pn	10 44 17.7	+0.1
	43nm,0.8s						
PDSI	Padang	9.78	142	P	Pn	10 44 22.4	-0.7
	1µm59nm,1.1s						
PBKT	Sadao Pong	11.55	33		Pn	10 44 47.5	+0.2
CM31	Chiang Mai Arr	12.32	20	P	Pn	10 44 46.2	-12
CM31	Chiang Mai Arr	12.32	20		Pn	10 44 58.5	+0.6
CMAR	Chiang Mai Arr	12.32	20	Pn	Pn	10 44 56.7	-1.1
	3.0nm,0.3s,baz=212,slow=14,SNR=52						
CMAR				LR	LR	10 49 19.3	
	comp=Z,5µm,20.9s,baz=254,slow=36						
CMAR	Chiang Mai Arr	12.32	20	P	Pn	10 44 57.5	-0.3
CMAR	Chiang Mai Arr	12.32	20	Pn	Pn	10 44 57.5	-0.3
DSRI	Dabo	12.46	125	P	Pn	10 45 00.2	+0.5
	1µm41nm,1.7s						
JMBI	JAMBI	12.46	132	P	Pn	10 45 00.5	+0.7
	106nm,1.2s						
MASI	Maura Aman, Be	12.62	142	P	Pn	10 45 02.6	+0.6
	164nm,0.9s						
CHTO	Chiang Mai	12.65	20	P	Pn	10 45 03.0	+0.6
CHTO	Chiang Mai	12.65	20	P	Pn	10 44 52.9	-9.5
CHTO	Chiang Mai	12.65	20	Pn	Pn	10 45 03.0	+0.6
UBPT	Khong Chiam	13.65	51	Pn	Pn	10 45 15.5	-0.6
PALK	Pallekele	13.66	273	Pn	Pn	10 45 17.6	+1.3
	0.9nm,0.3s,baz=192,slow=16,SNR=4.5						
PALK				Sn	Sn	10 47 40.5	-6.6
	4.1nm,0.3s,baz=124,slow=18,SNR=3.1						
PALK				LR	LR	10 50 39.8	
	comp=Z,11µm,18.1s,baz=193,slow=37						
PALK	Pallekele	13.66	273	P	Pn	10 45 18.0	+1.7
PALK	Pallekele	13.66	273	Pn	Pn	10 45 18.0	+1.7
LHSI	Lahat	13.95	139	P	Pn	10 45 17.3	-2.9
	124nm,1.0s						
DLV	T Lat	14.72	69	Pn	Pn	10 45 30.6	-0.2
MDSI	Maura Dua	14.88	139	P	Pn	10 45 29.7	-3.0
	34nm,1.1s						
LWLI	Liwa	15.20	141	P	Pn	10 45 38.9	+1.7
	4µm199nm,0.7s						
VIS	Vishakhapatnam	15.31	316	eP	Pn	10 45 33.4	-5.0
KASI	Kota Agung	15.87	141	P	Pn	10 45 44.8	-0.9
	58nm,0.7s						
KSM	Kuching	16.68	108	P	Pn	10 45 56.0	-0.1
SLVN	Son La	17.03	31		Pn	10 46 00.7	+0.1
IMP	Imphal	17.87	358	eP	P	10 46 11.6	+0.3
DBJI	Dramaga	18.11	137	P	Pn	10 46 11.3	-2.6
	8µm45nm,0.4s						
SBUM	Sibu	18.23	103	P	Pn	10 46 16.0	+0.7
STKI	Sintang	18.27	111	P	P	10 46 15.7	-0.1
	71nm,1.8s						
BOK	Bokaro	18.74	335	eP	P	10 46 20.0	-0.9
BOK				IAmb	IAmb	10 46 24.6	
	comp=Z,301nm,1.7s						
HYB	Hyderabad	18.74	305	i P	P	10 46 20.0	-0.9
HYB				eS	Sn	10 49 51.0	+0.6
HYB	Hyderabad	18.74	305	eP	Pn	10 46 22.5	+0.9
KOHI	KOHIMA	18.75	359	eP	P	10 46 20.5	-0.6
SHL	Shillong	18.76	353	P	P	10 46 19.6	-1.6
SHL				pmax	pmax		
	comp=Z,118nm,1.3s						
SHL	Shillong	18.76	353	eP	P	10 46 19.0	-2.2
SHL	Shillong	18.76	353	P	P	10 46 18.1	-3.1
	SNR=23						
SHL	Shillong	18.76	353	P	P	10 46 19.6	-1.6
LEM	Lembang	18.90	136	LR	LR	10 55 11.0	
	comp=Z,11µm,18.3s,baz=300,slow=42						
TURI	Tura	18.99	348	ex	x	10 46 35.1	
COCO	West Island	19.08	173	P	P	10 46 23.6	-1.0
COCO				pmax	pmax		
	comp=Z,271nm,1.3s						
COCO	West Island	19.08	173	P	P	10 46 23.6	-1.0
COCO				IAmb	IAmb	10 46 39.3	
	comp=Z,271nm,1.2s						
QIZ	Qiongzhong	19.23	50	P	Pn	10 46 27.4	0.0
QIZ				S	Sn	10 50 02.0	-0.2
QIZ				pmax	pmax		
	comp=Z,25nm,1.0s						
QIZ				LR	LR		
	comp=Z,22µm,15.7s						
QIZ				LR	LR		
	comp=Z,12µm,11.8s						
QIZ				LR	LR		
	comp=Z,7µm,10.2s						
QIZ	Qiongzhong	19.23	50	P	Pn	10 46 27.7	+0.3
MOKO	MOKOCHONG	19.34	0	eP	P	10 46 27.0	-0.6
DHUB	DHUBRI	19.52	348	eP	P	10 46 27.0	-2.3
PBKI	Pangkalan Bun	19.63	118	P	P	10 46 31.4	+0.7
	comp=Z,3µmcomp=Z,167nm,1.1s						
KMI	Kunming	19.80	23	⇓P	Pn	10 46 35.2	+0.8
KMI				sP	sP	10 46 48.2	+4.2
KMI				S	Sn	10 50 19.0	+2.7
KMI				pmax	pmax		
	comp=Z,120nm,1.1s						
KMI				pmax	pmax		
	comp=Z,960nm,5.8s						
KMI				LR	LR		
	comp=Z,3µm,16.1s						
KMI				LR	LR		
	comp=Z,6µm,10.1s						
KMI				LR	LR		
	comp=Z,6µm,14.3s						
ODAN	Odare	20.99	342	eP	P	10 46 45.7	+0.1
	comp=Z,352nm,1.1s						
GTK	Tadong	21.09	345	eP	P	10 46 48.2	+1.6
RAMN	Ramite	21.32	340	eP	P	10 46 48.5	-0.7
	comp=Z,141nm,0.7s						
TAPN	Taplejung	21.36	343	eP	P	10 46 48.9	-0.7
	comp=Z,221nm,1.0s						
MTKI	Muara Teweh, K	21.82	110	P	P	10 46 54.2	-0.2
	comp=Z,44nm,2.0s						
GOA	Goa	21.97	295	eP	P	10 46 58.6	+2.7
GOA				IAmb	IAmb	10 47 02.4	
	comp=Z,75nm,1.0s						
SPMM	Sapulut	21.99	94	P	P	10 46 57.0	+0.7
NGJI	Ngawi	22.08	130	P	P	10 47 00.5	+3.4
	comp=Z,1µmcomp=Z,117nm,1.0s						
JIRN	Jiri	22.12	340	eP	P	10 46 57.0	-0.9
	comp=Z,360nm,0.9s						
BWJI	Bawean	22.12	124	P	P	10 46 59.1	+1.5
	comp=Z,5µmcomp=Z,325nm,1.1s						
PKI	Pulchoki	22.31	338	eP	P	10 46 59.1	-0.8
	comp=Z,219nm,0.8s						
PKIN	Phulchoki	22.32	338	eP	P	10 46 59.6	-0.3
	comp=Z,182nm,0.7s						
KAAM	Kaadhehdhoo	22.33	254	P	P	10 47 08.3	+8.4
GUN	Gumba	22.45	340	eP	P	10 47 01.1	-0.3
	comp=Z,129nm,0.7s						
DMN	Daman	22.46	338	eP	P	10 47 01.4	0.0
	comp=Z,359nm,1.0s						
KKN	Kakani	22.56	338	eP	P	10 47 02.0	-0.4
	comp=Z,117nm,0.9s						
GYA	Guiyang	22.68	29	⇑iP	P	10 47 03.9	+0.2
GYA				sP	pwP	10 47 15.1	+0.1
GYA				S	S	10 51 08.7	-1.5
GYA				pmax	pmax		
	comp=Z,68nm,1.2s						
GYA				LR	LR		
	comp=Z,9µm,11.7s						
GYA				LR	LR		
	comp=Z,7µm,11.5s						
GYA				LR	LR		
	comp=Z,8µm,16.2s						
BBKI	Banjar Baru	22.78	116	P	P	10 47 04.6	-0.1
	comp=Z,3µmcomp=Z,127nm,0.9s						
LSA	Lhasa	22.92	353	P	P	10 47 07.5	+1.0
LSA	Lhasa	22.92	353	P	P	10 47 05.8	-0.7
LSA				pmax	pmax		
	comp=Z,46nm,1.0s						
LSA	Lhasa	22.92	353	P	P	10 47 00.7	-5.8
LSA				P	P	10 47 00.7	-5.8
LSA	Lhasa	22.92	353	P	P	10 47 05.8	-0.7
LSA				IAmb	IAmb	10 47 16.8	
	comp=Z,46nm,1.0s						
GKN	Gorkha	22.99	337	eP	P	10 47 06.7	-0.2
POO	Poona	23.18	302	eP	P	10 47 09.0	+0.2
KOLN	Koldanda	23.20	335	eP	P	10 47 08.4	-0.7
	comp=Z,401nm,1.1s						
DANN	Dangsing	23.64	336	eP	P	10 47 12.7	-0.8
PYUN	Piuthan	23.75	334	eP	P	10 47 13.9	-0.5
SMKI	Samarinda	23.83	107	P	P	10 47 16.5	+1.4
	comp=Z,5µmcomp=Z,246nm,1.3s						
KMMI	Kalianget	23.87	125	P	P	10 47 14.9	-0.5
	comp=Z,3µmcomp=Z,4µmcomp=Z,200nm,1.6s						
KBKI	Kotabaru	23.90	114	P	P	10 47 15.0	-0.8
	comp=Z,54nm,1.2s						
BLJI	Banyuglugur	23.98	127	P	P	10 47 16.6	+0.2
	comp=Z,2µmcomp=Z,188nm,1.0s						
GMJI	Gumukmas	24.18	128	P	P	10 47 20.6	+2.4
	comp=Z,2µmcomp=Z,83nm,1.4s						
ABJI	Asem Bagus	24.52	126	P	P	10 47 21.9	+0.5
	comp=Z,6µmcomp=Z,378nm,1.0s						
SRBI	Singaraja	25.47	125	P	P	10 47 30.4	+0.4
	comp=Z,4µmcomp=Z,310nm,1.0s						
DGAR	Diego Garcia	26.14	238	i P	P	10 47 35.4	-0.7
MPSI	Mapaga	26.19	103	P	P	10 47 37.4	+0.8
	comp=Z,2µmcomp=Z,163nm,1.2s						
H08S3	Diego Garcia H	26.23	237	T	T	11 14 09.2	
	baz=56,slow=76						
H08S2	Diego Garcia H	26.23	237	T	T	11 14 13.4	
	baz=56,slow=76						
H08S1	Diego Carcia H	26.25	237	T	T	11 14 13.8	
	baz=56,slow=76						
TOLI2	Tolitoli	26.86	101	P	P	10 47 42.9	+0.2
SONA	Sohna	26.89	324	eP	P	10 47 42.6	-0.1
AJM	Ajmer	27.14	318	eP	P	10 47 44.4	-0.6
KUDL	Kundal	27.15	323	eP	P	10 47 44.4	-0.7
TTSI	Tana Toraja	27.16	110	P	P	10 47 46.0	+0.7
	comp=Z,57nm,1.5s						
ENH	Enshi	27.22	29	P	P	10 47 44.7	-1.1
ENH				IAmb	IAmb	10 47 51.0	
	comp=Z,88nm,1.2s						
KAPI	Kappang	27.86	114	P	P	10 47 50.8	-0.9
	comp=Z,6.2nm,0.3s,baz=289,slow=13,SNR=4.8						
KAPI				LR	LR	10 59 34.2	
	comp=Z,2µm,19.2s,baz=306,slow=38						
MRSI	Marisa	28.13	102	P	P	10 47 55.1	+1.0
	comp=Z,968nmcomp=Z,81nm,1.0s						
APSI	Ampana	28.21	105	P	P	10 47 55.4	+0.7
	comp=Z,1µmcomp=Z,136nm,1.3s						
BKSI	Bulukumba	28.33	115	P	P	10 47 55.4	-0.4
	comp=Z,832nmcomp=Z,71nm,1.3s						
BSSI	Bau Bau, Buton	29.01	116	P	P	10 48 02.3	+0.4
	comp=Z,21nm,1.4s						
SMLA	Simla	29.06	328	eP	P	10 48 01.4	-0.7
SMLA				IAmb	IAmb	10 48 03.8	
	comp=Z,12nm,0.5s						
GTOI	Gorontalo	29.14	101	P	P	10 48 02.9	-0.1
	comp=Z,856nmcomp=Z,73nm,1.3s						
LUWI	Luwuk	29.32	104	P	P	10 48 04.9	+0.3
	comp=Z,8µmcomp=Z,144nm,1.6s						
LUWI	Luwuk	29.32	104	P	P	10 48 04.3	-0.4
WHN	Wuhan	30.05	36	P	P	10 48 12.0	+1.2
WHN				S	S	10 53 10.4	+3.2
WHN				pmax	pmax		
	comp=Z,64nm,1.3s						
WHN				LR	LR		
	comp=Z,7µm,10.1s						
WHN				LR	LR		
	comp=Z,10µm,12.3s						
WHN				LR	LR		
	comp=Z,16µm,10.8s						
KMSI	Cibinong	30.10	101	P	P	10 48 13.9	+2.4
	comp=Z,3µmcomp=Z,113nm,1.1s						
XAN	Xi'an	30.16	24	P	P	10 48 11.5	-0.4
XAN				S	S	10 53 06.7	-2.4
XAN				SS	SnSn	10 54 44.8	+0.9
XAN				pmax	pmax		
	comp=Z,40nm,0.9s						
XAN				pmax	pmax		
	comp=Z,260nm,3.5s						
XAN				LR	LR		
	comp=Z,6µm,12.2s						
XAN				LR	LR		
	comp=Z,7µm,13.3s						
XAN				LR	LR		
	comp=Z,6µm,21.6s						
LZH	Lanzhou	30.32	15	eP	P	10 48 15.3	+1.9
LZH				pP	pP	10 48 22.8	+1.0
LZH				PP	PP	10 49 18.6	-3.7
LZH				S	S	10 53 10.2	-1.6
LZH				sS	sS	10 53 24.3	-1.3
LZH				SS	SnSn	10 54 47.3	-0.7
LZH				pmax	pmax		
	comp=Z,20nm,1.4s						
LZH				pmax	pmax		
	comp=Z,120nm,4.3s						
LZH				LR	LR		
	comp=Z,3µm,12.5s						
LZH				LR	LR		
	comp=Z,5µm,13.6s						
LZH				LR	LR		
	comp=Z,4µm,16.3s						
DHRM	DHARAMSHALA	30.40	329	eP	P	10 48 13.4	-0.8
DHRM				IAmb	IAmb	10 48 21.6	
	comp=Z,24nm,0.7s						
SSLB	Suanglung	30.49	54	P	P	10 48 14.1	-0.8
SANI	Sanana	32.69	105	P	P	10 48 32.6	-1.7
	comp=Z,520nmcomp=Z,22nm,1.2s						
GTA	Gaotai	32.75	8	⇑P	P	10 48 35.0	+0.2
GTA				PcP	PcP	10 51 20.4	+0.7
GTA				S	S	10 53 50.3	+0.6
GTA				ScP	ScP	10 55 01.2	-0.5
GTA				PcS	PcS	10 55 05.9	+0.8
GTA				pmax	pmax		
	comp=Z,13nm,1.0s						
GTA				pmax	pmax		
	comp=Z,170nm,5.9s						
GTA				LR	LR		
	comp=Z,2µm,15.4s						
GTA				LR	LR		
	comp=Z,2µm,12.0s						
GTA				LR	LR		
	comp=Z,2µm,17.4s						
NIL	Nilore	33.11	326	P	P	10 48 37.3	-0.5
NIL				pmax	pmax		
	comp=Z,138nm,1.1s						
NIL	Nilore	33.11	326	P	P	10 48 37.3	-0.5
NIL				P	P	10 48 37.3	-0.5
NIL	Nilore	33.11	326	P	P	10 48 37.3	-0.5
NJ2	Nanjing	33.83	39	eP	P	10 48 45.7	+1.6
NJ2				S	S	10 54 10.8	+4.5
NJ2				pmax	pmax		
	comp=Z,15nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,140nm,3.5s						
NJ2				LR	LR		
	comp=Z,9µm,14.5s						
NJ2				LR	LR		
	comp=Z,6µm,13.0s						
NJ2				LR	LR		
	comp=Z,2µm,19.2s						
SOEI	Soe	33.97	119	P	P	10 48 45.7	0.0
	comp=Z,1µmcomp=Z,39nm,0.6s						
SOEI	Soe	33.97	119	P	P	10 48 42.5	-3.2
SSE	Sheshan	34.73	43	P	P	10 48 52.7	+0.8
SSE				S	S	10 54 25.6	+5.4
SSE				pmax	pmax		
	comp=Z,11nm,0.9s						
SSE				pmax	pmax		
	comp=Z,120nm,3.5s						
SSE				LR	LR		
	comp=Z,4µm,18.2s						
SSE				LR	LR		
	comp=Z,3µm,20.6s						
TIY	Taiyuan	34.77	25	eP	P	10 48 55.8	+3.5
TIY				S	S	10 54 23.8	+2.9
TIY				pmax	pmax		
	comp=Z,220nm,4.7s						
TIY				LR	LR		
	comp=Z,3µm,9.7s						
TIY				LR	LR		
	comp=Z,5µm,12.6s						
TIY				LR	LR		
	comp=Z,6µm,13.3s						
TIA	Tai'an	35.82	32	⇑P	P	10 49 01.8	+0.6
TIA				S	S	10 54 37.0	+0.2

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TIA                                     pmax    pmax
       comp=Z,20nm,1.2s
TIA                                     pmax    pmax
       comp=Z,260nm,4.7s
TIA                                     LR      LR
       comp=Z,3µm,14.7s
TIA                                     LR      LR
       comp=Z,5µm,17.2s
TIA                                     LR      LR
       comp=Z,3µm,12.3s
KBL    Kabul              36.16 323     P       P          10 49 03.8  -0.6
KBL                                     pmax    pmax
       comp=Z,32nm,1.3s
KBL    Kabul              36.16 323     P       P          10 49 04.4  -0.1
       SNR=8.4
KBL                                     P       P          10 49 04.4  -0.1
       SNR=8.4
KBL    Kabul              36.16 323     P       P          10 49 03.8  -0.6
KBL                                     IAmb    IAmb       10 49 11.7
       comp=Z,32nm,1.2s
BTO    Baotou             36.36  20    eP       P          10 49 05.8  -0.1
BTO                                     S       S          10 54 47.2  +2.0
BTO                                     LR      LR
       comp=Z,5µm,9.8s
BTO                                     LR      LR
       comp=Z,16µm,12.4s
KSH    Kashi              36.51 336     P       P          10 49 05.1  -2.2
KSH                                     pP      pP         10 49 11.5  -4.4
KSH                                     sP      pwP        10 49 16.5  -2.1
KSH                                     PcP     PcP        10 51 31.6  +1.0
KSH                                     S       S          10 54 44.1  -3.5
KSH                                     SS      SnSn       10 57 07.7   -10
KSH                                     pmax    pmax
       comp=Z,14nm,0.6s
KSH                                     pmax    pmax
       comp=Z,170nm,6.2s
KSH                                     LR      LR
       comp=Z,1µm,17.2s
KSH                                     LR      LR
       comp=Z,2µm,18.5s
KSH                                     LR      LR
       comp=Z,2µm,22.0s
JLN    Jalan Bani Buh     37.05 298     P       P          10 49 15.2  +3.2
       SNR=12
JLN                                     P       P          10 49 15.2  +3.2
       SNR=12
HHC    Hu-ho-hao-te       37.12  22    eP       P          10 49 15.0  +2.6
HHC                                     PP      PnPn       10 50 42.3  +4.4
HHC                                     S       S          10 54 59.9  +3.1
HHC                                     pmax    pmax
       comp=Z,12nm,0.9s
HHC                                     pmax    pmax
       comp=Z,230nm,9.0s
HHC                                     LR      LR
       comp=Z,4µm,12.8s
HHC                                     LR      LR
       comp=Z,8µm,11.8s
HHC                                     LR      LR
       comp=Z,4µm,14.2s
WMQ    Urumqi             37.28 352    eP       P          10 49 15.8  +2.1
WMQ                                     pP      pP         10 49 19.5  -2.6
WMQ                                     sP      pwP        10 49 24.3  -1.2
WMQ                                     S       S          10 55 01.0  +1.9
WMQ                                     sS      sS         10 55 11.5  -1.5
WMQ                                     pmax    pmax
       comp=Z,37nm,1.7s
WMQ                                     pmax    pmax
       comp=Z,200nm,3.9s
WMQ                                     LR      LR
       comp=Z,2µm,14.1s
WMQ                                     LR      LR
       comp=Z,2µm,18.1s
WMQ                                     LR      LR
       comp=Z,1µm,18.9s
MBWA   Marble Bar         37.30 139     P       P          10 49 04.4   -10
MBWA                                    P       P          10 49 04.4   -10
MBWA   Marble Bar         37.30 139     P       P          10 49 12.9  -1.1
MBWA                                    IAmb    IAmb       10 49 16.0
       comp=Z,63nm,1.5s
SWI    Sorong             37.51 100     P       P          10 49 15.3  -0.6
       comp=Z,1µmcomp=Z,44nm,1.1s
WBK    Wadi Bani Khal     37.59 298     P       P          10 49 19.9  +3.4
WBK                                     P       P          10 49 19.9  +3.4
PSA00  Pilbara Seismi     37.67 139     P       P          10 49 16.1  -1.1
PSA00                                   IAmb    IAmb       10 49 18.3
       comp=Z,38nm,1.2s
TARG   Taragay, Kyrgy     37.74 339     P       P          10 49 17.8  -0.2
TARG                                    IAmb    IAmb       10 49 32.8
       comp=Z,41nm,1.4s
MHTO   MHTO               37.98 295     P       P          10 49 22.1  +2.3
MHTO                                    P       P          10 49 22.1  +2.3
DQM    DQM                38.09 294     P       P          10 49 23.6  +2.9
DQM                                     P       P          10 49 23.6  +2.9
WSAR   Wadi Sarin         38.09 299     P       P          10 49 23.0  +2.3
       comp=Z,15nm,0.9s,baz=140,slow=8.4,SNR=8.8
WSAR                                    LR      LR         11 05 48.0
       comp=Z,3µm,18.5s,baz=127,slow=37
WSAR   Wadi Sarin         38.09 299     P       P          10 49 24.2  +3.5
JMDO   Jabal Madar        38.27 298     P       P          10 49 25.3  +3.0
JMDO                                    P       P          10 49 25.3  +3.0
BJT    Baijiatuau         38.32  27     P       P          10 49 24.0  +1.6
BJT                                     pmax    pmax
       comp=Z,41nm,1.1s
BJT    Baijiatuau         38.32  27     P       P          10 49 24.0  +1.6
BJT                                     IAmb    IAmb       10 49 27.2
       comp=Z,41nm,1.1s
BJI    Beijing            38.34  27     P       P          10 49 24.0  +1.5
BJI                                     S       S          10 55 20.2  +5.2
BJI                                     pmax    pmax
       comp=Z,42nm,1.3s
BJI                                     pmax    pmax
       comp=Z,260nm,4.5s
BJI                                     LR      LR
       comp=Z,3µm,16.7s
BJI                                     LR      LR
       comp=Z,3µm,16.5s
BJI                                     LR      LR
       comp=Z,3µm,16.7s
SHLS   Shalkode           38.48 342    eP       P          10 49 22.9  -1.0
       baz=343
SHLS   Shalkode           38.48 342    eP       P          10 49 22.9  -1.0
SMDO   Samad              38.53 299     P       P          10 49 27.6  +3.1
SMDO                                    P       P          10 49 27.6  +3.1
SQUM   Sultan Qaboos      38.60 299     P       P          10 49 29.2  +4.3
UZB    Uzynbulak          38.61 342    eP       P          10 49 24.1  -0.9
       baz=342
UZB    Uzynbulak          38.61 342    eP       P          10 49 24.0  -0.9
BIDO   Bidbid             38.62 299     P       P          10 49 28.5  +3.4
       SNR=11
BIDO                                    P       P          10 49 28.5  +3.4
       SNR=11
PDGK   Podgornoye         38.63 342     P       P          10 49 25.3  +0.2
GAR    Garm               38.70 329     P       P          10 49 25.2  -0.5
SATY   Saty               38.72 341    eP       P          10 49 25.1  -0.9
       baz=341
SATY   Saty               38.72 341    eP       P          10 49 25.0  -0.9
KPKS   Kokpek             39.00 342    eP       P          10 49 27.5  -0.8
       baz=342
KPKS   Kokpek             39.00 342    eP       P          10 49 27.4  -0.8
CHGR   Chuyangaron        39.04 328     P       P          10 49 27.4  -1.1
BSY    Bisya              39.18 298     P       P          10 49 33.3  +3.4
       SNR=14
BSY                                     P       P          10 49 33.3  +3.4
       SNR=14
TNSS   Tian-Shan          39.19 340    eP       P          10 49 29.5  -0.7
       baz=340
BTK    Batken             39.26 331     P       P          10 49 30.9  +0.5
BTK                                     pmax    pmax
       comp=Z,68nm,0.9s
BTK    Batken             39.26 331     P       P          10 49 30.9  +0.5
BTK                                     IAmb    IAmb       10 49 40.3
       comp=Z,68nm,0.9s
MDOK   Medeo              39.27 340    eP       P          10 49 29.6  -0.8
       baz=340
MDOK   Medeo              39.27 340     P       P          10 49 29.7  -0.8
HOQ    Hoqain             39.35 299     P       P          10 49 34.5  +3.2
       SNR=18
HOQ                                     P       P          10 49 34.5  +3.2
       SNR=18
AAA    Alma-Ata           39.35 340    eP       P          10 49 30.4  -0.8
       baz=340
AAA    Alma-Ata           39.35 340    eP       P          10 49 30.3  -0.8
UCH    Uchtor             39.40 336     P       P          10 49 33.6  +1.7
       SNR=10
SHAO   Shalim             39.42 290     P       P          10 49 35.9  +4.0
FITZ   Fitzroy Crossi     39.53 129     P       P          10 49 31.1  -1.6
       baz=40,SNR=16
FITZ   Fitzroy Crossi     39.53 129     P       P          10 49 30.9  -1.8
TKM2   Tokmak 2           39.57 338     P       P          10 49 31.2  -1.9
       SNR=5.7
KBK    Karagaybulak       39.59 337     P       P          10 49 34.0  +0.7
       SNR=11
AML    Almayashu          39.65 336     P       P          10 49 34.0  +0.1
       SNR=26
AML    Almayashu          39.65 336   i P       P          10 49 34.1  +0.1
       SNR=26
AML    Almayashu          39.65 336     P       P          10 49 33.8  -0.1
AAK    Ala-Archa          39.75 337     P       P          10 49 35.3  +0.7
       comp=Z,11nm,0.8s,baz=158,slow=6.0,SNR=18
AAK                                     LR      LR         11 08 19.5
       comp=Z,3µm,19.0s,baz=157,slow=40
AAK    Ala-Archa          39.75 337     P       P          10 49 36.6  +2.1
       SNR=8.4
AAK    Ala-Archa          39.75 337   i P       P          10 49 36.6  +2.1
       SNR=11
AAK    Ala-Archa          39.75 337     P       P          10 49 34.6   0.0
AAK                                     P       P          10 49 34.6   0.0
AAK    Ala-Archa          39.75 337     P       P          10 49 34.8  +0.2
CHKK   Chushkaly          39.90 340    eP       P          10 49 33.9  -1.7
       baz=340
ARXS   Arharly            39.94 341    eP       P          10 49 36.4  +0.4
ARQ    Araqi              39.95 298     P       P          10 49 39.5  +3.1
ARQ                                     P       P          10 49 39.5  +3.1
DMTO   DMTO               40.00 289     P       P          10 49 39.6  +2.8
EKS2   Erkin-Say          40.06 336     P       P          10 49 37.8  +0.8
       SNR=8.6
KUU    Kurty              40.15 340    eP       P          10 49 36.1  -1.7
       comp=Z,50nm,2.6s,baz=340
KUU    Kurty              40.15 340    eP       P          10 49 36.0  -1.7
KUU                                     pmax    pmax
       comp=Z,50nm,2.6s
SOHO   SOHO               40.20 300   i P       P          10 49 41.2  +2.9
       SNR=5.0
SOHO   SOHO               40.20 300     P       P          10 49 40.9  +2.6
DL2    Dalian             40.22  33    eP       P          10 49 48.3   +10
DL2                                     pmax    pmax
       comp=Z,57nm,0.8s
USP    Ospenovka          40.28 337     P       P          10 49 38.6  -0.2
       SNR=11
SGDS   Sogindy            40.39 338    eP       P          10 49 38.3  -1.4
       baz=338
MSEY   Mahe Island        40.57 255     P       P          10 49 46.4  +4.8
MSEY                                    P       P          10 49 46.4  +4.8
RBK    Rabkut             40.66 289     P       P          10 49 46.3  +4.0
KNRA   Kununurra          40.69 124     P       P          10 49 40.3  -2.2
       baz=41,SNR=5.8
UOSS   Minazif            40.75 301     P       P          10 49 44.5  +1.6
HATD   Hatta, Dubai       40.77 300     P       P          10 49 45.3  +2.2
HATD   Hatta, Dubai       40.77 300     P       P          10 49 46.4  +3.3
HATD                                    P       P          10 49 46.4  +3.3
ASHO   Ashiyiah           40.79 300     P       P          10 49 45.5  +2.2
ASHO   Ashiyiah           40.79 300     P       P          10 49 45.9  +2.6
ASHO                                    P       P          10 49 45.9  +2.6
MDH    Madha              40.79 301     P       P          10 49 43.8  +0.6
ALNE   Al Ain             40.85 299   i P       P          10 49 46.6  +2.8
       SNR=11
ALNE   Al Ain             40.85 299     P       P          10 49 46.7  +2.9
       SNR=24
ALNE                                    P       P          10 49 46.7  +2.9
       SNR=24
MSFE   Esma-Masafi        40.92 301     P       P          10 49 47.4  +3.0
DOK    Doka               40.93 290     P       P          10 49 47.5  +3.0
       SNR=5.8
DOK                                     P       P          10 49 47.5  +3.0
       SNR=5.8
UMZA   Um Al Zommool      40.97 297     P       P          10 49 47.3  +2.6
UMZA                                    P       P          10 49 47.3  +2.6
BANOM  Banah              41.00 302     P       P          10 49 48.3  +3.3
BANOM  Banah              41.00 302     P       P          10 49 48.0  +3.0
MK31   Makanchi Array     41.13 347     P       P          10 49 46.2  +0.4
MK31                                    pmax    pmax
       comp=Z,49nm,1.3s
MK31   Makanchi Array     41.13 347     P       P          10 49 46.2  +0.4
MK31                                    IAmb    IAmb       10 49 55.0
       comp=Z,49nm,1.3s
MKAR   Makanchi Array     41.13 347     P       P          10 49 46.0  +0.3
       comp=Z,26nm,0.8s,baz=165,slow=6.1,SNR=104
MKAR                                    PcP     PcP        10 51 44.8   0.0
       comp=Z,1.8nm,0.7s,baz=185,slow=3.0,SNR=1.3
MKAR                                    ScP     ScP        10 55 31.5  -1.1
       comp=Z,0.8nm,0.8s,baz=188,slow=7.3,SNR=2.7
MKAR                                    LR      LR         11 11 46.7
       comp=Z,1µm,18.1s,baz=176,slow=43
MKAR   Makanchi Array     41.13 347     P       P          10 49 45.7   0.0
WHFO   Wadi Hawf          41.14 289     P       P          10 49 48.9  +2.7
WHFO                                    P       P          10 49 48.9  +2.7
FAQ    Al Faqa, Dubai     41.21 300     P       P          10 49 48.3  +1.6
FAQ    Al Faqa, Dubai     41.21 300     P       P          10 49 48.8  +2.1
FAQ                                     P       P          10 49 48.8  +2.1
MAKZ   Makanchi           41.22 347     P       P          10 49 45.7  -0.7
MAKZ                                    pmax    pmax
       comp=Z,19nm,0.9s
MAKZ   Makanchi           41.22 347     P       P          10 49 45.7  -0.7
ZSN    Zaisan             41.26 350    eP       P          10 49 45.8  -1.0
       baz=350
ZSN    Zaisan             41.26 350    eP       P          10 49 45.7  -1.0
IUG    Iuzhnay            41.26 332    eP       P          10 49 46.0  -1.0
       baz=332
IUG    Iuzhnay            41.26 332    eP       P          10 49 46.0  -1.0
MTN    Manton Dam         41.37 118     P       P          10 49 46.6  -1.5
       baz=41,SNR=7.0
MTN    Manton Dam         41.37 118     P       P          10 49 45.3  -2.8
ASUD   Al Ashush, Dub     41.40 300   i P       P          10 49 50.8  +2.6
       SNR=11
ASUD   Al Ashush, Dub     41.40 300     P       P          10 49 51.2  +3.0
       SNR=9.3
ASUD                                    P       P          10 49 51.2  +3.0
       SNR=9.3
ABTO   Aybut              41.49 288     P       P          10 49 51.9  +2.8
ABTO                                    P       P          10 49 51.9  +2.8
KK31   Karatay Array      41.80 334   i P       P          10 49 50.8  -0.5
KK31   Karatay Array      41.80 334     P       P          10 49 51.1  -0.2
KKAR   Karatay Array      41.80 334     P       P          10 49 51.5  +0.2
KKAR                                    pmax    pmax
       comp=Z,24nm,1.0s
KKAR   Karatay Array      41.80 334     P       P          10 49 51.5  +0.2
KKAR   Karatay Array      41.80 334     P       P          10 49 51.7  +0.4
KKAR                                    IAmb    IAmb       10 49 59.2
       comp=Z,24nm,0.9s
BTLS   Baital             41.97 338    eP       P          10 49 51.2  -1.4
       baz=338
BTLS   Baital             41.97 338    eP       P          10 49 51.1  -1.4
SONM   Songino Array      42.07  12     P       P          10 49 53.2  -0.4
       comp=Z,12nm,0.9s,baz=195,slow=8.0,SNR=52
SONM                                    PcP     PcP        10 51 48.4  +0.4
       comp=Z,3.2nm,0.8s,baz=204,slow=4.7,SNR=2.6
SONM   Songino Array      42.07  12     P       P          10 49 54.1  +0.5
ULN    Ulaanbaatar        42.24  13     P       P          10 49 54.3  -0.6
ULN                                     pmax    pmax
       comp=Z,10.0nm,0.7s
ULN    Ulaanbaatar        42.24  13     P       P          10 49 50.5  -4.4
ULN                                     P       P          10 49 50.5  -4.4
ULN    Ulaanbaatar        42.24  13     P       P          10 49 54.3  -0.6
KSRS   Korea Array        43.02  40     P       P          10 49 59.3  -1.9
       comp=Z,16nm,1.2s,baz=232,slow=8.6,SNR=12
DGZ    Jazzator, Alta     43.09 353   i P       P          10 50 00.7  -1.2
DGZ                                     pmax    pmax
       comp=Z,9.0nm,0.9s
GHWR   Ruwais             43.33 298     P       P          10 50 06.2  +2.2
GHWR                                    P       P          10 50 06.2  +2.2
SNY    Shenyang           43.34  32    ⇓P       P          10 50 02.6  -1.2
SNY                                     S       S          10 56 29.4  -0.1
SNY                                     pmax    pmax
       comp=Z,38nm,1.6s
SNY                                     pmax    pmax
       comp=Z,460nm,6.5s
SNY                                     LR      LR
       comp=Z,5µm,22.0s
SNY                                     LR      LR
       comp=Z,2µm,15.9s
SNY                                     LR      LR
       comp=Z,6µm,16.5s
MUN    Mundaring          43.85 153     P       P          10 50 09.1  +1.1
       baz=44,SNR=3.8
ZAK    Zakamensk          43.99   8    eP       P          10 50 08.3  -0.7
ZAK                                     pmax    pmax
       comp=Z,11nm,1.3s
NWAO   Narrogin (SRO)     45.11 153     P       P          10 50 18.4  +0.4
       baz=45,SNR=5.6
NWAO                                    P       P          10 50 18.4  +0.4
       baz=45,SNR=5.6
GEYT   Alibeck            45.16 319     P       P          10 50 19.1  +0.7
       comp=Z,13nm,0.8s,baz=178,slow=12,SNR=15
GEYT                                    LR      LR         11 12 35.4
       comp=Z,2µm,19.4s,baz=120,slow=40
GYA0B  ALIBECK ARRAY      45.16 319     P       P          10 50 19.3  +0.8
GYA0B                                   IAmb    IAmb       10 50 20.1
       comp=Z,21nm,0.8s
TLY    Talaya             45.31   8     LR      LR         11 10 28.9
       comp=Z,2µm,20.9s,baz=208,slow=38
KURBB  Kurchatov Arra     45.59 346     P       P          10 50 21.5  -0.1
       comp=Z,34nm,0.7s,baz=167,slow=6.9,SNR=171
KURBB                                   PcP     PcP        10 52 00.4  +0.7
       comp=Z,4.0nm,0.7s,baz=153,slow=2.9,SNR=2.3
KURBB                                   ScP     ScP        10 55 49.9  -0.6
       comp=Z,1.5nm,0.8s,baz=165,slow=3.3,SNR=4.2
KURK   Kurchatov          45.66 346d iP       P          10 50 21.7  -0.4
KURK                                    pmax    pmax
       comp=Z,31nm,1.0s
KURK   Kurchatov          45.66 346     P       P          10 50 19.9  -2.2
KURK                                    P       P          10 50 19.9  -2.2
KURK   Kurchatov          45.66 346     P       P          10 50 22.1   0.0
CN2    Changchun          45.71  31    eP       P          10 50 20.5  -2.2
CN2                                    eS       S          10 57 05.1  +1.3
CN2                                     SS      ScS        11 00 22.1  +5.5
CN2                                     pmax    pmax
       comp=Z,10.0nm,2.0s
CN2                                     pmax    pmax
       comp=Z,100nm,3.0s
CN2                                     LR      LR
       comp=Z,3µm,18.0s
CN2                                     LR      LR
       comp=Z,5µm,18.0s
CN2                                     LR      LR
       comp=Z,6µm,22.0s
WRKA   Warakurna          45.72 135     P       P          10 50 23.0  -0.1
       baz=46,SNR=27
BRZS   Berezniki          46.69 341    eP       P          10 50 29.7  -0.6
       baz=341
BRZS   Berezniki          46.69 341    eP       P          10 50 29.7  -0.6
WB0    Warramunga Arr     47.38 125     P       P          10 50 34.6  -1.5
WB0                                     IAmb    IAmb       10 50 47.9
       comp=Z,13nm,0.8s
WRA    Warramunga Arr     47.42 125     P       P          10 50 34.8  -1.7
       comp=Z,7.8nm,0.7s,baz=304,slow=9.0,SNR=81
WRA                                     PcP     PcP        10 52 06.7  -0.1
       comp=Z,2.9nm,0.7s,baz=321,slow=2.7,SNR=1.6
WRA                                     ScP     ScP        10 55 57.8  -1.0
       comp=Z,2.0nm,1.1s,baz=304,slow=3.5,SNR=5.3
WRA                                     LR      LR         11 13 17.7
       comp=Z,3µm,18.4s,baz=300,slow=40
WRA    Warramunga Arr     47.42 125     P       P          10 50 35.0  -1.5
WRAB   Tennant Creek      47.43 125c iP       P          10 50 34.9  -1.6
WRAB                                    pmax    pmax
       comp=Z,44nm,2.1s
WRAB   Tennant Creek      47.43 125     P       P          10 50 34.3  -2.2
WRAB                                    IAmb    IAmb       10 50 48.6
       comp=Z,22nm,0.8s
WB2    Warramunga Arr     47.43 125     P       P          10 50 34.8  -1.7
WB2                                     IAmb    IAmb       10 50 48.5
       comp=Z,18nm,0.8s
WC3    Warramunga Arr     47.46 125     P       P          10 50 35.6  -1.2
       baz=48
ZAA0   Zalesovo Array     47.59 352     P       P          10 50 37.2   0.0
ZALV   Zalesovo Beam      47.59 352     P       P          10 50 37.1  -0.1
       comp=Z,28nm,0.9s,baz=176,slow=7.8,SNR=70
ZALV   Zalesovo Beam      47.59 352     P       P          10 50 36.7  -0.5
WR0    Warramunga Arr     47.60 125     P       P          10 50 36.1  -1.7
WR0                                     IAmb    IAmb       10 50 48.8
       comp=Z,22nm,0.9s
CIT    Chita              47.68  16    eP       P          10 50 37.6  -0.4
CIT                                    e                   10 50 48.0
CIT                                    e        PcP        10 52 01.4  -5.7
CIT                                     pmax    pmax
       comp=Z,117nm,1.5s
INU    Inuyama            48.21  48     P       P          10 50 42.4   0.0
MDJ    Mudanjiang         48.46  33     P       P          10 50 45.6  +1.5
MDJ                                     pP      pP         10 50 54.5  +1.8
MDJ                                     sP      pwP        10 50 58.8  +2.5
MDJ                                     PP      PP         10 52 38.5  +1.5
MDJ                                     S       S          10 57 48.5  +5.4
MDJ                                     pmax    pmax
       comp=Z,30nm,1.3s
MDJ                                     pmax    pmax
       comp=Z,180nm,3.9s
MDJ                                     LR      LR
       comp=Z,2µm,18.1s
MDJ                                     LR      LR
       comp=Z,5µm,18.1s
MDJ                                     LR      LR
       comp=Z,7µm,20.4s
MDJ    Mudanjiang         48.46  33     P       P          10 50 42.9  -1.2
MDJ                                     IAmb    IAmb       10 51 03.6
       comp=Z,44nm,1.2s
AS31   Alice Springs      49.03 130     P       P          10 50 47.8  -1.1
ASAR   Alice Springs      49.03 130     P       P          10 50 47.8  -1.1
       comp=Z,13nm,0.8s,baz=310,slow=7.6,SNR=108
ASAR                                    PcP     PcP        10 52 12.1  -0.4
       comp=Z,6.2nm,0.8s,baz=305,slow=4.0,SNR=6.5
ASAR                                    ScP     ScP        10 56 03.6  -2.0
       comp=Z,1.3nm,0.9s,baz=305,slow=5.1,SNR=5.4
ASAR                                    LR      LR         11 13 30.1
       comp=Z,2µm,20.3s,baz=302,slow=38
ASAR   Alice Springs      49.03 130     P       P          10 50 47.4  -1.5
FORT   Forrest            49.36 141     P       P          10 50 51.6  +0.4
       baz=50,SNR=34
FORT   Forrest            49.36 141     P       P          10 50 51.1  -0.1
USRK   Ussuriysk Ar.      49.54  35     P       P          10 50 51.7  -0.7
       comp=Z,9.3nm,0.9s,baz=224,slow=8.0,SNR=8.6
USRK   Ussuriysk Ar.      49.54  35     P       P          10 50 52.3  -0.1
USRK   Ussuriysk Ar.      49.54  35     P       P          10 50 52.3  -0.1
MAJO   Matsushiro         49.60  47   i P       P          10 50 50.9  -2.1
MAJO                                    pmax    pmax
       comp=Z,31nm,1.5s
MAT    Matsushiro         49.60  47     P       P          10 50 54.2  +1.2
MJAR   Matsushiro Arr     49.60  47     P       P          10 50 53.5  +0.5
       comp=Z,8.2nm,1.0s,baz=246,slow=8.8,SNR=15
MJAR   Matsushiro Arr     49.60  47     P       P          10 50 52.4  -0.7
BVAR   Borovoye Array     50.04 341     P       P          10 50 55.3  -0.7
       comp=Z,21nm,0.7s,baz=184,slow=13,SNR=74
BRVK   Borovoye           50.10 341     P       P          10 50 56.0  -0.5
BRVK                                    pmax    pmax
       comp=Z,31nm,0.8s
BRVK   Borovoye           50.10 341     P       P          10 50 54.5  -2.0
BRVK                                    P       P          10 50 54.5  -2.0
BRVK   Borovoye           50.10 341     P       P          10 50 56.0  -0.5
BRVK                                    IAmb    IAmb       10 51 06.5
       comp=Z,31nm,0.8s
JSD    Sado               50.30  45     P       P          10 50 57.4  -0.9
JSD                                     IAmb    IAmb       10 51 00.4
       comp=Z,48nm,1.2s
JYT    Yasato             50.93  48     P       P          10 51 01.7  -1.4
JYT                                     IAmb    IAmb       10 51 03.9
       comp=Z,64nm,1.3s
ATD    Arta Tunnel        51.11 279     P       P          10 51 06.0  +1.2
       comp=Z,16nm,0.9s,baz=62,slow=5.0,SNR=8.5
ATD    Arta Tunnel        51.11 279     P       P          10 51 08.1  +3.3
AB31   Akbulak array      51.26 332   i P       P          10 51 05.0  -0.3
ABKAR  Akbulak array      51.26 332     P       P          10 51 05.5  +0.2
ABKAR  Akbulak array      51.26 332     P       P          10 51 05.5  +0.2
JMM    Marumori           52.03  47     P       P          10 51 10.5  -0.7
QIS    Mount Isa          52.06 123     P       P          10 51 10.8  -1.0
       baz=52,SNR=8.7
KLR    Kul'dur            52.58  30     P       P          10 51 15.4  +0.2
       comp=Z,1.9nm,0.7s,baz=262,slow=4.8,SNR=4.3
KLR    Kul'dur            52.58  30   i P       P          10 51 13.6  -1.6
KLR                                     pmax    pmax
       comp=Z,29nm,1.6s
AKTO   Aktyubinsk         52.98 332     P       P          10 51 17.9  -0.2
       comp=Z,27nm,0.7s,baz=126,slow=7.6,SNR=37
OPO    Ambohidratompo     53.03 241     P       P          10 51 20.8  +1.6
       comp=Z,6.4nm,0.9s,baz=40,slow=3.1,SNR=4.6
BOD    Bodaibo            53.05  13    eP       P          10 51 18.3  -0.2
BOD                                     pmax    pmax
       comp=Z,47nm,1.2s
MANU   Manus Island       53.54  98     P       P          10 51 21.9  -0.9
MANU                                    IAmb    IAmb       10 51 38.4
       comp=Z,20nm,1.2s
ZEA    Zeya               53.74  24    eP       P          10 51 24.2  +0.6
ZEA                                     pmax    pmax
       comp=Z,10.0nm,1.4s
MAK    Makhachkala        54.68 319    eP       P          10 51 27.2  -3.4
MAK                                    e        PP         10 53 27.6  -5.8
MAK                                    ePPP     PPP        10 54 41.3
MAK                                    eS       S          10 59 04.6  -4.2
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MAK                                eSS     SS      11 02 52.6 +0.6
MAK                                 pmax   pmax
      comp=Z,139nm,0.8s
VOI   Vohitsoka        54.77 237    P      P       10 51 33.4 +1.6
VOI                                 IAmb   IAmb    10 51 43.3
      comp=Z,31nm,1.3s
GNI   Garni            55.37 315    P      P       10 51 36.3 +0.4
      comp=Z,13nm,0.5s,baz=190,slow=4.7,SNR=7.4
GNI   Garni            55.37 315  i P      P       10 51 34.6 -1.3
GNI                                 pmax   pmax
      comp=Z,29nm,1.3s
BBOO  Buckleboo        55.86 138    P      P       10 51 38.8 -0.5
      baz=56,SNR=28
BBOO  Buckleboo        55.86 138    P      P       10 51 38.7 -0.7
BBOO                                IAmb   IAmb    10 51 39.5
      comp=Z,34nm,0.8s
ASAJ  Asahikawa        55.96  40    P      P       10 51 38.9 -1.0
      comp=Z,18nm,1.2s,baz=259,slow=16,SNR=3.1
SVE   Sverdlovsk       56.45 338   eP      P       10 51 43.6 +0.5
SVE                                eS      S       10 59 33.6 +1.7
SVE                                 pmax   pmax
      comp=Z,120nm,1.3s
SVE                                 MLR    MLR
      comp=Z,2µm,22.0s
GURO  Guroymak-BITLI   56.74 312    P      P       10 51 45.2 -0.5
ARU   Arti             56.93 337c iP       P       10 51 45.9 -0.7
ARU                                        PP      10 53 48.2 -5.1
ARU                                 S      S       10 59 39.0 +0.6
ARU                                 pmax   pmax
      comp=Z,66nm,1.9s
ARU                                 MLR    MLR
      comp=Z,2µm,21.0s
ARU   Arti             56.93 337    P      P       10 51 46.1 -0.5
ZEI   Tsey             56.99 317   eP      P       10 51 45.8 -1.7
ZEI                                 pmax   pmax
      comp=Z,6.0nm,0.9s
KIBK  Kibwezi          57.05 263    P      P       10 51 51.3 +3.1
KIBK  Kibwezi          57.05 263    P      P       10 51 49.0 +0.7
KIBK                                IAmb   IAmb    10 51 59.6
      comp=Z,24nm,1.2s
YSS   Yuzh-Sakhalins   57.38  37   eP      P       10 51 48.6 -1.3
YSS                                 pmax   pmax
      comp=Z,20nm,1.4s
NCK   Nalchik          57.48 318  i P      P       10 51 50.4 -0.4
NCK                                 pmax   pmax
      comp=Z,13nm,0.8s
CTA   Charters Tower   57.54 119    LR     LR      11 20 32.9
      comp=Z,989nm,18.2s,baz=293,slow=40
KMBO  Kilima Mbogo     57.64 264    P      P       10 51 55.3 +2.7
      comp=Z,18nm,0.9s,baz=54,slow=9.8,SNR=37
KMBO                                LR     LR      11 14 39.8
      comp=Z,1µm,18.0s,baz=92,slow=34
KMBO  Kilima Mbogo     57.64 264  i P      P       10 51 55.8 +3.2
      SNR=19
KMBO  Kilima Mbogo     57.64 264    P      P       10 51 53.7 +1.1
KMBO                                IAmb   IAmb    10 51 57.1
      comp=Z,26nm,1.0s
NEY   Neytrino         57.97 317  i P      P       10 51 53.8 -0.6
NEY                                 pmax   pmax
      comp=Z,3.0nm,0.8s
KBZ   Khabaz           58.04 318    P      P       10 51 53.8 -0.8
      comp=Z,6.9nm,0.9s,baz=144,slow=6.7,SNR=12
KBZ   Khabaz           58.04 318c iP       P       10 51 53.0 -1.6
KBZ                                 pmax   pmax
      comp=Z,9.0nm,0.9s
PYA1  Pyatigorsk       58.05 318  i P      P       10 51 53.5 -1.2
HTT   Hallett          58.16 136    P      P       10 51 55.7  0.0
      baz=58,SNR=18
SHA1  Shidzhatmaz      58.21 318  i P      P       10 51 52.7 -3.4
KVAR  Kislovodsk Arr   58.27 318    P      P       10 51 55.7 -0.7
      comp=Z,2.4nm,0.3s,baz=326,slow=3.6,SNR=2.0
KIV   Kislovodsk       58.27 318    P      P       10 51 55.8 -0.6
KIV   Kislovodsk       58.27 318   eP      P       10 51 55.8 -0.6
KIV                                eS      S       10 59 56.7 +0.1
KIV                                 pmax   pmax
      comp=Z,23nm,1.1s
KIV                                 MLR    MLR
      comp=Z,510nm,17.0s
KIV   Kislovodsk       58.27 318    P      P       10 51 56.1 -0.3
KIV                                 IAmb   IAmb    10 52 04.2
      comp=Z,20nm,1.0s
GOF   Gofitskoye       58.49 319⇑eP       P       10 51 53.5 -4.2
QLP   Quilpie          58.58 127    P      P       10 51 58.6  0.0
      baz=59,SNR=4.9
LODK  Lodwar           58.93 270    P      P       10 52 04.5 +3.0
      SNR=7.7
LODK  Lodwar           58.93 270    P      P       10 52 02.1 +0.7
ASF   Jabal al Asfar   59.03 303    P      P       10 52 02.3 +0.4
      comp=Z,3.0nm,0.4s,baz=104,slow=1.9,SNR=7.6
STKA  Stephens Creek   59.19 133    P      P       10 52 01.6 -1.2
      comp=Z,15nm,0.8s,baz=311,slow=8.3,SNR=47
STKA                                LR     LR      11 22 28.8
      comp=Z,2µm,18.4s,baz=310,slow=41
STKA  Stephens Creek   59.19 133    P      P       10 52 02.1 -0.6
      baz=59,SNR=20
STKA  Stephens Creek   59.19 133    P      P       10 52 02.0 -0.8
STKA                                pmax   pmax
      comp=Z,4.0nm,0.8s
STKA  Stephens Creek   59.19 133    P      P       10 52 02.0 -0.8
EIL   Elat             60.20 300    P      P       10 52 10.1 +0.2
      comp=Z,16nm,0.9s,baz=128,slow=7.0,SNR=8.5
MMAI  Mount Meron Ar   60.44 304    P      P       10 52 11.2 -0.3
      comp=Z,1.1nm,0.4s,baz=101,slow=8.8,SNR=7.0
YAK   Yakutsk          60.84  18    P      P       10 52 12.0 -1.6
      comp=Z,8.7nm,0.5s,baz=186,slow=1.9,SNR=2.4
YAK   Yakutsk          60.84  18   eP      P       10 52 11.9 -1.7
YAK                                e*PP    pP      10 52 20.9 -1.8
YAK                                e       PcP     10 52 54.7 -2.3
YAK                                e       PP      10 54 31.3 +3.5
YAK                                eS      S       11 00 28.9  0.0
YAK                                e*SS    sS      11 00 46.2 +2.9
YAK                                e               11 02 06.5
YAK                                 pmax   pmax
      comp=Z,39nm,1.0s
YAK                                 pmax   pmax
      comp=N,22nm,1.3s
YAK                                 pmax   pmax
      comp=E,33nm,1.5s
YAK                                 pmax   pmax
      comp=Z,203nm,3.2s
YAK                                 pmax   pmax
      comp=N,111nm,3.2s
YAK                                 pmax   pmax
      comp=E,138nm,3.3s
YAK                                 smax   smax
      comp=N,322nm,3.5s
YAK                                 smax   smax
      comp=E,131nm,3.7s
YAK                                 MLR    MLR
      comp=Z,1µm,17.0s
YAK                                 MLR    MLR
      comp=N,515nm,17.0s
YAK                                 MLR    MLR
      comp=E,767nm,14.0s
YAK   Yakutsk          60.84  18    P      P       10 52 13.2 -0.4
VRH   Novokhopyorsk    61.93 325   eP      P       10 52 22.6 +1.4
VRH                                 pmax   pmax
      comp=Z,30nm,0.8s
ARPS  Mount Arapiles   62.02 138    P      P       10 52 22.6 +0.6
      baz=62,SNR=8.5
CMSA  Cobar Meteorol   62.03 131    P      P       10 52 21.9 -0.2
      baz=62,SNR=35
KIRV  Kirov            62.05 335  i P      P       10 52 20.3 -1.5
RMQ   Roma             62.18 125    P      P       10 52 24.0 +0.6
      baz=62,SNR=6.6
NRIK  Noril'sk         62.55 357    P      P       10 52 24.6 -0.4
      comp=Z,4.1nm,0.6s,baz=141,slow=6.5,SNR=7.9
NRIK                                LR     LR      11 24 03.6
      comp=Z,3µm,18.2s,baz=5.0,slow=40
NRIK  Noril'sk         62.55 357    P      P       10 52 25.2 +0.2
NRIK                                pmax   pmax
      comp=Z,18nm,1.0s
NRIK  Noril'sk         62.55 357    P      P       10 52 25.2 +0.2
NRIK                                IAmb   IAmb    10 52 39.7
      comp=Z,18nm,0.9s
VORD  Divnogorie       63.22 324   eP      P       10 52 27.1 -2.6
VORD                                pmax   pmax
      comp=Z,10.0nm,0.6s
BRTR  Keskin Array B   63.33 311    LR     LR      11 23 17.8
      comp=Z,720nm,21.8s,baz=106,slow=39
VSR   Storozhevoye     63.39 325   eP      P       10 52 28.4 -2.5
VSR                                 pmax   pmax
      comp=Z,10.0nm,0.5s
MBAR  Mbarara          64.01 266    P      P       10 52 38.2 +2.3
      comp=Z,3.3nm,0.2s,baz=26,slow=7.8,SNR=9.4
MBAR  Mbarara          64.01 266    P      P       10 52 38.8 +2.9
MBAR                                P      P       10 52 38.8 +2.9
MBAR  Mbarara          64.01 266    P      P       10 52 38.2 +2.3
MBAR                                IAmb   IAmb    10 52 52.1
      comp=Z,19nm,1.2s
LPSR  Galich'ya Gora   64.09 326   eP      P       10 52 32.6 -2.9
LPSR                                pmax   pmax
      comp=Z,30nm,1.1s
TOO   Toolangi         64.91 137    P      P       10 52 42.4 +1.3
      baz=65,SNR=19
TOO   Toolangi         64.91 137    P      P       10 52 41.9 +0.7
TOO                                 pmax   pmax
      comp=Z,45nm,1.0s
TOO   Toolangi         64.91 137    P      P       10 52 41.9 +0.7
ISP   Isparta          65.29 308    P      P       10 52 42.7 -1.1
ISP                                 pmax   pmax
      comp=Z,46nm,1.3s
ISP   Isparta          65.29 308    P      P       10 52 42.7 -1.1
PRGR  Permogore        65.39 337   eP      P       10 52 42.3 -1.4
PRGR                                pmax   pmax
      comp=Z,55nm,1.4s
ELL   Elmali           65.58 307    P      P       10 52 45.7  0.0
ELL                                 pmax   pmax
      comp=Z,129nm,1.0s
ELL   Elmali           65.58 307    P      P       10 52 45.7  0.0
MOS   Moscow           66.10 329   eP      P       10 52 45.5 -3.0
MOS                                e               10 52 53.4
MOS                                e       PcP     10 53 20.5 +1.8
MOS                                e       PP      10 55 09.3 -4.8
MOS                                 pmax   pmax
      comp=Z,68nm,1.3s
MOS                                 MLR    MLR
      comp=Z,1µm,21.0s
CAN   Canberra         66.25 133    P      P       10 52 49.8 -0.1
CAN                                 pmax   pmax
      comp=Z,71nm,1.5s
CAN   Canberra         66.25 133    P      P       10 52 49.8 -0.1
OBN   Obninsk          66.39 328  i P      P       10 52 48.7 -1.6
OBN                               i                10 52 55.0
OBN                               i        PcP     10 53 14.9 -5.0
OBN                                 pmax   pmax
      comp=Z,22nm,1.1s
CNB   Canberra Magne   66.51 133    P      P       10 52 52.0 +0.4
      baz=67,SNR=4.5
KLMR  Klimovskoe       67.49 334   eP      P       10 52 55.6 -1.7
KLMR                               eS      S       11 01 48.3 -3.0
KLMR                               eSS     SS      11 06 08.9 -3.0
KLMR                                pmax   pmax
      comp=Z,22nm,1.0s
KLMR  Klimovskoe       67.49 334   eP      P       10 52 55.7 -1.6
KLMR                                AMP            10 53 00.1
      comp=Z,22nm,1.0s
KLMR                               eS      S       11 01 48.4 -2.9
KLMR                               eS      S       11 01 48.4 -2.9
KLMR                               eSS     SS      11 06 09.0 -3.0
KLMR                               eSS     SS      11 06 09.0 -3.0
KLMR                               eSSS    SSS     11 09 22.1
KLMR                               eSSS    SSS     11 09 22.1
KLMR                                LQ     LQ      11 17 01.6
KLMR                                LQ     LQ      11 17 01.6
KLMR                                LR     LR      11 20 51.8
TIXI  Tiksi            68.15  11    P      P       10 53 00.1 -1.1
      comp=Z,9.2nm,0.3s,baz=208,slow=4.4,SNR=22
TIXI  Tiksi            68.15  11  i P      P       10 53 00.0 -1.2
MILM  Milestii Mici    68.46 318   eP      P       10 53 06.0 +2.4
MILM                               e       PP      10 55 40.0 +5.1
SORM  Soroca           69.05 319  ⇑P       P       10 53 06.2 -1.1
SORM  Soroca           69.05 319  ⇑P       P       10 53 06.2 -1.1
AKASG Malin Array Be   69.14 322    P      P       10 53 06.2 -1.5
      comp=Z,1.6nm,0.6s,baz=91,slow=4.5,SNR=15
AKASG Malin Array Be   69.14 322    P      P       10 53 06.2 -1.5
LSZ   Lusaka           69.24 251    P      P       10 53 10.3 +1.1
      comp=Z,8.8nm,0.9s,baz=82,slow=6.1,SNR=10
ALN   Alexandroupoli   69.25 311    P      P       10 53 08.2 -0.4
ALN                                 pmax   pmax
      comp=Z,18nm,0.9s
ALN   Alexandroupoli   69.25 311    P      P       10 53 08.2 -0.4
ALN                                 IAmb   IAmb    10 53 16.1
      comp=Z,18nm,0.9s
IDI   Anoyia           69.40 305    P      P       10 53 10.0 +0.1
      comp=Z,14nm,0.6s,baz=119,slow=6.0,SNR=7.1
VRI   Vrincioaia       69.64 316  ⇑P       P       10 53 10.9 -0.1
VRI   Vrincioaia       69.64 316  ⇑P       P       10 53 10.9 -0.1
PLOR  Plostina         69.69 316  ⇑P       P       10 53 12.3 +0.9
PLOR  Plostina         69.69 316  ⇑P       P       10 53 12.3 +0.9
TESR  Tescani          69.83 317  ⇓P       P       10 53 12.0 -0.1
DOPR  Dopca            70.58 316  ⇑P       P       10 53 17.0 +0.2
MNK   Minsk            70.93 326  i P      P       10 53 18.3 -0.4
MNK                               i        PcP     10 53 38.4 -0.7
MNK                               i        PP      10 55 55.4 -0.7
MNK                               i PPP    PPP     10 57 38.6
MNK                               i S      S       11 02 32.1 -0.1
MNK                               i                11 03 19.4
MNK                               i SS     SS      11 07 06.0 +0.8
MNK                                 pmax   pmax
      comp=N,25nm,1.1s
MNK                                 pmax   pmax
      comp=Z,28nm,0.9s
MNK                                 pmax   pmax
      comp=E,4.0nm,0.9s
MNK                                 MLR    MLR
      comp=E,54nm,22.0s
MNK                                 MLR    MLR
      comp=Z,531nm,20.0s
MNK                                 MLR    MLR
      comp=N,482nm,19.0s
MNK   Minsk            70.93 326  i P      P       10 53 18.3 -0.4
      comp=E,4.0nm,0.9s
MNK                               i P      P       10 53 18.3 -0.4
      comp=N,25nm,1.1s
MNK                               i P      P       10 53 18.3 -0.4
      comp=Z,28nm,0.9s,baz=284
MNK                               i PcP    PcP     10 53 38.5 -0.6
MNK                               i PP     PP      10 55 55.4 -0.6
MNK                               i PPP    PPP     10 57 38.6
MNK                               i S      S       11 02 32.2  0.0
MNK                               i SS     SS      11 07 06.0 +0.8
MNK                               i SSS    SSS     11 10 25.3
MNK                               i LQ     LQ      11 19 25.3
MNK                               i LR     LR      11 24 31.1
MNK                               i LRM    MLR     11 27 03.5
      comp=E,54nm,21.7s
MNK                               i LRM    MLR     11 27 03.5
      comp=Z,531nm,19.5s
MNK                               i LRM    MLR     11 27 26.2
      comp=N,482nm,18.8s
BURAR Bucovina Array   71.00 318  ⇓P       P       10 53 19.7 +0.3
BURAR Bucovina Array   71.00 318  ⇓P       P       10 53 19.7 +0.3
BURAR Bucovina Array   71.00 318    P      P       10 53 18.9 -0.5
BUR08 Bucovina Ar. S   71.02 318    P      P       10 53 19.5 -0.1
BUR08                               IAmb   IAmb    10 53 27.5
      comp=Z,11nm,1.0s
VTS   Vitosha          71.58 313  ⇓P       P       10 53 22.9 -0.2
VTS   Vitosha          71.58 313  ⇓P       P       10 53 22.9 -0.2
VTS   Vitosha          71.58 313    P      P       10 53 22.7 -0.4
NACGM Naroch           71.65 326  i P      P       10 53 22.9 -0.1
LVV   L'vov            72.19 320   eP      P       10 53 26.1 -0.3
HERR  Herculane        72.47 315  ⇓P       P       10 53 28.1 -0.1
DRGR                   72.55 317  ⇓P       P       10 53 28.9 +0.2
DRGR                   72.55 317  ⇓P       P       10 53 28.9 +0.2
VSU   Vasula           72.61 329  i P      P       10 53 27.7 -1.0
VSU                                 pmax   pmax
      comp=Z,65nm,1.0s
BOVS  Bovan            72.82 313  ⇓P       P       10 53 29.2 -1.1
TRPA  Tarpa            72.87 318   eP      P       10 53 30.6 +0.1
APA   Apatity          72.89 339⇓iP        P       10 53 29.5 -0.7
APA                                 pmax   pmax
      comp=Z,13nm,0.7s
APA                                 MLR    MLR
      comp=Z,2µm,14.0s
MDVR  Moldovita        72.96 315  ⇓P       P       10 53 30.6 -0.5
UZH   Uzhgorod         73.11 319   eP      P       10 53 36.5 +4.7
UZH                                e       PcP     10 53 46.1 -2.4
BZS   Buzias           73.13 316  ⇑P       P       10 53 31.2 -0.9
BZS   Buzias           73.13 316  ⇑P       P       10 53 31.2 -0.9
KOLS  Kolonicke sedl   73.17 319   eP      P       10 53 33.4 +1.2
KOLS  Kolonicke sedl   73.17 319   eP      P       10 53 33.4 +1.2
SIRR  Siria            73.19 316  ⇓P       P       10 53 32.5  0.0
PABE  Paberze          73.36 326    P      P       10 53 32.5 -0.7
CRVS  Cervenica-Dubn   73.69 319   eP      P       10 53 36.5 +1.2
CRVS                                pmax   pmax
      comp=Z,62nm,1.8s
CRVS  Cervenica-Dubn   73.69 319   eP      P       10 53 36.5 +1.2
FIA1  FINESS Array S   73.74 332    P      P       10 53 35.4  0.0
FIA1                                IAmb   IAmb    10 53 38.0
      comp=Z,27nm,1.0s
FINES FINESS Array B   73.74 332    P      P       10 53 35.0 -0.4
      comp=Z,10nm,0.7s,baz=105,slow=5.5,SNR=33
FINES FINESS Array B   73.74 332    P      P       10 53 35.2 -0.2
FINES FINESS Array B   73.74 332    P      P       10 53 35.1 -0.2
PUK   Puka             73.98 312    P      P       10 53 35.9 -1.3
PUK                                 IAmb   IAmb    10 53 36.9
      comp=Z,25nm,1.2s
NIE   Niedzica         74.52 319   eP      P       10 53 42.0 +1.9
PSZ   Piszkesteto      74.59 318   eP      P       10 53 41.3 +0.6
PSZ   Piszkesteto      74.59 318    P      P       10 53 40.4 -0.3
PSZ                                 pmax   pmax
      comp=Z,10.0nm,1.0s
PSZ   Piszkesteto      74.59 318    P      P       10 53 40.4 -0.3
OJC   Ojcow            74.94 320   eP      P       10 53 42.6  0.0
OJC   Ojcow            74.94 320    P      P       10 53 42.4 -0.2
OJC                                 pmax   pmax
      comp=Z,21nm,0.9s
OJC   Ojcow            74.94 320    P      P       10 53 42.4 -0.2
OJC                                 IAmb   IAmb    10 53 51.0
      comp=Z,21nm,0.9s
LANS  Liptovska Anna   75.03 319   eP      P       10 53 44.0 +0.9
LANS  Liptovska Anna   75.03 319   eP      P       10 53 44.0 +0.9
MORH  Mrgy, Hungar     75.26 316   eP      P       10 53 43.5 -1.0
BOSA  Boshof           75.33 238    P      P       10 53 47.1 +1.7
      comp=Z,17nm,0.9s,baz=79,slow=5.9,SNR=19
BOSA                                LR     LR      11 22 12.8
      comp=Z,685nm,20.4s,baz=77,slow=32
BOSA  Boshof           75.33 238    P      P       10 53 46.0 +0.7
BOSA                                IAmb   IAmb    10 53 50.6
      comp=Z,31nm,1.1s
KOVH  Kovagotottos     75.63 316   eP      P       10 53 45.1 -1.5
MPLH  Magyarpolny      76.11 317   eP      P       10 53 49.0 -0.3
JAVC  Velka Javorina   76.17 319   eP      P       10 53 50.6 +0.9
ARA0  ARCESS Array S   76.31 340   eP      P       10 53 50.4 +0.3
ARCES ARCESS Array B   76.31 340    P      P       10 53 50.4 +0.3
      comp=Z,11nm,0.8s,baz=96,slow=5.6,SNR=20
ARCES ARCESS Array B   76.31 340    P      P       10 53 50.6 +0.5
ARCES                               pmax   pmax
      comp=Z,21nm,1.0s
ARCES ARCESS Array B   76.31 340    P      P       10 53 50.5 +0.5
ARCES                               IAmb   IAmb    10 53 53.8
      comp=Z,21nm,1.0s
MORC  Moravsky Berou   76.34 319  ⇓P       P       10 53 51.3 +0.6
MORC  Moravsky Berou   76.34 319   eP      P       10 53 51.1 +0.4
MORC  Moravsky Berou   76.34 319    P      P       10 53 50.4 -0.3
MORC                                IAmb   IAmb    10 53 59.0
      comp=Z,18nm,0.9s
MODS  Modra-Piesok     76.39 318   eP      P       10 53 51.1 +0.2
MODS                                pmax   pmax
      comp=Z,53nm,2.0s
MODS  Modra-Piesok     76.39 318   eP      P       10 53 51.1 +0.2
ZST   Bratislava       76.49 318   eP      P       10 53 51.9 +0.5
ZST   Bratislava       76.49 318   eP      P       10 53 51.9 +0.5
VRAC  Vranov           76.92 319   eP      P       10 53 54.0 +0.1
KTK1  Kautokeino       76.94 340   eP      P       10 53 54.2 +0.6
KRUC  Moravsky         77.03 319   eP      P       10 53 54.4 -0.1
DPC   Dobruska-Polom   77.18 320   eP      P       10 53 55.7 +0.3
DPC   Dobruska-Polom   77.18 320   eP      P       10 53 55.7 +0.3
HAMF  Hammerfest       77.23 341   eP      P       10 53 53.6 -1.6
KSP   Ksiaz            77.24 320   eP      P       10 53 56.6 +1.0
OSTC  Ostas            77.26 320   eP      P       10 53 56.0 +0.2
OSTC                               ex      x       10 54 02.5
CONA  Conrad Observa   77.30 317   eP      P       10 53 55.8 -0.4
      comp=Z,4.5nm,1.0s
CHVC  Chvalec          77.37 320   eP      P       10 53 55.7 -0.7
UPC   Upice            77.39 320   eP      P       10 53 57.0 +0.5
UPC                                e       PcP     10 54 04.0 -2.9
UPC   Upice            77.39 320   eP      P       10 53 57.0 +0.5
UPC                                ex      x       10 54 04.0
ARSA  Arzberg          77.48 317  i P      P       10 53 57.7 +0.6
      comp=Z,18nm,1.3s,SNR=5.5
MAW   Mawson           77.62 192    P      P       10 53 58.8 +1.5
      comp=Z,6.0nm,0.9s,baz=56,slow=9.5,SNR=8.3
MAW                                 LR     LR      11 23 40.7
      comp=Z,751nm,19.0s,baz=36,slow=32
MAW   Mawson           77.62 192    P      P       10 54 00.0 +2.7
      baz=78,SNR=6.0
MAW   Mawson           77.62 192    P      P       10 53 58.5 +1.2
SOKA  Soboth           77.79 316  i P      P       10 53 59.2 +0.3
      comp=Z,24nm,1.2s,SNR=14
JETT  Jettan, Norway   78.05 340   eP      P       10 54 00.7 +0.8
OBKA  Obir             78.11 316  i P      P       10 54 01.2 +0.5
      comp=Z,13nm,1.0s,SNR=9.1
PRU   Pruhonice        78.29 320   eP      P       10 54 01.2 -0.3
PRU                                e       PcP     10 54 09.0 -1.8
PRU   Pruhonice        78.29 320   eP      P       10 54 01.2 -0.3
PRU                                ex      x       10 54 09.0
MOA   Molln            78.36 317   eP      P       10 54 01.9 -0.1
      comp=Z,8.6nm,1.1s
PRA   Prague           78.37 320   eP      P       10 54 02.3 +0.4
PRA   Prague           78.37 320   eP      P       10 54 02.3 +0.4
CKRC  Cesky Krumlov    78.38 318   eP      P       10 54 02.0 -0.1
CKRC                               ex      x       10 54 19.8
TRO   Tromso           78.57 340   eP      P       10 54 03.0 +0.3
BRG   Berggiesshubel   78.72 320   eP      P       10 54 03.9 +0.1
      comp=Z,20nm,1.3s,baz=91,slow=5.3
BRG   Berggiesshubel   78.72 320   eP      P       10 54 04.5 +0.6
BRG                                 Amp            10 54 06.9
      comp=Z,10nm,1.1s
MYKA  Terra Mystica    78.74 316  i P      P       10 54 04.2 +0.1
      comp=Z,22nm,1.7s,SNR=5.9
GEC2  GERESS Array S   78.78 318   eP      P       10 54 04.6 +0.2
      comp=Z,40nm,1.4s,baz=91,slow=5.3
GEC2  GERESS Array S   78.78 318    P      P       10 54 05.0 +0.6
GEC2                                IAmb   IAmb    10 54 05.7
      comp=Z,27nm,1.1s
GERES GERESS Array B   78.78 318    P      P       10 54 04.5 +0.2
      comp=Z,8.0nm,0.8s,baz=87,slow=5.5,SNR=41
GERES GERESS Array B   78.78 318    P      P       10 54 04.4  0.0
KHC   Kasperske Hory   78.88 319   eP      P       10 54 04.5 -0.3
KHC                                e       PcP     10 54 18.5 +5.1
KHC   Kasperske Hory   78.88 319   eP      P       10 54 04.5 -0.3
KHC                                ex      x       10 54 18.5
RUE   Ruedersdorf      78.91 322   eP      P       10 54 05.0 +0.2
      comp=Z,57nm,1.1s,baz=91,slow=5.3
KBA   Koelnbreinsper   78.96 317   eP      P       10 54 04.7 -0.8
      comp=Z,12nm,0.9s
FBE   Freiberg         79.10 320   eP      P       10 54 06.3 +0.4
      comp=Z,31nm,1.2s,baz=91,slow=5.3
ZOU   Zoufplan         79.20 316    P      P       10 54 06.4 -0.4
ZOU                                 IAmb   IAmb    10 54 13.6
      comp=Z,19nm,0.9s
CLL   Collm            79.34 321  i P      P       10 54 06.7 -0.5
CLL                                e       PcP     10 54 14.0 -1.3
CLL                                 pmax   pmax
      comp=Z,12nm,1.3s
CLL                                 MLR    MLR
      comp=Z,700nm,22.0s
WET   Wettzell         79.34 319   eP      P       10 54 07.5 +0.2
      comp=Z,19nm,1.2s,baz=91,slow=5.3
RJOB  Jochberg         79.35 317   eP      P       10 54 07.0 -0.4
      comp=Z,17nm,1.2s,baz=91,slow=5.3
STAL  STALIGIAL        79.38 316    P      P       10 54 07.3 -0.3
STAL                                IAmb   IAmb    10 54 29.0
      comp=Z,37nm,1.1s
ABTA  Abfaltersbach    79.52 316  i P      P       10 54 07.7 -0.7
      comp=Z,5.0nm,1.1s,SNR=5.5
FAUS  Fauske           79.53 337   eP      P       10 54 08.0 +0.1
STEI  Steigen          79.62 338   eP      P       10 54 08.8 +0.4
NKC   Novy Kostel      79.65 320   eP      P       10 54 09.7 +0.7
NKC   Novy Kostel      79.65 320   eP      P       10 54 09.7 +0.7
MOR8  Moi Rana         79.72 336   eP      P       10 54 08.5 -0.5
GUNZ  Gunzen           79.73 320   eP      P       10 54 09.4  0.0
      comp=Z,46nm,1.9s,baz=91,slow=5.3
ROTZ  Rotzenmuhle      79.79 319   eP      P       10 54 10.3 +0.5
      comp=Z,5.3nm,1.2s,baz=91,slow=5.3
MANZ  Manzenberg       79.86 319   eP      P       10 54 10.6 +0.4
      comp=Z,7.0nm,1.2s,baz=91,slow=5.3
SUR   Sutherland       80.03 236    P      P       10 54 12.3 +0.8
SUR                                 IAmb   IAmb    10 54 28.1
      comp=Z,39nm,1.1s
NEUB  Neuenburg        80.10 321   eP      P       10 54 11.6 +0.2
      comp=Z,101nm,2.1s,baz=91,slow=5.3
WTTA  Wattenberg       80.13 317  i P      P       10 54 11.3 -0.6
      comp=Z,24nm,1.1s,SNR=8.6
WATA  Walderalm        80.17 317  i P      P       10 54 11.6 -0.4
      comp=Z,14nm,1.0s,SNR=6.2
MOX   Moxa             80.19 320   eL      L       11 45 26.1
      comp=Z,1µm,20.2s
LOF   Lofoten          80.28 338   eP      P       10 54 12.0 +0.1
SQTA  Sankt Quirin     80.42 317  i P      P       10 54 12.8 -0.5
      comp=Z,14nm,0.8s,SNR=9.1
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GRF	Grafenberg Arr	80.43	319	eP	P	10 54 13.6	+0.4
	comp=Z,63nm,1.7s,baz=91,slow=5.3						
GRF				eL	L	11 37 50.1	
	comp=Z,1µm,20.3s						
MOTA	Moosalm	80.49	317	i P	P	10 54 13.1	-0.6
	comp=Z,23nm,1.0s,SNR=6.2						
NC405	NORSAR Array S	80.52	331	P	P	10 54 12.8	-0.7
NC405				IAmb	IAmb	10 54 20.1	
	comp=Z,36nm,1.1s						
NC602	NORSAR Array S	80.58	330	eP	P	10 54 13.1	-0.6
NSS	Namsos	80.61	334	eP	P	10 54 14.0	+0.2
RETA	Reutte	80.72	317	i P	P	10 54 14.5	-0.4
	comp=Z,27nm,0.9s,SNR=13						
FETA	Feichten	80.75	316	i P	P	10 54 15.2	+0.1
	comp=Z,14nm,0.9s,SNR=10						
NB2	NORSAR Subarra	80.76	331	P	P	10 54 13.8	-1.0
	comp=Z,26nm,1.4s,baz=92,slow=5.9						
NB2	NORSAR Subarra	80.76	331	P	P	10 54 13.8	-1.0
	baz=92,slow=5.9						
NOA	NORSAR Array B	80.76	331	P	P	10 54 13.9	-0.8
	comp=Z,6.7nm,0.9s,baz=93,slow=5.6,SNR=21						
NOA	NORSAR Array B	80.76	331	P	P	10 54 14.0	-0.8
SPA0	Spitsbergen Ar	80.88	348	eP	P	10 54 15.1	0.0
SPITS	Spitsbergen Ar	80.88	348	P	P	10 54 14.2	-0.9
	comp=Z,24nm,1.1s,baz=69,slow=9.4,SNR=4.4						
SALO	Salr	80.90	315	P	P	10 54 16.1	+0.3
SALO				IAmb	IAmb	10 54 17.7	
	comp=Z,40nm,1.0s						
OSL	Oslo	80.96	330	eP	P	10 54 16.3	+0.5
CLZ	Clausthal	80.99	321	eP	P	10 54 16.2	+0.1
	comp=Z,29nm,1.1s,baz=91,slow=5.3						
BSEG	Bad Segeberg	81.04	323	eP	P	10 54 16.6	+0.3
	comp=Z,49nm,1.0s,baz=91,slow=5.3						
BSEG				epP	pP	10 54 26.2	+0.4
NRDL	Niedersach Rie	81.16	322	eP	P	10 54 17.3	+0.4
	comp=Z,64nm,1.7s,baz=91,slow=5.3						
UBR	Ueberruh	81.17	317	eP	P	10 54 16.8	-0.5
	comp=Z,14nm,0.8s,baz=91,slow=5.3						
GTTG	Gottingen	81.24	321	eP	P	10 54 17.8	+0.3
	comp=Z,84nm,1.9s,baz=91,slow=5.3						
DAVA	Damuels	81.32	317	i P	P	10 54 18.4	+0.1
	comp=Z,19nm,1.0s,SNR=7.7						
KONO	Kongsberg	81.52	329	eP	P	10 54 19.1	+0.3
STU	Stuttgart	81.76	318	eP	P	10 54 20.3	0.0
	comp=Z,222nm,2.1s,baz=91,slow=5.3						
DOMB	Dombas	81.82	332	eP	P	10 54 20.3	-0.1
KEST	Kesra	82.08	305	P	P	10 54 22.6	+0.3
	comp=Z,7.0nm,0.8s,baz=98,slow=1.7,SNR=7.0						
KEST	Kesra	82.08	305	P	P	10 54 21.3	-1.0
	SNR=6.0						
KEST				P	P	10 54 21.3	-1.0
	SNR=6.0						
KEST	Kesra	82.08	305	P	P	10 54 23.1	+0.7
KEST				IAmb	IAmb	10 54 41.4	
	comp=Z,29nm,1.4s						
SKAR	Skarslia	82.17	330	eP	P	10 54 22.2	-0.1
BFO	Black Forest	82.35	318	eP	P	10 54 22.9	-0.5
	comp=Z,22nm,1.0s,baz=91,slow=5.3						
BFO				epP	pP	10 54 32.0	-0.9
MOL	Molde	82.53	332	eP	P	10 54 24.7	+0.7
IBBN	Ibbenburen	82.60	322	eP	P	10 54 24.8	+0.2
	comp=Z,28nm,0.8s,baz=91,slow=5.3						
BUG	Bochum--Univer	82.93	321	eP	P	10 54 26.3	0.0
	comp=Z,22nm,1.1s,baz=91,slow=5.3						
SENIN	Lac Senin/Sane	83.12	316	P	P	10 54 28.7	+0.9
BTNL	Ternell	83.69	320	dP	P	10 54 30.2	-0.1
	comp=Z,7.3nm,0.8s						
WLF	Walferdange	83.72	319	dP	P	10 54 31.5	+1.0
WLF	Walferdange	83.72	319	eP	P	10 54 31.1	+0.6
	comp=Z,73nm,1.8s,baz=91,slow=5.3						
FOO	Floro	83.73	331	eP	P	10 54 30.5	+0.3
MEM	Membach	83.76	320	dP	P	10 54 30.9	+0.3
MEM				dpP	pP	10 54 38.7	-1.4
BGES	Gesves	84.36	320	dP	P	10 54 33.8	+0.1
SYO	Syowa Base	84.55	197⇑	eP	P	10 54 36.0	+1.9
BMRD	Maredsous	84.57	320	dP	P	10 54 35.3	+0.6
SNF	Seneffe	84.87	320	dP	P	10 54 36.4	+0.2
SNF				dpP	pP	10 54 45.5	-0.2
TORD	Torodi Ar. Bea	91.14	283	P	P	10 55 07.9	+0.9
	comp=Z,4.5nm,0.9s,baz=88,slow=4.2,SNR=26						
TORD				PP	PP	10 58 45.5	+1.4
	comp=Z,1.2nm,0.9s,baz=65,slow=7.4,SNR=4.2						
TORD				LR	LR	11 36 44.5	
	comp=Z,795nm,18.3s,baz=15,slow=36						
TORD	Torodi Ar. Bea	91.14	283	P	P	10 55 07.1	+0.1
TORD				IAmb	IAmb	10 55 09.2	
	comp=Z,12nm,1.1s						
GCSA	Galena City Sc	91.66	24	P	P	10 55 10.9	+2.5
	baz=290						
VNDA	Vanda	91.89	168	P	P	10 55 09.8	+0.6
	comp=Z,1.2nm,0.7s,baz=290,slow=5.5,SNR=7.4						
VNDA				LR	LR	11 33 58.7	
	comp=Z,648nm,18.0s,baz=314,slow=34						
ESBB	Sonseca Array	92.10	310	P	P	10 55 11.4	+0.3
ESBB				IAmb	IAmb	10 55 21.8	
	comp=Z,14nm,1.1s						
ESDC	Sonseca Array	92.11	310	P	P	10 55 11.8	+0.6
	comp=Z,6.4nm,0.8s,baz=56,slow=4.4,SNR=43						
ESDC	Sonseca Array	92.11	310	P	P	10 55 10.8	-0.4
ESDC				IAmb	IAmb	10 55 21.8	
	comp=Z,12nm,1.1s						
IMAR	Indian Mountai	92.43	22	P	P	10 55 12.6	+0.6
TTA	Tatalina	92.65	26	P	P	10 55 15.5	+2.3
	baz=290						
TOLK	Toolik Lake Re	92.79	19	P	P	10 55 15.9	+2.2
	baz=297						
H21K	Melozitna Rive	92.92	23	P	P	10 55 16.7	+2.4
	baz=294						
J20K	Nowinta River	92.97	24	P	P	10 55 16.3	+1.8
	baz=292						
K20K	Telida	93.31	25	P	P	10 55 17.8	+1.6
	baz=292						
CHUM	Lake Minchumin	93.83	24	P	P	10 55 21.4	+2.9
	baz=294						
N19K	Bonanza Creek	94.09	27	P	P	10 55 21.7	+1.8
	baz=292						
CAST	Castle Rocks	94.11	24	P	P	10 55 21.5	+1.7
	baz=294						
BPAW	Bear Paw Mtn.	94.27	24	P	P	10 55 22.3	+1.8
	baz=295						
SUMG	Summit	95.19	347	i P	P	10 55 26.0	+1.0
SUMG				IAmb	IAmb	10 55 28.6	
	comp=Z,25nm,1.0s						
SUMG				i		10 55 44.4	
I29M	Ogilvie Camp,	98.28	20	P	P	10 55 36.5	-2.2
	baz=307						
VNA2	Neumayer--Watz	100.33	199	Pdiff	Pdif	10 55 48.1	+0.5
VNA3	Neumayer Olymp	101.00	199	Pdiff	Pdif	10 55 51.4	+0.7
F10A	Beach Ranch, E	120.27	25		PKPdf	11 00 52.4	-0.5
J05D	Fort Rock, OR	120.51	30	P	PKiKP	11 00 54.4	+0.7
	baz=318						
MSO	Missoula	120.88	22	P	PKPdf	11 00 53.8	-0.2
	baz=327						
EGMT	Eagleton	121.32	19	P	PKiKP	11 00 55.2	+0.2
	baz=332						
PLID	Pearl Lake	121.49	25	PKPdf	PKPdf	11 00 55.2	-0.3
O03E	Paynes Creek	122.40	32	P	PKPdf	11 00 56.9	-0.2
	baz=316						
ULM	Lac du Bonnet	122.41	8	PKP	PKPdf	11 00 56.3	-0.4
	comp=Z,5.1nm,0.7s,baz=343,slow=2.6,SNR=6.5						
ULM	Lac du Bonnet	122.41	8		PKPdf	11 00 55.7	-1.0
HLID	Hailey	123.40	25	P	PKiKP	11 00 59.8	+0.5
	baz=325						
HLID	Hailey	123.40	25	PKPdf	PKiKP	11 00 59.3	-0.1
LAO	LASA Array	123.59	17	P	PKiKP	11 01 00.3	+0.9
	baz=335						
RLMT	Red Lodge	124.03	20	P	PKiKP	11 01 01.6	+1.0
	baz=331						
MOOW	Moose Ponds	124.69	22	PKPdf	PKPdf	11 01 00.9	-0.7
LOHW	Long Hollow	124.86	22		PKPdf	11 01 02.1	+0.1
NVAR	Mina Array Bea	125.61	32	PKP	PKiKP	11 01 04.1	+0.2
	comp=Z,2.5nm,0.8s,baz=288,slow=1.5,SNR=14						
NVAR	Mina Array Bea	125.61	32	PKPdf	PKiKP	11 01 04.6	+0.6
BW06	Boulder Array	125.98	22	P	PKPdf	11 01 04.0	-0.1
	baz=330						
BW06	Boulder Array	125.98	22		PKPdf	11 01 03.6	-0.6
PD31	Pinedale Array	125.98	22		PKPdf	11 01 03.6	-0.6
PDAR	Pinedale Array	125.98	22	PKP	PKPdf	11 01 03.5	-0.7
	comp=Z,2.2nm,0.8s,baz=43,slow=1.7,SNR=11						
PDAR	Pinedale Array	125.98	22	PKPdf	PKiKP	11 01 04.9	+0.3
DUG	Dugway, Tooele	126.84	26	PKIKP	PKiKP	11 01 06.9	+0.7
DUG	Dugway, Tooele	126.84	26	P	PKiKP	11 01 06.4	+0.2
	baz=325						
DUG	Dugway, Tooele	126.84	26	PKPdf	PKiKP	11 01 06.9	+0.7
F36A	Milaca	127.02	7	PKPdf	PKPdf	11 01 05.8	+0.1
R11A	Troy Canyon, C	127.04	30	P	PKiKP	11 01 07.2	+0.5
	baz=322						
ISA	Isabella, Lake	127.56	34	P	PKiKP	11 01 08.7	+1.0
	baz=317						
ECSD	EROS Data Cent	128.64	10	P	PKPdf	11 01 09.2	+0.3
	baz=346						
ECSD	EROS Data Cent	128.64	10	PKPdf	PKPdf	11 01 08.9	0.0
GSC	Goldstone, Bar	128.74	33	P	PKiKP	11 01 11.3	+1.2
	baz=319						
O20A	White River Ci	128.75	22	P	PKiKP	11 01 10.3	+0.2
	baz=331						
GMRC	Granite Mounta	129.75	32	P	PKiKP	11 01 13.0	+0.8
	baz=320						
L48A	N Adams	131.41	359		PKiKP	11 01 14.8	-0.3
P38A	Dawn	133.15	8	PKPdf	PKPdf	11 01 18.1	+0.6
ANMO	Albuquerque	133.96	24	P	PKiKP	11 01 21.2	+0.4
	baz=330						
TUC	Tucson	134.21	30	P	PKiKP	11 01 22.7	+1.5
	baz=324						
MSTX	Muleshoe	136.22	21	P	PKiKP	11 01 25.9	+0.6
	baz=335						
U40A	Yellville	136.46	9	P	PKiKP	11 01 25.6	0.0
	baz=349						
WVT	Waverly	137.18	3	P	PKPdf	11 01 25.1	0.0
	baz=357						
ABTX	Abilene, Hawle	138.49	18	P	PKPdf	11 01 28.6	+0.9
	baz=339						
TXAR	Lajitas Array	140.00	25	PKhKP	PKPpre	11 01 24.3	
	comp=Z,0.2nm,0.6s,baz=221,slow=1.1,SNR=1.2						
TXAR				PKP	PKPdf	11 01 30.9	+0.3
	comp=Z,0.9nm,0.6s,baz=76,slow=1.3,SNR=7.3						
TXAR				SKPbc	SKPbc	11 05 03.3	-1.2
	comp=Z,1.6nm,0.9s,baz=321,slow=2.3,SNR=5.8						
TXAR	Lajitas Array	140.00	25	PKIKP	PKPdf	11 01 31.0	+0.3
JCT	Junction City	140.42	20	P	PKPdf	11 01 31.8	+0.5
	baz=337						
435B	Jarrell	140.82	17	P	PKPdf	11 01 32.6	+0.6
	baz=341						
BDFB	Brasilia	142.24	253	PKP	PKPdf	11 01 33.5	-1.4
	comp=Z,1.6nm,0.5s,baz=236,slow=8.7,SNR=4.3						
PLCA	Paso Flores	143.72	199	PKP	PKPbc	11 01 35.1	+0.7
	comp=Z,6.7nm,0.9s,baz=170,slow=4.8,SNR=14						
PLCA	Paso Flores	143.72	199	PKIKP	PKPdf	11 01 36.2	-0.7
PLCA	Paso Flores	143.72	199	PKPdf	PKPdf	11 01 36.2	-0.7
LL03	Petrohue	143.92	197		PKPbc	11 01 35.9	+1.0
LL04	Puerto Octay	144.13	197	PKPdf	PKPbc	11 01 36.3	+0.7
ITQB	Itaqui	144.58	227	PKPdf	PKPbc	11 01 38.0	+0.7
CPUP	Villa Florida	146.90	231	PKPbc	PKPbc	11 01 45.1	+0.5
	comp=Z,5.2nm,0.7s,baz=76,slow=2.3,SNR=8.9						
CPUP	Villa Florida	146.90	231		PKPbc	11 01 44.5	-0.1
AQDB	Aquidauana	148.09	242	PKPdf	PKPdf	11 01 42.0	-2.8
AQDB				PKPbc	PKPbc	11 01 47.5	-0.4
ML02	Panimavida	148.46	202	PKPdf	PKPdf	11 01 42.8	-2.3
ML02					PKiKP	11 01 49.6	-0.5
OBIP	Obispado Ponce	148.98	323	PKPdf	PKPdf	11 01 43.0	-3.3
OBIP					PKPbc	11 01 50.5	+0.1
LPAZ	La Paz	160.56	240	PKP	PKPdf	11 02 03.6	+0.6
	comp=Z,1.0nm,0.7s,baz=135,slow=5.3,SNR=4.5						
LPAZ	La Paz	160.56	240		PKPdf	11 02 00.3	-2.7
LPAZ				PKPab	PKPab	11 02 40.4	-4.0

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*MOS **08** 10:46:14.3±1.0, 51°.62N×173°.04W, h9^{km}, mb5.5/54, MS5.1/31, Error ellipse: s-maj=7.5km s-min=6.8km az=90.0*

*IDC **08** 10:46:14.3±0.5, 51°.59N×172°.97W, h0^{km}, mb4.7/48, mb1 4.8/50, mb1mx4.8/64, mbtmp4.7/50, ML4.2/2, MS5.1/32, Ms1 5.1/32, ms1mx4.9/60, Error ellipse: s-maj=14.8km s-min=9.2km az=176.0*

*NEIC **08** 10:46:17.4±2.6, 51°.50N±0°.07×172°.91W±0°.05, h16^{km}±1^{km}, mb5.2/185, Ms_20 5.4/202, Mwb5.5/47, Mww5.6, Mwc5.7(GCMT), Error ellipse: s-maj=11.1km s-min=5.8km az=177.0*

*NEIC **08** 10:46:20, 51°.43N×172°.92W, h16^{km}, Moment Tensor Solution. Duration: 3^{s}.4 Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.92; M$_{\theta\theta}$-1.77; M$_{\phi\phi}$-0.15; M$_{r\theta}$2.92; M$_{\theta\phi}$-0.59; M$_{\phi r}$1.57; Fault plane solution: M$_0$3.84000×10^{17} NP1: ϕ_s261.00000°, δ16.00000°, λ107.00000°. NP2: ϕ_s63.00000°, δ75.00000°, λ85.00000°. Principal axes: T 3.8464, Plg60.0000°, Azm327.0000°; N -0.0097, Plg5.0000°, Azm64.0000°; P -3.8367, Plg30.0000°, Azm157.0000°;*

*GCMT **08** 10:46:20.5±0.1, 51°.43N±0°.01×172°.85W±0°.02, h18^{km}, MW5.6/143, Moment Tensor Solution. s110,c160; s143,c263; Duration: 1^{s}.5 Moment tensor: Scale 10^{17} Nm; M$_{rr}$2.02±.05; M$_{\theta\theta}$-1.79±.03; M$_{\phi\phi}$-0.23±.03; M$_{r\theta}$2.27±.10; M$_{\theta\phi}$-0.60±.02; M$_{\phi r}$0.89±.08; Best double couple: M$_0$3.15700×10^{17} NP1:ϕ_s253.00000°, δ20.00000°, λ94.00000°. NP2:ϕ_s69.00000°, δ70.00000°, λ89.00000°. Principal axes: T 3.1730, Plg65.0000°, Azm337.0000°; N -0.0350, Plg1.0000°, Azm70.0000°; P -3.1420, Plg25.0000°, Azm160.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **08** 10:46:21.4±0.0, 52°.01N×173°.63W, h41^{km}, mB5.7/43, mb5.2/61, Ms5.6/46, Ms7 5.4/47*

*NEIC **08** 10:46:22, 51°.72N×173°.10W, h16^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.34; M$_{\theta\theta}$-1.75; M$_{\phi\phi}$0.41; M$_{r\theta}$1.19; M$_{\theta\phi}$0.20; M$_{\phi r}$0.13; Fault plane solution: M$_0$2.00000×10^{17} NP1:ϕ_s287.78000°, δ27.44000°, λ109.24000°. NP2:ϕ_s86.31000°, δ64.21000°, λ80.29000°. Principal axes: T 1.7752, Plg69.0000°, Azm337.0000°; N 0.3908, Plg9.0000°, Azm91.0000°; P -2.1660, Plg19.0000°, Azm184.0000°;*

*NEIC **08** 10:46:31, 51°.32N×171°.67W, h20^{km}, Moment Tensor Solution. Duration: 20^{s}.6 Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.76; M$_{\theta\theta}$-1.15; M$_{\phi\phi}$-0.61; M$_{r\theta}$1.88; M$_{\theta\phi}$-0.64; M$_{\phi r}$1.84; Fault plane solution: M$_0$3.12000×10^{17} NP1: ϕ_s243.00000°, δ17.00000°, λ104.00000°. NP2: ϕ_s47.00000°, δ74.00000°, λ86.00000°. Principal axes: T 3.2217, Plg61.0000°, Azm311.0000°; N -0.2190, Plg4.0000°, Azm49.0000°; P -3.0028, Plg29.0000°, Azm141.0000°;*

ISC 08 10:46:20.5±0.5**, 51°.52N**±0°.05×**172°.99W**±0°.03**, h44**^{km}±3^{km}**, h236**^{km}**:pP-P, n908,** σ1^{s}.**44**/850**, mb5.1**/192**, MS5.3**/163**, 19C-11D, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOFP	Korovin Flat P	1.02	318		Pn	10 46 38.0	-0.4
KOSE	Korovin Southe	1.05	322		Pn	10 46 39.2	+0.3
KOSE					Sn	10 46 56.1	+3.7
KOKL	Mount Kliuchef	1.10	317		Pn	10 46 39.6	+0.1
KONE	Korovin Northe	1.12	322		Pn	10 46 40.1	+0.3
GSIG	Igitkin Island	1.88	285		Pn	10 46 49.5	-0.7
GSMY	Great Sitkin M	1.97	286		Pn	10 46 51.3	-0.2
GSTR	Great Sitkin T	1.99	288	Pn	Pn	10 46 52.0	+0.3
GSTD	Great Sitkin T	2.03	286		Pn	10 46 52.3	0.0
GSTD					Sn	10 47 18.6	+2.2
ADK	Adak	2.33	280	Pn	Pn	10 46 55.5	-0.7
ADK	Adak	2.33	280		Sn	10 47 24.8	+1.2
KIWB	Kanaga Island	2.61	279	Pn	Pn	10 47 00.1	-0.1
KIKV	Kanaga Island	2.62	279		Pn	10 47 00.6	+0.2
KIMD	Kanaga Island	2.66	277		Pn	10 47 00.4	-0.4
NIKH	Nikolski High	2.93	59	P	Pn	10 47 07.4	+2.9
	baz=238						
NIKH	Nikolski High	2.93	59		Pn	10 47 03.5	-1.0
NIKH					Sn	10 47 36.6	-1.8
TAFL	Tanaga Flats	3.07	276		Pn	10 47 06.9	+0.5
TAFP	Tanaga Falls P	3.13	279		Pn	10 47 07.9	+0.6
TASE	Tanaga Southea	3.16	278		Pn	10 47 08.3	+0.6
OKTU	Okmok Mt. Tuli	3.56	56		Pn	10 47 12.9	-0.2
GAEA	Gareloi East	3.59	276		Pn	10 47 13.8	+0.1
GANE	Gareloi Northe	3.62	277		Pn	10 47 14.6	+0.7
OKFG	Magazine Ridge	3.64	57		Sn	10 47 55.9	+0.1
MSW	Makushin Switc	4.47	55		Pn	10 47 25.6	0.0
UNV	Unalaska Valle	4.58	57	P	Pn	10 47 28.1	+1.0
	baz=240						
UNV	Unalaska Valle	4.58	57	Pn	Pn	10 47 28.1	+1.0
UNV	Unalaska Valle	4.58	57		Sn	10 48 19.6	+0.5
CEPE	Semis' Perret	4.60	278		Pn	10 47 27.4	0.0
AMKA	Amchitka	4.82	271	Pn	Pn	10 47 30.5	0.0
AKMO	Akutan Morgan	4.95	56		Pn	10 47 31.3	-1.0
AKBBA	Akutan Broad B	5.00	56		Pn	10 47 31.4	-1.5
AKUT	Akutan	5.10	56	Pn	Pn	10 47 37.3	+3.0
LSPA	Little Sitkin	5.26	278		Pn	10 47 37.3	+0.8
LSNW	Little Sitkin	5.30	278		Pn	10 47 37.2	+0.2
WECS	Westdahl Cape	5.80	55		Pn	10 47 42.9	-1.1
SPIA	Saint Paul Isl	5.89	15		Pn	10 47 45.8	+0.7
FALS	False Pass	6.65	56	P	Pn	10 47 58.7	+3.2
	baz=242						
SMY	Shemya	8.04	284	P	Pn	10 48 13.9	-0.7
SMY	Shemya	8.04	284		Pn	10 48 13.9	-0.7
SDPT	Sand Point	8.39	58	Pn	Pn	10 48 21.1	+1.6
P18K	Big Mountain,	12.76	45		Pn	10 49 20.8	+1.7
OHAK	Old Harbor	12.80	56	P	P	10 49 25.0	-4.6
	baz=251						
OHAK	Old Harbor	12.80	56	Pn	Pn	10 49 23.4	+3.8
O18K	Koktuh Hills	13.01	43	P	Pn	10 49 24.7	+2.2
	baz=237						
O18K	Koktuh Hills	13.01	43	Pn	Pn	10 49 24.4	+1.9
Q19K	Cape Douglas,	13.26	48	P	Pn	10 49 24.8	-1.2
	baz=244						
Q19K	Cape Douglas,	13.26	48	Pn	Pn	10 49 28.0	+2.0
KDAK	Kodiak Island	13.34	54	Pn	Pn	10 49 24.8	-2.3
	1.4nm,0.3s,baz=263,slow=5.7,SNR=27						
KDAK				Sn	S	10 52 10.5	-5.6
	0.7nm,0.3s,baz=162,slow=20,SNR=1.9						
KDAK	Kodiak Island	13.34	54	P	Pn	10 49 28.2	+1.2
KDAK	Kodiak Island	13.34	54	P	Pn	10 49 24.9	-2.1
	baz=250						
KDAK	Kodiak Island	13.34	54	Pn	Pn	10 49 28.2	+1.2
SVW2	Sparrevohn	13.57	38		Pn	10 49 31.8	+1.6
O19K	Port Alsworth	13.57	43	P	Pn	10 49 33.9	+3.8
	baz=238						
O19K	Port Alsworth	13.57	43		Pn	10 49 31.1	+1.0
P19K	Oil Pt	13.78	46	P	P	10 49 40.2	-0.3
	baz=242						
P19K	Oil Pt	13.78	46	Pn	Pn	10 49 33.6	+0.6
N19K	Bonanza Creek	13.84	41	P	Pn	10 49 36.2	+2.4
	baz=235						
N19K	Bonanza Creek	13.84	41	Pn	Pn	10 49 34.5	+0.6
M19K	Big River Lodg	14.51	37	P	P	10 49 46.0	-2.6
	baz=232						
M19K	Big River Lodg	14.51	37		Pn	10 49 44.9	+2.0
L19K	White Mountain	14.51	36	P	P	10 49 50.0	+1.4
	baz=230,SNR=10.0						
TTA	Tatalina	14.61	32	P	Pn	10 49 45.5	+1.3
TTA	Tatalina	14.61	32	P	Pn	10 49 46.1	+1.9
	baz=226,SNR=12						
TTA	Tatalina	14.61	32		Pn	10 49 45.5	+1.3
CNPM	China Poot	14.64	48		Pn	10 49 42.9	-1.6
BRLK	Bradley Lake	14.90	48		Pn	10 49 46.7	-1.3
BRSE	Bradley Lake S	14.96	48	P	Pn	10 49 51.1	+2.4
	baz=246						
SPCR	Spurr Chakacha	14.98	42	P	Pn	10 49 51.4	+2.3
	baz=238						
SPU	Mount Spurr	15.04	42		Pn	10 49 48.2	-1.6
L20K	Farewell, AK	15.05	36	P	Pn	10 49 51.0	+1.0
	baz=231,SNR=8.8						
K20K	Telida	15.55	33	P	Pn	10 49 57.7	+1.3
	baz=228,SNR=21						
K20K	Telida	15.55	33	Pn	Pn	10 49 56.4	0.0
K20K				IAmb	IAmb	10 50 19.0	
	comp=Z,282nm,1.3s						
SKT	Skwentna	15.67	40	P	P	10 50 00.6	-0.8
	baz=237,SNR=11						
SKT	Skwentna	15.67	40		Pn	10 49 58.6	+0.6
SKT				IAmb	IAmb	10 50 19.6	
	comp=Z,206nm,1.4s						
GCSA	Galena City Sc	15.68	26	P	Pn	10 49 59.6	+1.7
	baz=219,SNR=23						
SEW	Seward	15.70	48	P	Pn	10 49 55.5	-2.8
	baz=247						
SEW	Seward	15.70	48	P	Pn	10 49 59.3	+1.0
SEW				IAmb	IAmb	10 50 40.2	
	comp=Z,196nm,1.5s						
SUA	Susitna One	15.72	42	P	P	10 50 01.2	-0.9
	baz=240						
O22K	Cooper Landing	15.72	46	P	Pn	10 49 59.7	+1.1
	baz=245,SNR=11						
O22K	Cooper Landing	15.72	46	P	Pn	10 49 59.7	+1.1
PPLA	Purkeypile	15.93	36	P	P	10 50 03.3	-1.1
	baz=233						
PPLA	Purkeypile	15.93	36	Pn	Pn	10 50 02.1	+0.7
PPLA				IAmb	IAmb	10 50 30.5	
	comp=Z,242nm,1.4s						
RC01	Rabbit Creek A	15.98	44	P	Pn	10 50 02.8	+0.9
	baz=243						
RC01	Rabbit Creek A	15.98	44	P	Pn	10 50 02.8	+0.9
J20K	Nowinta River	16.07	31	P	P	10 50 06.5	+0.7
	baz=226,SNR=19						
J20K	Nowinta River	16.07	31	P	P	10 50 05.0	-0.9
J20K				IAmb	IAmb	10 50 25.2	
	comp=Z,313nm,1.5s						
CAST	Castle Rocks	16.28	35	P	Pn	10 50 06.3	+0.5
	baz=232,SNR=17						
CAST	Castle Rocks	16.28	35	P	Pn	10 50 06.7	+1.0
CUT	Chulitna	16.39	40	P	P	10 50 08.9	-0.5
	baz=238						
CUT	Chulitna	16.39	40	P	Pn	10 50 07.7	+0.6
CUT				IAmb	IAmb	10 50 41.2	
	comp=Z,385nm,1.4s						
PMR	Palmer	16.47	43	P	Pn	10 50 08.6	+0.5
PMR				pmax	pmax		
	comp=Z,77nm,1.4s						
PMR	Palmer	16.47	43	P	Pn	10 50 07.0	-1.1
	baz=242						
PMR	Palmer	16.47	43	P	Pn	10 50 08.6	+0.5
CHUM	Lake Minchumin	16.49	33	P	P	10 50 10.5	+0.1
	baz=230,SNR=20						
PWL	Port Wells	16.50	46	P	Pn	10 50 08.5	-0.1
	baz=246						
GHO	Glory Hole Cre	16.64	43	Pn	Pn	10 50 10.0	-0.3
GHO				IAmb	IAmb	10 50 36.7	
	comp=Z,216nm,1.8s						
KNK	Knik Glacier	16.68	44	P	Pn	10 50 09.6	-1.1
	baz=244						
KNK	Knik Glacier	16.68	44		Pn	10 50 09.7	-1.1
KTH	Kantishna Hill	16.78	36		Pn	10 50 11.6	-0.5
KTH				IAmb	IAmb	10 50 40.3	
	comp=Z,192nm,1.2s						
SML	Sawmill	16.90	43	P	Pn	10 50 12.9	-0.7
	baz=243						
SML	Sawmill	16.90	43		Pn	10 50 13.0	-0.6
TRF	Thorofare Moun	16.95	36	P	Pn	10 50 14.3	-0.1
	baz=235						
TRF	Thorofare Moun	16.95	36	P	Pn	10 50 13.8	-0.6
GLI	Glacier Island	17.07	47	P	Pn	10 50 15.8	+0.2
BPAW	Bear Paw Mtn.	17.08	34	P	P	10 50 17.2	+0.1
	baz=232,SNR=36						
BPAW	Bear Paw Mtn.	17.08	34		P	10 50 17.2	+0.1
BPAW				IAmb	IAmb	10 50 37.6	
	comp=Z,200nm,1.1s						
FID	Port Fidalgo	17.30	47	P	Pn	10 50 17.3	-1.3
FID				IAmb	IAmb	10 50 36.0	
	comp=Z,296nm,1.7s						
SCM	Sheep Creek Mo	17.34	44	P	Pn	10 50 18.5	-0.6
SCM				pmax	pmax		
	comp=Z,151nm,1.0s						
SCM	Sheep Creek Mo	17.34	44	P	Pn	10 50 18.2	-1.0
	baz=245,SNR=9.1						
SCM	Sheep Creek Mo	17.34	44	P	Pn	10 50 18.5	-0.6
SCM				IAmb	IAmb	10 50 44.0	
	comp=Z,151nm,1.0s						
PET	Petropavlovsk	17.38	286	d iP	P	10 50 21.0	+0.7
PET				eS	Sn	10 53 29.3	-2.3
PET				pmax	pmax		
	comp=Z,2µm,12.8s						
PET				pmax	pmax		
	comp=Z,2µm,12.4s						
PET				MLR	MLR		
	comp=Z,4µm,17.0s						
PET				MLR	MLR		
	comp=Z,3µm,18.0s						
I21K	Tanana	17.44	30	P	P	10 50 21.2	+0.2
	baz=228,SNR=34						
I21K	Tanana	17.44	30	P	P	10 50 20.9	-0.1
I21K				IAmb	IAmb	10 50 41.4	
	comp=Z,227nm,1.1s						
RND	Reindeer	17.47	38	P	Pn	10 50 19.5	-1.2
RND				pmax	pmax		
	comp=Z,128nm,1.3s						
RND	Reindeer	17.47	38	P	Pn	10 50 19.5	-1.2
IMAR	Indian Mountai	17.48	27		P	10 50 21.1	-0.3
WAT6	Susitna Watana	17.50	41	P	Pn	10 50 21.1	0.0
	baz=242						
H21K	Melozitna Rive	17.51	28	P	P	10 50 21.9	+0.1
	baz=225						
H21K	Melozitna Rive	17.51	28	P	Pn	10 50 21.1	0.0
H21K				IAmb	IAmb	10 50 41.5	
	comp=Z,182nm,1.1s						
EYAK	Cordova Ski Ar	17.58	49	P	Pn	10 50 21.9	0.0

EYAK				IAmb	IAmb	10 50 43.3	
	comp=Z,207nm,1.6s						
MCK	McKinley	17.61	37	P	Pn	10 50 21.0	-1.4
MCK				pmax	pmax		
	comp=Z,137nm,1.1s						
MCK	McKinley	17.61	37	P	Pn	10 50 20.9	-1.4
	baz=237,SNR=14						
MCK	McKinley	17.61	37	P	Pn	10 50 21.0	-1.4
MCK				IAmb	IAmb	10 50 39.8	
	comp=Z,137nm,1.1s						
BWN	Browne	17.66	35	P	Pn	10 50 23.0	+0.1
BWN				IAmb	IAmb	10 50 47.7	
	comp=Z,222nm,1.1s						
MLY	Manley	17.74	32	P	P	10 50 24.6	+0.2
	baz=230,SNR=18						
MLY	Manley	17.74	32	P	Pn	10 50 23.7	-0.3
DIV	Divide	17.76	47	P	P	10 50 25.0	+0.4
KLU	Klutina	17.82	45	P	Pn	10 50 23.8	-1.2
	baz=248						
KLU	Klutina	17.82	45	P	Pn	10 50 24.0	-1.1
DHY	Denali Highway	17.88	40	P	P	10 50 26.4	+0.3
	baz=241						
DHY	Denali Highway	17.88	40	P	Pn	10 50 25.5	-0.4
PEA0B	Petropavlovsk-	17.94	287	*i* P	Pn	10 50 26.4	0.0
PETK	Petropavlovsk-	17.94	287	P	Pn	10 50 25.8	-0.6
	comp=Z,1.9nm,0.3s,baz=95,slow=14,SNR=38						
PETK				LR	LR	10 56 47.3	
	comp=Z,5µm,21.2s,baz=95,slow=35						
PETK	Petropavlovsk-	17.94	287	P	Pn	10 50 25.6	-0.8
PETK	Petropavlovsk-	17.94	287	P	Pn	10 50 25.6	-0.8
M24K	Tolsona, Glenn	17.95	43	P	P	10 50 26.7	0.0
	baz=246,SNR=9.4						
M24K	Tolsona, Glenn	17.95	43	P	Pn	10 50 26.5	-0.1
M24K				IAmb	IAmb	10 50 52.7	
	comp=Z,288nm,1.4s						
RAGM	Ragged Mountai	18.03	50	P	P	10 50 27.8	+0.2
RAGM				IAmb	IAmb	10 50 59.9	
	comp=Z,137nm,1.2s						
NEA2	Nenana	18.05	34	P	Pn	10 50 25.9	-1.8
	baz=234,SNR=9.3						
NEA2	Nenana	18.05	34	P	Pn	10 50 25.8	-1.9
HMT	Hamilton	18.22	50	P	P	10 50 29.0	-0.6
HMT				IAmb	IAmb	10 50 56.0	
	comp=Z,475nm,1.8s						
BMRM	Bremner River	18.24	48	P	Pn	10 50 30.7	+0.6
	baz=251						
BMRM	Bremner River	18.24	48	P	P	10 50 29.4	-0.5
BMRM				IAmb	IAmb	10 50 56.3	
	comp=Z,142nm,1.1s						
I23K	Minto, Yukon-K	18.28	33	P	Pn	10 50 30.7	+0.3
	baz=232,SNR=32						
I23K	Minto, Yukon-K	18.28	33	P	P	10 50 29.8	-0.3
I23K				IAmb	IAmb	10 50 51.5	
	comp=Z,207nm,1.2s						
WRH	Wood River Hil	18.33	35	P	P	10 50 28.5	-2.2
N25K	Chitina, Valde	18.46	46	P	Pn	10 50 32.9	+0.2
	baz=249						
N25K	Chitina, Valde	18.46	46	P	P	10 50 31.9	-0.3
BERG	Berg Lake	18.50	50	P	P	10 50 32.5	-0.2
BERG				IAmb	IAmb	10 51 01.6	
	comp=Z,186nm,1.4s						
HARP	HAARP	18.51	43	P	P	10 50 31.5	-1.3
	baz=246,SNR=7.2						
CCB	Clear Creek Bu	18.53	35	P	P	10 50 32.0	-0.9
MDM	Murphy Dome	18.55	34	P	P	10 50 33.5	+0.3
PAX	Paxson	18.61	41	P	P	10 50 33.1	-0.9
PAX				pmax	pmax		
	comp=Z,38nm,1.0s						
PAX	Paxson	18.61	41	P	P	10 50 34.1	+0.1
	baz=244						
PAX	Paxson	18.61	41	P	P	10 50 33.1	-0.9
H23K	Yukon River	18.63	31	P	Pn	10 50 34.5	-0.3
	baz=231,SNR=16						
H23K	Yukon River	18.63	31	P	P	10 50 33.5	-0.7
TCOL	CIGO, UAF Yank	18.64	35	P	Pn	10 50 34.8	0.0
	baz=236						
TCOL	CIGO, UAF Yank	18.64	35	P	Pn	10 50 34.4	-0.3
COLA	College	18.64	35	P	P	10 50 34.0	-0.1
COLA				pmax	pmax		
	comp=Z,65nm,1.1s						
COLA	College	18.64	35	P	P	10 50 34.0	-0.1
HDA	Harding Lake	18.71	36	P	P	10 50 33.5	-1.5
	baz=238,SNR=25						
HDA	Harding Lake	18.71	36	P	P	10 50 33.6	-1.4
HDA				IAmb	IAmb	10 50 52.1	
	comp=Z,125nm,1.3s						
GLB	Gilahina Butte	18.76	47	P	P	10 50 35.8	+0.2
VRDI	Verde Repeater	18.86	48	P	P	10 50 36.2	-0.6
CRQM	Cirque	18.87	49	P	P	10 50 36.2	-0.7
CRQM				IAmb	IAmb	10 50 58.2	
	comp=Z,184nm,1.0s						
CRQE	Cirque	18.89	49	P	Pn	10 50 38.2	+0.2
	baz=254						
POKR	Poker Plat Res	18.92	34	P	Pn	10 50 38.1	-0.1
	baz=236,SNR=8.1						
POKR	Poker Plat Res	18.92	34	P	P	10 50 35.6	-1.7
WAX	Waxell Ridge	18.92	50	P	P	10 50 36.4	-1.0
WAX				IAmb	IAmb	10 50 59.4	
	comp=Z,251nm,1.1s						
IL31		18.93	36	P	P	10 50 35.4	-1.9
ILAR	Eielson Array	18.93	36	P	P	10 50 35.5	-1.8
	comp=Z,1.6nm,0.3s,baz=232,slow=10,SNR=51						
ILAR				LR	LR	10 58 41.0	
	comp=Z,7µm,18.2s,baz=244,slow=40						
ILAR	Eielson Array	18.93	36	P	P	10 50 35.0	-2.4
ILAR	Eielson Array	18.93	36	P	P	10 50 35.0	-2.4
TGL	Tana Glacier	19.01	49	P	P	10 50 36.9	-1.5
TGL				IAmb	IAmb	10 51 05.6	
	comp=Z,184nm,1.1s						
MCARA	McCarthy VSAT	19.10	47	P	Pn	10 50 40.3	-0.1
	baz=252						
H24K	Noodor Dome	19.18	32	P	P	10 50 40.2	0.0
	baz=233						
H24K	Noodor Dome	19.18	32	P	P	10 50 39.2	-1.0
RIDG	Independent Ri	19.20	40	P	P	10 50 40.6	+0.2
	baz=243,SNR=12						
ISLE	Juniper Island	19.21	50	P	P	10 50 39.9	-0.6
ISLE				IAmb	IAmb	10 51 08.0	
	comp=Z,102nm,0.9s						
MESA	MESA	19.29	51	P	P	10 50 41.5	-0.1
	baz=257						
MESA	MESA	19.29	51	P	P	10 50 40.9	-0.6
MESA				IAmb	IAmb	10 51 22.2	
	comp=Z,162nm,1.1s						
MENT	Mentasta	19.33	43	P	P	10 50 41.5	-0.3
SKR	Severo-Kuril's	19.35	280	*e*P	P	10 50 41.7	-0.3
SKR				pmax	pmax		
	comp=Z,900nm,3.3s						
SKR				MLR	MLR		
	comp=Z,3µm,19.0s						
SKR				MLR	MLR		
	comp=Z,4µm,18.0s						
COLD	Coldfoot	19.36	27	P	Pn	10 50 42.8	-0.7
	baz=226,SNR=41						
COLD	Coldfoot	19.36	27	P	P	10 50 42.2	+0.2
COLD				IAmb	IAmb	10 51 01.7	
	comp=Z,283nm,1.2s						
BILL	Bilibino	19.39	336	*d i*P	Pn	10 50 43.4	-0.4
BILL				*i* S	Sn	10 54 22.7	+2.5
BILL				pmax	pmax		
	comp=Z,64nm,1.3s						
BILL				MLR	MLR		
	comp=Z,5µm,15.0s						
BILL	Bilibino	19.39	336	P	P	10 50 42.5	+0.2
BILL				IAmb	IAmb	10 51 10.3	
	comp=Z,93nm,1.0s						
J25K	Salcha River,	19.41	37	P	P	10 50 40.3	-2.3
	baz=240,SNR=88						
YAH	Yahtse	19.43	51	P	P	10 50 41.5	-1.6
YAH				IAmb	IAmb	10 51 31.2	
	comp=Z,201nm,1.3s						
M26K	Nabesna, AK	19.44	44	P	P	10 50 42.3	-0.7
	baz=249						
M26K	Nabesna, AK	19.44	44	P	P	10 50 42.5	-0.5
M26K				IAmb	IAmb	10 51 09.0	
	comp=Z,124nm,1.4s						
DOT	Dot Lake	19.48	40	P	P	10 50 41.5	-1.9
GRNC	Granite Creek	19.52	50	P	P	10 50 43.6	-0.4
GRNC				IAmb	IAmb	10 51 06.0	
	comp=Z,168nm,1.2s						
L26K	Log Cabin Wild	19.52	42	P	P	10 50 43.2	-0.6
	baz=247,SNR=11						
L26K	Log Cabin Wild	19.52	42	P	P	10 50 43.0	-0.8
BARN	Barnard Glacie	19.64	49	P	P	10 50 44.9	-0.5
BARN				IAmb	IAmb	10 51 21.2	
	comp=Z,121nm,1.1s						
SCRK	Sand Creek	19.65	40	P	P	10 50 43.4	-1.9
	baz=244,SNR=38						
SCRK	Sand Creek	19.65	40	P	P	10 50 43.6	-1.7
TABL	Table Mountain	19.74	51	P	P	10 50 45.6	-0.9
TABL				IAmb	IAmb	10 51 04.5	
	comp=Z,129nm,0.9s						
CTG	Chitna Glacier	19.77	49	P	Pn	10 50 48.1	-0.4
	baz=255						
CTGM	Chitina Glacie	19.77	49	P	P	10 50 46.7	0.0
CTGM				IAmb	IAmb	10 51 34.9	
	comp=Z,225nm,1.3s						
PRP	Porcupine Dome	19.81	35	P	P	10 50 45.4	-1.8
	baz=238,SNR=20						
PRP	Porcupine Dome	19.81	35	P	P	10 50 45.3	-1.8
PRP				IAmb	IAmb	10 51 08.2	
	comp=Z,112nm,1.3s						
LOGN	Logan Glacier	19.90	50	P	P	10 50 47.0	-1.1
LOGN				IAmb	IAmb	10 51 09.4	
	comp=Z,122nm,0.9s						
M27K	Edge Creek, AK	19.92	45	P	P	10 50 46.8	-1.5
	baz=251						
M27K	Edge Creek, AK	19.92	45	P	P	10 50 47.6	-0.8
J26L	Joseph Creek	20.05	38	P	P	10 50 47.9	-1.7
	baz=243,SNR=72						
PCA	Pinnacle	20.11	52	P	P	10 50 49.2	-1.0
PINM	Pinnacle	20.11	52	P	P	10 50 50.3	0.0
	baz=259						
L27K	Beaver Creek,	20.18	43	P	P	10 50 51.5	+0.5
	baz=249,SNR=9.4						
L27K	Beaver Creek,	20.18	43	P	P	10 50 50.7	-0.3
BCAR	Beaver Creek A	20.20	43	P	P	10 50 50.5	-0.7
BCPM	Bancas Point	20.39	53	P	P	10 50 53.5	+0.2
BVCY	Beaver Creek	20.39	45	P	Pn	10 50 54.5	-1.1
	baz=252,SNR=12						
YUK3	Moose Creek	20.39	47	P	P	10 50 52.8	-0.7
	baz=254						
PNL	Peninsula	20.46	53	P	P	10 50 54.0	-0.1
	baz=261						
FYU	Fort Yukon	20.48	32	P	P	10 50 53.3	-0.9
TOLK	Toolik Lake Re	20.52	25	P	P	10 50 54.7	+0.1
	baz=225,SNR=19						
TOLK	Toolik Lake Re	20.52	25	P	P	10 50 53.5	-1.2
TOLK				IAmb	IAmb	10 51 16.8	
	comp=Z,150nm,1.0s						
EGAK	Eagle	21.10	39	P	P	10 50 59.8	-1.1
	baz=246,SNR=74						
EGAK	Eagle	21.10	39	P	P	10 50 59.8	-1.1
EGAK				IAmb	IAmb	10 51 26.0	
	comp=Z,158nm,0.9s						
EGAK				IAMs_20	IAMs_20	10 59 41.9	
	comp=Z,18µm,19.0s						
YUK4	Talbot Arm	21.13	49	P	P	10 51 02.3	+0.8
	baz=257						
BMAR	Burnt Mountain	21.18	31	P	P	10 51 01.3	-0.5
YUK6	Outpost Mounta	21.18	50	P	P	10 51 01.7	-0.4
	baz=259						
A21K	Barrow	21.20	15	IAMs_20	IAMs_20	11 00 19.1	
	comp=Z,15µm,19.0s						
DAWY	Dawson	21.55	41	P	P	10 51 04.3	-1.4
	baz=250,SNR=7.5						
DAWY	Dawson	21.55	41	P	P	10 51 07.2	+1.4
DAWY				IAmb	IAmb	10 51 30.3	
	comp=Z,56nm,0.9s						
HYT	Haines Junctio	21.58	51	P	P	10 51 06.9	+0.7
	baz=260,SNR=17						
HYT	Haines Junctio	21.58	51	P	P	10 51 06.0	-0.2
HYT				IAmb	IAmb	10 51 33.2	
	comp=Z,97nm,1.1s						
SEY	Seymchan	21.64	315	P	P	10 51 07.1	+0.4
	comp=Z,24nm,0.9s,baz=113,slow=9.8,SNR=22						
SEY				LR	LR	10 59 28.3	
	comp=Z,6µm,19.9s,baz=108,slow=37						
SEY	Seymchan	21.64	315	*i* P	P	10 51 06.0	-0.7
MA2	Magadan	21.79	306	P	P	10 51 06.8	-1.4
	comp=Z,15nm,1.0s,baz=74,slow=15,SNR=2.9						
MA2				LR	LR	10 59 27.4	
	comp=Z,6µm,18.9s,baz=106,slow=36						
M30M	Minto, Yukon	22.25	46	P	P	10 51 14.5	+1.1
	baz=256						
I29M	Ogilvie Camp,	22.44	39	P	P	10 51 13.3	-2.0
	baz=248,SNR=39						
SKAG	Skagway	22.50	55	P	P	10 51 16.3	+0.4
	baz=266,SNR=22						
SKAG	Skagway	22.50	55	P	P	10 51 15.7	-0.2
N31M	Braeburn, Yuko	22.51	49	P	P	10 51 18.8	+2.8
	baz=260						
BESE	Bessie Mountai	22.70	57	P	P	10 51 17.6	-0.6
WHY	Whitehorse	22.83	52	P	P	10 51 22.8	+3.2
	baz=263						
WHY	Whitehorse	22.83	52	P	P	10 51 19.5	0.0
WHY				IAmb	IAmb	10 51 44.7	
	comp=Z,169nm,1.3s						
MAYO	Mayo, Yukon	22.89	44	P	P	10 51 22.2	+2.1
	baz=255						
JIS	Juneau Island	22.94	58	P	P	10 51 21.0	+0.4
M31M	Drury Creek, Y	23.28	48	P	P	10 51 24.6	+0.7
	baz=260						
FARO	Faro, Yukon	23.77	48	P	P	10 51 29.4	+0.9
	baz=261						
CRAG	Craig	23.81	65	P	P	10 51 32.4	+3.5
	baz=277						
P33M	Teslin, Yukon	23.81	53	P	P	10 51 29.5	+0.5
	baz=266						
WRAK	Wrangell Islan	24.13	62	IAMs_20	IAMs_20	11 01 28.7	
	comp=Z,8µm,20.0s						
MMPY	Sheldon Lake,	24.78	47	P	P	10 51 38.1	+0.2
	baz=262						
DLBC	Dease Lake	25.24	57	P	P	10 51 41.8	-0.3
	comp=Z,16nm,0.6s,baz=289,slow=9.9,SNR=32						
DLBC				LR	LR	11 02 33.5	
	comp=Z,6µm,19.9s,baz=296,slow=39						
DLBC	Dease Lake	25.24	57	P	P	10 51 43.0	+1.0
INK	Inuvik	25.29	34	P	P	10 51 41.8	-0.5
	comp=Z,26nm,0.5s,baz=234,slow=9.4,SNR=120						
INK	Inuvik	25.29	34	P	P	10 51 41.2	-1.1
INK				pmax	pmax		
	comp=Z,124nm,1.1s						
INK	Inuvik	25.29	34	P	P	10 51 42.1	-0.2
	baz=248,SNR=40						
INK	Inuvik	25.29	34	P	P	10 51 41.2	-1.1
TGTN	Hyland Airport	26.09	50	P	P	10 51 50.4	+0.6
	baz=268						
KUR	Kuril'sk	26.50	272	*e*P	P	10 51 54.7	+1.2
KUR				pmax	pmax		
	comp=Z,333nm,1.6s						
KUR				pmax	pmax		
	comp=Z,2µm,4.8s						
KUR				pmax	pmax		
	comp=Z,2µm,15.0s						
TYV	Tymovskoe	27.49	286	*e*P	P	10 52 15.3	+13
TYV				pmax	pmax		
	comp=Z,19nm,1.5s						
TYV				MLR	MLR		
	comp=E,3µm,22.0s						
TYV				MLR	MLR		
	comp=Z,5µm,22.0s						
NKL	Nikolayevsk	27.98	292	*e*P	P	10 52 05.1	-1.5
NKL				*e*S	S	10 56 52.9	+5.5
NKL				pmax	pmax		
	comp=E,7.0nm,0.8s						
NKL				pmax	pmax		
	comp=N,538nm,1.2s						
NKL				pmax	pmax		
	comp=Z,38nm,1.3s						
NKL				smax	smax		
	comp=E,4.0nm,2.0s						
NKL				smax	smax		
	comp=N,2µm,6.2s						
NKL				MLR	MLR		
	comp=E,6.0nm,17.0s						
NKL				MLR	MLR		
	comp=N,21µm,20.0s						
NKL				MLR	MLR		
	comp=Z,2µm,18.0s						
YUK	Yuzh-Kuril'sk	28.34	271	*d i*P	P	10 52 07.0	-2.9
YUK				*i*		10 52 58.9	
YUK				*i* S	S	10 56 57.0	+3.8
YUK				*i* SS	SnSn	10 58 12.6	-0.8
YUK				pmax	pmax		
	comp=Z,440nm,1.0s						
YUK				pmax	pmax		
	comp=Z,454nm,2.1s						
UGL	Uglegorsk	28.47	283	*e*P	P	10 52 11.8	+0.7
UGL				pmax	pmax		
	comp=Z,80nm,0.7s						
UGL				MLR	MLR		
	comp=N,5µm,16.0s						
UGL				MLR	MLR		
	comp=E,3µm,16.0s						
UGL				MLR	MLR		
	comp=Z,4µm,19.0s						
YSS	Yuzh-Sakhalins	28.91	279	α*e*P	P	10 52 16.4	+1.4
YSS				*e*		10 53 12.9	
YSS				*e*S	S	10 57 00.4	-1.8
YSS				*e*SS	ScP	10 58 53.0	-7.6
YSS				pmax	pmax		
	comp=Z,80nm,0.9s						
YSS				pmax	pmax		
	comp=Z,1µm,4.5s						
YSS				MLR	MLR		
	comp=Z,5µm,17.0s						
YSS	Yuzh-Sakhalins	28.91	279	IAMs_20	IAMs_20	11 03 32.5	
	comp=Z,7µm,20.0s						
A36M	Sachs Harbour	29.22	28	P	P	10 52 17.3	-0.1
	baz=251,SNR=8.3						
A36M	Sachs Harbour	29.22	28	P	P	10 52 16.8	-0.7
A36M				IAmb	IAmb	10 52 35.3	
	comp=Z,58nm,1.1s						
CBB	Campbell River	29.74	74	P	P	10 52 22.9	+0.6
CBB				IAmb	IAmb	10 52 40.6	
	comp=Z,92nm,1.9s						
JKA	Kamikawa-asahi	30.33	274	P	P	10 52 28.8	+1.2
ASAJ	Asahikawa	30.34	274	P	P	10 52 28.6	+1.0
	comp=Z,68nm,0.9s,baz=52,slow=8.9,SNR=12						
ERM	Erimo	31.08	270	*i* P	P	10 52 35.8	+1.6
ERM				pmax	pmax		
	comp=Z,84nm,1.1s						
LLLB	Lillooet	31.60	71	P	P	10 52 39.3	+0.5
LLLB				IAmb	IAmb	10 52 58.8	
	comp=Z,20nm,0.9s						
YAK	Yakutsk	32.05	312	LR	LR	11 06 08.1	
	comp=Z,8µm,18.2s,baz=104,slow=37						
YAK	Yakutsk	32.05	312	IAMs_20	IAMs_20	11 06 23.2	
	comp=Z,9µm,18.0s						
D03D	Eldon	32.12	77	P	P	10 52 45.9	+2.5
	baz=296						
KIP	Kipapa	32.23	153	IAMs_20	IAMs_20	11 04 08.9	
	comp=Z,5µm,18.0s						
TIXI	Tiksi	32.32	330	P	P	10 52 45.0	+0.2
	comp=Z,4.0nm,0.6s,baz=105,slow=9.1,SNR=7.6						
TIXI	Tiksi	32.32	330	*i* P	P	10 52 44.5	-0.3
TIXI	Tiksi	32.32	330	P	P	10 52 44.8	0.0
TIXI				IAMs_20	IAMs_20	11 06 51.9	
	comp=Z,6µm,19.0s						
B05A	Bryant	32.41	75	P	P	10 52 48.6	+2.8
	baz=295,SNR=5.3						
YKA	Yellowknife Ar	32.48	47	P	P	10 52 44.5	-1.8
	comp=Z,1.1nm,0.4s,baz=357,slow=2.9,SNR=12						
YKA				LR	LR	11 07 48.3	
	comp=Z,8µm,18.6s,baz=0.0,slow=40						
YKA	Yellowknife Ar	32.48	47	*i* P	P	10 52 47.0	+0.7
YKA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
YKA	Yellowknife Ar	32.48	47	P	P	10 52 44.9	-1.4
E04D	Cinebar	32.88	78	P	P	10 52 53.6	+3.6
	baz=297,SNR=6.0						
D05A	Enumclaw	32.95	77	P	P	10 52 50.2	-0.4
TEY	Ternei	33.60	279	⇑*e*P	P	10 52 56.3	+0.1
TEY				*e*S	S	10 58 13.3	-2.1
TEY				pmax	pmax		
	comp=E,300nm,4.2s						
TEY				pmax	pmax		
	comp=Z,400nm,4.2s						
TEY				pmax	pmax		
	comp=N,20nm,0.8s						
TEY				pmax	pmax		
	comp=E,40nm,0.8s						
TEY				pmax	pmax		
	comp=Z,70nm,0.8s						
TEY				MLR	MLR		
	comp=E,1µm,21.0s						
TEY				MLR	MLR		
	comp=N,700nm,23.0s						
TEY				MLR	MLR		
	comp=Z,2µm,18.0s						
H04A	Detroit Lake	34.02	81	P	P	10 53 02.2	+2.3
H04A				IAmb	IAmb	10 53 30.8	
	comp=Z,62nm,1.3s						
HOOD	Mount Hood Mea	34.03	80	P	P	10 53 02.8	+2.6
HOOD				IAmb	IAmb	10 53 19.0	
	comp=Z,50nm,1.1s						
K02D	Willamette Mer	34.13	85	P	P	10 53 03.3	+2.2
	baz=302						
DBO	Dodson Butte	34.17	84	P	P	10 53 03.2	+1.9
DBO				IAmb	IAmb	10 53 14.9	
	comp=Z,39nm,1.2s						
G05D	Wamic, OR	34.28	80	P	P	10 53 05.4	+3.2
	baz=299						
I04A	Tendick Farm,	34.33	83	P	P	10 53 05.2	+2.5
	baz=301,SNR=5.1						
L02E	Cave Junction	34.46	86	P	P	10 53 05.3	+1.5
	baz=303						
POHA	Pohakuloa	34.54	150	IAMs_20	IAMs_20	11 04 32.9	
	comp=Z,4µm,20.0s						
KLR	Kul'dur	34.61	288	P	P	10 53 03.9	-1.1
	comp=Z,8.8nm,0.5s,baz=68,slow=7.1,SNR=26						
KLR				LR	LR	11 06 59.9	
	comp=Z,3µm,20.6s,baz=53,slow=36						
KLR	Kul'dur	34.61	288	*ce*P	P	10 53 02.9	-2.1
KLR				pmax	pmax		
	comp=Z,31nm,1.5s						
HUMO	Hull Mountain	34.62	85	IAMs_20	IAMs_20	11 06 15.0	
	comp=Z,4µm,18.0s						
I05D	Terrebonne, OR	34.72	81	P	P	10 53 08.9	+2.9
	baz=300						
L04D	Klamath Falls	35.24	85	P	P	10 53 13.6	+3.0
	baz=303						
J05D	Fort Rock, OR	35.33	83	P	P	10 53 13.3	+1.9
	baz=302						
M02C	Callahan	35.35	87	P	P	10 53 14.7	+3.1
	baz=304						
NEW	Newport	35.40	73	P	P	10 53 12.4	+0.6
	baz=296,SNR=7.1						
ZEA	Zeya	35.41	298	*e*P	P	10 53 11.2	-0.6
ZEA				*e*		10 54 33.8	
ZEA				*e*S	S	10 58 36.4	-6.8
ZEA				*e*		11 01 04.0	
ZEA				pmax	pmax		
	comp=E,10.0nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.1s						
ZEA				pmax	pmax		
	comp=N,100nm,2.5s						
ZEA				pmax	pmax		
	comp=Z,200nm,4.3s						
ZEA				pmax	pmax		
	comp=E,200nm,8.6s						
ZEA				pmax	pmax		
	comp=Z,200nm,8.5s						
ZEA				smax	smax		
	comp=N,100nm,3.6s						
ZEA				smax	smax		
	comp=E,200nm,8.0s						
ZEA				MLR	MLR		
	comp=E,2µm,16.0s						
ZEA				MLR	MLR		
	comp=N,2µm,17.0s						
ZEA				MLR	MLR		
	comp=Z,3µm,17.0s						
H11N2	WAKE ISLAND Hy	35.45	214	T	T	11 31 15.4	
	baz=21,slow=75						
H11N3	WAKE ISLAND Hy	35.45	214	T	T	11 31 21.5	
	baz=21,slow=75						
H11N1	WAKE ISLAND Hy	35.46	214	T	T	11 31 29.9	
	baz=21,slow=75						
N02D	Trinity Center	35.68	87	P	P	10 53 15.8	+1.4
	baz=304						
G08A	Pilot Rock	35.70	78	P	P	10 53 16.5	+1.9
G08A				IAmb	IAmb	10 53 44.9	
	comp=Z,34nm,1.5s						
M04C	Macdoel	35.77	85	P	P	10 53 17.2	+2.0
	baz=304						
K05A	Summer Lake	35.84	83	P	P	10 53 17.6	+1.7
I07A	Izee	35.98	80	P	P	10 53 18.3	+1.3
I07A				IAmb	IAmb	10 53 55.3	
	comp=Z,28nm,1.1s						
WDC	Whiskeytown Da	36.01	87	P	P	10 53 18.7	+1.6
WDC				pmax	pmax		
	comp=Z,40nm,1.2s						
WDC				MLR	MLR		
	comp=Z,2µm,18.0s						
WDC	Whiskeytown Da	36.01	87	P	P	10 53 18.7	+1.6
WDC				IAmb	IAmb	10 53 45.2	

	comp=Z,40nm,1.2s						
O02D	**Mt. Diablo Mer**	36.08	88	P	P	10 53 20.3	+2.5
	baz=305						
JYT	**Yasato**	36.38	264	P	P	10 53 20.3	0.0
F10A	**Beach Ranch, E**	36.41	76	P	P	10 53 23.0	+2.3
JSD	**Sado**	36.45	268	P	P	10 53 20.8	0.0
JSD				IAmb	IAmb	10 53 25.0	
	comp=Z,40nm,0.7s						
HOPS	**Hopland Field**	36.60	90	IAMs_20	IAMs_20	11 07 53.5	
	comp=Z,4µm,18.0s						
O03E	**Paynes Creek**	36.63	87	P	P	10 53 23.9	+1.4
	baz=305,SNR=12						
H11S1	**WAKE ISLAND Hy**	36.64	213	T	T	11 32 32.2	
	baz=21,slow=75						
MOD	**Modoc Plateau**	36.66	84	IAMs_20	IAMs_20	11 07 50.9	
	comp=Z,5µm,18.0s						
H11S2	**WAKE ISLAND Hy**	36.66	213	T	T	11 32 36.2	
	baz=21,slow=75						
H11S3	**WAKE ISLAND Hy**	36.66	214	T	T	11 32 35.9	
	baz=21,slow=75						
USRK	**Ussuriysk Ar.**	36.86	281	P	P	10 53 24.3	0.0
	comp=Z,12nm,0.7s,baz=57,slow=9.9,SNR=20						
USRK				LR	LR	11 08 34.9	
	comp=Z,3µm,20.5s,baz=45,slow=36						
USRK	**Ussuriysk Ar.**	36.86	281	P	P	10 53 23.4	-0.9
USRK	**Ussuriysk Ar.**	36.86	281	P	P	10 53 23.4	-0.9
MCCM	**Marconi Confer**	37.23	91	IAMs_20	IAMs_20	11 08 08.2	
	comp=Z,3µm,18.0s						
WVOR	**Wild Horse Val**	37.40	82	P	P	10 53 30.6	+1.5
WVOR				pmax	pmax		
	comp=Z,32nm,1.1s						
WVOR				MLR	MLR		
	comp=Z,4µm,18.0s						
WVOR	**Wild Horse Val**	37.40	82	P	P	10 53 30.6	+1.5
WVOR				IAmb	IAmb	10 54 06.3	
	comp=Z,32nm,1.1s						
WVOR				IAMs_20	IAMs_20	11 08 38.5	
	comp=Z,4µm,18.0s						
MJAR	**Matsushiro Arr**	37.41	266	P	P	10 53 29.1	0.0
	comp=Z,7.0nm,0.7s,baz=50,slow=7.1,SNR=8.3						
MJAR				LR	LR	11 06 58.0	
	comp=Z,2µm,21.7s,baz=65,slow=33						
MAJO	**Matsushiro**	37.41	266	*i* P	P	10 53 28.8	-0.3
MAJO				pmax	pmax		
	comp=Z,31nm,0.8s						
MAJO	**Matsushiro**	37.41	266	P	P	10 53 29.1	0.0
MAJO				IAmb	IAmb	10 53 54.2	
	comp=Z,43nm,1.0s						
MAT	**Matsushiro**	37.41	266	P	P	10 53 29.8	+0.7
MAT				S	S	10 59 19.6	+5.4
VLA	**Vladivostok**	37.50	279	*i* P	P	10 53 30.5	+0.8
VLA				pmax	pmax		
	comp=Z,170nm,1.7s						
MSO	**Missoula**	37.97	73	P	P	10 53 35.2	+1.3
	baz=299,SNR=8.4						
MSO	**Missoula**	37.97	73	IAMs_20	IAMs_20	11 09 45.7	
	comp=Z,3µm,18.0s						
RES	**Resolute Bay**	38.09	25	P	P	10 53 33.2	-1.2
	comp=Z,3.5nm,1.0s,baz=252,slow=9.1,SNR=4.2						
RES				LR	LR	11 12 11.6	
	comp=Z,4µm,19.2s,baz=327,slow=41						
RES	**Resolute Bay**	38.09	25	P	P	10 53 34.9	+0.6
MDJ	**Mudanjiang**	38.11	283	IAMs_20	IAMs_20	11 09 08.8	
	comp=Z,5µm,20.0s						
MSHR	**Mys Shultsa**	38.24	279	*i* P	P	10 53 37.3	+1.3
VCNR	**Virginia City**	38.56	87	P	P	10 53 40.2	+1.2
VCNR				IAmb	IAmb	10 53 54.3	
	comp=Z,41nm,1.0s						
PNTR	**Pine Nut**	38.71	87	P	P	10 53 41.3	+1.0
PNTR				IAmb	IAmb	10 54 01.4	
	comp=Z,54nm,0.9s						
CMB	**Columbia Colle**	38.86	89	P	P	10 53 42.5	+1.2
CMB				pmax	pmax		
	comp=Z,21nm,1.1s						
CMB				MLR	MLR		
	comp=Z,3µm,18.0s						
CMB	**Columbia Colle**	38.86	89	P	P	10 53 42.5	+1.2
HLID	**Hailey**	39.38	78	P	P	10 53 47.5	+1.7
	baz=303,SNR=7.3						
EGMT	**Eagleton**	39.86	69	P	P	10 53 50.5	+0.9
	baz=299,SNR=10.0						
EGMT	**Eagleton**	39.86	69	P	P	10 53 49.9	+0.3
LHV	**Little Huntoon**	39.90	87	P	P	10 53 52.1	+2.2
LHV				IAmb	IAmb	10 54 31.8	
	comp=Z,81nm,1.5s						
NVAR	**Mina Array Bea**	39.92	87	P	P	10 53 51.3	+0.9
	comp=Z,7.4nm,1.0s,baz=291,slow=7.4,SNR=25						
NVAR				LR	LR	11 07 11.6	
	comp=Z,1µm,20.9s,baz=294,slow=31						
NVAR	**Mina Array Bea**	39.92	87	P	P	10 53 51.5	+1.2
MDPB	**Devils Postpil**	39.92	89	P	P	10 53 51.9	+1.4
MDPB				IAmb	IAmb	10 54 49.5	
	comp=Z,35nm,1.1s						
JWT	**Wachi**	39.97	267	P	P	10 53 49.8	-0.7
JWT				IAmb	IAmb	10 54 30.3	
	comp=Z,104nm,1.5s						
BOZ	**Bozeman (W)**	39.98	74	P	P	10 53 51.9	+1.2
	baz=301,SNR=6.0						
MLAC	**Mammoth, Mammo**	40.08	89	P	P	10 53 55.7	+4.0
	baz=308						
ELK	**Elko**	40.45	82	P	P	10 53 55.9	+1.1
ELK				pmax	pmax		
	comp=Z,17nm,1.0s						
ELK				MLR	MLR		
	comp=Z,4µm,18.0s						
ELK	**Elko**	40.45	82	P	P	10 53 55.9	+1.1
ELK				IAMs_20	IAMs_20	11 10 44.3	
	comp=Z,4µm,18.0s						
YHL	**Hebgen Lake**	40.64	74	P	P	10 53 56.9	+0.5
YHL				IAmb	IAmb	10 54 14.8	
	comp=Z,37nm,1.1s						
TPH	**Tonopah**	40.81	87	P	P	10 53 58.3	+0.6
TPH				pmax	pmax		
	comp=Z,254nm,1.5s						
TPH	**Tonopah**	40.81	87	P	P	10 53 58.3	+0.6
TIN	**Tinemaha, Big**	40.81	89	P	P	10 53 59.5	+1.9
	baz=309						
YMR	**Madison River**	40.87	74	P	P	10 54 00.3	+2.1
YMR				IAmb	IAmb	10 54 16.8	
	comp=Z,38nm,1.1s						
VES	**Vestal, Richgr**	41.04	91	P	P	10 54 00.4	+1.0
	baz=310,SNR=6.4						
CN2	**Changchun**	41.06	284	*e*P	P	10 53 59.2	-0.3
CN2				*e*S	S	11 00 06.9	-1.9
CN2				pmax	pmax		
	comp=Z,20nm,1.2s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,4µm,19.0s						
CN2				LR	LR		
	comp=Z,3µm,19.0s						
CN2				LR	LR		
	comp=Z,6µm,18.0s						
FFC	**Flin Flon**	41.07	57	P	P	10 54 01.2	+1.8
FFC				pmax	pmax		
	comp=Z,22nm,0.9s						
FFC				MLR	MLR		
	comp=Z,6µm,20.0s						
FFC	**Flin Flon**	41.07	57	P	P	10 54 01.2	+1.8
FFC	**Flin Flon**	41.07	57	IAMs_20	IAMs_20	11 12 10.5	
	comp=Z,7µm,20.0s						
PKM	**Mcpherson Peak**	41.20	93	P	P	10 54 02.2	+1.3
	baz=310						
H17A	**Grant Village**	41.26	74	P	P	10 54 02.1	+0.8
	baz=303,SNR=7.4						
CWC	**Cottonwood Cre**	41.29	89	P	P	10 54 03.0	+1.3
	baz=309						
TPAW	**Teton Pass**	41.52	76	P	P	10 54 05.7	+2.1
TPAW				IAmb	IAmb	10 54 25.9	
	comp=Z,48nm,1.6s						
ISA	**Isabella, Lake**	41.54	91	P	P	10 54 04.1	+0.5
ISA				pmax	pmax		
	comp=Z,29nm,1.1s						
ISA	**Isabella, Lake**	41.54	91	P	P	10 54 04.3	+0.7
	baz=310,SNR=8.6						
ISA	**Isabella, Lake**	41.54	91	P	P	10 54 04.1	+0.5
HIA	**Hailar**	41.57	294	*c i*P	P	10 54 02.7	-0.9
HIA				pmax	pmax		
	comp=Z,30nm,1.0s						
HIA	**Hailar**	41.57	294	IAMs_20	IAMs_20	11 11 17.2	
	comp=Z,4µm,20.0s						
RLMT	**Red Lodge**	41.65	73	P	P	10 54 05.3	+0.8
	baz=302,SNR=6.1						
RLMT	**Red Lodge**	41.65	73	P	P	10 54 05.1	+0.6
RLMT				IAmb	IAmb	10 54 23.4	
	comp=Z,65nm,1.1s						
RLMT				IAMs_20	IAMs_20	11 12 54.9	
	comp=Z,4µm,18.0s						
R11A	**Troy Canyon, C**	41.66	85	P	P	10 54 05.6	+0.9
	baz=308,SNR=12						
FURC	**Furnace Creek,**	42.03	88	P	P	10 54 08.6	+1.1
	baz=309,SNR=11						
OSI	**Osito Audit: C**	42.06	92	P	P	10 54 09.4	+1.6
	baz=311						
LRMC	**Laurel Mtn Rad**	42.15	90	P	P	10 54 09.4	+0.8
	baz=310,SNR=5.2						
DUG	**Dugway, Tooele**	42.27	81	P	P	10 54 11.9	+2.3
	baz=306,SNR=11						
DUG	**Dugway, Tooele**	42.27	81	IAMs_20	IAMs_20	11 11 35.5	
	comp=Z,3µm,18.0s						
EDW2	**Edwards Air Fo**	42.34	91	P	P	10 54 11.1	+1.0
	baz=310,SNR=5.3						
LAO	**LASA Array**	42.61	69	P	P	10 54 12.6	+0.5
	baz=302						
LAO	**LASA Array**	42.61	69	IAMs_20	IAMs_20	11 11 26.3	
	comp=Z,3µm,19.0s						
PASC	**Pasadena Art C**	42.69	92	IAMs_20	IAMs_20	11 11 07.6	
	comp=Z,3µm,18.0s						
SHOC	**Shoshone, Teco**	42.76	89	P	P	10 54 14.8	+1.3
	baz=310,SNR=13						
BW06	**Boulder Array**	42.77	76	P	P	10 54 14.1	+0.4
	baz=304,SNR=9.5						
BW06	**Boulder Array**	42.77	76	P	P	10 54 13.6	-0.1
PD31	**Pinedale Array**	42.77	76	P	P	10 54 13.6	-0.1
PDAR	**Pinedale Array**	42.77	76	P	P	10 54 13.9	+0.2
	comp=Z,3.7nm,0.6s,baz=301,slow=4.5,SNR=16						
PDAR				LR	LR	11 11 39.1	
	comp=Z,1µm,18.5s,baz=306,slow=36						
GSC	**Goldstone, Bar**	42.81	90	P	P	10 54 14.9	+1.0
	baz=310,SNR=23						
DGMT	**Dagmar**	42.84	66	P	P	10 54 15.3	+1.3
	baz=301,SNR=6.3						
DGMT	**Dagmar**	42.84	66	IAMs_20	IAMs_20	11 14 03.6	
	comp=Z,5µm,18.0s						
BFSC	**Mount Baldy Ra**	42.97	92	P	P	10 54 16.4	+1.1
	baz=311,SNR=9.9						
KSRS	**Korea Array**	43.26	275	P	P	10 54 17.9	+0.5
	comp=Z,6.4nm,0.8s,baz=52,slow=6.8,SNR=12						
KSRS				LR	LR	11 11 46.0	
	comp=Z,1µm,20.8s,baz=85,slow=35						
TUQ	**Turquoise Moun**	43.28	89	P	P	10 54 18.6	+0.8
	baz=310,SNR=10						
HEC	**Hector,Ludlow**	43.41	90	P	P	10 54 19.5	+0.7
	baz=310,SNR=12						
BBRC	**Big Bear Solar**	43.41	91	P	P	10 54 20.2	+1.2
	baz=311,SNR=8.8						
TULEG	**Thule**	43.67	19	P	P	10 54 19.6	-0.7
TULEG				IAmb	IAmb	10 54 38.0	
	comp=Z,45nm,1.2s						
TULEG				IAMs_20	IAMs_20	11 14 40.8	
	comp=Z,3µm,19.0s						
MURC	**Murrieta**	43.68	92	P	P	10 54 23.0	+2.1
	baz=312,SNR=5.5						
GMRC	**Granite Mounta**	43.86	89	P	P	10 54 23.2	+0.7
	baz=310,SNR=16						
INCN	**Inchon**	44.04	276	IAMs_20	IAMs_20	11 09 04.3	
	comp=Z,3µm,19.0s						
PFO	**Pinyon Flats O**	44.13	91	P	P	10 54 24.1	-0.5
	comp=Z,8.0nm,1.0s,baz=316,slow=7.9,SNR=7.8						
PFO	**Pinyon Flats O**	44.13	91	P	P	10 54 25.5	+0.9
	baz=312,SNR=7.4						
PFO	**Pinyon Flats O**	44.13	91	P	P	10 54 25.3	+0.7
TPFO	**Pinon Flats**	44.14	91	P	P	10 54 25.3	+0.6
	baz=312,SNR=7.0						
BELC	**Belle Mtn. Jos**	44.16	90	P	P	10 54 25.5	+0.6
	baz=311,SNR=9.0						
109C	**Camp Elliot, M**	44.21	93	P	P	10 54 25.9	+0.9
	baz=312						
IRM	**Iron Mountain**	44.59	90	P	P	10 54 28.7	+0.5
	baz=311,SNR=13						
MONP2	**Monument Peak**	44.63	92	P	P	10 54 29.9	+1.2
	baz=312,SNR=6.9						
K22A	**Casper**	44.67	74	P	P	10 54 29.2	+0.3
	baz=305						
BC3	**Big Chuckawall**	44.73	90	P	P	10 54 29.9	+0.5
	baz=311						
RWWY	**Rawlins**	44.82	76	IAMs_20	IAMs_20	11 13 54.9	
	comp=Z,3µm,18.0s						
SWSC	**Sam W. Stewart**	44.99	91	P	P	10 54 32.3	+1.0
	baz=312						
IKP	**In-Ko-Pah, Jac**	44.99	92	P	P	10 54 31.4	0.0
	baz=312						
O20A	**White River Ci**	45.12	78	P	P	10 54 33.6	+1.1
	baz=307,SNR=12						
PDMCI	**Parker Dam,Lak**	45.12	89	P	P	10 54 33.4	+1.1
	baz=311,SNR=5.2						
RSSD	**Black Hills**	45.31	71	P	P	10 54 33.9	-0.1
RSSD				pmax	pmax		
	comp=Z,20nm,0.9s						
RSSD				MLR	MLR		
	comp=Z,2µm,19.0s						
RSSD	**Black Hills**	45.31	71	P	P	10 54 33.8	-0.1
	baz=305						
RSSD	**Black Hills**	45.31	71	P	P	10 54 33.9	-0.1
RSSD				IAmb	IAmb	10 54 59.2	
	comp=Z,20nm,0.9s						
GLA	**Glamis**	45.52	91	P	P	10 54 37.2	+1.6
	baz=312						
MDND	**Maddock**	45.78	64	P	P	10 54 38.4	+1.0
	baz=303,SNR=5.1						
MDND	**Maddock**	45.78	64	P	P	10 54 36.9	-0.6
N23A	**Red Feather La**	46.06	76	P	P	10 54 40.8	+0.8
	baz=307						
WUAZ	**Wupatki**	46.06	85	P	P	10 54 41.2	+1.3
	baz=310,SNR=13						
WUAZ	**Wupatki**	46.06	85	IAMs_20	IAMs_20	11 13 12.9	
	comp=Z,3µm,18.0s						
NRIK	**Noril'sk**	46.09	331	P	P	10 54 37.9	-1.6
	comp=Z,6.2nm,0.9s,baz=139,slow=9.3,SNR=2.6						
NRIK	**Noril'sk**	46.09	331	*ce*P	P	10 54 38.7	-0.8
NRIK				pmax	pmax		
	comp=Z,14nm,1.1s						
DL2	**Dalian**	46.26	281	P	P	10 54 41.9	+0.7
DL2				pmax	pmax		
	comp=Z,72nm,1.6s						
NEEM	**North Greenlan**	46.40	15	*i* P	P	10 54 41.7	-0.6
NOR	**Nord**	46.51	5	*i* P	P	10 54 41.7	-1.0
ULM	**Lac du Bonnet**	46.52	60	P	P	10 54 42.0	-1.1
	comp=Z,5.3nm,0.9s,baz=289,slow=11,SNR=3.9						
ULM				LR	LR	11 15 56.8	
	comp=Z,3µm,18.9s,baz=316,slow=38						
MVCO	**Mesa Verde**	46.77	81	P	P	10 54 47.7	+2.1
	baz=309,SNR=7.6						
ISCO	**Idaho Springs**	46.92	77	P	P	10 54 50.4	+3.5
	baz=308						
ISCO	**Idaho Springs**	46.92	77	IAMs_20	IAMs_20	11 15 47.6	
	comp=Z,3µm,18.0s						
W18A	**Petrified Fore**	47.34	85	P	P	10 54 52.1	+2.1
	baz=311,SNR=8.0						
S22A	**4UR Ranch, Cre**	47.46	80	P	P	10 54 54.2	+3.1
	baz=309,SNR=9.8						
214A	**Organ Pipe Nat**	47.52	90	P	P	10 54 52.9	+1.6
	baz=313						
AGMN	**Agassiz Nation**	47.61	62	P	P	10 54 51.8	+0.1
	baz=304						
AGMN	**Agassiz Nation**	47.61	62	IAMs_20	IAMs_20	11 16 00.6	
	comp=Z,4µm,20.0s						
SDCO	**Great Sand Dun**	48.27	79	P	P	10 54 59.7	+2.4
	baz=309						
SDCO	**Great Sand Dun**	48.27	79	P	P	10 54 58.9	+1.6
SDCO				IAmb	IAmb	10 55 37.6	
	comp=Z,15nm,1.1s						
OGNE	**Ogallala**	48.38	73	P	P	10 54 58.5	+0.6
	baz=308						
TUC	**Tucson**	48.55	88	P	P	10 55 00.0	+0.8
TUC				pmax	pmax		
	comp=Z,18nm,1.0s						
TUC				MLR	MLR		
	comp=Z,2µm,18.0s						
TUC	**Tucson**	48.55	88	P	P	10 55 00.3	+1.1
	baz=312						
TUC	**Tucson**	48.55	88	P	P	10 55 00.0	+0.8
TUC				IAmb	IAmb	10 55 15.3	
	comp=Z,18nm,1.0s						
BJI	**Beijing**	48.87	286	P	P	10 55 02.1	+0.6
BJI				pmax	pmax		
	comp=Z,22nm,2.4s						
TLY	**Talaya**	49.01	305	P	P	10 55 02.2	-0.3
	comp=Z,7.4nm,0.5s,baz=39,slow=4.9,SNR=5.6						
TLY	**Talaya**	49.01	305	*c i*P	P	10 55 01.3	-1.2
TLY				*e*	PcP	10 56 25.7	-0.1
TLY				*e*	PP	10 56 57.9	+2.0
TLY				*e*S	S	11 02 16.4	+13
TLY				pmax	pmax		
	comp=Z,62nm,1.0s						
TLY				MLR	MLR		
	comp=Z,6µm,13.0s						
TLY	**Talaya**	49.01	305	IAMs_20	IAMs_20	11 16 45.8	
	comp=Z,3µm,18.0s						
KSCO	**Kaye Shedlock'**	49.23	76	P	P	10 55 05.9	+1.5
T25A	**Trinidad**	49.33	79	P	P	10 55 08.5	+3.2
	baz=310,SNR=7.8						
ULN	**Ulaanbaatar**	49.41	299	*ce*P	P	10 55 06.1	+0.3
ULN				pmax	pmax		
	comp=Z,17nm,0.8s						
ULN	**Ulaanbaatar**	49.41	299	P	P	10 55 05.9	+0.1
ULN				IAmb	IAmb	10 55 31.4	
	comp=Z,20nm,0.8s						
ULN	**Ulaanbaatar**	49.41	299	IAMs_20	IAMs_20	11 16 46.6	
	comp=Z,5µm,20.0s						
ANMO	**Albuquerque**	49.49	82	P	P	10 55 06.4	-0.1
	comp=Z,3.3nm,1.0s,baz=308,slow=6.2,SNR=5.3						
ANMO	**Albuquerque**	49.49	82	P	P	10 55 08.0	+1.4
	baz=311						
ANMO	**Albuquerque**	49.49	82	P	P	10 55 07.3	+0.7
ANMO				IAmb	IAmb	10 56 05.1	
	comp=Z,27nm,1.4s						
ANMO	**Albuquerque**	49.49	82	IAMs_20	IAMs_20	11 16 18.5	
	comp=Z,3µm,18.0s						
Y22D	**IRIS PASSCAL I**	49.77	84	IAMs_20	IAMs_20	11 16 34.1	
	comp=Z,5µm,18.0s						
KBS	**Kingsbay**	49.78	359	IAMs_20	IAMs_20	11 18 09.7	
	comp=Z,4µm,18.0s						
SONM	**Songino Array**	49.79	299	P	P	10 55 08.8	+0.2
	comp=Z,8.5nm,0.6s,baz=49,slow=8.2,SNR=38						
SONM	**Songino Array**	49.79	299	P	P	10 55 09.0	+0.4
ECSD	**EROS Data Cent**	49.87	67	P	P	10 55 08.2	-0.9
	baz=307,SNR=6.4						
ECSD	**EROS Data Cent**	49.87	67	IAMs_20	IAMs_20	11 16 17.4	
	comp=Z,3µm,20.0s						
ZAK	**Zakamensk**	49.95	304	*e*P	P	10 55 10.0	+0.3
ZAK				pmax	pmax		
	comp=Z,67nm,1.4s						
EYMN	**Ely**	50.20	60	P	P	10 55 10.8	-0.7
	baz=306						
EYMN	**Ely**	50.20	60	IAMs_20	IAMs_20	11 17 58.0	
	comp=Z,3µm,18.0s						
121A	**Cookes Peak, D**	50.27	86	P	P	10 55 13.6	+1.2
	baz=312						
MOY	**Mondy**	50.36	306	*e*P	P	10 55 13.0	+0.1
MOY				pmax	pmax		
	comp=Z,64nm,1.7s						
SPA0	**Spitsbergen Ar**	50.44	358	*e*P	P	10 55 12.4	-0.6
SPITS	**Spitsbergen Ar**	50.44	358	P	P	10 55 12.3	-0.7
	comp=Z,16nm,0.9s,baz=51,slow=11,SNR=2.0						
CBKS	**Cedar Bluff**	51.09	74	P	P	10 55 19.4	+0.9
	baz=310						
HHC	**Hu-ho-hao-te**	51.11	289	*e*P	P	10 55 18.9	+0.3
HHC				S	S	11 02 30.1	-3.1
HHC				pmax	pmax		
	comp=Z,21nm,1.0s						
HHC				pmax	pmax		
	comp=Z,720nm,8.9s						
HHC				LR	LR		
	comp=Z,1µm,15.0s						
HHC				LR	LR		
	comp=Z,2µm,12.3s						
HHC				LR	LR		
	comp=Z,2µm,14.7s						
SPMN	**Marine on St.**	51.12	63	P	P	10 55 19.2	+0.7
	baz=308						
TARA	**Tarawa**	51.38	198	IAMs_20	IAMs_20	11 12 55.2	
	comp=Z,3µm,20.0s						
MNTX	**Cornudas Mount**	52.33	85	P	P	10 55 28.4	+0.7
	baz=313,SNR=12						
MNTX	**Cornudas Mount**	52.33	85	P	P	10 55 27.9	+0.2
MNTX				IAmb	IAmb	10 56 31.5	
	comp=Z,25nm,1.2s						
MSTX	**Muleshoe**	52.41	81	P	P	10 55 30.1	+1.7
	baz=312,SNR=6.7						
NJ2	**Nanjing**	52.43	276	*e*P	P	10 55 27.6	-0.8
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
AMTX	**Amarillo**	52.47	79	P	P	10 55 30.7	+1.9
	baz=312						
AMTX	**Amarillo**	52.47	79	IAMs_20	IAMs_20	11 20 03.5	
	comp=Z,2µm,18.0s						
TIY	**Taiyuan**	52.60	286	⇓P	P	10 55 31.5	+1.8
COWI	**Conover**	52.60	61	IAMs_20	IAMs_20	11 18 56.7	
	comp=Z,3µm,19.0s						
KSU1	**Kansas State U**	52.78	72	P	P	10 55 31.7	+0.8
	baz=310						
SCIA	**State Center**	52.96	67	P	P	10 55 32.5	+0.2
	baz=310						
SCIA	**State Center**	52.96	67	IAMs_20	IAMs_20	11 17 44.2	
	comp=Z,4µm,21.0s						
U32A	**Winter Ranch,**	53.12	76	IAMs_20	IAMs_20	11 19 51.5	
	comp=Z,2µm,18.0s						
DBG	**Daneborg**	53.12	9	*i* P	P	10 55 31.8	-1.2
JFWS	**Jewell Farm**	54.00	64	P	P	10 55 38.8	-1.1
	baz=310						
WMOK	**Wichita Mounta**	54.34	77	P	P	10 55 44.8	+2.3
	baz=312						
WMOK	**Wichita Mounta**	54.34	77	IAMs_20	IAMs_20	11 19 55.0	
	comp=Z,3µm,18.0s						
OK029	**Liberty Lake**	54.44	75	IAMs_20	IAMs_20	11 21 07.5	
	comp=Z,2µm,18.0s						
OK025	**Westminster Rd**	54.66	76	IAMs_20	IAMs_20	11 21 22.2	
	comp=Z,2µm,18.0s						
OK030	**Cody Creek RV**	54.76	75	IAMs_20	IAMs_20	11 21 49.9	
	comp=Z,2µm,18.0s						
ICESG	**Greenland Ices**	54.91	19	*i* P	P	10 55 44.8	-1.7
TX32	**Lajitas Array**	55.03	86	P	P	10 55 47.3	-0.3
TX32				IAmb	IAmb	10 56 05.9	
	comp=Z,23nm,1.0s						
TXAR	**Lajitas Array**	55.03	86	P	P	10 55 47.3	-0.3
	comp=Z,6.0nm,0.9s,baz=306,slow=5.3,SNR=26						
SLBS	**Sierra La Lagu**	55.14	95	IAMs_20	IAMs_20	11 17 51.6	
	comp=Z,2µm,18.0s						
ABTX	**Abilene, Hawle**	55.25	80	P	P	10 55 51.1	+2.0
	baz=313,SNR=6.2						
TUL1	**Leonard**	55.37	74	IAMs_20	IAMs_20	11 21 30.0	
	comp=Z,2µm,19.0s						
DY2G	**Dye2**	55.59	23	*i* P	P	10 55 50.7	-0.6
HDIL	**Hopedale**	56.08	66	P	P	10 55 54.4	-0.5
	baz=311,SNR=7.1						
HDIL	**Hopedale**	56.08	66	IAMs_20	IAMs_20	11 19 50.9	
	comp=Z,3µm,20.0s						
WHN	**Wuhan**	56.26	278	⇓P	P	10 55 57.2	+1.0
ZALV	**Zalesovo Beam**	56.51	316	P	P	10 55 56.8	-0.9
	comp=Z,2.4nm,0.5s,baz=51,slow=5.3,SNR=5.7						
ZALV	**Zalesovo Beam**	56.51	316	*i* P	P	10 55 57.5	-0.2
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.5s						
X37A	**Clayton**	56.51	75	P	P	10 55 59.2	+1.1
X37A				IAmb	IAmb	10 56 21.2	
	comp=Z,27nm,1.1s						
P43A	**Skaggs, Pawnee**	56.56	67	P	P	10 55 58.5	+0.2
CCM	**Cathedral Cave**	56.62	69	P	P	10 55 58.2	-0.6
CCM				pmax	pmax		
	comp=Z,40nm,1.2s						
CCM				MLR	MLR		
	comp=Z,3µm,20.0s						
CCM	**Cathedral Cave**	56.62	69	P	P	10 55 57.7	-1.1
	baz=312						
CCM	**Cathedral Cave**	56.62	69	P	P	10 55 58.1	-0.6
CCM				IAmb	IAmb	10 56 16.1	
	comp=Z,40nm,1.2s						
CCM	**Cathedral Cave**	56.62	69	IAMs_20	IAMs_20	11 21 21.3	
	comp=Z,3µm,20.0s						
JCT	**Junction City**	56.63	82	P	P	10 56 00.3	+1.4
	baz=314						
JCT	**Junction City**	56.63	82	IAMs_20	IAMs_20	11 21 20.6	
	comp=Z,3µm,18.0s						
SLM	**Saint Louis**	56.82	68	P	P	10 56 00.5	+0.3
SLM				pmax	pmax		
	comp=Z,46nm,0.9s						
SLM	**Saint Louis**	56.82	68	P	P	10 56 00.5	+0.3
U40A	**Yellville**	56.82	72	P	P	10 55 59.1	-1.2
	baz=313						
SSLB	**Suanglung**	56.95	267	P	P	10 56 00.9	-0.4
W39A	**Magazine**	57.05	73	P	P	10 56 02.8	+1.0
	baz=313						
SFIN	**Lafayette**	57.45	65	P	P	10 56 04.4	-0.2
	baz=312						
SCHQ	**Schefferville**	57.57	41	P	P	10 56 05.5	+0.2
	comp=Z,10nm,0.9s,baz=333,slow=7.7,SNR=4.7						
SCHQ				LR	LR	11 22 13.0	
	comp=Z,5µm,18.7s,baz=316,slow=38						

FCAR	Ozark Folk Cen	57.57	72	P	P	10 56 04.6	-0.9
FCAR				IAmb	IAmb	10 56 22.8	
	comp=Z,31nm,1.0s						
MIAR	Mount Ida	57.62	74	P	P	10 56 06.1	+0.2
	baz=313						
L48A	N Adams	57.88	62	P	P	10 56 07.0	-0.6
L48A				IAmb	IAmb	10 56 25.6	
	comp=Z,34nm,0.9s						
W41B	Gary Mavity, V	57.99	72	P	P	10 56 07.5	-0.9
	baz=313						
AAM	Ann Arbor	58.06	61	IAMs_20	IAMs_20	11 22 58.2	
	comp=Z,3µm,19.0s						
X40A	Basin Creek Fa	58.11	73	P	P	10 56 08.7	-0.6
	baz=314						
X40A	Basin Creek Fa	58.11	73	IAMs_20	IAMs_20	11 22 40.6	
	comp=Z,2µm,20.0s						
KEV	Kevo	58.15	352	IAMs_20	IAMs_20	11 25 16.9	
	comp=Z,2µm,18.0s						
833A	Chaparral WMA,	58.39	83	P	P	10 56 12.6	+1.2
	baz=315						
ARA0	ARCESS Array S	58.50	352	eP	P	10 56 11.9	+0.4
ARCES	ARCESS Array B	58.50	352	P	P	10 56 10.8	-0.7
	comp=Z,4.1nm,0.7s,baz=12,slow=7.3,SNR=9.1						
ARCES				LR	LR	11 24 28.3	
	comp=Z,2µm,18.2s,baz=10.0,slow=39						
ARCES	ARCESS Array B	58.50	352	P	P	10 56 11.2	-0.3
LZH	Lanzhou	58.79	290	eP	P	10 56 14.1	-0.2
LZH				pP	sP	10 56 28.8	-1.4
LZH				pmax	pmax		
	comp=Z,86nm,1.4s						
LZH				pmax	pmax		
	comp=Z,1µm,7.1s						
LZH				LR	LR		
	comp=Z,3µm,15.9s						
LZH				LR	LR		
	comp=Z,3µm,14.6s						
LZH				LR	LR		
	comp=Z,3µm,15.7s						
JETT	Jettan, Norway	58.84	355	eP	P	10 56 13.7	-0.2
GTA	Gaotai	58.84	295	⇑P	P	10 56 14.7	+0.2
GTA				pP	pP	10 56 27.0	+1.2
GTA				sP	pwP	10 56 31.6	+0.3
GTA				PcP	PcP	10 57 04.8	+1.2
GTA				ScP	ScP	11 01 01.6	+1.4
GTA				pmax	pmax		
	comp=Z,33nm,1.2s						
GTA				pmax	pmax		
	comp=Z,470nm,6.5s						
GTA				LR	LR		
	comp=Z,3µm,19.3s						
GTA				LR	LR		
	comp=Z,2µm,18.5s						
GTA				LR	LR		
	comp=Z,4µm,18.9s						
NATX	Nacogdoches	58.89	77	IAMs_20	IAMs_20	11 23 04.4	
	comp=Z,3µm,18.0s						
LVZ	Lovozero	59.12	348	IAMs_20	IAMs_20	11 25 57.4	
	comp=Z,2µm,20.0s						
KTK1	Kautokeino	59.19	353	eP	P	10 56 16.4	+0.1
P49A	Miami Univ. Ec	59.36	64	P	P	10 56 17.0	-1.0
	baz=313						
WCI	Wyandotte Cave	59.37	66	P	P	10 56 17.6	-0.4
WCI				pmax	pmax		
	comp=Z,65nm,1.0s						
WCI				MLR	MLR		
	comp=Z,4µm,22.0s						
WCI	Wyandotte Cave	59.37	66	P	P	10 56 17.2	-0.8
	baz=314						
WCI	Wyandotte Cave	59.37	66	P	P	10 56 17.6	-0.4
WCI	Wyandotte Cave	59.37	66	IAMs_20	IAMs_20	11 22 01.8	
	comp=Z,3µm,22.0s						
HKT	Hockley	59.44	79	IAMs_20	IAMs_20	11 24 02.8	
	comp=Z,3µm,18.0s						
APA	Apatity	59.58	349	⇓iP	P	10 56 32.3	+13
APA				pmax	pmax		
	comp=Z,15nm,1.1s						
ACSO	Alum Creek Sta	59.85	62	IAMs_20	IAMs_20	11 23 20.5	
	comp=Z,3µm,18.0s						
KVTX	Kingsville	59.88	83	IAMs_20	IAMs_20	11 26 29.7	
	comp=Z,3µm,18.0s						
WVT	Waverly	59.93	69	P	P	10 56 21.7	-0.2
WVT				pmax	pmax		
	comp=Z,45nm,1.2s						
WVT				MLR	MLR		
	comp=Z,3µm,19.0s						
WVT	Waverly	59.93	69	P	P	10 56 21.1	-0.8
	baz=314						
WVT	Waverly	59.93	69	P	P	10 56 21.7	-0.2
WVT	Waverly	59.93	69	IAMs_20	IAMs_20	11 23 21.8	
	comp=Z,3µm,19.0s						
TRQ	Mont Tremblant	60.11	52	P	P	10 56 23.1	0.0
NRS	Narsarsuaq	60.12	26	P	P	10 56 22.4	-0.4
NRS				pmax	pmax		
	comp=Z,69nm,0.9s						
NRS	Narsarsuaq	60.12	26	P	P	10 56 22.4	-0.4
FUNA	Funafuti	60.19	189	IAMs_20	IAMs_20	11 18 01.4	
	comp=Z,3µm,19.0s						
M53A	WI Miller and	60.27	60	P	P	10 56 24.8	+0.7
	baz=314						
M53A	WI Miller and	60.27	60	P	P	10 56 25.2	+1.1
ZAIG	Zacatecas	60.42	90	P	P	10 56 26.9	+1.2
ZAIG				IAmb	IAmb	10 57 23.7	
	comp=Z,24nm,1.5s						
LOF	Lofoten	60.57	357	eP	P	10 56 26.0	+0.3
PLAL	Pickwick Lake	60.59	70	IAMs_20	IAMs_20	11 23 43.1	
	comp=Z,2µm,19.0s						
STEI	Steigen	60.71	356	eP	P	10 56 26.6	0.0
P52A	Corning	60.73	62	P	P	10 56 28.3	+0.9
	baz=314						
P52A	Corning	60.73	62	IAMs_20	IAMs_20	11 24 13.9	
	comp=Z,3µm,18.0s						
O53A	New Philadelph	60.81	61	P	P	10 56 28.1	+0.2
	baz=314						
N54A	Moraine State	60.98	60	P	P	10 56 30.7	+1.7
	baz=314						
ZSN	Zaisan	61.04	311	eP	P	10 56 28.3	-1.1
	comp=Z,18nm,1.2s,baz=310						
ZSN	Zaisan	61.04	311	eP	P	10 56 28.2	-1.1
ZSN				pmax	pmax		
	comp=Z,18nm,1.2s						
LONY	Lake Ozonia	61.23	54	P	P	10 56 29.9	-0.7
	baz=315						
LONY	Lake Ozonia	61.23	54	IAMs_20	IAMs_20	11 23 24.8	
	comp=Z,4µm,20.0s						
FAUS	Fauske	61.26	356	eP	P	10 56 29.9	-0.6
L56A	Greenwood	61.45	57	P	P	10 56 32.9	+0.7
KURK	Kurchatov	61.48	317c	eP	P	10 56 32.5	+0.3
KURK				pmax	pmax		
	comp=Z,40nm,1.3s						
KURK	Kurchatov	61.48	317	P	P	10 56 32.2	0.0
KURK				IAmb	IAmb	10 56 33.3	
	comp=Z,26nm,0.8s						
KURBB	Kurchatov Arra	61.59	317	P	P	10 56 32.9	-0.1
	comp=Z,20nm,0.8s,baz=41,slow=6.9,SNR=60						
KURBB	Kurchatov Arra	61.59	317	P	P	10 56 31.7	-1.2
MCWV	Mont Chateau	61.97	61	P	P	10 56 36.0	+0.3
	baz=315						
TZTN	Tazewell	62.11	66	P	P	10 56 36.6	-0.1
	baz=315						
BINY	Binghamton	62.23	56	P	P	10 56 39.2	+1.8
	baz=315						
O56A	Blue Knob Stat	62.23	60	P	P	10 56 38.7	+1.2
	baz=315						
WMQ	Urumqi	62.25	306	eP	P	10 56 38.8	+1.2
WMQ				pmax	pmax		
	comp=Z,68nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,440nm,4.7s						
WMQ				LR	LR		
	comp=Z,3µm,17.9s						
WMQ				LR	LR		
	comp=Z,2µm,20.3s						
WMQ				LR	LR		
	comp=Z,1µm,22.9s						
SSPA	Standing Stone	62.34	59	P	P	10 56 38.2	+0.1
	baz=315						
SSPA	Standing Stone	62.34	59	P	P	10 56 38.5	+0.4
STOK	Stokkvaagen	62.38	357	eP	P	10 56 37.8	-0.2
MK31	Makanchi Array	62.72	312	i P	P	10 56 40.1	-0.6
MK31	Makanchi Array	62.72	312	P	P	10 56 39.9	-0.8
MK31				IAmb	IAmb	10 57 02.9	
	comp=Z,11nm,0.9s						
MKAR	Makanchi Array	62.72	312	P	P	10 56 40.3	-0.4
	comp=Z,9.8nm,0.8s,baz=55,slow=5.9,SNR=31						
MKAR				LR	LR	11 25 57.9	
	comp=Z,3µm,18.5s,baz=40,slow=38						
MKAR	Makanchi Array	62.72	312	i P	P	10 56 40.5	-0.2
MKAR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
G62A	West of Eustis	62.80	51	P	P	10 56 41.5	+0.3
MAKZ	Makanchi	62.86	312	P	P	10 56 41.3	-0.3
MAKZ				pmax	pmax		
	comp=Z,38nm,1.3s						
MAKZ	Makanchi	62.86	312	P	P	10 56 41.3	-0.3
MAKZ				IAmb	IAmb	10 56 59.5	
	comp=Z,38nm,1.3s						
BVAR	Borovoye Array	63.05	323	P	P	10 56 42.8	+0.1
	comp=Z,11nm,0.5s,baz=243,slow=1.0,SNR=29						
BRVK	Borovoye	63.07	323	P	P	10 56 42.0	-0.8
BRVK	Borovoye	63.07	323	P	P	10 56 42.7	-0.1
PRGR	Permogore	63.07	340	eP	P	10 56 41.2	-1.4
PRGR				pmax	pmax		
	comp=Z,93nm,1.5s						
N59A	State Game Lan	63.26	57	P	P	10 56 45.2	+0.9
	baz=316						
N59A	State Game Lan	63.26	57	P	P	10 56 43.5	-0.8
SVE	Sverdlovsk	63.35	330	eP	P	10 56 45.2	+0.6
SVE				eS	S	11 05 31.4	+18
SVE				pmax	pmax		
	comp=Z,33nm,1.3s						
BLA	Blacksburg	63.40	63	P	P	10 56 45.7	+0.5
	baz=316						
WVL	Waterville	63.70	51	IAMs_20	IAMs_20	11 24 10.1	
	comp=Z,3µm,22.0s						
GYA	Guiyang	63.90	280	⇓P	P	10 56 49.6	+0.8
GYA				sP	pwP	10 57 07.7	+1.6
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
P60A	Greenville	64.13	58	IAMs_20	IAMs_20	11 24 59.7	
	comp=Z,3µm,20.0s						
PAL	Palisades	64.17	56	P	P	10 56 50.8	+0.6
PAL				pmax	pmax		
	comp=Z,132nm,1.2s						
PAL				MLR	MLR		
	comp=Z,4µm,19.0s						
PAL	Palisades	64.17	56	P	P	10 56 50.8	+0.6
ARU	Arti	64.31	331c	iP	P	10 56 51.0	+0.1
ARU					PcP	10 57 24.0	-1.2
ARU					PP	10 59 10.4	-1.7
ARU				S	S	11 05 25.7	+0.4
ARU				*SS	sS	11 05 47.6	+1.1
ARU				pmax	pmax		
	comp=Z,15nm,0.8s						
ARU				MLR	MLR		
	comp=Z,6µm,17.0s						
ARU	Arti	64.31	331	P	P	10 56 49.8	-1.1
CBN	Corbin Frederi	64.36	60	P	P	10 56 53.2	+1.7
	baz=316						
KMSC	Kings Mountain	64.37	65	P	P	10 56 51.7	+0.1
	baz=316,SNR=13						
GOGA	Godfrey	64.39	68	P	P	10 56 51.6	-0.2
GOGA				pmax	pmax		
	comp=Z,47nm,1.2s						
GOGA				MLR	MLR		
	comp=Z,3µm,20.0s						
GOGA	Godfrey	64.39	68	P	P	10 56 50.9	-0.9
	baz=316						
GOGA	Godfrey	64.39	68	P	P	10 56 51.6	-0.2
GOGA	Godfrey	64.39	68	IAMs_20	IAMs_20	11 26 00.7	
	comp=Z,3µm,20.0s						
BRZS	Berezniki	64.52	319	eP	P	10 56 51.6	-0.8
	baz=319						
BRZS	Berezniki	64.52	319	eP	P	10 56 51.6	-0.8
KIRV	Kirov	64.94	337	P	P	10 56 55.0	0.0
	comp=Z,8.1nm,0.5s,baz=28,slow=12,SNR=5.3						
KIRV	Kirov	64.94	337c	eP	P	10 56 55.3	+0.3
KLMR	Klimovskoe	64.98	343	eP	P	10 56 53.0	-2.1
KLMR				e	PcP	10 57 27.5	-0.3
KLMR				pmax	pmax		
	comp=Z,23nm,1.1s						
KLMR	Klimovskoe	64.98	343	eP	P	10 56 53.1	-2.1
KLMR				AMP		10 57 12.7	
	comp=Z,23nm,1.1s						
KLMR				ePcP	PcP	10 57 27.6	-0.3
UNM	Universidad Na	65.08	90	IAMs_20	IAMs_20	11 23 37.6	
	comp=Z,2µm,19.0s						
AFI	Afiamalu	65.16	179	LR	LR	11 22 34.2	
	comp=Z,776nm,18.6s,baz=357,slow=33						
TDK	Taldyqorghan	65.86	313	eP	P	10 57 00.4	-0.9
	baz=312						
TDK	Taldyqorghan	65.86	313	eP	P	10 57 00.3	-0.9
FINES	FINESS Array B	66.36	350	P	P	10 57 03.3	-0.7
	comp=Z,4.8nm,0.8s,baz=1.9,slow=6.5,SNR=9.2						
FINES				LR	LR	11 31 16.3	
	comp=Z,1µm,18.0s,baz=80,slow=41						
FINES	FINESS Array B	66.36	350	i P	P	10 57 03.2	-0.8
FINES				pmax	pmax		
	comp=Z,5.0nm,0.8s						
FINES	FINESS Array B	66.36	350	P	P	10 57 04.2	+0.2
TAOE	Nuku Hiva Isla	66.47	144	eS	S	11 05 55.3	+2.7
	comp=Z,3µm,24.5s						
TAOE	Nuku Hiva Isla	66.47	144	eLR	LR	11 17 09.0	
	comp=Z,2µm,20.8s,baz=351						
NHSC	New Hope	66.50	66	P	P	10 57 06.5	+1.0
	baz=317						
PDGK	Podgornoye	66.63	311	P	P	10 57 05.8	-0.5
AKN	Aaknes	66.64	0	eP	P	10 57 07.0	+1.1
DOMB	Dombas	66.77	359	eP	P	10 57 06.0	-0.7
SHLS	Shalkode	66.78	311	eP	P	10 57 05.5	-1.7
	comp=Z,34nm,0.7s,baz=310						
SHLS	Shalkode	66.78	311	eP	P	10 57 05.5	-1.7
SHLS				pmax	pmax		
	comp=Z,34nm,0.7s						
KPKS	Kokpek	66.91	311	eP	P	10 57 07.8	-0.2
	baz=311						
KPKS	Kokpek	66.91	311	eP	P	10 57 07.8	-0.2
DAV	Davao City (W)	66.92	251	LR	LR	11 21 54.2	
	comp=Z,902nm,21.5s,baz=69,slow=32						
UZB	Uzynbulak	66.99	311	eP	P	10 57 06.5	-2.1
	comp=Z,96nm,3.9s,baz=311						
UZB	Uzynbulak	66.99	311	eP	P	10 57 06.5	-2.1
UZB				pmax	pmax		
	comp=Z,96nm,3.9s						
KMI	Kunming	67.28	282	⇑P	P	10 57 11.5	+0.7
KMI				pP	sP	10 57 26.4	-0.4
KMI				pmax	pmax		
	comp=Z,21nm,1.3s						
SATY	Saty	67.35	311	eP	P	10 57 10.5	-0.4
	comp=Z,35nm,1.8s,baz=311						
SATY	Saty	67.35	311	eP	P	10 57 10.5	-0.4
SATY				pmax	pmax		
	comp=Z,35nm,1.8s						
CHKK	Chushkaly	67.40	313	eP	P	10 57 09.4	-1.7
	baz=312						
QIZ	Qiongzhong	67.40	272	P	P	10 57 12.1	+0.8
QIZ				S	S	11 06 03.0	-0.8
QIZ				pmax	pmax		
	comp=Z,4µm,10.2s						
KUU	Kurty	67.67	313	eP	P	10 57 11.1	-1.6
	comp=Z,78nm,2.0s,baz=313						
KUU	Kurty	67.67	313	eP	P	10 57 11.1	-1.6
KUU				pmax	pmax		
	comp=Z,77nm,2.0s						
NB2	NORSAR Subarra	67.74	358	P	P	10 57 13.2	+0.3
	comp=Z,1.3nm,0.7s,baz=360,slow=6.5						
NB2	NORSAR Subarra	67.74	358	P	P	10 57 13.2	+0.3
	baz=360,slow=6.5						
NOA	NORSAR Array B	67.74	358	P	P	10 57 11.7	-1.2
	comp=Z,2.6nm,0.8s,baz=0.6,slow=6.2,SNR=6.9						
BTLS	Baital	67.80	315	eP	P	10 57 13.2	-0.4
	baz=315						
BTLS	Baital	67.80	315	eP	P	10 57 13.1	-0.4
MDOK	Medeo	67.90	312	eP	P	10 57 13.5	-0.9
	baz=312						
MDOK	Medeo	67.90	312	eP	P	10 57 13.5	-0.9
TNSS	Tian-Shan	68.05	312	eP	P	10 57 14.7	-1.0
	baz=312						
SKAR	Skarslia	68.14	359	eP	P	10 57 15.9	+0.4
TKM2	Tokmak 2	68.76	313	P	P	10 57 20.4	+0.6
	SNR=19						
TKM2	Tokmak 2	68.76	313	P	P	10 57 20.2	+0.4
SGDS	Sogindy	68.78	314	eP	P	10 57 18.6	-1.2
	comp=Z,38nm,1.8s,baz=314						
USP	Ospenovka	68.99	314	P	P	10 57 21.9	+0.8
	SNR=22						
CHMS	Chumysh	69.09	313	P	P	10 57 22.7	+1.0
	SNR=7.1						
KONO	Kongsberg	69.16	359	IAMs_20	IAMs_20	11 31 52.7	
	comp=Z,1µm,21.0s						
KBK	Karagaybulak	69.27	313	P	P	10 57 24.0	+1.0
	SNR=19						
MSVF	Nonsavu	69.40	189	LR	LR	11 26 28.6	
	comp=Z,2µm,18.1s,baz=330,slow=35						
MSVF	Nonsavu	69.40	189	IAMs_20	IAMs_20	11 27 20.8	
	comp=Z,3µm,21.0s						
DWPF	Disney Wildern	69.45	71	IAMs_20	IAMs_20	11 31 03.0	
	comp=Z,2µm,19.0s						
AAK	Ala-Archa	69.49	313	P	P	10 57 25.1	+0.9
	comp=Z,33nm,0.7s,baz=95,slow=2.8,SNR=49						
AAK	Ala-Archa	69.49	313	P	P	10 57 25.2	+0.9
	SNR=25						
AAK	Ala-Archa	69.49	313	P	P	10 57 24.5	+0.2
AAK	Ala-Archa	69.49	313	P	P	10 57 24.8	+0.6
AKTO	Aktyubinsk	69.58	328	P	P	10 57 24.5	0.0
	comp=Z,29nm,0.7s,baz=45,slow=7.2,SNR=48						
PMOR	Pomariorio Ree	69.77	154	eT	T	12 13 23.9	
	comp=Z,4.0nm,0.3s						
EKS2	Erkin-Say	69.79	314	P	P	10 57 27.0	+0.9
	SNR=20						
UCH	Uchtor	69.80	313	P	P	10 57 27.6	+1.1
	SNR=11						
AB31	Akbulak array	69.93	326	i P	P	10 57 26.8	+0.1
ABKAR	Akbulak array	69.93	326	P	P	10 57 26.7	0.0
ABKAR				IAmb	IAmb	10 57 45.4	
	comp=Z,36nm,1.1s						
ABKAR	Akbulak array	69.93	326	P	P	10 57 26.1	-0.6
MOS	Moscow	70.13	342	eP	P	10 57 26.2	-1.6
MOS				e	PcP	10 57 43.6	-5.9
MOS				pmax	pmax		
	comp=Z,27nm,0.8s						
AML	Almayashu	70.25	313	P	P	10 57 30.5	+1.3
	SNR=16						
LSA	Lhasa	70.77	294	IAMs_20	IAMs_20	11 30 53.3	
	comp=Z,2µm,20.0s						
KK31	Karatay Array	70.88	316	i P	P	10 57 32.5	-0.1
KK31	Karatay Array	70.88	316	P	P	10 57 32.6	-0.1
KK31				IAmb	IAmb	10 57 33.5	
	comp=Z,21nm,0.9s						
KKAR	Karatay Array	70.88	316	P	P	10 57 32.8	+0.1
KKAR				pmax	pmax		
	comp=Z,21nm,0.9s						
KKAR	Karatay Array	70.88	316	P	P	10 57 32.6	-0.1
KKAR				IAmb	IAmb	10 57 33.5	
	comp=Z,21nm,0.9s						
KKAR	Karatay Array	70.88	316	P	P	10 57 32.8	+0.1
OBN	Obninsk	70.92	343c	iP	P	10 57 31.5	-1.1
OBN				i		10 57 53.3	
OBN				pmax	pmax		
	comp=Z,18nm,1.0s						
OBN	Obninsk	70.92	343	IAMs_20	IAMs_20	11 33 12.7	
	comp=Z,3µm,18.0s						
BELG	Belogornoye	70.95	335	P	P	10 57 32.9	+0.1
	comp=Z,20nm,0.8s,baz=315,slow=2.8,SNR=8.6						
KSH	Kashi	71.25	310	P	P	10 57 39.0	+3.9
KSH				pP	sP	10 57 51.4	+0.2
KSH				sP	PcP	10 57 56.1	+1.3
KSH				pmax	pmax		
	comp=Z,80nm,1.1s						
KSH				pmax	pmax		
	comp=Z,690nm,6.9s						
KSH				LR	LR		
	comp=Z,2µm,17.0s						
KSH				LR	LR		
	comp=Z,4µm,17.2s						
KSH				LR	LR		
	comp=Z,4µm,17.9s						
PPT	Papeete	71.78	156	LR	LR	11 25 38.5	
	comp=Z,1µm,19.1s,baz=301,slow=33						
PPT2	Papeete2	71.80	156	eS	S	11 06 57.6	+2.2
	comp=Z,3µm,25.0s						
PPT2	Papeete2	71.80	156	eLR	LR	11 19 33.9	
	comp=Z,2µm,22.5s,baz=342						
IUG	Iuzhnay	71.86	316	eP	P	10 57 37.4	-1.3
	baz=316						
IUG	Iuzhnay	71.86	316	eP	P	10 57 37.4	-1.3
PABE	Paberze	72.41	350	IAMs_20	IAMs_20	11 33 24.9	
	comp=Z,3µm,18.0s						
LPSR	Galich'ya Gora	72.82	340	eP	P	10 57 42.5	-1.5
LPSR				e*PP	pwP	10 58 01.3	+0.1
LPSR				pmax	pmax		
	comp=Z,20nm,1.2s						
LPSR				MLR	MLR		
	comp=Z,2µm,14.0s						
MNK	Minsk	72.92	347	i P	P	10 57 43.7	-0.9
MNK				i	PcP	10 58 00.6	-0.8
MNK				i	PP	11 00 25.8	-0.6
MNK				i PPP	PPP	11 02 10.3	
MNK				i S	S	11 07 04.1	-3.2
MNK				i		11 07 46.6	
MNK				i SS	SS	11 11 47.4	+0.5
MNK				i SSS	SSS	11 15 08.1	
MNK				pmax	pmax		
	comp=E,2.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,28nm,1.0s						
MNK				pmax	pmax		
	comp=N,21nm,1.0s						
MNK				MLR	MLR		
	comp=Z,1µm,16.0s						
MNK				MLR	MLR		
	comp=E,85nm,17.0s						
MNK				MLR	MLR		
	comp=N,787nm,17.0s						
MNK	Minsk	72.92	347	i P	P	10 57 43.8	-0.8
	comp=E,2.0nm,0.9s						
MNK				i P	P	10 57 43.8	-0.8
	comp=N,21nm,1.0s						
MNK				i P	P	10 57 43.8	-0.8
	comp=Z,28nm,1.0s,baz=194						
MNK				i PcP	pwP	10 58 00.6	+0.1
MNK				i PP	PP	11 00 25.8	-0.6
MNK				i PPP	PPP	11 02 10.3	
MNK				i S	S	11 07 04.1	-3.2
MNK				i SS	SS	11 11 47.5	+0.6
MNK				i SSS	SSS	11 15 08.1	
MNK				i LR	LR	11 28 57.7	
MNK				i LRM	MLR	11 32 15.4	
	comp=Z,1µm,15.9s						
MNK				i LRM	MLR	11 32 32.6	
	comp=E,85nm,17.4s						
MNK				i LRM	MLR	11 32 35.5	
	comp=N,787nm,17.4s						
BTK	Batken	73.21	314	P	P	10 57 46.7	0.0
BTK				pmax	pmax		
	comp=Z,36nm,1.0s						
BTK	Batken	73.21	314	P	P	10 57 46.7	0.0
BTK				IAmb	IAmb	10 57 48.6	
	comp=Z,36nm,1.0s						
VRH	Novokhopyorsk	73.51	338	eP	P	10 57 47.2	-0.9
VRH				e*PP	PcP	10 58 04.0	0.0
VRH				pmax	pmax		
	comp=Z,40nm,1.0s						
VORR	Voronezh	73.64	340	P	P	10 57 46.0	-2.8
VORR				pmax	pmax		
	comp=Z,250nm,1.0s						
SUW	Suwalki	73.97	350	IAMs_20	IAMs_20	11 34 23.0	
	comp=Z,2µm,18.0s						
LIFNC	LIFOU	74.05	199	IAMs_20	IAMs_20	11 26 50.9	
	comp=Z,2µm,20.0s						
VSR	Storozhevoye	74.07	340	eP	P	10 57 50.8	-0.6
VSR				e*PP	pwP	10 58 09.1	+0.5
VSR				pmax	pmax		
	comp=Z,20nm,0.7s						
VSR				MLR	MLR		
	comp=Z,2µm,16.0s						
VORD	Divnogorie	74.28	339	eP	P	10 57 51.4	-1.2
VORD				e*PP	pwP	10 58 09.6	-0.2
VORD				pmax	pmax		
	comp=Z,30nm,0.7s						
TAPN	Taplejung	74.51	294	eP	P	10 57 55.7	+0.9
	comp=Z,141nm,1.1s						
CMAR	Chiang Mai Arr	74.59	280	P	P	10 57 55.4	+0.4
	comp=Z,4.2nm,0.7s,baz=28,slow=7.3,SNR=7.6						
CMAR				LR	LR	11 31 30.4	
	comp=Z,630nm,21.8s,baz=60,slow=36						
CMAR	Chiang Mai Arr	74.59	280	P	P	10 57 54.7	-0.3
CMAR	Chiang Mai Arr	74.59	280	P	P	10 57 54.7	-0.3
ODAN	Odare	75.07	294	eP	P	10 57 58.6	+0.7
CHGR	Chuyangaron	75.09	314	P	P	10 57 57.5	-0.2
GUN	Gumba	75.12	296	eP	P	10 57 58.8	+0.5
	comp=Z,251nm,1.3s						
JIRN	Jiri	75.14	296	eP	P	10 57 59.5	+1.1
	comp=Z,118nm,0.9s						
RAMN	Ramite	75.45	295	eP	P	10 58 00.8	+0.7
	comp=Z,47nm,0.6s						
DZM	Mont Dzumac	75.47	200	eS	S	11 07 36.8	+0.1
	comp=Z,944nm,24.9s						
DZM	Mont Dzumac	75.47	200	eLQ	LQ	11 18 09.0	

	comp=Z,2µm,32.5s						
DZM				eLR	LR	11 21 18.4	
	comp=Z,2µm,20.9s						
BBSR	BB Station	75.52	56	IAMs_20	IAMs_20	11 34 15.1	
	comp=Z,2µm,18.0s						
KKN	Kakani	75.55	296	eP	P	10 58 01.4	+0.8
	comp=Z,40nm,0.6s						
PKI	Pulchoki	75.64	296	eP	P	10 58 01.7	+0.4
	comp=Z,141nm,1.3s						
PKIN	Phulchoki	75.64	296	eP	P	10 58 01.8	+0.6
GKN	Gorkha	75.74	297	eP	P	10 58 02.1	+0.5
	comp=Z,78nm,0.8s						
DMN	Daman	75.78	296	eP	P	10 58 02.7	+0.7
	comp=Z,113nm,1.0s						
DANN	Dangsing	75.96	298	eP	P	10 58 03.7	+0.7
	comp=Z,141nm,0.9s						
AKASG	Malin Array Be	76.42	346	P	P	10 58 03.9	-1.0
	comp=Z,2.9nm,0.4s,baz=18,slow=5.8,SNR=15						
AKASG				LR	LR	11 36 38.6	
	comp=Z,2µm,19.1s,baz=25,slow=40						
AKBB	Malin Array Si	76.42	346	ceP	P	10 58 04.2	-0.7
KOLN	Koldanda	76.50	298	eP	P	10 58 06.5	+0.5
	comp=Z,84nm,1.1s						
PYUN	Piuthan	76.58	298	eP	P	10 58 07.1	+0.6
NIL	Nilore	77.25	308	P	P	10 58 10.3	+0.4
NIL				pmax	pmax		
	comp=Z,154nm,1.3s						
NIL	Nilore	77.25	308	P	P	10 58 10.3	+0.4
TBI	Tubuai	77.36	158	eS	S	11 07 59.3	+2.1
	comp=Z,1µm,28.2s						
TBI	Tubuai	77.36	158	eLR	LR	11 21 58.5	
	comp=Z,2µm,23.8s,baz=344						
CLL	Collm	77.42	356	i P	P	10 58 10.2	-0.3
CLL				i *PP	pP	10 58 22.7	+0.5
CLL				eS	S	11 07 56.0	-1.4
CLL				MLR	MLR		
	comp=Z,700nm,20.3s						
CLL	Collm	77.42	356	i P	P	10 58 10.2	-0.3
CLL				i PcP	pP	10 58 22.7	+0.5
CLL				i	PcP	10 58 27.8	+7.0
CLL				eS	S	11 08 03.0	+5.6
CLL				ePS	PnS	11 08 40.0	-0.9
CLL				eSS	SS	11 13 12.0	+17
CLL				eSSSS		11 18 42.0	
CLL				Lm	MLR	11 34 00.0	
	comp=N,900nm,21.4s						
CLL				Lm	MLR	11 34 00.0	
	comp=E,500nm,20.7s						
CLL				Lm	MLR	11 34 00.0	
	comp=Z,700nm,22.0s						
CLL				LmV		11 38 00.0	
	comp=Z,700nm,20.3s						
BRG	Berggiesshubel	77.81	356	i P	P	10 58 13.2	+0.5
BRG				Amp		10 58 14.0	
	comp=Z,9.7nm,0.9s						
CHVC	Chvalec	77.97	354	eP	P	10 58 13.0	-0.7
CHVC				ex	x	10 58 30.6	
CHVC				AMS	AMS	11 42 50.0	
	comp=Z,2µm,18.8s						
OSTC	Ostas	78.00	354	eP	P	10 58 12.9	-0.9
OSTC				AMS	AMS	11 43 00.0	
	comp=Z,1µm,17.3s						
LVV	L'vov	78.00	349	eP	P	10 58 19.3	+5.5
UPC	Upice	78.06	354	eP	P	10 58 14.5	+0.4
UPC				MLR	MLR		
	comp=Z,2µm,16.7s						
UPC	Upice	78.06	354	eP	P	10 58 14.5	+0.4
UPC				epP	sP	10 58 28.5	-1.8
UPC				AMS	AMS	11 43 10.0	
	comp=Z,2µm,16.7s						
DPC	Dobruska-Polom	78.19	354	eP	P	10 58 15.3	+0.4
DPC				e	sP	10 58 30.0	-1.1
DPC				eSS	SS	11 13 15.7	+8.7
DPC				MLR	MLR		
	comp=Z,1µm,18.3s						
DPC	Dobruska-Polom	78.19	354	eP	P	10 58 15.3	+0.4
DPC				epP	sP	10 58 30.0	-1.1
DPC				eSS	SS	11 13 15.7	+8.7
DPC				AMS	AMS	11 45 20.0	
	comp=Z,1µm,18.3s						
MEM	Membach	78.24	1	dP	P	10 58 16.0	+0.9
BCLA	Clavier	78.42	1	dP	P	10 58 15.9	-0.2
NKC	Novy Kostel	78.52	356	eP	P	10 58 17.2	+0.5
NKC				eSS	SS	11 13 15.0	+3.2
NKC				MLR	MLR		
	comp=Z,1µm,16.0s						
NKC	Novy Kostel	78.52	356	eP	P	10 58 17.2	+0.5
NKC				eSS	SS	11 13 15.0	+3.2
NKC				AMS	AMS	11 41 40.0	
	comp=Z,1µm,16.0s						
KBL	Kabul	78.53	312	P	P	10 58 16.7	-0.6
KBL				pmax	pmax		
	comp=Z,36nm,1.0s						
KBL	Kabul	78.53	312	P	P	10 58 16.7	-0.6
KBL				IAmb	IAmb	10 58 35.1	
	comp=Z,36nm,0.9s						
BMRD	Maredsous	78.53	1	dP	P	10 58 17.3	+0.6
PRU	Pruhonice	78.66	355	eP	P	10 58 17.5	+0.1
PRU				e	PcP	10 58 34.8	+8.5
PRU				MLR	MLR		
	comp=Z,1µm,17.9s						
PRU	Pruhonice	78.66	355	eP	P	10 58 17.5	+0.1
PRU				epP	pwP	10 58 34.8	0.0
PRU				eSS	SS	11 13 38.1	+24
PRU				AMS	AMS	11 39 30.0	
	comp=Z,1µm,17.9s						
MORC	Moravsky Berou	78.68	353	P	P	10 58 18.1	+0.5
MORC				pmax	pmax		
	comp=Z,12nm,1.1s						
MORC	Moravsky Berou	78.68	353	eP	P	10 58 17.4	-0.2
MORC	Moravsky Berou	78.68	353	P	P	10 58 18.1	+0.5
DOU	Dourbes	78.74	2	dP	P	10 58 18.1	+0.3
GOF	Gofitskoye	78.89	335⇑	eP	P	10 58 09.5	-9.3
GOF				pmax	pmax		
	comp=Z,82nm,0.8s						
KOLS	Kolonicke sedl	79.08	350	eP	P	10 58 19.8	0.0
KOLS	Kolonicke sedl	79.08	350	eP	P	10 58 19.8	0.0
KOLS				e		10 58 39.0	
GRFO	Grafenberg	79.10	357	P	P	10 58 19.9	0.0
GRFO				pmax	pmax		
	comp=Z,86nm,1.6s						
GRFO	Grafenberg	79.10	357	P	P	10 58 19.9	0.0
LANS	Liptovska Anna	79.14	352	eP	P	10 58 21.6	+1.4
LANS	Liptovska Anna	79.14	352	eP	P	10 58 21.6	+1.4
CRVS	Cervenica-Dubn	79.19	350	eP	P	10 58 20.3	-0.1
CRVS	Cervenica-Dubn	79.19	350	eP	P	10 58 20.3	-0.1
VRAC	Vranov	79.21	354	eP	P	10 58 20.7	+0.2
MTDJ	Mount Denham	79.26	74	IAMs_20	IAMs_20	11 39 17.0	
	comp=Z,1µm,20.0s						
UZH	Uzhgorod	79.37	350	eP	P	10 58 25.1	+3.8
UZH				eS	S	11 08 19.1	+0.7
UZH				ePS	PnS	11 09 25.5	+20
UZH				eSS	SS	11 13 35.1	+11
GTBY	Guantanamo Bay	79.40	71	IAMs_20	IAMs_20	11 35 21.5	
	comp=Z,2µm,21.0s						
KRUC	Moravsky	79.47	354	eP	P	10 58 21.6	-0.3
MAK	Makhachkala	79.55	331	eP	P	10 58 21.3	-1.1
MAK				ePPP	PPP	11 03 13.3	
MAK				eS	S	11 08 17.6	-2.8
MAK				eSS	SS	11 13 30.7	+3.2
MAK				eSSS	SSS	11 16 50.0	
MAK				pmax	pmax		
	comp=Z,395nm,2.0s						
KHC	Kasperske Hory	79.57	356	eP	P	10 58 22.7	+0.2
KHC				MLR	MLR		
	comp=Z,1µm,20.0s						
KHC	Kasperske Hory	79.57	356	eP	P	10 58 22.7	+0.2
KHC				epP	pwP	10 58 39.6	-0.2
KHC				ex	x	10 58 56.5	
KHC				eSS	SS	11 13 13.6	-14
KHC				AMS	AMS	11 44 40.0	
	comp=Z,1µm,20.0s						
JAVC	Velka Javorina	79.58	353	eP	P	10 58 23.7	+1.1
CKRC	Cesky Krumlov	79.84	355	eP	P	10 58 23.9	0.0
CKRC				eSS	SS	11 13 51.4	+20
GEC2	GERESS Array S	79.85	356	P	P	10 58 23.9	-0.1
GEC2				IAmb	IAmb	10 58 50.6	
	comp=Z,29nm,1.6s						
GERES	GERESS Array B	79.85	356	P	P	10 58 24.0	-0.1
	comp=Z,2.6nm,0.6s,baz=32,slow=5.2,SNR=14						
GERES	GERESS Array B	79.85	356	P	P	10 58 23.4	-0.7
GERES	GERESS Array B	79.85	356	P	P	10 58 23.4	-0.7
VYHS	Vyhne	79.85	352	eP	P	10 58 23.9	-0.1
VYHS	Vyhne	79.85	352	eP	P	10 58 23.9	-0.1
VYHS				e		10 58 42.3	
BUR08	Bucovina Ar. S	79.99	348	P	P	10 58 24.3	-0.5
KIV	Kislovodsk	80.00	335	eP	P	10 58 25.4	+0.4
KIV				pmax	pmax		
	comp=Z,15nm,1.0s						
BURAR	Bucovina Array	80.01	348	P	P	10 58 24.3	-0.7
KIS	Kishinev	80.08	345	eP	P	10 58 25.0	-0.2
KIS				eLR	LR	11 38 17.0	
	comp=Z,900nm,15.0s						
KIS	Kishinev	80.08	345	eP	P	10 58 25.0	-0.2
MODS	Modra-Piesok	80.09	353	eP	P	10 58 24.9	-0.4
MODS	Modra-Piesok	80.09	353	eP	P	10 58 24.9	-0.4
MODS				e		10 58 43.1	
KBZ	Khabaz	80.16	334	P	P	10 58 25.8	+0.2
	comp=Z,8.1nm,0.8s,baz=84,slow=2.0,SNR=13						
KBZ				LR	LR	11 40 27.7	
	comp=Z,1µm,18.0s,baz=36,slow=41						
KBZ	Khabaz	80.16	334	ceP	P	10 58 26.2	+0.5
KBZ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MILM	Milestii Mici	80.16	345	eP	P	10 58 28.0	+2.4
MTN	Manton Dam	80.25	235	P	P	10 58 26.8	+0.3
GEYT	Alibeck	80.34	321	P	P	10 58 25.4	-1.4
	comp=Z,12nm,1.0s,baz=37,slow=14,SNR=10						
GEYT				LR	LR	11 37 49.1	
	comp=Z,3µm,18.6s,baz=280,slow=38						
ANN	Anapa	80.52	339	eP	P	10 58 26.2	-1.4
ANN				e	PP	11 01 31.0	+0.6
ANN				eS	S	11 08 26.1	-4.5
ANN				e		11 08 43.6	
ANN				eSS	SS	11 13 44.0	+2.2
ANN				eSSS	SSS	11 17 06.9	
ANN				pmax	pmax		
	comp=N,4.0nm,0.7s						
ANN				pmax	pmax		
	comp=E,15nm,1.1s						
ANN				pmax	pmax		
	comp=Z,46nm,1.4s						
BFO	Black Forest	80.52	359	P	P	10 58 27.4	-0.2
BFO				pmax	pmax		
	comp=Z,28nm,1.4s						
BFO	Black Forest	80.52	359	P	P	10 58 27.4	-0.2
BFO				IAmb	IAmb	10 59 14.2	
	comp=Z,28nm,1.4s						
BFO				IAMs_20	IAMs_20	11 39 25.0	
	comp=Z,1µm,18.0s						
RAO	Raoul Island	80.54	184	LR	LR	11 25 55.5	
	comp=Z,994nm,21.4s,baz=338,slow=30						
CONA	Conrad Observa	80.64	354	eP	P	10 58 29.1	+0.8
	comp=Z,13nm,1.3s						
CLF	Chambon-Foret	80.75	3	IAMs_20	IAMs_20	11 37 55.9	
	comp=Z,2µm,20.0s						
ZEI	Tsey	80.75	333	eP	P	10 58 28.7	-0.5
ZEI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MOA	Molln	80.81	355	eP	P	10 58 28.9	-0.2
	comp=Z,1.8nm,0.7s						
SOC	Sochi	81.12	337	eP	P	10 58 29.8	-1.0
SOC				e	PP	11 01 41.2	+5.7
SOC				ePPP	PPP	11 03 23.8	
SOC				eS	S	11 08 36.2	-0.7
SOC				eSS	SS	11 13 55.0	+4.1
SOC				eSSS	SSS	11 17 11.5	
SOC				pmax	pmax		
	comp=Z,17nm,0.7s						
SOC				MLR	MLR		
	comp=Z,1µm,21.0s						
RETA	Reutte	81.32	357	eP	P	10 58 34.8	+2.8
	comp=Z,9.9nm,1.1s						
ARSA	Arzberg	81.33	354	eP	P	10 58 32.2	+0.2
	comp=Z,6.0nm,0.8s						
WATA	Walderalm	81.44	357	eP	P	10 58 33.0	+0.3
	comp=Z,14nm,1.2s						
MOTA	Moosalm	81.45	357	eP	P	10 58 33.0	+0.3
	comp=Z,15nm,1.7s						
WTTA	Wattenberg	81.51	357	eP	P	10 58 34.1	+1.0
	comp=Z,9.9nm,0.9s						
DAVA	Damuels	81.54	358	eP	P	10 58 33.3	+0.1
	comp=Z,8.2nm,1.1s						
SQTA	Sankt Quirin	81.57	357	eP	P	10 58 33.9	+0.5
	comp=Z,15nm,1.5s						
KBA	Koelnbreinsper	81.63	356	i P	P	10 58 34.2	+0.5
	comp=Z,18nm,0.8s,SNR=14						
HRA	Herat	81.70	317	P	P	10 58 34.4	0.0
FETA	Feichten	81.78	357	eP	P	10 58 34.8	+0.3
	comp=Z,21nm,1.9s						
SOKA	Soboth	81.94	354	i P	P	10 58 35.7	+0.5
	comp=Z,16nm,1.5s,SNR=8.7						
MLR	Muntele Rosu	81.99	347	IAMs_20	IAMs_20	11 41 35.4	
	comp=Z,2µm,18.0s						
ABTA	Abfaltersbach	81.99	356	eP	P	10 58 35.9	+0.4
	comp=Z,7.2nm,1.1s						
MYKA	Terra Mystica	82.06	355	eP	P	10 58 36.5	+0.7
	comp=Z,6.2nm,1.1s						
GROS	Grobnik	82.12	354	i P	P	10 58 36.1	-0.1
OBKA	Obir	82.13	355	i P	P	10 58 36.7	+0.4
	comp=Z,9.4nm,1.0s,SNR=4.9						
TUE	Stuetta	82.36	358	IAMs_20	IAMs_20	11 37 48.8	
	comp=Z,1µm,20.0s						
SDDR	Presa de Saban	82.38	69	IAMs_20	IAMs_20	11 36 03.4	
	comp=Z,2µm,20.0s						
SENIN	Lac Senin/Sane	82.49	360	IAMs_20	IAMs_20	11 42 33.2	
	comp=Z,1µm,19.0s						
VNDS	Vrh nad Dolski	82.53	355	eP	P	10 58 37.6	-0.6
JAVS	Javornik	82.77	355	i P	P	10 58 38.5	-1.1
GNI	Garni	82.95	332	ceP	P	10 58 41.8	+1.1
GNI				pmax	pmax		
	comp=Z,24nm,1.7s						
BNI	Bardonecchia	83.80	0	P	P	10 58 45.8	+0.8
BNI				pmax	pmax		
	comp=Z,69nm,1.5s						
BNI				MLR	MLR		
	comp=Z,1µm,20.0s						
BNI	Bardonecchia	83.80	0	P	P	10 58 45.8	+0.8
BNI				IAMs_20	IAMs_20	11 39 23.9	
	comp=Z,1µm,20.0s						
WB0	Warramunga Arr	84.56	229	P	P	10 58 47.3	-1.5
WR0	Warramunga Arr	84.66	229	P	P	10 58 49.2	-0.1
WR0				IAmb	IAmb	10 59 06.5	
	comp=Z,18nm,1.2s						
WRAB	Tennant Creek	84.73	229	ceP	P	10 58 50.2	+0.5
WRAB				pmax	pmax		
	comp=Z,30nm,1.7s						
WRAB	Tennant Creek	84.73	229	P	P	10 58 50.7	+1.0
WRAB				IAmb	IAmb	10 58 54.3	
	comp=Z,18nm,1.1s						
WB2	Warramunga Arr	84.73	229	P	P	10 58 49.8	0.0
WB2				IAmb	IAmb	10 59 07.0	
	comp=Z,21nm,1.2s						
WRA	Warramunga Arr	84.74	229	P	P	10 58 48.9	-0.9
	comp=Z,4.2nm,0.9s,baz=30,slow=5.6,SNR=22						
WRA	Warramunga Arr	84.74	229	i P	P	10 58 49.2	-0.5
WRA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
WRA	Warramunga Arr	84.74	229	P	P	10 58 49.3	-0.5
PGAV	Gavieira, Arco	85.94	11	eLR	LR	11 28 31.6	
	comp=Z,999nm,18.0s						
SJG	San Juan	86.04	66	LR	LR	11 38 22.9	
	comp=Z,691nm,19.6s,baz=318,slow=36						
SJG	San Juan	86.04	66	IAMs_20	IAMs_20	11 38 00.1	
	comp=Z,1µm,21.0s						
BR131	Keskin Array S	86.20	340	P	P	10 58 57.1	0.0
BR131				pmax	pmax		
	comp=Z,29nm,1.1s						
BR131	Keskin Array S	86.20	340	P	P	10 58 57.1	0.0
BR131				IAmb	IAmb	10 59 18.4	
	comp=Z,29nm,1.1s						
BRTR	Keskin Array B	86.20	340	P	P	10 58 56.9	-0.2
	comp=Z,5.3nm,0.9s,baz=37,slow=3.1,SNR=16						
BRTR	Keskin Array B	86.20	340	i P	P	10 58 57.7	+0.6
BRTR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
STIP	Stip	86.22	349	i P	P	10 58 57.4	+0.4
PBRG	Braganca	86.28	10	eP	P	10 58 58.2	+0.8
	comp=Z,44nm,1.6s						
RDO	Rodhopi	86.31	346	P	P	10 58 57.8	+0.4
NVR	Nevrokopi	86.35	347	P	P	10 58 58.2	+0.5
VAY	Valandovo	86.54	348	i P	P	10 58 59.6	+1.0
POLO	Lamas de Olo	86.59	11	eP	P	10 58 59.3	+0.4
SRS	Serrai	86.61	348	P	P	10 58 58.9	-0.1
KNT	Kendrikon	86.66	348	P	P	10 59 00.1	+0.9
PVRL	Vila Real	86.69	11	eP	P	10 59 00.1	+0.7
TIR	Tirane	86.83	350	IAMs_20	IAMs_20	11 41 41.3	
	comp=Z,1µm,20.0s						
MVO	Moncorvo	86.88	11	eP	P	10 59 00.7	+0.4
	comp=Z,42nm,1.7s						
MVO	Moncorvo	86.88	11	eS	S	11 09 39.1	+4.1
MVO	Moncorvo	86.88	11	eLR	LR	11 28 55.9	
	comp=Z,1µm,18.0s						
GRG	Griva	86.92	348	P	P	10 59 01.3	+0.8
OHR	Ohrid	86.96	350	i P	P	10 59 01.3	+0.6
FNA	Florina	87.22	349	P	P	10 59 01.6	-0.4
PVIS	Viseu	87.22	11	eP	P	10 59 02.2	+0.2
	comp=Z,26nm,1.6s						
FITZ	Fitzroy Crossi	87.50	237	P	P	10 59 03.5	+0.2
	comp=Z,7.4nm,0.9s,baz=3.1,slow=3.7,SNR=8.9						
FITZ				LR	LR	11 34 55.0	
	comp=Z,406nm,19.6s,baz=22,slow=33						
FITZ	Fitzroy Crossi	87.50	237	P	P	10 59 03.1	-0.2
MTE	Manteigas	87.58	11	eS	S	11 09 50.9	+9.2
MTE	Manteigas	87.58	11	eLR	LR	11 29 09.8	
	comp=Z,899nm,18.0s						
MTE	Manteigas	87.58	11	IAMs_20	IAMs_20	11 41 18.6	
	comp=Z,1µm,18.0s						
COI	Coimbra	87.66	12	IAMs_20	IAMs_20	11 44 18.8	
	comp=Z,1µm,20.0s						
PCAS	Casmilo, Conde	87.80	12	eP	P	10 59 04.8	+0.1
	comp=Z,36nm,1.9s						
SABA	Saba	88.07	64	IAMs_20	IAMs_20	11 39 23.0	
	comp=Z,1µm,21.0s						
PCBR	Castelo Branco	88.14	11	eP	P	10 59 06.2	-0.1
AS31	Alice Springs	88.15	227	P	P	10 59 06.4	0.0
ASAR	Alice Springs	88.15	227	P	P	10 59 06.9	+0.5
	comp=Z,9.9nm,0.9s,baz=32,slow=4.9,SNR=78						
ASAR				LR	LR	11 40 17.0	
	comp=Z,517nm,18.2s,baz=14,slow=37						
ASAR	Alice Springs	88.15	227	P	P	10 59 06.4	0.0
ASAR	Alice Springs	88.15	227	P	P	10 59 06.4	0.0
PSBE	So Bento	88.29	12	eP	P	10 59 07.5	+0.4
	comp=Z,55nm,1.8s						
PMRV	Marv??o	88.55	11	eP	P	10 59 08.8	+0.5
	comp=Z,31nm,1.6s						
PMRV	Marv??o	88.55	11	eS	S	11 09 54.7	+3.8
PMRV	Marv??o	88.55	11	eLR	LR	11 30 19.2	
	comp=Z,985nm,18.0s						
IGT	Igoumenitsa	88.58	350	P	P	10 59 04.8	-3.6
ESDC	Sonseca Array	88.67	8	P	P	10 59 08.8	-0.1
	comp=Z,2.9nm,0.9s,baz=341,slow=4.8,SNR=12						
ESDC	Sonseca Array	88.67	8	P	P	10 59 09.2	+0.3
ESDC				IAmb	IAmb	10 59 34.5	
	comp=Z,11nm,1.1s						
ISP	Isparta	88.67	342	IAMs_20	IAMs_20	11 46 06.0	
	comp=Z,1µm,18.0s						
EVR	Evrytania	89.01	349	P	P	10 59 11.2	+0.6
PESTR	Estremoz	89.08	11	eP	P	10 59 10.7	-0.1
	comp=Z,31nm,1.6s						
HATO	Hato, Curacao	89.11	72	IAMs_20	IAMs_20	11 42 10.7	
	comp=Z,2µm,19.0s						
VSL	Villasalto	89.33	358	IAMs_20	IAMs_20	11 44 57.3	
	comp=Z,1µm,20.0s						
KLV	Kalavryta, Ach	89.83	348	P	P	10 59 13.6	-0.8
URZ	Urewera	89.83	188	IAMs_20	IAMs_20	11 39 25.4	
	comp=Z,2µm,20.0s						
PBAR	Barrancos	89.83	11	eP	P	10 59 14.6	+0.3
	comp=Z,42nm,1.5s						
GUR	Goura	89.91	348	P	P	10 59 12.9	-1.9
DRO	Drossia	89.97	348	P	P	10 59 15.8	+0.8
PVAQ	Vaqueiros	90.51	12	eS	S	11 10 17.6	+8.5
PVAQ	Vaqueiros	90.51	12	eLR	LR	11 35 24.1	
	comp=Z,989nm,18.0s						
SDV	Santo Domingo	90.70	75	IAMs_20	IAMs_20	11 41 41.2	
	comp=Z,978nm,20.0s						
STKA	Stephens Creek	92.13	217	P	P	10 59 25.2	+0.4
	comp=Z,4.2nm,0.8s,baz=334,slow=8.9,SNR=7.4						
STKA				LR	LR	11 35 55.5	
	comp=Z,1µm,21.5s,baz=352,slow=32						
STKA	Stephens Creek	92.13	217	P	P	10 59 25.8	+1.1
MMAI	Mount Meron Ar	92.20	336	P	P	10 59 25.5	0.0
	comp=Z,0.6nm,0.2s,baz=352,slow=5.1,SNR=6.7						
UOSS	Minazif	92.47	317	IAMs_20	IAMs_20	11 43 03.6	
	comp=Z,1µm,22.0s						
ASF	Jabal al Asfar	92.61	335	P	P	10 59 27.4	0.0
	comp=Z,6.9nm,1.0s,baz=350,slow=5.4,SNR=5.8						
WSAR	Wadi Sarin	92.89	314	P	P	10 59 28.8	+0.1
	comp=Z,12nm,0.8s,baz=44,slow=4.6,SNR=8.0						
PMOZ	Porto Moniz, M	93.36	20	eLR	LR	11 31 49.9	
	comp=Z,759nm,18.0s						
GRGR	Grenville	93.40	66	IAMs_20	IAMs_20	11 43 04.1	
	comp=Z,1µm,20.0s						
PTGA	Pitinga	104.73	72	IAMs_20	IAMs_20	11 48 00.7	
	comp=Z,1µm,21.0s						
TORD	Torodi Ar. Bea	115.44	6	PKP	PKPdf	11 04 58.0	+0.5
	comp=Z,0.3nm,0.7s,baz=344,slow=2.7,SNR=1.9						
TORD				PKKPab	PKKPab	11 15 36.5	-2.8
	comp=Z,1.0nm,0.7s,baz=187,slow=2.7,SNR=5.7						
TORD				PKKP	PKKPdf	11 15 50.3	-1.9
	comp=Z,1.6nm,0.7s,baz=178,slow=3.0,SNR=7.0						
TORD	Torodi Ar. Bea	115.44	6		PKiKP	11 04 55.9	-1.7
LODK	Lodwar	120.17	327	IAMs_20	IAMs_20	12 02 22.8	
	comp=Z,1µm,21.0s						
KMBO	Kilima Mbogo	123.70	323	IAMs_20	IAMs_20	12 08 48.7	
	comp=Z,1µm,18.0s						
KIBK	Kibwezi	124.51	321	IAMs_20	IAMs_20	12 05 58.7	
	comp=Z,723nm,20.0s						
QSPA	South Pole Qui	141.28	180		PKPdf	11 05 44.5	-0.3
MAW	Mawson	148.82	218	PKPbc	PKPbc	11 06 01.8	+0.2
	comp=Z,6.2nm,0.7s,baz=67,slow=2.9,SNR=9.4						
MAW	Mawson	148.82	218		PKiKP	11 06 02.4	-0.5
BOSA	Boshof	153.34	322	PKPbc	PKiKP	11 06 13.9	+0.2
	comp=Z,1.7nm,0.6s,baz=53,slow=3.5,SNR=1.4						
BOSA				PKPab	pPKPbc	11 06 26.4	+0.6
	comp=Z,11nm,0.9s,baz=24,slow=3.5,SNR=6.1						
VNA2	Neumayer--Watz	159.45	167	PKPdf	PKPdf	11 06 12.8	+0.3
VNA1	Neumayer--Stat	159.56	165	PKPdf	PKPdf	11 06 15.1	+2.5

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*ISK **08** 10:51:42.5, 41°.74N×31°.92E, h8^{km}, ML3.5/25*
*CFUSG **08** 10:51:43.4, 41°.78N×31°.79E, h10^{km}, mb2.8/2, MD3.2/2,*
Black Sea Magtype MSH 2.9 from 2 stations
*DDA **08** 10:51:44.3, 41°.65N×31°.92E, h5^{km}±1^{km}, MW3.5*
ISC 08 10:51:43.7±1.0**, 41°.67N**±0°.02×**31°.94E**±0°.02**, h16**^{km}±9^{km}**,**
n87, σ1^{s}25/122**, 19C-18D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDZE	Karadeniz Ereo	0.52	227	PG	Pb	10 51 54.6	+0.1
KDZE				SG	Sb	10 52 02.1	+0.4
DEVR	Zonguldak/Devr	0.53	178	i P	Pb	10 51 54.7	0.0
DEVR				i S	Sg	10 52 01.7	+0.4
KURC	Kurucasile-Bar	0.62	73	PG	Pg	10 51 55.1	-0.9
KURC				SG	Sg	10 52 04.0	-0.3
KBUK	KARABUK-Merkez	0.67	130	i P	Pg	10 51 56.9	0.0
KBUK				i S	Sg	10 52 05.5	-0.3
SAFT	Safranbolu	0.71	127	PG	Pg	10 51 57.0	-0.5
CIDE	Kastamonu/Cide	0.78	74	i P	Pb	10 51 58.9	0.0
CIDE				i S	Sb	10 52 10.0	+0.7
YIGI	Dzce	0.80	208	i P	Pg	10 51 58.9	-0.4
YIGI				i S	Sg	10 52 08.5	-1.3
BCAM	Yenicaga	0.86	174	i P	Pg	10 52 00.4	0.0
BCAM				i S	Sg	10 52 11.2	-0.6
GRDE	Gerede-Bolu	0.89	167	PG	Pb	10 52 01.4	+0.5
PELI	Kastamonı-Ara	1.09	109	i P	Pb	10 52 04.4	+0.1
PELI				i S	Sn	10 52 19.4	+0.1
SAHE	Sakarya_HENDEK	1.16	226	i P	Pb	10 52 04.8	-0.6
SAHE				i S	Sb	10 52 20.1	0.0
CMDR	Camlidere-ANKA	1.24	161	i P	Pg	10 52 07.7	0.0
CMDR				i S	Sg	10 52 24.3	+0.4
YUVA	Yuva-Kibriscik	1.29	189	PN	Pg	10 52 08.5	-0.1
BTAS	Taskesti	1.31	213	i P	Pn	10 52 07.2	-0.2
BTAS				i S	Sn	10 52 25.4	+0.8
MDUB	Mudurnu	1.32	205	PN	Pg	10 52 09.0	-0.2
KAYN	Sakarya, Kayna	1.40	240	i P	Pn	10 52 08.4	-0.2
KAYN				i S	Sn	10 52 25.2	-1.4
KMON	Kastamonu	1.41	101	PN	Pb	10 52 09.9	+0.1
KAST	KASTAMONU	1.50	96	i P	Pn	10 52 09.6	-0.5
SAUV	Serdivan-Sakar	1.53	233	PN	Pn	10 52 11.1	+0.7
BZK	Bozkurt	1.57	79	PN	Pb	10 52 11.9	-0.5
ELDT	Eldivan	1.63	136	i P	Pg	10 52 14.5	-0.5
ELDT				i S	Sg	10 52 35.8	-0.4
GULT	Gulveren	1.64	222	PN	Pb	10 52 13.2	-0.5
CANT	Cankiri	1.65	129	PN	Pb	10 52 13.7	-0.2
GEYV	SAKARYA_Geyve	1.72	227	i P	Pn	10 52 14.0	+1.0
GEYV				i S	Sb	10 52 36.7	+0.4
SILT	Sile	1.81	254	PN	Pn	10 52 14.7	+0.5
LOD	Lodumlu	1.89	160	PN	Pb	10 52 17.1	-0.7
ANTO	Ankara	1.91	160	PN	Pn	10 52 17.2	+1.5
HRT	Hereke	1.91	244	PN	Pn	10 52 16.8	+1.1
KAGI	orum-Kargı	1.98	105	i P	Pb	10 52 20.0	+0.6
KAGI				i S	Sg	10 52 47.4	0.0

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BOYA  Sinop/Boyabat-     2.06  93 i P    Pb     10 52 20.9 +0.2
BOYA                              i S    Sg     10 52 48.9 -1.0
ADVT  Abdulvahap         2.07 234   PN   Pn     10 52 19.3 +1.4
BORA  Eskisehir          2.12 213 i P    Pn     10 52 19.1 +0.5
BORA  Eskisehir          2.12 213   PN   Pn     10 52 19.2 +0.7
CAVI  Cavuskoy           2.16 228   PN   Pn     10 52 20.5 +1.4
BILE  Bilecik/Merkez     2.17 227 i P    Pn     10 52 20.5 +1.1
BILE                              i S    Sb     10 52 49.0 -0.5
KLYT  Kilyos             2.22 260   PN   Pn     10 52 20.4 +0.5
YLV   Yalova             2.23 241   PN   Pn     10 52 21.4 +1.3
DELI  KIRIKKALE          2.25 137 i P    Pn     10 52 21.8 +1.5
ISK   Istanbul-Kandi     2.25 255   PN   Pn     10 52 20.8 +0.5
KAVV  Kandilli-Istan     2.25 255   PN   Pn     10 52 20.6 +0.3
AUBOZ BOZOYUK            2.28 220 i P    Pb     10 52 23.6 -0.9
AUBOZ BOZOYUK            2.28 220   PN   Pn     10 52 22.8 +2.0
SGAZ  Eskisehir, Sey     2.30 202 i P    Pg     10 52 27.5 -0.3
SGAZ                              i S    Sg     10 52 58.3 +0.7
BBAL  Bala               2.31 157 i P    Pb     10 52 26.2 +1.2
BR131 Keskin Array S     2.33 146   P    Pg     10 52 27.7 -0.8
      SNR=15
TRML  Termal-Yalova      2.34 244   PN   Pn     10 52 22.6 +1.0
AFSR  Afar-Bala (An      2.38 158   PN   Pn     10 52 23.9 +1.7
CTAK  Corum_Osmancik     2.38 114 i P    Pb     10 52 27.5 +1.1
GEMT  Gemlik             2.42 240   PN   Pn     10 52 23.4 +0.8
BGKT  Bogazkoy           2.43 259   PN   Pn     10 52 23.4 +0.6
SINO  SINOP_Merkez       2.46  81 i P    Pb     10 52 28.5 +1.0
IGD   Bursa              2.50 237 i P    Pn     10 52 24.3 +0.4
IGD                               i S    Sn     10 52 54.8 +0.8
KKUL  Konya-Kulu         2.60 163 i P    Pg     10 52 32.9 -0.7
KKUL                              i S    Sg     10 53 10.1 +2.7
ULDT  Uludag             2.62 235 i P    Pn     10 52 26.0 +0.5
CTKS  Kestanelik-??a     2.62 262   PN   Pn     10 52 26.2 +0.8
COAL  Corum-Alaca        2.70 121 i P    Pb     10 52 29.9 -1.9
CDAG  Cicekdag           2.76 137 i P    Pb     10 52 31.0 -1.7
KALB  Balgarevo          3.13 305 ⇑P     Pn     10 52 33.7 +1.3
KALB                              ⇑S     Sn     10 53 09.4 -0.1
SEV   Sevastopol'        3.14  23 eP     Pg     10 52 43.8 -0.1
SEV   Sevastopol'        3.14  23 eP     Pn     10 52 32.0 -0.5
SEV                                 Pm          10 52 44.5
      comp=Z,3.0nm,0.2s
SEV                               i S    Sn     10 53 09.0 -0.7
SEV                                 Sm          10 53 11.0
      comp=N,14nm,0.3s
SEV                                 Sm          10 53 11.0
      comp=E,15nm,0.3s
SEV   Sevastopol'        3.14  23 eP     Pg     10 52 43.8 -0.1
SEV                                 Pm          10 52 52.5
      comp=Z,17nm,0.5s
SEV                               i S    Sg     10 53 29.9 +5.3
SEV                                 Sm          10 53 31.8
      comp=N,85nm,0.5s
SEV                                 Sm          10 53 31.8
      comp=E,93nm,0.5s
YAL   Yalta              3.25  29 i S    Sn     10 53 10.8 -1.6
YAL                                 Sm          10 53 13.3
      comp=N,69nm,0.2s
YAL                                 Sm          10 53 13.3
      comp=E,120nm,0.4s
MANR  Mangalia           3.27 312 ⇓P     Pn     10 52 35.1 +0.7
MANR                              ⇑S     Sn     10 53 12.1 -0.8
EFOR  EFORIE             3.42 316 ⇑P     Pn     10 52 37.4 +0.9
EFOR                              ⇓S     Sn     10 53 16.4 -0.2
ALU   Alushta            3.51  30 i S    Sn     10 53 17.5 -1.2
ALU                                 Sm          10 53 20.2
      comp=N,25nm,0.3s
ALU                                 Sm          10 53 20.2
      comp=E,16nm,0.4s
MFTR  Murfatlar          3.60 315 ⇓P     Pn     10 52 39.5 +0.6
MFTR                              ⇑S     Sn     10 53 20.3 -0.8
SIM   Simferopol'        3.64  25 eS     Sn     10 53 21.8 -0.3
SIM                                 Sm          10 53 26.3
      comp=N,23nm,0.4s
SIM                                 Sm          10 53 26.3
      comp=E,33nm,0.5s
TIRR  Tirgusor           3.80 318 ⇓P     Pn     10 52 41.9 +0.2
JURR  Jurilovca          3.82 325 ⇑P     Pn     10 52 41.3 -0.6
TLBR  Topalu             4.05 317 ⇑P     Pn     10 52 45.6 +0.6
TPGR  Topolog            4.09 322 ⇓P     Pn     10 52 45.3 -0.4
TPGR                              ⇓S     Sn     10 53 30.4 -2.9
TLCR                     4.19 328 ⇓P     Pn     10 52 46.7 -0.3
TLCR                              ⇓S     Sn     10 53 34.4 -1.1
HARR  Harsova            4.21 317 ⇓P     Pn     10 52 47.6 +0.4
CFR   Carcaliu           4.47 323 ⇓P     Pn     10 52 50.5 -0.3
CFR                               ⇓S     Sn     10 53 39.5 -2.9
ISR   Istrita            5.23 313 ⇓P     Pn     10 53 03.0 +1.7
ISR                               ⇑S     Sn     10 54 04.1 +2.8
ISR   Istrita            5.23 313 ⇓P     Pn     10 53 03.0 +1.7
NEHR  Nehoiu             5.56 314 ⇓P     Pn     10 53 08.1 +2.2
MLR   Muntele Rosu       5.79 313 ⇑P     Pn     10 53 10.3 +1.2
MLR   Muntele Rosu       5.79 313 ⇑P     Pn     10 53 10.3 +1.2
COVR  Voineasa-Covas     5.89 317 ⇑P     Pn     10 53 11.7 +1.3
COVR                              ⇑S     Sn     10 54 16.3 -1.2
VOIR                     6.26 309 ⇑P     Pn     10 53 17.1 +1.6
VOIR                              ⇑S     Sn     10 54 26.1 -0.7
VOIR                     6.26 309 ⇑P     Pn     10 53 17.1 +1.6
DOPR  Dopca              6.40 314 ⇑S     Sn     10 54 27.3 -2.7
ARR   Arges              6.47 307 ⇑P     Pn     10 53 19.3 +1.0
ARR                               ⇓S     Sn     10 54 30.6 -1.3
LOT   Lotru              7.04 305 ⇑P     Pn     10 53 27.3 +1.2
LOT                               ⇓S     Sn     10 54 43.7 -2.1
GZR   Gura Zlata         7.63 302 ⇓P     Pn     10 53 35.7 +1.5
GZR                               ⇑S     Sn     10 54 56.0 -4.3
GZR   Gura Zlata         7.63 302 ⇓P     Pn     10 53 35.7 +1.5
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IDC ***08*** *10:53:30.3±2.8, 6.°96N×94.°62E, h21km±17km, mb4.2/27, mb1 4.3/30, mb1mx4.2/56, mbtmp4.4/30, ML4.2/3, MS4.4/4, Ms1 4.4/4, ms1mx4.1/52, Error ellipse: s-maj=18.0km s-min=10.6km az=56.0*

NEIC ***08*** *10:53:31.8±1.9, 7.°04N±0.°08×94.°7E±0.°1, h20km±4km, mb4.9/44, Error ellipse: s-maj=15.4km s-min=10.3km az=61.0*

GCMT ***08*** *10:53:33.8±0.4, 7.°01N×94.°64E, h15km, MW5.1/65, Moment Tensor Solution. s5,c7; s65,c98; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.47±.23; $M_{\theta\theta}$-3.07±.16; $M_{\phi\phi}$3.55±.18; $M_{r\theta}$-3.12±.63; $M_{\theta\phi}$0.20±.17; $M_{\phi r}$-2.21±.69; Best double couple: $M_0$5.06300×10^{16} NP1:ϕ_s141.00000°, δ42.00000°, λ-174.00000°. NP2: ϕ_s46.00000°, δ86.00000°, λ-49.00000°. Principal axes: T 4.8380, Plg29.0000°, Azm104.0000°; N 0.4540, Plg41.0000°, Azm222.0000°; P -5.2870, Plg35.0000°, Azm351.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BJI ***08*** *10:53:34.1±0.0, 7.°00N×94.°76E, h47km, mB5.5/11, mb4.5/28, Ms5.1/8, Ms7 5.0/8*

DJA ***08*** *10:53:43.7±0.4, 7°N±4°×9°6E±°, h46km±6km, M4.9/18, mB5.6/1, mb4.8/18, MLv4.9/6, Mw(mB)5.2/1*

KLM ***08*** *10:53:56, 6.°95N×96.°67E, h10km, mb4.9*

ISC 08 10:53:31.6±0.3**, 6.°95N**±0.°06×**94.°66E**±0.°06**, h26km, n167,** σ**1.°49**/168**, mb4.7**/68**, 1C, Nicobar Islands region**

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Code  Station Name        Δ°   AZ°   Phase ID          Time    Res
                                  Op     ISC         h  m  s   ISC
LHMI  Lhok Sumawe        2.84 127 P      Pn     10 54 15.5 +0.1
LHMI  Lhok Sumawe        2.84 127 Pn     Pn     10 54 15.8 +0.5
TPTI                     4.44 145 P      Pn     10 54 39.4 +2.1
PBA   Port Blair         5.05 338 eP     Pn     10 54 47.8 +2.1
TSI   Tuntungan          5.18 131 P      Pn     10 54 48.0 +0.5
PSI   Prapat             5.92 134 Pn     Pn     10 54 58.7 +1.0
      5.1nm,0.3s,baz=320,slow=12,SNR=17
PSI                               LR     LR     10 57 43.6
      comp=Z,2µm,21.3s,baz=291,slow=42
GSI   Gunungsitoli       6.31 152 P      Pn     10 55 06.2 +3.1
      0.6nm98nm,0.8s
GSI   Gunungsitoli       6.31 152 Pn     Pn     10 55 05.0 +1.9
DGPR  DIGLIPUR           6.42 345 eP     Pn     10 55 07.2 +2.6
MNSI  Mandailing Nat     7.84 141 P      Pn     10 55 24.1 +0.1
      0.8nm42nm,0.6s
JRMM  Jerantut           8.36 111 P      Pn     10 55 30.0 -1.1
BKNI  Bangkinang         9.15 136 P      Pn     10 55 43.0 +0.9
      165nm,0.5s
BKNI  Bangkinang         9.15 136 Pn     Pn     10 55 43.0 +0.9
PDSI  Padang             9.72 143 P      Pn     10 55 48.5 -1.4
      3µm20nm,0.6s
CM31  Chiang Mai Arr    12.18  20 Pn     Pn     10 56 24.4 +0.8
CMAR  Chiang Mai Arr    12.18  20 Pn     Pn     10 56 24.2 +0.6
      0.8nm,0.3s,baz=210,slow=14,SNR=8.5
CMAR                              LR     LR     11 00 46.2
      comp=Z,1µm,18.8s,baz=252,slow=36
CMAR  Chiang Mai Arr    12.18  20        Pn     10 56 23.7 +0.1
DSRI  Dabo              12.34 126 P      Pn     10 56 27.2 +1.4
      13nm,1.1s
CHTO  Chiang Mai        12.51  19 Pn     Pn     10 56 29.1 +1.0
PALK  Pallekele         13.85 272 Pn     Pn     10 56 44.5 -1.9
      0.7nm,0.3s,baz=39,slow=6.5,SNR=1.6
PALK                              Sn     Sn     10 59 07.6  -12
      2.2nm,0.3s,baz=282,slow=20,SNR=1.4
PALK                              LR     LR     11 01 47.6
      comp=Z,2µm,19.8s,baz=208,slow=36
LHSI  Lahat             13.89 140 P      Pn     10 56 45.5 -1.4
      60nm,1.0s
MDSI  Maura Dua         14.81 140 P      Pn     10 56 56.9 -2.5
      14nm,0.9s
VIS   Vishakhapatnam    15.39 315 eP     Pn     10 57 01.4 -5.8
MDRS  Chennai           15.44 294 eP     P      10 57 12.9 +0.9
KSM   Kuching           16.52 109 P      P      10 57 24.0 -0.2
SLVN  Son La            16.87  31 P      Pn     10 57 24.1 -2.0
SBUM  Sibu              18.06 103 P      P      10 57 43.0 +1.8
SHL   Shillong          18.71 352 eP     Pn     10 57 50.4 +1.5
SHL   Shillong          18.71 352 P      Pn     10 57 48.7 -0.2
SHL                               IAmb   IAmb   10 58 08.5
      comp=Z,164nm,1.4s
BOK   Bokaro            18.75 334 eP     Pn     10 57 50.9 +1.6
BOK                               IAmb   IAmb   10 57 52.4
      comp=Z,19nm,0.9s
LEM   Lembang           18.82 136 LR     LR     11 06 29.4
      comp=Z,2µm,18.7s,baz=274,slow=41
HYB   Hyderabad         18.85 305 i P    Pn     10 57 54.0 +3.4
HYB                               eS     S      11 01 27.0 +4.1
HYB   Hyderabad         18.85 305 eP     Pn     10 57 53.7 +3.1
KMI   Kunming           19.66  22 ⇑P     Pn     10 58 03.8 +3.4
KMI                               pP     sP     10 58 14.1 +5.6
KMI                               pmax   pmax
      comp=Z,31nm,1.4s
MTKI  Muara Teweh, K    21.66 110 P      P      10 58 21.0 +0.6
      comp=Z,33nm,1.0s
NGJI  Ngawi             21.98 130 P      P      10 58 24.6 +0.8
      comp=Z,58nm,1.0s
BBKI  Banjar Baru       22.65 117 P      P      10 58 31.7 +0.7
      comp=Z,42nm,1.8s
POO   Poona             23.30 302 eP     P      10 58 39.0 +1.3
KMMI  Kalianget         23.75 125 P      P      10 58 42.5 +0.4
      comp=Z,59nm,1.1s
BLJI  Banyuglugur       23.87 127 P      P      10 58 44.6 +1.4
      comp=Z,67nm,1.1s
ABJI  Asem Bagus        24.41 127 P      P      10 58 48.8 +0.6
      comp=Z,104nm,1.1s
SRBI  Singaraja         25.36 126 P      P      10 58 58.0 +1.2
      comp=Z,103nm,1.0s
MPSI  Mapaga            26.02 104 P      P      10 59 05.2 +2.4
H08S3 Diego Garcia H    26.43 237 T      T      11 25 45.4
      baz=56,slow=75
H08S2 Diego Garcia H    26.43 237 T      T      11 25 46.8
      baz=56,slow=75
H08S1 Diego Carcia H    26.45 237 T      T      11 25 48.7
      baz=56,slow=75
TOLI2 Tolitoli          26.69 101 P      P      10 59 09.0 +0.1
TOLI2                             IAmb   IAmb   10 59 13.3
      comp=Z,19nm,0.8s
PLAI  Plampang          27.87 124 P      P      10 59 05.4  -14
DHRM  DHARAMSHALA       30.44 328 IAmb   IAmb   10 58 11.7
      comp=Z,23nm,0.5s
GTA   Gaotai            32.66   7 eP     P      11 00 02.5 +0.8
GTA                               pP     sP     11 00 17.3 +5.5
GTA                               sP     pwP    11 00 24.9  +13
GTA                               pmax   pmax
      comp=Z,6.0nm,0.7s
NJ2   Nanjing           33.66  39 eP     P      11 00 11.1 +0.7
NJ2                               pmax   pmax
      comp=Z,4.0nm,0.5s
HHC   Hu-ho-hao-te      36.98  22 eP     P      11 00 40.5 +1.5
HHC                               pmax   pmax
      comp=Z,12nm,1.0s
HHC                               pmax   pmax
      comp=Z,280nm,7.4s
WMQ   Urumqi            37.23 352 eP     P      11 00 42.8 +1.7
WMQ                               LR     LR
      comp=Z,540nm,15.1s
WMQ                               LR     LR
      comp=Z,760nm,19.3s
WMQ                               LR     LR
      comp=Z,700nm,17.1s
GAR   Garm              38.73 329 P      P      11 00 53.3 -0.6
GAR                               IAmb   IAmb   11 01 00.1
      comp=Z,35nm,1.1s
FAKI  Fak Fak           38.78 103 P      P      11 00 56.0 +1.5
FAKI                              IAmb   IAmb   11 01 15.3
      comp=Z,26nm,1.2s
CHGR  Chuyangaron       39.08 328 P      P      11 00 57.1 +0.3
BTK   Batken            39.29 331 P      P      11 00 58.2 -0.2
BTK                               IAmb   IAmb   11 01 09.5
      comp=Z,31nm,1.0s
FITZ  Fitzroy Crossi    39.43 130 P      P      11 00 59.2 -0.5
      comp=Z,4.6nm,0.8s,baz=326,slow=8.6,SNR=7.2
FITZ  Fitzroy Crossi    39.43 130 P      P      11 00 59.4 -0.3
KNRA  Kununurra         40.58 124 P      P      11 01 10.5 +1.2
MK31  Makanchi Array    41.10 347 P      P      11 01 12.8 -0.5
MKAR  Makanchi Array    41.10 347 P      P      11 01 12.5 -0.8
      comp=Z,6.4nm,0.7s,baz=165,slow=7.8,SNR=16
MAKZ  Makanchi          41.19 347 P      P      11 01 13.6 -0.4
MAKZ                              IAmb   IAmb   11 01 20.4
      comp=Z,8.5nm,0.7s
MTN   Manton Dam        41.23 118 P      P      11 01 14.4 -0.4
MTN                               IAmb   IAmb   11 01 28.4
      comp=Z,20nm,1.4s
KK31  Karatay Array     41.82 333 P      P      11 01 18.3 -0.9
KKAR  Karatay Array     41.82 333 P      P      11 01 18.1 -1.1
SONM  Songino Array     41.96  12 P      P      11 01 20.1 -0.3
      comp=Z,4.6nm,1.0s,baz=188,slow=8.5,SNR=9.6
SONM                              PcP    PcP    11 03 14.6 -0.9
      comp=Z,1.6nm,0.8s,baz=197,slow=4.5,SNR=2.7
SONM                              ScP    ScP    11 07 04.0 -0.4
      comp=Z,0.9nm,0.8s,baz=171,slow=4.5,SNR=4.5
SONM  Songino Array     41.96  12 P      P      11 01 20.6 +0.1
NWAO  Narrogin (SRO)    45.09 153 P      P      11 01 45.5 -0.3
      comp=Z,4.1nm,0.6s,baz=275,slow=4.9,SNR=5.0
NWAO  Narrogin (SRO)    45.09 153 P      P      11 01 46.1 +0.4
NWAO                              IAmb   IAmb   11 02 08.5
      comp=Z,28nm,1.4s
GEYT  Alibeck           45.23 318 P      P      11 01 46.8  0.0
      comp=Z,2.7nm,0.5s,baz=98,slow=9.1,SNR=2.5
KURK  Kurchatov         45.63 346 P      P      11 01 49.8 +0.1
KURK                              IAmb   IAmb   11 02 07.5
      comp=Z,17nm,0.8s
WRA   Warramunga Arr    47.31 125 P      P      11 02 02.4 -1.0
      comp=Z,4.0nm,0.7s,baz=305,slow=9.1,SNR=13
WRA                               PcP    PcP    11 03 34.2 -0.1
      comp=Z,1.7nm,0.9s,baz=313,slow=2.5,SNR=1.8
ZAA0  Zalesovo Array    47.54 352 P      P      11 02 04.4 -0.2
ZAA0                              IAmb   IAmb   11 02 11.9
      comp=Z,14nm,0.9s
ZALV  Zalesovo Beam     47.54 352 P      P      11 02 03.4 -1.3
      comp=Z,7.6nm,0.8s,baz=177,slow=7.4,SNR=15
ZALV  Zalesovo Beam     47.54 352 P      P      11 02 04.4 -0.2
AS31  Alice Springs     48.93 130 P      P      11 02 15.4 -0.5
ASAR  Alice Springs     48.93 130 P      P      11 02 15.2 -0.7
      comp=Z,2.5nm,0.6s,baz=302,slow=7.1,SNR=20
ASAR                              PcP    PcP    11 03 39.7 -0.3
      comp=Z,2.3nm,0.8s,baz=310,slow=3.8,SNR=2.1
ASAR  Alice Springs     48.93 130 P      P      11 02 14.6 -1.3
FORT  Forrest           49.30 141 P      P      11 02 19.7 +1.1
MJAR  Matsushiro Arr    49.41  47 P      P      11 02 19.3 -0.1
      comp=Z,1.1nm,0.5s,baz=242,slow=6.1,SNR=2.1
BRVK  Borovoye          50.09 341 P      P      11 02 23.4 -0.9
ABKAR Akbulak array     51.29 331 P      P      11 02 33.0 -0.3
ABKAR Akbulak array     51.29 331 P      P      11 02 33.5 +0.1
ABKAR                             IAmb   IAmb   11 02 40.6
      comp=Z,34nm,1.1s
AKTO  Aktyubinsk        53.00 331 P      P      11 02 45.4 -0.8
      comp=Z,6.1nm,0.8s,baz=116,slow=7.3,SNR=11
BBOO  Buckleboo         55.78 138 P      P      11 03 06.3 -0.3
BBOO                              IAmb   IAmb   11 03 07.0
      comp=Z,11nm,0.8s
ARU   Arti              56.94 337 P      P      11 03 13.9 -0.6
KMBO  Kilima Mbogo      57.84 264 P      P      11 03 21.3 -0.6
      comp=Z,3.0nm,0.7s,baz=65,slow=8.5,SNR=8.5
KMBO  Kilima Mbogo      57.84 264 P      P      11 03 23.1 +1.2
KMBO                              IAmb   IAmb   11 03 30.8
      comp=Z,10nm,0.9s
STKA  Stephens Creek    59.10 134 P      P      11 03 29.1 -1.0
      comp=Z,3.0nm,0.7s,baz=305,slow=6.9,SNR=10
STKA  Stephens Creek    59.10 134 P      P      11 03 29.4 -0.7
BELG  Belogornoye       59.36 329 P      P      11 03 30.3 -1.1
      comp=Z,9.7nm,0.8s,baz=270,slow=2.0,SNR=2.5
NRIK  Noril'sk          62.49 357 P      P      11 03 51.4 -1.1
      comp=Z,1.1nm,0.5s,baz=151,slow=10,SNR=2.2
BR131 Keskin Array S    63.42 311 P      P      11 03 57.5 -1.9
BR131                             IAmb   IAmb   11 04 11.1
      comp=Z,8.3nm,0.8s
BRTR  Keskin Array B    63.42 311 P      P      11 03 57.2 -2.2
      comp=Z,1.2nm,0.7s,baz=120,slow=6.5,SNR=5.5
TOO   Toolangi          64.83 137 P      P      11 04 09.5 +1.0
TOO                               IAmb   IAmb   11 04 19.2
      comp=Z,12nm,1.0s
CAN   Canberra          66.16 133 P      P      11 04 18.4 +1.2
KLMR  Klimovskoe        67.51 334 eP     P      11 04 23.5 -1.7
KLMR                              AMP           11 04 38.6
      comp=Z,21nm,1.4s
TIXI  Tiksi             68.04  11 P      P      11 04 27.4 -1.0
TAU   Tasmania Unive    68.85 141 P      P      11 04 34.3 +0.4
AKASG Malin Array Be    69.20 322 P      P      11 04 34.9 -1.1
      comp=Z,0.3nm,0.4s,baz=88,slow=5.1,SNR=2.8
MNK   Minsk             70.98 325 i P    P      11 04 50.4 +3.6
      comp=E,2.0nm,0.9s
MNK                               i P    P      11 04 50.4 +3.6
      comp=N,22nm,0.8s
MNK                               i P    P      11 04 50.4 +3.6
      comp=Z,19nm,0.9s,baz=286
MNK                               i PcP  PcP    11 05 11.4 +4.3
MNK                               i PP   PP     11 07 27.2 +3.0
MNK                               i PPP  PPP    11 09 10.2
MNK                               i S    S      11 14 02.1 +1.0
MNK                               i SS   SS     11 18 35.0 +0.8
MNK                               i SSS  SSS    11 21 50.8
MNK                               i LQ   LQ     11 29 26.4
MNK                               i LR   LR     11 34 58.2
MNK                               i LRM  MLR    11 38 32.1
      comp=E,124nm,18.1s
MNK                               i LRM  MLR    11 38 32.1
      comp=N,912nm,16.6s
MNK                               i LRM  MLR    11 38 32.1
      comp=Z,1µm,18.1s
BURAR Bucovina Array    71.07 318 P      P      11 04 48.1 +0.3
KOLS  Kolonicke sedl    73.24 319 eP     P      11 05 06.1 +5.6
CRVS  Cervenica-Dubn    73.76 319 eP     P      11 05 10.7 +7.1
FIA1  FINESS Array S    73.77 332 P      P      11 05 03.1 -0.2
FIA1                              IAmb   IAmb   11 05 29.3
      comp=Z,25nm,1.2s
FINES FINESS Array B    73.77 332 P      P      11 05 02.1 -1.2
      comp=Z,1.7nm,0.5s,baz=84,slow=3.7,SNR=18
FINES FINESS Array B    73.77 332 P      P      11 05 02.7 -0.7
BOSA  Boshof            75.53 238 P      P      11 05 14.2 -0.1
      comp=Z,3.5nm,0.6s,baz=102,slow=4.8,SNR=11
BOSA  Boshof            75.53 238 P      P      11 05 14.9 +0.6
BOSA                              IAmb   IAmb   11 05 22.2
      comp=Z,14nm,0.9s
JAVC  Velka Javorina    76.24 319 eP     P      11 05 23.8 +5.8
ARCES ARCESS Array B    76.31 340 P      P      11 05 17.6 -0.4
      comp=Z,5.1nm,0.8s,baz=91,slow=5.0,SNR=9.9
ARCES ARCESS Array B    76.31 340 P      P      11 05 17.9  0.0
ARCES                             IAmb   IAmb   11 05 40.6
      comp=Z,26nm,1.4s
MORC  Moravsky Berou    76.41 319 eP     P      11 05 24.2 +5.3
VRAC  Vranov            76.98 319 eP     P      11 05 26.3 +4.2
KRUC  Moravsky          77.10 319 eP     P      11 05 27.2 +4.4
DPC   Dobruska-Polom    77.24 320 eP     P      11 05 24.7 +1.1
DPC                               epP    pP     11 05 29.9 -1.3
OSTC  Ostas             77.33 320 eP     P      11 05 29.9 +5.9
CONA  Conrad Observa    77.37 317 eP     P      11 05 24.1 -0.4
      comp=Z,6.1nm,1.2s
UPC   Upice             77.45 320 eP     P      11 05 29.6 +4.9
ARSA  Arzberg           77.56 317 eP     P      11 05 27.3 +1.9
      comp=Z,11nm,1.2s
MAW   Mawson            77.73 192 P      P      11 05 25.8  0.0
      comp=Z,1.7nm,0.6s,baz=340,slow=12,SNR=2.7
MAW   Mawson            77.73 192 P      P      11 05 27.5 +1.7
SOKA  Soboth            77.86 316 eP     P      11 05 27.9 +0.7
      comp=Z,13nm,1.1s
OBKA  Obir              78.19 316 eP     P      11 05 29.4 +0.4
      comp=Z,11nm,1.2s
PRU   Pruhonice         78.36 320 eP     P      11 05 33.3 +3.5
MOA   Molln             78.44 317 eP     P      11 05 30.8 +0.5
      comp=Z,6.5nm,1.2s
CKRC  Cesky Krumlov     78.45 318 eP     P      11 05 36.1 +5.7
BRG   Berggiesshubel    78.79 320 eP     P      11 05 38.6 +6.5
BRG                               Amp           11 05 39.6
      comp=Z,12nm,1.3s
BRG                               Amp           11 37 27.0
      comp=Z,1.0nm,17.1s
BRG                               Amp           11 37 33.0
      comp=N,0.9nm,20.2s
BRG                               Amp           11 37 33.0
      comp=E,0.5nm,16.3s
MYKA  Terra Mystica     78.82 316 eP     P      11 05 33.3 +0.8
      comp=E,4.9nm,1.1s
GEC2  GERESS Array S    78.86 318 P      P      11 05 32.8 +0.1
GEC2                              IAmb   IAmb   11 05 39.4
      comp=Z,12nm,1.1s
GERES GERESS Array B    78.86 318 P      P      11 05 32.4 -0.3
      comp=Z,3.2nm,0.9s,baz=76,slow=4.1,SNR=7.4
GERES GERESS Array B    78.86 318 P      P      11 05 32.1 -0.6
KHC   Kasperske Hory    78.95 319 eP     P      11 05 34.3 +1.2
KHC                               epP    pP     11 05 38.8 -1.9
KHC                               ex     x      11 05 44.1
KBA   Koelnbreinsper    79.04 317 eP     P      11 05 32.6 -1.2
      comp=Z,4.8nm,0.8s
CLL   Collm             79.40 321 eP     P      11 05 35.0 -0.4
CLL                               e             11 05 49.0
STAL  STALIGIAL         79.45 316 P      P      11 05 35.8 -0.1
ABTA  Abfaltersbach     79.60 316 eP     P      11 05 37.9 +1.1
      comp=Z,8.3nm,1.2s
CTI   Castel Tesino     80.19 315 P      P      11 05 40.3 +0.3
CTI                               IAmb   IAmb   11 05 47.2
      comp=Z,19nm,1.1s
WTTA  Wattenberg        80.20 317 eP     P      11 05 40.6 +0.5
      comp=Z,18nm,1.2s
SUR   Sutherland        80.23 236 P      P      11 05 41.3 +0.7
SUR                               IAmb   IAmb   11 05 49.9
      comp=Z,19nm,1.0s
WATA  Walderalm         80.25 317 eP     P      11 05 40.6 +0.2
      comp=Z,5.9nm,0.6s
SQTA  Sankt Quirin      80.50 317 eP     P      11 05 42.9 +1.2
      comp=Z,15nm,1.1s
NC405 NORSAR Array S    80.55 331 P      P      11 05 40.1 -1.4
MOTA  Moosalm           80.57 317 eP     P      11 05 42.3 +0.3
      comp=Z,9.9nm,0.9s
NB2   NORSAR Subarra    80.79 331 P      P      11 05 42.1 -0.7
      comp=Z,17nm,1.2s,baz=91,slow=5.9
NOA   NORSAR Array B    80.79 331 P      P      11 05 41.5 -1.3
      comp=Z,1.9nm,0.9s,baz=96,slow=5.0,SNR=4.7
RETA  Reutte            80.80 317 eP     P      11 05 44.2 +1.0
      comp=Z,5.1nm,0.7s
FETA  Feichten          80.83 316 eP     P      11 05 44.3 +0.8
      comp=Z,5.5nm,0.7s
SPITS Spitsbergen Ar    80.85 348 P      P      11 05 42.5 -0.2
      comp=Z,14nm,0.9s,baz=80,slow=10,SNR=2.2
DAVA  Damuels           81.40 317 eP     P      11 05 47.4 +0.8
      comp=Z,11nm,1.1s
KEST  Kesra             82.19 305 P      P      11 05 50.7 -0.1
      comp=Z,2.5nm,0.8s,baz=84,slow=5.3,SNR=2.0
SENIN Lac Senin/Sane    83.20 316 P      P      11 05 56.4 +0.4
SENIN                             IAmb   IAmb   11 06 07.8
      comp=Z,6.2nm,0.8s
TORD  Torodi Ar. Bea    91.31 283 P      P      11 06 33.9 -1.8
      comp=Z,0.9nm,0.6s,baz=91,slow=4.7,SNR=3.6
VNDA  Vanda             91.92 168 P      P      11 06 36.0 -1.2
      comp=Z,0.8nm,0.9s,baz=302,slow=3.6,SNR=1.5
ESDC  Sonseca Array     92.20 310 P      P      11 06 38.4 -1.1
      comp=Z,1.4nm,0.8s,baz=52,slow=3.5,SNR=8.7
ESDC  Sonseca Array     92.20 310 P      P      11 06 39.4 -0.1
ESDC                              IAmb   IAmb   11 06 46.4
      comp=Z,2.9nm,0.8s
IMAR  Indian Mountai    92.29  22 P      P      11 06 39.7 +0.5
NVAR  Mina Array Bea   125.44  32 PKP    PKiKP  11 12 31.6 +0.1
      comp=Z,1.5nm,0.8s,baz=306,slow=2.3,SNR=11
NVAR  Mina Array Bea   125.44  32        PKPdf  11 12 30.9 -0.2
PDAR  Pinedale Array   125.84  22 PKP    PKPdf  11 12 31.8  0.0
      comp=Z,1.1nm,0.8s,baz=85,slow=1.6,SNR=9.4
PDAR  Pinedale Array   125.84  22        PKPdf  11 12 31.3 -0.5
TXAR  Lajitas Array    139.85  25 PKP    PKPdf  11 12 58.0 -0.3
      comp=Z,0.6nm,0.6s,baz=99,slow=0.0,SNR=8.9
TXAR                              SKPbc  SKPbc  11 16 31.5 -1.1
      comp=Z,0.3nm,0.8s,baz=255,slow=3.5,SNR=3.7
PLCA  Paso Flores      143.85 199 PKP    PKPdf  11 13 04.3 -0.8
      comp=Z,2.5nm,0.9s,baz=200,slow=6.6,SNR=6.1
PLCA  Paso Flores      143.85 199        PKPdf  11 13 04.8 -0.3
CPUP  Villa Florida    147.09 231 PKPbc  PKPbc  11 13 12.2 -0.8
      comp=Z,2.0nm,0.7s,baz=70,slow=3.9,SNR=4.4
CPUP  Villa Florida    147.09 231        PKPdf  11 13 10.3 -0.6
```

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
CPUP				PKPbc	PKPbc	11 13 13.8	+0.8

JMA ***08*** *11:03:22.5±0.2, 22°.88N×122°.36E, h24^{km}, M2.5*
TAP ***08*** *11:03:23.7, 22°.85N×122°.29E, h23^{km}, ML2.7, D*
ISC 08 11:03:21.7±1.0, 22°.82N±0°.04×122°.37E±0°.03, h23^{km}, n84, σ1^{s}00/124, 1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LDUT	Ludao baz=256	0.85	260	P	Pb	11 03 37.7	0.0
LDUT	baz=256			S	Sb	11 03 47.9	-0.8
CHKT	Chengkung baz=286	0.97	287	P	Pb	11 03 39.6	-0.2
CHKT	baz=286			S	Sb	11 03 51.6	-0.6
ECBN	Changbin baz=301	0.98	300	P	Pb	11 03 40.3	+0.2
ECBN	baz=301			eS	Sb	11 03 52.0	-0.6
EDH	Donghe baz=277	1.00	279	eP	Pb	11 03 40.7	+0.4
EDH	baz=277			S	Sb	11 03 53.1	+0.1
FULB	Fuli baz=290	1.06	291	P	Pn	11 03 41.2	0.0
FULB	baz=290			eS	Sb	11 03 54.3	-0.7
LAY	Lan-yu baz=219	1.09	225	eP	Pn	11 03 41.0	-0.6
ECS	Chishang baz=284	1.10	285	P	Pb	11 03 42.5	+0.4
ECS	baz=284			S	Sn	11 03 56.6	+0.4
HGSD	Ruisui baz=308	1.10	308	P	Pn	11 03 41.5	-0.2
HGSD	baz=308			S	Sb	11 03 54.6	-1.4
EYUL	Yuli baz=299	1.10	299	P	Pn	11 03 42.1	+0.4
EYUL	baz=299			eS	Sn	11 03 56.0	-0.3
TWF1	Yuli baz=299	1.12	298	⇓iP	Pn	11 03 42.4	+0.3
TWF1	baz=299			eS	Sb	11 03 55.4	-1.3
YULB	Yu-li baz=300	1.14	300	P	Pn	11 03 42.8	+0.4
YULB	baz=300			eS	Sb	11 03 56.2	-1.1
LONT	Longtian baz=273	1.15	275	eP	Pb	11 03 43.6	+0.7
LONT	baz=273			eS	Sn	11 03 57.6	+0.2
EHY	Hungye baz=306	1.18	305	eP	Pn	11 03 42.9	0.0
EHY	baz=306			eS	Sn	11 03 58.0	-0.3
TWGBT	Beinan baz=268	1.19	270	eP	Pn	11 03 43.6	+0.6
TWGBT	baz=268			S	Sb	11 03 58.0	-0.6
TWG	Pinlang baz=268	1.20	270	eP	Pn	11 03 43.9	+0.8
TWG	baz=268			eS	Sn	11 03 58.2	-0.5
EGFH	Guangfu baz=315	1.21	314	eP	Pn	11 03 43.8	+0.6
EGFH	baz=315			eS	Sb	11 03 58.6	-0.6
TEYL	Yanliau Villag baz=329	1.26	326	eP	Pb	11 03 44.8	0.0
ELDTW	Lidau baz=286	1.30	287	eP	Pn	11 03 43.9	-0.7
ESL	Shilin baz=321	1.31	319	P	Pn	11 03 44.7	0.0
ESL	baz=321			eS	Sn	11 03 59.8	-1.7
ECL	Taimali baz=258	1.33	261	eP	Pn	11 03 45.2	+0.4
ECL	baz=258			eS	Sn	11 04 00.5	-1.3
ETM	Tongmen baz=326	1.40	325	eP	Pn	11 03 46.1	+0.3
TWD	Chiawan baz=333	1.44	331	eP	Pn	11 03 47.0	+0.5
YUS	Yu-Shan baz=297	1.47	297	eP	Pn	11 03 48.0	+0.8
EAST	Anshuo baz=250	1.48	253	eP	Pn	11 03 47.8	+0.9
EAST	baz=250			eS	Sn	11 04 05.4	-0.1
STYH	Taoyuan baz=282	1.51	284	eP	Pb	11 03 48.9	-0.2
STYH	baz=282			eS	Sn	11 04 06.8	+0.4
NACB	Ninganchiao baz=334	1.52	332	eP	Pn	11 03 48.0	+0.4
NACB	baz=334			eS	Sn	11 04 05.7	-1.0
SLIU	Shizi baz=245	1.57	248	eP	Pn	11 03 49.2	+1.0
OWD	Renai baz=317	1.58	316	eP	Pn	11 03 49.2	+0.8
ALS	Alishan baz=295	1.60	296	eP	Pb	11 03 50.7	0.0
TSMG	Majia baz=264	1.60	266	eP	Pn	11 03 49.5	+0.9
SLGT	Liugui baz=275	1.60	277	eP	Pb	11 03 50.6	0.0
ETLH	Xiulin Townshi baz=331	1.60	330	eP	Pn	11 03 49.8	+1.1
ETLH	baz=331			eS	Sn	11 04 08.4	-0.4
SSD	Sandimen baz=266	1.61	268	eP	Pn	11 03 49.8	+1.1
MASBT	Mashibuluo baz=261	1.62	263	P	Pn	11 03 49.9	+1.0
SSLB	Suanglung baz=307	1.62	307	P	Pn	11 03 49.7	+0.8
SSLB	baz=307			S	Sn	11 04 09.1	-0.1
CHGB	Renai baz=319	1.65	318	P	Pn	11 03 50.7	+1.2
CHGB	baz=319			eS	Sn	11 04 10.0	-0.2
WHF	Hehuan Shan baz=324	1.67	323	P	Pn	11 03 50.7	+0.8
WHF	baz=324			S	Sn	11 04 10.1	-0.7
SGST	Jiashian baz=278	1.67	279	eP	Pb	11 03 51.4	-0.5
WTP	Ta-pu baz=284	1.68	285	eP	Pb	11 03 52.2	+0.3
TPUB	Ta-pu baz=286	1.68	287	eP	Pb	11 03 51.8	-0.1
SCZT	Fangliau baz=252	1.68	255	eP	Pn	11 03 51.1	+1.4
TWKBT	Hengchun baz=236	1.69	239	eP	Pn	11 03 51.3	+1.5
ENA	Nanau baz=342	1.70	340	eP	Pn	11 03 51.4	+1.4
JYNG	Yonagunijimaku	1.71	18	P	Pn	11 03 51.9	+1.8
JYNG				eS	Sn	11 04 11.7	+0.5
EWUT	Wuta baz=343	1.71	341	eP	Pn	11 03 51.1	+1.1
EWUT	baz=343			eS	Sn	11 04 10.3	-0.9
SMLT	Sun Moon Lake baz=309	1.72	308	eP	Pn	11 03 51.8	+1.4
CHN4	Tsaushan baz=287	1.72	288	eP	Pn	11 03 51.6	+1.3
YOJ	Yonaguni jima	1.74	20	P	Pn	11 03 52.0	+1.5
YOJ				S	Sn	11 04 12.9	+1.0
CHN1	Nanshi baz=281	1.74	282	eP	Pb	11 03 52.8	-0.2
CHN5	Tsauling baz=296	1.74	297	eP	Pb	11 03 53.4	+0.4
FUSS	Fushou baz=325	1.76	324	eP	Pn	11 03 52.4	+1.3
FUSS	baz=325			eS	Sn	11 04 12.3	-0.6
TYC	Yuchr baz=308	1.76	308	eP	Pb	11 03 52.6	-0.8
TWK	Hsinying baz=284	1.79	285	eP	Pb	11 03 53.9	0.0
HATJ	Hateruma jima	1.80	47	P	Pn	11 03 52.2	+0.8
HATJ				eS	Sn	11 04 13.0	-0.5
TDCB	Techi baz=323	1.81	322	eP	Pb	11 03 53.3	-1.0
WCS	Beigang Elemen baz=313	1.82	313	eP	Pb	11 03 53.6	-0.8
NNSB	Datong baz=332	1.84	331	eP	Pn	11 03 53.4	+1.3
NNSB	baz=332			eS	Sn	11 04 14.7	0.0
TWC	Suao baz=347	1.84	345	eP	Pn	11 03 53.6	+1.7
NNS	Nan Shan baz=332	1.85	331	eP	Pn	11 03 53.6	+1.4
NNS	baz=332			eS	Sn	11 04 15.1	0.0
NDS	Dongshan baz=343	1.90	342	eP	Pn	11 03 54.5	+1.7
NDS	baz=343			eS	Sn	11 04 16.5	+0.4
IRIF	Iriomote-Funau	1.96	39	P	Pn	11 03 54.7	+1.2
IRIF				S	Sn	11 04 16.6	-0.7
WHP	Taichung City baz=319	1.96	318	eP	Pb	11 03 55.8	-0.9
ENTT	Nioudou baz=339	1.96	338	eP	Pn	11 03 55.5	+1.9
TWE	Neicheng baz=343	2.00	341	eP	Pb	11 03 57.1	-0.3
YHNB	Yeheng baz=335	2.06	334	eP	Pn	11 03 56.5	+1.5
YHNB	baz=335			S	Sn	11 04 20.3	+0.4
JKRS	Kuro-shima	2.06	46	P	Pn	11 03 56.2	+1.3
JKRS				eS	Sn	11 04 19.4	-0.5
NSK	Sanguang baz=335	2.07	333	eP	Pn	11 03 56.2	+1.1
NWLT	Wulai baz=339	2.10	338	eP	Pn	11 03 57.6	+2.1
TWQ1	Liyutan baz=317	2.11	316	eP	Pb	11 03 58.6	-0.8
WRL	Guolierlin Hig baz=300	2.13	301	eP	Pn	11 03 57.9	+2.1
NSTT	Nanjuang baz=326	2.20	325	eP	Pb	11 04 00.0	-0.8
TIPB	Shuangxi baz=348	2.20	347	eP	Pb	11 03 59.6	-1.2
LIOB	Emei baz=326	2.20	326	eP	Pb	11 03 59.9	-1.0
TWB1	Santiao Chiao baz=353	2.21	351	eP	Pn	11 03 58.8	+1.8
TWB1	baz=353			eS	Sn	11 04 23.5	0.0
JIJ	Ishigaki jima	2.23	46	P	Pn	11 03 57.9	+0.6
JIJ				eS	Sn	11 04 22.5	-1.7
NWF	Wu-fen Shan baz=348	2.31	347	eP	Pn	11 04 00.7	+2.3
WFSB	Wu-fen Shan baz=348	2.31	347	eP	Pn	11 04 00.7	+2.4
JISG	Ishigakijimahi	2.50	45	P	Pn	11 04 01.8	+0.8
JISG				S	Sn	11 04 30.1	-0.6
PHUB	P'eng-hu baz=284	2.67	286	eP	Pn	11 04 05.6	+2.3
JTJ	Tarama	2.80	49	P	Pn	11 04 06.3	+1.2
JTJ				S	Sn	11 04 38.1	-0.1
JIRB	Irabujima	3.25	52	P	Pn	11 04 12.6	+1.3
JIRB				eS	Sn	11 04 48.4	-0.9
JMJ2	Miyako jima3	3.31	54	P	Pn	11 04 13.1	+0.9
JMJ	Miyako jima 2 baz=54	3.33	53	eP	Pn	11 04 13.4	+1.0
PTMZ	Houxiangcun baz=306	3.71	307	eP	Pn	11 04 19.3	+1.7

IDC ***08*** *11:07:25.9±1.5, 6°.20N×94°.12E, h0^{km}, mb3.5/6, mb1 3.8/8, mb1mx3.6/42, mbtmp3.6/8, ML3.8/2, Error ellipse: s-maj=56.5km s-min=20.4km az=57.0*
ISC 08 11:07:31.2±1.4, 6°.3N±0°.2×94°.2E±0°.2, h35^{km}, n8, σ0^{s}68/8, mb3.6/6, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat 1.7nm,0.3s,baz=187,slow=10.0,SNR=2.7	5.84	126	Pn	Pn	11 08 55.9	+0.4
CMAR	Chiang Mai Arr 0.2nm,0.3s,baz=213,slow=13,SNR=6.6	13.00	21	Pn	Pn	11 10 33.9	+0.3
MKAR	Makanchi Array 1.1nm,0.7s,baz=163,slow=6.3,SNR=6.8	41.67	348	P	P	11 15 16.4	0.0
SONM	Songino Array 0.5nm,0.7s,baz=193,slow=5.6,SNR=2.7	42.74	12	P	P	11 15 24.5	-0.7
WRA	Warramunga Arr 0.3nm,0.9s,baz=281,slow=6.6,SNR=1.9	47.31	124	P	P	11 16 00.7	-1.1
ZALV	Zalesovo Beam 0.6nm,0.5s,baz=197,slow=13,SNR=3.8	48.16	353	P	P	11 16 08.2	+0.3
ASAR	Alice Springs 0.3nm,0.7s,baz=300,slow=7.9,SNR=6.5	48.86	129	P	P	11 16 14.2	+0.4
GERES	GERESS Array B 0.7nm,0.6s,baz=76,slow=5.6,SNR=5.6	79.06	318	P	P	11 19 32.4	+0.3

IDC ***08*** *11:17:16.1±0.6, 6°.97N×94°.98E, h0^{km}, mb3.9/16, mb1 4.0/17, mb1mx3.9/51, mbtmp3.9/17, Error ellipse: s-maj=26.2km s-min=16.3km az=53.0*
NEIC ***08*** *11:17:21.7±1.1, 7°.4N±0°.2×95°.4E±0°.2, h23^{km}±6^{km}, mb4.6/14, Error ellipse: s-maj=34.7km s-min=13.0km az=53.0*
ISC 08 11:17:22.1±0.5, 7°.1N±0°.1×95°.1E±0°.1, h35^{km}, n52, σ1^{s}48/49, mb4.3/30, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	2.65	135	Pn	Pn	11 18 02.5	+0.2
PSI	Prapat 0.5nm,0.3s,baz=171,slow=22,SNR=2.1	5.76	138	Pn	Pn	11 18 46.6	+1.4
CMAR	Chiang Mai Arr baz=212,slow=14,SNR=1.0	11.89	18	Pn	Pn	11 20 10.6	+1.3
H08S3	Diego Garcia H baz=56,slow=75,SNR=18	26.86	237	T	T	11 49 33.7	
H08S2	Diego Garcia H baz=56,slow=75,SNR=14	26.86	237	T	T	11 49 35.6	
H08S1	Diego Carcia H baz=56,slow=75,SNR=8.1	26.88	237	T	T	11 49 35.9	
NIL	Nilore	33.24	326	P	P	11 23 54.0	-2.1
GAR	Garm	38.80	329	P	P	11 24 43.8	+0.1
GAR	comp=Z,8.5nm,0.6s			IAmb	IAmb	11 24 47.2	
CHGR	Chuyangaron	39.16	327	P	P	11 24 46.2	-0.4
FITZ	Fitzroy Crossi	39.22	130	P	P	11 24 46.1	-1.3
MK31	Makanchi Array	41.03	347	P	P	11 25 03.0	+1.0
MKAR	Makanchi Array comp=Z,0.6nm,0.6s,baz=147,slow=6.8,SNR=5.6	41.03	347	P	P	11 25 00.6	-1.4
MKAR	Makanchi Array	41.03	347	P	P	11 25 02.8	+0.7
SONM	Songino Array comp=Z,0.6nm,0.6s,baz=165,slow=6.0,SNR=2.3	41.71	11	P	P	11 25 07.0	-0.7
WB0	Warramunga Arr	47.03	125	P	P	11 25 50.1	-0.4
WB0	comp=Z,4.3nm,1.2s			IAmb	IAmb	11 26 00.7	
WRA	Warramunga Arr comp=Z,0.5nm,0.8s,baz=306,slow=8.8,SNR=9.2	47.08	126	P	P	11 25 49.8	-1.1
WRA	Warramunga Arr	47.08	126	P	P	11 25 50.0	-0.9
WB2	Warramunga Arr	47.09	126	P	P	11 25 50.5	-0.4
WR0	Warramunga Arr	47.25	125	P	P	11 25 51.6	-0.6
WR0	comp=Z,4.4nm,1.2s			IAmb	IAmb	11 26 07.7	
ZALV	Zalesovo Beam comp=Z,0.6nm,0.3s,baz=184,slow=8.2,SNR=3.7	47.43	352	P	P	11 25 52.9	-0.2
ZALV	Zalesovo Beam	47.43	352	P	P	11 25 52.1	-1.0
ASAR	Alice Springs comp=Z,0.7nm,0.8s,baz=302,slow=7.1,SNR=9.7	48.73	130	P	P	11 26 02.2	-1.5
ASAR	comp=Z,0.7nm,0.8s,baz=313,slow=3.8,SNR=5.7			PcP	PcP	11 27 27.8	-0.7
ASAR	Alice Springs	48.73	130	P	P	11 26 02.8	-0.8
ABKAR	Akbulak array	51.33	331	P	P	11 26 21.8	-1.2
ABKAR	comp=Z,12nm,1.2s			IAmb	IAmb	11 26 28.3	
ABKAR	Akbulak array	51.33	331	P	P	11 26 22.6	-0.4
BBOO	Buckleboo	55.64	138	P	P	11 26 55.0	+0.1
BBOO	comp=Z,8.9nm,1.4s			IAmb	IAmb	11 26 57.1	
KMBO	Kilima Mbogo comp=Z,0.5nm,0.4s,baz=223,slow=23,SNR=1.4	58.25	264	P	P	11 27 12.1	-1.9
STKA	Stephens Creek comp=Z,1.7nm,0.7s,baz=301,slow=10,SNR=3.0	58.92	134	P	P	11 27 18.0	0.0
BRTR	Keskin Array B comp=Z,0.9nm,0.7s,baz=120,slow=4.9,SNR=4.5	63.62	311	P	P	11 27 50.3	+0.4
BRTR	Keskin Array B	63.62	311	P	P	11 27 51.3	+1.3
TIXI	Tiksi comp=Z,1.4nm,0.3s,baz=228,slow=6.7,SNR=3.6	67.80	11	P	P	11 28 16.1	0.0
KIS	Kishinev	68.70	318	e	P	11 28 25.0	+2.8
KIS	comp=Z,900nm,15.0s			eLR	LR	11 35 03.0	
AKASG	Malin Array Be comp=Z,0.2nm,0.3s,baz=92,slow=4.6,SNR=1.8	69.31	322	P	P	11 28 27.2	+1.2
FINES	FINESS Array B comp=Z,4.2nm,0.8s,baz=68,slow=5.1,SNR=6.7	73.81	332	P	P	11 28 52.5	-0.3
FINES	FINESS Array B	73.81	332	P	P	11 28 54.6	+1.8
BOSA	Boshof comp=Z,2.9nm,1.1s,baz=117,slow=6.8,SNR=1.9	75.96	238	P	P	11 29 03.6	-2.4
BOSA	Boshof	75.96	238	P	P	11 29 09.4	+3.3
BOSA	comp=Z,5.5nm,1.1s			IAmb	IAmb	11 29 09.7	
CONA	Conrad Observa comp=Z,4.6nm,1.6s	77.52	317	eP	P	11 29 16.5	+2.0
SOKA	Soboth comp=Z,2.8nm,1.2s	78.02	316	eP	P	11 29 17.9	+0.6
GERES	GERESS Array B comp=Z,1.1nm,0.9s,baz=97,slow=5.5,SNR=6.8	79.00	318	P	P	11 29 23.0	+0.3
STAL	STALIGIAL	79.62	316	P	P	11 29 27.3	+1.3
STAL	comp=Z,12nm,1.4s			IAmb	IAmb	11 29 30.4	
ABTA	Abfaltersbach comp=Z,4.3nm,1.4s	79.76	316	eP	P	11 29 29.3	+2.4
WTTA	Wattenberg comp=Z,3.6nm,0.9s	80.36	317	eP	P	11 29 31.7	+1.5
SQTA	Sankt Quirin comp=Z,4.7nm,0.7s	80.65	317	eP	P	11 29 35.0	+3.3
MOTA	Moosalm comp=Z,4.1nm,0.9s	80.72	317	eP	P	11 29 33.9	+1.8
NOA	NORSAR Array B comp=Z,1.2nm,0.8s,baz=94,slow=5.5,SNR=3.5	80.84	331	P	P	11 29 33.5	+1.2
RETA	Reutte comp=Z,3.7nm,0.9s	80.95	317	eP	P	11 29 36.3	+3.0
FETA	Feichten comp=Z,4.4nm,1.6s	80.98	316	eP	P	11 29 35.4	+1.9
TORD	Torodi Ar. Bea comp=Z,0.5nm,0.9s,baz=109,slow=8.0,SNR=1.7	91.66	283	P	P	11 30 25.1	-1.4
ESDC	Sonseca Array comp=Z,0.3nm,0.4s,baz=217,slow=38,SNR=2.9	92.40	310	P	P	11 30 29.9	+0.4
NVAR	Mina Array Bea comp=Z,0.5nm,0.7s,baz=340,slow=2.5,SNR=4.9	125.09	32	PKP	PKiKP	11 36 19.9	0.0
PDAR	Pinedale Array comp=Z,0.1nm,0.4s,baz=244,slow=3.5,SNR=2.4	125.53	22	PKP	PKiKP	11 36 20.2	-0.5

IDC ***08*** *11:29:06.0±3.1, 10°.33S×152°.23E, h0^{km}, mb3.4/2, mb1 3.6/4, mb1mx3.4/51, mbtmp3.5/4, ML2.4/2, Error ellipse: s-maj=60.4km s-min=47.1km az=1.0*
ISC 08 11:29:07.0±2.8, 10°.3S±0°.4×152°.3E±0°.2, h10^{km}, n5, σ0^{s}96/6, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby 1.0nm,0.3s,baz=61,slow=9.4,SNR=4.6	5.13	280	Pn	Pn	11 30 23.3	-0.7
PMG	1.9nm,0.3s,baz=118,slow=18,SNR=4.5			Sn	Sn	11 31 23.8	+0.5
WRA	Warramunga Arr 0.1nm,0.3s,baz=61,slow=11,SNR=5.1	19.76	239	P	P	11 33 37.0	-0.4
ASAR	Alice Springs 0.3nm,0.7s,baz=58,slow=11,SNR=6.7	21.97	231	P	P	11 34 00.9	-0.4
FITZ	Fitzroy Crossi 1.6nm,0.7s,baz=52,slow=12,SNR=2.3	26.93	250	P	P	11 34 50.0	+1.3
TORD	Torodi Ar. Bea 0.3nm,0.6s,baz=89,slow=1.9,SNR=2.2	151.07	278	PKPbc	PKPbc	11 49 01.5	0.0

IDC 08 11:32:41.4±2.5, 6°.96N×94°.36E, h0^{km}, mb3.5/4, mb1 3.6/5, mb1mx3.4/66, mbtmp3.5/5, ML3.7/1, Error ellipse: s-maj=94.8km s-min=25.6km az=62.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr 0.1nm,0.3s,baz=208,slow=15,SNR=2.1	12.27	21	Pn	Pn	11 35 37.5	+0.1
KURBB	Kurchatov Arra 0.5nm,0.4s,baz=161,slow=6.0,SNR=4.4	45.48	346	P	P	11 41 02.8	+0.5
ZALV	Zalesovo Beam 0.6nm,0.4s,baz=186,slow=6.0,SNR=4.4	47.48	352	P	P	11 41 17.1	-0.8
WRA	Warramunga Arr 0.3nm,0.7s,baz=305,slow=8.8,SNR=2.6	47.56	125	P	P	11 41 20.2	+1.1
ASAR	Alice Springs 0.2nm,0.6s,baz=303,slow=8.0,SNR=1.9	49.17	130	P	P	11 41 30.3	-1.2

MOS ***08*** *11:33:13.3±1.0, 51°.61N×172°.98W, h22^{km}, mb5.7/86, MS5.5/51, Error ellipse: s-maj=6.4km s-min=4.0km az=102.6*
NEIC ***08*** *11:33:14.6±2.4, 51°.54N±0°.07×172°.98W±0°.06, h20^{km}±1^{km}, mb5.6/246, Ms_20 5.5/246, Mwb5.6/38, Mww5.7, Mwc5.8(GCMT), Error ellipse: s-maj=12.1km s-min=5.4km az=168.0*
AEIC ***08*** *11:33:14±2.6, 51°.42N±0°.07×172°.94W±0°.06, h22^{km}±3^{km}, Error ellipse: s-maj=10.8km s-min=5.4km az=171.0*
BJI ***08*** *11:33:14.5±0.0, 51°.96N×173°.54W, h9^{km}, mB5.9/63, mb5.5/76, Ms5.9/86, Ms7 5.6/81*
NEIC ***08*** *11:33:16.2, 51°.51N×172°.95W, h20^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}2.59; $M_{\theta\theta}$-3.05; $M_{\phi\phi}$0.46; $M_{r\theta}$1.83; $M_{\theta\phi}$-1.40; $M_{\phi r}$0.23; Fault plane solution: $M_0$3.67000×10^{17} NP1:ϕ_s239.02000°, δ30.71000°, λ72.26000°. NP2:ϕ_s79.43000°, δ60.90000°, λ100.26000°. Principal axes: T 3.1432, Plg72.0000°, Azm14.0000°; N 0.8845, Plg9.0000°, Azm254.0000°; P -4.0276, Plg15.0000°, Azm162.0000°;*
GCMT ***08*** *11:33:17.6±0.1, 51°.48N±0°.01×172°.90W±0°.01, h19^{km}, MW5.8/145, Moment Tensor Solution. s128,c242; s145,c316; Duration: 1^{s}9 Moment tensor: Scale 10^{17} Nm; M_{rr}4.01±.07; $M_{\theta\theta}$-3.70±.05; $M_{\phi\phi}$-0.30±.04; $M_{r\theta}$3.82±.12; $M_{\theta\phi}$-1.18±.03; $M_{\phi r}$1.46±.10; Best double couple: $M_0$5.74800×10^{17} NP1:ϕ_s255.00000°, δ22.00000°, λ95.00000°. NP2:ϕ_s70.00000°, δ68.00000°, λ88.00000°. Principal axes: T 5.7230, Plg67.0000°, Azm337.0000°; N 0.0590, Plg2.0000°, Azm71.0000°; P -5.7740, Plg23.0000°, Azm162.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
IDC ***08*** *11:33:18.3±0.5, 51°.67N×173°.00W, h43^{km}±3^{km}, mb5.0/62, mb1 5.1/64, mb1mx5.0/84, mbtmp5.2/64, ML4.5/2, MS5.4/38, Ms1 5.4/38, ms1mx5.2/65 Error ellipse: s-maj=9.7km s-min=6.8km az=178.0*
NEIC ***08*** *11:33:19, 51°.47N×172°.94W, h19^{km}, Moment Tensor Solution. Duration: 3^{s}8 Moment tensor: Scale 10^{17}Nm; M_{rr}3.98; $M_{\theta\theta}$-3.74; $M_{\phi\phi}$-0.24; $M_{r\theta}$4.20; $M_{\theta\phi}$-1.17; $M_{\phi r}$1.85; Fault plane solution: $M_0$6.11000×10^{17} NP1: ϕ_s259.00000°, δ21.00000°, λ100.00000°. NP2: ϕ_s68.00000°, δ69.00000°, λ86.00000°. Principal axes: T 6.0741, Plg65.0000°, Azm331.0000°; N 0.0782, Plg4.0000°, Azm69.0000°; P -6.1523, Plg24.0000°, Azm161.0000°;*
NEIC ***08*** *11:33:22, 51°.40N×172°.98W, h18^{km}, Moment Tensor Solution. Duration: 12^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}3.62; $M_{\theta\theta}$-2.86; $M_{\phi\phi}$-0.76; $M_{r\theta}$2.23; $M_{\theta\phi}$-0.74; $M_{\phi r}$1.69; Fault plane solution: $M_0$4.39000×10^{17} NP1: ϕ_s260.00000°, δ26.00000°, λ107.00000°. NP2: ϕ_s61.00000°, δ65.00000°, λ82.00000°. Principal axes: T 4.6808, Plg69.0000°, Azm314.0000°; N -0.6456, Plg7.0000°, Azm64.0000°; P -4.0351, Plg19.0000°, Azm157.0000°;*
BGR ***08*** *11:33:22.3±0.0, 52°.42N×173°.18W, h45^{km}±1^{km}, mb5.5, Ms5.3*
ISC 08 11:33:16.9±0.3, 51°.61N±0°.04×173°.03W±0°.03, h32^{km}±1^{km}, h32^{km}:pP-P, n1513, σ1^{s}47/1514, mb5.5/366, MS5.5/217, 104C-50D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOFP	Korovin Flat P	0.94	316		Pb	11 33 35.0	+0.3
KOSE	Korovin Southe	0.97	320		Pb	11 33 35.7	+0.5
KOKL	Mount Kliuchef	1.01	315		Pb	11 33 35.9	-0.1
KONE	Korovin Northe	1.03	320		Pb	11 33 36.5	+0.3
GSMY	Great Sitkin M	1.93	284		Pn	11 33 48.3	+0.9
GSTR	Great Sitkin T	1.94	286	Pn	Pn	11 33 48.4	+0.8
GSTD	Great Sitkin T	1.98	284		Pn	11 33 48.6	+0.4
ADK	Adak	2.29	278	P	Pn	11 33 52.8	+0.5

ADK					Sn	11 34 21.6	+2.3
ADK	Adak	2.29	278	Pn	Pn	11 33 52.8	+0.5
KINC	Kanaga Island	2.56	279		Pn	11 33 58.0	+1.8
KIWB	Kanaga Island	2.57	277	Pn	Pn	11 33 56.9	+0.6
KIKV	Kanaga Island	2.58	278		Pn	11 33 57.8	+1.3
KIMD	Kanaga Island	2.62	275		Pn	11 33 57.8	+0.9
NIKH	Nikolski High	2.91	60	P	Pn	11 34 01.5	+0.6
	baz=240						
NIKH	Nikolski High	2.91	60		Pn	11 34 01.4	+0.6
NIKH					Sn	11 34 36.7	+2.1
TAPA	Tanaga Point A	2.98	276		Pn	11 34 03.1	+1.1
TAFP	Tanaga Falls P	3.09	277		Pn	11 34 04.8	+1.4
TAFP					Sn	11 34 43.5	+4.3
TASE	Tanaga Southea	3.12	276		Pn	11 34 05.3	+1.5
OKSP	Okmok Steeple	3.34	59		Pn	11 34 07.2	+0.4
OKNC	Okmok New Cone	3.52	56		Pn	11 34 10.7	+1.3
OKTU	Okmok Mt. Tuli	3.53	58		Pn	11 34 11.0	+1.5
GAEA	Gareloi East	3.56	275		Pn	11 34 11.5	+1.6
OKER	Okmok East Rim	3.56	57		Pn	11 34 11.6	+1.7
GANE	Gareloi Northe	3.58	276		Pn	11 34 11.2	+1.1
OKFG	Magazine Ridge	3.61	58		Pn	11 34 11.5	+0.9
MAPS	Pakushin South	4.31	57		Pn	11 34 21.6	+1.5
MAPS					Sn	11 35 13.2	+4.0
MSW	Makushin Switc	4.44	56		Pn	11 34 22.9	+0.9
MNAT	Makushin Natee	4.48	57		Pn	11 34 23.9	+1.4
UNV	Unalaska Valle	4.56	58	P	Pn	11 34 23.9	+0.5
	baz=241,SNR=26						
UNV	Unalaska Valle	4.56	58	Pn	Pn	11 34 24.0	+0.5
UNV	Unalaska Valle	4.56	58		Sn	11 35 16.9	+1.6
CESW	Semis’ Southwe	4.61	277		Pn	11 34 25.5	+1.3
AMKA	Amchitka	4.79	270		Pn	11 34 27.4	+0.7
AKMO	Akutan Morgan	4.93	57		Pn	11 34 30.2	+1.5
AKMO					Sn	11 35 28.0	+3.5
AKBBA	Akutan Broad B	4.97	57		Pn	11 34 30.4	+1.1
AKGG	Akutan Green G	4.99	56		Pn	11 34 31.4	+1.9
AKUT	Akutan	5.07	57	Pn	Pn	11 34 33.6	+3.0
AKSA	Akutan Strait	5.11	57		Pn	11 34 32.5	+1.3
AKSA					Sn	11 35 34.4	+5.4
LSSE	Little Sitkin	5.22	277		Pn	11 34 34.0	+1.3
LSNW	Little Sitkin	5.26	277		Pn	11 34 35.5	+2.3
WECS	Westdahl Cape	5.77	56		Pn	11 34 42.1	+1.8
SPIA	Saint Paul Isl	5.81	15	P	Pn	11 34 45.6	+4.9
	baz=196,SNR=5.6						
SPIA	Saint Paul Isl	5.81	15	Pn	Pn	11 34 45.6	+4.9
BRPK	Brown Peak	6.37	58		Pn	11 34 50.2	+1.8
FALS	False Pass	6.62	57	P	Pn	11 34 56.7	+4.8
	baz=243						
FALS	False Pass	6.62	57		Pn	11 34 52.6	+0.7
SMY	Shemya	7.99	283	P	Pn	11 35 12.4	+1.7
SMY	Shemya	7.99	283		Pn	11 35 12.4	+1.7
SDPT	Sand Point	8.37	59	P	Pn	11 35 17.0	+1.2
	baz=247						
SDPT	Sand Point	8.37	59	Pn	Pn	11 35 16.7	+0.9
CNBA	Chernabura Isl	8.69	63		Pn	11 35 20.8	+0.6
CHNA	Chernabura Isl	8.69	63	P	Pn	11 35 19.9	-0.3
	baz=252						
CHGN	Chignik	9.81	56	P	Pn	11 35 35.7	+0.2
	baz=246						
CHGN	Chignik	9.81	56		Pn	11 35 37.0	+1.5
CHIR	Chirikof Islan	11.14	61	P	Pn	11 35 53.1	-0.6
	baz=254						
SII	Sitkinak Islan	12.11	58	P	Pn	11 36 06.4	-0.6
	baz=253						
SII	Sitkinak Islan	12.11	58		Pn	11 36 06.1	-1.0
GAMB	Gambell	12.22	3	P	Pn	11 36 14.1	+5.6
	baz=184,SNR=7.5						
GAMB	Gambell	12.22	3	Pn	P	11 36 14.7	-5.8
P18K	Big Mountain,	12.72	45	P	P	11 36 22.1	-4.0
	baz=239,SNR=8.5						
P18K	Big Mountain,	12.72	45		Pn	11 36 16.5	+1.1
OHAK	Old Harbor	12.78	56	P	Pn	11 36 16.8	+0.7
	baz=252						
OHAK	Old Harbor	12.78	56	Pn	Pn	11 36 15.5	-0.6
O18K	Koktuh Hills	12.96	44	P	Pn	11 36 22.7	+4.1
	baz=238,SNR=17						
O18K	Koktuh Hills	12.96	44	Pn	Pn	11 36 22.0	+3.3
Q19K	Cape Douglas,	13.23	49	P	Pn	11 36 22.6	+0.4
	baz=244						
Q19K	Cape Douglas,	13.23	49		Pn	11 36 22.1	-0.2
KDAK	Kodiak Island	13.31	54	P	Pn	11 36 19.2	-4.2
	1.9nm,0.3s,baz=242,slow=6.3,SNR=35						
KDAK	Kodiak Island	13.31	54	P	Pn	11 36 24.6	+1.2
KDAK	Kodiak Island	13.31	54	P	Pn	11 36 23.2	-0.2
	baz=250						
KDAK	Kodiak Island	13.31	54	Pn	Pn	11 36 24.6	+1.2
SVW2	Sparrevohn	13.52	39		Pn	11 36 28.7	+2.5
O19K	Port Alsworth	13.52	43	P	Pn	11 36 28.5	+2.3
	baz=238,SNR=36						
O19K	Port Alsworth	13.52	43		Pn	11 36 27.3	+1.1
ANM	Nome	13.59	14	P	Pn	11 36 31.0	+3.8
ANM	Nome	13.59	14	P	P	11 36 33.8	-2.0
	baz=200,SNR=7.3						
ANM	Nome	13.59	14		Pn	11 36 31.0	+3.8
P19K	Oil Pt	13.74	46	P	P	11 36 33.9	-3.5
	baz=242,SNR=18						
P19K	Oil Pt	13.74	46		Pn	11 36 30.0	+0.7
N19K	Bonanza Creek	13.79	41	P	Pn	11 36 31.7	+1.7
	baz=236,SNR=46						
N19K	Bonanza Creek	13.79	41		Pn	11 36 30.6	+0.6
O20K	Slope Mountain	14.21	45	P	Pn	11 36 37.9	+2.2
	baz=242,SNR=8.6						
TNA	Tin City	14.23	9		Pn	11 36 38.7	+2.8
RSO	Redoubt South	14.33	44		Pn	11 36 37.4	-0.1
L19K	White Mountain	14.46	36	P	Pn	11 36 40.1	+1.1
	baz=231,SNR=57						
L19K	White Mountain	14.46	36		Pn	11 36 39.8	+0.8
M19K	Big River Lodg	14.46	37	P	Pn	11 36 41.0	+1.9
	baz=232						
M19K	Big River Lodg	14.46	37	P	Pn	11 36 40.6	+1.6
HOM	Homer	14.47	48		Pn	11 36 39.2	+0.1
TTA	Tatalina	14.55	32	P	Pn	11 36 43.0	+2.7
TTA	Tatalina	14.55	32	P	Pn	11 36 42.3	+2.1
	baz=226,SNR=58						
TTA	Tatalina	14.55	32		Pn	11 36 43.0	+2.7
CNPM	China Poot	14.60	49		Pn	11 36 40.9	-0.1
BRLK	Bradley Lake	14.86	48		Pn	11 36 44.8	+0.3
BRSE	Bradley Lake S	14.92	48	P	P	11 36 48.1	-2.4
	baz=246,SNR=23						
SPCR	Spurr Chakacha	14.93	42	P	Pn	11 36 47.0	+1.5
	baz=239,SNR=34						
SPU	Mount Spurr	14.99	42		Pn	11 36 47.6	+1.4
L20K	Farewell, AK	15.00	36	P	Pn	11 36 48.5	+2.2
	baz=232,SNR=70						
K20K	Telida	15.49	33	P	Pn	11 36 53.4	+0.7
	baz=229,SNR=81						
K20K	Telida	15.49	33	Pn	Pn	11 36 53.8	+1.0
K20K				IAmb	IAmb	11 37 10.5	
	comp=Z,466nm,1.3s						
GCSA	Galena City Sc	15.61	26	P	Pn	11 36 55.9	+1.7
	baz=220,SNR=69						
SKT	Skwentna	15.62	40	P	P	11 36 56.5	-1.8
	baz=238,SNR=34						
SEW	Seward	15.66	48	P	Pn	11 36 52.4	-2.5
	baz=247,SNR=5.7						
SUA	Susitna One	15.68	42	P	P	11 36 57.4	-1.7
	baz=240,SNR=8.7						
SUA	Susitna One	15.68	42		Pn	11 36 56.2	+1.0
O22K	Cooper Landing	15.68	46	P	Pn	11 36 53.8	-1.4
	baz=245,SNR=15						
O22K	Cooper Landing	15.68	46		Pn	11 36 53.5	-1.7
O22K				IAmb	IAmb	11 37 18.5	
	comp=Z,441nm,0.8s						
PPLA	Purkeypile	15.88	37	P	Pn	11 36 59.4	+1.6
	baz=234,SNR=35						
PPLA	Purkeypile	15.88	37		Pn	11 36 57.2	-0.6
PPLA				IAmb	IAmb	11 37 10.6	
	comp=Z,304nm,1.1s						
RC01	Rabbit Creek A	15.94	44	P	Pn	11 36 58.4	-0.1
	baz=243,SNR=11						
RC01	Rabbit Creek A	15.94	44		Pn	11 36 56.8	-1.6
J20K	Nowinta River	16.01	31	P	Pn	11 37 00.7	+1.3
	baz=226,SNR=63						
J20K	Nowinta River	16.01	31	Pn	Pn	11 37 00.1	+0.7
M22K	Willow	16.08	42	P	P	11 37 01.9	-1.5
	baz=241,SNR=13						
CAST	Castle Rocks	16.23	35	P	Pn	11 37 02.5	+0.3
	baz=232,SNR=131						
CAST	Castle Rocks	16.23	35		Pn	11 37 02.4	+0.3
CUT	Chulitna	16.34	40	P	P	11 37 06.9	+0.7
	baz=238,SNR=17						
CUT	Chulitna	16.34	40	P	Pn	11 37 03.9	+0.2
PMR	Palmer	16.42	43	P	Pn	11 37 05.3	+0.7
	baz=243						
CHUM	Lake Minchumin	16.43	34	P	Pn	11 37 05.8	+1.1
	baz=231,SNR=51						
PWL	Port Wells	16.46	46	P	Pn	11 37 03.7	-1.5
	baz=246						
PWL	Port Wells	16.46	46	P	Pn	11 37 03.1	-2.1
GHO	Glory Hole Cre	16.59	43	P	Pn	11 37 06.3	-0.6
KNK	Knik Glacier	16.63	44	P	Pn	11 37 06.4	-0.9
	baz=244,SNR=19						
KNK	Knik Glacier	16.63	44	P	Pn	11 37 06.1	-1.3
KTH	Kantishna Hill	16.73	36	P	Pn	11 37 08.8	+0.2
KTH				IAmb	IAmb	11 37 29.4	
	comp=Z,347nm,1.1s						
SML	Sawmill	16.86	43	P	Pn	11 37 10.1	-0.1
	baz=243,SNR=13						
SML	Sawmill	16.86	43		Pn	11 37 08.4	-1.8
TRF	Thorofare Moun	16.90	37	P	P	11 37 11.9	-0.7
	baz=236						
TRF	Thorofare Moun	16.90	37	P	Pn	11 37 11.4	+0.6
BPAW	Bear Paw Mtn.	17.02	34	P	P	11 37 14.2	+0.4
	baz=233,SNR=190						
BPAW	Bear Paw Mtn.	17.02	34		Pn	11 37 11.8	-0.5
BPAW				IAmb	IAmb	11 37 17.8	
	comp=Z,352nm,1.0s						
GLI	Glacier Island	17.03	47	P	Pn	11 37 11.1	-1.2
	baz=248						
GLI	Glacier Island	17.03	47		Pn	11 37 11.4	-0.9
HIN	Hinchinbrook I	17.14	49		Pn	11 37 12.4	-1.2
RDOG	Red Dog Mine	17.22	13	P	P	11 37 22.8	+6.8
	baz=201,SNR=9.6						
RDOG	Red Dog Mine	17.22	13	P	Pn	11 37 14.4	-0.2
FID	Port Fidalgo	17.27	48		Pn	11 37 12.4	-2.9
SCM	Sheep Creek Mo	17.30	44	P	Pn	11 37 14.3	-1.5
SCM				pmax	pmax		
	comp=Z,248nm,1.0s						
SCM	Sheep Creek Mo	17.30	44	P	Pn	11 37 15.0	-0.7
	baz=245,SNR=31						
SCM	Sheep Creek Mo	17.30	44		Pn	11 37 14.3	-1.5
PET	Petropavlovsk	17.32	286*c*	*i*P	Pn	11 37 15.3	-0.7
PET				*e*S	Sn	11 40 25.2	-2.4
PET				pmax	pmax		
	comp=Z,3µm,12.4s						
PET				pmax	pmax		
	comp=Z,3µm,12.9s						
PET				MLR	MLR		
	comp=Z,4µm,19.0s						
PET				MLR	MLR		
	comp=Z,4µm,18.0s						
I21K	Tanana	17.38	31	P	P	11 37 18.1	+0.4
	baz=228,SNR=256						
I21K	Tanana	17.38	31	P	P	11 37 17.8	+0.1
I21K				IAmb	IAmb	11 37 21.6	
	comp=Z,610nm,1.0s						
IMAR	Indian Mountai	17.41	27	P	P	11 37 18.0	-0.1
RND	Reindeer	17.42	38	P	Pn	11 37 16.7	-0.5
RND				pmax	pmax		
	comp=Z,307nm,1.3s						
RND	Reindeer	17.42	38	P	Pn	11 37 16.7	-0.5
H21K	Melozitna Rive	17.45	29	P	P	11 37 18.5	0.0
	baz=226						
H21K	Melozitna Rive	17.45	29	P	Pn	11 37 18.0	+0.5
WAT6	Susitna Watana	17.46	41	P	Pn	11 37 18.2	+0.4
	baz=242,SNR=19						
EYAK	Cordova Ski Ar	17.54	49	P	P	11 37 19.3	-0.1
	baz=251,SNR=6.1						
EYAK	Cordova Ski Ar	17.54	49	P	Pn	11 37 18.6	0.0
MCK	McKinley	17.56	37	P	Pn	11 37 17.5	-1.4
MCK				pmax	pmax		
	comp=Z,193nm,1.0s						
MCK	McKinley	17.56	37	P	Pn	11 37 17.9	-1.0
	baz=237,SNR=80						
MCK	McKinley	17.56	37	P	Pn	11 37 17.5	-1.4
BWN	Browne	17.61	35	P	Pn	11 37 19.4	0.0
BWN				IAmb	IAmb	11 37 28.6	
	comp=Z,467nm,1.1s						
MLY	Manley	17.68	32	P	P	11 37 21.0	-0.2
	baz=231,SNR=236						
MLY	Manley	17.68	32	P	P	11 37 20.9	-0.3
DIV	Divide	17.72	47	P	Pn	11 37 18.5	-2.4
KLU	Klutina	17.78	46	P	Pn	11 37 19.1	-2.7
	baz=248,SNR=27						
KLU	Klutina	17.78	46	P	Pn	11 37 20.0	-1.8
DHY	Denali Highway	17.84	40	P	Pn	11 37 21.3	-1.2
	baz=241						
DHY	Denali Highway	17.84	40	P	Pn	11 37 21.3	-1.2
PEA0B	Petropavlovsk-	17.89	286	P	Pn	11 37 20.7	-2.3
PEA0B				pmax	pmax		
	comp=Z,262nm,1.4s						
PEA0B	Petropavlovsk-	17.89	286	P	Pn	11 37 20.7	-2.3
PETK	Petropavlovsk-	17.89	286	P	P	11 37 23.4	0.0
	comp=Z,4.2nm,0.3s,baz=98,slow=12,SNR=65						
PETK				LR	LR	11 43 34.1	
	comp=Z,9µm,21.7s,baz=90,slow=34						
PETK				ScP	ScP	11 45 29.5	-0.8
	baz=132,slow=2.1,SNR=4.2						
PETK	Petropavlovsk-	17.89	286	P	Pn	11 37 20.9	-2.0
M24K	Tolsona, Glenn	17.91	44	P	Pn	11 37 22.4	-0.9
	baz=246,SNR=24						
M24K	Tolsona, Glenn	17.91	44	P	Pn	11 37 23.0	-0.3
NEA2	Nenana	17.99	35	P	Pn	11 37 22.8	-1.4
	baz=235,SNR=56						
NEA2	Nenana	17.99	35	P	Pn	11 37 22.8	-1.4
KAIM	Kayak Island	18.00	51	P	Pn	11 37 23.9	-0.4
	baz=255						
KAIM	Kayak Island	18.00	51	P	Pn	11 37 22.4	-1.9
KAIM				IAmb	IAmb	11 37 44.0	
	comp=Z,293nm,0.8s						
RAGM	Ragged Mountai	18.00	50	P	Pn	11 37 23.2	-1.2
HMT	Hamilton	18.18	50	P	Pn	11 37 26.0	-0.5
BMRM	Bremner River	18.20	48	P	Pn	11 37 24.3	-2.6
	baz=251,SNR=12						
BMRM	Bremner River	18.20	48	P	Pn	11 37 24.7	-2.2
I23K	Minto, Yukon-K	18.22	33	P	Pn	11 37 27.1	+0.2
	baz=233,SNR=167						
I23K	Minto, Yukon-K	18.22	33	P	P	11 37 26.5	-0.4
I23K				IAmb	IAmb	11 37 53.0	
	comp=Z,900nm,1.5s						
WRH	Wood River Hil	18.27	36	P	P	11 37 25.3	-2.3
SUCK	Suckling Hills	18.35	51	P	P	11 37 28.2	-0.2
SUCK				IAmb	IAmb	11 37 47.0	
	comp=Z,523nm,1.3s						
N25K	Chitina, Valde	18.42	46	P	P	11 37 28.6	-0.7
	baz=250,SNR=15						
N25K	Chitina, Valde	18.42	46	P	P	11 37 27.9	-1.4
HARP	HAARP	18.46	43	P	P	11 37 28.7	-1.0
	baz=246,SNR=30						
BERG	Berg Lake	18.46	50	P	P	11 37 28.2	-1.5
BERG				IAmb	IAmb	11 37 47.3	
	comp=Z,203nm,0.7s						
CCB	Clear Creek Bu	18.47	35	P	P	11 37 27.6	-2.1
MDM	Murphy Dome	18.50	34	P	P	11 37 29.2	-0.8
PAX	Paxson	18.57	42	P	P	11 37 29.2	-1.7
PAX				pmax	pmax		
	comp=Z,98nm,0.9s						
PAX	Paxson	18.57	42	P	P	11 37 29.5	-1.4
	baz=244,SNR=34						
PAX	Paxson	18.57	42	P	P	11 37 29.2	-1.7
H23K	Yukon River	18.57	31	P	Pn	11 37 31.5	+0.2
	baz=231						
H23K	Yukon River	18.57	31	P	P	11 37 30.5	-0.3
H23K				IAmb	IAmb	11 37 54.2	
	comp=Z,271nm,1.1s						
TCOL	CIGO, UAF Yank	18.58	35	P	P	11 37 29.4	-1.5
	baz=236,SNR=54						
TCOL	CIGO, UAF Yank	18.58	35	P	P	11 37 29.2	-1.7
COLA	College	18.58	35	P	P	11 37 29.2	-1.7
COLA				pmax	pmax		
	comp=Z,223nm,1.1s						
COLA	College	18.58	35	P	P	11 37 29.2	-1.7
HDA	Harding Lake	18.66	37	P	P	11 37 30.0	-1.8
	baz=238,SNR=92						
HDA	Harding Lake	18.66	37	P	P	11 37 30.5	-1.3
GLB	Gilahina Butte	18.72	47	P	P	11 37 30.8	-1.7
VRDI	Verde Repeater	18.82	48	P	P	11 37 32.1	-1.7
SNH	Sunshine Point	18.83	51	P	Pn	11 37 34.1	-0.3
CRQE	Cirque	18.85	49	P	P	11 37 33.8	-0.3
	baz=254,SNR=41						
POKR	Poker Plat Res	18.87	34	P	P	11 37 33.4	-0.7
	baz=236,SNR=28						
POKR	Poker Plat Res	18.87	34	P	P	11 37 32.7	-1.4
IL31		18.87	36	P	P	11 37 30.9	-3.2
IL31				IAmb	IAmb	11 37 36.0	
	comp=Z,283nm,1.1s						
ILAR	Eielson Array	18.87	36	P	P	11 37 32.1	-2.1
	comp=Z,3.3nm,0.3s,baz=239,slow=9.3,SNR=108						
ILAR				pPcP		11 42 12.3	
	comp=Z,0.5nm,0.3s,baz=249,slow=2.8,SNR=7.2						
ILAR				LR	LR	11 45 27.3	
	comp=Z,11µm,18.8s,baz=247,slow=39						
ILAR	Eielson Array	18.87	36	P	P	11 37 31.4	-2.8
WAX	Waxell Ridge	18.89	50	P	P	11 37 32.9	-1.6
WAX				IAmb	IAmb	11 37 38.8	
	comp=Z,347nm,0.8s						
TGL	Tana Glacier	18.98	49	P	P	11 37 33.6	-1.8
TGL				IAmb	IAmb	11 37 41.1	
	comp=Z,232nm,0.9s						
MCARA	McCarthy VSAT	19.06	47	P	P	11 37 35.2	-1.0
	baz=252,SNR=20						
H24K	Noodor Dome	19.13	32	P	P	11 37 36.7	-0.3
	baz=234,SNR=378						
RIDG	Independent Ri	19.15	40	P	P	11 37 36.6	-0.7
	baz=243,SNR=44						
RIDG	Independent Ri	19.15	40	P	P	11 37 36.0	-1.3
RIDG				IAmb	IAmb	11 38 04.9	
	comp=Z,473nm,1.4s						
ISLE	Juniper Island	19.17	50	P	P	11 37 37.4	-0.2
ISLE				IAmb	IAmb	11 37 47.6	
	comp=Z,301nm,1.0s						
MESA	MESA	19.26	51	P	P	11 37 39.0	+0.3
	baz=257,SNR=16						
MESA	MESA	19.26	51	P	P	11 37 37.7	-0.9
MESA				IAmb	IAmb	11 37 47.1	
	comp=Z,188nm,0.7s						
MENT	Mentasta	19.29	43	P	P	11 37 37.5	-1.2
COLD	Coldfoot	19.30	27	P	Pn	11 37 39.8	-0.1
	baz=227,SNR=217						
COLD	Coldfoot	19.30	27	P	Pn	11 37 39.6	-0.3
COLD				IAmb	IAmb	11 37 44.5	
	comp=Z,395nm,1.0s						
BILL	Bilibino	19.30	336*d*	*i*P	Pn	11 37 40.2	+0.2
BILL				*i* S	S	11 41 14.1	-1.1
BILL				pmax	pmax		
	comp=Z,125nm,0.9s						
BILL				MLR	MLR		
	comp=Z,8µm,15.0s						
BILL	Bilibino	19.30	336	P	Pn	11 37 39.7	-0.4
BILL				IAmb	IAmb	11 37 51.3	
	comp=Z,464nm,1.0s						
SKR	Severo-Kuril’s	19.31	279	*e*P	P	11 37 38.0	-1.0
SKR				pmax	pmax		
	comp=Z,2µm,3.8s						
SKR				pmax	pmax		
	comp=Z,118nm,2.6s						
SKR				pmax	pmax		
	comp=Z,700nm,4.5s						
SKR				MLR	MLR		
	comp=Z,7µm,20.0s						
SKR				MLR	MLR		
	comp=Z,6µm,20.0s						
J25K	Salcha River,	19.36	37	P	P	11 37 37.2	-2.3
	baz=240,SNR=244						
YAH	Yahtse	19.40	51	P	P	11 37 40.2	0.0
YAH				IAmb	IAmb	11 37 47.2	
	comp=Z,230nm,0.7s						
M26K	Nabesna, AK	19.40	45	P	P	11 37 37.4	-2.6
	baz=250,SNR=43						
M26K	Nabesna, AK	19.40	45	P	P	11 37 36.9	-3.1
DOT	Dot Lake	19.43	41	P	P	11 37 38.7	-1.5
L26K	Log Cabin Wild	19.48	43	P	P	11 37 38.7	-2.1
	baz=247,SNR=58						
L26K	Log Cabin Wild	19.48	43	P	P	11 37 38.9	-1.9
L26K				IAmb	IAmb	11 37 49.7	
	comp=Z,173nm,0.8s						
GRNC	Granite Creek	19.48	50	P	P	11 37 40.2	-0.9
GRNC				IAmb	IAmb	11 37 56.9	
	comp=Z,260nm,0.7s						
SCRK	Sand Creek	19.60	40	P	P	11 37 40.2	-2.0
	baz=244,SNR=134						
SCRK	Sand Creek	19.60	40	P	P	11 37 40.2	-2.0
BARN	Barnard Glacie	19.61	49	P	P	11 37 41.7	-0.7
TABL	Table Mountain	19.71	51	P	P	11 37 43.0	-0.5
TABL				IAmb	IAmb	11 38 05.3	
	comp=Z,329nm,0.9s						
CTG	Chitna Glacier	19.73	49	P	P	11 37 42.8	-0.9
	baz=256,SNR=50						
CTGM	Chitina Glacie	19.74	49	P	P	11 37 42.2	-1.6
CTGM				IAmb	IAmb	11 38 05.0	
	comp=Z,281nm,0.8s						
PRP	Porcupine Dome	19.76	35	P	P	11 37 42.4	-1.5
	baz=238,SNR=158						
PRP	Porcupine Dome	19.76	35	P	P	11 37 42.1	-1.8
PRP				IAmb	IAmb	11 37 45.3	
	comp=Z,241nm,1.1s						
LOGN	Logan Glacier	19.86	50	P	P	11 37 44.5	-0.6
LOGN				IAmb	IAmb	11 37 49.3	
	comp=Z,231nm,0.9s						
M27K	Edge Creek, AK	19.88	45	P	P	11 37 43.5	-1.8
	baz=251,SNR=82						
M27K	Edge Creek, AK	19.88	45	P	P	11 37 42.9	-2.4
J26L	Joseph Creek	19.99	39	P	P	11 37 45.0	-1.5
	baz=243,SNR=474						
PCA	Pinnacle	20.07	52	P	P	11 37 46.2	-1.2
PCA				IAmb	IAmb	11 37 55.1	
	comp=Z,496nm,1.0s						
PINM	Pinnacle	20.08	52	P	P	11 37 46.9	-0.5
	baz=259,SNR=35						
L27K	Beaver Creek,	20.13	43	P	P	11 37 45.6	-2.4
	baz=249,SNR=37						
L27K	Beaver Creek,	20.13	43	P	P	11 37 46.3	-1.7
L27K				IAMs_20	IAMs_20	11 45 41.8	
	comp=Z,15µm,20.0s						
BCAR	Beaver Creek A	20.15	43	P	P	11 37 47.3	-0.9
BVCY	Beaver Creek	20.35	45	P	P	11 37 48.2	-2.1
	baz=252,SNR=40						
YUK3	Moose Creek	20.35	47	P	P	11 37 48.2	-2.3
	baz=254,SNR=28						
BCPM	Bancas Point	20.36	53	P	P	11 37 50.0	-0.3
FYU	Fort Yukon	20.43	32	P	P	11 37 50.5	-0.5
FYU				IAMs_20	IAMs_20	11 46 22.8	
	comp=Z,14µm,19.0s						
PNL	Peninsula	20.43	54	P	P	11 37 51.4	+0.2
	baz=261,SNR=33						
TOLK	Toolik Lake Re	20.45	25	P	P	11 37 51.6	+0.3
	baz=225,SNR=95						
TOLK	Toolik Lake Re	20.45	25	P	P	11 37 51.1	-0.2
TOLK				IAmb	IAmb	11 38 06.7	
	comp=Z,420nm,1.0s						
EGAK	Eagle	21.05	39	P	P	11 37 56.6	-1.2
	baz=246,SNR=369						
EGAK	Eagle	21.05	39	P	P	11 37 56.3	-1.5
EGAK				IAMs_20	IAMs_20	11 46 37.2	
	comp=Z,27µm,19.0s						
YUK4	Talbot Arm	21.09	49	P	P	11 37 57.9	-0.6
	baz=258,SNR=17						
BMAR	Burnt Mountain	21.12	31	P	P	11 37 58.3	-0.3
A21K	Barrow	21.12	15	P	P	11 37 59.7	+1.2
	baz=209,SNR=10						
A21K	Barrow	21.12	15	P	P	11 37 58.2	-0.3
A21K				IAmb	IAmb	11 38 08.5	
	comp=Z,457nm,1.1s						
A21K				IAMs_20	IAMs_20	11 47 14.3	
	comp=Z,25µm,19.0s						
YUK6	Outpost Mounta	21.15	50	P	P	11 37 58.1	-1.1
	baz=259,SNR=15						
DAWY	Dawson	21.50	42	P	P	11 38 01.2	-1.5
	baz=250,SNR=100						
DAWY	Dawson	21.50	42	P	P	11 38 00.6	-2.1
DAWY				IAmb	IAmb	11 38 07.6	
	comp=Z,226nm,1.1s						
HYT	Haines Junctio	21.54	51	P	P	11 38 01.9	-1.4
	baz=260,SNR=48						
HYT	Haines Junctio	21.54	51	P	P	11 38 01.9	-1.4
HYT				IAmb	IAmb	11 38 13.7	
	comp=Z,143nm,0.9s						
SEY	Seymchan	21.56	315	P	P	11 38 04.3	+1.1
	comp=Z,54nm,1.0s,baz=112,slow=9.4,SNR=38						
SEY				LR	LR	11 46 24.5	
	comp=Z,9µm,19.8s,baz=108,slow=36						
SEY	Seymchan	21.56	315	*i* P	P	11 38 04.8	+1.5
MA2	Magadan	21.71	306	P	P	11 38 06.0	+1.1
	comp=Z,52nm,0.9s,baz=95,slow=8.5,SNR=9.6						
MA2				LR	LR	11 46 23.7	
	comp=Z,11µm,18.7s,baz=104,slow=36						
MA2	Magadan	21.71	306*ce*	P	P	11 38 05.5	+0.6
MA2				pmax	pmax		
	comp=Z,61nm,1.0s						
MA2				MLR	MLR		
	comp=Z,13µm,17.0s						
MA2	Magadan	21.71	306	P	P	11 38 05.3	+0.3
MA2				IAmb	IAmb	11 38 33.3	
	comp=Z,235nm,1.2s						
MA2				IAMs_20	IAMs_20	11 47 13.4	
	comp=Z,15µm,18.0s						

J29M	**Klondike Camp**	**22.11**	**41**	P	**P**	**11 38 08.2**	**-1.1**
	baz=251,SNR=11						
M30M	**Minto, Yukon**	**22.21**	**46**	P	**P**	**11 38 08.1**	**-2.2**
	baz=257,SNR=7.4						
I29M	**Ogilvie Camp,**	**22.39**	**39**	P	**P**	**11 38 09.9**	**-2.3**
	baz=248,SNR=227						
SIT	**Sitka**	**22.44**	**61**	P	**P**	**11 38 11.6**	**-1.1**
SIT				pmax	pmax		
	comp=Z,224nm,1.0s						
SIT	**Sitka**	**22.44**	**61**	P	**P**	**11 38 15.7**	**+3.0**
	baz=272,SNR=9.7						
SIT	**Sitka**	**22.44**	**61**	P	**P**	**11 38 11.6**	**-1.1**
SIT				IAmb	IAmb	11 38 23.1	
	comp=Z,224nm,1.0s						
SKAG	**Skagway**	**22.47**	**55**	P	**P**	**11 38 12.8**	**-0.3**
	baz=266,SNR=98						
SKAG	**Skagway**	**22.47**	**55**	P	**P**	**11 38 12.9**	**-0.1**
N31M	**Braeburn, Yuko**	**22.47**	**49**	P	**P**	**11 38 14.9**	**+1.7**
	baz=260,SNR=12						
BESE	**Bessie Mountai**	**22.68**	**57**	P	**P**	**11 38 14.5**	**-0.8**
BESE				IAmb	IAmb	11 38 18.6	
	comp=Z,298nm,1.1s						
WHY	**Whitehorse**	**22.80**	**52**	P	**P**	**11 38 18.0**	**+1.3**
	baz=263,SNR=32						
WHY	**Whitehorse**	**22.80**	**52**	P	**P**	**11 38 16.4**	**-0.3**
WHY				IAmb	IAmb	11 38 34.7	
	comp=Z,172nm,1.0s						
MAYO	**Mayo, Yukon**	**22.85**	**44**	P	**P**	**11 38 15.2**	**-1.9**
	baz=255						
JIS	**Juneau Island**	**22.92**	**58**	P	**P**	**11 38 16.2**	**-1.6**
JIS				IAmb	IAmb	11 38 31.9	
	comp=Z,339nm,1.1s						
M31M	**Drury Creek, Y**	**23.24**	**48**	P	**P**	**11 38 19.0**	**-2.0**
	baz=260,SNR=9.5						
FARO	**Faro, Yukon**	**23.73**	**48**	P	**P**	**11 38 24.5**	**-1.3**
	baz=261						
P33M	**Teslin, Yukon**	**23.78**	**53**	P	**P**	**11 38 27.4**	**+1.1**
	baz=266,SNR=25						
CRAG	**Craig**	**23.79**	**65**	P	**P**	**11 38 29.3**	**+2.9**
	baz=277						
WRAK	**Wrangell Islan**	**24.12**	**62**	P	**P**	**11 38 31.0**	**+1.6**
	baz=275,SNR=12						
WRAK	**Wrangell Islan**	**24.12**	**62**	P	**P**	**11 38 27.9**	**-1.5**
WRAK				IAmb	IAmb	11 38 42.1	
	comp=Z,166nm,1.0s						
WRAK	**Wrangell Islan**	**24.12**	**62**	IAMs_20	IAMs_20	11 48 25.5	
	comp=Z,12µm,21.0s						
DIB	**Dawson Inlet,**	**24.57**	**70**	P	**P**	**11 38 32.0**	**-1.5**
DIB				IAmb	IAmb	11 38 49.5	
	comp=Z,138nm,1.0s						
MMPY	**Sheldon Lake,**	**24.74**	**47**	P	**P**	**11 38 34.9**	**-0.2**
	baz=263						
MOBC	**Moresby Island**	**24.88**	**70**	P	**P**	**11 38 33.7**	**-2.7**
MOBC				IAmb	IAmb	11 38 55.6	
	comp=Z,97nm,0.9s						
DLBC	**Dease Lake**	**25.21**	**57**	P	**P**	**11 38 40.9**	**+1.4**
	comp=Z,128nm,0.8s,baz=277,slow=9.3,SNR=103						
DLBC				LR	LR	11 49 19.5	
	comp=Z,10µm,19.9s,baz=297,slow=38						
DLBC	**Dease Lake**	**25.21**	**57**	P	**P**	**11 38 38.5**	**-0.9**
INK	**Inuvik**	**25.23**	**34**	P	**P**	**11 38 38.4**	**-1.0**
	comp=Z,330nm,0.9s,baz=233,slow=9.9,SNR=238						
INK				PcP	**PcP**	**11 42 12.6**	**+0.8**
	comp=Z,19nm,0.9s,baz=239,slow=2.4,SNR=3.1						
INK				pPcP		11 42 26.4	
	comp=Z,9.4nm,0.6s,baz=38,slow=1.2,SNR=4.4						
INK				LR	LR	11 49 44.6	
	comp=Z,11µm,18.6s,baz=225,slow=39						
INK	**Inuvik**	**25.23**	**34**	P	**P**	**11 38 38.4**	**-1.0**
	baz=248,SNR=302						
INK	**Inuvik**	**25.23**	**34**	P	**P**	**11 38 37.7**	**-1.7**
HG4B	**Hotspring**	**25.54**	**72**	P	**P**	**11 38 39.9**	**-2.5**
HG4B				IAmb	IAmb	11 38 54.4	
	comp=Z,102nm,1.1s						
RUBB	**Prince Rupert**	**25.62**	**67**	P	**P**	**11 38 40.9**	**-2.2**
RUBB				IAmb	IAmb	11 39 06.6	
	comp=Z,174nm,1.1s						
WTLY	**Watson Lake, Y**	**25.79**	**53**	P	**P**	**11 38 45.7**	**+1.1**
	baz=270						
GRNB	**Grenville Isla**	**25.89**	**68**	P	**P**	**11 38 43.2**	**-2.3**
GRNB				IAmb	IAmb	11 39 08.4	
	comp=Z,197nm,1.1s						
TGTN	**Hyland Airport**	**26.06**	**50**	P	**P**	**11 38 47.9**	**+0.8**
	baz=268						
KUR	**Kuril'sk**	**26.48**	**272**	*c* *i*P	**P**	**11 38 51.1**	**+0.2**
KUR				*e*S	**S**	**11 43 23.1**	**+0.6**
KUR				SSS	SSS	11 44 51.6	
KUR				pmax	pmax		
	comp=Z,741nm,1.2s						
KUR				pmax	pmax		
	comp=Z,3µm,7.6s						
KUR				pmax	pmax		
	comp=Z,3µm,14.0s						
BBB	**Bella Bella**	**27.39**	**71**	P	**P**	**11 38 59.2**	**+0.2**
	comp=Z,34nm,0.9s,baz=301,slow=6.3,SNR=7.2						
BBB				LR	LR	11 48 49.1	
	comp=Z,4µm,19.4s,baz=295,slow=34						
TYV	**Tymovskoe**	**27.44**	**286**	*e*P	**P**	**11 38 59.9**	**+0.4**
TYV				*e*S	**S**	**11 43 40.1**	**+2.5**
TYV				pmax	pmax		
	comp=Z,19nm,0.9s						
TYV				pmax	pmax		
	comp=Z,600nm,5.1s						
TYV				smax	smax		
	comp=N,8.0nm,1.2s						
TYV				smax	smax		
	comp=E,16nm,1.2s						
TYV				smax	smax		
	comp=N,600nm,5.8s						
TYV				smax	smax		
	comp=E,700nm,5.8s						
TYV				MLR	MLR		
	comp=E,6µm,20.0s						
TYV				MLR	MLR		
	comp=Z,8µm,20.0s						
YUK	**Yuzh-Kuril'sk**	**28.31**	**271**	*e*P	**P**	**11 39 05.9**	**-1.4**
YUK				*i*		11 39 55.9	
YUK				*i* S	**S**	**11 43 50.8**	**-0.6**
YUK				*i* SS	**SnSn**	**11 45 11.9**	**+2.1**
YUK				pmax	pmax		
	comp=Z,819nm,1.5s						
YUK				pmax	pmax		
	comp=E,570nm,0.8s						
YUK				pmax	pmax		
	comp=N,461nm,1.7s						
WRGLY	**Wrigley**	**28.34**	**47**	P	**P**	**11 39 07.6**	**+0.1**
	baz=269,SNR=19						
UGL	**Uglegorsk**	**28.43**	**283**	*e*P	**P**	**11 39 09.0**	**+0.7**
UGL				*e*S	**S**	**11 43 44.6**	**-8.6**
UGL				pmax	pmax		
	comp=Z,2µm,4.5s						
UGL				pmax	pmax		
	comp=Z,230nm,1.0s						
UGL				MLR	MLR		
	comp=E,5µm,16.0s						
UGL				MLR	MLR		
	comp=N,7µm,15.0s						
UGL				MLR	MLR		
	comp=Z,5µm,17.0s						
YSS	**Yuzh-Sakhalins**	**28.87**	**278**	⇑*e*P	**P**	**11 39 13.6**	**+1.3**
YSS				*e**SP	**pwP**	**11 39 25.7**	**-0.1**
YSS				*e*S	**S**	**11 44 01.0**	**+0.8**
YSS				*e*SS	ScP	11 45 45.5	-14
YSS				pmax	pmax		
	comp=Z,2µm,3.9s						
YSS				pmax	pmax		
	comp=Z,150nm,0.9s						
YSS				MLR	MLR		
	comp=Z,9µm,19.0s						
YSS	**Yuzh-Sakhalins**	**28.87**	**278**	P	**P**	**11 39 09.4**	**-2.8**
YSS				IAmb	IAmb	11 39 15.8	
	comp=Z,142nm,0.9s						
YSS				IAMs_20	IAMs_20	11 50 31.5	
	comp=Z,11µm,20.0s						
A36M	**Sachs Harbour**	**29.15**	**28**	P	**P**	**11 39 14.1**	**-0.4**
	baz=251,SNR=62						
A36M	**Sachs Harbour**	**29.15**	**28**	P	**P**	**11 39 13.6**	**-0.9**
A36M				IAmb	IAmb	11 39 36.7	
	comp=Z,96nm,0.9s						
JKA	**Kamikawa-asahi**	**30.30**	**273**	P	**P**	**11 39 22.8**	**-2.2**
ASAJ	**Asahikawa**	**30.30**	**273**	P	**P**	**11 39 26.0**	**+1.0**
	comp=Z,153nm,0.9s,baz=90,slow=3.6,SNR=39						
ASAJ	**Asahikawa**	**30.30**	**273**	P	**P**	**11 39 26.0**	**+1.0**
ERM	**Erimo**	**31.06**	**269**	*i* P	**P**	**11 39 31.8**	**+0.1**
ERM				pmax	pmax		
	comp=Z,124nm,0.9s						
ERM				MLR	MLR		
	comp=Z,6µm,18.0s						
GRNR	**Gornyy**	**31.18**	**289**	⇑*i*P	**P**	**11 39 32.2**	**-0.5**
GRNR				*e*S	**S**	**11 44 37.7**	**+1.3**
GRNR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
GRNR				smax	smax		
	comp=N,2.0nm,0.7s						
GRNR				MLR	MLR		
	comp=E,2µm,19.0s						
GRNR				MLR	MLR		
	comp=N,1µm,16.0s						
GRNR				MLR	MLR		
	comp=Z,2µm,17.0s						
PGC	**Sidney**	**31.43**	**75**	P	**P**	**11 39 31.7**	**-3.2**
JEW	**Eniwo**	**31.68**	**272**	P	**P**	**11 39 36.5**	**-0.6**
NLWA	**Neilton Lookou**	**31.72**	**78**	P	**P**	**11 39 35.4**	**-2.1**
NLWA				IAmb	IAmb	11 39 42.5	
	comp=Z,74nm,0.9s						
YAK	**Yakutsk**	**31.97**	**311**	LR	LR	11 53 04.1	
	comp=Z,15µm,18.1s,baz=103,slow=37						
YAK	**Yakutsk**	**31.97**	**311**	*e*P	**P**	**11 39 38.3**	**-1.2**
YAK				*e**PP	**sP**	**11 39 50.1**	**-1.3**
YAK				*e*	**PP**	**11 40 53.2**	**+1.4**
YAK				*e*S	**S**	**11 44 48.7**	**+0.3**
YAK				*e*SS	**SnSn**	**11 46 42.7**	**+4.2**
YAK				*e*		11 50 06.2	
YAK				pmax	pmax		
	comp=Z,29nm,0.9s						
YAK				pmax	pmax		
	comp=N,12nm,1.1s						
YAK				pmax	pmax		
	comp=E,25nm,1.2s						
YAK				pmax	pmax		
	comp=Z,367nm,2.6s						
YAK				pmax	pmax		
	comp=E,138nm,2.6s						
YAK				pmax	pmax		
	comp=N,148nm,2.8s						
YAK				smax	smax		
	comp=E,152nm,2.5s						
YAK				smax	smax		
	comp=N,154nm,2.6s						
YAK				MLR	MLR		
	comp=Z,17µm,17.0s						
YAK				MLR	MLR		
	comp=E,10µm,15.0s						
YAK	**Yakutsk**	**31.97**	**311**	P	**P**	**11 39 38.5**	**-1.0**
YAK				IAmb	IAmb	11 39 54.1	
	comp=Z,42nm,0.6s						
D03D	**Eldon**	**32.13**	**77**	P	**P**	**11 39 42.9**	**+1.8**
	baz=296,SNR=16						
TIXI	**Tiksi**	**32.23**	**330**	P	**P**	**11 39 41.5**	**-0.2**
	comp=Z,14nm,0.7s,baz=104,slow=11,SNR=19						
TIXI				PcP	**PcP**	**11 42 30.6**	**+1.3**
	comp=Z,16nm,0.8s,baz=82,slow=2.5,SNR=6.0						
TIXI				ScP	**ScP**	**11 46 09.1**	**-1.2**
	comp=Z,11nm,1.0s,baz=316,slow=2.2,SNR=5.1						
TIXI				LR	LR	11 54 08.1	
	comp=Z,10µm,18.4s,baz=113,slow=39						
TIXI	**Tiksi**	**32.23**	**330**	P	**P**	**11 39 41.5**	**-0.2**
TIXI				IAMs_20	IAMs_20	11 53 48.5	
	comp=Z,10µm,19.0s						
B05A	**Bryant**	**32.41**	**75**	P	**P**	**11 39 44.4**	**+0.8**
	baz=295,SNR=30						
YKA	**Yellowknife Ar**	**32.44**	**48**	P	**P**	**11 39 43.0**	**-0.5**
	comp=Z,2.1nm,0.4s,baz=10,slow=2.9,SNR=23						
YKA				PcP	**PcP**	**11 42 30.9**	**+0.9**
	comp=Z,13nm,0.8s,baz=295,slow=1.4,SNR=8.9						
YKA				pPcP		11 42 44.8	
	comp=Z,3.3nm,0.5s,baz=288,slow=12,SNR=7.7						
YKA				LR	LR	11 54 43.8	
	comp=Z,13µm,18.1s,baz=0.0,slow=40						
YKA	**Yellowknife Ar**	**32.44**	**48**	P	**P**	**11 39 42.4**	**-1.2**
D04E	**Lakebay**	**32.48**	**78**	P	**P**	**11 39 46.6**	**+2.4**
	baz=296						
B06A	**Marblemount**	**32.67**	**75**	P	**P**	**11 39 42.7**	**-3.1**
B06A				IAmb	IAmb	11 40 02.6	
	comp=Z,62nm,1.0s						
F04D	**Rainier, OR**	**32.84**	**80**	P	**P**	**11 39 49.1**	**+1.8**
	baz=298,SNR=7.5						
E04D	**Cinebar**	**32.89**	**79**	P	**P**	**11 39 49.4**	**+1.7**
	baz=297,SNR=26						
D05A	**Enumclaw**	**32.95**	**77**	P	**P**	**11 39 43.6**	**-4.7**
G03D	**McMinnville, O**	**33.11**	**81**	P	**P**	**11 39 52.1**	**+2.4**
	baz=299						
LON	**Longmire**	**33.26**	**78**	P	**P**	**11 39 47.9**	**-3.2**
LON				pmax	pmax		
	comp=Z,64nm,1.1s						
LON	**Longmire**	**33.26**	**78**	P	**P**	**11 39 47.9**	**-3.2**
LON				IAmb	IAmb	11 40 08.5	
	comp=Z,64nm,1.1s						
F04A	**Amboy**	**33.28**	**79**	P	**P**	**11 39 46.4**	**-4.7**
F04A				IAmb	IAmb	11 39 55.4	
	comp=Z,96nm,1.0s						
I02E	**Swisshome, OR**	**33.30**	**83**	P	**P**	**11 39 53.6**	**+2.3**
	baz=300						
TEY	**Ternei**	**33.56**	**279**	⇑*e*P	**P**	**11 39 53.6**	**+0.1**
TEY				*e*S	**S**	**11 45 09.0**	**-4.4**
TEY				pmax	pmax		
	comp=N,200nm,3.8s						
TEY				pmax	pmax		
	comp=E,400nm,3.8s						
TEY				pmax	pmax		
	comp=Z,700nm,3.8s						
TEY				pmax	pmax		
	comp=N,20nm,1.2s						
TEY				pmax	pmax		
	comp=E,50nm,1.2s						
TEY				pmax	pmax		
	comp=Z,70nm,1.2s						
TEY				MLR	MLR		
	comp=E,2µm,20.0s						
TEY				MLR	MLR		
	comp=N,1µm,19.0s						
TEY				MLR	MLR		
	comp=Z,3µm,22.0s						
J01E	**Myrtle Point**	**33.74**	**85**	P	**P**	**11 39 57.3**	**+2.2**
	baz=302						
H04D	**Lebanon**	**33.77**	**82**	P	**P**	**11 39 58.1**	**+2.6**
	baz=300,SNR=12						
I03D	**Drain, OR**	**33.82**	**84**	P	**P**	**11 39 58.2**	**+2.4**
	baz=301,SNR=6.5						
F05D	**White Salmon**	**33.89**	**79**	P	**P**	**11 39 58.2**	**+1.8**
	baz=299,SNR=7.5						
K02D	**Willamette Mer**	**34.15**	**85**	P	**P**	**11 40 00.9**	**+2.0**
	baz=302,SNR=11						
DBO	**Dodson Butte**	**34.19**	**84**	P	**P**	**11 39 58.9**	**-0.2**
DBO				IAmb	IAmb	11 40 14.3	
	comp=Z,109nm,1.2s						
G05D	**Wamic, OR**	**34.29**	**80**	P	**P**	**11 40 02.1**	**+2.1**
	baz=299,SNR=14						
I04A	**Tendick Farm,**	**34.35**	**83**	P	**P**	**11 40 02.5**	**+2.0**
	baz=301,SNR=29						
L02E	**Cave Junction**	**34.48**	**86**	P	**P**	**11 40 03.8**	**+2.2**
	baz=303,SNR=6.6						
KLR	**Kul'dur**	**34.56**	**288**	P	**P**	**11 40 01.3**	**-0.9**
	comp=Z,17nm,0.5s,baz=62,slow=6.7,SNR=57						
KLR				LR	LR	11 53 57.2	
	comp=Z,5µm,20.7s,baz=66,slow=36						
KLR	**Kul'dur**	**34.56**	**288**	*ce*P	**P**	**11 40 00.9**	**-1.3**
KLR				pmax	pmax		
	comp=Z,42nm,0.9s						
KLR				MLR	MLR		
	comp=Z,5µm,19.0s						
POHA	**Pohakuloa**	**34.63**	**150**	IAMs_20	IAMs_20	11 51 43.3	
	comp=Z,6µm,20.0s						
HUMO	**Hull Mountain**	**34.64**	**85**	IAMs_20	IAMs_20	11 53 03.2	
	comp=Z,6µm,18.0s						
I05D	**Terrebonne, OR**	**34.73**	**81**	P	**P**	**11 40 06.1**	**+2.3**
	baz=301,SNR=27						
F07A	**Phinny Hill Vi**	**34.82**	**78**	P	**P**	**11 40 04.7**	**+0.2**
F07A				IAmb	IAmb	11 40 21.8	
	comp=Z,108nm,1.0s						
HAWA	**Hanford**	**34.82**	**77**	P	**P**	**11 40 04.3**	**-0.2**
J04D	**Umpqua Nationa**	**34.83**	**83**	P	**P**	**11 40 07.3**	**+2.4**
	baz=302,SNR=12						
L04D	**Klamath Falls**	**35.26**	**85**	P	**P**	**11 40 10.4**	**+1.9**
	baz=303,SNR=11						
YBH	**Yreka Blue Hor**	**35.27**	**86**	P	**P**	**11 40 08.8**	**+0.2**
	comp=Z,29nm,0.9s,baz=296,slow=4.5,SNR=46						
J05D	**Fort Rock, OR**	**35.34**	**83**	P	**P**	**11 40 11.5**	**+2.3**
	baz=302,SNR=40						
ZEA	**Zeya**	**35.35**	**298**	*e*P	**P**	**11 40 07.7**	**-1.2**
ZEA				*e*	**PP**	**11 41 25.0**	**-4.2**
ZEA				*e*S	**S**	**11 45 34.0**	**-6.9**
ZEA				pmax	pmax		
	comp=E,20nm,1.0s						
ZEA				pmax	pmax		
	comp=N,10.0nm,0.5s						
ZEA				pmax	pmax		
	comp=Z,40nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,400nm,11.5s						
ZEA				pmax	pmax		
	comp=E,500nm,10.8s						
ZEA				pmax	pmax		
	comp=N,300nm,13.1s						
ZEA				pmax	pmax		
	comp=Z,600nm,10.9s						
ZEA				smax	smax		
	comp=N,200nm,4.9s						
ZEA				MLR	MLR		
	comp=N,2µm,16.0s						
ZEA				MLR	MLR		
	comp=E,4µm,16.0s						
ZEA				MLR	MLR		
	comp=Z,6µm,17.0s						
M02C	**Callahan**	**35.37**	**87**	P	**P**	**11 40 11.6**	**+2.2**
	baz=304,SNR=14						
K04D	**Chiloquin, OR**	**35.38**	**84**	P	**P**	**11 40 11.4**	**+1.9**
	baz=303,SNR=8.9						
NEW	**Newport**	**35.40**	**73**	P	**P**	**11 40 09.7**	**+0.2**
	comp=Z,47nm,0.8s,baz=296,slow=9.2						
NEW	**Newport**	**35.40**	**73**	P	**P**	**11 40 09.3**	**-0.2**
	baz=297,SNR=54						
NEW	**Newport**	**35.40**	**73**	P	**P**	**11 40 08.1**	**-1.4**
NEW				IAmb	IAmb	11 40 27.5	
	comp=Z,113nm,1.1s						
H11N2	**WAKE ISLAND Hy**	**35.50**	**214**	T	T	12 18 26.1	
	baz=21,slow=76,SNR=846						
H11N3	**WAKE ISLAND Hy**	**35.51**	**214**	T	T	12 18 18.4	
	baz=21,slow=76,SNR=712						
EDM	**Edmonton**	**35.52**	**63**	P	**P**	**11 40 10.2**	**-0.3**
EDM				pmax	pmax		
	comp=Z,151nm,0.8s						
EDM	**Edmonton**	**35.52**	**63**	P	**P**	**11 40 10.2**	**-0.3**
H11N1	**WAKE ISLAND Hy**	**35.52**	**214**	T	T	12 18 27.4	
	baz=21,slow=76,SNR=406						
N02D	**Trinity Center**	**35.70**	**87**	P	**P**	**11 40 14.2**	**+1.9**
	baz=304,SNR=11						
M04C	**Macdoel**	**35.79**	**85**	P	**P**	**11 40 14.8**	**+1.8**
	baz=304,SNR=32						
O02D	**Mt. Diablo Mer**	**36.11**	**88**	P	**P**	**11 40 17.6**	**+1.8**
	baz=305,SNR=24						
HOPS	**Hopland Field**	**36.63**	**90**	IAMs_20	IAMs_20	11 53 58.8	
	comp=Z,7µm,20.0s						
O03E	**Paynes Creek**	**36.65**	**87**	P	**P**	**11 40 21.2**	**+0.8**
	baz=305,SNR=53						
MOD	**Modoc Plateau**	**36.67**	**84**	IAMs_20	IAMs_20	11 54 56.1	
	comp=Z,7µm,18.0s						
H11S1	**WAKE ISLAND Hy**	**36.70**	**213**	T	T	12 19 51.5	
	baz=20,slow=76,SNR=982						
H11S2	**WAKE ISLAND Hy**	**36.72**	**213**	T	T	12 19 37.8	
	baz=20,slow=76,SNR=457						
H11S3	**WAKE ISLAND Hy**	**36.72**	**213**	T	T	12 19 37.8	
	baz=20,slow=76,SNR=369						
USRK	**Ussuriysk Ar.**	**36.82**	**281**	P	**P**	**11 40 21.7**	**+0.1**
	comp=Z,32nm,0.8s,baz=57,slow=7.4,SNR=33						
USRK				PcP	**PcP**	**11 42 44.3**	**+1.3**
	comp=Z,11nm,0.9s,baz=192,slow=1.3,SNR=4.6						
USRK				pPcP		11 42 57.0	
	comp=Z,7.1nm,0.7s,baz=52,slow=4.1,SNR=4.3						
USRK				LR	LR	11 55 32.2	
	comp=Z,6µm,20.3s,baz=57,slow=36						
USRK	**Ussuriysk Ar.**	**36.82**	**281**	P	**P**	**11 40 20.4**	**-1.3**
MCCM	**Marconi Confer**	**37.26**	**91**	IAMs_20	IAMs_20	11 54 57.5	
	comp=Z,5µm,18.0s						
MJAR	**Matsushiro Arr**	**37.39**	**266**	LR	LR	11 55 22.3	
	comp=Z,3µm,21.1s,baz=65,slow=35						
MAJO	**Matsushiro**	**37.39**	**266**	*c* *i*P	**P**	**11 40 26.5**	**-0.1**
MAJO				pmax	pmax		
	comp=Z,147nm,1.6s						
MAJO				MLR	MLR		
	comp=Z,4µm,19.0s						
MAT	**Matsushiro**	**37.39**	**266**	P	**P**	**11 40 26.9**	**+0.3**
MAT				S	**S**	**11 46 13.0**	**+0.5**
VLA	**Vladivostok**	**37.46**	**279**	*i* P	**P**	**11 40 27.4**	**+0.4**
VLA				pmax	pmax		
	comp=Z,122nm,1.0s						
VLA				MLR	MLR		
	comp=Z,4µm,20.0s						
PLID	**Pearl Lake**	**37.61**	**77**	IAMs_20	IAMs_20	11 56 58.5	
	comp=Z,6µm,20.0s						
MSO	**Missoula**	**37.98**	**73**	P	**P**	**11 40 31.3**	**-0.2**
	baz=299,SNR=54						
RES	**Resolute Bay**	**38.03**	**25**	P	**P**	**11 40 30.3**	**-1.2**
	comp=Z,23nm,1.0s,baz=248,slow=12,SNR=18						
RES				PcP	**PcP**	**11 42 46.2**	**+0.1**
	comp=Z,28nm,1.1s,baz=219,slow=1.8,SNR=4.4						
MDJ	**Mudanjiang**	**38.06**	**283**	P	**P**	**11 40 31.1**	**-1.1**
MDJ				pP	pP	11 40 39.7	-0.6
MDJ				sP	sP	11 40 43.8	+0.1
MDJ				PP	**PP**	**11 41 59.2**	**-0.1**
MDJ				S	**S**	**11 46 24.0**	**+1.5**
MDJ				pmax	pmax		
	comp=Z,29nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,560nm,3.8s						
MDJ				LR	LR		
	comp=Z,3µm,19.6s						
MDJ				LR	LR		
	comp=Z,8µm,20.6s						
MDJ				LR	LR		
	comp=Z,11µm,18.6s						
MDJ	**Mudanjiang**	**38.06**	**283**	IAMs_20	IAMs_20	11 56 05.6	
	comp=Z,9µm,20.0s						
MSHR	**Mys Shultsa**	**38.20**	**279**	*ce*P	**P**	**11 40 34.7**	**+1.4**
MSHR				pmax	pmax		
	comp=Z,122nm,0.8s						
HLID	**Hailey**	**39.39**	**78**	P	**P**	**11 40 43.6**	**0.0**
	baz=303,SNR=47						
BCYI	**Bear Canyon**	**39.60**	**76**	P	**P**	**11 40 45.4**	**0.0**
EGMT	**Eagleton**	**39.86**	**69**	P	**P**	**11 40 47.3**	**0.0**
	baz=299,SNR=74						
NVAR	**Mina Array Bea**	**39.94**	**87**	P	**P**	**11 40 48.4**	**+0.2**
	comp=Z,22nm,0.8s,baz=292,slow=7.9,SNR=109						
NVAR				PcP	**PcP**	**11 42 54.0**	**+0.8**
	comp=Z,3.3nm,0.9s,baz=291,slow=2.5,SNR=1.7						
NVAR				pPcP		11 43 07.9	
	comp=Z,6.7nm,0.7s,baz=312,slow=2.0,SNR=5.9						
NVAR				ScP	**ScP**	**11 46 39.4**	**-0.1**
	comp=Z,3.2nm,0.9s,baz=292,slow=4.1,SNR=4.6						
NVAR				LR	LR	11 54 09.3	
	comp=Z,2µm,21.4s,baz=298,slow=31						
NVAR	**Mina Array Bea**	**39.94**	**87**	P	**P**	**11 40 48.0**	**-0.2**
BOZ	**Bozeman (W)**	**39.98**	**74**	P	**P**	**11 40 48.3**	**-0.2**
	baz=301,SNR=51						
NV11	**Mina Array Sit**	**40.03**	**87**	P	**P**	**11 40 49.1**	**+0.2**
MLAC	**Mammoth, Mammo**	**40.10**	**89**	P	**P**	**11 40 51.9**	**+2.3**
	baz=308,SNR=20						
PAGB	**Antelope Grade**	**40.41**	**92**	P	**P**	**11 40 53.6**	**+1.6**
PAGB				IAmb	IAmb	11 41 20.8	
	comp=Z,105nm,1.1s						
ELK	**Elko**	**40.47**	**82**	P	**P**	**11 40 52.9**	**+0.3**
	comp=Z,30nm,0.8s,baz=304,slow=8.3,SNR=99						
ELK	**Elko**	**40.47**	**82**	IAMs_20	IAMs_20	11 57 41.5	
	comp=Z,6µm,18.0s						
BOD	**Bodaibo**	**40.70**	**308**	*e*P	**P**	**11 40 52.7**	**-1.3**
BOD				pmax	pmax		
	comp=Z,48nm,1.4s						
TIN	**Tinemaha, Big**	**40.84**	**89**	P	**P**	**11 40 57.4**	**+1.9**
	baz=309,SNR=17						
SMMC	**Simmler**	**40.84**	**92**	P	**P**	**11 40 56.9**	**+1.4**
	baz=310,SNR=8.9						
CN2	**Changchun**	**41.02**	**284**	*e*P	**P**	**11 40 56.4**	**-0.4**
CN2				*e*S	**S**	**11 47 07.9**	**+1.1**
CN2				pmax	pmax		
	comp=Z,30nm,1.7s						
CN2				pmax	pmax		
	comp=Z,700nm,5.6s						
CN2				LR	LR		
	comp=Z,7µm,20.6s						
CN2				LR	LR		
	comp=Z,4µm,20.6s						
CN2				LR	LR		
	comp=Z,9µm,20.6s						
FFC	**Flin Flon**	**41.04**	**57**	P	**P**	**11 40 56.0**	**-0.9**
FFC				pmax	pmax		
	comp=Z,61nm,1.0s						
FFC				MLR	MLR		
	comp=Z,11µm,20.0s						
FFC	**Flin Flon**	**41.04**	**57**	P	**P**	**11 40 56.0**	**-0.9**
VES	**Vestal, Richgr**	**41.07**	**91**	P	**P**	**11 40 57.6**	**+0.3**

	baz=310,SNR=25						
PKM	**Mcpherson Peak**	**41.23**	**93**	P	**P**	**11 41 00.0**	**+1.1**
	baz=311,SNR=11						
H17A	**Grant Village**	**41.26**	**75**	P	**P**	**11 41 00.5**	**+1.4**
	baz=303,SNR=40						
CWC	**Cottonwood Cre**	**41.32**	**89**	P	**P**	**11 41 00.2**	**+0.7**
	baz=309						
GRAC	**Grapevine Rang**	**41.41**	**88**	P	**P**	**11 41 01.3**	**+1.2**
	baz=309,SNR=17						
HIA	**Hailar**	**41.51**	**294***c*	*i*P	**P**	**11 41 00.0**	**-0.8**
HIA				pmax	pmax		
	comp=Z,53nm,1.0s						
ISA	**Isabella, Lake**	**41.57**	**91**	P	**P**	**11 41 01.2**	**-0.3**
	baz=310,SNR=27						
RLMT	**Red Lodge**	**41.65**	**73**	P	**P**	**11 41 02.5**	**+0.3**
	baz=302,SNR=44						
RLMT	**Red Lodge**	**41.65**	**73**	IAMs_20	IAMs_20	11 59 51.3	
	comp=Z,5µm,18.0s						
R11A	**Troy Canyon, C**	**41.68**	**85**	P	**P**	**11 41 03.2**	**+0.7**
	baz=308,SNR=51						
ARVC	**Arvin**	**41.69**	**92**	P	**P**	**11 41 03.0**	**+0.6**
	baz=310,SNR=7.7						
FURC	**Furnace Creek,**	**42.06**	**88**	P	**P**	**11 41 06.2**	**+0.9**
	baz=309,SNR=54						
OSI	**Osito Audit: C**	**42.09**	**92**	P	**P**	**11 41 06.5**	**+0.8**
	baz=311						
LRMC	**Laurel Mtn Rad**	**42.18**	**90**	P	**P**	**11 41 06.6**	**+0.1**
	baz=310,SNR=20						
DUG	**Dugway, Tooele**	**42.29**	**81**	P	**P**	**11 41 08.7**	**+1.3**
	baz=306,SNR=66						
DUG	**Dugway, Tooele**	**42.29**	**81**	IAMs_20	IAMs_20	11 58 32.7	
	comp=Z,5µm,18.0s						
EDW2	**Edwards Air Fo**	**42.37**	**91**	P	**P**	**11 41 08.3**	**+0.3**
	baz=311,SNR=34						
SNCC	**San Nicolas Is**	**42.49**	**94**	P	**P**	**11 41 10.1**	**+1.1**
	baz=312						
DECC	**Green Verdugo**	**42.57**	**92**	P	**P**	**11 41 10.1**	**+0.5**
	baz=311						
LAO	**LASA Array**	**42.60**	**69**	P	**P**	**11 41 10.2**	**+0.4**
	baz=302,SNR=28						
PASC	**Pasadena Art C**	**42.72**	**92**	IAMs_20	IAMs_20	11 58 12.9	
	comp=Z,4µm,18.0s						
BW06	**Boulder Array**	**42.78**	**76**	P	**P**	**11 41 11.7**	**+0.3**
	baz=305,SNR=96						
PD31	**Pinedale Array**	**42.78**	**76**	P	**P**	**11 41 11.0**	**-0.5**
PD31				IAmb	IAmb	11 41 28.5	
	comp=Z,122nm,1.1s						
PDAR	**Pinedale Array**	**42.78**	**76**	P	**P**	**11 41 10.8**	**-0.7**
	comp=Z,59nm,0.9s,baz=302,slow=3.6,SNR=151						
PDAR				LR	LR	11 58 44.7	
	comp=Z,2µm,18.5s,baz=306,slow=36						
SHOC	**Shoshone, Teco**	**42.78**	**89**	P	**P**	**11 41 12.1**	**+0.7**
	baz=310,SNR=29						
DGMT	**Dagmar**	**42.84**	**66**	P	**P**	**11 41 11.6**	**0.0**
	baz=301,SNR=9.3						
DGMT	**Dagmar**	**42.84**	**66**	IAMs_20	IAMs_20	11 59 47.4	
	comp=Z,6µm,19.0s						
GSC	**Goldstone, Bar**	**42.84**	**90**	P	**P**	**11 41 12.1**	**+0.3**
	baz=310,SNR=66						
BFSC	**Mount Baldy Ra**	**43.00**	**92**	P	**P**	**11 41 13.4**	**+0.2**
	baz=311,SNR=24						
CIS	**Catalina Islan**	**43.08**	**93**	P	**P**	**11 41 13.6**	**-0.2**
	baz=312						
KSRS	**Korea Array**	**43.23**	**275**	LR	LR	11 58 53.2	
	comp=Z,2µm,20.3s,baz=57,slow=36						
KS19	**Wonju Array Si**	**43.23**	**275**	P	**P**	**11 41 12.9**	**-2.0**
KS19				IAmb	IAmb	11 41 33.8	
	comp=Z,140nm,1.1s						
KSAR	**Wonju Array Be**	**43.26**	**275**	P	**P**	**11 41 14.5**	**-0.6**
KSAR	**Wonju Array Be**	**43.26**	**275**	P	**P**	**11 41 14.4**	**-0.6**
SNY	**Shenyang**	**43.27**	**283**	⇑P	**P**	**11 41 15.4**	**+0.3**
SNY				pmax	pmax		
	comp=Z,100nm,1.9s						
SNY				pmax	pmax		
	comp=Z,2µm,8.9s						
SNY				LR	LR		
	comp=Z,4µm,20.5s						
SNY				LR	LR		
	comp=Z,4µm,19.9s						
SNY				LR	LR		
	comp=Z,6µm,20.0s						
SCI2	**San Clemente I**	**43.28**	**94**	P	**P**	**11 41 15.2**	**-0.1**
	baz=312						
TUQ	**Turquoise Moun**	**43.30**	**89**	P	**P**	**11 41 15.8**	**+0.1**
	baz=310,SNR=33						
HEC	**Hector,Ludlow**	**43.44**	**90**	P	**P**	**11 41 16.7**	**0.0**
	baz=311,SNR=45						
BBRC	**Big Bear Solar**	**43.44**	**91**	P	**P**	**11 41 17.3**	**+0.3**
	baz=311,SNR=27						
CIT	**Chita**	**43.56**	**301**	*e*P	P	11 41 08.5	-9.0
CIT				*e*		11 41 15.2	
TULEG	**Thule**	**43.60**	**19**	*i* P	**P**	**11 41 15.7**	**-1.7**
TULEG				IAmb	IAmb	11 41 18.3	
	comp=Z,70nm,1.1s						
TULEG	**Thule**	**43.60**	**19**	IAMs_20	IAMs_20	12 01 18.1	
	comp=Z,4µm,19.0s						
MURC	**Murrieta**	**43.71**	**92**	P	**P**	**11 41 19.0**	**+0.2**
	baz=312,SNR=21						
GMRC	**Granite Mounta**	**43.89**	**89**	P	**P**	**11 41 20.8**	**+0.4**
	baz=311,SNR=43						
INCN	**Inchon**	**44.01**	**276**	P	**P**	**11 41 22.3**	**+1.1**
INCN				pmax	pmax		
	comp=Z,366nm,1.3s						
INCN	**Inchon**	**44.01**	**276**	P	**P**	**11 41 23.2**	**+2.1**
INCN	**Inchon**	**44.01**	**276**	P	**P**	**11 41 22.3**	**+1.1**
PFO	**Pinyon Flats O**	**44.16**	**91**	P	**P**	**11 41 22.4**	**-0.1**
	comp=Z,22nm,1.0s,baz=319,slow=6.4,SNR=23						
PFO	**Pinyon Flats O**	**44.16**	**91**	P	**P**	**11 41 22.8**	**+0.3**
	baz=312,SNR=20						
PFO	**Pinyon Flats O**	**44.16**	**91**	P	**P**	**11 41 21.9**	**-0.6**
PFO				IAmb	IAmb	11 41 36.3	
	comp=Z,120nm,1.4s						
TPFO	**Pinon Flats**	**44.17**	**91**	P	**P**	**11 41 22.7**	**+0.1**
	baz=312,SNR=24						
BELC	**Belle Mtn. Jos**	**44.19**	**91**	P	**P**	**11 41 22.8**	**-0.1**
	baz=311,SNR=23						
109C	**Camp Elliot, M**	**44.24**	**93**	P	**P**	**11 41 23.6**	**+0.6**
	baz=312,SNR=17						
IRM	**Iron Mountain**	**44.62**	**90**	P	**P**	**11 41 26.3**	**+0.1**
	baz=311,SNR=25						
MONP2	**Monument Peak**	**44.66**	**92**	P	**P**	**11 41 27.1**	**+0.4**
	baz=312,SNR=20						
K22A	**Casper**	**44.67**	**74**	P	**P**	**11 41 26.2**	**-0.5**
	baz=305,SNR=10.0						
BC3	**Big Chuckawall**	**44.76**	**90**	P	**P**	**11 41 27.1**	**-0.2**
	baz=312,SNR=11						
RWWY	**Rawlins**	**44.83**	**76**	IAMs_20	IAMs_20	12 00 51.9	
	comp=Z,4µm,19.0s						
SWSC	**Sam W. Stewart**	**45.02**	**91**	P	**P**	**11 41 29.3**	**0.0**
	baz=312,SNR=6.4						
IKP	**In-Ko-Pah, Jac**	**45.02**	**92**	P	**P**	**11 41 29.8**	**+0.4**
	baz=312,SNR=18						
O20A	**White River Ci**	**45.13**	**78**	P	**P**	**11 41 30.0**	**-0.3**
	baz=307,SNR=55						
PDMCI	**Parker Dam,Lak**	**45.15**	**89**	P	**P**	**11 41 30.5**	**+0.3**
	baz=311,SNR=17						
RSSD	**Black Hills**	**45.31**	**71**	P	**P**	**11 41 30.3**	**-1.4**
RSSD				pmax	pmax		
	comp=Z,174nm,1.5s						
RSSD				MLR	MLR		
	comp=Z,4µm,19.0s						
RSSD	**Black Hills**	**45.31**	**71**	P	**P**	**11 41 31.4**	**-0.3**
	baz=305						
RSSD	**Black Hills**	**45.31**	**71**	P	**P**	**11 41 30.3**	**-1.4**
RSSD				IAmb	IAmb	11 41 51.4	
	comp=Z,174nm,1.5s						
RSSD				IAMs_20	IAMs_20	12 01 48.2	
	comp=Z,4µm,19.0s						
GLA	**Glamis**	**45.55**	**91**	P	**P**	**11 41 34.2**	**+0.7**
	baz=312,SNR=6.9						
MDND	**Maddock**	**45.77**	**64**	P	**P**	**11 41 35.4**	**+0.4**
	baz=303,SNR=7.9						
MDND	**Maddock**	**45.77**	**64**	P	**P**	**11 41 34.7**	**-0.3**
NRIK	**Noril'sk**	**46.00**	**331**	P	**P**	**11 41 36.3**	**-0.3**
	comp=Z,15nm,0.9s,baz=75,slow=9.1,SNR=19						
NRIK	**Noril'sk**	**46.00**	**331**	*ce*P	**P**	**11 41 36.1**	**-0.4**
NRIK				pmax	pmax		
	comp=Z,47nm,1.1s						
NRIK				MLR	MLR		
	comp=Z,5µm,16.0s						
NRIK	**Noril'sk**	**46.00**	**331**	P	**P**	**11 41 36.3**	**-0.3**
N23A	**Red Feather La**	**46.06**	**76**	P	**P**	**11 41 38.0**	**+0.2**
	baz=307,SNR=29						
WUAZ	**Wupatki**	**46.08**	**85**	P	**P**	**11 41 38.9**	**+1.0**
	baz=310,SNR=48						
WUAZ	**Wupatki**	**46.08**	**85**	IAMs_20	IAMs_20	11 58 06.1	
	comp=Z,4µm,21.0s						
DL2	**Dalian**	**46.21**	**281**	*e*P	**P**	**11 41 37.6**	**-1.0**
DL2				sP	**sP**	**11 41 51.6**	**+1.4**
DL2				*e*PP	**PP**	**11 43 22.7**	**-4.4**
DL2				S	**S**	**11 48 21.7**	**-1.0**
DL2				SS	**ScS**	**11 51 34.5**	**+3.2**
DL2				pmax	pmax		
	comp=Z,71nm,0.9s						
DL2				pmax	pmax		
	comp=Z,1µm,6.3s						
DL2				LR	LR		
	comp=Z,3µm,22.6s						
DL2				LR	LR		
	comp=Z,2µm,20.1s						
DL2				LR	LR		
	comp=Z,3µm,15.9s						
NEEM	**North Greenlan**	**46.32**	**15**	⇑*i*P	**P**	**11 41 38.5**	**-0.9**
NEEM				IAmb	IAmb	11 41 40.7	
	comp=Z,103nm,1.1s						
NOR	**Nord**	**46.43**	**5**	*i* P	**P**	**11 41 39.4**	**-0.4**
NOR				IAmb	IAmb	11 41 40.9	
	comp=Z,29nm,1.0s						
ULM	**Lac du Bonnet**	**46.50**	**60**	P	**P**	**11 41 40.3**	**-0.5**
	comp=Z,32nm,0.9s,baz=296,slow=8.8,SNR=11						
ULM				LR	LR	12 02 43.3	
	comp=Z,4µm,18.3s,baz=317,slow=38						
MVCO	**Mesa Verde**	**46.78**	**82**	P	**P**	**11 41 44.2**	**+0.8**
	baz=309,SNR=17						
ISCO	**Idaho Springs**	**46.93**	**77**	P	**P**	**11 41 44.1**	**-0.6**
ISCO				pmax	pmax		
	comp=Z,74nm,1.4s						
ISCO				MLR	MLR		
	comp=Z,4µm,18.0s						
ISCO	**Idaho Springs**	**46.93**	**77**	P	**P**	**11 41 45.6**	**+0.9**
	baz=308,SNR=14						
ISCO	**Idaho Springs**	**46.93**	**77**	P	**P**	**11 41 44.1**	**-0.6**
ISCO				IAmb	IAmb	11 42 05.4	
	comp=Z,74nm,1.4s						
ISCO				IAMs_20	IAMs_20	12 05 04.7	
	comp=Z,4µm,18.0s						
W18A	**Petrified Fore**	**47.36**	**85**	P	**P**	**11 41 48.1**	**+0.2**
	baz=311						
S22A	**4UR Ranch, Cre**	**47.47**	**80**	P	**P**	**11 41 50.4**	**+1.5**
	baz=309,SNR=25						
214A	**Organ Pipe Nat**	**47.55**	**90**	P	**P**	**11 41 49.4**	**+0.3**
	baz=313,SNR=12						
AGMN	**Agassiz Nation**	**47.59**	**62**	P	**P**	**11 41 48.3**	**-1.0**
	baz=304,SNR=20						
AGMN	**Agassiz Nation**	**47.59**	**62**	IAMs_20	IAMs_20	12 02 57.4	
	comp=Z,7µm,20.0s						
Q24A	**Divide**	**47.73**	**77**	P	**P**	**11 41 51.7**	**+0.8**
	baz=309						
SUSD	**Miller**	**48.08**	**68**	P	**P**	**11 41 52.5**	**-0.7**
	baz=306,SNR=21						
SDCO	**Great Sand Dun**	**48.28**	**79**	P	**P**	**11 41 55.0**	**-0.1**
	baz=309,SNR=52						
SDCO	**Great Sand Dun**	**48.28**	**79**	P	**P**	**11 41 54.4**	**-0.8**
SDCO				IAmb	IAmb	11 42 11.9	
	comp=Z,45nm,1.0s						
IRK	**Irkutsk**	**48.30**	**305**	*e*P	**P**	**11 41 52.7**	**-2.0**
IRK				pmax	pmax		
	comp=Z,180nm,2.2s						
OGNE	**Ogallala**	**48.38**	**73**	P	**P**	**11 41 55.6**	**0.0**
	baz=308,SNR=14						
UPNV	**Upernavik**	**48.52**	**21**	⇑*i*P	**P**	**11 41 55.4**	**-0.8**
UPNV				IAmb	IAmb	11 41 57.5	
	comp=Z,160nm,1.0s						
TUC	**Tucson**	**48.57**	**88**	P	**P**	**11 41 56.3**	**-0.9**
TUC				pmax	pmax		
	comp=Z,60nm,1.2s						
TUC				MLR	MLR		
	comp=Z,3µm,18.0s						
TUC	**Tucson**	**48.57**	**88**	P	**P**	**11 41 57.6**	**+0.4**
	baz=312						
TUC	**Tucson**	**48.57**	**88**	P	**P**	**11 41 56.3**	**-0.9**
TUC				IAmb	IAmb	11 42 11.1	
	comp=Z,60nm,1.1s						
B35A	**Bob, Littlefor**	**48.73**	**61**	P	**P**	**11 41 56.6**	**-1.5**
B35A				IAmb	IAmb	11 42 14.4	
	comp=Z,104nm,1.3s						
F33A	**5 Mile Ranch,**	**48.78**	**65**	P	**P**	**11 41 56.5**	**-2.0**
BJT	**Baijiatuau**	**48.84**	**286**	IAMs_20	IAMs_20	12 02 28.1	
	comp=Z,8µm,21.0s						
TLY	**Talaya**	**48.94**	**305**	P	**P**	**11 42 00.0**	**+0.4**
	comp=Z,18nm,0.5s,baz=49,slow=7.4,SNR=16						
TLY	**Talaya**	**48.94**	**305***c*	*i*P	**P**	**11 41 59.5**	**-0.1**
TLY				*e*	**PcP**	**11 43 23.1**	**-0.3**
TLY				*e*	**PP**	**11 43 54.3**	**+1.5**
TLY				*e*PPP	PPP	11 44 41.6	
TLY				*e*S	**S**	**11 49 08.2**	**+7.0**
TLY				pmax	pmax		
	comp=Z,167nm,1.1s						
TLY				MLR	MLR		
	comp=Z,10µm,13.0s						
TLY	**Talaya**	**48.94**	**305**	P	**P**	**11 41 59.3**	**-0.3**
TLY	**Talaya**	**48.94**	**305**	IAMs_20	IAMs_20	12 03 52.2	
	comp=Z,4µm,20.0s						
KSCO	**Kaye Shedlock'**	**49.23**	**76**	P	**P**	**11 42 02.8**	**+0.6**
	baz=309,SNR=16						
K31A	**O'Neill**	**49.30**	**70**	P	**P**	**11 42 02.1**	**-0.4**
T25A	**Trinidad**	**49.34**	**79**	P	**P**	**11 42 03.8**	**+0.7**
	baz=310,SNR=58						
ULN	**Ulaanbaatar**	**49.34**	**299**	*ce*P	**P**	**11 42 02.9**	**-0.1**
ULN				pmax	pmax		
	comp=Z,43nm,1.0s						
ULN				MLR	MLR		
	comp=Z,9µm,19.0s						
ULN	**Ulaanbaatar**	**49.34**	**299**	P	**P**	**11 42 02.9**	**-0.1**
ANMO	**Albuquerque**	**49.50**	**82**	P	**P**	**11 42 04.5**	**+0.1**
	comp=Z,6.9nm,1.0s,baz=304,slow=7.8,SNR=15						
ANMO	**Albuquerque**	**49.50**	**82**	*ce*P	**P**	**11 42 04.1**	**-0.3**
ANMO				pmax	pmax		
	comp=Z,21nm,1.3s						
ANMO				MLR	MLR		
	comp=Z,4µm,17.0s						
ANMO	**Albuquerque**	**49.50**	**82**	P	**P**	**11 42 05.3**	**+0.9**
	baz=311						
ANMO	**Albuquerque**	**49.50**	**82**	P	**P**	**11 42 04.5**	**+0.1**
ANMO				IAmb	IAmb	11 42 29.7	
	comp=Z,60nm,1.3s						
ANMO	**Albuquerque**	**49.50**	**82**	IAMs_20	IAMs_20	12 03 06.7	
	comp=Z,3µm,18.0s						
KBS	**Kingsbay**	**49.69**	**359**	*ce*P	**P**	**11 42 06.4**	**+1.4**
KBS				pmax	pmax		
	comp=Z,98nm,1.7s						
KBS	**Kingsbay**	**49.69**	**359**	P	**P**	**11 42 04.5**	**-0.5**
KBS				IAmb	IAmb	11 42 07.6	
	comp=Z,63nm,1.1s						
KBS	**Kingsbay**	**49.69**	**359**	IAMs_20	IAMs_20	12 04 57.6	
	comp=Z,6µm,18.0s						
SONM	**Songino Array**	**49.72**	**299**	P	**P**	**11 42 06.1**	**+0.3**
	comp=Z,27nm,0.9s,baz=53,slow=8.4,SNR=36						
SONM				ScP	**ScP**	**11 47 19.5**	**+0.1**
	comp=Z,3.0nm,1.0s,baz=75,slow=3.3,SNR=3.8						
SONM				LR	LR	12 04 16.7	
	comp=Z,10µm,19.2s,baz=54,slow=37						
SONM	**Songino Array**	**49.72**	**299**	P	**P**	**11 42 05.5**	**-0.4**
SONM				IAmb	IAmb	11 42 07.6	
	comp=Z,38nm,1.0s						
Y22D	**IRIS PASSCAL I**	**49.79**	**84**	P	**P**	**11 42 08.4**	**+1.8**
	baz=312						
Y22D	**IRIS PASSCAL I**	**49.79**	**84**	IAMs_20	IAMs_20	12 03 31.3	
	comp=Z,7µm,18.0s						
ECSD	**EROS Data Cent**	**49.86**	**67**	P	**P**	**11 42 05.3**	**-1.5**
	baz=307,SNR=19						
ECSD	**EROS Data Cent**	**49.86**	**67**	P	**P**	**11 42 05.6**	**-1.2**
ECSD	**EROS Data Cent**	**49.86**	**67**	IAMs_20	IAMs_20	12 03 33.3	
	comp=Z,5µm,20.0s						
ZAK	**Zakamensk**	**49.87**	**304**	*e*P	**P**	**11 42 07.2**	**+0.3**
ZAK				*e*	**PcP**	**11 43 30.3**	**+3.3**
ZAK				pmax	pmax		
	comp=Z,71nm,1.2s						
ZAK				pmax	pmax		
	comp=Z,43nm,1.1s						
NUUG	**Nuugaatsiaq**	**50.04**	**21**	*i* P	**P**	**11 42 07.4**	**-0.4**
NUUG				IAmb	IAmb	11 42 12.0	
	comp=Z,94nm,1.1s						
JOW	**Kunigami**	**50.17**	**264**	P	**P**	**11 42 10.1**	**+0.8**
	comp=Z,32nm,0.9s,baz=296,slow=3.4,SNR=5.0						
EYMN	**Ely**	**50.18**	**60**	P	**P**	**11 42 08.4**	**-0.8**
	baz=306,SNR=8.7						
EYMN	**Ely**	**50.18**	**60**	IAMs_20	IAMs_20	12 05 30.5	
	comp=Z,4µm,20.0s						
121A	**Cookes Peak, D**	**50.29**	**86**	P	**P**	**11 42 11.0**	**+0.6**
	baz=312,SNR=17						
MOY	**Mondy**	**50.29**	**306**	*e*P	**P**	**11 42 09.3**	**-0.8**
MOY				pmax	pmax		
	comp=Z,140nm,2.7s						
SPITS	**Spitsbergen Ar**	**50.35**	**357**	P	**P**	**11 42 10.4**	**+0.4**
	comp=Z,45nm,1.0s,baz=57,slow=6.1,SNR=14						
BGNE	**Belgrade**	**50.40**	**70**	P	**P**	**11 42 10.2**	**-0.7**
	baz=308						
TIA	**Tai'an**	**50.68**	**281**	⇑P	**P**	**11 42 13.3**	**+0.2**
TIA				pmax	pmax		
	comp=Z,33nm,1.0s						
TIA				pmax	pmax		
	comp=Z,850nm,3.5s						
TIA				LR	LR		
	comp=Z,3µm,18.0s						
TIA				LR	LR		
	comp=Z,4µm,22.0s						
TIA				LR	LR		
	comp=Z,3µm,21.6s						
DAG	**Danmarks Havn**	**50.86**	**7**	*i* P	**P**	**11 42 12.6**	**-1.2**
DAG				IAmb	IAmb	11 42 14.3	
	comp=Z,69nm,1.0s						
FRB	**Frobisher Bay**	**50.89**	**34**	P	**P**	**11 42 13.7**	**-0.5**
	comp=Z,31nm,0.9s,baz=309,slow=10,SNR=5.8						
HHC	**Hu-ho-hao-te**	**51.05**	**289**	*e*P	**P**	**11 42 16.7**	**+0.7**
HHC				PP	**PP**	**11 44 14.0**	**+1.6**
HHC				S	**S**	**11 49 30.1**	**-1.1**
HHC				pmax	pmax		
	comp=Z,29nm,0.7s						
HHC				pmax	pmax		
	comp=Z,2µm,10.4s						
HHC				LR	LR		
	comp=Z,880nm,18.0s						
HHC				LR	LR		
	comp=Z,810nm,18.0s						
HHC				LR	LR		
	comp=Z,640nm,14.9s						
CBKS	**Cedar Bluff**	**51.09**	**74**	P	**P**	**11 42 16.2**	**-0.1**
	baz=310,SNR=15						
SPMN	**Marine on St.**	**51.11**	**63**	P	**P**	**11 42 15.4**	**-0.8**
	baz=308,SNR=7.7						
TARA	**Tarawa**	**51.45**	**198**	IAMs_20	IAMs_20	12 00 41.8	
	comp=Z,3µm,19.0s						
SSE	**Sheshan**	**51.59**	**273**	P	P	11 42 34.4	+14
SSE				pmax	pmax		
	comp=Z,98nm,1.2s						
SSE	**Sheshan**	**51.59**	**273**	P	**P**	**11 42 18.3**	**-1.7**
SSE				pP	**pP**	**11 42 27.2**	**-1.1**
SSE				S	**S**	**11 49 41.5**	**+2.9**
SSE				pmax	pmax		
	comp=Z,15nm,0.7s						
SSE				pmax	pmax		
	comp=Z,350nm,3.6s						
EPT	**El Paso**	**51.60**	**85**	IAMs_20	IAMs_20	12 06 41.3	
	comp=Z,3µm,18.0s						
HOPEN	**Hopen**	**51.63**	**355**	*e*P	**P**	**11 42 20.3**	**+0.7**
BTO	**Baotou**	**52.12**	**290**	*e*P	**P**	**11 42 24.4**	**+0.5**
BTO				S	**S**	**11 49 48.5**	**+2.7**
BTO				LR	LR		
	comp=Z,4µm,19.0s						
BTO				LR	LR		
	comp=Z,4µm,21.2s						
SUMG	**Summit**	**52.15**	**16**	⇑*i*P	**P**	**11 42 23.7**	**-0.3**
SUMG				IAmb	IAmb	11 42 25.9	
	comp=Z,166nm,1.1s						
SUMG	**Summit**	**52.15**	**16**	IAMs_20	IAMs_20	12 07 31.0	
	comp=Z,4µm,20.0s						
MNTX	**Cornudas Mount**	**52.35**	**85**	P	**P**	**11 42 26.1**	**+0.5**
	baz=313,SNR=22						
NJ2	**Nanjing**	**52.39**	**276**	⇑P	**P**	**11 42 25.6**	**-0.3**
NJ2				pP	**pP**	**11 42 32.5**	**-1.8**
NJ2				sP	**pwP**	**11 42 39.7**	**0.0**
NJ2				S	**S**	**11 49 48.7**	**-0.8**
NJ2				sS	**sS**	**11 50 04.0**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,25nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,790nm,3.5s						
NJ2				LR	LR		
	comp=Z,3µm,19.4s						
NJ2				LR	LR		
	comp=Z,2µm,15.6s						
NJ2				LR	LR		
	comp=Z,4µm,18.0s						
MSTX	**Muleshoe**	**52.42**	**81**	P	**P**	**11 42 26.9**	**+0.6**
	baz=312,SNR=27						
AMTX	**Amarillo**	**52.48**	**79**	P	**P**	**11 42 27.5**	**+0.8**
	baz=312						
TIY	**Taiyuan**	**52.55**	**286**	⇓P	**P**	**11 42 28.7**	**+1.6**
TIY				pP	**pP**	**11 42 33.6**	**-1.9**
TIY				S	**S**	**11 49 56.9**	**+5.2**
TIY				ScS	**ScS**	**11 52 14.8**	**+0.5**
TIY				pmax	pmax		
	comp=Z,82nm,1.1s						
TIY				pmax	pmax		
	comp=Z,710nm,5.2s						
TIY				LR	LR		
	comp=Z,1µm,15.1s						
TIY				LR	LR		
	comp=Z,3µm,16.2s						
TIY				LR	LR		
	comp=Z,5µm,19.3s						
COWI	**Conover**	**52.58**	**61**	IAMs_20	IAMs_20	12 06 47.1	
	comp=Z,4µm,19.0s						
KSU1	**Kansas State U**	**52.77**	**72**	P	**P**	**11 42 27.4**	**-1.2**
	baz=310,SNR=20						
KSU1	**Kansas State U**	**52.77**	**72**	IAMs_20	IAMs_20	12 07 45.4	
	comp=Z,3µm,18.0s						
SCIA	**State Center**	**52.95**	**67**	P	**P**	**11 42 29.6**	**-0.4**
	baz=310,SNR=7.9						
SCIA	**State Center**	**52.95**	**67**	IAMs_20	IAMs_20	12 04 41.1	
	comp=Z,5µm,21.0s						
DBG	**Daneborg**	**53.04**	**9**	*i* P	**P**	**11 42 28.2**	**-1.9**
DBG				IAmb	IAmb	11 42 30.7	
	comp=Z,69nm,1.0s						
U32A	**Winter Ranch,**	**53.12**	**76**	IAMs_20	IAMs_20	12 07 12.6	
	comp=Z,3µm,18.0s						
JFWS	**Jewell Farm**	**53.99**	**64**	P	**P**	**11 42 36.3**	**-1.3**
	baz=310,SNR=15						
SFJD	**Kangerlussuaq**	**54.02**	**24**	P	**P**	**11 42 36.2**	**-1.2**
SFJD				pmax	pmax		
	comp=Z,64nm,1.1s						
SFJD	**Kangerlussuaq**	**54.02**	**24**	*i* P	**P**	**11 42 36.2**	**-1.2**
SFJD	**Kangerlussuaq**	**54.02**	**24**	P	**P**	**11 42 36.2**	**-1.2**
SFJD				IAmb	IAmb	11 42 38.3	
	comp=Z,64nm,1.1s						
I42A	**Draeger Farm,**	**54.11**	**63**	P	**P**	**11 42 37.0**	**-1.3**
I42A				IAmb	IAmb	11 42 59.1	
	comp=Z,57nm,1.0s						
P38A	**Dawn**	**54.24**	**69**	P	**P**	**11 42 38.0**	**-1.4**
T35A	**Sooner Cattle**	**54.27**	**74**	P	**P**	**11 42 38.1**	**-1.5**
T35A				IAmb	IAmb	11 42 42.1	
	comp=Z,55nm,0.8s						
WMOK	**Wichita Mounta**	**54.35**	**77**	P	**P**	**11 42 41.3**	**+1.0**
	baz=312,SNR=36						
WMOK	**Wichita Mounta**	**54.35**	**77**	IAMs_20	IAMs_20	12 06 52.1	
	comp=Z,4µm,18.0s						
ICESG	**Greenland Ices**	**54.84**	**19**	*i* P	**P**	**11 42 42.6**	**-1.2**
ICESG				IAmb	IAmb	11 42 45.9	
	comp=Z,87nm,0.9s						
TXAR	**Lajitas Array**	**55.05**	**86**	P	**P**	**11 42 44.5**	**-1.0**
	comp=Z,18nm,0.8s,baz=298,slow=4.3,SNR=143						
TXAR	**Lajitas Array**	**55.05**	**86**	P	**P**	**11 42 44.9**	**-0.6**
TXAR	**Lajitas Array**	**55.05**	**86**	P	**P**	**11 42 44.9**	**-0.6**
P40A	**Paris**	**55.17**	**69**	P	**P**	**11 42 43.9**	**-2.3**
SLBS	**Sierra La Lagu**	**55.18**	**95**	P	**P**	**11 42 45.7**	**-0.8**
SLBS				IAmb	IAmb	11 43 00.1	
	comp=Z,74nm,1.1s						
SLBS	**Sierra La Lagu**	**55.18**	**95**	IAMs_20	IAMs_20	12 04 57.9	
	comp=Z,3µm,18.0s						
K43A	**Burlington**	**55.20**	**63**	P	**P**	**11 42 44.8**	**-1.6**
K43A				IAmb	IAmb	11 43 09.2	
	comp=Z,54nm,0.9s						
ABTX	**Abilene, Hawle**	**55.26**	**80**	P	**P**	**11 42 47.4**	**+0.5**
	baz=313,SNR=25						
ABTX	**Abilene, Hawle**	**55.26**	**80**	P	**P**	**11 42 46.0**	**-1.0**
TUL1	**Leonard**	**55.37**	**74**	P	**P**	**11 42 46.8**	**-0.8**
	baz=312,SNR=18						
TUL1	**Leonard**	**55.37**	**74**	IAMs_20	IAMs_20	12 08 26.5	
	comp=Z,3µm,19.0s						
DY2G	**Dye2**	**55.52**	**23**	*i* P	**P**	**11 42 46.8**	**-1.7**
TATO	**Taipei**	**55.73**	**268**	IAMs_20	IAMs_20	12 06 56.2	
	comp=Z,3µm,19.0s						
L44A	**Lake County Fo**	**55.78**	**64**	P	**P**	**11 42 49.3**	**-1.2**
	baz=311,SNR=7.0						
GLMI	**Grayling**	**55.84**	**59**	P	**P**	**11 42 50.8**	**-0.1**
	baz=311,SNR=7.8						
GLMI	**Grayling**	**55.84**	**59**	IAMs_20	IAMs_20	12 07 51.4	
	comp=Z,6µm,21.0s						

HDIL	**Hopedale**	56.07	66	P	P	11 42 51.4	-1.2
	baz=312,SNR=24						
HDIL	**Hopedale**	56.07	66	IAMs_20	IAMs_20	12 08 35.7	
	comp=Z,4µm,18.0s						
WHN	**Wuhan**	56.22	278	⇑P	P	11 42 53.5	-0.2
WHN				sP	sP	11 43 07.2	+1.7
WHN				S	S	11 50 42.2	+1.1
WHN				ScS	ScS	11 52 38.8	-1.6
WHN				pmax	pmax		
	comp=Z,440nm,1.6s						
WHN				pmax	pmax		
	comp=Z,2µm,3.6s						
WHN				LR	LR		
	comp=Z,2µm,12.1s						
WHN				LR	LR		
	comp=Z,3µm,12.6s						
WHN				LR	LR		
	comp=Z,4µm,17.5s						
ZALV	**Zalesovo Beam**	56.43	316	P	P	11 42 54.4	-0.5
	comp=Z,8.5nm,0.8s,baz=38,slow=6.8,SNR=16						
ZALV				PcP	PcP	11 43 52.8	+1.3
	comp=Z,10nm,0.7s,baz=66,slow=3.2,SNR=6.8						
ZALV				LR	LR	12 09 14.2	
	comp=Z,5µm,18.5s,baz=39,slow=38						
SCO	**Scoresbysund**	56.44	11	*i* P	P	11 42 54.0	-0.7
SCO				IAmb	IAmb	11 42 56.2	
	comp=Z,68nm,1.1s						
P43A	**Skaggs, Pawnee**	56.55	67	P	P	11 42 54.3	-1.7
CCM	**Cathedral Cave**	56.62	69	P	P	11 42 53.9	-2.6
CCM				pmax	pmax		
	comp=Z,46nm,0.9s						
CCM				MLR	MLR		
	comp=Z,4µm,20.0s						
CCM	**Cathedral Cave**	56.62	69	P	P	11 42 54.6	-1.9
	baz=312						
CCM	**Cathedral Cave**	56.62	69	P	P	11 42 53.9	-2.6
CCM				IAmb	IAmb	11 42 58.2	
	comp=Z,46nm,0.8s						
CCM	**Cathedral Cave**	56.62	69	IAMs_20	IAMs_20	12 08 09.7	
	comp=Z,4µm,20.0s						
MGMO	**Mountain Grove**	56.63	71	P	P	11 42 54.1	-2.6
MGMO				IAmb	IAmb	11 42 58.4	
	comp=Z,56nm,0.8s						
JCT	**Junction City**	56.64	82	P	P	11 42 55.2	-1.7
JCT				pmax	pmax		
	comp=Z,58nm,1.0s						
JCT	**Junction City**	56.64	82	P	P	11 42 56.1	-0.8
	baz=314,SNR=12						
JCT	**Junction City**	56.64	82	P	P	11 42 55.2	-1.7
JCT				IAmb	IAmb	11 43 15.3	
	comp=Z,58nm,1.0s						
JCT				IAMs_20	IAMs_20	12 06 22.7	
	comp=Z,4µm,20.0s						
U40A	**Yellville**	56.82	72	P	P	11 42 55.9	-2.1
	baz=313,SNR=33						
U40A	**Yellville**	56.82	72	IAMs_20	IAMs_20	12 08 25.0	
	comp=Z,3µm,20.0s						
WHTX	**Lake Whitney,**	57.03	79	P	P	11 43 00.4	+0.9
	baz=314,SNR=9.4						
W39A	**Magazine**	57.05	73	P	P	11 42 58.7	-0.9
	baz=313,SNR=24						
W39A	**Magazine**	57.05	73	IAMs_20	IAMs_20	12 08 56.2	
	comp=Z,3µm,22.0s						
XAN	**Xi'an**	57.12	285	P	P	11 43 00.2	0.0
XAN				PP	PP	11 45 11.1	+4.1
XAN				pmax	pmax		
	comp=Z,82nm,1.3s						
XAN				pmax	pmax		
	comp=Z,1µm,7.9s						
XAN				LR	LR		
	comp=Z,4µm,14.3s						
XAN				LR	LR		
	comp=Z,4µm,17.2s						
XAN				LR	LR		
	comp=Z,5µm,19.3s						
SFIN	**Lafayette**	57.44	65	P	P	11 43 01.4	-0.9
	baz=312,SNR=31						
HAMF	**Hammerfest**	57.46	353	*e*P	P	11 43 02.4	+0.4
TPUB	**Ta-pu**	57.48	267	IAMs_20	IAMs_20	12 11 58.8	
	comp=Z,3µm,20.0s						
SCHQ	**Schefferville**	57.52	41	P	P	11 43 02.3	-0.4
	comp=Z,29nm,0.8s,baz=352,slow=6.7,SNR=13						
SCHQ				LR	LR	12 09 08.5	
	comp=Z,8µm,18.6s,baz=318,slow=37						
QZH	**Quanzhou**	57.55	270	⇑*i*P	P	11 43 03.5	+0.2
QZH				sP	pwP	11 43 17.7	+0.6
QZH				S	S	11 51 03.1	+4.3
QZH				pmax	pmax		
	comp=Z,59nm,1.3s						
QZH				pmax	pmax		
	comp=Z,900nm,7.5s						
QZH				LR	LR		
	comp=Z,6µm,13.3s						
QZH				LR	LR		
	comp=Z,4µm,13.7s						
QZH				LR	LR		
	comp=Z,2µm,15.2s						
MIAR	**Mount Ida**	57.62	74	P	P	11 43 03.0	-0.7
	baz=313,SNR=40						
435B	**Jarrell**	57.80	80	P	P	11 43 05.6	+0.7
	baz=314,SNR=12						
435B	**Jarrell**	57.80	80	IAMs_20	IAMs_20	12 08 40.6	
	comp=Z,2µm,19.0s						
ISOG	**Isortoq, Green**	57.97	21	*i* P	P	11 43 04.5	-1.1
ISOG				IAmb	IAmb	11 43 05.3	
	comp=Z,99nm,1.1s						
W41B	**Gary Mavity, V**	57.99	72	P	P	11 43 04.5	-1.7
	baz=313,SNR=28						
KNMB	**Chin-men Tao**	58.03	270	IAMs_20	IAMs_20	12 11 48.4	
	comp=Z,3µm,18.0s						
AAM	**Ann Arbor**	58.05	61	IAMs_20	IAMs_20	12 10 12.7	
	comp=Z,4µm,19.0s						
KEV	**Kevo**	58.06	352	IAMs_20	IAMs_20	12 06 43.7	
	comp=Z,4µm,22.0s						
X40A	**Basin Creek Fa**	58.11	73	P	P	11 43 06.0	-1.1
	baz=314,SNR=22						
X40A	**Basin Creek Fa**	58.11	73	IAMs_20	IAMs_20	12 09 38.0	
	comp=Z,4µm,20.0s						
DGZ	**Jazzator, Alta**	58.16	311	*c i*P	P	11 43 07.5	0.0
DGZ				pmax	pmax		
	comp=Z,68nm,1.5s						
DGZ				MLR	MLR		
	comp=Z,6µm,17.0s						
ANGG	**Ammassalik, Gr**	58.20	20	*i* P	P	11 43 05.7	-1.6
ANGG				IAmb	IAmb	11 43 07.3	
	comp=Z,81nm,1.1s						
ARA0	**ARCESS Array S**	58.41	352	*e*P	P	11 43 08.7	0.0
ARCES	**ARCESS Array B**	58.41	352	P	P	11 43 08.7	+0.1
	comp=Z,19nm,0.8s,baz=16,slow=7.1,SNR=46						
ARCES				PcP	PcP	11 43 59.8	+0.7
	comp=Z,35nm,0.9s,baz=7.1,slow=4.9,SNR=9.2						
ARCES				LR	LR	12 11 24.1	
	comp=Z,3µm,18.1s,baz=10.0,slow=39						
ARCES	**ARCESS Array B**	58.41	352	P	P	11 43 08.4	-0.2
833A	**Chaparral WMA,**	58.41	83	P	P	11 43 09.1	-0.1
	baz=315,SNR=14						
LZH	**Lanzhou**	58.74	290	*e*P	P	11 43 12.5	+0.8
LZH				pP	sP	11 43 24.3	+0.9
LZH				pmax	pmax		
	comp=Z,180nm,1.1s						
LZH				pmax	pmax		
	comp=Z,930nm,5.4s						
LZH				LR	LR		
	comp=Z,4µm,15.2s						
LZH				LR	LR		
	comp=Z,6µm,16.3s						
LZH				LR	LR		
	comp=Z,4µm,16.2s						
JETT	**Jettan, Norway**	58.75	355	*e*P	P	11 43 12.2	+1.2
TRO	**Tromso**	58.75	355	*e*P	P	11 43 10.5	-0.5
GTA	**Gaotai**	58.78	295	⇑P	P	11 43 11.8	-0.1
GTA				pP	sP	11 43 24.0	+0.4
GTA				PcP	PcP	11 44 02.4	+1.1
GTA				S	S	11 51 11.0	-3.8
GTA				ScS	ScS	11 52 57.7	-1.5
GTA				pmax	pmax		
	comp=Z,67nm,1.2s						
GTA				pmax	pmax		
	comp=Z,760nm,5.8s						
GTA				LR	LR		
	comp=Z,6µm,19.3s						
GTA				LR	LR		
	comp=Z,7µm,17.1s						
GTA				LR	LR		
	comp=Z,8µm,17.1s						
NATX	**Nacogdoches**	58.90	77	P	P	11 43 13.3	+0.7
	baz=314						
NATX	**Nacogdoches**	58.90	77	IAMs_20	IAMs_20	12 09 59.5	
	comp=Z,4µm,18.0s						
Z41A	**Richland Creek**	58.98	74	P	P	11 43 12.7	-0.4
	baz=314						
LVZ	**Lovozero**	59.02	348	*ce*P	P	11 43 12.9	-0.1
LVZ				pmax	pmax		
	comp=Z,79nm,1.0s						
LVZ	**Lovozero**	59.02	348	P	P	11 43 12.6	-0.4
LVZ				IAMs_20	IAMs_20	12 11 42.2	
	comp=Z,3µm,19.0s						
KTK1	**Kautokeino**	59.10	353	*e*P	P	11 43 13.5	+0.1
O49A	**Covington**	59.11	63	P	P	11 43 12.2	-1.8
O49A				IAmb	IAmb	11 43 39.9	
	comp=Z,53nm,1.3s						
UTMT	**University of**	59.18	69	P	P	11 43 13.6	-0.8
HALT	**Halls**	59.20	70	P	P	11 43 13.8	-0.8
IVI	**Ivigtut**	59.24	28	P	P	11 43 13.4	-1.0
P49A	**Miami Univ. Ec**	59.35	64	P	P	11 43 14.3	-1.3
	baz=314,SNR=6.0						
WCI	**Wyandotte Cave**	59.36	66	P	P	11 43 14.1	-1.6
WCI				pmax	pmax		
	comp=Z,82nm,0.9s						
WCI				MLR	MLR		
	comp=Z,4µm,18.0s						
WCI	**Wyandotte Cave**	59.36	66	P	P	11 43 14.6	-1.1
	baz=314						
WCI	**Wyandotte Cave**	59.36	66	P	P	11 43 14.1	-1.6
WCI	**Wyandotte Cave**	59.36	66	IAMs_20	IAMs_20	12 11 29.7	
	comp=Z,4µm,18.0s						
HKT	**Hockley**	59.45	79	*i* P	P	11 43 16.4	0.0
HKT				pmax	pmax		
	comp=Z,49nm,1.4s						
HKT				MLR	MLR		
	comp=Z,4µm,16.0s						
HKT	**Hockley**	59.45	79	IAMs_20	IAMs_20	12 10 10.2	
	comp=Z,3µm,18.0s						
APA	**Apatity**	59.49	349	⇓*i*P	P	11 43 15.2	-1.0
APA				pmax	pmax		
	comp=Z,17nm,1.1s						
APA				MLR	MLR		
	comp=Z,5µm,16.0s						
ACSO	**Alum Creek Sta**	59.83	62	P	P	11 43 17.9	-1.1
	baz=314						
ACSO	**Alum Creek Sta**	59.83	62	IAMs_20	IAMs_20	12 10 33.9	
	comp=Z,5µm,19.0s						
KVTX	**Kingsville**	59.89	83	IAMs_20	IAMs_20	12 09 57.8	
	comp=Z,4µm,19.0s						
WVT	**Waverly**	59.92	69	P	P	11 43 18.0	-1.6
WVT				pmax	pmax		
	comp=Z,116nm,1.4s						
WVT				MLR	MLR		
	comp=Z,3µm,18.0s						
WVT	**Waverly**	59.92	69	P	P	11 43 18.8	-0.9
	baz=314						
WVT	**Waverly**	59.92	69	P	P	11 43 18.0	-1.6
WVT	**Waverly**	59.92	69	IAMs_20	IAMs_20	12 10 29.2	
	comp=Z,3µm,18.0s						
TRQ	**Mont Tremblant**	60.08	52	P	P	11 43 19.4	-1.3
ERPA	**Erie**	60.15	59	P	P	11 43 21.0	-0.2
	baz=314,SNR=5.5						
ERPA	**Erie**	60.15	59	P	P	11 43 20.5	-0.6
M53A	**WI Miller and**	60.26	60	P	P	11 43 21.9	0.0
	baz=314,SNR=6.2						
ZAIG	**Zacatecas**	60.44	90	P	P	11 43 22.6	-1.1
ZAIG				IAmb	IAmb	11 43 37.1	
	comp=Z,40nm,1.2s						
LOF	**Lofoten**	60.48	357	*e*P	P	11 43 22.9	-0.1
STEI	**Steigen**	60.62	356	*e*P	P	11 43 23.8	-0.1
P52A	**Corning**	60.72	62	P	P	11 43 24.4	-0.7
	baz=314						
M54A	**Oil Creek Stat**	60.75	59	P	P	11 43 24.8	-0.5
	baz=314,SNR=9.5						
O53A	**New Philadelph**	60.79	61	P	P	11 43 24.7	-0.9
	baz=314,SNR=6.9						
SEM	**Semipalatinsk**	60.92	315	*e*P	P	11 43 23.7	-2.8
	baz=316						
SEM				*e*S	S	11 51 41.8	-0.5
	baz=316						
SEM				*e*LR	LR	12 10 06.5	
	comp=Z,2µm,16.9s,baz=316						
SEM	**Semipalatinsk**	60.92	315	*e*P	P	11 43 23.6	-2.9
SEM				*e*S	S	11 51 41.7	-0.5
SEM				MLR	MLR		
	comp=Z,2µm,17.0s						
N54A	**Moraine State**	60.96	60	P	P	11 43 25.9	-0.7
	baz=314,SNR=11						
ZSN	**Zaisan**	60.96	311	⇑*i*P	P	11 43 26.4	-0.2
	comp=Z,102nm,2.1s,baz=311						
ZSN				*e*S	S	11 51 42.8	+0.3
	baz=311						
ZSN	**Zaisan**	60.96	311	*c i*P	P	11 43 26.4	-0.2
ZSN				*e*S	S	11 51 42.7	+0.3
ZSN				pmax	pmax		
	comp=Z,102nm,2.1s						
VBMS	**Vicksburg**	61.08	74	P	P	11 43 27.4	-0.2
	baz=315,SNR=7.7						
FAUS	**Fauske**	61.17	356	*e*P	P	11 43 27.3	-0.3
LONY	**Lake Ozonia**	61.20	54	P	P	11 43 27.4	-0.8
	baz=315,SNR=7.1						
LONY	**Lake Ozonia**	61.20	54	IAMs_20	IAMs_20	12 10 12.1	
	comp=Z,5µm,20.0s						
KURK	**Kurchatov**	61.40	317	*ce*P	P	11 43 29.3	-0.2
KURK				pmax	pmax		
	comp=Z,106nm,1.3s						
KURK				MLR	MLR		
	comp=Z,10µm,18.0s						
KURK	**Kurchatov**	61.40	317	P	P	11 43 29.2	-0.2
KURK	**Kurchatov**	61.40	317	P	P	11 43 29.1	-0.4
KURK				IAmb	IAmb	11 43 31.1	
	comp=Z,70nm,0.9s						
KURBB	**Kurchatov Arra**	61.51	317	P	P	11 43 30.0	-0.2
	comp=Z,69nm,0.9s,baz=40,slow=7.1,SNR=130						
KURBB				pP	sP	11 43 42.4	+0.5
	comp=Z,50nm,0.8s,baz=38,slow=7.0,SNR=12						
KURBB	**Kurchatov Arra**	61.51	317	P	P	11 43 29.6	-0.6
K57A	**Scipio Center**	61.55	56	P	P	11 43 29.3	-1.3
X48A	**Hartselle**	61.56	70	P	P	11 43 29.1	-1.7
X48A				IAmb	IAmb	11 43 32.9	
	comp=Z,43nm,0.8s						
146A	**Union**	61.65	72	P	P	11 43 30.6	-0.9
MCWV	**Mont Chateau**	61.95	61	P	P	11 43 32.8	-0.6
	baz=315,SNR=12						
MCWV	**Mont Chateau**	61.95	61	IAMs_20	IAMs_20	12 11 22.1	
	comp=Z,4µm,19.0s						
TZTN	**Tazewell**	62.10	66	P	P	11 43 33.7	-0.7
	baz=315,SNR=12						
KONS	**Konsvik**	62.13	357	*e*P	P	11 43 34.5	+0.4
WMQ	**Urumqi**	62.18	306	P	P	11 43 35.5	+0.6
WMQ				pP	pP	11 43 40.8	-3.0
WMQ				PcP	PcP	11 44 11.1	-3.7
WMQ				pmax	pmax		
	comp=Z,91nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,2µm,4.9s						
WMQ				LR	LR		
	comp=Z,8µm,18.5s						
WMQ				LR	LR		
	comp=Z,5µm,21.1s						
WMQ				LR	LR		
	comp=Z,3µm,21.3s						
BINY	**Binghamton**	62.20	56	P	P	11 43 34.9	-0.2
	baz=316,SNR=13						
O56A	**Blue Knob Stat**	62.21	60	P	P	11 43 34.5	-0.7
	baz=315,SNR=9.3						
STOK	**Stokkvaagen**	62.30	357	*e*P	P	11 43 35.0	-0.2
SSPA	**Standing Stone**	62.32	59	P	P	11 43 35.3	-0.5
	baz=315						
SSPA	**Standing Stone**	62.32	59	P	P	11 43 34.9	-0.9
SSPA	**Standing Stone**	62.32	59	IAMs_20	IAMs_20	12 11 59.7	
	comp=Z,5µm,20.0s						
VT1	**Waterbury**	62.32	53	P	P	11 43 35.0	-0.8
FPAL	**Fort Paine**	62.33	69	P	P	11 43 34.3	-1.7
Y49A	**Blount Mountai**	62.35	70	P	P	11 43 34.2	-1.9
Y49A				IAmb	IAmb	11 43 43.2	
	comp=Z,48nm,1.0s						
MOR8	**Moi Rana**	62.41	357	*e*P	P	11 43 34.8	-1.3
S54A	**Dingess, Beckl**	62.47	63	P	P	11 43 35.6	-1.3
TKL	**Tuckaleechee C**	62.60	67	P	P	11 43 36.6	-1.1
	comp=Z,20nm,0.8s,baz=107,slow=0.5,SNR=17						
MK31	**Makanchi Array**	62.65	312	*c i*P	P	11 43 36.9	-1.1
MK31	**Makanchi Array**	62.65	312	P	P	11 43 37.3	-0.6
MK31				IAmb	IAmb	11 43 39.5	
	comp=Z,36nm,1.1s						
MKAR	**Makanchi Array**	62.65	312	P	P	11 43 37.2	-0.8
	comp=Z,31nm,0.9s,baz=54,slow=5.7,SNR=82						
MKAR	**Makanchi Array**	62.65	312	P	P	11 43 37.8	-0.2
MKAR	**Makanchi Array**	62.65	312	P	P	11 43 37.8	-0.2
MAKZ	**Makanchi**	62.78	312	P	P	11 43 37.5	-1.3
MAKZ	**Makanchi**	62.78	312	P	P	11 43 37.3	-1.5
MAKZ				IAmb	IAmb	11 43 39.5	
	comp=Z,34nm,1.0s						
LBNH	**Lisbon**	62.80	52	P	P	11 43 38.6	-0.4
	baz=316						
PQI	**Presque Isle**	62.90	48	P	P	11 43 38.4	-1.2
W52A	**Murphy**	62.91	67	P	P	11 43 38.1	-1.7
W52A				IAmb	IAmb	11 43 55.5	
	comp=Z,53nm,1.1s						
H62A	**Milan**	62.93	52	P	P	11 43 39.2	-0.6
BVAR	**Borovoye Array**	62.97	323	P	P	11 43 39.9	-0.1
	comp=Z,63nm,0.9s,baz=191,slow=3.0,SNR=152						
PRGR	**Permogore**	62.98	340	*e*P	P	11 43 39.1	-0.7
PRGR				pmax	pmax		
	comp=Z,162nm,1.1s						
BRVK	**Borovoye**	62.98	323	*ce*P	P	11 43 39.9	-0.1
BRVK				pmax	pmax		
	comp=Z,103nm,1.0s						
BRVK				MLR	MLR		
	comp=Z,11µm,17.0s						
BRVK	**Borovoye**	62.98	323	P	P	11 43 39.6	-0.4
BRVK	**Borovoye**	62.98	323	P	P	11 43 39.7	-0.4
HNH	**Hanover**	63.00	53	P	P	11 43 39.7	-0.6
HNH				IAmb	IAmb	11 43 54.1	
	comp=Z,54nm,1.1s						
U54A	**Nelsons Funny**	63.09	65	P	P	11 43 40.0	-1.1
F63A	**Nahmakanta, Br**	63.10	50	P	P	11 43 39.5	-1.4
J61A	**Chester**	63.13	54	P	P	11 43 41.0	-0.2
V53A	**Saluda**	63.14	66	P	P	11 43 40.3	-1.1
V53A				IAmb	IAmb	11 43 56.9	
	comp=Z,39nm,1.0s						
N59A	**State Game Lan**	63.24	57	P	P	11 43 41.6	-0.4
	baz=316,SNR=14						
SVE	**Sverdlovsk**	63.26	330	*de*P	P	11 43 41.9	+0.1
SVE				pmax	pmax		
	comp=Z,58nm,1.1s						
SVE				MLR	MLR		
	comp=Z,6µm,17.0s						
PKME	**Peaks-Kenny Pk**	63.33	50	P	P	11 43 42.0	-0.4
	baz=317,SNR=6.7						
BLA	**Blacksburg**	63.38	63	P	P	11 43 42.7	-0.2
	baz=316,SNR=21						
MOIG	**Morelia**	63.59	91	P	P	11 43 43.9	-1.0
MVL	**Millersville**	63.59	58	P	P	11 43 43.4	-0.9
MVL				IAmb	IAmb	11 43 59.5	
	comp=Z,44nm,0.8s						
I63A	**Otisfield**	63.59	52	P	P	11 43 43.9	-0.4
WVL	**Waterville**	63.67	51	P	P	11 43 43.7	-1.0
WVL				IAMs_20	IAMs_20	12 11 16.6	
	comp=Z,5µm,22.0s						
LUPA	**Lehigh Univers**	63.67	57	P	P	11 43 44.3	-0.5
L61B	**Northampton**	63.72	54	P	P	11 43 44.8	-0.3
	baz=317						
GYA	**Guiyang**	63.86	280	⇓P	P	11 43 46.8	+0.4
GYA				S	S	11 52 18.8	-0.8
GYA				pmax	pmax		
	comp=Z,55nm,1.2s						
GYA				pmax	pmax		
	comp=Z,1µm,3.5s						
GYA				LR	LR		
	comp=Z,3µm,15.0s						
GYA				LR	LR		
	comp=Z,4µm,12.4s						
GYA				LR	LR		
	comp=Z,4µm,14.8s						
BRAL	**Brewton**	63.89	72	P	P	11 43 46.4	0.0
	baz=316						
QUA2	**Belchertown**	64.01	54	P	P	11 43 46.8	-0.2
U56A	**King**	64.02	64	P	P	11 43 46.2	-1.0
U56A				IAmb	IAmb	11 43 50.6	
	comp=Z,71nm,0.9s						
WUPA	**West Chester U**	64.03	58	P	P	11 43 46.1	-1.1
WUPA				IAmb	IAmb	11 43 51.4	
	comp=Z,32nm,1.1s						
BRNJ	**Basking Ridge**	64.04	57	P	P	11 43 47.1	0.0
P60A	**Greenville**	64.11	58	P	P	11 43 47.2	-0.5
	baz=316						
NSS	**Namsos**	64.13	358	*e*P	P	11 43 47.3	-0.1
PAL	**Palisades**	64.14	56	P	P	11 43 48.2	+0.3
	baz=317,SNR=10.0						
ARU	**Arti**	64.22	331	P	P	11 43 47.8	-0.3
	comp=Z,8.5nm,0.6s,baz=19,slow=4.0,SNR=38						
ARU				LR	LR	12 16 25.4	
	comp=Z,8µm,18.2s,baz=42,slow=40						
ARU	**Arti**	64.22	331	*c i*P	P	11 43 47.7	-0.5
ARU					PcP	11 44 20.1	-2.7
ARU					PP	11 46 06.2	-2.8
ARU				S	S	11 52 25.3	+2.2
ARU				pmax	pmax		
	comp=Z,59nm,1.0s						
ARU				MLR	MLR		
	comp=Z,8µm,18.0s						
ARU	**Arti**	64.22	331	P	P	11 43 47.7	-0.5
ARU				IAmb	IAmb	11 43 49.2	
	comp=Z,45nm,0.9s						
HRV	**Adam Dziewonsk**	64.24	54	P	P	11 43 48.7	+0.2
HRV				pmax	pmax		
	comp=Z,225nm,1.5s						
HRV				MLR	MLR		
	comp=Z,5µm,20.0s						
HRV	**Adam Dziewonsk**	64.24	54	P	P	11 43 48.5	0.0
	baz=317						
HRV	**Adam Dziewonsk**	64.24	54	P	P	11 43 48.7	+0.2
HRV	**Adam Dziewonsk**	64.24	54	IAMs_20	IAMs_20	12 12 13.8	
	comp=Z,5µm,20.0s						
CPNY	**Central Park**	64.27	56	P	P	11 43 48.6	-0.1
PAULI	**Pauline**	64.31	66	P	P	11 43 47.8	-1.2
PAULI				IAmb	IAmb	11 43 52.1	
	comp=Z,61nm,0.9s						
WSPT	**Westport, CT**	64.32	56	P	P	11 43 48.2	-0.9
CBN	**Corbin Frederi**	64.34	60	P	P	11 43 49.2	0.0
	baz=316						
KMSC	**Kings Mountain**	64.36	65	P	P	11 43 48.7	-0.7
	baz=316,SNR=30						
GOGA	**Godfrey**	64.38	68	P	P	11 43 48.0	-1.5
GOGA				pmax	pmax		
	comp=Z,66nm,0.9s						
GOGA				MLR	MLR		
	comp=Z,4µm,18.0s						
GOGA	**Godfrey**	64.38	68	P	P	11 43 48.0	-1.5
	baz=316,SNR=27						
GOGA	**Godfrey**	64.38	68	P	P	11 43 48.0	-1.5
GOGA	**Godfrey**	64.38	68	IAMs_20	IAMs_20	12 14 35.6	
	comp=Z,4µm,18.0s						
BRZS	**Berezniki**	64.44	319	⇑*i*P	P	11 43 48.6	-1.1
	comp=Z,65nm,2.1s,baz=319						
BRZS	**Berezniki**	64.44	319	*c i*P	P	11 43 48.6	-1.1
BRZS				pmax	pmax		
	comp=Z,65nm,2.1s						
BCX	**Boston College**	64.56	53	IAMs_20	IAMs_20	12 12 14.3	
	comp=Z,5µm,20.0s						
KIRV	**Kirov**	64.85	337	P	P	11 43 51.6	-0.6
	comp=Z,24nm,0.8s,baz=28,slow=14,SNR=17						
KIRV				LR	LR	12 16 15.8	
	comp=Z,2µm,19.1s,baz=65,slow=40						
KIRV	**Kirov**	64.85	337	*ce*P	P	11 43 51.8	-0.4
KLMR	**Klimovskoe**	64.89	343	*e*P	P	11 43 50.8	-1.6
KLMR				*e*	PP	11 46 12.9	-1.7
KLMR				*e*S	S	11 52 33.9	+2.9
KLMR				*e*SS	SS	11 56 47.1	+5.3
KLMR				pmax	pmax		
	comp=Z,59nm,1.3s						
KLMR	**Klimovskoe**	64.89	343	*e*P	P	11 43 50.9	-1.5
KLMR				AMP		11 43 56.8	
	comp=Z,59nm,1.3s						
KLMR				*e*PP	PP	11 46 13.0	-1.7
KLMR				*e*S	S	11 52 34.0	+2.9
KLMR				*e*S	S	11 52 34.0	+2.9
KLMR				*e*S	S	11 52 34.0	+2.9
KLMR				*e*SS	SS	11 56 47.2	+5.4
KLMR				*e*SS	SS	11 56 47.2	+5.4
KLMR				LQ	LQ	12 06 51.5	
KLMR				LQ	LQ	12 06 51.5	
KLMR				LR	LR	12 12 36.8	
KLMR				AMP		12 19 55.1	
	comp=Z,2µm,16.1s						
LMN	**Caledonia Moun**	64.99	47	P	P	11 43 52.8	-0.6
UNM	**Universidad Na**	65.11	90	IAMs_20	IAMs_20	12 10 27.9	
	comp=Z,3µm,18.0s						
TDK	**Taldyqorghan**	65.79	312	*e*P	P	11 43 57.8	-0.8
	baz=312						
TDK				*e*LR	LR	12 13 19.7	
	comp=Z,2µm,16.3s,baz=312						

TDK	**Taldyqorghan**	**65.79**	**312**	*e*P	**P**	**11 43 57.7**	**-0.8**
TDK				MLR	MLR		
	comp=Z,2µm,16.0s						
MOL	**Molde**	**66.16**	**360**	*e*P	**P**	**11 44 00.8**	**+0.2**
FIA1	**FINESS Array S**	**66.27**	**350**	P	**P**	**11 44 01.6**	**+0.3**
FIA1				IAmb	IAmb	11 44 02.6	
	comp=Z,70nm,1.2s						
FINES	**FINESS Array B**	**66.27**	**350**	P	**P**	**11 44 00.5**	**-0.8**
	comp=Z,19nm,0.8s,baz=12,slow=4.8,SNR=38						
FINES				LR	LR	12 16 39.6	
	comp=Z,2µm,18.2s,baz=18,slow=39						
FINES	**FINESS Array B**	**66.27**	**350**	P	**P**	**11 44 00.7**	**-0.6**
FINES	**FINESS Array B**	**66.27**	**350**	P	**P**	**11 44 00.7**	**-0.6**
NHSC	**New Hope**	**66.49**	**66**	P	**P**	**11 44 03.7**	**+0.5**
	baz=317,SNR=6.2						
TAOE	**Nuku Hiva Isla**	**66.55**	**144**	*e*S	**S**	**11 52 57.7**	**+5.2**
	comp=Z,5µm,25.1s						
TAOE	**Nuku Hiva Isla**	**66.55**	**144**	*e*LR	LR	12 04 00.3	
	comp=Z,3µm,20.7s,baz=350						
TAOE	**Nuku Hiva Isla**	**66.55**	**144**	*e*T	T	12 56 20.6	
	comp=Z,31nm,0.3s						
PDGK	**Podgornoye**	**66.55**	**311**	P	**P**	**11 44 03.5**	**-0.1**
AKN	**Aaknes**	**66.56**	**360**	*e*P	**P**	**11 44 03.6**	**+0.4**
JAY	**Jayapura**	**66.63**	**232**	LR	LR	12 08 10.5	
	comp=Z,1µm,21.0s,baz=22,slow=31						
DOMB	**Dombas**	**66.68**	**359**	*e*P	**P**	**11 44 03.8**	**-0.2**
SHLS	**Shalkode**	**66.70**	**311**	⇑*i*P	**P**	**11 44 03.4**	**-1.2**
	baz=310						
SHLS	**Shalkode**	**66.70**	**311**	*c i*P	**P**	**11 44 03.3**	**-1.2**
KPKS	**Kokpek**	**66.83**	**311**	⇑*i*P	**P**	**11 44 05.4**	**0.0**
	comp=Z,136nm,2.4s,baz=311						
KPKS	**Kokpek**	**66.83**	**311**	*c i*P	**P**	**11 44 05.3**	**0.0**
KPKS				pmax	pmax		
	comp=Z,136nm,2.4s						
UZB	**Uzynbulak**	**66.91**	**311**	⇑*i*P	**P**	**11 44 05.6**	**-0.4**
	comp=Z,100nm,2.2s,baz=311						
UZB	**Uzynbulak**	**66.91**	**311**	*c i*P	**P**	**11 44 05.6**	**-0.4**
UZB				pmax	pmax		
	comp=Z,100nm,2.2s						
FOO	**Floro**	**67.13**	**1**	*e*P	**P**	**11 44 06.5**	**-0.3**
SMPI	**Sarmi**	**67.17**	**234**	P	**P**	**11 44 08.3**	**+0.6**
	comp=Z,9µmcomp=Z,18nm,0.4s						
KMI	**Kunming**	**67.23**	**282**	⇑P	**P**	**11 44 08.5**	**+0.2**
KMI				sP	pwP	11 44 22.3	-0.1
KMI				PP	**PP**	**11 46 35.2**	**-1.2**
KMI				S	**S**	**11 52 56.2**	**-4.9**
KMI				SKS	**SKSac**	**11 53 57.4**	**-6.2**
KMI				pmax	pmax		
	comp=Z,84nm,1.3s						
KMI				pmax	pmax		
	comp=Z,1µm,4.1s						
KMI				LR	LR		
	comp=Z,2µm,12.6s						
KMI				LR	LR		
	comp=Z,4µm,8.6s						
KMI				LR	LR		
	comp=Z,3µm,9.5s						
SATY	**Saty**	**67.27**	**311**	⇑*i*P	**P**	**11 44 08.3**	**0.0**
	comp=Z,73nm,1.4s,baz=311						
SATY	**Saty**	**67.27**	**311**	*c i*P	**P**	**11 44 08.2**	**0.0**
SATY				pmax	pmax		
	comp=Z,73nm,1.4s						
CHKK	**Chushkaly**	**67.32**	**313**	*e*P	**P**	**11 44 06.2**	**-2.2**
	baz=312						
QIZ	**Qiongzhong**	**67.37**	**272**	P	**P**	**11 44 09.5**	**+0.6**
QIZ				S	**S**	**11 53 01.1**	**-1.3**
QIZ				LR	LR		
	comp=Z,11µm,14.9s						
QIZ				LR	LR		
	comp=Z,5µm,21.0s						
QIZ				LR	LR		
	comp=Z,3µm,9.6s						
QIZ	**Qiongzhong**	**67.37**	**272**	IAMs_20	IAMs_20	12 12 17.3	
	comp=Z,3µm,20.0s						
HYA	**Hoyanger**	**67.57**	**0**	*e*P	**P**	**11 44 09.9**	**+0.4**
KUU	**Kurty**	**67.59**	**313**	⇑*i*P	**P**	**11 44 09.1**	**-1.0**
	comp=Z,172nm,2.5s,baz=313						
KUU	**Kurty**	**67.59**	**313**	*c i*P	**P**	**11 44 09.0**	**-1.0**
KUU				pmax	pmax		
	comp=Z,172nm,2.5s						
NB2	**NORSAR Subarra**	**67.65**	**358**	P	**P**	**11 44 09.5**	**-0.7**
	comp=Z,42nm,1.1s,baz=0.8,slow=6.2						
NB2	**NORSAR Subarra**	**67.65**	**358**	P	**P**	**11 44 09.5**	**-0.7**
	baz=0.8,slow=6.2						
NOA	**NORSAR Array B**	**67.65**	**358**	P	**P**	**11 44 09.9**	**-0.3**
	comp=Z,21nm,1.0s,baz=1.0,slow=6.3,SNR=32						
NOA				pP	**sP**	**11 44 22.3**	**-0.2**
	comp=Z,14nm,0.9s,baz=1.6,slow=6.4,SNR=8.3						
NOA				LR	LR	12 13 45.5	
	comp=Z,1µm,19.6s,baz=10.0,slow=36						
BTLS	**Baital**	**67.72**	**315**	⇑*i*P	**P**	**11 44 10.4**	**-0.4**
	comp=Z,48nm,1.4s,baz=315						
BTLS	**Baital**	**67.72**	**315**	*c i*P	**P**	**11 44 10.4**	**-0.4**
BTLS				pmax	pmax		
	comp=Z,49nm,1.4s						
MDOK	**Medeo**	**67.83**	**312**	*i* P	**P**	**11 44 10.8**	**-0.9**
	baz=312						
MDOK				*e*LR	LR	12 13 42.6	
	comp=Z,2µm,16.8s,baz=312						
MDOK	**Medeo**	**67.83**	**312**	P	**P**	**11 44 11.6**	**-0.1**
AAA	**Alma-Ata**	**67.85**	**312**	*e*P	**P**	**11 44 10.6**	**-1.3**
	baz=312						
AAA	**Alma-Ata**	**67.85**	**312**	*e*P	**P**	**11 44 10.5**	**-1.3**
NC602	**NORSAR Array S**	**67.95**	**358**	*e*P	**P**	**11 44 12.1**	**+0.2**
TNSS	**Tian-Shan**	**67.97**	**312**	*e*P	**P**	**11 44 11.8**	**-1.2**
	baz=312						
SKAR	**Skarslia**	**68.06**	**359**	*e*P	**P**	**11 44 12.6**	**-0.1**
AAL	**Aland**	**68.07**	**353**	*e*P	**P**	**11 44 13.2**	**+0.5**
ASK	**Askoy**	**68.25**	**1**	*e*P	**P**	**11 44 14.3**	**+0.4**
BER	**Bergen**	**68.35**	**1**	*e*P	**P**	**11 44 14.5**	**+0.1**
UPP	**Uppsala**	**68.55**	**354**	*e*P	**P**	**11 44 16.7**	**+0.9**
TKM2	**Tokmak 2**	**68.68**	**313**	P	**P**	**11 44 17.6**	**+0.4**
	SNR=86						
TKM2	**Tokmak 2**	**68.68**	**313**	P	**P**	**11 44 16.5**	**-0.7**
SGDS	**Sogindy**	**68.70**	**314**	⇑*i*P	**P**	**11 44 17.2**	**0.0**
	comp=Z,89nm,1.8s,baz=314						
OSL	**Oslo**	**68.77**	**358**	*e*P	**P**	**11 44 17.6**	**+0.5**
ODD1	**Odda**	**68.83**	**0**	*e*P	**P**	**11 44 18.0**	**+0.4**
USP	**Ospenovka**	**68.91**	**314**	P	**P**	**11 44 19.1**	**+0.7**
	SNR=87						
ULHL	**Ulahol**	**68.91**	**312**	P	**P**	**11 44 19.8**	**+1.2**
	SNR=14						
CHMS	**Chumysh**	**69.01**	**313**	P	**P**	**11 44 19.5**	**+0.6**
	SNR=41						
KONO	**Kongsberg**	**69.08**	**359**	*ce*P	**P**	**11 44 19.2**	**+0.1**
KONO				pmax	pmax		
	comp=Z,84nm,1.7s						
KONO	**Kongsberg**	**69.08**	**359**	*e*P	**P**	**11 44 19.2**	**+0.1**
KONO	**Kongsberg**	**69.08**	**359**	P	**P**	**11 44 19.0**	**0.0**
KONO				IAmb	IAmb	11 44 20.6	
	comp=Z,59nm,1.1s						
KONO	**Kongsberg**	**69.08**	**359**	IAMs_20	IAMs_20	12 18 12.6	
	comp=Z,2µm,19.0s						
VSU	**Vasula**	**69.11**	**349**	*e*P	**P**	**11 44 19.8**	**+0.6**
VSU	**Vasula**	**69.11**	**349**	*c i*P	**P**	**11 44 17.5**	**-1.7**
VSU				pmax	pmax		
	comp=Z,297nm,1.0s						
VSU				MLR	MLR		
	comp=Z,8µm,21.0s						
MTSE	**Matsula**	**69.18**	**351**	*e*P	**P**	**11 44 20.2**	**+0.5**
KBK	**Karagaybulak**	**69.19**	**313**	P	**P**	**11 44 20.9**	**+0.6**
	SNR=90						
BLS5	**Blasjo**	**69.32**	**0**	*e*P	**P**	**11 44 21.1**	**+0.5**
SLVN	**Son La**	**69.33**	**278**	P	**P**	**11 44 21.0**	**-0.3**
SLVN				IAmb	IAmb	11 44 39.1	
	comp=Z,56nm,0.9s						
SLVN				IAMs_20	IAMs_20	12 05 09.7	
	comp=Z,4µm,18.0s						
AAK	**Ala-Archa**	**69.41**	**313**	P	**P**	**11 44 22.2**	**+0.6**
	comp=Z,132nm,0.9s,baz=79,slow=3.2,SNR=130						
AAK				pP	**pwP**	**11 44 35.0**	**+0.4**
	comp=Z,94nm,0.9s,baz=151,slow=0.5,SNR=9.7						
AAK				LR	LR	12 16 18.4	
	comp=Z,3µm,18.9s,baz=50,slow=37						
AAK	**Ala-Archa**	**69.41**	**313**	P	**P**	**11 44 22.1**	**+0.5**
	SNR=126						
AAK	**Ala-Archa**	**69.41**	**313**	*i* P	**P**	**11 44 22.2**	**+0.6**
	SNR=132						
AAK	**Ala-Archa**	**69.41**	**313**	*ce*P	**P**	**11 44 22.1**	**+0.5**
AAK				pmax	pmax		
	comp=Z,464nm,1.0s						
AAK				MLR	MLR		
	comp=Z,8µm,18.0s						
AAK	**Ala-Archa**	**69.41**	**313**	P	**P**	**11 44 22.0**	**+0.5**
AAK	**Ala-Archa**	**69.41**	**313**	P	**P**	**11 44 21.1**	**-0.5**
AAK	**Ala-Archa**	**69.41**	**313**	IAMs_20	IAMs_20	12 19 14.7	
	comp=Z,3µm,19.0s						
DWPF	**Disney Wildern**	**69.45**	**71**	P	**P**	**11 44 21.1**	**-0.7**
DWPF	**Disney Wildern**	**69.45**	**71**	IAMs_20	IAMs_20	12 18 40.4	
	comp=Z,2µm,18.0s						
CMIG	**Matias Romero**	**69.46**	**88**	P	**P**	**11 44 21.2**	**-0.8**
	comp=Z,4.5nm,0.8s,baz=327,slow=10,SNR=7.5						
MSVF	**Nonsavu**	**69.48**	**189**	*i* P	**P**	**11 44 20.9**	**-1.2**
MSVF				pmax	pmax		
	comp=Z,82nm,1.7s						
MSVF	**Nonsavu**	**69.48**	**189**	IAMs_20	IAMs_20	12 12 46.8	
	comp=Z,4µm,19.0s						
AKTO	**Aktyubinsk**	**69.49**	**328**	P	**P**	**11 44 21.6**	**-0.2**
	comp=Z,111nm,0.9s,baz=39,slow=6.4,SNR=138						
AKTO				LR	LR	12 18 55.1	
	comp=Z,4µm,18.6s,baz=36,slow=39						
EKS2	**Erkin-Say**	**69.71**	**314**	P	**P**	**11 44 24.2**	**+0.7**
	SNR=110						
UCH	**Uchtor**	**69.72**	**313**	P	**P**	**11 44 24.2**	**+0.2**
	SNR=54						
PMG	**Port Moresby**	**69.77**	**222**	P	**P**	**11 44 24.0**	**+0.1**
	comp=Z,14nm,0.8s,baz=358,slow=7.6,SNR=6.5						
PMG	**Port Moresby**	**69.77**	**222**	P	**P**	**11 44 24.0**	**+0.1**
AB31	**Akbulak array**	**69.84**	**326**	*i* P	**P**	**11 44 23.8**	**-0.2**
ABKAR	**Akbulak array**	**69.84**	**326**	P	**P**	**11 44 24.0**	**+0.1**
ABKAR	**Akbulak array**	**69.84**	**326**	P	**P**	**11 44 24.0**	**+0.1**
ABKAR				IAmb	IAmb	11 44 26.3	
	comp=Z,93nm,1.1s						
PMOR	**Pomariorio Ree**	**69.86**	**154**	*e*T	T	13 00 23.5	
	comp=Z,7.2nm,0.2s						
MOS	**Moscow**	**70.04**	**342**	*e*P	**P**	**11 44 23.3**	**-1.7**
MOS				*e*		11 44 34.8	
MOS				pmax	pmax		
	comp=Z,64nm,0.9s						
MOS				pmax	pmax		
	comp=Z,100nm,0.9s						
MOS				MLR	MLR		
	comp=Z,4µm,19.0s						
SWI	**Sorong**	**70.15**	**241**	P	**P**	**11 44 26.5**	**+0.3**
	comp=Z,2µmcomp=Z,222nm,1.1s						
SWI	**Sorong**	**70.15**	**241**	P	**P**	**11 44 27.2**	**+1.0**
	comp=Z,2µmcomp=Z,222nm,1.1s						
SIJI	**Sorong**	**70.15**	**241**	P	**P**	**11 44 25.6**	**-0.7**
	comp=Z,54nm,0.8s,baz=29,slow=6.1,SNR=21						
AML	**Almayashu**	**70.17**	**313**	P	**P**	**11 44 27.6**	**+1.0**
	SNR=120						
AML	**Almayashu**	**70.17**	**313**	*i* P	**P**	**11 44 27.6**	**+1.0**
	SNR=122						
AML	**Almayashu**	**70.17**	**313**	P	**P**	**11 44 27.3**	**+0.6**
SLIT	**Slitere, Latvi**	**70.40**	**351**	*e*P	**P**	**11 44 27.3**	**+0.1**
DZA	**Taraz**	**70.62**	**315**	*e*P	**P**	**11 44 27.4**	**-1.5**
	baz=315						
DZA	**Taraz**	**70.62**	**315**	*e*P	**P**	**11 44 27.3**	**-1.5**
LSA	**Lhasa**	**70.71**	**293**	P	**P**	**11 44 31.9**	**+1.7**
LSA	**Lhasa**	**70.71**	**293**	IAMs_20	IAMs_20	12 17 20.6	
	comp=Z,4µm,19.0s						
KAC	**Achnashellach**	**70.79**	**7**	*e*P	**P**	**11 44 29.6**	**0.0**
KK31	**Karatay Array**	**70.80**	**316**	P	**P**	**11 44 29.5**	**-0.5**
KK31				pmax	pmax		
	comp=Z,55nm,0.8s						
KK31	**Karatay Array**	**70.80**	**316**	P	**P**	**11 44 29.5**	**-0.5**
KK31				IAmb	IAmb	11 44 31.7	
	comp=Z,55nm,0.8s						
KKAR	**Karatay Array**	**70.80**	**316**	P	**P**	**11 44 29.5**	**-0.5**
KKAR				pmax	pmax		
	comp=Z,55nm,0.8s						
KKAR	**Karatay Array**	**70.80**	**316**	P	**P**	**11 44 29.3**	**-0.7**
KKAR	**Karatay Array**	**70.80**	**316**	P	**P**	**11 44 29.5**	**-0.5**
KKAR				IAmb	IAmb	11 44 31.7	
	comp=Z,55nm,0.8s						
OBN	**Obninsk**	**70.83**	**343**	P	**P**	**11 44 29.4**	**-0.4**
	comp=Z,8.4nm,0.8s,baz=340,slow=6.4,SNR=10						
OBN	**Obninsk**	**70.83**	**343**	*c i*P	**P**	**11 44 28.8**	**-1.0**
OBN				*i*	**PcP**	**11 44 49.3**	**-1.1**
OBN				*i* S	**SKiKP**	**11 54 09.0**	**-0.3**
OBN				pmax	pmax		
	comp=Z,57nm,1.1s						
OBN	**Obninsk**	**70.83**	**343**	P	**P**	**11 44 29.1**	**-0.8**
MCD	**Coleburn Disti**	**70.85**	**6**	*e*P	**P**	**11 44 29.7**	**-0.2**
BELG	**Belogornoye**	**70.86**	**335**	P	**P**	**11 44 29.1**	**-1.0**
	comp=Z,148nm,1.0s,baz=241,slow=0.7,SNR=23						
MDO	**Dochfour**	**70.91**	**6**	*e*P	**P**	**11 44 29.9**	**-0.4**
BRLS	**Borolday**	**71.15**	**316**	*e*P	**P**	**11 44 31.8**	**-0.4**
	baz=316						
BRLS	**Borolday**	**71.15**	**316**	*e*P	**P**	**11 44 31.7**	**-0.4**
KSH	**Kashi**	**71.18**	**310**	P	**P**	**11 44 36.1**	**+3.7**
KSH				pP	sP	11 44 45.5	+1.2
KSH				sP	pwP	11 44 49.0	+3.5
KSH				PcP	**PcP**	**11 44 55.2**	**+2.8**
KSH				pmax	pmax		
	comp=Z,210nm,1.0s						
KSH				LR	LR		
	comp=Z,3µm,18.7s						
KSH				LR	LR		
	comp=Z,6µm,17.7s						
KSH				LR	LR		
	comp=Z,6µm,19.6s						
FAKI	**Fak Fak**	**71.33**	**239**	P	**P**	**11 44 33.3**	**-0.1**
	comp=Z,1µmcomp=Z,90nm,1.2s						
FAKI	**Fak Fak**	**71.33**	**239**	P	**P**	**11 44 33.0**	**-0.4**
	comp=Z,1µmcomp=Z,91nm,1.2s						
DRUM	**Mains of Drumt**	**71.56**	**5**	*e*P	**P**	**11 44 33.6**	**-0.7**
DRUM				IAmb	IAmb	11 44 35.6	
	comp=Z,155nm,1.1s						
IUG	**Iuzhnay**	**71.78**	**316**	⇑*i*P	**P**	**11 44 36.1**	**+0.1**
	baz=316						
IUG	**Iuzhnay**	**71.78**	**316**	*c i*P	**P**	**11 44 36.1**	**+0.1**
PPT	**Papeete**	**71.87**	**156**	LR	LR	12 13 04.7	
	comp=Z,2µm,18.4s,baz=320,slow=33						
PPT2	**Papeete2**	**71.89**	**156**	*e*S	**S**	**11 54 00.0**	**+4.6**
	comp=Z,5µm,26.2s						
PPT2	**Papeete2**	**71.89**	**156**	*e*LR	LR	12 06 30.7	
	comp=Z,2µm,22.2s,baz=343						
PPT2	**Papeete2**	**71.89**	**156**	*e*T	T	13 02 56.2	
	comp=Z,4.3nm,0.3s						
ISAL	**Salakas**	**72.01**	**349**	*e*P	**P**	**11 44 37.7**	**+0.8**
LAWE	**Loch Awe, Argy**	**72.01**	**7**	*e*P	**P**	**11 44 37.1**	**+0.2**
LAWE				IAmb	IAmb	11 44 38.6	
	comp=Z,78nm,1.0s						
PBUR	**Paburge**	**72.02**	**351**	*e*P	**P**	**11 44 37.6**	**+0.5**
LBMI	**Labuha**	**72.05**	**245**	P	**P**	**11 44 36.1**	**-1.7**
	comp=Z,1µmcomp=Z,54nm,1.5s						
EBH	**Black Hill**	**72.16**	**6**	*e*P	**P**	**11 44 37.7**	**-0.2**
PABE	**Paberze**	**72.32**	**350**	*e*P	**P**	**11 44 39.0**	**+0.2**
PABE	**Paberze**	**72.32**	**350**	IAMs_20	IAMs_20	12 19 29.6	
	comp=Z,4µm,19.0s						
NACGM	**Naroch**	**72.58**	**348**	*i* P	**P**	**11 44 39.8**	**-0.6**
LPSR	**Galich'ya Gora**	**72.73**	**340**	*e*P	**P**	**11 44 40.5**	**-0.8**
LPSR				pmax	pmax		
	comp=Z,70nm,1.3s						
LPSR				MLR	MLR		
	comp=Z,3µm,18.0s						
MNK	**Minsk**	**72.83**	**347**	*i* P	**P**	**11 44 39.6**	**-2.3**
MNK				*i*	**PcP**	**11 44 56.5**	**-2.4**
MNK				*i*	**PP**	**11 47 21.6**	**-1.7**
MNK				*i* PPP	PPP	11 49 06.2	
MNK				*i* S	**S**	**11 54 01.8**	**-3.4**
MNK				*i*		11 54 44.3	
MNK				*i* SS	**SS**	**11 58 44.8**	**+0.6**
MNK				*i* SSS	SSS	12 02 05.7	
MNK				pmax	pmax		
	comp=Z,119nm,1.1s						
MNK				pmax	pmax		
	comp=N,39nm,1.2s						
MNK				pmax	pmax		
	comp=E,2.0nm,0.8s						
MNK				MLR	MLR		
	comp=N,2µm,20.0s						
MNK				MLR	MLR		
	comp=Z,3µm,22.0s						
MNK				MLR	MLR		
	comp=E,85nm,18.0s						
MNK	**Minsk**	**72.83**	**347**	*i* P	**P**	**11 44 39.7**	**-2.2**
	comp=E,2.0nm,0.8s						
MNK				*i* P	**P**	**11 44 39.7**	**-2.2**
	comp=N,39nm,1.2s						
MNK				*i* P	**P**	**11 44 39.7**	**-2.2**
	comp=Z,119nm,1.1s,baz=13						
MNK				*i* PcP	**pwP**	**11 44 56.6**	**+1.3**
MNK				*i* PP	**PP**	**11 47 21.6**	**-1.7**
MNK				*i* PPP	PPP	11 49 06.3	
MNK				*i* S	**S**	**11 54 01.8**	**-3.4**
MNK				*i* SS	**SS**	**11 58 44.8**	**+0.6**
MNK				*i* SSS	SSS	12 02 05.7	
MNK				*i* LQ	LQ	12 09 57.8	
MNK				*i* LR	LR	12 15 24.6	
MNK				*i* LRM	MLR	12 19 10.1	
	comp=N,2µm,19.6s						
MNK				*i* LRM	MLR	12 19 10.1	
	comp=Z,3µm,21.7s						
MNK				*i* LRM	MLR	12 19 19.0	
	comp=E,85nm,18.1s						
UBPT	**Khong Chiam**	**72.92**	**273**	P	**P**	**11 44 42.4**	**-0.5**
UBPT				IAmb	IAmb	11 45 04.3	
	comp=Z,112nm,1.4s						
KMSI	**Cibinong**	**73.08**	**249**	P	**P**	**11 44 46.8**	**+2.9**
	comp=Z,2µmcomp=Z,128nm,0.8s						
ESK	**Eskdalemuir**	**73.11**	**6**	*e*P	**P**	**11 44 42.7**	**-0.8**
ESK				IAmb	IAmb	11 44 45.7	
	comp=Z,70nm,1.1s						
NEWG	**New Galloway**	**73.23**	**7**	*e*P	**P**	**11 44 44.3**	**+0.1**
NEWG				IAmb	IAmb	11 44 45.5	
	comp=Z,47nm,1.0s						
SHL	**Shillong**	**73.40**	**290**	P	**P**	**11 44 45.6**	**-0.4**
	SNR=93						
VRH	**Novokhopyorsk**	**73.42**	**338**	*e*P	**P**	**11 44 44.4**	**-1.0**
VRH				pmax	pmax		
	comp=Z,110nm,0.8s						
VRH				MLR	MLR		
	comp=Z,2µm,20.0s						
RAR	**Rarotonga**	**73.44**	**167**	LR	LR	12 13 20.1	
	comp=Z,3µm,18.2s,baz=2.0,slow=33						
GAL1	**Galloway**	**73.45**	**7**	*e*P	**P**	**11 44 45.1**	**-0.4**
GAL1				IAmb	IAmb	11 44 46.5	
	comp=Z,82nm,1.0s						
MSAI	**Masohi**	**73.49**	**242**	P	**P**	**11 44 47.7**	**+1.4**
	comp=Z,554nmcomp=Z,8.5nm,0.7s						
GTOI	**Gorontalo**	**73.60**	**249**	P	**P**	**11 44 46.5**	**-0.5**
	comp=Z,295nmcomp=Z,18nm,1.0s						
EDMD	**Edmundbyers**	**73.67**	**5**	*e*P	**P**	**11 44 47.0**	**+0.2**
EDMD				IAmb	IAmb	11 44 48.4	
	comp=Z,80nm,1.2s						
KESW	**Keswick, Cumbr**	**73.84**	**6**	*e*P	**P**	**11 44 48.3**	**+0.4**
SUW	**Suwalki**	**73.88**	**350**	*e*P	**P**	**11 44 47.4**	**-0.6**
SUW	**Suwalki**	**73.88**	**350**	*e*P	**P**	**11 44 48.2**	**+0.1**
SUW	**Suwalki**	**73.88**	**350**	IAMs_20	IAMs_20	12 19 50.8	
	comp=Z,3µm,20.0s						
BNDI	**Bandanaira**	**73.93**	**241**	P	**P**	**11 44 47.2**	**-1.7**
	comp=Z,40µmcomp=Z,138nm,1.2s						
VSR	**Storozhevoye**	**73.98**	**340**	*e*P	**P**	**11 44 48.3**	**-0.4**
VSR				pmax	pmax		
	comp=Z,130nm,0.9s						
VSR				MLR	MLR		
	comp=Z,4µm,17.0s						
SANI	**Sanana**	**74.06**	**245**	P	**P**	**11 44 48.3**	**-1.4**
	comp=Z,1µmcomp=Z,54nm,1.4s						
LIFNC	**LIFOU**	**74.12**	**199**	IAMs_20	IAMs_20	12 12 30.5	
	comp=Z,3µm,20.0s						
VORD	**Divnogorie**	**74.19**	**339**	*e*P	**P**	**11 44 49.7**	**-0.2**
VORD				pmax	pmax		
	comp=Z,140nm,0.9s						
GAR	**Garm**	**74.21**	**314**	P	**P**	**11 44 50.5**	**0.0**
SPMM	**Sapulut**	**74.27**	**257**	P	**P**	**11 44 51.0**	**+0.1**
CHTO	**Chiang Mai**	**74.28**	**280**	P	**P**	**11 44 50.4**	**-0.6**
CHTO				pmax	pmax		
	comp=Z,62nm,1.1s						
CHTO	**Chiang Mai**	**74.28**	**280**	P	**P**	**11 44 50.9**	**0.0**
CHTO	**Chiang Mai**	**74.28**	**280**	P	**P**	**11 44 50.4**	**-0.6**
CHTO				IAmb	IAmb	11 45 06.0	
	comp=Z,62nm,1.1s						
MRSI	**Marisa**	**74.35**	**250**	P	**P**	**11 44 51.1**	**-0.3**
	comp=Z,1µmcomp=Z,105nm,1.3s						
MRSI	**Marisa**	**74.35**	**250**	P	**P**	**11 44 50.5**	**-0.9**
	comp=Z,1µmcomp=Z,105nm,1.3s						
TAPN	**Taplejung**	**74.45**	**294**	*e*P	**P**	**11 44 52.8**	**+0.5**
	comp=Z,786nm,1.4s						
TOLI2	**Tolitoli**	**74.53**	**252**	IAMs_20	IAMs_20	12 11 48.3	
	comp=Z,2µm,21.0s						
CM31	**Chiang Mai Arr**	**74.55**	**280**	P	**P**	**11 44 53.0**	**+0.5**
CM31				IAmb	IAmb	11 45 08.1	
	comp=Z,126nm,1.2s						
CMAR	**Chiang Mai Arr**	**74.55**	**280**	P	**P**	**11 44 52.6**	**+0.1**
	comp=Z,14nm,0.8s,baz=26,slow=6.4,SNR=65						
CMAR	**Chiang Mai Arr**	**74.55**	**280**		**P**	**11 44 52.5**	**-0.1**
HPK	**Haverah Park**	**74.56**	**5**	*e*P	**P**	**11 44 51.7**	**-0.4**
BSEG	**Bad Segeberg**	**74.79**	**358**	*e*P	**P**	**11 44 53.5**	**+0.1**
	comp=Z,67nm,1.1s,baz=2.7,slow=5.6						
ODAN	**Odare**	**75.01**	**294**	*e*P	**P**	**11 44 55.5**	**+0.1**
CHGR	**Chuyangaron**	**75.01**	**314**	P	**P**	**11 44 54.7**	**-0.4**
GUN	**Gumba**	**75.05**	**296**	*e*P	**P**	**11 44 56.3**	**+0.5**
JIRN	**Jiri**	**75.07**	**296**	*e*P	**P**	**11 44 56.7**	**+0.8**
	comp=Z,922nm,1.3s						
LUWI	**Luwuk**	**75.09**	**249**	P	**P**	**11 44 54.6**	**-1.0**
	comp=Z,4µmcomp=Z,244nm,0.9s						
LBWR	**Ladybower, Pea**	**75.11**	**5**	*e*P	**P**	**11 44 55.7**	**+0.5**
LBWR				IAmb	IAmb	11 44 57.0	
	comp=Z,119nm,1.1s						
GKP	**Gorka Klasztor**	**75.14**	**354**	*e*P	**P**	**11 44 56.6**	**+1.2**
RAMN	**Ramite**	**75.39**	**295**	*e*P	**P**	**11 44 57.9**	**+0.3**
	comp=Z,226nm,0.9s						
KKN	**Kakani**	**75.48**	**296**	*e*P	**P**	**11 44 58.6**	**+0.5**
	comp=Z,460nm,1.5s						
BBSR	**BB Station**	**75.49**	**56**	IAMs_20	IAMs_20	12 21 11.5	
	comp=Z,3µm,18.0s						
FOEL	**Foel Wylfa**	**75.52**	**6**	*e*P	**P**	**11 44 58.3**	**+0.6**
FOEL				IAmb	IAmb	11 44 59.1	
	comp=Z,109nm,1.0s						
LLW	**Llanuwychllyn**	**75.53**	**7**	*e*P	**P**	**11 44 57.8**	**+0.2**
DZM	**Mont Dzumac**	**75.54**	**200**	*e*P	P	11 45 04.0	+5.9
	comp=Z,91nm,1.1s						
DZM				*e*S	**S**	**11 54 39.0**	**+2.5**
	comp=Z,1µm,23.6s						
DZM	**Mont Dzumac**	**75.54**	**200**	*e*LQ	LQ	12 04 47.3	
	comp=Z,2µm,29.1s						
DZM				*e*LR	LR	12 08 08.4	
	comp=Z,3µm,20.8s						
DZM	**Mont Dzumac**	**75.54**	**200**	P	**P**	**11 44 58.1**	**0.0**
	comp=Z,9.8nm,1.0s,baz=144,slow=8.5,SNR=3.6						
PKI	**Pulchoki**	**75.58**	**296**	*e*P	**P**	**11 44 59.0**	**+0.2**
	comp=Z,716nm,1.4s						
PKIN	**Phulchoki**	**75.58**	**296**	*e*P	**P**	**11 44 58.8**	**+0.1**
	comp=Z,526nm,1.4s						
APSI	**Ampana**	**75.64**	**250**	P	**P**	**11 44 58.3**	**-0.5**
	comp=Z,763nmcomp=Z,60nm,1.4s						
APSI	**Ampana**	**75.64**	**250**	P	**P**	**11 44 58.0**	**-0.8**
	comp=Z,763nmcomp=Z,60nm,1.4s						
MPSI	**Mapaga**	**75.67**	**252**	P	**P**	**11 44 58.6**	**-0.4**
	comp=Z,1µmcomp=Z,88nm,1.3s						
MPSI	**Mapaga**	**75.67**	**252**	P	**P**	**11 44 59.0**	**0.0**
	comp=Z,1µmcomp=Z,88nm,1.3s						
GKN	**Gorkha**	**75.68**	**297**	*e*P	**P**	**11 44 59.4**	**+0.3**
	comp=Z,584nm,1.2s						
DMN	**Daman**	**75.72**	**296**	*e*P	**P**	**11 44 59.9**	**+0.4**
	comp=Z,753nm,1.5s						
CWF	**Charnwood Fore**	**75.79**	**5**	*e*P	**P**	**11 44 58.8**	**-0.4**
CWF				IAmb	IAmb	11 45 02.5	
	comp=Z,76nm,1.3s						
DANN	**Dangsing**	**75.89**	**298**	*e*P	**P**	**11 45 01.0**	**+0.5**
WACR	**West Acre**	**75.90**	**4**	*e*P	**P**	**11 45 00.3**	**+0.6**
WACR				IAmb	IAmb	11 45 01.8	
	comp=Z,294nm,1.0s						
HLM1	**Long Mynd**	**75.91**	**6**	*e*P	**P**	**11 45 00.1**	**+0.2**
RUE	**Ruedersdorf**	**76.12**	**356**	*e*P	**P**	**11 45 01.5**	**+0.5**
RUE	**Ruedersdorf**	**76.12**	**356**	*e*P	**P**	**11 45 01.0**	**-0.1**
	comp=Z,69nm,1.1s,baz=2.7,slow=5.6						
NRDL	**Niedersach Rie**	**76.23**	**358**	*e*P	**P**	**11 45 01.5**	**-0.1**
	comp=Z,33nm,1.0s,baz=2.7,slow=5.6						
NRDL				*e*pP	**sP**	**11 45 14.3**	**+0.2**
AKASG	**Malin Array Be**	**76.33**	**346**	P	**P**	**11 45 01.0**	**-1.2**
	comp=Z,17nm,0.6s,baz=17,slow=6.0,SNR=59						
AKASG				LR	LR	12 23 35.4	
	comp=Z,3µm,19.3s,baz=10.0,slow=40						
AKASG	**Malin Array Be**	**76.33**	**346**	P	**P**	**11 45 01.3**	**-0.9**
AKASG				pmax	pmax		
	comp=Z,54nm,1.2s						
AKASG	**Malin Array Be**	**76.33**	**346**	P	**P**	**11 45 01.3**	**-0.9**
AKASG				IAmb	IAmb	11 45 03.2	
	comp=Z,54nm,1.1s						
AKBB	**Malin Array Si**	**76.33**	**346**	*ce*P	**P**	**11 45 00.9**	**-1.3**
AKBB	**Malin Array Si**	**76.33**	**346**	P	**P**	**11 45 00.5**	**-1.8**
AKBB				IAmb	IAmb	11 45 03.2	
	comp=Z,65nm,1.1s						
FLTG	**Flechtingen**	**76.37**	**357**	*e*P	**P**	**11 45 01.9**	**-0.6**
	comp=Z,37nm,1.0s,baz=2.7,slow=5.6						
KOLN	**Koldanda**	**76.43**	**298**	*e*P	**P**	**11 45 03.7**	**+0.2**
	comp=Z,418nm,1.3s						
IBBN	**Ibbenburen**	**76.45**	**360**	*e*P	**P**	**11 45 03.0**	**0.0**
	comp=Z,80nm,1.0s,baz=2.7,slow=5.6						
TGUH	**Tegucigalpa,Un**	**76.50**	**84**	*e*P	**P**	**11 45 02.4**	**-1.5**
PYUN	**Piuthan**	**76.51**	**298**	*e*P	**P**	**11 45 04.3**	**+0.3**
	comp=Z,799nm,1.2s						
ASSE	**Asse, Remlinge**	**76.59**	**358**	*e*P	**P**	**11 45 03.7**	**+0.1**

	comp=Z,32nm,1.2s,baz=2.7,slow=5.6						
ASSE				epP	sP	11 45 16.5	+0.4
CLZ	Clausthal	76.88	358	eP	P	11 45 05.7	+0.2
	comp=Z,58nm,1.1s,baz=2.7,slow=5.6						
CLZ				epP	sP	11 45 18.5	+0.6
NIL	Nilore	77.17	308	IAMs_20	IAMs_20	12 25 27.2	
	comp=Z,3µm,20.0s						
GTTG	Gottingen	77.19	358	eP	P	11 45 07.3	+0.2
	comp=Z,99nm,1.2s,baz=2.7,slow=5.6						
BUG	Bochum--Univer	77.32	360	eP	P	11 45 07.6	-0.3
	comp=Z,81nm,1.4s,baz=2.7,slow=5.6						
CLL	Collm	77.33	356	⇑iP	P	11 45 07.1	-0.8
CLL				i *SP	PcP	11 45 18.6	+0.2
CLL				pmax	pmax		
	comp=Z,31nm,1.0s						
CLL				MLR	MLR		
	comp=Z,1µm,21.6s						
CLL	Collm	77.33	356	⇑iP	P	11 45 07.1	-0.8
	comp=Z,31nm,1.0s						
CLL				i pP	pP	11 45 12.4	-4.5
CLL				i PcP	PcP	11 45 18.6	+0.2
CLL				eSP	SPn	11 55 33.0	+0.4
CLL				e		11 56 07.0	
CLL				eSS	SS	12 00 09.0	+16
CLL				eSSS	SSS	12 03 21.0	
CLL				e(SSSS)		12 05 12.0	
CLL				Lm	MLR	12 21 00.0	
	comp=N,1µm,21.5s						
CLL				Lm	MLR	12 21 00.0	
	comp=E,800nm,18.3s						
CLL				Lm	MLR	12 21 00.0	
	comp=Z,1µm,21.6s						
CLL	Collm	77.33	356	eP	P	11 45 07.4	-0.5
	comp=Z,88nm,1.6s,baz=2.7,slow=5.6						
TBI	Tubuai	77.46	158	eS	S	11 55 01.0	+3.9
	comp=Z,2µm,32.2s						
TBI	Tubuai	77.46	158	eLR	LR	12 08 55.5	
	comp=Z,3µm,24.5s,baz=339						
TBI	Tubuai	77.46	158	eT	T	13 09 52.0	
	comp=Z,11nm,0.3s						
NEUB	Neuenburg	77.48	357	eP	P	11 45 08.6	-0.1
	comp=Z,87nm,1.1s,baz=2.7,slow=5.6						
NEUB				epP	sP	11 45 21.5	+0.3
KSP	Ksiaz	77.62	354	eP	P	11 45 09.2	-0.4
FBE	Freiberg	77.70	356	eP	P	11 45 10.1	+0.1
	comp=Z,152nm,1.7s,baz=2.7,slow=5.6						
FBE				epP	sP	11 45 22.6	+0.1
BRG	Berggiesshubel	77.72	355	eP	P	11 45 09.7	-0.4
	comp=Z,58nm,1.2s,baz=2.7,slow=5.6						
BRG				epP	sP	11 45 22.7	+0.1
BRG	Berggiesshubel	77.72	355	⇑iP	P	11 45 09.9	-0.2
BRG				Amp		11 45 11.8	
	comp=Z,37nm,0.9s						
BRG	Berggiesshubel	77.72	355	P	P	11 45 23.2	+13
BRG				Amp		11 45 23.6	
	comp=Z,43nm,1.0s						
CHVC	Chvalec	77.89	354	eP	P	11 45 10.4	-0.7
CHVC				AMS	AMS	12 29 40.0	
	comp=Z,2µm,17.3s						
OSTC	Ostas	77.91	354	eP	P	11 45 10.8	-0.4
OSTC				ex	x	11 45 23.3	
OSTC				AMS	AMS	12 29 40.0	
	comp=Z,2µm,17.8s						
LVV	L'vov	77.91	349	eP	P	11 45 10.3	-0.8
LVV				eS	S	11 55 00.6	-1.1
LVV				e		11 55 41.1	
LVV				pmax	pmax		
	comp=Z,90nm,1.2s						
UBBA	Unterbreizbach	77.92	358	eP	P	11 45 11.1	0.0
	comp=Z,55nm,1.5s,baz=2.7,slow=5.6						
OJC	Ojcow	77.96	352	eP	P	11 45 11.2	-0.2
BEBN	Eben Emael	77.96	1	dP	P	11 45 10.3	-1.1
UPC	Upice	77.97	354	eP	P	11 45 11.2	-0.3
UPC				e	PcP	11 45 24.2	+3.0
UPC				MLR	MLR		
	comp=Z,2µm,18.2s						
UPC	Upice	77.97	354	eP	P	11 45 11.2	-0.3
UPC				ex	x	11 45 24.2	
UPC				AMS	AMS	12 29 30.0	
	comp=Z,2µm,18.2s						
PVCC	Panska Ves	78.03	355	eP	P	11 45 12.4	+0.6
PVCC				e	PcP	11 45 28.7	+7.3
PVCC				MLR	MLR		
	comp=Z,2µm,17.1s						
PVCC	Panska Ves	78.03	355	eP	P	11 45 12.4	+0.6
PVCC				ex	x	11 45 28.7	
PVCC				AMS	AMS	12 30 00.0	
	comp=Z,2µm,17.1s						
MOX	Moxa	78.05	357	eP	P	11 45 11.8	-0.1
	comp=Z,76nm,1.5s,baz=2.7,slow=5.6						
MOX				epP	sP	11 45 24.5	+0.1
MOX				eL	L	12 24 44.0	
	comp=Z,1µm,20.7s						
DPC	Dobruska-Polom	78.11	354	eP	P	11 45 12.2	-0.1
DPC				e	PcP	11 45 25.1	+3.3
DPC				eSS	SS	12 00 04.4	0.0
DPC				MLR	MLR		
	comp=Z,2µm,17.0s						
DPC	Dobruska-Polom	78.11	354	eP	P	11 45 12.2	-0.1
DPC				ex	x	11 45 25.1	
DPC				eSS	SS	12 00 04.4	0.0
DPC				AMS	AMS	12 28 20.0	
	comp=Z,2µm,17.0s						
MEM	Membach	78.15	1	dP	P	11 45 12.8	+0.3
	comp=Z,29nm,1.1s						
BTNL	Ternell	78.18	1	dP	P	11 45 12.8	+0.1
	comp=Z,25nm,1.1s						
WERD	Werda	78.22	357	eP	P	11 45 12.6	-0.3
	comp=Z,72nm,1.7s,baz=2.7,slow=5.6						
AHRW	Bad Neuenahr-A	78.22	360	eP	P	11 45 12.0	-0.9
	comp=Z,78nm,1.5s,baz=2.7,slow=5.6						
SNF	Seneffe	78.23	2	dP	P	11 45 13.5	+0.6
	comp=Z,31nm,1.1s						
TANN	Tannenbergstha	78.24	356	eP	P	11 45 13.1	0.0
	comp=Z,69nm,1.7s,baz=2.7,slow=5.6						
KWP	Kalwaria Pacla	78.25	350	eP	P	11 45 12.9	-0.2
GUNZ	Gunzen	78.30	356	eP	P	11 45 13.4	0.0
	comp=Z,105nm,1.9s,baz=2.7,slow=5.6						
GUNZ				epP	sP	11 45 26.3	+0.4
BCLA	Clavier	78.34	1	dP	P	11 45 14.1	+0.6
	comp=Z,21nm,1.2s						
KRLC	Kraliky	78.35	354	eP	P	11 45 13.4	-0.3
KRLC				e	PcP	11 45 26.6	+3.7
KRLC				MLR	MLR		
	comp=Z,2µm,16.7s						
KRLC	Kraliky	78.35	354	eP	P	11 45 13.4	-0.3
KRLC				ex	x	11 45 26.6	
KRLC				AMS	AMS	12 32 20.0	
	comp=Z,2µm,16.7s						
BGES	Gesves	78.37	1	dP	P	11 45 14.3	+0.6
	comp=Z,21nm,1.1s						
WERN	Wernitzgruen	78.38	356	eP	P	11 45 13.9	+0.1
	comp=Z,64nm,1.2s,baz=2.7,slow=5.6						
WERN				epP	sP	11 45 26.9	+0.6
BHOU	Houvegnez	78.41	1	dP	P	11 45 14.0	+0.1
NKC	Novy Kostel	78.43	356	eP	P	11 45 14.1	0.0
NKC				e	PcP	11 45 26.8	+3.6
NKC				eSS	SS	12 00 12.2	+3.1
NKC				MLR	MLR		
	comp=Z,2µm,16.2s						
NKC	Novy Kostel	78.43	356	eP	P	11 45 14.1	0.0
NKC				ex	x	11 45 26.8	
NKC				eSS	SS	12 00 12.2	+3.1
NKC				AMS	AMS	12 28 50.0	
	comp=Z,2µm,16.2s						
TTSI	Tana Toraja	78.43	250	P	P	11 45 14.3	-0.2
	comp=Z,1µmcomp=Z,75nm,1.0s						
TTSI	Tana Toraja	78.43	250	P	P	11 45 14.6	+0.1
	comp=Z,1µmcomp=Z,75nm,1.0s						
BMRD	Maredsous	78.45	1	dP	P	11 45 14.5	+0.4
	comp=Z,38nm,1.0s						
KBL	Kabul	78.45	312	P	P	11 45 13.7	-1.0
KBL				pmax	pmax		
	comp=Z,93nm,1.0s						
KBL	Kabul	78.45	312	P	P	11 45 13.9	-0.8
	SNR=60						
KBL	Kabul	78.45	312	P	P	11 45 13.7	-1.0
KBL				IAmb	IAmb	11 45 15.8	
	comp=Z,93nm,0.9s						
OKC	Ostrava-Krasne	78.48	353	eP	P	11 45 14.7	+0.4
OKC				e	PcP	11 45 27.3	+3.9
OKC				MLR	MLR		
	comp=Z,2µm,18.3s						
OKC	Ostrava-Krasne	78.48	353	eP	P	11 45 14.7	+0.4
OKC				ex	x	11 45 27.3	
OKC				AMS	AMS	12 22 30.0	
	comp=Z,2µm,18.3s						
PRA	Prague	78.50	355	eP	P	11 45 14.8	+0.4
PRA				MLR	MLR		
	comp=Z,2µm,16.7s						
PRA	Prague	78.50	355	eP	P	11 45 14.8	+0.4
PRA				eSS	SS	12 00 27.3	+17
PRA				AMS	AMS	12 30 10.0	
	comp=Z,2µm,16.7s						
TNS	Taunus Mts	78.54	359	eP	P	11 45 14.6	-0.1
	comp=Z,41nm,0.9s,baz=2.7,slow=5.6						
PRU	Pruhonice	78.57	355	eP	P	11 45 14.1	-0.7
PRU				eSS	SS	12 00 23.2	+12
PRU				MLR	MLR		
	comp=Z,2µm,17.0s						
PRU	Pruhonice	78.57	355	eP	P	11 45 14.1	-0.7
PRU				ex	x	11 45 27.7	
PRU				eSS	SS	12 00 23.2	+12
PRU				AMS	AMS	12 30 20.0	
	comp=Z,2µm,17.0s						
MORC	Moravsky Berou	78.59	353	⇑P	P	11 45 14.4	-0.6
MORC	Moravsky Berou	78.59	353	⇑P	P	11 45 14.4	-0.6
MORC	Moravsky Berou	78.59	353	eP	P	11 45 14.6	-0.4
MORC	Moravsky Berou	78.59	353	P	P	11 45 14.6	-0.4
RCHB	Rochefort	78.60	1	dP	P	11 45 15.1	+0.2
	comp=Z,19nm,1.0s						
STHS	Stebnicka Huta	78.62	351	eP	P	11 45 15.2	+0.1
STHS	Stebnicka Huta	78.62	351	eP	P	11 45 15.2	+0.1
SBUM	Sibu	78.63	259	P	P	11 45 16.0	+0.4
DOU	Dourbes	78.65	2	eP	P	11 45 15.0	-0.3
DOU	Dourbes	78.65	2	dP	P	11 45 15.4	+0.2
	comp=Z,30nm,1.1s						
MANZ	Manzenberg	78.69	357	eP	P	11 45 15.3	-0.2
	comp=Z,35nm,2.3s,baz=2.7,slow=5.6						
MANZ				epP	sP	11 45 28.8	+0.8
NIE	Niedzica	78.71	351	eP	P	11 45 12.0	-3.6
GOF	Gofitskoye	78.80	335	⇑iP	P	11 45 16.0	-0.1
GOF				eS	S	11 55 13.4	+2.0
GOF				pmax	pmax		
	comp=Z,301nm,1.0s						
GOF				smax	smax		
	comp=E,87nm,1.6s						
GOF				smax	smax		
	comp=N,22nm,0.6s						
ROTZ	Rotzenmuhle	78.90	357	eP	P	11 45 16.7	+0.1
	comp=N,21nm,1.8s,baz=2.7,slow=5.6						
SORM	Soroca	78.96	346	⇑P	P	11 45 17.2	+0.3
SORM	Soroca	78.96	346	⇑P	P	11 45 17.2	+0.3
KOLS	Kolonicke sedl	78.98	350	eP	P	11 45 17.8	+0.7
KOLS				pmax	pmax		
	comp=Z,42nm,0.9s						
KOLS	Kolonicke sedl	78.98	350	eP	P	11 45 17.8	+0.7
GRF	Grafenberg Arr	79.01	357	eP	P	11 45 17.6	+0.3
	comp=Z,131nm,1.2s,baz=2.7,slow=5.6						
GRF				epP	pwP	11 45 31.1	+0.4
GRF				eL	L	12 29 48.6	
	comp=Z,2µm,18.1s						
GRFO	Grafenberg	79.01	357	P	P	11 45 17.5	+0.2
GRFO				pmax	pmax		
	comp=Z,121nm,1.2s						
GRFO	Grafenberg	79.01	357	P	P	11 45 17.5	+0.2
GRFO				IAmb	IAmb	11 45 22.7	
	comp=Z,121nm,1.2s						
LANS	Liptovska Anna	79.05	352	eP	P	11 45 18.6	+1.1
LANS				pmax	pmax		
	comp=Z,24nm,0.9s						
LANS	Liptovska Anna	79.05	352	eP	P	11 45 18.6	+1.1
WLF	Walferdange	79.10	1	dP	P	11 45 17.2	-0.5
WLF	Walferdange	79.10	1	eP	P	11 45 18.0	+0.3
	comp=Z,74nm,1.4s,baz=2.7,slow=5.6						
WLF	Walferdange	79.10	1	IAMs_20	IAMs_20	12 26 30.7	
	comp=Z,2µm,20.0s						
CRVS	Cervenica-Dubn	79.10	350	eP	P	11 45 18.4	+0.6
CRVS	Cervenica-Dubn	79.10	350	eP	P	11 45 18.4	+0.6
VRAC	Vranov	79.12	354	⇓P	P	11 45 17.8	-0.1
VRAC	Vranov	79.12	354	⇓P	P	11 45 17.8	-0.1
VRAC	Vranov	79.12	354	eP	P	11 45 17.6	-0.3
NDI	New Delhi	79.16	303	ex	P	11 45 17.5	-0.8
TREC	Trest	79.21	354	eP	P	11 45 18.7	+0.3
TREC				e	PcP	11 45 31.3	+4.7
TREC				MLR	MLR		
	comp=Z,3µm,18.2s						
TREC	Trest	79.21	354	eP	P	11 45 18.7	+0.3
TREC				ex	x	11 45 31.3	
TREC				AMS	AMS	12 28 30.0	
	comp=Z,3µm,18.2s						
MTDJ	Mount Denham	79.27	74	P	P	11 45 17.6	-1.6
MTDJ				IAMs_20	IAMs_20	12 26 23.4	
	comp=Z,2µm,19.0s						
JSA	Saint Aubin	79.28	6	eP	P	11 45 18.2	-0.4
JSA				IAmb	IAmb	11 45 22.2	
	comp=Z,87nm,1.0s						
UZH	Uzhgorod	79.28	350	eP	P	11 45 18.3	-0.4
UZH				e	PcP	11 45 26.3	-0.6
UZH				e	PP	11 48 23.9	+6.1
UZH				eS	S	11 55 13.3	-3.1
UZH				ePS	PnS	11 56 09.3	+7.7
UZH				eSSS	SSS	12 03 47.9	
AYAN	Aya Nagar	79.36	303	ex	P	11 45 18.6	-0.9
KRUC	Moravsky	79.38	354	eP	P	11 45 18.9	-0.4
GTBY	Guantanamo Bay	79.40	71	IAMs_20	IAMs_20	12 22 16.9	
	comp=Z,3µm,21.0s						
MAK	Makhachkala	79.46	331	eP	P	11 45 15.9	-3.9
MAK				e	PP	11 48 18.7	-0.7
MAK				ePPP	PPP	11 50 09.3	
MAK				eS	S	11 55 13.2	-5.3
MAK				eSS	SS	12 00 24.4	-0.5
MAK				pmax	pmax		
	comp=Z,258nm,0.8s						
KHC	Kasperske Hory	79.48	356	eP	P	11 45 20.0	+0.1
KHC				e	PcP	11 45 32.9	+5.1
KHC				MLR	MLR		
	comp=Z,2µm,19.0s						
KHC	Kasperske Hory	79.48	356	eP	P	11 45 20.0	+0.1
KHC				ex	x	11 45 32.9	
KHC				eSS	SS	12 00 16.0	-9.0
KHC				AMS	AMS	12 25 00.0	
	comp=Z,2µm,19.0s						
JAVC	Velka Javorina	79.49	353	eP	P	11 45 20.8	+0.8
WET	Wettzell	79.50	356	eP	P	11 45 20.0	+0.1
	comp=Z,42nm,1.6s,baz=2.7,slow=5.6						
SONA	Sohna	79.57	302	ex	P	11 45 20.6	0.0
KECS	Kecovo	79.62	351	eP	P	11 45 20.9	+0.3
KECS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KECS	Kecovo	79.62	351	eP	P	11 45 20.9	+0.3
MTKI	Muara Teweh, K	79.68	255	P	P	11 45 20.9	-0.4
	comp=Z,26nm,0.6s						
PYA1	Pyatigorsk	79.71	334	i P	P	11 45 21.9	+0.7
PYA1				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GROC	Groznyy	79.74	332	eP	P	11 45 20.4	-0.9
GROC				e	PcP	11 45 28.5	-0.5
GROC				eS	S	11 55 26.1	+4.6
GROC				pmax	pmax		
	comp=Z,28nm,0.5s						
TRPA	Tarpa	79.75	349	⇓P	P	11 45 21.1	-0.2
TRPA	Tarpa	79.75	349	eP	P	11 45 20.9	-0.4
TRPA	Tarpa	79.75	349	eP	P	11 45 21.3	+0.1
CKRC	Cesky Krumlov	79.75	355	eP	P	11 45 21.0	-0.3
CKRC				ex	x	11 45 32.9	
CKRC				eSS	SS	12 00 14.9	-14
GEC2	GERESS Array S	79.76	355	eP	P	11 45 21.2	-0.3
	comp=Z,118nm,2.1s,baz=2.7,slow=5.6						
GEC2				epP	sP	11 45 34.1	+0.7
GERES	GERESS Array B	79.76	355	P	P	11 45 20.8	-0.7
	comp=Z,10nm,0.8s,baz=20,slow=4.3,SNR=56						
GERES				pP	sP	11 45 33.9	+0.5
	comp=Z,16nm,0.9s,baz=22,slow=4.3,SNR=12						
GERES	GERESS Array B	79.76	355	P	P	11 45 20.3	-1.1
VYHS	Vyhne	79.76	352	eP	P	11 45 21.4	0.0
VYHS				pmax	pmax		
	comp=Z,29nm,1.1s						
VYHS	Vyhne	79.76	352	eP	P	11 45 21.4	0.0
CTA	Charters Tower	79.78	219	P	P	11 45 21.9	+0.2
	comp=Z,18nm,0.9s,baz=29,slow=7.7,SNR=22						
CTAO	Charters Tower	79.78	219	P	P	11 45 22.1	+0.4
CTAO				pmax	pmax		
	comp=Z,92nm,1.2s						
CTAO	Charters Tower	79.78	219	P	P	11 45 22.1	+0.4
CTAO				IAmb	IAmb	11 45 36.8	
	comp=Z,92nm,1.1s						
SMOL	Smolenice	79.85	353	eP	P	11 45 22.7	+0.8
SMOL				pmax	pmax		
	comp=Z,23nm,1.3s						
SMOL	Smolenice	79.85	353	eP	P	11 45 22.7	+0.8
BUR08	Bucovina Ar. S	79.89	348	P	P	11 45 21.5	-0.7
KVAR	Kislovodsk Arr	79.91	335	LR	LR	12 24 03.8	
	comp=Z,2µm,21.6s,baz=272,slow=38						
KIV	Kislovodsk	79.92	335	⇓P	P	11 45 22.6	+0.2
KIV	Kislovodsk	79.92	335	i P	P	11 45 22.4	0.0
	SNR=9.4						
KIV	Kislovodsk	79.92	335	eP	P	11 45 22.5	+0.1
KIV				e	PP	11 48 23.6	+0.3
KIV				eS	S	11 55 23.7	+0.2
KIV				eSS	SS	12 00 34.7	+2.8
KIV				eSSS	SSS	12 04 00.7	
KIV				pmax	pmax		
	comp=Z,65nm,1.1s						
KIV				pmax	pmax		
	comp=Z,199nm,3.8s						
KIV	Kislovodsk	79.92	335	P	P	11 45 22.8	+0.4
KIV	Kislovodsk	79.92	335	P	P	11 45 22.1	-0.3
KIV				IAmb	IAmb	11 45 24.7	
	comp=Z,70nm,1.1s						
KIV				IAMs_20	IAMs_20	12 27 14.0	
	comp=Z,2µm,19.0s						
BURAR	Bucovina Array	79.92	348	⇑P	P	11 45 21.6	-0.7
BURAR	Bucovina Array	79.92	348	⇑P	P	11 45 21.6	-0.7
BURAR	Bucovina Array	79.92	348	P	P	11 45 21.6	-0.7
BURAR				IAmb	IAmb	11 45 24.1	
	comp=Z,35nm,0.9s						
KUDL	Kundal	79.97	303	ex	P	11 45 21.3	-1.4
STU	Stuttgart	79.98	359	P	P	11 45 22.3	-0.2
STU				pmax	pmax		
	comp=Z,80nm,1.1s						
STU				MLR	MLR		
	comp=Z,2µm,19.0s						
STU	Stuttgart	79.98	359	eP	P	11 45 22.4	-0.1
	comp=Z,121nm,1.1s,baz=2.7,slow=5.6						
STU				epP	sP	11 45 35.8	+1.3
STU	Stuttgart	79.98	359	P	P	11 45 22.3	-0.2
STU				IAmb	IAmb	11 45 37.1	
	comp=Z,80nm,1.1s						
STU				IAMs_20	IAMs_20	12 24 43.9	
	comp=Z,2µm,19.0s						
KIS	Kishinev	79.99	345	eP	P	11 45 22.0	-0.6
	comp=Z,30nm,0.9s						
KIS				eLR	LR	12 18 16.0	
	comp=Z,1µm,16.0s						
KIS	Kishinev	79.99	345	eP	P	11 45 22.0	-0.6
KIS				e	PcP	11 45 27.0	-3.0
KIS				pmax	pmax		
	comp=Z,30nm,0.9s						
MODS	Modra-Piesok	80.00	353	eP	P	11 45 22.3	-0.4
MODS				pmax	pmax		
	comp=Z,47nm,1.3s						
MODS	Modra-Piesok	80.00	353	eP	P	11 45 22.3	-0.4
KAPI	Kappang	80.05	249	P	P	11 45 23.7	+0.4
	comp=Z,8.1nm,0.7s,baz=62,slow=7.2,SNR=3.8						
KAPI	Kappang	80.05	249	IAMs_20	IAMs_20	12 13 23.8	
	comp=Z,2µm,20.0s						
KBZ	Khabaz	80.07	334	P	P	11 45 23.4	+0.3
	comp=Z,32nm,0.9s,baz=0.5,slow=1.9,SNR=47						
KBZ				LR	LR	12 28 01.8	
	comp=Z,3µm,18.0s,baz=29,slow=41						
KBZ	Khabaz	80.07	334	ceP	P	11 45 22.8	-0.2
KBZ				pmax	pmax		
	comp=Z,38nm,0.9s						
MILM	Milestii Mici	80.07	345	⇓P	P	11 45 22.1	-1.0
MILM	Milestii Mici	80.07	345	c iP	P	11 45 22.0	-1.0
MILM				e	PcP	11 45 36.0	+5.7
MILM				pmax	pmax		
	comp=Z,90nm,1.1s						
BMR	Baia Mare	80.08	349	⇑P	P	11 45 22.9	-0.2
BMR	Baia Mare	80.08	349	⇑P	P	11 45 22.9	-0.2
BKSI	Bulukumba	80.09	248	P	P	11 45 23.7	+0.2
	comp=Z,1µmcomp=Z,66nm,1.1s						
NCK	Nalchik	80.09	334	i P	P	11 45 24.0	+0.7
NCK				pmax	pmax		
	comp=Z,123nm,1.0s						
SHA1	Shidzhatmaz	80.12	335	c iP	P	11 45 23.7	0.0
ZST	Bratislava	80.19	353	eP	P	11 45 24.4	+0.7
ZST	Bratislava	80.19	353	eP	P	11 45 24.4	+0.7
PSZ	Piszkesteto	80.23	351	⇑P	P	11 45 24.2	+0.2
PSZ	Piszkesteto	80.23	351	eP	P	11 45 23.7	-0.3
PSZ	Piszkesteto	80.23	351	⇑P	P	11 45 24.2	+0.2
PSZ	Piszkesteto	80.23	351	IAMs_20	IAMs_20	12 26 51.9	
	comp=Z,2µm,19.0s						
GEYT	Alibeck	80.26	321	P	P	11 45 24.5	+0.3
	comp=Z,49nm,1.1s,baz=352,slow=3.0,SNR=39						
GEYT				LR	LR	12 24 45.2	
	comp=Z,5µm,18.4s,baz=30,slow=38						
ANN	Anapa	80.42	339	eP	P	11 45 22.5	-2.4
ANN				e*PP	pP	11 45 34.9	+0.9
ANN				eS	S	11 55 22.0	-6.6
ANN				e		11 55 38.7	
ANN				pmax	pmax		
	comp=Z,40nm,0.9s						
BFO	Black Forest	80.43	359	P	P	11 45 24.5	-0.5
BFO				pmax	pmax		
	comp=Z,33nm,1.0s						
BFO	Black Forest	80.43	359	eP	P	11 45 24.9	-0.1
	comp=Z,36nm,1.1s,baz=2.7,slow=5.6						
BFO	Black Forest	80.43	359	P	P	11 45 24.5	-0.5
SRO	Srobarova	80.48	352	eP	P	11 45 26.1	+0.9
SRO				pmax	pmax		
	comp=Z,18nm,0.9s						
SRO	Srobarova	80.48	352	eP	P	11 45 26.1	+0.9
VASR	Vaslui	80.50	346	⇑P	P	11 45 25.5	+0.1
SRO2	Moca	80.52	352	eP	P	11 45 25.4	0.0
SRO2				pmax	pmax		
	comp=Z,17nm,0.6s						
SRO2	Moca	80.52	352	eP	P	11 45 25.4	0.0
FUR	Furstenfeldbru	80.53	357	eP	P	11 45 25.6	0.0
	comp=Z,90nm,1.6s,baz=2.7,slow=5.6						
FUR				epP	sP	11 45 38.7	+1.2
BSSI	Bau Bau, Buton	80.54	248	P	P	11 45 25.3	-0.6
	comp=Z,567nmcomp=Z,29nm,0.9s						
CONA	Conrad Observa	80.55	354	i P	P	11 45 25.8	+0.1
	comp=Z,39nm,1.0s,SNR=22						
ECH	Echery	80.55	360	P	P	11 45 25.0	-0.7
ECH				pmax	pmax		
	comp=Z,50nm,0.9s						
ECH	Echery	80.55	360	P	P	11 45 25.0	-0.7
ECH				IAmb	IAmb	11 45 40.2	
	comp=Z,50nm,0.9s						
ARCR	ARCALIA	80.55	348	⇑P	P	11 45 27.7	+2.0
NEY	Neytrino	80.56	334	i P	P	11 45 26.3	+0.3
NEY				pmax	pmax		
	comp=Z,10.0nm,1.4s						
KSM	Kuching	80.57	260	P	P	11 45 27.0	+0.8
CLF	Chambon-Foret	80.66	3	IAMs_20	IAMs_20	12 24 40.9	
	comp=Z,2µm,20.0s						
MESR	Meseseni	80.67	349	⇓P	P	11 45 26.4	+0.1
ZEI	Tsey	80.67	333	eP	P	11 45 23.6	-3.0
ZEI				pmax	pmax		
	comp=Z,17nm,1.0s						
MOA	Molln	80.72	355	i P	P	11 45 26.7	+0.1
	comp=Z,10nm,1.0s,SNR=6.9						
BUD	Budapest	80.74	352	eP	P	11 45 23.3	-3.3
SOP	Sopron	80.74	353	eP	P	11 45 27.4	+0.8
KBKI	Kotabaru	80.79	253	P	P	11 45 26.0	-1.3
	comp=Z,25nm,0.9s						
TESR	Tescani	80.80	346	⇑P	P	11 45 27.0	+0.1
JTS	Las Juntas de	80.83	85	IAMs_20	IAMs_20	12 24 32.9	
	comp=Z,1µm,20.0s						
RJOB	Jochberg	80.91	356	eP	P	11 45 27.5	-0.1
	comp=Z,16nm,0.9s,baz=2.7,slow=5.6						
RJOB				epP	sP	11 45 40.1	+0.5
CSKK	Cskako	80.93	352	eP	P	11 45 27.0	-0.6
STKI	Sintang	80.96	259	P	P	11 45 28.5	+0.3
STKI	Sintang	80.96	259	P	P	11 45 28.8	+0.6
SIM	Simferopol'	81.00	341	d iP	P	11 45 29.7	+1.6
SIM				pmax	pmax		
	comp=Z,77nm,1.5s						
SOC	Sochi	81.03	337	i P	P	11 45 26.5	-1.7
SOC				e	PP	11 48 33.9	+1.5
SOC				eS	S	11 55 33.3	-1.7
SOC				eSS	SS	12 00 47.6	-0.7
SOC				pmax	pmax		
	comp=Z,35nm,0.8s						
SOC				MLR	MLR		
	comp=Z,2µm,21.0s						
DRGR		81.05	349	⇓P	P	11 45 27.9	-0.5
DRGR		81.05	349	⇓P	P	11 45 27.9	-0.5
UBR	Ueberruh	81.05	358	eP	P	11 45 28.4	0.0
	comp=Z,66nm,1.5s,baz=2.7,slow=5.6						
SEKA	Sheki	81.15	330	P	P	11 45 29.6	+0.6

MPLH	Magyarpolny	81.18	353	*e*P	P	11 45 28.7	-0.3
RETA	Reutte	81.23	357	*i* P	P	11 45 29.7	+0.3
	comp=Z,20nm,1.0s,SNR=9.1						
VLDR	Vladesti	81.23	345	⇓P	P	11 45 29.0	-0.3
ARSA	Arzberg	81.25	354	*i* P	P	11 45 29.8	+0.4
	comp=Z,22nm,1.0s,SNR=10						
OZUR		81.33	347	⇓P	P	11 45 30.4	+0.5
SOEI	Soe	81.35	242	P	P	11 45 30.0	-0.4
	comp=Z,1µmcomp=Z,73nm,1.2s						
SOEI	Soe	81.35	242	P	P	11 45 28.8	-1.6
SOEI				IAmb	IAmb	11 45 57.1	
	comp=Z,120nm,1.3s						
WATA	Walderalm	81.35	357	*i* P	P	11 45 30.1	0.0
	comp=Z,45nm,1.2s,SNR=17						
MOTA	Moosalm	81.36	357	*i* P	P	11 45 30.0	-0.1
	comp=Z,45nm,1.2s,SNR=20						
VRI	Vrincioaia	81.42	346	⇓P	P	11 45 30.1	-0.2
VRI	Vrincioaia	81.42	346	⇓P	P	11 45 30.1	-0.2
WTTA	Wattenberg	81.42	357	*i* P	P	11 45 30.7	+0.2
	comp=Z,36nm,1.2s,SNR=17						
PLOR	Plostina	81.44	346	⇑P	P	11 45 30.5	0.0
PLOR	Plostina	81.44	346	⇑P	P	11 45 30.5	0.0
DAVA	Damuels	81.45	358	*i* P	P	11 45 31.1	+0.5
	comp=Z,18nm,1.0s,SNR=7.3						
SQTA	Sankt Quirin	81.48	357	*i* P	P	11 45 30.7	0.0
	comp=Z,34nm,1.0s,SNR=17						
DOPR	Dopca	81.51	347	⇓P	P	11 45 31.9	+1.1
COVR	Voineasa-Covas	81.52	347	⇓P	P	11 45 32.0	+1.2
KBA	Koelnbreinsper	81.54	356	*i* P	P	11 45 31.4	+0.3
	comp=Z,62nm,0.9s,SNR=44						
MMRI	Maumere	81.57	245	P	P	11 45 30.0	-1.4
	comp=Z,81nm,0.9s						
MMRI	Maumere	81.57	245	IAMs_20	IAMs_20	12 14 34.8	
	comp=Z,3µm,20.0s						
IZVR	Izvoarele	81.58	345	⇓P	P	11 45 31.6	+0.5
MNGR	Mingechevir, A	81.58	330	P	P	11 45 32.7	+1.5
HRA	Herat	81.62	317	P	P	11 45 31.4	-0.4
HRA				IAmb	IAmb	11 45 33.5	
	comp=Z,93nm,1.1s						
SIRR	Siria	81.68	350	⇓P	P	11 45 31.3	-0.4
FETA	Feichten	81.69	357	*i* P	P	11 45 32.4	+0.5
	comp=Z,38nm,1.0s,SNR=19						
BBKI	Banjar Baru	81.71	254	P	P	11 45 31.3	-0.9
	comp=Z,16nm,0.5s						
BBKI	Banjar Baru	81.71	254	P	P	11 45 33.3	+1.1
	comp=Z,17nm,1.0s						
TLCR		81.75	345	⇓P	P	11 45 31.1	-0.9
TLCR		81.75	345	⇓P	P	11 45 31.1	-0.9
SOKA	Soboth	81.85	354	*i* P	P	11 45 32.9	+0.3
	comp=Z,49nm,1.1s,SNR=31						
CFR	Carcaliu	81.87	345	⇑P	P	11 45 32.6	0.0
CFR	Carcaliu	81.87	345	⇑P	P	11 45 32.6	0.0
PERS	Pernice	81.88	354	*e*P	P	11 45 32.6	-0.2
MLR	Muntele Rosu	81.90	347	⇑P	P	11 45 34.4	+1.4
MLR	Muntele Rosu	81.90	347	⇑P	P	11 45 34.4	+1.4
ABTA	Abfaltersbach	81.91	356	*i* P	P	11 45 32.9	0.0
	comp=Z,25nm,1.1s,SNR=15						
NEHR	Nehoiu	81.91	346	⇓P	P	11 45 33.0	+0.1
GANJ	Ganja	81.93	331	P	P	11 45 34.2	+1.1
EDFI	Ende, Flores	81.97	245	P	P	11 45 30.9	-2.8
	comp=Z,590nmcomp=Z,27nm,1.8s						
MYKA	Terra Mystica	81.97	355	*e*P	P	11 45 33.8	+0.6
	comp=Z,10nm,1.1s						
GROS	Grobnik	82.03	354	*e*P	P	11 45 33.1	-0.5
MORH	Mrgy, Hungar	82.04	352	⇑P	P	11 45 32.3	-1.2
MORH	Mrgy, Hungar	82.04	352	*e*P	P	11 45 32.4	-1.1
OBKA	Obir	82.04	355	*i* P	P	11 45 33.6	-0.1
	comp=Z,14nm,1.2s,SNR=12						
AKH	Akhalkalaki	82.06	333	⇓P	P	11 45 34.8	+0.9
BATI	Baumata	82.06	243	P	P	11 45 34.4	+0.5
	comp=Z,38nm,0.7s,baz=106,slow=4.4,SNR=3.1						
BATI	Baumata	82.06	243	P	P	11 45 34.5	+0.5
	comp=Z,686nmcomp=Z,58nm,0.9s						
BATI	Baumata	82.06	243	P	P	11 45 35.5	+1.5
	comp=Z,692nmcomp=Z,58nm,0.9s						
VOIR		82.08	347	⇑P	P	11 45 35.0	+1.1
VOIR		82.08	347	⇑P	P	11 45 35.0	+1.1
TPGR	Topolog	82.14	345	⇑P	P	11 45 34.2	+0.1
JURR	Jurilovca	82.15	344	⇓P	P	11 45 34.6	+0.5
ARR	Arges	82.20	348	⇓P	P	11 45 37.5	+3.0
KOVH	Kovagotottos	82.21	352	*e*P	P	11 45 33.0	-1.4
AJM	Ajmer	82.28	303	*e*x	P	11 45 35.2	0.0
TUE	Stuetta	82.28	358	IAMs_20	IAMs_20	12 22 26.7	
	comp=Z,2µm,21.0s						
MTUR	Matau	82.28	347	⇑P	P	11 45 36.5	+1.5
MTUR	Matau	82.28	347	⇑P	P	11 45 36.5	+1.5
BZS	Buzias	82.33	350	⇑P	P	11 45 33.7	-1.4
BZS	Buzias	82.33	350	⇑P	P	11 45 33.7	-1.4
BATM	Batumi	82.37	334	⇓P	P	11 45 35.3	-0.1
BATM	Batumi	82.37	334	⇓P	P	11 45 35.3	-0.1
SDDR	Presa de Saban	82.38	69	IAMs_20	IAMs_20	12 22 59.9	
	comp=Z,3µm,20.0s						
HARR	Harsova	82.38	345	⇑P	P	11 45 36.3	+1.0
HARR	Harsova	82.38	345	⇑P	P	11 45 36.3	+1.0
GZR	Gura Zlata	82.42	349	⇓P	P	11 45 35.5	-0.1
GZR	Gura Zlata	82.42	349	⇓P	P	11 45 35.5	-0.1
TIRR	Tirgusor	82.53	345	⇓P	P	11 45 36.3	+0.2
TIRR	Tirgusor	82.53	345	⇓P	P	11 45 36.3	+0.2
BCA	Borcka	82.54	334	⇑P	P	11 45 35.5	-0.8
GNI	Garni	82.86	332	P	P	11 45 39.9	+1.8
GNI	Garni	82.86	332*c*	*i*P	P	11 45 38.9	+0.8
GNI				pmax	pmax		
	comp=Z,89nm,1.7s						
GNI	Garni	82.86	332	P	P	11 45 38.9	+0.8
GNI				IAmb	IAmb	11 46 08.1	
	comp=Z,40nm,1.2s						
GNI	Garni	82.86	332	IAMs_20	IAMs_20	12 29 43.1	
	comp=Z,3µm,18.0s						
LKRN	Lenkeran, Azer	82.92	328	P	P	11 45 39.2	+1.0
HERR	Herculane	82.97	349	⇑P	P	11 45 38.7	+0.3
FRGS	Fruska Gora	82.97	351	⇑P	P	11 45 38.1	-0.4
KNDS	Knezji Dol	83.03	355	*e*P	P	11 45 38.2	-0.6
SALO	Salr	83.10	357	P	P	11 45 37.5	-1.6
SALO				IAmb	IAmb	11 45 52.7	
	comp=Z,64nm,1.0s						
MANR	Mangalia	83.12	344	⇓P	P	11 45 40.1	+0.9
MDVR	Moldovita	83.14	349	⇑P	P	11 45 39.7	+0.3
WSI	Waingapu	83.51	246	P	P	11 45 40.0	-1.5
NAX	Nakhchivan	83.53	331	P	P	11 45 42.3	+0.8
KALB	Balgarevo	83.55	344	⇓P	P	11 45 42.8	+1.3
KULM	Kulim	83.60	270	P	P	11 45 43.0	+0.9
BNI	Bardonecchia	83.72	0	IAMs_20	IAMs_20	12 25 48.8	
	comp=Z,2µm,21.0s						
DIKM	Dikmen	83.91	339	⇓P	P	11 45 44.9	+1.6
IPM	Ipoh	83.99	270	P	P	11 45 44.0	-0.1
WBSI	Waikabubak, Su	84.00	246	P	P	11 45 41.8	-2.3
	comp=Z,1µmcomp=Z,103nm,1.2s						
DIVS	Divibare	84.01	351	IAMs_20	IAMs_20	12 29 41.7	
	comp=Z,2µm,19.0s						
PLVB	Pleven	84.15	347	⇑P	P	11 45 44.2	-0.3
PLAI	Plampang	84.27	248	P	P	11 45 45.1	-0.3
	comp=Z,51nm,1.7s						
BOVS	Bovan	84.28	349	⇓P	P	11 45 43.9	-1.2
MSSA	Maissana	84.43	358	P	P	11 45 44.7	-1.3
MSSA				IAmb	IAmb	11 45 59.9	
	comp=Z,50nm,1.0s						
VLC	Villacollemand	84.56	358	P	P	11 45 46.1	-0.6
VLC				IAmb	IAmb	11 45 53.5	
	comp=Z,67nm,1.5s						
VLC				IAMs_20	IAMs_20	12 30 31.3	
	comp=Z,1µm,19.0s						
WB0	Warramunga Arr	84.60	229	P	P	11 45 45.7	-1.2
WB0				IAmb	IAmb	11 46 06.0	
	comp=Z,79nm,1.5s						
WR0	Warramunga Arr	84.70	228	P	P	11 45 46.0	-1.4
WR0				IAmb	IAmb	11 46 01.2	
	comp=Z,32nm,1.0s						
WRAB	Tennant Creek	84.76	229*c*	*e*P	P	11 45 46.4	-1.4
WRAB				pmax	pmax		
	comp=Z,29nm,1.3s						
WRAB				MLR	MLR		
	comp=Z,2µm,18.0s						
WRAB	Tennant Creek	84.76	229	P	P	11 45 46.7	-1.1
WRAB				IAmb	IAmb	11 46 01.8	
	comp=Z,57nm,1.2s						
WRAB	Tennant Creek	84.76	229	IAMs_20	IAMs_20	12 25 41.9	
	comp=Z,2µm,19.0s						
WB2	Warramunga Arr	84.77	229	P	P	11 45 46.5	-1.2
WB2				IAmb	IAmb	11 46 01.8	
	comp=Z,61nm,1.2s						
WRA	Warramunga Arr	84.78	229	P	P	11 45 46.5	-1.3
	comp=Z,8.6nm,0.8s,baz=37,slow=6.3,SNR=42						
WRA	Warramunga Arr	84.78	229	P	P	11 45 46.4	-1.4
BCIP	Isla Barro Col	84.87	82	*e*P	P	11 45 52.7	+4.2
KMMI	Kalianget	85.09	252	P	P	11 45 48.5	-1.0
	comp=Z,2µmcomp=Z,58nm,0.9s						
VTS	Vitosha	85.09	348	⇑P	P	11 45 48.8	-0.6
VTS	Vitosha	85.09	348	⇑P	P	11 45 48.8	-0.6
EDRB	Edirne	85.34	345	P	P	11 45 50.8	+0.3
PDG	Podgorica	85.73	351	⇓P	P	11 45 52.2	-0.2
PDG	Podgorica	85.73	351	IAMs_20	IAMs_20	12 31 32.3	
	comp=Z,3µm,19.0s						
PGAV	Gavieira, Arco	85.86	11	*e*P	P	11 45 53.4	+0.1
	comp=Z,69nm,2.0s						
PGAV	Gavieira, Arco	85.86	11	*e*LR	LR	12 14 55.6	
	comp=Z,2µm,18.0s						
SJG	San Juan	86.03	66	P	P	11 45 53.8	-0.5
	comp=Z,17nm,0.7s,baz=74,slow=5.1,SNR=6.8						
SJG	San Juan	86.03	66	*e*P	P	11 45 51.1	-3.2
BR131	Keskin Array S	86.11	340	P	P	11 45 54.4	-0.2
BR131				pmax	pmax		
	comp=Z,68nm,1.1s						
BR131	Keskin Array S	86.11	340	P	P	11 45 54.8	+0.2
	SNR=24						
BR131	Keskin Array S	86.11	340	P	P	11 45 54.4	-0.2
BR131				IAmb	IAmb	11 45 58.8	
	comp=Z,68nm,1.1s						
BRTR	Keskin Array B	86.11	340	P	P	11 45 54.3	-0.2
	comp=Z,25nm,0.9s,baz=47,slow=2.4,SNR=62						
BRTR				LR	LR	12 32 40.7	
	comp=Z,1µm,18.1s,baz=52,slow=41						
STIP	Stip	86.13	349	*i* P	P	11 45 53.8	-0.7
PCAB	Cabril	86.15	11	*e*P	P	11 45 55.2	+0.6
	comp=Z,50nm,1.8s						
ANTO	Ankara	86.15	340	P	P	11 45 55.1	+0.4
ANTO				pmax	pmax		
	comp=Z,49nm,1.2s						
ANTO	Ankara	86.15	340	P	P	11 45 55.1	+0.4
ANTO				IAmb	IAmb	11 45 57.7	
	comp=Z,49nm,1.1s						
ANTO				IAMs_20	IAMs_20	12 31 25.8	
	comp=Z,2µm,19.0s						
PBRG	Braganca	86.20	10	*e*P	P	11 45 54.8	-0.1
	comp=Z,62nm,1.6s						
RDO	Rodhopi	86.21	346	P	P	11 45 54.8	0.0
AQU	L'Aquila	86.25	355	P	P	11 45 54.9	-0.2
AQU				pmax	pmax		
	comp=Z,51nm,0.9s						
AQU				MLR	MLR		
	comp=Z,2µm,21.0s						
AQU	L'Aquila	86.25	355	P	P	11 45 54.9	-0.2
AQU				IAmb	IAmb	11 46 20.0	
	comp=Z,51nm,0.9s						
AQU				IAMs_20	IAMs_20	12 28 27.9	
	comp=Z,2µm,21.0s						
NVR	Nevrokopi	86.25	347	P	P	11 45 54.4	-0.7
PHP	Peshkopia	86.35	350	P	P	11 45 55.1	-0.5
ALN	Alexandroupoli	86.38	346	P	P	11 45 54.2	-1.5
VAY	Valandovo	86.45	348	*i* P	P	11 45 56.3	+0.3
POLO	Lamas de Olo	86.51	11	*e*P	P	11 45 56.7	+0.3
	comp=Z,30nm,2.0s						
KAVA	Kavala	86.51	347	P	P	11 45 55.3	-1.0
SRS	Serrai	86.52	347	P	P	11 45 55.5	-0.9
KNT	Kendrikon	86.57	348	P	P	11 45 55.8	-0.8
PSI	Prapat	86.60	270	LR	LR	12 24 31.7	
	comp=Z,381nm,21.3s,baz=358,slow=35						
PVRL	Vila Real	86.61	11	*e*P	P	11 45 56.8	-0.1
	comp=Z,70nm,1.7s						
MVO	Moncorvo	86.80	11	*e*P	P	11 45 57.8	0.0
	comp=Z,59nm,1.4s						
MVO	Moncorvo	86.80	11	*e*LR	LR	12 15 32.2	
	comp=Z,2µm,18.0s						
GRG	Griva	86.83	348	P	P	11 45 57.2	-0.8
OHR	Ohrid	86.87	350	*i* P	P	11 45 57.8	-0.4
FNA	Florina	87.13	349	P	P	11 45 57.9	-1.5
PVIS	Viseu	87.14	11	*e*P	P	11 45 59.3	-0.2
	comp=Z,46nm,1.8s						
OUR	Ouranopolis	87.24	347	P	P	11 45 59.1	-0.7
PLG	Polygyros	87.27	347	P	P	11 45 58.8	-1.3
HYB	Hyderabad	87.45	295	*i* P	P	11 45 59.5	-1.8
HYB				*e*pP	pP	11 46 08.0	-2.1
HYB				*e*PP	pwP	11 46 26.0	+10
MTE	Manteigas	87.50	11	*e*P	P	11 46 01.0	-0.2
	comp=Z,49nm,1.3s						
MTE	Manteigas	87.50	11	*e*LR	LR	12 16 02.0	
	comp=Z,2µm,18.0s						
MTE	Manteigas	87.50	11	IAMs_20	IAMs_20	12 27 12.4	
	comp=Z,2µm,19.0s						
FITZ	Fitzroy Crossi	87.52	237	P	P	11 46 01.0	-0.3
	comp=Z,29nm,0.8s,baz=86,slow=2.1,SNR=26						
NEST	Nestorio	87.53	349	P	P	11 46 00.2	-1.2
COI	Coimbra	87.58	12	*e*P	P	11 46 01.8	+0.3
	comp=Z,81nm,1.1s						
COI	Coimbra	87.58	12	IAMs_20	IAMs_20	12 27 29.9	
	comp=Z,2µm,20.0s						
URIC	Uribia, Colomb	87.67	74	*e*P	P	11 46 06.3	+4.0
PTAC	Punta Ardita,	87.69	81	*e*P	P	11 46 08.2	+5.8
PCAS	Casmilo, Conde	87.72	12	*e*P	P	11 46 02.2	0.0
	comp=Z,68nm,1.2s						
MOTC	Monteria, Cord	87.74	79	*e*P	P	11 46 01.6	-1.1
ARGC	Ariguani, Magd	87.76	77	*e*P	P	11 46 09.2	+6.4
SMRT	St. Maarten	87.81	63	IAMs_20	IAMs_20	12 25 47.8	
	comp=Z,3µm,22.0s						
KPRO	Kipourio	87.95	349	P	P	11 46 02.5	-0.9
PCBR	Castelo Branco	88.06	11	*e*P	P	11 46 03.4	-0.4
	comp=Z,45nm,1.6s						
SABA	Saba	88.06	64	IAMs_20	IAMs_20	12 26 09.5	
	comp=Z,2µm,20.0s						
AS31	Alice Springs	88.19	227	P	P	11 46 04.3	-0.2
ASAR	Alice Springs	88.19	227	P	P	11 46 04.0	-0.5
	comp=Z,28nm,0.8s,baz=32,slow=4.7,SNR=110						
ASAR	Alice Springs	88.19	227	P	P	11 46 04.0	-0.5
ASAR	Alice Springs	88.19	227	P	P	11 46 03.7	-0.8
PSBE	So Bento	88.21	12	*e*P	P	11 46 04.5	-0.1
	comp=Z,102nm,1.5s						
XOR	Xorichti	88.30	347	P	P	11 46 03.0	-2.0
SEUS	St. Eustatius	88.31	64	IAMs_20	IAMs_20	12 25 44.1	
	comp=Z,2µm,22.0s						
PMRV	Marv??o	88.47	11	*e*P	P	11 46 05.8	0.0
	comp=Z,44nm,1.5s						
PMRV	Marv??o	88.47	11	*e*LR	LR	12 16 12.8	
	comp=Z,1µm,20.0s						
IGT	Igoumenitsa	88.48	350	P	P	11 46 04.4	-1.5
ISP	Isparta	88.58	342	IAMs_20	IAMs_20	12 32 31.7	
	comp=Z,2µm,21.0s						
ESDC	Sonseca Array	88.59	8	P	P	11 46 06.0	-0.5
	comp=Z,19nm,1.1s,baz=350,slow=4.4,SNR=53						
UREC	San Jos de Ur	88.62	79	*e*P	P	11 46 08.2	+1.4
PAB	San Pablo	88.68	9	P	P	11 46 06.2	-0.7
PAB				pmax	pmax		
	comp=Z,15nm,1.1s						
PAB	San Pablo	88.68	9	P	P	11 46 06.2	-0.7
PAB	San Pablo	88.68	9	P	P	11 46 06.7	-0.2
PMAFR	Mafra	88.70	13	*e*P	P	11 46 07.0	+0.1
	comp=Z,207nm,1.5s						
PMTG	Montargil	88.72	12	*e*P	P	11 46 06.2	-0.8
	comp=Z,37nm,1.6s						
AGG	Agios Georgios	88.75	348	P	P	11 46 05.9	-1.3
AGG				pmax	pmax		
	comp=Z,78nm,1.4s						
AGG	Agios Georgios	88.75	348	P	P	11 46 05.9	-1.3
DBBC	Dabeiba	88.78	80	*e*P	P	11 46 10.2	+2.5
MAKR	Makrakomi, Fth	88.78	348	P	P	11 46 05.2	-2.1
EVR	Evrytania	88.92	348	P	P	11 46 06.8	-1.2
PMST	Lisbon--Monsan	88.92	13	*e*P	P	11 46 08.9	+1.0
	comp=Z,87nm,1.3s						
PESTR	Estremoz	89.00	11	*e*P	P	11 46 08.1	-0.2
	comp=Z,72nm,1.7s						
PESTR	Estremoz	89.00	11	P	P	11 46 07.6	-0.7
PESTR				IAmb	IAmb	11 46 12.3	
	comp=Z,25nm,1.2s						
PESTR	Estremoz	89.00	11	P	P	11 46 08.0	-0.3
HATO	Hato, Curacao	89.11	72	IAMs_20	IAMs_20	12 29 17.2	
	comp=Z,2µm,20.0s						
MXZ	Matakaoa Point	89.12	187	IAMs_20	IAMs_20	12 21 42.6	
	comp=Z,2µm,20.0s						
POO	Poona	89.16	299	*e*x	P	11 46 08.0	-1.4
TIP	Timpagrande	89.18	352	⇑P	P	11 46 08.7	-0.6
TIP	Timpagrande	89.18	352	IAMs_20	IAMs_20	12 28 03.6	
	comp=Z,2µm,21.0s						
LKD2	Lefkada island	89.18	349	P	P	11 46 07.5	-1.7
ZARC	Zaragoza, Cauc	89.24	79	*e*P	P	11 46 06.3	-3.4
VSL	Villasalto	89.25	358	IAMs_20	IAMs_20	12 33 06.2	
	comp=Z,2µm,20.0s						
NYDR	Nydri-Lefkada	89.25	349	P	P	11 46 07.8	-1.6
EVO	Evora	89.28	12	*e*P	P	11 46 09.3	-0.3
	comp=Z,56nm,1.8s						
EVGI	Lefkada island	89.35	349	P	P	11 46 07.7	-2.2
SERG	Sergoula	89.38	348	P	P	11 46 08.4	-1.7
EFP	Efpalio	89.39	348	P	P	11 46 08.7	-1.4
LAKA	Lakka	89.56	348	P	P	11 46 09.2	-1.8
OCAC	Ocana	89.59	77	*e*P	P	11 46 15.3	+3.8
PNCL	Nicolau / Gran	89.63	12	*e*P	P	11 46 10.8	-0.4
	comp=Z,56nm,1.6s						
KLV	Kalavryta, Ach	89.73	348	P	P	11 46 09.9	-1.9
PBAR	Barrancos	89.75	11	*e*P	P	11 46 11.4	-0.4
	comp=Z,85nm,1.4s						
VLS	Valsamata	89.80	349	P	P	11 46 10.1	-1.9
PBEJ	Beja	89.80	12	*e*P	P	11 46 12.6	+0.6
	comp=Z,38nm,1.4s						
CBOC	Ciudad Bolivar	89.80	81	*e*P	P	11 46 19.5	+6.9
RLS	Riolos of Patr	89.81	349	P	P	11 46 11.2	-0.9
GUR	Goura	89.82	348	P	P	11 46 10.5	-1.8
HELC	Santa Helena	89.84	80	*e*P	P	11 46 13.7	+0.7
DRO	Drossia	89.88	348	P	P	11 46 12.2	-0.3
URZ	Urewera	89.91	188	LR	LR	12 19 00.8	
	comp=Z,1µm,22.0s,baz=31,slow=30						
URZ	Urewera	89.91	188	P	P	11 46 11.9	-0.2
URZ				IAmb	IAmb	11 46 25.1	
	comp=Z,26nm,1.0s						
URZ				IAMs_20	IAMs_20	12 24 39.4	
	comp=Z,2µm,20.0s						
BRRC	Barranca, Sant	90.24	78	*e*P	P	11 46 19.5	+5.1
HIZ	Hauiti	90.37	189	IAMs_20	IAMs_20	12 21 42.7	
	comp=Z,2µm,20.0s						
PLMC	San Jos del P	90.38	82	*e*P	P	11 46 18.6	+3.5
PVAQ	Vaqueiros	90.43	12	*e*LR	LR	12 18 34.4	
	comp=Z,2µm,18.0s						
PAMC	Pamplona, Colo	90.67	77	*e*P	P	11 46 18.6	+1.6
SDV	Santo Domingo	90.71	75	*e*P	P	11 46 21.6	+4.8
SDV	Santo Domingo	90.71	75	*e*P	P	11 46 18.0	+1.2
SDV	Santo Domingo	90.71	75	IAMs_20	IAMs_20	12 28 26.7	
	comp=Z,2µm,21.0s						
NORC	Norcasia	90.74	80	*e*P	P	11 46 18.6	+1.8
BKZ	Black Stump Fm	90.86	188	P	P	11 46 15.8	-0.8
BKZ				IAmb	IAmb	11 46 31.4	
	comp=Z,28nm,1.1s						
BARC	Barichara	90.97	78	*e*P	P	11 46 23.6	+5.5
CLTB	Caltabellotta	91.02	355	P	P	11 46 16.6	-1.3
CLTB				IAmb	IAmb	11 46 40.1	
	comp=Z,60nm,1.4s						
YOTC	Yotoco, Valle	91.06	82	*e*P	P	11 46 18.7	+0.4
SPBC	San Pablo de B	91.16	80	*e*P	P	11 46 23.5	+4.7
ANIL	Santa Ana	91.25	81	*e*P	P	11 46 24.5	+5.0
SHME	Shamm	91.45	317	*i* P	P	11 46 19.9	0.0
	SNR=5.0						
SHME	Shamm	91.45	317	P	P	11 46 19.1	-0.8
BANOM	Banah	91.49	317	P	P	11 46 19.2	-1.0
BANOM	Banah	91.49	317	P	P	11 46 19.9	-0.3
RUSC	La Rusia	91.57	79	*e*P	P	11 46 26.9	+5.7
ROSC	El Rosal	91.64	80	*e*P	P	11 46 22.5	+1.1
ORTC	Ortega, Tolima	91.80	81	*e*P	P	11 46 25.2	+3.5
MASF	Masafi	92.03	317	P	P	11 46 22.4	-0.3
MDH	Madha	92.04	317	P	P	11 46 21.1	-1.5
MDH	Madha	92.04	317	P	P	11 46 22.2	-0.4
MSFE	Esma-Masafi	92.05	317	P	P	11 46 21.8	-1.0
CHIC	Chingaza	92.17	80	*e*P	P	11 46 26.1	+2.2
STKA	Stephens Creek	92.19	217	P	P	11 46 22.8	-0.1
	comp=Z,15nm,0.8s,baz=349,slow=7.2,SNR=35						
STKA				LR	LR	12 22 53.8	
	comp=Z,1µm,21.6s,baz=359,slow=32						
STKA	Stephens Creek	92.19	217	P	P	11 46 22.8	-0.1
PCON	Cinco Dias	92.32	83	*e*P	P	11 46 29.3	+4.5
SOTA	Rioblanco	92.34	84	*e*P	P	11 46 27.3	+2.6
UOSS	Minazif	92.39	317	*i* P	P	11 46 23.2	-1.1
	SNR=7.1						
UOSS	Minazif	92.39	317	P	P	11 46 23.5	-0.8
UOSS	Minazif	92.39	317	IAMs_20	IAMs_20	12 30 02.1	
	comp=Z,2µm,22.0s						
PAC1	Pacto, Paraso	92.44	87	*e*P	P	11 46 29.7	+4.9
HATD	Hatta, Dubai	92.53	317	P	P	11 46 23.6	-1.4
HATD	Hatta, Dubai	92.53	317	P	P	11 46 24.1	-0.8
NAZ	Nazwa, Dubai	92.58	317	P	P	11 46 26.0	+0.8
	SNR=6.8						
GCUF	Volcan Galeras	92.59	85	*e*P	P	11 46 28.2	+2.2
OTAV	Otavalo	92.67	86	*e*P	P	11 46 27.9	+1.7
ASHO	Ashiyiah	92.68	317	*i* P	P	11 46 24.4	-1.3
	SNR=6.5						
ASHO	Ashiyiah	92.68	317	P	P	11 46 25.2	-0.5
WSAR	Wadi Sarin	92.81	314	P	P	11 46 26.1	-0.1
	comp=Z,53nm,1.0s,baz=33,slow=3.4,SNR=22						
WSAR	Wadi Sarin	92.81	314	P	P	11 46 26.7	+0.4
	SNR=9.4						
FAQ	Al Faqa, Dubai	92.83	317	P	P	11 46 24.7	-1.6
ELOV	Elorza	92.89	75	*e*P	P	11 46 23.6	-3.1
QRZ	Quartz Range	92.92	191	IAMs_20	IAMs_20	12 24 15.0	
	comp=Z,2µm,20.0s						
SOHO	SOHO	92.96	316	*i* P	P	11 46 25.7	-1.2
	SNR=7.4						
SOHO	SOHO	92.96	316	P	P	11 46 26.5	-0.4
KEST	Kesra	93.00	358	P	P	11 46 26.8	-0.2
	comp=Z,7.3nm,1.1s,baz=231,slow=7.7,SNR=4.0						
ASUD	Al Ashush, Dub	93.04	317	*i* P	P	11 46 25.5	-1.8
	SNR=11						
ASUD	Al Ashush, Dub	93.04	317	P	P	11 46 27.0	-0.3
	SNR=6.0						
HOQ	Hoqain	93.10	315	P	P	11 46 27.1	-0.5
SNZO	South Karori	93.16	189	IAMs_20	IAMs_20	12 24 57.3	
	comp=Z,3µm,20.0s						
WBK	Wadi Bani Khal	93.20	313	P	P	11 46 28.8	+0.7
	SNR=9.0						
NNZ	Nelson	93.20	190	IAMs_20	IAMs_20	12 33 52.7	
	comp=Z,2µm,19.0s						
SMDO	Samad	93.23	314	P	P	11 46 28.3	0.0
	SNR=8.9						
PMOZ	Porto Moniz, M	93.28	20	*e*P	P	11 46 29.2	+0.8
	comp=Z,121nm,1.6s						
PMOZ	Porto Moniz, M	93.28	20	*e*LR	LR	12 18 20.8	
	comp=Z,998nm,20.0s						
ALNE	Al Ain	93.36	316	*i* P	P	11 46 28.6	-0.2
	SNR=6.7						
ALNE	Al Ain	93.36	316	P	P	11 46 28.9	+0.1
	SNR=10						
GRGR	Grenville	93.39	66	IAMs_20	IAMs_20	12 30 00.6	
	comp=Z,2µm,20.0s						
JLN	Jalan Bani Buh	93.40	313	P	P	11 46 29.4	+0.4
	SNR=15						
PMAR	Madeira	93.44	20	*e*P	P	11 46 29.9	+0.7
	comp=Z,221nm,1.6s						
ARQ	Araqi	93.66	315	P	P	11 46 30.0	-0.2
	SNR=17						
GHAJ	Ghor Haditha	93.69	336	IAMs_20	IAMs_20	12 36 43.7	
	comp=Z,2µm,19.0s						
THZ	Tophouse	93.80	190	IAMs_20	IAMs_20	12 26 49.9	
	comp=Z,2µm,19.0s						
JMDO	Jabal Madar	93.80	314	P	P	11 46 31.0	+0.2
	SNR=13						
BSY	Bisya	93.88	315	P	P	11 46 31.0	-0.2
	SNR=13						
JBK	JBK	94.01	8	P	P	11 46 32.1	+0.2
UMZA	Um Al Zommool	94.80	316	P	P	11 46 34.9	-0.5
CZD	Col de Zad	95.06	10	P	P	11 46 38.0	+1.2
MHTO	MHTO	95.07	313	P	P	11 46 35.9	-0.7
	SNR=21						
MDT	Midelt	95.32	10	P	P	11 46 38.4	+0.6
FIGM	Figuig	96.30	7	P	P	11 46 43.0	+0.7
GOLM	Goulmima	96.38	10	P	P	11 46 44.0	+1.3
OUK	Oukaimeden	96.51	13	P	P	11 46 44.0	+0.5
TZRR	Tazzarine	97.22	11	P	Pdif	11 46 47.0	+0.5
ZGR	Zagora	97.87	11	P	Pdif	11 46 50.0	+0.6
SHAO	Shalim	98.72	314	P	Pdif	11 46 53.4	+0.2
DOK	Doka	98.86	315	P	P	11 46 53.3	-0.5
WHFO	Wadi Hawf	99.63	315	P	Pdif	11 46 56.6	-0.7
KOWA	Kowa	113.48	12	PKiKP	PKiKP	11 51 52.2	+0.4
	comp=Z,1.5nm,0.7s,baz=13,slow=3.8,SNR=4.1						
TORD	Torodi Ar. Bea	115.35	6	PKP	PKiKP	11 51 55.1	-0.3
	comp=Z,2.2nm,0.7s,baz=346,slow=2.4,SNR=11						
TORD				pPKP	pPKiKP	11 52 08.8	+4.3
	comp=Z,2.0nm,0.6s,baz=342,slow=2.6,SNR=6.2						
TORD				PKKPbc	PKKPbc	12 02 29.6	+2.1
	comp=Z,5.6nm,0.9s,baz=187,slow=1.9,SNR=6.3						
H03N2	Juan Fernandez	117.78	109	T	T	14 01 26.2	
	baz=317,slow=78,SNR=16						
H03N1	Juan Fernandez	117.79	109	T	T	14 01 17.0	
	baz=317,slow=78,SNR=20						
H03N3	Juan Fernandez	117.80	110	T	T	14 01 16.4	
	baz=317,slow=78,SNR=17						
DBIC	Dimbokro	121.07	14	PKP	PKPdf	11 52 06.4	0.0
	comp=Z,3.7nm,0.7s,baz=340,slow=0.7,SNR=5.6						
TIC	Toumodi	121.07	14	*e*PKP1	PKPdf	11 52 06.0	-0.4
KIC	Kosan Boka	121.39	14	*e*PKP1	PKPdf	11 52 06.5	-0.5
	comp=Z,20nm,1.1s						
LIC	Lamto	121.48	14	*e*PKP1	PKPdf	11 52 06.9	-0.3
	comp=Z,16nm,0.7s						

KMBO	Kilima Mbogo	123.62	323	PKP	PKPdf	11 52 09.9	-1.6
	comp=Z,4.1nm,0.9s,baz=36,slow=8.0,SNR=6.0						
KMBO	Kilima Mbogo	123.62	323	PKIKP	PKPdf	11 52 10.0	-1.6
JANB	Januaria	125.36	68	eP	PKiKP	11 52 17.5	+2.6
CPUP	Villa Florida	125.99	88	PKP	PKPdf	11 52 15.5	+0.1
	comp=Z,2.1nm,0.7s,baz=197,slow=3.3,SNR=3.3						
CPUP				PKKPbc	PKKPab	12 01 49.7	+1.5
	comp=Z,1.1nm,0.5s,baz=137,slow=9.0,SNR=2.9						
PLCA	Paso Flores	127.63	110	PKP	PKPdf	11 52 18.2	0.0
	comp=Z,4.8nm,0.8s,baz=237,slow=3.3,SNR=16						
PLCA	Paso Flores	127.63	110	PKIKP	PKiKP	11 52 19.2	+0.5
PLCA	Paso Flores	127.63	110	eP	PKiKP	11 52 21.4	+2.7
PLCA	Paso Flores	127.63	110	PKPdf	PKiKP	11 52 19.2	+0.5
BLWY	Bulawayo	144.31	324	eP	PKPbc	11 52 48.3	+0.2
BLWY	Bulawayo	144.31	324	eP	PKPbc	11 52 48.3	+0.2
MATP	Matopo	144.61	324	eP	PKPbc	11 52 49.3	+0.3
MATP	Matopo	144.61	324	eP	PKPbc	11 52 49.3	+0.3
MSNA	Messina	145.76	320	eP	PKPab	11 52 54.1	+1.2
MSNA	Messina	145.76	320	eP	PKPab	11 52 54.1	+1.2
MOPA	Mopani	146.23	317	eP	PKPab	11 52 55.8	+1.1
MOPA	Mopani	146.23	317	eP	PKPab	11 52 55.8	+1.1
MAW	Mawson	148.88	218	PKPbc	PKiKP	11 53 00.9	-0.1
	comp=Z,32nm,0.8s,baz=337,slow=0.7,SNR=42						
MAW				pPKPbc	pPKPab	11 53 13.1	+0.4
	comp=Z,98nm,1.1s,baz=212,slow=2.4,SNR=12						
MAW	Mawson	148.88	218	PKP2	PKPbc	11 53 00.1	+0.4
MAW						12 52 54.3	
MAW	Mawson	148.88	218	PKPdf	PKPdf	11 52 54.3	-1.4
MAW					PKPbc	11 53 00.1	+0.4
BOSA	Boshof	153.25	322	PKPbc	PKPbc	11 53 11.0	-0.4
	comp=Z,8.6nm,0.7s,baz=42,slow=2.1,SNR=22						
BOSA	Boshof	153.25	322	eP	PKPbc	11 53 08.0	-3.3
BOSA	Boshof	153.25	322	eP	PKPbc	11 53 08.0	-3.3
BOSA	Boshof	153.25	322	PKPdf	PKPdf	11 53 03.4	-0.5
BOSA					PKiKP	11 53 11.8	+0.2
SYO	Syowa Base	156.71	209	⇑epPKPdf	PKPdf	11 53 11.4	+4.3
SYO	Syowa Base	156.71	209	⇑ePKPab	PKPab	11 53 37.8	+1.1
VNA2	Neumayer--Watz	159.54	167	PKPdf	PKPdf	11 53 10.9	+0.4

NNC 08 11:37:13.9±10.0**,36.°97N×70.°18E,h0^{km},mb4.2,mpv3.9, 3C-1D,Error ellipse: s-maj=80.3km s-min=67.8km az=172.0,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.83	27	P	Pn	11 38 42.5	+0.5
	SNR=71						
KK31	Karatay Array	6.13	2	⇑P	Pn	11 38 47.5	+1.6
	0.9nm,0.2s,baz=180,slow=12,SNR=36						
KK31				⇑S	Sn	11 39 59.3	+2.6
	1.8nm,0.3s,baz=188,slow=26,SNR=6.4						
UCH	Uchtor	6.23	31	P	Pn	11 38 47.9	+0.3
	SNR=36						
EKS2	Erkin-Say	6.33	25	P	Pn	11 38 49.6	+1.0
	SNR=9.9						
AAK	Ala-Archa	6.57	29	P	Pn	11 38 52.4	+0.5
	SNR=8.2						
AAK	Ala-Archa	6.57	29	P	Pn	11 38 51.5	-0.4
	5.3nm,0.6s						
AAK				S	Sn	11 40 08.2	+0.6
	12nm,0.7s						
USP	Ospenovka	7.11	26	P	Pn	11 38 59.1	-0.2
	SNR=6.8						
TKM2	Tokmak 2	7.26	33	P	Pn	11 39 01.2	-0.2
	SNR=10.0						
TKM2	Tokmak 2	7.26	33	⇑P	Pn	11 39 01.0	-0.4
	12nm,0.5s						
TKM2				⇓S	Sn	11 40 23.7	-1.0
	3.6nm,0.7s						

IDC ***08*** *11:38:27.5±0.6,6.°82N×94.°80E,h0^{km},mb4.2/9, mb1 4.2/11,mb1mx3.9/67,mbtmp4.1/11,ML4.0/2,Error ellipse: s-maj=24.0km s-min=5.9km az=57.0*

ISC 08 11:38:33.2±1.0**,6.°9N**±0.°1×**94.°9E**±0.°2**,h35^{km},n11, σ1.^{s}08**/11**,mb4.3**/9**,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	5.72	135	Pn	Pn	11 39 55.0	-0.7
	2.5nm,0.3s,baz=328,slow=12,SNR=11						
CMAR	Chiang Mai Arr	12.14	19	Pn	Pn	11 41 22.9	-0.8
	0.4nm,0.3s,baz=209,slow=14,SNR=3.4						
MKAR	Makanchi Array	41.20	347	P	P	11 46 15.0	+0.6
	4.4nm,0.9s,baz=161,slow=10,SNR=2.8						
KURBB	Kurchatov Arra	45.67	345	P	P	11 46 50.3	0.0
	1.0nm,0.4s,baz=175,slow=7.1,SNR=1.4						
WRA	Warramunga Arr	47.09	125	P	P	11 47 02.7	+0.7
	3.2nm,1.0s,baz=296,slow=12,SNR=0.8						
ZALV	Zalesovo Beam	47.61	352	P	P	11 47 04.6	-0.9
	1.6nm,0.5s,baz=180,slow=6.5,SNR=2.7						
BVAR	Borovoye Array	50.15	341	P	P	11 47 24.0	-1.1
	3.7nm,0.9s,baz=140,slow=11,SNR=2.3						
BRTR	Keskin Array B	63.63	311	P	P	11 48 60.0	-1.1
	1.8nm,0.8s,baz=116,slow=6.7,SNR=3.1						
TIXI	Tiksi	68.03	11	P	P	11 49 29.9	+1.3
	2.7nm,0.4s,baz=177,slow=4.1,SNR=4.2						
ARCES	ARCESS Array B	76.43	340	P	P	11 50 20.3	+1.5
	4.7nm,0.9s,baz=81,slow=5.6,SNR=2.5						
GERES	GERESS Array B	79.05	318	P	P	11 50 33.7	-0.3
	0.4nm,0.6s,baz=132,slow=6.7,SNR=2.0						

JMA ***08*** *11:38:55.4,33.°31N×132.°09E,h50^{km}±1^{km},M3.8*
JMA Felt I J1.
KMA ***08*** *11:38:56.8±99.0,33.°53N×131.°71E,h0^{km}±999^{km},Error ellipse: s-maj=29.9km s-min=2.8km az=305.0*

ISC 08 11:38:55.7±1.4**,33.°30N**±0.°05×**132.°09E**±0.°04**,h47^{km}**±14^{km}**, n29,σ0.^{s}42**/37**,6C-3D,Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JUS	Usuki	0.37	231	⇓P	Pn	11 39 05.1	-0.2
JUS				S	Sn	11 39 11.9	-0.1
JNA	Nagahama	0.41	51	⇑P	Pn	11 39 05.6	-0.2
JNA				S	Sn	11 39 12.9	-0.1
UWA2	Uwa jima 2	0.46	101	⇑P	Pn	11 39 06.1	-0.2
UWA2				S	Sn	11 39 14.1	+0.3
JSKE	Saikikamae	0.52	198	⇓P	Pn	11 39 07.1	0.0
JSKE				S	Sn	11 39 15.5	+0.3
JTO	Tosashimizu	0.74	126	⇓P	Pn	11 39 09.6	-0.3
JTO				S	Sn	11 39 20.6	+0.5
JKU	Kubokawa	0.81	89	⇑P	Pn	11 39 10.5	-0.4
JKU				S	Sn	11 39 21.8	-0.1
JHM	Kurahashi	0.91	23	⇑P	Pn	11 39 12.0	-0.2
JHM				S	Sn	11 39 24.3	0.0
JET	Tanbara	0.93	59	⇑P	Pn	11 39 12.0	-0.5
JET				S	Sn	11 39 24.2	-0.6
JIU3	Izumi3	1.31	236	⇑P	Pn	11 39 17.4	-0.2
JHT	Toyohira	1.39	11	P	Pn	11 39 18.9	+0.2
KSUSN	Ulsan	3.43	315	P	Pn	11 39 45.8	-0.8
	SNR=8.2						
YKDB	Yokjido	3.44	294	P	Pn	11 39 46.2	-0.5
	SNR=34						
KSDAG	Daegu	3.61	314	P	Pn	11 39 48.3	-0.8
	SNR=14						
YNDB	Yeoundo	3.74	289	P	Pn	11 39 50.5	-0.4
	SNR=57						
KOHB	KOHEUNG	4.21	290	P	Pn	11 39 57.1	-0.3
	SNR=199						
BOSB	Boseong-gun	4.31	291	P	Pn	11 39 58.3	-0.3
	SNR=62						
NAWB	Namwon	4.42	300	P	Pn	11 40 00.1	-0.1
	SNR=12						
CHYB	Chungyang	4.47	325	P	Pn	11 40 01.0	0.0
	SNR=15						
KSKWJ	Gwangju	4.62	295	P	Pn	11 40 02.7	-0.2
	SNR=20						
KSKWJ	Gwangju	4.62	295	P	Pn	11 40 02.7	-0.2
	SNR=20						
KSMGY	Mungyeong	4.71	316	P	Pn	11 40 03.9	-0.3
	SNR=12						
KSJEO	Jeonju	4.75	305	P	Pn	11 40 04.7	-0.1
	SNR=18						
KSJEU	Jeongeup	4.80	299	P	Pn	11 40 05.3	0.0
	SNR=63						
GOCB	Gochang-gun	4.98	296	P	Pn	11 40 08.0	0.0
	SNR=48						
SMKB	Mukjeong-gil	5.16	299	P	Pn	11 40 10.2	0.0
	SNR=7.2						
KSDGY	Daegwallycong	5.19	329	P	Pn	11 40 12.0	+1.1
	SNR=9.8						
OYDB	Oeyeondo	5.75	302	P	Pn	11 40 18.3	-0.1
	SNR=28						
SEHB	SEOHWA	5.86	329	P	Pn	11 40 20.4	+0.5
	SNR=41						
MAT	Matsushiro	5.97	56	P	Pn	11 40 22.6	+1.0

AEIC ***08*** *11:38:55±2.2,51.°3N±0.°1×172.°78W±0.°02,h21^{km}±5^{km}, Error ellipse: s-maj=14.6km s-min=0.8km az=171.0*
IDC ***08*** *11:39:01.0±1.0,51.°70N×172.°96W,h41^{km}±5^{km},mb4.2/31, mb1 4.3/34,mb1mx4.1/81,mbtmp4.4/34,ML4.0/3,Error ellipse: s-maj=21.7km s-min=10.9km az=171.0*
NEIC ***08*** *11:39:00.1±1.4,51.°59N±0.°10×172.°86W±0.°03,h38^{km}±8^{km}, mb4.7/30,ML4.0(AEIC),Error ellipse: s-maj=14.7km s-min=0.8km az=170.0*

ISC 08 11:38:60.0±0.5**,51.°6N**±0.°1×**172.°87W**±0.°04**,h37^{km},n98, σ0.^{s}85**/96**,mb4.6**/43**,Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOFP	Korovin Flat P	1.03	313		Pn	11 39 18.0	+0.1
KOSE	Korovin Southe	1.06	317		Pn	11 39 18.8	+0.6
KOKL	Mount Kliuchef	1.11	313		Pn	11 39 19.1	+0.1
KONE	Korovin Northe	1.12	317		Pn	11 39 19.6	+0.6
GSMY	Great Sitkin M	2.03	284		Pn	11 39 31.0	-0.6
GSTR	Great Sitkin T	2.05	286	Pn	Pn	11 39 31.8	0.0
GSTD	Great Sitkin T	2.09	284		Pn	11 39 33.3	+0.9
ADK	Adak	2.39	279	Pn	Pn	11 39 36.0	-0.6
KIWB	Kanaga Island	2.68	278		Pn	11 39 40.3	-0.1
KIKV	Kanaga Island	2.69	278		Pn	11 39 41.6	+1.0
NIKH	Nikolski High	2.83	59		Pn	11 39 41.8	-0.7
TAFP	Tanaga Falls P	3.20	278		Pn	11 39 47.0	-0.6
OKFG	Magazine Ridge	3.54	57		Pn	11 39 52.0	-0.3
MAPS	Pakushin South	4.24	56		Pn	11 40 01.8	-0.1
UNV	Unalaska Valle	4.48	57		Pn	11 40 05.4	+0.2
KDAK	Kodiak Island	13.25	54	P	Pn	11 42 04.2	-0.9
	0.8nm,0.3s,baz=283,slow=7.4,SNR=5.9						
PETK	Petropavlovsk-	18.00	286	P	Pn	11 43 06.1	-0.8
	0.6nm,0.3s,baz=97,slow=15,SNR=8.1						
ILAR	Eielson Array	18.84	36	P	P	11 43 15.0	-1.3
	1.3nm,0.3s,baz=237,slow=9.3,SNR=19						
COLD	Coldfoot	19.27	27	P	P	11 43 21.4	+0.4
COLD				IAmb	IAmb	11 43 24.0	
	comp=Z,27nm,1.1s						
DLBC	Dease Lake	25.14	57	P	P	11 44 23.1	+1.8
	comp=Z,6.6nm,0.8s,baz=225,slow=8.1,SNR=5.7						
INK	Inuvik	25.20	34	P	P	11 44 21.4	-0.1
	comp=Z,6.7nm,0.3s,baz=200,slow=14,SNR=20						
INK	Inuvik	25.20	34		P	11 44 20.5	-1.0
INK				IAmb	IAmb	11 44 23.7	
	comp=Z,20nm,0.9s						
ASAJ	Asahikawa	30.41	274	P	P	11 45 08.2	-0.2
	comp=Z,25nm,1.0s,baz=56,slow=14,SNR=6.6						
ERM	Erimo	31.16	270	P	P	11 45 15.9	+0.9
YKA	Yellowknife Ar	32.38	48	P	P	11 45 25.9	+0.4
	comp=Z,1.0nm,0.7s,baz=274,slow=9.7,SNR=5.7						
KLR	Kul'dur	34.67	288	P	P	11 45 44.8	-0.8
	comp=Z,2.8nm,0.5s,baz=57,slow=6.4,SNR=10						
NEW	Newport	35.31	73	P	P	11 45 52.4	+1.2
	comp=Z,2.6nm,0.6s,baz=307,slow=10,SNR=2.7						
NEW	Newport	35.31	73	P	P	11 45 51.6	+0.4
NEW				IAmb	IAmb	11 46 14.1	
	comp=Z,3.7nm,0.7s						
H11N2	WAKE ISLAND Hy	35.53	214	T	T	12 23 58.0	
	baz=21						
H11N3	WAKE ISLAND Hy	35.54	214	T	T	12 24 04.2	
	baz=21						
H11N1	WAKE ISLAND Hy	35.55	214	T	T	12 24 07.0	
	baz=21						
H11S1	WAKE ISLAND Hy	36.73	214	T	T	12 25 23.2	
	baz=22						
H11S2	WAKE ISLAND Hy	36.75	214	T	T	12 25 21.1	
	baz=22						
H11S3	WAKE ISLAND Hy	36.75	214	T	T	12 25 22.2	
	baz=22						
USRK	Ussuriysk Ar.	36.93	281	P	P	11 46 03.9	-1.1
	comp=Z,4.0nm,0.9s,baz=65,slow=9.5,SNR=4.6						
MJAR	Matsushiro Arr	37.49	266	P	P	11 46 09.6	-0.3
	comp=Z,2.0nm,0.6s,baz=1.3,slow=4.7,SNR=7.9						
PNTR	Pine Nut	38.63	87	P	P	11 46 19.1	-0.7
PNTR				IAmb	IAmb	11 46 44.0	
	comp=Z,16nm,1.2s						
MCMT	McKenzie Canyo	39.56	75	P	P	11 46 28.9	+1.5
EGMT	Eagleton	39.77	69		P	11 46 28.5	-0.4
EGMT				IAmb	IAmb	11 46 48.9	
	comp=Z,20nm,1.0s						
NVAR	Mina Array Bea	39.84	87	P	P	11 46 30.4	+0.5
	comp=Z,1.6nm,1.0s,baz=302,slow=8.4,SNR=3.0						
ISA	Isabella, Lake	41.46	91	P	P	11 46 43.9	+0.8
R11A	Troy Canyon, C	41.58	85	P	P	11 46 44.6	+0.5
BW06	Boulder Array	42.69	76	P	P	11 46 53.5	+0.4
PD31	Pinedale Array	42.69	76	P	P	11 46 53.5	+0.3
PDAR	Pinedale Array	42.69	76	P	P	11 46 53.5	+0.3
	comp=Z,1.8nm,0.7s,baz=303,slow=3.8,SNR=4.6						
PDAR	Pinedale Array	42.69	76	P	P	11 46 53.0	-0.1
KSRS	Korea Array	43.33	275	P	P	11 46 59.2	+1.2
	comp=Z,3.0nm,0.8s,baz=61,slow=7.9,SNR=4.0						
NRIK	Noril'sk	46.07	331	P	P	11 47 19.3	-0.3
	comp=Z,8.9nm,0.8s,baz=45,slow=7.9,SNR=5.5						
SONM	Songino Array	49.83	300	P	P	11 47 48.9	-0.1
	comp=Z,4.8nm,0.9s,baz=51,slow=6.8,SNR=6.1						
SONM	Songino Array	49.83	300	P	P	11 47 48.6	-0.5
SONM				IAmb	IAmb	11 47 50.0	
	comp=Z,15nm,1.4s						
SPITS	Spitsbergen Ar	50.38	358	P	P	11 47 53.6	+0.9
	comp=Z,13nm,0.9s,baz=7.7,slow=13,SNR=5.2						
TXAR	Lajitas Array	54.95	86	P	P	11 48 27.2	0.0
	comp=Z,1.1nm,0.7s,baz=317,slow=6.1,SNR=2.6						
TXAR	Lajitas Array	54.95	86	P	P	11 48 27.8	+0.6
P40A	Paris	55.08	69	P	P	11 48 28.6	+0.7
ZALV	Zalesovo Beam	56.52	316	PcP	PcP	11 49 35.1	+0.8
	comp=Z,2.1nm,0.8s,baz=34,slow=5.4,SNR=3.1						
FCAR	Ozark Folk Cen	57.48	72	P	P	11 48 44.2	-0.8
FCAR				IAmb	IAmb	11 49 12.3	
	comp=Z,9.1nm,1.1s						
ARCES	ARCESS Array B	58.45	353	P	P	11 48 50.9	-0.5
	comp=Z,18nm,1.3s,baz=27,slow=5.2,SNR=6.5						
ARCES	ARCESS Array B	58.45	353	P	P	11 48 51.1	-0.3
PLAL	Pickwick Lake	60.49	70	P	P	11 49 05.8	-0.2
PLAL				IAmb	IAmb	11 49 06.9	
	comp=Z,5.8nm,0.7s						
KURK	Kurchatov	61.49	317	P	P	11 49 12.6	+0.1
KURK				IAmb	IAmb	11 49 18.4	
	comp=Z,6.8nm,0.8s						
KURBB	Kurchatov Arra	61.60	317	P	P	11 49 12.6	-0.6
	comp=Z,6.2nm,0.7s,baz=40,slow=7.3,SNR=8.7						
MK31	Makanchi Array	62.74	312	P	P	11 49 20.6	-0.4
MK31				IAmb	IAmb	11 49 46.4	
	comp=Z,4.7nm,0.8s						
MKAR	Makanchi Array	62.74	312	P	P	11 49 20.1	-0.8
	comp=Z,1.4nm,0.4s,baz=49,slow=6.2,SNR=14						
MKAR	Makanchi Array	62.74	312	P	P	11 49 20.5	-0.5
BVAR	Borovoye Array	63.05	323	P	P	11 49 22.7	-0.2
	comp=Z,3.7nm,0.5s,baz=225,slow=1.0,SNR=20						
BVAR				pP	pwP	11 49 35.3	-2.0
	comp=Z,3.1nm,0.5s,baz=247,slow=1.1,SNR=5.5						
GOGA	Godfrey	64.29	68	P	P	11 49 30.5	-0.8
GOGA				IAmb	IAmb	11 49 54.1	
	comp=Z,10nm,1.1s						
ARU	Arti	64.30	331	P	P	11 49 30.8	-0.2
	comp=Z,1.6nm,0.4s,baz=78,slow=3.7,SNR=3.9						
ARU	Arti	64.30	331	P	P	11 49 30.8	-0.2
ARU				IAmb	IAmb	11 49 31.5	
	comp=Z,7.5nm,0.8s						
HODGE	Hodges	64.40	67	P	P	11 49 32.7	+0.7
FIA1	FINESS Array S	66.31	350	P	P	11 49 43.7	-0.3
FINES	FINESS Array B	66.31	350	P	P	11 49 43.2	-0.8
	comp=Z,1.0nm,0.6s,baz=6.0,slow=6.5,SNR=5.5						
FINES	FINESS Array B	66.31	350	P	P	11 49 43.5	-0.5
NOA	NORSAR Array B	67.68	358	P	P	11 49 52.0	-0.8
	comp=Z,1.6nm,0.9s,baz=5.4,slow=6.5,SNR=3.5						
NOA				pP	pwP	11 50 05.4	-2.2
	comp=Z,1.1nm,0.7s,baz=3.5,slow=6.0,SNR=2.8						
AAK	Ala-Archa	69.50	313	P	P	11 50 05.1	+0.5
	comp=Z,13nm,0.9s,baz=139,slow=3.9,SNR=8.1						
AAK	Ala-Archa	69.50	313	P	P	11 50 04.8	+0.2
AKTO	Aktyubinsk	69.57	328	P	P	11 50 04.5	-0.2
	comp=Z,14nm,0.9s,baz=46,slow=5.5,SNR=9.3						
ABKAR	Akbulak array	69.93	326	P	P	11 50 07.0	+0.1
ABKAR	Akbulak array	69.93	326	P	P	11 50 07.0	+0.1
ABKAR				IAmb	IAmb	11 50 07.7	
	comp=Z,14nm,1.2s						
KK31	Karatay Array	70.90	316	P	P	11 50 12.6	-0.4
KK31				IAmb	IAmb	11 50 13.6	
	comp=Z,5.8nm,0.8s						
KKAR	Karatay Array	70.90	316	P	P	11 50 13.1	+0.2
KKAR				IAmb	IAmb	11 50 13.6	
	comp=Z,5.8nm,0.8s						
KSH	Kashi	71.28	310	P	P	11 50 18.8	+3.4
KSH				pmax	pmax		
	comp=Z,27nm,1.0s						
CMAR	Chiang Mai Arr	74.66	280	P	P	11 50 36.3	+0.8
	comp=Z,2.8nm,0.8s,baz=27,slow=6.5,SNR=3.0						
AKASG	Malin Array Be	76.38	346	P	P	11 50 44.0	-1.0
	comp=Z,1.0nm,0.3s,baz=17,slow=6.0,SNR=6.3						
AKASG				pP	PcP	11 50 56.2	-0.4
	comp=Z,1.0nm,0.4s,baz=17,slow=5.9,SNR=4.5						
AKBB	Malin Array Si	76.38	346	P	P	11 50 44.3	-0.7
AKBB				IAmb	IAmb	11 50 44.7	
	comp=Z,7.3nm,1.1s						
UPC	Upice	78.01	354	eP	P	11 50 54.6	+0.5
DPC	Dobruska-Polom	78.15	354	eP	P	11 50 55.3	+0.4
DPC				ex	x	11 51 07.4	
KHC	Kasperske Hory	79.52	356	eP	P	11 51 03.1	+0.7
KHC				ex	x	11 51 15.2	
GERES	GERESS Array B	79.80	356	P	P	11 51 04.0	0.0
	comp=Z,1.0nm,0.7s,baz=43,slow=8.0,SNR=4.8						
GERES				pP	pP	11 51 16.6	+2.2
	comp=Z,1.5nm,0.7s,baz=30,slow=6.2,SNR=4.9						
GERES	GERESS Array B	79.80	356	P	P	11 51 04.7	+0.7
BUR08	Bucovina Ar. S	79.95	348	P	P	11 51 04.6	-0.2
BURAR	Bucovina Array	79.97	348	P	P	11 51 04.8	-0.2
KBZ	Khabaz	80.14	335	P	P	11 51 06.1	+0.3
	comp=Z,2.6nm,0.7s,baz=34,slow=3.0,SNR=3.7						
BRTR	Keskin Array B	86.17	340	P	P	11 51 37.6	+0.4
	comp=Z,2.0nm,0.9s,baz=36,slow=3.9,SNR=4.5						
ASAR	Alice Springs	88.25	227	P	P	11 51 47.7	+0.6
	comp=Z,2.1nm,0.8s,baz=34,slow=5.1,SNR=4.6						
ESDC	Sonseca Array	88.61	9	P	P	11 51 48.5	-0.4
	comp=Z,1.6nm,0.9s,baz=348,slow=3.8,SNR=5.5						
STKA	Stephens Creek	92.23	217	P	P	11 52 03.4	-2.0
MAW	Mawson	148.92	218	PKPbc	PKPbc	11 58 42.4	+0.2
	comp=Z,1.7nm,0.8s,baz=326,slow=3.6,SNR=1.8						
BOSA	Boshof	153.34	322	PKPbc	PKiKP	11 58 55.9	+1.8
	comp=Z,1.2nm,0.7s,baz=61,slow=2.7,SNR=1.0						

DJA ***08*** *11:41:55.8±1.5,7.°N±5.°×9.°4E±2.°0,h119^{km}±10^{km},M4.8/13, mB5.1/7,mb4.6/13,MLv5.2/4,Mw(mB)4.5/7*
IDC ***08*** *11:41:59.7±0.7,6.°99N×94.°71E,h0^{km},mb4.3/18, mb1 4.3/19,mb1mx4.1/68,mbtmp4.3/19,ML3.8/1,Error ellipse: s-maj=30.3km s-min=14.2km az=53.0*
NEIC ***08*** *11:42:02.3±1.0,7.°1N±0.°1×94.°9E±0.°2,h10^{km}±1^{km}, mb4.8/11,Error ellipse: s-maj=33.1km s-min=14.0km az=241.0*

ISC 08 11:42:05.2±0.5**,7.°1N**±0.°1×**94.°8E**±0.°1**,h35^{km},n65, σ0.^{s}89**/58**,mb4.4**/37**,1D,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	2.80	131		Pn	11 42 47.2	-0.3
TPTI		4.47	148	P	Pn	11 43 12.7	+2.2
	0.3nm496nm30nm,0.9s						
SNSI	Sinabang, Aceh	4.88	162	P	Pn	11 43 15.5	-0.7
	9.3nm9µm252nm,0.5s						
PSI	Prapat	5.90	136	Pn	Pn	11 43 31.1	+0.9
	2.4nm,0.3s,baz=326,slow=12,SNR=7.5						
PSI				Sn	Sn	11 44 38.7	+2.0
	2.0nm,0.3s,baz=137,slow=16,SNR=3.5						
GSI	Gunungsitoli	6.37	154	P	Pn	11 43 36.7	+0.2
	0.5nm56nm,0.8s						
GSI	Gunungsitoli	6.37	154	Pn	Pn	11 43 36.8	+0.2
MNSI	Mandailing Nat	7.84	143	P	Pn	11 43 59.4	+2.5
	23nm,0.6s						
PPI	Padang Panjang	9.33	143	P	Pn	11 44 18.8	+1.5
CM31	Chiang Mai Arr	11.99	19	P	Pn	11 44 54.9	+1.2
	SNR=42						
KSI	Kapahiang	13.19	144	P	Pn	11 45 10.0	-0.1
	48nm,0.8s						
LHSI	Lahat	13.89	141	P	Pn	11 45 19.1	-0.6
	39nm,0.8s						
MDSI	Maura Dua	14.81	141	P	Pn	11 45 29.5	-2.7
	8.6nm,1.2s						
KLSI		15.32	140	P	Pn	11 45 36.8	-2.1
	7.0nm,0.9s						
H08S3	Diego Garcia H	26.65	237	T	T	12 14 20.7	
H08S2	Diego Garcia H	26.66	237	T	T	12 14 20.1	
	baz=122,slow=74,SNR=85						
H08S1	Diego Carcia H	26.67	237	T	T	12 14 23.0	
	baz=58,slow=74,SNR=24						
GAR	Garm	38.70	329	P	P	11 49 25.6	-0.4
GAR				IAmb	IAmb	11 49 39.9	
	comp=Z,32nm,1.2s						
MKAR	Makanchi Array	41.00	347	P	P	11 49 45.7	+0.9
	comp=Z,6.4nm,0.7s,baz=169,slow=7.3,SNR=9.8						
SONM	Songino Array	41.78	12	P	P	11 49 53.0	+1.6
	comp=Z,3.3nm,0.9s,baz=192,slow=7.3,SNR=5.1						
KURBB	Kurchatov Arra	45.47	345	P	P	11 50 21.0	+0.2
	comp=Z,9.4nm,0.8s,baz=166,slow=7.0,SNR=16						
WB0	Warramunga Arr	47.21	125	P	P	11 50 34.8	-0.2
WRA	Warramunga Arr	47.25	125	P	P	11 50 34.4	-0.9
	comp=Z,1.5nm,0.7s,baz=304,slow=9.0,SNR=7.9						
WRA	Warramunga Arr	47.25	125	P	P	11 50 34.7	-0.7
WRAB	Tennant Creek	47.26	125	P	P	11 50 34.8	-0.6
WRAB				IAmb	IAmb	11 50 42.9	
	comp=Z,12nm,1.2s						
WB2	Warramunga Arr	47.26	125	P	P	11 50 35.0	-0.4
WB2				IAmb	IAmb	11 50 58.7	
	comp=Z,5.3nm,0.8s						
ZALV	Zalesovo Beam	47.42	352	P	P	11 50 36.4	+0.3
	comp=Z,6.8nm,0.9s,baz=178,slow=6.8,SNR=9.2						
WR0	Warramunga Arr	47.42	125	P	P	11 50 36.0	-0.7
WR0				IAmb	IAmb	11 50 37.3	
	comp=Z,5.9nm,0.9s						
ASAR	Alice Springs	48.89	130	P	P	11 50 48.2	+0.2
	comp=Z,1.7nm,0.6s,baz=304,slow=7.2,SNR=13						
BRVK	Borovoye	50.01	341	P	P	11 50 55.9	-0.1
BRVK				IAmb	IAmb	11 50 57.3	
	comp=Z,15nm,1.2s						
ABKAR	Akbulak array	51.24	331	P	P	11 51 05.9	+0.6
ABKAR				IAmb	IAmb	11 51 06.5	
	comp=Z,17nm,1.3s						
ABKAR	Akbulak array	51.24	331	P	P	11 51 06.2	+0.8
AKTO	Aktyubinsk	52.96	331	P	P	11 51 18.6	+0.4
	comp=Z,3.4nm,0.5s,baz=121,slow=12,SNR=4.1						
BBOO	Buckleboo	55.78	138	P	P	11 51 38.4	-0.5
BBOO				IAmb	IAmb	11 51 48.5	
	comp=Z,12nm,1.1s						
ARU	Arti	56.87	337	P	P	11 51 46.2	-0.2
	comp=Z,0.7nm,0.3s,baz=143,slow=13,SNR=3.7						
KMBO	Kilima Mbogo	58.02	264	P	P	11 51 55.5	0.0
	comp=Z,1.6nm,0.8s,baz=42,slow=11,SNR=4.8						
STKA	Stephens Creek	59.07	134	P	P	11 52 02.3	+0.1
	comp=Z,3.1nm,0.8s,baz=318,slow=9.1,SNR=6.1						
BRTR	Keskin Array B	63.45	311	P	P	11 52 30.4	-1.6
	comp=Z,1.1nm,0.7s,baz=129,slow=7.2,SNR=3.7						
BRTR	Keskin Array B	63.45	311	P	P	11 52 31.3	-0.7
TOO	Toolangi	64.82	137	P	P	11 52 42.5	+1.7
TIXI	Tiksi	67.86	11	P	P	11 52 59.7	+0.2
	comp=Z,5.1nm,0.6s,baz=211,slow=3.9,SNR=13						
FIA1	FINESS Array S	73.72	332	P	P	11 53 35.9	+0.5
FINES	FINESS Array B	73.72	332	P	P	11 53 35.0	-0.3
	comp=Z,1.2nm,0.5s,baz=98,slow=6.0,SNR=8.8						
FINES	FINESS Array B	73.72	332	P	P	11 53 35.5	+0.1
ARCES	ARCESS Array B	76.23	340	P	P	11 53 50.3	+0.5
	comp=Z,4.1nm,0.8s,baz=75,slow=5.3,SNR=7.1						
CONA	Conrad Observa	77.38	317	eP	P	11 53 58.7	+1.9
	comp=Z,3.0nm,1.0s						
ARSA	Arzberg	77.57	317	eP	P	11 53 58.8	+1.0
	comp=Z,5.0nm,1.4s						
SOKA	Soboth	77.88	316	eP	P	11 54 00.8	+1.3
	comp=Z,6.8nm,1.3s						
OBKA	Obir	78.21	316	eP	P	11 54 02.5	+1.1
	comp=Z,6.3nm,1.7s						
MOA	Molln	78.45	317	eP	P	11 54 02.9	+0.3
	comp=Z,5.7nm,1.3s						
GERES	GERESS Array B	78.86	318	P	P	11 54 04.7	-0.3
	comp=Z,1.3nm,0.7s,baz=106,slow=4.7,SNR=6.6						
KBA	Koelnbreinsper	79.05	316	eP	P	11 54 06.7	+0.5
	comp=Z,4.1nm,0.8s						
WTTA	Wattenberg	80.22	317	eP	P	11 54 12.0	-0.5
	comp=Z,5.9nm,1.2s						
SQTA	Sankt Quirin	80.51	317	eP	P	11 54 14.8	+0.8
	comp=Z,5.3nm,1.1s						
MOTA	Moosalm	80.58	317	eP	P	11 54 14.5	+0.1
	comp=Z,6.3nm,1.2s						
NB2	NORSAR Subarra	80.74	331	P	P	11 54 17.4	+2.5
	comp=Z,3.7nm,1.0s,baz=91,slow=5.9						
NB2	NORSAR Subarra	80.74	331	P	P	11 54 14.4	-0.5
	comp=Z,4.9nm,1.0s,baz=92,slow=5.9						
NOA	NORSAR Array B	80.74	331	P	P	11 54 14.8	-0.1
	comp=Z,1.0nm,0.8s,baz=96,slow=4.9,SNR=2.2						

RETA	Reutte	80.81	317	eP	P	11 54 16.2	+0.6
	comp=Z,2.3nm,0.6s						
FETA	Feichten	80.84	316	eP	P	11 54 15.6	-0.2
	comp=Z,4.9nm,1.5s						
DAVA	Damuels	81.41	317	eP	P	11 54 18.3	-0.6
	comp=Z,0.8nm,0.5s						
DAVOX	Davos/Dischmat	81.42	316	P	P	11 54 18.9	0.0
	comp=Z,3.8nm,0.6s,baz=98,slow=7.4,SNR=3.4						
SYO	Syowa Base	84.86	197⇓	eP	P	11 54 37.1	+1.2
ESDC	Sonseca Array	92.24	310	P	P	11 55 11.5	-0.4
	comp=Z,1.1nm,0.8s,baz=57,slow=3.8,SNR=5.0						
NVAR	Mina Array Bea	125.23	32	PKP	PKiKP	12 01 02.9	-0.5
	comp=Z,0.8nm,0.8s,baz=317,slow=1.9,SNR=6.1						
PDAR	Pinedale Array	125.64	22	PKP	PKiKP	12 01 03.2	-0.8
	comp=Z,0.5nm,0.8s,baz=90,slow=4.4,SNR=4.1						

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*IDC **08** 11:44:03.0±0.5, 6°.86N×94°.60E, h0^{km}, mb4.5/31, mb1 4.5/33, mb1mx4.3/68, mbtmp4.4/33, ML4.2/2, MS4.2/3, Ms1 4.3/3, ms1mx3.7/60, Error ellipse: s-maj=19.2km s-min=11.7km az=49.0*

*NEIC **08** 11:44:05.5±1.4, 7°.0N±0°.1×94°.7E±0°.1, h10^{km}±1^{km}, mb4.9/42, Error ellipse: s-maj=22.7km s-min=14.3km az=226.0*

ISC 08 11:44:07.3±0.4**, 6°.85N**±0°.07×**94°.58E**±0°.06**, h26^{km}, n130, σ1^{s}29**/133**, mb4.7**/73**, 1C, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	2.85	124	Pn	Pn	11 44 50.9	-0.2
PSI	Prapat	5.91	133	Pn	Pn	11 45 33.6	+0.3
	5.2nm,0.3s,baz=328,slow=13,SNR=4.5						
GSI	Gunungsitoli	6.27	151	Pn	Pn	11 45 38.5	+0.3
CMAR	Chiang Mai Arr	12.29	20	Pn	Pn	11 47 00.6	-0.2
	0.6nm,0.3s,baz=208,slow=14,SNR=5.4						
CMAR				LR	LR	11 51 36.0	
	comp=Z,638nm,18.7s,baz=190,slow=37						
PALK	Pallekele	13.78	273	Pn	Pn	11 47 23.8	+2.6
	0.4nm,0.3s,baz=143,slow=7.7,SNR=1.3						
PALK				Sn	Sn	11 49 49.1	-4.4
	1.6nm,0.3s,baz=218,slow=5.0,SNR=4.5						
PALK				LR	LR	11 52 34.6	
	comp=Z,1μm,18.4s,baz=197,slow=37						
LEM	Lembang	18.81	136	LR	LR	11 55 21.6	
	comp=Z,1μm,20.1s,baz=274,slow=36						
KMI	Kunming	19.77	22	⇑P	Pn	11 48 40.0	+2.6
KMI				pP	sP	11 48 44.5	-0.7
KMI				sP	pwP	11 48 46.5	+0.9
KMI				pmax	pmax		
	comp=Z,19nm,1.4s						
ODAN	Odare	21.04	342	eP	P	11 48 51.8	+2.2
	comp=Z,66nm,0.7s						
RAMN	Ramite	21.38	340	eP	P	11 48 55.9	+2.7
	comp=Z,54nm,0.6s						
TAPN	Taplejung	21.41	343	eP	P	11 48 55.9	+2.3
	comp=Z,109nm,0.9s						
JIRN	Jiri	22.17	340	eP	P	11 49 03.5	+1.6
	comp=Z,46nm,0.6s						
PKI	Pulchoki	22.37	338	eP	P	11 49 07.7	+3.7
	comp=Z,40nm,0.6s						
PKIN	Phulchoki	22.38	338	eP	P	11 49 07.6	+3.6
	comp=Z,56nm,0.6s						
DMN	Daman	22.52	338	eP	P	11 49 08.6	+3.1
	comp=Z,142nm,0.8s						
KKN	Kakani	22.62	338	eP	P	11 49 10.4	+3.9
	comp=Z,22nm,0.6s						
GKN	Gorkha	23.05	337	eP	P	11 49 15.0	+4.1
DANN	Dangsing	23.71	336	eP	P	11 49 21.6	+4.0
	comp=Z,42nm,0.7s						
H08S3	Diego Garcia H	26.32	237	T	T	12 16 23.8	
	baz=56,slow=75,SNR=190						
H08S2	Diego Garcia H	26.32	237	T	T	12 16 25.1	
	baz=56,slow=75,SNR=9.5						
H08S1	Diego Carcia H	26.34	237	T	T	12 16 23.8	
	baz=56,slow=75,SNR=7.8						
TOLI2	Tolitoli	26.74	101	P	P	11 49 44.7	-0.3
TOLI2				IAmb	IAmb	11 49 49.8	
	comp=Z,18nm,0.8s						
NIL	Nilore	33.19	326	P	P	11 50 41.2	-0.8
JOW	Kunigami	37.68	54	P	P	11 51 21.9	+1.1
	comp=Z,12nm,1.0s,baz=137,slow=14,SNR=2.8						
WSAR	Wadi Sarin	38.20	299	P	P	11 51 25.0	-0.2
	comp=Z,5.5nm,0.9s,baz=61,slow=5.3,SNR=2.5						
FITZ	Fitzroy Crossi	39.42	129	P	P	11 51 34.4	-1.0
	comp=Z,1.8nm,0.6s,baz=298,slow=18,SNR=2.0						
FITZ				PcP	PcP	11 53 42.9	-0.4
	comp=Z,1.7nm,0.9s,baz=270,slow=4.0,SNR=1.4						
FITZ	Fitzroy Crossi	39.42	129	P	P	11 51 34.8	-0.6
MK31	Makanchi Array	41.17	347	P	P	11 51 48.8	-0.8
MKAR	Makanchi Array	41.17	347	P	P	11 51 49.2	-0.4
	comp=Z,7.0nm,0.7s,baz=164,slow=8.0,SNR=12						
MKAR				PcP	PcP	11 53 48.2	-0.4
	comp=Z,0.7nm,0.6s,baz=184,slow=2.7,SNR=1.3						
MKAR	Makanchi Array	41.17	347	P	P	11 51 48.3	-1.3
MAKZ	Makanchi	41.26	347	P	P	11 51 49.9	-0.4
KKAR	Karatay Array	41.87	333	P	P	11 51 54.6	-0.7
SONM	Songino Array	42.06	12	P	P	11 51 55.7	-1.3
	comp=Z,2.8nm,0.7s,baz=194,slow=7.5,SNR=6.1						
SONM				PcP	PcP	11 53 51.2	-0.3
	comp=Z,1.3nm,0.7s,baz=231,slow=1.7,SNR=3.4						
SONM	Songino Array	42.06	12	P	P	11 51 55.1	-1.9
KSRS	Korea Array	42.95	40	P	P	11 52 02.1	-2.1
	comp=Z,1.9nm,0.8s,baz=227,slow=9.2,SNR=4.3						
GEYT	Alibeck	45.25	319	P	P	11 52 23.1	+0.4
	comp=Z,3.4nm,0.4s,baz=205,slow=25,SNR=3.2						
KURBB	Kurchatov Arra	45.64	346	P	P	11 52 25.6	+0.1
	comp=Z,5.2nm,0.7s,baz=170,slow=6.9,SNR=13						
KURK	Kurchatov	45.70	346	P	P	11 52 25.7	-0.2
KURK				IAmb	IAmb	11 52 34.0	
	comp=Z,23nm,1.2s						
WB0	Warramunga Arr	47.27	125	P	P	11 52 37.9	-0.9
WB0				IAmb	IAmb	11 53 06.3	
	comp=Z,13nm,1.3s						
WRA	Warramunga Arr	47.32	125	P	P	11 52 38.4	-0.8
	comp=Z,1.7nm,0.6s,baz=307,slow=8.6,SNR=6.8						
WRA				PcP	PcP	11 54 09.6	-0.4
	comp=Z,1.0nm,0.7s,baz=310,slow=4.0,SNR=1.1						
WRA	Warramunga Arr	47.32	125	P	P	11 52 38.0	-1.2
WRAB	Tennant Creek	47.32	125	P	P	11 52 37.7	-1.5
WB2	Warramunga Arr	47.33	125	P	P	11 52 38.5	-0.7
WB2				IAmb	IAmb	11 52 50.6	
	comp=Z,6.6nm,0.9s						
WR0	Warramunga Arr	47.49	125	P	P	11 52 39.6	-0.9
WR0				IAmb	IAmb	11 52 57.3	
	comp=Z,4.6nm,0.7s						
ZALV	Zalesovo Beam	47.62	352	P	P	11 52 41.1	+0.1
	comp=Z,4.5nm,0.8s,baz=168,slow=7.6,SNR=4.0						
ZALV	Zalesovo Beam	47.62	352	P	P	11 52 40.3	-0.7
AS31	Alice Springs	48.93	130	P	P	11 52 51.0	-0.6
ASAR	Alice Springs	48.93	130	P	P	11 52 51.0	-0.7
	comp=Z,2.0nm,0.7s,baz=302,slow=7.9,SNR=7.4						
ASAR				PcP	PcP	11 54 16.1	+0.4
	comp=Z,1.2nm,0.7s,baz=302,slow=3.4,SNR=1.2						
FORT	Forrest	49.27	141		P	11 52 54.6	+0.6
USRK	Ussuriysk Ar.	49.48	35		P	11 52 56.0	+0.5
BVAR	Borovoye Array	50.09	341	P	P	11 52 59.5	-0.5
	comp=Z,4.8nm,0.8s,baz=193,slow=12,SNR=8.7						
BRVK	Borovoye	50.15	341	P	P	11 53 00.2	-0.3
BRVK				IAmb	IAmb	11 53 08.8	
	comp=Z,8.5nm,0.7s						
ABKAR	Akbulak array	51.33	332	P	P	11 53 09.4	0.0
ABKAR				IAmb	IAmb	11 53 13.0	
	comp=Z,11nm,0.7s						
ABKAR	Akbulak array	51.33	332	P	P	11 53 09.4	0.0
AKTO	Aktyubinsk	53.05	332	P	P	11 53 22.1	-0.1
	comp=Z,9.9nm,0.7s,baz=109,slow=7.5,SNR=9.9						
BBOO	Buckleboo	55.77	138	P	P	11 53 42.0	-0.2
BBOO				IAmb	IAmb	11 53 50.4	
	comp=Z,8.9nm,0.8s						
ARU	Arti	56.99	337	P	P	11 53 50.0	-0.6
	comp=Z,2.1nm,0.7s,baz=84,slow=3.3,SNR=4.5						
ARU	Arti	56.99	337	P	P	11 53 49.3	-1.3
ARU				IAmb	IAmb	11 54 11.9	
	comp=Z,8.8nm,0.9s						
KMBO	Kilima Mbogo	57.75	264	P	P	11 53 57.4	+0.4
	comp=Z,5.3nm,1.0s,baz=36,slow=8.7,SNR=3.3						
STKA	Stephens Creek	59.09	134	P	P	11 54 05.0	-0.7
	comp=Z,2.8nm,0.7s,baz=326,slow=6.1,SNR=4.8						
STKA	Stephens Creek	59.09	134	P	P	11 54 05.3	-0.4
BELG	Belogornoye	59.41	329	P	P	11 54 06.3	-1.1
	comp=Z,14nm,0.8s,baz=103,slow=12,SNR=3.6						
KIRV	Kirov	62.12	335	P	P	11 54 26.2	+0.4
	comp=Z,6.3nm,0.6s,baz=170,slow=21,SNR=1.8						
NRIK	Noril'sk	62.58	357	P	P	11 54 28.8	+0.1
	comp=Z,1.3nm,0.4s,baz=39,slow=10,SNR=1.4						
BR131	Keskin Array S	63.42	311	P	P	11 54 34.2	-0.9
BR131				IAmb	IAmb	11 54 42.5	
	comp=Z,7.9nm,0.8s						
BRTR	Keskin Array B	63.42	311	P	P	11 54 33.6	-1.5
	comp=Z,2.8nm,0.7s,baz=127,slow=7.4,SNR=10.0						
BRTR	Keskin Array B	63.42	311	P	P	11 54 34.2	-0.9
TOO	Toolangi	64.82	137	P	P	11 54 45.0	+0.9
TOO				IAmb	IAmb	11 54 54.2	
	comp=Z,13nm,1.1s						
CAN	Canberra	66.15	133	P	P	11 54 53.1	+0.3
TIXI	Tiksi	68.14	11	P	P	11 55 03.8	-0.8
	comp=Z,6.9nm,0.5s,baz=213,slow=3.6,SNR=17						
TIXI	Tiksi	68.14	11	P	P	11 55 03.9	-0.8
AKASG	Malin Array Be	69.22	322	P	P	11 55 11.9	+0.1
	comp=Z,0.2nm,0.3s,baz=85,slow=5.0,SNR=2.0						
IDI	Anoyia	69.51	305	P	P	11 55 13.3	-0.7
	comp=Z,6.9nm,0.6s,baz=258,slow=12,SNR=1.8						
SEY	Seymchan	69.67	24	P	P	11 55 14.3	-0.1
	comp=Z,1.6nm,0.5s,baz=308,slow=21,SNR=5.6						
BURAR	Bucovina Array	71.09	318	P	P	11 55 23.0	-0.5
BUR08	Bucovina Ar. S	71.11	318	P	P	11 55 24.0	+0.4
BUR08				IAmb	IAmb	11 55 27.7	
	comp=Z,7.9nm,1.4s						
LVZ	Lovozero	72.66	340	P	P	11 55 32.1	-0.4
CRVS	Cervenica-Dubn	73.78	319	eP	P	11 55 42.4	+3.0
FIA1	FINESS Array S	73.81	332	P	P	11 55 39.1	-0.2
FIA1				IAmb	IAmb	11 55 50.5	
	comp=Z,14nm,0.8s						
FINES	FINESS Array B	73.81	332	P	P	11 55 38.8	-0.5
	comp=Z,2.4nm,0.5s,baz=94,slow=5.9,SNR=13						
FINES	FINESS Array B	73.81	332	P	P	11 55 39.1	-0.2
BOSA	Boshof	75.42	238	P	P	11 55 50.9	+1.4
BOSA				IAmb	IAmb	11 56 02.3	
	comp=Z,17nm,1.2s						
ARCES	ARCESS Array B	76.37	340	P	P	11 55 54.0	+0.1
	comp=Z,2.3nm,0.5s,baz=80,slow=5.9,SNR=10						
ARCES	ARCESS Array B	76.37	340	P	P	11 55 54.3	+0.4
DPC	Dobruska-Polom	77.27	320	eP	P	11 55 57.0	-2.4
DPC				ex	x	11 56 07.2	
CONA	Conrad Observa	77.39	317	eP	P	11 55 59.6	-0.6
	comp=Z,1.8nm,0.9s						
ARSA	Arzberg	77.58	317	eP	P	11 56 02.4	+1.2
	comp=Z,3.7nm,0.8s						
SOKA	Soboth	77.88	316	eP	P	11 56 01.5	-1.5
	comp=Z,8.7nm,1.3s						
OBKA	Obir	78.21	316	eP	P	11 56 03.7	-1.1
	comp=Z,10nm,1.2s						
PRU	Pruhonice	78.38	320	epP	pP	11 56 13.0	-0.2
MOA	Molln	78.46	317	eP	P	11 56 05.2	-0.9
	comp=Z,2.4nm,0.9s						
MYKA	Terra Mystica	78.84	316	eP	P	11 56 07.6	-0.6
	comp=Z,2.1nm,0.5s						
GEC2	GERESS Array S	78.88	318	P	P	11 56 08.4	0.0
GEC2				IAmb	IAmb	11 56 17.7	
	comp=Z,16nm,1.4s						
GERES	GERESS Array B	78.88	318	P	P	11 56 08.7	+0.2
	comp=Z,2.7nm,0.7s,baz=87,slow=7.0,SNR=8.5						
GERES	GERESS Array B	78.88	318	P	P	11 56 08.2	-0.2
KHC	Kasperske Hory	78.97	319	eP	P	11 56 08.7	-0.2
KHC				epP	pP	11 56 16.0	-0.5
KBA	Koelnbreinsper	79.05	317	eP	P	11 56 09.0	-0.5
	comp=Z,7.5nm,1.3s						
ZOU	Zoufplan	79.29	316	P	P	11 56 09.5	-1.4
CLL	Collm	79.42	321	eP	P	11 56 11.0	-0.3
CLL				ePcP	PcP	11 56 20.0	+0.7
STAL	STALIGIAL	79.47	316	P	P	11 56 11.6	-0.1
STAL				IAmb	IAmb	11 56 30.2	
	comp=Z,18nm,1.3s						
ABTA	Abfaltersbach	79.62	316	eP	P	11 56 12.0	-0.5
	comp=Z,4.7nm,1.0s						
SUR	Sutherland	80.12	236		P	11 56 17.0	+1.3
CTI	Castel Tesino	80.20	315	P	P	11 56 15.8	0.0
CTI				IAmb	IAmb	11 56 24.9	
	comp=Z,10nm,0.9s						
WTTA	Wattenberg	80.22	317	i P	P	11 56 15.0	-0.9
	comp=Z,4.8nm,0.6s,SNR=6.7						
WATA	Walderalm	80.26	317	eP	P	11 56 15.0	-1.1
	comp=Z,8.8nm,1.2s						
SQTA	Sankt Quirin	80.51	317	i P	P	11 56 16.4	-1.0
	comp=Z,4.5nm,0.6s,SNR=5.6						
MOTA	Moosalm	80.58	317	eP	P	11 56 16.8	-1.0
	comp=Z,13nm,1.1s						
NC405	NORSAR Array S	80.59	331	P	P	11 56 16.4	-1.0
RETA	Reutte	80.82	317	eP	P	11 56 18.3	-0.7
	comp=Z,4.4nm,0.5s						
NB2	NORSAR Subarra	80.83	331	P	P	11 56 18.1	-0.6
	comp=Z,8.6nm,0.9s,baz=96,slow=5.1						
NOA	NORSAR Array B	80.83	331	P	P	11 56 18.1	-0.6
	comp=Z,3.2nm,0.8s,baz=322,slow=21,SNR=7.1						
FETA	Feichten	80.84	316	i P	P	11 56 18.6	-0.6
	comp=Z,4.5nm,0.8s,SNR=7.8						
DAVA	Damuels	81.42	317	eP	P	11 56 22.6	+0.3
	comp=Z,7.6nm,1.0s						
DAVOX	Davos/Dischmat	81.43	316	P	P	11 56 21.9	-0.5
	comp=Z,8.4nm,0.7s,baz=108,slow=5.9,SNR=11						
TUE	Stuetta	81.80	316	P	P	11 56 24.4	+0.1
TUE				IAmb	IAmb	11 56 35.9	
	comp=Z,9.7nm,0.8s						
BFO	Black Forest	82.44	318	P	P	11 56 27.6	+0.1
BFO				IAmb	IAmb	11 56 34.9	
	comp=Z,6.0nm,0.7s						
SENIN	Lac Senin/Sane	83.22	316	P	P	11 56 32.3	+0.5
SSB	Saint Sauveur	85.21	315	P	P	11 56 41.2	-0.6
SSB				IAmb	IAmb	11 56 49.9	
	comp=Z,7.7nm,0.8s						
TORD	Torodi Ar. Bea	91.26	283	P	P	11 57 11.6	+0.4
	comp=Z,1.6nm,0.7s,baz=92,slow=2.7,SNR=4.4						
TORD	Torodi Ar. Bea	91.26	283	P	P	11 57 12.0	+0.9
ESDC	Sonseca Array	92.21	310	P	P	11 57 15.1	-0.1
	comp=Z,1.8nm,0.7s,baz=54,slow=4.1,SNR=8.5						
IMAR	Indian Mountai	92.40	22		P	11 57 15.9	+0.5
TOLK	Toolik Lake Re	92.77	19	P	P	11 57 18.1	+0.9
TOLK				IAmb	IAmb	11 57 27.9	
	comp=Z,5.8nm,0.9s						
ULM	Lac du Bonnet	122.41	8	PKP	PKPdf	12 02 59.4	-1.0
	comp=Z,2.5nm,0.6s,baz=12,slow=4.6,SNR=4.1						
NVAR	Mina Array Bea	125.56	32	PKP	PKiKP	12 03 08.0	+0.6
	comp=Z,1.1nm,0.6s,baz=331,slow=2.2,SNR=12						
NVAR	Mina Array Bea	125.56	32		PKiKP	12 03 07.9	+0.5
PDAR	Pinedale Array	125.95	22	PKP	PKPdf	12 03 07.4	-0.3
	comp=Z,0.8nm,0.7s,baz=239,slow=0.9,SNR=6.9						
TXAR	Lajitas Array	139.97	25	PKP	PKPdf	12 03 34.9	+0.7
	comp=Z,0.5nm,0.6s,baz=186,slow=0.6,SNR=6.5						
PLCA	Paso Flores	143.74	199	PKP	PKPdf	12 03 40.0	-0.6
	comp=Z,1.8nm,0.9s,baz=359,slow=4.2,SNR=3.8						
MDP	Montagnes des	145.20	289	PKPbc	PKPbc	12 03 43.0	-0.4
	comp=Z,5.3nm,0.8s,baz=31,slow=3.5,SNR=4.5						
CPUP	Villa Florida	146.98	231	PKPbc	PKPbc	12 03 48.3	-0.1
	comp=Z,3.1nm,1.0s,baz=101,slow=4.5,SNR=4.2						

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*IDC **08** 11:49:09.8±0.8, 6°.82N×94°.69E, h0^{km}, mb3.9/13, mb1 4.0/15, mb1mx3.8/58, mbtmp3.9/15, ML3.5/2, Error ellipse: s-maj=34.9km s-min=18.7km az=53.0*

ISC 08 11:49:14.1±0.7**, 6°.9N**±0°.1×**94°.7E**±0°.2**, h26^{km}, n18, σ1^{s}17**/18**, mb3.9**/14**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	5.86	134	Pn	Pn	11 50 40.5	+1.2
	0.3nm,0.3s,baz=314,slow=12,SNR=1.9						
CMAR	Chiang Mai Arr	12.19	19	Pn	Pn	11 52 06.1	-0.1
	0.3nm,0.3s,baz=220,slow=14,SNR=2.4						
MKAR	Makanchi Array	41.15	347	P	P	11 56 55.0	-1.2
	1.7nm,0.9s,baz=170,slow=10,SNR=5.3						
SONM	Songino Array	41.98	12	P	P	11 57 02.8	-0.3
	0.5nm,0.6s,baz=198,slow=9.3,SNR=3.7						
WRA	Warramunga Arr	47.24	125	P	P	11 57 44.9	-0.5
	0.7nm,0.8s,baz=306,slow=8.9,SNR=3.5						
ZALV	Zalesovo Beam	47.58	352	P	P	11 57 46.1	-1.3
	1.3nm,0.8s,baz=167,slow=7.1,SNR=2.8						
ASAR	Alice Springs	48.87	130	P	P	11 57 55.2	-2.7
	0.7nm,0.8s,baz=313,slow=8.0,SNR=4.4						
BRTR	Keskin Array B	63.48	311	P	P	11 59 42.3	0.0
	0.6nm,0.7s,baz=106,slow=9.8,SNR=3.0						
TIXI	Tiksi	68.06	11	P	P	12 00 12.9	+1.9
	6.1nm,0.6s,baz=209,slow=3.4,SNR=15						
FINES	FINESS Array B	73.82	332	P	P	12 00 46.4	+0.3
	2.1nm,1.0s,baz=64,slow=8.7,SNR=4.1						
ARCES	ARCESS Array B	76.36	340	P	P	12 00 59.8	-0.9
	3.6nm,0.9s,baz=103,slow=7.9,SNR=1.8						
GERES	GERESS Array B	78.92	318	P	P	12 01 15.4	0.0
	0.2nm,0.4s,baz=110,slow=8.4,SNR=1.7						
NOA	NORSAR Array B	80.84	331	P	P	12 01 26.9	+1.3
	1.0nm,0.8s,baz=53,slow=8.5,SNR=3.4						
DAVOX	Davos/Dischmat	81.47	316	P	P	12 01 30.8	+1.3
	0.9nm,0.4s,baz=127,slow=12,SNR=3.5						
ESDC	Sonseca Array	92.27	310	P	P	12 02 22.5	+0.3
	0.4nm,0.9s,baz=62,slow=4.0,SNR=2.0						
KOWA	Kowa	96.67	285	P	P	12 02 42.1	-0.7
	3.0nm,0.8s,baz=158,slow=5.1,SNR=6.6						
NVAR	Mina Array Bea	125.44	32	PKP	PKPdf	12 08 14.0	+0.4
	0.2nm,0.5s,baz=180,slow=1.9,SNR=3.6						
PDAR	Pinedale Array	125.85	22	PKP	PKiKP	12 08 14.7	0.0
	0.1nm,0.3s,baz=1.4,slow=5.9,SNR=3.9						

IDC 08 11:53:03.3±1.1**, 6°.66N**×**94°.18E, h0^{km}, mb3.8**/10**, mb1 3.9**/12**, mb1mx3.7**/56**, mbtmp3.8**/12**, ML3.7**/2**, Error ellipse: s-maj=45.0km s-min=17.2km az=56.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	6.09	129	Pn	Pn	11 54 36.4	+1.6
	0.9nm,0.3s,baz=338,slow=12,SNR=5.1						
CMAR	Chiang Mai Arr	12.61	21	Pn	Pn	11 56 04.4	+0.3
	0.2nm,0.3s,baz=208,slow=15,SNR=1.5						
MKAR	Makanchi Array	41.27	348	P	P	12 00 50.2	-0.1
	1.7nm,0.7s,baz=171,slow=7.7,SNR=7.8						
SONM	Songino Array	42.33	12	P	P	12 00 58.7	-0.4
	0.9nm,0.9s,baz=212,slow=10,SNR=4.3						
WRA	Warramunga Arr	47.54	125	P	P	12 01 40.3	-0.6
	1.4nm,0.7s,baz=305,slow=9.0,SNR=5.5						
ZALV	Zalesovo Beam	47.76	353	P	P	12 01 42.8	+0.8
	1.1nm,0.5s,baz=184,slow=5.8,SNR=2.9						
ASAR	Alice Springs	49.12	129	P	P	12 01 53.6	+0.5
	0.7nm,0.9s,baz=303,slow=6.7,SNR=5.8						
STKA	Stephens Creek	59.25	133	P	P	12 03 06.5	-0.3
	0.4nm,0.2s,baz=297,slow=4.5,SNR=1.6						
BRTR	Keskin Array B	63.25	311	P	P	12 03 34.3	+0.2
	0.4nm,0.5s,baz=107,slow=6.8,SNR=2.5						
TIXI	Tiksi	68.41	11	P	P	12 04 06.0	-0.5
	1.8nm,0.5s,baz=219,slow=2.7,SNR=3.6						
FINES	FINESS Array B	73.79	332	P	P	12 04 39.7	+0.3
	2.7nm,0.9s,baz=101,slow=4.4,SNR=2.1						
GERES	GERESS Array B	78.75	318	P	P	12 05 07.4	-0.6
	0.5nm,0.8s,baz=77,slow=6.1,SNR=2.4						

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*BGR **08** 11:54:31.1±0.0, 4°.29N×94°.31E, h19^{km}±1^{km}, mb5.0*

*NEIC **08** 11:54:39.3±1.6, 6°.79N±0°.07×94°.61E±0°.08, h10^{km}±3^{km}, mb5.1/88, Error ellipse: s-maj=13.4km s-min=8.7km az=53.0*

*MOS **08** 11:54:40.9±1.1, 6°.92N×94°.52E, h34^{km}, mb5.3/53, MS5.1/4, Error ellipse: s-maj=8.2km s-min=4.0km az=112.8*

*DJA **08** 11:54:40.7±0.2, 7°N±2°×9°5E±°, h10^{km}, M5.1/53, mb5.0/53, mB5.6/27, MLv5.3/6, Mw(mB)5.1/27, MwMwp6.2/1, Mwp6.2/1*

*NDI **08** 11:54:41.3±4.5, 7°.12N×94°.52E, h10^{km}, mb4.7, mb5.1(NEIC)*

*BJI **08** 11:54:42.6±0.0, 6°.80N×94°.43E, h50^{km}, mB5.4/28, mb4.9/56, Ms5.4/32, Ms7 5.2/28*

*GCMT **08** 11:54:43.3±0.2, 6°.90N±0°.01×94°.69E±0°.01, h14^{km}±1^{km}, MW5.3/122, Moment Tensor Solution. s44,c60; s122,c206; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.19±.02; $M_{\theta\theta}$-0.71±.02; $M_{\phi\phi}$0.89±.02; $M_{r\theta}$-0.40±.06; $M_{\theta\phi}$0.39±.02; $M_{\phi r}$-0.21±.05; Best double couple: $M_0$1.00600×10^{17} NP1:ϕ_s150.00000°, δ62.00000°, λ-172.00000°. NP2:ϕ_s56.00000°, δ83.00000°, λ-28.00000°. Principal axes: T 1.0560, Plg14.0000°, Azm106.0000°; N -0.1020, Plg61.0000°, Azm222.0000°; P -0.9550, Plg25.0000°, Azm9.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **08** 11:54:43.2±2.0, 6°.97N×94°.60E, h34^{km}±14^{km}, mb4.5/44, mb1 4.5/46, mb1mx4.5/60, mbtmp4.7/46, ML4.5/2, MS4.9/13, Ms1 5.0/13, ms1mx4.6/43 Error ellipse: s-maj=10.7km s-min=9.0km az=50.0*

*KLM **08** 11:54:46, 6°.91N×94°.77E, h50^{km}, mb5.3*

ISC 08 11:54:42.0±0.8**, 6°.89N**±0°.04×**94°.55E**±0°.04**, h29^{km}**±5^{km}**, n555, σ1^{s}63**/616**, mb5.0**/182**, MS5.0**/19**, 30C-19D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	2.90	124	P	Pn	11 55 26.1	-0.2
LHMI	Lhok Sumawe	2.90	124	Pn	Pn	11 55 24.1	-2.2
LHMI	Lhok Sumawe	2.90	124	P	Pn	11 55 26.1	-0.2
TPTI		4.46	144	P	Pn	11 55 48.1	+0.4
PBA	Port Blair	5.06	340	eP	Pn	11 55 54.4	-1.7
PBA	Port Blair	5.06	340	P	Pn	11 55 56.7	+0.6
PBA	Port Blair	5.06	340	Pn	Pn	11 55 58.7	+2.6
TSI	Tuntungan	5.23	130	P	Pn	11 55 59.1	+0.8
	5.1nm7μm331nm,1.0s						
PSI	Prapat	5.96	133	Pn	Pn	11 56 09.3	+0.9
	9.0nm,0.3s,baz=331,slow=14,SNR=20						
KULM	Kulim	6.27	104	P	Pn	11 56 11.0	-1.7
GSI	Gunungsitoli	6.31	151	P	Pn	11 56 13.2	-0.1
	1.2nm84nm,1.1s						
GSI	Gunungsitoli	6.31	151	Pn	Pn	11 56 11.4	-1.9
GSI	Gunungsitoli	6.31	151	P	Pn	11 56 15.1	+1.8
IPM	Ipoh	6.88	110	P	Pn	11 56 19.0	-2.0
MNSI	Mandailing Nat	7.86	140	P	Pn	11 56 33.9	-0.6
	0.4nm1μm59nm,0.7s						
JRMM	Jerantut	8.44	110	P	Pn	11 56 42.0	-0.5
BKNI	Bangkinang	9.19	135	P	Pn	11 56 53.0	+0.3
	5μm231nm,1.2s						
BKNI	Bangkinang	9.19	135	Pn	Pn	11 56 50.8	-2.0
BKNI	Bangkinang	9.19	135	P	Pn	11 56 55.3	+2.6
SISI	Saibi	9.33	151	P	Pn	11 56 56.9	+2.2
	45nm,1.5s						
PPI	Padang Panjang	9.34	141	P	Pn	11 56 54.7	-0.1
PDSI	Padang	9.74	142	P	Pn	11 56 59.5	-0.8
	25nm,1.0s						
PBKT	Sadao Pong	11.49	33	Pn	Pn	11 57 26.1	+1.7
CM31	Chiang Mai Arr	12.27	20	P	Pn	11 57 38.2	+3.2
	SNR=6.1						
CM31	Chiang Mai Arr	12.27	20	Pn	Pn	11 57 37.4	+2.4
CMAR	Chiang Mai Arr	12.27	20	Pn	Pn	11 57 35.1	+0.1
	0.9nm,0.3s,baz=212,slow=14,SNR=17						
CMAR				LR	LR	12 02 19.0	
	comp=Z,3μm,19.8s,baz=254,slow=37						
CMAR	Chiang Mai Arr	12.27	20	P	Pn	11 57 37.4	+2.4
CMAR	Chiang Mai Arr	12.27	20	Pn	Pn	11 57 37.4	+2.4
DSRI	Dabo	12.40	126	P	Pn	11 57 37.4	+0.7
	2μm17nm,1.2s						
JMBI	JAMBI	12.41	133	P	Pn	11 57 36.8	-0.1
	79nm,1.3s						
MASI	Maura Aman, Be	12.58	142	P	Pn	11 57 38.7	-0.5
	3μm165nm,1.6s						
CHTO	Chiang Mai	12.61	19	P	Pn	11 57 41.5	+1.9
CHTO	Chiang Mai	12.61	19	P	Pn	11 57 42.3	+2.8
CHTO	Chiang Mai	12.61	19	Pn	Pn	11 57 41.5	+1.9
KSI	Kapahiang	13.19	142	P	Pn	11 57 49.3	+1.6
	10μm164nm,0.9s						
UBPT	Khong Chiam	13.58	51	Pn	Pn	11 57 54.1	+1.2
PALK	Pallekele	13.74	272	Sn	Sn	12 00 23.0	-4.0
	5.0nm,0.3s,baz=188,slow=8.3,SNR=4.4						
PALK				LR	LR	12 03 17.0	
	comp=Z,7μm,18.0s,baz=197,slow=37						
LHSI	Lahat	13.91	140	P	Pn	11 57 55.8	-1.6
	2μm78nm,1.1s						
PMBI	Palembang	14.11	133	P	Pn	11 57 59.4	-0.8
	186nm,0.5s						
DLV	T Lat	14.64	69	Pn	Pn	11 58 03.9	-3.7
PPBI	Pangkal Pinang	14.65	127	P	Pn	11 58 07.5	0.0
LWLI	Liwa	15.16	141	P	Pn	11 58 15.9	+1.4
	150nm,0.7s						
KLSI		15.35	138	P	Pn	11 58 13.6	-3.2
	31nm,1.0s						
VIS	Vishakhapatnam	15.36	316	eP	Pn	11 58 11.6	-5.2
MDRS	Chennai	15.36	295	eP	Pn	11 58 16.6	-0.3
KSM	Kuching	16.61	108	P	Pn	11 58 34.0	+1.0
SLVN	Son La	16.98	31	P	Pn	11 58 38.0	+0.4
SBJI	Serang	17.34	138	P	P	11 58 43.7	+0.5
	6μm105nm,1.1s						
DBJI	Dramaga	18.07	137	P	P	11 58 52.3	+0.9
	64nm,1.0s						
SBUM	Sibu	18.15	103	P	P	11 58 53.0	+0.7
STKI	Sintang	18.20	111	P	P	11 58 53.7	+0.9
SHL	Shillong	18.75	352	P	P	11 58 57.4	-1.6
SHL				pmax	pmax		
	comp=Z,81nm,1.3s						
SHL	Shillong	18.75	352	ex	P	11 58 58.6	-0.4
SHL	Shillong	18.75	352	P	P	11 58 57.8	-1.2
	SNR=16						

SHL	Shillong	18.75	352	P	P	11 58 57.4	-1.6
BOK	Bokaro	18.76	335	eP	P	11 58 58.5	-0.5
BOK				IAmb	IAmb	11 59 02.8	
	comp=Z,53nm,0.9s						
HYB	Hyderabad	18.80	305	i P	P	11 58 59.0	-0.4
HYB	Hyderabad	18.80	305	eP	Pn	11 59 00.2	+0.1
LEM	Lembang	18.86	136	LR	LR	12 07 56.0	
	comp=Z,6µm,18.2s,baz=306,slow=42						
LEM	Lembang	18.86	136	P	Pn	11 59 02.0	+1.1
	comp=Z,25nm,1.8s						
QIZ	Qiongzhong	19.16	50	P	P	11 59 03.2	-0.1
QIZ				S	Sn	12 02 37.7	-0.7
QIZ				LR	LR		
	comp=Z,8µm,11.2s						
QIZ				LR	LR		
	comp=Z,6µm,12.6s						
QIZ	Qiongzhong	19.16	50		P	11 59 03.0	-0.4
QIZ				IAmb	IAmb	11 59 22.4	
	comp=Z,115nm,1.4s						
KMI	Kunming	19.76	22	⇑P	Pn	11 59 13.9	+2.2
KMI				sP	sP	11 59 25.2	+4.6
KMI				PP	PnPn	11 59 33.4	+7.5
KMI				SS	Sn	12 03 22.6	+30
KMI				pmax	pmax		
	comp=Z,66nm,1.0s						
KMI				pmax	pmax		
	comp=Z,930nm,5.5s						
KMI				LR	LR		
	comp=Z,2µm,12.5s						
KMI				LR	LR		
	comp=Z,4µm,8.3s						
KMI				LR	LR		
	comp=Z,3µm,9.2s						
ODAN	Odare	21.00	342	eP	P	11 59 22.2	-1.4
	comp=Z,198nm,1.0s						
RAMN	Ramite	21.34	340	eP	P	11 59 26.8	-0.4
	comp=Z,63nm,0.7s						
TAPN	Taplejung	21.36	343	eP	P	11 59 26.6	-0.9
	comp=Z,256nm,1.0s						
MTKI	Muara Teweh, K	21.74	110	P	P	11 59 32.3	+0.9
	comp=Z,3µmcomp=Z,26nm,0.5s						
SPMM	Sapulut	21.91	94	P	P	11 59 36.0	+2.7
NGJI	Ngawi	22.02	130	P	P	11 59 37.6	+3.2
	comp=Z,83nm,1.1s						
JIRN	Jiri	22.13	340	eP	P	11 59 34.6	-1.3
	comp=Z,108nm,0.8s						
PKI	Pulchoki	22.33	338	eP	P	11 59 36.7	-1.2
	comp=Z,96nm,0.6s						
PKIN	Phulchoki	22.34	338	eP	P	11 59 36.7	-1.3
	comp=Z,139nm,0.7s						
GUN	Gumba	22.47	340	eP	P	11 59 38.1	-1.3
	comp=Z,134nm,0.7s						
DMN	Daman	22.47	338	eP	P	11 59 38.0	-1.4
	comp=Z,188nm,1.0s						
KKN	Kakani	22.57	338	eP	P	11 59 38.8	-1.6
	comp=Z,61nm,0.8s						
GYA	Guiyang	22.63	29	⇑iP	P	11 59 42.6	+1.7
GYA				sP	sP	11 59 56.1	+4.6
GYA				S	S	12 03 47.3	0.0
GYA				pmax	pmax		
	comp=Z,60nm,1.2s						
GYA				pmax	pmax		
	comp=Z,890nm,5.0s						
GYA				LR	LR		
	comp=Z,6µm,12.9s						
GYA				LR	LR		
	comp=Z,4µm,12.9s						
GYA				LR	LR		
	comp=Z,4µm,16.7s						
BBKI	Banjar Baru	22.72	116	P	P	11 59 42.1	+0.2
	comp=Z,89nm,1.2s						
LSA	Lhasa	22.92	352	P	P	11 59 44.5	+0.2
LSA	Lhasa	22.92	352	P	P	11 59 44.0	-0.3
LSA				pmax	pmax		
	comp=Z,24nm,0.8s						
LSA	Lhasa	22.92	352	P	P	11 59 44.0	-0.3
GKN	Gorkha	23.01	337	eP	P	11 59 43.6	-1.3
	comp=Z,166nm,1.0s						
KOLN	Koldanda	23.22	335	eP	P	11 59 46.4	-0.7
	comp=Z,377nm,1.5s						
DANN	Dangsing	23.66	336	eP	P	11 59 50.8	-0.8
	comp=Z,118nm,0.9s						
PYUN	Piuthan	23.77	334	eP	P	11 59 52.2	-0.3
	comp=Z,288nm,1.4s						
KMMI	Kalianget	23.81	125	P	P	11 59 53.8	+1.1
	comp=Z,5µmcomp=Z,192nm,2.1s						
KBKI	Kotabaru	23.84	114	P	P	11 59 54.4	+1.4
	comp=Z,34nm,1.1s						
BLJI	Banyuglugur	23.92	127	P	P	11 59 54.1	+0.4
	comp=Z,2µmcomp=Z,94nm,1.2s						
ABJI	Asem Bagus	24.46	126	P	P	11 59 59.9	+1.2
	comp=Z,5µmcomp=Z,430nm,1.1s						
SRBI	Singaraja	25.41	125	P	P	12 00 08.2	+0.8
	comp=Z,3µmcomp=Z,290nm,1.3s						
MPSI	Mapaga	26.11	103	P	P	12 00 15.9	+2.2
	comp=Z,1µmcomp=Z,64nm,1.4s						
H08S3	Diego Garcia H	26.30	237	T	T	12 27 00.6	
	baz=57,slow=75,SNR=96						
H08S2	Diego Garcia H	26.31	237	T	T	12 27 00.5	
	baz=57,slow=75,SNR=47						
H08S1	Diego Carcia H	26.32	237	T	T	12 27 01.7	
	baz=57,slow=75,SNR=18						
TOLI2	Tolitoli	26.78	101	P	P	12 00 17.2	-2.6
TOLI2				IAmb	IAmb	12 00 25.1	
	comp=Z,43nm,0.9s						
AYAN	Aya Nagar	27.07	325	eP	P	12 00 21.7	-0.5
TTSI	Tana Toraja	27.09	111	P	P	12 00 25.4	+2.8
	comp=Z,2µmcomp=Z,28nm,1.2s						
ENH	Enshi	27.17	29	P	P	12 00 23.2	0.0
ENH				IAmb	IAmb	12 00 32.3	
	comp=Z,51nm,1.1s						
NDI	New Delhi	27.17	325	eP	P	12 00 22.6	-0.6
KUDL	Kundal	27.19	323	eP	P	12 00 23.4	+0.1
KAPI	Kappang	27.80	115	P	P	12 00 29.7	+0.8
	comp=Z,24nm,1.2s,baz=118,slow=0.7,SNR=4.7						
MRSI	Marisa	28.05	102	P	P	12 00 32.8	+1.6
	comp=Z,640nmcomp=Z,34nm,1.3s						
APSI	Ampana	28.13	105	P	P	12 00 35.1	+3.2
	comp=Z,807nmcomp=Z,52nm,1.3s						
BKSI	Bulukumba	28.26	115	P	P	12 00 33.2	+0.2
	comp=Z,680nmcomp=Z,51nm,1.3s						
GTOI	Gorontalo	29.06	101	P	P	12 00 39.8	-0.4
	comp=Z,468nmcomp=Z,26nm,1.1s						
LUWI	Luwuk	29.25	105	P	P	12 00 44.8	+3.0
	comp=Z,3µmcomp=Z,101nm,1.1s						
LZH	Lanzhou	30.29	15	eP	P	12 00 52.3	+1.3
LZH				pP	pwP	12 01 06.4	+4.1
LZH				sP	sP	12 01 12.8	+11
LZH				pmax	pmax		
	comp=Z,26nm,1.1s						
EDFI	Ende, Flores	31.20	119	P	P	12 01 00.0	+0.8
	comp=Z,7.9nm,1.6s						
GTA	Gaotai	32.73	8	⇓P	P	12 01 13.0	+0.6
GTA				pP	sP	12 01 23.5	+0.2
GTA				sP	pwP	12 01 27.3	+3.6
GTA				PcP	PcP	12 04 01.7	+4.1
GTA				ScP	ScP	12 07 38.9	-0.9
GTA				ScS	ScS	12 11 37.8	-1.8
GTA				pmax	pmax		
	comp=Z,16nm,0.8s						
GTA				LR	LR		
	comp=Z,4µm,16.0s						
GTA				LR	LR		
	comp=Z,7µm,16.7s						
GTA				LR	LR		
	comp=Z,8µm,17.1s						
NIL	Nilore	33.14	326	P	P	12 01 15.8	-0.2
NIL				pmax	pmax		
	comp=Z,73nm,0.8s						
NIL	Nilore	33.14	326	P	P	12 01 15.8	-0.2
NJ2	Nanjing	33.77	39	eP	P	12 01 21.3	-0.1
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2				LR	LR		
	comp=Z,6µm,15.6s						
NJ2				LR	LR		
	comp=Z,4µm,14.2s						
NJ2				LR	LR		
	comp=Z,3µm,17.1s						
SOEI	Soe	33.91	119	P	P	12 01 24.8	+1.8
	comp=Z,36nm,1.1s						
SOEI	Soe	33.91	119	P	P	12 01 19.9	-3.1
SOEI				IAmb	IAmb	12 01 45.0	
	comp=Z,35nm,1.1s						
KBL	Kabul	36.20	323	P	P	12 01 41.6	-1.0
KBL				pmax	pmax		
	comp=Z,25nm,1.2s						
KBL	Kabul	36.20	323	P	P	12 01 42.8	+0.2
	SNR=7.7						
KBL				P	P	12 01 42.8	+0.2
	SNR=7.7						
KBL	Kabul	36.20	323	P	P	12 01 41.6	-1.0
KBL				IAmb	IAmb	12 01 58.7	
	comp=Z,25nm,1.2s						
BTO	Baotou	36.32	20	eP	P	12 01 42.8	-0.6
KSH	Kashi	36.53	336	P	P	12 01 43.3	-2.0
KSH				pP	pP	12 01 53.0	-0.2
KSH				pmax	pmax		
	comp=Z,11nm,0.7s						
HHC	Hu-ho-hao-te	37.08	22	eP	P	12 01 51.9	+2.0
HHC				pmax	pmax		
	comp=Z,15nm,0.8s						
HHC				pmax	pmax		
	comp=Z,420nm,8.3s						
JLN	Jalan Bani Buh	37.12	298	P	P	12 01 53.6	+3.2
	SNR=8.2						
WMQ	Urumqi	37.28	352	eP	P	12 01 52.7	+1.2
WMQ				pmax	pmax		
	comp=Z,25nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,250nm,3.9s						
WMQ				LR	LR		
	comp=Z,2µm,16.1s						
WMQ				LR	LR		
	comp=Z,4µm,19.5s						
WMQ				LR	LR		
	comp=Z,2µm,20.5s						
SWI	Sorong	37.43	100	P	P	12 01 54.2	+1.1
	comp=Z,32nm,1.3s						
SIJI	Sorong	37.44	100	P	P	12 01 53.6	+0.4
	comp=Z,18nm,0.9s,baz=295,slow=7.3,SNR=6.3						
WBK	Wadi Bani Khal	37.65	298	P	P	12 01 58.8	+3.8
WBK				P	P	12 01 58.8	+3.8
MHTO	MHTO	38.05	295	P	P	12 02 01.5	+3.2
WSAR	Wadi Sarin	38.15	299	P	P	12 01 58.5	-0.7
	comp=Z,8.8nm,0.7s,baz=138,slow=6.9,SNR=7.1						
WSAR				LR	LR	12 18 25.8	
	comp=Z,1µm,18.9s,baz=124,slow=37						
WSAR	Wadi Sarin	38.15	299	P	P	12 02 01.9	+2.8
BJT	Baijiatuau	38.27	27	P	P	12 02 01.0	+1.1
BJT				pmax	pmax		
	comp=Z,67nm,1.4s						
BJT	Baijiatuau	38.27	27	P	P	12 02 01.0	+1.1
BJT				IAmb	IAmb	12 02 08.5	
	comp=Z,67nm,1.4s						
DRK	Karamyk	38.37	331	P	P	12 02 01.9	+0.8
DRK				IAmb	IAmb	12 02 08.0	
	comp=Z,48nm,0.7s						
SHLS	Shalkode	38.49	342	eP	P	12 01 59.7	-2.2
	comp=Z,14nm,0.9s,baz=343						
SHLS	Shalkode	38.49	342	eP	P	12 01 59.6	-2.2
SHLS				pmax	pmax		
	comp=Z,14nm,0.9s						
SMDO	Samad	38.60	299	P	P	12 02 05.4	+2.4
SMDO				P	P	12 02 05.4	+2.4
UZB	Uzynbulak	38.62	342	eP	P	12 02 01.3	-1.6
	baz=342						
UZB	Uzynbulak	38.62	342	eP	P	12 02 01.3	-1.6
PDGK	Podgornoye	38.64	342	P	P	12 02 02.8	-0.3
BIDO	Bidbid	38.68	299	P	P	12 02 08.0	+4.4
	SNR=8.5						
BIDO				P	P	12 02 08.0	+4.4
	SNR=8.5						
GAR	Garm	38.73	329	P	P	12 02 02.9	-0.9
KPKS	Kokpek	39.01	342	eP	P	12 02 04.7	-1.5
	baz=342						
KPKS	Kokpek	39.01	342	eP	P	12 02 04.7	-1.5
CHGR	Chuyangaron	39.07	328	P	P	12 02 06.4	-0.3
BSY	Bisya	39.24	298	P	P	12 02 13.0	+4.6
	SNR=14						
BSY				P	P	12 02 13.0	+4.6
	SNR=14						
MDOK	Medeo	39.28	340	eP	P	12 02 07.2	-1.3
	baz=340						
MDOK	Medeo	39.28	340	P	P	12 02 08.0	-0.5
BTK	Batken	39.29	331	P	P	12 02 09.3	+0.8
BTK				pmax	pmax		
	comp=Z,50nm,1.1s						
BTK	Batken	39.29	331	P	P	12 02 09.3	+0.8
BTK				IAmb	IAmb	12 02 16.0	
	comp=Z,50nm,1.1s						
HOQ	Hoqain	39.41	299	P	P	12 02 14.0	+4.3
	SNR=15						
HOQ				P	P	12 02 14.0	+4.3
	SNR=15						
UCH	Uchtor	39.42	336	P	P	12 02 10.4	+0.4
	SNR=6.0						
FITZ	Fitzroy Crossi	39.47	129	P	P	12 02 10.7	+0.5
	comp=Z,4.7nm,0.5s,baz=326,slow=9.7,SNR=25						
FITZ				PcP	PcP	12 04 18.7	+0.9
	comp=Z,6.8nm,0.9s,baz=319,slow=3.4,SNR=2.8						
FITZ	Fitzroy Crossi	39.47	129	P	P	12 02 10.1	-0.1
	baz=40,SNR=19						
FITZ	Fitzroy Crossi	39.47	129	P	P	12 02 08.3	-1.9
TKM2	Tokmak 2	39.59	338	P	P	12 02 10.0	-1.1
KBK	Karagaybulak	39.61	337	P	P	12 02 11.8	+0.6
	SNR=8.2						
AML	Almayashu	39.67	335	P	P	12 02 12.0	0.0
	SNR=15						
AML	Almayashu	39.67	335	i P	P	12 02 12.5	+0.5
	SNR=15						
AAK	Ala-Archa	39.77	337	P	P	12 02 11.9	-0.7
	comp=Z,4.4nm,0.7s,baz=165,slow=6.6,SNR=12						
AAK	Ala-Archa	39.77	337	P	P	12 02 13.5	+0.9
	SNR=8.5						
AAK	Ala-Archa	39.77	337	i P	P	12 02 13.6	+1.0
	SNR=9.2						
AAK	Ala-Archa	39.77	337	P	P	12 02 13.0	+0.4
AAK				pmax	pmax		
	comp=Z,34nm,1.5s						
AAK	Ala-Archa	39.77	337	P	P	12 02 13.7	+1.1
AAK				P	P	12 02 13.7	+1.1
AAK	Ala-Archa	39.77	337	P	P	12 02 13.0	+0.4
CHKK	Chushkaly	39.91	340	eP	P	12 02 11.9	-1.6
	baz=340						
ARXS	Arharly	39.96	341	eP	P	12 02 13.5	-0.5
ARQ	Araqi	40.02	298	P	P	12 02 18.3	+3.5
ARQ				P	P	12 02 18.3	+3.5
KUU	Kurty	40.17	340	eP	P	12 02 12.2	-3.5
	baz=340						
KUU	Kurty	40.17	340	eP	P	12 02 12.2	-3.5
SOHO	SOHO	40.26	299	i P	P	12 02 19.2	+2.5
	SNR=9.3						
SOHO	SOHO	40.26	299	P	P	12 02 19.8	+3.1
USP	Ospenovka	40.30	337	P	P	12 02 17.2	+0.3
	SNR=9.6						
SGDS	Sogindy	40.41	338	eP	P	12 02 16.3	-1.5
	baz=338						
UOSS	Minazif	40.81	300	i P	P	12 02 21.7	+0.5
	SNR=12						
HATD	Hatta, Dubai	40.83	300	i P	P	12 02 24.9	+3.5
	SNR=7.9						
HATD	Hatta, Dubai	40.83	300	P	P	12 02 24.5	+3.0
	SNR=5.4						
HATD				P	P	12 02 24.5	+3.0
	SNR=5.4						
ASHO	Ashiyiah	40.85	300	P	P	12 02 23.2	+1.5
ASHO	Ashiyiah	40.85	300	P	P	12 02 26.0	+4.3
ASHO				P	P	12 02 26.0	+4.3
ALNE	Al Ain	40.91	299	i P	P	12 02 24.6	+2.5
	SNR=7.4						
ALNE	Al Ain	40.91	299	P	P	12 02 26.0	+3.8
	SNR=18						
ALNE				P	P	12 02 26.0	+3.8
	SNR=18						
DOK	Doka	41.01	290	P	P	12 02 25.5	+2.6
DOK				P	P	12 02 25.5	+2.6
UMZA	Um Al Zommool	41.03	297	P	P	12 02 26.8	+3.7
UMZA				P	P	12 02 26.8	+3.7
MK31	Makanchi Array	41.14	347	i P	P	12 02 23.0	-0.6
MK31	Makanchi Array	41.14	347	P	P	12 02 23.0	-0.6
MKAR	Makanchi Array	41.14	347	P	P	12 02 23.4	-0.2
	comp=Z,17nm,0.8s,baz=166,slow=8.2,SNR=53						
WHFO	Wadi Hawf	41.21	289	P	P	12 02 27.2	+2.5
WHFO				P	P	12 02 27.2	+2.5
MAKZ	Makanchi	41.22	347	P	P	12 02 23.4	-0.9
MAKZ				pmax	pmax		
	comp=Z,16nm,0.8s						
MAKZ	Makanchi	41.22	347	P	P	12 02 23.4	-0.9
ZSN	Zaisan	41.26	350	eP	P	12 02 23.0	-1.6
	baz=350						
ZSN	Zaisan	41.26	350	eP	P	12 02 23.0	-1.6
IUG	Iuzhnay	41.29	332	eP	P	12 02 24.9	-0.2
	baz=332						
IUG	Iuzhnay	41.29	332	eP	P	12 02 24.8	-0.2
DZA	Taraz	41.29	334	eP	P	12 02 23.5	-1.6
	baz=334						
DZA	Taraz	41.29	334	eP	P	12 02 23.4	-1.6
MTN	Manton Dam	41.30	118	P	P	12 02 23.9	-1.5
	baz=41,SNR=3.1						
ASUD	Al Ashush, Dub	41.46	300	i P	P	12 02 29.3	+2.7
	SNR=7.0						
ASUD	Al Ashush, Dub	41.46	300	P	P	12 02 29.4	+2.8
ASUD				P	P	12 02 29.4	+2.8
KK31	Karatay Array	41.82	333	i P	P	12 02 29.2	-0.1
KK31	Karatay Array	41.82	333	P	P	12 02 28.9	-0.4
KKAR	Karatay Array	41.82	333	P	P	12 02 29.2	-0.2
KKAR	Karatay Array	41.82	333	P	P	12 02 29.2	-0.2
KKAR	Karatay Array	41.82	333	P	P	12 02 29.1	-0.2
KKAR				IAmb	IAmb	12 02 36.4	
	comp=Z,27nm,1.2s						
BTLS	Baital	41.98	338	eP	P	12 02 28.9	-1.8
	baz=338						
BTLS	Baital	41.98	338	eP	P	12 02 28.8	-1.8
SONM	Songino Array	42.04	12	P	P	12 02 31.9	+0.7
	comp=Z,9.0nm,0.9s,baz=193,slow=7.7,SNR=34						
SONM				PcP	PcP	12 04 26.4	+0.6
	comp=Z,2.3nm,0.8s,baz=194,slow=3.6,SNR=3.0						
SONM				ScP	ScP	12 08 13.7	-0.7
	comp=Z,1.3nm,0.9s,baz=197,slow=4.6,SNR=4.1						
SONM	Songino Array	42.04	12		P	12 02 31.5	+0.4
BRLS	Borolday	42.07	333	eP	P	12 02 28.4	-2.9
	baz=332						
BRLS	Borolday	42.07	333	eP	P	12 02 28.4	-2.9
ULN	Ulaanbaatar	42.21	13	ceP	P	12 02 32.8	+0.2
ULN				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ULN	Ulaanbaatar	42.21	13	P	P	12 02 33.3	+0.8
KSRS	Korea Array	42.95	40	P	P	12 02 38.8	+0.2
	comp=Z,9.6nm,1.0s,baz=223,slow=8.8,SNR=12						
KSRS				ScP	ScP	12 08 16.9	-1.3
	comp=Z,2.9nm,0.9s,baz=216,slow=4.0,SNR=4.7						
KSRS				LR	LR	12 20 50.9	
	comp=Z,1µm,18.2s,baz=234,slow=37						
DGZ	Jazzator, Alta	43.09	353	i P	P	12 02 38.1	-1.6
DGZ				pmax	pmax		
	comp=Z,9.0nm,1.5s						
MUN	Mundaring	43.83	153	P	P	12 02 46.1	+0.4
	baz=44,SNR=3.6						
ZAK	Zakamensk	43.97	8	eP	P	12 02 47.0	+0.3
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.5s						
SMPI	Sarmi	44.95	100	P	P	12 02 57.3	+2.3
	comp=Z,17nm,1.2s						
NWAO	Narrogin (SRO)	45.09	153	P	P	12 02 55.7	-0.1
	comp=Z,22nm,1.0s,baz=291,slow=12,SNR=2.0						
NWAO	Narrogin (SRO)	45.09	153	P	P	12 02 56.1	+0.4
	baz=45,SNR=3.7						
NWAO				P	P	12 02 56.1	+0.4
	baz=45,SNR=3.7						
NWAO	Narrogin (SRO)	45.09	153	P	P	12 03 00.8	+5.0
GEYT	Alibeck	45.20	319	P	P	12 02 56.5	-0.2
	comp=Z,6.9nm,0.6s,baz=191,slow=12,SNR=8.1						
GYA0B	ALIBECK ARRAY	45.20	319	P	P	12 02 57.5	+0.8
GYA0B				IAmb	IAmb	12 03 04.0	
	comp=Z,27nm,1.1s						
KURBB	Kurchatov Arra	45.60	346	S	S	12 09 46.7	+6.6
	comp=Z,0.5nm,0.4s,baz=164,slow=15,SNR=4.9						
KURBB	Kurchatov Arra	45.60	346	P	P	12 02 59.2	-0.3
CN2	Changchun	45.65	31	eP	P	12 03 01.6	+1.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KURK	Kurchatov	45.66	346	ceP	P	12 03 00.3	+0.3
KURK				pmax	pmax		
	comp=Z,78nm,1.7s						
KURK	Kurchatov	45.66	346	P	P	12 03 00.7	+0.7
KURK				P	P	12 03 00.7	+0.7
KURK	Kurchatov	45.66	346	P	P	12 02 60.0	-0.1
WRKA	Warakurna	45.67	135	P	P	12 03 00.4	-0.1
	baz=46,SNR=16						
BRZS	Berezniki	46.70	341	eP	P	12 03 06.6	-1.7
	comp=Z,15nm,1.2s,baz=341						
BRZS	Berezniki	46.70	341	eP	P	12 03 06.6	-1.7
BRZS				pmax	pmax		
	comp=Z,15nm,1.2s						
HIA	Hailar	47.27	22	i P	P	12 03 13.7	+0.9
HIA				pmax	pmax		
	comp=Z,28nm,1.2s						
WB0	Warramunga Arr	47.32	125	P	P	12 03 11.7	-1.9
WRA	Warramunga Arr	47.37	125	P	P	12 03 12.7	-1.2
	comp=Z,6.3nm,0.7s,baz=306,slow=9.0,SNR=22						
WRA				ScP	ScP	12 08 35.0	-1.7
	comp=Z,3.3nm,1.1s,baz=310,slow=3.1,SNR=5.0						
WRA				LR	LR	12 25 53.0	
	comp=Z,1µm,18.4s,baz=40,slow=40						
WRA	Warramunga Arr	47.37	125	P	P	12 03 12.5	-1.4
WRAB	Tennant Creek	47.37	125	ceP	P	12 03 13.0	-0.9
WRAB				pmax	pmax		
	comp=Z,36nm,2.5s						
WRAB	Tennant Creek	47.37	125	P	P	12 03 12.3	-1.6
WRAB				IAmb	IAmb	12 03 41.5	
	comp=Z,14nm,1.0s						
WB2	Warramunga Arr	47.38	125	P	P	12 03 12.0	-1.9
	baz=47						
WB2	Warramunga Arr	47.38	125	P	P	12 03 13.3	-0.6
WB2				IAmb	IAmb	12 03 41.4	
	comp=Z,16nm,1.1s						
WR0	Warramunga Arr	47.54	125	P	P	12 03 13.3	-1.9
WR0				IAmb	IAmb	12 03 36.4	
	comp=Z,14nm,0.8s						
ZAA0	Zalesovo Array	47.58	352	P	P	12 03 15.3	+0.3
ZAA0				IAmb	IAmb	12 03 16.6	
	comp=Z,39nm,1.3s						
ZALV	Zalesovo Beam	47.58	352	P	P	12 03 15.3	+0.3
	comp=Z,10nm,0.8s,baz=168,slow=7.6,SNR=24						
ZALV	Zalesovo Beam	47.58	352	P	P	12 03 15.0	0.0
INU	Inuyama	48.14	48	P	P	12 03 19.6	-0.2
INU				IAmb	IAmb	12 03 22.3	
	comp=Z,24nm,0.9s						
MDJ	Mudanjiang	48.40	33	P	P	12 03 23.8	+2.2
MDJ				pmax	pmax		
	comp=Z,25nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,2µm,10.6s						
MDJ	Mudanjiang	48.40	33	P	P	12 03 22.3	+0.7
ASPA	Alice Springs	48.98	130	P	P	12 03 25.9	-0.4
	baz=49						
ASAR	Alice Springs	48.98	130	P	P	12 03 25.9	-0.4
	comp=Z,5.8nm,0.8s,baz=308,slow=7.6,SNR=32						
ASAR				PcP	PcP	12 04 51.2	+0.9
	comp=Z,7.1nm,0.8s,baz=302,slow=4.3,SNR=5.8						
ASAR				ScP	ScP	12 08 41.2	-2.3
	comp=Z,2.2nm,1.1s,baz=300,slow=4.1,SNR=5.6						
ASAR				S	S	12 10 24.0	-5.1
	comp=Z,1.1nm,1.0s,baz=297,slow=13,SNR=5.6						
ASAR				LR	LR	12 26 03.8	
	comp=Z,1µm,19.8s,baz=335,slow=38						
ASAR	Alice Springs	48.98	130	P	P	12 03 25.3	-1.1
AS31	Alice Springs	48.98	130	P	P	12 03 24.3	-2.1
FORT	Forrest	49.32	141	P	P	12 03 28.9	+0.1
	baz=49,SNR=6.2						
FORT	Forrest	49.32	141	P	P	12 03 27.8	-1.0
USRK	Ussuriysk Ar.	49.48	35	P	P	12 03 29.7	-0.1
	comp=Z,10nm,1.0s,baz=255,slow=6.9,SNR=6.7						
USRK	Ussuriysk Ar.	49.48	35	P	P	12 03 29.3	-0.5
MAJO	Matsushiro	49.53	47	i P	P	12 03 30.5	+0.1
MAJO				pmax	pmax		
	comp=Z,35nm,1.8s						
MAJO	Matsushiro	49.53	47	P	P	12 03 30.1	-0.3
MAJO				IAmb	IAmb	12 03 33.8	
	comp=Z,13nm,0.9s						
MAT	Matsushiro	49.53	47	P	P	12 03 31.5	+1.1
MJAR	Matsushiro Arr	49.53	47	P	P	12 03 31.7	+1.3
	comp=Z,6.2nm,0.8s,baz=245,slow=7.6,SNR=15						
MJAR	Matsushiro Arr	49.53	47	P	P	12 03 29.9	-0.5
BVAR	Borovoye Array	50.05	341	S	S	12 10 44.7	+1.4
	comp=Z,1.2nm,0.9s,baz=181,slow=13,SNR=5.1						
BRVK	Borovoye	50.11	341	P	P	12 03 34.1	-0.4
BRVK				pmax	pmax		
	comp=Z,48nm,1.4s						
BRVK	Borovoye	50.11	341	P	P	12 03 34.4	-0.1
BRVK	Borovoye	50.11	341	P	P	12 03 34.1	-0.4
BRVK				IAmb	IAmb	12 03 35.5	
	comp=Z,48nm,1.4s						
ATD	Arta Tunnel	51.19	279	P	P	12 03 44.7	+1.4
	comp=Z,9.4nm,0.5s,baz=125,slow=5.7,SNR=7.2						
AB31	Akbulak array	51.29	332	i P	P	12 03 43.7	+0.3
ABKAR	Akbulak array	51.29	332	P	P	12 03 43.7	+0.3

ABKAR	Akbulak array	51.29	332	P	P	12 03 43.3	-0.1
QIS	Mount Isa	52.00	123	P	P	12 03 49.2	0.0
	baz=52,SNR=4.0						
KLR	Kul'dur	52.53	30	P	P	12 03 52.7	0.0
	comp=Z,1.3nm,0.7s,baz=114,slow=21,SNR=2.4						
KLR	Kul'dur	52.53	30	*i* P	P	12 03 51.9	-0.8
KLR				pmax	pmax		
	comp=Z,30nm,1.6s						
AKTO	Aktyubinsk	53.00	332	S	S	12 11 23.3	-0.7
	comp=Z,2.9nm,1.0s,baz=28,slow=22,SNR=7.4						
AKTO	Aktyubinsk	53.00	332	P	P	12 03 55.9	-0.3
BOD	Bodaibo	53.02	13	*e*P	P	12 03 57.0	+0.9
BOD				pmax	pmax		
	comp=Z,47nm,1.6s						
OPO	Ambohidratompo	53.11	241	P	P	12 03 59.8	+2.2
	comp=Z,5.7nm,0.8s,baz=53,slow=5.1,SNR=5.1						
OPO				S	S	12 11 25.2	-1.4
	comp=Z,4.3nm,1.0s,baz=192,slow=12,SNR=3.2						
ZEA	Zeya	53.69	23	*e*P	P	12 04 08.4	+7.2
ZEA				pmax	pmax		
	comp=N,10.0nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.4s						
VOI	Vohitsoka	54.85	237	P	P	12 04 13.4	+3.1
GNI	Garni	55.41	315	P	P	12 04 13.9	-0.2
GNI	Garni	55.41	315	*ce*P	P	12 04 13.7	-0.4
GNI				pmax	pmax		
	comp=Z,31nm,1.3s						
BBOO	Buckleboo	55.81	138	P	P	12 04 16.3	-0.6
	baz=56,SNR=18						
BBOO	Buckleboo	55.81	138	P	P	12 04 15.5	-1.4
SVE	Sverdlovsk	56.46	338	⇑*e*P	P	12 04 21.7	+0.6
SVE				pmax	pmax		
	comp=Z,58nm,1.4s						
GURO	Guroymak-BITLI	56.79	312	P	P	12 04 24.3	+0.3
ARU	Arti	56.95	337	*c i*P	P	12 04 24.6	0.0
ARU						12 05 15.9	
ARU						12 06 28.8	
ARU				S	S	12 12 19.3	+2.5
ARU				SS	SS	12 16 01.7	-3.7
ARU				pmax	pmax		
	comp=Z,59nm,1.3s						
ARU	Arti	56.95	337	P	P	12 04 24.4	-0.2
ZEI	Tsey	57.04	317	*e*P	P	12 04 21.6	-4.1
ZEI				pmax	pmax		
	comp=Z,14nm,1.0s						
KIBK	Kibwezi	57.13	263	P	P	12 04 30.1	+3.4
KIBK	Kibwezi	57.13	263	P	P	12 04 27.6	+0.9
KIBK				IAmb	IAmb	12 04 30.8	
	comp=Z,13nm,1.0s						
YSS	Yuzh-Sakhalins	57.31	37	*e*P	P	12 04 30.2	+2.9
YSS				pmax	pmax		
	comp=Z,40nm,1.4s						
NCK	Nalchik	57.53	318	*i* P	P	12 04 27.5	-1.5
NCK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KMBO	Kilima Mbogo	57.72	264	P	P	12 04 33.4	+2.3
	comp=Z,15nm,1.0s,baz=53,slow=8.6,SNR=19						
KMBO				LR	LR	12 27 16.6	
	comp=Z,745nm,18.6s,baz=44,slow=34						
KMBO	Kilima Mbogo	57.72	264	*i* P	P	12 04 33.7	+2.6
	SNR=16						
KMBO	Kilima Mbogo	57.72	264	P	P	12 04 34.6	+3.5
KMBO	Kilima Mbogo	57.72	264	P	P	12 04 32.5	+1.4
KMBO				IAmb	IAmb	12 04 35.5	
	comp=Z,20nm,1.1s						
KBZ	Khabaz	58.09	318	P	P	12 04 33.0	+0.2
	comp=Z,6.2nm,0.9s,baz=101,slow=13,SNR=8.1						
KBZ	Khabaz	58.09	318	*ce*P	P	12 04 31.4	-1.4
KBZ				pmax	pmax		
	comp=Z,16nm,1.1s						
HTT	Hallett	58.12	136	P	P	12 04 33.2	-0.1
	baz=58,SNR=16						
SHA1	Shidzhatmaz	58.25	318	*i* P	P	12 04 32.5	-1.8
KIV	Kislovodsk	58.32	318	P	P	12 04 33.7	-0.9
KIV	Kislovodsk	58.32	318	*e*P	P	12 04 33.6	-0.9
KIV				pmax	pmax		
	comp=Z,22nm,1.0s						
KIV	Kislovodsk	58.32	318	P	P	12 04 33.6	-0.9
KIV				IAmb	IAmb	12 04 40.6	
	comp=Z,22nm,1.0s						
QLP	Quilpie	58.52	127	P	P	12 04 36.5	+0.3
	baz=58,SNR=5.2						
LODK	Lodwar	59.02	270	P	P	12 04 43.2	+3.3
STKA	Stephens Creek	59.14	133	P	P	12 04 40.2	-0.1
	comp=Z,11nm,0.8s,baz=306,slow=7.9,SNR=21						
STKA	Stephens Creek	59.14	133	P	P	12 04 40.5	+0.1
	baz=59,SNR=12						
STKA	Stephens Creek	59.14	133	P	P	12 04 39.9	-0.4
TYV	Tymovskoe	59.19	33	*e*P	P	12 04 47.8	+7.5
TYV				*e*S	S	12 13 02.2	+16
TYV				pmax	pmax		
	comp=Z,21nm,1.4s						
TYV				pmax	pmax		
	comp=Z,400nm,6.4s						
TYV				MLR	MLR		
	comp=Z,2µm,15.0s						
YAK	Yakutsk	60.80	18	P	P	12 04 51.1	-0.1
	comp=Z,7.4nm,0.6s,baz=195,slow=1.3,SNR=6.1						
YAK	Yakutsk	60.80	18	*e*P	P	12 04 50.6	-0.6
YAK				*e*		12 05 34.9	
YAK				*e*S	S	12 13 07.2	+0.7
YAK				*e*SS	SS	12 17 00.7	-5.0
YAK				pmax	pmax		
	comp=Z,19nm,0.9s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.1s						
YAK				pmax	pmax		
	comp=N,5.0nm,0.9s						
YAK				smax	smax		
	comp=N,227nm,4.4s						
YAK				smax	smax		
	comp=E,184nm,4.2s						
YAK				MLR	MLR		
	comp=Z,1µm,18.0s						
YAK				MLR	MLR		
	comp=N,695nm,16.0s						
YAK				MLR	MLR		
	comp=E,755nm,18.0s						
YAK	Yakutsk	60.80	18	P	P	12 04 50.9	-0.3
BNN	Bunyan	61.50	311	P	P	12 04 56.2	-0.4
CMSA	Cobar Meteorol	61.97	131	P	P	12 04 59.7	0.0
	baz=62,SNR=23						
ARPS	Mount Arapiles	61.98	138	P	P	12 05 00.7	+1.0
	baz=62,SNR=6.7						
KIRV	Kirov	62.07	335	*ce*P	P	12 04 58.6	-1.3
RMQ	Roma	62.12	125	P	P	12 05 01.4	+0.5
	baz=62,SNR=6.1						
NRIK	Noril'sk	62.54	357	P	P	12 05 02.8	-0.1
	comp=E,1.5nm,0.3s,baz=148,slow=5.5,SNR=5.7						
NRIK	Noril'sk	62.54	357	*ce*P	P	12 05 02.2	-0.6
NRIK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
NRIK	Noril'sk	62.54	357	P	P	12 05 03.0	+0.1
NRIK				IAmb	IAmb	12 05 09.0	
	comp=Z,8.5nm,0.8s						
BR131	Keskin Array S	63.38	311	P	P	12 05 08.3	-0.8
BR131				pmax	pmax		
	comp=Z,16nm,1.0s						
BR131	Keskin Array S	63.38	311	P	P	12 05 08.3	-0.8
BR131				IAmb	IAmb	12 05 14.3	
	comp=Z,16nm,0.9s						
BRTR	Keskin Array B	63.38	311	P	P	12 05 07.9	-1.3
	comp=Z,3.8nm,0.7s,baz=131,slow=7.4,SNR=16						
BRTR	Keskin Array B	63.38	311	P	P	12 05 08.1	-1.1
BRTR	Keskin Array B	63.38	311	P	P	12 05 08.1	-1.1
ANTO	Ankara	64.04	311	P	P	12 05 13.4	-0.1
ANTO				pmax	pmax		
	comp=Z,14nm,0.9s						
ANTO	Ankara	64.04	311	P	P	12 05 13.3	-0.1
ANTO				IAmb	IAmb	12 05 13.9	
	comp=Z,14nm,0.8s						
MBAR	Mbarara	64.09	266	*i* P	P	12 05 13.5	-0.8
MBAR	Mbarara	64.09	266	P	P	12 05 17.9	+3.6
MBAR	Mbarara	64.09	266	P	P	12 05 16.2	+1.8
MBAR				IAmb	IAmb	12 05 19.1	
	comp=Z,37nm,1.5s						
TOO	Toolangi	64.86	137	P	P	12 05 20.3	+1.5
	baz=65,SNR=14						
TOO	Toolangi	64.86	137	P	P	12 05 19.7	+0.9
TOO				pmax	pmax		
	comp=Z,64nm,1.2s						
TOO	Toolangi	64.86	137	P	P	12 05 19.7	+0.9
ISP	Isparta	65.35	308	P	P	12 05 21.1	-1.0
ISP				pmax	pmax		
	comp=Z,29nm,1.2s						
ISP	Isparta	65.35	308	P	P	12 05 21.1	-1.0
ISP				IAmb	IAmb	12 05 32.1	
	comp=Z,29nm,1.2s						
PRGR	Permogore	65.41	337	*e*P	P	12 05 20.4	-1.4
PRGR				pmax	pmax		
	comp=Z,40nm,1.4s						
ELL	Elmali	65.64	307	P	P	12 05 24.0	0.0
ELL				pmax	pmax		
	comp=Z,206nm,1.2s						
ELL	Elmali	65.64	307	P	P	12 05 24.0	0.0
MOS	Moscow	66.13	329	*e*P	P	12 05 24.5	-2.1
MOS				*e*		12 05 30.8	
MOS				*e*		12 07 58.7	
MOS				pmax	pmax		
	comp=Z,79nm,1.5s						
CAN	Canberra	66.20	133	P	P	12 05 26.9	-0.6
CAN				pmax	pmax		
	comp=Z,62nm,1.4s						
CAN	Canberra	66.20	133	P	P	12 05 26.9	-0.6
OBN	Obninsk	66.42	328	*ce*P	P	12 05 27.9	-0.6
OBN				*i*		12 05 41.5	
OBN				*i*		12 07 54.7	
OBN				pmax	pmax		
	comp=Z,40nm,1.4s						
MA2	Magadan	67.45	27	P	P	12 05 35.4	+0.4
	comp=Z,8.0nm,0.7s,baz=207,slow=9.2,SNR=5.1						
MA2	Magadan	67.45	27	*i* P	P	12 05 35.5	+0.5
MA2				pmax	pmax		
	comp=Z,31nm,1.2s						
MA2	Magadan	67.45	27	P	P	12 05 34.8	-0.1
KLMR	Klimovskoe	67.52	334	*e*P	P	12 05 32.2	-3.0
KLMR				*e*		12 08 00.9	
KLMR				pmax	pmax		
	comp=Z,48nm,1.5s						
KLMR	Klimovskoe	67.52	334	*e*P	P	12 05 32.3	-3.0
KLMR				AMP		12 05 46.1	
	comp=Z,48nm,1.5s						
KLMR				*e*PP	PP	12 08 00.9	-3.4
TIXI	Tiksi	68.12	11	P	P	12 05 38.5	-0.4
	comp=Z,14nm,0.7s,baz=203,slow=3.5,SNR=30						
TIXI	Tiksi	68.12	11	P	P	12 05 38.5	-0.4
CFR	Carcaliu	68.58	316	⇑P	P	12 05 39.9	-2.4
CFR	Carcaliu	68.58	316	⇑P	P	12 05 39.9	-2.4
SORM	Soroca	69.09	319	⇑P	P	12 05 44.3	-1.1
SORM	Soroca	69.09	319	⇑P	P	12 05 44.3	-1.1
AKASG	Malin Array Be	69.17	322	P	P	12 05 44.6	-1.4
	comp=Z,0.8nm,0.5s,baz=89,slow=4.7,SNR=14						
AKASG	Malin Array Be	69.17	322	*ce*P	P	12 05 44.5	-1.4
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
AKASG	Malin Array Be	69.17	322	P	P	12 05 44.9	-1.0
AKBB	Malin Array Si	69.17	322	*ce*P	P	12 05 44.2	-1.7
AKBB	Malin Array Si	69.17	322	P	P	12 05 46.6	+0.7
AKBB				IAmb	IAmb	12 05 50.9	
	comp=Z,9.4nm,1.0s						
ALN	Alexandroupoli	69.30	311	P	P	12 05 47.1	+0.2
ALN				pmax	pmax		
	comp=Z,21nm,1.4s						
ALN	Alexandroupoli	69.30	311	P	P	12 05 47.1	+0.2
ALN				IAmb	IAmb	12 06 05.6	
	comp=Z,21nm,1.4s						
SEY	Seymchan	69.65	24	P	P	12 05 48.4	-0.2
	comp=Z,3.6nm,0.6s,baz=221,slow=4.2,SNR=8.9						
SEY	Seymchan	69.65	24	*i* P	P	12 05 47.0	-1.6
VRI	Vrincioaia	69.69	316	⇓P	P	12 05 49.7	+0.5
VRI	Vrincioaia	69.69	316	⇓P	P	12 05 49.7	+0.5
PLOR	Plostina	69.74	316	⇑P	P	12 05 50.4	+0.8
PLOR	Plostina	69.74	316	⇑P	P	12 05 50.4	+0.8
TESR	Tescani	69.87	317	⇑P	P	12 05 50.0	-0.3
MLR	Muntele Rosu	70.16	316	⇓P	P	12 05 53.5	+1.2
MLR	Muntele Rosu	70.16	316	⇓P	P	12 05 53.5	+1.2
MLR	Muntele Rosu	70.16	316	P	P	12 05 52.4	+0.2
OZUR		70.38	316	⇑P	P	12 05 58.2	+4.7
MNK	Minsk	70.97	325	*i* P	P	12 05 55.0	-1.8
MNK				*i*		12 06 15.3	
MNK				*i*		12 08 31.9	
MNK				*i* PPP	PPP	12 10 15.0	
MNK				*i* S	S	12 15 08.7	-2.0
MNK				*i*		12 15 55.9	
MNK				*i* SS	SS	12 19 46.6	+2.8
MNK				pmax	pmax		
	comp=Z,36nm,1.2s						
MNK				pmax	pmax		
	comp=E,5.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,15nm,1.1s						
MNK				MLR	MLR		
	comp=E,52nm,16.0s						
MNK				MLR	MLR		
	comp=Z,643nm,21.0s						
MNK				MLR	MLR		
	comp=N,359nm,19.0s						
MNK	Minsk	70.97	325	*i* P	P	12 05 55.0	-1.8
	comp=E,5.0nm,0.9s						
MNK				*i* P	P	12 05 55.0	-1.8
	comp=N,15nm,1.1s						
MNK				*i* P	P	12 05 55.0	-1.8
	comp=Z,36nm,1.2s,baz=285						
MNK				*i* PcP	PcP	12 06 15.3	-1.8
MNK				*i* PP	PP	12 08 32.0	-2.3
MNK				*i* PPP	PPP	12 10 15.1	
MNK				*i* S	S	12 15 08.7	-2.0
MNK				*i* SS	SS	12 19 46.6	+2.8
MNK				*i* LR	LR	12 37 19.2	
MNK				*i* LRM	MLR	12 39 38.3	
	comp=E,52nm,15.9s						
MNK				*i* LRM	MLR	12 39 51.2	
	comp=Z,643nm,21.0s						
MNK				*i* LRM	MLR	12 40 08.5	
	comp=N,359nm,18.8s						
ARR	Arges	71.04	316	⇓P	P	12 05 57.0	-0.6
BURAR	Bucovina Array	71.05	318	⇑P	P	12 05 58.2	+0.6
BURAR	Bucovina Array	71.05	318	P	P	12 05 57.6	0.0
BUR08	Bucovina Ar. S	71.06	318	P	P	12 05 58.1	+0.4
BUR08				IAmb	IAmb	12 06 04.3	
	comp=Z,15nm,1.1s						
VTS	Vitosha	71.63	313	⇑P	P	12 06 01.1	-0.2
VTS	Vitosha	71.63	313	⇑P	P	12 06 01.1	-0.2
VTS	Vitosha	71.63	313	P	P	12 06 00.8	-0.5
VTS				IAmb	IAmb	12 06 07.3	
	comp=Z,17nm,1.2s						
NACGM	Naroch	71.69	326	*i* P	P	12 06 00.8	-0.4
ITM	Ithomi	72.03	307	P	P	12 06 03.4	-0.3
ITM				IAmb	IAmb	12 06 09.8	
	comp=Z,46nm,1.4s						
DRGR		72.59	317	⇓P	P	12 06 06.8	0.0
DRGR		72.59	317	⇓P	P	12 06 06.8	0.0
LVZ	Lovozero	72.62	340	*i* P	P	12 06 07.1	+0.5
LVZ				pmax	pmax		
	comp=Z,39nm,1.2s						
VSU	Vasula	72.64	329	*e*P	P	12 06 07.3	+0.6
VSU	Vasula	72.64	329	*i* P	P	12 06 06.3	-0.5
FNA	Florina	72.80	310	P	P	12 06 07.3	-0.9
FNA				pmax	pmax		
	comp=Z,12nm,1.1s						
FNA	Florina	72.80	310	P	P	12 06 07.3	-0.9
FNA				IAmb	IAmb	12 06 16.6	
	comp=Z,12nm,1.1s						
BOVS	Bovan	72.87	313	⇑P	P	12 06 05.7	-2.7
TRPA	Tarpa	72.91	318	⇑P	P	12 06 07.7	-0.9
TRPA	Tarpa	72.91	318	*e*P	P	12 06 07.2	-1.4
MDVR	Moldovita	73.00	315	⇑P	P	12 06 08.8	-0.6
BZS	Buzias	73.18	315	⇓P	P	12 06 10.3	0.0
BZS	Buzias	73.18	315	⇓P	P	12 06 10.3	0.0
SIRR	Siria	73.23	316	⇓P	P	12 06 10.2	-0.5
PABE	Paberze	73.40	326	*e*P	P	12 06 11.7	+0.4
PABE	Paberze	73.40	326	P	P	12 06 11.1	-0.2
SUW	Suwalki	73.54	324	*e*P	P	12 06 12.2	0.0
CRVS	Cervenica-Dubn	73.73	319	*e*P	P	12 06 14.8	+1.3
CRVS				pmax	pmax		
	comp=Z,54nm,1.5s						
CRVS	Cervenica-Dubn	73.73	319	*e*P	P	12 06 14.8	+1.3
FINES	FINESS Array B	73.77	332	P	P	12 06 13.2	-0.2
	comp=Z,10.0nm,0.9s,baz=100,slow=5.5,SNR=19						
FINES	FINESS Array B	73.77	332	*ce*P	P	12 06 13.1	-0.3
FINES				pmax	pmax		
	comp=Z,10.0nm,0.9s						
DIVS	Divibare	74.15	314	P	P	12 06 15.5	-0.7
PDG	Podgorica	74.53	312	P	P	12 06 17.7	-0.6
PDG				IAmb	IAmb	12 06 18.8	
	comp=Z,29nm,1.3s						
NIE	Niedzica	74.56	319	*e*P	P	12 06 19.8	+1.5
PSZ	Piszkesteto	74.64	318	*e*P	P	12 06 17.5	-1.4
PSZ	Piszkesteto	74.64	318	P	P	12 06 18.9	0.0
PSZ				pmax	pmax		
	comp=Z,14nm,1.2s						
PSZ	Piszkesteto	74.64	318	P	P	12 06 18.9	0.0
OJC	Ojcow	74.99	320	*e*P	P	12 06 21.1	+0.3
LANS	Liptovska Anna	75.07	319	*e*P	P	12 06 21.9	+0.6
LANS				pmax	pmax		
	comp=Z,3.0nm,1.0s						
LANS	Liptovska Anna	75.07	319	*e*P	P	12 06 21.9	+0.6
MORH	Mrgy, Hungar	75.31	316	⇑P	P	12 06 21.3	-1.4
MORH	Mrgy, Hungar	75.31	316	*e*P	P	12 06 21.0	-1.7
BOSA	Boshof	75.41	238	P	P	12 06 25.2	+1.5
	comp=Z,27nm,1.1s,baz=89,slow=4.8,SNR=14						
BOSA	Boshof	75.41	238	P	P	12 06 24.5	+0.8
BOSA				IAmb	IAmb	12 06 26.8	
	comp=Z,36nm,1.2s						
VYHS	Vyhne	75.41	318	*e*P	P	12 06 23.6	+0.3
VYHS				pmax	pmax		
	comp=Z,19nm,1.3s						
VYHS	Vyhne	75.41	318	*e*P	P	12 06 23.5	+0.3
SRO2	Moca	75.63	317	*e*P	P	12 06 24.1	-0.3
SRO2				pmax	pmax		
	comp=Z,19nm,1.2s						
SRO2	Moca	75.63	317	*e*P	P	12 06 24.1	-0.3
KOVH	Kovagotottos	75.67	316	*e*P	P	12 06 20.8	-3.9
SRO	Srobarova	75.69	317	*e*P	P	12 06 25.3	+0.5
SRO	Srobarova	75.69	317	*e*P	P	12 06 25.3	+0.5
OKC	Ostrava-Krasne	76.00	320	*e*P	P	12 06 27.2	+0.6
OKC				*e*		12 06 32.3	
OKC	Ostrava-Krasne	76.00	320	*e*P	P	12 06 27.2	+0.6
OKC				*e*pP	pP	12 06 32.3	-2.8
MPLH	Magyarpolny	76.15	317	*e*P	P	12 06 27.0	-0.5
JAVC	Velka Javorina	76.21	319	*e*P	P	12 06 28.9	+1.0
ARCES	ARCESS Array B	76.33	340	P	P	12 06 28.6	+0.6
	comp=Z,3.6nm,0.5s,baz=91,slow=7.3,SNR=7.6						
ARCES				LR	LR	12 42 28.4	
	comp=Z,1µm,21.1s,baz=90,slow=38						
MORC	Moravsky Berou	76.38	319	⇓P	P	12 06 29.1	+0.3
MORC	Moravsky Berou	76.38	319	⇓P	P	12 06 29.1	+0.3
MORC	Moravsky Berou	76.38	319	*e*P	P	12 06 29.3	+0.5
MORC	Moravsky Berou	76.38	319	P	P	12 06 29.2	+0.3
MORC				IAmb	IAmb	12 06 35.9	
	comp=Z,29nm,1.2s						
MODS	Modra-Piesok	76.43	318	*e*P	P	12 06 28.6	-0.5
MODS	Modra-Piesok	76.43	318	*e*P	P	12 06 28.5	-0.5
ZST	Bratislava	76.53	318	*e*P	P	12 06 30.1	+0.5
ZST				pmax	pmax		
	comp=Z,88nm,1.1s						
ZST	Bratislava	76.53	318	*e*P	P	12 06 30.1	+0.5
BILL	Bilibino	76.85	22	*e*P	P	12 06 29.3	-1.7
BILL				*i*		12 06 41.0	
BILL				*i*		12 09 26.3	
BILL				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,912nm,18.0s						
VRAC	Vranov	76.96	319	*e*P	P	12 06 32.2	+0.2
KRUC	Moravsky	77.07	319	*e*P	P	12 06 32.5	-0.1
DPC	Dobruska-Polom	77.22	320	*e*P	P	12 06 34.1	+0.6
DPC				*e*		12 06 44.0	
DPC	Dobruska-Polom	77.22	320	*e*P	P	12 06 34.1	+0.6
DPC				*e*x	x	12 06 44.0	
KSP	Ksiaz	77.28	320	*e*P	P	12 06 34.6	+0.8
OSTC	Ostas	77.30	320	*e*P	P	12 06 33.0	-0.9
CONA	Conrad Observa	77.34	317	*e*P	P	12 06 34.2	-0.1
	comp=Z,12nm,1.3s						
CHVC	Chvalec	77.41	320	*e*P	P	12 06 34.6	+0.1
UPC	Upice	77.43	320	*e*P	P	12 06 34.6	0.0
UPC	Upice	77.43	320	*e*P	P	12 06 34.6	0.0
ARSA	Arzberg	77.53	317	*i* P	P	12 06 35.6	+0.3
	comp=Z,24nm,1.2s,SNR=11						
MAW	Mawson	77.66	192	P	P	12 06 37.1	+1.7
	comp=Z,4.1nm,0.9s,baz=213,slow=5.5,SNR=4.7						
PERS	Pernice	77.77	316	*e*P	P	12 06 36.6	-0.1
SOKA	Soboth	77.83	316	*i* P	P	12 06 37.6	+0.5
	comp=Z,36nm,1.2s,SNR=21						
SOKA				*e*P	PKiKP	12 12 15.9	+0.1
	comp=Z,5.2nm,1.6s						
OBKA	Obir	78.16	316	*i* P	P	12 06 39.2	+0.3
	comp=Z,23nm,1.3s,SNR=11						
OBKA				*e*P	PKiKP	12 12 16.5	+0.2
	comp=Z,4.9nm,1.8s						
PRU	Pruhonice	78.33	320	*e*P	P	12 06 40.0	+0.3
PRU				*e*		12 06 45.0	
PRU	Pruhonice	78.33	320	*e*P	P	12 06 40.0	+0.3
PRU				*e*x	x	12 06 45.0	
CRNS	Crni Vrh	78.34	316	*i* P	P	12 06 39.7	-0.1
MOA	Molln	78.41	317	*e*P	P	12 06 40.0	-0.1
	comp=Z,15nm,1.4s						
MOA				*e*P	PKiKP	12 12 18.0	+1.4
	comp=Z,6.5nm,1.8s						
CKRC	Cesky Krumlov	78.42	318	*e*P	P	12 06 40.2	0.0
VOJS	Vojsko	78.60	315	*i* P	P	12 06 40.9	-0.4
TRI	Trieste	78.67	315	P	P	12 06 41.6	0.0
TRI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
TRI	Trieste	78.67	315	P	P	12 06 41.6	0.0
BRG	Berggiesshubel	78.77	320	*e*P	P	12 06 42.5	+0.5
	comp=Z,9.4nm,0.9s,baz=92,slow=5.2						
BRG	Berggiesshubel	78.77	320	*e*P	P	12 06 33.5	-8.5
BRG				Amp		12 06 34.9	
	comp=Z,6.8nm,1.1s						
BRG				pP	pP	12 06 42.7	-7.9
BRG				Amp		12 06 44.2	
	comp=Z,22nm,1.2s						
BRG				Amp		12 24 29.0	
	comp=N,1.5nm,18.4s						
BRG				Amp		12 24 33.0	
	comp=Z,1.4nm,18.0s						
BRG				Amp		12 24 33.0	
	comp=E,1.0nm,16.9s						
MYKA	Terra Mystica	78.79	316	*e*P	P	12 06 43.0	+0.7
	comp=E,20nm,1.6s						
MYKA				*e*P	PKiKP	12 12 17.3	0.0
	comp=E,3.7nm,1.1s						
GEC2	GERESS Array S	78.83	318	*e*P	P	12 06 42.8	+0.3
	comp=E,30nm,1.1s,baz=92,slow=5.2						
GEC2	GERESS Array S	78.83	318	P	P	12 06 43.1	+0.5
GEC2				IAmb	IAmb	12 06 49.5	
	comp=Z,35nm,1.1s						
GERES	GERESS Array B	78.83	318	P	P	12 06 43.0	+0.4
	comp=Z,9.9nm,0.9s,baz=89,slow=5.7,SNR=46						
GERES	GERESS Array B	78.83	318	P	P	12 06 43.0	+0.4
GERES	GERESS Array B	78.83	318	P	P	12 06 42.7	+0.1
KHC	Kasperske Hory	78.92	319	*e*P	P	12 06 42.5	-0.5
KHC				*e*		12 06 47.6	
KHC	Kasperske Hory	78.92	319	*e*P	P	12 06 42.5	-0.5
KHC				*e*pP	pP	12 06 47.6	-4.0
RUE	Ruedersdorf	78.95	322	*e*P	P	12 06 43.5	+0.5
KBA	Koelnbreinsper	79.00	317	*i* P	P	12 06 43.1	-0.6
	comp=Z,22nm,1.3s,SNR=6.9						
KBA				*e*P	PKiKP	12 12 16.1	-1.6
	comp=Z,3.5nm,1.2s						
FBE	Freiberg	79.14	320	*e*P	P	12 06 45.2	+1.2
	baz=92,slow=5.2						
FBE				*e*pP	PcP	12 06 50.4	-2.0
ZOU	Zoufplan	79.25	316	P	P	12 06 45.0	0.0
ZOU				IAmb	IAmb	12 06 51.6	
	comp=Z,54nm,1.3s						
CLL	Collm	79.38	321	*i* P	P	12 06 44.0	-1.3
CLL				*i* *PP	PcP	12 06 50.7	-2.7
CLL				pmax	pmax		
	comp=Z,24nm,1.4s						
CLL	Collm	79.38	321	*i* P	P	12 06 44.0	-1.3
	comp=Z,24nm,1.4s						
CLL				*i*		12 06 50.7	
CLL	Collm	79.38	321	*e*P	P	12 06 44.9	-0.4
	comp=Z,5.5nm,0.8s,baz=92,slow=5.2						
CLL	Collm	79.38	321	P	P	12 06 44.6	-0.7
CLL				IAmb	IAmb	12 06 46.8	
	comp=Z,21nm,1.3s						
WET	Wettzell	79.38	319	*e*P	P	12 06 45.8	+0.3
	comp=Z,6.9nm,0.8s,baz=92,slow=5.2						
WET				*e*pP	PcP	12 06 51.5	-2.1
RJOB	Jochberg	79.40	317	*e*P	P	12 06 45.2	-0.4
	comp=Z,8.5nm,0.7s,baz=92,slow=5.2						
STAL	STALIGIAL	79.42	316	P	P	12 06 45.8	0.0
ABTA	Abfaltersbach	79.57	316	*i* P	P	12 06 46.3	-0.4
	comp=Z,17nm,1.4s,SNR=5.3						
ABTA				*e*P	PKiKP	12 12 18.5	0.0
	comp=Z,7.1nm,1.6s						
TANN	Tannenbergstha	79.69	320	*e*P	P	12 06 47.7	+0.5
	comp=Z,4.3nm,0.9s,baz=92,slow=5.2						
NKC	Novy Kostel	79.69	320	*e*P	P	12 06 46.7	-0.4

NKC				e		12 06 55.8	
NKC	Novy Kostel	79.69	320	eP	P	12 06 46.7	-0.4
NKC				ex	x	12 06 55.8	
GUNZ	Gunzen	79.77	320	eP	P	12 06 48.2	+0.6
	baz=92,slow=5.2						
WERD	Werda	79.79	320	eP	P	12 06 48.1	+0.4
	baz=92,slow=5.2						
ROTZ	Rotzenmuhle	79.83	319	eP	P	12 06 48.6	+0.7
	comp=Z,2.5nm,0.9s,baz=92,slow=5.2						
ROTZ				epP	PcP	12 06 54.3	-1.2
MANZ	Manzenberg	79.90	319	eP	P	12 06 48.9	+0.6
	comp=Z,16nm,1.4s,baz=92,slow=5.2						
TSUM	Tsumeb	80.05	249	P	P	12 06 50.4	+0.6
	comp=Z,5.4nm,0.9s,baz=78,slow=5.1,SNR=5.2						
TSUM	Tsumeb	80.05	249	P	P	12 06 49.1	-0.7
SUR	Sutherland	80.11	236	P	P	12 06 51.6	+1.6
	comp=Z,13nm,0.9s,baz=45,slow=6.7,SNR=5.4						
SUR	Sutherland	80.11	236	P	P	12 06 53.5	+3.5
WTTA	Wattenberg	80.17	317	i P	P	12 06 49.5	-0.5
	comp=Z,33nm,1.3s,SNR=12						
WTTA				eP	PKiKP	12 12 16.7	-2.8
	comp=Z,7.7nm,1.3s						
WATA	Walderalm	80.22	317	i P	P	12 06 49.5	-0.7
	comp=Z,36nm,1.4s,SNR=11						
WATA				eP	PKiKP	12 12 19.3	-0.2
	comp=Z,5.9nm,1.2s						
MOX	Moxa	80.23	320	eP	P	12 06 50.3	+0.2
	comp=Z,22nm,1.2s,baz=92,slow=5.2						
MOX				epP	PcP	12 06 56.0	-1.2
SQTA	Sankt Quirin	80.47	317	i P	P	12 06 50.9	-0.6
	comp=Z,28nm,1.4s,SNR=11						
SQTA				eP	PKiKP	12 12 20.6	+0.7
	comp=Z,12nm,1.7s						
GRF	Grafenberg Arr	80.47	319	eP	P	12 06 52.1	+0.7
	comp=Z,19nm,0.9s,baz=92,slow=5.2						
MOTA	Moosalm	80.54	317	i P	P	12 06 51.1	-0.8
	comp=Z,29nm,1.1s,SNR=10						
MOTA				eP	PKiKP	12 12 19.4	-0.7
	comp=Z,10nm,1.6s						
ZCCA	Zocca	80.63	314	P	P	12 06 53.1	+0.8
RETA	Reutte	80.77	317	i P	P	12 06 53.0	-0.1
	comp=Z,49nm,1.5s,SNR=14						
RETA				eP	PKiKP	12 12 18.5	-1.8
	comp=Z,8.4nm,1.7s						
NB2	NORSAR Subarra	80.78	331	P	P	12 06 52.2	-0.6
	comp=Z,14nm,0.9s,baz=96,slow=5.1						
NB2	NORSAR Subarra	80.78	331	P	P	12 06 52.2	-0.6
	baz=96,slow=5.1						
NOA	NORSAR Array B	80.78	331	P	P	12 06 52.2	-0.6
	comp=Z,9.0nm,1.0s,baz=94,slow=5.3,SNR=12						
FETA	Feichten	80.79	316	i P	P	12 06 52.9	-0.4
	comp=Z,25nm,1.3s,SNR=10						
FETA				eP	PKiKP	12 12 20.7	+0.3
	comp=Z,3.7nm,1.3s						
CLZ	Clausthal	81.03	321	eP	P	12 06 54.7	+0.3
	comp=Z,14nm,0.8s,baz=92,slow=5.2						
CLZ				epP	PcP	12 07 00.3	-0.4
BSEG	Bad Segeberg	81.08	323	eP	P	12 06 55.2	+0.8
	comp=Z,19nm,0.7s,baz=92,slow=5.2						
NRDL	Niedersach Rie	81.20	322	eP	P	12 06 55.9	+0.9
	comp=Z,21nm,1.0s,baz=92,slow=5.2						
UBR	Ueberruh	81.21	317	eP	P	12 06 55.1	-0.4
	comp=Z,9.0nm,0.7s,baz=92,slow=5.2						
DAVA	Damuels	81.37	317	i P	P	12 06 56.5	+0.1
	comp=Z,35nm,1.4s,SNR=9.9						
DAVA				eP	PKiKP	12 12 22.9	+1.6
	comp=Z,5.3nm,1.2s						
TUE	Stuetta	81.75	316	P	P	12 06 58.6	+0.2
TUE				IAmb	IAmb	12 07 00.7	
	comp=Z,28nm,1.2s						
KEST	Kesra	82.14	305	P	P	12 07 01.5	+0.9
	comp=Z,18nm,1.2s,baz=301,slow=1.3,SNR=7.4						
KEST	Kesra	82.14	305	P	P	12 07 01.8	+1.2
TNS	Taunus Mts	82.26	320	eP	P	12 07 01.1	+0.2
	comp=Z,6.0nm,0.6s,baz=92,slow=5.2						
BFO	Black Forest	82.39	318	eP	P	12 07 00.8	-0.8
	comp=Z,7.7nm,0.8s,baz=92,slow=5.2						
SENIN	Lac Senin/Sane	83.17	316	P	P	12 07 06.9	+1.0
SENIN				IAmb	IAmb	12 07 13.4	
	comp=Z,12nm,0.8s						
WLF	Walferdange	83.77	319	dP	P	12 07 09.8	+1.2
	comp=Z,8.6nm,1.3s						
MEM	Membach	83.81	320	dP	P	12 07 08.9	+0.1
BHOU	Houvegnez	83.82	320	dP	P	12 07 09.4	+0.5
BCLA	Clavier	84.27	320	dP	P	12 07 11.3	+0.2
BGES	Gesves	84.41	320	dP	P	12 07 11.9	+0.1
DOU	Dourbes	84.74	320	dP	P	12 07 13.8	+0.2
SSB	Saint Sauveur	85.17	315	P	P	12 07 16.0	+0.1
SSB				pmax	pmax		
	comp=Z,29nm,1.3s						
SSB	Saint Sauveur	85.17	315	P	P	12 07 16.0	+0.1
SSB				IAmb	IAmb	12 07 17.3	
	comp=Z,29nm,1.3s						
URZ	Urewera	88.41	129	LR	LR	12 48 52.7	
	comp=Z,535nm,18.9s,baz=212,slow=37						
TORD	Torodi Ar. Bea	91.22	283	P	P	12 07 45.5	+0.2
	comp=Z,8.5nm,1.2s,baz=63,slow=3.5,SNR=17						
TORD				LR	LR	12 49 40.5	
	comp=Z,1μm,18.2s,baz=345,slow=36						
TORD	Torodi Ar. Bea	91.22	283	P	P	12 07 44.6	-0.7
TORD				IAmb	IAmb	12 07 48.4	
	comp=Z,13nm,1.3s						
VNDA	Vanda	91.89	168	P	P	12 07 48.5	+1.4
	comp=Z,1.2nm,0.9s,baz=119,slow=9.4,SNR=4.4						
VNDA				LR	LR	12 44 25.8	
	comp=Z,524nm,19.2s,baz=326,slow=32						
ESDC	Sonseca Array	92.16	310	P	P	12 07 49.3	0.0
	comp=Z,7.0nm,1.1s,baz=57,slow=4.2,SNR=18						
ESDC	Sonseca Array	92.16	310	P	P	12 07 48.1	-1.2
ESDC				IAmb	IAmb	12 07 51.3	
	comp=Z,14nm,1.3s						
IMAR	Indian Mountai	92.39	22	P	P	12 07 47.7	-2.0
ILAR	Eielson Array	95.50	22	P	P	12 08 02.8	-1.3
	comp=Z,0.1nm,0.6s,baz=316,slow=6.4,SNR=1.5						
ILAR				PP	PP	12 12 00.1	+5.4
	comp=Z,0.7nm,0.8s,baz=300,slow=6.8,SNR=5.4						
ILAR				LR	LR	12 54 24.3	
	comp=Z,486nm,18.6s,baz=304,slow=38						
KOWA	Kowa	96.52	285	P	P	12 08 09.6	-0.1
	comp=Z,1.7nm,0.8s,baz=120,slow=6.2,SNR=2.9						
QSPA	South Pole Qui	96.79	180	P	P	12 08 08.2	-1.7
QSPA				IAmb	IAmb	12 08 31.8	
	comp=Z,4.8nm,1.2s						
INK	Inuvik	97.82	16	P	P	12 08 14.3	-0.2
	comp=Z,1.5nm,1.0s,baz=314,slow=2.1,SNR=2.7						
RES	Resolute Bay	98.36	3	P	P	12 08 16.7	0.0
	comp=Z,2.0nm,0.7s,baz=236,slow=9.6,SNR=6.9						
VNA2	Neumayer--Watz	100.37	199	Pdiff	Pdif	12 08 25.8	+0.1
PLID	Pearl Lake	121.45	25	PKPdf	PKPdf	12 13 32.2	-1.1
ULM	Lac du Bonnet	122.38	8	PKP	PKPdf	12 13 34.3	-0.3
	comp=Z,3.2nm,0.7s,baz=50,slow=2.0,SNR=3.1						
ULM	Lac du Bonnet	122.38	8		PKPdf	12 13 33.9	-0.7
NVAR	Mina Array Bea	125.55	32	PKP	PKiKP	12 13 42.2	+0.5
	comp=Z,1.2nm,0.7s,baz=305,slow=2.0,SNR=11						
NVAR	Mina Array Bea	125.55	32		PKPdf	12 13 41.4	+0.1
BW06	Boulder Array	125.93	22		PKPdf	12 13 40.0	-2.0
PD31	Pinedale Array	125.93	22		PKPdf	12 13 41.1	-0.9
PDAR	Pinedale Array	125.93	22	PKP	PKPdf	12 13 41.7	-0.3
	comp=Z,1.1nm,0.8s,baz=42,slow=1.7,SNR=6.1						
PDAR	Pinedale Array	125.93	22		PKPdf	12 13 40.7	-1.3
ECSD	EROS Data Cent	128.61	10	PKPdf	PKPdf	12 13 45.0	-1.8
TXAR	Lajitas Array	139.95	25	PKP	PKPdf	12 14 09.2	+0.7
	comp=Z,0.3nm,0.4s,baz=301,slow=0.8,SNR=11						
TXAR	Lajitas Array	139.95	25		PKPdf	12 14 07.6	-0.9
PLCA	Paso Flores	143.76	199	PKP	PKPdf	12 14 14.1	-0.8
	comp=Z,4.3nm,1.0s,baz=182,slow=6.2,SNR=5.6						
PLCA	Paso Flores	143.76	199	PKPdf	PKPdf	12 14 13.9	-1.0
LL04	Puerto Octay	144.17	197		PKPab	12 14 12.9	-0.3
MDP	Montagnes des	145.15	289	PKPbc	PKPdf	12 14 17.9	-0.1
	comp=Z,20nm,1.1s,baz=48,slow=5.3,SNR=3.8						
CPUP	Villa Florida	146.97	231	PKPbc	PKPbc	12 14 22.6	0.0
	comp=Z,5.6nm,1.0s,baz=113,slow=0.7,SNR=6.1						
CPUP	Villa Florida	146.97	231	PKIKP	PKPdf	12 14 18.4	-2.3
CPUP	Villa Florida	146.97	231		PKPdf	12 14 18.4	-2.3
AQDB	Aquidauana	148.17	242		PKPdf	12 14 22.1	-0.7
TLIG	Tlapa	152.47	28		PKPdf	12 14 28.4	-1.4
PTGA	Pitinga	153.86	282	PKPab	PKPab	12 14 54.3	+1.4
	comp=Z,10nm,1.1s,baz=82,slow=6.9,SNR=7.5						
SIV	San Ignacio	154.47	247	PKPbc	PKiKP	12 14 42.5	+1.5
	comp=Z,0.5nm,0.4s,baz=131,slow=5.5,SNR=3.7						
SIV				PKPab	PKPab	12 14 56.0	+0.6
	comp=Z,1.1nm,0.4s,baz=180,slow=2.2,SNR=4.4						
LPAZ	La Paz	160.64	240	PKP	PKPdf	12 14 40.6	-0.4
	comp=Z,1.0nm,0.9s,baz=344,slow=1.6,SNR=3.6						
LPAZ				PKPab	PKPab	12 15 24.1	+1.4
	comp=Z,2.3nm,0.8s,baz=120,slow=5.9,SNR=5.6						
LPAZ	La Paz	160.64	240		PKPdf	12 14 37.1	-3.9
LPAZ				PKPab	PKPab	12 15 18.8	-3.9
OCAC	Ocana	160.71	321		PKPdf	12 14 37.7	-2.9

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*DDA **08** 11:56:13.4, 36°.25N×32°.03E, h77^{km}, ML2.2*

*NIC **08** 11:56:14.7±0.0, 36°.23N×32°.22E, h55^{km}±8^{km}, Ml2.5/3*

ISC 08 11:56:14.0±1.5**, 36°.20N**±0°.03×**32°.01E**±0°.05**, h78^{km}**±11^{km}**, n17, σ1^{s}03**/31**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAZI	Gazipasa	0.25	82	i P	Pn	11 56 25.8	0.0
GAZI				i S	Sn	11 56 34.6	0.0
KEPZ	Antalya-Kepez	0.77	335	i P	Pn	11 56 30.0	-0.4
KEPZ				i S	Sn	11 56 42.5	-0.1
ERMK	Ermenek	0.85	58	i P	Pn	11 56 32.3	+0.9
ERMK				i S	Sn	11 56 46.1	+1.8
ERMK				IAML		11 56 47.0	
	comp=E,70nm,0.2s						
ERMK				IAML		11 56 48.0	
	comp=N,80nm,0.3s						
ALFC	Alefka	1.15	155	P	Pn	11 56 34.4	-0.4
ALFC				S	Sn	11 56 49.5	-0.8
ALFC				AML	AML	11 56 52.1	
	comp=N,0.4nm,0.3s						
ALFC				AML	AML	11 56 52.1	
	comp=N,0.4nm,0.3s						
ALFC				AML	AML	11 56 55.4	
	comp=N,0.3nm,0.5s						
ALFC				AML	AML	11 56 55.4	
	comp=N,0.3nm,0.5s						
AKMS	Akamas	1.21	167	P	Pn	11 56 35.7	+0.2
AKMS				S	Sn	11 56 52.0	+0.3
AKMS				AML	AML	11 56 53.1	
	comp=N,0.3nm,0.4s						
AKMS				AML	AML	11 56 53.1	
	comp=N,0.3nm,0.4s						
AKMS				AML	AML	11 56 57.8	
	comp=N,0.3nm,0.3s						
AKMS				AML	AML	11 56 57.8	
	comp=N,0.3nm,0.3s						
GULN	MERSIN_Gulnar	1.24	90	i P	Pn	11 56 36.3	+0.4
GULN				i S	Sn	11 56 52.5	+0.2
KKBE	Karaman, Kazim	1.26	36	i P	Pn	11 56 36.4	+0.1
KKBE				i S	Sn	11 56 53.0	0.0
KKBE				IAML		11 56 53.0	
	comp=E,36nm,0.4s						
KKBE				IAML		11 56 53.0	
	comp=N,31nm,0.3s						
SEDI	Konya, Seydise	1.27	351	i P	Pn	11 56 36.2	-0.2
LEF	Lefka	1.29	146	i P	Pn	11 56 36.5	-0.1
LEF				i S	Sn	11 56 51.3	-2.3
LEF				IAML		11 56 53.0	
	comp=E,35nm,0.7s						
LEF				IAML		11 56 54.0	
	comp=N,34nm,0.6s						
NATA	Nata	1.49	162	S	Sn	11 56 58.0	-0.1
BUCA	Burdur, Bucak-	1.62	314	i P	Pn	11 56 40.9	0.0
BUCA				i S	Sn	11 57 00.6	-0.7
CSS	Mathiatis	1.64	139	P	Pn	11 56 40.7	-0.3
CSS				S	Sn	11 56 60.0	-1.5
ASGA	Asgata	1.73	144	S	Sn	11 57 03.9	+0.1
KIZK	Mersin	1.74	80	i P	Pn	11 56 42.9	+0.5
KIZK				i S	Sn	11 57 05.0	+1.0
MVOU	Mavrovouni	1.77	131	P	Pn	11 56 41.7	-1.0
MVOU				AML	AML	11 57 02.9	
	comp=N,0.1nm,0.4s						
MVOU				AML	AML	11 57 02.9	
	comp=N,0.1nm,0.4s						
MVOU				S	Sn	11 57 03.4	-1.2
KERG	Konya-Eregli	2.08	54	i P	Pn	11 56 46.8	-0.3
KERG				i S	Sn	11 57 10.8	-1.5
KERG				IAML		11 57 12.0	
	comp=E,13nm,0.4s						
OSC2	CSNet OBS 4	3.12	176	P	Pn	11 57 01.9	+0.9
OSC2				S	Sn	11 57 40.1	+2.8

IDC 08 11:57:49.1±2.3**, 0°.97N**×**127°.30E, h0**^{km}**, mb3.5**/3**, mb1 3.7**/3**, mb1mx3.4**/59**, mbtmp3.5**/3**, MS4.3**/1**, Ms1 4.3**/1**, ms1mx3.5**/37**, Error ellipse: s-maj=166.4km s-min=28.7km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.89	162	P	P	12 02 42.8	-1.1
	1.2nm,0.8s,baz=341,slow=11,SNR=6.8						
ASAR	Alice Springs	25.31	166	P	P	12 03 18.6	+0.9
	0.8nm,0.8s,baz=346,slow=12,SNR=6.1						
CTA	Charters Tower	27.98	139	LR	LR	12 16 18.4	
	comp=Z,665nm,20.5s,baz=32,slow=40						
MKAR	Makanchi Array	60.14	326	P	P	12 07 58.5	-0.1
	0.5nm,0.6s,baz=125,slow=7.4,SNR=2.6						

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*IDC **08** 12:06:24.7±0.5, 6°.96N×94°.74E, h0^{km}, mb4.2/24, mb1 4.2/27, mb1mx4.1/66, mbtmp4.2/27, ML4.0/3, Error ellipse: s-maj=21.4km s-min=11.8km az=52.0*

*NEIC **08** 12:06:27.0±1.2, 6°.9N±0°.1×94°.7E±0°.1, h10^{km}±1^{km}, mb4.7/21, Error ellipse: s-maj=21.2km s-min=13.1km az=228.0*

*DJA **08** 12:06:28.2±0.4, 7°N±3°×9°4E±°, h43^{km}±7^{km}, M4.6/12, mB5.6/1, mb4.5/12, MLv4.7/5, Mw(mB)5.1/1*

ISC 08 12:06:29.0±0.4**, 6°.92N**±0°.07×**94°.63E**±0°.08**, h26^{km}, n109, σ1^{s}74**/100**, mb4.4**/53**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	2.85	126	P	Pn	12 07 13.3	+0.5
LHMI	Lhok Sumawe	2.85	126	Pn	Pn	12 07 12.2	-0.6
TPTI		4.44	145	P	Pn	12 07 34.9	+0.3
TSI	Tuntungan	5.19	131	P	Pn	12 07 48.0	+3.1
	1.0nm50nm,0.6s						
PSI	Prapat	5.92	134	Pn	Pn	12 07 54.8	-0.3
	1.2nm,0.3s,baz=327,slow=14,SNR=5.2						
GSI	Gunungsitoli	6.31	152	P	Pn	12 08 01.3	+0.9
	0.4nm38nm,1.6s						
DGPR	DIGLIPUR	6.44	345	eP	Pn	12 08 05.8	+3.7
MNSI	Mandailing Nat	7.84	141	P	Pn	12 08 22.9	+1.5
	22nm,0.7s						
PPI	Padang Panjang	9.32	142	P	Pn	12 08 42.5	+0.8
	7.3nm,0.4s						
CMAR	Chiang Mai Arr	12.21	20	Pn	Pn	12 09 21.2	-0.1
	0.3nm,0.3s,baz=212,slow=14,SNR=7.7						
CMAR	Chiang Mai Arr	12.21	20		Pn	12 09 22.2	+0.9
PALK	Pallekele	13.83	272	Pn	Pn	12 09 43.2	-0.3
	2.2nm,0.3s,baz=203,slow=12,SNR=5.7						
PALK	Pallekele	13.83	272		Pn	12 09 42.7	-0.8
LHSI	Lahat	13.88	140	P	Pn	12 09 44.0	-0.2
	36nm,0.8s						
KLSI		15.32	139	P	Pn	12 10 01.1	-2.5
	5.1nm,1.4s						
VIS	Vishakhapatnam	15.39	315	eP	Pn	12 09 58.4	-6.1
BOK	Bokaro	18.76	334	ex	Pn	12 10 45.2	-1.6
ODAN	Odare	20.99	342	eP	Pn	12 11 13.0	-0.4
RAMN	Ramite	21.33	340	eP	P	12 11 13.9	-0.5
	19nm,0.5s						
TAPN	Taplejung	21.35	343	eP	P	12 11 14.8	+0.1
JIRN	Jiri	22.12	340	eP	P	12 11 23.6	+0.6
PKI	Pulchoki	22.32	338	eP	P	12 11 28.8	+3.7
PKIN	Phulchoki	22.33	338	eP	P	12 11 28.7	+3.5
GUN	Gumba	22.46	339	eP	P	12 11 26.5	-0.1
DMN	Daman	22.47	337	eP	P	12 11 29.0	+2.4
KKN	Kakani	22.57	338	eP	P	12 11 27.1	-0.5
GKN	Gorkha	23.00	337	eP	P	12 11 33.5	+1.3
KOLN	Koldanda	23.22	335	eP	P	12 11 32.7	-1.7
	30nm,0.9s						
DANN	Dangsing	23.66	336	eP	P	12 11 37.6	-1.2
	17nm,0.5s						
ABJI	Asem Bagus	24.41	126	P	P	12 11 46.6	+1.0
	79nm,1.0s						
SRBI	Singaraja	25.36	126	P	P	12 11 55.2	+1.0
	2μm56nm,1.4s						
MPSI	Mapaga	26.04	104	P	P	12 11 59.0	-1.4
H08S3	Diego Garcia H	26.40	237	T	T	12 38 47.5	
	baz=56,slow=75,SNR=126						
H08S2	Diego Garcia H	26.40	237	T	T	12 38 47.8	
	baz=56,slow=75,SNR=72						
H08S1	Diego Carcia H	26.42	237	T	T	12 38 50.4	
	baz=56,slow=75,SNR=15						
FITZ	Fitzroy Crossi	39.43	130	P	P	12 13 55.5	-1.7
	1.1nm,0.7s,baz=18,slow=20,SNR=2.0						
MKAR	Makanchi Array	41.12	347	P	P	12 14 09.4	-1.4
	5.3nm,0.8s,baz=170,slow=8.1,SNR=7.9						
SONM	Songino Array	41.98	12	P	P	12 14 18.0	0.0
	2.7nm,0.9s,baz=193,slow=9.8,SNR=12						
SONM	Songino Array	41.98	12	P	P	12 14 17.6	-0.4
GEYT	Alibeck	45.23	318	P	P	12 14 44.0	-0.3
	2.4nm,0.6s,baz=134,slow=10,SNR=1.2						
KURBB	Kurchatov Arra	45.58	346	P	P	12 14 46.5	-0.2
	6.5nm,0.8s,baz=167,slow=6.9,SNR=20						
KURK	Kurchatov	45.65	346	P	P	12 14 46.7	-0.5
KURK				IAmb	IAmb	12 14 55.4	
	comp=Z,8.5nm,0.8s						
WB0	Warramunga Arr	47.27	125	P	P	12 14 58.7	-1.8
WB0				IAmb	IAmb	12 15 15.2	
	comp=Z,3.2nm,0.8s						
WRA	Warramunga Arr	47.32	125	P	P	12 14 59.9	-0.9
	comp=Z,0.8nm,0.6s,baz=304,slow=8.8,SNR=9.9						
WRA				PcP	PcP	12 16 31.6	-0.1
	comp=Z,0.8nm,0.7s,baz=310,slow=2.9,SNR=4.6						
WRA	Warramunga Arr	47.32	125	P	P	12 15 00.6	-0.3
WRAB	Tennant Creek	47.32	125	P	P	12 15 00.0	-0.8
WRAB				IAmb	IAmb	12 15 27.4	
	comp=Z,4.5nm,0.9s						
WB2	Warramunga Arr	47.33	125	P	P	12 15 00.5	-0.5
WB2				IAmb	IAmb	12 15 27.4	
	comp=Z,5.5nm,0.9s						
WR0	Warramunga Arr	47.49	125	P	P	12 15 03.0	+0.8
WR0				IAmb	IAmb	12 15 21.2	
	comp=Z,5.5nm,1.0s						
ZALV	Zalesovo Beam	47.56	352	P	P	12 15 02.3	+0.1
	comp=Z,6.1nm,0.8s,baz=182,slow=7.4,SNR=7.5						
AS31	Alice Springs	48.94	130	P	P	12 15 13.7	+0.4
ASAR	Alice Springs	48.94	130	P	P	12 15 11.8	-1.5
	comp=Z,1.4nm,0.8s,baz=303,slow=7.5,SNR=18						
ASAR				PcP	PcP	12 16 38.0	+0.6
	comp=Z,2.0nm,0.8s,baz=306,slow=3.9,SNR=8.8						
ASAR	Alice Springs	48.94	130	P	P	12 15 13.1	-0.2
FORT	Forrest	49.30	141	P	P	12 15 15.6	-0.3
BVAR	Borovoye Array	50.04	341	P	P	12 15 20.4	-0.8
	comp=Z,3.5nm,0.8s,baz=189,slow=15,SNR=4.3						
BRVK	Borovoye	50.10	341	P	P	12 15 21.0	-0.7
BRVK				IAmb	IAmb	12 15 27.6	
	comp=Z,5.5nm,0.7s						
ABKAR	Akbulak array	51.29	331	P	P	12 15 30.5	-0.3
ABKAR	Akbulak array	51.29	331	P	P	12 15 30.6	-0.2
AKTO	Aktyubinsk	53.01	331	P	P	12 15 42.8	-0.8
	comp=Z,3.0nm,0.5s,baz=108,slow=12,SNR=4.8						
BBOO	Buckleboo	55.78	138	P	P	12 16 02.9	-1.1
BBOO				IAmb	IAmb	12 16 06.9	
	comp=Z,8.7nm,0.9s						
ARU	Arti	56.95	337	P	P	12 16 12.0	+0.2
	comp=Z,0.6nm,0.3s,baz=130,slow=5.1,SNR=4.2						
ARU	Arti	56.95	337	P	P	12 16 12.1	+0.2
ARU				IAmb	IAmb	12 16 24.0	
	comp=Z,9.4nm,1.0s						
KMBO	Kilima Mbogo	57.81	264	P	P	12 16 20.7	+1.7
	comp=Z,4.5nm,0.8s,baz=56,slow=10,SNR=13						
KBZ	Khabaz	58.12	318	P	P	12 16 21.9	+1.5
	comp=Z,2.5nm,0.8s,baz=138,slow=5.0,SNR=4.1						
STKA	Stephens Creek	59.10	134	P	P	12 16 25.8	-1.7
	comp=Z,1.6nm,0.7s,baz=300,slow=9.2,SNR=3.7						
STKA	Stephens Creek	59.10	134	P	P	12 16 27.4	0.0
BELG	Belogornoye	59.37	329	P	P	12 16 30.5	+1.6
	comp=Z,14nm,0.7s,baz=327,slow=5.2,SNR=5.7						
MMAI	Mount Meron Ar	60.55	304	P	P	12 16 38.1	+0.6
	comp=Z,1.4nm,0.3s,baz=355,slow=9.2,SNR=4.1						
BRTR	Keskin Array B	63.42	311	P	P	12 16 55.2	-1.5
	comp=Z,1.1nm,0.7s,baz=145,slow=7.1,SNR=3.8						
BRTR	Keskin Array B	63.42	311	P	P	12 16 56.5	-0.2
TOO	Toolangi	64.83	137	P	P	12 17 05.5	-0.4
CAN	Canberra	66.17	133	P	P	12 17 14.5	-0.1
TIXI	Tiksi	68.06	11	P	P	12 17 24.8	-1.0
TIXI				IAmb	IAmb	12 17 35.8	
	comp=Z,5.5nm,0.8s						
AKASG	Malin Array Be	69.20	322	P	P	12 17 34.1	+0.7
	comp=Z,0.7nm,0.4s,baz=94,slow=4.6,SNR=6.7						
BURAR	Bucovina Array	71.07	318	P	P	12 17 44.9	-0.2
FIA1	FINESS Array S	73.77	332	P	P	12 18 00.8	+0.1
FINES	FINESS Array B	73.77	332	P	P	12 17 59.1	-1.7
	comp=Z,2.6nm,0.7s,baz=72,slow=6.2,SNR=8.6						
FINES	FINESS Array B	73.77	332	P	P	12 17 59.7	-1.0
BOSA	Boshof	75.50	238	P	P	12 18 12.3	+0.8
	comp=Z,1.8nm,0.7s,baz=98,slow=5.0,SNR=4.9						
BOSA	Boshof	75.50	238	P	P	12 18 12.1	+0.5
BOSA				IAmb	IAmb	12 18 19.2	
	comp=Z,5.1nm,0.8s						
ARCES	ARCESS Array B	76.32	340	P	P	12 18 14.6	-0.7
	comp=Z,6.4nm,1.1s,baz=81,slow=7.5,SNR=4.7						
DPC	Dobruska-Polom	77.24	320	eP	P	12 18 27.3	+6.3
CONA	Conrad Observa	77.37	317	eP	P	12 18 27.1	+5.3
	comp=Z,6.7nm,1.6s						
ARSA	Arzberg	77.56	317	eP	P	12 18 27.9	+5.1
	comp=Z,2.9nm,1.1s						
SOKA	Soboth	77.86	316	eP	P	12 18 28.1	+3.6
	comp=Z,5.2nm,1.3s						
OBKA	Obir	78.19	316	eP	P	12 18 30.1	+3.7
	comp=Z,2.1nm,1.1s						
MOA	Molln	78.44	317	eP	P	12 18 30.3	+2.6
	comp=Z,3.7nm,1.2s						
MYKA	Terra Mystica	78.82	316	eP	P	12 18 32.8	+3.0
	comp=Z,3.2nm,0.9s						
GERES	GERESS Array B	78.86	318	P	P	12 18 28.4	-1.6
	comp=Z,1.6nm,0.8s,baz=71,slow=7.4,SNR=5.0						
GERES	GERESS Array B	78.86	318	P	P	12 18 31.2	+1.2
KHC	Kasperske Hory	78.95	319	eP	P	12 18 28.3	-2.2
KBA	Koelnbreinsper	79.04	317	eP	P	12 18 35.0	+3.9
	comp=Z,2.7nm,1.0s						
ABTA	Abfaltersbach	79.60	316	eP	P	12 18 37.1	+3.0
	comp=Z,0.1nm,0.3s						
WTTA	Wattenberg	80.20	317	eP	P	12 18 42.1	+4.6
	comp=Z,4.3nm,0.6s						
WATA	Walderalm	80.25	317	eP	P	12 18 40.4	+2.7
	comp=Z,1.8nm,0.6s						
SQTA	Sankt Quirin	80.50	317	eP	P	12 18 42.2	+3.2
	comp=Z,4.5nm,0.6s						
MOTA	Moosalm	80.57	317	eP	P	12 18 43.2	+3.7
	comp=Z,4.0nm,0.7s						
NB2	NORSAR Subarra	80.79	331	P	P	12 18 45.6	+5.4
	comp=Z,1.3nm,0.6s,baz=96,slow=5.3						
NOA	NORSAR Array B	80.79	331	P	P	12 18 38.3	-1.9
	comp=Z,1.3nm,0.9s,baz=93,slow=5.6,SNR=2.9						
RETA	Reutte	80.80	317	eP	P	12 18 45.4	+4.8
	comp=Z,6.9nm,1.0s						
FETA	Feichten	80.82	316	eP	P	12 18 45.9	+5.1
	comp=Z,4.6nm,1.1s						
DAVA	Damuels	81.40	317	eP	P	12 18 49.0	+5.1
	comp=Z,11nm,1.5s						
SENIN	Lac Senin/Sane	83.20	316	P	P	12 18 52.2	-1.2
SENIN				IAmb	IAmb	12 19 00.9	
	comp=Z,6.1nm,0.8s						
ESDC	Sonseca Array	92.20	310	P	P	12 19 36.8	-0.1
	comp=Z,2.1nm,0.8s,baz=58,slow=5.4,SNR=8.7						
NVAR	Mina Array Bea	125.47	32	PKP	PKiKP	12 25 29.6	+0.7
	comp=Z,1.1nm,0.8s,baz=290,slow=1.9,SNR=8.5						
NVAR	Mina Array Bea	125.47	32		PKiKP	12 25 31.1	+2.2
PDAR	Pinedale Array	125.86	22	PKP	PKiKP	12 25 29.4	-0.2
	comp=Z,0.7nm,0.8s,baz=79,slow=0.8,SNR=5.7						
TXAR	Lajitas Array	139.88	25	PKP	PKiKP	12 25 57.5	-0.7
	comp=Z,0.2nm,0.5s,baz=350,slow=3.7,SNR=2.2						
PLCA	Paso Flores	143.82	199	PKP	PKPdf	12 26 03.1	+0.7
	comp=Z,2.5nm,1.0s,baz=77,slow=5.0,SNR=3.9						
CPUP	Villa Florida	147.06	231	PKPbc	PKPbc	12 26 10.2	-0.1
	comp=Z,0.9nm,0.4s,baz=134,slow=8.0,SNR=3.3						

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*IDC **08** 12:08:34.1±0.8, 31°.50N×67°.14E, h0^{km}, mb3.9/18, mb1 4.0/21, mb1mx3.9/57, mbtmp3.9/21, ML4.0/3, MS4.4/3, Ms1 4.4/3, ms1mx3.7/57, Error ellipse: s-maj=18.8km s-min=16.5km az=137.0*

*NEIC **08** 12:08:38.8±2.5, 31°.5N±0°.1×67°.06E±0°.10, h20^{km}±6^{km}, mb4.3/15, Error ellipse: s-maj=16.8km s-min=11.7km az=175.0*

ISC 08 12:08:37.2±0.6**, 31°.50N**±0°.08×**67°.04E**±0°.07**, h17^{km}, n61, σ1^{s}10**/58**, mb4.1**/23**, 1C, Southeastern Afghanistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	Kabul	3.47	29	Pn	Pn	12 09 32.1	+1.4
THW	Thamme Wali	4.20	71	⇑P	Pn	12 09 41.8	+1.4
CEP	Cherat	4.72	59	P	Pn	12 09 49.2	+1.5
HRA	Herat	4.95	307	Pn	Pn	12 09 53.2	+2.2
NIL	Nilore	5.67	66	Pn	Pn	12 10 01.9	+1.3
CHGR	Chuyangaron	7.35	13	Pn	Pn	12 10 25.2	+1.4
AJM	Ajmer	8.33	125	ex	Sn	12 12 11.9	+1.1
BTK	Batken	9.08	19		Pn	12 10 49.2	+1.8
WSAR	Wadi Sarin	11.11	224	Pn	Pn	12 11 13.3	-1.9

	1.6nm,0.3s,baz=79,slow=8.2,SNR=8.3						
AML	**Almayashu**	**11.87**	**25**	P	**Pn**	**12 11 24.8**	**-1.2**
	SNR=18						
KK31	**Karatay Array**	**11.91**	**12**	Pn	**Pn**	**12 11 24.9**	**-1.3**
KKAR	**Karatay Array**	**11.91**	**12**	Pn	**Pn**	**12 11 26.2**	**0.0**
AAK	**Ala-Archa**	**12.61**	**26**	Pn	**Pn**	**12 11 34.2**	**-1.7**
	1.1nm,0.3s,baz=222,slow=6.9,SNR=17						
AAK	**Ala-Archa**	**12.61**	**26**	P	**Pn**	**12 11 35.2**	**-0.7**
	SNR=5.8						
AAK	**Ala-Archa**	**12.61**	**26**	Pn	**Pn**	**12 11 35.2**	**-0.7**
CHMS	**Chumysh**	**13.01**	**26**	P	**Pn**	**12 11 39.9**	**-1.4**
	SNR=8.7						
USP	**Ospenovka**	**13.15**	**25**	P	**Pn**	**12 11 41.4**	**-1.8**
	SNR=5.1						
TKM2	**Tokmak 2**	**13.28**	**28**	P	**Pn**	**12 11 43.5**	**-1.5**
	SNR=7.3						
ABKAR	**Akbulak array**	**18.53**	**345**	P	**P**	**12 12 51.7**	**-0.9**
ABKAR	**Akbulak array**	**18.53**	**345**	P	**P**	**12 12 52.1**	**-0.6**
ABKAR				IAmb	IAmb	12 12 57.7	
	comp=Z,5.7nm,0.9s						
MAKZ	**Makanchi**	**19.13**	**33**	P	**P**	**12 12 58.5**	**-0.9**
MAKZ				IAmb	IAmb	12 13 06.0	
	comp=Z,7.5nm,0.8s						
MK31	**Makanchi Array**	**19.27**	**33**	P	**P**	**12 13 01.2**	**+0.4**
MKAR	**Makanchi Array**	**19.27**	**33**	P	**P**	**12 12 59.6**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=215,slow=11,SNR=9.5						
MKAR	**Makanchi Array**	**19.27**	**33**	P	**P**	**12 13 00.6**	**-0.3**
GNI	**Garni**	**20.00**	**302**	LR	LR	12 23 01.2	
	comp=Z,815nm,20.8s,baz=23,slow=43						
AKTO	**Aktyubinsk**	**20.08**	**343**	P	**P**	**12 13 10.3**	**+0.6**
	comp=Z,1.9nm,0.5s,baz=168,slow=16,SNR=3.8						
KURBB	**Kurchatov Arra**	**20.93**	**21**	P	**P**	**12 13 18.4**	**-0.6**
	comp=Z,2.6nm,0.6s,baz=215,slow=10,SNR=9.3						
KURK	**Kurchatov**	**21.04**	**21**	P	**P**	**12 13 20.8**	**+0.7**
KURK				IAmb	IAmb	12 13 27.2	
	comp=Z,5.7nm,0.8s						
BVAR	**Borovoye Array**	**21.65**	**5**	P	**P**	**12 13 26.2**	**-0.4**
	comp=Z,7.2nm,0.7s,baz=197,slow=18,SNR=15						
BRVK	**Borovoye**	**21.68**	**5**	P	**P**	**12 13 26.7**	**-0.2**
BRVK				IAmb	IAmb	12 13 30.3	
	comp=Z,14nm,0.8s						
KBZ	**Khabaz**	**22.60**	**310**	P	**P**	**12 13 38.0**	**+1.2**
	comp=Z,3.3nm,1.0s,baz=145,slow=9.6,SNR=4.3						
ZALV	**Zalesovo Beam**	**25.82**	**24**	P	**P**	**12 14 07.0**	**-0.3**
	comp=Z,2.2nm,0.6s,baz=218,slow=9.1,SNR=7.3						
ZALV	**Zalesovo Beam**	**25.82**	**24**	P	**P**	**12 14 07.4**	**+0.1**
SONM	**Songino Array**	**33.99**	**50**	P	**P**	**12 15 19.3**	**-0.6**
	comp=Z,1.6nm,1.0s,baz=255,slow=4.3,SNR=1.8						
BURAR	**Bucovina Array**	**35.55**	**309**	P	**P**	**12 15 34.3**	**+0.9**
FINES	**FINESS Array B**	**40.01**	**331**	P	**P**	**12 16 09.2**	**-1.6**
	comp=Z,3.8nm,0.9s,baz=134,slow=16,SNR=1.1						
GERES	**GERESS Array B**	**43.34**	**309**	P	**P**	**12 16 39.6**	**+1.2**
	comp=Z,0.5nm,0.6s,baz=96,slow=8.2,SNR=4.6						
GERES	**GERESS Array B**	**43.34**	**309**	P	**P**	**12 16 38.8**	**+0.4**
ARCES	**ARCESS Array B**	**44.64**	**341**	P	**P**	**12 16 48.0**	**-0.4**
	comp=Z,3.4nm,0.9s,baz=115,slow=8.4,SNR=6.3						
ARCES	**ARCESS Array B**	**44.64**	**341**	P	**P**	**12 16 47.7**	**-0.7**
MSSA	**Maissana**	**46.27**	**303**	P	**P**	**12 17 02.1**	**+0.4**
MSSA				IAmb	IAmb	12 17 18.2	
	comp=Z,6.3nm,1.0s						
NOA	**NORSAR Array B**	**46.55**	**326**	P	**P**	**12 17 03.6**	**0.0**
	comp=Z,1.3nm,0.9s,baz=102,slow=8.0,SNR=3.3						
SENIN	**Lac Senin/Sane**	**47.69**	**306**	P	**P**	**12 17 13.4**	**+0.4**
KSRS	**Korea Array**	**49.79**	**66**	P	**P**	**12 17 27.6**	**-1.4**
	comp=Z,2.0nm,0.8s,baz=268,slow=9.1,SNR=4.7						
KLR	**Kul'dur**	**50.82**	**50**	P	**P**	**12 17 36.2**	**-0.4**
	comp=Z,1.2nm,0.5s,baz=312,slow=14,SNR=2.7						
JWT	**Wachi**	**56.18**	**66**	P	**P**	**12 18 16.9**	**+0.7**
TORD	**Torodi Ar. Bea**	**62.31**	**269**	P	**P**	**12 18 59.8**	**+0.9**
	comp=Z,0.8nm,0.7s,baz=43,slow=8.1,SNR=6.0						
TORD	**Torodi Ar. Bea**	**62.31**	**269**	P	**P**	**12 19 00.4**	**+1.5**
TORD				IAmb	IAmb	12 19 07.1	
	comp=Z,2.5nm,1.2s						
BOSA	**Boshof**	**71.80**	**218**	P	**P**	**12 19 58.3**	**-0.7**
	comp=Z,2.2nm,1.0s,baz=45,slow=7.1,SNR=2.1						
TOLK	**Toolik Lake Re**	**76.55**	**13**	P	**P**	**12 20 26.2**	**0.0**
TOLK				IAmb	IAmb	12 20 47.7	
	comp=Z,5.8nm,1.3s						
BMAR	**Burnt Mountain**	**78.53**	**12**	P	**P**	**12 20 38.1**	**+0.9**
INK	**Inuvik**	**79.32**	**8**	P	**P**	**12 20 40.3**	**-1.1**
	comp=Z,0.7nm,0.8s,baz=342,slow=7.9,SNR=4.3						
ILAR	**Eielson Array**	**80.45**	**14**	P	**P**	**12 20 45.7**	**-1.9**
	comp=Z,0.1nm,0.7s,baz=321,slow=7.0,SNR=1.3						
SCRK	**Sand Creek**	**81.74**	**13**	P	**P**	**12 20 54.5**	**-0.2**
SCRK				IAmb	IAmb	12 21 20.2	
	comp=Z,3.4nm,1.2s						
WRA	**Warramunga Arr**	**82.31**	**119**	P	**P**	**12 20 57.9**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=324,slow=4.3,SNR=2.7						
WB2	**Warramunga Arr**	**82.32**	**119**	P	**P**	**12 21 00.2**	**+2.0**
WB2				IAmb	IAmb	12 21 16.5	
	comp=Z,2.6nm,1.1s						
DAWY	**Dawson**	**82.50**	**11**	P	**P**	**12 20 58.1**	**-0.5**
DAWY				IAmb	IAmb	12 21 18.4	
	comp=Z,2.2nm,1.2s						
ASAR	**Alice Springs**	**84.25**	**122**	P	**P**	**12 21 08.3**	**+0.2**
	comp=Z,0.8nm,0.8s,baz=306,slow=5.7,SNR=10						
ASAR	**Alice Springs**	**84.25**	**122**	P	**P**	**12 21 08.9**	**+0.7**
YKA	**Yellowknife Ar**	**86.33**	**1**	LR	LR	13 07 04.6	
	comp=Z,254nm,18.1s,baz=0.0,slow=41						
ULM	**Lac du Bonnet**	**97.21**	**349**	LR	LR	13 11 20.0	
	comp=Z,198nm,19.1s,baz=356,slow=39						

IDC 08 12:20:43.5±8.7**,6°.85N×94°.59E,h0km,mb3.3**/3**,mb1 3.5**/3**,**
mb1mx3.2/38**,mbtmp3.3**/3**,Error ellipse:**
s-maj=454.4km s-min=32.8km az=58.0,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**41.18**	**347**	P	P	12 28 29.7	-0.1
	0.4nm,0.7s,baz=162,slow=12,SNR=2.3						
WRA	**Warramunga Arr**	**47.30**	**125**	P	P	12 29 21.0	+1.8
	0.3nm,0.8s,baz=307,slow=8.6,SNR=2.5						
ASAR	**Alice Springs**	**48.92**	**130**	P	P	12 29 29.7	-2.0
	0.2nm,0.7s,baz=303,slow=7.9,SNR=2.3						

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*IDC **08** 12:25:45.7±2.7,6°.55N×94°.01E,h0km,mb3.4/5,mb1 3.6/6,*
mb1mx3.4/46,mbtmp3.4/6,ML4.0/1,Error ellipse:
s-maj=96.2km s-min=24.8km az=65.0

ISC 08 12:25:51.3±2.0**,6°.6N**±0°.2×**94°.2E**±0°.4**,h35km,n6,σ0s.31**/6**,**
mb3.2/5**,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**12.65**	**21**	Pn	**Pn**	**12 28 48.6**	**-0.2**
	0.3nm,0.3s,baz=225,slow=14,SNR=2.0						
MKAR	**Makanchi Array**	**41.30**	**348**	P	**P**	**12 33 33.2**	**-0.2**
	0.3nm,0.7s,baz=170,slow=10,SNR=3.1						
SONM	**Songino Array**	**42.37**	**12**	P	**P**	**12 33 42.7**	**+0.4**
	0.2nm,0.4s,baz=195,slow=10,SNR=2.4						
WRA	**Warramunga Arr**	**47.54**	**125**	P	**P**	**12 34 23.7**	**0.0**
	0.4nm,0.9s,baz=310,slow=8.9,SNR=3.7						
ZALV	**Zalesovo Beam**	**47.78**	**353**	P	**P**	**12 34 24.9**	**-0.1**
	0.7nm,0.6s,baz=182,slow=5.6,SNR=2.0						
ASAR	**Alice Springs**	**49.12**	**129**	P	**P**	**12 34 35.8**	**-0.1**
	0.1nm,0.7s,baz=295,slow=8.9,SNR=1.7						

IDC 08 12:26:16.5±6.9**,6°.94N×94°.62E,h0km,mb3.4**/4**,mb1 3.6**/4**,**
mb1mx3.3/45**,mbtmp3.4**/4**,Error ellipse:**
s-maj=352.8km s-min=17.0km az=59.0,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**41.10**	**347**	P	P	12 34 01.2	-1.0
	0.7nm,0.8s,baz=178,slow=6.6,SNR=3.2						
WRA	**Warramunga Arr**	**47.33**	**125**	P	P	12 34 52.2	-0.3
	0.3nm,0.9s,baz=306,slow=9.8,SNR=1.5						
ZALV	**Zalesovo Beam**	**47.54**	**352**	P	P	12 34 54.5	+0.9
	0.7nm,0.6s,baz=167,slow=7.1,SNR=2.0						
ASAR	**Alice Springs**	**48.95**	**130**	P	P	12 35 05.0	0.0
	0.4nm,0.7s,baz=310,slow=7.2,SNR=3.2						

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*IDC **08** 12:31:10.8±1.0,7°.00N×94°.48E,h0km,mb3.6/7,mb1 3.7/9,*
mb1mx3.6/46,mbtmp3.6/9,ML3.8/2,Error ellipse:
s-maj=39.3km s-min=19.3km az=59.0

ISC 08 12:31:14.5±0.9**,7°.0N**±0°.1×**94°.4E**±0°.2**,h26km,n10,**
σ0s.79/10**,mb3.6**/7**,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	**Prapat**	**6.14**	**132**	Pn	**Pn**	**12 32 44.5**	**+0.8**
	1.5nm,0.3s,baz=338,slow=15,SNR=5.9						
CMAR	**Chiang Mai Arr**	**12.26**	**21**	Pn	**Pn**	**12 34 08.0**	**+0.4**
	0.2nm,0.3s,baz=235,slow=14,SNR=1.5						
MKAR	**Makanchi Array**	**41.02**	**347**	P	**P**	**12 38 56.0**	**+0.4**
	1.1nm,0.7s,baz=163,slow=8.9,SNR=6.7						
SONM	**Songino Array**	**42.00**	**12**	P	**P**	**12 39 02.4**	**-1.3**
	0.9nm,0.9s,baz=195,slow=10,SNR=3.2						
ZALV	**Zalesovo Beam**	**47.48**	**352**	P	**P**	**12 39 47.4**	**+0.3**
	1.0nm,0.7s,baz=180,slow=8.9,SNR=5.6						
WRA	**Warramunga Arr**	**47.55**	**125**	P	**P**	**12 39 47.7**	**-0.5**
	0.4nm,0.7s,baz=306,slow=8.3,SNR=2.2						
ASAR	**Alice Springs**	**49.16**	**130**	P	**P**	**12 39 59.6**	**-1.0**
	0.5nm,0.8s,baz=303,slow=6.7,SNR=6.0						
BRTR	**Keskin Array B**	**63.19**	**311**	P	**P**	**12 41 40.9**	**+0.2**
	0.3nm,0.6s,baz=64,slow=36,SNR=1.6						
GERES	**GERESS Array B**	**78.65**	**318**	P	**P**	**12 43 14.9**	**+0.5**
	0.4nm,0.8s,baz=97,slow=7.0,SNR=1.2						
CPUP	**Villa Florida**	**146.88**	**231**	PKPbc	**PKPab**	**12 50 56.3**	**-0.4**
	2.5nm,0.3s,baz=147,slow=4.5,SNR=19						

WEL 08 12:37:00.0±0.7**,39°S**±5°×**17°4E**±°**,h5km**±3km**,M3.3**/34**,**
ML3.6/34**,MLv3.3**/34**,Error ellipse: s-maj=0.0km**
s-min=0.0km az=135.6,Off west coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PKE	**Pukeiti**	**0.17**	**174**	P	Pg	12 37 03.8	+0.3
DREZ	**Durham Road**	**0.25**	**132**	P	Pg	12 37 05.4	+0.5
DREZ				S	Sg	12 37 09.5	+1.3
NBEZ	**Newall Road No**	**0.26**	**197**	P	Pg	12 37 05.7	+0.6
NBEZ				S	Sg	12 37 10.1	+1.6
NEZ	**North Egmont**	**0.27**	**157**	P	Pg	12 37 05.5	+0.2
KHEZ	**Kahui Hut**	**0.28**	**171**	P	Pg	12 37 05.7	+0.2
MHEZ	**Mangahewa**	**0.29**	**101**	P	Pg	12 37 06.4	+0.8
MHEZ				S	Sg	12 37 11.0	+1.6
PREZ	**Palmer Road**	**0.35**	**154**	P	Pg	12 37 07.5	+0.5
NMEZ	**Namu Road**	**0.40**	**189**	P	Pg	12 37 08.1	+0.4
NMEZ				S	Sb	12 37 14.6	-1.3
LREZ	**Lake Rotokare**	**0.56**	**142**	P	Pg	12 37 11.1	+0.4
VRZ	**Vera Road**	**0.63**	**100**	P	Pg	12 37 12.2	+0.1
HIZ	**Hauiti**	**0.86**	**54**	P	Pg	12 37 16.6	0.0
HIZ				S	Sb	12 37 29.2	-0.1
WAZ	**Wanganui**	**1.08**	**133**	P	Pg	12 37 20.2	-0.5
PKVZ	**Pokaka**	**1.11**	**104**	P	Pg	12 37 20.3	-1.1
PKVZ				S	Sg	12 37 35.3	-0.4
TWVZ	**Taurewa**	**1.15**	**93**	P	Pg	12 37 20.9	-1.2
MTVZ	**Mangateitei**	**1.23**	**108**	P	Pg	12 37 22.7	-0.9
FWVZ	**Far West T-bar**	**1.26**	**101**	P	Pg	12 37 23.1	-1.1
TRVZ	**Turoa**	**1.26**	**103**	P	Pg	12 37 23.3	-1.0
WTVZ	**West Tongariro**	**1.27**	**95**	P	Pg	12 37 23.1	-1.3
NGZ	**Ngauruhoe**	**1.28**	**97**	P	Pg	12 37 23.8	-0.9
WHVZ	**Whangaehu Hut**	**1.29**	**102**	P	Pg	12 37 23.7	-1.1
NNVZ	**North Ngauruho**	**1.29**	**95**	P	Pg	12 37 23.4	-1.4
WNVZ	**Wahianoa**	**1.31**	**104**	P	Pn	12 37 23.9	-1.2
KRVZ	**Karewarewa**	**1.31**	**94**	P	Pn	12 37 24.1	-1.0
SNVZ	**South Ngauruho**	**1.32**	**98**	P	Pn	12 37 24.2	-1.1
OTVZ	**Oturere**	**1.33**	**97**	P	Pn	12 37 24.5	-1.0
NTVZ	**North Tongarir**	**1.34**	**94**	P	Pn	12 37 24.5	-0.9
TUVZ	**Tukino**	**1.34**	**101**	P	Pn	12 37 24.7	-0.8
KATZ	**Kakaramea**	**1.35**	**89**	P	Pn	12 37 24.9	-0.8
TMVZ	**Te Maari**	**1.36**	**95**	P	Pn	12 37 24.9	-0.9
ETVZ	**East Tongariro**	**1.37**	**95**	P	Pn	12 37 25.3	-0.6
TLZ	**Tolley Road**	**1.41**	**61**	P	Pn	12 37 25.2	-1.3
WATZ	**Wairara**	**1.42**	**78**	P	Pn	12 37 26.1	-0.4
RATZ	**Rangitukua**	**1.42**	**84**	P	Pn	12 37 25.9	-0.6
MOVZ	**Moawhango**	**1.44**	**106**	P	Pn	12 37 25.8	-1.1
RITZ	**Rihia Road**	**1.48**	**89**	P	Pn	12 37 27.4	+0.1
KUTZ	**Kaahu Road**	**1.55**	**71**	P	Pn	12 37 28.2	-0.1
OHWZ	**Ohakea**	**1.58**	**139**	P	Pn	12 37 29.0	+0.4
WHTZ	**Whakaora**	**1.60**	**78**	P	Pb	12 37 29.6	-0.5
BHHZ	**Black Hill Sta**	**1.70**	**107**	P	Pn	12 37 29.9	-0.4
TOZ	**Tahuroa Road**	**1.77**	**44**	P	Pn	12 37 30.3	-1.0
DUWZ	**D'Urville Isla**	**1.78**	**181**	P	Pn	12 37 30.1	-1.3
WPRZ	**Whakapapatarin**	**1.79**	**74**	P	Pn	12 37 31.8	+0.2
TSZ	**Takapari Road**	**1.86**	**124**	P	Pb	12 37 34.0	-0.6
HSRZ	**Hossack Road**	**1.92**	**69**	P	Pb	12 37 34.8	-0.8
MRHZ	**Matea Rd**	**1.92**	**85**	P	Pn	12 37 33.4	-0.1
UTU	**Utuhina**	**1.94**	**65**	P	Pn	12 37 33.6	-0.1
PNHZ	**Pukenui**	**1.95**	**118**	P	Pb	12 37 35.5	-0.6
KWHZ	**Kaweka Forest**	**1.95**	**103**	P	Pn	12 37 34.3	+0.4
POWZ	**Post Office Ro**	**1.95**	**135**	P	Pb	12 37 35.1	-1.0
KRHZ	**Kereru**	**1.97**	**109**	P	Pb	12 37 35.7	-0.6
BKZ	**Black Stump Fm**	**1.97**	**95**	P	Pn	12 37 34.3	+0.1
KIW	**Kapiti Island**	**1.98**	**159**	P	Pn	12 37 33.7	-0.4
OGWZ	**Otaki Gorge**	**2.02**	**153**	P	Pn	12 37 35.6	+0.9
AWAZ	**Awhitu Peninsu**	**2.03**	**16**	P	Pn	12 37 34.2	-0.6
MRZ	**Mangatainoka R**	**2.06**	**143**	P	Pn	12 37 36.4	+1.1
QRZ	**Quartz Range**	**2.11**	**211**	P	Pn	12 37 33.8	-2.2
DVHZ	**Dannevirke**	**2.13**	**128**	P	Pb	12 37 38.2	-0.8
WTAZ	**Waiatarua**	**2.14**	**13**	P	Pn	12 37 35.9	-0.5
MCHZ	**McNeill Hill**	**2.17**	**102**	P	Pb	12 37 39.5	-0.2
PRWZ	**Pori Road**	**2.18**	**135**	P	Pb	12 37 39.0	-0.9
WPHZ	**Waipukurau**	**2.18**	**119**	P	Pb	12 37 39.7	-0.3
TCW	**Tory Channel**	**2.20**	**174**	P	Pn	12 37 36.8	-0.4
ETAZ	**East Tamaki Re**	**2.20**	**21**	P	Pn	12 37 36.6	-0.6
NMHZ	**Naumai**	**2.22**	**93**	P	Pb	12 37 39.2	-1.4
HOWZ	**Holdsworth Sta**	**2.22**	**148**	P	Pn	12 37 38.8	+1.3
NNZ	**Nelson**	**2.24**	**191**	P	Pn	12 37 36.7	-1.1
CAW	**Cannon Point**	**2.25**	**158**	P	Pn	12 37 38.2	+0.3
MTHZ	**Maungataniwha**	**2.25**	**87**	P	Pb	12 37 41.2	0.0
TIWZ	**Tintock**	**2.29**	**140**	P	Pb	12 37 40.6	-1.3
OPRZ	**Ohinepanea**	**2.35**	**61**	P	Pn	12 37 39.1	-0.2
MARZ	**Manawahe**	**2.37**	**65**	P	Pn	12 37 37.2	-2.3
MBAZ	**Motutapu North**	**2.37**	**19**	P	Pn	12 37 38.9	-0.6
ARHZ	**Aropaoanui**	**2.37**	**97**	P	Pb	12 37 42.1	-1.1
KAHZ	**Kahuranaki**	**2.39**	**110**	P	Pb	12 37 44.6	+1.1
TUWZ	**Tuamarina**	**2.41**	**180**	P	Pn	12 37 39.2	-0.8
WIAZ	**Waiheke Island**	**2.41**	**23**	P	Pn	12 37 39.6	-0.5
ANWZ	**Angora Road**	**2.41**	**127**	P	Pg	12 37 45.6	-0.7
BFZ	**Birch Farm**	**2.42**	**134**	P	Pb	12 37 42.7	-1.3
MTW	**Mount Morrison**	**2.44**	**152**	P	Pn	12 37 42.4	+1.8
PXZ	**Pawanui**	**2.46**	**115**	P	Pg	12 37 46.5	-0.7
BHW	**Baring Head**	**2.48**	**164**	P	Pb	12 37 43.4	-1.7
TMWZ	**Te Maipa**	**2.56**	**145**	P	Pb	12 37 44.6	-1.8
URZ	**Urewera**	**2.58**	**74**	P	Pb	12 37 45.3	-1.4
MSWZ	**Moikau Station**	**2.59**	**158**	P	Pn	12 37 44.2	+1.7
PAWZ	**Paruwai Farm**	**2.61**	**155**	P	Pb	12 37 47.3	0.0
KUZ	**Kuaotunu**	**2.67**	**32**	P	Pn	12 37 42.6	-1.0
BSWZ	**Blackbirch Sta**	**2.69**	**181**	P	Pn	12 37 45.1	+1.1
TRWZ	**Traveller**	**2.72**	**151**	P	Pb	12 37 47.5	-1.6
PLWZ	**Palliser**	**2.73**	**159**	P	Pb	12 37 49.1	-0.3
THZ	**Tophouse**	**2.85**	**196**	P	Pn	12 37 45.9	-0.4
MWZ	**Matawai**	**2.87**	**77**	P	Pn	12 37 48.4	+1.9
WCZ	**Waipu Caves**	**3.09**	**6**	P	Pn	12 37 48.9	-0.6
RUGZ	**Raukumara Rang**	**3.10**	**71**	P	Pb	12 37 53.3	-2.5
DSZ	**Denniston Nort**	**3.18**	**211**	P	Pn	12 37 49.4	-1.4
HAZ	**Te Kaha**	**3.26**	**68**	P	Pb	12 37 55.1	-3.2
KHZ	**Kahutara**	**3.41**	**185**	P	Pn	12 37 53.9	+0.2
OUZ	**Omahuta**	**3.81**	**355**	P	Pn	12 37 58.9	-0.4
LTZ	**Lake Taylor**	**3.97**	**198**	P	Pn	12 38 01.7	+0.1
GVZ	**Greta Valley S**	**4.00**	**190**	P	Pn	12 38 02.1	+0.1
INZ	**Inchbonnie**	**4.16**	**206**	P	Pn	12 38 03.1	-1.1
WVZ	**Waitaha Valley**	**4.73**	**210**	P	Pn	12 38 10.5	-1.4
OKCZ	**Okains Bay**	**4.75**	**188**	P	Pn	12 38 11.1	-1.1
MQZ	**McQueen's Vall**	**4.78**	**191**	P	Pn	12 38 11.0	-1.7
GCSZ	**Gaunt Creek Bo**	**5.09**	**211**	P	Pn	12 38 15.9	-1.1
TMZ	**Timaru**	**5.80**	**201**	P	Pn	12 38 24.9	-1.8

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*IDC **08** 12:43:44.2±1.4,6°.49N×94°.44E,h0km,mb3.7/7,mb1 3.9/8,*
mb1mx3.6/50,mbtmp3.7/8,ML4.0/1,MS4.3/1,Ms1 4.3/1,
ms1mx3.2/52,Error ellipse: s-maj=56.8km s-min=20.2km
az=57.0

ISC 08 12:43:49.6±1.3**,6°.5N**±0°.2×**94°.5E**±0°.2**,h35km,n9,σ0s.95**/8**,**
mb3.6/7**,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**12.65**	**20**	Pn	**Pn**	**12 46 47.6**	**+0.4**
	0.3nm,0.3s,baz=187,slow=11,SNR=4.8						
MKAR	**Makanchi Array**	**41.49**	**347**	P	**P**	**12 51 32.5**	**-0.8**
	0.7nm,0.7s,baz=163,slow=8.5,SNR=6.5						
SONM	**Songino Array**	**42.42**	**12**	P	**P**	**12 51 40.9**	**-0.1**
	0.6nm,0.7s,baz=189,slow=12,SNR=2.7						
KURBB	**Kurchatov Arra**	**45.95**	**346**	P	**P**	**12 52 07.8**	**-1.2**
	0.3nm,0.3s,baz=171,slow=6.9,SNR=5.1						
WRA	**Warramunga Arr**	**47.19**	**125**	P	**P**	**12 52 19.9**	**+0.6**
	0.3nm,0.5s,baz=307,slow=8.3,SNR=8.6						
ASAR	**Alice Springs**	**48.78**	**129**	P	**P**	**12 52 30.8**	**-0.8**
	0.4nm,0.5s,baz=301,slow=7.6,SNR=9.6						
BELG	**Belogornoye**	**59.65**	**329**	LR	LR	13 23 01.9	
	comp=Z,229nm,18.4s,baz=167,slow=40						
FINES	**FINESS Array B**	**74.08**	**332**	P	**P**	**12 55 21.9**	**0.0**
	4.2nm,1.1s,baz=103,slow=6.1,SNR=4.8						
GERES	**GERESS Array B**	**79.07**	**318**	P	**P**	**12 55 51.7**	**+1.1**
	0.2nm,0.4s,baz=87,slow=5.0,SNR=2.4						

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*TAP **08** 12:48:18.1,23°.71N×121°.63E,h44km,ML2.5,B*
*JMA **08** 12:48:18.0,23°.67N×121°.62E,h43km±2km*

ISC 08 12:48:18.9±1.2**,23°.70N**±0°.02×**121°.63E**±0°.02**,h43km**±5km**,**
n101,σ0s.58/190**,1D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TEGC	**Jichi Village**	**0.09**	**273**	P	**Pn**	**12 48 26.0**	**+0.3**
	baz=268						
TEYL	**Yanliau Villag**	**0.17**	**349**	P	**Pn**	**12 48 26.7**	**+0.5**
	baz=352						
TEYL				*e*S	**Sn**	**12 48 32.2**	**+0.9**
	baz=352						
EGFH	**Guangfu**	**0.19**	**260**	*i* P	**Pn**	**12 48 25.9**	**-0.5**
	baz=257						
EGFH				S	**Sn**	**12 48 32.2**	**+0.5**
	baz=257						
ESL	**Shilin**	**0.21**	**301**	*i* P	**Pn**	**12 48 25.7**	**-0.9**
	baz=300						
ESL				*i* S	**Sn**	**12 48 32.4**	**+0.4**
	baz=300						
HWA	**Hwalien**	**0.27**	**354**	*i* P	**Pn**	**12 48 26.8**	**-0.3**
	baz=356						
HWA				*e*S	**Sn**	**12 48 33.1**	**+0.2**
	baz=356						
HGSD	**Ruisui**	**0.29**	**222**	P	**Pn**	**12 48 27.5**	**+0.3**
	baz=220						
HGSD				*e*S	**Sn**	**12 48 34.1**	**+1.0**
	baz=220						
ETM	**Tongmen**	**0.29**	**334**	P	**Pn**	**12 48 26.6**	**-0.7**
	baz=333						
ETM				*e*S	**Sn**	**12 48 33.3**	**+0.1**
	baz=333						
EHY	**Hungye**	**0.35**	**235**	*i* P	**Pn**	**12 48 26.9**	**-1.0**
	baz=233						
EHY				S	**Sn**	**12 48 34.2**	**0.0**
	baz=233						
TWD	**Chiawan**	**0.38**	**355**	*i* P	**Pn**	**12 48 27.6**	**-0.7**
	baz=356						
TWD				S	**Sn**	**12 48 34.6**	**-0.1**
	baz=356						
ECBN	**Changbin**	**0.42**	**204**	P	**Pn**	**12 48 28.8**	**+0.1**
	baz=202						
ECBN				*e*S	**Sn**	**12 48 36.9**	**+1.2**
	baz=202						
YULB	**Yu-li**	**0.44**	**225**	P	**Pn**	**12 48 27.8**	**-1.2**
	baz=223						
YULB				S	**Sn**	**12 48 34.8**	**-1.3**
	baz=223						
ETL	**Fush Village**	**0.45**	**359**	*e*P	**Pn**	**12 48 28.7**	**-0.5**
	baz=359						
ETL				S	**Sn**	**12 48 36.6**	**+0.2**
	baz=359						
EYUL	**Yuli**	**0.46**	**219**	*e*P	**Pn**	**12 48 29.6**	**+0.4**
	baz=218						
EYUL				*i* S	**Sn**	**12 48 37.1**	**+0.6**
	baz=218						
NACB	**Ninganchiao**	**0.47**	**356**	P	**Pn**	**12 48 29.1**	**-0.2**
	baz=356						
NACB				S	**Sn**	**12 48 37.5**	**+0.8**
	baz=356						
OWD	**Renai**	**0.49**	**301**	*i* P	**Pn**	**12 48 29.4**	**-0.4**
	baz=300						
OWD				*i* S	**Sn**	**12 48 37.0**	**-0.4**
	baz=300						
ETLH	**Xiulin Townshi**	**0.52**	**344**	*e*P	**Pn**	**12 48 29.0**	**-1.1**
	baz=344						
ETLH				S	**Sn**	**12 48 37.1**	**-1.0**
	baz=344						
CHGB	**Renai**	**0.55**	**310**	⇓P	**Pn**	**12 48 30.3**	**-0.3**
	baz=309						
CHGB				S	**Sn**	**12 48 38.5**	**-0.5**
	baz=309						
WHF	**Hehuan Shan**	**0.55**	**323**	*i* P	**Pn**	**12 48 30.1**	**-0.8**
	baz=322						
WHF				*i* S	**Sn**	**12 48 39.1**	**-0.2**
	baz=322						
FULB	**Fuli**	**0.59**	**212**	*i* P	**Pn**	**12 48 31.2**	**+0.2**
	baz=211						
FULB				*i* S	**Sn**	**12 48 40.4**	**+0.8**
	baz=211						
EHP	**Heping Village**	**0.61**	**9**	*e*P	**Pn**	**12 48 31.2**	**0.0**
	baz=10.0						
SSLB	**Suanglung**	**0.63**	**278**	P	**Pn**	**12 48 31.0**	**-0.5**
	baz=277						
SSLB				S	**Sn**	**12 48 40.8**	**+0.4**
	baz=277						
FUSS	**Fushou**	**0.65**	**327**	*i* P	**Pn**	**12 48 31.6**	**-0.3**
	baz=326						
FUSS				*i* S	**Sn**	**12 48 41.0**	**-0.2**
	baz=326						
CHKT	**Chengkung**	**0.65**	**202**	*i* P	**Pn**	**12 48 31.1**	**-0.7**
	baz=201						
CHKT				*i* S	**Sn**	**12 48 40.8**	**-0.1**
	baz=201						
TWT	**Tachien**	**0.69**	**323**	*i* P	**Pn**	**12 48 32.5**	**+0.1**
	baz=321						
TWT				*i* S	**Sn**	**12 48 41.6**	**-0.5**
	baz=321						
SMLT	**Sun Moon Lake**	**0.69**	**285**	*i* P	**Pn**	**12 48 32.3**	**-0.1**
	baz=284						
SMLT				S	**Sn**	**12 48 42.1**	**-0.1**
	baz=284						
TDCB	**Techi**	**0.70**	**322**	P	**Pn**	**12 48 32.4**	**-0.1**
	baz=321						
TDCB				S	**Sn**	**12 48 41.8**	**-0.5**
	baz=321						
ENA	**Nanau**	**0.73**	**8**	*i* P	**Pn**	**12 48 33.1**	**+0.3**
	baz=8.0						
ENA				*i* S	**Sn**	**12 48 43.5**	**+0.7**
	baz=8.0						
TYC	**Yuchr**	**0.74**	**286**	*i* P	**Pn**	**12 48 32.8**	**-0.1**
	baz=285						
TYC				*i* S	**Sn**	**12 48 43.4**	**+0.3**
	baz=285						
WCS	**Beigang Elemen**	**0.75**	**298**	*i* P	**Pn**	**12 48 33.5**	**+0.4**
	baz=297						
WCS				S	**Sn**	**12 48 43.5**	**+0.3**
	baz=297						
EWUT	**Wuta**	**0.75**	**10**	*e*P	**Pn**	**12 48 33.1**	**0.0**
	baz=10.0						
EWUT				*e*S	**Sn**	**12 48 43.7**	**+0.4**
	baz=10.0						
NNSB	**Datong**	**0.76**	**342**	P	**Pn**	**12 48 33.6**	**+0.3**
	baz=342						
NNSB				S	**Sn**	**12 48 42.7**	**-1.0**
	baz=342						
ELDTW	**Lidau**	**0.76**	**228**	P	**Pn**	**12 48 32.2**	**-1.1**
	baz=226						
ELDTW				S	**Sn**	**12 48 42.9**	**-0.9**
	baz=226						
NNS	**Nan Shan**	**0.77**	**342**	*i* P	**Pn**	**12 48 33.4**	**-0.1**
	baz=342						
NNS				*i* S	**Sn**	**12 48 42.9**	**-1.1**
	baz=342						
ALS	**Alishan**	**0.78**	**256**	*i* P	**Pn**	**12 48 33.5**	**-0.3**
	baz=254						
ALS				*i* S	**Sn**	**12 48 44.6**	**0.0**
	baz=254						
EDH	**Donghe**	**0.79**	**203**	P	**Pn**	**12 48 33.0**	**-0.6**
	baz=202						
EDH				S	**Sn**	**12 48 44.3**	**+0.1**
	baz=202						
WJS	**Zhushan**	**0.84**	**278**	*e*P	**Pn**	**12 48 34.6**	**+0.4**
	baz=277						
WJS				*e*S	**Sn**	**12 48 46.0**	**+0.5**
	baz=277						
WHP	**Taichung City**	**0.85**	**312**	*i* P	**Pn**	**12 48 35.0**	**+0.5**
	baz=312						
WHP				S	**Sn**	**12 48 46.4**	**+0.5**
	baz=312						
CHN5	**Tsauling**	**0.88**	**263**	*i* P	**Pn**	**12 48 35.0**	**+0.1**
	baz=262						
CHN5				*i* S	**Sn**	**12 48 47.1**	**+0.4**
	baz=262						
WNT	**Mingjian**	**0.89**	**281**	*i* P	**Pn**	**12 48 35.2**	**+0.3**
	baz=280						
WNT				S	**Sn**	**12 48 47.0**	**+0.4**
	baz=280						
NDT	**Datong Townshi**	**0.90**	**353**	*i* P	**Pn**	**12 48 35.3**	**+0.2**

	baz=353						
NDT				S	Sn	12 48 46.8	-0.2
	baz=353						
LONT	Longtian	0.92	210	P	Pn	12 48 35.5	+0.1
	baz=209						
LONT				*e*S	Sn	12 48 48.5	+1.0
	baz=209						
TWC	Suao	0.92	12	*i* P	Pn	12 48 35.5	+0.1
	baz=13						
TWC				*i* S	Sn	12 48 48.0	+0.5
	baz=13						
NDS	Dongshan	0.93	5	*e*P	Pn	12 48 35.4	-0.1
	baz=4.0						
NDS				*e*S	Sn	12 48 47.7	0.0
	baz=4.0						
ENTT	Nioudou	0.93	356	*i* P	Pn	12 48 35.2	-0.4
	baz=356						
ENTT				S	Sn	12 48 47.9	+0.1
	baz=356						
STYH	Taoyuan	0.95	236	P	Pn	12 48 35.4	-0.4
	baz=235						
STYH				S	Sn	12 48 48.5	+0.3
	baz=235						
TCU	Taichung	0.98	297	*e*P	Pn	12 48 35.9	-0.3
	baz=296						
TCU				*e*S	Sn	12 48 49.5	+0.5
	baz=296						
YHNB	Yeheng	0.99	346	P	Pn	12 48 35.8	-0.6
	baz=346						
YHNB				S	Sn	12 48 48.4	-0.9
	baz=346						
NSK	Sanguang	1.00	345	*i* P	Pn	12 48 36.3	-0.3
	baz=345						
NSK				*i* S	Sn	12 48 48.6	-0.9
	baz=345						
TPUB	Ta-pu	1.01	247	P	Pn	12 48 36.7	+0.1
	baz=246						
TPUB				S	Sn	12 48 50.2	+0.6
	baz=246						
TWE	Neicheng	1.01	2	*i* P	Pn	12 48 37.7	+1.1
	baz=2.0						
TWE				*i* S	Sn	12 48 49.8	+0.1
	baz=2.0						
TWQ1	Liyutan	1.01	309	P	Pn	12 48 36.9	+0.2
	baz=309						
TWQ1				*i* S	Sn	12 48 50.9	+1.1
	baz=309						
TWGBT	Beinan	1.02	210	P	Pn	12 48 35.8	-0.9
	baz=209						
TWGBT				S	Sn	12 48 50.4	+0.6
	baz=209						
TWG	Pinlang	1.02	211	P	Pn	12 48 35.8	-1.0
	baz=209						
TWG				S	Sn	12 48 50.6	+0.7
	baz=209						
LDUT	Ludao	1.04	188	*e*P	Pn	12 48 35.6	-1.4
	baz=188						
LDUT				*e*S	Sn	12 48 49.5	-0.7
	baz=188						
WTP	Ta-pu	1.04	244	*i* P	Pn	12 48 37.5	+0.4
	baz=243						
WTP				*i* S	Sn	12 48 51.1	+0.6
	baz=243						
WCHH	Zhanghua	1.05	291	*e*P	Pn	12 48 37.4	+0.2
	baz=290						
WCHH				*e*S	Sn	12 48 51.3	+0.6
	baz=290						
ILA	Ilan	1.06	6	*e*P	Pn	12 48 37.7	+0.4
	baz=6.0						
ILA				*e*S	Sn	12 48 51.6	+0.7
	baz=6.0						
NSY	Sanyi	1.07	312	P	Pn	12 48 37.2	-0.3
	baz=311						
NSY				*e*S	Sn	12 48 51.3	+0.2
	baz=311						
NWLT	Wulai	1.07	354	*e*P	Pn	12 48 38.4	+0.9
	baz=353						
NWLT				*e*S	Sn	12 48 50.4	-0.9
	baz=353						
NSTT	Nanjuang	1.09	328	*e*P	Pn	12 48 38.0	+0.3
	baz=328						
NSTT				S	Sn	12 48 52.2	+0.7
	baz=328						
LIOB	Emei	1.09	329	*e*P	Pn	12 48 37.8	0.0
	baz=329						
LIOB				*i* S	Sn	12 48 52.4	+0.6
	baz=329						
WDJ	Dajia District	1.11	305	*e*S	Sn	12 48 52.2	0.0
	baz=305						
NMLH	Miaoli	1.13	317	*e*P	Pn	12 48 38.7	+0.4
	baz=317						
CHN1	Nanshi	1.14	243	P	Pn	12 48 38.9	+0.5
	baz=242						
CHN1				S	Sn	12 48 53.5	+0.6
	baz=242						
WTK	Tuku	1.14	269	*e*P	Pn	12 48 37.9	-0.5
	baz=268						
WTK				*e*S	Sn	12 48 53.2	+0.4
	baz=268						
SGST	Jiashian	1.15	238	*i* P	Pn	12 48 39.0	+0.5
	baz=236						
SGST				*i* S	Sn	12 48 53.4	+0.4
	baz=236						
SLGT	Liugui	1.15	232	P	Pn	12 48 39.3	+0.7
	baz=231						
SLGT				S	Sn	12 48 54.0	+0.9
	baz=231						
WRL	Guolierlin Hig	1.17	280	*e*P	Pn	12 48 39.1	+0.3
	baz=279						
WRL				*e*S	Sn	12 48 53.9	+0.4
	baz=279						
SBCB	Hsinchu	1.23	331	*e*S	Sn	12 48 55.8	+0.7
	baz=331						
WTCT	Ta-ch'eng	1.25	278	*e*S	Sn	12 48 55.5	0.0
	baz=277						
ECL	Taimali	1.27	210	P	Pn	12 48 39.0	-1.1
	baz=208						
ECL				S	Sn	12 48 54.9	-1.1
	baz=208						
TWA	Mucha	1.27	358	*e*P	Pn	12 48 40.5	+0.2
	baz=358						
TIPB	Shuangxi	1.27	8	*e*P	Pn	12 48 40.5	+0.2
	baz=8.0						
TIPB				*e*S	Sn	12 48 56.1	-0.1
	baz=8.0						
ICHU	Yijhu	1.29	255	*e*P	Pn	12 48 40.6	+0.2
	baz=254						
WSF	Szhu	1.30	267	*e*S	Sn	12 48 56.6	0.0
	baz=266						
NCU	National Centr	1.32	342	*e*P	Pn	12 48 40.2	-0.8
	baz=342						
NCU				*e*S	Sn	12 48 57.5	+0.1
	baz=342						
SSD	Sandimen	1.33	224	*e*P	Pn	12 48 41.3	+0.4
	baz=223						
SSD				*e*S	Sn	12 48 58.5	+1.0
	baz=223						
TSMG	Majia	1.35	223	*e*P	Pn	12 48 41.6	+0.4
	baz=222						
TSMG				*e*S	Sn	12 48 57.8	-0.2
	baz=222						
CHN8	Yiju	1.35	255	*e*P	Pn	12 48 41.2	-0.1
	baz=254						
CHN8				*e*S	Sn	12 48 58.1	0.0
	baz=254						
NWF	Wu-fen Shan	1.37	6	*e*P	Pn	12 48 41.4	-0.2
	baz=5.0						
NWF				*e*S	Sn	12 48 58.8	+0.3
	baz=5.0						
JYNG	Yonagunijimaku	1.41	58	P	Pn	12 48 42.4	+0.3
JYNG				*e*S	Sn	12 48 59.7	+0.2
TWM1	Shoushan	1.42	232	*e*P	Pn	12 48 42.0	-0.2
	baz=231						
TWM1				*e*S	Sn	12 48 59.6	-0.1
	baz=231						
MASBT	Mashibuluo	1.43	220	*e*P	Pn	12 48 42.4	+0.1
	baz=219						
MASBT				*e*S	Sn	12 49 00.5	+0.6
	baz=219						
SGLT	Jiouru	1.43	227	*e*P	Pn	12 48 43.0	+0.6
	baz=226						
SGLT				*e*S	Sn	12 49 00.5	+0.4
	baz=226						
YOJ	Yonaguni jima	1.47	59	*e*P	Pn	12 48 43.4	+0.5
	baz=58						
YOJ				*e*S	Sn	12 49 01.4	+0.6
	baz=58						
YOJ	Yonaguni jima	1.47	59	P	Pn	12 48 43.3	+0.5
YOJ				*e*S	Sn	12 49 00.9	0.0
EAST	Anshuo	1.50	209	*e*P	Pn	12 48 42.9	-0.5
	baz=208						
EAST				*e*S	Sn	12 49 02.5	+0.7
	baz=208						
TAW	Tawu	1.50	207	*e*P	Pn	12 48 43.5	+0.2
	baz=206						
TAW				*e*S	Sn	12 49 01.9	+0.2
	baz=206						
SSPT	Xinbi	1.56	219	*e*P	Pn	12 48 44.3	+0.2
	baz=218						
SSPT				*e*S	Sn	12 49 03.9	+0.7
	baz=218						
SCZT	Fangliau	1.62	215	*e*P	Pn	12 48 45.5	+0.5
	baz=214						
SCZT				*e*S	Sn	12 49 05.5	+0.8
	baz=214						
LAY	Lan-yu	1.66	183	*e*P	Pn	12 48 44.2	-1.3
	baz=182						
SLIU	Shizi	1.67	208	*e*P	Pn	12 48 44.7	-0.9
	baz=207						
SLIU				*e*S	Sn	12 49 06.2	+0.3
	baz=207						
PHUB	P'eng-hu	1.90	265	*e*P	Pn	12 48 48.2	-0.6
	baz=264						
PHUB				*e*S	Sn	12 49 10.2	-1.3
	baz=264						
TWK1	Hengchun	1.91	204	*e*P	Pn	12 48 49.2	+0.3
	baz=203						
TWK1				*e*S	Sn	12 49 11.5	-0.3
	baz=203						
IRIF	Iriomote-Funau	2.02	71	P	Pn	12 48 51.0	+0.6
IRIF				S	Sn	12 49 14.8	+0.4
HATJ	Hateruma jima	2.02	80	P	Pn	12 48 51.0	+0.6
JKRS	Kuro-shima	2.24	76	P	Pn	12 48 54.0	+0.6
JKRS				S	Sn	12 49 20.4	+0.6
JIJ	Ishigaki jima	2.39	74	P	Pn	12 48 55.0	-0.5
JIJ				*e*S	Sn	12 49 22.6	-0.9
JISG	Ishigakijimahi	2.60	70	P	Pn	12 48 57.9	-0.5
JISG				*e*S	Sn	12 49 27.4	-1.3
PTMZ	Houxiangcun	2.65	301	*e*P	Pn	12 48 58.8	-0.3
	baz=300						
JTJ	Tarama	2.95	71	P	Pn	12 49 03.1	-0.2
JTJ				S	Sn	12 49 37.3	-0.2

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*IDC **08** 12:49:02.2±1.2, 6°.68N×94°.37E, h0km, mb3.7/8, mb1 3.8/10, mb1mx3.7/49, mbtmp3.7/10, ML3.5/1, Error ellipse: s-maj=52.5km s-min=17.9km az=57.0*

ISC 08 12:49:07.7±1.1, **6°.7N**±0°.1×**94°.5E**±0°.2, **h35**km, **n10**, σ**0ˢ.78**/10, **mb3.7**/8, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	5.91	131	Pn	Pn	12 50 33.2	+0.2
	1.2nm,0.3s,baz=269,slow=8.7,SNR=5.8						
CMAR	Chiang Mai Arr	12.47	20	Pn	Pn	12 52 03.2	+0.4
	baz=214,slow=14,SNR=1.4						
MKAR	Makanchi Array	41.28	347	P	P	12 56 50.5	+0.8
	1.0nm,0.7s,baz=50,slow=12,SNR=11						
SONM	Songino Array	42.23	12	P	P	12 56 57.2	-0.4
	0.5nm,0.9s,baz=204,slow=9.2,SNR=2.4						
KURBB	Kurchatov Arra	45.74	346	P	P	12 57 23.6	-2.0
	0.4nm,0.5s,baz=170,slow=7.6,SNR=4.7						
WRA	Warramunga Arr	47.34	125	P	P	12 57 38.0	-0.6
	0.6nm,0.8s,baz=301,slow=8.8,SNR=4.8						
ZALV	Zalesovo Beam	47.74	352	P	P	12 57 40.2	-0.9
	0.3nm,0.3s,baz=159,slow=6.2,SNR=1.9						
ASAR	Alice Springs	48.94	129	P	P	12 57 50.4	-0.5
	0.5nm,0.7s,baz=298,slow=7.7,SNR=4.6						
ASAR				PcP	PcP	12 59 16.1	+1.2
	0.4nm,0.8s,baz=292,slow=3.8,SNR=4.5						
FINES	FINESS Array B	73.88	332	P	P	13 00 38.4	-0.4
	6.6nm,1.1s,baz=76,slow=3.2,SNR=8.1						
GERES	GERESS Array B	78.89	318	P	P	13 01 07.9	+0.3
	0.5nm,0.7s,baz=105,slow=4.6,SNR=5.2						

IDC 08 12:51:33.6±16.0, **20°.84S**×**179°.06E**, **h437**km±118km, **mb2.9**/4, **mb1 3.1**/5, **mb1mx2.9**/31, **mbtmp3.7**/5, **Error ellipse: s-maj=430.0km s-min=100.6km az=92.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.23	343	P	P	12 52 41.6	0.0
	2.4nm,0.3s,baz=341,slow=19,SNR=15						
STKA	Stephens Creek	35.17	244	P	P	12 57 48.6	-0.6
	0.9nm,0.8s,baz=95,slow=11,SNR=3.9						
ASAR	Alice Springs	41.76	257	P	P	12 58 43.3	0.0
	1.0nm,0.6s,baz=97,slow=7.8,SNR=16						
WRA	Warramunga Arr	41.83	263	P	P	12 58 44.0	+0.2
	0.2nm,0.3s,baz=96,slow=7.8,SNR=10						
FITZ	Fitzroy Crossi	50.26	263	P	P	12 59 47.9	-0.6
	0.8nm,0.5s,baz=87,slow=6.7,SNR=1.8						

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*IDC **08** 12:57:17.9±0.8, 7°.00N×94°.72E, h0km, mb3.9/12, mb1 3.9/14, mb1mx3.8/52, mbtmp3.8/14, ML3.6/2, Error ellipse: s-maj=33.0km s-min=17.3km az=59.0*

ISC 08 12:57:23.3±0.8, **7°.1N**±0°.1×**94°.9E**±0°.2, **h35**km, **n17**, σ**1ˢ.05**/14, **mb3.9**/12, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	5.87	136	Pn	Pn	12 58 48.0	0.0
	0.8nm,0.3s,baz=334,slow=18,SNR=2.6						
CMAR	Chiang Mai Arr	11.99	19	Pn	Pn	13 00 10.3	-1.5
	0.2nm,0.3s,baz=205,slow=15,SNR=1.1						
H08S3	Diego Garcia H	26.67	237	T	T	13 29 41.9	
	baz=56,slow=74,SNR=7.5						
H08S2	Diego Garcia H	26.67	237	T	T	13 29 38.2	
	baz=249,slow=74,SNR=7.1						
H08S1	Diego Carcia H	26.68	237	T	T	13 29 33.5	
MKAR	Makanchi Array	41.02	347	P	P	13 05 02.3	-0.8
	1.3nm,0.7s,baz=169,slow=8.7,SNR=7.8						
SONM	Songino Array	41.79	12	P	P	13 05 11.5	+2.0
	0.3nm,0.3s,baz=179,slow=6.9,SNR=3.6						
KURBB	Kurchatov Arra	45.49	345	P	P	13 05 39.4	+0.3
	1.3nm,0.5s,baz=170,slow=7.2,SNR=15						
WRA	Warramunga Arr	47.23	125	P	P	13 05 53.5	+0.2
	0.9nm,0.7s,baz=303,slow=9.0,SNR=4.8						
ZALV	Zalesovo Beam	47.44	352	P	P	13 05 54.4	+0.1
	1.2nm,0.7s,baz=177,slow=8.9,SNR=5.2						
ASAR	Alice Springs	48.87	130	P	P	13 06 06.0	+0.2
	0.4nm,0.8s,baz=298,slow=7.4,SNR=6.1						
BVAR	Borovoye Array	49.97	341	P	P	13 06 12.5	-1.3
	0.8nm,0.7s,baz=183,slow=13,SNR=4.2						
BRTR	Keskin Array B	63.48	311	P	P	13 07 50.8	+0.6
	0.7nm,0.7s,baz=150,slow=4.8,SNR=2.9						
AKASG	Malin Array Be	69.21	322	P	P	13 08 26.5	0.0
	0.3nm,0.5s,baz=81,slow=5.2,SNR=7.5						
FINES	FINESS Array B	73.74	332	P	P	13 08 53.3	-0.3
	4.1nm,0.9s,baz=153,slow=12,SNR=2.8						
BOSA	Boshof	75.77	238	P	P	13 09 04.8	-1.3
	1.2nm,0.7s,baz=90,slow=5.1,SNR=1.7						
GERES	GERESS Array B	78.89	318	P	P	13 09 24.1	+0.9
	0.3nm,0.6s,baz=108,slow=4.3,SNR=4.2						

IDC 08 12:59:16.1±6.0, **7°.11N**×**94°.40E**, **h0**km, **mb3.6**/4, **mb1 3.7**/4, **mb1mx3.4**/53, **mbtmp3.6**/4, **Error ellipse: s-maj=139.2km s-min=49.2km az=139.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	40.88	347	P	P	13 07 00.3	+0.4
	0.7nm,0.8s,baz=168,slow=5.6,SNR=1.8						
SONM	Songino Array	41.85	12	P	P	13 07 08.0	+0.1
	0.2nm,0.3s,baz=187,slow=7.3,SNR=2.0						
ZALV	Zalesovo Beam	47.34	352	P	P	13 07 50.7	-0.9
	0.3nm,0.4s,baz=165,slow=6.0,SNR=1.5						
GERES	GERESS Array B	78.56	318	P	P	13 11 19.9	+0.1
	0.7nm,0.9s,baz=76,slow=4.1,SNR=3.9						

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*IDC **08** 13:01:51.5±1.7, 4°.50S×153°.42E, h56km±14km, mb4.0/15, mb1 4.1/18, mb1mx4.0/37, mbtmp4.3/18, MS3.7/2, Ms1 3.7/2, ms1mx3.2/35, Error ellipse: s-maj=17.3km s-min=11.5km az=108.0*

*NEIC **08** 13:01:56.4±1.2, 4°.6S±0°.1×153°.4E±0°.1, h100km±4km, mb4.7/63, Error ellipse: s-maj=17.9km s-min=14.7km az=80.0*

ISC 08 13:01:54.3±0.4, **4°.56S**±0°.06×**153°.46E**±0°.07, **h85**km, **n116**, σ**1ˢ.42**/120, **mb4.6**/53, **New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	7.89	232	P	Pn	13 03 44.6	-1.8
	0.7nm,0.3s,baz=359,slow=12,SNR=4.6						
PMG				S	Sn	13 05 11.0	-3.1
	3.4nm,0.3s,baz=283,slow=23,SNR=12						
PMG	Port Moresby	7.89	232	Pn	Pn	13 03 45.2	-1.1
HNR	Honiara	8.05	127	P	Pn	13 03 46.8	-1.8
	20nm,0.3s,baz=342,slow=20,SNR=3.3						
HNR				LR	LR	13 06 46.5	
	comp=Z,448nm,21.4s,baz=316,slow=36						
HNR	Honiara	8.05	127	Pn	Pn	13 03 45.8	-2.8
PATS	Pohnpei	12.31	23	Pn	Pn	13 04 44.3	-2.2
CTA	Charters Tower	16.96	204	P	Pn	13 05 46.4	+0.1
	0.1nm,0.3s,baz=19,slow=12,SNR=6.9						
FAKI	Fak Fak	21.23	274	P	P	13 06 32.1	-1.4
FAKI				IAmb	IAmb	13 06 44.1	
	comp=Z,44nm,1.1s						
DZM	Mont Dzumac	21.48	145	P	P	13 06 36.3	+0.2
	comp=Z,22nm,1.3s,baz=297,slow=9.3,SNR=3.9						
DZM	Mont Dzumac	21.48	145	IAmb	IAmb	13 06 39.1	
	comp=Z,20nm,1.2s						
SIJI	Sorong	22.47	279	P	P	13 06 45.7	-1.0
	comp=Z,7.1nm,0.4s,baz=80,slow=11,SNR=7.6						
WB0	Warramunga Arr	23.95	229	P	P	13 07 00.3	-0.6
WR0	Warramunga Arr	23.96	229	P	P	13 07 00.5	-0.4
WRAB	Tennant Creek	24.08	229	P	P	13 07 01.8	-0.2
WRAB				IAmb	IAmb	13 07 06.7	
	comp=Z,12nm,0.6s						
WB2	Warramunga Arr	24.09	229	P	P	13 07 01.9	-0.2
WB2				IAmb	IAmb	13 07 06.9	
	comp=Z,14nm,0.5s						
WRA	Warramunga Arr	24.10	229	P	P	13 07 02.1	0.0
	comp=Z,8.1nm,0.4s,baz=52,slow=9.9,SNR=46						
WRA				S	S	13 11 16.2	+2.2
	comp=Z,1.1nm,0.9s,baz=49,slow=14,SNR=5.2						
WRA				ScP	ScP	13 14 16.1	+3.4
	comp=Z,3.8nm,0.8s,baz=56,slow=3.0,SNR=22						
WRA	Warramunga Arr	24.10	229	P	P	13 07 01.8	-0.4
AS31	Alice Springs	26.77	223	P	P	13 07 25.8	-0.6
ASAR	Alice Springs	26.77	223	P	P	13 07 26.2	-0.1
	comp=Z,0.5nm,0.8s,baz=53,slow=8.6,SNR=5.1						
ASAR				S	S	13 12 03.6	+7.2
	comp=Z,0.3nm,0.7s,baz=44,slow=12,SNR=2.2						
ASAR				ScP	ScP	13 14 23.8	+3.4
	comp=Z,2.1nm,0.8s,baz=58,slow=3.1,SNR=16						
ASAR	Alice Springs	26.77	223	P	P	13 07 25.0	-1.4
STKA	Stephens Creek	29.37	201	P	P	13 07 48.8	-0.5
	comp=Z,2.0nm,0.7s,baz=346,slow=8.3,SNR=5.8						
STKA	Stephens Creek	29.37	201	P	P	13 07 49.5	+0.1
MBWA	Marble Bar	36.66	240	P	P	13 08 52.2	-0.8
MBWA				IAmb	IAmb	13 08 52.6	
	comp=Z,12nm,1.1s						
JOW	Kunigami	39.59	323	P	P	13 09 18.4	+0.9
BKZ	Black Stump Fm	40.28	152	P	P	13 09 24.2	+1.0
BKZ				IAmb	IAmb	13 09 33.7	
	comp=Z,12nm,1.4s						
YOJ	Yonaguni jima	41.35	316	P	P	13 09 33.0	+0.9
BFZ	Birch Farm	41.39	154	P	P	13 09 32.3	+0.1
LTZ	Lake Taylor	41.57	159	P	P	13 09 35.2	+1.5
LTZ				IAmb	IAmb	13 09 53.1	
	comp=Z,20nm,1.3s						
YULB	Yu-li	41.91	313	P	P	13 09 36.1	-0.6
YULB				IAmb	IAmb	13 09 38.1	
	comp=Z,9.5nm,0.8s						
RPZ	Rata Peaks	41.98	161	P	P	13 09 38.7	+1.7
RPZ				IAmb	IAmb	13 10 00.5	
	comp=Z,28nm,1.5s						
JMN	Monobe	42.34	336	P	P	13 09 40.6	+0.5
TPUB	Ta-pu	42.35	312	P	P	13 09 39.7	-0.6
TPUB				IAmb	IAmb	13 10 04.3	
	comp=Z,9.2nm,1.0s						
WKZ	Wanaka	42.37	164	P	P	13 09 40.3	+0.2
SSLB	Suanglung	42.40	313	P	P	13 09 40.8	+0.1
SSLB				IAmb	IAmb	13 09 41.9	
	comp=Z,8.8nm,0.5s						
UGM	Wanagama	42.80	263	P	P	13 09 43.2	-0.9
JWT	Wachi	43.11	338	P	P	13 09 46.1	-0.1
MJAR	Matsushiro Arr	43.30	342	P	P	13 09 46.7	-1.1
MAJO	Matsushiro	43.30	342	P	P	13 09 47.0	-0.8
MAJO				IAmb	IAmb	13 09 50.1	
	comp=Z,13nm,1.2s						
JHS	Saijyo	43.76	336	P	P	13 09 51.9	+0.5
JMM	Marumori	43.82	345	P	P	13 09 51.9	+0.1
JMM				IAmb	IAmb	13 10 14.2	
	comp=Z,30nm,1.2s						
JTM	Tenmabayashi	46.53	347	P	P	13 10 13.6	+0.3
ERM	Erimo	47.29	350	P	P	13 10 18.7	-0.5
KSRS	Korea Array	48.09	333	P	P	13 10 24.4	-0.9
	comp=Z,4.4nm,0.8s,baz=147,slow=8.2,SNR=9.7						
NJ2	Nanjing	49.08	320	*e*P	P	13 10 34.2	+1.1
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.5s						
ASAJ	Asahikawa	49.43	350	LR	LR	13 25 38.6	
	comp=Z,125nm,21.6s,baz=68,slow=29						
USRK	Ussuriysk Ar.	52.24	341	P	P	13 10 56.0	-0.7
	comp=Z,5.1nm,0.7s,baz=197,slow=10,SNR=8.2						
USRK	Ussuriysk Ar.	52.24	341	P	P	13 10 57.6	+0.9
USA0B	Ussuriysk Arra	52.24	341	P	P	13 10 57.8	+1.1
USA0B				IAmb	IAmb	13 10 58.2	
	comp=Z,7.6nm,0.8s						
PETK	Petropavlovsk-	57.56	3	P	P	13 11 35.6	+0.7
	comp=Z,3.8nm,0.9s,baz=155,slow=7.8,SNR=1.6						
CMAR	Chiang Mai Arr	58.37	295	P	P	13 11 42.1	+0.8
	comp=Z,3.2nm,0.8s,baz=116,slow=5.2,SNR=24						
CMAR	Chiang Mai Arr	58.37	295	P	P	13 11 41.2	-0.1
CHTO	Chiang Mai	58.48	295	P	P	13 11 41.9	-0.1
HHC	Hu-ho-hao-te	59.24	324	*e*P	P	13 11 51.1	+4.1
HHC				pmax	pmax		
	comp=Z,24nm,0.7s						
HHC				pmax	pmax		
	comp=Z,150nm,7.9s						
LZH	Lanzhou	61.52	315	*e*P	P	13 12 04.8	+2.1
LZH				pP	pP	13 12 09.3	-14
LZH				pmax	pmax		
	comp=Z,23nm,1.6s						
GTA	Gaotai	65.93	317	*e*P	P	13 12 32.4	+0.8
GTA				pP	PcP	13 12 59.0	-2.8
GTA				sP	sP	13 13 14.0	+12
GTA				pmax	pmax		
	comp=Z,7.0nm,1.3s						
SONM	Songino Array	66.47	327	P	P	13 12 35.6	+0.7
	comp=Z,1.2nm,0.6s,baz=146,slow=6.2,SNR=8.7						
SONM				PcP	PcP	13 13 03.7	-0.2
	comp=Z,1.4nm,0.7s,baz=143,slow=3.6,SNR=5.4						
SONM	Songino Array	66.47	327	P	P	13 12 35.4	+0.4
BILL	Bilibino	72.99	5	P	P	13 13 15.3	+0.9
BILL				IAmb	IAmb	13 13 31.4	
	comp=Z,9.0nm,1.2s						
VNDA	Vanda	73.05	178	P	P	13 13 16.5	+1.9
	comp=Z,1.6nm,0.8s,baz=331,slow=7.2,SNR=12						
VNDA	Vanda	73.05	178	P	P	13 13 16.6	+1.9
SBA	Scott Base	73.58	177	P	P	13 13 17.9	+0.2
SBA				IAmb	IAmb	13 13 21.5	
	comp=Z,8.5nm,1.3s						
Q19K	Cape Douglas,	75.85	25	P	P	13 13 31.8	+0.7
WMQ	Urumqi	76.01	317	*e*P	P	13 13 33.2	+0.7
WMQ				pmax	pmax		
	comp=Z,14nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,160nm,6.9s						
P19K	Oil Pt	76.44	25	P	P	13 13 35.3	+0.8
P19K				IAmb	IAmb	13 13 35.9	
	comp=Z,12nm,0.8s						
CNPM	China Poot	77.22	25	P	P	13 13 40.1	+1.3
CNPM				IAmb	IAmb	13 13 53.5	
	comp=Z,12nm,0.9s						
L19K	White Mountain	77.28	22	P	P	13 13 39.3	+0.2
L19K				IAmb	IAmb	13 13 59.4	
	comp=Z,8.7nm,1.2s						
K20K	Telida	78.27	21	P	P	13 13 44.0	-0.6
K20K				IAmb	IAmb	13 14 06.1	
	comp=Z,12nm,1.4s						
SUA	Susitna One	78.47	24	P	P	13 13 46.2	+0.3
SUA				IAmb	IAmb	13 14 11.2	
	comp=Z,12nm,1.2s						
J20K	Nowinta River	78.73	21	P	P	13 13 48.8	+1.7
CAST	Castle Rocks	79.03	22	P	P	13 13 50.3	+1.5
PWL	Port Wells	79.15	25	P	P	13 13 49.9	+0.4
PWL				IAmb	IAmb	13 13 51.0	
	comp=Z,27nm,1.0s						
GHO	Glory Hole Cre	79.37	24	P	P	13 13 51.2	+0.5
GHO				IAmb	IAmb	13 14 10.0	
	comp=Z,25nm,1.5s						

SML	Sawmill	79.63	24	P	P	13 13 51.6	-0.5
SML				IAmb	IAmb	13 13 53.7	
	comp=Z,16nm,1.1s						
BPAW	Bear Paw Mtn.	79.82	22	P	P	13 13 53.5	+0.4
IMAR	Indian Mountai	79.94	19	P	P	13 13 54.6	+0.9
H21K	Melozitna Rive	80.06	20	P	P	13 13 55.4	+1.1
MK31	Makanchi Array	80.58	319	P	P	13 13 57.5	0.0
MKAR	Makanchi Array	80.58	319	P	P	13 13 58.3	+0.8
	comp=Z,5.4nm,0.9s,baz=102,slow=7.8,SNR=21						
MKAR	Makanchi Array	80.58	319	P	P	13 13 57.2	-0.3
MAKZ	Makanchi	80.79	319	P	P	13 13 58.3	-0.4
MAKZ				IAmb	IAmb	13 14 00.1	
	comp=Z,12nm,0.9s						
ZALV	Zalesovo Beam	81.32	326	P	P	13 14 00.9	-0.4
	comp=Z,1.1nm,0.5s,baz=105,slow=6.9,SNR=7.0						
ILAR	Eielson Array	81.69	22	P	P	13 14 01.5	-1.5
	comp=Z,1.1nm,0.8s,baz=252,slow=5.1,SNR=7.6						
ILAR	Eielson Array	81.69	22	P	P	13 14 01.8	-1.2
KSH	Kashi	83.28	311	P	P	13 14 14.3	+2.3
KSH				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KSH				pmax	pmax		
	comp=Z,330nm,7.7s						
KSH				LR	LR		
	comp=N,2μm,18.6s						
KSH				LR	LR		
	comp=E,880nm,21.3s						
KSH				LR	LR		
	comp=Z,950nm,14.4s						
KURK	Kurchatov	83.98	322	P	P	13 14 14.6	-0.5
KURK				IAmb	IAmb	13 14 16.3	
	comp=Z,11nm,1.1s						
TKM2	Tokmak 2	84.24	314	P	P	13 14 18.2	+1.3
	SNR=11						
NIL	Nilore	84.38	304	P	P	13 14 16.7	-0.9
KBK	Karagaybulak	84.66	313	P	P	13 14 20.4	+1.4
	SNR=6.8						
CHMS	Chumysh	84.86	314	P	P	13 14 20.7	+0.9
	SNR=12						
UCH	Uchtor	84.89	313	P	P	13 14 22.4	+1.9
	SNR=17						
AAK	Ala-Archa	84.98	313	P	P	13 14 22.0	+1.4
	SNR=16						
AAK	Ala-Archa	84.98	313	P	P	13 14 21.2	+0.6
AAK				IAmb	IAmb	13 14 22.6	
	comp=Z,17nm,0.8s						
USP	Ospenovka	85.09	314	P	P	13 14 22.2	+1.2
	SNR=16						
QSPA	South Pole Qui	85.40	180	P	P	13 14 22.7	+0.6
QSPA				IAmb	IAmb	13 14 25.8	
	comp=Z,6.1nm,1.1s						
AML	Almayashu	85.47	313	P	P	13 14 24.8	+1.4
	SNR=26						
EKS2	Erkin-Say	85.50	313	P	P	13 14 24.3	+1.1
	SNR=13						
NRIK	Noril'sk	85.95	341	P	P	13 14 24.2	-0.4
	comp=Z,4.3nm,0.5s,baz=112,slow=5.0,SNR=7.8						
NRIK	Noril'sk	85.95	341	P	P	13 14 24.1	-0.5
NRIK				IAmb	IAmb	13 14 25.9	
	comp=Z,5.1nm,0.6s						
BTK	Batken	87.28	310	P	P	13 14 31.5	-0.4
BTK				IAmb	IAmb	13 14 33.5	
	comp=Z,10.0nm,0.9s						
GAR	Garm	87.52	309	P	P	13 14 32.2	-0.9
KK31	Karatay Array	87.94	313	P	P	13 14 34.4	-0.5
KK31				IAmb	IAmb	13 14 36.0	
	comp=Z,4.3nm,0.8s						
KKAR	Karatay Array	87.94	313	P	P	13 14 34.4	-0.5
KKAR	Karatay Array	87.94	313	P	P	13 14 34.4	-0.5
KKAR				IAmb	IAmb	13 14 36.0	
	comp=Z,4.3nm,0.8s						
CHGR	Chuyangaron	88.37	309	P	P	13 14 37.1	-0.1
BRVK	Borovoye	89.51	323	P	P	13 14 41.1	-0.9
ABKAR	Akbulak array	95.72	319	P	P	13 15 08.9	-1.8
ABKAR	Akbulak array	95.72	319	P	P	13 15 09.0	-1.8
ABKAR				IAmb	IAmb	13 15 10.0	
	comp=Z,2.7nm,0.8s						
ARU	Arti	96.48	326	P	P	13 15 12.2	-1.8
ARU				IAmb	IAmb	13 15 13.4	
	comp=Z,4.9nm,0.9s						
VNA2	Neumayer--Watz	103.59	186	Pdiff	Pdif	13 15 44.3	-1.3
VNA1	Neumayer--Stat	103.95	186	Pdiff	Pdif	13 15 49.4	+2.3
KLMR	Klimovskoe	105.48	332	ePdif	Pdif	13 15 50.8	-3.3
KLMR				AMP		13 16 03.4	
	comp=Z,17nm,1.5s						
AKASG	Malin Array Be	114.68	325	PKP	PKiKP	13 20 24.1	-0.8
	comp=Z,1.2nm,0.5s,baz=71,slow=2.8,SNR=6.0						
GERES	GERESS Array B	124.19	329	PKP	PKiKP	13 20 44.4	+0.7
	comp=Z,1.1nm,0.7s,baz=74,slow=1.9,SNR=10						
DAVOX	Davos/Dischmat	127.49	329	PKP	PKiKP	13 20 50.9	+0.5
	comp=Z,1.9nm,0.8s,baz=88,slow=4.2,SNR=4.7						
MDT	Midelt	145.21	327	PKPbc	PKPdf	13 21 23.7	+0.9
	comp=Z,4.1nm,0.7s,baz=81,slow=6.9,SNR=10						
TORD	Torodi Ar. Bea	150.85	289	PKPbc	PKPbc	13 21 37.9	-0.2
	comp=Z,8.8nm,0.8s,baz=60,slow=2.2,SNR=41						
TORD	Torodi Ar. Bea	150.85	289		PKPbc	13 21 37.3	-0.8

IDC 08 13:15:25.8±0.8**, 6°.90S×156°.72E, h0km, mb3.9**/3**, mb1 4.0**/4**, mb1mx3.6**/39**, mbtmp3.9**/4**, ML3.9**/1**, Error ellipse: s-maj=14.9km s-min=4.4km az=17.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.07	128	Pn	Pn	13 16 30.9	+1.6
	8.1nm,0.3s,baz=211,slow=3.3,SNR=7.5						
HNR				Sn	Sn	13 17 17.8	+0.1
	32nm,0.3s,baz=265,slow=20,SNR=6.9						
WRA	Warramunga Arr	25.29	237	P	P	13 20 54.7	+0.4
	0.7nm,0.5s,baz=70,slow=9.2,SNR=16						
ASAR	Alice Springs	27.54	230	P	P	13 21 14.3	-0.2
	0.6nm,0.4s,baz=58,slow=9.4,SNR=27						
MKAR	Makanchi Array	84.47	318	P	P	13 27 59.5	-1.1
	1.2nm,0.7s,baz=101,slow=6.3,SNR=6.5						

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*IDC **08** 13:17:48.0±1.2, 6°.20N×94°.07E, h0km, mb3.6/6, mb1 3.6/7, mb1mx3.4/62, mbtmp3.5/7, ML3.6/1, Error ellipse: s-maj=37.0km s-min=14.5km az=69.0*

ISC 08 13:17:53.8±1.9**, 6°.3N**±0°.2×**94°.2E**±0°.4**, h35km, n7, σ0ˢ.72**/7**, mb3.6**/6**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	12.95	20	Pn	Pn	13 20 55.1	-0.3
	0.1nm,0.3s,baz=213,slow=12,SNR=1.5						
MKAR	Makanchi Array	41.65	348	P	P	13 25 38.6	-0.2
	1.7nm,1.1s,baz=175,slow=7.2,SNR=2.7						
SONM	Songino Array	42.69	12	P	P	13 25 48.3	+0.9
	0.3nm,0.5s,baz=190,slow=7.2,SNR=1.9						
KURBB	Kurchatov Arra	46.10	346	P	P	13 26 13.8	-0.6
	0.5nm,0.3s,baz=166,slow=6.4,SNR=3.1						
WRA	Warramunga Arr	47.29	124	P	P	13 26 23.5	-0.7
	0.4nm,0.8s,baz=304,slow=9.0,SNR=1.9						
ZALV	Zalesovo Beam	48.13	353	P	P	13 26 29.9	-0.3
	0.4nm,0.4s,baz=179,slow=7.1,SNR=1.6						
ASAR	Alice Springs	48.85	129	P	P	13 26 36.7	+0.5
	0.3nm,0.8s,baz=307,slow=7.4,SNR=2.3						

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*MOS **08** 13:18:14.4±1.3, 41°.81N×48°.21E, h13km, mb3.8/1, Error ellipse: s-maj=7.4km s-min=5.4km az=123.5*

*AZER **08** 13:18:15.0±0.1, 41°.74N×48°.13E, h25km, ml3.1/26, Error ellipse: s-maj=1.8km s-min=1.3km az=21.0*

*DRS **08** 13:18:15.5±0.0, 41°.80N×48°.20E, h17km, ML3.5/3*

ISC 08 13:18:15.2±0.7**, 41°.83N**±0°.02×**48°.23E**±0°.02**, h20km**±1km**, n81, σ1ˢ.57**/148**, 4C, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRN	Derbent	0.21	21	ePG	Pb	13 18 21.1	+0.2
DRN				eS	Sb	13 18 25.1	+0.1
DRN				pmax	pmax		
	comp=Z,957nm,0.4s						
DRN	Derbent	0.21	21	i Pg	Pb	13 18 21.1	+0.2
DRN				i Sg	Sb	13 18 25.9	+1.0
	comp=Z,4μm,0.2s						
KSMR	Kasumkent	0.24	199	ePG	Pb	13 18 20.8	-0.5
KSMR				eS	Sb	13 18 24.7	-0.7
KSMR				pmax	pmax		
	comp=Z,2μm,0.1s						
KSMR	Kasumkent	0.24	199	ePg	Pb	13 18 20.8	-0.5
KSMR				eSg	Sb	13 18 24.7	-0.7
QSAR	Qusar	0.32	175	P	Pb	13 18 22.4	+0.2
QSAR				S	Sb	13 18 28.0	+1.1
AKT	Akhty	0.51	227	ePG	Pb	13 18 24.7	-0.9
AKT				eS	Sb	13 18 31.3	-1.3
AKT				pmax	pmax		
	comp=Z,4μm,0.2s						
AKT	Akhty	0.51	227	i Pg	Pb	13 18 24.7	-0.9
AKT				i Sg	Sb	13 18 31.5	-1.1
	comp=Z,3μm,0.3s						
QUBA	Quba, Azerbaij	0.52	157	P	Pb	13 18 26.1	+0.6
QUBA				S	Sn	13 18 34.1	-1.5
URKR	Urkarakh	0.56	307	ePG	Pb	13 18 25.6	-0.8
URKR				eS	Sb	13 18 33.2	-0.8
URKR				pmax	pmax		
	comp=Z,681nm,0.3s						
URKR	Urkarakh	0.56	307	ePg	Pb	13 18 25.6	-0.8
URKR				i Sg	Sb	13 18 33.2	-0.8
	comp=Z,1μm,0.2s						
XNQ	Khinaliq	0.66	186	P	Pb	13 18 28.1	-0.2
XNQ				S	Sb	13 18 37.3	+0.2
SGKR	Sergokala	0.76	326	ePG	Pb	13 18 29.3	-0.4
SGKR				eS	Sb	13 18 40.5	+0.9
SGKR				pmax	pmax		
	comp=Z,195nm,0.4s						
SGKR	Sergokala	0.76	326	ePg	Pb	13 18 29.4	-0.4
SGKR				eSg	Sb	13 18 40.5	+0.9
KMKR	Kumukh	0.90	290	ePG	Pb	13 18 31.3	-0.8
KMKR				eS	Sb	13 18 43.8	+0.1
KMKR				pmax	pmax		
	comp=Z,211nm,0.4s						
KMKR	Kumukh	0.90	290	ePg	Pb	13 18 31.3	-0.8
KMKR				eSg	Sb	13 18 43.8	+0.1
SIZA	Siyzn	0.91	146	P	Pn	13 18 32.6	-0.3
SIZA				S	Sn	13 18 46.9	+1.5
QBL	Gabala	0.93	199	P	Pb	13 18 31.7	-1.0
QBL				S	Sb	13 18 44.3	-0.3
SEKA	Sheki	0.99	232	PG	Pb	13 18 32.4	-1.3
SEKA	Sheki	0.99	232	P	Pb	13 18 32.4	-1.3
SEKA				S	Sb	13 18 45.2	-1.2
IML	Ismayilli	1.04	182	P	Pn	13 18 34.7	+0.1
IML				S	Sn	13 18 48.9	+0.4
PQL	Pirkuli	1.08	165	P	Pn	13 18 35.8	+0.5
PQL				S	Sn	13 18 50.9	+1.3
GNBR	Gunib	1.09	301	ePG	Pn	13 18 35.1	-0.3
GNBR				e		13 18 50.3	
GNBR				pmax	pmax		
	comp=Z,116nm,0.4s						
GNBR				smax	smax		
	comp=E,651nm,0.2s						
GNBR	Gunib	1.09	301	ePg	Pn	13 18 35.2	-0.3
GNBR				eSg	Sn	13 18 50.1	+0.2
ATGJ	Altiaghaj	1.11	151	P	Pb	13 18 36.4	+0.7
ATGJ				S	Sn	13 18 53.5	+3.3
ARKR	Arakani	1.20	310	ePG	Pn	13 18 36.7	-0.1
ARKR				eS	Sn	13 18 52.8	+0.3
ARKR				pmax	pmax		
	comp=Z,56nm,0.2s						
ARKR	Arakani	1.20	310	ePg	Pn	13 18 36.8	-0.1
ARKR				eSg	Sn	13 18 52.9	+0.3
ZKTA	Zakatala	1.22	261	P	Pn	13 18 36.4	-0.6
ZKTA				S	Sn	13 18 53.7	+0.7
MAK	Makhachkala	1.25	335	ePG	Pb	13 18 37.9	-0.2
MAK				eS	Sb	13 18 55.5	+1.8
MAK	Makhachkala	1.25	335	ePg	Pb	13 18 38.1	0.0
MAK				eSg	Sb	13 18 55.7	+2.0
BUJR	Buynaksk	1.29	320	ePG	Pb	13 18 38.6	-0.3
BUJR				eS	Sb	13 18 56.3	+1.3
BUJR				pmax	pmax		
	comp=Z,130nm,0.2s						
BUJR	Buynaksk	1.29	320	ePg	Pb	13 18 38.6	-0.3
BUJR				eSg	Sb	13 18 56.4	+1.3
XNZR	Khunzakh	1.34	303	ePG	Pb	13 18 39.4	-0.2
XNZR				eS	Sb	13 18 57.4	+1.0
XNZR				pmax	pmax		
	comp=Z,112nm,0.3s						
XNZR	Khunzakh	1.34	303	ePg	Pb	13 18 39.5	-0.2
XNZR				eSg	Sb	13 18 57.4	+1.0
MNGR	Mingechevir, A	1.36	220	PG	Pb	13 18 40.4	+0.4
MNGR	Mingechevir, A	1.36	220	P	Pb	13 18 40.4	+0.4
MNGR				S	Sb	13 18 57.7	+0.7
UNCR	Uncukul	1.38	310	ePG	Pb	13 18 40.2	-0.1
UNCR				eS	Sb	13 18 59.2	+1.6
UNCR				pmax	pmax		
	comp=Z,61nm,0.3s						
UNCR	Uncukul	1.38	310	ePg	Pb	13 18 40.3	-0.1
UNCR				eSg	Sb	13 18 59.3	+1.6
KRNR	Karanay	1.40	316	ePG	Pb	13 18 40.1	-0.5
KRNR				eS	Sb	13 18 58.8	+0.7
KRNR				pmax	pmax		
	comp=Z,54nm,0.3s						
KRNR	Karanay	1.40	316	ePg	Pb	13 18 40.2	-0.5
KRNR				eSg	Sb	13 18 59.9	+1.8
GBS	Qobustan	1.40	157	P	Pb	13 18 41.9	+1.2
KDMR	Kurdemir	1.45	181	P	Pn	13 18 40.6	+0.3
KDMR				S	Sb	13 19 00.6	+1.1
LGD	Lagodekhi	1.48	271	P	Pn	13 18 41.1	+0.3
LGD				S	Sn	13 18 59.2	-0.3
LGD	Lagodekhi	1.48	271	ePG	Pn	13 18 41.0	+0.3
LGD				eS	Sn	13 18 59.2	-0.3
DBC	Dubki	1.58	319	i PG	Pb	13 18 42.9	-0.8
DBC				pmax	pmax		
	comp=Z,34nm,0.4s						
ZRD	Zardab	1.60	195	P	Pb	13 18 43.5	-0.6
ZRD				S	Sb	13 19 06.3	+2.5
DDFL	Dedoflistskaro	1.63	257	P	Pb	13 18 47.1	+2.5
DDFL				S	Sb	13 19 10.2	+5.5
DDFL	Dedoflistskaro	1.63	257	ePG	Pb	13 18 47.0	+2.5
DDFL				eS	Sb	13 19 10.2	+5.5
BTLR	Botlikh	1.71	300	ePN	Pb	13 18 45.4	-0.5
BTLR				eS	Sb	13 19 07.8	+0.9
BTLR				pmax	pmax		
	comp=Z,50nm,0.2s						
BTLR	Botlikh	1.71	300	ePg	Pb	13 18 45.0	-0.9
BTLR				eSg	Sb	13 19 09.1	+2.1
DLMR	Dylym	1.71	317	ePN	Pb	13 18 45.9	0.0
DLMR				eS	Sb	13 19 08.9	+1.8
DLMR				pmax	pmax		
	comp=Z,94nm,0.3s						
DLMR	Dylym	1.71	317	ePg	Pb	13 18 46.0	0.0
DLMR				eSg	Sb	13 19 10.0	+2.9
BRDA	Brd	1.76	207	P	Pb	13 18 46.0	-0.7
BRDA				S	Sb	13 19 08.3	+0.1
GANJ	Ganja	1.86	231	PN	Pn	13 18 46.7	+0.8
GANJ	Ganja	1.86	231	P	Pn	13 18 46.7	+0.8
GANJ				S	Sb	13 19 10.1	-1.3
AGDM	Agdam	1.92	207	P	Pn	13 18 46.7	0.0
AGDM				S	Sb	13 19 12.7	-0.2
DVE	Vedeno	1.92	307	ePN	Pb	13 18 48.7	-0.9
DVE				pmax	pmax		
	comp=Z,35nm,0.4s						
DVE	Vedeno	1.92	307	ePg	Pb	13 18 49.1	-0.5
DVE				eSg	Sb	13 19 13.9	+0.8
ALIB	Äli-Bayra	1.96	162	P	Pn	13 18 47.8	+0.6
ALIB				S	Sn	13 19 11.9	+0.7
BLQ	Beylaqan	2.17	194	P	Pn	13 18 50.0	-0.1
BLQ				S	Sn	13 19 17.3	+1.0
GDB	GEDABAY	2.17	240	P	Pn	13 18 51.0	+0.7
GDB				S	Sb	13 19 18.3	-2.1
GROC	Groznyy	2.26	308	ePN	Pn	13 18 51.5	+0.1
GROC				e		13 19 27.5	
GROC				pmax	pmax		
	comp=Z,46nm,0.4s						
GROC				smax	smax		
	comp=N,99nm,1.1s						
GROC				smax	smax		
	comp=E,62nm,0.4s						
GROC				smax	smax		
	comp=N,78nm,0.5s						
GROC				MLR	MLR		
	comp=Z,16nm,1.0s						
GROC	Groznyy	2.26	308	ePg	Pb	13 18 58.3	+3.0
GROC				i Sg	Sb	13 19 26.1	+3.3
QZX	Qazax, Azerbai	2.28	251	P	Pn	13 18 53.0	+1.3
QZX				S	Sb	13 19 21.2	-2.3
QRD	Qoradiz	2.47	197	S	Sn	13 19 24.9	+1.2
GLBA	Clilabad	2.59	177	P	Pn	13 18 56.8	+0.9
GLBA				S	Sb	13 19 29.8	-2.4
KMGR	Komgaron	2.77	297	ePn	Pb	13 19 04.2	+0.1
KMGR				eSn	Sb	13 19 38.6	+0.9
PNSH	Pansheti	2.80	288	P	Pn	13 18 56.5	-2.6
PNSH				S	Sn	13 19 32.9	+0.7
PNSH	Pansheti	2.80	288	ePN	Pn	13 18 56.4	-2.6
PNSH				eS	Sn	13 19 32.9	+0.7
MTEO	Meteo	2.87	288	P	Pb	13 19 07.3	+1.3
MTEO				S	Sb	13 19 47.7	+6.8
YRD	Yardimli	2.91	180	P	Pn	13 19 00.6	+0.1
YRD				S	Sn	13 19 35.4	+0.4
DMNI	Dmanisi	3.07	262	P	Pn	13 19 03.4	+0.8
DMNI				S	Sn	13 19 40.5	+1.6
DMNI	Dmanisi	3.07	262	ePN	Pn	13 19 03.4	+0.8
DMNI				eS	Sn	13 19 40.4	+1.6
LACR	Lac	3.08	290	ePn	Pb	13 19 08.2	-1.2
LACR				eSn	Sb	13 19 45.2	-1.3
GNI	Garni	3.13	239	i PN	Pn	13 19 04.8	+1.3
LKRN	Lenkeran, Azer	3.15	172	S	Sn	13 19 43.5	+3.1
LRK	Lerik	3.19	178	P	Pn	13 19 05.8	+1.6
LRK				S	Sn	13 19 42.7	+1.0
NEY	Neytrino	4.31	291	i PN	Pn	13 19 20.6	+0.9
AKTO	Aktyubinsk	10.95	35	⇑Pn	Pn	13 20 46.6	-4.0
	comp=Z,1.3nm,0.8s						
AKTO				⇑Sn	Sn	13 22 48.2	-4.2
	comp=Z,1.0nm,0.6s						
AB31	Akbulak array	11.06	44	⇑Pn	Pn	13 20 52.2	+0.1
	comp=Z,0.1nm,0.3s,baz=230,slow=12,SNR=7.3						
AB31				⇑Sn	Sn	13 22 51.5	-3.7
	comp=Z,0.4nm,0.4s,baz=224,slow=20,SNR=4.9						
BRVK	Borovoye	18.59	45	i P	Pn	13 22 33.4	+2.3
BRVK				pmax	pmax		
	comp=Z,7.0nm,3.0s						
AAK	Ala-Archa	19.44	79	i P	Pn	13 22 43.6	+1.9
AAK				pmax	pmax		
	comp=Z,9.0nm,1.2s						

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*UCR **08** 13:21:30.6±2.5, 9°.35N×82°.67W, h6km±20km, MW3.8*

*INET **08** 13:21:31.0, 9°.35N×82°.96W, h35km, ML2.9, MW3.1*

*UPA **08** 13:21:31.6±0.5, 9°.24N×82°.65W, h3km±2km, MW4.1*

ISC 08 13:21:30.2±1.3**, 9°.37N**±0°.04×**82°.68W**±0°.04**, h9km**±10km**, n25, σ0ˢ.54**/40**, 2D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRU2	Volcan	0.57	181	⇓iP	Pg	13 21 41.5	+0.2
BRU2				eS	Sg	13 21 49.5	+0.7
MLIR3	Monte Lirio, C	0.59	194	eP	Pb	13 21 42.3	-0.5
MLIR3				eS	Sb	13 21 50.2	-1.1
EDSV	San Vito	0.62	208	eP	Pb	13 21 42.8	-0.5
EDSV				eS	Sb	13 21 52.4	+0.3
LNBQ3	Los Naranjos,	0.62	158	eP	Pg	13 21 42.2	-0.1
LNBQ3				eS	Sg	13 21 50.5	+0.1
EDBA	Buenos Aires	0.62	251	⇓iP	Pb	13 21 43.1	-0.2
EDBA				eS	Sb	13 21 52.1	0.0
BCO2	Palmira	0.66	167	eP	Pg	13 21 43.0	-0.1
BCO2				eS	Sg	13 21 52.4	+0.6
CHGR2	Aguacate	0.68	129	eP	Pb	13 21 44.2	0.0
CHGR2				eS	Sb	13 21 53.5	-0.3
CDITO	Canoas	0.81	194	eP	Pb	13 21 46.4	-0.2
CDITO				eS	Sb	13 21 57.1	-0.5
EDPN	Palmar Norte	0.87	242	eP	Pb	13 21 47.7	+0.2
BAGA3	Bagala, Chiriq	0.91	170	eP	Pg	13 21 47.6	-0.1
BAGA3				eS	Sb	13 21 59.8	-0.6
DVD	David	0.95	166	eP	Pb	13 21 48.6	-0.3
DVD				eS	Sb	13 22 01.7	0.0
PEZE	Perez Zeledon,	0.98	271	eP	Pg	13 21 48.8	-0.4
LOCO3	Loma Colorada,	0.99	165	eP	Pg	13 21 49.0	-0.2
LOCO3				eS	Sg	13 22 02.0	-0.1
BATAN	Batan	1.00	317	eP	Pn	13 21 50.3	-0.1
BATAN				eS	Sn	13 22 05.2	+0.5
PTJ1	Puerto Jimnez	1.03	217	eP	Pg	13 21 49.8	-0.3
PTJ1	Puerto Jimnez	1.03	217	eP	Pg	13 21 50.0	-0.1
PTJ1				eS	Sb	13 22 04.3	+0.4
PTPM	Petroterminale	1.17	190	eP	Pb	13 21 52.4	-0.3
PTPM				eS	Sn	13 22 08.8	-0.1
EDDO	Dominical	1.17	264	eP	Pb	13 21 47.6	-5.1
EDDO				eS	Sn	13 22 09.0	0.0
RIMA	Rio Macho	1.23	289	eP	Pb	13 21 53.3	-0.6
RAFA	San Farael, Vo	1.26	298	eP	Pn	13 21 54.0	-0.3
LCR2	La Lucha 2	1.36	286	eP	Pn	13 21 55.2	-0.4
HDC	Heredia	1.55	294	eP	Pb	13 21 58.9	-0.3
ARE1	Arenal 1	2.28	299	eP	Pn	13 22 09.8	+1.6
JTS	Las Juntas de	2.42	292	eP	Pn	13 22 11.1	+1.1
JTS	Las Juntas de	2.42	292	eP	Pb	13 22 12.7	-1.2
JTS				eS	Sb	13 22 44.5	+0.5

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*BJI **08** 13:23:44.9±0.0, 6°.43N×94°.47E, h18km, mB5.1/30, mb4.6/42, Ms5.3/50, Ms7 5.1/45*

*IDC **08** 13:23:46.0±0.6, 6°.80N×94°.48E, h0km, mb4.2/22, mb1 4.2/24, mb1mx4.1/52, mbtmp4.2/24, ML3.8/2, MS4.8/1, Ms1 4.8/1, ms1mx4.5/2, Error ellipse: s-maj=20.5km s-min=12.1km az=54.0*

*KLM **08** 13:23:46, 6°.61N×94°.31E, h10km, mb5.2*

*NEIC **08** 13:23:47.8±1.9, 6°.77N±0°.08×94°.48E±0°.08, h10km±3km, mb5.2/56, Error ellipse: s-maj=13.4km s-min=10.0km az=49.0*

*MOS **08** 13:23:48.3±1.1, 6°.83N×94°.69E, h27km, mb5.2/29, MS4.9/10, Error ellipse: s-maj=12.7km s-min=6.2km az=103.4*

*DJA **08** 13:23:54.0±0.3, 7°N±3°×9°5E±°, h10km, M4.9/19, mb4.9/19, mB5.4/13, MLv5.2/7, Mw(mB)4.8/13, MwMwp5.0/7, Mwp5.3/7*

*GCMT **08** 13:24:00.8±0.1, 6°.88N±0°.01×94°.69E±0°.01, h15km, MW5.4/141, Moment Tensor Solution. s87,c131; s141,c262; Duration: 1ˢ.2 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.24±.02; $M_{\theta\theta}$-1.08±.02; $M_{\phi\phi}$1.32±.02; $M_{r\theta}$-0.48±.05; $M_{\theta\phi}$0.54±.02; $M_{\phi r}$-0.09±.04; Best double couple: $M_0$1.41900×10^{17} NP1:ϕ_s149.00000°,δ70.00000°, λ-169.00000°. NP2:ϕ_s55.00000°,δ79.00000°, λ-21.00000°. Principal axes: T 1.4580, Plg7.0000°, Azm103.0000°; N -0.0840, Plg67.0000°, Azm209.0000°; P -1.3790, Plg22.0000°, Azm11.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 13:23:51.5±0.3**, 6°.70N**±0°.04×**94°.45E**±0°.05**, h35km, n238, σ1ˢ.98**/236**, mb4.9**/85**, MS5.0**/17**, 3C-1D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	2.88	120	P	Pn	13 24 34.0	-1.0
LHMI	Lhok Sumawe	2.88	120	Pn	Pn	13 24 33.3	-1.6
TPTI		4.37	141	P	Pn	13 24 58.9	+3.5
TSI	Tuntungan	5.19	128	P	Pn	13 25 06.5	-0.2
PSI	Prapat	5.91	131	Pn	Pn	13 25 17.7	+1.0
	2.3nm,0.3s,baz=324,slow=15,SNR=13						
GSI	Gunungsitoli	6.20	150	P	Pn	13 25 24.7	+4.1
	1.0nm2μm81nm,1.1s						
GSI	Gunungsitoli	6.20	150		Pn	13 25 20.2	-0.4
KULM	Kulim	6.33	102	P	Pn	13 25 19.0	-3.3
DGPR	DIGLIPUR	6.61	347	eP	Pn	13 25 22.3	-3.9
IPM	Ipoh	6.91	108	P	Pn	13 25 27.0	-3.3
MNSI	Mandailing Nat	7.79	139	P	Pn	13 25 43.8	+1.4
	0.5nm77nm,0.6s						
JRMM	Jerantut	8.47	109	P	Pn	13 25 49.0	-2.8
BKNI	Bangkinang	9.13	134	P	Pn	13 26 01.7	+0.9
	5μm3μm257nm,1.4s						
BKNI	Bangkinang	9.13	134		Pn	13 26 00.2	-0.6
PDSI	Padang	9.65	141	P	Pn	13 26 09.3	+1.3
	36nm,1.2s						
PBKT	Sadao Pong	11.70	32	Pn	Pn	13 26 34.3	-1.7
JMBI	JAMBI	12.36	132	P	Pn	13 26 45.7	+0.6
DSRI	Dabo	12.37	125	P	Pn	13 26 48.1	+2.9
	2μm26nm,1.3s						
CM31	Chiang Mai Arr	12.48	20		Pn	13 26 44.7	-2.0
CMAR	Chiang Mai Arr	12.48	20	Pn	Pn	13 26 44.5	-2.3
	0.2nm,0.3s,baz=212,slow=14,SNR=31						
CHTO	Chiang Mai	12.81	20	P	Pn	13 26 50.1	-1.1
CHTO	Chiang Mai	12.81	20	Pn	Pn	13 26 50.1	-1.1
PALK	Pallekele	13.66	273	P	Pn	13 27 02.8	-0.1
PALK	Pallekele	13.66	273	Pn	Pn	13 27 02.8	-0.1
LHSI	Lahat	13.84	139	P	Pn	13 27 05.4	+0.2
	107nm,1.3s						
MNAI	Manna	13.89	142	Pn	Pn	13 27 04.1	-1.8
PPBI	Pangkal Pinang	14.62	127	P	P	13 27 21.3	-0.5
	5μm51nm,1.2s						
MDSI	Maura Dua	14.76	139	P	Pn	13 27 15.8	-2.0
DLV	T Lat	14.80	68	Pn	Pn	13 27 17.8	-0.7
LWLI	Liwa	15.08	140	P	P	13 27 29.2	+2.1
	219nm,0.8s						
KLSI		15.28	138	P	Pn	13 27 23.5	-1.2
KASI	Kota Agung	15.75	140	P	P	13 27 36.7	+2.3
	83nm,1.0s						

SLVN	**Son La**	**17.19**	**31**		**Pn**	**13 27 47.4**	**-1.6**
SBUM	**Sibu**	**18.21**	**103**	P	**Pn**	**13 28 03.0**	**+1.4**
HYB	**Hyderabad**	**18.82**	**306**	*e*S	**Sn**	**13 31 38.0**	**-0.9**
KOHI	**KOHIMA**	**18.92**	**359**	*e*x	**P**	**13 28 08.5**	**-1.0**
QIZ	**Qiongzhong**	**19.35**	**49**	P	**P**	**13 28 14.0**	**-0.2**
QIZ				S	**S**	**13 31 52.6**	**+1.2**
QIZ				pmax	pmax		
	comp=Z,16nm,1.3s						
QIZ				LR	LR		
	comp=N,14µm,14.5s						
QIZ				LR	LR		
	comp=E,8µm,11.4s						
QIZ				LR	LR		
	comp=Z,4µm,13.7s						
QIZ	**Qiongzhong**	**19.35**	**49**	P	**P**	**13 28 13.0**	**-1.1**
MOKO	**MOKOCHONG**	**19.51**	**0**	IAmb	IAmb	13 28 28.7	
	comp=Z,47nm,0.9s						
MOKO	**MOKOCHONG**	**19.51**	**0**	*e*x	**Pn**	**13 28 16.7**	**-0.7**
KMI	**Kunming**	**19.96**	**23**	⇑P	**P**	**13 28 23.7**	**+2.7**
KMI				pP	Pn	13 28 27.1	+4.2
KMI				PP	**PnPn**	**13 28 40.6**	**+3.0**
KMI				S	Sn	13 32 09.5	+2.9
KMI				SS	**SnSn**	**13 32 35.6**	**+14**
KMI				pmax	pmax		
	comp=Z,18nm,0.8s						
KMI				pmax	pmax		
	comp=Z,60nm,3.5s						
KMI				LR	LR		
	comp=Z,3µm,13.7s						
KMI				LR	LR		
	comp=Z,4µm,13.7s						
KMI				LR	LR		
	comp=Z,4µm,14.9s						
LKP	**Lekhapani**	**20.56**	**4**	IAmb	IAmb	13 28 38.3	
	comp=Z,88nm,1.2s						
LKP	**Lekhapani**	**20.56**	**4**	*e*x	Pn	13 28 27.7	-2.0
UGM	**Wanagama**	**21.63**	**132**	P	**P**	**13 28 38.6**	**-0.3**
UGM				IAmb	IAmb	13 28 42.1	
	comp=Z,217nm,1.4s						
MTKI	**Muara Teweh, K**	**21.77**	**110**	P	**P**	**13 28 40.0**	**-0.4**
NGJI	**Ngawi**	**21.98**	**129**	P	**P**	**13 28 47.0**	**+4.3**
	comp=Z,900nmcomp=Z,109nm,1.1s						
BBKI	**Banjar Baru**	**22.73**	**116**	P	**P**	**13 28 51.4**	**+0.8**
GYA	**Guiyang**	**22.84**	**29**	⇑P	**P**	**13 28 52.4**	**+0.6**
GYA				pP	**pP**	**13 29 02.7**	**+2.2**
GYA				S	**S**	**13 33 02.2**	**+3.1**
GYA				SS	**SnSn**	**13 33 41.9**	**+10**
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,380nm,4.4s						
GYA				LR	LR		
	comp=Z,6µm,11.4s						
GYA				LR	LR		
	comp=Z,4µm,10.4s						
GYA				LR	LR		
	comp=Z,7µm,15.2s						
LSA	**Lhasa**	**23.09**	**353**	P	**P**	**13 28 53.1**	**-1.7**
LSA				pmax	pmax		
	comp=Z,39nm,0.7s						
LSA	**Lhasa**	**23.09**	**353**	P	**P**	**13 28 53.0**	**-1.7**
LSA				IAmb	IAmb	13 29 14.8	
	comp=Z,39nm,0.7s						
JAGI	**Jajag, Banyuwa**	**24.76**	**127**	P	**P**	**13 29 09.7**	**-0.4**
JAGI				IAmb	IAmb	13 29 28.4	
	comp=Z,51nm,0.8s						
TOLI2	**Tolitoli**	**26.84**	**101**	P	**P**	**13 29 27.7**	**-1.3**
TOLI2				IAmb	IAmb	13 29 49.6	
	comp=Z,63nm,1.0s						
BISR	**Bishrakh**	**27.05**	**326**	*e*x	**P**	**13 29 27.2**	**-3.5**
ENH	**Enshi**	**27.38**	**29**	P	**P**	**13 29 30.5**	**-3.1**
ENH				IAmb	IAmb	13 29 50.8	
	comp=Z,44nm,0.8s						
XAN	**Xi'an**	**30.32**	**24**	P	**P**	**13 29 58.9**	**-0.9**
XAN				pP	**pP**	**13 30 07.7**	**-1.4**
XAN				S	**S**	**13 35 05.9**	**+8.1**
XAN				pmax	pmax		
	comp=Z,32nm,0.9s						
XAN				pmax	pmax		
	comp=Z,91nm,4.7s						
XAN				LR	LR		
	comp=Z,4µm,15.9s						
XAN				LR	LR		
	comp=Z,5µm,12.5s						
XAN				LR	LR		
	comp=Z,6µm,15.2s						
GTA	**Gaotai**	**32.92**	**8**	*e*P	**P**	**13 30 21.6**	**-1.1**
GTA				pP	pP	13 30 27.2	-5.0
GTA				S	**S**	**13 35 41.7**	**+3.2**
GTA				sS	**sS**	**13 35 52.6**	**-1.7**
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,200nm,6.0s						
GTA				LR	LR		
	comp=Z,2µm,20.0s						
GTA				LR	LR		
	comp=Z,2µm,14.9s						
GTA				LR	LR		
	comp=Z,2µm,20.7s						
NIL	**Nilore**	**33.24**	**327**	P	P	13 30 23.6	-1.8
NIL				pmax	pmax		
	comp=Z,86nm,0.8s						
NIL	**Nilore**	**33.24**	**327**	P	P	13 30 23.6	-1.8
NJ2	**Nanjing**	**33.98**	**39**	*e*P	**P**	**13 30 32.2**	**+0.4**
NJ2				S	**S**	**13 35 52.0**	**-2.7**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,260nm,3.5s						
NJ2				LR	LR		
	comp=Z,6µm,14.2s						
NJ2				LR	LR		
	comp=Z,4µm,13.7s						
NJ2				LR	LR		
	comp=Z,2µm,12.8s						
HHC	**Hu-ho-hao-te**	**37.28**	**22**	*e*P	**P**	**13 31 02.2**	**+1.9**
HHC				PP	**PnPn**	**13 32 30.0**	**+3.5**
HHC				S	**S**	**13 36 49.5**	**+4.0**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,88nm,8.3s						
HHC				LR	LR		
	comp=Z,3µm,13.4s						
HHC				LR	LR		
	comp=Z,3µm,15.1s						
HHC				LR	LR		
	comp=Z,4µm,14.9s						
WMQ	**Urumqi**	**37.45**	**352**	*e*P	**P**	**13 31 02.3**	**+0.8**
WMQ				sP	**pP**	**13 31 11.5**	**+0.5**
WMQ				pmax	pmax		
	comp=Z,19nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,230nm,6.3s						
WMQ				LR	LR		
	comp=Z,1µm,19.1s						
WMQ				LR	LR		
	comp=Z,1µm,18.5s						
WMQ				LR	LR		
	comp=Z,1µm,18.5s						
BJT	**Baijiatuau**	**38.48**	**27**	P	**P**	**13 31 10.1**	**-0.1**
BJT				pmax	pmax		
	comp=Z,54nm,1.2s						
BJT	**Baijiatuau**	**38.48**	**27**	P	**P**	**13 31 10.1**	**-0.1**
BJT				IAmb	IAmb	13 31 28.8	
	comp=Z,54nm,1.2s						
DRK	**Karamyk**	**38.48**	**331**	P	**P**	**13 31 09.3**	**-1.3**
PDGK	**Podgornoye**	**38.78**	**343**	P	P	13 31 18.0	+5.1
GAR	**Garm**	**38.83**	**329**	P	**P**	**13 31 11.8**	**-1.5**
CHGR	**Chuyangaron**	**39.17**	**328**	P	P	13 31 14.2	-1.9
BTK	**Batken**	**39.40**	**331**	P	P	13 31 15.8	-2.3
BTK				pmax	pmax		
	comp=Z,53nm,0.9s						
BTK	**Batken**	**39.40**	**331**	P	P	13 31 15.8	-2.2
BTK				IAmb	IAmb	13 31 38.0	
	comp=Z,53nm,0.9s						
MDOK	**Medeo**	**39.42**	**340**	P	**P**	**13 31 19.6**	**+1.3**
FITZ	**Fitzroy Crossi**	**39.43**	**129**	P	**P**	**13 31 19.0**	**+0.5**
	comp=Z,1.6nm,0.6s,baz=334,slow=10,SNR=5.6						
FITZ	**Fitzroy Crossi**	**39.43**	**129**	P	**P**	**13 31 20.8**	**+2.3**
	baz=40,SNR=9.1						
TKM2	**Tokmak 2**	**39.72**	**338**	P	**P**	**13 31 22.5**	**+1.6**
AAK	**Ala-Archa**	**39.90**	**337**	*i* P	**P**	**13 31 20.9**	**-1.4**
AAK				pmax	pmax		
	comp=Z,43nm,1.2s						
KNRA	**Kununurra**	**40.61**	**123**	P	**P**	**13 31 27.8**	**-0.5**
	baz=41,SNR=3.8						
MK31	**Makanchi Array**	**41.29**	**347**	*i* P	**P**	**13 31 31.8**	**-1.7**
MK31	**Makanchi Array**	**41.29**	**347**	P	P	13 31 31.3	-2.2
MKAR	**Makanchi Array**	**41.29**	**347**	P	**P**	**13 31 32.3**	**-1.2**
	comp=Z,3.4nm,0.8s,baz=165,slow=8.9,SNR=19						
MKAR	**Makanchi Array**	**41.29**	**347**	P	P	13 31 31.5	-2.1
MAKZ	**Makanchi**	**41.38**	**347**	P	P	13 31 32.2	-2.0
MAKZ				pmax	pmax		
	comp=Z,17nm,0.9s						
MAKZ	**Makanchi**	**41.38**	**347**	P	P	13 31 32.2	-2.1
KKAR	**Karatay Array**	**41.94**	**334**	P	**P**	**13 31 37.9**	**-1.0**
KKAR				pmax	pmax		
	comp=Z,29nm,1.3s						
KKAR	**Karatay Array**	**41.94**	**334**	P	**P**	**13 31 37.9**	**-1.0**
KKAR	**Karatay Array**	**41.94**	**334**	P	**P**	**13 31 37.8**	**-1.1**
SONM	**Songino Array**	**42.24**	**12**	P	**P**	**13 31 40.0**	**-1.5**
	comp=Z,3.4nm,0.8s,baz=196,slow=8.6,SNR=16						
SONM				PcP	**PcP**	**13 33 35.5**	**+0.6**
	comp=Z,1.5nm,0.8s,baz=197,slow=3.0,SNR=1.5						
SONM	**Songino Array**	**42.24**	**12**	P	**P**	**13 31 39.9**	**-1.5**
SONM				pmax	pmax		
	comp=Z,12nm,0.9s						
SONM	**Songino Array**	**42.24**	**12**	P	**P**	**13 31 39.9**	**-1.5**
ULN	**Ulaanbaatar**	**42.41**	**13**	*i* P	**P**	**13 31 41.2**	**-1.6**
ULN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ULN	**Ulaanbaatar**	**42.41**	**13**	P	**P**	**13 31 41.0**	**-1.8**
KSRS	**Korea Array**	**43.15**	**40**	P	**P**	**13 31 47.1**	**-1.7**
	comp=Z,4.4nm,1.0s,baz=236,slow=7.1,SNR=7.7						
DGZ	**Jazzator, Alta**	**43.26**	**353**	*i* P	**P**	**13 31 48.8**	**-0.9**
DGZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MUN	**Mundaring**	**43.71**	**153**	P	P	13 32 03.6	+10
	baz=44,SNR=3.7						
GEYT	**Alibeck**	**45.27**	**319**	P	**P**	**13 32 06.3**	**+0.4**
	comp=Z,1.8nm,0.6s,baz=184,slow=13,SNR=2.1						
GEYT				LR	LR	13 54 42.5	
	comp=Z,1µm,18.8s,baz=185,slow=41						
GEYT	**Alibeck**	**45.27**	**319**	P	**P**	**13 32 05.6**	**-0.3**
JHS	**Saijyo**	**45.34**	**46**	P	**P**	**13 32 06.5**	**0.0**
JHS				IAmb	IAmb	13 32 29.2	
	comp=Z,37nm,1.1s						
WRKA	**Warakurna**	**45.61**	**135**	P	**P**	**13 32 09.6**	**+0.9**
	baz=46,SNR=4.0						
KURBB	**Kurchatov Arra**	**45.75**	**346**	P	**P**	**13 32 07.9**	**-1.4**
	comp=Z,4.0nm,0.7s,baz=167,slow=6.7,SNR=14						
KURK	**Kurchatov**	**45.82**	**346**	P	**P**	**13 32 09.1**	**-0.8**
KURK				pmax	pmax		
	comp=Z,31nm,0.9s						
KURK	**Kurchatov**	**45.82**	**346**	P	**P**	**13 32 09.1**	**-0.8**
KURK				IAmb	IAmb	13 32 27.6	
	comp=Z,31nm,0.9s						
CN2	**Changchun**	**45.86**	**31**	*e*P	**P**	**13 32 10.9**	**+0.6**
CN2				SS	SS	13 42 12.6	-4.6
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CN2				pmax	pmax		
	comp=Z,200nm,5.5s						
CN2				LR	LR		
	comp=Z,2µm,14.0s						
CN2				LR	LR		
	comp=Z,2µm,14.0s						
CN2				LR	LR		
	comp=Z,2µm,15.1s						
JWT	**Wachi**	**47.13**	**47**	P	**P**	**13 32 20.0**	**-0.4**
JWT				IAmb	IAmb	13 32 26.2	
	comp=Z,35nm,1.5s						
WB0	**Warramunga Arr**	**47.30**	**125**	P	**P**	**13 32 21.1**	**-0.9**
WB0				IAmb	IAmb	13 32 38.8	
	comp=Z,24nm,1.3s						
WRA	**Warramunga Arr**	**47.34**	**125**	P	**P**	**13 32 21.6**	**-0.7**
	comp=Z,2.1nm,0.7s,baz=306,slow=9.1,SNR=30						
WRA	**Warramunga Arr**	**47.34**	**125**	P	**P**	**13 32 21.1**	**-1.3**
WRAB	**Tennant Creek**	**47.34**	**125**	*i* P	**P**	**13 32 20.9**	**-1.4**
WRAB				pmax	pmax		
	comp=Z,23nm,1.3s						
WRAB	**Tennant Creek**	**47.34**	**125**	P	**P**	**13 32 21.4**	**-1.0**
WRAB				IAmb	IAmb	13 32 44.8	
	comp=Z,14nm,0.9s						
WB2	**Warramunga Arr**	**47.35**	**125**	P	**P**	**13 32 21.7**	**-0.7**
	baz=47						
WB2	**Warramunga Arr**	**47.35**	**125**	P	**P**	**13 32 21.4**	**-1.0**
WB2				IAmb	IAmb	13 32 46.2	
	comp=Z,13nm,0.8s						
HIA	**Hailar**	**47.48**	**22**	*i* P	P	13 32 19.9	-3.1
HIA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
WR0	**Warramunga Arr**	**47.51**	**125**	P	**P**	**13 32 21.9**	**-1.8**
WR0				IAmb	IAmb	13 32 45.2	
	comp=Z,13nm,0.9s						
ZAA0	**Zalesovo Array**	**47.75**	**352**	P	**P**	**13 32 23.5**	**-1.4**
ZALV	**Zalesovo Beam**	**47.75**	**352**	P	**P**	**13 32 24.1**	**-0.8**
	comp=Z,5.0nm,0.9s,baz=167,slow=7.2,SNR=13						
ZALV	**Zalesovo Beam**	**47.75**	**352**	P	**P**	**13 32 23.2**	**-1.7**
MDJ	**Mudanjiang**	**48.61**	**33**	P	**P**	**13 32 34.4**	**+2.6**
MDJ				pP	**pP**	**13 32 39.1**	**-2.5**
MDJ				sP	**pwP**	**13 32 40.7**	**-3.4**
MDJ				S	**S**	**13 39 32.7**	**+1.4**
MDJ				pmax	pmax		
	comp=Z,7.0nm,1.6s						
MDJ				pmax	pmax		
	comp=Z,260nm,3.7s						
MDJ				LR	LR		
	comp=Z,2µm,12.4s						
MDJ				LR	LR		
	comp=Z,3µm,11.0s						
MDJ				LR	LR		
	comp=Z,3µm,12.4s						
AS31	**Alice Springs**	**48.94**	**129**	P	**P**	**13 32 33.5**	**-1.1**
ASAR	**Alice Springs**	**48.94**	**129**	P	**P**	**13 32 34.2**	**-0.4**
	comp=Z,1.5nm,0.8s,baz=307,slow=7.5,SNR=24						
ASAR	**Alice Springs**	**48.94**	**129**	P	**P**	**13 32 33.5**	**-1.1**
ASAR	**Alice Springs**	**48.94**	**129**		**P**	**13 32 33.5**	**-1.1**
FORT	**Forrest**	**49.24**	**141**	P	**P**	**13 32 38.5**	**+1.7**
	baz=50						
USRK	**Ussuriysk Ar.**	**49.69**	**35**	P	**P**	**13 32 39.6**	**-0.4**
	comp=Z,2.4nm,0.8s,baz=199,slow=8.5,SNR=2.5						
MAT	**Matsushiro**	**49.73**	**47**	P	**P**	**13 32 39.9**	**-0.6**
MAT				*e*S	**S**	**13 39 45.2**	**-2.1**
MJAR	**Matsushiro Arr**	**49.73**	**47**	P	**P**	**13 32 40.3**	**-0.2**
	comp=Z,2.2nm,0.8s,baz=240,slow=7.2,SNR=7.0						
MJAR	**Matsushiro Arr**	**49.73**	**47**	P	**P**	**13 32 38.9**	**-1.6**
MJAR				pmax	pmax		
	comp=Z,20nm,1.5s						
MJAR	**Matsushiro Arr**	**49.73**	**47**	P	**P**	**13 32 38.9**	**-1.6**
BVAR	**Borovoye Array**	**50.19**	**341**	P	**P**	**13 32 42.7**	**-1.0**
	comp=Z,2.3nm,0.8s,baz=185,slow=15,SNR=9.6						
BRVK	**Borovoye**	**50.25**	**341**	*i* P	**P**	**13 32 42.9**	**-1.2**
BRVK				pmax	pmax		
	comp=Z,12nm,0.8s						
BRVK	**Borovoye**	**50.25**	**341**	P	**P**	**13 32 42.7**	**-1.5**
BRVK				IAmb	IAmb	13 33 01.8	
	comp=Z,20nm,0.8s						
ABKAR	**Akbulak array**	**51.40**	**332**	P	**P**	**13 32 52.3**	**-0.6**
KLR	**Kul'dur**	**52.74**	**30**	*i* P	P	13 33 00.0	-2.8
KLR				pmax	pmax		
	comp=Z,26nm,2.0s						
AKTO	**Aktyubinsk**	**53.12**	**332**	P	**P**	**13 33 04.7**	**-0.9**
	comp=Z,3.2nm,0.6s,baz=113,slow=7.6,SNR=10						
BOD	**Bodaibo**	**53.22**	**13**	*e*P	**P**	**13 33 05.4**	**-0.8**
BOD				pmax	pmax		
	comp=Z,44nm,1.1s						
GNI	**Garni**	**55.47**	**315**	*i* P	**P**	**13 33 24.2**	**+1.1**
GNI				pmax	pmax		
	comp=Z,39nm,1.3s						
BBOO	**Buckleboo**	**55.74**	**137**	P	**P**	**13 33 25.3**	**+0.3**
	baz=56,SNR=6.6						
ARU	**Arti**	**57.08**	**337**	P	**P**	**13 33 32.7**	**-1.4**
	comp=Z,0.4nm,0.3s,baz=178,slow=8.7,SNR=4.2						
ARU	**Arti**	**57.08**	**337**	*c i*P	**P**	**13 33 33.6**	**-0.5**
ARU						13 34 23.4	
ARU						13 35 35.3	
ARU				S	**S**	**13 41 29.8**	**+3.3**
ARU				SS	**SS**	**13 45 14.0**	**-1.6**
ARU				pmax	pmax		
	comp=Z,12nm,1.6s						
ARU				MLR	MLR		
	comp=Z,1µm,20.0s						
ARU	**Arti**	**57.08**	**337**	P	P	13 33 31.5	-2.6
ARU				IAmb	IAmb	13 33 51.0	
	comp=Z,33nm,0.9s						
HTT	**Hallett**	**58.05**	**136**	P	**P**	**13 33 42.3**	**+1.0**
	baz=58,SNR=7.6						
KBZ	**Khabaz**	**58.16**	**318**	*i* P	**P**	**13 33 43.9**	**+2.0**
KBZ				pmax	pmax		
	comp=Z,9.0nm,1.3s						
SHA1	**Shidzhatmaz**	**58.32**	**318**	*i* P	**P**	**13 33 44.4**	**+1.0**
KIV	**Kislovodsk**	**58.39**	**318**	*e*P	**P**	**13 33 43.3**	**-0.3**
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,312nm,17.0s						
QLP	**Quilpie**	**58.49**	**127**	P	**P**	**13 33 43.9**	**-0.6**
	baz=58,SNR=5.2						
STKA	**Stephens Creek**	**59.08**	**133**	P	**P**	**13 33 48.9**	**+0.3**
	comp=Z,1.9nm,0.7s,baz=320,slow=8.8,SNR=8.3						
STKA	**Stephens Creek**	**59.08**	**133**	P	**P**	**13 33 49.1**	**+0.6**
	baz=59,SNR=6.2						
STKA	**Stephens Creek**	**59.08**	**133**	P	**P**	**13 33 48.3**	**-0.2**
STKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
STKA	**Stephens Creek**	**59.08**	**133**	P	**P**	**13 33 48.3**	**-0.2**
YAK	**Yakutsk**	**61.01**	**18**	*e*		13 43 47.3	
YAK	**Yakutsk**	**61.01**	**18**	P	**P**	**13 33 59.6**	**-1.6**
YAK	**Yakutsk**	**61.01**	**18**	*e*SS	SS	13 46 13.9	-3.1
YAK	**Yakutsk**	**61.01**	**18**	*e*S	**S**	**13 42 18.1**	**+1.0**
ARPS	**Mount Arapiles**	**61.91**	**138**	P	**P**	**13 34 11.9**	**+4.2**
	baz=62,SNR=4.8						
CMSA	**Cobar Meteorol**	**61.93**	**131**	P	**P**	**13 34 08.9**	**+1.0**
	baz=62,SNR=4.5						
KIRV	**Kirov**	**62.20**	**335**	*i* P	**P**	**13 34 10.0**	**+0.7**
NRIK	**Noril'sk**	**62.72**	**357**	*i* P	**P**	**13 34 12.6**	**0.0**
NRIK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
NRIK	**Noril'sk**	**62.72**	**357**	P	**P**	**13 34 11.4**	**-1.2**
BRTR	**Keskin Array B**	**63.42**	**311**	P	**P**	**13 34 17.2**	**-0.8**
	comp=Z,1.1nm,0.7s,baz=128,slow=6.2,SNR=5.7						
BRTR	**Keskin Array B**	**63.42**	**311**	*i* P	**P**	**13 34 18.7**	**+0.7**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRTR	**Keskin Array B**	**63.42**	**311**	P	**P**	**13 34 16.2**	**-1.9**
MBAR	**Mbarara**	**63.98**	**266**	*i* P	**P**	**13 34 26.3**	**+4.1**
TOO	**Toolangi**	**64.80**	**137**	P	**P**	**13 34 29.8**	**+2.9**
	baz=65,SNR=9.1						
PRGR	**Permogore**	**65.53**	**337**	*e*P	**P**	**13 34 32.1**	**+0.9**
PRGR				pmax	pmax		
	comp=Z,62nm,1.3s						
MOS	**Moscow**	**66.23**	**329**	*e*	**PcP**	**13 35 06.2**	**+0.5**
OBN	**Obninsk**	**66.53**	**328**	*i*	**PcP**	**13 35 07.9**	**+1.0**
KLMR	**Klimovskoe**	**67.64**	**334**	*e*P	**P**	**13 34 46.3**	**+1.7**
KLMR				pmax	pmax		
	comp=Z,36nm,1.3s						
KLMR	**Klimovskoe**	**67.64**	**334**	*e*P	**P**	**13 34 46.3**	**+1.7**
KLMR				AMP		13 35 02.1	
	comp=Z,36nm,1.3s						
KLMR				LQ	LQ	13 58 19.3	
KLMR				LQ	LQ	13 58 19.3	
KLMR				LR	LR	14 04 50.6	
TIXI	**Tiksi**	**68.32**	**11**	P	**P**	**13 34 47.1**	**-1.6**
TIXI				pmax	pmax		
	comp=Z,24nm,0.9s						
TIXI	**Tiksi**	**68.32**	**11**	P	**P**	**13 34 47.1**	**-1.6**
TIXI				IAmb	IAmb	13 35 10.9	
	comp=Z,24nm,0.9s						
MNK	**Minsk**	**71.06**	**326**	*i* P	**P**	**13 35 04.5**	**-1.4**
MNK				*i*		13 35 29.5	
MNK				*i*		13 37 41.7	
MNK				*i* PPP	PPP	13 39 24.6	
MNK				*i* S	**S**	**13 44 20.7**	**+0.9**
MNK				*i* SS	**SS**	**13 48 54.9**	**+1.5**
MNK				pmax	pmax		
	comp=Z,12nm,1.0s						
MNK				pmax	pmax		
	comp=E,2.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,11nm,0.8s						
MNK				MLR	MLR		
	comp=Z,433nm,20.0s						
MNK				MLR	MLR		
	comp=N,626nm,22.0s						
MNK				MLR	MLR		
	comp=E,26nm,17.0s						
MNK	**Minsk**	**71.06**	**326**	*i* P	**P**	**13 35 04.5**	**-1.4**
	comp=E,2.0nm,0.9s						
MNK				*i* P	**P**	**13 35 04.5**	**-1.4**
	comp=N,11nm,0.8s						
MNK				*i* P	**P**	**13 35 04.5**	**-1.4**
	comp=Z,12nm,1.0s,baz=104						
MNK				*i* PcP	**PcP**	**13 35 29.5**	**+3.5**
MNK				*i* PP	**PP**	**13 37 41.7**	**-1.9**
MNK				*i* PPP	PPP	13 39 24.7	
MNK				*i* S	**S**	**13 44 20.7**	**+0.9**
MNK				*i* SS	**SS**	**13 48 54.9**	**+1.6**
MNK				*i* SSS	SSS	13 52 09.6	
MNK				*i* LQ	LQ	14 01 31.6	
MNK				*i* LR	LR	14 06 48.3	
MNK				*i* LRM	MLR	14 10 01.4	
	comp=Z,433nm,19.6s						
MNK				*i* LRM	MLR	14 10 02.8	
	comp=N,626nm,21.7s						
MNK				*i* LRM	MLR	14 10 12.2	
	comp=E,26nm,17.4s						
ITM	**Ithomi**	**72.06**	**307**	P	**P**	**13 35 13.0**	**+0.6**
ITM				IAmb	IAmb	13 35 29.8	
	comp=Z,19nm,1.0s						
LVV	**L'vov**	**72.31**	**320**	*e*P	**P**	**13 35 15.2**	**+1.7**
ISAL	**Salakas**	**72.31**	**326**	*e*P	**P**	**13 35 12.2**	**-1.3**
VSU	**Vasula**	**72.75**	**329**	*e*P	**P**	**13 35 14.3**	**-1.7**
UZH	**Uzhgorod**	**73.22**	**319**	*e*P	**PcP**	**13 35 34.7**	**-0.7**
PABE	**Paberze**	**73.49**	**326**	*e*P	**P**	**13 35 19.0**	**-1.4**
SUW	**Suwalki**	**73.63**	**324**	*e*P	**P**	**13 35 21.1**	**-0.2**
CASY	**Casey**	**73.73**	**173**	P	**P**	**13 35 21.3**	**-0.3**
FIA1	**FINESS Array S**	**73.88**	**332**	P	**P**	**13 35 21.6**	**-1.0**
FIA1				IAmb	IAmb	13 35 44.0	
	comp=Z,22nm,1.1s						
FINES	**FINESS Array B**	**73.88**	**332**	P	**P**	**13 35 22.1**	**-0.5**
	comp=Z,2.0nm,0.7s,baz=110,slow=6.0,SNR=12						
FINES	**FINESS Array B**	**73.88**	**332**	P	**P**	**13 35 21.8**	**-0.8**
BOSA	**Boshof**	**75.23**	**238**	P	**P**	**13 35 32.0**	**+0.8**
	comp=Z,1.5nm,0.5s,baz=92,slow=8.4,SNR=4.4						
BOSA	**Boshof**	**75.23**	**238**	P	**P**	**13 35 31.6**	**+0.4**
BOSA				pmax	pmax		
	comp=Z,29nm,1.1s						
BOSA	**Boshof**	**75.23**	**238**	P	**P**	**13 35 31.6**	**+0.4**
BOSA				IAmb	IAmb	13 35 54.4	
	comp=Z,29nm,1.1s						
DZM	**Mont Dzumac**	**76.03**	**115**	*e*LR	LR	13 59 04.9	
	comp=Z,804nm,23.5s						
TIP	**Timpagrande**	**76.26**	**309**	P	**P**	**13 35 35.5**	**-1.4**
ARCES	**ARCESS Array B**	**76.47**	**340**	P	**P**	**13 35 36.7**	**-0.7**
	comp=Z,4.7nm,0.9s,baz=17,slow=5.1,SNR=8.9						
ARCES	**ARCESS Array B**	**76.47**	**340**	P	**P**	**13 35 36.6**	**-0.8**
ARCES				pmax	pmax		
	comp=Z,41nm,1.2s						
ARCES	**ARCESS Array B**	**76.47**	**340**	P	**P**	**13 35 36.6**	**-0.8**
AAL	**Aland**	**76.50**	**330**	*e*P	**P**	**13 35 35.9**	**-1.8**
BILL	**Bilibino**	**77.06**	**22**	*i* P	P	13 35 37.2	-3.5
BILL				*i*		13 35 48.6	
BILL				pmax	pmax		
	comp=Z,6.0nm,1.4s						
BILL				MLR	MLR		
	comp=Z,1µm,18.0s						
CONA	**Conrad Observa**	**77.41**	**318**	*e*P	**P**	**13 35 45.0**	**+1.7**
	comp=Z,9.9nm,1.1s						
ARSA	**Arzberg**	**77.59**	**317**	*e*P	**P**	**13 35 43.2**	**-1.0**
	comp=Z,24nm,1.3s						
UPP	**Uppsala**	**77.62**	**330**	*e*P	**P**	**13 35 43.8**	**-0.2**
SOKA	**Soboth**	**77.90**	**316**	P	**P**	**13 35 46.8**	**+0.8**
	comp=Z,36nm,1.2s,SNR=6.0						
OBKA	**Obir**	**78.22**	**316**	*e*P	**P**	**13 35 47.6**	**-0.1**
	comp=Z,23nm,1.3s						
MOA	**Molln**	**78.48**	**317**	*e*P	**P**	**13 35 49.7**	**+0.6**
	comp=Z,16nm,1.2s						
MYKA	**Terra Mystica**	**78.85**	**316**	*e*P	**P**	**13 35 51.0**	**-0.2**
	comp=Z,7.2nm,0.9s						
GEC2	**GERESS Array S**	**78.90**	**318**	P	**P**	**13 35 51.4**	**-0.1**
GEC2				IAmb	IAmb	13 36 10.2	
	comp=Z,28nm,0.9s						
GERES	**GERESS Array B**	**78.90**	**318**	P	**P**	**13 35 51.6**	**+0.1**
	comp=Z,1.2nm,0.6s,baz=77,slow=5.8,SNR=13						
RUE	**Ruedersdorf**	**79.03**	**322**	*e*P	**P**	**13 35 50.7**	**-1.3**
KBA	**Koelnbreinsper**	**79.07**	**317**	*e*P	**P**	**13 35 52.3**	**-0.2**
	comp=Z,19nm,1.2s						
ZOU	**Zoufplan**	**79.31**	**316**	P	**P**	**13 35 54.1**	**+0.2**
ZOU				IAmb	IAmb	13 36 12.2	
	comp=Z,31nm,1.1s						
STAL	**STALIGIAL**	**79.48**	**316**	P	**P**	**13 35 53.9**	**-0.8**
ABTA	**Abfaltersbach**	**79.63**	**316**	P	**P**	**13 35 55.2**	**-0.3**

	comp=Z,5.3nm,1.0s,SNR=4.3						
CTI	Castel Tesino	80.22	315	P	P	13 35 58.7	0.0
CTI				pmax	pmax		
	comp=Z,46nm,1.0s						
CTI	Castel Tesino	80.22	315	P	P	13 35 58.7	0.0
WTTA	Wattenberg	80.24	317	i P	P	13 35 58.9	0.0
	comp=Z,13nm,0.7s,SNR=6.8						
WATA	Walderalm	80.28	317	eP	P	13 36 00.9	+1.9
	comp=Z,6.7nm,0.6s						
SQTA	Sankt Quirin	80.53	317	i P	P	13 36 00.1	-0.3
	comp=Z,16nm,0.7s,SNR=8.0						
MOTA	Moosalm	80.60	317	i P	P	13 36 00.4	-0.5
	comp=Z,10.0nm,0.7s,SNR=6.2						
RETA	Reutte	80.83	317	i P	P	13 36 01.8	-0.1
	comp=Z,15nm,0.6s,SNR=8.4						
FETA	Feichten	80.86	316	P	P	13 36 02.5	+0.3
	comp=Z,8.0nm,0.7s,SNR=7.1						
SALO	Salr	81.00	315	P	P	13 36 01.9	-1.0
DAVA	Damuels	81.44	317	i P	P	13 36 04.6	-0.6
	comp=Z,8.5nm,0.7s,SNR=4.2						
TUE	Stuetta	81.81	316	P	P	13 36 05.8	-1.6
TUE				IAmb	IAmb	13 36 21.7	
	comp=Z,19nm,0.7s						
SENIN	Lac Senin/Sane	83.23	316	P	P	13 36 13.7	-1.1
BCLA	Clavier	84.34	320	dP	P	13 36 20.4	+0.3
TORD	Torodi Ar. Bea	91.16	283	P	P	13 36 55.0	+1.4
	comp=Z,0.6nm,0.7s,baz=71,slow=3.5,SNR=4.3						
ESBB	Sonseca Array	92.20	310	P	P	13 36 55.7	-2.3
ESBB				IAmb	IAmb	13 37 17.0	
	comp=Z,15nm,1.2s						
ESDC	Sonseca Array	92.20	310	P	P	13 36 58.5	+0.4
	comp=Z,1.2nm,1.1s,baz=62,slow=3.9,SNR=4.1						
ESDC	Sonseca Array	92.20	310	P	P	13 36 55.6	-2.4
ESDC				IAmb	IAmb	13 37 17.1	
	comp=Z,12nm,1.1s						
IMAR	Indian Mountai	92.59	22	P	P	13 36 59.1	-0.1
K20K	Telida	93.47	25	P	P	13 37 03.4	+0.1
K20K				IAmb	IAmb	13 37 26.2	
	comp=Z,14nm,1.1s						
A36M	Sachs Harbour	97.33	12	P	P	13 37 19.6	-1.1
VNA2	Neumayer--Watz	100.16	199	Pdiff	Pdif	13 37 39.3	+5.9
VNA3	Neumayer Olymp	100.84	199	Pdiff	Pdif	13 37 36.3	-0.1
TBI	Tubuai	116.56	113	eLR	LR	14 17 52.2	
	comp=Z,536nm,27.8s						
PPT2	Papeete2	116.73	106	eLR	LR	14 17 57.3	
	comp=Z,339nm,23.5s						
PLID	Pearl Lake	121.65	25		PKPdf	13 42 41.5	-0.7
ULM	Lac du Bonnet	122.58	8	PKIKP	PKPdf	13 42 42.3	-1.2
ULM	Lac du Bonnet	122.58	8	PKPdf	PKPdf	13 42 42.3	-1.2
NVAR	Mina Array Bea	125.76	32	PKP	PKPdf	13 42 49.6	-0.7
	comp=Z,1.0nm,0.7s,baz=332,slow=1.6,SNR=10						
PDAR	Pinedale Array	126.14	22	PKP	PKPdf	13 42 49.9	-1.0
	comp=Z,1.2nm,0.9s,baz=45,slow=2.3,SNR=5.8						
R11A	Troy Canyon, C	127.19	30		PKPdf	13 42 52.8	-0.2
S39A	Bolivar	135.25	9		PKPdf	13 43 07.5	-0.5
PLCA	Paso Flores	143.55	199	PKP	PKPab	13 43 22.2	+2.7
	comp=Z,2.5nm,0.9s,baz=198,slow=1.8,SNR=5.0						
ITQB	Itaqui	144.46	226	PKPdf	PKPab	13 43 24.3	+1.2
CPUP	Villa Florida	146.78	231	PKPbc	PKPdf	13 43 29.2	+0.3
	comp=Z,2.0nm,0.8s,baz=349,slow=4.8,SNR=2.8						
BOAV	Boa Vista	153.43	289		PKPab	13 43 56.9	-2.7

IDC ***08*** *13:23:54.9±0.4, 6°.77N×94°.34E, h0km, mb4.6/34, mb1 4.6/37, mb1mx4.5/52, mbtmp4.6/37, ML4.2/3, Error ellipse: s-maj=14.8km s-min=10.4km az=44.0*

BGR ***08*** *13:24:09.3±0.0, 7°.14N×92°.50E, h29km±5km, mb4.9*

ISC 08 13:24:00.1±0.6, **6°.72N**±0°.06×**94°.29E**±0°.06, **h31**km±3km, **h31km:pP-P, n218,** σ1s.**79**/186, **mb4.8**/75, **MS5.0**/14, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBA	Port Blair	5.14	343	eP	Pn	13 25 14.1	-0.9
PBA				eS	Sn	13 26 07.4	-5.9
PSI	Prapat	6.04	130	Pn	Pn	13 25 26.7	-0.8
	5.0nm,0.3s,baz=326,slow=15,SNR=14						
DGPR	DIGLIPUR	6.56	348	ex	Sn	13 26 47.5	-0.7
CMAR	Chiang Mai Arr	12.52	21	Pn	Pn	13 26 54.8	-1.5
	1.1nm,0.3s,baz=216,slow=14,SNR=24						
PALK	Pallekele	13.50	273	Pn	Pn	13 27 10.0	+0.3
	0.3nm,0.3s,baz=41,slow=8.5,SNR=1.2						
PALK				Sn	Sn	13 29 36.3	-2.5
	2.1nm,0.3s,baz=123,slow=21,SNR=5.7						
MDRS	Chennai	15.20	296	ex	P	13 27 42.5	+5.1
HYB	Hyderabad	18.69	306	eP	P	13 28 15.4	-0.7
HYB				IAmb	IAmb	13 28 26.3	
	comp=Z,47nm,1.2s						
HYB	Hyderabad	18.69	306	i P	P	13 28 15.0	-1.1
BOK	Bokaro	18.80	335	eP	P	13 28 17.0	-0.2
BOK				IAmb	IAmb	13 28 21.3	
	comp=Z,38nm,0.8s						
DHUB	DHUBRI	19.63	348	eP	P	13 28 23.9	-2.4
ITAN	ITANAGAR	20.32	359	eP	P	13 28 33.4	-0.4
ODAN	Odare	21.08	343	eP	P	13 28 41.7	-0.6
	comp=Z,134nm,0.8s						
GTK	Tadong	21.19	346	eP	P	13 28 42.4	-1.0
RAMN	Ramite	21.41	341	eP	P	13 28 46.2	+0.4
	comp=Z,72nm,0.6s						
TAPN	Taplejung	21.45	344	eP	P	13 28 46.4	+0.1
	comp=Z,184nm,0.9s						
JIRN	Jiri	22.20	341	eP	P	13 28 54.5	0.0
	comp=Z,85nm,0.7s						
DMN	Daman	22.53	338	eP	P	13 28 57.9	0.0
GUN	Gumba	22.54	340	eP	P	13 28 58.8	+0.8
	comp=Z,36nm,0.3s						
GKN	Gorkha	23.06	338	eP	P	13 29 03.8	+0.5
POO	Poona	23.11	302	eP	P	13 29 05.3	+1.5
POO				IAMs_20	IAMs_20	13 38 21.7	
	comp=Z,5µm,17.4s						
POO	Poona	23.11	302	eP	P	13 29 04.0	+0.2
DANN	Dangsing	23.71	336	eP	P	13 29 09.6	-0.3
PYUN	Piuthan	23.81	335	eP	P	13 29 11.6	+0.9
H08S3	Diego Garcia H	26.00	237	T	T	13 56 14.2	
	baz=56,slow=75,SNR=734						
H08S2	Diego Garcia H	26.00	237	T	T	13 56 07.5	
	baz=56,slow=75,SNR=539						
H08S1	Diego Carcia H	26.02	237	T	T	13 56 15.6	
	baz=56,slow=75,SNR=121						
SONA	Sohna	26.91	325	ex	P	13 29 40.5	+1.9
AYAN	Aya Nagar	27.06	325	ex	P	13 29 43.1	+3.2
MERT	Meerut	27.10	327	eP	P	13 29 39.8	-0.5
AJM	Ajmer	27.14	319	eP	P	13 29 41.8	+1.0
NDI	New Delhi	27.16	326	eP	P	13 29 43.1	+2.2
KUDL	Kundal	27.17	324	eP	P	13 29 41.8	+0.8
DDI	Dehra Dun	28.00	329	eP	P	13 29 49.4	+0.9
DDI				IAMs_20	IAMs_20	13 41 59.5	
	comp=Z,4µm,18.0s						
WHN	Wuhan	30.27	36	P	P	13 30 14.9	+6.4
WHN				S	S	13 35 17.0	+10
WHN				LR	LR		
	comp=N,10µm,9.7s						
WHN				LR	LR		
	comp=E,6µm,11.0s						
WHN				LR	LR		
	comp=Z,13µm,10.9s						
DHRM	DHARAMSHALA	30.44	329	eP	P	13 30 04.5	-5.8
DHRM				IAmb	IAmb	13 30 14.7	
	comp=Z,15nm,0.9s						
DHRM				IAMs_20	IAMs_20	13 43 01.8	
	comp=Z,4µm,20.9s						
LZH	Lanzhou	30.51	15	eP	P	13 30 12.0	+1.2
LZH				pP	pP	13 30 17.2	-2.0
LZH				sP	pwP	13 30 21.3	-0.2
LZH				PP	PP	13 31 22.4	+2.3
LZH				S	S	13 35 16.9	+6.3
LZH				sS	sS	13 35 34.2	+10
LZH				pmax	pmax		
	comp=Z,25nm,1.2s						
LZH				pmax	pmax		
	comp=Z,220nm,4.9s						
LZH				LR	LR		
	comp=N,2µm,17.0s						
LZH				LR	LR		
	comp=E,3µm,15.2s						
LZH				LR	LR		
	comp=Z,2µm,17.4s						
SSE	Sheshan	34.96	43	P	P	13 30 57.9	+8.3
SSE				S	S	13 36 29.3	+10
SSE				pmax	pmax		
	comp=Z,19nm,0.7s						
SSE				pmax	pmax		
	comp=Z,180nm,5.1s						
SSE				LR	LR		
	comp=N,3µm,18.9s						
SSE				LR	LR		
	comp=E,2µm,21.4s						
BTO	Baotou	36.56	20	LR	LR		
	comp=N,7µm,16.5s						
BTO	Baotou	36.56	20	S	S	13 36 50.0	+6.0
BTO	Baotou	36.56	20	LR	LR		
	comp=E,9µm,14.7s						
BTO	Baotou	36.56	20	eP	P	13 31 02.4	-0.9
KSH	Kashi	36.58	336	P	P	13 31 01.4	-2.2
KSH				pP	sP	13 31 17.1	+1.5
KSH				sP	pwP	13 31 20.8	+6.5
KSH				PcP	PcP	13 33 30.6	+4.1
KSH				pmax	pmax		
	comp=Z,11nm,0.5s						
KSH				pmax	pmax		
	comp=Z,270nm,6.5s						
KSH				LR	LR		
	comp=N,1µm,15.3s						
KSH				LR	LR		
	comp=E,730nm,19.1s						
KSH				LR	LR		
	comp=Z,2µm,19.9s						
SIJI	Sorong	37.66	100	P	P	13 31 11.5	-1.4
	comp=Z,8.6nm,0.8s,baz=192,slow=19,SNR=3.7						
WSAR	Wadi Sarin	38.01	299	P	P	13 31 15.4	-0.4
	comp=Z,3.2nm,0.9s,baz=110,slow=12,SNR=1.6						
FITZ	Fitzroy Crossi	39.57	129	P	P	13 31 28.6	-0.2
	comp=Z,5.3nm,0.6s,baz=326,slow=8.9,SNR=17						
AAK	Ala-Archa	39.82	337	P	P	13 31 30.3	-0.6
	comp=Z,6.7nm,1.1s,baz=217,slow=3.6,SNR=7.3						
MKAR	Makanchi Array	41.24	347	P	P	13 31 41.5	-0.9
	comp=Z,11nm,0.7s,baz=166,slow=8.2,SNR=32						
KK31	Karatay Array	41.86	334	i P	P	13 31 45.8	-1.7
SONM	Songino Array	42.25	12	P	P	13 31 50.1	-0.7
	comp=Z,6.9nm,0.8s,baz=192,slow=8.5,SNR=19						
SONM				PcP	PcP	13 33 44.6	+0.3
	comp=Z,3.0nm,0.8s,baz=211,slow=3.6,SNR=3.6						
KSRS	Korea Array	43.24	40	P	P	13 31 57.1	-1.6
	comp=Z,3.4nm,0.9s,baz=218,slow=9.4,SNR=6.5						
ZAK	Zakamensk	44.16	8	eP	P	13 32 06.1	0.0
ZAK	Zakamensk	44.16	8	pmax	pmax		
	comp=Z,7.0nm,1.6s						
GEYT	Alibeck	45.16	319	P	P	13 32 14.6	+0.4
	comp=Z,7.6nm,0.6s,baz=181,slow=12,SNR=8.4						
KURBB	Kurchatov Arra	45.70	346	P	P	13 32 18.1	-0.1
	comp=Z,13nm,0.8s,baz=170,slow=6.9,SNR=30						
KURBB				PcP	PcP	13 33 56.6	+0.8
	comp=Z,4.9nm,0.8s,baz=156,slow=2.8,SNR=2.5						
WRA	Warramunga Arr	47.48	125	P	P	13 32 30.4	-2.3
	comp=Z,2.7nm,0.6s,baz=303,slow=9.2,SNR=26						
WRA				PcP	PcP	13 34 03.4	+0.7
	comp=Z,1.7nm,0.6s,baz=310,slow=2.6,SNR=1.7						
ZALV	Zalesovo Beam	47.71	352	P	P	13 32 33.1	-0.7
	comp=Z,5.0nm,0.6s,baz=173,slow=8.0,SNR=12						
ASAR	Alice Springs	49.07	129	P	P	13 32 43.6	-1.2
	comp=Z,2.3nm,0.5s,baz=299,slow=7.4,SNR=16						
ASAR				PcP	PcP	13 34 09.2	+0.9
	comp=Z,8.5nm,0.8s,baz=323,slow=2.7,SNR=4.0						
USRK	Ussuriysk Ar.	49.76	35	P	P	13 32 49.7	-0.1
	comp=Z,11nm,1.0s,baz=228,slow=7.1,SNR=5.5						
MJAR	Matsushiro Arr	49.83	47	P	P	13 32 50.4	-0.2
	comp=Z,2.7nm,0.8s,baz=232,slow=7.2,SNR=5.6						
MJAR				PcP	PcP	13 34 12.5	+1.6
	comp=Z,1.7nm,0.9s,baz=216,slow=5.2,SNR=1.8						
BVAR	Borovoye Array	50.12	341	P	P	13 32 51.9	-0.6
	comp=Z,12nm,0.7s,baz=185,slow=15,SNR=26						
AB31	Akbulak array	51.31	332	P	P	13 32 59.7	-1.7
AKTO	Aktyubinsk	53.03	332	P	P	13 33 13.8	-0.4
	comp=Z,18nm,0.7s,baz=96,slow=6.0,SNR=12						
AKTO	Aktyubinsk	53.03	332	P	P	13 33 11.4	-2.8
ZEA	Zeya	53.94	24	MLR	MLR		
	comp=Z,1µm,14.0s						
ZEA	Zeya	53.94	24	pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZEA	Zeya	53.94	24	MLR	MLR		
	comp=N,1µm,14.0s						
ZEA	Zeya	53.94	24	eP	P	13 33 22.8	+2.0
ZEA	Zeya	53.94	24	MLR	MLR		
	comp=E,1µm,15.0s						
SVE	Sverdlovsk	56.52	339	MLR	MLR		
	comp=Z,2µm,22.0s						
SVE	Sverdlovsk	56.52	339	pmax	pmax		
	comp=Z,64nm,1.0s						
SVE	Sverdlovsk	56.52	339	eP	P	13 33 38.0	-1.4
SVE	Sverdlovsk	56.52	339	eS	S	13 41 36.1	+7.3
ZEI	Tsey	56.99	317	eP	P	13 33 41.8	-1.4
ZEI	Tsey	56.99	317	pmax	pmax		
	comp=Z,6.0nm,1.4s						
ARU	Arti	57.01	337	P	P	13 33 41.0	-1.8
	comp=Z,4.3nm,0.7s,baz=142,slow=4.5,SNR=17						
KMBO	Kilima Mbogo	57.45	264	P	P	13 33 46.9	-0.1
	comp=Z,5.4nm,0.8s,baz=61,slow=14,SNR=8.6						
YSS	Yuzh-Sakhalins	57.60	37	pmax	pmax		
	comp=Z,40nm,1.2s						
YSS	Yuzh-Sakhalins	57.60	37	pmax	pmax		
	comp=Z,300nm,5.0s						
YSS	Yuzh-Sakhalins	57.60	37	eP	P	13 33 48.7	+1.5
YSS	Yuzh-Sakhalins	57.60	37	MLR	MLR		
	comp=Z,800nm,15.0s						
YSS	Yuzh-Sakhalins	57.60	37	MLR	MLR		
	comp=E,1µm,15.0s						
KBZ	Khabaz	58.04	318	P	P	13 33 49.5	-0.8
	comp=E,3.5nm,0.8s,baz=155,slow=6.5,SNR=6.6						
STKA	Stephens Creek	59.21	133	P	P	13 33 57.9	-0.8
	comp=E,4.1nm,0.9s,baz=307,slow=8.4,SNR=6.5						
EIL	Elat	60.13	300	P	P	13 34 05.4	+0.3
	comp=E,7.1nm,0.7s,baz=18,slow=3.4,SNR=4.5						
YAK	Yakutsk	61.04	18	e		13 36 22.5	
YAK	Yakutsk	61.04	18	e	PcP	13 34 50.4	-3.2
YAK	Yakutsk	61.04	18	eP	P	13 34 09.6	-1.0
YAK	Yakutsk	61.04	18	MLR	MLR		
	comp=Z,2µm,16.0s						
YAK	Yakutsk	61.04	18	pmax	pmax		
	comp=E,142nm,4.1s						
YAK	Yakutsk	61.04	18	pmax	pmax		
	comp=N,251nm,4.2s						
YAK	Yakutsk	61.04	18	smax	smax		
	comp=N,215nm,3.0s						
YAK	Yakutsk	61.04	18	pmax	pmax		
	comp=Z,27nm,1.1s						
YAK	Yakutsk	61.04	18	pmax	pmax		
	comp=E,11nm,1.4s						
YAK	Yakutsk	61.04	18	pmax	pmax		
	comp=N,13nm,1.4s						
YAK	Yakutsk	61.04	18	pmax	pmax		
	comp=Z,273nm,4.8s						
YAK	Yakutsk	61.04	18	MLR	MLR		
	comp=N,603nm,18.0s						
YAK	Yakutsk	61.04	18	smax	smax		
	comp=E,143nm,2.5s						
YAK	Yakutsk	61.04	18	MLR	MLR		
	comp=E,964nm,18.0s						
NRIK	Noril'sk	62.70	357	P	P	13 34 19.2	-2.5
	comp=E,1.9nm,0.4s,baz=171,slow=4.6,SNR=5.5						
BRTR	Keskin Array B	63.29	311	P	P	13 34 24.1	-2.3
	comp=E,7.2nm,0.7s,baz=122,slow=7.0,SNR=19						
MOS	Moscow	66.14	329	MLR	MLR		
	comp=Z,800nm,19.0s						
MOS	Moscow	66.14	329	eP	P	13 34 43.8	-0.6
MOS	Moscow	66.14	329	e	pP	13 34 50.7	-2.7
OBN	Obninsk	66.43	328	i P	P	13 34 43.6	-2.7
OBN	Obninsk	66.43	328	MLR	MLR		
	comp=Z,530nm,18.0s						
OBN	Obninsk	66.43	328	pmax	pmax		
	comp=Z,14nm,1.0s						
OBN	Obninsk	66.43	328	i S	S	13 43 34.7	+0.2
OBN	Obninsk	66.43	328	i	pP	13 34 53.7	-1.6
LSZ	Lusaka	69.03	251	P	P	13 35 03.7	+0.1
	comp=Z,1.6nm,0.2s,baz=104,slow=1.9,SNR=3.6						
AKASG	Malin Array Be	69.15	322	P	P	13 35 01.4	-2.2
	comp=Z,3.0nm,0.7s,baz=95,slow=5.5,SNR=6.4						
NACGM	Naroch	71.68	326	i P	P	13 35 17.6	-1.3
UZH	Uzhgorod	73.11	319	e	pP	13 35 39.5	+2.9
UZH	Uzhgorod	73.11	319	e	PcP	13 35 43.5	-0.7
CRVS	Cervenica-Dubn	73.69	319	e	pP	13 35 40.1	0.0
FINES	FINESS Array B	73.80	332	P	P	13 35 31.4	0.0
	comp=Z,7.2nm,0.6s,baz=97,slow=5.5,SNR=26						
OJC	Ojcow	74.95	320	eP	P	13 35 39.2	+0.9
BOSA	Boshof	75.10	238	P	P	13 35 40.9	+1.1
	comp=Z,6.1nm,0.7s,baz=85,slow=4.8,SNR=16						
JAVC	Velka Javorina	76.17	319	eP	pP	13 35 55.1	+0.6
MORC	Moravsky Berou	76.34	320	eP	pP	13 35 55.0	-0.5
MODS	Modra-Piesok	76.38	318	e	pP	13 35 53.7	-2.0
ARCES	ARCESS Array B	76.40	340	P	P	13 35 46.5	+0.3
	comp=Z,5.9nm,0.6s,baz=87,slow=5.0,SNR=5.6						
VRAC	Vranov	76.92	319	eP	pP	13 35 58.2	-0.5
KTK1	Kautokeino	77.02	340	eP	P	13 35 50.3	+0.5
KRUC	Moravsky	77.02	319	eP	pP	13 35 58.6	-0.7
DPC	Dobruska-Polom	77.18	320	e	pP	13 35 58.0	-2.2
DPC	Dobruska-Polom	77.18	320	ex	pP	13 35 58.0	-2.2
DPC	Dobruska-Polom	77.18	320	eP	P	13 35 48.7	-2.4
DPC	Dobruska-Polom	77.18	320	eP	P	13 35 48.7	-2.4
OSTC	Ostas	77.27	320	ex	pP	13 36 00.6	-0.1
OSTC	Ostas	77.27	320	eP	P	13 35 52.3	+0.7
HAMF	Hammerfest	77.32	341	eP	P	13 35 51.6	+0.2
CHVC	Chvalec	77.37	320	ex	pP	13 35 59.9	-1.4
CHVC	Chvalec	77.37	320	eP	P	13 35 53.6	+1.4
UPC	Upice	77.39	320	e	pP	13 36 01.5	+0.1
UPC	Upice	77.39	320	eP	P	13 35 53.4	+1.2
UPC	Upice	77.39	320	eP	P	13 35 53.4	+1.2
UPC	Upice	77.39	320	ex	pP	13 36 01.5	+0.1
JETT	Jettan, Norway	78.13	340	eP	P	13 35 57.8	+1.7
PRU	Pruhonice	78.30	320	eP	P	13 35 58.4	+1.1
PRU	Pruhonice	78.30	320	ex	pP	13 36 05.8	-0.6
PRU	Pruhonice	78.30	320	e	pP	13 36 05.8	-0.6
PRU	Pruhonice	78.30	320	eP	P	13 35 58.4	+1.1
CKRC	Cesky Krumlov	78.38	318	eP	P	13 35 58.6	+0.8
CKRC	Cesky Krumlov	78.38	318	ex	pP	13 36 06.6	-0.3
TRO	Tromso	78.65	340	eP	P	13 35 58.3	-0.5
BRG	Berggiesshubel	78.73	320	eP	P	13 36 00.9	+1.2
	comp=Z,9.2nm,0.9s,baz=92,slow=5.5						
BRG				epP	pP	13 36 09.0	+0.3
BRG	Berggiesshubel	78.73	320	eP	P	13 36 00.8	+1.2
BRG				Amp		13 36 03.7	
	comp=Z,4.4nm,0.9s						
BRG	Berggiesshubel	78.73	320	P	P	13 36 09.0	+9.3
BRG				Amp		13 36 09.9	
	comp=Z,18nm,1.0s						
BRG				Amp		14 16 53.0	
	comp=E,0.4nm,18.9s						
BRG				Amp		14 16 56.0	
	comp=N,0.3nm,15.9s						
BRG				Amp		14 16 58.0	
	comp=Z,0.6nm,20.1s						
GEC2	GERESS Array S	78.78	318	eP	P	13 36 01.3	+1.2
	comp=Z,18nm,0.8s,baz=92,slow=5.5						
GEC2				epP	pP	13 36 09.4	+0.2
GERES	GERESS Array B	78.78	318	P	P	13 36 00.3	+0.2
	comp=Z,6.4nm,0.7s,baz=88,slow=5.3,SNR=31						
KHC	Kasperske Hory	78.88	319	e	pP	13 36 09.0	-0.7
KHC	Kasperske Hory	78.88	319	ex	x	13 36 21.4	
KHC	Kasperske Hory	78.88	319	eP	P	13 36 01.5	+0.9
KHC	Kasperske Hory	78.88	319	eP	P	13 36 01.5	+0.9
KHC	Kasperske Hory	78.88	319	ex	pP	13 36 09.0	-0.7
RUE	Ruedersdorf	78.92	322	eP	pP	13 36 09.4	-0.3
	baz=92,slow=5.5						
FBE	Freiberg	79.11	320	eP	P	13 36 03.3	+1.6
	comp=Z,21nm,0.9s,baz=92,slow=5.5						
FBE				epP	pP	13 36 11.2	+0.4
WET	Wettzell	79.34	319	eP	P	13 36 04.3	+1.3
	comp=Z,12nm,0.9s,baz=92,slow=5.5						
WET				epP	pP	13 36 12.4	+0.2
CLL	Collm	79.34	321	i	pP	13 36 09.8	-2.3
CLL	Collm	79.34	321	eS	S	13 46 02.0	+0.4
CLL	Collm	79.34	321	eP	P	13 36 04.1	+1.1
	comp=Z,9.6nm,1.0s,baz=92,slow=5.5						
CLL				epP	pP	13 36 11.9	-0.3
CLL	Collm	79.34	321	eS	S	13 46 02.0	+0.4
CLL	Collm	79.34	321	eP	P	13 36 04.0	+1.0
CLL	Collm	79.34	321	i	pP	13 36 09.8	-2.3
	comp=Z,25nm,1.2s						
CLL	Collm	79.34	321	e(PcP)	P	13 36 04.0	+1.0
CLL	Collm	79.34	321	LmV		14 17 00.0	
	comp=Z,400nm,20.6s						
CLL	Collm	79.34	321	LmH		14 13 00.0	
	comp=E,400nm,21.6s						
CLL	Collm	79.34	321	LmH		14 13 00.0	
	comp=N,500nm,20.6s						
CLL	Collm	79.34	321	eSSS	SSS	13 54 24.0	
FAUS	Fauske	79.60	337	eP	P	13 36 03.8	-0.2
TANN	Tannenbergstha	79.65	320	eP	P	13 36 05.5	+0.7
	comp=N,12nm,1.2s,baz=92,slow=5.5						
NKC	Novy Kostel	79.65	320	e	pP	13 36 13.8	-0.1
NKC	Novy Kostel	79.65	320	eP	P	13 36 05.9	+1.1
NKC	Novy Kostel	79.65	320	eP	P	13 36 05.9	+1.1
NKC	Novy Kostel	79.65	320	ex	pP	13 36 13.8	-0.1
STEI	Steigen	79.69	338	eP	P	13 36 05.0	+0.5
WERN	Wernitzgruen	79.70	320	eP	P	13 36 05.0	-0.1
	comp=N,3.3nm,0.7s,baz=92,slow=5.5						
WERN				epP	pP	13 36 14.9	+0.8
GUNZ	Gunzen	79.73	320	eP	P	13 36 05.0	-0.2
	comp=N,3.8nm,0.7s,baz=92,slow=5.5						
GUNZ				epP	pP	13 36 14.5	+0.1
WERD	Werda	79.75	320	epP	pP	13 36 14.5	0.0
MOR8	Moi Rana	79.79	336	eP	P	13 36 04.7	-0.4
ROTZ	Rotzenmuhle	79.79	319	eP	P	13 36 07.0	+1.5
	comp=N,2.1nm,0.7s,baz=92,slow=5.5						
ROTZ				epP	pP	13 36 15.0	+0.3
MANZ	Manzenberg	79.86	319	eP	P	13 36 07.5	+1.6
	comp=N,1.6nm,0.7s,baz=92,slow=5.5						
MANZ				epP	pP	13 36 15.5	+0.4
NEUB	Neuenburg	80.11	321	eP	P	13 36 08.4	+1.2
	comp=N,12nm,0.7s,baz=92,slow=5.5						
NEUB				epP	pP	13 36 16.0	-0.3
MOX	Moxa	80.20	320	eP	P	13 36 08.8	+1.1
	comp=N,3.8nm,0.7s,baz=92,slow=5.5						
MOX				epP	pP	13 36 16.8	0.0
LOF	Lofoten	80.35	338	eP	P	13 36 07.8	-0.3
GRF	Grafenberg Arr	80.43	319	eP	P	13 36 10.5	+1.6
	comp=N,8.6nm,0.7s,baz=92,slow=5.5						
GRF				epP	pP	13 36 18.9	+0.8
FLTG	Flechtingen	80.47	322	eP	P	13 36 09.7	+0.7
	comp=N,6.3nm,0.7s,baz=92,slow=5.5						
FLTG				epP	pP	13 36 17.3	-0.9
NC602	NORSAR Array S	80.63	330	eP	P	13 36 09.5	-0.3
NB2	NORSAR Subarra	80.80	331	P	P	13 36 10.1	-0.6
	comp=Z,20nm,1.1s,baz=95,slow=5.6						
NB2	NORSAR Subarra	80.80	331	P	P	13 36 10.1	-0.6
	baz=95,slow=5.6						
NOA	NORSAR Array B	80.80	331	P	P	13 36 08.9	-1.8
	comp=Z,4.0nm,0.7s,baz=94,slow=5.3,SNR=17						
ASSE	Asse, Remlinge	80.82	322	eP	P	13 36 11.3	+0.4
	comp=Z,3.9nm,0.7s,baz=92,slow=5.5						
ASSE				epP	pP	13 36 19.7	-0.3
CLZ	Clausthal	81.00	321	eP	P	13 36 13.2	+1.2
	comp=Z,11nm,0.7s,baz=92,slow=5.5						
CLZ				epP	pP	13 36 21.2	+0.1
BSEG	Bad Segeberg	81.06	323	eP	P	13 36 13.5	+1.4
	comp=Z,13nm,0.7s,baz=92,slow=5.5						
BSEG				epP	pP	13 36 21.3	0.0
UBR	Ueberruh	81.16	317	eP	P	13 36 13.4	+0.4
	comp=Z,10.0nm,0.7s,baz=92,slow=5.5						
UBR				epP	pP	13 36 21.7	-0.4
GTTG	Gottingen	81.25	321	eP	P	13 36 14.7	+1.5
	baz=92,slow=5.5						
KONO	Kongsberg	81.56	329	eP	P	13 36 15.8	+1.1
STU	Stuttgart	81.76	318	eP	P	13 36 17.2	+1.2
	comp=Z,28nm,0.7s,baz=92,slow=5.5						
DOMB	Dombas	81.87	332	eP	P	13 36 16.4	0.0
KEST	Kesra	82.02	305	P	P	13 36 16.9	-0.9
	comp=Z,4.5nm,0.8s,baz=161,slow=2.1,SNR=5.3						
TNS	Taunus Mts	82.22	320	eP	P	13 36 19.7	+1.2
	comp=Z,6.9nm,0.7s,baz=92,slow=5.5						
BFO	Black Forest	82.34	318	eP	P	13 36 19.7	+0.5
	comp=Z,9.4nm,0.7s,baz=92,slow=5.5						
MOL	Molde	82.58	332	eP	P	13 36 21.1	+1.1
IBBN	Ibbenburen	82.61	322	eP	P	13 36 19.9	-0.4
	comp=Z,22nm,0.6s,baz=92,slow=5.5						
IBBN				epP	pP	13 36 29.4	-0.2
BUG	Bochum--Univer	82.94	321	eP	P	13 36 22.5	+0.4
	comp=Z,12nm,0.7s,baz=92,slow=5.5						
BUG				epP	pP	13 36 31.0	-0.3
WLF	Walferdange	83.72	319	eP	pP	13 36 35.1	-0.2
	comp=Z,10nm,1.0s,baz=92,slow=5.5						
NOR	Nord	86.41	352	i P	P	13 36 35.2	-3.9
DAG	Danmarks Havn	88.63	348	eP	P	13 36 49.1	-0.7
DAG				IAmb	IAmb	13 36 52.7	
	comp=Z,3.6nm,0.8s						
TORD	Torodi Ar. Bea	91.01	283	P	P	13 37 03.0	+0.8
	comp=Z,3.1nm,0.7s,baz=75,slow=3.9,SNR=6.3						
ESDC	Sonseca Array	92.07	310	P	P	13 37 06.2	-0.5
	comp=Z,3.6nm,0.7s,baz=58,slow=4.0,SNR=16						
SUMG	Summit	95.29	347	i P	pP	13 37 29.7	-0.8
SUMG				IAmb	IAmb	13 37 30.6	
	comp=Z,9.2nm,1.0s						
ILAR	Eielson Array	95.75	22	P	P	13 37 20.8	-2.2
	comp=Z,0.3nm,0.6s,baz=291,slow=4.1,SNR=1.9						
ILAR				PKKPbc	PKKPbc	13 54 20.4	+5.2
	comp=Z,0.4nm,0.7s,baz=148,slow=3.2,SNR=4.5						
ULM	Lac du Bonnet	122.58	8	PKP	PKPdf	13 42 51.5	-1.3
	comp=Z,2.9nm,0.6s,baz=5.1,slow=4.3,SNR=6.1						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NVAR	Mina Array Bea	125.82	31	PKP	PKPdf	13 42 59.0	-0.7
	comp=Z,1.5nm,0.7s,baz=323,slow=2.0,SNR=11						
PDAR	Pinedale Array	126.18	22	PKP	PKPdf	13 42 58.8	-1.5
	comp=Z,2.1nm,0.9s,baz=46,slow=4.3,SNR=7.3						
PDAR				PKKPbc	PKKPbc	13 52 39.4	+4.7
	comp=Z,0.5nm,0.5s,baz=140,slow=1.2,SNR=4.6						
TXAR	Lajitas Array	140.21	25	PKP	PKPdf	13 43 25.8	-1.0
	comp=Z,0.5nm,0.5s,baz=155,slow=0.2,SNR=6.3						
TXAR				PP	PP	13 46 28.9	+5.8
	comp=Z,0.4nm,0.8s,baz=359,slow=5.0,SNR=3.7						
PLCA	Paso Flores	143.52	200	PKP	PKPdf	13 43 32.4	+0.1
	comp=Z,3.9nm,1.0s,baz=196,slow=4.9,SNR=6.7						
CPUP	Villa Florida	146.67	231	PKPbc	PKPbc	13 43 39.6	0.0
	comp=Z,3.2nm,0.7s,baz=162,slow=10,SNR=6.7						

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*IDC **08** 13:31:20.5±1.2, 6°.59N×94°.23E, h0^{km}, mb3.8/9, mb1 3.8/11, mb1mx3.7/37, mbtmp3.7/11, ML3.3/2, Error ellipse: s-maj=47.6km s-min=19.3km az=54.0*

*NEIC **08** 13:31:22.7±0.6, 6°.7N±0°.1×94°.4E±0°.1, h10^{km}±2^{km}, mb4.0/5, Error ellipse: s-maj=28.7km s-min=8.8km az=237.0*

ISC 08 13:31:25.9±0.9, 6°.7N±0°.1×94°.4E±0°.1, h35^{km}, n20, σ0^s.79/20, mb3.8/11, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	2.93	120	Pn	Pn	13 32 09.2	-0.9
PSI	Prapat	5.95	130	Pn	Pn	13 32 53.0	+1.3
	0.7nm,0.3s,baz=338,slow=19,SNR=2.1						
RPSI	Rantau Prapat	6.02	131		Pn	13 32 53.0	+0.5
CMAR	Chiang Mai Arr	12.49	20	Pn	Pn	13 34 21.7	+0.4
	0.1nm,0.3s,baz=208,slow=15,SNR=1.3						
SLVN	Son La	17.21	31	Pn	Pn	13 35 23.3	-0.5
SLVN				IAmb	IAmb	13 35 32.9	
	comp=Z,6.8nm,1.2s						
MKAR	Makanchi Array	41.28	347	P	P	13 39 07.9	0.0
	comp=Z,0.2nm,0.3s,baz=188,slow=8.7,SNR=5.1						
SONM	Songino Array	42.24	12	P	P	13 39 16.3	+0.4
	comp=Z,0.3nm,0.4s,baz=165,slow=6.0,SNR=2.1						
KURBB	Kurchatov Arra	45.73	346	P	P	13 39 44.6	+1.0
	comp=Z,1.0nm,0.6s,baz=165,slow=6.5,SNR=1.6						
WB0	Warramunga Arr	47.34	125	P	P	13 39 55.9	-0.9
WB0				IAmb	IAmb	13 40 24.0	
	comp=Z,5.5nm,1.4s						
WRA	Warramunga Arr	47.39	125	P	P	13 39 56.7	-0.4
	comp=Z,0.6nm,0.9s,baz=308,slow=8.5,SNR=2.6						
ZALV	Zalesovo Beam	47.74	352	P	P	13 40 00.4	+1.1
	comp=Z,1.5nm,0.6s,baz=184,slow=5.9,SNR=5.0						
ZALV	Zalesovo Beam	47.74	352	P	P	13 39 59.6	+0.3
ASAR	Alice Springs	48.98	129	P	P	13 40 09.7	+0.3
	comp=Z,0.3nm,0.6s,baz=294,slow=7.8,SNR=4.4						
USA0B	Ussuriysk Arra	49.71	35	P	P	13 40 15.0	+0.4
USRK	Ussuriysk Ar.	49.71	35	P	P	13 40 15.4	+0.8
MJAR	Matsushiro Arr	49.76	47	P	P	13 40 14.7	-0.6
MJAR				IAmb	IAmb	13 40 15.3	
	comp=Z,1.3nm,1.1s						
ABKAR	Akbulak array	51.37	332	P	P	13 40 26.4	-0.7
BRTR	Keskin Array B	63.38	311	P	P	13 41 51.6	-0.6
	comp=Z,0.5nm,0.6s,baz=134,slow=4.2,SNR=1.9						
FINES	FINESS Array B	73.86	332	P	P	13 42 55.8	-1.1
	comp=Z,3.4nm,1.1s,baz=98,slow=4.0,SNR=4.6						
GERES	GERESS Array B	78.86	318	P	P	13 43 26.7	+1.0
	comp=Z,0.4nm,0.7s,baz=107,slow=3.4,SNR=2.2						

IDC 08 13:36:52.1±2.3, 6°.83N×94°.58E, h0^{km}, mb3.6/4, mb1 3.8/4, mb1mx3.4/39, mbtmp3.6/4, Error ellipse: s-maj=155.6km s-min=16.7km az=53.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURBB	Kurchatov Arra	45.66	346	P	P	13 45 14.4	0.0
	0.3nm,0.2s,baz=165,slow=6.6,SNR=2.7						
WRA	Warramunga Arr	47.31	125	P	P	13 45 27.5	-0.4
	0.1nm,0.6s,baz=304,slow=9.1,SNR=1.5						
ASAR	Alice Springs	48.92	130	P	P	13 45 40.5	+0.1
	0.3nm,0.6s,baz=304,slow=7.6,SNR=5.2						
FINES	FINESS Array B	73.83	332	P	P	13 48 28.3	-0.1
	5.1nm,1.1s,baz=101,slow=7.5,SNR=2.2						

NNC 08 13:37:41.9±4.0, 38°.29N×54°.04E, h0^{km}, mb3.9, 1C-5D, Error ellipse: s-maj=35.1km s-min=23.7km az=46.0, Turkmenistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AB31	Akbulak array	11.76	19	⇓Pn	Pn	13 40 31.1	+0.3
	0.7nm,0.5s,baz=202,slow=12,SNR=9.1						
AB31				⇓Sn	Sn	13 42 42.5	-0.2
	3.6nm,0.7s,baz=202,slow=27,SNR=12						
AKTO	Aktyubinsk	12.47	12	⇓Pn	Pn	13 40 40.9	+0.3
	3.7nm,0.8s						
AKTO				⇓Sn	Sn	13 43 02.2	+2.1
	4.8nm,1.1s						
KK31	Karatay Array	13.39	64	⇓P	Pn	13 40 52.1	-1.0
	1.9nm,0.9s,baz=341,slow=6.6,SNR=6.9						
KK31				⇑S	Sn	13 43 25.4	+2.7
	0.9nm,0.5s,baz=279,slow=26,SNR=6.6						

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*TEH **08** 13:38:01.2, 38°.26N×56°.94E, h10^{km}, ML3.5*

*THR **08** 13:38:01.8±0.6, 38°.25N×56°.96E, h14^{km}±9^{km}, ML3.3*

ISC 08 13:38:02.2±1.9, 38°.2N±0°.1×57°.00E±0°.04, h10^{km}, n31, σ1^s.56/33, Iran-Turkmenistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BJRD	Bojnurd	0.63	149	*e*Pg	Pg	13 38 14.1	-0.3
BJRD				*e*Sg	Sb	13 38 24.0	-0.3
BJRD	Bojnurd	0.63	149	*e*Pn	Pg	13 38 14.1	-0.3
ISFR	Sfrayin	1.43	146	*e*Pg	Pg	13 38 29.5	-0.1
ISFR				*e*		13 38 57.2	
	comp=Z,10µm,0.4s						
IEMG	Emamgholi	1.55	122	*e*Pn	Pb	13 38 30.4	-0.7
IEMG				*e*		13 38 33.2	
	comp=Z,8µm,0.4s						
IMND	Minoodasht	1.60	233	*e*Pg	Pb	13 38 30.7	-1.1
SBZV	Sabzevar	1.91	165	*e*Pn	Pb	13 38 37.4	+0.1
IAKL	Akhelmad	2.15	139	*e*Pn	Pb	13 38 40.9	-0.5
IAKL				*e*		13 39 25.0	
	comp=Z,2µm,0.6s						
SHRO	Shahrood	2.38	200	*e*Pn	Pb	13 38 42.5	-2.8
SHRO				*e*Sg	Sb	13 39 15.7	+1.0
SHRO	Shahrood	2.38	200	*e*Pn	Pb	13 38 42.5	-2.8
IPAY	Payeh	2.39	138	*e*Pn	Pb	13 38 43.8	-1.7
IPAY				*e*		13 39 27.9	
	comp=Z,2µm,0.5s						
IKRD	Kardeh	2.48	125	*e*Pn	Pb	13 38 45.1	-1.9
IKRD				*e*		13 39 31.5	
	comp=Z,2µm,0.3s						
IMOG	Moghan	2.83	138	*e*Pn	Pb	13 38 50.3	-2.7
IMOG				*e*		13 39 42.1	
	comp=Z,970nm,0.8s						
IMYA	Miami	3.12	127	*e*Pn	Pn	13 38 53.3	+1.7
IMYA				*e*		13 40 03.6	
	comp=Z,490nm,0.9s						
JRKH	Jarkhoshk	3.55	130	*e*Pn	Pn	13 38 58.5	+1.0
IANJ	Anjilo	3.71	223	*e*Pn	Pn	13 39 01.4	+1.6
IANJ				*e*		13 40 06.2	
	comp=Z,438nm,0.5s						
ISHM	Shahmirzad	3.83	232	*e*Pn	Pn	13 39 02.6	+1.1
TBJM	Torbat-e-JAM	3.99	137	*e*Pn	Pn	13 39 04.2	+0.6
IFIR	Firoozkooh	4.28	234	*e*Pn	Pn	13 39 09.2	+1.6
TNSJ	Nastanj	4.28	184	*e*Pn	Pn	13 39 08.1	+0.6
TKDS	Koohdasht(Taba	4.62	179	*e*Pn	Pn	13 39 14.2	+2.0
DAMV	Damavand	4.80	239	*e*Pn	Pn	13 39 15.6	+0.9
DAMV				IAML		13 40 02.7	
	comp=E,19nm,0.3s						
DAMV	Damavand	4.80	239	*e*Pn	Pn	13 39 15.6	+0.9
AFRZ	Afriz	5.08	161	*e*Pn	Pn	13 39 20.1	+1.6
TPRV	Parvadeh(Tabas	5.21	183	*e*Pn	Pn	13 39 22.3	+2.1
SHRT	Shahrakht	5.30	149	*e*Pn	Pn	13 39 23.2	+1.6
SHRT	Shahrakht	5.30	149	*e*Pn	Pn	13 39 23.2	+1.6
ANAR	Anarak	5.70	209	*e*Pn	Pn	13 39 28.3	+1.3
KRSH	Karshahi	5.80	224	*e*Pn	Pn	13 39 30.5	+2.0
YZKH	Yazd	6.16	199	*e*Pn	Pn	13 39 34.8	+1.5
YZKH				IAML		13 41 45.3	
	comp=E,6.7nm,0.9s						
YZKH	Yazd	6.16	199	*e*Pn	Pn	13 39 34.8	+1.5
IRAM	Ramesheh	7.45	212	*e*Pn	Pn	13 39 52.8	+1.6

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*IDC **08** 13:38:11.3±1.3, 6°.98N×94°.93E, h0^{km}, mb3.8/9, mb1 3.9/9, mb1mx3.7/38, mbtmp3.8/9, Error ellipse: s-maj=73.5km s-min=20.9km az=51.0*

*NEIC **08** 13:38:13.2±1.2, 7°.0N±0°.3×94°.9E±0°.3, h10^{km}±1^{km}, mb4.5/14, Error ellipse: s-maj=59.2km s-min=16.3km az=225.0*

ISC 08 13:38:15.2±1.2, 6°.7N±0°.3×94°.6E±0°.3, h35^{km}, n26, σ0^s.66/24, mb4.0/13, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	2.73	123	Pn	Pn	13 38 56.1	-0.5
NIL	Nilore	33.33	326	P	P	13 44 50.4	+0.4
GAR	Garm	38.91	329	P	P	13 45 37.9	+0.2
MKAR	Makanchi Array	41.31	347	P	P	13 45 57.5	+0.1
	1.6nm,0.8s,baz=163,slow=8.9,SNR=4.4						
MAKZ	Makanchi	41.40	347	P	P	13 45 57.6	-0.5
MAKZ				IAmb	IAmb	13 46 26.1	
	comp=Z,5.8nm,0.8s						
KKAR	Karatay Array	42.01	333	P	P	13 46 04.0	+0.9
KURBB	Kurchatov Arra	45.78	346	P	P	13 46 34.1	+0.9
	comp=Z,0.4nm,0.3s,baz=165,slow=6.8,SNR=4.5						
KURK	Kurchatov	45.84	346	P	P	13 46 34.1	+0.4
WB0	Warramunga Arr	47.15	125	P	P	13 46 44.8	+0.2
WB0				IAmb	IAmb	13 46 50.9	
	comp=Z,5.8nm,1.4s						
WRA	Warramunga Arr	47.19	125	P	P	13 46 45.5	+0.6
	comp=Z,0.4nm,0.6s,baz=308,slow=8.5,SNR=5.9						
WRAB	Tennant Creek	47.20	125	P	P	13 46 45.1	+0.3
WRAB				IAmb	IAmb	13 47 12.3	
	comp=Z,2.9nm,1.1s						
WB2	Warramunga Arr	47.20	125	P	P	13 46 45.1	+0.2
WB2				IAmb	IAmb	13 46 60.0	
	comp=Z,3.6nm,1.2s						
WR0	Warramunga Arr	47.37	125	P	P	13 46 46.7	+0.5
ZALV	Zalesovo Beam	47.76	352	P	P	13 46 47.7	-1.0
	comp=Z,0.5nm,0.5s,baz=142,slow=7.3,SNR=1.9						
AS31	Alice Springs	48.80	130	P	P	13 46 57.8	+0.5
ASAR	Alice Springs	48.80	130	P	P	13 46 58.2	+0.9
	comp=Z,0.2nm,0.4s,baz=302,slow=7.8,SNR=4.1						
BRVK	Borovoye	50.29	341	P	P	13 47 07.6	-0.6
ABKAR	Akbulak array	51.47	332	P	P	13 47 17.5	+0.5
ABKAR	Akbulak array	51.47	332	P	P	13 47 17.4	+0.3
BRTR	Keskin Array B	63.55	311	P	P	13 48 45.9	+3.3
	comp=Z,0.8nm,0.5s,baz=152,slow=5.6,SNR=4.0						
BRTR	Keskin Array B	63.55	311	P	P	13 48 41.7	-0.9
FINES	FINESS Array B	73.95	332	P	P	13 49 46.8	+0.1
	comp=Z,1.5nm,0.8s,baz=108,slow=4.2,SNR=4.7						
ARCES	ARCESS Array B	76.51	340	P	P	13 50 01.6	+0.3
	comp=Z,1.7nm,0.8s,baz=99,slow=8.3,SNR=3.6						
ARCES	ARCESS Array B	76.51	340	IAmb	IAmb	13 50 17.3	
	comp=Z,11nm,1.4s						
GERES	GERESS Array B	79.01	318	P	P	13 50 16.4	+0.6
	comp=Z,0.6nm,0.6s,baz=108,slow=4.3,SNR=4.8						
GERES	GERESS Array B	79.01	318	P	P	13 50 14.4	-1.4

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*IDC **08** 13:38:36.6±0.6, 7°.09N×94°.84E, h0^{km}, mb4.1/16, mb1 4.2/18, mb1mx4.0/40, mbtmp4.1/18, ML3.8/2, MS4.1/4, Ms1 4.1/4, ms1mx3.7/38, Error ellipse: s-maj=23.9km s-min=14.5km az=58.0*

*BJI **08** 13:38:37.4±0.0, 6°.76N×94°.19E, h20^{km}, mB5.4/10, mb4.3/28, Ms4.7/1*

*NEIC **08** 13:38:39.4±2.0, 7°.12N±0°.08×94°.77E±0°.06, h10^{km}±1^{km}, mb4.7/36, Error ellipse: s-maj=13.4km s-min=10.3km az=352.0*

*KLM **08** 13:38:40, 7°.26N×94°.70E, h10^{km}, mb4.8*

*GCMT **08** 13:38:41.4±0.4, 6°.95N±0°.02×94°.69E±0°.02, h12^{km}, MW4.8/69, Moment Tensor Solution. s1,c1; s69,c100; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.57±.11; $M_{\theta\theta}$-1.40±.08; $M_{\phi\phi}$1.98±.08; $M_{r\theta}$-0.59±.29; $M_{\theta\phi}$-0.14±.08; $M_{\phi r}$-0.99±.26; Best double couple: $M_0$2.06500×10^{16} NP1:ϕ_s134.00000°, δ53.00000°, λ-169.00000°. NP2: ϕ_s37.00000°, δ82.00000°, λ-38.00000°. Principal axes: T 2.3220, Plg19.0000°, Azm91.0000°; N -0.5080, Plg51.0000°, Azm207.0000°; P -1.8080, Plg32.0000°, Azm348.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 13:38:41.3±0.5, 7°.04N±0°.07×94°.68E±0°.07, h26^{km}, n96, σ1^s.28/87, mb4.4/48, 1C-2D, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	2.88	128	Pn	Pn	13 39 24.5	-1.1
PSI	Prapat	5.97	135	Pn	Pn	13 40 06.1	-2.0
	3.2nm,0.3s,baz=324,slow=16,SNR=8.5						
PSI				LR	LR	13 42 45.3	
	comp=Z,1µm,21.3s,baz=221,slow=42						
RPSI	Rantau Prapat	6.04	135		Pn	13 40 06.1	-2.9
KULM	Kulim	6.19	106	P	Pn	13 40 10.0	-1.0
GSI	Gunungsitoli	6.39	153	Pn	Pn	13 40 12.3	-1.5
IPM	Ipoh	6.81	112	P	Pn	13 40 18.0	-1.6
CMAR	Chiang Mai Arr	12.09	20	Pn	Pn	13 41 26.8	-5.2
	0.2nm,0.3s,baz=230,slow=15,SNR=6.3						
CMAR				LR	LR	13 45 54.1	
	comp=Z,508nm,18.4s,baz=190,slow=36						
CMAR	Chiang Mai Arr	12.09	20	Pn	Pn	13 41 30.0	-1.9
CHTO	Chiang Mai	12.42	19	Pn	Pn	13 41 35.0	-1.5
PALK	Pallekele	13.87	272	LR	LR	13 47 08.3	
	comp=Z,916nm,19.8s,baz=195,slow=36						
KSM	Kuching	16.53	109	P	Pn	13 42 34.0	+2.5
SLVN	Son La	16.78	31		Pn	13 42 35.6	+0.9
SBUM	Sibu	18.06	104	P	P	13 42 54.0	+3.1
LEM	Lembang	18.88	137	LR	LR	13 51 45.8	
	comp=Z,1µm,18.3s,baz=260,slow=42						
QIZ	Qiongzhong	18.96	50	P	P	13 42 58.7	-2.0
QIZ				IAmb	IAmb	13 43 10.9	
	comp=Z,30nm,1.3s						
KMI	Kunming	19.57	22	⇓P	Pn	13 43 13.8	+4.8
KMI				pP	pwP	13 43 22.7	+5.7
KMI				pmax	pmax		
	comp=Z,24nm,1.3s						
RAMN	Ramite	21.24	340	*e*P	P	13 43 26.3	+0.6
	comp=Z,13nm,0.6s						
JIRN	Jiri	22.03	340	*e*P	P	13 43 33.4	-1.0
	comp=Z,11nm,0.6s						
PKI	Pulchoki	22.23	338	*e*P	P	13 43 42.1	+9.2
	comp=Z,36nm,0.5s						
PKIN	Phulchoki	22.24	338	*e*P	P	13 43 41.3	+8.6
	comp=Z,26nm,0.5s						
H08S3	Diego Garcia H	26.50	237	T	T	14 11 01.7	
	baz=56,slow=76,SNR=51						
H08S2	Diego Garcia H	26.50	237	T	T	14 11 00.6	
	baz=56,slow=76,SNR=102						
H08S1	Diego Carcia H	26.52	237	T	T	14 10 58.9	
	baz=56,slow=76,SNR=31						
TOLI2	Tolitoli	26.68	102	P	P	13 44 18.9	+0.4
TOLI2				IAmb	IAmb	13 44 34.7	
	comp=Z,14nm,1.0s						
XAN	Xi'an	29.92	24	P	P	13 44 54.1	+6.8
XAN				pP	pwP	13 45 03.4	+6.3
XAN				pmax	pmax		
	comp=Z,12nm,1.0s						
GTA	Gaotai	32.56	7	*e*P	P	13 45 11.5	+1.0
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
NIL	Nilore	33.09	326	P	P	13 45 14.5	-0.6
NJ2	Nanjing	33.57	39	*e*P	P	13 45 21.1	+1.8
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
KSH	Kashi	36.45	335	P	P	13 45 41.9	-2.3
KSH				pmax	pmax		
	comp=Z,3.0nm,0.6s						
HHC	Hu-ho-hao-te	36.89	22	*e*P	P	13 45 48.8	+0.9
HHC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,1µm,10.2s						
WMQ	Urumqi	37.15	352	*e*P	P	13 45 51.8	+1.8
WMQ				pP	pP	13 45 54.6	-2.4
WMQ				pmax	pmax		
	comp=Z,13nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,63nm,5.3s						
DRK	Karamyk	38.29	331	P	P	13 46 00.2	+0.1
GAR	Garm	38.66	329	P	P	13 46 01.6	-1.3
GAR				IAmb	IAmb	13 46 03.1	
	comp=Z,22nm,1.2s						
CHGR	Chuyangaron	39.01	328	P	P	13 46 04.4	-1.5
CHGR				IAmb	IAmb	13 46 05.4	
	comp=Z,24nm,1.1s						
BTK	Batken	39.22	331	P	P	13 46 08.2	+0.6
BTK				IAmb	IAmb	13 46 10.9	
	comp=Z,13nm,1.1s						
MK31	Makanchi Array	41.02	347	P	P	13 46 21.4	-0.8
MKAR	Makanchi Array	41.02	347	P	P	13 46 21.2	-1.1
	comp=Z,5.1nm,0.9s,baz=168,slow=8.7,SNR=13						
MKAR	Makanchi Array	41.02	347	P	P	13 46 21.3	-1.0
MAKZ	Makanchi	41.10	347	P	P	13 46 21.9	-1.1
KK31	Karatay Array	41.74	333	P	P	13 46 27.6	-0.7
KKAR	Karatay Array	41.74	333	P	P	13 46 27.2	-1.1
SONM	Songino Array	41.86	12	P	P	13 46 28.1	-1.3
	comp=Z,1.9nm,0.8s,baz=198,slow=7.4,SNR=9.5						
SONM				PcP	PcP	13 48 25.7	+0.8
	comp=Z,0.7nm,0.7s,baz=176,slow=3.8,SNR=3.0						
SONM	Songino Array	41.86	12	P	P	13 46 29.2	-0.1
KS19	Wonju Array Si	42.74	40	P	P	13 46 36.4	-0.2
KS19				IAmb	IAmb	13 46 41.1	
	comp=Z,31nm,1.4s						
KURBB	Kurchatov Arra	45.48	346	P	P	13 46 58.3	+0.1
	comp=Z,4.2nm,0.8s,baz=163,slow=7.5,SNR=13						
KURK	Kurchatov	45.55	346	P	P	13 46 58.9	+0.1
KURK				IAmb	IAmb	13 47 00.5	
	comp=Z,20nm,1.4s						
WB0	Warramunga Arr	47.30	125	P	P	13 47 14.0	+1.0
WB0				IAmb	IAmb	13 47 26.4	
	comp=Z,8.5nm,1.4s						
WRA	Warramunga Arr	47.35	125	P	P	13 47 10.9	-2.5
	comp=Z,1.8nm,0.6s,baz=303,slow=9.1,SNR=8.1						
WRA	Warramunga Arr	47.35	125	P	P	13 47 14.1	+0.7
WRAB	Tennant Creek	47.35	125	P	P	13 47 13.4	0.0
WRAB				IAmb	IAmb	13 47 19.2	
	comp=Z,3.6nm,0.7s						
WB2	Warramunga Arr	47.36	125	P	P	13 47 13.9	+0.4
WB2				IAmb	IAmb	13 47 42.8	
	comp=Z,6.8nm,1.2s						
ZAA0	Zalesovo Array	47.45	352	P	P	13 47 13.5	-0.2
ZAA0				IAmb	IAmb	13 47 15.5	
	comp=Z,7.9nm,1.1s						
ZALV	Zalesovo Beam	47.45	352	P	P	13 47 13.2	-0.5
	comp=Z,2.1nm,0.6s,baz=157,slow=8.0,SNR=10						
WR0	Warramunga Arr	47.52	125	P	P	13 47 14.0	-0.7
WR0				IAmb	IAmb	13 47 30.8	
	comp=Z,9.0nm,1.3s						
ASAR	Alice Springs	48.97	130	P	P	13 47 24.8	-1.2
	comp=Z,1.2nm,0.7s,baz=308,slow=7.2,SNR=7.1						
ASAR				PcP	PcP	13 48 50.0	+0.1
	comp=Z,1.0nm,0.8s,baz=307,slow=3.1,SNR=4.4						
ASAR	Alice Springs	48.97	130	P	P	13 47 24.5	-1.5
AS31	Alice Springs	48.98	130	P	P	13 47 24.6	-1.4
MJAR	Matsushiro Arr	49.33	47	P	P	13 47 26.7	-1.8
BRVK	Borovoye	50.01	341	P	P	13 47 32.9	-0.4
BRVK				IAmb	IAmb	13 47 36.0	
	comp=Z,5.9nm,0.8s						
ABKAR	Akbulak array	51.22	331	P	P	13 47 42.2	-0.3
KMBO	Kilima Mbogo	57.87	264	P	P	13 48 32.6	+0.9
	comp=Z,1.1nm,0.5s,baz=54,slow=11,SNR=4.8						
KMBO	Kilima Mbogo	57.87	264	P	P	13 48 33.6	+1.9
KMBO				IAmb	IAmb	13 48 40.4	
	comp=Z,3.8nm,0.9s						
STKA	Stephens Creek	59.15	134	P	P	13 48 38.0	-2.1
	comp=Z,1.3nm,0.6s,baz=339,slow=9.5,SNR=3.9						
BRTR	Keskin Array B	63.38	311	P	P	13 49 07.2	-1.6
	comp=Z,1.9nm,0.7s,baz=131,slow=5.7,SNR=4.6						
CAN	Canberra	66.21	133	P	P	13 49 27.3	+0.1
TIXI	Tiksi	67.94	11	P	P	13 49 36.7	-0.7
FIA1	FINESS Array S	73.69	332	P	P	13 50 11.4	-1.2
FINES	FINESS Array B	73.69	332	P	P	13 50 11.8	-0.7
	comp=Z,2.2nm,0.8s,baz=100,slow=5.8,SNR=6.8						
FINES	FINESS Array B	73.69	332	P	P	13 50 11.5	-1.1
BOSA	Boshof	75.60	238	P	P	13 50 24.9	+0.5
	comp=Z,3.0nm,0.9s,baz=88,slow=5.6,SNR=4.3						
BOSA	Boshof	75.60	238	P	P	13 50 24.7	+0.2
BOSA				IAmb	IAmb	13 50 36.6	
	comp=Z,11nm,1.3s						
ARCES	ARCESS Array B	76.23	340	P	P	13 50 27.0	-0.1
	comp=Z,6.8nm,1.1s,baz=74,slow=5.2,SNR=8.5						
ARCES	ARCESS Array B	76.23	340	P	P	13 50 27.2	+0.1
ARCES				IAmb	IAmb	13 50 42.7	
	comp=Z,7.5nm,1.1s						
SGRT	San Giovanni R	77.10	311	P	P	13 50 32.9	+0.2
CONA	Conrad Observa	77.32	317	*e*P	P	13 50 34.9	+1.1
	comp=Z,4.9nm,1.6s						
ARSA	Arzberg	77.51	317	*e*P	P	13 50 34.7	-0.1
	comp=Z,3.0nm,0.8s						
SOKA	Soboth	77.81	316	*e*P	P	13 50 36.9	+0.3
	comp=Z,3.7nm,1.1s						
OBKA	Obir	78.14	316	*e*P	P	13 50 39.5	+1.0
	comp=Z,4.0nm,1.1s						
MYKA	Terra Mystica	78.77	316	*e*P	P	13 50 41.5	-0.4
	comp=Z,0.8nm,0.4s						
GERES	GERESS Array B	78.80	318	P	P	13 50 41.9	-0.1
	comp=Z,1.6nm,0.9s,baz=88,slow=6.8,SNR=6.1						
KBA	Koelnbreinsper	78.98	317	*e*P	P	13 50 42.0	-1.2
	comp=Z,2.1nm,1.0s						
STAL	STALIGIAL	79.40	316	P	P	13 50 44.4	-1.0
STAL				IAmb	IAmb	13 50 51.3	
	comp=Z,9.0nm,1.1s						
WATA	Walderalm	80.19	317	*e*P	P	13 50 48.5	-1.3
	comp=Z,2.0nm,0.5s						
SQTA	Sankt Quirin	80.44	317	*e*P	P	13 50 51.8	+0.8
	comp=Z,5.2nm,1.2s						
MOTA	Moosalm	80.52	317	*e*P	P	13 50 50.6	-0.8
	comp=Z,7.7nm,1.3s						
NB2	NORSAR Subarra	80.72	331	P	P	13 50 52.9	+0.8
	comp=Z,0.6nm,0.6s,baz=96,slow=5.1						
NOA	NORSAR Array B	80.72	331	P	P	13 50 51.0	-1.1
	comp=Z,1.6nm,0.9s,baz=92,slow=5.8,SNR=3.8						
RETA	Reutte	80.75	317	*e*P	P	13 50 52.7	+0.1
	comp=Z,6.1nm,1.4s						
FETA	Feichten	80.77	316	*e*P	P	13 50 53.9	+1.0
	comp=Z,5.3nm,1.2s						
DAVA	Damuels	81.35	317	*e*P	P	13 50 55.2	-0.7
	comp=Z,7.6nm,1.4s						
SYO	Syowa Base	84.77	197	⇓*e*pP	pP	13 51 19.2	-1.1
SYO	Syowa Base	84.77	197	⇑*e*sP	sP	13 51 20.2	-2.8
TORD	Torodi Ar. Bea	91.31	283	P	P	13 51 46.0	+0.6
	comp=Z,0.5nm,0.6s,baz=79,slow=5.0,SNR=3.6						
TORD	Torodi Ar. Bea	91.31	283	IAmb	IAmb	13 51 58.2	
	comp=Z,2.9nm,0.8s						
ESDC	Sonseca Array	92.16	310	P	P	13 51 48.6	-0.4
	comp=Z,0.6nm,0.8s,baz=66,slow=4.0,SNR=6.4						
NVAR	Mina Array Bea	125.35	32	PKP	PKPdf	13 57 40.3	-0.4
	comp=Z,0.7nm,0.7s,baz=287,slow=2.0,SNR=5.8						
TXAR	Lajitas Array	139.76	25	PKP	PKPdf	13 58 07.6	-0.2
	comp=Z,0.1nm,0.3s,baz=152,slow=4.1,SNR=1.6						
CPUP	Villa Florida	147.16	231	PKPbc	PKPdf	13 58 23.1	+2.3
	comp=Z,1.5nm,0.6s,baz=30,slow=4.3,SNR=3.1						

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*IDC **08** 13:45:16.9±1.3, 6°.88N×94°.39E, h0^{km}, mb3.7/8, mb1 3.9/10, mb1mx3.7/35, mbtmp3.7/10, ML3.6/2, Error ellipse: s-maj=54.2km s-min=20.1km az=56.0*

ISC 08 13:45:21.0±1.1, 6°.9N±0°.1×94°.4E±0°.2, h26^{km}, n10, σ0^s.88/10, mb3.6/8, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	6.06	132	Pn	Pn	13 46 49.3	+0.2
	1.1nm,0.3s,baz=332,slow=13,SNR=4.3						
CMAR	Chiang Mai Arr	12.35	21	Pn	Pn	13 48 16.1	+0.8
	0.1nm,0.3s,baz=213,slow=14,SNR=1.9						
MKAR	Makanchi Array	41.12	347	P	P	13 53 02.8	-0.2
	0.9nm,0.7s,baz=166,slow=8.3,SNR=6.1						
SONM	Songino Array	42.09	12	P	P	13 53 10.3	-0.7
	0.5nm,0.7s,baz=197,slow=9.0,SNR=2.7						
WRA	Warramunga Arr	47.48	125	P	P	13 53 54.0	-0.1
	0.3nm,0.6s,baz=305,slow=9.0,SNR=2.9						
ZALV	Zalesovo Beam	47.59	352	P	P	13 53 53.3	-1.2
	0.4nm,0.3s,baz=163,slow=5.4,SNR=2.0						
ASAR	Alice Springs	49.08	129	P	P	13 54 06.3	-0.2
	0.2nm,0.5s,baz=306,slow=7.9,SNR=3.1						
FINES	FINESS Array B	73.72	332	P	P	13 56 51.9	-0.6
	4.4nm,1.0s,baz=90,slow=5.9,SNR=6.0						
ARCES	ARCESS Array B	76.30	340	P	P	13 57 06.9	-0.4
	2.1nm,0.9s,baz=98,slow=5.5,SNR=1.1						
GERES	GERESS Array B	78.74	318	P	P	13 57 23.0	+1.5
	0.2nm,0.5s,baz=99,slow=8.2,SNR=3.5						

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*IDC **08** 13:48:42.1±2.0, 6°.97N×94°.60E, h0^{km}, mb3.4/5, mb1 3.6/6, mb1mx3.4/34, mbtmp3.4/6, ML3.1/1, Error ellipse: s-maj=111.8km s-min=22.7km az=54.0*

ISC 08 13:48:46.0±1.8, 7°.0N±0°.4×94°.7E±0°.6, h26^{km}, n6, σ0^s.68/6, mb3.4/5, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	5.94	134	Pn	Pn	13 50 11.9	-0.5
	0.5nm,0.3s,baz=340,slow=18,SNR=1.9						
MKAR	Makanchi Array	41.08	347	P	P	13 56 27.1	-0.4
	0.3nm,0.7s,baz=170,slow=8.8,SNR=2.5						
WRA	Warramunga Arr	47.33	125	P	P	13 57 18.2	+0.2
	0.2nm,0.8s,baz=305,slow=9.2,SNR=1.8						
ZALV	Zalesovo Beam	47.51	352	P	P	13 57 19.1	+0.3
	0.5nm,0.3s,baz=156,slow=7.4,SNR=2.0						
ASAR	Alice Springs	48.95	130	P	P	13 57 31.4	+0.9
	0.3nm,0.7s,baz=316,slow=7.8,SNR=1.9						
GERES	GERESS Array B	78.83	318	P	P	14 00 46.8	-0.1
	0.4nm,0.7s,baz=64,slow=6.7,SNR=2.7						

NNC 08 13:59:12.6±4.7,**37°.10N×69°.90E,h0^{km},mb3.5,mpv3.1, 2C-2D,Error ellipse: s-maj=37.9km s-min=35.0km az=118.0,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.02	4	⇑P	Pn	14 00 43.7	+0.7
	0.4nm,0.2s,baz=183,slow=13,SNR=17						
KK31				⇓S	Sn	14 01 53.2	+0.7
	11nm,0.8s,baz=180,slow=29,SNR=17						
AAK	Ala-Archa	6.56	31	P	Pn	14 00 51.8	+1.2
	1.3nm,0.6s						
AAK				S	Sn	14 02 07.9	+1.7
	3.9nm,0.8s						
TKM2	Tokmak 2	7.27	35	⇓P	Pn	14 00 58.2	-2.2
	1.2nm,0.8s						
TKM2				⇑S	Sn	14 02 25.0	+1.3
	2.7nm,0.9s						

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*IDC **08** 14:06:41.2±1.7,6°.46N×94°.44E,h0^{km},mb3.6/5,mb1 3.7/7, mb1mx3.5/35,mbtmp3.5/7,ML3.3/1,MS3.6/4,Ms1 3.6/4, ms1mx3.2/45,Error ellipse: s-maj=75.9km s-min=20.8km az=58.0*

ISC 08 14:06:46.5±1.4,**6°.5N**±0°.2×**94°.5E**±0°.3,**h35^{km},n13,**σ**1^s.73**/8,**mb3.5**/5,**MS3.7**/3,**Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	5.69	130	Pn	Pn	14 08 08.0	-0.7
	0.8nm,0.3s,baz=136,slow=9.2,SNR=2.3						
CMAR	Chiang Mai Arr	12.68	19	Pn	Pn	14 09 44.9	+0.5
	baz=210,slow=14,SNR=1.4						
CMAR				LR	LR	14 14 27.9	
	comp=Z,118nm,20.0s,baz=249,slow=37						
H08S3	Diego Garcia H	26.07	238	T	T	14 39 03.2	
	baz=58,slow=74						
H08S2	Diego Garcia H	26.07	238	T	T	14 38 50.0	
	baz=58,slow=74						
H08S1	Diego Carcia H	26.08	238	T	T	14 39 01.5	
	baz=58						
BATI	Baumata	33.41	119	LR	LR	14 27 16.7	
	comp=Z,165nm,20.1s,baz=283,slow=37						
MKAR	Makanchi Array	41.54	347	P	P	14 14 29.8	-0.8
	0.4nm,0.6s,baz=172,slow=7.6,SNR=2.8						
KSRS	Korea Array	43.28	40	LR	LR	14 33 29.7	
	comp=Z,84nm,18.9s,baz=260,slow=37						
GEYT	Alibeck	45.51	319	LR	LR	14 35 15.6	
	comp=Z,82nm,18.9s,baz=220,slow=38						
WRA	Warramunga Arr	47.14	125	P	P	14 15 14.3	-1.4
	0.2nm,0.6s,baz=306,slow=8.0,SNR=1.4						
ZALV	Zalesovo Beam	48.00	352	P	P	14 15 21.6	-0.3
	0.4nm,0.3s,baz=183,slow=9.7,SNR=3.6						
ASAR	Alice Springs	48.72	129	P	P	14 15 28.6	+0.7
	0.4nm,0.8s,baz=308,slow=7.5,SNR=6.0						
ASAR				PcP	PcP	14 16 56.1	+3.3
	0.2nm,0.5s,baz=307,slow=3.4,SNR=1.3						
FINES	FINESS Array B	74.13	332	P	P	14 18 18.4	-0.7
	2.2nm,0.8s,baz=123,slow=10,SNR=4.3						

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*IDC **08** 14:18:33.5±1.8,7°.09N×94°.05E,h0^{km},mb3.6/6,mb1 3.7/7, mb1mx3.5/42,mbtmp3.6/7,ML3.9/1,Error ellipse: s-maj=67.4km s-min=23.1km az=62.0*

*NEIC **08** 14:18:34.9±1.5,7°.18N±0°.09×94°.3E±0°.2,h10^{km}±2^{km}, mb4.3/4,Error ellipse: s-maj=39.0km s-min=8.3km az=250.0*

ISC 08 14:18:36.3±1.3,**7°.1N**±0°.2×**94°.2E**±0°.2,**h21^{km},n20,** σ**1^s.09**/16,**mb3.8**/8,**Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	12.22	22	Pn	Pn	14 21 31.0	+1.7
	0.2nm,0.3s,baz=211,slow=15,SNR=5.6						
CMAR	Chiang Mai Arr	12.22	22		Pn	14 21 28.3	-1.0
H08S3	Diego Garcia H	26.11	236	T	T	14 50 54.3	
	baz=56,slow=74,SNR=2.6						
H08S2	Diego Garcia H	26.11	236	T	T	14 50 49.4	
	baz=56,slow=74,SNR=2.7						
H08S1	Diego Carcia H	26.13	236	T	T	14 50 50.6	
	baz=56						
MKAR	Makanchi Array	40.87	348	P	P	14 26 16.9	+0.1
	0.9nm,0.8s,baz=154,slow=10.0,SNR=5.3						
MKAR	Makanchi Array	40.87	348	P	P	14 26 15.7	-1.1
SONM	Songino Array	41.92	12	P	P	14 26 25.1	-0.4
	0.5nm,0.7s,baz=195,slow=10,SNR=3.2						
SONM	Songino Array	41.92	12	IAmb	IAmb	14 26 26.9	
	comp=Z,1.3nm,1.2s						
ZALV	Zalesovo Beam	47.34	352	P	P	14 27 08.8	+0.3
	comp=Z,0.5nm,0.4s,baz=179,slow=6.8,SNR=4.0						
ZALV	Zalesovo Beam	47.34	352	P	P	14 27 07.5	-1.0
WRA	Warramunga Arr	47.77	125	P	P	14 27 13.9	+1.5
	comp=Z,0.3nm,0.7s,baz=308,slow=8.5,SNR=2.6						
WB2	Warramunga Arr	47.78	125	P	P	14 27 10.8	-1.7
WR0	Warramunga Arr	47.95	125	P	P	14 27 13.6	-0.2
WR0				IAmb	IAmb	14 27 23.3	
	comp=Z,3.8nm,1.3s						
ASAR	Alice Springs	49.38	129	P	P	14 27 26.0	+1.2
	comp=Z,0.3nm,0.7s,baz=298,slow=7.8,SNR=4.7						
ASAR	Alice Springs	49.38	129	P	P	14 27 24.1	-0.7
BRVK	Borovoye	49.81	341	P	P	14 27 26.6	-1.0
BRVK				IAmb	IAmb	14 27 35.0	
	comp=Z,2.5nm,0.8s						
ABKAR	Akbulak array	50.94	332	P	P	14 27 37.0	+0.8
FINES	FINESS Array B	73.43	332	P	P	14 30 07.3	+0.5
	comp=Z,3.8nm,1.0s,baz=123,slow=5.1,SNR=3.6						
FINES	FINESS Array B	73.43	332	P	P	14 30 06.7	-0.1

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*IDC **08** 14:18:54.1±1.0,1°.08N×127°.57E,h0^{km},mb3.7/5, mb1 3.9/6,mb1mx3.6/46,mbtmp3.7/6,ML3.3/1,MS3.7/1, Ms1 3.6/1,ms1mx2.7/51,Error ellipse: s-maj=41.0km s-min=18.1km az=64.0*

*DJA **08** 14:18:56.0±0.4,1°N±3°×12°8E±°,h10^{km},M3.6/8,MLv3.6/8*

ISC 08 14:18:56.0±0.9,**0°.96N**±0°.08×**127°.57E**±0°.05,**h10^{km},n13,** σ**1^s.31**/14,**mb3.7**/5,**Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.28	228	P	Pg	14 19 01.6	0.0
TNTI				S	Sg	14 19 06.1	+0.7
LBMI	Labuha	1.59	183	P	Pb	14 19 25.2	-0.3
SANI	Sanana	3.38	208	P	Pn	14 19 47.7	-1.2
KMSI	Cibinong	3.61	264	P	Pn	14 19 52.8	+0.7
SWI	Sorong	4.11	116	P	Pn	14 20 00.4	+1.5
SIJI	Sorong	4.12	116	Pn	Pn	14 20 00.1	+1.0
	1.9nm,0.3s,baz=322,slow=17,SNR=4.2						
SIJI				Sn	Sn	14 20 48.0	+0.7
	0.2nm,0.3s,baz=106,slow=22,SNR=1.2						
GTOI	Gorontalo	4.57	266	P	Pn	14 20 07.9	+2.6
WRA	Warramunga Arr	21.81	163	P	P	14 23 49.2	+0.7
	1.3nm,0.6s,baz=342,slow=12,SNR=20						
ASAR	Alice Springs	25.24	166	P	P	14 24 23.1	+0.7
	1.9nm,0.9s,baz=347,slow=9.1,SNR=15						
STKA	Stephens Creek	35.26	159	LR	LR	14 42 21.8	
	comp=Z,114nm,18.2s,baz=219,slow=40						
MJAR	Matsushiro Arr	36.75	14	P	P	14 26 02.4	-1.4
	1.1nm,0.9s,baz=186,slow=10,SNR=4.8						
MKAR	Makanchi Array	60.30	326	P	P	14 29 04.8	-0.2
	0.3nm,0.4s,baz=116,slow=9.7,SNR=5.0						
KURBB	Kurchatov Arra	64.51	328	P	P	14 29 31.4	-1.7
	0.5nm,0.4s,baz=127,slow=6.0,SNR=7.3						

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*IDC **08** 14:27:25.2±0.9,6°.95N×94°.69E,h0^{km},mb3.7/12, mb1 3.8/13,mb1mx3.7/47,mbtmp3.7/13,ML3.7/1,Error ellipse: s-maj=43.1km s-min=14.9km az=55.0*

ISC 08 14:27:29.6±0.8,**7°.0N**±0°.1×**94°.6E**±0°.2,**h26^{km},n18,** σ**1^s.39**/17,**mb3.8**/13,**Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	5.98	134	Pn	Pn	14 28 59.7	+3.2
	1.6nm,0.3s,baz=330,slow=14,SNR=9.0						
CMAR	Chiang Mai Arr	12.12	20	Pn	Pn	14 30 21.0	+0.3
	0.1nm,0.3s,baz=214,slow=14,SNR=1.5						
H08S3	Diego Garcia H	26.45	237	T	T	14 59 46.7	
	baz=56,slow=75,SNR=9.5						
H08S2	Diego Garcia H	26.45	237	T	T	14 59 46.3	
	baz=56,slow=75,SNR=9.6						
H08S1	Diego Carcia H	26.47	237	T	T	14 59 46.3	
	baz=56,slow=75,SNR=3.8						
FITZ	Fitzroy Crossi	39.49	130	P	P	14 34 57.2	-1.0
	1.6nm,0.7s,baz=324,slow=8.7,SNR=2.4						
MKAR	Makanchi Array	41.03	347	P	P	14 35 10.2	-0.4
	1.2nm,0.9s,baz=184,slow=10.0,SNR=5.1						
SONM	Songino Array	41.89	12	P	P	14 35 19.0	+1.1
	0.4nm,0.6s,baz=216,slow=7.1,SNR=2.9						
KURBB	Kurchatov Arra	45.49	346	P	P	14 35 46.6	0.0
	1.4nm,0.9s,baz=169,slow=6.8,SNR=11						
WRA	Warramunga Arr	47.37	125	P	P	14 36 00.1	-1.7
	1.0nm,0.7s,baz=307,slow=8.5,SNR=5.9						
WRA				PcP	PcP	14 37 34.1	+1.7
	0.4nm,0.8s,baz=307,slow=2.7,SNR=2.0						
ZALV	Zalesovo Beam	47.47	352	P	P	14 36 02.1	0.0
	0.4nm,0.4s,baz=186,slow=5.8,SNR=4.2						
ASAR	Alice Springs	48.99	130	P	P	14 36 12.9	-1.5
	0.5nm,0.7s,baz=305,slow=7.4,SNR=8.1						
ASAR				PcP	PcP	14 37 38.5	+0.3
	0.3nm,0.7s,baz=312,slow=3.3,SNR=2.1						
BVAR	Borovoye Array	49.96	341	P	P	14 36 20.4	-0.8
	0.9nm,0.8s,baz=186,slow=12,SNR=4.2						
STKA	Stephens Creek	59.16	134	P	P	14 37 28.0	-0.4
	0.8nm,0.7s,baz=313,slow=14,SNR=2.9						
BRTR	Keskin Array B	63.36	311	P	P	14 37 56.6	-0.3
	0.2nm,0.4s,baz=126,slow=8.5,SNR=1.7						
HNR	Honiara	67.09	103	P	P	14 38 19.2	-2.2
	10nm,0.4s,baz=283,slow=17,SNR=1.5						
GERES	GERESS Array B	78.79	318	P	P	14 39 31.2	+0.9
	0.9nm,0.9s,baz=60,slow=5.8,SNR=3.0						
ESDC	Sonseca Array	92.14	310	P	P	14 40 37.4	+0.3
	0.8nm,1.2s,baz=60,slow=3.4,SNR=1.7						

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*BJI **08** 14:34:01.4±0.0,6°.39N×94°.28E,h10^{km},mB5.1/50, mb4.7/62,Ms5.2/69,Ms7 4.9/61*

*MOS **08** 14:34:03.6±1.0,6°.73N×94°.54E,h12^{km},mb5.3/54, MS4.8/10,Error ellipse: s-maj=9.1km s-min=4.3km az=114.6*

*IDC **08** 14:34:04.2±0.4,6°.69N×94°.47E,h0^{km},mb4.7/38, mb1 4.7/40,mb1mx4.6/50,mbtmp4.7/40,ML4.4/2,MS4.6/36, Ms1 4.6/36,ms1mx4.5/49,Error ellipse: s-maj=14.9km s-min=9.2km az=49.0*

*BGR **08** 14:34:05.1±0.0,5°.73N×94°.64E,h33^{km},mb4.8*

*NEIC **08** 14:34:05.4±1.4,6°.68N±0°.08×94°.44E±0°.09,h10^{km}±1^{km}, mb5.1/97,Error ellipse: s-maj=16.7km s-min=12.2km az=239.0*

*KLM **08** 14:34:06,6°.66N×94°.53E,h10^{km},mb5.2*

*DJA **08** 14:34:08.9±0.2,7°N±2°×9°5E±°,h10^{km},M4.9/45,mb5.0/45, mB5.4/28,MLv5.2/8,Mw(mB)4.9/28,MwMwp4.8/6, Mwp5.1/6*

*GCMT **08** 14:34:10.4±0.2,6°.83N±0°.01×94°.73E±0°.01,h15^{km}, MW5.3/128,Moment Tensor Solution. s72,c96; s128,c219; Duration: 1^s.0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.10±.02; $M_{\theta\theta}$-0.76±.01; $M_{\phi\phi}$0.85±.02; $M_{r\theta}$-0.46±.05; $M_{\theta\phi}$0.30±.01; $M_{\phi r}$-0.17±.05; Best double couple: $M_0$0.99400×10^{17} NP1:ϕ_s148.00000°,δ61.00000°, λ-172.00000°. NP2:ϕ_s54.00000°,δ83.00000°, λ-29.00000°. Principal axes: T 0.9750, Plg15.0000°, Azm104.0000°; N 0.0370, Plg60.0000°, Azm221.0000°; P -1.0130, Plg25.0000°, Azm7.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 14:34:06.6±0.8,**6°.71N**±0°.04×**94°.41E**±0°.04,**h15^{km}**±4^{km}, **n538,**σ**1^s.88**/569,**mb5.0**/184,**MS4.8**/61,**24C-19D,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	2.92	120	P	Pn	14 34 50.9	-1.7
LHMI	Lhok Sumawe	2.92	120		Pn	14 34 50.8	-1.8
TPTI		4.40	141	P	Pn	14 35 13.4	+0.5
TPTI				S	Sn	14 36 02.1	-1.8
SNSI	Sinabang, Aceh	4.68	156	P	Pn	14 35 19.4	+2.6
PBA	Port Blair	5.18	342	*e*P	Pn	14 35 25.1	+1.3
PBA				*e*S	Sn	14 36 26.7	+3.3
TSI	Tuntungan	5.22	127	P	Pn	14 35 22.3	-1.9
PSI	Prapat	5.94	131	Pn	Pn	14 35 34.0	-0.2
	8.3nm,0.3s,baz=309,slow=11,SNR=24						
PSI				LR	LR	14 37 56.5	
	comp=Z,2μm,21.0s,baz=300,slow=39						
RPSI	Rantau Prapat	6.01	131		Pn	14 35 34.0	-1.1
GSI	Gunungsitoli	6.23	149	P	Pn	14 35 42.7	+4.6
	1.0nm3μm90nm,0.8s						
GSI	Gunungsitoli	6.23	149		Pn	14 35 37.8	-0.3
GSI	Gunungsitoli	6.23	149	P	Pn	14 35 40.6	+2.5
KULM	Kulim	6.36	102	P	Pn	14 35 37.0	-3.0
DGPR	DIGLIPUR	6.59	347	*e*P	Pn	14 35 42.4	-0.7
DGPR				*e*S	Sn	14 37 03.8	+5.7
IPM	Ipoh	6.95	108	P	Pn	14 35 45.0	-3.0
MNSI	Mandailing Nat	7.81	139	P	Pn	14 35 58.5	-1.4
JRMM	Jerantut	8.51	109	P	Pn	14 36 06.0	-3.4
BKNI	Bangkinang	9.16	134	P	Pn	14 36 17.0	-1.4
	3μm139nm,1.5s						
BKNI	Bangkinang	9.16	134	P	Pn	14 36 20.3	+1.9
PPI	Padang Panjang	9.29	140	P	Pn	14 36 19.6	-0.6
	449nm27nm,1.2s						
PDSI	Padang	9.68	141	P	Pn	14 36 24.5	-1.1
	559nm13nm,0.6s						
PBKT	Sadao Pong	11.72	33		Pn	14 36 54.2	+0.8
JMBI	JAMBI	12.39	132	P	Pn	14 37 03.3	+0.7
	64nm,0.4s						
DSRI	Dabo	12.41	125	P	Pn	14 36 52.5	-10
CM31	Chiang Mai Arr	12.49	20		Pn	14 37 05.6	+1.7
CMAR	Chiang Mai Arr	12.49	20	Pn	Pn	14 37 05.2	+1.3
	0.7nm,0.3s,baz=210,slow=14,SNR=24						
CMAR				LR	LR	14 41 27.6	
	comp=Z,3μm,21.3s,baz=256,slow=36						
CMAR	Chiang Mai Arr	12.49	20	P	Pn	14 37 03.4	-0.5
CMAR	Chiang Mai Arr	12.49	20	Pn	Pn	14 37 03.4	-0.5
MASI	Maura Aman, Be	12.52	141	P	P	14 37 24.7	+8.6
CHTO	Chiang Mai	12.82	20	P	Pn	14 37 08.6	+0.1
CHTO	Chiang Mai	12.82	20	Pn	Pn	14 37 08.6	+0.1
KSI	Kapahiang	13.14	141	P	P	14 37 29.7	+6.7
PALK	Pallekele	13.62	273	Pn	P	14 37 25.3	-3.0
	0.8nm,0.3s,baz=188,slow=13,SNR=4.3						
PALK				Sn	Sn	14 39 47.1	-3.6
	2.6nm,0.3s,baz=306,slow=20,SNR=8.1						
PALK				LR	LR	14 42 45.9	
	comp=Z,6μm,18.1s,baz=194,slow=38						
UBPT	Khong Chiam	13.79	51	Pn	Pn	14 37 20.8	-1.0
PMBI	Palembang	14.09	132	P	Pn	14 37 24.0	-1.9
	11μm210nm,0.4s						
PPBI	Pangkal Pinang	14.65	127	P	Pn	14 37 32.9	-0.7
MDSI	Maura Dua	14.79	138	P	Pn	14 37 32.9	-2.5
	28nm,1.1s						
DLV	T Lat	14.83	68	Pn	Pn	14 37 34.6	-1.6
LWLI	Liwa	15.11	140	P	Pn	14 37 39.8	-0.1
	4μm111nm,0.9s						
KLSI		15.31	137	P	Pn	14 37 40.2	-2.2
	20nm,1.1s						
VIS	Vishakhapatnam	15.39	316	*e*P	Pn	14 37 40.4	-3.0
KSM	Kuching	16.68	107	P	Pn	14 38 00.0	-0.1
SLVN	Son La	17.20	31	Pn	Pn	14 38 05.1	-1.5
SBUM	Sibu	18.25	103	P	Pn	14 38 19.0	-0.5
STKI	Sintang	18.26	111	P	P	14 38 19.9	0.0
	29nm,1.2s						
HYB	Hyderabad	18.79	306	*i* P	Pn	14 38 27.0	+0.8
HYB				*e*S	S	14 42 02.0	+2.7
HYB	Hyderabad	18.79	306	*e*P	Pn	14 38 27.3	+1.1
LEM	Lembang	18.82	135	LR	LR	14 47 12.0	
	comp=Z,5μm,18.1s,baz=304,slow=42						
BOK	Bokaro	18.86	335	*e*P	Pn	14 38 28.2	+1.2
BOK				IAmb	IAmb	14 38 35.9	
BOK				*e*S	Sn	14 41 49.2	-8.8
KOHI	KOHIMA	18.91	359	*e*P	P	14 38 25.9	-1.1
SHL	Shillong	18.91	353	P	P	14 38 26.4	-0.7
SHL				pmax	pmax		
	comp=Z,61nm,1.3s						
SHL	Shillong	18.91	353	*e*P	P	14 38 26.1	-1.0
SHL	Shillong	18.91	353		P	14 38 26.4	-0.7
QIZ	Qiongzhong	19.38	49	P	P	14 38 32.2	+0.1
QIZ				S	S	14 42 11.0	0.0
QIZ				pmax	pmax		
	comp=Z,15nm,1.0s						
QIZ				pmax	pmax		
	comp=Z,270nm,3.7s						
QIZ				LR	LR		
	comp=Z,5μm,12.2s						
QIZ				LR	LR		
	comp=Z,3μm,14.9s						
QIZ	Qiongzhong	19.38	49	P	P	14 38 31.1	-1.0
QIZ				IAmb	IAmb	14 38 48.2	
	comp=Z,91nm,1.3s						
MOKO	MOKOCHONG	19.50	0	*e*P	P	14 38 33.6	0.0
MOKO				IAmb	IAmb	14 38 39.1	
	comp=Z,38nm,0.9s						
PBKI	Pangkalan Bun	19.60	118	P	Pn	14 38 49.1	+13
KMI	Kunming	19.97	23	⇑P	Pn	14 38 42.2	+1.7
KMI				sP	pwP	14 38 47.2	+2.3
KMI				PP	PnPn	14 39 01.6	+6.7
KMI				S	Sn	14 42 26.3	+1.2
KMI				sS	pS	14 42 33.5	-2.2
KMI				SS	SnSn	14 42 50.8	+11
KMI				pmax	pmax		
	comp=Z,39nm,1.1s						
KMI				pmax	pmax		
	comp=Z,410nm,6.7s						
KMI				LR	LR		
	comp=Z,1μm,9.3s						
KMI				LR	LR		
	comp=Z,3μm,10.5s						
KMI				LR	LR		
	comp=Z,2μm,8.8s						
LKP	Lekhapani	20.56	4	*e*P	P	14 38 44.1	-0.8
LKP				IAmb	IAmb	14 38 47.9	
	comp=Z,104nm,1.3s						
ODAN	Odare	21.13	342	*e*P	P	14 38 55.6	+4.3
	comp=Z,44nm,0.7s						
TAPN	Taplejung	21.49	344	*e*P	P	14 38 55.1	-0.2
	comp=Z,89nm,0.8s						
MTKI	Muara Teweh, K	21.81	110	P	P	14 38 58.8	+0.3
GOA	Goa	21.99	295	*e*P	P	14 39 02.7	+2.3
GOA				IAmb	IAmb	14 39 12.2	
	comp=Z,41nm,0.9s						
NGJI	Ngawi	22.02	129	P	P	14 39 05.4	+4.7
	comp=Z,45nm,0.7s						
SPMM	Sapulut	22.03	94	P	P	14 39 02.0	+1.0
PKIN	Phulchoki	22.45	339	*e*P	P	14 39 07.3	+1.7
	comp=Z,57nm,0.7s						
BBKI	Banjar Baru	22.76	116	P	P	14 39 08.5	-0.2
	comp=Z,3μmcomp=Z,53nm,1.1s						
GYA	Guiyang	22.85	29	⇑*i*P	P	14 39 10.7	+1.1
GYA				sP	pwP	14 39 18.2	+2.4
GYA				PP	PnPn	14 39 40.1	+5.9
GYA				S	S	14 43 14.6	-4.3
GYA				pmax	pmax		
	comp=Z,36nm,1.2s						
GYA				LR	LR		
	comp=Z,3μm,10.8s						
GYA				LR	LR		
	comp=Z,4μm,10.4s						
GYA				LR	LR		
	comp=Z,5μm,15.0s						
LSA	Lhasa	23.08	353	P	P	14 39 11.2	-1.1
LSA				pmax	pmax		
	comp=Z,35nm,0.9s						
LSA	Lhasa	23.08	353	P	P	14 39 11.2	-1.1
LSA				IAmb	IAmb	14 39 21.4	
	comp=Z,35nm,0.9s						
GKN	Gorkha	23.12	338	*e*P	P	14 39 11.8	-0.6
POO	Poona	23.22	302	*e*P	P	14 39 15.0	+1.6
POO				IAMs_20	IAMs_20	14 48 13.4	
	comp=Z,3μm,20.2s						
POO	Poona	23.22	302	*e*P	P	14 39 20.0	+6.6
KOLN	Koldanda	23.32	335	*e*P	P	14 39 14.2	-0.4
KMMI	Kalianget	23.82	125	P	P	14 39 17.8	-1.5
	comp=Z,2μmcomp=Z,128nm,1.9s						
SMKI	Samarinda	23.83	106	P	P	14 39 18.9	-0.6
	comp=Z,9μmcomp=Z,170nm,0.5s						
PYUN	Piuthan	23.87	334	*e*P	P	14 39 20.5	+0.6
KBKI	Kotabaru	23.89	114	P	P	14 39 17.9	-2.1
	comp=Z,1μmcomp=Z,26nm,1.2s						
BLJI	Banyuglugur	23.92	127	P	P	14 39 18.5	-1.8
	comp=Z,981nmcomp=Z,58nm,1.6s						
ABJI	Asem Bagus	24.46	126	P	P	14 39 25.7	+0.4
	comp=Z,3μmcomp=Z,180nm,1.1s						
JAGI	Jajag, Banyuwa	24.79	127	P	P	14 39 28.5	+0.2
	comp=Z,46nm,1.3s						
JAGI	Jajag, Banyuwa	24.79	127	P	P	14 39 25.1	-3.2
JAGI				IAmb	IAmb	14 39 52.5	
	comp=Z,115nm,1.5s						
SRBI	Singaraja	25.42	125	P	P	14 39 33.5	-0.5
	comp=Z,3μmcomp=Z,192nm,1.3s						
H08S3	Diego Garcia H	26.10	237	T	T	15 06 28.2	
	baz=56,slow=76,SNR=476						
H08S2	Diego Garcia H	26.10	237	T	T	15 06 16.1	
	baz=56,slow=76,SNR=202						
H08S1	Diego Carcia H	26.11	237	T	T	15 06 18.6	
	baz=56,slow=76,SNR=65						
MPSI	Mapaga	26.20	103	P	P	14 39 42.9	+1.8
	comp=Z,783nmcomp=Z,62nm,1.4s						
TOLI2	Tolitoli	26.88	101	P	P	14 39 46.5	-0.7
TOLI2				IAmb	IAmb	14 39 50.0	
	comp=Z,53nm,1.1s						
TTSI	Tana Toraja	27.15	110	P	P	14 40 00.3	+11
ENH	Enshi	27.39	29	P	P	14 39 50.5	-1.2
ENH				IAmb	IAmb	14 39 59.2	
	comp=Z,32nm,1.0s						
KAPI	Kappang	27.85	114	P	P	14 39 55.2	-0.7
	comp=Z,5.2nm,0.2s,baz=245,slow=3.5,SNR=6.5						
KAPI				LR	LR	14 51 35.2	
	comp=Z,1μm,19.7s,baz=301,slow=38						
DDI	Dehra Dun	28.07	329	*e*P	P	14 39 59.1	+1.3
DDI				IAmb	IAmb	14 40 09.6	
	comp=Z,40nm,0.6s						
MRSI	Marisa	28.15	102	P	P	14 40 00.2	+1.6
	comp=Z,536nmcomp=Z,42nm,1.1s						
BKSI	Bulukumba	28.31	114	P	P	14 40 00.1	+0.1
	comp=Z,513nmcomp=Z,42nm,1.3s						
GTOI	Gorontalo	29.16	101	P	P	14 40 08.8	+1.2
	comp=Z,369nmcomp=Z,27nm,1.1s						
SMLA	Simla	29.17	329	*e*P	P	14 40 07.8	+0.3
SMLA				IAmb	IAmb	14 40 15.4	
	comp=Z,16nm,0.4s						
SMLA				IAMs_20	IAMs_20	14 52 45.7	
	comp=Z,2μm,18.8s						
WHN	Wuhan	30.21	36	⇓P	P	14 40 17.1	+0.4
WHN				S	S	14 45 14.9	-0.8
WHN				LR	LR		
	comp=Z,7μm,16.2s						
WHN				LR	LR		
	comp=Z,3μm,17.8s						
XAN	Xi'an	30.33	24	P	P	14 40 17.3	-0.5
XAN				S	S	14 45 12.2	-5.5
XAN				pmax	pmax		
	comp=Z,24nm,0.9s						
XAN				pmax	pmax		
	comp=Z,83nm,3.5s						
XAN				LR	LR		
	comp=Z,2μm,14.5s						
XAN				LR	LR		
	comp=Z,4μm,13.9s						
XAN				LR	LR		
	comp=Z,4μm,14.4s						
LZH	Lanzhou	30.49	15	*e*P	P	14 40 25.9	+6.6
LZH				sP	pwP	14 40 32.0	+6.1
LZH				PP	PP	14 41 31.4	+3.1
LZH				S	S	14 45 18.0	-2.4
LZH				sS	sS	14 45 30.5	+3.6
LZH				SS	ScP	14 47 10.2	+9.5
LZH				pmax	pmax		
	comp=Z,32nm,1.1s						
LZH				pmax	pmax		
	comp=Z,95nm,6.0s						
LZH				LR	LR		
	comp=N,2μm,15.7s						
LZH				LR	LR		
	comp=E,2μm,14.1s						
LZH				LR	LR		
	comp=Z,2μm,15.9s						
DHRM	DHARAMSHALA	30.51	329	*e*P	P	14 40 19.9	+0.3
DHRM				IAmb	IAmb	14 40 21.9	
	comp=Z,48nm,1.4s						
DAV	Davao City (W)	30.94	87	P	P	14 40 24.5	+1.1
	comp=Z,60nm,0.3s,baz=322,slow=16,SNR=3.9						

DAV				LR	LR	14 56 26.1	
	comp=Z,854nm,18.6s,baz=277,slow=44						
SANI	**Sanana**	32.70	104	P	P	14 40 42.1	+3.2
	comp=Z,18nm,1.5s						
GTA	**Gaotai**	32.92	8	⇓P	P	14 40 40.9	+0.3
GTA				pP	pP	14 40 44.0	-0.6
GTA				sP	sP	14 40 46.7	+0.5
GTA				PcP	PcP	14 43 20.2	-4.7
GTA				S	S	14 45 55.4	-2.8
GTA				pmax	pmax		
	comp=Z,9.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,77nm,5.7s						
GTA				LR	LR		
	comp=Z,1µm,18.5s						
GTA				LR	LR		
	comp=Z,1µm,15.6s						
GTA				LR	LR		
	comp=Z,1µm,18.2s						
NIL	**Nilore**	33.21	327	P	P	14 40 42.3	-0.9
NIL				pmax	pmax		
	comp=Z,92nm,0.9s						
NIL	**Nilore**	33.21	327	P	P	14 40 42.3	-0.9
BATI	**Baumata**	33.63	120	LR	LR	14 55 52.1	
	comp=Z,4µm,19.6s,baz=306,slow=39						
NJ2	**Nanjing**	33.99	39	eP	P	14 40 51.0	+1.1
NJ2				sP	pwP	14 40 56.6	+0.1
NJ2				PP	PP	14 42 07.2	+0.2
NJ2				S	S	14 46 21.3	+6.6
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,230nm,3.9s						
NJ2				LR	LR		
	comp=Z,3µm,14.2s						
NJ2				LR	LR		
	comp=Z,3µm,12.8s						
TIA	**Tai'an**	35.98	32	⇓P	P	14 41 07.6	+0.6
TIA				S	S	14 46 50.8	+5.5
TIA				pmax	pmax		
	comp=Z,12nm,0.9s						
TIA				LR	LR		
	comp=Z,1µm,11.2s						
TIA				LR	LR		
	comp=Z,2µm,11.6s						
TIA				LR	LR		
	comp=Z,1µm,13.7s						
KBL	**Kabul**	36.26	323	P	P	14 41 08.0	-1.7
KBL				pmax	pmax		
	comp=Z,19nm,1.1s						
KBL	**Kabul**	36.26	323	P	P	14 41 08.0	-1.7
BTO	**Baotou**	36.53	20	eP	P	14 41 10.3	-1.5
BTO				S	S	14 46 51.0	-2.7
BTO				LR	LR		
	comp=Z,6µm,15.1s						
BTO				LR	LR		
	comp=Z,7µm,12.4s						
KSH	**Kashi**	36.64	336	P	P	14 41 11.6	-1.2
KSH				pP	pwP	14 41 21.2	+2.0
KSH				S	S	14 46 48.6	-6.9
KSH				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KSH				LR	LR		
	comp=Z,890nm,15.6s						
KSH				LR	LR		
	comp=Z,880nm,13.6s						
KSH				LR	LR		
	comp=Z,830nm,13.4s						
BNDI	**Bandanaira**	37.15	107	P	P	14 41 30.5	+13
HHC	**Hu-ho-hao-te**	37.29	22	eP	P	14 41 19.2	+0.9
HHC				PP	PP	14 42 47.0	+3.6
HHC				S	S	14 47 06.5	+1.1
HHC				pmax	pmax		
	comp=Z,25nm,0.9s						
HHC				pmax	pmax		
	comp=Z,170nm,8.9s						
HHC				LR	LR		
	comp=Z,2µm,13.4s						
HHC				LR	LR		
	comp=Z,2µm,15.7s						
HHC				LR	LR		
	comp=Z,2µm,16.1s						
WMQ	**Urumqi**	37.43	352	eP	P	14 41 18.8	-0.6
WMQ				sP	pwP	14 41 27.3	+1.5
WMQ				PP	PP	14 42 46.9	+2.0
WMQ				S	S	14 47 09.1	+1.8
WMQ				ScS	ScS	14 51 33.9	+0.9
WMQ				pmax	pmax		
	comp=Z,14nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,160nm,4.3s						
WMQ				LR	LR		
	comp=Z,970nm,18.7s						
WMQ				LR	LR		
	comp=Z,670nm,22.7s						
WMQ				LR	LR		
	comp=Z,710nm,18.7s						
SWI	**Sorong**	37.53	100	P	P	14 41 20.7	+0.1
	comp=Z,894nmcomp=Z,44nm,1.4s						
SIJI	**Sorong**	37.54	100	P	P	14 41 18.2	-2.4
	comp=Z,22nm,1.0s,baz=308,slow=9.0,SNR=12						
SIJI				LR	LR	14 59 48.3	
	comp=Z,301nm,18.3s,baz=225,slow=41						
JOW	**Kunigami**	37.90	54	P	P	14 41 23.5	-0.1
	comp=Z,9.3nm,0.8s,baz=277,slow=8.1,SNR=3.1						
WSAR	**Wadi Sarin**	38.12	299	P	P	14 41 26.5	+1.1
	comp=Z,9.8nm,1.0s,baz=135,slow=14,SNR=4.2						
WSAR				LR	LR	14 57 46.0	
	comp=Z,1µm,18.5s,baz=122,slow=37						
DRK	**Karamyk**	38.45	331	P	P	14 41 27.7	-0.7
BJT	**Baijiatuau**	38.49	27	P	P	14 41 27.1	-1.1
BJT				pmax	pmax		
	comp=Z,57nm,1.3s						
BJT	**Baijiatuau**	38.49	27	P	P	14 41 27.1	-1.1
BJT				IAmb	IAmb	14 41 38.5	
	comp=Z,57nm,1.3s						
PDGK	**Podgornoye**	38.77	343	P	P	14 41 28.4	-2.3
GAR	**Garm**	38.81	329	P	P	14 41 29.8	-1.3
CHGR	**Chuyangaron**	39.15	328	P	P	14 41 32.9	-1.0
BTK	**Batken**	39.38	331	P	P	14 41 34.9	-1.0
BTK				pmax	pmax		
	comp=Z,64nm,1.2s						
BTK	**Batken**	39.38	331	P	P	14 41 34.9	-1.0
BTK				IAmb	IAmb	14 41 48.8	
	comp=Z,64nm,1.1s						
MDOK	**Medeo**	39.40	340	P	P	14 41 34.9	-1.2
FITZ	**Fitzroy Crossi**	39.47	129	P	P	14 41 37.6	+0.9
	comp=Z,6.0nm,0.6s,baz=317,slow=10,SNR=5.7						
FITZ				LR	LR	14 59 34.9	
	comp=Z,1µm,20.4s,baz=304,slow=39						
AAK	**Ala-Archa**	39.88	337	P	P	14 41 39.9	-0.2
	comp=Z,7.6nm,1.1s,baz=195,slow=5.0,SNR=6.2						
AAK				LR	LR	14 59 42.5	
	comp=Z,1µm,21.0s,baz=158,slow=38						
AAK	**Ala-Archa**	39.88	337	iP	P	14 41 39.5	-0.6
AAK				pmax	pmax		
	comp=Z,62nm,1.1s						
AAK	**Ala-Archa**	39.88	337	P	P	14 41 39.6	-0.4
KNRA	**Kununurra**	40.65	123	P	P	14 41 45.0	-1.5
	baz=40,SNR=3.8						
MK31	**Makanchi Array**	41.28	347	iP	P	14 41 51.0	-0.4
MK31	**Makanchi Array**	41.28	347	P	P	14 41 50.0	-1.3
MKAR	**Makanchi Array**	41.28	347	P	P	14 41 51.4	0.0
	comp=Z,17nm,0.9s,baz=163,slow=8.5,SNR=68						
MKAR				LR	LR	15 03 46.8	
	comp=Z,449nm,18.3s,baz=165,slow=43						
MKAR	**Makanchi Array**	41.28	347	P	P	14 41 50.4	-1.0
MTN	**Manton Dam**	41.34	118	P	P	14 41 51.6	-0.7
	baz=41,SNR=3.9						
MAKZ	**Makanchi**	41.36	347	P	P	14 41 51.4	-0.7
MAKZ	**Makanchi**	41.36	347	P	P	14 41 51.2	-0.9
MAKZ				IAmb	IAmb	14 41 60.0	
	comp=Z,22nm,0.8s						
KK31	**Karatay Array**	41.92	334	P	P	14 41 55.9	-0.8
KK31				pmax	pmax		
	comp=Z,23nm,1.2s						
KK31	**Karatay Array**	41.92	334	P	P	14 41 55.9	-0.8
KKAR	**Karatay Array**	41.92	334	P	P	14 41 55.8	-0.9
KKAR	**Karatay Array**	41.92	334	P	P	14 41 55.8	-0.9
TJN	**Taejon**	42.17	41	iP	P	14 41 55.6	-3.2
SONM	**Songino Array**	42.24	12	P	P	14 41 59.3	-0.1
	comp=Z,11nm,0.9s,baz=194,slow=7.9,SNR=51						
SONM				LR	LR	15 01 25.2	
	comp=Z,710nm,18.3s,baz=183,slow=39						
SONM	**Songino Array**	42.24	12	P	P	14 41 58.6	-0.8
SONM				pmax	pmax		
	comp=Z,13nm,1.0s						
SONM	**Songino Array**	42.24	12	P	P	14 41 58.5	-0.8
BAKI	**Biak**	42.35	99	P	P	14 42 13.0	+12
ULN	**Ulaanbaatar**	42.41	13	ceP	P	14 41 59.7	-1.1
ULN				pmax	pmax		
	comp=Z,18nm,1.7s						
ULN	**Ulaanbaatar**	42.41	13	P	P	14 41 59.4	-1.4
KSRS	**Korea Array**	43.17	40	P	P	14 42 06.7	-0.2
	comp=Z,7.5nm,1.0s,baz=227,slow=8.6,SNR=10						
KSRS				LR	LR	15 00 42.8	
	comp=Z,1µm,19.2s,baz=232,slow=37						
DGZ	**Jazzator, Alta**	43.25	353	iP	P	14 42 07.3	-0.3
DGZ				pmax	pmax		
	comp=Z,11nm,1.4s						
SNY	**Shenyang**	43.51	32	⇓P	P	14 42 10.0	+0.4
SNY				S	S	14 48 44.7	+6.8
SNY				pmax	pmax		
	comp=Z,25nm,2.5s						
SNY				pmax	pmax		
	comp=Z,450nm,4.2s						
SNY				LR	LR		
	comp=Z,1µm,13.6s						
SNY				LR	LR		
	comp=Z,1µm,16.9s						
SNY				LR	LR		
	comp=Z,2µm,16.3s						
ZAK	**Zakamensk**	44.16	8	eP	P	14 42 12.5	-2.3
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
NWAO	**Narrogin (SRO)**	44.99	153	P	P	14 42 20.7	-0.9
	comp=Z,9.2nm,0.9s,baz=346,slow=4.2,SNR=2.7						
NWAO				LR	LR	15 00 02.3	
	comp=Z,753nm,20.8s,baz=324,slow=35						
SMPI	**Sarmi**	45.05	100	P	P	14 42 28.8	+6.4
GEYT	**Alibeck**	45.24	319	P	P	14 42 24.6	+1.0
	comp=Z,3.7nm,0.5s,baz=181,slow=10,SNR=7.3						
GEYT				LR	LR	15 04 53.3	
	comp=Z,654nm,18.7s,baz=170,slow=41						
GYA0B	**ALIBECK ARRAY**	45.24	319	P	P	14 42 23.6	0.0
GYA0B				IAmb	IAmb	14 42 34.1	
	comp=Z,26nm,1.3s						
WRKA	**Warakurna**	45.64	135	P	P	14 42 27.6	+0.6
	baz=46,SNR=22						
KURBB	**Kurchatov Arra**	45.73	346	P	P	14 42 27.5	+0.3
	comp=Z,22nm,0.9s,baz=166,slow=6.9,SNR=92						
KURBB	**Kurchatov Arra**	45.73	346	P	P	14 42 27.2	0.0
KURK	**Kurchatov**	45.80	346	ceP	P	14 42 27.4	-0.4
KURK				pmax	pmax		
	comp=Z,43nm,1.0s						
KURK	**Kurchatov**	45.80	346	P	P	14 42 27.3	-0.4
CN2	**Changchun**	45.87	31	eP	P	14 42 28.8	+0.3
CN2				eS	S	14 49 14.5	+2.3
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CN2				pmax	pmax		
	comp=Z,200nm,7.0s						
CN2				LR	LR		
	comp=Z,800nm,14.0s						
CN2				LR	LR		
	comp=Z,2µm,14.0s						
CN2				LR	LR		
	comp=Z,1µm,16.5s						
JAY	**Jayapura**	47.11	100	LR	LR	15 03 57.3	
	comp=Z,175nm,18.3s,slow=38						
WRA	**Warramunga Arr**	47.37	125	P	P	14 42 38.5	-2.1
	comp=Z,3.1nm,0.5s,baz=305,slow=8.3,SNR=41						
WRA				PcP	PcP	14 44 12.1	+0.8
	comp=Z,2.5nm,0.8s,baz=303,slow=2.8,SNR=2.4						
WRA				LR	LR	15 05 18.7	
	comp=Z,1µm,18.6s,baz=290,slow=40						
WRA	**Warramunga Arr**	47.37	125	iP	P	14 42 38.5	-2.1
WRA				pmax	pmax		
	comp=Z,4.0nm,0.5s						
WRA	**Warramunga Arr**	47.37	125	P	P	14 42 38.0	-2.6
WRAB	**Tennant Creek**	47.38	125	ceP	P	14 42 38.6	-2.0
WRAB				pmax	pmax		
	comp=Z,20nm,0.9s						
WRAB	**Tennant Creek**	47.38	125	P	P	14 42 38.2	-2.4
WRAB				IAmb	IAmb	14 42 51.6	
	comp=Z,18nm,0.9s						
WRAB	**Tennant Creek**	47.38	125	P	P	14 42 42.0	+1.4
WB2	**Warramunga Arr**	47.38	125	P	P	14 42 38.7	-2.0
	baz=47						
WB2	**Warramunga Arr**	47.38	125	P	P	14 42 38.0	-2.6
WB2				IAmb	IAmb	14 42 51.6	
	comp=Z,20nm,1.0s						
HIA	**Hailar**	47.49	22	iP	P	14 42 38.4	-2.7
HIA				pmax	pmax		
	comp=Z,14nm,1.3s						
WR0	**Warramunga Arr**	47.55	125	P	P	14 42 39.5	-2.4
WR0				IAmb	IAmb	14 42 52.9	
	comp=Z,25nm,1.0s						
ZAA0	**Zalesovo Array**	47.74	352	P	P	14 42 42.2	-0.7
ZAA0				IAmb	IAmb	14 42 53.7	
	comp=Z,28nm,1.0s						
ZALV	**Zalesovo Beam**	47.74	352	P	P	14 42 43.1	+0.3
	comp=Z,15nm,0.9s,baz=167,slow=7.4,SNR=44						
ZALV				LR	LR	15 07 31.9	
	comp=Z,593nm,18.2s,baz=188,slow=42						
ZALV	**Zalesovo Beam**	47.74	352	P	P	14 42 42.0	-0.8
INU	**Inuyama**	48.36	48	P	P	14 42 49.3	+1.3
	comp=Z,26nm,1.6s						
MDJ	**Mudanjiang**	48.62	33	P	P	14 42 50.3	+0.4
MDJ				pP	sP	14 42 55.2	-0.3
MDJ				sP	pwP	14 42 57.0	+0.4
MDJ				pmax	pmax		
	comp=Z,19nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,550nm,4.8s						
MDJ				LR	LR		
	comp=Z,1µm,14.1s						
MDJ				LR	LR		
	comp=Z,2µm,14.9s						
MDJ				LR	LR		
	comp=Z,2µm,14.5s						
MDJ	**Mudanjiang**	48.62	33	P	P	14 42 49.7	-0.2
MDJ				IAmb	IAmb	14 42 53.2	
	comp=Z,31nm,1.1s						
MDJ	**Mudanjiang**	48.62	33	P	P	14 42 51.0	+1.1
ASAR	**Alice Springs**	48.97	129	P	P	14 42 51.5	-1.4
	comp=Z,6.2nm,0.8s,baz=309,slow=7.6,SNR=35						
ASAR				PcP	PcP	14 44 18.1	+1.0
	comp=Z,7.0nm,0.9s,baz=306,slow=3.0,SNR=7.7						
ASAR				LR	LR	15 05 31.1	
	comp=Z,1µm,20.1s,baz=300,slow=39						
ASAR	**Alice Springs**	48.97	129	P	P	14 42 51.0	-1.9
ASAR	**Alice Springs**	48.97	129	P	P	14 42 51.0	-1.9
AS31	**Alice Springs**	48.97	129	P	P	14 42 50.7	-2.2
FORT	**Forrest**	49.27	141	P	P	14 42 56.0	+1.0
	baz=49,SNR=9.2						
USRK	**Ussuriysk Ar.**	49.70	35	P	P	14 42 58.5	+0.4
	comp=Z,9.2nm,1.0s,baz=227,slow=8.0,SNR=5.3						
USRK				LR	LR	15 05 13.5	
	comp=Z,671nm,18.8s,baz=215,slow=38						
MAT	**Matsushiro**	49.75	47	P	P	14 42 55.4	-3.3
MAT				S	S	14 50 08.8	+1.3
MJAR	**Matsushiro Arr**	49.75	47	P	P	14 42 59.0	+0.3
	comp=Z,6.3nm,1.0s,baz=257,slow=6.5,SNR=10						
MJAR	**Matsushiro Arr**	49.75	47	P	P	14 42 58.1	-0.6
MJAR				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MJAR	**Matsushiro Arr**	49.75	47	P	P	14 42 58.1	-0.6
GUMO	**Guam**	50.06	78	LR	LR	15 02 42.6	
	comp=Z,200nm,21.7s,baz=278,slow=34						
BRVK	**Borovoye**	50.23	341	P	P	14 43 01.2	-0.8
BRVK				pmax	pmax		
	comp=Z,31nm,1.0s						
BRVK	**Borovoye**	50.23	341	P	P	14 43 01.2	-0.8
BRVK				IAmb	IAmb	14 43 09.1	
	comp=Z,31nm,0.9s						
ATD	**Arta Tunnel**	51.08	279	LR	LR	15 01 30.5	
	comp=Z,442nm,21.5s,baz=107,slow=32						
AB31	**Akbulak array**	51.38	332	iP	P	14 43 11.0	+0.3
ABKAR	**Akbulak array**	51.38	332	P	P	14 43 11.0	+0.3
QIS	**Mount Isa**	52.02	122	P	P	14 43 15.0	-1.0
	baz=52,SNR=3.9						
JMM	**Marumori**	52.18	46	P	P	14 43 16.4	-0.5
JMM				IAmb	IAmb	14 43 18.9	
	comp=Z,50nm,1.1s						
KLR	**Kul'dur**	52.75	30	P	P	14 43 21.3	+0.4
	comp=Z,4.5nm,1.1s,baz=263,slow=13						
KLR	**Kul'dur**	52.75	30	ceP	P	14 43 20.2	-0.7
KLR				pmax	pmax		
	comp=Z,28nm,1.9s						
AKTO	**Aktyubinsk**	53.09	332	P	P	14 43 23.4	-0.1
BOD	**Bodaibo**	53.22	13	eP	P	14 43 24.3	+0.1
BOD				pmax	pmax		
	comp=Z,35nm,1.1s						
ZEA	**Zeya**	53.91	23	eP	P	14 43 30.5	+1.1
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ZEA				MLR	MLR		
	comp=E,900nm,13.0s						
ZEA				MLR	MLR		
	comp=N,700nm,16.0s						
ZEA				MLR	MLR		
	comp=Z,800nm,14.0s						
PMG	**Port Moresby**	54.94	106	P	P	14 43 36.3	-1.2
	comp=Z,2.3nm,0.3s,baz=306,slow=2.4,SNR=4.0						
PMG	**Port Moresby**	54.94	106	P	P	14 43 36.3	-1.2
PMG				pmax	pmax		
	comp=Z,17nm,1.1s						
PMG	**Port Moresby**	54.94	106	IAmb	IAmb	14 43 58.8	
	comp=Z,16nm,1.1s						
GNI	**Garni**	55.44	315	ceP	P	14 43 41.4	+0.4
GNI				pmax	pmax		
	comp=Z,25nm,1.3s						
GNI	**Garni**	55.44	315	P	P	14 43 39.8	-1.2
GNI				IAmb	IAmb	14 43 57.5	
	comp=Z,47nm,1.4s						
BBOO	**Buckleboo**	55.77	137	P	P	14 43 43.9	+0.6
	baz=56,SNR=25						
ASAJ	**Asahikawa**	56.12	40	P	P	14 43 46.4	+0.8
	comp=Z,11nm,0.9s,baz=256,slow=12,SNR=2.3						
SVE	**Sverdlovsk**	56.58	339	eP	P	14 43 49.2	+0.6
SVE				pmax	pmax		
	comp=Z,53nm,1.1s						
SVE				MLR	MLR		
	comp=Z,959nm,21.0s						
GURO	**Guroymak-BITLI**	56.81	312	P	P	14 43 48.6	-2.2
ARU	**Arti**	57.06	337	LR	LR	15 10 12.3	
	comp=Z,851nm,21.2s,baz=142,slow=38						
ARU	**Arti**	57.06	337	c iP	P	14 43 52.2	+0.2
ARU				PPP	PPP	14 47 16.0	
ARU				S	S	14 51 48.4	+2.2
ARU				SS	SS	14 55 30.3	-4.7
ARU				pmax	pmax		
	comp=Z,42nm,1.2s						
ARU				MLR	MLR		
	comp=Z,779nm,19.0s						
ARU	**Arti**	57.06	337	P	P	14 43 50.9	-1.1
ARU				IAmb	IAmb	14 44 07.1	
	comp=Z,29nm,0.9s						
ZEI	**Tsey**	57.08	317	eP	P	14 43 51.3	-1.4
ZEI				pmax	pmax		
	comp=Z,5.0nm,1.5s						
YSS	**Yuzh-Sakhalins**	57.54	37	eP	P	14 43 56.2	+0.7
YSS				e		14 44 50.7	
YSS				eS	S	14 51 53.2	+0.5
YSS				pmax	pmax		
	comp=Z,40nm,1.4s						
YSS				MLR	MLR		
	comp=E,700nm,14.0s						
YSS				MLR	MLR		
	comp=Z,800nm,14.0s						
YSS	**Yuzh-Sakhalins**	57.54	37	P	P	14 43 56.3	+0.8
KMBO	**Kilima Mbogo**	57.57	264	P	P	14 44 00.6	+3.9
	comp=Z,3.0nm,0.8s,baz=65,slow=11,SNR=6.0						
KMBO				LR	LR	15 06 45.2	
	comp=Z,670nm,18.3s,baz=94,slow=34						
HTT	**Hallett**	58.08	136	P	P	14 44 00.2	+0.5
	baz=58,SNR=18						
KBZ	**Khabaz**	58.13	318	P	P	14 43 59.4	-0.4
	comp=Z,7.3nm,1.1s,baz=175,slow=1.8,SNR=5.6						
KBZ				LR	LR	15 12 23.6	
	comp=Z,239nm,19.0s,baz=132,slow=40						
KBZ	**Khabaz**	58.13	318	ceP	P	14 43 59.0	-0.7
KBZ				pmax	pmax		
	comp=Z,12nm,1.2s						
SHA1	**Shidzhatmaz**	58.29	318	iP	P	14 44 00.6	-0.6
KVAR	**Kislovodsk Arr**	58.35	318	LR	LR	15 11 17.5	
	comp=Z,241nm,21.4s,baz=138,slow=38						
KIV	**Kislovodsk**	58.36	318	eP	P	14 44 02.2	+0.7
KIV				pmax	pmax		
	comp=Z,19nm,1.1s						
KIV				MLR	MLR		
	comp=Z,240nm,17.0s						
KIV	**Kislovodsk**	58.36	318	P	P	14 44 01.2	-0.3
KIV				IAmb	IAmb	14 44 11.3	
	comp=Z,14nm,0.9s						
QLP	**Quilpie**	58.52	127	P	P	14 44 02.2	-0.6
	baz=58,SNR=9.8						
STKA	**Stephens Creek**	59.11	133	P	P	14 44 05.8	-1.1
	comp=Z,9.7nm,1.0s,baz=302,slow=7.5,SNR=24						
STKA				LR	LR	15 14 29.7	
	comp=Z,749nm,18.0s,baz=298,slow=41						
STKA	**Stephens Creek**	59.11	133	P	P	14 44 07.3	+0.5
	baz=59,SNR=14						
STKA	**Stephens Creek**	59.11	133	P	P	14 44 04.9	-2.0
STKA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
STKA	**Stephens Creek**	59.11	133	P	P	14 44 04.8	-2.0
TYV	**Tymovskoe**	59.41	33	eP	P	14 44 03.2	-5.3
TYV				eS	S	14 52 10.9	-6.1
TYV				pmax	pmax		
	comp=Z,13nm,1.4s						
TYV				pmax	pmax		
	comp=Z,200nm,3.4s						
TYV				smax	smax		
	comp=N,20nm,1.6s						
TYV				smax	smax		
	comp=E,15nm,1.6s						
TYV				smax	smax		
	comp=N,600nm,3.6s						
TYV				smax	smax		
	comp=E,400nm,3.6s						
TYV				MLR	MLR		
	comp=Z,2µm,16.0s						
EIL	**Elat**	60.24	300	LR	LR	15 12 27.4	
	comp=Z,669nm,18.2s,baz=98,slow=38						
MMAI	**Mount Meron Ar**	60.49	304	LR	LR	15 13 20.0	
	comp=Z,381nm,19.7s,baz=150,slow=39						
YAK	**Yakutsk**	61.01	18	P	P	14 44 18.8	-0.5
	comp=Z,18nm,0.9s,baz=271,slow=1.5,SNR=11						
YAK	**Yakutsk**	61.01	18	c iP	P	14 44 18.5	-0.8
YAK				e		14 45 01.5	
YAK				e		14 46 33.5	
YAK				eS	S	14 52 34.3	-2.9
YAK				e*SS	sS	14 52 56.5	+12
YAK				e		14 54 07.0	
YAK				eSS	SS	14 56 34.9	-1.9
YAK				pmax	pmax		
	comp=Z,40nm,1.0s						
YAK				pmax	pmax		
	comp=E,15nm,1.1s						
YAK				pmax	pmax		
	comp=N,12nm,1.0s						
YAK				pmax	pmax		
	comp=Z,84nm,3.8s						
YAK				smax	smax		
	comp=E,95nm,2.5s						
YAK				smax	smax		
	comp=N,56nm,2.8s						
YAK	**Yakutsk**	61.01	18	P	P	14 44 17.8	-1.5
ARPS	**Mount Arapiles**	61.94	138	P	P	14 44 26.4	+0.4
	baz=62,SNR=5.8						
CMSA	**Cobar Meteorol**	61.96	131	P	P	14 44 27.2	+1.0
	baz=62,SNR=10						
VRH	**Novokhopyorsk**	62.03	325	eP	P	14 44 25.1	-1.3
VRH				pmax	pmax		
	comp=Z,20nm,1.0s						
RMQ	**Roma**	62.13	125	P	P	14 44 28.7	+1.2
	baz=62,SNR=4.2						
KIRV	**Kirov**	62.18	335	ceP	P	14 44 27.4	+0.2
NRIK	**Noril'sk**	62.71	357	P	P	14 44 30.3	-0.4
	comp=Z,4.7nm,0.8s,baz=154,slow=7.1,SNR=5.5						
NRIK	**Noril'sk**	62.71	357	ceP	P	14 44 27.4	-3.2
NRIK				pmax	pmax		
	comp=Z,16nm,1.2s						
NRIK	**Noril'sk**	62.71	357	P	P	14 44 29.7	-1.0
NRIK				IAmb	IAmb	14 44 38.8	
	comp=Z,15nm,1.1s						
VORD	**Divnogorie**	63.32	325	eP	P	14 44 33.4	-1.6
VORD				pmax	pmax		
	comp=Z,40nm,1.1s						
BR131	**Keskin Array S**	63.39	311	P	P	14 44 34.7	-1.2
BR131				pmax	pmax		
	comp=Z,16nm,1.0s						
BR131	**Keskin Array S**	63.39	311	P	P	14 44 34.7	-1.2
BR131				IAmb	IAmb	14 44 43.8	
	comp=Z,16nm,1.0s						

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BRTR  Keskin Array B    63.39 311   P     P       14 44 35.5  -0.4
      comp=Z,2.9nm,0.6s,baz=127,slow=7.2,SNR=18
BRTR  Keskin Array B    63.39 311   P     P       14 44 34.8  -1.2
VSR   Storozhevoye      63.49 325  eP     P       14 44 35.1  -1.0
VSR                                 pmax  pmax
      comp=Z,10.0nm,1.1s
MBAR  Mbarara           63.94 266  i P    P       14 44 41.2  +1.2
ANTO  Ankara            64.06 311   P     P       14 44 39.4  -0.9
ANTO                                pmax  pmax
      comp=Z,13nm,1.0s
ANTO  Ankara            64.06 311   P     P       14 44 39.4  -0.9
ANTO                                IAmb  IAmb    14 44 47.2
      comp=Z,13nm,1.0s
LPSR  Galich'ya Gora    64.20 326  eP     P       14 44 40.2  -0.6
LPSR                                pmax  pmax
      comp=Z,10.0nm,1.0s
TOO   Toolangi          64.83 137   P     P       14 44 46.6  +1.4
      baz=65,SNR=18
PRGR  Permogore         65.51 337  eP     P       14 44 48.2  -0.9
PRGR                                pmax  pmax
      comp=Z,91nm,1.2s
ELL   Elmali            65.64 307   P     P       14 44 49.9  -0.7
ELL                                 pmax  pmax
      comp=Z,74nm,0.9s
ELL   Elmali            65.64 307   P     P       14 44 49.9  -0.7
CAN   Canberra          66.18 133   P     P       14 44 53.2  -0.8
CAN                                 pmax  pmax
      comp=Z,30nm,1.2s
CAN   Canberra          66.18 133   P     P       14 44 53.2  -0.8
CAN                                 IAmb  IAmb    14 45 03.4
      comp=Z,30nm,1.2s
CAN   Canberra          66.18 133   P     P       14 44 54.7  +0.7
MOS   Moscow            66.21 329  eP     P       14 44 50.6  -3.2
MOS                                e              14 44 59.3
MOS                                e              14 47 16.8
MOS                                eS     S       14 53 31.7   -10
MOS                                 pmax  pmax
      comp=Z,44nm,1.0s
MOS                                 MLR   MLR
      comp=Z,700nm,21.0s
OBN   Obninsk           66.50 328  i P    P       14 44 54.8  -0.8
OBN                                i              14 45 00.9
OBN                                i              14 45 24.8
OBN                                 pmax  pmax
      comp=Z,25nm,1.2s
OBN                                 MLR   MLR
      comp=Z,354nm,18.0s
OBN   Obninsk           66.50 328   P     P       14 44 55.4  -0.2
KLMR  Klimovskoe        67.62 334  eP     P       14 45 00.4  -2.2
KLMR                                pmax  pmax
      comp=Z,28nm,1.1s
KLMR  Klimovskoe        67.62 334  eP     P       14 45 00.5  -2.2
KLMR                                AMP           14 45 12.2
      comp=Z,28nm,1.1s
KLMR                                LQ    LQ      15 09 15.4
KLMR                                LQ    LQ      15 09 15.4
KLMR                                LR    LR      15 15 12.2
TIRR  Tirgusor          68.27 315   P     P       14 45 05.5  -1.5
TIRR                                pmax  pmax
      comp=Z,33nm,1.0s
TIRR  Tirgusor          68.27 315   P     P       14 45 05.5  -1.5
TIXI  Tiksi             68.32  11   P     P       14 45 05.4  -1.5
      comp=Z,19nm,0.9s,baz=208,slow=3.9,SNR=33
TIXI  Tiksi             68.32  11  i P    P       14 45 05.5  -1.3
TIXI  Tiksi             68.32  11   P     P       14 45 05.3  -1.5
CFR   Carcaliu          68.61 316  ⇑P     P       14 45 09.8  +0.6
CFR   Carcaliu          68.61 316  ⇑P     P       14 45 09.8  +0.6
PETK  Petropavlovsk-    68.79  35   LR    LR      15 15 14.5
      comp=Z,460nm,21.3s,baz=228,slow=36
SORM  Soroca            69.14 319  ⇓P     P       14 45 12.4   0.0
SORM  Soroca            69.14 319  ⇓P     P       14 45 12.4   0.0
AKASG Malin Array Be    69.23 322   P     P       14 45 12.0  -0.9
      comp=Z,1.6nm,0.6s,baz=93,slow=5.3,SNR=8.3
AKASG Malin Array Be    69.23 322  i P    P       14 45 12.0  -0.9
AKASG                               pmax  pmax
      comp=Z,2.0nm,0.6s
AKASG Malin Array Be    69.23 322   P     P       14 45 11.8  -1.2
AKBB  Malin Array Si    69.23 322ceP      P       14 45 11.9  -1.0
ALN   Alexandroupoli    69.31 311   P     P       14 45 12.5  -1.2
ALN                                 pmax  pmax
      comp=Z,18nm,1.3s
ALN   Alexandroupoli    69.31 311   P     P       14 45 12.5  -1.2
ALN                                 IAmb  IAmb    14 45 23.1
      comp=Z,18nm,1.3s
VRI   Vrincioaia        69.72 316  ⇓P     P       14 45 17.4  +1.3
VRI   Vrincioaia        69.72 316  ⇓P     P       14 45 17.4  +1.3
PLOR  Plostina          69.77 316  ⇑P     P       14 45 18.2  +1.7
PLOR  Plostina          69.77 316  ⇑P     P       14 45 18.2  +1.7
SEY   Seymchan          69.87  24   P     P       14 45 15.9  -0.8
      comp=Z,9.3nm,1.1s,baz=239,slow=14,SNR=7.4
TESR  Tescani           69.91 317  ⇓P     P       14 45 18.0  +0.8
MLR   Muntele Rosu      70.19 316   P     P       14 45 17.7  -1.5
MLR                                 pmax  pmax
      comp=Z,28nm,1.1s
MLR   Muntele Rosu      70.19 316   P     P       14 45 17.7  -1.5
MLR                                 IAmb  IAmb    14 45 29.0
      comp=Z,28nm,1.1s
DOPR  Dopca             70.66 316  ⇑P     P       14 45 22.9  +1.0
PLVB  Pleven            70.76 314  ⇑P     P       14 45 23.8  +1.3
VOIR                    70.80 316  ⇓P     P       14 45 22.9  +0.1
VOIR                    70.80 316  ⇓P     P       14 45 22.9  +0.1
MNK   Minsk             71.03 326  i P    P       14 45 22.0  -1.9
MNK                                i              14 45 41.6
MNK                                i              14 48 07.6
MNK                                i PPP  PPP     14 49 42.8
MNK                                i S    S       14 54 40.3  +0.7
MNK                                i              14 55 26.4
MNK                                i SS   SS      14 59 14.9  +2.2
MNK                                 pmax  pmax
      comp=Z,26nm,1.1s
MNK                                 pmax  pmax
      comp=N,10.0nm,0.9s
MNK                                 pmax  pmax
      comp=E,2.0nm,0.8s
MNK                                 MLR   MLR
      comp=E,18nm,19.0s
MNK                                 MLR   MLR
      comp=N,315nm,21.0s
MNK                                 MLR   MLR
      comp=Z,202nm,18.0s
MNK   Minsk             71.03 326  i P    P       14 45 22.0  -1.9
      comp=E,2.0nm,0.8s
MNK                                i P    P       14 45 22.0  -1.9
      comp=N,10.0nm,0.9s
MNK                                i P    P       14 45 22.0  -1.9
      comp=Z,26nm,1.1s,baz=104
MNK                                i PcP  PcP     14 45 41.7  -2.5
MNK                                i PP   PP      14 48 07.6  +6.3
MNK                                i PPP  PPP     14 49 42.9
MNK                                i S    S       14 54 40.3  +0.7
MNK                                i SS   SS      14 59 14.9  +2.2
MNK                                i SSS  SSS     15 02 34.1
MNK                                i LR   LR      15 18 16.8
MNK                                i LRM  MLR     15 19 40.8
      comp=E,18nm,18.8s
MNK                                i LRM  MLR     15 20 14.1
      comp=N,315nm,21.0s
MNK                                i LRM  MLR     15 20 18.4
      comp=Z,202nm,18.1s
BURAR Bucovina Array    71.09 318  ⇓P     P       14 45 25.5  +1.0
BURAR Bucovina Array    71.09 318  ⇓P     P       14 45 25.5  +1.0
BURAR Bucovina Array    71.09 318   P     P       14 45 24.2  -0.3
BUR08 Bucovina Ar. S    71.10 318   P     P       14 45 24.2  -0.4
VTS   Vitosha           71.65 313  ⇑P     P       14 45 29.0  +0.9
VTS   Vitosha           71.65 313  ⇑P     P       14 45 29.0  +0.9
NACGM Naroch            71.76 326  i P    P       14 45 28.9  +0.6
ITM   Ithomi            72.03 307   P     P       14 45 29.4  -0.9
ITM                                 IAmb  IAmb    14 45 37.4
      comp=Z,14nm,0.9s
LVV   L'vov             72.28 320  eP     P       14 45 31.3  -0.2
LVV                                eS     S       14 54 53.4  -0.7
DRGR                    72.63 317  ⇑P     P       14 45 34.5  +0.7
DRGR                    72.63 317  ⇑P     P       14 45 34.5  +0.7
VSU   Vasula            72.72 329  eP     P       14 45 34.4  +0.4
LVZ   Lovozero          72.74 340   P     P       14 45 33.5  -0.5
LVZ                                 pmax  pmax
      comp=Z,93nm,1.5s
LVZ   Lovozero          72.74 340   P     P       14 45 33.5  -0.5
FNA   Florina           72.81 311   P     P       14 45 33.6  -1.4
FNA                                 pmax  pmax
      comp=Z,15nm,1.3s
FNA   Florina           72.81 311   P     P       14 45 33.6  -1.4
FNA                                 IAmb  IAmb    14 45 51.7
      comp=Z,15nm,1.3s
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BOVS  Bovan             72.89 314  ⇓P     P       14 45 32.3  -3.0
TRPA  Tarpa             72.95 318  eP     P       14 45 34.8  -0.7
SIRR  Siria             73.27 316  ⇓P     P       14 45 37.1  -0.4
PABE  Paberze           73.47 326  eP     P       14 45 38.5  +0.1
CRVS  Cervenica-Dubn    73.78 319  eP     P       14 45 42.3  +1.8
CRVS                                pmax  pmax
      comp=Z,25nm,1.1s
CRVS  Cervenica-Dubn    73.78 319  eP     P       14 45 42.2  +1.8
FIA1  FINESS Array S    73.86 332   P     P       14 45 40.2  -0.5
FINES FINESS Array B    73.86 332   P     P       14 45 40.9  +0.3
      comp=Z,12nm,0.8s,baz=94,slow=5.1,SNR=39
FINES                               LR    LR      15 22 25.0
      comp=Z,382nm,19.7s,baz=116,slow=39
FINES FINESS Array B    73.86 332   P     P       14 45 40.2  -0.5
DIVS  Divibare          74.18 314   P     P       14 45 42.6  -0.4
PDG   Podgorica         74.55 312  ⇓P     P       14 45 45.0  -0.1
PDG   Podgorica         74.55 312   P     P       14 45 44.0  -1.0
PDG                                 IAmb  IAmb    14 45 53.0
      comp=Z,18nm,1.1s
OJC   Ojcow             75.03 320  eP     P       14 45 48.3  +0.6
OJC   Ojcow             75.03 320   P     P       14 45 47.6  -0.2
OJC                                 pmax  pmax
      comp=Z,37nm,1.4s
OJC   Ojcow             75.03 320   P     P       14 45 47.6  -0.2
OJC                                 IAmb  IAmb    14 45 58.6
      comp=Z,37nm,1.4s
BOSA  Boshof            75.20 238   P     P       14 45 52.1  +2.9
      comp=Z,5.3nm,0.5s,baz=97,slow=4.3,SNR=16
MORH  Mrgy, Hungar      75.34 316  ⇓P     P       14 45 50.0  +0.4
MORH  Mrgy, Hungar      75.34 316  eP     P       14 45 48.3  -1.3
SRO2  Moca              75.67 317  eP     P       14 45 51.9  +0.5
SRO2  Moca              75.67 317  eP     P       14 45 51.9  +0.5
SRO   Srobarova         75.72 318  eP     P       14 45 53.1  +1.4
SRO   Srobarova         75.72 318  eP     P       14 45 53.1  +1.4
KEV   Kevo              76.02 341   P     P       14 45 53.2  +0.3
KEV                                 pmax  pmax
      comp=Z,38nm,1.1s
KEV   Kevo              76.02 341   P     P       14 45 53.2  +0.3
DZM   Mont Dzumac       76.06 115  eLR    LR      15 09 20.4
      comp=Z,608nm,26.6s
MPLH  Magyarpolny       76.19 317  eP     P       14 45 55.3  +0.9
TIP   Timpagrande       76.23 309   P     P       14 45 55.4  +0.5
TIP                                 IAmb  IAmb    14 45 57.5
      comp=Z,16nm,1.2s
JAVC  Velka Javorina    76.26 319  eP     P       14 45 56.4  +1.6
MORC  Moravsky Berou    76.43 319  ⇓P     P       14 45 57.1  +1.3
MORC  Moravsky Berou    76.43 319  ⇓P     P       14 45 57.1  +1.3
MORC  Moravsky Berou    76.43 319  eP     P       14 45 56.7  +0.9
MORC  Moravsky Berou    76.43 319   P     P       14 45 55.0  -0.8
MORC                                IAmb  IAmb    14 46 06.0
      comp=Z,20nm,1.1s
ARA0  ARCESS Array S    76.45 340  eP     P       14 45 56.1  +0.7
ARCES ARCESS Array B    76.45 340   P     P       14 45 56.0  +0.5
      comp=Z,7.9nm,0.6s,baz=96,slow=5.9,SNR=30
ARCES ARCESS Array B    76.45 340   P     P       14 45 55.7  +0.2
ARCES                               pmax  pmax
      comp=Z,53nm,1.3s
ARCES ARCESS Array B    76.45 340   P     P       14 45 55.7  +0.2
MODS  Modra-Piesok      76.47 318  eP     P       14 45 55.9  -0.1
MODS  Modra-Piesok      76.47 318  eP     P       14 45 55.9  -0.1
ZST   Bratislava        76.57 318  eP     P       14 45 57.9  +1.4
ZST   Bratislava        76.57 318  eP     P       14 45 57.9  +1.4
SOP   Sopron            76.89 317  eP     P       14 45 58.1  -0.3
KRLC  Kraliky           76.95 320  eP     P       14 45 59.7  +1.0
KRLC  Kraliky           76.95 320  eP     P       14 45 59.7  +1.0
VRAC  Vranov            77.00 319  eP     P       14 45 59.1  +0.1
BILL  Bilibino          77.07  22  i P    P       14 45 56.1  -2.8
BILL                               i              14 46 08.6
BILL                               i              14 48 56.8
BILL                                pmax  pmax
      comp=Z,8.0nm,1.1s
BILL                                MLR   MLR
      comp=Z,898nm,17.0s
KTK1  Kautokeino        77.07 340  eP     P       14 45 59.4  +0.4
KRUC  Moravsky          77.11 319  eP     P       14 45 59.9  +0.3
DPC   Dobruska-Polom    77.27 320  eP     P       14 46 01.4  +0.9
DPC                                e              14 46 08.2
DPC   Dobruska-Polom    77.27 320  eP     P       14 46 01.4  +0.9
DPC                                ex     x       14 46 08.2
KSP   Ksiaz             77.33 321  eP     P       14 46 01.7  +1.0
OSTC  Ostas             77.35 320  eP     P       14 46 01.3  +0.4
HAMF  Hammerfest        77.37 341  eP     P       14 46 01.0  +0.5
CONA  Conrad Observa    77.38 318  eP     P       14 46 01.2   0.0
      comp=Z,5.0nm,1.1s
MAW   Mawson            77.45 192   P     P       14 46 00.6  -0.4
      comp=Z,2.9nm,0.7s,baz=1.3,slow=6.1,SNR=3.6
MAW                                 LR    LR      15 15 32.5
      comp=Z,336nm,18.6s,baz=40,slow=32
MAW   Mawson            77.45 192   P     P       14 46 00.6  -0.4
MAW                                 pmax  pmax
      comp=Z,2.0nm,1.2s
CHVC  Chvalec           77.46 320  eP     P       14 46 02.3  +0.8
UPC   Upice             77.48 320  eP     P       14 46 02.6  +1.0
UPC   Upice             77.48 320  eP     P       14 46 02.6  +1.0
ARSA  Arzberg           77.56 317  i P    P       14 46 03.6  +1.4
      comp=Z,16nm,1.3s,SNR=6.6
UPP   Uppsala           77.60 330  eP     P       14 46 01.8  -0.3
BOJS  Bojanci           77.65 315  i P    P       14 46 03.3  +0.6
SOKA  Soboth            77.86 316  i P    P       14 46 05.2  +1.2
      comp=Z,22nm,1.1s,SNR=14
SOKA                               eP     PP      14 48 58.1  -1.6
      comp=Z,12nm,1.3s
JETT  Jettan, Norway    78.18 340  eP     P       14 46 06.6  +1.4
OBKA  Obir              78.19 316  i P    P       14 46 07.1  +1.3
      comp=Z,14nm,0.9s,SNR=7.0
OBKA                               eP     PP      14 49 00.8  -1.7
      comp=Z,7.8nm,1.3s
CRNS  Crni Vrh          78.37 316  i P    P       14 46 07.4  +0.7
PRU   Pruhonice         78.38 320  eP     P       14 46 08.0  +1.4
PRU   Pruhonice         78.38 320  eP     P       14 46 08.0  +1.4
MOA   Molln             78.45 317  eP     P       14 46 08.1  +1.0
      comp=Z,9.2nm,1.1s
MOA                                eP     PP      14 49 03.9  -0.5
      comp=Z,4.0nm,1.1s
CKRC  Cesky Krumlov     78.47 318  eP     P       14 46 07.8  +0.6
TRO   Tromso            78.70 340  eP     P       14 46 08.3  +0.3
CADS  Cadrg             78.74 316  i P    P       14 46 09.2  +0.4
BRG   Berggiesshubel    78.81 320  eP     P       14 46 10.1  +1.1
      comp=Z,8.6nm,1.0s,baz=91,slow=5.3
BRG   Berggiesshubel    78.81 320  eP     P       14 46 10.3  +1.3
BRG                                 Amp           14 46 12.1
      comp=Z,9.1nm,1.1s
BRG   Berggiesshubel    78.81 320   P     P       14 46 18.2  +9.2
BRG                                 Amp           14 46 19.3
      comp=Z,18nm,1.2s
MYKA  Terra Mystica     78.82 316  eP     P       14 46 09.9  +0.7
      comp=Z,7.1nm,0.9s
MYKA                               eP     PP      14 49 06.6  -1.0
      comp=Z,4.5nm,1.1s
GEC2  GERESS Array S    78.87 318  eP     P       14 46 10.6  +1.1
      comp=Z,12nm,0.9s,baz=91,slow=5.3
GEC2  GERESS Array S    78.87 318   P     P       14 46 09.1  -0.4
GEC2                                IAmb  IAmb    14 46 20.1
      comp=Z,17nm,1.0s
GERES GERESS Array B    78.87 318   P     P       14 46 09.9  +0.5
      comp=Z,8.7nm,0.8s,baz=90,slow=6.7,SNR=44
GERES GERESS Array B    78.87 318   P     P       14 46 09.1  -0.4
GERES GERESS Array B    78.87 318   P     P       14 46 09.1  -0.4
AQU   L'Aquila          78.88 312   P     P       14 46 08.5  -1.1
AQU                                 pmax  pmax
      comp=Z,15nm,1.0s
AQU   L'Aquila          78.88 312   P     P       14 46 08.5  -1.1
AQU                                 IAmb  IAmb    14 46 14.4
      comp=Z,15nm,1.0s
KHC   Kasperske Hory    78.96 319  eP     P       14 46 10.0  +0.1
KHC   Kasperske Hory    78.96 319  eP     P       14 46 10.0  +0.1
RUE   Ruedersdorf       79.01 322  eP     P       14 46 11.4  +1.4
RUE   Ruedersdorf       79.01 322  eP     P       14 46 11.0  +1.0
      comp=Z,20nm,0.7s,baz=91,slow=5.3
KBA   Koelnbreinsper    79.04 317  eP     P       14 46 11.1  +0.5
      comp=Z,6.3nm,0.8s
KBA                                eP     PP      14 49 06.2  -3.3
      comp=Z,3.6nm,1.1s
NRCA  Norcia            79.10 312   P     P       14 46 09.3  -1.6
FBE   Freiberg          79.19 320  eP     P       14 46 12.6  +1.6
      comp=Z,12nm,0.9s,baz=91,slow=5.3
ZOU   Zoufplan          79.28 316   P     P       14 46 11.2  -0.7
ZOU                                 IAmb  IAmb    14 46 21.7
      comp=Z,19nm,0.9s
WET   Wettzell          79.42 319  eP     P       14 46 13.5  +1.1
      comp=Z,5.5nm,0.8s,baz=91,slow=5.3
CLL   Collm             79.43 321  eP     P       14 46 13.0  +0.7
CLL                                e              14 46 19.0
CLL   Collm             79.43 321  eP     P       14 46 13.0  +0.7
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CLL                                ePcP   pwP     14 46 19.0   0.0
CLL   Collm             79.43 321  eP     P       14 46 13.1  +0.7
      comp=Z,7.0nm,1.0s,baz=91,slow=5.3
CLL   Collm             79.43 321   P     P       14 46 09.6  -2.7
RJOB  Jochberg          79.43 317  eP     P       14 46 13.0  +0.5
      comp=Z,9.1nm,0.8s,baz=91,slow=5.3
STAL  STALIGIAL         79.45 316   P     P       14 46 11.1  -1.6
STAL                                IAmb  IAmb    14 46 22.8
      comp=Z,45nm,1.2s
MURB  Monte Urbino      79.53 313   P     P       14 46 10.7  -2.5
MURB                                IAmb  IAmb    14 46 39.5
      comp=Z,35nm,1.4s
ABTA  Abfaltersbach     79.60 316  eP     P       14 46 14.0  +0.5
      comp=Z,7.7nm,0.8s
ABTA                               eP     PP      14 49 10.6  -3.6
      comp=Z,6.4nm,1.4s
FAUS  Fauske            79.66 337  eP     P       14 46 13.8  +0.5
BJO1  Bjornoya          79.69 345  eP     P       14 46 13.1  -0.2
TANN  Tannenbergstha    79.74 320  eP     P       14 46 15.2  +1.0
      comp=Z,3.4nm,0.9s,baz=91,slow=5.3
NKC   Novy Kostel       79.74 320  eP     P       14 46 17.8  +3.7
NKC   Novy Kostel       79.74 320  eP     P       14 46 17.8  +3.7
STEI  Steigen           79.75 338  eP     P       14 46 13.8   0.0
WERN  Wernitzgruen      79.79 320  eP     P       14 46 15.6  +1.2
      comp=Z,3.4nm,0.8s,baz=91,slow=5.3
GUNZ  Gunzen            79.82 320  eP     P       14 46 15.6  +1.0
      comp=Z,3.9nm,0.8s,baz=91,slow=5.3
MOR8  Moi Rana          79.84 336  eP     P       14 46 14.1  -0.2
ROTZ  Rotzenmuhle       79.88 319  eP     P       14 46 16.2  +1.4
      comp=Z,1.8nm,0.8s,baz=91,slow=5.3
MANZ  Manzenberg        79.95 319  eP     P       14 46 16.7  +1.5
      comp=Z,2.6nm,1.0s,baz=91,slow=5.3
TEOL  Teolo             80.17 315   P     P       14 46 16.2  -0.3
TEOL                                IAmb  IAmb    14 46 28.5
      comp=Z,22nm,1.2s
CTI   Castel Tesino     80.19 315   P     P       14 46 16.7   0.0
CTI                                 pmax  pmax
      comp=Z,26nm,0.9s
CTI   Castel Tesino     80.19 315   P     P       14 46 16.7   0.0
CTI                                 IAmb  IAmb    14 46 24.9
      comp=Z,26nm,0.9s
WTTA  Wattenberg        80.21 317  i P    P       14 46 17.2  +0.3
      comp=Z,7.7nm,0.7s,SNR=7.6
WTTA                               eP     PP      14 49 14.0  -5.3
      comp=Z,4.1nm,0.7s
WATA  Walderalm         80.25 317  i P    P       14 46 17.4  +0.3
      comp=Z,9.4nm,0.7s,SNR=6.1
WATA                               eP     PP      14 49 13.7  -5.9
      comp=Z,5.6nm,0.9s
MOX   Moxa              80.28 320  eP     P       14 46 17.0   0.0
      comp=Z,4.2nm,0.9s,baz=91,slow=5.3
LOF   Lofoten           80.41 338  eP     P       14 46 16.8  -0.5
KONS  Konsvik           80.41 336  eP     P       14 46 17.5  +0.2
OSSC  Osservatorio P    80.47 313   P     P       14 46 17.7  -0.5
SQTA  Sankt Quirin      80.50 317  i P    P       14 46 18.7  +0.3
      comp=Z,7.8nm,0.6s,SNR=5.6
SQTA                               eP     PP      14 49 15.1  -6.5
      comp=Z,3.5nm,0.6s
GRF   Grafenberg Arr    80.52 319  eP     P       14 46 18.9  +0.6
      comp=Z,16nm,1.0s,baz=91,slow=5.3
MOTA  Moosalm           80.57 317  i P    P       14 46 19.1  +0.2
      comp=Z,19nm,1.1s,SNR=7.1
MOTA                               eP     PP      14 49 15.1  -7.2
      comp=Z,4.6nm,0.8s
NC602 NORSAR Array S    80.70 330  eP     P       14 46 18.7  -0.3
NC602 NORSAR Array S    80.70 330   P     P       14 46 17.7  -1.3
NSS   Namsos            80.73 334  eP     P       14 46 18.9  -0.2
RETA  Reutte            80.81 317  i P    P       14 46 20.4  +0.4
      comp=Z,14nm,0.6s,SNR=6.4
RETA                               eP     PP      14 49 19.4  -4.7
      comp=Z,4.6nm,0.6s
FETA  Feichten          80.83 316  eP     P       14 46 20.8  +0.5
      comp=Z,9.2nm,0.8s
FETA                               eP     PP      14 49 19.3  -5.1
      comp=Z,4.4nm,0.9s
NB2   NORSAR Subarra    80.87 331   P     P       14 46 19.8  -0.2
      comp=Z,4.4nm,0.8s,baz=95,slow=5.3
NB2   NORSAR Subarra    80.87 331   P     P       14 46 19.8  -0.2
      baz=95,slow=5.3
NOA   NORSAR Array B    80.87 331   P     P       14 46 19.5  -0.5
      comp=Z,8.3nm,0.9s,baz=93,slow=5.6,SNR=14
NOA                                 LR    LR      15 25 52.8
      comp=Z,279nm,19.0s,baz=110,slow=38
ASSE  Asse, Remlinge    80.90 322  eP     P       14 46 20.7  +0.5
      comp=Z,16nm,1.3s,baz=91,slow=5.3
SALO  Salr              80.97 315   P     P       14 46 19.0  -1.9
SALO                                IAmb  IAmb    14 46 29.6
      comp=Z,29nm,0.8s
SPA0  Spitsbergen Ar    81.03 348  eP     P       14 46 21.0  +0.5
OSL   Oslo              81.07 330  eP     P       14 46 21.3  +0.3
CLZ   Clausthal         81.08 321  eP     P       14 46 22.3  +0.9
      comp=Z,8.0nm,0.8s,baz=91,slow=5.3
NBO00 NORSAR Array S    81.08 331   P     P       14 46 19.3  -1.8
NC204 NORSAR Array S    81.10 331   P     P       14 46 20.7  -0.5
BSEG  Bad Segeberg      81.14 323  eP     P       14 46 22.5  +1.0
      comp=Z,15nm,0.9s,baz=91,slow=5.3
UBR   Ueberruh          81.25 317  eP     P       14 46 23.0  +0.6
      comp=Z,7.8nm,0.8s,baz=91,slow=5.3
NRDL  Niedersach Rie    81.25 322  eP     P       14 46 23.5  +1.5
      comp=Z,16nm,1.1s,baz=91,slow=5.3
GTTG  Gottingen         81.33 321  eP     P       14 46 24.1  +1.5
      comp=Z,13nm,1.1s,baz=91,slow=5.3
DAVA  Damuels           81.41 317  i P    P       14 46 23.9  +0.6
      comp=Z,13nm,0.9s,SNR=5.4
DAVA                               eP     PP      14 49 21.2  -8.0
      comp=Z,13nm,1.6s
KONO  Kongsberg         81.63 329ceP      P       14 46 24.5  +0.5
KONO                                pmax  pmax
      comp=Z,55nm,1.7s
KONO  Kongsberg         81.63 329  eP     P       14 46 23.7  -0.3
MSSA  Maissana          81.71 314   P     P       14 46 23.9  -1.0
MSSA                                IAmb  IAmb    14 46 25.8
      comp=Z,18nm,1.2s
DOMB  Dombas            81.93 332  eP     P       14 46 25.6   0.0
VSL   Villasalto        81.95 309   P     P       14 46 24.0  -2.1
VSL                                 IAmb  IAmb    14 46 41.7
      comp=Z,16nm,1.1s
KEST  Kesra             82.13 305   P     P       14 46 27.9  +0.6
      comp=Z,9.3nm,1.0s,baz=94,slow=3.9,SNR=7.0
KEST                                LR    LR      15 27 44.9
      comp=Z,200nm,20.0s,baz=348,slow=39
KEST  Kesra             82.13 305   P     P       14 46 24.6  -2.7
KEST                                IAmb  IAmb    14 46 30.7
      comp=Z,21nm,1.2s
SKAR  Skarslia          82.29 330  eP     P       14 46 27.4  -0.2
BFO   Black Forest      82.43 318   P     P       14 46 27.2  -1.3
BFO                                 pmax  pmax
      comp=Z,12nm,1.0s
BFO   Black Forest      82.43 318  eP     P       14 46 28.9  +0.4
      comp=Z,8.6nm,1.0s,baz=91,slow=5.3
BFO   Black Forest      82.43 318   P     P       14 46 27.1  -1.3
BFO                                 IAmb  IAmb    14 46 38.4
      comp=Z,12nm,1.0s
IBBN  Ibbenburen        82.69 322  eP     P       14 46 30.5  +0.8
      comp=Z,12nm,0.7s,baz=91,slow=5.3
BUG   Bochum--Univer    83.02 321  eP     P       14 46 32.5  +1.1
      comp=Z,7.2nm,0.8s,baz=91,slow=5.3
AHRW  Bad Neuenahr-A    83.18 320  eP     P       14 46 33.9  +1.6
      comp=Z,11nm,1.1s,baz=91,slow=5.3
SENIN Lac Senin/Sane    83.20 316   P     P       14 46 31.3  -1.5
SENIN                               IAmb  IAmb    14 46 41.8
      comp=Z,9.3nm,0.8s
ABSA  Djebel Ababsia    83.61 306   P     P       14 46 36.8  +1.8
CMAH  Djebel Manchou    83.64 306   P     P       14 46 37.4  +2.3
BNI   Bardonecchia      83.70 315   P     P       14 46 33.8  -1.5
BNI                                 pmax  pmax
      comp=Z,17nm,1.0s
BNI   Bardonecchia      83.70 315   P     P       14 46 33.8  -1.5
BNI                                 IAmb  IAmb    14 46 47.6
      comp=Z,17nm,1.0s
CTEI  Djebel Teioual    84.49 306   P     P       14 46 41.2  +1.7
DFRA  Djebel Bou Aff    84.88 306   P     P       14 46 43.8  +2.4
SSB   Saint Sauveur     85.19 315   P     P       14 46 42.2  -0.5
SSB                                 pmax  pmax
      comp=Z,15nm,1.2s
SSB   Saint Sauveur     85.19 315   P     P       14 46 42.2  -0.5
SSB                                 IAmb  IAmb    14 46 52.4
      comp=Z,15nm,1.2s
MSVF  Nonsavu           86.00 108   LR    LR      15 28 40.8
      comp=Z,276nm,18.4s,baz=251,slow=38
NOR   Nord              86.43 352  i P    P       14 46 47.0  -1.1
NOR                                 IAmb  IAmb    14 46 48.6
      comp=Z,10nm,1.1s
DAG   Danmarks Havn     88.67 348  i P    P       14 46 57.9  -1.0
DAG                                eP     P       14 46 57.9  -1.0
TORD  Torodi Ar. Bea    91.12 283   P     P       14 47 13.4  +1.7
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	comp=Z,1.7nm,0.6s,baz=82,slow=4.3,SNR=8.6						
TORD	Torodi Ar. Bea	91.12	283	P	P	14 47 11.9	+0.3
VNDA	Vanda	91.74	168	P	P	14 47 14.5	+1.3
	comp=Z,1.0nm,0.8s,baz=277,slow=6.3,SNR=6.7						
GCSA	Galena City Sc	91.83	24	P	P	14 47 14.9	+1.1
	baz=290						
ESDC	Sonseca Array	92.17	310	P	P	14 47 17.1	+1.0
	comp=Z,3.9nm,1.1s,baz=57,slow=4.4,SNR=11						
ESDC	Sonseca Array	92.17	310	P	P	14 47 16.6	+0.5
IMAR	Indian Mountai	92.60	22	P	P	14 47 17.5	+0.1
TOLK	Toolik Lake Re	92.96	19	P	P	14 47 20.5	+1.4
	baz=297						
H21K	Melozitna Rive	93.09	23	P	P	14 47 20.9	+1.2
	baz=294						
K20K	Telida	93.48	25	P	P	14 47 22.7	+1.1
	baz=292						
NEEM	North Greenlan	93.77	353	eP	P	14 47 22.8	-0.3
CHUM	Lake Minchumin	93.99	24	P	P	14 47 25.3	+1.4
	baz=294						
CAST	Castle Rocks	94.28	24	P	P	14 47 26.2	+1.0
	baz=294						
BPAW	Bear Paw Mtn.	94.44	24	P	P	14 47 26.5	+0.5
	baz=295						
SUMG	Summit	95.33	347	i P	P	14 47 30.9	+0.5
SUMG				IAmb	IAmb	14 47 35.7	
	comp=Z,3.2nm,1.0s						
ILAR	Eielson Array	95.72	22	P	P	14 47 35.7	+4.0
	comp=Z,0.5nm,1.0s,baz=292,slow=5.1,SNR=2.9						
A36M	Sachs Harbour	97.33	12	P	Pdif	14 47 40.1	+1.1
	baz=320						
A36M	Sachs Harbour	97.33	12	P	P	14 47 36.0	-2.9
INK	Inuvik	98.03	16	P	Pdif	14 47 43.4	+1.2
	comp=Z,3.5nm,1.2s,baz=321,slow=3.5,SNR=3.2						
TBI	Tubuai	116.60	113	eLR	LR	15 28 10.5	
	comp=Z,338nm,28.0s						
PPT2	Papeete2	116.77	106	eLR	LR	15 28 15.5	
	comp=Z,271nm,23.2s						
MSO	Missoula	121.05	22	P	PKPdf	14 52 59.1	0.0
	baz=327						
EGMT	Eagleton	121.49	19	P	PKiKP	14 53 00.2	+0.2
	baz=332						
ULM	Lac du Bonnet	122.58	8	PKP	PKPdf	14 53 01.6	-0.2
	comp=Z,3.5nm,0.9s,baz=24,slow=9.7,SNR=3.0						
HLID	Hailey	123.56	25	P	PKiKP	14 53 04.5	+0.1
	baz=325						
NVAR	Mina Array Bea	125.77	32	PKP	PKPdf	14 53 08.4	-0.2
	comp=Z,2.0nm,0.9s,baz=302,slow=1.8,SNR=11						
BW06	Boulder Array	126.15	22	P	PKPdf	14 53 09.0	-0.2
	baz=330						
BW06	Boulder Array	126.15	22		PKPdf	14 53 06.4	-2.8
PD31	Pinedale Array	126.15	22		PKPdf	14 53 06.8	-2.4
PDAR	Pinedale Array	126.15	22	PKP	PKPdf	14 53 08.3	-0.9
	comp=Z,2.5nm,0.9s,baz=349,slow=1.5,SNR=11						
PDAR	Pinedale Array	126.15	22		PKPdf	14 53 07.1	-2.1
RSSD	Black Hills	126.73	17	P	PKPdf	14 53 10.3	+0.1
	baz=337						
DUG	Dugway, Tooele	127.01	26	P	PKiKP	14 53 12.0	+0.7
	baz=325						
R11A	Troy Canyon, C	127.20	30	P	PKiKP	14 53 12.4	+0.6
	baz=322						
LRMC	Laurel Mtn Rad	128.30	34	P	PKiKP	14 53 13.8	-0.2
	baz=318						
ECSD	EROS Data Cent	128.81	10	P	PKiKP	14 53 14.6	0.0
	baz=346						
GSC	Goldstone, Bar	128.91	33	P	PKiKP	14 53 15.7	+0.5
	baz=319						
O20A	White River Ci	128.92	22	P	PKiKP	14 53 15.0	-0.2
	baz=331						
GMRC	Granite Mounta	129.91	33	P	PKiKP	14 53 17.7	+0.5
	baz=320						
ISCO	Idaho Springs	130.16	20	P	PKiKP	14 53 17.9	+0.1
	baz=334						
IRM	Iron Mountain	130.66	33	P	PKiKP	14 53 20.2	+1.6
	baz=320						
MVCO	Mesa Verde	131.34	24	P	PKiKP	14 53 20.9	+0.6
	baz=329						
ANMO	Albuquerque	134.13	24	i PKIKP	PKPdf	14 53 23.2	-1.3
ANMO	Albuquerque	134.13	24	P	PKPdf	14 53 24.8	+0.3
	baz=330						
MSTX	Muleshoe	136.39	21	P	PKPdf	14 53 29.4	+0.8
	baz=335						
U40A	Yellville	136.62	9	P	PKPdf	14 53 29.6	+0.7
	baz=350						
MNTX	Cornudas Mount	137.39	25	P	PKiKP	14 53 31.7	-0.6
	baz=330						
TXAR	Lajitas Array	140.17	25	PKP	PKPdf	14 53 34.4	-1.3
	comp=Z,0.2nm,0.5s,baz=304,slow=6.4,SNR=2.6						
JCT	Junction City	140.59	20	P	PKPdf	14 53 37.1	+0.8
	baz=338						
PLCA	Paso Flores	143.55	199	PKP	PKPdf	14 53 40.9	-0.5
	comp=Z,3.8nm,0.9s,baz=182,slow=3.4,SNR=8.3						
PLCA	Paso Flores	143.55	199	PKIKP	PKPbc	14 53 39.1	+0.5
PLCA	Paso Flores	143.55	199	PKPdf	PKPbc	14 53 39.1	+0.5
CPUP	Villa Florida	146.75	231	PKPbc	PKPbc	14 53 49.0	+0.1
	comp=Z,1.1nm,0.5s,baz=128,slow=1.7,SNR=3.8						
CPUP	Villa Florida	146.75	231	PKP2	PKPbc	14 53 49.0	+0.1
LPAZ	La Paz	160.44	239	PKP	PKPdf	14 54 09.2	+1.5
	comp=Z,0.5nm,0.5s,baz=62,slow=2.5,SNR=2.6						

IDC ***08*** *14:36:55.8±0.8, 6°.83N×94°.58E, h0^{km}, mb4.2/15, mb1 4.3/16, mb1mx4.0/54, mbtmp4.1/16, ML3.7/1, Error ellipse: s-maj=29.5km s-min=20.9km az=66.0*

NEIC ***08*** *14:36:58.1±1.7, 6°.90N±0°.09×94°.7E±0°.1, h10^{km}±1^{km}, mb4.7/16, Error ellipse: s-maj=23.8km s-min=11.2km az=241.0*

ISC 08 14:36:59.4±0.6**, 6°.8N**±0°.1×**94°.7E**±0°.1**, h26**^{km}**, n44, σ1s.07**/41**, mb4.4**/21**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	Lhok Sumawe	2.73	124	Pn	Pn	14 37 38.7	-2.9
CMAR	Chiang Mai Arr	12.33	19	Pn	Pn	14 39 54.4	+1.1
	0.1nm,0.3s,baz=200,slow=10,SNR=2.8						
CMAR	Chiang Mai Arr	12.33	19	Pn	Pn	14 39 52.3	-1.1
H08S3	Diego Garcia H	26.36	237	T	T	15 09 55.1	
	baz=58						
H08S2	Diego Garcia H	26.36	237	T	T	15 09 54.8	
	baz=58						
H08S1	Diego Carcia H	26.38	237	T	T	15 09 58.3	
	baz=58						
SSLB	Suanglung	30.37	53	P	P	14 43 11.0	+1.6
SOEI	Soe	33.74	119	P	P	14 43 39.5	+0.3
GAR	Garm	38.88	329	P	P	14 44 22.2	-0.7
GAR				IAmb	IAmb	14 44 28.5	
	comp=Z,27nm,1.1s						
MK31	Makanchi Array	41.27	347	P	P	14 44 41.5	-1.0
MKAR	Makanchi Array	41.27	347	P	P	14 44 40.6	-1.9
	comp=Z,3.3nm,0.9s,baz=162,slow=9.5,SNR=3.9						
MKAR	Makanchi Array	41.27	347	P	P	14 44 40.9	-1.5
SONM	Songino Array	42.11	12	P	P	14 44 50.4	+0.9
	comp=Z,2.3nm,0.9s,baz=199,slow=7.6,SNR=3.1						
KURBB	Kurchatov Arra	45.73	346	P	P	14 45 18.4	+0.1
	comp=Z,1.8nm,0.2s,baz=164,slow=7.3,SNR=4.8						
WRA	Warramunga Arr	47.20	125	P	P	14 45 31.4	+1.1
	comp=Z,1.4nm,0.8s,baz=304,slow=8.9,SNR=2.0						
WB2	Warramunga Arr	47.21	125	P	P	14 45 31.8	+1.4
WB2				IAmb	IAmb	14 45 56.9	
	comp=Z,7.4nm,1.1s						
ZALV	Zalesovo Beam	47.71	352	P	P	14 45 34.6	+0.9
	comp=Z,3.2nm,0.9s,baz=169,slow=8.4,SNR=3.3						
ASAR	Alice Springs	48.81	130	P	P	14 45 43.1	+0.3
	comp=Z,0.8nm,0.5s,baz=308,slow=8.0,SNR=1.9						
BRVK	Borovoye	50.25	341	P	P	14 45 53.4	+0.1
BRVK				IAmb	IAmb	14 45 59.8	
	comp=Z,11nm,1.1s						
ABKAR	Akbulak array	51.44	331	P	P	14 46 02.4	+0.1
ABKAR				IAmb	IAmb	14 46 09.0	
	comp=Z,14nm,1.1s						
BR131	Keskin Array S	63.55	311	P	P	14 47 26.2	-1.8
BRTR	Keskin Array B	63.55	311	P	P	14 47 26.5	-1.5
	comp=Z,1.4nm,0.8s,baz=110,slow=5.7,SNR=4.4						
BRTR	Keskin Array B	63.55	311	P	P	14 47 26.4	-1.6
TIXI	Tiksi	68.20	11	P	P	14 47 57.0	-0.1
	comp=Z,3.1nm,0.5s,baz=215,slow=4.5,SNR=4.7						
TIXI	Tiksi	68.20	11	P	P	14 47 56.6	-0.5
TIXI				IAmb	IAmb	14 48 03.1	
	comp=Z,10nm,1.1s						
FINES	FINESS Array B	73.92	332	P	P	14 48 32.3	+0.3
	comp=Z,6.2nm,1.1s,baz=90,slow=5.7,SNR=4.0						
FINES	FINESS Array B	73.92	332	P	P	14 48 31.8	-0.2
PSZ	Piszkesteto	74.81	318	P	P	14 48 36.5	-1.1
PSZ				IAmb	IAmb	14 48 45.7	
	comp=Z,6.3nm,1.1s						
BOSA	Boshof	75.46	238	P	P	14 48 43.3	+1.6
	comp=Z,2.9nm,0.9s,baz=95,slow=6.1,SNR=4.0						
BOSA	Boshof	75.46	238	P	P	14 48 43.1	+1.4
ARCES	ARCESS Array B	76.47	340	P	P	14 48 46.9	+0.4
	comp=Z,3.5nm,0.9s,baz=90,slow=5.7,SNR=5.0						
ARCES	ARCESS Array B	76.47	340	P	P	14 48 47.0	+0.4
GEC2	GERESS Array S	78.99	318	P	P	14 49 02.1	+1.0
GERES	GERESS Array B	78.99	318	P	P	14 49 01.7	+0.5
	comp=Z,1.8nm,0.8s,baz=93,slow=5.3,SNR=4.8						
CTI	Castel Tesino	80.32	315	P	P	14 49 08.7	+0.2
CTI				IAmb	IAmb	14 49 21.7	
	comp=Z,10nm,1.0s						
NOA	NORSAR Array B	80.94	331	P	P	14 49 10.7	-0.7
	comp=Z,2.1nm,1.0s,baz=91,slow=5.7,SNR=3.1						
TORD	Torodi Ar. Bea	91.37	283	P	P	14 50 03.5	-0.2
	comp=Z,0.5nm,0.9s,baz=101,slow=5.3,SNR=2.3						
ESDC	Sonseca Array	92.33	310	P	P	14 50 08.2	+0.4
	comp=Z,0.4nm,0.8s,baz=64,slow=3.2,SNR=2.4						
PMSA	Palmer Station	120.17	190		PKiKP	14 55 48.8	+1.1
BOZ	Bozeman (W)	122.79	22		PKPdf	14 55 53.4	-0.1
NVAR	Mina Array Bea	125.57	32	PKP	PKPdf	14 55 59.6	+0.5
	comp=Z,0.4nm,0.7s,baz=270,slow=1.8,SNR=2.5						
PDAR	Pinedale Array	125.98	22	PKP	PKPdf	14 56 00.3	+0.5
	comp=Z,0.2nm,0.3s,baz=56,slow=3.4,SNR=2.3						
TXAR	Lajitas Array	139.99	25	PKP	PKPdf	14 56 27.0	+0.7
	comp=Z,0.2nm,0.4s,baz=339,slow=4.8,SNR=2.1						
TXAR	Lajitas Array	139.99	25		PKPdf	14 56 26.2	-0.1

NNC 08 14:38:38.1±10.0**, 36°.94N**×**70°.13E, h0**^{km}**, mb3.7, mpv3.3, 3C-3D, Error ellipse: s-maj=84.2km s-min=73.2km az=169.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	Karatay Array	6.16	3	⇑P	Pn	14 40 12.2	+1.8
	0.3nm,0.3s,baz=181,slow=12,SNR=11						
KK31				⇓S	Sn	14 41 24.0	+2.4
	0.4nm,0.3s,baz=188,slow=24,SNR=5.5						
AAK	Ala-Archa	6.61	29	⇓P	Pn	14 40 16.6	-0.1
	1.4nm,0.6s						
AAK				⇑S	Sn	14 41 30.6	-2.2
	0.4nm,0.5s						
TKM2	Tokmak 2	7.30	33	⇓P	Pn	14 40 24.8	-1.4
	3.9nm,0.5s						
TKM2				⇑S	Sn	14 41 52.9	+2.9
	3.7nm,1.1s						

IDC ***08*** *14:38:26.4±0.9, 6°.57N×95°.32E, h0^{km}, mb3.9/13, mb1 4.0/13, mb1mx3.8/53, mbtmp3.9/13, Error ellipse: s-maj=33.3km s-min=22.0km az=64.0*

ISC 08 14:38:53.5±0.9**, 6°.7N**±0°.2×**95°.6E**±0°.2**, h239**^{km}**, n13, σ1s.69**/13**, mb3.6**/13**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	41.57	346	P	P	14 46 15.8	-2.2
	3.0nm,1.0s,baz=157,slow=6.3,SNR=1.9						
SONM	Songino Array	42.03	11	P	P	14 46 21.6	-0.1
	1.4nm,0.8s,baz=213,slow=10,SNR=2.9						
KURBB	Kurchatov Arra	46.06	345	P	P	14 46 52.2	-1.3
	2.6nm,0.9s,baz=166,slow=7.0,SNR=2.6						
WRA	Warramunga Arr	46.39	126	P	P	14 46 56.3	-0.3
	0.9nm,0.9s,baz=310,slow=8.8,SNR=1.1						
ZALV	Zalesovo Beam	47.93	351	P	P	14 47 07.0	-0.9
	0.4nm,0.3s,baz=169,slow=8.2,SNR=1.2						
ASAR	Alice Springs	48.04	130	P	P	14 47 07.7	-1.6
	0.7nm,0.7s,baz=322,slow=4.8,SNR=1.3						
BRTR	Keskin Array B	64.30	311	P	P	14 49 01.6	-2.4
	0.7nm,0.7s,baz=97,slow=4.6,SNR=2.1						
TIXI	Tiksi	68.11	11	P	P	14 49 30.0	+2.7
	2.6nm,0.6s,baz=228,slow=3.4,SNR=3.6						
FINES	FINESS Array B	74.43	332	P	P	14 50 05.0	-0.3
	1.8nm,0.6s,baz=103,slow=4.9,SNR=4.0						
BOSA	Boshof	76.19	238	P	P	14 50 16.7	+0.6
	1.1nm,0.5s,baz=96,slow=10,SNR=4.5						
ARCES	ARCESS Array B	76.87	340	P	P	14 50 20.6	+1.7
	1.3nm,0.6s,baz=93,slow=7.3,SNR=4.9						
GERES	GERESS Array B	79.67	318	P	P	14 50 35.0	+0.2
	0.3nm,0.3s,baz=101,slow=5.3,SNR=1.9						
TORD	Torodi Ar. Bea	92.28	283	P	P	14 51 38.8	+1.5
	0.5nm,0.8s,baz=68,slow=6.1,SNR=1.6						

IPEC ***08*** *14:42:49.3±0.2, 49°.86N×18°.54E, h0^{km}±3^{km}, ML1.5/3, Error ellipse: s-maj=1.7km s-min=1.1km az=164.0*

PRU 08 14:42:49.9±0.0**, 49°.85N**×**18°.51E, h0**^{km}**, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	Ostrava-Krasne	0.23	267	ePG	Pg	14 42 53.9	-0.5
OKC				eSG	Sg	14 42 57.8	+0.4
	comp=Z,62nm,0.9s						
MORC	Moravsky Berou	0.63	264	ePg	Pg	14 43 01.5	-0.5
	baz=83						
MORC				eSg	Sg	14 43 09.8	-0.3
	10nm,0.3s,baz=83						
LANS	Liptovska Anna	0.94	138	ePG	Pg	14 43 08.0	+0.1
LANS				eSG	Sb	14 43 22.3	+0.2
LANS				eLG	Lg	14 43 25.9	
JAVC	Velka Javorina	1.13	209	ePg	Pg	14 43 11.6	0.0
	baz=29						
JAVC	Velka Javorina	1.13	209	ePG	Pg	14 43 11.7	+0.1
KRLC	Kraliky	1.14	282	eSG	Sg	14 43 26.7	+0.2
	comp=Z,8.3nm,0.3s						
VRAC	Vranov	1.36	247	ePg	Pg	14 43 15.0	-0.9
	baz=66						
VRAC				eSg	Sg	14 43 32.7	-0.9
	4.8nm,0.3s,baz=66						
VRAC	Vranov	1.36	247	ePG	Pg	14 43 15.1	-0.8
VRAC				eSG	Sg	14 43 32.8	-0.8
VYHS	Vyhne	1.37	171	ePG	Pg	14 43 15.3	-0.9
VYHS				eSG	Sb	14 43 34.8	+0.2
DPC	Dobruska-Polom	1.50	290	ePG	Pn	14 43 16.7	-1.3
DPC				eSG	Sg	14 43 37.1	-0.8
	comp=Z,6.2nm,0.6s						
KRUC	Moravsky	1.59	241	ePg	Pn	14 43 18.3	-1.0
	baz=60						
KRUC				eSg	Sn	14 43 39.8	-0.7
	3.6nm,0.3s,baz=60						
OSTC	Ostas	1.64	297	ePG	Pn	14 43 19.4	-0.6
OSTC				eSG	Sn	14 43 41.9	+0.2
	comp=Z,5.3nm,0.5s						
UPC	Upice	1.74	293	ePG	Pn	14 43 21.5	+0.2
UPC				eSG	Sb	14 43 44.6	-0.4
	comp=Z,4.3nm,0.4s						
CHVC	Chvalec	1.74	296	ePG	Pn	14 43 20.9	-0.5
CHVC				eSG	Sb	14 43 44.9	-0.3
PRU	Pruhonice	2.57	275	eSG	Sb	14 44 10.6	+1.7
CKRC	Cesky Krumlov	2.93	251	ePG	Pb	14 43 41.9	-1.2
CKRC				eSG	Sg	14 44 23.4	-0.7
KHC	Kasperske Hory	3.29	259	ePG	Pb	14 43 48.6	-0.6
KHC				eSG	Sg	14 44 34.7	-1.0

IDC ***08*** *14:46:00.6±1.1, 6°.89N×94°.61E, h0^{km}, mb3.8/11, mb1 4.0/13, mb1mx3.7/55, mbtmp3.8/13, ML3.7/2, Error ellipse: s-maj=46.3km s-min=17.0km az=57.0*

NEIC ***08*** *14:46:02.4±1.7, 6°.90N±0°.10×94°.6E±0°.1, h10^{km}±1^{km}, mb4.4/14, Error ellipse: s-maj=23.9km s-min=5.3km az=228.0*

ISC 08 14:46:04.3±0.6**, 6°.87N**±0°.10×**94°.6E**±0°.1**, h26**^{km}**, n33, σ0s.88**/27**, mb4.2**/17**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	Lhok Sumawe	2.87	125	Pn	Pn	14 46 48.6	+0.2
PSI	Prapat	5.93	133	Pn	Pn	14 47 31.6	+1.1
	0.9nm,0.3s,baz=319,slow=10,SNR=5.3						
PBKT	Sadao Pong	11.49	32	Pn	Pn	14 48 47.4	+0.6
CMAR	Chiang Mai Arr	12.28	20	Pn	Pn	14 48 58.2	+0.7
	0.2nm,0.3s,baz=205,slow=12,SNR=1.7						
H08S3	Diego Garcia H	26.32	237	T	T	15 19 27.8	
	baz=56,slow=75,SNR=96						
H08S2	Diego Garcia H	26.32	237	T	T	15 19 27.9	
	baz=56,slow=75,SNR=67						
H08S1	Diego Carcia H	26.34	237	T	T	15 19 25.1	
	baz=56,slow=75,SNR=48						
GAR	Garm	38.75	329	P	P	14 53 25.8	-0.9
GAR				IAmb	IAmb	14 53 32.4	
	comp=Z,11nm,1.1s						
FITZ	Fitzroy Crossi	39.45	129	P	P	14 53 33.1	+0.5
	comp=Z,1.7nm,0.8s,baz=324,slow=8.7,SNR=2.2						
MK31	Makanchi Array	41.15	347	P	P	14 53 45.0	-1.4
MKAR	Makanchi Array	41.15	347	P	P	14 53 46.1	-0.3
	comp=Z,0.9nm,0.8s,baz=178,slow=7.2,SNR=3.5						
MKAR	Makanchi Array	41.15	347	P	P	14 53 45.1	-1.3
SONM	Songino Array	42.04	12	P	P	14 53 54.2	+0.4
	comp=Z,0.8nm,0.8s,baz=199,slow=9.6,SNR=4.1						
KURBB	Kurchatov Arra	45.62	346	P	P	14 54 22.1	-0.2
	comp=Z,1.4nm,0.7s,baz=176,slow=7.1,SNR=6.2						
KURK	Kurchatov	45.68	346	P	P	14 54 22.1	-0.7
KURK	Kurchatov	45.68	346	IAmb	IAmb	14 54 30.4	
	comp=Z,7.9nm,1.1s						
WB0	Warramunga Arr	47.29	125	P	P	14 54 34.5	-1.4
WRA	Warramunga Arr	47.34	125	P	P	14 54 35.2	-1.1
	comp=Z,0.4nm,0.8s,baz=303,slow=8.9,SNR=2.1						
ZALV	Zalesovo Beam	47.60	352	P	P	14 54 38.7	+0.9
	comp=Z,1.1nm,0.7s,baz=158,slow=4.7,SNR=2.8						
ASAR	Alice Springs	48.95	130	P	P	14 54 48.7	-0.1
	comp=Z,0.9nm,0.8s,baz=312,slow=8.5,SNR=4.9						
BRVK	Borovoye	50.13	341	P	P	14 54 56.9	-0.4
BRVK				IAmb	IAmb	14 55 04.6	
	comp=Z,7.7nm,1.4s						
ABKAR	Akbulak array	51.31	332	P	P	14 55 06.0	-0.2
CAN	Canberra	66.18	133	P	P	14 56 49.0	-1.0
TIXI	Tiksi	68.12	11	P	P	14 57 00.9	-0.7
	comp=Z,1.3nm,0.6s,baz=191,slow=4.1,SNR=3.7						
TIXI	Tiksi	68.12	11	IAmb	IAmb	14 57 12.1	
	comp=Z,3.5nm,1.1s						
FINES	FINESS Array B	73.79	332	P	P	14 57 36.2	0.0
	comp=Z,2.2nm,0.9s,baz=100,slow=4.8,SNR=4.9						
FINES	FINESS Array B	73.79	332	P	P	14 57 35.5	-0.7
CASY	Casey	73.89	173	P	P	14 57 36.6	+0.1
CASY				IAmb	IAmb	14 57 40.7	
	comp=Z,4.4nm,0.9s						
BOSA	Boshof	75.42	238	P	P	14 57 46.8	+0.3
BOSA				IAmb	IAmb	14 57 54.9	
	comp=Z,3.8nm,1.1s						
GERES	GERESS Array B	78.85	318	P	P	14 58 05.8	+0.4
	comp=Z,1.0nm,0.9s,baz=86,slow=6.0,SNR=3.7						
ZOU	Zoufplan	79.27	316	P	P	14 58 08.3	+0.5
ZOU				IAmb	IAmb	14 58 17.6	
	comp=Z,3.4nm,1.1s						
ESDC	Sonseca Array	92.19	310	P	P	14 59 14.1	+2.1
	comp=Z,1.1nm,1.0s,baz=75,slow=4.0,SNR=5.0						
ESDC	Sonseca Array	92.19	310	IAmb	IAmb	14 59 31.2	
	comp=Z,2.1nm,1.4s						

BJI ***08*** *14:46:57.6±0.0, 6°.61N×94°.28E, h10^{km}, mB5.3/21, mb4.7/49, Ms5.0/26, Ms7 4.7/27*

IDC ***08*** *14:47:00.4±0.4, 6°.93N×94°.63E, h0^{km}, mb4.4/30, mb1 4.5/32, mb1mx4.4/54, mbtmp4.4/32, ML4.3/2, MS4.6/7, Ms1 4.6/7, ms1mx3.8/48, Error ellipse: s-maj=15.6km s-min=10.8km az=61.0*

NEIC ***08*** *14:47:01.3±1.4, 6°.88N±0°.07×94°.46E±0°.07, h10^{km}±1^{km}, mb4.9/52, Error ellipse: s-maj=13.0km s-min=10.6km az=122.0*

KLM ***08*** *14:47:03, 6°.92N×94°.60E, h10^{km}, mb5.0*

DJA ***08*** *14:47:04.2±1.2, 7°N±3°×9°4E±°, h29^{km}±9^{km}, M5.1/28, mb4.9/28, mB5.7/7, MLv5.2/7, Mw(mB)5.2/7, MwMwp6.3/1, Mwp6.3/1*

GCMT ***08*** *14:47:06.3±0.2, 6°.97N±0°.01×94°.67E±0°.01, h15^{km}±1^{km}, MW5.2/120, Moment Tensor Solution. s29,c33; s120,c199; Duration: 1s.0 Moment tensor: Scale 10^{16} Nm; M_{rr}-0.78±.17; $M_{\theta\theta}$-5.27±.13; $M_{\phi\phi}$6.05±.15; $M_{r\theta}$-3.32±.57; $M_{\theta\phi}$1.75±.12; $M_{\phi r}$-3.55±.60; Best double couple: $M_0$7.62400×10^{16} NP1:ϕ_s143.00000°, δ50.00000°, λ-178.00000°. NP2:ϕ_s51.00000°, δ88.00000°, λ-40.00000°. Principal axes: T 8.2160, Plg25.0000°, Azm104.0000°; N -1.1780, Plg50.0000°, Azm229.0000°; P -7.0330, Plg28.0000°, Azm359.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 14:47:03.9±0.3**, 6°.88N**±0°.05×**94°.50E**±0°.05**, h26**^{km}**, n191, σ1s.69**/197**, mb4.7**/84**, MS4.6**/10**, 3C-1D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	Lhok Sumawe	2.93	124	P	Pn	14 47 48.4	-0.5
LHMI	Lhok Sumawe	2.93	124		Pn	14 47 48.3	-0.5
TPTI		4.48	143	P	Pn	14 48 12.9	+2.8
TPTI				S	Sn	14 49 03.3	+1.9
TSI	Tuntungan	5.26	129	P	Pn	14 48 20.8	0.0
	4.0nm213nm,1.6s						
PSI	Prapat	5.99	132	Pn	Pn	14 48 31.7	+0.7
	4.5nm,0.3s,baz=298,slow=12,SNR=14						
PSI				LR	LR	14 51 29.6	
	comp=Z,3μm,19.8s,baz=298,slow=45						
RPSI	Rantau Prapat	6.06	133		Pn	14 48 31.7	-0.2
KULM	Kulim	6.32	104	P	Pn	14 48 33.0	-2.4
GSI	Gunungsitoli	6.33	151	P	Pn	14 48 39.1	+3.5
GSI	Gunungsitoli	6.33	151		Pn	14 48 35.0	-0.6
DGPR	DIGLIPUR	6.45	346	eP	Pn	14 48 41.4	+4.2
DGPR				IAmb	IAmb	14 48 48.4	
	comp=Z,489nm,1.6s						
IPM	Ipoh	6.92	110	P	Pn	14 48 41.0	-2.7
MNSI	Mandailing Nat	7.88	140	P	Pn	14 48 57.9	+0.9
	comp=Z,0.3nmcomp=Z,42nm,0.8s						
JRMM	Jerantut	8.48	110	P	Pn	14 49 05.0	-0.1
BKNI	Bangkinang	9.21	135	P	Pn	14 49 15.8	+0.6
	comp=Z,148nm,1.3s						
SISI	Saibi	9.35	150	P	Pn	14 49 18.3	+1.3
	comp=Z,19nm,1.6s						
PPI	Padang Panjang	9.36	141	P	Pn	14 49 18.1	+0.8
	comp=Z,26nm,0.8s						
PDSI	Padang	9.76	142	P	Pn	14 49 23.1	+0.4
	comp=Z,14nm,0.7s						
RGRI	Rengat	10.61	132	P	Pn	14 49 35.6	+1.2
	comp=Z,206nm,0.5s						
PBKT	Sadao Pong	11.53	33	Pn	Pn	14 49 48.2	+1.3
CM31	Chiang Mai Arr	12.30	20		Pn	14 49 58.6	+1.1
CMAR	Chiang Mai Arr	12.30	20	Pn	Pn	14 49 56.9	-0.6
	comp=Z,0.9nm,0.3s,baz=215,slow=14,SNR=7.8						
CMAR	Chiang Mai Arr	12.30	20	Pn	Pn	14 49 58.6	+1.1
DSRI	Dabo	12.43	126	P	Pn	14 50 00.7	+1.4
	comp=Z,15nm,1.4s						
JMBI	JAMBI	12.44	132	P	Pn	14 50 00.2	+0.8
	comp=Z,99nm,0.4s						
CHTO	Chiang Mai	12.63	20	Pn	Pn	14 50 02.8	+0.8
KSI	Kapahiang	13.21	142	P	Pn	14 50 09.1	-1.0
UBPT	Khong Chiam	13.62	51	Pn	Pn	14 50 16.3	+0.8
PALK	Pallekele	13.70	272	LR	LR	14 55 39.7	
	comp=Z,3μm,18.1s,baz=194,slow=38						
LHSI	Lahat	13.94	139	P	Pn	14 50 18.7	-1.1
	comp=Z,3μmcomp=Z,57nm,1.0s						
PPBI	Pangkal Pinang	14.68	127	P	Pn	14 50 30.1	+0.1
	comp=Z,5μmcomp=Z,43nm,1.1s						
DLV	T Lat	14.69	69	Pn	Pn	14 50 30.2	-0.1
MDSI	Maura Dua	14.86	139	P	Pn	14 50 29.9	-2.5
LWLI	Liwa	15.19	141	P	P	14 50 46.5	+4.8
KLSI		15.37	138	P	Pn	14 50 36.9	-2.3
KSM	Kuching	16.65	108	P	P	14 50 57.0	-0.9
SBUM	Sibu	18.20	103	P	P	14 51 16.0	+1.0
STKI	Sintang	18.24	111	P	P	14 51 15.8	+0.3
	comp=Z,18nm,0.6s						
BOK	Bokaro	18.75	335	eP	Pn	14 51 24.9	+3.4
HYB	Hyderabad	18.76	305	i P	Pn	14 51 22.0	+0.2
LEM	Lembang	18.88	136	LR	LR	14 59 51.0	
	comp=Z,3μm,18.4s,baz=295,slow=41						
QIZ	Qiongzhong	19.20	50	P	P	14 51 26.4	+0.4
QIZ				S	S	14 55 02.4	+0.2
QIZ				LR	LR		
	comp=Z,7μm,15.3s						
QIZ				LR	LR		
	comp=Z,3μm,12.4s						
QIZ				LR	LR		
	comp=Z,3μm,10.2s						
QIZ	Qiongzhong	19.20	50	P	P	14 51 26.4	+0.4
PBKI	Pangkalan Bun	19.61	118	P	P	14 51 30.7	+0.2
	comp=Z,106nm,1.1s						
KMI	Kunming	19.79	23	⇑P	Pn	14 51 36.8	+2.6
KMI				pP	pwP	14 51 43.7	+1.2
KMI				sP	sP	14 51 46.6	+4.7
KMI				pmax	pmax		
	comp=Z,44nm,1.3s						
KMI				LR	LR		
	comp=Z,1μm,11.7s						
KMI				LR	LR		
	comp=Z,2μm,10.4s						
KMI				LR	LR		
	comp=Z,2μm,10.2s						
TAPN	Taplejung	21.36	343	eP	P	14 51 52.8	+3.1
	comp=Z,116nm,0.9s						
MTKI	Muara Teweh, K	21.79	110	P	P	14 51 53.9	-0.2

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      comp=Z,27nm,1.3s
SPMM  Sapulut             21.96  94    P        P         14 51 57.0 +1.0
NGJI  Ngawi               22.05 130    P        P         14 52 01.2 +4.3
JIRN  Jiri                22.12 340   eP        P         14 52 01.2 +3.2
      comp=Z,30nm,0.7s
PKIN  Phulchoki           22.33 338   eP        P         14 52 05.4 +5.3
      comp=Z,79nm,0.6s
GUN   Gumba               22.46 340   eP        P         14 52 02.3 +0.7
GYA   Guiyang             22.66  29 ⇑iP         P         14 52 05.5 +2.0
GYA                                    sP       sP        14 52 12.2 -0.7
GYA                                    pmax     pmax
      comp=Z,24nm,1.5s
GYA                                    LR       LR
      comp=Z,2µm,16.8s
BBKI  Banjar Baru         22.75 116    P        P         14 52 04.7 +0.2
      comp=Z,5µmcomp=Z,59nm,1.0s
DANN  Dangsing            23.65 336   eP        P         14 52 13.3 -0.4
      comp=Z,13nm,0.5s
SMKI  Samarinda           23.80 107    P        P         14 52 16.4 +1.5
      comp=Z,137nm,0.6s
KMMI  Kalianget           23.84 125    P        P         14 52 15.5 +0.2
      comp=Z,74nm,1.0s
BLJI  Banyuglugur         23.95 127    P        P         14 52 17.0 +0.7
      comp=Z,48nm,0.9s
ABJI  Asem Bagus          24.49 126    P        P         14 52 22.3 +1.1
      comp=Z,151nm,1.0s
JAGI  Jajag, Banyuwa      24.82 128    P        P         14 52 22.8 -1.5
      comp=Z,33nm,1.0s
SRBI  Singaraja           25.45 125    P        P         14 52 30.5 +0.6
      comp=Z,108nm,1.2s
MPSI  Mapaga              26.16 103    P        P         14 52 39.2 +2.8
DGAR  Diego Garcia        26.17 238    P        P         14 52 36.1 -0.4
TOLI2 Tolitoli            26.83 101    P        P         14 52 42.6 +0.1
TOLI2                                  IAmb     IAmb      14 52 46.6
      comp=Z,26nm,0.8s
ENH   Enshi               27.20  29    P        P         14 52 44.4 -1.3
ENH                                    IAmb     IAmb      14 52 49.3
      comp=Z,39nm,1.2s
KAPI  Kappang             27.84 114    P        P         14 52 50.5 -0.9
KAPI                                   IAmb     IAmb      14 52 52.1
      comp=Z,20nm,1.1s
WHN   Wuhan               30.02  36 ⇓P          P         14 53 16.1 +5.4
XAN   Xi'an               30.14  24    P        P         14 53 12.0 +0.1
XAN                                    pP       pwP       14 53 24.7 +2.5
XAN                                    pmax     pmax
      comp=Z,22nm,1.2s
LZH   Lanzhou             30.31  15   eP        P         14 53 14.3 +0.9
LZH                                    pP       pP        14 53 20.5 +0.2
LZH                                    sP       sP        14 53 23.1  0.0
LZH                                    pmax     pmax
      comp=Z,23nm,1.3s
LZH                                    LR       LR
      comp=Z,1µm,15.7s
LZH                                    LR       LR
      comp=Z,1µm,15.2s
LZH                                    LR       LR
      comp=Z,2µm,17.4s
GTA   Gaotai              32.74   8 ⇑P          P         14 53 35.0 +0.2
GTA                                    pP       pP        14 53 39.7 -2.0
GTA                                    sP       sP        14 53 42.0 -2.5
GTA                                    PcP      PcP       14 56 21.7 +1.8
GTA                                    ScS      ScS       15 04 01.6 -0.7
GTA                                    pmax     pmax
      comp=Z,8.0nm,0.9s
GTA                                    LR       LR
      comp=Z,820nm,19.3s
GTA                                    LR       LR
      comp=Z,830nm,13.8s
GTA                                    LR       LR
      comp=Z,770nm,16.7s
NIL   Nilore              33.12 326    P        P         14 53 36.8 -1.2
NJ2   Nanjing             33.81  39   eP        P         14 53 44.3 +0.3
NJ2                                    pmax     pmax
      comp=Z,12nm,0.5s
NJ2                                    LR       LR
      comp=Z,3µm,18.5s
NJ2                                    LR       LR
      comp=Z,2µm,11.4s
NJ2                                    LR       LR
      comp=Z,1µm,11.8s
BTO   Baotou              36.34  20   eP        P         14 54 13.4 +7.5
KSH   Kashi               36.52 336    P        P         14 54 06.1 -1.4
KSH                                    pP       sP        14 54 16.1 -1.4
KSH                                    sP       pwP       14 54 20.0 +2.5
KSH                                    pmax     pmax
      comp=Z,7.0nm,0.4s
KSH                                    LR       LR
      comp=Z,700nm,11.7s
KSH                                    LR       LR
      comp=Z,840nm,10.3s
KSH                                    LR       LR
      comp=Z,2µm,13.4s
HHC   Hu-ho-hao-te        37.10  22   eP        P         14 54 13.5 +1.1
HHC                                    pmax     pmax
      comp=Z,15nm,0.9s
HHC                                    pmax     pmax
      comp=Z,290nm,9.7s
WMQ   Urumqi              37.28 352   eP        P         14 54 15.8 +2.0
WMQ                                    pmax     pmax
      comp=Z,13nm,1.5s
WMQ                                    pmax     pmax
      comp=Z,93nm,6.1s
MBWA  Marble Bar          37.28 139    P        P         14 54 12.4 -1.5
MBWA                                   IAmb     IAmb      14 54 24.9
      comp=Z,34nm,1.5s
JOW   Kunigami            37.73  54    P        P         14 54 18.4 +0.7
      comp=Z,8.1nm,0.8s,baz=114,slow=17,SNR=3.2
WSAR  Wadi Sarin          38.12 299    P        P         14 54 22.1 +1.0
      comp=Z,2.1nm,0.6s,baz=102,slow=13,SNR=2.5
BJT   Baijiatuau          38.30  27    P        P         14 54 22.8 +0.5
BJT                                    IAmb     IAmb      14 54 26.2
      comp=Z,30nm,1.4s
DRK   Karamyk             38.35 331    P        P         14 54 22.4 -0.8
GAR   Garm                38.71 329    P        P         14 54 25.2 -0.8
GAR                                    IAmb     IAmb      14 54 33.6
      comp=Z,32nm,0.9s
CHGR  Chuyangaron         39.05 328    P        P         14 54 26.8 -2.0
CHGR                                   IAmb     IAmb      14 54 36.0
      comp=Z,42nm,1.1s
BTK   Batken              39.27 331    P        P         14 54 29.4 -1.2
BTK                                    IAmb     IAmb      14 54 42.8
      comp=Z,40nm,1.0s
FITZ  Fitzroy Crossi      39.50 129    P        P         14 54 32.9 +0.2
      comp=Z,3.1nm,0.6s,baz=315,slow=8.6,SNR=7.3
AAK   Ala-Archa           39.76 337    P        P         14 54 35.9 +1.1
      comp=Z,2.9nm,0.9s,baz=136,slow=12,SNR=4.9
AAK                                    LR       LR        15 13 18.6
      comp=Z,765nm,18.5s,baz=156,slow=40
MK31  Makanchi Array      41.13 347    P        P         14 54 44.5 -1.4
MK31                                   IAmb     IAmb      14 54 54.7
      comp=Z,14nm,1.0s
MKAR  Makanchi Array      41.13 347    P        P         14 54 45.4 -0.5
      comp=Z,12nm,0.8s,baz=165,slow=8.4,SNR=38
MKAR  Makanchi Array      41.13 347    P        P         14 54 44.7 -1.2
MAKZ  Makanchi            41.22 347    P        P         14 54 44.7 -1.9
KK31  Karatay Array       41.81 333    P        P         14 54 50.3 -1.2
KKAR  Karatay Array       41.81 333    P        P         14 54 50.4 -1.1
SONM  Songino Array       42.06  12    P        P         14 54 53.9 +0.4
      comp=Z,7.6nm,1.0s,baz=196,slow=8.3,SNR=25
SONM  Songino Array       42.06  12    P        P         14 54 52.8 -0.8
ULN   Ulaanbaatar         42.23  13    P        P         14 54 53.0 -2.0
KSRS  Korea Array         42.99  40    P        P         14 55 01.6 +0.4
      comp=Z,6.7nm,1.1s,baz=228,slow=8.1,SNR=7.3
KSRS                                   LR       LR        15 13 26.2
      comp=Z,585nm,18.2s,baz=215,slow=37
NWAO  Narrogin (SRO)      45.10 153    P        P         14 55 19.0 +0.9
      comp=Z,5.7nm,0.7s,baz=328,slow=10,SNR=2.2
GEYT  Alibeck             45.18 319    P        P         14 55 19.9 +1.2
      comp=Z,1.4nm,0.4s,baz=64,slow=29,SNR=2.9
KURBB Kurchatov Arra      45.60 346    P        P         14 55 21.6 -0.2
      comp=Z,17nm,0.9s,baz=165,slow=6.9,SNR=45
KURK  Kurchatov           45.66 346    P        P         14 55 21.2 -1.1
WRA   Warramunga Arr      47.40 125    P        P         14 55 35.0 -1.4
      comp=Z,4.4nm,0.9s,baz=299,slow=8.8,SNR=6.5
WRAB  Tennant Creek       47.40 125    P        P         14 55 34.6 -1.9
WRAB                                   IAmb     IAmb      14 55 48.4
      comp=Z,10.0nm,0.8s
WB2   Warramunga Arr      47.41 125    P        P         14 55 35.0 -1.5
WB2                                    IAmb     IAmb      14 56 00.7
      comp=Z,8.7nm,0.8s
WR0   Warramunga Arr      47.57 125    P        P         14 55 35.8 -2.0
WR0                                    IAmb     IAmb      14 55 49.8
      comp=Z,23nm,1.4s
ZAA0  Zalesovo Array      47.59 352    P        P         14 55 36.2 -1.2
ZALV  Zalesovo Beam       47.59 352    P        P         14 55 37.3  0.0
      comp=Z,15nm,0.8s,baz=168,slow=7.6,SNR=27
ZALV  Zalesovo Beam       47.59 352    P        P         14 55 35.9 -1.4
ASAR  Alice Springs       49.01 130    P        P         14 55 48.0 -0.9
      comp=Z,4.8nm,0.8s,baz=314,slow=8.1,SNR=10
ASAR                                   PcP      PcP       14 57 12.9 +0.3
      comp=Z,3.4nm,0.9s,baz=305,slow=3.8,SNR=5.1
ASAR                                   LR       LR        15 18 30.0
      comp=Z,616nm,20.6s,baz=303,slow=39
MJAR  Matsushiro Arr      49.57  47    P        P         14 55 53.5 +0.5
      comp=Z,3.6nm,0.9s,baz=242,slow=8.1,SNR=7.5
MJAR                                   PcP      PcP       14 57 15.5 +1.1
      comp=Z,3.7nm,1.1s,baz=247,slow=5.0,SNR=4.4
MJAR  Matsushiro Arr      49.57  47    P        P         14 55 54.0 +1.1
BRVK  Borovoye            50.10 341    P        P         14 55 55.7 -1.0
BRVK                                   IAmb     IAmb      14 56 00.2
      comp=Z,12nm,0.8s
ABKAR Akbulak array       51.27 332    P        P         14 56 04.9 -0.6
ABKAR                                  IAmb     IAmb      14 56 16.0
      comp=Z,18nm,0.8s
ABKAR Akbulak array       51.27 332    P        P         14 56 05.0 -0.6
ARU   Arti                56.94 337    P        P         14 56 45.9 -0.9
ARU                                    IAmb     IAmb      14 57 01.3
      comp=Z,16nm,0.9s
KMBO  Kilima Mbogo        57.67 264    P        P         14 56 56.0 +2.9
      comp=Z,4.9nm,0.8s,baz=55,slow=8.7,SNR=11
KMBO  Kilima Mbogo        57.67 264    P        P         14 56 50.4 -2.6
KMBO                                   IAmb     IAmb      14 57 04.6
      comp=Z,16nm,1.3s
KBZ   Khabaz              58.06 318    P        P         14 56 57.3 +2.4
      comp=Z,2.5nm,0.8s,baz=149,slow=2.3,SNR=2.5
LODK  Lodwar              58.97 270    P        P         14 56 59.7 -2.2
STKA  Stephens Creek      59.16 133    P        P         14 57 02.2 -0.6
      comp=Z,6.9nm,0.8s,baz=311,slow=6.5,SNR=13
STKA  Stephens Creek      59.16 133    P        P         14 57 01.7 -1.1
YAK   Yakutsk             60.83  18    P        P         14 57 13.2 -0.5
      comp=Z,4.2nm,0.6s,baz=236,slow=19,SNR=4.5
NRIK  Noril'sk            62.55 357    P        P         14 57 24.6 -0.5
      comp=Z,0.9nm,0.3s,baz=162,slow=9.6,SNR=4.9
NRIK  Noril'sk            62.55 357    P        P         14 57 24.2 -1.0
NRIK                                   IAmb     IAmb      14 57 35.4
      comp=Z,8.4nm,1.2s
BR131 Keskin Array S      63.35 311    P        P         14 57 29.0 -2.2
BR131                                  IAmb     IAmb      14 57 38.2
      comp=Z,8.7nm,0.9s
BRTR  Keskin Array B      63.35 311    P        P         14 57 29.6 -1.6
      comp=Z,1.2nm,0.8s,baz=130,slow=7.8,SNR=5.1
BRTR  Keskin Array B      63.35 311    P        P         14 57 29.2 -2.0
KLMR  Klimovskoe          67.50 334   eP        P         14 57 56.2 -1.3
KLMR                                   AMP                14 58 05.3
      comp=Z,19nm,1.4s
TIXI  Tiksi               68.14  11    P        P         14 58 00.0 -1.3
      comp=Z,8.9nm,0.5s,baz=187,slow=3.3,SNR=24
TIXI  Tiksi               68.14  11    P        P         14 57 59.7 -1.6
TIXI                                   IAmb     IAmb      14 58 03.3
      comp=Z,11nm,0.8s
AKASG Malin Array Be      69.15 322    P        P         14 58 07.0 -1.1
      comp=Z,0.2nm,0.3s,baz=93,slow=4.8,SNR=2.2
MNK   Minsk               70.95 326   i P       P         14 58 16.4 -2.5
      comp=E,2.0nm,0.8s
MNK                                   i P       P         14 58 16.4 -2.5
      comp=N,10.0nm,0.8s
MNK                                   i P       P         14 58 16.4 -2.5
      comp=Z,5.0nm,0.7s,baz=285
MNK                                   i PcP     PcP       14 58 36.4 -2.9
MNK                                   i PP      PP        15 00 53.6 -2.7
MNK                                   i PPP     PPP       15 02 36.6
MNK                                   i S       S         15 07 33.3 +0.3
MNK                                   i SS      SS        15 12 07.5 +1.5
MNK                                   i SSS     SSS       15 15 26.5
MNK                                   i LR      LR        15 29 59.9
MNK                                   i LRM     MLR       15 31 46.6
      comp=E,26nm,20.4s
MNK                                   i LRM     MLR       15 32 01.7
      comp=N,241nm,21.7s
MNK                                   i LRM     MLR       15 32 11.0
      comp=Z,82nm,19.7s
VTS   Vitosha             71.60 313    P        P         14 58 21.2 -2.2
NACGM Naroch              71.67 326   i P       P         14 58 29.3 +6.0
PABE  Paberze             73.38 326   eP        P         14 58 32.8 -0.7
CRVS  Cervenica-Dubn      73.71 319   eP        P         14 58 39.9 +4.3
CRVS                                  e                   14 58 56.9
FIA1  FINESS Array S      73.75 332    P        P         14 58 35.3 -0.3
FINES FINESS Array B      73.75 332    P        P         14 58 35.8 +0.2
      comp=Z,1.7nm,0.5s,baz=102,slow=6.0,SNR=7.2
FINES FINESS Array B      73.75 332    P        P         14 58 35.1 -0.5
BOSA  Boshof              75.36 238    P        P         14 58 47.0 +1.3
      comp=Z,5.4nm,0.8s,baz=58,slow=4.7,SNR=6.9
BOSA  Boshof              75.36 238    P        P         14 58 44.7 -1.1
BOSA                                   IAmb     IAmb      14 58 48.8
      comp=Z,24nm,1.4s
KEV   Kevo                75.89 341    P        P         14 58 47.9 +0.1
ARCES ARCESS Array B      76.32 340    P        P         14 58 50.2 -0.1
      comp=Z,3.4nm,0.7s,baz=98,slow=6.5,SNR=10
ARCES ARCESS Array B      76.32 340    P        P         14 58 49.5 -0.8
MORC  Moravsky Berou      76.36 319   eP        P         14 58 52.0 +1.0
KRLC  Kraliky             76.88 320   eP        P         14 58 56.5 +2.6
VRAC  Vranov              76.93 319   eP        P         14 58 56.3 +2.1
KRUC  Moravsky            77.04 319   eP        P         14 58 56.5 +1.7
DPC   Dobruska-Polom      77.19 320   eP        P         14 58 55.9 +0.2
CONA  Conrad Observa      77.32 317   eP        P         14 58 58.0 +1.6
      comp=Z,4.6nm,1.0s
UPP   Uppsala             77.50 330   eP        P         14 58 58.0 +1.0
ARSA  Arzberg             77.50 317   eP        P         14 58 58.0 +0.6
      comp=Z,4.3nm,0.9s
MAW   Mawson              77.64 192    P        P         14 58 59.8 +2.2
      comp=Z,4.5nm,1.0s,baz=11,slow=9.2,SNR=5.1
MAW                                    LR       LR        15 28 49.1
      comp=Z,274nm,18.4s,baz=45,slow=32
SOKA  Soboth              77.81 316   eP        P         14 59 01.4 +2.2
      comp=Z,9.6nm,1.2s
OBKA  Obir                78.13 316   eP        P         14 59 02.1 +1.1
      comp=Z,5.9nm,1.3s
MOA   Molln               78.38 317   eP        P         14 59 03.8 +1.5
      comp=Z,3.9nm,0.8s
CKRC  Cesky Krumlov       78.40 318   eP        P         14 59 07.1 +4.7
BRG   Berggiesshubel      78.74 320   eP        P         14 59 07.9 +3.7
BRG                                    Amp                14 59 11.7
      comp=Z,5.2nm,1.1s
MYKA  Terra Mystica       78.76 316   eP        P         14 59 07.1 +2.6
      comp=Z,8.3nm,1.0s
GERES GERESS Array B      78.80 318    P        P         14 59 06.6 +1.9
      comp=Z,2.8nm,0.9s,baz=79,slow=6.9,SNR=9.7
GERES GERESS Array B      78.80 318    P        P         14 59 03.5 -1.2
KHC   Kasperske Hory      78.90 319   eP        P         14 59 07.7 +2.6
KHC                                   ex        x         14 59 23.0
RUE   Ruedersdorf         78.93 322   eP        P         14 59 04.3 -0.8
KBA   Koelnbreinsper      78.98 317   eP        P         14 59 07.7 +1.9
      comp=Z,5.5nm,1.1s
CLL   Collm               79.35 321   e(PcP)    PcP       14 59 14.0 -1.6
ABTA  Abfaltersbach       79.54 316   eP        P         14 59 11.9 +3.2
      comp=Z,6.8nm,1.1s
CTI   Castel Tesino       80.13 315    P        P         14 59 10.9 -1.1
CTI                                    IAmb     IAmb      14 59 20.7
      comp=Z,10nm,0.9s
WTTA  Wattenberg          80.15 317   eP        P         14 59 13.4 +1.3
      comp=Z,8.2nm,1.1s
WATA  Walderalm           80.19 317   eP        P         14 59 13.2 +0.9
      comp=Z,3.6nm,0.7s
SQTA  Sankt Quirin        80.44 317   eP        P         14 59 14.9 +1.3
      comp=Z,6.1nm,1.0s
MOTA  Moosalm             80.51 317   eP        P         14 59 15.8 +1.7
      comp=Z,21nm,1.2s
RETA  Reutte              80.74 317   eP        P         14 59 16.2 +0.9
      comp=Z,5.0nm,0.6s
FETA  Feichten            80.77 316   eP        P         14 59 16.2 +0.7
      comp=Z,6.4nm,1.0s
NB2   NORSAR Subarra      80.77 331    P        P         14 59 16.4 +1.4
      comp=Z,1.3nm,0.7s,baz=98,slow=5.1
NOA   NORSAR Array B      80.77 331    P        P         14 59 15.1 +0.1
      comp=Z,2.8nm,0.8s,baz=94,slow=5.5,SNR=7.1
SALO  Salr                80.92 315    P        P         14 59 14.9 -1.2
DAVA  Damuels             81.34 317   eP        P         14 59 19.4 +0.9
      comp=Z,10nm,1.8s
SENIN Lac Senin/Sane      83.14 316    P        P         14 59 26.6 -1.5
SENIN                                  IAmb     IAmb      14 59 36.8
      comp=Z,7.9nm,0.8s
TORD  Torodi Ar. Bea      91.17 283    P        P         15 00 08.6 +1.1
      comp=Z,1.5nm,0.9s,baz=86,slow=4.4,SNR=6.8
TORD  Torodi Ar. Bea      91.17 283    P        P         15 00 04.9 -2.5
TORD                                   IAmb     IAmb      15 00 14.9
      comp=Z,5.7nm,1.4s
VNDA  Vanda               91.89 168    P        P         15 00 10.1 +0.8
      comp=Z,0.7nm,0.8s,baz=278,slow=9.3,SNR=2.5
ESDC  Sonseca Array       92.13 310    P        P         15 00 12.1 +0.6
      comp=Z,2.3nm,0.7s,baz=64,slow=4.2,SNR=6.5
A36M  Sachs Harbour       97.15  12    P        P         15 00 33.0 -0.7
VNA2  Neumayer--Watz     100.34 199    Pdiff    Pdif      15 00 44.8 -3.2
VNA3  Neumayer Olymp     101.02 199    Pdiff    Pdif      15 00 46.9 -4.1
NVAR  Mina Array Bea     125.58  32    PKP      PKiKP     15 06 04.0 -0.1
      comp=Z,2.2nm,0.9s,baz=285,slow=1.9,SNR=12
NVAR  Mina Array Bea     125.58  32             PKPdf     15 06 03.3 -0.4
PDAR  Pinedale Array     125.96  22    PKP      PKPdf     15 06 04.5 +0.1
      comp=Z,2.3nm,0.9s,baz=17,slow=1.5,SNR=10.0
PDAR  Pinedale Array     125.96  22             PKPdf     15 06 03.2 -1.2
TXAR  Lajitas Array      139.98  25    PKP      PKPdf     15 06 30.8  0.0
      comp=Z,0.9nm,0.9s,baz=198,slow=2.7,SNR=5.3
BDFB  Brasilia           142.27 253    PKP      PKiKP     15 06 37.0 -1.3
      comp=Z,2.5nm,0.8s,baz=90,slow=10,SNR=2.6
PLCA  Paso Flores        143.74 199    PKP      PKPdf     15 06 36.0 -1.2
      comp=Z,3.8nm,0.9s,baz=189,slow=4.8,SNR=6.8
CPUP  Villa Florida      146.93 231    PKPbc    PKPbc     15 06 44.7 -0.2
      comp=Z,2.1nm,0.8s,baz=94,slow=6.1,SNR=4.6
```

NEIC ***08*** *14:49:51.6±1.5, 0°.99N±0°.05×127°.57E±0°.05, h10^{km}±1^{km}, mb4.6/14, Error ellipse: s-maj=11.2km s-min=5.1km az=133.0*

DJA ***08*** *14:49:53.1±0.3, 1°N±2°×12°7E±°, h10^{km}, M4.0/11, mb4.2/1, MLv3.9/11*

IDC ***08*** *14:49:55.4±4.8, 1°.04N×127°.61E, h36^{km}±46^{km}, mb4.0/8, mb1 4.1/11, mb1mx3.7/55, mbtmp4.1/11, ML3.6/3, Error ellipse: s-maj=29.8km s-min=16.9km az=77.0*

ISC 08 14:49:50.9±0.6**, 1°.03N**±0°.05×**127°.58E**±0°.05**, h10**^{km}**, n43,** σ**1^{s}48**/46**, mb4.5**/15**, Halmahera**

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Code  Station Name          Δ°  AZ°    Phase ID              Time     Res
                                       Op       ISC       h  m  s     ISC
TNTI  Ternate              0.33 219    P        Pg        14 49 57.9 +0.4
TNTI                                   S        Sg        14 50 02.1 +0.1
TNTI  Ternate              0.33 219             Pg        14 49 57.6 +0.1
TNTI                                   Sg       Sg        14 50 01.5 -0.4
LBMI  Labuha               1.66 183    P        Pb        14 50 21.4 -0.2
LBMI                                   S        Sg        14 50 46.2 +1.8
SANI  Sanana               3.45 207    P        Pn        14 50 44.8 +0.1
KMSI  Cibinong             3.62 263    P        Pn        14 50 49.0 +1.9
SWI   Sorong               4.14 117    P        Pn        14 50 57.8 +3.6
SIJI  Sorong               4.15 117    Pn       Pn        14 50 56.6 +2.3
      1.7nm,0.3s,baz=316,slow=13,SNR=7.2
SIJI                                   Sn       Sn        14 51 43.4 +0.5
      1.0nm,0.3s,baz=2.0,slow=22,SNR=1.6
GTOI  Gorontalo            4.58 265    P        Pn        14 51 03.0 +2.7
LUWI  Luwuk                5.23 247    Pn       Pn        14 51 12.1 +2.9
MRSI  Marisa               5.66 264    P        Pb        14 51 25.3 -4.5
FAKI  Fak Fak              6.10 130    Pn       Pn        14 51 22.2 +0.9
TOLI2 Tolitoli             6.79 271             Pn        14 51 31.1 +0.4
MPSI  Mapaga               7.71 265    P        Pn        14 51 46.1 +2.9
TTSI  Tana Toraja          8.75 242    P        Pn        14 51 58.2 +0.7
KAPI  Kappang              9.86 232    Pn       Pn        14 52 14.8 +2.1
      2.1nm,0.3s,baz=103,slow=6.5,SNR=6.8
KAPI                                   Sn       Sn        14 54 01.1 -2.5
      0.8nm,0.3s,baz=185,slow=23,SNR=1.3
FITZ  Fitzroy Crossi      19.11 186    P        Pn        14 54 15.2 +0.3
      0.1nm,0.3s,baz=354,slow=9.2,SNR=1.9
WB0   Warramunga Arr      21.73 162    P        P         14 54 41.9 -0.6
WB0                                    IAmb     IAmb      14 54 46.5
      comp=Z,9.1nm,0.7s
WRAB  Tennant Creek       21.87 163    P        P         14 54 43.5 -0.5
WRAB                                   IAmb     IAmb      14 54 48.0
      comp=Z,14nm,0.7s
WRA   Warramunga Arr      21.88 163    P        P         14 54 44.9 +0.8
      comp=Z,13nm,0.8s,baz=342,slow=12,SNR=40
WB2   Warramunga Arr      21.88 163    P        P         14 54 43.7 -0.5
WB2                                    IAmb     IAmb      14 54 48.1
      comp=Z,15nm,0.8s
WR0   Warramunga Arr      21.95 162    P        P         14 54 43.3 -1.6
WR0                                    IAmb     IAmb      14 54 48.9
      comp=Z,9.1nm,0.7s
MNAI  Manna               25.18 258    P        P         14 55 17.4 +0.6
AS31  Alice Springs       25.31 166    P        P         14 55 17.1 -0.8
ASAR  Alice Springs       25.31 166    P        P         14 55 19.2 +1.3
      comp=Z,12nm,0.8s,baz=346,slow=10,SNR=4.1
ASAR  Alice Springs       25.31 166    P        P         14 55 17.2 -0.7
GSI   Gunungsitoli        29.99 271    P        P         14 55 57.3 -2.8
GSI                                    IAmb     IAmb      14 56 24.5
      comp=Z,17nm,0.8s
PATS  Pohnpei             31.19  79    P        P         14 56 07.5 -3.1
STKA  Stephens Creek      35.33 159    P        P         14 56 47.1 +0.7
      comp=Z,2.3nm,0.7s,baz=337,slow=9.5,SNR=6.4
STKA  Stephens Creek      35.33 159    P        P         14 56 46.8 +0.3
KSAR  Wonju Array Be      36.23   0    P        P         14 56 55.3 +1.2
KSRS  Korea Array         36.24   0    P        P         14 56 55.0 +0.8
      comp=Z,1.0nm,0.6s,baz=174,slow=9.9,SNR=4.4
MJAR  Matsushiro Arr      36.68  14    P        P         14 56 58.0  0.0
      comp=Z,2.7nm,0.9s,baz=195,slow=9.7,SNR=6.6
MJAR  Matsushiro Arr      36.68  14    IAmb     IAmb      14 57 17.5
      comp=Z,8.9nm,1.3s
SONM  Songino Array       50.10 342    P        P         14 58 47.0 +0.7
      comp=Z,2.0nm,1.0s,baz=136,slow=7.0,SNR=4.7
TUWZ  Tuamarina           59.54 141    P        P         14 59 54.0 -0.6
MK31  Makanchi Array      60.24 326    P        P         14 59 60.0 +0.5
MK31                                   IAmb     IAmb      15 00 02.8
      comp=Z,3.5nm,0.9s
MKAR  Makanchi Array      60.24 326    P        P         15 00 00.5 +1.0
      comp=Z,4.0nm,1.0s,baz=123,slow=7.4,SNR=7.0
MKAR  Makanchi Array      60.24 326    P        P         14 59 60.0 +0.5
TARG  Taragay, Kyrgy      60.31 319    P        P         14 59 60.0 -0.5
MAKZ  Makanchi            60.42 326    P        P         15 00 00.1 -0.6
MAKZ                                   IAmb     IAmb      15 00 05.4
      comp=Z,8.3nm,1.2s
ZALV  Zalesovo Beam       63.36 333    P        P         15 00 20.9 +0.6
      comp=Z,1.9nm,0.9s,baz=132,slow=6.4,SNR=3.6
ZALV  Zalesovo Beam       63.36 333    P        P         15 00 20.3 +0.1
KURK  Kurchatov           64.45 328    P        P         15 00 28.6 +1.0
KURK                                   IAmb     IAmb      15 00 32.0
      comp=Z,9.1nm,1.0s
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IDC ***08*** *14:54:21.1±0.6, 7°.07N×94°.72E, h0^{km}, mb4.1/22, mb1 4.1/23, mb1mx4.0/56, mbtmp4.0/23, ML3.8/1, Error ellipse: s-maj=26.7km s-min=12.1km az=56.0*

NEIC ***08*** *14:54:22.9±1.8, 7°.1N±0°.1×94°.76E±0°.08, h10^{km}±1^{km}, mb4.6/30, Error ellipse: s-maj=20.6km s-min=9.3km az=212.0*

ISC 08 14:54:24.8±0.5**, 7°.06N**±0°.08×**94°.75E**±0°.08**, h26**^{km}**, n69,** σ**1^{s}57**/65**, mb4.3**/38**, Nicobar Islands region**

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Code  Station Name          Δ°  AZ°    Phase ID              Time     Res
                                       Op       ISC       h  m  s     ISC
LHMI  Lhok Sumawe          2.84 130             Pn        14 55 09.0 +0.4
PSI   Prapat               5.93 135    Pn       Pn        14 55 52.8 +1.6
      2.4nm,0.3s,baz=316,slow=12,SNR=11
PSI                                    Sn       Sn        14 57 01.8 +3.4
      1.7nm,0.3s,baz=102,slow=20,SNR=1.7
RPSI  Rantau Prapat        6.01 136             Pn        14 55 52.8 +0.7
RPSI                                            Sn        14 57 01.8 +1.7
CMAR  Chiang Mai Arr      12.05  19    Pn       Pn        14 57 19.5 +4.5
      0.4nm,0.3s,baz=212,slow=14,SNR=12
MNAI  Manna               13.99 144    Pn       Pn        14 57 39.3 -2.3
DLV   T  Lat              14.39  69    P        P         14 57 54.6 +0.7
TAPN  Taplejung           21.26 343   eP        P         14 59 13.1 +3.5
JIRN  Jiri                22.04 339   eP        P         14 59 21.8 +3.8
      8.4nm,0.5s
PKIN  Phulchoki           22.25 338   eP        P         14 59 26.7 +6.5
      15nm,0.6s
DMN   Daman               22.39 337   eP        P         14 59 29.3 +7.6
DANN  Dangsing            23.59 335   eP        P         14 59 33.9 -0.1
H08S3 Diego Garcia H      26.57 237    T        T         15 26 46.8
      baz=56,slow=75,SNR=11
H08S2 Diego Garcia H      26.57 237    T        T         15 26 46.9
      baz=56,slow=75,SNR=14
H08S1 Diego Carcia H      26.58 237    T        T         15 26 41.2
      baz=56,slow=75,SNR=6.6
YULB  Yu-li               30.24  55    P        P         15 00 31.6 -2.2
YULB                                   IAmb     IAmb      15 00 54.7
      comp=Z,24nm,1.5s
NIL   Nilore              33.11 326    P        P         15 00 57.8 -1.1
NIL                                    IAmb     IAmb      15 01 23.4
      comp=Z,14nm,0.7s
GAR   Garm                38.68 329    P        P         15 01 45.4 -1.3
GAR                                    IAmb     IAmb      15 02 06.5
      comp=Z,9.5nm,0.8s
BTK   Batken              39.24 331    P        P         15 01 51.3  0.0
BTK                                    IAmb     IAmb      15 02 04.1
      comp=Z,7.2nm,0.9s
FITZ  Fitzroy Crossi      39.43 130    P        P         15 01 53.6 +0.6
      comp=Z,1.6nm,0.7s,baz=323,slow=6.8,SNR=2.1
JMZ   Minamidaito 2       39.45  57    P        P         15 01 53.9 +0.8
MK31  Makanchi Array      41.01 347    P        P         15 02 04.6 -1.2
MKAR  Makanchi Array      41.01 347    P        P         15 02 05.6 -0.2
      comp=Z,2.8nm,0.8s,baz=158,slow=8.1,SNR=9.7
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MKAR	Makanchi Array	41.01	347	P	P	15 02 04.6	-1.2
MAKZ	Makanchi	41.10	347	P	P	15 02 05.8	-0.7
SONM	Songino Array	41.83	12	P	P	15 02 13.3	+0.6
	comp=Z,1.9nm,0.8s,baz=201,slow=5.4,SNR=9.1						
SONM	Songino Array	41.83	12	P	P	15 02 12.2	-0.4
GEYT	Alibeck	45.21	318	P	P	15 02 41.4	+1.5
	comp=Z,1.2nm,0.5s,baz=168,slow=7.4,SNR=1.5						
KURBB	Kurchatov Arra	45.48	346	P	P	15 02 42.1	+0.3
	comp=Z,4.7nm,0.9s,baz=167,slow=7.1,SNR=17						
KURK	Kurchatov	45.55	346	P	P	15 02 42.0	-0.3
KURK				IAmb	IAmb	15 02 45.7	
	comp=Z,6.7nm,0.9s						
WB0	Warramunga Arr	47.26	125	P	P	15 02 54.7	-1.6
WB0				IAmb	IAmb	15 03 14.4	
	comp=Z,3.0nm,0.8s						
WRA	Warramunga Arr	47.30	125	P	P	15 02 55.8	-0.8
	comp=Z,0.7nm,0.7s,baz=302,slow=8.7,SNR=9.3						
WRA				PcP	PcP	15 04 29.4	+1.9
	comp=Z,0.4nm,0.5s,baz=310,slow=2.9,SNR=1.5						
WRA	Warramunga Arr	47.30	125	P	P	15 02 54.5	-2.1
WRAB	Tennant Creek	47.30	125	P	P	15 02 56.0	-0.6
WRAB				IAmb	IAmb	15 03 24.6	
	comp=Z,4.0nm,0.8s						
WB2	Warramunga Arr	47.31	125	P	P	15 02 55.5	-1.2
WB2				IAmb	IAmb	15 03 01.9	
	comp=Z,4.9nm,0.9s						
ZAA0	Zalesovo Array	47.44	352	P	P	15 02 57.3	+0.2
ZAA0				IAmb	IAmb	15 03 11.4	
	comp=Z,5.3nm,0.9s						
ZALV	Zalesovo Beam	47.44	352	P	P	15 02 57.5	+0.3
	comp=Z,4.2nm,0.8s,baz=169,slow=8.5,SNR=9.9						
ZALV	Zalesovo Beam	47.44	352	P	P	15 02 57.0	-0.1
WR0	Warramunga Arr	47.47	125	P	P	15 02 56.3	-1.7
WR0				IAmb	IAmb	15 03 17.6	
	comp=Z,4.6nm,0.9s						
ASAR	Alice Springs	48.93	130	P	P	15 03 08.8	-0.4
	comp=Z,0.9nm,0.8s,baz=303,slow=6.6,SNR=7.1						
ASAR				PcP	PcP	15 04 35.6	+2.3
	comp=Z,0.8nm,0.9s,baz=318,slow=2.6,SNR=1.8						
USRK	Ussuriysk Ar.	49.22	35	P	P	15 03 11.6	+0.5
BVAR	Borovoye Array	49.95	341	P	P	15 03 15.9	-0.6
	comp=Z,3.5nm,0.9s,baz=185,slow=9.8,SNR=9.5						
BRVK	Borovoye	50.01	341	P	P	15 03 16.7	-0.2
BRVK				IAmb	IAmb	15 03 23.3	
	comp=Z,3.9nm,0.6s						
ABKAR	Akbulak array	51.23	331	P	P	15 03 26.0	-0.2
AKTO	Aktyubinsk	52.95	331	P	P	15 03 38.4	-0.6
	comp=Z,1.6nm,0.5s,baz=125,slow=10,SNR=6.2						
ARU	Arti	56.87	337	P	P	15 04 07.4	+0.1
ARU				IAmb	IAmb	15 04 14.3	
	comp=Z,8.6nm,1.1s						
KMBO	Kilima Mbogo	57.94	264	P	P	15 04 15.3	-0.5
	comp=Z,1.0nm,0.5s,baz=60,slow=16,SNR=1.9						
STKA	Stephens Creek	59.11	134	P	P	15 04 23.2	-0.1
	comp=Z,1.5nm,0.7s,baz=316,slow=9.1,SNR=4.3						
STKA	Stephens Creek	59.11	134	IAmb	IAmb	15 04 30.6	
	comp=Z,0.9nm,0.9s						
NRIK	Noril'sk	62.38	357	P	P	15 04 45.8	+0.8
	comp=Z,0.8nm,0.4s,baz=159,slow=13,SNR=1.9						
NRIK	Noril'sk	62.38	357	IAmb	IAmb	15 04 52.4	
	comp=Z,2.1nm,0.9s						
BRTR	Keskin Array B	63.41	311	P	P	15 04 50.3	-2.4
	comp=Z,0.6nm,0.7s,baz=118,slow=9.4,SNR=3.1						
CAN	Canberra	66.18	133	P	P	15 05 10.4	-0.1
TIXI	Tiksi	67.91	11	P	P	15 05 20.6	-0.3
PEA0B	Petropavlovsk-	68.32	35	P	P	15 05 22.3	-1.4
PETK	Petropavlovsk-	68.32	35	P	P	15 05 22.3	-1.4
AKASG	Malin Array Be	69.16	322	P	P	15 05 28.3	-0.7
	comp=Z,0.1nm,0.3s,baz=95,slow=4.6,SNR=1.7						
KWAJ	Kwajalein Atol	72.09	83	P	P	15 05 45.8	-1.8
FIA1	FINESS Array S	73.71	332	P	P	15 05 57.1	+0.8
FINES	FINESS Array B	73.71	332	P	P	15 05 57.3	+1.0
	comp=Z,1.8nm,0.6s,baz=112,slow=9.2,SNR=6.5						
PSZ	Piszkesteto	74.65	318	P	P	15 06 02.6	+0.4
PSZ				IAmb	IAmb	15 06 14.2	
	comp=Z,3.0nm,0.8s						
BOSA	Boshof	75.67	238	P	P	15 06 09.9	+1.5
	comp=Z,1.9nm,0.8s,baz=84,slow=9.2,SNR=2.4						
BOSA	Boshof	75.67	238	P	P	15 06 07.8	-0.6
BOSA				IAmb	IAmb	15 06 25.2	
	comp=Z,11nm,1.2s						
ARCES	ARCESS Array B	76.23	340	P	P	15 06 10.8	+0.1
	comp=Z,3.8nm,0.9s,baz=94,slow=6.3,SNR=4.2						
GERES	GERESS Array B	78.83	318	P	P	15 06 24.6	-1.3
	comp=Z,1.3nm,1.0s,baz=76,slow=4.1,SNR=6.3						
NOA	NORSAR Array B	80.73	331	P	P	15 06 36.1	+0.3
	comp=Z,1.2nm,0.8s,baz=92,slow=5.4,SNR=3.8						
TORD	Torodi Ar. Bea	91.37	283	P	P	15 07 30.0	+0.8
	comp=Z,0.4nm,0.8s,baz=84,slow=5.5,SNR=3.1						
TORD	Torodi Ar. Bea	91.37	283	IAmb	IAmb	15 07 32.7	
	comp=Z,2.8nm,1.3s						
VNDA	Vanda	92.01	168	P	P	15 07 32.2	+1.3
	comp=Z,0.4nm,0.8s,baz=295,slow=10,SNR=2.2						
ESDC	Sonseca Array	92.20	310	P	P	15 07 32.2	-0.6
	comp=Z,0.3nm,0.6s,baz=55,slow=4.5,SNR=3.0						

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*BJI **08** 15:01:22.6±0.0, 27°.80N×67°.00E, h10^{km}, mB5.3/19, mb4.7/48, Ms4.5/9, Ms7 4.3/8*

*IDC **08** 15:01:22.2±0.4, 27°.79N×66°.90E, h0^{km}, mb4.5/35, mb1 4.6/38, mb1mx4.5/51, mbtmp4.5/38, ML4.7/2, MS3.8/1, Ms1 3.8/1, ms1mx3.1/50, Error ellipse: s-maj=12.0km s-min=10.3km az=23.0*

*MOS **08** 15:01:23.5±1.0, 27°.84N×66°.92E, h20^{km}, mb4.9/52, Error ellipse: s-maj=5.7km s-min=3.6km az=87.9*

*NEIC **08** 15:01:24.1±1.4, 27°.84N±0°.07×66°.89E±0°.08, h10^{km}±1^{km}, mb4.9/133, Error ellipse: s-maj=13.3km s-min=10.8km az=139.0*

ISC 08 15:01:26.7±0.3**, 27°.76N**±0°.04×**66°.88E**±0°.03**, h35**^{km}**, n489,** σ1^{s}**66**/522**, mb4.8**/152**, MS4.0**/3**, 7C-1D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BHUJ	Bhuj	5.14	150	*e*P	Pn	15 02 42.6	+1.4
BHUJ				*e*S	Sn	15 03 39.6	+0.3
BHUJ				IAML		15 03 44.5	
	comp=E,641nm,0.3s						
BHUJ				IAML		15 03 50.3	
	comp=N,657nm,0.5s						
SARP	Sargodha	6.52	49	P	Pn	15 02 58.6	-1.5
THW	Thamme Wali	6.55	39	⇑P	Pn	15 02 59.7	-0.8
KBL	Kabul	7.01	15	P	Pn	15 03 06.6	-0.4
KBL	Kabul	7.01	15	Pn	Pn	15 03 06.6	-0.4
AJM	Ajmer	7.04	99	*e*P	Pn	15 03 08.1	+0.8
AJM				*e*S	Sn	15 04 23.0	-3.1
CEP	Cherat	7.43	34	P	Pn	15 03 11.9	-0.8
HRA	Herat	7.70	330	Pn	Pn	15 03 16.2	-0.4
NIL	Nilore	8.03	42	P	Pn	15 03 19.6	-1.3
NIL	Nilore	8.03	42	Pn	Pn	15 03 19.6	-1.3
CHCP	Chirah Chowk	8.05	42	⇑P	Pn	15 03 20.0	-1.1
KUDL	Kundal	8.51	85	*e*P	Pn	15 03 26.0	-1.4
KUDL				*e*S	Sn	15 04 58.5	-3.7
WSAR	Wadi Sarin	8.70	241	Pn	Pn	15 03 30.1	0.0
	comp=N,19nm,0.3s,baz=95,slow=11,SNR=187						
WSAR				Sn	Sn	15 05 00.9	-6.1
	comp=N,8.3nm,0.3s,baz=347,slow=9.8,SNR=4.7						
WSAR	Wadi Sarin	8.70	241	P	Pn	15 03 30.1	0.0
WSAR				S	Sn	15 05 01.9	-5.1
JLN	Jalan Bani Buh	8.78	232	P	Pn	15 03 30.8	-0.4
	SNR=65						
JLN				S	Sn	15 05 04.8	-4.1
WBK	Wadi Bani Khal	8.81	236	P	Pn	15 03 31.4	-0.1
	SNR=84						
WBK				S	Sn	15 05 04.3	-5.4
BIDO	Bidbid	8.95	244	P	Pn	15 03 34.6	+1.1
	SNR=14						
BIDO				S	Sn	15 05 10.4	-2.8
SONA	Sohna	9.04	85	*e*P	Pn	15 03 32.8	-1.9
SONA				*e*S	Sn	15 05 13.3	-1.8
BHK	Bhakra	9.07	64	*e*P	Pn	15 03 41.8	+6.7
BHK				*e*S	Sn	15 05 16.4	+0.4
AYAN	Aya Nagar	9.08	83	*e*P	Pn	15 03 34.1	-1.1
NDI	New Delhi	9.17	82	*e*P	Pn	15 03 35.5	-1.0
NDI				*e*S	Sn	15 05 14.7	-3.8
NDI				*e*S	Sn	15 05 15.0	-3.4
SMDO	Samad	9.25	242	P	Pn	15 03 38.1	+0.4
	SNR=13						
SMDO				S	Sn	15 05 18.3	-2.3
DHRM	DHARAMSHALA	9.31	59	*e*P	Pn	15 03 37.3	-1.3
DHRM				*e*S	Sn	15 05 19.2	-3.0
DHRM				IAML		15 05 26.9	
	comp=E,312nm,0.2s						
DHRM				IAML		15 05 29.0	
	comp=N,428nm,0.8s						
HOQ	Hoqain	9.58	246	P	Pn	15 03 42.0	-0.2
	SNR=20						
SMLA	Simla	9.58	67	*e*P	Pn	15 03 41.3	-0.7
SMLA				*e*S	Sn	15 05 24.0	-4.4
SMLA				IAML		15 05 27.1	
	comp=N,159nm,0.8s						
SMLA				IAML		15 05 29.0	
	comp=E,225nm,0.2s						
JMDO	Jabal Madar	9.59	238	P	Pn	15 03 43.4	+1.1
	SNR=112						
BANOM	Banah	9.62	261	*i* P	Pn	15 03 43.4	+0.7
	SNR=8.3						
BANOM	Banah	9.62	261	P	Pn	15 03 43.8	+1.1
	SNR=8.7						
BANOM				S	Sn	15 05 27.2	-2.4
SHME	Shamm	9.73	262	*i* P	Pn	15 03 45.9	+1.7
	SNR=19						
SHME	Shamm	9.73	262	P	Pn	15 03 46.2	+2.0
	SNR=19						
SHME				P	Pn	15 03 46.2	+2.0
	SNR=19						
MDH	Madha	9.79	258	*i* P	Pn	15 03 45.1	+0.1
	SNR=18						
MDH	Madha	9.79	258	P	Pn	15 03 45.0	+0.1
	SNR=6.1						
MDH				⇑S	Sn	15 05 28.5	-5.0
MASF	Masafi	9.88	258	P	Pn	15 03 46.8	+0.5
	SNR=17						
MSFE	Esma-Masafi	9.89	258	*i* P	Pn	15 03 46.4	+0.1
	SNR=8.2						
UOSS	Minazif	9.97	256	*i* P	Pn	15 03 46.8	-0.7
	SNR=18						
UOSS	Minazif	9.97	256	P	Pn	15 03 47.2	-0.3
UOSS				S	Sn	15 05 32.4	-5.9
UOSS	Minazif	9.97	256	Pn	Pn	15 03 46.8	-0.7
SOHO	SOHO	9.98	251	*i* P	Pn	15 03 46.9	-0.7
	SNR=21						
SOHO	SOHO	9.98	251	P	Pn	15 03 47.8	+0.2
SOHO				S	Sn	15 05 33.8	-4.7
HATD	Hatta, Dubai	10.07	256	*i* P	Pn	15 03 49.0	+0.1
	SNR=13						
HATD	Hatta, Dubai	10.07	256	P	Pn	15 03 49.2	+0.3
	SNR=13						
BSY	Bisya	10.08	242	P	Pn	15 03 51.0	+2.0
	SNR=79						
BSY				S	Sn	15 05 39.2	-1.7
DDI	Dehra Dun	10.11	73	*e*P	Pn	15 03 51.3	+1.8
DDI				*e*S	Sn	15 05 37.4	-4.3
ASHO	Ashiyiah	10.18	255	*i* P	Pn	15 03 51.0	+0.5
	SNR=19						
ASHO	Ashiyiah	10.18	255	P	Pn	15 03 51.9	+1.4
	SNR=46						
ASHO				S	Sn	15 05 39.3	-4.1
ARQ	Araqi	10.33	247	P	Pn	15 03 55.9	+3.4
NAZ	Nazwa, Dubai	10.43	257	*i* P	Pn	15 03 57.0	+3.3
	SNR=6.6						
NAZ	Nazwa, Dubai	10.43	257	P	Pn	15 03 57.7	+4.0
	SNR=12						
MHTO	MHTO	10.55	232	P	Pn	15 03 57.1	+1.7
	SNR=8.9						
MHTO				S	Sn	15 05 49.8	-2.6
FAQ	Al Faqa, Dubai	10.56	256	*i* P	Pn	15 03 58.2	+2.6
	SNR=20						
FAQ	Al Faqa, Dubai	10.56	256	P	Pn	15 03 58.6	+3.0
	SNR=19						
FAQ				S	Sn	15 05 49.9	-2.8
ALNE	Al Ain	10.67	252	*i* P	Pn	15 03 59.4	+2.3
	SNR=21						
ALNE	Al Ain	10.67	252	P	Pn	15 03 59.9	+2.8
	SNR=21						
ASUD	Al Ashush, Dub	10.83	256	*i* P	Pn	15 04 01.8	+2.6
	SNR=14						
ASUD	Al Ashush, Dub	10.83	256	P	Pn	15 04 02.8	+3.6
	SNR=14						
CHGR	Chuyangaron	11.03	9	Pn	Pn	15 04 01.3	-0.7
GAR	Garm	11.57	13		Pn	15 04 09.2	-0.2
UMZA	Um Al Zommool	11.73	247	P	Pn	15 04 13.0	+1.4
DRK	Karamyk	12.38	18		Pn	15 04 19.9	-0.8
GEYT	Alibeck	12.52	326	Pn	Pn	15 04 23.7	+1.3
	comp=E,0.1nm,0.3s,baz=32,slow=26,SNR=1.5						
BTK	Batken	12.69	14	P	Pn	15 04 24.2	-0.5
BTK	Batken	12.69	14	Pn	Pn	15 04 24.2	-0.5
PYUN	Piuthan	14.25	85	*e*P	Pn	15 04 42.3	-3.9
SHMA	Al-Shehemyia	14.34	266	P	Pn	15 04 48.8	+1.7
SHMA				S	Sn	15 07 20.4	-4.6
TRNA	Turayna	14.37	261	P	Pn	15 04 49.3	+1.6
TRNA				S	Sn	15 07 19.9	-5.9
IUG	Iuzhnay	14.58	9	*e*P	Pn	15 04 49.8	-0.7
	baz=9.1						
IUG	Iuzhnay	14.58	9	*e*P	Pn	15 04 49.8	-0.7
KOLN	Koldanda	14.81	86	*e*P	Pn	15 04 48.6	-5.1
DOK	Doka	14.83	235	P	Pn	15 04 55.0	+1.1
	SNR=7.6						
DMTO	DMTO	14.86	230	P	Pn	15 04 54.7	+0.5
HYB	Hyderabad	14.90	131	*i* P	P	15 04 57.0	-3.1
HYB				*e*S	Sn	15 07 38.0	-0.8
DANN	Dangsing	14.92	84	*e*P	Pn	15 04 52.6	-2.7
AML	Almayashu	15.38	19	P	Pn	15 04 57.8	-3.6
RBK	Rabkut	15.51	232	P	Pn	15 05 04.2	+1.2
DZA	Taraz	15.52	12	*e*P	Pn	15 05 01.5	-1.4
	baz=12						
DZA	Taraz	15.52	12	*e*P	Pn	15 05 01.5	-1.4
WHFO	Wadi Hawf	15.54	234	P	Pn	15 05 03.6	+0.3
KK31	Karatay Array	15.59	10	P	Pn	15 05 01.2	-2.5
KK31				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KK31	Karatay Array	15.59	10	Pn	Pn	15 05 01.2	-2.5
KKAR	Karatay Array	15.59	10	P	Pn	15 05 03.4	-0.3
KKAR	Karatay Array	15.59	10	Pn	Pn	15 05 03.4	-0.3
GKN	Gorkha	15.71	85	*e*P	Pn	15 05 01.2	-4.3
AAK	Ala-Archa	16.08	21	Pn	Pn	15 05 08.3	-1.9
	comp=Z,1.4nm,0.3s,baz=197,slow=4.1,SNR=13						
AAK				Sn	Sn	15 07 55.4	-12
	comp=Z,0.2nm,0.3s,baz=14,slow=22,SNR=2.0						
AAK	Ala-Archa	16.08	21	P	Pn	15 05 08.3	-1.9
AAK	Ala-Archa	16.08	21	P	Pn	15 05 07.1	-3.1
AAK	Ala-Archa	16.08	21	Pn	Pn	15 05 08.1	-2.1
ABTO	Aybut	16.25	233	P	P	15 05 14.3	-0.8
KKN	Kakani	16.29	86	*e*P	Pn	15 05 09.0	-4.0
	comp=Z,21nm,0.6s						
PKI	Pulchoki	16.42	86	*e*P	Pn	15 05 11.0	-3.8
TKM2	Tokmak 2	16.70	23	P	Pn	15 05 16.5	-1.6
GUN	Gumba	16.81	85	*e*P	Pn	15 05 17.5	-2.3
	comp=Z,120nm,0.5s						
SGDS	Sogindy	16.86	20	*e*P	Pn	15 05 19.8	-0.3
	baz=20						
JIRN	Jiri	17.11	86	*e*P	Pn	15 05 20.5	-3.0
	comp=Z,160nm,0.5s						
TNSS	Tian-Shan	17.29	26	*e*P	Pn	15 05 22.5	-3.2
	baz=26						
PRZ	Przheval'sk	17.43	30	P	P	15 05 27.1	-1.0
PRZ				pmax	pmax		
	comp=Z,317nm,1.5s						
PRZ	Przheval'sk	17.43	30		P	15 05 27.1	-1.0
MDOK	Medeo	17.43	26	*e*P	Pn	15 05 25.2	-2.0
	baz=26						
MDOK	Medeo	17.43	26	*e*P	Pn	15 05 25.2	-2.0
RAMN	Ramite	17.54	88	*e*P	Pn	15 05 25.7	-3.1
	comp=Z,57nm,0.5s						
KUU	Kurty	17.81	23	*e*P	Pn	15 05 29.9	-1.9
	baz=23						
KUU	Kurty	17.81	23	*e*P	Pn	15 05 29.8	-1.9
SATY	Saty	17.89	28	*e*P	Pn	15 05 31.9	-1.0
	baz=28						
SATY	Saty	17.89	28	*e*P	Pn	15 05 31.8	-1.0
CHKK	Chushkaly	18.01	24	*e*P	Pn	15 05 33.2	-0.9
	baz=24						
BTLS	Baital	18.17	16	*e*P	P	15 05 36.1	0.0
	baz=16						
BTLS	Baital	18.17	16	*e*P	P	15 05 36.1	0.0
UZB	Uzynbulak	18.23	29	*e*P	Pn	15 05 36.6	-0.4
	baz=29						
UZB	Uzynbulak	18.23	29	*e*P	Pn	15 05 36.6	-0.4
ODAN	Odare	18.25	88	*e*P	P	15 05 36.4	-1.1
SHLS	Shalkode	18.43	30	*e*P	Pn	15 05 40.0	+0.5
	baz=31						
SHLS	Shalkode	18.43	30	*e*P	Pn	15 05 39.9	+0.5
TAPN	Taplejung	18.48	86	*e*P	Pn	15 05 39.7	-0.6
	comp=Z,34nm,0.5s						
PDGK	Podgornoye	18.58	30	P	Pn	15 05 41.1	-0.2
LKRN	Lenkeran, Azer	18.63	310	P	Pn	15 05 43.2	+1.5
TDK	Taldyqorghan	19.51	25	*e*P	P	15 05 47.8	-3.1
	baz=25						
TDK	Taldyqorghan	19.51	25	*e*P	P	15 05 47.7	-3.1
SOCY	Socotra	19.64	220	P	P	15 05 51.0	-1.5
SOCY				IAmb	IAmb	15 05 51.4	
	comp=Z,50nm,1.1s						
MNGR	Mingechevir, A	20.82	314	P	Pn	15 06 06.7	-0.9
SEKA	Sheki	20.98	315	P	Pn	15 06 08.2	-1.5
NAX	Nakhchivan	21.10	308	P	P	15 06 09.9	+1.6
GANJ	Ganja	21.25	313	P	P	15 06 12.1	+2.4
LSA	Lhasa	21.37	79	P	P	15 06 13.0	+1.4
LSA	Lhasa	21.37	79	P	P	15 06 11.6	0.0
LSA				pmax	pmax		
	comp=Z,31nm,1.0s						
LSA	Lhasa	21.37	79	P	P	15 06 11.6	0.0
LSA				IAmb	IAmb	15 06 14.6	
	comp=Z,31nm,1.0s						
MAK	Makhachkala	21.82	319	*e*P	P	15 06 11.5	-4.3
MAK				*e*S	S	15 10 10.8	-4.3
MAK				pmax	pmax		
	comp=Z,261nm,1.1s						
MAK				MLR	MLR		
	comp=Z,502nm,16.0s						
GNI	Garni	22.06	310	P	P	15 06 18.2	-0.4
	comp=Z,19nm,0.7s,baz=35,slow=5.9,SNR=11						
GNI	Garni	22.06	310	P	P	15 06 21.1	+2.4
GNI	Garni	22.06	310	*i* P	P	15 06 20.0	+1.4
GNI				pmax	pmax		
	comp=Z,26nm,0.8s						
GNI	Garni	22.06	310	P	P	15 06 17.6	-1.0
GNI				IAmb	IAmb	15 06 46.3	
	comp=Z,27nm,0.8s						
AB31	Akbulak array	22.12	348	*i* P	P	15 06 18.8	-0.1
ABKAR	Akbulak array	22.12	348	P	P	15 06 18.3	-0.5
ABKAR	Akbulak array	22.12	348	P	P	15 06 18.4	-0.5
ABKAR				IAmb	IAmb	15 06 38.2	
	comp=Z,18nm,0.9s						
MAKZ	Makanchi	22.42	28	P	P	15 06 21.0	-1.2
MAKZ	Makanchi	22.42	28	P	P	15 06 21.3	-0.9
MAKZ				IAmb	IAmb	15 06 27.1	
	comp=Z,28nm,0.9s						
SHL	Shillong	22.45	90	P	P	15 06 21.9	-1.0
SHL				pmax	pmax		
	comp=Z,19nm,0.7s						
SHL	Shillong	22.45	90	P	P	15 06 21.9	-1.0
SHL				IAmb	IAmb	15 06 27.7	
	comp=Z,19nm,0.7s						
MK31	Makanchi Array	22.54	28	P	P	15 06 22.1	-1.4
MK31				pmax	pmax		
	comp=Z,11nm,0.7s						
MK31	Makanchi Array	22.54	28	P	P	15 06 22.1	-1.4
MKAR	Makanchi Array	22.54	28	P	P	15 06 22.2	-1.3
	comp=Z,11nm,0.6s,baz=213,slow=8.3,SNR=60						
MKAR	Makanchi Array	22.54	28	*i* P	P	15 06 23.5	0.0
MKAR				pmax	pmax		
	comp=Z,11nm,0.6s						
MKAR	Makanchi Array	22.54	28	P	P	15 06 22.0	-1.5
BRZS	Berezniki	22.63	10	*e*P	P	15 06 23.4	-1.0
	baz=9.6						
BRZS	Berezniki	22.63	10	*e*P	P	15 06 23.4	-1.0
SIRT	Sirnak	22.70	302	P	P	15 06 26.5	+1.1
GROC	Groznyy	22.97	318	*e*P	P	15 06 29.0	+1.0
GROC				*e*		15 06 53.9	
GROC				pmax	pmax		
	comp=Z,59nm,1.0s						
WMQ	Urumqi	23.18	41	*e*P	P	15 06 33.0	+2.7
WMQ				pP	pP	15 06 36.4	-3.6
WMQ				pmax	pmax		
	comp=Z,43nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,190nm,5.5s						
WMQ				LR	LR		
	comp=Z,530nm,16.9s						
WMQ				LR	LR		
	comp=Z,470nm,15.3s						
GURO	Guroymak-BITLI	23.35	304	P	P	15 06 32.4	+0.4
AKTO	Aktyubinsk	23.63	346	P	P	15 06 34.3	-0.1
	comp=Z,6.1nm,0.8s,baz=166,slow=6.3,SNR=8.4						
ZEI	Tsey	23.91	315	*e*P	P	15 06 40.6	+3.2
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ONI	Oni	24.09	314	P	P	15 06 37.9	-1.0
ONI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ONI	Oni	24.09	314	P	P	15 06 37.9	-1.0
ZSN	Zaisan	24.17	31	*e*P	P	15 06 39.3	-0.3
	baz=31						
ZSN	Zaisan	24.17	31	*e*P	P	15 06 39.2	-0.3
PALK	Pallekele	24.23	145	LR	LR	15 16 12.1	
	comp=Z,218nm,21.1s,baz=125,slow=37						
PALK	Pallekele	24.23	145	P	P	15 06 39.7	-0.7
PALK				pmax	pmax		
	comp=Z,20nm,1.2s						
PALK	Pallekele	24.23	145	P	P	15 06 39.6	-0.7
NCK	Nalchik	24.47	316	*i* P	P	15 06 43.1	+0.8
NCK				pmax	pmax		
	comp=Z,11nm,0.3s						
KURBB	Kurchatov Arra	24.49	18	P	P	15 06 42.4	0.0
	comp=Z,6.9nm,0.6s,baz=210,slow=9.0,SNR=24						
KURK	Kurchatov	24.60	18	P	P	15 06 42.4	-1.0
KURK	Kurchatov	24.60	18	P	P	15 06 42.4	-1.0
KURK				IAmb	IAmb	15 06 46.6	
	comp=Z,15nm,0.9s						
NEY	Neytrino	24.88	315	*i* P	P	15 06 47.4	+1.1
NEY				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KBZ	Khabaz	25.02	316	P	P	15 06 48.6	+1.3
	comp=Z,6.1nm,0.9s,baz=115,slow=9.4,SNR=10						
KBZ	Khabaz	25.02	316	*i* P	P	15 06 48.5	+1.3
KBZ				pmax	pmax		
	comp=Z,13nm,0.9s						
SHA1	Shidzhatmaz	25.18	316	*i* P	P	15 06 51.3	+2.3
KIV	Kislovodsk	25.27	316	P	P	15 06 52.4	+2.7
KIV	Kislovodsk	25.27	316	*e*P	P	15 06 49.2	-0.5
KIV				pmax	pmax		
	comp=Z,21nm,1.1s						
KIV	Kislovodsk	25.27	316	P	P	15 06 50.9	+1.2
KIV				IAmb	IAmb	15 06 55.3	
	comp=Z,16nm,0.9s						
BVAR	Borovoye Array	25.37	5	P	P	15 06 51.6	+1.2
	comp=Z,11nm,0.6s,baz=199,slow=16,SNR=35						
BRVK	Borovoye	25.39	5	P	P	15 06 51.1	+0.5
BRVK				pmax	pmax		
	comp=Z,25nm,1.1s						
BRVK	Borovoye	25.39	5	P	P	15 06 51.1	+0.5
BRVK				IAmb	IAmb	15 06 58.0	
	comp=Z,25nm,1.1s						
ASF	Jabal al Asfar	26.30	287	P	P	15 07 01.2	+2.1
	comp=Z,4.6nm,0.7s,baz=40,slow=4.8,SNR=4.3						
DGZ	Jazzator, Alta	26.98	30	*i* P	P	15 07 05.9	+0.7
DGZ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BELG	Belogornoye	28.50	335	P	P	15 07 19.1	+0.6
	comp=Z,11nm,0.6s,baz=121,slow=5.3,SNR=4.3						
ARU	Arti	29.26	351	P	P	15 07 26.7	+1.5
	comp=Z,1.3nm,0.5s,baz=169,slow=4.3,SNR=6.0						
ARU				PcP	PcP	15 10 31.6	+0.2
	comp=Z,0.8nm,0.5s,baz=217,slow=5.1,SNR=3.5						
ARU	Arti	29.26	351	*d i*P	P	15 07 27.6	+2.4
ARU						15 08 17.1	
ARU				S	S	15 12 23.7	+8.1
ARU				SS	SnSn	15 13 50.8	+8.1
ARU				pmax	pmax		
	comp=Z,14nm,1.3s						
ARU	Arti	29.26	351	P	P	15 07 23.2	-2.0
ZAA0	Zalesovo Array	29.30	22	P	P	15 07 24.4	-1.1
ZALV	Zalesovo Beam	29.30	22	P	P	15 07 26.1	+0.5
	comp=Z,9.0nm,0.7s,baz=221,slow=8.9,SNR=20						
ZALV	Zalesovo Beam	29.30	22	P	P	15 07 24.3	-1.3
ZALV	Zalesovo Beam	29.30	22	P	P	15 07 24.3	-1.3
SVE	Sverdlovsk	29.39	353	*e*P	P	15 07 27.7	+1.4
SVE				pmax	pmax		
	comp=Z,9.0nm,1.3s						
GTA	Gaotai	29.64	58	⇑P	P	15 07 30.6	+1.6
GTA				pP	pP	15 07 34.9	-4.5
GTA				sP	sP	15 07 37.7	-6.1
GTA				pmax	pmax		
	comp=Z,13nm,1.1s						
BRTR	Keskin Array B	29.93	302	PcP	PcP	15 10 34.6	+0.9
	comp=Z,1.0nm,0.9s,baz=164,slow=4.9,SNR=4.1						
CHTO	Chiang Mai	30.70	100	P	P	15 07 38.1	-0.3
CHTO				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CHTO	Chiang Mai	30.70	100	P	P	15 07 38.1	-0.3
CHTO				IAmb	IAmb	15 07 40.4	
	comp=Z,9.0nm,0.8s						
CM31	Chiang Mai Arr	30.84	101	P	P	15 07 38.9	-0.7
CMAR	Chiang Mai Arr	30.84	101	P	P	15 07 40.7	+1.1
	comp=Z,3.3nm,0.6s,baz=287,slow=11,SNR=30						

CMAR				PcP	PcP	15 10 36.7	+0.5
	comp=Z,1.1nm,0.6s,baz=289,slow=5.0,SNR=4.8						
CMAR	**Chiang Mai Arr**	30.84	101	P	P	15 07 39.5	-0.1
ISP	**Isparta**	31.99	298	P	P	15 07 49.0	-0.7
ISP				pmax	pmax		
	comp=Z,24nm,1.3s						
ISP	**Isparta**	31.99	298	P	P	15 07 49.0	-0.7
ISP				IAmb	IAmb	15 07 55.6	
	comp=Z,24nm,1.3s						
KMI	**Kunming**	32.15	86	⇑P	P	15 07 53.2	+1.8
KMI				pmax	pmax		
	comp=Z,18nm,0.6s						
ELL	**Elmali**	32.36	296	P	P	15 07 53.0	+0.1
ELL				pmax	pmax		
	comp=Z,38nm,0.8s						
ELL	**Elmali**	32.36	296	P	P	15 07 53.0	+0.1
KIRV	**Kirov**	33.12	343	*i* P	P	15 07 59.8	+0.6
SLVN	**Son La**	34.19	92	P	P	15 08 09.6	+0.5
TIRR	**Tirgusor**	34.88	309	P	P	15 08 14.8	+0.2
TIRR				pmax	pmax		
	comp=Z,32nm,1.1s						
TIRR	**Tirgusor**	34.88	309	P	P	15 08 14.8	+0.2
MOY	**Mondy**	34.97	38	*e*P	P	15 08 17.2	+1.7
MOY				pmax	pmax		
	comp=Z,20nm,1.3s						
MOS	**Moscow**	34.97	331	*e*P	P	15 08 15.8	+0.5
MOS				pmax	pmax		
	comp=Z,28nm,0.9s						
OBN	**Obninsk**	35.03	330	*i* P	P	15 08 15.8	0.0
OBN				*i*		15 08 24.1	
OBN				*i*		15 09 32.8	
OBN				pmax	pmax		
	comp=Z,19nm,0.6s						
OBN	**Obninsk**	35.03	330	P	P	15 08 16.8	+1.1
ZAK	**Zakamensk**	35.65	41	*e*P	P	15 08 21.9	+0.5
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.2s						
LHMI	**Lhok Sumawe**	36.32	123	P	P	15 08 28.7	+1.4
XAN	**Xi'an**	36.42	69	P	P	15 08 28.7	+0.6
XAN				pP	pP	15 08 39.2	+0.6
XAN				pmax	pmax		
	comp=Z,14nm,1.0s						
TLY	**Talaya**	36.43	39	*e*P	P	15 08 30.7	+2.8
TLY				pmax	pmax		
	comp=Z,18nm,0.8s						
TLY	**Talaya**	36.43	39	P	P	15 08 29.5	+1.6
TLY				IAmb	IAmb	15 08 34.7	
	comp=Z,12nm,1.0s						
AKASG	**Malin Array Be**	36.51	319	P	P	15 08 28.4	-0.1
	comp=Z,1.4nm,0.6s,baz=110,slow=7.7,SNR=6.6						
AKASG	**Malin Array Be**	36.51	319	*i* P	P	15 08 29.2	+0.7
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKBB	**Malin Array Si**	36.51	319	P	P	15 08 28.0	-0.5
AKBB				pmax	pmax		
	comp=Z,7.0nm,0.9s						
AKBB	**Malin Array Si**	36.51	319	P	P	15 08 28.0	-0.5
SONM	**Songino Array**	36.59	46	P	P	15 08 31.3	+1.9
	comp=Z,9.6nm,1.0s,baz=256,slow=7.4,SNR=32						
SONM	**Songino Array**	36.59	46	P	P	15 08 29.8	+0.4
SONM				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SONM	**Songino Array**	36.59	46	P	P	15 08 29.8	+0.4
PRGR	**Permogore**	36.72	343	*e*P	P	15 08 34.5	+4.3
PRGR				pmax	pmax		
	comp=Z,77nm,1.4s						
ULN	**Ulaanbaatar**	37.01	46	*i* P	P	15 08 33.4	+0.3
ULN				pmax	pmax		
	comp=Z,11nm,1.1s						
ULN	**Ulaanbaatar**	37.01	46	P	P	15 08 33.6	+0.5
ENH	**Enshi**	37.19	76	P	P	15 08 34.7	0.0
UBPT	**Khong Chiam**	37.83	101	P	P	15 08 40.2	0.0
UBPT				IAmb	IAmb	15 08 41.7	
	comp=Z,15nm,1.1s						
KLMR	**Klimovskoe**	37.88	339	*e*P	P	15 08 39.1	-0.9
KLMR						15 10 04.8	
KLMR				*e*		15 10 56.1	
KLMR				pmax	pmax		
	comp=Z,18nm,1.4s						
KLMR	**Klimovskoe**	37.88	339	*e*P	P	15 08 39.2	-0.8
KLMR				AMP		15 08 40.8	
	comp=Z,18nm,1.4s						
KLMR				PP	PP	15 10 04.8	-1.9
KLMR				*e*PcP	PcP	15 10 56.1	+0.5
BURAR	**Bucovina Array**	37.89	313	P	P	15 08 40.3	-0.2
BUR08	**Bucovina Ar. S**	37.91	313	P	P	15 08 40.1	-0.5
VTS	**Vitosha**	38.19	305	P	P	15 08 42.1	-1.0
VTS				pmax	pmax		
	comp=Z,4.0nm,0.8s						
VTS	**Vitosha**	38.19	305	P	P	15 08 42.1	-1.0
HHC	**Hu-ho-hao-te**	38.76	58	*e*P	P	15 08 48.2	+0.4
HHC				pmax	pmax		
	comp=Z,17nm,0.9s						
HHC				pmax	pmax		
	comp=Z,820nm,9.5s						
ITM	**Ithomi**	38.76	296	P	P	15 08 47.5	-0.3
ITM				IAmb	IAmb	15 08 53.1	
	comp=Z,17nm,0.7s						
FNA	**Florina**	39.36	301	P	P	15 08 52.3	-0.5
FNA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
FNA	**Florina**	39.36	301	P	P	15 08 52.3	-0.5
PSI	**Prapat**	39.40	123	P	P	15 08 54.5	+1.0
	comp=Z,4.5nm,0.6s,baz=291,slow=11,SNR=3.8						
GSI	**Gunungsitoli**	39.44	127	P	P	15 08 55.8	+2.1
GSI				IAmb	IAmb	15 08 57.8	
	comp=Z,24nm,0.9s						
RPSI	**Rantau Prapat**	39.47	124	P	P	15 08 54.5	+0.6
NACGM	**Naroch**	39.66	324	*i* P	P	15 08 56.0	+1.0
KBN	**Korca**	39.80	301	P	P	15 08 56.5	0.0
KBN				pmax	pmax		
	comp=Z,32nm,1.4s						
KBN	**Korca**	39.80	301	P	P	15 08 56.5	0.0
KBN				IAmb	IAmb	15 09 00.6	
	comp=Z,32nm,1.4s						
KMBO	**Kilima Mbogo**	40.44	230	P	P	15 09 04.9	+2.7
	comp=Z,3.3nm,0.9s,baz=36,slow=11,SNR=6.0						
KMBO	**Kilima Mbogo**	40.44	230	P	P	15 09 04.7	+2.5
KMBO	**Kilima Mbogo**	40.44	230	P	P	15 09 04.0	+1.8
KMBO				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KMBO	**Kilima Mbogo**	40.44	230	P	P	15 09 04.0	+1.8
KIBK	**Kibwezi**	40.81	227	P	P	15 09 07.0	+1.9
WHN	**Wuhan**	41.32	74	⇑*i*P	P	15 09 10.8	+1.8
WHN				pmax	pmax		
	comp=Z,74nm,0.7s						
JRMM	**Jerantut**	41.40	119	P	P	15 09 12.0	+2.1
MORH	**Mrgy, Hungar**	41.98	309	*e*P	P	15 09 13.2	-1.1
BJT	**Baijiatuau**	42.22	60	P	P	15 09 16.3	0.0
BJT				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BJT	**Baijiatuau**	42.22	60	P	P	15 09 16.3	0.0
KOVH	**Kovagotottos**	42.34	309	*e*P	P	15 09 17.6	+0.4
TIP	**Timpagrande**	42.84	299	P	P	15 09 21.5	0.0
FIA1	**FINESS Array S**	43.22	333	P	P	15 09 24.1	0.0
FIA1				IAmb	IAmb	15 09 45.3	
	comp=Z,27nm,1.3s						
FINES	**FINESS Array B**	43.22	333	P	P	15 09 24.7	+0.6
	comp=Z,2.2nm,0.7s,baz=122,slow=8.0,SNR=14						
FINES	**FINESS Array B**	43.22	333	P	P	15 09 24.3	+0.2
FINES	**FINESS Array B**	43.22	333	P	P	15 09 24.3	+0.2
NRIK	**Noril'sk**	43.33	11	P	P	15 09 26.1	+1.2
	comp=Z,7.9nm,1.0s,baz=200,slow=2.5,SNR=7.0						
NRIK	**Noril'sk**	43.33	11	*i* P	P	15 09 24.8	-0.1
NRIK				pmax	pmax		
	comp=Z,12nm,1.1s						
NRIK	**Noril'sk**	43.33	11	P	P	15 09 25.3	+0.4
SGRT	**San Giovanni R**	43.66	302	P	P	15 09 27.9	-0.1
SGRT				IAmb	IAmb	15 09 30.8	
	comp=Z,16nm,0.8s						
VRAC	**Vranov**	43.87	313	*e*P	P	15 09 29.9	+0.4
KRUC	**Moravsky**	43.95	313	*e*P	P	15 09 31.4	+1.2
CONA	**Conrad Observa**	44.12	311	*e*P	P	15 09 32.0	+0.3
	comp=Z,4.6nm,1.7s						
DPC	**Dobruska-Polom**	44.23	315	*e*P	P	15 09 32.9	+0.4
DPC	**Dobruska-Polom**	44.23	315	*e*P	P	15 09 32.9	+0.4
ARSA	**Arzberg**	44.26	310	*e*P	P	15 09 32.5	-0.2
	comp=Z,5.4nm,0.9s						
OSTC	**Ostas**	44.34	315	*e*P	P	15 09 34.8	+1.5
CHVC	**Chvalec**	44.45	315	*e*P	P	15 09 35.2	+1.0
SOKA	**Soboth**	44.52	309	*e*P	P	15 09 35.3	+0.5
	comp=Z,2.8nm,0.8s						
PAOL	**Paolisi**	44.53	301	P	P	15 09 35.0	0.0
PAOL				IAmb	IAmb	15 09 36.4	
	comp=Z,9.7nm,0.6s						
MBAR	**Mbarara**	44.70	237	*i* P	P	15 09 37.6	+0.8
RAFF	**Raffo Rosso**	44.80	296	P	P	15 09 37.9	+0.7
OBKA	**Obir**	44.83	309	*e*P	P	15 09 38.4	+0.9
	comp=Z,5.1nm,1.1s						
NJ2	**Nanjing**	44.91	71	*e*P	P	15 09 37.9	-0.2
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MOA	**Molln**	45.17	311	*e*P	P	15 09 40.4	+0.3
	comp=Z,3.3nm,1.0s						
CKRC	**Cesky Krumlov**	45.27	312	*e*P	P	15 09 41.5	+0.7
TRI	**Trieste**	45.31	308	P	P	15 09 40.7	-0.3
TRI				pmax	pmax		
	comp=Z,7.0nm,0.6s						
TRI	**Trieste**	45.31	308	P	P	15 09 40.7	-0.3
TRI				IAmb	IAmb	15 09 41.7	
	comp=Z,7.2nm,0.6s						
MYKA	**Terra Mystica**	45.47	309	*e*P	P	15 09 40.6	-1.9
	comp=Z,3.4nm,0.7s						
HIA	**Hailar**	45.53	47	*i* P	P	15 09 43.0	+0.2
HIA				pmax	pmax		
	comp=Z,18nm,2.4s						
CORL	**Corleone**	45.59	297	P	P	15 09 43.6	+0.1
NRCA	**Norcia**	45.63	304	P	P	15 09 42.1	-1.7
NRCA				IAmb	IAmb	15 09 47.1	
	comp=Z,8.7nm,0.8s						
GEC2	**GERESS Array S**	45.67	312	P	P	15 09 43.9	-0.1
GERES	**GERESS Array B**	45.67	312	P	P	15 09 44.6	+0.5
	comp=Z,3.7nm,0.8s,baz=97,slow=7.7,SNR=20						
GERES	**GERESS Array B**	45.67	312	P	P	15 09 43.8	-0.3
GERES	**GERESS Array B**	45.67	312	P	P	15 09 43.8	-0.3
KBA	**Koelnbreinsper**	45.71	310	*e*P	P	15 09 45.1	+0.6
	comp=Z,9.1nm,0.9s						
KHC	**Kasperske Hory**	45.79	313	*e*P	P	15 09 44.9	0.0
KHC	**Kasperske Hory**	45.79	313	*e*P	P	15 09 44.9	0.0
BRG	**Berggiesshubel**	45.82	315	*e*P	P	15 09 46.4	+1.4
BRG				Amp		15 09 48.8	
	comp=Z,4.8nm,0.9s						
BRG				Amp		15 27 17.0	
	comp=Z,0.4nm,16.9s						
BRG				Amp		15 27 23.0	
	comp=E,0.3nm,17.8s						
BRG				Amp		15 27 24.0	
	comp=N,0.2nm,16.1s						
ZOU	**Zoufplan**	45.92	309	P	P	15 09 46.0	-0.1
MURB	**Monte Urbino**	46.07	304	P	P	15 09 47.9	+0.6
ABTA	**Abfaltersbach**	46.25	309	*i* P	P	15 09 49.1	+0.5
	comp=N,3.8nm,0.7s,SNR=5.6						
CLL	**Collm**	46.48	316	*e*P	P	15 09 49.0	-1.2
CLL				*i* *SP	pP	15 09 54.0	-7.0
CLL	**Collm**	46.48	316	*e*P	P	15 09 49.0	-1.2
CLL				*i* sP	pP	15 09 54.0	-7.0
CLL				*e*PP	PP	15 11 38.0	-1.6
CLL				*e*		15 11 57.0	
CLL				*e*		15 12 09.0	
TEOL	**Teolo**	46.75	307	P	P	15 09 52.2	-0.3
CTI	**Castel Tesino**	46.80	308	P	P	15 09 52.8	-0.2
CTI				pmax	pmax		
	comp=Z,9.0nm,1.3s						
CTI	**Castel Tesino**	46.80	308	P	P	15 09 52.8	-0.2
CTI				IAmb	IAmb	15 09 59.9	
	comp=Z,9.3nm,1.3s						
WTTA	**Wattenberg**	46.89	310	*e*P	P	15 09 53.5	-0.2
	comp=Z,8.8nm,0.7s						
WATA	**Walderalm**	46.94	310	*e*P	P	15 09 55.2	+1.1
	comp=Z,6.1nm,1.0s						
OSSC	**Osservatorio P**	47.01	305	P	P	15 09 54.7	+0.2
OSSC				IAmb	IAmb	15 10 20.5	
	comp=Z,5.5nm,0.8s						
SQTA	**Sankt Quirin**	47.18	310	*e*P	P	15 09 55.5	-0.4
	comp=Z,6.4nm,0.9s						
MNAI	**Manna**	47.22	127	P	P	15 09 57.3	+0.9
MOTA	**Moosalm**	47.26	310	*i* P	P	15 09 55.6	-1.0
	comp=Z,4.5nm,0.5s,SNR=8.1						
GRA1	**Grafenberg Arr**	47.39	313	P	P	15 09 57.0	-0.4
GRA1				IAmb	IAmb	15 10 20.8	
	comp=Z,21nm,1.3s						
GRF	**Grafenberg Arr**	47.39	313	P	P	15 09 57.0	-0.4
GRF				pmax	pmax		
	comp=Z,21nm,1.3s						
FETA	**Feichten**	47.49	310	*i* P	P	15 09 58.4	0.0
	comp=Z,9.9nm,0.9s,SNR=11						
RETA	**Reutte**	47.50	310	*i* P	P	15 09 57.9	-0.4
	comp=Z,4.3nm,0.7s,SNR=7.0						
SALO	**Salr**	47.57	308	P	P	15 09 59.1	+0.3
VLC	**Villacollemand**	47.64	306	P	P	15 09 58.6	-0.8
VLC				IAmb	IAmb	15 10 14.7	
	comp=Z,10.0nm,0.8s						
DAVA	**Damuels**	48.09	310	*i* P	P	15 10 02.7	-0.3
	comp=Z,8.6nm,0.6s,SNR=9.0						
ARCES	**ARCESS Array B**	48.11	342	P	P	15 10 03.3	+0.6
	comp=Z,2.4nm,0.5s,baz=130,slow=7.0,SNR=17						
ARCES	**ARCESS Array B**	48.11	342	P	P	15 10 01.8	-0.9
ARCES				pmax	pmax		
	comp=Z,37nm,1.5s						
ARCES	**ARCESS Array B**	48.11	342	P	P	15 10 01.8	-0.9
MSSA	**Maissana**	48.26	306	P	P	15 10 02.9	-1.4
MSSA				IAmb	IAmb	15 10 06.4	
	comp=Z,12nm,0.8s						
TUE	**Stuetta**	48.42	309	P	P	15 10 04.5	-1.1
TUE				IAmb	IAmb	15 10 16.4	
	comp=Z,11nm,0.7s						
VSL	**Villasalto**	48.55	299	P	P	15 10 07.2	+0.7
KEST	**Kesra**	48.97	294	P	P	15 10 10.8	+0.9
	comp=Z,13nm,0.7s,baz=326,slow=1.5,SNR=15						
KEST	**Kesra**	48.97	294	P	P	15 10 10.4	+0.6
KEST				IAmb	IAmb	15 10 14.8	
	comp=Z,15nm,0.8s						
KSM	**Kuching**	49.07	115	P	P	15 10 13.0	+2.2
NC602	**NORSAR Array S**	49.37	328	P	P	15 10 12.0	-0.4
NC602				IAmb	IAmb	15 10 33.1	
	comp=Z,22nm,1.1s						
NC405	**NORSAR Array S**	49.39	328	P	P	15 10 12.4	-0.2
NB2	**NORSAR Subarra**	49.60	328	P	P	15 10 13.9	-0.4
	comp=Z,4.4nm,0.8s,baz=108,slow=7.9						
NB2	**NORSAR Subarra**	49.60	328	P	P	15 10 13.9	-0.4
	comp=Z,5.8nm,0.9s,baz=108,slow=7.9						
NOA	**NORSAR Array B**	49.60	328	P	P	15 10 14.0	-0.3
	comp=Z,2.7nm,0.8s,baz=108,slow=7.4,SNR=8.6						
NBO00	**NORSAR Array S**	49.81	328	P	P	15 10 14.7	-1.0
SENIN	**Lac Senin/Sane**	49.83	309	P	P	15 10 15.2	-1.3
SENIN				IAmb	IAmb	15 10 18.4	
	comp=Z,5.5nm,0.7s						
SBUM	**Sibu**	50.06	112	P	P	15 10 20.0	+1.7
BNI	**Bardonecchia**	50.28	307	P	P	15 10 19.0	-0.8
BNI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BNI	**Bardonecchia**	50.28	307	P	P	15 10 19.0	-0.8
BNI				IAmb	IAmb	15 10 22.2	
	comp=Z,8.0nm,0.8s						
ZEA	**Zeya**	50.73	42	*e*P	P	15 10 25.1	+2.2
STKI	**Sintang**	50.84	115	P	P	15 10 25.8	+1.6
KSAR	**Wonju Array Be**	51.51	63	P	P	15 10 28.7	-0.3
KSAR	**Wonju Array Be**	51.51	63	P	P	15 10 28.7	-0.3
KSRS	**Korea Array**	51.54	63	P	P	15 10 29.9	+0.7
	comp=Z,6.9nm,0.8s,baz=271,slow=7.4,SNR=15						
SSB	**Saint Sauveur**	51.78	307	P	P	15 10 30.5	-0.5
SSB				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SSB	**Saint Sauveur**	51.78	307	P	P	15 10 30.5	-0.5
SPMM	**Sapulut**	52.39	107	P	P	15 10 38.0	+2.2
VOI	**Vohitsoka**	53.06	204	P	P	15 10 42.3	+1.7
VOI				IAmb	IAmb	15 10 43.6	
	comp=Z,19nm,0.9s						
YAK	**Yakutsk**	53.16	32	*e*P	P	15 10 40.9	+0.1
YAK				*e*		15 11 49.3	
YAK				*e*S	S	15 18 03.6	-5.2
YAK				*e*SS	SS	15 21 45.2	-3.0
YAK				pmax	pmax		
	comp=Z,30nm,1.3s						
YAK				pmax	pmax		
	comp=E,12nm,1.3s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.2s						
YAK				smax	smax		
	comp=E,129nm,3.6s						
YAK				smax	smax		
	comp=N,79nm,2.9s						
YAK	**Yakutsk**	53.16	32	P	P	15 10 40.2	-0.6
YAK				IAmb	IAmb	15 10 43.1	
	comp=Z,22nm,1.0s						
KLR	**Kul'dur**	53.38	48	*i* P	P	15 10 43.2	+0.6
KLR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
USRK	**Ussuriysk Ar.**	53.83	54	P	P	15 10 46.5	+0.4
	comp=Z,1.3nm,0.5s,baz=282,slow=6.0,SNR=2.3						
TIXI	**Tiksi**	55.16	20	*i* P	P	15 10 54.2	-1.0
TIXI	**Tiksi**	55.16	20	P	P	15 10 54.7	-0.5
JMN	**Monobe**	57.00	66	P	P	15 11 09.7	+0.6
JWT	**Wachi**	57.87	64	P	P	15 11 15.9	+0.8
ESDC	**Sonseca Array**	58.73	301	P	P	15 11 20.7	-0.4
	comp=Z,2.0nm,0.7s,baz=58,slow=7.1,SNR=11						
ESDC	**Sonseca Array**	58.73	301	P	P	15 11 21.0	-0.1
PAB	**San Pablo**	59.04	301	P	P	15 11 22.8	-0.6
PAB				pmax	pmax		
	comp=Z,9.0nm,1.2s						
PAB	**San Pablo**	59.04	301	P	P	15 11 22.8	-0.6
PAB				IAmb	IAmb	15 11 24.1	
	comp=Z,9.1nm,1.1s						
INU	**Inuyama**	59.14	64	P	P	15 11 25.2	+1.2
MJAR	**Matsushiro Arr**	59.79	62	P	P	15 11 28.9	+0.4
	comp=Z,2.8nm,1.0s,baz=294,slow=9.4,SNR=5.1						
MJAR				PcP	PcP	15 12 15.0	0.0
	comp=Z,2.4nm,0.9s,baz=289,slow=3.7,SNR=3.5						
PBRG	**Braganca**	60.36	304	*e*P	P	15 11 33.6	+1.3
MTE	**Manteigas**	61.26	303	*e*P	P	15 11 39.5	+1.0
PCBR	**Castelo Branco**	61.33	302	*e*P	P	15 11 39.6	+0.7
PBAR	**Barrancos**	61.40	300	*e*P	P	15 11 39.7	+0.3
NOR	**Nord**	61.77	350	*i* P	P	15 11 42.0	+0.8
NOR				IAmb	IAmb	15 11 43.7	
	comp=Z,3.1nm,0.8s						
COI	**Coimbra**	61.95	303	*e*P	P	15 11 44.5	+1.5
EVO	**Evora**	62.05	301	*e*P	P	15 11 44.1	+0.3
TORD	**Torodi Ar. Bea**	62.16	271	P	P	15 11 45.6	+0.9
	comp=Z,7.6nm,0.5s,baz=60,slow=6.3,SNR=73						
TORD	**Torodi Ar. Bea**	62.16	271	P	P	15 11 45.3	+0.5
DAG	**Danmarks Havn**	62.17	345	*i* P	P	15 11 44.8	+0.9
DAG				IAmb	IAmb	15 11 45.4	
	comp=Z,5.7nm,0.7s						
PCVE	**Castro Verde**	62.30	300	*e*P	P	15 11 49.6	+4.1
KOWA	**Kowa**	66.66	275	P	P	15 12 14.4	+0.1
KOWA				IAmb	IAmb	15 12 15.9	
	comp=Z,8.2nm,0.7s						
TSUM	**Tsumeb**	66.75	231	P	P	15 12 14.6	-0.2
TSUM				IAmb	IAmb	15 12 21.0	
	comp=Z,8.0nm,1.2s						
SOEI	**Soe**	66.88	115	P	P	15 12 15.0	-0.7
	comp=Z,22nm,1.3s						
SOEI	**Soe**	66.88	115	P	P	15 12 14.4	-1.3
BILL	**Bilibino**	67.98	24	*i* P	P	15 12 21.1	-0.7
BILL				*i*		15 12 30.2	
BILL				*i*		15 12 46.7	
BILL				*i*		15 14 49.5	
BILL				pmax	pmax		
	comp=Z,7.0nm,1.2s						
SUMG	**Summit**	68.21	342	P	P	15 12 24.5	+0.9
SUMG				pmax	pmax		
	comp=Z,19nm,1.5s						
SUMG	**Summit**	68.21	342	*i* P	P	15 12 24.9	+1.3
SUMG				IAmb	IAmb	15 12 29.1	
	comp=Z,6.8nm,0.6s						
SUMG	**Summit**	68.21	342	P	P	15 12 24.5	+0.9
SUMG				IAmb	IAmb	15 12 37.1	
	comp=Z,19nm,1.5s						
BOSA	**Boshof**	68.80	219	P	P	15 12 28.6	+1.1
	comp=Z,2.7nm,0.8s,baz=57,slow=6.2,SNR=5.9						
BOSA	**Boshof**	68.80	219	P	P	15 12 28.0	+0.5
BOSA				pmax	pmax		
	comp=Z,13nm,1.5s						
BOSA	**Boshof**	68.80	219	P	P	15 12 28.0	+0.5
BOSA				IAmb	IAmb	15 12 39.4	
	comp=Z,13nm,1.4s						
NEEM	**North Greenlan**	68.82	348	*i* P	P	15 12 28.0	+0.8
NEEM				IAmb	IAmb	15 12 29.1	
	comp=Z,5.5nm,0.7s						
MBWA	**Marble Bar**	70.54	128	P	P	15 12 38.4	+0.2
MBWA				IAmb	IAmb	15 12 39.8	
	comp=Z,11nm,0.9s						
DBIC	**Dimbokro**	70.77	267	P	P	15 12 40.5	+0.6
	comp=Z,5.6nm,0.8s,baz=55,slow=5.0,SNR=7.3						
DBIC	**Dimbokro**	70.77	267	P	P	15 12 40.1	+0.2
DBIC	**Dimbokro**	70.77	267	P	P	15 12 40.1	+0.2
DBIC				IAmb	IAmb	15 12 41.3	
	comp=Z,6.9nm,0.8s						
KIC	**Kosan Boka**	70.81	267	*e*P	P	15 12 40.3	+0.2
	comp=Z,9.1nm,0.6s						
TIC	**Toumodi**	70.92	268	*e*P	P	15 12 41.5	+0.6
LIC	**Lamto**	71.12	267	*e*P	P	15 12 42.1	+0.1
	comp=Z,51nm,1.5s						
EUNU	**Eureka**	71.42	355	P	P	15 12 44.0	+1.2
FITZ	**Fitzroy Crossi**	72.90	122	P	P	15 12 53.5	+0.9
	comp=Z,8.5nm,0.9s,baz=295,slow=3.6,SNR=7.0						
RES	**Resolute Bay**	77.11	355	P	P	15 13 17.0	+1.0
RES				pmax	pmax		
	comp=Z,7.0nm,1.2s						
RES	**Resolute Bay**	77.11	355	P	P	15 13 17.0	+1.0
RES				IAmb	IAmb	15 13 20.9	
	comp=Z,7.4nm,1.1s						
A36M	**Sachs Harbour**	80.17	4	P	P	15 13 34.4	+1.6
	baz=349,SNR=7.2						
A36M	**Sachs Harbour**	80.17	4	P	P	15 13 33.8	+1.0
A36M				IAmb	IAmb	15 13 36.8	
	comp=Z,15nm,1.1s						
TOLK	**Toolik Lake Re**	80.21	13	P	P	15 13 34.8	+1.6
	baz=328						
TOLK	**Toolik Lake Re**	80.21	13	P	P	15 13 34.5	+1.3
TOLK				IAmb	IAmb	15 13 35.7	
	comp=Z,19nm,1.1s						
WRA	**Warramunga Arr**	80.65	118	P	P	15 13 37.2	+1.0
	comp=Z,13nm,1.0s,baz=301,slow=4.4,SNR=54						
WRA	**Warramunga Arr**	80.65	118	P	P	15 13 37.3	+1.0
WRAB	**Tennant Creek**	80.66	118	*ce*P	P	15 13 37.6	+1.3
WRAB				pmax	pmax		
	comp=Z,22nm,1.0s						
WRAB	**Tennant Creek**	80.66	118	P	P	15 13 37.2	+0.9
WB2	**Warramunga Arr**	80.66	118	P	P	15 13 37.1	+0.7
WB2				IAmb	IAmb	15 13 38.4	
	comp=Z,22nm,1.1s						
WR0	**Warramunga Arr**	80.82	118	P	P	15 13 37.6	+0.4
WR0				IAmb	IAmb	15 13 39.6	
	comp=Z,18nm,1.4s						
COLD	**Coldfoot**	81.28	14	P	P	15 13 40.4	+1.5
	baz=327						
COLD	**Coldfoot**	81.28	14	P	P	15 13 40.1	+1.2
COLD				IAmb	IAmb	15 13 43.0	
	comp=Z,10nm,0.8s						
IMAR	**Indian Mountai**	81.52	16	P	P	15 13 40.9	+0.7
H21K	**Melozitna Rive**	82.01	16	P	P	15 13 44.2	+1.4
	baz=325						
H21K	**Melozitna Rive**	82.01	16	P	P	15 13 44.1	+1.3
H21K				IAmb	IAmb	15 13 46.8	
	comp=Z,11nm,0.8s						
BMAR	**Burnt Mountain**	82.20	12	P	P	15 13 45.8	+2.0
ASAR	**Alice Springs**	82.41	122	P	P	15 13 46.5	+1.0
	comp=Z,12nm,0.7s,baz=308,slow=5.3,SNR=90						
AS31	**Alice Springs**	82.41	122	P	P	15 13 46.4	+0.9
AS31				IAmb	IAmb	15 13 47.3	
	comp=Z,4.0nm,0.6s						
I21K	**Tanana**	82.60	15	P	P	15 13 47.3	+1.5
	baz=326						
I21K	**Tanana**	82.60	15	P	P	15 13 46.9	+1.1
I21K				IAmb	IAmb	15 13 50.0	
	comp=Z,10nm,0.9s						
H23K	**Yukon River**	82.61	14	P	P	15 13 47.8	+1.9
	baz=328						
H23K	**Yukon River**	82.61	14	P	P	15 13 47.3	+1.4
H23K				IAmb	IAmb	15 13 50.5	
	comp=Z,12nm,0.8s						
FYU	**Fort Yukon**	82.85	12	P	P	15 13 48.9	+1.8
J20K	**Nowinta River**	82.89	17	P	P	15 13 48.7	+1.3
	baz=324						
H24K	**Noodor Dome**	82.96	14	P	P	15 13 49.4	+1.7
	baz=329						
H24K	**Noodor Dome**	82.96	14	P	P	15 13 49.3	+1.5
H24K				IAmb	IAmb	15 13 52.2	
	comp=Z,7.7nm,0.8s						
MLY	**Manley**	83.02	15	P	P	15 13 49.2	+1.1
	baz=327						
MLY	**Manley**	83.02	15	P	P	15 13 49.1	+1.0
MLY				IAmb	IAmb	15 13 52.0	
	comp=Z,6.2nm,0.7s						
INK	**Inuvik**	83.03	8	P	P	15 13 49.3	+1.3
	comp=Z,7.4nm,0.5s,baz=352,slow=6.4,SNR=38						
INK	**Inuvik**	83.03	8	P	P	15 13 49.2	+1.3
INK				pmax	pmax		
	comp=Z,10.0nm,0.7s						
INK	**Inuvik**	83.03	8	P	P	15 13 49.3	+1.3
	baz=342,SNR=9.0						
INK	**Inuvik**	83.03	8	P	P	15 13 49.2	+1.3
I23K	**Minto, Yukon-K**	83.23	15	P	P	15 13 50.6	+1.5

	baz=328						
I23K	Minto, Yukon-K	83.23	15	P	P	15 13 50.0	+0.9
I23K				IAmb	IAmb	15 13 53.3	
	comp=Z,5.5nm,0.8s						
K20K	Telida	83.58	17	P	P	15 13 52.2	+1.2
	baz=324						
K20K	Telida	83.58	17	P	P	15 13 52.1	+1.1
CHUM	Lake Minchumin	83.60	16	P	P	15 13 52.2	+1.2
	baz=326						
MDM	Murphy Dome	83.64	14	P	P	15 13 52.5	+1.3
MDM				IAmb	IAmb	15 13 53.4	
	comp=Z,11nm,0.9s						
POKR	Poker Plat Res	83.68	14	P	P	15 13 52.9	+1.5
	baz=330,SNR=6.5						
POKR	Poker Plat Res	83.68	14	P	P	15 13 52.6	+1.2
POKR				IAmb	IAmb	15 13 54.4	
	comp=Z,12nm,1.0s						
PRP	Porcupine Dome	83.72	13	P	P	15 13 53.8	+2.0
	baz=332						
BPAW	Bear Paw Mtn.	83.74	16	P	P	15 13 52.6	+0.8
	baz=327						
NEA2	Nenana	83.77	15	P	P	15 13 53.1	+1.2
	baz=328,SNR=6.6						
NEA2	Nenana	83.77	15	P	P	15 13 52.8	+0.8
NEA2				IAmb	IAmb	15 13 55.5	
	comp=Z,8.9nm,0.9s						
TCOL	CIGO, UAF Yank	83.80	14	P	P	15 13 53.6	+1.6
	baz=330						
TCOL	CIGO, UAF Yank	83.80	14	P	P	15 13 53.2	+1.2
TCOL				IAmb	IAmb	15 13 55.8	
	comp=Z,8.4nm,0.9s						
COLA	College	83.80	14	P	P	15 13 52.3	+0.3
COLA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
COLA	College	83.80	14	P	P	15 13 52.3	+0.3
COLA				IAmb	IAmb	15 13 55.7	
	comp=Z,9.3nm,0.9s						
CAST	Castle Rocks	84.04	17	P	P	15 13 54.4	+1.1
	baz=326,SNR=9.8						
CAST	Castle Rocks	84.04	17	P	P	15 13 54.3	+0.9
IL31		84.09	14	P	P	15 13 53.5	0.0
IL31				IAmb	IAmb	15 13 55.2	
	comp=Z,12nm,1.4s						
ILAR	Eielson Array	84.09	14	P	P	15 13 54.0	+0.4
	comp=Z,2.0nm,0.6s,baz=322,slow=3.6,SNR=22						
ILAR	Eielson Array	84.09	14	P	P	15 13 53.3	-0.3
ILAR	Eielson Array	84.09	14	P	P	15 13 53.3	-0.3
HDA	Harding Lake	84.40	14	P	P	15 13 55.6	+0.5
	baz=330						
MCK	McKinley	84.54	15	P	P	15 13 56.6	+0.7
MCK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MCK	McKinley	84.54	15	P	P	15 13 57.0	+1.1
	baz=329						
MCK	McKinley	84.54	15	P	P	15 13 56.6	+0.7
MCK				IAmb	IAmb	15 13 59.3	
	comp=Z,7.2nm,0.8s						
J25K	Salcha River,	84.55	13	P	P	15 13 56.7	+0.7
	baz=332						
RND	Reindeer	84.84	15	P	P	15 13 57.6	+0.2
RND				pmax	pmax		
	comp=Z,8.0nm,0.9s						
RND	Reindeer	84.84	15	P	P	15 13 57.6	+0.2
RND				IAmb	IAmb	15 14 00.4	
	comp=Z,7.8nm,0.9s						
J26L	Joseph Creek	85.01	13	P	P	15 13 59.5	+1.2
	baz=333,SNR=13						
I29M	Ogilvie Camp,	85.15	10	P	P	15 13 59.9	+0.9
	baz=338,SNR=7.0						
EGAK	Eagle	85.21	12	P	P	15 14 00.4	+1.2
	baz=335						
EGAK	Eagle	85.21	12	P	P	15 14 00.1	+0.9
EGAK				IAmb	IAmb	15 14 02.0	
	comp=Z,18nm,1.5s						
SKT	Skwentna	85.38	17	P	P	15 14 00.8	+0.7
	baz=326						
SCRK	Sand Creek	85.39	13	P	P	15 14 01.5	+1.2
	baz=333,SNR=6.7						
SCRK	Sand Creek	85.39	13	P	P	15 14 00.8	+0.5
SCRK				IAmb	IAmb	15 14 04.2	
	comp=Z,5.8nm,1.0s						
DHY	Denali Highway	85.46	15	P	P	15 14 02.3	+1.6
	baz=330						
N19K	Bonanza Creek	85.53	19	P	P	15 14 02.8	+1.8
	baz=324						
N19K	Bonanza Creek	85.53	19	P	P	15 14 02.1	+1.1
DOT	Dot Lake	85.67	13	P	P	15 14 02.9	+1.3
DOT				IAmb	IAmb	15 14 05.2	
	comp=Z,8.2nm,1.2s						
WAT6	Susitna Watana	85.81	15	P	P	15 14 02.8	+0.4
	baz=330						
PAX	Paxson	85.98	14	P	P	15 14 04.3	+1.1
	baz=332						
SUA	Susitna One	86.02	17	P	P	15 14 04.2	+0.7
	baz=327,SNR=8.1						
SUA	Susitna One	86.02	17	P	P	15 14 04.2	+0.7
DAWY	Dawson	86.17	11	P	P	15 14 05.5	+1.5
	baz=337						
DAWY	Dawson	86.17	11	P	P	15 14 05.0	+0.9
DAWY				IAmb	IAmb	15 14 08.0	
	comp=Z,9.1nm,1.0s						
GHO	Glory Hole Cre	86.22	16	P	P	15 14 04.5	+0.1
PMR	Palmer	86.32	16	P	P	15 14 05.3	+0.6
PMR				pmax	pmax		
	comp=Z,30nm,1.4s						
PMR	Palmer	86.32	16	P	P	15 14 05.8	+1.1
	baz=329						
PMR	Palmer	86.32	16	P	P	15 14 05.3	+0.6
SML	Sawmill	86.34	16	P	P	15 14 06.2	+1.3
	baz=329,SNR=6.1						
L26K	Log Cabin Wild	86.38	13	P	P	15 14 06.8	+1.8
	baz=334						
RC01	Rabbit Creek A	86.60	17	P	P	15 14 07.0	+0.9
	baz=328						
RC01	Rabbit Creek A	86.60	17	P	P	15 14 06.7	+0.6
RC01				IAmb	IAmb	15 14 11.6	
	comp=Z,12nm,1.0s						
KNK	Knik Glacier	86.64	16	P	P	15 14 07.8	+1.4
	baz=329						
KNK	Knik Glacier	86.64	16	P	P	15 14 06.8	+0.4
L27K	Beaver Creek,	86.65	13	P	P	15 14 07.2	+0.9
	baz=335						
L27K	Beaver Creek,	86.65	13	P	P	15 14 06.5	+0.2
L27K				IAmb	IAmb	15 14 10.9	
	comp=Z,15nm,1.4s						
KLU	Klutina	87.18	15	P	P	15 14 09.9	+0.9
	baz=331						
KLU	Klutina	87.18	15	P	P	15 14 10.4	+1.3
KLU				IAmb	IAmb	15 14 13.6	
	comp=Z,9.7nm,0.9s						
M27K	Edge Creek, AK	87.28	13	P	P	15 14 11.1	+1.5
	baz=335						
M27K	Edge Creek, AK	87.28	13	P	P	15 14 11.1	+1.5
M31M	Drury Creek, Y	88.73	10	P	P	15 14 17.9	+1.6
	baz=341						
FARO	Faro, Yukon	88.86	9	P	P	15 14 18.6	+1.6
	baz=342						
N31M	Braeburn, Yuko	89.19	11	P	P	15 14 20.3	+1.8
	baz=340						
BCPM	Bancas Point	89.92	13	P	P	15 14 22.5	+0.5
YKA	Yellowknife Ar	90.05	1	P	P	15 14 22.2	-0.2
	comp=Z,5.1nm,1.0s,baz=356,slow=5.4,SNR=6.3						
STKA	Stephens Creek	92.57	125	P	P	15 14 35.5	+0.9
	comp=Z,3.4nm,0.7s,baz=316,slow=7.2,SNR=13						
STKA	Stephens Creek	92.57	125	P	P	15 14 35.5	+0.9
STKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
STKA	Stephens Creek	92.57	125	P	P	15 14 35.5	+0.9
NVAR	Mina Array Bea	113.97	4	PKiKP	PKiKP	15 20 04.6	+2.1
	comp=Z,0.5nm,0.7s,baz=349,slow=1.8,SNR=2.4						
TXAR	Lajitas Array	122.51	350	PKP	PKiKP	15 20 19.4	+0.2
	comp=Z,0.7nm,0.8s,baz=134,slow=3.6,SNR=4.3						
SIV	San Ignacio	130.62	272	PKP	PKiKP	15 20 35.6	+0.2
	comp=Z,0.9nm,0.7s,baz=24,slow=0.7,SNR=4.0						
CPUP	Villa Florida	130.65	258	PKP	PKiKP	15 20 34.3	-0.9
	comp=Z,2.2nm,0.9s,baz=296,slow=3.5,SNR=3.1						
LPAZ	La Paz	136.97	276	PKP	PKiKP	15 20 47.8	-1.3
	comp=Z,1.0nm,0.9s,baz=24,slow=23,SNR=3.7						
PLCA	Paso Flores	142.85	238	PKP	PKiKP	15 20 57.5	-2.2
	comp=Z,2.5nm,0.9s,baz=200,slow=4.2,SNR=4.4						

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*IDC **08** 15:09:26.1±11.0,6°.89N×94°.48E,h0^{km},mb3.9/5, mb1 3.9/6,mb1mx3.5/51,mbtmp3.9/6,ML3.4/1,MS3.9/1, Ms1 3.9/1,ms1mx2.9/55,Error ellipse: s-maj=208.4km s-min=75.3km az=155.0*

ISC 08 15:09:29.3±8.0,**6°.7N**±0°.9×**94°.9E**±0°.7,**h35^{km},n7,**σ**1^{s}.36**/6, **mb4.0**/5,**Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	12.39	18	Pn	Pn	15 12 23.5	+0.2
	0.1nm,0.3s,baz=216,slow=14,SNR=4.5						
MKAR	Makanchi Array	41.44	347	P	P	15 17 11.3	-1.2
	1.4nm,0.7s,baz=152,slow=7.1,SNR=5.0						
SONM	Songino Array	42.20	12	P	P	15 17 19.5	+0.6
	0.4nm,0.5s,baz=201,slow=8.0,SNR=2.1						
KURBB	Kurchatov Arra	45.90	346	P	P	15 17 47.7	-0.7
	2.5nm,0.8s,baz=161,slow=6.2,SNR=11						
ZALV	Zalesovo Beam	47.86	352	P	P	15 18 02.0	-1.6
	0.9nm,0.6s,baz=171,slow=10,SNR=3.7						
BVAR	Borovoye Array	50.37	341	P	P	15 18 23.6	+0.7
	1.6nm,0.7s,baz=185,slow=15,SNR=6.4						
AKTO	Aktyubinsk	53.36	331	LR	LR	15 44 31.1	
	comp=Z,103nm,18.1s,baz=84,slow=40						

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*IDC **08** 15:14:38.2±1.1,6°.67N×94°.49E,h0^{km},mb3.8/8,mb1 3.9/9, mb1mx3.7/44,mbtmp3.7/9,ML3.0/1,Error ellipse: s-maj=61.7km s-min=18.3km az=50.0*

*NEIC **08** 15:14:39.7±0.9,6°.53N±0°.08×94°.4E±0°.2,h10^{km}±1^{km}, mb4.1/7,Error ellipse: s-maj=28.4km s-min=8.3km az=245.0*

ISC 08 15:14:43.0±0.9,**6°.6N**±0°.1×**94°.5E**±0°.1,**h35^{km},n20,** σ**0^{s}.81**/20,**mb3.9**/13,**Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	2.81	118	Pn	Pn	15 15 25.0	-0.4
PSI	Prapat	5.81	130	Pn	Pn	15 16 07.2	+0.3
	0.4nm,0.3s,baz=134,slow=23,SNR=1.4						
RPSI	Rantau Prapat	5.88	131		Pn	15 16 07.2	-0.5
PBKT	Sadao Pong	11.82	32	Pn	Pn	15 17 29.0	-0.2
CMAR	Chiang Mai Arr	12.61	20	Pn	Pn	15 17 42.1	+2.1
	0.2nm,0.3s,baz=203,slow=16,SNR=1.1						
GAR	Garm	38.96	330	P	P	15 22 05.8	-0.1
GAR				IAmb	IAmb	15 22 13.5	
	comp=Z,4.9nm,1.1s						
MK31	Makanchi Array	41.43	347	P	P	15 22 25.7	-0.5
MK31				IAmb	IAmb	15 22 27.3	
	comp=Z,3.2nm,1.2s						
MKAR	Makanchi Array	41.43	347	P	P	15 22 26.0	-0.3
	comp=Z,0.8nm,0.7s,baz=175,slow=6.8,SNR=4.9						
MKAR	Makanchi Array	41.43	347	P	P	15 22 25.6	-0.6
MAKZ	Makanchi	41.52	347	P	P	15 22 26.4	-0.5
MAKZ				IAmb	IAmb	15 22 53.9	
	comp=Z,2.6nm,0.7s						
SONM	Songino Array	42.38	12	P	P	15 22 32.7	-1.3
	comp=Z,0.3nm,0.4s,baz=180,slow=5.8,SNR=1.9						
WRA	Warramunga Arr	47.25	125	P	P	15 23 13.3	+0.2
	comp=Z,0.8nm,0.9s,baz=313,slow=9.2,SNR=7.2						
ASAR	Alice Springs	48.84	129	P	P	15 23 26.4	+1.0
	comp=Z,0.4nm,0.5s,baz=301,slow=7.8,SNR=11						
BRVK	Borovoye	50.39	341	P	P	15 23 37.0	+0.3
BRVK				IAmb	IAmb	15 23 55.3	
	comp=Z,1.8nm,0.8s						
ABKAR	Akbulak array	51.53	332	P	P	15 23 45.8	+0.4
ABKAR				IAmb	IAmb	15 23 54.1	
	comp=Z,6.0nm,1.4s						
BRTR	Keskin Array B	63.52	311	P	P	15 25 09.4	-0.8
	comp=Z,0.5nm,0.5s,baz=109,slow=6.6,SNR=2.2						
TIXI	Tiksi	68.46	11	P	P	15 25 40.4	-0.7
FINES	FINESS Array B	74.02	332	P	P	15 26 15.0	+0.1
	comp=Z,2.1nm,0.9s,baz=83,slow=4.4,SNR=6.2						
ARCES	ARCESS Array B	76.60	340	P	P	15 26 30.3	+0.6
	comp=Z,3.6nm,0.9s,baz=64,slow=9.5,SNR=5.3						
GERES	GERESS Array B	79.01	318	P	P	15 26 44.5	+0.8
	comp=Z,0.3nm,0.5s,baz=99,slow=4.3,SNR=5.4						

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*FUNV **08** 15:16:44.5,8°.45N×71°.45W,h5^{km},MW3.2*

*NEIC **08** 15:16:45.0±1.8,8°.65N±0°.07×71°.46W±0°.05,h10^{km}±2^{km}, mb4.4/3,Error ellipse: s-maj=12.9km s-min=6.7km az=155.0*

*IDC **08** 15:16:46.5±2.5,8°.55N×71°.33W,h32^{km}±22^{km},mb3.5/1, mb1 3.9/3,mb1mx3.3/31,mbtmp3.8/3,ML2.8/2,MS4.2/3, Ms1 4.2/3,ms1mx3.2/29,Error ellipse: s-maj=40.4km s-min=23.7km az=140.0*

ISC 08 15:16:43.5±1.1,**8°.56N**±0°.02×**71°.45W**±0°.02,**h8^{km}**±8^{km},**n64,** σ**1^{s}.62**/95,**mb4.5**/3,**MS4.2**/3,**3D,Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.65	115	⇓*i*P	Pg	15 16 55.4	-0.5
SOCV				*e*S	Sg	15 17 03.5	-0.9
SOCV	Socops	0.65	115	⇓*e*P	Pg	15 16 55.3	-0.7
SOCV				*e*S	Sg	15 17 04.2	-0.2
SDV	Santo Domingo	0.87	68	Pg	Pg	15 17 00.9	+0.6
	40nm,0.3s,baz=234,slow=16,SNR=41						
SDV				Lg	Lg	15 17 12.6	
	251nm,0.3s,baz=273,slow=21,SNR=35						
SDV	Santo Domingo	0.87	68	*e*P	Pg	15 17 00.8	+0.6
SDV				*e*S	Sg	15 17 12.8	+1.2
SDV				*i*		15 17 14.5	
	comp=Z,495nm,0.4s						
SDV	Santo Domingo	0.87	68		Pg	15 17 00.7	+0.4
CAPV	Capacho	1.10	231	*e*P	Pb	15 17 03.1	-1.7
CAPV				⇓*e*S	Sb	15 17 18.2	-1.2
PAMC	Pamplona, Colo	1.73	226	*e*P	Pn	15 17 14.9	+0.6
PAMC				*e*S	Sb	15 17 39.3	+1.5
PAMC				*i*		15 17 41.3	
	comp=Z,629nm,0.3s						
MCQV	Machiques	1.83	324	*e*P	Pb	15 17 17.0	-0.2
MCQV				*e*S	Sb	15 17 41.6	+1.2
OCAC	Ocana	1.88	261	*e*P	Pn	15 17 17.0	+1.0
OCAC				*e*S	Sb	15 17 41.4	-0.4
OCAC				*i*		15 17 44.5	
	comp=Z,2µm,0.4s						
OCAC	Ocana	1.88	261	Pn	Pn	15 17 16.9	+0.8
TAMC	Tame, Arauca	2.13	189	*e*P	Pn	15 17 21.1	+1.7
TAMC				*e*S	Sb	15 17 50.4	+1.3
TAMC				*i*		15 17 58.8	
	comp=Z,206nm,0.6s						
LL1C	La Loma 1 Cana	2.30	295	*e*P	Pb	15 17 25.6	+0.3
LL1C				*e*S	Sb	15 17 55.2	+1.4
LL1C				*i*		15 18 02.2	
	comp=Z,570nm,0.5s						
DABV	Dabajuro	2.48	19	*e*P	Pn	15 17 25.8	+1.5
DABV				*e*S	Sb	15 17 57.5	-1.6
ELOV	Elorza	2.48	128	*e*P	Pb	15 17 28.6	+0.2
ELOV				*e*S	Sb	15 17 58.9	-0.3
ELOV				*i*		15 18 08.0	
	comp=Z,706nm,0.6s						
ELOV	Elorza	2.48	128	*e*P	Pn	15 17 24.2	0.0
ELOV				*e*S	Sn	15 17 53.6	-1.2
BARC	Barichara	2.60	222	*e*P	Pb	15 17 30.8	+0.3
BARC				*e*S	Sb	15 18 05.3	+2.6
BARC				*i*		15 18 10.2	
	comp=Z,128nm,0.4s						
SMLC	San Martn de	2.60	276	*e*P	Pn	15 17 26.5	+0.6
SMLC				*e*S	Sb	15 18 03.2	+0.6
SMLC				*i*		15 18 04.1	
	comp=Z,186nm,0.3s						
SIQV	Siquisique	2.64	38	*e*P	Pn	15 17 28.5	+2.2
SIQV				*e*S	Sn	15 18 00.4	+1.8
BRRC	Barranca, Sant	2.66	237	*e*P	Pn	15 17 28.2	+1.4
BRRC				*e*S	Sb	15 18 03.6	-0.8
BRRC				*i*		15 18 18.0	
	comp=Z,54nm,0.5s						
RUSC	La Rusia	3.10	212	*e*P	Pn	15 17 34.6	+1.4
RUSC				*e*S	Sn	15 18 11.4	+0.7
RUSC				*i*		15 18 24.0	
	comp=Z,49nm,0.5s						
URIC	Uribia, Colomb	3.17	350	Pn	Pn	15 17 33.0	-0.7
MAPV	Macapo	3.21	67	*e*P	Pn	15 17 35.2	+0.9
BAUV	El Baul	3.39	83	*e*P	Pn	15 17 37.6	+0.9
BAUV				*e*S	Sn	15 18 16.8	-0.3
BAUV	El Baul	3.39	83	Pn	Pn	15 17 37.4	+0.7
ZARC	Zaragoza, Cauc	3.54	253	*e*P	Pn	15 17 39.9	+1.2
ZARC				*e*S	Sb	15 18 27.1	-2.4
ZARC				*i*		15 18 37.0	
	comp=Z,81nm,0.3s						
ZARC	Zaragoza, Cauc	3.54	253		Pn	15 17 39.2	+0.5
JACV	Jacura	3.60	45	*e*P	Pn	15 17 40.9	+1.2
MONV	Montecano	3.68	23	*e*P	Pn	15 17 42.2	+1.5
MONV				*e*S	Sn	15 18 25.3	+1.1
SMRC	Santa Marta, M	3.77	314	*i* P	Pn	15 17 41.3	-0.6
SMRC				*e*S	Sn	15 18 24.3	-2.2
SMRC				*i*		15 18 43.6	
	comp=Z,31nm,0.4s						
SJCC	San Jacinto, C	3.92	290	*e*P	Pn	15 17 46.1	+2.1
SJCC				*e*S	Sn	15 18 34.2	+3.9
SJCC				*i*		15 18 38.3	
	comp=Z,23nm,0.6s						
SJCC	San Jacinto, C	3.92	290		Pn	15 17 45.8	+1.8
BENV	Beln	4.05	69	*e*P	Pn	15 17 46.4	+0.5
BENV				*e*S	Sn	15 18 32.7	-0.8
UREC	San Jos de Ur	4.12	259	*e*P	Pn	15 17 48.4	+1.6
UREC				*e*S	Sn	15 18 37.9	+2.7
UREC				*i*		15 18 40.2	
	comp=Z,17nm,0.2s						
MOTC	Monteria, Cord	4.17	273	*e*P	Pn	15 17 49.1	+1.6
MOTC				*e*S	Sg	15 18 56.3	-1.4
MOTC				*i*		15 19 04.6	
	comp=Z,14nm,0.5s						
MOTC	Monteria, Cord	4.17	273		Pn	15 17 48.9	+1.4
PTGC	Puerto Gaitan,	4.38	189	*e*P	Pg	15 18 10.1	+2.6
PTGC				*e*S	Sb	15 18 58.6	+4.8
PTGC				*i*		15 19 08.3	
	comp=Z,67nm,0.3s						
CHIC	Chingaza	4.51	210	*e*P	Pn	15 17 53.8	+1.3
CHIC				*e*S	Sn	15 18 44.2	-1.2
CHIC				*i*		15 18 50.5	
	comp=Z,22nm,0.3s						
NORC	Norcasia	4.51	229	*e*P	Pn	15 17 53.7	+1.5
NORC				*e*S	Sn	15 18 45.5	+0.6
NORC				*i*		15 19 02.4	
	comp=Z,20nm,0.6s						
ROSC	El Rosal	4.66	218	Pn	Pn	15 17 57.4	+2.8
	comp=Z,4.9nm,0.3s,baz=114,slow=23,SNR=6.3						
ROSC				Sn	Sn	15 18 50.0	+0.8
	comp=Z,1.5nm,0.3s,baz=36,slow=21,SNR=1.5						
ROSC	El Rosal	4.66	218		Pn	15 17 56.5	+2.0
PAYV	Puerto Ayacuch	4.88	129	*e*P	Pn	15 17 56.1	-1.2
VILC	Villavicencio,	4.95	207	*e*P	Pn	15 17 59.0	+0.8
VILC				*e*S	Sn	15 18 54.1	-1.6
VILC				*i*		15 19 04.1	
	comp=Z,2µm,0.5s						
CACV	CAICARA DEL OR	4.96	101	*e*P	Pb	15 18 05.6	-5.0
DBBC	Dabeiba	4.96	252	*e*P	Pb	15 18 07.2	-3.4
DBBC				*e*S	Sg	15 19 20.3	-2.5
DBBC				*i*		15 19 23.5	
	comp=Z,162nm,0.6s						
MERV	Las Mercedes	5.14	82	*e*P	Pn	15 18 01.1	+0.3
CBOC	Ciudad Bolivar	5.26	240	*e*P	Pn	15 18 05.9	+3.4
BIRV	Birongo	5.45	69	*e*P	Pn	15 18 05.5	+0.3
BIRV	Birongo	5.45	69	Pn	Pn	15 18 07.1	+2.0
CAP2	Capurgana	5.85	271	Pn	Pn	15 18 09.8	-0.7
ORTC	Ortega, Tolima	5.96	220	*e*P	Pn	15 18 13.6	+1.4
ORTC				*e*S	Sn	15 19 20.6	-0.1
ORTC				*i*		15 19 26.3	
	comp=Z,12nm,0.4s						
PLMC	San Jos del P	6.02	233	*e*P	Pn	15 18 15.2	+2.3
PLMC				*e*S	Sn	15 19 24.7	+2.6
PLMC				*i*		15 19 35.4	
	comp=Z,5.1nm,0.4s						
PRGV	PARIAGUAN	6.73	88	*e*P	Pn	15 18 22.3	-0.3
MACC	Macarena, Meta	6.80	201	*e*P	Pn	15 18 23.6	-0.1
MACC				*e*S	Sn	15 19 36.7	-4.6
MACC				*i*		15 19 43.0	
	comp=Z,16nm,0.3s						
PCRV	Puerto La Cruz	6.91	76	Pn	Pn	15 18 26.2	+1.0
	comp=Z,0.5nm,0.3s,baz=239,slow=7.1,SNR=1.5						
PCRV				Sn	Sn	15 19 42.9	-1.2
	comp=Z,0.5nm,0.3s,baz=262,slow=12,SNR=1.9						
PCRV	Puerto La Cruz	6.91	76	*e*P	Pn	15 18 24.9	-0.3
SCHQ	Schefferville	46.30	4	LR	LR	15 45 10.2	
	comp=Z,263nm,21.3s,baz=52,slow=37						
BW06	Boulder Array	47.70	322	P	P	15 25 21.5	+0.5
BW06				IAmb	IAmb	15 25 50.4	
	comp=Z,5.7nm,1.5s						
PD31	Pinedale Array	47.70	322	P	P	15 25 21.7	+0.7
PD31				IAmb	IAmb	15 25 32.5	
	comp=Z,2.8nm,1.5s						
PDAR	Pinedale Array	47.70	322	P	P	15 25 21.3	+0.3
	comp=Z,0.5nm,0.4s,baz=125,slow=11,SNR=6.4						
USHA	Ushuaia	63.20	178	LR	LR	15 54 43.1	
	comp=Z,314nm,18.6s,baz=249,slow=36						
KOWA	Kowa	66.15	78	LR	LR	15 53 12.9	
	comp=Z,122nm,19.3s,baz=14,slow=33						
A36M	Sachs Harbour	71.20	345	P	P	15 28 02.1	-0.4
A36M				IAmb	IAmb	15 28 26.6	
	comp=Z,9.5nm,1.5s						
ASAR	Alice Springs	151.46	235	PKPbc	PKPbc	15 36 37.7	-1.3
	comp=Z,0.3nm,0.8s,baz=114,slow=3.0,SNR=7.2						
WRA	Warramunga Arr	152.61	243	PKPbc	PKPbc	15 36 40.4	-1.2
	comp=Z,0.3nm,0.4s,baz=118,slow=2.6,SNR=10						

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*NOU **08** 15:20:49.9,17°.68S×167°.88E,h10^{km},MLv4.6/14, Vanuatu Islands*

*IDC **08** 15:20:52.9±13.0,17°.89S×167°.32E,h0^{km},mb4.1/4, mb1 4.2/5,mb1mx3.8/36,mbtmp4.0/5,ML3.6/1,MS4.7/1, Ms1 4.7/1,ms1mx3.1/42,Error ellipse: s-maj=231.2km s-min=36.8km az=72.0*

*NEIC **08** 15:20:52.7±2.0,17°.8S±0°.2×168°.0E±0°.2,h29^{km}±13^{km}, mb4.0/8,Error ellipse: s-maj=26.6km s-min=15.7km az=225.0*

ISC 08 15:20:51.9±1.2,**17°.8S**±0°.1×**168°.01E**±0°.09,**h32^{km},n31,** σ**1^{s}.07**/28,**mb4.1**/8,**Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	0.17	83	P	Pb	15 20 57.4	-0.6
RTV	Rentapao	0.40	96	P	Pb	15 21 00.6	-0.3
LIFNC	LIFOU	3.10	193	Pn	Pn	15 21 36.4	-2.1
LIFNC	LIFOU	3.10	193	P	Pn	15 21 39.3	+0.7
MARNC	Mare, Loyalty	3.71	180	Pn	Pn	15 21 45.2	-1.9
YATNC	Mamie plateau,	4.42	194	P	Pn	15 21 56.9	+0.2
KOUNC	Koumac, New Ca	4.49	231	P	Pn	15 21 57.2	-0.5
DZM	Mont Dzumac	4.55	199	Pn	Pn	15 21 58.5	0.0
	3.6nm,0.3s,baz=78,slow=12,SNR=117						
DZM				Sn	Sn	15 22 48.9	-1.5
	7.4nm,0.3s,baz=146,slow=21,SNR=11						
DZM	Mont Dzumac	4.55	199	P	Pn	15 21 58.7	+0.1
NOUC	Port Laguerre	4.62	200	P	Pn	15 22 00.1	+0.6
ONTNC	Ouen Toro	4.77	198	Pn	Pn	15 22 02.6	+1.2
ONTNC	Ouen Toro	4.77	198	P	Pn	15 22 02.8	+1.3
OUENC	Ouen Island, N	4.77	193	Pn	Pn	15 22 02.8	+1.2
OUENC	Ouen Island, N	4.77	193	P	Pn	15 22 03.6	+2.0
PINNC	Pines Island,	4.87	186	Pn	Pn	15 22 04.0	+1.0
PINNC	Pines Island,	4.87	186	P	Pn	15 22 03.9	+1.0
CTA	Charters Tower	20.71	260	P	Pn	15 25 34.0	+1.9
	6.4nm,1.0s,baz=80,slow=14,SNR=3.8						
BKZ	Black Stump Fm	22.58	163	P	P	15 25 50.0	+0.4
STKA	Stephens Creek	27.70	234	P	P	15 26 38.7	+1.4
	1.4nm,0.6s,baz=71,slow=11,SNR=5.9						
STKA	Stephens Creek	27.70	234	IAmb	IAmb	15 26 44.0	
	comp=Z,0.4nm,0.9s						
WR0	Warramunga Arr	31.72	261	P	P	15 27 12.5	-0.6
WR0				IAmb	IAmb	15 27 36.8	
	comp=Z,3.0nm,1.1s						
WB0	Warramunga Arr	31.86	261	P	P	15 27 14.2	-0.1
WB0				IAmb	IAmb	15 27 20.8	
	comp=Z,2.4nm,0.9s						
WB2	Warramunga Arr	31.90	261	P	P	15 27 14.4	-0.2
WRA	Warramunga Arr	31.91	261	P	P	15 27 14.1	-0.7
	comp=Z,0.7nm,0.9s,baz=82,slow=6.6,SNR=11						
WRA	Warramunga Arr	31.91	261	IAmb	IAmb	15 27 22.8	
	comp=Z,0.2nm,1.4s						
AS31	Alice Springs	32.39	254	P	P	15 27 17.7	-1.2
AS31				IAmb	IAmb	15 27 19.9	
	comp=Z,1.3nm,0.5s						
ASAR	Alice Springs	32.39	254	P	P	15 27 18.6	-0.3
	comp=Z,2.4nm,0.5s,baz=80,slow=8.9,SNR=88						
ASAR	Alice Springs	32.39	254	P	P	15 27 17.8	-1.1
FITZ	Fitzroy Crossi	40.25	263	P	P	15 28 26.1	+0.1
	comp=Z,3.4nm,0.7s,baz=114,slow=6.7,SNR=11						
JHJ	Hachijo jima 2	57.32	332	LR	LR	15 51 58.2	
	comp=Z,761nm,21.5s,baz=76,slow=33						
QSPA	South Pole Qui	72.30	180	P	P	15 32 14.8	+0.7
QSPA				IAmb	IAmb	15 32 29.8	
	comp=Z,1.6nm,1.2s						

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*IDC **08** 15:20:49.8±1.2,6°.77N×94°.24E,h0^{km},mb3.6/8, mb1 3.8/10,mb1mx3.6/45,mbtmp3.6/10,ML3.3/1,MS3.6/2, Ms1 3.6/2,ms1mx3.0/48,Error ellipse: s-maj=47.2km s-min=20.1km az=54.0*

ISC 08 15:20:53.3±1.0,**6°.8N**±0°.1×**94°.3E**±0°.2,**h21^{km},n12,** σ**1^{s}.18**/10,**mb3.5**/8,**Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	6.13	130	Pn	Pn	15 22 23.4	+0.6
	0.8nm,0.3s,baz=309,slow=12,SNR=3.8						
CMAR	Chiang Mai Arr	12.45	21	Pn	Pn	15 23 49.5	+0.1
	baz=262,slow=40,SNR=1.5						
PALK	Pallekele	13.45	273	LR	LR	15 28 38.7	
	comp=Z,124nm,18.6s,baz=207,slow=35						
MKAR	Makanchi Array	41.14	348	P	P	15 28 36.0	0.0
	0.7nm,0.7s,baz=169,slow=7.4,SNR=4.4						
SONM	Songino Array	42.17	12	P	P	15 28 43.7	-0.9
	0.7nm,1.0s,baz=167,slow=8.5,SNR=3.9						
WRA	Warramunga Arr	47.57	125	P	P	15 29 27.8	0.0
	0.2nm,0.6s,baz=304,slow=8.9,SNR=1.9						
ZALV	Zalesovo Beam	47.61	352	P	P	15 29 28.0	+0.3
	0.5nm,0.5s,baz=162,slow=8.8,SNR=2.6						
ASAR	Alice Springs	49.16	129	P	P	15 29 38.8	-1.4
	0.3nm,0.7s,baz=314,slow=7.1,SNR=3.4						
OPO	Ambohidratompo	52.81	241	LR	LR	15 47 52.9	
	comp=Z,109nm,21.8s,baz=3.0,slow=31						
BRTR	Keskin Array B	63.20	311	P	P	15 31 18.7	-1.7
	0.5nm,0.7s,baz=122,slow=5.4,SNR=2.2						
FINES	FINESS Array B	73.69	332	P	P	15 32 26.2	+0.8
	4.2nm,1.0s,baz=132,slow=11,SNR=4.4						
GERES	GERESS Array B	78.68	318	P	P	15 32 55.9	+1.7
	0.4nm,0.7s,baz=83,slow=4.1,SNR=2.3						

TUL ***08*** *15:31:17.2±1.2, 36°.93N±0°.02×97°.69W±0°.03, h4km±7km, ML2.9, mb_Lg2.9/42(NEIC), Error ellipse: s-maj=3.5km s-min=2.3km az=62.0*

NEIC 08 15:31:17.2±0.8**, 36°.90N**±0°.02×**97°.68W**±0°.03**, h5**km±7km**, Error ellipse: s-maj=3.7km s-min=2.4km az=56.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.15	251	Pg	Pg	15 31 20.8	+0.5
GC02				Sg	Sg	15 31 23.1	+0.8
KAN17	Caldwell West	0.16	334	Pg	Pg	15 31 20.4	0.0
KAN13	South Haven SW	0.20	55		Pg	15 31 21.3	+0.2
KAN13				Sg	Sg	15 31 23.4	-0.3
KAN14	Manchester OK	0.23	284		Pg	15 31 22.0	+0.2
KAN09	Caldwell North	0.24	12		Pg	15 31 21.8	-0.1
KAN09				Sg	Sg	15 31 24.5	-0.5
KAN05	Bluff City Nor	0.26	323		Pg	15 31 22.2	-0.1
KAN05				Sg	Sg	15 31 25.2	-0.5
KAN01	Argonia South	0.26	346		Pg	15 31 22.1	-0.2
KAN01				Sg	Sg	15 31 24.8	-0.9
KS20	Mayfield South	0.34	17		Pg	15 31 23.7	-0.1
KS20				Sg	Sg	15 31 27.6	-0.7
KAN06	Argonia West S	0.38	337		Pg	15 31 24.2	-0.2
KAN06				Sg	Sg	15 31 29.0	-0.4
BLOK	Blackwell	0.40	111		Pg	15 31 25.1	+0.3
KAN08	Anthony NE Sta	0.40	324		Pg	15 31 24.8	-0.1
KAN10	Anthony SW Sta	0.40	304	Pg	Pg	15 31 24.9	0.0
OK032	Salt Plains WL	0.44	257		Pg	15 31 25.8	+0.1
KAN16	Harper SW Stat	0.45	316	Pg	Pg	15 31 25.6	-0.2
CROK	Carrier	0.47	212	Pg	Pg	15 31 26.8	+0.7
KAN12	Harper NE Stat	0.47	327		Pg	15 31 25.9	-0.4
T35A	Sooner Cattle	0.94	89		Pg	15 31 34.6	-0.6
QUOK	Quay	1.07	133		Pg	15 31 37.4	-0.3
OK029	Liberty Lake	1.12	171		Pg	15 31 38.7	+0.1
OK031	S. Brethren Rd	1.16	144		Pg	15 31 39.4	-0.1
U32A	Winter Ranch,	1.19	244	Pg	Pg	15 31 39.4	-0.5
OK030	Cody Creek RV	1.21	143		Pg	15 31 40.1	-0.3
BCOK	Bluff Creek, N	1.24	177	Pn	Pg	15 31 40.9	-0.1
OK025	Westminster Rd	1.35	168		Pb	15 31 42.8	-0.1
OK025				IAmb_Lg		15 32 02.3	
	comp=Z,49nm,0.7s						
OKCFA	Oklahoma City	1.49	173		Pn	15 31 45.1	+0.4
OKCSW	OKLAHOMA CITY	1.50	173		Pb	15 31 45.4	-0.2
FNO	Franklin	1.66	172		Pn	15 31 47.5	+0.5
R32A	Long Quarter,	1.73	332		Pn	15 31 48.1	+0.2
TUL1	Leonard	1.81	122		Pn	15 31 49.4	+0.3
X34A	Smith Ranch, M	2.30	183	Pn	Pn	15 31 55.7	-0.1
X34A				IAmb_Lg		15 32 36.6	
	comp=Z,37nm,0.8s						
WMOK	Wichita Mounta	2.34	203		Pn	15 31 56.4	+0.1
WMOK				IAmb_Lg		15 32 34.5	
	comp=Z,65nm,1.0s						
KSU1	Kansas State U	2.35	21		Pn	15 31 55.5	-1.0
KSU1				IAmb_Lg		15 32 31.0	
	comp=Z,71nm,0.9s						
CBKS	Cedar Bluff	2.51	320	Pn	Pn	15 31 57.9	-0.8
CBKS				IAmb_Lg		15 32 41.8	
	comp=Z,45nm,1.1s						
U38A	Gravette	2.69	99		Pn	15 32 01.0	-0.1
LOOK	Love County	2.93	172	Pn	Pn	15 32 04.5	0.0
LOOK				IAmb_Lg		15 32 55.4	
	comp=Z,23nm,0.9s						
X37A	Clayton	2.97	140	Pn	Pn	15 32 05.5	+0.4
X37A				IAmb_Lg		15 32 55.5	
	comp=Z,46nm,0.9s						
HHAR	Hobbs	3.07	100		Pn	15 32 07.0	+0.6
HHAR				IAmb_Lg		15 33 02.0	
	comp=Z,34nm,0.8s						
S39A	Bolivar	3.56	76		Pn	15 32 12.8	-0.4
Z35A	Perchaven, San	3.58	174	Pn	Pn	15 32 14.0	+0.6
W39A	Magazine	3.58	117	Pn	Pn	15 32 13.7	+0.3
W39A				IAmb_Lg		15 33 13.8	
	comp=Z,40nm,0.8s						
AMTX	Amarillo	3.82	239	IAmb_Lg		15 33 24.7	
	comp=Z,39nm,0.9s						
N33A	J Bar K, Exete	3.84	3	IAmb_Lg		15 33 28.2	
	comp=Z,25nm,0.8s						
U40A	Yellville	3.92	97		Pn	15 32 17.9	-0.1
U40A				IAmb_Lg		15 33 21.2	
	comp=Z,36nm,1.0s						
MIAR	Mount Ida	4.08	124	Pn	Pn	15 32 21.9	+1.6
P38A	Dawn	4.25	49	Pn	Pn	15 32 22.2	-0.3
MGMO	Mountain Grove	4.34	85	Pn	Pn	15 32 23.5	-0.3
R40A	Maddies Statio	4.51	70		Pn	15 32 25.9	-0.4
ABTX	Abilene, Hawle	4.56	201	Pn	Pn	15 32 26.6	-0.3
FCAR	Ozark Folk Cen	4.59	101	Pn	Pn	15 32 27.4	+0.1
X40A	Basin Creek Fa	4.62	120	Pn	Pn	15 32 27.5	-0.2
X40A				IAmb_Lg		15 33 49.1	
	comp=Z,31nm,1.0s						
WHAR	Wooly Hollow	4.65	109	IAmb_Lg		15 33 57.2	
	comp=Z,20nm,0.7s						
WLAR	White Oak Lake	4.92	129	IAmb_Lg		15 33 58.1	
	comp=Z,18nm,0.7s						
CCM	Cathedral Cave	5.25	75	IAmb_Lg		15 34 17.1	
	comp=Z,26nm,1.2s						
LCAR	Lake Charles	5.32	97	IAmb_Lg		15 34 09.0	
	comp=Z,18nm,1.2s						
PBMO	Poplar Bluff	5.81	89	IAmb_Lg		15 34 25.7	
	comp=Z,19nm,0.8s						
FVM	French Village	5.87	77	IAmb_Lg		15 34 21.9	
	comp=Z,18nm,0.8s						
435B	Jarrell	6.10	179	IAmb_Lg		15 34 35.7	
	comp=Z,20nm,0.8s						
344A	Westbrook Farm	7.91	131	IAmb_Lg		15 35 41.8	
	comp=Z,12nm,1.1s						

KRNET ***08*** *15:33:28.6±0.1, 38°.67N×70°.10E, h12km, mb3.8*

NNC ***08*** *15:33:30.7±10.0, 38°.48N×69°.55E, h15km±174km, mb4.0, mpv3.7, Error ellipse: s-maj=164.0km s-min=34.0km az=10.0*

ISC 08 15:33:30.4±1.3**, 38°.74N**±0°.08×**70°.06E**±0°.05**, h10**km**, n17,** σ**3**^{s}.**41**/25**, 12C-10D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAR	Garm	0.32	38	⇓iP	Pg	15 33 35.8	-1.2
	baz=28						
GAR				⇓iS	Sg	15 33 41.6	+0.3
	baz=28						
CHGR	Chuyangaron	0.71	263	⇑iP	Pg	15 33 42.9	-1.3
	baz=69						
CHGR				⇑iS	Sg	15 33 53.2	-0.3
	baz=69						
BTK	Batken	1.44	24	⇑iP	Pb	15 33 56.6	-0.8
	baz=22						
BTK				⇑iS	Sg	15 34 17.3	+0.6
	baz=22						
DRK	Karamyk	1.54	61	⇑iP	Pb	15 33 57.9	-1.3
	baz=58						
DRK				⇑iS	Sg	15 34 19.4	-0.6
	baz=58						
MNAS	Manas	4.18	26	⇓eP	Pn	15 34 36.7	+2.4
	baz=25						
MNAS				⇓iS	Sn	15 35 26.3	+3.1
	baz=25						
KK31	Karatay Array	4.37	4	⇑P	Pn	15 34 40.3	+3.4
	2.5nm,0.4s,baz=188,slow=12,SNR=63						
KK31				⇓S	Sb	15 35 34.5	-5.5
	11nm,0.5s,baz=197,slow=28						
AML	Almayashu	4.37	38	P	Pn	15 34 41.3	+4.1
	SNR=16						
AML	Almayashu	4.37	38	⇑eP	Pn	15 34 39.4	+2.1
	baz=37						
AML				⇑iS	Sn	15 35 30.8	+2.3
	baz=37						
UCH	Uchtor	4.86	43	P	Pb	15 34 51.6	-4.4
	SNR=10						
UCH	Uchtor	4.86	43	⇓eP	Pn	15 34 45.9	+1.9
	baz=42						
UCH				⇓iS	Sn	15 35 42.3	+1.7
	baz=42						
AAK	Ala-Archa	5.14	39	P	Pn	15 34 53.0	+5.3
	SNR=10						
AAK	Ala-Archa	5.14	39	P	Pn	15 34 52.7	+5.1
	5.4nm,0.5s						
AAK				S	Sb	15 35 55.9	-6.6
	11nm,0.7s						
KBK	Karagaybulak	5.39	42	P	Pn	15 34 55.8	+4.8
	SNR=7.7						
TKM2	Tokmak 2	5.92	43	P	Pb	15 35 05.7	-8.1
	SNR=8.4						
TKM2	Tokmak 2	5.92	43	⇑P	Pn	15 35 02.2	+3.9
	4.8nm,0.6s						
TKM2				⇑S	Sn	15 36 14.5	+8.3
	10nm,0.7s						
AB31	Akbulak array	12.77	329	⇓P	Pn	15 36 30.8	-1.1
	0.7nm,0.5s,baz=144,slow=12,SNR=19						
AB31				⇓S	Sn	15 38 54.6	+0.5
	0.7nm,0.5s,baz=145,slow=21,SNR=3.8						
AKTO	Aktyubinsk	14.48	328	⇓P	Pn	15 36 55.0	-0.3
	5.1nm,0.8s						
AKTO				⇑S	Sn	15 39 39.0	+3.2
	2.0nm,0.8s						

IDC ***08*** *15:35:17.5±7.8, 5°.54S×151°.22E, h61km±57km, mb3.7/4, mb1 3.9/5, mb1mx3.4/49, mbtmp4.0/5, ML2.0/1, Error ellipse: s-maj=76.6km s-min=40.2km az=110.0*

NEIC ***08*** *15:35:19.5±0.9, 5°.4S±0°.1×150°.9E±0°.1, h65km±10km, mb4.3/11, Error ellipse: s-maj=22.2km s-min=13.2km az=124.0*

ISC 08 15:35:18.5±1.0**, 5°.3S**±0°.1×**150°.9E**±0°.2**, h65**km**, n21,** σ**0**^{s}.**64**/24**, mb4.0**/10**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	5.52	223	P	Pn	15 36 39.0	+0.9
	3.0nm,0.3s,baz=27,slow=9.8,SNR=12						
PMG				S	Sn	15 37 40.1	-0.2
	2.4nm,0.3s,baz=158,slow=21,SNR=1.8						
PMG	Port Moresby	5.52	223		Pn	15 36 38.8	+0.7
GUMO	Guam	19.75	342	Pn	Pn	15 39 46.1	+0.9
GUMO				IAmb	IAmb	15 40 10.4	
	comp=Z,92nm,0.9s						
WB0	Warramunga Arr	21.57	227	P	P	15 40 02.6	-0.3
WB0				IAmb	IAmb	15 40 06.6	
	comp=Z,7.9nm,1.2s						
WR0	Warramunga Arr	21.59	226	P	P	15 40 02.8	-0.2
WR0				IAmb	IAmb	15 40 18.9	
	comp=Z,7.9nm,1.4s						
WRAB	Tennant Creek	21.70	227	P	P	15 40 04.2	-0.1
WRAB				IAmb	IAmb	15 40 07.2	
	comp=Z,3.4nm,0.6s						
WB2	Warramunga Arr	21.71	227	P	P	15 40 03.9	-0.5
WB2				IAmb	IAmb	15 40 07.8	
	comp=Z,11nm,1.4s						
WRA	Warramunga Arr	21.72	227	P	P	15 40 03.8	-0.7
	comp=Z,2.7nm,0.6s,baz=55,slow=9.7,SNR=41						
WRA				PcP	PcP	15 44 03.0	-0.4
	comp=Z,0.3nm,0.7s,baz=46,slow=2.1,SNR=1.9						
WRA	Warramunga Arr	21.72	227	P	P	15 40 04.5	-0.1
AS31	Alice Springs	24.52	220	P	P	15 40 32.0	-0.2
ASAR	Alice Springs	24.53	220	P	P	15 40 32.1	-0.1
	comp=Z,0.8nm,0.5s,baz=56,slow=8.7,SNR=47						
ASAR				PcP	PcP	15 44 08.9	-0.4
	comp=Z,0.3nm,0.8s,baz=45,slow=1.4,SNR=2.3						
FITZ	Fitzroy Crossi	27.78	241	P	P	15 41 02.7	+1.1
	comp=Z,2.5nm,0.3s,baz=59,slow=9.9,SNR=16						
TOLI2	Tolitoli	30.80	281	P	P	15 41 27.6	-0.8
TOLI2				IAmb	IAmb	15 41 35.5	
	comp=Z,6.6nm,0.9s						
GSI	Gunungsitoli	53.71	276	P	P	15 44 35.5	+1.0
GSI				IAmb	IAmb	15 44 36.1	
	comp=Z,19nm,1.5s						
LHMI	Lhok Sumawe	54.93	280	P	P	15 44 41.9	-1.4
SBLHI	Steaming Bluff	58.36	63	P	P	15 45 07.7	0.0
ZALV	Zalesovo Beam	80.58	327	P	P	15 47 24.0	+0.1
	comp=Z,0.4nm,0.4s,baz=99,slow=5.8,SNR=2.4						
TORD	Torodi Ar. Bea	148.70	287	PKPbc	PKPbc	15 54 59.5	-0.1
	comp=Z,2.9nm,0.6s,baz=71,slow=3.0,SNR=23						
TORD	Torodi Ar. Bea	148.70	287		PKPbc	15 54 59.3	-0.3
KOWA	Kowa	153.74	292	PKPbc	PKPbc	15 55 11.2	-0.1
	comp=Z,1.9nm,0.4s,baz=62,slow=2.2,SNR=9.1						
KOWA	Kowa	153.74	292		PKPbc	15 55 10.8	-0.5

IDC ***08*** *15:35:11.8±11.0, 40°.33N×142°.22E, h0km, mb3.4/2, mb1 3.6/3, mb1mx3.2/64, mbtmp3.3/3, ML2.3/1, MS4.0/1, Ms1 4.0/1, ms1mx2.7/37, Error ellipse: s-maj=289.1km s-min=75.7km az=156.0*

NEIC ***08*** *15:35:27.4±2.3, 39°.23N±0°.05×141°.8E±0°.1, h63km±11km, mb4.4/4, Error ellipse: s-maj=16.5km s-min=6.4km az=103.0*

JMA ***08*** *15:35:27.8, 39°.19N×141°.83E, h53km±1km, M3.2*

ISC 08 15:35:26.9±0.9**, 39°.18N**±0°.04×**141°.90E**±0°.07**, h57**km±7km**, n35,** σ**0**^{s}.**83**/37**, mb4.1**/4**, 6C-5D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.20	241	⇓P	Pn	15 35 36.5	+0.5
OFUJ				S	Sn	15 35 42.5	0.0
MIYJ	Miyakonagasawa	0.40	351	⇓P	Pn	15 35 38.1	+0.5
MIYJ				S	Sn	15 35 45.2	-0.1
JKMT	Kesennumamotoy	0.49	222	⇑P	Pn	15 35 38.9	+0.4
JKMT				S	Sn	15 35 46.6	-0.4
JOM	Ohasama	0.55	302	⇓P	Pn	15 35 39.3	+0.1
JOM				S	Sn	15 35 47.9	-0.2
JMK	Ichinoseki	0.57	247	⇑P	Pn	15 35 39.6	+0.2
JMK				S	Sn	15 35 47.9	-0.6
JTH	Tanohata	0.76	358	⇓P	Pn	15 35 42.3	+0.6
JTH				S	Sn	15 35 52.8	+0.3
JIO	Ouri	0.84	211	⇑P	Pn	15 35 43.1	+0.4
JIO				S	Sn	15 35 53.7	-0.7
JRG	Rokugo	1.00	283	⇑P	Pn	15 35 44.9	+0.1
JRG				S	Sn	15 35 57.8	-0.3
JYK	Kaneyama	1.23	258	⇑P	Pn	15 35 48.1	+0.3
JANG	Nango	1.23	346	⇓P	Pn	15 35 48.0	+0.2
JOU	Okura	1.26	230	P	Pn	15 35 48.6	+0.3
JOU				S	Sn	15 36 04.3	0.0
JAH	Hinai	1.40	316	⇑P	Pn	15 35 50.8	+0.7
JMM	Marumori	1.57	214		Pn	15 35 52.3	-0.2
JTM	Tenmabayashi	1.73	339		Pn	15 35 55.3	+0.7
ERM	Erimo	2.99	18	Pn	Pn	15 36 12.5	+0.8
JSD	Sado	3.07	249	Pn	Pn	15 36 13.4	+0.5
JYT	Yasato	3.24	205	Pn	Pn	15 36 17.3	+2.0
MAJO	Matsushiro	3.93	229		Pn	15 36 25.2	+0.4
MJAR	Matsushiro Arr	3.93	229	Pn	Pn	15 36 27.1	+2.4
	0.1nm,0.3s,baz=40,slow=11,SNR=12						
MJAR	Matsushiro Arr	3.93	229		Pn	15 36 25.1	+0.4
JKA	Kamikawa-asahi	4.96	6	Pn	Pn	15 36 38.3	-0.4
H11N2	WAKE ISLAND Hy	28.99	125	T	T	16 11 50.9	
	baz=318,slow=75,SNR=47						
H11N1	WAKE ISLAND Hy	29.00	125	T	T	16 11 48.5	
	baz=318,slow=75,SNR=43						
H11N3	WAKE ISLAND Hy	29.01	125	T	T	16 11 49.8	
	baz=318,slow=75,SNR=46						
H11S1	WAKE ISLAND Hy	29.77	127	T	T	16 12 47.8	
	baz=319,slow=76,SNR=12						
H11S3	WAKE ISLAND Hy	29.77	127	T	T	16 12 46.3	
	baz=319,slow=76,SNR=17						
H11S2	WAKE ISLAND Hy	29.79	127	T	T	16 12 52.7	
	baz=319,slow=76,SNR=8.3						
ZALV	Zalesovo Beam	40.78	311	P	P	15 43 03.4	+1.1
PMG	Port Moresby	48.58	173	LR	LR	16 02 46.4	
	comp=Z,183nm,21.1s,baz=348,slow=33						
WB0	Warramunga Arr	59.06	188	P	P	15 45 20.1	-1.0
WB0				IAmb	IAmb	15 45 30.1	
	comp=Z,4.5nm,1.2s						
WR0	Warramunga Arr	59.23	188	P	P	15 45 22.4	+0.1
WR0				IAmb	IAmb	15 45 43.9	
	comp=Z,4.5nm,1.5s						
WRA	Warramunga Arr	59.24	188	P	P	15 45 22.6	+0.2
	comp=Z,0.4nm,0.4s,baz=6.9,slow=6.9,SNR=3.4						
WRA	Warramunga Arr	59.24	188	P	P	15 45 20.6	-1.7
ASAR	Alice Springs	62.96	188	P	P	15 45 48.2	+0.7
	comp=Z,0.2nm,0.9s,baz=355,slow=5.3,SNR=5.3						
DZM	Mont Dzumac	65.12	155	P	P	15 46 00.2	-1.5

IDC ***08*** *15:37:12.6±0.4, 24°.88S×69°.95E, h0km, mb4.4/28, mb1 4.5/28, mb1mx4.3/60, mbtmp4.4/28, MS4.0/2, Ms1 3.9/2, ms1mx3.4/37, Error ellipse: s-maj=15.3km s-min=12.1km az=39.0*

NEIC ***08*** *15:37:13.3±1.3, 25°.0S±0°.1×69°.9E±0°.1, h10km±1km, mb4.9/46, Error ellipse: s-maj=21.5km s-min=18.2km az=238.0*

ISC 08 15:37:15.1±0.4**, 24°.95S**±0°.08×**69°.92E**±0°.09**, h19**km**, n138,** σ**1**^{s}.**07**/127**, mb4.8**/64**, MS4.1**/3**, 9C-8D, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	17.38	9	T	T	15 59 03.5	
	baz=189,slow=76,SNR=30						
H08S2	Diego Garcia H	17.38	9	T	T	15 59 02.9	
	baz=189,slow=76,SNR=33						
H08S3	Diego Garcia H	17.40	9	T	T	15 59 06.0	
	baz=189,slow=76,SNR=25						
OPO	Ambohidratompo	22.03	282	P	P	15 42 08.8	-0.1
	8.0nm,0.8s,baz=96,slow=10,SNR=7.8						
MSEY	Mahe Island	24.47	323	P	P	15 42 31.8	-1.4
MSEY				IAmb	IAmb	15 42 35.9	
	comp=Z,26nm,1.1s						
KIBK	Kibwezi	38.07	301	P	P	15 44 31.1	-1.8
H01W2	Cape Leeuwin H	39.31	115	T	T	16 26 24.9	
	baz=272,slow=75,SNR=9.3						
H01W3	Cape Leeuwin H	39.31	115	T	T	16 26 23.5	
	baz=272,slow=75,SNR=10						
H01W1	Cape Leeuwin H	39.33	115	T	T	16 26 26.2	
	baz=272,slow=75,SNR=11						
KMBO	Kilima Mbogo	39.45	302	P	P	15 44 45.2	+0.6
	comp=Z,5.1nm,1.0s,baz=108,slow=4.6,SNR=10						
KMBO	Kilima Mbogo	39.45	302	P	P	15 44 41.0	-3.6
BOSA	Boshof	39.87	255	LR	LR	15 58 18.3	
	comp=Z,263nm,19.2s,baz=127,slow=32						
LSZ	Lusaka	40.21	276	P	P	15 44 51.3	+0.4
	comp=Z,1.8nm,0.2s,baz=250,slow=1.8,SNR=4.0						
LEM	Lembang	40.29	70	P	P	15 44 52.1	+0.5
	comp=Z,12nm,0.5s,baz=301,slow=22,SNR=2.7						
MAW	Mawson	42.89	184	P	P	15 45 13.6	+1.6
	comp=Z,2.7nm,0.9s,baz=319,slow=12,SNR=2.7						
MAW				LR	LR	15 59 03.2	
	comp=Z,163nm,20.7s,baz=36,slow=30						
LODK	Lodwar	43.83	305	P	P	15 45 19.7	-0.7
ATD	Arta Tunnel	44.85	321	P	P	15 45 29.3	+0.8
	comp=Z,3.6nm,0.4s,baz=139,slow=19,SNR=1.6						
SYO	Syowa Base	47.65	194	⇓eP	P	15 45 51.2	+1.5
CASY	Casey	48.52	159	P	P	15 45 53.6	-2.8
CASY				IAmb	IAmb	15 46 13.7	
	comp=Z,12nm,1.4s						
CMAR	Chiang Mai Arr	51.58	36	P	P	15 46 20.6	+0.3
	comp=Z,1.1nm,0.7s,baz=224,slow=6.2,SNR=12						
CMAR	Chiang Mai Arr	51.58	36	P	P	15 46 19.1	-1.2
FITZ	Fitzroy Crossi	51.99	94	P	P	15 46 24.3	+0.8
	comp=Z,4.8nm,0.8s,baz=229,slow=4.7,SNR=8.0						
TOLI2	Tolitoli	55.61	70	P	P	15 46 49.6	-0.5
TOLI2				IAmb	IAmb	15 46 52.3	
	comp=Z,12nm,1.3s						
ASAR	Alice Springs	57.83	103	P	P	15 47 06.2	+0.5
	comp=Z,2.3nm,0.9s,baz=253,slow=6.2,SNR=14						
ASAR	Alice Springs	57.83	103	P	P	15 47 04.0	-1.8
AS31	Alice Springs	57.83	103	P	P	15 47 04.0	-1.8
KBL	Kabul	59.17	359	P	P	15 47 14.9	-0.1
KBL				IAmb	IAmb	15 47 23.3	
	comp=Z,16nm,1.4s						
WRA	Warramunga Arr	59.27	99	P	P	15 47 16.0	+0.1
	comp=Z,4.4nm,1.0s,baz=254,slow=6.8,SNR=18						
WRA	Warramunga Arr	59.27	99	P	P	15 47 15.4	-0.5
WB2	Warramunga Arr	59.28	99	P	P	15 47 15.2	-0.7
WB2				IAmb	IAmb	15 47 23.3	
	comp=Z,15nm,1.1s						
WRAB	Tennant Creek	59.28	99	P	P	15 47 14.8	-1.2
WRAB				IAmb	IAmb	15 47 23.4	
	comp=Z,13nm,1.1s						
WR0	Warramunga Arr	59.45	99	P	P	15 47 15.8	-1.3
WR0				IAmb	IAmb	15 47 24.3	
	comp=Z,12nm,1.1s						
SNAA	Sanae	61.11	200	P	P	15 47 29.1	+1.4
SNAA	Sanae	61.11	200	P	P	15 47 28.8	+1.0
	comp=Z,4.8nm,0.9s,baz=38,slow=2.1,SNR=4.8						
SNAA	Sanae	61.11	200	IAmb	IAmb	15 47 31.1	
	comp=Z,4.0nm,0.8s						
VNA2	Neumayer--Watz	62.50	201	P	P	15 47 35.2	-1.8
CHGR	Chuyangaron	63.28	359	P	P	15 47 40.9	-1.7
GAR	Garm	63.62	0	P	P	15 47 41.9	-2.9
GAR				IAmb	IAmb	15 47 44.7	
	comp=Z,7.0nm,1.0s						
KSH	Kashi	64.38	5	P	P	15 47 47.1	-2.8
KSH				pP	pP	15 47 53.0	-2.0
KSH				sP	sP	15 47 55.0	-2.2
KSH	Kashi	64.38	5	SS	SS	16 00 32.7	-5.4
KSH				pmax	pmax		
	comp=Z,12nm,0.9s						
KSH				LR	LR		
	comp=N,2μm,21.3s						
KSH				LR	LR		
	comp=E,4μm,17.2s						
KSH				LR	LR		
	comp=Z,5μm,19.6s						
BTK	Batken	64.68	1	P	P	15 47 50.5	-1.3
BTK				IAmb	IAmb	15 47 59.7	
	comp=Z,18nm,1.5s						
ASF	Jabal al Asfar	64.97	329	P	P	15 47 54.4	+0.6
	baz=89,slow=3.0						
QSPA	South Pole Qui	65.18	180	P	P	15 47 55.9	+1.0
	comp=Z,8.9nm,0.9s,baz=276,slow=3.1,SNR=24						
QSPA	South Pole Qui	65.18	180	P	P	15 47 54.2	-0.7
QSPA				IAmb	IAmb	15 47 56.7	
	comp=Z,11nm,0.9s						
VNDA	Vanda	66.25	166	P	P	15 48 02.4	+0.9
	comp=Z,2.9nm,0.9s,baz=276,slow=7.7,SNR=16						
VNDA	Vanda	66.25	166	P	P	15 48 01.1	-0.3
AAK	Ala-Archa	67.38	4	P	P	15 48 09.9	+0.7
	comp=Z,2.7nm,1.0s,baz=194,slow=21,SNR=2.5						
AAK	Ala-Archa	67.38	4	P	P	15 48 08.0	-1.2
AAK				IAmb	IAmb	15 48 16.9	
	comp=Z,16nm,1.4s						
KK31	Karatay Array	67.72	0	P	P	15 48 10.7	-0.4
KKAR	Karatay Array	67.72	0	P	P	15 48 10.7	-0.4
CTA	Charters Tower	69.83	103	P	P	15 48 25.3	+0.4
	comp=Z,4.2nm,1.1s,baz=252,slow=3.2,SNR=2.5						
WMQ	Urumqi	70.35	14	eP	P	15 48 30.0	+2.5
WMQ				sP	pwP	15 48 38.5	+1.4
WMQ				pmax	pmax		
	comp=Z,20nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,87nm,4.7s						
MK31	Makanchi Array	72.28	9	P	P	15 48 38.1	-1.0
MK31				IAmb	IAmb	15 48 45.8	
	comp=Z,12nm,1.4s						
MKAR	Makanchi Array	72.28	9	P	P	15 48 38.8	-0.3
	comp=Z,4.5nm,0.8s,baz=196,slow=6.9,SNR=25						
MKAR	Makanchi Array	72.28	9	P	P	15 48 37.6	-1.4
BR131	Keskin Array S	72.70	331	P	P	15 48 41.0	-0.9
BR131				IAmb	IAmb	15 48 49.8	
	comp=Z,13nm,1.3s						
BRTR	Keskin Array B	72.70	331	P	P	15 48 42.5	+0.6
	comp=Z,3.9nm,1.0s,baz=157,slow=6.7,SNR=16						
BRTR	Keskin Array B	72.70	331	P	P	15 48 41.5	-0.4
KBZ	Khabaz	72.71	340	P	P	15 48 42.5	+0.9
	comp=Z,2.4nm,0.9s,baz=155,slow=13,SNR=3.2						
NJ2	Nanjing	73.45	42	eP	P	15 48 48.1	+1.8
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
ABKAR	Akbulak array	74.40	353	P	P	15 48 50.4	-1.1
ABKAR				IAmb	IAmb	15 48 58.8	
	comp=Z,13nm,1.1s						
KURBB	Kurchatov Arra	75.62	6	P	P	15 48 58.8	+0.3
	comp=Z,7.2nm,0.9s,baz=201,slow=6.4,SNR=4.2						
KURK	Kurchatov	75.72	6	P	P	15 48 58.0	-1.0
HHC	Hu-ho-hao-te	76.04	31	eP	P	15 49 03.6	+2.3
HHC				pmax	pmax		
	comp=Z,16nm,0.9s						

HHC				pmax	pmax		
	comp=Z,240nm,9.1s						
TORD	Torodi Ar. Bea	76.51	292	P	P	15 49 04.5	+0.1
	comp=Z,4.6nm,0.9s,baz=113,slow=5.5,SNR=20						
TORD	Torodi Ar. Bea	76.51	292	P	P	15 49 03.6	-0.8
BRVK	Borovoye	77.68	0	P	P	15 49 08.8	-1.2
TIRR	Tirgusor	78.81	331	⇓P	P	15 49 17.1	+0.5
TIRR	Tirgusor	78.81	331	P	P	15 49 16.9	+0.4
DBIC	Dimbokro	79.14	283	P	P	15 49 19.6	+0.5
	comp=Z,3.5nm,0.9s,baz=152,slow=8.8,SNR=3.9						
FNA	Florina	79.43	325	P	P	15 49 19.6	-0.5
FNA				IAmb	IAmb	15 49 21.1	
	comp=Z,11nm,1.1s						
CFR	Carcaliu	79.50	331	⇑P	P	15 49 21.2	+0.9
SONM	Songino Array	79.53	24	P	P	15 49 20.2	-0.4
	comp=Z,3.1nm,1.0s,baz=209,slow=4.9,SNR=7.0						
SONM	Songino Array	79.53	24	P	P	15 49 20.4	-0.2
SONM				IAmb	IAmb	15 49 23.8	
	comp=Z,12nm,1.4s						
ZAA0	Zalesovo Array	79.62	9	P	P	15 49 19.8	-0.9
ZAA0				IAmb	IAmb	15 49 27.6	
	comp=Z,20nm,1.4s						
ZALV	Zalesovo Beam	79.62	9	P	P	15 49 19.8	-1.0
	comp=Z,2.5nm,0.6s,baz=204,slow=3.2,SNR=4.2						
VTS	Vitosha	79.82	327	P	P	15 49 20.9	-1.4
VRI	Vrincioaia	80.66	331	⇑P	P	15 49 28.0	+1.4
PLOR	Plostina	80.68	331	⇑P	P	15 49 27.6	+0.8
MLR	Muntele Rosu	80.72	330	P	P	15 49 26.2	-0.8
MLR				IAmb	IAmb	15 49 29.0	
	comp=Z,16nm,1.1s						
COVR	Voineasa-Covas	80.87	331	⇓P	P	15 49 28.6	+0.8
VOIR		81.08	330	⇑P	P	15 49 29.3	+0.4
DOPR	Dopca	81.33	330	⇑P	P	15 49 30.0	-0.2
ARU	Arti	81.63	354	P	P	15 49 30.8	-0.6
ARU				IAmb	IAmb	15 49 39.3	
	comp=Z,16nm,1.1s						
PDG	Podgorica	81.72	325	⇑P	P	15 49 32.5	+0.3
SORM	Soroca	81.75	333	⇓P	P	15 49 32.4	+0.1
HERR	Herculane	81.90	328	⇓P	P	15 49 33.4	+0.2
KOWA	Kowa	82.01	290	P	P	15 49 35.3	+0.8
	comp=Z,5.6nm,0.9s,baz=122,slow=4.9,SNR=16						
KOWA	Kowa	82.01	290	P	P	15 49 33.4	-1.1
KOWA				IAmb	IAmb	15 49 36.8	
	comp=Z,8.3nm,0.9s						
CORL	Corleone	82.03	318	P	P	15 49 33.5	-0.7
GZR	Gura Zlata	82.10	329	⇑P	P	15 49 35.3	+1.0
DIVS	Divibare	82.52	326	P	P	15 49 36.0	-0.6
DIVS				IAmb	IAmb	15 49 38.6	
	comp=Z,13nm,1.1s						
BZS	Buzias	82.82	328	⇓P	P	15 49 37.8	-0.1
KEST	Kesra	83.17	314	P	P	15 49 42.0	+1.8
	comp=Z,5.8nm,1.0s,baz=6.1,slow=1.5,SNR=5.0						
KEST	Kesra	83.17	314	IAmb	IAmb	15 49 45.2	
	comp=Z,11nm,1.2s						
DRGR		83.17	329	⇑P	P	15 49 40.7	+0.8
AKASG	Malin Array Be	83.46	335	P	P	15 49 41.1	0.0
	comp=Z,4.2nm,0.9s,baz=145,slow=4.5,SNR=15						
AKASG	Malin Array Be	83.46	335	P	P	15 49 40.4	-0.7
TRPA	Tarpa	84.24	330	⇓P	P	15 49 45.9	+0.8
MORH	Mrgy, Hungar	84.70	327	⇓P	P	15 49 48.0	+0.5
SOKA	Soboth	86.83	326	*e*P	P	15 49 58.7	+0.5
	comp=Z,1.6nm,0.9s						
MODS	Modra-Piesok	86.87	328	*e*P	P	15 49 58.0	-0.3
ARSA	Arzberg	86.97	326	*e*P	P	15 49 59.7	+0.9
	comp=Z,8.3nm,1.1s						
OBKA	Obir	86.97	325	*e*P	P	15 49 59.7	+0.8
	comp=Z,2.5nm,0.6s						
OJC	Ojcow	87.00	330	P	P	15 49 58.4	-0.5
JAVC	Velka Javorina	87.02	328	*e*P	P	15 50 00.7	+1.6
CONA	Conrad Observa	87.25	327	*i* P	P	15 50 00.8	+0.5
	comp=Z,13nm,1.1s,SNR=5.4						
MYKA	Terra Mystica	87.52	325	*e*P	P	15 50 01.4	-0.1
	comp=Z,4.2nm,0.9s						
MORC	Moravsky Berou	87.72	329	⇑P	P	15 50 02.9	+0.5
MORC	Moravsky Berou	87.72	329	*e*P	P	15 50 03.1	+0.7
MORC	Moravsky Berou	87.72	329	P	P	15 50 01.7	-0.7
MORC				IAmb	IAmb	15 50 04.4	
	comp=Z,7.4nm,1.0s						
TEOL	Teolo	87.75	323	P	P	15 50 02.6	-0.1
KRUC	Moravsky	87.77	328	*e*P	P	15 50 03.2	+0.6
KRUC				*e*		15 50 09.0	
STAL	STALIGIAL	87.77	324	P	P	15 50 02.4	-0.4
ZOU	Zoufplan	87.82	325	P	P	15 50 02.6	-0.5
VRAC	Vranov	87.84	328	*e*P	P	15 50 03.0	0.0
MOA	Molln	88.00	326	*i* P	P	15 50 04.3	+0.5
	comp=Z,13nm,1.1s,SNR=6.5						
ABTA	Abfaltersbach	88.18	325	*i* P	P	15 50 05.6	+0.8
	comp=Z,17nm,1.0s,SNR=6.7						
KRLC	Kraliky	88.28	329	*e*P	P	15 50 05.7	+0.6
MSSA	Maissana	88.29	321	P	P	15 50 04.4	-0.9
MSSA				IAmb	IAmb	15 50 06.4	
	comp=Z,9.2nm,1.0s						
OSTC	Ostas	88.87	329	*e*P	P	15 50 08.6	+0.8
GERES	GERESS Array B	88.94	327	P	P	15 50 08.4	+0.1
	comp=Z,1.9nm,0.9s,baz=148,slow=7.8,SNR=13						
CHVC	Chvalec	88.97	329	*e*P	P	15 50 09.3	+1.0
WTTA	Wattenberg	88.98	325	*i* P	P	15 50 09.2	+0.6
	comp=Z,19nm,1.2s,SNR=8.3						
KLMR	Klimovskoe	89.00	346	*e*	P	15 50 08.0	-0.1
KLMR				AMP		15 50 09.6	
	comp=Z,38nm,1.1s						
WATA	Walderalm	89.05	325	*i* P	P	15 50 09.5	+0.6
	comp=Z,11nm,0.9s,SNR=5.2						
SQTA	Sankt Quirin	89.17	324	*e*P	P	15 50 10.0	+0.5
	comp=Z,16nm,1.2s						
KHC	Kasperske Hory	89.19	327	*e*P	P	15 50 09.3	-0.1
PRU	Pruhonice	89.28	328	*e*P	P	15 50 10.2	+0.5
FETA	Feichten	89.30	324	*i* P	P	15 50 11.0	+0.8
	comp=Z,19nm,1.1s,SNR=8.5						
MOTA	Moosalm	89.31	324	*e*P	P	15 50 09.7	-0.5
	comp=Z,12nm,1.0s						
RETA	Reutte	89.58	324	*e*P	P	15 50 11.9	+0.6
	comp=Z,12nm,1.1s						
DAVA	Damuels	89.92	324	*i* P	P	15 50 13.5	+0.4
	comp=Z,17nm,1.0s,SNR=5.3						
NKC	Novy Kostel	90.46	327	*e*P	P	15 50 17.0	+1.7
ESDC	Sonseca Array	94.14	312	P	P	15 50 33.2	+0.6
	comp=Z,1.5nm,1.0s,baz=117,slow=3.1,SNR=7.4						
YKA	Yellowknife Ar	142.34	3	PKhKP	PKPpre	15 56 36.2	
	comp=Z,1.4nm,0.8s,baz=297,slow=2.5,SNR=2.6						
ULM	Lac du Bonnet	152.45	340	PKPbc	PKPbc	15 57 07.8	-2.0
	comp=Z,6.7nm,0.9s,baz=356,slow=4.2,SNR=5.2						
PDAR	Pinedale Array	162.22	359	PKP	PKPdf	15 57 15.8	0.0
	comp=Z,1.4nm,1.0s,baz=48,slow=2.2,SNR=3.9						

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*IDC **08** 15:37:29.5±4.9, 36°.12N×70°.54E, h179^{km}±38^{km}, mb3.6/10, mb1 3.6/15, mb1mx3.3/75, mbtmp4.1/15, MS4.5/1, Ms1 4.5/1, ms1mx3.2/40, Error ellipse: s-maj=44.7km s-min=22.9km az=162.0*

*NEIC **08** 15:37:33.7±2.2, 36°.52N±0°.03×70°.36E±0°.09, h207^{km}±7^{km}, mb4.3/19, Error ellipse: s-maj=10.9km s-min=3.4km az=82.0*

*NNC **08** 15:37:36.5±2.2, 36°.83N×70°.35E, h191^{km}±27^{km}, mb3.4, mpv4.4, Error ellipse: s-maj=19.3km s-min=13.9km az=37.0*

ISC 08 15:37:33.1±0.5**, 36°.52N**±0°.05×**70°.39E**±0°.06**, h204**^{km}**, n82,** σ**1^{s}65**/87**, mb4.2**/14**, 3C-7D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	Kabul	2.26	209		Pn	15 38 14.9	0.0
CHGR	Chuyangaron	2.34	336		Pn	15 38 15.6	0.0
GAR	Garm	2.47	359	Pn	Pn	15 38 17.2	+0.1
CEP	Cherat	2.97	155	⇓P	Pn	15 38 23.0	+0.3
CEP				S	S	15 39 00.0	-0.9
DRK	Karamyk	3.16	20		Pn	15 38 25.5	+0.5
BTK	Batken	3.55	5		Pn	15 38 30.5	+1.0
CHCP	Chirah Chowk	3.70	140	⇓P	Pn	15 38 32.0	+0.6
NIL	Nilore	3.70	140	Pn	Pn	15 38 31.9	+0.5
THW	Thamme Wali	3.88	163	⇓P	Pn	15 38 33.6	-0.1
TAS	Tashkent	4.87	350	Pn	Pn	15 38 46.6	+0.7
KSH	Kashi	5.33	54	P	Pn	15 38 46.9	-4.9
KSH				sP		15 39 28.7	
KSH				S	S	15 39 40.4	-13
KSH				pmax	pmax		
	comp=Z,31nm,0.4s						
KSH				smax	smax		
	comp=N,150nm,0.6s						
KSH				smax	smax		
	comp=E,110nm,0.6s						
AML	Almayashu	6.16	24	P	Pn	15 39 02.8	0.0
	SNR=165						
UCH	Uchtor	6.53	28	P	Pn	15 39 07.7	0.0
	SNR=43						
KK31	Karatay Array	6.57	1	P	Pn	15 39 07.7	-0.1
	4.8nm,0.3s,baz=188,slow=6.7,SNR=178						
KK31				⇓S	S	15 40 18.9	-3.8
	15nm,0.5s,baz=188,slow=22,SNR=8.3						
KK31	Karatay Array	6.57	1	Pn	Pn	15 39 07.6	-0.1
KKAR	Karatay Array	6.57	1	Pn	Pn	15 39 07.5	-0.3
EKS2	Erkin-Say	6.67	22	P	Pn	15 39 09.4	+0.4
	SNR=31						
AAK	Ala-Archa	6.88	26	P	Pn	15 39 12.1	+0.3
	7.4nm,0.3s,baz=187,slow=6.3,SNR=42						
AAK				S	S	15 40 27.0	-3.1
	2.8nm,0.3s,baz=326,slow=20,SNR=24						
AAK	Ala-Archa	6.88	26	P	Pn	15 39 12.2	+0.3
	SNR=26						
AAK	Ala-Archa	6.88	26	P	Pn	15 39 11.6	-0.3
	12nm,0.6s						
AAK				S	S	15 40 28.5	-1.6
	50nm,0.5s						
AAK	Ala-Archa	6.88	26	Pn	Pn	15 39 11.9	+0.1
KBK	Karagaybulak	7.06	28	P	Pn	15 39 14.7	+0.4
	SNR=8.6						
FRU1	Bishkek	7.08	26		Pn	15 39 14.6	+0.2
CHMS	Chumysh	7.29	26	P	Pn	15 39 17.3	+0.3
	SNR=8.0						
USP	Ospenovka	7.44	24	P	Pn	15 39 19.2	+0.3
	SNR=11						
TKM2	Tokmak 2	7.54	31	P	Pn	15 39 20.6	0.0
	SNR=56						
TKM2	Tokmak 2	7.54	31	⇑P	Pn	15 39 20.5	0.0
	40nm,0.5s						
TKM2				⇓S	S	15 40 43.0	-2.9
	19nm,0.8s						
SMLA	Simla	7.79	132	*e*P	Pn	15 39 22.6	-1.0
SMLA				*e*S	S	15 40 44.7	-6.9
SMLA				IAML		15 40 49.5	
	comp=N,108nm,0.5s						
SMLA				IAML		15 40 50.1	
	comp=E,98nm,0.7s						
NDI	New Delhi	9.71	142	*e*S	S	15 41 27.0	-10
KUDL	Kundal	9.82	147	*e*P	Pn	15 39 48.8	-1.1
KUDL				*e*S	S	15 41 28.3	-12
MAKZ	Makanchi	13.42	36	Pn	Pn	15 40 35.7	+0.1
PYUN	Piuthan	13.56	125	*e*P	P	15 40 41.8	+1.8
MK31	Makanchi Array	13.56	37	Pn	Pn	15 40 38.2	+0.9
MKAR	Makanchi Array	13.56	37	P	P	15 40 38.9	-0.8
	comp=E,0.4nm,0.3s,baz=225,slow=14,SNR=15						
MKAR	Makanchi Array	13.56	37	Pn	Pn	15 40 37.8	+0.4
GKN	Gorkha	14.73	121	*e*P	P	15 40 55.3	+2.3
	comp=E,16nm,0.3s						
AB31	Akbulak array	14.83	332	⇓P	Pn	15 40 52.6	-0.2
	comp=E,0.8nm,0.3s,baz=148,slow=10,SNR=45						
AB31				⇑S	S	15 43 35.0	-2.2
	comp=E,1.3nm,0.6s,baz=164,slow=22,SNR=3.2						
ABKAR	Akbulak array	14.83	332		Pn	15 40 52.0	-0.8
WMQ	Urumqi	15.09	56	*e*P	P	15 40 57.1	+0.5
KURBB	Kurchatov Arra	15.26	20	P	P	15 40 59.8	+1.4
	comp=E,0.1nm,0.3s,baz=213,slow=9.9,SNR=3.4						
KKN	Kakani	15.31	120	*e*P	P	15 41 02.0	+2.6
	comp=E,17nm,0.5s						
KURK	Kurchatov	15.37	20	P	P	15 40 59.8	+0.2
KURK	Kurchatov	15.37	20	IAmb	IAmb	15 41 25.9	
	comp=Z,5.7nm,1.2s						
PKIN	Phulchoki	15.52	121	*e*P	P	15 41 04.6	+2.8
JIRN	Jiri	16.03	119	*e*P	Pn	15 41 10.7	+2.7
	comp=Z,20nm,0.4s						
BVAR	Borovoye Array	16.50	360	P	Pn	15 41 14.3	+1.4
	comp=Z,0.6nm,0.3s,baz=208,slow=18,SNR=7.4						
AKTO	Aktyubinsk	16.52	331	P	Pn	15 41 14.9	+1.7
	comp=Z,1.2nm,0.3s,baz=145,slow=11,SNR=35						
AKTO				S	S	15 44 11.1	-3.4
	comp=Z,0.1nm,0.3s,baz=16,slow=19,SNR=1.8						
AKTO	Aktyubinsk	16.52	331	⇓P	Pn	15 41 13.7	+0.4
	comp=Z,15nm,0.7s						
AKTO				⇑S	S	15 44 14.7	+0.2
	comp=Z,4.1nm,0.9s						
BRVK	Borovoye	16.53	360	P	P	15 41 11.6	-0.8
BRVK				IAmb	IAmb	15 41 29.7	
	comp=Z,4.3nm,0.7s						
TAPN	Taplejung	17.29	117	*e*P	Pn	15 41 23.8	+0.9
	comp=Z,9.1nm,0.5s						
ODAN	Odare	17.36	119	*e*P	Pn	15 41 25.8	+2.1
ZAA0	Zalesovo Array	20.10	25	P	P	15 41 51.6	+0.7
ZAA0				IAmb	IAmb	15 41 52.9	
	comp=Z,4.4nm,0.7s						
ZALV	Zalesovo Beam	20.10	25	P	P	15 41 52.1	+1.1
	comp=Z,4.0nm,0.4s,baz=221,slow=11,SNR=25						
ZALV	Zalesovo Beam	20.10	25	P	P	15 41 51.6	+0.7
ARU	Arti	21.45	342	P	P	15 42 07.3	+2.1
	comp=Z,2.7nm,0.6s,baz=159,slow=8.2,SNR=13						
ARU	Arti	21.45	342	P	P	15 42 06.7	+1.4
ARU				IAmb	IAmb	15 42 09.5	
	comp=Z,9.8nm,0.8s						
BELG	Belogornoye	22.57	322	P	P	15 42 18.1	+2.3
	comp=Z,15nm,0.8s,baz=33,slow=1.5,SNR=9.9						
BRTR	Keskin Array B	28.96	288	P	P	15 43 10.8	-2.8
HHC	Hu-ho-hao-te	32.22	70	*e*P	P	15 43 43.7	+1.6
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						
HHC				pmax	pmax		
	comp=Z,120nm,9.8s						
AKASG	Malin Array Be	32.55	309	P	P	15 43 46.5	+1.8
	comp=Z,0.2nm,0.3s,baz=79,slow=6.8,SNR=4.1						
NRIK	Noril'sk	34.19	11	P	P	15 44 01.1	+2.4
	comp=Z,2.5nm,0.6s,baz=205,slow=4.0,SNR=6.7						
NRIK	Noril'sk	34.19	11	P	P	15 43 57.4	-1.4
NRIK				IAmb	IAmb	15 44 02.0	
	comp=Z,3.2nm,0.9s						
FIA1	FINESS Array S	37.19	326	P	P	15 44 25.9	+1.6
FIA1				IAmb	IAmb	15 44 37.2	
	comp=Z,20nm,1.4s						
FINES	FINESS Array B	37.19	326	P	P	15 44 26.5	+2.3
	comp=Z,3.6nm,0.6s,baz=114,slow=9.2,SNR=20						
FINES	FINESS Array B	37.19	326	P	P	15 44 25.9	+1.7
ARCES	ARCESS Array B	40.94	338	P	P	15 44 57.3	+2.1
	comp=Z,2.0nm,0.5s,baz=109,slow=7.0,SNR=14						
ARCES	ARCESS Array B	40.94	338	P	P	15 44 57.0	+1.8
ARCES				IAmb	IAmb	15 45 07.9	
	comp=Z,30nm,1.5s						
NC405	NORSAR Array S	43.83	323	P	P	15 45 19.3	+0.7
NC303	NORSAR Array S	44.01	323	P	P	15 45 21.7	+1.7
NC303				IAmb	IAmb	15 45 39.8	
	comp=Z,31nm,1.4s						
NB201	NORSAR Array S	44.03	323	P	P	15 45 21.5	+1.3
NB2	NORSAR Subarra	44.07	323	P	P	15 45 22.4	+1.9
	comp=Z,1.1nm,0.5s,baz=95,slow=7.9						
NOA	NORSAR Array B	44.07	323	P	P	15 45 22.1	+1.5
	comp=Z,1.5nm,0.6s,baz=97,slow=7.8,SNR=7.9						
NBO00	NORSAR Array S	44.28	323	P	P	15 45 22.5	+0.4
NC204	NORSAR Array S	44.31	323	P	P	15 45 23.6	+1.1
TIXI	Tiksi	45.94	22	P	P	15 45 35.9	+0.9
	comp=Z,1.7nm,0.3s,baz=295,slow=5.9,SNR=7.8						
TIXI	Tiksi	45.94	22	P	P	15 45 35.5	+0.5
MSSA	Maissana	46.05	299	P	P	15 45 34.8	-1.7
MSSA				IAmb	IAmb	15 45 57.0	
	comp=Z,5.2nm,1.0s						
KMBO	Kilima Mbogo	48.48	227	P	P	15 45 54.2	-1.5
DAV	Davao City (W)	58.07	106	LR	LR	16 11 16.2	
	comp=Z,404nm,21.7s,baz=32,slow=35						
TORD	Torodi Ar. Bea	65.23	268	P	P	15 47 52.7	-0.3
	comp=Z,0.5nm,0.5s,baz=38,slow=5.4,SNR=4.7						
TORD	Torodi Ar. Bea	65.23	268	P	P	15 47 52.8	-0.2
COLD	Coldfoot	72.08	15	P	P	15 48 32.6	-1.9
COLD				IAmb	IAmb	15 48 41.0	
	comp=Z,12nm,1.1s						

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*BJI **08** 15:40:49.1±0.0, 48°.46N×155°.45E, h33^{km}, mB5.2/55, mb4.9/68, Ms5.2/76, Ms7 5.0/73*

*SKHL **08** 15:40:53.1±0.2, 48°.10N×155°.30E, h48^{km}±3^{km}, mb5.5/11, mbv6.0/8, ms5.0/8, msh5.7/5*

*KRSC **08** 15:40:53.3±2.1, 48°.22N×155°.30E, h100^{km}±29^{km}, ML5.9*

*MOS **08** 15:40:54.9±1.1, 48°.40N×154°.82E, h56^{km}, mb5.2/101, MS4.9/36, Error ellipse: s-maj=5.7km s-min=2.7km az=74.5*

*NEIC **08** 15:40:56.4±1.1, 48°.40N±0°.08×154°.8E±0°.1, h50^{km}±4^{km}, mb5.2/468, Error ellipse: s-maj=12.6km s-min=8.4km az=139.0*

*GCMT **08** 15:40:57.4±0.1, 48°.35N±0°.01×155°.24E±0°.01, h34^{km}, MW5.4/136, Moment Tensor Solution. s122,c234; s136,c250; Duration: 1^{s}3 Moment tensor: Scale 10^{17} Nm; M$_{rr}$1.68±.03; M$_{\theta\theta}$-0.67±.02; M$_{\phi\phi}$-1.01±.02; M$_{r\theta}$0.44±.02; M$_{\theta\phi}$-0.83±.01; M$_{\phi r}$0.43±.02; Best double couple: M$_0$1.79500×10^{17} NP1:φ$_s$217.00000°, δ35.00000°, λ86.00000°. NP2:φ$_s$41.00000°, δ55.00000°, λ92.00000°. Principal axes: T 1.7910, Plg80.0000°, Azm321.0000°; N 0.0060, Plg2.0000°, Azm220.0000°; P -1.8000, Plg10.0000°, Azm130.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **08** 15:40:57.8±2.0, 48°.41N×154°.76E, h58^{km}±17^{km}, mb4.4/39, mb1 4.6/46, mb1mx4.5/57, mbtmp4.7/46, MS4.9/35, Ms1 4.9/35, ms1mx4.7/49 Error ellipse: s-maj=11.9km s-min=8.0km az=138.0*

*BGR **08** 15:41:13.7±0.0, 51°.44N×154°.16E, h33^{km}, mb5.6, Ms5.2*

ISC 08 15:40:55.4±0.5**, 48°.33N**±0°.04×**154°.87E**±0°.03**, h43**^{km}±3^{km}**, n1401,** σ**1^{s}42**/1477**, mb5.2**/398**, MS5.1**/80**, 234C-92D, Fault plane solution: NP1:**φ$_s$29.06032°**,**δ77.24633°**,** λ63.92558°. **NP2:**φ$_s$274.77844°**,**δ28.82896°**,**λ152.75339°. **Principal axes:** T Plg50.8568°**,** Azm269.5652°**;** N Plg25.3847°**,** Azm35.2259°**;** P Plg27.6047°**,** Azm139.5920°**; Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	2.49	19	*e*PN	Pn	15 41 32.8	-0.6
SKR				*e*S	Sn	15 42 03.1	+0.6
SKR				pmax	pmax		
	comp=Z,1µm,1.0s						
SKR				pmax	pmax		
	comp=Z,5µm,1.1s						
SKR				smax	smax		
	comp=N,13µm,0.8s						
SKR				smax	smax		
	comp=E,12µm,0.6s						
SKR				MLR	MLR		
	comp=Z,25µm,18.0s						
SKR	Severo-Kuril's	2.49	19	*e*P	Pn	15 41 33.8	+0.4
SKR				*e*S	Sn	15 42 02.9	+0.4
SKR	Severo-Kuril's	2.49	19	*e*P	Pn	15 41 33.0	-0.4
SKR				AMB	AMB	15 41 37.0	
	comp=Z,5µm,2.0s						
SKR				AMB	AMB	15 41 40.0	
	comp=Z,3µm,0.5s						
SKR				*e*S	Sn	15 42 02.2	-0.3
SKR				A	A	15 42 10.0	
	comp=Z,16µm,0.6s						
SKR				A	A	15 42 10.0	
	comp=Z,14µm,0.6s						
SKR				AMS	AMS	15 42 36.0	
	comp=Z,25µm,18.0s						
PAU	Pauzhetka	3.38	21	PN	Pn	15 41 46.6	+1.0
PAU				S	Sn	15 42 24.6	+0.1
PAU	Pauzhetka	3.38	21	*e*P	Pn	15 41 46.6	+1.0
PAU				*e*S	Sn	15 42 24.6	+0.1
PAU	Pauzhetka	3.38	21	*e*P	Pn	15 41 45.7	+0.1
PAU				AMB	AMB	15 41 52.7	
	comp=Z,2µm,0.6s						
PAU				*e*S	Sn	15 42 25.0	+0.5
PAU				A	A	15 42 42.2	
	comp=Z,16µm,0.7s						
PAU				A	A	15 42 42.2	
	comp=Z,13µm,0.7s						
KDTR	Khodutka, Kamc	4.05	29	PN	Pn	15 41 54.3	-0.4
KDTR				S	Sn	15 42 38.5	-2.4
KDTR	Khodutka, Kamc	4.05	29	*e*P	Pn	15 41 54.3	-0.4
KDTR				*e*S	Sn	15 42 38.5	-2.4
MIPR	Malaya Ipel'ka	4.13	16	PN	Pn	15 41 57.6	+1.7
MIPR	Malaya Ipel'ka	4.13	16	*e*P	Pn	15 41 57.6	+1.7
ASAK	Asacha	4.50	24	PN	Pn	15 42 02.1	+1.1
ASAK	Asacha	4.50	24	*e*P	Pn	15 42 02.1	+1.1
MTVR	Mutnovka	4.67	26	PN	Pn	15 42 03.8	+0.4
MTVR				S	Sn	15 42 56.0	-0.3
MTVR	Mutnovka	4.67	26	*e*P	Pn	15 42 03.8	+0.4
MTVR				*e*S	Sn	15 42 56.0	-0.3
GRL	Gorelyy	4.70	25	PN	Pn	15 42 04.9	+1.1
GRL	Gorelyy	4.70	25	*e*P	Pn	15 42 04.9	+1.1
RUS	Russkaya	4.72	28	PN	Pn	15 42 03.1	-0.9
RUS	Russkaya	4.72	28	*e*P	Pn	15 42 03.1	-0.9
RUS				*e*S	Sn	15 42 54.7	-2.7
RUS	Russkaya	4.72	28	*e*P	Pn	15 42 03.1	-0.9
APC	Apacha	4.83	17	PN	Pn	15 42 07.1	+1.7
APC				S	Sn	15 43 01.4	+1.4
APC	Apacha	4.83	17	*e*P	Pn	15 42 07.1	+1.7
APC				*e*S	Sn	15 43 01.4	+1.4
KRMR	Karymshinskiy	4.96	23	PN	Pn	15 42 09.1	+1.8
KRMR				S	Sn	15 43 03.9	+0.6
KRMR	Karymshinskiy	4.96	23	*e*P	Pn	15 42 09.1	+1.8
KRMR				*e*S	Sn	15 43 03.9	+0.6
PEA0B	Petropavlovsk-	5.11	19	*i* PN	Pn	15 42 10.1	+0.8
PEA0B	Petropavlovsk-	5.11	19	Pn	Pn	15 42 10.8	+1.5
PETK	Petropavlovsk-	5.11	19	P	Pn	15 42 10.5	+1.1
	comp=Z,26nm,0.3s,baz=102,slow=27,SNR=173						
PETK				S	Sn	15 43 09.3	+2.3
	comp=Z,17nm,0.3s,baz=168,slow=15,SNR=1.7						
PETK	Petropavlovsk-	5.11	19	PN	Pn	15 42 09.9	+0.5
PETK						15 43 09.3	
PETK	Petropavlovsk-	5.11	19	Pn	Pn	15 42 09.9	+0.5
PET	Petropavlovsk	5.28	26	PN	Pn	15 42 11.7	+0.1
PET	Petropavlovsk	5.28	26	*e*P	Pn	15 42 11.7	+0.1
PET				*e*S	Sn	15 43 09.4	-1.7
PET	Petropavlovsk	5.28	26	*e*P	Pn	15 42 11.7	+0.1
PET				AMB	AMB	15 42 20.7	
	comp=Z,700nm,1.0s						
PET				*e*S	Sn	15 43 11.2	+0.1
PET				A	A	15 43 28.7	
	comp=Z,5µm,0.7s						
PET				A	A	15 43 28.7	
	comp=Z,8µm,0.7s						
PET				AMS	AMS	15 44 35.7	
	comp=Z,12µm,17.0s						
PET	Petropavlovsk	5.28	26		Pn	15 42 11.3	-0.3
DALK	Dalny	5.32	26	PN	Pn	15 42 12.4	+0.3
DALK				S	Sn	15 43 11.9	-0.1
DALK	Dalny	5.32	26	*e*P	Pn	15 42 12.4	+0.3
DALK				*e*S	Sn	15 43 11.9	-0.1
UGLR	Uglovaya	5.49	26	PN	Pn	15 42 15.0	+0.3
UGLR	Uglovaya	5.49	26	*e*P	Pn	15 42 15.0	+0.3
KOK	Koryaka	5.51	24	PN	Pn	15 42 16.5	+1.6
KOK	Koryaka	5.51	24	*e*P	Pn	15 42 16.5	+1.6
AVH	Avacha	5.52	25	PN	Pn	15 42 16.2	+1.2
AVH	Avacha	5.52	25	*e*P	Pn	15 42 16.2	+1.2
SMAR	Somma	5.53	25	PN	Pn	15 42 16.9	+1.6
SMAR	Somma	5.53	25	*e*P	Pn	15 42 16.9	+1.6
KRER	Koryakskii	5.55	25	PN	Pn	15 42 17.0	+1.4
KRER	Koryakskii	5.55	25	*e*P	Pn	15 42 17.0	+1.4
SDLR	Sedlovina	5.57	26	PN	Pn	15 42 16.0	+0.3
SDLR	Sedlovina	5.57	26	*e*P	Pn	15 42 16.0	+0.3
NLC	Nalytchevo	5.62	29	PN	Pn	15 42 14.7	-1.6
NLC	Nalytchevo	5.62	29	*e*P	Pn	15 42 14.7	-1.6
NLC				*e*S	Sn	15 43 15.9	-3.5
GNL	Ganaly	5.71	19	PN	Pn	15 42 19.6	+1.9
GNL	Ganaly	5.71	19	*e*P	Pn	15 42 19.6	+1.9
KUR	Kuril'sk	5.72	240	c*e*PN	Pn	15 42 20.8	+3.1
KUR				*e*S	Sn	15 43 26.8	+4.8
KUR				pmax	pmax		
	comp=N,234nm,0.5s						
KUR				pmax	pmax		
	comp=Z,663nm,0.5s						
KUR				pmax	pmax		
	comp=E,172nm,0.3s						
KUR				pmax	pmax		
	comp=Z,3µm,2.9s						
KUR				pmax	pmax		
	comp=E,6µm,3.1s						
KUR				pmax	pmax		
	comp=N,3µm,2.8s						
KUR				smax	smax		
	comp=E,9µm,5.0s						
KUR				smax	smax		
	comp=N,8µm,2.6s						
KUR				smax	smax		
	comp=N,331nm,0.8s						
KUR				smax	smax		
	comp=E,823nm,0.8s						
KUR				MLR	MLR		
	comp=Z,14µm,15.0s						
KUR	Kuril'sk	5.72	240	*e*P	Pn	15 42 18.5	+0.8
KUR				AMB	AMB	15 42 33.0	
	comp=Z,660nm,0.5s						
KUR				AMB	AMB	15 42 43.0	
	comp=Z,3µm,2.9s						
KUR				*e*S	Sn	15 43 22.3	+0.3

KUR	comp=Z,8µm,5.0s			A	A	15 43 36.0	
KUR	comp=Z,8µm,5.0s			A	A	15 43 36.0	
KUR	comp=Z,331nm,0.5s			A	A	15 43 50.0	
KUR	comp=Z,823nm,0.5s			A	A	15 43 50.0	
SPN	**Mys Shipunski**	**5.79**	**32**	PN	**Pn**	**15 42 17.9**	**-0.7**
SPN	**Mys Shipunski**	**5.79**	**32**	*e*P	**Pn**	**15 42 17.9**	**-0.7**
SPN				*e*S	**Sn**	**15 43 21.1**	**-2.5**
SPN	**Mys Shipunski**	**5.79**	**32**	*e*P	**Pn**	**15 42 17.9**	**-0.7**
MKZ	**Mys Kozlova**	**7.56**	**32**	PN	**Pn**	**15 42 41.0**	**-1.9**
MKZ	**Mys Kozlova**	**7.56**	**32**	*e*P	**Pn**	**15 42 41.0**	**-1.9**
MKZ				*e*S	**Sn**	**15 44 03.2**	**-4.0**
YUK	**Yuzh-Kuril'sk**	**7.58**	**239**	*d i*PN	**Pn**	**15 42 45.5**	**+2.2**
YUK				*e*S	**Sn**	**15 44 12.0**	**+4.2**
YUK	comp=N,91nm,0.2s			pmax	pmax		
YUK	comp=Z,438nm,0.2s			pmax	pmax		
YUK	comp=Z,752nm,1.0s			pmax	pmax		
YUK	comp=E,1µm,2.1s			smax	smax		
YUK	comp=N,767nm,1.8s			smax	smax		
YUK	comp=Z,8µm,15.0s			MLR	MLR		
YUK	comp=N,6µm,16.0s			MLR	MLR		
YUK	comp=E,7µm,16.0s			MLR	MLR		
YUK	**Yuzh-Kuril'sk**	**7.58**	**239**	*i* P	**Pn**	**15 42 45.0**	**+1.7**
YUK	comp=E,640nm,0.5s			AMB	AMB	15 42 47.0	
YUK	comp=E,752nm,2.0s			AMB	AMB	15 42 53.0	
YUK				*e*S	**Sn**	**15 44 09.4**	**+1.6**
YUK	comp=E,767nm,2.0s			A	A	15 44 22.0	
YUK	comp=E,1µm,2.0s			A	A	15 44 22.0	
YUK	comp=E,370nm,0.6s			A	A	15 44 22.4	
YUK	comp=E,870nm,0.6s			A	A	15 44 22.4	
YUK	comp=E,6µm,16.0s			AMS	AMS	15 44 22.6	
YUK	comp=E,7µm,16.0s			AMS	AMS	15 44 22.6	
YUK	comp=E,8µm,16.0s			AMS	AMS	15 44 22.6	
GRPR	**Tuman**	**7.66**	**239**	*c i*PN	**Pn**	**15 42 45.6**	**+1.3**
GRPR	comp=N,189nm,0.5s			pmax	pmax		
GRPR	comp=E,155nm,0.5s			pmax	pmax		
GRPR	comp=Z,376nm,0.5s			pmax	pmax		
GRPR	comp=Z,525nm,1.1s			pmax	pmax		
GRPR	**Tuman**	**7.66**	**239**	*i* P	**Pn**	**15 42 46.0**	**+1.7**
GRPR	comp=Z,376nm,0.5s			AMB	AMB	15 42 49.3	
GRPR	comp=Z,525nm,1.0s			AMB	AMB	15 42 56.0	
GRPR				*e*S	**Sn**	**15 44 10.0**	**+0.2**
GRPR	comp=Z,683nm,2.0s			A	A	15 44 29.0	
GRPR	comp=Z,579nm,2.0s			A	A	15 44 29.0	
TUMD	**Tumrok D**	**7.69**	**24**	*e*P	**Pn**	**15 42 45.7**	**+1.0**
TUMR	**Tumrok**	**7.69**	**23**	PN	**Pn**	**15 42 45.7**	**+0.9**
TUMR	**Tumrok**	**7.69**	**23**	*e*P	**Pn**	**15 42 46.4**	**+1.6**
GLVR	**Golovnino**	**7.96**	**238**	*e*PN	**Pn**	**15 42 48.8**	**+0.4**
GLVR	**Golovnino**	**7.96**	**238**	*e*P	**Pn**	**15 42 49.8**	**+1.4**
GLVR				*e*S	**Sn**	**15 44 17.9**	**+0.8**
ESO	**Esso**	**7.96**	**16**	PN	**Pn**	**15 42 50.5**	**+2.1**
ESO	**Esso**	**7.96**	**16**	*e*P	**Pn**	**15 42 50.5**	**+2.1**
ESO	**Esso**	**7.96**	**16**	*e*P	**Pn**	**15 42 50.5**	**+2.1**
JRA	**Rausu**	**8.07**	**241**	P	**Pn**	**15 42 52.0**	**+2.1**
NEM2	**Nemuro 2**	**8.08**	**235**	P	**Pn**	**15 42 49.2**	**-0.8**
NEM2				*e*S	**Sn**	**15 44 17.0**	**-2.9**
NMR	**Nemuro--Hokkai**	**8.08**	**236**	⇓*i*PN	**Pn**	**15 42 48.9**	**-1.2**
NMR	**Nemuro--Hokkai**	**8.08**	**236**	*i* P	**Pn**	**15 42 48.0**	**-2.1**
KMNR	**Kamenistaya**	**8.14**	**22**	PN	**Pn**	**15 42 51.2**	**+0.3**
KMNR	**Kamenistaya**	**8.14**	**22**	*e*P	**Pn**	**15 42 51.2**	**+0.3**
YSS	**Yuzh-Sakhalins**	**8.30**	**265**	*e*PN	**Pn**	**15 42 56.3**	**+3.2**
YSS				*e*S	**Sn**	**15 44 30.7**	**+5.3**
YSS	comp=Z,130nm,0.8s			pmax	pmax		
YSS	comp=Z,900nm,4.5s			pmax	pmax		
YSS	comp=N,70nm,0.5s			smax	smax		
YSS	comp=E,60nm,0.5s			smax	smax		
YSS	comp=Z,8µm,19.0s			MLR	MLR		
YSS	comp=E,6µm,18.0s			MLR	MLR		
YSS	**Yuzh-Sakhalins**	**8.30**	**265**	*e*P	**Pn**	**15 42 56.5**	**+3.4**
YSS	comp=E,130nm,0.8s			AMB	AMB	15 43 01.0	
YSS	comp=E,900nm,4.5s			AMB	AMB	15 43 01.0	
YSS				*e*S	**Sn**	**15 44 27.0**	**+1.6**
YSS	comp=E,70nm,0.5s			A	A	15 44 33.2	
YSS	comp=E,60nm,0.5s			A	A	15 44 33.2	
YSS	comp=E,6µm,19.0s			AMS	AMS	15 45 43.0	
YSS	comp=E,8µm,19.0s			AMS	AMS	15 45 43.0	
YSS	**Yuzh-Sakhalins**	**8.30**	**265**	Pn	**Pn**	**15 42 53.4**	**+0.3**
KPT	**Kopyto**	**8.32**	**21**	PN	**Pn**	**15 42 54.5**	**+1.1**
KPT	**Kopyto**	**8.32**	**21**	*e*P	**Pn**	**15 42 54.5**	**+1.1**
KOZ	**Kozyrevsk**	**8.33**	**20**	PN	**Pn**	**15 42 56.0**	**+2.6**
KOZ	**Kozyrevsk**	**8.33**	**20**	*e*P	**Pn**	**15 42 56.0**	**+2.6**
KOZ	**Kozyrevsk**	**8.33**	**20**	*e*P	**Pn**	**15 42 56.0**	**+2.6**
TYV	**Tymovskoe**	**8.33**	**292**	*e*PN	**Pn**	**15 42 58.0**	**+4.5**
TYV				*e*S	**Sn**	**15 44 29.5**	**+3.3**
TYV	comp=Z,1µm,2.5s			pmax	pmax		
TYV	comp=Z,124nm,1.1s			pmax	pmax		
TYV	comp=N,29nm,1.4s			smax	smax		
TYV	comp=E,42nm,1.4s			smax	smax		
TYV	comp=N,800nm,4.3s			smax	smax		
TYV	comp=E,400nm,4.3s			smax	smax		
TYV	comp=N,9µm,19.0s			MLR	MLR		
TYV	comp=Z,15µm,19.0s			MLR	MLR		
TYV	**Tymovskoe**	**8.33**	**292**	*e*P	**Pn**	**15 42 56.6**	**+3.1**
TYV	comp=Z,1µm,2.5s			AMB	AMB	15 42 59.9	
TYV	comp=Z,123nm,1.1s			AMB	AMB	15 43 00.4	
TYV				*e*S	**Sn**	**15 44 29.5**	**+3.3**
TYV	comp=Z,29nm,1.4s			A	A	15 44 29.6	
TYV	comp=Z,41nm,1.4s			A	A	15 44 29.6	
TYV	comp=Z,800nm,4.2s			A	A	15 44 30.7	
TYV	comp=Z,400nm,4.2s			A	A	15 44 30.7	
TYV	comp=Z,9µm,18.0s			AMS	AMS	15 46 18.3	
TYV	comp=Z,15µm,18.0s			AMS	AMS	15 46 18.3	
KIRR	**Kirishev**	**8.34**	**22**	PN	**Pn**	**15 42 55.8**	**+2.1**
KIRR	**Kirishev**	**8.34**	**22**	*e*P	**Pn**	**15 42 55.8**	**+2.1**
BZWR	**Bezymyannyi-We**	**8.39**	**22**	PN	**Pn**	**15 42 55.7**	**+1.3**
BZWR	**Bezymyannyi-We**	**8.39**	**22**	*e*P	**Pn**	**15 42 55.7**	**+1.3**
BZGR	**Bezymyannyi-Gr**	**8.42**	**23**	PN	**Pn**	**15 42 56.1**	**+1.3**
BZGR	**Bezymyannyi-Gr**	**8.42**	**23**	*e*P	**Pn**	**15 42 56.1**	**+1.3**
UGL	**Uglegorsk**	**8.51**	**280**	*e*PN	**Pn**	**15 42 57.4**	**+1.5**
UGL	comp=Z,600nm,2.0s			pmax	pmax		
UGL	comp=Z,146nm,1.2s			pmax	pmax		
UGL	comp=N,9µm,14.0s			MLR	MLR		
UGL	comp=E,9µm,14.0s			MLR	MLR		
UGL	comp=Z,10µm,14.0s			MLR	MLR		
UGL	**Uglegorsk**	**8.51**	**280**	*e*P	**Pn**	**15 42 58.3**	**+2.4**
UGL	comp=Z,600nm,2.0s			AMB	AMB	15 43 03.0	
UGL	comp=Z,146nm,1.2s			AMB	AMB	15 43 03.1	
UGL				*e*S	**Sn**	**15 44 34.0**	**+3.5**
UGL	comp=Z,10µm,14.0s			AMS	AMS	15 46 47.5	
UGL	comp=Z,9µm,14.0s			AMS	AMS	15 46 47.5	
UGL	comp=Z,10µm,14.0s			AMS	AMS	15 46 47.5	
JNK	**Nakash**	**8.51**	**240**	P	**Pn**	**15 42 57.1**	**+1.1**
ZLN	**Zelenaya**	**8.52**	**23**	PN	**Pn**	**15 42 57.1**	**+1.0**
ZLN	**Zelenaya**	**8.52**	**23**	*e*P	**Pn**	**15 42 57.1**	**+1.0**
LGNR	**Loginova**	**8.55**	**22**	PN	**Pn**	**15 42 58.0**	**+1.3**
LGNR	**Loginova**	**8.55**	**22**	*e*P	**Pn**	**15 42 58.0**	**+1.3**
CIRR	**Tsirk**	**8.59**	**23**	PN	**Pn**	**15 42 58.1**	**+1.0**
CIRR	**Tsirk**	**8.59**	**23**	*e*P	**Pn**	**15 42 58.1**	**+1.0**
KRSR	**Krestovskiy**	**8.63**	**22**	PN	**Pn**	**15 42 59.0**	**+1.3**
KRSR	**Krestovskiy**	**8.63**	**22**	*e*P	**Pn**	**15 42 59.0**	**+1.3**
KLY	**Klyuchi**	**8.74**	**22**	PN	**Pn**	**15 42 59.9**	**+0.8**
KLY	**Klyuchi**	**8.74**	**22**	*e*P	**Pn**	**15 42 59.9**	**+0.8**
JTKR	**Abashiri--Toko**	**8.77**	**244**	P	**Pn**	**15 43 01.8**	**+2.3**
JAK	**Akkeshi**	**8.90**	**237**	P	**Pn**	**15 43 00.3**	**-0.9**
JAK				*e*S	**Sn**	**15 44 36.2**	**-3.9**
JMP	**Maruseppu**	**9.08**	**246**	P	**Pn**	**15 43 06.4**	**+2.6**
BDR	**Baidarnaya**	**9.11**	**23**	PN	**Pn**	**15 43 05.0**	**+0.8**
BDR	**Baidarnaya**	**9.11**	**23**	*e*P	**Pn**	**15 43 05.0**	**+0.8**
OKH	**Okha**	**9.17**	**309**	*c i*PN	Pn	15 43 13.2	+8.3
OKH	comp=Z,500nm,10.9s			pmax	pmax		
OKH	comp=E,10µm,16.0s			MLR	MLR		
OKH	comp=N,8µm,16.0s			MLR	MLR		
OKH	comp=Z,8µm,16.0s			MLR	MLR		
OKH	**Okha**	**9.17**	**309**	*i* P	**Pn**	**15 43 08.7**	**+3.8**
OKH	comp=Z,3µm,2.0s			AMB	AMB	15 43 15.6	
OKH				*e*S	**Sn**	**15 44 53.1**	**+6.5**
OKH	comp=Z,3µm,2.0s			A	A	15 44 54.1	
OKH	comp=Z,3µm,2.0s			A	A	15 44 54.1	
OKH	comp=Z,8µm,16.0s			AMS	AMS	15 47 15.2	
OKH	comp=Z,10µm,16.0s			AMS	AMS	15 47 15.2	
OKH	comp=Z,8µm,16.0s			AMS	AMS	15 47 15.2	
SRKR	**Sorokina**	**9.18**	**22**	PN	**Pn**	**15 43 05.2**	**+0.1**
SRKR	**Sorokina**	**9.18**	**22**	*e*P	**Pn**	**15 43 05.2**	**+0.1**
SMKR	**Semkarok**	**9.19**	**23**	PN	**Pn**	**15 43 05.7**	**+0.4**
SMKR	**Semkarok**	**9.19**	**23**	*e*P	**Pn**	**15 43 05.7**	**+0.4**
JAR	**Ashorobuto**	**9.24**	**241**	P	**Pn**	**15 43 07.3**	**+1.3**
JAR				*e*S	**Sn**	**15 44 49.5**	**+1.0**
KBTR	**Krutoberegovo**	**9.27**	**29**	PN	**Pn**	**15 43 04.3**	**-2.0**
KBTR	**Krutoberegovo**	**9.27**	**29**	*e*P	**Pn**	**15 43 04.3**	**-2.0**
KBG	**Krutoberegovo**	**9.27**	**28**	PN	**Pn**	**15 43 08.3**	**+2.0**
KBG	**Krutoberegovo**	**9.27**	**28**	*e*P	**Pn**	**15 43 08.3**	**+2.0**
KBG	**Krutoberegovo**	**9.27**	**28**	*e*P	**Pn**	**15 43 08.3**	**+2.0**
JKA	**Kamikawa-asahi**	**9.49**	**248**	*e*P	**Pn**	**15 43 12.3**	**+2.9**
JKA	**Kamikawa-asahi**	**9.49**	**248**		**Sn**	**15 44 48.5**	**-6.2**
ASAJ	**Asahikawa** comp=Z,12nm,0.3s,baz=70,slow=14,SNR=86	**9.49**	**248**	P	**Pn**	**15 43 12.3**	**+2.9**
ASAJ	baz=70,slow=18,SNR=1.3			S	**Sn**	**15 44 48.5**	**-6.2**
ASAJ	comp=Z,9µm,19.2s,baz=66,slow=36			LR	LR	15 46 39.0	
ASAJ	**Asahikawa**	**9.49**	**248**	P	**Pn**	**15 43 13.1**	**+3.7**
JKK2	**Kamakawa 2**	**9.53**	**247**	P	**Pn**	**15 43 12.9**	**+3.0**
BKI	**Bering**	**9.72**	**41**	PN	**Pn**	**15 43 11.7**	**-0.8**
BKI	**Bering**	**9.72**	**41**	*e*P	**Pn**	**15 43 11.7**	**-0.8**
BKI				*e*S	Sn	15 44 49.8	-10
BKI	**Bering**	**9.72**	**41**	*e*P	**Pn**	**15 43 11.7**	**-0.8**
JCH	**Churui**	**9.90**	**239**	P	**Pn**	**15 43 14.3**	**-0.6**
JCH				*e*S	**Sn**	**15 45 00.0**	**-4.6**
JAB	**Ashibetsu**	**10.04**	**246**	P	**Pn**	**15 43 20.1**	**+3.1**
NKL	**Nikolayevsk**	**10.21**	**304**	*e*PN	**Pn**	**15 43 18.7**	**-0.4**
NKL	comp=E,11nm,0.9s			pmax	pmax		
NKL	comp=N,490nm,1.3s			pmax	pmax		
NKL	comp=Z,182nm,1.5s			pmax	pmax		
NKL	comp=N,8µm,12.0s			MLR	MLR		
NKL	comp=Z,6µm,15.0s			MLR	MLR		
NKL	**Nikolayevsk**	**10.21**	**304**	*e*P	**Pn**	**15 43 20.6**	**+1.5**
NKL	comp=Z,181nm,1.5s			AMB	AMB	15 43 26.1	
NKL	comp=Z,8µm,15.0s			AMS	AMS	15 48 29.4	
NKL	comp=Z,11nm,15.0s			AMS	AMS	15 48 29.4	
NKL	comp=Z,6µm,15.0s			AMS	AMS	15 48 29.4	
JBT2	**Biratori 2**	**10.38**	**242**	P	**Pn**	**15 43 22.6**	**+1.1**
ERM	**Erimo**	**10.40**	**237**	*i* PN	**Pn**	**15 43 20.9**	**-0.9**
ERM	**Erimo**	**10.40**	**237**	Pn	**Pn**	**15 43 22.4**	**+0.6**
JNBK	**Urakawa-nobuka**	**10.46**	**239**	P	**Pn**	**15 43 20.5**	**-2.1**
JEW	**Eniwo**	**10.89**	**245**	P	**Pn**	**15 43 30.4**	**+1.9**
JEW	**Eniwo**	**10.89**	**245**	Pn	**Pn**	**15 43 27.6**	**-0.9**
PALN	**Palana**	**11.19**	**14**	PN	**Pn**	**15 43 32.6**	**+0.1**
PALN	**Palana**	**11.19**	**14**	*e*P	**Pn**	**15 43 32.6**	**+0.1**
JNB	**Noboribetsu**	**11.35**	**244**	P	**Pn**	**15 43 34.1**	**-0.7**
MA2	**Magadan** comp=Z,4.2nm,0.3s,baz=161,slow=18,SNR=20	**11.52**	**349**	P	**Pn**	**15 43 38.4**	**+1.3**
MA2	comp=Z,6µm,18.4s,baz=173,slow=40			LR	LR	15 48 37.1	
MA2	**Magadan**	**11.52**	**349**	*ce*PN	**Pn**	**15 43 36.9**	**-0.2**
MA2	comp=Z,158nm,1.3s			pmax	pmax		
MA2	**Magadan**	**11.52**	**349**	*e*P	**Pn**	**15 43 36.9**	**-0.2**
MA2	**Magadan**	**11.52**	**349**	Pn	**Pn**	**15 43 36.5**	**-0.6**
JYM2	**Yakumo 2**	**11.96**	**244**	P	**Pn**	**15 43 42.4**	**-0.7**
GRNR	**Gornyy**	**12.23**	**288**	⇓*i*PN	Pn	15 43 51.8	+5.0
GRNR				*e*S	Sn	15 46 12.2	+11
GRNR	comp=E,8.0nm,0.9s			pmax	pmax		
GRNR	comp=Z,10.0nm,0.9s			pmax	pmax		
GRNR	comp=E,3.0nm,0.9s			smax	smax		
GRNR	comp=E,4µm,20.0s			MLR	MLR		
GRNR	comp=N,2µm,17.0s			MLR	MLR		
GRNR	comp=Z,5µm,18.0s			MLR	MLR		
GRNR	**Gornyy**	**12.23**	**288**	*e*P	**Pn**	**15 43 49.8**	**+3.0**
GRNR	comp=Z,10.0nm,0.9s			AMB	AMB	15 43 53.0	
GRNR	comp=Z,2µm,18.0s			AMS	AMS	15 48 45.0	
GRNR	comp=Z,4µm,18.0s			AMS	AMS	15 48 45.0	
GRNR	comp=Z,5µm,18.0s			AMS	AMS	15 48 45.0	
JTM	**Tenmabayashi**	**12.39**	**238**	P	**Pn**	**15 43 45.5**	**-3.5**
JTM	**Tenmabayashi**	**12.39**	**238**	Pn	**Pn**	**15 43 45.5**	**-3.5**
TEY	**Ternei**	**12.97**	**262**	*e*PN	**P**	**15 44 04.4**	**-2.0**
TEY				*e*		15 46 28.4	
TEY	**Ternei**	**12.97**	**262**	*e*P	**Pn**	**15 43 57.4**	**+0.5**
TEY	comp=Z,100nm,14.0s			AMS	AMS	15 50 54.6	
TEY	comp=Z,100nm,14.0s			AMS	AMS	15 50 54.6	
TEY	comp=Z,100nm,14.0s			AMS	AMS	15 50 54.6	
SMY	**Shemya**	**12.99**	**63**	PN	**Pn**	**15 43 53.8**	**-3.3**
SMY	**Shemya**	**12.99**	**63**	Pn	**Pn**	**15 43 53.8**	**-3.3**
JRG	**Rokugo**	**13.59**	**234**	P	**Pn**	**15 44 01.4**	**-4.0**
JRG				*e*S	**Sn**	**15 46 26.3**	**-8.6**
JIO	**Ouri**	**13.91**	**230**	P	Pn	15 44 04.9	-4.9
JIO				*e*S	Sn	15 46 31.0	-12
JMM	**Marumori**	**14.64**	**230**	Pn	**Pn**	**15 44 15.8**	**-3.8**
JYA	**Atsumi**	**14.67**	**234**	P	**Pn**	**15 44 15.7**	**-4.2**
SEY	**Seymchan** comp=Z,0.8nm,0.3s,baz=164,slow=9.2,SNR=20	**14.71**	**356**	P	**Pn**	**15 44 20.6**	**+0.4**
SEY	comp=Z,6µm,20.6s,baz=162,slow=38			LR	LR	15 50 21.4	
SEY	**Seymchan**	**14.71**	**356**	*i* P	**Pn**	**15 44 19.7**	**-0.6**
SEY	**Seymchan**	**14.71**	**356**	*e*P	**Pn**	**15 44 19.7**	**-0.6**
KLR	**Kul'dur** comp=Z,0.1nm,0.3s,baz=86,slow=12,SNR=12	**15.26**	**282**	P	**P**	**15 44 30.3**	**-1.6**
KLR	comp=Z,0.1nm,0.3s,baz=133,slow=14,SNR=1.8			S	**Sn**	**15 47 10.5**	**-5.0**
KLR	comp=Z,5µm,19.2s,baz=90,slow=38			LR	LR	15 50 40.8	
KLR	**Kul'dur**	**15.26**	**282**	*ce*P	**Pn**	**15 44 28.3**	**+0.6**
KLR	**Kul'dur**	**15.26**	**282**	*e*P	**Pn**	**15 44 27.0**	**-0.7**
KMSK	**Kamenskaya**	**15.52**	**20**	P	**Pn**	**15 44 30.3**	**-0.7**
KMSK	**Kamenskaya**	**15.52**	**20**	*e*P	**Pn**	**15 44 30.3**	**-0.7**
JFY	**Yanaizu**	**15.55**	**231**	P	**Pn**	**15 44 28.4**	**-3.1**
JSD	**Sado**	**15.86**	**236**	Pn	**Pn**	**15 44 32.5**	**-3.0**
USA0B	**Ussuriysk Arra**	**16.34**	**264**	P	**P**	**15 44 43.0**	**-0.9**
USA0B	comp=Z,29nm,0.8s			pmax	pmax		
USA0B	**Ussuriysk Arra**	**16.34**	**264**		**P**	**15 44 43.0**	**-0.9**
USRK	**Ussuriysk Ar.** baz=72,slow=13,SNR=14	**16.34**	**264**	P	**P**	**15 44 43.1**	**-0.8**
USRK	baz=46,slow=46,SNR=1.1			S	**Sn**	**15 47 40.0**	**-1.6**
USRK	comp=Z,3µm,20.9s,baz=64,slow=35			LR	LR	15 50 34.4	
USRK	**Ussuriysk Ar.**	**16.34**	**264**	P	**Pn**	**15 44 42.5**	**+1.0**
USRK						15 47 40.0	
USRK	**Ussuriysk Ar.**	**16.34**	**264**		**Pn**	**15 44 42.5**	**+1.0**
MAJO	**Matsushiro**	**16.99**	**232**	*c i*P	**Pn**	**15 44 47.8**	**-1.9**
MAJO	**Matsushiro**	**16.99**	**232**		**Pn**	**15 44 47.5**	**-2.2**
MAT	**Matsushiro**	**16.99**	**232**	P	**Pn**	**15 44 47.7**	**-2.0**
MJAR	**Matsushiro Arr** comp=Z,0.2nm,0.3s,baz=36,slow=13,SNR=43	**16.99**	**232**	P	**Pn**	**15 44 47.0**	**-2.7**
MJAR	**Matsushiro Arr**	**16.99**	**232**	P	**Pn**	**15 44 46.9**	**-2.8**
MJAR	comp=Z,27nm,1.5s			pmax	pmax		
MJAR	**Matsushiro Arr**	**16.99**	**232**		**Pn**	**15 44 46.9**	**-2.8**
MDJ	**Mudanjiang**	**17.78**	**267**	P	**Pn**	**15 44 58.8**	**-0.6**
MDJ				PP	**PnPn**	**15 45 10.2**	**-0.4**
MDJ				sP	sP	15 45 15.0	-0.4
MDJ				S	**Sn**	**15 48 15.2**	**-1.2**
MDJ	comp=Z,30nm,1.1s			pmax	pmax		
MDJ	comp=Z,540nm,4.9s			pmax	pmax		
MDJ	comp=Z,3µm,11.4s			LR	LR		
MDJ	comp=Z,3µm,12.4s			LR	LR		
MDJ	comp=Z,6µm,12.9s			LR	LR		
MDJ	**Mudanjiang**	**17.78**	**267**	P	**Pn**	**15 44 59.2**	**-0.2**
ZEA	**Zeya**	**18.13**	**298**	*e*P	**Pn**	**15 45 07.1**	**+3.4**
ZEA				*e*S	**Sn**	**15 48 20.9**	**-4.0**
ZEA	comp=E,10.0nm,2.1s			pmax	pmax		
ZEA	comp=N,10.0nm,1.8s			pmax	pmax		
ZEA	comp=Z,30nm,1.5s			pmax	pmax		
ZEA	comp=E,600nm,4.4s			pmax	pmax		
ZEA	comp=Z,600nm,4.3s			pmax	pmax		
ZEA	comp=N,2µm,9.6s			smax	smax		
ZEA	comp=E,4µm,16.0s			MLR	MLR		
ZEA	comp=N,800nm,14.0s			MLR	MLR		
ZEA	comp=Z,4µm,15.0s			MLR	MLR		
ZEA	**Zeya**	**18.13**	**298**	*e*P	**Pn**	**15 45 06.9**	**+3.2**
ZEA	comp=Z,60nm,0.6s			AMB	AMB	15 45 10.4	
ZEA	comp=Z,600nm,4.0s			AMB	AMB	15 45 14.5	
ZEA	comp=Z,800nm,15.0s			AMS	AMS	15 53 04.0	
ZEA	comp=Z,4µm,15.0s			AMS	AMS	15 53 04.0	
ZEA	comp=Z,4µm,15.0s			AMS	AMS	15 53 04.0	
JGF	**Kuroka**	**18.15**	**232**	P	**P**	**15 45 03.0**	**-1.0**
INU	**Inuyama**	**18.52**	**232**		**P**	**15 45 06.9**	**-1.1**
JWT	**Wachi**	**19.44**	**235**		**P**	**15 45 17.7**	**-0.4**
YAK	**Yakutsk** comp=Z,0.3nm,0.3s,baz=0.2,slow=0.8,SNR=11	**19.70**	**323**	P	**P**	**15 45 20.2**	**-0.4**
YAK	baz=342,slow=11,SNR=0.9			S	**S**	**15 48 55.4**	**-4.8**
YAK	comp=Z,3µm,21.2s,baz=105,slow=36			LR	LR	15 52 48.2	
YAK	**Yakutsk**	**19.70**	**323**	*e*P	**Pn**	**15 45 23.1**	**+0.7**
YAK	comp=Z,66nm,1.3s			pmax	pmax		
YAK	comp=N,25nm,1.3s			pmax	pmax		
YAK	comp=E,48nm,1.3s			pmax	pmax		
YAK	comp=Z,4µm,14.0s			MLR	MLR		
YAK	comp=N,1µm,12.0s			MLR	MLR		
YAK	comp=E,1µm,14.0s			MLR	MLR		
YAK	**Yakutsk**	**19.70**	**323**	*e*P	**Pn**	**15 45 23.1**	**+0.7**
YAK	**Yakutsk**	**19.70**	**323**	P	**P**	**15 45 20.7**	**0.0**
YAK	comp=Z,93nm,0.7s			IAmb	IAmb	15 45 35.9	
BILL	**Bilibino**	**20.59**	**12**	*i* P	**P**	**15 45 28.7**	**-1.6**
BILL				*i*		15 46 07.0	
BILL				*i* S	Sn	15 49 21.8	-2.0
BILL	comp=Z,64nm,1.2s			pmax	pmax		
BILL	comp=Z,4µm,17.0s			MLR	MLR		
BILL	**Bilibino**	**20.59**	**12**	P	**P**	**15 45 28.6**	**-1.6**
CN2	**Changchun**	**20.85**	**268**	*e*P	**P**	**15 45 31.5**	**-1.8**
CN2	comp=Z,30nm,1.2s			pmax	pmax		
CN2	comp=Z,100nm,3.0s			pmax	pmax		
CN2	comp=Z,2µm,18.0s			LR	LR		
CN2	comp=Z,2µm,18.0s			LR	LR		
CN2	comp=Z,3µm,20.0s			LR	LR		
JHS	**Saijyo**	**20.92**	**238**	P	**P**	**15 45 35.3**	**+1.1**
KSRS	**Korea Array** comp=Z,32nm,0.7s,baz=50,slow=9.3,SNR=57	**22.42**	**251**	P	**P**	**15 45 51.2**	**+1.0**
KSRS	comp=Z,4µm,18.8s,baz=50,slow=35			LR	LR	15 54 09.8	
KS19	**Wonju Array Si**	**22.43**	**251**	P	**P**	**15 45 49.9**	**-0.5**
KS19	comp=Z,60nm,0.9s			IAmb	IAmb	15 45 54.4	
KSAR	**Wonju Array Be**	**22.46**	**251**	P	**P**	**15 45 49.0**	**-1.6**
KSAR	**Wonju Array Be**	**22.46**	**251**	P	**P**	**15 45 49.0**	**-1.6**
SNY	**Shenyang**	**22.93**	**265**	⇓P	**P**	**15 45 57.9**	**+2.4**
SNY				S	**S**	**15 50 00.7**	**-1.5**
SNY	comp=Z,2µm,15.1s			LR	LR		
SNY	comp=Z,3µm,14.3s			LR	LR		
SNY	comp=Z,4µm,16.0s			LR	LR		
HIA	**Hailar**	**23.04**	**286**	P	**P**	**15 45 56.0**	**-0.7**
HIA	comp=Z,24nm,1.2s			pmax	pmax		
HIA	**Hailar**	**23.04**	**286**	P	**P**	**15 45 56.0**	**-0.7**
JCJ	**Chichijima** comp=Z,184nm,18.9s,baz=11,slow=41	**23.39**	**210**	LR	LR	15 57 01.3	
TJN	**Taejon**	**23.44**	**250**	*ce*P	**P**	**15 46 01.7**	**+1.1**
GAMB	**Gambell** baz=246	**23.84**	**37**	P	**P**	**15 46 05.2**	**+1.1**

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GAMB  Gambell            23.84  37    P      P      15 46 04.3 +0.2
JSU   Suzuyama           25.00 237    P      P      15 46 16.2 +1.2
DL2   Dalian             25.67 261    P      P      15 46 23.9 +2.9
DL2                                   S      S      15 50 51.5 +5.1
DL2                                   pmax   pmax
      comp=Z,58nm,1.1s
DL2                                   pmax   pmax
      comp=Z,380nm,3.7s
DL2                                   LR     LR
      comp=Z,1µm,17.2s
DL2                                   LR     LR
      comp=Z,1µm,16.6s
DL2                                   LR     LR
      comp=Z,2µm,16.7s
BOD   Bodaibo            25.95 307  eP      P      15 46 25.3 +1.9
BOD                                   pmax   pmax
      comp=Z,27nm,1.5s
TNA   Tin City           26.05  35    P      P      15 46 28.5 +4.2
      baz=247
TIXI  Tiksi              26.32 342    P      P      15 46 23.0 -3.5
      comp=Z,24nm,1.1s,baz=128,slow=9.9,SNR=19
TIXI                                  S      S      15 50 57.5 +1.5
      comp=Z,1.9nm,0.3s,baz=25,slow=2.5,SNR=2.8
TIXI                                  LR     LR     15 58 08.9
      comp=Z,4µm,18.4s,baz=126,slow=39
TIXI  Tiksi              26.32 342  i P      P      15 46 24.8 -1.7
TIXI  Tiksi              26.32 342    P      P      15 46 23.3 -3.3
BJT   Baijiatuau         28.72 268    P      P      15 46 46.9 -1.5
BJT                                   pmax   pmax
      comp=Z,8.0nm,1.1s
BJT   Baijiatuau         28.72 268    P      P      15 46 46.9 -1.5
RDOG  Red Dog Mine       28.85  32    P      P      15 46 56.1 +6.8
      baz=248,SNR=5.7
RDOG  Red Dog Mine       28.85  32    P      P      15 46 48.3 -1.0
RDOG                                  IAmb   IAmb   15 46 56.8
      comp=Z,68nm,1.2s
JOW   Kunigami           29.82 234    P      P      15 46 57.6 -0.6
      comp=Z,6.7nm,0.5s,baz=27,slow=9.7,SNR=3.1
JOW                                   LR     LR     15 59 18.7
      comp=Z,1µm,21.9s,baz=35,slow=37
JOW   Kunigami           29.82 234    P      P      15 46 56.8 -1.5
H11N2 WAKE ISLAND Hy     30.14 157    T      T      16 18 41.4
      baz=345,slow=76,SNR=1256
TIA   Tai'an             30.14 260  ⇑P      P      15 47 01.6 +0.6
TIA                                   pmax   pmax
      comp=Z,320nm,3.5s
TIA                                   LR     LR
      comp=Z,860nm,15.4s
TIA                                   LR     LR
      comp=Z,2µm,16.8s
TIA                                   LR     LR
      comp=Z,2µm,18.0s
H11N1 WAKE ISLAND Hy     30.16 157    T      T      16 18 49.3
      baz=345,slow=76,SNR=2230
H11N3 WAKE ISLAND Hy     30.16 157    T      T      16 18 43.0
      baz=345,slow=76,SNR=1328
SSE   Sheshan            30.79 248    P      P      15 47 06.6 -0.1
SSE                                   S      S      15 52 11.1 +4.2
SSE                                   pmax   pmax
      comp=Z,24nm,0.7s
SSE                                   pmax   pmax
      comp=Z,200nm,3.7s
N19K  Bonanza Creek      31.07  47    P      P      15 47 10.5 +1.5
M19K  Big River Lodg     31.14  45    P      P      15 47 11.2 +1.6
H11S1 WAKE ISLAND Hy     31.26 158    T      T      16 20 10.0
      baz=345,slow=76
H11S3 WAKE ISLAND Hy     31.27 158    T      T      16 20 13.7
      baz=345,slow=76
H11S2 WAKE ISLAND Hy     31.28 158    T      T      16 20 13.9
      baz=345,slow=76,SNR=9282
K20K  Telida             31.36  42    P      P      15 47 12.8 +1.3
      baz=266
K20K  Telida             31.36  42    P      P      15 47 13.1 +1.5
HHC   Hu-ho-hao-te       31.39 273  eP      P      15 47 13.2 +1.1
HHC                                   S      S      15 52 15.0 -1.6
HHC                                   pmax   pmax
      comp=Z,31nm,1.0s
HHC                                   pmax   pmax
      comp=Z,240nm,8.6s
HHC                                   LR     LR
      comp=Z,2µm,12.6s
HHC                                   LR     LR
      comp=Z,2µm,12.3s
HHC                                   LR     LR
      comp=Z,4µm,13.0s
J20K  Nowinta River      31.40  41    P      P      15 47 13.2 +1.4
      baz=264,SNR=9.5
J20K  Nowinta River      31.40  41    P      P      15 47 11.9 +0.1
J20K                                  IAmb   IAmb   15 47 14.4
      comp=Z,64nm,1.4s
ULN   Ulaanbaatar        31.53 287ceP      P      15 47 12.1 -1.3
ULN                                   pmax   pmax
      comp=Z,11nm,1.3s
ULN                                   MLR    MLR
      comp=Z,5µm,17.0s
ULN   Ulaanbaatar        31.53 287    P      P      15 47 11.9 -1.5
NJ2   Nanjing            31.61 252  eP      P      15 47 15.3 +1.4
NJ2                                   S      S      15 52 20.6 +0.8
NJ2                                   pmax   pmax
      comp=Z,6.0nm,0.5s
NJ2                                   pmax   pmax
      comp=Z,300nm,4.5s
NJ2                                   LR     LR
      comp=Z,2µm,18.9s
NJ2                                   LR     LR
      comp=Z,1µm,17.5s
NJ2                                   LR     LR
      comp=Z,3µm,18.9s
IMAR  Indian Mountai     31.79  37    P      P      15 47 15.7 +0.5
RSO   Redoubt South      31.92  48    P      P      15 47 17.4 +0.7
SONM  Songino Array      31.96 288    P      P      15 47 16.2 -0.9
      comp=Z,1.9nm,0.7s,baz=56,slow=9.2,SNR=13
SONM                                  PcP    PcP    15 50 06.4 +0.1
      comp=Z,1.6nm,0.8s,baz=72,slow=1.5,SNR=2.6
SONM                                  LR     LR     16 01 23.5
      comp=Z,5µm,19.4s,baz=74,slow=38
SONM  Songino Array      31.96 288    P      P      15 47 16.6 -0.5
A21K  Barrow             32.06  27    P      P      15 47 18.3 +0.8
      baz=250,SNR=6.8
A21K  Barrow             32.06  27    P      P      15 47 18.0 +0.5
H21K  Melozitna Rive     32.13  38    P      P      15 47 19.4 +1.1
      baz=263
H21K  Melozitna Rive     32.13  38    P      P      15 47 18.9 +0.6
H21K                                  IAmb   IAmb   15 47 20.8
      comp=Z,65nm,1.2s
SPCR  Spurr Chakacha     32.17  47    P      P      15 47 20.6 +1.9
      baz=271
CHUM  Lake Minchumin     32.18  41    P      P      15 47 19.7 +1.0
      baz=267
KDAK  Kodiak Island      32.19  53    P      P      15 47 16.2 -2.6
      comp=Z,13nm,0.8s,baz=94,slow=16,SNR=5.4
KDAK  Kodiak Island      32.19  53    P      P      15 47 19.0 +0.2
      baz=276
PPLA  Purkeypile         32.19  43    P      P      15 47 20.8 +1.8
      baz=268
PPLA  Purkeypile         32.19  43    P      P      15 47 20.1 +1.1
PPLA                                  IAmb   IAmb   15 47 34.0
      comp=Z,87nm,1.5s
SPU   Mount Spurr        32.25  47    P      P      15 47 19.9 +0.6
CAST  Castle Rocks       32.26  42    P      P      15 47 20.9 +1.5
      baz=268
TIY   Taiyuan            32.41 267  eP      P      15 47 27.4 +6.4
TIY                                   LR     LR
      comp=N,2µm,14.5s
TIY                                   LR     LR
      comp=E,860nm,13.4s
TIY                                   LR     LR
      comp=Z,2µm,18.5s
I21K  Tanana             32.42  39    P      P      15 47 22.1 +1.3
      baz=265,SNR=12
I21K  Tanana             32.42  39    P      P      15 47 21.8 +1.0
I21K                                  IAmb   IAmb   15 47 23.6
      comp=Z,35nm,1.2s
SKT   Skwentna           32.49  45    P      P      15 47 21.5 +0.1
TLY   Talaya             32.55 296    P      P      15 47 22.5 +0.4
      comp=Z,2.9nm,0.4s,baz=91,slow=4.7,SNR=3.6
TLY                                   LR     LR     16 01 52.1
      comp=Z,4µm,19.2s,baz=60,slow=39
TLY   Talaya             32.55 296    P      P      15 47 21.7 -0.4
CNPM  China Poot         32.73  50    P      P      15 47 24.2 +0.7
CNPM                                  IAmb   IAmb   15 47 31.0
      comp=Z,38nm,1.2s
BPAW  Bear Paw Mtn.      32.78  41    P      P      15 47 25.0 +1.1
      baz=268,SNR=6.0
BPAW  Bear Paw Mtn.      32.78  41    P      P      15 47 24.3 +0.3
KTH   Kantishna Hill     32.79  42    P      P      15 47 24.8 +0.8
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KTH                                   IAmb   IAmb   15 47 26.9
      comp=Z,67nm,1.3s
BRLK  Bradley Lake       32.89  49    P      P      15 47 25.1 +0.2
MLY   Manley             32.94  39    P      P      15 47 26.6 +1.2
      baz=266,SNR=11
MLY   Manley             32.94  39    P      P      15 47 26.2 +0.9
MLY                                   IAmb   IAmb   15 47 28.1
      comp=Z,34nm,1.2s
TRF   Thorofare Moun     33.07  42    P      P      15 47 27.5 +0.9
      baz=269
CUT   Chulitna           33.08  44    P      P      15 47 26.9 +0.4
CUT                                   IAmb   IAmb   15 47 39.0
      comp=Z,61nm,1.3s
ZAK   Zakamensk          33.12 293  eP      P      15 47 27.4 +0.2
ZAK                                   pmax   pmax
      comp=Z,16nm,1.4s
ZAK   Zakamensk          33.12 293  eP      P      15 47 27.4 +0.2
COLD  Coldfoot           33.35  35    P      P      15 47 29.9 +1.1
      baz=264,SNR=13
COLD  Coldfoot           33.35  35    P      P      15 47 29.8 +0.9
COLD                                  IAmb   IAmb   15 47 31.5
      comp=Z,34nm,1.1s
BWN   Browne             33.45  41    P      P      15 47 31.2 +1.5
H23K  Yukon River        33.49  38    P      P      15 47 31.5 +1.4
      baz=266
H23K  Yukon River        33.49  38    P      P      15 47 31.1 +1.0
H23K                                  IAmb   IAmb   15 47 33.2
      comp=Z,36nm,1.1s
I23K  Minto, Yukon-K     33.53  39    P      P      15 47 31.3 +1.0
      baz=268,SNR=11
I23K  Minto, Yukon-K     33.53  39    P      P      15 47 31.1 +0.7
I23K                                  IAmb   IAmb   15 47 33.2
      comp=Z,52nm,1.3s
NEA2  Nenana             33.63  40    P      P      15 47 32.2 +0.8
      baz=269,SNR=8.9
NEA2  Nenana             33.63  40    P      P      15 47 31.9 +0.6
NEA2                                  IAmb   IAmb   15 47 54.3
      comp=Z,17nm,0.7s
PMR   Palmer             33.64  46    P      P      15 47 31.4  0.0
PMR                                   pmax   pmax
      comp=Z,26nm,1.4s
PMR   Palmer             33.64  46    P      P      15 47 31.4  0.0
MCK   McKinley           33.68  42    P      P      15 47 31.6 -0.2
MCK                                   pmax   pmax
      comp=Z,41nm,1.2s
MCK   McKinley           33.68  42    P      P      15 47 32.2 +0.4
      baz=270,SNR=7.3
MCK   McKinley           33.68  42    P      P      15 47 31.6 -0.2
MCK                                   IAmb   IAmb   15 47 33.9
      comp=Z,41nm,1.2s
RND   Reindeer           33.72  42    P      P      15 47 31.7 -0.5
RND                                   pmax   pmax
      comp=Z,50nm,1.3s
RND   Reindeer           33.72  42    P      P      15 47 31.7 -0.5
RND                                   IAmb   IAmb   15 47 33.8
      comp=Z,50nm,1.3s
TOLK  Toolik Lake Re     33.77  33    P      P      15 47 33.8 +1.2
      baz=262,SNR=15
TOLK  Toolik Lake Re     33.77  33    P      P      15 47 33.3 +0.7
KNK   Knik Glacier       33.97  46    P      P      15 47 35.1 +0.8
      baz=274
KNK   Knik Glacier       33.97  46    P      P      15 47 33.7 -0.7
KNK                                   IAmb   IAmb   15 47 56.8
      comp=Z,37nm,0.9s
MDM   Murphy Dome        34.00  40    P      P      15 47 35.0 +0.5
MDM                                   IAmb   IAmb   15 47 37.2
      comp=Z,44nm,1.2s
SML   Sawmill            34.01  45    P      P      15 47 35.0 +0.3
      baz=274,SNR=9.2
SML   Sawmill            34.01  45    P      P      15 47 34.5 -0.2
WRH   Wood River Hil     34.05  40    P      P      15 47 35.1 +0.1
WRH                                   IAmb   IAmb   15 47 39.1
      comp=Z,24nm,1.0s
PWL   Port Wells         34.07  47    P      P      15 47 35.1 -0.1
PWL                                   IAmb   IAmb   15 47 58.0
      comp=Z,22nm,1.0s
MOY   Mondy              34.14 296  eP      P      15 47 37.0 +1.0
MOY                                   pmax   pmax
      comp=Z,32nm,2.4s
TCOL  CIGO, UAF Yank     34.16  40    P      P      15 47 37.1 +1.3
      baz=269,SNR=15
TCOL  CIGO, UAF Yank     34.16  40    P      P      15 47 36.3 +0.5
COLA  College            34.16  40    P      P      15 47 36.0 +0.1
COLA                                  pmax   pmax
      comp=Z,77nm,1.1s
COLA  College            34.16  40    P      P      15 47 36.9 +1.0
      baz=269
COLA  College            34.16  40    P      P      15 47 36.0 +0.1
H24K  Noodor Dome        34.17  38    P      P      15 47 37.5 +1.4
      baz=268
H24K  Noodor Dome        34.17  38    P      P      15 47 36.9 +0.8
H24K                                  IAmb   IAmb   15 47 39.1
      comp=Z,45nm,1.1s
CCB   Clear Creek Bu     34.18  40    P      P      15 47 36.4 +0.4
CCB                                   IAmb   IAmb   15 48 02.4
      comp=Z,33nm,1.2s
POKR  Poker Plat Res     34.34  39    P      P      15 47 38.9 +1.4
      baz=269,SNR=27
POKR  Poker Plat Res     34.34  39    P      P      15 47 38.3 +0.8
DHY   Denali Highway     34.39  43    P      P      15 47 38.3 +0.2
      baz=272
DHY   Denali Highway     34.39  43    P      P      15 47 38.0 -0.1
DHY                                   IAmb   IAmb   15 47 50.7
      comp=Z,62nm,1.4s
SCM   Sheep Creek Mo     34.48  45    P      P      15 47 39.6 +0.8
SCM                                   pmax   pmax
      comp=Z,63nm,1.4s
SCM   Sheep Creek Mo     34.48  45    P      P      15 47 39.4 +0.6
      baz=274
SCM   Sheep Creek Mo     34.48  45    P      P      15 47 39.6 +0.8
SCM                                   IAmb   IAmb   15 47 52.6
      comp=Z,63nm,1.4s
HDA   Harding Lake       34.55  41    P      P      15 47 39.8 +0.5
      baz=271,SNR=6.2
HDA   Harding Lake       34.55  41    P      P      15 47 39.6 +0.4
IL31                     34.57  40    P      P      15 47 39.8 +0.3
IL31                                  IAmb   IAmb   15 47 42.3
      comp=Z,44nm,1.4s
ILAR  Eielson Array      34.57  40    P      P      15 47 36.6 -2.9
      comp=Z,18nm,1.2s,baz=267,slow=7.2,SNR=19
ILAR                                  PcP    PcP    15 50 12.5 -0.6
      comp=Z,0.8nm,0.5s,baz=278,slow=3.2,SNR=5.3
ILAR                                  LR     LR     16 04 45.2
      comp=Z,2µm,18.2s,baz=284,slow=41
ILAR  Eielson Array      34.57  40    P      P      15 47 39.7 +0.2
ILAR                                                15 50 12.5
ILAR  Eielson Array      34.57  40    P      P      15 47 39.7 +0.2
M24K  Tolsona, Glenn     35.00  45    P      P      15 47 43.8 +0.5
PRP   Porcupine Dome     35.14  39    P      P      15 47 46.3 +1.8
      baz=270,SNR=20
PRP   Porcupine Dome     35.14  39    P      P      15 47 44.5 -0.1
KLU   Klutina            35.18  46    P      P      15 47 46.0 +1.1
      baz=276
KLU   Klutina            35.18  46    P      P      15 47 46.4 +1.6
J25K  Salcha River,      35.23  40    P      P      15 47 45.0 -0.2
      baz=272,SNR=8.4
PAX   Paxson             35.26  43    P      P      15 47 46.4 +0.8
PAX                                   pmax   pmax
      comp=Z,13nm,1.1s
PAX   Paxson             35.26  43    P      P      15 47 46.8 +1.2
      baz=274
PAX   Paxson             35.26  43    P      P      15 47 46.4 +0.8
FYU   Fort Yukon         35.27  37    P      P      15 47 46.9 +1.5
WHN   Wuhan              35.49 255  ⇓P      P      15 47 48.5 +0.8
WHN                                   sP     pP     15 47 57.9 -1.5
WHN                                   S      S      15 53 23.9 +4.0
WHN                                   LR     LR
      comp=Z,3µm,15.5s
WHN                                   LR     LR
      comp=Z,2µm,17.3s
WHN                                   LR     LR
      comp=Z,3µm,22.3s
RIDG  Independent Ri     35.49  42    P      P      15 47 48.3 +0.8
      baz=274,SNR=9.9
RIDG  Independent Ri     35.49  42    P      P      15 47 47.8 +0.3
BMAR  Burnt Mountain     35.54  35    P      P      15 47 48.0 +0.1
GUMO  Guam               35.62 197    LR     LR     16 01 24.3
      comp=Z,759nm,19.5s,baz=33,slow=34
NACB  Ninganchiao        35.63 239    P      P      15 47 47.6 -1.3
N25K  Chitina, Valde     35.80  45    P      P      15 47 49.8 -0.4
      baz=277
N25K  Chitina, Valde     35.80  45    P      P      15 47 50.7 +0.6
DOT   Dot Lake           35.85  42    P      P      15 47 50.5 -0.1
SCRK  Sand Creek         35.86  41    P      P      15 47 51.1 +0.4
      baz=274,SNR=16
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SCRK  Sand Creek         35.86  41    P      P      15 47 50.4 -0.3
BMRM  Bremner River      35.87  46    P      P      15 47 52.4 +1.7
      baz=278
J26L  Joseph Creek       36.01  40    P      P      15 47 51.5 -0.4
      baz=274
L26K  Log Cabin Wild     36.23  43    P      P      15 47 55.5 +1.8
      baz=276,SNR=5.2
SSLB  Suanglung          36.29 240    P      P      15 47 53.7 -1.0
VRDI  Verde Repeater     36.39  46    P      P      15 47 54.7 -0.6
VRDI                                  IAmb   IAmb   15 48 09.8
      comp=Z,29nm,1.3s
YULB  Yu-li              36.40 239    P      P      15 47 54.8 -0.9
M26K  Nabesna, AK        36.45  44    P      P      15 47 57.6 +1.9
      baz=277,SNR=9.5
M26K  Nabesna, AK        36.45  44    P      P      15 47 56.5 +0.8
M26K                                  IAmb   IAmb   15 48 09.9
      comp=Z,36nm,1.2s
CRQM  Cirque             36.61  47    P      P      15 47 58.2 +0.9
CRQE  Cirque             36.64  47    P      P      15 47 58.8 +1.4
      baz=279,SNR=5.2
TGL   Tana Glacier       36.76  47    P      P      15 47 58.3 -0.1
TGL                                   IAmb   IAmb   15 48 17.7
      comp=Z,32nm,1.2s
QZH   Quanzhou           36.80 244⇑i P      P      15 48 00.0 +1.0
QZH                                   S      S      15 53 42.9 +2.8
QZH                                   sS     sS     15 53 59.6  0.0
QZH                                   pmax   pmax
      comp=Z,250nm,5.7s
QZH                                   LR     LR
      comp=Z,950nm,16.6s
QZH                                   LR     LR
      comp=Z,680nm,13.7s
QZH                                   LR     LR
      comp=Z,750nm,16.1s
XAN   Xi'an              36.85 264    P      P      15 47 59.6 +0.2
XAN                                   pmax   pmax
      comp=Z,16nm,1.5s
TPUB  Ta-pu              36.86 240    P      P      15 47 59.0 -0.5
TPUB                                  IAmb   IAmb   15 48 02.2
      comp=Z,36nm,0.7s
L27K  Beaver Creek,      36.91  43    P      P      15 48 01.2 +1.6
      baz=277,SNR=19
L27K  Beaver Creek,      36.91  43    P      P      15 48 00.8 +1.2
BCAR  Beaver Creek A     36.93  43    P      P      15 48 00.9 +1.2
M27K  Edge Creek, AK     36.98  44    P      P      15 48 02.1 +1.8
      baz=278,SNR=6.0
M27K  Edge Creek, AK     36.98  44    P      P      15 48 00.7 +0.4
TWG   Pinlang            36.98 239    P      P      15 48 00.5  0.0
TWG                                   IAmb   IAmb   15 48 05.5
      comp=Z,25nm,0.8s
EGAK  Eagle              37.02  40    P      P      15 48 00.6 +0.2
      baz=275,SNR=17
EGAK  Eagle              37.02  40    P      P      15 48 00.8 +0.3
ISLE  Juniper Island     37.03  47    P      P      15 48 01.4 +0.7
ISLE                                  IAmb   IAmb   15 48 21.4
      comp=Z,18nm,0.8s
BARN  Barnard Glacie     37.28  46    P      P      15 48 03.7 +0.8
BARN                                  IAmb   IAmb   15 48 06.0
      comp=Z,24nm,1.1s
GRNC  Granite Creek      37.29  46    P      P      15 48 02.6 -0.4
GRNC                                  IAmb   IAmb   15 48 05.8
      comp=Z,66nm,1.4s
CTG   Chitna Glacier     37.45  46    P      P      15 48 05.8 +1.5
      baz=280
CTGM  Chitina Glacie     37.45  46    P      P      15 48 04.8 +0.5
CTGM                                  IAmb   IAmb   15 48 08.5
      comp=Z,36nm,1.1s
LOGN  Logan Glacier      37.63  46    P      P      15 48 06.3 +0.4
LOGN                                  IAmb   IAmb   15 48 13.3
      comp=Z,30nm,1.2s
TABL  Table Mountain     37.64  47    P      P      15 48 06.2 +0.3
TABL                                  IAmb   IAmb   15 48 12.1
      comp=Z,62nm,1.4s
YUK3  Moose Creek        37.73  45    P      P      15 48 08.2 +1.5
      baz=280,SNR=8.3
DAWY  Dawson             37.86  41    P      P      15 48 08.6 +0.9
      baz=278,SNR=11
DAWY  Dawson             37.86  41    P      P      15 48 08.0 +0.4
NRIK  Noril'sk           38.04 328    P      P      15 48 06.4 -2.6
      comp=Z,0.6nm,0.3s,baz=192,slow=3.1,SNR=4.0
NRIK                                  LR     LR     16 05 28.7
      comp=Z,1µm,18.3s,baz=54,slow=39
NRIK  Noril'sk           38.04 328  i P      P      15 48 07.8 -1.2
NRIK                                  pmax   pmax
      comp=Z,11nm,1.9s
NRIK                                  MLR    MLR
      comp=Z,2µm,16.0s
NRIK  Noril'sk           38.04 328    P      P      15 48 07.1 -1.9
PINM  Pinnacle           38.14  47    P      P      15 48 12.5 +2.4
      baz=282
I29M  Ogilvie Camp,      38.16  39    P      P      15 48 11.5 +1.4
      baz=277,SNR=15
ENH   Enshi              38.83 259    P      P      15 48 15.3 -0.8
LZH   Lanzhou            39.04 271  eP      P      15 48 19.1 +1.1
LZH                                   S      S      15 54 16.8 +2.6
LZH                                   sS     sS     15 54 34.8 +1.0
LZH                                   pmax   pmax
      comp=Z,33nm,1.1s
LZH                                   pmax   pmax
      comp=Z,210nm,5.4s
LZH                                   LR     LR
      comp=Z,2µm,12.5s
LZH                                   LR     LR
      comp=Z,2µm,16.3s
LZH                                   LR     LR
      comp=Z,3µm,16.2s
M30M  Minto, Yukon       39.27  43    P      P      15 48 22.0 +2.6
      baz=282,SNR=5.7
HYT   Haines Junctio     39.31  46    P      P      15 48 21.9 +2.0
      baz=283,SNR=5.3
HYT   Haines Junctio     39.31  46    P      P      15 48 20.9 +1.0
MAYO  Mayo, Yukon        39.47  41    P      P      15 48 23.2 +2.1
      baz=281
INK   Inuvik             39.68  34    P      P      15 48 23.9 +1.3
      comp=Z,11nm,0.8s,baz=297,slow=6.8,SNR=28
INK   Inuvik             39.68  34    P      P      15 48 23.9 +1.3
INK                                   pmax   pmax
      comp=Z,36nm,1.2s
INK   Inuvik             39.68  34    P      P      15 48 24.3 +1.6
      baz=278,SNR=14
INK   Inuvik             39.68  34    P      P      15 48 23.9 +1.3
INK                                   IAmb   IAmb   15 48 51.7
      comp=Z,36nm,1.2s
GTA   Gaotai             39.91 278  ⇑P      P      15 48 25.6 +0.4
GTA                                   pP     pP     15 48 39.3 +2.4
GTA                                   PP     PnPn   15 50 02.8 +1.9
GTA                                   PcP    PcP    15 50 31.6 +1.6
GTA                                   PcS    PcS    15 54 17.0 -3.3
GTA                                   sS     sS     15 54 52.6 +5.8
GTA                                   SS     SS     15 57 24.8 +0.3
GTA                                   ScS    ScS    15 58 31.0 +2.6
GTA                                   pmax   pmax
      comp=Z,10.0nm,1.6s
GTA                                   pmax   pmax
      comp=Z,200nm,8.2s
GTA                                   LR     LR
      comp=Z,2µm,16.4s
GTA                                   LR     LR
      comp=Z,3µm,18.2s
GTA                                   LR     LR
      comp=Z,4µm,17.4s
N31M  Braeburn, Yuko     39.97  44    P      P      15 48 27.8 +2.5
      baz=284
M31M  Drury Creek, Y     40.44  43    P      P      15 48 31.6 +2.4
      baz=284,SNR=10.0
WHY   Whitehorse         40.60  45    P      P      15 48 33.0 +2.4
      baz=285
SKAG  Skagway            40.71  47    P      P      15 48 32.4 +1.1
FARO  Faro, Yukon        40.91  43    P      P      15 48 34.7 +1.7
      baz=285
JIS   Juneau Island      41.53  49    P      P      15 48 38.6 +0.6
JIS                                   IAmb   IAmb   15 48 41.8
      comp=Z,50nm,1.3s
P33M  Teslin, Yukon      41.71  46    P      P      15 48 41.9 +2.3
      baz=287,SNR=8.8
MMPY  Sheldon Lake,      41.74  42    P      P      15 48 42.4 +2.5
      baz=286
A36M  Sachs Harbour      41.90  27    P      P      15 48 43.0 +2.0
      baz=280,SNR=33
A36M  Sachs Harbour      41.90  27    P      P      15 48 41.0 +0.1
A36M                                  IAmb   IAmb   15 48 57.1
      comp=Z,58nm,0.8s
ZAA0  Zalesovo Array     42.67 305    P      P      15 48 46.3 -1.1
ZALV  Zalesovo Beam      42.67 305    P      P      15 48 47.3 -0.1
      comp=Z,2.5nm,0.4s,baz=60,slow=6.3,SNR=13
ZALV                                  PcP    PcP    15 50 38.5 -0.1
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	comp=Z,2.8nm,0.7s,baz=77,slow=2.0,SNR=6.5						
ZALV				LR	LR	16 07 26.8	
	comp=Z,2µm,19.6s,baz=78,slow=37						
ZALV	**Zalesovo Beam**	**42.67**	**305**	P	**P**	**15 48 46.7**	**-0.7**
ZALV						15 50 38.6	
ZALV	**Zalesovo Beam**	**42.67**	**305**	P	**P**	**15 48 46.7**	**-0.7**
ZALV					**PcP**	**15 50 38.6**	**0.0**
DGZ	**Jazzator, Alta**	**42.89**	**298**	*c i*P	**P**	**15 48 49.7**	**+0.2**
DGZ				pmax	pmax		
	comp=Z,21nm,1.2s						
DGZ				MLR	MLR		
	comp=Z,2µm,18.0s						
GYA	**Guiyang**	**43.22**	**257**	⇑*i*P	**P**	**15 48 53.1**	**+0.7**
GYA				pP	sP	15 49 08.1	-1.3
GYA				S	**S**	**15 55 12.1**	**-4.2**
GYA				pmax	pmax		
	comp=Z,37nm,1.1s						
GYA				pmax	pmax		
	comp=Z,380nm,3.5s						
GYA				LR	LR		
	comp=Z,1µm,18.1s						
GYA				LR	LR		
	comp=Z,800nm,18.2s						
GYA				LR	LR		
	comp=Z,880nm,18.6s						
TGTN	**Hyland Airport**	**43.42**	**43**	P	**P**	**15 48 55.3**	**+1.8**
	baz=289						
DLBC	**Dease Lake**	**43.64**	**47**	P	**P**	**15 48 56.8**	**+1.4**
	comp=Z,6.7nm,0.8s,baz=290,slow=12,SNR=12						
DLBC	**Dease Lake**	**43.64**	**47**	P	**P**	**15 48 55.7**	**+0.4**
WRGLY	**Wrigley**	**44.95**	**39**	P	**P**	**15 49 08.2**	**+2.7**
	baz=291,SNR=5.5						
WMQ	**Urumqi**	**45.48**	**291**	*e*P	**P**	**15 49 11.1**	**+1.0**
WMQ				pP	pP	15 49 19.8	-2.3
WMQ				sP	sP	15 49 28.2	+1.1
WMQ				pmax	pmax		
	comp=Z,19nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,220nm,5.5s						
WMQ				LR	LR		
	comp=Z,3µm,16.5s						
WMQ				LR	LR		
	comp=Z,830nm,14.7s						
WMQ				LR	LR		
	comp=Z,630nm,21.7s						
GRNB	**Grenville Isla**	**45.48**	**53**	P	**P**	**15 49 10.6**	**+0.6**
GRNB				IAmb	IAmb	15 49 20.5	
	comp=Z,28nm,1.0s						
QIZ	**Qiongzhong**	**46.56**	**247**	P	**P**	**15 49 20.7**	**+1.9**
QIZ				S	**S**	**15 56 04.1**	**-0.4**
QIZ				pmax	pmax		
	comp=Z,14nm,1.2s						
QIZ				pmax	pmax		
	comp=Z,240nm,4.1s						
QIZ				LR	LR		
	comp=Z,2µm,12.6s						
QIZ				LR	LR		
	comp=Z,890nm,14.9s						
QIZ				LR	LR		
	comp=Z,1µm,16.5s						
QIZ	**Qiongzhong**	**46.56**	**247**	P	**P**	**15 49 20.8**	**+2.0**
KMI	**Kunming**	**46.70**	**260**	⇑P	**P**	**15 49 20.9**	**+0.7**
KMI				pP	pP	15 49 33.6	+1.4
KMI				PP	**PP**	**15 51 10.6**	**+0.3**
KMI				S	**S**	**15 56 08.0**	**+1.1**
KMI				sS	sS	15 56 27.1	+0.2
KMI				SS	**SS**	**15 59 25.9**	**-7.4**
KMI				pmax	pmax		
	comp=Z,30nm,1.8s						
KMI				pmax	pmax		
	comp=Z,350nm,5.2s						
KMI				LR	LR		
	comp=Z,890nm,17.9s						
KMI				LR	LR		
	comp=Z,420nm,15.6s						
KMI				LR	LR		
	comp=Z,940nm,18.5s						
SEM	**Semipalatinsk**	**46.72**	**302**	*e*P	**P**	**15 49 17.3**	**-2.7**
	baz=302						
SEM	**Semipalatinsk**	**46.72**	**302**	*e*P	**P**	**15 49 17.3**	**-2.7**
MK31	**Makanchi Array**	**47.28**	**297**	*c i*P	**P**	**15 49 23.6**	**-0.6**
MK31	**Makanchi Array**	**47.28**	**297**	P	**P**	**15 49 23.9**	**-0.4**
MKAR	**Makanchi Array**	**47.28**	**297**	P	**P**	**15 49 24.1**	**-0.1**
	comp=Z,6.9nm,0.7s,baz=72,slow=5.6,SNR=28						
MKAR				LR	LR	16 10 52.9	
	comp=Z,2µm,18.4s,baz=41,slow=38						
MKAR	**Makanchi Array**	**47.28**	**297**	P	**P**	**15 49 23.6**	**-0.6**
MKAR	**Makanchi Array**	**47.28**	**297**	*e*P	**P**	**15 49 23.6**	**-0.6**
MKAR	**Makanchi Array**	**47.28**	**297**	P	**P**	**15 49 23.6**	**-0.6**
MAKZ	**Makanchi**	**47.46**	**297**	P	**P**	**15 49 24.7**	**-0.9**
MAKZ				pmax	pmax		
	comp=Z,16nm,1.2s						
MAKZ	**Makanchi**	**47.46**	**297**	P	**P**	**15 49 24.7**	**-0.9**
KURK	**Kurchatov**	**47.49**	**303**	*ce*P	**P**	**15 49 25.6**	**-0.1**
KURK				pmax	pmax		
	comp=Z,33nm,1.3s						
KURK				MLR	MLR		
	comp=Z,3µm,19.0s						
KURK	**Kurchatov**	**47.49**	**303**	*e*P	**P**	**15 49 25.6**	**-0.1**
KURK	**Kurchatov**	**47.49**	**303**	P	**P**	**15 49 24.9**	**-0.8**
KURK	**Kurchatov**	**47.49**	**303**		**PcP**	**15 50 55.4**	**+0.1**
KURBB	**Kurchatov Arra**	**47.59**	**303**	P	**P**	**15 49 25.8**	**-0.6**
	comp=Z,6.7nm,0.6s,baz=67,slow=8.6,SNR=11						
KURBB				PcP	**PcP**	**15 50 55.4**	**-0.2**
	comp=Z,3.9nm,0.8s,baz=61,slow=2.4,SNR=7.1						
YKA	**Yellowknife Ar**	**48.95**	**38**	P	**P**	**15 49 37.3**	**+0.6**
	comp=Z,18nm,1.0s,baz=302,slow=6.5,SNR=20						
YKA				LR	LR	16 14 11.3	
	comp=Z,866nm,18.3s,baz=0.0,slow=41						
YKA	**Yellowknife Ar**	**48.95**	**38**	*ce*P	**P**	**15 49 38.5**	**+1.7**
YKA				pmax	pmax		
	comp=Z,19nm,1.0s						
RES	**Resolute Bay**	**48.96**	**19**	P	**P**	**15 49 38.0**	**+1.3**
	comp=Z,32nm,0.9s,baz=261,slow=1.7,SNR=33						
RES	**Resolute Bay**	**48.96**	**19**	P	**P**	**15 49 37.5**	**+0.8**
RES				pmax	pmax		
	comp=Z,63nm,1.2s						
RES	**Resolute Bay**	**48.96**	**19**	P	**P**	**15 49 37.5**	**+0.8**
HMH	**Humu‘ula Sheep**	**49.02**	**108**	P	**P**	**15 49 39.2**	**+1.0**
TDK	**Taldyqorghan**	**50.53**	**297**	*e*P	**P**	**15 49 47.4**	**-1.8**
	baz=297						
TDK	**Taldyqorghan**	**50.53**	**297**	*e*P	**P**	**15 49 47.3**	**-1.8**
BRVK	**Borovoye**	**50.82**	**309**	*ce*P	**P**	**15 49 51.6**	**+0.5**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BRVK				MLR	MLR		
	comp=Z,3µm,18.0s						
BRVK	**Borovoye**	**50.82**	**309**	*e*P	**P**	**15 49 51.6**	**+0.5**
BRVK	**Borovoye**	**50.82**	**309**	P	**P**	**15 49 50.0**	**-1.1**
SHLS	**Shalkode**	**50.91**	**294**	*e*P	**P**	**15 49 48.6**	**-3.6**
	baz=294						
SHLS	**Shalkode**	**50.91**	**294**	*e*P	**P**	**15 49 48.5**	**-3.6**
KBS	**Kingsbay**	**51.12**	**351**	P	**P**	**15 49 52.0**	**-1.0**
KBS				pmax	pmax		
	comp=Z,27nm,1.1s						
KBS	**Kingsbay**	**51.12**	**351**	P	**P**	**15 49 52.0**	**-1.0**
KBS				IAmb	IAmb	15 50 17.0	
	comp=Z,27nm,1.1s						
BRZS	**Berezniki**	**51.15**	**305**	*e*P	**P**	**15 49 51.3**	**-2.4**
	baz=305						
BRZS	**Berezniki**	**51.15**	**305**	*e*P	**P**	**15 49 51.3**	**-2.4**
UZB	**Uzynbulak**	**51.18**	**294**	*e*P	**P**	**15 49 52.0**	**-2.2**
	comp=Z,39nm,2.1s,baz=294						
UZB	**Uzynbulak**	**51.18**	**294**	*e*P	**P**	**15 49 51.9**	**-2.2**
UZB				pmax	pmax		
	comp=Z,39nm,2.1s						
SPA0	**Spitsbergen Ar**	**51.27**	**350**	*e*P	**P**	**15 49 54.9**	**+0.7**
SPITS	**Spitsbergen Ar**	**51.27**	**350**	P	**P**	**15 49 52.8**	**-1.4**
SPITS				pmax	pmax		
	comp=Z,79nm,1.5s						
SPB2	**Spitsbergen Ar**	**51.27**	**350**	P	**P**	**15 49 52.5**	**-1.7**
LSA	**Lhasa**	**51.38**	**273**	P	**P**	**15 49 58.1**	**+1.9**
LSA	**Lhasa**	**51.38**	**273**	P	**P**	**15 49 57.2**	**+1.0**
LSA				pmax	pmax		
	comp=Z,18nm,0.5s						
LSA	**Lhasa**	**51.38**	**273**	P	**P**	**15 49 57.2**	**+1.0**
LSA				IAmb	IAmb	15 49 59.5	
	comp=Z,18nm,0.5s						
LLLB	**Lillooet**	**51.39**	**54**	P	**P**	**15 49 56.2**	**+0.7**
LLLB				IAmb	IAmb	15 49 58.3	
	comp=Z,48nm,1.5s						
CHKK	**Chushkaly**	**52.01**	**296**	*e*P	**P**	**15 49 58.4**	**-1.8**
	baz=296						
SMPI	**Sarmi**	**52.05**	**201**	P	**P**	**15 50 03.9**	**+3.2**
	comp=Z,16nm,1.6s						
UBPT	**Khong Chiam**	**52.11**	**248**	P	**P**	**15 50 00.1**	**-1.0**
JAY	**Jayapura**	**52.12**	**198**	LR	LR	16 08 31.4	
	comp=Z,311nm,20.0s,slow=32						
TULEG	**Thule**	**52.34**	**12**	AMP		15 50 03.5	
	comp=Z,80nm,0.6s						
TULEG	**Thule**	**52.34**	**12**	P	**P**	**15 50 01.8**	**-0.4**
KUU	**Kurty**	**52.38**	**297**	*e*P	**P**	**15 50 00.7**	**-2.2**
	baz=296						
KUU	**Kurty**	**52.38**	**297**	*e*P	**P**	**15 50 00.7**	**-2.2**
B05A	**Bryant**	**52.54**	**57**	P	**P**	**15 50 06.0**	**+2.0**
	baz=304						
BTLS	**Baital**	**53.09**	**299**	*e*P	**P**	**15 50 06.1**	**-2.0**
	comp=Z,14nm,1.8s,baz=299						
BTLS	**Baital**	**53.09**	**299**	*e*P	**P**	**15 50 06.1**	**-2.0**
BTLS				pmax	pmax		
	comp=Z,14nm,1.8s						
E04D	**Cinebar**	**53.23**	**59**	P	**P**	**15 50 11.1**	**+1.9**
	baz=304						
NEEM	**North Greenlan**	**53.46**	**7**	*i* P	**P**	**15 50 09.3**	**-1.4**
NEEM				AMP		15 50 12.4	
	comp=Z,183nm,0.9s						
SHL	**Shillong**	**53.60**	**269**	P	**P**	**15 50 12.8**	**+0.4**
SHL				pmax	pmax		
	comp=Z,56nm,0.7s						
SHL	**Shillong**	**53.60**	**269**	P	**P**	**15 50 12.8**	**+0.4**
CHTO	**Chiang Mai**	**53.64**	**257**	P	**P**	**15 50 13.1**	**+0.6**
CHTO				pmax	pmax		
	comp=Z,23nm,0.9s						
CHTO	**Chiang Mai**	**53.64**	**257**	P	**P**	**15 50 13.1**	**+0.6**
CHTO				IAmb	IAmb	15 50 14.8	
	comp=Z,22nm,0.9s						
SGDS	**Sogindy**	**53.65**	**297**	*e*P	**P**	**15 50 10.6**	**-1.8**
	baz=297						
USP	**Ospenovka**	**53.83**	**297**	P	**P**	**15 50 14.4**	**+0.7**
	SNR=9.9						
CHMS	**Chumysh**	**53.84**	**296**	P	**P**	**15 50 14.1**	**+0.3**
	SNR=5.8						
CM31	**Chiang Mai Arr**	**53.90**	**257**	P	**P**	**15 50 14.6**	**+0.2**
CM31				IAmb	IAmb	15 50 16.9	
	comp=Z,18nm,0.9s						
CMAR	**Chiang Mai Arr**	**53.90**	**257**	P	**P**	**15 50 16.1**	**+1.8**
	comp=Z,7.1nm,0.8s,baz=32,slow=7.3,SNR=53						
CMAR				LR	LR	16 15 13.3	
	comp=Z,1µm,18.4s,baz=98,slow=38						
CMAR	**Chiang Mai Arr**	**53.90**	**257**	P	**P**	**15 50 15.1**	**+0.7**
CMAR	**Chiang Mai Arr**	**53.90**	**257**	P	**P**	**15 50 15.1**	**+0.7**
LTY	**Liberty**	**53.90**	**57**	P	**P**	**15 50 14.2**	**+0.1**
KBK	**Karagaybulak**	**53.92**	**296**	P	**P**	**15 50 14.5**	**0.0**
	SNR=7.2						
B08A	**Colville Reser**	**54.02**	**55**	P	**P**	**15 50 15.4**	**+0.4**
B08A				IAmb	IAmb	15 50 17.3	
	comp=Z,44nm,1.4s						
AAK	**Ala-Archa**	**54.20**	**296**	P	**P**	**15 50 16.2**	**-0.3**
	comp=Z,6.6nm,0.9s,baz=113,slow=2.5,SNR=13						
AAK	**Ala-Archa**	**54.20**	**296**	P	**P**	**15 50 17.0**	**+0.5**
	SNR=7.9						
AAK	**Ala-Archa**	**54.20**	**296**	*i* P	**P**	**15 50 17.0**	**+0.5**
	SNR=8.3						
AAK	**Ala-Archa**	**54.20**	**296**	*ce*P	**P**	**15 50 13.9**	**-2.6**
AAK				pmax	pmax		
	comp=Z,57nm,1.3s						
AAK				MLR	MLR		
	comp=Z,5µm,18.0s						
AAK	**Ala-Archa**	**54.20**	**296**	P	**P**	**15 50 16.6**	**+0.1**
EDM	**Edmonton**	**54.37**	**48**	P	**P**	**15 50 18.3**	**+0.9**
EDM				pmax	pmax		
	comp=Z,75nm,1.1s						
EDM	**Edmonton**	**54.37**	**48**	P	**P**	**15 50 18.3**	**+0.9**
EKS2	**Erkin-Say**	**54.62**	**297**	P	**P**	**15 50 20.1**	**+0.6**
	SNR=6.5						
ARU	**Arti**	**54.66**	**317**	*d i*P	**P**	**15 50 18.6**	**-0.8**
ARU				*SP	**sP**	**15 50 37.6**	**+0.9**
ARU						15 51 19.4	
ARU						15 52 19.1	
ARU				S	**S**	**15 57 56.1**	**+0.2**
ARU				SS	**SS**	**16 01 42.9**	**+4.5**
ARU				pmax	pmax		
	comp=Z,15nm,1.4s						
ARU				MLR	MLR		
	comp=Z,1µm,15.0s						
ARU	**Arti**	**54.66**	**317**	*e*P	**P**	**15 50 18.6**	**-0.8**
ARU	**Arti**	**54.66**	**317**	P	**P**	**15 50 18.0**	**-1.4**
E07A	**Sunnyside**	**54.76**	**57**	P	**P**	**15 50 20.9**	**+0.5**
E07A				IAmb	IAmb	15 50 22.9	
	comp=Z,24nm,1.3s						
I04A	**Tendick Farm,**	**54.91**	**61**	P	**P**	**15 50 23.0**	**+1.5**
	baz=306						
C09A	**Chrisman Ranch**	**54.92**	**55**	P	**P**	**15 50 21.9**	**+0.4**
C09A				IAmb	IAmb	15 50 23.7	
	comp=Z,32nm,1.3s						
D08A	**Wollman Farm,**	**54.99**	**56**	P	**P**	**15 50 22.1**	**+0.1**
HAWA	**Hanford**	**55.04**	**57**	P	**P**	**15 50 22.6**	**+0.2**
F07A	**Phinny Hill Vi**	**55.11**	**58**	P	**P**	**15 50 23.7**	**+0.8**
F07A				IAmb	IAmb	15 50 25.7	
	comp=Z,21nm,1.2s						
KSH	**Kashi**	**55.16**	**292**	P	**P**	**15 50 27.1**	**+3.7**
KSH				pP	sP	15 50 41.2	+0.5
KSH				sP	pP	15 50 46.4	+11
KSH				ScS	ScS	16 00 06.3	-2.6
KSH				pmax	pmax		
	comp=Z,18nm,1.8s						
KSH				LR	LR		
	comp=Z,2µm,20.4s						
KSH				LR	LR		
	comp=Z,4µm,18.2s						
KSH				LR	LR		
	comp=Z,5µm,17.5s						
TAPN	**Taplejung**	**55.20**	**273**	*e*P	**P**	**15 50 24.4**	**+0.3**
	comp=Z,24nm,0.5s						
E08A	**Dider Farm, El**	**55.25**	**57**	P	**P**	**15 50 24.3**	**+0.5**
NEW	**Newport**	**55.28**	**54**	P	**P**	**15 50 24.3**	**+0.3**
	comp=Z,12nm,1.2s,baz=300,slow=5.5,SNR=8.4						
NEW	**Newport**	**55.28**	**54**	P	**P**	**15 50 25.0**	**+0.9**
	baz=306,SNR=6.4						
NEW	**Newport**	**55.28**	**54**	P	**P**	**15 50 24.5**	**+0.5**
NEW				IAmb	IAmb	15 50 26.4	
	comp=Z,36nm,1.4s						
TOLI2	**Tolitoli**	**55.47**	**223**	P	**P**	**15 50 25.5**	**-0.2**
MRSI	**Marisa**	**55.51**	**221**	P	**P**	**15 50 28.3**	**+2.3**
	comp=Z,709nmcomp=Z,31nm,1.6s						
E09A	**Wood Farm, Sta**	**55.74**	**57**	P	**P**	**15 50 27.9**	**+0.5**
E09A				IAmb	IAmb	15 50 30.4	
	comp=Z,21nm,1.1s						
PINE	**Pine Mountain**	**55.77**	**61**	P	**P**	**15 50 28.5**	**+0.7**
PINE				IAmb	IAmb	15 50 31.4	
	comp=Z,30nm,1.2s						
J05D	**Fort Rock, OR**	**55.90**	**61**	P	**P**	**15 50 30.5**	**+1.8**
	baz=307,SNR=5.5						
L04D	**Klamath Falls**	**55.91**	**63**	P	**P**	**15 50 30.6**	**+1.8**
	baz=307						
JIRN	**Jiri**	**56.01**	**275**	*e*P	**P**	**15 50 30.7**	**+0.7**
M02C	**Callahan**	**56.08**	**64**	P	**P**	**15 50 32.9**	**+3.0**
	baz=307						
RAMN	**Ramite**	**56.20**	**274**	*e*P	**P**	**15 50 32.0**	**+0.7**
	comp=Z,50nm,0.4s						
HAMF	**Hammerfest**	**56.25**	**342**	*e*P	**P**	**15 50 29.6**	**-1.0**
KKAR	**Karatay Array**	**56.28**	**299**	P	**P**	**15 50 29.4**	**-1.9**
KKAR				pmax	pmax		
	comp=Z,13nm,1.3s						
KKAR	**Karatay Array**	**56.28**	**299**	P	**P**	**15 50 29.4**	**-1.9**
KKAR	**Karatay Array**	**56.28**	**299**	P	**P**	**15 50 30.6**	**-0.7**
KKAR				IAmb	IAmb	15 50 33.9	
	comp=Z,13nm,1.2s						
I07A	**Izee**	**56.43**	**60**	P	**P**	**15 50 33.1**	**+0.7**
I07A				IAmb	IAmb	15 50 35.5	
	comp=Z,23nm,1.3s						
K05A	**Summer Lake**	**56.44**	**62**	P	**P**	**15 50 33.6**	**+1.0**
WALA	**Waterton Lakes**	**56.52**	**52**	P	**P**	**15 50 33.7**	**+0.6**
WALA				IAmb	IAmb	15 50 35.8	
	comp=Z,25nm,1.1s						
KKN	**Kakani**	**56.53**	**275**	*e*P	**P**	**15 50 34.4**	**+0.9**
	comp=Z,50nm,0.8s						
F10A	**Beach Ranch, E**	**56.58**	**57**	P	**P**	**15 50 33.7**	**+0.2**
PKI	**Pulchoki**	**56.59**	**275**	*e*P	**P**	**15 50 34.7**	**+0.6**
PKIN	**Phulchoki**	**56.59**	**275**	*e*P	**P**	**15 50 34.6**	**+0.6**
	comp=Z,30nm,0.6s						
ARA0	**ARCESS Array S**	**56.75**	**341**	*e*P	**P**	**15 50 34.0**	**-0.2**
ARCES	**ARCESS Array B**	**56.75**	**341**	P	**P**	**15 50 33.6**	**-0.6**
	comp=Z,4.2nm,0.9s,baz=49,slow=6.6,SNR=18						
ARCES				LR	LR	16 20 15.8	
	comp=Z,2µm,18.8s,baz=20,slow=42						
ARCES	**ARCESS Array B**	**56.75**	**341**	P	**P**	**15 50 33.7**	**-0.6**
ARCES				IAmb	IAmb	15 50 45.1	
	comp=Z,31nm,1.4s						
DMN	**Daman**	**56.76**	**275**	*e*P	**P**	**15 50 36.2**	**+1.0**
	comp=Z,68nm,0.6s						
GKN	**Gorkha**	**56.81**	**276**	*e*P	**P**	**15 50 36.3**	**+0.8**
	comp=Z,56nm,0.7s						
JTMT	**Jette**	**57.12**	**53**	P	**P**	**15 50 37.1**	**-0.2**
JTMT				IAmb	IAmb	15 50 40.2	
	comp=Z,30nm,1.2s						
IUG	**Iuzhnay**	**57.15**	**298**	*e*P	**P**	**15 50 36.2**	**-1.4**
	baz=298						
IUG	**Iuzhnay**	**57.15**	**298**	*e*P	**P**	**15 50 36.2**	**-1.4**
DANN	**Dangsing**	**57.17**	**277**	*e*P	**P**	**15 50 39.2**	**+1.1**
	comp=Z,63nm,0.5s						
KIRV	**Kirov**	**57.23**	**323**	*ce*P	**P**	**15 50 37.1**	**-0.6**
MOD	**Modoc Plateau**	**57.28**	**62**	P	**P**	**15 50 39.6**	**+1.0**
MOD				IAmb	IAmb	15 50 41.6	
	comp=Z,23nm,1.3s						
O03E	**Paynes Creek**	**57.38**	**64**	P	**P**	**15 50 40.2**	**+0.9**
	baz=308,SNR=5.2						
KOLN	**Koldanda**	**57.66**	**277**	*e*P	**P**	**15 50 42.2**	**+0.7**
	comp=Z,14nm,0.3s						
KTK1	**Kautokeino**	**57.66**	**341**	*e*P	**P**	**15 50 41.2**	**+0.6**
JETT	**Jettan, Norway**	**57.79**	**343**	*e*P	**P**	**15 50 42.3**	**+0.7**
PLID	**Pearl Lake**	**57.80**	**57**	P	**P**	**15 50 42.7**	**+0.4**
PLID				IAmb	IAmb	15 50 45.6	
	comp=Z,33nm,1.0s						
PYUN	**Piuthan**	**57.84**	**277**	*e*P	**P**	**15 50 43.7**	**+0.9**
MSO	**Missoula**	**57.86**	**54**	P	**P**	**15 50 43.9**	**+1.4**
	baz=308,SNR=12						
MSO	**Missoula**	**57.86**	**54**	P	**P**	**15 50 43.5**	**+0.9**
WVOR	**Wild Horse Val**	**57.93**	**61**	P	**P**	**15 50 43.3**	**+0.2**
WVOR				pmax	pmax		
	comp=Z,21nm,1.5s						
WVOR	**Wild Horse Val**	**57.93**	**61**	P	**P**	**15 50 43.3**	**+0.2**
WVOR				IAmb	IAmb	15 50 45.3	
	comp=Z,21nm,1.4s						
BTK	**Batken**	**57.97**	**296**	P	**P**	**15 50 43.0**	**-0.3**
BTK				pmax	pmax		
	comp=Z,22nm,1.2s						
BTK	**Batken**	**57.97**	**296**	P	**P**	**15 50 43.0**	**-0.3**
BTK				IAmb	IAmb	15 50 45.4	
	comp=Z,22nm,1.1s						
ORV	**Oroville**	**58.02**	**65**	P	**P**	**15 50 43.2**	**-0.4**
ORV				pmax	pmax		
	comp=Z,13nm,1.5s						
ORV	**Oroville**	**58.02**	**65**	P	**P**	**15 50 43.2**	**-0.4**
ABKAR	**Akbulak array**	**58.33**	**310**	P	**P**	**15 50 44.6**	**-1.0**
FFC	**Flin Flon**	**58.76**	**41**	P	**P**	**15 50 48.8**	**+0.2**
FFC				pmax	pmax		
	comp=Z,64nm,1.3s						
FFC	**Flin Flon**	**58.76**	**41**	P	**P**	**15 50 48.8**	**+0.2**
GAR	**Garm**	**58.93**	**295**	P	**P**	**15 50 48.8**	**-1.4**
MFID	**Camas Ranch**	**58.94**	**58**	P	**P**	**15 50 50.1**	**0.0**
MFID				IAmb	IAmb	15 50 53.0	
	comp=Z,18nm,1.3s						
SUMG	**Summit**	**59.04**	**5**	P	**P**	**15 50 51.2**	**+0.5**
SUMG	**Summit**	**59.04**	**5**	*i* P	**P**	**15 50 51.0**	**+0.3**
SUMG				AMP		15 50 53.4	
	comp=Z,348nm,0.7s						
SUMG	**Summit**	**59.04**	**5**	P	**P**	**15 50 51.2**	**+0.5**
HRY	**Holter Researc**	**59.07**	**53**	P	**P**	**15 50 51.7**	**+0.7**
PAHR	**Pah Rah Range**	**59.20**	**64**	P	**P**	**15 50 51.1**	**-0.8**
PAHR				IAmb	IAmb	15 50 54.6	
	comp=Z,24nm,1.5s						
FCC	**Fort Churchill**	**59.29**	**34**	P	**P**	**15 50 51.9**	**-0.2**
FCC				pmax	pmax		
	comp=Z,99nm,1.4s						
FCC	**Fort Churchill**	**59.29**	**34**	P	**P**	**15 50 51.9**	**-0.2**
VCNR	**Virginia City**	**59.30**	**64**	P	**P**	**15 50 53.2**	**+0.5**
LRM	**Limekiln Ridge**	**59.30**	**54**	P	**P**	**15 50 53.2**	**+0.4**
EGMT	**Eagleton**	**59.33**	**51**	P	**P**	**15 50 54.2**	**+1.4**
	baz=310,SNR=9.3						
EGMT	**Eagleton**	**59.33**	**51**	P	**P**	**15 50 53.0**	**+0.2**
KLMR	**Klimovskoe**	**59.37**	**329**	*e*P	**P**	**15 50 50.7**	**-1.9**
KLMR				*e*SS	SS	16 02 55.1	+2.9
KLMR				pmax	pmax		
	comp=Z,26nm,1.5s						
KLMR	**Klimovskoe**	**59.37**	**329**	*e*P	**P**	**15 50 50.8**	**-1.9**
KLMR				AMP		15 50 53.6	
	comp=Z,26nm,1.5s						
KLMR				*e*SS	**SS**	**16 02 55.1**	**+2.9**
KLMR				*e*SS	**SS**	**16 02 55.1**	**+2.9**
KLMR				LQ	LQ	16 12 46.9	
KLMR				LQ	LQ	16 12 46.9	
KLMR				LR	LR	16 17 00.1	
PNTR	**Pine Nut**	**59.46**	**64**	P	**P**	**15 50 54.7**	**+0.8**
DLMT	**Dillon**	**59.51**	**55**	P	**P**	**15 50 54.6**	**+0.5**
DLMT				IAmb	IAmb	15 51 06.1	
	comp=Z,29nm,1.5s						
HLID	**Hailey**	**59.64**	**57**	P	**P**	**15 50 56.9**	**+1.8**
	baz=310,SNR=16						
HLID	**Hailey**	**59.64**	**57**	P	**P**	**15 50 54.0**	**-1.0**
HLID				IAmb	IAmb	15 50 58.2	
	comp=Z,23nm,1.2s						
CMB	**Columbia Colle**	**59.65**	**66**	P	**P**	**15 50 54.6**	**-0.4**
CMB				pmax	pmax		
	comp=Z,24nm,1.5s						
CMB	**Columbia Colle**	**59.65**	**66**	P	**P**	**15 50 54.6**	**-0.4**
CMB				IAmb	IAmb	15 50 57.7	
	comp=Z,24nm,1.5s						
MCMT	**McKenzie Canyo**	**59.71**	**55**	P	**P**	**15 50 54.5**	**-1.1**
BCYI	**Bear Canyon**	**59.73**	**56**	P	**P**	**15 50 54.6**	**-1.2**
YERR	**Yerington**	**59.74**	**64**	P	**P**	**15 50 54.9**	**-0.9**
YERR				IAmb	IAmb	15 51 10.2	
	comp=Z,16nm,1.2s						
CHGR	**Chuyangaron**	**59.85**	**295**	P	**P**	**15 50 55.6**	**-0.8**
BOZ	**Bozeman (W)**	**59.88**	**54**	P	**P**	**15 50 57.5**	**+0.8**
BOZ				pmax	pmax		
	comp=Z,63nm,1.2s						
BOZ	**Bozeman (W)**	**59.88**	**54**	P	**P**	**15 50 58.3**	**+1.7**
	baz=310,SNR=26						
BOZ	**Bozeman (W)**	**59.88**	**54**	P	**P**	**15 50 57.5**	**+0.8**
BMN	**Battle Mountai**	**60.02**	**62**	P	**P**	**15 50 56.9**	**-0.8**
BMN				pmax	pmax		
	comp=Z,33nm,1.5s						
BMN	**Battle Mountai**	**60.02**	**62**	P	**P**	**15 50 56.9**	**-0.8**
BMN				IAmb	IAmb	15 51 00.8	
	comp=Z,33nm,1.5s						
STEI	**Steigen**	**60.17**	**344**	*e*P	**P**	**15 50 59.0**	**+1.0**
LOF	**Lofoten**	**60.31**	**344**	*e*P	**P**	**15 50 58.9**	**-0.1**
KSM	**Kuching**	**60.38**	**234**	P	**P**	**15 51 03.0**	**+2.9**
KVN	**Kaiserville**	**60.38**	**63**	P	**P**	**15 51 00.7**	**+0.5**
KVN				pmax	pmax		
	comp=Z,26nm,1.4s						
KVN	**Kaiserville**	**60.38**	**63**	P	**P**	**15 51 00.7**	**+0.5**
KVN				IAmb	IAmb	15 51 03.1	
	comp=Z,26nm,1.4s						
RYN	**Ryan**	**60.40**	**64**	P	**P**	**15 51 00.3**	**0.0**
QLMT	**Earthquake Lak**	**60.48**	**55**	P	**P**	**15 51 01.9**	**+1.1**
NIL	**Nilore**	**60.54**	**289**	P	**P**	**15 51 00.4**	**-0.8**
NIL				pmax	pmax		
	comp=Z,21nm,0.9s						
NIL	**Nilore**	**60.54**	**289**	P	**P**	**15 51 00.4**	**-0.8**
NIL				IAmb	IAmb	15 51 02.5	
	comp=Z,21nm,0.8s						
YHL	**Hebgen Lake**	**60.61**	**55**	P	**P**	**15 51 02.9**	**+1.1**
FAUS	**Fauske**	**60.64**	**343**	*e*P	**P**	**15 51 01.1**	**-0.1**
LHV	**Little Huntoon**	**60.65**	**64**	P	**P**	**15 51 02.7**	**+0.9**
LHV				IAmb	IAmb	15 51 06.0	
	comp=Z,23nm,1.2s						
NVAR	**Mina Array Bea**	**60.66**	**64**	P	**P**	**15 51 03.3**	**+1.2**
	comp=Z,1.9nm,0.6s,baz=304,slow=6.7,SNR=18						
NVAR				LR	LR	16 13 04.9	
	comp=Z,395nm,21.7s,baz=289,slow=32						
NVAR	**Mina Array Bea**	**60.66**	**64**	P	**P**	**15 51 01.6**	**-0.5**
MDPB	**Devils Postpil**	**60.70**	**65**	P	**P**	**15 51 01.3**	**-1.2**
NV11	**Mina Array Sit**	**60.74**	**64**	P	**P**	**15 51 01.7**	**-0.9**
GCMT	**Greycliff**	**60.81**	**53**	P	**P**	**15 51 03.8**	**+0.8**
YHH	**Holmes Hill**	**60.83**	**54**	P	**P**	**15 51 03.9**	**+0.6**
YHH				IAmb	IAmb	15 51 06.5	
	comp=Z,36nm,1.3s						
YMR	**Madison River**	**60.84**	**55**	P	**P**	**15 51 03.6**	**+0.3**
YNR	**Norris Junctio**	**60.97**	**54**	P	**P**	**15 51 03.4**	**-0.8**
ELK	**Elko**	**60.97**	**60**	P	**P**	**15 51 03.9**	**-0.4**
ELK				pmax	pmax		
	comp=Z,9.0nm,1.2s						
ELK	**Elko**	**60.97**	**60**	P	**P**	**15 51 03.9**	**-0.4**
LKWY	**Lake**	**61.22**	**54**	P	**P**	**15 51 05.5**	**-0.4**
LKWY				pmax	pmax		
	comp=Z,26nm,1.1s						
LKWY	**Lake**	**61.22**	**54**	P	**P**	**15 51 05.5**	**-0.4**
LKWY				IAmb	IAmb	15 51 12.5	
	comp=Z,26nm,1.1s						
PAGB	**Antelope Grade**	**61.22**	**68**	P	**P**	**15 51 06.1**	**+0.4**
PAGB				IAmb	IAmb	15 51 20.1	
	comp=Z,19nm,1.4s						

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H17A  Grant Village      61.23  55  P      P      15 51 09.4 +3.4
      baz=311,SNR=22
YMP   Mirror Lake Pl     61.23  54  P      P      15 51 06.9 +0.8
KAPI  Kappang            61.37 221  P      P      15 51 07.6 +0.7
      comp=Z,3.9nm,0.4s,baz=15,slow=9.7,SNR=4.3
KAPI  Kappang            61.37 221  IAmb   IAmb   15 51 10.4
      comp=Z,24nm,1.2s
RLMT  Red Lodge          61.46  53  P      P      15 51 09.8 +2.3
      baz=311,SNR=8.1
RLMT  Red Lodge          61.46  53  P      P      15 51 08.1 +0.6
FXWY  Fox Creek          61.48  56  P      P      15 51 08.5 +0.9
FXWY                                IAmb   IAmb   15 51 11.3
      comp=Z,17nm,1.1s
TPH   Tonopah            61.53  64  P      P      15 51 08.6 +0.5
TPH                                 pmax   pmax
      comp=Z,172nm,1.5s
TPH   Tonopah            61.53  64  P      P      15 51 08.6 +0.5
MOOW  Moose Ponds        61.56  55  P      P      15 51 09.0 +0.8
MOOW                                IAmb   IAmb   15 51 11.8
      comp=Z,30nm,1.4s
TPAW  Teton Pass         61.62  56  P      P      15 51 09.0 +0.4
HVU   Hansel Valley      61.72  58  P      P      15 51 10.2 +1.0
HVU                                 pmax   pmax
      comp=Z,12nm,1.2s
HVU   Hansel Valley      61.72  58  P      P      15 51 10.2 +1.0
LOHW  Long Hollow        61.73  55  P      P      15 51 10.5 +1.2
SNOW  Snow King Moun     61.74  56  P      P      15 51 10.3 +0.9
REDW  Red Top Meadow     61.76  56  P      P      15 51 10.7 +1.2
LCH   Last Change Ra     61.83  65  P      P      15 51 10.0  0.0
KONS  Konsvik            61.83 344  eP     P      15 51 09.8 +0.5
DGMT  Dagmar             61.86  48  P      P      15 51 11.6 +1.7
      baz=312,SNR=12
DGMT  Dagmar             61.86  48  P      P      15 51 10.1 +0.3
MOR8  Moi Rana           61.87 343  eP     P      15 51 08.5 -1.1
AHID  Auburn Hatcher     62.01  56  P      P      15 51 11.3 +0.2
LAO   LASA Array         62.03  50  P      P      15 51 13.1 +2.0
      baz=312,SNR=20
LAO   LASA Array         62.03  50  P      P      15 51 12.3 +1.3
CWC   Cottonwood Cre     62.09  66  P      P      15 51 12.8 +1.0
      baz=311
BGU   Big Grassy Mou     62.13  59  P      P      15 51 12.9 +0.9
SPUT  South Promonto     62.21  58  P      P      15 51 13.1 +0.6
SPUT                                IAmb   IAmb   15 51 15.7
      comp=Z,37nm,1.4s
BBKI  Banjar Baru        62.27 227  P      P      15 51 16.1 +3.2
      comp=Z,25nm,1.9s
R11A  Troy Canyon, C     62.33  63  P      P      15 51 14.6 +1.2
      baz=311,SNR=16
R11A  Troy Canyon, C     62.33  63  P      P      15 51 13.8 +0.4
R11A                                IAmb   IAmb   15 51 16.0
      comp=Z,20nm,1.4s
ISA   Isabella, Lake     62.35  67  P      P      15 51 14.5 +1.1
      baz=312
ICESG Greenland Ices     62.41   6  i P    P      15 51 13.3 -0.3
HWUT  Hardware Ranch     62.51  58  P      P      15 51 14.4 -0.1
HWUT                                IAmb   IAmb   15 51 17.8
      comp=Z,38nm,1.4s
KBL   Kabul              62.59 292  P      P      15 51 12.5 -2.7
KBL                                 pmax   pmax
      comp=Z,7.0nm,0.8s
KBL   Kabul              62.59 292  P      P      15 51 12.5 -2.7
SPR3  Spring Creek 3     62.64  61  P      P      15 51 16.1 +0.5
SPR3                                IAmb   IAmb   15 51 19.0
      comp=Z,19nm,1.2s
DUG   Dugway, Tooele     62.73  59  P      P      15 51 16.3 +0.3
DUG                                 pmax   pmax
      comp=Z,38nm,1.3s
DUG   Dugway, Tooele     62.73  59  P      P      15 51 17.5 +1.6
      baz=312,SNR=15
DUG   Dugway, Tooele     62.73  59  P      P      15 51 16.3 +0.3
DUG                                 IAmb   IAmb   15 51 19.1
      comp=Z,38nm,1.3s
FURC  Furnace Creek,     62.80  65  P      P      15 51 18.2 +1.9
      baz=312
BW06  Boulder Array      62.86  55  P      P      15 51 18.2 +1.3
      baz=312,SNR=25
BW06  Boulder Array      62.86  55  P      P      15 51 17.4 +0.5
PD31  Pinedale Array     62.86  55  P      P      15 51 16.6 -0.3
PDAR  Pinedale Array     62.86  55  P      P      15 51 18.0 +1.1
      comp=Z,18nm,1.0s,baz=299,slow=1.5,SNR=60
PDAR                                LR     LR     16 19 26.7
      comp=Z,222nm,20.1s,baz=343,slow=37
PDAR  Pinedale Array     62.86  55  P      P      15 51 17.4 +0.5
TCUT  Toone Canyon       62.92  58  P      P      15 51 17.4  0.0
TCUT                                IAmb   IAmb   15 51 20.4
      comp=Z,19nm,1.1s
PBA   Port Blair         62.93 257  P      P      15 51 15.9 -1.5
LRMC  Laurel Mtn Rad     62.96  66  P      P      15 51 18.3 +0.8
      baz=312,SNR=7.1
GWY   Greenwater Val     63.11  65  P      P      15 51 19.0 +0.5
FIA1  FINESS Array S     63.11 335  P      P      15 51 17.4 -0.6
FINES FINESS Array B     63.11 335  P      P      15 51 17.2 -0.7
      comp=Z,5.1nm,0.5s,baz=32,slow=7.3,SNR=56
FINES                               LR     LR     16 21 23.6
      comp=Z,2µm,20.7s,baz=24,slow=38
FINES FINESS Array B     63.11 335  i P    P      15 51 18.2 +0.3
FINES                               pmax   pmax
      comp=Z,5.0nm,0.5s
FINES FINESS Array B     63.11 335  P      P      15 51 17.4 -0.6
QSM   Queen of Sheba     63.13  65  P      P      15 51 18.8 +0.3
QSM                                 IAmb   IAmb   15 51 20.3
      comp=Z,21nm,1.5s
EDW2  Edwards Air Fo     63.16  67  P      P      15 51 20.0 +1.2
      baz=312,SNR=8.3
PSUT  Pine Spring        63.23  61  P      P      15 51 19.5 +0.2
JLU   Jordanelle         63.24  58  P      P      15 51 20.3 +0.8
JLU                                 IAmb   IAmb   15 51 22.6
      comp=Z,32nm,1.4s
PRN   Pahroc Range       63.27  63  P      P      15 51 20.3 +0.7
PRN                                 IAmb   IAmb   15 51 22.5
      comp=Z,25nm,1.4s
SFJD  Kangerlussuaq      63.38  11  P      P      15 51 20.0 +0.4
SFJD                                pmax   pmax
      comp=Z,69nm,1.2s
SFJD  Kangerlussuaq      63.38  11  i P    P      15 51 19.5 -0.1
SFJD  Kangerlussuaq      63.38  11  P      P      15 51 20.0 +0.4
MPU   Maple Canyon       63.53  59  P      P      15 51 21.6 +0.3
MPU                                 IAmb   IAmb   15 51 24.4
      comp=Z,21nm,1.2s
MWC   Mount Wilson       63.56  68  P      P      15 51 21.9 +0.3
MWC                                 pmax   pmax
      comp=Z,47nm,1.5s
MWC   Mount Wilson       63.56  68  P      P      15 51 21.9 +0.3
MWC                                 IAmb   IAmb   15 51 23.9
      comp=Z,47nm,1.5s
GSC   Goldstone, Bar     63.61  66  P      P      15 51 21.4 -0.4
GSC                                 pmax   pmax
      comp=Z,21nm,1.5s
GSC   Goldstone, Bar     63.61  66  P      P      15 51 22.8 +0.9
      baz=312
GSC   Goldstone, Bar     63.61  66  P      P      15 51 21.4 -0.4
SHPR  Sheep Range        63.80  64  P      P      15 51 23.9 +0.7
NSS   Namsos             63.81 343  eP     P      15 51 23.1 +0.6
SOEI  Soe                63.84 214  P      P      15 51 26.5 +3.1
      comp=Z,28nm,0.9s
SOEI  Soe                63.84 214  P      P      15 51 22.6 -0.9
SOEI                                IAmb   IAmb   15 51 45.9
      comp=Z,39nm,1.2s
EDFI  Ende, Flores       63.92 217  P      P      15 51 24.3 +0.3
      comp=Z,6.3nm,1.1s
TUQ   Turquoise Moun     64.06  65  P      P      15 51 26.0 +1.2
      baz=312,SNR=10
CCUT  Cedar City         64.17  62  P      P      15 51 25.8 +0.2
MVU   Marysvale          64.21  60  P      P      15 51 26.6 +0.7
HEC   Hector,Ludlow      64.22  66  P      P      15 51 27.4 +1.7
      baz=312,SNR=7.4
MSU   Marysvale          64.22  60  P      P      15 51 25.9  0.0
MSU   Marysvale          64.22  60  P      P      15 51 25.9  0.0
TMUT  Trail Mountain     64.25  59  P      P      15 51 26.8 +0.5
SZCU  Shurtz Canyon      64.31  62  P      P      15 51 26.8 +0.3
RDMU  Red Mountain       64.33  57  P      P      15 51 27.4 +0.8
P17A  Butcher Ranch,     64.40  59  P      P      15 51 27.9 +0.9
P17A                                IAmb   IAmb   15 51 30.0
      comp=Z,36nm,1.2s
BATI  Baumata            64.48 214  P      P      15 51 27.9 +0.3
      comp=Z,7.6nm,0.5s,baz=178,slow=1.6,SNR=4.1
MURC  Murrieta           64.51  68  P      P      15 51 29.0 +1.4
      baz=313
MDND  Maddock            64.52  46  P      P      15 51 29.8 +2.3
      baz=315
MDND  Maddock            64.52  46  P      P      15 51 27.8 +0.3
Q16A  Castle Valley      64.53  60  P      P      15 51 28.5 +0.5
Q16A                                IAmb   IAmb   15 51 30.9
      comp=Z,21nm,1.2s
MTPU  Mount Pierson      64.53  61  P      P      15 51 29.0 +0.9
ULM   Lac du Bonnet      64.55  42  P      P      15 51 26.9 -0.6
      comp=Z,8.7nm,0.8s,baz=297,slow=6.5,SNR=6.0
ULM                                 LR     LR     16 22 54.6
      comp=Z,542nm,19.0s,baz=322,slow=39
ULM   Lac du Bonnet      64.55  42  P      P      15 51 27.0 -0.6
ULM   Lac du Bonnet      64.55  42  P      P      15 51 27.6  0.0
ULM                                 IAmb   IAmb   15 51 29.8
      comp=Z,29nm,1.2s
P18A  Preston Nutter     64.58  58  P      P      15 51 29.2 +0.8
P18A                                IAmb   IAmb   15 51 44.0
      comp=Z,34nm,1.4s
K22A  Casper             64.59  54  P      P      15 51 29.9 +1.7
      baz=313
K22A  Casper             64.59  54  P      P      15 51 28.8 +0.6
K22A                                IAmb   IAmb   15 51 30.0
      comp=Z,48nm,1.4s
LCMT  Little Creek M     64.61  62  P      P      15 51 28.8 +0.4
LCMT                                IAmb   IAmb   15 51 31.4
      comp=Z,28nm,1.2s
GMRC  Granite Mounta     64.66  66  P      P      15 51 30.1 +1.4
      baz=313,SNR=8.0
OBN   Obninsk            64.67 326  i P    P      15 51 27.0 -1.3
OBN                                 i             15 51 59.4
OBN                                 pmax   pmax
      comp=Z,6.0nm,0.9s
OBN                                 MLR    MLR
      comp=Z,1µm,16.0s
OBN   Obninsk            64.67 326  eP     P      15 51 27.0 -1.3
SRU   San Rafael Swe     64.77  59  P      P      15 51 30.0 +0.5
SRU                                 pmax   pmax
      comp=Z,27nm,1.0s
SRU   San Rafael Swe     64.77  59  P      P      15 51 30.0 +0.5
SRU                                 IAmb   IAmb   15 51 32.2
      comp=Z,27nm,1.0s
KNB   Kanab              64.85  62  P      P      15 51 31.0 +1.0
KNB                                 pmax   pmax
      comp=Z,44nm,1.4s
KNB   Kanab              64.85  62  P      P      15 51 31.0 +1.0
KNB                                 IAmb   IAmb   15 51 33.2
      comp=Z,44nm,1.4s
PKCU  Pink Cliffs        64.86  61  P      P      15 51 31.6 +1.3
PKCU                                IAmb   IAmb   15 51 44.9
      comp=Z,26nm,1.3s
RWWY  Rawlins            64.87  55  P      P      15 51 29.9 -0.3
RWWY                                IAmb   IAmb   15 51 31.8
      comp=Z,29nm,1.1s
RSSD  Black Hills        64.90  51  P      P      15 51 30.8 +0.5
RSSD                                pmax   pmax
      comp=Z,46nm,0.9s
RSSD  Black Hills        64.90  51  P      P      15 51 31.3 +1.0
      baz=314
RSSD  Black Hills        64.90  51  P      P      15 51 30.8 +0.5
PFO   Pinyon Flats O     64.96  67  P      P      15 51 31.0 +0.3
PFO                                 pmax   pmax
      comp=Z,17nm,1.4s
PFO   Pinyon Flats O     64.96  67  P      P      15 51 31.6 +0.9
      baz=313
PFO   Pinyon Flats O     64.96  67  P      P      15 51 31.0 +0.3
BELC  Belle Mtn. Jos     64.98  66  P      P      15 51 31.8 +1.0
      baz=313,SNR=5.1
O20A  White River Ci     65.36  57  P      P      15 51 34.5 +1.2
      baz=313,SNR=8.9
O20A  White River Ci     65.36  57  P      P      15 51 33.5 +0.1
O20A                                IAmb   IAmb   15 51 35.9
      comp=Z,44nm,1.4s
IRM   Iron Mountain      65.39  66  P      P      15 51 34.5 +1.1
      baz=313,SNR=10
BAR   Barrett            65.46  68  P      P      15 51 34.7 +0.9
BAR                                 IAmb   IAmb   15 51 35.9
      comp=Z,25nm,1.4s
TSI   Tuntungan          65.50 246  P      P      15 51 32.1 -2.1
W13A  Hualapai Mount     65.52  64  P      P      15 51 35.0 +0.6
BC3   Big Chuckawall     65.54  66  P      P      15 51 35.1 +0.6
      baz=313,SNR=5.1
U15A  North Rim          65.56  62  P      P      15 51 35.4 +0.6
U15A                                IAmb   IAmb   15 51 37.9
      comp=Z,32nm,1.4s
IKP   In-Ko-Pah, Jac     65.82  68  P      P      15 51 37.1 +0.8
      baz=313
RMX   La Rumorosa        65.88  68  P      P      15 51 37.7 +1.0
AGMN  Agassiz Nation     65.96  44  P      P      15 51 37.8 +1.1
      baz=317,SNR=9.3
AGMN  Agassiz Nation     65.96  44  P      P      15 51 37.1 +0.3
N23A  Red Feather La     66.11  55  P      P      15 51 39.8 +1.6
      baz=314,SNR=9.7
GLA   Glamis             66.34  66  P      P      15 51 39.5  0.0
GLA                                 pmax   pmax
      comp=Z,14nm,1.1s
GLA   Glamis             66.34  66  P      P      15 51 41.0 +1.5
      baz=314
GLA   Glamis             66.34  66  P      P      15 51 39.5  0.0
MOL   Molde              66.43 344  eP     P      15 51 39.8 +0.3
DOMB  Dombas             66.63 343  eP     P      15 51 41.5 +0.6
WUAZ  Wupatki            66.73  62  P      P      15 51 43.9 +1.8
      baz=314,SNR=9.0
WUAZ  Wupatki            66.73  62  P      P      15 51 42.5 +0.4
WUAZ                                IAmb   IAmb   15 51 45.1
      comp=Z,31nm,1.4s
SMCO  Snowmass           66.73  57  P      P      15 51 42.7 +0.3
SMCO                                IAmb   IAmb   15 51 45.1
      comp=Z,20nm,1.1s
GEYT  Alibeck            66.81 301  P      P      15 51 42.6 +0.2
      comp=Z,4.4nm,0.8s,baz=216,slow=7.3,SNR=5.0
GEYT                                LR     LR     16 23 05.7
      comp=Z,2µm,18.6s,baz=40,slow=38
GYA0B ALIBECK ARRAY      66.81 301  P      P      15 51 42.2 -0.3
NC300 NORSAR Array S     66.87 342  P      P      15 51 42.5 +0.1
NC303 NORSAR Array S     66.91 342  P      P      15 51 42.1 -0.5
NC303                               IAmb   IAmb   15 52 03.3
      comp=Z,48nm,1.4s
NC405 NORSAR Array S     66.94 342  P      P      15 51 42.3 -0.6
NC204 NORSAR Array S     66.99 342  P      P      15 51 42.6 -0.6
NC204                               IAmb   IAmb   15 51 46.5
      comp=Z,44nm,1.1s
MNSI  Mandailing Nat     67.03 243  P      P      15 51 44.4 +0.4
      comp=Z,30nm,0.5s
ISCO  Idaho Springs      67.06  56  P      P      15 51 44.9 +0.6
ISCO                                pmax   pmax
      comp=Z,41nm,1.3s
ISCO  Idaho Springs      67.06  56  P      P      15 51 46.1 +1.8
      baz=315,SNR=26
ISCO  Idaho Springs      67.06  56  P      P      15 51 44.9 +0.6
ISCO                                IAmb   IAmb   15 51 47.5
      comp=Z,41nm,1.2s
NB201 NORSAR Array S     67.08 342  P      P      15 51 43.8 +0.1
NB201                               IAmb   IAmb   15 52 00.6
      comp=Z,37nm,1.3s
NB2   NORSAR Subarra     67.11 342  P      P      15 51 43.5 -0.5
      comp=Z,2.0nm,0.5s,baz=25,slow=6.5
NB2   NORSAR Subarra     67.11 342  P      P      15 51 43.5 -0.5
      baz=25,slow=6.5
NOA   NORSAR Array B     67.11 342  P      P      15 51 43.6 -0.3
      comp=Z,3.8nm,0.6s,baz=28,slow=6.0,SNR=22
NOA                                 LR     LR     16 25 50.0
      comp=Z,899nm,19.7s,baz=25,slow=40
NBO00 NORSAR Array S     67.21 342  P      P      15 51 44.4 -0.1
NBO00                               IAmb   IAmb   15 51 52.4
      comp=Z,51nm,1.2s
MVCO  Mesa Verde         67.23  59  P      P      15 51 46.8 +1.5
      baz=314,SNR=11
MVCO  Mesa Verde         67.23  59  P      P      15 51 45.4  0.0
MVCO                                IAmb   IAmb   15 51 48.1
      comp=Z,25nm,1.1s
NC602 NORSAR Array S     67.32 341  eP     P      15 51 45.7 +0.6
NC602 NORSAR Array S     67.32 341  P      P      15 51 45.8 +0.6
X16A  Lo Mia Camp, P     67.45  63  P      P      15 51 46.5 -0.2
F33A  5 Mile Ranch,      67.55  46  P      P      15 51 47.3 +0.4
S22A  4UR Ranch, Cre     67.81  58  P      P      15 51 50.9 +1.8
      baz=315,SNR=23
GSI   Gunungsitoli       67.83 245  P      P      15 51 49.1 +0.1
Q24A  Divide             67.90  56  P      P      15 51 51.1 +1.5
      baz=315
W18A  Petrified Fore     67.97  62  P      P      15 51 51.8 +1.8
      baz=314
W18A  Petrified Fore     67.97  62  P      P      15 51 49.9 -0.1
SKAR  Skarslia           68.03 343  eP     P      15 51 50.2 +0.5
HYB   Hyderabad          68.15 272  i P    P      15 51 51.0 -0.1
OGNE  Ogallala           68.18  53  P      P      15 51 52.6 +1.5
      baz=316,SNR=12
OGNE  Ogallala           68.18  53  P      P      15 51 51.6 +0.5
EYMN  Ely                68.19  42  P      P      15 51 51.8 +0.9
      baz=319
EYMN  Ely                68.19  42  P      P      15 51 51.2 +0.2
EYMN                                IAmb   IAmb   15 51 53.8
      comp=Z,21nm,1.0s
OSL   Oslo               68.22 341  eP     P      15 51 51.9 +1.0
MNK   Minsk              68.24 330  i P    P      15 51 49.8 -1.3
MNK                                 i             15 52 15.5
MNK                                 i             15 54 20.0
MNK                                 i PPP  PPP    15 55 58.4
MNK                                 i S    S      16 00 44.2 -3.9
MNK                                 i             16 01 44.2
MNK                                 i SS   SS     16 05 07.3 -3.2
MNK                                   pmax pmax
      comp=Z,38nm,0.7s
MNK                                   pmax pmax
      comp=E,3.0nm,0.9s
MNK                                   pmax pmax
      comp=N,16nm,0.7s
MNK                                   MLR  MLR
      comp=E,107nm,19.0s
MNK                                   MLR  MLR
      comp=N,509nm,19.0s
MNK                                   MLR  MLR
      comp=Z,1µm,23.0s
MNK   Minsk              68.24 330  i P    P      15 51 49.8 -1.3
      comp=E,3.0nm,0.9s
MNK                                 i P    P      15 51 49.8 -1.3
      comp=N,16nm,0.7s
MNK                                 i P    P      15 51 49.8 -1.3
      comp=Z,38nm,0.7s,baz=214
MNK                                 i PcP  PcP    15 52 15.6 -1.0
MNK                                 i PP   PP     15 54 20.0 -1.3
MNK                                 i PPP  PPP    15 55 58.4
MNK                                 i S    S      16 00 44.2 -3.8
MNK                                 i SS   SS     16 05 07.3 -3.1
MNK                                 i SSS  SSS    16 08 25.9
MNK                                 i LR   LR     16 21 41.3
MNK                                 i LRM  MLR    16 24 16.5
      comp=E,107nm,18.8s
MNK                                 i LRM  MLR    16 24 44.4
      comp=N,509nm,18.8s
MNK                                 i LRM  MLR    16 24 48.7
      comp=Z,1µm,23.1s
X18A  Snowflake          68.25  62  P      P      15 51 52.5 +0.7
X18A                                IAmb   IAmb   15 51 54.8
      comp=Z,28nm,1.4s
NACGM Naroch             68.27 331  i P    P      15 51 52.9 +1.6
214A  Organ Pipe Nat     68.33  66  P      P      15 51 53.9 +1.8
      baz=314
214A  Organ Pipe Nat     68.33  66  P      P      15 51 53.2 +1.1
214A                                IAmb   IAmb   15 51 54.7
      comp=Z,32nm,1.4s
CTA   Charters Tower     68.54 189  P      P      15 51 53.4 +0.2
      comp=Z,1.3nm,0.6s,baz=7.3,slow=11,SNR=1.7
CTAO  Charters Tower     68.54 189  P      P      15 51 53.1 -0.2
CTAO                                pmax   pmax
      comp=Z,14nm,1.4s
CTAO  Charters Tower     68.54 189  P      P      15 51 53.1 -0.2
SDCO  Great Sand Dun     68.56  57  P      P      15 51 55.0 +1.2
      baz=315,SNR=17
SDCO  Great Sand Dun     68.56  57  P      P      15 51 53.9 +0.1
SDCO                                IAmb   IAmb   15 51 56.7
      comp=Z,25nm,1.3s
PABE  Paberze            68.66 333  P      P      15 51 54.3 +0.6
K31A  O'Neill            68.68  49  P      P      15 51 54.3 +0.2
KONO  Kongsberg          68.71 342  i P    P      15 51 52.1 -1.9
KONO                                pmax   pmax
      comp=Z,32nm,1.2s
KONO                                MLR    MLR
      comp=Z,1µm,20.0s
KONO  Kongsberg          68.71 342  eP     P      15 51 54.7 +0.7
KONO  Kongsberg          68.71 342  P      P      15 51 54.3 +0.3
KONO                                IAmb   IAmb   15 51 57.0
      comp=Z,53nm,1.3s
LEM   Lembang            68.79 231  LR     LR     16 22 04.4
      comp=Z,343nm,21.2s,baz=311,slow=36
F36A  Milaca             68.84  44  P      P      15 51 55.1 +0.2
MAK   Makhachkala        68.93 311d iP     P      15 51 55.0 -0.6
MAK                                 eS     S      16 00 54.8 -1.8
MAK                                 MLR    MLR
      comp=Z,2µm,17.0s
ECSD  EROS Data Cent     68.93  47  P      P      15 51 56.4 +0.7
      baz=318,SNR=16
ECSD  EROS Data Cent     68.93  47  P      P      15 51 55.8 +0.1
ECSD                                IAmb   IAmb   15 51 58.3
      comp=Z,31nm,0.9s
STRU  Stroemstad         68.94 341  i P    P      15 51 56.8 +1.4
ODD1  Odda               69.06 344  eP     P      15 51 57.5 +1.3
IVI   Ivigtut            69.25  12  P      P      15 51 57.1 -0.1
TUC   Tucson             69.31  64  P      P      15 51 56.5 -1.7
TUC                                 pmax   pmax
      comp=Z,15nm,1.3s
TUC   Tucson             69.31  64  P      P      15 51 59.7 +1.4
      baz=315
TUC   Tucson             69.31  64  P      P      15 51 56.5 -1.7
GOF   Gofitskoye         69.55 315⇑eP      P      15 52 04.2 +4.8
GOF                                 pmax   pmax
      comp=Z,17nm,0.5s
T25A  Trinidad           69.60  57  P      P      15 52 01.3 +1.2
      baz=316,SNR=15
T25A  Trinidad           69.60  57  P      P      15 52 00.4 +0.3
T25A                                IAmb   IAmb   15 52 02.9
      comp=Z,47nm,1.3s
SPMN  Marine on St.      69.65  44  P      P      15 52 00.6 +0.6
      baz=319,SNR=6.0
SPMN  Marine on St.      69.65  44  P      P      15 52 00.3 +0.3
SPMN                                IAmb   IAmb   15 52 02.1
      comp=Z,69nm,1.4s
ANMO  Albuquerque        70.00  60ceP      P      15 52 03.6 +1.0
ANMO                                pmax   pmax
      comp=Z,18nm,1.3s
ANMO                                MLR    MLR
      comp=Z,286nm,17.0s
ANMO  Albuquerque        70.00  60  P      P      15 52 04.2 +1.6
      baz=316
ANMO  Albuquerque        70.00  60  P      P      15 52 01.8 -0.8
D41A  Chassel            70.15  41  P      P      15 52 03.1 +0.1
HOMB  Homborsund         70.21 342  i P    P      15 52 04.9 +1.7
WB0   Warramunga Arr     70.22 200  P      P      15 52 03.6 -0.1
LENM  Lemitar            70.25  61  P      P      15 52 04.6 +0.5
I37A  Lemond, Waseca     70.28  45  P      P      15 52 04.6 +0.7
L34A  Svendsen Farm,     70.36  49  P      P      15 52 04.6 +0.1
L34A                                IAmb   IAmb   15 52 05.3
      comp=Z,49nm,1.1s
WR0   Warramunga Arr     70.37 200  P      P      15 52 04.5 -0.1
WRAB  Tennant Creek      70.39 200ceP      P      15 52 05.3 +0.6
WRAB                                pmax   pmax
      comp=Z,23nm,1.3s
WRAB  Tennant Creek      70.39 200  P      P      15 52 04.8 +0.1
WB2   Warramunga Arr     70.40 200  P      P      15 52 04.9 +0.2
WRA   Warramunga Arr     70.40 201  P      P      15 52 05.3 +0.6
      comp=Z,8.1nm,0.8s,baz=20,slow=4.8,SNR=91
WRA   Warramunga Arr     70.40 201  P      P      15 52 04.5 -0.3
WRA                                 pmax   pmax
      comp=Z,1.0nm,0.9s
WRA   Warramunga Arr     70.40 201  P      P      15 52 04.5 -0.3
SNART Snartemo           70.41 343  i P    P      15 52 05.9 +1.5
SNART                               IAmb   IAmb   15 52 08.1
      comp=Z,73nm,1.0s
SNART Snartemo           70.41 343  eP     P      15 52 05.8 +1.5
BNM   Barren Site        70.47  60  P      P      15 52 05.4 -0.1
KIV   Kislovodsk         70.54 315  eP     P      15 52 06.1 +0.5
KIV                                 eS     S      16 01 15.8  0.0
KIV                                 eSS    SS     16 05 48.4 +1.8
KIV                                   pmax pmax
      comp=Z,6.0nm,1.0s
KIV                                 MLR    MLR
      comp=Z,904nm,18.0s
KIV   Kislovodsk         70.54 315  eP     P      15 52 06.1 +0.5
KBZ   Khabaz             70.61 315  P      P      15 52 06.9 +1.0
      comp=Z,4.1nm,0.6s,baz=183,slow=2.7,SNR=13
KBZ                                 LR     LR     16 25 57.8
      comp=Z,2µm,21.2s,baz=36,slow=38
KBZ   Khabaz             70.61 315ceP      P      15 52 06.7 +0.8
KBZ                                 pmax   pmax
      comp=Z,12nm,1.1s
KBZ   Khabaz             70.61 315  eP     P      15 52 06.7 +0.8
DEL   Delary             70.63 338  i P    P      15 52 06.6 +0.8
DEL                                 IAmb   IAmb   15 52 08.4
      comp=Z,5.5nm,0.8s
COWI  Conover            70.65  42  P      P      15 52 06.2  0.0
COWI                                IAmb   IAmb   15 52 08.0
      comp=Z,54nm,1.4s
SHA1  Shidzhatmaz        70.72 315  i P    P      15 52 07.4 +0.5
DZM   Mont Dzumac        70.84 169  eS     S      16 01 00.0  -19
      comp=Z,222nm,25.7s
DZM   Mont Dzumac        70.84 169  eLR    LR     16 13 13.0
      comp=Z,2µm,24.7s
ZEI   Tsey               70.84 313  eP     P      15 52 10.2 +2.6
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ZEI				pmax	pmax		
	comp=Z,3.0nm,1.2s						
319A	**Douglas**	**70.87**	**64**	P	**P**	**15 52 07.2**	**-0.7**
319A				IAmb	IAmb	15 52 10.7	
	comp=Z,55nm,1.3s						
AKASG	**Malin Array Be**	**70.89**	**327**	P	**P**	**15 52 07.0**	**-0.4**
	comp=Z,4.0nm,0.5s,baz=33,slow=6.2,SNR=19						
AKASG	**Malin Array Be**	**70.89**	**327**	*i* P	**P**	**15 52 07.8**	**+0.3**
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.5s						
AKASG	**Malin Array Be**	**70.89**	**327**	P	**P**	**15 52 06.7**	**-0.8**
AKBB	**Malin Array Si**	**70.89**	**327**	*ce*P	**P**	**15 52 06.8**	**-0.7**
AKBB	**Malin Array Si**	**70.89**	**327**	P	**P**	**15 52 06.6**	**-0.8**
121A	**Cookes Peak, D**	**70.94**	**62**	P	**P**	**15 52 10.6**	**+2.2**
	baz=316,SNR=8.8						
121A	**Cookes Peak, D**	**70.94**	**62**	P	**P**	**15 52 08.8**	**+0.5**
121A				IAmb	IAmb	15 52 11.6	
	comp=Z,38nm,1.4s						
CBKS	**Cedar Bluff**	**70.94**	**53**	P	**P**	**15 52 08.5**	**+0.4**
CBKS				pmax	pmax		
	comp=Z,28nm,0.9s						
CBKS	**Cedar Bluff**	**70.94**	**53**	P	**P**	**15 52 08.5**	**+0.4**
CBKS				IAmb	IAmb	15 52 09.7	
	comp=Z,28nm,0.8s						
FITZ	**Fitzroy Crossi**	**71.10**	**209**	P	**P**	**15 52 10.5**	**+1.5**
	comp=Z,11nm,0.8s,baz=28,slow=5.7,SNR=38						
FITZ				LR	LR	16 21 07.0	
	comp=Z,129nm,21.9s,baz=350,slow=34						
ONI	**Oni**	**71.21**	**313**	P	**P**	**15 52 09.9**	**+0.2**
ONI				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ONI	**Oni**	**71.21**	**313**	P	**P**	**15 52 09.8**	**+0.2**
OUENC	**Ouen Island, N**	**71.23**	**168**	P	**P**	**15 52 09.4**	**-0.3**
OUENC				IAmb	IAmb	15 52 35.0	
	comp=Z,32nm,1.1s						
F42A	**Maple Grove Fa**	**71.35**	**41**	P	**P**	**15 52 10.1**	**-0.3**
F42A				IAmb	IAmb	15 52 12.6	
	comp=Z,48nm,1.2s						
SCHQ	**Schefferville**	**71.39**	**24**	P	**P**	**15 52 11.2**	**+0.7**
	comp=Z,9.9nm,0.7s,baz=291,slow=6.5,SNR=12						
SCHQ				LR	LR	16 27 11.2	
	comp=Z,682nm,19.5s,baz=287,slow=39						
N35A	**Tabor**	**71.55**	**49**	P	**P**	**15 52 11.6**	**-0.1**
N35A				IAmb	IAmb	15 52 14.9	
	comp=Z,29nm,0.6s						
I40A	**Norwalk**	**71.68**	**44**	P	**P**	**15 52 12.1**	**-0.3**
I40A				IAmb	IAmb	15 52 14.2	
	comp=Z,58nm,1.4s						
SCIA	**State Center**	**71.96**	**47**	P	**P**	**15 52 15.4**	**+1.3**
	baz=320						
SCIA	**State Center**	**71.96**	**47**	P	**P**	**15 52 14.1**	**-0.1**
SOC	**Sochi**	**72.21**	**316**	*c i*P	**P**	**15 52 13.9**	**-1.7**
SOC				*e*PPP	PPP	15 56 36.9	
SOC				*e*S	**S**	**16 01 34.1**	**-0.8**
SOC				*e*SS	**SS**	**16 06 13.9**	**+1.9**
SOC				pmax	pmax		
	comp=Z,14nm,0.7s						
SOC				MLR	MLR		
	comp=Z,1µm,18.0s						
ANN	**Anapa**	**72.30**	**318**	*e*P	**P**	**15 52 15.8**	**-0.3**
ANN				*e**PP	**pP**	**15 52 28.4**	**-0.3**
ANN				*e*PPP	PPP	15 56 38.2	
ANN				*e*S	**S**	**16 01 36.3**	**+0.6**
ANN				*e*SS	**SS**	**16 06 07.4**	**-5.8**
ANN				pmax	pmax		
	comp=Z,41nm,1.8s						
ANN	**Anapa**	**72.30**	**318**	*e*P	**P**	**15 52 15.8**	**-0.3**
GNI	**Garni**	**72.41**	**311**	*c i*P	**P**	**15 52 17.6**	**+0.6**
GNI				pmax	pmax		
	comp=Z,26nm,1.4s						
GNI				MLR	MLR		
	comp=Z,2µm,23.0s						
I42A	**Draeger Farm,**	**72.46**	**43**	P	**P**	**15 52 16.8**	**-0.3**
I42A				IAmb	IAmb	15 52 19.0	
	comp=Z,42nm,1.4s						
H43A	**Windswept, Lux**	**72.52**	**42**	P	**P**	**15 52 16.3**	**-1.1**
H43A				IAmb	IAmb	15 52 41.3	
	comp=Z,26nm,0.9s						
JFWS	**Jewell Farm**	**72.60**	**44**	P	**P**	**15 52 16.0**	**-1.9**
JFWS				pmax	pmax		
	comp=Z,36nm,1.4s						
JFWS	**Jewell Farm**	**72.60**	**44**	P	**P**	**15 52 16.0**	**-1.9**
JFWS				IAmb	IAmb	15 52 19.4	
	comp=Z,36nm,1.4s						
AMTX	**Amarillo**	**72.76**	**57**	P	**P**	**15 52 20.5**	**+1.4**
	baz=317						
N38A	**Joes South For**	**72.80**	**48**	P	**P**	**15 52 18.9**	**-0.2**
N38A				IAmb	IAmb	15 52 21.5	
	comp=Z,23nm,0.8s						
L40A	**Anamosa**	**72.80**	**45**	P	**P**	**15 52 18.8**	**-0.3**
L40A				IAmb	IAmb	15 52 20.7	
	comp=Z,56nm,1.4s						
MSTX	**Muleshoe**	**72.81**	**58**	P	**P**	**15 52 20.7**	**+1.3**
	baz=317,SNR=6.5						
MSTX	**Muleshoe**	**72.81**	**58**	P	**P**	**15 52 18.7**	**-0.8**
MSTX				IAmb	IAmb	15 52 21.8	
	comp=Z,64nm,1.4s						
MNTX	**Cornudas Mount**	**72.95**	**61**	P	**P**	**15 52 21.4**	**+1.1**
	baz=317,SNR=15						
MNTX	**Cornudas Mount**	**72.95**	**61**	P	**P**	**15 52 20.7**	**+0.4**
MNTX				IAmb	IAmb	15 52 23.0	
	comp=Z,36nm,1.4s						
U32A	**Winter Ranch,**	**73.13**	**54**	P	**P**	**15 52 21.3**	**+0.1**
KAN01	**Argonia South**	**73.22**	**53**	P	**P**	**15 52 21.9**	**+0.2**
KAN01				IAmb	IAmb	15 52 23.1	
	comp=Z,42nm,1.2s						
SORM	**Soroca**	**73.33**	**326**	⇓P	**P**	**15 52 22.4**	**+0.3**
SORM	**Soroca**	**73.33**	**326**	⇓P	**P**	**15 52 22.4**	**+0.3**
LVV	**L'vov**	**73.46**	**329**	*e*P	**P**	**15 52 23.8**	**+0.9**
LVV				*e*S	**S**	**16 01 47.4**	**-1.4**
LVV				*e*		16 02 13.1	
LVV				pmax	pmax		
	comp=Z,110nm,1.5s						
LVV				MLR	MLR		
	comp=E,1µm,16.0s						
LVV				MLR	MLR		
	comp=N,2µm,17.0s						
LVV				MLR	MLR		
	comp=Z,1µm,16.0s						
P38A	**Dawn**	**73.54**	**48**	P	**P**	**15 52 23.2**	**-0.3**
I45A	**Fountain**	**73.54**	**41**	P	**P**	**15 52 22.1**	**-1.4**
L42A	**Oliver, Polo**	**73.58**	**45**	P	**P**	**15 52 23.3**	**-0.4**
L42A				IAmb	IAmb	15 52 25.1	
	comp=Z,53nm,1.3s						
CROK	**Carrier**	**73.58**	**53**	P	**P**	**15 52 23.3**	**-0.6**
CROK				IAmb	IAmb	15 52 25.6	
	comp=Z,70nm,1.4s						
N41A	**Harden Midland**	**74.02**	**46**	P	**P**	**15 52 26.3**	**0.0**
KWP	**Kalwaria Pacla**	**74.07**	**330**	*e*P	**P**	**15 52 28.2**	**+1.7**
KWP	**Kalwaria Pacla**	**74.07**	**330**	P	**P**	**15 52 26.5**	**0.0**
KWP	**Kalwaria Pacla**	**74.07**	**330**	P	**P**	**15 52 26.5**	**0.0**
PALK	**Pallekele**	**74.08**	**263**	P	**P**	**15 52 27.6**	**+0.5**
	comp=Z,6.0nm,0.6s,baz=122,slow=4.2,SNR=4.2						
PALK	**Pallekele**	**74.08**	**263**	IAmb	IAmb	15 52 41.4	
	comp=Z,27nm,1.2s						
AS31	**Alice Springs**	**74.09**	**200**	P	**P**	**15 52 27.1**	**+0.3**
ASAR	**Alice Springs**	**74.09**	**200**	P	**P**	**15 52 28.1**	**+1.4**
	comp=Z,4.3nm,0.6s,baz=12,slow=5.7,SNR=90						
ASAR	**Alice Springs**	**74.09**	**200**	P	**P**	**15 52 27.6**	**+0.8**
ASAR	**Alice Springs**	**74.09**	**200**	P	**P**	**15 52 27.6**	**+0.8**
KIS	**Kishinev**	**74.09**	**325**	⇑*i*P	**P**	**15 52 27.0**	**+0.4**
	comp=Z,60nm,1.4s						
KIS	**Kishinev**	**74.09**	**325**	*e*PP	PP	15 55 00.0	-12
KIS				*e*LR	LR	16 24 26.0	
	comp=Z,500nm,17.0s						
KIS	**Kishinev**	**74.09**	**325**	*c i*P	**P**	**15 52 27.0**	**+0.4**
KIS				*e*		15 52 47.0	
KIS				pmax	pmax		
	comp=Z,60nm,1.4s						
KIS				MLR	MLR		
	comp=Z,500nm,17.0s						
HLG	**Helgoland**	**74.12**	**341**	*e*P	**P**	**15 52 24.9**	**-1.8**
	comp=Z,434nm,1.2s,baz=23,slow=5.8						
MILM	**Milestii Mici**	**74.16**	**325**	*c i*P	**P**	**15 52 27.0**	**0.0**
MILM				pmax	pmax		
	comp=Z,100nm,1.6s						
MILM				MLR	MLR		
	comp=Z,1µm,17.0s						
MILM				MLR	MLR		
	comp=N,700nm,21.0s						
MILM				MLR	MLR		
	comp=E,800nm,16.0s						
RUE	**Ruedersdorf**	**74.24**	**336**	*e*P	**P**	**15 52 28.2**	**+0.8**
	comp=E,90nm,1.3s,baz=23,slow=5.8						
P40A	**Paris**	**74.35**	**48**	P	**P**	**15 52 28.4**	**+0.2**
WMOK	**Wichita Mounta**	**74.47**	**55**	P	**P**	**15 52 28.8**	**-0.3**
WMOK				pmax	pmax		
	comp=Z,18nm,1.1s						
WMOK	**Wichita Mounta**	**74.47**	**55**	P	**P**	**15 52 30.0**	**+0.9**
	baz=319,SNR=18						
WMOK	**Wichita Mounta**	**74.47**	**55**	P	**P**	**15 52 28.8**	**-0.3**
OJC	**Ojcow**	**74.50**	**332**	*e*P	**P**	**15 52 29.9**	**+0.9**
OJC	**Ojcow**	**74.50**	**332**	P	**P**	**15 52 29.0**	**0.0**
OJC				pmax	pmax		
	comp=Z,31nm,0.9s						
OJC	**Ojcow**	**74.50**	**332**	P	**P**	**15 52 29.0**	**0.0**
OJC				IAmb	IAmb	15 52 31.9	
	comp=Z,31nm,0.9s						
QUOK	**Quay**	**74.51**	**53**	P	**P**	**15 52 28.8**	**-0.5**
OK031	**S. Brethren Rd**	**74.61**	**53**	P	**P**	**15 52 29.9**	**0.0**
OK030	**Cody Creek RV**	**74.66**	**53**	P	**P**	**15 52 29.2**	**-0.9**
OKCFA	**Oklahoma City**	**74.68**	**54**	P	**P**	**15 52 30.9**	**+0.6**
VASR	**Vaslui**	**74.78**	**325**	⇓P	**P**	**15 52 31.8**	**+1.2**
J47A	**Sunmer**	**74.80**	**41**	P	**P**	**15 52 31.2**	**+0.4**
KOLS	**Kolonicke sedl**	**74.81**	**330**	*e*P	**P**	**15 52 31.7**	**+0.9**
KOLS				pmax	pmax		
	comp=Z,39nm,1.2s						
KOLS	**Kolonicke sedl**	**74.81**	**330**	*e*P	**P**	**15 52 31.7**	**+0.9**
M44A	**Midewin, Midew**	**74.82**	**44**	P	**P**	**15 52 30.3**	**-0.6**
M44A				IAmb	IAmb	15 52 32.7	
	comp=Z,61nm,1.2s						
HDIL	**Hopedale**	**74.88**	**45**	P	**P**	**15 52 31.7**	**+0.4**
	baz=322,SNR=6.6						
HDIL	**Hopedale**	**74.88**	**45**	P	**P**	**15 52 29.6**	**-1.7**
BUR08	**Bucovina Ar. S**	**74.90**	**327**	P	**P**	**15 52 31.4**	**0.0**
BURAR	**Bucovina Array**	**74.92**	**327**	P	**P**	**15 52 31.3**	**-0.2**
KSP	**Ksiaz**	**75.01**	**334**	*e*P	**P**	**15 52 32.8**	**+0.9**
FLTG	**Flechtingen**	**75.03**	**338**	*e*P	**P**	**15 52 32.2**	**+0.2**
	comp=Z,88nm,1.5s,baz=23,slow=5.8						
NIE	**Niedzica**	**75.04**	**331**	*e*P	**P**	**15 52 34.3**	**+2.2**
UZH	**Uzhgorod**	**75.07**	**330**	*e*P	**P**	**15 52 33.3**	**+1.1**
UZH				*e*		15 52 49.9	
UZH				*e*		15 52 59.3	
UZH				*e*PPP	PPP	15 57 05.3	
UZH				*e*S	**S**	**16 02 06.3**	**-0.5**
UZH				*e*PS	**PnS**	**16 02 50.9**	**+4.9**
UZH				MLR	MLR		
	comp=N,200nm,16.0s						
UZH				MLR	MLR		
	comp=E,200nm,16.0s						
UZH				MLR	MLR		
	comp=Z,160nm,16.0s						
X34A	**Smith Ranch, M**	**75.09**	**55**	P	**P**	**15 52 33.9**	**+1.2**
X34A				IAmb	IAmb	15 52 48.0	
	comp=Z,43nm,1.5s						
ESK	**Eskdalemuir**	**75.10**	**347**	P	**P**	**15 52 33.1**	**+0.8**
ESK				pmax	pmax		
	comp=Z,38nm,1.1s						
ESK	**Eskdalemuir**	**75.10**	**347**	P	**P**	**15 52 33.1**	**+0.8**
ESK				IAmb	IAmb	15 52 34.5	
	comp=Z,38nm,1.1s						
CRVS	**Cervenica-Dubn**	**75.11**	**330**	*e*P	**P**	**15 52 33.4**	**+0.9**
CRVS				pmax	pmax		
	comp=Z,65nm,1.5s						
CRVS	**Cervenica-Dubn**	**75.11**	**330**	*e*P	**P**	**15 52 33.4**	**+0.9**
CRVS				*e*		16 22 28.0	
L46A	**Eue Claire**	**75.12**	**42**	P	**P**	**15 52 32.6**	**-0.1**
S39A	**Bolivar**	**75.12**	**50**	P	**P**	**15 52 31.9**	**-0.9**
S39A				IAmb	IAmb	15 52 34.0	
	comp=Z,48nm,1.5s						
NRDL	**Niedersach Rie**	**75.17**	**339**	*e*P	**P**	**15 52 33.5**	**+0.8**
	comp=Z,51nm,1.5s,baz=23,slow=5.8						
R40A	**Maddies Statio**	**75.19**	**49**	P	**P**	**15 52 32.3**	**-0.8**
R40A				IAmb	IAmb	15 52 34.8	
	comp=Z,36nm,1.2s						
TUL1	**Leonard**	**75.20**	**52**	P	**P**	**15 52 33.9**	**+0.7**
	baz=320,SNR=8.3						
TUL1	**Leonard**	**75.20**	**52**	P	**P**	**15 52 33.0**	**-0.3**
TUL1				IAmb	IAmb	15 52 35.4	
	comp=Z,52nm,1.2s						
OSTC	**Ostas**	**75.29**	**334**	*e*P	**P**	**15 52 34.6**	**+1.1**
OSTC				AMS	AMS	16 31 30.0	
	comp=Z,2µm,19.0s						
CHVC	**Chvalec**	**75.31**	**334**	*e*P	**P**	**15 52 34.4**	**+0.8**
CHVC				AMS	AMS	16 31 10.0	
	comp=Z,2µm,18.2s						
TESR	**Tescani**	**75.32**	**326**	⇓P	**P**	**15 52 34.5**	**+0.8**
VLDR	**Vladesti**	**75.33**	**325**	⇓P	**P**	**15 52 35.1**	**+1.3**
OKC	**Ostrava-Krasne**	**75.35**	**333**	*e*P	**P**	**15 52 34.7**	**+0.9**
OKC				MLR	MLR		
	comp=Z,2µm,20.5s						
OKC	**Ostrava-Krasne**	**75.35**	**333**	*e*P	**P**	**15 52 34.7**	**+0.9**
OKC				AMS	AMS	16 30 40.0	
	comp=Z,2µm,20.5s						
ASSE	**Asse, Remlinge**	**75.36**	**338**	*e*P	**P**	**15 52 34.7**	**+0.9**
	comp=Z,83nm,1.6s,baz=23,slow=5.8						
UPC	**Upice**	**75.39**	**334**	*e*P	**P**	**15 52 34.6**	**+0.5**
UPC				MLR	MLR		
	comp=Z,2µm,17.8s						
UPC	**Upice**	**75.39**	**334**	*e*P	**P**	**15 52 34.6**	**+0.5**
UPC				AMS	AMS	16 31 00.0	
	comp=Z,2µm,17.8s						
TRPA	**Tarpa**	**75.41**	**329**	⇓P	**P**	**15 52 35.2**	**+1.0**
TRPA	**Tarpa**	**75.41**	**329**	*e*P	**P**	**15 52 34.1**	**-0.1**
DPC	**Dobruska-Polom**	**75.44**	**334**	*e*P	**P**	**15 52 35.5**	**+1.1**
DPC				MLR	MLR		
	comp=Z,1µm,16.1s						
DPC	**Dobruska-Polom**	**75.44**	**334**	*e*P	**P**	**15 52 35.5**	**+1.1**
DPC				AMS	AMS	16 31 20.0	
	comp=Z,1µm,16.1s						
P43A	**Skaggs, Pawnee**	**75.49**	**46**	P	**P**	**15 52 34.7**	**-0.2**
P43A				IAmb	IAmb	15 52 36.9	
	comp=Z,30nm,1.1s						
CLL	**Collm**	**75.51**	**336**	⇑*i*P	**P**	**15 52 35.3**	**+0.6**
CLL				pmax	pmax		
	comp=Z,85nm,1.4s						
CLL				MLR	MLR		
	comp=Z,1µm,21.3s						
CLL	**Collm**	**75.51**	**336**	⇑*i*P	**P**	**15 52 35.3**	**+0.6**
	comp=Z,85nm,1.4s						
CLL				*e*		16 08 00.0	
CLL				*e*SSS	SSS	16 10 24.0	
CLL				*e*		16 11 24.0	
CLL				Lm	MLR	16 28 00.0	
	comp=Z,1µm,21.3s						
CLL	**Collm**	**75.51**	**336**	*e*P	**P**	**15 52 34.9**	**+0.1**
	comp=Z,85nm,1.4s,baz=23,slow=5.8						
CLL	**Collm**	**75.51**	**336**	P	**P**	**15 52 34.3**	**-0.5**
CLL				IAmb	IAmb	15 52 37.3	
	comp=Z,38nm,0.9s						
U38A	**Gravette**	**75.53**	**51**	P	**P**	**15 52 35.0**	**-0.2**
U38A				IAmb	IAmb	15 52 36.9	
	comp=Z,34nm,1.2s						
LANS	**Liptovska Anna**	**75.54**	**332**	*e*P	**P**	**15 52 37.3**	**+2.3**
LANS				pmax	pmax		
	comp=Z,26nm,1.0s						
LANS	**Liptovska Anna**	**75.54**	**332**	*e*P	**P**	**15 52 37.3**	**+2.3**
KRLC	**Kraliky**	**75.55**	**334**	*e*P	**P**	**15 52 36.2**	**+1.1**
KRLC				MLR	MLR		
	comp=Z,1µm,19.9s						
KRLC	**Kraliky**	**75.55**	**334**	*e*P	**P**	**15 52 36.2**	**+1.1**
KRLC				AMS	AMS	16 29 30.0	
	comp=Z,1µm,19.9s						
ABTX	**Abilene, Hawle**	**75.57**	**57**	P	**P**	**15 52 36.5**	**+1.1**
	baz=319						
ABTX	**Abilene, Hawle**	**75.57**	**57**	P	**P**	**15 52 35.5**	**0.0**
MORC	**Moravsky Berou**	**75.59**	**333**	⇑P	**P**	**15 52 36.5**	**+1.2**
MORC	**Moravsky Berou**	**75.59**	**333**	P	**P**	**15 52 35.5**	**+0.2**
MORC				pmax	pmax		
	comp=Z,45nm,1.1s						
MORC	**Moravsky Berou**	**75.59**	**333**	*e*P	**P**	**15 52 36.3**	**+1.0**
MORC	**Moravsky Berou**	**75.59**	**333**	P	**P**	**15 52 35.5**	**+0.2**
MORC				IAmb	IAmb	15 52 38.5	
	comp=Z,45nm,1.1s						
O44A	**Mansfield**	**75.59**	**45**	P	**P**	**15 52 35.4**	**0.0**
O44A				IAmb	IAmb	15 52 37.3	
	comp=Z,53nm,1.3s						
TLCR		**75.60**	**324**	⇑P	**P**	**15 52 36.4**	**+1.1**
TLCR		**75.60**	**324**	⇑P	**P**	**15 52 36.4**	**+1.1**
BRG	**Berggiesshubel**	**75.65**	**336**	*e*P	**P**	**15 52 35.9**	**+0.4**
	comp=Z,47nm,1.4s,baz=23,slow=5.8						
BRG	**Berggiesshubel**	**75.65**	**336**	*e*P	**P**	**15 52 36.2**	**+0.6**
BRG				Amp		15 52 38.3	
	comp=Z,46nm,1.4s						
TX31	**Lajitas Ar. Si**	**75.69**	**62**	P	**P**	**15 52 36.5**	**+0.2**
TX32	**Lajitas Array**	**75.69**	**62**	P	**P**	**15 52 36.5**	**+0.3**
TX32				IAmb	IAmb	15 52 38.9	
	comp=Z,38nm,1.2s						
TXAR	**Lajitas Array**	**75.69**	**62**	P	**P**	**15 52 37.4**	**+1.1**
	comp=Z,12nm,0.8s,baz=298,slow=4.1,SNR=62						
TXAR	**Lajitas Array**	**75.69**	**62**	P	**P**	**15 52 36.8**	**+0.5**
TXAR	**Lajitas Array**	**75.69**	**62**	P	**P**	**15 52 36.8**	**+0.5**
CLZ	**Clausthal**	**75.70**	**338**	*e*P	**P**	**15 52 36.9**	**+1.0**
	comp=Z,114nm,1.4s,baz=23,slow=5.8						
FBE	**Freiberg**	**75.76**	**336**	*e*P	**P**	**15 52 36.9**	**+0.7**
	comp=Z,130nm,1.7s,baz=23,slow=5.8						
PVCC	**Panska Ves**	**75.78**	**335**	*e*P	**P**	**15 52 37.4**	**+1.1**
PVCC				MLR	MLR		
	comp=Z,2µm,21.5s						
PVCC	**Panska Ves**	**75.78**	**335**	*e*P	**P**	**15 52 37.4**	**+1.1**
PVCC				AMS	AMS	16 27 50.0	
	comp=Z,2µm,21.5s						
KECS	**Kecovo**	**75.80**	**331**	*e*P	**P**	**15 52 37.7**	**+1.3**
KECS				pmax	pmax		
	comp=Z,22nm,1.6s						
KECS	**Kecovo**	**75.80**	**331**	*e*P	**P**	**15 52 37.7**	**+1.3**
VRI	**Vrincioaia**	**75.83**	**325**	⇓P	**P**	**15 52 37.4**	**+0.7**
VRI	**Vrincioaia**	**75.83**	**325**	⇓P	**P**	**15 52 37.4**	**+0.7**
CFR	**Carcaliu**	**75.87**	**324**	⇑P	**P**	**15 52 37.5**	**+0.6**
CFR	**Carcaliu**	**75.87**	**324**	⇑P	**P**	**15 52 37.5**	**+0.6**
HHAR	**Hobbs**	**75.88**	**51**	P	**P**	**15 52 37.1**	**-0.1**
CCM	**Cathedral Cave**	**75.88**	**48**	P	**P**	**15 52 36.9**	**-0.2**
CCM				pmax	pmax		
	comp=Z,37nm,1.3s						
CCM	**Cathedral Cave**	**75.88**	**48**	P	**P**	**15 52 37.3**	**+0.2**
	baz=321						
CCM	**Cathedral Cave**	**75.88**	**48**	P	**P**	**15 52 36.9**	**-0.2**
CCM				IAmb	IAmb	15 52 39.0	
	comp=Z,37nm,1.3s						
IBBN	**Ibbenburen**	**75.89**	**340**	*e*P	**P**	**15 52 37.7**	**+0.8**
	comp=Z,65nm,1.2s,baz=23,slow=5.8						
LOOK	**Love County**	**75.90**	**55**	P	**P**	**15 52 37.6**	**+0.4**
LOOK				IAmb	IAmb	15 52 39.5	
	comp=Z,31nm,1.1s						
NEUB	**Neuenburg**	**75.92**	**337**	*e*P	**P**	**15 52 37.6**	**+0.5**
	comp=Z,77nm,1.4s,baz=23,slow=5.8						
OZUR		**75.99**	**326**	⇑P	**P**	**15 52 39.2**	**+1.5**
L48A	**N Adams**	**76.01**	**41**	P	**P**	**15 52 37.7**	**-0.1**
TPGR	**Topolog**	**76.03**	**324**	⇑P	**P**	**15 52 38.9**	**+1.1**
COVR	**Voineasa-Covas**	**76.05**	**326**	⇓P	**P**	**15 52 39.5**	**+1.5**
SFIN	**Lafayette**	**76.05**	**44**	P	**P**	**15 52 39.0**	**+0.9**
	baz=323						
SFIN	**Lafayette**	**76.05**	**44**	P	**P**	**15 52 37.7**	**-0.4**
SFIN				IAmb	IAmb	15 52 39.9	
	comp=Z,51nm,1.4s						
MGMO	**Mountain Grove**	**76.07**	**49**	P	**P**	**15 52 37.8**	**-0.4**
GTTG	**Gottingen**	**76.07**	**338**	*e*P	**P**	**15 52 38.9**	**+0.9**
	comp=Z,72nm,1.4s,baz=23,slow=5.8						
BISRR	**Bisoca**	**76.11**	**325**	⇓P	**P**	**15 52 40.3**	**+1.9**
PRA	**Prague**	**76.23**	**335**	*e*P	**P**	**15 52 39.9**	**+1.0**
PRA				MLR	MLR		
	comp=Z,2µm,22.3s						
PRA	**Prague**	**76.23**	**335**	*e*P	**P**	**15 52 39.9**	**+1.0**
PRA				AMS	AMS	16 28 10.0	
	comp=Z,2µm,22.3s						
DOPR	**Dopca**	**76.25**	**326**	⇓P	**P**	**15 52 40.8**	**+1.7**
HPIG		**76.25**	**65**	P	**P**	**15 52 39.7**	**+0.1**
CJR	**Cluj-Napoca**	**76.26**	**328**	⇓P	**P**	**15 52 40.7**	**+1.5**
CJR	**Cluj-Napoca**	**76.26**	**328**	⇓P	**P**	**15 52 40.7**	**+1.5**
PRU	**Pruhonice**	**76.28**	**335**	*e*P	**P**	**15 52 39.8**	**+0.7**
PRU				MLR	MLR		
	comp=Z,1µm,21.5s						
PRU	**Pruhonice**	**76.28**	**335**	*e*P	**P**	**15 52 39.8**	**+0.7**
PRU				AMS	AMS	16 28 10.0	
	comp=Z,1µm,21.5s						
VRAC	**Vranov**	**76.29**	**333**	⇓P	**P**	**15 52 40.5**	**+1.3**
VRAC	**Vranov**	**76.29**	**333**	⇓P	**P**	**15 52 40.5**	**+1.3**
VRAC	**Vranov**	**76.29**	**333**	*e*P	**P**	**15 52 40.5**	**+1.3**
Q44A	**Meyer Farm, Va**	**76.31**	**46**	P	**P**	**15 52 39.4**	**-0.1**
Q44A				IAmb	IAmb	15 52 41.6	
	comp=Z,49nm,1.2s						
VYHS	**Vyhne**	**76.32**	**332**	*e*P	**P**	**15 52 40.6**	**+1.2**
VYHS				pmax	pmax		
	comp=Z,71nm,1.6s						
VYHS	**Vyhne**	**76.32**	**332**	*e*P	**P**	**15 52 40.6**	**+1.2**
FVM	**French Village**	**76.34**	**48**	P	**P**	**15 52 39.5**	**-0.2**
FVM				pmax	pmax		
	comp=Z,29nm,1.2s						
FVM	**French Village**	**76.34**	**48**	P	**P**	**15 52 39.5**	**-0.2**
FVM				IAmb	IAmb	15 52 41.8	
	comp=Z,30nm,1.2s						
HARR	**Harsova**	**76.36**	**324**	⇓P	**P**	**15 52 40.7**	**+1.0**
HARR	**Harsova**	**76.36**	**324**	⇓P	**P**	**15 52 40.7**	**+1.0**
JAVC	**Velka Javorina**	**76.36**	**333**	*e*P	**P**	**15 52 41.7**	**+2.0**
Z35A	**Perchaven, San**	**76.36**	**55**	P	**P**	**15 52 39.9**	**0.0**
Z35A				IAmb	IAmb	15 52 41.6	
	comp=Z,42nm,1.4s						
TIRR	**Tirgusor**	**76.36**	**324**	⇓P	**P**	**15 52 40.6**	**+0.9**
TIRR	**Tirgusor**	**76.36**	**324**	⇓P	**P**	**15 52 40.6**	**+0.9**
TIRR	**Tirgusor**	**76.36**	**324**	P	**P**	**15 52 39.4**	**-0.3**
U40A	**Yellville**	**76.39**	**50**	P	**P**	**15 52 40.4**	**+0.3**
	baz=321,SNR=23						
U40A	**Yellville**	**76.39**	**50**	P	**P**	**15 52 40.0**	**0.0**
TRQ	**Mont Tremblant**	**76.43**	**33**	P	**P**	**15 52 40.1**	**0.0**
TLBR	**Topalu**	**76.43**	**324**	⇑P	**P**	**15 52 41.6**	**+1.5**
MLR	**Muntele Rosu**	**76.44**	**326**	⇑P	**P**	**15 52 42.0**	**+1.6**
MLR	**Muntele Rosu**	**76.44**	**326**	⇑P	**P**	**15 52 42.0**	**+1.6**
MLR	**Muntele Rosu**	**76.44**	**326**	P	**P**	**15 52 39.5**	**-0.8**
MLR				IAmb	IAmb	15 52 44.1	
	comp=Z,33nm,0.9s						
BANOM	**Banah**	**76.45**	**294**	P	**P**	**15 52 41.0**	**+0.4**
BANOM	**Banah**	**76.45**	**294**	P	**P**	**15 52 41.7**	**+1.1**
SHME	**Shamm**	**76.46**	**294**	P	**P**	**15 52 41.1**	**+0.5**
SHME	**Shamm**	**76.46**	**294**	P	**P**	**15 52 41.5**	**+0.9**
TANN	**Tannenbergstha**	**76.46**	**336**	*e*P	**P**	**15 52 41.0**	**+0.7**
	comp=Z,66nm,1.6s,baz=23,slow=5.8						
WERD	**Werda**	**76.48**	**336**	*e*P	**P**	**15 52 41.0**	**+0.7**
	comp=Z,63nm,1.4s,baz=23,slow=5.8						
MOX	**Moxa**	**76.48**	**337**	*e*P	**P**	**15 52 41.0**	**+0.7**
	comp=Z,64nm,1.4s,baz=23,slow=5.8						
MOX				*e*L	L	16 29 26.6	
	comp=Z,1µm,20.8s						
PSZ	**Piszkesteto**	**76.48**	**331**	⇑P	**P**	**15 52 41.9**	**+1.4**
PSZ	**Piszkesteto**	**76.48**	**331**	*e*P	**P**	**15 52 41.3**	**+0.9**
PSZ	**Piszkesteto**	**76.48**	**331**	⇑P	**P**	**15 52 41.9**	**+1.4**
PSZ	**Piszkesteto**	**76.48**	**331**	P	**P**	**15 52 41.0**	**+0.6**
PSZ				IAmb	IAmb	15 52 43.9	
	comp=Z,23nm,1.0s						
DRGR		**76.51**	**328**	⇓P	**P**	**15 52 41.6**	**+1.0**
DRGR		**76.51**	**328**	⇓P	**P**	**15 52 41.6**	**+1.0**
ISR	**Istrita**	**76.53**	**325**	⇓P	**P**	**15 52 42.3**	**+1.6**
ISR	**Istrita**	**76.53**	**325**	⇓P	**P**	**15 52 42.3**	**+1.6**
GUNZ	**Gunzen**	**76.55**	**336**	*e*P	**P**	**15 52 41.6**	**+0.8**
	comp=Z,59nm,1.4s,baz=23,slow=5.8						
KRUC	**Moravsky**	**76.57**	**333**	*e*P	**P**	**15 52 41.9**	**+1.1**
WERN	**Wernitzgruen**	**76.60**	**336**	*e*P	**P**	**15 52 41.9**	**+0.8**
	comp=Z,64nm,1.3s,baz=23,slow=5.8						
P46A	**Rosedale**	**76.61**	**45**	P	**P**	**15 52 41.4**	**+0.2**
NKC	**Novy Kostel**	**76.63**	**336**	*e*P	**P**	**15 52 42.2**	**+1.0**
NKC				MLR	MLR		
	comp=Z,1µm,23.8s						
NKC	**Novy Kostel**	**76.63**	**336**	*e*P	**P**	**15 52 42.2**	**+1.0**
NKC				AMS	AMS	16 29 10.0	
	comp=Z,1µm,23.8s						
DELO	**Deloro Mine**	**76.72**	**36**	P	**P**	**15 52 41.7**	**-0.1**
DELO				IAmb	IAmb	15 52 43.5	
	comp=Z,36nm,1.2s						
UBBA	**Unterbreizbach**	**76.73**	**338**	*e*P	**P**	**15 52 42.4**	**+0.8**
	comp=Z,71nm,1.4s,baz=23,slow=5.8						
SMOL	**Smolenice**	**76.74**	**332**	*e*P	**P**	**15 52 43.5**	**+1.7**
SMOL				pmax	pmax		
	comp=Z,54nm,1.9s						
SMOL	**Smolenice**	**76.74**	**332**	*e*P	**P**	**15 52 43.5**	**+1.7**
LMQ	**La Malbaie**	**76.75**	**30**	P	**P**	**15 52 42.4**	**+0.5**
T42A	**Van Buren**	**76.76**	**49**	P	**P**	**15 52 41.7**	**-0.4**
T42A				IAmb	IAmb	15 52 44.0	
	comp=Z,28nm,1.4s						
W39A	**Magazine**	**76.80**	**52**	P	**P**	**15 52 42.9**	**+0.5**
	baz=321,SNR=8.0						
W39A	**Magazine**	**76.80**	**52**	P	**P**	**15 52 42.1**	**-0.3**
W39A				IAmb	IAmb	15 52 44.3	
	comp=Z,43nm,1.4s						
BUG	**Bochum--Univer**	**76.81**	**340**	*e*P	**P**	**15 52 42.7**	**+0.6**
	comp=Z,112nm,1.5s,baz=23,slow=5.8						
VOIR		**76.83**	**326**	⇑P	**P**	**15 52 43.7**	**+1.3**
VOIR		**76.83**	**326**	⇑P	**P**	**15 52 43.7**	**+1.3**
MODS	**Modra-Piesok**	**76.91**	**333**	*e*P	**P**	**15 52 43.3**	**+0.5**
MODS				pmax	pmax		
	comp=Z,79nm,1.6s						
MODS	**Modra-Piesok**	**76.91**	**333**	*e*P	**P**	**15 52 43.3**	**+0.5**
MDH	**Madha**	**76.91**	**293**	P	**P**	**15 52 43.2**	**0.0**
MANZ	**Manzenberg**	**76.95**	**336**	*e*P	**P**	**15 52 43.7**	**+0.7**
	comp=Z,12nm,1.4s,baz=23,slow=5.8						

WSAR	Wadi Sarin	76.97	290	P	P	15 52 44.7	+1.2
	comp=Z,3.9nm,0.8s,baz=131,slow=12,SNR=3.8						
WSAR				LR	LR	16 31 27.8	
	comp=Z,1µm,19.6s,baz=66,slow=39						
WSAR	Wadi Sarin	76.97	290	P	P	15 52 45.1	+1.6
ARR	Arges	77.04	326	⇑P	P	15 52 46.3	+2.7
JCT	Junction City	77.08	59	P	P	15 52 43.7	-0.4
JCT				pmax	pmax		
	comp=Z,66nm,1.5s						
JCT	Junction City	77.08	59	P	P	15 52 44.9	+0.8
	baz=319,SNR=8.2						
JCT	Junction City	77.08	59	P	P	15 52 43.7	-0.4
BIDO	Bidbid	77.08	291	P	P	15 52 46.2	+2.1
SRO	Srobarova	77.08	332	*e*P	P	15 52 45.7	+2.0
SRO				pmax	pmax		
	comp=Z,114nm,1.8s						
SRO	Srobarova	77.08	332	*e*P	P	15 52 45.7	+2.0
SRO2	Moca	77.10	332	*e*P	P	15 52 44.2	+0.4
SRO2				pmax	pmax		
	comp=Z,33nm,1.4s						
SRO2	Moca	77.10	332	*e*P	P	15 52 44.2	+0.4
FCAR	Ozark Folk Cen	77.12	50	P	P	15 52 43.7	-0.4
FCAR				IAmb	IAmb	15 52 45.7	
	comp=Z,37nm,1.2s						
ROTZ	Rotzenmuhle	77.12	336	*e*P	P	15 52 44.9	+0.9
	comp=Z,25nm,1.6s,baz=23,slow=5.8						
ZST	Bratislava	77.12	333	*e*P	P	15 52 45.7	+1.8
ZST	Bratislava	77.12	333	*e*P	P	15 52 45.7	+1.8
BUD	Budapest	77.15	331	*e*P	P	15 52 40.2	-3.8
S44A	Carbondale	77.15	47	P	P	15 52 44.0	-0.2
S44A				IAmb	IAmb	15 52 45.7	
	comp=Z,16nm,0.8s						
SIUC	Southern Illin	77.15	47	P	P	15 52 43.6	-0.6
SIUC				IAmb	IAmb	15 52 46.4	
	comp=Z,35nm,1.1s						
WBK	Wadi Bani Khal	77.22	290	P	P	15 52 46.8	+1.9
	SNR=5.5						
UOSS	Minazif	77.23	293	P	P	15 52 45.1	+0.2
UOSS	Minazif	77.23	293	P	P	15 52 46.0	+1.1
JLN	Jalan Bani Buh	77.27	289	P	P	15 52 47.1	+1.9
	SNR=12						
BLO	Bloomington	77.28	44	P	P	15 52 45.0	0.0
BLO				pmax	pmax		
	comp=Z,31nm,1.5s						
BLO	Bloomington	77.28	44	P	P	15 52 45.0	0.0
BLO				IAmb	IAmb	15 53 05.6	
	comp=Z,31nm,1.5s						
PBMO	Poplar Bluff	77.28	48	P	P	15 52 45.3	+0.3
KHC	Kasperske Hory	77.32	335	*e*P	P	15 52 46.4	+1.3
KHC				*e*		15 53 08.5	
KHC				MLR	MLR		
	comp=Z,2µm,19.6s						
KHC	Kasperske Hory	77.32	335	*e*P	P	15 52 46.4	+1.3
KHC				*e*x	x	15 53 08.5	
KHC				AMS	AMS	16 29 30.0	
	comp=Z,2µm,19.6s						
SIRR	Siria	77.33	329	⇓P	P	15 52 46.3	+1.1
HATD	Hatta, Dubai	77.36	293	*i* P	P	15 52 46.7	+1.1
	SNR=6.8						
HATD	Hatta, Dubai	77.36	293	P	P	15 52 46.9	+1.2
	SNR=6.4						
MNTQ	Montreal, Queb	77.39	33	P	P	15 52 45.1	-0.3
MNTQ				IAmb	IAmb	15 52 48.8	
	comp=Z,34nm,1.4s						
CKRC	Cesky Krumlov	77.39	335	*e*P	P	15 52 46.3	+0.8
MIAR	Mount Ida	77.41	52	P	P	15 52 45.9	+0.1
MIAR				pmax	pmax		
	comp=Z,31nm,1.2s						
MIAR	Mount Ida	77.41	52	P	P	15 52 46.7	+0.9
	baz=321,SNR=8.2						
MIAR	Mount Ida	77.41	52	P	P	15 52 45.9	+0.1
MIAR				IAmb	IAmb	15 52 48.0	
	comp=Z,31nm,1.2s						
GRA1	Grafenberg Arr	77.45	337	P	P	15 52 46.6	+0.9
GRF	Grafenberg Arr	77.45	337	P	P	15 52 46.7	+0.9
GRF				pmax	pmax		
	comp=Z,83nm,1.1s						
GRF	Grafenberg Arr	77.45	337	*e*P	P	15 52 46.9	+1.1
	comp=Z,140nm,1.3s,baz=23,slow=5.8						
GRF				*e*L	L	16 30 16.6	
	comp=Z,1µm,20.6s						
GRFO	Grafenberg	77.45	337	P	P	15 52 46.5	+0.7
GRFO				pmax	pmax		
	comp=Z,82nm,1.1s						
GRFO	Grafenberg	77.45	337	P	P	15 52 46.5	+0.7
SMDO	Samad	77.47	290	P	P	15 52 47.6	+1.2
LCAR	Lake Charles	77.47	49	P	P	15 52 46.0	-0.1
CSKK	Cskako	77.50	331	*e*P	P	15 52 47.6	+1.5
WHAR	Wooly Hollow	77.50	51	P	P	15 52 46.2	-0.1
WET	Wettzell	77.50	336	*e*P	P	15 52 47.2	+1.0
	comp=Z,101nm,1.4s,baz=23,slow=5.8						
ASHO	Ashiyiah	77.51	293	*i* P	P	15 52 46.9	+0.3
	SNR=9.6						
ASHO	Ashiyiah	77.51	293	P	P	15 52 47.1	+0.5
	SNR=7.3						
NAZ	Nazwa, Dubai	77.53	293	P	P	15 52 47.7	+1.1
HOQ	Hoqain	77.54	291	P	P	15 52 47.8	+1.0
	SNR=6.3						
GEC2	GERESS Array S	77.55	335	*e*P	P	15 52 47.0	+0.6
	comp=Z,40nm,1.3s,baz=23,slow=5.8						
GEC2	GERESS Array S	77.55	335	P	P	15 52 46.8	+0.3
GEC2				IAmb	IAmb	15 52 48.7	
	comp=Z,32nm,1.2s						
GERES	GERESS Array B	77.55	335	P	P	15 52 47.2	+0.8
	comp=Z,5.6nm,0.6s,baz=36,slow=5.7,SNR=63						
GERES	GERESS Array B	77.55	335	P	P	15 52 46.6	+0.2
GERES	GERESS Array B	77.55	335	P	P	15 52 46.6	+0.2
DSB	Dublin	77.56	349	P	P	15 52 46.3	+0.1
DSB				IAmb	IAmb	15 53 04.8	
	comp=Z,35nm,1.1s						
P48A	Milroy	77.56	44	P	P	15 52 46.5	-0.1
P48A				IAmb	IAmb	15 52 48.4	
	comp=Z,56nm,1.4s						
D62A	Allapoint, All	77.57	29	P	P	15 52 46.5	0.0
D62A				IAmb	IAmb	15 52 48.0	
	comp=Z,20nm,1.0s						
W41B	Gary Mavity, V	77.61	51	P	P	15 52 47.6	+0.7
	baz=321,SNR=7.8						
SOHO	SOHO	77.62	292	P	P	15 52 47.3	+0.2
SOHO	SOHO	77.62	292	P	P	15 52 47.5	+0.4
Z38A	Mt. Pleasant	77.64	54	P	P	15 52 47.2	+0.1
Z38A				IAmb	IAmb	15 52 49.2	
	comp=Z,48nm,1.2s						
TNS	Taunus Mts	77.67	339	*e*P	P	15 52 47.8	+0.7
	comp=Z,108nm,1.6s,baz=23,slow=5.8						
M52A	Chesterland	77.67	40	P	P	15 52 47.3	+0.1
M52A				IAmb	IAmb	15 52 52.6	
	comp=Z,37nm,1.0s						
GZR	Gura Zlata	77.69	328	⇑P	P	15 52 48.0	+0.7
GZR	Gura Zlata	77.69	328	⇑P	P	15 52 48.0	+0.7
J55A	Hilton	77.69	36	P	P	15 52 47.1	-0.1
J55A				IAmb	IAmb	15 52 51.3	
	comp=Z,23nm,1.1s						
AHRW	Bad Neuenahr-A	77.69	340	*e*P	P	15 52 47.9	+0.8
	comp=Z,112nm,1.4s,baz=23,slow=5.8						
BNN	Bunyan	77.73	316	P	P	15 52 47.9	+0.2
CONA	Conrad Observa	77.74	333	*i* P	P	15 52 49.2	+1.6
	comp=Z,59nm,1.3s,SNR=25						
CONA				*e*S	SKSac	16 02 55.3	-2.2
	comp=Z,5.1nm,1.8s						
SOP	Sopron	77.75	333	*e*P	P	15 52 48.7	+1.3
FAQ	Al Faqa, Dubai	77.75	293	*i* P	P	15 52 48.2	+0.3
	SNR=7.2						
FAQ	Al Faqa, Dubai	77.75	293	P	P	15 52 48.5	+0.6
	SNR=5.5						
ERPA	Erie	77.77	39	P	P	15 52 48.1	+0.4
ERPA				IAmb	IAmb	15 53 02.8	
	comp=Z,28nm,0.9s						
BEBN	Eben Emael	77.77	341	*d*P	P	15 52 48.4	+0.9
E62A	Clayton Lake	77.83	30	P	P	15 52 48.2	+0.3
E62A				IAmb	IAmb	15 52 50.1	
	comp=Z,50nm,1.2s						
X40A	Basin Creek Fa	77.84	51	P	P	15 52 49.2	+1.0
	baz=321,SNR=6.3						
X40A	Basin Creek Fa	77.84	51	P	P	15 52 47.6	-0.5
X40A				IAmb	IAmb	15 52 50.4	
	comp=Z,45nm,1.4s						
BTNL	Ternell	77.87	340	*d*P	P	15 52 49.1	+0.9
	comp=Z,21nm,1.1s						
COPA	Copaceanca	77.87	325	⇑P	P	15 52 48.7	+0.6
MEM	Membach	77.88	340	*d*P	P	15 52 48.9	+0.8
	comp=Z,30nm,1.0s						
MPLH	Magyarpolny	77.90	332	*e*P	P	15 52 49.3	+1.0
BZS	Buzias	77.91	328	⇓P	P	15 52 49.2	+0.8
BZS	Buzias	77.91	328	⇓P	P	15 52 49.2	+0.8
JMDO	Jabal Madar	77.94	290	P	P	15 52 51.0	+2.0
	SNR=9.8						
ASUD	Al Ashush, Dub	78.00	293	*i* P	P	15 52 50.2	+1.0
	SNR=6.0						
ASUD	Al Ashush, Dub	78.00	293	P	P	15 52 50.5	+1.3
MOQ	Mont Orford	78.03	32	P	P	15 52 49.8	+0.6
BR131	Keskin Array S	78.04	318	P	P	15 52 49.7	+0.3
BR131				pmax	pmax		
	comp=Z,29nm,1.2s						
BR131	Keskin Array S	78.04	318	P	P	15 52 50.9	+1.5
	SNR=13						
BR131	Keskin Array S	78.04	318	P	P	15 52 49.7	+0.3
BR131				IAmb	IAmb	15 52 51.0	
	comp=Z,29nm,1.1s						
BRTR	Keskin Array B	78.04	318	P	P	15 52 50.4	+1.0
	comp=Z,10nm,0.9s,baz=64,slow=2.9,SNR=30						
BRTR	Keskin Array B	78.04	318	P	P	15 52 49.5	+0.1
BRTR	Keskin Array B	78.04	318	P	P	15 52 49.5	+0.1
M53A	WI Miller and	78.04	39	P	P	15 52 50.0	+0.8
	baz=326,SNR=5.4						
M53A	WI Miller and	78.04	39	P	P	15 52 49.4	+0.2
J56A	Wolcott	78.06	36	P	P	15 52 49.2	0.0
J56A				IAmb	IAmb	15 53 10.2	
	comp=Z,21nm,0.8s						
WVNY	West Valley, N	78.10	37	P	P	15 52 49.4	-0.1
BHOU	Houvegnez	78.11	340	*d*P	P	15 52 50.5	+1.0
	comp=Z,27nm,1.2s						
WCI	Wyandotte Cave	78.14	45	P	P	15 52 50.4	+0.6
WCI				pmax	pmax		
	comp=Z,59nm,1.3s						
WCI	Wyandotte Cave	78.14	45	P	P	15 52 50.8	+1.0
	baz=324						
WCI	Wyandotte Cave	78.14	45	P	P	15 52 50.4	+0.6
237A	Washetta, Mont	78.16	55	P	P	15 52 50.6	+0.6
ALNE	Al Ain	78.16	293	*i* P	P	15 52 51.0	+0.8
	SNR=7.2						
ALNE	Al Ain	78.16	293	P	P	15 52 51.2	+1.1
	SNR=10						
BCLA	Clavier	78.21	341	*d*P	P	15 52 50.9	+1.0
	comp=Z,25nm,1.2s						
ARQ	Araqi	78.21	292	P	P	15 52 51.5	+1.0
	SNR=8.2						
BSY	Bisya	78.23	291	P	P	15 52 51.8	+1.2
	SNR=11						
HERR	Herculane	78.26	328	⇓P	P	15 52 50.8	+0.5
MOA	Molln	78.28	334	*i* P	P	15 52 51.6	+1.1
	comp=Z,14nm,0.8s,SNR=7.3						
BGES	Gesves	78.29	341	*d*P	P	15 52 51.1	+0.6
	comp=Z,22nm,1.2s						
ANTO	Ankara	78.30	318	P	P	15 52 50.9	+0.1
ANTO				pmax	pmax		
	comp=Z,24nm,0.8s						
ANTO	Ankara	78.30	318	P	P	15 52 50.9	+0.1
ANTO				IAmb	IAmb	15 52 54.1	
	comp=Z,24nm,0.8s						
WLAR	White Oak Lake	78.31	52	P	P	15 52 51.0	+0.2
SNF	Seneffe	78.35	341	*d*P	P	15 52 51.6	+0.9
MORH	Mrgy, Hungar	78.39	331	⇑P	P	15 52 51.1	+0.1
MORH	Mrgy, Hungar	78.39	331	*e*P	P	15 52 50.4	-0.6
MORH	Mrgy, Hungar	78.39	331	⇑*i*P	P	15 52 50.9	-0.1
GAZ	Gaziantep	78.43	314	P	P	15 52 50.9	-0.6
GAZ				IAmb	IAmb	15 52 52.3	
	comp=Z,27nm,1.1s						
BMRD	Maredsous	78.44	341	*d*P	P	15 52 52.2	+1.0
	comp=Z,34nm,1.3s						
ARSA	Arzberg	78.45	333	*i* P	P	15 52 52.8	+1.4
	comp=Z,30nm,1.1s,SNR=20						
ARSA				*e*S	SKSac	16 02 59.2	-3.3
	comp=Z,3.2nm,1.2s						
N53A	Lisbon	78.50	40	P	P	15 52 52.1	+0.3
N53A				IAmb	IAmb	15 52 53.9	
	comp=Z,49nm,1.4s						
MDUB	Mudurnu	78.51	320	P	P	15 52 52.1	+0.1
MDVR	Moldovita	78.60	328	⇑P	P	15 52 52.5	+0.3
J58A	Remsen	78.60	35	P	P	15 52 51.7	-0.6
J58A				IAmb	IAmb	15 52 53.9	
	comp=Z,33nm,1.2s						
R49A	Shelbyville	78.62	44	P	P	15 52 52.5	+0.1
O52A	Adamsville	78.63	41	P	P	15 52 52.5	-0.1
O52A				IAmb	IAmb	15 52 54.5	
	comp=Z,41nm,1.2s						
DOU	Dourbes	78.67	341	*d*P	P	15 52 53.0	+0.5
	comp=Z,15nm,1.4s						
KOVH	Kovagotottos	78.68	331	*e*P	P	15 52 52.1	-0.5
WLF	Walferdange	78.73	340	*d*P	P	15 52 55.1	+2.2
WLF	Walferdange	78.73	340	*e*P	P	15 52 54.1	+1.3
	comp=Z,224nm,2.1s,baz=23,slow=5.8						
N54A	Moraine State	78.73	39	P	P	15 52 53.9	+0.9
	baz=326						
N54A	Moraine State	78.73	39	P	P	15 52 53.3	+0.3
N54A				IAmb	IAmb	15 52 55.2	
	comp=Z,58nm,1.4s						
PLVB	Pleven	78.73	325	⇓P	P	15 52 53.4	+0.5
L56A	Greenwood	78.75	37	P	P	15 52 53.2	0.0
L56A				IAmb	IAmb	15 52 55.2	
	comp=Z,54nm,1.4s						
T47A	Sharon Grove	78.75	46	P	P	15 52 53.0	-0.1
BEHE	Becsehely	78.76	332	*e*P	P	15 52 54.0	+0.9
O53A	New Philadelph	78.80	40	P	P	15 52 54.2	+0.8
	baz=326						
O53A	New Philadelph	78.80	40	P	P	15 52 53.3	-0.1
O53A				IAmb	IAmb	15 52 55.3	
	comp=Z,52nm,1.4s						
RJOB	Jochberg	78.81	335	*e*P	P	15 52 54.6	+1.2
	comp=Z,71nm,1.7s,baz=23,slow=5.8						
M55A	Ridgway	78.82	38	P	P	15 52 53.2	-0.3
M55A				IAmb	IAmb	15 52 55.8	
	comp=Z,57nm,1.4s						
STU	Stuttgart	78.82	338	P	P	15 52 53.5	+0.1
STU				pmax	pmax		
	comp=Z,63nm,1.3s						
STU	Stuttgart	78.82	338	*e*P	P	15 52 54.1	+0.7
	comp=Z,226nm,1.5s,baz=23,slow=5.8						
STU	Stuttgart	78.82	338	P	P	15 52 53.5	+0.1
FUR	Furstenfeldbru	78.83	336	*e*P	P	15 52 54.7	+1.2
	comp=Z,148nm,1.6s,baz=23,slow=5.8						
MIB	Mutribah	78.84	302	*e*P	P	15 52 54.1	+0.3
Q51A	Peebles	78.86	42	P	P	15 52 54.0	+0.2
Q51A				IAmb	IAmb	15 52 56.1	
	comp=Z,33nm,1.1s						
F64A	Sherman	78.88	29	P	P	15 52 54.0	+0.3
F64A				IAmb	IAmb	15 53 22.6	
	comp=Z,50nm,1.5s						
P52A	Corning	78.90	41	P	P	15 52 53.8	-0.2
P52A				IAmb	IAmb	15 53 04.2	
	comp=Z,41nm,1.4s						
FRGS	Fruska Gora	78.93	329	⇑P	P	15 52 54.8	+0.7
FRGS	Fruska Gora	78.93	329	⇑*i*P	P	15 52 54.6	+0.5
NATX	Nacogdoches	78.97	54	P	P	15 52 56.2	+1.7
	baz=321						
NATX	Nacogdoches	78.97	54	P	P	15 52 55.2	+0.7
R50A	Paris	79.02	44	P	P	15 52 54.9	+0.3
MHTO	MHTO	79.04	289	P	P	15 52 56.5	+1.5
	SNR=19						
SOKA	Soboth	79.11	333	*i* P	P	15 52 55.9	+0.8
	comp=Z,82nm,1.3s,SNR=46						
SOKA				*e*S	S	16 02 47.8	-3.3
	comp=Z,2.2nm,0.9s						
KBD	Kabd	79.12	302	*e*P	P	15 52 55.2	-0.1
KALN	Kalnik	79.16	332	*i* P	P	15 52 54.5	-0.9
O54A	Avella	79.21	40	P	P	15 52 55.8	+0.1
O54A				IAmb	IAmb	15 52 58.1	
	comp=Z,64nm,1.4s						
EDRB	Edirne	79.22	323	P	P	15 52 56.3	+0.7
KBA	Koelnbreinsper	79.25	334	*i* P	P	15 52 57.7	+1.7
	comp=Z,103nm,0.9s,SNR=44						
KBA				*e*S	SKSac	16 03 06.1	-2.4
	comp=Z,3.6nm,1.1s						
LOBO	Lobor	79.26	332	*i* P	P	15 52 56.1	+0.3
QRN	Al-Qurain	79.32	301	*e*P	P	15 52 55.8	-0.6
RDF	Al-Radifah	79.39	302	*e*P	P	15 52 57.2	+0.4
Q52A	Bidwell	79.39	42	P	P	15 52 56.9	+0.2
Q52A				IAmb	IAmb	15 52 58.7	
	comp=Z,45nm,1.4s						
OBKA	Obir	79.41	333	*i* P	P	15 52 57.5	+0.7
	comp=Z,30nm,1.1s,SNR=14						
BFO	Black Forest	79.45	338	P	P	15 52 57.3	+0.4
BFO				pmax	pmax		
	comp=Z,98nm,1.5s						
BFO	Black Forest	79.45	338	*e*P	P	15 52 57.6	+0.8
	comp=Z,91nm,1.4s,baz=23,slow=5.8						
BFO	Black Forest	79.45	338	P	P	15 52 57.3	+0.4
WATA	Walderalm	79.51	336	*i* P	P	15 52 58.8	+1.4
	comp=Z,137nm,1.4s,SNR=47						
WATA				*e*S	S	16 03 00.4	+5.0
	comp=Z,2.1nm,0.6s						
PTJ	Puntijarka	79.52	332	P	P	15 52 57.4	+0.1
UMZA	Um Al Zommool	79.52	292	P	P	15 52 58.2	+0.6
MZWR	Madinat Zayed	79.53	294	P	P	15 52 58.0	+0.4
MOSL	Moslavina	79.53	332	*i* P	P	15 52 56.8	-0.6
WTTA	Wattenberg	79.56	336	*i* P	P	15 52 59.2	+1.6
	comp=Z,130nm,1.3s,SNR=49						
WTTA				*e*S	S	16 02 59.6	+3.5
	comp=Z,4.1nm,0.9s						
MYKA	Terra Mystica	79.57	334	*i* P	P	15 52 58.2	+0.7
	comp=Z,60nm,1.9s,SNR=11						
MYKA				*e*S	S	16 02 52.2	-3.7
	comp=Z,4.2nm,1.0s						
M57A	Sunshine Farm,	79.59	37	P	P	15 52 57.6	-0.1
M57A				IAmb	IAmb	15 53 16.1	
	comp=Z,51nm,1.3s						
UBR	Ueberruh	79.59	337	*e*P	P	15 52 58.6	+0.9
	comp=Z,102nm,1.6s,baz=23,slow=5.8						
BOVS	Bovan	79.59	327	⇑P	P	15 52 57.3	-0.4
RETA	Reutte	79.60	336	*i* P	P	15 52 59.0	+1.3
	comp=Z,37nm,1.0s,SNR=13						
RETA				*e*S	S	16 03 04.0	+7.8
	comp=Z,5.4nm,0.8s						
MOTA	Moosalm	79.63	336	*i* P	P	15 52 59.3	+1.3
	comp=Z,142nm,1.2s,SNR=58						
MOTA				*e*S	S	16 03 00.6	+3.8
	comp=Z,6.3nm,1.3s						
SHMA	Al-Shehemyia	79.72	297	P	P	15 52 59.6	+1.0
SQTA	Sankt Quirin	79.72	336	*i* P	P	15 52 59.9	+1.5
	comp=Z,124nm,1.4s,SNR=51						
SQTA				*e*S	S	16 03 02.2	+4.6
	comp=Z,2.6nm,0.7s						
CRES	Cresnjev	79.75	332	⇑*i*P	P	15 52 58.8	+0.3
U49A	Red Boiling Sp	79.76	46	P	P	15 52 59.0	+0.2
U49A				IAmb	IAmb	15 53 01.0	
	comp=Z,41nm,1.4s						
ABTA	Abfaltersbach	79.79	335	*i* P	P	15 52 59.4	+0.6
	comp=Z,38nm,1.6s,SNR=17						
ABTA				*e*S	SKSac	16 03 08.5	-3.6
	comp=Z,1.0nm,0.6s						
DIVS	Divibare	79.80	329	⇑*i*P	P	15 52 59.0	+0.1
DIVS	Divibare	79.80	329	P	P	15 52 58.4	-0.5
DIVS				IAmb	IAmb	15 53 01.2	
	comp=Z,32nm,1.1s						
T50A	Nancy	79.80	45	P	P	15 52 59.2	+0.3
T50A				IAmb	IAmb	15 53 01.2	
	comp=Z,47nm,1.4s						
ZOU	Zoufplan	79.83	334	P	P	15 52 58.5	-0.6
LJU	Ljubljana	79.83	333	⇑*i*P	P	15 52 57.7	-1.3
CLTN	Cedars of Leba	79.84	46	P	P	15 52 58.6	-0.5
CLTN				IAmb	IAmb	15 53 00.7	
	comp=Z,43nm,1.5s						
ECH	Echery	79.84	339	P	P	15 52 58.9	-0.1
ECH				pmax	pmax		
	comp=Z,45nm,1.1s						
ECH	Echery	79.84	339	P	P	15 52 58.9	-0.1
ECH				IAmb	IAmb	15 53 02.0	
	comp=Z,45nm,1.1s						
MCWV	Mont Chateau	79.87	40	P	P	15 52 59.0	-0.2
MCWV				IAmb	IAmb	15 53 01.9	
	comp=Z,58nm,1.4s						
PLAL	Pickwick Lake	79.87	48	P	P	15 52 59.2	-0.1
S51A	Beattyville	79.87	43	P	P	15 52 59.5	+0.2
S51A				IAmb	IAmb	15 53 01.6	
	comp=Z,27nm,1.2s						
SSPA	Standing Stone	79.88	38	P	P	15 52 59.4	+0.2
V48A	Smith Brothers	79.88	47	P	P	15 52 58.6	-0.7
V48A				IAmb	IAmb	15 53 01.7	
	comp=Z,25nm,1.2s						
O56A	Blue Knob Stat	79.90	39	P	P	15 52 59.3	-0.2
O56A				IAmb	IAmb	15 53 01.6	
	comp=Z,54nm,1.5s						
VTS	Vitosha	79.91	326	⇑P	P	15 53 00.5	+0.9
VTS	Vitosha	79.91	326	⇑P	P	15 53 00.5	+0.9
VTS	Vitosha	79.91	326	P	P	15 52 59.8	+0.2
LMN	Caledonia Moun	80.00	27	P	P	15 52 59.1	-0.7
LMN				IAmb	IAmb	15 53 02.2	
	comp=Z,46nm,1.3s						
DAVA	Damuels	80.02	337	*i* P	P	15 53 01.4	+1.3
	comp=Z,74nm,1.7s,SNR=16						
DAVA				*e*S	S	16 03 07.0	+6.2
	comp=Z,8.5nm,1.4s						
MRAK	Mrakovica	80.02	331	⇑*i*P	P	15 52 59.9	-0.1
FETA	Feichten	80.03	336	*i* P	P	15 53 01.6	+1.4
	comp=Z,66nm,1.4s,SNR=36						
CEY	Cerknica	80.14	333	⇑*i*P	P	15 53 00.7	+0.1
HAPS	Han Pijesak,BI	80.16	329	⇑*i*P	P	15 53 01.4	+0.5
STAL	STALIGIAL	80.17	334	P	P	15 52 59.8	-1.0
BBLS	Lazići	80.20	329	⇑*i*P	P	15 53 01.7	+0.6
RDO	Rodhopi	80.29	324	P	P	15 53 01.4	-0.1
ALN	Alexandroupoli	80.30	323	P	P	15 53 01.4	-0.1
ALN	Alexandroupoli	80.30	323	P	P	15 53 01.2	-0.3
ALN				pmax	pmax		
	comp=Z,59nm,1.2s						
ALN	Alexandroupoli	80.30	323	P	P	15 53 01.2	-0.3
ALN				IAmb	IAmb	15 53 04.2	
	comp=Z,59nm,1.2s						
TRI	Trieste	80.36	333	P	P	15 53 00.9	-0.9
TRI				pmax	pmax		
	comp=Z,25nm,1.0s						
TRI	Trieste	80.36	333	P	P	15 53 00.9	-0.9
TRI				IAmb	IAmb	15 53 03.7	
	comp=Z,25nm,1.0s						
TRNA	Turayna	80.41	296	P	P	15 53 03.1	+0.7
RUDO	Rudo	80.43	329	⇑*i*P	P	15 53 02.2	0.0
MGRS	Mrkonjic Grad	80.49	331	*e*P	P	15 53 03.5	+1.0
RIY	Rijeka	80.50	333	⇑*i*P	P	15 53 02.0	-0.5
RIY	Rijeka	80.50	333	P	P	15 53 01.8	-0.7
TAOE	Nuku Hiva Isla	80.50	115	*e*LR	LR	16 17 53.1	
	comp=Z,1µm,29.3s						
PLIT	Plitvice	80.55	332	*i* P	P	15 53 02.0	-0.8
BALB	Balikesir	80.61	321	P	P	15 53 02.4	-0.8
CTI	Castel Tesino	80.67	335	P	P	15 53 03.3	-0.3
CTI				pmax	pmax		
	comp=Z,25nm,1.0s						
CTI	Castel Tesino	80.67	335	P	P	15 53 03.3	-0.3
CTI				IAmb	IAmb	15 53 05.7	
	comp=Z,25nm,1.0s						
STKA	Stephens Creek	80.72	191	P	P	15 53 04.3	+0.7
	comp=Z,1.4nm,0.6s,baz=10,slow=3.2,SNR=3.7						
NVR	Nevrokopi	80.77	325	P	P	15 53 03.8	-0.3
UDBI	Udbina	80.81	332	*i* P	P	15 53 03.5	-0.8
KAVA	Kavala	80.82	324	P	P	15 53 03.9	-0.4
SMRN	Sveta Marina	80.86	333	*i* P	P	15 53 03.5	-0.9
TUE	Stuetta	80.91	337	P	P	15 53 05.2	+0.2
RABC	Rab	80.92	332	*i* P	P	15 53 03.6	-1.1
PMOR	Pomariorio Ree	80.94	125	*e*T	T	17 21 07.7	
	comp=Z,9.9nm,0.2s						
NVLJ	Novalja	81.06	332	*i* P	P	15 53 05.0	-0.6
SRS	Serrai	81.07	325	P	P	15 53 04.9	-0.8
KIJV	Kijevo	81.08	331	*i* P	P	15 53 05.8	+0.1
STIP	Stip	81.10	326	*i* P	P	15 53 05.3	-0.5
ZAIG	Zacatecas	81.22	66	P	P	15 53 07.4	+0.3
146A	Union	81.24	50	P	P	15 53 07.5	+0.8
VAY	Valandovo	81.28	326	*i* P	P	15 53 07.5	+0.8
TEOL	Teolo	81.29	335	P	P	15 53 06.5	-0.2
TEOL				IAmb	IAmb	15 53 11.6	
	comp=Z,33nm,0.8s						
RICI	Ricice	81.30	330	*i* P	P	15 53 06.4	-0.4
Z47A	Carrollton	81.30	49	P	P	15 53 07.1	+0.1
Z47A				IAmb	IAmb	15 53 09.2	
	comp=Z,50nm,1.2s						
KNT	Kendrikon	81.30	325	P	P	15 53 06.7	-0.2
BRY	Bratogost	81.35	329	⇑*i*P	P	15 53 06.8	-0.5
SALO	Salr	81.38	336	P	P	15 53 07.2	-0.1
MORI	Morici	81.43	331	*i* P	P	15 53 05.9	-1.5
FPAL	Fort Paine	81.44	47	P	P	15 53 07.4	-0.4
FPAL				IAmb	IAmb	15 53 09.7	
	comp=Z,44nm,1.3s						
PDG	Podgorica	81.52	328	⇓P	P	15 53 08.4	+0.4
PDG	Podgorica	81.52	328	⇑*i*P	P	15 53 07.9	-0.1
PDG	Podgorica	81.52	328	P	P	15 53 07.4	-0.6
PDG				IAmb	IAmb	15 53 10.1	
	comp=Z,44nm,0.9s						
MAKA	Makarska	81.52	330	*i* P	P	15 53 06.9	-1.0
SENIN	Lac Senin/Sane	81.54	338	P	P	15 53 08.2	-0.1
SENIN				IAmb	IAmb	15 53 11.0	
	comp=Z,54nm,1.4s						
TREB	Trebinje	81.58	329	⇑*i*P	P	15 53 08.4	+0.1
ZIRJ	Zirje	81.64	331	*i* P	P	15 53 07.9	-0.7
STON	Ston	81.66	330	⇑*i*P	P	15 53 07.9	-0.8
STON	Ston	81.66	330	*i* P	P	15 53 07.1	-1.6
GRG	Griva	81.66	326	P	P	15 53 06.6	-2.2
DBRK	Dubrovnik	81.69	329	*i* P	P	15 53 06.9	-2.0

PHP	Peshkopia	81.75	327	P	P	15 53 08.3	-1.0
DRME	Dracevica, Mon	81.76	328	⇑*i*P	P	15 53 09.5	+0.2
HCY	Herceg Novi	81.77	329	⇑*i*P	P	15 53 08.8	-0.5
X51A	Calhoun	81.78	46	P	P	15 53 09.5	0.0
X51A				IAmb	IAmb	15 53 11.8	
	comp=Z,53nm,1.4s						
HVAR	Hvar	81.80	331	*i* P	P	15 53 08.7	-0.8
CSS	Mathiatis	82.06	315	P	P	15 53 10.6	-0.5
CSS				IAmb	IAmb	15 53 13.4	
	comp=Z,47nm,1.1s						
OHR	Ohrid	82.12	327	*i* P	P	15 53 09.7	-1.6
PPT	Papeete	82.14	127	LR	LR	16 22 08.4	
	comp=Z,747nm,20.3s,baz=322,slow=30						
ELL	Elmali	82.16	318	P	P	15 53 11.0	-0.6
ELL				pmax	pmax		
	comp=Z,91nm,1.1s						
ELL	Elmali	82.16	318	P	P	15 53 11.0	-0.6
PPT2	Papeete2	82.16	127	*e*S	S	16 03 07.5	-16
	comp=Z,1µm,28.8s						
PPT2	Papeete2	82.16	127	*e*LR	LR	16 18 32.6	
	comp=Z,1µm,22.2s,baz=324						
PPT2	Papeete2	82.16	127	*e*T	T	17 22 37.2	
	comp=Z,4.4nm,0.3s						
FNA	Florina	82.20	326	P	P	15 53 11.1	-0.6
FNA	Florina	82.20	326	P	P	15 53 10.7	-1.0
FNA				pmax	pmax		
	comp=Z,17nm,1.0s						
FNA	Florina	82.20	326	P	P	15 53 10.7	-1.0
TIR	Tirane	82.25	328	⇓P	P	15 53 12.6	+0.7
TIR	Tirane	82.25	328	⇓P	P	15 53 12.6	+0.7
TIR	Tirane	82.25	328	P	P	15 53 11.6	-0.3
TIAR	Tiarei	82.26	127	*e*T	T	17 22 43.2	
	comp=Z,1.4nm,0.2s						
KBN	Korca	82.55	327	P	P	15 53 13.1	-0.5
KBN				pmax	pmax		
	comp=Z,55nm,1.5s						
KBN	Korca	82.55	327	P	P	15 53 13.1	-0.5
KBN				IAmb	IAmb	15 53 20.1	
	comp=Z,55nm,1.5s						
MMAI	Mount Meron Ar	82.65	312	LR	LR	16 34 46.6	
	comp=Z,463nm,18.8s,baz=30,slow=39						
SHAO	Shalim	82.71	289	P	P	15 53 15.8	+1.2
VLC	Villacollemand	82.76	335	P	P	15 53 14.5	0.0
MSSA	Maissana	82.86	336	P	P	15 53 14.8	-0.3
BNI	Bardonecchia	82.92	338	P	P	15 53 16.1	+0.6
BNI				pmax	pmax		
	comp=Z,40nm,1.1s						
BNI	Bardonecchia	82.92	338	P	P	15 53 16.1	+0.6
BNI				IAmb	IAmb	15 53 19.4	
	comp=Z,40nm,1.1s						
MURB	Monte Urbino	82.96	333	P	P	15 53 15.6	0.0
OSSC	Osservatorio P	83.10	334	P	P	15 53 16.1	-0.2
OSSC				IAmb	IAmb	15 53 19.8	
	comp=Z,37nm,1.2s						
NRCA	Norcia	83.17	333	P	P	15 53 16.9	+0.2
250A	Grady	83.18	49	P	P	15 53 17.5	+0.7
DOK	Doka	83.20	290	P	P	15 53 18.0	+0.8
SSB	Saint Sauveur	83.22	339	P	P	15 53 16.9	0.0
SSB				pmax	pmax		
	comp=Z,38nm,1.0s						
SSB	Saint Sauveur	83.22	339	P	P	15 53 16.9	0.0
SSB				IAmb	IAmb	15 53 20.5	
	comp=Z,38nm,1.0s						
HODGE	Hodges	83.28	44	P	P	15 53 17.1	-0.2
HODGE				IAmb	IAmb	15 53 19.1	
	comp=Z,31nm,1.4s						
SGRT	San Giovanni R	83.31	330	P	P	15 53 16.7	-0.8
SGRT				IAmb	IAmb	15 53 19.6	
	comp=Z,26nm,0.8s						
DMTO	DMTO	83.36	289	P	P	15 53 19.0	+1.0
AGG	Agios Georgios	83.37	325	P	P	15 53 15.6	-2.2
AGG				pmax	pmax		
	comp=Z,20nm,1.3s						
AGG	Agios Georgios	83.37	325	P	P	15 53 15.6	-2.2
AQU	L'Aquila	83.52	332	P	P	15 53 17.7	-0.8
AQU				pmax	pmax		
	comp=Z,66nm,1.5s						
AQU	L'Aquila	83.52	332	P	P	15 53 17.7	-0.8
BIRD	Birdtown, Kers	83.77	43	P	P	15 53 19.8	0.0
BIRD				IAmb	IAmb	15 53 22.0	
	comp=Z,49nm,1.3s						
GHAJ	Ghor Haditha	83.95	311	P	P	15 53 20.1	-0.6
WHFO	Wadi Hawf	83.95	290	P	P	15 53 21.5	+0.4
RBK	Rabkut	83.99	289	P	P	15 53 22.3	+1.1
PAOL	Paolisi	84.34	331	P	P	15 53 22.2	-0.6
PAOL				IAmb	IAmb	15 53 24.3	
	comp=Z,33nm,1.4s						
ABTO	Aybut	84.67	290	P	P	15 53 25.5	+0.8
ITM	Ithomi	85.12	324	P	P	15 53 25.9	-0.8
TIP	Timpagrande	85.27	329	⇓P	P	15 53 28.4	+1.0
TIP	Timpagrande	85.27	329	P	P	15 53 27.1	-0.4
TBI	Tubuai	86.99	131	*e*S	SKSac	16 03 55.2	-4.0
	comp=Z,654nm,31.8s						
TBI	Tubuai	86.99	131	*e*LR	LR	16 20 48.0	
	comp=Z,2µm,22.8s,baz=327						
TBI	Tubuai	86.99	131	*e*T	T	17 28 34.9	
	comp=Z,5.4nm,0.2s						
VSL	Villasalto	87.35	334	P	P	15 53 37.8	+0.2
VSL				IAmb	IAmb	15 53 41.0	
	comp=Z,23nm,1.2s						
NWAO	Narrogin (SRO)	87.62	211	P	P	15 53 39.8	+1.1
	comp=Z,6.3nm,0.6s,baz=45,slow=1.2,SNR=7.0						
NWAO	Narrogin (SRO)	87.62	211	P	P	15 53 39.9	+1.3
ESDC	Sonseca Array	90.39	344	P	P	15 53 51.5	-0.4
	comp=Z,9.9nm,1.3s,baz=5.9,slow=4.0,SNR=18						
ESDC				LR	LR	16 39 26.0	
	comp=Z,952nm,20.4s,baz=330,slow=39						
ESDC	Sonseca Array	90.39	344	P	P	15 53 51.0	-0.9
ESDC				IAmb	IAmb	15 53 54.1	
	comp=Z,15nm,1.4s						
KEST	Kesra	90.84	333	P	P	15 53 55.0	+0.8
	comp=Z,5.8nm,0.8s,baz=101,slow=1.4,SNR=6.8						
KEST				LR	LR	16 39 33.1	
	comp=Z,1µm,20.4s,baz=341,slow=39						
KEST	Kesra	90.84	333	P	P	15 53 55.2	+1.0
KEST	Kesra	90.84	333	P	P	15 53 53.5	-0.6
KEST				IAmb	IAmb	15 53 55.5	
	comp=Z,19nm,1.2s						
TORD	Torodi Ar. Bea	114.32	331	PKP	PKiKP	15 59 29.4	-1.1
	comp=Z,0.4nm,0.6s,baz=8.5,slow=1.7,SNR=4.1						
VNDA	Vanda	125.65	178	PKP	PKiKP	15 59 51.0	+0.3
	comp=Z,0.7nm,0.8s,baz=348,slow=6.0,SNR=5.8						
VNDA	Vanda	125.65	178	PKIKP	PKiKP	15 59 51.0	+0.3
SBA	Scott Base	126.12	177	PKIKP	PKiKP	15 59 52.3	+0.7
SBA	Scott Base	126.12	177		PKiKP	15 59 52.3	+0.7
ETMB	Extrema	128.45	56		PKPdf	15 59 56.7	-0.8
LPAZ	La Paz	132.55	63	PKP	PKiKP	16 00 07.4	+0.3
	comp=Z,0.9nm,0.7s,baz=340,slow=5.6,SNR=6.0						
LPAZ	La Paz	132.55	63	*e*P	PKPdf	16 00 03.4	-2.7
MAW	Mawson	134.17	212	PKP	PKPdf	16 00 07.1	+0.4
	comp=Z,1.3nm,0.5s,baz=131,slow=21,SNR=2.4						
SIV	San Ignacio	136.35	55	PKP	PKPdf	16 00 12.4	0.0
	comp=Z,0.9nm,0.5s,baz=233,slow=3.3,SNR=4.9						
SYO	Syowa Base	142.88	213	⇓*e*X	Pdif	15 57 53.6	+8.3
BO02	Sierra Bellavi	143.80	85		PKPbc	16 00 23.7	+0.5
LC01	Cunco	145.34	92	PKPdf	PKPbc	16 00 27.5	-0.3
LR03	Panguipulli	145.40	93		PKPdf	16 00 27.8	-0.1
LL04	Puerto Octay	145.99	95	PKPdf	PKPbc	16 00 29.5	-0.3
CPUP	Villa Florida	146.65	60	PKPbc	PKPbc	16 00 32.0	-0.1
	comp=Z,21nm,1.1s,baz=327,slow=2.3,SNR=13						
CPUP	Villa Florida	146.65	60	PKP2	PKPdf	16 00 30.2	-0.2
CPUP	Villa Florida	146.65	60	PKPdf	PKPdf	16 00 30.2	-0.2
PLCA	Paso Flores	147.14	94	PKPbc	PKPbc	16 00 33.8	+0.6
	comp=Z,4.2nm,0.6s,baz=275,slow=4.7,SNR=2.9						
PLCA	Paso Flores	147.14	94	PKP2	PKPbc	16 00 33.6	+0.4
PLCA	Paso Flores	147.14	94	PKPbc	PKPbc	16 00 33.6	+0.4

JMA ***08*** *15:45:20.7, 23°.87N×121°.92E, h38*^{km}*±2*^{km}*, M2.8*
TAP ***08*** *15:45:21.1, 23°.90N×121°.93E, h32*^{km}*, ML2.9, C*
ISC 08 15:45:21.6±1.0, **23°.91N**±0°.02×**121°.94E**±0°.02, **h33**^{km}±6^{km},
n108, σ**0**^{s}**.62**/194, **5D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	Hwalien	0.31	283	P	Pn	15 45 30.0	+0.1
	baz=284						
HWA				S	Sn	15 45 34.7	-0.6
	baz=284						
TEYL	Yanliau Villag	0.31	263	P	Pn	15 45 29.9	0.0
	baz=270						
TWD	Chiawan	0.36	299	*i* P	Pb	15 45 29.9	-0.2
	baz=301						
TWD				*i* S	Sn	15 45 36.4	0.0
	baz=301						
ETL	Fush Village	0.38	311	P	Pb	15 45 30.4	-0.1
	baz=312						
ETL				*e*S	Sn	15 45 36.7	-0.5
	baz=312						
ETM	Tongmen	0.41	278	P	Pb	15 45 30.7	-0.1
	baz=279						
ETM				S	Sb	15 45 37.6	+0.4
	baz=279						
NACB	Ninganchiao	0.41	310	P	Pb	15 45 30.5	-0.4
	baz=311						
NACB				S	Sb	15 45 37.3	+0.1
	baz=311						
TEGC	Jichi Village	0.41	242	P	Pb	15 45 31.0	+0.1
	baz=241						
ESL	Shilin	0.47	259	*i* P	Pb	15 45 31.2	-0.5
	baz=258						
ESL				*i* S	Sb	15 45 39.1	+0.4
	baz=258						
ETLH	Xiulin Townshi	0.51	306	P	Pn	15 45 32.1	-0.7
	baz=306						
ETLH				S	Sb	15 45 39.8	-0.2
	baz=306						
EGFH	Guangfu	0.52	243	*i* P	Pn	15 45 32.2	-0.6
	baz=243						
EGFH				S	Sb	15 45 40.9	+0.8
	baz=243						
ENA	Nanau	0.55	341	*i* P	Pn	15 45 32.6	-0.6
	baz=342						
ENA				*i* S	Sn	15 45 41.0	-0.3
	baz=342						
EWUT	Wuta	0.56	345	*i* P	Pn	15 45 32.9	-0.4
	baz=345						
EWUT				*i* S	Sn	15 45 41.5	+0.1
	baz=345						
HGSD	Ruisui	0.63	229	P	Pn	15 45 33.4	-0.8
	baz=228						
HGSD				S	Sn	15 45 42.8	-0.4
	baz=228						
WHF	Hehuan Shan	0.66	291	⇓*i*P	Pn	15 45 34.2	-0.9
	baz=291						
WHF				*i* S	Sn	15 45 43.9	-0.7
	baz=291						
EHY	Hungye	0.69	235	*i* P	Pn	15 45 34.0	-1.1
	baz=234						
EHY				S	Sn	15 45 43.8	-0.9
	baz=234						
OWD	Renai	0.70	274	*i* P	Pn	15 45 34.7	-0.6
	baz=274						
OWD				S	Sn	15 45 44.3	-0.9
	baz=274						
TWC	Suao	0.70	353	*i* P	Pn	15 45 34.9	-0.4
	baz=354						
TWC				*i* S	Sn	15 45 45.4	+0.3
	baz=354						
CHGB	Renai	0.72	283	⇓P	Pn	15 45 35.1	-0.5
	baz=282						
CHGB				S	Sn	15 45 44.9	-0.8
	baz=282						
FUSS	Fushou	0.72	298	*i* P	Pn	15 45 35.3	-0.4
	baz=298						
FUSS				*i* S	Sn	15 45 45.7	-0.1
	baz=298						
NNSB	Datong	0.73	316	P	Pn	15 45 35.1	-0.6
	baz=316						
NNSB				S	Sn	15 45 45.2	-0.6
	baz=316						
NNS	Nan Shan	0.74	316	*i* P	Pn	15 45 35.4	-0.6
	baz=316						
NNS				*i* S	Sn	15 45 45.7	-0.5
	baz=316						
NDS	Dongshan	0.75	344	P	Pn	15 45 35.4	-0.6
	baz=344						
NDS				*i* S	Sb	15 45 46.7	+0.3
	baz=344						
TWT	Tachien	0.78	297	*i* P	Pn	15 45 36.5	0.0
	baz=296						
TWT				*i* S	Sn	15 45 47.1	0.0
	baz=296						
YULB	Yu-li	0.78	229	⇓P	Pn	15 45 35.4	-1.0
	baz=228						
YULB				S	Sn	15 45 45.9	-1.0
	baz=228						
TDCB	Techi	0.79	296	P	Pn	15 45 36.4	-0.3
	baz=296						
TDCB				S	Sn	15 45 46.9	-0.6
	baz=296						
EYUL	Yuli	0.80	226	*i* P	Pn	15 45 36.0	-0.5
	baz=225						
EYUL				S	Sn	15 45 47.6	+0.3
	baz=225						
NDT	Datong Townshi	0.80	331	*i* P	Pn	15 45 36.3	-0.3
	baz=331						
NDT				*i* S	Sn	15 45 46.9	-0.4
	baz=331						
ENTT	Nioudou	0.81	335	*i* P	Pn	15 45 36.3	-0.4
	baz=336						
ENTT				*i* S	Sn	15 45 48.0	+0.3
	baz=336						
TWE	Neicheng	0.85	343	*i* P	Pn	15 45 37.2	-0.1
	baz=344						
TWE				*i* S	Sn	15 45 48.7	+0.1
	baz=344						
ILA	Ilan	0.87	349	*e*P	Pn	15 45 37.1	-0.5
	baz=349						
ILA				*e*S	Sn	15 45 49.5	+0.2
	baz=349						
SSLB	Suanglung	0.91	263	P	Pn	15 45 37.8	-0.3
	baz=262						
SSLB				S	Sn	15 45 50.2	0.0
	baz=262						
YHNB	Yeheng	0.92	326	P	Pn	15 45 38.0	-0.3
	baz=326						
YHNB				S	Sn	15 45 49.3	-1.1
	baz=326						
FULB	Fuli	0.92	220	*i* P	Pn	15 45 37.5	-0.8
	baz=219						
FULB				*i* S	Sn	15 45 50.5	0.0
	baz=219						
NSK	Sanguang	0.93	325	*i* P	Pn	15 45 38.3	-0.2
	baz=326						
NSK				*i* S	Sn	15 45 50.1	-0.7
	baz=326						
NTC	Toucheng	0.95	354	*e*P	Pn	15 45 38.8	+0.1
	baz=354						
NTC				*e*S	Sn	15 45 51.2	+0.1
	baz=354						
SMLT	Sun Moon Lake	0.95	269	⇓*i*P	Pn	15 45 38.6	-0.2
	baz=268						
SMLT				S	Sn	15 45 50.6	-0.7
	baz=268						
WCS	Beigang Elemen	0.95	279	P	Pn	15 45 38.8	+0.1
	baz=279						
NWLT	Wulai	0.95	335	*e*P	Pn	15 45 38.8	0.0
	baz=335						
NWLT				*e*S	Sn	15 45 51.1	-0.2
	baz=335						
CHKT	Chengkung	0.96	213	P	Pn	15 45 37.7	-1.1
	baz=212						
CHKT				*i* S	Sn	15 45 49.3	-2.0
	baz=212						
WHP	Taichung City	0.98	292	*e*P	Pn	15 45 39.5	+0.3
	baz=292						
WHP				*e*S	Sn	15 45 52.6	+0.6
	baz=292						
TIPB	Shuangxi	1.07	354	*i* P	Pn	15 45 40.4	+0.1
	baz=354						
TIPB				S	Sn	15 45 54.4	+0.4
	baz=354						
JYNG	Yonagunijimaku	1.07	59	P	Pn	15 45 40.2	-0.1
JYNG				S	Sn	15 45 54.0	0.0
EDH	Donghe	1.10	212	*e*P	Pn	15 45 40.2	-0.5
	baz=211						
EDH				*i* S	Sn	15 45 53.6	-1.1
	baz=211						
TWB1	Santiao Chiao	1.10	2	*e*P	Pn	15 45 40.5	-0.2
	baz=3.0						
TWB1				S	Sn	15 45 54.8	0.0
	baz=3.0						
ELDTW	Lidau	1.11	230	*i* P	Pn	15 45 40.0	-1.0
	baz=229						
ELDTW				S	Sn	15 45 54.3	-0.9
	baz=229						
ALS	Alishan	1.11	249	*i* P	Pn	15 45 41.3	+0.1
	baz=249						
ALS				S	Sn	15 45 55.4	-0.2
	baz=249						
WJS	Zhushan	1.11	266	*e*P	Pn	15 45 41.3	+0.4
	baz=265						
WJS				*e*S	Sn	15 45 55.7	+0.6
	baz=265						
TWA	Mucha	1.12	343	*i* P	Pn	15 45 41.1	0.0
	baz=343						
TWA				*i* S	Sn	15 45 55.3	0.0
	baz=343						
NHDH	Xindian Distri	1.12	340	P	Pn	15 45 41.4	+0.4
	baz=340						
NHDH				*e*S	Sn	15 45 55.8	+0.5
	baz=340						
LIOB	Emei	1.12	311	*i* P	Pn	15 45 42.1	+1.1
	baz=311						
LIOB				*i* S	Sn	15 45 56.2	+0.9
	baz=311						
NSTT	Nanjuang	1.12	310	⇓*i*P	Pn	15 45 41.9	+0.9
	baz=310						
NSTT				*i* S	Sn	15 45 56.1	+0.7
	baz=310						
YOJ	Yonaguni jima	1.12	60	P	Pn	15 45 41.2	+0.1
	baz=60						
YOJ				S	Sn	15 45 55.8	+0.4
	baz=60						
YOJ	Yonaguni jima	1.12	60	P	Pn	15 45 41.0	-0.1
YOJ				*e*S	Sn	15 45 55.4	0.0
TWQ1	Liyutan	1.15	293	*i* P	Pn	15 45 42.2	+0.8
	baz=292						
NWF	Wu-fen Shan	1.17	353	*i* P	Pn	15 45 42.5	+0.7
	baz=353						
NWF				*i* S	Sn	15 45 57.4	+0.8
	baz=353						
TCU	Taichung	1.18	282	*e*P	Pn	15 45 42.7	+0.8
	baz=282						
NSY	Sanyi	1.19	296	P	Pn	15 45 42.4	+0.4
	baz=295						
CHN5	Tsauling	1.20	255	P	Pn	15 45 42.6	+0.4
	baz=255						
CHN5				S	Sn	15 45 58.3	+1.0
	baz=255						
NMLH	Miaoli	1.22	301	*e*P	Pn	15 45 43.3	+0.9
	baz=301						
LONT	Longtian	1.24	217	*e*P	Pn	15 45 41.4	-1.3
	baz=216						
LONT				*e*S	Sn	15 45 58.7	+0.4
	baz=216						
HSN	Hsinchu	1.26	315	*e*P	Pn	15 45 42.9	0.0
	baz=317						
HSN				*e*S	Sn	15 45 59.2	+0.6
	baz=317						
NCU	National Centr	1.26	327	P	Pn	15 45 43.5	+0.6
	baz=327						
NCUH	Zhongli	1.26	327	*i* P	Pn	15 45 43.5	+0.6
	baz=327						
NCUH				*e*S	Sn	15 45 58.2	-0.6
	baz=327						
WDJ	Dajia District	1.27	291	*e*P	Pn	15 45 43.9	+0.8
	baz=290						
WDJ				*e*S	Sn	15 45 59.1	+0.2
	baz=290						
WCHH	Zhanghua	1.27	278	*e*P	Pn	15 45 43.0	-0.1
	baz=278						
YM01	YM01	1.28	345	*e*P	Pn	15 45 43.6	+0.4
	baz=345						
YM01				*e*S	Sn	15 45 59.6	+0.2
	baz=345						
STYH	Taoyuan	1.29	236	*e*P	Pn	15 45 43.9	+0.5
	baz=235						
STYH				*e*S	Sn	15 45 60.0	+0.4
	baz=235						
LDUT	Ludao	1.30	199	*e*P	Pn	15 45 42.7	-0.8
	baz=199						
LDUT				*e*S	Sn	15 45 59.0	-0.7
	baz=199						
WDLH	Douliu	1.30	261	*e*P	Pn	15 45 43.5	0.0
	baz=260						
NTST	Danshui	1.33	341	*e*P	Pn	15 45 44.1	+0.2
	baz=340						
NTST				*e*S	Sn	15 46 00.3	-0.2
	baz=340						
ANP	Anpu	1.33	343	*e*P	Pn	15 45 43.2	-0.8
	baz=344						
TWGBT	Beinan	1.34	216	*e*P	Pn	15 45 44.8	+0.8
	baz=215						
TWGBT				*e*S	Sn	15 46 00.5	-0.2
	baz=215						
TWG	Pinlang	1.34	217	*e*P	Pn	15 45 43.6	-0.4
	baz=215						
TWG				*e*S	Sn	15 46 00.5	-0.3
	baz=215						
TPUB	Ta-pu	1.34	244	*e*P	Pn	15 45 44.8	+0.7
	baz=243						
TPUB				*e*S	Sn	15 46 01.9	+1.0
	baz=243						
TTN	Taitung	1.36	213	*e*P	Pn	15 45 44.7	+0.4
	baz=211						
TTN				*e*S	Sn	15 46 01.2	0.0
	baz=211						
WTP	Ta-pu	1.38	242	P	Pn	15 45 45.7	+1.0
	baz=241						
WTP				S	Sn	15 46 03.1	+1.3
	baz=241						
WRL	Guolierlin Hig	1.43	270	*e*P	Pn	15 45 46.3	+1.1
	baz=269						
WTK	Tuku	1.44	262	*e*P	Pn	15 45 45.8	+0.4
	baz=261						
CHY	Chiayi	1.45	254	*e*P	Pn	15 45 46.1	+0.6
	baz=253						
TWK	Hsinying	1.48	245	P	Pn	15 45 46.9	+0.9
	baz=244						
TWK				*e*S	Sn	15 46 04.0	-0.2
	baz=244						
CHN1	Nanshi	1.48	241	P	Pn	15 45 46.8	+0.8
	baz=240						
CHN1				*e*S	Sn	15 46 04.9	+0.7
	baz=240						
SNST	Tainan City	1.49	243	*e*P	Pn	15 45 47.3	+1.2
	baz=242						
SGST	Jiashian	1.49	237	P	Pn	15 45 46.5	+0.3
	baz=236						
SGST				*e*S	Sn	15 46 05.3	+0.8
	baz=236						
SLGT	Liugui	1.50	233	*e*P	Pn	15 45 46.5	+0.4
	baz=232						
WTCT	Ta-ch'eng	1.52	269	*e*P	Pn	15 45 46.8	+0.3
	baz=268						
ECL	Taimali	1.59	215	*e*P	Pn	15 45 48.3	+0.8
	baz=214						
ECL				*e*S	Sn	15 46 06.8	-0.1
	baz=214						
WSF	Szhu	1.59	261	*e*P	Pn	15 45 47.9	+0.3
	baz=260						
WSF				*e*S	Sn	15 46 07.4	+0.4
	baz=260						
ICHU	Yijhu	1.62	251	*e*P	Pn	15 45 47.9	0.0
	baz=250						
ICHU				*e*S	Sn	15 46 08.4	+0.8
	baz=250						
SSD	Sandimen	1.67	226	*e*P	Pn	15 45 49.5	+0.9
	baz=225						
SSD				*e*S	Sn	15 46 09.5	+0.7
	baz=225						
TSMG	Majia	1.69	225	*e*P	Pn	15 45 50.1	+1.3
	baz=224						
TSMG				*e*S	Sn	15 46 10.3	+1.0
	baz=224						
IRIF	Iriomote-Funau	1.69	75	P	Pn	15 45 48.9	0.0
IRIF				*e*S	Sn	15 46 09.7	+0.3
HATJ	Hateruma jima	1.71	85	P	Pn	15 45 49.6	+0.4
MASBT	Mashibuluo	1.76	223	*e*P	Pn	15 45 50.5	+0.7
	baz=222						
MASBT				*e*S	Sn	15 46 12.4	+1.2
	baz=222						
EAST	Anshuo	1.82	214	*e*P	Pn	15 45 51.3	+0.6
	baz=213						
EAST				*e*S	Sn	15 46 13.4	+0.8
	baz=213						
JKRS	Kuro-shima	1.92	80	P	Pn	15 45 52.5	+0.5
JKRS				S	Sn	15 46 16.1	+1.0
SCZT	Fangliau	1.95	219	*e*P	Pn	15 45 54.1	+1.6
	baz=218						
SCZT				*e*S	Sn	15 46 16.4	+0.6
	baz=218						
JIJ	Ishigaki jima	2.06	77	P	Pn	15 45 53.7	-0.3
JIJ				S	Sn	15 46 17.5	-1.1
PHUB	P'eng-hu	2.20	260	*e*P	Pn	15 45 56.0	+0.1
	baz=259						
PHUB				*e*S	Sn	15 46 21.9	-0.1
	baz=259						
PNG	Penghu	2.21	262	*e*P	Pn	15 45 55.7	-0.3

	baz=261						
PNG				eS	Sn	15 46 22.2	0.0
	baz=261						
JISG	Ishigakijimahi	2.27	72	P	Pn	15 45 56.4	-0.4
JISG				eS	Sn	15 46 22.4	-1.3
VCHM	Qimei	2.41	254	eP	Pn	15 45 58.9	+0.2
	baz=253						
VCHM				eS	Sn	15 46 27.1	+0.1
	baz=253						
JTJ	Tarama	2.63	73	P	Pn	15 46 01.8	+0.1
JTJ				S	Sn	15 46 32.2	-0.3
PTMZ	Houxiangcun	2.81	294	eP	Pn	15 46 03.3	-0.9
	baz=293						
JIRB	Irabujima	3.09	72	P	Pn	15 46 07.9	-0.2
JIRB				eS	Sn	15 46 43.6	-0.3
JMJ2	Miyako jima3	3.20	74	P	Pn	15 46 10.0	+0.3
JMJ2				eS	Sn	15 46 47.3	+0.6
KNMB	Chin-men Tao	3.29	280	eP	Pn	15 46 10.2	-0.7
	baz=279						
AXDP	Jialang	3.75	286	eP	Pn	15 46 17.0	-0.2
	baz=285						
ZPLA	Ao Xicun	3.83	271	eP	Pn	15 46 17.5	-0.8
	baz=270						

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*IDC **08** 15:45:45.4±6.5, 6°.47N×93°.76E, h0^{km}, mb3.8/5, mb1 3.8/6, mb1mx3.5/53, mbtmp3.7/6, ML3.7/1, MS4.1/3, Ms1 4.1/3, ms1mx3.4/53, Error ellipse: s-maj=141.3km s-min=58.5km az=142.0*

*NEIC **08** 15:45:46.6±1.6, 6°.48N±0°.09×94°.5E±0°.2, h10^{km}±2^{km}, mb4.3/5, Error ellipse: s-maj=34.7km s-min=7.7km az=245.0*

ISC 08 15:45:48.5±1.9**, 6°.2N**±0°.2×**94°.3E**±0°.2**, h35^{km}, n16, σ0^{s}.93**/9**, mb3.9**/7**, MS4.0**/3**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	Lhok Sumawe	2.79	110	Pn	Pn	15 46 30.7	-0.1
CMAR	Chiang Mai Arr	12.99	20	Pn	Pn	15 48 51.1	+0.5
	0.1nm,0.3s,baz=220,slow=14,SNR=2.3						
MKAR	Makanchi Array	41.74	348	P	P	15 53 33.5	-0.7
	1.5nm,0.8s,baz=157,slow=6.6,SNR=4.8						
SONM	Songino Array	42.75	12	P	P	15 53 42.2	-0.4
	0.4nm,0.7s,baz=193,slow=5.9,SNR=2.0						
SONM	Songino Array	42.75	12	IAmb	IAmb	15 53 49.0	
	comp=Z,2.1nm,1.2s						
KURBB	Kurchatov Arra	46.20	346	P	P	15 54 09.1	-0.7
	comp=Z,0.5nm,0.3s,baz=167,slow=6.8,SNR=1.8						
KURK	Kurchatov	46.26	346	P	P	15 54 09.1	-1.2
KURK	Kurchatov	46.26	346	IAmb	IAmb	15 54 13.0	
	comp=Z,5.0nm,1.1s						
ZALV	Zalesovo Beam	48.22	352	P	P	15 54 25.6	0.0
	comp=Z,1.4nm,0.8s,baz=147,slow=8.1,SNR=3.4						
ZALV	Zalesovo Beam	48.22	352	P	P	15 54 24.7	-0.9
ABKAR	Akbulak array	51.77	332	P	P	15 54 51.6	-1.0
ABKAR				IAmb	IAmb	15 54 57.1	
	comp=Z,6.4nm,1.3s						
OPO	Ambohidratompo	52.58	241	LR	LR	16 13 54.2	
	comp=Z,78nm,19.2s,baz=224,slow=32						
LSZ	Lusaka	68.88	251	LR	LR	16 24 09.1	
	comp=Z,77nm,18.5s,baz=74,slow=34						
FINES	FINESS Array B	74.26	332	P	P	15 57 23.0	+1.2
VAE	Valguarnera	78.24	307	LR	LR	16 37 22.2	
	comp=Z,354nm,19.1s,baz=34,slow=40						
GERES	GERESS Array B	79.18	318	P	P	15 57 49.3	-0.7
	comp=Z,0.9nm,0.8s,baz=90,slow=5.9,SNR=3.6						

DJA 08 15:49:10.7±1.3**, 3°S**±4°×**13°0E**±°**, h28^{km}**±14^{km}**, M4.1**/10**, mb4.8**/3**, mB5.4**/1**, MLv3.8**/10**, Mw(mB)4.9**/1**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	Masohi	1.07	242	P	Pn	15 49 29.5	-0.3
BNDI	Bandanaira	1.67	179	P	Pn	15 49 38.2	+0.1
FAKI	Fak Fak	2.38	92	P	Pn	15 49 47.4	-0.5
FAKI				S	Sn	15 50 16.5	+0.4
SWI	Sorong	2.41	35	P	Pn	15 49 48.0	-0.2
LBMI	Labuha	3.22	313	P	Pn	15 49 59.5	0.0
SANI	Sanana	3.96	281	P	Pn	15 50 07.3	-2.3
BAKI	Biak	6.45	75	P	Pn	15 50 44.1	+0.3
	92nm,0.7s						
LUWI	Luwuk	7.32	284	P	Pn	15 50 55.4	-0.4
	0.2nm3μm51nm,1.0s						
APSI	Ampana	8.44	283	P	Pn	15 51 13.1	+1.9

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*IDC **08** 15:49:44.7±0.5, 6°.86N×94°.57E, h0^{km}, mb4.2/24, mb1 4.3/27, mb1mx4.2/50, mbtmp4.2/27, ML3.8/3, MS3.8/1, Ms1 4.0/1, ms1mx3.2/45, Error ellipse: s-maj=18.5km s-min=11.8km az=52.0*

*NEIC **08** 15:49:46.7±1.7, 6°.96N±0°.08×94°.67E±0°.10, h8^{km}±4^{km}, mb4.7/49, Error ellipse: s-maj=14.8km s-min=10.7km az=59.0*

*DJA **08** 15:49:50.9±1.1, 7°N±3°×9°5E±1°4, h30^{km}, M4.7/10, mB5.4/3, mb4.7/10, MLv4.7/6, Mw(mB)4.8/3*

ISC 08 15:49:48.6±0.4**, 6°.80N**±0°.06×**94°.59E**±0°.06**, h26^{km}, n142, σ1^{s}.63**/145**, mb4.5**/67**, 2C, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	Lhok Sumawe	2.81	124	P	Pn	15 50 32.4	+0.5
LHMI	Lhok Sumawe	2.81	124	Pn	Pn	15 50 32.0	+0.1
TPTI		4.36	144	P	Pn	15 50 54.9	+1.7
TSI	Tuntungan	5.14	129	P	Pn	15 51 05.1	+1.2
	1.0nm2μm101nm,0.7s						
PSI	Prapat	5.87	132	Pn	Pn	15 51 16.5	+2.4
	1.6nm,0.3s,baz=323,slow=14,SNR=15						
KULM	Kulim	6.21	104	P	Pn	15 51 18.0	-0.6
GSI	Gunungsitoli	6.22	151	P	Pn	15 51 21.5	+2.7
	0.2nm43nm,0.7s						
GSI	Gunungsitoli	6.22	151	Pn	Pn	15 51 20.3	+1.5
IPM	Ipoh	6.80	109	P	Pn	15 51 26.0	-0.9
MNSI	Mandailing Nat	7.77	140	P	Pn	15 51 41.0	+0.9
	0.2nm30nm,0.5s						
PPI	Padang Panjang	9.25	141	P	Pn	15 52 01.4	+1.0
CMAR	Chiang Mai Arr	12.34	20	Pn	Pn	15 52 41.9	-0.8
	0.3nm,0.3s,baz=212,slow=14,SNR=16						
CMAR				LR	LR	15 57 26.6	
	comp=Z,416nm,18.4s,baz=230,slow=38						
PALK	Pallekele	13.80	273	Pn	Pn	15 53 02.2	-0.5
	0.3nm,0.3s,baz=112,slow=5.5,SNR=2.1						
LHSI	Lahat	13.82	140	P	Pn	15 53 03.7	+0.8
	1μm48nm,1.1s						
DLV	T Lat	14.63	69	P	P	15 53 17.2	-3.1
MDSI	Maura Dua	14.74	139	P	Pn	15 53 13.0	-2.5
	11nm,1.0s						
KLSI		15.25	138	P	Pn	15 53 20.7	-1.7
SLVN	Son La	17.02	31	P	Pn	15 53 45.7	+0.6
SHL	Shillong	18.84	352	P	P	15 54 05.6	-1.3
QIZ	Qiongzhong	19.18	49	P	P	15 54 09.0	-1.5
QIZ	Qiongzhong	19.18	49		P	15 54 09.9	-0.5
KMI	Kunming	19.82	22	⇑P	Pn	15 54 20.2	+0.9
KMI				sP	sP	15 54 26.0	-0.9
KMI				PP	PnPn	15 54 38.8	+5.2
KMI				S	Sn	15 58 02.1	+0.6
KMI				pmax	pmax		
	comp=Z,17nm,0.9s						
KMI				pmax	pmax		
	comp=Z,140nm,5.1s						
KMI				LR	LR		
	comp=N,360nm,12.7s						
KMI				LR	LR		
	comp=E,670nm,9.2s						
KMI				LR	LR		
	comp=Z,420nm,9.9s						
MNCI	Minicoy	21.40	275	P	P	15 54 35.9	+1.2
JIRN	Jiri	22.23	340	eP	P	15 54 44.5	+0.7
	comp=Z,15nm,0.6s						
PKI	Pulchoki	22.42	338	eP	P	15 54 49.3	+3.4
PKIN	Phulchoki	22.43	338	eP	P	15 54 49.4	+3.5
DMN	Daman	22.57	338	eP	P	15 54 49.2	+1.8
GYA	Guiyang	22.68	29	⇑iP	P	15 54 49.8	+1.4
GYA				pP	pwP	15 54 59.1	+1.4
GYA				PP	PnPn	15 55 16.0	+3.3
GYA				S	S	15 58 59.3	+4.0
GYA				SS	SnSn	15 59 36.7	+10
GYA				pmax	pmax		
	comp=Z,24nm,0.9s						
GYA				pmax	pmax		
	comp=Z,150nm,3.8s						
GYA				LR	LR		
	comp=N,690nm,13.0s						
GYA				LR	LR		
	comp=E,770nm,12.6s						
GYA				LR	LR		
	comp=Z,880nm,18.6s						
GKN	Gorkha	23.10	337	eP	P	15 54 51.8	-1.0
KOLN	Koldanda	23.32	335	eP	P	15 54 57.4	+2.4
	comp=Z,30nm,0.9s						
DANN	Dangsing	23.76	336	eP	P	15 54 57.2	-2.2
PYUN	Piuthan	23.87	334	eP	P	15 54 59.3	-1.0
H08S3	Diego Garcia H	26.30	237	T	T	16 23 07.1	
	baz=56,slow=75,SNR=158						
H08S2	Diego Garcia H	26.30	237	T	T	16 23 07.1	
	baz=56,slow=75,SNR=62						
H08S1	Diego Carcia H	26.32	237	T	T	16 23 08.5	
	baz=56,slow=75,SNR=24						
TOLI2	Tolitoli	26.72	101	P	P	15 55 26.4	+0.1
TOLI2				IAmb	IAmb	15 55 31.4	
	comp=Z,16nm,0.7s						
ENH	Enshi	27.22	29	P	P	15 55 29.8	-0.8
ENH				IAmb	IAmb	15 55 38.9	
	comp=Z,25nm,1.1s						
XAN	Xi'an	30.17	24	P	P	15 55 57.4	+0.6
XAN				pP	pwP	15 56 13.9	+6.4
XAN				pmax	pmax		
	comp=Z,33nm,1.0s						
LZH	Lanzhou	30.36	15	eP	P	15 55 58.2	-0.4
LZH				pP	pP	15 56 02.8	-2.7
LZH				pmax	pmax		
	comp=Z,23nm,1.6s						
SSLB	Suanglung	30.43	53	P	P	15 55 57.3	-1.9
SSLB				IAmb	IAmb	15 56 09.7	
	comp=Z,10nm,1.2s						
GTA	Gaotai	32.80	7	eP	P	15 56 19.9	-0.1
GTA				pP	pP	15 56 25.3	-1.7
GTA				sP	sP	15 56 28.3	-1.5
GTA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
NIL	Nilore	33.23	326	P	P	15 56 22.9	-0.8
NJ2	Nanjing	33.81	39	eP	P	15 56 29.1	+0.4
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
HHC	Hu-ho-hao-te	37.14	22	eP	P	15 56 57.8	+0.4
HHC				pmax	pmax		
	comp=Z,23nm,1.1s						
HHC				pmax	pmax		
	comp=Z,340nm,8.7s						
WMQ	Urumqi	37.37	352	eP	P	15 57 00.4	+1.2
WMQ				LR	LR		
	comp=N,960nm,14.7s						
WMQ				LR	LR		
	comp=E,600nm,9.7s						
WMQ				LR	LR		
	comp=Z,670nm,13.9s						
SIJI	Sorong	37.38	100	P	P	15 56 59.8	+0.1
	comp=Z,1.0nm,0.3s,baz=290,slow=23,SNR=1.7						
DRK	Karamyk	38.46	331	P	P	15 57 07.6	-1.2
GAR	Garm	38.82	329	P	P	15 57 10.3	-1.4
GAR				IAmb	IAmb	15 57 18.6	
	comp=Z,28nm,1.1s						
CHGR	Chuyangaron	39.17	328	P	P	15 57 12.5	-2.0
CHGR				IAmb	IAmb	15 57 21.6	
	comp=Z,27nm,1.1s						
FITZ	Fitzroy Crossi	39.38	129	P	P	15 57 15.7	-0.7
	comp=Z,1.7nm,0.6s,baz=231,slow=13,SNR=2.7						
FITZ				PcP	PcP	15 59 25.4	+0.8
	comp=Z,3.8nm,1.0s,baz=2.7,slow=3.0,SNR=3.3						
AAK	Ala-Archa	39.87	337	P	P	15 57 19.7	-0.7
	comp=Z,2.3nm,1.0s,baz=20,slow=18,SNR=2.2						
AAK				PcP	PcP	15 59 26.6	+0.7
	comp=Z,1.9nm,0.7s,baz=199,slow=14,SNR=2.2						
MK31	Makanchi Array	41.23	347	P	P	15 57 28.8	-2.5
MKAR	Makanchi Array	41.23	347	P	P	15 57 30.5	-0.9
	comp=Z,3.7nm,0.8s,baz=162,slow=8.4,SNR=18						
MKAR	Makanchi Array	41.23	347	P	P	15 57 29.0	-2.3
MAKZ	Makanchi	41.31	347	P	P	15 57 29.7	-2.3
MAKZ				IAmb	IAmb	15 57 39.0	
	comp=Z,13nm,1.5s						
KK31	Karatay Array	41.92	333	P	P	15 57 36.2	-0.9
KKAR	Karatay Array	41.92	333	P	P	15 57 36.0	-1.1
SONM	Songino Array	42.11	12	P	P	15 57 38.5	-0.3
	comp=Z,3.6nm,0.8s,baz=192,slow=8.7,SNR=19						
SONM				PcP	PcP	15 59 33.8	+0.8
	comp=Z,1.2nm,0.7s,baz=196,slow=4.3,SNR=2.0						
SONM	Songino Array	42.11	12	P	P	15 57 38.4	-0.3
ULN	Ulaanbaatar	42.28	12	P	P	15 57 39.8	-0.3
KSRS	Korea Array	42.98	40	P	P	15 57 46.0	+0.3
	comp=Z,3.0nm,0.8s,baz=219,slow=11,SNR=6.7						
KURBB	Kurchatov Arra	45.69	346	P	P	15 58 07.0	-0.3
	comp=Z,2.2nm,0.4s,baz=167,slow=7.0,SNR=13						
KURK	Kurchatov	45.75	346	P	P	15 58 06.5	-1.3
KURK				IAmb	IAmb	15 58 09.3	
	comp=Z,16nm,1.3s						
WB0	Warramunga Arr	47.23	125	P	P	15 58 19.6	-0.3
WB0				IAmb	IAmb	15 58 38.5	
	comp=Z,8.3nm,1.1s						
WRA	Warramunga Arr	47.28	125	P	P	15 58 19.9	-0.3
	comp=Z,2.3nm,0.7s,baz=300,slow=8.7,SNR=18						
WRA	Warramunga Arr	47.28	125	P	P	15 58 19.9	-0.3
WRAB	Tennant Creek	47.28	125	P	P	15 58 19.5	-0.7
WRAB				IAmb	IAmb	15 58 29.3	
	comp=Z,6.2nm,0.8s						
WB2	Warramunga Arr	47.29	125	P	P	15 58 19.6	-0.7
WB2				IAmb	IAmb	15 58 39.2	
	comp=Z,8.0nm,1.0s						
WR0	Warramunga Arr	47.45	125	P	P	15 58 21.2	-0.3
WR0				IAmb	IAmb	15 58 33.5	
	comp=Z,5.9nm,0.8s						
ZAA0	Zalesovo Array	47.67	352	P	P	15 58 20.4	-2.3
ZAA0				IAmb	IAmb	15 58 35.9	
	comp=Z,9.1nm,1.0s						
ZALV	Zalesovo Beam	47.67	352	P	P	15 58 22.5	-0.2
	comp=Z,3.0nm,0.7s,baz=167,slow=7.2,SNR=18						
ZALV	Zalesovo Beam	47.67	352	P	P	15 58 20.7	-2.0
AS31	Alice Springs	48.89	130	P	P	15 58 32.1	-0.5
ASAR	Alice Springs	48.89	130	P	P	15 58 32.8	+0.2
	comp=Z,2.3nm,0.8s,baz=309,slow=7.6,SNR=12						
ASAR				PcP	PcP	15 59 57.7	+0.8
	comp=Z,1.6nm,0.7s,baz=312,slow=4.2,SNR=5.6						
ASAR	Alice Springs	48.89	130	P	P	15 58 32.6	0.0
USRK	Ussuriysk Ar.	49.52	35	P	P	15 58 36.9	-0.2
	comp=Z,2.6nm,0.9s,baz=205,slow=5.7,SNR=2.8						
MJAR	Matsushiro Arr	49.55	47	P	P	15 58 38.4	+0.8
	comp=Z,2.8nm,0.9s,baz=238,slow=6.6,SNR=6.9						
ABKAR	Akbulak array	51.38	332	P	P	15 58 50.9	-0.2
ABKAR				IAmb	IAmb	15 58 59.7	
	comp=Z,18nm,1.0s						
ARU	Arti	57.05	337	P	P	15 59 31.1	-1.1
KMBO	Kilima Mbogo	57.76	264	P	P	15 59 41.0	+2.7
	comp=Z,4.7nm,0.8s,baz=65,slow=8.5,SNR=6.8						
KBZ	Khabaz	58.18	318	P	P	15 59 40.6	+0.1
	comp=Z,1.3nm,0.8s,baz=63,slow=23,SNR=2.3						
STKA	Stephens Creek	59.05	133	P	P	15 59 46.7	0.0
	comp=Z,2.2nm,0.7s,baz=304,slow=8.1,SNR=7.9						
STKA	Stephens Creek	59.05	133	P	P	15 59 47.2	+0.6
LODK	Lodwar	59.06	270	P	P	15 59 48.3	+1.0
LODK				IAmb	IAmb	15 59 57.4	
	comp=Z,2.8nm,1.0s						
YAK	Yakutsk	60.87	18	P	P	15 59 57.9	-0.7
NRIK	Noril'sk	62.63	357	P	P	16 00 07.8	-2.6
	comp=Z,1.9nm,0.8s,baz=200,slow=6.6,SNR=4.2						
BR131	Keskin Array S	63.47	311	P	P	16 00 15.9	-0.8
BR131				IAmb	IAmb	16 00 23.8	
	comp=Z,6.0nm,0.8s						
BRTR	Keskin Array B	63.47	311	P	P	16 00 15.7	-1.0
	comp=Z,1.2nm,0.7s,baz=117,slow=6.7,SNR=6.8						
BRTR	Keskin Array B	63.47	311	P	P	16 00 16.5	-0.3
CAN	Canberra	66.11	133	P	P	16 00 34.9	+1.0
TIXI	Tiksi	68.19	11	P	P	16 00 45.2	-1.1
	comp=Z,7.0nm,0.7s,baz=208,slow=4.0,SNR=25						
TIXI	Tiksi	68.19	11	P	P	16 00 45.2	-1.1
AKASG	Malin Array Be	69.27	322	P	P	16 00 51.7	-1.8
	comp=Z,0.9nm,0.7s,baz=93,slow=4.3,SNR=2.6						
AKASG	Malin Array Be	69.27	322	IAmb	IAmb	16 00 60.0	
	comp=Z,1.7nm,1.2s						
NACGM	Naroch	71.78	326	iP	P	16 01 15.9	+7.2
LVZ	Lovozero	72.72	340	P	P	16 01 13.3	-0.8
FINES	FINESS Array B	73.86	332	P	P	16 01 20.3	-0.7
	comp=Z,2.6nm,0.8s,baz=98,slow=5.1,SNR=8.3						
BOSA	Boshof	75.40	238	P	P	16 01 31.7	+1.0
	comp=Z,2.7nm,0.7s,baz=75,slow=3.8,SNR=5.1						
BOSA	Boshof	75.40	238	P	P	16 01 32.2	+1.6
BOSA				IAmb	IAmb	16 01 33.3	
	comp=Z,6.5nm,1.1s						
KEV	Kevo	75.99	341	P	P	16 01 33.1	0.0
ARCES	ARCESS Array B	76.42	340	P	P	16 01 35.4	-0.2
	comp=Z,4.2nm,1.0s,baz=35,slow=4.4,SNR=4.2						
ARCES	ARCESS Array B	76.42	340	P	P	16 01 35.6	0.0
MORC	Moravsky Berou	76.48	319	eP	P	16 01 36.7	+0.4
BILL	Bilibino	76.91	22	P	P	16 01 38.8	+0.4
BILL				IAmb	IAmb	16 01 39.0	
	comp=Z,5.2nm,0.9s						
KRLC	Kraliky	76.99	320	eP	P	16 01 37.9	-1.4
VRAC	Vranov	77.05	319	eP	P	16 01 38.7	-0.9
KRUC	Moravsky	77.16	319	eP	P	16 01 39.7	-0.5
DPC	Dobruska-Polom	77.31	320	eP	P	16 01 41.2	+0.2
CONA	Conrad Observa	77.43	317	eP	P	16 01 44.0	+2.2
	comp=Z,3.6nm,1.2s						
ARSA	Arzberg	77.62	317	eP	P	16 01 42.1	-0.7
	comp=Z,6.6nm,1.4s						
SOKA	Soboth	77.92	316	eP	P	16 01 45.1	+0.5
	comp=Z,5.3nm,1.3s						
OBKA	Obir	78.25	316	eP	P	16 01 46.3	-0.1
	comp=Z,2.6nm,0.8s						
MOA	Molln	78.50	317	eP	P	16 01 46.9	-0.8
	comp=Z,6.3nm,1.7s						
GEC2	GERESS Array S	78.92	318	P	P	16 01 50.5	+0.4
GEC2				IAmb	IAmb	16 01 59.0	
	comp=Z,4.6nm,0.9s						
GERES	GERESS Array B	78.92	318	P	P	16 01 50.4	+0.3
	comp=Z,2.1nm,0.8s,baz=86,slow=5.8,SNR=15						
KHC	Kasperske Hory	79.01	319	eP	P	16 01 51.1	+0.6
KBA	Koelnbreinsper	79.10	317	eP	P	16 01 51.5	+0.3
	comp=Z,4.9nm,0.9s						
ZOU	Zoufplan	79.34	316	P	P	16 01 52.6	+0.1
ZOU				IAmb	IAmb	16 02 04.1	
	comp=Z,4.5nm,0.9s						
STAL	STALIGIAL	79.51	316	P	P	16 01 53.4	+0.1
STAL				IAmb	IAmb	16 01 56.1	
	comp=Z,8.4nm,1.0s						
ABTA	Abfaltersbach	79.66	316	eP	P	16 01 54.6	+0.5
	comp=Z,1.9nm,0.8s						
CTI	Castel Tesino	80.25	315	P	P	16 01 57.5	+0.1
CTI				IAmb	IAmb	16 02 06.3	
	comp=Z,9.0nm,1.0s						
WTTA	Wattenberg	80.27	317	eP	P	16 01 57.2	-0.3
	comp=Z,3.8nm,0.7s						
WATA	Walderalm	80.31	317	eP	P	16 01 57.1	-0.6
	comp=Z,3.0nm,0.7s						
SQTA	Sankt Quirin	80.56	317	eP	P	16 01 58.4	-0.6
	comp=Z,3.1nm,0.5s						
MOTA	Moosalm	80.63	317	eP	P	16 01 58.8	-0.6
	comp=Z,4.1nm,0.8s						
RETA	Reutte	80.86	317	eP	P	16 01 59.4	-1.2
	comp=Z,3.3nm,0.7s						
NB2	NORSAR Subarra	80.88	331	P	P	16 01 59.9	-0.4
	comp=Z,3.6nm,0.9s,baz=93,slow=6.2						
NB2	NORSAR Subarra	80.88	331	P	P	16 01 59.7	-0.6
	comp=Z,13nm,1.7s,baz=91,slow=5.1						
NOA	NORSAR Array B	80.88	331	P	P	16 01 59.9	-0.4
	comp=Z,2.6nm,1.0s,baz=96,slow=5.2,SNR=3.2						
FETA	Feichten	80.89	316	eP	P	16 02 00.5	-0.3
	comp=Z,4.0nm,1.1s						
DAVA	Damuels	81.46	317	eP	P	16 01 59.2	-4.7
	comp=Z,5.8nm,1.3s						
SENIN	Lac Senin/Sane	83.26	316	P	P	16 02 13.5	+0.1
SENIN				IAmb	IAmb	16 02 22.6	
	comp=Z,6.8nm,0.8s						
TORD	Torodi Ar. Bea	91.28	283	P	P	16 02 53.3	+0.7
	comp=Z,0.8nm,0.7s,baz=76,slow=5.3,SNR=4.5						
ESDC	Sonseca Array	92.25	310	P	P	16 02 57.2	+0.5
	comp=Z,1.6nm,1.0s,baz=65,slow=4.5,SNR=5.8						
ESDC	Sonseca Array	92.25	310	P	P	16 02 57.2	+0.5
ESDC				IAmb	IAmb	16 03 06.2	
	comp=Z,3.9nm,1.2s						
A36M	Sachs Harbour	97.20	12	P	P	16 03 18.5	-0.1
ULM	Lac du Bonnet	122.46	8	PKP	PKPdf	16 08 41.3	-0.5
	comp=Z,2.3nm,0.6s,baz=27,slow=6.8,SNR=3.6						
NVAR	Mina Array Bea	125.60	32	PKP	PKiKP	16 08 49.2	+0.3
	comp=Z,1.4nm,0.7s,baz=304,slow=2.5,SNR=13						
PDAR	Pinedale Array	125.99	22	PKP	PKPdf	16 08 48.5	-0.7
	comp=Z,1.4nm,0.8s,baz=70,slow=1.7,SNR=6.0						
TXAR	Lajitas Array	140.01	25	PKP	PKPdf	16 09 15.9	+0.3
	comp=Z,0.5nm,0.6s,baz=185,slow=1.7,SNR=4.2						
PLCA	Paso Flores	143.70	199	PKP	PKPbc	16 09 20.2	+1.0
	comp=Z,3.2nm,0.9s,baz=172,slow=5.4,SNR=5.7						
CPUP	Villa Florida	146.95	231	PKPbc	PKPbc	16 09 30.1	+0.5
	comp=Z,2.6nm,0.8s,baz=129,slow=5.2,SNR=4.1						

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*IDC **08** 15:50:47.7±0.7, 6°.97N×94°.57E, h0^{km}, mb4.2/16, mb1 4.3/18, mb1mx4.0/50, mbtmp4.1/18, ML3.5/2, Error ellipse: s-maj=29.6km s-min=17.9km az=58.0*

*NEIC **08** 15:50:49.6±1.8, 6°.86N±0°.07×94°.5E±0°.1, h10^{km}±1^{km}, mb4.7/23, Error ellipse: s-maj=24.2km s-min=9.3km az=248.0*

ISC 08 15:50:51.8±0.6**, 6°.98N**±0°.09×**94°.55E**±0°.10**, h26^{km}, n49, σ0^{s}.85**/49**, mb4.4**/27**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	Lhok Sumawe	2.95	126	Pn	Pn	15 51 35.1	-1.8
SRIT	Nakonsritamara	5.26	72	Pn	Pn	15 52 08.3	-0.4
PSI	Prapat	6.01	133	Pn	Pn	15 52 19.4	+0.2
	0.1nm,0.3s,baz=320,slow=12,SNR=3.7						
PBKT	Sadao Pong	11.42	33	Pn	Pn	15 53 34.0	+0.8
CMAR	Chiang Mai Arr	12.19	20	Pn	Pn	15 53 44.7	+0.8
	0.4nm,0.3s,baz=210,slow=14,SNR=4.7						
DLV	T Lat	14.60	69	Pn	Pn	15 54 18.5	+1.5
NIL	Nilore	33.07	326	P	P	15 57 25.2	-0.2
TARG	Taragay, Kyrgy	37.67	339	P	P	15 58 06.4	+1.0
TARG				IAmb	IAmb	15 58 08.5	
	comp=Z,26nm,1.4s						
GAR	Garm	38.65	329	P	P	15 58 13.4	0.0
GAR				IAmb	IAmb	15 58 14.2	
	comp=Z,21nm,1.1s						
CHGR	Chuyangaron	39.00	328	P	P	15 58 15.7	-0.6
CHGR				IAmb	IAmb	15 58 17.0	
	comp=Z,23nm,0.9s						
BTK	Batken	39.21	331	P	P	15 58 19.4	+1.4
BTK				IAmb	IAmb	15 58 35.0	
	comp=Z,12nm,0.9s						
MK31	Makanchi Array	41.05	347	P	P	15 58 33.2	+0.1
MKAR	Makanchi Array	41.05	347	P	P	15 58 33.1	0.0
	comp=Z,5.3nm,0.8s,baz=159,slow=9.4,SNR=7.6						
MKAR				PcP	PcP	16 00 32.7	+0.1
	comp=Z,1.1nm,0.9s,baz=149,slow=3.4,SNR=2.1						
MKAR	Makanchi Array	41.05	347	P	P	15 58 32.8	-0.2
MAKZ	Makanchi	41.13	347	P	P	15 58 33.6	-0.1
KK31	Karatay Array	41.74	333	P	P	15 58 39.6	+0.8
KKAR	Karatay Array	41.74	333	P	P	15 58 39.4	+0.6
KKAR	Karatay Array	41.74	333	P	P	15 58 39.7	+0.9
KKAR				IAmb	IAmb	15 58 54.9	
	comp=Z,3.8nm,0.9s						
SONM	Songino Array	41.95	12	P	P	15 58 38.9	-1.7
	comp=Z,2.3nm,0.9s,baz=189,slow=7.3,SNR=2.3						
SONM				PcP	PcP	16 00 36.4	+0.7
	comp=Z,0.9nm,0.7s,baz=183,slow=5.2,SNR=2.2						
GEYT	Alibeck	45.14	319	P	P	15 59 04.9	-1.4
	comp=Z,1.6nm,0.5s,baz=107,slow=5.0,SNR=1.2						
KURBB	Kurchatov Arra	45.51	346	P	P	15 59 09.6	+0.6
	comp=Z,5.9nm,0.7s,baz=163,slow=6.8,SNR=8.1						
KURK	Kurchatov	45.58	346	P	P	15 59 09.6	+0.1
KURK	Kurchatov	45.58	346	IAmb	IAmb	15 59 11.6	
	comp=Z,13nm,1.1s						
WB0	Warramunga Arr	47.37	125	P	P	15 59 23.5	-0.6
WB0				IAmb	IAmb	15 59 30.0	
	comp=Z,4.9nm,0.9s						
WRA	Warramunga Arr	47.41	125	P	P	15 59 22.9	-1.4
	comp=Z,2.1nm,0.7s,baz=302,slow=9.1,SNR=1.7						
ZAA0	Zalesovo Array	47.50	352	P	P	15 59 25.1	+0.6
ZAA0				IAmb	IAmb	15 59 26.4	
	comp=Z,7.8nm,1.1s						
ZALV	Zalesovo Beam	47.50	352	P	P	15 59 25.1	+0.6
	comp=Z,1.6nm,0.3s,baz=169,slow=7.8,SNR=7.3						
ASAR	Alice Springs	49.03	130	P	P	15 59 35.6	-1.3
	comp=Z,1.7nm,0.7s,baz=309,slow=8.1,SNR=2.0						
BRVK	Borovoye	50.03	341	P	P	15 59 44.1	+0.1
BRVK				IAmb	IAmb	15 59 47.6	
	comp=Z,4.7nm,0.8s						
ABKAR	Akbulak array	51.21	331	P	P	15 59 53.6	+0.6
ABKAR				IAmb	IAmb	15 59 54.6	
	comp=Z,15nm,1.2s						
STKA	Stephens Creek	59.19	134	P	P	16 00 52.2	+1.3
BRTR	Keskin Array B	63.32	311	P	P	16 01 18.0	-0.9
	comp=Z,0.9nm,0.7s,baz=118,slow=7.3,SNR=1.6						
BRTR	Keskin Array B	63.32	311	P	P	16 01 18.4	-0.6
CAN	Canberra	66.26	133	P	P	16 01 38.1	+0.1
TIXI	Tiksi	68.03	11	P	P	16 01 48.4	-0.1
TIXI				IAmb	IAmb	16 02 11.4	
	comp=Z,5.1nm,0.8s						
AKASG	Malin Array Be	69.11	322	P	P	16 01 54.9	-0.7

	comp=Z,0.3nm,0.4s,baz=95,slow=4.8,SNR=2.0						
FIA1	FINESS Array S	73.69	332	P	P	16 02 22.8	-0.3
FINES	FINESS Array B	73.69	332	P	P	16 02 22.6	-0.5
	comp=Z,2.5nm,0.7s,baz=93,slow=6.2,SNR=5.9						
BOSA	Boshof	75.46	238	P	P	16 02 35.3	+1.1
	comp=Z,1.6nm,0.5s,baz=58,slow=5.6,SNR=4.0						
ARCES	ARCESS Array B	76.24	340	P	P	16 02 37.6	-0.1
	comp=Z,5.5nm,0.9s,baz=93,slow=5.1,SNR=5.0						
ARCES	ARCESS Array B	76.24	340	IAmb	IAmb	16 02 38.3	
	comp=Z,15nm,1.1s						
MORC	Moravsky Berou	76.32	319	P	P	16 02 37.2	-1.4
MORC				IAmb	IAmb	16 02 40.1	
	comp=Z,5.7nm,1.3s						
GERES	GERESS Array B	78.77	318	P	P	16 02 52.6	+0.3
	comp=Z,1.1nm,0.7s,baz=54,slow=6.8,SNR=2.1						
NB2	NORSAR Subarra	80.71	331	P	P	16 03 02.5	-0.1
	comp=Z,2.3nm,0.8s,baz=91,slow=5.1						
NOA	NORSAR Array B	80.71	331	P	P	16 03 02.2	-0.4
	comp=Z,2.8nm,1.0s,baz=336,slow=16,SNR=3.3						
TORD	Torodi Ar. Bea	91.20	283	P	P	16 03 56.5	+1.1
	comp=Z,0.3nm,0.6s,baz=98,slow=1.9,SNR=1.4						
ESDC	Sonseca Array	92.11	310	P	P	16 03 59.4	+0.2
	comp=Z,0.5nm,0.7s,baz=55,slow=5.1,SNR=2.2						
NVAR	Mina Array Bea	125.47	32	PKP	PKiKP	16 09 52.8	+1.0
	comp=Z,0.5nm,0.8s,baz=346,slow=1.9,SNR=2.4						
PDAR	Pinedale Array	125.85	22	PKP	PKiKP	16 09 53.1	+0.7
	comp=Z,0.1nm,0.4s,baz=358,slow=2.7,SNR=2.1						

KRSC 08 15:54:54.6±0.9, 48°.37N×156°.44E, h15^{km}±14^{km}, ML3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.33	355	eS	Sb	15 56 02.8	-1.9
PAU	Pauzhetka	3.11	4	S	Sn	15 56 23.4	+3.5
KDTR	Khodutka, Kamc	3.60	16	eP	Pn	15 55 53.3	+3.5
KDTR				eS	Sn	15 56 36.7	+4.7
MTVR	Mutnovka	4.27	15	eP	Pn	15 56 03.7	+4.6
RUS	Russkaya	4.28	17	eP	Pn	15 56 03.0	+3.9
RUS				eS	Sn	15 56 53.2	+4.5
GRL	Gorelyy	4.32	13	eP	Pn	15 56 03.6	+3.8
SMAR	Somma	5.12	16	eP	Pn	15 56 15.9	+5.0
SDLR	Sedlovina	5.15	17	eP	Pn	15 56 15.0	+3.7

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*IDC **08** 15:56:24.1±1.0, 6°.72N×94°.34E, h0^{km}, mb3.8/9, mb1 3.9/10, mb1mx3.7/42, mbtmp3.8/10, ML3.6/1, Error ellipse: s-maj=53.6km s-min=16.3km az=53.0*

*NEIC **08** 15:56:25.9±1.1, 6°.7N±0°.1×94°.4E±0°.1, h10^{km}±1^{km}, mb4.4/14, Error ellipse: s-maj=30.8km s-min=15.3km az=226.0*

ISC 08 15:56:29.2±0.7, 6°.6N±0°.1×94°.3E±0°.2, h35^{km}, n38, σ1^s.69/35, mb4.2/26, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	2.95	118	Pn	Pn	15 57 13.0	-0.5
PSI	Prapat	5.95	130	Pn	Pn	15 57 56.3	+1.3
	1.3nm,0.3s,baz=212,slow=3.7,SNR=4.2						
GSI	Gunungsitoli	6.21	148	Pn	Pn	15 57 57.6	-0.7
GAR	Garm	38.83	330	P	P	16 03 50.2	-0.8
GAR				IAmb	IAmb	16 04 12.7	
	comp=Z,9.9nm,1.3s						
MKAR	Makanchi Array	41.33	347	P	P	16 04 10.8	-0.7
	comp=Z,1.4nm,0.8s,baz=160,slow=7.6,SNR=6.8						
MAKZ	Makanchi	41.41	347	P	P	16 04 10.7	-1.5
MAKZ				IAmb	IAmb	16 04 22.0	
	comp=Z,3.1nm,1.0s						
SONM	Songino Array	42.32	12	P	P	16 04 19.4	-0.4
	comp=Z,0.8nm,0.8s,baz=209,slow=11,SNR=4.5						
WB0	Warramunga Arr	47.35	125	P	P	16 04 59.5	-0.7
WB0				IAmb	IAmb	16 05 14.1	
	comp=Z,5.1nm,1.4s						
WRA	Warramunga Arr	47.40	125	P	P	16 05 00.2	-0.2
	comp=Z,0.7nm,0.9s,baz=308,slow=8.5,SNR=5.3						
WRA				PcP	PcP	16 06 32.0	+1.2
	comp=Z,0.5nm,0.7s,baz=315,slow=4.1,SNR=2.9						
WRA	Warramunga Arr	47.40	125	IAmb	IAmb	16 05 07.7	
	comp=Z,0.2nm,1.4s						
WB2	Warramunga Arr	47.41	125	P	P	16 05 00.1	-0.4
WB2				IAmb	IAmb	16 05 14.4	
	comp=Z,5.9nm,1.4s						
WR0	Warramunga Arr	47.57	125	P	P	16 05 01.5	-0.3
WR0				IAmb	IAmb	16 05 08.9	
	comp=Z,4.0nm,1.2s						
ZAA0	Zalesovo Array	47.80	352	P	P	16 05 00.8	-2.2
ZAA0				IAmb	IAmb	16 05 20.4	
	comp=Z,3.0nm,1.0s						
ZALV	Zalesovo Beam	47.80	352	P	P	16 05 02.1	-0.9
	comp=Z,0.5nm,0.4s,baz=174,slow=4.3,SNR=2.5						
ZALV	Zalesovo Beam	47.80	352	P	P	16 05 00.9	-2.1
ASAR	Alice Springs	48.98	129	P	P	16 05 12.8	+0.1
	comp=Z,0.6nm,0.7s,baz=301,slow=7.6,SNR=9.5						
ASAR				PcP	PcP	16 06 38.2	+1.7
	comp=Z,0.5nm,0.8s,baz=309,slow=2.7,SNR=4.6						
ASAR	Alice Springs	48.98	129	P	P	16 05 10.8	-1.9
AS31	Alice Springs	48.98	129	P	P	16 05 11.3	-1.4
ABKAR	Akbulak array	51.41	332	P	P	16 05 31.2	+0.6
JEM	Erimo	55.67	43	P	P	16 06 05.0	+3.0
JKA	Kamikawa-asahi	56.23	40	P	P	16 06 05.6	-0.4
STKA	Stephens Creek	59.12	133	P	P	16 06 26.3	-0.2
	comp=Z,0.9nm,0.7s,baz=316,slow=6.5,SNR=3.0						
STKA	Stephens Creek	59.12	133	IAmb	IAmb	16 06 34.1	
	comp=Z,1.3nm,1.4s						
CSS	Mathiatis	62.55	306	P	P	16 06 48.2	-1.6
CSS				IAmb	IAmb	16 06 52.9	
	comp=Z,10nm,1.0s						
BRTR	Keskin Array B	63.38	311	P	P	16 06 55.2	-0.2
	comp=Z,0.5nm,0.6s,baz=134,slow=7.2,SNR=3.6						
TIXI	Tiksi	68.40	11	P	P	16 07 26.7	-0.3
TIXI				IAmb	IAmb	16 07 28.0	
	comp=Z,2.2nm,0.8s						
FINES	FINESS Array B	73.89	332	P	P	16 07 59.9	-0.5
	comp=Z,0.7nm,0.5s,baz=131,slow=5.3,SNR=5.4						
LIFNC	LIFOU	76.54	113	P	P	16 08 15.4	-0.9
CONA	Conrad Observa	77.38	318	eP	P	16 08 25.7	+4.9
	comp=Z,4.4nm,1.5s						
ARSA	Arzberg	77.56	317	eP	P	16 08 26.9	+5.1
	comp=Z,2.8nm,1.5s						
SOKA	Soboth	77.86	316	eP	P	16 08 27.5	+4.0
	comp=Z,3.4nm,1.4s						
MOA	Molln	78.45	317	eP	P	16 08 32.1	+5.4
	comp=Z,4.9nm,1.8s						
GERES	GERESS Array B	78.87	318	P	P	16 08 29.4	+0.4
	comp=Z,0.9nm,0.8s,baz=90,slow=5.3,SNR=8.8						
KBA	Koelnbreinsper	79.04	317	eP	P	16 08 32.6	+2.5
	comp=Z,1.0nm,0.5s						
SQTA	Sankt Quirin	80.50	317	eP	P	16 08 40.0	+2.1
	comp=Z,1.7nm,0.7s						
MOTA	Moosalm	80.57	317	eP	P	16 08 40.8	+2.4
	comp=Z,2.7nm,0.8s						
RETA	Reutte	80.81	317	eP	P	16 08 42.1	+2.5
	comp=Z,2.3nm,0.6s						
FETA	Feichten	80.83	316	eP	P	16 08 43.1	+3.4
	comp=Z,2.9nm,0.8s						

KRSC 08 15:57:07.6±1.5, 48°.33N×156°.48E, h17^{km}±28^{km}, ML3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.37	354	eS	Sn	15 58 16.0	+1.6
PAU	Pauzhetka	3.15	4	eS	Sb	15 58 37.5	-3.7
KDTR	Khodutka, Kamc	3.63	16	eP	Pn	15 58 07.0	+3.9
KDTR				eS	Sb	15 58 51.2	-3.9
MTVR	Mutnovka	4.30	14	eP	Pn	15 58 17.3	+4.9
MTVR				eS	Sn	15 59 06.1	+3.9
RUS	Russkaya	4.31	17	eP	Pn	15 58 15.9	+3.5
RUS				S	Sn	15 59 07.5	+5.3
GRL	Gorelyy	4.35	13	eP	Pn	15 58 17.4	+4.3
SDLR	Sedlovina	5.18	16	P	Pn	15 58 29.6	+5.1
MKZ	Mys Kozlova	7.04	26	eP	Pn	15 58 55.2	+5.3

IDC 08 16:00:55.2±3.9, 6°.43N×94°.07E, h0^{km}, mb3.4/4, mb1 3.5/5, mb1mx3.3/36, mbtmp3.4/5, ML3.1/1, Error ellipse: s-maj=148.0km s-min=24.2km az=61.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	6.03	126	Pn	Pn	16 02 28.5	+2.6
	0.5nm,0.3s,baz=298,slow=17,SNR=2.2						
MKAR	Makanchi Array	41.48	348	P	P	16 08 44.3	+0.4
	0.8nm,0.8s,baz=166,slow=8.5,SNR=4.8						
SONM	Songino Array	42.58	12	P	P	16 08 52.5	-0.6
	0.3nm,0.5s,baz=181,slow=8.1,SNR=2.2						
WRA	Warramunga Arr	47.50	124	P	P	16 09 31.9	-0.5
	0.4nm,0.8s,baz=309,slow=8.7,SNR=2.1						
ASAR	Alice Springs	49.06	129	P	P	16 09 44.1	-0.4
	0.2nm,0.6s,baz=299,slow=7.5,SNR=6.2						

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*SOME **08** 16:04:51.2, 43°.25N×78°.08E, h0^{km}*

*NNC **08** 16:04:51.3±1.2, 43°.23N×78°.15E, h11^{km}±4^{km}, mpv2.5, Error ellipse: s-maj=8.6km s-min=2.9km az=63.0*

ISC 08 16:04:50.7±2.1, 43°.21N±0°.07×78°.07E±0°.09, h13^{km}±14^{km}, n7, σ0^s.19/14, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURS	Kuram	0.29	15	P	Pb	16 04 57.8	0.0
	2.0nm,0.1s						
KURS				S	Sb	16 05 02.8	+0.2
	13nm,0.2s						
SATY	Saty	0.29	121	eP	Pb	16 04 57.8	0.0
	22nm,0.0s						
SATY				eS	Sb	16 05 02.7	+0.1
	119nm,0.1s						
SATY	Saty	0.29	121	P	Pb	16 04 57.8	0.0
	22nm,0.1s						
SATY				S	Sb	16 05 02.7	+0.1
	119nm,0.1s						
UZB	Uzynbulak	0.70	95	eP	Pg	16 05 04.3	0.0
	2.7nm,0.2s						
UZB				eS	Sg	16 05 13.8	+0.2
	7.0nm,0.1s						
UZB	Uzynbulak	0.70	95	P	Pg	16 05 04.3	0.0
	2.7nm,0.2s						
UZB				S	Sg	16 05 13.8	+0.2
	7.0nm,0.1s						
ARXS	Arharly	1.02	350	eP	Pg	16 05 10.2	-0.1
	0.6nm,0.0s						
ARXS				eS	Sg	16 05 23.9	+0.2
	2.6nm,0.0s						
PDGK	Podgornoye	1.05	83	P	Pg	16 05 10.5	-0.4
	0.3nm,0.2s						
PDGK				S	Sb	16 05 24.3	-0.1
	1.2nm,0.6s						

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*IDC **08** 16:04:57.3±2.5, 6°.33N×93°.78E, h0^{km}, mb3.4/4, mb1 3.5/6, mb1mx3.3/37, mbtmp3.4/6, ML3.0/1, Error ellipse: s-maj=91.1km s-min=22.8km az=60.0*

ISC 08 16:05:02.5±2.1, 6°.4N±0°.2×93°.8E±0°.3, h35^{km}, n9, σ1^s.04/6, mb3.5/4, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	6.23	125	Pn	Pn	16 06 32.9	+0.7
	0.3nm,0.3s,baz=314,slow=6.1,SNR=3.7						
CMAR	Chiang Mai Arr	13.00	22	Pn	Pn	16 08 04.8	-0.1
	baz=210,slow=15,SNR=1.3						
MKAR	Makanchi Array	41.45	348	P	P	16 12 46.5	+0.6
	0.9nm,0.9s,baz=174,slow=9.7,SNR=4.4						
H01W3	Cape Leeuwin H	45.32	156	T	T	17 02 32.9	
	baz=333,slow=75,SNR=5.1						
H01W2	Cape Leeuwin H	45.33	156	T	T	17 02 33.8	
	baz=333,slow=75,SNR=4.9						
H01W1	Cape Leeuwin H	45.33	156	T	T	17 02 34.1	
	baz=333,slow=75,SNR=4.5						
WRA	Warramunga Arr	47.70	124	P	P	16 13 34.6	-1.5
	0.2nm,0.7s,baz=307,slow=8.8,SNR=1.9						
ZALV	Zalesovo Beam	47.97	353	P	P	16 13 37.6	-0.1
	0.5nm,0.5s,baz=170,slow=9.6,SNR=2.4						
ASAR	Alice Springs	49.24	129	P	P	16 13 48.2	+0.2
	0.4nm,0.7s,baz=297,slow=7.4,SNR=6.2						

IDC 08 16:06:08.8±1.7, 6°.88N×94°.79E, h0^{km}, mb3.7/7, mb1 3.8/7, mb1mx3.5/37, mbtmp3.7/7, Error ellipse: s-maj=131.5km s-min=21.5km az=52.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	41.19	347	P	P	16 13 55.1	-0.2
	0.2nm,0.6s,baz=161,slow=9.2,SNR=1.4						
WRA	Warramunga Arr	47.17	125	P	P	16 14 43.0	-0.6
	0.4nm,0.6s,baz=308,slow=7.9,SNR=4.7						
ASAR	Alice Springs	48.79	130	P	P	16 14 57.1	+1.0
	0.5nm,0.8s,baz=305,slow=7.7,SNR=2.8						
STKA	Stephens Creek	58.96	134	P	P	16 16 09.8	-0.6
	0.6nm,0.6s,baz=333,slow=16,SNR=3.2						
FINES	FINESS Array B	73.88	332	P	P	16 17 45.2	-0.3
	4.4nm,1.1s,baz=108,slow=4.5,SNR=1.8						
ARCES	ARCESS Array B	76.41	340	P	P	16 18 00.2	+0.3
	2.1nm,0.9s,baz=112,slow=12,SNR=4.4						
GERES	GERESS Array B	78.99	318	P	P	16 18 15.0	+0.1
	0.2nm,0.6s,baz=64,slow=4.5,SNR=1.6						

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*NEIC **08** 16:10:31.2±1.1, 4°.85N±0°.07×95°.97E±0°.05, h10^{km}±1^{km}, mb4.7/35, Error ellipse: s-maj=11.9km s-min=7.5km az=345.0*

*DJA **08** 16:10:32.5±0.7, 5°N±3°×9°6E±°, h10^{km}, M5.0/12, mB5.4/4, mb4.9/12, MLv5.1/9, Mw(mB)4.8/4*

*IDC **08** 16:10:37.8±2.4, 5°.02N×96°.26E, h61^{km}±23^{km}, mb4.0/21, mb1 4.2/23, mb1mx4.0/36, mbtmp4.3/23, ML4.0/2, MS4.0/2, Ms1 4.0/2, ms1mx3.3/46, Error ellipse: s-maj=20.4km s-min=10.3km az=49.0*

ISC 08 16:10:34.1±0.3, 4°.81N±0°.05×95°.99E±0°.05, h29^{km}, n117, σ1^s.53/114, mb4.5/56, MS4.1/3, 4C, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	1.04	66	P	Pn	16 10 51.1	-1.6
LHMI	Lhok Sumawe	1.04	66	Pg	Pn	16 10 51.1	-1.6
LHMI				Sg	Sn	16 11 04.7	-1.6
LHMI	Lhok Sumawe	1.04	66	P	Pn	16 10 51.1	-1.6
TPTI		1.94	142	P	Pn	16 11 04.9	-0.3
SNSI	Sinabang, Aceh	2.41	172	P	Pn	16 11 05.1	-6.5
TSI	Tuntungan	2.88	117	P	Pn	16 11 19.6	+1.6
PSI	Prapat	3.54	124	P	Pn	16 11 29.5	+2.2
	20nm,0.3s,baz=311,slow=13,SNR=94						
PSI				S	Sn	16 12 11.3	+3.0
	19nm,0.3s,baz=270,slow=14,SNR=3.6						
RPSI	Rantau Prapat	3.60	126		Pn	16 11 29.5	+1.5
GSI	Gunungsitoli	3.83	156	P	Pn	16 11 30.4	-0.7
GSI	Gunungsitoli	3.83	156		Pn	16 11 30.4	-0.7
GSI	Gunungsitoli	3.83	156	P	Pn	16 11 31.7	+0.6
MNSI	Mandailing Nat	5.36	138	P	Pn	16 11 54.3	+2.1
	1.8nm3μm210nm,0.5s						
BKNI	Bangkinang	6.73	131	P	Pn	16 12 12.3	+1.3
	1.8nm2μm145nm,0.5s						
SISI	Saibi	6.84	153	P	Pn	16 12 11.6	-0.9
	0.3nm30nm,0.7s						
PPI	Padang Panjang	6.84	140	P	Pn	16 12 14.5	+2.0
	37nm,0.6s						
PDSI	Padang	7.23	142	P	Pn	16 12 20.0	+2.1
	0.2nm820nm60nm,0.9s						
MASI	Maura Aman, Be	10.07	142	P	Pn	16 12 57.3	+0.4
	97nm,0.8s						
KSI	Kapahiang	10.68	142	P	Pn	16 13 04.4	-0.9
	3μm70nm,0.7s						
LHSI	Lahat	11.41	139	P	Pn	16 13 14.7	-0.5
	67nm,0.9s						
MNAI	Manna	11.46	143	Pn	Pn	16 13 14.5	-1.4
PPBI	Pangkal Pinang	12.28	124	P	P	16 13 35.9	-3.2
MDSI	Maura Dua	12.34	138	P	Pn	16 13 26.2	-1.7
	38nm,1.0s						
LWLI	Liwa	12.66	140	P	P	16 13 43.7	+0.3
PBKT	Sadao Pong	12.67	22		Pn	16 13 33.8	+1.4
KLSI		12.86	137	P	Pn	16 13 32.8	-2.2
	24nm,0.8s						
KASI	Kota Agung	13.32	140	P	Pn	16 13 39.2	-2.2
	38nm,0.6s						
CMAR	Chiang Mai Arr	13.87	12	P	Pn	16 13 51.1	+2.3
	0.8nm,0.3s,baz=199,slow=14,SNR=19						
CMAR	Chiang Mai Arr	13.87	12	Pn	Pn	16 13 47.7	-1.1
PALK	Pallekele	15.40	280	P	P	16 14 13.4	-0.4
	0.4nm,0.3s,baz=170,slow=12,SNR=2.5						
PALK	Pallekele	15.40	280	Pn	Pn	16 14 07.5	-2.0
PALK				IAmb	IAmb	16 14 18.8	
	comp=Z,20nm,0.8s						
STKI	Sintang	16.17	107	P	P	16 14 22.7	+0.3
HYB	Hyderabad	21.18	308	iP	P	16 15 20.0	+2.6
KMI	Kunming	21.21	17	⇑P	P	16 15 21.7	+3.8
KMI				pP	pP	16 15 26.3	+0.3
KMI				sP	sP	16 15 28.4	-1.4
KMI				pmax	pmax		
	comp=Z,17nm,0.8s						
JAGI	Jajag, Banyuwa	22.41	126	P	P	16 15 31.0	+0.4
JAGI				IAmb	IAmb	16 15 47.9	
	comp=Z,50nm,1.2s						
GYA	Guiyang	23.83	24	⇑P	P	16 15 46.3	+1.4
GYA				sP	pP	16 15 52.5	-1.1
GYA				pmax	pmax		
	comp=Z,19nm,1.3s						
TOLI2	Tolitoli	25.02	98	P	P	16 15 54.9	-1.0
TOLI2				IAmb	IAmb	16 16 03.6	
	comp=Z,18nm,0.9s						
LSA	Lhasa	25.18	350	P	P	16 15 56.8	-0.9
LSA				IAmb	IAmb	16 16 11.7	
	comp=Z,8.6nm,0.7s						
WHN	Wuhan	30.90	32	⇑P	P	16 16 54.8	+6.5
SOEI	Soe	31.67	117	P	P	16 16 54.9	-0.5
SOEI				IAmb	IAmb	16 17 21.4	
	comp=Z,8.9nm,0.9s						
LZH	Lanzhou	31.96	12	eP	P	16 17 01.4	+3.7
LZH				pP	pP	16 17 06.0	-0.6
LZH				sP	sP	16 17 10.9	+0.5
LZH				pmax	pmax		
	comp=Z,19nm,1.0s						
NJ2	Nanjing	34.54	36	⇑P	P	16 17 26.4	+6.3
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
GTA	Gaotai	34.62	5	eP	P	16 17 20.4	-0.5
GTA				pP	pP	16 17 24.8	-5.0
GTA				sP	sP	16 17 27.6	-6.0
GTA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NIL	Nilore	35.65	326	P	P	16 17 28.4	-1.3
SIJI	Sorong	35.69	98	LR	LR	16 35 17.2	
	comp=Z,156nm,18.2s,baz=239,slow=42						
FAKI	Fak Fak	37.03	101	P	P	16 17 40.7	-1.0
FITZ	Fitzroy Crossi	37.06	129	P	P	16 17 40.8	-1.1
	comp=Z,8.9nm,0.8s,baz=270,slow=3.1,SNR=15						
HHC	Hu-ho-hao-te	38.51	19	eP	P	16 17 55.2	+1.1
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC				pmax	pmax		
	comp=Z,390nm,9.5s						
KSH	Kashi	39.01	335	P	P	16 17 56.0	-2.3
KSH				sP	pP	16 18 03.0	-4.2
KSH				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KSH				LR	LR		
	comp=N,300nm,19.6s						
KSH				LR	LR		
	comp=E,430nm,19.6s						
WMQ	Urumqi	39.54	351	eP	P	16 18 03.4	+0.9
WSAR	Wadi Sarin	40.43	301	P	P	16 18 12.7	+2.6
	comp=E,4.4nm,0.6s,baz=134,slow=7.8,SNR=14						
DRK	Karamyk	40.86	331	P	P	16 18 13.2	-0.7
GAR	Garm	41.23	329	P	P	16 18 15.6	-1.2
GAR				IAmb	IAmb	16 18 44.9	
	comp=Z,21nm,1.1s						
CHGR	Chuyangaron	41.58	328	P	P	16 18 18.1	-1.4
CHGR				IAmb	IAmb	16 18 37.0	
	comp=Z,14nm,0.6s						
BTK	Batken	41.79	331	P	P	16 18 20.6	-0.6
BTK				IAmb	IAmb	16 18 40.4	
	comp=Z,8.8nm,0.8s						
NWAO	Narrogin (SRO)	42.60	153	P	P	16 18 28.4	+0.6
	comp=Z,17nm,0.8s,baz=314,slow=9.0,SNR=8.1						
MK31	Makanchi Array	43.47	346	P	P	16 18 33.4	-1.3
MKAR	Makanchi Array	43.47	346	P	P	16 18 34.0	-0.8
	comp=Z,0.9nm,0.5s,baz=162,slow=8.0,SNR=17						
MKAR	Makanchi Array	43.47	346	P	P	16 18 33.6	-1.1
MAKZ	Makanchi	43.56	346	P	P	16 18 34.1	-1.3
KSRS	Korea Array	43.66	38	P	P	16 18 36.4	+0.1
	comp=Z,3.5nm,1.2s,baz=215,slow=8.0,SNR=1.7						
SONM	Songino Array	43.79	10	P	P	16 18 36.8	-0.5
	comp=Z,2.7nm,0.6s,baz=190,slow=8.7,SNR=10						
SONM	Songino Array	43.79	10	P	P	16 18 37.2	-0.2
ULN	Ulaanbaatar	43.94	11	P	P	16 18 37.8	-0.8
KK31	Karatay Array	44.31	333	P	P	16 18 40.7	-0.8
KK31				IAmb	IAmb	16 19 02.1	
	comp=Z,3.1nm,0.6s						
KKAR	Karatay Array	44.31	333	P	P	16 18 40.6	-0.9
KKAR	Karatay Array	44.31	333	P	P	16 18 40.7	-0.8
KKAR				IAmb	IAmb	16 19 02.1	
	comp=Z,3.1nm,0.6s						
WRA	Warramunga Arr	45.01	124	P	P	16 18 47.5	+0.1
	comp=Z,6.8nm,0.6s,baz=302,slow=9.2,SNR=47						
WRA				LR	LR	16 39 14.9	
	comp=Z,197nm,18.7s,baz=25,slow=38						
WRAB	Tennant Creek	45.01	124	P	P	16 18 46.6	-0.9
AS31	Alice Springs	46.56	129	P	P	16 18 59.0	-0.6
AS31				IAmb	IAmb	16 19 00.1	
	comp=Z,5.0nm,0.7s						
ASAR	Alice Springs	46.56	129	P	P	16 18 59.4	-0.3
	comp=Z,18nm,0.7s,baz=299,slow=7.8,SNR=185						
ASAR	Alice Springs	46.56	129	P	P	16 18 58.9	-0.7
GEYT	Alibeck	47.70	319	P	P	16 19 08.9	+0.6
	comp=Z,5.9nm,0.6s,baz=166,slow=10,SNR=11						
GYA0B	ALIBECK ARRAY	47.70	319	P	P	16 19 08.4	+0.1
GYA0B				IAmb	IAmb	16 19 10.8	
	comp=Z,8.0nm,0.8s						
ZAA0	Zalesovo Array	49.83	351	P	P	16 19 22.9	-1.4
ZAA0				IAmb	IAmb	16 19 48.4	
	comp=Z,4.8nm,0.8s						
ZALV	Zalesovo Beam	49.83	351	P	P	16 19 23.4	-1.0
	comp=Z,1.5nm,0.6s,baz=172,slow=6.8,SNR=12						
ZALV	Zalesovo Beam	49.83	351	P	P	16 19 23.0	-1.3
ABKAR	Akbulak array	53.78	331	P	P	16 19 52.6	-1.4
CTAO	Charters Tower	55.23	118	P	P	16 20 04.8	-0.1
CTAO				IAmb	IAmb	16 20 05.0	
	comp=Z,6.8nm,0.9s						
STKA	Stephens Creek	56.68	133	P	P	16 20 15.1	-0.1
	comp=Z,6.4nm,0.7s,baz=314,slow=6.6,SNR=24						
STKA	Stephens Creek	56.68	133	P	P	16 20 14.9	-0.2
KMBO	Kilima Mbogo	58.97	266	P	P	16 20 35.4	+3.5
	comp=Z,5.7nm,0.8s,baz=65,slow=9.7,SNR=18						
KBZ	Khabaz	60.58	318	P	P	16 20 41.9	-0.2
	comp=Z,1.9nm,0.8s,baz=231,slow=4.6,SNR=4.6						
CAN	Canberra	63.74	133	P	P	16 21 03.7	+0.2
BR131	Keskin Array S	65.82	312	P	P	16 21 15.8	-1.3
BR131				IAmb	IAmb	16 21 34.6	
	comp=Z,4.1nm,0.8s						
BRTR	Keskin Array B	65.82	312	P	P	16 21 16.0	-1.1
	comp=Z,1.3nm,0.5s,baz=140,slow=6.7,SNR=9.2						
BRTR	Keskin Array B	65.82	312	P	P	16 21 15.8	-1.3
AKASG	Malin Array Be	71.68	322	P	P	16 21 51.4	-1.9
	comp=Z,0.3nm,0.3s,baz=192,slow=9.9,SNR=4.9						
BURAR	Bucovina Array	73.54	318	P	P	16 22 03.3	-1.2
BUR08	Bucovina Ar. S	73.56	318	P	P	16 22 03.3	-1.4
ITM	Ithomi	74.42	307	P	P	16 22 08.1	-1.7
BOSA	Boshof	75.56	239	P	P	16 22 18.9	+2.2
	comp=Z,1.8nm,0.6s,baz=50,slow=3.9,SNR=8.5						
FINES	FINESS Array B	76.26	332	P	P	16 22 18.2	-1.6
	comp=Z,2.1nm,0.8s,baz=112,slow=2.1,SNR=6.7						
FINES	FINESS Array B	76.26	332	P	P	16 22 18.4	-1.4
ARCES	ARCESS Array B	78.75	340	P	P	16 22 32.5	-1.2
	comp=Z,1.2nm,0.5s,baz=36,slow=4.5,SNR=7.6						
CONA	Conrad Observa	79.83	318	eP	P	16 22 41.7	+1.7
	comp=Z,2.2nm,1.1s						
ARSA	Arzberg	80.02	317	eP	P	16 22 42.4	+1.4
	comp=Z,3.4nm,1.3s						
SOKA	Soboth	80.31	316	eP	P	16 22 42.4	-0.3
	comp=Z,3.1nm,1.0s						
OBKA	Obir	80.64	316	eP	P	16 22 47.0	+2.5
	comp=Z,2.4nm,0.7s						
MOA	Molln	80.90	318	eP	P	16 22 49.2	+3.5
	comp=Z,6.1nm,1.5s						
GERES	GERESS Array B	81.32	319	P	P	16 22 47.7	-0.4
	comp=Z,0.7nm,0.7s,baz=124,slow=6.6,SNR=5.9						
KBA	Koelnbreinsper	81.49	317	eP	P	16 22 50.2	+1.1
	comp=Z,3.8nm,1.1s						
ABTA	Abfaltersbach	82.05	316	eP	P	16 22 55.2	+3.3
	comp=Z,2.7nm,1.2s						
WTTA	Wattenberg	82.66	317	eP	P	16 22 54.1	-1.1
	comp=Z,1.6nm,0.6s						
SQTA	Sankt Quirin	82.95	317	eP	P	16 22 55.6	-1.0
	comp=Z,2.1nm,0.6s						
MOTA	Moosalm	83.02	317	eP	P	16 22 56.4	-0.7
	comp=Z,6.9nm,1.6s						
RETA	Reutte	83.26	317	eP	P	16 22 57.1	-1.1
	comp=Z,3.2nm,0.8s						
FETA	Feichten	83.28	317	eP	P	16 22 57.3	-1.1
	comp=Z,4.0nm,1.6s						
DAVA	Damuels	83.86	317	eP	P	16 23 00.3	-1.0
	comp=Z,3.0nm,1.4s						

KEST	Kesra	84.50	305	P	P	16 23 04.7	-0.1
	comp=Z,1.2nm,0.6s,baz=36,slow=8.4,SNR=1.6						
KEST	Kesra	84.50	305	IAmb	IAmb	16 23 15.0	
	comp=Z,4.1nm,0.9s						
VNDA	Vanda	89.58	169	P	P	16 23 28.3	-0.1
	comp=Z,0.4nm,0.7s,baz=294,slow=8.6,SNR=2.2						
TORD	Torodi Ar. Bea	93.09	283	P	P	16 23 47.4	+1.4
	comp=Z,1.5nm,0.8s,baz=85,slow=5.2,SNR=7.8						
TORD	Torodi Ar. Bea	93.09	283	P	P	16 23 44.6	-1.4
TORD				IAmb	IAmb	16 24 06.9	
	comp=Z,3.0nm,1.2s						
ESDC	Sonseca Array	94.59	310	P	P	16 23 56.0	+3.5
	comp=Z,0.3nm,0.7s,baz=58,slow=4.8,SNR=2.3						
NVAR	Mina Array Bea	126.52	33	PKP	PKiKP	16 29 35.7	0.0
	comp=Z,0.3nm,0.6s,baz=328,slow=3.2,SNR=2.6						
CPUP	Villa Florida	146.70	227	PKPbc	PKiKP	16 30 17.4	+0.7
	comp=Z,2.0nm,0.7s,baz=90,slow=3.0,SNR=4.0						
LPAZ	La Paz	160.69	233	PKPab	PKPab	16 31 13.7	-1.2
	comp=Z,0.3nm,0.4s,baz=104,slow=4.2,SNR=1.6						

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*IDC **08** 16:19:25.7±1.9, 6°.65N×94°.50E, h0km, mb3.9/8, mb1 3.9/8, mb1mx3.6/57, mbtmp3.9/8, MS3.6/2, Ms1 3.7/2, ms1mx3.3/49, Error ellipse: s-maj=83.1km s-min=25.4km az=57.0*

*NEIC **08** 16:19:27.6±1.2, 6°.62N±0°.05×94°.25E±0°.10, h10km±2km, mb4.2/11, Error ellipse: s-maj=17.0km s-min=6.2km az=291.0*

ISC 08 16:19:30.9±1.1, 6°.7N±0°.1×94°.4E±0°.2, h35km, n29, σ0s.65/23, mb4.0/14, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	Lhok Sumawe	2.91	119	Pn	Pn	16 20 15.4	+0.6
PBKT	Sadao Pong	11.77	33	Pn	Pn	16 22 16.3	0.0
CM31	Chiang Mai Arr	12.54	20	Pn	Pn	16 22 26.3	-0.6
CMAR	Chiang Mai Arr	12.54	20	LR	LR	16 26 36.6	
	comp=Z,175nm,20.6s,baz=70,slow=34						
CHTO	Chiang Mai	12.87	20	Pn	Pn	16 22 31.4	0.0
PALK	Pallekele	13.60	273	LR	LR	16 27 03.0	
	comp=Z,451nm,22.0s,baz=146,slow=33						
H08S3	Diego Garcia H	26.05	237	T	T	16 51 45.1	
	baz=56,slow=75,SNR=11						
H08S2	Diego Garcia H	26.06	237	T	T	16 51 48.5	
	baz=56,slow=75,SNR=7.7						
H08S1	Diego Carcia H	26.07	237	T	T	16 51 49.0	
	baz=56,slow=75,SNR=5.9						
TOLI2	Tolitoli	26.89	101	P	P	16 25 09.6	+0.8
TOLI2				IAmb	IAmb	16 25 13.8	
	comp=Z,5.7nm,0.8s						
NIL	Nilore	33.24	327	P	P	16 26 04.6	-0.3
GAR	Garm	38.84	330	P	P	16 26 53.0	+0.1
GAR				IAmb	IAmb	16 27 02.5	
	comp=Z,10nm,1.3s						
MK31	Makanchi Array	41.32	347	P	P	16 27 13.5	+0.3
MK31				IAmb	IAmb	16 27 18.4	
	comp=Z,3.2nm,1.3s						
MKAR	Makanchi Array	41.32	347	P	P	16 27 12.9	-0.3
	comp=Z,1.6nm,0.8s,baz=162,slow=8.3,SNR=9.9						
MKAR	Makanchi Array	41.32	347	P	P	16 27 13.0	-0.2
MAKZ	Makanchi	41.40	347	P	P	16 27 13.4	-0.4
KK31	Karatay Array	41.95	334	P	P	16 27 17.8	-0.6
KK31				IAmb	IAmb	16 27 37.4	
	comp=Z,4.4nm,1.4s						
KKAR	Karatay Array	41.95	334	P	P	16 27 17.7	-0.7
SONM	Songino Array	42.29	12	P	P	16 27 21.2	0.0
	comp=Z,0.6nm,1.0s,baz=189,slow=9.0,SNR=4.0						
SONM	Songino Array	42.29	12	IAmb	IAmb	16 27 22.5	
	comp=Z,1.3nm,1.0s						
KURBB	Kurchatov Arra	45.78	346	P	P	16 27 49.6	+0.7
	comp=Z,2.1nm,0.8s,baz=166,slow=6.7,SNR=15						
KURK	Kurchatov	45.84	346	P	P	16 27 48.3	-1.2
KURK				IAmb	IAmb	16 27 56.0	
	comp=Z,3.4nm,1.1s						
WB0	Warramunga Arr	47.32	125	P	P	16 28 00.2	-1.4
WB0				IAmb	IAmb	16 28 22.9	
	comp=Z,4.0nm,1.4s						
ZALV	Zalesovo Beam	47.78	352	P	P	16 28 04.5	-0.1
	comp=Z,0.6nm,0.4s,baz=179,slow=5.9,SNR=4.8						
ASAR	Alice Springs	48.95	129	P	P	16 28 13.4	-0.7
	comp=Z,0.5nm,0.7s,baz=312,slow=8.2,SNR=7.1						
BVAR	Borovoye Array	50.21	341	P	P	16 28 23.5	+0.2
	comp=Z,1.3nm,0.8s,baz=191,slow=15,SNR=6.7						
ABKAR	Akbulak array	51.41	332	P	P	16 28 33.3	+0.9
AKTO	Aktyubinsk	53.13	332	P	P	16 28 45.7	+0.6
	comp=Z,1.0nm,0.5s,baz=117,slow=12,SNR=3.5						
FINES	FINESS Array B	73.89	332	P	P	16 31 02.6	+0.5
	comp=Z,2.5nm,1.0s,baz=94,slow=5.7,SNR=4.8						

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*IDC **08** 16:20:09.8±1.8, 0°.83N×126°.97E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.4/49, mbtmp3.7/4, Error ellipse: s-maj=165.2km s-min=23.1km az=67.0*

*DJA **08** 16:20:09.8±0.6, 1°N±4°×12°8E±°, h12km±5km, M3.0/5, MLv3.0/5*

ISC 08 16:20:10.5±1.4, 1°.0N±0°.1×127°.5E±0°.1, h10km, n6, σ1s.63/7, mb3.7/4, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	0.25	223	P	Pb	16 20 17.0	-0.2
TNTI				S	Sb	16 20 21.6	0.0
LBMI	Labuha	1.59	181	P	Pb	16 20 39.0	-0.9
WRA	Warramunga Arr	21.82	163	P	P	16 25 04.6	+1.6
	1.2nm,0.5s,baz=340,slow=11,SNR=8.6						
ASAR	Alice Springs	25.25	166	P	P	16 25 37.8	+0.8
	1.6nm,0.9s,baz=345,slow=10,SNR=13						
MKAR	Makanchi Array	60.28	326	P	P	16 30 20.7	+1.4
	0.5nm,0.8s,baz=143,slow=5.0,SNR=2.8						
KURBB	Kurchatov Arra	64.50	328	P	P	16 30 45.2	-2.2
	0.3nm,0.4s,baz=125,slow=6.4,SNR=2.2						

IDC 08 16:24:16.3±3.0, 6°.64N×95°.47E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.4/62, mbtmp3.7/5, Error ellipse: s-maj=211.8km s-min=25.6km az=53.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KURBB	Kurchatov Arra	46.06	345	P	P	16 32 41.2	-0.6
	0.4nm,0.6s,baz=168,slow=6.6,SNR=4.4						
WRA	Warramunga Arr	46.48	125	P	P	16 32 45.6	0.0
	0.3nm,0.8s,baz=305,slow=8.9,SNR=1.8						
ASAR	Alice Springs	48.12	130	P	P	16 32 58.1	-0.3
	0.1nm,0.3s,baz=295,slow=7.9,SNR=1.6						
FINES	FINESS Array B	74.41	332	P	P	16 35 55.6	-0.4
	3.8nm,1.1s,baz=101,slow=7.2,SNR=1.4						
ARCES	ARCESS Array B	76.86	340	P	P	16 36 10.8	+0.9
	5.5nm,1.1s,baz=98,slow=6.7,SNR=4.5						
GERES	GERESS Array B	79.62	318	P	P	16 36 28.6	+2.9
	0.2nm,0.5s,baz=88,slow=3.3,SNR=4.2						

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*IASPEI **08** 16:24:34.7±1.0, 36°.93N±0°.03×97°.82W±0°.03, h9km±7km, Error ellipse: s-maj=4.1km s-min=3.4km az=127.2, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*NEIC **08** 16:24:34.9±0.9, 36°.93N±0°.01×97°.81W±0°.02, h6km±6km, Error ellipse: s-maj=3.2km s-min=1.5km az=117.0*

*TUL **08** 16:24:34.7±0.6, 36°.95N±0°.01×97°.83W±0°.03, h5km±6km, ML2.9, mb_Lg2.6/19(NEIC), Error ellipse: s-maj=3.2km s-min=1.3km az=118.0*

*ANF **08** 16:24:35.2±0.5, 36°.92N×97°.83W, h5km, ML3.1/8, Error ellipse: s-maj=5.4km s-min=4.2km az=24.0*

ISC 08 16:24:34.9±0.9, 36°.93N±0°.02×97°.81W±0°.02, h7km±6km, n54, σ0s.47/59, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GC02	Grant County #	0.08	207	Pg	Pg	16 24 37.2	+0.3
GC02				Sg	Sg	16 24 38.7	+0.3
KAN14	Manchester OK	0.12	285	Pg	Pg	16 24 37.4	-0.3
KAN14				Sg	Sg	16 24 39.0	-0.5
KAN17	Caldwell West	0.12	18	Pg	Pg	16 24 37.5	-0.1
KAN17				Sg	Sg	16 24 39.3	-0.3
KAN05	Bluff City Nor	0.19	346		Pg	16 24 38.6	-0.2
KAN05				Sg	Sg	16 24 41.3	-0.1
KAN01	Argonia South	0.23	11		Pg	16 24 39.5	-0.1
KAN01				Sg	Sg	16 24 42.4	-0.3
KAN09	Caldwell North	0.26	36	Pg	Pg	16 24 40.1	0.0
KAN09				Sg	Sg	16 24 43.4	-0.2
KAN13	South Haven SW	0.28	72		Pg	16 24 40.2	-0.3
KAN10	Anthony SW Sta	0.30	311	Pg	Pg	16 24 40.5	-0.3
KAN06	Argonia West S	0.33	354		Pg	16 24 41.1	-0.2
KAN08	Anthony NE Sta	0.33	337		Pg	16 24 41.1	-0.2
OK032	Salt Plains WL	0.34	249		Pg	16 24 41.6	0.0
OK032				Sg	Sg	16 24 46.1	0.0
KAN16	Harper SW Stat	0.36	326	Pg	Pg	16 24 41.7	-0.3
KS20	Mayfield South	0.37	34	Pg	Pg	16 24 42.1	-0.1
KAN12	Harper NE Stat	0.40	338		Pg	16 24 42.3	-0.4
KAN12				Sg	Sg	16 24 47.8	-0.2
CROK	Carrier	0.44	198	Pg	Pg	16 24 43.8	+0.3
BLOK	Blackwell	0.51	109	Pg	Pg	16 24 45.0	+0.4
T35A	Sooner Cattle	1.04	90	Pg	Pg	16 24 54.7	-0.2
T35B	Sooner Cattle	1.04	90	P	Pg	16 24 54.7	-0.2
	baz=271,SNR=45						
T35B				S	Sb	16 25 09.0	-0.1
	baz=271						
U32A	Winter Ranch,	1.10	241	Pg	Pg	16 24 55.3	-0.7
U32A	Winter Ranch,	1.10	241	P	Pg	16 24 55.5	-0.5
	baz=60						
OK029	Liberty Lake	1.16	165	Pg	Pg	16 24 56.9	-0.3
QUOK	Quay	1.17	130		Pg	16 24 57.0	-0.3
OK031	S. Brethren Rd	1.25	141		Pg	16 24 58.4	-0.4
BCOK	Bluff Creek, N	1.28	173		Pn	16 24 58.9	-0.2
OK030	Cody Creek RV	1.30	140		Pn	16 24 59.1	-0.2
OK025	Westminster Rd	1.40	164		Pn	16 25 01.1	+0.4
OKCFA	Oklahoma City	1.53	169		Pb	16 25 03.4	-0.2
OKCFA	Oklahoma City	1.53	169	P	Pb	16 25 03.5	-0.2
	baz=349						
OKCSW	OKLAHOMA CITY	1.55	169		Pb	16 25 03.6	-0.3
R32A	Long Quarter,	1.66	335		Pn	16 25 05.0	+0.6
R32A	Long Quarter,	1.66	335	P	Pn	16 25 05.0	+0.6
	baz=154,SNR=12						
R32A				S	Sn	16 25 26.3	+0.3
	baz=154						
FNO	Franklin	1.70	169		Pn	16 25 05.4	+0.5
TUL1	Leonard	1.92	121		Pn	16 25 08.8	+0.8
TUL1				IAmb_Lg		16 25 38.7	
	comp=Z,41nm,0.8s						
TUL1	Leonard	1.92	121	P	Pb	16 25 09.5	-0.7
	baz=302						
TUL1				S	Sg	16 25 35.9	-0.7
	baz=302						
WMOK	Wichita Mounta	2.32	200		Pn	16 25 14.1	+0.6
WMOK				IAmb_Lg		16 25 53.0	
	comp=Z,19nm,1.0s						
WMOK	Wichita Mounta	2.32	200	P	Pn	16 25 13.9	+0.4
	baz=20,SNR=47						
X34A	Smith Ranch, M	2.32	180		Pn	16 25 14.4	+0.9
X34A				IAmb_Lg		16 25 49.5	
	comp=Z,20nm,0.8s						
KSU1	Kansas State U	2.37	23	Pn	Pn	16 25 14.9	+0.7
KSU1	Kansas State U	2.37	23	S	Sb	16 25 47.4	0.0
	baz=204						
CBKS	Cedar Bluff	2.42	322	Pn	Pn	16 25 16.0	+1.0
CBKS	Cedar Bluff	2.42	322	S	Sb	16 25 48.8	-0.1
	baz=141						
U38A	Gravette	2.80	99	Pn	Pn	16 25 20.6	+0.5
X37A	Clayton	3.06	139	Pn	Pn	16 25 24.6	+0.9
X37A				IAmb_Lg		16 26 20.9	
	comp=Z,22nm,0.8s						
HHAR	Hobbs	3.18	100		Pn	16 25 25.9	+0.5
S39A	Bolivar	3.66	77	Pn	Pn	16 25 32.4	+0.6
S39A				IAmb_Lg		16 26 35.2	
	comp=Z,11nm,0.8s						
S39A	Bolivar	3.66	77	P	Pn	16 25 32.5	+0.6
	baz=259,SNR=14						
AMTX	Amarillo	3.74	238	IAmb_Lg		16 26 37.8	
	comp=Z,12nm,0.8s						
U40A	Yellville	4.03	97	Pn	Pn	16 25 37.8	+0.8
P38A	Dawn	4.31	50	IAmb_Lg		16 26 58.2	
	comp=Z,12nm,0.9s						
Z38A	Mt. Pleasant	4.33	147	IAmb_Lg		16 26 54.9	
	comp=Z,15nm,0.8s						
R40A	Maddies Statio	4.61	71	Pn	Pn	16 25 45.9	+0.9
P40A	Paris	5.23	58	IAmb_Lg		16 27 26.2	
	comp=Z,8.3nm,0.7s						
FVM	French Village	5.97	78	IAmb_Lg		16 27 45.7	
	comp=Z,16nm,1.3s						
PLAL	Pickwick Lake	8.13	101	IAmb_Lg		16 29 07.8	
	comp=Z,3.5nm,1.0s						

IDC 08 16:27:13.9±2.6, 5°.86N×94°.10E, h0km, mb3.4/4, mb1 3.4/5, mb1mx3.2/58, mbtmp3.4/5, ML3.4/1, Error ellipse: s-maj=89.3km s-min=31.1km az=64.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	13.39	20	Pn	Pn	16 30 24.2	-1.2
	0.1nm,0.3s,baz=205,slow=15,SNR=2.5						
MKAR	Makanchi Array	42.04	348	P	P	16 35 06.8	-0.5
	0.4nm,0.7s,baz=156,slow=7.9,SNR=3.5						
SONM	Songino Array	43.13	12	P	P	16 35 16.7	+0.5
	0.5nm,0.7s,baz=191,slow=7.0,SNR=2.7						
KURBB	Kurchatov Arra	46.48	346	P	P	16 35 42.5	-0.3
	0.8nm,0.9s,baz=159,slow=6.9,SNR=4.0						
ASAR	Alice Springs	48.68	129	P	P	16 36 00.1	-0.2
	0.2nm,0.8s,baz=294,slow=7.8,SNR=1.7						

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*IDC **08** 16:29:57.9±1.0, 6°.86N×94°.42E, h0km, mb4.0/15, mb1 4.0/17, mb1mx3.8/55, mbtmp4.0/17, ML3.9/2, MS3.6/4, Ms1 3.6/4, ms1mx3.6/54, Error ellipse: s-maj=40.2km s-min=17.1km az=54.0*

*NEIC **08** 16:29:59.5±1.9, 6°.87N±0°.09×94°.6E±0°.1, h10km±1km, mb4.5/21, Error ellipse: s-maj=22.9km s-min=13.0km az=247.0*

ISC 08 16:30:01.3±0.6, 6°.85N±0°.08×94°.5E±0°.1, h26km, n51, σ1s.20/46, mb4.3/22, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	Lhok Sumawe	2.88	124	Pn	Pn	16 30 44.5	-1.1
PSI	Prapat	5.94	132	Pn	Pn	16 31 30.9	+3.1
	1.2nm,0.3s,baz=327,slow=14,SNR=5.5						
PSI				LR	LR	16 34 05.5	
	comp=Z,340nm,20.7s,baz=312,slow=41						
RPSI	Rantau Prapat	6.01	133		Pn	16 31 30.9	+2.3
GSI	Gunungsitoli	6.29	151	Pn	Pn	16 31 34.1	+1.7
PBKT	Sadao Pong	11.53	33	Pn	Pn	16 32 45.1	+0.8
CM31	Chiang Mai Arr	12.31	20	Pn	Pn	16 32 56.1	+1.1
CMAR	Chiang Mai Arr	12.31	20	Pn	Pn	16 32 55.5	+0.5
	0.3nm,0.3s,baz=212,slow=15,SNR=12						
CMAR				LR	LR	16 37 30.6	
	comp=Z,230nm,19.1s,baz=207,slow=37						
CHTO	Chiang Mai	12.64	19		Pn	16 33 00.7	+1.1
PALK	Pallekele	13.74	273	LR	LR	16 38 08.9	
	comp=Z,325nm,20.4s,baz=171,slow=36						
DLV	T Lat	14.66	69	Pn	Pn	16 33 26.4	-0.9
SLVN	Son La	17.01	31	P	Pn	16 33 58.8	+1.1
SHL	Shillong	18.79	353	P	P	16 34 17.7	-1.3
SHL				IAmb	IAmb	16 34 28.4	
	comp=Z,12nm,0.4s						
LEM	Lembang	18.84	136	LR	LR	16 43 12.6	
	comp=Z,247nm,18.9s,baz=278,slow=42						
COCO	West Island	19.05	173	P	Pn	16 34 21.9	-0.8
H08S3	Diego Garcia H	26.28	237	T	T	17 02 18.7	
	baz=56,slow=75,SNR=13						
H08S2	Diego Garcia H	26.28	237	T	T	17 02 18.7	
	baz=56,slow=75,SNR=13						
H08S1	Diego Carcia H	26.30	237	T	T	17 02 21.0	
	baz=56,slow=75,SNR=10						
NIL	Nilore	33.16	326	P	P	16 36 35.4	-0.4
NIL				IAmb	IAmb	16 36 43.0	
	comp=Z,7.8nm,0.6s						
DRK	Karamyk	38.39	331	P	P	16 37 21.2	+0.3
DRK				IAmb	IAmb	16 37 40.2	
	comp=Z,7.9nm,0.7s						
GAR	Garm	38.75	329	P	P	16 37 23.0	-0.8
GAR				IAmb	IAmb	16 37 33.2	
	comp=Z,5.8nm,0.7s						
BTK	Batken	39.31	331	P	P	16 37 29.7	+1.3
BTK				IAmb	IAmb	16 37 49.1	
	comp=Z,6.2nm,1.0s						
MK31	Makanchi Array	41.17	347	P	P	16 37 41.9	-1.7
MKAR	Makanchi Array	41.17	347	P	P	16 37 43.3	-0.3
	comp=Z,1.6nm,0.7s,baz=157,slow=7.5,SNR=9.9						
MKAR	Makanchi Array	41.17	347		P	16 37 42.2	-1.4
MAKZ	Makanchi	41.25	347		P	16 37 42.7	-1.6
SONM	Songino Array	42.07	12	P	P	16 37 51.7	+0.6
	comp=Z,1.4nm,0.9s,baz=198,slow=9.2,SNR=6.7						
KURBB	Kurchatov Arra	45.63	346	P	P	16 38 19.7	+0.2
	comp=Z,2.3nm,0.8s,baz=164,slow=6.8,SNR=15						
WB0	Warramunga Arr	47.31	125	P	P	16 38 32.8	-0.3
WB0				IAmb	IAmb	16 38 40.1	
	comp=Z,6.3nm,1.4s						
WRA	Warramunga Arr	47.35	125	P	P	16 38 34.2	+0.7
	comp=Z,0.4nm,0.8s,baz=307,slow=8.6,SNR=2.4						
WB2	Warramunga Arr	47.36	125	P	P	16 38 32.8	-0.7
WB2				IAmb	IAmb	16 38 53.9	
	comp=Z,6.0nm,1.4s						
ZAA0	Zalesovo Array	47.62	352	P	P	16 38 34.9	-0.1
ZAA0				IAmb	IAmb	16 38 49.0	
	comp=Z,3.9nm,0.8s						
ZALV	Zalesovo Beam	47.62	352	P	P	16 38 35.5	+0.5
	comp=Z,2.9nm,0.8s,baz=170,slow=9.0,SNR=11						
ZALV	Zalesovo Beam	47.62	352	P	P	16 38 34.9	-0.1
AS31	Alice Springs	48.96	130	P	P	16 38 43.5	-2.4
ASAR	Alice Springs	48.96	130	P	P	16 38 46.6	+0.8
	comp=Z,0.4nm,0.6s,baz=303,slow=7.2,SNR=7.2						
ASAR	Alice Springs	48.96	130	P	P	16 38 43.7	-2.2
BVAR	Borovoye Array	50.08	341	P	P	16 38 54.1	+0.2
	comp=Z,1.3nm,0.8s,baz=201,slow=12,SNR=5.8						
ABKAR	Akbulak array	51.31	332	P	P	16 39 03.6	+0.3
AKTO	Aktyubinsk	53.03	332	P	P	16 39 16.4	+0.4
	comp=Z,1.0nm,0.4s,baz=155,slow=4.3,SNR=4.4						
ARU	Arti	56.98	337	P	P	16 39 44.6	+0.1
	comp=Z,0.4nm,0.3s,baz=150,slow=6.5,SNR=3.6						
BRTR	Keskin Array B	63.40	311	P	P	16 40 28.2	-0.8
	comp=Z,0.6nm,0.7s,baz=131,slow=7.2,SNR=3.6						
CAN	Canberra	66.18	133	P	P	16 40 45.0	-2.0
TIXI	Tiksi	68.15	11	P	P	16 40 58.7	-0.1
	comp=Z,1.4nm,0.4s,baz=276,slow=3.1,SNR=6.5						
TIXI	Tiksi	68.15	11	P	P	16 40 58.2	-0.6
TIXI				IAmb	IAmb	16 41 17.8	
	comp=Z,7.3nm,1.2s						
FIA1	FINESS Array S	73.80	332	P	P	16 41 32.5	-0.8
FINES	FINESS Array B	73.80	332	P	P	16 41 32.6	-0.6
	comp=Z,4.9nm,1.0s,baz=132,slow=2.8,SNR=4.4						
FINES	FINESS Array B	73.80	332	P	P	16 41 32.4	-0.9
ARCES	ARCESS Array B	76.36	340	P	P	16 41 48.4	+0.5
	comp=Z,4.5nm,1.0s,baz=90,slow=6.3,SNR=1.5						
GERES	GERESS Array B	78.85	318	P	P	16 42 03.6	+1.3
	comp=Z,0.6nm,0.7s,baz=81,slow=8.2,SNR=4.1						
HFS	Hagfors	79.53	330	P	P	16 42 06.2	+0.5
	comp=Z,4.7nm,1.0s,baz=110,slow=7.8,SNR=2.6						
NVAR	Mina Array Bea	125.58	32	PKP	PKiKP	16 49 03.2	+1.7
	comp=Z,0.3nm,0.7s,baz=275,slow=3.2,SNR=2.3						

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*INET **08** 16:34:26.2, 13°.10N×90°.99W, h15km, MW4.1*

*GCG **08** 16:34:36.3±0.5, 13°.47N×90°.93W, h24km±20km, MD4.5*

*IDC **08** 16:34:37.0±3.2, 13°.87N×90°.32W, h40km±30km, mb3.8/13, mb1 4.1/15, mb1mx3.9/36, mbtmp4.1/15, ML4.7/2, MS4.1/6, Ms1 4.1/6, ms1mx3.7/46, Error ellipse: s-maj=29.4km s-min=13.6km az=52.0*

*UCR **08** 16:34:37.9±1.2, 13°.58N×90°.71W, h22km±4km, ML4.8, mb4.6(NEIC)*

*SNET **08** 16:34:37.5±0.9, 13°.51N×90°.78W, h45km, ML5.0*

*NEIC **08** 16:34:39.7±2.2, 13°.64N±0°.08×90°.66W±0°.07, h52km±5km, mb4.6/191, Md5.0(SNET), Error ellipse: s-maj=13.4km s-min=8.0km az=214.0*

ISC 08 16:34:39.4±1.0, 13°.57N±0°.06×90°.70W±0°.06, h68km±9km, n381, σ1s.25/387, mb4.6/96, 1C-4D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCG	Pacaya	0.82	6	⇓iP	Pn	16 34 54.4	-1.5
FUG	Fuego 3	0.88	351	⇓iP	Pn	16 34 54.6	-2.0
NBG	Las Nubes	1.07	19	⇓eP	Pn	16 34 58.9	0.0
RTR	El Retiro	1.07	72	i P	Pn	16 34 57.7	-1.2
RTR	El Retiro	1.07	72	i P	Pn	16 34 57.7	-1.2
CEVE	Cerro Verde	1.07	76	eP	Pn	16 34 57.6	-1.4
CEVE				eS	Sn	16 35 13.9	+0.3
CEVE				IAML		16 35 14.5	
	comp=Z,89µm,0.3s						
CEVE	Cerro Verde	1.07	76	eP	Pn	16 34 57.6	-1.4
CEVE				eS	Sn	16 35 13.9	+0.3
CEVE				IAML		16 35 14.5	
	comp=Z,89µm,0.3s						
SBLS	San Blas	1.08	75	i P	Pn	16 34 57.5	-1.5
SBLS	San Blas	1.08	75	i P	Pn	16 34 57.5	-1.5
UNIC	Universidad Ca	1.19	70	eP	Pn	16 34 59.0	-1.3
UNIC	Universidad Ca	1.19	70	eP	Pn	16 34 59.0	-1.3
JAYA	Jayaque - finc	1.22	86	eS	Sn	16 35 16.6	-0.1
JAYA	Jayaque - finc	1.22	86	eS	Sn	16 35 16.6	-0.1
CEDA	San Andres	1.29	79	eP	Pn	16 35 00.4	-1.1
CEDA				eS	Sn	16 35 18.2	+0.1
CEDA				IAML		16 35 25.9	
	comp=Z,41µm,0.3s						
CEDA	San Andres	1.29	79	eP	Pn	16 35 00.4	-1.1
CEDA				eS	Sn	16 35 18.2	+0.1
CEDA				IAML		16 35 25.9	
	comp=Z,41µm,0.3s						
LALI	Alcalda de L	1.34	93	eP	Pn	16 35 00.8	-1.3
LALI	Alcalda de L	1.34	93	eP	Pn	16 35 00.8	-1.3
PMON	Piamonte	1.35	84	eP	Pn	16 35 01.5	-0.9
PMON				eS	Sn	16 35 20.6	+0.9
PMON	Piamonte	1.35	84	eP	Pn	16 35 01.5	-0.9
PMON				eS	Sn	16 35 20.6	+0.9
TACO	Tacachico	1.36	73	i P	Pn	16 35 01.7	-0.8
TACO	Tacachico	1.36	73	i P	Pn	16 35 01.7	-0.8
ITCA	Escuela Especi	1.38	86	eP	Pn	16 35 01.7	-1.1
ITCA				eS	Sn	16 35 20.9	+0.4
ITCA	Escuela Especi	1.38	86	eP	Pn	16 35 01.7	-1.1
ITCA				eS	Sn	16 35 20.9	+0.4
BOQS	Boqueron	1.39	83	eP	Pn	16 35 02.0	-1.0
BOQS	Boqueron	1.39	83	eP	Pn	16 35 02.0	-1.0
STG3	Santiaguito 3,	1.42	323	⇓iP	Pn	16 35 00.6	-2.8
UEES	Universidad Ev	1.42	84	eS	Sn	16 35 22.3	+0.8
UEES				IAML		16 35 24.9	
	comp=Z,23µm,0.5s						
UEES	Universidad Ev	1.42	84	eS	Sn	16 35 22.3	+0.8
UEES				IAML		16 35 24.9	
	comp=Z,23µm,0.5s						
SNET	Serv Nac Est T	1.43	85	eP	Pn	16 35 02.4	-1.1
SNET				eS	Sn	16 35 22.0	+0.5
SNET				IAML		16 35 24.3	
	comp=Z,22µm,0.3s						
SNET	Serv Nac Est T	1.43	85	eP	Pn	16 35 02.4	-1.1
SNET				eS	Sn	16 35 22.0	+0.5
SNET				IAML		16 35 24.3	
	comp=Z,22µm,0.3s						
SNET	Serv Nac Est T	1.43	85		Pn	16 35 02.3	-1.1
SEMO	Seminario San	1.44	85	eP	Pn	16 35 02.6	-1.0
SEMO				eS	Sn	16 35 22.4	+0.7
UTEC	Universidad Te	1.46	85	IAML		16 35 27.3	
	comp=Z,15µm,0.6s						
UTEC	Universidad Te	1.46	85	IAML		16 35 27.3	
	comp=Z,15µm,0.6s						
OPAM	Oficina de Pla	1.46	84	eP	Pn	16 35 03.3	-0.6
OPAM	Oficina de Pla	1.46	84	eP	Pn	16 35 03.3	-0.6
IGN	Direccin Gen	1.49	84	eP	Pn	16 35 03.6	-0.7
IGN				eP	Pn	16 35 03.8	-0.5
IGN	Direccin Gen	1.49	84	eP	Pn	16 35 03.6	-0.7
IGN				eP	Pn	16 35 03.8	-0.5
UDBS	Universidad Do	1.51	84	eP	Pn	16 35 04.0	-0.5
UDBS	Universidad Do	1.51	84	eP	Pn	16 35 04.0	-0.5
MTO3	Montecristo	1.54	57	eP	Pn	16 35 04.6	-0.4
MTO3				eS	Sn	16 35 26.4	+2.1
MTO3				IAML		16 35 28.4	
	comp=Z,3µm,0.3s						
MTO3	Montecristo	1.54	57	eP	Pn	16 35 04.6	-0.4
MTO3				eS	Sn	16 35 26.4	+2.1
MTO3				IAML		16 35 28.4	
	comp=Z,3µm,0.3s						
MTO3	Montecristo	1.54	57		Pn	16 35 04.5	-0.4
LFRS	El Faro	1.59	88	eP	Pn	16 35 04.9	-0.7
LFRS	El Faro	1.59	88	eP	Pn	16 35 04.9	-0.7
LBRS	Las Brisas	1.62	84	eP	Pn	16 35 05.6	-0.4
LBRS	Las Brisas	1.62	84	eP	Pn	16 35 05.6	-0.4
ESQI	Esquipulas	1.64	53		Pn	16 35 06.2	-0.1
SJTE	Alcalda de S	1.64	88	eP	Pn	16 35 05.8	-0.5
SJTE				IAML		16 35 34.5	
	comp=Z,6µm,0.4s						
SJTE	Alcalda de S	1.64	88	eP	Pn	16 35 05.8	-0.5
SJTE				IAML		16 35 34.5	
	comp=Z,6µm,0.4s						
COEG	Centro de Oper	1.77	88	eP	Pn	16 35 07.7	-0.3
COEG	Centro de Oper	1.77	88	eP	Pn	16 35 07.7	-0.3
MRL	Marmol	1.79	33	⇑eP	Pn	16 35 09.5	+1.0

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HUEH  Huehuetenango    1.91 336       Pn      16 35 09.1 -0.9
SCLA  Alcaldia de Sa   1.92  86 eP    Pn      16 35 10.0  0.0
SCLA  Alcaldia de Sa   1.92  86 eP    Pn      16 35 10.0  0.0
COEB  Comit de Eme     2.11  92 eP    Pn      16 35 12.1 -0.5
COEB                            eS    Sn      16 35 38.0 +0.1
COEB  Comit de Eme     2.11  92 eP    Pn      16 35 12.1 -0.5
COEB                            eS    Sn      16 35 38.0 +0.1
JUCU  Jucuar¡n         2.40  97 eP    Pn      16 35 15.3 -1.3
JUCU  Jucuar¡n         2.40  97 eP    Pn      16 35 15.3 -1.3
CCIG  Comitan          3.04 333       Pn      16 35 25.1 -0.1
TGUH  Tegucigalpa,Un   3.36  81  Pn   Pn      16 35 29.1 -0.6
CRIN  San Cristobal    3.66 103       Pn      16 35 32.3 -1.3
CNGN  Cerro Negro      4.04 105       Pn      16 35 38.1 -0.7
CMIG  Matias Romero    5.35 311  P    Pn      16 35 54.2 -2.5
      comp=Z,15nm,0.3s,baz=165,slow=12,SNR=108
CMIG                             S    Sn      16 36 56.1 -0.8
      comp=Z,40nm,0.3s,baz=92,slow=14,SNR=6.6
CMIG                             LR   LR      16 38 24.2
      comp=Z,956nm,19.2s,baz=128,slow=42
CMIG  Matias Romero    5.35 311       Sn      16 36 55.1 -1.9
ACON  Acoyapa          5.62 106       Pn      16 35 58.1 -2.3
HZTE  Horizontes, Gu   5.74 119       Pn      16 36 02.4 +0.3
GB1A  Borinquen Arri   5.86 117 eP    Pn      16 36 04.4 +0.6
ORTG  Ortega, Santa    6.04 121       Pn      16 36 06.3 +0.1
GUAI  GUAI             6.04 122 eP    Pn      16 36 06.4 +0.2
GUAB  Guayabo de Bag   6.06 117 eP    Pn      16 36 06.9 +0.5
COLC  Colonia          6.10 118 eP    Pn      16 36 07.3 +0.3
DUNO  Dulce Nombre,    6.16 124       Pn      16 36 08.0 +0.1
ACAL  Aguas Claras     6.26 117 eP    Pn      16 36 09.1 -0.2
JTS   Las Juntas de    6.50 119  P    Pn      16 36 12.6 +0.2
      comp=Z,10nm,0.3s,baz=173,slow=7.9,SNR=37
JTS                              S    Sn      16 37 21.6 -3.7
      comp=Z,4.3nm,0.3s,baz=345,slow=20,SNR=0.8
JTS   Las Juntas de    6.50 119  Pn   Pn      16 36 12.4 -0.1
FORC  Fortuna          6.65 117 eP    Pn      16 36 15.4 +0.8
CAO2  Cobano, Puntar   6.70 125       Pn      16 36 15.2  0.0
COVE  Coope Vega, Sa   6.78 114       Pn      16 36 15.9 -0.4
HDC   Heredia          7.36 118       Pn      16 36 23.3 -1.0
RIMA  Rio Macho        7.69 119       Pn      16 36 28.9  0.0
BATAN Batan            7.95 115       Pn      16 36 32.5 +0.1
EDDO  Dominical        7.95 122 eP    Pn      16 36 34.6 +2.3
PEZE  Perez Zeledon,   8.04 120       Pn      16 36 34.3 +0.6
SRBA  San Rafael, Bu   8.38 120  Pn   Pn      16 36 38.9 +0.5
EDPN  Palmar Norte     8.45 122 eP    Pn      16 36 41.0 +1.8
EDBA  Buenos Aires     8.49 120 eP    Pn      16 36 40.9 +1.1
RIOS  Rincon, Osa      8.55 124       Pn      16 36 41.1 +0.5
CDITO Canoas           9.14 122       Pn      16 36 49.2 +0.5
BRU2  Volcan           9.18 120       Pn      16 36 49.6 +0.3
BCIP  Isla Barro Col  11.51 111       Pn      16 37 20.2 -0.8
SOR   Soroa           11.72  37  Pn   Pn      16 37 25.0 +1.1
MOIG  Morelia         11.74 303  Pn   Pn      16 37 25.9 +1.5
ZAIG  Zacatecas       14.52 311  Pn   Pn      16 38 02.5 +0.9
SJCC  San Jacinto, C  15.62 102  P    P       16 38 19.6 +1.0
SJCC                             IAmb IAmb    16 38 30.9
      comp=Z,49nm,1.3s
ZARC  Zaragoza, Cauc  16.70 110  Pn   Pn      16 38 29.4 +0.3
DWPF  Disney Wildern  16.85  29  P    P       16 38 36.5 +4.5
      baz=212
HKT   Hockley         16.98 345  P    P       16 38 35.8 +2.5
553A  Crawfordville   17.52  18  P    P       16 38 41.4 +2.0
346A  Big Creek Wild  17.77   3  P    Pn      16 38 43.7 +1.5
342A  Flagon Creek P  17.79 355       Pn      16 38 44.0 +1.6
342A                             IAmb IAmb    16 38 48.9
      comp=Z,48nm,0.8s
344A  Westbrook Farm  17.80 360  P    Pn      16 38 44.6 +2.1
OCAC  Ocana           17.86 105       P       16 38 43.1 -0.3
435B  Jarrell         18.27 341  P    Pn      16 38 49.5 +1.2
ROSC  El Rosal        18.33 117  P    Pn      16 38 49.4 -0.2
      comp=Z,0.8nm,0.3s,baz=276,slow=18,SNR=1.5
NATX  Nacogdoches     18.47 349  P    Pn      16 38 50.9 +0.3
VBMS  Vicksburg       18.56   0  P    Pn      16 38 54.7 +3.0
      baz=180
VBMS  Vicksburg       18.56   0  P    Pn      16 38 52.6 +0.9
352A  Blakely         18.60  16  P    Pn      16 38 53.2 +1.0
JCT   Junction City   18.81 335  P    Pn      16 38 56.4 +1.5
      baz=151
JCT   Junction City   18.81 335  P    P       16 38 54.2 +0.6
146A  Union           19.04   4  P    Pn      16 38 57.2 -0.2
146A                             IAmb IAmb    16 39 06.5
      comp=Z,54nm,0.9s
143A  Socs Landing,   19.06 358  P    Pn      16 38 57.8 +0.1
143A                             IAmb IAmb    16 39 07.2
      comp=Z,46nm,0.8s
HPIG                  19.31 316  P    P       16 39 00.1 +0.7
HPIG                             IAmb IAmb    16 39 03.6
      comp=Z,32nm,0.9s
WHTX  Lake Whitney,   19.36 342  P    Pn      16 39 01.3 +0.1
WHTX                             IAmb IAmb    16 39 16.2
      comp=Z,37nm,0.8s
Z47A  Carrollton      19.69   7  P    Pn      16 39 04.7 -0.4
Z41A  Richland Creek  19.69 355  P    Pn      16 39 04.3 -0.8
      baz=174
TXAR  Lajitas Array   19.77 325  P    Pn      16 39 05.4 -0.8
      comp=Z,0.8nm,0.3s,baz=153,slow=11,SNR=67
TXAR                             PcP  PcP     16 43 21.8 +1.6
      comp=Z,0.1nm,0.3s,baz=159,slow=3.8,SNR=3.9
TXAR  Lajitas Array   19.77 325  P    Pn      16 39 05.5 -0.7
TXAR                                  PcP     16 43 21.1 +1.0
TX31  Lajitas Ar. Si  19.77 325  P    Pn      16 39 05.6 -0.6
TX31                             IAmb IAmb    16 39 11.1
      comp=Z,33nm,0.8s
TX32  Lajitas Array   19.77 325  P    Pn      16 39 05.5 -0.7
152A  Waverly Hall    19.78  15  P    Pn      16 39 05.9 -0.3
152A                             IAmb IAmb    16 39 08.1
      comp=Z,34nm,0.8s
Z38A  Mt. Pleasant    19.99 349  P    P       16 39 06.6 +0.2
Z38A                             IAmb IAmb    16 39 11.0
      comp=Z,30nm,1.1s
H06E1 SOCORRO T-PHAS20.10 288    T    T       16 59 24.7
      SNR=13
WLAR  White Oak Lake  20.15 354  P    P       16 39 07.8 -0.3
154A  Montrose        20.19  19  P    Pn      16 39 10.7 -0.3
SDV   Santo Domingo   20.22 101  P    P       16 39 10.5 +1.3
      comp=Z,1.5nm,0.3s,baz=310,slow=6.0,SNR=6.3
SDV   Santo Domingo   20.22 101 eP    Pn      16 39 13.4 +1.6
SDV   Santo Domingo   20.22 101  P    P       16 39 10.2 +0.9
Y45A  Yeager Farm, C  20.23   3  P    Pn      16 39 11.4 -0.1
Y49A  Blount Mountai  20.57  10  P    P       16 39 13.5 +0.8
ABTX  Abilene, Hawle  20.66 338  P    P       16 39 13.6 -0.1
      baz=155,SNR=6.9
ABTX  Abilene, Hawle  20.66 338  P    P       16 39 12.6 -1.1
ABTX                             IAmb IAmb    16 39 38.5
      comp=Z,35nm,1.2s
GOGA  Godfrey         20.82  17  P    Pn      16 39 17.8 -0.6
      baz=200,SNR=6.9
GOGA  Godfrey         20.82  17  P    Pn      16 39 17.2 -1.3
GOGA                             IAmb IAmb    16 39 19.6
      comp=Z,28nm,0.9s
X40A  Basin Creek Fa  20.92 355  P    P       16 39 17.4 +1.0
      baz=174
MIAR  Mount Ida       21.05 353  P    P       16 39 17.6 -0.2
      baz=172
MIAR  Mount Ida       21.05 353  P    P       16 39 16.6 -1.2
X48A  Hartselle       21.05   8  P    P       16 39 17.7 -0.1
X48A                             IAmb IAmb    16 39 21.9
      comp=Z,33nm,0.8s
Y52A  Lilburn         21.09  15  P    P       16 39 18.5 +0.2
Y52A                             IAmb IAmb    16 39 34.2
      comp=Z,27nm,0.9s
LPIG  La Paz          21.29 302  LR   LR      16 48 13.5
      comp=Z,189nm,19.2s,baz=89,slow=38
X37A  Clayton         21.35 349       P       16 39 21.3 +0.3
X37A                             IAmb IAmb    16 39 44.5
      comp=Z,54nm,1.2s
FPAL  Fort Paine      21.38  12  P    P       16 39 21.8 +0.3
W41B  Gary Mavity, V  21.56 357  P    P       16 39 24.9 +1.7
      baz=176
WHAR  Wooly Hollow    21.68 356  P    P       16 39 25.6 +1.1
WHAR                             IAmb IAmb    16 39 48.6
      comp=Z,25nm,1.1s
W39A  Magazine        21.71 353  P    P       16 39 25.2 +0.3
      baz=172,SNR=5.1
W39A  Magazine        21.71 353  P    P       16 39 25.4 +0.5
X34A  Smith Ranch, M  21.91 344       P       16 39 28.6 +1.5
X34A                             IAmb IAmb    16 39 51.1
      comp=Z,39nm,1.0s
SWET  Sewanee         21.98  10  P    P       16 39 29.6 +1.8
SWET                             IAmb IAmb    16 39 30.9
      comp=Z,19nm,0.7s
W50A  Signal Mountai  22.08  12  P    P       16 39 29.6 +0.8
W50A                             IAmb IAmb    16 39 31.9
      comp=Z,26nm,1.1s
W52A  Murphy          22.29  15  P    P       16 39 33.4 +2.3
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W52A                             IAmb IAmb    16 39 51.2
      comp=Z,33nm,0.8s
WMOK  Wichita Mounta  22.31 342  P    P       16 39 32.7 +1.3
      baz=159
WMOK  Wichita Mounta  22.31 342  P    P       16 39 30.5 -0.9
V48A  Smith Brothers  22.35   8  P    P       16 39 31.3 -0.5
V48A                             IAmb IAmb    16 39 35.1
      comp=Z,16nm,0.8s
LCAR  Lake Charles    22.41 359  P    P       16 39 30.5 -1.8
LCAR                             IAmb IAmb    16 39 51.8
      comp=Z,18nm,0.7s
FNO   Franklin        22.43 345       P       16 39 30.8 -1.8
CPCT  Cooper Cave     22.49  13  P    P       16 39 32.9 -0.3
CPCT                             IAmb IAmb    16 39 50.3
      comp=Z,26nm,1.0s
MNTX  Cornudas Mount  22.52 326  P    P       16 39 33.6 -0.1
      baz=140,SNR=70
MNTX  Cornudas Mount  22.52 326  P    P       16 39 32.6 -1.1
WVT   Waverly         22.61   6  P    P       16 39 34.9 +0.3
TUL1  Leonard         22.71 349  P    P       16 39 34.0 -1.6
      baz=167
TUL1  Leonard         22.71 349       P       16 39 33.4 -2.2
TUL1                             IAmb IAmb    16 39 59.4
      comp=Z,28nm,1.0s
CLTN  Cedars of Leba  22.77   9  P    P       16 39 35.5 -0.7
CLTN                             IAmb IAmb    16 39 57.5
      comp=Z,18nm,0.9s
U40A  Yellville       22.77 355  P    P       16 39 36.2 -0.1
      baz=174,SNR=9.7
U40A  Yellville       22.77 355  P    P       16 39 34.9 -1.3
U40A                             IAmb IAmb    16 39 38.3
      comp=Z,16nm,0.8s
HHAR  Hobbs           22.80 353  P    P       16 39 34.7 -1.9
HHAR                             IAmb IAmb    16 40 04.9
      comp=Z,28nm,1.1s
BCOK  Bluff Creek, N  22.86 345       P       16 39 35.3 -1.8
BCOK                             IAmb IAmb    16 39 38.0
      comp=Z,27nm,0.8s
TKL   Tuckaleechee C  22.86  15  P    P       16 39 33.9 -3.3
      comp=Z,16nm,1.0s,baz=191,slow=11,SNR=7.7
TKL                              LR   LR      16 49 30.2
      comp=Z,311nm,18.1s,baz=198,slow=40
TKL   Tuckaleechee C  22.86  15  P    P       16 39 35.6 -1.6
TKL                              IAmb IAmb    16 39 58.8
      comp=Z,34nm,1.1s
U38A  Gravette        23.01 352  P    P       16 39 38.5 -0.2
U38A                             IAmb IAmb    16 40 07.3
      comp=Z,20nm,1.1s
V52A  Sevierville     23.08  15  P    P       16 39 39.0 -0.4
V52A                             IAmb IAmb    16 39 42.6
      comp=Z,20nm,1.0s
KMSC  Kings Mountain  23.08  20  P    P       16 39 41.8 +2.4
      baz=204
PBMO  Poplar Bluff    23.11   1  P    P       16 39 38.9 -0.7
PBMO                             IAmb IAmb    16 39 52.2
      comp=Z,18nm,0.9s
U49A  Red Boiling Sp  23.27  10  P    P       16 39 40.0 -1.2
T42A  Van Buren       23.37 359  P    P       16 39 41.3 -0.7
MGMO  Mountain Grove  23.53 357  P    P       16 39 42.6 -1.0
T47A  Sharon Grove    23.54   7  P    P       16 39 42.6 -1.0
W57A  Gilead          23.56  22  P    P       16 39 45.5 +1.7
W57A                             IAmb IAmb    16 40 02.5
      comp=Z,33nm,1.4s
TZTN  Tazewell        23.76  14  P    P       16 39 47.6 +2.0
      baz=197
TZTN  Tazewell        23.76  14  P    P       16 39 45.6  0.0
TZTN                             IAmb IAmb    16 39 49.7
      comp=Z,21nm,1.0s
BLOK  Blackwell       23.82 347       P       16 39 45.1 -1.1
BLOK                             IAmb IAmb    16 40 05.8
      comp=Z,18nm,0.9s
T35A  Sooner Cattle   23.82 348       P       16 39 44.6 -1.6
T35A                             IAmb IAmb    16 39 48.0
      comp=Z,15nm,0.8s
ATAH  Atahualpa       23.92 149  P    P       16 39 49.6 +1.8
      comp=Z,4.7nm,0.8s,baz=27,slow=4.5,SNR=3.3
T50A  Nancy           23.93  12  P    P       16 39 46.1 -1.1
T50A                             IAmb IAmb    16 39 50.3
      comp=Z,19nm,0.8s
S44A  Carbondale      24.06   3  P    P       16 39 47.8 -0.5
S44A                             IAmb IAmb    16 40 02.8
      comp=Z,21nm,0.8s
SIUC  Southern Illin  24.08   3  P    P       16 39 48.0 -0.6
SIUC                             IAmb IAmb    16 40 14.7
      comp=Z,38nm,1.1s
S39A  Bolivar         24.14 355  P    P       16 39 48.5 -0.6
U54A  Nelsons Funny   24.20  18  P    P       16 39 50.2 +0.5
U54A                             IAmb IAmb    16 39 53.5
      comp=Z,23nm,0.7s
HSIG                  24.28 312  P    P       16 39 51.8 +1.3
CCM   Cathedral Cave  24.39 359  P    P       16 39 51.8 +0.5
      baz=179
CCM   Cathedral Cave  24.39 359  P    P       16 39 51.5 +0.2
KAN06 Argonia West S  24.43 346  P    P       16 39 50.5 -1.2
KAN06                            IAmb IAmb    16 39 53.3
      comp=Z,17nm,0.6s
KAN08 Anthony NE Sta  24.44 346  P    P       16 39 51.1 -0.7
KAN08                            IAmb IAmb    16 39 53.7
      comp=Z,16nm,0.6s
V58A  Windy Hill, Pi  24.46  23  P    P       16 39 52.5 +0.5
V58A                             IAmb IAmb    16 39 54.8
      comp=Z,16nm,0.8s
121A  Cookes Peak, D  24.50 323  P    P       16 39 54.9 +2.3
      baz=136,SNR=56
121A  Cookes Peak, D  24.50 323  P    P       16 39 54.0 +1.4
R40A  Maddies Statio  24.66 357  P    P       16 39 52.9 -0.9
R40A                             IAmb IAmb    16 40 10.0
      comp=Z,18nm,0.8s
S51A  Beattyville     24.79  14  P    P       16 39 54.0 -1.0
S51A                             IAmb IAmb    16 40 11.0
      comp=Z,21nm,1.1s
WCI   Wyandotte Cave  24.87   8  P    P       16 39 57.7 +2.0
      baz=190
WCI   Wyandotte Cave  24.87   8  P    P       16 39 54.8 -0.8
BNM   Barren Site     25.07 328  P    P       16 39 57.8 -0.1
R49A  Shelbyville     25.11  10  P    P       16 39 57.0 -0.8
R49A                             IAmb IAmb    16 40 00.3
      comp=Z,14nm,0.8s
R50A  Paris           25.25  12  P    P       16 40 00.6 +1.4
R50A                             IAmb IAmb    16 40 03.7
      comp=Z,15nm,0.8s
LENM  Lemitar         25.27 327  P    P       16 40 00.6 +1.0
ANMO  Albuquerque     25.61 329  P    P       16 40 02.1 -0.6
      comp=Z,3.4nm,0.9s,baz=165,slow=12,SNR=6.2
ANMO  Albuquerque     25.61 329  P    P       16 40 03.8 +1.1
      baz=142
ANMO  Albuquerque     25.61 329  P    P       16 40 03.5 +0.8
PCRV  Puerto La Cruz  25.72  95  LR   LR      16 50 02.2
      comp=Z,594nm,19.8s,slow=36
KSU1  Kansas State U  25.96 349  P    P       16 40 08.2 +2.6
      baz=167
KSU1  Kansas State U  25.96 349  P    P       16 40 06.9 +1.3
KSU1                             IAmb IAmb    16 40 08.9
      comp=Z,16nm,0.7s
Q51A  Peebles         26.18  13  P    P       16 40 06.9 -0.6
Q51A                             IAmb IAmb    16 40 11.5
      comp=Z,21nm,0.8s
TUC   Tucson          26.18 319  P    P       16 40 09.1 +1.3
      baz=131
TUC   Tucson          26.18 319  P    P       16 40 07.4 -0.4
X18A  Snowflake       27.19 323  P    P       16 40 17.8 +0.8
214A  Organ Pipe Nat  27.30 316  P    P       16 40 19.9 +2.1
      baz=127
214A  Organ Pipe Nat  27.30 316  P    P       16 40 18.6 +0.8
SDCO  Great Sand Dun  27.45 334  P    P       16 40 20.5 +1.2
N49A  Columbus Grove  27.84  11  P    P       16 40 23.6 +1.2
N49A                             IAmb IAmb    16 40 38.3
      comp=Z,18nm,1.4s
X16A  Lo Mia Camp, P  28.00 321  P    P       16 40 25.4 +1.3
X16A                             IAmb IAmb    16 40 27.6
      comp=Z,9.4nm,0.8s
S22A  4UR Ranch, Cre  28.04 332  P    P       16 40 25.8 +1.2
      baz=145
MVCO  Mesa Verde      28.41 329  P    P       16 40 29.1 +1.3
      baz=141
MVCO  Mesa Verde      28.41 329  P    P       16 40 28.6 +0.8
WUAZ  Wupatki         28.71 323  P    P       16 40 32.6 +2.1
      baz=134,SNR=13
WUAZ  Wupatki         28.71 323  P    P       16 40 31.6 +1.2
WUAZ                             IAmb IAmb    16 40 34.0
      comp=Z,12nm,0.9s
GLA   Glamis          29.32 315  P    P       16 40 37.7 +1.9
GLA                              IAmb IAmb    16 40 39.1
      comp=Z,20nm,1.2s
PDMCI Parker Dam,Lak  29.62 318  P    P       16 40 40.6 +2.3
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      baz=128,SNR=7.3
U15A  North Rim       29.88 323  P    P       16 40 42.2 +1.2
U15A                             IAmb IAmb    16 40 44.7
      comp=Z,11nm,1.0s
RMX   La Rumorosa     29.93 314  P    P       16 40 41.6 +0.3
W13A  Hualapai Mount  29.96 320  P    P       16 40 42.9 +1.3
BC3   Big Chuckawall  30.10 316  P    P       16 40 45.0 +2.3
      baz=126,SNR=12
IRM   Iron Mountain   30.19 317  P    P       16 40 45.8 +2.4
      baz=127,SNR=7.1
KNB   Kanab           30.59 324  P    P       16 40 49.0 +1.8
KNB                              IAmb IAmb    16 40 50.4
      comp=Z,16nm,0.9s
PKCU  Pink Cliffs     30.60 325  P    P       16 40 49.5 +2.1
BELC  Belle Mtn. Jos  30.67 316  P    P       16 40 49.8 +2.1
      baz=125
PFO   Pinyon Flats O  30.76 315  P    P       16 40 48.9 +0.3
      comp=Z,2.1nm,0.8s,baz=63,slow=0.8,SNR=3.8
PFO                              LR   LR      16 55 09.8
      comp=Z,206nm,19.7s,baz=134,slow=40
PFO   Pinyon Flats O  30.76 315  P    P       16 40 50.0 +1.5
LCMT  Little Creek M  30.84 323  P    P       16 40 50.7 +1.4
LCMT                             IAmb IAmb    16 40 52.8
      comp=Z,11nm,1.0s
SRU   San Rafael Swe  30.89 329  P    P       16 40 50.9 +1.2
GMRC  Granite Mounta  30.90 317  P    P       16 40 51.7 +1.8
      baz=127,SNR=8.5
MTPU  Mount Pierson   30.96 326  P    P       16 40 52.4 +1.8
MTPU                             IAmb IAmb    16 40 54.9
      comp=Z,17nm,0.9s
Q16A  Castle Valley   31.07 328  P    P       16 40 52.9 +1.6
Q16A                             IAmb IAmb    16 40 54.3
      comp=Z,16nm,1.3s
P18A  Preston Nutter  31.15 330  P    P       16 40 53.4 +1.3
SZCU  Shurtz Canyon   31.15 324  P    P       16 40 53.5 +1.5
SZCU                             IAmb IAmb    16 40 55.4
      comp=Z,13nm,1.0s
P17A  Butcher Ranch,  31.27 329  P    P       16 40 53.5 +0.5
P17A                             IAmb IAmb    16 40 56.6
      comp=Z,10nm,1.0s
CCUT  Cedar City      31.27 324  P    P       16 40 54.5 +1.3
CCUT                             IAmb IAmb    16 40 56.9
      comp=Z,15nm,1.0s
MSU   Marysvale       31.30 326  P    P       16 40 54.5 +1.2
MVU   Marysvale       31.31 326  P    P       16 40 54.3 +0.8
HEC   Hector,Ludlow   31.38 317  P    P       16 40 56.4 +2.5
      baz=126,SNR=8.8
TUQ   Turquoise Moun  31.47 318  P    P       16 40 57.0 +2.2
      baz=128
TCRU  Three Creeks R  31.51 326  P    P       16 40 56.7 +1.4
TCRU                             IAmb IAmb    16 40 58.7
      comp=Z,14nm,0.9s
K57A  Scipio Center   31.54  20  P    P       16 40 56.5 +1.3
K57A                             IAmb IAmb    16 41 12.9
      comp=Z,23nm,1.2s
SHPR  Sheep Range     31.65 321  P    P       16 40 58.0 +1.6
BOAV  Boa Vista       31.83 108 eP    P       16 41 07.0 +8.9
J56A  Wolcott         31.91  19  P    P       16 40 59.7 +1.3
GSC   Goldstone, Bar  31.97 317  P    P       16 41 00.9 +1.8
      baz=126
GSC   Goldstone, Bar  31.97 317  P    P       16 41 00.3 +1.2
MPU   Maple Canyon    32.13 329  P    P       16 41 01.2 +0.6
MPU                              IAmb IAmb    16 41 03.7
      comp=Z,6.7nm,0.9s
PRN   Pahroc Range    32.17 322  P    P       16 41 01.9 +0.9
PSUT  Pine Spring     32.24 325  P    P       16 41 02.8 +1.2
PSUT                             IAmb IAmb    16 41 05.2
      comp=Z,7.7nm,0.8s
QSM   Queen of Sheba  32.40 318  P    P       16 41 04.0 +1.1
QSM                              IAmb IAmb    16 41 05.5
      comp=Z,10nm,1.2s
GWY   Greenwater Val  32.40 319  P    P       16 41 04.4 +1.4
EDW2  Edwards Air Fo  32.52 315  P    P       16 41 06.2 +2.2
      baz=124
LRMC  Laurel Mtn Rad  32.65 317  P    P       16 41 07.4 +2.2
      baz=125,SNR=9.3
DELO  Deloro Mine     32.80  17  P    P       16 41 07.0 +0.8
DELO                             IAmb IAmb    16 41 08.3
      comp=Z,9.5nm,0.8s
SPR3  Spring Creek 3  32.83 325  P    P       16 41 07.2 +0.3
SPR3                             IAmb IAmb    16 41 09.5
      comp=Z,11nm,0.9s
SPR3                                  PcP     16 43 51.1 +0.5
DUG   Dugway, Tooele  32.87 328  P    P       16 41 08.7 +1.7
      baz=138
DUG   Dugway, Tooele  32.87 328  P    P       16 41 08.2 +1.1
R11A  Troy Canyon, C  33.11 323  P    P       16 41 11.5 +2.3
      baz=132,SNR=15
R11A  Troy Canyon, C  33.11 323  P    P       16 41 10.8 +1.6
R11A                             IAmb IAmb    16 41 12.7
      comp=Z,8.0nm,1.1s
ISA   Isabella, Lake  33.29 316  P    P       16 41 13.2 +2.6
      baz=124,SNR=6.4
ISA   Isabella, Lake  33.29 316  P    P       16 41 12.5 +1.8
ISA                              IAmb IAmb    16 41 14.3
      comp=Z,11nm,1.1s
HWUT  Hardware Ranch  33.32 331  P    P       16 41 12.5 +1.5
HWUT                                  PcP     16 43 51.7  0.0
GRAC  Grapevine Rang  33.34 319  P    P       16 41 13.8 +2.7
      baz=127
PDAR  Pinedale Array  33.34 334  P    P       16 41 11.0 -0.3
      comp=Z,0.5nm,0.6s,baz=99,slow=5.8,SNR=3.2
PDAR                             PcP  PcP     16 43 52.3 +0.5
      comp=Z,0.3nm,0.4s,baz=117,slow=5.2,SNR=5.3
CWC   Cottonwood Cre  33.47 318  P    P       16 41 14.1 +1.7
      baz=126
BGU   Big Grassy Mou  33.52 329  P    P       16 41 13.2 +0.5
ETMB  Extrema         33.62 132 eP    P       16 41 13.0 -0.7
LCH   Last Change Ra  33.66 319  P    P       16 41 15.3 +1.3
VES   Vestal, Richgr  33.80 316  P    P       16 41 17.3 +2.3
      baz=124,SNR=15
TPH   Tonopah         33.92 321  P    P       16 41 17.6 +1.4
HVU   Hansel Valley   34.03 330  P    P       16 41 17.9 +0.7
HVU                              IAmb IAmb    16 41 20.5
      comp=Z,10nm,1.2s
MACA  Manacapuru-AM   34.10 117 eP    P       16 41 18.9 +1.0
REDW  Red Top Meadow  34.38 334  P    P       16 41 20.3  0.0
PAGB  Antelope Grade  34.53 315  P    P       16 41 22.3 +0.9
ELK   Elko            34.55 326  P    P       16 41 22.1 +0.4
ELK                              IAmb IAmb    16 41 25.8
      comp=Z,6.2nm,0.8s
MOOW  Moose Ponds     34.65 334  P    P       16 41 22.8 +0.2
NV11  Mina Array Sit  34.71 321  P    P       16 41 24.4 +1.3
NVAR  Mina Array Bea  34.80 320  P    P       16 41 25.6 +1.7
      comp=Z,15nm,0.8s,baz=133,slow=8.3,SNR=97
NVAR                             PcP  PcP     16 43 57.1 +1.1
      comp=Z,1.2nm,0.6s,baz=145,slow=3.6,SNR=5.5
NVAR  Mina Array Bea  34.80 320  P    P       16 41 25.2 +1.2
NVAR                                  PcP     16 43 56.5 +0.4
MDPB  Devils Postpil  34.82 319  P    P       16 41 24.1  0.0
MDPB                             IAmb IAmb    16 41 27.6
      comp=Z,11nm,1.0s
LHV   Little Huntoon  34.82 320  P    P       16 41 25.7 +1.9
RYN   Ryan            35.06 320  P    P       16 41 27.5 +1.4
RYN                              IAmb IAmb    16 41 29.5
      comp=Z,5.2nm,0.8s
KVN   Kaiserville     35.06 321  P    P       16 41 27.4 +1.3
KVN                              IAmb IAmb    16 41 29.3
      comp=Z,12nm,0.9s
SAML  Samuel          35.31 128 eP    P       16 41 28.5 +0.3
SAML  Samuel          35.31 128  P    P       16 41 28.1 -0.1
SAML                             IAmb IAmb    16 41 42.9
      comp=Z,8.3nm,0.8s
BMN   Battle Mountai  35.44 324  P    P       16 41 30.2 +0.9
BMN                              IAmb IAmb    16 41 32.4
      comp=Z,10nm,0.8s
YERR  Yerington       35.72 320  P    P       16 41 32.7 +0.9
CMB   Columbia Colle  35.89 318  P    P       16 41 34.5 +1.4
CMB                              IAmb IAmb    16 41 36.4
      comp=Z,6.6nm,0.9s
PNTR  Pine Nut        36.01 320  P    P       16 41 36.0 +1.7
PNTR                             IAmb IAmb    16 41 37.9
      comp=Z,11nm,0.9s
HLID  Hailey          36.17 330  P    P       16 41 37.6 +2.0
      baz=138,SNR=5.0
HLID  Hailey          36.17 330  P    P       16 41 36.7 +1.2
PAHR  Pah Rah Range   36.25 321  P    P       16 41 37.0 +0.7
PAHR                             IAmb IAmb    16 41 39.5
      comp=Z,8.7nm,1.0s
MCMT  McKenzie Canyo  36.42 333  P    P       16 41 38.7 +1.0
ULM   Lac du Bonnet   36.82 354  P    P       16 41 38.2 -2.5
      comp=Z,4.1nm,0.8s,baz=175,slow=11,SNR=3.7
ULM   Lac du Bonnet   36.82 354  P    P       16 41 38.7 -2.0
ULM                              IAmb IAmb    16 41 43.0
      comp=Z,16nm,1.4s
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LRM	Limekiln Ridge	37.04	335	P	P	16 41 43.1	+0.2
LPAZ	La Paz	37.12	142	P	P	16 41 44.5	+0.1
	comp=Z,0.2nm,0.3s,baz=302,slow=15,SNR=1.9						
ORV	Oroville	37.48	319	P	P	16 41 48.3	+1.8
ORV				IAmb	IAmb	16 41 49.3	
	comp=Z,14nm,1.3s						
WVOR	Wild Horse Val	37.56	325	P	P	16 41 48.1	+0.8
WVOR				IAmb	IAmb	16 41 52.5	
	comp=Z,11nm,0.9s						
PLID	Pearl Lake	38.06	331	P	P	16 41 51.9	+0.3
J08A	Circle Bar Ran	38.09	327	P	P	16 41 52.4	+0.6
O03E	Paynes Creek	38.09	320	P	P	16 41 53.0	+1.2
	baz=126,SNR=5.3						
MOD	Modoc Plateau	38.16	323	P	P	16 41 53.0	+0.6
MOD				IAmb	IAmb	16 41 54.5	
	comp=Z,9.5nm,0.9s						
O02D	Mt. Diablo Mer	38.64	319	P	P	16 41 56.7	+0.3
	baz=124						
WDC	Whiskeytown Da	38.72	320	P	P	16 41 56.8	-0.1
ITTB	Itaituba	39.01	115	*e*P	P	16 42 06.7	+7.0
I07A	Izee	39.13	327	P	P	16 42 00.9	+0.4
I07A				IAmb	IAmb	16 42 04.1	
	comp=Z,8.4nm,1.0s						
MALB	Monte Alegre	39.24	110	*e*P	P	16 42 10.3	+8.7
F10A	Beach Ranch, E	39.30	331	P	P	16 42 02.1	+0.2
F10A				IAmb	IAmb	16 42 05.9	
	comp=Z,15nm,1.1s						
YBH	Yreka Blue Hor	39.49	321	P	P	16 42 03.2	-0.2
YBH				IAmb	IAmb	16 42 05.6	
	comp=Z,7.8nm,0.9s						
L04D	Klamath Falls	39.53	322	P	P	16 42 04.8	+1.0
	baz=127						
PINE	Pine Mountain	39.72	325	P	P	16 42 05.7	+0.2
J04D	Umpqua Nationa	40.04	324	P	P	16 42 10.3	+2.2
	baz=128						
VILB	Vilhena	40.10	130	*e*P	P	16 42 09.7	+1.0
I05D	Terrebonne, OR	40.29	326	P	P	16 42 13.6	+3.5
	baz=130						
G05D	Wamic, OR	40.87	327	P	P	16 42 16.5	+1.7
	baz=131						
NEW	Newport	40.95	333	P	P	16 42 15.3	0.0
H04A	Detroit Lake	40.98	325	P	P	16 42 16.0	+0.3
I03D	Drain, OR	41.03	323	P	P	16 42 17.1	+1.1
	baz=127						
J01E	Myrtle Point	41.05	322	P	P	16 42 17.4	+1.2
	baz=126						
HOOD	Mount Hood Mea	41.10	326	P	P	16 42 17.7	+0.9
BUCK	Buck Mountain	41.13	324	P	P	16 42 18.0	+1.1
KEBM	Edson Butte	41.13	322	P	P	16 42 18.3	+1.3
H04D	Lebanon	41.19	325	P	P	16 42 17.6	+0.3
	baz=128						
F05D	White Salmon	41.37	327	P	P	16 42 20.3	+1.5
	baz=131						
SIV	San Ignacio	41.48	134	P	P	16 42 20.2	+0.2
	comp=Z,3.1nm,0.9s,baz=298,slow=9.6,SNR=11						
LTY	Liberty	41.88	329	P	P	16 42 23.0	-0.1
LON	Longmire	42.12	328	P	P	16 42 25.5	+0.6
LON				IAmb	IAmb	16 42 28.3	
	comp=Z,8.4nm,0.9s						
E03A	Lebam	42.91	327	P	P	16 42 33.2	+1.9
SCHQ	Schefferville	45.20	19	P	P	16 42 47.5	-2.1
	comp=Z,6.4nm,0.8s,baz=217,slow=11,SNR=5.8						
SCHQ	Schefferville	45.20	19	IAmb	IAmb	16 43 12.1	
	comp=Z,16nm,1.1s						
H03N2	Juan Fernandez	48.07	167	T	T	17 34 31.1	
	baz=346,slow=76,SNR=12						
H03N1	Juan Fernandez	48.08	167	T	T	17 34 31.6	
	baz=346,slow=76,SNR=13						
H03N3	Juan Fernandez	48.09	167	T	T	17 34 30.2	
	baz=346,slow=76,SNR=10						
YKA	Yellowknife Ar	51.74	346	P	P	16 43 38.0	-1.6
	comp=Z,0.7nm,0.5s,baz=187,slow=5.0,SNR=4.3						
NBIT	Itapeh - BA	58.09	117	*e*P	P	16 44 38.5	+12
LOGN	Logan Glacier	59.50	334	P	P	16 44 35.5	0.0
BCAR	Beaver Creek A	60.94	336	P	P	16 44 45.1	-0.1
L27K	Beaver Creek,	60.95	336	P	P	16 44 45.3	0.0
GLB	Gilahina Butte	60.99	334	P	P	16 44 46.0	+0.5
GLB				IAmb	IAmb	16 44 52.0	
	comp=Z,9.4nm,1.2s						
BMRM	Bremner River	61.12	333	P	P	16 44 47.0	+0.5
N25K	Chitina, Valde	61.40	334	P	P	16 44 49.2	+0.8
ILAR	Eielson Array	63.73	337	P	P	16 45 02.0	-1.7
	comp=Z,0.4nm,0.5s,baz=169,slow=4.8,SNR=9.7						
ILAR	Eielson Array	63.73	337	P	P	16 45 02.7	-1.0
KDAK	Kodiak Island	63.75	328	P	P	16 45 02.7	-1.2
OHAK	Old Harbor	63.95	327	P	P	16 45 05.4	+0.1
RND	Reindeer	63.95	335	P	P	16 45 05.5	+0.2
RND				IAmb	IAmb	16 45 25.6	
	comp=Z,14nm,1.4s						
BMAR	Burnt Mountain	64.13	340	P	P	16 45 05.5	-0.8
H24K	Noodor Dome	64.57	337	P	P	16 45 08.5	-0.8
SKT	Skwentna	64.58	333	P	P	16 45 08.6	-0.7
I23K	Minto, Yukon-K	64.85	336	P	P	16 45 10.6	-0.4
BPAW	Bear Paw Mtn.	65.09	335	P	P	16 45 11.8	-0.9
PPLA	Purkeypile	65.18	334	P	P	16 45 12.5	-0.8
H23K	Yukon River	65.19	337	P	P	16 45 12.7	-0.5
H23K				IAmb	IAmb	16 45 24.9	
	comp=Z,8.5nm,1.5s						
MLY	Manley	65.34	336	P	P	16 45 13.9	-0.3
O18K	Koktuh Hills	65.64	330	P	P	16 45 15.8	-0.4
K20K	Telida	66.14	334	P	P	16 45 18.3	-1.1
K20K				IAmb	IAmb	16 45 28.6	
	comp=Z,8.5nm,1.4s						
H21K	Melozitna Rive	66.38	336	P	P	16 45 19.9	-1.0
H21K				IAmb	IAmb	16 45 39.7	
	comp=Z,14nm,1.5s						
J20K	Nowinta River	66.42	335	P	P	16 45 20.8	-0.4
J20K				IAmb	IAmb	16 45 26.9	
	comp=Z,10nm,1.4s						
USHA	Ushuaia	70.70	167	LR	LR	17 10 02.7	
	comp=Z,632nm,18.8s,baz=262,slow=30						
UNV	Unalaska Valle	70.79	323	P	P	16 45 48.9	+0.3
ADK	Adak	76.99	321	P	P	16 46 24.9	+0.1
KIWB	Kanaga Island	77.28	321	P	P	16 46 26.9	+0.5
TIC	Toumodi	84.28	85	*e*PKP2	P	16 47 03.4	-1.2
LIC	Lamto	84.37	85	*e*PKP2	P	16 47 03.7	-1.3
	comp=Z,17nm,0.7s						
DBIC	Dimbokro	84.44	84	P	P	16 47 02.4	-3.0
	comp=Z,2.9nm,0.6s,baz=293,slow=6.2,SNR=6.1						
KIC	Kosan Boka	84.62	85	*e*PKP2	P	16 47 04.7	-1.6
	comp=Z,6.1nm,0.5s						
TORD	Torodi Ar. Bea	89.25	77	P	P	16 47 25.9	-2.8
	comp=Z,0.4nm,0.6s,baz=302,slow=4.0,SNR=2.5						
WRA	Warramunga Arr	136.51	255	PKhKP	PKPpre	16 53 51.7	
	comp=Z,1.4nm,0.9s,baz=71,slow=1.1,SNR=4.1						
ASAR	Alice Springs	136.71	250	PKP	PKPdf	16 53 54.3	-0.6
	comp=Z,0.5nm,0.8s,baz=104,slow=1.1,SNR=1.7						

*IDC **08** 16:37:59.5±0.5, 6°.88N×94°.66E, h0^{km}, mb3.9/18, mb1 4.0/19, mb1mx3.9/40, mbtmp3.9/19, ML3.9/1, MS3.3/1, Ms1 3.3/1, ms1mx3.2/59, Error ellipse: s-maj=28.3km s-min=12.3km az=53.0*

*NEIC **08** 16:38:01.9±1.9, 6°.82N±0°.08×94°.6E±0°.1, h12^{km}±4^{km}, mb4.4/24, Error ellipse: s-maj=17.0km s-min=10.9km az=66.0*

ISC 08 16:38:03.4±0.5, 6°.82N±0°.08×94°.6E±0°.1, h26^{km}, n58, σ1^{s}06/56, mb4.2/27, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	Lhok Sumawe	2.80	124		Pn	16 38 46.3	-0.3
SRIT	Nakonsritamara	5.24	70	Pn	Pn	16 39 19.2	-1.0
PSI	Prapat	5.86	133	Pn	Pn	16 39 30.2	+1.4
	2.9nm,0.3s,baz=338,slow=16,SNR=13						
PSI				LR	LR	16 42 27.5	
	comp=Z,293nm,20.1s,baz=290,slow=45						
RPSI	Rantau Prapat	5.93	134		Pn	16 39 30.2	+0.5
GSI	Gunungsitoli	6.22	152	Pn	Pn	16 39 33.3	-0.4
PBKT	Sadao Pong	11.51	32	Pn	Pn	16 40 46.4	+0.2
CM31	Chiang Mai Arr	12.31	20	Pn	Pn	16 40 59.3	+2.1
CMAR	Chiang Mai Arr	12.31	20	Pn	Pn	16 40 59.2	+2.1
	0.2nm,0.3s,baz=212,slow=14,SNR=5.5						
CMAR	Chiang Mai Arr	12.31	20		Pn	16 40 58.4	+1.3
H08S3	Diego Garcia H	26.34	237	T	T	17 10 15.5	
	baz=56,slow=75,SNR=44						
H08S2	Diego Garcia H	26.34	237	T	T	17 10 16.0	
	baz=56,slow=75,SNR=35						
H08S1	Diego Carcia H	26.35	237	T	T	17 10 13.3	
	baz=56,slow=75,SNR=15						
NIL	Nilore	33.23	326	P	P	16 44 36.5	-2.0
BTK	Batken	39.38	331	P	P	16 45 32.1	+1.0
BTK				IAmb	IAmb	16 45 39.5	
	comp=Z,5.6nm,0.9s						
FITZ	Fitzroy Crossi	39.38	129	P	P	16 45 30.2	-1.0
	comp=Z,1.2nm,0.5s,baz=323,slow=7.9,SNR=7.6						
MK31	Makanchi Array	41.21	347	P	P	16 45 45.5	-0.6
MKAR	Makanchi Array	41.21	347	P	P	16 45 45.5	-0.6
	comp=Z,1.4nm,0.8s,baz=163,slow=8.9,SNR=8.5						
MKAR	Makanchi Array	41.21	347	P	P	16 45 44.1	-1.9
MAKZ	Makanchi	41.30	347	P	P	16 45 46.0	-0.7
MAKZ				IAmb	IAmb	16 45 56.6	
	comp=Z,5.7nm,1.4s						
KK31	Karatay Array	41.91	333	P	P	16 45 51.7	-0.1
KKAR	Karatay Array	41.91	333	P	P	16 45 51.1	-0.8
SONM	Songino Array	42.08	12	P	P	16 45 54.3	+1.0
	comp=Z,1.1nm,0.8s,baz=192,slow=8.8,SNR=6.4						
SONM	Songino Array	42.08	12	IAmb	IAmb	16 46 03.7	
	comp=Z,2.4nm,1.2s						
KURBB	Kurchatov Arra	45.67	346	P	P	16 46 21.9	-0.1
	comp=Z,3.7nm,0.8s,baz=166,slow=7.0,SNR=13						
KURK	Kurchatov	45.74	346	P	P	16 46 23.1	+0.7
KURK				IAmb	IAmb	16 46 29.5	
	comp=Z,6.0nm,1.1s						
WB0	Warramunga Arr	47.23	125	P	P	16 46 33.0	-1.6
WB0				IAmb	IAmb	16 47 01.5	
	comp=Z,6.3nm,1.5s						
WRA	Warramunga Arr	47.27	125	P	P	16 46 34.2	-0.8
	comp=Z,0.8nm,0.7s,baz=305,slow=8.5,SNR=11						
WRA				PcP	PcP	16 48 05.8	-0.2
	comp=Z,0.3nm,0.5s,baz=314,slow=2.5,SNR=4.5						
WB2	Warramunga Arr	47.28	125	P	P	16 46 33.4	-1.6
WB2				IAmb	IAmb	16 46 45.0	
	comp=Z,2.0nm,0.8s						
WR0	Warramunga Arr	47.44	125	P	P	16 46 35.0	-1.2
WR0				IAmb	IAmb	16 46 40.9	
	comp=Z,3.6nm,1.1s						
ZALV	Zalesovo Beam	47.65	352	P	P	16 46 37.1	-0.3
	comp=Z,0.5nm,0.3s,baz=170,slow=9.9,SNR=4.3						
ASAR	Alice Springs	48.88	130	P	P	16 46 46.9	-0.5
	comp=Z,0.6nm,0.6s,baz=300,slow=7.6,SNR=12						
ASAR				PcP	PcP	16 48 11.6	-0.1
	comp=Z,1.0nm,0.7s,baz=314,slow=3.4,SNR=8.1						
AS31	Alice Springs	48.88	130	P	P	16 46 46.1	-1.3
BVAR	Borovoye Array	50.13	341	P	P	16 46 57.0	+0.6
	comp=Z,2.2nm,0.8s,baz=189,slow=17,SNR=6.4						
BRVK	Borovoye	50.19	341	P	P	16 46 57.7	+0.8
BRVK				IAmb	IAmb	16 47 03.8	
	comp=Z,4.6nm,1.0s						
ABKAR	Akbulak array	51.38	332	P	P	16 47 05.8	-0.1
STKA	Stephens Creek	59.04	134	P	P	16 48 02.5	+1.0
	comp=Z,1.3nm,0.9s,baz=302,slow=18,SNR=2.6						
STKA	Stephens Creek	59.04	134	P	P	16 48 01.1	-0.3
BR131	Keskin Array S	63.47	311	P	P	16 48 29.4	-2.2
BR131				IAmb	IAmb	16 48 51.8	
	comp=Z,2.7nm,0.9s						
BRTR	Keskin Array B	63.47	311	P	P	16 48 30.1	-1.4
	comp=Z,0.6nm,0.7s,baz=130,slow=7.7,SNR=5.2						
BRTR	Keskin Array B	63.47	311	P	P	16 48 29.9	-1.7
CAN	Canberra	66.11	133	P	P	16 48 48.4	-0.3
TIXI	Tiksi	68.16	11	P	P	16 49 00.5	-0.5
TIXI				IAmb	IAmb	16 49 08.8	
	comp=Z,3.7nm,0.8s						
AKASG	Malin Array Be	69.27	322	P	P	16 49 07.7	-0.6
	comp=Z,0.1nm,0.3s,baz=90,slow=7.4,SNR=2.6						
AKBB	Malin Array Si	69.27	322	P	P	16 49 09.0	+0.7
AKBB				IAmb	IAmb	16 49 15.1	
	comp=Z,4.3nm,1.0s						
LVZ	Lovozero	72.70	340	P	P	16 49 29.5	+0.6
FIA1	FINESS Array S	73.86	332	P	P	16 49 35.2	-0.5
FINES	FINESS Array B	73.86	332	P	P	16 49 35.1	-0.6
	comp=Z,1.1nm,0.5s,baz=93,slow=5.0,SNR=16						
BOSA	Boshof	75.44	238	P	P	16 49 47.6	+1.9
	comp=Z,1.5nm,0.5s,baz=86,slow=3.7,SNR=9.1						
BOSA	Boshof	75.44	238	P	P	16 49 47.0	+1.3
BOSA				IAmb	IAmb	16 50 14.3	
	comp=Z,12nm,1.4s						
ARCES	ARCESS Array B	76.41	340	P	P	16 49 49.5	-0.9
	comp=Z,1.7nm,0.6s,baz=26,slow=3.4,SNR=6.3						
GEC2	GERESS Array S	78.92	318	P	P	16 50 05.2	+0.4
GEC2				IAmb	IAmb	16 50 12.7	
	comp=Z,5.9nm,1.4s						
GERES	GERESS Array B	78.92	318	P	P	16 50 05.0	+0.1
	comp=Z,0.8nm,0.5s,baz=91,slow=5.5,SNR=12						
NOA	NORSAR Array B	80.87	331	P	P	16 50 15.3	+0.2
	comp=Z,0.9nm,0.8s,baz=95,slow=5.4,SNR=2.7						
TORD	Torodi Ar. Bea	91.30	283	P	P	16 51 08.5	+0.9
	comp=Z,0.4nm,0.7s,baz=60,slow=3.6,SNR=2.9						
ESDC	Sonseca Array	92.25	310	P	P	16 51 12.1	+0.5
	comp=Z,0.4nm,0.7s,baz=46,slow=5.5,SNR=3.4						
NVAR	Mina Array Bea	125.56	32	PKP	PKiKP	16 57 04.6	+1.0
	comp=Z,0.1nm,0.3s,baz=252,slow=3.0,SNR=3.6						
NVAR	Mina Array Bea	125.56	32		PKiKP	16 57 03.5	-0.1
PDAR	Pinedale Array	125.96	22	PKP	PKiKP	16 57 04.5	+0.2
	comp=Z,0.2nm,0.5s,baz=339,slow=4.8,SNR=2.9						

*BJI **08** 16:42:35.3±0.0, 6°.54N×94°.29E, h18^{km}, mB4.9/23, mb4.5/44*

*IDC **08** 16:42:37.0±0.4, 6°.97N×94°.66E, h0^{km}, mb4.4/22, mb1 4.5/23, mb1mx4.3/37, mbtmp4.4/23, ML4.1/1, Error ellipse: s-maj=21.5km s-min=10.9km az=53.0*

*NEIC **08** 16:42:38.5±1.9, 6°.85N±0°.08×94°.49E±0°.10, h10^{km}±1^{km}, mb4.9/51, Error ellipse: s-maj=17.5km s-min=11.9km az=240.0*

*DJA **08** 16:42:40.1±0.3, 7°N±3°×9°4E±°, h10^{km}, M5.0/25, mB5.3/7, mb4.7/25, MLv5.4/5, Mw(mB)4.7/7*

ISC 08 16:42:41.6±3.4, 6°.82N±0°.05×94°.41E±0°.08, h30^{km}±23^{km}, n178, σ1^{s}66/177, mb4.6/73, 2C, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	Lhok Sumawe	2.98	122	P	Pn	16 43 25.1	-1.7
LHMI	Lhok Sumawe	2.98	122	Pn	Pn	16 43 23.9	-2.9
TPTI		4.49	142	P	Pn	16 43 49.4	+1.8
PSI	Prapat	6.01	131	Pn	Pn	16 44 09.3	+0.7
	5.2nm,0.3s,baz=343,slow=14,SNR=14						
PSI				Sn	Sn	16 45 16.1	-0.6
	2.2nm,0.3s,baz=79,slow=19,SNR=2.2						
RPSI	Rantau Prapat	6.09	132		Pn	16 44 09.3	-0.2
RPSI					Sn	16 45 16.1	-2.2
GSI	Gunungsitoli	6.33	150	P	Pn	16 44 13.8	+0.9
	0.9nm47nm,0.8s						
GSI	Gunungsitoli	6.33	150		Pn	16 44 11.6	-1.3
MNSI	Mandailing Nat	7.90	139	P	Pn	16 44 34.9	+0.4
	5.7nm28nm,0.4s						
PDSI	Padang	9.77	142	P	Pn	16 45 00.0	-0.2
	790nm12nm,0.6s						
PBKT	Sadao Pong	11.62	33	Pn	Pn	16 45 24.9	-0.6
CM31	Chiang Mai Arr	12.38	20	Pn	Pn	16 45 35.1	-0.8
CMAR	Chiang Mai Arr	12.38	20	Pn	Pn	16 45 34.1	-1.8
	0.6nm,0.3s,baz=209,slow=14,SNR=7.9						
CMAR	Chiang Mai Arr	12.38	20		Pn	16 45 35.1	-0.8
DSRI	Dabo	12.47	125	P	Pn	16 45 37.3	+0.2
	9.4nm,1.5s						
CHTO	Chiang Mai	12.71	20	Pn	Pn	16 45 39.6	-0.7
UBPT	Khong Chiam	13.72	51		Pn	16 45 53.3	-0.9
LHSI	Lahat	13.95	139	P	Pn	16 45 55.8	-1.6
	39nm,1.3s						
PPBI	Pangkal Pinang	14.72	127	P	P	16 46 16.0	+2.4
DLV	T Lat	14.79	69	Pn	Pn	16 46 08.0	-0.9
MDSI	Maura Dua	14.88	139	P	Pn	16 46 08.5	-1.4
	8.7nm,1.0s						
LWLI	Liwa	15.20	140	P	P	16 46 24.1	+5.0
KLSI		15.39	138	P	Pn	16 46 16.0	-0.8
	12nm,0.9s						
SLVN	Son La	17.10	32	P	P	16 46 39.5	-0.6
TNG	Tangerang	17.77	136	P	P	16 46 57.8	+10
STKI	Sintang	18.30	111	P	Pn	16 46 54.1	+0.7
	2µm30nm,1.4s						
HYB	Hyderabad	18.72	306	*i* P	Pn	16 47 07.0	+8.4
QIZ	Qiongzhong	19.30	50	P	P	16 47 03.7	-0.6
PBKI	Pangkalan Bun	19.66	118	P	Pn	16 47 10.2	+0.5
	67nm,1.1s						
KMI	Kunming	19.87	23	⇑P	Pn	16 47 13.8	+1.4
KMI				sP	sP	16 47 22.6	+1.0
KMI				PP	PnPn	16 47 32.0	+5.2
KMI				S	Sn	16 50 56.4	+1.4
KMI				SS	SnSn	16 51 21.1	+11
KMI				pmax	pmax		
	comp=Z,28nm,1.3s						
KMI				pmax	pmax		
	comp=Z,91nm,3.5s						
NGJI	Ngawi	22.09	129	P	P	16 47 43.3	+8.8
GYA	Guiyang	22.75	29	⇑P	P	16 47 42.4	+0.8
GYA				pmax	pmax		
	comp=Z,23nm,1.2s						
GYA				pmax	pmax		
	comp=Z,230nm,4.1s						
BBKI	Banjar Baru	22.81	116	P	P	16 47 41.9	-0.3
	2µm42nm,1.0s						
LSA	Lhasa	22.96	353	P	P	16 47 43.2	-1.0
LSA				IAmb	IAmb	16 47 60.0	
	comp=Z,14nm,0.6s						
KMMI	Kalianget	23.89	125	P	P	16 47 53.5	+0.7
	comp=Z,46nm,1.1s						
BLJI	Banyuglugur	23.99	127	P	P	16 48 04.6	+11
ABJI	Asem Bagus	24.53	126	P	P	16 48 00.7	+2.0
	comp=Z,99nm,0.9s						
SRBI	Singaraja	25.49	125	P	P	16 48 09.2	+1.8
	comp=Z,77nm,1.1s						
H08S3	Diego Garcia H	26.16	237	T	T	17 14 54.6	
	baz=56,slow=75,SNR=121						
H08S2	Diego Garcia H	26.16	237	T	T	17 14 56.0	
	baz=56,slow=75,SNR=122						
H08S1	Diego Carcia H	26.18	237	T	T	17 14 48.4	
	baz=56,slow=75,SNR=55						
MPSI	Mapaga	26.23	103	P	P	16 48 15.7	+1.5
	comp=Z,2µmcomp=Z,45nm,1.2s						
TOLI2	Tolitoli	26.90	101	P	P	16 48 19.1	-1.2
TOLI2				IAmb	IAmb	16 48 23.1	
	comp=Z,26nm,0.8s						
TTSI	Tana Toraja	27.19	110	P	P	16 48 29.9	+7.0
ENH	Enshi	27.29	29	P	P	16 48 22.3	-1.3
ENH				IAmb	IAmb	16 48 42.2	
	comp=Z,21nm,1.1s						
MRSI	Marisa	28.17	102	P	P	16 48 41.8	+10
BKSI	Bulukumba	28.36	115	P	P	16 48 33.6	+0.3
	comp=Z,9.8nm,1.2s						
GTOI	Gorontalo	29.18	101	P	P	16 48 40.6	0.0
	comp=Z,18nm,1.3s						
XAN	Xi'an	30.23	24	P	P	16 48 48.7	-1.0
XAN				pP	pP	16 48 53.4	-4.5
XAN				pmax	pmax		
	comp=Z,15nm,0.9s						
LZH	Lanzhou	30.38	15	*e*P	P	16 48 51.3	+0.1
LZH				sP	pP	16 48 59.7	+0.4
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
SANI	Sanana	32.73	105	P	P	16 49 20.5	+8.6
GTA	Gaotai	32.81	8	*e*P	P	16 49 12.0	-0.5
GTA				pP	pP	16 49 20.0	-0.5
GTA				sP	sP	16 49 24.3	+0.4
GTA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NIL	Nilore	33.12	327	P	P	16 49 14.4	-0.8
NJ2	Nanjing	33.90	39	*e*P	P	16 49 22.1	+0.2
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
SOEI	Soe	34.00	119	P	P	16 49 37.0	+14
KSH	Kashi	36.53	336	P	P	16 49 42.6	-2.1
KSH				pP	pP	16 49 50.7	-2.3
KSH				sP	pwP	16 49 53.7	-1.7
KSH				PcP	PcP	16 52 10.3	+2.4
KSH				pmax	pmax		
	comp=Z,6.0nm,0.5s						
HHC	Hu-ho-hao-te	37.19	22	*e*P	P	16 49 52.2	+2.0
HHC				pmax	pmax		
	comp=Z,14nm,0.9s						
HHC				pmax	pmax		
	comp=Z,130nm,9.3s						
WMQ	Urumqi	37.32	352	*e*P	P	16 49 51.3	+0.1
WMQ				sP	pwP	16 50 01.2	-0.7
WMQ				pmax	pmax		
	comp=Z,16nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,250nm,4.7s						
SWI	Sorong	37.55	100	P	P	16 50 04.0	+10
DRK	Karamyk	38.35	331	P	P	16 50 00.2	-0.1
DRK				IAmb	IAmb	16 50 12.8	
	comp=Z,32nm,0.8s						
GAR	Garm	38.71	329	P	P	16 50 02.0	-1.1
GAR				IAmb	IAmb	16 50 03.3	
	comp=Z,41nm,1.2s						
CHGR	Chuyangaron	39.05	328	P	P	16 50 04.5	-1.4
CHGR				IAmb	IAmb	16 50 05.7	
	comp=Z,32nm,0.8s						
FITZ	Fitzroy Crossi	39.54	129	P	P	16 50 08.4	-1.7
	comp=Z,2.1nm,0.6s,baz=346,slow=8.4,SNR=9.1						
FITZ				PcP	PcP	16 52 18.1	+0.7
	comp=Z,1.9nm,0.6s,baz=329,slow=3.1,SNR=2.3						
AAK	Ala-Archa	39.77	337	P	P	16 50 12.5	+0.5
	comp=Z,3.0nm,0.8s,baz=144,slow=4.8,SNR=7.3						
AAK	Ala-Archa	39.77	337	P	P	16 50 11.8	-0.2
MK31	Makanchi Array	41.17	347	P	P	16 50 22.1	-1.2
MK31				IAmb	IAmb	16 50 23.7	
	comp=Z,17nm,1.2s						
MKAR	Makanchi Array	41.17	347	P	P	16 50 22.2	-1.0
	comp=Z,9.5nm,0.7s,baz=168,slow=8.0,SNR=66						
MKAR				PcP	PcP	16 52 22.7	+0.5
	comp=Z,0.6nm,0.6s,baz=180,slow=3.9,SNR=1.7						
MKAR	Makanchi Array	41.17	347	P	P	16 50 21.9	-1.4
MAKZ	Makanchi	41.25	347	P	P	16 50 22.2	-1.7
MAKZ				IAmb	IAmb	16 50 23.7	
	comp=Z,8.9nm,0.7s						
KK31	Karatay Array	41.82	334	P	P	16 50 27.9	-0.8
KKAR	Karatay Array	41.82	334	P	P	16 50 27.5	-1.1
SONM	Songino Array	42.13	12	P	P	16 50 30.2	-1.1
	comp=Z,5.8nm,1.0s,baz=193,slow=8.6,SNR=22						
SONM				PcP	PcP	16 52 25.9	+0.5
	comp=Z,1.7nm,0.9s,baz=191,slow=3.6,SNR=3.0						
SONM	Songino Array	42.13	12	P	P	16 50 30.4	-0.8
ULN	Ulaanbaatar	42.30	13	P	P	16 50 31.6	-1.1
KSRS	Korea Array	43.08	40	P	P	16 50 39.6	+0.6
	comp=Z,3.1nm,0.9s,baz=213,slow=13,SNR=5.5						
GEYT	Alibeck	45.16	319	P	P	16 50 56.7	+1.0
	comp=Z,3.8nm,0.5s,baz=126,slow=9.3,SNR=6.4						
GEYT	Alibeck	45.16	319	P	P	16 50 53.0	-2.7
KURBB	Kurchatov Arra	45.62	346	P	P	16 50 58.8	-0.3
	comp=Z,15nm,0.8s,baz=173,slow=7.1,SNR=111						
KURK	Kurchatov	45.69	346	P	P	16 50 59.0	-0.6
KURK				IAmb	IAmb	16 51 00.9	
	comp=Z,31nm,1.2s						
WRA	Warramunga Arr	47.44	125	P	P	16 51 12.1	-1.8
	comp=Z,4.7nm,0.7s,baz=305,slow=9.1,SNR=38						
WRA				PcP	PcP	16 52 43.4	-0.7
	comp=Z,0.5nm,0.4s,baz=314,slow=2.6,SNR=5.4						
WRAB	Tennant Creek	47.44	125	P	P	16 51 11.6	-2.3
WRAB				IAmb	IAmb	16 51 36.1	
	comp=Z,8.5nm,0.9s						
ZAA0	Zalesovo Array	47.63	352	P	P	16 51 13.3	-1.5
ZALV	Zalesovo Beam	47.63	352	P	P	16 51 14.2	-0.6
	comp=Z,3.0nm,0.3s,baz=168,slow=7.6,SNR=34						
ZALV	Zalesovo Beam	47.63	352	P	P	16 51 13.5	-1.2
AS31	Alice Springs	49.04	129	P	P	16 51 24.2	-2.1
ASAR	Alice Springs	49.04	129	P	P	16 51 24.6	-1.6
	comp=Z,2.3nm,0.7s,baz=306,slow=7.0,SNR=37						
ASAR				PcP	PcP	16 52 50.0	+0.2
	comp=Z,1.7nm,0.7s,baz=317,slow=3.3,SNR=4.4						
ASAR	Alice Springs	49.04	129	P	P	16 51 24.4	-1.9
BRVK	Borovoye	50.13	341	P	P	16 51 33.0	-1.0
BRVK				IAmb	IAmb	16 51 34.7	
	comp=Z,31nm,1.4s						
ABKAR	Akbulak array	51.28	332	P	P	16 51 42.4	-0.3
ABKAR				IAmb	IAmb	16 51 43.7	
	comp=Z,39nm,1.4s						
ARU	Arti	56.96	337	P	P	16 52 23.1	-0.9
ARU				IAmb	IAmb	16 52 25.1	
	comp=Z,36nm,1.5s						
KMBO	Kilima Mbogo	57.58	264	P	P	16 52 31.4	+2.0
	comp=Z,3.6nm,0.9s,baz=55,slow=10,SNR=10						
STKA	Stephens Creek	59.19	133	P	P	16 52 39.4	-0.7
	comp=Z,3.9nm,0.7s,baz=308,slow=8.5,SNR=13						
STKA	Stephens Creek	59.19	133	P	P	16 52 38.6	-1.5
NRIK	Noril'sk	62.60	357	P	P	16 53 01.6	-1.0
	comp=Z,1.7nm,0.4s,baz=168,slow=6.2,SNR=5.7						
NRIK	Noril'sk	62.60	357	P	P	16 53 01.5	-1.0
NRIK				IAmb	IAmb	16 53 11.7	
	comp=Z,9.1nm,1.2s						
BR131	Keskin Array S	63.32	311	P	P	16 53 06.7	-1.4
BR131				IAmb	IAmb	16 53 14.5	
	comp=Z,6.3nm,0.8s						
BRTR	Keskin Array B	63.32	311	P	P	16 53 07.3	-0.8
	comp=Z,1.5nm,0.6s,baz=129,slow=7.2,SNR=12						
BRTR	Keskin Array B	63.32	311	P	P	16 53 06.7	-1.4
CAN	Canberra	66.26	133	P	P	16 53 27.2	0.0
TIXI	Tiksi	68.20	11	P	P	16 53 37.3	-1.5
TAU	Tasmania Unive	68.91	141	P	P	16 53 44.3	+0.7
AKASG	Malin Array Be	69.14	322	P	P	16 53 43.6	-1.4
	comp=Z,0.2nm,0.3s,baz=86,slow=5.8,SNR=5.5						
AKBB	Malin Array Si	69.14	322	P	P	16 53 43.1	-1.9
BURAR	Bucovina Array	71.00	318	P	P	16 53 55.3	-1.4
AGG	Agios Georgios	71.82	309	P	P	16 53 59.5	-2.2

AGG				IAmb	IAmb	16 54 07.6	
	comp=Z,20nm,1.4s						
LVZ	**Lovozero**	**72.63**	**340**	P	**P**	**16 54 05.7**	**-0.3**
CRVS	**Cervenica-Dubn**	**73.69**	**319**	*e*P	**P**	**16 54 15.7**	**+3.1**
FIA1	**FINESS Array S**	**73.76**	**332**	P	**P**	**16 54 11.9**	**-0.7**
FINES	**FINESS Array B**	**73.76**	**332**	P	**P**	**16 54 12.2**	**-0.5**
	comp=Z,4.0nm,0.6s,baz=97,slow=5.4,SNR=37						
CASY	**Casey**	**73.86**	**173**	P	**P**	**16 54 14.9**	**+1.8**
CASY				IAmb	IAmb	16 54 39.4	
	comp=Z,8.2nm,1.2s						
BOSA	**Boshof**	**75.26**	**238**	P	**P**	**16 54 24.8**	**+2.6**
	comp=Z,6.0nm,0.9s,baz=99,slow=5.0,SNR=12						
BOSA	**Boshof**	**75.26**	**238**	P	**P**	**16 54 24.5**	**+2.2**
BOSA				IAmb	IAmb	16 54 35.1	
	comp=Z,19nm,1.4s						
KEV	**Kevo**	**75.91**	**341**	P	**P**	**16 54 23.8**	**-1.1**
JAVC	**Velka Javorina**	**76.17**	**319**	*e*P	**P**	**16 54 27.9**	**+0.9**
ARA0	**ARCESS Array S**	**76.34**	**340**	*e*P	**P**	**16 54 26.8**	**-0.7**
ARCES	**ARCESS Array B**	**76.34**	**340**	P	**P**	**16 54 27.3**	**-0.2**
	comp=Z,3.0nm,0.6s,baz=90,slow=6.0,SNR=18						
ARCES	**ARCESS Array B**	**76.34**	**340**	P	**P**	**16 54 27.4**	**-0.1**
MORC	**Moravsky Berou**	**76.34**	**319**	*e*P	**P**	**16 54 28.1**	**+0.2**
MORC	**Moravsky Berou**	**76.34**	**319**	P	**P**	**16 54 28.2**	**+0.3**
MORC				IAmb	IAmb	16 54 38.1	
	comp=Z,9.3nm,1.3s						
KRLC	**Kraliky**	**76.86**	**320**	*e*P	**P**	**16 54 30.9**	**0.0**
VRAC	**Vranov**	**76.92**	**319**	*e*P	**P**	**16 54 30.8**	**-0.3**
BILL	**Bilibino**	**76.96**	**22**	P	**P**	**16 54 30.3**	**-0.6**
BILL				IAmb	IAmb	16 54 47.1	
	comp=Z,9.9nm,1.2s						
KTK1	**Kautokeino**	**76.97**	**340**	*e*P	**P**	**16 54 30.0**	**-1.0**
KRUC	**Moravsky**	**77.03**	**319**	*e*P	**P**	**16 54 31.7**	**0.0**
HAMF	**Hammerfest**	**77.26**	**341**	*e*P	**P**	**16 54 31.7**	**-0.9**
CONA	**Conrad Observa**	**77.30**	**317**	*e*P	**P**	**16 54 36.1**	**+2.7**
	comp=Z,0.9nm,0.7s						
ARSA	**Arzberg**	**77.48**	**317**	*e*P	**P**	**16 54 36.5**	**+2.2**
	comp=Z,6.7nm,1.4s						
SOKA	**Soboth**	**77.78**	**316**	*e*P	**P**	**16 54 37.1**	**+1.0**
	comp=Z,11nm,1.7s						
JETT	**Jettan, Norway**	**78.07**	**340**	*e*P	**P**	**16 54 37.7**	**+0.5**
OBKA	**Obir**	**78.11**	**316**	*e*P	**P**	**16 54 39.7**	**+1.7**
	comp=Z,7.7nm,1.3s						
MOA	**Molln**	**78.36**	**317**	*e*P	**P**	**16 54 39.9**	**+0.6**
	comp=Z,5.7nm,1.2s						
TRO	**Tromso**	**78.60**	**340**	*e*P	**P**	**16 54 39.2**	**-0.8**
BRG	**Berggiesshubel**	**78.73**	**320**	*e*P	**P**	**16 54 45.0**	**+3.9**
BRG				Amp		16 54 45.7	
	comp=Z,4.4nm,1.0s						
MYKA	**Terra Mystica**	**78.74**	**316**	*e*P	**P**	**16 54 42.8**	**+1.4**
	comp=Z,13nm,1.6s						
GEC2	**GERESS Array S**	**78.78**	**318**	P	**P**	**16 54 41.7**	**+0.1**
GEC2				IAmb	IAmb	16 54 51.6	
	comp=Z,12nm,1.3s						
GERES	**GERESS Array B**	**78.78**	**318**	P	**P**	**16 54 42.2**	**+0.5**
	comp=Z,1.7nm,0.7s,baz=79,slow=6.2,SNR=12						
GERES	**GERESS Array B**	**78.78**	**318**	P	**P**	**16 54 41.6**	**-0.1**
KHC	**Kasperske Hory**	**78.88**	**319**	*e*P	**P**	**16 54 42.4**	**+0.3**
KBA	**Koelnbreinsper**	**78.96**	**317**	*e*P	**P**	**16 54 43.1**	**+0.3**
	comp=Z,5.9nm,1.6s						
ZOU	**Zoufplan**	**79.20**	**316**	P	**P**	**16 54 43.5**	**-0.6**
ZOU				IAmb	IAmb	16 54 56.3	
	comp=Z,9.9nm,1.2s						
CLL	**Collm**	**79.34**	**321**	*e*P	**P**	**16 54 44.0**	**-0.5**
STAL	**STALIGIAL**	**79.37**	**316**	P	**P**	**16 54 43.9**	**-1.0**
STAL				IAmb	IAmb	16 54 51.7	
	comp=Z,13nm,1.0s						
ABTA	**Abfaltersbach**	**79.52**	**316**	*e*P	**P**	**16 54 46.5**	**+0.8**
	comp=Z,5.5nm,1.5s						
FAUS	**Fauske**	**79.55**	**337**	*e*P	**P**	**16 54 44.0**	**-1.3**
STEI	**Steigen**	**79.64**	**338**	*e*P	**P**	**16 54 45.6**	**-0.2**
MOR8	**Moi Rana**	**79.74**	**336**	*e*P	**P**	**16 54 44.8**	**-1.6**
CTI	**Castel Tesino**	**80.11**	**315**	P	**P**	**16 54 49.1**	**+0.2**
CTI				IAmb	IAmb	16 55 08.5	
	comp=Z,26nm,1.5s						
NBB30	**Finnes**	**80.11**	**337**	*e*P	**P**	**16 54 47.8**	**-0.5**
WTTA	**Wattenberg**	**80.13**	**317**	*e*P	**P**	**16 54 48.7**	**-0.4**
	comp=Z,2.2nm,0.4s						
WATA	**Walderalm**	**80.17**	**317**	*e*P	**P**	**16 54 48.6**	**-0.7**
	comp=Z,2.7nm,0.5s						
LOF	**Lofoten**	**80.30**	**338**	*e*P	**P**	**16 54 48.9**	**-0.4**
SQTA	**Sankt Quirin**	**80.42**	**317**	*e*P	**P**	**16 54 49.9**	**-0.7**
	comp=Z,2.0nm,0.4s						
MOTA	**Moosalm**	**80.49**	**317**	*e*P	**P**	**16 54 51.6**	**+0.5**
	comp=Z,6.6nm,1.2s						
NC602	**NORSAR Array S**	**80.60**	**330**	*e*P	**P**	**16 54 50.6**	**-0.5**
NSS	**Namsos**	**80.63**	**334**	*e*P	**P**	**16 54 50.2**	**-0.9**
RETA	**Reutte**	**80.72**	**317**	*e*P	**P**	**16 54 52.2**	**+0.1**
	comp=Z,2.1nm,0.4s						
FETA	**Feichten**	**80.74**	**316**	*e*P	**P**	**16 54 51.0**	**-1.4**
	comp=Z,7.4nm,1.4s						
NB2	**NORSAR Subarra**	**80.77**	**331**	P	**P**	**16 54 51.3**	**-0.9**
	comp=Z,2.1nm,0.7s,baz=96,slow=5.1						
NB2	**NORSAR Subarra**	**80.77**	**331**	P	**P**	**16 54 51.2**	**-0.9**
	comp=Z,2.3nm,0.7s,baz=96,slow=5.1						
NB2	**NORSAR Subarra**	**80.77**	**331**	P	**P**	**16 54 51.2**	**-0.9**
	baz=96,slow=5.1						
NOA	**NORSAR Array B**	**80.77**	**331**	P	**P**	**16 54 51.5**	**-0.7**
	comp=Z,1.3nm,0.8s,baz=95,slow=5.1,SNR=6.0						
SPA0	**Spitsbergen Ar**	**80.91**	**348**	*e*P	**P**	**16 54 52.0**	**-0.6**
DAVA	**Damuels**	**81.32**	**317**	*e*P	**P**	**16 54 55.1**	**-0.3**
	comp=Z,6.2nm,0.9s						
KONO	**Kongsberg**	**81.53**	**329**	*e*P	**P**	**16 54 55.0**	**-1.1**
DOMB	**Dombas**	**81.83**	**332**	*e*P	**P**	**16 54 56.8**	**-0.9**
KEST	**Kesra**	**82.06**	**305**	P	**P**	**16 55 00.9**	**+1.4**
	comp=Z,2.1nm,0.6s,baz=36,slow=3.4,SNR=4.4						
MOL	**Molde**	**82.54**	**332**	*e*P	**P**	**16 55 00.8**	**-0.5**
AKN	**Aaknes**	**82.81**	**332**	*e*P	**P**	**16 55 02.1**	**-0.6**
TORD	**Torodi Ar. Bea**	**91.10**	**283**	P	**P**	**16 55 46.0**	**+1.8**
	comp=Z,0.7nm,0.6s,baz=93,slow=5.5,SNR=4.8						
ESDC	**Sonseca Array**	**92.10**	**310**	P	**P**	**16 55 49.0**	**+0.6**
	comp=Z,1.0nm,0.7s,baz=70,slow=3.6,SNR=10						
ESDC	**Sonseca Array**	**92.10**	**310**	P	**P**	**16 55 48.4**	**0.0**
A36M	**Sachs Harbour**	**97.22**	**12**	P	Pdif	16 56 11.2	+0.1
ULM	**Lac du Bonnet**	**122.46**	**8**	PKP	**PKPdf**	**17 01 32.8**	**-1.3**
	comp=Z,2.2nm,0.5s,baz=324,slow=1.5,SNR=5.8						
NVAR	**Mina Array Bea**	**125.67**	**32**	PKP	**PKiKP**	**17 01 41.9**	**+0.5**
	comp=Z,1.2nm,0.8s,baz=298,slow=2.0,SNR=8.3						
PDAR	**Pinedale Array**	**126.04**	**22**	PKP	**PKPdf**	**17 01 41.2**	**-0.3**
	comp=Z,1.5nm,0.8s,baz=22,slow=1.6,SNR=8.8						
TXAR	**Lajitas Array**	**140.06**	**25**	PKP	**PKPdf**	**17 02 08.2**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=128,slow=0.8,SNR=5.2						
PLCA	**Paso Flores**	**143.66**	**199**	PKP	**PKPdf**	**17 02 13.8**	**-0.3**
	comp=Z,2.0nm,1.0s,baz=225,slow=4.3,SNR=2.7						
CPUP	**Villa Florida**	**146.82**	**231**	PKPbc	**PKPab**	**17 02 23.0**	**+0.1**
	comp=Z,2.1nm,0.8s,baz=108,slow=5.2,SNR=3.5						
CPUP	**Villa Florida**	**146.82**	**231**		**PKPdf**	**17 02 19.8**	**0.0**

*SJA **08** 16:42:47.0, 31°.55S×72°.53W, h10^{km}, ML4.0*

*GUC **08** 16:42:49.2±0.7, 31°.53S×72°.20W, h36^{km}±3^{km}, ML3.3*

ISC 08 16:42:45.7±1.9, **31°.55S**±0°.04×**72°.40W**±0°.10, **h4**^{km}±14^{km}, **n20**, σ1^{s}**47**/25, **Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	**Fray Jorge**	**1.09**	**37**	*e*P	**Pg**	**16 43 06.7**	**+0.1**
CO06				*i* S	**Sg**	**16 43 20.1**	**-0.6**
VA06	**Catapilco**	**1.38**	**138**	*e*P	**Pn**	**16 43 11.6**	**-0.2**
VA06				*i* S	**Sb**	**16 43 28.7**	**-1.5**
VA06				IAML		16 43 32.5	
	comp=E,926nm,0.4s						
VA01	**Torpederas**	**1.60**	**157**	*i* P	**Pb**	**16 43 16.0**	**0.0**
ROC1	**El Roble**	**1.85**	**141**	*i* P	**Pn**	**16 43 19.0**	**+0.5**
ROCH	**El Roble**	**1.85**	**141**	*e*P	**Pn**	**16 43 18.8**	**+0.3**
ROCH				*i* S	**Sn**	**16 43 42.2**	**-0.2**
ROCH				IAML		16 43 49.4	
	comp=E,296nm,0.3s						
GO04	**Tololo Observa**	**1.94**	**46**	*e*P	**Pn**	**16 43 20.5**	**+0.7**
GO04				*i* S	**Sn**	**16 43 43.3**	**-1.4**
GO04				IAML		16 43 50.9	
	comp=N,1μm,0.4s						
GO04	**Tololo Observa**	**1.94**	**46**	*i* P	**Pb**	**16 43 21.0**	**-0.8**
VA03	**San Esteban**	**1.98**	**128**	*e*P	**Pn**	**16 43 20.6**	**+0.4**
VA03				*i* S	**Sn**	**16 43 44.2**	**-1.4**
VA03				IAML		16 43 52.0	
	comp=E,391nm,0.3s						
VA03	**San Esteban**	**1.98**	**128**	*i* P	**Pn**	**16 43 21.0**	**+0.8**
PEL	**Peldehue**	**2.15**	**138**	*i* P	**Pn**	**16 43 23.0**	**+0.4**
MT05	**Renca**	**2.32**	**143**	*i* P	**Pb**	**16 43 27.0**	**-1.1**
MT01	**Popeta**	**2.51**	**158**	*i* P	**Pn**	**16 43 29.0**	**+1.7**
AUSP	**Uspallata**	**2.65**	**106**	*i* P	**Pn**	**16 43 32.0**	**+2.4**
RTLS	**Leoncito**	**2.66**	**96**	*i* P	**Pn**	**16 43 32.0**	**+2.3**
BO01	**Tunca**	**3.05**	**159**	*i* P	**Pn**	**16 43 36.0**	**+1.2**
GO05	**Huala**	**3.48**	**174**	*i* P	**Pn**	**16 43 42.0**	**+1.3**
AC04	**Llanos de Chal**	**3.52**	**19**	*i* P	**Pn**	**16 43 42.0**	**+0.7**
ACLC	**CERRO LA CRUZ**	**5.15**	**67**	*i* P	**Pn**	**16 44 08.0**	**+4.1**
AC02	**Maricunga**	**5.50**	**32**	*i* P	**Pn**	**16 44 09.0**	**+0.1**
GO08	**Villa O'Higgin**	**16.90**	**180**	*i* P	**Pn**	**16 46 44.0**	**+0.9**

*BJI **08** 16:47:00.5±0.0, 6°.80N×94°.50E, h10^{km}, mB6.2/76, mb5.6/87, Ms6.7/95, Ms7 6.5/87*

*MOS **08** 16:47:01.6±0.9, 7°.03N×94°.41E, h17^{km}, mb6.1/50, MS6.0/55, Error ellipse: s-maj=5.9km s-min=3.4km az=108.1*

*NEIC **08** 16:47:02.2±2.5, 6°.84N±0°.04×94°.65E±0°.07, h10^{km}±1^{km}, mb6.1/256, Ms_20 6.3/412, Mwb6.4/37, Mww6.6, Mwc6.6(GCMT), Error ellipse: s-maj=12.2km s-min=6.0km az=66.0*

*NEIC **08** 16:47:02.1, 6°.83N×94°.71E, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.30; $M_{\theta\theta}$-4.31; $M_{\phi\phi}$4.61; $M_{r\theta}$0.51; $M_{\theta\phi}$1.14; $M_{\phi r}$-0.10; Fault plane solution: $M_0$4.64000×10^{18} NP1:ϕ_s322.39000°, δ85.28000°, λ-174.74000°. NP2:ϕ_s231.95000°, δ84.76000°, λ-4.74000°. Principal axes: T 4.7577, Plg0.0000°, Azm97.0000°; N -0.2401, Plg83.0000°, Azm4.0000°; P -4.5175, Plg7.0000°, Azm187.0000°;*

*DJA **08** 16:47:03.8±0.8, 7°N±2°×9°5E±°, h16^{km}±5^{km}, M6.2/116, mB6.5/113, mb6.1/116, MLv6.8/7, Mw(mB)6.2/113, MwMwp6.1/95, Mwp6.1/95*

*BGR **08** 16:47:04.1±0.0, 6°.61N×94°.38E, h33^{km}, mb6.3, Ms6.0*

*IDC **08** 16:47:05.3±2.9, 6°.97N×94°.63E, h33^{km}±21^{km}, mb5.3/34, mb1 5.3/37, mb1mx5.3/37, mbtmp5.4/37, ML4.3/3, MS6.0/46, Ms1 6.0/46, ms1mx5.9/57, Error ellipse: s-maj=12.3km s-min=9.0km az=57.0*

*KLM **08** 16:47:06, 6°.76N×94°.54E, h26^{km}, mb6.3*

*NEIC **08** 16:47:12, 6°.74N×94°.77E, h15^{km}, Moment Tensor Solution. Duration: 9^{s}4 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.38; $M_{\theta\theta}$-8.04; $M_{\phi\phi}$8.42; $M_{r\theta}$-1.12; $M_{\theta\phi}$2.76; $M_{\phi r}$-0.50; Fault plane solution: $M_0$8.77000×10^{18} NP1: ϕ_s144.00000°, δ82.00000°, λ-178.00000°. NP2: ϕ_s54.00000°, δ88.00000°, λ-8.00000°. Principal axes: T 8.9196, Plg4.0000°, Azm100.0000°; N -0.3013, Plg82.0000°, Azm220.0000°; P -8.6184, Plg7.0000°, Azm9.0000°;*

*GCMT **08** 16:47:12.2±0.0, 6°.76N×94°.78E, h15^{km}, MW6.5/159, Moment Tensor Solution. s159,c370; s155,c681; Duration: 4^{s}6 Moment tensor: Scale 10^{19}Nm; M_{rr}-0.04±.00; $M_{\theta\theta}$-0.76±.00; $M_{\phi\phi}$0.80±.00; $M_{r\theta}$-0.18±.01; $M_{\theta\phi}$0.24±.00; $M_{\phi r}$-0.06±.01; Best double couple: $M_0$0.83700×10^{19} NP1:ϕ_s144.00000°, δ78.00000°, λ-175.00000°. NP2:ϕ_s53.00000°, δ85.00000°, λ-12.00000°. Principal axes: T 0.8440, Plg5.0000°, Azm99.0000°; N -0.0130, Plg77.0000°, Azm213.0000°; P -0.8300, Plg12.0000°, Azm8.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=125s. Triangular moment-rate function*

*NEIC **08** 16:47:16, 6°.74N×94°.72E, h12^{km}, Moment Tensor Solution. Duration: 30^{s}0 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.09; $M_{\theta\theta}$-7.72; $M_{\phi\phi}$7.81; $M_{r\theta}$-1.96; $M_{\theta\phi}$3.97; $M_{\phi r}$1.88; Fault plane solution: $M_0$9.13000×10^{18} NP1:ϕ_s58.00000°, δ73.00000°, λ-4.00000°. NP2:ϕ_s149.00000°, δ86.00000°, λ-163.00000°. Principal axes: T 8.9781, Plg9.0000°, Azm282.0000°; N 0.3040, Plg73.0000°, Azm162.0000°; P -9.2820, Plg14.0000°, Azm15.0000°;*

ISC 08 16:47:02.9±0.3, **6°.81N**±0°.03×**94°.48E**±0°.03, **h16**^{km}±1^{km}, **h16**^{km}**:pP-P, n2145**, σ1^{s}**94**/2199, **mb6.0**/363, **MS6.3**/324, **279C-282D, Fault plane solution: NP1:**ϕ_s57.63979°, δ84.03670°, λ-2.37345°. **NP2:**ϕ_s147.88651°, δ87.63940°, λ-174.03162°. **Principal axes:** T Plg2.5412°, Azm282.6326°; N Plg83.5833°, Azm169.3896°; P Plg5.8882°, Azm12.8948°; **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	**Lhok Sumawe**	**2.92**	**123**	⇑P	**Pn**	**16 47 47.4**	**-1.2**
LHMI	**Lhok Sumawe**	**2.92**	**123**	P	**Pn**	**16 47 48.4**	**-0.2**
LHMI	**Lhok Sumawe**	**2.92**	**123**	Pn	**Pn**	**16 47 46.2**	**-2.4**
LHMI	**Lhok Sumawe**	**2.92**	**123**	P	**Pn**	**16 47 48.1**	**-0.5**
TPTI		**4.44**	**143**	P	**Pn**	**16 48 10.0**	**+0.4**
PBA	**Port Blair**	**5.11**	**341**	*e*P	**Pn**	**16 48 21.4**	**+2.6**
	comp=Z,1μm,0.9s						
PBA				*e*S	**Sn**	**16 49 14.8**	**-2.7**
PBA	**Port Blair**	**5.11**	**341**	P	**Pn**	**16 48 20.9**	**+2.1**
	SNR=24						
PBA	**Port Blair**	**5.11**	**341**	⇓P	**Pn**	**16 48 20.7**	**+1.9**
PBA	**Port Blair**	**5.11**	**341**	Pn	**Pn**	**16 48 19.6**	**+0.8**
TSI	**Tuntungan**	**5.23**	**129**	P	**Pn**	**16 48 20.1**	**-0.4**
	comp=Z,194nmcomp=Z,661μmcomp=Z,129μmcomp=Z,3μm,0.8s						
PSI	**Prapat**	**5.96**	**132**	Pn	**Pn**	**16 48 30.5**	**-0.1**
	comp=Z,29nm,0.3s,baz=295,slow=9.7,SNR=60						
PSI				Sn	**Sn**	**16 49 43.8**	**+5.2**
	comp=Z,58nm,0.3s,baz=246,slow=20,SNR=1.8						
PSI				LR	LR	16 51 31.8	
	comp=Z,396μm,20.9s,baz=292,slow=44						
RPSI	**Rantau Prapat**	**6.03**	**133**		**Pn**	**16 48 30.5**	**-1.0**
RPSI					**Sn**	**16 49 43.8**	**+3.6**
GSI	**Gunungsitoli**	**6.28**	**150**	⇑P	**Pn**	**16 48 34.7**	**-0.3**
GSI	**Gunungsitoli**	**6.28**	**150**	P	**Pn**	**16 48 35.1**	**+0.1**
	comp=Z,54nmcomp=Z,439μmcomp=Z,51μmcomp=Z,1μm,1.0s						
GSI	**Gunungsitoli**	**6.28**	**150**	Pn	**Pn**	**16 48 33.9**	**-1.1**
GSI	**Gunungsitoli**	**6.28**	**150**	P	**Pn**	**16 48 35.7**	**+0.7**
KULM	**Kulim**	**6.32**	**104**	P	**Pn**	**16 48 33.0**	**-2.5**
DGPR	**DIGLIPUR**	**6.50**	**347**	*e*P	**Pn**	**16 48 40.8**	**+2.8**
DGPR				IAmb	IAmb	16 48 49.0	
	comp=Z,1μm,1.0s						
DGPR				*e*S	**Sn**	**16 49 54.0**	**+2.1**
IPM	**Ipoh**	**6.91**	**109**	P	**Pn**	**16 48 40.0**	**-3.7**
MNSI	**Mandailing Nat**	**7.85**	**139**	P	**Pn**	**16 48 57.1**	**+0.6**
	comp=Z,21nmcomp=Z,146μmcomp=Z,21μmcomp=Z,932nm,0.7s						
BKNI	**Bangkinang**	**9.18**	**134**	⇑P	**Pn**	**16 49 14.9**	**+0.1**
BKNI	**Bangkinang**	**9.18**	**134**	P	**Pn**	**16 49 14.9**	**+0.1**
	comp=Z,237μmcomp=Z,38μmcomp=Z,4μm,1.3s						
BKNI	**Bangkinang**	**9.18**	**134**	Pn	**Pn**	**16 49 13.3**	**-1.6**
BKNI	**Bangkinang**	**9.18**	**134**	P	**Pn**	**16 49 16.3**	**+1.5**
SISI	**Saibi**	**9.30**	**150**	P	**Pn**	**16 49 16.4**	**-0.1**
	comp=Z,170μmcomp=Z,15μmcomp=Z,484nm,1.0s						
PPI	**Padang Panjang**	**9.33**	**141**	P	**Pn**	**16 49 17.3**	**+0.5**
	comp=Z,485nmcomp=Z,6μmcomp=Z,806nm,1.0s						
PDSI	**Padang**	**9.72**	**142**	P	**Pn**	**16 49 22.2**	**-0.1**
	comp=Z,56μmcomp=Z,8μmcomp=Z,703nm,1.2s						
RGRI	**Rengat**	**10.59**	**132**	P	**Pn**	**16 49 34.5**	**+0.5**
	comp=Z,950nmcomp=Z,1μm,1.0s						
PPSI	**Pulau Pagai**	**11.00**	**150**	P	**Pn**	**16 49 40.5**	**+0.8**
	comp=Z,185μmcomp=Z,17μmcomp=Z,974nm,0.9s						
PBKT	**Sadao Pong**	**11.59**	**33**		**Pn**	**16 49 46.7**	**-1.1**
CM31	**Chiang Mai Arr**	**12.36**	**20**		**Pn**	**16 49 58.7**	**+0.3**
CMAR	**Chiang Mai Arr**	**12.36**	**20**	Pn	**Pn**	**16 49 57.6**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=216,slow=12,SNR=4.4						
CMAR				LR	LR	16 55 07.6	
	comp=Z,21μm,19.9s,baz=230,slow=40						
CMAR	**Chiang Mai Arr**	**12.36**	**20**	P	**Pn**	**16 49 57.4**	**-1.0**
CMAR	**Chiang Mai Arr**	**12.36**	**20**	Pn	**Pn**	**16 49 57.4**	**-1.0**
DSRI	**Dabo**	**12.41**	**125**	P	**Pn**	**16 49 58.8**	**-0.2**
	comp=Z,131μmcomp=Z,8μmcomp=Z,412nm,1.3s						
JMBI	**JAMBI**	**12.41**	**132**	P	**Pn**	**16 49 59.3**	**+0.3**
	comp=Z,15μmcomp=Z,2μm,1.1s						
MASI	**Maura Aman, Be**	**12.56**	**142**	P	**Pn**	**16 49 59.9**	**-1.3**
	comp=Z,66μmcomp=Z,35μmcomp=Z,4μm,1.2s						
CHTO	**Chiang Mai**	**12.69**	**20**	P	**Pn**	**16 50 02.8**	**-0.1**
CHTO	**Chiang Mai**	**12.69**	**20**	⇓P	**Pn**	**16 50 02.9**	**-0.1**
CHTO	**Chiang Mai**	**12.69**	**20**	Pn	**Pn**	**16 50 02.8**	**-0.1**
CHTO	**Chiang Mai**	**12.69**	**20**	P	**Pn**	**16 50 04.3**	**+1.4**
KSI	**Kapahiang**	**13.18**	**142**	P	**Pn**	**16 50 07.3**	**-2.3**
	comp=Z,21μmcomp=Z,1μm,1.2s						
UBPT	**Khong Chiam**	**13.67**	**51**	⇑P	**Pn**	**16 50 16.7**	**+0.4**
UBPT	**Khong Chiam**	**13.67**	**51**	Pn	**Pn**	**16 50 13.2**	**-3.0**
PALK	**Pallekele**	**13.68**	**273**	Pn	**Pn**	**16 50 19.0**	**+2.5**
	comp=Z,1.6nm,0.3s,baz=200,slow=12,SNR=8.3						
PALK				Sn	**Sn**	**16 52 41.3**	**-7.0**
	comp=Z,4.9nm,0.3s,baz=270,slow=20,SNR=1.9						
PALK	**Pallekele**	**13.68**	**273**	P	**Pn**	**16 50 18.1**	**+1.6**
PALK	**Pallekele**	**13.68**	**273**	⇑P	**Pn**	**16 50 18.2**	**+1.7**
PALK	**Pallekele**	**13.68**	**273**	Pn	**Pn**	**16 50 18.1**	**+1.6**
HALK	**Hakmana**	**13.73**	**268**	⇑P	**Pn**	**16 50 19.3**	**+2.2**
LHSI	**Lahat**	**13.90**	**139**	P	**Pn**	**16 50 16.9**	**-2.5**
	comp=Z,50μmcomp=Z,18μmcomp=Z,2μm,0.9s						
MNAI	**Manna**	**13.96**	**142**	⇑P	**Pn**	**16 50 17.8**	**-2.5**
MNAI	**Manna**	**13.96**	**142**	P	**Pn**	**16 50 17.7**	**-2.5**
	comp=Z,52μmcomp=Z,24μmcomp=Z,3μm,1.2s						
MNAI	**Manna**	**13.96**	**142**	Pn	**Pn**	**16 50 16.8**	**-3.4**
MNAI	**Manna**	**13.96**	**142**	P	**Pn**	**16 50 18.9**	**-1.3**
PMBI	**Palembang**	**14.11**	**133**	⇑P	**Pn**	**16 50 20.6**	**-1.7**
PMBI	**Palembang**	**14.11**	**133**	P	**Pn**	**16 50 20.6**	**-1.7**
	comp=Z,119μmcomp=Z,21μmcomp=Z,3μm,1.2s						
PMBI	**Palembang**	**14.11**	**133**	Pn	**Pn**	**16 50 19.6**	**-2.8**
PMBI	**Palembang**	**14.11**	**133**	P	**Pn**	**16 50 22.3**	**0.0**
PPBI	**Pangkal Pinang**	**14.66**	**127**	P	**Pn**	**16 50 29.1**	**-0.7**
	comp=Z,141μmcomp=Z,15μmcomp=Z,1μm,1.4s						
DLV	**T Lat**	**14.73**	**69**	Pn	**Pn**	**16 50 28.4**	**-2.5**
DLV	**T Lat**	**14.73**	**69**	P	**Pn**	**16 50 32.1**	**+1.2**
MDSI	**Maura Dua**	**14.82**	**139**	P	**Pn**	**16 50 28.4**	**-3.6**
	comp=Z,22μmcomp=Z,6μmcomp=Z,725nm,1.1s						
LWLI	**Liwa**	**15.15**	**141**	P	**Pn**	**16 50 32.7**	**-3.8**
	comp=Z,17μmcomp=Z,3μm,0.8s						
MDRS	**Chennai**	**15.33**	**295**	*e*P	**Pn**	**16 50 38.8**	**+0.1**
MDRS				IAmb	IAmb	16 50 54.5	
	comp=Z,746nm,1.2s						
MDRS				IAMs_20	IAMs_20	16 58 34.4	
	comp=Z,53μm,14.7s						
KLSI		**15.34**	**138**	P	**Pn**	**16 50 35.8**	**-3.1**
	comp=Z,18μmcomp=Z,6μmcomp=Z,487nm,1.0s						
VIS	**Vishakhapatnam**	**15.36**	**316**	*e*x	**Pn**	**16 50 34.8**	**-4.4**
KLI	**Kotabumi**	**15.55**	**138**	P	**Pn**	**16 50 37.8**	**-3.9**
	comp=Z,48μmcomp=Z,11μmcomp=Z,777nm,1.1s						
KASI	**Kota Agung**	**15.82**	**141**	P	**Pn**	**16 50 40.4**	**-4.7**
BRDH	**Bariadhala**	**16.01**	**350**	Pn	**P**	**16 50 49.7**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=191,slow=24,SNR=7.0						
BLSI	**Bandar Lampung**	**16.18**	**138**	P	**Pn**	**16 50 46.1**	**-3.7**
	comp=Z,41μmcomp=Z,6μmcomp=Z,653nm,0.9s						
SLVN	**Son La**	**17.07**	**31**		**Pn**	**16 51 00.5**	**-0.7**
SBJI	**Serang**	**17.33**	**138**	P	**Pn**	**16 51 00.2**	**-4.1**
	comp=Z,30μmcomp=Z,11μmcomp=Z,908nm,1.1s						
CGJI	**Cibinong**	**17.41**	**140**	P	**Pn**	**16 50 59.8**	**-5.5**
TRD	**Trivandrum**	**17.45**	**277**	*e*P	**P**	**16 51 06.8**	**-0.2**
TRD				IAmb	IAmb	16 51 18.5	
	comp=Z,1μm,2.0s						
TNG	**Tangerang**	**17.71**	**136**	P	**Pn**	**16 51 06.6**	**-2.5**
	comp=Z,39μmcomp=Z,16μmcomp=Z,805nm,0.8s						
TNG				P	**P**	**16 51 08.4**	**-1.5**
	comp=Z,11μmcomp=Z,547nm,0.8s						
SILR	**SILCHAR**	**17.94**	**355**	*e*P	**P**	**16 51 14.3**	**+2.0**
DBJI	**Dramaga**	**18.06**	**137**	P	**Pn**	**16 51 10.1**	**-3.3**
	comp=Z,829nm,2.0s						
STKI	**Sintang**	**18.23**	**111**	P	**Pn**	**16 51 14.4**	**-1.1**
	comp=Z,85μmcomp=Z,21μmcomp=Z,633nm,1.3s						
HYB	**Hyderabad**	**18.78**	**306**	*i* P	**P**	**16 51 22.0**	**+0.3**
	comp=Z,600nm,1.0s						
HYB				*e*S	**S**	**16 54 54.0**	**-1.2**
HYB				*e*LR	LR		
	comp=Z,40nm,20.0s						
BOK	**Bokaro**	**18.80**	**335**	*e*P	**Pn**	**16 51 22.4**	**+0.1**
BOK				IAmb	IAmb	16 51 32.7	
	comp=Z,1μm,1.4s						
KOHI	**KOHIMA**	**18.80**	**359**	*e*P	**P**	**16 51 19.7**	**-2.3**
KOHI				IAmb	IAmb	16 51 32.8	
	comp=Z,888nm,1.1s						
SHL	**Shillong**	**18.81**	**353**	P	**P**	**16 51 19.7**	**-2.5**
SHL				pmax	pmax		
	comp=Z,284nm,0.9s						
SHL	**Shillong**	**18.81**	**353**	*e*x	**P**	**16 51 18.4**	**-3.7**
SHL	**Shillong**	**18.81**	**353**	P	**P**	**16 51 21.3**	**-0.8**
	SNR=69						
SHL	**Shillong**	**18.81**	**353**	P	**P**	**16 51 19.7**	**-2.5**
LEM	**Lembang**	**18.85**	**136**	P	**P**	**16 51 20.5**	**-2.1**
	comp=Z,4.8nm,0.3s,baz=338,slow=9.2,SNR=19						
LEM				S	S	16 55 09.5	+13
	comp=Z,1.6nm,0.3s,baz=143,slow=20,SNR=1.3						
LEM				LR	LR	17 00 40.7	
	comp=Z,619μm,18.3s,baz=304,slow=43						
LEM	**Lembang**	**18.85**	**136**	P	**P**	**16 51 19.5**	**-3.1**
	comp=Z,28μmcomp=Z,7μmcomp=Z,244nm,1.1s						
CNJI	**Cibinong**	**18.87**	**138**	P	**P**	**16 51 17.9**	**-4.7**
QIZ	**Qiongzhong**	**19.25**	**49**	P	**P**	**16 51 26.8**	**-0.1**
QIZ				S	**Sn**	**16 55 00.1**	**-3.5**
QIZ				pmax	pmax		
	comp=Z,49nm,1.1s						
QIZ				LR	LR		
	comp=Z,245μm,16.1s						
QIZ				LR	LR		
	comp=Z,162μm,19.8s						
QIZ				LR	LR		
	comp=Z,131μm,9.8s						
QIZ	**Qiongzhong**	**19.25**	**49**		**P**	**16 51 26.7**	**-0.2**
QIZ				IAmb	IAmb	16 51 55.7	
	comp=Z,2μm,1.4s						
QIZ	**Qiongzhong**	**19.25**	**49**	P	**Pn**	**16 51 28.5**	**+0.6**
MOKO	**MOKOCHONG**	**19.40**	**0**	*e*P	**P**	**16 51 27.7**	**-0.8**
MOKO				IAmb	IAmb	16 51 47.2	
	comp=Z,525nm,1.1s						
PBKI	**Pangkalan Bun**	**19.59**	**118**	P	**P**	**16 51 29.4**	**-1.2**
	comp=Z,90μmcomp=Z,23μmcomp=Z,2μm,1.0s						
JORH	**JORHAT**	**19.82**	**359**	*e*P	**Pn**	**16 51 34.2**	**-0.4**
JORH				IAmb	IAmb	16 51 37.4	
	comp=Z,398nm,1.1s						
KMI	**Kunming**	**19.85**	**23**	⇓P	**Pn**	**16 51 35.5**	**+0.4**
KMI				pP	sP	16 51 38.3	-0.9
KMI				PP	**PnPn**	**16 51 54.5**	**+5.2**
KMI				S	**Sn**	**16 55 18.9**	**+0.8**
KMI				SS	**SnSn**	**16 55 45.1**	**+12**
KMI				pmax	pmax		
	comp=Z,540nm,1.3s						
KMI				pmax	pmax		
	comp=Z,5μm,3.5s						
KMI				LR	LR		
	comp=Z,55μm,14.9s						
KMI				LR	LR		
	comp=Z,150μm,14.9s						
KMI				LR	LR		
	comp=Z,93μm,10.8s						
CMJI	**Cimerak**	**20.11**	**136**	P	**P**	**16 51 34.7**	**-1.5**
	comp=Z,20μmcomp=Z,3μmcomp=Z,249nm,1.2s						
ITAN	**ITANAGAR**	**20.23**	**358**	*e*P	**P**	**16 51 35.2**	**-2.3**
LKP	**Lekhapani**	**20.45**	**3**	*e*P	**P**	**16 51 38.7**	**-1.1**
LKP				IAmb	IAmb	16 51 42.4	
	comp=Z,642nm,0.8s						
DIBR	**DIBRUGARH**	**20.55**	**1**	*e*P	Pn	16 51 42.2	-0.9
GTK	**Tadong**	**21.14**	**345**	*e*P	**P**	**16 51 46.1**	**-1.4**
RAMN	**Ramite**	**21.38**	**340**	*e*P	**P**	**16 51 49.7**	**-0.5**
	comp=Z,322nm,0.5s						
TAPN	**Taplejung**	**21.41**	**343**	*e*P	**P**	**16 51 49.3**	**-1.2**
	comp=Z,234nm,0.7s						
YOGI	**Yogyakarta**	**21.45**	**132**	P	**P**	**16 51 46.3**	**-4.4**
	comp=Z,22μmcomp=Z,10μmcomp=Z,464nm,1.4s						
UGM	**Wanagama**	**21.68**	**132**	P	**P**	**16 51 51.1**	**-2.1**
	comp=Z,59μmcomp=Z,20μmcomp=Z,909nm,1.0s						
UGM	**Wanagama**	**21.68**	**132**	P	**P**	**16 51 50.7**	**-2.5**
UGM				IAmb	IAmb	16 52 20.6	
	comp=Z,1μm,1.1s						
UGM	**Wanagama**	**21.68**	**132**	P	**P**	**16 51 55.1**	**+1.9**
MTKI	**Muara Teweh, K**	**21.78**	**110**	P	**P**	**16 51 54.7**	**+0.4**
	comp=Z,63μmcomp=Z,14μmcomp=Z,700nm,1.9s						
TBJI	**Tambak Boyo**	**21.99**	**128**	P	P	16 52 03.8	+7.3
GOA	**Goa**	**22.00**	**295**	*e*P	**P**	**16 51 58.8**	**+2.1**
NGJI	**Ngawi**	**22.03**	**129**	P	**P**	**16 51 59.4**	**+2.4**
	comp=Z,3μmcomp=Z,11μmcomp=Z,1μm,1.0s						
BWJI	**Bawean**	**22.08**	**124**	P	**P**	**16 51 56.8**	**-0.7**
	comp=Z,45μmcomp=Z,26μmcomp=Z,2μm,1.1s						
JIRN	**Jiri**	**22.18**	**340**	*e*P	**P**	**16 51 57.9**	**-0.9**
	comp=Z,279nm,0.6s						
KAAM	**Kaadhehdhoo**	**22.33**	**255**	P	P	16 52 08.9	+8.6
	SNR=10						
KAAM	**Kaadhehdhoo**	**22.33**	**255**	⇑P	**P**	**16 52 04.4**	**+4.2**
PCJI	**Pacitan**	**22.35**	**132**	P	**P**	**16 51 58.6**	**-1.8**
	comp=Z,53μmcomp=Z,13μmcomp=Z,341nm,1.4s						
PKI	**Pulchoki**	**22.37**	**338**	*e*P	**P**	**16 51 59.5**	**-1.3**
	comp=Z,346nm,0.7s						
PKIN	**Phulchoki**	**22.38**	**338**	*e*P	**P**	**16 51 59.5**	**-1.4**
	comp=Z,595nm,0.6s						
GUN	**Gumba**	**22.51**	**340**	*e*P	**P**	**16 52 00.7**	**-1.7**
	comp=Z,322nm,0.6s						
DMN	**Daman**	**22.51**	**338**	*e*P	**P**	**16 52 01.0**	**-1.3**
	comp=Z,567nm,0.9s						
KKN	**Kakani**	**22.61**	**338**	*e*P	**P**	**16 52 01.6**	**-1.7**
	comp=Z,334nm,0.7s						
GYA	**Guiyang**	**22.72**	**29**	⇓*i*P	**P**	**16 52 04.9**	**+0.5**
GYA				S	**S**	**16 56 10.3**	**-2.3**
GYA				pmax	pmax		
	comp=Z,620nm,1.1s						
GYA				pmax	pmax		
	comp=Z,7μm,5.7s						
GYA				LR	LR		
	comp=Z,75μm,12.4s						
GYA				LR	LR		
	comp=Z,75μm,11.2s						
GYA				LR	LR		
	comp=Z,68μm,16.0s						

BBKI	Banjar Baru	22.74	116	P	P	16 52 04.9	+0.3
	comp=Z,52µmcomp=Z,20µmcomp=Z,2µm,1.7s						
LSA	Lhasa	22.98	353	P	P	16 52 03.8	-3.6
GKN	Gorkha	23.05	337	eP	P	16 52 06.4	-1.4
POO	Poona	23.22	302	eP	P	16 52 11.4	+1.8
POO				IAmb	IAmb	16 52 20.3	
	comp=Z,427nm,1.1s						
KOLN	Koldanda	23.26	335	eP	P	16 52 09.3	-0.7
DANN	Dangsing	23.70	336	eP	P	16 52 13.6	-0.9
SMKI	Samarinda	23.80	107	P	P	16 52 16.6	+1.4
	comp=Z,89µmcomp=Z,39µmcomp=Z,2µm,1.5s						
PYUN	Piuthan	23.80	334	eP	P	16 52 15.2	-0.2
KMMI	Kalianget	23.82	125	P	P	16 52 14.9	-0.5
	comp=Z,69µmcomp=Z,53µmcomp=Z,2µm,1.5s						
KBKI	Kotabaru	23.87	114	P	P	16 52 14.7	-1.2
	comp=Z,5µmcomp=Z,483nm,1.2s						
MCO	Taipa Grande	23.89	48	P	P	16 52 17.0	+1.0
BLJI	Banyuglugur	23.93	127	P	P	16 52 16.7	+0.3
	comp=Z,36µmcomp=Z,19µmcomp=Z,2µm,1.2s						
GMJI	Gumukmas	24.13	128	P	P	16 52 16.6	-1.7
	comp=Z,35µmcomp=Z,17µmcomp=Z,519nm,1.1s						
PPR	Puerto Princes	24.17	81	⇓eP	P	16 52 19.2	+0.4
BOM	Bombay	24.26	302	eP	P	16 52 20.3	+0.8
GZH	Guangzhou	24.32	46	P	P	16 52 25.7	+5.7
GZH				S	S	16 56 50.0	+11
GZH				LR	LR		
	comp=Z,151µm,14.7s						
GZH				LR	LR		
	comp=Z,144µm,12.8s						
HKC	Hong Kong Obse	24.45	49	⇑P	P	16 52 21.0	-0.2
ABJI	Asem Bagus	24.47	126	P	P	16 52 21.9	+0.5
	comp=Z,69µmcomp=Z,44µmcomp=Z,5µm,1.1s						
JAGI	Jajag, Banyuwa	24.80	127	⇑P	P	16 52 21.9	-2.6
JAGI	Jajag, Banyuwa	24.80	127	P	P	16 52 22.1	-2.4
	comp=Z,36µmcomp=Z,16µmcomp=Z,878nm,1.4s						
JAGI	Jajag, Banyuwa	24.80	127	P	P	16 52 21.7	-2.8
JAGI	Jajag, Banyuwa	24.80	127	P	P	16 52 24.0	-0.5
SRBI	Singaraja	25.43	125	P	P	16 52 30.7	+0.6
	comp=Z,48µmcomp=Z,48µmcomp=Z,4µm,1.1s						
DNP	Denpasar	25.77	126	P	P	16 52 32.6	-0.6
	comp=Z,34µmcomp=Z,34µmcomp=Z,2µm,1.2s						
IGBI	Denpasar	25.80	127	P	P	16 52 31.5	-2.0
	comp=Z,9µmcomp=Z,467nm,1.1s						
DGAR	Diego Garcia	26.12	238	i P	P	16 52 38.0	+1.5
DGAR	Diego Garcia	26.12	238	P	P	16 52 44.1	+7.7
DGAR				P	P	16 52 44.1	+7.7
DGAR				P	P	16 52 44.1	+7.7
MPSI	Mapaga	26.16	103	P	P	16 52 37.8	+1.0
	comp=Z,55µmcomp=Z,20µmcomp=Z,2µm,1.1s						
H08S3	Diego Garcia H	26.21	237	T	T	17 19 22.3	
	baz=56,slow=75,SNR=5110						
H08S2	Diego Garcia H	26.21	237	T	T	17 19 19.9	
	baz=56,slow=75,SNR=5397						
H08S1	Diego Carcia H	26.23	237	T	T	17 19 17.1	
	baz=56,slow=75,SNR=3541						
LUBP	Lubang	26.25	73	⇑eP	P	16 52 37.5	-0.1
LUBP				eS	S	16 57 06.8	-2.9
TOLI2	Tolitoli	26.83	101	P	P	16 52 41.9	-1.0
TOLI2				IAmb	IAmb	16 52 46.9	
	comp=Z,451nm,0.8s						
TOLI2				IAMs_20	IAMs_20	17 04 34.8	
	comp=Z,128µm,20.0s						
TOLI2	Tolitoli	26.83	101	P	P	16 52 44.0	+1.1
PGP	Puerto Galera	26.87	74	⇑eP	P	16 52 48.1	+4.8
SONA	Sohna	26.94	324	eP	P	16 52 43.7	0.0
TGY	Tagaytay City	26.98	72	eP	P	16 52 45.5	+1.2
TTSI	Tana Toraja	27.12	110	P	P	16 52 45.7	+0.2
	comp=Z,33µmcomp=Z,9µmcomp=Z,533nm,1.4s						
TWSI	Taliwang, Sumb	27.15	124	P	P	16 52 45.1	-0.7
	comp=Z,16µmcomp=Z,4µmcomp=Z,310nm,1.2s						
AJM	Ajmer	27.19	318	eP	P	16 52 47.1	+1.1
NDI	New Delhi	27.19	325	eP	P	16 52 46.0	0.0
KUDL	Kundal	27.21	323	eP	P	16 52 45.6	-0.5
ENH	Enshi	27.26	29	P	P	16 52 44.8	-1.8
ENH				IAmb	IAmb	16 52 54.7	
	comp=Z,558nm,1.1s						
ENH				IAMs_20	IAMs_20	17 04 29.5	
	comp=Z,65µm,18.0s						
LQP	Lukban	27.56	73	⇓eP	P	16 52 50.3	+0.7
KAPI	Kappang	27.83	114	P	P	16 52 50.4	-1.4
	comp=Z,178nm,1.2s,baz=298,slow=8.2,SNR=42						
KAPI				S	S	16 57 38.0	+3.4
	comp=Z,11nm,0.2s,baz=244,slow=18,SNR=4.9						
KAPI				LR	LR	17 04 35.8	
	comp=Z,145µm,20.0s,baz=300,slow=38						
KAPI	Kappang	27.83	114	P	P	16 52 50.6	-1.2
KAPI				pmax	pmax		
	comp=Z,927nm,1.5s						
KAPI				MLR	MLR		
	comp=Z,197µm,20.0s						
KAPI	Kappang	27.83	114	⇑P	P	16 52 50.4	-1.4
KAPI	Kappang	27.83	114	P	P	16 52 50.6	-1.2
KAPI				IAmb	IAmb	16 53 09.9	
	comp=Z,927nm,1.4s						
KAPI	Kappang	27.83	114	P	P	16 52 52.5	+0.7
PLAI	Plampang	27.94	123	P	P	16 52 52.1	-0.7
	comp=Z,28µmcomp=Z,6µmcomp=Z,232nm,1.1s						
PLAI	Plampang	27.94	123	P	P	16 52 55.0	+2.2
CNOP	Candoni, Negro	28.02	82	⇑iP	P	16 52 53.5	0.0
DDI	Dehra Dun	28.02	329	eP	P	16 52 53.7	+0.2
DDI				IAmb	IAmb	16 52 59.1	
	comp=Z,227nm,1.1s						
MRSI	Marisa	28.10	102	P	P	16 52 54.0	-0.3
	comp=Z,45µmcomp=Z,7µmcomp=Z,920nm,1.2s						
APSI	Ampana	28.18	105	P	P	16 52 55.4	+0.5
	comp=Z,25µmcomp=Z,10µmcomp=Z,897nm,1.1s						
RCP	Roxas	28.29	78	⇑eP	P	16 52 56.9	+0.9
BKSI	Bulukumba	28.29	115	P	P	16 52 55.3	-0.6
	comp=Z,32µmcomp=Z,9µmcomp=Z,620nm,1.0s						
DCPH	Dipolog City	28.66	85	⇓eP	P	16 53 03.6	+4.4
JCNP	Jose Panganiba	28.69	73	⇑eP	P	16 52 57.0	-2.5
JCNP				i S	S	16 57 58.6	+10
KNMB	Chin-men Tao	28.86	50	IAMs_20	IAMs_20	17 04 28.7	
	comp=Z,80µm,19.0s						
BHUJ	Bhuj	28.93	307	eP	P	16 53 04.5	+3.0
BHUJ				IAmb	IAmb	16 53 13.2	
	comp=Z,164nm,1.0s						
BSSI	Bau Bau, Buton	28.97	116	P	P	16 53 00.5	-1.5
	comp=Z,16µmcomp=Z,3µmcomp=Z,192nm,1.4s						
GTOI	Gorontalo	29.11	101	P	P	16 53 01.6	-1.7
	comp=Z,15µmcomp=Z,5µmcomp=Z,442nm,1.4s						
SMLA	Simla	29.12	328	eP	P	16 53 02.5	-0.6
SMLA				IAmb	IAmb	16 53 07.2	
	comp=Z,286nm,1.5s						
TBP	Tagbilaran	29.21	82	⇑iP	P	16 53 07.1	+2.9
QZH	Quanzhou	29.28	49	⇓iP	P	16 53 03.8	-0.8
QZH				sP	pwP	16 53 14.2	+2.1
QZH				S	S	16 57 54.6	-2.6
QZH				pmax	pmax		
	comp=Z,150nm,1.5s						
QZH				pmax	pmax		
	comp=Z,3µm,5.5s						
QZH				LR	LR		
	comp=Z,123µm,15.2s						
QZH				LR	LR		
	comp=Z,42µm,14.2s						
QZH				LR	LR		
	comp=Z,88µm,13.3s						
LUWI	Luwuk	29.29	104	⇑P	P	16 53 04.1	-0.8
LUWI	Luwuk	29.29	104	P	P	16 53 05.2	+0.3
	comp=Z,41µmcomp=Z,25µmcomp=Z,3µm,1.1s						
LUWI	Luwuk	29.29	104	P	P	16 53 04.7	-0.2
LUWI				IAMs_20	IAMs_20	17 05 24.1	
	comp=Z,108µm,21.0s						
LUWI	Luwuk	29.29	104	P	P	16 53 06.4	+1.5
WBSI	Waikabubak, Su	29.72	123	P	P	16 53 04.0	-4.7
TPUB	Ta-pu	30.01	54	P	P	16 53 09.0	-2.2
TPUB				IAMs_20	IAMs_20	17 04 18.1	
	comp=Z,90µm,21.0s						
TPUB	Ta-pu	30.01	54	P	P	16 53 14.0	+2.8
JASL	Jaisalmer	30.04	314	eP	P	16 53 11.8	+0.4
KMSI	Cibinong	30.07	101	P	P	16 53 13.4	+1.6
	comp=Z,1µmcomp=Z,13µmcomp=Z,931nm,1.0s						
WHN	Wuhan	30.08	36	⇓iP	P	16 53 12.4	+0.7
WHN				sP	pwP	16 53 20.8	+1.6
WHN				S	S	16 58 10.4	+0.7
WHN				pmax	pmax		
	comp=Z,620nm,1.2s						
WHN				pmax	pmax		
	comp=Z,6µm,5.5s						
WHN				LR	LR		
	comp=Z,260µm,11.0s						
WHN				LR	LR		
	comp=Z,218µm,14.5s						
TWG	Pinlang	30.14	55	P	P	16 53 09.6	-2.8
TWG				IAmb	IAmb	16 53 36.4	
	comp=Z,467nm,1.3s						
TWG				IAMs_20	IAMs_20	17 06 12.7	
	comp=Z,66µm,18.0s						
XAN	Xi'an	30.21	24	P	P	16 53 11.3	-1.5
XAN				pP	sP	16 53 19.2	+0.5
XAN				PP	PnPn	16 54 14.8	+4.3
XAN				S	S	16 58 13.4	+1.7
XAN				sS	sS	16 58 24.3	+5.8
XAN				pmax	pmax		
	comp=Z,120nm,1.2s						
XAN				pmax	pmax		
	comp=Z,2µm,5.8s						
MSLP	Maasin	30.22	82	⇑eP	P	16 53 15.5	+2.4
LZH	Lanzhou	30.37	15	⇓P	P	16 53 14.2	-0.2
LZH				pP	pP	16 53 19.0	+0.4
LZH				sP	pwP	16 53 22.1	+0.2
LZH				S	S	16 58 22.4	+7.9
LZH				pmax	pmax		
	comp=Z,85nm,1.1s						
LZH				pmax	pmax		
	comp=Z,2µm,6.0s						
LZH				LR	LR		
	comp=Z,40µm,15.7s						
LZH				LR	LR		
	comp=Z,50µm,16.3s						
LZH				LR	LR		
	comp=Z,46µm,16.8s						
DHRM	DHARAMSHALA	30.46	329	eP	P	16 53 14.3	-0.9
DHRM				IAmb	IAmb	16 53 17.3	
	comp=Z,218nm,1.3s						
SSLB	Suanglung	30.51	54	P	P	16 53 14.0	-1.6
SSLB				IAmb	IAmb	16 53 40.1	
	comp=Z,323nm,1.3s						
SSLB				IAMs_20	IAMs_20	17 04 12.3	
	comp=Z,84µm,21.0s						
SSLB	Suanglung	30.51	54	P	P	16 53 18.1	+2.5
YULB	Yu-li	30.60	55	IAMs_20	IAMs_20	17 05 18.5	
	comp=Z,70µm,20.0s						
DAV	Davao City (W)	30.87	88	P	P	16 53 21.5	+2.6
	comp=Z,1µm,1.3s						
BASI	Baing, Sumba	31.01	123	P	P	16 53 19.8	-0.3
	comp=Z,11µmcomp=Z,6µmcomp=Z,650nm,1.2s						
SGSI	Sangihe	31.07	94	P	P	16 53 29.4	+8.8
NACB	Ninganchiao	31.21	53	IAMs_20	IAMs_20	17 06 20.8	
	comp=Z,77µm,19.0s						
EDFI	Ende, Flores	31.22	119	P	P	16 53 19.0	-3.0
	comp=Z,14µmcomp=Z,2µmcomp=Z,166nm,1.4s						
YHNB	Yeheng	31.28	52	P	P	16 53 25.4	+3.0
MMRI	Maumere	31.64	119	⇑P	P	16 53 21.1	-4.5
MMRI	Maumere	31.64	119	P	P	16 53 23.6	-2.0
	comp=Z,24µmcomp=Z,6µmcomp=Z,329nm,1.3s						
MMRI	Maumere	31.64	119	P	P	16 53 21.9	-3.8
MMRI	Maumere	31.64	119	P	P	16 53 24.8	-0.8
YOJ	Yonaguni jima	32.48	54	P	P	16 53 31.3	-1.6
YOJ				pmax	pmax		
	comp=Z,576nm,1.5s						
YOJ	Yonaguni jima	32.48	54	P	P	16 53 31.3	-1.6
YOJ				IAmb	IAmb	16 53 48.7	
	comp=Z,576nm,1.5s						
YOJ	Yonaguni jima	32.48	54	P	P	16 53 37.1	+4.2
SANI	Sanana	32.66	105	⇑P	P	16 53 32.0	-2.6
SANI	Sanana	32.66	105	P	P	16 53 32.7	-1.9
	comp=Z,21µmcomp=Z,6µmcomp=Z,427nm,1.2s						
SANI	Sanana	32.66	105	P	P	16 53 33.7	-0.9
GTA	Gaotai	32.81	8	eP	P	16 53 35.3	-0.4
GTA				pP	pP	16 53 38.8	-1.3
GTA				sP	sP	16 53 41.2	-0.7
GTA				S	S	16 58 52.9	+0.5
GTA				sS	sS	16 59 01.6	+2.5
GTA				ScP	ScP	17 00 01.8	-2.5
GTA				SS	SnSn	17 00 46.0	-3.0
GTA				ScS	ScS	17 04 02.5	-1.8
GTA				pmax	pmax		
	comp=Z,96nm,1.1s						
GTA				pmax	pmax		
	comp=Z,1µm,6.8s						
GTA				LR	LR		
	comp=Z,22µm,18.2s						
GTA				LR	LR		
	comp=Z,20µm,15.6s						
GTA				LR	LR		
	comp=Z,28µm,18.9s						
NIL	Nilore	33.16	326	P	P	16 53 37.5	-1.3
NIL				pmax	pmax		
	comp=Z,533nm,0.8s						
NIL				MLR	MLR		
	comp=Z,23µm,19.0s						
NIL	Nilore	33.16	326	P	P	16 53 37.9	-0.9
NIL				P	P	16 53 37.9	-0.9
NIL	Nilore	33.16	326	P	P	16 53 37.5	-1.3
TNTI	Ternate	33.34	99	P	P	16 53 39.9	-0.7
	comp=Z,18µmcomp=Z,3µmcomp=Z,198nm,1.1s						
TNTI	Ternate	33.34	99	P	P	16 53 37.6	-2.9
TNTI				IAmb	IAmb	16 53 58.0	
	comp=Z,215nm,1.1s						
BATI	Baumata	33.62	120	P	P	16 53 39.3	-3.7
	comp=Z,10µmcomp=Z,3µmcomp=Z,369nm,1.0s						
LBMI	Labuha	33.77	101	P	P	16 53 44.5	+0.2
	comp=Z,16µmcomp=Z,8µmcomp=Z,447nm,1.5s						
NJ2	Nanjing	33.87	39	eP	P	16 53 36.4	-8.5
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
NJ2	Nanjing	33.87	39	⇓P	P	16 53 46.1	+1.2
NJ2				sP	pwP	16 53 53.5	+1.1
NJ2				S	S	16 59 09.4	+0.7
NJ2				sS	sS	16 59 17.5	+2.0
NJ2				pmax	pmax		
	comp=Z,88nm,1.1s						
NJ2				pmax	pmax		
	comp=Z,5µm,3.7s						
NJ2				LR	LR		
	comp=Z,49µm,16.1s						
NJ2				LR	LR		
	comp=Z,65µm,14.7s						
NJ2				LR	LR		
	comp=Z,96µm,13.0s						
SOEI	Soe	33.93	119	⇑P	P	16 53 41.5	-4.4
SOEI	Soe	33.93	119	P	P	16 53 42.7	-3.1
	comp=Z,21µmcomp=Z,9µmcomp=Z,614nm,1.1s						
SOEI	Soe	33.93	119	P	P	16 53 41.9	-4.0
SOEI				IAmb	IAmb	16 54 08.6	
	comp=Z,396nm,1.1s						
SOEI	Soe	33.93	119	P	P	16 53 45.7	-0.1
JMJ	Miyako jima 2	34.49	55	P	P	16 53 54.1	+3.7
SSE	Sheshan	34.76	43	P	P	16 53 53.7	+1.0
SSE				sP	pwP	16 54 02.1	+1.9
SSE				S	S	16 59 24.6	+2.1
SSE				pmax	pmax		
	comp=Z,30nm,1.4s						
SSE				pmax	pmax		
	comp=Z,290nm,6.5s						
TIY	Taiyuan	34.82	25	⇑iP	P	16 53 54.0	+0.8
TIY				PP	PP	16 55 11.6	-0.6
TIY				S	S	16 59 31.8	+8.4
TIY				pmax	pmax		
	comp=Z,110nm,1.0s						
TIY				pmax	pmax		
	comp=Z,3µm,7.1s						
TIY				LR	LR		
	comp=Z,64µm,11.9s						
TIY				LR	LR		
	comp=Z,30µm,10.1s						
TIY				LR	LR		
	comp=Z,65µm,12.6s						
GIRL	Giralia	35.09	147	P	P	16 53 56.3	+0.8
	baz=35,SNR=6.9						
MSAI	Masohi	35.84	105	P	P	16 54 00.8	-1.4
	comp=Z,57nm,0.7s						
TIA	Tai'an	35.85	32	⇓P	P	16 54 02.3	+0.3
TIA				pmax	pmax		
	comp=Z,150nm,1.0s						
TIA				pmax	pmax		
	comp=Z,2µm,5.1s						
TIA				LR	LR		
	comp=Z,70µm,13.2s						
TIA				LR	LR		
	comp=Z,93µm,12.7s						
TIA				LR	LR		
	comp=Z,50µm,10.3s						
KBL	Kabul	36.22	323	P	P	16 54 04.1	-1.3
KBL				pmax	pmax		
	comp=Z,205nm,1.2s						
KBL	Kabul	36.22	323	P	P	16 54 05.0	-0.4
	SNR=54						
KBL				P	P	16 54 05.0	-0.4
	SNR=54						
KBL				P	P	16 54 05.0	-0.4
	SNR=54						
KBL	Kabul	36.22	323	P	P	16 54 04.1	-1.3
BTO	Baotou	36.41	20	eP	P	16 54 06.5	-0.3
BTO				S	S	16 59 50.2	+2.4
BTO				LR	LR		
	comp=Z,166µm,12.4s						
KSH	Kashi	36.57	336	P	P	16 54 05.5	-2.8
KSH				pP	pP	16 54 10.4	-2.2
KSH				sP	sP	16 54 12.7	-1.7
KSH				S	S	16 59 43.8	-6.6
KSH				pmax	pmax		
	comp=Z,50nm,1.7s						
KSH				pmax	pmax		
	comp=Z,1µm,5.3s						
KSH				LR	LR		
	comp=Z,13µm,19.6s						
KSH				LR	LR		
	comp=Z,16µm,20.6s						
KSH				LR	LR		
	comp=Z,25µm,19.6s						
JLN	Jalan Bani Buh	37.09	298	P	P	16 54 16.1	+3.3
	SNR=100						
BNDI	Bandanaira	37.11	107	⇑P	P	16 54 09.4	-3.6
BNDI	Bandanaira	37.11	107	P	P	16 54 10.2	-2.8
	comp=Z,18µmcomp=Z,12µmcomp=Z,1µm,1.2s						
BNDI	Bandanaira	37.11	107	P	P	16 54 12.2	-0.8
HHC	Hu-ho-hao-te	37.17	22	eP	P	16 54 14.5	+1.2
HHC				PP	PnPn	16 55 41.6	+3.0
HHC				S	S	17 00 00.4	+1.0
HHC				pmax	pmax		
	comp=Z,89nm,0.8s						
HHC				pmax	pmax		
	comp=Z,3µm,8.3s						
HHC				LR	LR		
	comp=Z,38µm,14.6s						
HHC				LR	LR		
	comp=Z,61µm,18.2s						
HHC				LR	LR		
	comp=Z,64µm,16.1s						
MBWA	Marble Bar	37.25	139	P	P	16 54 13.0	-1.1
MBWA				P	P	16 54 13.0	-1.1
MBWA	Marble Bar	37.25	139	⇑P	P	16 54 12.9	-1.2
MBWA	Marble Bar	37.25	139	P	P	16 54 13.2	-0.9
WMQ	Urumqi	37.34	352	P	P	16 54 15.0	+0.3
WMQ				pP	pP	16 54 19.4	+0.3
WMQ				PP	PnPn	16 55 41.7	+1.1
WMQ				S	S	17 00 01.6	-0.3
WMQ				sS	sS	17 00 09.1	+0.1
WMQ				PcS	PcS	17 00 21.0	-1.1
WMQ				pmax	pmax		
	comp=Z,160nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,2µm,3.9s						
WMQ				LR	LR		
	comp=Z,19µm,15.7s						
WMQ				LR	LR		
	comp=Z,17µm,17.1s						
WMQ				LR	LR		
	comp=Z,12µm,18.3s						
SWI	Sorong	37.48	100	P	P	16 54 15.5	-0.7
	comp=Z,18µmcomp=Z,7µmcomp=Z,668nm,1.1s						
WBK	Wadi Bani Khal	37.63	298	P	P	16 54 20.9	+3.5
	SNR=32						
JOW	Kunigami	37.78	54	LR	LR	17 12 32.3	
	comp=Z,23µm,18.0s,baz=238,slow=41						
JOW	Kunigami	37.78	54	⇓P	P	16 54 19.7	+1.1
JOW	Kunigami	37.78	54	P	P	16 54 16.9	-1.7
JOW	Kunigami	37.78	54	P	P	16 54 20.8	+2.2
MHTO	MHTO	38.02	295	P	P	16 54 22.3	+1.6
	SNR=48						
MHTO				P	P	16 54 22.3	+1.6
	SNR=48						
WSAR	Wadi Sarin	38.13	299	P	P	16 54 24.6	+3.0
	SNR=53						
JMDO	Jabal Madar	38.31	298	P	P	16 54 24.7	+1.6
	SNR=48						
JMDO				P	P	16 54 24.7	+1.6
	SNR=48						
BJT	Baijiatuau	38.36	27	P	P	16 54 22.5	-0.8
BJT				pmax	pmax		
	comp=Z,920nm,1.5s						
BJT				MLR	MLR		
	comp=Z,14µm,22.0s						
BJT	Baijiatuau	38.36	27	P	P	16 54 22.5	-0.8
BJT				IAmb	IAmb	16 54 49.2	
	comp=Z,920nm,1.5s						
DRK	Karamyk	38.40	331	P	P	16 54 23.4	-0.5
SHLS	Shalkode	38.54	342	eP	P	16 54 22.7	-2.2
	baz=343						
SHLS				eS	S	17 00 16.9	-3.3
	baz=343						
SHLS	Shalkode	38.54	342	eP	P	16 54 22.7	-2.2
SHLS				eS	S	17 00 16.9	-3.3
SMDO	Samad	38.58	299	P	P	16 54 28.1	+2.6
	SNR=74						
SMDO				P	P	16 54 28.1	+2.6
	SNR=74						
BIDO	Bidbid	38.66	299	P	P	16 54 28.9	+2.9
	SNR=83						
UZB	Uzynbulak	38.66	342	eP	P	16 54 25.0	-1.0
	baz=342						
UZB				eS	S	17 00 19.7	-2.5
	baz=342						
UZB	Uzynbulak	38.66	342	eP	P	16 54 25.0	-1.0
UZB				eS	S	17 00 19.6	-2.5
PDGK	Podgornoye	38.69	342	P	P	16 54 23.4	-2.8
GAR	Garm	38.75	329	P	P	16 54 25.2	-1.6
SATY	Saty	38.78	341	eP	P	16 54 25.6	-1.3
	baz=341						
SATY				eS	S	17 00 22.0	-1.9
	baz=341						
SATY	Saty	38.78	341	eP	P	16 54 25.6	-1.3
SATY				eS	S	17 00 21.9	-1.9
ULHL	Ulahol	38.81	338	P	P	16 54 24.5	-2.8
	SNR=6.6						
FAKI	Fak Fak	38.92	103	⇑P	P	16 54 25.4	-3.0
FAKI	Fak Fak	38.92	103	P	P	16 54 27.7	-0.7
	comp=Z,20µmcomp=Z,6µmcomp=Z,631nm,1.1s						
FAKI	Fak Fak	38.92	103	P	P	16 54 26.6	-1.8
FAKI				IAmb	IAmb	16 54 47.4	
	comp=Z,565nm,1.0s						
FAKI				IAMs_20	IAMs_20	17 11 43.3	
	comp=Z,43µm,20.0s						
FAKI	Fak Fak	38.92	103	P	P	16 54 29.7	+1.3
KPKS	Kokpek	39.06	342	eP	P	16 54 28.3	-0.9
	baz=342						
KPKS				eS	S	17 00 23.3	-4.8
	baz=342						
KPKS	Kokpek	39.06	342	eP	P	16 54 28.3	-0.9
KPKS				eS	S	17 00 23.2	-4.8
CHGR	Chuyangaron	39.09	328	P	P	16 54 27.6	-1.9
BSY	Bisya	39.22	298	P	P	16 54 34.3	+3.5
BSY				P	P	16 54 34.3	+3.5
TNSS	Tian-Shan	39.25	340	eP	P	16 54 30.1	-1.0
	baz=340						
BTK	Batken	39.32	331	P	P	16 54 31.5	+0.1
BTK				pmax	pmax		
	comp=Z,511nm,0.8s						
BTK	Batken	39.32	331	P	P	16 54 31.5	+0.1
BTK				IAmb	IAmb	16 54 51.9	
	comp=Z,510nm,0.8s						
MDOK	Medeo	39.33	340	eP	P	16 54 30.5	-1.1
	baz=340						
MDOK				eS	S	17 00 30.7	-1.5
	baz=340						
MDOK	Medeo	39.33	340	eP	P	16 54 30.4	-1.1
MDOK				eS	S	17 00 30.6	-1.5
HOQ	Hoqain	39.39	299	P	P	16 54 35.2	+3.0
	SNR=69						
HOQ				P	P	16 54 35.2	+3.0
	SNR=69						
KNDC	Almaty	39.40	340	P	P	16 54 32.4	+0.3
AAA	Alma-Ata	39.41	340	eP	P	16 54 31.7	-0.4
	baz=340						
AAA	Alma-Ata	39.41	340	eP	P	16 54 33.7	+1.6
UCH	Uchtor	39.45	336	P	P	16 54 32.7	-0.3
	SNR=29						
SHAO	Shalim	39.46	290	i P	P	16 54 35.7	+2.9
	SNR=8.6						
SHAO	Shalim	39.46	290	P	P	16 54 36.3	+3.5
	SNR=10						
SHAO				P	P	16 54 36.3	+3.5
	SNR=10						

SHAO				P	P	16 54 36.3	+3.5
	SNR=10						
FITZ	Fitzroy Crossi	39.48	129	P	P	16 54 31.8	-1.1
	comp=Z,41nm,0.6s,baz=325,slow=7.9,SNR=50						
FITZ	Fitzroy Crossi	39.48	129	P	P	16 54 30.8	-2.2
	baz=40,SNR=56						
TKM2	Tokmak 2	39.63	338	P	P	16 54 34.2	+0.1
	SNR=24						
TKM2	Tokmak 2	39.63	338	P	P	16 54 33.0	-1.2
KBK	Karagaybulak	39.65	337	P	P	16 54 34.0	-0.2
	SNR=63						
AML	Almayashu	39.70	336	P	P	16 54 34.5	-0.5
	SNR=110						
AML	Almayashu	39.70	336	*i* P	P	16 54 33.9	-1.1
	SNR=110						
JMZ	Minamidaito 2	39.80	57	P	P	16 54 32.5	-3.0
AAK	Ala-Archa	39.81	337	LR	LR	17 12 53.9	
	comp=Z,25µm,21.6s,baz=158,slow=39						
AAK	Ala-Archa	39.81	337	P	P	16 54 35.2	-0.4
	SNR=41						
AAK	Ala-Archa	39.81	337	*i* P	P	16 54 34.9	-0.7
	SNR=65						
AAK	Ala-Archa	39.81	337	P	P	16 54 34.8	-0.7
AAK	Ala-Archa	39.81	337	⇑P	P	16 54 35.2	-0.4
AAK	Ala-Archa	39.81	337	P	P	16 54 34.8	-0.7
FRU1	Bishkek	39.90	337	P	P	16 54 36.0	-0.2
FRU1				pmax	pmax		
	comp=Z,150nm,1.1s						
FRU1	Bishkek	39.90	337	P	P	16 54 36.0	-0.2
CHKK	Chushkaly	39.96	340	*e*P	P	16 54 34.2	-2.4
	baz=340						
ARQ	Araqi	40.00	298	P	P	16 54 40.5	+3.2
	SNR=63						
ARQ				P	P	16 54 40.5	+3.2
	SNR=63						
ARXS	Arharly	40.00	341	*e*P	P	16 54 36.0	-1.1
CHMS	Chumysh	40.02	337	P	P	16 54 36.5	-0.6
	SNR=35						
DMTO	DMTO	40.03	289	P	P	16 54 40.7	+3.1
	SNR=5.7						
DMTO				P	P	16 54 40.7	+3.1
	SNR=5.7						
DMTO				P	P	16 54 40.7	+3.1
	SNR=5.7						
EKS2	Erkin-Say	40.11	336	P	P	16 54 37.8	-0.3
	SNR=32						
KUU	Kurty	40.21	340	*e*P	P	16 54 36.5	-2.3
	baz=340						
KUU				*e*S	S	17 00 44.9	-0.2
	baz=340						
KUU	Kurty	40.21	340	*e*P	P	16 54 36.4	-2.3
KUU				*e*S	S	17 00 44.9	-0.2
KSJDO	Jindo	40.23	42	P	P	16 54 40.1	+1.1
	SNR=6.3						
SOHO	SOHO	40.24	300	*i* P	P	16 54 41.3	+2.1
	SNR=54						
SOHO	SOHO	40.24	300	P	P	16 54 41.8	+2.6
DL2	Dalian	40.26	33	P	P	16 54 39.7	+0.6
DL2				S	S	17 00 48.0	+2.2
DL2				pmax	pmax		
	comp=Z,350nm,0.9s						
DL2				pmax	pmax		
	comp=Z,3µm,3.6s						
DL2				LR	LR		
	comp=Z,56µm,12.8s						
DL2				LR	LR		
	comp=Z,69µm,15.6s						
DL2				LR	LR		
	comp=Z,34µm,11.4s						
SOCY	Socotra	40.26	281	⇑P	P	16 54 41.9	+2.2
SOCY	Socotra	40.26	281	P	P	16 54 40.2	+0.6
SOCY				IAmb	IAmb	16 54 50.8	
	comp=Z,487nm,1.4s						
USP	Ospenovka	40.34	337	P	P	16 54 38.8	-1.0
	SNR=49						
SGDS	Sogindy	40.45	338	*e*P	P	16 54 39.9	-0.9
	baz=338						
SGDS				*e*S	S	17 00 46.8	-2.0
	baz=338						
HRA	Herat	40.45	317	P	P	16 54 40.4	-0.8
TDK	Taldyqorghan	40.53	342	*e*P	P	16 54 39.1	-2.3
	baz=342						
TDK	Taldyqorghan	40.53	342	*e*P	P	16 54 39.0	-2.3
MSEY	Mahe Island	40.57	255	*i* P	P	16 54 46.3	+4.2
	SNR=10						
MSEY	Mahe Island	40.57	255	P	P	16 54 43.4	+1.3
MSEY				pmax	pmax		
	comp=Z,268nm,1.3s						
MSEY				MLR	MLR		
	comp=Z,30µm,21.0s						
MSEY	Mahe Island	40.57	255	P	P	16 54 46.6	+4.5
MSEY	Mahe Island	40.57	255	⇑p	P	16 54 49.2	+7.1
MSEY	Mahe Island	40.57	255	P	P	16 54 43.4	+1.3
KNRA	Kununurra	40.65	124	P	P	16 54 40.3	-2.3
	baz=41,SNR=11						
MEEK	Meekatharra	40.66	146	P	P	16 54 42.2	-0.5
	baz=41,SNR=17						
RBK	Rabkut	40.69	289	P	P	16 54 45.9	+2.8
	SNR=12						
RBK				P	P	16 54 45.9	+2.8
	SNR=12						
RBK				P	P	16 54 45.9	+2.8
	SNR=12						
UOSS	Minazif	40.79	301	*i* P	P	16 54 45.2	+1.4
	SNR=20						
UOSS	Minazif	40.79	301	P	P	16 54 44.5	+0.7
UOSS				P	P	16 54 44.5	+0.7
UOSS	Minazif	40.79	301	⇑P	P	16 54 45.2	+1.4
UOSS	Minazif	40.79	301	P	P	16 54 42.9	-0.9
HATD	Hatta, Dubai	40.81	300	*i* P	P	16 54 46.2	+2.2
	SNR=15						
HATD	Hatta, Dubai	40.81	300	P	P	16 54 46.6	+2.6
	SNR=38						
HATD				P	P	16 54 46.6	+2.6
	SNR=38						
ASHO	Ashiyiah	40.83	300	*i* P	P	16 54 45.7	+1.5
	SNR=16						
ASHO	Ashiyiah	40.83	300	P	P	16 54 46.9	+2.8
	SNR=29						
MDH	Madha	40.83	301	*i* P	P	16 54 44.6	+0.5
	SNR=6.8						
MDH	Madha	40.83	301	P	P	16 54 45.3	+1.2
MDH				P	P	16 54 45.3	+1.2
ALNE	Al Ain	40.89	299	*i* P	P	16 54 47.2	+2.5
	SNR=19						
ALNE	Al Ain	40.89	299	P	P	16 54 47.6	+3.0
	SNR=136						
ALNE				P	P	16 54 47.6	+3.0
	SNR=136						
MSFE	Esma-Masafi	40.97	301	*i* P	P	16 54 47.8	+2.5
	SNR=14						
DOK	Doka	40.97	291	P	P	16 54 48.3	+2.9
	SNR=22						
DOK				P	P	16 54 48.3	+2.9
	SNR=22						
MASF	Masafi	40.97	301	P	P	16 54 48.0	+2.6
	SNR=6.7						
MASF				P	P	16 54 48.0	+2.6
	SNR=6.7						
UMZA	Um Al Zommool	41.01	297	P	P	16 54 48.1	+2.5
UMZA				P	P	16 54 48.1	+2.5
UMZA				P	P	16 54 48.1	+2.5
TAS	Tashkent	41.03	331	P	P	16 54 45.0	-0.5
TAS				pmax	pmax		
	comp=Z,255nm,0.8s						
TAS	Tashkent	41.03	331	P	P	16 54 45.0	-0.5
TAS				IAmb	IAmb	16 55 12.1	
	comp=Z,255nm,0.8s						
BANOM	Banah	41.05	302	*i* P	P	16 54 47.5	+1.6
	SNR=6.0						
BANOM	Banah	41.05	302	P	P	16 54 48.5	+2.5
BANOM				P	P	16 54 48.5	+2.5
WHFO	Wadi Hawf	41.17	289	P	P	16 54 49.7	+2.6
	SNR=19						
WHFO				P	P	16 54 49.7	+2.6
	SNR=19						
WHFO				P	P	16 54 49.7	+2.6
	SNR=19						
MK31	Makanchi Array	41.19	347	*i* P	P	16 54 44.4	-2.4
MK31	Makanchi Array	41.19	347	P	P	16 54 45.4	-1.3
MKAR	Makanchi Array	41.19	347	P	P	16 54 45.6	-1.1
	comp=Z,96nm,0.8s,baz=166,slow=7.6,SNR=231						
MKAR				LR	LR	17 15 42.3	
	comp=Z,9µm,19.1s,baz=162,slow=42						
MKAR				PKPPKP	P'P'df	17 26 42.9	-18
	comp=Z,1.7nm,1.0s,baz=336,slow=3.2,SNR=4.2						
MKAR	Makanchi Array	41.19	347	P	P	16 54 45.3	-1.5
SHME	Shamm	41.22	302	*i* P	P	16 54 47.9	+0.6
	SNR=7.1						
SHME	Shamm	41.22	302	P	P	16 54 51.8	+4.5
SHME				P	P	16 54 51.8	+4.5
FAQ	Al Faqa, Dubai	41.25	300	*i* P	P	16 54 49.0	+1.4
	SNR=16						
FAQ	Al Faqa, Dubai	41.25	300	P	P	16 54 51.0	+3.5
	SNR=32						
FAQ				P	P	16 54 51.0	+3.5
	SNR=32						
NAZ	Nazwa, Dubai	41.27	300	*i* P	P	16 54 49.0	+1.3
	SNR=28						
NAZ	Nazwa, Dubai	41.27	300	P	P	16 54 52.0	+4.3
	SNR=26						
NAZ				P	P	16 54 52.0	+4.3
	SNR=26						
MAKZ	Makanchi	41.27	347	P	P	16 54 45.8	-1.6
MAKZ				pmax	pmax		
	comp=Z,166nm,0.9s						
MAKZ				MLR	MLR		
	comp=Z,7µm,19.0s						
MAKZ	Makanchi	41.27	347	⇓P	P	16 54 45.9	-1.6
MAKZ	Makanchi	41.27	347	P	P	16 54 45.8	-1.6
MORW	Morawa	41.28	151	P	P	16 54 48.2	+0.5
	baz=41,SNR=8.1						
ZSN	Zaisan	41.32	350	*e*P	P	16 54 46.6	-1.2
	baz=350						
ZSN	Zaisan	41.32	350	*e*P	P	16 54 46.6	-1.2
IUG	Iuzhnay	41.32	332	*e*P	P	16 54 47.0	-1.0
	baz=332						
IUG	Iuzhnay	41.32	332	*e*P	P	16 54 47.0	-1.0
MTN	Manton Dam	41.33	118	P	P	16 54 45.9	-2.4
	baz=41,SNR=14						
DZA	Taraz	41.33	334	*e*P	P	16 54 45.9	-2.1
	baz=334						
DZA	Taraz	41.33	334	*e*P	P	16 54 45.8	-2.1
ASUD	Al Ashush, Dub	41.44	300	*i* P	P	16 54 51.6	+2.5
	SNR=62						
ASUD	Al Ashush, Dub	41.44	300	P	P	16 54 52.1	+3.0
	SNR=62						
ASUD				P	P	16 54 52.1	+3.0
	SNR=62						
UMQ	Umm Al-Quwin	41.45	301	*i* P	P	16 54 50.6	+1.4
	SNR=5.7						
UMQ	Umm Al-Quwin	41.45	301	P	P	16 54 54.0	+4.9
UMQ				P	P	16 54 54.0	+4.9
ABTO	Aybut	41.52	288	P	P	16 54 53.0	+3.1
	SNR=17						
ABTO				P	P	16 54 53.0	+3.1
	SNR=17						
JSU	Suzuyama	41.61	49	⇓P	P	16 54 51.4	+1.0
KSJEO	Jeonju	41.74	41	P	P	16 54 52.0	+0.6
	SNR=13						
KK31	Karatay Array	41.85	334	P	P	16 54 51.2	-1.1
KK31				pmax	pmax		
	comp=Z,278nm,1.2s						
KK31	Karatay Array	41.85	334	P	P	16 54 51.2	-1.1
KKAR	Karatay Array	41.85	334	P	P	16 54 51.0	-1.3
KKAR				pmax	pmax		
	comp=Z,278nm,1.2s						
KKAR	Karatay Array	41.85	334	⇓P	P	16 54 51.1	-1.1
KKAR	Karatay Array	41.85	334	P	P	16 54 51.0	-1.3
KOJ2	Gongju-si	41.96	41	P	P	16 54 54.0	+0.8
	SNR=23						
BTLS	Baital	42.02	338	*e*P	P	16 54 52.1	-1.6
	baz=338						
BTLS				*e*S	S	17 01 07.8	-4.2
	baz=338						
BTLS	Baital	42.02	338	*e*P	P	16 54 52.0	-1.6
BTLS				*e*S	S	17 01 07.8	-4.2
TJN	Taejon	42.05	41	*ce*P	P	16 54 53.6	-0.3
TJN	Taejon	42.05	41	P	P	16 54 54.5	+0.6
BRLS	Borolday	42.10	333	*e*P	P	16 54 51.6	-2.7
	baz=332						
BRLS	Borolday	42.10	333	*e*P	P	16 54 51.6	-2.7
SONM	Songino Array	42.12	12	P	P	16 54 53.9	-0.6
	comp=Z,96nm,1.0s,baz=194,slow=6.3,SNR=210						
SONM				PKPPKP	P'P'df	17 26 41.3	-19
	comp=Z,1.8nm,1.1s,baz=29,slow=3.3,SNR=4.4						
SONM	Songino Array	42.12	12	P	P	16 54 53.2	-1.3
SONM				pmax	pmax		
	comp=Z,378nm,1.4s						
SONM	Songino Array	42.12	12	P	P	16 54 53.2	-1.3
SONM				IAmb	IAmb	16 55 18.1	
	comp=Z,378nm,1.4s						
KSCEA	Cheonan	42.24	40	P	P	16 54 56.0	+0.5
	SNR=14						
PYTK	Pyeongtaek	42.25	40	P	P	16 54 55.9	+0.3
	SNR=10						
INCN	Inchon	42.25	39	P	P	16 54 53.9	-1.7
INCN				pmax	pmax		
	comp=Z,313nm,1.2s						
INCN				MLR	MLR		
	comp=Z,49µm,18.0s						
INCN	Inchon	42.25	39	⇑P	P	16 54 55.8	+0.2
INCN	Inchon	42.25	39	P	P	16 54 53.9	-1.7
INCN	Inchon	42.25	39	IAMs_20	IAMs_20	17 14 40.8	
	comp=Z,49µm,18.0s						
INCN	Inchon	42.25	39	P	P	16 54 55.8	+0.2
ULN	Ulaanbaatar	42.29	13	*ce*P	P	16 54 55.1	-0.8
ULN				pmax	pmax		
	comp=Z,83nm,1.0s						
ULN	Ulaanbaatar	42.29	13	P	P	16 54 55.6	-0.3
ULN				P	P	16 54 55.6	-0.3
ULN	Ulaanbaatar	42.29	13	⇓P	P	16 54 55.5	-0.4
ULN	Ulaanbaatar	42.29	13	P	P	16 54 54.5	-1.4
BAKI	Biak	42.30	99	P	P	16 54 54.8	-1.5
	comp=Z,425nm,1.1s						
KSSWO	Suwon	42.33	40	P	P	16 54 56.5	+0.3
	SNR=13						
KSSEO	Seoul	42.43	39	P	P	16 54 57.0	0.0
	SNR=11						
KSSEO	Seoul	42.43	39	P	P	16 54 57.1	0.0
	SNR=11						
MZWR	Madinat Zayed	42.44	298	P	P	16 54 59.4	+2.1
KDU	Kakadu	42.44	117	P	P	16 54 55.0	-2.3
	baz=42,SNR=4.9						
KSSOD	Songwoldong	42.51	39	P	P	16 54 58.4	+0.7
	SNR=15						
SRPI	Serui, Papua	42.56	100	P	P	16 54 56.7	-1.8
	comp=Z,9µmcomp=Z,2µmcomp=Z,156nm,1.0s						
KSMUS	Musan	42.58	39	P	P	16 54 58.7	+0.5
	SNR=32						
KSDDC	Dongducheon	42.77	39	P	P	16 55 00.3	+0.5
	SNR=7.3						
YNCB	YEONCHEON	42.78	39	P	P	16 55 00.3	+0.5
	SNR=14						
BLDU	Ballidu	42.88	151	P	P	16 55 00.8	0.0
	baz=43,SNR=8.7						
KSAR	Wonju Array Be	43.02	40	P	P	16 55 00.6	-1.2
KSAR	Wonju Array Be	43.02	40	P	P	16 55 00.6	-1.2
KS19	Wonju Array Si	43.04	40	P	P	16 55 01.2	-0.8
KSRS	Korea Array	43.05	40	P	P	16 55 01.0	-1.0
	comp=Z,44nm,0.8s,baz=224,slow=8.8,SNR=64						
KSRS				ScP	ScP	17 00 38.0	-4.7
	comp=Z,20nm,1.2s,baz=232,slow=4.3,SNR=8.7						
KSRS				LR	LR	17 13 57.2	
	comp=Z,24µm,19.2s,baz=215,slow=38						
DGZ	Jazzator, Alta	43.15	353	*d i*P	P	16 55 01.3	-1.6
DGZ				pmax	pmax		
	comp=Z,119nm,1.9s						
GHWR	Ruwais	43.38	298	P	P	16 55 06.6	+1.7
GHWR				P	P	16 55 06.6	+1.7
GHWR				P	P	16 55 06.6	+1.7
SNY	Shenyang	43.38	32	⇓P	P	16 55 05.0	+0.4
SNY				pP	pwP	16 55 14.9	+2.6
SNY				S	S	17 01 31.8	-0.2
SNY				pmax	pmax		
	comp=Z,170nm,1.1s						
SNY				pmax	pmax		
	comp=Z,4µm,6.5s						
SNY				LR	LR		
	comp=Z,56µm,16.9s						
SNY				LR	LR		
	comp=Z,55µm,13.7s						
SNY				LR	LR		
	comp=Z,83µm,15.1s						
MUN	Mundaring	43.79	153	P	P	16 55 08.0	-0.1
	baz=44,SNR=35						
ZAK	Zakamensk	44.04	8	*e*P	P	16 55 09.4	-0.6
ZAK				pmax	pmax		
	comp=Z,119nm,1.7s						
SMPI	Sarmi	45.00	100	P	P	16 55 17.3	-0.8
	comp=Z,10µmcomp=Z,5µmcomp=Z,144nm,1.2s						
MOY	Mondy	45.03	6	*e*P	P	16 55 17.4	-0.5
MOY				pmax	pmax		
	comp=Z,83nm,1.8s						
TRNA	Turayna	45.05	298	P	P	16 55 20.0	+1.7
SEM	Semipalatinsk	45.05	347	*e*P	P	16 55 16.2	-2.0
	baz=347						
SEM	Semipalatinsk	45.05	347	*e*P	P	16 55 16.1	-2.0
NWAO	Narrogin (SRO)	45.06	153	P	P	16 55 18.2	0.0
	comp=Z,131nm,0.9s,baz=323,slow=8.6,SNR=50						
NWAO				LR	LR	17 12 31.8	
	comp=Z,74µm,21.5s,baz=334,slow=34						
NWAO	Narrogin (SRO)	45.06	153	P	P	16 55 18.0	-0.2
	baz=45,SNR=16						
NWAO				P	P	16 55 18.0	-0.2
	baz=45,SNR=16						
NWAO	Narrogin (SRO)	45.06	153	P	P	16 55 17.2	-1.0
NWAO				P	P	16 55 17.2	-1.0
NWAO	Narrogin (SRO)	45.06	153	P	P	16 55 17.5	-0.7
JMN	Monobe	45.20	48	⇑P	P	16 55 21.0	+1.6
JMN	Monobe	45.20	48	P	P	16 55 17.2	-2.2
GEYT	Alibeck	45.21	319	P	P	16 55 19.0	-0.4
	comp=Z,33nm,0.6s,baz=154,slow=9.2,SNR=43						
GEYT				LR	LR	17 18 21.0	
	comp=Z,10µm,18.0s,baz=135,slow=42						
GYA0B	ALIBECK ARRAY	45.21	319	P	P	16 55 19.0	-0.4
GYA0B				IAmb	IAmb	16 55 28.8	
	comp=Z,156nm,0.8s						
JHS	Saijyo	45.24	46	⇑P	P	16 55 20.9	+1.1
TLY	Talaya	45.36	8	LR	LR	17 17 14.4	
	comp=Z,14µm,19.1s,baz=168,slow=40						
TLY	Talaya	45.36	8	*d i*P	P	16 55 20.1	-0.3
TLY				*e*S	S	17 02 06.8	+6.1
TLY				pmax	pmax		
	comp=Z,234nm,1.3s						
TLY				MLR	MLR		
	comp=Z,37µm,12.0s						
TLY	Talaya	45.36	8	⇑P	P	16 55 21.1	+0.7
TLY	Talaya	45.36	8	P	P	16 55 18.5	-1.9
H01W3	Cape Leeuwin H	45.44	157	T	T	17 44 07.8	
	baz=331,slow=76,SNR=66						
H01W2	Cape Leeuwin H	45.45	157	T	T	17 44 08.4	
	baz=331,slow=76,SNR=56						
H01W1	Cape Leeuwin H	45.45	157	T	T	17 44 12.3	
	baz=331,slow=76,SNR=62						
SHMA	Al-Shehemyia	45.58	300	P	P	16 55 23.9	+1.5
KURBB	Kurchatov Arra	45.65	346	P	P	16 55 21.1	-1.5
WRKA	Warakurna	45.67	135	P	P	16 55 22.2	-1.0
	baz=46,SNR=133						
KURK	Kurchatov	45.71	346	*ce*P	P	16 55 22.6	-0.5
KURK				pmax	pmax		
	comp=Z,450nm,1.3s						
KURK				MLR	MLR		
	comp=Z,15µm,23.0s						
KURK	Kurchatov	45.71	346	P	P	16 55 23.3	+0.2
KURK				P	P	16 55 23.3	+0.2
KURK	Kurchatov	45.71	346	⇓P	P	16 55 22.1	-1.1
KURK	Kurchatov	45.71	346	P	P	16 55 22.2	-1.0
CN2	Changchun	45.75	31	*e*P	P	16 55 23.6	+0.1
CN2				*e*S	S	17 02 03.0	-3.4
CN2				SS	SS	17 05 27.7	-3.2
CN2				pmax	pmax		
	comp=Z,70nm,1.2s						
CN2				pmax	pmax		
	comp=Z,1µm,6.2s						
CN2				LR	LR		
	comp=Z,41µm,13.0s						
CN2				LR	LR		
	comp=Z,61µm,13.0s						
CN2				LR	LR		
	comp=Z,36µm,15.1s						
IRK	Irkutsk	46.00	8	*e*P	P	16 55 25.8	+0.4
IRK				pmax	pmax		
	comp=Z,339nm,2.1s						
BRZS	Berezniki	46.75	341	*e*P	P	16 55 29.9	-1.5
	baz=341						
BRZS				*e*S	S	17 02 19.4	-1.2
	baz=341						
BRZS	Berezniki	46.75	341	*e*P	P	16 55 29.8	-1.5
BRZS				*e*S	S	17 02 19.4	-1.2
JWT	Wachi	47.03	47	⇑P	P	16 55 34.6	+0.9
JWT	Wachi	47.03	47	P	P	16 55 31.7	-2.1
RER	Riviere de l’E	47.10	233	P	P	16 55 35.2	+0.6
RER				IAmb	IAmb	16 55 48.6	
	comp=Z,273nm,1.1s						
RER				IAMs_20	IAMs_20	17 12 22.7	
	comp=Z,31µm,19.0s						
AIS	Amsterdam Isla	47.10	198	IAMs_20	IAMs_20	17 10 39.3	
	comp=Z,47µm,21.0s						
HIA	Hailar	47.36	22	*d i*P	P	16 55 35.7	-0.5
HIA				pmax	pmax		
	comp=Z,227nm,1.1s						
HIA				MLR	MLR		
	comp=Z,49µm,16.0s						
HIA	Hailar	47.36	22	P	P	16 55 35.0	-1.2
HIA				IAmb	IAmb	16 55 46.2	
	comp=Z,207nm,1.1s						
HIA	Hailar	47.36	22	IAMs_20	IAMs_20	17 17 46.7	
	comp=Z,39µm,19.0s						
WRA	Warramunga Arr	47.38	125	P	P	16 55 35.0	-1.7
	comp=Z,41nm,0.7s,baz=304,slow=9.1,SNR=145						
WRA				S	S	17 02 16.9	-14
	comp=Z,1.1nm,0.8s,baz=297,slow=14,SNR=0.5						
WRA				LR	LR	17 18 18.8	
	comp=Z,141µm,18.6s,baz=300,slow=40						
WRA				PKPPKP	P'P'df	17 26 31.1	-22
	comp=Z,1.6nm,1.0s,baz=179,slow=3.0,SNR=4.8						
WRAB	Tennant Creek	47.38	125	*ce*P	P	16 55 34.7	-2.0
WRAB				pmax	pmax		
	comp=Z,54nm,0.6s						
WRAB				MLR	MLR		
	comp=Z,139µm,18.0s						
WRAB	Tennant Creek	47.38	125	⇑P	P	16 55 34.0	-2.7
WRAB	Tennant Creek	47.38	125	P	P	16 55 34.8	-2.0
WRAB				IAmb	IAmb	16 55 52.7	
	comp=Z,185nm,0.7s						
WRAB	Tennant Creek	47.38	125	P	P	16 55 35.9	-0.8
ZAA0	Zalesovo Array	47.65	352	P	P	16 55 37.7	-0.5
ZALV	Zalesovo Beam	47.65	352	P	P	16 55 37.5	-0.7
	comp=Z,143nm,1.0s,baz=167,slow=7.3,SNR=141						
ZALV				PKPPKP	P'P'df	17 26 35.8	-17
	comp=Z,0.4nm,0.3s,baz=293,slow=5.8,SNR=4.0						
CIT	Chita	47.73	16	*e*P	P	16 55 39.5	+0.5
CIT				*e*		16 55 47.3	
CIT				*e*		17 02 30.3	
CIT				pmax	pmax		
	comp=Z,569nm,1.4s						
MSHR	Mys Shultsa	48.11	36	*ce*P	P	16 55 42.3	+0.3
MSHR				pmax	pmax		
	comp=Z,73nm,1.3s						
INU	Inuyama	48.24	48	⇓P	P	16 55 43.4	+0.3
INU	Inuyama	48.24	48	P	P	16 55 41.0	-2.2
INU				IAmb	IAmb	16 56 05.6	
	comp=Z,242nm,1.1s						
INU				IAMs_20	IAMs_20	17 18 04.2	
	comp=Z,30µm,18.0s						
INU	Inuyama	48.24	48	P	P	16 55 44.4	+1.2
MDJ	Mudanjiang	48.50	33	P	P	16 55 45.4	+0.4
MDJ				pP	pP	16 55 48.9	-0.4
MDJ				PP	PP	16 57 41.3	+3.4
MDJ				S	S	17 02 48.2	+2.6
MDJ				pmax	pmax		
	comp=Z,120nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,2µm,4.4s						
MDJ				LR	LR		
	comp=Z,60µm,16.5s						
MDJ				LR	LR		
	comp=Z,63µm,16.3s						
MDJ				LR	LR		
	comp=Z,66µm,14.8s						
MDJ	Mudanjiang	48.50	33	P	P	16 55 43.9	-1.1
MDJ				IAMs_20	IAMs_20	17 18 43.8	
	comp=Z,40µm,18.0s						
MDJ	Mudanjiang	48.50	33	P	P	16 55 45.9	+0.9
JGF	Kuroka	48.60	48	⇑P	P	16 55 46.0	0.0
JGF	Kuroka	48.60	48	P	P	16 55 44.1	-1.9
JGF				IAmb	IAmb	16 56 11.3	
	comp=Z,255nm,1.3s						
SBV	Sambava	48.62	245	P	P	16 55 49.6	+3.3
	SNR=5.7						
SBV	Sambava	48.62	245	P	P	16 55 57.2	+11
VLA	Vladivostok	48.86	36	*d i*P	P	16 55 47.4	-0.4
VLA				pmax	pmax		
	comp=Z,670nm,1.6s						
AS31	Alice Springs	48.98	129	P	P	16 55 47.3	-1.8
ASAR	Alice Springs	48.98	129	P	P	16 55 47.9	-1.2

	comp=Z,62nm,0.8s,baz=308,slow=7.6,SNR=199						
ASAR				PcP	PcP	16 57 12.8	-0.3
	comp=Z,49nm,1.0s,baz=299,slow=5.0,SNR=4.3						
ASAR				S	S	17 02 43.5	-10
	comp=Z,2.7nm,0.9s,baz=297,slow=7.2,SNR=2.3						
ASAR				LR	LR	17 18 30.9	
	comp=Z,117µm,20.0s,baz=300,slow=38						
ASAR				PKPPKP	P'P'df	17 26 30.2	-21
	comp=Z,2.6nm,1.2s,baz=92,slow=2.0,SNR=3.4						
ASAR	**Alice Springs**	48.98	129	P	P	16 55 47.6	-1.5
ASAR	**Alice Springs**	48.98	129	P	P	16 55 47.6	-1.5
QRN	**Al-Qurain**	49.01	302	*e*P	P	16 55 48.5	-0.7
FORT	**Forrest**	49.31	141	P	P	16 55 51.6	+0.2
	baz=49,SNR=135						
KBD	**Kabd**	49.32	303	*e*P	P	16 55 51.1	-0.5
RDF	**Al-Radifah**	49.37	302	*e*P	P	16 55 51.8	-0.2
UMR	**Umm Al-Rimmam**	49.42	303	*e*P	P	16 55 52.3	-0.1
JHJ	**Hachijo jima 2**	49.44	52	LR	LR	17 16 21.1	
	comp=Z,28µm,20.4s,baz=257,slow=36						
JCJ	**Chichijima**	49.52	60	LR	LR	17 16 55.1	
	comp=Z,17µm,18.8s,baz=260,slow=36						
JCJ	**Chichijima**	49.52	60	P	P	16 55 50.7	-2.5
JCJ	**Chichijima**	49.52	60	P	P	16 55 55.1	+1.9
USA0B	**Ussuriysk Arra**	49.57	35	P	P	16 55 52.0	-1.3
USA0B				pmax	pmax		
	comp=Z,336nm,1.5s						
USA0B	**Ussuriysk Arra**	49.57	35	P	P	16 55 52.0	-1.3
USA0B				IAmb	IAmb	16 56 13.3	
	comp=Z,336nm,1.4s						
USRK	**Ussuriysk Ar.**	49.57	35	P	P	16 55 53.0	-0.2
	comp=Z,44nm,0.9s,baz=237,slow=6.5,SNR=54						
USRK				LR	LR	17 18 56.2	
	comp=Z,20µm,18.0s,baz=211,slow=39						
USRK	**Ussuriysk Ar.**	49.57	35	P	P	16 55 52.2	-1.0
USRK	**Ussuriysk Ar.**	49.57	35	P	P	16 55 52.2	-1.0
MAJO	**Matsushiro**	49.62	47	*i* P	P	16 55 52.9	-0.9
MAJO				pmax	pmax		
	comp=Z,280nm,1.7s						
MAJO	**Matsushiro**	49.62	47	P	P	16 55 52.4	-1.4
MAJO	**Matsushiro**	49.62	47	IAMs_20	IAMs_20	17 16 03.7	
	comp=Z,35µm,22.0s						
MAJO	**Matsushiro**	49.62	47	P	P	16 55 55.2	+1.4
MAT	**Matsushiro**	49.62	47	P	P	16 55 53.6	-0.2
MAT				S	S	17 03 01.4	-0.4
MJAR	**Matsushiro Arr**	49.63	47	P	P	16 55 54.0	+0.1
	comp=Z,24nm,0.8s,baz=238,slow=7.4,SNR=41						
MJAR				LR	LR	17 16 26.6	
	comp=Z,29µm,21.7s,baz=280,slow=36						
MJAR	**Matsushiro Arr**	49.63	47	P	P	16 55 52.8	-1.0
MJAR				pmax	pmax		
	comp=Z,87nm,1.2s						
MJAR	**Matsushiro Arr**	49.63	47	P	P	16 55 52.8	-1.0
GUMO	**Guam**	49.97	78	LR	LR	17 14 18.1	
	comp=Z,17µm,20.9s,baz=266,slow=33						
BRVK	**Borovoye**	50.16	341	P	P	16 55 55.9	-1.7
BRVK				pmax	pmax		
	comp=Z,333nm,1.1s						
BRVK				MLR	MLR		
	comp=Z,17µm,19.0s						
BRVK	**Borovoye**	50.16	341	P	P	16 55 56.9	-0.6
BRVK				P	P	16 55 56.9	-0.6
BRVK				P	P	16 55 56.9	-0.6
BRVK	**Borovoye**	50.16	341	⇓P	P	16 55 56.2	-1.3
BRVK	**Borovoye**	50.16	341	P	P	16 55 55.9	-1.7
BRVK				IAmb	IAmb	16 56 05.2	
	comp=Z,333nm,1.1s						
JSD	**Sado**	50.32	45	⇑P	P	16 55 59.4	+0.3
JSD	**Sado**	50.32	45	P	P	16 55 57.6	-1.5
JSD				IAmb	IAmb	16 56 21.4	
	comp=Z,291nm,1.2s						
ATD	**Arta Tunnel**	51.13	279	LR	LR	17 14 39.9	
	comp=Z,5µm,22.0s,baz=93,slow=32						
ATD	**Arta Tunnel**	51.13	279	P	P	16 56 08.9	+3.3
	SNR=24						
AB31	**Akbulak array**	51.32	332	*i* P	P	16 56 05.3	-1.1
ABKAR	**Akbulak array**	51.32	332	⇓P	P	16 56 05.8	-0.6
ABKAR	**Akbulak array**	51.32	332	P	P	16 56 05.5	-0.8
ABKAR	**Akbulak array**	51.32	332	P	P	16 56 05.3	-1.0
ABKAR				IAmb	IAmb	16 56 15.0	
	comp=Z,881nm,1.3s						
QIS	**Mount Isa**	52.02	123	P	P	16 56 10.9	-1.1
	baz=52,SNR=36						
JMM	**Marumori**	52.05	47	⇑P	P	16 56 12.2	+0.1
JMM	**Marumori**	52.05	47	P	P	16 56 09.7	-2.4
JMM				IAmb	IAmb	16 56 20.9	
	comp=Z,370nm,1.2s						
KLR	**Kul'dur**	52.62	30	LR	LR	17 22 59.7	
	comp=Z,26µm,18.0s,baz=222,slow=41						
KLR	**Kul'dur**	52.62	30	*ce*P	P	16 56 16.1	0.0
KLR				pmax	pmax		
	comp=Z,362nm,1.6s						
TEY	**Ternei**	52.75	37	⇓*e*P	P	16 56 17.1	+0.1
TEY				*e*		16 56 25.0	
TEY				*e*S	S	17 03 47.9	+3.3
TEY				pmax	pmax		
	comp=N,10.0nm,1.0s						
TEY				pmax	pmax		
	comp=E,10.0nm,1.3s						
TEY				pmax	pmax		
	comp=Z,40nm,1.3s						
TEND	**Ethiopian Broa**	52.94	280	*e*P	P	16 56 23.3	+4.2
TEND				*e*S	S	17 03 59.1	+11
OPO	**Ambohidratompo**	53.02	241	P	P	16 56 22.5	+2.8
	comp=Z,31nm,0.9s,baz=61,slow=6.8,SNR=24						
AKTO	**Aktyubinsk**	53.03	332	S	S	17 03 45.5	-2.8
	comp=Z,7.2nm,1.0s,baz=24,slow=20,SNR=1.8						
AKTO	**Aktyubinsk**	53.03	332	P	P	16 56 18.2	-0.9
BOD	**Bodaibo**	53.10	13	*e*P	P	16 56 19.2	-0.2
BOD				pmax	pmax		
	comp=Z,50nm,1.5s						
JTM	**Tenmabayashi**	53.49	43	⇑P	P	16 56 23.8	+1.1
ZEA	**Zeya**	53.78	23	*e*P	P	16 56 25.0	+0.5
ZEA				*e*S	S	17 04 02.9	+4.5
ZEA				pmax	pmax		
	comp=N,10.0nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,30nm,1.2s						
ZEA				pmax	pmax		
	comp=E,400nm,3.9s						
ZEA				pmax	pmax		
	comp=N,600nm,6.2s						
ZEA				pmax	pmax		
	comp=Z,1µm,6.8s						
ZEA				smax	smax		
	comp=E,2µm,18.0s						
ZEA				MLR	MLR		
	comp=E,19µm,16.0s						
ZEA				MLR	MLR		
	comp=N,20µm,14.0s						
ZEA				MLR	MLR		
	comp=Z,16µm,14.0s						
ANKE	**Ethiopia-Afar**	54.21	277	*e*P	P	16 56 30.3	+1.4
ANKE				*i* S	S	17 04 22.4	+16
DESE	**Dese**	54.28	279	*e*P	P	16 56 30.3	+1.0
DESE				*e*S	S	17 04 17.7	+11
JEW	**Eniwo**	54.67	41	⇑P	P	16 56 32.6	+1.4
MAK	**Makhachkala**	54.73	319	*d i*P	P	16 56 26.1	-5.5
MAK				*e*		16 58 29.7	
MAK				*e*PPP	PPP	16 59 39.8	
MAK				*e*S	S	17 04 01.5	-10
MAK				pmax	pmax		
	comp=Z,225nm,0.9s						
VOI	**Vohitsoka**	54.76	237	P	P	16 56 35.9	+3.6
	SNR=8.5						
VOI	**Vohitsoka**	54.76	237	⇑P	P	16 56 35.5	+3.2
VOI	**Vohitsoka**	54.76	237	P	P	16 56 34.1	+1.8
VOI				IAMs_20	IAMs_20	17 15 58.8	
	comp=Z,35µm,20.0s						
VOI	**Vohitsoka**	54.76	237	P	P	16 56 36.4	+4.0
PMG	**Port Moresby**	54.91	106	P	P	16 56 31.3	-2.1
PMG				pmax	pmax		
	comp=Z,234nm,1.1s						
PMG				MLR	MLR		
	comp=Z,56µm,19.0s						
PMG	**Port Moresby**	54.91	106	⇑P	P	16 56 32.1	-1.3
PMG	**Port Moresby**	54.91	106	P	P	16 56 31.2	-2.1
PMG				IAmb	IAmb	16 56 52.1	
	comp=Z,234nm,1.1s						
PMG	**Port Moresby**	54.91	106	P	P	16 56 33.0	-0.4
PMG	**Port Moresby**	54.91	106	P	P	16 56 32.8	-0.6
MTSU	**Mount Surprise**	55.07	118	P	P	16 56 32.8	-1.7
	baz=55,SNR=9.3						
AAE	**Adis Abeba**	55.19	276	*e*P	P	16 56 37.2	+1.4
AAE				*e*S	S	17 04 36.3	+17
FURI	**Furi**	55.28	276	⇓P	P	16 56 41.0	+4.5
FURI	**Furi**	55.28	276	*e*P	P	16 56 41.9	+5.4
FURI				*e*S	S	17 04 31.6	+11
GNI	**Garni**	55.42	315	LR	LR	17 23 18.4	
	comp=Z,6µm,21.0s,baz=99,slow=39						
GNI	**Garni**	55.42	315	P	P	16 56 35.5	-1.4
GNI	**Garni**	55.42	315	*ce*P	P	16 56 35.3	-1.6
GNI				pmax	pmax		
	comp=Z,149nm,1.3s						
GNI				MLR	MLR		
	comp=Z,7µm,22.0s						
GNI	**Garni**	55.42	315	P	P	16 56 36.8	-0.1
GNI	**Garni**	55.42	315	⇑P	P	16 56 36.4	-0.5
GNI	**Garni**	55.42	315	P	P	16 56 35.6	-1.3
GNI				IAmb	IAmb	16 57 01.7	
	comp=Z,196nm,1.0s						
ERM	**Erimo**	55.44	43	*i* P	P	16 56 37.1	+0.3
ERM				pmax	pmax		
	comp=Z,278nm,1.4s						
ERM	**Erimo**	55.44	43	P	P	16 56 35.2	-1.6
ERM	**Erimo**	55.44	43	IAMs_20	IAMs_20	17 23 09.9	
	comp=Z,27µm,18.0s						
ERM	**Erimo**	55.44	43	P	P	16 56 40.2	+3.4
JEM	**Erimo**	55.44	43	P	P	16 56 37.3	+0.5
JEM				IAmb	IAmb	16 57 06.1	
	comp=Z,199nm,1.2s						
DILA	**Dilla**	55.79	273	*e*P	P	16 56 41.9	+1.9
DILA				*e*S	S	17 04 43.3	+16
BBOO	**Buckleboo**	55.81	137	P	P	16 56 37.8	-1.8
	baz=56,SNR=157						
GRNR	**Gornyy**	55.94	31	⇓*i*P	P	16 56 40.9	+0.7
GRNR				*e*S	S	17 04 33.5	+6.0
GRNR				pmax	pmax		
	comp=N,9.0nm,1.2s						
GRNR				pmax	pmax		
	comp=E,2.0nm,1.2s						
GRNR				pmax	pmax		
	comp=Z,20nm,1.0s						
GRNR				smax	smax		
	comp=N,1.0nm,1.2s						
GRNR				MLR	MLR		
	comp=E,12µm,14.0s						
GRNR				MLR	MLR		
	comp=N,18µm,12.0s						
GRNR				MLR	MLR		
	comp=Z,31µm,13.0s						
GROC	**Groznyy**	55.96	318	*e*P	P	16 56 38.7	-1.8
GROC				*e*		16 57 37.6	
GROC				*e*PPP	PPP	16 59 57.4	
GROC				pmax	pmax		
	comp=Z,127nm,1.0s						
ASAJ	**Asahikawa**	55.99	40	P	P	16 56 38.7	-2.0
ASAJ				pmax	pmax		
	comp=Z,587nm,1.4s						
JKA	**Kamikawa-asahi**	56.00	40	P	P	16 56 38.6	-2.1
JKA	**Kamikawa-asahi**	56.00	40	P	P	16 56 36.2	-4.6
SIRT	**Sirnak**	56.13	311	P	P	16 56 41.0	-1.1
SVE	**Sverdlovsk**	56.50	338	*ce*P	P	16 56 43.7	-0.4
SVE				*e*S	S	17 04 34.8	0.0
SVE				*e*		17 08 10.7	
SVE				pmax	pmax		
	comp=Z,817nm,1.3s						
SVE				MLR	MLR		
	comp=Z,18µm,20.0s						
KARS	**Kars**	56.77	315	P	P	16 56 45.5	-1.1
KARS				pmax	pmax		
	comp=Z,918nm,1.4s						
KARS	**Kars**	56.77	315	P	P	16 56 45.5	-1.1
GURO	**Guroymak-BITLI**	56.79	312	P	P	16 56 45.8	-0.9
ARU	**Arti**	56.99	337	LR	LR	17 24 00.5	
	comp=Z,12µm,18.1s,baz=139,slow=39						
ARU	**Arti**	56.99	337	*d i*P	P	16 56 45.7	-1.9
ARU						16 57 36.5	
ARU						16 58 52.2	
ARU				PPP	PPP	17 00 08.2	
ARU				S	S	17 04 41.7	+0.5
ARU						17 06 37.8	
ARU				pmax	pmax		
	comp=Z,269nm,1.4s						
ARU				MLR	MLR		
	comp=Z,9µm,16.0s						
ARU	**Arti**	56.99	337	⇑P	P	16 56 46.3	-1.3
ARU	**Arti**	56.99	337	P	P	16 56 46.0	-1.6
ZEI	**Tsey**	57.05	317	*e*P	P	16 56 46.4	-2.1
ZEI				pmax	pmax		
	comp=Z,35nm,0.9s						
KIBK	**Kibwezi**	57.06	263	P	P	16 56 52.1	+3.2
	SNR=34						
KIBK	**Kibwezi**	57.06	263	P	P	16 56 50.1	+1.1
ONI	**Oni**	57.27	317	P	P	16 56 49.1	-0.9
ONI				pmax	pmax		
	comp=Z,182nm,1.4s						
ONI	**Oni**	57.27	317	P	P	16 56 49.1	-0.9
YSS	**Yuzh-Sakhalins**	57.41	37	⇓*e*P	P	16 56 50.5	-0.2
YSS				*e**SP	pwP	16 56 58.8	+0.2
YSS				*e*		16 57 43.3	
YSS				*e*		16 59 00.0	
YSS				*e*S	S	17 04 43.3	-3.7
YSS				*e**SS	sS	17 05 00.0	+5.6
YSS				pmax	pmax		
	comp=Z,160nm,1.3s						
YSS				pmax	pmax		
	comp=Z,300nm,3.7s						
YSS				smax	smax		
	comp=E,300nm,6.9s						
YSS				MLR	MLR		
	comp=N,20µm,14.0s						
YSS				MLR	MLR		
	comp=Z,19µm,14.0s						
YSS	**Yuzh-Sakhalins**	57.41	37	⇓P	P	16 56 51.0	+0.3
YSS	**Yuzh-Sakhalins**	57.41	37	P	P	16 56 50.1	-0.7
YSS	**Yuzh-Sakhalins**	57.41	37	P	P	16 56 52.6	+1.9
CTAO	**Charters Tower**	57.50	119	P	P	16 56 49.3	-2.5
CTAO				pmax	pmax		
	comp=Z,111nm,1.1s						
CTAO				MLR	MLR		
	comp=Z,71µm,22.0s						
CTAO	**Charters Tower**	57.50	119	⇓P	P	16 56 50.7	-1.2
CTAO	**Charters Tower**	57.50	119	P	P	16 56 49.3	-2.5
CTAO	**Charters Tower**	57.50	119	P	P	16 56 50.8	-1.1
NCK	**Nalchik**	57.54	318	*i* P	P	16 56 51.0	-0.8
NCK				pmax	pmax		
	comp=Z,100nm,1.1s						
KMBO	**Kilima Mbogo**	57.65	264	P	P	16 56 55.2	+1.9
	comp=Z,55nm,0.9s,baz=63,slow=8.7,SNR=103						
KMBO				LR	LR	17 17 55.1	
	comp=Z,18µm,21.3s,baz=84,slow=32						
KMBO	**Kilima Mbogo**	57.65	264	*i* P	P	16 56 54.9	+1.5
	SNR=66						
KMBO	**Kilima Mbogo**	57.65	264	P	P	16 56 55.1	+1.8
KMBO				pmax	pmax		
	comp=Z,283nm,1.1s						
KMBO				MLR	MLR		
	comp=Z,18µm,21.0s						
KMBO	**Kilima Mbogo**	57.65	264	P	P	16 56 56.6	+3.3
KMBO				P	P	16 56 56.6	+3.3
KMBO	**Kilima Mbogo**	57.65	264	⇑P	P	16 56 55.3	+1.9
KMBO	**Kilima Mbogo**	57.65	264	P	P	16 56 55.1	+1.8
KMBO				IAmb	IAmb	16 57 04.3	
	comp=Z,283nm,1.1s						
NEY	**Neytrino**	58.02	317	*i* P	P	16 56 55.4	0.0
NEY				pmax	pmax		
	comp=Z,51nm,1.8s						
UGL	**Uglegorsk**	58.05	35	*e*P	P	16 56 57.4	+2.2
UGL				*e*S	S	17 05 07.3	+12
UGL				pmax	pmax		
	comp=Z,3µm,6.0s						
UGL				pmax	pmax		
	comp=Z,190nm,1.9s						
UGL				MLR	MLR		
	comp=N,23µm,12.0s						
UGL				MLR	MLR		
	comp=E,22µm,12.0s						
UGL				MLR	MLR		
	comp=Z,29µm,13.0s						
YUK	**Yuzh-Kuril'sk**	58.09	42	*e*P	P	16 56 59.5	+4.0
YUK				*e*		16 59 12.8	
YUK				*e*S	S	17 05 02.8	+6.8
YUK				*e*		17 06 38.4	
YUK				*e*SS	SS	17 08 48.8	+1.3
YUK				*e*SSS	SSS	17 11 09.8	
YUK				pmax	pmax		
	comp=Z,1µm,2.1s						
YUK				pmax	pmax		
	comp=Z,911nm,1.2s						
YUK				pmax	pmax		
	comp=N,213nm,0.7s						
YUK				pmax	pmax		
	comp=E,431nm,1.0s						
KBZ	**Khabaz**	58.09	318	P	P	16 56 54.7	-0.9
	comp=E,26nm,1.0s,baz=132,slow=5.2,SNR=28						
KBZ				LR	LR	17 24 37.2	
	comp=E,3µm,21.7s,baz=124,slow=39						
KBZ				PKP2bc	P'P'bc	17 26 46.9	-4.0
	comp=E,3.1nm,0.9s,baz=228,slow=3.0,SNR=4.5						
KBZ	**Khabaz**	58.09	318	*ce*P	P	16 56 53.8	-1.8
KBZ				pmax	pmax		
	comp=Z,83nm,1.0s						
PYA1	**Pyatigorsk**	58.10	318	*i* P	P	16 56 53.9	-1.8
HTT	**Hallett**	58.11	136	P	P	16 56 54.6	-1.3
	baz=58,SNR=126						
SHA1	**Shidzhatmaz**	58.26	318	*c i*P	P	16 56 55.9	-1.2
KVAR	**Kislovodsk Arr**	58.32	318	LR	LR	17 27 05.6	
	comp=Z,4µm,18.3s,baz=122,slow=41						
KIV	**Kislovodsk**	58.33	318	*i* P	P	16 56 56.2	-1.2
	SNR=19						
KIV	**Kislovodsk**	58.33	318	*e*P	P	16 56 55.0	-2.4
KIV				*e*S	S	17 04 57.8	-1.6
KIV				*e*SS	SS	17 08 53.5	+2.0
KIV				pmax	pmax		
	comp=Z,91nm,1.0s						
KIV				pmax	pmax		
	comp=Z,77nm,4.8s						
KIV				MLR	MLR		
	comp=Z,3µm,17.0s						
KIV	**Kislovodsk**	58.33	318	P	P	16 56 57.1	-0.3
KIV				P	P	16 56 57.1	-0.3
KIV	**Kislovodsk**	58.33	318	⇑P	P	16 56 56.4	-1.0
KIV	**Kislovodsk**	58.33	318	P	P	16 56 55.7	-1.7
KIV				IAmb	IAmb	16 57 21.5	
	comp=Z,160nm,1.0s						
QLP	**Quilpie**	58.53	127	P	P	16 56 58.7	-0.2
	baz=58,SNR=37						
GOF	**Gofitskoye**	58.54	319	⇑*i*P	P	16 56 57.5	-1.2
GOF				*e*S	S	17 04 52.2	-10
GOF				pmax	pmax		
	comp=Z,76nm,0.8s						
GOF				smax	smax		
	comp=N,27nm,1.0s						
GOF				smax	smax		
	comp=E,77nm,1.4s						
LODK	**Lodwar**	58.95	270	P	P	16 57 05.5	+3.2
	SNR=72						
ASF	**Jabal al Asfar**	59.08	303	LR	LR	17 24 07.1	
	comp=E,5µm,21.9s,baz=88,slow=38						
STKA	**Stephens Creek**	59.14	133	P	P	16 57 02.4	-0.7
	comp=E,87nm,0.8s,baz=308,slow=6.5,SNR=149						
STKA				PKPPKP		17 26 36.4	
	comp=E,2.0nm,0.9s,baz=102,slow=3.4,SNR=3.1						
STKA				LR	LR	17 27 29.8	
	comp=E,86µm,18.3s,baz=297,slow=41						
STKA	**Stephens Creek**	59.14	133	P	P	16 57 02.4	-0.7
	baz=59,SNR=49						
STKA	**Stephens Creek**	59.14	133	P	P	16 57 01.1	-2.0
TYV	**Tymovskoe**	59.28	33	*e*P	P	16 57 05.7	+2.0
TYV				*e*S	S	17 05 18.5	+7.2
TYV				pmax	pmax		
	comp=Z,40nm,1.2s						
TYV				pmax	pmax		
	comp=Z,1µm,4.5s						
TYV				smax	smax		
	comp=N,13nm,1.0s						
TYV				smax	smax		
	comp=N,2µm,5.6s						
TYV				smax	smax		
	comp=E,3µm,5.6s						
TYV				MLR	MLR		
	comp=E,37µm,15.0s						
TYV				MLR	MLR		
	comp=Z,31µm,15.0s						
BELG	**Belogornoye**	59.38	329	LR	LR	17 26 35.7	
	comp=Z,6µm,20.0s,baz=129,slow=40						
NKL	**Nikolayevsk**	59.47	30	*e*P	P	16 57 04.7	-0.2
NKL				*e*S	S	17 05 30.5	+17
NKL				pmax	pmax		
	comp=N,964nm,0.9s						
NKL				pmax	pmax		
	comp=E,3.0nm,0.9s						
NKL				pmax	pmax		
	comp=Z,239nm,1.3s						
NKL				MLR	MLR		
	comp=E,102nm,16.0s						
NKL				MLR	MLR		
	comp=N,25µm,20.0s						
NKL				MLR	MLR		
	comp=Z,16µm,12.0s						
KUR	**Kuril'sk**	59.87	41	*c i*P	P	16 57 09.0	+1.1
KUR				*i*		16 57 51.0	
KUR				*e*S	S	17 05 21.0	+1.8
KUR				pmax	pmax		
	comp=E,464nm,1.7s						
KUR				pmax	pmax		
	comp=Z,939nm,1.7s						
KUR				pmax	pmax		
	comp=N,264nm,1.3s						
KUR				pmax	pmax		
	comp=Z,7µm,7.0s						
KUR				pmax	pmax		
	comp=E,4µm,5.6s						
KUR				pmax	pmax		
	comp=N,3µm,3.3s						
KUR				MLR	MLR		
	comp=E,21µm,15.0s						
KUR				MLR	MLR		
	comp=Z,21µm,15.0s						
KUR				MLR	MLR		
	comp=N,10µm,14.0s						
GHAJ	**Ghor Haditha**	60.01	302	P	P	16 57 08.1	-1.1
GHAJ				IAmb	IAmb	16 57 33.7	
	comp=Z,284nm,1.2s						
GAZ	**Gaziantep**	60.01	309	P	P	16 57 07.0	-2.1
SOC	**Sochi**	60.18	317	*e*P	P	16 57 08.2	-1.9
SOC				*e*		16 59 21.2	
SOC				*e*S	S	17 05 23.3	+0.1
SOC				*e*SS	SS	17 09 18.7	-1.7
SOC				pmax	pmax		
	comp=Z,77nm,0.8s						
SOC				MLR	MLR		
	comp=Z,4µm,18.0s						
EIL	**Elat**	60.24	300	LR	LR	17 23 16.1	
	comp=Z,5µm,21.4s,baz=102,slow=36						
EIL	**Elat**	60.24	300	⇑P	P	16 57 11.3	+0.5
YAK	**Yakutsk**	60.89	18	*d i*P	P	16 57 13.7	-0.9
YAK				*e**PP	pP	16 57 17.1	-2.1
YAK				*e*		16 57 56.8	
YAK				*e*		16 59 28.7	
YAK				*e*S	S	17 05 32.2	+0.6
YAK				*e**SS	sS	17 05 41.0	+2.4
YAK				*e*		17 07 07.3	
YAK				pmax	pmax		
	comp=Z,275nm,1.2s						
YAK				pmax	pmax		
	comp=N,84nm,1.1s						
YAK				pmax	pmax		
	comp=E,87nm,1.1s						
YAK				pmax	pmax		
	comp=Z,904nm,3.6s						
YAK				pmax	pmax		
	comp=N,731nm,3.7s						
YAK				pmax	pmax		
	comp=E,465nm,3.5s						
YAK				smax	smax		
	comp=E,941nm,3.8s						
YAK				smax	smax		
	comp=N,739nm,3.8s						
YAK				MLR	MLR		
	comp=Z,28µm,16.0s						
YAK				MLR	MLR		
	comp=E,22µm,17.0s						
YAK				MLR	MLR		
	comp=N,12µm,19.0s						
YAK	**Yakutsk**	60.89	18	⇓P	P	16 57 13.7	-0.9
YAK	**Yakutsk**	60.89	18	P	P	16 57 12.5	-2.1
YAK				IAMs_20	IAMs_20	17 25 50.0	
	comp=Z,21µm,20.0s						
BNN	**Bunyan**	61.50	311	P	P	16 57 17.9	-1.4
ARPS	**Mount Arapiles**	61.97	138	P	P	16 57 22.6	+0.3
	baz=62,SNR=47						
CMSA	**Cobar Meteorol**	61.98	131	P	P	16 57 21.3	-1.2
	baz=62,SNR=129						
VRH	**Novokhopyorsk**	61.99	325	*e*P	P	16 57 20.3	-1.9

VRH				e		16 57 23.1	
VRH				eS	S	17 05 36.2	-10
VRH				pmax	pmax		
	comp=Z,420nm,1.8s						
VRH				pmax	pmax		
	comp=Z,740nm,1.9s						
VRH				smax	smax		
	comp=N,2µm,7.4s						
VRH				MLR	MLR		
	comp=Z,6µm,20.0s						
KIRV	Kirov	62.11	335	LR	LR	17 27 13.9	
	comp=Z,10µm,18.6s,baz=141,slow=39						
KIRV	Kirov	62.11	335	ceP	P	16 57 21.6	-1.2
RMQ	Roma	62.14	125	P	P	16 57 23.6	0.0
	baz=62,SNR=48						
ANN	Anapa	62.14	317	eP	P	16 57 20.7	-2.6
ANN				e		16 59 42.5	
ANN				i PPP	PPP	17 01 09.5	
ANN				eS	S	17 05 49.3	+1.2
ANN				pmax	pmax		
	comp=E,5.0nm,0.6s						
ANN				pmax	pmax		
	comp=N,26nm,1.5s						
ANN				pmax	pmax		
	comp=Z,75nm,1.5s						
ANN				pmax	pmax		
	comp=E,260nm,4.3s						
ANN				pmax	pmax		
	comp=N,614nm,5.7s						
ANN				pmax	pmax		
	comp=Z,1µm,5.8s						
CSS	Mathiatis	62.56	306	⇑P	P	16 57 26.6	+0.2
CSS	Mathiatis	62.56	306	P	P	16 57 25.0	-1.4
NRIK	Noril'sk	62.61	357	P	P	16 57 25.2	-0.8
	comp=Z,41nm,1.1s,baz=164,slow=6.4,SNR=35						
NRIK				PKP2bc	P'P'bc	17 26 40.2	+1.6
	comp=Z,3.3nm,1.0s,baz=330,slow=2.7,SNR=4.8						
NRIK	Noril'sk	62.61	357	ceP	P	16 57 24.1	-1.9
NRIK				pmax	pmax		
	comp=Z,227nm,1.3s						
NRIK	Noril'sk	62.61	357	P	P	16 57 24.4	-1.7
NRIK				IAmb	IAmb	16 57 33.1	
	comp=Z,221nm,1.2s						
SNOP	Sinop	62.83	314	P	P	16 57 27.8	-0.2
SNOP				IAmb	IAmb	16 57 35.5	
	comp=Z,128nm,1.0s						
VORD	Divnogorie	63.27	324	eP	P	16 57 28.6	-2.2
VORD				pmax	pmax		
	comp=Z,100nm,1.0s						
PATS	Pohnpei	63.33	86	P	P	16 57 30.5	-1.4
	baz=63,SNR=3.4						
PATS	Pohnpei	63.33	86	IAMs_20	IAMs_20	17 21 42.9	
	comp=Z,32µm,22.0s						
PATS	Pohnpei	63.33	86	P	P	16 57 32.8	+0.9
BRTR	Keskin Array B	63.37	311	P	P	16 57 30.1	-1.7
	comp=Z,30nm,0.7s,baz=126,slow=6.8,SNR=139						
BRTR				LR	LR	17 27 40.9	
	comp=Z,8µm,20.8s,baz=110,slow=38						
BRTR	Keskin Array B	63.37	311	i P	P	16 57 29.7	-2.2
BRTR				pmax	pmax		
	comp=Z,30nm,0.7s						
BRTR	Keskin Array B	63.37	311	P	P	16 57 29.6	-2.3
BR131	Keskin Array S	63.37	311	P	P	16 57 29.6	-2.3
BR131				pmax	pmax		
	comp=Z,206nm,1.0s						
BR131	Keskin Array S	63.37	311	P	P	16 57 30.9	-1.0
	SNR=59						
BR131				P	P	16 57 30.9	-1.0
	SNR=59						
BR131	Keskin Array S	63.37	311	P	P	16 57 29.6	-2.3
BR131				IAmb	IAmb	16 57 54.5	
	comp=Z,206nm,0.9s						
VSR	Storozhevoye	63.45	325	eP	P	16 57 29.7	-2.2
VSR				e		16 57 32.7	
VSR				eS	S	17 05 56.1	-8.2
VSR				pmax	pmax		
	comp=Z,230nm,1.8s						
VSR				pmax	pmax		
	comp=Z,360nm,1.5s						
VSR				smax	smax		
	comp=N,2µm,8.2s						
VSR				MLR	MLR		
	comp=Z,5µm,21.0s						
VORR	Voronezh	63.61	325	eP	P	16 57 32.0	-1.0
VORR				pmax	pmax		
	comp=Z,300nm,1.2s						
EIDS	Eidsvold	63.62	123	P	P	16 57 33.3	-0.3
	baz=64,SNR=6.6						
BZK	Bozkurt	63.67	314	P	P	16 57 31.6	-2.0
MBAR	Mbarara	64.02	266	i P	P	16 57 36.2	-0.4
MBAR	Mbarara	64.02	266	P	P	16 57 39.1	+2.4
MBAR	Mbarara	64.02	266	⇑P	P	16 57 38.3	+1.7
MBAR				⇑P	pP	16 57 39.2	-2.1
MBAR	Mbarara	64.02	266	IAMs_20	IAMs_20	17 21 54.8	
	comp=Z,24µm,21.0s						
ANTO	Ankara	64.04	311	P	P	16 57 34.3	-1.9
ANTO				pmax	pmax		
	comp=Z,137nm,0.9s						
ANTO				MLR	MLR		
	comp=Z,5µm,20.0s						
ANTO	Ankara	64.04	311	P	P	16 57 34.3	-1.9
ANTO				IAmb	IAmb	16 57 59.2	
	comp=Z,137nm,0.9s						
BR231	Keskin MP Arra	64.05	311	P	P	16 57 34.0	-2.3
BR231				IAmb	IAmb	16 57 59.2	
	comp=Z,102nm,0.9s						
LPSR	Galich'ya Gora	64.15	326	eP	P	16 57 34.3	-2.2
LPSR				e		16 57 37.0	
LPSR				eS	S	17 06 05.6	-7.4
LPSR				pmax	pmax		
	comp=Z,220nm,1.2s						
LPSR				pmax	pmax		
	comp=Z,300nm,1.5s						
LPSR				smax	smax		
	comp=N,2µm,7.1s						
LPSR				MLR	MLR		
	comp=Z,6µm,25.0s						
SIM	Simferopol'	64.43	317	c iP	P	16 57 36.4	-2.1
SIM				e		16 58 12.0	
SIM				S	S	17 06 09.0	-7.7
SIM				pmax	pmax		
	comp=Z,262nm,1.6s						
SIM				MLR	MLR		
	comp=Z,3µm,28.4s						
TOO	Toolangi	64.86	137	P	P	16 57 41.5	0.0
	baz=65,SNR=105						
CRZF	Crozet Islands	65.15	211	⇓P	P	16 57 46.4	+3.3
CRZF	Crozet Islands	65.15	211	P	P	16 57 41.6	-1.4
CRZF				IAmb	IAmb	16 58 05.2	
	comp=Z,125nm,0.9s						
CRZF				IAMs_20	IAMs_20	17 18 58.3	
	comp=Z,22µm,22.0s						
YNG	Young	65.29	133	P	P	16 57 44.2	-0.2
	baz=65,SNR=16						
ISP	Isparta	65.34	308	P	P	16 57 42.9	-1.9
ISP				pmax	pmax		
	comp=Z,301nm,1.2s						
ISP				MLR	MLR		
	comp=Z,5µm,21.0s						
ISP	Isparta	65.34	308	P	P	16 57 42.9	-1.9
MDUB	Mudurnu	65.37	311	P	P	16 57 42.9	-2.0
KDZE	Karadeniz Ereo	65.37	312	⇑P	P	16 57 43.4	-1.4
ELL	Elmali	65.63	307	P	P	16 57 45.3	-1.4
ELL				pmax	pmax		
	comp=Z,2µm,1.2s						
ELL	Elmali	65.63	307	P	P	16 57 45.2	-1.4
ARMA	Armidale	66.05	127	P	P	16 57 50.5	+1.1
	baz=66,SNR=13						
MOS	Moscow	66.16	329	eP	P	16 57 44.8	-4.7
MOS				e		17 00 18.3	
MOS				eS	S	17 06 34.5	-3.0
MOS				e		17 06 51.9	
MOS				pmax	pmax		
	comp=Z,876nm,1.6s						
MOS				pmax	pmax		
	comp=Z,2µm,2.0s						
MOS				smax	smax		
	comp=E,2µm,4.7s						
MOS				smax	smax		
	comp=N,1µm,3.0s						
CAN	Canberra	66.20	133	P	P	16 57 47.8	-2.5
CAN				pmax	pmax		
	comp=Z,654nm,1.4s						
CAN				MLR	MLR		
	comp=Z,84µm,22.0s						
CAN	Canberra	66.20	133	⇑P	P	16 57 49.2	-1.0
CAN	Canberra	66.20	133	P	P	16 57 47.8	-2.5
CAN	Canberra	66.20	133	P	P	16 57 51.0	+0.7
FETY	Fethiye	66.26	307	P	P	16 57 49.3	-1.3
OBN	Obninsk	66.45	328	⇑P	P	16 57 49.9	-1.5
OBN	Obninsk	66.45	328	LR	LR	17 31 46.9	
	comp=Z,2µm,18.0s,baz=120,slow=40						
OBN	Obninsk	66.45	328	c iP	P	16 57 49.7	-1.7
OBN				i		16 58 20.2	
OBN				i S	S	17 06 33.2	-7.8
OBN				pmax	pmax		
	comp=Z,339nm,1.2s						
OBN				MLR	MLR		
	comp=Z,8µm,18.0s						
OBN	Obninsk	66.45	328	⇑P	P	16 57 50.2	-1.2
OBN				⇑P	P	16 57 50.2	-1.2
OBN				⇑p	sP	16 57 57.7	0.0
OBN	Obninsk	66.45	328	P	P	16 57 49.7	-1.7
CNB	Canberra Magne	66.46	133	P	P	16 57 52.0	+0.1
	baz=66,SNR=34						
MGCD	Mangrove Creek	66.82	130	P	P	16 57 54.7	+0.6
	baz=67,SNR=8.1						
KULA	Kula-Manisa	66.91	309	P	P	16 57 53.3	-1.5
SKR	Severo-Kuril’s	66.98	37	i P	P	16 57 55.8	+0.9
ISK	Istanbul-Kandi	67.08	312	P	P	16 57 54.4	-1.3
MILA	Mila	67.13	135	P	P	16 57 56.6	+0.4
	baz=67,SNR=5.7						
HNR	Honiara	67.19	103	P	P	16 57 54.1	-2.8
HNR				pmax	pmax		
	comp=Z,366nm,1.1s						
HNR				MLR	MLR		
	comp=Z,15µm,20.0s						
HNR	Honiara	67.19	103	⇓P	P	16 57 55.9	-1.0
HNR	Honiara	67.19	103	P	P	16 57 54.1	-2.8
HNR	Honiara	67.19	103	P	P	16 57 59.2	+2.3
DAT	Datca	67.47	307	P	P	16 57 56.8	-1.6
MA2	Magadan	67.54	27	LR	LR	17 28 58.0	
	comp=Z,11µm,18.5s,baz=220,slow=37						
MA2	Magadan	67.54	27	ceP	P	16 57 56.9	-1.4
MA2				pmax	pmax		
	comp=Z,172nm,1.7s						
MA2	Magadan	67.54	27	⇑P	P	16 57 58.5	+0.2
MA2	Magadan	67.54	27	P	P	16 57 57.4	-0.9
MA2				IAMs_20	IAMs_20	17 32 58.3	
	comp=Z,23µm,18.0s						
MA2	Magadan	67.54	27	P	P	16 57 58.8	+0.5
KLMR	Klimovskoe	67.55	334	d iP	P	16 57 57.7	-0.5
KLMR				e		17 00 24.7	
KLMR				eS	S	17 06 57.8	+3.6
KLMR				pmax	pmax		
	comp=Z,430nm,1.2s						
KLMR	Klimovskoe	67.55	334	⇓iP	P	16 57 57.8	-0.5
KLMR				i P	P	16 57 57.8	-0.5
KLMR				i P	P	16 57 57.8	-0.5
KLMR				AMP		16 58 08.2	
	comp=Z,430nm,1.2s						
KLMR				ePP	PP	17 00 24.7	-2.5
KLMR				eS	S	17 06 57.8	+3.6
KLMR				eS	S	17 06 57.8	+3.6
KLMR				eSS	SS	17 11 20.7	+6.0
KLMR				eSS	SS	17 11 20.7	+6.0
KLMR				eSSS	SSS	17 14 36.6	
KLMR				eSSS	SSS	17 14 36.6	
KLMR				LQ	LQ	17 23 12.7	
KLMR				LQ	LQ	17 23 12.7	
KLMR				LR	LR	17 28 44.7	
KLMR				AMP		17 38 29.8	
	comp=Z,5µm,12.7s						
BALB	Balikesir	67.70	310	P	P	16 57 58.6	-1.1
PURM	Purcari	67.71	318	⇓P	P	16 57 58.6	-1.0
TLCR		68.12	316	⇑P	P	16 58 01.2	-0.9
TIXI	Tiksi	68.20	11	d iP	P	16 57 59.4	-2.8
TIXI	Tiksi	68.20	11	⇓P	P	16 57 59.5	-2.8
TIXI	Tiksi	68.20	11	P	P	16 57 59.7	-2.5
TIXI				IAMs_20	IAMs_20	17 32 17.5	
	comp=Z,17µm,20.0s						
TIRR	Tirgusor	68.24	315	⇑P	P	16 58 01.6	-1.3
TIRR	Tirgusor	68.24	315	P	P	16 58 01.3	-1.6
TIRR				pmax	pmax		
	comp=Z,207nm,0.9s						
TIRR	Tirgusor	68.24	315	⇑P	P	16 58 01.9	-1.1
TIRR	Tirgusor	68.24	315	P	P	16 58 01.3	-1.6
TIRR				IAmb	IAmb	16 58 22.7	
	comp=Z,207nm,0.9s						
TPGR	Topolog	68.32	316	⇑P	P	16 58 01.9	-1.6
MILM	Milestii Mici	68.51	318	⇓P	P	16 58 03.0	-1.6
MILM	Milestii Mici	68.51	318	c iP	P	16 58 03.0	-1.6
MILM				eS	S	17 07 08.0	+1.8
MILM				ePS		17 07 20.0	
MILM				pmax	pmax		
	comp=Z,900nm,4.0s						
MOO	Moorlands	68.53	141	P	P	16 58 05.9	+1.2
	baz=69,SNR=5.1						
KIS	Kishinev	68.53	318	⇑iP	P	16 58 06.0	+1.3
	comp=Z,400nm,4.6s						
KIS	Kishinev	68.53	318	ePP	PP	17 00 46.0	+10
KIS				eS	S	17 07 08.0	+1.6
KIS				eLR	LR	17 21 01.0	
	comp=Z,2µm,19.0s						
KIS	Kishinev	68.53	318	c iP	P	16 58 06.0	+1.3
KIS				eS	S	17 07 08.0	+1.6
KIS				e		17 08 05.0	
KIS				pmax	pmax		
	comp=Z,400nm,4.6s						
MOPA	Mopani	68.54	242	eP	P	16 58 08.0	+2.8
MOPA	Mopani	68.54	242	eP	P	16 58 08.0	+2.8
CFR	Carcaliu	68.58	316	⇓P	P	16 58 03.3	-1.8
HARR	Harsova	68.62	315	⇓P	P	16 58 03.6	-1.7
PETK	Petropavlovsk-	68.67	35	P	P	16 58 01.8	-3.7
	comp=Z,10nm,1.1s,baz=243,slow=14,SNR=3.0						
PETK				LR	LR	17 27 37.3	
	comp=Z,9µm,21.5s,baz=230,slow=36						
VLDR	Vladesti	68.77	317	⇑P	P	16 58 05.6	-0.7
TAU	Tasmania Unive	68.85	141	P	P	16 58 06.6	-0.2
TAU				pmax	pmax		
	comp=Z,239nm,1.2s						
TAU				MLR	MLR		
	comp=Z,50µm,20.0s						
TAU	Tasmania Unive	68.85	141	P	P	16 58 06.6	-0.2
TAU				IAmb	IAmb	16 58 22.8	
	comp=Z,239nm,1.2s						
PRK	Paraskevi	68.87	309	P	P	16 58 06.6	-0.4
CHOS	Chios island	68.91	308	P	P	16 58 06.9	-0.5
EZN	Ezine	68.92	310	P	P	16 58 06.4	-0.9
EDRB	Edirne	68.93	312	P	P	16 58 05.3	-2.1
VARL	Varlezi	68.94	317	⇑P	P	16 58 07.2	-0.1
RASA	Rasa	69.08	315	⇑P	P	16 58 07.6	-0.6
SORM	Soroca	69.10	319	⇓P	P	16 58 06.8	-1.5
VASR	Vaslui	69.14	317	⇓P	P	16 58 06.8	-1.7
SIGR	SIGRI	69.18	309	P	P	16 58 07.4	-1.6
ENEZ	Enez	69.19	311	P	P	16 58 07.7	-1.3
AKASG	Malin Array Be	69.19	322	P	P	16 58 06.8	-2.0
	comp=Z,12nm,0.8s,baz=97,slow=5.5,SNR=50						
AKASG				PKP2ab	P'P'ab	17 26 21.6	+0.3
	comp=Z,0.2nm,0.4s,baz=283,slow=3.3,SNR=5.8						
AKASG				LR	LR	17 34 06.2	
	comp=Z,4µm,18.2s,baz=100,slow=41						
AKBB	Malin Array Si	69.19	322	P	P	16 58 07.0	-1.8
AKBB				pmax	pmax		
	comp=Z,103nm,0.9s						
AKBB	Malin Array Si	69.19	322	P	P	16 58 07.0	-1.8
AKBB				IAmb	IAmb	16 58 33.0	
	comp=Z,103nm,0.9s						
PET	Petropavlovsk	69.19	36	eP	P	16 58 11.8	+3.1
PET				eS	S	17 07 15.1	+1.2
PET				eSS	SS	17 11 40.2	-0.2
PET				pmax	pmax		
	comp=Z,2µm,13.0s						
PET				pmax	pmax		
	comp=Z,2µm,12.8s						
PET				pmax	pmax		
	comp=Z,173nm,1.3s						
PET				smax	smax		
	comp=E,4µm,22.5s						
PET				MLR	MLR		
	comp=Z,20µm,19.0s						
PET				MLR	MLR		
	comp=Z,19µm,18.0s						
PET	Petropavlovsk	69.19	36	P	P	16 58 07.6	-1.1
PET				IAmb	IAmb	16 58 26.4	
	comp=Z,212nm,1.3s						
PET				IAMs_20	IAMs_20	17 31 37.2	
	comp=Z,16µm,18.0s						
ALN	Alexandroupoli	69.30	311	P	P	16 58 08.4	-1.2
ALN	Alexandroupoli	69.30	311	P	P	16 58 07.8	-1.8
ALN				pmax	pmax		
	comp=Z,225nm,1.4s						
ALN	Alexandroupoli	69.30	311	⇑P	P	16 58 07.8	-1.8
ALN				⇑P	pP	16 58 08.7	-5.5
ALN				⇓p	sP	16 58 16.0	+0.2
ALN	Alexandroupoli	69.30	311	P	P	16 58 07.8	-1.8
ALN				IAmb	IAmb	16 58 23.7	
	comp=Z,225nm,1.4s						
GADA	Gvkgeada	69.30	310	P	P	16 58 07.8	-1.8
LEHL	Lehliu	69.36	315	⇓P	P	16 58 09.7	-0.2
MSNA	Messina	69.40	243	eP	P	16 58 16.3	+5.7
MSNA	Messina	69.40	243	eP	P	16 58 16.3	+5.7
RAZG	Razgrad	69.41	314	⇓P	P	16 58 09.7	-0.7
ODBI	Odobesti	69.45	316	⇑P	P	16 58 10.1	-0.4
SMTH	Samothraki Isl	69.62	311	P	P	16 58 09.7	-2.0
BISRR	Bisoca	69.64	316	⇑P	P	16 58 12.1	+0.3
ISR	Istrita	69.68	316	⇓P	P	16 58 12.1	+0.1
VRI	Vrincioaia	69.69	316	⇓P	P	16 58 11.3	-0.7
RDO	Rodhopi	69.71	311	P	P	16 58 10.1	-2.1
RDO	Rodhopi	69.71	311	⇑P	P	16 58 11.2	-1.0
RDO				⇑P	P	16 58 11.3	-1.0
RDO				⇓p	sP	16 58 18.4	0.0
PLOR	Plostina	69.75	316	⇑P	P	16 58 12.0	-0.3
SEY	Seymchan	69.75	24	LR	LR	17 31 22.6	
	comp=Z,14µm,18.4s,baz=228,slow=38						
SEY	Seymchan	69.75	24	i P	P	16 58 10.5	-1.5
LIA	Limnos Island	69.80	310	P	P	16 58 11.2	-1.5
TESR	Tescani	69.88	317	⇓P	P	16 58 12.0	-1.1
SECR		69.99	315	⇓P	P	16 58 14.3	+0.4
VAM	Vamos	70.02	305	P	P	16 58 13.8	-0.4
COVR	Voineasa-Covas	70.05	316	⇓P	P	16 58 12.8	-1.5
MLR	Muntele Rosu	70.16	316	⇑P	P	16 58 14.2	-0.9
MLR	Muntele Rosu	70.16	316	P	P	16 58 13.7	-1.4
MLR				pmax	pmax		
	comp=Z,367nm,1.1s						
MLR				MLR	MLR		
	comp=Z,4µm,18.0s						
MLR	Muntele Rosu	70.16	316	P	P	16 58 13.7	-1.4
IMMV	Iera Moni Meta	70.20	305	P	P	16 58 14.9	-0.5
MATP	Matopo	70.23	246	eP	P	16 58 15.3	-0.7
MATP	Matopo	70.23	246	eP	P	16 58 15.3	-0.7
THAS	Thassos island	70.25	311	P	P	16 58 13.6	-1.9
PRAR	RASCA	70.33	318	⇓P	P	16 58 15.0	-0.9
OZUR		70.38	317	⇑P	P	16 58 15.3	-1.0
COPA	Copaceanca	70.43	314	⇑P	P	16 58 16.3	-0.3
KAVA	Kavala	70.46	311	P	P	16 58 15.3	-1.5
KYMI	Kymi, Euboea I	70.46	308	P	P	16 58 15.0	-1.9
DION	Dionisos Attik	70.53	308	P	P	16 58 15.6	-1.7
PTL	Penteli	70.58	308	P	P	16 58 15.8	-1.8
VLY	Voula,Athens	70.61	308	P	P	16 58 14.6	-3.2
ATHU	Athens Univers	70.63	308	P	P	16 58 16.0	-1.9
DOPR	Dopca	70.63	316	⇓P	P	16 58 17.3	-0.5
HUMR	Humele	70.66	315	⇑P	P	16 58 16.8	-1.2
PLVB	Pleven	70.73	314	⇑P	P	16 58 17.9	-0.5
STFAR	Stefanesti-Arg	70.73	315	⇓P	P	16 58 18.6	+0.2
OUR	Ouranopolis	70.77	310	P	P	16 58 17.5	-1.2
VOIR		70.77	316	⇓P	P	16 58 17.7	-1.0
ANKY	Antikythira Is	70.79	305	P	P	16 58 18.6	-0.3
PAIG	Paliouri	70.94	310	P	P	16 58 17.5	-2.3
MNK	Minsk	70.99	326	i P	P	16 58 18.6	-1.1
MNK				i		16 58 42.9	
MNK				i		17 00 55.5	
MNK				i PPP	PPP	17 02 38.2	
MNK				i S	S	17 07 34.8	-0.2
MNK				i SS	SS	17 12 08.2	+0.2
MNK				pmax	pmax		
	comp=E,17nm,1.1s						
MNK				pmax	pmax		
	comp=Z,142nm,1.0s						
MNK				pmax	pmax		
	comp=N,32nm,1.0s						
MNK				MLR	MLR		
	comp=E,211nm,20.0s						
MNK				MLR	MLR		
	comp=N,5µm,20.0s						
MNK				MLR	MLR		
	comp=Z,4µm,22.0s						
MNK	Minsk	70.99	326	i P	P	16 58 18.7	-1.0
	comp=E,17nm,1.1s						
MNK				i P	P	16 58 18.7	-1.0
	comp=N,32nm,1.0s						
MNK				i P	P	16 58 18.7	-1.0
	comp=Z,142nm,1.0s,baz=285						
MNK				i PcP	PcP	16 58 43.0	+2.9
MNK				i PP	PP	17 00 55.5	-1.5
MNK				i PPP	PPP	17 02 38.3	
MNK				i S	S	17 07 34.9	-0.1
MNK				i SS	SS	17 12 08.3	+0.3
MNK				i SSS	SSS	17 15 27.1	
MNK				i LQ	LQ	17 23 10.2	
MNK				i LR	LR	17 29 57.2	
MNK				i LRM	MLR	17 32 18.4	
	comp=E,211nm,20.3s						
MNK				i LRM	MLR	17 32 48.1	
	comp=N,5µm,20.3s						
MNK				i LRM	MLR	17 32 55.3	
	comp=Z,4µm,21.7s						
VLAD	Vladila	70.99	314	⇑P	P	16 58 20.0	+0.1
NVR	Nevrokopi	70.99	311	P	P	16 58 18.3	-1.8
VILL	Villia	71.02	308	P	P	16 58 16.4	-4.0
KTHA	Kythira Island	71.02	306	P	P	16 58 18.5	-1.9
ARR	Arges	71.05	316	⇓P	P	16 58 19.6	-0.7
BURAR	Bucovina Array	71.05	318	⇓P	P	16 58 19.4	-1.0
BURAR	Bucovina Array	71.05	318	P	P	16 58 19.2	-1.2
BUR08	Bucovina Ar. S	71.07	318	P	P	16 58 19.4	-1.2
BUR08				IAmb	IAmb	16 58 46.9	
	comp=Z,199nm,1.4s						
KTHR	Kythira	71.07	306	P	P	16 58 18.4	-2.2
EPID	Epidavros	71.12	307	P	P	16 58 18.2	-2.7
SRS	Serrai	71.16	311	P	P	16 58 18.9	-2.2
XOR	Xorichti	71.25	309	P	P	16 58 16.8	-4.9
LTK	Loutraki	71.28	308	P	P	16 58 18.6	-3.3
PUL	Pulkovo	71.30	331	eP	P	16 58 22.1	+0.6
PUL	Pulkovo	71.30	331	ceP	P	16 58 20.6	-0.9
PUL				pmax	pmax		
	comp=Z,319nm,1.3s						
PUL				MLR	MLR		
	comp=Z,6µm,19.0s						
SOH	Sokhos	71.31	311	P	P	16 58 20.4	-1.6
HORT	Hortiatis	71.47	310	P	P	16 58 20.9	-2.2
ARCR	ARCALIA	71.53	317	⇓P	P	16 58 23.3	+0.1
VTS	Vitosha	71.63	313	⇓P	P	16 58 23.5	-0.5
VTS	Vitosha	71.63	313	P	P	16 58 22.4	-1.7
VTS				pmax	pmax		
	comp=Z,145nm,1.1s						
VTS	Vitosha	71.63	313	⇓P	P	16 58 22.6	-1.4
VTS				⇑P	pP	16 58 23.0	-5.6
VTS				⇓p	sP	16 58 30.4	+0.1
VTS	Vitosha	71.63	313	P	P	16 58 22.4	-1.7
VTS				IAmb	IAmb	16 58 38.0	
	comp=Z,145nm,1.1s						
LOT	Lotru	71.66	316	⇓P	P	16 58 23.2	-1.0
KNT	Kendrikon	71.69	311	P	P	16 58 21.6	-2.7
NACGM	Naroch	71.71	326	i P	P	16 58 23.3	-0.8
GUR	Goura	71.76	308	P	P	16 58 22.1	-2.8
AGG	Agios Georgios	71.88	309	P	P	16 58 21.1	-4.4
AGG	Agios Georgios	71.88	309	P	P	16 58 22.9	-2.6
AGG				pmax	pmax		
	comp=Z,62nm,1.1s						
AGG	Agios Georgios	71.88	309	P	P	16 58 22.9	-2.6
KLV	Kalavryta, Ach	71.92	308	P	P	16 58 22.9	-2.9
VAY	Valandovo	71.95	311	i Pn	P	16 58 24.3	-1.5
CJR	Cluj-Napoca	71.98	317	⇑P	P	16 58 26.1	+0.1
TRIZ	Trizonia	72.01	308	P	P	16 58 22.8	-3.4
ITM	Ithomi	72.02	307	P	P	16 58 24.4	-1.9
ITM	Ithomi	72.02	307	P	P	16 58 24.5	-1.9
ITM				IAmb	IAmb	16 58 39.8	
	comp=Z,350nm,1.3s						
CBBR	Cluj-Babes-Bol	72.02	317	⇑P	P	16 58 26.5	+0.3
SERG	Sergoula	72.03	308	P	P	16 58 23.9	-2.5
MAKR	Makrakomi, Fth	72.03	309	P	P	16 58 23.7	-2.7
GRG	Griva	72.04	311	P	P	16 58 23.4	-3.0
LAKA	Lakka	72.08	308	P	P	16 58 24.3	-2.4
PYL	PYLOS	72.14	306	P	P	16 58 24.0	-3.1
EFP	Efpalio	72.15	308	P	P	16 58 25.2	-1.9
THL	Klokotos Trika	72.18	309	P	P	16 58 23.1	-4.1
BMR	Baia Mare	72.21	318	⇑P	P	16 58 27.0	-0.2
ISAL	Salakas	72.24	326	eP	P	16 58 27.9	+0.7
LVV	L'vov	72.24	320	eP	P	16 58 26.4	-1.0
LVV				e		16 58 43.2	
LVV				e		17 02 51.1	
LVV				eS	S	17 07 45.6	-4.0

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LVV                                pmax     pmax
      comp=Z,500nm,1.5s
DRO   Drossia           72.26 308  P        P         16 58 26.0 -1.8
EVR   Evrytania         72.27 309  P        P         16 58 26.2 -1.8
GZR   Gura Zlata        72.34 315 ⇑P        P         16 58 27.5 -0.7
LHI   Lord Howe Isla    72.38 126  P        P         16 58 29.0 +0.5
      baz=72,SNR=4.6
RLS   Riolos of Patr    72.46 308  P        P         16 58 27.5 -1.4
PVO   Paravola          72.47 308  P        P         16 58 28.0 -1.0
MESR  Meseseni          72.49 317 ⇑P        P         16 58 28.9 -0.1
HERR  Herculane         72.53 315 ⇓P        P         16 58 28.5 -0.7
DRGR                    72.60 317 ⇑P        P         16 58 29.1 -0.6
LVZ   Lovozero          72.66 340ceP        P         16 58 28.4 -1.2
LVZ                                pmax     pmax
      comp=Z,106nm,1.3s
LVZ                                MLR      MLR
      comp=Z,17µm,19.0s
LVZ   Lovozero          72.66 340  P        P         16 58 28.0 -1.6
LVZ                                IAmb     IAmb      16 58 55.8
      comp=Z,227nm,0.9s
LVZ                                IAMs_20  IAMs_20   17 33 14.2
      comp=Z,17µm,20.0s
VSU   Vasula            72.67 329 eP        P         16 58 29.6 -0.1
VSU   Vasula            72.67 329 i P       P         16 58 28.6 -1.1
VSU   Vasula            72.67 329 ⇓P        P         16 58 29.1 -0.6
VSU                               ⇓P        pP        16 58 29.4 -5.0
VSU                               ⇑P        sP        16 58 31.9 -4.2
KPRO  Kipourio          72.72 310  P        P         16 58 27.0 -3.5
FNA   Florina           72.79 310  P        P         16 58 28.6 -2.4
FNA   Florina           72.79 310  P        P         16 58 28.6 -2.4
FNA                                pmax     pmax
      comp=Z,81nm,0.9s
FNA   Florina           72.79 310 ⇑P        P         16 58 28.9 -2.0
FNA                               ⇑P        P         16 58 28.9 -2.0
FNA   Florina           72.79 310  P        P         16 58 28.6 -2.4
BOVS  Bovan             72.87 313 ⇓P        P         16 58 30.1 -1.2
TRPA  Tarpa             72.92 318 ⇓P        P         16 58 30.6 -0.9
TRPA  Tarpa             72.92 318 eP        P         16 58 30.9 -0.5
LTHK  Lithakia          72.93 307  P        P         16 58 29.3 -2.4
APA   Apatity           72.95 339⇓iP        P         16 58 30.1 -1.2
NEST  Nestorio          73.00 310  P        P         16 58 29.7 -2.6
MDVR  Moldovita         73.01 315 ⇓P        P         16 58 31.2 -0.9
NYDR  Nydri-Lefkada     73.12 308  P        P         16 58 30.4 -2.4
EVGI  Lefkada island    73.14 308  P        P         16 58 31.1 -1.9
LKD2  Lefkada island    73.16 308  P        P         16 58 31.6 -1.5
PSDA  Pessada-Kefalo    73.16 308  P        P         16 58 31.1 -2.0
UZH   Uzhgorod          73.16 319 eP        P         16 58 32.6 -0.3
UZH                               e                   16 58 38.9
UZH                               e                   16 58 51.5
UZH                               e                   17 01 15.7
UZH                               ePPP      PPP       17 02 57.3
UZH                               eS        S         17 07 57.5 -2.6
UZH                               ePS       PnS       17 08 39.5 +7.0
TSLK  Tsoukalades, L    73.16 308  P        P         16 58 32.3 -0.8
BZS   Buzias            73.18 316 ⇓P        P         16 58 31.9 -1.2
DRAG  Dragano-Lefkad    73.21 308  P        P         16 58 31.7 -1.7
KOLS  Kolonicke sedl    73.22 319 eP        P         16 58 33.4 +0.1
KOLS                               pmax     pmax
      comp=Z,256nm,1.2s
KOLS  Kolonicke sedl    73.22 319 eP        P         16 58 33.4 +0.1
KOLS                              eS        SKiKP     17 08 08.0 +3.2
KBN   Korca             73.22 310  P        P         16 58 31.0 -2.5
KBN                                pmax     pmax
      comp=Z,121nm,1.1s
KBN   Korca             73.22 310  P        P         16 58 30.9 -2.5
SIRR  Siria             73.24 316 ⇓P        P         16 58 33.2 -0.2
OHR   Ohrid             73.26 311 i Pn      P         16 58 31.5 -2.2
KEF4  Livadi, Kephal    73.30 308  P        P         16 58 31.9 -2.0
LSK   Leskovik          73.32 310  P        P         16 58 32.5 -1.6
DMLN  Damoulianata-K    73.33 308  P        P         16 58 32.9 -1.3
KEF3  Kipouria, Keph    73.35 308  P        P         16 58 32.2 -2.0
PABE  Paberze           73.42 326 eP        P         16 58 34.0 -0.2
PABE  Paberze           73.42 326  P        P         16 58 32.3 -1.9
IGT   Igoumenitsa       73.47 309  P        P         16 58 32.7 -2.2
SUW   Suwalki           73.56 324 eP        P         16 58 34.5 -0.6
SUW                               epP       sP        16 58 41.0 -0.4
SUW                               eS        SKiKP     17 08 06.2 +1.1
SUW                               eL        L         17 35 13.9
      comp=Z,6µm,22.7s
SUW   Suwalki           73.56 324 eP        P         16 58 34.6 -0.5
SUW   Suwalki           73.56 324  P        P         16 58 33.3 -1.8
SUW                                pmax     pmax
      comp=Z,1µm,1.2s
SUW                                MLR      MLR
      comp=Z,5µm,20.0s
SUW   Suwalki           73.56 324  P        P         16 58 33.2 -1.8
PHP   Peshkopia         73.58 311  P        P         16 58 32.9 -2.7
CRVS  Cervenica-Dubn    73.74 319 eP        P         16 58 37.2 +0.8
CRVS                               pmax     pmax
      comp=Z,806nm,1.3s
CRVS  Cervenica-Dubn    73.74 319 eP        P         16 58 37.2 +0.8
CRVS                              eS        S         17 08 13.9 +7.1
SRN   Sarande           73.75 309  P        P         16 58 33.8 -2.8
FIA1  FINESS Array S    73.80 332  P        P         16 58 35.0 -1.3
FINES FINESS Array B    73.80 332  P        P         16 58 35.0 -1.3
      comp=Z,42nm,0.6s,baz=99,slow=6.6,SNR=104
FINES                              LR       LR        17 35 28.4
      comp=Z,5µm,20.4s,baz=106,slow=39
CASY  Casey             73.84 173 ⇓P        P         16 58 37.3 +0.9
CASY                              ⇓P        P         16 58 37.4 +0.9
CASY  Casey             73.84 173  P        P         16 58 36.1 -0.3
CASY                               IAmb     IAmb      16 58 57.8
      comp=Z,254nm,1.2s
KEK   Kerkira           73.90 309  P        P         16 58 36.1 -1.3
STHS  Stebnicka Huta    73.96 319 eP        P         16 58 37.3 -0.3
STHS  Stebnicka Huta    73.96 319 eP        P         16 58 37.3 -0.3
TIR   Tirane            73.98 311 ⇑P        P         16 58 36.8 -1.1
TIR   Tirane            73.98 311  P        P         16 58 36.1 -1.8
TIR                                pmax     pmax
      comp=Z,169nm,1.2s
TIR   Tirane            73.98 311 ⇑P        P         16 58 36.7 -1.2
TIR   Tirane            73.98 311  P        P         16 58 36.1 -1.8
TIR                                IAmb     IAmb      16 58 51.9
      comp=Z,169nm,1.2s
PUK   Puka              74.03 312  P        P         16 58 35.7 -2.5
DIVS  Divibare          74.15 314⇑iP        P         16 58 36.2 -2.7
DIVS  Divibare          74.15 314 ⇓P        P         16 58 37.2 -1.7
DIVS                              ⇑P        pP        16 58 37.8 -5.8
DIVS  Divibare          74.15 314  P        P         16 58 36.7 -2.2
VLO   Vlora             74.19 310  P        P         16 58 37.2 -1.9
VLO                                pmax     pmax
      comp=Z,286nm,1.5s
VLO   Vlora             74.19 310  P        P         16 58 37.2 -1.9
VLO                                IAmb     IAmb      16 58 59.0
      comp=Z,286nm,1.5s
MTSE  Matsula           74.21 329 eP        P         16 58 38.8  0.0
KECS  Kecovo            74.33 318 eP        P         16 58 39.6 -0.1
KECS                               pmax     pmax
      comp=Z,103nm,1.4s
KECS  Kecovo            74.33 318 eP        P         16 58 39.6 -0.1
FRGS  Fruska Gora       74.39 315 ⇑P        P         16 58 39.3 -0.9
FRGS  Fruska Gora       74.39 315 eP        P         16 58 37.8 -2.4
TEKS  Tekeris           74.53 314 eP        P         16 58 39.7 -1.3
PDG   Podgorica         74.53 312 ⇓P        P         16 58 39.8 -1.2
PDG   Podgorica         74.53 312⇑iP        P         16 58 39.4 -1.6
PDG   Podgorica         74.53 312 ⇑P        P         16 58 39.5 -1.5
PDG                               ⇑P        P         16 58 39.6 -1.5
PDG                               ⇑P        P         16 58 43.1 +2.1
PDG                               ⇓s        pP        16 58 48.3 +2.7
PDG   Podgorica         74.53 312  P        P         16 58 39.0 -2.0
PDG                                IAmb     IAmb      16 59 01.3
      comp=Z,148nm,0.9s
BBLS  Lazi&#263;i       74.55 314⇑iP        P         16 58 40.5 -0.7
RUDO  Rudo              74.55 313 eP        P         16 58 39.8 -1.4
DRME  Dracevica, Mon    74.56 312⇑iP        P         16 58 39.7 -1.6
NIE   Niedzica          74.57 319 eP        P         16 58 42.0 +0.8
NIE                               epP       pwP       16 58 49.2 +0.5
NIE                               eL        L         17 39 13.4
      comp=Z,3µm,21.4s
BEL   Belsk             74.61 322 eP        P         16 58 41.6 +0.3
BEL                               epP       pwP       16 58 48.1 -0.6
BEL                               eL        L         17 38 14.1
      comp=Z,6µm,20.5s
PSZ   Piszkesteto       74.65 318 ⇓P        P         16 58 41.5 -0.3
PSZ   Piszkesteto       74.65 318 eP        P         16 58 40.7 -1.0
PSZ   Piszkesteto       74.65 318  P        P         16 58 40.4 -1.3
PSZ                                pmax     pmax
      comp=Z,129nm,1.0s
PSZ                                MLR      MLR
      comp=Z,4µm,21.0s
PSZ   Piszkesteto       74.65 318 ⇑P        P         16 58 41.1 -0.5
PSZ                               ⇑P        P         16 58 41.2 -0.5
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PSZ   Piszkesteto       74.65 318  P        P         16 58 40.4 -1.3
PBUR  Paburge           74.65 326 eP        P         16 58 41.3 -0.1
SLIT  Slitere, Latvi    74.77 328 eP        P         16 58 41.7 -0.4
HAPS  Han Pijesak,Bl    74.90 314 eP        P         16 58 42.7 -0.6
SCTE  Santa Cesarea     74.94 310  P        P         16 58 41.9 -1.6
SCTE                               IAmb     IAmb      16 58 56.9
      comp=Z,252nm,1.0s
OJC   Ojcow             75.00 320 eP        P         16 58 43.3 -0.3
OJC                               epP       pwP       16 58 51.0  0.0
OJC                               eS        S         17 08 20.9 +0.1
OJC                               eL        L         17 40 20.5
      comp=Z,5µm,18.7s
OJC   Ojcow             75.00 320  P        P         16 58 42.5 -1.1
OJC                                pmax     pmax
      comp=Z,268nm,0.9s
OJC   Ojcow             75.00 320  P        P         16 58 42.5 -1.1
OJC                                IAmb     IAmb      16 59 09.6
      comp=Z,268nm,0.9s
LANS  Liptovska Anna    75.08 319 eP        P         16 58 44.5 +0.4
LANS                               pmax     pmax
      comp=Z,67nm,1.1s
LANS  Liptovska Anna    75.08 319 eP        P         16 58 44.5 +0.4
HCY   Herceg Novi       75.09 312 eP        P         16 58 42.4 -1.9
BRY   Bratogost         75.10 312 eP        P         16 58 42.9 -1.6
BUD   Budapest          75.18 317 eP        P         16 58 38.4 -6.3
TREB  Trebinje          75.22 312 eP        P         16 58 43.9 -1.1
BOSA  Boshof            75.31 238  P        P         16 58 47.0 +1.1
      comp=Z,55nm,0.8s,baz=80,slow=5.3,SNR=103
BOSA                               LR       LR        17 29 48.5
      comp=Z,7µm,18.7s,baz=78,slow=34
BOSA  Boshof            75.31 238  P        P         16 58 46.8 +0.8
BOSA                               pmax     pmax
      comp=Z,273nm,1.1s
BOSA  Boshof            75.31 238 eP        P         16 58 48.0 +2.0
BOSA  Boshof            75.31 238 eP        P         16 58 48.0 +2.0
BOSA  Boshof            75.31 238  P        P         16 58 46.8 +0.8
BOSA                               IAmb     IAmb      16 59 05.5
      comp=Z,272nm,1.1s
MORH  Mrgy, Hungar      75.31 316 ⇓P        P         16 58 44.1 -1.4
MORH  Mrgy, Hungar      75.31 316 eP        P         16 58 43.4 -2.0
MORH  Mrgy, Hungar      75.31 316 eP        P         16 58 43.7 -1.8
DBRK  Dubrovnik         75.37 312 i P       P         16 58 43.8 -2.1
KLNR  Kaliningrad       75.38 325 i P       P         16 58 45.2 -0.4
KLNR                               pmax     pmax
      comp=Z,469nm,1.0s
VYHS  Vyhne             75.42 318 eP        P         16 58 45.4 -0.7
VYHS                               pmax     pmax
      comp=Z,331nm,1.4s
VYHS  Vyhne             75.42 318 eP        P         16 58 45.4 -0.7
VYHS                              eS        S         17 08 31.4 +5.8
SRO2  Moca              75.64 317 eP        P         16 58 46.8 -0.5
SRO2  Moca              75.64 317 eP        P         16 58 46.8 -0.5
KOVH  Kovagotottos      75.68 316 eP        P         16 58 45.9 -1.7
CSKK  Cskako            75.69 317 eP        P         16 58 47.0 -0.7
SRO   Srobarova         75.69 318 eP        P         16 58 48.1 +0.4
SRO   Srobarova         75.69 318 eP        P         16 58 48.0 +0.4
STON  Ston              75.71 312⇑iP        P         16 58 45.9 -1.9
STON  Ston              75.71 312 i P       P         16 58 45.9 -1.9
TIH   Tihany            75.89 317 eP        P         16 58 48.4 -0.4
KEV   Kevo              75.94 341  P        P         16 58 48.1 -0.5
KEV                                pmax     pmax
      comp=Z,342nm,1.3s
KEV                                MLR      MLR
      comp=Z,12µm,20.0s
KEV   Kevo              75.94 341 ⇓P        P         16 58 48.2 -0.3
KEV                               ⇑P        P         16 58 48.3 -0.3
KEV   Kevo              75.94 341  P        P         16 58 48.1 -0.5
KEV                                IAmb     IAmb      16 58 56.2
      comp=Z,342nm,1.3s
OKC   Ostrava-Krasne    76.01 320 eP        P         16 58 49.4  0.0
OKC                                MLR      MLR
      comp=Z,3µm,24.4s
OKC   Ostrava-Krasne    76.01 320 eP        P         16 58 49.4  0.0
OKC                               eS        SKiKP     17 08 18.5 +9.5
OKC                                AMS      AMS       17 32 10.0
      comp=Z,3µm,24.4s
DZM   Mont Dzumac       76.05 115 eP        P         16 58 50.6 +0.4
      comp=Z,502nm,1.4s
DZM                               eS        S         17 08 31.2 -2.3
      comp=Z,10µm,23.6s
DZM                               eSS       SS        17 13 27.9 +1.0
      comp=Z,20µm,36.1s
DZM                               eLQ       LQ        17 19 02.9
      comp=Z,25µm,25.2s
DZM                               eLR       LR        17 22 09.3
      comp=Z,62µm,23.4s
DZM   Mont Dzumac       76.05 115  P        P         16 58 49.5 -0.7
DZM                                IAmb     IAmb      16 59 14.4
      comp=Z,215nm,1.2s
ONTNC Ouen Toro         76.11 115  P        P         16 58 50.5 +0.1
ONTNC                              IAmb     IAmb      16 59 10.9
      comp=Z,165nm,1.1s
MPLH  Magyarpolny       76.16 317 eP        P         16 58 50.3  0.0
RICI  Ricice            76.17 313 i P       P         16 58 48.8 -1.6
BLY   Banja Luka        76.21 314⇑iP        P         16 58 50.0 -0.7
TIP   Timpagrande       76.21 309 ⇓P        P         16 58 50.7 -0.2
TIP   Timpagrande       76.21 309 ⇑P        P         16 58 50.5 -0.4
TIP                               ⇓P        P         16 58 50.9  0.0
TIP   Timpagrande       76.21 309  P        P         16 58 50.1 -0.8
JAVC  Velka Javorina    76.22 319 eP        P         16 58 51.1 +0.4
MAKA  Makarska          76.23 313 i P       P         16 58 48.7 -2.1
MGRS  Mrkonjic Grad     76.26 314 eP        P         16 58 50.2 -0.8
SMOL  Smolenice         76.35 318 eP        P         16 58 51.4  0.0
SMOL                               pmax     pmax
      comp=Z,165nm,1.9s
SMOL  Smolenice         76.35 318 eP        P         16 58 51.4  0.0
ARA0  ARCESS Array S    76.37 340⇓iP        P         16 58 51.3 +0.2
ARCES ARCESS Array B    76.37 340  P        P         16 58 50.9 -0.2
      comp=Z,28nm,0.5s,baz=39,slow=7.8,SNR=132
ARCES                              LR       LR        17 36 01.1
      comp=Z,11µm,18.5s,baz=100,slow=38
ARCES ARCESS Array B    76.37 340  P        P         16 58 50.4 -0.7
ARCES                              pmax     pmax
      comp=Z,287nm,1.2s
ARCES ARCESS Array B    76.37 340  P        P         16 58 50.4 -0.7
ARCES                              IAmb     IAmb      16 58 58.9
      comp=Z,287nm,1.1s
MORC  Moravsky Berou    76.39 319 ⇓P        P         16 58 51.1 -0.5
MORC  Moravsky Berou    76.39 319  P        P         16 58 50.8 -0.9
MORC                               pmax     pmax
      comp=Z,535nm,1.4s
MORC  Moravsky Berou    76.39 319 eP        P         16 58 51.0 -0.7
MORC                              eS        S         17 08 32.7 -3.7
MORC  Moravsky Berou    76.39 319  P        P         16 58 50.8 -0.9
AAL   Aland             76.42 330 eP        P         16 58 51.3 -0.2
MRAK  Mrakovica         76.43 315 eP        P         16 58 51.1 -0.9
MODS  Modra-Piesok      76.44 318 eP        P         16 58 50.6 -1.3
MODS                               pmax     pmax
      comp=Z,596nm,1.4s
MODS  Modra-Piesok      76.44 318 eP        P         16 58 50.6 -1.3
MODS                              eS        S         17 08 31.7 -5.2
ZST   Bratislava        76.54 318 eP        P         16 58 52.7 +0.3
ZST                               eS        S         17 08 37.4 -0.5
ZST   Bratislava        76.54 318 eP        P         16 58 52.7 +0.3
ZST                               eS        S         17 08 37.4 -0.5
MOSL  Moslavina         76.58 315 i P       P         16 58 51.7 -1.1
BEHE  Becsehely         76.62 316 eP        P         16 58 51.6 -1.4
BEHE  Becsehely         76.62 316⇑iP        P         16 58 52.9 -0.1
KIJV  Kijevo            76.72 313 i P       P         16 58 51.5 -2.1
KALN  Kalnik            76.82 316 i P       P         16 58 53.3 -0.8
CEL   Celeste           76.86 308  P        P         16 58 54.1 -0.4
CEL                                IAmb     IAmb      16 59 10.1
      comp=Z,245nm,1.2s
SOP   Sopron            76.86 317 eP        P         16 58 52.6 -1.7
KRLC  Kraliky           76.91 320 eP        P         16 58 54.1 -0.5
KRLC                              e                   16 59 01.0
KRLC                              eS        S         17 08 40.3 -1.7
KRLC                               MLR      MLR
      comp=Z,3µm,20.8s
KRLC  Kraliky           76.91 320 eP        P         16 58 54.1 -0.5
KRLC                              ex        x         16 59 01.0
KRLC                              eS        S         17 08 40.3 -1.7
KRLC                               AMS      AMS       17 31 50.0
      comp=Z,3µm,20.8s
BILL  Bilibino          76.94  22⇓iP        P         16 58 53.1 -1.3
BILL                              i                   16 59 05.2
BILL                              i                   17 01 46.8
BILL                              i S       S         17 08 40.9 -0.7
BILL                               pmax     pmax
      comp=Z,39nm,0.9s
BILL  Bilibino          76.94  22  P        P         16 58 53.0 -1.3
BILL                               IAMs_20  IAMs_20   17 36 08.7
      comp=Z,14µm,19.0s
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GKP   Gorka Klasztor    76.94 323 eP        P         16 58 53.9 -0.7
GKP                               epP       sP        16 59 01.1 +0.2
GKP                               eL        L         17 37 28.4
      comp=Z,5µm,23.2s
GKP   Gorka Klasztor    76.94 323 eP        P         16 58 54.6 +0.1
VRAC  Vranov            76.97 319 ⇓P        P         16 58 54.2 -0.7
VRAC  Vranov            76.97 319 eP        P         16 58 54.1 -0.7
VRAC                              eS        S         17 08 38.8 -3.8
KOGS  Kog               76.98 316 eP        P         16 58 53.8 -1.2
KOGS                              i pP      pwP       16 59 01.9 -0.6
KOGS                              i                   16 59 12.9
KOGS                              e                   16 59 40.6
KOGS                              eS        S         17 08 46.2 +3.4
KTK1  Kautokeino        77.00 340⇓iP        P         16 58 54.6  0.0
KTK1                               IVmB_BB            16 59 02.0
      comp=Z,3µm,1.5s
KTK1                              eS        S         17 08 40.5 -1.7
KTK1                               IVMs_BB  IVMs_BB   17 36 03.7
      comp=Z,7µm,18.6s
KRUC  Moravsky          77.08 319 eP        P         16 58 54.9 -0.6
KRUC                              eS        S         17 08 40.9 -2.9
LOBO  Lobor             77.09 316 i P       P         16 58 54.9 -0.8
SGRT  San Giovanni R    77.10 311  P        P         16 58 53.9 -1.9
ZAG   Zagreb            77.13 315 eP        P         16 58 54.5 -1.3
PTJ   Puntijarka        77.15 315  P        P         16 58 55.4 -0.7
UDBI  Udbina            77.21 314 i P       P         16 58 55.4 -1.1
MORI  Morici            77.22 313 i P       P         16 58 53.0 -3.4
DPC   Dobruska-Polom    77.23 320 eP        P         16 58 56.5 +0.1
DPC                               eS        S         17 08 31.6  -14
DPC                                MLR      MLR
      comp=Z,6µm,27.9s
DPC   Dobruska-Polom    77.23 320 eP        P         16 58 56.5 +0.1
DPC                               eS        S         17 08 31.6  -14
DPC                                AMS      AMS       17 32 30.0
      comp=Z,6µm,27.9s
ZIRJ  Zirje             77.25 313 i P       P         16 58 53.8 -2.8
HAMF  Hammerfest        77.29 341⇓iP        P         16 58 56.4 +0.2
HAMF                              eS        S         17 08 43.3 -2.0
HAMF                               IVMs_BB  IVMs_BB   17 46 55.0
      comp=Z,4µm,16.9s
KSP   Ksiaz             77.29 320 eP        P         16 58 56.9 +0.2
KSP                               epP       pwP       16 59 04.0 -0.1
KSP                               eS        S         17 08 42.6 -3.4
KSP                               eSKSac    SKKSac    17 09 11.6 +1.9
KSP                               eL        L         17 38 59.7
      comp=Z,7µm,19.8s
OSTC  Ostas             77.31 320 eP        P         16 58 56.4 -0.4
OSTC                              eS        S         17 08 36.0  -10
OSTC                               AMS      AMS       17 32 20.0
      comp=Z,6µm,28.6s
PLIT  Plitvice          77.33 314 i P       P         16 58 55.5 -1.5
CONA  Conrad Observa    77.35 317 i P       P         16 58 56.4 -0.8
      comp=Z,32nm,1.1s,SNR=21
CHVC  Chvalec           77.42 320 eP        P         16 58 57.0 -0.4
CHVC                              ex        x         16 59 03.6
CHVC                              eS        S         17 08 36.0  -12
CHVC                               AMS      AMS       17 38 40.0
      comp=Z,5µm,18.9s
UPC   Upice             77.44 320 eP        P         16 58 57.3 -0.2
UPC                               eS        S         17 08 40.3 -7.4
UPC                                MLR      MLR
      comp=Z,8µm,31.5s
UPC   Upice             77.44 320 eP        P         16 58 57.3 -0.2
UPC                               eS        S         17 08 40.3 -7.4
UPC                                AMS      AMS       17 32 50.0
      comp=Z,8µm,31.5s
OZLJ  Ozalj             77.48 315 i P       P         16 58 57.0 -0.8
CRES  Cresnjev          77.50 315⇑iP        P         16 58 57.6 -0.3
ARSA  Arzberg           77.53 317 i P       P         16 58 57.4 -0.7
      comp=Z,85nm,1.2s,SNR=71
UPP   Uppsala           77.54 330 eP        P         16 58 57.4 -0.4
MAW   Mawson            77.57 192  P        P         16 59 00.2 +2.5
      comp=Z,35nm,0.7s,baz=8.2,slow=5.9,SNR=51
MAW                                LR       LR        17 28 32.8
      comp=Z,21µm,19.0s,baz=15,slow=32
MAW   Mawson            77.57 192  P        P         16 59 00.0 +2.3
      baz=78,SNR=28
MAW   Mawson            77.57 192  P        P         16 58 59.4 +1.7
MAW                                pmax     pmax
      comp=Z,35nm,1.0s
MAW   Mawson            77.57 192  P        P         16 58 59.4 +1.7
TREC  Trest             77.69 319 eP        P         16 58 58.7 -0.2
TREC                              eS        S         17 08 44.7 -5.8
TREC                               MLR      MLR
      comp=Z,11µm,40.6s
TREC  Trest             77.69 319 eP        P         16 58 58.7 -0.2
TREC                              eS        S         17 08 44.7 -5.8
TREC                               AMS      AMS       17 28 20.0
      comp=Z,11µm,40.6s
DUGI  Dugi Otok         77.69 313 i P       P         16 58 52.1 -6.9
PDKS  Podkum            77.83 316 eP        P         16 58 59.3 -0.5
SOKA  Soboth            77.84 316 i P       P         16 58 59.3 -0.6
      comp=Z,108nm,1.2s,SNR=108
NVLJ  Novalja           77.85 314 i P       P         16 58 58.4 -1.5
RABC  Rab               77.92 314 i P       P         16 58 60.0 -0.3
PAOL  Paolisi           77.96 310  P        P         16 58 58.7 -1.9
RAFF  Raffo Rosso       78.05 307  P        P         16 59 00.9 -0.3
JETT  Jettan, Norway    78.11 340⇓iP        P         16 59 01.1 +0.3
JETT                              eS        S         17 08 53.1 -1.2
LJU   Ljubljana         78.16 316⇑iP        P         16 58 59.7 -1.9
LJU   Ljubljana         78.16 316 eP        P         16 59 00.3 -1.2
LJU                               epP       pwP       16 59 08.7 -0.4
LJU                               i                   16 59 19.6
LJU                               eS        S         17 08 50.3 -5.3
LJU                               e                   17 20 01.3
RIY   Rijeka            78.16 315 eP        P         16 59 00.1 -1.5
RIY   Rijeka            78.16 315  P        P         16 59 00.1 -1.5
OBKA  Obir              78.16 316 i P       P         16 59 01.3 -0.4
      comp=Z,89nm,1.4s,SNR=76
CEY   Cerknica          78.21 315 eP        P         16 59 00.5 -1.4
PRU   Pruhonice         78.35 320 eP        P         16 59 02.0 -0.5
PRU                               e                   16 59 09.6
PRU                               eS        S         17 08 49.0 -8.4
PRU                                MLR      MLR
      comp=Z,10µm,43.8s
PRU   Pruhonice         78.35 320 eP        P         16 59 02.0 -0.5
PRU                               ex        x         16 59 09.6
PRU                               eS        S         17 08 49.0 -8.4
PRU                                AMS      AMS       17 28 00.0
      comp=Z,10µm,43.8s
PVCC  Panska Ves        78.36 320 eP        P         16 59 02.2 -0.4
PVCC                               MLR      MLR
      comp=Z,5µm,17.7s
PVCC  Panska Ves        78.36 320 eP        P         16 59 02.2 -0.4
PVCC                              eS        S         17 08 40.3  -17
PVCC                               AMS      AMS       17 39 20.0
      comp=Z,5µm,17.7s
SMRN  Sveta Marina      78.38 314 i P       P         16 59 01.3 -1.5
MOA   Molln             78.42 317 i P       P         16 59 02.1 -0.9
      comp=Z,37nm,1.0s,SNR=30
PRA   Prague            78.42 320 eP        P         16 59 02.8 -0.1
PRA                               e                   16 59 14.4
PRA                               eS        S         17 08 46.9  -11
PRA                                MLR      MLR
      comp=Z,7µm,38.0s
PRA   Prague            78.42 320 eP        P         16 59 02.8 -0.1
PRA                               ex        x         16 59 14.4
PRA                               eS        S         17 08 46.9  -11
PRA                                AMS      AMS       17 28 10.0
      comp=Z,7µm,38.0s
CKRC  Cesky Krumlov     78.43 318 eP        P         16 59 02.8 -0.3
CKRC                              ex        x         16 59 09.9
CKRC                              eS        S         17 08 53.4 -5.1
BSD   Bornholm Skovb    78.47 325 i P       P         16 59 01.1 -2.0
BSD                               i P       P         16 59 02.9 -0.2
TRO   Tromso            78.63 340⇓iP        P         16 59 03.4 -0.2
TRO                                IVmB_BB            16 59 10.6
      comp=Z,2µm,2.1s
TRO                               eS        S         17 08 59.5 -0.2
TRO                                IVMs_BB  IVMs_BB   17 36 55.1
      comp=Z,6µm,18.4s
TRI   Trieste           78.68 315  P        P         16 59 02.7 -1.7
TRI                                pmax     pmax
      comp=Z,171nm,1.1s
TRI   Trieste           78.68 315  P        P         16 59 02.7 -1.7
TRI                                IAmb     IAmb      16 59 22.6
      comp=Z,171nm,1.1s
HOPEN Hopen             78.68 347 eP        P         16 59 04.0 +0.2
HOPEN                             eS        S         17 08 58.8 -1.2
HOPEN                              IVMs_BB  IVMs_BB   17 42 20.0
      comp=Z,4µm,23.0s
BRG   Berggiesshubel    78.78 320 eP        P         16 59 04.7 -0.1
      comp=Z,682nm,1.8s,baz=91,slow=5.3
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BRG	Berggiesshubel	78.78	320	⇑iP	P	16 59 04.8	-0.1
BRG				Amp		16 59 06.8	
	comp=Z,44nm,1.0s						
BRG	Berggiesshubel	78.78	320	P	P	16 59 12.1	+7.2
BRG				Amp		16 59 13.9	
	comp=Z,245nm,1.3s						
BRG	Berggiesshubel	78.78	320	S	S	17 09 00.0	-2.0
MYKA	Terra Mystica	78.79	316	i P	P	16 59 04.3	-0.8
	comp=Z,258nm,1.9s,SNR=40						
GEC2	GERESS Array S	78.84	318	eP	P	16 59 05.1	-0.3
	comp=Z,1µm,2.0s,baz=91,slow=5.3						
GEC2	GERESS Array S	78.84	318	P	P	16 59 04.5	-1.0
GEC2				IAmb	IAmb	16 59 27.9	
	comp=Z,394nm,1.2s						
GERES	GERESS Array B	78.84	318	P	P	16 59 04.8	-0.7
	comp=Z,66nm,0.9s,baz=86,slow=5.1,SNR=223						
GERES	GERESS Array B	78.84	318	P	P	16 59 04.4	-1.0
GERES	GERESS Array B	78.84	318	P	P	16 59 04.4	-1.0
AQU	L'Aquila	78.86	312	P	P	16 59 04.6	-1.0
AQU				pmax	pmax		
	comp=Z,172nm,1.0s						
AQU				MLR	MLR		
	comp=Z,6µm,22.0s						
AQU	L'Aquila	78.86	312	⇑iP	P	16 59 05.1	-0.5
AQU	L'Aquila	78.86	312	P	P	16 59 04.5	-1.0
AQU				IAmb	IAmb	16 59 18.2	
	comp=Z,172nm,1.0s						
CORL	Corleone	78.90	307	P	P	16 59 04.2	-1.7
KHC	Kasperske Hory	78.93	319	eP	P	16 59 04.7	-1.1
KHC				e		16 59 16.4	
KHC				eS	S	17 08 57.8	-6.0
KHC				MLR	MLR		
	comp=Z,14µm,46.6s						
KHC	Kasperske Hory	78.93	319	eP	P	16 59 04.7	-1.1
KHC				ex	x	16 59 16.4	
KHC				ex	x	16 59 24.0	
KHC				eS	S	17 08 57.8	-6.0
KHC				AMS	AMS	17 28 20.0	
	comp=Z,14µm,46.6s						
CLTB	Caltabellotta	78.97	307	P	P	16 59 04.1	-2.2
RUE	Ruedersdorf	78.97	322	eP	P	16 59 05.9	+0.1
RUE	Ruedersdorf	78.97	322	eP	P	16 59 05.5	-0.3
	comp=Z,2µm,1.9s,baz=91,slow=5.3						
KBA	Koelnbreinsper	79.01	317	i P	P	16 59 05.5	-1.0
	comp=Z,63nm,1.3s,SNR=31						
NRCA	Norcia	79.08	312	P	P	16 59 05.5	-1.4
FBE	Freiberg	79.15	320	eP	P	16 59 07.0	0.0
	comp=Z,1µm,1.9s,baz=91,slow=5.3						
DEL	Delary	79.17	326	i P	P	16 59 06.5	-0.4
ZOU	Zoufplan	79.25	316	P	P	16 59 06.4	-1.5
ZOU				IAmb	IAmb	16 59 29.9	
	comp=Z,383nm,1.1s						
RGN	Rugen	79.36	324	eP	P	16 59 07.4	-0.5
RGN	Rugen	79.36	324	eP	P	16 59 07.8	-0.1
	comp=Z,996nm,1.6s,baz=91,slow=5.3						
RGN	Rugen	79.36	324	P	P	16 59 06.4	-1.5
CLL	Collm	79.39	321	eP	P	16 59 08.0	-0.2
CLL				i		16 59 14.4	
CLL				eS	S	17 09 05.0	-3.5
CLL				pmax	pmax		
	comp=Z,356nm,1.5s						
CLL	Collm	79.39	321	eP	P	16 59 08.0	-0.2
	comp=Z,58nm,1.2s						
CLL				i		16 59 11.4	
CLL				i		16 59 14.4	
	comp=Z,317nm,1.6s						
CLL				ePmax		16 59 19.0	
	comp=Z,356nm,1.5s						
CLL				e		17 00 06.0	
CLL				ePP	PP	17 02 06.0	-2.2
CLL				ePPP	PPP	17 04 00.0	
CLL				eS	S	17 09 05.0	-3.5
	comp=N,3µm,33.5s						
CLL				eS	S	17 09 05.0	-3.5
	comp=E,400nm,18.2s						
CLL				eScS	ScS	17 09 34.0	+3.1
CLL				ePPS	PPS	17 10 13.0	
CLL				eSS	SS	17 14 16.0	+0.4
CLL				e		17 15 30.0	
CLL				eSSS	SSS	17 17 42.0	
CLL				eSSSS		17 19 54.0	
CLL				ePKPPKPdf	P'P'df	17 26 01.0	-2.2
CLL				eSKPPKPdf		17 29 36.0	
CLL				LmV		17 59 00.0	
	comp=Z,6µm,21.8s						
CLL	Collm	79.39	321	eP	P	16 59 07.6	-0.7
	comp=Z,356nm,1.5s,baz=91,slow=5.3						
CLL	Collm	79.39	321	P	P	16 59 06.7	-1.5
CLL				IAmb	IAmb	16 59 27.7	
	comp=Z,290nm,1.4s						
WET	Wettzell	79.39	319	eP	P	16 59 08.1	-0.2
	comp=Z,538nm,1.7s,baz=91,slow=5.3						
RJOB	Jochberg	79.40	317	eP	P	16 59 07.6	-0.9
	comp=Z,418nm,1.6s,baz=91,slow=5.3						
STAL	STALIGIAL	79.43	316	P	P	16 59 07.4	-1.2
MURB	Monte Urbino	79.51	313	P	P	16 59 07.8	-1.3
MURB				IAmb	IAmb	16 59 29.8	
	comp=Z,144nm,0.9s						
ABTA	Abfaltersbach	79.57	316	i P	P	16 59 08.4	-1.1
	comp=Z,106nm,1.2s,SNR=24						
FAUS	Fauske	79.59	337	⇓iP	P	16 59 09.0	0.0
FAUS				eS	S	17 09 08.6	-1.4
FAUS				IVMs_BB	IVMs_BB	17 47 13.9	
	comp=Z,5µm,20.4s						
BJO1	Bjornoya	79.60	345	eP	P	16 59 09.2	+0.3
BJO1				eS	S	17 09 09.2	-0.8
BJO1				IVMs_BB	IVMs_BB	17 39 22.4	
	comp=Z,3µm,11.4s						
STEI	Steigen	79.68	338	eP	P	16 59 08.8	-0.6
TANN	Tannenbergstha	79.70	320	eP	P	16 59 09.6	-0.4
	comp=Z,439nm,1.9s,baz=91,slow=5.3						
NKC	Novy Kostel	79.70	320	eP	P	16 59 09.5	-0.5
NKC				MLR	MLR		
	comp=Z,4µm,18.6s						
NKC	Novy Kostel	79.70	320	eP	P	16 59 09.5	-0.5
NKC				eS	S	17 08 57.8	-14
NKC				AMS	AMS	17 38 30.0	
	comp=Z,4µm,18.6s						
WERN	Wernitzgruen	79.75	320	eP	P	16 59 10.1	-0.2
	comp=Z,271nm,1.6s,baz=91,slow=5.3						
MOR8	Moi Rana	79.78	336	eP	P	16 59 08.8	-1.3
MOR8				eS	S	17 09 09.5	-2.6
MOR8				IVMs_BB	IVMs_BB	17 47 35.9	
	comp=Z,5µm,16.1s						
GUNZ	Gunzen	79.78	320	eP	P	16 59 10.1	-0.3
	comp=Z,273nm,1.3s,baz=91,slow=5.3						
WERD	Werda	79.80	320	eP	P	16 59 10.1	-0.4
	comp=Z,470nm,1.9s,baz=91,slow=5.3						
ROTZ	Rotzenmuhle	79.85	319	eP	P	16 59 10.8	0.0
	comp=Z,146nm,1.7s,baz=91,slow=5.3						
MANZ	Manzenberg	79.92	319	eP	P	16 59 11.3	+0.1
	comp=Z,122nm,1.5s,baz=91,slow=5.3						
COP	Copenhagen	79.92	325	i P	P	16 59 11.3	+0.3
TSUM	Tsumeb	79.97	249	P	P	16 59 11.6	-0.5
TSUM	Tsumeb	79.97	249	IAMs_20	IAMs_20	17 31 19.1	
	comp=Z,14µm,20.0s						
SUR	Sutherland	80.01	236	P	P	16 59 11.7	-0.5
SUR	Sutherland	80.01	236	P	P	16 59 11.6	-0.6
SUR				IAmb	IAmb	16 59 32.7	
	comp=Z,256nm,1.0s						
SUR	Sutherland	80.01	236	IAMs_20	IAMs_20	17 32 42.3	
	comp=Z,18µm,18.0s						
TEOL	Teolo	80.14	315	P	P	16 59 11.5	-0.9
TEOL				IAmb	IAmb	16 59 35.3	
	comp=Z,277nm,1.1s						
NBB30	Finnes	80.14	337	eP	P	16 59 11.5	-0.4
NEUB	Neuenburg	80.16	321	eP	P	16 59 11.8	-0.6
	comp=Z,373nm,1.5s,baz=91,slow=5.3						
CTI	Castel Tesino	80.16	315	P	P	16 59 11.7	-1.0
CTI				pmax	pmax		
	comp=Z,351nm,1.1s						
CTI	Castel Tesino	80.16	315	P	P	16 59 11.7	-1.0
CTI				IAmb	IAmb	16 59 35.1	
	comp=Z,351nm,1.1s						
WTTA	Wattenberg	80.18	317	i P	P	16 59 11.5	-1.4
	comp=Z,78nm,0.7s,SNR=44						
WATA	Walderalm	80.22	317	i P	P	16 59 11.0	-2.1
	comp=Z,46nm,0.7s,SNR=51						
MOX	Moxa	80.25	320	eP	P	16 59 12.6	-0.4
	comp=Z,420nm,1.6s,baz=91,slow=5.3						
MOX				eL	L	18 00 27.2	
	comp=Z,6µm,20.0s						
NBB13	Alf Garage	80.27	336	eP	P	16 59 12.0	-0.7
LOF	Lofoten	80.34	338	eP	P	16 59 12.3	-0.7
LOF				IVmBBB		16 59 15.8	
	comp=Z,2µm,1.4s						
LOF				eS	S	17 09 16.2	-1.7
LOF				IVMs_BB	IVMs_BB	17 41 06.8	
	comp=Z,5µm,17.4s						
KONS	Konsvik	80.34	336	eP	P	16 59 13.0	0.0
STOK	Stokkvaagen	80.37	336	eP	P	16 59 13.2	0.0
STOK				eS	S	17 09 18.0	-0.2
FUR	Furstenfeldbru	80.43	318	eP	P	16 59 13.2	-0.8
	comp=Z,1µm,1.9s,baz=91,slow=5.3						
OSSC	Osservatorio P	80.45	313	P	P	16 59 11.6	-2.6
SQTA	Sankt Quirin	80.47	317	i P	P	16 59 13.0	-1.3
	comp=Z,90nm,0.7s,SNR=45						
GRA1	Grafenberg Arr	80.48	319	P	P	16 59 13.7	-0.5
GRF	Grafenberg Arr	80.48	319	P	P	16 59 13.7	-0.5
GRF				pmax	pmax		
	comp=Z,583nm,1.4s						
GRF	Grafenberg Arr	80.48	319	eP	P	16 59 14.2	0.0
	comp=Z,724nm,1.5s,baz=91,slow=5.3						
GRF				eL	L	18 00 40.9	
	comp=Z,8µm,21.9s						
GRFO	Grafenberg	80.48	319	P	P	16 59 13.8	-0.4
GRFO				pmax	pmax		
	comp=Z,629nm,1.4s						
GRFO	Grafenberg	80.48	319	P	P	16 59 13.8	-0.4
FLTG	Flechtingen	80.52	322	eP	P	16 59 13.2	-1.1
	comp=Z,325nm,1.8s,baz=91,slow=5.3						
MOTA	Moosalm	80.54	317	i P	P	16 59 13.3	-1.5
	comp=Z,75nm,0.8s,SNR=58						
NC405	NORSAR Array S	80.57	331	P	P	16 59 12.4	-2.0
ZCCA	Zocca	80.64	314	P	P	16 59 15.1	-0.1
NC602	NORSAR Array S	80.64	330	⇓iP	P	16 59 14.2	-0.6
NC602				eS	S	17 09 20.7	-0.6
NC602				IVMs_BB	IVMs_BB	17 42 54.5	
	comp=Z,3µm,17.9s						
NC602	NORSAR Array S	80.64	330	P	P	16 59 13.4	-1.4
NSS	Namsos	80.66	334	eP	P	16 59 14.9	+0.1
NSS				IVmB_BB		16 59 21.8	
	comp=Z,4µm,1.8s						
NSS				eS	S	17 09 20.4	-1.0
NSS				IVMs_BB	IVMs_BB	17 42 49.4	
	comp=Z,4µm,14.8s						
STRU	Stroemstad	80.75	329	i P	P	16 59 15.1	-0.2
NC303	NORSAR Array S	80.75	331	P	P	16 59 14.2	-1.2
NC303				IAmb	IAmb	16 59 29.3	
	comp=Z,525nm,1.5s						
RETA	Reutte	80.78	317	i P	P	16 59 14.8	-1.1
	comp=Z,85nm,0.7s,SNR=48						
NB201	NORSAR Array S	80.78	331	P	P	16 59 14.2	-1.3
FETA	Feichten	80.80	316	i P	P	16 59 15.2	-1.0
	comp=Z,80nm,1.0s,SNR=61						
NB2	NORSAR Subarra	80.81	331	P	P	16 59 14.3	-1.5
	comp=Z,177nm,1.4s,baz=96,slow=5.1						
NB2	NORSAR Subarra	80.81	331	P	P	16 59 14.3	-1.5
	baz=96,slow=5.1						
NOA	NORSAR Array B	80.81	331	P	P	16 59 14.2	-1.6
	comp=Z,70nm,1.0s,baz=95,slow=5.3,SNR=82						
NOA				PKKPbc	PKKPbc	17 18 11.0	+14
	comp=Z,1.7nm,0.8s,baz=281,slow=2.1,SNR=4.4						
NOA				LR	LR	17 40 32.7	
	comp=Z,3µm,18.5s,baz=80,slow=40						
ASSE	Asse, Remlinge	80.86	322	eP	P	16 59 15.5	-0.5
	comp=Z,648nm,1.9s,baz=91,slow=5.3						
HSPB	Hornsund (broa	80.92	347	eP	P	16 59 16.2	+0.2
HSPB				epP	PcP	16 59 22.6	+0.1
HSPB				eL	L	17 45 35.4	
	comp=Z,10µm,23.0s						
HSPB	Hornsund (broa	80.92	347	eP	P	16 59 15.9	0.0
HSPB				IVmB_BB		16 59 23.1	
	comp=Z,1µm,1.2s						
HSPB				eS	S	17 09 20.3	-3.3
HSPB				IVMs_BB	IVMs_BB	17 35 33.5	
	comp=Z,3µm,27.6s						
SPB2	Spitsbergen Ar	80.93	348	P	P	16 59 14.2	-1.9
SPB2				IAmb	IAmb	16 59 30.5	
	comp=Z,446nm,1.2s						
SPA0	Spitsbergen Ar	80.94	348	⇓iP	P	16 59 15.7	-0.5
SPA0				eS	S	17 09 22.9	-1.1
SPA0				IVMs_BB	IVMs_BB	17 41 36.4	
	comp=Z,4µm,20.6s						
SPITS	Spitsbergen Ar	80.94	348	P	P	16 59 14.6	-1.5
SPITS				pmax	pmax		
	comp=Z,520nm,1.4s						
SALO	Salr	80.95	315	P	P	16 59 16.1	-0.7
NAO01	NORSAR Array S	80.97	330	P	P	16 59 15.1	-1.5
OSL	Oslo	81.01	330	⇓iP	P	16 59 17.1	+0.3
OSL				eS	S	17 09 23.0	-2.2
NBO00	NORSAR Array S	81.03	331	P	P	16 59 15.0	-1.9
NC204	NORSAR Array S	81.04	331	P	P	16 59 15.6	-1.5
CLZ	Clausthal	81.04	321	eP	P	16 59 16.8	-0.4
	comp=Z,522nm,1.6s,baz=91,slow=5.3						
VLC	Villacollemand	81.06	314	P	P	16 59 15.6	-1.9
BSEG	Bad Segeberg	81.10	323	eP	P	16 59 17.1	-0.3
	comp=Z,467nm,1.2s,baz=91,slow=5.3						
PRMA	PARMA	81.11	314	P	P	16 59 17.6	0.0
NRDL	Niedersach Rie	81.21	322	eP	P	16 59 18.0	+0.1
	comp=Z,798nm,1.5s,baz=91,slow=5.3						
OVD	Ostervraa, Den	81.21	327	eP	P	16 59 19.8	+1.9
UBR	Ueberruh	81.22	317	eP	P	16 59 17.3	-1.0
	comp=Z,290nm,1.3s,baz=91,slow=5.3						
UBBA	Unterbreizbach	81.27	320	eP	P	16 59 18.0	-0.2
	comp=Z,476nm,2.1s,baz=91,slow=5.3						
GTTG	Gottingen	81.30	321	eP	P	16 59 18.1	-0.4
	comp=Z,403nm,1.4s,baz=91,slow=5.3						
TBLU	Trondheim	81.35	333	eP	P	16 59 17.8	-0.7
TBLU				eS	S	17 09 26.7	-2.0
TBLU				IVMs_BB	IVMs_BB	17 47 21.5	
	comp=Z,4µm,15.8s						
DAVA	Damuels	81.38	317	i P	P	16 59 18.6	-0.7
	comp=Z,102nm,1.0s,SNR=34						
KONO	Kongsberg	81.58	329	ceP	P	16 59 18.7	-1.1
KONO				pmax	pmax		
	comp=Z,196nm,1.3s						
KONO	Kongsberg	81.58	329	⇓iP	P	16 59 19.7	0.0
KONO				IVmB_BB		16 59 27.2	
	comp=Z,3µm,1.2s						
KONO				eS	S	17 09 30.1	-1.0
KONO				IVMs_BB	IVMs_BB	17 41 17.6	
	comp=Z,3µm,19.7s						
KONO	Kongsberg	81.58	329	P	P	16 59 18.8	-1.0
MSSA	Maissana	81.68	314	P	P	16 59 18.9	-1.9
MSSA				IAmb	IAmb	16 59 47.1	
	comp=Z,336nm,1.3s						
TUE	Stuetta	81.75	316	P	P	16 59 19.8	-1.5
TUE				IAmb	IAmb	16 59 40.8	
	comp=Z,296nm,1.0s						
MUD	Monsted U'grnd	81.77	326	i P	P	16 59 20.5	-0.4
MUD				i P	P	16 59 21.1	+0.3
STU	Stuttgart	81.81	318	P	P	16 59 20.2	-1.1
STU				pmax	pmax		
	comp=Z,295nm,1.4s						
STU	Stuttgart	81.81	318	eP	P	16 59 20.7	-0.6
	comp=Z,1µm,1.9s,baz=91,slow=5.3						
STU	Stuttgart	81.81	318	P	P	16 59 20.2	-1.1
STU				IAmb	IAmb	16 59 45.7	
	comp=Z,295nm,1.4s						
DOMB	Dombas	81.87	332	⇓iP	P	16 59 21.4	0.0
DOMB				IVmB_BB		16 59 22.5	
	comp=Z,1µm,1.8s						
DOMB				eS	S	17 09 34.0	-0.3
DOMB				IVMs_BB	IVMs_BB	17 44 54.0	
	comp=Z,4µm,14.9s						
KBS	Kingsbay	81.92	349	ceP	P	16 59 20.8	-0.5
KBS				pmax	pmax		
	comp=Z,56nm,1.3s						
KBS	Kingsbay	81.92	349	⇓iP	P	16 59 20.9	-0.3
KBS				IVmB_BB		16 59 24.1	
	comp=Z,1µm,3.6s						
KBS				eS	S	17 09 32.7	-1.4
KBS				IVMs_BB	IVMs_BB	17 51 31.4	
	comp=Z,5µm,12.9s						
KBS	Kingsbay	81.92	349	P	P	16 59 20.2	-1.1
KBS				IAmb	IAmb	16 59 28.7	
	comp=Z,153nm,1.2s						
VSL	Villasalto	81.94	309	P	P	16 59 21.1	-1.1
VSL				IAmb	IAmb	16 59 34.1	
	comp=Z,168nm,1.1s						
KEST	Kesra	82.12	305	P	P	16 59 23.4	0.0
	comp=Z,51nm,1.0s,baz=339,slow=1.9,SNR=37						
KEST				LR	LR	17 43 11.4	
	comp=Z,5µm,18.2s,baz=46,slow=41						
KEST	Kesra	82.12	305	P	P	16 59 23.8	+0.4
	SNR=61						
KEST	Kesra	82.12	305	P	P	16 59 22.9	-0.4
HOMB	Homborsund	82.13	328	i P	P	16 59 23.4	+0.6
HOMB	Homborsund	82.13	328	⇓iP	P	16 59 22.6	-0.1
HOMB				IVmBBB		16 59 30.4	
	comp=Z,2µm,2.1s						
HOMB				eS	S	17 09 35.1	-1.8
HOMB				IVMs_BB	IVMs_BB	17 41 00.9	
	comp=Z,4µm,17.4s						
SKAR	Skarslia	82.23	330	eP	P	16 59 23.1	-0.2
SKAR				eS	S	17 09 36.6	-1.3
TNS	Taunus Mts	82.27	320	eP	P	16 59 23.4	-0.4
	comp=Z,250nm,1.4s,baz=91,slow=5.3						
BFO	Black Forest	82.40	318	P	P	16 59 22.9	-1.5
BFO				pmax	pmax		
	comp=Z,158nm,1.1s						
BFO	Black Forest	82.40	318	eP	P	16 59 23.4	-1.1
	comp=Z,216nm,1.2s,baz=91,slow=5.3						
BFO	Black Forest	82.40	318	P	P	16 59 22.9	-1.5
BFO				IAmb	IAmb	16 59 46.0	
	comp=Z,158nm,1.1s						
MOL	Molde	82.58	332	⇓iP	P	16 59 25.5	+0.5
IBBN	Ibbenburen	82.65	322	eP	P	16 59 25.2	-0.4
	comp=Z,362nm,1.1s,baz=91,slow=5.3						
SNART	Snartemo	82.81	328	i P	P	16 59 27.1	+0.8
SNART	Snartemo	82.81	328	eP	P	16 59 26.6	+0.3
SNART				eS	S	17 09 43.5	-0.4
AKN	Aaknes	82.84	332	⇓iP	P	16 59 26.8	+0.4
AKN				IVmB_BB		16 59 28.1	
	comp=Z,1µm,1.6s						
AKN				eS	S	17 09 43.4	-0.8
AKN				IVMs_BB	IVMs_BB	17 56 19.3	
	comp=Z,5µm,22.1s						
DCZ	Deep Cove	82.86	137	P	P	16 59 25.4	-1.3
DCZ				IAmb	IAmb	16 59 39.8	
	comp=Z,176nm,1.0s						
BUG	Bochum--Univer	82.98	321	eP	P	16 59 26.9	-0.4
	comp=Z,482nm,1.4s,baz=91,slow=5.3						
ODD1	Odda	83.08	330	⇓iP	P	16 59 27.8	+0.1
ODD1				eS	S	17 09 46.4	-0.2
AHRW	Bad Neuenahr-A	83.14	320	eP	P	16 59 28.1	-0.1
	comp=Z,747nm,1.8s,baz=91,slow=5.3						
SENIN	Lac Senin/Sane	83.17	316	P	P	16 59 27.9	-0.8
BLS5	Blasjo	83.18	329	eP	P	16 59 28.2	0.0
BLS5				eS	S	17 09 46.4	-1.2
BLS5				IVMs_BB	IVMs_BB	17 41 40.6	
	comp=Z,4µm,18.9s						
ECH	Echery	83.19	318	P	P	16 59 27.4	-1.1
ECH				pmax	pmax		
	comp=Z,157nm,1.3s						
ECH	Echery	83.19	318	P	P	16 59 27.4	-1.1
ECH				IAmb	IAmb	16 59 35.9	
	comp=Z,157nm,1.3s						
HYA	Hoyanger	83.26	331	⇓iP	P	16 59 28.6	0.0
MLZ	Mavora Lakes	83.48	137	P	P	16 59 28.3	-1.7
MLZ				IAmb	IAmb	16 59 48.7	
	comp=Z,163nm,1.5s						
WHZ	Wether Hill Ro	83.51	138	P	P	16 59 28.3	-1.8
WHZ				IAmb	IAmb	16 59 38.5	
	comp=Z,92nm,0.8s						
ABSA	Djebel Ababsia	83.61	306	P	P	16 59 31.5	+0.5
CMAH	Djebel Manchou	83.63	306	P	P	16 59 31.1	0.0
BNI	Bardonecchia	83.68	315	P	P	16 59 30.0	-1.3
BNI				pmax	pmax		
	comp=Z,158nm,1.1s						
BNI	Bardonecchia	83.68	315	P	P	16 59 30.0	-1.3
BNI				IAmb	IAmb	16 59 48.3	
	comp=Z,158nm,1.1s						
BER	Bergen	83.70	330	⇓iP	P	16 59 31.1	+0.3
BER				IVmB_BB		16 59 38.9	
	comp=Z,2µm,3.8s						
BER				eS	S	17 09 53.1	+0.3
BER				IVMs_BB	IVMs_BB	17 47 40.6	
	comp=Z,4µm,12.6s						
BTNL	Ternell	83.74	320	dP	P	16 59 30.8	-0.6
	comp=Z,61nm,1.3s						
ASK	Askoy	83.77	330	⇓iP	P	16 59 31.3	+0.1
ASK				eSKSac	SKSac	17 09 50.8	-2.5
WLF	Walferdange	83.78	319	dP	P	16 59 31.6	+0.2
	comp=Z,82nm,1.4s						
WLF	Walferdange	83.78	319	P	P	16 59 30.9	-0.6
WLF				pmax	pmax		
	comp=Z,516nm,1.5s						
WLF	Walferdange	83.78	319	eP	P	16 59 31.4	-0.1
	comp=Z,709nm,1.7s,baz=91,slow=5.3						
WLF	Walferdange	83.78	319	P	P	16 59 30.9	-0.6
FOO	Floro	83.79	331	⇓iP	P	16 59 31.5	+0.2
FOO				eS	S	17 09 51.1	-2.4
FOO				IVMs_BB	IVMs_BB	17 47 13.5	
	comp=Z,4µm,21.0s						
KMY	Karmoy	83.81	329	eP	P	16 59 31.4	0.0
MEM	Membach	83.82	320	bP	P	16 59 30.6	-1.0
	comp=Z,56nm,0.9s						
MEM				dP	P	16 59 30.6	-1.0
	comp=Z,52nm,1.0s						
BHOU	Houvegnez	83.83	320	dP	P	16 59 31.4	-0.3
	comp=Z,44nm,1.2s						
SUE	Sulen	83.95	331	⇓iP	P	16 59 32.9	+0.8
SUE				eS	S	17 09 53.1	-2.1
BEBN	Eben Emael	84.02	320	dP	P	16 59 32.3	-0.4
CKFL	Kef-Lekhel	84.21	306	P	P	16 59 34.4	+0.3
BCLA	Clavier	84.28	320	dP	P	16 59 33.4	-0.6
CASM	Ain Smara	84.40	306	P	P	16 59 34.6	-0.4
BGES	Gesves	84.42	320	dP	P	16 59 34.5	-0.2
CTEI	Djebel Teioual	84.48	306	P	P	16 59 36.5	+0.9
SYO	Syowa Base	84.50	197	⇓eP	P	16 59 35.6	+1.0
SYO	Syowa Base	84.50	197	⇑iPcP	PcP	16 59 38.0	-0.2
SYO	Syowa Base	84.50	197	⇓epP	pP	16 59 39.2	-0.2
SYO	Syowa Base	84.50	197	⇑esP	sP	16 59 40.6	-0.5
LBZ	Lake Benmore	84.63	136	P	P	16 59 33.3	-2.6
LBZ				IAmb	IAmb	16 59 54.5	
	comp=Z,158nm,1.3s						
BMRD	Maredsous	84.63	320	dP	P	16 59 34.9	-0.9
	comp=Z,42nm,1.4s						
UCC	Uccle	84.85	320	dP	P	16 59 36.8	-0.1
DFRA	Djebel Bou Aff	84.87	306	P	P	16 59 38.5	+1.0
SNF	Seneffe	84.92	320	dP	P	16 59 36.9	-0.4
	comp=Z,74nm,0.7s						
SSB	Saint Sauveur	85.17	315	P	P	16 59 38.0	-0.7
SSB				pmax	pmax		
	comp=Z,143nm,1.0s						
SSB				MLR	MLR		
	comp=Z,3µm,22.0s						
SSB	Saint Sauveur	85.17	315	P	P	16 59 38.0	-0.7
SSB				IAmb	IAmb	16 59 46.3	
	comp=Z,142nm,1.0s						
CKHR	Kef el Ahmar	85.21	306	P	P	16 59 42.4	+3.2
SET	Setif	85.28	306	P	P	16 59 40.0	+0.5
QRZ	Quartz Range	85.45	132	P	P	16 59 38.4	-1.6
OXZ	Oxford	85.67	134	P	P	16 59 39.7	-1.4
OXZ				IAmb	IAmb	16 59 54.2	
	comp=Z,138nm,1.0s						
LTZ	Lake Taylor	85.71	134	P	P	16 59 40.4	-1.0
LTZ				IAmb	IAmb	16 59 56.1	
	comp=Z,248nm,1.4s						
MAHO	Mahon	85.84	310	P	P	16 59 45.8	+3.7
MAHO				S	S	17 10 05.5	-9.4
THZ	Tophouse	85.94	133	P	P	16 59 41.3	-1.3
THZ				IAmb	IAmb	16 59 53.6	
	comp=Z,178nm,0.9s						
NNZ	Nelson	86.17	132	P	P	16 59 42.4	-1.2
MQZ	McQueen’s Vall	86.19	135	P	P	16 59 42.6	-1.1
NOR	Nord	86.34	352	i P	P	16 59 41.3	-2.5
CLF	Chambon-Foret	86.47	318	P	P	16 59 44.3	-0.7
CLF				IAmb	IAmb	16 59 52.8	
	comp=Z,250nm,1.1s						
KHZ	Kahutara	86.54	133	P	P	16 59 44.2	-1.1
KHZ				IAmb	IAmb	16 59 57.8	
	comp=Z,231nm,1.1s						
TUWZ	Tuamarina	86.62	132	P	P	16 59 44.0	-1.8
BSWZ	Blackbirch Sta	86.64	133	P	P	16 59 44.2	-1.7
HIZ	Hauiti	86.72	129	P	P	16 59 45.1	-1.3
HIZ				IAmb	IAmb	17 00 08.9	
	comp=Z,234nm,1.1s						
SNZO	South Karori	87.16	132	P	P	16 59 46.1	-2.3
BHW	Baring Head	87.31	132	P	P	16 59 46.4	-2.8
MSWZ	Moikau Station	87.58	132	P	P	16 59 49.0	-1.6
PLWZ	Palliser	87.62	132	P	P	16 59 49.1	-1.6
BKZ	Black Stump Fm	88.10	130	P	P	16 59 51.7	-1.5
BKZ				IAmb	IAmb	17 00 09.9	
	comp=Z,136nm,1.0s						
BFZ	Birch Farm	88.19	131	P	P	16 59 51.3	-2.1
ANM	Nome	88.24	25	IAMs_20	IAMs_20	17 42 50.0	
	comp=Z,13µm,18.0s						
RDOG	Red Dog Mine	88.41	22	P	P	16 59 59.0	+5.0
	baz=284						
URZ	Urewera	88.42	129	P	P	16 59 52.6	-2.0
URZ				IAmb	IAmb	17 00 19.9	

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      comp=Z,187nm,1.1s
DAG   Danmarks Havn    88.58 348  i P       P        16 59 52.6 -2.0
ESK   Eskdalemuir      88.81 325    P       P        16 59 55.6 -0.5
ESK                                 pmax    pmax
      comp=Z,196nm,1.2s
ESK                                 MLR     MLR
      comp=Z,6µm,21.0s
ESK   Eskdalemuir      88.81 325    P       P        16 59 55.6 -0.5
ESK                                 IAmb    IAmb     17 00 04.0
      comp=Z,196nm,1.2s
OKGL  Djebel Kef Gue   89.13 306    P       P        17 00 01.0 +2.9
OJBR  Djebel Berber    89.43 306    P       P        17 00 05.0 +5.4
A21K  Barrow           89.55  18    P       P        16 59 59.2 +0.1
      baz=290
A21K  Barrow           89.55  18    P       P        16 59 58.3 -0.8
A21K                                IAMs_20 IAMs_20  17 41 34.9
      comp=Z,13µm,20.0s
ODJA  Bouhanifia       89.87 305    P       P        17 00 02.0 +0.4
DBG   Daneborg         89.97 346  i P       P        17 00 01.1 -0.1
CART  Cartagena        90.22 308    P       P        17 00 05.3 +2.3
CART                                S       SKSac    17 10 31.4 -2.5
TORD  Torodi Ar. Bea   91.17 283    P       P        17 00 08.4 +0.5
      comp=Z,27nm,1.0s,baz=83,slow=4.3,SNR=65
TORD                                PP      PP       17 03 46.7 +1.8
      comp=Z,5.4nm,1.0s,baz=79,slow=7.5,SNR=2.4
TORD                                PKKP    PKKPdf   17 17 26.1 -1.6
      comp=Z,0.8nm,0.9s,baz=274,slow=3.5,SNR=1.8
TORD                                LR      LR       17 40 17.9
      comp=Z,7µm,19.9s,baz=90,slow=35
TORD  Torodi Ar. Bea   91.17 283    P       P        17 00 07.7 -0.3
TORD                                IAmb    IAmb     17 00 17.3
      comp=Z,146nm,1.4s
FIGM  Figuig           91.25 302    P       P        17 00 11.0 +2.8
UCM   Universidad Co   91.50 311    P       P        17 00 20.0  +11
UCM                                 S       S        17 11 09.1 +0.6
GCSA  Galena City Sc   91.70  24    P       P        17 00 10.1 +0.7
      baz=290,SNR=11
CHAS  Isla Isabel II   91.73 306    P       P        17 00 15.4 +5.2
CHAS                                S       S        17 10 52.0  -19
TDRA  Tendrara         91.75 303    P       P        17 00 13.0 +2.4
TAF   Taforalt         91.78 305    P       P        17 00 13.0 +2.4
VNDA  Vanda            91.83 168    P       P        17 00 09.5 -0.1
      comp=Z,9.8nm,0.9s,baz=288,slow=5.7,SNR=38
VNDA                                PKKP    PKKPdf   17 17 27.2 -1.1
      comp=Z,1.0nm,0.8s,baz=47,slow=1.6,SNR=8.4
VNDA                                PKPPKP           17 25 37.2
      comp=Z,1.5nm,1.0s,baz=334,slow=3.4,SNR=4.4
VNDA                                LR      LR       17 39 08.8
      comp=Z,31µm,18.2s,baz=307,slow=34
VNDA  Vanda            91.83 168    P       P        17 00 09.0 -0.7
VNDA                                pmax    pmax
      comp=Z,110nm,1.4s
VNDA  Vanda            91.83 168    P       P        17 00 09.0 -0.7
VNDA                                IAmb    IAmb     17 00 32.9
      comp=Z,110nm,1.4s
JBK   JBK              91.98 305    P       P        17 00 14.1 +2.4
SCO   Scoresbysund     92.15 342  eP        P        17 00 12.4 +1.1
ESBB  Sonseca Array    92.15 310    P       P        17 00 11.6 -0.5
ESBB                                IAmb    IAmb     17 00 20.2
      comp=Z,92nm,1.1s
ESDC  Sonseca Array    92.15 310    P       P        17 00 12.3 +0.2
      comp=Z,26nm,0.8s,baz=57,slow=4.2,SNR=122
ESDC                                PKKPbc  PKKPdf   17 17 27.1 +0.8
      comp=Z,1.4nm,0.8s,baz=262,slow=2.3,SNR=7.3
ESDC  Sonseca Array    92.15 310    P       P        17 00 11.4 -0.7
ESDC                                IAmb    IAmb     17 00 20.2
      comp=Z,100nm,1.1s
PAB   San Pablo        92.47 310    P       P        17 00 13.2 -0.4
PAB                                 pmax    pmax
      comp=Z,95nm,1.1s
PAB                                 MLR     MLR
      comp=Z,3µm,21.0s
PAB   San Pablo        92.47 310    P       P        17 00 13.2 -0.4
PAB                                 IAmb    IAmb     17 00 21.8
      comp=Z,94nm,1.1s
PAB   San Pablo        92.47 310    P       P        17 00 15.0 +1.4
IMAR  Indian Mountai   92.48  22    P       P        17 00 12.2 -0.8
TTA   Tatalina         92.69  26    P       P        17 00 12.5 -1.6
TTA                                 pmax    pmax
      comp=Z,84nm,1.4s
TTA   Tatalina         92.69  26    P       P        17 00 14.5 +0.4
      baz=290
TTA   Tatalina         92.69  26    P       P        17 00 12.5 -1.6
TTA                                 IAmb    IAmb     17 00 32.5
      comp=Z,84nm,1.4s
TOLK  Toolik Lake Re   92.84  19    P       P        17 00 14.8 +0.1
      baz=296,SNR=16
TOLK  Toolik Lake Re   92.84  19    P       P        17 00 13.8 -0.9
TOLK                                IAmb    IAmb     17 00 35.3
      comp=Z,106nm,1.1s
SBA   Scott Base       92.93 168    P       P        17 00 15.0 +0.3
SBA                                 pmax    pmax
      comp=Z,157nm,1.4s
SBA                                 MLR     MLR
      comp=Z,24µm,21.0s
SBA   Scott Base       92.93 168    P       P        17 00 15.0 +0.3
SBA                                 IAmb    IAmb     17 00 37.2
      comp=Z,157nm,1.4s
H21K  Melozitna Rive   92.96  23    P       P        17 00 15.3 +0.1
      baz=293
H21K  Melozitna Rive   92.96  23    P       P        17 00 14.5 -0.7
H21K                                IAMs_20 IAMs_20  17 49 13.6
      comp=Z,14µm,18.0s
J20K  Nowinta River    93.01  24    P       P        17 00 15.7 +0.3
      baz=292,SNR=15
J20K  Nowinta River    93.01  24    P       P        17 00 14.8 -0.6
J20K                                IAmb    IAmb     17 00 35.1
      comp=Z,191nm,1.4s
J20K                                IAMs_20 IAMs_20  17 46 07.1
      comp=Z,10µm,18.0s
PVLZ  Peæn de          93.25 306    P       P        17 00 24.5 +7.4
PVLZ                                S       S        17 11 24.2 +0.1
COLD  Coldfoot         93.25  21    P       P        17 00 16.9 +0.3
      baz=296
COLD  Coldfoot         93.25  21    P       P        17 00 15.9 -0.6
COLD                                IAmb    IAmb     17 00 43.8
      comp=Z,89nm,1.3s
K20K  Telida           93.35  25    P       P        17 00 17.7 +0.6
      baz=292,SNR=17
K20K  Telida           93.35  25    P       P        17 00 16.3 -0.8
K20K                                IAmb    IAmb     17 00 35.9
      comp=Z,140nm,1.1s
K20K                                IAMs_20 IAMs_20  17 48 38.2
      comp=Z,9µm,19.0s
L19K  White Mountain   93.46  26    P       P        17 00 18.0 +0.4
      baz=291
L19K  White Mountain   93.46  26    P       P        17 00 16.8 -0.8
L19K                                IAmb    IAmb     17 00 42.4
      comp=Z,80nm,1.3s
L19K                                IAMs_20 IAMs_20  17 50 49.8
      comp=Z,9µm,20.0s
I21K  Tanana           93.47  23    P       P        17 00 18.1 +0.5
      baz=294
I21K  Tanana           93.47  23    P       P        17 00 16.9 -0.7
I21K                                IAmb    IAmb     17 00 46.7
      comp=Z,179nm,1.3s
I21K                                IAMs_20 IAMs_20  17 50 37.3
      comp=Z,13µm,18.0s
NEEM  North Greenlan   93.68 353  i P       P        17 00 17.4 -1.3
JOHN  Johnston Islan   93.76  73    IAMs_20 IAMs_20  17 40 22.8
      comp=Z,12µm,21.0s
M19K  Big River Lodg   93.76  26    P       P        17 00 20.1 +1.1
      baz=292
M19K  Big River Lodg   93.76  26    P       P        17 00 19.0  0.0
PBRG  Braganca         93.80 313  eP        P        17 00 19.5 -0.1
      comp=Z,97nm,1.9s
CHUM  Lake Minchumin   93.87  24    P       P        17 00 20.0 +0.6
      baz=294,SNR=12
MDT   Midelt           93.93 304    PP      PP       17 04 00.9 -5.3
      comp=Z,3.8nm,0.9s,baz=81,slow=14,SNR=2.7
MDT   Midelt           93.93 304    P       P        17 00 21.9 +1.4
MLY   Manley           94.01  23    P       P        17 00 20.1 -0.1
      baz=295
MLY   Manley           94.01  23    P       P        17 00 20.0 -0.1
MLY                                 IAMs_20 IAMs_20  17 43 35.6
      comp=Z,10µm,21.0s
H23K  Yukon River      94.11  22    P       P        17 00 21.1 +0.6
      baz=296
H23K  Yukon River      94.11  22    P       P        17 00 20.8 +0.3
H23K                                IAmb    IAmb     17 00 44.8
      comp=Z,84nm,1.3s
H23K                                IAMs_20 IAMs_20  17 45 11.9
      comp=Z,10µm,21.0s
N19K  Bonanza Creek    94.13  27    P       P        17 00 21.0 +0.2
      baz=292
N19K  Bonanza Creek    94.13  27    P       P        17 00 20.5 -0.3
N19K                                IAmb    IAmb     17 00 30.8
      comp=Z,73nm,0.9s
N19K                                IAMs_20 IAMs_20  17 50 13.5
      comp=Z,10µm,19.0s
O18K  Koktuh Hills     94.14  28    P       P        17 00 21.0 +0.3
      baz=291
O18K  Koktuh Hills     94.14  28    P       P        17 00 20.7 -0.1
O18K                                IAmb    IAmb     17 00 49.3
      comp=Z,136nm,1.3s
MVO   Moncorvo         94.15 312  eP        P        17 00 22.1 +0.8
      comp=Z,107nm,1.9s
MVO   Moncorvo         94.15 312  eS        S        17 11 32.5 +0.5
MVO                               eSS       SS       17 18 21.1  +29
MVO                               eLQ       LQ       17 25 18.8
MVO                               eLR       LR       17 32 22.7
      comp=Z,3µm,20.0s
CAST  Castle Rocks     94.15  24    P       P        17 00 20.5 -0.3
      baz=294,SNR=15
CAST  Castle Rocks     94.15  24    P       P        17 00 20.1 -0.6
CAST                                IAmb    IAmb     17 00 49.3
      comp=Z,96nm,1.0s
CAST                                IAMs_20 IAMs_20  17 46 54.3
      comp=Z,13µm,18.0s
BPAW  Bear Paw Mtn.    94.31  24    P       P        17 00 21.5  0.0
      baz=295,SNR=17
BPAW  Bear Paw Mtn.    94.31  24    P       P        17 00 20.9 -0.5
BPAW                                IAmb    IAmb     17 00 45.1
      comp=Z,182nm,1.4s
BPAW                                IAMs_20 IAMs_20  17 45 52.5
      comp=Z,12µm,21.0s
PPLA  Purkeypile       94.32  25    P       P        17 00 21.9 +0.2
      baz=294
PPLA  Purkeypile       94.32  25    P       P        17 00 21.3 -0.4
PPLA                                IAmb    IAmb     17 00 49.2
      comp=Z,118nm,1.4s
O19K  Port Alsworth    94.43  28    P       P        17 00 22.2 +0.1
      baz=292
O19K  Port Alsworth    94.43  28    P       P        17 00 21.0 -1.0
O19K                                IAMs_20 IAMs_20  17 50 51.2
      comp=Z,12µm,18.0s
I23K  Minto, Yukon-K   94.48  22    P       P        17 00 23.0 +0.8
      baz=296
I23K  Minto, Yukon-K   94.48  22    IAMs_20 IAMs_20  17 50 27.7
      comp=Z,9µm,18.0s
SFS   San Fernando     94.51 307    P       P        17 00 20.5 -2.4
SFS                                 S       S        17 11 16.0  -19
PVRL  Vila Real        94.63 312  eP        P        17 00 25.2 +1.7
      comp=Z,94nm,2.0s
POLO  Lamas de Olo     94.66 312  eP        P        17 00 25.5 +1.8
      comp=Z,42nm,1.7s
MTE   Manteigas        94.70 311  eP        P        17 00 25.0 +1.2
      comp=Z,113nm,2.0s
MTE   Manteigas        94.70 311  eS        S        17 11 47.4  +11
MTE                               eSS       SS       17 18 20.5  +20
MTE                               eLQ       LQ       17 25 36.5
MTE                               eLR       LR       17 33 12.5
      comp=Z,2µm,20.0s
MTE   Manteigas        94.70 311    P       P        17 00 23.9 +0.1
MTE                                 IAmb    IAmb     17 00 32.3
      comp=Z,105nm,1.5s
H24K  Noodor Dome      94.72  21    P       P        17 00 23.3  0.0
      baz=298,SNR=7.8
H24K  Noodor Dome      94.72  21    P       P        17 00 23.1 -0.3
PCAB  Cabril           94.75 313  eP        P        17 00 28.0 +4.0
      comp=Z,96nm,2.0s
PCBR  Castelo Branco   94.77 311  eP        P        17 00 25.3 +1.2
      comp=Z,80nm,1.5s
ARNO  Arenosillo       94.80 308    P       P        17 00 34.3  +10
ARNO                                S       S        17 11 42.8 +5.2
PMRV  Marv??o          94.80 310  eP        P        17 00 26.4 +2.1
      comp=Z,48nm,1.8s
PMRV  Marv??o          94.80 310  eS        S        17 11 46.2 +8.5
PMRV                              eSS       SS       17 18 26.2  +25
PMRV                              eLQ       LQ       17 25 15.7
PMRV                              eLR       LR       17 31 28.7
      comp=Z,2µm,18.0s
PBAR  Barrancos        94.80 309  eP        P        17 00 24.5 +0.2
      comp=Z,89nm,1.8s
NEA2  Nenana           94.85  23    IAMs_20 IAMs_20  17 51 29.7
      comp=Z,10µm,18.0s
TRF   Thorofare Moun   94.87  24    P       P        17 00 24.9 +0.7
      baz=296
TRF   Thorofare Moun   94.87  24    IAMs_20 IAMs_20  17 49 10.7
      comp=Z,9µm,18.0s
PGAV  Gavieira, Arco   94.87 313  eS        S        17 11 46.5 +8.1
PGAV                              eSS       SS       17 18 25.3  +23
PGAV                              eLQ       LQ       17 25 30.1
PGAV                              eLR       LR       17 31 51.3
      comp=Z,3µm,20.0s
BWN   Browne           94.88  23    IAMs_20 IAMs_20  17 51 25.3
      comp=Z,10µm,18.0s
PVIS  Viseu            94.89 312  eP        P        17 00 25.6 +0.9
      comp=Z,82nm,1.8s
SKT   Skwentna         94.98  26    P       P        17 00 23.8 -0.8
      baz=294
SKT   Skwentna         94.98  26    P       P        17 00 23.8 -0.8
SKT                                 IAmb    IAmb     17 00 52.6
      comp=Z,64nm,1.0s
MDM   Murphy Dome      95.00  22    IAMs_20 IAMs_20  17 44 07.7
      comp=Z,10µm,22.0s
SPCR  Spurr Chakacha   95.00  27    P       P        17 00 24.1 -0.6
      baz=294
BMAR  Burnt Mountain   95.07  19    P       P        17 00 24.2 -0.7
PESTR Estremoz         95.07 310  eP        P        17 00 26.3 +0.8
      comp=Z,46nm,1.9s
SPU   Mount Spurr      95.08  26    P       P        17 00 23.8 -1.3
TZRR  Tazzarine        95.11 302    P       P        17 00 27.1 +1.2
P19K  Oil Pt           95.15  28    IAMs_20 IAMs_20  17 47 26.4
      comp=Z,10µm,21.0s
TCOL  CIGO, UAF Yank   95.18  22    IAMs_20 IAMs_20  17 49 53.0
      comp=Z,11µm,19.0s
COLA  College          95.18  22    IAMs_20 IAMs_20  17 49 53.5
      comp=Z,10µm,19.0s
POKR  Poker Plat Res   95.22  22    P       P        17 00 27.5 +1.9
      baz=298
POKR  Poker Plat Res   95.22  22    IAMs_20 IAMs_20  17 50 28.7
      comp=Z,11µm,18.0s
Q19K  Cape Douglas,    95.23  29    IAMs_20 IAMs_20  17 48 12.5
      comp=Z,8µm,18.0s
SUMG  Summit           95.24 347    P       P        17 00 25.4 -0.6
SUMG                                pmax    pmax
      comp=Z,137nm,1.5s
SUMG                                MLR     MLR
      comp=Z,5µm,19.0s
SUMG  Summit           95.24 347  i P       P        17 00 26.0 -0.1
SUMG                                IAmb    IAmb     17 00 29.4
      comp=Z,11nm,0.8s
SUMG  Summit           95.24 347    P       P        17 00 25.4 -0.6
SUMG                                IAmb    IAmb     17 00 33.6
      comp=Z,137nm,1.5s
WRH   Wood River Hil   95.28  23    IAMs_20 IAMs_20  17 51 43.1
      comp=Z,9µm,19.0s
ZGR   Zagora           95.28 301    P       P        17 00 28.0 +1.2
MCK   McKinley         95.29  24    P       P        17 00 25.0 -1.0
MCK                                 pmax    pmax
      comp=Z,108nm,1.4s
MCK                                 MLR     MLR
      comp=Z,13µm,21.0s
MCK   McKinley         95.29  24    P       P        17 00 25.7 -0.2
      baz=297,SNR=6.6
MCK   McKinley         95.29  24    P       P        17 00 25.0 -1.0
MCK                                 IAmb    IAmb     17 00 48.9
      comp=Z,108nm,1.4s
MCK                                 IAMs_20 IAMs_20  17 46 31.3
      comp=Z,13µm,21.0s
FYU   Fort Yukon       95.29  20    P       P        17 00 26.3 +0.4
FYU                                 IAmb    IAmb     17 00 47.0
      comp=Z,110nm,1.3s
FYU                                 IAMs_20 IAMs_20  17 47 57.7
      comp=Z,11µm,19.0s
CCB   Clear Creek Bu   95.31  23    P       P        17 00 25.4 -0.6
CUT   Chulitna         95.33  25    P       P        17 00 26.1 -0.1
      baz=296
CUT   Chulitna         95.33  25    IAMs_20 IAMs_20  17 47 50.5
      comp=Z,10µm,19.0s
RND   Reindeer         95.47  24    P       P        17 00 25.7 -1.1
RND                                 pmax    pmax
      comp=Z,46nm,1.2s
RND                                 MLR     MLR
      comp=Z,12µm,21.0s
RND   Reindeer         95.47  24    P       P        17 00 25.7 -1.1
RND                                 IAMs_20 IAMs_20  17 46 36.1
      comp=Z,12µm,21.0s
EVO   Evora            95.47 310    P       P        17 00 33.9 +6.6
EVO                                 S       S        17 11 36.2 -7.3
EVO   Evora            95.47 310  eP        P        17 00 28.9 +1.6
      comp=Z,32nm,2.0s
PBEJ  Beja             95.47 309  eP        P        17 00 28.2 +0.9
      comp=Z,43nm,1.7s
PVAQ  Vaqueiros        95.50 309  eP        P        17 00 30.4 +2.9
      comp=Z,85nm,1.6s
PVAQ  Vaqueiros        95.50 309  eS        S        17 11 48.6 +4.8
PVAQ  Vaqueiros        95.50 309  eLQ       LQ       17 25 40.5
PVAQ                              eLR       LR       17 35 30.1
      comp=Z,4µm,18.0s
SUA   Susitna One      95.53  26    P       P        17 00 26.5 -0.7
      baz=295
SUA   Susitna One      95.53  26    IAMs_20 IAMs_20  17 50 58.4
      comp=Z,8µm,18.0s
ILAR  Eielson Array    95.59  22    P       P        17 00 26.3 -1.0
      comp=Z,2.0nm,0.8s,baz=294,slow=3.7,SNR=9.4
ILAR                                PP      PP       17 04 14.8 -3.2
      comp=Z,2.9nm,0.8s,baz=303,slow=5.0,SNR=4.4
ILAR                                PKKP    PKKPdf   17 17 16.1 -4.3
      comp=Z,1.5nm,0.8s,baz=151,slow=3.1,SNR=8.1
ILAR                                PKPPKP  P'P'df   17 25 35.5 +3.0
      comp=Z,1.1nm,1.0s,baz=100,slow=1.3,SNR=4.4
ILAR                                LR      LR       17 50 06.7
      comp=Z,6µm,18.1s,baz=306,slow=40
ILAR  Eielson Array    95.59  22    P       P        17 00 26.8 -0.5
ILAR  Eielson Array    95.59  22    P       P        17 00 26.8 -0.5
CAPN  Captain Cook N   95.65  27    IAMs_20 IAMs_20  17 50 14.7
      comp=Z,10µm,20.0s
M22K  Willow           95.68  26    P       P        17 00 27.6 -0.1
      baz=296
PRP   Porcupine Dome   95.72  21    P       P        17 00 29.0 +0.9
      baz=300,SNR=8.0
PRP   Porcupine Dome   95.72  21    P       P        17 00 27.0 -1.1
PRP                                 IAMs_20 IAMs_20  17 49 33.0
      comp=Z,11µm,20.0s
HDA   Harding Lake     95.74  23    P       P        17 00 30.1 +2.1
      baz=299
HDA   Harding Lake     95.74  23    IAMs_20 IAMs_20  17 52 28.5
      comp=Z,11µm,18.0s
MESJ  Messejana        95.79 309  eP        P        17 00 31.0 +2.2
      comp=Z,49nm,2.0s
PSBE  So Bento         95.84 311  eP        P        17 00 32.6 +3.6
      comp=Z,71nm,1.6s
SII   Sitkinak Islan   95.85  31    IAMs_20 IAMs_20  17 51 55.8
      comp=Z,10µm,19.0s
WAT1  Susitna Watana   95.86  24    P       P        17 00 29.3 +0.8
      baz=297
FIS   Fire Island      95.90  26    IAMs_20 IAMs_20  17 50 45.5
      comp=Z,9µm,18.0s
PNCL  Nicolau / Gran   95.96 309  eP        P        17 00 31.8 +2.2
      comp=Z,44nm,1.9s
CNPM  China Poot       96.13  28    IAMs_20 IAMs_20  17 51 21.3
      comp=Z,8µm,18.0s
RC01  Rabbit Creek A   96.14  26    P       P        17 00 28.6 -1.3
      baz=296
RC01  Rabbit Creek A   96.14  26    P       P        17 00 28.2 -1.6
RC01                                IAmb    IAmb     17 00 47.2
      comp=Z,97nm,1.3s
RC01                                IAMs_20 IAMs_20  17 50 16.6
      comp=Z,10µm,19.0s
AVE   Averroes         96.14 304    P       P        17 00 37.7 +7.2
AVE                                 S       S        17 11 45.7 -3.9
PMR   Palmer           96.17  26    P       P        17 00 28.0 -2.0
PMR                                 pmax    pmax
      comp=Z,73nm,1.4s
PMR   Palmer           96.17  26    P       P        17 00 29.4 -0.5
      baz=296
PMR   Palmer           96.17  26    P       P        17 00 28.0 -2.0
PMR                                 IAmb    IAmb     17 00 48.1
      comp=Z,73nm,1.4s
GHO   Glory Hole Cre   96.18  25    P       P        17 00 28.3 -1.8
GHO                                 IAMs_20 IAMs_20  17 48 01.9
      comp=Z,10µm,19.0s
KDAK  Kodiak Island    96.19  30    LR      LR       17 45 16.7
      comp=Z,2µm,21.6s,baz=294,slow=36
KDAK  Kodiak Island    96.19  30    IAMs_20 IAMs_20  17 48 25.5
      comp=Z,14µm,19.0s
BRLK  Bradley Lake     96.19  28    P       P        17 00 28.2 -1.9
BRLK                                IAmb    IAmb     17 00 57.3
      comp=Z,76nm,1.3s
BRLK                                IAMs_20 IAMs_20  17 48 57.9
      comp=Z,9µm,18.0s
TULEG Thule            96.22 356  i P       P        17 00 29.5 -0.4
TULEG Thule            96.22 356    P       P        17 00 28.3 -1.6
TULEG                               IAmb    IAmb     17 00 37.6
      comp=Z,111nm,1.4s
TULEG                               IAMs_20 IAMs_20  17 49 53.2
      comp=Z,10µm,21.0s
DHY   Denali Highway   96.22  24    P       P        17 00 32.3 +2.0
      baz=298
J25K  Salcha River,    96.24  22    P       P        17 00 29.6 -0.7
      baz=300
BRSE  Bradley Lake S   96.27  28    P       P        17 00 29.4 -1.1
      baz=295
WAT6  Susitna Watana   96.30  24    P       P        17 00 30.6 -0.2
      baz=298
PMAFR Mafra            96.34 310  eP        P        17 00 33.2 +1.9
O22K  Cooper Landing   96.41  27    IAMs_20 IAMs_20  17 50 51.4
      comp=Z,10µm,20.0s
SML   Sawmill          96.42  25    P       P        17 00 31.4 +0.2
      baz=297
SML   Sawmill          96.42  25    IAMs_20 IAMs_20  17 48 26.1
      comp=Z,11µm,18.0s
KOWA  Kowa             96.48 285    P       P        17 00 32.9 +0.5
      comp=Z,8.3nm,0.9s,baz=86,slow=4.6,SNR=17
KOWA  Kowa             96.48 285    P       P        17 00 31.2 -1.1
KOWA  Kowa             96.48 285    P       P        17 00 33.7 +1.3
KNK   Knik Glacier     96.54  26    P       P        17 00 32.0 +0.3
      baz=297
KNK   Knik Glacier     96.54  26    P       P        17 00 30.6 -1.1
KNK                                 IAmb    IAmb     17 00 55.1
      comp=Z,115nm,1.4s
KNK                                 IAMs_20 IAMs_20  17 51 32.1
      comp=Z,9µm,19.0s
QSPA  South Pole Qui   96.72 180    P       P        17 00 33.6 +1.1
      comp=Z,10nm,0.9s,baz=298,slow=2.2,SNR=13
QSPA                                PP      PP       17 04 27.1  0.0
      comp=Z,18nm,1.1s,baz=315,slow=5.5,SNR=3.2
QSPA  South Pole Qui   96.72 180    P       P        17 00 31.9 -0.5
SCM   Sheep Creek Mo   96.83  25    P       P        17 00 34.6 +1.6
      baz=298
PWL   Port Wells       96.85  26    P       P        17 00 32.9 -0.2
      baz=297
PWL   Port Wells       96.85  26    IAMs_20 IAMs_20  17 51 17.5
      comp=Z,9µm,18.0s
RIDG  Independent Ri   96.88  23    P       P        17 00 32.8 -0.4
      baz=300
J26L  Joseph Creek     96.96  22    P       P        17 00 33.7  0.0
      baz=302
SCRK  Sand Creek       97.08  22    P       Pdif     17 00 34.2 -0.1
      baz=301
SCRK  Sand Creek       97.08  22    P       P        17 00 32.9 -1.3
SCRK                                IAMs_20 IAMs_20  17 52 54.4
      comp=Z,10µm,19.0s
M24K  Tolsona, Glenn   97.17  24    IAMs_20 IAMs_20  17 48 47.7
      comp=Z,9µm,19.0s
A36M  Sachs Harbour    97.22  12    P       P        17 00 33.7 -0.7
      baz=320
A36M  Sachs Harbour    97.22  12    P       P        17 00 33.4 -1.1
KLU   Klutina          97.58  25    IAMs_20 IAMs_20  17 50 57.8
      comp=Z,9µm,19.0s
EGAK  Eagle            97.68  21    P       Pdif     17 00 38.0 +1.2
      baz=304
EGAK  Eagle            97.68  21    IAMs_20 IAMs_20  17 47 36.3
      comp=Z,10µm,22.0s
FID   Port Fidalgo     97.70  26    IAMs_20 IAMs_20  17 52 37.0
      comp=Z,12µm,20.0s
MENT  Mentasta         97.73  23    P       P        17 00 36.8 -0.3
MENT                                IAmb    IAmb     17 01 05.2
      comp=Z,43nm,1.0s
L26K  Log Cabin Wild   97.83  23    P       Pdif     17 00 38.4 +0.8
      baz=302
L26K  Log Cabin Wild   97.83  23    IAMs_20 IAMs_20  17 53 48.1
      comp=Z,13µm,18.0s
HIN   Hinchinbrook I   97.86  26    IAMs_20 IAMs_20  17 51 51.4
      comp=Z,10µm,18.0s
INK   Inuvik           97.91  16    PKKPbc  PKKPbc   17 17 10.0 -4.4
      comp=Z,3.8nm,0.8s,baz=90,slow=5.3,SNR=7.0
INK   Inuvik           97.91  16    P       P        17 00 36.9 -0.8
INK                                 pmax    pmax
      comp=Z,95nm,1.4s
INK   Inuvik           97.91  16    P       Pdif     17 00 37.7  0.0
      baz=312
INK   Inuvik           97.91  16    P       P        17 00 36.9 -0.8
INK                                 IAmb    IAmb     17 00 58.3
      comp=Z,95nm,1.4s
N25K  Chitina, Valde   98.07  24    IAMs_20 IAMs_20  17 48 33.4
      comp=Z,10µm,19.0s
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M26K	Nabesna, AK	98.30	23	P	Pdif	17 00 39.6	-0.1
	baz=302						
M26K	Nabesna, AK	98.30	23	IAMs_20	IAMs_20	17 53 53.5	
	comp=Z,11µm,19.0s						
KIC	Kosan Boka	98.35	277	*e*P	Pdif	17 00 42.4	+1.5
	comp=Z,21nm,0.8s						
BMRM	Bremner River	98.39	25	P	**P**	**17 00 38.5**	**-1.6**
BMRM				IAmb	IAmb	17 01 00.2	
	comp=Z,69nm,1.3s						
BMRM				IAMs_20	IAMs_20	17 49 30.4	
	comp=Z,10µm,18.0s						
L27K	Beaver Creek,	98.39	23	P	Pdif	17 00 40.5	+0.5
	baz=303						
L27K	Beaver Creek,	98.39	23	P	**P**	**17 00 39.7**	**-0.3**
L27K				IAMs_20	IAMs_20	17 53 51.0	
	comp=Z,10µm,18.0s						
BCAR	Beaver Creek A	98.41	23	P	**P**	**17 00 39.7**	**-0.5**
DBIC	Dimbokro	98.42	278	P	Pdif	17 00 42.1	+0.9
	comp=Z,11nm,0.9s,baz=83,slow=4.7,SNR=8.1						
DBIC				LR	LR	17 44 56.9	
	comp=Z,3µm,18.4s,baz=93,slow=35						
DBIC	Dimbokro	98.42	278	P	Pdif	17 00 41.9	+0.7
DBIC				pmax	pmax		
	comp=Z,39nm,1.1s						
DBIC	Dimbokro	98.42	278	P	Pdif	17 00 41.9	+0.7
DBIC				IAmb	IAmb	17 00 56.5	
	comp=Z,39nm,1.1s						
RES	Resolute Bay	98.44	3	P	**P**	**17 00 39.6**	**-0.3**
RES				pmax	pmax		
	comp=Z,46nm,1.1s						
RES	Resolute Bay	98.44	3	P	**P**	**17 00 39.6**	**-0.3**
RES				IAmb	IAmb	17 00 58.9	
	comp=Z,46nm,1.1s						
GLB	Gilahina Butte	98.48	24	IAMs_20	IAMs_20	17 51 17.6	
	comp=Z,9µm,19.0s						
TIC	Toumodi	98.58	278	*e*P	Pdif	17 00 44.0	+2.1
LIC	Lamto	98.65	277	*e*P	Pdif	17 00 44.3	+2.1
	comp=Z,51nm,1.4s						
DAWY	Dawson	98.72	21	Pdiff	Pdif	17 00 41.8	+0.3
	baz=306						
DAWY	Dawson	98.72	21	P	**P**	**17 00 41.3**	**-0.2**
SNAA	Sanae	98.73	199	P	Pdif	17 00 43.0	+1.6
	comp=Z,1.7nm,0.6s,baz=324,slow=19,SNR=2.4						
SNAA				PP	**PP**	**17 04 44.1**	**+1.6**
	comp=Z,6.8nm,1.0s,baz=328,slow=22,SNR=2.0						
SNAA	Sanae	98.73	199	P	Pdif	17 00 43.0	+1.6
SNAA				pmax	pmax		
	comp=Z,11nm,0.9s						
SNAA				MLR	MLR		
	comp=Z,15µm,20.0s						
VRDI	Verde Repeater	98.74	25	IAMs_20	IAMs_20	17 49 24.5	
	comp=Z,10µm,18.0s						
M27K	Edge Creek, AK	98.76	23	Pdiff	Pdif	17 00 42.1	+0.2
	baz=303						
M27K	Edge Creek, AK	98.76	23	IAMs_20	IAMs_20	17 52 53.8	
	comp=Z,13µm,19.0s						
KAIM	Kayak Island	99.00	26	IAMs_20	IAMs_20	17 51 53.1	
	comp=Z,13µm,18.0s						
BERG	Berg Lake	99.07	25	IAMs_20	IAMs_20	17 51 29.9	
	comp=Z,12µm,20.0s						
CRQM	Cirque	99.12	25	IAMs_20	IAMs_20	17 49 00.1	
	comp=Z,10µm,19.0s						
SUCK	Suckling Hills	99.21	26	IAMs_20	IAMs_20	17 52 45.4	
	comp=Z,13µm,19.0s						
TGL	Tana Glacier	99.25	25	IAMs_20	IAMs_20	17 49 02.9	
	comp=Z,10µm,20.0s						
WAX	Waxell Ridge	99.40	25	IAMs_20	IAMs_20	17 49 46.6	
	comp=Z,13µm,20.0s						
ISLE	Juniper Island	99.53	25	IAMs_20	IAMs_20	17 45 38.1	
	comp=Z,11µm,21.0s						
SNH	Sunshine Point	99.55	25	IAMs_20	IAMs_20	17 51 44.5	
	comp=Z,13µm,19.0s						
BARN	Barnard Glacie	99.56	24	IAMs_20	IAMs_20	17 54 33.9	
	comp=Z,9µm,19.0s						
GRNC	Granite Creek	99.70	24	IAMs_20	IAMs_20	17 45 56.6	
	comp=Z,11µm,22.0s						
YAH	Yahtse	99.91	25	IAMs_20	IAMs_20	17 50 11.1	
	comp=Z,11µm,19.0s						
MESA	MESA	99.92	25	IAMs_20	IAMs_20	17 52 09.5	
	comp=Z,11µm,20.0s						
LOGN	Logan Glacier	99.96	24	IAMs_20	IAMs_20	17 49 35.4	
	comp=Z,9µm,19.0s						
TABL	Table Mountain	100.12	25	IAMs_20	IAMs_20	17 54 22.5	
	comp=Z,9µm,21.0s						
M30M	Minto, Yukon	100.55	22	Pdiff	**Pdif**	**17 00 50.3**	**+0.6**
	baz=308						
VNA1	Neumayer--Stat	100.61	199	Pdiff	**Pdif**	**17 00 53.0**	**+3.4**
VNA3	Neumayer Olymp	100.96	199	Pdiff	**Pdif**	**17 00 54.2**	**+3.0**
DY2G	Dye2	101.58	345	*e*P	**Pdif**	**17 00 55.0**	**+0.6**
SHEL	Horse Pasture	101.64	255	IAMs_20	IAMs_20	17 47 53.7	
	comp=Z,13µm,19.0s						
JIS	Juneau Island	104.19	24	IAMs_20	IAMs_20	17 56 27.2	
	comp=Z,11µm,20.0s						
PMOZ	Porto Moniz, M	104.20	306	*e*LQ	LQ	17 30 44.1	
PMOZ				*e*LR	LR	17 34 41.3	
	comp=Z,3µm,18.0s						
DLBC	Dease Lake	105.80	23	PKKPbc	PKKPbc	17 16 50.6	-0.7
	comp=Z,1.9nm,0.8s,baz=210,slow=12,SNR=3.0						
WRAK	Wrangell Islan	106.23	25	IAMs_20	IAMs_20	17 59 02.3	
	comp=Z,10µm,18.0s						
POHA	Pohakuloa	106.27	67	IAMs_20	IAMs_20	17 42 57.1	
	comp=Z,10µm,22.0s						
YKA	Yellowknife Ar	107.37	14	PP	**PP**	**17 05 44.4**	**-2.2**
	comp=Z,7.9nm,1.0s,baz=339,slow=6.6,SNR=4.5						
YKA				PKKPbc	**PKKPbc**	**17 16 43.5**	**-3.0**
	comp=Z,2.4nm,0.8s,baz=135,slow=3.8,SNR=3.7						
XMAS	Kiritimati	107.68	86	IAMs_20	IAMs_20	17 43 22.2	
	comp=Z,12µm,21.0s						
MBO	M'Bour	108.82	288	IAMs_20	IAMs_20	17 57 54.0	
	comp=Z,9µm,18.0s						
ASCN	Ascension	109.50	264	IAMs_20	IAMs_20	17 53 04.2	
	comp=Z,7µm,18.0s						
EDM	Edmonton	115.71	18	PKIKP	**PKiKP**	**17 05 43.8**	**-0.8**
EDM	Edmonton	115.71	18		**PKiKP**	**17 05 43.8**	**-0.8**
NLWA	Neilton Lookou	116.27	28	IAMs_20	IAMs_20	18 05 45.8	
	comp=Z,6µm,18.0s						
B05A	Bryant	116.43	26	P	**PKPdf**	**17 05 46.0**	**-0.1**
	baz=319						
D03D	Eldon	116.53	28	P	**PKiKP**	**17 05 46.8**	**+0.5**
	baz=317						
TBI	Tubuai	116.58	113	*e*PP	PP	17 06 53.5	-0.9
	comp=Z,754nm,32.2s						
TBI	Tubuai	116.58	113	*e*PS	PS	17 16 36.1	-1.4
	comp=Z,5µm,28.0s						
TBI				*e*SS	SS	17 23 00.2	+0.2
	comp=Z,4µm,31.0s						
TBI	Tubuai	116.58	113	*e*LQ	LQ	17 36 01.8	
	comp=Z,28µm,41.0s						
TBI				*e*LR	LR	17 40 56.5	
	comp=Z,31µm,28.0s						
SCHQ	Schefferville	116.62	348	PKP	**PKPdf**	**17 05 45.6**	**-0.7**
	comp=Z,5.0nm,0.5s,baz=76,slow=4.2,SNR=3.5						
PPT2	Papeete2	116.73	106	*e*PP	PP	17 06 52.4	-3.3
	comp=Z,902nm,27.2s						
PPT2	Papeete2	116.73	106	*e*PS	PS	17 16 37.4	-1.9
	comp=Z,6µm,26.5s						
PPT2				*e*SS	SS	17 22 53.2	-9.3
	comp=Z,5µm,28.2s						
PPT2	Papeete2	116.73	106	*e*LQ	LQ	17 36 06.0	
	comp=Z,21µm,34.5s						
PPT2				*e*LR	LR	17 40 59.8	
	comp=Z,32µm,26.5s						
FFC	Flin Flon	117.16	11	PKIKP	**PKPdf**	**17 05 45.4**	**-1.9**
FFC				MLR	MLR		
	comp=Z,8µm,20.0s						
FFC	Flin Flon	117.16	11		**PKPdf**	**17 05 45.4**	**-1.9**
FFC	Flin Flon	117.16	11	IAMs_20	IAMs_20	18 04 35.9	
	comp=Z,8µm,20.0s						
E04D	Cinebar	117.49	28	P	**PKiKP**	**17 05 48.3**	**+0.1**
	baz=318						
B08A	Colville Reser	117.55	25		**PKPdf**	**17 05 47.1**	**-1.2**
LON	Longmire	117.70	27	PKIKP	**PKPdf**	**17 05 47.7**	**-1.0**
LON	Longmire	117.70	27		**PKPdf**	**17 05 47.7**	**-1.0**
LTY	Liberty	117.82	26		**PKPdf**	**17 05 47.9**	**-1.0**
F04A	Amboy	118.02	28		**PKPdf**	**17 05 48.7**	**-0.5**
C09A	Chrisman Ranch	118.42	25	PKPdf	**PKPdf**	**17 05 49.1**	**-0.9**
NEW	Newport	118.52	23	PKKPbc	PKKPbc	17 16 03.3	-5.5
	comp=Z,1.0nm,0.6s,baz=90,slow=6.1,SNR=2.5						
NEW	Newport	118.52	23	PKIKP	**PKPdf**	**17 05 49.4**	**-0.8**
NEW				MLR	MLR		
	comp=Z,6µm,22.0s						
NEW	Newport	118.52	23	P	**PKPdf**	**17 05 50.0**	**-0.2**
	baz=324						
NEW	Newport	118.52	23	PKPdf	**PKPdf**	**17 05 49.4**	**-0.8**
E07A	Sunnyside	118.72	26	PKPdf	**PKPdf**	**17 05 50.0**	**-0.6**
D08A	Wollman Farm,	118.74	25	PKPdf	**PKPdf**	**17 05 50.1**	**-0.5**
H04D	Lebanon	118.90	30	P	**PKPdf**	**17 05 50.7**	**-0.2**
	baz=317						
HAWA	Hanford	118.99	26	PKPdf	**PKPdf**	**17 05 50.0**	**-1.1**
HAWA				IAMs_20	IAMs_20	18 06 08.6	
	comp=Z,7µm,19.0s						
H04A	Detroit Lake	119.05	29	PKPdf	**PKPdf**	**17 05 50.1**	**-1.2**
E08A	Dider Farm, El	119.12	26		**PKPdf**	**17 05 50.2**	**-1.1**
I03D	Drain, OR	119.19	31	P	**PKiKP**	**17 05 51.6**	**0.0**
	baz=316						
J01E	Myrtle Point	119.28	31	P	**PKiKP**	**17 05 51.7**	**0.0**
	baz=315						
E09A	Wood Farm, Sta	119.49	25		**PKPdf**	**17 05 51.0**	**-1.0**
I04A	Tendick Farm,	119.59	30	P	**PKPdf**	**17 05 51.8**	**-0.6**
	baz=317						
I05D	Terrebonne, OR	119.72	29	P	**PKiKP**	**17 05 52.8**	**+0.1**
	baz=318,SNR=6.9						
K02D	Willamette Mer	119.74	32	P	**PKPdf**	**17 05 52.7**	**-0.1**
	baz=315						
G08A	Pilot Rock	120.10	27	PKPdf	**PKPdf**	**17 05 52.2**	**-1.3**
J04D	Umpqua Nationa	120.15	30	P	**PKPdf**	**17 05 53.6**	**-0.1**
	baz=317,SNR=8.3						
PMSA	Palmer Station	120.17	190	PKP	**PKPdf**	**17 05 51.9**	**-0.8**
	comp=Z,2.7nm,0.6s,baz=315,slow=8.6,SNR=3.0						
PMSA	Palmer Station	120.17	190	*e*P	**PKiKP**	**17 05 56.0**	**+3.2**
HUMO	Hull Mountain	120.17	31	PKPdf	**PKPdf**	**17 05 53.0**	**-0.6**
HUMO				IAMs_20	IAMs_20	18 00 39.9	
	comp=Z,7µm,22.0s						
F10A	Beach Ranch, E	120.31	25		**PKPdf**	**17 05 53.1**	**-0.7**
PINE	Pine Mountain	120.31	29	PKPdf	**PKPdf**	**17 05 53.7**	**-0.3**
J05D	Fort Rock, OR	120.55	30	P	**PKiKP**	**17 05 54.6**	**+0.1**
	baz=318,SNR=12						
I07A	Izee	120.78	28	PKPdf	**PKPdf**	**17 05 54.4**	**-0.4**
L04D	Klamath Falls	120.79	31	P	**PKPdf**	**17 05 54.1**	**-0.8**
	baz=316						
MSO	Missoula	120.93	22	P	**PKPdf**	**17 05 54.3**	**-0.7**
	baz=326						
MSO	Missoula	120.93	22	PKPdf	**PKPdf**	**17 05 53.7**	**-1.3**
MSO				IAMs_20	IAMs_20	18 04 46.0	
	comp=Z,8µm,18.0s						
M02C	Callahan	121.09	32	P	**PKiKP**	**17 05 55.7**	**+0.1**
	baz=315						
BMO	Blue Mountains	121.17	26	PKIKP	**PKPdf**	**17 05 54.1**	**-1.4**
BMO				MLR	MLR		
	comp=Z,7µm,22.0s						
BMO	Blue Mountains	121.17	26		**PKPdf**	**17 05 54.0**	**-1.4**
BMO				IAMs_20	IAMs_20	18 01 53.3	
	comp=Z,7µm,22.0s						
M04C	Macdoel	121.34	31	P	**PKPdf**	**17 05 55.5**	**-0.5**
	baz=316						
EGMT	Eagleton	121.37	19	P	**PKPdf**	**17 05 55.6**	**-0.2**
	baz=331,SNR=36						
EGMT	Eagleton	121.37	19	PKPdf	**PKPdf**	**17 05 54.7**	**-1.0**
N02D	Trinity Center	121.47	32	P	**PKiKP**	**17 05 56.3**	**0.0**
	baz=315,SNR=7.2						
PLID	Pearl Lake	121.54	25	PKPdf	**PKPdf**	**17 05 55.0**	**-1.4**
J08A	Circle Bar Ran	121.81	28		**PKPdf**	**17 05 55.1**	**-1.7**
WDC	Whiskeytown Da	121.84	33	PKIKP	**PKPdf**	**17 05 55.8**	**-1.0**
WDC				MLR	MLR		
	comp=Z,7µm,22.0s						
WDC	Whiskeytown Da	121.84	33	PKPdf	**PKPdf**	**17 05 55.8**	**-1.0**
WDC				IAMs_20	IAMs_20	17 58 58.0	
	comp=Z,7µm,22.0s						
O02D	Mt. Diablo Mer	121.99	33	P	**PKiKP**	**17 05 57.2**	**-0.1**
	baz=315,SNR=5.3						
LRM	Limekiln Ridge	122.33	22		**PKPdf**	**17 05 56.8**	**-1.1**
O03E	Paynes Creek	122.44	32	P	**PKPdf**	**17 05 57.3**	**-0.7**
	baz=316,SNR=9.2						
WVOR	Wild Horse Val	122.44	29	PKIKP	**PKPdf**	**17 05 57.2**	**-0.8**
WVOR				MLR	MLR		
	comp=Z,8µm,20.0s						
WVOR	Wild Horse Val	122.44	29		**PKPdf**	**17 05 57.2**	**-0.8**
WVOR				IAMs_20	IAMs_20	18 02 31.1	
	comp=Z,8µm,20.0s						
ULM	Lac du Bonnet	122.46	8	PKP	**PKPdf**	**17 05 56.5**	**-1.1**
	comp=Z,18nm,0.6s,baz=6.0,slow=2.5,SNR=35						
ULM				PKKPab	**PKKPbc**	**17 15 59.2**	**+5.2**
	comp=Z,4.5nm,0.7s,baz=128,slow=7.4,SNR=6.2						
DGMT	Dagmar	122.55	15	P	**PKPdf**	**17 05 57.9**	**0.0**
	baz=338						
DGMT	Dagmar	122.55	15	PKPdf	**PKPdf**	**17 05 57.0**	**-0.9**
DGMT	Dagmar	122.55	15	IAMs_20	IAMs_20	18 07 50.5	
	comp=Z,8µm,19.0s						
HOPS	Hopland Field	122.66	34	IAMs_20	IAMs_20	18 07 07.7	
	comp=Z,6µm,20.0s						
DLMT	Dillon	122.67	22	IAMs_20	IAMs_20	18 10 26.0	
	comp=Z,8µm,18.0s						
BOZ	Bozeman (W)	122.83	22	PKIKP	**PKPdf**	**17 05 57.9**	**-0.8**
BOZ				MLR	MLR		
	comp=Z,7µm,19.0s						
BOZ	Bozeman (W)	122.83	22	P	**PKPdf**	**17 05 58.6**	**-0.1**
	baz=329,SNR=12						
BOZ	Bozeman (W)	122.83	22		**PKPdf**	**17 05 57.9**	**-0.8**
BOZ				IAMs_20	IAMs_20	18 10 14.3	
	comp=Z,7µm,19.0s						
MFID	Camas Ranch	122.96	26	PKPdf	**PKPdf**	**17 05 58.2**	**-0.8**
MCMT	McKenzie Canyo	123.02	23	PKPdf	**PKPdf**	**17 05 58.4**	**-0.9**
ORV	Oroville	123.13	33	PKIKP	**PKPdf**	**17 05 58.1**	**-1.2**
ORV				MLR	MLR		
	comp=Z,4µm,20.0s						
ORV	Oroville	123.13	33		**PKPdf**	**17 05 58.0**	**-1.2**
GCMT	Greycliff	123.35	20		**PKPdf**	**17 05 59.2**	**-0.5**
HLID	Hailey	123.44	25	P	**PKiKP**	**17 06 00.2**	**0.0**
	baz=325,SNR=28						
HLID	Hailey	123.44	25	PKPdf	**PKPdf**	**17 05 59.3**	**-0.7**
LAO	LASA Array	123.64	17	P	**PKiKP**	**17 06 00.9**	**+0.5**
	baz=335,SNR=13						
LAO	LASA Array	123.64	17	PKPdf	**PKPdf**	**17 05 59.6**	**-0.5**
LAO				IAMs_20	IAMs_20	18 08 48.9	
	comp=Z,8µm,19.0s						
RLMT	Red Lodge	124.07	20	P	**PKPdf**	**17 06 01.2**	**0.0**
	baz=331						
RLMT	Red Lodge	124.07	20	IAMs_20	IAMs_20	18 02 51.3	
	comp=Z,8µm,22.0s						
PAHR	Pah Rah Range	124.13	31	PKPdf	**PKPdf**	**17 06 00.7**	**-0.7**
MDND	Maddock	124.17	11	PKPdf	**PKPdf**	**17 06 00.0**	**-1.0**
H17A	Grant Village	124.24	22	P	**PKiKP**	**17 06 03.1**	**+1.1**
	baz=329,SNR=21						
AGMN	Agassiz Nation	124.37	8	P	**PKPdf**	**17 06 00.1**	**-1.3**
	baz=347						
AGMN	Agassiz Nation	124.37	8	PKPdf	**PKPdf**	**17 05 59.8**	**-1.6**
AGMN				IAMs_20	IAMs_20	18 07 10.9	
	comp=Z,7µm,20.0s						
FLWY	Flagg Ranch	124.47	22	IAMs_20	IAMs_20	18 11 00.6	
	comp=Z,7µm,20.0s						
PNTR	Pine Nut	124.48	32	PKPdf	**PKPdf**	**17 06 00.7**	**-1.5**
PQI	Presque Isle	124.52	345	IAMs_20	IAMs_20	18 10 58.2	
	comp=Z,7µm,19.0s						
B35A	Bob, Littlefor	124.59	7		**PKPdf**	**17 06 00.7**	**-1.1**
FXWY	Fox Creek	124.72	22	PKPdf	**PKPdf**	**17 06 01.5**	**-1.0**
FXWY				IAMs_20	IAMs_20	18 11 40.4	
	comp=Z,6µm,20.0s						
MOOW	Moose Ponds	124.74	22	PKPdf	**PKPdf**	**17 06 01.4**	**-1.2**
MOOW				IAMs_20	IAMs_20	18 10 33.7	
	comp=Z,7µm,18.0s						
CMB	Columbia Colle	124.82	33	PKIKP	**PKPdf**	**17 06 01.8**	**-0.8**
CMB	Columbia Colle	124.82	33	PKPdf	**PKPdf**	**17 06 01.8**	**-0.8**
TPAW	Teton Pass	124.88	22		**PKPdf**	**17 06 01.8**	**-1.1**
TPAW				IAMs_20	IAMs_20	18 11 35.5	
	comp=Z,6µm,18.0s						
LOHW	Long Hollow	124.91	22		**PKPdf**	**17 06 02.1**	**-0.7**
LOHW				IAMs_20	IAMs_20	18 10 47.2	
	comp=Z,8µm,19.0s						
SNOW	Snow King Moun	124.98	22	IAMs_20	IAMs_20	18 10 50.1	
	comp=Z,7µm,19.0s						
REDW	Red Top Meadow	125.03	22		**PKPdf**	**17 06 02.5**	**-0.7**
REDW				IAMs_20	IAMs_20	18 11 40.4	
	comp=Z,6µm,19.0s						
SAO	San Andreas Ge	125.13	35	IAMs_20	IAMs_20	18 11 59.2	
	comp=Z,6µm,20.0s						
E28A	Huff	125.16	13		**PKPdf**	**17 06 02.2**	**-0.7**
EYMN	Ely	125.22	5	P	**PKPdf**	**17 06 02.7**	**-0.3**
	baz=352						
EYMN	Ely	125.22	5	PKPdf	**PKPdf**	**17 06 02.1**	**-0.9**
KVN	Kaiserville	125.28	31	PKIKP	**PKPdf**	**17 06 02.3**	**-1.4**
KVN	Kaiserville	125.28	31	PKPdf	**PKPdf**	**17 06 02.2**	**-1.4**
ELK	Elko	125.35	28	PKIKP	**PKPdf**	**17 06 02.9**	**-1.0**
ELK				MLR	MLR		
	comp=Z,6µm,20.0s						
ELK	Elko	125.35	28	PKPdf	**PKPdf**	**17 06 02.9**	**-1.0**
AHID	Auburn Hatcher	125.44	23	IAMs_20	IAMs_20	18 04 59.4	
	comp=Z,7µm,20.0s						
HVU	Hansel Valley	125.59	25	PKIKP	**PKPdf**	**17 06 03.1**	**-1.1**
HVU	Hansel Valley	125.59	25	PKPdf	**PKPdf**	**17 06 03.1**	**-1.1**
NVAR	Mina Array Bea	125.64	32	PKP	**PKPdf**	**17 06 04.0**	**-0.4**
	comp=Z,9.4nm,0.7s,baz=311,slow=1.7,SNR=61						
NVAR				PKKPab	**PKKPbc**	**17 15 46.5**	**+5.0**
	comp=Z,2.5nm,0.9s,baz=143,slow=4.7,SNR=8.5						
NVAR				SKKPbc	SKKPbc	17 19 29.9	-1.9
	comp=Z,2.9nm,1.1s,baz=145,slow=3.3,SNR=3.7						
NVAR	Mina Array Bea	125.64	32	PKPdf	**PKPdf**	**17 06 03.4**	**-1.0**
TAOE	Nuku Hiva Isla	125.88	96	*e*PP	PP	17 07 54.7	-3.6
	comp=Z,903nm,27.6s						
TAOE	Nuku Hiva Isla	125.88	96	*e*SS	SS	17 24 59.9	0.0
	comp=Z,15µm,33.4s						
TAOE	Nuku Hiva Isla	125.88	96	*e*LQ	LQ	17 39 57.1	
	comp=Z,10µm,31.5s						
TAOE				*e*LR	LR	17 45 11.7	
	comp=Z,24µm,26.5s						
BW06	Boulder Array	126.02	22	P	**PKPdf**	**17 06 04.0**	**-1.1**
	baz=330						
BW06	Boulder Array	126.02	22		**PKPdf**	**17 06 03.6**	**-1.4**
BW06				IAMs_20	IAMs_20	18 07 54.8	
	comp=Z,8µm,20.0s						
PD31	Pinedale Array	126.02	22		**PKPdf**	**17 06 03.7**	**-1.4**
PDAR	Pinedale Array	126.02	22	PKP	**PKPdf**	**17 06 03.6**	**-1.4**
	comp=Z,7.9nm,0.7s,baz=200,slow=0.1,SNR=53						
PDAR				PKKPab	**PKKPab**	**17 15 38.9**	**-0.2**
	comp=Z,1.7nm,0.6s,baz=139,slow=5.6,SNR=11						
PDAR				SKKPbc	SKKPbc	17 19 32.0	+1.4
	comp=Z,3.1nm,1.0s,baz=151,slow=4.1,SNR=2.7						
PDAR	Pinedale Array	126.02	22	PKPdf	**PKPdf**	**17 06 03.4**	**-1.7**
PKME	Peaks-Kenny Pk	126.15	346	IAMs_20	IAMs_20	18 11 01.3	
	comp=Z,7µm,20.0s						
BGU	Big Grassy Mou	126.19	26		**PKPdf**	**17 06 04.3**	**-1.1**
EMMW	East Machias	126.20	344	IAMs_20	IAMs_20	18 11 24.8	
	comp=Z,7µm,20.0s						
HWUT	Hardware Ranch	126.23	24		**PKPdf**	**17 06 04.4**	**-1.1**
D41A	Chassel	126.29	3		**PKPdf**	**17 06 04.6**	**-0.5**
TRQ	Mont Tremblant	126.30	351	PKPdf	**PKPdf**	**17 06 04.3**	**-0.9**
E38A	The Farm, Brul	126.55	5		**PKPdf**	**17 06 04.5**	**-1.1**
RSSD	Black Hills	126.61	17	PKIKP	**PKPdf**	**17 06 04.9**	**-1.2**
RSSD				MLR	MLR		
	comp=Z,7µm,18.0s						
RSSD	Black Hills	126.61	17	P	**PKPdf**	**17 06 05.7**	**-0.5**
	baz=337						
RSSD	Black Hills	126.61	17		**PKPdf**	**17 06 04.9**	**-1.2**
RSSD	Black Hills	126.61	17	IAMs_20	IAMs_20	18 08 26.8	
	comp=Z,7µm,18.0s						
F33A	5 Mile Ranch,	126.70	9	PKPdf	**PKPdf**	**17 06 05.1**	**-0.8**
MOQ	Mont Orford	126.76	348		**PKPdf**	**17 06 04.5**	**-1.7**
DUG	Dugway, Tooele	126.88	26	PKIKP	**PKPdf**	**17 06 05.4**	**-1.3**
DUG	Dugway, Tooele	126.88	26	P	**PKPdf**	**17 06 06.6**	**-0.1**
	baz=325						
DUG	Dugway, Tooele	126.88	26	PKPdf	**PKPdf**	**17 06 05.4**	**-1.3**
WVL	Waterville	126.90	346	IAMs_20	IAMs_20	18 11 40.1	
	comp=Z,6µm,18.0s						
SMMC	Simmler	126.99	35	P	**PKiKP**	**17 06 07.8**	**+0.5**
	baz=315						
E43A	Lone Tree Farm	127.03	1	PKPdf	**PKPdf**	**17 06 05.9**	**-0.7**
E46A	Sault Ste Mari	127.05	359	PKPdf	**PKPdf**	**17 06 05.5**	**-1.0**
F36A	Milaca	127.07	7	PKPdf	**PKPdf**	**17 06 05.4**	**-1.3**
R11A	Troy Canyon, C	127.08	30	P	**PKPdf**	**17 06 07.2**	**+0.1**
	baz=321						
VES	Vestal, Richgr	127.13	34	P	**PKPdf**	**17 06 06.4**	**-0.6**
	baz=316						
SPR3	Spring Creek 3	127.17	28	PKPdf	**PKPdf**	**17 06 05.6**	**-1.8**
K22A	Casper	127.18	19	P	**PKPdf**	**17 06 06.7**	**-0.4**
	baz=333						
K22A	Casper	127.18	19		**PKPdf**	**17 06 05.1**	**-2.1**
GRAC	Grapevine Rang	127.21	32	P	**PKiKP**	**17 06 07.8**	**0.0**
	baz=319						
COWI	Conover	127.22	3		**PKPdf**	**17 06 06.3**	**-0.6**
COWI				IAMs_20	IAMs_20	18 13 11.7	
	comp=Z,9µm,19.0s						
CWC	Cottonwood Cre	127.24	33	P	**PKPdf**	**17 06 07.6**	**+0.1**
	baz=318						
PKM	Mcpherson Peak	127.39	36	P	**PKiKP**	**17 06 08.5**	**+0.1**
	baz=315						
SUSD	Miller	127.56	12	P	**PKPdf**	**17 06 07.6**	**0.0**
	baz=343						
SUSD	Miller	127.56	12		**PKPdf**	**17 06 06.1**	**-1.6**
ISA	Isabella, Lake	127.60	34	PKIKP	**PKPdf**	**17 06 06.0**	**-2.1**
ISA	Isabella, Lake	127.60	34	P	**PKPdf**	**17 06 08.1**	**0.0**
	baz=317						
ISA	Isabella, Lake	127.60	34	PKPdf	**PKPdf**	**17 06 06.0**	**-2.1**
SPMN	Marine on St.	127.79	7	P	**PKPdf**	**17 06 07.8**	**-0.2**
	baz=351						
SPMN	Marine on St.	127.79	7		**PKPdf**	**17 06 07.0**	**-1.0**
VT1	Waterbury	127.80	348	IAMs_20	IAMs_20	18 04 42.9	
	comp=Z,7µm,20.0s						
RWWY	Rawlins	127.81	21	IAMs_20	IAMs_20	18 05 11.0	
	comp=Z,7µm,20.0s						
PLVO	Plevna	127.83	352		**PKPdf**	**17 06 07.2**	**-0.9**
LONY	Lake Ozonia	127.86	350	P	**PKPdf**	**17 06 07.0**	**-1.2**
	baz=14						
LONY	Lake Ozonia	127.86	350		**PKPdf**	**17 06 06.7**	**-1.5**
LONY				IAMs_20	IAMs_20	18 11 02.0	
	comp=Z,6µm,22.0s						
FURC	Furnace Creek,	127.87	32	P	**PKiKP**	**17 06 09.6**	**+0.6**
	baz=319						
RDMU	Red Mountain	127.91	23	PKPdf	**PKPdf**	**17 06 07.1**	**-1.6**
G40A	Rib Lake	127.98	4		**PKPdf**	**17 06 07.5**	**-0.9**
LRMC	Laurel Mtn Rad	128.17	34	P	**PKiKP**	**17 06 10.0**	**+0.1**
	baz=318,SNR=17						
SADO	Sadowa	128.33	354		**PKPdf**	**17 06 08.2**	**-0.9**
FFD	Franklin Falls	128.40	347	IAMs_20	IAMs_20	18 11 18.5	
	comp=Z,6µm,20.0s						
DELO	Deloro Mine	128.41	353		**PKPdf**	**17 06 07.7**	**-1.5**
EDW2	Edwards Air Fo	128.44	34	P	**PKiKP**	**17 06 10.1**	**-0.2**
	baz=317,SNR=7.4						
P18A	Preston Nutter	128.44	24		**PKPdf**	**17 06 08.4**	**-1.5**
GLMI	Grayling	128.59	359	P	**PKPdf**	**17 06 09.5**	**0.0**
	baz=0.9						
SHOC	Shoshone, Teco	128.61	32	P	**PKiKP**	**17 06 11.1**	**+0.5**
	baz=319						
ECSD	EROS Data Cent	128.69	10	P	**PKPdf**	**17 06 09.5**	**-0.3**
	baz=346						
ECSD	EROS Data Cent	128.69	10	PKPdf	**PKPdf**	**17 06 08.3**	**-1.5**
GSC	Goldstone, Bar	128.78	33	P	**PKiKP**	**17 06 11.1**	**+0.1**
	baz=318,SNR=16						
O20A	White River Ci	128.80	22	P	**PKPdf**	**17 06 10.2**	**-0.2**
	baz=330						
O20A	White River Ci	128.80	22		**PKPdf**	**17 06 09.2**	**-1.2**
PASC	Pasadena Art C	128.84	35	IAMs_20	IAMs_20	18 11 10.5	
	comp=Z,7µm,22.0s						
N23A	Red Feather La	128.95	20	P	**PKPdf**	**17 06 10.8**	**0.0**
	baz=333						
J59A	Piesco	128.97	350		**PKPdf**	**17 06 09.3**	**-1.1**
BFSC	Mount Baldy Ra	129.09	35	P	**PKPdf**	**17 06 11.2**	**+0.2**
	baz=317						
TUQ	Turquoise Moun	129.15	32	P	**PKiKP**	**17 06 12.2**	**+0.4**
	baz=320,SNR=14						
J58A	Remsen	129.21	350	PKPdf	**PKPdf**	**17 06 10.0**	**-0.8**
J57A	Williamstown	129.27	351		**PKPdf**	**17 06 09.2**	**-1.6**
HRV	Adam Dziewonsk	129.29	347	IAMs_20	IAMs_20	18 15 32.3	
	comp=Z,6µm,20.0s						
I40A	Norwalk	129.32	5		**PKPdf**	**17 06 09.7**	**-1.3**
WES	Weston	129.35	346	IAMs_20	IAMs_20	18 15 25.1	
	comp=Z,6µm,18.0s						
BCX	Boston College	129.36	346	IAMs_20	IAMs_20	18 15 27.4	
	comp=Z,8µm,18.0s						
HEC	Hector,Ludlow	129.39	33	P	**PKiKP**	**17 06 12.8**	**+0.6**
	baz=319						
I42A	Draeger Farm,	129.44	3		**PKPdf**	**17 06 09.6**	**-1.6**
TRY	Troy	129.52	349	IAMs_20	IAMs_20	18 15 08.1	
	comp=Z,7µm,20.0s						
J55A	Hilton	129.67	353		**PKPdf**	**17 06 10.0**	**-1.6**
QUA2	Belchertown	129.69	347	IAMs_20	IAMs_20	18 15 38.6	
	comp=Z,6µm,19.0s						
GMRC	Granite Mounta	129.78	33	P	**PKiKP**	**17 06 13.8**	**+0.7**
	baz=320,SNR=22						
MURC	Murrieta	129.82	35	P	**PKiKP**	**17 06 13.0**	**-0.1**
	baz=317						
MEDO	Medina	129.84	353		**PKPdf**	**17 06 10.5**	**-1.5**
M65A	Busby, Falmout	129.97	345	IAMs_20	IAMs_20	18 15 53.3	
	comp=Z,8µm,19.0s						
ISCO	Idaho Springs	130.04	20	PKIKP	**PKPdf**	**17 06 11.1**	**-1.8**
ISCO	Idaho Springs	130.04	20	P	**PKPdf**	**17 06 12.2**	**-0.7**
	baz=333						
ISCO	Idaho Springs	130.04	20	PKPdf	**PKPdf**	**17 06 11.1**	**-1.8**
ISCO				IAMs_20	IAMs_20	18 12 21.1	
	comp=Z,8µm,19.0s						
NBRF	Rio Formoso -	130.06	264	*e*P	**PKiKP**	**17 06 17.2**	**+3.2**
SMCO	Snowmass	130.11	22	IAMs_20	IAMs_20	18 08 04.9	
	comp=Z,7µm,20.0s						
OGNE	Ogallala	130.11	16	P	**PKPdf**	**17 06 12.6**	**-0.1**
	baz=338						
NBPV	Pedro Velho	130.12	267	*e*P	**PKiKP**	**17 06 15.2**	**+1.1**
USHA	Ushuaia	130.19	193	SKPab	**SKPab**	**17 09 33.2**	**-1.2**
	comp=Z,66nm,1.1s,baz=134,slow=4.1,SNR=8.3						
BELC	Belle Mtn. Jos	130.19	33	P	**PKiKP**	**17 06 14.5**	**+0.6**
	baz=319						
MMNY	Mt. Morris Dam	130.21	353	PKPdf	**PKPdf**	**17 06 12.0**	**-0.7**

PFO	Pinyon Flats O	130.23	34	P	PKiKP	17 06 14.1	+0.1
	baz=318						
PFO	Pinyon Flats O	130.23	34	IAMs_20	IAMs_20	18 05 03.9	
	comp=Z,6µm,20.0s						
TPFO	Pinon Flats	130.24	34	P	PKiKP	17 06 14.1	0.0
	baz=318						
JFWS	Jewell Farm	130.32	5	PKIKP	PKPdf	17 06 11.4	-1.5
JFWS	Jewell Farm	130.32	5	P	PKPdf	17 06 12.1	-0.8
	baz=354						
JFWS	Jewell Farm	130.32	5	PKPdf	PKPdf	17 06 11.4	-1.5
K38A	Parkersburg	130.33	7		PKPdf	17 06 11.5	-1.5
109C	Camp Elliot, M	130.39	35	IAMs_20	IAMs_20	18 13 35.5	
	comp=Z,6µm,22.0s						
BINY	Binghamton	130.45	351	P	PKPdf	17 06 13.5	+0.2
	baz=12						
BINY	Binghamton	130.45	351	IAMs_20	IAMs_20	18 08 27.4	
	comp=Z,7µm,21.0s						
IRM	Iron Mountain	130.54	33	P	PKiKP	17 06 15.2	+0.7
	baz=320,SNR=17						
WVNY	West Valley, N	130.61	353	PKPdf	PKPdf	17 06 12.7	-0.9
YLE	Yale	130.73	347	IAMs_20	IAMs_20	18 16 14.1	
	comp=Z,7µm,19.0s						
L56A	Greenwood	130.75	352		PKPdf	17 06 12.9	-0.9
BC3	Big Chuckawall	130.75	33	P	PKiKP	17 06 15.6	+0.6
	baz=319,SNR=11						
MONP2	Monument Peak	130.78	35	P	PKiKP	17 06 16.1	+0.8
	baz=318						
Q24A	Divide	130.95	20	P	PKPdf	17 06 14.4	-0.2
	baz=334						
PDMCI	Parker Dam,Lak	130.96	32	P	PKiKP	17 06 15.7	+0.4
	baz=321,SNR=9.2						
WSPT	Westport, CT	130.96	348	IAMs_20	IAMs_20	18 15 55.1	
	comp=Z,8µm,20.0s						
ERPA	Erie	131.04	355	P	PKiKP	17 06 14.8	-0.5
	baz=7.0						
ERPA	Erie	131.04	355	IAMs_20	IAMs_20	18 14 38.6	
	comp=Z,9µm,21.0s						
L40A	Anamosa	131.08	6		PKPdf	17 06 12.9	-1.5
SWSC	Sam W. Stewart	131.09	34	P	PKiKP	17 06 16.3	+0.7
	baz=318						
IKP	In-Ko-Pah, Jac	131.14	35	P	PKiKP	17 06 15.7	-0.1
	baz=318						
L44A	Lake County Fo	131.19	2	IAMs_20	IAMs_20	18 15 22.8	
	comp=Z,8µm,18.0s						
NBAN	Anadia - AL	131.21	263	*e*P	PKiKP	17 06 17.6	+1.3
MVCO	Mesa Verde	131.22	24	P	PKiKP	17 06 16.1	0.0
	baz=329						
MVCO	Mesa Verde	131.22	24	IAMs_20	IAMs_20	18 15 04.2	
	comp=Z,8µm,20.0s						
L42A	Oliver, Polo	131.27	4		PKPdf	17 06 13.7	-1.0
WUAZ	Wupatki	131.36	28	P	PKiKP	17 06 15.8	-0.5
	baz=325						
WUAZ	Wupatki	131.36	28	IAMs_20	IAMs_20	18 15 44.1	
	comp=Z,5µm,19.0s						
S22A	4UR Ranch, Cre	131.42	23	P	PKiKP	17 06 16.5	0.0
	baz=331						
L48A	N Adams	131.47	359		PKPdf	17 06 14.1	-1.0
GLA	Glamis	131.55	33	P	PKiKP	17 06 17.1	+0.5
	baz=319						
M54A	Oil Creek Stat	131.62	354	P	PKPdf	17 06 15.0	-0.5
	baz=7.5						
M54A	Oil Creek Stat	131.62	354		PKPdf	17 06 14.6	-0.8
M54A				IAMs_20	IAMs_20	18 14 56.8	
	comp=Z,7µm,20.0s						
N59A	State Game Lan	131.66	350	P	PKPdf	17 06 15.7	+0.1
	baz=13						
N59A	State Game Lan	131.66	350	IAMs_20	IAMs_20	18 16 51.6	
	comp=Z,8µm,18.0s						
M53A	WI Miller and	131.78	355	IAMs_20	IAMs_20	18 11 19.0	
	comp=Z,9µm,22.0s						
NBLV	Livramento - P	131.79	266	*e*P	PKiKP	17 06 17.9	+0.4
NBPA	Parau_RN	131.89	268	*e*P	PKiKP	17 06 19.2	+1.5
SDCO	Great Sand Dun	131.91	21	P	PKPdf	17 06 16.0	-0.5
	baz=333						
SDCO	Great Sand Dun	131.91	21	PKPdf	PKPdf	17 06 15.2	-1.3
SDCO				IAMs_20	IAMs_20	18 16 32.6	
	comp=Z,6µm,19.0s						
N54A	Moraine State	132.19	354	P	PKiKP	17 06 17.0	-0.5
	baz=7.2						
N54A	Moraine State	132.19	354	IAMs_20	IAMs_20	18 15 20.9	
	comp=Z,9µm,21.0s						
SSPA	Standing Stone	132.26	352	P	PKPdf	17 06 16.4	-0.2
	baz=10.0						
SSPA	Standing Stone	132.26	352	PKPdf	PKPdf	17 06 15.9	-0.7
SSPA	Standing Stone	132.26	352	IAMs_20	IAMs_20	18 12 26.2	
	comp=Z,6µm,20.0s						
N53A	Lisbon	132.42	355		PKPdf	17 06 16.2	-0.8
W18A	Petrified Fore	132.45	27	P	PKiKP	17 06 18.4	-0.2
	baz=326						
N49A	Columbus Grove	132.48	359	PKPdf	PKPdf	17 06 16.0	-1.1
NBLA	Lagarto - SE	132.70	261	*e*P	PKiKP	17 06 20.4	+1.1
O56A	Blue Knob Stat	132.72	353	P	PKPdf	17 06 17.4	-0.2
	baz=9.1						
O56A	Blue Knob Stat	132.72	353		PKPdf	17 06 16.9	-0.7
O56A				IAMs_20	IAMs_20	18 17 51.1	
	comp=Z,7µm,19.0s						
P60A	Greenville	132.72	350	IAMs_20	IAMs_20	18 14 21.5	
	comp=Z,8µm,20.0s						
CBKS	Cedar Bluff	132.72	15	IAMs_20	IAMs_20	18 17 07.6	
	comp=Z,8µm,20.0s						
HDIL	Hopedale	132.74	4	P	PKPdf	17 06 16.7	-0.8
	baz=355						
HDIL	Hopedale	132.74	4		PKPdf	17 06 16.4	-1.2
HDIL				IAMs_20	IAMs_20	18 11 03.5	
	comp=Z,7µm,22.0s						
T25A	Trinidad	132.84	21	P	PKPdf	17 06 18.4	+0.2
	baz=334,SNR=5.6						
T25A	Trinidad	132.84	21	IAMs_20	IAMs_20	18 13 29.3	
	comp=Z,7µm,20.0s						
NBCL	Cascavel-CE	132.93	271	*e*P	PKiKP	17 06 22.8	+3.1
O53A	New Philadelph	133.00	355	P	PKPdf	17 06 17.6	-0.5
	baz=5.6						
O53A	New Philadelph	133.00	355	IAMs_20	IAMs_20	18 14 31.5	
	comp=Z,6µm,19.0s						
SFIN	Lafayette	133.02	2	P	PKPdf	17 06 18.0	-0.1
	baz=358						
ACSO	Alum Creek Sta	133.13	357	P	PKPdf	17 06 17.9	-0.4
	baz=3.2						
ACSO	Alum Creek Sta	133.13	357		PKPdf	17 06 17.4	-0.9
KSU1	Kansas State U	133.17	12	P	PKPdf	17 06 18.1	-0.4
	baz=345						
KSU1	Kansas State U	133.17	12	PKPdf	PKPdf	17 06 17.2	-1.2
O52A	Adamsville	133.18	356		PKPdf	17 06 17.4	-1.0
P38A	Dawn	133.20	8	PKPdf	PKPdf	17 06 17.3	-1.1
O49A	Covington	133.22	359		PKPdf	17 06 17.3	-1.2
MCWV	Mont Chateau	133.47	354	IAMs_20	IAMs_20	18 15 30.8	
	comp=Z,9µm,21.0s						
P40A	Paris	133.50	7		PKPdf	17 06 17.9	-1.1
NBMA	Muriti-CE	133.62	266	*e*P	PKiKP	17 06 21.9	+0.7
P43A	Skaggs, Pawnee	133.63	4		PKPdf	17 06 18.3	-0.9
P52A	Corning	133.68	356	P	PKPdf	17 06 18.5	-0.8
	baz=4.4						
P52A	Corning	133.68	356		PKPdf	17 06 18.2	-1.2
P53A	Whipple	133.77	356		PKPdf	17 06 18.7	-0.8
P46A	Rosedale	133.78	2		PKPdf	17 06 18.5	-1.0
P49A	Miami Univ. Ec	133.88	359		PKPdf	17 06 18.6	-1.2
P49A				IAMs_20	IAMs_20	18 13 52.2	
	comp=Z,8µm,20.0s						
P48A	Milroy	133.96	360	PKPdf	PKPdf	17 06 18.6	-1.3
ANMO	Albuquerque	134.00	24	P	PKPdf	17 06 20.8	+0.4
	baz=330						
ANMO	Albuquerque	134.00	24	IAMs_20	IAMs_20	18 17 12.0	
	comp=Z,5µm,19.0s						
NBIT	Itapeh - BA	134.10	256	*e*P	PKiKP	17 06 23.7	+1.7
CMC01	Camacan, BA	134.15	255	*e*P	PKiKP	17 06 23.1	+1.0
TUC	Tucson	134.25	30	P	PKiKP	17 06 21.9	-0.2
	baz=324						
TUC	Tucson	134.25	30	IAMs_20	IAMs_20	18 07 58.4	
	comp=Z,7µm,22.0s						
GUA01	Guaratinga, BA	134.29	254	*e*P	PKiKP	17 06 26.2	+3.8
NBPB	Pedra_Branca-C	134.33	269	*e*P	PKiKP	17 06 24.7	+2.0
GDU01	Guandu, BA	134.33	258	*e*P	PKiKP	17 06 24.2	+1.6
Q51A	Peebles	134.35	358		PKPdf	17 06 19.5	-1.2
Q52A	Bidwell	134.36	356		PKPdf	17 06 19.6	-1.1
Q44A	Meyer Farm, Va	134.40	4		PKPdf	17 06 19.6	-1.1
NAN01	Guarapari, ES	134.44	252	*e*P	PKiKP	17 06 24.5	+1.8
RIB01	Linhares ES	134.46	250	*e*P	PKiKP	17 06 24.8	+2.1
ALF01	Guarapari-ES	134.54	248	*e*P	PKiKP	17 06 24.5	+1.7
Y22D	IRIS PASSCAL I	134.56	25	IAMs_20	IAMs_20	18 16 37.8	
	comp=Z,8µm,21.0s						
CBN	Corbin Frederi	134.57	351	IAMs_20	IAMs_20	18 13 42.5	
	comp=Z,7µm,20.0s						
NBMO	Morrinhos-CE	134.58	272	*e*P	PKiKP	17 06 25.4	+2.3
OLIL	Olney	134.62	3		PKPdf	17 06 20.2	-0.9
KS21	Milan North St	134.68	14	IAMs_20	IAMs_20	18 18 43.5	
	comp=Z,8µm,20.0s						
R40A	Maddies Statio	134.69	7		PKPdf	17 06 20.1	-1.2
BSFB	Barra de Sao F	134.96	250	*e*P	PKiKP	17 06 25.7	+2.0
CCM	Cathedral Cave	135.04	6	P	PKPdf	17 06 21.3	-0.6
	baz=352						
CCM	Cathedral Cave	135.04	6	IAMs_20	IAMs_20	18 17 16.4	
	comp=Z,8µm,22.0s						
NBPN	Ponto Novo - B	135.07	262	*e*P	PKiKP	17 06 25.7	+1.6
R49A	Shelbyville	135.12	360		PKPdf	17 06 21.1	-1.0
S39A	Bolivar	135.13	9		PKPdf	17 06 20.9	-1.3
WCI	Wyandotte Cave	135.18	1	PKIKP	PKPdf	17 06 21.3	-0.9
WCI	Wyandotte Cave	135.18	1	P	PKPdf	17 06 21.5	-0.7
	baz=359						
WCI	Wyandotte Cave	135.18	1	PKPdf	PKPdf	17 06 21.3	-0.9
FVM	French Village	135.20	6	PKIKP	PKPdf	17 06 20.2	-2.1
FVM	French Village	135.20	6		PKPdf	17 06 20.2	-2.1
U32A	Winter Ranch,	135.21	15	IAMs_20	IAMs_20	18 18 21.4	
	comp=Z,5µm,20.0s						
T35A	Sooner Cattle	135.30	13		PKPdf	17 06 20.9	-1.6
SJMB	Sao Joao De Ma	135.30	250	*e*P	PKiKP	17 06 25.7	+1.3
121A	Cookes Peak, D	135.50	27	P	PKPdf	17 06 23.6	+0.4
	baz=327						
SIUC	Southern Illin	135.57	4		PKPdf	17 06 22.4	-0.5
S51A	Beattyville	135.74	358		PKPdf	17 06 22.4	-0.9
AMTX	Amarillo	135.81	19	IAMs_20	IAMs_20	18 10 17.9	
	comp=Z,7µm,20.0s						
MGMO	Mountain Grove	135.81	8		PKPdf	17 06 21.9	-1.6
BLA	Blacksburg	135.95	354	IAMs_20	IAMs_20	18 16 26.4	
	comp=Z,9µm,21.0s						
T42A	Van Buren	136.07	6	PKPdf	PKPdf	17 06 22.8	-1.1
NBPS	Pedro II - PI	136.08	271	*e*P	PKPdf	17 06 24.8	+0.2
OK031	S. Brethren Rd	136.15	13	IAMs_20	IAMs_20	18 11 18.3	
	comp=Z,7µm,22.0s						
U38A	Gravette	136.18	10		PKPdf	17 06 22.9	-1.3
OK030	Cody Creek RV	136.19	13	IAMs_20	IAMs_20	18 15 11.3	
	comp=Z,7µm,20.0s						
T50A	Nancy	136.39	359		PKPdf	17 06 23.4	-1.1
PBMO	Poplar Bluff	136.39	6		PKPdf	17 06 23.3	-1.2
T47A	Sharon Grove	136.40	2		PKPdf	17 06 23.8	-0.8
HHAR	Hobbs	136.41	10	PKPdf	PKPdf	17 06 23.1	-1.5
TUL1	Leonard	136.42	12	P	PKPdf	17 06 24.0	-0.6
	baz=345						
TUL1	Leonard	136.42	12		PKPdf	17 06 23.0	-1.6
U40A	Yellville	136.51	9	P	PKPdf	17 06 24.0	-0.8
	baz=349						
U40A	Yellville	136.51	9	PKPdf	PKPdf	17 06 23.3	-1.4
U40A				IAMs_20	IAMs_20	18 17 56.1	
	comp=Z,7µm,19.0s						
EPT	El Paso	136.71	26	IAMs_20	IAMs_20	18 17 02.3	
	comp=Z,6µm,19.0s						
WMOK	Wichita Mounta	136.81	16	P	PKPdf	17 06 25.5	+0.1
	baz=340						
TZTN	Tazewell	136.83	358	P	PKPdf	17 06 24.9	-0.4
	baz=2.6						
TZTN	Tazewell	136.83	358	PKPdf	PKPdf	17 06 24.5	-0.9
TZTN				IAMs_20	IAMs_20	18 20 38.5	
	comp=Z,7µm,20.0s						
U49A	Red Boiling Sp	136.90	0	PKPdf	PKPdf	17 06 24.1	-1.4
MAN01	Angra dos Reis	136.97	244	*e*P	PKiKP	17 06 28.8	+1.0
LCAR	Lake Charles	137.02	7	PKPdf	PKPdf	17 06 24.7	-1.0
FCAR	Ozark Folk Cen	137.07	8		PKPdf	17 06 23.9	-1.9
WVT	Waverly	137.23	3	PKIKP	PKPdf	17 06 25.2	-0.9
WVT	Waverly	137.23	3	P	PKPdf	17 06 23.6	-2.5
	baz=356						
WVT	Waverly	137.23	3		PKPdf	17 06 25.2	-0.9
WVT	Waverly	137.23	3	IAMs_20	IAMs_20	18 20 42.5	
	comp=Z,8µm,20.0s						
MNTX	Cornudas Mount	137.26	25	P	PKPdf	17 06 25.9	-0.4
	baz=330						
MNTX	Cornudas Mount	137.26	25	IAMs_20	IAMs_20	18 19 01.3	
	comp=Z,7µm,19.0s						
CLTN	Cedars of Leba	137.32	1		PKPdf	17 06 25.5	-0.8
V55A	Taylorsville	137.37	355		PKPdf	17 06 25.1	-1.3
W39A	Magazine	137.50	10	P	PKPdf	17 06 25.8	-0.8
	baz=348						
W39A	Magazine	137.50	10	PKPdf	PKPdf	17 06 25.4	-1.2
V52A	Sevierville	137.53	358	PKPdf	PKPdf	17 06 26.2	-0.5
CNNC	Cliffs of the	137.56	351	IAMs_20	IAMs_20	18 20 52.5	
	comp=Z,8µm,19.0s						
WHAR	Wooly Hollow	137.64	8	PKPdf	PKPdf	17 06 25.9	-1.0
V53A	Saluda	137.67	357		PKPdf	17 06 26.1	-0.9
DIAM	Diamantina, MG	137.69	250	*e*P	PKiKP	17 06 29.5	0.0
TKL	Tuckaleechee C	137.72	358	PKIKP	PKPdf	17 06 26.4	-0.6
TKL	Tuckaleechee C	137.72	358	PKPdf	PKPdf	17 06 26.4	-0.6
W41B	Gary Mavity, V	137.76	8	P	PKPdf	17 06 26.2	-0.8
	baz=350						
X37A	Clayton	137.78	12		PKPdf	17 06 26.4	-0.8
KMSC	Kings Mountain	138.08	355	P	PKPdf	17 06 27.2	-0.5
	baz=5.9						
BSCB	Bom Sucesso	138.16	246	*e*P	PKPdf	17 06 29.1	+0.8
MIAR	Mount Ida	138.16	10	P	PKPdf	17 06 26.4	-1.5
	baz=348						
MC01	Montes Claros	138.21	253	*e*P	PKiKP	17 06 31.1	+0.6
PARB	Paraibuna	138.30	242	*e*P	PKiKP	17 06 32.0	+1.4
X40A	Basin Creek Fa	138.34	9	P	PKiKP	17 06 30.1	-0.1
	baz=349						
PLAL	Pickwick Lake	138.36	3	PKPdf	PKPdf	17 06 27.0	-1.2
PLAL				IAMs_20	IAMs_20	18 12 14.4	
	comp=Z,5µm,20.0s						
BIRD	Birdtown, Kers	138.49	354		PKPdf	17 06 26.8	-1.6
ABTX	Abilene, Hawle	138.54	18	P	PKPdf	17 06 27.9	-0.7
	baz=338						
ABTX	Abilene, Hawle	138.54	18	PKPdf	PKPdf	17 06 26.6	-2.1
ROSB	Rosrio	138.58	273	*e*P	PKiKP	17 06 31.4	+0.1
JANB	Januaria	138.78	255	*e*P	PKiKP	17 06 30.7	-0.9
X48A	Hartselle	138.93	2	PKPdf	PKPdf	17 06 28.1	-1.2
TER01	Tubaro-SC	139.41	233	*e*P	PKiKP	17 06 33.5	+0.9
PET01	Itanhaem-SP	139.45	240	*e*P	PKiKP	17 06 32.3	-0.5
Z41A	Richland Creek	139.55	9	P	PKPdf	17 06 29.7	-0.7
	baz=349						
SDBA	SAO DESIDERIO	139.60	259	*e*P	PKiKP	17 06 32.9	-0.5
GOGA	Godfrey	139.95	357	P	PKPdf	17 06 31.0	-0.2
	baz=2.9						
GOGA	Godfrey	139.95	357	IAMs_20	IAMs_20	18 13 45.0	
	comp=Z,7µm,19.0s						
TX31	Lajitas Ar. Si	140.04	25	PKPdf	PKPdf	17 06 30.5	-1.1
TX32	Lajitas Array	140.04	25	PKPdf	PKPdf	17 06 30.3	-1.3
TXAR	Lajitas Array	140.04	25	PKhKP	PKPpre	17 06 23.5	
	comp=Z,0.9nm,0.7s,baz=303,slow=1.4,SNR=5.9						
TXAR				PKP	PKPdf	17 06 31.1	-0.5
	comp=Z,3.9nm,0.6s,baz=261,slow=1.1,SNR=22						
TXAR				PP	PP	17 09 28.9	+1.9
	comp=Z,5.0nm,1.0s,baz=20,slow=2.9,SNR=3.2						
TXAR	Lajitas Array	140.04	25	PKIKP	PKPdf	17 06 30.4	-1.2
TXAR	Lajitas Array	140.04	25	PKPdf	PKPdf	17 06 30.4	-1.2
Z47A	Carrollton	140.13	3	PKPdf	PKPdf	17 06 29.3	-2.2
JCT	Junction City	140.47	20	PKIKP	PKPdf	17 06 31.1	-1.1
JCT	Junction City	140.47	20	P	PKPdf	17 06 31.8	-0.4
	baz=337						
JCT	Junction City	140.47	20	PKPdf	PKPdf	17 06 31.1	-1.1
435B	Jarrell	140.87	17	P	PKPdf	17 06 32.7	-0.2
	baz=341						
VBMS	Vicksburg	140.89	7	IAMs_20	IAMs_20	18 17 21.3	
	comp=Z,7µm,20.0s						
HPIG		141.19	29	PKPdf	PKPdf	17 06 32.4	-1.5
PLTB	Pedras Altas	141.24	226	*e*P	PKiKP	17 06 36.2	0.0
SLBS	Sierra La Lagu	141.43	37	IAMs_20	IAMs_20	18 06 27.7	
	comp=Z,6µm,20.0s						
BB19B	Bebedouro	141.53	245	*e*P	PKiKP	17 06 37.9	+0.8
FRTB	Fartura	141.74	241	*e*P	PKiKP	17 06 37.5	-0.1
CPSB	Cacapava Do Su	141.84	228	*e*P	PKPdf	17 06 35.3	+0.7
IPMB	Ipameri, GO	141.99	250	*e*P	PKPdf	17 06 36.5	+1.3
HKT	Hockley	142.13	15	IAMs_20	IAMs_20	18 23 53.3	
	comp=Z,7µm,20.0s						
BRAL	Brewton	142.20	2	P	PKPdf	17 06 36.0	+0.7
	baz=357						
BRAL	Brewton	142.20	2	IAMs_20	IAMs_20	18 17 27.3	
	comp=Z,7µm,21.0s						
BDFB	Brasilia	142.24	253	PKhKP	PKPpre	17 06 31.9	
	comp=Z,7.0nm,0.6s,baz=117,slow=6.7,SNR=8.1						
BDFB	Brasilia	142.24	253	PKHKP	PKPpre	17 06 30.4	
BDFB	Brasilia	142.24	253	PKPpre	PKPpre	17 06 30.4	
SMTB	Santa Maria do	142.38	264	*e*P	PKiKP	17 06 38.1	-1.0
TMAB	Tom-Au,PA,Br	142.45	275	*e*P	PKiKP	17 06 38.4	-0.8
833A	Chaparral WMA,	142.59	20	P	PKPdf	17 06 36.1	0.0
	baz=337						
PEXB	Peixe	142.94	259	*e*P	PKiKP	17 06 39.3	-0.9
PTGB	Pitanga	143.37	237	*e*P	PKiKP	17 06 39.3	-1.6
ITRB	Iturama	143.55	246	*e*P	PKiKP	17 06 40.5	-0.8
PLCA	Paso Flores	143.67	199	PKP	PKPbc	17 06 36.2	+1.2
	comp=Z,37nm,0.8s,baz=177,slow=3.3,SNR=62						
PLCA				PKKP	PKKPdf	17 15 46.8	-2.9
	comp=Z,3.0nm,1.0s,baz=334,slow=3.1,SNR=3.2						
PLCA	Paso Flores	143.67	199	*e*P	PKPdf	17 06 38.7	+1.0
PCMB	Pacaembu	143.80	242	*e*P	PKiKP	17 06 41.4	-0.3
LL03	Petrohue	143.87	197		PKPdf	17 06 37.1	-0.8
LL04	Puerto Octay	144.09	197	PKPdf	PKPdf	17 06 37.2	-1.1
ITQB	Itaqui	144.56	226	PKPdf	PKPbc	17 06 38.3	+0.3
DWPF	Disney Wildern	145.06	354	P	PKPbc	17 06 39.5	-0.1
	baz=6.8						
DWPF	Disney Wildern	145.06	354	IAMs_20	IAMs_20	18 26 04.7	
	comp=Z,5µm,20.0s						
MDP	Montagnes des	145.12	289	PKPbc	PKPbc	17 06 40.3	0.0
	comp=Z,45nm,0.6s,baz=72,slow=2.8,SNR=38						
ARAG	Araguaiana, MT	145.83	252	*e*P	PKPab	17 06 44.2	+1.3
SNDB	Serra Nova Dou	145.87	259	*e*P	PKPab	17 06 44.2	+1.1
MCPB	Macapa, AP	146.01	279	*e*P	PKPab	17 06 44.2	+0.5
ANWB	Willy Bob	146.22	316	*e*P	PKiKP	17 06 47.7	+0.9
ANWB	Willy Bob	146.22	316	*e*P	PKiKP	17 06 47.8	+1.0
ANBD	Bethesda, Anti	146.63	316	*e*P	PKiKP	17 06 47.0	-0.6
ANBD	Bethesda, Anti	146.63	316	*e*P	PKiKP	17 06 47.8	+0.1
SMRT	St. Maarten	146.81	318	*e*P	PKPdf	17 06 42.7	-0.9
SMRT	St. Maarten	146.81	318	*e*P	PKPbc	17 06 44.9	-0.4
SMRT	St. Maarten	146.81	318	PKPdf	PKPdf	17 06 42.1	-1.5
CPUP	Villa Florida	146.87	231	PKPbc	PKPbc	17 06 45.2	0.0
	comp=Z,18nm,0.7s,baz=103,slow=2.7,SNR=40						
CPUP	Villa Florida	146.87	231	*e*P	PKPbc	17 06 45.7	+0.4
MAGL	Barre de l'ile	147.02	313	*e*P	PKiKP	17 06 54.7	+6.2
MAGL	Barre de l'ile	147.02	313	*e*P	PKiKP	17 06 56.3	+7.8
SKI	Saint Kitts	147.10	317	*e*P	PKPbc	17 06 46.5	+0.3
SEUS	St. Eustatius	147.15	318	*e*P	PKiKP	17 06 51.3	+2.6
SEUS	St. Eustatius	147.15	318	*e*P	PKiKP	17 06 52.2	+3.5
CBE	Ff, Capester	147.18	314	*e*P	PKPab	17 06 47.3	-0.7
SABA	Saba	147.23	318	*e*P	PKPdf	17 06 35.0	-9.3
SABA	Saba	147.23	318	*e*P	PKPdf	17 06 36.0	-8.3
DWS	Wesley	147.29	313	*e*P	PKPab	17 06 47.9	-0.6
TDBA	Terre de Bas,	147.34	314	*e*P	PKPab	17 06 48.3	-0.4
TDBA	Terre de Bas,	147.34	314	*e*P	PKiKP	17 06 51.7	+2.6
DLPL	La Plaine	147.40	313	*e*P	PKPdf	17 06 45.7	+1.1
DLPL	La Plaine	147.40	313	*e*P	PKiKP	17 06 55.6	+6.3
DSLB	Salisbury	147.46	313	*e*P	PKPab	17 06 48.8	-0.3
DSLB	Salisbury	147.46	313	*e*P	PKiKP	17 06 51.4	+2.0
BBGH	Gun Hill	147.47	308	*e*P	PKPab	17 06 48.6	-0.6
BBGH	Gun Hill	147.47	308	*e*P	PKiKP	17 06 59.1	+10
ILAM	Ilet Lapin Mar	147.48	311	*e*P	PKiKP	17 06 52.8	+3.4
ILAM	Ilet Lapin Mar	147.48	311	*e*P	PKiKP	17 06 52.9	+3.4
MDN	Morne-Daniel	147.52	313	*e*P	PKiKP	17 06 51.2	+1.7
MDN	Morne-Daniel	147.52	313	*e*P	PKiKP	17 06 55.6	+6.1
MPOM	Morne Pois Mar	147.68	311	*e*P	PKPdf	17 06 46.0	+1.0
MPOM	Morne Pois Mar	147.68	311	*e*P	PKPdf	17 06 46.2	+1.1
FDF	Fort de France	147.72	312	*e*P	PKiKP	17 06 49.5	-0.5
FDF	Fort de France	147.72	312	*e*P	PKPab	17 06 51.6	+1.4
BIM	Bigot	147.79	311	*e*P	PKPbc	17 06 48.4	+0.2
BIM	Bigot	147.79	311	*e*P	PKiKP	17 06 49.7	-0.5
SLBI	Saint Lucia, B	148.03	310	*e*P	PKPab	17 06 55.8	+4.4
SLBI	Saint Lucia, B	148.03	310	*e*P	PKPab	17 06 56.6	+5.2
CUPR	Culebra, Puert	148.03	322	PKPbc	PKPbc	17 06 48.1	-0.6
AQDB	Aquidauana	148.08	242	*e*P	PKPbc	17 06 47.8	-0.9
AQDB	Aquidauana	148.08	242	PKPdf	PKPdf	17 06 44.5	-1.1
AQDB				PKPbc	PKPbc	17 06 48.3	-0.5
CDVI	St. Croix	148.13	320	*e*P	PKPbc	17 06 48.7	-0.2
MCLT	Moule a Chique	148.20	310	*e*P	PKPab	17 06 52.0	-0.1
MCLT	Moule a Chique	148.20	310	*e*P	PKPab	17 06 54.5	+2.4
SLB	Belfond	148.20	310	*e*P	PKPbc	17 06 49.0	-0.3
PP1B	Ponte de Pedra	148.25	247	*e*P	PKPbc	17 06 48.4	-0.9
MTP	Monte Pirata	148.36	322	PKPbc	PKPbc	17 06 48.9	-0.7
ML02	Panimavida	148.42	202	PKPbc	PKPbc	17 06 48.3	-1.0
MALB	Monte Alegre	148.46	278	*e*P	PKPbc	17 06 48.7	-1.2
GRTK	Grand Turk	148.51	334	PKPbc	PKPbc	17 06 49.1	-0.7
GRTK				IAMs_20	IAMs_20	18 27 22.3	
	comp=Z,7µm,22.0s						
SSV	Crater Summit	148.63	310	*e*P	PKPdf	17 06 43.4	-3.4
PDPR	Patillas Dam,	148.71	322		PKPbc	17 06 49.1	-1.3
SVB	Belmont	148.71	310	*e*P	PKPdf	17 06 42.1	-4.7
SVB	Belmont	148.71	310	*e*P	PKPab	17 06 53.6	-0.6
SJG	San Juan	148.71	323	PKPbc	PKPbc	17 06 49.7	-0.7
	comp=Z,20nm,0.7s,baz=106,slow=8.9,SNR=6.7						
SJG	San Juan	148.71	323	PKP2	PKPbc	17 06 49.0	-1.4
SJG	San Juan	148.71	323	*e*P	PKPbc	17 06 50.8	+0.3
SJG	San Juan	148.71	323		PKPbc	17 06 49.0	-1.4
AOPR	Arecibo Observ	148.89	324	*e*P	PKPdf	17 06 46.6	-0.4
OBIP	Obispado Ponce	149.04	323	PKPbc	PKPbc	17 06 49.8	-1.5
TOSP	Speyside	149.31	306	*e*P	PKiKP	17 06 53.8	+0.6
TOSP	Speyside	149.31	306	*e*P	PKPab	17 06 55.0	-1.6
GCMP	Grenada, Carri	149.32	309	*e*P	PKPab	17 06 57.5	+0.8
GCMP	Grenada, Carri	149.32	309	*e*P	PKPab	17 06 57.6	+0.9
SALV	Santo Antonio	149.43	250	*e*P	PKPbc	17 06 51.8	-0.5
MOIG	Morelia	149.49	30	PKPbc	PKPbc	17 06 50.5	-2.3
BO01	Tunca	149.49	204	PKPbc	PKPbc	17 06 51.4	-0.6
RPN	Rapa Nui	149.67	135	PKPbc	PKiKP	17 06 53.6	-0.1
	baz=203,slow=4.4						
GRGR	Grenville	149.71	308	*e*P	PKPdf	17 06 49.3	+0.9
GRGR	Grenville	149.71	308	*e*P	PKPab	17 06 56.8	-1.4
GRFF	Grenada Fort F	149.83	308	*e*P	PKiKP	17 06 54.4	+0.1
GRFF	Grenada Fort F	149.83	308	*e*P	PKPab	17 07 04.5	+5.8
MT09	Talagante	149.99	205		PKPbc	17 06 52.3	-1.1
NPGB	Novo Progresso	150.06	268	*e*P	PKPbc	17 06 52.1	-1.9
ITTB	Itaituba	150.26	273	*e*P	PKPbc	17 06 52.4	-2.1
CLDB	Colider	150.37	260	*e*P	PKPbc	17 06 52.4	-2.3
TRN	Trinidad (W)	150.38	306	*e*P	PKPdf	17 06 50.3	+0.8
TRN	Trinidad (W)	150.38	306	*e*P	PKiKP	17 06 55.7	+0.2
MT02	Curacav	150.49	205		PKPbc	17 06 53.2	-1.3
SDDR	Presa de Saban	150.78	332	*e*P	PKPbc	17 06 54.7	-0.9
SDDR	Presa de Saban	150.78	332	IAMs_20	IAMs_20	18 20 34.9	
	comp=Z,5µm,21.0s						
PDRB	Porto dos Gac	151.20	258	*e*P	PKPdf	17 06 53.3	+2.6
GTBY	Guantanamo Bay	151.52	339	*e*P	PKiKP	17 07 00.1	+2.4
GTBY	Guantanamo Bay	151.52	339	IAMs_20	IAMs_20	18 27 26.1	
	comp=Z,4µm,20.0s						
PTLB	Pontes e Lacer	152.76	249	*e*P	PKPdf	17 06 56.1	+3.1
PLCV	Puerto La Cruz	153.19	309		PKPbc	17 06 58.7	-2.5
PCRV	Puerto La Cruz	153.22	309	PKPbc	PKPbc	17 06 58.7	-2.6
	comp=Z,15nm,0.6s,baz=226,slow=2.8,SNR=14						
BOAV	Boa Vista	153.42	289	*e*P	PKPdf	17 06 57.0	+2.9
PTGA	Pitinga	153.81	282	PKP	PKPdf	17 06 55.1	+0.4
	comp=Z,11nm,1.1s,baz=51,slow=1.6,SNR=10						
PTGA				PKPbc	PKPbc	17 07 02.0	-0.6
	comp=Z,21nm,1.0s,baz=35,slow=2.5,SNR=16						
PTGA	Pitinga	153.81	282	PKPdf	PKPdf	17 06 53.4	-1.3
MTDJ	Mount Denham	153.90	343	*e*P	PKPbc	17 07 02.1	-0.6
MTDJ	Mount Denham	153.90	343	IAMs_20	IAMs_20	18 30 19.6	
	comp=Z,7µm,21.0s						
VILB	Vilhena	154.34	254	*e*P	PKPdf	17 06 58.7	+3.3
SIV	San Ignacio	154.39	247	PKP	PKPdf	17 06 54.9	-0.4
	comp=Z,2.4nm,0.7s,baz=106,slow=4.6,SNR=10						
SIV				PKPbc	PKPbc	17 07 03.6	-0.1
	comp=Z,9.1nm,0.9s,baz=103,slow=2.0,SNR=18						
CMIG	Matias Romero	154.51	21	PKP	PKPdf	17 06 55.3	-0.2
	comp=Z,3.0nm,0.6s,baz=101,slow=1.9,SNR=2.3						
CMIG				PKPbc	PKPbc	17 07 03.0	-0.9
	comp=Z,12nm,0.8s,baz=243,slow=1.7,SNR=2.6						
HATO	Hato, Curacao	154.96	319	IAMs_20	IAMs_20	18 28 04.2	
	comp=Z,6µm,22.0s						
MACA	Manacapuru-AM	155.00	277	*e*P	PKPdf	17 06 59.4	+3.1
URIC	Uribia, Colomb	157.21	324	*e*P	PKPdf	17 07 03.9	+4.7
LVC	Limon Verde	157.57	224	PKP	PKPdf	17 07 02.0	+2.1
	comp=Z,3.6nm,0.8s,baz=152,slow=4.5,SNR=2.5						
LVC	Limon Verde	157.57	224	*e*P	PKPdf	17 07 02.5	+2.6
SAML	Samuel	157.78	263	*e*P	PKPdf	17 06 60.0	+0.1
SAML	Samuel	157.78	263	*e*P	PKPdf	17 07 03.7	+3.8
SDV	Santo Domingo	158.47	316	PKP	PKPdf	17 07 00.7	-0.3
	comp=Z,3.4nm,0.2s,baz=342,slow=3.1,SNR=6.7						
SDV				PP	PP	17 11 20.5	+5.6
	comp=Z,5.9nm,0.3s,baz=31,slow=9.5,SNR=3.3						
SDV	Santo Domingo	158.47	316	*e*P	PKPdf	17 06 58.1	-2.9
SDV	Santo Domingo	158.47	316	*e*P	PKPdf	17 07 03.7	+2.7
SMRC	Santa Marta, M	158.90	328	*e*P	PKPdf	17 07 12.1	+11
ELOV	Elorza	158.92	310	*e*P	PKPdf	17 07 04.2	+2.9
TGUH	Tegucigalpa,Un	159.19	5	*e*P	PKPdf	17 07 05.2	+3.5
LL1C	La Loma 1 Cana	159.85	324	*e*P	PKPdf	17 07 05.5	+3.2
ARGC	Ariguani, Magd	159.99	326	*e*P	PKPdf	17 07 12.4	+10
SJCC	San Jacinto, C	160.46	328	*e*P	PKPdf	17 07 02.3	-0.9
LPAZ	La Paz	160.55	240	PKP	PKPdf	17 07 04.6	+0.7
	comp=Z,6.3nm,1.0s,baz=62,slow=2.9,SNR=19						
LPAZ	La Paz	160.55	240	PKIKP	PKPdf	17 07 03.2	-0.6
LPAZ	La Paz	160.55	240	*e*P	PKPdf	17 07 06.1	+2.2
LPAZ	La Paz	160.55	240	*e*P	PKPdf	17 07 05.2	+1.4
LPAZ	La Paz	160.55	240	PKPdf	PKPdf	17 07 03.2	-0.6
ETMB	Extrema	160.67	260	PKPdf	PKPdf	17 07 01.9	-1.3
OCAC	Ocana	160.72	321	*e*P	PKPdf	17 07 03.9	+0.4
SMLC	San Martn de	160.74	324	*e*P	PKPdf	17 07 08.0	+4.7
PAMC	Pamplona, Colo	161.00	317	*e*P	PKPdf	17 07 08.8	+4.6
TAMC	Tame, Arauca	161.00	314	*e*P	PKPdf	17 07 07.2	+3.5
MOTC	Monteria, Cord	161.66	327	*e*P	PKPdf	17 07 04.7	+0.4
BRRC	Barranca, Sant	161.84	319	*e*P	PKPdf	17 07 07.7	+3.1
BARC	Barichara	161.87	317	*e*P	PKPdf	17 07 09.6	+4.7
ZARC	Zaragoza, Cauc	162.25	323	*e*P	PKPdf	17 07 08.0	+3.1

RUSC	La Rusia	162.30	315	eP	PKPdf	17 07 08.8	+3.2
UREC	San Jos de Ur	162.43	325	eP	PKPdf	17 07 03.9	-1.2
CAPC	Capurgana	162.63	332	eP	PKPdf	17 07 10.5	+5.2
PTGC	Puerto Gaitan,	162.73	309	eP	PKPdf	17 07 08.8	+3.4
JTS	Las Juntas de	163.00	358	eP	PKPdf	17 07 11.9	+6.3
BCIP	Isla Barro Col	163.15	340	eP	PKPdf	17 07 06.7	+0.9
SPBC	San Pablo de B	163.15	317	eP	PKPdf	17 07 07.2	+1.2
DBBC	Dabeiba	163.41	326	eP	PKPdf	17 07 04.7	-1.5
CHIC	Chingaza	163.64	314	eP	PKPdf	17 07 11.5	+4.6
HELC	Santa Helena	163.68	322	eP	PKPdf	17 07 08.0	+1.2
NORC	Norcasia	163.75	319	eP	PKPdf	17 07 03.9	-2.6
ROSC	El Rosal	163.91	316	PKP	PKPdf	17 07 07.1	+0.1
	comp=Z,6.0nm,0.3s,baz=198,slow=18,SNR=6.7						
ROSC	El Rosal	163.91	316	eP	PKPdf	17 07 10.1	+3.0
PTAC	Punta Ardita,	164.14	331	eP	PKPdf	17 07 08.8	+2.1
CBOC	Ciudad Bolivar	164.23	323	eP	PKPdf	17 07 11.5	+4.4
BRU2	Volcan	164.24	350	eP	PKPdf	17 07 14.3	+7.3
TBTG	Tabatinga, AM	164.25	279	eP	PKPdf	17 07 07.7	+0.8
TBTG	Tabatinga, AM	164.25	279	eP	PKPdf	17 07 10.4	+3.6
GUY2C	Guyana, Caldas	164.32	319	eP	PKPdf	17 07 08.0	+0.5
ANIL	Santa Ana	164.90	318	eP	PKPdf	17 07 11.5	+3.7
PLMC	San Jos del P	165.15	321	eP	PKPdf	17 07 08.8	+1.1
ORTC	Ortega, Tolima	165.21	316	eP	PKPdf	17 07 06.4	-1.4
MACC	Macarena, Meta	165.34	307	eP	PKPdf	17 07 11.3	+3.5
PIZC	Pizarro, Choco	165.74	325	eP	PKPdf	17 07 08.8	+0.7
YOTC	Yotoco, Valle	165.90	319	eP	PKPdf	17 07 08.0	-0.4
MARP	Paez Belalcaza	166.47	315	eP	PKPdf	17 07 09.4	+0.3
GARC	Garzon, Huila	166.58	311	eP	PKPdf	17 07 10.5	+1.4
PCON	Cinco Dias	167.14	315	eP	PKPdf	17 07 08.5	-1.5
PTLC	Puerto Leguiza	167.25	303	eP	PKPdf	17 07 08.8	-0.5
SOTA	Rioblanco	167.42	315	eP	PKPdf	17 07 09.1	-1.0
MAPC	Malpelo	168.57	340	eP	PKPdf	17 07 11.3	+1.1
GCUF	Volcan Galeras	168.58	314	eP	PKPdf	17 07 09.2	-1.7
TULM	Tulcn-Chalpat	169.25	314	eP	PKPdf	17 07 18.1	+6.8
CUSE	Cuicocha Este	169.97	315	eP	PKPdf	17 07 18.1	+6.5
OTAV	Otavalo	170.06	315	eP	PKPdf	17 07 05.2	-6.6
PAC1	Pacto, Paraso	170.28	316	eP	PKPdf	17 07 09.8	-1.6
ATAH	Atahualpa	172.92	267	PKP	PKPdf	17 07 12.8	-0.2
	comp=Z,7.3nm,0.8s,baz=112,slow=8.5,SNR=5.7						

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*FUNV **08** 16:51:10.6, 8°.44N×71°.56W, h4^{km}, MW3.0*

ISC 08 16:51:09.2±1.2**, 8°.46N**±0°.03×**71°.48W**±0°.02**, h4**^{km}±10^{km}**, n29, σ1^{s}.59**/56**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SDV	Santo Domingo	0.94	63	eP	Pg	16 51 27.0	-0.2
SDV				eS	Sg	16 51 39.5	+0.1
SDV				i		16 51 45.0	
	comp=Z,126nm,0.5s						
CAPV	Capacho	1.02	234	eP	Pg	16 51 28.7	0.0
CAPV				eS	Sg	16 51 41.4	-0.6
PAMC	Pamplona, Colo	1.64	227	eP	Pg	16 51 41.2	+0.4
PAMC				eS	Sg	16 52 02.4	+0.2
PAMC				i		16 52 06.7	
	comp=Z,317nm,0.3s						
OCAC	Ocana	1.83	263	eP	Pn	16 51 42.6	+1.0
OCAC				eS	Sg	16 52 06.8	-1.3
OCAC				i		16 52 09.3	
	comp=Z,635nm,0.4s						
MCQV	Machiques	1.89	327	eP	Pn	16 51 43.0	+0.8
MCQV				eS	Sn	16 52 06.4	-0.1
TAMC	Tame, Arauca	2.04	189	eP	Pg	16 51 48.8	+0.5
TAMC				eS	Sg	16 52 14.7	-0.1
TAMC				i		16 52 20.5	
	comp=Z,117nm,0.4s						
LL1C	La Loma 1 Cana	2.31	298	eP	Pn	16 51 49.8	+1.8
LL1C				eS	Sb	16 52 19.1	-1.2
LL1C				i		16 52 26.6	
	comp=Z,264nm,0.2s						
ELOV	Elorza	2.46	126	eP	Pn	16 51 51.8	+1.8
ELOV				eS	Sn	16 52 22.0	+1.4
BARC	Barichara	2.51	222	eP	Pb	16 51 54.7	-0.3
BARC				eS	Sg	16 52 29.7	-0.2
BARC				i		16 52 32.0	
	comp=Z,113nm,0.5s						
DABV	Dabajuro	2.58	19	eP	Pn	16 51 53.1	+1.4
DABV				eS	Sn	16 52 25.0	+1.4
SMLC	San Martn de	2.58	278	eP	Pn	16 51 51.9	+0.1
SMLC				eS	Sb	16 52 28.6	+0.4
SMLC				i		16 52 32.1	
	comp=Z,86nm,0.2s						
BRRC	Barranca, Sant	2.59	239	eP	Pb	16 51 54.7	-1.5
BRRC				eS	Sg	16 52 32.3	-0.1
BRRC				i		16 52 41.3	
	comp=Z,52nm,0.3s						
SIQV	Siquisique	2.73	37	eP	Pn	16 51 55.2	+1.4
SIQV				eS	Sn	16 52 28.7	+1.4
RUSC	La Rusia	3.01	212	eP	Pn	16 51 60.0	+1.9
RUSC				eS	Sn	16 52 37.4	+2.5
RUSC				i		16 52 44.7	
	comp=Z,54nm,0.3s						
MAPV	Macapo	3.28	65	eP	Pn	16 52 03.2	+1.8
MAPV				eS	Sn	16 52 41.1	+0.2
BAUV	El Baul	3.43	82	eP	Pn	16 52 04.4	+0.9
BAUV				eS	Sn	16 52 44.3	-0.4
ZARC	Zaragoza, Cauc	3.48	254	eP	Pn	16 52 05.2	+1.0
ZARC				eS	Sn	16 52 46.8	+0.9
ZARC				i		16 53 08.3	
	comp=Z,32nm,0.6s						
MONV	Montecano	3.77	23	eP	Pn	16 52 08.6	+0.4
MONV				eS	Sn	16 52 52.4	-0.7
SPBC	San Pablo de B	3.80	223	eP	Pg	16 52 30.3	+8.3
SPBC				eS	Sn	16 52 51.8	-2.0
SPBC				i		16 52 54.6	
	comp=Z,62nm,0.2s						
SJCC	San Jacinto, C	3.92	292	eP	Pn	16 52 11.8	+1.6
SJCC				eS	Sn	16 52 56.2	-0.6
UREC	San Jos de Ur	4.07	260	eP	Pn	16 52 14.7	+2.4
UREC				eS	Sn	16 53 03.1	+2.6
UREC				i		16 53 26.4	
	comp=Z,18nm,0.2s						
BENV	Beln	4.11	68	eP	Pn	16 52 13.9	+1.0
BENV				eS	Sn	16 53 01.0	-0.6
CHIC	Chingaza	4.42	211	eP	Pn	16 52 19.2	+1.8
CHIC				eS	Sn	16 53 08.0	-1.5
CHIC				i		16 53 16.4	
	comp=Z,13nm,0.4s						
HELC	Santa Helena	4.61	241	eP	Pg	16 52 42.8	+5.3
HELC				eS	Sn	16 53 12.1	-2.0
HELC				i		16 53 19.7	
	comp=Z,20nm,0.4s						
TACV	Tcata	4.70	69	eP	Pn	16 52 22.0	+1.0
TACV				eS	Sn	16 53 15.5	-0.6
VILC	Villavicencio,	4.85	207	eP	Pn	16 52 24.5	+1.4
VILC				eS	Sn	16 53 19.2	-0.7
VILC				i		16 53 32.5	
	comp=Z,681nm,0.5s						
PAYV	Puerto Ayacuch	4.86	128	eP	Pn	16 52 23.0	-0.1
PAYV				eS	Sn	16 53 17.6	-2.2
GUY2C	Guyana, Caldas	5.02	230	eP	Pn	16 52 28.4	+2.6
GUY2C				eS	Sn	16 53 18.5	-6.1
GUY2C				i		16 53 33.5	
	comp=Z,12nm,0.5s						
BIRV	Birongo	5.52	68	eP	Pn	16 52 33.4	+1.2
BIRV				eS	Sn	16 53 33.5	-2.6

IDC 08 16:58:55.3±1.8**, 6°.59N**×**94°.59E, h0**^{km}**, mb3.9**/5**, mb1 4.1**/5**, mb1mx3.6**/67**, mbtmp3.9**/5**, Error ellipse: s-maj=73.4km s-min=32.6km az=52.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	41.43	347	P	P	17 06 43.5	-0.2
	1.7nm,0.9s,baz=174,slow=8.0,SNR=2.2						
SONM	Songino Array	42.32	12	P	P	17 06 51.2	+0.3
	0.8nm,0.9s,baz=199,slow=8.5,SNR=2.3						
WRA	Warramunga Arr	47.16	125	P	P	17 07 29.7	-0.2
	1.9nm,1.2s,baz=307,slow=8.7,SNR=2.2						
FINES	FINESS Array B	74.05	332	P	P	17 10 32.4	-0.4
	7.2nm,1.0s,baz=111,slow=7.6,SNR=4.9						
GERES	GERESS Array B	79.08	318	P	P	17 11 02.1	+0.4
	0.2nm,0.4s,baz=89,slow=6.4,SNR=4.6						

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*MOS **08** 16:59:19.1±1.0, 6°.82N×94°.65E, h16^{km}, mb5.3/33, Error ellipse: s-maj=8.8km s-min=4.1km az=115.6*

*NEIC **08** 16:59:20.9±1.6, 6°.93N±0°.07×94°.76E±0°.08, h10^{km}±1^{km}, mb5.2/121, Error ellipse: s-maj=13.7km s-min=9.9km az=238.0*

*IDC **08** 16:59:24.6±2.7, 6°.91N×94°.73E, h33^{km}±19^{km}, mb4.7/53, mb1 4.7/54, mb1mx4.7/67, mbtmp4.9/54, ML4.2/1, Error ellipse: s-maj=10.5km s-min=8.6km az=63.0*

*DJA **08** 16:59:27.6±1.4, 7°N±4°×9°5E±°, h29^{km}±12^{km}, M5.5/14, mb5.2/14, MLv5.6/6*

ISC 08 16:59:22.7±0.8**, 6°.85N**±0°.04×**94°.73E**±0°.05**, h23**^{km}±5^{km}**, n578, σ1^{s}.45**/594**, mb5.1**/182**, MS5.5**/4**, 19C-27D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	2.73	126	P	Pn	17 00 05.5	+0.3
LHMI	Lhok Sumawe	2.73	126		Pn	17 00 05.0	-0.2
LHMI	Lhok Sumawe	2.73	126	P	Pn	17 00 06.8	+1.6
TPTI		4.32	145	P	Pn	17 00 29.8	+2.8
SRIT	Nakonsritamara	5.14	70	Pn	Pn	17 00 37.5	-0.8
PBA	Port Blair	5.17	338	eP	Pn	17 00 37.1	-1.5
PBA	Port Blair	5.17	338	Pn	Pn	17 00 37.8	-0.8
PSI	Prapat	5.80	134	Pn	Pn	17 00 49.3	+1.8
	6.3nm,0.3s,baz=299,slow=12,SNR=11						
RPSI	Rantau Prapat	5.87	134		Pn	17 00 49.3	+0.9
GSI	Gunungsitoli	6.20	153	Pn	Pn	17 00 54.4	+1.6
DGPR	DIGLIPUR	6.54	344	eP	Pn	17 00 56.0	-1.5
MNSI	Mandailing Nat	7.72	141	P	Pn	17 01 15.7	+2.0
	2.6nm87nm,1.0s						
BKNI	Bangkinang	9.03	136	P	Pn	17 01 35.4	+3.6
	186nm,1.0s						
BKNI	Bangkinang	9.03	136	P	Pn	17 01 37.2	+5.4
PPI	Padang Panjang	9.20	142	P	Pn	17 01 34.5	+0.4
PDSI	Padang	9.60	143	P	Pn	17 01 42.5	+2.9
	39nm,0.9s						
DSRI	Dabo	12.23	126	P	P	17 02 24.4	-3.5
CMAR	Chiang Mai Arr	12.25	19	Pn	Pn	17 02 19.2	+3.3
	0.6nm,0.3s,baz=212,slow=14,SNR=6.6						
JMBI	JAMBI	12.25	133	P	Pn	17 02 18.7	+2.8
MASI	Maura Aman, Be	12.44	143	P	P	17 02 24.5	-5.7
CHTO	Chiang Mai	12.59	19	P	Pn	17 02 19.8	-0.7
CHTO	Chiang Mai	12.59	19	Pn	Pn	17 02 19.8	-0.7
UBPT	Khong Chiam	13.46	51	Pn	Pn	17 02 28.7	-3.7
LHSI	Lahat	13.77	140	P	Pn	17 02 35.9	-0.7
	156nm,1.1s						
MNAI	Manna	13.83	143	Pn	Pn	17 02 35.9	-1.7
PPBI	Pangkal Pinang	14.48	128	P	Pn	17 02 47.4	+1.0
DLV	T Lat	14.49	69	P	P	17 02 50.3	-2.9
MDSI	Maura Dua	14.69	140	P	Pn	17 02 48.9	-0.3
LWLI	Liwa	15.02	141	P	Pn	17 02 49.4	-4.4
KLSI		15.20	139	P	Pn	17 02 51.6	-4.5
VIS	Vishakhapatnam	15.51	315	eP	Pn	17 02 54.8	-5.3
MDRS	Chennai	15.54	295	eP	Pn	17 03 00.3	-0.2
MDRS				IAmb	IAmb	17 03 15.0	
	comp=Z,81nm,1.0s						
MDRS				ex	x	17 05 14.5	
KASI	Kota Agung	15.69	141	P	Pn	17 03 00.5	-1.9
	comp=Z,92nm,0.9s						
TRD	Trivandrum	17.69	277	eP	Pn	17 03 25.1	-2.6
TRD				ex	x	17 03 26.7	
STKI	Sintang	18.02	111	P	P	17 03 35.0	+2.8
	comp=Z,54nm,0.8s						
KOHI	KOHIMA	18.78	358	eP	Pn	17 03 42.5	+1.3
SHL	Shillong	18.81	352	P	P	17 03 40.5	-0.5
SHL				pmax	pmax		
	comp=Z,54nm,0.9s						
SHL	Shillong	18.81	352	eP	P	17 03 40.7	-0.4
SHL				ex	x	17 03 47.8	
SHL	Shillong	18.81	352	P	P	17 03 40.5	-0.5
BOK	Bokaro	18.87	334	eP	P	17 03 40.6	-0.9
BOK				IAmb	IAmb	17 03 47.5	
	comp=Z,88nm,0.9s						
HYB	Hyderabad	18.97	305	i P	P	17 03 43.0	+0.4
HYB	Hyderabad	18.97	305	eP	Pn	17 03 43.6	+0.3
QIZ	Qiongzhong	19.05	49	P	Pn	17 03 48.6	+4.2
MOKO	MOKOCHONG	19.37	359	eP	P	17 03 46.1	-1.0
PBKI	Pangkalan Bun	19.39	119	P	Pn	17 03 50.2	+1.7
KMI	Kunming	19.73	22	⇑P	Pn	17 03 58.3	+5.7
KMI				pmax	pmax		
	comp=Z,64nm,1.5s						
ITAN	ITANAGAR	20.21	357	eP	P	17 03 54.6	-1.5
LKP	Lekhapani	20.40	3	eP	P	17 03 59.0	+0.8
ODAN	Odare	21.09	342	eP	P	17 04 10.3	+4.4
	comp=Z,202nm,0.8s						
GTK	Tadong	21.18	345	eP	P	17 04 08.3	+1.6
YOGI	Yogyakarta	21.29	133	P	P	17 04 02.5	-5.4
NGJI	Ngawi	21.86	130	P	P	17 04 18.1	+4.1
	comp=Z,102nm,0.9s						
GOA	Goa	22.21	295	eP	P	17 04 20.0	+2.2
GOA				IAmb	IAmb	17 04 26.4	
	comp=Z,50nm,0.8s						
JIRN	Jiri	22.23	340	eP	P	17 04 19.6	+1.3
	comp=Z,64nm,0.7s						
PKIN	Phulchoki	22.44	338	eP	P	17 04 21.5	+1.1
	comp=Z,87nm,0.7s						
BBKI	Banjar Baru	22.54	116	P	P	17 04 23.2	+1.9
DMN	Daman	22.58	337	eP	P	17 04 23.1	+1.2
	comp=Z,233nm,0.9s						
KKN	Kakani	22.68	338	eP	P	17 04 23.7	+0.8
	comp=Z,62nm,0.8s						
LSA	Lhasa	22.98	352	P	P	17 04 25.3	-1.0
LSA				pmax	pmax		
	comp=Z,34nm,0.7s						
LSA	Lhasa	22.98	352	P	P	17 04 25.3	-1.0
GKN	Gorkha	23.11	337	eP	P	17 04 26.9	-0.5
KOLN	Koldanda	23.33	334	eP	P	17 04 29.6	-0.1
	comp=Z,202nm,1.0s						
KMMI	Kalianget	23.64	125	P	P	17 04 34.2	+1.7
KBKI	Kotabaru	23.66	115	P	P	17 04 35.7	+3.0
	comp=Z,30nm,1.8s						
BLJI	Banyuglugur	23.75	127	P	P	17 04 36.2	+2.6
	comp=Z,143nm,2.3s						
DANN	Dangsing	23.77	335	eP	P	17 04 32.6	-1.4
PYUN	Piuthan	23.89	334	eP	P	17 04 34.4	-0.6
ABJI	Asem Bagus	24.29	126	P	P	17 04 40.0	+1.4
	comp=Z,471nm,1.0s						
JAGI	Jajag, Banyuwa	24.63	128	P	P	17 04 42.1	+0.4
	comp=Z,71nm,0.9s						
JAGI	Jajag, Banyuwa	24.63	128	P	P	17 04 41.1	-0.6
JAGI				IAmb	IAmb	17 05 07.2	
	comp=Z,68nm,1.1s						
SRBI	Singaraja	25.24	126	P	P	17 04 48.8	+1.5
H08S3	Diego Garcia H	26.43	237	T	T	17 31 43.0	
	baz=57,slow=75,SNR=351						
H08S2	Diego Garcia H	26.44	237	T	T	17 31 43.4	
	baz=57,slow=75,SNR=172						
H08S1	Diego Carcia H	26.45	237	T	T	17 31 44.3	
	baz=57,slow=75,SNR=97						
TOLI2	Tolitoli	26.60	101	P	P	17 05 03.7	+4.1
SONA	Sohna	27.06	324	eP	P	17 05 03.7	+0.1
ENH	Enshi	27.12	29	P	P	17 05 02.9	-1.2
ENH				IAmb	IAmb	17 05 19.6	
	comp=Z,82nm,1.3s						
AYAN	Aya Nagar	27.21	324	eP	P	17 05 05.3	+0.4
AYAN				i x	x	17 05 11.7	
LQP	Lukban	27.32	72	⇓eP	P	17 05 09.5	+3.2
AJM	Ajmer	27.33	318	eP	P	17 05 06.0	-0.1
KUDL	Kundal	27.33	323	eP	P	17 05 06.3	+0.3
KAPI	Kappang	27.62	115	P	P	17 05 15.4	+6.6
LUWI	Luwuk	29.06	105	P	P	17 05 27.8	+6.1
LZH	Lanzhou	30.28	15	eP	P	17 05 36.0	+3.6
LZH				pP	sP	17 05 40.6	-0.2
LZH				pmax	pmax		
	comp=Z,33nm,1.3s						
DHRM	DHARAMSHALA	30.56	328	eP	P	17 05 36.9	+1.9
YHNB	Yeheng	31.07	52	P	P	17 05 47.1	+7.7
SANI	Sanana	32.43	105	P	P	17 05 56.3	+4.9
GTA	Gaotai	32.74	7	eP	P	17 05 54.4	+0.4
GTA				pP	pwP	17 06 05.6	+2.5
GTA				sP	sP	17 06 09.5	+7.0
GTA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
NIL	Nilore	33.27	326	P	P	17 05 57.5	-1.1
NIL				pmax	pmax		
	comp=Z,160nm,0.8s						
NIL	Nilore	33.27	326	P	P	17 05 57.5	-1.1
NJ2	Nanjing	33.69	39	eP	P	17 06 02.0	-0.2
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
SOEI	Soe	33.73	119	P	P	17 06 01.4	-1.5
SOEI				IAmb	IAmb	17 06 13.8	
	comp=Z,41nm,0.9s						
KBL	Kabul	36.34	323	P	P	17 06 24.3	-1.0
KBL				pmax	pmax		
	comp=Z,20nm,1.1s						
KBL	Kabul	36.34	323	P	P	17 06 24.3	-1.0
KSH	Kashi	36.65	335	P	P	17 06 26.0	-1.7
KSH				sP	pP	17 06 32.5	-1.5
KSH				pmax	pmax		
	comp=Z,11nm,0.8s						
HHC	Hu-ho-hao-te	37.05	21	eP	P	17 06 30.8	-0.3
HHC				pmax	pmax		
	comp=Z,16nm,1.1s						
WMQ	Urumqi	37.34	352	eP	P	17 06 34.6	+1.1
WMQ				sP	sP	17 06 40.9	-1.1
WMQ				pmax	pmax		
	comp=Z,29nm,1.5s						
WMQ				LR	LR		
	comp=Z,5µm,15.5s						
JOW	Kunigami	37.57	54	P	P	17 06 39.4	+3.8
	comp=Z,11nm,0.8s,baz=138,slow=1.2,SNR=4.0						
JOW	Kunigami	37.57	54	P	P	17 06 35.4	-0.2
WSAR	Wadi Sarin	38.33	299	P	P	17 06 43.9	+1.8
	comp=Z,12nm,0.9s,baz=177,slow=3.1,SNR=7.4						
DRK	Karamyk	38.48	331	P	P	17 06 42.6	-0.9
PDGK	Podgornoye	38.73	342	P	P	17 06 44.5	-0.8
GAR	Garm	38.85	329	P	P	17 06 44.9	-1.5
CHGR	Chuyangaron	39.20	328	P	P	17 06 48.0	-1.3
FITZ	Fitzroy Crossi	39.31	130	P	P	17 06 50.7	+0.4
	comp=Z,11nm,0.9s,baz=320,slow=9.5,SNR=17						
FITZ				PcP	PcP	17 08 58.8	-0.1
	comp=Z,4.4nm,0.6s,baz=271,slow=1.9,SNR=2.4						
FITZ	Fitzroy Crossi	39.31	130	P	P	17 06 49.8	-0.5
	baz=40,SNR=13						
MDOK	Medeo	39.38	340	P	P	17 06 50.5	-0.3
BTK	Batken	39.41	331	P	P	17 06 51.4	+0.4
BTK				pmax	pmax		
	comp=Z,65nm,0.9s						
BTK	Batken	39.41	331	P	P	17 06 51.4	+0.4
BTK				IAmb	IAmb	17 07 00.6	
	comp=Z,65nm,0.8s						
TKM2	Tokmak 2	39.69	338	P	P	17 06 53.0	-0.5
AAK	Ala-Archa	39.88	337	P	P	17 06 55.6	+0.7
	comp=Z,11nm,0.9s,baz=66,slow=5.2,SNR=9.1						
AAK				PcP	PcP	17 09 01.9	+1.3
	comp=Z,5.7nm,0.7s,baz=176,slow=5.9,SNR=4.9						
AAK	Ala-Archa	39.88	337	P	P	17 06 54.4	-0.6
AAK				pmax	pmax		
	comp=Z,16nm,1.1s						
AAK	Ala-Archa	39.88	337	P	P	17 06 54.4	-0.6
KNRA	Kununurra	40.46	124	P	P	17 06 58.6	-1.3
	baz=41,SNR=3.7						
MK31	Makanchi Array	41.21	347	i P	P	17 07 05.2	-0.6
MK31	Makanchi Array	41.21	347	P	P	17 07 04.9	-0.8
MK31				IAmb	IAmb	17 07 14.1	
	comp=Z,30nm,0.9s						
MKAR	Makanchi Array	41.21	347	P	P	17 07 05.7	-0.1
	comp=Z,19nm,0.8s,baz=165,slow=6.6,SNR=34						
MKAR				PcP	PcP	17 09 05.8	+1.2
	comp=Z,1.7nm,0.6s,baz=209,slow=4.2,SNR=1.7						
MKAR	Makanchi Array	41.21	347	i P	P	17 07 05.3	-0.5
MKAR				pmax	pmax		
	comp=Z,19nm,0.8s						
MKAR	Makanchi Array	41.21	347	P	P	17 07 04.3	-1.5
MAKZ	Makanchi	41.30	347	P	P	17 07 05.3	-1.2
MAKZ	Makanchi	41.30	347	P	P	17 07 05.0	-1.4
MAKZ				IAmb	IAmb	17 07 14.6	
	comp=Z,28nm,0.8s						
KK31	Karatay Array	41.94	333	P	P	17 07 11.2	-0.6
KK31	Karatay Array	41.94	333	P	P	17 07 10.5	-1.2
KKAR	Karatay Array	41.94	333	P	P	17 07 10.4	-1.4
KKAR				pmax	pmax		
	comp=Z,27nm,1.0s						
KKAR	Karatay Array	41.94	333	P	P	17 07 10.3	-1.4
KKAR	Karatay Array	41.94	333	P	P	17 07 10.4	-1.4
KKAR				IAmb	IAmb	17 07 19.6	
	comp=Z,26nm,0.9s						
SONM	Songino Array	42.04	12	P	P	17 07 13.9	+1.2
	comp=Z,7.0nm,0.9s,baz=191,slow=8.4,SNR=14						
SONM				PcP	PcP	17 09 08.0	+0.6
	comp=Z,2.7nm,0.7s,baz=190,slow=3.6,SNR=2.2						
SONM				ScP	ScP	17 12 56.1	-0.6
	comp=Z,1.1nm,0.8s,baz=211,slow=4.9,SNR=4.3						
SONM	Songino Array	42.04	12	P	P	17 07 11.8	-0.9
SONM				pmax	pmax		
	comp=Z,29nm,1.4s						
SONM	Songino Array	42.04	12	P	P	17 07 11.8	-0.9
ULN	Ulaanbaatar	42.21	12	eP	P	17 07 14.0	0.0
ULN				pmax	pmax		
	comp=Z,20nm,2.1s						
ULN	Ulaanbaatar	42.21	12	P	P	17 07 13.5	-0.6
KSRS	Korea Array	42.87	40	P	P	17 07 21.4	+2.1
	comp=Z,4.2nm,0.8s,baz=230,slow=9.0,SNR=11						
DGZ	Jazzator, Alta	43.15	353	i P	P	17 07 22.3	+0.6
DGZ				pmax	pmax		
	comp=Z,10.0nm,1.2s						
MUN	Mundaring	43.71	153	P	P	17 07 26.1	-0.2
	baz=44,SNR=3.5						
ZAK	Zakamensk	43.98	8	eP	P	17 07 29.0	+0.7
ZAK				pmax	pmax		
	comp=Z,12nm,1.6s						
NWAO	Narrogin (SRO)	44.97	153	P	P	17 07 36.6	+0.3
	comp=Z,10nm,0.9s,baz=326,slow=13,SNR=2.7						
JHS	Saijyo	45.05	46	P	P	17 07 37.2	+0.2
JHS				IAmb	IAmb	17 07 41.7	
	comp=Z,27nm,0.9s						
GEYT	Alibeck	45.35	318	P	P	17 07 39.3	0.0
	comp=Z,6.0nm,0.5s,baz=179,slow=12,SNR=9.3						
GYA0B	ALIBECK ARRAY	45.35	318	P	P	17 07 38.7	-0.7
H01W3	Cape Leeuwin H	45.37	157	T	T	17 56 46.9	
	baz=330,slow=76,SNR=5.6						
H01W2	Cape Leeuwin H	45.38	157	T	T	17 56 49.7	
	baz=330,slow=76,SNR=7.9						
H01W1	Cape Leeuwin H	45.38	157	T	T	17 56 46.4	
	baz=330,slow=76,SNR=4.6						
CN2	Changchun	45.59	31	eP	P	17 07 43.2	+2.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KURBB	Kurchatov Arra	45.68	346	P	P	17 07 42.2	+0.6
	comp=Z,27nm,0.9s,baz=168,slow=6.9,SNR=48						
KURBB				PcP	PcP	17 09 20.8	+1.3
	comp=Z,7.3nm,0.8s,baz=154,slow=2.8,SNR=5.0						
KURBB	Kurchatov Arra	45.68	346	P	P	17 07 41.3	-0.4
KURK	Kurchatov	45.74	346	i P	P	17 07 41.7	-0.5
KURK				pmax	pmax		
	comp=Z,48nm,1.2s						
KURK	Kurchatov	45.74	346	P	P	17 07 41.1	-1.1
WRA	Warramunga Arr	47.20	125	P	P	17 07 53.6	-0.5
	comp=Z,8.3nm,0.8s,baz=304,slow=9.3,SNR=22						
WRA				PcP	PcP	17 09 26.5	+1.0
	comp=Z,3.8nm,0.8s,baz=313,slow=2.5,SNR=4.8						
WRAB	Tennant Creek	47.20	125	i P	P	17 07 53.0	-1.1
WRAB				pmax	pmax		
	comp=Z,83nm,4.1s						
WRAB	Tennant Creek	47.20	125	P	P	17 07 53.2	-0.9
WRAB				IAmb	IAmb	17 08 05.4	
	comp=Z,17nm,0.8s						
HIA	Hailar	47.24	22	i P	P	17 07 54.8	+0.8
HIA				pmax	pmax		
	comp=Z,13nm,1.2s						
ZAA0	Zalesovo Array	47.65	352	P	P	17 07 56.5	-0.5
ZAA0				IAmb	IAmb	17 08 07.4	
	comp=Z,32nm,1.1s						
ZALV	Zalesovo Beam	47.65	352	P	P	17 07 57.1	0.0
	comp=Z,16nm,0.9s,baz=168,slow=7.6,SNR=17						
ZALV	Zalesovo Beam	47.65	352	P	P	17 07 56.4	-0.6
MDJ	Mudanjiang	48.34	33	P	P	17 08 02.3	-0.3
MDJ				pmax	pmax		
	comp=Z,20nm,2.0s						
AS31	Alice Springs	48.81	130	P	P	17 08 05.1	-1.5
ASAR	Alice Springs	48.81	130	P	P	17 08 06.2	-0.4
	comp=Z,11nm,0.8s,baz=306,slow=7.4,SNR=28						
ASAR				PcP	PcP	17 09 31.9	+0.7
	comp=Z,6.6nm,0.8s,baz=310,slow=2.8,SNR=5.7						
ASAR				ScP	ScP	17 13 21.3	-3.8
	comp=Z,1.5nm,0.8s,baz=305,slow=4.5,SNR=6.2						
ASAR	Alice Springs	48.81	130	P	P	17 08 06.0	-0.6
ASAR	Alice Springs	48.81	130	P	P	17 08 06.0	-0.6
ASAR					PcP	17 09 30.2	-1.1
FORT	Forrest	49.18	141	P	P	17 08 11.6	+2.4
	baz=49,SNR=7.4						
USRK	Ussuriysk Ar.	49.41	35	P	P	17 08 12.3	+1.5
	comp=Z,7.4nm,1.0s,baz=248,slow=11,SNR=5.8						
USRK	Ussuriysk Ar.	49.41	35	P	P	17 08 11.4	+0.6
USRK	Ussuriysk Ar.	49.41	35	P	P	17 08 11.4	+0.6
MAT	Matsushiro	49.43	47	P	P	17 08 08.8	-2.3
MJAR	Matsushiro Arr	49.43	47	P	P	17 08 13.2	+2.1
	comp=Z,3.3nm,0.8s,baz=240,slow=8.0,SNR=8.0						
MJAR	Matsushiro Arr	49.43	47	P	P	17 08 11.0	-0.1
MJAR				pmax	pmax		
	comp=Z,12nm,1.4s						
MJAR	Matsushiro Arr	49.43	47	P	P	17 08 11.0	-0.1

BVAR	Borovoye Array	50.14	341	P	P	17 08 16.1	-0.1
	comp=Z,20nm,0.8s,baz=186,slow=13,SNR=32						
BRVK	Borovoye	50.21	341	P	P	17 08 16.2	-0.5
BRVK	Borovoye	50.21	341	P	P	17 08 15.7	-1.0
BRVK				IAmb	IAmb	17 08 24.9	
	comp=Z,36nm,0.8s						
ATD	Arta Tunnel	51.37	279	P	P	17 08 28.2	+2.0
	comp=Z,9.2nm,0.8s,baz=233,slow=20						
AB31	Akbulak array	51.41	331	*i* P	P	17 08 25.6	-0.2
ABKAR	Akbulak array	51.41	331	P	P	17 08 25.1	-0.7
KLR	Kul'dur	52.48	30	P	P	17 08 35.1	+1.3
	comp=Z,3.2nm,0.7s,baz=271,slow=8.7,SNR=5.8						
KLR	Kul'dur	52.48	30	*i* P	P	17 08 33.7	-0.1
KLR				pmax	pmax		
	comp=Z,21nm,1.9s						
BOD	Bodaibo	53.01	13	*e*P	P	17 08 38.0	+0.4
BOD				pmax	pmax		
	comp=Z,33nm,1.3s						
AKTO	Aktyubinsk	53.12	331	P	P	17 08 38.2	-0.3
	comp=Z,24nm,0.7s,baz=125,slow=7.3,SNR=26						
OPO	Ambohidratompo	53.24	241	P	P	17 08 41.7	+1.6
	comp=Z,8.1nm,0.8s,baz=83,slow=6.7,SNR=9.8						
ZEA	Zeya	53.66	23	*e*P	P	17 08 45.2	+2.8
ZEA				pmax	pmax		
	comp=N,10.0nm,1.6s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.6s						
PMG	Port Moresby	54.68	107	P	P	17 08 49.5	-1.0
PMG				pmax	pmax		
	comp=Z,17nm,0.9s						
PMG	Port Moresby	54.68	107	P	P	17 08 49.5	-1.0
PMG				IAmb	IAmb	17 09 02.7	
	comp=Z,17nm,0.8s						
MAK	Makhachkala	54.87	319	*e*P	P	17 08 43.8	-7.6
MAK				*e*S	S	17 16 22.7	-8.8
MAK				pmax	pmax		
	comp=Z,307nm,1.1s						
GNI	Garni	55.57	315	P	P	17 08 56.3	-0.4
	comp=Z,13nm,0.9s,baz=216,slow=3.5,SNR=4.3						
GNI	Garni	55.57	315	*i* P	P	17 08 54.6	-2.2
GNI				pmax	pmax		
	comp=Z,22nm,1.1s						
GNI	Garni	55.57	315	P	P	17 08 54.7	-2.0
GNI				IAmb	IAmb	17 09 00.4	
	comp=Z,25nm,1.1s						
BBOO	Buckleboo	55.66	138	P	P	17 08 57.3	0.0
	baz=56,SNR=11						
SIRT	Sirnak	56.30	311	P	P	17 08 59.6	-2.3
SVE	Sverdlovsk	56.57	338	*e*P	P	17 09 03.6	+0.2
SVE				pmax	pmax		
	comp=Z,66nm,1.3s						
GURO	Guroymak-BITLI	56.95	312	P	P	17 09 05.6	-1.1
ARU	Arti	57.06	337	P	P	17 09 06.8	-0.1
	comp=Z,7.9nm,0.7s,baz=159,slow=3.4,SNR=18						
ARU	Arti	57.06	337*c*	*i*P	P	17 09 06.1	-0.8
ARU				S	S	17 17 03.4	+3.2
ARU				SS	SS	17 20 55.8	+6.7
ARU				pmax	pmax		
	comp=Z,43nm,1.0s						
ARU	Arti	57.06	337	P	P	17 09 05.5	-1.4
ARU				IAmb	IAmb	17 09 08.4	
	comp=Z,37nm,0.9s						
ZEI	Tsey	57.19	317	*e*P	P	17 09 06.9	-1.4
ZEI				pmax	pmax		
	comp=Z,4.0nm,1.0s						
YSS	Yuzh-Sakhalins	57.24	37	*e*P	P	17 09 07.3	-1.0
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
YSS	Yuzh-Sakhalins	57.24	37	P	P	17 09 06.9	-1.4
KMBO	Kilima Mbogo	57.89	264	P	P	17 09 15.8	+2.0
	comp=Z,15nm,0.9s,baz=61,slow=10,SNR=33						
KMBO	Kilima Mbogo	57.89	264	*i* P	P	17 09 16.7	+2.9
KMBO				pmax	pmax		
	comp=Z,15nm,0.9s						
KMBO	Kilima Mbogo	57.89	264	P	P	17 09 14.0	+0.2
KMBO				IAmb	IAmb	17 09 18.7	
	comp=Z,17nm,1.0s						
HTT	Hallett	57.97	137	P	P	17 09 13.7	-0.1
	baz=58,SNR=10						
KBZ	Khabaz	58.24	318	P	P	17 09 14.6	-0.8
	comp=Z,8.9nm,0.9s,baz=142,slow=5.7,SNR=9.9						
KBZ	Khabaz	58.24	318	*i* P	P	17 09 12.8	-2.6
KBZ				pmax	pmax		
	comp=Z,13nm,1.0s						
QLP	Quilpie	58.35	127	P	P	17 09 16.9	+0.4
	baz=59,SNR=9.9						
SHA1	Shidzhatmaz	58.40	318	*i* P	P	17 09 15.1	-1.7
KIV	Kislovodsk	58.47	318	*e*P	P	17 09 15.4	-1.7
KIV				pmax	pmax		
	comp=Z,18nm,1.1s						
KIV				MLR	MLR		
	comp=Z,4µm,17.0s						
KIV	Kislovodsk	58.47	318	P	P	17 09 15.7	-1.5
KIV				IAmb	IAmb	17 09 17.8	
	comp=Z,14nm,0.9s						
STKA	Stephens Creek	58.98	134	P	P	17 09 20.8	0.0
	comp=Z,11nm,0.8s,baz=311,slow=6.9,SNR=14						
STKA	Stephens Creek	58.98	134	P	P	17 09 20.0	-0.8
	baz=59,SNR=11						
STKA	Stephens Creek	58.98	134	P	P	17 09 19.5	-1.2
STKA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
STKA	Stephens Creek	58.98	134	P	P	17 09 19.5	-1.2
ASF	Jabal al Asfar	59.26	303	P	P	17 09 22.8	-0.1
	comp=Z,7.8nm,0.9s,baz=88,slow=2.1,SNR=10						
BELG	Belogornoye	59.48	329	P	P	17 09 23.1	-0.7
	comp=Z,44nm,0.8s,baz=22,slow=0.8,SNR=17						
GHAJ	Ghor Haditha	60.20	302	P	P	17 09 27.8	-1.4
GHAJ				IAmb	IAmb	17 09 55.8	
	comp=Z,26nm,1.1s						
YAK	Yakutsk	60.78	18	P	P	17 09 31.9	-0.6
	comp=Z,12nm,0.6s,baz=69,slow=1.0,SNR=11						
YAK	Yakutsk	60.78	18	*e*P	P	17 09 33.1	+0.5
YAK				pmax	pmax		
	comp=Z,51nm,1.1s						
YAK				pmax	pmax		
	comp=E,15nm,1.3s						
YAK				pmax	pmax		
	comp=N,17nm,1.1s						
YAK	Yakutsk	60.78	18	P	P	17 09 32.0	-0.6
CMSA	Cobar Meteorol	61.81	131	P	P	17 09 40.6	+0.5
	baz=62,SNR=11						
RMQ	Roma	61.95	125	P	P	17 09 41.5	+0.3
	baz=62,SNR=5.4						
VRH	Novokhopyorsk	62.10	325	*e*P	P	17 09 40.3	-1.4
VRH				pmax	pmax		
	comp=Z,30nm,0.8s						
KIRV	Kirov	62.18	335	P	P	17 09 41.9	-0.3
	comp=Z,17nm,0.7s,baz=104,slow=4.9,SNR=8.5						
NRIK	Noril'sk	62.59	357	P	P	17 09 44.2	-0.5
	comp=Z,3.9nm,0.5s,baz=146,slow=5.6,SNR=10						
NRIK	Noril'sk	62.59	357	P	P	17 09 43.9	-0.8
NRIK				pmax	pmax		
	comp=Z,13nm,0.9s						
NRIK	Noril'sk	62.59	357	P	P	17 09 43.9	-0.8
NRIK				IAmb	IAmb	17 09 57.0	
	comp=Z,13nm,0.9s						
CSS	Mathiatis	62.74	306	P	P	17 09 46.9	+0.5
CSS				IAmb	IAmb	17 09 48.4	
	comp=Z,12nm,0.9s						
VORD	Divnogorie	63.39	324	*e*P	P	17 09 46.8	-3.5
VORD				pmax	pmax		
	comp=Z,30nm,1.1s						
BR131	Keskin Array S	63.54	311	P	P	17 09 49.7	-2.0
BR131				pmax	pmax		
	comp=Z,22nm,0.7s						
BR131	Keskin Array S	63.54	311	P	P	17 09 49.7	-2.0
BR131				IAmb	IAmb	17 09 51.9	
	comp=Z,22nm,0.7s						
BRTR	Keskin Array B	63.54	311	P	P	17 09 50.0	-1.8
	comp=Z,13nm,0.7s,baz=126,slow=6.5,SNR=49						
BRTR	Keskin Array B	63.54	311	*i* P	P	17 09 49.5	-2.3
BRTR				pmax	pmax		
	comp=Z,13nm,0.7s						
BRTR	Keskin Array B	63.54	311	P	P	17 09 49.4	-2.3
VSR	Storozhevoye	63.56	325	*e*P	P	17 09 47.3	-4.2
VSR				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BZK	Bozkurt	63.83	314	P	P	17 09 51.2	-2.2
ANTO	Ankara	64.20	311	P	P	17 09 54.1	-2.0
ANTO				pmax	pmax		
	comp=Z,16nm,1.0s						
ANTO	Ankara	64.20	311	P	P	17 09 54.1	-2.0
ANTO				IAmb	IAmb	17 09 56.1	
	comp=Z,16nm,0.9s						
BR231	Keskin MP Arra	64.21	311	P	P	17 09 54.8	-1.4
BR231				IAmb	IAmb	17 09 57.2	
	comp=Z,10nm,0.8s						
LPSR	Galich'ya Gora	64.26	326	*e*P	P	17 09 54.9	-1.1
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MBAR	Mbarara	64.26	266	P	P	17 09 58.2	+1.2
	comp=Z,2.8nm,0.2s,baz=112,slow=9.4,SNR=6.4						
MBAR	Mbarara	64.26	266	P	P	17 09 56.1	-0.9
MBAR				pmax	pmax		
	comp=Z,13nm,1.2s						
MBAR	Mbarara	64.26	266	P	P	17 09 56.1	-0.9
MBAR				IAmb	IAmb	17 10 00.4	
	comp=Z,13nm,1.1s						
TOO	Toolangi	64.71	137	P	P	17 10 00.7	+1.4
	baz=65,SNR=18						
PRGR	Permogore	65.51	337	*e*P	P	17 10 02.7	-1.3
PRGR				*e**SP	pP	17 10 09.3	-1.0
PRGR				*e*		17 10 30.0	
PRGR				pmax	pmax		
	comp=Z,128nm,1.5s						
ISP	Isparta	65.51	308	P	P	17 10 03.2	-1.4
ISP				pmax	pmax		
	comp=Z,12nm,0.8s						
ISP	Isparta	65.51	308	P	P	17 10 03.2	-1.4
ISP				IAmb	IAmb	17 10 06.6	
	comp=Z,12nm,0.8s						
MDUB	Mudurnu	65.53	311	P	P	17 10 03.2	-1.5
ELL	Elmali	65.80	307	P	P	17 10 05.6	-1.0
ELL				pmax	pmax		
	comp=Z,131nm,1.0s						
ELL	Elmali	65.80	307	P	P	17 10 05.6	-1.0
CAN	Canberra	66.05	133	P	P	17 10 07.8	-0.2
CAN				pmax	pmax		
	comp=Z,12nm,0.7s						
CAN	Canberra	66.05	133	P	P	17 10 07.8	-0.2
CAN				IAmb	IAmb	17 10 10.8	
	comp=Z,12nm,0.7s						
MOS	Moscow	66.25	329	*e*P	P	17 10 08.1	-0.8
MOS				pmax	pmax		
	comp=Z,94nm,1.3s						
CNB	Canberra Magne	66.31	133	P	P	17 10 11.6	+1.9
	baz=66,SNR=6.0						
OBN	Obninsk	66.55	328	*i* P	P	17 10 09.1	-1.7
OBN				*i*		17 10 16.9	
OBN				*i*		17 10 39.4	
OBN				*i*		17 12 39.3	
OBN				pmax	pmax		
	comp=Z,74nm,1.5s						
OBN	Obninsk	66.55	328	P	P	17 10 09.5	-1.3
MA2	Magadan	67.41	27	P	P	17 10 17.6	+1.4
	comp=Z,19nm,0.9s,baz=177,slow=8.3,SNR=4.6						
MA2	Magadan	67.41	27	*i* P	P	17 10 16.2	0.0
MA2				pmax	pmax		
	comp=Z,25nm,1.0s						
MA2	Magadan	67.41	27	P	P	17 10 16.0	-0.2
KLMR	Klimovskoe	67.63	334	*e*P	P	17 10 14.7	-2.8
KLMR				pmax	pmax		
	comp=Z,39nm,1.0s						
KLMR	Klimovskoe	67.63	334	*e*P	P	17 10 14.8	-2.8
KLMR				AMP		17 10 18.1	
	comp=Z,39nm,1.0s						
BALB	Balikesir	67.87	310	P	P	17 10 18.2	-1.3
BALB				IAmb	IAmb	17 10 19.2	
	comp=Z,13nm,0.8s						
TIXI	Tiksi	68.12	11	P	P	17 10 20.1	-0.3
	comp=Z,15nm,0.5s,baz=203,slow=3.8,SNR=48						
TIXI	Tiksi	68.12	11	*i* P	P	17 10 19.1	-1.3
TIXI	Tiksi	68.12	11	P	P	17 10 19.2	-1.3
TIRR	Tirgusor	68.39	315	⇓P	P	17 10 22.4	-0.3
TIRR	Tirgusor	68.39	315	P	P	17 10 21.2	-1.5
TIRR				pmax	pmax		
	comp=Z,36nm,0.9s						
TIRR	Tirgusor	68.39	315	P	P	17 10 21.2	-1.5
PETK	Petropavlovsk-	68.50	35	P	P	17 10 22.1	-1.1
PETK	Petropavlovsk-	68.50	35	P	P	17 10 22.1	-1.1
MILM	Milestii Mici	68.65	318	⇑P	P	17 10 23.0	-1.3
CFR	Carcaliu	68.73	316	⇓P	P	17 10 24.1	-0.7
HARR	Harsova	68.77	315	⇑P	P	17 10 25.2	+0.2
SORM	Soroca	69.24	319	⇓P	P	17 10 27.0	-0.8
AKASG	Malin Array Be	69.32	322	P	P	17 10 26.7	-1.6
	comp=Z,5.4nm,0.7s,baz=94,slow=5.4,SNR=22						
AKBB	Malin Array Si	69.32	322	P	P	17 10 26.6	-1.7
AKBB				pmax	pmax		
	comp=Z,8.0nm,0.8s						
AKBB	Malin Array Si	69.32	322	P	P	17 10 26.6	-1.7
ALN	Alexandroupoli	69.46	311	P	P	17 10 28.4	-1.0
ALN				pmax	pmax		
	comp=Z,13nm,1.0s						
ALN	Alexandroupoli	69.46	311	P	P	17 10 28.4	-1.0
ALN				IAmb	IAmb	17 10 29.5	
	comp=Z,13nm,1.0s						
LSZ	Lusaka	69.48	251	P	P	17 10 30.2	+0.1
	comp=Z,9.1nm,0.8s,baz=88,slow=3.7,SNR=14						
RAZG	Razgrad	69.56	314	⇓P	P	17 10 30.0	0.0
SEY	Seymchan	69.62	24	P	P	17 10 30.9	+1.0
	comp=Z,5.1nm,0.7s,baz=270,slow=3.9,SNR=11						
IDI	Anoyia	69.63	305	P	P	17 10 29.4	-1.2
	comp=Z,28nm,0.7s,baz=96,slow=8.6,SNR=13						
ISR	Istrita	69.83	316	⇑P	P	17 10 32.4	+0.8
VRI	Vrincioaia	69.84	316	⇑P	P	17 10 31.8	+0.1
PLOR	Plostina	69.89	316	⇓P	P	17 10 32.5	+0.5
TESR	Tescani	70.02	317	⇓P	P	17 10 31.7	-1.1
COVR	Voineasa-Covas	70.20	316	⇓P	P	17 10 34.0	+0.1
MLR	Muntele Rosu	70.31	316	⇑P	P	17 10 34.9	+0.2
MLR	Muntele Rosu	70.31	316	P	P	17 10 33.5	-1.2
MLR				pmax	pmax		
	comp=Z,21nm,0.9s						
MLR	Muntele Rosu	70.31	316	P	P	17 10 33.5	-1.2
MLR				IAmb	IAmb	17 10 36.1	
	comp=Z,21nm,0.9s						
DOPR	Dopca	70.78	316	⇓P	P	17 10 37.3	-0.1
HUMR	Humele	70.81	315	⇓P	P	17 10 37.7	0.0
PLVB	Pleven	70.89	313	⇑P	P	17 10 37.9	-0.2
VOIR		70.92	316	⇓P	P	17 10 37.8	-0.6
MNK	Minsk	71.10	325	*i* P	P	17 10 37.4	-1.7
MNK				*i*		17 10 52.6	
MNK				*i*		17 13 15.0	
MNK				*i* PPP	PPP	17 14 58.1	
MNK				*i* S	S	17 19 55.3	+0.9
MNK				*i*		17 20 41.8	
MNK				*i* SS	SS	17 24 29.9	+2.0
MNK				pmax	pmax		
	comp=Z,35nm,0.9s						
MNK				pmax	pmax		
	comp=E,9.0nm,1.1s						
MNK				pmax	pmax		
	comp=N,14nm,0.8s						
MNK				MLR	MLR		
	comp=N,2µm,18.0s						
MNK				MLR	MLR		
	comp=E,406nm,20.0s						
MNK				MLR	MLR		
	comp=Z,4µm,20.0s						
MNK	Minsk	71.10	325	*i* P	P	17 10 37.5	-1.7
	comp=E,9.0nm,1.1s						
MNK				*i* P	P	17 10 37.5	-1.7
	comp=N,14nm,0.8s						
MNK				*i* P	P	17 10 37.5	-1.7
	comp=Z,35nm,0.9s,baz=286						
MNK				*i* PcP	pwP	17 10 52.7	+3.6
MNK				*i* PP	PP	17 13 15.1	-1.8
MNK				*i* PPP	PPP	17 14 58.2	
MNK				*i* S	S	17 19 55.3	+0.9
MNK				*i* SS	SS	17 24 29.9	+2.0
MNK				*i* SSS	SSS	17 27 49.0	
MNK				*i* LR	LR	17 42 25.4	
MNK				*i* LRM	MLR	17 44 22.3	
	comp=N,2µm,18.1s						
MNK				*i* LRM	MLR	17 44 38.2	
	comp=E,406nm,20.3s						
MNK				*i* LRM	MLR	17 44 42.6	
	comp=Z,4µm,20.3s						
BURAR	Bucovina Array	71.19	318	⇓P	P	17 10 40.4	+0.4
BURAR	Bucovina Array	71.19	318	P	P	17 10 38.9	-1.1
ARR	Arges	71.20	316	⇓P	P	17 10 39.8	-0.2
BUR08	Bucovina Ar. S	71.21	318	P	P	17 10 39.3	-0.9
VTS	Vitosha	71.79	313	⇑P	P	17 10 43.2	-0.6
VTS	Vitosha	71.79	313	P	P	17 10 41.8	-2.0
VTS				pmax	pmax		
	comp=Z,7.0nm,0.9s						
VTS	Vitosha	71.79	313	P	P	17 10 41.8	-2.0
NACGM	Naroch	71.82	326	*i* P	P	17 10 43.4	-0.1
AGG	Agios Georgios	72.05	309	P	P	17 10 42.8	-2.5
AGG				pmax	pmax		
	comp=Z,12nm,1.0s						
AGG	Agios Georgios	72.05	309	P	P	17 10 42.8	-2.5
KWAJ	Kwajalein Atol	72.13	83	P	P	17 10 44.6	-1.6
KWAJ				pmax	pmax		
	comp=Z,238nm,1.2s						
KWAJ	Kwajalein Atol	72.13	83	P	P	17 10 44.6	-1.6
ITM	Ithomi	72.19	307	P	P	17 10 45.1	-1.1
ITM				IAmb	IAmb	17 10 56.6	
	comp=Z,29nm,1.1s						
LHI	Lord Howe Isla	72.20	126	P	P	17 10 48.0	+1.8
	baz=72,SNR=3.6						
GZR	Gura Zlata	72.49	315	⇑P	P	17 10 48.4	+0.6
HERR	Herculane	72.68	315	⇓P	P	17 10 47.1	-1.7
LVZ	Lovozero	72.72	340	P	P	17 10 47.9	-0.8
LVZ	Lovozero	72.72	340	P	P	17 10 47.9	-0.8
LVZ				IAmb	IAmb	17 11 05.8	
	comp=Z,45nm,1.2s						
DRGR		72.74	317	⇑P	P	17 10 49.3	0.0
VSU	Vasula	72.76	329	*e*P	P	17 10 48.3	-0.8
FNA	Florina	72.96	310	P	P	17 10 48.8	-1.9
FNA				pmax	pmax		
	comp=Z,20nm,1.3s						
FNA	Florina	72.96	310	P	P	17 10 48.8	-1.9
FNA				IAmb	IAmb	17 11 03.7	
	comp=Z,20nm,1.3s						
BOVS	Bovan	73.03	313	⇑P	P	17 10 49.4	-1.5
TRPA	Tarpa	73.06	318	⇑P	P	17 10 50.8	-0.2
TRPA	Tarpa	73.06	318	*e*P	P	17 10 50.2	-0.8
MDVR	Moldovita	73.16	315	⇓P	P	17 10 50.1	-1.7
BZS	Buzias	73.33	315	⇑P	P	17 10 52.3	-0.5
SIRR	Siria	73.39	316	⇑P	P	17 10 53.9	+0.9
PABE	Paberze	73.53	326	*e*P	P	17 10 53.0	-0.6
PABE	Paberze	73.53	326	P	P	17 10 53.2	-0.4
CASY	Casey	73.85	173	P	P	17 10 54.0	-1.2
CRVS	Cervenica-Dubn	73.88	319	*e*P	P	17 10 57.5	+1.6
CRVS				pmax	pmax		
	comp=Z,40nm,1.3s						
CRVS	Cervenica-Dubn	73.88	319	*e*P	P	17 10 57.5	+1.6
FIA1	FINESS Array S	73.89	332	P	P	17 10 55.2	-0.4
FIA1				IAmb	IAmb	17 10 56.4	
	comp=Z,27nm,0.9s						
FINES	FINESS Array B	73.89	332	P	P	17 10 54.9	-0.7
	comp=Z,16nm,0.7s,baz=107,slow=6.4,SNR=26						
FINES	FINESS Array B	73.89	332	*i* P	P	17 10 56.0	+0.4
FINES				pmax	pmax		
	comp=Z,16nm,0.7s						
DIVS	Divibare	74.31	314	P	P	17 10 57.0	-1.6
MTSE	Matsula	74.31	329	*e*P	P	17 10 58.2	+0.1
KECS	Kecovo	74.47	318	*e*P	P	17 10 59.9	+0.6
KECS	Kecovo	74.47	318	*e*P	P	17 10 59.9	+0.6
PDG	Podgorica	74.69	312	⇑P	P	17 11 00.1	-0.6
PDG	Podgorica	74.69	312	P	P	17 10 58.8	-1.9
PDG				IAmb	IAmb	17 11 01.8	
	comp=Z,15nm,0.8s						
PBUR	Paburge	74.76	326	*e*P	P	17 11 00.9	+0.1
PSZ	Piszkesteto	74.79	318	⇑P	P	17 11 00.3	-1.0
PSZ	Piszkesteto	74.79	318	*e*P	P	17 11 00.6	-0.7
PSZ	Piszkesteto	74.79	318	P	P	17 11 00.0	-1.3
PSZ				pmax	pmax		
	comp=Z,25nm,1.3s						
PSZ	Piszkesteto	74.79	318	P	P	17 10 60.0	-1.3
PSZ				IAmb	IAmb	17 11 16.1	
	comp=Z,25nm,1.3s						
SCTE	Santa Cesarea	75.11	310	P	P	17 11 02.2	-1.0
OJC	Ojcow	75.13	320	P	P	17 11 02.1	-1.0
OJC				pmax	pmax		
	comp=Z,45nm,1.0s						
OJC	Ojcow	75.13	320	P	P	17 11 02.1	-1.0
LANS	Liptovska Anna	75.21	319	*e*P	P	17 11 04.8	+1.1
LANS	Liptovska Anna	75.21	319	*e*P	P	17 11 04.8	+1.1
MORH	Mrgy, Hungar	75.46	316	⇓P	P	17 11 04.3	-0.7
MORH	Mrgy, Hungar	75.46	316	*e*P	P	17 11 04.3	-0.7
BOSA	Boshof	75.54	238	P	P	17 11 06.5	+0.5
	comp=Z,25nm,0.9s,baz=84,slow=5.7,SNR=35						
BOSA	Boshof	75.54	238	P	P	17 11 06.1	+0.1
BOSA				pmax	pmax		
	comp=Z,29nm,0.9s						
BOSA	Boshof	75.54	238	P	P	17 11 06.1	+0.1
BOSA				IAmb	IAmb	17 11 08.4	
	comp=Z,29nm,0.9s						
SRO2	Moca	75.78	317	*e*P	P	17 11 06.3	-0.6
SRO2				pmax	pmax		
	comp=Z,13nm,0.8s						
SRO2	Moca	75.78	317	*e*P	P	17 11 06.2	-0.6
KOVH	Kovagotottos	75.83	316	*e*P	P	17 11 05.4	-1.8
SRO	Srobarova	75.84	317	*e*P	P	17 11 08.2	+1.0
SRO				pmax	pmax		
	comp=Z,19nm,0.9s						
SRO	Srobarova	75.84	317	*e*P	P	17 11 08.2	+1.0
KEV	Kevo	75.99	341	P	P	17 11 07.6	0.0
KEV				pmax	pmax		
	comp=Z,21nm,0.7s						
KEV	Kevo	75.99	341	P	P	17 11 07.6	0.0
KEV				IAmb	IAmb	17 11 09.3	
	comp=Z,21nm,0.7s						
OKC	Ostrava-Krasne	76.14	320	*e*P	P	17 11 09.7	+0.8
OKC	Ostrava-Krasne	76.14	320	*e*P	P	17 11 09.7	+0.8
MPLH	Magyarpolny	76.30	317	*e*P	P	17 11 09.0	-0.8
JAVC	Velka Javorina	76.36	319	*e*P	P	17 11 11.2	+0.9
TIP	Timpagrande	76.39	309	⇓P	P	17 11 11.1	+0.5
TIP	Timpagrande	76.39	309	P	P	17 11 09.6	-1.0
ARA0	ARCESS Array S	76.42	340	*e*P	P	17 11 10.2	+0.1
ARCES	ARCESS Array B	76.42	340	P	P	17 11 09.9	-0.2
	comp=Z,16nm,0.7s,baz=92,slow=6.1,SNR=30						
ARCES	ARCESS Array B	76.42	340	P	P	17 11 09.8	-0.3
ARCES				pmax	pmax		
	comp=Z,43nm,1.1s						
ARCES	ARCESS Array B	76.42	340	P	P	17 11 09.8	-0.3
ARCES				IAmb	IAmb	17 11 11.5	
	comp=Z,43nm,1.1s						
SMOL	Smolenice	76.49	318	*e*P	P	17 11 11.9	+1.0
SMOL	Smolenice	76.49	318	*e*P	P	17 11 11.9	+1.0
AAL	Aland	76.51	330	*e*P	P	17 11 10.9	+0.2
MORC	Moravsky Berou	76.53	319	⇑P	P	17 11 11.6	+0.4
MORC	Moravsky Berou	76.53	319	P	P	17 11 10.7	-0.5
MORC				pmax	pmax		
	comp=Z,29nm,1.1s						
MORC	Moravsky Berou	76.53	319	*e*P	P	17 11 11.3	+0.1
MORC	Moravsky Berou	76.53	319	P	P	17 11 10.7	-0.5
MORC				IAmb	IAmb	17 11 12.9	
	comp=Z,28nm,1.1s						
MODS	Modra-Piesok	76.58	318	*e*P	P	17 11 10.5	-1.0
MODS				pmax	pmax		
	comp=Z,30nm,1.4s						
MODS	Modra-Piesok	76.58	318	*e*P	P	17 11 10.5	-1.0
ZST	Bratislava	76.68	318	*e*P	P	17 11 12.8	+0.8
ZST	Bratislava	76.68	318	*e*P	P	17 11 12.8	+0.8
BEHE	Becsehely	76.77	316	*e*P	P	17 11 10.6	-1.9
BILL	Bilibino	76.82	21	*i* P	P	17 11 07.7	-4.7
BILL				*i*		17 11 23.2	
BILL				pmax	pmax		
	comp=Z,10.0nm,1.4s						
BILL	Bilibino	76.82	21	P	P	17 11 12.5	+0.1
SOP	Sopron	77.00	317	*e*P	P	17 11 14.5	+0.7
KRLC	Kraliky	77.05	320	*e*P	P	17 11 13.8	-0.3
KRLC	Kraliky	77.05	320	*e*P	P	17 11 13.8	-0.3
VRAC	Vranov	77.11	319	⇓P	P	17 11 15.4	+1.0
VRAC	Vranov	77.11	319	*e*P	P	17 11 14.4	0.0
KRUC	Moravsky	77.22	319	*e*P	P	17 11 15.1	+0.1
SGRT	San Giovanni R	77.26	311	P	P	17 11 14.8	-0.7
HAMF	Hammerfest	77.34	341	*e*P	P	17 11 15.2	0.0
DPC	Dobruska-Polom	77.36	320	*e*P	P	17 11 15.9	0.0
DPC	Dobruska-Polom	77.36	320	*e*P	P	17 11 15.9	0.0
OSTC	Ostas	77.45	320	*e*P	P	17 11 15.7	-0.6
CONA	Conrad Observa	77.49	317	*e*P	P	17 11 16.6	-0.1
	comp=Z,11nm,1.0s						
CONA				*e*P	PKiKP	17 16 56.6	-0.3
	comp=Z,2.9nm,1.3s						
CHVC	Chvalec	77.55	320	*e*P	P	17 11 17.1	+0.2
UPC	Upice	77.57	320	*e*P	P	17 11 16.7	-0.3
UPC	Upice	77.57	320	*e*P	P	17 11 16.7	-0.3
UPP	Uppsala	77.64	330	*e*P	P	17 11 16.4	-0.7
MAW	Mawson	77.65	192	P	P	17 11 18.0	+1.1
	comp=Z,9.3nm,0.9s,baz=31,slow=9.2,SNR=9.2						
MAW	Mawson	77.65	192	P	P	17 11 17.3	+0.4
	baz=78,SNR=5.6						
MAW	Mawson	77.65	192	P	P	17 11 17.1	+0.2
MAW	Mawson	77.65	192	P	P	17 11 17.1	+0.2
ARSA	Arzberg	77.68	317	*i* P	P	17 11 17.7	+0.1
	comp=Z,18nm,1.0s,SNR=5.7						
ARSA				*e*P	PKiKP	17 16 55.4	-1.7
	comp=Z,1.9nm,1.0s						
TREC	Trest	77.83	319	*e*P	P	17 11 18.2	-0.2

TREC	Trest	77.83	319	eP	P	17 11 18.2	-0.2
SOKA	Soboth	77.98	316	i P	P	17 11 19.2	-0.3
	comp=Z,32nm,1.0s,SNR=12						
SOKA				eP	PKiKP	17 16 55.1	-2.5
	comp=Z,1.8nm,0.8s						
JETT	Jettan, Norway	78.16	340	eP	P	17 11 20.7	+0.8
OBKA	Obir	78.31	316	eP	P	17 11 21.5	+0.2
	comp=Z,19nm,0.9s						
PRU	Pruhonice	78.48	320	eP	P	17 11 21.5	-0.5
PRU	Pruhonice	78.48	320	eP	P	17 11 21.5	-0.5
PVCC	Panska Ves	78.49	320	eP	P	17 11 23.1	+1.0
PVCC	Panska Ves	78.49	320	eP	P	17 11 23.1	+1.0
MOA	Molln	78.56	317	eP	P	17 11 22.4	-0.1
	comp=Z,12nm,0.9s						
CKRC	Cesky Krumlov	78.57	318	eP	P	17 11 22.5	-0.1
BSD	Bornholm Skovb	78.59	325	i P	P	17 11 22.0	-0.5
BSD				IAmb	IAmb	17 11 22.6	
	comp=Z,27nm,0.8s						
TRO	Tromso	78.69	340	eP	P	17 11 23.3	+0.6
HOPEN	Hopen	78.70	347	eP	P	17 11 22.5	-0.2
TRI	Trieste	78.83	315	P	P	17 11 23.3	-0.7
TRI				pmax	pmax		
	comp=Z,11nm,0.9s						
TRI	Trieste	78.83	315	P	P	17 11 23.3	-0.7
BRG	Berggiesshubel	78.91	320	eP	P	17 11 24.7	+0.3
BRG				Amp		17 11 25.8	
	comp=Z,12nm,0.9s						
BRG				Amp		17 39 52.0	
	comp=N,3.5nm,16.4s						
BRG				Amp		17 39 52.0	
	comp=Z,5.6nm,19.0s						
BRG				Amp		17 39 53.0	
	comp=E,4.9nm,19.6s						
MYKA	Terra Mystica	78.94	316	eP	P	17 11 25.1	+0.3
	comp=E,13nm,0.9s						
GEC2	GERESS Array S	78.98	318	P	P	17 11 24.1	-0.8
GEC2				IAmb	IAmb	17 11 26.5	
	comp=Z,28nm,0.8s						
GERES	GERESS Array B	78.98	318	P	P	17 11 24.6	-0.3
	comp=Z,20nm,0.8s,baz=88,slow=5.3,SNR=84						
GERES	GERESS Array B	78.98	318	P	P	17 11 24.1	-0.8
GERES	GERESS Array B	78.98	318	P	P	17 11 24.1	-0.8
AQU	L'Aquila	79.02	312	P	P	17 11 24.7	-0.5
AQU				pmax	pmax		
	comp=Z,21nm,1.0s						
AQU	L'Aquila	79.02	312	P	P	17 11 24.7	-0.5
AQU				IAmb	IAmb	17 11 26.3	
	comp=Z,21nm,1.0s						
KHC	Kasperske Hory	79.07	319	eP	P	17 11 24.7	-0.6
KHC				e		17 11 39.0	
KHC	Kasperske Hory	79.07	319	eP	P	17 11 24.7	-0.6
KHC				ex	x	17 11 39.0	
RUE	Ruedersdorf	79.09	322	eP	P	17 11 24.8	-0.4
KBA	Koelnbreinsper	79.16	317	eP	P	17 11 25.7	-0.3
	comp=Z,15nm,0.9s						
NRCA	Norcia	79.24	312	P	P	17 11 25.7	-0.7
NRCA				IAmb	IAmb	17 11 27.5	
	comp=Z,20nm,1.2s						
DEL	Delary	79.28	326	i P	P	17 11 25.0	-1.2
DEL				i P	P	17 11 25.9	-0.3
ZOU	Zoufplan	79.40	316	P	P	17 11 26.1	-1.3
ZOU				IAmb	IAmb	17 11 34.4	
	comp=Z,23nm,0.9s						
CLL	Collm	79.52	321	P	P	17 11 26.3	-1.4
CLL				pmax	pmax		
	comp=Z,13nm,0.9s						
CLL	Collm	79.52	321	eP	P	17 11 26.0	-1.7
	comp=Z,14nm,0.9s						
CLL	Collm	79.52	321	P	P	17 11 26.3	-1.4
STAL	STALIGIAL	79.57	316	P	P	17 11 26.6	-1.6
BJO1	Bjornoya	79.64	345	eP	P	17 11 28.3	+0.5
FAUS	Fauske	79.65	337	eP	P	17 11 27.5	-0.6
MURB	Monte Urbino	79.67	313	P	P	17 11 28.7	-0.1
MURB				IAmb	IAmb	17 11 34.9	
	comp=Z,34nm,1.1s						
ABTA	Abfaltersbach	79.72	316	eP	P	17 11 27.7	-1.3
	comp=Z,13nm,0.8s						
ABTA				eP	PKiKP	17 16 56.4	-3.9
	comp=Z,2.2nm,0.9s						
STEI	Steigen	79.74	338	eP	P	17 11 28.6	+0.1
NKC	Novy Kostel	79.84	320	eP	P	17 11 29.7	+0.2
NKC	Novy Kostel	79.84	320	eP	P	17 11 29.7	+0.2
MOR8	Moi Rana	79.85	336	eP	P	17 11 28.9	-0.3
TSUM	Tsumeb	80.20	249	P	P	17 11 33.8	+1.6
	comp=Z,10nm,0.9s,baz=54,slow=5.7,SNR=11						
TSUM	Tsumeb	80.20	249	P	P	17 11 33.5	+1.3
NBB30	Finnes	80.21	337	eP	P	17 11 31.5	+0.4
SUR	Sutherland	80.23	236	P	P	17 11 33.6	+1.4
	comp=Z,23nm,0.8s,baz=87,slow=5.5,SNR=15						
SUR	Sutherland	80.23	236	P	P	17 11 33.2	+1.0
SUR				IAmb	IAmb	17 11 36.0	
	comp=Z,23nm,0.8s						
TEOL	Teolo	80.29	315	P	P	17 11 31.4	-0.6
TEOL				IAmb	IAmb	17 11 33.2	
	comp=Z,24nm,0.9s						
CTI	Castel Tesino	80.31	315	P	P	17 11 31.3	-0.9
CTI				pmax	pmax		
	comp=Z,40nm,0.9s						
CTI	Castel Tesino	80.31	315	P	P	17 11 31.3	-0.9
CTI				IAmb	IAmb	17 11 33.8	
	comp=Z,40nm,0.9s						
WTTA	Wattenberg	80.33	317	i P	P	17 11 31.4	-1.0
	comp=Z,33nm,0.7s,SNR=9.0						
WTTA				eP	PKiKP	17 17 04.5	+3.1
	comp=Z,6.5nm,1.4s						
NBB13	Alf Garage	80.34	336	eP	P	17 11 32.1	+0.3
WATA	Walderalm	80.37	317	eP	P	17 11 31.9	-0.6
	comp=Z,22nm,0.8s						
WATA				eP	PKiKP	17 17 01.9	+0.5
	comp=Z,3.5nm,1.3s						
LOF	Lofoten	80.40	338	eP	P	17 11 32.3	+0.2
KONS	Konsvik	80.41	336	eP	P	17 11 32.6	+0.4
OSSC	Osservatorio P	80.60	313	P	P	17 11 32.2	-1.5
SQTA	Sankt Quirin	80.62	317	i P	P	17 11 33.7	-0.1
	comp=Z,38nm,0.7s,SNR=7.7						
SQTA				eP	PKiKP	17 17 06.8	+5.1
	comp=Z,1.6nm,0.6s						
GRA1	Grafenberg Arr	80.62	319	P	P	17 11 32.6	-1.1
GRA1				IAmb	IAmb	17 11 35.7	
	comp=Z,25nm,0.8s						
GRF	Grafenberg Arr	80.62	319	P	P	17 11 32.6	-1.1
GRF				pmax	pmax		
	comp=Z,25nm,0.8s						
GRFO	Grafenberg	80.62	319	P	P	17 11 32.6	-1.1
GRFO				pmax	pmax		
	comp=Z,23nm,0.8s						
GRFO	Grafenberg	80.62	319	P	P	17 11 32.6	-1.1
GRFO				IAmb	IAmb	17 11 35.6	
	comp=Z,23nm,0.8s						
NC405	NORSAR Array S	80.67	331	P	P	17 11 32.2	-1.4
MOTA	Moosalm	80.69	317	i P	P	17 11 33.4	-0.9
	comp=Z,32nm,0.8s,SNR=6.4						
MOTA				eP	PKiKP	17 17 01.5	-0.3
	comp=Z,1.7nm,1.0s						
NC602	NORSAR Array S	80.73	330	P	P	17 11 33.2	-0.8
NSS	Namsos	80.74	334	eP	P	17 11 34.1	+0.2
NB2	NORSAR Subarra	80.91	331	P	P	17 11 33.8	-1.2
	comp=Z,20nm,0.9s,baz=91,slow=5.9						
NB2	NORSAR Subarra	80.91	331	P	P	17 11 33.8	-1.2
	baz=91,slow=5.9						
NOA	NORSAR Array B	80.91	331	P	P	17 11 34.1	-0.9
	comp=Z,13nm,0.9s,baz=93,slow=5.6,SNR=32						
RETA	Reutte	80.92	317	i P	P	17 11 34.6	-0.8
	comp=Z,40nm,0.7s,SNR=12						
HSPB	Hornsund (broa	80.94	347	eP	P	17 11 34.3	-0.5
FETA	Feichten	80.94	316	i P	P	17 11 36.0	+0.4
	comp=Z,27nm,0.8s,SNR=5.3						
SPA0	Spitsbergen Ar	80.96	348	eP	P	17 11 35.1	+0.1
NAO01	NORSAR Array S	81.06	330	P	P	17 11 34.8	-1.0
SALO	Salr	81.10	315	P	P	17 11 35.9	-0.5
NBO00	NORSAR Array S	81.12	331	P	P	17 11 34.5	-1.7
NC204	NORSAR Array S	81.13	331	P	P	17 11 35.2	-1.0
TBLU	Trondheim	81.44	333	eP	P	17 11 37.5	-0.2
DAVA	Damuels	81.52	317	eP	P	17 11 38.7	0.0
	comp=Z,28nm,0.8s						
DAVOX	Davos/Dischmat	81.53	316	P	P	17 11 38.8	0.0
	comp=Z,41nm,0.7s,baz=104,slow=13						
MSSA	Maissana	81.84	314	P	P	17 11 38.9	-1.5
MSSA				IAmb	IAmb	17 11 40.8	
	comp=Z,24nm,0.9s						
MUD	Monsted U'grnd	81.88	326	i P	P	17 11 41.0	+0.9
TUE	Stuetta	81.90	316	P	P	17 11 39.8	-1.0
TUE				IAmb	IAmb	17 11 45.0	
	comp=Z,30nm,0.8s						
KBS	Kingsbay	81.94	349	eP	P	17 11 40.0	-0.1
STU	Stuttgart	81.95	318	P	P	17 11 39.9	-0.9
STU				pmax	pmax		
	comp=Z,16nm,0.6s						
STU	Stuttgart	81.95	318	P	P	17 11 39.9	-0.9
STU				IAmb	IAmb	17 11 42.6	
	comp=Z,16nm,0.6s						
VSL	Villasalto	82.11	309	P	P	17 11 40.8	-1.0
VSL				IAmb	IAmb	17 11 42.9	
	comp=Z,19nm,1.0s						
KEST	Kesra	82.30	305	P	P	17 11 43.4	+0.4
	comp=Z,12nm,0.8s,baz=343,slow=1.0,SNR=11						
KEST	Kesra	82.30	305	P	P	17 11 42.4	-0.6
KEST				IAmb	IAmb	17 11 45.0	
	comp=Z,20nm,1.0s						
BFO	Black Forest	82.54	318	P	P	17 11 43.0	-0.9
BFO				pmax	pmax		
	comp=Z,15nm,0.7s						
BFO	Black Forest	82.54	318	P	P	17 11 43.0	-0.9
BFO				IAmb	IAmb	17 11 44.9	
	comp=Z,15nm,0.7s						
MOL	Molde	82.67	332	eP	P	17 11 45.0	+0.8
SNART	Snartemo	82.92	328	i P	P	17 11 45.9	+0.4
SENIN	Lac Senin/Sane	83.32	316	P	P	17 11 48.1	-0.1
ECH	Echery	83.33	318	P	P	17 11 47.4	-0.6
ECH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ECH	Echery	83.33	318	P	P	17 11 47.4	-0.6
ECH				IAmb	IAmb	17 11 50.4	
	comp=Z,10nm,0.8s						
BNI	Bardonecchia	83.83	315	P	P	17 11 49.9	-0.9
BNI				pmax	pmax		
	comp=Z,21nm,0.8s						
BNI	Bardonecchia	83.83	315	P	P	17 11 49.9	-0.9
BNI				IAmb	IAmb	17 11 56.4	
	comp=Z,21nm,0.8s						
BTNL	Ternell	83.87	320	dP	P	17 11 51.3	+0.6
	comp=Z,9.7nm,0.8s						
WLF	Walferdange	83.91	319	dP	P	17 11 51.6	+0.7
	comp=Z,7.5nm,1.0s						
MEM	Membach	83.95	320	dP	P	17 11 51.5	+0.4
	comp=Z,13nm,0.7s						
BHOU	Houvegnez	83.97	320	dP	P	17 11 51.3	+0.1
BCLA	Clavier	84.41	320	dP	P	17 11 52.4	-1.0
BGES	Gesves	84.55	320	dP	P	17 11 53.3	-0.8
	comp=Z,8.6nm,0.8s						
SYO	Syowa Base	84.60	197	⇑iP	P	17 11 57.4	+3.5
BMRD	Maredsous	84.76	320	dP	P	17 11 55.6	+0.4
	comp=Z,6.7nm,0.7s						
DOU	Dourbes	84.89	320	dP	P	17 11 54.6	-1.2
	comp=Z,6.4nm,1.0s						
SNF	Seneffe	85.05	320	dP	P	17 11 57.1	+0.5
	comp=Z,17nm,0.7s						
SSB	Saint Sauveur	85.32	315	P	P	17 11 57.6	-0.6
SSB				pmax	pmax		
	comp=Z,20nm,1.0s						
SSB	Saint Sauveur	85.32	315	P	P	17 11 57.6	-0.6
SSB				IAmb	IAmb	17 11 59.1	
	comp=Z,20nm,1.0s						
NOR	Nord	86.34	352	i P	P	17 12 01.9	-0.6
NOR				i P	PcP	17 12 02.4	-2.6
NOR				AMP		17 12 02.7	
	comp=Z,20nm,0.6s						
NOR				IAmb	IAmb	17 12 03.7	
	comp=Z,14nm,1.0s						
BKZ	Black Stump Fm	87.93	130	P	P	17 12 10.7	-0.4
BKZ				IAmb	IAmb	17 12 13.6	
	comp=Z,17nm,0.9s						
DAG	Danmarks Havn	88.60	348	i P	P	17 12 13.3	-0.1
TORD	Torodi Ar. Bea	91.40	283	P	P	17 12 27.6	-0.2
	comp=Z,4.9nm,0.8s,baz=86,slow=5.2,SNR=12						
TORD				PP	PP	17 16 06.6	+1.0
	comp=Z,1.2nm,0.9s,baz=72,slow=6.9,SNR=4.1						
TORD	Torodi Ar. Bea	91.40	283	P	P	17 12 27.2	-0.5
VNDA	Vanda	91.81	168	P	P	17 12 29.5	+1.2
	comp=Z,1.6nm,0.9s,baz=290,slow=7.2,SNR=4.2						
ESDC	Sonseca Array	92.32	310	P	P	17 12 31.8	+0.2
	comp=Z,4.0nm,0.7s,baz=59,slow=4.3,SNR=23						
ESDC	Sonseca Array	92.32	310	P	P	17 12 31.1	-0.6
H21K	Melozitna Rive	92.84	23	P	P	17 12 36.5	+3.1
	baz=293						
K20K	Telida	93.22	25	P	P	17 12 36.9	+1.7
	baz=292						
I21K	Tanana	93.35	23	P	P	17 12 37.4	+1.7
	baz=294						
NEEM	North Greenlan	93.68	353	i P	P	17 12 37.1	-0.3
SUMG	Summit	95.27	347	i P	P	17 12 44.7	-0.2
SUMG				IAmb	IAmb	17 12 49.0	
	comp=Z,4.7nm,0.9s						
ILAR	Eielson Array	95.47	22	P	P	17 12 44.0	-1.5
	comp=Z,0.7nm,0.9s,baz=263,slow=7.8,SNR=3.4						
ILAR				PP	PP	17 16 37.5	+1.6
	comp=Z,1.1nm,1.1s,baz=295,slow=6.9,SNR=2.8						
KOWA	Kowa	96.70	285	P	P	17 12 53.1	+1.0
	comp=Z,0.6nm,0.3s,baz=307,slow=1.1,SNR=3.1						
RES	Resolute Bay	98.40	3	P	Pdif	17 12 59.9	+1.4
	comp=Z,3.1nm,0.7s,baz=46,slow=4.3,SNR=5.3						
RES	Resolute Bay	98.40	3	P	Pdif	17 12 59.9	+1.4
RES				pmax	pmax		
	comp=Z,9.0nm,1.1s						
RES	Resolute Bay	98.40	3	IAmb	IAmb	17 13 00.7	
	comp=Z,9.4nm,1.1s						
DBIC	Dimbokro	98.66	278	P	Pdif	17 13 03.0	+2.1
	comp=Z,3.9nm,0.8s,baz=58,slow=2.3,SNR=3.5						
I04A	Tendick Farm,	119.44	30	P	PKiKP	17 18 11.7	+0.8
	baz=317						
J04D	Umpqua Nationa	120.00	30	P	PKiKP	17 18 13.8	+1.6
	baz=317						
F10A	Beach Ranch, E	120.18	25		PKPdf	17 18 12.2	-0.1
J05D	Fort Rock, OR	120.40	30	P	PKiKP	17 18 13.9	+1.0
	baz=318						
MSO	Missoula	120.81	23	P	PKiKP	17 18 14.0	+0.5
	baz=326						
EGMT	Eagleton	121.26	19	P	PKiKP	17 18 15.3	+0.9
	baz=331						
EGMT	Eagleton	121.26	19		PKPdf	17 18 13.9	-0.4
N02D	Trinity Center	121.31	33	P	PKiKP	17 18 15.8	+1.2
	baz=315						
PLID	Pearl Lake	121.41	25		PKPdf	17 18 13.7	-1.1
J08A	Circle Bar Ran	121.67	28		PKPdf	17 18 14.4	-0.8
ULM	Lac du Bonnet	122.40	8	PKP	PKPdf	17 18 15.9	-0.3
	comp=Z,6.4nm,0.7s,baz=67,slow=2.8,SNR=7.5						
HLID	Hailey	123.31	25	P	PKiKP	17 18 19.8	+1.1
	baz=325						
LAO	LASA Array	123.54	17	P	PKiKP	17 18 20.6	+1.7
	baz=335						
REDW	Red Top Meadow	124.91	23		PKPdf	17 18 21.1	-0.5
EYMN	Ely	125.17	5	P	PKiKP	17 18 22.6	+0.6
	baz=352						
NVAR	Mina Array Bea	125.49	32	PKP	PKiKP	17 18 24.4	+1.2
	comp=Z,2.5nm,0.7s,baz=306,slow=1.6,SNR=14						
NVAR	Mina Array Bea	125.49	32		PKPdf	17 18 21.3	-1.5
BW06	Boulder Array	125.90	22	P	PKiKP	17 18 24.1	+0.1
	baz=330						
BW06	Boulder Array	125.90	22		PKPdf	17 18 22.2	-1.3
PD31	Pinedale Array	125.90	22		PKPdf	17 18 22.6	-0.9
PDAR	Pinedale Array	125.90	22	PKP	PKPdf	17 18 22.8	-0.7
	comp=Z,2.4nm,0.7s,baz=104,slow=0.6,SNR=11						
RSSD	Black Hills	126.51	17	P	PKiKP	17 18 25.3	+0.2
	baz=337						
DUG	Dugway, Tooele	126.75	26	P	PKiKP	17 18 26.5	+0.9
	baz=325						
R11A	Troy Canyon, C	126.93	30	P	PKiKP	17 18 26.6	+0.5
	baz=321						
R11A	Troy Canyon, C	126.93	30		PKPdf	17 18 25.0	-0.5
F36A	Milaca	127.01	7	PKPdf	PKiKP	17 18 25.6	-0.2
K22A	Casper	127.07	20	P	PKiKP	17 18 26.1	0.0
	baz=333						
RDMU	Red Mountain	127.78	23	PKPdf	PKPdf	17 18 26.3	-0.9
GSC	Goldstone, Bar	128.62	33	P	PKiKP	17 18 31.1	+1.8
	baz=318						
ECSD	EROS Data Cent	128.62	11	P	PKiKP	17 18 29.3	+0.3
	baz=346						
ECSD	EROS Data Cent	128.62	11		PKPdf	17 18 28.1	-0.2
O20A	White River Ci	128.68	23	P	PKiKP	17 18 30.0	+0.5
	baz=330						
BELC	Belle Mtn. Jos	130.03	34	P	PKiKP	17 18 33.7	+1.4
	baz=319						
PDMCI	Parker Dam,Lak	130.80	32	P	PKiKP	17 18 35.0	+1.4
	baz=321						
T25A	Trinidad	132.72	21	P	PKiKP	17 18 37.7	-0.1
	baz=334						
ANMO	Albuquerque	133.88	24	i PKIKP	PKPdf	17 18 36.0	-2.8
TXAR	Lajitas Array	139.91	25	PKP	PKiKP	17 18 51.5	-0.9
	comp=Z,1.4nm,0.6s,baz=145,slow=1.4,SNR=6.8						
JCT	Junction City	140.36	20	P	PKiKP	17 18 52.0	-1.3
	baz=337						
BDFB	Brasilia	142.48	253	PKP	PKPdf	17 18 53.1	-1.8
	comp=Z,4.9nm,0.8s,baz=135,slow=13,SNR=5.1						
PLCA	Paso Flores	143.78	199	PKP	PKPdf	17 18 55.6	-1.0
	comp=Z,11nm,0.9s,baz=167,slow=2.4,SNR=13						
ITQB	Itaqui	144.75	226	PKPdf	PKPbc	17 18 57.7	+0.4
CPUP	Villa Florida	147.08	231	PKPbc	PKPbc	17 19 04.5	-0.1
	comp=Z,10nm,0.8s,baz=115,slow=3.3,SNR=14						
CPUP	Villa Florida	147.08	231	PKP2	PKPdf	17 19 01.9	-0.6
CPUP	Villa Florida	147.08	231	PKPdf	PKPdf	17 19 01.9	-0.6
AQDB	Aquidauana	148.31	242	PKPdf	PKPdf	17 19 03.6	-1.1
BO02	Sierra Bellavi	149.15	204	PKPbc	PKPbc	17 19 09.1	-0.8
VA03	San Esteban	150.80	206		PKPbc	17 19 13.2	-0.8
LPAZ	La Paz	160.78	239	PKPab	PKPab	17 20 04.7	-0.2
	comp=Z,3.8nm,0.8s,baz=138,slow=5.6,SNR=5.3						

IDC 08 17:04:47.0±1.9, 6°.49N×95°.09E, h21^{km}±5^{km}, mb4.0/5, mb1 4.1/5, mb1mx3.4/77, mbtmp4.1/5, Error ellipse: s-maj=156.6km s-min=31.7km az=45.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	46.70	125	P	P	17 13 14.5	-0.1
	1.6nm,1.1s,baz=306,slow=8.5,SNR=3.7						
FINES	FINESS Array B	74.37	332	P	P	17 16 22.8	-0.1
	1.7nm,0.5s,baz=106,slow=4.5,SNR=3.8						
FINES				pP	pP	17 16 29.8	+0.7
	1.8nm,0.5s,baz=95,slow=5.0,SNR=2.6						
ARCES	ARCESS Array B	76.88	340	P	P	17 16 37.8	+0.6
	6.4nm,1.1s,baz=96,slow=7.3,SNR=0.9						
ARCES				pP	sP	17 16 44.6	-1.1
	1.5nm,0.6s,baz=95,slow=5.6,SNR=1.4						
GERES	GERESS Array B	79.48	318	P	P	17 16 52.4	+0.3
	0.5nm,0.7s,baz=101,slow=5.1,SNR=3.0						
GERES				pP	pP	17 16 59.1	+0.8
	0.8nm,0.6s,baz=99,slow=4.4,SNR=6.1						
HFS	Hagfors	80.12	330	P	P	17 16 54.8	-0.5
	1.7nm,0.8s,baz=103,slow=6.4,SNR=1.4						
HFS				pP	PcP	17 17 02.0	-0.5
	2.2nm,0.8s,baz=113,slow=3.4,SNR=1.8						

*SFS **08** 17:05:22.0, 33°.87N×6°.18W, ML3.4, TIFLET (MARRUECOS)*

*CNRM **08** 17:05:22.7, 33°.81N×6°.33W, h2^{km}, ml2.8*

*MDD **08** 17:05:24.2±3.2, 33°.94N×6°.24W, h0^{km}, mb3.8/6, Error ellipse: s-maj=28.5km s-min=24.0km az=168.0, PRXIMO*

*INMG **08** 17:05:26.0±1.5, 33°.99N×6°.28W, h13^{km}±11^{km}, ML2.0, Error ellipse: s-maj=5.8km s-min=5.5km az=64.0*

ISC 08 17:05:23.4±1.1, 33°.90N±0°.02×6°.34W±0°.03, h14^{km}±9^{km}, n41, σ1^{s}.55/75, Morocco

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZHG	ZHG	0.52	209	P	Pg	17 05 32.3	-1.4
ZHG				S	Sg	17 05 39.3	-1.3
AVE	Averroes	1.08	236	P	Pn	17 05 44.5	+0.4
AVE				S	Sb	17 05 58.3	+0.4
AVE	Averroes	1.08	236	P	Pb	17 05 44.1	+0.2
AVE				S	Sn	17 05 58.7	-0.3
LCRM	LCR	1.25	100	P	Pn	17 05 46.4	-0.2
CZD	Col de Zad	1.39	128	P	Pn	17 05 49.0	+0.4
CZD				S	Sn	17 06 07.0	+0.1
CHEFC	Chefchaouen	1.46	34	P	Pg	17 05 52.9	+1.5
CHEFC				S	Sg	17 06 11.8	+1.5
MD31	MD31	1.68	128	P	Pn	17 05 53.2	+0.8
MD31				S	Sn	17 06 14.1	+0.3
MDT	Midelt	1.81	126	P	Pn	17 05 53.2	-1.1
MDT				S	Sn	17 06 16.3	-0.7
SRHM	Skhour des Reh	1.94	223	P	Pb	17 05 58.2	-0.3
SRHM				S	Sg	17 06 26.1	+0.4
SMIR	Smir Dam	1.94	24	P	Pb	17 05 57.7	-0.8
SMIR				S	Sb	17 06 24.6	+2.0
OUK	Oukaimeden	2.98	206	P	Pn	17 06 10.5	-0.1
OUK				S	Sn	17 06 48.5	+2.2
OUZM	OUZ	3.01	187	P	Pn	17 06 12.8	+2.1
OUZM				S	Sb	17 06 52.3	-1.1
JBK	JBK	3.16	81	P	Pn	17 06 11.6	-1.2
JBK				S	Sn	17 06 50.0	-0.4
TZRR	Tazzarine	3.17	168	P	Pn	17 06 12.6	-0.5
TZRR				S	Sn	17 06 51.1	+0.3
TAF	Taforalt	3.37	73	P	Pn	17 06 15.7	+0.1
TAF				S	Sn	17 06 57.9	+2.4
PBDV	Barranco-do-Ve	3.58	339	ePn	Pn	17 06 19.4	+0.9
PBDV				eSn	Sn	17 06 58.2	-2.4
PBDV				A	A	17 07 01.4	
	3.4nm,1.0s						
PVAQ	Vaqueiros	3.67	343	ePn	Pn	17 06 21.2	+1.5
PVAQ				eSn	Sn	17 07 01.7	-1.1
PVAQ				A	A	17 07 07.7	
	3.2nm,0.7s						
PVAQ	Vaqueiros	3.67	343	P	Pn	17 06 20.6	+0.9
PVAQ				S	Sn	17 07 07.2	+4.4
EGOR	Sierra Gorda,	3.68	29	S	Sn	17 07 00.6	-2.7
	0.1nm,0.0s,SNR=7.9						
TDRA	Tendrara	3.70	102	P	Pn	17 06 20.4	0.0
TDRA				S	Sn	17 07 04.7	+0.8
EGRO	El Granado	3.74	346	P	Pn	17 06 21.9	+1.2
	1.9nm,0.1s,SNR=17						
EGRO				S	Sn	17 07 04.7	+0.2
	0.9nm,0.1s,SNR=7.9						
TTIG	Tnine Tigouga,	3.79	209	P	Pn	17 06 23.5	+2.0
TTIG				S	Sn	17 07 06.9	+0.9
PFVI	Vila Bisbo	3.81	328	ePn	Pn	17 06 22.5	+0.8
PFVI				eSn	Sn	17 07 05.1	-1.2
ZGR	Zagora	3.82	171	S	Sn	17 07 07.4	+0.7
EMIN	Mina Concepcio	3.87	356	P	Pn	17 06 22.3	-0.1
	0.2nm,0.1s,SNR=7.9						
EMIN				S	Sn	17 07 07.5	-0.2
	0.6nm,0.1s,SNR=7.9						
MORF	Marmelete	3.88	332	ePn	Pn	17 06 23.7	+1.0
MORF				eSn	Sn	17 07 07.3	-0.9
MORF				A	A	17 07 18.1	
	4.1nm,0.8s						
PCVE	Castro Verde	3.97	340	ePn	Pn	17 06 24.5	+0.6
PCVE				eSn	Sn	17 07 08.0	-2.2
PCVE				A	A	17 07 14.3	
	2.7nm,0.8s						
PTEO	Sao Teotonio	4.12	333	ePn	Pn	17 06 27.3	+1.4
PTEO				eSn	Sn	17 07 13.1	-0.8
MESJ	Messejana	4.22	339	ePn	Pn	17 06 28.5	+1.3
MESJ				eSn	Sn	17 07 15.4	-0.9
ECAB	El Cabril	4.23	10	P	Pn	17 06 28.1	+0.6
	0.2nm,0.0s,SNR=8.2						
ECAB				S	Sn	17 07 14.3	-2.3
	0.2nm,0.1s,SNR=7.9						
PBAR	Barrancos	4.30	353	ePn	Pn	17 06 29.3	+0.9
PBAR				A	A	17 07 20.1	
	1.1nm,0.2s						
EADA	Adamuz	4.49	18	P	Pn	17 06 32.0	+0.9
	0.5nm,0.1s,SNR=7.9						
EADA				S	Sn	17 07 19.5	-3.5
	0.2nm,0.1s,SNR=7.9						
PNCL	Nicolau / Gran	4.56	338	ePn	Pn	17 06 31.3	-0.7
PNCL				eSn	Sn	17 07 21.7	-3.1
PNCL				A	A	17 07 29.7	
	2.0nm,0.6s						
EQES	Quesada	4.71	33	P	Pn	17 06 36.1	+1.9
	0.2nm,0.1s,SNR=4.0						
EQES				S	Sn	17 07 26.9	-1.7
	0.1nm,0.1s,SNR=7.9						
EVO	Evora	4.81	344	ePn	Pn	17 06 36.3	+0.8
EVO				eSn	Sn	17 07 30.1	-0.9
EVO				A	A	17 07 32.0	
	1.8nm,0.4s						
EBAD	Badajoz	4.87	354	P	Pn	17 06 36.5	+0.3
	1.2nm,0.1s,SNR=15						
EBAD				S	Sn	17 07 32.1	-0.4
	0.5nm,0.1s,SNR=7.9						
PESTR	Estremoz	5.06	349	ePn	Pn	17 06 39.7	+0.9
PESTR				eSn	Sn	17 07 36.6	-0.4
PMTG	Montargil	5.38	344	ePn	Pn	17 06 43.7	+0.5
PMTG				eSn	Sn	17 07 44.9	0.0
PMRV	Marv??o	5.58	352	eSn	Sn	17 07 47.6	-2.3
PMRV				A	A	17 07 55.6	
	0.6nm,0.2s						
AFON	Font Roja	6.67	43	S	Sn	17 08 07.4	-10
	1.1nm,0.1s,SNR=4.0						
ETOR	Torete	7.70	25	P	Pn	17 07 14.0	-1.2
	SNR=7.9						
ETOR				S	Sn	17 08 36.7	-5.5
	1.2nm,0.2s,SNR=7.9						

MOS ***08*** *17:05:29.2±0.9, 48°.13N×155°.26E, h7^{km}, mb4.6/1, Error ellipse: s-maj=17.7km s-min=5.2km az=72.3*
SKHL ***08*** *17:05:33.7±0.1, 48°.20N×155°.30E, h52^{km}±6^{km}, mb4.4/4*
KRSC ***08*** *17:05:34.2±1.6, 48°.34N×156°.35E, h16^{km}±26^{km}, ML4.4*
IDC ***08*** *17:05:37.5±3.0, 48°.41N×154°.84E, h57^{km}±26^{km}, mb3.7/10, mb1 3.9/14, mb1mx3.6/75, mbtmp4.0/14, ML3.4/4, Error ellipse: s-maj=26.6km s-min=17.1km az=122.0*
ISC 08 17:05:34.9±0.8**, 48°.26N**±0°.08×**155°.2E**±0°.1**, h43**^{km}**, n72, σ1^{s}.38**/75**, mb4.0**/10**, 1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.50	13	*e*PN	Pn	17 06 12.6	-0.4
SKR				pmax	pmax		
	comp=Z,24nm,0.3s						
SKR	Severo-Kuril's	2.50	13	*e*P	Pn	17 06 12.5	-0.4
SKR				*e*S	Sn	17 06 41.5	-0.6
SKR	Severo-Kuril's	2.50	13	*e*P	Pn	17 06 12.3	-0.6
SKR				AMB	AMB	17 06 22.7	
	comp=Z,220nm,0.7s						
SKR				*e*S	Sn	17 06 41.3	-0.8
SKR				A	A	17 06 45.8	
	comp=Z,340nm,0.3s						
SKR				A	A	17 06 45.8	
	comp=Z,370nm,0.3s						
PAU	Pauzhetka	3.37	17	PN	Pn	17 06 26.2	+1.2
PAU	Pauzhetka	3.37	17	*e*P	Pn	17 06 26.2	+1.2
PAU				*e*S	Sn	17 07 03.5	-0.2
PAU	Pauzhetka	3.37	17	*e*P	Pn	17 06 25.1	+0.1
PAU				AMB	AMB	17 06 34.3	
	comp=Z,110nm,0.7s						
PAU				*e*S	Sn	17 07 03.6	-0.2
PAU				A	A	17 07 09.1	
	comp=Z,260nm,0.3s						
PAU				A	A	17 07 09.1	
	comp=Z,290nm,0.3s						
KDTR	Khodutka, Kamc	4.00	26	PN	Pn	17 06 33.2	-0.4
KDTR	Khodutka, Kamc	4.00	26	*e*P	Pn	17 06 33.2	-0.4
KDTR				*e*S	Sn	17 07 16.8	-2.4
ASAK	Asacha	4.47	22	PN	Pn	17 06 41.9	+1.8
ASAK	Asacha	4.47	22	*e*P	Pn	17 06 41.9	+1.8
MTVR	Mutnovka	4.63	23	PN	Pn	17 06 43.4	+1.0
MTVR	Mutnovka	4.63	23	*e*P	Pn	17 06 43.4	+1.0
MTVR				*e*S	Sn	17 07 34.7	-0.3
GRL	Gorelyy	4.67	22	PN	Pn	17 06 44.6	+1.7
GRL	Gorelyy	4.67	22	*e*P	Pn	17 06 44.6	+1.7
RUS	Russkaya	4.68	25	PN	Pn	17 06 42.7	-0.2
RUS	Russkaya	4.68	25	*e*P	Pn	17 06 42.7	-0.2
RUS				*e*S	Sn	17 07 34.4	-1.5
RUS	Russkaya	4.68	25	*e*P	Pn	17 06 42.7	-0.2
APC	Apacha	4.83	14	PN	Pn	17 06 46.2	+1.2
APC	Apacha	4.83	14	*e*P	Pn	17 06 46.2	+1.2
PETK	Petropavlovsk-	5.11	17	P	Pn	17 06 49.7	+1.0
	comp=Z,1.8nm,0.3s,baz=168,slow=12,SNR=73						
PET	Petropavlovsk	5.25	23	PN	Pn	17 06 52.0	+1.3
PET	Petropavlovsk	5.25	23	*e*P	Pn	17 06 52.0	+1.3
PET				*e*S	Sn	17 07 49.9	+0.1
PET	Petropavlovsk	5.25	23	*e*P	Pn	17 06 53.3	+2.6
PET				*e*S	Sn	17 07 51.7	+1.9
PET				A	A	17 08 01.3	
	comp=Z,100nm,0.8s						
PET				A	A	17 08 01.3	
	comp=Z,200nm,0.8s						
DALK	Dalny	5.28	24	PN	Pn	17 06 52.0	+0.9
DALK	Dalny	5.28	24	*e*P	Pn	17 06 52.0	+0.9
DALK				*e*S	Sn	17 07 50.9	+0.3
KOK	Koryaka	5.49	22	PN	Pn	17 06 56.5	+2.4
KOK	Koryaka	5.49	22	*e*P	Pn	17 06 56.5	+2.4
KOK	Koryaka	5.49	22	*e*P	Pn	17 06 56.5	+2.4
AVH	Avacha	5.49	23	PN	Pn	17 06 56.6	+2.5
AVH	Avacha	5.49	23	*e*P	Pn	17 06 56.6	+2.5
SDLR	Sedlovina	5.54	23	PN	Pn	17 06 56.1	+1.3
SDLR	Sedlovina	5.54	23	*e*P	Pn	17 06 56.1	+1.3
SPN	Mys Shipunski	5.72	30	PN	Pn	17 06 58.1	+0.9
SPN	Mys Shipunski	5.72	30	*e*P	Pn	17 06 58.1	+0.9
SPN				*e*S	Sn	17 07 58.7	-2.9
SPN	Mys Shipunski	5.72	30	*e*P	Pn	17 06 58.1	+0.9
KUR	Kuril'sk	5.89	242	*de*PN	Pn	17 07 00.8	+1.2
KUR				pmax	pmax		
	comp=N,23nm,0.4s						
KUR				pmax	pmax		
	comp=E,44nm,0.4s						
KUR				pmax	pmax		
	comp=Z,100nm,0.4s						
KUR	Kuril'sk	5.89	242	*e*P	Pn	17 07 00.8	+1.2
KUR				AMB	AMB	17 07 06.0	
	comp=Z,40nm,0.4s						
KUR				*e*S	Sn	17 08 05.4	-0.4
KUR				A	A	17 08 09.6	
	comp=Z,110nm,0.6s						
KUR				A	A	17 08 09.6	
	comp=Z,100nm,0.6s						
MKZ	Mys Kozlova	7.50	30	PN	Pn	17 07 20.4	-1.2
MKZ	Mys Kozlova	7.50	30	*e*P	Pn	17 07 20.4	-1.2
TUMR	Tumrok	7.67	22	PN	Pn	17 07 25.8	+1.8
TUMR	Tumrok	7.67	22	*e*P	Pn	17 07 25.8	+1.8
NMR	Nemuro--Hokkai	8.24	237	*e*P	Pn	17 07 29.1	-2.6
YSS	Yuzh-Sakhalins	8.53	266	*e*PN	Pn	17 07 36.1	+0.4
YSS				*e*		17 09 24.5	
YSS	Yuzh-Sakhalins	8.53	266	*e*P	Pn	17 07 36.1	+0.4
TYV	Tymovskoe	8.58	292	*e*P	Pn	17 07 37.2	+0.8
TYV				AMB	AMB	17 07 44.1	
	comp=Z,3.0nm,0.7s						
KBTR	Krutoberegovo	9.22	27	PN	Pn	17 07 45.5	+0.4
KBTR	Krutoberegovo	9.22	27	*e*P	Pn	17 07 45.5	+0.4
JKA	Kamikawa-asahi	9.69	249	*e*P	Pn	17 07 52.6	+1.0
ASAJ	Asahikawa	9.69	249	P	Pn	17 07 52.5	+1.0
	comp=Z,1.7nm,0.3s,baz=58,slow=11,SNR=19						
USRK	Ussuriysk Ar.	16.56	264	P	Pn	17 09 22.7	-1.2
	baz=70,slow=11,SNR=2.9						
MJAR	Matsushiro Arr	17.13	233	P	P	17 09 33.2	+0.9
	comp=Z,0.1nm,0.3s,baz=31,slow=12,SNR=5.1						
KSRS	Korea Array	22.62	252	P	P	17 10 31.1	-0.9
	comp=Z,7.4nm,0.9s,baz=56,slow=9.8,SNR=10						
H11N2	WAKE ISLAND Hy	29.98	158	T	T	17 43 24.8	
	baz=345,slow=76,SNR=73						
H11N1	WAKE ISLAND Hy	30.00	158	T	T	17 43 25.0	
	baz=345,slow=76,SNR=93						
H11N3	WAKE ISLAND Hy	30.00	158	T	T	17 43 26.2	
	baz=345,slow=76,SNR=62						
H11S1	WAKE ISLAND Hy	31.11	159	T	T	17 44 47.9	
	baz=345,slow=76,SNR=794						
H11S3	WAKE ISLAND Hy	31.12	159	T	T	17 44 54.6	
	baz=345,slow=76,SNR=1362						
H11S2	WAKE ISLAND Hy	31.13	159	T	T	17 44 49.4	
	baz=345,slow=76,SNR=894						
MKAR	Makanchi Array	47.53	297	P	P	17 14 03.6	-2.0
	comp=Z,1.1nm,0.7s,baz=42,slow=4.2,SNR=7.0						
KURK	Kurchatov	47.73	303	P	P	17 14 05.5	-1.6
KURBB	Kurchatov Arra	47.82	303	P	P	17 14 05.5	-2.4
	comp=Z,1.0nm,0.7s,baz=68,slow=8.2,SNR=3.5						
CMAR	Chiang Mai Arr	54.11	257	P	P	17 14 55.6	+0.1
	comp=Z,1.5nm,0.9s,baz=30,slow=7.4,SNR=6.2						
WRA	Warramunga Arr	70.42	201	P	P	17 16 45.2	+0.7
	comp=Z,1.2nm,0.8s,baz=16,slow=6.5,SNR=6.0						
ASAR	Alice Springs	74.11	200	P	P	17 17 07.6	+1.2
	comp=Z,0.5nm,0.7s,baz=16,slow=5.6,SNR=13						
EKA	Eskdalemuir Ar	75.20	347	P	P	17 17 12.7	+0.2
	comp=Z,2.2nm,0.8s,baz=18,slow=5.4,SNR=5.1						
TXAR	Lajitas Array	75.51	62	P	P	17 17 16.8	+2.0
	comp=Z,0.7nm,0.6s,baz=294,slow=4.4,SNR=4.7						
GERES	GERESS Array B	77.71	335	P	P	17 17 26.4	-0.6
	comp=Z,0.5nm,0.5s,baz=39,slow=6.3,SNR=4.9						
DAVOX	Davos/Dischmat	80.64	337	P	P	17 17 44.0	+0.9
	comp=Z,0.7nm,0.4s,baz=355,slow=12,SNR=4.2						
DAVOX	Davos/Dischmat	80.64	337	P	P	17 17 44.0	+0.9
H03N2	Juan Fernandez	137.33	90	T	T	19 58 00.3	
	baz=310,slow=77,SNR=45						
H03N1	Juan Fernandez	137.34	90	T	T	19 58 00.5	
	baz=310,slow=77,SNR=57						
H03N3	Juan Fernandez	137.34	90	T	T	19 57 56.6	
	baz=310,slow=77,SNR=38						

IDC ***08*** *17:09:41.7±1.7, 6°.80N×94°.20E, h0^{km}, mb3.7/7, mb1 3.7/9, mb1mx3.5/69, mbtmp3.6/9, ML3.5/2, Error ellipse: s-maj=76.2km s-min=18.2km az=59.0*
ISC 08 17:09:45.1±1.3**, 6°.8N**±0°.2×**94°.2E**±0°.2**, h21**^{km}**, n12, σ1^{s}.34**/9**, mb3.8**/7**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	6.19	129	Pn	Pn	17 11 16.6	+1.1
	0.9nm,0.3s,baz=304,slow=12,SNR=5.6						
CMAR	Chiang Mai Arr	12.51	21	Pn	Pn	17 12 42.4	+0.4
	0.1nm,0.3s,baz=211,slow=14,SNR=2.0						
H08S3	Diego Garcia H	25.91	237	T	T	17 42 06.3	
	baz=56,slow=75,SNR=17						
H08S2	Diego Garcia H	25.92	237	T	T	17 42 05.4	
	baz=56,slow=75,SNR=8.9						
H08S1	Diego Carcia H	25.93	237	T	T	17 42 07.6	
	baz=56,slow=75,SNR=9.9						
MKAR	Makanchi Array	41.15	348	P	P	17 17 27.0	-0.9
	0.4nm,0.6s,baz=180,slow=10,SNR=4.2						
KURBB	Kurchatov Arra	45.60	346	P	P	17 18 03.3	-0.4
	0.8nm,0.7s,baz=180,slow=6.8,SNR=4.8						
WRA	Warramunga Arr	47.63	125	P	P	17 18 17.9	-2.2
	0.4nm,0.7s,baz=306,slow=9.2,SNR=2.2						
ZALV	Zalesovo Beam	47.63	353	P	P	17 18 18.6	-1.0
	0.7nm,0.5s,baz=178,slow=7.4,SNR=3.9						
ASAR	Alice Springs	49.22	129	P	P	17 18 32.7	+0.4
	0.6nm,0.7s,baz=302,slow=8.1,SNR=5.9						
STKA	Stephens Creek	59.36	133	P	P	17 19 45.5	-0.5
	0.9nm,0.7s,baz=346,slow=11,SNR=2.9						
FINES	FINESS Array B	73.67	332	P	P	17 21 18.4	+1.4
	2.1nm,0.9s,baz=169,slow=8.3,SNR=3.5						

IDC ***08*** *17:12:36.7±0.6, 6°.79N×94°.64E, h0^{km}, mb4.1/15, mb1 4.1/16, mb1mx3.9/63, mbtmp4.1/16, ML3.5/1, Error ellipse: s-maj=31.0km s-min=14.3km az=51.0*
NEIC ***08*** *17:12:40.0±1.3, 7°.22N±0°.10×95°.0E±0°.1, h10^{km}±2^{km}, mb4.5/18, Error ellipse: s-maj=23.2km s-min=15.4km az=247.0*
ISC 08 17:12:42.7±0.6**, 7°.11N**±0°.09×**95°.0E**±0°.1**, h35**^{km}**, n61, σ1^{s}.48**/59**, mb4.3**/40**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	2.72	133	Pn	Pn	17 13 24.5	+0.6
SRIT	Nakonsritamara	4.83	72	Pn	Pn	17 13 51.5	-1.5
PSI	Prapat	5.82	137	Pn	Pn	17 14 07.1	+0.4
	1.2nm,0.3s,baz=332,slow=18,SNR=5.4						
CMAR	Chiang Mai Arr	11.93	19	Pn	Pn	17 15 37.0	+6.6
	0.2nm,0.3s,baz=212,slow=14,SNR=7.2						
LSA	Lhasa	22.76	351	P	P	17 17 40.5	-2.1
H08S3	Diego Garcia H	26.77	237	T	T	17 44 51.2	
	baz=56,slow=75,SNR=3.6						
H08S2	Diego Garcia H	26.77	237	T	T	17 44 59.6	
	baz=56,slow=75,SNR=3.9						
H08S1	Diego Carcia H	26.79	237	T	T	17 44 57.4	
	baz=56,slow=75,SNR=2.8						
NIL	Nilore	33.19	326	P	P	17 19 16.1	-0.2
GAR	Garm	38.75	329	P	P	17 20 03.2	-0.7
GAR				IAmb	IAmb	17 20 15.2	
	comp=Z,13nm,1.1s						
CHGR	Chuyangaron	39.10	327	P	P	17 20 05.7	-1.2
CHGR				IAmb	IAmb	17 20 21.4	
	comp=Z,20nm,1.2s						
MK31	Makanchi Array	41.01	347	P	P	17 20 22.6	+0.1
MKAR	Makanchi Array	41.01	347	P	P	17 20 23.3	+0.8
	comp=Z,1.6nm,0.7s,baz=168,slow=8.1,SNR=9.4						
MKAR	Makanchi Array	41.01	347	P	P	17 20 22.7	+0.2
MAKZ	Makanchi	41.10	346	P	P	17 20 22.8	-0.5
MAKZ				IAmb	IAmb	17 20 32.2	
	comp=Z,5.1nm,1.1s						
KK31	Karatay Array	41.81	333	P	P	17 20 27.7	-1.4
KS19	Wonju Array Si	42.51	40	P	P	17 20 33.9	-1.0
KURK	Kurchatov	45.55	345	P	P	17 20 58.4	-0.6
KURK				IAmb	IAmb	17 21 08.6	
	comp=Z,11nm,1.1s						
WB0	Warramunga Arr	47.11	125	P	P	17 21 11.9	+0.2
WB0				IAmb	IAmb	17 21 32.5	
	comp=Z,9.8nm,1.5s						
WRA	Warramunga Arr	47.16	126	P	P	17 21 11.4	-0.8
	comp=Z,0.9nm,0.8s,baz=304,slow=9.0,SNR=7.9						
WRA				PcP	PcP	17 22 43.4	-0.1
	comp=Z,0.5nm,0.5s,baz=311,slow=3.0,SNR=4.8						
WB2	Warramunga Arr	47.17	126	P	P	17 21 11.9	-0.3
WB2				IAmb	IAmb	17 21 39.7	
	comp=Z,3.5nm,0.9s						
WR0	Warramunga Arr	47.33	125	P	P	17 21 13.0	-0.4
WR0				IAmb	IAmb	17 21 20.8	
	comp=Z,9.6nm,1.4s						
ZAA0	Zalesovo Array	47.42	352	P	P	17 21 13.3	-0.3
ZALV	Zalesovo Beam	47.42	352	P	P	17 21 15.0	+1.4
	comp=Z,1.8nm,0.9s,baz=160,slow=4.7,SNR=4.7						
ZALV	Zalesovo Beam	47.42	352	P	P	17 21 13.9	+0.2
AS31	Alice Springs	48.80	130	P	P	17 21 24.6	-0.2
ASAR	Alice Springs	48.80	130	P	P	17 21 24.1	-0.8
	comp=Z,0.8nm,0.7s,baz=302,slow=7.8,SNR=9.0						
ASAR				PcP	PcP	17 22 49.1	-0.2
	comp=Z,1.1nm,0.8s,baz=300,slow=2.5,SNR=5.9						
ASAR	Alice Springs	48.80	130	P	P	17 21 23.3	-1.6
JHJ	Hachijo jima 2	48.89	52	P	P	17 21 29.2	+3.8
	comp=Z,217nm,0.9s,baz=253,slow=17,SNR=3.6						
BRVK	Borovoye	50.04	341	P	P	17 21 33.4	-0.3
BRVK				IAmb	IAmb	17 21 41.9	
	comp=Z,5.5nm,0.9s						
ABKAR	Akbulak array	51.29	331	P	P	17 21 43.2	-0.1
ABKAR	Akbulak array	51.29	331	P	P	17 21 43.7	+0.4
ABKAR				IAmb	IAmb	17 21 59.0	
	comp=Z,9.1nm,1.2s						
AKTO	Aktyubinsk	53.01	331	P	P	17 21 56.9	+0.8
	comp=Z,1.3nm,0.5s,baz=90,slow=9.2,SNR=4.6						
STKA	Stephens Creek	58.99	134	P	P	17 22 37.0	-2.2
	comp=Z,1.5nm,0.9s,baz=337,slow=7.7,SNR=3.5						
BRTR	Keskin Array B	63.54	311	P	P	17 23 08.6	-1.5
	comp=Z,0.6nm,0.6s,baz=118,slow=6.8,SNR=3.1						
TIXI	Tiksi	67.82	11	P	P	17 23 37.9	+1.0
	comp=Z,3.9nm,0.7s,baz=241,slow=1.7,SNR=6.6						
FINES	FINESS Array B	73.77	332	P	P	17 24 13.0	-0.2
	comp=Z,1.3nm,0.5s,baz=76,slow=5.2,SNR=11						
BOSA	Boshof	75.87	238	P	P	17 24 24.2	-2.0
	comp=Z,1.5nm,0.7s,baz=102,slow=8.2,SNR=3.7						
ARCES	ARCESS Array B	76.26	340	P	P	17 24 28.5	+1.0
	comp=Z,2.2nm,0.7s,baz=34,slow=4.5,SNR=8.5						
CONA	Conrad Observa	77.46	317	*e*P	P	17 24 37.2	+2.4
	comp=Z,3.8nm,1.4s						
SOKA	Soboth	77.96	316	*e*P	P	17 24 39.7	+2.1
	comp=Z,3.9nm,1.2s						
OBKA	Obir	78.28	316	*e*P	P	17 24 42.2	+2.8
	comp=Z,6.8nm,1.4s						
MOA	Molln	78.53	317	*e*P	P	17 24 43.5	+2.9
	comp=Z,4.6nm,1.3s						
MYKA	Terra Mystica	78.91	316	*e*P	P	17 24 46.1	+3.3
	comp=Z,3.0nm,1.0s						
GERES	GERESS Array B	78.94	318	P	P	17 24 42.0	-0.9
	comp=Z,0.5nm,0.4s,baz=96,slow=5.9,SNR=8.0						
KBA	Koelnbreinsper	79.13	316	*e*P	P	17 24 47.5	+3.4
	comp=Z,4.2nm,1.2s						
CLL	Collm	79.47	321	*e*P	P	17 24 48.0	+2.4
HFS	Hagfors	79.52	330	P	P	17 24 45.6	-0.2
	comp=Z,1.7nm,0.6s,baz=107,slow=5.1,SNR=8.7						
ABTA	Abfaltersbach	79.69	316	*e*P	P	17 24 45.7	-1.4
	comp=Z,6.6nm,1.7s						
WTTA	Wattenberg	80.30	317	*e*P	P	17 24 49.5	-1.0
	comp=Z,3.1nm,0.8s						
WATA	Walderalm	80.34	317	*e*P	P	17 24 49.8	-0.8
	comp=Z,1.5nm,0.6s						
SQTA	Sankt Quirin	80.59	317	*e*P	P	17 24 50.9	-1.1
	comp=Z,0.9nm,0.4s						
MOTA	Moosalm	80.66	317	*e*P	P	17 24 53.6	+1.2
	comp=Z,2.2nm,0.7s						
NOA	NORSAR Array B	80.79	331	P	P	17 24 52.3	-0.4
	comp=Z,1.1nm,0.9s,baz=94,slow=6.1,SNR=1.7						
RETA	Reutte	80.89	317	*e*P	P	17 24 52.2	-1.3
	comp=Z,0.8nm,0.4s						
FETA	Feichten	80.92	316	*e*P	P	17 24 55.8	+2.0
	comp=Z,3.4nm,1.0s						
DAVA	Damuels	81.49	317	*e*P	P	17 24 58.1	+1.2
	comp=Z,0.2nm,0.3s						
DAVOX	Davos/Dischmat	81.50	316	P	P	17 24 56.9	0.0
	comp=Z,2.4nm,0.6s,baz=323,slow=3.4,SNR=8.8						
ESDC	Sonseca Array	92.33	310	P	P	17 25 51.7	+1.8
	comp=Z,1.2nm,1.1s,baz=72,slow=4.2,SNR=4.7						
NVAR	Mina Array Bea	125.15	32	PKP	PKiKP	17 31 42.1	+1.4
	comp=Z,0.5nm,0.8s,baz=38,slow=2.6,SNR=3.7						
PDAR	Pinedale Array	125.58	22	PKP	PKiKP	17 31 41.5	0.0
	comp=Z,0.2nm,0.4s,baz=41,slow=2.9,SNR=2.6						

TAP ***08*** *17:14:39.5, 24°.27N×121°.89E, h20^{km}, ML2.8, B*
JMA ***08*** *17:14:39.6, 24°.20N×121°.84E, h28^{km}±1^{km}, M2.1*
ISC 08 17:14:39.6±0.9**, 24°.26N**±0°.01×**121°.92E**±0°.02**, h18**^{km}±4^{km}**, n110, σ0^{s}.86**/192**, 2D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	Heping Village	0.17	288	P	Pg	17 14 44.0	-0.1
	baz=288						
EHP				S	Sg	17 14 47.8	+0.7
	baz=288						
EWUT	Wuta	0.23	325	*i* P	Pg	17 14 44.9	0.0
	baz=330						
EWUT				*i* S	Sg	17 14 48.9	+0.3
	baz=330						
ENA	Nanau	0.24	316	⇓*i*P	Pg	17 14 44.9	-0.2
	baz=321						
ENA				S	Sg	17 14 48.8	0.0
	baz=321						
ETL	Fush Village	0.29	250	P	Pb	17 14 45.9	-0.4
	baz=246						
ETL				S	Sb	17 14 51.1	+0.3
	baz=246						
NACB	Ninganchiao	0.31	254	⇓*i*P	Pb	17 14 46.0	-0.6
	baz=251						
NACB				S	Sb	17 14 51.1	-0.2
	baz=251						
TWD	Chiawan	0.35	239	*i* P	Pb	17 14 46.7	-0.5
	baz=239						
TWD				S	Sb	17 14 52.7	+0.3
	baz=239						
TWC	Suao	0.36	349	*e*P	Pb	17 14 47.0	-0.4
	baz=359						
TWC				*e*S	Sb	17 14 52.3	-0.4
	baz=359						
HWA	Hwalien	0.40	226	*i* P	Pb	17 14 48.7	+0.5
	baz=222						
HWA				*e*S	Sb	17 14 55.8	+1.8
	baz=222						
ETLH	Xiulin Townshi	0.40	263	P	Pb	17 14 47.5	-0.7
	baz=268						
ETLH				*e*S	Sb	17 14 54.5	+0.4
	baz=268						
NDS	Dongshan	0.42	333	*i* P	Pb	17 14 48.3	-0.2
	baz=339						
NDS				*i* S	Sb	17 14 54.8	+0.3
	baz=339						
ETM	Tongmen	0.49	233	P	Pb	17 14 49.3	-0.4
	baz=232						
TEYL	Yanliau Villag	0.49	217	*e*P	Pb	17 14 49.4	-0.2
	baz=218						
ENTT	Nioudou	0.50	320	*i* P	Pb	17 14 49.5	-0.4
	baz=321						
ENTT				S	Sb	17 14 56.4	-0.5
	baz=321						
NDT	Datong Townshi	0.51	313	P	Pb	17 14 49.7	-0.2
	baz=314						
NDT				S	Sb	17 14 57.0	-0.1
	baz=314						
TWE	Neicheng	0.52	333	*i* P	Pb	17 14 50.0	-0.1
	baz=337						
TWE				S	Sb	17 14 56.3	-1.0
	baz=337						
NNSB	Datong	0.52	289	P	Pb	17 14 49.9	-0.3
	baz=289						
NNSB				S	Sb	17 14 57.0	-0.5
	baz=289						
ILA	Ilan	0.53	343	*i* P	Pb	17 14 50.7	+0.4
	baz=345						
ILA				*e*S	Sb	17 14 58.5	+0.8
	baz=345						
NNS	Nan Shan	0.53	290	*i* P	Pb	17 14 50.0	-0.4
	baz=290						
NNS				*i* S	Sb	17 14 57.3	-0.6
	baz=290						
WHF	Hehuan Shan	0.61	260	*i* P	Pb	17 14 51.4	-0.5
	baz=258						
WHF				S	Sb	17 15 00.2	-0.2
	baz=258						
FUSS	Fushou	0.62	269	*i* P	Pb	17 14 51.6	-0.3
	baz=268						
FUSS				*i* S	Sb	17 15 00.2	-0.2
	baz=268						
ESL	Shilin	0.63	225	*i* P	Pb	17 14 51.4	-0.6
	baz=223						
ESL				*i* S	Sb	17 15 02.0	+1.5
	baz=223						
NWLT	Wulai	0.64	324	*i* P	Pb	17 14 52.0	-0.3
	baz=320						
NWLT				*i* S	Sb	17 15 01.0	0.0
	baz=320						
YHNB	Yeheng	0.64	310	P	Pb	17 14 52.1	-0.3
	baz=310						
YHNB				S	Sb	17 15 01.4	+0.3
	baz=310						
NSK	Sanguang	0.66	309	*i* P	Pb	17 14 52.3	-0.3
	baz=310						
NSK				*i* S	Sb	17 15 01.3	-0.2
	baz=310						
TWT	Tachien	0.68	270	*i* P	Pb	17 14 53.2	+0.2
	baz=269						
TWT				*i* S	Sb	17 15 02.7	+0.5
	baz=269						
TDCB	Techi	0.70	270	P	Pb	17 14 53.0	-0.3
	baz=269						
TDCB				S	Sb	17 15 02.6	0.0
	baz=269						
CHGB	Renai	0.71	254	P	Pb	17 14 53.4	-0.2
	baz=253						
CHGB				S	Sb	17 15 03.5	+0.4
	baz=253						
TIPB	Shuangxi	0.72	353	*i* P	Pb	17 14 53.5	0.0
	baz=354						
TIPB				S	Sb	17 15 03.9	+0.8
	baz=354						
EGFH	Guangfu	0.74	218	*i* P	Pb	17 14 53.6	-0.3
	baz=230						
EGFH				S	Sb	17 15 05.5	+1.8
	baz=230						
OWD	Renai	0.74	246	*i* P	Pb	17 14 53.9	-0.2
	baz=245						
OWD				*i* S	Sb	17 15 04.4	+0.4
	baz=245						
TWB1	Santiao Chiao	0.75	5	*i* P	Pn	17 14 54.6	-0.7
TWB1				*i* S	Sn	17 15 05.3	-0.9
TWA	Mucha	0.78	337	*i* P	Pn	17 14 55.0	-0.8
	baz=328						
TWA				*i* S	Sn	17 15 06.5	-0.6
	baz=328						
NHDH	Xindian Distri	0.79	333	P	Pb	17 14 54.5	-0.3
	baz=333						
NHDH				S	Sn	17 15 06.0	-1.2
	baz=333						
TATO	Taipei	0.82	331	*e*P	Pb	17 14 55.0	-0.2
	baz=332						
TATO				S	Sb	17 15 06.3	+0.3
	baz=332						
NWF	Wu-fen Shan	0.82	351	*i* P	Pn	17 14 56.3	0.0
	baz=344						
NWF				S	Sn	17 15 07.4	-0.6
	baz=344						
WFSB	Wu-fen Shan	0.82	351	*e*P	Pn	17 14 55.7	-0.5
	baz=352						
NHY	Taipei	0.84	338	*e*P	Pb	17 14 55.4	-0.3
	baz=338						
TAP	Taipei	0.86	334	S	Sn	17 15 08.9	-0.1
	baz=318						
HGSD	Ruisui	0.89	211	P	Pb	17 14 56.2	-0.3
	baz=210						
HGSD				*e*S	Sn	17 15 10.7	+1.1
	baz=210						
WHP	Taichung City	0.89	271	*i* P	Pb	17 14 56.5	0.0
	baz=271						
WHP				*i* S	Sb	17 15 08.9	+0.8
	baz=271						
NJD	Zhudong	0.90	302	*e*P	Pn	17 14 57.2	-0.1
	baz=306						
LIOB	Emei	0.91	295	*i* P	Pn	17 14 57.3	-0.2
	baz=287						
LIOB				*e*S	Sn	17 15 10.0	-0.2
	baz=287						
WPL	Puli Township	0.91	255	*e*P	Pb	17 14 56.4	-0.6
	baz=254						
WPL				*e*S	Sb	17 15 08.7	-0.1
	baz=254						
NSTT	Nanjuang	0.92	294	*i* P	Pn	17 14 57.2	-0.4
	baz=294						
NSTT				*i* S	Sn	17 15 10.1	-0.2
	baz=294						
EHY	Hungye	0.93	216	*i* P	Pg	17 14 56.2	-1.4
	baz=216						
EHY				S	Sb	17 15 10.2	+1.0
	baz=216						
NTY	Taoyuan	0.93	323	*e*P	Pn	17 14 57.7	-0.1
	baz=323						

DPDB	Guoxing	0.94	256	*e*P	Pb	17 14 57.2	-0.1
	baz=248						
YM01	YM01	0.94	340	P	Pn	17 14 58.2	+0.2
	baz=325						
YM01				S	Sn	17 15 11.0	0.0
	baz=325						
JYNG	Yonagunijimaku	0.95	78	P	Pn	17 14 58.4	+0.3
JYNG				*e*S	Sn	17 15 12.6	+1.4
TWS1	Kuangyinshan	0.96	331	*e*P	Pn	17 14 58.0	-0.1
	baz=332						
NCU	National Centr	0.97	317	*e*S	Sn	17 15 13.6	+1.8
	baz=316						
NCUH	Zhongli	0.97	317	P	Pn	17 14 58.6	+0.2
	baz=316						
NCUH				*i* S	Sn	17 15 13.1	+1.3
	baz=316						
YM08	YM08	0.97	342	*e*P	Pn	17 14 58.6	+0.2
	baz=326						
ANP	Anpu	0.99	339	*i* P	Pn	17 14 59.0	+0.2
	baz=339						
NTST	Danshui	1.00	335	*e*P	Pn	17 14 58.5	-0.2
	baz=335						
NTST				*e*S	Sn	17 15 13.6	+1.2
	baz=335						
SSLB	Suanglung	1.00	242	P	Pg	17 14 57.9	-1.1
	baz=242						
SSLB				*e*S	Sb	17 15 11.8	+0.5
	baz=242						
SMLT	Sun Moon Lake	1.00	248	*i* P	Pb	17 14 58.6	+0.1
	baz=240						
SMLT				S	Sb	17 15 12.5	+1.0
	baz=240						
YOJ	Yonaguni jima	1.01	78	P	Pn	17 14 59.3	+0.4
	baz=71						
YOJ				S	Sn	17 15 14.5	+1.7
	baz=71						
YOJ	Yonaguni jima	1.01	78	P	Pn	17 14 59.3	+0.4
YOJ				*e*S	Sn	17 15 14.4	+1.7
TYC	Yuchr	1.03	250	*i* P	Pb	17 14 58.9	-0.1
	baz=242						
TYC				*e*S	Sn	17 15 13.4	+0.2
	baz=242						
YULB	Yu-li	1.03	214	P	Pg	17 14 57.6	-2.0
	baz=215						
YULB				S	Sg	17 15 12.4	-0.8
	baz=215						
TWQ1	Liyutan	1.05	275	*i* P	Pn	17 15 00.2	+0.8
	baz=275						
TWQ1				*e*S	Sn	17 15 14.7	+1.0
	baz=275						
EYUL	Yuli	1.06	211	*i* P	Pg	17 14 58.8	-1.3
	baz=229						
EYUL				*e*S	Sb	17 15 13.8	+0.8
	baz=229						
NMLH	Miaoli	1.07	285	P	Pn	17 15 00.8	+1.2
	baz=284						
TWF1	Yuli	1.07	213	*e*P	Pg	17 14 58.5	-1.8
	baz=226						
NSY	Sanyi	1.07	279	*e*P	Pn	17 15 00.3	+0.6
	baz=278						
NSY				*e*S	Sn	17 15 15.1	+1.0
	baz=278						
WWF	Wufeng	1.14	259	*e*P	Pn	17 15 01.2	+0.6
	baz=258						
TCU	Taichung	1.14	265	*i* P	Pn	17 15 01.9	+1.2
	baz=264						
TCU				*i* S	Sn	17 15 18.1	+2.2
	baz=264						
WDJ	Dajia District	1.17	275	*e*P	Pn	17 15 01.7	+0.6
	baz=274						
WDJ				*i* S	Sn	17 15 18.6	+2.0
	baz=274						
WJS	Zhushan	1.17	249	*i* P	Pn	17 15 01.8	+0.7
	baz=240						
WJS				*i* S	Sn	17 15 19.0	+2.3
	baz=240						
WNT	Mingjian	1.19	252	P	Pn	17 15 01.9	+0.6
	baz=252						
WNT				*i* S	Sn	17 15 19.0	+1.8
	baz=252						
FULB	Fuli	1.20	209	*i* P	Pb	17 15 00.9	-0.9
	baz=225						
FULB				*e*S	Sn	17 15 18.5	+1.1
	baz=225						
CHKT	Chengkung	1.26	204	*e*P	Pn	17 15 02.5	+0.2
	baz=187						
ALS	Alishan	1.26	234	*e*P	Pg	17 15 03.2	-0.8
	baz=235						
ALS				*e*S	Sn	17 15 20.1	+0.8
	baz=235						
CHN5	Tsauling	1.31	240	*i* P	Pg	17 15 04.4	-0.5
	baz=241						
CHN5				*e*S	Sn	17 15 22.9	+2.7
	baz=241						
ELDTW	Lidau	1.35	218	*i* P	Pn	17 15 02.6	-1.0
	baz=211						
ELDTW				S	Sb	17 15 21.6	+0.2
	baz=211						
PCYT	Pengchaiyu	1.37	6	P	Pg	17 15 05.0	-1.1
	baz=7.0						
WDLH	Douliu	1.39	246	P	Pb	17 15 04.8	-0.1
	baz=247						
WDLH				*i* S	Sg	17 15 25.0	+0.6
	baz=247						
EDH	Donghe	1.40	204	P	Pn	17 15 03.5	-0.7
	baz=187						
EDH				*i* S	Sb	17 15 21.9	-0.8
	baz=187						
WRL	Guolierlin Hig	1.46	256	*e*P	Pn	17 15 05.0	0.0
	baz=256						
WRL				*i* S	Sg	17 15 26.3	-0.3
	baz=256						
CHN2	Minshiung	1.51	242	*e*S	Sg	17 15 29.3	+1.0
	baz=243						
STYH	Taoyuan	1.51	224	*i* P	Pb	17 15 06.6	-0.4
	baz=217						
STYH				S	Sn	17 15 25.8	+0.9
	baz=217						
WTK	Tuku	1.51	248	S	Sg	17 15 28.0	-0.4
	baz=249						
TPUB	Ta-pu	1.52	231	P	Pb	17 15 07.1	-0.2
	baz=222						
TPUB				S	Sg	17 15 27.6	-1.0
	baz=222						
LONT	Longtian	1.53	209	*e*P	Pn	17 15 06.8	+0.8
	baz=211						
CHY	Chiayi	1.56	241	*e*P	Pg	17 15 08.8	-0.9
	baz=242						
CHY				*e*S	Sg	17 15 30.0	-0.1
	baz=242						
WTP	Ta-pu	1.56	230	*i* P	Pb	17 15 07.7	-0.3
	baz=232						
WTP				*e*S	Sg	17 15 30.1	0.0
	baz=232						
LDUT	Ludao	1.63	195	*e*P	Pn	17 15 05.1	-2.3
	baz=181						
LDUT				S	Sn	17 15 26.2	-1.7
	baz=181						
TWK	Hsinying	1.64	233	*i* P	Pb	17 15 08.8	-0.5
	baz=235						
TWK				*i* S	Sg	17 15 31.8	-0.8
	baz=235						
IRIF	Iriomote-Funau	1.65	87	P	Pn	17 15 08.3	+0.6
IRIF				S	Sb	17 15 30.8	+0.8
CHN1	Nanshi	1.67	230	*i* P	Pb	17 15 09.0	-0.7
	baz=233						
CHN1				*i* S	Sg	17 15 32.1	-1.2
	baz=233						
WSF	Szhu	1.67	249	*i* S	Sg	17 15 31.8	-1.7
	baz=249						
SGST	Jiashian	1.70	227	*i* P	Pb	17 15 09.5	-0.7
	baz=217						
SGST				*i* S	Sb	17 15 32.2	+0.9
	baz=217						
SLGT	Liugui	1.72	223	*i* P	Pb	17 15 10.3	-0.3
	baz=226						
SLGT				*i* S	Sb	17 15 32.8	+0.8
	baz=226						
ICHU	Yijhu	1.75	240	P	Pb	17 15 11.0	-0.2
	baz=227						
ICHU				*e*S	Sb	17 15 32.8	+0.1
	baz=227						
CHN8	Yiju	1.81	240	*e*S	Sb	17 15 35.6	+1.1
	baz=229						
ECL	Taimali	1.88	208	*e*P	Pn	17 15 10.7	-0.1
	baz=194						
JKRS	Kuro-shima	1.91	90	P	Pn	17 15 11.7	+0.5
SSD	Sandimen	1.91	218	*i* P	Pn	17 15 12.6	+1.3
	baz=223						
SSD				*i* S	Sb	17 15 38.3	+0.7
	baz=223						
TSMG	Majia	1.94	217	*e*P	Pb	17 15 13.6	-0.8
	baz=221						
MASBT	Mashibuluo	2.02	216	P	Pb	17 15 14.5	-1.3
	baz=221						
MASBT				S	Sb	17 15 40.8	+0.2
	baz=221						
JIJ	Ishigaki jima	2.03	87	P	Pn	17 15 13.3	+0.4
JIJ				*e*S	Sn	17 15 38.7	+0.9
EAST	Anshuo	2.11	208	*e*P	Pn	17 15 15.1	+1.0
	baz=194						
EAST				*e*S	Sn	17 15 40.6	+0.7
	baz=194						
JISG	Ishigakijimahi	2.20	81	P	Pn	17 15 15.5	+0.2
JISG				*e*S	Sn	17 15 43.7	+1.6
SCZT	Fangliau	2.23	213	*e*P	Pb	17 15 18.5	-0.8
	baz=200						
PNG	Penghu	2.27	253	P	Pn	17 15 16.1	-0.1
	baz=253						
PNG				S	Sn	17 15 44.4	+0.6
	baz=253						
PHUB	P'eng-hu	2.27	251	P	Pn	17 15 16.5	+0.2
	baz=252						
PHUB				*i* S	Sn	17 15 44.4	+0.6
	baz=252						
VCHM	Qimei	2.51	246	P	Pn	17 15 20.4	+0.9
	baz=247						
VCHM				S	Sn	17 15 51.1	+1.4
	baz=247						
MATB	Ma-tsu	2.60	317	*e*S	Sn	17 15 53.9	+2.0
	baz=311						
PTMZ	Houxiangcun	2.67	288	P	Pn	17 15 22.5	+0.9
	baz=283						

ISK ***08*** *17:15:43.9, 37°.24N×31°.34E, h5^{km}, ML3.6/31*
IDC ***08*** *17:15:44.9±1.1, 37°.28N×31°.47E, h0^{km}, mb3.7/5, mb1 3.8/10, mb1mx3.5/52, mbtmp3.6/10, ML3.5/5, Error ellipse: s-maj=22.3km s-min=18.2km az=98.0*
DDA ***08*** *17:15:45.0, 37°.24N×31°.34E, h15^{km}±2^{km}, MW3.7*
NIC ***08*** *17:15:46.8±0.0, 37°.22N×31°.40E, h25^{km}±6^{km}, Ml4.0/4*
ISC 08 17:15:44.8±1.2**, 37°.25N**±0°.02×**31°.39E**±0°.02**, h3**^{km}±9^{km}**,**
n75, σ1^{s}**15**/91**, mb3.9**/5**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SEDI	Konya, Seydise	0.36	55	*i* P	Pb	17 15 53.4	-0.5
SEDI				*i* S	Sb	17 15 58.8	-1.3
SEDI				IAML		17 16 00.0	
	comp=N,4μm,0.5s						
SEDI				IAML		17 16 00.0	
	comp=E,5μm,0.4s						
KEPZ	Antalya-Kepez	0.38	153	*i* P	Pg	17 15 53.1	+0.9
KEPZ				*i* S	Sb	17 15 59.4	-1.3
KEPZ				IAML		17 16 03.0	
	comp=E,3μm,0.8s						
KEPZ				IAML		17 16 06.0	
	comp=N,2μm,0.6s						
SEYD	Seydisehir-KON	0.39	66	PG	Pb	17 15 54.0	-0.6
SEYD				SG	Sb	17 16 00.5	-0.6
BUCA	Burdur, Bucak-	0.67	277	*i* P	Pg	17 15 57.1	-0.5
BUCA				*i* S	Sg	17 16 07.6	+1.4
BUCA				IAML		17 16 12.0	
	comp=N,1μm,0.4s						
BUCA				IAML		17 16 17.0	
	comp=E,1μm,0.7s						
BCK	Bucak	0.67	289	PG	Pg	17 15 57.2	-0.5
BCK				SG	Sg	17 16 07.5	+1.0
ANTB	Antalya	0.68	240	PG	Pb	17 15 59.4	+0.1
KORT	Korkueli	0.86	254	*i* P	Pg	17 16 01.1	-0.3
KORT				IAML		17 16 22.0	
	comp=E,899nm,0.6s						
KORT				IAML		17 16 25.0	
	comp=N,681nm,0.6s						
KORT	Korkueli	0.86	254	PG	Pg	17 16 00.9	-0.5
BAGO	Egridir - ISPA	0.88	328	*i* P	Pg	17 16 01.9	+0.1
BAGO				*i* S	Sb	17 16 15.8	+0.7
BAGO				IAML		17 16 18.0	
	comp=E,443nm,0.9s						
BAGO				IAML		17 16 19.0	
	comp=N,307nm,0.4s						
DOGA	KONYA_Doganhis	0.89	14	*i* P	Pg	17 16 02.0	+0.1
DOGA				*i* S	Sg	17 16 14.1	+0.7
DOGA				IAML		17 16 19.0	
	comp=E,1μm,0.3s						
DOGA				IAML		17 16 20.0	
	comp=N,2μm,0.4s						
ISP	Isparta	0.90	310	PG	Pg	17 16 01.7	-0.4
HDMB	Hadim	0.92	107	PG	Pg	17 16 02.9	+0.4
KEMT	Kemer-ANTALYA	0.92	226	PG	Pg	17 16 01.9	-0.6
KMER	Konya-Meram	0.94	56	*i* P	Pb	17 16 03.7	-0.1
KMER				*i* S	Sn	17 16 17.5	-1.6
KMER				IAML		17 16 20.0	
	comp=N,1μm,0.3s						
KMER				IAML		17 16 21.0	
	comp=E,636nm,0.8s						
YVAC	Isparta, Yalva	1.03	354	*i* P	Pg	17 16 04.4	-0.2
YVAC				*i* S	Sn	17 16 21.7	+0.4
YVAC				IAML		17 16 22.0	
	comp=N,938nm,0.6s						
YVAC				IAML		17 16 22.0	
	comp=E,701nm,0.4s						
KONT	Konya--Tatoy	1.04	48	*i* P	Pn	17 16 05.8	-0.7
KONT				*i* S	Sn	17 16 20.8	-0.7
KONT				IAML		17 16 24.0	
	comp=N,577nm,0.2s						
KONT				IAML		17 16 27.0	
	comp=E,905nm,0.3s						
KONT	Konya--Tatoy	1.04	48	PN	Pn	17 16 05.7	-0.7
BRDR	BURDUR-Merkez	1.15	294	*i* P	Pb	17 16 05.9	-1.5
BRDR				IAML		17 16 28.0	
	comp=N,504nm,0.6s						
BRDR				IAML		17 16 30.0	
	comp=E,372nm,0.5s						
LADK	Ladik-KONYA	1.23	39	PN	Pg	17 16 08.7	+0.3
KKBE	Karaman, Kazim	1.24	91	*i* P	Pb	17 16 08.5	-0.5
KKBE				*i* S	Sn	17 16 29.1	+2.6
KKBE				IAML		17 16 33.0	
	comp=E,283nm,0.7s						
KKBE				IAML		17 16 41.0	
	comp=N,254nm,1.0s						
AKUM	Antalya-Kumluc	1.25	223	*i* P	Pn	17 16 07.6	-1.5
AKUM				IAML		17 16 37.0	
	comp=N,369nm,0.6s						
AKUM				IAML		17 16 37.0	
	comp=E,352nm,0.4s						
GAZI	Gazipasa	1.25	143	*i* P	Pn	17 16 08.7	-0.6
GAZI				IAML		17 16 33.0	
	comp=N,726nm,0.9s						
GAZI				IAML		17 16 35.0	
	comp=E,385nm,0.4s						
GAZI	Gazipasa	1.25	143	PN	Pn	17 16 08.7	-0.6
BASM	Basmaki-Afyon	1.26	303	PN	Pn	17 16 08.5	-0.9
ELL	Elmali	1.28	248	PN	Pn	17 16 08.9	-0.9
ELL	Elmali	1.28	248	P	Pn	17 16 08.9	-0.9
ELL				S	Sb	17 16 26.3	-0.3
KDHN	Kadinhani	1.40	24	*i* P	Pb	17 16 11.4	-0.3
KDHN				IAML		17 16 35.0	
	comp=N,429nm,0.5s						
KDHN				IAML		17 16 37.0	
	comp=E,497nm,0.6s						
KZIL	AFYON_Kizioren	1.41	316	*i* P	Pn	17 16 10.8	-0.7
KZIL				IAML		17 16 36.0	
	comp=N,382nm,0.5s						
KZIL				IAML		17 16 37.0	
	comp=E,282nm,0.6s						
SHUT	Suhut-Afyon	1.46	333	PN	Pn	17 16 12.3	0.0
KRMN	Karaman	1.50	92	PN	Pg	17 16 13.5	-0.1
ALIN	Konya, Altinte	1.58	48	*i* P	Pn	17 16 10.8	-3.1
KIZT	Kizilcal	1.68	13	PN	Pb	17 16 15.6	-0.9
CAME	Cameli-Denizli	1.69	260	PN	Pn	17 16 15.3	-0.2
BERE	Bereket-Mersin	1.73	121	PN	Pb	17 16 16.6	-0.7
AKAS	Kas	1.75	235	PN	Pn	17 16 16.2	0.0
TEKE	Tekeli-Mersin	1.77	128	PN	Pb	17 16 17.2	-0.8
CHBY	Cihanbeyli	1.79	41	PN	Pb	17 16 17.3	-1.0
KSL	Kastellorizon	1.81	234	P	Pn	17 16 17.3	+0.3
TEVE	Tevekalti-Mers	1.84	115	PN	Pb	17 16 18.4	-0.7
SULT	Sultanhani-AKS	1.94	60	PN	Pb	17 16 19.3	-1.6
YESY	Yesilyurt	1.95	73	PN	Pb	17 16 20.1	-1.0
KEBE	Keben-Mersin	2.03	112	PN	Pb	17 16 21.5	-0.9
GULN	MERSIN_Gulnar	2.03	121	*i* P	Pb	17 16 21.9	-0.5
GULN				IAML		17 17 01.0	
	comp=E,269nm,0.5s						
GULN				IAML		17 17 02.0	
	comp=N,242nm,1.0s						
AKKU	Akkuyu-Mersin	2.05	121	PN	Pb	17 16 21.3	-1.4
IKL	Isikli	2.10	118	PN	Pb	17 16 21.8	-1.8
CIFT	Cifteler, Eski	2.13	353	PN	Pn	17 16 21.3	-0.1
TISA	Tisan-Mersin	2.13	120	PN	Pb	17 16 22.4	-1.8
KARG	Kargicak-Mersi	2.14	118	PN	Pb	17 16 22.6	-1.6
KERG	Konya-Eregli	2.19	85	*i* P	Pb	17 16 23.9	-1.2
KERG				IAML		17 17 01.0	
	comp=E,175nm,0.6s						
KERG				IAML		17 17 03.0	
	comp=N,220nm,0.9s						
AUSIV	SIVRIHISAR	2.19	3	PN	Pn	17 16 22.7	+0.4
SVRH	Sivrihisar-ESK	2.20	3	PN	Pn	17 16 22.2	-0.2
SILI	Silifke-Mersin	2.22	113	PN	Pb	17 16 23.5	-2.0
SLFK	Silifke-Mersin	2.22	112	PN	Pb	17 16 23.6	-2.0
ALFC	Alefka	2.30	154	P	Pn	17 16 23.5	-0.2
ALFC				AML	AML	17 16 55.0	
	comp=N,2.3nm,0.7s						
ALFC				AML	AML	17 16 55.0	
	comp=N,2.6nm,0.7s						
KIZK	Mersin	2.34	108	PN	Pb	17 16 25.4	-2.2
AKMS	Akamas	2.35	161	P	Pn	17 16 23.0	-1.3
AKMS				S	Sn	17 16 52.2	-1.6
AKMS				AML	AML	17 17 01.4	
	comp=N,1.5nm,0.6s						
AKMS				AML	AML	17 17 01.4	
	comp=N,1.5nm,0.6s						
AKMS				AML	AML	17 17 04.3	
	comp=N,2.4nm,0.7s						
AKMS				AML	AML	17 17 04.3	
	comp=N,2.4nm,0.7s						
SERE	Sereflikochisa	2.42	45	PN	Pn	17 16 26.5	+1.1
MERS	Mersin	2.54	98	PN	Pb	17 16 28.5	-2.5
NATA	Nata	2.64	158	P	Pn	17 16 28.2	-0.1
NATA				AML	AML	17 17 11.3	
	comp=N,1.8nm,0.6s						
NATA				AML	AML	17 17 13.6	
	comp=N,2.6nm,0.8s						
CSS	Mathiatis	2.77	145	P	Pn	17 16 29.5	-0.6
ARG	Arkhangelos	2.81	250	P	Pn	17 16 30.5	-0.2
MVOU	Mavrovouni	2.87	140	P	Pn	17 16 30.3	-1.2
MVOU				AML	AML	17 17 14.6	
	comp=N,0.8nm,1.0s						
MVOU				AML	AML	17 17 21.5	
	comp=N,1.0nm,0.7s						
BRTR	Keskin Array B	3.04	35	Pn	Pn	17 16 34.9	+0.9
	comp=N,1.4nm,0.3s,baz=158,slow=27,SNR=36						
BRTR				Sn	Sn	17 17 10.0	-1.0
	comp=N,3.6nm,0.3s,baz=210,slow=18,SNR=6.2						
OSC1	CSNet OBS 1	3.74	181	P	Pn	17 16 42.7	-0.7
OSC2	CSNet OBS 4	4.22	170	P	Pn	17 16 49.6	-0.5
MMAI	Mount Meron Ar	5.35	141	Pn	Pn	17 17 07.5	+1.8
	comp=N,4.1nm,0.3s,baz=336,slow=12,SNR=12						
IDI	Anoyia	5.60	252	Pn	Pn	17 17 08.4	-0.7
	comp=N,0.8nm,0.3s,baz=42,slow=14,SNR=1.8						
IDI				Sn	Sn	17 18 13.4	-0.6
	comp=N,1.9nm,0.3s,baz=344,slow=18,SNR=1.7						
ASF	Jabal al Asfar	6.79	137	Pn	Pn	17 17 28.9	+3.4
	comp=N,0.7nm,0.3s,baz=191,slow=4.6,SNR=6.5						
EIL	Elat	8.12	157	Pn	Pn	17 17 43.4	-0.2
	comp=N,1.3nm,0.3s,baz=224,slow=5.1,SNR=6.9						
EIL				Sn	Sn	17 19 17.0	+1.1
	comp=N,1.3nm,0.3s,baz=117,slow=11,SNR=4.4						
GERES	GERESS Array B	17.32	318	P	P	17 19 50.0	+0.9
	comp=N,0.1nm,0.3s,baz=119,slow=10,SNR=1.2						
FINES	FINESS Array B	24.45	354	P	P	17 21 03.5	-1.1
	comp=N,3.8nm,1.0s,baz=159,slow=11,SNR=7.5						
ARCES	ARCESS Array B	32.51	356	P	P	17 22 18.1	+1.7
	comp=N,5.7nm,1.0s,baz=46,slow=3.5,SNR=5.0						
TORD	Torodi Ar. Bea	35.76	236	P	P	17 22 46.9	+1.7
	comp=N,0.4nm,0.7s,baz=26,slow=10,SNR=2.5						
MKAR	Makanchi Array	38.41	59	P	P	17 23 07.0	-0.4
	comp=N,0.3nm,0.5s,baz=267,slow=8.2,SNR=4.2						
CMAR	Chiang Mai Arr	61.39	88	P	P	17 26 02.1	-0.4
	comp=N,0.5nm,0.6s,baz=297,slow=8.0,SNR=2.9						

IDC ***08*** *17:19:59.1±1.6, 26°.95N×143°.43E, h0^{km}, mb3.8/5, mb1 3.9/7, mb1mx3.6/50, mbtmp3.8/7, ML3.2/2, Error ellipse: s-maj=28.8km s-min=25.3km az=57.0*
JMA ***08*** *17:20:01.9, 27°.38N×143°.43E, h20^{km}±2^{km}*
ISC 08 17:20:04.5±1.3**, 27°.18N**±0°.08×**143°.4E**±0°.1**, h35**^{km}**, n13,**
σ1^{s}**23**/18**, mb3.8**/5**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.11	266	P	Pn	17 20 22.6	-0.9
CBIJ				S	Sn	17 20 37.4	-0.2
JCJ	Chichijima	1.11	266	Pn	Pn	17 20 22.7	-0.8
	38nm,0.3s,baz=14,slow=22,SNR=73						
JCJ				Sn	Sn	17 20 37.3	-0.3
	79nm,0.3s,baz=287,slow=19,SNR=5.8						
JHH2	Haha-jima-NKT2	1.24	244	*e*S	Sn	17 20 42.8	+1.9
JHU	Hanno	9.34	339	P	Pn	17 22 16.1	-0.5
JHU				*e*S	Sn	17 23 59.1	-1.3
JRY	Ryogami san	9.61	337	P	Pn	17 22 19.9	-0.5
JRY				*e*S	Sn	17 24 06.3	-0.9
JAG	Ashikaga	9.81	341	P	Pn	17 22 22.5	-0.6
JAG				*e*S	Sn	17 24 10.6	-1.5
MJAR	Matsushiro Arr	10.33	336	Pn	Pn	17 22 30.2	0.0
	0.1nm,0.3s,baz=162,slow=13,SNR=8.0						
KSRS	Korea Array	16.61	312	Pn	P	17 23 57.6	+0.8
	0.2nm,0.3s,baz=121,slow=11,SNR=5.0						
KLR	Kul'dur	23.79	341	P	P	17 25 15.8	+1.9
	1.2nm,0.4s,baz=161,slow=11,SNR=6.0						
SONM	Songino Array	35.42	316	P	P	17 26 58.5	+1.2
	1.0nm,0.9s,baz=110,slow=7.1,SNR=2.4						
WRA	Warramunga Arr	47.66	192	P	P	17 28 35.4	-2.2
	0.8nm,0.9s,baz=12,slow=8.1,SNR=5.4						
MKAR	Makanchi Array	51.27	310	P	P	17 29 05.5	+0.5
	0.2nm,0.3s,baz=89,slow=10,SNR=7.7						
FINES	FINESS Array B	78.35	334	P	P	17 32 01.9	+0.9
	5.4nm,1.1s,baz=85,slow=6.1,SNR=2.8						

IDC 08 17:37:24.9±3.1**, 5°.67N**×**93°.46E, h0**^{km}**, mb3.2**/3**, mb1 3.5**/4**,**
mb1mx3.3/30**, mbtmp3.3**/4**, ML3.8**/1**, Error ellipse:**
s-maj=107.6km s-min=30.0km az=64.0, Off west coast
of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	13.79	22	Pn	Pn	17 40 41.8	-0.1
	0.2nm,0.3s,baz=217,slow=13,SNR=4.9						
MKAR	Makanchi Array	42.09	349	P	P	17 45 18.6	-0.1
	0.5nm,0.8s,baz=152,slow=6.4,SNR=3.8						
WRA	Warramunga Arr	47.58	123	P	P	17 46 03.8	+1.0
	0.3nm,0.9s,baz=308,slow=8.4,SNR=2.0						
ASAR	Alice Springs	49.06	128	P	P	17 46 12.9	-1.3
	0.2nm,0.8s,baz=305,slow=8.0,SNR=2.1						

BJI ***08*** *17:46:47.7±0.0, 6°.38N×94°.50E, h16^{km}, mB5.1/1, mb4.6/43, Ms5.2/4, Ms7 4.9/4*
NEIC ***08*** *17:46:51.3±1.7, 6°.77N±0°.09×94°.76E±0°.09, h10^{km}±1^{km}, mb4.7/33, Error ellipse: s-maj=17.9km s-min=12.5km az=224.0*
DJA ***08*** *17:46:52.8±1.0, 7°N±3°×9°4E±1°3, h81^{km}±10^{km}, M4.8/12, mB5.3/2, mb4.4/12, MLv5.0/7, Mw(mB)4.7/2*
IDC ***08*** *17:46:56.0±2.5, 6°.74N×94°.71E, h45^{km}±24^{km}, mb4.1/24, mb1 4.2/27, mb1mx4.1/48, mbtmp4.4/27, ML4.1/3, Error ellipse: s-maj=17.0km s-min=10.9km az=53.0*
ISC 08 17:46:57.4±0.4**, 6°.72N**±0°.06×**94°.75E**±0°.06**, h64**^{km}**, n152,**
σ1^{s}**27**/150**, mb4.5**/63**, 2C, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	2.65	124	P	Pn	17 47 35.1	-2.6
LHMI	Lhok Sumawe	2.65	124	Pn	Pn	17 47 34.9	-2.8
TPTI		4.21	145	P	Pn	17 47 57.6	-1.5
SNSI	Sinabang, Aceh	4.56	160	P	Pn	17 48 01.5	-2.5
TSI	Tuntungan	4.97	130	P	Pn	17 48 12.0	+2.5
	1.6nm136nm,0.8s						
PSI	Prapat	5.70	133	P	Pn	17 48 20.3	+0.7
	2.5nm,0.3s,baz=330,slow=13,SNR=13						
GSI	Gunungsitoli	6.08	152	P	Pn	17 48 22.5	-2.2
	1.0nm60nm,0.7s						
GSI	Gunungsitoli	6.08	152		Pn	17 48 23.1	-1.6
DGPR	DIGLIPUR	6.66	345	*e*P	Pn	17 48 30.5	-2.2
MNSI	Mandailing Nat	7.61	140	P	Pn	17 48 46.5	+0.8
	30nm,1.6s						
BKNI	Bangkinang	8.93	135	P	Pn	17 49 03.8	0.0

	47nm,0.4s						
PPI	**Padang Panjang**	**9.09**	**141**	P	**Pn**	**17 49 07.3**	**+1.4**
CM31	**Chiang Mai Arr**	**12.36**	**19**		**Pn**	**17 49 46.9**	**-3.7**
CMAR	**Chiang Mai Arr**	**12.36**	**19**	P	**Pn**	**17 49 50.2**	**-0.4**
	0.8nm,0.3s,baz=208,slow=14,SNR=12						
CMAR	**Chiang Mai Arr**	**12.36**	**19**	Pn	**Pn**	**17 49 51.6**	**+1.0**
CHTO	**Chiang Mai**	**12.70**	**18**	Pn	Pn	17 49 50.6	-4.5
LHSI	**Lahat**	**13.66**	**140**	P	**Pn**	**17 50 10.5**	**+2.3**
	22nm,0.6s						
PALK	**Pallekele**	**13.95**	**273**	P	**Pn**	**17 50 10.9**	**-1.2**
	0.5nm,0.3s,baz=198,slow=20,SNR=1.9						
PALK				S	Sn	17 52 32.7	-13
	0.7nm,0.3s,baz=306,slow=19,SNR=1.4						
PALK	**Pallekele**	**13.95**	**273**		**Pn**	**17 50 10.0**	**-2.2**
MDSI	**Maura Dua**	**14.58**	**140**	P	**Pn**	**17 50 21.7**	**+1.3**
	8.3nm,0.8s						
KASI	**Kota Agung**	**15.58**	**141**	P	**Pn**	**17 50 31.7**	**-1.5**
	19nm,1.2s						
SLVN	**Son La**	**17.02**	**30**		**Pn**	**17 50 49.2**	**-2.1**
STKI	**Sintang**	**17.95**	**111**	P	**Pn**	**17 51 02.8**	**0.0**
KOHI	**KOHIMA**	**18.90**	**358**	*e*P	**P**	**17 51 13.5**	**+0.4**
SHL	**Shillong**	**18.94**	**352**	*e*P	**P**	**17 51 14.2**	**+0.8**
SHL				IAmb	IAmb	17 51 21.6	
	comp=Z,12nm,0.2s						
SHL	**Shillong**	**18.94**	**352**	P	**P**	**17 51 13.2**	**-0.2**
BOK	**Bokaro**	**18.99**	**334**	*e*P	**P**	**17 51 13.1**	**-0.7**
BOK				IAmb	IAmb	17 51 17.6	
	comp=Z,11nm,0.9s						
QIZ	**Qiongzhong**	**19.12**	**49**		**P**	**17 51 12.7**	**-2.6**
QIZ				IAmb	IAmb	17 51 20.2	
	comp=Z,48nm,1.5s						
MOKO	**MOKOCHONG**	**19.49**	**359**	*e*P	**P**	**17 51 20.1**	**+0.6**
KMI	**Kunming**	**19.83**	**22**	⇑P	**Pn**	**17 51 26.8**	**+1.4**
KMI				sP	pP	17 51 31.3	-4.8
KMI				PP	**sP**	**17 51 45.7**	**+1.8**
KMI				pmax	pmax		
	comp=Z,17nm,1.0s						
LKP	**Lekhapani**	**20.53**	**3**	*e*P	**P**	**17 51 30.5**	**0.0**
ODAN	**Odare**	**21.22**	**342**	*e*P	**P**	**17 51 43.0**	**+4.8**
	comp=Z,16nm,0.5s						
MNCI	**Minicoy**	**21.55**	**275**	P	**P**	**17 51 39.8**	**-1.9**
TAPN	**Taplejung**	**21.58**	**343**	*e*P	**P**	**17 51 40.4**	**-1.8**
	comp=Z,13nm,0.5s						
JIRN	**Jiri**	**22.35**	**340**	*e*P	**P**	**17 51 48.5**	**-2.1**
	comp=Z,18nm,0.7s						
PKIN	**Phulchoki**	**22.56**	**338**	*e*P	**P**	**17 51 52.6**	**-0.1**
	comp=Z,21nm,0.6s						
GYA	**Guiyang**	**22.68**	**29**	⇑*i*P	**P**	**17 51 55.0**	**+1.2**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LSA	**Lhasa**	**23.11**	**352**	P	**P**	**17 51 56.3**	**-2.2**
GKN	**Gorkha**	**23.23**	**337**	*e*P	**P**	**17 51 56.9**	**-2.5**
PYUN	**Piuthan**	**24.00**	**334**	*e*P	**P**	**17 52 05.4**	**-1.1**
	comp=Z,21nm,0.4s						
H08S3	**Diego Garcia H**	**26.39**	**238**	T	T	18 19 08.0	
	baz=56,slow=75,SNR=90						
H08S2	**Diego Garcia H**	**26.39**	**238**	T	T	18 18 59.8	
	baz=56,slow=75,SNR=69						
H08S1	**Diego Carcia H**	**26.40**	**238**	T	T	18 19 00.7	
	baz=56,slow=75,SNR=49						
ENH	**Enshi**	**27.22**	**29**	P	**P**	**17 52 35.8**	**+0.5**
ENH				IAmb	IAmb	17 52 43.8	
	comp=Z,18nm,1.1s						
LUWI	**Luwuk**	**29.01**	**104**	P	**P**	**17 52 48.6**	**-2.9**
SMLA	**Simla**	**29.34**	**328**	*e*P	**P**	**17 52 53.0**	**-1.1**
SMLA				IAmb	IAmb	17 52 56.8	
	comp=Z,7.5nm,0.2s						
XAN	**Xi'an**	**30.18**	**24**	P	**P**	**17 53 02.4**	**+0.7**
XAN				pmax	pmax		
	comp=Z,24nm,1.1s						
LZH	**Lanzhou**	**30.39**	**15**	*e*P	**P**	**17 53 04.5**	**+0.8**
LZH				pP	pP	17 53 10.9	-7.6
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
YULB	**Yu-li**	**30.44**	**54**	P	**P**	**17 53 00.8**	**-3.3**
YULB				IAmb	IAmb	17 53 09.0	
	comp=Z,6.2nm,0.9s						
DHRM	**DHARAMSHALA**	**30.67**	**328**	*e*P	**P**	**17 53 05.3**	**-1.0**
DHRM				IAmb	IAmb	17 53 16.9	
	comp=Z,37nm,1.8s						
NACB	**Ninganchiao**	**31.05**	**53**	P	**P**	**17 53 06.6**	**-2.9**
GTA	**Gaotai**	**32.86**	**7**	*e*P	**P**	**17 53 25.9**	**+0.6**
GTA				pP	pP	17 53 31.2	-9.1
GTA				sP	pwP	17 53 34.4	-9.0
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
NIL	**Nilore**	**33.38**	**326**	P	**P**	**17 53 28.7**	**-1.2**
NJ2	**Nanjing**	**33.77**	**39**	*e*P	**P**	**17 53 33.0**	**-0.2**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
HHC	**Hu-ho-hao-te**	**37.16**	**21**	*e*P	**P**	**17 54 03.5**	**+1.3**
HHC				pmax	pmax		
	comp=Z,18nm,0.8s						
SIJI	**Sorong**	**37.22**	**100**	P	**P**	**17 54 02.3**	**-0.7**
	comp=Z,6.8nm,0.9s,baz=318,slow=11,SNR=5.5						
WMQ	**Urumqi**	**37.47**	**352**	*e*P	**P**	**17 54 05.8**	**+1.0**
BJT	**Baijiatuau**	**38.32**	**27**	P	**P**	**17 54 10.2**	**-1.8**
BJT				IAmb	IAmb	17 54 16.9	
	comp=Z,19nm,1.0s						
GAR	**Garm**	**38.97**	**329**	P	**P**	**17 54 17.2**	**-0.3**
GAR				IAmb	IAmb	17 54 17.5	
	comp=Z,31nm,1.2s						
FITZ	**Fitzroy Crossi**	**39.22**	**129**	P	**P**	**17 54 20.2**	**+0.5**
	comp=Z,2.8nm,0.7s,baz=316,slow=6.1,SNR=14						
CHGR	**Chuyangaron**	**39.31**	**328**	P	**P**	**17 54 19.3**	**-1.1**
CHGR				IAmb	IAmb	17 54 20.3	
	comp=Z,18nm,0.7s						
BTK	**Batken**	**39.53**	**331**	P	**P**	**17 54 22.7**	**+0.5**
BTK				IAmb	IAmb	17 54 25.4	
	comp=Z,13nm,0.9s						
MK31	**Makanchi Array**	**41.34**	**347**	P	**P**	**17 54 36.5**	**-0.4**
MKAR	**Makanchi Array**	**41.34**	**347**	P	**P**	**17 54 36.6**	**-0.3**
	comp=Z,7.1nm,1.0s,baz=163,slow=8.5,SNR=22						
MKAR	**Makanchi Array**	**41.34**	**347**	P	**P**	**17 54 36.0**	**-1.0**
MAKZ	**Makanchi**	**41.42**	**347**	P	**P**	**17 54 36.4**	**-1.2**
KK31	**Karatay Array**	**42.05**	**333**	P	**P**	**17 54 42.7**	**-0.1**
KK31				IAmb	IAmb	17 54 44.3	
	comp=Z,9.3nm,1.1s						
KKAR	**Karatay Array**	**42.05**	**333**	P	**P**	**17 54 42.4**	**-0.4**
KKAR	**Karatay Array**	**42.05**	**333**	P	**P**	**17 54 43.0**	**+0.2**
KKAR				IAmb	IAmb	17 54 44.3	
	comp=Z,9.3nm,1.1s						
SONM	**Songino Array**	**42.16**	**12**	P	**P**	**17 54 44.9**	**+1.2**
	comp=Z,6.1nm,0.9s,baz=190,slow=8.3,SNR=29						
SONM	**Songino Array**	**42.16**	**12**	P	**P**	**17 54 44.7**	**+1.0**
SONM				IAmb	IAmb	17 54 45.9	
	comp=Z,7.8nm,1.0s						
ULN	**Ulaanbaatar**	**42.32**	**12**	P	**P**	**17 54 45.4**	**+0.3**
KSRS	**Korea Array**	**42.95**	**40**	P	**P**	**17 54 51.4**	**+1.2**
	comp=Z,4.6nm,1.1s,baz=226,slow=9.8,SNR=6.1						
GEYT	**Alibeck**	**45.45**	**319**	P	**P**	**17 55 10.2**	**0.0**
	comp=Z,1.3nm,0.5s,baz=83,slow=16,SNR=2.5						
KURK	**Kurchatov**	**45.87**	**346**	P	**P**	**17 55 13.3**	**+0.1**
WRA	**Warramunga Arr**	**47.11**	**125**	P	**P**	**17 55 23.6**	**+0.2**
	comp=Z,2.5nm,0.6s,baz=306,slow=8.4,SNR=34						
ZAA0	**Zalesovo Array**	**47.77**	**352**	P	**P**	**17 55 27.9**	**-0.1**
ZALV	**Zalesovo Beam**	**47.77**	**352**	P	**P**	**17 55 28.2**	**+0.2**
	comp=Z,3.7nm,0.8s,baz=168,slow=8.8,SNR=17						
ZALV	**Zalesovo Beam**	**47.77**	**352**	P	**P**	**17 55 27.9**	**-0.1**
ASAR	**Alice Springs**	**48.72**	**130**	P	**P**	**17 55 36.0**	**+0.1**
	comp=Z,2.0nm,0.5s,baz=301,slow=8.0,SNR=68						
ASAR				PcP	**PcP**	**17 57 01.4**	**+1.2**
	comp=Z,2.0nm,0.8s,baz=304,slow=4.5,SNR=4.7						
ASAR	**Alice Springs**	**48.72**	**130**	P	**P**	**17 55 35.2**	**-0.6**
AS31	**Alice Springs**	**48.72**	**130**	P	**P**	**17 55 35.0**	**-0.9**
MJAR	**Matsushiro Arr**	**49.50**	**47**	P	**P**	**17 55 43.9**	**+2.2**
	comp=Z,3.1nm,1.0s,baz=249,slow=8.3,SNR=6.3						
USRK	**Ussuriysk Ar.**	**49.50**	**35**	P	**P**	**17 55 42.8**	**+1.3**
	comp=Z,9.1nm,1.1s,baz=189,slow=8.2,SNR=4.3						
BRVK	**Borovoye**	**50.33**	**341**	P	**P**	**17 55 47.1**	**-0.5**
BRVK				IAmb	IAmb	17 55 48.5	
	comp=Z,7.0nm,0.7s						
ABKAR	**Akbulak array**	**51.52**	**331**	P	**P**	**17 55 57.0**	**+0.4**
ABKAR	**Akbulak array**	**51.52**	**331**	P	**P**	**17 55 57.0**	**+0.4**
ABKAR				IAmb	IAmb	17 55 58.1	
	comp=Z,37nm,1.3s						
ARU	**Arti**	**57.18**	**337**	P	**P**	**17 56 37.3**	**-0.3**
ARU				IAmb	IAmb	17 56 38.8	
	comp=Z,7.8nm,0.8s						
STKA	**Stephens Creek**	**58.88**	**134**	P	**P**	**17 56 50.3**	**+0.4**
	comp=Z,2.8nm,0.8s,baz=313,slow=8.5,SNR=6.2						
STKA	**Stephens Creek**	**58.88**	**134**	P	**P**	**17 56 50.3**	**+0.4**
NRIK	**Noril'sk**	**62.71**	**357**	P	**P**	**17 57 15.2**	**-0.1**
	comp=Z,2.2nm,0.4s,baz=138,slow=4.3,SNR=4.6						
BR131	**Keskin Array S**	**63.63**	**311**	P	**P**	**17 57 21.5**	**-0.7**
BR131				IAmb	IAmb	17 57 22.0	
	comp=Z,4.8nm,0.6s						
BRTR	**Keskin Array B**	**63.63**	**311**	P	**P**	**17 57 21.6**	**-0.5**
	comp=Z,2.7nm,0.6s,baz=128,slow=7.2,SNR=19						
KLMR	**Klimovskoe**	**67.75**	**334**	*e*P	**P**	**17 57 47.4**	**-0.6**
KLMR				AMP		17 57 49.1	
	comp=Z,25nm,1.4s						
KLMR				*e*		17 59 15.1	
TIXI	**Tiksi**	**68.24**	**11**	P	**P**	**17 57 50.9**	**0.0**
AKASG	**Malin Array Be**	**69.42**	**322**	P	**P**	**17 57 58.1**	**-0.6**
	comp=Z,0.7nm,0.4s,baz=95,slow=5.4,SNR=8.8						
NACGM	**Naroch**	**71.93**	**326**	*i*P	**P**	**17 58 13.5**	**-0.3**
FINES	**FINESS Array B**	**74.00**	**332**	P	**P**	**17 58 26.3**	**+0.3**
	comp=Z,6.6nm,0.4s,baz=94,slow=5.1,SNR=87						
BOSA	**Boshof**	**75.49**	**238**	P	**P**	**17 58 37.5**	**+2.2**
	comp=Z,3.1nm,0.5s,baz=85,slow=3.5,SNR=15						
ARA0	**ARCESS Array S**	**76.55**	**340**	*e*P	**P**	**17 58 41.4**	**+1.0**
ARCES	**ARCESS Array B**	**76.55**	**340**	P	**P**	**17 58 41.1**	**+0.7**
	comp=Z,3.9nm,0.4s,baz=92,slow=6.1,SNR=53						
KRLC	**Kraliky**	**77.15**	**320**	*e*P	**P**	**17 58 45.1**	**+0.8**
KTK1	**Kautokeino**	**77.18**	**339**	*e*P	**P**	**17 58 44.4**	**+0.4**
HAMF	**Hammerfest**	**77.46**	**341**	*e*P	**P**	**17 58 45.5**	**-0.1**
DPC	**Dobruska-Polom**	**77.47**	**320**	*e*P	**P**	**17 58 46.3**	**+0.2**
MAW	**Mawson**	**77.54**	**192**	P	**P**	**17 58 47.0**	**+1.1**
	comp=Z,0.9nm,0.4s,baz=22,slow=11,SNR=1.9						
CONA	**Conrad Observa**	**77.59**	**317**	*e*P	**P**	**17 58 47.7**	**+0.8**
	comp=Z,2.1nm,0.9s						
CHVC	**Chvalec**	**77.66**	**320**	*e*P	**P**	**17 58 48.4**	**+1.3**
ARSA	**Arzberg**	**77.78**	**317**	*e*P	**P**	**17 58 48.9**	**+1.0**
	comp=Z,3.4nm,0.7s						
SOKA	**Soboth**	**78.09**	**316**	*i*P	**P**	**17 58 50.8**	**+1.2**
	comp=Z,8.4nm,1.0s,SNR=5.7						
JETT	**Jettan, Norway**	**78.28**	**340**	*e*P	**P**	**17 58 51.9**	**+1.7**
OBKA	**Obir**	**78.41**	**316**	*i*P	**P**	**17 58 52.5**	**+1.1**
	comp=Z,5.0nm,0.8s,SNR=4.0						
PRU	**Pruhonice**	**78.59**	**320**	*e*P	**P**	**17 58 52.5**	**+0.3**
MOA	**Molln**	**78.66**	**317**	*i*P	**P**	**17 58 53.4**	**+0.7**
	comp=Z,3.2nm,0.8s,SNR=4.4						
BSD	**Bornholm Skovb**	**78.70**	**325**	*i*P	**P**	**17 58 53.6**	**+0.9**
TRO	**Tromso**	**78.81**	**340**	*e*P	**P**	**17 58 53.3**	**+0.3**
BRG	**Berggiesshubel**	**79.02**	**320**	*e*P	**P**	**17 58 55.9**	**+1.4**
BRG				Amp		17 58 59.5	
	comp=Z,2.9nm,0.8s						
MYKA	**Terra Mystica**	**79.04**	**316**	*e*P	**P**	**17 58 55.6**	**+0.8**
	comp=Z,3.0nm,0.8s						
GEC2	**GERESS Array S**	**79.08**	**318**	P	**P**	**17 58 55.8**	**+0.7**
GEC2				IAmb	IAmb	17 58 57.0	
	comp=Z,7.2nm,1.0s						
GERES	**GERESS Array B**	**79.08**	**318**	P	**P**	**17 58 56.0**	**+0.9**
	comp=Z,2.7nm,0.5s,baz=108,slow=4.6,SNR=38						
GERES	**GERESS Array B**	**79.08**	**318**	P	**P**	**17 58 55.6**	**+0.6**
KHC	**Kasperske Hory**	**79.17**	**319**	*e*P	**P**	**17 58 55.8**	**+0.3**
KBA	**Koelnbreinsper**	**79.26**	**317**	*e*P	**P**	**17 58 56.6**	**+0.4**
	comp=Z,2.8nm,0.7s						
DEL	**Delary**	**79.39**	**326**	*i*P	**P**	**17 58 57.4**	**+1.0**
DEL				IAmb	IAmb	17 58 57.9	
	comp=Z,6.4nm,0.6s						
CLL	**Collm**	**79.63**	**321**	*e*P	**P**	**17 58 58.0**	**+0.2**
FAUS	**Fauske**	**79.78**	**337**	*e*P	**P**	**17 58 58.8**	**+0.5**
ABTA	**Abfaltersbach**	**79.82**	**316**	*e*P	**P**	**17 58 59.6**	**+0.4**
	comp=Z,1.0nm,0.4s						
STEI	**Steigen**	**79.86**	**338**	*e*P	**P**	**17 58 59.5**	**+0.8**
MOR8	**Moi Rana**	**79.97**	**336**	*e*P	**P**	**17 58 59.5**	**+0.1**
WTTA	**Wattenberg**	**80.43**	**317**	*i*P	**P**	**17 59 02.7**	**+0.3**
	comp=Z,8.5nm,0.5s,SNR=8.7						
WATA	**Walderalm**	**80.47**	**317**	*e*P	**P**	**17 59 02.5**	**-0.1**
	comp=Z,3.8nm,0.5s						
LOF	**Lofoten**	**80.52**	**338**	*e*P	**P**	**17 59 02.9**	**+0.6**
KONS	**Konsvik**	**80.53**	**336**	*e*P	**P**	**17 59 01.7**	**-0.6**
SQTA	**Sankt Quirin**	**80.72**	**317**	P	**P**	**17 59 04.1**	**+0.1**
	comp=Z,6.8nm,0.5s,SNR=7.4						
MOTA	**Moosalm**	**80.79**	**317**	P	**P**	**17 59 04.6**	**+0.2**
	comp=Z,8.1nm,0.8s,SNR=6.0						
NC602	**NORSAR Array S**	**80.85**	**330**	*e*P	**P**	**17 59 04.7**	**+0.5**
NSS	**Namsos**	**80.86**	**334**	*e*P	**P**	**17 59 04.8**	**+0.6**
RETA	**Reutte**	**81.02**	**317**	P	**P**	**17 59 06.0**	**+0.4**
	comp=Z,7.0nm,0.5s,SNR=5.2						
NB2	**NORSAR Subarra**	**81.02**	**331**	P	**P**	**17 59 04.7**	**-0.5**
	comp=Z,22nm,1.4s,baz=95,slow=5.1						
NB2	**NORSAR Subarra**	**81.02**	**331**	P	**P**	**17 59 04.7**	**-0.5**
	baz=95,slow=5.1						
NOA	**NORSAR Array B**	**81.02**	**331**	P	**P**	**17 59 05.2**	**0.0**
	comp=Z,6.6nm,1.0s,baz=93,slow=5.5,SNR=9.7						
FETA	**Feichten**	**81.05**	**316**	*e*P	**P**	**17 59 06.4**	**+0.6**
	comp=Z,7.9nm,1.4s						
SPA0	**Spitsbergen Ar**	**81.08**	**348**	*e*P	**P**	**17 59 05.3**	**+0.1**
DAVA	**Damuels**	**81.62**	**317**	*e*P	**P**	**17 59 08.8**	**-0.1**
	comp=Z,4.3nm,0.8s						
KONO	**Kongsberg**	**81.79**	**329**	*e*P	**P**	**17 59 09.1**	**-0.1**
DOMB	**Dombas**	**82.08**	**332**	*e*P	**P**	**17 59 11.1**	**+0.4**
KEST	**Kesra**	**82.39**	**305**	P	**P**	**17 59 13.6**	**+0.6**
	comp=Z,3.8nm,0.8s,baz=357,slow=3.1,SNR=4.4						
TORD	**Torodi Ar. Bea**	**91.44**	**283**	P	**P**	**17 59 59.1**	**+1.7**
	comp=Z,0.7nm,0.5s,baz=95,slow=5.3,SNR=5.6						
ESDC	**Sonseca Array**	**92.41**	**310**	P	**P**	**18 00 02.9**	**+1.4**
	comp=Z,0.4nm,0.5s,baz=70,slow=4.6,SNR=4.3						
NVAR	**Mina Array Bea**	**125.58**	**32**	PKP	**PKiKP**	**18 05 53.9**	**+1.2**
	comp=Z,1.1nm,0.8s,baz=280,slow=2.5,SNR=4.2						
ANMO	**Albuquerque**	**133.98**	**24**	PKP	**PKiKP**	**18 06 10.2**	**+0.6**
	comp=Z,0.9nm,0.7s,baz=180,slow=3.0,SNR=3.8						
PLCA	**Paso Flores**	**143.67**	**199**	PKP	**PKPdf**	**18 06 26.1**	**+0.6**
	comp=Z,2.1nm,0.9s,baz=96,slow=4.3,SNR=3.0						

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*NEIC **08** 17:56:46.8±2.6, 51°.27N±0°.07×173°.01W±0°.04, h1^{km}±9^{km}, Error ellipse: s-maj=10.0km s-min=3.4km az=166.0*

*AEIC **08** 17:56:46.9±2.8, 51°.31N±0°.09×173°.05W±0°.09, h2^{km}±8^{km}, ML3.8/18, mb4.0/10(NEIC), Error ellipse: s-maj=13.2km s-min=8.1km az=180.0*

*IDC **08** 17:56:54.6±0.6, 51°.79N×173°.03W, h43^{km}±3^{km}, mb3.8/29, mb1 4.0/31, mb1mx3.8/83, mbtmp4.1/31, ML3.6/2, Error ellipse: s-maj=18.3km s-min=9.7km az=1.0*

ISC 08 17:56:53.4±0.5**, 51°.58N**±0°.09×**173°.05W**±0°.04**, h37**^{km}**, n73, σ1^{s}54**/84**, mb4.2**/34**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KOFP	**Korovin Flat P**	**0.95**	**317**		**Pn**	**17 57 09.7**	**-0.5**
KOSE	**Korovin Southe**	**0.98**	**321**		**Pn**	**17 57 10.4**	**-0.2**
KOSE					**Sn**	**17 57 29.2**	**+6.0**
KOKL	**Mount Kliuchef**	**1.03**	**317**		**Pn**	**17 57 10.8**	**-0.5**
KONE	**Korovin Northe**	**1.05**	**321**		**Pn**	**17 57 11.4**	**-0.1**
GSMY	**Great Sitkin M**	**1.92**	**285**		**Pn**	**17 57 22.2**	**-1.3**
GSTR	**Great Sitkin T**	**1.93**	**287**		**Pn**	**17 57 22.7**	**-1.0**
GSTD	**Great Sitkin T**	**1.98**	**285**		**Pn**	**17 57 23.5**	**-0.8**
GSTD					**Sn**	**17 57 50.9**	**+3.1**
ADK	**Adak**	**2.28**	**279**	Pn	**Pn**	**17 57 27.3**	**-1.1**
KIWB	**Kanaga Island**	**2.56**	**278**	Pn	**Pn**	**17 57 31.5**	**-0.8**
KIMD	**Kanaga Island**	**2.61**	**276**		**Pn**	**17 57 31.5**	**-1.4**
NIKH	**Nikolski High**	**2.93**	**60**		**Pn**	**17 57 37.6**	**+0.3**
TAFP	**Tanaga Falls P**	**3.08**	**278**		**Pn**	**17 57 38.6**	**-0.8**
GANE	**Gareloi Northe**	**3.57**	**276**		**Pn**	**17 57 45.5**	**-0.6**
OKFG	**Magazine Ridge**	**3.64**	**58**		**Pn**	**17 57 46.7**	**-0.3**
MAPS	**Pakushin South**	**4.33**	**57**		**Pn**	**17 57 57.0**	**+0.4**
UNV	**Unalaska Valle**	**4.58**	**58**		**Pn**	**17 58 00.7**	**+0.8**
KDAK	**Kodiak Island**	**13.34**	**54**	P	**Pn**	**17 59 56.5**	**-3.3**
	0.5nm,0.3s,baz=242,slow=5.7,SNR=9.0						
CNPM	**China Poot**	**14.63**	**49**	Pn	**Pn**	**18 00 18.4**	**+1.0**
PETK	**Petropavlovsk-**	**17.88**	**286**	P	**Pn**	**18 00 58.1**	**-0.8**
	0.2nm,0.3s,baz=91,slow=14,SNR=6.8						
I23K	**Minto, Yukon-K**	**18.25**	**33**	P	**P**	**18 01 01.7**	**-1.4**
CCB	**Clear Creek Bu**	**18.50**	**35**	P	**P**	**18 01 04.2**	**-1.8**
HDA	**Harding Lake**	**18.69**	**37**	P	**P**	**18 01 05.3**	**-2.8**
HDA				IAmb	IAmb	18 01 20.7	
	comp=Z,6.8nm,0.8s						
IL31		**18.90**	**36**	P	**Pn**	**18 01 09.7**	**-1.5**
IL31				IAmb	IAmb	18 01 23.2	
	comp=Z,9.6nm,1.1s						
ILAR	**Eielson Array**	**18.90**	**36**	P	**P**	**18 01 07.5**	**-3.0**
	comp=Z,0.7nm,0.3s,baz=236,slow=10,SNR=44						
ILAR	**Eielson Array**	**18.90**	**36**	P	**Pn**	**18 01 09.8**	**-1.5**
H24K	**Noodor Dome**	**19.16**	**32**	P	**Pn**	**18 01 13.2**	**-1.1**
DOT	**Dot Lake**	**19.46**	**40**	P	**Pn**	**18 01 16.0**	**-1.9**
DOT				IAmb	IAmb	18 01 31.1	
	comp=Z,5.8nm,0.8s						
SCRK	**Sand Creek**	**19.63**	**40**	P	**P**	**18 01 16.9**	**-1.6**
SCRK				IAmb	IAmb	18 01 33.6	
	comp=Z,8.6nm,1.0s						
M27K	**Edge Creek, AK**	**19.91**	**45**	P	**Pn**	**18 01 21.3**	**-2.1**
M27K				IAmb	IAmb	18 01 37.5	
	comp=Z,10nm,1.1s						
L27K	**Beaver Creek,**	**20.16**	**43**	P	**Pn**	**18 01 24.6**	**-1.7**
BCAR	**Beaver Creek A**	**20.18**	**43**	P	**Pn**	**18 01 25.9**	**-0.6**
DAWY	**Dawson**	**21.53**	**42**	P	**P**	**18 01 36.7**	**-2.2**
DAWY				IAmb	IAmb	18 01 57.7	
	comp=Z,7.3nm,0.9s						
SEY	**Seymchan**	**21.57**	**315**	P	**P**	**18 01 39.4**	**0.0**
	comp=Z,2.8nm,0.8s,baz=32,slow=22,SNR=2.5						
DLBC	**Dease Lake**	**25.24**	**57**	P	**P**	**18 02 15.6**	**+0.1**
	comp=Z,5.8nm,0.8s,baz=281,slow=10.0,SNR=5.5						
INK	**Inuvik**	**25.26**	**34**	P	**P**	**18 02 14.3**	**-1.2**
	comp=Z,6.3nm,0.6s,baz=232,slow=9.9,SNR=28						
ASAJ	**Asahikawa**	**30.29**	**273**	P	**P**	**18 03 02.0**	**+1.2**
	comp=Z,12nm,0.9s,baz=297,slow=16,SNR=2.9						
TIXI	**Tiksi**	**32.25**	**330**	P	**P**	**18 03 16.3**	**-1.4**
	comp=Z,0.4nm,0.3s,baz=104,slow=12,SNR=1.1						
KLR	**Kul'dur**	**34.55**	**288**	P	**P**	**18 03 36.7**	**-1.3**
	comp=Z,1.0nm,0.6s,baz=66,slow=4.8,SNR=4.7						
NEW	**Newport**	**35.42**	**73**	P	**P**	**18 03 44.1**	**-1.4**
	comp=Z,1.0nm,0.3s,baz=308,slow=12,SNR=2.4						
H11N2	**WAKE ISLAND Hy**	**35.47**	**214**	T	T	18 41 45.7	
	baz=21,slow=76,SNR=17						
H11N3	**WAKE ISLAND Hy**	**35.48**	**214**	T	T	18 41 42.8	
	baz=21,slow=76,SNR=14						
H11N1	**WAKE ISLAND Hy**	**35.49**	**214**	T	T	18 41 47.9	
	baz=21,slow=76,SNR=12						
H11S1	**WAKE ISLAND Hy**	**36.67**	**213**	T	T	18 43 07.8	
	baz=20,slow=75,SNR=30						
H11S2	**WAKE ISLAND Hy**	**36.69**	**213**	T	T	18 43 08.9	
	baz=20,slow=75,SNR=21						
H11S3	**WAKE ISLAND Hy**	**36.69**	**213**	T	T	18 43 11.4	
	baz=20,slow=75,SNR=12						
MJAR	**Matsushiro Arr**	**37.38**	**266**	P	**P**	**18 04 04.3**	**+1.9**
	comp=Z,1.2nm,0.7s,baz=22,slow=5.8,SNR=2.8						
NVAR	**Mina Array Bea**	**39.95**	**87**	P	**P**	**18 04 25.9**	**+1.7**
	comp=Z,0.7nm,0.8s,baz=299,slow=12,SNR=4.0						
NVAR				pP	**sP**	**18 04 38.2**	**+0.6**
	comp=Z,1.5nm,0.7s,baz=294,slow=8.4,SNR=6.5						
PDAR	**Pinedale Array**	**42.80**	**76**	P	**P**	**18 04 47.8**	**+0.3**
	comp=Z,1.0nm,0.7s,baz=355,slow=3.4,SNR=9.7						
KSRS	**Korea Array**	**43.22**	**275**	P	**P**	**18 04 52.2**	**+1.7**
	comp=Z,2.5nm,0.9s,baz=55,slow=7.6,SNR=5.2						
KSRS				pP	**sP**	**18 05 04.7**	**+0.7**
	comp=Z,3.3nm,0.7s,baz=55,slow=7.4,SNR=6.4						
ULM	**Lac du Bonnet**	**46.52**	**60**	P	**P**	**18 05 18.0**	**+1.2**
	comp=Z,1.2nm,0.5s,baz=233,slow=5.1,SNR=3.1						
SONM	**Songino Array**	**49.72**	**299**	P	**P**	**18 05 41.9**	**+0.2**
	comp=Z,0.8nm,0.6s,baz=47,slow=7.6,SNR=6.2						
SONM				pP	**pwP**	**18 05 54.0**	**-1.7**
	comp=Z,1.7nm,0.7s,baz=50,slow=7.8,SNR=6.8						
TXAR	**Lajitas Array**	**55.06**	**86**	P	**P**	**18 06 20.9**	**-0.5**
	comp=Z,0.9nm,0.7s,baz=292,slow=4.3,SNR=8.3						
TXAR				pP	**pP**	**18 06 33.8**	**+2.6**
	comp=Z,1.7nm,0.7s,baz=317,slow=5.1,SNR=11						
ZALV	**Zalesovo Beam**	**56.44**	**316**	P	**P**	**18 06 31.4**	**+0.6**
	comp=Z,0.5nm,0.5s,baz=64,slow=6.6,SNR=2.1						
ZALV				PcP	**PcP**	**18 07 27.8**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=54,slow=2.6,SNR=3.6						
ZALV				pPcP		18 07 40.7	
	comp=Z,1.0nm,0.6s,baz=25,slow=4.9,SNR=4.7						
H06N1	**SOCORRO T-PHAS**	**58.14**	**100**	T	T	19 10 37.3	
	SNR=9.6						
ARCES	**ARCESS Array B**	**58.43**	**352**	P	**P**	**18 06 44.2**	**-0.5**
	comp=Z,3.1nm,0.9s,baz=13,slow=7.5,SNR=5.5						
KURBB	**Kurchatov Arra**	**61.52**	**317**	P	**P**	**18 07 05.8**	**-0.2**
	comp=Z,2.2nm,0.6s,baz=45,slow=6.7,SNR=19						
MKAR	**Makanchi Array**	**62.66**	**312**	P	**P**	**18 07 12.7**	**-1.1**
	comp=Z,0.6nm,0.6s,baz=48,slow=4.9,SNR=9.5						
MKAR				pP	**pP**	**18 07 24.6**	**+0.5**
	comp=Z,1.2nm,0.8s,baz=72,slow=4.0,SNR=5.6						
BVAR	**Borovoye Array**	**62.98**	**323**	P	**P**	**18 07 15.8**	**-0.1**
	comp=Z,2.2nm,0.5s,baz=236,slow=1.6,SNR=12						
BVAR				pP	**pP**	**18 07 28.3**	**+2.3**
	comp=Z,2.5nm,0.6s,baz=199,slow=3.1,SNR=8.1						
ARU	**Arti**	**64.24**	**331**	P	**P**	**18 07 23.7**	**-0.4**
	comp=Z,0.6nm,0.4s,baz=360,slow=5.5,SNR=5.8						
ARU				pP	**pP**	**18 07 36.3**	**+2.1**
	comp=Z,0.9nm,0.7s,baz=137,slow=2.0,SNR=3.2						
FINES	**FINESS Array B**	**66.29**	**350**	P	**P**	**18 07 36.1**	**-1.1**
	comp=Z,3.3nm,1.1s,baz=23,slow=7.5,SNR=1.5						
AAK	**Ala-Archa**	**69.42**	**313**	P	**P**	**18 07 58.1**	**+0.6**
	comp=Z,5.1nm,0.8s,baz=127,slow=2.7,SNR=13						
AKTO	**Aktyubinsk**	**69.51**	**328**	P	**P**	**18 07 57.4**	**-0.3**
	comp=Z,5.1nm,0.7s,baz=48,slow=5.9,SNR=18						
AKTO				pP	**pP**	**18 08 09.6**	**+1.6**
	comp=Z,4.5nm,0.7s,baz=73,slow=6.4,SNR=7.8						
BELG	**Belogornoye**	**70.88**	**335**	P	**P**	**18 08 05.3**	**-0.7**
	comp=Z,2.8nm,0.5s,baz=96,slow=9.2,SNR=2.1						
BELG				pP	**pP**	**18 08 17.9**	**+1.7**
	comp=Z,5.6nm,0.7s,baz=78,slow=5.0,SNR=2.9						
TAPN	**Taplejung**	**74.45**	**294**	*e*P	**P**	**18 08 28.1**	**+0.1**
	comp=Z,23nm,0.8s						
CMAR	**Chiang Mai Arr**	**74.54**	**280**	P	**P**	**18 08 28.6**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=23,slow=7.1,SNR=6.3						
CMAR				pP	**PcP**	**18 08 42.3**	**-0.3**
	comp=Z,2.7nm,0.8s,baz=27,slow=6.4,SNR=11						
JIRN	**Jiri**	**75.07**	**296**	*e*P	**P**	**18 08 32.3**	**+0.6**
	comp=Z,31nm,0.7s						
GKN	**Gorkha**	**75.68**	**297**	*e*P	**P**	**18 08 35.3**	**+0.4**
	comp=Z,21nm,0.7s						
AKASG	**Malin Array Be**	**76.35**	**346**	P	**P**	**18 08 36.1**	**-2.1**
	comp=Z,0.5nm,0.4s,baz=18,slow=6.8,SNR=3.4						
AKASG				pP	**PcP**	**18 08 49.6**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=21,slow=6.1,SNR=3.9						
PYUN	**Piuthan**	**76.51**	**298**	*e*P	**P**	**18 08 40.2**	**+0.5**
	comp=Z,33nm,1.0s						
GERES	**GERESS Array B**	**79.78**	**355**	P	**P**	**18 08 57.4**	**0.0**
	comp=Z,0.3nm,0.6s,baz=31,slow=5.4,SNR=4.4						
GERES				pP	**pwP**	**18 09 09.6**	**-2.2**
	comp=Z,0.6nm,0.7s,baz=17,slow=5.9,SNR=3.9						
BRTR	**Keskin Array B**	**86.13**	**340**	P	**P**	**18 09 30.6**	**+0.2**
	comp=Z,1.0nm,1.0s,baz=1.9,slow=4.3,SNR=3.7						
BRTR				pP	**pwP**	**18 09 43.5**	**-2.6**
	comp=Z,1.0nm,0.8s,baz=49,slow=2.3,SNR=4.8						
ASAR	**Alice Springs**	**88.17**	**227**	P	**P**	**18 09 40.0**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=30,slow=4.8,SNR=17						
ASAR				pP	**pP**	**18 09 53.5**	**+3.1**
	comp=Z,1.8nm,0.8s,baz=33,slow=4.4,SNR=10						
MATP	**Matopo**	**144.63**	**323**	PKP	**PKPab**	**18 16 24.6**	**0.0**
	comp=Z,2.2nm,0.7s,baz=38,slow=5.6,SNR=4.3						
MATP				pPKP	**pPKPdf**	**18 16 37.7**	**+1.1**
	comp=Z,3.4nm,0.8s,baz=51,slow=7.6,SNR=4.4						

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*GUC **08** 17:57:53.7±0.7, 31°.74S×72°.17W, h26^{km}±5^{km}, ML4.0*

*IDC **08** 17:57:55.7±1.1, 31°.79S×71°.96W, h31^{km}±5^{km}, mb3.6/4, mb1 3.7/8, mb1mx3.5/38, mbtmp3.7/8, ML3.6/4, Error ellipse: s-maj=33.4km s-min=31.4km az=142.0*

ISC 08 17:57:54.7±1.0**, 31°.74S**±0°.04×**72°.1W**±0°.1**, h25**^{km}±5^{km}**, n26, σ1^{s}05**/30**, mb3.9**/4**, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
VA06	**Catapilco**	**1.05**	**141**	*e*P	**Pn**	**17 58 13.4**	**-0.4**
VA06				*i*S	**Sb**	**17 58 28.1**	**+0.6**
VA06				IAML		17 58 32.7	
	comp=E,6µm,0.4s						
CO06	**Fray Jorge**	**1.13**	**20**	*e*P	**Pn**	**17 58 12.7**	**-2.3**
CO06				*i*S	**Sn**	**17 58 28.9**	**-0.8**
ROCH	**El Roble**	**1.52**	**144**	*e*P	**Pn**	**17 58 20.9**	**+0.4**
ROCH				*i*S	**Sb**	**17 58 41.6**	**+0.2**
ROCH				IAML		17 58 44.7	
	comp=N,2µm,0.4s						
VA03	**San Esteban**	**1.64**	**129**	*e*P	**Pn**	**17 58 22.7**	**+0.6**
VA03				*i*S	**Sb**	**17 58 44.5**	**-0.2**
VA03				IAML		17 58 51.4	
	comp=E,3µm,0.6s						
PEL	**Peldehue**	**1.82**	**140**	*e*P	**Pn**	**17 58 25.4**	**+0.8**
PEL				*i*S	**Sb**	**17 58 50.2**	**+0.3**
GO04	**Tololo Observa**	**1.91**	**35**	*e*P	**Pn**	**17 58 26.7**	**+0.8**
GO04				*i*S	**Sb**	**17 58 52.4**	**-0.2**
CO05	**La Serena**	**1.96**	**22**	*e*P	**Pn**	**17 58 27.2**	**+0.8**
CO05				*i*S	**Sb**	**17 58 52.7**	**-1.0**
MT05	**Renca**	**1.99**	**146**	*i*S	**Sb**	**17 58 54.5**	**-0.3**
LMEL	**Las Melosas**	**2.62**	**144**	*e*P	**Pn**	**17 58 37.0**	**+1.3**
LMEL				*i*S	**Sb**	**17 59 10.4**	**-2.6**
H03N1	**Juan Fernandez**	**6.01**	**252**	T	T	18 06 06.9	
	baz=81,slow=73,SNR=298						
H03N3	**Juan Fernandez**	**6.03**	**252**	T	T	18 06 10.1	
	baz=81,slow=73,SNR=246						
H03N2	**Juan Fernandez**	**6.03**	**252**	T	T	18 06 10.8	
	baz=81,slow=73,SNR=314						
H03S3	**Juan Fernandez**	**6.12**	**248**	T	T	18 06 12.1	
	baz=84,slow=75,SNR=2.9						
H03S1	**Juan Fernandez**	**6.12**	**248**	T	T	18 06 15.2	
	baz=84,slow=75,SNR=2.9						
H03S2	**Juan Fernandez**	**6.13**	**248**	T	T	18 06 17.4	
	baz=84,slow=75,SNR=4.5						
PLCA	**Paso Flores**	**9.05**	**173**	Pn	**Pn**	**18 00 02.0**	**-1.9**
	comp=E,0.2nm,0.3s,baz=334,slow=16,SNR=4.6						
CPUP	**Villa Florida**	**13.98**	**71**	Pn	**Pn**	**18 01 12.0**	**+0.8**

	comp=E,0.1nm,0.3s,baz=232,slow=12,SNR=2.9						
LPAZ	La Paz	15.80	14	Pn	Pn	18 01 36.3	+0.1
	comp=E,0.1nm,0.3s,baz=185,slow=4.1,SNR=3.6						
SIV	San Ignacio	18.61	35	P	P	18 02 09.7	-0.7
	comp=E,0.1nm,0.3s,baz=230,slow=13,SNR=4.6						
BDFB	Brasilia	27.15	59	P	P	18 03 35.0	-1.3
	comp=E,3.1nm,0.8s,baz=231,slow=14,SNR=3.7						
ANMO	Albuquerque	73.80	331	P	P	18 09 26.5	-0.6
	comp=E,0.5nm,0.4s,baz=120,slow=8.1,SNR=1.7						
NVAR	Mina Array Bea	82.02	325	P	P	18 10 14.3	+1.5
	comp=E,0.1nm,0.3s,baz=158,slow=7.6,SNR=3.6						
TORD	Torodi Ar. Bea	83.48	70	P	P	18 10 21.2	+0.6
	comp=E,0.3nm,0.7s,baz=262,slow=5.1,SNR=2.6						
TORD				pP	sP	18 10 30.1	-0.1
	comp=E,1.5nm,0.7s,baz=264,slow=4.8,SNR=11						
BVAR	Borovoye Array	145.62	41	pPKPbc	pPKPbc	18 17 40.9	+2.9
	comp=E,1.9nm,0.6s,baz=242,slow=9.5,SNR=6.0						
KURBB	Kurchatov Arra	151.22	40	PKPbc	PKiKP	18 17 45.6	-0.3
	comp=E,0.2nm,0.5s,baz=295,slow=2.8,SNR=4.4						
KURBB				pPKPbc	sPKPbc	18 17 55.6	+0.3
	comp=E,0.7nm,0.9s,baz=298,slow=3.0,SNR=3.8						
ZALV	Zalesovo Beam	152.32	30	PKPbc	PKiKP	18 17 47.9	-0.3
	comp=E,0.4nm,0.5s,baz=325,slow=4.2,SNR=1.6						
ZALV				pPKPbc	sPKPbc	18 17 58.0	+0.2
	comp=E,1.7nm,0.8s,baz=298,slow=3.8,SNR=4.6						

IDC 08 17:59:30.2±2.7, 5°.93N×94°.04E, h0^{km}, mb3.6/3, mb1 3.7/4, mb1mx3.3/68, mbtmp3.5/4, ML4.0/1, Error ellipse: s-maj=101.6km s-min=27.7km az=63.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	5.78	122	Pn	Pn	18 01 02.2	+4.9
	0.2nm,0.3s,baz=270,slow=20,SNR=1.4						
CMAR	Chiang Mai Arr	13.34	21	Pn	Pn	18 02 42.8	+1.8
	0.2nm,0.3s,baz=228,slow=13,SNR=4.3						
KURBB	Kurchatov Arra	46.40	346	P	P	18 07 57.9	-0.5
	1.6nm,0.9s,baz=171,slow=6.8,SNR=5.8						
WRA	Warramunga Arr	47.24	124	P	P	18 08 05.1	-0.4
	0.3nm,0.6s,baz=307,slow=9.4,SNR=5.4						
ASAR	Alice Springs	48.77	129	P	P	18 08 17.4	+0.1
	0.6nm,0.8s,baz=309,slow=7.3,SNR=5.3						

IDC 08 18:06:05.1±2.1, 5°.87N×92°.85E, h0^{km}, mb3.6/7, mb1 3.7/8, mb1mx3.5/61, mbtmp3.6/8, ML3.5/1, Error ellipse: s-maj=77.3km s-min=21.8km az=61.0

ISC 08 18:06:09.0±1.8, 5°.9N±0°.2×92°.8E±0°.3, h27^{km}, n8, σ1^{s}.00/8, mb3.6/7, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	13.86	25	Pn	Pn	18 09 23.9	+0.1
	0.1nm,0.3s,baz=233,slow=14,SNR=7.1						
MKAR	Makanchi Array	41.77	349	P	P	18 13 55.7	-0.3
	2.3nm,1.0s,baz=189,slow=8.0,SNR=3.6						
SONM	Songino Array	43.39	13	P	P	18 14 08.7	-0.7
	1.1nm,0.9s,baz=190,slow=9.6,SNR=7.3						
KURBB	Kurchatov Arra	46.18	347	P	P	18 14 30.5	-0.9
	0.5nm,0.7s,baz=165,slow=6.9,SNR=10.0						
WRA	Warramunga Arr	48.22	123	P	P	18 14 48.1	+0.3
	0.4nm,0.7s,baz=305,slow=8.9,SNR=2.9						
ZALV	Zalesovo Beam	48.37	354	P	P	18 14 49.8	+1.5
	1.6nm,0.7s,baz=187,slow=6.0,SNR=8.3						
ASAR	Alice Springs	49.69	128	P	P	18 14 58.6	-0.3
	0.4nm,0.7s,baz=302,slow=7.8,SNR=5.4						
BVAR	Borovoye Array	50.47	343	P	P	18 15 05.6	+1.1
	0.4nm,0.5s,baz=217,slow=7.0,SNR=1.5						

IDC 08 18:06:27.6±2.1, 30°.91S×71°.94W, h0^{km}, mb4.2/2, mb1 4.1/4, mb1mx3.8/30, mbtmp4.1/4, ML3.4/2, Error ellipse: s-maj=78.9km s-min=49.0km az=131.0

ISC 08 18:06:29.0±2.3, 30°.9S±0°.2×72°.0W±0°.4, h12^{km}, n9, σ0^{s}.37/6, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H03N1	Juan Fernandez	6.38	244	T	T	18 15 08.1	
	baz=72,slow=72,SNR=166						
H03N3	Juan Fernandez	6.39	244	T	T	18 15 05.9	
	baz=72,slow=72,SNR=225						
H03N2	Juan Fernandez	6.39	244	T	T	18 15 07.2	
	baz=72,slow=72,SNR=157						
LPAZ	La Paz	14.94	15	Pn	Pn	18 10 00.8	+0.1
	0.1nm,0.3s,baz=199,slow=7.0,SNR=6.3						
SIV	San Ignacio	17.88	37	P	P	18 10 38.1	-0.2
	0.1nm,0.3s,baz=220,slow=13,SNR=17						
BDFB	Brasilia	26.68	61	P	P	18 12 08.1	-0.2
	3.0nm,0.6s,baz=212,slow=11,SNR=6.0						
TORD	Torodi Ar. Bea	83.15	70	P	P	18 18 55.7	+0.4
	1.2nm,0.7s,baz=254,slow=4.6,SNR=8.7						
BVAR	Borovoye Array	144.93	40	PKP	PKPdf	18 26 05.2	-0.4
	0.8nm,0.6s,baz=229,slow=11,SNR=4.8						
ZALV	Zalesovo Beam	151.53	29	PKPbc	PKiKP	18 26 23.1	+0.1
	3.1nm,0.7s,baz=304,slow=3.1,SNR=15						

IDC 08 18:10:18.3±1.1, 6°.70N×94°.68E, h0^{km}, mb3.7/9, mb1 3.8/10, mb1mx3.6/49, mbtmp3.7/10, ML3.8/1, Error ellipse: s-maj=46.4km s-min=19.3km az=55.0

ISC 08 18:10:24.3±1.0, 6°.8N±0°.1×94°.7E±0°.2, h35^{km}, n14, σ1^{s}.02/11, mb3.8/9, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	5.81	133	Pn	Pn	18 11 49.4	+1.3
	0.7nm,0.3s,baz=335,slow=17,SNR=1.9						
CMAR	Chiang Mai Arr	12.30	19	Pn	Pn	18 13 17.1	0.0
	0.2nm,0.3s,baz=209,slow=16,SNR=4.1						
H08S3	Diego Garcia H	26.37	237	T	T	18 43 48.2	
	baz=56,slow=75,SNR=7.2						
H08S2	Diego Garcia H	26.38	237	T	T	18 43 48.4	
	baz=56,slow=75,SNR=7.5						
H08S1	Diego Carcia H	26.39	237	T	T	18 43 49.4	
	baz=56,slow=75,SNR=3.6						
MKAR	Makanchi Array	41.24	347	P	P	18 18 05.1	-0.9
	0.8nm,0.7s,baz=171,slow=8.6,SNR=7.1						
SONM	Songino Array	42.09	12	P	P	18 18 13.4	+0.4
	0.5nm,0.9s,baz=204,slow=13,SNR=3.4						
KURBB	Kurchatov Arra	45.70	346	P	P	18 18 41.4	-0.5
	1.5nm,0.9s,baz=165,slow=6.8,SNR=12						
WRA	Warramunga Arr	47.21	125	P	P	18 18 52.4	-1.8
	0.7nm,0.7s,baz=303,slow=9.0,SNR=7.6						
ZALV	Zalesovo Beam	47.68	352	P	P	18 18 57.0	-0.2
	1.0nm,0.6s,baz=171,slow=10,SNR=5.0						
ASAR	Alice Springs	48.83	130	P	P	18 19 05.5	-1.1
	0.5nm,0.7s,baz=302,slow=8.0,SNR=8.2						
BRTR	Keskin Array B	63.52	311	P	P	18 20 51.4	-0.2
	0.5nm,0.7s,baz=132,slow=8.0,SNR=4.2						
FINES	FINESS Array B	73.90	332	P	P	18 21 56.4	+0.9
	2.1nm,0.9s,baz=122,slow=15,SNR=3.5						
GERES	GERESS Array B	78.97	318	P	P	18 22 25.0	+0.3
	0.4nm,0.7s,baz=48,slow=2.0,SNR=3.6						

IDC 08 18:11:25.7±2.3, 5°.90N×93°.19E, h0^{km}, mb3.7/5, mb1 3.9/7, mb1mx3.5/48, mbtmp3.7/7, ML3.8/2, Error ellipse: s-maj=85.0km s-min=21.1km az=58.0

ISC 08 18:11:29.5±1.9, 5°.9N±0°.2×93°.2E±0°.3, h27^{km}, n7, σ0^{s}.57/7, mb3.9/5, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	6.50	118	Pn	Pn	18 13 03.5	-0.1
	1.5nm,0.3s,baz=339,slow=17,SNR=2.1						
CMAR	Chiang Mai Arr	13.71	24	Pn	Pn	18 14 42.4	+0.1
	0.2nm,0.3s,baz=220,slow=12,SNR=5.7						
MKAR	Makanchi Array	41.83	349	P	P	18 19 16.5	-0.5
	0.9nm,0.8s,baz=162,slow=8.9,SNR=4.6						
KURBB	Kurchatov Arra	46.25	347	P	P	18 19 52.4	0.0
	1.1nm,0.8s,baz=166,slow=6.8,SNR=5.3						
WRA	Warramunga Arr	47.93	123	P	P	18 20 05.4	-0.6
	0.8nm,0.7s,baz=305,slow=9.1,SNR=2.5						
ZALV	Zalesovo Beam	48.40	353	P	P	18 20 09.4	+0.3
	0.6nm,0.5s,baz=169,slow=8.5,SNR=2.2						
ASAR	Alice Springs	49.42	128	P	P	18 20 18.2	+0.7
	0.9nm,0.7s,baz=301,slow=7.5,SNR=6.2						

IDC 08 18:22:17.6±1.0, 6°.85N×94°.41E, h0^{km}, mb3.6/9, mb1 3.8/11, mb1mx3.6/42, mbtmp3.6/11, ML3.4/2, Error ellipse: s-maj=43.6km s-min=17.1km az=52.0

ISC 08 18:22:22.0±0.9, 6°.9N±0°.1×94°.4E±0°.2, h26^{km}, n14, σ0^{s}.69/12, mb3.7/9, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	6.08	132	Pn	Pn	18 23 51.5	+1.1
	0.7nm,0.3s,baz=319,slow=16,SNR=1.9						
PSI				Sn	Sn	18 24 59.1	-0.1
	0.4nm,0.3s,baz=90,slow=20,SNR=1.6						
CMAR	Chiang Mai Arr	12.30	21	Pn	Pn	18 25 16.0	+0.3
	0.1nm,0.3s,baz=215,slow=14,SNR=8.4						
H08S3	Diego Garcia H	26.20	237	T	T	18 54 35.3	
	baz=56,slow=75,SNR=28						
H08S2	Diego Garcia H	26.20	237	T	T	18 54 41.7	
	baz=56,slow=75,SNR=10						
H08S1	Diego Carcia H	26.21	237	T	T	18 54 36.6	
	baz=56,slow=75,SNR=8.8						
MKAR	Makanchi Array	41.08	347	P	P	18 30 03.3	-0.3
	0.9nm,0.6s,baz=167,slow=8.0,SNR=6.8						
SONM	Songino Array	42.05	12	P	P	18 30 11.3	-0.3
	0.2nm,0.4s,baz=205,slow=6.4,SNR=2.8						
WRA	Warramunga Arr	47.50	125	P	P	18 30 54.1	-1.2
	0.4nm,0.7s,baz=306,slow=9.1,SNR=7.5						
ZALV	Zalesovo Beam	47.54	352	P	P	18 30 55.1	0.0
	0.4nm,0.3s,baz=170,slow=9.0,SNR=3.7						
ASAR	Alice Springs	49.10	130	P	P	18 31 06.7	-1.0
	0.4nm,0.8s,baz=301,slow=7.7,SNR=7.2						
BRTR	Keskin Array B	63.25	311	P	P	18 32 48.7	0.0
	0.4nm,0.5s,baz=93,slow=7.8,SNR=2.2						
FINES	FINESS Array B	73.68	332	P	P	18 33 53.3	+0.1
	1.2nm,0.7s,baz=103,slow=6.0,SNR=5.0						
GERES	GERESS Array B	78.72	318	P	P	18 34 22.4	0.0
	0.3nm,0.6s,baz=82,slow=7.0,SNR=1.9						
ESDC	Sonseca Array	92.03	310	P	P	18 35 29.7	+0.6
	0.3nm,0.8s,baz=77,slow=3.4,SNR=4.4						

GUC 08 18:27:00.8±0.7, 31°.69S×72°.12W, h33^{km}±3^{km}, ML3.9

IDC 08 18:27:07.1±2.8, 32°.33S×71°.93W, h0^{km}, mb4.2/2, mb1 4.0/4, mb1mx3.7/28, mbtmp4.0/4, ML3.9/2, Error ellipse: s-maj=100.5km s-min=30.6km az=96.0

ISC 08 18:27:02.1±1.9, 31°.68S±0°.05×72°.2W±0°.2, h35^{km}, n22, σ0^{s}.95/16, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	1.12	27	eP	Pn	18 27 20.0	-1.3
CO06				i S	Sn	18 27 34.4	-1.2
VA06	Catapilco	1.19	138	eP	Pn	18 27 21.0	-1.2
VA06				i S	Sn	18 27 35.6	-1.5
VA06				IAML		18 27 40.3	
	comp=N,5µm,0.3s						
VA01	Torpederas	1.43	160	eP	Pn	18 27 24.9	-0.6
ROCH	El Roble	1.65	142	eP	Pn	18 27 28.3	-0.5
ROCH				i S	Sn	18 27 49.1	+0.1
ROCH				IAML		18 27 52.3	
	comp=N,2µm,0.4s						
VA03	San Esteban	1.79	128	eP	Pn	18 27 30.2	-0.4
VA03				i S	Sn	18 27 52.1	0.0
VA03				IAML		18 27 58.9	
	comp=E,3µm,0.6s						
MT02	Curacav	1.83	150	eP	Pn	18 27 30.7	-0.3
GO04	Tololo Observa	1.94	40	eP	Pn	18 27 32.9	+0.1
GO04				i S	Sn	18 27 57.5	+1.5
PEL	Peldehue	1.96	139	eP	Pn	18 27 32.8	-0.1
PEL				i S	Sn	18 27 56.9	+0.6
PEL				IAML		18 28 04.3	
	comp=N,1µm,0.4s						
H03N1	Juan Fernandez	5.91	251	T	T	18 35 16.8	
	baz=82,slow=72,SNR=15						
H03N3	Juan Fernandez	5.92	251	T	T	18 35 12.2	
	baz=82,slow=72,SNR=24						
H03N2	Juan Fernandez	5.92	251	T	T	18 35 16.4	
	baz=82,slow=72,SNR=25						
H03S3	Juan Fernandez	6.02	247	T	T	18 35 36.4	
	baz=79						
H03S1	Juan Fernandez	6.02	247	T	T	18 35 29.1	
	baz=79						
H03S2	Juan Fernandez	6.04	247	T	T	18 35 27.0	
	baz=79						
PLCA	Paso Flores	9.14	172	Pn	Pn	18 29 12.0	+0.5
	comp=N,0.3nm,0.3s,baz=328,slow=14,SNR=9.5						
LVC	Limon Verde	9.50	19	Pn	Pn	18 29 33.7	+17
	comp=N,0.8nm,0.3s,baz=222,slow=14,SNR=2.5						
LVC				Sn	Sn	18 31 29.0	+26
	comp=N,0.5nm,0.3s,baz=214,slow=22,SNR=3.1						
DBIC	Dimbokro	74.60	72	P	P	18 38 47.9	+10
	comp=N,0.9nm,0.5s,baz=243,slow=4.5,SNR=3.8						
TORD	Torodi Ar. Bea	83.58	70	P	P	18 39 37.6	+11
	comp=N,1.2nm,0.7s,baz=251,slow=3.9,SNR=9.4						
H11S2	WAKE ISLAND Hy	125.61	271	T	T	21 04 54.1	
	baz=116,slow=74,SNR=5.6						
H11S1	WAKE ISLAND Hy	125.62	271	T	T	21 04 55.7	
	baz=116,slow=74,SNR=5.1						
H11S3	WAKE ISLAND Hy	125.62	271	T	T	21 04 57.3	
	baz=116,slow=74,SNR=5.1						
ZALV	Zalesovo Beam	152.32	30	PKPbc	PKPab	18 47 05.0	+1.3
	comp=N,2.7nm,0.8s,baz=286,slow=2.5,SNR=6.3						

KRSC 08 18:37:11.5±2.1, 48°.34N×158°.45E, h16^{km}±36^{km}, ML3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDTR	Khodutka, Kamc	3.48	356	eP	Pn	18 38 07.1	+2.2
KDTR				eS	Sn	18 38 50.1	+4.4
RUS	Russkaya	4.09	1	eP	Pn	18 38 15.9	+2.5
RUS				eS	Sn	18 39 05.0	+4.1
MTVR	Mutnovka	4.15	358	eP	Pn	18 38 17.8	+3.5
MTVR				eS	Sn	18 39 07.7	+5.2
GRL	Gorelyy	4.22	357	P	Pn	18 38 17.8	+2.5
DALK	Dalny	4.70	2	eP	Pn	18 38 26.8	+5.1
AVH	Avacha	4.93	2	P	Pn	18 38 30.5	+5.5
SMAR	Somma	4.93	2	P	Pn	18 38 30.3	+5.2
SDLR	Sedlovina	4.95	3	eP	Pn	18 38 29.8	+4.5
MKZ	Mys Kozlova	6.55	17	P	Pn	18 38 53.1	+6.0

IDC 08 18:41:48.9±2.5, 36°.46N×70°.98E, h190^{km}±22^{km}, mb3.5/12, mb1 3.5/19, mb1mx3.2/77, mbtmp4.0/19, Error ellipse: s-maj=18.5km s-min=13.2km az=28.0

NNC 08 18:41:52.7±5.0, 36°.85N×70°.94E, h174^{km}±63^{km}, mb3.2, mpv4.4, Error ellipse: s-maj=44.0km s-min=32.7km az=37.0

ISC 08 18:41:49.6±0.7, 36°.61N±0°.07×70°.93E±0°.07, h188^{km}, n42, σ1^{s}.50/48, mb3.6/12, 6C-4D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.91	20	P	Pn	18 43 17.0	+1.2
	SNR=201						
UCH	Uchtor	6.25	25	P	Pn	18 43 21.6	+1.3
	SNR=72						
EKS2	Erkin-Say	6.43	19	P	Pn	18 43 23.7	+1.4
	SNR=12						
KK31	Karatay Array	6.49	357	⇓P	Pn	18 43 23.9	+0.8
	3.9nm,0.3s,baz=183,slow=13,SNR=132						
KK31				⇑S	Sn	18 44 33.8	-3.1
	26nm,0.7s,baz=183,slow=22,SNR=14						
AAK	Ala-Archa	6.61	23	P	Pn	18 43 26.3	+1.5
	12nm,0.3s,baz=184,slow=6.2,SNR=131						
AAK				S	Sn	18 44 39.4	-0.7
	2.2nm,0.3s,baz=156,slow=23,SNR=12						
AAK	Ala-Archa	6.61	23	P	Pn	18 43 26.2	+1.5
	SNR=42						
AAK	Ala-Archa	6.61	23	⇑P	Pn	18 43 26.0	+1.2
	19nm,0.4s						
AAK				⇑S	Sn	18 44 39.1	-1.0
	19nm,0.6s						
KBK	Karagaybulak	6.78	26	P	Pn	18 43 28.6	+1.6
	SNR=24						
ULHL	Ulahol	6.96	35	P	Pn	18 43 30.3	+0.8
	SNR=18						
CHMS	Chumysh	7.02	24	P	Pn	18 43 31.5	+1.5
	SNR=11						
USP	Ospenovka	7.19	21	P	Pn	18 43 33.1	+0.9
	SNR=8.1						
TKM2	Tokmak 2	7.25	28	P	Pn	18 43 34.2	+1.1
	SNR=36						
TKM2	Tokmak 2	7.25	28	⇓P	Pn	18 43 33.3	+0.1
	37nm,0.7s						
TKM2				⇑S	Sn	18 44 51.5	-3.7
	18nm,1.1s						
GEYT	Alibeck	10.30	281	P	Pn	18 44 13.8	+0.9
	0.6nm,0.3s,baz=94,slow=13,SNR=2.4						
MKAR	Makanchi Array	13.23	36	P	Pn	18 44 52.0	+1.7
	0.4nm,0.3s,baz=214,slow=10,SNR=20						
PYUN	Piuthan	13.25	126	eP	Pn	18 44 50.3	-0.6
PYUN				eS	Sn	18 47 09.2	-9.5
DANN	Dangsing	13.60	124	eP	Pn	18 44 54.8	-0.5
KOLN	Koldanda	13.87	126	eP	Pn	18 44 59.1	+0.4
	7.7nm,0.3s						
GKN	Gorkha	14.41	123	eP	Pn	18 45 06.2	+0.9
	17nm,0.3s						
AB31	Akbulak array	14.96	331	⇓P	Pn	18 45 10.8	-0.9
	0.4nm,0.5s,baz=137,slow=12,SNR=9.8						
AB31				⇓S	Sn	18 47 57.7	-1.0
	0.8nm,0.6s,baz=150,slow=23,SNR=3.5						
KKN	Kakani	14.98	122	eP	Pn	18 45 13.8	+1.4
	16nm,0.5s						
KURBB	Kurchatov Arra	15.03	19	P	Pn	18 45 13.5	+1.0
	0.1nm,0.3s,baz=300,slow=20,SNR=8.4						
GUN	Gumba	15.32	120	eP	Pn	18 45 17.4	+0.8
	14nm,0.4s						
JIRN	Jiri	15.69	120	eP	P	18 45 23.5	+2.2
	42nm,0.4s						
BVAR	Borovoye Array	16.41	359	P	P	18 45 29.6	+0.9
	0.7nm,0.3s,baz=184,slow=20,SNR=3.8						
AKTO	Aktyubinsk	16.66	330	P	P	18 45 32.0	+0.7
	0.3nm,0.3s,baz=129,slow=11,SNR=4.2						
AKTO	Aktyubinsk	16.66	330	⇑P	P	18 45 30.3	-1.0
	2.2nm,1.1s						
AKTO				⇑S	S	18 48 39.8	+4.4
	2.6nm,0.9s						
TAPN	Taplejung	16.95	118	eP	Pn	18 45 38.1	+1.9
	22nm,0.7s						
ZALV	Zalesovo Beam	19.83	25	P	P	18 46 05.9	+0.1
	1.3nm,0.3s,baz=221,slow=11,SNR=17						
SONM	Songino Array	28.32	55	P	P	18 47 26.2	+0.5
	0.8nm,0.6s,baz=262,slow=9.1,SNR=7.3						
CMAR	Chiang Mai Arr	30.56	119	P	P	18 47 45.4	-0.3
	0.5nm,0.6s,baz=297,slow=8.0,SNR=4.9						
NRIK	Noril'sk	34.02	10	P	P	18 48 16.0	+0.7
	2.2nm,0.4s,baz=196,slow=8.0,SNR=5.0						
FINES	FINESS Array B	37.36	326	P	P	18 48 44.2	+0.6
	0.5nm,0.3s,baz=127,slow=10,SNR=7.3						
ARCES	ARCESS Array B	41.02	338	P	P	18 49 14.5	+0.6
	13nm,1.2s,baz=113,slow=8.2,SNR=8.5						
HFS	Hagfors	42.94	322	P	P	18 49 29.9	+0.3
	1.7nm,0.5s,baz=122,slow=7.3,SNR=8.0						
NB2	NORSAR Subarra	44.26	323	P	P	18 49 40.1	0.0
	comp=Z,0.6nm,0.5s,baz=93,slow=7.9						
NOA	NORSAR Array B	44.26	323	P	P	18 49 40.2	+0.1
	comp=Z,0.6nm,0.5s,baz=95,slow=7.8,SNR=3.5						
TORD	Torodi Ar. Bea	65.67	269	P	P	18 52 12.5	-1.6
	comp=Z,0.4nm,0.4s,baz=43,slow=6.1,SNR=4.3						
INK	Inuvik	73.80	9	P	P	18 53 03.0	+0.1
	comp=Z,1.0nm,0.5s,baz=348,slow=6.3,SNR=9.9						
ILAR	Eielson Array	74.68	16	P	P	18 53 07.5	-0.6
	comp=Z,0.3nm,0.5s,baz=296,slow=4.7,SNR=4.9						
WRA	Warramunga Arr	82.10	122	P	P	18 53 46.8	-2.5
	comp=Z,1.1nm,0.7s,baz=323,slow=4.9,SNR=8.3						
ASAR	Alice Springs	84.36	125	P	P	18 53 58.5	-2.3
	comp=Z,1.1nm,0.7s,baz=308,slow=4.8,SNR=16						

IDC 08 18:44:34.6±2.4, 5°.83N×93°.00E, h0^{km}, mb3.4/5, mb1 3.5/6, mb1mx3.3/68, mbtmp3.4/6, Error ellipse: s-maj=94.7km s-min=23.2km az=60.0

ISC 08 18:44:38.4±2.0, 5°.8N±0°.2×93°.0E±0°.3, h27^{km}, n6, σ0^{s}.50/6, mb3.4/5, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	13.86	24	Pn	Pn	18 47 53.3	+0.1
	baz=218,slow=14,SNR=4.9						
MKAR	Makanchi Array	41.86	349	P	P	18 52 25.8	-0.4
	0.4nm,0.6s,baz=167,slow=7.2,SNR=4.3						
KURBB	Kurchatov Arra	46.27	347	P	P	18 53 01.7	+0.2
	0.8nm,0.7s,baz=169,slow=6.9,SNR=7.5						
WRA	Warramunga Arr	48.07	123	P	P	18 53 15.5	-0.5
	0.2nm,0.7s,baz=305,slow=9.1,SNR=2.4						
ZALV	Zalesovo Beam	48.45	354	P	P	18 53 18.4	0.0
	0.2nm,0.3s,baz=175,slow=8.5,SNR=2.4						
ASAR	Alice Springs	49.54	128	P	P	18 53 27.8	+0.5
	0.2nm,0.7s,baz=305,slow=7.8,SNR=5.2						

IDC 08 18:47:12.3±0.8, 6°.64N×94°.27E, h0^{km}, mb3.9/15, mb1 4.0/17, mb1mx3.8/65, mbtmp3.9/17, ML3.5/2, MS3.9/2, Ms1 4.0/2, ms1mx3.6/43, Error ellipse: s-maj=39.2km s-min=15.3km az=52.0

ISC 08 18:47:17.8±0.8, 6°.7N±0°.1×94°.3E±0°.2, h35^{km}, n21, σ0^{s}.57/17, mb4.0/15, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	5.98	130	Pn	Pn	18 48 44.2	+0.2
	0.4nm,0.3s,baz=315,slow=15,SNR=1.9						
CMAR	Chiang Mai Arr	12.53	21	Pn	Pn	18 50 13.8	+0.1
	0.1nm,0.3s,baz=211,slow=14,SNR=4.6						
CMAR				LR	LR	18 55 10.3	
	comp=Z,533nm,19.4s,baz=140,slow=38						
LEM	Lembang	18.86	135	LR	LR	18 59 39.1	
	comp=Z,388nm,18.6s,baz=354,slow=40						
H08S3	Diego Garcia H	26.03	237	T	T	19 19 27.1	
	baz=57						
H08S2	Diego Garcia H	26.03	237	T	T	19 19 36.3	
	baz=57						
H08S1	Diego Carcia H	26.05	237	T	T	19 19 37.0	
	baz=57						
MKAR	Makanchi Array	41.28	347	P	P	18 54 59.4	-0.3
	1.1nm,0.7s,baz=168,slow=8.2,SNR=8.2						
SONM	Songino Array	42.27	12	P	P	18 55 08.1	+0.2
	0.4nm,0.6s,baz=186,slow=9.6,SNR=4.2						
KURBB	Kurchatov Arra	45.74	346	P	P	18 55 35.5	0.0
	1.5nm,0.7s,baz=170,slow=7.0,SNR=17						
WRA	Warramunga Arr	47.42	125	P	P	18 55 48.5	-0.7
	0.6nm,0.7s,baz=303,slow=9.2,SNR=5.6						
ZALV	Zalesovo Beam	47.75	352	P	P	18 55 50.8	-0.4
	0.3nm,0.3s,baz=160,slow=4.7,SNR=3.6						
ASAR	Alice Springs	49.01	129	P	P	18 56 01.3	-0.2
	0.7nm,0.7s,baz=301,slow=7.6,SNR=8.8						
AKTO	Aktyubinsk	53.08	332	P	P	18 56 31.2	-0.4
	1.6nm,0.7s,baz=130,slow=7.7,SNR=5.1						
STKA	Stephens Creek	59.15	133	P	P	18 57 15.3	+0.1
	1.0nm,0.8s,baz=319,slow=8.9,SNR=3.7						
BRTR	Keskin Array B	63.35	311	P	P	18 57 43.0	-0.8
	0.6nm,0.7s,baz=129,slow=9.7,SNR=4.8						
FINES	FINESS Array B	73.85	332	P	P	18 58 49.0	+0.3
	3.9nm,1.0s,baz=95,slow=4.6,SNR=7.3						
ARCES	ARCESS Array B	76.44	340	P	P	18 59 04.2	+0.6
	4.6nm,0.9s,baz=104,slow=7.6,SNR=4.8						
GERES	GERESS Array B	78.84	318	P	P	18 59 16.8	-0.7
	0.4nm,0.6s,baz=97,slow=7.3,SNR=5.3						
HFS	Hagfors	79.57	330	P	P	18 59 21.2	+0.1
	2.7nm,0.9s,baz=101,slow=7.8,SNR=7.5						
DAVOX	Davos/Dischmat	81.38	316	P	P	18 59 32.4	+1.1
	1.3nm,0.5s,baz=94,slow=7.4,SNR=5.6						
ESDC	Sonseca Array	92.13	310	P	P	19 00 24.8	+0.8
	0.4nm,0.7s,baz=58,slow=3.8,SNR=4.3						

BJI 08 18:48:42.9±0.0, 6°.58N×94°.28E, h19^{km}, mB5.0/10, mb4.4/33, Ms4.5/3, Ms7 4.5/3

IDC 08 18:48:44.8±0.5, 7°.06N×94°.74E, h0^{km}, mb4.2/23, mb1 4.3/26, mb1mx4.1/58, mbtmp4.2/26, ML4.0/3, Error ellipse: s-maj=20.2km s-min=12.8km az=54.0

NEIC 08 18:48:44.3±2.4, 6°.86N±0°.09×94°.5E±0°.1, h10^{km}±1^{km}, mb4.6/16, Error ellipse: s-maj=23.2km s-min=13.7km az=244.0

DJA 08 18:48:46.2±0.4, 7°N±3°×9°4E±°, h10^{km}, M4.8/19, mb4.5/19, mB5.5/3, MLv4.9/6, Mw(mB)5.0/3

ISC 08 18:48:49.1±0.4, 6°.95N±0°.06×94°.71E±0°.07, h26^{km}, n102, σ2^{s}.04/99, mb4.4/50, 3C, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	2.81	127	P	Pn	18 49 32.7	+0.3
LHMI	Lhok Sumawe	2.81	127	Pn	Pn	18 49 31.1	-1.3
TPTI		4.42	146	P	Pn	18 49 57.1	+2.6
PBA	Port Blair	5.06	338	eP	Pn	18 50 05.7	+2.4
TSI	Tuntungan	5.15	132	P	Pn	18 50 06.1	+1.5
	1.5nm58nm,0.6s						
PSI	Prapat	5.89	134	Pn	Pn	18 50 16.1	+1.3
	3.7nm,0.3s,baz=326,slow=13,SNR=12						
GSI	Gunungsitoli	6.30	153	P	Pn	18 50 23.8	+3.4
	0.3nm25nm,0.8s						
DGPR	DIGLIPUR	6.43	344	eP	Pn	18 50 23.9	+1.8
MNSI	Mandailing Nat	7.81	141	P	Pn	18 50 43.1	+1.9
	1µm20nm,0.9s						
PPI	Padang Panjang	9.30	142	P	Pn	18 51 03.5	+2.0

	9.4nm,0.6s						
PBKT	Sadao Pong	11.35	32	Pn	Pn	18 51 29.9	+0.3
CM31	Chiang Mai Arr	12.16	19		Pn	18 51 39.4	-1.3
CMAR	Chiang Mai Arr	12.16	19	Pn	Pn	18 51 39.9	-0.8
	0.4nm,0.3s,baz=213,slow=14,SNR=9.8						
CMAR	Chiang Mai Arr	12.16	19	Pn	Pn	18 51 38.9	-1.8
CHTO	Chiang Mai	12.49	19	Pn	Pn	18 51 47.8	+2.5
LHSI	Lahat	13.86	140	P	Pn	18 52 04.9	+0.9
	32nm,0.8s						
PALK	Pallekele	13.90	272	Pn	Pn	18 52 05.5	+0.9
	0.3nm,0.3s,baz=176,slow=4.4,SNR=1.3						
PALK				Sn	Sn	18 54 23.7	-15
	1.3nm,0.3s,baz=143,slow=12,SNR=2.4						
MDSI	Maura Dua	14.78	140	P	Pn	18 52 13.8	-2.8
	7.1nm,0.9s						
STKI	Sintang	18.07	112	P	P	18 53 00.8	+2.0
	2µm14nm,1.2s						
KOHI	KOHIMA	18.67	358	*e*P	Pn	18 53 08.5	+2.6
HYB	Hyderabad	18.89	305	*i* P	Pn	18 53 13.0	+4.5
MOKO	MOKOCHONG	19.26	359	*e*P	Pn	18 53 15.7	+2.7
KMI	Kunming	19.63	22	⇑P	Pn	18 53 20.1	+2.5
KMI				PP	PnPn	18 53 35.7	+4.2
KMI				pmax	pmax		
	comp=Z,19nm,1.1s						
LKP	Lekhapani	20.30	3	*e*P	Pn	18 53 26.9	+1.8
GTK	Tadong	21.07	345	*e*P	P	18 53 34.6	+3.0
TAPN	Taplejung	21.35	343	*e*P	P	18 53 36.7	+2.0
	59nm,0.8s						
JIRN	Jiri	22.12	340	*e*P	P	18 53 44.8	+1.7
	44nm,0.8s						
PKIN	Phulchoki	22.33	338	*e*P	P	18 53 48.7	+3.4
	35nm,0.6s						
DMN	Daman	22.47	337	*e*P	P	18 53 50.3	+3.5
GYA	Guiyang	22.49	29	⇑*i*P	P	18 53 49.5	+2.6
GYA				pmax	pmax		
	comp=Z,13nm,1.2s						
BBKI	Banjar Baru	22.61	117	P	P	18 53 49.7	+1.7
	28nm,0.9s						
LSA	Lhasa	22.87	352	P	P	18 53 47.2	-4.0
DANN	Dangsing	23.67	335	*e*P	P	18 53 56.1	-2.9
	15nm,0.6s						
KMMI	Kalianget	23.72	126	P	P	18 54 01.6	+2.3
	32nm,0.9s						
PYUN	Piuthan	23.78	334	*e*P	P	18 53 59.1	-0.9
BLJI	Banyuglugur	23.83	127	P	P	18 54 12.2	+12
JAGI	Jajag, Banyuwa	24.71	128	P	P	18 54 04.7	-3.7
SRBI	Singaraja	25.32	126	P	P	18 54 24.6	+11
MPSI	Mapaga	25.97	104	P	P	18 54 22.9	+3.0
	28nm,1.3s						
H08S3	Diego Garcia H	26.48	237	T	T	19 21 06.5	
	baz=56,slow=75,SNR=94						
H08S2	Diego Garcia H	26.48	237	T	T	19 21 05.1	
	baz=56,slow=75,SNR=78						
H08S1	Diego Carcia H	26.49	237	T	T	19 21 10.0	
	baz=56,slow=75,SNR=27						
TOLI2	Tolitoli	26.64	101	P	P	18 54 22.8	-3.2
TOLI2				IAmb	IAmb	18 54 39.5	
	comp=Z,18nm,1.0s						
ENH	Enshi	27.03	29	P	P	18 54 27.7	-1.7
ENH				IAmb	IAmb	18 54 43.0	
	comp=Z,14nm,1.0s						
BKSI	Bulukumba	28.14	115	P	P	18 54 51.1	+12
GTOI	Gorontalo	28.92	101	P	P	18 54 57.2	+11
GTA	Gaotai	32.64	7	⇑P	P	18 55 19.2	+0.2
GTA				pP	pP	18 55 23.9	-2.2
GTA				sP	pwP	18 55 26.5	-2.5
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
NJ2	Nanjing	33.62	39	*e*P	P	18 55 28.1	+0.6
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
HHC	Hu-ho-hao-te	36.96	21	*e*P	P	18 55 58.2	+1.9
HHC				pmax	pmax		
	comp=Z,24nm,0.8s						
WMQ	Urumqi	37.23	352	*e*P	P	18 55 58.0	-0.5
WMQ				pmax	pmax		
	comp=Z,13nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,83nm,5.3s						
GAR	Garm	38.75	329	P	P	18 56 09.3	-2.2
GAR				IAmb	IAmb	18 56 10.3	
	comp=Z,16nm,1.1s						
CHGR	Chuyangaron	39.10	328	P	P	18 56 10.4	-4.0
CHGR				IAmb	IAmb	18 56 13.1	
	comp=Z,12nm,0.7s						
FITZ	Fitzroy Crossi	39.40	130	P	P	18 56 17.6	+0.7
	comp=Z,1.9nm,0.8s,baz=315,slow=11,SNR=2.6						
MK31	Makanchi Array	41.10	347	P	P	18 56 28.7	-2.1
MKAR	Makanchi Array	41.10	347	P	P	18 56 29.5	-1.3
	comp=Z,6.0nm,0.8s,baz=162,slow=8.3,SNR=30						
MKAR	Makanchi Array	41.10	347	P	P	18 56 28.8	-2.0
MAKZ	Makanchi	41.19	347	P	P	18 56 29.1	-2.4
MAKZ				IAmb	IAmb	18 56 31.2	
	comp=Z,6.0nm,0.8s						
KKAR	Karatay Array	41.83	333	P	P	18 56 32.6	-4.3
SONM	Songino Array	41.94	12	P	P	18 56 37.2	-0.6
	comp=Z,3.8nm,0.9s,baz=195,slow=7.2,SNR=20						
SONM	Songino Array	41.94	12	P	P	18 56 37.3	-0.4
GEYT	Alibeck	45.26	318	P	P	18 57 04.8	+0.3
	comp=Z,1.4nm,0.4s,baz=156,slow=14,SNR=2.1						
KURBB	Kurchatov Arra	45.57	346	P	P	18 57 05.8	-0.9
	comp=Z,8.3nm,0.8s,baz=166,slow=6.9,SNR=41						
KURK	Kurchatov	45.63	346	P	P	18 57 04.3	-2.9
WRA	Warramunga Arr	47.27	125	P	P	18 57 19.6	-1.0
	comp=Z,1.3nm,0.7s,baz=302,slow=9.1,SNR=7.9						
WRAB	Tennant Creek	47.28	125	P	P	18 57 18.3	-2.4
ZAA0	Zalesovo Array	47.54	352	P	P	18 57 19.7	-2.4
ZALV	Zalesovo Beam	47.54	352	P	P	18 57 21.0	-1.1
	comp=Z,8.3nm,0.9s,baz=168,slow=7.6,SNR=23						
ZALV	Zalesovo Beam	47.54	352	P	P	18 57 19.2	-2.9
ASAR	Alice Springs	48.90	130	P	P	18 57 33.0	-0.2
	comp=Z,2.4nm,0.8s,baz=308,slow=7.6,SNR=16						
ASAR	Alice Springs	48.90	130	P	P	18 57 31.6	-1.6
BRVK	Borovoye	50.10	341	P	P	18 57 38.0	-3.8
BRVK				IAmb	IAmb	18 57 41.6	
	comp=Z,6.1nm,0.9s						
OPO	Ambohidratompo	53.28	241	P	P	18 58 08.2	+1.8
	comp=Z,1.7nm,0.7s,baz=101,slow=5.2,SNR=1.7						
KMBO	Kilima Mbogo	57.88	264	P	P	18 58 39.8	+0.1
	comp=Z,1.9nm,0.7s,baz=63,slow=8.2,SNR=6.4						
STKA	Stephens Creek	59.07	134	P	P	18 58 47.5	+0.1
	comp=Z,2.5nm,0.8s,baz=312,slow=8.5,SNR=8.6						
STKA	Stephens Creek	59.07	134	P	P	18 58 46.1	-1.2
BRTR	Keskin Array B	63.45	311	P	P	18 59 16.1	-1.0
	comp=Z,0.7nm,0.7s,baz=113,slow=6.5,SNR=3.9						
KLMR	Klimovskoe	67.52	334	P	P	18 59 41.9	-0.9
KLMR				AMP		18 59 55.9	
	comp=Z,19nm,1.4s						
AKASG	Malin Array Be	69.22	322	P	P	18 59 53.3	-0.3
	comp=Z,0.4nm,0.4s,baz=90,slow=5.6,SNR=2.2						
AKASG	Malin Array Be	69.22	322	P	P	18 59 53.3	-0.3
MNK	Minsk	71.00	325	*i* P	P	19 00 03.3	-1.2
	comp=E,3.0nm,0.9s						
MNK				*i* P	P	19 00 03.3	-1.2
	comp=N,10.0nm,0.8s						
MNK				*i* P	P	19 00 03.3	-1.2
	comp=Z,10.0nm,0.7s,baz=286						
MNK				*i* PcP	PcP	19 00 29.1	+4.3
MNK				*i* PP	PP	19 02 40.1	-1.8
MNK				*i* PPP	PPP	19 04 22.8	
MNK				*i* S	S	19 09 19.6	+0.8
MNK				*i* SS	SS	19 14 10.4	+18
MNK				*i* SSS	SSS	19 17 23.7	
MNK				*i* LR	LR	19 31 41.4	
MNK				*i* LRM	MLR	19 33 38.5	
	comp=Z,1µm,18.8s						
MNK				*i* LRM	MLR	19 33 40.6	
	comp=E,100nm,16.6s						
MNK				*i* LRM	MLR	19 33 44.1	
	comp=N,406nm,18.8s						
NACGM	Naroch	71.72	326	*i* P	P	19 00 15.0	+6.2
FINES	FINESS Array B	73.78	332	P	P	19 00 19.3	-1.6
	comp=N,4.5nm,0.8s,baz=120,slow=5.6,SNR=8.9						
BOSA	Boshof	75.58	238	P	P	19 00 32.0	-0.1
	comp=N,1.8nm,0.8s,baz=96,slow=5.2,SNR=6.2						
ARCES	ARCESS Array B	76.32	340	P	P	19 00 34.3	-1.1
	comp=N,3.1nm,0.8s,baz=47,slow=5.3,SNR=3.8						
ARSA	Arzberg	77.59	317	*e*P	P	19 00 44.2	+1.1
	comp=N,3.6nm,1.1s						
SOKA	Soboth	77.89	316	*e*P	P	19 00 45.6	+0.7
	comp=N,1.9nm,1.0s						
MYKA	Terra Mystica	78.85	316	*e*P	P	19 00 51.2	+1.1
	comp=N,3.2nm,1.0s						
GERES	GERESS Array B	78.88	318	P	P	19 00 50.0	-0.3
	comp=N,1.2nm,0.8s,baz=90,slow=5.3,SNR=9.6						
HFS	Hagfors	79.53	330	P	P	19 00 52.3	-1.2
	comp=N,1.4nm,0.5s,baz=100,slow=5.1,SNR=8.1						
ABTA	Abfaltersbach	79.63	316	*e*P	P	19 00 54.3	-0.1
	comp=N,2.1nm,0.9s						
WATA	Walderalm	80.27	317	*e*P	P	19 00 56.4	-1.6
	comp=N,3.4nm,1.1s						
SQTA	Sankt Quirin	80.52	317	*e*P	P	19 00 58.3	-1.0
	comp=N,4.3nm,0.8s						
MOTA	Moosalm	80.60	317	*e*P	P	19 00 59.7	0.0
	comp=N,4.3nm,1.0s						
NB2	NORSAR Subarra	80.80	331	P	P	19 00 58.8	-1.6
	comp=Z,26nm,2.5s,baz=90,slow=5.9						
NOA	NORSAR Array B	80.80	331	P	P	19 00 58.9	-1.6
	comp=Z,1.6nm,0.9s,baz=94,slow=5.0,SNR=3.1						
RETA	Reutte	80.83	317	*e*P	P	19 01 00.1	-0.7
	comp=Z,5.2nm,1.2s						
DAVOX	Davos/Dischmat	81.44	316	P	P	19 01 04.1	-0.2
	comp=Z,4.7nm,0.8s,baz=111,slow=6.0,SNR=11						
EKA	Eskdalemuir Ar	88.79	326	P	P	19 01 41.0	+0.3
	comp=Z,4.5nm,0.9s,baz=115,slow=6.3,SNR=3.4						
TORD	Torodi Ar. Bea	91.35	283	P	P	19 01 52.6	-0.8
	comp=Z,0.3nm,0.8s,baz=80,slow=5.2,SNR=2.3						
ESDC	Sonseca Array	92.24	310	P	P	19 01 57.3	+0.2
	comp=Z,0.9nm,0.8s,baz=57,slow=4.3,SNR=9.4						
PDAR	Pinedale Array	125.81	22	PKP	PKPdf	19 07 48.9	-0.3
	comp=Z,0.4nm,0.8s,baz=329,slow=3.4,SNR=3.6						
TXAR	Lajitas Array	139.82	25	PKP	PKPdf	19 08 16.3	+0.6
	comp=Z,0.2nm,0.6s,baz=5.7,slow=1.8,SNR=2.1						

IDC ***08*** *18:49:58.5±11.0, 7°.21N×77°.01W, h0^{km}, mb1 4.0/1, mb1mx3.3/45, mbtmp4.4/1, ML2.9/1, Error ellipse: s-maj=623.3km s-min=44.3km az=30.0*

RSNC ***08*** *18:50:08.9±0.9, 7°.45N×73°.20W, h135^{km}±3^{km}, ML3.4, Mw3.8*

ISC 08 18:50:07.1±1.0**, 7°.48N**±0°.03×**73°.19W**±0°.03**, h150^{km}, n37, σ1^{s}67**/71**, 2D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAMC	Pamplona, Colo	0.51	106	*e*P	Pn	18 50 29.1	+0.1
PAMC				*e*S	Sn	18 50 43.9	-1.8
PAMC				*i*		18 50 47.1	
	comp=Z,377nm,0.5s						
BRRC	Barranca, Sant	0.64	234	⇓*e*P	Pn	18 50 28.8	-0.4
BRRC				*e*S	Sn	18 50 43.9	-2.1
BRRC				*i*		18 50 47.3	
	comp=Z,329nm,0.3s						
OCAC	Ocana	0.77	350	*e*P	Pn	18 50 30.2	0.0
OCAC				*e*S	Sn	18 50 47.2	-0.7
OCAC				*i*		18 50 49.2	
	comp=Z,1µm,0.4s						
BARC	Barichara	0.88	180	⇓*e*P	Pn	18 50 30.8	-0.5
BARC				*i*		18 50 48.2	
	comp=Z,476nm,0.1s						
SMLC	San Martn de	1.58	326	*e*P	Pn	18 50 37.4	-0.1
SMLC				*e*S	Sn	18 51 00.1	-0.7
SMLC				*i*		18 51 01.6	
	comp=Z,667nm,0.1s						
RUSC	La Rusia	1.58	176	*e*P	Pn	18 50 37.6	-0.5
RUSC				*e*S	Sn	18 51 00.2	-1.6
ZARC	Zaragoza, Cauc	1.66	271	*e*P	Pn	18 50 38.7	+0.4
ZARC				*e*S	Sn	18 51 02.2	0.0
ZARC				*i*		18 51 06.6	
	comp=Z,451nm,0.3s						
TAMC	Tame, Arauca	1.73	127	*e*P	Pn	18 50 39.6	+0.3
TAMC				*e*S	Sn	18 51 03.3	-0.6
TAMC				*i*		18 51 04.4	
	comp=Z,370nm,0.2s						
SPBC	San Pablo de B	2.02	206	*e*P	Pn	18 50 43.2	+0.7
SPBC				*e*S	Sn	18 51 09.3	-0.5
SPBC				*i*		18 51 16.1	
	comp=Z,314nm,0.3s						
LL1C	La Loma 1 Cana	2.08	350	*e*P	Pn	18 50 45.7	+2.5
LL1C				*e*S	Sn	18 51 11.9	+0.9
LL1C				*i*		18 51 21.1	
	comp=Z,372nm,0.5s						
UREC	San Jos de Ur	2.34	277	*e*P	Pn	18 50 46.0	-0.2
UREC				*e*S	Sn	18 51 13.9	-2.5
UREC				*i*		18 51 16.6	
	comp=Z,166nm,0.2s						
NORC	Norcasia	2.53	221	*e*P	Pn	18 50 48.9	+0.2
NORC				*e*S	Sn	18 51 20.0	-0.8
NORC				*i*		18 51 25.3	
	comp=Z,245nm,0.2s						
ARGC	Ariguani, Magd	2.58	336	*e*P	Pn	18 50 51.3	+2.0
ARGC				*e*S	Sn	18 51 23.0	+1.2
HELC	Santa Helena	2.65	241	*e*P	Pn	18 50 51.2	+0.8
HELC				*e*S	Sn	18 51 23.0	-0.9
HELC				*i*		18 51 33.6	
	comp=Z,149nm,0.4s						
MOTC	Monteria, Cord	2.77	298	*e*P	Pn	18 50 51.1	-0.4
MOTC				*e*S	Sn	18 51 25.9	-0.1
ROSC	El Rosal	2.85	203	Pn	Pn	18 50 55.3	+2.3
	comp=Z,22nm,0.3s,baz=311,slow=11,SNR=25						
ROSC				Sn	Sn	18 51 32.4	+3.9
	comp=Z,38nm,0.3s,baz=126,slow=23,SNR=17						
ROSC	El Rosal	2.85	203	*e*P	Pn	18 50 55.3	+2.3
ROSC				*e*S	Sn	18 51 28.4	-0.1
ROSC				*i*		18 51 39.1	
	comp=Z,145nm,0.6s						
CHIC	Chingaza	2.88	191	*e*P	Pn	18 50 53.9	+0.5
CHIC				*e*S	Sn	18 51 29.0	-0.1
CHIC				*i*		18 51 36.1	
	comp=Z,88nm,0.5s						
SDV	Santo Domingo	2.89	61	*e*P	Pn	18 50 54.2	+0.9
SDV				*e*S	Sn	18 51 27.2	-1.8
SDV				*i*		18 51 30.6	
	comp=Z,54nm,0.3s						
CVALL	Valledupar, Ce	3.01	359	*e*P	Pn	18 50 55.2	+0.5
CVALL				*e*S	Sn	18 51 30.6	-0.9
CVALL				*i*		18 51 37.1	
	comp=Z,103nm,0.3s						
DBBC	Dabeiba	3.03	261	*e*P	Pn	18 50 55.7	+0.8
DBBC				*e*S	Sn	18 51 29.0	-3.0
GUY2C	Guyana, Caldas	3.12	224	*e*P	Pn	18 50 57.2	+0.8
GUY2C				*e*S	Sn	18 51 34.1	-0.4
GUY2C				*i*		18 51 46.6	
	comp=Z,190nm,0.4s						
CBOC	Ciudad Bolivar	3.23	240	*e*P	Pn	18 50 58.9	+1.3
CBOC				*e*S	Sn	18 51 36.4	-0.2
CBOC				*i*		18 51 44.7	
	comp=Z,42nm,0.5s						
VILC	Villavicencio,	3.38	189	*e*P	Pn	18 51 00.5	+0.9
VILC				*e*S	Sn	18 51 40.1	0.0
PTGC	Puerto Gaitan,	3.42	162	*e*P	Pn	18 50 58.9	-1.0
PTGC				*e*S	Sn	18 51 40.4	-0.5
PTGC				*i*		18 52 15.4	
	comp=Z,44nm,0.4s						
ANIL	Santa Ana	3.70	217	*e*P	Pn	18 51 06.1	+2.4
ANIL				*e*S	Sn	18 51 47.5	-0.1
ELOV	Elorza	3.71	97	*e*P	Pn	18 51 04.0	+0.4
ELOV				*e*S	Sn	18 51 44.2	-3.1
SMRC	Santa Marta, M	3.80	344	*e*P	Pn	18 51 05.4	+0.7
SMRC				*e*S	Sn	18 51 47.2	-2.4
SMRC				*i*		18 51 50.5	
	comp=Z,39nm,0.3s						
PLMC	San Jos del P	4.00	230	*e*P	Pn	18 51 08.6	+1.1
PLMC				*e*S	Sn	18 51 53.3	-1.0
PLMC				*i*		18 52 01.8	
	comp=Z,51nm,0.3s						
ORTC	Ortega, Tolima	4.10	210	*e*P	Pn	18 51 09.7	+1.0
ORTC				*e*S	Sn	18 51 56.2	-0.3
ORTC				*i*		18 52 05.2	
	comp=Z,64nm,0.3s						
CAPC	Capurgana	4.28	286	*e*P	Pn	18 51 09.8	-1.2
CAPC				*e*S	Sn	18 51 54.0	-6.8
CAPC				*i*		18 52 01.1	
	comp=Z,45nm,0.3s						
PTAC	Punta Ardita,	4.59	266	*e*P	Pn	18 51 15.8	+0.7
PTAC				*e*S	Sn	18 52 05.6	-2.6
PTAC				*i*		18 52 10.9	
	comp=Z,38nm,0.2s						
MACC	Macarena, Meta	5.34	187	*e*P	Pn	18 51 25.0	-0.1
MACC				*e*S	Sn	18 52 21.4	-4.6
MACC				*i*		18 52 50.3	
	comp=Z,26nm,0.5s						
GARC	Garzon, Huila	5.74	204	*e*P	Pn	18 51 31.3	+0.7
GARC				*e*S	Sn	18 52 33.9	-1.9
PCON	Cinco Dias	6.03	212	*e*P	Pn	18 51 35.5	+0.7
PCON				*e*S	Sn	18 52 42.4	-1.0
PCON				*i*		18 52 52.7	
	comp=Z,11nm,0.5s						
ASAR	Alice Springs	149.43	235	PKPbc	PKPbc	19 09 40.7	+1.3
	comp=Z,0.2nm,0.7s,baz=112,slow=3.9,SNR=2.0						
WRA	Warramunga Arr	150.59	242	PKPbc	PKPbc	19 09 43.6	+1.4
	comp=Z,0.1nm,0.5s,baz=106,slow=2.8,SNR=1.6						

IDC ***08*** *19:09:59.8±1.2, 6°.77N×94°.29E, h0^{km}, mb3.7/10, mb1 3.8/12, mb1mx3.6/56, mbtmp3.7/12, ML3.6/2, Error ellipse: s-maj=46.4km s-min=19.0km az=55.0*

ISC 08 19:10:04.0±1.0**, 6°.8N**±0°.1×**94°.3E**±0°.2**, h26^{km}, n12, σ0^{s}75**/12**, mb3.7**/10**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	6.09	131	Pn	Pn	19 11 33.3	+0.8
	1.6nm,0.3s,baz=338,slow=14,SNR=5.0						
CMAR	Chiang Mai Arr	12.44	21	Pn	Pn	19 13 00.0	+0.5
	0.1nm,0.3s,baz=213,slow=14,SNR=6.3						
MKAR	Makanchi Array	41.16	347	P	P	19 17 45.8	-0.3
	1.0nm,0.7s,baz=168,slow=8.7,SNR=7.5						
SONM	Songino Array	42.17	12	P	P	19 17 53.5	-1.0
	0.6nm,0.8s,baz=101,slow=23,SNR=4.3						
KURBB	Kurchatov Arra	45.61	346	P	P	19 18 22.3	+0.3
	1.2nm,0.7s,baz=165,slow=6.9,SNR=11						
WRA	Warramunga Arr	47.53	125	P	P	19 18 36.3	-1.2
	0.6nm,0.8s,baz=241,slow=27,SNR=2.4						
ZALV	Zalesovo Beam	47.63	352	P	P	19 18 38.2	+0.5
	0.8nm,0.5s,baz=191,slow=5.4,SNR=4.7						
ASAR	Alice Springs	49.12	129	P	P	19 18 49.4	-0.4
	0.3nm,0.6s,baz=171,slow=17,SNR=2.4						
BVAR	Borovoye Array	50.04	341	P	P	19 18 56.2	-0.1
	1.4nm,1.0s,baz=163,slow=10,SNR=2.5						
BRTR	Keskin Array B	63.24	311	P	P	19 20 30.3	-0.3
	0.5nm,0.8s,baz=314,slow=27,SNR=2.7						
FINES	FINESS Array B	73.72	332	P	P	19 21 35.3	-0.1
	2.5nm,0.9s,baz=206,slow=17,SNR=2.4						
GERES	GERESS Array B	78.72	318	P	P	19 22 05.2	+1.0
	0.1nm,0.4s,baz=300,slow=32,SNR=2.7						

NEIC ***08*** *19:10:05.5±1.9, 5°.39S±0°.08×151°.8E±0°.2, h47^{km}±7^{km}, mb4.4/13, Error ellipse: s-maj=21.9km s-min=11.7km az=97.0*

IDC ***08*** *19:10:07.8±2.6, 5°.50S×151°.74E, h68^{km}±22^{km}, mb4.2/17, mb1 4.3/19, mb1mx4.0/53, mbtmp4.5/19, MS4.1/2, Ms1 4.1/2, ms1mx3.4/38, Error ellipse: s-maj=21.1km s-min=11.4km az=119.0*

ISC 08 19:10:05.1±0.6**, 5°.46S**±0°.09×**151°.8E**±0°.1**, h45^{km}, n44, σ0^{s}87**/44**, mb4.4**/23**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.06	229	P	Pn	19 11 34.2	+2.1
	18nm,0.3s,baz=41,slow=7.6,SNR=52						
PMG				S	Sn	19 12 41.3	+1.1
	18nm,0.3s,baz=348,slow=22,SNR=8.1						
PMG	Port Moresby	6.06	229		Pn	19 11 32.8	+0.6
CTA	Charters Tower	15.51	200	P	P	19 13 43.9	-0.8
	0.1nm,0.3s,baz=11,slow=11,SNR=5.1						
CTAO	Charters Tower	15.51	200	P	P	19 13 44.5	-0.1
GUMO	Guam	20.14	340	P	Pn	19 14 37.3	-0.5
	86nm,0.8s,baz=148,slow=2.8,SNR=3.7						
SIJI	Sorong	21.01	282	P	P	19 14 44.9	-0.2
	7.9nm,0.6s,baz=60,slow=9.1,SNR=9.0						
DZM	Mont Dzumac	21.75	141	LR	LR	19 22 06.7	
	comp=Z,398nm,19.2s,baz=124,slow=33						
WB0	Warramunga Arr	22.13	228	P	P	19 14 56.4	-0.7
WB0				IAmb	IAmb	19 15 01.1	
	comp=Z,23nm,1.2s						
WR0	Warramunga Arr	22.14	228	P	P	19 14 56.1	-1.0
WR0				IAmb	IAmb	19 15 12.1	
	comp=Z,9.9nm,0.7s						
WB2	Warramunga Arr	22.27	228	P	P	19 14 58.2	-0.3
WB2				IAmb	IAmb	19 15 01.8	
	comp=Z,14nm,0.8s						
WRA	Warramunga Arr	22.27	228	P	P	19 14 58.6	-0.1
	comp=Z,11nm,0.7s,baz=52,slow=9.8,SNR=73						
WRA				S	S	19 18 59.8	-1.3
	comp=Z,4.6nm,1.1s,baz=55,slow=19,SNR=7.0						
AS31	Alice Springs	25.00	222	P	P	19 15 25.0	0.0
AS31				IAmb	IAmb	19 15 28.0	
	comp=Z,6.2nm,0.8s						
ASAR	Alice Springs	25.00	222	P	P	19 15 25.0	0.0
	comp=Z,20nm,0.8s,baz=56,slow=9.0,SNR=165						
ASAR	Alice Springs	25.00	222	P	P	19 15 24.9	0.0
STKA	Stephens Creek	27.97	199	P	P	19 15 51.4	-0.2
	comp=Z,2.6nm,0.8s,baz=23,slow=13,SNR=7.1						
STKA	Stephens Creek	27.97	199	P	P	19 15 51.9	+0.3
BATI	Baumata	28.27	259	P	P	19 15 54.5	0.0
	comp=Z,18nm,0.5s,baz=75,slow=0.6,SNR=12						
BATI				LR	LR	19 28 19.4	
	comp=Z,539nm,20.1s,baz=110,slow=39						
FITZ	Fitzroy Crossi	28.48	242	P	P	19 15 55.8	-0.5
	comp=Z,9.2nm,0.5s,baz=58,slow=7.3,SNR=36						
MMRI	Maumere	29.52	262	P	P	19 16 03.3	-2.3
CMAR	Chiang Mai Arr	57.27	296	P	P	19 19 49.6	+0.9
	comp=Z,2.6nm,0.9s,baz=118,slow=5.6,SNR=2.0						
PETK	Petropavlovsk-	58.56	4	P	P	19 19 57.1	+0.1
	comp=Z,7.7nm,1.2s,baz=152,slow=6.1,SNR=4.5						
GTA	Gaotai	65.48	318	*e*P	P	19 20 44.8	+0.9
GTA				pP	pP	19 20 50.1	-6.9
GTA				sP	sP	19 20 52.8	-9.4
ULN	Ulaanbaatar	66.04	329	P	P	19 20 47.8	+0.3
ULN				IAmb	IAmb	19 20 49.6	
	comp=Z,4.2nm,0.8s						
SONM	Songino Array	66.36	328	P	P	19 20 49.9	+0.5
	comp=Z,4.6nm,0.6s,baz=149,slow=5.5,SNR=16						
SONM	Songino Array	66.36	328	P	P	19 20 48.8	-0.6
VNDA	Vanda	72.21	178	P	P	19 21 24.0	-0.9
	comp=Z,0.3nm,0.6s,baz=320,slow=7.3,SNR=2.5						
VNDA	Vanda	72.21	178	P	P	19 21 24.6	-0.4
MKAR	Makanchi Array	80.18	319	P	P	19 22 10.4	-0.4
	comp=Z,2.1nm,0.7s,baz=90,slow=4.9,SNR=4.1						
ZALV	Zalesovo Beam	81.16	327	P	P	19 22 15.0	-0.8
	comp=Z,2.4nm,0.5s,baz=110,slow=6.2,SNR=5.5						
ZALV	Zalesovo Beam	81.16	327	P	P	19 22 14.8	-1.0
IL31		83.14	22	P	P	19 22 24.6	-1.3
IL31				IAmb	IAmb	19 22 26.4	
	comp=Z,2.5nm,0.6s						
ILAR	Eielson Array	83.14	22	P	P	19 22 25.2	-0.7
	comp=Z,2.0nm,0.6s,baz=244,slow=5.2,SNR=41						
ILAR	Eielson Array	83.14	22	P	P	19 22 25.0	-1.0
KURK	Kurchatov	83.68	322	P	P	19 22 27.3	-1.8
KURK				IAmb	IAmb	19 22 30.2	
	comp=Z,3.3nm,0.8s						
KURBB	Kurchatov Arra	83.71	322	P	P	19 22 28.8	-0.5
	comp=Z,2.1nm,0.9s,baz=107,slow=4.8,SNR=5.0						
M27K	Edge Creek, AK	84.09	25	P	P	19 22 32.1	+1.0
YBH	Yreka Blue Hor	90.22	48	P	P	19 23 02.0	+0.8
	comp=Z,1.8nm,0.7s,baz=266,slow=16,SNR=3.8						
NVAR	Mina Array Bea	93.26	52	P	P	19 23 16.3	+0.8
	comp=Z,1.7nm,0.7s,baz=246,slow=7.0,SNR=6.6						
GERES	GERESS Array B	124.09	328	PKP	PKiKP	19 29 00.2	+1.0
	comp=Z,1.1nm,0.5s,baz=69,slow=1.9,SNR=7.8						
BOAV	Boa Vista	147.60	94		PKPbc	19 29 45.9	+0.1
TORD	Torodi Ar. Bea	149.57	287	PKPbc	PKPbc	19 29 50.5	-0.3
	comp=Z,16nm,0.7s,baz=77,slow=2.2,SNR=56						
TORD	Torodi Ar. Bea	149.57	287		PKPbc	19 29 50.7	0.0
BDFB	Brasilia	151.27	137	PKPbc	PKPbc	19 29 54.9	0.0
	comp=Z,3.2nm,0.9s,baz=203,slow=3.9,SNR=6.3						
DBIC	Dimbokro	156.77	274	PKPab	PKPab	19 30 26.1	-0.2
	comp=Z,2.7nm,0.9s,baz=152,slow=5.5,SNR=1.8						

IDC ***08*** *19:10:51.0±0.7, 6°.78N×94°.60E, h0^{km}, mb4.1/17, mb1 4.1/19, mb1mx3.9/55, mbtmp4.0/19, ML3.6/2, Error ellipse: s-maj=28.1km s-min=15.6km az=58.0*

NEIC ***08*** *19:10:52.7±1.4, 6°.78N±0°.04×94°.6E±0°.1, h10^{km}±1^{km}, mb4.5/13, Error ellipse: s-maj=19.7km s-min=7.1km az=274.0*

ISC 08 19:10:55.0±0.6**, 6°.87N**±0°.09×**94°.7E**±0°.1**, h26^{km}, n42, σ0^{s}93**/40**, mb4.3**/23**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	2.80	125	Pn	Pn	19 11 37.9	-0.2
PSI	Prapat	5.86	133	Pn	Pn	19 12 22.2	+1.8
	1.5nm,0.3s,baz=329,slow=14,SNR=6.8						
CMAR	Chiang Mai Arr	12.25	20	Pn	Pn	19 13 48.8	+0.9
	0.1nm,0.3s,baz=224,slow=15,SNR=0.9						
CMAR	Chiang Mai Arr	12.25	20	Pn	Pn	19 13 48.2	+0.3
H08S3	Diego Garcia H	26.39	237	T	T	19 43 42.8	
	baz=56,slow=75,SNR=118						
H08S2	Diego Garcia H	26.39	237	T	T	19 43 42.9	
	baz=56,slow=75,SNR=40						
H08S1	Diego Carcia H	26.41	237	T	T	19 43 44.2	

	baz=56,slow=75,SNR=6.5						
SSLB	Suanglung	30.34	53	P	P	19 17 04.3	-0.4
NIL	Nilore	33.22	326	P	P	19 17 29.4	-0.6
BJT	Baijiatuau	38.23	27	P	P	19 18 11.2	-1.6
BJT				IAmb	IAmb	19 18 26.6	
	comp=Z,5.8nm,1.2s						
DRK	Karamyk	38.43	331	P	P	19 18 14.5	-0.4
CHGR	Chuyangaron	39.14	328	P	P	19 18 19.3	-1.4
CHGR				IAmb	IAmb	19 18 21.7	
	comp=Z,8.5nm,0.7s						
BTK	Batken	39.36	331	P	P	19 18 23.7	+1.3
BTK				IAmb	IAmb	19 18 41.6	
	comp=Z,7.7nm,1.1s						
MK31	Makanchi Array	41.18	347	P	P	19 18 36.8	-0.5
MKAR	Makanchi Array	41.18	347	P	P	19 18 38.1	+0.7
	comp=Z,2.8nm,0.7s,baz=165,slow=7.9,SNR=12						
MKAR	Makanchi Array	41.18	347	P	P	19 18 37.7	+0.4
MAKZ	Makanchi	41.26	347	P	P	19 18 38.4	+0.4
SONM	Songino Array	42.03	12	P	P	19 18 45.8	+1.4
	comp=Z,1.1nm,0.8s,baz=192,slow=10,SNR=5.0						
SONM	Songino Array	42.03	12	P	P	19 18 45.6	+1.1
KURBB	Kurchatov Arra	45.64	346	P	P	19 19 13.9	+0.7
	comp=Z,2.7nm,0.6s,baz=171,slow=7.0,SNR=11						
KURK	Kurchatov	45.71	346	P	P	19 19 14.8	+1.1
KURK				IAmb	IAmb	19 19 22.9	
	comp=Z,8.6nm,1.4s						
WRA	Warramunga Arr	47.26	125	P	P	19 19 25.8	-0.7
	comp=Z,0.8nm,0.6s,baz=305,slow=9.4,SNR=2.9						
ZALV	Zalesovo Beam	47.62	352	P	P	19 19 29.3	+0.7
	comp=Z,0.7nm,0.4s,baz=176,slow=8.9,SNR=4.0						
ZALV	Zalesovo Beam	47.62	352	P	P	19 19 29.0	+0.3
ASAR	Alice Springs	48.88	130	P	P	19 19 38.8	-0.2
	comp=Z,1.6nm,0.7s,baz=305,slow=7.5,SNR=6.3						
ASAR	Alice Springs	48.88	130	P	P	19 19 37.7	-1.2
BVAR	Borovoye Array	50.10	341	P	P	19 19 48.5	+0.7
	comp=Z,2.3nm,0.7s,baz=181,slow=15,SNR=7.7						
ABKAR	Akbulak array	51.35	331	P	P	19 19 55.6	-1.7
ABKAR				IAmb	IAmb	19 19 59.2	
	comp=Z,4.8nm,0.6s						
ABKAR	Akbulak array	51.35	331	P	P	19 19 57.2	0.0
STKA	Stephens Creek	59.05	134	P	P	19 20 52.5	-0.5
	comp=Z,1.0nm,0.6s,baz=307,slow=5.6,SNR=3.6						
YAK	Yakutsk	60.78	18	P	P	19 21 04.3	-0.2
	comp=Z,2.0nm,0.4s,baz=27,slow=1.0,SNR=2.0						
BR131	Keskin Array S	63.47	311	P	P	19 21 22.1	-1.0
BR131				IAmb	IAmb	19 21 38.6	
	comp=Z,5.9nm,1.2s						
BRTR	Keskin Array B	63.47	311	P	P	19 21 22.4	-0.8
	comp=Z,1.4nm,0.7s,baz=126,slow=7.7,SNR=7.9						
TIXI	Tiksi	68.11	11	P	P	19 21 52.4	+0.2
	comp=Z,2.8nm,0.7s,baz=260,slow=6.8,SNR=1.8						
FINES	FINESS Array B	73.83	332	P	P	19 22 27.9	+0.7
	comp=Z,3.7nm,0.7s,baz=59,slow=5.1,SNR=7.5						
BOSA	Boshof	75.49	238	P	P	19 22 37.9	+0.3
	comp=Z,1.1nm,0.7s,baz=32,slow=18,SNR=1.4						
GERES	GERESS Array B	78.91	318	P	P	19 22 57.2	+0.8
	comp=Z,1.3nm,0.7s,baz=97,slow=5.8,SNR=10						
CLL	Collm	79.46	321	*e*P	P	19 23 00.0	+0.8
CLL				*e*(PcP)	pP	19 23 05.0	-1.7
	comp=Z,5.0nm,0.8s						
NB2	NORSAR Subarra	80.85	331	P	P	19 23 07.1	+0.5
	comp=Z,4.3nm,1.1s,baz=92,slow=5.3						
NOA	NORSAR Array B	80.85	331	P	P	19 23 06.8	+0.2
	comp=Z,0.7nm,0.8s,baz=46,slow=26,SNR=2.5						
KEST	Kesra	82.24	305	P	P	19 23 15.5	+1.0
	comp=Z,1.3nm,0.6s,baz=246,slow=17,SNR=2.1						
ESDC	Sonseca Array	92.25	310	P	P	19 24 02.8	-0.3
	comp=Z,0.7nm,0.9s,baz=0.8,slow=3.1,SNR=3.8						

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*IDC **08** 19:11:09.9±0.7, 51°.74N×173°.30W, h0^{km}, mb4.4/30, mb1 4.5/32, mb1mx4.4/63, mbtmp4.4/32, ML3.9/2, Error ellipse: s-maj=20.2km s-min=10.3km az=4.0*

*AEIC **08** 19:11:12.1±2.2, 51°.43N±0°.10×173°.26W±0°.06, h14^{km}±5^{km}, ML4.1, mb4.4/60(NEIC), Error ellipse: s-maj=13.8km s-min=5.4km az=175.0*

*NEIC **08** 19:11:15.7±1.4, 51°.65N±0°.05×173°.28W±0°.07, h43^{km}±8^{km}, Error ellipse: s-maj=8.5km s-min=3.5km az=217.0*

ISC 08 19:11:15.1±0.5, **51°.63N**±0°.09×**173°.25W**±0°.04, **h37**^{km}, **n200**, σ**0^{s}92**/200, **mb4.5**/61, **11C-18D, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOFP	Korovin Flat P	0.83	321		Pn	19 11 30.4	+0.1
KOSE	Korovin Southe	0.87	326		Pn	19 11 31.3	+0.5
KOKL	Mount Kliuchef	0.91	320		Pn	19 11 31.6	+0.2
KONE	Korovin Northe	0.94	325		Pn	19 11 32.2	+0.5
GSIG	Igitkin Island	1.70	283		Pn	19 11 40.6	-1.6
GSIG					Sn	19 12 04.0	+1.4
GSMY	Great Sitkin M	1.79	285		Pn	19 11 42.3	-1.1
GSTR	Great Sitkin T	1.80	286		Pn	19 11 44.3	+0.7
GSTD	Great Sitkin T	1.85	285		Pn	19 11 43.3	-0.9
GSTD					Sn	19 12 08.5	+2.2
ADK	Adak	2.15	278		Pn	19 11 48.4	+0.1
KIWB	Kanaga Island	2.44	277		Pn	19 11 52.5	+0.2
KIMD	Kanaga Island	2.48	275		Pn	19 11 53.4	+0.5
TAFP	Tanaga Falls P	2.95	277		Pn	19 11 59.9	+0.6
TAFP					Sn	19 12 35.4	+1.8
TASE	Tanaga Southea	2.98	276		Pn	19 12 00.7	+0.8
NIKH	Nikolski High	3.02	62		Pn	19 12 00.5	+0.3
GALAA	Gareloi Lava P	3.44	274		Pn	19 12 06.8	+0.8
OKFG	Magazine Ridge	3.72	59		Pn	19 12 11.4	+1.6
MAPS	Pakushin South	4.41	58		Pn	19 12 20.5	+1.1
CEPE	Semis' Perret	4.42	277		Pn	19 12 20.6	+1.1
MSW	Makushin Switc	4.55	57		Pn	19 12 22.3	+1.1
AMKA	Amchitka	4.66	270		Pn	19 12 21.5	-1.3
UNV	Unalaska Valle	4.66	59	Pn	Pn	19 12 24.5	+1.7
KDAK	Kodiak Island	13.41	55	Pn	Pn	19 14 19.9	-2.7
	0.8nm,0.3s,baz=254,slow=6.3,SNR=14						
KDAK	Kodiak Island	13.41	55	Pn	Pn	19 14 22.6	+0.1
BRLK	Bradley Lake	14.95	48		Pn	19 14 43.0	-0.4
BRLK				IAmb	IAmb	19 14 50.9	
	comp=Z,19nm,1.0s						
KTH	Kantishna Hill	16.79	36	P	P	19 15 10.1	+1.1
KTH				IAmb	IAmb	19 15 22.9	
	comp=Z,24nm,0.9s						
SCM	Sheep Creek Mo	17.38	44		Pn	19 15 14.5	0.0
SCM				IAmb	IAmb	19 15 30.8	
	comp=Z,43nm,1.4s						
RND	Reindeer	17.49	38		Pn	19 15 14.4	-1.4
H21K	Melozitna Rive	17.50	29		Pn	19 15 16.2	+0.3
MCK	McKinley	17.63	37		Pn	19 15 16.5	-1.0
PETK	Petropavlovsk-	17.75	286	P	Pn	19 15 18.7	-0.3
	comp=Z,0.5nm,0.3s,baz=95,slow=13,SNR=9.9						
KLU	Klutina	17.87	46	P	Pn	19 15 18.1	-2.4
DHY	Denali Highway	17.91	40	P	Pn	19 15 19.3	-1.8
M24K	Tolsona, Glenn	17.99	44	P	Pn	19 15 21.7	-0.3
M24K				IAmb	IAmb	19 15 36.4	
	comp=Z,24nm,0.9s						
I23K	Minto, Yukon-K	18.28	33	P	Pn	19 15 26.1	+0.7
I23K				IAmb	IAmb	19 15 35.3	
	comp=Z,19nm,0.6s						
CCB	Clear Creek Bu	18.54	36	P	P	19 15 25.7	-2.4
MDM	Murphy Dome	18.56	34	P	P	19 15 28.1	-0.3
PAX	Paxson	18.64	42	P	P	19 15 28.6	-0.7
HDA	Harding Lake	18.73	37	P	P	19 15 30.0	-0.2
HDA				IAmb	IAmb	19 15 34.6	
	comp=Z,26nm,0.5s						
IL31		18.94	36	P	P	19 15 32.8	+0.4
IL31				IAmb	IAmb	19 15 33.9	
	comp=Z,20nm,1.2s						
ILAR	Eielson Array	18.94	36	P	P	19 15 30.5	-2.0
	comp=Z,1.7nm,0.3s,baz=225,slow=9.0,SNR=16						
ILAR	Eielson Array	18.94	36	P	P	19 15 32.0	-0.6
WAX	Waxell Ridge	18.98	50	P	Pn	19 15 33.9	-0.1
WAX				IAmb	IAmb	19 15 42.4	
	comp=Z,26nm,0.9s						
TGL	Tana Glacier	19.07	50	P	P	19 15 33.4	-0.7
TGL				IAmb	IAmb	19 15 41.5	
	comp=Z,18nm,1.0s						
H24K	Noodor Dome	19.18	32	P	Pn	19 15 36.1	-0.2
H24K				IAmb	IAmb	19 15 37.8	
	comp=Z,24nm,0.8s						
COLD	Coldfoot	19.34	27		Pn	19 15 38.0	-0.1
COLD				IAmb	IAmb	19 15 55.3	
	comp=Z,25nm,1.4s						
DOT	Dot Lake	19.50	41	P	P	19 15 38.5	-0.2
GRNC	Granite Creek	19.57	50	P	P	19 15 39.9	+0.2
GRNC				IAmb	IAmb	19 15 46.4	
	comp=Z,18nm,0.9s						
SCRK	Sand Creek	19.67	40	P	P	19 15 40.4	-0.2
SCRK				IAmb	IAmb	19 15 58.9	
	comp=Z,9.4nm,0.6s						
BARN	Barnard Glacie	19.70	49	P	P	19 15 40.5	-0.6
BARN				IAmb	IAmb	19 15 50.0	
	comp=Z,16nm,1.0s						
CTGM	Chitina Glacie	19.83	49	P	P	19 15 42.5	+0.1
CTGM				IAmb	IAmb	19 15 48.4	
	comp=Z,12nm,0.8s						
LOGN	Logan Glacier	19.95	50	P	P	19 15 43.9	+0.1
LOGN				IAmb	IAmb	19 15 49.7	
	comp=Z,16nm,0.8s						
PCA	Pinnacle	20.17	52	P	P	19 15 46.8	+0.7
FYU	Fort Yukon	20.48	32	P	P	19 15 49.5	+0.2
FYU				IAmb	IAmb	19 16 07.9	
	comp=Z,31nm,1.1s						
TOLK	Toolik Lake Re	20.49	25	P	P	19 15 49.6	+0.2
TOLK				IAmb	IAmb	19 15 51.2	
	comp=Z,22nm,0.8s						
EGAK	Eagle	21.12	39	P	P	19 15 56.5	+0.3
BMAR	Burnt Mountain	21.18	31	P	P	19 15 58.0	+1.1
SEY	Seymchan	21.45	315	P	P	19 15 60.0	+0.2
	comp=Z,4.9nm,0.8s,baz=354,slow=23,SNR=3.9						
DAWY	Dawson	21.58	42	P	P	19 15 58.9	-2.3
HYT	Haines Junctio	21.64	51	P	P	19 16 01.9	0.0
SKAG	Skagway	22.57	55	P	P	19 16 11.7	0.0
SKAG				IAmb	IAmb	19 16 26.6	
	comp=Z,18nm,0.8s						
INK	Inuvik	25.29	34	P	P	19 16 37.1	-0.4
	comp=Z,14nm,0.8s,baz=241,slow=6.6,SNR=39						
INK	Inuvik	25.29	34	P	P	19 16 37.1	-0.4
INK				IAmb	IAmb	19 16 39.3	
	comp=Z,15nm,0.8s						
DLBC	Dease Lake	25.32	57	P	P	19 16 38.9	+0.9
	comp=Z,7.4nm,0.8s,baz=288,slow=10.0,SNR=13						
YAK	Yakutsk	31.86	311	P	P	19 17 34.4	-1.7
	comp=Z,2.1nm,0.5s,baz=241,slow=2.1,SNR=4.5						
TIXI	Tiksi	32.15	330	P	P	19 17 38.1	-0.4
	comp=Z,4.8nm,0.6s,baz=103,slow=12,SNR=6.2						
B08A	Colville Reser	34.16	74	P	P	19 17 57.1	+0.7
B08A				IAmb	IAmb	19 18 06.2	
	comp=Z,7.2nm,0.7s						
KLR	Kul'dur	34.42	288	P	P	19 17 58.2	-0.4
	comp=Z,1.3nm,0.5s,baz=83,slow=8.4,SNR=7.6						
YBH	Yreka Blue Hor	35.41	86	P	P	19 18 08.7	+1.4
	comp=Z,5.5nm,0.9s,baz=260,slow=3.6,SNR=9.3						
H11N2	WAKE ISLAND Hy	35.44	213	T	T	19 56 04.5	
	baz=21,slow=76,SNR=80						
H11N3	WAKE ISLAND Hy	35.45	213	T	T	19 56 05.5	
	baz=21,slow=76,SNR=88						
H11N1	WAKE ISLAND Hy	35.46	213	T	T	19 56 07.2	
	baz=21,slow=76,SNR=58						
NEW	Newport	35.52	73	P	P	19 18 08.8	+0.6
NEW				IAmb	IAmb	19 18 16.8	
	comp=Z,4.9nm,0.7s						
I07A	Izee	36.12	80	P	P	19 18 14.6	+1.2
I07A				IAmb	IAmb	19 18 15.4	
	comp=Z,3.5nm,0.7s						
H11S1	WAKE ISLAND Hy	36.64	213	T	T	19 57 35.3	
	baz=20,slow=75,SNR=42						
H11S2	WAKE ISLAND Hy	36.66	213	T	T	19 57 36.8	
	baz=20,slow=75,SNR=45						
H11S3	WAKE ISLAND Hy	36.66	213	T	T	19 57 34.9	
	baz=20,slow=75,SNR=19						
USRK	Ussuriysk Ar.	36.68	280	P	P	19 18 17.4	-0.6
	comp=Z,2.5nm,0.5s,baz=56,slow=9.7,SNR=9.5						
MJAR	Matsushiro Arr	37.26	266	P	P	19 18 22.8	-0.2
	comp=Z,2.3nm,0.7s,baz=56,slow=6.3,SNR=7.4						
MAT	Matsushiro	37.26	266	P	P	19 18 22.9	-0.1
RES	Resolute Bay	38.07	25	P	P	19 18 29.1	-0.2
	comp=Z,1.6nm,0.8s,baz=297,slow=4.5,SNR=2.4						
BMN	Battle Mountai	39.55	84	P	P	19 18 41.2	-1.3
MCMT	McKenzie Canyo	39.78	75	P	P	19 18 44.8	+0.4
KVN	Kaiserville	39.83	86	P	P	19 18 44.9	+0.2
EGMT	Eagleton	39.98	69	P	P	19 18 46.1	+0.3
NVAR	Mina Array Bea	40.08	87	P	P	19 18 47.1	+0.2
	comp=Z,3.1nm,0.8s,baz=294,slow=8.3,SNR=11						
YHH	Holmes Hill	41.01	74	P	P	19 18 53.9	-0.7
YHH				IAmb	IAmb	19 19 09.7	
	comp=Z,7.3nm,1.0s						
LCH	Last Change Ra	41.22	88	P	P	19 18 56.2	-0.1
HVU	Hansel Valley	41.51	79	P	P	19 18 57.9	-0.7
HVU				IAmb	IAmb	19 19 00.2	
	comp=Z,3.5nm,0.7s						
AHID	Auburn Hatcher	41.97	77	P	P	19 19 01.9	-0.5
AHID				IAmb	IAmb	19 19 04.7	
	comp=Z,8.1nm,0.6s						
QSM	Queen of Sheba	42.51	89	P	P	19 19 06.3	-0.3
PSUT	Pine Spring	42.78	84	P	P	19 19 07.9	-1.1
PSUT				IAmb	IAmb	19 19 21.5	
	comp=Z,4.1nm,0.8s						
BW06	Boulder Array	42.91	76	P	P	19 19 09.8	-0.2
BW06				IAmb	IAmb	19 19 24.8	
	comp=Z,7.2nm,1.1s						
PDAR	Pinedale Array	42.91	76	P	P	19 19 10.1	0.0
	comp=Z,3.7nm,0.6s,baz=301,slow=4.5,SNR=34						
PDAR	Pinedale Array	42.91	76	P	P	19 19 10.2	+0.2
KSRS	Korea Array	43.09	275	P	P	19 19 12.1	+0.8
	comp=Z,5.2nm,0.9s,baz=56,slow=8.3,SNR=11						
PFO	Pinyon Flats O	44.30	91	P	P	19 19 21.3	+0.1
	comp=Z,2.4nm,0.5s,baz=296,slow=4.1,SNR=6.4						
O20A	White River Ci	45.26	78	P	P	19 19 28.5	-0.4
NRIK	Noril'sk	45.92	331	P	P	19 19 32.8	-0.7
	comp=Z,4.7nm,0.7s,baz=71,slow=9.0,SNR=9.6						
ULM	Lac du Bonnet	46.61	60	P	P	19 19 38.9	-0.2
	comp=Z,1.6nm,0.5s,baz=317,slow=9.6,SNR=1.8						
SONM	Songino Array	49.59	299	P	P	19 20 02.4	0.0
	comp=Z,3.3nm,0.6s,baz=67,slow=6.0,SNR=20						
HHC	Hu-ho-hao-te	50.92	289	*e*P	P	19 20 12.9	+0.4
HHC				pmax	pmax		
	comp=Z,11nm,0.8s						
HHC				pmax	pmax		
	comp=Z,74nm,7.8s						
TX31	Lajitas Ar. Si	55.18	85	P	P	19 20 43.6	-0.4
TX32	Lajitas Array	55.18	85	P	P	19 20 43.2	-0.8
TX32				IAmb	IAmb	19 21 01.2	
	comp=Z,5.6nm,1.0s						
TXAR	Lajitas Array	55.18	85	P	P	19 20 43.7	-0.3
	comp=Z,2.8nm,0.7s,baz=296,slow=5.3,SNR=34						
P40A	Paris	55.29	68	P	P	19 20 43.6	-0.9
ZALV	Zalesovo Beam	56.32	316	P	P	19 20 51.4	-0.3
	comp=Z,1.1nm,0.5s,baz=42,slow=6.6,SNR=1.7						
ZALV				PcP	PcP	19 21 48.6	0.0
	comp=Z,1.0nm,0.6s,baz=351,slow=4.5,SNR=2.6						
FCAR	Ozark Folk Cen	57.69	72	P	P	19 21 00.1	-1.6
ARCES	ARCESS Array B	58.37	352	P	P	19 21 03.8	-2.2
	comp=Z,5.1nm,0.8s,baz=2.9,slow=7.3,SNR=10						
ARCES				PcP	PcP	19 21 56.5	0.0
	comp=Z,6.4nm,0.8s,baz=333,slow=4.2,SNR=4.7						
PLAL	Pickwick Lake	60.70	70	P	P	19 21 20.9	-1.6
KURBB	Kurchatov Arra	61.40	316	P	P	19 21 26.1	-0.9
	comp=Z,5.0nm,0.6s,baz=42,slow=6.6,SNR=20						
WMQ	Urumqi	62.06	306	*e*P	P	19 21 33.5	+1.8
MK31	Makanchi Array	62.53	311	P	P	19 21 34.0	-0.7
MK31				IAmb	IAmb	19 21 48.4	
	comp=Z,2.2nm,0.7s						
MKAR	Makanchi Array	62.53	311	P	P	19 21 34.0	-0.7
	comp=Z,0.8nm,0.4s,baz=46,slow=6.5,SNR=22						
MKAR	Makanchi Array	62.53	311	P	P	19 21 34.1	-0.6
BVAR	Borovoye Array	62.87	323	P	P	19 21 36.9	+0.1
	comp=Z,11nm,0.5s,baz=234,slow=1.3,SNR=69						
BVAR				PcP	PcP	19 22 15.3	+0.5
	comp=Z,4.0nm,0.7s,baz=201,slow=7.9,SNR=5.5						
BRVK	Borovoye	62.88	323	P	P	19 21 36.8	-0.1
ARU	Arti	64.14	331	P	P	19 21 44.6	-0.5
FINES	FINESS Array B	66.23	350	P	P	19 21 58.1	-0.4
	comp=Z,1.8nm,0.6s,baz=9.3,slow=7.3,SNR=11						
KMI	Kunming	67.10	282	⇓P	P	19 22 06.5	+1.5
KMI				pP	sP	19 22 18.5	-0.6
KMI				sP	pwP	19 22 26.1	+5.5
KMI				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NOA	NORSAR Array B	67.63	358	P	P	19 22 07.5	0.0
	comp=Z,0.6nm,0.6s,baz=7.8,slow=6.7,SNR=3.9						
TKM2	Tokmak 2	68.57	313	P	P	19 22 14.6	+0.6
	SNR=5.6						
USP	Ospenovka	68.80	314	P	P	19 22 15.9	+0.7
	SNR=7.9						
ABKAR	Akbulak array	69.75	326	P	P	19 22 20.7	-0.2
ABKAR	Akbulak array	69.75	326	P	P	19 22 21.0	+0.1
ABKAR				IAmb	IAmb	19 22 22.4	
	comp=Z,9.1nm,0.7s						
LSA	Lhasa	70.58	293	P	P	19 22 28.7	+1.9
KSH	Kashi	71.06	310	P	P	19 22 32.7	+3.4
KSH				pP	sP	19 22 45.4	+0.6
KSH				pmax	pmax		
	comp=Z,11nm,0.9s						
KSH				pmax	pmax		
	comp=Z,35nm,0.6s						
KSH				LR	LR		
	comp=N,1μm,16.1s						
KSH				LR	LR		
	comp=E,740nm,13.2s						
AKASG	Malin Array Be	76.28	346	P	P	19 22 58.5	-1.0
	comp=E,3.8nm,0.4s,baz=17,slow=5.9,SNR=22						
AKBB	Malin Array Si	76.28	346	P	P	19 22 58.4	-1.1
BRG	Berggiesshubel	77.69	355	*e*P	P	19 23 07.7	+0.3
BRG				Amp		19 23 08.4	
	comp=Z,6.5nm,0.7s						
CHVC	Chvalec	77.86	354	*e*P	P	19 23 08.2	-0.2
OSTC	Ostas	77.88	354	*e*P	P	19 23 08.6	+0.1
UPC	Upice	77.94	354	*e*P	P	19 23 09.0	+0.2
PVCC	Panska Ves	78.00	355	*e*P	P	19 23 10.0	+0.8
DPC	Dobruska-Polom	78.07	354	*e*P	P	19 23 09.5	-0.1
KRLC	Kraliky	78.31	353	*e*P	P	19 23 10.6	-0.4
BGES	Gesves	78.36	1	*d*P	P	19 23 11.0	-0.1
	comp=Z,6.9nm,1.0s						
NKC	Novy Kostel	78.40	356	*e*P	P	19 23 11.6	+0.2
PRU	Pruhonice	78.54	355	*e*P	P	19 23 12.6	+0.4
MORC	Moravsky Berou	78.56	353	*e*P	P	19 23 12.2	-0.1
DOU	Dourbes	78.64	1	*d*P	P	19 23 13.5	+0.8
	comp=Z,5.3nm,1.2s						
SORM	Soroca	78.91	345	⇓P	P	19 23 13.9	-0.2
VRAC	Vranov	79.09	353	⇓P	P	19 23 16.0	+0.8
VRAC	Vranov	79.09	353	*e*P	P	19 23 15.4	+0.2
KRUC	Moravsky	79.35	354	*e*P	P	19 23 16.6	0.0
KHC	Kasperske Hory	79.45	355	*e*P	P	19 23 17.3	+0.1
JAVC	Velka Javorina	79.46	353	*e*P	P	19 23 18.2	+0.9
TRPA	Tarpa	79.70	349	⇓P	P	19 23 18.8	+0.3
CKRC	Cesky Krumlov	79.72	355	*e*P	P	19 23 18.3	-0.4
GERES	GERESS Array B	79.73	355	P	P	19 23 19.1	+0.3
	comp=Z,2.8nm,0.7s,baz=19,slow=4.5,SNR=16						
KIV	Kislovodsk	79.84	334	⇓P	P	19 23 20.0	+0.6
KIV	Kislovodsk	79.84	334	P	P	19 23 19.1	-0.4
BURAR	Bucovina Array	79.88	347	⇑P	P	19 23 19.6	0.0
KBZ	Khabaz	80.00	334	P	P	19 23 20.3	+0.2
	comp=Z,6.6nm,0.8s,baz=123,slow=2.5,SNR=14						
ARCR	ARCALIA	80.51	348	⇑P	P	19 23 24.1	+1.2
CONA	Conrad Observa	80.52	354	*i* P	P	19 23 23.8	+0.8
	comp=Z,5.4nm,0.8s,SNR=7.2						
MOA	Molln	80.69	355	*e*P	P	19 23 24.0	+0.1
	comp=Z,1.5nm,0.8s						
DRGR		81.00	349	⇑P	P	19 23 25.5	-0.1
VLDR	Vladesti	81.18	345	⇑P	P	19 23 27.2	+0.7
RETA	Reutte	81.20	357	*e*P	P	19 23 27.1	+0.3
	comp=Z,7.7nm,1.3s						
ARSA	Arzberg	81.21	354	*i* P	P	19 23 24.1	-2.6
	comp=Z,3.3nm,0.7s,SNR=4.1						
WATA	Walderalm	81.33	357	*e*P	P	19 23 27.9	+0.4
	comp=Z,3.8nm,0.9s						
MOTA	Moosalm	81.34	357	*e*P	P	19 23 28.0	+0.5
	comp=Z,6.7nm,1.2s						
WTTA	Wattenberg	81.40	357	*i* P	P	19 23 28.6	+0.8
	comp=Z,5.4nm,0.8s,SNR=4.4						
DAVA	Damuels	81.43	358	*e*P	P	19 23 29.5	+1.5
	comp=Z,3.2nm,0.8s						
SQTA	Sankt Quirin	81.46	357	*i* P	P	19 23 28.6	+0.5
	comp=Z,5.8nm,0.7s,SNR=4.5						
DOPR	Dopca	81.47	347	⇓P	P	19 23 29.2	+1.2
COVR	Voineasa-Covas	81.47	346	⇓P	P	19 23 29.0	+0.9
KBA	Koelnbreinsper	81.51	355	*i* P	P	19 23 29.3	+0.8
	comp=Z,11nm,0.7s,SNR=19						
IZVR	Izvoarele	81.52	345	⇑P	P	19 23 29.2	+0.9
SIRR	Siria	81.64	350	⇓P	P	19 23 29.2	+0.2
FETA	Feichten	81.67	357	*e*P	P	19 23 30.0	+0.7
	comp=Z,7.9nm,0.9s						
TLCR		81.70	344	⇑P	P	19 23 30.1	+0.9
SOKA	Soboth	81.81	354	*i* P	P	19 23 30.0	+0.1
	comp=Z,5.2nm,0.8s,SNR=4.5						
CFR	Carcaliu	81.82	345	⇓P	P	19 23 30.3	+0.5
ABTA	Abfaltersbach	81.88	356	*e*P	P	19 23 29.4	-0.9
	comp=Z,4.7nm,1.0s						
MYKA	Terra Mystica	81.94	355	*e*P	P	19 23 30.9	+0.3
	comp=Z,1.4nm,0.5s						
OBKA	Obir	82.01	355	*i* P	P	19 23 31.3	+0.3
	comp=Z,3.0nm,0.5s,SNR=6.8						
TPGR	Topolog	82.09	345	⇓P	P	19 23 32.3	+1.0
JURR	Jurilovca	82.10	344	⇑P	P	19 23 31.3	0.0
ARR	Arges	82.16	347	⇑P	P	19 23 34.5	+2.8
BZS	Buzias	82.29	350	⇓P	P	19 23 32.2	-0.1
HARR	Harsova	82.33	345	⇓P	P	19 23 32.5	0.0
GZR	Gura Zlata	82.37	349	⇑P	P	19 23 33.0	+0.1
TLBR	Topalu	82.45	345	⇑P	P	19 23 34.1	+0.9
TIRR	Tirgusor	82.48	345	⇓P	P	19 23 34.3	+1.0
HUMR	Humele	82.93	347	⇓P	P	19 23 34.6	-1.1
PLVB	Pleven	84.10	347	⇓P	P	19 23 42.5	+0.7
BOVS	Bovan	84.23	349	⇑P	P	19 23 41.7	-0.7
VTS	Vitosha	85.05	348	⇓P	P	19 23 46.2	-0.5
BRTR	Keskin Array B	86.04	340	P	P	19 23 52.1	+0.4
	comp=Z,4.5nm,0.8s,baz=53,slow=2.5,SNR=20						
RDO	Rodhopi	86.17	346	P	P	19 23 53.0	+0.9
NVR	Nevrokopi	86.21	347	P	P	19 23 52.6	+0.2
ALN	Alexandroupoli	86.33	345	P	P	19 23 50.4	-2.5
SRS	Serrai	86.47	347	P	P	19 23 53.5	-0.2
KNT	Kendrikon	86.52	348	P	P	19 23 54.3	+0.4
GRG	Griva	86.79	348	P	P	19 23 55.4	+0.2
STKA	Stephens Creek	92.12	217	P	P	19 24 20.4	+0.3
	comp=Z,0.9nm,0.6s,baz=296,slow=2.8,SNR=3.2						
TRD	Trivandrum	95.38	291	IAMs_20	IAMs_20	19 24 51.1	
	comp=Z,5μm,19.5s						
MAW	Mawson	148.81	218	PKPbc	PKPbc	19 30 57.4	+0.4
	comp=Z,2.9nm,0.8s,baz=347,slow=3.0,SNR=4.7						
BOSA	Boshof	153.16	322	PKPbc	PKPbc	19 31 08.7	0.0
	comp=Z,1.3nm,0.5s,baz=357,slow=3.0,SNR=6.9						
BOSA				PKPab	PKPab	19 31 20.1	-0.2
	comp=Z,4.4nm,0.7s,baz=64,slow=3.2,SNR=7.3						

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*BJI **08** 19:14:45.7±0.0, 6°.88N×94°.27E, h12^{km}, mB5.2/35, mb4.8/49, Ms5.4/56, Ms7 5.0/53*

*IDC **08** 19:14:46.1±0.4, 6°.98N×94°.61E, h0^{km}, mb4.5/41, mb1 4.6/44, mb1mx4.5/53, mbtmp4.5/44, ML4.0/3, MS4.9/30, Ms1 4.9/30, ms1mx4.7/44, Error ellipse: s-maj=12.8km s-min=9.2km az=51.0*

*NEIC **08** 19:14:47.4±2.2, 6°.98N±0°.08×94°.53E±0°.09, h10^{km}±1^{km}, mb5.1/41, Ms_20 5.1/51, Mwc5.6(GCMT), Error ellipse: s-maj=16.1km s-min=12.3km az=244.0*

*MOS **08** 19:14:47.6±1.3, 6°.94N×94°.58E, h30^{km}, mb5.2/27, MS4.9/10, Error ellipse: s-maj=11.9km s-min=6.0km az=101.8*

*DJA **08** 19:14:48.7±1.2, 7°N±2°×9°4E±°, h14^{km}±8^{km}, M5.0/35, mB5.4/24, mb5.0/35, MLv5.4/8, Mw(mB)4.8/24*

*GCMT **08** 19:14:50.4±0.3, 6°.95N±0°.02×94°.72E±0°.01, h25^{km}, MW5.6/113, Moment Tensor Solution. s49,c58; s113,c166; Duration: 1^{s}4 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.24±.09; M$_{\theta\theta}$-2.00±.07; M$_{\phi\phi}$2.24±.07; M$_{r\theta}$-1.58±.17; M$_{\theta\phi}$0.95±.07; M$_{\phi r}$-0.56±.17; Best double couple: M$_0$2.86400×10^{17} NP1:φ$_s$150.00000°,δ56.00000°, λ-172.00000°. NP2:φ$_s$56.00000°,δ84.00000°, λ-35.00000°. Principal axes: T 2.7430, Plg19.0000°, Azm108.0000°; N 0.2460, Plg55.0000°, Azm226.0000°; P -2.9860, Plg29.0000°, Azm7.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*KLM **08** 19:14:50, 6°.94N×94°.71E, h10^{km}, mb5.3*

*NEIC **08** 19:14:51, 6°.96N×94°.70E, h26^{km}, Moment Tensor Solution. Duration: 2^{s}8 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.01; M$_{\theta\theta}$-2.23; M$_{\phi\phi}$2.24; M$_{r\theta}$-0.83; M$_{\theta\phi}$1.23; M$_{\phi r}$-0.45; Fault plane solution: M$_0$2.72000×10^{17} NP1: φ$_s$150.00000°,δ70.00000°,λ-179.00000°. NP2: φ$_s$59.00000°,δ89.00000°,λ-20.00000°. Principal axes: T 2.7121, Plg14.0000°, Azm106.0000°; N 0.0171, Plg70.0000°, Azm238.0000°; P -2.7292, Plg15.0000°, Azm13.0000°;*

ISC 08 19:14:48.1±0.6, **6°.92N**±0°.04×**94°.54E**±0°.04, **h13**^{km}±3^{km}, **n384**, σ**1^{s}88**/366, **mb4.9**/126, **MS5.0**/73, **9C-3D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	Lhok Sumawe	2.93	125	P	Pn	19 15 33.8	-0.5
LHMI	Lhok Sumawe	2.93	125	Pn	Pn	19 15 32.8	-1.5
LHMI	Lhok Sumawe	2.93	125	P	Pn	19 15 35.0	+0.7
TPTI		4.49	144	P	Pn	19 15 53.9	-1.9
TPTI				S	Sn	19 16 50.2	+2.3
SNSI	Sinabang, Aceh	4.82	158	P	Pn	19 16 01.0	+0.6
TSI	Tuntungan	5.25	130	P	Pn	19 16 06.6	+0.2
	5.8nm8μm320nm,0.7s						

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PSI   Prapat              5.99 133  Pn        Pn        19 16 16.2 -0.3
            9.2nm,0.3s,baz=300,slow=12,SNR=17
PSI                                 LR        LR        19 19 24.6
            comp=Z,8µm,19.2s,baz=300,slow=46
GSI   Gunungsitoli        6.35 151  P         Pn        19 16 23.1 +1.7
            1.2nm89nm,1.4s
GSI   Gunungsitoli        6.35 151  Pn        Pn        19 16 22.4 +1.0
GSI   Gunungsitoli        6.35 151  P         Pn        19 16 23.1 +1.7
IPM   Ipoh                6.89 110  P         Pn        19 16 27.0 -1.9
MNSI  Mandailing Nat      7.89 140  P         Pn        19 16 43.8 +1.2
            0.6nm2µm88nm,0.7s
JRMM  Jerantut            8.46 110  P         Pn        19 16 49.0 -1.4
BKNI  Bangkinang          9.22 135  P         Pn        19 17 02.1 +1.3
            3µm262nm,1.3s
BKNI  Bangkinang          9.22 135  Pn        Pn        19 17 01.9 +1.1
BKNI  Bangkinang          9.22 135  P         Pn        19 17 02.8 +2.0
PPI   Padang Panjang      9.38 141  P         Pn        19 17 03.6 +0.6
            49nm,0.6s
PDSI  Padang              9.77 143  P         Pn        19 17 09.1 +0.7
            34nm,1.0s
PBKT  Sadao Pong         11.47  33            Pn        19 17 30.8 -0.9
CM31  Chiang Mai Arr     12.24  20            Pn        19 17 40.3 -2.0
CMAR  Chiang Mai Arr     12.24  20  Pn        Pn        19 17 40.1 -2.2
            0.2nm,0.3s,baz=213,slow=14,SNR=5.0
CMAR                                LR        LR        19 22 05.0
            comp=Z,4µm,20.9s,baz=254,slow=36
CMAR  Chiang Mai Arr     12.24  20  P         Pn        19 17 40.4 -1.9
CMAR  Chiang Mai Arr     12.24  20  Pn        Pn        19 17 40.4 -1.9
DSRI  Dabo               12.42 126  P         Pn        19 17 45.7 +0.9
            815nm28nm,2.1s
JMBI  JAMBI              12.44 133  P         Pn        19 17 46.4 +1.4
            87nm,1.0s
CHTO  Chiang Mai         12.57  20  P         Pn        19 17 44.8 -2.0
CHTO  Chiang Mai         12.57  20  Pn        Pn        19 17 44.8 -2.0
MASI  Maura Aman, Be     12.61 142  P         Pn        19 17 48.0 +0.7
            2µm88nm,0.8s
KSI   Kapahiang          13.23 142  P         Pn        19 17 54.9 -0.9
UBPT  Khong Chiam        13.56  51  Pn        Pn        19 18 00.2 -0.1
PALK  Pallekele          13.74 272  Pn        Pn        19 18 03.4 +0.7
            0.7nm,0.3s,baz=210,slow=9.6,SNR=1.6
PALK                                LR        LR        19 23 16.3
            comp=Z,8µm,19.6s,baz=194,slow=37
LHSI  Lahat              13.94 140  P         Pn        19 18 05.0 -0.5
            1µm125nm,0.9s
DLV   T  Lat             14.63  69  Pn        Pn        19 18 17.3 +2.2
PPBI  Pangkal Pinang     14.68 128  P         Pn        19 18 16.3 +0.7
            5µm76nm,1.5s
MDSI  Maura Dua          14.87 139  P         Pn        19 18 15.9 -2.2
            26nm,0.9s
LWLI  Liwa               15.20 141  P         Pn        19 18 24.1 +1.4
            145nm,0.7s
KLSI                     15.38 138  P         Pn        19 18 23.0 -2.0
            420nm25nm,0.9s
KLI   Kotabumi           15.59 138  P         Pn        19 18 27.3 -0.4
            75nm,0.5s
KASI  Kota Agung         15.86 141  P         Pn        19 18 29.9 -1.3
            62nm,0.9s
BLSI  Bandar Lampung     16.22 139  P         Pn        19 18 37.1 +1.2
KSM   Kuching            16.63 108  P         P         19 18 44.0 +0.5
SBUM  Sibu               18.17 103  P         P         19 19 02.0 +1.5
STKI  Sintang            18.22 111  P         P         19 19 01.7 +0.6
            2µm59nm,1.7s
KOHI  KOHIMA             18.70 359 eP         Pn        19 19 06.9 +0.1
KOHI                                IAmb      IAmb      19 19 26.9
            comp=Z,81nm,0.9s
BOK   Bokaro             18.72 335 eP         Pn        19 19 07.8 +0.9
BOK                                 IAmb      IAmb      19 19 15.6
            comp=Z,151nm,1.2s
BOK                                 IAMs_20   IAMs_20   19 26 18.9
            comp=Z,4µm,23.0s
HYB   Hyderabad          18.77 305 i P        Pn        19 19 10.0 +2.4
HYB   Hyderabad          18.77 305 eP         Pn        19 19 08.0 +0.4
HYB                                 IAmb      IAmb      19 19 16.3
            comp=Z,31nm,1.1s
LEM   Lembang            18.89 136  LR        LR        19 27 38.3
            comp=Z,8µm,18.9s,baz=302,slow=41
QIZ   Qiongzhong         19.14  50  P         Pn        19 19 13.2 +1.1
QIZ                                 S         Sn        19 22 47.1 +0.6
QIZ                                 LR        LR
            comp=Z,14µm,14.5s
QIZ                                 LR        LR
            comp=Z,9µm,11.4s
QIZ                                 LR        LR
            comp=Z,5µm,9.6s
QIZ   Qiongzhong         19.14  50            P         19 19 11.1 -0.1
MOKO  MOKOCHONG          19.29 360 eP         Pn        19 19 13.5 -0.5
MOKO                                IAmb      IAmb      19 19 21.0
            comp=Z,96nm,1.1s
PBKI  Pangkalan Bun      19.59 119  P         Pn        19 19 17.7 +0.2
            comp=Z,2µmcomp=Z,155nm,1.1s
KMI   Kunming            19.73  23 ⇑P         Pn        19 19 21.9 +2.6
KMI                                 sP        pwP       19 19 25.8 +1.4
KMI                                 PP        PnPn      19 19 42.7  +10
KMI                                 S         S         19 22 58.4 -1.8
KMI                                 pmax      pmax
            comp=Z,47nm,1.1s
KMI                                 pmax      pmax
            comp=Z,850nm,8.0s
KMI                                 LR        LR
            comp=Z,2µm,11.2s
KMI                                 LR        LR
            comp=Z,4µm,10.7s
KMI                                 LR        LR
            comp=Z,3µm,8.6s
ITAN  ITANAGAR           20.13 358 eP         Pn        19 19 23.4 -0.3
ITAN                                IAmb      IAmb      19 19 39.6
            comp=Z,263nm,1.5s
LKP   Lekhapani          20.34   3 eP         Pn        19 19 26.3 +0.1
LKP                                 IAmb      IAmb      19 19 27.4
            comp=Z,94nm,1.1s
ODAN  Odare              20.96 342 eP         P         19 19 32.4 +1.2
            comp=Z,192nm,1.0s
GTK   Tadong             21.05 345 eP         P         19 19 34.5 +2.4
GTK                                 IAmb      IAmb      19 19 48.8
            comp=Z,78nm,0.9s
UGM   Wanagama           21.71 132  IAMs_20   IAMs_20   19 28 19.0
            comp=Z,8µm,20.0s
SPMM  Sapulut            21.92  95  P         P         19 19 43.0 +1.5
GOA   Goa                22.01 295 eP         P         19 19 35.9 -6.5
JIRN  Jiri               22.09 340 eP         P         19 19 43.1 -0.4
            comp=Z,201nm,0.8s
KKN   Kakani             22.54 338 eP         P         19 19 47.6 -0.5
            comp=Z,92nm,0.9s
GYA   Guiyang            22.60  29 ⇑P         P         19 19 51.7 +3.0
GYA                                 sP        pwP       19 19 58.7 +3.6
GYA                                 S         S         19 23 57.2 +0.9
GYA                                 pmax      pmax
            comp=Z,43nm,1.1s
GYA                                 pmax      pmax
            comp=Z,440nm,5.0s
GYA                                 LR        LR
            comp=Z,7µm,10.8s
GYA                                 LR        LR
            comp=Z,5µm,9.5s
GYA                                 LR        LR
            comp=Z,6µm,15.8s
BBKI  Banjar Baru        22.74 116  P         P         19 19 50.5 +0.3
            comp=Z,3µmcomp=Z,126nm,1.0s
LSA   Lhasa              22.88 352  P         P         19 19 50.9 -1.1
LSA                                 pmax      pmax
            comp=Z,22nm,0.8s
LSA                                 MLR       MLR
            comp=Z,2µm,21.0s
LSA   Lhasa              22.88 352  P         P         19 19 50.9 -1.1
LSA                                 IAmb      IAmb      19 20 06.5
            comp=Z,22nm,0.8s
GKN   Gorkha             22.97 337 eP         P         19 19 51.6 -1.0
            comp=Z,98nm,0.8s
KOLN  Koldanda           23.18 335 eP         P         19 19 54.4 -0.5
            comp=Z,153nm,0.9s
PYUN  Piuthan            23.73 334 eP         P         19 19 59.4 -0.9
KMMI  Kalianget          23.84 125  P         P         19 20 01.6 +0.4
            comp=Z,3µmcomp=Z,150nm,0.8s
KBKI  Kotabaru           23.86 115  P         P         19 20 01.5 +0.1
            comp=Z,26nm,0.8s
BLJI  Banyuglugur        23.95 127  P         P         19 20 04.0 +1.8
            comp=Z,2µmcomp=Z,100nm,1.1s
ABJI  Asem Bagus         24.48 126  P         P         19 20 10.1 +2.9
            comp=Z,4µmcomp=Z,382nm,0.9s
JAGI  Jajag, Banyuwa     24.82 128  P         P         19 20 10.5 +0.2
            comp=Z,72nm,0.8s
JAGI  Jajag, Banyuwa     24.82 128  P         P         19 20 08.9 -1.3
JAGI                                IAMs_20   IAMs_20   19 30 20.5
            comp=Z,5µm,22.0s
SRBI  Singaraja          25.44 126  P         P         19 20 17.1 +1.3
            comp=Z,2µmcomp=Z,188nm,1.4s
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MPSI  Mapaga             26.12 103  P         P         19 20 23.8 +1.7
            comp=Z,997nmcomp=Z,56nm,1.4s
DGAR  Diego Garcia       26.23 238  P         P         19 20 20.5 -2.5
DGAR                                pmax      pmax
            comp=Z,46nm,0.6s
DGAR  Diego Garcia       26.23 238  P         P         19 20 20.5 -2.5
H08S3 Diego Garcia H     26.32 237  T         T         19 47 12.7
            baz=56,slow=75,SNR=404
H08S2 Diego Garcia H     26.32 237  T         T         19 47 16.1
            baz=56,slow=75,SNR=204
H08S1 Diego Carcia H     26.34 237  T         T         19 47 07.1
            baz=56,slow=75,SNR=68
SONA  Sohna              26.89 324 ex         P         19 20 31.7 +2.9
AYAN  Aya Nagar          27.04 325 eP         P         19 20 29.4 -0.7
ENH   Enshi              27.14  29  P         P         19 20 29.3 -1.8
ENH                                 IAmb      IAmb      19 20 37.9
            comp=Z,56nm,1.2s
ENH                                 IAMs_20   IAMs_20   19 31 56.7
            comp=Z,4µm,19.0s
AJM   Ajmer              27.15 318 ex         P         19 20 38.5 +7.3
KUDL  Kundal             27.16 323 eP         P         19 20 32.3 +1.0
KAPI  Kappang            27.82 115  P         P         19 20 38.0 +0.7
            comp=Z,5.1nm,0.4s,baz=291,slow=7.1,SNR=6.1
BKSI  Bulukumba          28.28 115  P         P         19 20 41.2 -0.3
            comp=Z,433nmcomp=Z,36nm,1.1s
KNMB  Chin-men Tao       28.75  50  IAMs_20   IAMs_20   19 31 56.5
            comp=Z,4µm,18.0s
SMLA  Simla              29.06 328 eP         P         19 20 48.8 +0.6
SMLA                                IAMs_20   IAMs_20   19 33 22.6
            comp=Z,3µm,19.5s
GTOI  Gorontalo          29.07 101  P         P         19 20 49.3 +0.8
            comp=Z,364nmcomp=Z,32nm,1.2s
LUWI  Luwuk              29.26 105  P         P         19 20 47.7 -2.5
TPUB  Ta-pu              29.90  54  P         P         19 20 53.9 -2.0
TPUB                                IAMs_20   IAMs_20   19 31 45.3
            comp=Z,4µm,20.0s
WHN   Wuhan              29.96  36  P         P         19 21 03.6 +7.4
TWG   Pinlang            30.04  55  IAMs_20   IAMs_20   19 33 38.0
            comp=Z,4µm,18.0s
XAN   Xi'an              30.08  24  P         P         19 20 56.8 -0.5
XAN                                 S         S         19 25 50.3 -5.4
XAN                                 pmax      pmax
            comp=Z,21nm,1.1s
XAN                                 pmax      pmax
            comp=Z,470nm,12.0s
XAN                                 LR        LR
            comp=Z,4µm,13.2s
XAN                                 LR        LR
            comp=Z,5µm,14.7s
XAN                                 LR        LR
            comp=Z,5µm,19.0s
LZH   Lanzhou            30.25  15 eP         P         19 21 00.1 +1.2
LZH                                 pP        pwP       19 21 04.7 -1.0
LZH                                 S         S         19 25 56.5 -2.0
LZH                                 pmax      pmax
            comp=Z,14nm,1.0s
LZH                                 pmax      pmax
            comp=Z,300nm,6.0s
LZH                                 LR        LR
            comp=Z,2µm,13.0s
LZH                                 LR        LR
            comp=Z,2µm,13.6s
LZH                                 LR        LR
            comp=Z,3µm,16.8s
DHRM  DHARAMSHALA        30.39 328 ex         P         19 20 57.9 -2.4
DHRM                                IAmb      IAmb      19 21 11.8
            comp=Z,16nm,0.5s
DHRM                                IAMs_20   IAMs_20   19 33 49.1
            comp=Z,4µm,20.1s
SSLB  Suanglung          30.40  54  P         P         19 20 56.8 -3.4
SSLB                                IAmb      IAmb      19 21 11.0
            comp=Z,15nm,0.8s
YULB  Yu-li              30.49  55  P         P         19 20 57.6 -3.4
YULB                                IAmb      IAmb      19 21 10.7
            comp=Z,23nm,1.5s
NACB  Ninganchiao        31.10  54  IAMs_20   IAMs_20   19 33 35.9
            comp=Z,4µm,18.0s
EDFI  Ende, Flores       31.22 120  P         P         19 21 04.5 -3.2
            comp=Z,5.9nm,1.1s
TATO  Taipei             31.41  52  IAMs_20   IAMs_20   19 33 07.3
            comp=Z,4µm,19.0s
MMRI  Maumere            31.64 119  P         P         19 21 11.0 -0.3
MMRI                                IAmb      IAmb      19 21 23.0
            comp=Z,13nm,0.7s
MMRI                                IAMs_20   IAMs_20   19 34 45.1
            comp=Z,4µm,19.0s
SANI  Sanana             32.63 105  P         P         19 21 19.2 -0.7
GTA   Gaotai             32.69   8 eP         P         19 21 21.2 +0.9
GTA                                 pP        sP        19 21 24.6 -0.3
GTA                                 sP        pwP       19 21 27.2 +0.1
GTA                                 S         S         19 26 39.9 +3.4
GTA                                 sS        sS        19 26 51.5  +10
GTA                                 ScP       ScP       19 27 46.1 -3.8
GTA                                 ScS       ScS       19 31 47.0 -2.7
GTA                                 pmax      pmax
            comp=Z,12nm,1.1s
GTA                                 pmax      pmax
            comp=Z,78nm,5.3s
GTA                                 LR        LR
            comp=Z,2µm,19.6s
GTA                                 LR        LR
            comp=Z,2µm,18.5s
GTA                                 LR        LR
            comp=Z,2µm,21.8s
NIL   Nilore             33.10 326  P         P         19 21 20.9 -3.0
NIL                                 pmax      pmax
            comp=Z,67nm,0.7s
NIL                                 MLR       MLR
            comp=Z,2µm,19.0s
NIL   Nilore             33.10 326  P         P         19 21 20.9 -3.0
BATI  Baumata            33.63 120  P         P         19 21 27.9 -0.8
            comp=Z,10nm,0.7s,baz=157,slow=4.1,SNR=6.5
NJ2   Nanjing            33.75  39 eP         P         19 21 30.2 +0.7
NJ2                                 pmax      pmax
            comp=Z,4.0nm,0.5s
NJ2                                 LR        LR
            comp=Z,5µm,14.2s
NJ2                                 LR        LR
            comp=Z,4µm,13.3s
NJ2                                 LR        LR
            comp=Z,3µm,16.1s
SOEI  Soe                33.93 119  IAMs_20   IAMs_20   19 36 02.8
            comp=Z,5µm,21.0s
TIA   Tai'an             35.73  32 ⇓P         P         19 21 48.8 +2.2
TIA                                 S         S         19 27 27.7 +4.4
TIA                                 pmax      pmax
            comp=Z,14nm,1.1s
TIA                                 LR        LR
            comp=Z,2µm,13.2s
TIA                                 LR        LR
            comp=Z,3µm,17.7s
TIA                                 LR        LR
            comp=Z,2µm,15.7s
KSH   Kashi              36.50 336  P         P         19 21 51.4 -1.9
KSH                                 pP        pP        19 21 56.8 +0.3
HHC   Hu-ho-hao-te       37.05  22 eP         P         19 21 58.5 +0.6
HHC                                 pmax      pmax
            comp=Z,10.0nm,0.7s
HHC                                 pmax      pmax
            comp=Z,280nm,9.5s
HHC                                 LR        LR
            comp=Z,2µm,11.6s
HHC                                 LR        LR
            comp=Z,1µm,15.0s
HHC                                 LR        LR
            comp=Z,2µm,18.2s
WMQ   Urumqi             37.24 352 eP         P         19 22 00.5 +1.0
WMQ                                 sP        pwP       19 22 08.1 +1.8
WMQ                                 SS        SS        19 30 14.2  -15
WMQ                                 pmax      pmax
            comp=Z,27nm,1.3s
WMQ                                 pmax      pmax
            comp=Z,480nm,4.7s
WMQ                                 LR        LR
            comp=Z,1µm,19.9s
WMQ                                 LR        LR
            comp=Z,2µm,21.3s
WMQ                                 LR        LR
            comp=Z,2µm,22.1s
SIJI  Sorong             37.45 101  P         P         19 22 00.3 -1.3
            comp=Z,9.0nm,0.8s,baz=294,slow=8.1,SNR=5.0
WSAR  Wadi Sarin         38.13 299  P         P         19 22 07.6 +0.4
            comp=Z,6.6nm,1.0s,baz=126,slow=6.1,SNR=4.9
WSAR                                LR        LR        19 38 12.3
            comp=Z,1µm,18.4s,baz=147,slow=37
BJT   Baijiatuau         38.24  27  P         P         19 22 06.1 -1.8
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BJT                                 pmax      pmax
            comp=Z,25nm,1.0s
BJT                                 MLR       MLR
            comp=Z,2µm,22.0s
BJT   Baijiatuau         38.24  27  P         P         19 22 06.1 -1.8
BJT                                 IAmb      IAmb      19 22 23.7
            comp=Z,24nm,1.0s
GAR   Garm               38.69 329  P         P         19 22 10.8 -1.1
GAR                                 IAmb      IAmb      19 22 20.2
            comp=Z,68nm,1.1s
FAKI  Fak Fak            38.89 103  P         P         19 22 12.7 -1.0
FAKI                                IAmb      IAmb      19 22 28.1
            comp=Z,26nm,1.0s
CHGR  Chuyangaron        39.03 328  P         P         19 22 12.2 -2.6
MDOK  Medeo              39.24 340  P         P         19 22 14.5 -2.0
BTK   Batken             39.25 331  IAmb      IAmb      19 22 29.9
            comp=Z,54nm,1.0s
FITZ  Fitzroy Crossi     39.50 129  P         P         19 22 17.5 -1.2
            comp=Z,3.0nm,0.6s,baz=327,slow=7.8,SNR=7.4
FITZ  Fitzroy Crossi     39.50 129  P         P         19 22 17.8 -0.9
            baz=40,SNR=9.0
TKM2  Tokmak 2           39.55 338  P         P         19 22 13.3 -5.8
KBK   Karagaybulak       39.57 337  P         P         19 22 17.7 -1.6
            SNR=7.0
AML   Almayashu          39.63 335  P         P         19 22 20.5 +0.5
            SNR=11
AAK   Ala-Archa          39.73 337  P         P         19 22 19.1 -1.5
            comp=Z,14nm,0.8s,baz=118,slow=2.4,SNR=28
AAK   Ala-Archa          39.73 337  P         P         19 22 19.1 -1.5
            SNR=13
AAK   Ala-Archa          39.73 337  P         P         19 22 18.5 -2.1
AAK                                 pmax      pmax
            comp=Z,16nm,0.9s
AAK                                 MLR       MLR
            comp=Z,3µm,21.0s
AAK   Ala-Archa          39.73 337  P         P         19 22 18.5 -2.1
AAK   Ala-Archa          39.73 337  IAMs_20   IAMs_20   19 40 06.6
            comp=Z,3µm,21.0s
EKS2  Erkin-Say          40.04 336  P         P         19 22 21.1 -2.0
            SNR=7.2
SOCY  Socotra            40.30 281  IAMs_20   IAMs_20   19 37 36.7
            comp=Z,2µm,19.0s
MSEY  Mahe Island        40.65 255  IAMs_20   IAMs_20   19 35 30.2
            comp=Z,2µm,21.0s
MK31  Makanchi Array     41.10 347  P         P         19 22 31.0 -0.6
MK31  Makanchi Array     41.10 347  P         P         19 22 30.5 -1.1
MKAR  Makanchi Array     41.10 347  P         P         19 22 31.9 +0.3
            comp=Z,10nm,0.8s,baz=163,slow=8.9,SNR=20
MKAR                                LR        LR        19 44 31.0
            comp=Z,2µm,19.1s,baz=334,slow=44
MKAR  Makanchi Array     41.10 347ceP         P         19 22 31.8 +0.2
MKAR                                pmax      pmax
            comp=Z,10.0nm,0.8s
MKAR  Makanchi Array     41.10 347  P         P         19 22 31.1 -0.5
MAKZ  Makanchi           41.18 347  P         P         19 22 31.7 -0.6
MAKZ                                pmax      pmax
            comp=Z,11nm,0.7s
MAKZ  Makanchi           41.18 347  P         P         19 22 31.7 -0.6
SONM  Songino Array      42.00  12  P         P         19 22 39.3 +0.1
            comp=Z,10nm,0.9s,baz=195,slow=6.4,SNR=21
SONM                                PcP       PcP       19 24 33.9 -0.3
            comp=Z,1.3nm,0.7s,baz=195,slow=5.3,SNR=1.6
SONM  Songino Array      42.00  12  P         P         19 22 38.6 -0.6
SONM                                pmax      pmax
            comp=Z,13nm,1.0s
SONM  Songino Array      42.00  12  P         P         19 22 38.6 -0.6
INCN  Inchon             42.13  39  IAMs_20   IAMs_20   19 41 50.4
            comp=Z,2µm,18.0s
ULN   Ulaanbaatar        42.17  13ceP         P         19 22 39.9 -0.7
ULN                                 pmax      pmax
            comp=Z,6.0nm,0.8s
ULN   Ulaanbaatar        42.17  13  P         P         19 22 40.8 +0.3
ULN   Ulaanbaatar        42.17  13  IAMs_20   IAMs_20   19 42 02.1
            comp=Z,2µm,18.0s
KSRS  Korea Array        42.93  40  P         P         19 22 47.3 +0.6
            comp=Z,4.4nm,0.9s,baz=224,slow=9.3,SNR=8.1
DGZ   Jazzator, Alta     43.05 353 i P        P         19 22 47.6 -0.1
DGZ                                 pmax      pmax
            comp=Z,10.0nm,1.6s
ZAK   Zakamensk          43.93   8 eP         P         19 22 57.7 +3.0
ZAK                                 pmax      pmax
            comp=Z,9.0nm,1.2s
ZAK                                 pmax      pmax
            comp=Z,6.0nm,1.2s
NWAO  Narrogin (SRO)     45.13 153  P         P         19 23 06.0 +1.6
            comp=Z,20nm,1.0s,baz=319,slow=9.0,SNR=5.3
NWAO  Narrogin (SRO)     45.13 153  P         P         19 23 06.5 +2.2
            baz=45,SNR=4.0
NWAO                                P         P         19 23 06.5 +2.2
            baz=45,SNR=4.0
NWAO  Narrogin (SRO)     45.13 153  IAMs_20   IAMs_20   19 38 23.7
            comp=Z,2µm,20.0s
GEYT  Alibeck            45.17 319  P         P         19 23 04.2 -0.6
            comp=Z,5.1nm,0.4s,baz=171,slow=10,SNR=9.5
GEYT                                LR        LR        19 45 19.1
            comp=Z,1µm,19.1s,baz=285,slow=41
KURBB Kurchatov Arra     45.56 346  P         P         19 23 05.8 -1.7
            comp=Z,14nm,0.8s,baz=166,slow=6.9,SNR=32
KURK  Kurchatov          45.62 346ceP         P         19 23 07.1 -1.0
KURK                                pmax      pmax
            comp=Z,44nm,1.3s
KURK  Kurchatov          45.62 346  P         P         19 23 07.0 -1.0
CN2   Changchun          45.62  31 eP         P         19 23 08.7 +0.5
CN2                                eS         S         19 29 43.5 -7.0
CN2                                 SS        ScS       19 33 06.8 +2.3
CN2                                 pmax      pmax
            comp=Z,10.0nm,1.2s
CN2                                 pmax      pmax
            comp=Z,100nm,3.0s
CN2                                 LR        LR
            comp=Z,2µm,17.0s
CN2                                 LR        LR
            comp=Z,3µm,17.0s
CN2                                 LR        LR
            comp=Z,2µm,19.0s
HIA   Hailar             47.24  22 i P        P         19 23 21.0 +0.1
HIA                                 pmax      pmax
            comp=Z,15nm,1.2s
WRA   Warramunga Arr     47.39 125  P         P         19 23 21.1 -1.3
            comp=Z,4.1nm,0.8s,baz=305,slow=9.1,SNR=28
WRA                                 LR        LR        19 45 55.0
            comp=Z,2µm,18.1s,baz=315,slow=40
WRAB  Tennant Creek      47.40 125ceP         P         19 23 19.7 -2.8
WRAB                                pmax      pmax
            comp=Z,25nm,1.7s
WRAB  Tennant Creek      47.40 125  IAMs_20   IAMs_20   19 46 02.9
            comp=Z,2µm,18.0s
ZALV  Zalesovo Beam      47.55 352  P         P         19 23 21.4 -1.6
            comp=Z,4.6nm,0.4s,baz=170,slow=9.0,SNR=22
ZALV  Zalesovo Beam      47.55 352  P         P         19 23 21.9 -1.2
MDJ   Mudanjiang         48.38  33  P         P         19 23 31.0 +1.3
MDJ                                 pP        pP        19 23 33.4 +0.4
MDJ                                 sP        pwP       19 23 35.8 -0.8
MDJ                                 S         S         19 30 31.5 +1.7
MDJ                                 pmax      pmax
            comp=Z,13nm,1.4s
MDJ                                 pmax      pmax
            comp=Z,310nm,5.4s
MDJ                                 LR        LR
            comp=Z,3µm,13.1s
MDJ                                 LR        LR
            comp=Z,3µm,12.2s
MDJ                                 LR        LR
            comp=Z,4µm,11.0s
MDJ   Mudanjiang         48.38  33  IAMs_20   IAMs_20   19 45 55.8
            comp=Z,2µm,19.0s
AS31  Alice Springs      49.01 130  P         P         19 23 33.1 -1.8
ASAR  Alice Springs      49.01 130  P         P         19 23 34.0 -0.9
            comp=Z,4.0nm,0.8s,baz=303,slow=7.6,SNR=17
ASAR                                PcP       PcP       19 24 58.8 -0.1
            comp=Z,2.5nm,0.7s,baz=312,slow=3.7,SNR=1.8
ASAR                                LR        LR        19 46 16.9
            comp=Z,2µm,20.3s,baz=294,slow=39
ASAR  Alice Springs      49.01 130  P         P         19 23 35.1 +0.2
ASAR  Alice Springs      49.01 130  P         P         19 23 35.1 +0.2
FORT  Forrest            49.35 141  P         P         19 23 38.6 +1.3
            baz=50,SNR=11
USRK  Ussuriysk Ar.      49.45  35  P         P         19 23 38.5 +0.6
            comp=Z,5.4nm,0.9s,baz=192,slow=7.2,SNR=4.9
USRK  Ussuriysk Ar.      49.45  35  P         P         19 23 36.4 -1.6
USRK  Ussuriysk Ar.      49.45  35  P         P         19 23 36.4 -1.6
MAT   Matsushiro         49.51  47  P         P         19 23 38.6  0.0
MJAR  Matsushiro Arr     49.51  47  P         P         19 23 40.1 +1.5
            comp=Z,3.4nm,0.8s,baz=246,slow=7.5,SNR=6.3
MJAR                                LR        LR        19 46 30.7
            comp=Z,1µm,19.4s,baz=205,slow=38
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BVAR	Borovoye Array	50.01	341	P	P	19 23 41.0	-1.1
	comp=Z,9.9nm,0.9s,baz=184,slow=14,SNR=13						
BRVK	Borovoye	50.07	341	P	P	19 23 40.4	-2.1
BRVK	Borovoye	50.07	341	P	P	19 23 39.6	-3.0
BRVK				IAmb	IAmb	19 23 51.9	
	comp=Z,17nm,0.8s						
ATD	Arta Tunnel	51.17	279	P	P	19 23 52.1	+0.5
	comp=Z,1.6nm,0.3s,baz=69,slow=8.6,SNR=1.3						
AB31	Akbulak array	51.25	332	P	P	19 23 49.3	-2.2
ABKAR	Akbulak array	51.25	332	P	P	19 23 49.0	-2.5
ABKAR	Akbulak array	51.25	332	P	P	19 23 50.7	-0.8
ABKAR				IAmb	IAmb	19 24 01.5	
	comp=Z,49nm,0.9s						
KLR	Kul'dur	52.50	30	P	P	19 24 01.7	+0.9
	comp=Z,2.3nm,0.8s,baz=255,slow=6.9,SNR=3.9						
KLR	Kul'dur	52.50	30	i P	P	19 24 00.2	-0.6
KLR				pmax	pmax		
	comp=Z,25nm,2.0s						
BOD	Bodaibo	52.98	13	eP	P	19 24 04.6	+0.4
BOD				pmax	pmax		
	comp=Z,34nm,1.2s						
OPO	Ambohidratompo	53.12	241	P	P	19 24 08.4	+2.3
	comp=Z,4.6nm,0.8s,baz=81,slow=7.8,SNR=5.3						
ZEA	Zeya	53.66	23	eP	P	19 24 16.1	+6.8
ZEA				pmax	pmax		
	comp=E,10.0nm,1.6s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ZEA				MLR	MLR		
	comp=E,800nm,19.0s						
ZEA				MLR	MLR		
	comp=N,900nm,13.0s						
ZEA				MLR	MLR		
	comp=Z,800nm,15.0s						
GNI	Garni	55.38	315	LR	LR	19 50 30.1	
	comp=Z,828nm,19.9s,baz=106,slow=39						
GNI	Garni	55.38	315	i P	P	19 24 20.8	-1.5
GNI				pmax	pmax		
	comp=Z,29nm,1.2s						
BBOO	Buckleboo	55.85	138	P	P	19 24 25.1	-0.4
	baz=56,SNR=11						
SVE	Sverdlovsk	56.43	338	eP	P	19 24 28.5	-0.7
SVE				pmax	pmax		
	comp=Z,69nm,1.3s						
SVE				MLR	MLR		
	comp=Z,1µm,18.0s						
ARU	Arti	56.91	337	LR	LR	19 50 49.2	
	comp=Z,2µm,20.1s,baz=156,slow=38						
ARU	Arti	56.91	337	c iP	P	19 24 32.7	0.0
ARU						19 26 34.9	
ARU				S	S	19 32 30.7	+4.5
ARU				SS	SS	19 36 15.5	+0.9
ARU				pmax	pmax		
	comp=Z,18nm,1.1s						
ARU	Arti	56.91	337	P	P	19 24 31.8	-0.9
ZEI	Tsey	57.01	317	eP	P	19 24 37.1	+3.2
ZEI				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KIBK	Kibwezi	57.13	263	IAMs_20	IAMs_20	19 52 04.9	
	comp=Z,1µm,18.0s						
YSS	Yuzh-Sakhalins	57.29	37	eP	P	19 24 38.2	+2.7
YSS				pmax	pmax		
	comp=Z,40nm,1.1s						
KMBO	Kilima Mbogo	57.72	264	P	P	19 24 41.0	+1.5
	comp=Z,2.1nm,0.6s,baz=51,slow=9.2,SNR=7.9						
KMBO				LR	LR	19 45 33.3	
	comp=Z,1µm,21.7s,baz=92,slow=32						
KMBO	Kilima Mbogo	57.72	264	P	P	19 24 36.9	-2.5
KMBO				pmax	pmax		
	comp=Z,17nm,1.3s						
KMBO	Kilima Mbogo	57.72	264	P	P	19 24 36.9	-2.5
KMBO				IAmb	IAmb	19 24 49.8	
	comp=Z,17nm,1.3s						
KBZ	Khabaz	58.05	318	P	P	19 24 42.9	+2.0
	comp=Z,4.0nm,1.0s,baz=178,slow=3.3,SNR=3.5						
KBZ	Khabaz	58.05	318	ceP	P	19 24 42.9	+2.0
KBZ				pmax	pmax		
	comp=Z,14nm,1.2s						
HTT	Hallett	58.15	136	P	P	19 24 41.9	0.0
	baz=58,SNR=9.6						
SHA1	Shidzhatmaz	58.22	318	i P	P	19 24 42.2	-0.2
KVAR	Kislovodsk Arr	58.28	318	LR	LR	19 51 31.3	
	comp=Z,496nm,20.4s,baz=194,slow=38						
KIV	Kislovodsk	58.28	318	eP	P	19 24 43.9	+1.2
KIV				pmax	pmax		
	comp=Z,21nm,1.1s						
QLP	Quilpie	58.55	127	P	P	19 24 45.2	+0.5
	baz=59,SNR=5.4						
STKA	Stephens Creek	59.17	134	P	P	19 24 47.5	-1.5
	comp=Z,10nm,1.0s,baz=303,slow=7.1,SNR=11						
STKA				LR	LR	19 55 15.8	
	comp=Z,1µm,18.2s,baz=290,slow=41						
STKA	Stephens Creek	59.17	134	P	P	19 24 48.7	-0.2
	baz=59,SNR=7.0						
STKA	Stephens Creek	59.17	134	P	P	19 24 47.5	-1.5
STKA				pmax	pmax		
	comp=Z,4.0nm,1.4s						
STKA	Stephens Creek	59.17	134	P	P	19 24 47.5	-1.5
BELG	Belogornoye	59.32	329	LR	LR	19 55 22.0	
	comp=Z,684nm,18.0s,baz=118,slow=41						
GHAJ	Ghor Haditha	60.01	302	IAMs_20	IAMs_20	19 55 06.3	
	comp=Z,2µm,18.0s						
YAK	Yakutsk	60.77	18	P	P	19 24 58.6	-0.8
	comp=Z,6.8nm,0.6s,baz=304,slow=1.4,SNR=9.8						
YAK	Yakutsk	60.77	18	eP	P	19 24 59.0	-0.4
YAK				e*PP	sP	19 25 03.7	-0.3
YAK				e		19 25 45.9	
YAK				e		19 27 08.2	
YAK				eS	S	19 33 14.6	-1.4
YAK				e*SS	sS	19 33 22.7	+1.0
YAK				pmax	pmax		
	comp=Z,18nm,0.9s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,208nm,3.3s						
YAK				pmax	pmax		
	comp=N,162nm,3.9s						
YAK				pmax	pmax		
	comp=E,111nm,4.1s						
YAK				smax	smax		
	comp=E,216nm,3.5s						
YAK				smax	smax		
	comp=N,102nm,3.3s						
YAK				MLR	MLR		
	comp=Z,2µm,17.0s						
YAK				MLR	MLR		
	comp=N,730nm,20.0s						
YAK				MLR	MLR		
	comp=E,282nm,14.0s						
VRH	Novokhopyorsk	61.93	325	eP	P	19 25 06.4	-1.1
VRH				pmax	pmax		
	comp=Z,20nm,0.7s						
CMSA	Cobar Meteorol	62.00	131	P	P	19 25 08.4	+0.2
	baz=62,SNR=9.1						
KIRV	Kirov	62.04	335	i P	P	19 25 08.3	+0.3
RMQ	Roma	62.15	125	P	P	19 25 10.1	+0.7
	baz=62,SNR=4.5						
NRIK	Noril'sk	62.51	357	P	P	19 25 10.7	-0.3
	comp=Z,4.8nm,0.8s,baz=78,slow=2.4,SNR=3.9						
NRIK				LR	LR	19 56 28.7	
	comp=Z,990nm,18.7s,baz=312,slow=40						
NRIK	Noril'sk	62.51	357	ceP	P	19 25 11.2	+0.2
NRIK				pmax	pmax		
	comp=Z,19nm,1.3s						
VORD	Divnogorie	63.22	324	eP	P	19 25 12.4	-3.6
VORD				pmax	pmax		
	comp=Z,20nm,0.9s						
BRTR	Keskin Array B	63.35	311	P	P	19 25 16.3	-1.1
	comp=Z,3.6nm,0.7s,baz=126,slow=7.7,SNR=11						
BRTR				LR	LR	19 54 29.6	
	comp=Z,894nm,21.0s,baz=110,slow=38						
BRTR	Keskin Array B	63.35	311	P	P	19 25 14.9	-2.4
BRTR	Keskin Array B	63.35	311	P	P	19 25 14.9	-2.4
MBAR	Mbarara	64.08	266	IAMs_20	IAMs_20	19 50 50.0	
	comp=Z,2µm,20.0s						
LPSR	Galich'ya Gora	64.09	326	eP	P	19 25 19.8	-2.0
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
TOO	Toolangi	64.90	137	P	P	19 25 28.8	+1.5
	baz=65,SNR=8.2						
PRGR	Permogore	65.37	337	eP	P	19 25 27.5	-2.4
PRGR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MOS	Moscow	66.09	329	eP	P	19 25 36.7	+2.0
MOS				e		19 26 06.2	
MOS				pmax	pmax		
	comp=Z,104nm,1.4s						
MOS				pmax	pmax		
	comp=Z,200nm,1.7s						
OBN	Obninsk	66.39	328	i P	P	19 25 34.7	-1.9
OBN				i		19 25 40.1	
OBN				i		19 25 51.7	
OBN				i		19 26 07.3	
OBN				pmax	pmax		
	comp=Z,27nm,1.3s						
OBN				MLR	MLR		
	comp=Z,737nm,21.0s						
KLMR	Klimovskoe	67.48	334	eP	P	19 25 42.5	-0.9
KLMR				e		19 28 10.6	
KLMR				pmax	pmax		
	comp=Z,38nm,1.3s						
KLMR	Klimovskoe	67.48	334	eP	P	19 25 42.6	-0.9
KLMR				AMP		19 25 54.1	
	comp=Z,38nm,1.3s						
KLMR				ePP	PP	19 28 10.7	-1.5
TIXI	Tiksi	68.08	11	P	P	19 25 46.3	-0.8
TIXI				pmax	pmax		
	comp=Z,21nm,0.9s						
TIXI	Tiksi	68.08	11	P	P	19 25 46.3	-0.8
AKASG	Malin Array Be	69.14	322	P	P	19 25 55.0	+0.8
	comp=Z,3.8nm,0.7s,baz=93,slow=5.0,SNR=8.0						
AKASG				LR	LR	19 59 08.8	
	comp=Z,514nm,21.2s,baz=100,slow=38						
SEY	Seymchan	69.62	24	P	P	19 25 57.0	+0.2
	comp=Z,4.9nm,0.8s,baz=0.7,slow=7.6,SNR=4.6						
SEY	Seymchan	69.62	24	i P	P	19 25 54.5	-2.4
MNK	Minsk	70.93	325	i P	P	19 26 06.4	+1.4
MNK				i		19 26 26.3	
MNK				i		19 28 39.2	
MNK				i PPP	PPP	19 30 22.7	
MNK				i S	S	19 35 23.5	+3.2
MNK				i SS	SS	19 39 57.6	+4.6
MNK				pmax	pmax		
	comp=Z,14nm,0.7s						
MNK				pmax	pmax		
	comp=N,9.0nm,0.7s						
MNK				pmax	pmax		
	comp=E,2.0nm,0.7s						
MNK				MLR	MLR		
	comp=Z,311nm,20.0s						
MNK				MLR	MLR		
	comp=E,35nm,17.0s						
MNK				MLR	MLR		
	comp=N,324nm,20.0s						
MNK	Minsk	70.93	325	i P	P	19 26 06.4	+1.4
	comp=E,2.0nm,0.7s						
MNK				i P	P	19 26 06.4	+1.4
	comp=N,9.0nm,0.7s						
MNK				i P	P	19 26 06.4	+1.4
	comp=Z,14nm,0.7s,baz=285						
MNK				i PcP	PcP	19 26 26.4	+0.9
MNK				i PP	PP	19 28 39.3	-2.9
MNK				i PPP	PPP	19 30 22.8	
MNK				i S	S	19 35 23.6	+3.3
MNK				i SS	SS	19 39 57.6	+4.6
MNK				i SSS	SSS	19 43 14.2	
MNK				i LQ	LQ	19 52 17.3	
MNK				i LR	LR	19 57 50.3	
MNK				i LRM	MLR	19 59 45.6	
	comp=Z,311nm,20.3s						
MNK				i LRM	MLR	19 59 52.0	
	comp=E,35nm,16.6s						
MNK				i LRM	MLR	20 00 10.9	
	comp=N,324nm,20.3s						
VTS	Vitosha	71.60	313	IAmb	IAmb	19 26 19.5	
	comp=Z,24nm,1.5s						
NACGM	Naroch	71.65	326	i P	P	19 26 12.9	+3.6
LHI	Lord Howe Isla	72.40	126	P	P	19 26 14.2	-0.1
	baz=72,SNR=3.6						
UZH	Uzhgorod	73.12	319	eP	P	19 26 25.7	+7.4
UZH				e		19 26 37.5	
KOLS	Kolonicke sedl	73.18	319	eP	P	19 26 23.8	+5.1
KOLS	Kolonicke sedl	73.18	319	eP	P	19 26 23.8	+5.1
CRVS	Cervenica-Dubn	73.70	319	eP	P	19 26 25.1	+3.3
CRVS				pmax	pmax		
	comp=Z,54nm,1.5s						
CRVS	Cervenica-Dubn	73.70	319	eP	P	19 26 25.1	+3.3
FINES	FINESS Array B	73.73	332	P	P	19 26 21.2	-0.4
	comp=Z,3.6nm,0.6s,baz=86,slow=4.7,SNR=20						
FINES				LR	LR	20 03 01.2	
	comp=Z,756nm,19.9s,baz=114,slow=39						
PSZ	Piszkesteto	74.61	318	eP	P	19 26 41.1	+14
OJC	Ojcow	74.95	320	P	P	19 26 28.3	-0.7
OJC				pmax	pmax		
	comp=Z,13nm,0.8s						
OJC	Ojcow	74.95	320	P	P	19 26 28.3	-0.7
OJC				IAmb	IAmb	19 26 37.0	
	comp=Z,13nm,0.8s						
MORH	Mrgy, Hungar	75.28	316	eP	P	19 26 35.4	+4.5
BOSA	Boshof	75.42	238	P	P	19 26 33.3	+1.1
	comp=Z,7.4nm,0.6s,baz=80,slow=5.7,SNR=10						
BOSA				LR	LR	19 57 04.7	
	comp=Z,595nm,19.3s,baz=44,slow=34						
SRO	Srobarova	75.66	317	eP	P	19 26 37.0	+3.9
SRO	Srobarova	75.66	317	eP	P	19 26 37.0	+3.9
JAVC	Velka Javorina	76.18	319	eP	P	19 26 39.8	+3.7
ARA0	ARCESS Array S	76.29	340	eP	P	19 26 35.8	-0.5
ARCES	ARCESS Array B	76.29	340	P	P	19 26 36.2	-0.1
	comp=Z,3.9nm,0.7s,baz=94,slow=6.5,SNR=13						
ARCES				LR	LR	20 03 16.9	
	comp=Z,1µm,19.6s,baz=110,slow=38						
SMOL	Smolenice	76.31	318	eP	P	19 26 40.4	+3.6
SMOL	Smolenice	76.31	318	eP	P	19 26 40.4	+3.6
MORC	Moravsky Berou	76.35	319	eP	P	19 26 39.3	+2.2
MORC	Moravsky Berou	76.35	319	IAmb	IAmb	19 26 48.7	
	comp=Z,24nm,1.3s						
MODS	Modra-Piesok	76.40	318	eP	P	19 26 39.4	+2.1
MODS	Modra-Piesok	76.40	318	eP	P	19 26 39.4	+2.1
ZST	Bratislava	76.50	318	eP	P	19 26 41.7	+3.8
ZST	Bratislava	76.50	318	eP	P	19 26 41.7	+3.8
BILL	Bilibino	76.82	22	i P	P	19 26 36.5	-2.8
BILL				i		19 26 48.7	
BILL				pmax	pmax		
	comp=Z,10.0nm,1.2s						
BILL				MLR	MLR		
	comp=Z,1µm,19.0s						
KRLC	Kraliky	76.87	320	eP	P	19 26 38.3	-1.7
KRLC	Kraliky	76.87	320	eP	P	19 26 38.3	-1.7
KTK1	Kautokeino	76.92	339	eP	P	19 26 39.4	-0.5
VRAC	Vranov	76.93	319	eP	P	19 26 41.8	+1.5
KRUC	Moravsky	77.04	319	eP	P	19 26 42.3	+1.4
DPC	Dobruska-Polom	77.19	320	eP	P	19 26 47.5	+5.7
DPC	Dobruska-Polom	77.19	320	epP	pP	19 26 47.5	+2.3
HAMF	Hammerfest	77.21	341	eP	P	19 26 40.9	-0.5
OSTC	Ostas	77.27	320	eP	P	19 26 48.5	+6.3
CONA	Conrad Observa	77.31	317	eP	P	19 26 45.2	+2.7
	comp=Z,6.5nm,1.0s						
CHVC	Chvalec	77.37	320	eP	P	19 26 44.3	+1.5
ARSA	Arzberg	77.50	317	eP	P	19 26 47.4	+3.8
	comp=Z,5.9nm,1.0s						
MAW	Mawson	77.69	192	P	P	19 26 45.6	+1.6
	comp=Z,6.3nm,1.1s,baz=61,slow=14,SNR=5.7						
MAW	Mawson	77.69	192	P	P	19 26 46.6	+2.6
SOKA	Soboth	77.80	316	eP	P	19 26 47.0	+1.7
	comp=Z,9.5nm,1.0s						
JETT	Jettan, Norway	78.03	340	eP	P	19 26 45.4	-0.7
OBKA	Obir	78.13	316	eP	P	19 26 47.1	-0.1
	comp=Z,5.1nm,0.8s						
PRU	Pruhonice	78.30	320	eP	P	19 26 50.8	+2.9
PRU	Pruhonice	78.30	320	eP	P	19 26 50.8	+2.9
MOA	Molln	78.38	317	eP	P	19 26 51.9	+3.4
	comp=Z,10nm,1.1s						
CKRC	Cesky Krumlov	78.39	318	eP	P	19 26 51.5	+3.0
TRO	Tromso	78.55	340	eP	P	19 26 48.1	-0.8
BRG	Berggiesshubel	78.73	320	eP	P	19 26 54.0	+3.8
BRG				Amp		19 26 56.6	
	comp=Z,5.9nm,1.0s						
BRG	Berggiesshubel	78.73	320	P	P	19 27 00.7	+10
BRG				Amp		19 27 01.5	
	comp=Z,14nm,1.1s						
BRG				Amp		20 07 35.0	
	comp=Z,0.8nm,19.8s						
BRG				Amp		20 07 41.0	
	comp=N,0.3nm,17.9s						
BRG				Amp		20 07 43.0	
	comp=E,0.5nm,19.4s						
MYKA	Terra Mystica	78.76	316	eP	P	19 26 53.7	+3.1
	comp=E,5.0nm,0.9s						
GEC2	GERESS Array S	78.80	318	IAmb	IAmb	19 27 01.8	
	comp=Z,30nm,1.2s						
GERES	GERESS Array B	78.80	318	P	P	19 26 50.7	-0.1
	comp=Z,2.2nm,0.8s,baz=90,slow=5.7,SNR=10						
GERES				LR	LR	20 08 11.7	
	comp=Z,304nm,18.1s,baz=74,slow=41						
KHC	Kasperske Hory	78.89	319	eP	P	19 26 50.2	-1.1
KHC				e		19 26 58.5	
KHC	Kasperske Hory	78.89	319	eP	P	19 26 50.2	-1.1
KHC				ex	x	19 26 58.5	
KBA	Koelnbreinsper	78.97	317	eP	P	19 26 52.8	+0.8
	comp=Z,12nm,1.2s						
CLL	Collm	79.34	321	eP	P	19 26 52.0	-1.6
CLL				e		19 26 59.0	
CLL				eS	S	19 36 54.0	0.0
CLL	Collm	79.34	321	eP	P	19 26 52.0	-1.6
CLL				e(sP)	sP	19 26 59.0	+0.7
CLL				i PcP	PcP	19 27 02.3	+0.5
	comp=Z,25nm,1.6s						
CLL				eS	S	19 36 54.0	0.0
FAUS	Fauske	79.51	337	eP	P	19 26 53.2	-1.0
ABTA	Abfaltersbach	79.54	316	eP	P	19 26 56.7	+1.7
	comp=Z,5.7nm,1.1s						
STEI	Steigen	79.60	338	eP	P	19 26 53.3	-1.3
NKC	Novy Kostel	79.66	320	eP	P	19 26 57.8	+2.4
NKC	Novy Kostel	79.66	320	eP	P	19 26 57.8	+2.4
MOR8	Moi Rana	79.70	336	eP	P	19 26 53.8	-1.5
CTI	Castel Tesino	80.12	315	IAmb	IAmb	19 27 09.1	
	comp=Z,20nm,0.9s						
WTTA	Wattenberg	80.14	317	eP	P	19 26 59.1	+0.8
	comp=Z,4.4nm,0.6s						
WATA	Walderalm	80.18	317	eP	P	19 26 59.1	+0.7
	comp=Z,5.8nm,0.8s						
LOF	Lofoten	80.26	338	eP	P	19 26 56.4	-1.9
SQTA	Sankt Quirin	80.43	317	eP	P	19 26 59.0	-0.8
	comp=Z,6.4nm,0.6s						
MOTA	Moosalm	80.50	317	eP	P	19 26 59.2	-1.0
	comp=Z,11nm,0.8s						
NC602	NORSAR Array S	80.58	330	eP	P	19 26 58.6	-1.5
NSS	Namsos	80.59	334	eP	P	19 26 59.1	-1.0
RETA	Reutte	80.74	317	eP	P	19 27 01.1	-0.2
	comp=Z,5.9nm,0.6s						
NB2	NORSAR Subarra	80.75	331	P	P	19 26 59.5	-1.6
	comp=Z,8.4nm,0.9s,baz=93,slow=5.6						
NB2	NORSAR Subarra	80.75	331	P	P	19 26 59.5	-1.6
	baz=93,slow=5.6						
NOA	NORSAR Array B	80.75	331	P	P	19 27 00.1	-0.9
	comp=Z,1.4nm,0.9s,baz=222,slow=24,SNR=4.7						
NOA				LR	LR	20 06 29.6	
	comp=Z,341nm,18.8s,baz=100,slow=38						
FETA	Feichten	80.76	316	eP	P	19 27 01.0	-0.6
	comp=Z,11nm,0.9s						
SPA0	Spitsbergen Ar	80.84	348	eP	P	19 27 00.7	-0.6
DAVA	Damuels	81.34	317	eP	P	19 27 05.1	+0.4
	comp=Z,17nm,1.5s						
KONO	Kongsberg	81.51	329	eP	P	19 27 04.1	-1.0
TUE	Stuetta	81.72	316	P	P	19 27 06.4	-0.4
TUE				IAmb	IAmb	19 27 18.3	
	comp=Z,20nm,0.7s						
DOMB	Dombas	81.81	332	eP	P	19 27 05.3	-1.4
KEST	Kesra	82.11	305	P	P	19 27 08.4	-0.5
	comp=Z,2.4nm,0.7s,baz=349,slow=5.8,SNR=4.7						
KEST				LR	LR	20 08 21.7	
	comp=Z,299nm,20.0s,baz=152,slow=39						
SKAR	Skarslia	82.17	330	eP	P	19 27 07.3	-1.3
BFO	Black Forest	82.36	318	P	P	19 27 09.8	-0.1
BFO				pmax	pmax		
	comp=Z,12nm,0.9s						
BFO	Black Forest	82.36	318	P	P	19 27 09.8	-0.1
BFO				IAmb	IAmb	19 27 20.2	
	comp=Z,12nm,0.9s						
SENIN	Lac Senin/Sane	83.14	316	IAmb	IAmb	19 27 24.4	
	comp=Z,16nm,0.8s						
ASK	Askoy	83.71	330	eP	P	19 27 15.7	-0.8
MEM	Membach	83.77	320	dP	P	19 27 17.0	-0.1
SYO	Syowa Base	84.62	197	⇓epP	pP	19 27 26.4	+1.9
TORD	Torodi Ar. Bea	91.20	283	P	P	19 27 54.6	+0.9
	comp=Z,0.9nm,0.6s,baz=81,slow=4.4,SNR=9.5						
TORD				LR	LR	20 07 28.3	
	comp=Z,703nm,20.8s,baz=135,slow=35						
GCSA	Galena City Sc	91.58	24	P	P	19 27 56.3	+1.8
	baz=290						
VNDA	Vanda	91.92	168	P	P	19 27 56.2	+0.4
	comp=Z,2.0nm,1.1s,baz=295,slow=7.0,SNR=4.2						
VNDA				LR	LR	20 07 02.6	
	comp=Z,470nm,18.2s,baz=285,slow=34						
ESDC	Sonseca Array	92.13	310	P	P	19 27 57.4	-0.3
	comp=Z,1.5nm,0.6s,baz=358,slow=37,SNR=6.7						
ESDC				LR	LR	20 14 52.3	
	comp=Z,253nm,18.3s,baz=20,slow=39						
IMAR	Indian Mountai	92.35	22	P	P	19 27 57.2	-0.8
TOLK	Toolik Lake Re	92.72	19	P	P	19 28 01.4	+1.6
	baz=297						
H21K	Melozitna Rive	92.84	23	P	P	19 28 02.7	+2.4
	baz=294						
J20K	Nowinta River	92.89	24	P	P	19 28 02.0	+1.5
	baz=292						
K20K	Telida	93.23	25	P	P	19 28 04.1	+1.9
	baz=292						
CHUM	Lake Minchumin	93.75	24	P	P	19 28 06.6	+2.1
	baz=294						
O18K	Koktuh Hills	94.02	28	P	P	19 28 07.4	+1.5
	baz=291						
CAST	Castle Rocks	94.03	24	P	P	19 28 07.4	+1.5
	baz=294						
BPAW	Bear Paw Mtn.	94.19	24	P	P	19 28 08.8	+2.2
	baz=295						
ILAR	Eielson Array	95.47	22	P	P	19 28 12.8	+0.4
	comp=Z,0.2nm,0.6s,baz=124,slow=28,SNR=3.4						
ILAR				PP	PP	19 32 03.0	+0.2
	comp=Z,0.7nm,0.7s,baz=310,slow=8.4,SNR=5.2						
ILAR				LR	LR	20 13 36.0	
	comp=Z,491nm,20.9s,baz=325,slow=37						
GHO	Glory Hole Cre	96.06	25	IAMs_20	IAMs_20	19 58 09.1	
	comp=Z,634nm,19.0s						
GLI	Glacier Island	97.25	26	IAMs_20	IAMs_20	20 18 00.8	
	comp=Z,798nm,18.0s						
INK	Inuvik	97.79	16	P	Pdif	19 28 23.6	+0.8
	comp=Z,1.1nm,0.7s,baz=66,slow=6.9,SNR=3.4						
DBIC	Dimbokro	98.46	278	LR	LR	20 12 43.5	
	comp=Z,623nm,19.1s,baz=90,slow=35						
EGMT	Eagleton	121.25	19	P	PKiKP	19 33 41.5	+0.2
	baz=332						
PLID	Pearl Lake	121.42	25	IAMs_20	IAMs_20	20 09 16.7	
	comp=Z,646nm,21.0s						
O03E	Paynes Creek	122.31	32	P	PKPdf	19 33 43.1	-0.4
	baz=316						
ULM	Lac du Bonnet	122.35	8	PKP	PKPdf	19 33 42.5	-0.6
	comp=Z,3.2nm,0.6s,baz=272,slow=1.7,SNR=4.4						
BOZ	Bozeman (W)	122.71	22	P	PKiKP	19 33 44.8	+0.4
	baz=329						
HLID	Hailey	123.32	25	P	PKiKP	19 33 46.1	+0.4
	baz=325						
FXWY	Fox Creek	124.60	22	IAMs_20	IAMs_20	20 13 08.8	
	comp=Z,565nm,20.0s						
NVAR	Mina Array Bea	125.52	32	PKP	PKPdf	19 33 49.9	0.0
	comp=Z,1.1nm,0.6s,baz=319,slow=2.0,SNR=6.0						
PDAR	Pinedale Array	125.90	22	PKP	PKPdf	19 33 50.3	-0.2
	comp=Z,1.2nm,0.7s,baz=70,slow=2.2,SNR=12						
DUG	Dugway, Tooele	126.76	26	P	PKiKP	19 33 52.7	+0.2
	baz=326						
R11A	Troy Canyon, C	126.96	30	P	PKiKP	19 33 53.9	+0.8
	baz=322						
CWC	Cottonwood Cre	127.12	33	P	PKiKP	19 33 53.9	+0.4
	baz=318						
ECSD	EROS Data Cent	128.58	10	P	PKiKP	19 33 56.2	+0.3
	baz=346						
O20A	White River Ci	128.67	22	P	PKiKP	19 33 56.9	+0.4
	baz=331						
GMRC	Granite Mounta	129.66	33	P	PKiKP	19 33 59.7	+1.2
	baz=320						
TXAR	Lajitas Array	139.92	25	PKP	PKPdf	19 34 17.6	+0.6
	comp=Z,0.9nm,0.6s,baz=231,slow=0.5,SNR=8.2						
TXAR	Lajitas Array	139.92	25	PKIKP	PKiKP	19 34 18.8	-0.6
TXAR	Lajitas Array	139.92	25		PKiKP	19 34 18.8	-0.6
JCT	Junction City	140.35	20	PKIKP	PKPdf	19 34 14.6	-3.1
JCT	Junction City	140.35	20	PKPdf	PKPdf	19 34 14.6	-3.1
PLCA	Paso Flores	143.79	199	PKP	PKPdf	19 34 22.9	-0.7
	comp=Z,5.3nm,1.0s,baz=180,slow=6.4,SNR=5.1						
PLCA	Paso Flores	143.79	199	PKIKP	PKPdf	19 34 22.7	-0.8
PLCA	Paso Flores	143.79	199	PKPdf	PKPdf	19 34 22.7	-0.8
ITQB	Itaqui	144.67	227	PKPdf	PKPdf	19 34 25.5	+0.2
SMRT	St. Maarten	146.77	319	IAMs_20	IAMs_20	20 33 16.0	
	comp=Z,480nm,22.0s						
CPUP	Villa Florida	146.99	231	PKPbc	PKPbc	19 34 30.8	-0.5

	comp=Z,1.6nm,0.3s,baz=134,slow=1.3,SNR=5.2						
SAML	Samuel	157.85	263	IAMs_20	IAMs_20	20 30 23.0	
	comp=Z,225nm,18.0s						
LPAZ	La Paz	160.66	240	PKP	PKPdf	19 34 51.0	+1.4
	comp=Z,1.3nm,0.8s,baz=71,slow=3.1,SNR=2.6						

IDC 08 19:23:12.2±11.0**, 6.°29N×93.°34E, h0^{km}, mb3.6**/4**, mb1 3.7**/4**, mb1mx3.4**/40**, mbtmp3.6**/4**, Error ellipse: s-maj=590.3km s-min=31.4km az=59.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	41.46	349	P	P	19 31 00.2	-0.6
	0.5nm,0.7s,baz=162,slow=8.7,SNR=3.6						
KURBB	Kurchatov Arra	45.89	347	P	P	19 31 36.5	+0.2
	1.0nm,0.7s,baz=150,slow=5.8,SNR=4.1						
ZALV	Zalesovo Beam	48.02	353	P	P	19 31 52.9	0.0
	0.7nm,0.4s,baz=187,slow=5.8,SNR=2.0						
ASAR	Alice Springs	49.54	128	P	P	19 32 05.0	-0.1
	0.4nm,0.7s,baz=302,slow=7.3,SNR=1.7						

*IDC **08** 19:25:38.7±1.0, 6.°82N×94.°41E, h0^{km}, mb3.8/12, mb1 3.9/14, mb1mx3.7/41, mbtmp3.7/14, ML3.7/2, Error ellipse: s-maj=42.7km s-min=16.0km az=56.0*

*NEIC **08** 19:25:39.9±1.8, 6.°8N±0.°1×94.°4E±0.°2, h10^{km}±2^{km}, mb4.2/7, Error ellipse: s-maj=38.5km s-min=5.3km az=231.0*

ISC 08 19:25:42.6±0.7**, 6.°9N**±0.°1×**94.°5E**±0.°1**, h26^{km}, n29,** σ**1.^{s}04**/26**, mb4.0**/17**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	2.98	124	Pn	Pn	19 26 27.5	-0.7
PSI	Prapat	6.03	132	Pn	Pn	19 27 11.8	+1.6
	0.9nm,0.3s,baz=330,slow=14,SNR=5.2						
CMAR	Chiang Mai Arr	12.29	20	Pn	Pn	19 28 36.3	+0.3
	0.2nm,0.3s,baz=210,slow=15,SNR=5.3						
CMAR	Chiang Mai Arr	12.29	20		Pn	19 28 34.9	-1.1
CHTO	Chiang Mai	12.62	20	Pn	Pn	19 28 41.7	+1.2
H08S3	Diego Garcia H	26.24	237	T	T	19 58 01.6	
	baz=56,slow=75,SNR=14						
H08S2	Diego Garcia H	26.24	237	T	T	19 58 01.8	
	baz=56,slow=75,SNR=17						
H08S1	Diego Carcia H	26.26	237	T	T	19 58 02.9	
	baz=56,slow=75,SNR=6.9						
NIL	Nilore	33.08	326	P	P	19 32 14.6	-1.7
NIL				IAmb	IAmb	19 32 18.3	
	comp=Z,7.7nm,0.6s						
KBL	Kabul	36.13	323	P	P	19 32 41.5	-1.5
KBL				IAmb	IAmb	19 32 45.7	
	comp=Z,2.4nm,0.7s						
MK31	Makanchi Array	41.10	347	P	P	19 33 22.2	-2.1
MK31				IAmb	IAmb	19 33 25.2	
	comp=Z,2.1nm,1.1s						
MKAR	Makanchi Array	41.10	347	P	P	19 33 25.0	+0.7
	comp=Z,1.6nm,0.8s,baz=161,slow=7.7,SNR=9.7						
MKAR	Makanchi Array	41.10	347	P	P	19 33 23.5	-0.8
KKAR	Karatay Array	41.77	333	P	P	19 33 29.4	-0.5
SONM	Songino Array	42.04	12	P	P	19 33 33.0	+0.9
	comp=Z,0.6nm,0.6s,baz=186,slow=10,SNR=4.1						
KURBB	Kurchatov Arra	45.56	346	P	P	19 34 01.2	+1.0
	comp=Z,2.3nm,0.8s,baz=169,slow=7.2,SNR=9.6						
KURK	Kurchatov	45.63	346	P	P	19 34 01.0	+0.3
KURK				IAmb	IAmb	19 34 12.3	
	comp=Z,2.9nm,0.9s						
WRA	Warramunga Arr	47.44	125	P	P	19 34 15.2	-0.3
	comp=Z,0.4nm,0.6s,baz=303,slow=9.4,SNR=4.2						
ZALV	Zalesovo Beam	47.56	352	P	P	19 34 15.8	+0.1
	comp=Z,1.8nm,0.8s,baz=169,slow=9.1,SNR=6.2						
ZALV	Zalesovo Beam	47.56	352	P	P	19 34 15.5	-0.3
ASAR	Alice Springs	49.05	130	P	P	19 34 27.7	-0.2
	comp=Z,0.6nm,0.8s,baz=299,slow=7.8,SNR=5.0						
AS31	Alice Springs	49.05	130	P	P	19 34 26.0	-1.9
BVAR	Borovoye Array	50.01	341	P	P	19 34 34.4	-0.3
	comp=Z,1.3nm,0.8s,baz=188,slow=9.0,SNR=6.5						
ABKAR	Akbulak array	51.23	332	P	P	19 34 44.1	+0.2
ABKAR				IAmb	IAmb	19 34 46.2	
	comp=Z,2.4nm,0.8s						
STKA	Stephens Creek	59.21	133	P	P	19 35 41.3	-0.5
	comp=Z,0.9nm,0.7s,baz=191,slow=18,SNR=3.6						
BRTR	Keskin Array B	63.30	311	P	P	19 36 09.5	-0.1
	comp=Z,0.6nm,0.7s,baz=113,slow=9.5,SNR=4.0						
FINES	FINESS Array B	73.72	332	P	P	19 37 14.8	+0.8
	comp=Z,1.6nm,0.8s,baz=15,slow=7.9,SNR=1.4						
GERES	GERESS Array B	78.76	318	P	P	19 37 44.2	+1.1
	comp=Z,0.4nm,0.8s,baz=264,slow=40,SNR=2.3						
ESDC	Sonseca Array	92.08	310	P	P	19 38 50.7	+0.8
	comp=Z,0.2nm,0.3s,baz=60,slow=5.1,SNR=3.2						

IDC 08 19:33:34.4±16.0**, 6.°62N×93.°76E, h0^{km}, mb3.4**/3**, mb1 3.5**/3**, mb1mx3.2**/46**, mbtmp3.4**/3**, Error ellipse: s-maj=873.7km s-min=33.6km az=60.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S3	Diego Garcia H	25.50	237	T	T	20 06 00.4	
	baz=58,SNR=6.7						
H08S2	Diego Garcia H	25.50	237	T	T	20 06 00.4	
	baz=58,SNR=3.9						
H08S1	Diego Carcia H	25.52	237	T	T	20 05 57.6	
	baz=58						
MKAR	Makanchi Array	41.23	348	P	P	19 41 20.2	-0.9
	0.4nm,0.8s,baz=166,slow=8.6,SNR=1.9						
ZALV	Zalesovo Beam	47.75	353	P	P	19 42 13.8	+0.7
	0.3nm,0.2s,baz=185,slow=5.4,SNR=2.2						
ASAR	Alice Springs	49.42	129	P	P	19 42 26.3	-0.2
	0.2nm,0.7s,baz=310,slow=7.7,SNR=2.1						

*VAO **08** 19:43:32.3±0.6, 9.°07N×71.°41W, h10^{km}, mb4.3*

*IDC **08** 19:43:32.0±0.6, 8.°54N×71.°46W, h0^{km}, mb3.9/12, mb1 4.2/17, mb1mx4.0/36, mbtmp4.0/17, ML4.3/4, Error ellipse: s-maj=14.4km s-min=8.7km az=155.0*

*NEIC **08** 19:43:33.8±2.2, 8.°63N±0.°04×71.°40W±0.°05, h10^{km}±2^{km}, mb4.1/6, Error ellipse: s-maj=8.0km s-min=6.2km az=122.0*

*FUNV **08** 19:43:34.4, 8.°48N×71.°52W, h4^{km}, MW3.8*

ISC 08 19:43:32.9±1.2**, 8.°54N**±0.°02×**71.°45W**±0.°02**, h4^{km}**±7^{km}**, n128,** σ**1.^{s}87**/176**, mb3.9**/13**, 1C-1D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.64	113	*e*P	Pg	19 43 44.9	-0.4
SOCV				*e*S	Sg	19 43 52.6	-1.0
SDV	Santo Domingo	0.88	67	Pg	Pg	19 43 50.1	+0.2
	328nm,0.3s,baz=335,slow=17,SNR=417						
SDV				Lg	Lg	19 44 02.0	
	353nm,0.3s,baz=265,slow=12,SNR=9.9						
SDV				LR	LR	19 44 25.9	
	comp=Z,1µm,21.8s,baz=21,slow=61						
SDV	Santo Domingo	0.88	67⇓	*e*P	Pg	19 43 50.1	+0.2
SDV				*e*S	Sg	19 44 02.9	+1.5
SDV				*i*		19 44 06.0	
	comp=Z,1µm,0.4s						
SDV	Santo Domingo	0.88	67		Pg	19 43 48.5	-1.4
CAPV	Capacho	1.08	232	*e*P	Pg	19 43 52.8	-1.0
CAPV				*e*S	Sb	19 44 07.7	-1.2
PAMC	Pamplona, Colo	1.71	226	*e*P	Pn	19 44 04.8	+0.8
PAMC				*e*S	Sg	19 44 29.7	+1.6
PAMC				*i*		19 44 33.6	
	comp=Z,2µm,0.4s						
MCQV	Machiques	1.84	325	*e*P	Pn	19 44 05.9	+0.6
MCQV				*e*S	Sn	19 44 29.7	+0.5
OCAC	Ocana	1.87	261	*e*P	Pn	19 44 06.1	+0.3
OCAC				*e*S	Sg	19 44 32.0	-1.1
OCAC				*i*		19 44 34.2	
	comp=Z,7µm,0.6s						
OCAC	Ocana	1.87	261		Pn	19 44 05.9	0.0
TAMC	Tame, Arauca	2.11	189	*e*P	Pn	19 44 10.8	+1.7
TAMC				*e*S	Sg	19 44 40.7	-0.2
TAMC				*i*		19 44 47.6	
	comp=Z,1µm,0.5s						
LL1C	La Loma 1 Cana	2.30	296	*e*P	Pn	19 44 14.3	+2.6
LL1C				*e*S	Sb	19 44 45.7	+1.8
LL1C				*i*		19 45 03.2	
	comp=Z,5µm,0.6s						
ELOV	Elorza	2.48	128	*e*P	Pn	19 44 15.6	+1.5
ELOV				*e*S	Sn	19 44 48.1	+3.3
ELOV				*i*		19 45 03.2	
	comp=Z,6µm,0.5s						
ELOV	Elorza	2.48	128	*e*P	Pn	19 44 15.1	+1.0
ELOV				*e*S	Sn	19 44 44.9	+0.1
BARC	Barichara	2.58	222	*e*P	Pn	19 44 17.9	+2.2
BARC				*e*S	Sg	19 44 55.7	-0.3
BARC				*i*		19 44 57.7	
	comp=Z,1µm,0.5s						
SMLC	San Martn de	2.60	276	*e*P	Pn	19 44 15.9	+0.2
SMLC				*e*S	Sb	19 44 52.5	+0.1
SMLC				*i*		19 44 54.0	
	comp=Z,934nm,0.7s						
BRRC	Barranca, Sant	2.65	238	*e*P	Pn	19 44 18.0	+1.5
BRRC				*e*S	Sg	19 44 56.6	-1.5
BRRC				*i*		19 45 03.5	
	comp=Z,290nm,0.5s						
SIQV	Siquisique	2.65	38	*e*P	Pn	19 44 18.7	+2.1
SIQV				*e*S	Sn	19 44 50.8	+1.6
RUSC	La Rusia	3.08	212	*e*P	Pn	19 44 24.2	+1.3
RUSC				*e*S	Sg	19 45 10.1	-2.1
RUSC				*i*		19 45 13.5	
	comp=Z,418nm,0.6s						
URIC	Uribia, Colomb	3.19	350	*e*P	Pn	19 44 24.8	+0.9
URIC				*e*S	Sn	19 45 01.1	-1.2
URIC				*i*		19 45 16.9	
	comp=Z,199nm,0.5s						
URIC	Uribia, Colomb	3.19	350		Pn	19 44 23.0	-0.9
MAPV	Macapo	3.23	66	*e*P	Pn	19 44 26.2	+1.8
MAPV				*e*S	Sn	19 45 04.6	+1.3
BAUV	El Baul	3.40	83	*e*P	Pn	19 44 27.5	+0.8
BAUV				*e*S	Sn	19 45 07.2	-0.3
BAUV	El Baul	3.40	83	Pn	Pn	19 44 26.9	+0.1
ZARC	Zaragoza, Cauc	3.53	253	*e*P	Pn	19 44 29.0	+0.4
ZARC				*e*S	Sb	19 45 21.7	+2.5
ZARC				*i*		19 45 26.8	
	comp=Z,219nm,0.4s						
ZARC	Zaragoza, Cauc	3.53	253		Pn	19 44 29.2	+0.7
JACV	Jacura	3.62	45	*e*P	Pn	19 44 32.0	+2.1
JACV				*e*S	Sn	19 45 13.9	+0.9
SMRC	Santa Marta, M	3.78	314	*e*P	Pn	19 44 31.8	-0.2
SMRC				*e*S	Sn	19 45 20.6	+3.7
SMRC				*i*		19 45 30.9	
	comp=Z,222nm,0.5s						
SPBC	San Pablo de B	3.87	222	*e*P	Pn	19 44 34.2	+0.9
SPBC				*e*S	Sg	19 45 35.4	-1.9
SPBC				*i*		19 45 42.8	
	comp=Z,222nm,0.7s						
SJCC	San Jacinto, C	3.92	290	*e*P	Pn	19 44 36.0	+2.0
SJCC				*e*S	Sn	19 45 22.2	+1.7
SJCC				*i*		19 45 45.0	
	comp=Z,169nm,0.6s						
SJCC	San Jacinto, C	3.92	290		Pn	19 44 35.2	+1.3
TURV	Turiamo	4.04	62	*e*P	Pn	19 44 37.3	+1.7
TURV				*e*S	Sn	19 45 23.3	0.0
BENV	Beln	4.06	69	*e*P	Pn	19 44 37.4	+1.5
BENV				*e*S	Sn	19 45 23.8	-0.1
UREC	San Jos de Ur	4.11	259	*e*P	Pn	19 44 37.8	+1.2
UREC				*e*S	Sg	19 45 40.7	-4.4
UREC				*i*		19 45 42.9	
	comp=Z,73nm,0.4s						
MOTC	Monteria, Cord	4.17	274	*e*P	Pn	19 44 38.8	+1.5
MOTC				*e*S	Sg	19 45 44.7	-2.3
MOTC				*i*		19 45 55.2	
	comp=Z,123nm,0.7s						
MOTC	Monteria, Cord	4.17	274		Pn	19 44 37.9	+0.5
PTGC	Puerto Gaitan,	4.36	189	*e*P	Pg	19 44 59.9	+3.3
PTGC				*e*S	Sg	19 45 50.7	-2.5
PTGC				*i*		19 46 04.8	
	comp=Z,459nm,0.5s						
CHIC	Chingaza	4.49	210	*e*P	Pn	19 44 43.7	+1.5
CHIC				*e*S	Sn	19 45 34.6	-0.5
CHIC				*i*		19 46 02.0	
	comp=Z,120nm,0.6s						
NORC	Norcasia	4.50	229	*e*P	Pn	19 44 42.5	+0.6
NORC				*e*S	Sb	19 45 40.4	-6.7
NORC				*i*		19 45 54.9	
	comp=Z,98nm,0.5s						
ROSC	El Rosal	4.65	218	Pn	Pn	19 44 45.8	+1.5
	comp=Z,11nm,0.3s,baz=188,slow=1.3,SNR=27						
ROSC				Sn	Sn	19 45 39.4	+0.6
	comp=Z,15nm,0.3s,baz=249,slow=22,SNR=1.9						
ROSC				Lg	Lg	19 46 01.3	
	comp=Z,13nm,0.3s,baz=358,slow=20,SNR=4.1						
ROSC	El Rosal	4.65	218	*e*P	Pn	19 44 46.9	+2.6
ROSC				*e*S	Sg	19 46 03.4	+1.0
ROSC				*i*		19 46 16.2	
	comp=Z,78nm,0.5s						
ROSC	El Rosal	4.65	218		Pn	19 44 47.2	+2.9
TACV	Tcata	4.65	70	*e*P	Pn	19 44 45.0	+0.9
TACV				*e*S	Sn	19 45 36.8	-1.7
HELC	Santa Helena	4.67	240	*e*P	Pn	19 44 45.8	+1.3
HELC				*e*S	Sb	19 45 55.3	+3.1
HELC				*i*		19 46 05.7	
	comp=Z,81nm,0.5s						
LCBC	Los crdobas,	4.87	274	*e*P	Pn	19 44 46.5	-0.5
LCBC				*e*S	Sn	19 45 46.2	+2.4
LCBC				*i*		19 45 50.0	
	comp=Z,133nm,0.8s						
CARV	Caracas	4.87	66	*e*P	Pn	19 44 48.9	+1.8
CARV				*e*S	Sn	19 45 42.9	-1.2
PAYV	Puerto Ayacuch	4.88	129	*e*P	Pn	19 44 47.1	0.0
PAYV				*e*S	Sn	19 45 41.7	-2.3
VILC	Villavicencio,	4.93	207⇑	*e*P	Pn	19 44 48.8	+0.9
VILC				*e*S	Sn	19 45 45.4	-0.1
VILC				*i*		19 45 57.2	
	comp=Z,9µm,0.5s						
DBBC	Dabeiba	4.95	253	*e*P	Pn	19 44 52.3	+4.1
DBBC				*e*S	Sn	19 45 49.5	+3.6
DBBC				*i*		19 46 12.1	
	comp=Z,458nm,0.5s						
CACV	CAICARA DEL OR	4.96	101	*e*P	Pn	19 44 55.9	+7.6
CACV				*e*S	Sb	19 45 56.9	-3.6
MERV	Las Mercedes	5.14	82	*e*P	Pn	19 44 51.3	+0.5
MERV				*e*S	Sn	19 45 48.6	-2.0
CBOC	Ciudad Bolivar	5.24	240	*e*P	Pn	19 44 55.0	+2.7
CBOC				*e*S	Sg	19 46 18.4	-3.1
CBOC				*i*		19 46 24.0	
	comp=Z,49nm,0.7s						
BIRV	Birongo	5.46	69	*e*P	Pn	19 44 55.9	+0.6
BIRV				*e*S	Sn	19 45 56.2	-2.3
BIRV	Birongo	5.46	69	Pn	Pn	19 44 55.8	+0.6
ANIL	Santa Ana	5.62	225	*e*P	Pn	19 44 58.9	+1.4
ANIL				*e*S	Sn	19 46 06.8	+4.2
ANIL				*i*		19 46 10.6	
	comp=Z,149nm,0.4s						
CAPC	Capurgana	5.83	271	*e*P	Pn	19 44 59.0	-1.3
CAPC				*e*S	Sn	19 46 05.1	-2.5
CAPC				*i*		19 46 08.5	
	comp=Z,24nm,0.6s						
CAP2	Capurgana	5.84	272		Pn	19 44 58.9	-1.4
ORTC	Ortega, Tolima	5.95	220	*e*P	Pn	19 45 02.7	+0.9
ORTC				*e*S	Sn	19 46 11.3	+0.8
ORTC				*i*		19 46 49.8	
	comp=Z,68nm,0.6s						
PLMC	San Jos del P	6.00	233	*e*P	Pn	19 45 04.9	+2.3
PLMC				*e*S	Sn	19 46 16.8	+4.9
GUVC	San Jose del G	6.07	191	*e*P	Pn	19 45 03.1	-0.4
GUVC				*e*S	Sn	19 46 10.6	-2.8
GUVC				*i*		19 46 55.4	
	comp=Z,245nm,0.5s						
YOTC	Yotoco, Valle	6.64	227	*e*P	Pn	19 45 12.0	+0.5
YOTC				*e*S	Sn	19 46 37.5	+10
PRGV	PARIAGUAN	6.74	88	*e*P	Pn	19 45 12.9	+0.3
PRGV				*e*S	Sn	19 46 25.8	-4.1
MACC	Macarena, Meta	6.78	201	*e*P	Pn	19 45 12.2	-1.2
MACC				*e*S	Sn	19 46 28.2	-2.8
MACC				*i*		19 47 31.9	
	comp=Z,155nm,0.5s						
PCRV	Puerto La Cruz	6.92	76	Pn	Pn	19 45 16.7	+1.5
	comp=Z,4.3nm,0.3s,baz=199,slow=6.8,SNR=16						
PCRV				Sn	Sn	19 46 35.8	+1.3
	comp=Z,11nm,0.3s,baz=166,slow=23,SNR=5.8						
PCRV	Puerto La Cruz	6.92	76	*e*P	Pn	19 45 15.9	+0.6
PCRV				*e*S	Sn	19 46 31.6	-2.9
GARC	Garzon, Huila	7.48	213	*e*P	Pn	19 45 23.9	+0.8
GARC				*e*S	Sn	19 46 45.4	-3.2
GARC				*i*		19 46 55.0	
	comp=Z,38nm,0.3s						
PCON	Cinco Dias	7.89	219	*e*P	Pn	19 45 32.1	+3.1
SOTA	Rioblanco	8.17	219	*e*P	Pn	19 45 32.6	-0.2
BCIP	Isla Barro Col	8.31	275	Pn	Pn	19 45 34.8	+0.5
PCDR	Punta Cana, DR	10.36	16	Pn	Pn	19 45 59.1	-3.2
SDDR	Presa de Saban	10.38	1		Pn	19 46 03.9	+1.1
DR12	Loma Pena Alta	10.39	11		Pn	19 46 00.9	-1.9
ICMP	Isla Caja de M	10.46	27	Pn	Pn	19 46 01.4	-2.3
PRSN	Puerto Rico Se	10.49	23	Pn	Pn	19 46 01.9	-2.3
OTAV	Otavalo	10.80	221	*e*P	Pn	19 46 13.6	+4.8
PDPR	Patillas Dam,	10.80	29	Pn	Pn	19 46 06.9	-1.5
SJG	San Juan	10.82	28	Pn	Pn	19 46 07.3	-1.4
	comp=Z,3.5nm,0.3s,baz=198,slow=14,SNR=7.3						
SJG				Sn	Sn	19 48 02.7	-7.7
	comp=Z,1.0nm,0.3s,baz=346,slow=17,SNR=2.3						
SJG	San Juan	10.82	28	Pn	Pn	19 46 06.2	-2.5
HUMP	Col San Antoni	10.99	29	Pn	Pn	19 46 08.9	-2.2
CBYP	Canovanas	11.10	29	Pn	Pn	19 46 11.5	-1.1
STVI	Saint Thomas	11.62	32	Pn	Pn	19 46 18.6	-1.1
BOAV	Boa Vista	12.47	119	*e*P	Pn	19 46 31.7	+0.4
BOAV	Boa Vista	12.47	119		Pn	19 46 30.6	-0.8
PTGA	Pitinga	14.69	128	Pn	Pn	19 46 59.5	-2.2
	comp=Z,1.0nm,0.3s,baz=312,slow=15,SNR=12						
PTGA				Sn	Sn	19 49 34.6	-10
	comp=Z,0.4nm,0.3s,baz=309,slow=23,SNR=1.6						
PTGA				Lg	Lg	19 51 13.4	
	comp=Z,3.4nm,0.3s,baz=37,slow=23,SNR=7.3						
PTGA	Pitinga	14.69	128	Pn	Pn	19 46 60.0	-1.7
ETMB	Extrema	18.96	164	*e*P	Pn	19 47 58.6	+2.6
ETMB	Extrema	18.96	164	P	P	19 47 56.2	+0.9
ETMB				IAmb	IAmb	19 48 16.1	
	comp=Z,3.7nm,0.7s						
MDP	Montagnes des	18.99	99	P	P	19 47 56.9	+1.2
	comp=Z,0.7nm,0.3s,baz=277,slow=12,SNR=7.3						
SAML	Samuel	19.23	154	*e*P	Pn	19 48 02.5	+3.4
SAML	Samuel	19.23	154	P	P	19 47 59.3	+1.1
MALB	Monte Alegre	20.00	120	*e*P	P	19 48 08.9	+2.1
ITTB	Itaituba	20.25	129	*e*P	Pn	19 48 12.3	+1.0
NPGB	Novo Progresso	22.29	134	*e*P	P	19 48 32.2	+0.7
CLDB	Colider	24.79	141	*e*P	P	19 48 56.4	+0.2
LPAZ	La Paz	24.88	172	P	P	19 48 59.2	+1.6
	comp=Z,2.7nm,0.6s,baz=341,slow=8.9,SNR=9.3						
LPAZ	La Paz	24.88	172	*e*P	P	19 49 00.4	+2.8
LPAZ	La Paz	24.88	172	P	P	19 48 58.5	+0.8
LPAZ				IAmb	IAmb	19 49 16.3	
	comp=Z,3.9nm,0.8s						
SIV	San Ignacio	26.45	157	P	P	19 49 11.7	+0.5
	comp=Z,2.5nm,0.9s,baz=318,slow=3.2,SNR=6.2						
PTLB	Pontes e Lacer	26.77	153	*e*P	P	19 49 18.2	+4.1
PB11	IPOC Station P	28.17	176		P	19 49 25.4	-1.4
SNDB	Serra Nova Dou	28.58	135	*e*P	P	19 49 32.0	+1.7
SALV	Santo Antonio	28.86	147	*e*P	P	19 49 35.0	+2.2
SMTB	Santa Maria do	29.39	125	*e*P	P	19 49 38.6	+1.1
ROSB	Rosrio	29.52	111	*e*P	P	19 49 39.8	+1.0
PEXB	Peixe	30.83	131	*e*P	P	19 49 51.4	+1.1
SDBA	SAO DESIDERIO	33.60	128	*e*P	P	19 50 15.7	+0.9
IPMB	Ipameri, GO	34.95	139	*e*P	P	19 50 27.9	+1.6
JANB	Januaria	35.69	131	*e*P	P	19 50 33.7	+1.0
NBPN	Ponto Novo - B	36.58	121	*e*P	P	19 50 41.8	+1.4
TXAR	Lajitas Array	36.62	309	P	P	19 50 41.1	+0.3
	comp=Z,0.3nm,0.6s,baz=131,slow=8.6,SNR=4.1						
TXAR				PcP	PcP	19 53 04.4	+0.4
	comp=Z,0.4nm,0.6s,baz=127,slow=3.9,SNR=4.4						
BB19B	Bebedouro	37.05	143	*e*P	P	19 50 45.1	+0.8
CPUP	Villa Florida	37.28	159	*e*P	P	19 50 48.0	+2.0
DIAM	Diamantina, MG	38.25	134	*e*P	P	19 50 55.8	+1.2
GDU01	Guandu, BA	38.60	125	*e*P	P	19 50 57.0	-0.5
SDCO	Great Sand Dun	42.31	319	P	P	19 51 27.4	-0.9
SDCO				IAmb	IAmb	19 51 33.3	
	comp=Z,2.6nm,0.8s						
ULM	Lac du Bonnet	46.27	338	P	P	19 52 00.2	+0.7
	comp=Z,2.7nm,0.6s,baz=160,slow=8.3,SNR=4.1						
PDAR	Pinedale Array	47.71	322	P	P	19 52 11.6	+0.5
	comp=Z,1.1nm,0.5s,baz=119,slow=11,SNR=18						
PDAR	Pinedale Array	47.71	322	P	P	19 52 11.4	+0.2
PLCA	Paso Flores	49.03	179	P	P	19 52 19.9	-1.1
	comp=Z,4.1nm,0.8s,baz=351,slow=7.9,SNR=7.5						
PLCA	Paso Flores	49.03	179	P	P	19 52 21.0	-0.1
PLCA				IAmb	IAmb	19 52 22.8	
	comp=Z,4.0nm,0.8s						
NVAR	Mina Array Bea	51.50	313	P	P	19 52 39.7	-0.4
	comp=Z,0.1nm,0.3s,baz=107,slow=8.7,SNR=2.2						
DBIC	Dimbokro	65.97	86	P	P	19 54 19.4	-1.6
	comp=Z,3.1nm,1.0s,baz=292,slow=5.4,SNR=2.1						
ESDC	Sonseca Array	67.29	51	P	P	19 54 28.3	-0.8
	comp=Z,0.4nm,0.6s,baz=258,slow=7.3,SNR=2.4						
TORD	Torodi Ar. Bea	71.78	79	P	P	19 54 55.2	-2.0
	comp=Z,0.8nm,0.7s,baz=286,slow=6.7,SNR=7.8						
ILAR	Eielson Array	76.12	335	P	P	19 55 20.3	-1.4
	comp=Z,0.6nm,0.7s,baz=112,slow=4.7,SNR=5.8						
GERES	GERESS Array B	80.45	42	P	P	19 55 46.9	+0.7
	comp=Z,0.6nm,0.8s,baz=291,slow=4.1,SNR=4.5						
ASAR	Alice Springs	151.44	235	PKPbc	PKPbc	20 03 27.4	-1.6
	comp=Z,1.1nm,0.7s,baz=120,slow=2.9,SNR=14						
CMAR	Chiang Mai Arr	151.55	19	PKPbc	PKPbc	20 03 30.2	+0.8
	comp=Z,0.7nm,0.4s,baz=324,slow=3.6,SNR=5.0						
WRA	Warramunga Arr	152.60	243	PKPbc	PKPbc	20 03 30.2	-1.5
	comp=Z,1.4nm,0.5s,baz=110,slow=2.6,SNR=19						

*IDC **08** 19:45:18.0±1.6, 6.°76N×94.°28E, h0^{km}, mb3.7/6, mb1 3.8/8, mb1mx3.5/47, mbtmp3.7/8, ML3.7/2, MS4.4/1, Ms1 4.4/1, ms1mx3.4/55, Error ellipse: s-maj=70.0km s-min=18.3km az=56.0*

ISC 08 19:45:22.3±1.2**, 6.°8N**±0.°2×**94.°3E**±0.°2**, h26^{km}, n13,** σ**0.^{s}90**/9**, mb3.8**/7**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	6.11	131	Pn	Pn	19 46 52.1	+1.0
	1.0nm,0.3s,baz=316,slow=15,SNR=6.9						
CMAR	Chiang Mai Arr	12.43	21	Pn	Pn	19 48 17.9	+0.2
	0.2nm,0.3s,baz=214,slow=15,SNR=7.9						
H08S3	Diego Garcia H	26.05	237	T	T	20 17 40.8	
	baz=56,slow=76,SNR=18						
H08S2	Diego Garcia H	26.05	237	T	T	20 17 34.8	
	baz=56,slow=76,SNR=12						
H08S1	Diego Carcia H	26.06	237	T	T	20 17 41.1	
	baz=56,slow=76,SNR=4.3						
MKAR	Makanchi Array	41.15	347	P	P	19 53 03.8	-0.7
	0.6nm,0.7s,baz=151,slow=8.3,SNR=6.1						
KURBB	Kurchatov Arra	45.60	346	P	P	19 53 40.2	0.0
	0.6nm,0.3s,baz=169,slow=7.1,SNR=4.5						
WRA	Warramunga Arr	47.54	125	P	P	19 53 54.7	-1.2
	0.3nm,0.5s,baz=304,slow=8.9,SNR=6.8						
ZALV	Zalesovo Beam	47.62	352	P	P	19 53 55.4	-0.6
	0.4nm,0.4s,baz=296,slow=11,SNR=2.0						
ASAR	Alice Springs	49.14	129	P	P	19 54 07.2	-1.0
	0.4nm,0.8s,baz=318,slow=9.0,SNR=6.5						
JHJ	Hachijo jima 2	49.60	52	LR	LR	20 17 28.1	
	comp=Z,329nm,18.7s,baz=84,slow=39						
AKTO	Aktyubinsk	52.94	332	P	P	19 54 36.8	+0.4
	0.7nm,0.4s,baz=154,slow=6.3,SNR=2.0						
FINES	FINESS Array B	73.71	332	P	P	19 56 54.3	+0.6
	3.6nm,1.0s,baz=202,slow=4.1,SNR=4.1						

*ATH **08** 19:47:43.6, 39.°77N×26.°24E, h16^{km}±5^{km}, ML2.0/3, Error ellipse: s-maj=6.1km s-min=1.5km az=220.0*

*DDA **08** 19:47:43.3, 39.°77N×26.°28E, h7^{km}±1^{km}, ML1.9*

*THE **08** 19:47:44.2, 39.°79N×26.°21E, h11^{km}±1^{km}, ML2.0/7, Error ellipse: s-maj=1.4km s-min=0.4km az=168.0*

ISK 08 19:47:42.7, 39.°78N×26.°29E, h7^{km}, ML2.5/32**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EZN	Ezine	0.05	35	PG	Pg	19 47 44.8	+0.5
EZN				SG	Sg	19 47 45.9	+0.4
BOZC	Bozcaada	0.19	288	*i* P	Pg	19 47 47.4	+0.8
BOZC				*i* S	Sg	19 47 50.4	+1.3
BOZC	Bozcaada	0.19	288	PG	Pg	19 47 47.3	+0.8
BOZC				SG	Sg	19 47 50.4	+1.3
ECEA	Canakkale, Ece	0.28	342	*i* P	Pb	19 47 49.2	-0.8
ECEA				*i* S	Sb	19 47 53.6	-1.2
ECEA				IAML		19 47 54.0	
	comp=N,192nm,0.6s						
ECEA				IAML		19 47 56.0	
	comp=E,157nm,0.5s						
KOCA	Canakkale, Ayv	0.30	202	*i* P	Pg	19 47 49.4	+0.8
KOCA				*i* S	Sg	19 47 54.0	+1.3
KOCA				IAML		19 47 54.0	
	comp=E,364nm,0.5s						
KOCA				IAML		19 47 54.0	
	comp=N,392nm,0.3s						
GPNR	Gulpinar-Canak	0.35	200	PG	Pg	19 47 50.0	+0.5
GPNR				SG	Sg	19 47 55.2	+1.2
GOKA	anakkale-Gk	0.50	325	*i* P	Pb	19 47 53.3	-0.5
GOKA				*i* S	Sb	19 48 00.7	-0.6
GOKA				IAML		19 48 11.0	
	comp=E,153nm,0.2s						
GOKC	Gokceada-Canak	0.50	326	PG	Pg	19 47 52.9	+0.5

GADA	**Gvkgeada**	**0.51**	**324**	PG	Pg	19 47 53.0	+0.5
PRK	**Paraskevi**	**0.54**	**181**	P	Pb	19 47 54.8	+0.4
PRK				S	Sb	19 48 02.9	+0.6
	comp=E,175nm,0.2s						
AYVA	**Ayvalik**	**0.57**	**146**	*i* P	Pb	19 47 54.5	-0.4
AYVA				IAML		19 48 02.0	
	comp=N,144nm,0.5s						
AYVA				IAML		19 48 02.0	
	comp=E,63nm,0.3s						
AYVA				*i* S	Sb	19 48 02.4	-0.8
GELI	**Tayfur-Gelibol**	**0.63**	**13**	PG	Pb	19 47 55.5	-0.5
SIGR	**SIGRI**	**0.66**	**210**	P	Pb	19 47 56.0	-0.5
SIGR				S	Sb	19 48 05.5	-0.4
	comp=E,312nm,0.2s						
SIGR	**SIGRI**	**0.66**	**210**	P	Pg	19 47 55.7	+0.3
SIGR				S	Sb	19 48 05.3	-0.6
SIGR				AML	AML	19 48 07.0	
	comp=E,640µm,0.2s						
SIGR				AML	AML	19 48 07.4	
	comp=N,621µm,0.3s						
SIGR	**SIGRI**	**0.66**	**210**	PG	Pg	19 47 55.8	+0.4
BUHA	**Balikesir, Bur**	**0.67**	**114**	*i* P	Pb	19 47 56.4	-0.3
BUHA				*i* S	Sb	19 48 06.0	-0.3
BUHA				IAML		19 48 06.0	
	comp=N,81nm,0.4s						
BUHA				IAML		19 48 06.0	
	comp=E,65nm,0.4s						
LPK	**Lapseki**	**0.69**	**32**	PG	Pg	19 47 56.5	+0.5
ENZZ	**Sultanice-Enez**	**0.83**	**352**	PG	Pb	19 47 59.1	-0.3
DKL	**Dikili**	**0.86**	**146**	PG	Pb	19 47 59.7	-0.2
LIA	**Limnos Island**	**0.86**	**278**	P	Pg	19 47 59.3	+0.1
LIA				S	Sb	19 48 11.1	-0.4
	comp=E,58nm,0.4s						
LIA	**Limnos Island**	**0.86**	**278**	P	Pg	19 47 59.2	0.0
SMTH	**Samothraki Isl**	**0.90**	**320**	P	Pb	19 48 00.4	-0.2
SMTH				S	Sb	19 48 13.1	+0.3
	comp=E,165nm,0.2s						
ERIK	**Erikli-Kesan**	**0.90**	**11**	PG	Pg	19 48 00.2	+0.1
CAVK	**Edirne/Enez-Ca**	**0.91**	**354**	*i* P	Pb	19 48 01.1	+0.2
CAVK				*i* S	Sn	19 48 14.7	-0.6
CAVK				IAML		19 48 17.0	
	comp=E,45nm,0.8s						
CAVK				IAML		19 48 21.0	
	comp=N,34nm,0.6s						
CAND	**Candarli**	**0.92**	**154**	PG	Pb	19 48 01.0	+0.1
ENEZ	**Enez**	**0.96**	**354**	P	Pb	19 48 01.8	+0.2
ENEZ				S	Sn	19 48 15.9	-0.5
	comp=N,88nm,0.4s						
ENEZ	**Enez**	**0.96**	**354**	PG	Pb	19 48 01.6	0.0
KRBG	**Karabiga-Canak**	**0.99**	**52**	PG	Pg	19 48 01.7	0.0
GONE	**Gonen-Balikesi**	**1.11**	**76**	PN	Pn	19 48 04.5	-0.1
FOCM	**Foa**	**1.12**	**162**	PN	Pn	19 48 04.8	0.0
ALN	**Alexandroupoli**	**1.13**	**351**	P	Pg	19 48 04.2	-0.2
ALN				S	Sn	19 48 20.1	-0.5
	comp=N,50nm,0.4s						
ALN	**Alexandroupoli**	**1.13**	**351**	P	Pg	19 48 04.4	0.0
ALN				AML	AML	19 48 21.9	
	comp=E,111µm,0.3s						
ALN				AML	AML	19 48 22.1	
	comp=N,89µm,0.4s						
ALN	**Alexandroupoli**	**1.13**	**351**	PN	Pg	19 48 04.3	-0.1
RKY	**Sarkoy-Tekirda**	**1.13**	**37**	PN	Pn	19 48 04.9	-0.1
MAR6	**Marsite Statio**	**1.19**	**39**	PN	Pn	19 48 05.8	+0.1
MAR2	**Marsite Statio**	**1.22**	**40**	PN	Pn	19 48 06.6	+0.5
MAR3	**Marsite Statio**	**1.23**	**38**	PN	Pg	19 48 06.8	+0.5
BALB	**Balikesir**	**1.24**	**96**	PN	Pn	19 48 06.4	0.0
GZKV	**Gazikoy-Tekird**	**1.25**	**39**	PN	Pg	19 48 06.9	+0.2
MRMT	**Marmara Adasi**	**1.30**	**50**	PN	Pn	19 48 07.2	-0.1
EDC	**Edincik**	**1.33**	**65**	PN	Pn	19 48 07.8	+0.1
UKOP	**Uzunkopru-Edir**	**1.37**	**11**	PN	Pb	19 48 08.6	0.0
CHOS	**Chios island**	**1.41**	**187**	P	Pn	19 48 08.5	-0.2
CHOS	**Chios island**	**1.41**	**187**	PN	Pb	19 48 09.3	0.0
URLA	**Izmir**	**1.44**	**170**	PN	Pn	19 48 09.1	-0.1
THAS	**Thassos island**	**1.46**	**305**	P	Pn	19 48 09.2	-0.2
THAS				S	Sn	19 48 27.8	-0.9
	comp=N,32nm,0.3s						
THAS	**Thassos island**	**1.46**	**305**	P	Pn	19 48 09.4	0.0
THAS				AML	AML	19 48 28.3	
	comp=N,81µm,0.4s						
THAS				AML	AML	19 48 28.6	
	comp=E,52µm,0.2s						
RDO	**Rodhopi**	**1.48**	**337**	P	Pn	19 48 09.8	+0.1
RDO	**Rodhopi**	**1.48**	**337**	PN	Pn	19 48 09.9	+0.2
BLCB	**Balcova**	**1.51**	**157**	PN	Pb	19 48 10.8	-0.3
KCTX	**Karacabey (Bur**	**1.66**	**72**	PN	Pn	19 48 12.6	+0.4
CRLT	**Corlu**	**1.74**	**39**	PN	Pn	19 48 14.1	+0.8
OUR	**Ouranopolis**	**1.85**	**288**	P	Pn	19 48 15.0	+0.2
OUR	**Ouranopolis**	**1.85**	**288**	PN	Pn	19 48 15.1	+0.3
SLVT	**Silivri**	**2.06**	**45**	PN	Pn	19 48 18.5	+0.8
MDNY	**Mudanya-Bursa**	**2.08**	**73**	PN	Pn	19 48 18.4	+0.5
EDRB	**Edirne**	**2.09**	**9**	PN	Pn	19 48 18.6	+0.5
AYDB	**Zeytinkoy-Aydi**	**2.22**	**145**	PN	Pn	19 48 20.6	+0.6
CTKS	**Kestanelik-??a**	**2.23**	**49**	PN	Pn	19 48 20.9	+0.9
KULA	**Kula-Manisa**	**2.24**	**124**	PN	Pn	19 48 21.1	+0.9

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*VIE **08** 19:49:18.6±0.3, 46°.49N×16°.18E, h15^{km}, mb1.3/2, ml1.8/6, Error ellipse: s-maj=2.0km s-min=1.2km az=91.0 24 km NNW of Varazdin*

*LJU **08** 19:49:18.6, 46°.48N×16°.18E, h8^{km}, ML1.6*

*RHSSO **08** 19:49:19.5±0.5, 46°.40N×16°.28E, h7^{km}±3^{km}, ML1.6/5*

*PRU **08** 19:49:22.4±0.0, 46°.53N×16°.08E, h15^{km}*

KRSZO 08 19:49:18.2±0.8**, 46°.46N×16°.22E, h8**^{km}±3^{km}**, ML1.8**/8**, 2C-3D, Error ellipse: s-maj=3.1km s-min=2.7km az=172.0, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOGS	**Kog**	**0.03**	**105**	⇑*i*Pg	Pg	19 49 20.6	+0.8
KOGS				*i* Sg	Sg	19 49 22.0	+1.1
KOGS				IAML		19 49 22.4	
	comp=Z,414nm,0.1s						
KOGS	**Kog**	**0.03**	**105**	Pb	Pg	19 49 19.8	0.0
	comp=Z,10nm,SNR=82						
BEHE	**Becsehely**	**0.39**	**88**	*e*PG	Pb	19 49 27.0	-0.4
BEHE				*e*SG	Sb	19 49 32.8	-0.7
BEHE	**Becsehely**	**0.39**	**88**	*e*Pg	Pg	19 49 26.5	+0.7
BEHE				*e*Sg	Sg	19 49 31.7	+0.8
BEHE	**Becsehely**	**0.39**	**88**	Pb	Pb	19 49 27.0	-0.4
	comp=Z,0.3nm,SNR=3.6						
BEHE				Sg	Sb	19 49 32.8	-0.7
GROS	**Grobnik**	**0.49**	**271**	*i* Pg	Pg	19 49 28.2	+0.4
GROS				*e*Sg	Sg	19 49 35.0	+0.8
GROS				IAML		19 49 36.8	
	comp=Z,15nm,0.1s						
PTJ	**Puntijarka**	**0.57**	**197**	Lg	Lg	19 49 38.1	
DOBS	**Dobrina**	**0.60**	**240**	*e*Pg	Pg	19 49 30.3	+0.5
DOBS				IAML		19 49 42.9	
	comp=Z,14nm,0.1s						
GOLS	**Golise**	**0.60**	**223**	⇑*i*Pg	Pb	19 49 30.6	-0.4
GOLS				*e*Sg	Sb	19 49 39.5	-0.2
GOLS				IAML		19 49 42.6	
	comp=Z,14nm,0.2s						
ZAG	**Zagreb**	**0.65**	**194**	*e*Pg	Pg	19 49 30.0	-0.7
ZAG				*e*Sg	Sg	19 49 39.5	+0.3
GCIS	**Gornji Cirnik**	**0.72**	**215**	*e*Pg	Pb	19 49 32.7	-0.2
GCIS				*e*Sg	Sb	19 49 43.7	+0.8
GCIS				IAML		19 49 46.2	
	comp=Z,5.6nm,0.2s						
PERS	**Pernice**	**0.78**	**284**	*e*Pg	Pg	19 49 33.5	+0.2
PERS				*e*Sg	Sg	19 49 43.9	+0.5
PERS				IAML		19 49 48.0	
	comp=Z,72nm,0.2s						
LEGS	**Legarje**	**0.80**	**231**	*i* Pg	Pb	19 49 34.2	-0.2
LEGS				*e*Sg	Sb	19 49 45.4	0.0
CRES	**Cresnjev**	**0.82**	**220**	⇓*i*Pg	Pg	19 49 34.3	+0.3
CRES				*e*Sg	Sb	19 49 46.1	+0.2
CRES	**Cresnjev**	**0.82**	**220**	*i* Pg	Pb	19 49 34.7	0.0
CRES				*e*Sg	Sb	19 49 46.4	+0.5
CRES				IAML		19 49 49.1	
	comp=Z,2.7nm,0.1s						
CRES	**Cresnjev**	**0.82**	**220**	Pg	Pb	19 49 34.6	-0.1
	comp=Z,0.2nm,SNR=2.2						
CRES				Lg	Lg	19 49 46.2	
SOKA	**Soboth**	**0.85**	**286**	*e*Pg	Pg	19 49 34.5	0.0
	comp=Z,0.1nm,0.1s,SNR=9.5						
SOKA				*e*Sg	Sg	19 49 45.6	+0.1
	comp=Z,1.4nm,0.1s						
ARSA	**Arzberg**	**0.93**	**329**	*e*Pg	Pg	19 49 35.7	-0.4
	comp=Z,0.3nm,0.1s,SNR=16						
ARSA				*e*Sg	Sb	19 49 48.6	-0.4
	comp=Z,0.9nm,0.1s						
ARSA	**Arzberg**	**0.93**	**329**	Pn	Pn	19 49 37.2	-0.3
	comp=Z,0.1nm,SNR=2.2						
PDKS	**Podkum**	**0.93**	**245**	⇓*i*Pg	Pb	19 49 36.5	-0.1
PDKS				IAML		19 49 51.5	
	comp=Z,3.3nm,0.2s						
OBKA	**Obir**	**1.15**	**273**	*e*Pg	Pn	19 49 40.7	0.0
	comp=Z,0.2nm,0.1s						
OBKA				*e*Sg	Sn	19 49 56.2	-0.5
	comp=Z,3.2nm,0.1s,SNR=5.0						
OBKA	**Obir**	**1.15**	**273**	Pg	Pb	19 49 40.5	+0.1
	SNR=1.4						
MPLH	**Magyarpolny**	**1.16**	**51**	*e*P	Pn	19 49 40.9	+0.3
MPLH				*e*S	Sn	19 49 57.6	+1.0
MPLH	**Magyarpolny**	**1.16**	**51**	Pg	Pn	19 49 40.9	+0.3
	SNR=1.6						
MPLH				Lg	Lg	19 49 57.6	
KOVH	**Kovagotottos**	**1.36**	**105**	*e*P	Pn	19 49 41.9	-1.5
KOVH	**Kovagotottos**	**1.36**	**105**	Pn	Pn	19 49 41.9	-1.5
	SNR=1.4						
CEY	**Cerknica**	**1.44**	**241**	⇓*i*Pg	Pb	19 49 45.4	+0.2
CEY				*e*Sg	Sg	19 50 05.0	+0.6
MRAK	**Mrakovica**	**1.52**	**161**	*e*Pg	Pn	19 49 46.1	+0.4
MRAK				*e*Sg	Sn	19 50 05.5	-0.2
PRIJ	**Prijedor**	**1.52**	**166**	*e*Pg	Pn	19 49 45.2	-0.4
PRIJ				*e*Sg	Sn	19 50 05.7	+0.1
MORH	**Mrgy, Hungar**	**1.70**	**97**	*e*P	Pn	19 49 46.2	-1.9
MORH	**Mrgy, Hungar**	**1.70**	**97**	*e*Sn	Sn	19 50 09.9	-0.1
MORH	**Mrgy, Hungar**	**1.70**	**97**	Pn	Pn	19 49 46.2	-1.9
	SNR=1.5						
MYKA	**Terra Mystica**	**1.79**	**277**	*e*Pn	Pn	19 49 48.5	-0.9
	comp=Z,0.1nm,0.1s						
MYKA				*e*Sn	Sn	19 50 11.2	-1.1
	comp=Z,0.1nm,0.0s						
BLY	**Banja Luka**	**1.84**	**158**	*e*Sn	Sn	19 50 13.7	+0.3
MOA	**Molln**	**1.93**	**317**	*e*Pn	Pn	19 49 50.0	-1.3
	comp=Z,0.4nm,0.2s						
MOA				*e*Sn	Sn	19 50 15.0	-0.7
	comp=Z,1.2nm,0.2s						
KBA	**Koelnbreinsper**	**2.07**	**289**	*e*Pg	Pg	19 49 57.8	-0.1
	comp=Z,0.5nm,0.2s						
KBA				*e*Sn	Sn	19 50 18.7	-0.8
	comp=Z,0.7nm,0.2s						
CKRC	**Cesky Krumlov**	**2.69**	**332**	*e*SG	Sg	19 50 44.9	+0.1
KHC	**Kasperske Hory**	**3.21**	**327**	*e*PN	Pn	19 50 10.6	+1.6
KHC				*e*SN	Sn	19 50 47.1	-0.4

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*IDC **08** 19:49:44.1±1.3, 6°.89N×94°.46E, h0^{km}, mb3.7/9, mb1 3.8/11, mb1mx3.6/42, mbtmp3.6/11, ML3.7/2, MS4.5/1, Ms1 4.5/1, ms1mx3.4/58, Error ellipse: s-maj=53.5km s-min=18.4km az=56.0*

*NEIC **08** 19:49:44.4±2.5, 6°.6N±0°.1×94°.3E±0°.2, h10^{km}±2^{km}, mb4.2/6, Error ellipse: s-maj=36.6km s-min=10.2km az=233.0*

ISC 08 19:49:47.5±0.9**, 6°.9N**±0°.1×**94°.4E**±0°.2**, h26**^{km}**, n27,** σ1^{s}.**60**/23**, mb4.0**/13**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	**Lhok Sumawe**	**3.04**	**122**	Pn	**Pn**	**19 50 32.6**	**-1.4**
PSI	**Prapat**	**6.08**	**131**	Pn	**Pn**	**19 51 17.6**	**+1.7**
	0.8nm,0.3s,baz=302,slow=12,SNR=4.3						
CMAR	**Chiang Mai Arr**	**12.38**	**21**	Pn	**Pn**	**19 52 42.7**	**+0.5**
	0.2nm,0.3s,baz=211,slow=14,SNR=5.0						
CMAR	**Chiang Mai Arr**	**12.38**	**21**	Pn	**Pn**	**19 52 44.8**	**+2.6**
LSA	**Lhasa**	**22.93**	**353**	P	**P**	**19 54 49.5**	**-0.8**
LSA				IAmb	IAmb	19 55 15.3	
	comp=Z,5.0nm,1.0s						
H08S3	**Diego Garcia H**	**26.12**	**237**	T	T	20 22 06.0	
	baz=56,slow=75,SNR=16						
H08S2	**Diego Garcia H**	**26.12**	**237**	T	T	20 22 02.1	
	baz=56,slow=75,SNR=15						
H08S1	**Diego Carcia H**	**26.14**	**237**	T	T	20 22 07.4	
	baz=56,slow=75,SNR=7.3						
NIL	**Nilore**	**33.06**	**327**	P	**P**	**19 56 20.2**	**-1.0**
MK31	**Makanchi Array**	**41.13**	**347**	P	**P**	**19 57 25.4**	**-4.1**
MKAR	**Makanchi Array**	**41.13**	**347**	P	**P**	**19 57 28.7**	**-0.8**
	comp=Z,0.9nm,0.8s,baz=161,slow=8.6,SNR=5.4						
MKAR	**Makanchi Array**	**41.13**	**347**	P	**P**	**19 57 26.7**	**-2.8**
KKAR	**Karatay Array**	**41.77**	**334**	P	**P**	**19 57 34.1**	**-0.7**
SONM	**Songino Array**	**42.12**	**12**	P	**P**	**19 57 37.0**	**-0.7**
	comp=Z,0.8nm,1.0s,baz=202,slow=9.0,SNR=3.1						
KURBB	**Kurchatov Arra**	**45.59**	**346**	P	**P**	**19 58 06.0**	**+0.6**
	comp=Z,3.6nm,0.2s,baz=167,slow=7.0,SNR=5.6						
KURK	**Kurchatov**	**45.65**	**346**	P	**P**	**19 58 07.9**	**+2.0**
KURK				IAmb	IAmb	19 58 15.1	
	comp=Z,4.7nm,1.1s						
JAY	**Jayapura**	**47.20**	**100**	LR	LR	20 19 36.6	
	comp=Z,516nm,21.4s,baz=224,slow=38						
WRA	**Warramunga Arr**	**47.50**	**125**	P	**P**	**19 58 19.9**	**-1.0**
	comp=Z,0.4nm,0.8s,baz=304,slow=9.2,SNR=1.9						
ZALV	**Zalesovo Beam**	**47.60**	**352**	P	**P**	**19 58 21.2**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=187,slow=3.9,SNR=3.9						
ZALV	**Zalesovo Beam**	**47.60**	**352**	P	**P**	**19 58 21.0**	**-0.1**
ASAR	**Alice Springs**	**49.10**	**129**	P	**P**	**19 58 33.0**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=307,slow=7.6,SNR=5.3						
BVAR	**Borovoye Array**	**50.02**	**341**	P	**P**	**19 58 40.0**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=166,slow=7.5,SNR=5.5						
ABKAR	**Akbulak array**	**51.23**	**332**	P	**P**	**19 58 50.2**	**+1.3**
ABKAR	**Akbulak array**	**51.23**	**332**	P	**P**	**19 58 49.1**	**+0.2**
ABKAR				IAmb	IAmb	19 58 59.9	
	comp=Z,3.4nm,1.0s						
AKTO	**Aktyubinsk**	**52.94**	**332**	P	**P**	**19 59 02.5**	**+0.8**
	comp=Z,0.8nm,0.4s,baz=104,slow=8.3,SNR=2.0						
FINES	**FINESS Array B**	**73.71**	**332**	P	**P**	**20 01 20.0**	**+1.0**
	comp=Z,2.5nm,1.0s,baz=79,slow=9.9,SNR=3.9						
GERES	**GERESS Array B**	**78.73**	**318**	P	**P**	**20 01 49.6**	**+1.7**
	comp=Z,0.2nm,0.4s,baz=357,slow=20,SNR=2.3						

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*IASPEI **08** 19:59:05.9±1.0, 35°.99N±0°.03×96°.82W±0°.03, h7^{km}±6^{km}, Error ellipse: s-maj=4.5km s-min=3.1km az=140.9, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*IDC **08** 19:59:06.2±2.2, 35°.97N×96°.81W, h0^{km}, mb1 3.7/3, mb1mx3.4/56, mbtmp3.4/3, ML3.4/3, Error ellipse: s-maj=28.6km s-min=14.8km az=106.0*

*TUL **08** 19:59:06±1.0, 35°.98N±0°.02×96°.82W±0°.03, h4^{km}±7^{km}, ML3.5, mb_Lg3.7/121(NEIC), Error ellipse: s-maj=3.8km s-min=2.3km az=126.0*

*ANF **08** 19:59:06.9±0.8, 35°.94N×96°.78W, h2^{km}±5^{km}, ML4.4/15, Error ellipse: s-maj=4.3km s-min=2.7km az=2.0*

*NEIC **08** 19:59:06.2±1.0, 35°.99N±0°.02×96°.81W±0°.02, h5^{km}±1^{km}, Error ellipse: s-maj=3.9km s-min=2.8km az=141.0*

ISC 08 19:59:06.2±0.8**, 36°.00N**±0°.02×**96°.83W**±0°.02**, h6**^{km}±5^{km}**, n139,** σ1^{s}.**54**/140**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK031	**S. Brethren Rd**	**0.04**	**185**	Pg	**Pg**	**19 59 07.3**	**-0.2**
OK031				Sg	**Sg**	**19 59 08.0**	**-0.4**
OK030	**Cody Creek RV**	**0.08**	**149**	Pg	**Pg**	**19 59 07.8**	**-0.2**
OK030				Sg	**Sg**	**19 59 08.9**	**-0.3**
QUOK	**Quay**	**0.20**	**30**	Pg	**Pg**	**19 59 10.6**	**+0.4**
QUOK				Sg	**Sg**	**19 59 13.2**	**+0.3**
OK005	**Luther M Schoo**	**0.45**	**221**	Pg	**Pg**	**19 59 15.0**	**+0.2**
OK029	**Liberty Lake**	**0.54**	**249**	Pg	**Pg**	**19 59 16.8**	**+0.2**
OK029				Sg	**Sg**	**19 59 24.2**	**+0.5**
OK001	**Jones High Sch**	**0.57**	**221**		**Pg**	**19 59 17.1**	**0.0**
OK025	**Westminster Rd**	**0.58**	**225**	Pg	**Pg**	**19 59 17.3**	**-0.1**
OK025				IAmb_Lg		19 59 25.0	
	comp=Z,812nm,0.8s						
BCOK	**Bluff Creek, N**	**0.71**	**242**	Pg	**Pg**	**19 59 19.8**	**-0.1**
BCOK				Sg	**Sg**	**19 59 29.6**	**+0.4**
OKCFA	**Oklahoma City**	**0.77**	**221**	Pg	**Pg**	**19 59 20.4**	**-0.5**
OKCFA				Sg	**Sg**	**19 59 30.6**	**-0.2**
OKCFA	**Oklahoma City**	**0.77**	**221**	P	**Pg**	**19 59 20.7**	**-0.2**
	baz=42,SNR=35						
OKCFA				S	**Sg**	**19 59 31.7**	**+0.9**
	baz=42						
OKCSW	**OKLAHOMA CITY**	**0.77**	**220**	Pg	**Pg**	**19 59 20.4**	**-0.5**
OKCSW				Sg	**Sg**	**19 59 31.1**	**+0.3**
BLOK	**Blackwell**	**0.82**	**338**	Pg	**Pg**	**19 59 22.0**	**0.0**
TUL1	**Leonard**	**0.85**	**95**	P	**Pg**	**19 59 21.8**	**-0.7**
	baz=276,SNR=264						
TUL1				S	**Sg**	**19 59 33.1**	**-0.5**
	baz=276						
TUL1	**Leonard**	**0.85**	**95**	Pg	**Pg**	**19 59 21.8**	**-0.7**
TUL1				Sg	**Sg**	**19 59 32.6**	**-0.9**
TUL1	**Leonard**	**0.85**	**95**	P	**Pg**	**19 59 21.9**	**-0.7**
	baz=276,SNR=434						
TUL1				S	**Sg**	**19 59 33.1**	**-0.5**
	baz=276						
FNO	**Franklin**	**0.87**	**212**	Pg	**Pg**	**19 59 22.2**	**-0.7**
T35A	**Sooner Cattle**	**0.95**	**16**	Pg	**Pg**	**19 59 24.3**	**-0.2**
T35B	**Sooner Cattle**	**0.95**	**16**	P	**Pg**	**19 59 24.3**	**-0.3**
	baz=195,SNR=361						
T35B				S	**Sg**	**19 59 37.0**	**0.0**
	baz=195						
CROK	**Carrier**	**1.06**	**299**	Pg	**Pg**	**19 59 26.4**	**-0.1**
KAN13	**South Haven SW**	**1.14**	**333**	Pg	**Pg**	**19 59 27.8**	**-0.2**
GC02	**Grant County #**	**1.19**	**316**		**Pg**	**19 59 28.8**	**-0.2**
KAN17	**Caldwell West**	**1.29**	**325**		**Pn**	**19 59 30.4**	**-0.5**
KAN09	**Caldwell North**	**1.30**	**331**		**Pn**	**19 59 30.6**	**-0.5**
KAN14	**Manchester OK**	**1.32**	**317**		**Pn**	**19 59 30.8**	**-0.4**
KS20	**Mayfield South**	**1.36**	**335**		**Pn**	**19 59 31.6**	**-0.2**
KS20				IAmb_Lg		19 59 51.7	
	comp=Z,449nm,1.0s						
OK032	**Salt Plains WL**	**1.37**	**306**		**Pn**	**19 59 31.5**	**-0.5**
KAN01	**Argonia South**	**1.38**	**327**		**Pn**	**19 59 31.8**	**-0.2**
KAN01				IAmb_Lg		19 59 52.2	
	comp=Z,341nm,0.8s						
KAN05	**Bluff City Nor**	**1.39**	**323**		**Pn**	**19 59 31.9**	**-0.3**
KAN06	**Argonia West S**	**1.50**	**327**		**Pn**	**19 59 34.1**	**+0.4**
KAN06				IAmb_Lg		19 59 55.9	
	comp=Z,312nm,1.1s						
KAN10	**Anthony SW Sta**	**1.52**	**318**	Pn	**Pn**	**19 59 34.0**	**+0.1**
KAN08	**Anthony NE Sta**	**1.53**	**324**		**Pn**	**19 59 34.5**	**+0.4**
KAN08				IAmb_Lg		19 59 58.3	
	comp=Z,350nm,0.8s						
KAN16	**Harper SW Stat**	**1.58**	**321**		**Pn**	**19 59 35.2**	**+0.4**
KAN12	**Harper NE Stat**	**1.60**	**325**		**Pn**	**19 59 35.6**	**+0.5**
X34A	**Smith Ranch, M**	**1.61**	**211**		**Pn**	**19 59 35.6**	**+0.3**
X34A				IAmb_Lg		20 00 00.2	
	comp=Z,515nm,1.1s						
U32A	**Winter Ranch,**	**1.79**	**283**		**Pn**	**19 59 38.3**	**+0.5**
U32A				IAmb_Lg		20 00 04.9	
	comp=Z,458nm,0.9s						
U32A	**Winter Ranch,**	**1.79**	**283**	P	**Pn**	**19 59 38.5**	**+0.7**
	baz=102,SNR=15						
U32A				S	**Sb**	**20 00 03.7**	**+1.4**
	baz=102						
X37A	**Clayton**	**1.84**	**139**		**Pn**	**19 59 38.6**	**+0.2**
X37A				IAmb_Lg		20 00 05.3	
	comp=Z,315nm,0.7s						
X37A	**Clayton**	**1.84**	**139**	P	**Pn**	**19 59 38.8**	**+0.4**
	baz=320,SNR=155						
X37A				S	**Sg**	**20 00 04.6**	**-0.8**
	baz=320						
LOOK	**Love County**	**2.02**	**188**		**Pn**	**19 59 41.1**	**+0.3**
LOOK				IAmb_Lg		20 00 14.8	
	comp=Z,438nm,1.0s						
WMOK	**Wichita Mounta**	**2.03**	**232**	P	**Pn**	**19 59 41.5**	**+0.6**
	baz=51						
WMOK				S	**Sb**	**20 00 09.2**	**+0.2**
	baz=51						
WMOK	**Wichita Mounta**	**2.03**	**232**		**Pn**	**19 59 41.3**	**+0.4**
WMOK	**Wichita Mounta**	**2.03**	**232**	P	**Pn**	**19 59 41.7**	**+0.7**
	baz=51,SNR=209						
WMOK				S	**Sb**	**20 00 09.1**	**+0.1**
	baz=51						
U38A	**Gravette**	**2.03**	**77**		**Pn**	**19 59 41.1**	**+0.1**
U38A				IAmb_Lg		20 00 10.9	
	comp=Z,341nm,0.7s						
U38A	**Gravette**	**2.03**	**77**	P	**Pn**	**19 59 42.0**	**+1.0**
	baz=258,SNR=46						
U38A				S	**Sb**	**20 00 09.7**	**+0.6**
	baz=258						
HHAR	**Hobbs**	**2.36**	**82**	Pn	**Pn**	**19 59 45.4**	**-0.2**
W39A	**Magazine**	**2.61**	**107**	P	**Pn**	**19 59 49.0**	**+0.1**
	baz=289,SNR=72						
W39A				S	**Sn**	**20 00 22.4**	**+1.4**
	baz=289						
W39A	**Magazine**	**2.61**	**107**		**Pn**	**19 59 49.1**	**+0.1**
W39A				IAmb_Lg		20 00 33.8	
	comp=Z,295nm,0.8s						
W39A	**Magazine**	**2.61**	**107**	P	**Pn**	**19 59 49.2**	**+0.2**
	baz=289,SNR=91						
Z35A	**Perchaven, San**	**2.68**	**188**		**Pn**	**19 59 50.0**	**+0.1**
R32A	**Long Quarter,**	**2.85**	**329**	IAmb_Lg		20 00 42.9	
	comp=Z,155nm,0.9s						
R32A	**Long Quarter,**	**2.85**	**329**	Sb	**Sb**	**20 00 35.7**	**+3.0**
	baz=148						
MIAR	**Mount Ida**	**3.03**	**118**	P	**Pn**	**19 59 55.4**	**+0.6**
	baz=300,SNR=20						
MIAR				S	**Sn**	**20 00 32.7**	**+1.3**
	baz=300						
MIAR	**Mount Ida**	**3.03**	**118**		**Pn**	**19 59 55.2**	**+0.4**
MIAR	**Mount Ida**	**3.03**	**118**	P	**Pn**	**19 59 55.1**	**+0.3**
	baz=300,SNR=53						
KSU1	**Kansas State U**	**3.10**	**3**	Pb	**Pb**	**20 00 03.1**	**+1.2**
	baz=183,SNR=36						
KSU1				Sb	**Sg**	**20 00 43.8**	**-2.1**
	baz=183						
KSU1	**Kansas State U**	**3.10**	**3**		**Pn**	**19 59 55.5**	**-0.3**
KSU1				IAmb_Lg		20 00 51.9	
	comp=Z,252nm,0.8s						
KSU1	**Kansas State U**	**3.10**	**3**	P	**Pn**	**19 59 55.8**	**0.0**
	baz=183						
KSU1				Sb	**Sg**	**20 00 43.5**	**-2.4**
	baz=183						
Z38A	**Mt. Pleasant**	**3.13**	**150**		**Pn**	**19 59 56.0**	**-0.1**
Z38A				IAmb_Lg		20 00 52.7	
	comp=Z,274nm,0.8s						
U40A	**Yellville**	**3.24**	**82**	P	**Pn**	**19 59 58.7**	**+1.0**
	baz=265,SNR=15						
U40A				Sb	**Sg**	**20 00 46.9**	**-3.4**
	baz=265						
U40A	**Yellville**	**3.24**	**82**		**Pn**	**19 59 57.4**	**-0.3**
U40A	**Yellville**	**3.24**	**82**	P	**Pn**	**19 59 57.5**	**-0.1**
	baz=265,SNR=48						
U40A				P	**Pn**	**19 59 57.5**	**-0.1**
	baz=265,SNR=48						
S39A	**Bolivar**	**3.29**	**58**		**Pn**	**19 59 58.6**	**+0.3**
S39A				IAmb_Lg		20 00 56.5	
	comp=Z,208nm,0.7s						
X40A	**Basin Creek Fa**	**3.60**	**114**	P	**Pn**	**20 00 03.7**	**+1.1**
	baz=296,SNR=18						
X40A	**Basin Creek Fa**	**3.60**	**114**		**Pn**	**20 00 02.5**	**-0.1**
X40A				IAmb_Lg		20 01 04.2	
	comp=Z,152nm,0.7s						
CBKS	**Cedar Bluff**	**3.64**	**321**	Pb	**Pb**	**20 00 12.4**	**+1.4**
	baz=140,SNR=13						
CBKS				Sb	**Sg**	**20 01 00.9**	**-2.3**
	baz=140						
CBKS	**Cedar Bluff**	**3.64**	**321**		**Pn**	**20 00 03.9**	**+0.7**
WHAR	**Wooly Hollow**	**3.77**	**99**		**Pn**	**20 00 05.2**	**+0.3**
WHAR				IAmb_Lg		20 01 09.8	
	comp=Z,309nm,1.1s						
FCAR	**Ozark Folk Cen**	**3.82**	**90**		**Pn**	**20 00 05.5**	**-0.2**
W41B	**Gary Mavity, V**	**3.83**	**101**	P	**Pn**	**20 00 06.0**	**+0.3**
	baz=284,SNR=12						
W41B				S	**Sn**	**20 00 51.9**	**+0.8**
	baz=284						
W41B				Sb	**Sg**	**20 01 06.0**	**-3.1**
	baz=284						
W41B	**Gary Mavity, V**	**3.83**	**101**	P	**Pn**	**20 00 05.7**	**0.0**
	baz=284,SNR=73						
WLAR	**White Oak Lake**	**3.83**	**126**		**Pn**	**20 00 05.6**	**-0.1**
MGMO	**Mountain Grove**	**3.85**	**71**		**Pn**	**20 00 06.4**	**+0.3**
MGMO				IAmb_Lg		20 01 11.9	
	comp=Z,336nm,0.7s						
WHTX	**Lake Whitney,**	**4.03**	**188**	Pb	**Pb**	**20 00 17.0**	**-0.6**
	baz=7.4,SNR=6.0						
WHTX				Sb	**Sb**	**20 01 09.7**	**+3.2**
	baz=7.4						
WHTX	**Lake Whitney,**	**4.03**	**188**		**Pn**	**20 00 06.9**	**-1.5**
ABTX	**Abilene, Hawle**	**4.09**	**215**	Pb	**Pb**	**20 00 18.7**	**0.0**
	baz=34,SNR=25						
ABTX				S	**Sn**	**20 00 58.0**	**+0.4**
	baz=34						
ABTX	**Abilene, Hawle**	**4.09**	**215**		**Pn**	**20 00 09.1**	**-0.3**
AMTX	**Amarillo**	**4.11**	**256**	Sb	**Sb**	**20 01 13.6**	**+4.6**
	baz=73						
AMTX	**Amarillo**	**4.11**	**256**	IAmb_Lg		20 01 23.5	
	comp=Z,242nm,0.7s						
Z41A	**Richland Creek**	**4.30**	**128**	P	**Pn**	**20 00 12.0**	**-0.2**
	baz=311,SNR=5.8						
Z41A				S	**Sn**	**20 01 02.6**	**-0.1**
	baz=311						
Z41A	**Richland Creek**	**4.30**	**128**	P	**Pn**	**20 00 12.0**	**-0.2**
	baz=311,SNR=5.9						
Z41A				P	**Pn**	**20 00 12.0**	**-0.2**
	baz=311,SNR=5.9						
R40A	**Maddies Statio**	**4.31**	**57**		**Pn**	**20 00 12.3**	**0.0**
R40A				IAmb_Lg		20 01 23.8	

	comp=Z,282nm,1.1s						
P38A	Dawn	4.47	35		Pn	20 00 14.8	+0.3
P38A				IAmb_Lg		20 01 31.9	
	comp=Z,109nm,0.7s						
NATX	Nacogdoches	4.59	156	IAmb_Lg		20 01 43.3	
	comp=Z,143nm,1.1s						
LCAR	Lake Charles	4.60	87		Pn	20 00 15.7	-0.7
LCAR				IAmb_Lg		20 01 43.0	
	comp=Z,98nm,0.8s						
CCAR	Cane Creek	4.65	115	IAmb_Lg		20 01 41.0	
	comp=Z,115nm,0.8s						
T42A	Van Buren	4.74	76		Pn	20 00 18.2	0.0
T42A				IAmb_Lg		20 01 32.9	
	comp=Z,195nm,0.8s						
CCM	Cathedral Cave	4.92	64		Pn	20 00 21.7	+0.9
CCM				IAmb_Lg		20 01 52.8	
	comp=Z,225nm,0.8s						
P40A	Paris	5.18	46		Pn	20 00 24.6	+0.3
P40A				IAmb_Lg		20 01 58.6	
	comp=Z,186nm,1.0s						
435B	Jarrell	5.24	187	Sb	Sb	20 01 46.4	+5.1
	baz=6.8						
435B	Jarrell	5.24	187		Pn	20 00 24.1	-1.0
435B				IAmb_Lg		20 01 55.9	
	comp=Z,97nm,0.7s						
MSTX	Muleshoe	5.28	249	Sb	Sg	20 01 51.1	-4.5
	baz=66						
FVM	French Village	5.50	67		Pn	20 00 28.1	-0.6
FVM				IAmb_Lg		20 02 03.2	
	comp=Z,178nm,0.8s						
BGNE	Belgrade	5.50	350	IAmb_Lg		20 02 08.9	
	comp=Z,222nm,0.7s						
KSCO	Kaye Shedlock’	5.50	305	Pb	Pb	20 00 46.8	+4.0
	baz=121,SNR=20						
KSCO	Kaye Shedlock’	5.50	305	IAmb_Lg		20 02 12.2	
	comp=Z,120nm,0.9s						
N38A	Joes South For	5.56	29	Pn	Pn	20 00 29.6	+0.1
N38A				IAmb_Lg		20 02 14.4	
	comp=Z,180nm,0.8s						
143A	Socs Landing,	5.56	125	IAmb_Lg		20 02 12.1	
	comp=Z,83nm,1.0s						
JCT	Junction City	6.04	205	Pb	Pb	20 00 55.8	+4.0
	baz=24,SNR=11						
JCT				Sb	Sg	20 02 14.2	-5.8
	baz=24						
JCT	Junction City	6.04	205		Pn	20 00 34.6	-1.5
JCT				IAmb_Lg		20 02 30.2	
	comp=Z,80nm,0.9s						
GLAT	Glass	6.11	85	IAmb_Lg		20 02 28.9	
	comp=Z,186nm,0.7s						
T25A	Trinidad	6.20	283	Sb	Sg	20 02 18.5	-6.9
	baz=98						
T25A	Trinidad	6.20	283	IAmb_Lg		20 02 27.5	
	comp=Z,166nm,1.0s						
S44A	Carbondale	6.31	72	IAmb_Lg		20 02 31.7	
	comp=Z,183nm,0.8s						
Y45A	Yeager Farm, C	6.35	107	IAmb_Lg		20 02 41.3	
	comp=Z,130nm,0.9s						
OGNE	Ogallala	6.41	322	IAmb_Lg		20 02 34.8	
	comp=Z,124nm,0.8s						
SCIA	State Center	6.54	24	P	Pn	20 00 44.0	+1.0
	baz=206						
SCIA	State Center	6.54	24	IAmb_Lg		20 02 50.7	
	comp=Z,113nm,0.8s						
P43A	Skaggs, Pawnee	6.84	56	IAmb_Lg		20 02 51.1	
	comp=Z,147nm,0.8s						
SDCO	Great Sand Dun	7.16	287	P	Pn	20 00 54.1	+2.2
	baz=102,SNR=7.7						
SDCO				Sb	Sg	20 02 51.2	-5.0
	baz=102						
735A	Kenedy	7.17	187	IAmb_Lg		20 03 00.8	
	comp=Z,56nm,1.0s						
PLAL	Pickwick Lake	7.22	96	IAmb_Lg		20 02 58.4	
	comp=Z,72nm,1.1s						
WVT	Waverly	7.29	86	IAmb_Lg		20 02 59.8	
	comp=Z,66nm,0.7s						
K38A	Parkersburg	7.35	24	Pn	Pn	20 00 53.4	-0.7
K38A				IAmb_Lg		20 03 17.8	
	comp=Z,98nm,0.9s						
L40A	Anamosa	7.47	34		Pn	20 00 55.3	-0.4
L40A				IAmb_Lg		20 03 00.1	
	comp=Z,84nm,0.9s						
HDIL	Hopedale	7.47	50	P	Pn	20 00 56.2	+0.4
	baz=235						
HDIL				S	Sn	20 02 20.3	-0.6
	baz=235						
HDIL	Hopedale	7.47	50	Pn	Pn	20 00 55.3	-0.5
ECSD	EROS Data Cent	7.73	1	Pn	Pn	20 00 58.5	-0.8
O44A	Mansfield	7.79	55	IAmb_Lg		20 03 25.5	
	comp=Z,104nm,0.7s						
ISCO	Idaho Springs	7.91	301	P	Pn	20 01 03.0	+0.9
	baz=116,SNR=5.3						
ISCO	Idaho Springs	7.91	301	Pn	Pn	20 01 01.6	-0.5
ANMO	Albuquerque	7.92	265	Pg	Pg	20 01 32.8	-5.0
	comp=Z,0.5nm,0.3s,baz=76,slow=17,SNR=7.8						
ANMO				Lg	Lg	20 03 16.8	
	comp=Z,1.0nm,0.3s,baz=351,slow=21,SNR=7.5						
V48A	Smith Brothers	8.13	89	IAmb_Lg		20 03 21.5	
	comp=Z,56nm,1.0s						
X48A	Hartselle	8.16	98	IAmb_Lg		20 03 25.6	
	comp=Z,64nm,0.9s						
L42A	Oliver, Polo	8.19	41	IAmb_Lg		20 03 25.8	
	comp=Z,103nm,0.8s						
MNTX	Cornudas Mount	8.30	241	Pn	Pn	20 01 06.5	-0.7
JFWS	Jewell Farm	8.58	34	Pn	Pn	20 01 11.4	+0.5
JFWS				IAmb_Lg		20 03 51.5	
	comp=Z,56nm,0.8s						
SUSD	Miller	8.59	350	IAmb_Lg		20 03 56.9	
	comp=Z,89nm,1.0s						
M44A	Midewin, Midew	8.73	49	IAmb_Lg		20 03 45.7	
	comp=Z,103nm,1.1s						
TXAR	Lajitas Array	8.79	223	Pn	Pn	20 01 12.8	-1.1
	comp=Z,0.3nm,0.3s,baz=40,slow=12,SNR=8.7						
TXAR				Pg	Pg	20 01 43.2	-11
	comp=Z,0.8nm,0.3s,baz=46,slow=16,SNR=8.9						
TXAR				Lg	Lg	20 03 38.5	
	comp=Z,0.8nm,0.3s,baz=175,slow=16,SNR=2.0						
SFIN	Lafayette	8.83	57	IAmb_Lg		20 03 48.8	
	comp=Z,106nm,0.7s						
I40A	Norwalk	9.21	29	IAmb_Lg		20 04 09.3	
	comp=Z,62nm,1.2s						
L44A	Lake County Fo	9.28	46	IAmb_Lg		20 04 12.2	
	comp=Z,88nm,0.9s						
K43A	Burlington	9.39	42	IAmb_Lg		20 04 03.0	
	comp=Z,70nm,0.9s						
RSSD	Black Hills	9.81	328	IAmb_Lg		20 04 34.7	
	comp=Z,39nm,0.9s						
F33A	5 Mile Ranch,	9.84	2	IAmb_Lg		20 04 16.1	
	comp=Z,41nm,0.9s						
I42A	Draeger Farm,	9.95	35	IAmb_Lg		20 04 21.9	
	comp=Z,53nm,1.0s						
TKL	Tuckaleechee C	10.61	88	Lg	Lg	20 04 35.5	
	comp=Z,3.6nm,0.3s,baz=173,slow=23,SNR=11						
PDAR	Pinedale Array	11.94	308	Pn	Pn	20 01 57.9	+0.7
	comp=Z,0.1nm,0.3s,baz=109,slow=14,SNR=1.9						
PDAR				Pg		20 02 48.7	
	comp=Z,0.3nm,0.3s,baz=124,slow=16,SNR=7.4						
PDAR				Lg	Lg	20 05 21.4	
	comp=Z,0.5nm,0.3s,baz=97,slow=33,SNR=3.1						
ULM	Lac du Bonnet	14.27	2	Pn	Pn	20 02 24.9	-3.8
	comp=Z,0.4nm,0.3s,baz=176,slow=14,SNR=2.7						
ULM				Lg	Lg	20 06 28.6	
	comp=Z,0.6nm,0.3s,baz=268,slow=18,SNR=4.8						

IDC ***08*** *20:02:49.8±1.7, 60°.09N×151°.74W, $h84^{km}\pm26^{km}$, mb3.6/6, mb1 3.7/11, mb1mx3.3/69, mbtmp3.9/11, Error ellipse: s-maj=36.6km s-min=13.7km az=121.0*

NEIC ***08*** *20:02:50.2±1.2, 60°.20N±0°.02×151°.78W±0°.06, $h80^{km}\pm5^{km}$, Error ellipse: s-maj=4.2km s-min=3.1km az=113.0*

AEIC ***08*** *20:02:51.5±1.3, 60°.20N±0°.03×151°.77W±0°.06, $h71^{km}\pm5^{km}$, ML3.4, ML3.6/162(NEIC), Error ellipse: s-maj=4.1km s-min=3.7km az=63.0*

ISC 08 20:02:49.9±0.7, **60°.18N**±0°.03×**151°.71W**±0°.03, **h81**$^{km}\pm6^{km}$, **n314,** $\sigma 0^{s}.78$/295, **mb3.8**/6, **Kenai Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
O20K	Slope Mountain	0.47	259	P	Pn	20 03 03.3	-0.2
	baz=74						
O20K				S	Sn	20 03 13.3	-0.3
	baz=74						
O20K	Slope Mountain	0.47	259		Pn	20 03 03.3	-0.2
O20K					Sn	20 03 13.3	-0.3
HOM	Homer	0.52	176	P	Pn	20 03 04.6	+0.8
	baz=354						
HOM	Homer	0.52	176		Pn	20 03 04.6	+0.8
HOM	Homer	0.52	176	IAML		20 03 05.1	
	comp=N,4µm,0.2s						
HOM				IAML		20 03 05.2	
	comp=E,4µm,0.2s						
RED	Redoubt Volcan	0.58	295		Pn	20 03 04.0	-0.6
RED					Sn	20 03 14.1	-1.4
RDSO	Redoubt South	0.58	299		Pn	20 03 03.9	-0.8
RDSO					Sn	20 03 14.2	-1.4
BRLK	Bradley Lake	0.59	134		Pn	20 03 04.9	+0.3
RSO	Redoubt South	0.59	300		Pn	20 03 04.2	-0.6
ILIM	Iliamna	0.63	262		Pn	20 03 04.5	-0.5
DFR	Drift River	0.64	311		Pn	20 03 04.4	-0.7
DFR					Sn	20 03 15.2	-1.3
RDWB	Redoubt West	0.64	300		Pn	20 03 04.5	-0.7
RDWB					Sn	20 03 15.2	-1.4
BRSE	Bradley Lake S	0.66	131	P	Pn	20 03 05.6	+0.4
	baz=312						
BRSE	Bradley Lake S	0.66	131		Pn	20 03 05.6	+0.4
CAPN	Captain Cook N	0.66	25	P	Pn	20 03 06.8	+1.6
	baz=208						
CAPN	Captain Cook N	0.66	25		Pn	20 03 06.8	+1.6
IVE	Iliamna Volcan	0.67	257		Pn	20 03 04.9	-0.5
IVE					Sn	20 03 15.9	-1.1
RDJH	Redoubt Jeurge	0.68	308		Pn	20 03 05.2	-0.4
RDJH					Sn	20 03 16.5	-0.8
CNPM	China Poot	0.69	159		Pn	20 03 06.1	+0.5
CNPM					Sn	20 03 17.9	+0.6
CNPM	China Poot	0.69	159	IAML		20 03 19.0	
	comp=E,3µm,0.2s						
ILS	Iliamna Low So	0.71	253		Pn	20 03 05.6	-0.3
ILS					Sn	20 03 17.2	-0.5
NCT	North Crescent	0.72	303		Pn	20 03 05.5	-0.5
NCT					Sn	20 03 16.9	-1.0
ILSW	Iliamna Southw	0.74	256		Pn	20 03 05.8	-0.4
ILSW					Sn	20 03 17.6	-0.7
SLKM	Skilak Lake	0.81	65		Pn	20 03 06.9	0.0
OPT	Oil Point	0.93	236	P	Pn	20 03 08.4	+0.2
	baz=53						
OPT	Oil Point	0.93	236		Pn	20 03 08.4	+0.2
P19K	Oil Pt	0.93	236	P	Pn	20 03 08.3	+0.2
	baz=53						
P19K				S	Sn	20 03 22.3	+0.5
	baz=53						
P19K	Oil Pt	0.93	236		Pn	20 03 08.3	+0.2
P19K					Sn	20 03 22.3	+0.5
SPU	Mount Spurr	1.02	351		Pn	20 03 09.2	-0.1
O22K	Cooper Landing	1.04	72	P	Pn	20 03 10.1	+0.7
	baz=255						
O22K	Cooper Landing	1.04	72		Pn	20 03 10.1	+0.7
CKT	Bend	1.06	347		Sn	20 03 24.5	-0.2
SPCR	Spurr Chakacha	1.06	347	P	Pn	20 03 09.7	-0.1
	baz=168						
SPCR	Spurr Chakacha	1.06	347		Pn	20 03 09.7	-0.1
SPCN	Chakachatna No	1.08	348		Pn	20 03 10.2	+0.2
SPCP	Crater Peak Br	1.12	349		Pn	20 03 10.8	+0.3
SPCP					Sn	20 03 26.5	+0.5
SPCG	Spurr Capps Gl	1.13	352		Pn	20 03 10.9	+0.2
SEW	Seward	1.13	93	P	Pn	20 03 11.0	+0.5
	baz=276						
SEW	Seward	1.13	93		Pn	20 03 11.0	+0.5
SPBG	Spurr Blockage	1.14	344		Pn	20 03 10.9	+0.2
AU22	Augustine Moun	1.16	227		Pn	20 03 11.4	+0.6
AU22					Sn	20 03 27.5	+0.9
AUL	Augustine Lava	1.18	228		Pn	20 03 12.0	+0.9
AUQ	Augustine Qik’	1.19	227		Pn	20 03 12.0	+0.7
AGU	Augustine-Summ	1.19	227		Pn	20 03 11.9	+0.5
AUCH	Augustine Cone	1.20	228		Pn	20 03 12.0	+0.6
AUW	Augustine West	1.20	229		Pn	20 03 12.1	+0.7
FIS	Fire Island	1.22	36		Pn	20 03 13.1	+1.5
FIS	Fire Island	1.22	36	IAML		20 03 38.8	
	comp=E,1000nm,0.7s						
FIS				IAML		20 03 47.8	
	comp=N,1µm,0.7s						
O19K	Port Alsworth	1.30	272	P	Pn	20 03 12.0	-0.7
	baz=89						
O19K	Port Alsworth	1.30	272		Pn	20 03 12.0	-0.7
STLK	Strandline Lak	1.33	358		Pn	20 03 13.6	+0.5
RC01	Rabbit Creek A	1.34	46	P	Pn	20 03 13.5	+0.4
	baz=229						
RC01	Rabbit Creek A	1.34	46		Pn	20 03 13.5	+0.4
SUA	Susitna One	1.38	20	P	Pn	20 03 14.4	+0.7
	baz=202						
SUA	Susitna One	1.38	20		Pn	20 03 14.4	+0.7
SUA	Susitna One	1.38	20	IAML		20 03 33.9	
	comp=E,1µm,0.6s						
N19K	Bonanza Creek	1.51	296	P	Pn	20 03 14.8	-0.7
	baz=114						
N19K				S	Sn	20 03 33.2	-1.6
	baz=114						
N19K	Bonanza Creek	1.51	296		Pn	20 03 14.8	-0.7
N19K					Sn	20 03 33.2	-1.6
N19K	Bonanza Creek	1.51	296	IAML		20 03 33.8	
	comp=N,839nm,0.6s						
Q19K	Cape Douglas,	1.59	219	P	Pn	20 03 17.1	+0.6
	baz=36						
Q19K	Cape Douglas,	1.59	219		Pn	20 03 17.1	+0.6
M22K	Willow	1.76	25	P	Pn	20 03 19.4	+0.8
	baz=208						
M22K	Willow	1.76	25		Pn	20 03 19.4	+0.8
O18K	Koktuh Hills	1.78	261	P	Pn	20 03 18.4	-0.5
	baz=77						
O18K	Koktuh Hills	1.78	261		Pn	20 03 18.4	-0.5
PWL	Port Wells	1.81	66	P	Pn	20 03 19.5	+0.3
	baz=250						
PWL	Port Wells	1.81	66		Pn	20 03 19.5	+0.3
SKT	Skwentna	1.81	3	P	Pn	20 03 19.9	+0.6
	baz=184						
SKT	Skwentna	1.81	3		Pn	20 03 19.9	+0.6
SKT	Skwentna	1.81	3	IAML		20 03 45.0	
	comp=E,629nm,0.4s						
SKT				IAML		20 03 45.6	
	comp=N,422nm,0.3s						
PMR	Palmer	1.90	40	P	Pn	20 03 20.8	+0.4
	baz=224						
PMR	Palmer	1.90	40		Pn	20 03 20.8	+0.4
P18K	Big Mountain,	1.94	248	P	Pn	20 03 20.7	-0.3
	baz=64						
P18K	Big Mountain,	1.94	248		Pn	20 03 20.7	-0.3
KNK	Knik Glacier	2.02	51	P	Pn	20 03 22.5	+0.5
	baz=234						
KNK	Knik Glacier	2.02	51		Pn	20 03 22.6	+0.5
KNK	Knik Glacier	2.02	51	IAML		20 03 48.4	
	comp=N,325nm,0.5s						
KNK				IAML		20 03 57.0	
	comp=E,446nm,0.4s						
GHO	Glory Hole Cre	2.10	39		Pn	20 03 23.6	+0.4
GHO					Sn	20 03 48.5	-0.1
GHO	Glory Hole Cre	2.10	39	IAML		20 03 49.6	
	comp=E,598nm,0.6s						
GHO				IAML		20 03 54.4	
	comp=N,344nm,0.6s						
SVW2	Sparrevohn	2.12	298		Pn	20 03 22.6	-0.7
M19K	Big River Lodg	2.17	324	P	Pn	20 03 23.9	-0.1
	baz=142						
M19K	Big River Lodg	2.17	324		Pn	20 03 23.9	-0.1
SML	Sawmill	2.32	44	P	Pn	20 03 26.5	+0.4
	baz=228						
SML	Sawmill	2.32	44		Pn	20 03 26.5	+0.4
SML	Sawmill	2.32	44	IAML		20 03 54.3	
	comp=E,294nm,0.5s						
SML				IAML		20 04 12.7	
	comp=N,245nm,0.8s						
CUT	Chulitna	2.34	17	P	Pn	20 03 27.3	+1.0
	baz=199						
CUT	Chulitna	2.34	17		Pn	20 03 27.3	+1.0
CUT	Chulitna	2.34	17	IAML		20 04 02.5	
	comp=N,515nm,0.3s						
GLI	Glacier Island	2.39	71	P	Pn	20 03 26.2	-0.7
	baz=256						
GLI	Glacier Island	2.39	71		Pn	20 03 26.2	-0.7
GLI	Glacier Island	2.39	71	IAML		20 03 59.4	
	comp=E,280nm,0.4s						
GLI				IAML		20 04 07.5	
	comp=N,241nm,0.7s						
KDAK	Kodiak Island	2.44	191	P	Pn	20 03 27.5	-0.1
	comp=N,6.7nm,0.3s,baz=56,slow=11,SNR=192						
KDAK				S	Sn	20 03 54.9	-1.7
	comp=N,49nm,0.3s,baz=221,slow=22,SNR=8.4						
KDAK	Kodiak Island	2.44	191	S	Sn	20 03 55.6	-1.0
	baz=9.6						
KDAK	Kodiak Island	2.44	191		Pn	20 03 27.9	+0.2
KDAK					Sn	20 03 55.6	-1.0
KDAK	Kodiak Island	2.44	191	IAML		20 03 56.6	
	comp=N,232nm,0.3s						
KDAK				IAML		20 03 58.5	
	comp=N,258nm,0.2s						
L19K	White Mountain	2.52	324	P	Pn	20 03 28.8	+0.1
	baz=142						
L19K	White Mountain	2.52	324		Pn	20 03 28.8	+0.1
L20K	Farewell, AK	2.54	337	P	Pn	20 03 29.1	+0.2
	baz=155						
L20K	Farewell, AK	2.54	337		Pn	20 03 29.1	+0.2
KAKN	Katmai Knife C	2.55	224		Pn	20 03 29.6	+0.4
HIN	Hinchinbrook I	2.61	83		Pn	20 03 29.5	-0.4
HIN					Sn	20 04 00.6	0.0
HIN	Hinchinbrook I	2.61	83	IAML		20 04 00.9	
	comp=E,348nm,0.3s						
HIN				IAML		20 04 01.5	
	comp=N,362nm,0.4s						
KABU	Katmai Buttres	2.65	225		Pn	20 03 31.1	+0.5
FID	Port Fidalgo	2.66	75		Pn	20 03 29.5	-1.1
FID	Port Fidalgo	2.66	75	IAML		20 04 01.0	
	comp=N,286nm,0.7s						
FID				IAML		20 04 03.6	
	comp=E,251nm,0.5s						
JPK	Jack Peak	2.67	68		Pn	20 03 30.5	-0.3
SCM	Sheep Creek Mo	2.71	50	P	Pn	20 03 31.7	+0.4
	baz=235						
SCM	Sheep Creek Mo	2.71	50		Pn	20 03 31.7	+0.4
SCM	Sheep Creek Mo	2.71	50	IAML		20 04 07.2	
	comp=E,157nm,0.6s						
PPLA	Purkeypile	2.74	355	P	Pn	20 03 32.8	+1.0
	baz=176						
PPLA	Purkeypile	2.74	355		Pn	20 03 32.8	+1.0
VMT	TAPS Tl Valdez	2.79	69		Pn	20 03 32.3	+0.1
Q23K	Middleton Isla	2.81	103	P	Pn	20 03 33.5	+0.9
	baz=288						
Q23K	Middleton Isla	2.81	103		Pn	20 03 33.5	+0.9
Q23K	Middleton Isla	2.81	103	IAML		20 04 21.4	
	comp=N,287nm,1.7s						
MID	Middleton Isla	2.82	103		Pn	20 03 33.5	+0.8
MID	Middleton Isla	2.82	103	IAML		20 04 21.5	
	comp=N,273nm,1.6s						
EYAK	Cordova Ski Ar	2.99	80	P	Pn	20 03 34.3	-0.7
	baz=266						
EYAK	Cordova Ski Ar	2.99	80		Pn	20 03 34.3	-0.7
WAT7	Susitna Watana	3.00	26		Pn	20 03 36.5	+1.2
OHAK	Old Harbor	3.07	196	P	Pn	20 03 36.2	+0.1
	baz=14						
OHAK	Old Harbor	3.07	196		Pn	20 03 36.2	+0.1
OHAK	Old Harbor	3.07	196	IAML		20 04 10.5	
	comp=E,163nm,0.4s						
DIV	Divide	3.08	69		Pn	20 03 36.1	-0.1
WAT6	Susitna Watana	3.08	37	P	Pn	20 03 37.3	+0.9
	baz=221						
WAT6	Susitna Watana	3.08	37		Pn	20 03 37.3	+0.9
KLU	Klutina	3.13	63	P	Pn	20 03 37.2	+0.2
	baz=248						
KLU	Klutina	3.13	63		Pn	20 03 37.2	+0.2
KLU	Klutina	3.13	63	IAML		20 04 14.6	
	comp=E,132nm,0.3s						
KLU				IAML		20 04 19.0	
	comp=N,182nm,0.4s						
CAST	Castle Rocks	3.26	357	P	Pn	20 03 38.8	+0.1
	baz=177						
CAST	Castle Rocks	3.26	357		Pn	20 03 38.8	+0.1
M24K	Tolsona, Glenn	3.31	52	P	Pn	20 03 40.4	+1.0
	baz=237						
M24K	Tolsona, Glenn	3.31	52		Pn	20 03 40.4	+1.0
M24K	Tolsona, Glenn	3.31	52	IAML		20 04 42.5	
	comp=E,148nm,1.5s						
M24K				IAML		20 04 50.8	
	comp=N,124nm,2.0s						
TRF	Thorofare Moun	3.36	11	P	Pn	20 03 40.3	+0.2
	baz=193						
TRF	Thorofare Moun	3.36	11		Pn	20 03 40.3	+0.2
TRF	Thorofare Moun	3.36	11	IAML		20 04 39.3	
	comp=N,162nm,1.1s						
TRF				IAML		20 04 40.2	
	comp=E,141nm,1.0s						
K20K	Telida	3.38	342	P	Pn	20 03 40.8	+0.4
	baz=160						
K20K	Telida	3.38	342		Pn	20 03 40.8	+0.4
KTH	Kantishna Hill	3.41	6		Pn	20 03 41.5	+0.7
KTH	Kantishna Hill	3.41	6	IAML		20 04 32.2	
	comp=N,109nm,0.8s						
KTH				IAML		20 04 40.3	
	comp=E,93nm,0.7s						
TT01	Tatalina	3.43	325		Pn	20 03 40.8	-0.2
TTA	Tatalina	3.44	325	P	Pn	20 03 41.1	-0.1
	baz=142						
TTA	Tatalina	3.44	325		Pn	20 03 41.1	-0.1
PS12	TAPS Pump St12	3.47	65		Pn	20 03 41.7	+0.2
RND	Reindeer	3.52	21		Pn	20 03 43.1	+0.9
RND	Reindeer	3.52	21	IAML		20 04 40.3	
	comp=E,81nm,1.8s						
DHY	Denali Highway	3.57	34	P	Pn	20 03 44.1	+1.0
	baz=218						
DHY	Denali Highway	3.57	34		Pn	20 03 44.1	+1.0
DHY	Denali Highway	3.57	34	IAML		20 04 29.5	
	comp=N,84nm,0.6s						
DHY				IAML		20 04 30.8	
	comp=E,79nm,0.3s						
PS11	TAPS Pump St11	3.58	55		Pn	20 03 43.9	+0.9
BMRM	Bremner River	3.60	74	P	Pn	20 03 42.7	-0.6
	baz=261						
BMRM	Bremner River	3.60	74		Pn	20 03 42.7	-0.6
BMRM	Bremner River	3.60	74	IAML		20 04 25.3	
	comp=N,98nm,0.6s						
BMRM				IAML		20 04 48.3	
	comp=E,88nm,0.7s						
KAIM	Kayak Island	3.67	91	P	Pn	20 03 44.4	+0.2
	baz=277						
KAIM	Kayak Island	3.67	91		Pn	20 03 44.4	+0.2
HMT	Hamilton	3.72	84		Pn	20 03 45.4	+0.5
HMT	Hamilton	3.72	84	IAML		20 04 28.4	
	comp=N,150nm,0.3s						
CHUM	Lake Minchumin	3.73	356	P	Pn	20 03 45.2	+0.1
	baz=176						
CHUM	Lake Minchumin	3.73	356		Pn	20 03 45.2	+0.1
N25K	Chitina, Valde	3.76	64	P	Pn	20 03 45.7	+0.2
	baz=251						
N25K	Chitina, Valde	3.76	64		Pn	20 03 45.7	+0.2
MCK	McKinley	3.80	19	P	Pn	20 03 47.1	+1.0
	baz=202						
MCK	McKinley	3.80	19		Pn	20 03 47.1	+1.0
MCK	McKinley	3.80	19	IAML		20 04 37.5	
	comp=N,78nm,0.6s						
NICHA	Nichawak Mount	3.87	86		Pn	20 03 47.4	+0.5
NICHA					Sn	20 04 29.5	-1.7
HARP	HAARP	3.87	52	P	Pn	20 03 47.8	+0.9
	baz=238						
HARP	HAARP	3.87	52		Pn	20 03 47.8	+0.9
BPAW	Bear Paw Mtn.	3.95	5	P	Pn	20 03 47.6	-0.5
	baz=186						
BPAW	Bear Paw Mtn.	3.95	5		Pn	20 03 47.6	-0.5
SUCK	Suckling Hills	3.97	88		Pn	20 03 49.0	+0.7
SUCK	Suckling Hills	3.97	88	IAML		20 04 51.5	
	comp=E,116nm,3.7s						
BERG	Berg Lake	4.00	83		Pn	20 03 49.5	+0.8
GLB	Gilahina Butte	4.08	68		Pn	20 03 49.7	-0.1
PAX	Paxson	4.09	44	P	Pn	20 03 51.1	+1.1
	baz=230						
PAX	Paxson	4.09	44		Pn	20 03 51.1	+1.1
J20K	Nowinta River	4.17	345	P	Pn	20 03 51.5	+0.4
	baz=163						
J20K	Nowinta River	4.17	345		Pn	20 03 51.5	+0.4
GRIN	Grindle Hills	4.19	85		Pn	20 03 52.2	+1.0
GRIN					Sn	20 04 37.2	-1.7
VRDI	Verde Repeater	4.20	72		Pn	20 03 51.1	-0.4
KHIT	Khitrov Hills	4.22	83		Pn	20 03 52.6	+0.8
CRQM	Cirque	4.29	78		Pn	20 03 52.5	-0.3
CRQM	Cirque	4.29	78	IAML		20 04 41.9	
	comp=N,68nm,0.3s						
CRQM				IAML		20 04 45.7	
	comp=E,84nm,0.4s						
CRQE	Cirque	4.31	79	P	Pn	20 03 52.5	-0.5
	baz=266						
WAX	Waxell Ridge	4.42	83		Pn	20 03 53.8	-0.7
MCARA	McCarthy VSAT	4.43	70	P	Pn	20 03 54.6	+0.1
	baz=258						
MCARA	McCarthy VSAT	4.43	70		Pn	20 03 54.6	+0.1
MCARA	McCarthy VSAT	4.43	70	IAML		20 05 07.5	
	comp=E,53nm,0.6s						
MCARA				IAML		20 05 21.0	
	comp=N,62nm,1.7s						
SNH	Sunshine Point	4.43	86	Pn	Pn	20 03 56.1	+1.5
TGL	Tana Glacier	4.44	79		Pn	20 03 54.1	-0.7

TGL	Tana Glacier	4.44	79	IAML		20 04 45.7	
	comp=N,44nm,0.8s						
TGL				IAML		20 04 48.8	
	comp=E,44nm,0.3s						
BARK	Barkley Ridge	4.60	83		Pn	20 03 56.3	-0.6
NEA2	Nenana	4.60	14		Pn	20 03 57.0	+0.1
NEA2				IAML		20 05 04.4	
	comp=N,35nm,4.6s						
WRH	Wood River Hil	4.63	20		Pn	20 03 57.2	-0.1
PTPK	Patty Peak	4.66	73		Pn	20 03 57.9	0.0
ANNE	Aniakchak Nort	4.66	228		Pn	20 03 57.2	-0.6
ISLE	Juniper Island	4.67	81		Pn	20 03 57.6	-0.4
ISLE				IAML		20 04 52.5	
	comp=E,47nm,0.9s						
ISLE				IAML		20 05 29.5	
	comp=N,54nm,1.2s						
KIAG	Kiagna River	4.68	77		Pn	20 03 58.0	-0.1
BALM	Baldy	4.70	75		Pn	20 03 57.7	-0.6
MENT	Mentasta	4.72	51		Pn	20 03 58.9	+0.4
MENT				IAML		20 05 11.3	
	comp=E,51nm,0.5s						
MENT				IAML		20 05 37.1	
	comp=N,47nm,1.2s						
BAGL	Bagley Icefiel	4.79	82		Pn	20 04 00.5	+1.1
HDA	Harding Lake	4.80	26	P	Pn	20 04 00.5	+1.0
	baz=210						
HDA	Harding Lake	4.80	26		Pn	20 04 00.6	+1.0
RIDG	Independent Ri	4.83	39	P	Pn	20 04 01.5	+1.5
	baz=226						
RIDG	Independent Ri	4.83	39		Pn	20 04 01.5	+1.5
CCB	Clear Creek Bu	4.84	20		Pn	20 04 00.9	+0.8
CCB	Clear Creek Bu	4.84	20	IAML		20 04 56.6	
	comp=E,34nm,0.4s						
MESA	MESA	4.88	86	P	Pn	20 04 01.5	+0.7
	baz=274						
MESA	MESA	4.88	86		Pn	20 04 01.5	+0.7
MLY	Manley	4.89	5	P	Pn	20 04 01.5	+0.6
	baz=186						
MLY	Manley	4.89	5		Pn	20 04 01.5	+0.6
MLY	Manley	4.89	5	IAML		20 05 38.4	
	comp=N,30nm,3.2s						
L26K	Log Cabin Wild	4.91	51	P	Pn	20 04 01.8	+0.6
	baz=238						
L26K	Log Cabin Wild	4.91	51		Pn	20 04 01.8	+0.6
L26K	Log Cabin Wild	4.91	51	IAML		20 05 19.8	
	comp=N,34nm,0.5s						
L26K				IAML		20 05 48.2	
	comp=E,33nm,0.5s						
GRNC	Granite Creek	4.96	79		Pn	20 04 01.8	-0.3
GRNC	Granite Creek	4.96	79	IAML		20 05 00.6	
	comp=E,32nm,0.6s						
GRNC				IAML		20 05 01.6	
	comp=N,30nm,0.4s						
YAH	Yahtse	4.97	84		Pn	20 04 02.9	+0.8
YAH	Yahtse	4.97	84	IAML		20 04 53.1	
	comp=N,57nm,3.2s						
YAH				IAML		20 05 07.3	
	comp=E,47nm,2.9s						
DOT	Dot Lake	5.02	43		Pn	20 04 03.5	+0.8
I21K	Tanana	5.03	359	P	Pn	20 04 03.4	+0.7
	baz=179						
I21K	Tanana	5.03	359		Pn	20 04 03.4	+0.7
I21K	Tanana	5.03	359	IAML		20 05 19.2	
	comp=N,42nm,4.9s						
I21K				IAML		20 06 01.0	
	comp=E,32nm,4.2s						
BARN	Barnard Glacie	5.03	75		Pn	20 04 03.5	+0.6
BARN	Barnard Glacie	5.03	75	IAML		20 04 48.2	
	comp=E,26nm,4.1s						
TCOL	CIGO, UAF Yank	5.04	19	P	Pn	20 04 03.3	+0.4
	baz=203						
TCOL	CIGO, UAF Yank	5.04	19		Pn	20 04 03.2	+0.4
COLA	College	5.04	19		Pn	20 04 03.0	+0.1
MDM	Murphy Dome	5.06	17		Pn	20 04 03.2	0.0
MDM	Murphy Dome	5.06	17	IAML		20 05 25.5	
	comp=E,26nm,2.7s						
MDM				IAML		20 06 45.1	
	comp=N,30nm,4.4s						
I23K	Minto, Yukon-K	5.11	11	P	Pn	20 04 04.5	+0.8
	baz=194						
I23K	Minto, Yukon-K	5.11	11		Pn	20 04 04.5	+0.8
I23K	Minto, Yukon-K	5.11	11	IAML		20 05 04.2	
	comp=N,51nm,4.7s						
I23K				IAML		20 05 06.5	
	comp=E,30nm,4.8s						
IL31		5.13	24		Pn	20 04 04.7	+0.7
ILAR	Eielson Array	5.13	24	P	Pn	20 04 04.7	+0.6
	comp=E,6.4nm,0.3s,baz=200,slow=13,SNR=202						
ILAR				S	Sn	20 04 58.3	-3.5
	comp=E,2.7nm,0.3s,baz=199,slow=17,SNR=9.1						
ILAR	Eielson Array	5.13	24	Pn	Pn	20 04 04.9	+0.9
RKAV	Rock Avalanche	5.17	84		Pn	20 04 05.5	+0.8
CTG	Chitna Glacier	5.18	77	P	Pn	20 04 05.9	+1.0
	baz=266						
CTGM	Chitina Glacie	5.18	77		Pn	20 04 05.5	+0.6
CTGM				IAML		20 05 16.8	
	comp=N,30nm,3.1s						
CTGM				IAML		20 06 29.9	
	comp=E,23nm,4.5s						
M27K	Edge Creek, AK	5.23	61	P	Pn	20 04 06.4	+0.9
	baz=250						
M27K	Edge Creek, AK	5.23	61		Pn	20 04 06.4	+0.9
M27K	Edge Creek, AK	5.23	61	IAML		20 06 24.4	
	comp=E,24nm,4.5s						
M27K				IAML		20 06 54.1	
	comp=N,23nm,3.9s						
TABL	Table Mountain	5.26	83		Pn	20 04 07.0	+0.9
TABL	Table Mountain	5.26	83	IAML		20 05 08.7	
	comp=E,42nm,1.3s						
TABL				IAML		20 05 24.9	
	comp=N,38nm,2.4s						
SCRK	Sand Creek	5.27	40	P	Pn	20 04 06.4	+0.3
	baz=227						
SCRK	Sand Creek	5.27	40		Pn	20 04 06.4	+0.3
SCRK	Sand Creek	5.27	40	IAML		20 05 25.1	
	comp=E,27nm,0.8s						
SCRK				IAML		20 05 48.5	
	comp=N,23nm,3.8s						
CHX	Chaix Hills	5.30	87		Pn	20 04 06.8	+0.3
LOGN	Logan Glacier	5.33	78		Pn	20 04 07.6	+0.6
LOGN	Logan Glacier	5.33	78	IAML		20 05 51.3	
	comp=N,27nm,5.0s						
LOGN				IAML		20 06 13.5	
	comp=E,22nm,2.7s						
POKR	Poker Plat Res	5.34	20	P	Pn	20 04 07.8	+0.9
	baz=204						
POKR	Poker Plat Res	5.34	20		Pn	20 04 07.8	+0.9
POKR	Poker Plat Res	5.34	20	IAML		20 05 08.4	
	comp=N,30nm,0.5s						
POKR				IAML		20 06 19.9	
	comp=E,31nm,4.2s						
J25K	Salcha River,	5.34	31	P	Pn	20 04 07.9	+0.9
	baz=217						
J25K	Salcha River,	5.34	31		Pn	20 04 07.9	+0.9
SAMH	Samovar Hills	5.46	86		Pn	20 04 10.0	+1.3
H21K	Melozitna Rive	5.53	355	P	Pn	20 04 09.1	-0.3
	baz=175						
H21K	Melozitna Rive	5.53	355		Pn	20 04 09.1	-0.3
L27K	Beaver Creek,	5.53	54	P	Pn	20 04 10.1	+0.5
	baz=243						
L27K	Beaver Creek,	5.53	54		Pn	20 04 10.1	+0.5
YUK2	White River	5.54	68		Pn	20 04 09.9	+0.2
BC03		5.55	54		Pn	20 04 10.2	+0.5
BCAR	Beaver Creek A	5.55	54		Pn	20 04 09.9	+0.1
YUK3	Moose Creek	5.71	69	P	Pn	20 04 12.7	+0.6
	baz=259						
YUK3	Moose Creek	5.71	69		Pn	20 04 12.7	+0.6
PCA	Pinnacle	5.73	86		Pn	20 04 13.6	+1.3
PINM	Pinnacle	5.73	86	P	Pn	20 04 13.5	+1.2
	baz=276						
H23K	Yukon River	5.76	9	P	Pn	20 04 13.4	+0.8
	baz=191						
H23K	Yukon River	5.76	9		Pn	20 04 13.4	+0.8
J26L	Joseph Creek	5.76	38	P	Pn	20 04 13.5	+0.7
	baz=225						
J26L	Joseph Creek	5.76	38		Pn	20 04 13.5	+0.7
IM03		5.90	352		Pn	20 04 14.2	-0.3
IMAR	Indian Mountai	5.90	352		Pn	20 04 14.3	-0.3
H24K	Noodor Dome	5.95	15	P	Pn	20 04 15.9	+0.7
	baz=199						
H24K	Noodor Dome	5.95	15		Pn	20 04 15.9	+0.7
BCPM	Bancas Point	6.05	87		Pn	20 04 17.8	+1.1
PRP	Porcupine Dome	6.06	25	P	Pn	20 04 17.9	+1.0
	baz=211						
PRP	Porcupine Dome	6.06	25		Pn	20 04 17.9	+1.0
PNL	Peninsula	6.22	89	P	Pn	20 04 19.9	+1.0
	baz=280						
PNL	Peninsula	6.22	89		Pn	20 04 19.9	+1.0
YUK4	Talbot Arm	6.51	74	P	Pn	20 04 24.1	+1.0
	baz=265						
YUK6	Outpost Mounta	6.63	78	P	Pn	20 04 25.2	+0.5
	baz=269						
YUK6	Outpost Mounta	6.63	78		Pn	20 04 25.2	+0.5
EGAK	Eagle	6.72	42	P	Pn	20 04 26.5	+0.7
	baz=232						
EGAK	Eagle	6.72	42		Pn	20 04 26.5	+0.7
YUK7	Dusty Glacier	6.75	81		Pn	20 04 27.2	+0.9
YUK5	Granite Creek	6.88	76		Pn	20 04 28.7	+0.7
DAWY	Dawson	6.97	51	P	Pn	20 04 29.8	+0.6
	baz=242						
DAWY	Dawson	6.97	51		Pn	20 04 29.8	+0.6
FYU	Fort Yukon	7.04	22	Pn	Pn	20 04 30.2	+0.2
HYT	Haines Junctio	7.05	79	P	Pn	20 04 30.6	+0.2
	baz=271						
HYT	Haines Junctio	7.05	79		Pn	20 04 30.6	+0.2
COLD	Coldfoot	7.11	5	P	Pn	20 04 31.0	-0.1
	baz=186						
COLD	Coldfoot	7.11	5		Pn	20 04 31.0	-0.1
M30M	Minto, Yukon	7.56	65	P	Pn	20 04 37.4	+0.2
	baz=258						
M30M	Minto, Yukon	7.56	65		Pn	20 04 37.4	+0.2
BM03	Burnt Mountain	7.92	20		Pn	20 04 41.6	-0.5
BMAR	Burnt Mountain	7.93	20	Pn	Pn	20 04 42.0	-0.3
BM01	Burnt Mountain	7.96	20		Pn	20 04 42.2	-0.4
WHY	Whitehorse	8.34	79	Pn	Pn	20 04 48.5	+0.5
TOLK	Toolik Lake Re	8.55	5	Pn	Pn	20 04 52.0	+1.3
BESE	Bessie Mountai	8.75	93	Pn	Pn	20 04 54.1	+0.6
JIS	Juneau Island	9.09	95	Pn	Pn	20 04 59.4	+1.5
DLBC	Dease Lake	11.21	89	P	Pn	20 05 28.3	+1.3
	comp=E,0.4nm,0.3s,baz=300,slow=7.5,SNR=10						
DLBC				S	Sn	20 07 26.6	-3.7
	comp=E,0.2nm,0.3s,baz=166,slow=23,SNR=1.5						
DLBC	Dease Lake	11.21	89		Pn	20 05 27.0	0.0
INK	Inuvik	11.31	36	P	Pn	20 05 28.5	+0.3
	comp=E,0.2nm,0.3s,baz=239,slow=14,SNR=6.4						
INK	Inuvik	11.31	36		Pn	20 05 27.1	-1.0
YKA	Yellowknife Ar	17.79	66	P	Pn	20 06 53.5	+1.7
	comp=E,0.1nm,0.3s,baz=281,slow=9.9,SNR=4.4						
ARCES	ARCESS Array B	50.57	1	P	P	20 11 38.8	-0.6
	comp=E,3.7nm,0.9s,baz=12,slow=6.2,SNR=6.2						
SONM	Songino Array	55.21	307	P	P	20 12 15.2	+1.2
	comp=E,0.6nm,0.7s,baz=52,slow=5.9,SNR=4.1						
ZALV	Zalesovo Beam	57.61	324	P	P	20 12 31.5	+0.7
	comp=E,0.4nm,0.4s,baz=28,slow=6.5,SNR=1.7						
FINES	FINESS Array B	58.70	1	P	P	20 12 37.8	-0.4
	comp=E,2.4nm,0.8s,baz=12,slow=10,SNR=5.8						
AKASG	Malin Array Be	69.48	359	P	P	20 13 47.6	-1.3
	comp=E,0.4nm,0.4s,baz=4.7,slow=6.3,SNR=4.8						
GERES	GERESS Array B	70.69	10	P	P	20 13 57.0	+0.4
	comp=E,0.4nm,0.6s,baz=354,slow=6.7,SNR=4.4						

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*FUNV **08** 20:07:32.3, 8°.46N×71°.44W, h5^{km}, MW3.1*

ISC 08 20:07:31.4±1.2, **8°.50N**±0°.04×**71°.42W**±0°.03, **h10**^{km}±10^{km}, **n19**, σ**1^{s}.24**/36, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.59	111	*e*P	Pg	20 07 43.0	0.0
SOCV				*e*S	Sg	20 07 51.6	+0.9
SDV	Santo Domingo	0.86	64	*e*P	Pg	20 07 48.0	0.0
SDV				*e*S	Sb	20 08 00.6	+0.3
SDV				*i*		20 08 10.5	
	comp=Z,180nm,0.5s						
CAPV	Capacho	1.09	235	*e*P	Pg	20 07 51.3	-1.1
CAPV				*e*S	Sg	20 08 06.2	-0.4
PAMC	Pamplona, Colo	1.72	228	*e*P	Pb	20 08 03.0	-0.4
PAMC				*e*S	Sg	20 08 26.8	+0.1
MCQV	Machiques	1.90	324	*e*P	Pb	20 08 05.1	-1.0
MCQV				*e*S	Sb	20 08 29.8	-0.1
OCAC	Ocana	1.90	262	*e*P	Pn	20 08 04.8	+0.7
OCAC				*e*S	Sb	20 08 29.6	-0.6
TAMC	Tame, Arauca	2.08	190	*e*P	Pb	20 08 08.9	-0.5
TAMC				*e*S	Sg	20 08 38.2	-0.3
TAMC				*i*		20 08 45.3	
	comp=Z,191nm,0.6s						
ELOV	Elorza	2.42	128	*e*P	Pn	20 08 11.9	+0.8
ELOV				*e*S	Sn	20 08 41.7	+0.8
BARC	Barichara	2.58	223	*e*P	Pb	20 08 18.1	+0.2
BARC				*e*S	Sb	20 08 50.4	+0.6
BARC				*i*		20 08 55.7	
	comp=Z,155nm,0.5s						
SIQV	Siquisique	2.66	36	*e*P	Pn	20 08 16.3	+1.9
SIQV				*e*S	Sn	20 08 48.3	+1.5
BRRC	Barranca, Sant	2.66	239	*e*P	Pn	20 08 16.1	+1.7
BRRC				*e*S	Sb	20 08 54.5	+2.5
BRRC				*i*		20 08 58.8	
	comp=Z,40nm,0.5s						
MAPV	Macapo	3.21	65	*e*P	Pn	20 08 22.5	+0.6
MAPV				*e*S	Sn	20 09 01.1	+0.9
BAUV	El Baul	3.36	82	*e*P	Pn	20 08 25.0	+0.9
BAUV				*e*S	Sn	20 09 04.0	-0.1
TURV	Turiamo	4.02	61	*e*P	Pn	20 08 33.8	+0.7
TURV				*e*S	Sn	20 09 20.1	-0.2
BENV	Beln	4.04	69	*e*P	Pn	20 08 34.5	+1.1
BENV				*e*S	Sn	20 09 19.6	-1.2
TACV	Tcata	4.63	69	*e*P	Pn	20 08 41.6	+0.2
TACV				*e*S	Sn	20 09 33.2	-2.2
PAYV	Puerto Ayacuch	4.83	129	*e*P	Pn	20 08 44.1	-0.1
PAYV				*e*S	Sn	20 09 37.9	-2.3
CACV	CAICARA DEL OR	4.92	101	*e*P	Pb	20 08 52.6	-5.0
BIRV	Birongo	5.44	68	*e*P	Pn	20 08 53.0	+0.4
BIRV				*e*S	Sn	20 09 51.9	-3.5

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*IDC **08** 20:12:11.2±1.1, 33°.50N×81°.80E, h0^{km}, mb3.6/7, mb1 3.8/10, mb1mx3.5/60, mbtmp3.7/10, ML3.4/3, MS3.8/1, Ms1 4.0/1, ms1mx3.1/52, Error ellipse: s-maj=37.7km s-min=19.3km az=59.0*

ISC 08 20:12:16.6±0.8, **33°.61N**±0°.10×**81°.9E**±0°.1, **h35**^{km}, **n16**, σ**1^{s}.01**/16, **mb3.6**/6, **Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PYUN	Piuthan	5.56	170	*e*P	Pn	20 13 36.2	-0.9
KOLN	Koldanda	5.99	166	*e*P	Pn	20 13 42.6	-0.4
	6.7nm,0.2s						
GKN	Gorkha	6.05	157	*e*P	Pn	20 13 44.1	+0.3
	22nm,0.4s						
JIRN	Jiri	6.97	147	*e*P	Pn	20 13 57.6	+1.0
	9.6nm,0.3s						
RAMN	Ramite	7.76	147	*e*P	Pn	20 14 08.6	+1.2
	19nm,0.4s						
TAPN	Taplejung	7.98	140	*e*P	Pn	20 14 11.4	+1.0
	4.8nm,0.3s						
AAK	Ala-Archa	10.75	329	Pn	Pn	20 14 50.3	+2.1
	0.2nm,0.3s,baz=198,slow=12,SNR=2.5						
MKAR	Makanchi Array	13.18	1	Pn	Pn	20 15 19.7	-1.5
	0.5nm,0.3s,baz=179,slow=12,SNR=30						
MKAR				Sn	Sn	20 17 30.6	-16
	0.1nm,0.3s,baz=185,slow=29,SNR=1.6						
KURBB	Kurchatov Arra	17.19	353	P	Pn	20 16 13.3	-0.6
	0.1nm,0.3s,baz=177,slow=10,SNR=7.2						
ZALV	Zalesovo Beam	20.44	5	P	P	20 16 51.4	+0.6
	1.6nm,0.6s,baz=193,slow=12,SNR=8.7						
BVAR	Borovoye Array	21.10	340	P	P	20 16 57.9	-0.1
	1.0nm,0.4s,baz=186,slow=13,SNR=6.2						
CMAR	Chiang Mai Arr	21.43	131	P	P	20 17 02.2	+0.5
	1.9nm,0.8s,baz=311,slow=11,SNR=16						
CMAR				LR	LR	20 25 54.7	
	comp=Z,250nm,18.4s,baz=300,slow=38						
FINES	FINESS Array B	44.91	326	P	P	20 20 27.6	+0.1
	1.0nm,0.6s,baz=99,slow=9.8,SNR=6.4						
NOA	NORSAR Array B	52.02	324	P	P	20 21 22.2	-0.1
	0.7nm,0.9s,baz=87,slow=8.5,SNR=1.6						
TORD	Torodi Ar. Bea	74.79	276	P	P	20 23 53.0	-0.6
	0.5nm,0.5s,baz=45,slow=4.8,SNR=8.8						
ASAR	Alice Springs	75.43	132	P	P	20 23 56.4	-0.7
	0.4nm,0.7s,baz=315,slow=5.8,SNR=2.3						

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*IDC **08** 20:15:14.6±1.9, 43°.54N×105°.36W, h0^{km}, mb1 3.5/4, mb1mx3.3/50, mbtmp3.3/4, ML3.3/4, Error ellipse: s-maj=50.6km s-min=8.8km az=151.0*

*NEIC **08** 20:15:15.4±1.3, 43°.58N±0°.08×105°.2W±0°.1, h0^{km}±2^{km}, ML3.4/32, Error ellipse: s-maj=17.1km s-min=11.1km az=47.0*

ISC 08 20:15:14.6±1.1, **43°.57N**±0°.06×**105°.21W**±0°.06, **h0**^{km}, **n26**, σ**1^{s}.09**/25, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	1.01	57	Pg	Pg	20 15 33.5	-0.5
K22A	Casper	1.33	227		Pg	20 15 38.9	-1.2
RWWY	Rawlins	2.39	219	Pn	Pn	20 15 55.9	+0.6
RWWY				IAML		20 16 33.5	
	338nm,1.0s						
BW06	Boulder Array	3.28	257		Pn	20 16 07.8	+0.3
BW06				IAML		20 17 01.3	
	71nm,1.0s						
PD31	Pinedale Array	3.28	257		Pn	20 16 07.8	+0.3
PDAR	Pinedale Array	3.28	257	Pn	Pn	20 16 07.7	+0.2
	3.8nm,0.3s,baz=79,slow=18,SNR=32						
PDAR				Lg	Lg	20 16 53.5	
	15nm,0.3s,baz=68,slow=32,SNR=9.8						
PDAR	Pinedale Array	3.28	257		Pn	20 16 08.0	+0.5
RLMT	Red Lodge	3.30	299		Pn	20 16 07.7	0.0
RLMT				IAML		20 17 44.1	
	87nm,2.5s						
RLMT				IAML		20 18 03.8	
	80nm,3.1s						
OGNE	Ogallala	3.52	137		Pn	20 16 12.7	+1.9
YMP	Mirror Lake Pl	3.75	290		Pn	20 16 14.9	+1.0
ISCO	Idaho Springs	3.78	185		Pn	20 16 15.1	+0.7
ISCO				IAML		20 17 22.6	
	38nm,1.0s						
GCMT	Greycliff	3.88	306		Pn	20 16 15.9	+0.3
LOHW	Long Hollow	3.92	272		Pn	20 16 18.0	+1.7
LOHW				IAML		20 17 46.1	
	42nm,1.6s						
LOHW				IAML		20 17 51.6	
	42nm,3.0s						
FLWY	Flagg Ranch	4.01	279		Pn	20 16 18.4	+0.9
FLWY				IAML		20 17 46.1	
	72nm,2.1s						
MOOW	Moose Ponds	4.02	274		Pn	20 16 19.1	+1.4
O20A	White River Ci	4.11	214		Pn	20 16 19.2	+0.3
O20A				IAML		20 18 30.5	
	comp=E,84nm,1.8s						
TPAW	Teton Pass	4.18	271		Pn	20 16 20.8	+0.9
TPAW				IAML		20 17 39.3	
	comp=E,40nm,3.4s						
FXWY	Fox Creek	4.23	273		Pn	20 16 21.6	+1.1
FXWY				IAML		20 17 40.0	
	comp=E,31nm,2.4s						
FXWY				IAML		20 17 56.9	
	comp=E,27nm,2.2s						
BOZ	Bozeman (W)	5.01	296		Pn	20 16 32.2	+0.9
BOZ				IAML		20 17 56.9	
	comp=E,27nm,1.9s						
BOZ				IAML		20 19 37.9	
	comp=E,25nm,4.0s						
HWUT	Hardware Ranch	5.09	249		Pn	20 16 32.6	+0.4
HWUT				IAML		20 18 25.7	
	comp=E,39nm,1.0s						
HWUT				IAML		20 18 48.2	
	comp=E,40nm,1.4s						
LRM	Limekiln Ridge	5.63	296	Pn	Pn	20 16 40.5	+0.7
SRU	San Rafael Swe	5.99	224		Pn	20 16 44.8	+0.2
ELK	Elko	7.97	253	Pn	Pn	20 17 14.1	+2.2
	comp=E,0.2nm,0.3s,baz=89,slow=10,SNR=2.5						
ELK				Lg	Lg	20 19 23.5	
	comp=E,0.1nm,0.3s,baz=97,slow=13,SNR=1.5						
I10CA	LAC DU BONNET	9.13	40	*i*		21 07 25.0	
	baz=219,slow=314,SNR=14						
ULM	Lac du Bonnet	9.24	40	Pn	Pn	20 17 28.4	-0.6
	comp=E,0.9nm,0.3s,baz=232,slow=10,SNR=8.4						
ULM				Lg	Lg	20 20 01.6	
	comp=E,0.4nm,0.3s,baz=333,slow=20,SNR=4.5						
NVAR	Mina Array Bea	11.15	247	Pn	Pn	20 17 57.2	+1.8
	comp=E,0.1nm,0.3s,baz=56,slow=12,SNR=2.0						

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*JMA **08** 20:19:44.1±0.3, 36°.85N×133°.60E, h441^{km}±4^{km}, M3.4*

*IDC **08** 20:19:45.8±1.1, 36°.84N×133°.74E, h430^{km}±16^{km}, mb2.9/7, mb1 3.1/12, mb1mx2.8/71, mbtmp3.8/12, Error ellipse: s-maj=21.5km s-min=14.0km az=64.0*

ISC 08 20:19:45.8±0.7, **36°.79N**±0°.08×**133°.76E**±0°.06, **h450**^{km}, **n30**, σ**2^{s}.43**/37, **mb3.1**/7, **Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHS	Saijyo	1.87	197	*e*S	S	20 21 29.2	-5.0
JWT	Wachi	2.01	138	P	P	20 20 45.4	-1.0
JWT				S	S	20 21 32.6	-2.9
JHT	Toyohira	2.39	208	P	P	20 20 45.9	-2.9
JHT				*e*S	S	20 21 34.0	-5.7
JYTA	Yamagatataniai	2.69	116	P	P	20 20 49.6	-1.0
JHG	Hegura jima	2.73	66	*e*S	S	20 21 38.6	-5.0
JWY	Kouya	2.97	149	P	P	20 20 51.7	-1.1
JAI	Aioi	3.05	169	P	P	20 20 52.3	-1.0
JTNC	Tanabenakahech	3.33	152	P	P	20 20 54.2	-1.3
JIE	Ise	3.39	134	P	P	20 20 55.5	-0.4
JNG	Nsakai	3.51	95	*e*S	S	20 21 55.0	+0.3
MJAR	Matsushiro Arr	3.58	93	P	P	20 20 56.5	-0.9
	0.1nm,0.3s,baz=278,slow=8.1,SNR=16						
JRY	Ryogami san	4.22	99	P	P	20 21 02.9	0.0
JRY				*e*S	S	20 22 04.9	-0.7
JOD2	Odawara 2	4.58	108	S	S	20 22 11.8	+0.1
KSRS	Korea Array	4.71	280	P	P	20 21 06.2	-1.2
	1.1nm,0.3s,baz=103,slow=8.3,SNR=20						
JFT	Otama	5.30	80	P	P	20 21 12.2	-0.8
JFT				*e*S	S	20 22 21.4	-2.9
JMM	Marumori	5.70	77	*e*S	S	20 22 27.0	-4.5
JFK	Kawauchi	5.71	82	P	P	20 21 15.8	-1.4
JFK				S	S	20 22 27.1	-4.7
JRG	Rokugo	6.01	62	P	P	20 21 19.7	-0.4
JRG				*e*S	S	20 22 33.8	-3.4
JSJ	Shimokoshiki	6.10	214	P	P	20 21 20.3	-1.0
JMK	Ichinoseki	6.28	68	P	P	20 21 23.0	+0.1
JMK				*e*S	S	20 22 39.2	-3.1
USRK	Ussuriysk Ar.	7.52	350	P	P	20 21 35.7	-0.1
	baz=176,slow=11,SNR=15						
ASAJ	Asahikawa	9.94	40	P	P	20 22 01.2	-0.8
	5.0nm,0.3s,baz=219,slow=14,SNR=59						
KLR	Kul'dur	12.52	354	P	P	20 22 30.5	+0.5
	0.6nm,0.3s,baz=186,slow=10,SNR=6.4						
SONM	Songino Array	22.93	307	P	P	20 24 14.3	+0.6
	1.6nm,0.7s,baz=114,slow=11,SNR=6.2						
CMAR	Chiang Mai Arr	35.59	249	P	P	20 26 05.2	+1.2
	0.5nm,0.7s,baz=42,slow=7.4,SNR=6.5						
MKAR	Makanchi Array	39.03	301	P	P	20 26 32.8	+0.7
	0.3nm,0.6s,baz=79,slow=12,SNR=5.3						
WRA	Warramunga Arr	56.43	179	P	P	20 28 45.3	+1.8
	0.3nm,0.3s,baz=359,slow=7.6,SNR=16						
ASAR	Alice Springs	60.13	180	P	P	20 29 10.8	+2.2
	0.2nm,0.5s,baz=12,slow=12,SNR=5.6						
ARCES	ARCESS Array B	61.98	338	P	P	20 29 21.4	+1.2
	1.9nm,0.7s,baz=66,slow=11,SNR=1.4						
FINES	FINESS Array B	66.06	330	P	P	20 29 48.1	+1.7
	2.3nm,1.0s,baz=41,slow=9.3,SNR=1.3						

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*FUNV **08** 20:20:50.6, 8°.45N×71°.46W, h1^{km}, MW3.4*

ISC 08 20:20:50.9±1.2, **8°.52N**±0°.03×**71°.38W**±0°.02, **h10**^{km}±10^{km}, **n33**, σ**1^{s}.40**/57, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.57	114	*e*P	Pg	20 21 01.8	-0.3
SOCV				*e*S	Sg	20 21 10.2	+0.5
SOCV	Socops	0.57	114	*e*P	Pg	20 21 01.9	-0.1
SOCV				*e*S	Sg	20 21 10.8	+1.1
SDV	Santo Domingo	0.83	64	*e*P	Pg	20 21 07.0	+0.1
SDV				*e*S	Sb	20 21 19.2	+0.5
CAPV	Capacho	1.13	235	*e*P	Pb	20 21 10.1	-2.5
CAPV				*e*S	Sb	20 21 24.7	-2.7
PAMC	Pamplona, Colo	1.75	228	*e*P	Pn	20 21 22.8	+1.0
PAMC				*e*S	Sb	20 21 47.1	+1.4
MCQV	Machiques	1.90	323	*e*P	Pn	20 21 24.0	+0.6
MCQV				*e*S	Sb	20 21 48.4	-1.0
OCAC	Ocana	1.94	262	*e*P	Pn	20 21 24.2	+0.2
OCAC				*e*S	Sn	20 21 48.8	+0.4
TAMC	Tame, Arauca	2.11	191	*e*P	Pn	20 21 28.1	+1.7
TAMC				*e*S	Sb	20 21 57.5	+1.9
LL1C	La Loma 1 Cana	2.37	296	*e*P	Pb	20 21 33.0	-0.8
LL1C				*e*S	Sb	20 22 02.8	-0.3
ELOV	Elorza	2.41	129	*e*P	Pn	20 21 32.9	+2.4
ELOV				*e*S	Sb	20 22 05.2	+0.9
ELOV	Elorza	2.41	129	*e*P	Pn	20 21 30.1	-0.4
ELOV				*e*S	Sn	20 22 00.9	+0.8
BARC	Barichara	2.62	223	*e*P	Pb	20 21 37.8	-0.3
BARC				*e*S	Sb	20 22 09.8	-0.5

BARC				i		20 22 14.0	
	comp=Z,318nm,0.5s						
SIQV	Siquisique	2.62	36	eP	Pn	20 21 35.2	+1.8
SIQV				eS	Sn	20 22 07.0	+1.6
SMLC	San Martn de	2.67	276	eP	Pn	20 21 33.4	-0.6
SMLC				eS	Sn	20 22 08.6	+2.2
BRRC	Barranca, Sant	2.70	239	eP	Pb	20 21 37.8	-1.5
BRRC				eS	Sb	20 22 13.4	+0.9
BRRC				i		20 22 25.0	
	comp=Z,80nm,0.5s						
RUSC	La Rusia	3.11	213	eP	Pn	20 21 41.3	+0.9
RUSC				eS	Sb	20 22 25.4	+0.7
MAPV	Macapo	3.17	66	eP	Pn	20 21 42.6	+1.7
MAPV				eS	Sn	20 22 19.6	+0.9
BAUV	El Baul	3.33	82	eP	Pn	20 21 44.1	+1.0
BAUV				eS	Sn	20 22 23.1	+0.3
JACV	Jacura	3.58	44	eP	Pn	20 21 47.4	+0.8
JACV				eS	Sn	20 22 29.6	+0.6
ZARC	Zaragoza, Cauc	3.59	254	eP	Pn	20 21 46.4	-0.2
MONV	Montecano	3.69	22	eP	Pn	20 21 48.6	+0.7
MONV				eS	Sn	20 22 31.0	-0.5
SPBC	San Pablo de B	3.90	223	eP	Pn	20 21 53.2	+2.1
BENV	Beln	4.00	69	eP	Pn	20 21 53.4	+1.0
BENV				eS	Sn	20 22 39.5	+0.1
UREC	San Jos de Ur	4.18	260	eP	Pn	20 21 55.2	+0.4
CHIC	Chingaza	4.51	211	eP	Pn	20 22 00.8	+1.1
TACV	Tcata	4.59	69	eP	Pn	20 22 01.6	+1.2
TACV				eS	Sn	20 22 53.4	-0.5
HELC	Santa Helena	4.72	241	eP	Pn	20 22 05.4	+2.9
PAYV	Puerto Ayacuch	4.81	130	eP	Pn	20 22 03.2	-0.3
PAYV				eS	Sn	20 22 56.4	-2.9
CACV	CAICARA DEL OR	4.89	101	eP	Pb	20 22 12.2	-4.5
CACV				eS	Sb	20 23 12.4	-3.2
VILC	Villavicencio,	4.94	208	eP	Pn	20 22 06.0	+0.6
MERV	Las Mercedes	5.08	81	eP	Pn	20 22 07.6	+0.4
MERV				eS	Sn	20 23 03.6	-2.2
GUY2C	Guyana, Caldas	5.13	231	eP	Pn	20 22 10.6	+2.3
BIRV	Birongo	5.41	69	eP	Pn	20 22 12.1	+0.4

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*IDC **08** 20:25:09.7±1.4, 6°.90N×94°.50E, h0^{km}, mb3.7/8, mb1 3.8/9, mb1mx3.5/45, mbtmp3.6/9, ML3.5/1, Error ellipse: s-maj=54.3km s-min=21.9km az=57.0*

ISC 08 20:25:14.3±1.1**, 7°.0N**±0°.1×**94°.4E**±0°.2**, h26^{km}, n13, σ1^{s}26**/10**, mb3.6**/8**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	6.12	132	Pn	Pn	20 26 44.8	+1.6
	1.0nm,0.3s,baz=337,slow=13,SNR=4.6						
CMAR	Chiang Mai Arr	12.24	21	Pn	Pn	20 28 07.8	+0.7
	0.1nm,0.3s,baz=213,slow=14,SNR=4.3						
H08S3	Diego Garcia H	26.24	237	T	T	20 57 31.6	
	baz=57,slow=75,SNR=102						
H08S2	Diego Garcia H	26.24	237	T	T	20 57 28.7	
	baz=57,slow=75,SNR=69						
H08S1	Diego Carcia H	26.25	237	T	T	20 57 32.6	
	baz=57,slow=75,SNR=11						
MKAR	Makanchi Array	41.02	347	P	P	20 32 55.2	-0.2
	0.8nm,0.7s,baz=163,slow=8.6,SNR=6.1						
SONM	Songino Array	41.98	12	P	P	20 33 02.7	-0.7
	0.1nm,0.3s,baz=71,slow=32,SNR=2.2						
ZALV	Zalesovo Beam	47.48	352	P	P	20 33 45.8	-1.1
	0.4nm,0.3s,baz=151,slow=9.4,SNR=3.9						
WRA	Warramunga Arr	47.52	125	P	P	20 33 46.2	-1.6
	0.4nm,0.8s,baz=302,slow=10,SNR=2.5						
ASAR	Alice Springs	49.14	130	P	P	20 33 58.5	-1.7
	0.4nm,0.8s,baz=305,slow=6.9,SNR=5.4						
AKTO	Aktyubinsk	52.86	332	P	P	20 34 28.3	+0.5
	0.9nm,0.6s,baz=119,slow=17,SNR=2.8						
FINES	FINESS Array B	73.63	332	P	P	20 36 45.7	+0.4
	3.7nm,1.0s,baz=205,slow=8.4,SNR=1.8						
GERES	GERESS Array B	78.67	318	P	P	20 37 15.0	+0.6
	0.2nm,0.2s,baz=99,slow=6.1,SNR=2.2						

IDC 08 20:25:39.9±52.0**, 15°.33S**×**172°.46W, h0^{km}, mb3.8**/3**, mb1 4.0**/3**, mb1mx3.6**/33**, mbtmp3.8**/3**, Error ellipse: s-maj=1010.0km s-min=205.1km az=79.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	44.85	240	P	P	20 33 56.3	+0.1
	0.7nm,0.5s,baz=61,slow=13,SNR=2.8						
WRA	Warramunga Arr	50.74	257	P	P	20 34 42.4	+0.3
	0.1nm,0.3s,baz=92,slow=7.1,SNR=5.1						
ASAR	Alice Springs	50.99	252	P	P	20 34 43.4	-0.6
	2.5nm,0.6s,baz=88,slow=8.1,SNR=50						

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*FUNV **08** 20:27:35.3, 8°.38N×71°.50W, h4^{km}, MW3.0*

ISC 08 20:27:35.1±1.6**, 8°.46N**±0°.05×**71°.39W**±0°.03**, h5^{km}**±14^{km}**, n20, σ1^{s}30**/32**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.55	108	eP	Pb	20 27 46.8	-0.5
SOCV				eS	Sn	20 27 57.6	-1.7
SDV	Santo Domingo	0.86	60	eP	Pn	20 27 55.9	+1.8
SDV				eS	Sn	20 28 07.4	+0.3
CAPV	Capacho	1.09	237	eP	Pg	20 27 53.1	-2.9
PAMC	Pamplona, Colo	1.71	230	eP	Pg	20 28 07.5	-0.4
PAMC				eS	Sg	20 28 33.2	+3.2
PAMC				i		20 28 41.0	
	comp=Z,69nm,0.4s						
OCAC	Ocana	1.92	264	eP	Pn	20 28 09.2	+0.6
OCAC				eS	Sb	20 28 34.7	-0.4
MCQV	Machiques	1.95	325	eP	Pn	20 28 08.4	-0.4
MCQV				eS	Sn	20 28 33.3	-0.4
TAMC	Tame, Arauca	2.05	191	i P	Pg	20 28 14.3	-0.1
TAMC				eS	Sg	20 28 40.5	-0.4
TAMC				i		20 28 59.5	
	comp=Z,61nm,0.5s						
ELOV	Elorza	2.38	127	eP	Pn	20 28 14.9	+0.2
BARC	Barichara	2.57	224	eP	Pg	20 28 23.3	-1.1
BRRC	Barranca, Sant	2.66	240	eP	Pb	20 28 23.6	+0.3
BRRC				eS	Sg	20 29 02.7	+1.9
SMLC	San Martn de	2.67	278	eP	Pg	20 28 25.3	-1.1
SMLC				eS	Sb	20 28 55.2	-1.5
SMLC				i		20 29 01.1	
	comp=Z,66nm,0.5s						
SIQV	Siquisique	2.68	35	eP	Pn	20 28 19.3	+0.3
SIQV				eS	Sn	20 28 53.5	+1.6
RUSC	La Rusia	3.05	214	eP	Pn	20 28 25.9	+1.4
RUSC				eS	Sg	20 29 14.8	+1.6
RUSC				i		20 29 18.4	
	comp=Z,20nm,0.7s						
MAPV	Macapo	3.20	64	eP	Pn	20 28 27.4	+1.2
BAUV	El Baul	3.34	81	eP	Pn	20 28 29.2	+1.2
BAUV				eS	Sn	20 29 08.0	-0.2
MONV	Montecano	3.75	22	eP	Pn	20 28 34.2	+0.6
BENV	Beln	4.03	68	eP	Pn	20 28 38.5	+0.9
BENV				eS	Sn	20 29 24.7	-0.5
TACV	Tcata	4.62	68	eP	Pn	20 28 46.6	+0.9
PAYV	Puerto Ayacuch	4.78	129	eP	Pn	20 28 47.3	-0.4
MERV	Las Mercedes	5.09	81	eP	Pn	20 28 51.8	-0.4

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*IDC **08** 20:29:27.0±2.3, 43°.22N×105°.30W, h0^{km}, mb1 3.7/2, mb1mx3.3/42, mbtmp3.6/2, ML3.3/2, Error ellipse: s-maj=46.4km s-min=10.6km az=154.0*

*NEIC **08** 20:29:30.5±1.7, 43°.500N±0°.010×105°.33W±0°.09, h0^{km}±2^{km}, ML3.5/32, Error ellipse: s-maj=11.2km s-min=3.1km az=85.0*

ISC 08 20:29:29.2±1.0**, 43°.51N**±0°.06×**105°.33W**±0°.06**, h0^{km}, n25, σ1^{s}49**/24**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	1.12	56		Pb	20 29 51.2	-0.3
K22A	Casper	1.23	226		Pg	20 29 51.9	-0.8
RWWY	Rawlins	2.29	218		Pn	20 30 09.7	+1.2
RWWY				IAML		20 30 42.4	
	310nm,0.8s						
RWWY				IAML		20 30 45.2	
	190nm,0.7s						
BW06	Boulder Array	3.18	258		Pn	20 30 21.5	+0.7
BW06				IAML		20 31 11.6	
	52nm,1.4s						
PD31	Pinedale Array	3.18	258		Pn	20 30 21.4	+0.7
PDAR	Pinedale Array	3.18	258	Pn	Pn	20 30 21.4	+0.7
	2.8nm,0.3s,baz=83,slow=16,SNR=46						
PDAR				Lg	Lg	20 31 05.2	
	8.3nm,0.3s,baz=83,slow=36,SNR=1.8						
PDAR	Pinedale Array	3.18	258		Pn	20 30 21.3	+0.5
RLMT	Red Lodge	3.25	301		Pn	20 30 22.9	+1.2
RLMT				IAML		20 31 19.1	
	60nm,1.7s						
RLMT				IAML		20 31 49.4	
	54nm,3.8s						
OGNE	Ogallala	3.54	135	Pn	Pn	20 30 26.8	+1.2
OGNE				IAML		20 31 30.6	
	178nm,2.1s						
OGNE				IAML		20 31 31.4	
	124nm,1.4s						
YMP	Mirror Lake Pl	3.69	291		Pn	20 30 29.5	+1.8
YMP				IAML		20 31 32.5	
	comp=E,84nm,1.3s						
YMP				IAML		20 31 45.0	
	comp=N,84nm,1.9s						
ISCO	Idaho Springs	3.71	183	Pn	Pn	20 30 30.0	+1.9
ISCO				IAML		20 32 28.0	
	comp=N,28nm,3.7s						
GCMT	Greycliff	3.84	308		Pn	20 30 31.5	+1.8
MOOW	Moose Ponds	3.94	275		Pn	20 30 33.6	+2.5
O20A	White River Ci	4.02	214		Pn	20 30 34.3	+2.2
O20A				IAML		20 32 11.3	
	comp=N,80nm,1.6s						
O20A				IAML		20 32 16.4	
	comp=E,87nm,2.3s						
REDW	Red Top Meadow	4.03	270		Pn	20 30 34.5	+2.2
REDW				IAML		20 31 44.3	
	comp=E,60nm,1.4s						
REDW				IAML		20 31 45.8	
	comp=E,101nm,1.6s						
E28A	Huff	4.49	45		Pn	20 30 40.4	+1.9
KSCO	Kaye Shedlock’	4.94	155	Pn	Pn	20 30 45.5	+0.8
HWUT	Hardware Ranch	4.98	250		Pn	20 30 46.2	+0.8
HWUT				IAML		20 32 13.7	
	comp=E,39nm,1.7s						
HWUT				IAML		20 32 30.3	
	comp=E,25nm,2.0s						
DGMT	Dagmar	5.02	9		Pn	20 30 46.5	+0.7
TCUT	Toone Canyon	5.10	244		Pn	20 30 47.9	+0.8
EGMT	Eagleton	5.47	327	Pn	Pn	20 30 53.8	+1.8
LRM	Limekiln Ridge	5.58	297		Pn	20 30 54.5	+0.8
P17A	Butcher Ranch,	5.73	227	Pn	Pn	20 30 56.5	+0.9
I10CA	LAC DU BONNET	9.23	40	i		21 21 50.0	
	baz=219,slow=311,SNR=2.2						
ULM	Lac du Bonnet	9.34	41	Pn	Pn	20 31 43.2	-1.7
	comp=E,0.7nm,0.3s,baz=228,slow=11,SNR=4.5						
ULM				Lg	Lg	20 34 21.6	
	comp=E,0.3nm,0.3s,baz=128,slow=7.8,SNR=4.6						

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*IDC **08** 20:30:05.1±0.6, 6°.97N×94°.70E, h0^{km}, mb4.2/19, mb1 4.3/19, mb1mx4.1/37, mbtmp4.2/19, MS3.6/6, Ms1 3.6/6, ms1mx3.3/45, Error ellipse: s-maj=24.0km s-min=14.6km az=52.0*

*DJA **08** 20:30:05.6±1.9, 6°N±5°×9°4E±°, h15^{km}±17^{km}, M4.3/6, mB5.2/2, mb4.2/6, MLv4.4/4, Mw(mB)4.6/2*

*NEIC **08** 20:30:07.1±2.5, 7°.13N±0°.07×94°.63E±0°.07, h10^{km}±1^{km}, mb4.7/17, Error ellipse: s-maj=13.6km s-min=10.3km az=325.0*

ISC 08 20:30:09.3±0.4**, 6°.98N**±0°.06×**94°.64E**±0°.06**, h26^{km}, n93, σ1^{s}76**/87**, mb4.4**/48**, MS3.6**/5**, 3C, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	2.88	127	P	Pn	20 30 53.5	0.0
LHMI				S	Sn	20 31 26.6	-0.8
LHMI	Lhok Sumawe	2.88	127	Pn	Pn	20 30 53.2	-0.3
TPTI		4.48	146	P	Pn	20 31 07.4	-8.2
PSI	Prapat	5.95	134	Pn	Pn	20 31 38.3	+2.3
	3.3nm,0.3s,baz=313,slow=13,SNR=14						
PSI				LR	LR	20 34 36.7	
	comp=Z,602nm,19.6s,baz=292,slow=46						
GSI	Gunungsitoli	6.35	152	P	Pn	20 31 32.7	-8.7
	0.2nm22nm,1.6s						
GSI	Gunungsitoli	6.35	152	Pn	Pn	20 31 43.4	+2.0
MNSI	Mandailing Nat	7.87	141	P	Pn	20 32 04.7	+2.4
PPI	Padang Panjang	9.36	142	P	Pn	20 32 39.4	+17
RGRI	Rengat	10.58	133	P	Pn	20 32 53.7	+14
CMAR	Chiang Mai Arr	12.15	20	Pn	Pn	20 33 02.8	+1.9
	0.3nm,0.3s,baz=210,slow=14,SNR=8.7						
CMAR				LR	LR	20 38 31.4	
	comp=Z,230nm,19.6s,baz=217,slow=42						
CMAR	Chiang Mai Arr	12.15	20		Pn	20 33 00.3	-0.6
CHTO	Chiang Mai	12.48	19	Pn	Pn	20 33 01.6	-3.8
PALK	Pallekele	13.84	272	LR	LR	20 38 04.5	
	comp=Z,457nm,21.3s,baz=191,slow=34						
LHSI	Lahat	13.92	140	P	P	20 33 34.7	+1.7
DLV	T Lat	14.51	69		Pn	20 33 31.4	-1.9
KLSI		15.36	139	P	Pn	20 33 41.9	-2.6
	5.4nm,0.7s						
HYB	Hyderabad	18.82	305	i P	Pn	20 34 35.0	+7.1
QIZ	Qiongzhong	19.02	50	P	P	20 34 28.3	-1.2
QIZ				S	Sn	20 38 02.5	-0.3
QIZ				LR	LR		
	comp=N,930nm,14.2s						
QIZ				LR	LR		
	comp=E,460nm,19.6s						
QIZ				LR	LR		
	comp=Z,290nm,16.2s						
KMI	Kunming	19.63	22	⇑P	Pn	20 34 41.4	+3.6
KMI				sP	sP	20 34 47.2	+1.4
KMI				PP	PnPn	20 35 00.8	+9.1
KMI				S	Sn	20 38 17.3	-0.4
KMI				pmax	pmax		
	comp=Z,13nm,1.1s						
KMI				pmax	pmax		
	comp=Z,130nm,4.7s						
KMI				LR	LR		
	comp=N,230nm,13.9s						
KMI				LR	LR		
	comp=E,310nm,12.8s						
KMI				LR	LR		
	comp=Z,190nm,12.2s						
ODAN	Odare	20.94	342	eP	Pn	20 34 52.8	-0.3
	comp=Z,32nm,0.7s						
RAMN	Ramite	21.28	340	eP	P	20 34 55.1	+0.9
	comp=Z,7.2nm,0.5s						
TAPN	Taplejung	21.30	343	eP	P	20 34 58.6	+4.1
	comp=Z,83nm,0.8s						
JIRN	Jiri	22.07	340	eP	P	20 35 04.5	+1.6
PKIN	Phulchoki	22.28	338	eP	P	20 35 06.2	+1.2
	comp=Z,44nm,0.6s						
GYA	Guiyang	22.50	29	⇑P	P	20 35 10.7	+3.5
GYA				S	Sn	20 39 19.5	-6.9
GYA				pmax	pmax		
	comp=Z,8.0nm,1.6s						
GYA				LR	LR		
	comp=N,240nm,10.6s						
GYA				LR	LR		
	comp=E,400nm,14.6s						
GYA				LR	LR		
	comp=Z,350nm,13.1s						
BBKI	Banjar Baru	22.67	117	P	P	20 35 10.6	+1.6
GKN	Gorkha	22.95	337	eP	P	20 35 10.7	-1.3
	comp=Z,101nm,0.7s						
KOLN	Koldanda	23.18	334	eP	P	20 35 13.7	-0.6
DANN	Dangsing	23.62	335	eP	P	20 35 17.9	-0.9
	comp=Z,22nm,0.6s						
SRBI	Singaraja	25.39	126	P	P	20 35 48.7	+14
MPSI	Mapaga	26.04	104	P	P	20 35 41.3	+0.5
H08S3	Diego Garcia H	26.44	237	T	T	21 02 26.0	
	baz=56,slow=76,SNR=201						
H08S2	Diego Garcia H	26.44	237	T	T	21 02 27.0	
	baz=56,slow=76,SNR=144						
H08S1	Diego Carcia H	26.46	237	T	T	21 02 31.6	
	baz=56,slow=76,SNR=30						
TOLI2	Tolitoli	26.70	101	P	P	20 35 48.8	+2.0
TOLI2				IAmb	IAmb	20 35 51.4	
	comp=Z,15nm,0.8s						
GTA	Gaotai	32.62	7	⇑P	P	20 36 40.6	+1.5
GTA				pP	pP	20 36 44.8	-1.3
GTA				sP	sP	20 36 47.4	-1.6
GTA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GTA				LR	LR		
	comp=N,140nm,15.6s						
GTA				LR	LR		
	comp=E,170nm,14.2s						
GTA				LR	LR		
	comp=Z,99nm,13.5s						
NIL	Nilore	33.11	326	P	P	20 36 43.2	-0.2
NJ2	Nanjing	33.63	39	eP	P	20 36 47.0	-0.9
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
KSH	Kashi	36.49	335	P	P	20 37 10.7	-1.9
KSH				sP	pP	20 37 18.4	-1.3
KSH				pmax	pmax		
	comp=Z,3.0nm,0.6s						
HHC	Hu-ho-hao-te	36.95	22	eP	P	20 37 16.8	+0.3
HHC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,8.4s						
WMQ	Urumqi	37.20	352	eP	P	20 37 19.4	+0.9
GAR	Garm	38.69	329	P	P	20 37 28.7	-2.6
GAR				IAmb	IAmb	20 37 32.2	
	comp=Z,25nm,1.3s						
CHGR	Chuyangaron	39.04	328	P	P	20 37 31.9	-2.2
CHGR				IAmb	IAmb	20 37 43.2	
	comp=Z,17nm,1.0s						
MK31	Makanchi Array	41.06	347	P	P	20 37 49.8	-0.9
MKAR	Makanchi Array	41.06	347	P	P	20 37 50.9	+0.2
	comp=Z,4.2nm,0.7s,baz=167,slow=8.2,SNR=36						
MKAR				LR	LR	20 57 25.7	
	comp=Z,86nm,19.2s,baz=130,slow=40						
MKAR	Makanchi Array	41.06	347	P	P	20 37 49.8	-0.9
MAKZ	Makanchi	41.15	347	P	P	20 37 50.0	-1.5
SONM	Songino Array	41.92	12	P	P	20 37 58.5	+0.6
	comp=Z,3.2nm,0.9s,baz=196,slow=7.9,SNR=14						
SONM				PcP	PcP	20 39 54.0	+0.9
	comp=Z,0.7nm,0.9s,baz=209,slow=3.1,SNR=2.6						
SONM				ScP	ScP	20 43 42.1	+0.1
	comp=Z,0.6nm,0.8s,baz=193,slow=2.8,SNR=4.3						
SONM	Songino Array	41.92	12	P	P	20 37 56.0	-1.9
GEYT	Alibeck	45.19	318	P	P	20 38 25.0	+0.7
	comp=Z,2.3nm,0.5s,baz=93,slow=15,SNR=2.7						
WRA	Warramunga Arr	47.34	125	P	P	20 38 40.4	-1.0
	comp=Z,2.0nm,0.7s,baz=305,slow=9.1,SNR=26						
WRAB	Tennant Creek	47.35	125	P	P	20 38 40.9	-0.5
WRAB				IAmb	IAmb	20 39 00.5	
	comp=Z,6.6nm,0.8s						
ZALV	Zalesovo Beam	47.50	352	P	P	20 38 42.0	-0.1
	comp=Z,1.6nm,0.3s,baz=180,slow=7.3,SNR=15						
ZALV	Zalesovo Beam	47.50	352	P	P	20 38 40.7	-1.4
ASAR	Alice Springs	48.97	130	P	P	20 38 53.0	-1.0
	comp=Z,1.3nm,0.5s,baz=304,slow=7.3,SNR=21						
ASAR	Alice Springs	48.97	130	P	P	20 38 52.8	-1.1
GUMO	Guam	49.78	78	LR	LR	21 00 24.1	
	comp=Z,31nm,20.5s,baz=243,slow=37						
BRVK	Borovoye	50.05	341	P	P	20 39 01.6	-0.1
BRVK				IAmb	IAmb	20 39 03.1	
	comp=Z,14nm,1.4s						
ABKAR	Akbulak array	51.25	331	P	P	20 39 09.3	-1.5
ABKAR	Akbulak array	51.25	331	P	P	20 39 09.4	-1.4
ARU	Arti	56.90	337	P	P	20 39 50.3	-1.6
ARU				IAmb	IAmb	20 39 54.9	
	comp=Z,9.4nm,1.1s						
KMBO	Kilima Mbogo	57.83	264	P	P	20 39 60.0	+0.4
	comp=Z,1.6nm,0.6s,baz=62,slow=13,SNR=6.9						
KMBO				LR	LR	21 01 34.2	
	comp=Z,53nm,20.1s,baz=86,slow=33						
STKA	Stephens Creek	59.13	134	P	P	20 40 07.3	-0.7
	comp=Z,2.0nm,0.6s,baz=312,slow=8.3,SNR=8.3						
STKA	Stephens Creek	59.13	134	P	P	20 40 05.6	-2.4
BR131	Keskin Array S	63.39	311	P	P	20 40 35.2	-1.7
BR131				IAmb	IAmb	20 40 50.2	
	comp=Z,3.3nm,0.8s						
BRTR	Keskin Array B	63.39	311	P	P	20 40 36.6	-0.3
	comp=Z,1.1nm,0.6s,baz=123,slow=8.0,SNR=9.3						
TIXI	Tiksi	68.00	11	P	P	20 41 04.2	-1.7
AKASG	Malin Array Be	69.16	322	P	P	20 41 12.6	-0.9
	comp=Z,0.1nm,0.2s,baz=95,slow=4.9,SNR=4.3						
FINES	FINESS Array B	73.73	332	P	P	20 41 40.5	-0.3
	comp=Z,2.4nm,0.7s,baz=96,slow=3.8,SNR=20						
BOSA	Boshof	75.54	238	P	P	20 41 53.1	+0.9
	comp=Z,2.3nm,0.6s,baz=72,slow=4.8,SNR=11						
ARCES	ARCESS Array B	76.27	340	P	P	20 41 55.4	0.0
	comp=Z,2.4nm,0.7s,baz=79,slow=6.3,SNR=11						
CONA	Conrad Observa	77.33	317	eP	P	20 42 03.2	+1.2
	comp=Z,4.8nm,1.5s						
ARSA	Arzberg	77.52	317	eP	P	20 42 05.2	+2.2
	comp=Z,4.1nm,1.3s						
SOKA	Soboth	77.83	316	eP	P	20 42 06.0	+1.2
	comp=Z,6.1nm,1.3s						
OBKA	Obir	78.15	316	eP	P	20 42 08.1	+1.5
	comp=Z,5.4nm,1.3s						
GERES	GERESS Array B	78.82	318	P	P	20 42 11.1	+0.9
	comp=Z,1.2nm,0.7s,baz=91,slow=5.7,SNR=11						
GERES	GERESS Array B	78.82	318	P	P	20 42 10.6	+0.4
KBA	Koelnbreinsper	79.00	317	eP	P	20 42 10.4	-0.9
	comp=Z,4.4nm,1.4s						
HFS	Hagfors	79.47	330	P	P	20 42 13.2	-0.2
	comp=Z,1.4nm,0.3s,baz=107,slow=3.8,SNR=19						
ABTA	Abfaltersbach	79.56	316	eP	P	20 42 13.2	-1.1
	comp=Z,4.1nm,1.5s						
WTTA	Wattenberg	80.17	317	eP	P	20 42 17.5	-0.2
	comp=Z,8.2nm,1.2s						
WATA	Walderalm	80.21	317	eP	P	20 42 17.4	-0.4
	comp=Z,1.8nm,0.6s						
SQTA	Sankt Quirin	80.46	317	eP	P	20 42 18.5	-0.7
	comp=Z,2.5nm,0.7s						
MOTA	Moosalm	80.53	317	eP	P	20 42 20.0	+0.4
	comp=Z,7.1nm,1.4s						
NOA	NORSAR Array B	80.75	331	P	P	20 42 20.1	-0.3
	comp=Z,1.1nm,0.8s,baz=94,slow=5.4,SNR=3.4						
RETA	Reutte	80.76	317	eP	P	20 42 20.5	-0.2
	comp=Z,9.4nm,1.2s						
FETA	Feichten	80.79	316	eP	P	20 42 21.0	0.0
	comp=Z,7.9nm,1.9s						
DAVA	Damuels	81.36	317	eP	P	20 42 25.5	+1.5
	comp=Z,8.5nm,1.7s						
EKA	Eskdalemuir Ar	88.73	326	P	P	20 43 01.1	+0.5
	comp=Z,2.6nm,0.8s,baz=107,slow=4.6,SNR=4.2						
TORD	Torodi Ar. Bea	91.29	283	P	P	20 43 13.4	0.0
	comp=Z,0.7nm,0.8s,baz=98,slow=4.9,SNR=5.0						
ESDC	Sonseca Array	92.17	310	P	P	20 43 17.4	+0.3
	comp=Z,0.7nm,0.7s,baz=65,slow=4.1,SNR=7.8						
NVAR	Mina Array Bea	125.42	32	PKP	PKiKP	20 49 09.8	+0.5
	comp=Z,0.8nm,0.8s,baz=335,slow=4.0,SNR=3.6						
PDAR	Pinedale Array	125.81	22	PKP	PKiKP	20 49 09.8	-0.1
	comp=Z,0.6nm,0.8s,baz=77,slow=3.2,SNR=4.7						

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*FUNV **08** 20:31:10.7, 8°.44N×71°.42W, h1^{km}, MW3.2*

ISC 08 20:31:10.9±1.5**, 8°.49N**±0°.04×**71°.35W**±0°.03**, h12^{km}**±11^{km}**, n28, σ1^{s}24**/52**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.53	113	eP	Pg	20 31 21.6	+0.3
SOCV				eS	Sb	20 31 29.8	-0.1
SOCV	Socops	0.53	113	eP	Pg	20 31 21.6	+0.3
SOCV				eS	Sb	20 31 30.4	+0.5
SDV	Santo Domingo	0.81	61	eP	Pg	20 31 27.0	+0.3
SDV				eS	Sb	20 31 38.8	+0.6
SDV				i		20 31 46.6	
	comp=Z,212nm,0.5s						
CAPV	Capacho	1.14	237	eP	Pb	20 31 30.3	-2.4
CAPV				eS	Sb	20 31 45.9	-1.7
PAMC	Pamplona, Colo	1.76	230	eP	Pn	20 31 42.7	+1.0
PAMC				eS	Sb	20 32 06.2	+0.5
PAMC				i		20 32 13.2	
	comp=Z,158nm,0.2s						
MCQV	Machiques	1.94	323	eP	Pn	20 31 43.7	-0.1
MCQV				eS	Sn	20 32 08.8	+0.6
OCAC	Ocana	1.96	263	eP	Pn	20 31 44.2	0.0
OCAC				eS	Sn	20 32 08.6	-0.3
OCAC				i		20 32 11.2	
	comp=Z,2µm,0.3s						
TAMC	Tame, Arauca	2.09	192	eP	Pn	20 31 47.5	+1.6
TAMC				eS	Sb	20 32 16.8	+2.0
ELOV	Elorza	2.37	128	eP	Pn	20 31 50.5	+0.8
ELOV				eS	Sn	20 32 19.1	+0.4
BARC	Barichara	2.62	224	eP	Pb	20 31 57.9	-0.1
BARC				eS	Sb	20 32 31.6	+1.4
BARC				i		20 32 34.7	
	comp=Z,97nm,0.5s						
SIQV	Siquisique	2.63	35	eP	Pn	20 31 54.2	+0.9
SIQV				eS	Sn	20 32 26.1	+0.8
SMLC	San Martn de	2.71	277	eP	Pn	20 31 56.1	+1.7
SMLC				eS	Sn	20 32 29.4	+2.2
BRRC	Barranca, Sant	2.71	240	eP	Pb	20 31 58.0	-1.5
BRRC				eS	Sb	20 32 33.3	+0.6
BRRC				i		20 32 45.1	
	comp=Z,49nm,0.5s						
RUSC	La Rusia	3.10	214	eP	Pn	20 32 01.3	+1.1
RUSC				eS	Sb	20 32 45.1	+0.7

MAPV	**Macapo**	**3.15**	**65**	*e*P	**Pn**	**20 32 01.8**	**+1.2**
BAUV	**El Baul**	**3.30**	**82**	*e*P	**Pn**	**20 32 03.4**	**+0.8**
BAUV				*e*S	**Sn**	**20 32 42.0**	**+0.2**
JACV	**Jacura**	**3.58**	**44**	*e*P	**Pn**	**20 32 07.8**	**+1.3**
JACV				*e*S	**Sn**	**20 32 49.0**	**+0.2**
ZARC	**Zaragoza, Cauc**	**3.61**	**254**	*e*P	**Pn**	**20 32 06.9**	**0.0**
ZARC				*e*S	**Sb**	**20 32 58.0**	**-0.7**
MONV	**Montecano**	**3.70**	**21**	*e*P	**Pn**	**20 32 09.1**	**+1.0**
MONV				*e*S	**Sn**	**20 32 52.1**	**+0.5**
TURV	**Turiamo**	**3.97**	**60**	*e*P	**Pn**	**20 32 12.8**	**+1.0**
TURV				*e*S	**Sn**	**20 32 58.5**	**+0.2**
BENV	**Beln**	**3.98**	**68**	*e*P	**Pn**	**20 32 13.0**	**+1.0**
BENV				*e*S	**Sn**	**20 32 59.4**	**+0.7**
TACV	**Tcata**	**4.57**	**69**	*e*P	**Pn**	**20 32 21.0**	**+0.9**
TACV				*e*S	**Sn**	**20 33 12.8**	**-0.4**
PAYV	**Puerto Ayacuch**	**4.77**	**130**	*e*P	**Pn**	**20 32 22.9**	**+0.1**
MERV	**Las Mercedes**	**5.05**	**81**	*e*P	**Pn**	**20 32 27.0**	**+0.4**
MERV				*e*S	**Sn**	**20 33 23.2**	**-1.8**
GUY2C	**Guyana, Caldas**	**5.14**	**231**	*e*P	**Pn**	**20 32 29.2**	**+0.9**
BIRV	**Birongo**	**5.39**	**68**	*e*P	**Pn**	**20 32 32.0**	**+0.7**
PRGV	**PARIAGUAN**	**6.63**	**87**	*e*P	**Pn**	**20 32 47.8**	**-0.6**
PRGV				*e*S	**Sn**	**20 34 00.2**	**-3.9**
PCRV	**Puerto La Cruz**	**6.83**	**75**	*e*P	**Pn**	**20 32 51.8**	**+0.6**
PCRV				*e*S	**Sn**	**20 34 05.9**	**-3.1**

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*JMA **08** 20:45:03.6±0.1, 24°.62N×122°.59E, h110^{km}±2^{km}, M1.1*
*TAP **08** 20:45:04.1, 24°.76N×122°.59E, h105^{km}, ML2.6, D*
ISC 08 20:45:04.6±1.5**, 24°.73N**±0°.06×**122°.61E**±0°.03**, h100**^{km}±9^{km}**,**
n58, σ0^s.61/100**, 2D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.41**	**132**	P	**Pn**	**20 45 19.6**	**-0.2**
JYNG				S	**Sn**	**20 45 31.7**	**+0.5**
YOJ	**Yonaguni jima**	**0.45**	**126**	*e*P	**Pn**	**20 45 19.7**	**-0.4**
	baz=127						
YOJ				S	**Sn**	**20 45 32.6**	**+1.0**
	baz=127						
YOJ	**Yonaguni jima**	**0.45**	**126**	P	**Pn**	**20 45 20.0**	**-0.1**
YOJ				*e*S	**Sn**	**20 45 32.6**	**+1.0**
TWB1	**Santiao Chiao**	**0.63**	**297**	*e*P	**Pn**	**20 45 21.1**	**-0.2**
	baz=294						
TWC	**Suao**	**0.70**	**261**	*e*P	**Pn**	**20 45 21.6**	**-0.4**
	baz=257						
TWC				*e*S	**Sn**	**20 45 34.4**	**-0.7**
	baz=257						
NTC	**Toucheng**	**0.72**	**280**	*e*P	**Pn**	**20 45 23.9**	**+1.7**
	baz=277						
TIPB	**Shuangxi**	**0.75**	**289**	*i* P	**Pn**	**20 45 22.4**	**-0.2**
	baz=287						
TIPB				*i* S	**Sn**	**20 45 36.0**	**0.0**
	baz=287						
EWUT	**Wuta**	**0.81**	**250**	P	**Pn**	**20 45 23.3**	**+0.3**
	baz=246						
EWUT				*e*S	**Sn**	**20 45 37.4**	**+0.6**
	baz=246						
NDS	**Dongshan**	**0.82**	**264**	P	**Pn**	**20 45 23.1**	**0.0**
	baz=261						
NDS				S	**Sn**	**20 45 36.7**	**-0.3**
	baz=261						
NWF	**Wu-fen Shan**	**0.82**	**295**	⇓*i*P	**Pn**	**20 45 23.1**	**-0.2**
	baz=293						
WFSB	**Wu-fen Shan**	**0.82**	**295**	⇓*i*P	**Pn**	**20 45 23.1**	**-0.1**
	baz=292						
WFSB				*e*S	**Sn**	**20 45 36.0**	**-1.2**
	baz=292						
ENA	**Nanau**	**0.84**	**250**	P	**Pn**	**20 45 23.6**	**+0.3**
	baz=246						
ENA				*e*S	**Sn**	**20 45 37.9**	**+0.4**
	baz=246						
TWE	**Neicheng**	**0.85**	**270**	P	**Pn**	**20 45 23.7**	**+0.2**
	baz=267						
TWE				S	**Sn**	**20 45 37.9**	**+0.1**
	baz=267						
ENTT	**Nioudou**	**0.95**	**265**	*e*P	**Pn**	**20 45 24.7**	**+0.2**
	baz=262						
ENTT				*e*S	**Sn**	**20 45 39.8**	**+0.3**
	baz=262						
NHY	**Taipei**	**0.99**	**289**	*e*P	**Pn**	**20 45 24.2**	**-0.7**
	baz=286						
NDT	**Datong Townshi**	**1.00**	**263**	*e*P	**Pn**	**20 45 25.3**	**+0.2**
	baz=260						
NDT				*e*S	**Sn**	**20 45 41.4**	**+0.8**
	baz=260						
NWLT	**Wulai**	**1.01**	**273**	*e*P	**Pn**	**20 45 24.9**	**-0.3**
	baz=271						
NWLT				S	**Sn**	**20 45 40.4**	**-0.2**
	baz=271						
YM01	**YM01**	**1.03**	**294**	P	**Pn**	**20 45 25.1**	**-0.3**
	baz=292						
YM01				S	**Sn**	**20 45 41.1**	**0.0**
	baz=292						
ETL	**Fush Village**	**1.06**	**238**	*e*P	**Pn**	**20 45 25.8**	**0.0**
	baz=235						
NACB	**Ninganchiao**	**1.07**	**239**	*e*P	**Pn**	**20 45 25.1**	**-0.8**
	baz=237						
NACB				*e*S	**Sn**	**20 45 40.9**	**-0.9**
	baz=237						
IRIF	**Iriomote-Funau**	**1.09**	**111**	P	**Pn**	**20 45 25.8**	**-0.2**
IRIF				S	**Sn**	**20 45 42.4**	**+0.2**
YHNB	**Yeheng**	**1.12**	**267**	*i* P	**Pn**	**20 45 26.6**	**+0.2**
	baz=265						
YHNB				*i* S	**Sn**	**20 45 42.8**	**-0.2**
	baz=265						
TWD	**Chiawan**	**1.12**	**235**	*e*P	**Pn**	**20 45 27.5**	**+1.1**
	baz=232						
TWD				*e*S	**Sn**	**20 45 42.8**	**0.0**
	baz=232						
NSK	**Sanguang**	**1.14**	**268**	*i* P	**Pn**	**20 45 26.7**	**+0.1**
	baz=265						
NSK				*e*S	**Sn**	**20 45 43.1**	**-0.2**
	baz=265						
ETLH	**Xiulin Townshi**	**1.15**	**243**	*e*P	**Pn**	**20 45 26.7**	**-0.1**
	baz=241						
ETLH				*e*S	**Sn**	**20 45 43.0**	**-0.6**
	baz=241						
NNSB	**Datong**	**1.15**	**255**	P	**Pn**	**20 45 27.0**	**+0.1**
	baz=253						
NNSB				*e*S	**Sn**	**20 45 43.6**	**-0.1**
	baz=253						
NNS	**Nan Shan**	**1.16**	**256**	P	**Pn**	**20 45 26.9**	**0.0**
	baz=253						
NNS				*e*S	**Sn**	**20 45 43.6**	**-0.2**
	baz=253						
TEYL	**Yanliau Villag**	**1.26**	**227**	*e*P	**Pn**	**20 45 27.9**	**0.0**
	baz=226						
ETM	**Tongmen**	**1.27**	**234**	*e*P	**Pn**	**20 45 27.9**	**-0.2**
	baz=231						
ETM				*e*S	**Sn**	**20 45 45.1**	**-0.7**
	baz=231						
FUSS	**Fushou**	**1.33**	**249**	*e*P	**Pn**	**20 45 29.6**	**+0.6**
	baz=247						
FUSS				*e*S	**Sn**	**20 45 47.7**	**+0.2**
	baz=247						
WHF	**Hehuan Shan**	**1.35**	**245**	*i* P	**Pn**	**20 45 29.2**	**-0.3**
	baz=242						
WHF				S	**Sn**	**20 45 47.7**	**-0.7**
	baz=242						
JKRS	**Kuro-shima**	**1.37**	**111**	P	**Pn**	**20 45 29.3**	**+0.1**
JKRS				S	**Sn**	**20 45 47.9**	**0.0**
TWT	**Tachien**	**1.39**	**250**	*e*P	**Pn**	**20 45 30.3**	**+0.6**
	baz=248						
TWT				*e*S	**Sn**	**20 45 48.9**	**+0.3**
	baz=248						
TDCB	**Techi**	**1.40**	**251**	P	**Pn**	**20 45 30.2**	**+0.4**
	baz=248						
TDCB				S	**Sn**	**20 45 48.7**	**-0.2**
	baz=248						
JIJ	**Ishigaki jima**	**1.44**	**104**	P	**Pn**	**20 45 29.9**	**-0.3**
JIJ				S	**Sn**	**20 45 48.8**	**-0.8**
LIOB	**Emei**	**1.45**	**267**	P	**Pn**	**20 45 30.2**	**-0.1**
	baz=265						
LIOB				*e*S	**Sn**	**20 45 49.3**	**-0.4**
	baz=265						
NSTT	**Nanjuang**	**1.46**	**267**	*e*P	**Pn**	**20 45 30.0**	**-0.4**
	baz=264						
NSTT				*e*S	**Sn**	**20 45 49.7**	**-0.3**
	baz=264						
CHGB	**Renai**	**1.47**	**243**	P	**Pn**	**20 45 30.8**	**+0.1**
	baz=241						
CHGB				S	**Sn**	**20 45 50.0**	**-0.4**
	baz=241						
EGFH	**Guangfu**	**1.51**	**226**	*e*P	**Pn**	**20 45 30.4**	**-0.5**
	baz=224						
OWD	**Renai**	**1.52**	**240**	*e*P	**Pn**	**20 45 31.5**	**+0.3**
	baz=238						
OWD				*e*S	**Sn**	**20 45 50.4**	**-1.0**
	baz=238						
JISG	**Ishigakijimahi**	**1.56**	**95**	P	**Pn**	**20 45 31.2**	**-0.3**
JISG				S	**Sn**	**20 45 51.4**	**-0.6**
WHP	**Taichung City**	**1.58**	**254**	*e*P	**Pn**	**20 45 32.5**	**+0.6**
	baz=252						
WHP				*e*S	**Sn**	**20 45 53.0**	**+0.3**
	baz=252						
HGSD	**Ruisui**	**1.64**	**222**	*e*P	**Pn**	**20 45 32.1**	**-0.5**
	baz=220						
HGSD				*e*S	**Sn**	**20 45 53.3**	**-0.5**
	baz=220						
WPL	**Puli Township**	**1.66**	**245**	*e*P	**Pn**	**20 45 32.9**	**0.0**
	baz=243						
DPDB	**Guoxing**	**1.68**	**246**	*e*P	**Pn**	**20 45 33.9**	**+0.7**
	baz=244						
WCS	**Beigang Elemen**	**1.68**	**247**	*e*P	**Pn**	**20 45 34.0**	**+0.9**
	baz=245						
EHY	**Hungye**	**1.69**	**224**	*e*P	**Pn**	**20 45 34.9**	**+1.7**
	baz=222						
ECBN	**Changbin**	**1.76**	**217**	*e*P	**Pn**	**20 45 34.0**	**-0.1**
	baz=215						
SMLT	**Sun Moon Lake**	**1.77**	**242**	*e*P	**Pn**	**20 45 35.0**	**+0.7**
	baz=240						
SMLT				*e*S	**Sn**	**20 45 58.5**	**+1.5**
	baz=240						
SSLB	**Suanglung**	**1.77**	**239**	*e*P	**Pn**	**20 45 35.2**	**+0.9**
	baz=237						
SSLB				*e*S	**Sn**	**20 45 57.2**	**+0.3**
	baz=237						
YULB	**Yu-li**	**1.79**	**222**	*e*P	**Pn**	**20 45 33.4**	**-1.1**
	baz=220						
TYC	**Yuchr**	**1.79**	**243**	*e*P	**Pn**	**20 45 35.4**	**+0.9**
	baz=241						
TYC				*e*S	**Sn**	**20 45 58.5**	**+1.2**
	baz=241						
EYUL	**Yuli**	**1.81**	**221**	*e*P	**Pn**	**20 45 34.5**	**-0.2**
	baz=219						
TWF1	**Yuli**	**1.82**	**221**	*e*P	**Pn**	**20 45 34.1**	**-0.8**
	baz=219						
TWF1				*e*S	**Sn**	**20 45 55.9**	**-2.0**
	baz=219						
JTJ	**Tarama**	**1.91**	**92**	P	**Pn**	**20 45 36.0**	**0.0**
JTJ				*e*S	**Sn**	**20 45 59.6**	**-0.3**
FULB	**Fuli**	**1.94**	**219**	*e*P	**Pn**	**20 45 36.5**	**+0.1**
	baz=217						
CHKT	**Chengkung**	**1.98**	**215**	*e*P	**Pn**	**20 45 37.5**	**+0.6**
	baz=213						
JIRB	**Irabujima**	**2.33**	**87**	P	**Pn**	**20 45 42.1**	**+0.6**
JIRB				*e*S	**Sn**	**20 46 10.4**	**+0.6**

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*IDC **08** 20:51:22.0±1.6, 19°.66S×177°.72W, h560^{km}±14^{km},*
mb3.6/14, mb1 3.8/16, mb1mx3.5/48, mbtmp4.6/16, Error
ellipse: s-maj=31.4km s-min=11.1km az=151.0
ISC 08 20:51:20.7±0.9**, 19°.8S**±0°.2×**177°.6W**±0°.1**, h550**^{km}**, n32,**
σ0^s.70/31**, mb4.0**/14**, 1C-1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.57**	**296**	P	**P**	**20 52 47.4**	**+0.2**
	18nm,0.3s,baz=253,slow=20,SNR=69						
MSVF				S	**S**	**20 53 59.1**	**+1.5**
	baz=326,slow=23,SNR=0.7						
AFI	**Afiamalu**	**8.08**	**45**	P	P	20 53 14.7	-4.6
	11nm,0.3s,baz=154,slow=11,SNR=6.1						
AFI				S	S	20 54 45.3	-11
	20nm,0.3s,baz=15,slow=21,SNR=8.6						
DZM	**Mont Dzumac**	**15.06**	**258**	P	**P**	**20 54 31.4**	**+0.5**
	1.7nm,0.3s,baz=80,slow=20,SNR=19						
CTA	**Charters Tower**	**33.92**	**263**	P	**P**	**20 57 18.6**	**-0.1**
	19nm,0.4s,baz=90,slow=10,SNR=8.6						
STKA	**Stephens Creek**	**38.43**	**243**	P	**P**	**20 57 56.0**	**+0.3**
	7.3nm,0.7s,baz=87,slow=10,SNR=26						
JAY	**Jayapura**	**44.16**	**288**	P	**P**	**20 58 41.6**	**+0.4**
	20nm,0.6s,baz=144,slow=3.9,SNR=18						
ASAR	**Alice Springs**	**45.03**	**256**	P	**P**	**20 58 47.8**	**-0.2**
	21nm,0.8s,baz=87,slow=8.6,SNR=200						
ASAR				S	**S**	**21 04 46.3**	**-0.8**
	0.4nm,0.6s,baz=86,slow=15,SNR=4.9						
WRA	**Warramunga Arr**	**45.06**	**261**	P	**P**	**20 58 47.3**	**-0.9**
	12nm,0.8s,baz=95,slow=7.7,SNR=150						
MJAR	**Matsushiro Arr**	**69.84**	**323**	P	**P**	**21 01 34.8**	**-1.6**
	1.5nm,0.7s,baz=159,slow=6.2,SNR=6.4						
PETK	**Petropavlovsk-**	**75.66**	**345**	P	**P**	**21 02 09.7**	**+0.3**
	4.7nm,0.8s,baz=165,slow=12,SNR=3.1						
YBH	**Yreka Blue Hor**	**79.50**	**39**	P	**P**	**21 02 30.7**	**+0.1**
	2.3nm,0.6s,baz=194,slow=3.3,SNR=7.5						
NVAR	**Mina Array Bea**	**80.25**	**43**	P	**P**	**21 02 35.2**	**+0.4**
	1.5nm,0.7s,baz=225,slow=8.7,SNR=6.2						
ELK	**Elko**	**83.51**	**43**	P	**P**	**21 02 51.3**	**-0.1**
	0.5nm,0.6s,baz=300,slow=19,SNR=3.9						
SEY	**Seymchan**	**85.75**	**347**	P	**P**	**21 03 01.1**	**-0.3**
	2.3nm,0.7s,baz=132,slow=4.8,SNR=5.4						
TXAR	**Lajitas Array**	**86.36**	**57**	P	**P**	**21 03 06.2**	**+0.9**
	1.2nm,0.7s,baz=220,slow=6.3,SNR=15						
ILAR	**Eielson Array**	**87.53**	**13**	P	**P**	**21 03 08.9**	**-0.9**
	1.7nm,0.7s,baz=225,slow=5.6,SNR=11						
PDAR	**Pinedale Array**	**88.19**	**43**	P	**P**	**21 03 13.7**	**0.0**
	1.1nm,0.6s,baz=217,slow=4.0,SNR=13						
MKAR	**Makanchi Array**	**110.96**	**314**	PKiKP	**PKiKP**	**21 08 50.5**	**-1.2**
	0.4nm,0.6s,baz=111,slow=1.0,SNR=1.0						
ARCES	**ARCESS Array B**	**128.27**	**350**	PKP	**PKPdf**	**21 09 24.3**	**+0.1**
	5.1nm,1.0s,baz=343,slow=2.5,SNR=8.4						
FINES	**FINESS Array B**	**135.17**	**344**	PKhKP	PKPpre	21 09 33.8	
	3.6nm,1.1s,baz=270,slow=3.8,SNR=1.9						
AKASG	**Malin Array Be**	**142.55**	**332**	PKhKP	PKPpre	21 09 47.0	
	0.8nm,0.4s,baz=46,slow=4.4,SNR=8.7						
BRTR	**Keskin Array B**	**146.61**	**313**	PKPbc	**PKPbc**	**21 10 01.1**	**-0.1**
	1.4nm,0.7s,baz=136,slow=3.8,SNR=6.0						
OSTC	**Ostas**	**147.38**	**344**	*e*PKP	**PKPbc**	**21 10 02.8**	**0.0**
CHVC	**Chvalec**	**147.39**	**344**	*e*PKP	**PKiKP**	**21 10 06.3**	**+1.9**
CLL	**Collm**	**147.43**	**348**	⇑*i*PKPbc	**PKPbc**	**21 10 03.0**	**+0.2**
	comp=Z,8.0nm,0.9s						
CLL				⇓*i*		21 10 06.4	
	comp=Z,4.0nm,0.9s						
DPC	**Dobruska-Polom**	**147.54**	**343**	*e*PKP	**PKPbc**	**21 10 03.3**	**+0.1**
KRLC	**Kraliky**	**147.66**	**343**	*e*PKP	**PKPbc**	**21 10 03.8**	**+0.3**
PRU	**Pruhonice**	**148.33**	**345**	*e*PKP	**PKPbc**	**21 10 05.1**	**0.0**
TREC	**Trest**	**148.72**	**343**	*e*PKP	**PKPbc**	**21 10 06.1**	**-0.1**
KHC	**Kasperske Hory**	**149.36**	**346**	*e*PKP	**PKPbc**	**21 10 07.8**	**0.0**
CKRC	**Cesky Krumlov**	**149.47**	**344**	*e*PKP	**PKPbc**	**21 10 08.2**	**+0.2**
GERES	**GERESS Array B**	**149.59**	**345**	PKPbc	**PKPbc**	**21 10 08.6**	**+0.2**
	comp=Z,3.0nm,0.8s,baz=38,slow=2.4,SNR=22						

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*JMA **08** 20:56:09.8±0.2, 24°.43N×122°.58E, h94^{km}±2^{km}, M1.9*
*TAP **08** 20:56:09.9, 24°.47N×122°.61E, h95^{km}, ML2.7, C*
ISC 08 20:56:10.2±1.4**, 24°.46N**±0°.04×**122°.61E**±0°.02**, h91**^{km}±9^{km}**,**
n75, σ0^s.71/122**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.30**	**92**	P	**Pn**	**20 56 24.1**	**+0.4**
JYNG				S	**Sn**	**20 56 34.4**	**+0.7**
YOJ	**Yonaguni jima**	**0.36**	**90**	*i* P	**Pn**	**20 56 24.4**	**+0.3**
	baz=95						
YOJ				S	**Sn**	**20 56 34.7**	**+0.3**
	baz=95						
YOJ	**Yonaguni jima**	**0.36**	**90**	P	**Pn**	**20 56 24.3**	**+0.3**
YOJ				S	**Sn**	**20 56 34.9**	**+0.6**
TWC	**Suao**	**0.71**	**282**	P	**Pn**	**20 56 26.8**	**0.0**
	baz=285						
TWC				*e*S	**Sn**	**20 56 37.7**	**-1.6**
	baz=285						
EWUT	**Wuta**	**0.76**	**269**	*e*P	**Pn**	**20 56 27.2**	**-0.1**
	baz=264						
EWUT				*e*S	**Sn**	**20 56 40.5**	**+0.4**
	baz=264						
TWB1	**Santiao Chiao**	**0.79**	**314**	*e*P	**Pn**	**20 56 27.7**	**+0.1**
	baz=308						
ENA	**Nanau**	**0.79**	**268**	P	**Pn**	**20 56 27.7**	**0.0**
	baz=263						
ENA				*e*S	**Sn**	**20 56 41.1**	**+0.3**
	baz=263						
NTC	**Toucheng**	**0.81**	**299**	*e*P	**Pn**	**20 56 27.9**	**0.0**
	baz=293						
NDS	**Dongshan**	**0.83**	**282**	P	**Pn**	**20 56 28.4**	**+0.3**
	baz=286						
NDS				*e*S	**Sn**	**20 56 40.4**	**-1.1**
	baz=286						
TIPB	**Shuangxi**	**0.88**	**306**	*e*P	**Pn**	**20 56 28.2**	**-0.4**
	baz=305						
TIPB				*e*S	**Sn**	**20 56 41.4**	**-1.0**
	baz=305						
TWE	**Neicheng**	**0.90**	**287**	P	**Pn**	**20 56 28.8**	**0.0**
	baz=286						
TWE				*e*S	**Sn**	**20 56 42.2**	**-0.5**
	baz=286						
ETL	**Fush Village**	**0.95**	**252**	*e*P	**Pn**	**20 56 29.1**	**-0.3**
	baz=245						
ETL				*e*S	**Sn**	**20 56 43.5**	**-0.3**
	baz=245						
ENTT	**Nioudou**	**0.97**	**281**	P	**Pn**	**20 56 29.9**	**+0.3**
	baz=283						
ENTT				*e*S	**Sn**	**20 56 44.3**	**+0.1**
	baz=283						
NWF	**Wu-fen Shan**	**0.97**	**309**	*e*P	**Pn**	**20 56 29.4**	**-0.2**
	baz=301						
NWF				*e*S	**Sn**	**20 56 44.0**	**-0.3**
	baz=301						
WFSB	**Wu-fen Shan**	**0.97**	**309**	P	**Pn**	**20 56 29.6**	**0.0**
	baz=302						
WFSB				S	**Sn**	**20 56 44.1**	**0.0**
	baz=302						
NACB	**Ninganchiao**	**0.97**	**253**	P	**Pn**	**20 56 29.2**	**-0.4**
	baz=246						
NACB				*e*S	**Sn**	**20 56 43.8**	**-0.3**
	baz=246						
TWD	**Chiawan**	**1.00**	**248**	P	**Pn**	**20 56 29.7**	**-0.2**
	baz=246						
TWD				*e*S	**Sn**	**20 56 44.5**	**-0.2**
	baz=246						
NDT	**Datong Townshi**	**1.01**	**278**	*e*P	**Pn**	**20 56 30.4**	**+0.3**
	baz=280						
NDT				*e*S	**Sn**	**20 56 45.3**	**+0.4**
	baz=280						
IRIF	**Iriomote-Funau**	**1.03**	**97**	P	**Pn**	**20 56 30.6**	**+0.4**
IRIF				S	**Sn**	**20 56 45.2**	**-0.1**
NWLT	**Wulai**	**1.06**	**288**	*e*P	**Pn**	**20 56 31.3**	**+0.7**
	baz=293						
NWLT				*e*S	**Sn**	**20 56 45.7**	**-0.2**
	baz=293						
ETLH	**Xiulin Townshi**	**1.06**	**256**	P	**Pn**	**20 56 30.6**	**-0.1**
	baz=251						
ETLH				*e*S	**Sn**	**20 56 46.0**	**-0.1**
	baz=251						
TEYL	**Yanliau Villag**	**1.10**	**238**	*e*P	**Pn**	**20 56 30.9**	**-0.2**
	baz=235						
NNSB	**Datong**	**1.12**	**269**	P	**Pn**	**20 56 31.3**	**-0.2**
	baz=262						
NNSB				*e*S	**Sn**	**20 56 47.0**	**-0.4**
	baz=262						
NNS	**Nan Shan**	**1.13**	**269**	*e*P	**Pn**	**20 56 31.5**	**-0.1**
	baz=263						
NNS				*e*S	**Sn**	**20 56 47.1**	**-0.5**
	baz=263						
ETM	**Tongmen**	**1.13**	**244**	*e*P	**Pn**	**20 56 31.1**	**-0.4**
	baz=243						
ETM				*e*S	**Sn**	**20 56 46.6**	**-0.9**
	baz=243						
TATO	**Taipei**	**1.14**	**297**	*e*P	**Pn**	**20 56 31.9**	**+0.3**
	baz=295						
YHNB	**Yeheng**	**1.14**	**281**	P	**Pn**	**20 56 31.7**	**0.0**
	baz=280						
YHNB				*e*S	**Sn**	**20 56 47.5**	**-0.4**
	baz=280						
NSK	**Sanguang**	**1.16**	**281**	*e*P	**Pn**	**20 56 31.9**	**0.0**
	baz=280						
HATJ	**Hateruma jima**	**1.16**	**110**	P	**Pn**	**20 56 32.5**	**+0.7**
HATJ				S	**Sn**	**20 56 49.4**	**+1.3**
YM01	**YM01**	**1.17**	**306**	*e*P	**Pn**	**20 56 31.4**	**-0.5**
	baz=297						
YM01				*e*S	**Sn**	**20 56 46.7**	**-1.5**
	baz=297						
ESL	**Shilin**	**1.25**	**239**	*e*P	**Pn**	**20 56 32.6**	**-0.4**
	baz=238						
TWS1	**Kuangyinshan**	**1.26**	**301**	*e*P	**Pn**	**20 56 33.0**	**+0.1**
	baz=294						
FUSS	**Fushou**	**1.26**	**261**	P	**Pn**	**20 56 33.4**	**+0.1**
	baz=264						
FUSS				*e*S	**Sn**	**20 56 50.8**	**+0.1**
	baz=264						
WHF	**Hehuan Shan**	**1.27**	**256**	P	**Pn**	**20 56 33.5**	**0.0**
	baz=260						
WHF				*e*S	**Sn**	**20 56 50.6**	**-0.5**
	baz=260						
JKRS	**Kuro-shima**	**1.29**	**100**	P	**Pn**	**20 56 34.1**	**+0.7**
JKRS				S	**Sn**	**20 56 51.5**	**+0.6**
TWT	**Tachien**	**1.32**	**261**	P	**Pn**	**20 56 34.7**	**+0.7**
	baz=260						
TWT				*e*S	**Sn**	**20 56 52.5**	**+0.6**
	baz=260						
EGFH	**Guangfu**	**1.34**	**234**	*e*P	**Pn**	**20 56 33.4**	**-0.5**
	baz=237						
EGFH				*e*S	**Sn**	**20 56 52.0**	**+0.1**
	baz=237						
TDCB	**Techi**	**1.34**	**261**	P	**Pn**	**20 56 34.4**	**+0.2**
	baz=260						
TDCB				*e*S	**Sn**	**20 56 51.7**	**-0.5**
	baz=260						
CHGB	**Renai**	**1.37**	**253**	*e*P	**Pn**	**20 56 34.8**	**+0.2**
	baz=246						
CHGB				*e*S	**Sn**	**20 56 52.6**	**-0.4**
	baz=246						
JIJ	**Ishigaki jima**	**1.40**	**94**	P	**Pn**	**20 56 34.9**	**+0.2**
JIJ				S	**Sn**	**20 56 52.8**	**-0.5**
OWD	**Renai**	**1.40**	**249**	P	**Pn**	**20 56 35.0**	**+0.1**
	baz=244						
OWD				*e*S	**Sn**	**20 56 53.0**	**-0.5**
	baz=244						
HGSD	**Ruisui**	**1.45**	**229**	P	**Pn**	**20 56 35.2**	**-0.2**
	baz=225						
HGSD				*e*S	**Sn**	**20 56 55.2**	**+0.8**
	baz=225						
LIOB	**Emei**	**1.46**	**278**	*e*P	**Pn**	**20 56 36.0**	**+0.5**
	baz=276						
LIOB				*e*S	**Sn**	**20 56 54.9**	**+0.2**
	baz=276						
NSTT	**Nanjuang**	**1.48**	**277**	*e*P	**Pn**	**20 56 36.1**	**+0.4**
	baz=276						
NSTT				*e*S	**Sn**	**20 56 54.8**	**-0.1**
	baz=276						
EHY	**Hungye**	**1.51**	**231**	*e*P	**Pn**	**20 56 35.7**	**-0.5**
	baz=238						
WHP	**Taichung City**	**1.53**	**263**	P	**Pn**	**20 56 37.6**	**+1.1**
	baz=262						
WHP				*e*S	**Sn**	**20 56 56.7**	**+0.4**
	baz=262						
JISG	**Ishigakijimahi**	**1.55**	**85**	P	**Pn**	**20 56 36.4**	**-0.2**
JISG				S	**Sn**	**20 56 56.0**	**-0.7**
WCS	**Beigang Elemen**	**1.60**	**256**	P	**Pn**	**20 56 38.0**	**+0.8**
	baz=253						
WCS				*e*S	**Sn**	**20 56 58.9**	**+1.1**
	baz=253						
YULB	**Yu-li**	**1.60**	**229**	*e*P	**Pn**	**20 56 36.8**	**-0.6**
	baz=236						
EYUL	**Yuli**	**1.62**	**227**	*e*P	**Pn**	**20 56 37.0**	**-0.5**
	baz=235						
SSLB	**Suanglung**	**1.66**	**246**	*e*P	**Pn**	**20 56 38.1**	**+0.1**
	baz=240						
SMLT	**Sun Moon Lake**	**1.67**	**250**	*e*P	**Pn**	**20 56 39.2**	**+1.0**
	baz=245						
SMLT				*e*S	**Sn**	**20 56 59.1**	**-0.3**
	baz=245						
TYC	**Yuchr**	**1.69**	**251**	*e*P	**Pn**	**20 56 39.6**	**+1.2**
	baz=244						
FULB	**Fuli**	**1.74**	**224**	*e*P	**Pn**	**20 56 38.8**	**-0.3**
	baz=218						
WJS	**Zhushan**	**1.83**	**250**	*e*P	**Pn**	**20 56 41.5**	**+1.3**
	baz=242						
ALS	**Alishan**	**1.90**	**241**	*e*P	**Pn**	**20 56 42.3**	**+0.8**
	baz=234						
ALS				*e*S	**Sn**	**20 57 07.2**	**+2.0**
	baz=234						
EDH	**Donghe**	**1.91**	**219**	*e*P	**Pn**	**20 56 40.7**	**-0.5**
	baz=213						
EDH				*e*S	**Sn**	**20 57 03.2**	**-1.6**
	baz=213						
JTJ	**Tarama**	**1.91**	**84**	P	**Pn**	**20 56 41.5**	**+0.2**
JTJ				S	**Sn**	**20 57 04.2**	**-0.8**
ELDTW	**Lidau**	**1.93**	**229**	*e*P	**Pn**	**20 56 41.2**	**-0.5**
	baz=224						
ELDTW				*e*S	**Sn**	**20 57 05.0**	**-0.6**
	baz=224						
CHN5	**Tsauling**	**1.96**	**244**	*e*P	**Pn**	**20 56 42.7**	**+0.7**
	baz=237						
CHN5				*e*S	**Sn**	**20 57 08.5**	**+2.2**
	baz=237						
LDUT	**Ludao**	**2.06**	**211**	*e*P	**Pn**	**20 56 42.7**	**-0.6**
	baz=207						
LDUT				*e*S	**Sn**	**20 57 06.5**	**-2.1**
	baz=207						
STYH	**Taoyuan**	**2.12**	**233**	*e*P	**Pn**	**20 56 44.7**	**+0.7**

	baz=227						
TPUB	**Ta-pu**	**2.15**	**238**	*e*P	**Pn**	**20 56 45.5**	**+1.1**
	baz=237						
TWGBT	**Beinan**	**2.16**	**221**	*e*P	**Pn**	**20 56 44.3**	**-0.2**
	baz=226						
TWG	**Pinlang**	**2.16**	**221**	*e*P	**Pn**	**20 56 44.3**	**-0.2**
	baz=226						
WTK	**Tuku**	**2.17**	**250**	*e*P	**Pn**	**20 56 44.9**	**+0.2**
	baz=249						
WTP	**Ta-pu**	**2.19**	**237**	*e*P	**Pn**	**20 56 46.0**	**+0.9**
	baz=244						
TWK	**Hsinying**	**2.28**	**239**	*e*P	**Pn**	**20 56 47.4**	**+1.2**
	baz=238						
CHN1	**Nanshi**	**2.29**	**237**	*e*P	**Pn**	**20 56 47.1**	**+0.8**
	baz=245						
SLGT	**Liugui**	**2.32**	**231**	*e*P	**Pn**	**20 56 48.2**	**+1.6**
	baz=237						
JIRB	**Irabujima**	**2.36**	**81**	S	**Sn**	**20 57 13.9**	**-1.6**
SSD	**Sandimen**	**2.49**	**227**	*e*P	**Pn**	**20 56 50.0**	**+1.1**
	baz=226						
MASBT	**Mashibuluo**	**2.58**	**225**	*e*P	**Pn**	**20 56 50.0**	**-0.2**
	baz=224						
EAST	**Anshuo**	**2.63**	**218**	*e*P	**Pn**	**20 56 49.6**	**-1.2**
	baz=217						
SLIU	**Shizi**	**2.79**	**217**	*e*P	**Pn**	**20 56 52.6**	**-0.3**
	baz=220						

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*IDC **08** 20:57:11.0±1.3, 51.°89N×173.°09W, h0km, mb3.9/13, mb1 4.1/15, mb1mx3.8/71, mbtmp3.9/15, ML3.4/2, Error ellipse: s-maj=39.9km s-min=16.5km az=3.0*

*AEIC **08** 20:57:12±1.9, 51.°41N±0.°08×172.°97W±0.°09, h26km±9km, ML3.6/16, Error ellipse: s-maj=11.0km s-min=8.0km az=177.0*

*NEIC **08** 20:57:14.5±1.5, 51.°52N±0.°10×172.°98W±0.°10, h38km±31km, Error ellipse: s-maj=14.0km s-min=8.6km az=182.0*

ISC 08 20:57:15.3±0.8**, 51.°6N**±0.°1×**172.°99W**±0.°04**, h37km, n37, σ1.s18**/34**, mb3.8**/13**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOFP	**Korovin Flat P**	**0.95**	**314**		**Pn**	**20 57 31.9**	**-0.2**
KOFP					**Sn**	**20 57 48.2**	**+3.8**
KOSE	**Korovin Southe**	**0.98**	**318**		**Pn**	**20 57 32.4**	**0.0**
KOKL	**Mount Kliuchef**	**1.02**	**314**		**Pn**	**20 57 32.5**	**-0.7**
KONE	**Korovin Northe**	**1.04**	**318**		**Pn**	**20 57 32.9**	**-0.4**
GSIG	**Igitkin Island**	**1.86**	**282**		**Pn**	**20 57 43.9**	**-0.6**
GSMY	**Great Sitkin M**	**1.95**	**284**		**Sn**	**20 58 10.0**	**+1.0**
GSTD	**Great Sitkin T**	**2.00**	**284**		**Pn**	**20 57 45.8**	**-0.8**
GSTD					**Sn**	**20 58 11.7**	**+1.2**
ADK	**Adak**	**2.31**	**278**		**Pn**	**20 57 50.2**	**-0.6**
ADK					**Sn**	**20 58 18.1**	**+0.2**
ADK	**Adak**	**2.31**	**278**		**Pn**	**20 57 50.3**	**-0.4**
KIWB	**Kanaga Island**	**2.60**	**277**		**Pn**	**20 57 54.7**	**+0.1**
KIMD	**Kanaga Island**	**2.65**	**275**		**Pn**	**20 57 55.2**	**-0.2**
NIKH	**Nikolski High**	**2.88**	**60**		**Pn**	**20 57 58.8**	**+0.3**
OKFG	**Magazine Ridge**	**3.58**	**58**		**Pn**	**20 58 08.1**	**-0.1**
UNV	**Unalaska Valle**	**4.53**	**58**		**Pn**	**20 58 20.6**	**-0.6**
AMKA	**Amchitka**	**4.82**	**270**		**Pn**	**20 58 25.2**	**0.0**
KDAK	**Kodiak Island**	**13.29**	**54**	Pn	**Pn**	**21 00 19.0**	**-2.0**
	0.2nm,0.3s,baz=301,slow=14,SNR=1.4						
PETK	**Petropavlovsk-**	**17.91**	**286**	P	**Pn**	**21 01 20.7**	**-0.5**
	0.2nm,0.3s,baz=98,slow=12,SNR=4.5						
ILAR	**Eielson Array**	**18.85**	**36**	P	**P**	**21 01 29.2**	**-2.6**
	0.3nm,0.3s,baz=234,slow=9.3,SNR=16						
DLBC	**Dease Lake**	**25.18**	**57**	P	**P**	**21 02 38.5**	**+1.5**
	3.2nm,0.8s,baz=284,slow=5.7,SNR=5.6						
INK	**Inuvik**	**25.21**	**34**	P	**P**	**21 02 36.7**	**-0.3**
	4.6nm,0.7s,baz=250,slow=9.7,SNR=16						
H11N2	**WAKE ISLAND Hy**	**35.53**	**214**	T	T	21 42 09.3	
	baz=21,slow=75,SNR=17						
H11N3	**WAKE ISLAND Hy**	**35.53**	**214**	T	T	21 42 09.3	
	baz=21,slow=75,SNR=14						
H11N1	**WAKE ISLAND Hy**	**35.55**	**214**	T	T	21 42 09.3	
	baz=21,slow=75,SNR=14						
H11S1	**WAKE ISLAND Hy**	**36.73**	**213**	T	T	21 43 34.1	
	baz=20,slow=75,SNR=24						
H11S2	**WAKE ISLAND Hy**	**36.74**	**213**	T	T	21 43 31.0	
	baz=20,slow=75,SNR=15						
H11S3	**WAKE ISLAND Hy**	**36.74**	**213**	T	T	21 43 31.0	
	baz=20,slow=75,SNR=7.9						
NVAR	**Mina Array Bea**	**39.91**	**87**	P	**P**	**21 04 47.2**	**+1.4**
	0.3nm,0.5s,baz=313,slow=11,SNR=2.4						
PDAR	**Pinedale Array**	**42.75**	**76**	P	**P**	**21 05 10.6**	**+1.6**
	0.7nm,0.6s,baz=303,slow=8.1,SNR=4.3						
SONM	**Songino Array**	**49.74**	**299**	P	**P**	**21 06 03.9**	**+0.1**
	0.3nm,0.3s,baz=63,slow=6.7,SNR=3.2						
TXAR	**Lajitas Array**	**55.02**	**86**	P	**P**	**21 06 43.3**	**+0.2**
	0.2nm,0.4s,baz=304,slow=6.1,SNR=6.4						
ZALV	**Zalesovo Beam**	**56.44**	**316**	P	**P**	**21 06 51.2**	**-1.5**
	0.4nm,0.4s,baz=20,slow=5.1,SNR=1.8						
ARCES	**ARCESS Array B**	**58.40**	**352**	P	**P**	**21 07 05.8**	**-0.6**
	5.8nm,1.1s,baz=14,slow=7.8,SNR=1.8						
MKAR	**Makanchi Array**	**62.66**	**312**	P	**P**	**21 07 35.1**	**-0.6**
	1.4nm,0.7s,baz=33,slow=5.2,SNR=4.6						
FINES	**FINESS Array B**	**66.26**	**350**	P	**P**	**21 07 58.3**	**-0.7**
	1.0nm,0.7s,baz=5.3,slow=10,SNR=3.6						
AAK	**Ala-Archa**	**69.42**	**313**	P	**P**	**21 08 20.0**	**+0.6**
	2.1nm,0.6s,baz=128,slow=4.5,SNR=5.2						
CMAR	**Chiang Mai Arr**	**74.57**	**280**	P	**P**	**21 08 51.5**	**+1.1**
	0.5nm,0.5s,baz=21,slow=5.6,SNR=4.4						
AKASG	**Malin Array Be**	**76.32**	**346**	P	**P**	**21 08 59.0**	**-0.9**
	0.3nm,0.4s,baz=18,slow=6.9,SNR=2.6						

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*IDC **08** 20:59:37.1±0.5, 6.°99N×94.°61E, h0km, mb4.1/18, mb1 4.2/20, mb1mx4.0/55, mbtmp4.1/20, ML4.2/2, MS4.0/26, Ms1 4.0/26, ms1mx3.9/34, Error ellipse: s-maj=20.9km s-min=13.8km az=51.0*

*BJI **08** 20:59:38.6±0.0, 6.°74N×94.°62E, h14km, mB4.8/19, mb4.4/37, Ms4.5/31, Ms7 4.3/27*

*NEIC **08** 20:59:39.2±1.5, 6.°91N±0.°05×94.°5E±0.°1, h10km±1km, mb4.8/16, Error ellipse: s-maj=24.9km s-min=6.8km az=256.0*

*DJA **08** 20:59:44.9±1.0, 7°N±4°×9°5E±1°3, h10km, M4.5/9, mB5.2/3, mb4.4/9, MLv4.6/4, Mw(mB)4.5/3*

ISC 08 20:59:41.9±0.4**, 6.°89N**±0.°06×**94.°58E**±0.°06**, h26km, n125, σ2.s44**/109**, mb4.4**/51**, MS4.1**/29**, 3D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	**Lhok Sumawe**	**2.88**	**125**	P	**Pn**	**21 00 25.7**	**-0.4**
LHMI	**Lhok Sumawe**	**2.88**	**125**	Pn	**Pn**	**21 00 25.6**	**-0.5**
TPTI		**4.44**	**144**	P	**Pn**	**21 00 49.5**	**+1.9**
PSI	**Prapat**	**5.94**	**133**	Pn	**Pn**	**21 01 09.6**	**+1.2**
	3.1nm,0.3s,baz=330,slow=12,SNR=15						
PSI				LR	LR	21 04 17.1	
	comp=Z,1μm,18.4s,baz=298,slow=46						
GSI	**Gunungsitoli**	**6.30**	**152**		**Pn**	**21 01 14.2**	**+1.0**
MNSI	**Mandailing Nat**	**7.84**	**140**	P	**Pn**	**21 01 37.6**	**+3.2**
	0.2nm918nm29nm,0.7s						
BKNI	**Bangkinang**	**9.17**	**135**	P	Pn	21 02 03.3	+11
PPI	**Padang Panjang**	**9.33**	**141**	P	**Pn**	**21 01 58.8**	**+4.0**
	14nm,0.7s						
PDSI	**Padang**	**9.72**	**143**	P	**Pn**	**21 02 02.3**	**+2.0**
	2μm12nm,0.7s						
CM31	**Chiang Mai Arr**	**12.26**	**20**		**Pn**	**21 02 34.0**	**-0.9**
CMAR	**Chiang Mai Arr**	**12.26**	**20**	Pn	**Pn**	**21 02 33.5**	**-1.4**
	0.6nm,0.3s,baz=212,slow=14,SNR=21						
CMAR				LR	LR	21 07 16.1	
	comp=Z,499nm,20.3s,baz=250,slow=38						
CMAR	**Chiang Mai Arr**	**12.26**	**20**	Pn	**Pn**	**21 02 33.8**	**-1.2**
CHTO	**Chiang Mai**	**12.59**	**19**	Pn	**Pn**	**21 02 39.4**	**-0.1**
PALK	**Pallekele**	**13.77**	**272**	LR	LR	21 08 16.5	
	comp=Z,1μm,18.1s,baz=194,slow=38						
LHSI	**Lahat**	**13.90**	**140**	P	**Pn**	**21 02 54.6**	**-2.7**
MDSI	**Maura Dua**	**14.82**	**139**	P	**Pn**	**21 03 06.5**	**-3.4**
KLSI		**15.33**	**138**	P	Pn	21 03 07.8	-8.9
STKI	**Sintang**	**18.17**	**111**	P	**Pn**	**21 03 51.4**	**-1.2**
	21nm,0.8s						
HYB	**Hyderabad**	**18.82**	**305**	*i* P	**Pn**	**21 04 05.0**	**+4.5**
LEM	**Lembang**	**18.84**	**136**	LR	LR	21 12 58.1	
	comp=Z,1μm,18.0s,baz=297,slow=42						
QIZ	**Qiongzhong**	**19.14**	**49**	P	**P**	**21 04 03.4**	**+0.1**
QIZ				S	**S**	**21 07 40.5**	**+1.7**
QIZ				LR	LR		
	comp=N,2μm,15.1s						
QIZ				LR	LR		
	comp=E,1μm,12.0s						
QIZ				LR	LR		
	comp=Z,800nm,10.0s						
KMI	**Kunming**	**19.74**	**22**	⇓P	**Pn**	**21 04 13.8**	**+2.1**
KMI				sP	pP	21 04 17.4	+0.9
KMI				S	**Sn**	**21 07 53.4**	**+0.4**
KMI				sS	sS	21 08 04.1	+2.2
KMI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KMI				pmax	pmax		
	comp=Z,130nm,5.1s						
KMI				LR	LR		
	comp=N,270nm,14.2s						
KMI				LR	LR		
	comp=E,650nm,11.3s						
KMI				LR	LR		
	comp=Z,580nm,15.4s						
ODAN	**Odare**	**21.00**	**342**	*e*P	**P**	**21 04 27.7**	**+3.9**
	63nm,0.8s						
RAMN	**Ramite**	**21.34**	**340**	*e*P	**P**	**21 04 31.6**	**+4.1**
	36nm,0.6s						
TAPN	**Taplejung**	**21.37**	**343**	*e*P	**P**	**21 04 32.0**	**+4.2**
	132nm,0.9s						
MTKI	**Muara Teweh, K**	**21.72**	**110**	P	**P**	**21 04 37.0**	**+5.6**
NGJI	**Ngawi**	**22.01**	**130**	P	P	21 04 45.2	+11
JIRN	**Jiri**	**22.14**	**340**	*e*P	**P**	**21 04 40.4**	**+4.3**
PKI	**Pulchoki**	**22.33**	**338**	*e*P	**P**	**21 04 43.2**	**+5.0**
	62nm,0.6s						
PKIN	**Phulchoki**	**22.34**	**338**	*e*P	**P**	**21 04 42.7**	**+4.5**
	68nm,0.6s						
GUN	**Gumba**	**22.47**	**340**	*e*P	**P**	**21 04 44.3**	**+4.6**
GYA	**Guiyang**	**22.61**	**29**	⇓P	**P**	**21 04 42.9**	**+1.9**
GYA				S	**S**	**21 08 48.4**	**+1.0**
GYA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GYA				LR	LR		
	comp=N,790nm,10.7s						
GYA				LR	LR		
	comp=E,750nm,11.2s						
GYA				LR	LR		
	comp=Z,860nm,15.1s						
BBKI	**Banjar Baru**	**22.69**	**116**	P	**P**	**21 04 45.0**	**+3.2**
LSA	**Lhasa**	**22.92**	**352**	P	**P**	**21 04 43.8**	**-0.7**
LSA				IAmb	IAmb	21 04 56.7	
	comp=Z,15nm,0.7s						
GKN	**Gorkha**	**23.02**	**337**	*e*P	**P**	**21 04 50.0**	**+4.8**
KOLN	**Koldanda**	**23.23**	**335**	*e*P	**P**	**21 04 52.4**	**+5.0**
DANN	**Dangsing**	**23.67**	**336**	*e*P	**P**	**21 04 57.3**	**+5.4**
	comp=Z,35nm,0.6s						
PYUN	**Piuthan**	**23.78**	**334**	*e*P	**P**	**21 04 58.6**	**+5.8**
KMMI	**Kalianget**	**23.79**	**125**	P	**P**	**21 04 59.6**	**+6.8**
BLJI	**Banyuglugur**	**23.90**	**127**	P	P	21 05 02.0	+8.2
ABJI	**Asem Bagus**	**24.44**	**126**	P	P	21 05 08.5	+10
SRBI	**Singaraja**	**25.39**	**126**	P	P	21 05 17.3	+10
MPSI	**Mapaga**	**26.08**	**103**	P	P	21 05 22.4	+8.6
H08S3	**Diego Garcia H**	**26.33**	**237**	T	T	21 31 45.7	
	baz=56,slow=75,SNR=726						
H08S2	**Diego Garcia H**	**26.33**	**237**	T	T	21 31 43.2	
	baz=56,slow=75,SNR=127						
H08S1	**Diego Carcia H**	**26.35**	**237**	T	T	21 31 47.2	
	baz=56,slow=75,SNR=18						
TOLI2	**Tolitoli**	**26.75**	**101**	P	**P**	**21 05 19.8**	**-0.1**
TOLI2				IAmb	IAmb	21 05 29.9	
	comp=Z,17nm,0.8s						
KAPI	**Kappang**	**27.77**	**115**	LR	LR	21 16 20.1	
	comp=Z,232nm,21.6s,baz=306,slow=36						
BKSI	**Bulukumba**	**28.23**	**115**	P	P	21 05 41.1	+8.0
GTOI	**Gorontalo**	**29.03**	**101**	P	P	21 05 51.2	+11
XAN	**Xi'an**	**30.10**	**24**	P	**P**	**21 05 49.2**	**-0.3**
XAN				pP	pP	21 05 56.2	-0.3
XAN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
LZH	**Lanzhou**	**30.28**	**15**	*e*P	**P**	**21 05 54.8**	**+3.6**
LZH				pP	pP	21 05 59.0	+0.8
LZH				sP	pwP	21 06 02.6	+1.4
LZH				pmax	pmax		
	comp=Z,17nm,1.2s						
LZH				pmax	pmax		
	comp=Z,110nm,5.4s						
LZH				LR	LR		
	comp=Z,480nm,11.4s						
LZH				LR	LR		
	comp=Z,720nm,13.0s						
LZH				LR	LR		
	comp=Z,830nm,13.1s						
WSI	**Waingapu**	**30.45**	**122**	P	P	21 06 10.9	+18
SANI	**Sanana**	**32.59**	**105**	P	P	21 06 22.9	+11
GTA	**Gaotai**	**32.72**	**8**	⇓P	**P**	**21 06 12.3**	**-0.3**
GTA				S	**S**	**21 11 29.2**	**+1.5**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,70nm,4.3s						
GTA				LR	LR		
	comp=Z,230nm,14.9s						
GTA				LR	LR		
	comp=Z,300nm,12.0s						
GTA				LR	LR		
	comp=Z,200nm,14.2s						
NIL	**Nilore**	**33.15**	**326**	P	**P**	**21 06 13.9**	**-2.4**
NJ2	**Nanjing**	**33.75**	**39**	*e*P	**P**	**21 06 22.2**	**+0.7**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
NJ2				LR	LR		
	comp=Z,910nm,13.7s						
NJ2				LR	LR		
	comp=Z,860nm,16.6s						
NJ2				LR	LR		
	comp=Z,440nm,13.3s						
HHC	**Hu-ho-hao-te**	**37.06**	**22**	*e*P	**P**	**21 06 51.5**	**+1.5**
HHC				pmax	pmax		
	comp=Z,12nm,0.8s						
HHC				pmax	pmax		
	comp=Z,160nm,9.7s						
HHC				LR	LR		
	comp=Z,410nm,13.3s						
HHC				LR	LR		
	comp=Z,1μm,12.9s						
HHC				LR	LR		
	comp=Z,390nm,12.8s						
WMQ	**Urumqi**	**37.28**	**352**	*e*P	**P**	**21 06 52.5**	**+0.7**
WMQ				LR	LR		
	comp=Z,430nm,20.7s						
GAR	**Garm**	**38.74**	**329**	P	**P**	**21 07 02.0**	**-2.2**
GAR				IAmb	IAmb	21 07 09.6	
	comp=Z,20nm,0.7s						
CHGR	**Chuyangaron**	**39.08**	**328**	P	**P**	**21 07 04.7**	**-2.4**
CHGR				IAmb	IAmb	21 07 12.1	
	comp=Z,25nm,0.7s						
MK31	**Makanchi Array**	**41.14**	**347**		**P**	**21 07 23.0**	**-0.9**
MKAR	**Makanchi Array**	**41.14**	**347**	P	**P**	**21 07 21.8**	**-2.1**
	comp=Z,2.0nm,0.8s,baz=173,slow=7.9,SNR=13						
MKAR				LR	LR	21 27 27.6	
	comp=Z,105nm,19.7s,baz=165,slow=41						
MKAR	**Makanchi Array**	**41.14**	**347**	P	**P**	**21 07 21.7**	**-2.3**
SONM	**Songino Array**	**42.03**	**12**	P	**P**	**21 07 29.4**	**-1.9**
	comp=Z,1.1nm,0.8s,baz=189,slow=4.9,SNR=7.5						
SONM				PcP	**PcP**	**21 09 25.8**	**-0.2**
	comp=Z,0.8nm,0.8s,baz=190,slow=2.1,SNR=2.5						
SONM				LR	LR	21 25 49.6	
	comp=Z,140nm,21.5s,baz=185,slow=38						
SONM	**Songino Array**	**42.03**	**12**	P	**P**	**21 07 29.9**	**-1.4**
ULN	**Ulaanbaatar**	**42.20**	**13**	P	**P**	**21 07 31.3**	**-1.4**
KSRS	**Korea Array**	**42.93**	**40**	LR	LR	21 27 53.3	
	comp=Z,216nm,18.7s,baz=215,slow=40						
GEYT	**Alibeck**	**45.22**	**319**	P	**P**	**21 07 56.0**	**-1.0**
	comp=Z,4.7nm,0.7s,baz=185,slow=18,SNR=4.5						
GEYT				LR	LR	21 30 11.7	
	comp=Z,133nm,19.5s,baz=70,slow=41						
GYA0B	**ALIBECK ARRAY**	**45.22**	**319**	P	**P**	**21 07 56.7**	**-0.4**
GYA0B				IAmb	IAmb	21 08 06.4	
	comp=Z,9.0nm,0.6s						
KURK	**Kurchatov**	**45.66**	**346**	P	**P**	**21 08 00.1**	**-0.3**
WRA	**Warramunga Arr**	**47.34**	**125**	P	**P**	**21 08 12.7**	**-1.3**
	comp=Z,2.2nm,0.8s,baz=304,slow=9.1,SNR=14						
WRA				PcP	**PcP**	**21 09 45.7**	**+1.0**
	comp=Z,0.9nm,0.9s,baz=312,slow=3.1,SNR=1.6						
WRA				LR	LR	21 30 55.7	
	comp=Z,285nm,18.3s,baz=345,slow=40						
WRAB	**Tennant Creek**	**47.35**	**125**	P	**P**	**21 08 13.4**	**-0.6**
WRAB				IAmb	IAmb	21 08 18.8	
	comp=Z,5.4nm,0.6s						
WB2	**Warramunga Arr**	**47.35**	**125**	P	**P**	**21 08 13.1**	**-1.0**
WB2				IAmb	IAmb	21 08 23.6	
	comp=Z,11nm,1.3s						
ZALV	**Zalesovo Beam**	**47.58**	**352**	P	**P**	**21 08 13.7**	**-1.6**
	comp=Z,1.3nm,0.4s,baz=169,slow=8.5,SNR=7.8						
ZALV				LR	LR	21 32 59.6	
	comp=Z,150nm,18.4s,baz=239,slow=42						
ZALV	**Zalesovo Beam**	**47.58**	**352**	P	**P**	**21 08 13.5**	**-1.8**
ASAR	**Alice Springs**	**48.96**	**130**	P	**P**	**21 08 25.6**	**-0.8**
	comp=Z,2.0nm,0.7s,baz=305,slow=6.8,SNR=17						
ASAR				PcP	**PcP**	**21 09 51.5**	**+1.0**
	comp=Z,1.0nm,0.7s,baz=323,slow=3.1,SNR=1.4						
ASAR				LR	LR	21 31 08.1	
	comp=Z,338nm,19.6s,baz=300,slow=39						
MJAR	**Matsushiro Arr**	**49.51**	**47**	P	**P**	**21 08 30.7**	**+0.2**
	comp=Z,1.5nm,0.8s,baz=246,slow=9.5,SNR=2.9						
MJAR				LR	LR	21 29 15.5	
	comp=Z,174nm,21.7s,baz=250,slow=36						
ATD	**Arta Tunnel**	**51.22**	**279**	P	**P**	**21 08 43.8**	**0.0**
	comp=Z,3.0nm,0.3s,baz=318,slow=16,SNR=2.1						
ABKAR	**Akbulak array**	**51.30**	**332**	P	**P**	**21 08 42.4**	**-1.4**
KMBO	**Kilima Mbogo**	**57.75**	**264**	P	**P**	**21 09 31.4**	**-0.1**
	comp=Z,1.3nm,0.7s,baz=53,slow=8.5,SNR=5.6						
KMBO				LR	LR	21 31 41.0	
	comp=Z,139nm,18.0s,baz=94,slow=33						
KBZ	**Khabaz**	**58.10**	**318**	LR	LR	21 37 40.4	
	comp=Z,84nm,18.1s,baz=108,slow=39						
STKA	**Stephens Creek**	**59.12**	**134**	P	**P**	**21 09 38.5**	**-2.0**
	comp=Z,1.4nm,0.7s,baz=341,slow=4.0,SNR=5.0						
STKA				LR	LR	21 40 06.8	
	comp=Z,170nm,18.1s,baz=288,slow=41						
STKA	**Stephens Creek**	**59.12**	**134**	P	**P**	**21 09 40.8**	**+0.3**
NRIK	**Noril'sk**	**62.54**	**357**	LR	LR	21 41 20.6	
	comp=Z,122nm,18.4s,baz=194,slow=40						
BRTR	**Keskin Array B**	**63.40**	**311**	LR	LR	21 40 30.9	
	comp=Z,92nm,21.9s,baz=112,slow=39						
KLMR	**Klimovskoe**	**67.52**	**334**	*e*P	**P**	**21 10 33.6**	**-2.0**
KLMR				AMP		21 10 39.9	
	comp=Z,31nm,1.7s						
TIXI	**Tiksi**	**68.11**	**11**	P	**P**	**21 10 37.2**	**-1.9**
PETK	**Petropavlovsk-**	**68.55**	**35**	LR	LR	21 41 42.7	
	comp=Z,87nm,19.3s,baz=229,slow=37						
AKASG	**Malin Array Be**	**69.19**	**322**	P	**P**	**21 10 44.9**	**-1.4**
	comp=Z,0.3nm,0.4s,baz=85,slow=5.0,SNR=2.6						
AKASG				LR	LR	21 45 40.6	
	comp=Z,54nm,18.5s,baz=65,slow=40						
MNK	**Minsk**	**70.98**	**325**	*i* P	**P**	**21 10 58.4**	**+1.2**
	comp=E,2.0nm,0.9s						
MNK				*i* P	**P**	**21 10 58.4**	**+1.2**
	comp=N,13nm,1.1s						
MNK				*i* P	**P**	**21 10 58.4**	**+1.2**
	comp=Z,8.0nm,0.9s,baz=106						
MNK				*i* PcP	**PcP**	**21 11 19.1**	**+1.6**
MNK				*i* PP	**PP**	**21 13 34.8**	**+0.2**
MNK				*i* PPP	PPP	21 15 17.3	
MNK				*i* S	**S**	**21 20 13.4**	**+2.0**
MNK				*i* SS	**SS**	**21 24 50.4**	**+5.9**
MNK				*i* SSS	SSS	21 28 04.8	
MNK				*i* LQ	LQ	21 36 41.8	
MNK				*i* LR	LR	21 42 47.6	
MNK				*i* LRM	MLR	21 43 50.6	
	comp=N,379nm,24.6s						
MNK				*i* LRM	MLR	21 44 18.8	
	comp=E,13nm,16.6s						
MNK				*i* LRM	MLR	21 45 35.5	
	comp=Z,108nm,19.6s						
NACGM	**Naroch**	**71.70**	**326**	*i* P	P	21 11 06.5	+5.0
CRVS	**Cervenica-Dubn**	**73.75**	**319**	*e*	P	21 11 18.7	+4.8
FINES	**FINESS Array B**	**73.78**	**332**	P	**P**	**21 11 11.8**	**-1.9**
	comp=Z,1.5nm,0.7s,baz=81,slow=6.8,SNR=7.3						
FINES	**FINESS Array B**	**73.78**	**332**	P	**P**	**21 11 12.3**	**-1.4**
BOSA	**Boshof**	**75.43**	**238**	P	**P**	**21 11 24.1**	**0.0**
	comp=Z,1.4nm,0.6s,baz=0.8,slow=1.3,SNR=5.7						
BOSA				LR	LR	21 41 35.8	
	comp=Z,84nm,20.0s,baz=28,slow=33						
ARCES	**ARCESS Array B**	**76.33**	**340**	P	**P**	**21 11 26.9**	**-1.5**
	comp=Z,4.8nm,1.0s,baz=110,slow=7.8,SNR=2.2						
ARCES				LR	LR	21 48 07.8	
	comp=Z,190nm,19.3s,baz=105,slow=38						
KRLC	**Kraliky**	**76.92**	**320**	*e*P	**P**	**21 11 34.9**	**+2.8**
DPC	**Dobruska-Polom**	**77.23**	**320**	*e*P	P	21 11 39.5	+5.6
OSTC	**Ostas**	**77.32**	**320**	*e*P	P	21 11 39.3	+5.0
CONA	**Conrad Observa**	**77.36**	**317**	*e*P	**P**	**21 11 35.7**	**+1.0**
	comp=Z,3.6nm,1.2s						
SOKA	**Soboth**	**77.85**	**316**	*e*P	**P**	**21 11 39.0**	**+1.6**
	comp=Z,4.5nm,1.2s						
OBKA	**Obir**	**78.17**	**316**	*e*P	**P**	**21 11 39.5**	**+0.2**
	comp=Z,6.5nm,1.6s						
MYKA	**Terra Mystica**	**78.80**	**316**	*e*P	**P**	**21 11 41.5**	**-1.2**
	comp=Z,0.9nm,0.5s						
GERES	**GERESS Array B**	**78.84**	**318**	P	**P**	**21 11 41.7**	**-1.3**
	comp=Z,1.8nm,0.9s,baz=72,slow=4.3,SNR=8.8						
KHC	**Kasperske Hory**	**78.94**	**319**	*e*P	P	21 11 48.4	+5.0
KBA	**Koelnbreinsper**	**79.02**	**317**	*e*P	**P**	**21 11 45.6**	**+1.6**
	comp=Z,3.3nm,0.9s						
CLL	**Collm**	**79.39**	**321**	*e*P	**P**	**21 11 47.0**	**+1.3**
ABTA	**Abfaltersbach**	**79.58**	**316**	*e*P	**P**	**21 11 47.5**	**+0.5**
	comp=Z,2.7nm,1.0s						
WTTA	**Wattenberg**	**80.19**	**317**	*e*P	**P**	**21 11 51.3**	**+0.9**
	comp=Z,8.3nm,1.0s						
WATA	**Walderalm**	**80.23**	**317**	*e*P	**P**	**21 11 51.2**	**+0.6**
	comp=Z,3.9nm,0.9s						
SQTA	**Sankt Quirin**	**80.48**	**317**	*e*P	**P**	**21 11 52.5**	**+0.6**
	comp=Z,6.1nm,1.2s						
MOTA	**Moosalm**	**80.55**	**317**	*e*P	**P**	**21 11 53.5**	**+1.1**
	comp=Z,6.8nm,1.0s						
RETA	**Reutte**	**80.78**	**317**	*e*P	**P**	**21 11 54.6**	**+1.1**
	comp=Z,2.4nm,0.7s						
NB2	**NORSAR Subarra**	**80.80**	**331**	P	**P**	**21 11 51.1**	**-2.1**
	comp=Z,2.6nm,0.8s,baz=91,slow=5.9						
NOA	**NORSAR Array B**	**80.80**	**331**	P	**P**	**21 11 52.9**	**-0.2**
	comp=Z,1.4nm,0.9s,baz=95,slow=5.1,SNR=2.7						
NOA				LR	LR	21 52 32.4	
	comp=Z,69nm,18.1s,baz=115,slow=39						
FETA	**Feichten**	**80.81**	**316**	*e*P	**P**	**21 11 52.9**	**-0.8**
	comp=Z,3.3nm,0.9s						
DAVA	**Damuels**	**81.39**	**317**	*e*P	**P**	**21 12 01.5**	**+4.7**
	comp=Z,5.2nm,0.8s						
TORD	**Torodi Ar. Bea**	**91.24**	**283**	P	**P**	**21 12 44.9**	**-0.8**
	comp=Z,0.3nm,0.6s,baz=88,slow=4.2,SNR=2.9						
TORD				LR	LR	21 52 30.2	
	comp=Z,114nm,19.7s,baz=50,slow=35						
VNDA	**Vanda**	**91.88**	**168**	LR	LR	21 49 17.6	
	comp=Z,104nm,19.4s,baz=330,slow=32						
ESDC	**Sonseca Array**	**92.18**	**310**	P	**P**	**21 12 48.1**	**-1.6**
	comp=Z,0.5nm,0.6s,baz=60,slow=4.0,SNR=6.8						
DBIC	**Dimbokro**	**98.50**	**278**	LR	LR	21 57 04.7	
	comp=Z,98nm,19.5s,baz=108,slow=35						
NVAR	**Mina Array Bea**	**125.53**	**32**	PKP	**PKPdf**	**21 18 38.7**	**-3.0**
	comp=Z,0.1nm,0.3s,baz=336,slow=2.0,SNR=1.0						
PDAR	**Pinedale Array**	**125.92**	**22**	PKP	**PKPdf**	**21 18 40.5**	**-1.8**
	comp=Z,0.7nm,0.8s,baz=49,slow=2.9,SNR=1.6						
CPUP	**Villa Florida**	**146.99**	**231**	PKPbc	**PKPab**	**21 19 23.9**	**-0.6**
	comp=Z,1.2nm,0.8s,baz=158,slow=3.7,SNR=1.9						

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*IDC **08** 21:00:38.3±2.6, 28.°32S×136.°32E, h0km, mb1 3.3/4, mb1mx3.3/39, mbtmp3.1/4, ML2.8/4, Error ellipse: s-maj=47.8km s-min=15.1km az=53.0*

ISC 08 21:00:39.7±1.4**, 28.°4S**±0.°2×**136.°3E**±0.°2**, h10km, n4, σ1.s40**/7**, South Australia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**5.13**	**335**	Pn	**Pn**	**21 01 57.8**	**+1.2**
	0.2nm,0.3s,baz=150,slow=13,SNR=4.1						
ASAR				Sn	**Sn**	**21 02 54.8**	**-1.2**
	0.3nm,0.3s,baz=153,slow=22,SNR=5.1						
ASAR				Lg	Lg	21 03 20.9	
	0.2nm,0.3s,baz=155,slow=20,SNR=1.7						
STKA	**Stephens Creek**	**5.79**	**129**	Pn	**Pn**	**21 02 06.0**	**+0.3**
	0.2nm,0.3s,baz=312,slow=15,SNR=1.9						
STKA				Sn	**Sn**	**21 03 11.0**	**-1.1**
	0.3nm,0.3s,baz=334,slow=7.5,SNR=3.3						
STKA				Lg	Lg	21 03 41.2	
	0.3nm,0.3s,baz=234,slow=12,SNR=1.8						
WRA	**Warramunga Arr**	**8.55**	**348**	Pn	**Pn**	**21 02 44.5**	**+0.8**
	0.1nm,0.3s,baz=172,slow=13,SNR=6.2						
WRA				Sn	**Sn**	**21 04 18.6**	**-1.7**
	0.1nm,0.3s,baz=177,slow=24,SNR=1.5						
WRA				Lg	Lg	21 05 08.2	
	0.1nm,0.3s,baz=172,slow=29,SNR=2.8						
FITZ	**Fitzroy Crossi**	**14.13**	**314**	Pn	**Pn**	**21 03 59.5**	**-0.4**
	0.0nm,0.3s,baz=144,slow=19,SNR=1.7						

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*IDC **08** 21:18:41.5±2.5, 5.°08N×125.°60E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/28, mbtmp3.3/3, Error ellipse: s-maj=210.4km s-min=29.2km az=65.0*

*MAN **08** 21:18:52.9, 4.°96N×125.°85E, h90km, mb4.7, ML3.6, MS3.6*

*DJA **08** 21:18:57.0±1.1, 5°N±11°×12°6E±°, h146km±7km, M4.0/7, mb4.1/5, mB4.6/4, MLv4.1/7, Mw(mB)3.8/4*

ISC 08 21:18:55.5±1.1,5°.15N±0°.05×125°.9E±0°.1,h100^{km},n11,σ3^{s}.28/14,mb3.0/3,2C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSPH	**General Santos**	**1.31**	**315**	⇑iP	**Pn**	**21 19 19.4**	**-0.2**
SGSI	**Sangihe**	**1.50**	**193**	P	**Pn**	**21 19 24.3**	**+2.6**
SGSI				S	**Sn**	**21 19 46.5**	**+4.9**
DMPH	**Davao City--Mi**	**1.96**	**349**	⇑eP	**Pn**	**21 19 27.7**	**+0.2**
DMPH				eS	**Sn**	**21 19 58.7**	**+6.8**
KCP	**Kidapawan**	**2.01**	**337**	⇓eP	**Pn**	**21 19 28.8**	**+0.6**
GTOI	**Gorontalo**	**5.32**	**213**	P	**Pn**	**21 20 14.2**	**+1.6**
	0.1nm416nm33nm,0.6s						
GTOI				S	**Sn**	**21 21 12.3**	**-0.3**
	0.1nm416nm33nm,0.6s						
LBMI	**Labuha**	**5.97**	**164**	P	**Pn**	**21 20 23.7**	**+2.2**
	0.1nm476nm12nm,0.6s						
MRSI	**Marisa**	**6.08**	**220**	P	**Pn**	**21 20 25.8**	**+2.9**
	0.2nm922nm53nm,0.8s						
SANI	**Sanana**	**7.15**	**179**	P	**Pn**	**21 20 36.6**	**-0.9**
WRA	**Warramunga Arr**	**26.29**	**162**	P	**P**	**21 24 20.2**	**-1.6**
	0.4nm,0.9s,baz=341,slow=9.8,SNR=6.9						
ASAR	**Alice Springs**	**29.69**	**165**	P	**P**	**21 24 48.3**	**-3.8**
	0.2nm,0.5s,baz=345,slow=7.8,SNR=5.6						
MKAR	**Makanchi Array**	**55.91**	**325**	P	**P**	**21 28 20.6**	**-2.5**
	0.4nm,0.9s,baz=108,slow=8.9,SNR=1.9						

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*IDC **08** 21:33:58.7±4.0,32°.05S×71°.76W,h0^{km},mb3.8/1,
mb1 3.8/2,mb1mx3.5/26,mbtmp3.7/2,ML3.7/1,Error
ellipse: s-maj=145.2km s-min=80.6km az=86.0*

*GUC **08** 21:34:02.2±0.7,31°.81S×71°.93W,h33^{km}±3^{km},ML3.4*

ISC 08 21:34:00.5±2.1,31°.83S±0°.03×71°.99W±0°.06,h16^{km}±15^{km},n20,σ0^{s}.52/24,4C-2D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VA06	**Catapilco**	**0.94**	**141**	⇓iP	**Pn**	**21 34 19.2**	**+0.1**
VA06				eS	**Sg**	**21 34 31.4**	**+0.2**
VA06				IAML		21 34 34.2	
	comp=E,4μm,0.4s						
CO06	**Fray Jorge**	**1.19**	**15**	⇑iP	**Pb**	**21 34 22.8**	**+0.1**
CO06				eS	**Sn**	**21 34 38.1**	**-0.2**
CO06				IAML		21 34 45.9	
	comp=E,873nm,0.3s						
VA01	**Torpederas**	**1.23**	**166**	eP	**Pb**	**21 34 23.7**	**+0.2**
VA01				eS	**Sb**	**21 34 38.9**	**-0.1**
VA01				IAML		21 34 43.8	
	comp=N,440nm,0.2s						
ROCH	**El Roble**	**1.41**	**144**	⇑iP	**Pb**	**21 34 26.7**	**0.0**
ROCH				eS	**Sb**	**21 34 44.9**	**+0.3**
ROCH				IAML		21 34 46.7	
	comp=N,1μm,0.4s						
VA03	**San Esteban**	**1.54**	**128**	⇓iP	**Pb**	**21 34 28.6**	**-0.2**
VA03				eS	**Sb**	**21 34 48.4**	**+0.3**
VA03				IAML		21 34 53.5	
	comp=E,2μm,0.3s						
MT02	**Curacav**	**1.60**	**153**	eP	**Pb**	**21 34 29.3**	**-0.5**
MT02				eS	**Sn**	**21 34 48.5**	**-0.1**
MT02				IAML		21 34 58.1	
	comp=E,269nm,0.4s						
PEL	**Peldehue**	**1.72**	**140**	⇑iP	**Pb**	**21 34 31.2**	**-0.6**
PEL				eS	**Sb**	**21 34 53.2**	**+0.1**
PEL				IAML		21 34 58.2	
	comp=E,1μm,0.4s						
MT05	**Renca**	**1.89**	**146**	⇑eP	**Pb**	**21 34 34.4**	**-0.3**
MT05				eS	**Sb**	**21 34 58.0**	**-0.1**
MT05				IAML		21 35 01.4	
	comp=E,1μm,0.3s						
GO04	**Tololo Observa**	**1.94**	**32**	eP	**Pn**	**21 34 34.0**	**+0.9**
GO04				eS	**Sb**	**21 34 58.9**	**-0.9**
H03N1	**Juan Fernandez**	**6.06**	**253**	Pn	**Pn**	**21 35 29.8**	**+0.6**
	baz=280,slow=72,SNR=14						
H03N1				T	T	21 41 59.1	
	baz=82,slow=72,SNR=920						
H03N3	**Juan Fernandez**	**6.07**	**253**	Pn	**Pn**	**21 35 29.7**	**+0.2**
	baz=280,slow=72,SNR=9.9						
H03N3				T	T	21 42 06.0	
	baz=82,slow=72,SNR=796						
H03N2	**Juan Fernandez**	**6.07**	**253**	Pn	**Pn**	**21 35 29.2**	**-0.2**
	baz=280,slow=72,SNR=6.2						
H03N2				T	T	21 42 03.5	
	baz=82,slow=72,SNR=732						
LPAZ	**La Paz**	**15.86**	**14**	Pn	**P**	**21 37 46.2**	**-1.3**
	comp=E,0.1nm,0.3s,baz=173,slow=8.1,SNR=1.9						
TORD	**Torodi Ar. Bea**	**83.44**	**70**	P	**P**	**21 46 27.9**	**+0.2**
	comp=E,0.7nm,0.8s,baz=255,slow=4.4,SNR=4.2						
H11S2	**WAKE ISLAND Hy**	**125.81**	**271**	T	T	00 11 47.3	
	baz=117,slow=75,SNR=5.7						
H11S1	**WAKE ISLAND Hy**	**125.83**	**271**	T	T	00 11 48.9	
	baz=117,slow=75,SNR=7.5						
H11S3	**WAKE ISLAND Hy**	**125.83**	**271**	T	T	00 11 51.3	
	baz=117,slow=75,SNR=7.3						
H11N3	**WAKE ISLAND Hy**	**126.17**	**272**	T	T	00 12 15.3	
	baz=154,slow=74,SNR=6.8						
H11N2	**WAKE ISLAND Hy**	**126.19**	**272**	T	T	00 12 16.8	
	baz=120,slow=74,SNR=7.4						
ZALV	**Zalesovo Beam**	**152.35**	**30**	PKPbc	**PKiKP**	**21 53 56.2**	**+0.7**
	comp=E,0.7nm,0.4s,baz=302,slow=3.2,SNR=2.1						

**IDC 08 21:36:52.1±4.1,5°.07S×152°.26E,h0^{km},mb2.8/2,
mb1 3.1/2,mb1mx3.0/25,mbtmp2.9/2,Error ellipse:
s-maj=165.0km s-min=55.5km az=119.0,New Britain
region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.86**	**228**	P	P	21 41 56.1	-1.2
	0.1nm,0.5s,baz=54,slow=10.0,SNR=1.4						
ASAR	**Alice Springs**	**25.58**	**222**	P	P	21 42 24.2	+1.0
	0.1nm,0.4s,baz=53,slow=9.4,SNR=1.4						
TORD	**Torodi Ar. Bea**	**149.87**	**287**	PKPbc	PKPbc	21 56 45.0	-0.4
	0.3nm,0.6s,baz=58,slow=1.6,SNR=1.6						

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*IDC **08** 21:42:28.3±1.1,31°.82S×71°.70W,h0^{km},mb4.1/6,
mb1 4.1/10,mb1mx3.9/25,mbtmp3.9/10,ML3.7/4,MS3.2/2,
Ms1 3.2/2,ms1mx2.9/29,Error ellipse: s-maj=33.4km
s-min=26.6km az=81.0*

*NEIC **08** 21:42:28.2±0.8,31°.79S±0°.03×72°.2W±0°.1,h13^{km}±4^{km},
mb4.5/9,Mwr4.1/32,ML4.2(GUC),Error ellipse:
s-maj=13.6km s-min=3.8km az=84.0*

*GUC **08** 21:42:28.1±0.7,31°.80S×72°.22W,h11^{km}±8^{km},ML4.2*

*NEIC **08** 21:42:28.2,31°.79S×72°.19W,h16^{km},Moment Tensor
Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.32;
M$_{\theta\theta}$0.04; M$_{\phi\phi}$-1.36; M$_{r\theta}$0.01; M$_{\theta\phi}$0.14; M$_{\phi r}$-0.69; Fault
plane solution: M$_0$1.52000×10^{15} NP1:φ$_s$176.57000°,
δ58.52000°,λ92.29000°. NP2:φ$_s$352.19000°,δ31.56000°,
λ86.26000°. Principal axes: T 1.4911, Plg76.0000°,
Azm93.0000°; N 0.0501, Plg2.0000°, Azm355.0000°; P
-1.5411, Plg13.0000°, Azm265.0000°;*

ISC 08 21:42:27.0±1.8,31°.81S±0°.03×72°.24W±0°.08,h8^{km}±10^{km},n58,σ1^{s}.22/59,mb4.4/9,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VA06	**Catapilco**	**1.10**	**134**	eP	**Pb**	**21 42 48.4**	**+0.2**
VA06				i S	**Sb**	**21 43 03.3**	**+0.7**
VA06				IAML		21 43 10.3	
	comp=N,10μm,0.5s						
CO06	**Fray Jorge**	**1.24**	**25**	eP	**Pn**	**21 42 50.0**	**-0.6**
CO06				i S	**Sn**	**21 43 07.8**	**+0.2**
CO06	**Fray Jorge**	**1.24**	**25**	Pn	**Pn**	**21 42 49.6**	**-1.1**
CO06				Sn	**Sn**	**21 43 08.1**	**+0.5**
VA01	**Torpederas**	**1.31**	**158**		**Pg**	**21 42 52.3**	**+0.1**
VA01				Sn	**Sb**	**21 43 08.5**	**-0.3**
ROCH	**El Roble**	**1.56**	**139**	eP	**Pb**	**21 42 56.0**	**-0.2**
ROCH				i S	**Sg**	**21 43 17.3**	**+0.1**
ROCH				IAML		21 43 22.4	
	comp=E,5μm,0.5s						
VA03	**San Esteban**	**1.72**	**124**	eP	**Pn**	**21 42 58.2**	**+0.9**
VA03				i S	**Sb**	**21 43 20.6**	**-0.1**
VA03				IAML		21 43 25.9	
	comp=N,6μm,0.4s						
VA03	**San Esteban**	**1.72**	**124**		**Pn**	**21 42 58.1**	**+0.9**
VA03				Sn	**Sn**	**21 43 19.1**	**-0.4**
MT02	**Curacav**	**1.72**	**148**		**Pn**	**21 42 58.1**	**+0.8**
MT02				Sn	**Sn**	**21 43 19.1**	**-0.4**
PEL	**Peldehue**	**1.87**	**136**	eP	**Pn**	**21 43 00.5**	**+1.2**
PEL				i S	**Sb**	**21 43 25.6**	**+0.6**
PEL				IAML		21 43 34.0	
	comp=E,3μm,0.5s						
VA05	**Santo Domingo**	**1.92**	**164**	Pn	**Pn**	**21 43 00.5**	**+0.6**
MT05	**Renca**	**2.03**	**142**		**Pn**	**21 43 01.7**	**+0.2**
GO04	**Tololo Observa**	**2.04**	**38**	i S	**Sb**	**21 43 30.1**	**0.0**
GO04	**Tololo Observa**	**2.04**	**38**		**Pn**	**21 43 01.8**	**-0.1**
CO05	**La Serena**	**2.07**	**25**	eP	**Pb**	**21 43 03.7**	**-1.0**
CO05	**La Serena**	**2.07**	**25**		**Pn**	**21 43 02.3**	**+0.3**
MT01	**Popeta**	**2.21**	**158**		**Pn**	**21 43 04.6**	**+0.5**
MT09	**Talagante**	**2.23**	**152**	eP	**Pb**	**21 43 06.3**	**-1.3**
MT09	**Talagante**	**2.23**	**152**		**Pn**	**21 43 04.8**	**+0.4**
LMEL	**Las Melosas**	**2.66**	**140**	eP	**Pn**	**21 43 12.6**	**+2.3**
LMEL				i S	**Sb**	**21 43 46.4**	**-1.5**
BO01	**Tunca**	**2.75**	**160**	Pn	**Pn**	**21 43 12.0**	**+0.6**
GO05	**Huala**	**3.21**	**175**		**Pn**	**21 43 18.2**	**+0.6**
BO02	**Sierra Bellavi**	**3.22**	**158**		**Pn**	**21 43 19.3**	**+1.4**
ML02	**Panimavida**	**4.00**	**170**	Pn	**Pn**	**21 43 29.3**	**+0.6**
AC02	**Maricunga**	**5.65**	**30**	Pn	**Pn**	**21 43 51.4**	**-0.3**
H03N1	**Juan Fernandez**	**5.86**	**252**	T	T	21 50 49.4	
	baz=80,slow=72,SNR=457						
H03N3	**Juan Fernandez**	**5.88**	**252**	T	T	21 50 44.2	
	baz=80,slow=72,SNR=416						
H03N2	**Juan Fernandez**	**5.88**	**252**	T	T	21 50 45.5	
	baz=80,slow=72,SNR=373						
H03S3	**Juan Fernandez**	**5.97**	**248**	T	T	21 50 52.5	
	baz=71,slow=78,SNR=8.7						
H03S1	**Juan Fernandez**	**5.97**	**248**	T	T	21 50 49.9	
	baz=71,slow=78,SNR=8.4						
H03S2	**Juan Fernandez**	**5.98**	**248**	T	T	21 50 54.1	
	baz=71,slow=78,SNR=11						
PB14	**IPOC Station P**	**7.33**	**13**	Pn	**Pn**	**21 44 14.3**	**-0.4**
PLCA	**Paso Flores**	**9.01**	**172**	Pn	**Pn**	**21 44 38.6**	**+1.1**
	comp=E,0.3nm,0.3s,baz=29,slow=17,SNR=2.1						
PLCA				Sn	**Sn**	**21 46 14.1**	**-5.1**
	comp=E,0.1nm,0.3s,baz=17,slow=5.6,SNR=2.1						
PLCA				LR	LR	21 48 29.9	
	comp=E,184nm,20.9s,baz=324,slow=40						
LVC	**Limon Verde**	**9.63**	**19**	Pn	**Pn**	**21 44 46.5**	**+0.4**
	comp=E,0.2nm,0.3s,baz=205,slow=6.2,SNR=1.3						
LVC				LR	LR	21 48 53.5	
	comp=E,97nm,19.4s,baz=211,slow=41						
LPAZ	**La Paz**	**15.89**	**15**	Pn	**Pn**	**21 46 11.9**	**+0.2**
	comp=E,0.2nm,0.3s,baz=199,slow=4.5,SNR=4.2						
SIV	**San Ignacio**	**18.74**	**35**	P	**P**	**21 46 44.9**	**-1.5**
	comp=E,0.1nm,0.3s,baz=216,slow=12,SNR=6.7						
ETMB	**Extrema**	**22.58**	**16**	P	**P**	**21 47 28.0**	**0.0**
ETMB				IAmb	IAmb	21 47 30.3	
	comp=Z,8.3nm,1.0s						
SAML	**Samuel**	**24.25**	**22**	P	**P**	**21 47 43.4**	**-1.1**
BDFB	**Brasilia**	**27.30**	**60**	P	**P**	**21 48 11.9**	**-0.4**
	comp=Z,4.8nm,0.8s,baz=241,slow=12,SNR=6.9						
BDFB	**Brasilia**	**27.30**	**60**	P	**P**	**21 48 09.2**	**-3.2**
BDFB				IAmb	IAmb	21 48 13.0	
	comp=Z,14nm,1.3s						
BOAV	**Boa Vista**	**35.79**	**20**	P	**P**	**21 49 26.1**	**-0.7**
TOSP	**Speyside**	**44.30**	**17**	P	**P**	**21 50 35.9**	**-1.5**
SNAA	**Sanae**	**53.68**	**158**	P	**P**	**21 51 49.1**	**+0.3**
SNAA				IAmb	IAmb	21 51 51.7	
	comp=Z,5.1nm,0.9s						
QSPA	**South Pole Qui**	**58.42**	**180**	P	**P**	**21 52 23.4**	**+0.4**
QSPA				IAmb	IAmb	21 52 41.2	
	comp=Z,6.1nm,1.1s						
TXAR	**Lajitas Array**	**67.75**	**331**	P	P	21 53 30.6	+5.4
	comp=Z,0.1nm,0.5s,baz=159,slow=8.3,SNR=2.0						
DBIC	**Dimbokro**	**74.65**	**72**	P	**P**	**21 54 07.8**	**+0.5**
	comp=Z,4.9nm,0.8s,baz=213,slow=5.3,SNR=4.4						
BOSA	**Boshof**	**81.24**	**118**	P	**P**	**21 54 44.5**	**+0.5**
	comp=Z,3.0nm,0.9s,baz=111,slow=2.7,SNR=4.2						
BOSA	**Boshof**	**81.24**	**118**	P	**P**	**21 54 42.6**	**-1.4**
NVAR	**Mina Array Bea**	**81.99**	**325**	P	**P**	**21 54 50.7**	**+3.1**
	comp=Z,0.3nm,0.5s,baz=126,slow=4.6,SNR=1.8						
TORD	**Torodi Ar. Bea**	**83.63**	**70**	P	**P**	**21 54 56.5**	**+0.2**
	comp=Z,2.6nm,0.8s,baz=261,slow=4.8,SNR=16						
TORD	**Torodi Ar. Bea**	**83.63**	**70**	P	**P**	**21 54 56.3**	**-0.1**
TORD				IAmb	IAmb	21 54 57.9	
	comp=Z,2.3nm,0.8s						
H11S2	**WAKE ISLAND Hy**	**125.60**	**271**	T	T	00 20 23.3	
	baz=116,slow=75,SNR=7.0						
H11S1	**WAKE ISLAND Hy**	**125.62**	**271**	T	T	00 20 21.0	
	baz=116,slow=75,SNR=5.6						
H11S3	**WAKE ISLAND Hy**	**125.62**	**271**	T	T	00 20 26.5	
	baz=116,slow=75,SNR=5.2						
BVAR	**Borovoye Array**	**145.76**	**41**	PKPbc	**PKPab**	**22 02 07.4**	**+0.9**
	comp=Z,0.9nm,0.4s,baz=238,slow=8.2,SNR=4.6						
KURBB	**Kurchatov Arra**	**151.35**	**40**	PKPbc	**PKiKP**	**22 02 22.6**	**+1.3**
	comp=Z,0.4nm,0.4s,baz=304,slow=3.1,SNR=5.2						
ZALV	**Zalesovo Beam**	**152.44**	**30**	PKPbc	**PKiKP**	**22 02 24.7**	**+1.2**
	comp=Z,0.9nm,0.4s,baz=280,slow=4.6,SNR=5.7						
ZALV	**Zalesovo Beam**	**152.44**	**30**		**PKiKP**	**22 02 23.6**	**+0.2**
MKAR	**Makanchi Array**	**155.40**	**45**	PKPab	**PKPab**	**22 02 46.9**	**+0.6**
	comp=Z,0.6nm,0.8s,baz=296,slow=3.9,SNR=4.0						

**IDC 08 21:48:02.3±2.2,6°.75S×128°.54E,h0^{km},mb3.3/1,
mb1 3.5/3,mb1mx3.3/22,mbtmp3.3/3,ML3.7/2,Error
ellipse: s-maj=127.5km s-min=33.0km az=66.0,Banda
Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.28**	**157**	Pn	Pn	21 51 24.8	-1.1
	0.4nm,0.3s,baz=336,slow=12,SNR=14						
WRA				Sn	Sn	21 53 53.5	-12
	0.4nm,0.3s,baz=343,slow=19,SNR=6.0						
ASAR	**Alice Springs**	**17.60**	**164**	P	P	21 52 09.8	-0.5
	0.2nm,0.3s,baz=345,slow=10,SNR=7.7						
ASAR				S	Sn	21 55 11.8	-14
	0.1nm,0.3s,baz=213,slow=36,SNR=1.7						
MKAR	**Makanchi Array**	**67.22**	**327**	P	P	21 58 58.5	0.0
	0.2nm,0.5s,baz=116,slow=7.6,SNR=1.6						

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*IDC **08** 21:53:08.9±4.4,18°.48S×67°.10W,h260^{km}±26^{km},mb2.9/2,
mb1 3.2/4,mb1mx3.0/24,mbtmp3.6/4,Error ellipse:
s-maj=85.2km s-min=25.0km az=17.0*

ISC 08 21:53:09.2±1.7,18°.4S±0°.2×67°.1W±0°.1,h266^{km},n5,σ0^{s}.83/6,Central Bolivia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**2.36**	**335**	P	**Pn**	**21 53 56.5**	**-0.5**
	14nm,0.3s,baz=149,slow=6.9,SNR=171						
LPAZ				S	**S**	**21 54 34.8**	**-0.1**
	1.1nm,0.3s,baz=317,slow=21,SNR=6.2						
SIV	**San Ignacio**	**6.25**	**68**	P	**Pn**	**21 54 40.3**	**-0.5**
	1.4nm,0.3s,baz=251,slow=9.5,SNR=35						
PDAR	**Pinedale Array**	**72.36**	**329**	P	**P**	**22 04 07.1**	**+0.6**
	0.1nm,0.3s,baz=125,slow=9.4,SNR=1.6						
TORD	**Torodi Ar. Bea**	**74.72**	**70**	P	**P**	**22 04 21.2**	**+0.7**
	0.2nm,0.4s,baz=247,slow=4.7,SNR=6.5						
WRA	**Warramunga Arr**	**136.44**	**210**	PKP	**PKPdf**	**22 11 59.4**	**-0.9**
	0.1nm,0.4s,baz=149,slow=1.9,SNR=1.4						

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*IDC **08** 22:01:54.2±2.0,8°.34S×125°.48E,h0^{km},mb3.5/1,
mb1 3.6/3,mb1mx3.4/38,mbtmp3.4/3,ML3.3/2,Error
ellipse: s-maj=163.8km s-min=23.1km az=61.0*

*DJA **08** 22:01:57.6±2.0,8°S±5°×12°5E±1°8,h10^{km},M3.1/6,
MLv3.1/6*

ISC 08 22:01:58.2±1.3,8°.6S±0°.1×125°.18E±0°.10,h24^{km},n8,σ2^{s}.32/10,Timor region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**1.50**	**217**	P	**Pb**	**22 02 27.9**	**+2.4**
SOEI				S	**Sn**	**22 02 38.0**	**-4.6**
BATI	**Baumata**	**2.23**	**222**	P	**Pn**	**22 02 33.6**	**-0.1**
MMRI	**Maumere**	**2.91**	**268**	P	**Pn**	**22 02 42.8**	**-0.2**
EDFI	**Ende, Flores**	**3.46**	**266**	P	**Pn**	**22 02 50.2**	**-0.4**
BASI	**Baing, Sumba**	**4.83**	**250**	P	**Pn**	**22 03 12.4**	**+2.9**
WRA	**Warramunga Arr**	**14.38**	**143**	Pn	**Pn**	**22 05 19.8**	**-0.7**
	0.1nm,0.3s,baz=319,slow=13,SNR=6.0						
WRA				Sn	Sn	22 07 47.4	-12
	0.1nm,0.3s,baz=264,slow=27,SNR=5.3						
ASAR	**Alice Springs**	**17.20**	**152**	P	**P**	**22 05 58.5**	**0.0**
	0.2nm,0.3s,baz=329,slow=11,SNR=11						
ASAR				S	**Sn**	**22 09 08.7**	**+0.9**
	0.1nm,0.3s,baz=327,slow=22,SNR=5.5						
MKAR	**Makanchi Array**	**67.01**	**329**	P	**P**	**22 12 48.6**	**-0.6**
	0.3nm,0.6s,baz=121,slow=6.9,SNR=1.8						

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*IDC **08** 22:03:39.9±0.8,44°.65N×86°.82E,h0^{km},mb3.8/13,
mb1 3.8/19,mb1mx3.7/48,mbtmp3.7/19,ML3.0/6,MS3.1/1,
Ms1 3.1/1,ms1mx2.4/60,Error ellipse: s-maj=19.4km
s-min=10.5km az=36.0*

*SOME **08** 22:03:39.8,44°.72N×86°.73E,h0^{km}*

*NNC **08** 22:03:41.4±2.8,44°.71N×86°.95E,h0^{km},mb4.1,mpv3.9,
Error ellipse: s-maj=24.1km s-min=16.0km az=122.0*

ISC 08 22:03:41.6±0.7,44°.56N±0°.04×86°.90E±0°.04,h10^{km},n48,σ2^{s}.52/50,mb3.7/13,10C-8D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZSN	**Zaisan**	**3.22**	**335**	eP	Pn	22 04 35.9	+3.7
	34nm,0.5s						
ZSN				eS	**Sb**	**22 05 17.7**	**-0.3**
	151nm,0.2s						
ZSN	**Zaisan**	**3.22**	**335**	Pg	Pn	22 04 35.9	+3.7
	34nm,0.5s						
ZSN				Lg	Lg	22 05 17.7	
	120nm,0.7s						
MK31	**Makanchi Array**	**3.93**	**306**	⇓Pn	**Pn**	**22 04 43.0**	**+1.1**
	0.9nm,0.3s,baz=117,slow=13,SNR=426						
MK31				⇑Pg	**Pb**	**22 04 53.2**	**+2.3**
	8.9nm,0.4s,baz=118,slow=13,SNR=52						
MK31				⇑Lg	Lg	22 05 44.9	
	161nm,0.7s,baz=112,slow=26,SNR=17						
MKAR	**Makanchi Array**	**3.93**	**306**	Pn	**Pn**	**22 04 43.0**	**+1.1**
	1.1nm,0.3s,baz=130,slow=14,SNR=51						
MKAR				Pg	**Pb**	**22 04 52.9**	**+1.9**
	11nm,0.3s,baz=122,slow=17,SNR=47						
MKAR				Sn	**Sn**	**22 05 28.4**	**+0.3**
	12nm,0.3s,baz=121,slow=14,SNR=8.2						
MKAR				Lg	Lg	22 05 40.0	
	8.6nm,0.3s,baz=78,slow=22,SNR=5.5						
MAKZ	**Makanchi**	**4.12**	**305**	⇓Pn	**Pn**	**22 04 46.0**	**+1.4**
	2.1nm,0.3s						
MAKZ				⇓Pg	**Pb**	**22 04 56.1**	**+1.9**
	5.6nm,0.4s						
MAKZ				⇑Lg	Lg	22 05 51.0	
	72nm,0.6s						
PDGK	**Podgornoye**	**5.49**	**260**	Pg	**Pb**	**22 05 21.0**	**+3.3**
	4.5nm,0.4s						
PDGK				Lg	Lg	22 06 34.7	
	20nm,0.8s						
PDGK	**Podgornoye**	**5.49**	**260**	⇑Pn	**Pn**	**22 05 05.0**	**+1.5**
	3.8nm,0.7s						
PDGK				⇓Lg	Lg	22 06 37.5	
	75nm,0.6s						
SHLS	**Shalkode**	**5.56**	**258**	eP	Pb	22 05 16.2	-2.6
	11nm,0.2s						
SHLS				eS	**Sb**	**22 06 26.3**	**+0.7**
	55nm,0.6s						
SHLS	**Shalkode**	**5.56**	**258**	Pg	Pb	22 05 16.2	-2.6
	11nm,0.2s						
SHLS				Lg	Lg	22 06 26.3	
	55nm,0.6s						
UZB	**Uzynbulak**	**5.87**	**259**	eP	**Pb**	**22 05 26.7**	**+2.6**
	7.1nm,0.4s						
UZB				eS	Sb	22 06 44.6	+10
	21nm,0.6s						
UZB	**Uzynbulak**	**5.87**	**259**	Pg	**Pb**	**22 05 26.7**	**+2.6**
	7.1nm,0.4s						
UZB				Lg	Lg	22 06 44.6	
	21nm,0.6s						
BLB	**Baldybastay**	**6.06**	**269**	Pg	**Pb**	**22 05 30.3**	**+2.9**
	22nm,0.3s						
BLB				Lg	Lg	22 06 50.6	
	28nm,0.4s						
TDK	**Taldyqorghan**	**6.07**	**277**	eP	**Pb**	**22 05 30.9**	**+3.6**
	30nm,0.2s						
TDK				eS	**Sg**	**22 06 51.8**	**-4.4**
	52nm,0.7s						
TDK	**Taldyqorghan**	**6.07**	**277**	Pg	**Pb**	**22 05 30.9**	**+3.6**
	30nm,0.2s						
TDK				Lg	Lg	22 06 51.8	
	52nm,0.7s						
CHKK	**Chushkaly**	**7.16**	**268**	eP	**Pb**	**22 05 48.7**	**+2.7**
	1.1nm,0.0s						
CHKK				eS	Sb	22 07 22.0	+11
	14nm,0.5s						
CHKK	**Chushkaly**	**7.16**	**268**	Pg	**Pb**	**22 05 48.7**	**+2.7**
	1.8nm,0.2s						
CHKK				Lg	Lg	22 07 22.0	
	14nm,0.5s						
MDOK	**Medeo**	**7.26**	**262**	Pg	**Pb**	**22 05 52.5**	**+4.8**
	10nm,0.7s						
MDOK				Lg	Lg	22 07 37.1	
	25nm,0.6s						
SEM	**Semipalatinsk**	**7.38**	**325**	eP	**Pb**	**22 05 49.8**	**0.0**
	3.4nm,0.1s						
SEM				eS	**Sb**	**22 07 23.8**	**+5.9**
	17nm,0.1s						
SEM	**Semipalatinsk**	**7.38**	**325**	Pg	**Pb**	**22 05 47.9**	**-1.9**
	5.0nm,0.3s						
SEM				Lg	Lg	22 07 22.9	
	14nm,0.2s						
KTBS	**Karatobe**	**7.40**	**267**	eP	Pb	22 05 56.4	+6.3
	2.6nm,0.5s						
KTBS				eS	**Sg**	**22 07 36.8**	**-2.3**
	36nm,0.5s						
KTBS	**Karatobe**	**7.40**	**267**	Pg	Pb	22 05 56.4	+6.3
	2.6nm,0.5s						
KTBS				Lg	Lg	22 07 36.8	
	36nm,0.5s						
KUU	**Kurty**	**7.62**	**269**	eP	Pb	22 06 00.0	+6.3
	2.6nm,0.8s						
KUU				eS	**Sg**	**22 07 42.8**	**-3.2**
	26nm,0.4s						
KUU	**Kurty**	**7.62**	**269**	Pg	Pb	22 06 00.0	+6.3
	2.6nm,0.8s						
KUU				Lg	Lg	22 07 42.8	
	26nm,0.4s						
KURBB	**Kurchatov Arra**	**8.29**	**320**	Pn	**Pn**	**22 05 40.9**	**-0.9**
	0.4nm,0.3s,baz=131,slow=13,SNR=15						
KURBB				Sn	**Sn**	**22 07 11.2**	**-4.2**
	0.6nm,0.3s,baz=138,slow=23,SNR=5.6						
KURBB				Lg	Lg	22 07 57.1	
	0.4nm,0.3s,baz=44,slow=26,SNR=4.1						
KURBB	**Kurchatov Arra**	**8.29**	**320**	⇓Pn	**Pn**	**22 05 43.1**	**+1.3**
	3.7nm,0.2s						
KURBB				⇓Lg	Lg	22 08 02.6	
	59nm,0.7s						
KURK	**Kurchatov**	**8.31**	**321**	⇑Pn	**Pn**	**22 05 39.8**	**-2.3**
	7.6nm,1.3s						
KURK				⇓Lg	Lg	22 08 00.4	
	50nm,0.8s						
TKM2	**Tokmak 2**	**8.35**	**263**	⇑Pn	**Pn**	**22 05 45.6**	**+2.7**
	1.0nm,0.8s						
TKM2				⇓Lg	Lg	22 08 11.5	
	18nm,1.1s						
AAK	**Ala-Archa**	**9.21**	**262**	Pn	**Pn**	**22 05 55.4**	**+0.9**
	0.2nm,0.3s,baz=86,slow=13,SNR=2.2						
AAK				Lg	Lg	22 08 29.9	
	0.1nm,0.3s,baz=271,slow=22,SNR=1.7						
AAK	**Ala-Archa**	**9.21**	**262**	⇑Pn	**Pn**	**22 05 57.2**	**+2.6**
	2.2nm,1.2s						
AAK				⇑Lg	Lg	22 08 38.3	
	13nm,0.9s						
ZALV	**Zalesovo Beam**	**9.49**	**353**	Pn	**Pn**	**22 05 56.6**	**-1.6**
	0.1nm,0.3s,baz=178,slow=11,SNR=6.1						
KK31	**Karatay Array**	**11.93**	**269**	⇑Pn	**Pn**	**22 06 31.7**	**0.0**
	0.4nm,0.5s,baz=81,slow=13,SNR=5.6						
KK31				⇑Lg	Lg	22 10 07.8	
	3.6nm,0.7s						
BVAR	**Borovoye Array**	**13.76**	**314**	Pn	Pn	22 06 53.5	-3.2
	0.2nm,0.3s,baz=141,slow=9.3,SNR=1.8						
BVAR				Sn	**Sn**	**22 09 22.0**	**-7.5**
	0.7nm,0.3s,baz=98,slow=31,SNR=8.0						
BVAR				Lg	Lg	22 10 54.0	
	0.2nm,0.3s,baz=78,slow=28,SNR=1.5						
SONM	**Songino Array**	**13.89**	**69**	Pn	**Pn**	**22 06 58.1**	**-0.4**
	0.1nm,0.3s,baz=258,slow=11,SNR=2.8						
SONM				Lg	Lg	22 10 58.9	
	0.1nm,0.3s,baz=267,slow=28,SNR=3.7						
AKTO	**Aktyubinsk**	**20.30**	**297**	LR	LR	22 15 33.8	
	comp=Z,54nm,18.4s,baz=55,slow=35						
ARU	**Arti**	**21.41**	**314**	P	**P**	**22 08 28.6**	**-0.7**
	0.8nm,0.3s,baz=118,slow=22,SNR=1.4						
NRIK	**Noril'sk**	**24.84**	**1**	P	**P**	**22 09 03.1**	**-0.6**
	5.8nm,0.4s,baz=165,slow=7.5,SNR=10						
KBZ	**Khabaz**	**31.30**	**284**	P	**P**	**22 10 00.8**	**-0.8**
	0.7nm,0.7s,baz=233,slow=16,SNR=1.5						
AKASG	**Malin Array Be**	**38.49**	**300**	P	**P**	**22 11 03.4**	**-0.2**
	0.4nm,0.4s,baz=70,slow=8.7,SNR=2.3						
FINES	**FINESS Array B**	**38.67**	**318**	P	**P**	**22 11 03.0**	**-2.0**
	1.5nm,0.9s,baz=99,slow=8.7,SNR=1.5						
BRTR	**Keskin Array B**	**39.20**	**282**	P	**P**	**22 11 08.4**	**-1.6**
	0.5nm,0.8s,baz=76,slow=6.5,SNR=1.9						
NOA	**NORSAR Array B**	**45.82**	**319**	P	**P**	**22 12 02.7**	**-0.6**
	0.6nm,0.7s,baz=74,slow=8.2,SNR=2.7						
ILAR	**Eielson Array**	**63.20**	**23**	P	**P**	**22 14 09.4**	**0.0**
	0.4nm,0.8s,baz=317,slow=5.0,SNR=2.6						

ESDC	Sonseca Array	64.13	301	P	P	22 14 15.6	-0.5
	0.3nm,0.8s,baz=45,slow=7.4,SNR=4.1						
WRA	Warramunga Arr	77.42	135	P	P	22 15 37.5	+0.5
	0.7nm,0.7s,baz=335,slow=5.3,SNR=8.6						
TORD	Torodi Ar. Bea	77.51	276	P	P	22 15 37.1	-0.6
	0.3nm,0.4s,baz=37,slow=4.9,SNR=7.5						
ASAR	Alice Springs	80.34	137	P	P	22 15 53.5	+0.6
	0.4nm,0.5s,baz=340,slow=6.3,SNR=7.0						
DBIC	Dimbokro	86.62	276	P	P	22 16 25.1	-0.4
	3.5nm,1.1s,baz=48,slow=6.9,SNR=3.6						
LPAZ	La Paz	144.81	315	PKP	PKPab	22 23 18.9	+0.2
	0.8nm,0.6s,baz=14,slow=8.1,SNR=2.1						

IDC ***08*** *22:07:16.7±1.8, 19°.64S×70°.88W, h0^{km}, mb3.9/3, mb1 4.1/5, mb1mx3.8/32, mbtmp4.1/5, ML3.8/2, Error ellipse: s-maj=50.1km s-min=25.9km az=97.0*

VAO ***08*** *22:07:16.4±1.1, 19°.87S×71°.48W, h10^{km}, mb4.1*

NEIC ***08*** *22:07:19.1±0.9, 19°.81S±0°.02×70°.96W±0°.07, h18^{km}±4^{km}, mb4.2/6, Mwr4.0/42, ML4.1(GUC), Error ellipse: s-maj=9.3km s-min=3.3km az=93.0*

NEIC ***08*** *22:07:19.1, 19°.81S×70°.95W, h19^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.98; $M_{\theta\theta}$0.00; $M_{\phi\phi}$-0.99; $M_{r\theta}$0.38; $M_{\theta\phi}$0.15; $M_{\phi r}$-0.96; Fault plane solution: $M_0$1.44000×10^{15} NP1:ϕ_s161.90000°, δ68.23000°, λ82.80000°. NP2:ϕ_s0.70000°, δ22.87000°, λ107.41000°. Principal axes: T 1.4383, Plg66.0000°, Azm59.0000°; N -0.0011, Plg7.0000°, Azm165.0000°; P -1.4372, Plg23.0000°, Azm257.0000°;*

GUC ***08*** *22:07:20.9±0.7, 19°.83S×70°.97W, h30^{km}±3^{km}, ML4.1*

ISC 08 22:07:17.5±1.7**, 19°.82S**±0°.03×**71°.03W**±0°.06**, h8**^{km}±10^{km}**, n83,** σ1^{s}.**53**/92**, mb4.2**/4**, 9C-4D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	Pisagua	0.88	76	⇓iP	Pb	22 07 34.7	-0.5
PSGC				eS	Sg	22 07 45.8	-0.2
PSGCX	Pisagua	0.88	76	Pg	Pb	22 07 34.6	-0.5
PSGCX				Sn	Sb	22 07 45.7	-1.5
TA02	Huaiquique	0.96	118	⇓eP	Pg	22 07 36.7	+0.7
TA02				eS	Sb	22 07 48.0	-1.2
TA02				IAML		22 07 50.8	
	comp=N,9µm,0.1s						
TA02	Huaiquique	0.96	118		Pg	22 07 36.7	+0.7
TA02				Sn	Sn	22 07 49.2	-1.9
TA01	Diego Aracena	1.09	133	⇑iP	Pn	22 07 39.3	+0.1
TA01				eS	Sb	22 07 51.8	-1.3
TA01				IAML		22 07 58.0	
	comp=E,6µm,0.6s						
TA01	Diego Aracena	1.09	133		Pn	22 07 39.2	+0.1
TA01				Sn	Sb	22 07 52.5	-0.6
PATCX	Punta Patache	1.30	141	⇑iP	Pn	22 07 42.2	+0.2
PATCX				eS	Sb	22 07 58.1	-1.0
PATCX	Punta Patache	1.30	141		Pn	22 07 42.0	0.0
PATCX				Sn	Sb	22 07 57.9	-1.1
PB11	IPOC Station P	1.30	88	⇓iP	Pn	22 07 41.7	-0.4
PB11				eS	Sn	22 07 58.0	-1.8
PB11				IAML		22 08 03.4	
	comp=E,6µm,0.4s						
PB11	IPOC Station P	1.30	88		Pn	22 07 41.6	-0.4
PB11				Sn	Sn	22 07 57.9	-1.8
PB12	IPOC Station P	1.37	29	⇑iP	Pn	22 07 43.0	0.0
PB12				iS	Sb	22 08 01.0	-0.1
PB12	IPOC Station P	1.37	29	Pn	Pn	22 07 43.0	0.0
AP01	Chacalluta	1.58	25	⇓eP	Pn	22 07 46.1	+0.3
AP01				iS	Sb	22 08 07.4	+0.3
AP01				IAML		22 08 13.2	
	comp=N,8µm,0.4s						
AP01	Chacalluta	1.58	25		Pn	22 07 46.0	+0.3
PB08	IPOC Station P	1.80	101	⇑iP	Pn	22 07 49.6	+0.4
PB08				iS	Sb	22 08 12.6	-1.2
PB08				IAML		22 08 17.0	
	comp=N,2µm,0.3s						
PB08	IPOC Station P	1.80	101		Pn	22 07 48.6	-0.5
PB02	IPOC Station P	1.84	145	⇑iP	Pn	22 07 50.0	+0.5
PB02				eS	Sn	22 08 11.7	-1.2
PB02				IAML		22 08 21.0	
	comp=E,6µm,0.6s						
PB01	IPOC Station P	1.90	130	⇑iP	Pn	22 07 50.9	+0.7
PB01				iS	Sn	22 08 13.5	-0.8
PB01				IAML		22 08 21.7	
	comp=N,2µm,0.5s						
PB01	IPOC Station P	1.90	130		Pn	22 07 50.0	-0.3
PB16	IPOC Station P	2.06	45	⇑eP	Pn	22 07 53.7	+0.7
PB16				eS	Sb	22 08 20.2	-1.3
PB16				IAML		22 08 26.2	
	comp=N,2µm,0.4s						
PB16	IPOC Station P	2.06	45		Pn	22 07 52.7	-0.2
PB07	IPOC Station P	2.18	151	⇑eP	Pn	22 07 54.7	+0.4
PB07				eS	Sn	22 08 22.6	+1.0
PB07				IAML		22 08 40.0	
	comp=E,2µm,0.8s						
PB07	IPOC Station P	2.18	151		Pn	22 07 54.4	+0.1
PB03	IPOC Station P	2.52	152	⇑eP	Pn	22 07 59.5	+0.6
PB03				eS	Sb	22 08 31.9	-2.6
PB03				IAML		22 08 46.1	
	comp=E,744nm,0.4s						
PB09	IPOC Station P	2.59	140		Pn	22 08 00.2	+0.4
PB04	IPOC Station P	2.64	162	eP	Pn	22 08 00.4	-0.1
PB04	IPOC Station P	2.64	162		Pn	22 08 00.1	-0.4
PB06	IPOC Station P	3.18	155		Pn	22 08 07.7	-0.3
LVC	Limon Verde	3.41	145	Pn	Pn	22 08 13.4	+2.1
	comp=E,4.9nm,0.3s,baz=335,slow=10,SNR=42						
LVC				Sn	Sn	22 08 51.4	-0.8
	comp=E,30nm,0.3s,baz=70,slow=17,SNR=7.0						
LVC				Lg	Lg	22 09 03.9	
	comp=E,70nm,0.3s,baz=244,slow=22,SNR=5.5						
LVC	Limon Verde	3.41	145	eP	Pn	22 08 12.8	+1.5
LVC	Limon Verde	3.41	145	Pn	Pn	22 08 10.6	-0.8
PB15	IPOC Station P	3.67	157		Pn	22 08 14.9	+0.1
LPAZ	La Paz	4.46	39	Pn	Pb	22 08 32.4	-4.1
	comp=E,4.7nm,0.3s,baz=240,slow=7.1,SNR=30						
LPAZ				Lg	Lg	22 09 37.1	
	baz=239,slow=4.0,SNR=1.3						
LPAZ	La Paz	4.46	39	eP	Pn	22 08 29.8	+3.8
LPAZ	La Paz	4.46	39	Pn	Pn	22 08 25.9	-0.1
PB14	IPOC Station P	4.82	173	Pn	Pn	22 08 29.7	-1.0
AC02	Maricunga	7.20	166	Pn	Pn	22 09 03.4	-0.2
SIV	San Ignacio	10.22	70	Pn	Pn	22 09 43.3	-1.2
	comp=E,1.6nm,0.3s,baz=252,slow=13,SNR=32						
SIV				Sn	Sn	22 11 39.6	+0.3
	comp=E,0.2nm,0.3s,baz=220,slow=13,SNR=1.7						
ETMB	Extrema	10.98	26	eP	Pn	22 09 56.7	+1.8
ETMB	Extrema	10.98	26	Pn	Pn	22 09 53.3	-1.7
PTLB	Pontes e Lacer	12.14	71	Pn	Pn	22 10 09.1	-1.8
VILB	Vilhena	12.43	58	eP	Pn	22 10 17.6	+2.8
VILB	Vilhena	12.43	58	Pn	Pn	22 10 15.1	+0.2
SAML	Samuel	13.21	36	eP	Pn	22 10 28.4	+3.0
SAML	Samuel	13.21	36		Pn	22 10 25.0	-0.4
CPUP	Villa Florida	14.18	120	eP	P	22 10 42.6	-3.6
AQDB	Aquidauana	14.42	95	eP	P	22 10 46.8	-2.2
SALV	Santo Antonio	15.11	78	eP	P	22 10 55.5	-1.2
H03N1	Juan Fernandez	15.28	206	T	T	22 26 45.5	
	baz=32,slow=72,SNR=111						
H03N2	Juan Fernandez	15.29	206	T	T	22 27 17.2	
	baz=32,slow=72,SNR=55						
H03N3	Juan Fernandez	15.30	206	T	T	22 27 10.6	
	baz=32,slow=72,SNR=49						
PDRB	Porto dos Gac	15.99	61	eP	P	22 11 06.4	-0.1
ITQB	Itaqui	16.34	130	eP	P	22 11 10.1	-0.1
CLDB	Colider	17.16	61	eP	P	22 11 20.9	+1.4
PTGB	Pitanga	18.22	109	eP	P	22 11 33.7	+2.5
ARAG	Araguaiana, MT	18.75	80	eP	Pn	22 11 40.1	+2.7
CPSB	Cacapava Do Su	19.08	127	eP	Pn	22 11 42.4	+1.1
ITRB	Iturama	19.46	93	eP	Pn	22 11 47.9	+1.9
PLTB	Pedras Altas	19.66	131	eP	P	22 11 47.4	+0.4
SNDB	Serra Nova Dou	20.51	71	eP	Pn	22 11 59.1	+0.7
PLCA	Paso Flores	20.85	179	P	Pn	22 12 02.0	-0.3
	comp=E,1.0nm,0.5s,baz=330,slow=14,SNR=3.6						
PLCA	Paso Flores	20.85	179	P	P	22 11 59.5	-0.4
BB19B	Bebedouro	21.12	97	eP	P	22 12 05.0	+2.0
PTGA	Pitinga	21.84	31	P	P	22 12 08.8	-1.8
	comp=E,3.9nm,0.3s,baz=175,slow=22,SNR=9.6						
PTGA	Pitinga	21.84	31	P	P	22 12 09.6	-1.1
PTGA				IAmb	IAmb	22 12 12.7	
	comp=Z,6.1nm,0.9s						
RCLB	Rio Claro- Sao	22.07	101	eP	P	22 12 17.1	+4.0
PET01	Itanhaem-SP	22.45	106	eP	P	22 12 20.2	+3.0
BOAV	Boa Vista	24.37	26	eP	P	22 12 36.4	+0.2
BOAV	Boa Vista	24.37	26	P	P	22 12 35.3	-1.0
BOAV				IAmb	IAmb	22 12 36.9	
	comp=Z,5.7nm,0.8s						
PRPB	Parauapebas	24.68	60	eP	P	22 12 42.2	+3.1
SDBA	SAO DESIDERIO	26.14	78	eP	P	22 12 55.9	+3.5
RWWY	Rawlins	69.76	332	P	P	22 18 27.6	-0.8
QSPA	South Pole Qui	70.36	180	P	P	22 18 32.2	+0.4
QSPA				IAmb	IAmb	22 18 38.1	
	comp=Z,6.9nm,1.5s						
TORD	Torodi Ar. Bea	78.69	72	P	P	22 19 19.5	-1.3
	comp=Z,1.6nm,0.8s,baz=258,slow=5.0,SNR=13						
TORD	Torodi Ar. Bea	78.69	72	P	P	22 19 19.1	-1.7
TORD				IAmb	IAmb	22 19 20.6	
	comp=Z,2.1nm,0.9s						
H11S2	WAKE ISLAND Hy	125.67	279	T	T	00 45 40.9	
	baz=101,slow=74,SNR=35						
H11S1	WAKE ISLAND Hy	125.68	279	T	T	00 45 52.6	
	baz=101,slow=74,SNR=26						
H11S3	WAKE ISLAND Hy	125.69	279	T	T	00 45 40.8	
	baz=101,slow=74,SNR=28						
H11N3	WAKE ISLAND Hy	125.72	280	T	T	00 45 44.5	
	baz=101,slow=74,SNR=5.1						
H11N2	WAKE ISLAND Hy	125.73	280	T	T	00 45 46.3	
	baz=101,slow=74,SNR=13						
H11N1	WAKE ISLAND Hy	125.73	280	T	T	00 45 42.5	
	baz=101,slow=74,SNR=3.6						
MKAR	Makanchi Array	145.37	33	PKPbc	PKPbc	22 26 54.8	-1.2
	comp=Z,0.6nm,0.8s,baz=306,slow=3.2,SNR=3.7						
SONM	Songino Array	151.97	4	PKPab	PKPab	22 27 23.0	+0.5
	comp=Z,0.1nm,0.3s,baz=348,slow=4.7,SNR=2.3						

IDC ***08*** *22:19:11.2±1.1, 51°.69N×172°.95W, h0^{km}, mb3.9/13, mb1 4.1/15, mb1mx3.9/62, mbtmp3.9/15, ML3.6/2, MS3.1/1, Ms1 3.1/1, ms1mx2.5/50, Error ellipse: s-maj=33.9km s-min=15.3km az=178.0*

AEIC ***08*** *22:19:14.2±1.8, 51°.30N±0°.05×172°.95W±0°.09, h42^{km}±10^{km}, ML3.5/13, Error ellipse: s-maj=9.9km s-min=4.6km az=51.0*

NEIC ***08*** *22:19:14.7±1.2, 51°.32N±0°.05×172°.86W±0°.08, h32^{km}±11^{km}, Error ellipse: s-maj=8.5km s-min=5.2km az=51.0*

NEIC ***08*** *22:19:16.1±1.7, 51°.5N±0°.1×172°.86W±0°.08, h38^{km}±6^{km}, mb4.0/51, ML3.5(AEIC), Error ellipse: s-maj=18.7km s-min=6.6km az=173.0*

ISC 08 22:19:15.6±0.6**, 51°.41N**±0°.08×**172°.89W**±0°.04**, h37**^{km}**, n104,** σ1^{s}.**20**/102**, mb4.1**/18**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOFP	Korovin Flat P	1.14	320		Pn	22 19 34.7	-0.4
KOSE	Korovin Southe	1.18	323		Pn	22 19 36.4	+0.9
KOSE					Sn	22 19 53.5	+3.2
KOKL	Mount Kliuchef	1.22	319		Pn	22 19 36.8	+0.7
GSIG	Igitkin Island	1.97	288		Pn	22 19 46.0	-0.4
GSMY	Great Sitkin M	2.07	289		Pn	22 19 47.6	0.0
GSTD	Great Sitkin T	2.12	289		Pn	22 19 48.4	-0.1
GSTD					Sn	22 20 14.8	+1.2
ADK	Adak	2.41	283	Pn	Pn	22 19 52.8	+0.4
ADK				Sn	Sn	22 20 20.0	-0.5
ADK	Adak	2.41	283		Pn	22 19 52.9	+0.6
ADK				Sn	Sn	22 20 21.4	+0.8
KIWB	Kanaga Island	2.69	281		Pn	22 19 57.1	+0.9
NIKH	Nikolski High	2.94	56		Pn	22 20 00.1	+0.5
TASE	Tanaga Southea	3.23	280		Pn	22 20 04.2	+0.5
UNV	Unalaska Valle	4.59	55		Pn	22 20 22.4	+0.1
UNV				Sn	Sn	22 21 14.4	+0.2
UNV	Unalaska Valle	4.59	55	Pn	Pn	22 20 23.3	+1.0
AMKA	Amchitka	4.89	273	Pn	Pn	22 20 27.2	+0.8
SII	Sitkinak Islan	12.14	58	Pn	Pn	22 22 06.0	+0.2
P18K	Big Mountain,	12.80	45	Pn	Pn	22 22 14.7	0.0
KDAK	Kodiak Island	13.36	54	Pn	Pn	22 22 19.4	-2.9
	0.3nm,0.3s,baz=118,slow=18,SNR=1.1						
M19K	Big River Lodg	14.56	37	Pn	Pn	22 22 40.8	+2.1
L19K	White Mountain	14.57	35	Pn	Pn	22 22 38.9	+0.1
CNPM	China Poot	14.67	48	Pn	Pn	22 22 42.8	+2.6
K20K	Telida	15.61	33		Pn	22 22 53.8	+1.3
K20K				IAmb	IAmb	22 23 00.9	
	comp=Z,9.7nm,1.2s						
SKT	Skwentna	15.71	39	Pn	Pn	22 22 53.0	-0.9
SKT				IAmb	IAmb	22 23 08.8	
	comp=Z,15nm,1.4s						
SEW	Seward	15.73	47	Pn	Pn	22 22 52.3	-1.7
SEW				IAmb	IAmb	22 23 07.4	
	comp=Z,13nm,0.9s						
J20K	Nowinta River	16.14	30	Pn	Pn	22 22 58.8	-0.4
J20K				IAmb	IAmb	22 23 18.7	
	comp=Z,9.9nm,1.2s						
CAST	Castle Rocks	16.34	35		Pn	22 23 02.9	+1.1
PWL	Port Wells	16.54	46	Pn	Pn	22 23 04.2	-0.2
PWL				IAmb	IAmb	22 23 12.7	
	comp=Z,19nm,1.2s						
GHO	Glory Hole Cre	16.68	42	Pn	Pn	22 23 05.4	-0.8
GHO				IAmb	IAmb	22 23 08.1	
	comp=Z,5.5nm,0.7s						
KNK	Knik Glacier	16.71	44	Pn	Pn	22 23 06.4	-0.2
KNK				IAmb	IAmb	22 23 13.4	
	comp=Z,11nm,1.3s						
KTH	Kantishna Hill	16.84	35	Pn	Pn	22 23 06.3	-1.9
KTH				IAmb	IAmb	22 23 18.9	
	comp=Z,11nm,1.3s						
SML	Sawmill	16.94	43	Pn	Pn	22 23 08.4	-1.0
BPAW	Bear Paw Mtn.	17.14	34		Pn	22 23 12.3	+0.5
SCM	Sheep Creek Mo	17.38	43		Pn	22 23 14.3	-0.6
SCM				IAmb	IAmb	22 23 16.2	
	comp=Z,8.5nm,0.8s						
H21K	Melozitna Rive	17.58	28		P	22 23 19.1	+1.0
BWN	Browne	17.72	35	P	Pn	22 23 17.6	-1.5
KLU	Klutina	17.86	45	Pn	Pn	22 23 19.0	-1.9
M24K	Tolsona, Glenn	17.99	43		Pn	22 23 21.9	-0.6
M24K				IAmb	IAmb	22 23 26.0	
	comp=Z,21nm,1.2s						
PETK	Petropavlovsk-	18.03	287	P	Pn	22 23 22.4	-0.5
	comp=Z,0.2nm,0.3s,baz=99,slow=12,SNR=1.9						
PETK	Petropavlovsk-	18.03	287	P	Pn	22 23 22.3	-0.6
I23K	Minto, Yukon-K	18.34	32	P	P	22 23 26.3	0.0
SUCK	Suckling Hills	18.40	51	P	P	22 23 25.6	-1.5
N25K	Chitina, Valde	18.49	46		P	22 23 26.9	-1.3
CCB	Clear Creek Bu	18.59	35	P	P	22 23 27.8	-1.3
H23K	Yukon River	18.70	31	P	P	22 23 29.7	-0.7
HDA	Harding Lake	18.77	36	P	P	22 23 30.0	-1.1
HDA				IAmb	IAmb	22 23 48.5	
	comp=Z,13nm,1.4s						
VRDI	Verde Repeater	18.89	47	P	P	22 23 31.2	-1.5
VRDI				IAmb	IAmb	22 23 31.4	
	comp=Z,25nm,1.4s						
WAX	Waxell Ridge	18.95	50		P	22 23 33.4	+0.2
IL31		18.98	35	P	P	22 23 32.6	-0.8
IL31				IAmb	IAmb	22 23 46.0	
	comp=Z,13nm,1.4s						
ILAR	Eielson Array	18.98	35	P	P	22 23 31.0	-2.5
	comp=Z,0.8nm,0.3s,baz=231,slow=9.5,SNR=51						
ILAR	Eielson Array	18.98	35	P	P	22 23 31.0	-2.5
TGL	Tana Glacier	19.04	49		P	22 23 34.3	+0.1
TGL				IAmb	IAmb	22 23 37.5	
	comp=Z,23nm,1.3s						
H24K	Noodor Dome	19.25	32	P	P	22 23 36.3	-0.1
H24K				IAmb	IAmb	22 23 38.9	
	comp=Z,6.5nm,0.8s						
YAH	Yahtse	19.46	51	P	P	22 23 37.5	-1.5
DOT	Dot Lake	19.52	40	P	P	22 23 37.7	-1.7
GRNC	Granite Creek	19.54	49		P	22 23 39.2	-0.6
GRNC				IAmb	IAmb	22 23 53.4	
	comp=Z,13nm,1.0s						
SCRK	Sand Creek	19.70	39	P	P	22 23 40.1	-1.2
SCRK				IAmb	IAmb	22 23 42.8	
	comp=Z,4.9nm,0.5s						
TABL	Table Mountain	19.77	50		P	22 23 42.7	+0.4
CTGM	Chitina Glacie	19.80	49		P	22 23 42.3	-0.3
CTGM				IAmb	IAmb	22 23 46.3	
	comp=Z,8.8nm,0.9s						
PRP	Porcupine Dome	19.87	34		P	22 23 42.2	-1.1
PRP				IAmb	IAmb	22 23 48.5	
	comp=Z,4.3nm,0.8s						
LOGN	Logan Glacier	19.92	49		P	22 23 43.5	-0.4
M27K	Edge Creek, AK	19.96	45	P	P	22 23 43.4	-0.8
M27K				IAmb	IAmb	22 23 52.1	
	comp=Z,6.7nm,1.1s						
PCA	Pinnacle	20.13	52		P	22 23 46.5	+0.5
L27K	Beaver Creek,	20.22	43	P	P	22 23 46.3	-0.7
L27K				IAmb	IAmb	22 23 54.0	
	comp=Z,3.6nm,0.6s						
BCAR	Beaver Creek A	20.24	43	Pn	P	22 23 47.9	+0.7
BCPM	Bancas Point	20.41	52	Pn	P	22 23 50.4	+1.4
TOLK	Toolik Lake Re	20.59	24		P	22 23 51.3	+0.3
TOLK				IAmb	IAmb	22 24 02.9	
	comp=Z,4.9nm,0.9s						
EGAK	Eagle	21.15	39	P	P	22 23 56.3	-0.6
BMAR	Burnt Mountain	21.25	30	P	P	22 23 57.9	-0.2
DAWY	Dawson	21.59	41	P	P	22 24 00.6	-1.1
HYT	Haines Junctio	21.60	50	P	P	22 24 01.1	-0.9
HYT				IAmb	IAmb	22 24 05.2	
	comp=Z,4.9nm,0.6s						
SKAG	Skagway	22.51	54	P	P	22 24 12.4	+0.8
SKAG				IAmb	IAmb	22 24 27.3	
	comp=Z,10.0nm,1.0s						
WHY	Whitehorse	22.85	51	P	P	22 24 15.2	-0.1
DIB	Dawson Inlet,	24.55	70	P	P	22 24 29.4	-2.0
DLBC	Dease Lake	25.25	57	P	P	22 24 37.9	+0.1
	comp=Z,4.6nm,0.8s,baz=267,slow=6.6,SNR=9.1						
DLBC	Dease Lake	25.25	57	P	P	22 24 41.1	+3.3
DLBC				IAmb	IAmb	22 24 41.8	
	comp=Z,6.5nm,0.8s						
INK	Inuvik	25.35	33	P	P	22 24 37.8	-0.7
	comp=Z,8.0nm,0.6s,baz=234,slow=5.5,SNR=46						
INK	Inuvik	25.35	33	P	P	22 24 38.0	-0.4
A36M	Sachs Harbour	29.29	28	P	P	22 25 14.2	+0.4
A36M				IAmb	IAmb	22 25 20.6	
	comp=Z,5.1nm,1.1s						
KLR	Kul'dur	34.70	289	P	P	22 26 01.1	-0.4
	comp=Z,1.1nm,0.5s,baz=24,slow=2.9,SNR=4.4						
KLR	Kul'dur	34.70	289	P	P	22 26 01.1	-0.4
RSD	Rainshed	34.77	150	P	P	22 26 02.8	+0.3
H11N2	WAKE ISLAND Hy	35.39	214	T	T	23 04 21.4	
	baz=21,slow=75,SNR=11						
H11N3	WAKE ISLAND Hy	35.39	214	T	T	23 04 19.2	
	baz=21,slow=75,SNR=10.0						
H11N1	WAKE ISLAND Hy	35.41	214	T	T	23 04 23.1	
	baz=21,slow=75,SNR=12						
H11S1	WAKE ISLAND Hy	36.59	214	T	T	23 05 41.8	
	baz=20,slow=76,SNR=17						
H11S2	WAKE ISLAND Hy	36.60	214	T	T	23 05 43.1	
	baz=20,slow=76,SNR=8.5						
H11S3	WAKE ISLAND Hy	36.60	214	T	T	23 05 46.6	
	baz=20,slow=76,SNR=5.6						
USRK	Ussuriysk Ar.	36.94	281	P	P	22 26 21.1	+0.4
	comp=Z,1.2nm,0.7s,baz=56,slow=11,SNR=2.7						
NVAR	Mina Array Bea	39.86	87	P	P	22 26 47.3	+1.7
	comp=Z,0.2nm,0.3s,baz=298,slow=7.7,SNR=1.7						
PDAR	Pinedale Array	42.74	76	P	P	22 27 10.6	+1.4
	comp=Z,1.4nm,0.8s,baz=306,slow=3.3,SNR=10						
PDAR	Pinedale Array	42.74	76	P	P	22 27 10.2	+1.0
SONM	Songino Array	49.90	300	P	P	22 28 05.3	+0.2
	comp=Z,0.5nm,0.4s,baz=48,slow=8.3,SNR=4.2						
SONM	Songino Array	49.90	300	P	P	22 28 05.8	+0.6
SONM				IAmb	IAmb	22 28 20.1	
	comp=Z,0.9nm,0.7s						
GUMO	Guam	50.74	238	LR	LR	22 45 50.1	
	comp=Z,22nm,21.2s,baz=106,slow=31						
TXAR	Lajitas Array	54.97	86	P	P	22 28 42.9	-0.1
	comp=Z,0.7nm,0.8s,baz=292,slow=5.1,SNR=6.6						
TXAR	Lajitas Array	54.97	86	P	P	22 28 43.0	0.0
LZH	Lanzhou	58.89	290	eP	P	22 29 07.6	-3.1
LZH				pP	pP	22 29 13.1	-7.3
LZH				pmax	pmax		
	comp=Z,29nm,1.6s						
GTA	Gaotai	58.94	295	eP	P	22 29 08.6	-2.4
GTA				pP	pP	22 29 11.8	-8.9
GTA				sP	sP	22 29 14.7	-10
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MKAR	Makanchi Array	62.84	312	P	P	22 29 37.0	-0.3
	comp=Z,0.3nm,0.3s,baz=49,slow=6.5,SNR=13						
MKAR	Makanchi Array	62.84	312	P	P	22 29 37.3	+0.1
FINES	FINESS Array B	66.48	350	P	P	22 29 60.0	-0.6
	comp=Z,3.6nm,1.0s,baz=352,slow=7.7,SNR=3.9						
AKASG	Malin Array Be	76.54	346	P	P	22 31 00.6	-0.8
	comp=Z,0.6nm,0.3s,baz=20,slow=6.8,SNR=2.8						
ASAR	Alice Springs	88.12	227	P	P	22 32 04.3	+2.1
	comp=Z,1.7nm,0.7s,baz=28,slow=6.3,SNR=2.2						
ASAR	Alice Springs	88.12	227	P	P	22 32 03.4	+1.3
ESDC	Sonseca Array	88.78	9	P	P	22 32 05.3	+0.1
	comp=Z,0.2nm,0.6s,baz=343,slow=4.0,SNR=1.7						

IDC ***08*** *22:20:18.1±2.4, 5°.24S×131°.57E, h38^{km}±20^{km}, mb4.2/11, mb1 4.5/17, mb1mx4.2/40, mbtmp4.6/17, ML4.6/6, MS3.3/13, Ms1 3.3/13, ms1mx3.1/42, Error ellipse: s-maj=18.7km s-min=12.2km az=73.0*

NEIC ***08*** *22:20:19.0±1.9, 5°.18S±0°.05×131°.70E±0°.08, h52^{km}±7^{km}, mb4.7/23, Error ellipse: s-maj=12.1km s-min=8.0km az=88.0*

DJA ***08*** *22:20:22.5±0.3, 5°S±3°×13°2E±°, h71^{km}±5^{km}, M4.7/26, mB5.2/17, mb5.0/26, MLv5.3/13, Mw(mB)4.5/17*

ISC 08 22:20:18.2±0.3**, 5°.20S**±0°.04×**131°.73E**±0°.04**, h47**^{km}**, n132,** σ1^{s}.**86**/126**, mb4.7**/31**, MS3.1**/7**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	Bandanaira	1.94	290	P	Pn	22 20 50.6	+1.9
BNDI				S	Sn	22 21 13.3	+1.4
BNDI	Bandanaira	1.94	290	P	Pn	22 20 50.9	+2.2
FAKI	Fak Fak	2.32	13	P	Pn	22 20 56.4	+2.4
FAKI				S	Sn	22 21 22.6	+1.3
FAKI	Fak Fak	2.32	13	Pn	Pn	22 20 55.6	+1.7
FAKI				Sn	Sn	22 21 22.3	+1.0
FAKI	Fak Fak	2.32	13	P	Pn	22 20 56.3	+2.3
SAUI	Saumlaki	2.80	189		Pn	22 21 02.7	+2.2
SAUI	Saumlaki	2.80	189	P	Pn	22 21 04.0	+3.5
MSAI	Masohi	3.35	303	P	Pn	22 21 09.6	+1.6
MSAI				S	Sn	22 21 44.8	-1.8
SIJI	Sorong	4.33	354	Pn	Pn	22 21 20.9	-0.6
	51nm,0.3s,baz=179,slow=13,SNR=86						
SIJI				Sn	Sn	22 22 05.0	-5.7
	128nm,0.3s,baz=257,slow=23,SNR=6.8						
SWI	Sorong	4.33	354	P	Pn	22 21 22.6	+1.0
SRPI	Serui, Papua	5.58	54	P	Pn	22 21 43.9	+5.2
	3.5nm6µm170nm,0.6s						
BAKI	Biak	5.91	48	P	Pn	22 21 47.2	+4.0
	280nm,0.7s						
LBMI	Labuha	6.19	317	P	Pn	22 21 50.1	+3.0
	1.9nm2µm205nm,0.9s						
SANI	Sanana	6.53	298	P	Pn	22 21 51.0	-0.7
	1.4nm5µm352nm,0.5s						
SANI	Sanana	6.53	298	P	Pn	22 21 51.1	-0.7
TNTI	Ternate	7.36	324	P	Pn	22 22 14.1	+11
SMPI	Sarmi	7.66	66	P	Pn	22 22 13.5	+6.3
	0.3nm662nm41nm,1.0s						
SOEI	Soe	8.68	238	P	Pn	22 22 24.9	+3.6
	2µm196nm,0.9s						
SOEI	Soe	8.68	238		Pn	22 22 22.0	+0.7
SOEI	Soe	8.68	238	P	Pn	22 22 23.3	+2.0
JAY	Jayapura	9.34	74	Pn	Pn	22 22 33.2	+2.9
	2.0nm,0.3s,baz=217,slow=12,SNR=17						
JAY				Sn	Sn	22 24 16.3	+2.2
	0.7nm,0.3s,baz=209,slow=23,SNR=1.4						
BATI	Baumata	9.42	238	Pn	Pn	22 22 30.6	-0.8
	7.2nm,0.3s,baz=283,slow=0.3,SNR=12						
BATI				Sn	Sn	22 24 11.7	-4.3
	46nm,0.3s,baz=24,slow=15,SNR=7.9						
BATI	Baumata	9.42	238	P	Pn	22 22 33.6	+2.2
	825nm73nm,0.7s						
KMSI	Cibinong	9.63	306	P	Pn	22 22 35.5	+1.2
	195nm,0.6s						
LUWI	Luwuk	9.85	294	P	Pn	22 22 39.8	+2.5
	2µm73nm,0.6s						
LUWI	Luwuk	9.85	294	Pn	Pn	22 22 37.8	+0.5
LUWI	Luwuk	9.85	294	P	Pn	22 22 38.7	+1.4
MMRI	Maumere	10.03	250	P	Pn	22 22 47.0	+7.3
	3µm74nm,0.8s						
EDFI	Ende, Flores	10.57	250	P	Pn	22 22 51.3	+4.0
	334nm24nm,0.9s						
APSI	Ampana	10.93	293	P	Pn	22 22 53.9	+1.8
	758nm60nm,0.5s						
BSSI	Bau Bau, Buton	11.23	265	P	Pn	22 23 01.7	+5.6
	895nm99nm,1.0s						
MRSI	Marisa	11.29	300	P	Pn	22 22 58.4	+1.4
	914nm59nm,0.5s						
BKSI	Bulukumba	11.56	269	P	Pn	22 23 04.2	+3.5
	731nm62nm,0.9s						
KAPI	Kappang	11.94	270	Pn	Pn	22 23 04.3	-1.5
	1.5nm,0.3s,baz=208,slow=19,SNR=1.4						
KAPI				LR	LR	22 28 35.2	
	comp=Z,95nm,18.2s,baz=120,slow=42						
KAPI	Kappang	11.94	270		Pn	22 23 06.5	+0.7
TTSI	Tana Toraja	12.07	280	P	Pn	22 23 13.0	+5.3
	707nm35nm,1.2s						

TOLI2	Tolitoli	12.61	300		Pn	22 23 14.2	-0.8
TOLI2	Tolitoli	12.61	300	P	Pn	22 23 16.2	+1.2
WBSI	Waikabubak, Su	13.01	249	P	P	22 23 36.6	+6.8
MPSI	Mapaga	13.04	295	P	Pn	22 23 23.2	+2.4
	1µm48nm,1.2s						
DAV	Davao City (W)	13.65	333	LR	LR	22 29 31.8	
	comp=Z,72nm,19.7s,baz=134,slow=41						
FITZ	Fitzroy Crossi	14.14	204	Pn	Pn	22 23 32.5	-3.3
	23nm,0.3s,baz=34,slow=11,SNR=229						
FITZ				Sn	Sn	22 25 58.2	-13
	15nm,0.3s,baz=88,slow=18,SNR=11						
FITZ				LR	LR	22 28 59.3	
	comp=Z,139nm,21.9s,baz=34,slow=37						
COEN	Coen	14.24	128	Pn	Pn	22 23 36.4	-0.9
WRA	Warramunga Arr	14.87	170	Pn	Pn	22 23 43.5	-2.1
	4.0nm,0.3s,baz=352,slow=13,SNR=95						
WRA				Sn	Sn	22 26 18.9	-10
	13nm,0.3s,baz=353,slow=23,SNR=7.9						
WRA				LR	LR	22 30 37.0	
	comp=Z,84nm,21.9s,baz=355,slow=42						
PMG	Port Moresby	15.86	106	Pn	P	22 24 00.2	-1.2
	3.1nm,0.3s,baz=289,slow=13,SNR=19						
PMG				Sn	Sn	22 26 46.2	-7.1
	1.7nm,0.3s,baz=13,slow=24,SNR=1.7						
PMG				LR	LR	22 31 48.1	
	comp=Z,102nm,20.6s,baz=250,slow=43						
PMG	Port Moresby	15.86	106	Pn	Pn	22 23 58.5	+0.1
PMG				IAmb	IAmb	22 24 03.7	
	comp=Z,45nm,0.8s						
PMG	Port Moresby	15.86	106	P	P	22 24 01.8	+0.3
PMG	Port Moresby	15.86	106	P	P	22 24 01.7	+0.3
MANU	Manus Island	15.91	79	P	Pn	22 24 00.1	+1.0
BBKI	Banjar Baru	16.93	275	P	P	22 24 13.8	+0.5
	comp=Z,25nm,1.2s						
KMMI	Kalianget	17.76	263	P	P	22 24 23.7	+1.2
	comp=Z,125nm,0.9s						
MTSU	Mount Surprise	17.79	137	P	P	22 24 25.8	+3.0
	comp=Z,24nm,0.8s						
SPMM	Sapulut	18.15	303	P	Pn	22 24 28.0	+1.0
AS31	Alice Springs	18.48	174	P	P	22 24 27.4	-3.0
AS31				IAmb	IAmb	22 24 35.4	
	comp=Z,29nm,0.5s						
ASAR	Alice Springs	18.48	174	P	P	22 24 29.9	-0.5
	comp=Z,5.4nm,0.3s,baz=347,slow=8.4,SNR=162						
ASAR				S	Sn	22 27 42.6	-14
	comp=Z,2.8nm,0.3s,baz=358,slow=28,SNR=10						
ASAR				LR	LR	22 32 12.4	
	comp=Z,129nm,20.0s,baz=14,slow=39						
ASAR	Alice Springs	18.48	174	P	P	22 24 29.0	-1.4
MBWA	Marble Bar	19.68	215	P	P	22 24 42.6	-0.9
MBWA				IAmb	IAmb	22 24 44.2	
	comp=Z,39nm,0.6s						
MBWA	Marble Bar	19.68	215	P	P	22 24 43.7	+0.2
PSA00	Pilbara Seismi	19.94	214	P	P	22 24 46.6	+0.2
PSA00	Pilbara Seismi	19.94	214	P	P	22 24 45.2	-1.2
PSA00				IAmb	IAmb	22 24 47.7	
	comp=Z,30nm,0.7s						
PSA00	Pilbara Seismi	19.94	214	P	P	22 24 46.3	-0.1
	comp=Z,137nm,1.1s						
WRKA	Warakurna	20.00	189	P	Pn	22 24 47.8	-1.3
	comp=Z,105nm,0.7s						
CTA	Charters Tower	20.46	138	P	Pn	22 24 55.2	+0.7
	comp=Z,13nm,0.8s,baz=322,slow=13,SNR=11						
CTA				S	S	22 28 34.9	-3.8
	comp=Z,3.8nm,0.6s,baz=61,slow=21,SNR=2.3						
CTA	Charters Tower	20.46	138	P	Pn	22 24 56.0	+1.5
	comp=Z,26nm,1.2s						
CTAO	Charters Tower	20.46	138	P	Pn	22 24 54.6	+0.1
CTAO				IAmb	IAmb	22 24 56.3	
	comp=Z,36nm,1.2s						
CTAO	Charters Tower	20.46	138	P	Pn	22 24 55.4	+0.9
SBUM	Sibu	20.92	291	P	P	22 24 57.0	0.0
OOD	Oodnadatta	22.79	171	P	P	22 25 17.5	+0.6
	comp=Z,98nm,0.8s						
QLP	Quilpie	24.39	152	P	P	22 25 34.2	+2.0
	comp=Z,130nm,0.5s						
MULG	Mulgathing	25.05	175	P	P	22 25 39.1	+1.0
	comp=Z,59nm,0.9s						
FORT	Forrest	25.68	187	P	P	22 25 44.0	+0.2
FORT	Forrest	25.68	187	P	P	22 25 44.4	+0.5
	comp=Z,143nm,0.7s						
LCRK	Leigh Creek	25.85	167	P	P	22 25 46.6	+1.2
	comp=Z,98nm,0.8s						
BBOO	Buckleboo	27.77	172	P	P	22 26 01.4	-1.2
BBOO				IAmb	IAmb	22 26 03.8	
	comp=Z,9.7nm,0.7s						
BBOO	Buckleboo	27.77	172	P	P	22 26 03.1	+0.4
	comp=Z,22nm,0.8s						
MORW	Morawa	28.01	210	P	P	22 26 04.0	-0.8
MORW				IAmb	IAmb	22 26 05.1	
	comp=Z,13nm,0.7s						
STKA	Stephens Creek	28.11	162	P	P	22 26 06.8	+1.2
	comp=Z,8.2nm,0.4s,baz=336,slow=9.5,SNR=33						
STKA				LR	LR	22 37 56.2	
	comp=Z,112nm,21.3s,baz=267,slow=38						
STKA	Stephens Creek	28.11	162	P	P	22 26 05.7	+0.1
STKA	Stephens Creek	28.11	162	P	P	22 26 06.6	+0.9
	comp=Z,4.6nm,0.9s						
CMSA	Cobar Meteorol	29.29	155	P	P	22 26 17.9	+1.7
	comp=Z,15nm,1.5s						
NWAO	Narrogin (SRO)	30.73	204	P	P	22 26 28.7	-0.2
	comp=Z,12nm,0.4s,baz=44,slow=7.7,SNR=23						
NWAO				LR	LR	22 40 12.6	
	comp=Z,180nm,18.2s,baz=208,slow=39						
NWAO	Narrogin (SRO)	30.73	204	P	P	22 26 28.8	-0.1
NWAO				IAmb	IAmb	22 26 29.5	
	comp=Z,13nm,0.6s						
JOW	Kunigami	32.02	354	LR	LR	22 38 54.9	
	comp=Z,41nm,20.7s,baz=296,slow=35						
IPM	Ipoh	32.14	287	P	P	22 26 41.0	-0.6
ARPS	Mount Arapiles	32.76	165	P	P	22 26 48.5	+1.8
	comp=Z,43nm,0.8s						
YNG	Young	32.82	154	P	P	22 26 49.7	+2.4
	comp=Z,30nm,1.1s						
PSI	Prapat	33.72	283	LR	LR	22 41 32.3	
	comp=Z,124nm,19.9s,baz=14,slow=38						
CAN	Canberra	33.95	154	P	P	22 26 57.6	+0.4
CAN	Canberra	33.95	154	P	P	22 26 59.7	+2.5
BRAT	Ballarat	34.07	163	P	P	22 27 00.9	+2.8
	comp=Z,11nm,0.9s						
TOO	Toolangi	34.59	161	P	P	22 27 03.3	+0.6
TOO				IAmb	IAmb	22 27 06.3	
	comp=Z,21nm,1.1s						
TOO	Toolangi	34.59	161	P	P	22 27 05.4	+2.7
	comp=Z,25nm,1.0s						
CMAR	Chiang Mai Arr	39.97	307	P	P	22 27 48.8	+0.3
	comp=Z,1.1nm,0.3s,baz=138,slow=7.9,SNR=11						
CMAR				LR	LR	22 44 48.2	
	comp=Z,33nm,21.8s,baz=191,slow=37						
CMAR	Chiang Mai Arr	39.97	307	P	P	22 27 47.3	-1.2
CHTO	Chiang Mai	40.16	307	P	P	22 27 49.7	-0.3
MJAR	Matsushiro Arr	41.96	8	LR	LR	22 44 19.2	
	comp=Z,26nm,20.7s,baz=105,slow=34						
MJB9	Matsu-Tunnel	41.97	8	P	P	22 28 03.4	-1.3
KSRS	Korea Array	42.58	356	LR	LR	22 45 12.7	
	comp=Z,24nm,19.1s,baz=122,slow=35						
USRK	Ussuriysk Ar.	49.17	0	P	P	22 29 02.6	+1.1
	comp=Z,1.0nm,0.5s,baz=194,slow=9.0,SNR=1.4						
BSWZ	Blackbirch Sta	52.23	141	P	P	22 29 25.0	+0.4
URZ	Urewera	52.68	135	P	P	22 29 28.4	+0.4
	comp=Z,5.4nm,0.9s,baz=301,slow=23,SNR=2.3						
TAPN	Taplejung	53.43	310	*e*P	P	22 29 32.9	-1.1
	comp=Z,7.0nm,0.5s						
RAMN	Ramite	54.08	309	*e*P	P	22 29 38.4	-0.4
	comp=Z,18nm,0.4s						
JIRN	Jiri	54.75	309	*e*P	P	22 29 43.1	-0.7
	comp=Z,11nm,0.8s						
GKN	Gorkha	56.12	309	*e*P	P	22 29 53.1	-0.3
	comp=Z,14nm,0.5s						
KOLN	Koldanda	56.82	308	*e*P	P	22 29 58.4	0.0
	comp=Z,14nm,0.7s						
SONM	Songino Array	57.32	340	P	P	22 30 02.2	+0.7
	comp=Z,0.5nm,0.7s,baz=152,slow=7.0,SNR=2.2						
PYUN	Piuthan	57.45	308	*e*P	P	22 30 03.0	+0.1
CASY	Casey	62.74	189	P	P	22 30 38.8	+0.6
CASY				IAmb	IAmb	22 30 39.5	
	comp=Z,9.0nm,0.6s						
NIL	Nilore	67.38	310	P	P	22 31 08.1	-0.9
NIL				IAmb	IAmb	22 31 22.1	
	comp=Z,6.1nm,0.8s						
MK31	Makanchi Array	67.69	326	P	P	22 31 10.1	-0.6
MKAR	Makanchi Array	67.69	326	P	P	22 31 11.3	+0.7
	comp=Z,2.1nm,0.6s,baz=114,slow=7.9,SNR=21						
MKAR	Makanchi Array	67.69	326	P	P	22 31 09.8	-0.9
MAKZ	Makanchi	67.88	326	P	P	22 31 11.2	-0.6
MAKZ				IAmb	IAmb	22 31 28.0	
	comp=Z,8.0nm,1.4s						
ZALV	Zalesovo Beam	70.76	333	P	P	22 31 29.4	0.0
	comp=Z,1.0nm,0.6s,baz=123,slow=5.5,SNR=5.8						
ZALV	Zalesovo Beam	70.76	333	P	P	22 31 29.0	-0.4
VNDA	Vanda	74.02	173	P	P	22 31 49.4	+0.9
	comp=Z,4.9nm,0.8s,baz=314,slow=6.4,SNR=32						
VNDA	Vanda	74.02	173	P	P	22 31 48.5	0.0
VNDA				IAmb	IAmb	22 31 50.9	
	comp=Z,4.6nm,0.8s						
MAW	Mawson	77.25	201	P	P	22 32 07.9	+0.8
	comp=Z,4.0nm,0.6s,baz=93,slow=2.9,SNR=7.2						
MAW	Mawson	77.25	201	P	P	22 32 07.6	+0.5
QSPA	South Pole Qui	84.77	180	P	P	22 32 47.6	+0.3
	baz=270,slow=2.2,SNR=55						
QSPA	South Pole Qui	84.77	180	P	P	22 32 47.9	+0.6
ILAR	Eielson Array	90.99	25	P	P	22 33 18.1	+1.0
	comp=Z,0.3nm,0.6s,baz=274,slow=5.4,SNR=4.5						
ILAR	Eielson Array	90.99	25	P	P	22 33 17.6	+0.6
VNA3	Neumayer Olymp	99.59	192	Pdiff	Pdif	22 33 59.7	+3.5
TXAR	Lajitas Array	122.53	58	PKP	PKiKP	22 39 10.4	+0.9
	comp=Z,0.1nm,0.5s,baz=243,slow=4.0,SNR=1.6						
TORD	Torodi Ar. Bea	130.12	283	PKP	PKPdf	22 39 23.5	-0.6
	comp=Z,1.4nm,0.7s,baz=55,slow=2.1,SNR=12						
TORD				SKPab	SKPab	22 42 40.0	-3.1
	comp=Z,1.9nm,1.0s,baz=93,slow=1.9,SNR=8.1						
TORD	Torodi Ar. Bea	130.12	283		PKPdf	22 39 23.4	-0.7
DBIC	Dimbokro	136.81	274	PKP	PKiKP	22 39 38.1	-0.3
	comp=Z,1.3nm,0.5s,baz=16,slow=2.1,SNR=5.2						
DBIC	Dimbokro	136.81	274		PKPdf	22 39 33.5	-3.2
CPUP	Villa Florida	147.45	165	PKPbc	PKPab	22 39 58.8	-0.9
	comp=Z,7.3nm,0.9s,baz=203,slow=3.5,SNR=11						
LPAZ	La Paz	150.98	138	PKPbc	PKiKP	22 40 09.2	+1.0
	comp=Z,2.4nm,0.8s,baz=232,slow=3.3,SNR=6.0						

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*NEIC **08** 22:20:51.3±0.6, 37°.179N±0°.008×97°.79W±0°.01, h10^{km}±2^{km}, Error ellipse: s-maj=1.5km s-min=1.1km az=112.0*

NEIC 08 22:20:51.2±1.0,**37°.179N**±0°.010×**97°.788W**±0°.008, **h4**^{km}±5^{km},**mb_Lg2.0**/2,**ML2.3**/23,**Error ellipse: s-maj=1.5km s-min=0.8km az=151.0,Kansas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN01	Argonia South	0.03	138		Pg	22 20 53.2	+1.0
KAN06	Argonia West S	0.09	321		Pg	22 20 54.9	+1.8
KAN05	Bluff City Nor	0.10	224		Pg	22 20 55.1	+1.9
KAN17	Caldwell West	0.14	172		Pg	22 20 54.2	+0.3
KAN17					Sg	22 20 56.4	+0.7
KAN09	Caldwell North	0.14	108		Pg	22 20 54.3	+0.3
KAN09					Sg	22 20 56.5	+0.6
KS21	Milan North St	0.15	43		Pg	22 20 54.4	+0.3
KS21					Sg	22 20 56.7	+0.6
KAN08	Anthony NE Sta	0.15	288		Pg	22 20 54.5	+0.3
KAN08					Sg	22 20 57.0	+0.7
KS20	Mayfield South	0.19	75		Pg	22 20 55.2	+0.3
KS20					Sg	22 20 58.2	+0.7
KAN12	Harper NE Stat	0.20	305		Pg	22 20 55.5	+0.2
KAN12					Sg	22 20 58.5	+0.6
KAN16	Harper SW Stat	0.23	282		Pg	22 20 55.9	+0.3
KAN16					Sg	22 20 59.2	+0.6
KAN10	Anthony SW Sta	0.25	257		Pg	22 20 56.4	+0.3
KAN10					Sg	22 20 60.0	+0.6
KAN14	Manchester OK	0.26	212		Pg	22 20 56.6	+0.4
KAN14					Sg	22 21 00.4	+0.6
KAN13	South Haven SW	0.30	124		Pg	22 20 57.2	+0.2
KAN13					Sg	22 21 01.4	+0.6
GC02	Grant County #	0.33	190	Pg	Pg	22 20 57.8	+0.2
OK032	Salt Plains WL	0.51	222		Pg	22 21 01.0	+0.2
OK032					Sg	22 21 08.1	+0.7
BLOK	Blackwell	0.62	132	Pg	Pg	22 21 03.3	+0.2
CROK	Carrier	0.69	193	Pg	Pg	22 21 04.4	0.0
T35A	Sooner Cattle	1.05	104	Pg	Pg	22 21 10.9	-0.5
U32A	Winter Ranch,	1.26	231	Pg	Pg	22 21 14.5	-0.8
OK029	Liberty Lake	1.41	169	Pn	Pn	22 21 17.2	-0.4
R32A	Long Quarter,	1.44	330		Pn	22 21 17.9	-0.2
OK031	S. Brethren Rd	1.44	148	Pn	Pn	22 21 17.9	-0.1
OK030	Cody Creek RV	1.49	147		Pn	22 21 18.7	0.0
BCOK	Bluff Creek, N	1.53	175	Pn	Pn	22 21 18.9	-0.3
BCOK				IAmb_Lg		22 21 38.6	
	comp=Z,10nm,1.2s						
OK025	Westminster Rd	1.64	167	Pn	Pn	22 21 20.3	-0.4
CBKS	Cedar Bluff	2.24	317	IAmb_Lg		22 22 02.5	
	comp=Z,6.2nm,0.8s						

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*IDC **08** 22:26:25.1±3.3, 18°.60S×177°.93W, h562^{km}±29^{km}, mb3.3/5, mb1 3.5/6, mb1mx3.0/45, mbtmp4.3/6, Error ellipse: s-maj=124.0km s-min=27.6km az=156.0*

*NEIC **08** 22:26:26.6±1.1, 18°.7S±0°.2×178°.1W±0°.2, h559^{km}±13^{km}, mb4.1/13, Error ellipse: s-maj=29.2km s-min=20.7km az=112.0*

ISC 08 22:26:25.8±0.9,**18°.7S**±0°.1×**178°.0W**±0°.2,**h557**^{km}**,n23, σ0^{s}.72**/23,**mb4.1**/11,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.87	284	P	P	22 27 47.3	0.0
	7.3nm,0.3s,baz=264,slow=23,SNR=16						
MSVF	Nonsavu	3.87	284	P	P	22 27 47.2	-0.1
OUZ	Omahuta	18.08	203	P	P	22 30 04.8	+0.9
OUZ				IAmb	IAmb	22 30 07.0	
	comp=Z,6.6nm,1.0s						
BHW	Baring Head	23.46	194	P	P	22 30 52.4	+0.1
THZ	Tophouse	24.28	197	P	P	22 31 00.4	+0.7
MLZ	Mavora Lakes	29.00	200	P	P	22 31 41.0	-0.1
ARMA	Armidale	29.90	241	P	P	22 31 49.5	+0.4
ARMA				IAmb	IAmb	22 31 53.4	
	comp=Z,4.6nm,0.9s						
CTA	Charters Tower	33.71	262	P	P	22 32 21.2	-0.4
	comp=Z,8.7nm,1.0s,baz=78,slow=11,SNR=0.9						
CTAO	Charters Tower	33.71	262	P	P	22 32 21.4	-0.2
TOO	Toolangi	36.99	232	P	P	22 32 49.2	+0.6
TOO				IAmb	IAmb	22 32 49.6	
	comp=Z,4.0nm,0.8s						
COEN	Coen	37.50	271	P	P	22 32 53.3	+0.2
COEN				IAmb	IAmb	22 32 53.4	
	comp=Z,4.7nm,0.7s						
STKA	Stephens Creek	38.60	242	P	P	22 33 02.0	+0.2
	comp=Z,8.4nm,1.0s,baz=63,slow=6.8,SNR=1.9						
WB0	Warramunga Arr	44.84	260	P	P	22 33 50.4	-0.8
WB0				IAmb	IAmb	22 33 56.8	
	comp=Z,5.0nm,0.9s						
WB2	Warramunga Arr	44.86	260	P	P	22 33 50.8	-0.5
WRA	Warramunga Arr	44.88	260	P	P	22 33 50.6	-0.8
	comp=Z,1.7nm,0.4s,baz=98,slow=6.7,SNR=14						
AS31	Alice Springs	44.96	255	P	P	22 33 51.5	-0.6
ASAR	Alice Springs	44.96	255	P	P	22 33 51.5	-0.5
	comp=Z,3.4nm,0.4s,baz=95,slow=7.5,SNR=10						
MJAR	Matsushiro Arr	68.75	323	P	P	22 36 34.3	-0.2
KIWB	Kanaga Island	70.23	1	P	P	22 36 44.0	+1.1
YULB	Yu-li	72.51	303	P	P	22 36 56.7	-0.2
YULB				IAmb	IAmb	22 37 04.0	
	comp=Z,6.5nm,1.1s						
TGL	Tana Glacier	84.08	17	P	P	22 37 58.2	+0.2
TGL				IAmb	IAmb	22 38 07.8	
	comp=Z,7.0nm,1.0s						
M24K	Tolsona, Glenn	84.39	14	P	P	22 38 00.9	+1.4
TXAR	Lajitas Array	86.08	57	P	P	22 38 06.8	-1.6
	comp=Z,0.3nm,0.7s,baz=219,slow=7.0,SNR=4.0						

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*TAP **08** 22:32:05.0, 24°.28N×122°.65E, h51^{km}±1^{km}, ML3.0, C*

*JMA **08** 22:32:04.5, 24°.29N×122°.67E, h58^{km}±1^{km}, M2.0*

ISC 08 22:32:04.8±1.2,**24°.30N**±0°.03×**122°.68E**±0°.02,**h55**^{km}±9^{km}**, n84,σ0^{s}.63**/159,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.29	59	P	Pn	22 32 14.4	+0.1
JYNG				S	Sn	22 32 21.5	+0.4
YOJ	Yonaguni jima	0.34	63	P	Pn	22 32 14.8	0.0
	baz=59						
YOJ				S	Sn	22 32 22.2	+0.2
	baz=59						
YOJ	Yonaguni jima	0.34	63	P	Pn	22 32 14.8	0.0
YOJ				S	Sn	22 32 22.1	+0.1
EWUT	Wuta	0.83	280	*e*P	Pn	22 32 20.9	+0.5
	baz=281						
EWUT				*e*S	Sn	22 32 31.5	-0.4
	baz=281						
ENA	Nanau	0.86	278	*e*P	Pn	22 32 21.0	+0.1
	baz=280						
ENA				*e*S	Sn	22 32 32.6	0.0
	baz=280						
NDS	Dongshan	0.93	291	*e*P	Pn	22 32 21.6	-0.2
	baz=292						
NDS				*e*S	Sn	22 32 33.5	-0.8
	baz=292						
NTC	Toucheng	0.94	306	*e*P	Pn	22 32 21.8	-0.2
	baz=307						
NTC				*e*S	Sn	22 32 33.8	-0.7
	baz=307						
IRIF	Iriomote-Funau	0.96	88	P	Pn	22 32 22.1	-0.1
IRIF				S	Sn	22 32 35.2	+0.2
ETL	Fush Village	0.97	262	*e*P	Pn	22 32 21.8	-0.5
	baz=262						
ETL				*e*S	Sn	22 32 35.4	+0.2
	baz=262						
NACB	Ninganchiao	0.99	263	*e*P	Pn	22 32 22.3	-0.3
	baz=263						
NACB				S	Sn	22 32 35.2	-0.6
	baz=263						
TWE	Neicheng	1.01	295	*e*P	Pn	22 32 22.7	-0.1
	baz=296						
TWE				*e*S	Sn	22 32 35.7	-0.4
	baz=296						
TWD	Chiawan	1.01	257	*e*P	Pn	22 32 23.1	+0.3
	baz=258						
TWD				*e*S	Sn	22 32 36.0	-0.1
	baz=258						
TIPB	Shuangxi	1.02	311	*e*P	Pn	22 32 22.8	-0.2
	baz=312						
TIPB				*e*S	Sn	22 32 35.6	-0.8
	baz=312						
ENTT	Nioudou	1.06	289	*e*P	Pn	22 32 24.0	+0.5
	baz=290						
ENTT				*e*S	Sn	22 32 37.6	+0.2
	baz=290						
ETLH	Xiulin Townshi	1.09	265	*e*P	Pn	22 32 24.4	+0.3
	baz=266						
ETLH				*e*S	Sn	22 32 38.8	+0.5
	baz=266						
NDT	Datong Townshi	1.10	286	*e*P	Pn	22 32 24.6	+0.6
	baz=287						
NDT				*e*S	Sn	22 32 38.6	+0.3
	baz=287						
NWF	Wu-fen Shan	1.11	313	*e*P	Pn	22 32 24.0	-0.3
	baz=315						
NWF				*e*S	Sn	22 32 38.3	-0.5
	baz=315						
NWLT	Wulai	1.17	294	*e*P	Pn	22 32 25.9	+0.9
	baz=295						
NWLT				*e*S	Sn	22 32 39.5	-0.5
	baz=295						
NNSB	Datong	1.19	276	*e*P	Pn	22 32 24.7	-0.6
	baz=277						
NNSB				*e*S	Sn	22 32 39.8	-0.7
	baz=277						
NNS	Nan Shan	1.20	277	*e*P	Pn	22 32 25.9	+0.5
	baz=277						
NNS				*e*S	Sn	22 32 40.4	-0.4
	baz=277						
JKRS	Kuro-shima	1.22	93	P	Pn	22 32 26.2	+0.6
JKRS				S	Sn	22 32 41.8	+0.7
ESL	Shilin	1.24	247	*e*P	Pn	22 32 25.8	-0.1
	baz=247						
ESL				*e*S	Sn	22 32 41.2	-0.3
	baz=247						
YHNB	Yeheng	1.24	287	*e*P	Pn	22 32 26.6	+0.6
	baz=288						
YHNB				*e*S	Sn	22 32 41.2	-0.5
	baz=288						
NSK	Sanguang	1.26	287	*e*P	Pn	22 32 26.6	+0.4
	baz=288						
NSK				*e*S	Sn	22 32 41.6	-0.5
	baz=288						
WHF	Hehuan Shan	1.30	263	*e*P	Pn	22 32 27.5	+0.4
	baz=263						
WHF				*e*S	Sn	22 32 42.3	-1.3
	baz=263						
EGFH	Guangfu	1.30	241	*e*P	Pn	22 32 27.4	+0.7
	baz=241						
EGFH				*e*S	Sn	22 32 42.9	-0.3
	baz=241						
FUSS	Fushou	1.31	268	*e*P	Pn	22 32 27.4	+0.4
	baz=268						
FUSS				*e*S	Sn	22 32 43.8	+0.1
	baz=268						
YM01	YM01	1.31	310	*e*P	Pn	22 32 27.1	+0.2
	baz=311						
YM01				*e*S	Sn	22 32 42.6	-0.7
	baz=311						
JIJ	Ishigaki jima	1.34	87	P	Pn	22 32 27.1	-0.2
JIJ				S	Sn	22 32 43.1	-0.9
TWT	Tachien	1.37	268	*e*P	Pn	22 32 28.9	+1.1
	baz=268						
TWT				*e*S	Sn	22 32 45.1	+0.1
	baz=268						
TDCB	Techi	1.39	268	*e*P	Pn	22 32 28.7	+0.7
	baz=268						
TDCB				S	Sn	22 32 44.7	-0.7
	baz=268						
CHGB	Renai	1.39	260	*e*P	Pn	22 32 28.4	+0.3
	baz=260						
CHGB				*e*S	Sn	22 32 44.7	-0.9
	baz=260						
HGSD	Ruisui	1.40	235	*e*P	Pn	22 32 28.5	+0.4
	baz=235						
HGSD				*e*S	Sn	22 32 44.7	-0.8
	baz=235						
OWD	Renai	1.41	256	*e*P	Pn	22 32 28.4	0.0
	baz=256						
OWD				*e*S	Sn	22 32 45.6	-0.4
	baz=256						
EHY	Hungye	1.47	238	*e*P	Pn	22 32 29.5	+0.5
	baz=237						
EHY				*e*S	Sn	22 32 46.1	-1.1
	baz=237						
JISG	Ishigakijimahi	1.52	79	P	Pn	22 32 29.7	+0.1
JISG				S	Sn	22 32 47.3	-1.0
LIOB	Emei	1.55	283	*e*P	Pn	22 32 31.3	+1.2
	baz=283						
LIOB				*e*S	Sn	22 32 49.6	+0.4
	baz=283						
YULB	Yu-li	1.55	235	*e*P	Pn	22 32 30.1	-0.1
	baz=234						
YULB				*e*S	Sn	22 32 48.5	-0.8
	baz=234						
NSTT	Nanjuang	1.56	282	*e*P	Pn	22 32 31.0	+0.8
	baz=283						
NSTT				*e*S	Sn	22 32 49.5	+0.1
	baz=283						
EYUL	Yuli	1.56	233	*e*P	Pn	22 32 30.1	-0.3
	baz=232						
EYUL				*e*S	Sn	22 32 49.8	+0.3
	baz=232						
WHP	Taichung City	1.58	269	*e*P	Pn	22 32 31.2	+0.7
	baz=270						
WHP				*e*S	Sn	22 32 50.0	0.0
	baz=270						
WCS	Beigang Elemen	1.63	262	*e*P	Pn	22 32 31.7	+0.5
	baz=262						
WCS				*e*S	Sn	22 32 51.0	0.0
	baz=262						
SSLB	Suanglung	1.66	252	*e*P	Pn	22 32 32.0	+0.4
	baz=252						
SSLB				*e*S	Sn	22 32 51.3	-0.5
	baz=252						
SMLT	Sun Moon Lake	1.68	256	*e*P	Pn	22 32 32.7	+0.7
	baz=256						
SMLT				*e*S	Sn	22 32 52.1	-0.3
	baz=256						
FULB	Fuli	1.68	229	*e*P	Pn	22 32 31.6	-0.3
	baz=229						
FULB				*e*S	Sn	22 32 51.5	-0.7
	baz=229						
CHKT	Chengkung	1.70	225	*e*P	Pn	22 32 32.0	-0.1
	baz=224						
CHKT				*e*S	Sn	22 32 51.8	-0.9
	baz=224						
TYC	Yuchr	1.71	257	*e*P	Pn	22 32 33.2	+0.9
	baz=257						
TYC				*e*S	Sn	22 32 52.8	-0.1
	baz=257						
EDH	Donghe	1.83	224	*e*P	Pn	22 32 33.9	0.0
	baz=223						
EDH				*e*S	Sn	22 32 55.2	-0.7
	baz=223						
TCU	Taichung	1.83	266	*e*P	Pn	22 32 33.6	-0.4
	baz=265						

TCU				eS	Sn	22 32 55.8	-0.2
	baz=265						
WJS	Zhushan	1.84	255	eP	Pn	22 32 34.9	+0.8
	baz=255						
WJS				eS	Sn	22 32 56.7	+0.4
	baz=255						
JTJ	Tarama	1.88	79	P	Pn	22 32 34.9	+0.4
JTJ				S	Sn	22 32 56.9	-0.2
ELDTW	Lidau	1.88	234	eP	Pn	22 32 34.9	+0.1
	baz=233						
ELDTW				eS	Sn	22 32 56.6	-0.8
	baz=233						
ALS	Alishan	1.89	246	eP	Pn	22 32 35.6	+0.7
	baz=245						
ALS				eS	Sn	22 32 57.2	-0.6
	baz=245						
CHN5	Tsauling	1.96	249	eP	Pn	22 32 36.7	+1.0
	baz=249						
CHN5				eS	Sn	22 32 59.3	+0.1
	baz=249						
LDUT	Ludao	1.96	215	eP	Pn	22 32 36.0	+0.2
	baz=214						
LDUT				eS	Sn	22 32 58.4	-0.8
	baz=214						
LONT	Longtian	1.99	226	eP	Pn	22 32 36.0	-0.1
	baz=225						
LONT				eS	Sn	22 32 59.0	-0.8
	baz=225						
WDLH	Douliu	2.05	253	eP	Pn	22 32 37.7	+0.8
	baz=253						
WDLH				eS	Sn	22 33 01.6	+0.3
	baz=253						
STYH	Taoyuan	2.07	237	eP	Pn	22 32 38.2	+1.0
	baz=237						
STYH				eS	Sn	22 33 02.2	+0.2
	baz=237						
TWGBT	Beinan	2.08	225	eP	Pn	22 32 37.4	0.0
	baz=224						
TWGBT				eS	Sn	22 33 01.2	-0.9
	baz=224						
TWG	Pinlang	2.08	225	eP	Pn	22 32 38.2	+0.8
	baz=224						
TWG				eS	Sn	22 33 01.7	-0.5
	baz=224						
TPUB	Ta-pu	2.12	242	eP	Pn	22 32 38.8	+0.9
	baz=242						
TPUB				eS	Sn	22 33 03.5	+0.3
	baz=242						
WRL	Guolierlin Hig	2.14	260	eP	Pn	22 32 38.8	+0.7
	baz=259						
WRL				eS	Sn	22 33 03.2	-0.2
	baz=259						
WTP	Ta-pu	2.16	241	eP	Pn	22 32 39.5	+1.0
	baz=240						
WTP				eS	Sn	22 33 04.3	+0.1
	baz=240						
WTK	Tuku	2.18	254	eS	Sn	22 33 04.4	-0.1
	baz=254						
CHY	Chiayi	2.21	249	eS	Sn	22 33 05.1	-0.2
	baz=249						
TWK	Hsinying	2.25	243	eP	Pn	22 32 40.4	+0.7
	baz=242						
TWK				eS	Sn	22 33 06.2	-0.2
	baz=242						
CHN1	Nanshi	2.26	241	eP	Pn	22 32 40.8	+0.9
	baz=240						
CHN1				eS	Sn	22 33 06.8	+0.2
	baz=240						
SNST	Tainan City	2.27	242	eP	Pn	22 32 39.6	-0.3
	baz=241						
SNST				eS	Sn	22 33 07.1	+0.4
	baz=241						
SGST	Jiashian	2.27	238	eP	Pn	22 32 39.7	-0.2
	baz=237						
SLGT	Liugui	2.27	235	eP	Pn	22 32 40.8	+0.9
	baz=235						
SLGT				eS	Sn	22 33 06.8	0.0
	baz=235						
ECL	Taimali	2.32	223	eP	Pn	22 32 40.6	0.0
	baz=222						
ECL				eS	Sn	22 33 06.6	-1.4
	baz=222						
WSF	Szhu	2.34	254	eS	Sn	22 33 08.0	-0.4
	baz=253						
ICHU	Yijhu	2.39	247	eP	Pn	22 32 42.1	+0.6
	baz=247						
SSD	Sandimen	2.43	231	eP	Pn	22 32 43.2	+1.0
	baz=230						
SSD				eS	Sn	22 33 10.8	+0.1
	baz=230						
TSMG	Majia	2.45	230	eS	Sn	22 33 10.9	-0.2
	baz=229						
LAY	Lan-yu	2.48	205	eP	Pn	22 32 43.8	+1.0
	baz=204						
LAY				eS	Sn	22 33 11.3	-0.6
	baz=204						
MASBT	Mashibuluo	2.52	228	eP	Pn	22 32 44.2	+0.9
	baz=228						
MASBT				eS	Sn	22 33 11.9	-0.9
	baz=228						
EAST	Anshuo	2.54	222	eP	Pn	22 32 44.7	+1.0
	baz=221						
EAST				eS	Sn	22 33 12.2	-1.3
	baz=221						
SCZT	Fangliau	2.69	225	eP	Pn	22 32 46.7	+0.9
	baz=224						
SCZT				eS	Sn	22 33 17.1	-0.1
	baz=224						
SLIU	Shizi	2.70	220	eP	Pn	22 32 46.8	+1.0
	baz=219						
SLIU				eS	Sn	22 33 15.9	-1.5
	baz=219						
HEN	Hengchun	2.90	218	eS	Sn	22 33 21.7	-0.5
	baz=217						
PHUB	P'eng-hu	2.95	255	eS	Sn	22 33 22.3	-1.0
	baz=254						
PNG	Penghu	2.95	256	eS	Sn	22 33 22.0	-1.3
	baz=255						
PTMZ	Houxiangcun	3.32	283	eP	Pn	22 32 55.2	+1.0
	baz=283						
PTMZ				eS	Sn	22 33 30.5	-1.9
	baz=283						

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*IDC **08** 22:34:00.9±1.2, 0°.76N×127°.11E, h0^{km}, mb3.6/5, mb1 3.7/6, mb1mx3.5/46, mbtmp3.6/6, ML3.1/1, Error ellipse: s-maj=60.1km s-min=20.1km az=63.0*

*DJA **08** 22:34:04.5±0.4, 1°N±3°×12°7E±°, h10^{km}, M3.3/6, MLv3.3/6*

ISC 08 22:34:05.8±1.0, **1°.0N**±0°.1×**127°.35E**±0°.09, **h35^{km}, n9,** σ1^{s}**81**/10, **mb3.6**/5, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.18	174	P	Pn	22 34 09.4	-3.0
LBMI	Labuha	1.59	174	P	Pn	22 34 33.2	+1.8
SANI	Sanana	3.28	205	P	Pn	22 34 55.9	+1.2
SIJI	Sorong	4.32	115	Pn	Pn	22 35 10.0	+1.0
	0.9nm,0.3s,baz=328,slow=6.9,SNR=4.5						
SIJI				Sn	Sn	22 35 58.3	+0.2
	0.7nm,0.3s,baz=264,slow=22,SNR=1.4						
WRA	Warramunga Arr	21.87	162	P	P	22 38 55.0	-0.7
	1.2nm,0.6s,baz=340,slow=11,SNR=7.6						
ASAR	Alice Springs	25.29	166	P	P	22 39 26.7	-2.4
	0.4nm,0.7s,baz=345,slow=11,SNR=2.0						
STKA	Stephens Creek	35.33	159	P	P	22 40 57.6	-0.2
	1.3nm,0.6s,baz=311,slow=11,SNR=4.1						
SONM	Songino Array	50.11	342	P	P	22 42 57.7	+0.1
	0.5nm,0.8s,baz=159,slow=8.6,SNR=3.2						
MKAR	Makanchi Array	60.18	326	P	P	22 44 11.5	+1.3
	0.4nm,0.5s,baz=121,slow=7.6,SNR=7.2						

KRSC 08 22:35:38.5±1.4, **48°.54N×155°.84E, h61^{km}**±26^{km}, **ML3.7, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.15	5	eP	Pn	22 36 13.8	+1.9
KDTR	Khodutka, Kamc	3.57	23	eP	Pn	22 36 34.8	+3.5
KDTR				eS	Sn	22 37 17.4	+5.2
RUS	Russkaya	4.25	23	eP	Pn	22 36 43.2	+2.6
RUS				eS	Sn	22 37 32.1	+3.2
AVH	Avacha	5.07	20	P	Pn	22 36 56.1	+4.2
SDLR	Sedlovina	5.12	21	eP	Pn	22 36 56.2	+3.6

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*IDC **08** 22:37:19.2±0.9, 7°.01N×94°.47E, h0^{km}, mb4.0/14, mb1 4.0/16, mb1mx3.8/58, mbtmp3.9/16, ML3.9/2, MS3.2/2, Ms1 3.2/2, ms1mx2.6/49, Error ellipse: s-maj=36.2km s-min=17.3km az=55.0*

*NEIC **08** 22:37:21.6±1.4, 7°.0N±0°.2×94°.6E±0°.2, h10^{km}±2^{km}, mb4.4/12, Error ellipse: s-maj=40.7km s-min=14.2km az=222.0*

ISC 08 22:37:23.0±0.6, **6°.93N**±0°.09×**94°.41E**±0°.08, **h26^{km}, n39,** σ1^{s}**62**/39, **mb4.2**/22, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	3.03	124	Pn	Pn	22 38 07.5	-1.9
LHMI				Sn	Sn	22 38 45.6	+0.8
PSI	Prapat	6.08	132	Pn	Pn	22 38 51.1	-0.4
	0.6nm,0.3s,baz=307,slow=9.5,SNR=5.8						
PSI				Sn	Sn	22 40 02.0	+1.7
	0.6nm,0.3s,baz=158,slow=23,SNR=1.3						
CMAR	Chiang Mai Arr	12.28	21	Pn	Pn	22 40 14.9	-1.4
	0.6nm,0.3s,baz=214,slow=14,SNR=7.6						
PALK	Pallekele	13.61	272	Sn	Sn	22 43 03.0	-2.1
	0.2nm,0.3s,baz=247,slow=20,SNR=1.0						
PALK				LR	LR	22 45 16.9	
	comp=Z,64nm,20.8s,baz=206,slow=35						
LEM	Lembang	18.98	136	LR	LR	22 50 12.3	
	comp=Z,136nm,19.6s,baz=270,slow=41						
TAPN	Taplejung	21.29	343	eP	P	22 42 11.7	+3.7
	17nm,0.8s						
JIRN	Jiri	22.05	340	eP	P	22 42 17.9	+1.6
	6.0nm,0.7s						
PKI	Pulchoki	22.24	338	eP	P	22 42 23.2	+4.9
PKIN	Phulchoki	22.25	338	eP	P	22 42 23.3	+5.0
	21nm,0.6s						
H08S3	Diego Garcia H	26.22	237	T	T	23 09 39.1	
	baz=56,slow=74						
H08S2	Diego Garcia H	26.22	237	T	T	23 09 32.2	
	baz=56,slow=74						
H08S1	Diego Carcia H	26.23	237	T	T	23 09 57.2	
	baz=56						
CHGR	Chuyangaron	38.96	328	P	P	22 44 46.5	-0.7
CHGR				IAmb	IAmb	22 45 00.8	
	comp=Z,7.5nm,0.8s						
AAK	Ala-Archa	39.68	337	P	P	22 44 54.0	+0.8
	comp=Z,1.0nm,0.7s,baz=135,slow=2.9,SNR=3.6						
AAK	Ala-Archa	39.68	337	P	P	22 44 53.5	+0.3
MK31	Makanchi Array	41.07	347	P	P	22 45 03.8	-0.6
MKAR	Makanchi Array	41.07	347	P	P	22 45 04.0	-0.4
	comp=Z,2.1nm,0.7s,baz=167,slow=8.0,SNR=16						
MKAR				PcP	PcP	22 47 04.3	+0.3
	comp=Z,0.4nm,0.8s,baz=180,slow=2.9,SNR=2.5						
MKAR	Makanchi Array	41.07	347	P	P	22 45 03.9	-0.5
SONM	Songino Array	42.02	12	P	P	22 45 11.0	-1.4
	comp=Z,1.1nm,0.8s,baz=189,slow=9.3,SNR=7.6						
SONM				PcP	PcP	22 47 07.6	+0.4
	comp=Z,0.3nm,0.7s,baz=204,slow=3.2,SNR=1.6						
KURK	Kurchatov	45.59	346	P	P	22 45 40.8	0.0
KURK				IAmb	IAmb	22 45 47.4	
	comp=Z,3.8nm,0.8s						
WRA	Warramunga Arr	47.50	125	P	P	22 45 56.0	-0.3
	comp=Z,0.9nm,0.7s,baz=304,slow=9.1,SNR=4.4						
WRAB	Tennant Creek	47.50	125	P	P	22 45 54.9	-1.4
WB2	Warramunga Arr	47.51	125	P	P	22 45 55.1	-1.3
WB2				IAmb	IAmb	22 46 00.3	
	comp=Z,4.2nm,1.0s						
ZALV	Zalesovo Beam	47.52	352	P	P	22 45 55.3	-0.7
	comp=Z,1.6nm,0.6s,baz=184,slow=7.9,SNR=10						
ZALV	Zalesovo Beam	47.52	352	P	P	22 45 56.0	0.0
WR0	Warramunga Arr	47.67	125	P	P	22 45 56.9	-0.7
WR0				IAmb	IAmb	22 45 59.7	
	comp=Z,7.1nm,1.4s						
MAJO	Matsushiro	49.60	47	P	P	22 46 12.0	-0.2
ABKAR	Akbulak array	51.19	332	P	P	22 46 24.1	0.0
ABKAR	Akbulak array	51.19	332	P	P	22 46 24.4	+0.4
ABKAR				IAmb	IAmb	22 46 31.0	
	comp=Z,6.5nm,1.2s						
AKTO	Aktyubinsk	52.90	332	P	P	22 46 36.5	-0.3
	comp=Z,2.0nm,0.6s,baz=127,slow=5.1,SNR=3.1						
ARU	Arti	56.86	337	P	P	22 47 05.2	-0.2
	comp=Z,0.5nm,0.4s,baz=114,slow=12,SNR=4.0						
BELG	Belogornoye	59.25	329	P	P	22 47 22.8	+0.7
	comp=Z,4.3nm,0.8s,baz=297,slow=2.3,SNR=3.1						
STKA	Stephens Creek	59.26	133	P	P	22 47 23.4	+0.8
	comp=Z,1.4nm,0.7s,baz=269,slow=4.4,SNR=4.6						
STKA	Stephens Creek	59.26	133	P	P	22 47 23.9	+1.3
BRTR	Keskin Array B	63.25	311	P	P	22 47 48.5	-1.2
	comp=Z,0.5nm,0.6s,baz=116,slow=8.3,SNR=3.0						
FINES	FINESS Array B	73.67	332	P	P	22 48 53.4	-0.8
	comp=Z,2.7nm,0.8s,baz=89,slow=5.8,SNR=5.2						
GERES	GERESS Array B	78.71	318	P	P	22 49 23.5	+0.2
	comp=Z,0.3nm,0.7s,baz=86,slow=6.8,SNR=4.3						
TORD	Torodi Ar. Bea	91.08	283	P	P	22 50 27.1	+1.1
	comp=Z,0.6nm,1.0s,baz=76,slow=3.6,SNR=2.8						
ESDC	Sonseca Array	92.03	310	P	P	22 50 30.6	+0.5
	comp=Z,0.4nm,0.7s,baz=60,slow=4.3,SNR=7.9						

IDC 08 22:42:00.4±20.0, **7°.43S×146°.04E, h380^{km}**±217^{km}, **mb3.0**/2, **mb1 3.2**/4, **mb1mx2.8**/46, **mbtmp3.8**/4, **Error ellipse: s-maj=106.7km s-min=80.0km az=46.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.83	221	P	P	22 45 33.2	-0.3
	0.7nm,0.3s,baz=48,slow=11,SNR=29						
ASAR	Alice Springs	19.90	214	P	P	22 46 05.9	+0.5
	0.4nm,0.3s,baz=53,slow=8.3,SNR=11						
FITZ	Fitzroy Crossi	22.51	240	P	P	22 46 28.6	-0.6
	3.4nm,0.5s,baz=58,slow=12,SNR=13						
MKAR	Makanchi Array	77.99	321	P	P	22 53 18.0	+0.2
	0.1nm,0.3s,baz=127,slow=6.9,SNR=1.5						

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*IDC **08** 22:48:01.9±4.3, 36°.19N×71°.12E, h170^{km}±43^{km}, mb3.3/7, mb1 3.3/11, mb1mx3.0/59, mbtmp3.8/11, Error ellipse: s-maj=54.0km s-min=27.0km az=133.0*

*NNC **08** 22:48:08.6±10.0, 36°.68N×70°.77E, h136^{km}±164^{km}, mb3.2, mpv3.7, Error ellipse: s-maj=81.9km s-min=59.3km az=20.0*

ISC 08 22:48:05.5±0.8, **36°.49N**±0°.07×**71°.04E**±0°.08, **h188^{km}, n24,** σ1^{s}**20**/30, **mb3.6**/6, **5C-5D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.62	357	⇓P	Pn	22 49 43.6	+3.0
	4.3nm,0.3s,baz=184,slow=14,SNR=57						
KK31				⇓S	Sn	22 50 55.1	-0.7
	4.6nm,0.3s,baz=186,slow=26,SNR=10						
AAK	Ala-Archa	6.69	22	P	Pn	22 49 42.4	+0.7
	2.6nm,0.3s,baz=181,slow=6.0,SNR=30						
AAK				S	Sn	22 50 55.4	-2.3
	0.9nm,0.3s,baz=207,slow=13,SNR=4.9						
AAK	Ala-Archa	6.69	22	⇓P	Pn	22 49 44.0	+2.3
	2.3nm,0.3s						
AAK				⇑S	Sn	22 50 56.4	-1.3
	9.7nm,0.7s						
TKM2	Tokmak 2	7.32	27	⇓P	Pn	22 49 50.2	+0.2
	1.4nm,0.5s						
TKM2				⇓S	Sn	22 51 11.9	-0.8
	4.5nm,0.9s						
PYUN	Piuthan	13.11	126	eP	Pn	22 51 05.1	+0.1
	15nm,0.3s						
MKAR	Makanchi Array	13.28	36	P	Pn	22 51 05.8	-1.0
	0.1nm,0.3s,baz=203,slow=10,SNR=11						
KOLN	Koldanda	13.73	126	eP	Pn	22 51 13.7	+0.9
	6.8nm,0.4s						
GKN	Gorkha	14.27	123	eP	Pn	22 51 19.5	+0.1
	14nm,0.3s						
KKN	Kakani	14.84	122	eP	Pn	22 51 27.1	+0.5
PKIN	Phulchoki	15.06	122	eP	Pn	22 51 29.9	+0.6
	14nm,0.4s						
AB31	Akbulak array	15.11	331	⇑P	P	22 51 31.8	+1.6
	2.0nm,0.6s,baz=140,slow=11,SNR=25						
AB31				⇑S	S	22 54 18.4	+0.3
	0.4nm,0.5s						
KURBB	Kurchatov Arra	15.12	19	P	Pn	22 51 28.1	-1.4
	0.0nm,0.3s,baz=207,slow=9.6,SNR=2.9						
JIRN	Jiri	15.55	120	eP	Pn	22 51 35.8	+0.4
	23nm,0.3s						
RAMN	Ramite	16.28	121	eP	P	22 51 44.0	+0.4
	10nm,0.3s						
AKTO	Aktyubinsk	16.80	330	P	Pn	22 51 50.0	+0.1
	1.1nm,0.3s,baz=140,slow=7.9,SNR=14						
AKTO	Aktyubinsk	16.80	330	⇑P	Pn	22 51 51.3	+1.5
	3.7nm,0.7s						
AKTO				⇑S	Sn	22 54 57.7	-0.9
	2.0nm,0.9s						
ODAN	Odare	16.89	120	eP	Pn	22 51 51.3	0.0
	5.9nm,0.4s						
ZALV	Zalesovo Beam	19.91	24	P	P	22 52 22.4	-0.1
	0.5nm,0.4s,baz=215,slow=10,SNR=2.4						
MMAI	Mount Meron Ar	29.38	274	P	P	22 53 49.0	-2.2
	0.9nm,0.7s,baz=301,slow=14,SNR=12						
AKASG	Malin Array Be	32.98	309	P	P	22 54 22.7	+0.4
	0.4nm,0.5s,baz=83,slow=8.4,SNR=1.7						
FINES	FINESS Array B	37.51	326	P	P	22 55 01.3	+0.5
	1.7nm,0.9s,baz=163,slow=7.0,SNR=4.4						
ARCES	ARCESS Array B	41.16	338	P	P	22 55 31.2	+0.2
	2.7nm,1.0s,baz=116,slow=8.0,SNR=12						
NOA	NORSAR Array B	44.41	323	P	P	22 55 57.3	+0.1
	0.5nm,0.9s,baz=103,slow=8.1,SNR=3.8						
TORD	Torodi Ar. Bea	65.75	269	P	P	22 58 29.7	-0.8
	0.6nm,0.5s,baz=49,slow=5.9,SNR=8.9						

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*IDC **08** 22:54:00.7±0.6, 7°.98S×117°.42E, h0^{km}, mb4.3/15, mb1 4.4/19, mb1mx4.2/41, mbtmp4.3/19, ML4.4/3, MS3.4/5, Ms1 3.4/5, ms1mx3.0/28, Error ellipse: s-maj=20.8km s-min=12.6km az=54.0*

*NEIC **08** 22:54:04.3±1.6, 7°.83S±0°.09×117°.48E±0°.06, h16^{km}±4^{km}, mb4.7/25, Error ellipse: s-maj=12.6km s-min=9.1km az=174.0*

*DJA **08** 22:54:06.8±0.5, 8°S±3°×11°7E±°, h31^{km}±6^{km}, M4.7/18, mb4.9/13, mB5.3/6, MLv4.6/18, Mw(mB)4.8/6*

ISC 08 22:54:06.0±0.4, **7°.97S**±0°.04×**117°.49E**±0°.04, **h35^{km}, n106,** σ1^{s}**80**/99, **mb4.7**/38, **MS3.2**/3, **Bali Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	0.90	161	P	Pn	22 54 23.6	+1.5
TWSI	Taliwang, Sumb	0.97	218	P	Pn	22 54 24.1	+1.0
SRBI	Singaraja	2.25	267	P	Pn	22 54 40.6	-0.2
IGBI	Denpasar	2.46	250	P	Pn	22 55 00.4	+17
WBSI	Waikabubak, Su	2.51	132	P	Pn	22 54 46.2	+1.8
ABJI	Asem Bagus	3.23	273	P	Pn	22 54 53.9	-0.3
WSI	Waingapu	3.25	121	P	Pn	22 55 09.1	+15
JAGI	Jajag, Banyuwa	3.34	261	P	Pn	22 54 54.7	-1.0
JAGI	Jajag, Banyuwa	3.34	261	Pn	Pn	22 54 56.2	+0.5
JAGI				Sn	Sn	22 55 33.9	-0.3
BSSI	Bau Bau, Buton	3.49	59	P	Pn	22 54 57.1	-0.7
KMMI	Kalianget	3.61	284	P	Pn	22 55 01.9	+2.5
KAPI	Kappang	3.70	38	Pn	Pn	22 54 59.2	-1.5
	73nm,0.3s,baz=228,slow=4.1,SNR=93						
KAPI				Sn	Sn	22 55 39.8	-3.4
	138nm,0.3s,baz=260,slow=3.3,SNR=13						
KAPI				Lg	Lg	22 55 52.7	
	84nm,0.3s,baz=268,slow=20,SNR=6.4						
KAPI				LR	LR	22 56 35.9	
	comp=Z,513nm,18.8s,baz=188,slow=41						
BKSI	Bulukumba	3.71	45	P	Pn	22 54 59.1	-1.8
BLJI	Banyuglugur	3.86	273	P	Pn	22 55 05.7	+2.8
GMJI	Gumukmas	4.01	265	P	Pn	22 55 21.5	+17
EDFI	Ende, Flores	4.23	101	P	Pn	22 55 08.8	+0.7
MMRI	Maumere	4.75	98	P	Pn	22 55 16.8	+1.7
MMRI	Maumere	4.75	98	Pn	Pn	22 55 15.3	+0.2
MMRI	Maumere	4.75	98	P	Pn	22 55 15.5	+0.4
KBKI	Kotabaru	4.82	344	P	Pn	22 55 17.5	+1.3
BBKI	Banjar Baru	5.20	329	P	Pn	22 55 23.6	+2.3
	1.0nm6μm207nm,0.9s						
TTSI	Tana Toraja	5.42	26	P	Pn	22 55 25.5	+1.2
	0.9nm2μm63nm,0.8s						
PWJI	Pagerwojo	5.63	269	P	Pn	22 55 28.3	+1.1
	25nm,0.6s						
BATI	Baumata	6.49	110	Pn	Pn	22 55 38.5	-0.6
	8.5nm,0.3s,baz=334,slow=4.0,SNR=5.3						
BATI				Sn	Sn	22 56 54.4	+2.4
	3.5nm,0.3s,baz=215,slow=17,SNR=1.4						
SOEI	Soe	6.93	105	P	Pn	22 55 57.7	+12
MTKI	Muara Teweh, K	7.45	340	P	Pn	22 55 58.6	+6.4
LUWI	Luwuk	8.67	38	P	Pn	22 56 25.6	+17
LUWI	Luwuk	8.67	38	P	Pn	22 56 24.6	+16
LEM	Lembang	9.85	276	Pn	Pn	22 56 30.5	+5.1
	1.3nm,0.3s,baz=49,slow=9.2,SNR=4.2						
LEM				LR	LR	23 00 57.6	
	comp=Z,197nm,18.7s,baz=152,slow=43						
STKI	Sintang	9.98	323	P	Pn	22 56 32.7	+5.7
SANI	Sanana	10.31	56	P	Pn	22 56 33.3	+1.8
	12nm,1.1s						
BNDI	Bandanaira	12.81	75	P	P	22 57 19.1	+2.9
FITZ	Fitzroy Crossi	12.82	143	Pn	Pn	22 57 04.1	-1.7
	0.8nm,0.3s,baz=240,slow=0.1,SNR=23						
FITZ				Sn	Sn	22 59 21.7	-5.6
	baz=174,slow=18						
FITZ	Fitzroy Crossi	12.82	143	P	Pn	22 57 03.5	-2.3
	8.1nm,0.8s						
MBWA	Marble Bar	13.29	171	P	Pn	22 57 15.7	+3.5
KNRA	Kununurra	13.43	126	Pn	Pn	22 57 13.3	-0.8
MTN	Manton Dam	14.27	111	Pn	Pn	22 57 23.1	-2.6
SWI	Sorong	15.44	63	P	P	22 57 48.6	+3.2
SIJI	Sorong	15.44	63	Pn	Pn	22 57 40.4	-0.9
	baz=229,slow=19,SNR=1.0						
FAKI	Fak Fak	15.53	72	P	P	22 57 45.1	-1.3
	520nm42nm,0.7s						
FAKI	Fak Fak	15.53	72	P	Pn	22 57 40.6	-1.8
FAKI				IAmb	IAmb	22 57 46.4	
	comp=Z,32nm,0.8s						
MEEK	Meekatharra	18.60	177	P	Pn	22 58 28.5	+7.7
	comp=Z,15nm,1.3s						
BAKI	Biak	19.74	71	P	Pn	22 58 38.3	+3.7
WRA	Warramunga Arr	20.20	128	P	P	22 58 38.4	+0.5
	comp=Z,3.5nm,0.7s,baz=302,slow=12,SNR=22						
WRA				S	S	23 02 14.3	-8.7
	comp=Z,0.9nm,0.8s,baz=297,slow=22,SNR=3.6						
WRA				LR	LR	23 06 45.5	
	comp=Z,74nm,19.4s,baz=175,slow=38						
WRAB	Tennant Creek	20.20	128	P	Pn	22 58 40.0	-0.1
WB2	Warramunga Arr	20.21	128	P	Pn	22 58 39.3	-0.9
WR0	Warramunga Arr	20.37	128	P	Pn	22 58 40.8	-1.2
WR0				IAmb	IAmb	22 58 53.6	
	comp=Z,28nm,0.9s						
RPSI	Rantau Prapat	21.33	299	P	P	22 58 50.0	-0.2
PSI	Prapat	21.39	299	P	P	22 58 50.0	-0.9
	comp=Z,6.0nm,0.8s,baz=186,slow=19,SNR=3.1						
AS31	Alice Springs	22.16	137	P	P	22 59 00.9	+1.8
ASAR	Alice Springs	22.16	137	P	P	22 58 59.9	+0.8
	comp=Z,4.9nm,0.6s,baz=314,slow=8.9,SNR=35						
ASAR				S	S	23 03 01.3	-0.2
	comp=Z,1.4nm,0.8s,baz=310,slow=23,SNR=4.8						
ASAR	Alice Springs	22.16	137	P	P	22 59 01.6	+2.5
FORT	Forrest	24.75	158	P	P	22 59 26.9	+2.5
QIS	Mount Isa	24.78	123	P	P	22 59 27.5	+2.7
	comp=Z,31nm,0.9s						
COEN	Coen	25.90	106	P	P	22 59 35.9	+0.9
COEN				IAmb	IAmb	22 59 37.8	
	comp=Z,14nm,0.8s						
MULG	Mulgathing	27.09	147	P	P	22 59 50.3	+4.8
	comp=Z,8.6nm,1.1s						
CMAR	Chiang Mai Arr	32.01	325	P	P	23 00 30.0	+0.8
	comp=Z,1.3nm,0.7s,baz=154,slow=6.6,SNR=7.2						
CMAR				LR	LR	23 13 42.6	
	comp=Z,46nm,18.6s,baz=200,slow=37						
STKA	Stephens Creek	32.70	140	P	P	23 00 35.2	0.0
	comp=Z,3.1nm,0.7s,baz=302,slow=7.4,SNR=9.9						
STKA				LR	LR	23 16 56.3	
	comp=Z,81nm,19.4s,baz=208,slow=42						
STKA	Stephens Creek	32.70	140	P	P	23 00 37.5	+2.3
SHL	Shillong	41.62	324	P	P	23 01 50.6	-0.5
SHL				IAmb	IAmb	23 01 52.9	
	comp=Z,16nm,0.9s						
LSA	Lhasa	45.22	327	P	P	23 02 20.2	-0.3
LSA				IAmb	IAmb	23 02 24.7	
	comp=Z,8.2nm,0.9s						
ODAN	Odare	45.28	321	eP	P	23 02 22.0	+1.2
	comp=Z,38nm,0.7s						
TAPN	Taplejung	45.44	322	eP	P	23 02 23.1	+1.0
	comp=Z,49nm,0.8s						
RAMN	Ramite	45.84	320	eP	P	23 02 26.8	+1.6
	comp=Z,19nm,0.5s						
KSRS	Korea Array	46.23	12	P	P	23 02 27.7	-0.1
	comp=Z,1.8nm,0.8s,baz=183,slow=7.7,SNR=2.9						
JIRN	Jiri	46.60	321	eP	P	23 02 31.4	+0.1
	comp=Z,43nm,0.7s						
GUN	Gumba	46.97	321	eP	P	23 02 34.7	+0.5
	comp=Z,41nm,0.6s						
PKIN	Phulchoki	47.05	320	eP	P	23 02 34.8	+0.1
	comp=Z,12nm,0.5s						
KKN	Kakani	47.27	320	eP	P	23 02 36.7	+0.4
	comp=Z,15nm,0.8s						
GKN	Gorkha	47.82	320	eP	P	23 02 40.8	+0.2
KOLN	Koldanda	48.34	319	eP	P	23 02 44.6	0.0
	comp=Z,27nm,0.9s						

PYUN	Piuthan	48.96	318	eP	P	23 02 48.4	-1.0
	comp=Z,38nm,0.8s						
GTA	Gaotai	49.91	342	eP	P	23 02 57.3	+0.9
GTA				pP	pP	23 03 01.4	-5.1
GTA				sP	pwP	23 03 04.4	-2.1
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
USRK	Ussuriysk Ar.	53.56	13	P	P	23 03 23.6	+0.3
	comp=Z,4.5nm,0.7s,baz=199,slow=7.3,SNR=9.4						
USRK	Ussuriysk Ar.	53.56	13	P	P	23 03 23.1	-0.2
ULN	Ulaanbaatar	56.35	352	P	P	23 03 43.5	-0.3
ULN				IAmb	IAmb	23 03 45.1	
	comp=Z,7.7nm,1.1s						
SONM	Songino Array	56.42	351	P	P	23 03 44.2	+0.1
	comp=Z,4.0nm,0.8s,baz=168,slow=8.3,SNR=24						
SONM	Songino Array	56.42	351	P	P	23 03 43.7	-0.5
MSVF	Nonsavu	59.63	106	P	P	23 04 07.9	+0.7
	comp=Z,11nm,0.9s,baz=307,slow=20,SNR=4.5						
KSH	Kashi	60.90	324	P	P	23 04 15.6	+0.1
KSH				pP	pP	23 04 21.2	-4.5
KSH				pmax	pmax		
	comp=Z,15nm,1.1s						
KBL	Kabul	62.31	316	P	P	23 04 24.6	-0.6
KBL				IAmb	IAmb	23 04 25.2	
	comp=Z,5.3nm,0.6s						
MK31	Makanchi Array	62.87	334	P	P	23 04 28.9	+0.4
MK31				IAmb	IAmb	23 04 30.4	
	comp=Z,6.8nm,0.8s						
MKAR	Makanchi Array	62.87	334	P	P	23 04 28.6	+0.2
	comp=Z,11nm,0.9s,baz=148,slow=7.3,SNR=63						
MKAR	Makanchi Array	62.87	334	P	P	23 04 28.5	0.0
MAKZ	Makanchi	63.02	333	P	P	23 04 29.2	-0.2
AAK	Ala-Archa	63.79	326	P	P	23 04 34.0	-0.8
AAK				IAmb	IAmb	23 04 36.6	
	comp=Z,8.5nm,1.1s						
GAR	Garm	64.00	321	P	P	23 04 36.1	-0.2
BTK	Batken	64.32	322	P	P	23 04 38.0	-0.3
BTK				IAmb	IAmb	23 04 39.8	
	comp=Z,9.7nm,1.3s						
CHGR	Chuyangaron	64.54	320	P	P	23 04 39.3	-0.5
KKAR	Karatay Array	66.35	324	P	P	23 04 50.4	-0.9
KURK	Kurchatov	67.42	334	P	P	23 04 56.8	-1.1
KURK				IAmb	IAmb	23 04 59.4	
	comp=Z,6.6nm,0.8s						
ZAA0	Zalesovo Array	67.56	340	P	P	23 04 57.7	-1.0
ZAA0				IAmb	IAmb	23 04 59.5	
	comp=Z,4.6nm,0.7s						
ZALV	Zalesovo Beam	67.56	340	P	P	23 04 58.1	-0.6
	comp=Z,6.5nm,0.8s,baz=145,slow=4.0,SNR=19						
ZALV	Zalesovo Beam	67.56	340	P	P	23 04 57.9	-0.7
PETK	Petropavlovsk-	69.75	25	P	P	23 05 12.2	-0.2
	comp=Z,6.3nm,1.0s,baz=243,slow=6.3,SNR=2.6						
BRVK	Borovoye	72.76	332	P	P	23 05 31.0	+0.4
VNDA	Vanda	73.23	171	P	P	23 05 33.5	+0.4
	comp=Z,1.3nm,1.1s,baz=312,slow=7.5,SNR=6.1						
ABKAR	Akbulak array	75.87	325	P	P	23 05 47.8	-0.9
ABKAR	Akbulak array	75.87	325	P	P	23 05 49.0	+0.2
ABKAR				IAmb	IAmb	23 05 49.7	
	comp=Z,6.5nm,0.8s						
TIXI	Tiksi	79.81	4	P	P	23 06 09.9	-0.4
KMBO	Kilima Mbogo	80.17	270	P	P	23 06 13.0	-0.8
	comp=Z,2.6nm,0.9s,baz=48,slow=9.7,SNR=5.5						
KMBO	Kilima Mbogo	80.17	270	P	P	23 06 13.4	-0.4
BOSA	Boshof	88.18	242	P	P	23 06 54.4	+0.3
	comp=Z,2.6nm,1.0s,baz=44,slow=5.9,SNR=3.3						
TORD	Torodi Ar. Bea	116.80	281	PKP	PKPdf	23 12 46.2	-1.6
	comp=Z,0.2nm,0.7s,baz=110,slow=2.6,SNR=1.9						
CPUP	Villa Florida	145.53	188	PKPbc	PKPdf	23 13 40.6	-0.7
	comp=Z,2.5nm,0.6s,baz=133,slow=2.8,SNR=7.6						
CPUP	Villa Florida	145.53	188		PKPab	23 13 42.2	+0.6

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*NEIC **08** 23:06:25.9±0.9, 30°.4S±0°.1×179°.7W±0°.1, h339^{km}±10^{km}, mb4.0/10, Error ellipse: s-maj=22.0km s-min=12.2km az=153.0*

*IDC **08** 23:06:28.4±2.9, 30°.24S×179°.52W, h384^{km}±31^{km}, mb3.0/3, mb1 3.3/5, mb1mx3.1/21, mbtmp4.0/5, Error ellipse: s-maj=40.3km s-min=19.7km az=171.0*

ISC 08 23:06:25.2±0.6, **30°.36S**±0°.08×**179°.62W**±0°.09, **h350**^{km}, **n33**, σ**1s.47**/34, **mb3.8**/8, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.84	54	Pn	Pn	23 07 15.5	0.0
URZ	Urewera	8.33	198	P	P	23 08 28.8	+2.9
	0.7nm,0.3s,baz=301,slow=24,SNR=6.1						
URZ				S	S	23 09 57.5	-1.9
	1.5nm,0.3s,baz=301,slow=24,SNR=3.6						
BKZ	Black Stump Fm	9.35	199		P	23 08 36.7	-0.7
BFZ	Birch Farm	10.84	197		P	23 08 53.9	+0.1
QRZ	Quartz Range	12.24	209	P	Pn	23 09 09.8	+0.2
CMWZ	Cape Campbell	12.41	202	P	Pn	23 09 11.6	0.0
THZ	Tophouse	12.88	206	P	Pn	23 09 17.0	-0.3
KHZ	Kahutara	13.23	203	P	Pn	23 09 20.5	-0.7
LTZ	Lake Taylor	14.00	205	P	Pn	23 09 28.6	-1.7
OUENC	Ouen Island, N	14.47	300	P	Pn	23 09 35.3	-0.8
RAR	Rarotonga	20.03	68	P	P	23 10 32.7	-0.8
	2.7nm,0.3s,baz=270,slow=17,SNR=2.3						
RAR	Rarotonga	20.03	68	P	P	23 10 32.8	-0.8
CTA	Charters Tower	32.41	280	P	P	23 12 26.2	+2.4
	2.4nm,0.8s,baz=112,slow=5.4,SNR=1.8						
CTAO	Charters Tower	32.41	280	P	P	23 12 25.8	+2.0
CTAO				IAmb	IAmb	23 12 28.5	
	comp=Z,8.9nm,1.1s						
BBOO	Buckleboo	37.63	254	P	P	23 13 08.1	+0.2
BBOO				IAmb	IAmb	23 13 36.6	
	comp=Z,7.2nm,1.4s						
ASAR	Alice Springs	41.71	268	P	P	23 13 41.5	+0.1
	comp=Z,0.5nm,0.8s,baz=113,slow=8.3,SNR=4.8						
WR0	Warramunga Arr	42.52	273	P	P	23 13 46.1	-1.7
WB2	Warramunga Arr	42.69	273	P	P	23 13 49.5	+0.4
WB2				IAmb	IAmb	23 13 56.7	
	comp=Z,6.3nm,1.3s						
WRA	Warramunga Arr	42.70	273	P	P	23 13 49.8	+0.5
	comp=Z,1.1nm,0.7s,baz=112,slow=7.6,SNR=6.8						
WB0	Warramunga Arr	42.72	273	P	P	23 13 49.9	+0.5
PTCN	Pitcairn Islan	43.88	96	P	P	23 13 59.9	+1.4
MORW	Morawa	55.20	254	P	P	23 15 22.8	-0.2
MORW				IAmb	IAmb	23 15 41.3	
	comp=Z,20nm,1.4s						
SOEI	Soe	55.97	279	P	P	23 15 28.6	-0.2
SOEI				IAmb	IAmb	23 15 45.6	
	comp=Z,15nm,1.1s						
QSPA	South Pole Qui	59.75	180	P	P	23 15 55.9	+1.9
QSPA				IAmb	IAmb	23 15 56.6	
	comp=Z,6.5nm,1.4s						
KURBB	Kurchatov Arra	120.05	314	PKP	PKiKP	23 24 33.3	-1.0
	comp=Z,0.4nm,0.7s,baz=102,slow=2.5,SNR=5.0						
OBN	Obninsk	144.33	324	PKP	PKPdf	23 25 17.9	-1.4
	comp=Z,2.9nm,0.4s,baz=146,slow=3.6,SNR=3.6						
FINES	FINESS Array B	144.61	339	PKP	PKPdf	23 25 18.7	-1.0
	comp=Z,2.8nm,0.5s,baz=55,slow=4.5,SNR=27						
NOA	NORSAR Array B	148.48	350	PKPbc	PKiKP	23 25 29.7	-1.9
	comp=Z,1.6nm,0.9s,baz=17,slow=4.1,SNR=2.3						
HFS	Hagfors	148.91	347	PKPbc	PKiKP	23 25 30.2	-2.3
	comp=Z,1.2nm,0.7s,baz=91,slow=5.8,SNR=4.4						
AKASG	Malin Array Be	150.41	322	PKPbc	PKiKP	23 25 33.7	-2.1
	comp=Z,0.1nm,0.2s,baz=50,slow=4.1,SNR=4.3						
BRTR	Keskin Array B	151.35	298	PKPbc	PKiKP	23 25 37.5	-0.8
	comp=Z,0.3nm,0.5s,baz=133,slow=4.4,SNR=1.7						
CLL	Collm	157.06	339	ePKPab	PKPab	23 26 15.0	+3.6
TORD	Torodi Ar. Bea	162.83	184	PKPab	PKPab	23 26 37.3	-0.1
	comp=Z,0.5nm,1.1s,baz=179,slow=4.6,SNR=1.2						

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*IASPEI **08** 23:12:26.8±0.8, 40°.93N±0°.03×22°.39E±0°.02, h3^{km}±5^{km}, Error ellipse: s-maj=3.8km s-min=2.7km az=167.8, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*THE **08** 23:12:26.8, 40°.98N×22°.37E, h3^{km}, ML2.3/7, Error ellipse: s-maj=1.0km s-min=0.4km az=164.0*

*ISK **08** 23:12:26.4, 40°.95N×22°.40E, h5^{km}, ML2.8/8*

*SKO **08** 23:12:26.1, 40°.95N×22°.38E, h15^{km}*

*ATH **08** 23:12:27.1, 40°.95N×22°.40E, h7^{km}±2^{km}, ML2.3/9, Error ellipse: s-maj=2.7km s-min=0.7km az=241.0*

ISC 08 23:12:26.6±0.8, **40°.94N**±0°.02×**22°.39E**±0°.02, **h4**^{km}±4^{km}, **n57**, σ**0s.60**/82, **2C-4D**, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRG	Griva	0.02	24	P	Pg	23 12 27.7	+0.2
GRG				S	Sg	23 12 28.3	+0.1
GRG	Griva	0.02	24	PG	Pg	23 12 27.7	+0.2
GRG				SG	Sg	23 12 28.2	+0.1
GRG	Griva	0.02	24	⇓iPg	Pg	23 12 27.7	+0.2
GRG				i Sg	Sg	23 12 28.1	0.0
VAY	Valandovo	0.41	19	⇑iPg	Pg	23 12 34.7	+0.2
VAY				i Sg	Sg	23 12 40.5	+0.7
VAY				eLg	Lg	23 12 40.6	
	comp=E,200nm,0.4s						
VAY				eLg	Lg	23 12 41.8	
	comp=N,221nm,0.3s						
KNT	Kendrikon	0.44	60	P	Pg	23 12 35.6	+0.5
KNT				S	Sg	23 12 41.8	+0.8
	comp=N,412nm,0.2s						
KNT	Kendrikon	0.44	60	P	Pg	23 12 35.7	+0.5
KNT				S	Sg	23 12 41.0	0.0
KNT	Kendrikon	0.44	60	PG	Pg	23 12 35.9	+0.7
KNT				SG	Sg	23 12 41.9	+0.9
KNT	Kendrikon	0.44	60	⇓iPg	Pg	23 12 35.7	+0.5
KNT				i Sg	Sg	23 12 42.0	+0.9
THE	Thessaloniki	0.53	125	P	Pg	23 12 37.1	+0.2
THE	Thessaloniki	0.53	125	P	Pg	23 12 36.9	0.0
THE	Thessaloniki	0.53	125	i Pg	Pg	23 12 37.0	+0.2
THE				i Sg	Sg	23 12 44.7	+0.9
KTI	Kastanea	0.58	201	P	Pg	23 12 38.4	+0.5
HORT	Hortiatis	0.64	122	P	Pg	23 12 39.3	+0.4
HORT				S	Sb	23 12 49.3	-0.4
	comp=N,420nm,0.3s						
HORT	Hortiatis	0.64	122	PG	Pg	23 12 39.2	+0.4
SOH	Sokhos	0.74	99	P	Pg	23 12 41.0	+0.2
SOH	Sokhos	0.74	99	P	Pg	23 12 41.1	+0.2
SOH				S	Sg	23 12 51.0	+0.6
SOH				AML	AML	23 12 52.3	
	comp=N,1243µm,0.5s						
SOH				AML	AML	23 12 52.6	
	comp=E,1207µm,0.4s						
SOH	Sokhos	0.74	99	⇓iPg	Pg	23 12 41.1	+0.2
SOH				i Sg	Sb	23 12 51.8	-0.8
STIP	Stip	0.77	349	⇑iPg	Pg	23 12 41.6	+0.2
STIP				i Sg	Sb	23 12 53.5	0.0
FNA	Florina	0.79	259	P	Pg	23 12 41.6	-0.1
FNA				S	Sg	23 12 52.3	+0.4
	comp=E,322nm,0.5s						
FNA	Florina	0.79	259	P	Pg	23 12 41.8	+0.1
FNA				S	Sg	23 12 52.9	+1.1
FNA				AML	AML	23 13 00.8	
	comp=E,454µm,0.3s						
FNA				AML	AML	23 13 02.8	
	comp=N,835µm,0.8s						
FNA	Florina	0.79	259	PG	Pg	23 12 41.8	+0.1
FNA	Florina	0.79	259	i Pg	Pg	23 12 41.8	+0.1
KZN	Kozani	0.79	217	P	Pg	23 12 41.6	-0.1
KZN	Kozani	0.79	217	P	Pg	23 12 41.6	-0.1
KZN				S	Sg	23 12 53.1	+1.1
KZN				AML	AML	23 12 58.6	
	comp=E,353µm,0.4s						
KZN				AML	AML	23 12 60.0	
	comp=N,282µm,0.4s						
SRS	Serrai	0.93	79	P	Pg	23 12 44.0	-0.4
SRS				S	Sb	23 12 57.4	-0.6
	comp=N,118nm,0.5s						
SRS	Serrai	0.93	79	P	Pg	23 12 44.0	-0.4
SRS				S	Sg	23 12 56.9	+0.4
SRS				AML	AML	23 13 01.0	
	comp=E,137µm,0.4s						
SRS				AML	AML	23 13 02.4	
	comp=N,273µm,0.8s						
SRS	Serrai	0.93	79	⇓iPg	Pg	23 12 44.0	-0.4
SRS				i Sg	Sb	23 12 57.0	-1.0
PLG	Polygyros	0.98	125	P	Pg	23 12 45.6	+0.1
PLG				S	Sn	23 13 00.6	-1.0
	comp=N,235nm,0.3s						
PLG	Polygyros	0.98	125	P	Pg	23 12 45.6	+0.1
PLG				S	Sg	23 12 58.4	+0.2
PLG				AML	AML	23 13 03.3	
	comp=N,514µm,0.3s						
PLG				AML	AML	23 13 06.8	
	comp=E,416µm,0.3s						
NEST	Nestorio	1.15	243	P	Pg	23 12 48.7	+0.1
NEST	Nestorio	1.15	243	P	Pg	23 12 48.8	+0.1
NVR	Nevrokopi	1.19	69	P	Pg	23 12 48.9	-0.5
NVR				S	Sn	23 13 05.6	-1.1
	comp=E,88nm,0.5s						
NVR	Nevrokopi	1.19	69	P	Pg	23 12 48.8	-0.6
NVR				S	Sb	23 13 05.1	-0.3
NVR				AML	AML	23 13 07.1	
	comp=N,176µm,0.8s						
NVR				AML	AML	23 13 10.4	
	comp=E,170µm,0.3s						
OHR	Ohrid	1.22	279	i Pg	Pn	23 12 52.0	+1.5
OHR				i Sg	Sb	23 13 06.1	-0.3
KPRO	Kipourio	1.26	219	P	Pn	23 12 50.5	-0.6
KPRO	Kipourio	1.26	219	P	Pn	23 12 50.5	-0.6
OUR	Ouranopolis	1.35	116	P	Pb	23 12 52.5	0.0
OUR				S	Sg	23 13 11.7	+1.6
	comp=E,152nm,0.5s						
OUR	Ouranopolis	1.35	116	P	Pb	23 12 52.3	-0.2
OUR				AML	AML	23 13 15.3	
	comp=N,202µm,0.6s						
OUR				AML	AML	23 13 18.6	
	comp=E,315µm,0.6s						
OUR	Ouranopolis	1.35	116	PN	Pb	23 12 52.6	0.0
THL	Klokotos Trika	1.40	192	P	Pn	23 12 52.9	0.0
THL				AML	AML	23 13 19.2	
	comp=N,96µm,0.9s						
THL				AML	AML	23 13 20.1	
	comp=E,160µm,0.7s						
PAIG	Paliouri	1.41	135	P	Pn	23 12 53.0	0.0
PAIG	Paliouri	1.41	135	P	Pn	23 12 53.1	0.0
PAIG				AML	AML	23 13 14.4	
	comp=N,249µm,0.7s						
PAIG				AML	AML	23 13 17.3	
	comp=E,242µm,0.7s						
KAVA	Kavala	1.61	87	P	Pn	23 12 55.8	0.0
KAVA	Kavala	1.61	87	P	Pn	23 12 55.9	0.0
VTS	Vitosha	1.79	20	i Pn	Pb	23 12 60.0	-0.2
THAS	Thassos island	1.80	100	P	Pn	23 12 58.1	-0.3
AGG	Agios Georgios	1.92	181	PN	Pn	23 13 00.6	+0.5
BARS	Barje	1.93	347	i Pn	Pb	23 13 01.4	-1.0
PLD	Plovdiv	2.09	55	PN	Pn	23 13 03.1	+0.6
PLD	Plovdiv	2.09	55	i Pn	Pg	23 13 06.8	+0.1
RDO	Rodhopi	2.39	84	PN	Pn	23 13 07.2	+0.6
ALN	Alexandroupoli	2.77	90	PN	Pn	23 13 12.5	+0.7
GADA	Gvkgeada	2.77	104	PN	Pn	23 13 12.2	+0.3
ENEZ	Enez	2.86	93	PN	Pn	23 13 13.9	+0.9
ERIK	Erikli-Kesan	3.14	94	PN	Pn	23 13 18.2	+1.3
GELI	Tayfur-Gelibol	3.15	99	PN	Pn	23 13 18.2	+1.2
UKOP	Uzunkopru-Edir	3.21	85	PN	Pn	23 13 19.1	+1.2

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*ISK **08** 23:29:11.8, 42°.34N×41°.00E, h12^{km}, ML2.5/6*

*TIF **08** 23:29:11.6, 42°.38N×41°.05E, h20^{km}±1^{km}*

*NORS **08** 23:29:13.0±0.0, 42°.47N×41°.29E, h9^{km}, MPVA3.2*

*MOS **08** 23:29:13.3±0.0, 42°.47N×41°.15E, h4^{km}, MPVA3.3*

ISC 08 23:29:11.7±1.2, **42°.35N**±0°.03×**41°.06E**±0°.03, **h8**^{km}±11^{km}, **n27**, σ**0s.64**/50, **Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHVG	Ch'k'valeri	0.84	63	P	Pg	23 29 28.0	+0.1
CHVG				S	Sb	23 29 40.6	+0.5
BCA	Borcka	0.99	155	PG	Pn	23 29 31.9	-0.1
BCA				SG	Sn	23 29 46.2	0.0
HOPA	Hopa-Artvin	1.00	163	PG	Pb	23 29 30.9	-0.4
HOPA				SG	Sn	23 29 45.9	-0.4
CHOM	Cayeli-Rize	1.27	190	PN	Pn	23 29 35.6	-0.2
CHOM				SN	Sg	23 29 53.7	+1.2
VSLR	Vesyoloye	1.35	326	ePg	Pb	23 29 37.0	-0.2
VSLR				eSg	Sg	23 29 55.9	+0.8
ABS	Abastumani	1.43	114	P	Pb	23 29 38.8	0.0
ABS				S	Sg	23 29 58.5	+0.7
TKB	Tkibuli	1.43	89	P	Pn	23 29 38.2	+0.2
TKB				S	Sb	23 29 57.4	+0.3
RPOR	Krasnaya Polya	1.47	337	ePg	Pb	23 29 38.9	-0.5
RPOR				eSg	Sb	23 29 58.5	+0.2
NEY	Neytrino	1.52	53	ePg	Pn	23 29 39.6	+0.2
NEY				eSg	Sn	23 29 58.5	-0.9
KTUT	Trabzon	1.67	216	PN	Pn	23 29 40.9	-0.4
KTUT				SN	Sn	23 30 02.3	-0.6
ONI	Oni	1.78	81	P	Pn	23 29 43.4	+0.4
ONI				S	Sb	23 30 07.8	+0.6
ONI	Oni	1.78	81	ePg	Pb	23 29 45.2	+0.5
ONI				eSg	Sb	23 30 08.0	+0.8
GUZR	Guzeripl'	1.79	338	i Pg	Pb	23 29 44.7	-0.1
GUZR				i Sg	Sb	23 30 07.8	+0.4
AHMR	Akhmetovskaya	1.81	360	ePg	Pb	23 29 45.2	+0.1
AHMR				eSg	Sb	23 30 08.6	+0.6
SHA1	Shidzhatmaz	1.82	39	ePg	Pb	23 29 44.9	-0.4
SHA1				i Sg	Sb	23 30 08.0	-0.4
BKRG	Bakuriani	1.92	107	P	Pb	23 29 46.4	-0.7
BKRG				S	Sg	23 30 13.2	-0.2
KBZ	Khabaz	1.93	44	ePg	Pb	23 29 46.5	-0.6
KBZ				eSg	Sb	23 30 10.8	-0.5
DIGR	Digorskoe uzhe	1.94	73	ePg	Pb	23 29 46.7	-0.7
DIGR				eSg	Sb	23 30 11.7	-0.1
KIV	Kislovodsk	2.00	36	PN	Pn	23 29 46.7	+0.8
KIV				SN	Sn	23 30 12.2	+1.0
LZRR	Lazarevskoye	2.01	323	ePg	Pb	23 29 49.1	+0.6
LZRR				eSg	Sg	23 30 14.8	-1.4
SENK	Senkaya-Erzuru	2.03	151	PN	Pn	23 29 47.6	+1.2
AKH	Akhalkalaki	2.04	116	PN	Pn	23 29 47.5	+0.9
BAYT	Aydıntepe-Bayb	2.07	200	PN	Pn	23 29 47.2	+0.2
ZEI	Tsey	2.14	77	ePg	Pb	23 29 50.3	-0.6
ZEI				eSg	Sb	23 30 17.1	-0.7
KORR	Kora	2.33	71	ePg	Pb	23 29 53.3	-0.8
KORR				eSg	Sb	23 30 22.0	-1.1
KOPR	Koprukoy-ERZUR	2.43	166	PN	Pn	23 29 52.4	+0.5
LACR	Lac	2.44	78	ePn	Pg	23 29 57.7	-0.7
LACR				eSn	Sb	23 30 26.7	+0.6

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*IDC **08** 23:30:21.4±2.1, 6°.29S×130°.53E, h135^{km}±20^{km}, mb3.9/12, mb1 4.1/15, mb1mx3.8/30, mbtmp4.4/15, Error ellipse: s-maj=23.5km s-min=12.9km az=75.0*

*DJA **08** 23:30:23.4±0.2, 6°S±2°×13°0E±°, h145^{km}±3^{km}, M4.7/17, mB5.2/13, mb4.6/17, MLv4.9/13, Mw(mB)4.6/13*

*NEIC **08** 23:30:23.1±1.4, 6°.32S±0°.02×130°.38E±0°.10, h142^{km}±8^{km}, mb4.4/22, Error ellipse: s-maj=13.9km s-min=1.6km az=99.0*

ISC 08 23:30:22.9±0.4, **6°.34S**±0°.04×**130°.47E**±0°.05, **h150**^{km}, **n94**, σ**1s.91**/105, **mb4.4**/31, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.83	153	P	Pn	23 30 57.9	+1.8
SAUI				S	Sn	23 31 21.7	+0.1
SAUI	Saumlaki	1.83	153		Pn	23 30 57.8	+1.7
SAUI				Sn	Sn	23 31 20.7	-0.9
SAUI	Saumlaki	1.83	153	P	Pn	23 30 57.9	+1.8
BNDI	Bandanaira	1.89	343	P	Pn	23 30 57.8	+1.0
BNDI				S	Sn	23 31 26.0	+3.1
BNDI	Bandanaira	1.89	343	P	Pn	23 30 58.1	+1.3
MSAI	Masohi	3.35	333	P	Pn	23 31 15.8	+1.1
MSAI				S	Sn	23 31 54.1	-0.8
FAKI	Fak Fak	3.83	28	P	Pn	23 31 20.3	-0.8
FAKI				S	Sn	23 32 04.0	-2.2
FAKI	Fak Fak	3.83	28	Pn	Pn	23 31 20.2	-0.8
FAKI				Sn	Sn	23 32 02.0	-4.2
FAKI	Fak Fak	3.83	28	P	Pn	23 31 20.5	-0.6
SIJI	Sorong	5.49	8	P	Pn	23 31 40.6	-2.4
	26nm,0.3s,baz=221,slow=22,SNR=61						
SIJI				S	Sn	23 32 38.2	-7.3
	40nm,0.3s,baz=97,slow=23,SNR=27						
SWI	Sorong	5.50	8	P	Pn	23 31 42.2	-0.8
	2.1nm5µm77nm,0.7s						
SWI				S	Sn	23 32 39.5	-6.1
	2.1nm5µm77nm,0.7s						
DRS	Darwin Rock St	6.07	176	P	Pn	23 31 51.1	+0.6
SANI	Sanana	6.17	313	P	Pn	23 31 51.9	-0.1
	0.2nm892nm48nm,0.6s						
SANI				S	Sn	23 32 59.8	-1.9
	0.2nm892nm48nm,0.6s						
SANI	Sanana	6.17	313	P	Pn	23 31 52.8	+0.8
LBMI	Labuha	6.39	332	P	Pn	23 31 54.6	-0.3
	0.4nm1µm34nm,0.7s						
LBMI				S	Sn	23 33 01.3	-5.7
	0.4nm1µm34nm,0.7s						
MTN	Manton Dam	6.50	174	Pn	Pn	23 31 55.5	-0.8
MTN				Sn	Sn	23 33 05.7	-3.7
MTN	Manton Dam	6.50	174	P	Pn	23 31 57.4	+1.1
KDU	Kakadu	6.61	163	P	Pn	23 31 57.6	-0.2
SOEI	Soe	7.01	241	P	Pn	23 32 02.8	-0.5
	0.4nm2µm71nm,0.6s						
SOEI	Soe	7.01	241		Pn	23 32 02.8	-0.5
SOEI	Soe	7.01	241	P	Pn	23 32 03.1	-0.2
BAKI	Biak	7.60	48	P	Pn	23 32 12.4	+1.3
	2.4nm7µm726nm,0.7s						
BATI	Baumata	7.75	240	P	Pn	23 32 12.9	-0.2
	85nm,0.3s,baz=89,slow=2.6,SNR=33						
BATI				S	Sn	23 33 37.8	-1.9
	14nm,0.3s,baz=120,slow=21,SNR=7.2						
BATI	Baumata	7.75	240	P	Pn	23 32 12.1	-1.0
	0.8nm3µm155nm,0.4s						
MMRI	Maumere	8.47	254	P	Pn	23 32 25.5	+2.8
MMRI	Maumere	8.47	254		Pn	23 32 21.2	-1.5
MMRI	Maumere	8.47	254	P	Pn	23 32 23.7	+1.0
EDFI	Ende, Flores	9.03	254	P	Pn	23 32 32.3	+2.1
	306nm18nm,0.8s						
KNRA	Kununurra	9.43	190	Pn	Pn	23 32 33.8	-1.6
KNRA	Kununurra	9.43	190	P	Pn	23 32 34.6	-0.8
APSI	Ampana	10.32	301	P	Pn	23 32 53.3	+6.1
MRSI	Marisa	10.88	308	P	Pn	23 32 55.6	+1.0
	846nm14nm,0.5s						
FITZ	Fitzroy Crossi	12.60	202	P	Pn	23 33 14.1	-3.0
	3.1nm,0.3s,baz=32,slow=9.1,SNR=37						
FITZ				S	Sn	23 35 23.3	-13
	6.1nm,0.3s,baz=51,slow=14,SNR=14						
FITZ	Fitzroy Crossi	12.60	202	Pn	Pn	23 33 14.0	-3.0
PLAI	Plampang	12.82	258	P	P	23 33 24.6	-0.4
	27nm,0.5s						
WB0	Warramunga Arr	13.88	164	Pn	Pn	23 33 30.5	-2.9
WRAB	Tennant Creek	14.03	165	Pn	Pn	23 33 35.9	+0.7
WRA	Warramunga Arr	14.03	165	P	Pn	23 33 33.2	-2.1
	2.6nm,0.3s,baz=347,slow=14,SNR=58						
WRA				S	Sn	23 36 00.1	-11
	5.2nm,0.3s,baz=350,slow=23,SNR=9.1						
WB2	Warramunga Arr	14.04	165		Pn	23 33 34.9	-0.5
WR0	Warramunga Arr	14.10	164	Pn	Pn	23 33 35.2	-1.0
COEN	Coen	14.61	122	Pn	Pn	23 33 43.6	+1.0
BBKI	Banjar Baru	15.83	280	P	P	23 34 01.8	+3.3
	33nm,1.0s						
AS31	Alice Springs	17.54	169		P	23 34 18.3	+1.0
ASAR	Alice Springs	17.54	169	P	Pn	23 34 18.7	+0.3
	2.1nm,0.3s,baz=346,slow=10,SNR=134						
ASAR				S	S	23 37 24.1	-8.1
	1.0nm,0.3s,baz=352,slow=26,SNR=9.7						
ASAR	Alice Springs	17.54	169		P	23 34 18.2	+0.9
PSA00	Pilbara Seismi	18.30	213	P	P	23 34 25.8	+0.2
PSA00	Pilbara Seismi	18.30	213	P	P	23 34 25.3	-0.3
PSA00				IAmb	IAmb	23 34 26.7	
	comp=Z,10nm,0.6s						
PWJI	Pagerwojo	18.59	264	P	P	23 34 28.4	-0.4
	comp=Z,33nm,1.4s						
MORW	Morawa	26.40	209	P	P	23 35 45.0	-0.6
BBOO	Buckleboo	26.85	170	P	P	23 35 49.9	+0.4
STKA	Stephens Creek	27.45	159	P	P	23 35 55.0	+0.1
	comp=Z,2.6nm,0.5s,baz=333,slow=8.8,SNR=7.5						
UBPT	Khong Chiam	32.79	311	P	P	23 36 41.6	-0.5
UBPT				IAmb	IAmb	23 36 42.2	
	comp=Z,5.9nm,0.8s						
CMAR	Chiang Mai Arr	39.67	309	P	P	23 37 40.4	-0.3
	comp=Z,2.2nm,0.6s,baz=142,slow=7.5,SNR=15						
NJ2	Nanjing	39.75	344	eP	P	23 37 44.0	+3.0
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
CHTO	Chiang Mai	39.88	309	P	P	23 37 42.2	-0.2
CHTO				IAmb	IAmb	23 37 42.7	
	comp=Z,5.7nm,0.7s						
JMN	Monobe	39.98	4	P	P	23 37 43.4	+0.5
JMN				IAmb	IAmb	23 37 58.8	
	comp=Z,13nm,1.0s						
JHS	Saijyo	41.19	3	P	P	23 37 53.7	+0.9
JHS				IAmb	IAmb	23 38 08.9	
	comp=Z,8.0nm,1.0s						
JWT	Wachi	41.66	6	P	P	23 37 57.2	+0.6
JWT				IAmb	IAmb	23 38 04.6	
	comp=Z,7.1nm,0.9s						
MJAR	Matsushiro Arr	43.27	9	P	P	23 38 08.2	-1.4
	comp=Z,1.0nm,0.5s,baz=183,slow=10.0,SNR=4.3						
BJT	Baijiatuau	47.98	345	P	P	23 38 46.9	+0.4
BJT				IAmb	IAmb	23 38 47.1	
	comp=Z,9.1nm,0.6s						
HHC	Hu-ho-hao-te	50.07	341	eP	P	23 39 05.4	+2.8
HHC				pmax	pmax		

	comp=Z,7.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,92nm,9.5s						
USRK	**Ussuriysk Ar.**	**50.33**	**1**	P	**P**	**23 39 03.5**	**-0.8**
	comp=Z,1.0nm,0.6s,baz=179,slow=5.8,SNR=1.4						
SNZO	**South Karori**	**52.51**	**139**	P	**P**	**23 39 22.8**	**+2.1**
ODAN	**Odare**	**53.18**	**310**	*e*P	**P**	**23 39 25.5**	**-0.6**
	comp=Z,12nm,0.6s						
TAPN	**Taplejung**	**53.20**	**311**	*e*P	**P**	**23 39 25.7**	**-0.6**
	comp=Z,11nm,0.4s						
GTA	**Gaotai**	**53.63**	**331**	*e*P	**P**	**23 39 29.4**	**+0.4**
GTA				pP	pP	23 40 01.3	-1.2
GTA				sP	sP	23 40 17.3	-1.3
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
RAMN	**Ramite**	**53.83**	**310**	*e*P	**P**	**23 39 30.6**	**-0.3**
	comp=Z,30nm,0.5s						
JIRN	**Jiri**	**54.51**	**310**	*e*P	**P**	**23 39 35.3**	**-0.6**
GKN	**Gorkha**	**55.87**	**310**	*e*P	**P**	**23 39 44.7**	**-0.7**
	comp=Z,13nm,0.5s						
KOLN	**Koldanda**	**56.54**	**309**	*e*P	**P**	**23 39 49.4**	**-0.9**
PYUN	**Piuthan**	**57.17**	**309**	*e*P	**P**	**23 39 54.5**	**-0.2**
ULN	**Ulaanbaatar**	**57.79**	**342**	P	**P**	**23 39 59.6**	**+1.0**
SONM	**Songino Array**	**57.97**	**341**	P	**P**	**23 40 00.6**	**+0.8**
	comp=Z,2.9nm,0.7s,baz=162,slow=6.5,SNR=19						
SONM	**Songino Array**	**57.97**	**341**	P	**P**	**23 40 00.8**	**+1.0**
SONM				IAmb	IAmb	23 40 02.3	
	comp=Z,2.3nm,0.8s						
WMQ	**Urumqi**	**63.10**	**327**	*e*P	**P**	**23 40 35.7**	**+1.1**
WMQ				pP	pP	23 41 09.3	+0.2
WMQ				pmax	pmax		
	comp=Z,13nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,150nm,5.7s						
PEA0B	**Petropavlovsk-**	**63.56**	**18**	P	**P**	**23 40 38.0**	**+0.7**
PETK	**Petropavlovsk-**	**63.56**	**18**	P	**P**	**23 40 38.0**	**+0.7**
	comp=Z,4.6nm,1.0s,baz=172,slow=5.2,SNR=4.0						
MK31	**Makanchi Array**	**67.93**	**326**	P	**P**	**23 41 05.9**	**+0.4**
MK31				IAmb	IAmb	23 41 06.7	
	comp=Z,6.5nm,0.7s						
MKAR	**Makanchi Array**	**67.93**	**326**	P	**P**	**23 41 05.9**	**+0.3**
	comp=Z,11nm,0.6s,baz=122,slow=7.9,SNR=133						
MKAR	**Makanchi Array**	**67.93**	**326**	P	**P**	**23 41 06.0**	**+0.5**
MAKZ	**Makanchi**	**68.11**	**326**	P	**P**	**23 41 06.9**	**+0.3**
AAK	**Ala-Archa**	**70.34**	**320**	P	**P**	**23 41 21.6**	**+0.9**
ZAA0	**Zalesovo Array**	**71.20**	**333**	IAmb	IAmb	23 41 25.5	
	comp=Z,4.0nm,0.8s						
ZALV	**Zalesovo Beam**	**71.20**	**333**	P	**P**	**23 41 24.9**	**-0.5**
	comp=Z,3.1nm,0.6s,baz=120,slow=5.1,SNR=15						
ZALV	**Zalesovo Beam**	**71.20**	**333**	P	**P**	**23 41 25.0**	**-0.3**
BTK	**Batken**	**71.63**	**316**	P	**P**	**23 41 28.8**	**+0.4**
KURBB	**Kurchatov Arra**	**72.20**	**328**	P	**P**	**23 41 31.3**	**-0.1**
	comp=Z,3.6nm,0.7s,baz=128,slow=4.9,SNR=50						
KURK	**Kurchatov**	**72.20**	**328**	P	**P**	**23 41 31.4**	**0.0**
KURK				IAmb	IAmb	23 41 32.2	
	comp=Z,4.9nm,0.8s						
CHGR	**Chuyangaron**	**72.22**	**314**	P	**P**	**23 41 31.9**	**0.0**
CHGR				IAmb	IAmb	23 41 32.6	
	comp=Z,10.0nm,0.8s						
VNDA	**Vanda**	**73.04**	**173**	P	**P**	**23 41 36.8**	**+0.8**
	comp=Z,0.4nm,0.6s,baz=277,slow=6.8,SNR=2.7						
TIXI	**Tiksi**	**77.84**	**359**	P	**P**	**23 42 03.1**	**-0.2**
	comp=Z,2.6nm,0.6s,baz=163,slow=8.1,SNR=1.9						
PPT	**Papeete**	**78.56**	**107**	P	**P**	**23 42 08.1**	**-0.4**
	comp=Z,21nm,0.5s,baz=225,slow=2.9,SNR=2.1						
NRIK	**Noril'sk**	**81.04**	**346**	P	**P**	**23 42 20.5**	**-0.1**
	comp=Z,3.5nm,0.7s,baz=144,slow=2.9,SNR=5.8						
TORD	**Torodi Ar. Bea**	**129.14**	**282**	PKP	**PKPdf**	**23 49 14.1**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=112,slow=1.7,SNR=3.2						

*ANF **08** 23:46:55.7±0.3, 36°.64N×89°.57W, h8^{km}±3^{km}, ML3.3/17, Error ellipse: s-maj=2.4km s-min=2.1km az=14.0*

*IASPEI **08** 23:46:56.0±0.8, 36°.63N±0°.02×89°.57W±0°.02, h17^{km}±4^{km}, Error ellipse: s-maj=2.9km s-min=2.7km az=102.8, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*SLM **08** 23:46:56.2±1.2, 36°.625N±0°.005×89°.57W±0°.01, h11^{km}±2^{km}, Md2.8/35, mb_Lg2.8/36(NEIC), Error ellipse: s-maj=1.6km s-min=0.8km az=79.0*

*NEIC **08** 23:46:56.4±2.5, 36°.616N±0°.008×89°.57W±0°.01, h5^{km}±1^{km}, Error ellipse: s-maj=2.7km s-min=1.6km az=60.0*

ISC 08 23:46:56.5±0.9**, 36°.63N**±0°.02×**89°.56W**±0°.02**, h17**^{km}±3^{km}**, n109, σ0^{s}80**/132**, New Madrid region, Missouri**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NMMO	**New Madrid**	**0.04**	**168**		**Pg**	**23 47 00.5**	**+0.9**
NMEM	**New Madrid Sch**	**0.06**	**197**		**Pg**	**23 47 00.7**	**+1.0**
CATM	**Catron**	**0.07**	**255**		**Pg**	**23 46 58.9**	**-0.8**
CATM					**Sg**	**23 47 01.1**	**-0.8**
SJMO	**Saint John's B**	**0.07**	**92**		**Pg**	**23 46 58.9**	**-0.8**
SJMO					**Sg**	**23 47 01.0**	**-0.8**
KEWM	**Kewanee**	**0.07**	**341**		**Pg**	**23 46 59.0**	**-0.7**
KEWM					**Sg**	**23 47 01.3**	**-0.7**
WALK	**Watson Lake**	**0.09**	**170**		**Pg**	**23 46 59.0**	**-0.9**
WALK					**Sg**	**23 47 01.3**	**-0.9**
HENM	**Henderson Moun**	**0.11**	**41**		**Pg**	**23 46 59.4**	**-0.7**
HENM				Sg	**Sg**	**23 47 02.0**	**-0.5**
MARMO	**Marston**	**0.13**	**220**		**Pg**	**23 46 59.6**	**-0.7**
MARMO					**Sg**	**23 47 02.3**	**-0.6**
MATM	**Matthews**	**0.15**	**347**		**Pg**	**23 47 00.1**	**-0.5**
MATM					**Sg**	**23 47 03.0**	**-0.3**
COKM	**Charter Oak**	**0.15**	**301**		**Pg**	**23 47 00.1**	**-0.5**
COKM					**Sg**	**23 47 03.1**	**-0.4**
PARMO	**Parma**	**0.15**	**282**		**Pg**	**23 47 00.0**	**-0.6**
PARMO				Sg	**Sg**	**23 47 02.9**	**-0.6**
DWDM	**Dogwood**	**0.17**	**19**		**Pg**	**23 47 00.6**	**-0.4**
DWDM					**Sg**	**23 47 03.8**	**-0.2**
EPRM	**East Prairie**	**0.19**	**62**		**Pg**	**23 47 00.6**	**-0.5**
EPRM					**Sg**	**23 47 04.0**	**-0.2**
PENMO	**Penman**	**0.19**	**196**		**Pg**	**23 47 00.2**	**-0.9**
PENMO				Sg	**Sg**	**23 47 03.5**	**-0.7**
PGVM	**Portageville**	**0.22**	**218**		**Pg**	**23 47 00.9**	**-0.6**
PGVM					**Sg**	**23 47 04.5**	**-0.4**
PPLM	**Point Pleasant**	**0.23**	**184**		**Pg**	**23 47 01.1**	**-0.6**
PPLM					**Sg**	**23 47 04.8**	**-0.4**
POBM	**Portage Bay**	**0.24**	**200**		**Pg**	**23 47 01.2**	**-0.6**
POBM					**Sg**	**23 47 05.2**	**-0.3**
PVMO	**Portageville**	**0.24**	**207**		**Pg**	**23 47 01.2**	**-0.7**
PVMO				Sg	**Sg**	**23 47 05.2**	**-0.5**
CHRM	**Charleston**	**0.27**	**36**		**Pg**	**23 47 02.1**	**-0.4**
CHRM					**Sg**	**23 47 06.4**	**-0.2**
TOPM	**Tallapoosa**	**0.28**	**248**		**Pg**	**23 47 02.1**	**-0.5**
TOPM					**Sg**	**23 47 06.5**	**-0.3**
HICK	**Hickman**	**0.28**	**108**		**Pg**	**23 47 02.1**	**-0.6**
HICK				Sg	**Sg**	**23 47 06.6**	**-0.3**
MLDM	**Malden**	**0.29**	**269**		**Pg**	**23 47 02.2**	**-0.5**
MLDM					**Sg**	**23 47 06.5**	**-0.4**
WYBT	**Wynnburg**	**0.29**	**169**		**Pg**	**23 47 02.2**	**-0.5**
WYBT					**Sg**	**23 47 06.7**	**-0.3**
FLPT	**Flippin**	**0.29**	**138**		**Pg**	**23 47 02.4**	**-0.5**
WADM	**Wardell**	**0.32**	**215**		**Pg**	**23 47 02.8**	**-0.5**
WADM					**Sg**	**23 47 07.8**	**-0.2**
GUAMO	**Guam**	**0.34**	**319**		**Pg**	**23 47 03.2**	**-0.4**
BRNM	**Bernie**	**0.36**	**285**		**Pg**	**23 47 03.6**	**-0.4**
GLAT	**Glass**	**0.42**	**148**		**Pg**	**23 47 04.6**	**-0.5**
GLAT				Sg	**Sg**	**23 47 10.8**	**-0.1**
LNXT	**Lenox**	**0.53**	**174**		**Pg**	**23 47 06.5**	**-0.5**
LNXT				Sg	**Sg**	**23 47 14.1**	**-0.1**
LNXT	**Lenox**	**0.53**	**174**	P	**Pg**	**23 47 06.6**	**-0.5**
	baz=354,SNR=61						
PEBM	**Pemiscott Bayo**	**0.57**	**205**		**Pg**	**23 47 07.0**	**-0.8**
PEBM				Sg	**Sg**	**23 47 15.4**	**0.0**
UTMT	**University of**	**0.63**	**117**		**Pg**	**23 47 08.3**	**-0.7**
UTMT				Sg	**Sg**	**23 47 17.2**	**-0.1**
CGM3	**Cape Girardeau**	**0.67**	**354**		**Pg**	**23 47 08.9**	**-0.8**
PBMO	**Poplar Bluff**	**0.71**	**282**		**Pg**	**23 47 09.6**	**-0.9**
PBMO				Sg	**Sg**	**23 47 18.7**	**-1.2**
PBMO	**Poplar Bluff**	**0.71**	**282**	P	**Pg**	**23 47 09.6**	**-0.9**
	baz=102,SNR=37						
PBMO				S	**Sg**	**23 47 19.0**	**-0.9**
	baz=102						
HALT	**Halls**	**0.74**	**166**		**Pg**	**23 47 10.2**	**-0.8**
GNAR	**Gosnell**	**0.76**	**209**		**Pg**	**23 47 10.7**	**-0.6**
T45B	**Paducah**	**0.83**	**62**	P	**Pg**	**23 47 11.6**	**-1.1**
	baz=242,SNR=17						
T45B				S	**Sg**	**23 47 23.0**	**-0.7**
	baz=242						
T45A	**Paducah**	**0.83**	**62**		**Pg**	**23 47 11.5**	**-1.2**
S44A	**Carbondale**	**1.09**	**13**		**Pg**	**23 47 16.3**	**-1.3**
S44A	**Carbondale**	**1.09**	**13**	P	**Pg**	**23 47 16.4**	**-1.3**
	baz=193,SNR=41						
S44A				S	**Sg**	**23 47 30.6**	**-1.2**
	baz=193						
SIUC	**Southern Illin**	**1.12**	**14**		**Pg**	**23 47 16.7**	**-1.4**
LPAR	**Lepanto**	**1.19**	**210**		**Pg**	**23 47 17.8**	**-1.7**
T42A	**Van Buren**	**1.29**	**288**		**Pn**	**23 47 19.1**	**-0.6**
T42A	**Van Buren**	**1.29**	**288**	P	**Pn**	**23 47 19.2**	**-0.6**
	baz=108,SNR=162						
T42A				S	**Sg**	**23 47 36.6**	**-1.7**
	baz=108						
SFTN	**Shelby Forest**	**1.32**	**196**		**Pg**	**23 47 22.5**	**+0.5**
HBAR	**Harrisburg**	**1.39**	**220**		**Pn**	**23 47 20.4**	**-0.8**
HBAR	**Harrisburg**	**1.39**	**220**	S	**Sb**	**23 47 40.1**	**+0.6**
	baz=39						
LCAR	**Lake Charles**	**1.40**	**247**		**Pn**	**23 47 20.9**	**-0.3**
LCAR	**Lake Charles**	**1.40**	**247**	P	**Pn**	**23 47 21.1**	**-0.1**
	baz=66,SNR=6.7						
WVT	**Waverly**	**1.48**	**109**		**Pn**	**23 47 22.2**	**-0.3**
WVT	**Waverly**	**1.48**	**109**	P	**Pn**	**23 47 22.4**	**0.0**
	baz=290						
EBZ	**Ebenezer Churc**	**1.50**	**173**		**Pn**	**23 47 22.8**	**+0.3**
W45A	**Hickory Valley**	**1.50**	**168**		**Pn**	**23 47 20.7**	**-2.0**
W45A	**Hickory Valley**	**1.50**	**168**	S	**Sn**	**23 47 43.3**	**+1.4**
	baz=348						
FVM	**French Village**	**1.52**	**333**		**Pn**	**23 47 23.1**	**+0.2**
FVM	**French Village**	**1.52**	**333**	P	**Pn**	**23 47 23.1**	**+0.2**
	baz=153,SNR=166						
FVM				S	**Sn**	**23 47 43.2**	**+1.0**
	baz=153						
CCM	**Cathedral Cave**	**1.95**	**317**		**Pn**	**23 47 30.2**	**+1.3**
CCM	**Cathedral Cave**	**1.95**	**317**	P	**Pn**	**23 47 30.2**	**+1.3**
	baz=136,SNR=93						
T47A	**Sharon Grove**	**2.00**	**79**		**Pn**	**23 47 30.3**	**+0.7**
T47A	**Sharon Grove**	**2.00**	**79**	P	**Pn**	**23 47 30.4**	**+0.9**
	baz=260,SNR=48						
PLAL	**Pickwick Lake**	**2.04**	**143**		**Pn**	**23 47 29.7**	**-0.4**
PWLA	**Pickwick Lake**	**2.05**	**143**		**Pn**	**23 47 29.8**	**-0.4**
SLM	**Saint Louis**	**2.07**	**345**	Pn	**Pn**	**23 47 32.0**	**+1.5**
FCAR	**Ozark Folk Cen**	**2.20**	**251**		**Pn**	**23 47 33.8**	**+1.6**
FCAR				IAmb_Lg		23 48 10.5	
	comp=Z,28nm,0.8s						
MGMO	**Mountain Grove**	**2.23**	**284**		**Pn**	**23 47 33.8**	**+1.0**
MGMO				IAmb_Lg		23 48 07.4	
	comp=Z,34nm,0.8s						
Q44A	**Meyer Farm, Va**	**2.31**	**11**		**Pn**	**23 47 34.6**	**+0.8**
Q44A	**Meyer Farm, Va**	**2.31**	**11**	P	**Pn**	**23 47 34.8**	**+1.1**
	baz=191,SNR=13						
V48A	**Smith Brothers**	**2.39**	**111**		**Pn**	**23 47 35.5**	**+0.6**
V48A	**Smith Brothers**	**2.39**	**111**	P	**Pn**	**23 47 35.7**	**+0.9**
	baz=293,SNR=20						
OLIL	**Olney**	**2.40**	**29**		**Pn**	**23 47 35.8**	**+0.8**
WHAR	**Wooly Hollow**	**2.58**	**240**		**Pn**	**23 47 38.1**	**+0.6**
WHAR				IAmb_Lg		23 48 21.0	
	comp=Z,32nm,0.9s						
W41B	**Gary Mavity, V**	**2.62**	**237**	P	**Pn**	**23 47 38.6**	**+0.6**
	baz=56						
CLTN	**Cedars of Leba**	**2.66**	**101**		**Pn**	**23 47 38.9**	**+0.2**
U40A	**Yellville**	**2.67**	**265**		**Pn**	**23 47 40.9**	**+2.3**
R40A	**Maddies Statio**	**2.72**	**308**		**Pn**	**23 47 40.6**	**+1.3**
Y45A	**Yeager Farm, C**	**2.76**	**180**	Pn	**Pn**	**23 47 40.0**	**+0.1**
Y45A	**Yeager Farm, C**	**2.76**	**180**	P	**Pn**	**23 47 40.5**	**+0.6**
	baz=360,SNR=5.6						
X48A	**Hartselle**	**2.99**	**136**		**Pn**	**23 47 42.7**	**-0.4**
X48A	**Hartselle**	**2.99**	**136**	P	**Pn**	**23 47 43.4**	**+0.3**
	baz=317,SNR=32						
P43A	**Skaggs, Pawnee**	**3.00**	**1**	Pn	**Pn**	**23 47 43.2**	**-0.1**
U49A	**Red Boiling Sp**	**3.05**	**91**	Pn	**Pn**	**23 47 45.1**	**+1.2**
U49A				IAmb_Lg		23 48 33.4	
	comp=Z,22nm,0.9s						
WCI	**Wyandotte Cave**	**3.05**	**58**		**Pn**	**23 47 44.0**	**+0.1**
S39A	**Bolivar**	**3.18**	**291**		**Pn**	**23 47 47.1**	**+1.3**
S39A				IAmb_Lg		23 48 45.6	
	comp=Z,20nm,0.8s						
S39A	**Bolivar**	**3.18**	**291**	P	**Pn**	**23 47 47.2**	**+1.3**
	baz=108,SNR=13						
CCAR	**Cane Creek**	**3.25**	**214**	Pn	**Pn**	**23 47 45.9**	**-0.9**
SWET	**Sewanee**	**3.27**	**115**		**Pn**	**23 47 47.7**	**+0.7**
X40A	**Basin Creek Fa**	**3.42**	**232**		**Pn**	**23 47 49.6**	**+0.6**
P40A	**Paris**	**3.50**	**327**		**Pn**	**23 47 50.6**	**+0.5**
P46A	**Rosedale**	**3.51**	**31**	IAmb_Lg		23 48 51.7	
	comp=Z,22nm,0.8s						
O44A	**Mansfield**	**3.62**	**13**	IAmb_Lg		23 48 57.7	
	comp=Z,24nm,0.8s						
Z47A	**Carrollton**	**3.64**	**160**	Pn	**Pn**	**23 47 52.0**	**0.0**
Z47A				IAmb_Lg		23 48 55.0	
	comp=Z,22nm,0.9s						
W39A	**Magazine**	**3.71**	**249**	Pn	**Pn**	**23 47 54.0**	**+1.0**
W50A	**Signal Mountai**	**3.73**	**111**	IAmb_Lg		23 48 58.6	
	comp=Z,26nm,0.8s						
Y49A	**Blount Mountai**	**3.78**	**136**	P	**Pn**	**23 47 53.9**	**-0.1**
	baz=318,SNR=9.7						
FPAL	**Fort Paine**	**3.84**	**122**	Pn	**Pn**	**23 47 55.2**	**+0.4**
R49A	**Shelbyville**	**3.87**	**63**	Pn	**Pn**	**23 47 55.3**	**+0.1**
MIAR	**Mount Ida**	**3.88**	**239**		**Pn**	**23 47 55.5**	**+0.1**
MIAR				IAmb_Lg		23 48 59.0	
	comp=Z,24nm,0.8s						
U38A	**Gravette**	**3.89**	**269**	Pn	**Pn**	**23 47 56.2**	**+0.7**
U38A				IAmb_Lg		23 49 02.5	
	comp=Z,18nm,0.7s						
CMGA	**Chestnut Mount**	**4.20**	**117**		**Pn**	**23 48 00.8**	**+1.0**
SFIN	**Lafayette**	**4.21**	**27**	IAmb_Lg		23 49 15.9	
	comp=Z,25nm,1.0s						
P38A	**Dawn**	**4.33**	**315**	Pn	**Pn**	**23 48 01.8**	**+0.3**
P38A				IAmb_Lg		23 49 14.3	
	comp=Z,19nm,0.9s						
P38A	**Dawn**	**4.33**	**315**	P	**Pn**	**23 48 02.3**	**+0.8**
	baz=133,SNR=15						
TKL	**Tuckaleechee C**	**4.79**	**100**	IAmb_Lg		23 49 33.8	
	comp=Z,12nm,0.7s						
V52A	**Sevierville**	**4.89**	**98**	IAmb_Lg		23 49 36.6	
	comp=Z,20nm,0.8s						
QUOK	**Quay**	**5.78**	**268**	IAmb_Lg		23 50 11.8	
	comp=Z,11nm,0.8s						
OK030	**Cody Creek RV**	**5.88**	**265**	IAmb_Lg		23 50 12.1	
	comp=Z,15nm,0.8s						
KSU1	**Kansas State U**	**6.09**	**296**	Pn	**Pn**	**23 48 26.0**	**+0.2**
JFWS	**Jewell Farm**	**6.30**	**355**	IAmb_Lg		23 50 20.1	
	comp=Z,14nm,0.8s						

*MOS **08** 23:47:40.9±1.0, 56°.08S×27°.30W, h64^{km}, mb5.4/7, Error ellipse: s-maj=21.6km s-min=11.5km az=113.1*

*GCMT **08** 23:47:41.7±0.4, 56°.35S±0°.03×27°.21W±0°.05, h90^{km}±5^{km}, MW5.0/89, Moment Tensor Solution. s12,c13; s89,c117; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.37±.18; $M_{\theta\theta}$3.15±.17; $M_{\phi\phi}$-2.79±.17; $M_{r\theta}$-0.98±.11; $M_{\theta\phi}$-0.78±.23; $M_{\phi r}$-1.46±.09; Best double couple: $M_0$3.54700×10^{16} NP1:ϕ_s320.00000°, δ62.00000°, λ-10.00000°. NP2: ϕ_s54.00000°, δ81.00000°, λ-152.00000°. Principal axes: T 3.4320, Plg13.0000°, Azm184.0000°; N 0.2210, Plg60.0000°, Azm70.0000°; P -3.6620, Plg26.0000°, Azm281.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **08** 23:47:43.7±1.4, 56°.1S±0°.1×27°.3W±0°.2, h75^{km}±5^{km}, mb5.1/74 Error ellipse: s-maj=19.2km s-min=13.0km az=209.0*

*IDC **08** 23:47:45.5±1.4, 56°.15S×27°.31W, h93^{km}±11^{km}, mb4.5/15, mb1 4.6/17, mb1mx4.5/21, mbtmp4.8/17, MS3.8/20, Ms1 3.8/20, ms1mx3.8/25, Error ellipse: s-maj=14.3km s-min=9.9km az=64.0*

ISC 08 23:47:45.5±0.3**, 56°.17S**±0°.06×**27°.36W**±0°.06**, h100**^{km}**, n389, σ1^{s}52**/380**, mb5.0**/48**, 2C-1D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**5.56**	**286**	P	**Pn**	**23 49 03.2**	**-2.5**
HOPE	**Hope Point**	**5.56**	**286**		**Pn**	**23 49 03.2**	**-2.5**
VNA1	**Neumayer--Stat**	**16.72**	**158**	P	**P**	**23 51 34.6**	**+0.8**
VNA1	**Neumayer--Stat**	**16.72**	**158**	ScP	**ScP**	**23 59 44.4**	**+3.5**
VNA3	**Neumayer Olymp**	**16.91**	**160**	P	**P**	**23 51 35.6**	**-0.4**
VNA3	**Neumayer Olymp**	**16.91**	**160**	ScP	**ScP**	**23 59 44.2**	**+2.9**
VNA2	**Neumayer--Watz**	**17.12**	**158**	P	**P**	**23 51 37.7**	**-0.6**
	baz=314,slow=12						
VNA2				S	**Sn**	**23 54 40.5**	**-7.5**
VNA2	**Neumayer--Watz**	**17.12**	**158**	ScP	**ScP**	**23 59 44.9**	**+3.1**
EFI	**East Falkland**	**18.54**	**271**	P	**Pn**	**23 51 54.6**	**-0.8**
EFI				pmax	pmax		
	comp=Z,90nm,1.0s						
EFI	**East Falkland**	**18.54**	**271**	P	**Pn**	**23 51 54.6**	**-0.8**
EFI				IAmb	IAmb	23 51 57.4	
	comp=Z,90nm,1.0s						
SNAA	**Sanae**	**18.67**	**156**	P	**Pn**	**23 51 55.7**	**-1.2**
SNAA	**Sanae**	**18.67**	**156**	ScP	**ScP**	**23 59 47.8**	**+2.7**
SNAA	**Sanae**	**18.67**	**156**	P	**P**	**23 51 55.0**	**-0.3**
	comp=Z,3.1nm,0.3s,baz=307,slow=8.5,SNR=133						
SNAA				S	**S**	**23 55 21.4**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=323,slow=20,SNR=1.7						
SNAA				LR	LR	23 58 01.0	
	comp=Z,234nm,18.6s,baz=8.0,slow=33						
SNAA				ScP	**ScP**	**23 59 47.9**	**+2.8**
	comp=Z,0.4nm,0.3s,baz=320,slow=5.2,SNR=6.7						
SNAA	**Sanae**	**18.67**	**156***c*	*i*P	**P**	**23 51 55.1**	**-0.3**
SNAA				pmax	pmax		
	comp=Z,62nm,0.7s						
SNAA	**Sanae**	**18.67**	**156**	P	**P**	**23 51 55.4**	**0.0**
SNAA				IAmb	IAmb	23 51 57.1	
	comp=Z,64nm,0.7s						
PMSA	**Palmer Station**	**19.75**	**229**	P	**Pn**	**23 52 09.4**	**0.0**
	comp=Z,2.6nm,0.3s,baz=66,slow=7.2,SNR=19						
PMSA				LR	LR	23 58 36.8	
	comp=Z,235nm,19.5s,baz=65,slow=33						
PMSA	**Palmer Station**	**19.75**	**229**	*e*P	**Pn**	**23 52 09.8**	**+0.4**
PMSA	**Palmer Station**	**19.75**	**229**	P	**Pn**	**23 52 08.2**	**-1.2**
PMSA				IAmb	IAmb	23 52 14.5	
	comp=Z,67nm,0.8s						
MG01	**Puerto William**	**22.59**	**256**	P	**P**	**23 52 38.2**	**+0.9**
USHA	**Ushuaia**	**23.06**	**256**	P	**P**	**23 52 41.7**	**-0.3**
	comp=Z,34nm,1.1s,baz=102,slow=11,SNR=5.1						
USHA				LR	LR	23 59 36.9	
	comp=Z,278nm,18.8s,baz=95,slow=31						
MG02	**Cerro Sombrero**	**24.29**	**260**	P	**P**	**23 52 53.8**	**+0.7**
GO10	**Punta Arenas**	**25.13**	**258**	P	**P**	**23 53 02.1**	**+1.2**
GO10				IAmb	IAmb	23 53 25.6	
	comp=Z,69nm,1.1s						
MG05	**Puerto Natales**	**26.58**	**261**	P	**P**	**23 53 13.9**	**0.0**
MG05				IAmb	IAmb	23 53 26.2	
	comp=Z,38nm,1.0s						
GO09	**Cerro Castillo**	**26.68**	**261**	P	**P**	**23 53 13.3**	**-1.5**
COYC	**Coyhaique**	**29.64**	**272**	P	**P**	**23 53 41.7**	**+0.5**
PLTB	**Pedras Altas**	**30.51**	**312**	*e*P	**P**	**23 53 49.6**	**+0.6**
PLTB	**Pedras Altas**	**30.51**	**312**	P	**P**	**23 53 49.5**	**+0.5**
PLTB				IAmb	IAmb	23 53 50.8	
	comp=Z,25nm,0.6s						
CPSB	**Cacapava Do Su**	**31.63**	**314**	*e*P	**P**	**23 53 59.5**	**+0.6**
TER01	**Tubaro-SC**	**31.69**	**322**	*e*P	**P**	**23 54 00.3**	**+0.9**
PLCA	**Paso Flores**	**31.93**	**280**	P	**P**	**23 54 01.2**	**-0.3**
	comp=Z,2.8nm,0.8s,baz=150,slow=6.4,SNR=8.8						
PLCA				LR	LR	00 06 58.5	
	comp=Z,151nm,18.8s,baz=132,slow=36						
PLCA	**Paso Flores**	**31.93**	**280**	P	**P**	**23 54 00.7**	**-0.8**
ITQB	**Itaqui**	**33.60**	**310**	*e*P	**P**	**23 54 16.1**	**+0.1**
ITQB	**Itaqui**	**33.60**	**310**	P	**P**	**23 54 15.9**	**-0.1**
ITQB				IAmb	IAmb	23 54 17.1	
	comp=Z,20nm,0.9s						
LC01	**Cunco**	**33.94**	**282**	P	**P**	**23 54 17.6**	**-1.3**
QSPA	**South Pole Qui**	**34.08**	**180**	P	**P**	**23 54 21.4**	**+1.4**
	comp=Z,70nm,1.0s,baz=199,slow=4.0,SNR=110						
QSPA				ScP	**ScP**	**00 00 32.1**	**+1.7**
	comp=Z,2.2nm,0.7s,baz=356,slow=0.4,SNR=6.0						
QSPA				LR	LR	00 07 30.7	
	comp=Z,324nm,20.8s,baz=188,slow=35						
QSPA	**South Pole Qui**	**34.08**	**180**	P	**P**	**23 54 21.5**	**+1.4**
SPB	**Sao Paulo**	**35.72**	**327**	*e*P	**P**	**23 54 36.0**	**+1.6**
DUB01	**Friburgo-RJ**	**35.82**	**336**	*e*P	**P**	**23 54 35.4**	**+0.1**
PTGB	**Pitanga**	**36.22**	**320**	*e*P	**P**	**23 54 38.6**	**0.0**
BO02	**Sierra Bellavi**	**36.37**	**287**	P	**P**	**23 54 40.0**	**0.0**
CPUP	**Villa Florida**	**36.82**	**312**	P	**P**	**23 54 43.5**	**-0.1**
	comp=Z,12nm,0.7s,baz=150,slow=7.5,SNR=27						
CPUP				PcP	**PcP**	**23 57 04.2**	**+0.7**
	comp=Z,5.9nm,0.7s,baz=161,slow=3.4,SNR=7.1						
CPUP				LR	LR	00 08 30.4	
	comp=Z,155nm,20.6s,baz=156,slow=34						
CPUP	**Villa Florida**	**36.82**	**312**	*e*P	**P**	**23 54 43.7**	**+0.1**
GO05	**Huala**	**36.82**	**286**	P	**P**	**23 54 42.9**	**-0.8**
GO05				IAmb	IAmb	23 55 01.5	
	comp=Z,21nm,1.3s						
BO01	**Tunca**	**36.84**	**288**	P	**P**	**23 54 43.8**	**0.0**
MT09	**Talagante**	**37.26**	**288**	P	**P**	**23 54 46.1**	**-1.4**
MT09				IAmb	IAmb	23 54 47.7	
	comp=Z,14nm,0.8s						
MT01	**Popeta**	**37.33**	**288**	P	**P**	**23 54 46.7**	**-1.3**
MT01				IAmb	IAmb	23 54 48.7	
	comp=Z,28nm,1.4s						
MT05	**Renca**	**37.42**	**289**	P	**P**	**23 54 48.2**	**-0.6**
MT05				IAmb	IAmb	23 55 00.2	
	comp=Z,12nm,0.6s						
BSCB	**Bom Sucesso**	**37.44**	**333**	*e*P	**P**	**23 54 50.4**	**+1.4**
VA05	**Santo Domingo**	**37.68**	**288**	P	**P**	**23 54 50.4**	**-0.5**
VA05				IAmb	IAmb	23 54 51.4	
	comp=Z,24nm,0.8s						
MT02	**Curacav**	**37.73**	**289**	P	**P**	**23 54 51.0**	**-0.4**
MT02				IAmb	IAmb	23 54 52.5	
	comp=Z,26nm,1.1s						
VA03	**San Esteban**	**37.81**	**290**	P	**P**	**23 54 52.5**	**+0.4**
VA03				IAmb	IAmb	23 54 54.2	
	comp=Z,21nm,1.1s						
TRCB	**Terra Rica**	**38.18**	**320**	*e*P	**P**	**23 54 56.2**	**+0.9**
TRCB	**Terra Rica**	**38.18**	**320**	P	**P**	**23 54 55.5**	**+0.2**
BB19B	**Bebedouro**	**38.43**	**327**	*e*P	**P**	**23 54 58.8**	**+1.5**
BSFB	**Barra de Sao F**	**38.64**	**339**	*e*P	**P**	**23 55 00.0**	**+1.0**
PCMB	**Pacaembu**	**38.80**	**323**	*e*P	**P**	**23 55 01.2**	**+0.8**
SJMB	**Sao Joao De Ma**	**38.83**	**339**	*e*P	**P**	**23 55 01.7**	**+1.0**
NAN01	**Guarapari, ES**	**39.46**	**341**	*e*P	**P**	**23 55 05.9**	**0.0**
DIAM	**Diamantina, MG**	**39.77**	**335**	*e*P	**P**	**23 55 09.2**	**+0.6**
MAW	**Mawson**	**40.11**	**144**	P	**P**	**23 55 11.8**	**+1.1**
	comp=Z,15nm,0.8s,baz=237,slow=8.1,SNR=19						
MAW				ScP	**ScP**	**00 00 54.6**	**+1.9**
	comp=Z,4.1nm,0.7s,baz=266,slow=9.5,SNR=7.5						
MAW				LR	LR	00 09 18.6	
	comp=Z,189nm,21.5s,baz=236,slow=32						
MAW	**Mawson**	**40.11**	**144**	P	**P**	**23 55 11.6**	**+0.9**
ITRB	**Iturama**	**40.28**	**325**	*e*P	**P**	**23 55 13.7**	**+1.0**
GUA01	**Guaratinga, BA**	**40.63**	**341**	*e*P	**P**	**23 55 16.2**	**+0.6**
SUR	**Sutherland**	**40.76**	**75**	LR	LR	00 08 58.2	
	comp=Z,100nm,18.1s,baz=218,slow=31						
SUR	**Sutherland**	**40.76**	**75**	P	**P**	**23 55 16.4**	**-0.4**
LCO	**Las Campanas**	**40.87**	**293**	P	**P**	**23 55 18.6**	**+0.9**
LCO	**Las Campanas**	**40.87**	**293**	P	**P**	**23 55 18.6**	**+0.9**
IPMB	**Ipameri, GO**	**41.25**	**329**	*e*P	**P**	**23 55 21.9**	**+1.2**
MC01	**Montes Claros**	**41.36**	**336**	*e*P	**P**	**23 55 22.1**	**+0.5**
AQDB	**Aquidauana**	**41.42**	**318**	*e*P	**P**	**23 55 21.5**	**-0.6**
AQDB	**Aquidauana**	**41.42**	**318**	P	**P**	**23 55 21.7**	**-0.4**
AQDB				IAmb	IAmb	23 55 23.5	
	comp=Z,22nm,0.9s						
AC04	**Llanos de Chal**	**41.71**	**294**	P	**P**	**23 55 24.2**	**-0.2**
GO03	**Copiap**	**41.78**	**295**	P	**P**	**23 55 24.4**	**-0.6**
GO03				IAmb	IAmb	23 55 26.1	
	comp=Z,24nm,0.8s						
CMC01	**Camacan, BA**	**41.78**	**342**	*e*P	**P**	**23 55 25.4**	**+0.4**
AC02	**Maricunga**	**41.84**	**297**	P	**P**	**23 55 26.6**	**+0.6**
NBIT	**Itapeh - BA**	**42.19**	**342**	*e*P	**P**	**23 55 28.3**	**0.0**
JANB	**Januaria**	**43.04**	**336**	*e*P	**P**	**23 55 35.7**	**+0.4**
GDU01	**Guandu, BA**	**43.40**	**343**	*e*P	**P**	**23 55 38.3**	**+0.2**
BDFB	**Brasilia**	**43.42**	**330**	P	**P**	**23 55 39.5**	**+1.1**
	comp=Z,5.6nm,0.6s,baz=143,slow=6.0,SNR=8.8						
BDFB				LR	LR	00 11 39.5	
	comp=Z,148nm,19.1s,baz=137,slow=33						
BDFB	**Brasilia**	**43.42**	**330**	P	**P**	**23 55 38.5**	**+0.2**
PP1B	**Ponte de Pedra**	**43.76**	**320**	*e*P	**P**	**23 55 41.2**	**+0.2**
PB14	**IPOC Station P**	**44.31**	**297**	P	**P**	**23 55 45.5**	**-0.2**
ARAG	**Araguaiana, MT**	**44.49**	**325**	*e*P	**P**	**23 55 47.7**	**+0.9**
PB15	**IPOC Station P**	**45.04**	**299**	P	**P**	**23 55 50.9**	**-0.5**
PB15				IAmb	IAmb	23 56 18.7	
	comp=Z,17nm,0.9s						
LVC	**Limon Verde**	**45.28**	**300**	P	**P**	**23 55 53.7**	**+0.3**
LVC				pmax	pmax		
	comp=Z,23nm,0.7s						
LVC	**Limon Verde**	**45.28**	**300**	*e*P	**P**	**23 55 54.0**	**+0.6**
LVC	**Limon Verde**	**45.28**	**300**	P	**P**	**23 55 53.7**	**+0.3**
LVC				IAmb	IAmb	23 55 56.7	
	comp=Z,22nm,0.7s						
PB10	**IPOC Station P**	**45.32**	**298**	P	**P**	**23 55 53.0**	**-0.3**
PB10				IAmb	IAmb	23 55 55.9	
	comp=Z,58nm,1.4s						
PB06	**IPOC Station P**	**45.52**	**300**	P	**P**	**23 55 54.7**	**-0.4**
PB06				IAmb	IAmb	23 55 56.4	
	comp=Z,25nm,1.0s						
SALV	**Santo Antonio**	**45.62**	**320**	*e*P	**P**	**23 55 56.2**	**+0.4**
SDBA	**SAO DESIDERIO**	**45.73**	**336**	*e*P	**P**	**23 55 57.1**	**+0.4**
NBLA	**Lagarto - SE**	**45.80**	**346**	*e*P	**P**	**23 55 57.4**	**+0.3**

SBA	Scott Base	45.95	184	P	P	23 56 00.3	+2.7
SBA				pmax	pmax		
	comp=Z,19nm,1.0s						
SBA	Scott Base	45.95	184	P	P	23 56 00.3	+2.7
SBA				IAmb	IAmb	23 56 01.8	
	comp=Z,19nm,0.9s						
BOSA	Boshof	46.09	76	P	P	23 55 59.3	-0.3
	comp=Z,3.2nm,0.7s,baz=207,slow=7.4,SNR=9.7						
BOSA				LR	LR	00 12 24.0	
	comp=Z,133nm,18.5s,baz=196,slow=32						
BOSA	Boshof	46.09	76	P	P	23 55 59.2	-0.3
PB09	IPOC Station P	46.13	301	P	P	23 56 01.1	+1.2
NBPN	Ponto Novo - B	46.31	342	eP	P	23 56 00.8	-0.4
VNDA	Vanda	46.45	183	P	P	23 56 03.7	+2.2
	comp=Z,25nm,0.7s,baz=187,slow=6.0,SNR=150						
VNDA				ScP	ScP	00 01 20.3	+1.9
	comp=Z,1.1nm,0.8s,baz=216,slow=5.4,SNR=4.5						
VNDA				LR	LR	00 14 03.1	
	comp=Z,104nm,21.1s,baz=164,slow=34						
VNDA	Vanda	46.45	183	P	P	23 56 03.8	+2.2
VNDA				pmax	pmax		
	comp=Z,27nm,0.8s						
VNDA	Vanda	46.45	183	P	P	23 56 03.8	+2.2
VNDA				IAmb	IAmb	23 56 05.2	
	comp=Z,26nm,0.8s						
PEXB	Peixe	46.87	331	eP	P	23 56 06.3	+0.8
NBAN	Anadia - AL	46.91	348	eP	P	23 56 06.0	+0.2
PTLB	Pontes e Lacer	47.32	316	eP	P	23 56 09.1	+0.1
PTLB	Pontes e Lacer	47.32	316	IAmb	IAmb	23 56 10.2	
	comp=Z,35nm,0.9s						
PATCX	Punta Patache	47.40	300	P	P	23 56 10.1	+0.4
PB08	IPOC Station P	47.50	302	IAmb	IAmb	23 56 13.3	
	comp=Z,59nm,1.4s						
TA01	Diego Aracena	47.63	300	P	P	23 56 10.3	-1.1
TA01				IAmb	IAmb	23 56 13.5	
	comp=Z,38nm,1.2s						
SNDB	Serra Nova Dou	47.85	328	eP	P	23 56 14.2	+1.1
H10S2	ASCENSION HYDR	48.14	17	T	T	00 49 05.8	
	baz=189,slow=74,SNR=152						
H10S3	ASCENSION HYDR	48.15	17	T	T	00 49 06.1	
	baz=31,slow=74,SNR=198						
PSGCX	Pisagua	48.43	301	P	P	23 56 17.6	-0.1
PSGCX				IAmb	IAmb	23 56 35.9	
	comp=Z,18nm,1.1s						
H10N1	ASCENSION HYDR	49.26	17	T	T	00 49 42.4	
	baz=194						
H10N3	ASCENSION HYDR	49.26	17	T	T	00 50 29.8	
	baz=194,slow=74						
NBLV	Livramento - P	49.27	347	eP	P	23 56 23.7	-0.4
H10N2	ASCENSION HYDR	49.28	17	T	T	00 50 31.0	
	baz=194,slow=74						
PB12	IPOC Station P	49.37	302	P	P	23 56 25.3	+0.4
PB12				IAmb	IAmb	23 56 27.3	
	comp=Z,25nm,1.1s						
NBMA	Muriti-CE	49.51	345	eP	P	23 56 26.6	+0.7
SMTB	Santa Maria do	49.80	333	eP	P	23 56 29.1	+1.1
PDRB	Porto dos Gac	49.96	321	eP	P	23 56 29.2	-0.1
VILB	Vilhena	50.00	316	eP	P	23 56 29.5	-0.1
VILB	Vilhena	50.00	316	P	P	23 56 29.6	-0.1
NBPV	Pedro Velho	50.02	350	eP	P	23 56 30.1	+0.4
CLDB	Colider	50.32	323	eP	P	23 56 31.9	-0.1
LPAZ	La Paz	50.37	305	P	P	23 56 33.9	+0.9
	comp=Z,13nm,0.4s,baz=143,slow=5.6,SNR=84						
LPAZ				LR	LR	00 17 32.6	
	comp=Z,47nm,21.9s,baz=174,slow=36						
LPAZ	La Paz	50.37	305	P	P	23 56 34.0	+0.9
LPAZ				pmax	pmax		
	comp=Z,24nm,0.7s						
LPAZ	La Paz	50.37	305	eP	P	23 56 33.9	+0.9
LPAZ	La Paz	50.37	305	P	P	23 56 34.0	+0.9
NBPB	Pedra_Branca-C	51.42	344	eP	P	23 56 41.3	+1.1
NBPS	Pedro II - PI	52.84	342	eP	P	23 56 51.7	+0.9
PRPB	Parauapebas	52.95	332	eP	P	23 56 52.8	+1.2
NBMO	Morrinhos-CE	53.68	344	eP	P	23 56 58.4	+1.6
NPGB	Novo Progresso	53.76	325	eP	P	23 56 57.7	+0.2
CASY	Casey	53.83	160	P	P	23 56 58.9	+1.6
ROSB	Rosrio	54.80	339	eP	P	23 57 05.9	+1.0
SAML	Samuel	54.82	315	P	P	23 57 05.2	+0.1
SAML				pmax	pmax		
	comp=Z,24nm,0.9s						
SAML	Samuel	54.82	315	eP	P	23 57 05.3	+0.1
SAML	Samuel	54.82	315	P	P	23 57 05.2	+0.1
SAML				IAmb	IAmb	23 57 06.2	
	comp=Z,24nm,0.8s						
ETMB	Extrema	55.27	311	eP	P	23 57 08.3	-0.1
ETMB	Extrema	55.27	311	IAmb	IAmb	23 57 09.4	
	comp=Z,16nm,0.9s						
TMAB	Tom-Au,PA,Br	56.17	335	eP	P	23 57 16.6	+1.8
ITTB	Itaituba	56.40	325	eP	P	23 57 16.7	+0.2
MALB	Monte Alegre	58.32	328	eP	P	23 57 30.7	+0.7
MCPB	Macapa, AP	59.12	331	eP	P	23 57 36.8	+1.4
MACA	Manacapuru-AM	59.20	320	P	P	23 57 35.4	-0.7
CZSB	Cruzeiro do Su	59.98	305	P	P	23 57 41.0	-0.4
PTGA	Pitinga	61.21	322	LR	LR	00 25 17.9	
	comp=Z,79nm,19.3s,baz=159,slow=37						
PTGA	Pitinga	61.21	322	P	P	23 57 48.9	-0.8
TBTG	Tabatinga, AM	61.90	310	eP	P	23 57 56.4	+2.1
TBTG	Tabatinga, AM	61.90	310	P	P	23 57 52.8	-1.6
TBTG				IAmb	IAmb	23 57 54.2	
	comp=Z,19nm,0.8s						
ATAH	Atahualpa	63.17	300	LR	LR	00 26 43.3	
	comp=Z,60nm,20.4s,baz=149,slow=37						
BOAV	Boa Vista	64.32	323	eP	P	23 58 10.2	-0.1
BOAV	Boa Vista	64.32	323	P	P	23 58 09.6	-0.7
BOAV				IAmb	IAmb	23 58 10.9	
	comp=Z,21nm,0.8s						
MDP	Montagnes des	64.50	332	LR	LR	00 24 01.0	
	comp=Z,80nm,21.4s,baz=168,slow=34						
LIC	Lamto	64.84	25	eP	P	23 58 13.5	-0.2
	comp=Z,32nm,0.7s						
KIC	Kosan Boka	65.04	25	eP	P	23 58 14.6	-0.4
	comp=Z,17nm,0.8s						
TIC	Toumodi	65.25	25	eP	P	23 58 16.2	-0.2
DBIC	Dimbokro	65.31	25	P	P	23 58 17.1	+0.4
	comp=Z,8.3nm,0.8s,baz=189,slow=6.2,SNR=12						
DBIC				LR	LR	00 19 51.6	
	comp=Z,98nm,21.0s,baz=161,slow=30						
OTAV	Otavalo	69.64	304	P	P	23 58 45.7	+1.1
OTAV				pmax	pmax		
	comp=Z,29nm,1.1s						
OTAV	Otavalo	69.64	304	eP	P	23 58 46.2	+1.6
OTAV	Otavalo	69.64	304	eP	P	23 58 46.2	+1.6
OTAV	Otavalo	69.64	304	P	P	23 58 45.7	+1.1
OTAV				IAmb	IAmb	23 58 48.0	
	comp=Z,29nm,1.1s						
SOTA	Rioblanco	70.48	307	eP	P	23 58 51.1	+1.4
ORTC	Ortega, Tolima	71.45	309	eP	P	23 58 55.3	+0.2
ROSC	El Rosal	71.89	310	P	P	23 58 59.0	+0.9
	comp=Z,6.8nm,0.4s,baz=185,slow=12,SNR=8.9						
ROSC				LR	LR	00 30 41.6	
	comp=Z,68nm,21.1s,baz=197,slow=36						
ROSC	El Rosal	71.89	310	P	P	23 58 58.3	+0.2
ROSC				IAmb	IAmb	23 59 00.9	
	comp=Z,16nm,1.0s						
YOTC	Yotoco, Valle	72.00	308	eP	P	23 58 57.5	-1.0
MBAR	Mbarara	72.29	63	i P	P	23 58 57.4	-2.9
SPBC	San Pablo de B	72.51	311	eP	P	23 58 59.5	-2.0
PLMC	San Jos del P	72.80	308	eP	P	23 59 02.3	-0.9
TORD	Torodi Ar. Bea	73.21	30	P	P	23 59 06.0	+0.6
	comp=Z,8.5nm,0.8s,baz=200,slow=6.4,SNR=62						
SDV	Santo Domingo	74.03	315	eP	P	23 59 11.1	+0.7
SDV	Santo Domingo	74.03	315	P	P	23 59 10.5	0.0
SDV				IAmb	IAmb	23 59 11.9	
	comp=Z,25nm,0.8s						
ZARC	Zaragoza, Cauc	74.50	311	eP	P	23 59 11.4	-1.6
KMBO	Kilima Mbogo	75.17	69	P	P	23 59 19.2	+2.0
	comp=Z,0.3nm,0.3s,baz=252,slow=9.6,SNR=1.6						
SJCC	San Jacinto, C	76.79	311	P	P	23 59 26.1	0.0
SJCC				IAmb	IAmb	23 59 27.6	
	comp=Z,29nm,1.0s						
SJG	San Juan	80.88	323	LR	LR	00 34 40.9	
	comp=Z,63nm,21.5s,baz=160,slow=35						
JTS	Las Juntas de	81.50	303	⇑eP	P	23 59 50.3	-1.4
JTS				pmax	pmax		
	comp=Z,33nm,1.2s						
JTS	Las Juntas de	81.50	303	P	P	23 59 51.7	0.0
ACON	Acoyapa	83.07	303	IAmb	IAmb	00 00 02.5	
	comp=Z,44nm,1.1s						
MTO3	Montecristo	87.16	301	P	P	00 00 20.4	-0.1
MTO3				IAmb	IAmb	00 00 21.8	
	comp=Z,17nm,0.8s						
ESQI	Esquipulas	87.29	301	P	P	00 00 20.6	-0.4
STKA	Stephens Creek	91.80	171	P	P	00 00 43.3	+1.4
	comp=Z,1.3nm,0.4s,baz=270,slow=3.0,SNR=4.9						
STKA				LR	LR	00 40 43.0	
	comp=Z,142nm,18.9s,baz=204,slow=35						
ESDC	Sonseca Array	97.52	18	P	Pdif	00 01 09.2	+1.5
	comp=Z,0.6nm,0.8s,baz=200,slow=5.0,SNR=6.2						
ESDC				LR	LR	00 39 44.6	
	comp=Z,57nm,21.6s,baz=195,slow=32						
ASAR	Alice Springs	98.90	163	P	Pdif	00 01 14.9	+0.4
	comp=Z,0.9nm,0.5s,baz=183,slow=3.6,SNR=13						
ASAR				PP	PP	00 05 13.3	-2.9
	comp=Z,0.8nm,0.7s,baz=189,slow=6.9,SNR=6.1						
WRA	Warramunga Arr	102.62	162	P	Pdif	00 01 31.4	+0.4
	comp=Z,0.8nm,0.8s,baz=194,slow=4.5,SNR=3.8						
MIAR	Mount Ida	106.36	308	P	PKiKP	00 05 59.4	+1.7
	baz=148						
WCI	Wyandotte Cave	106.47	315	P	PKiKP	00 05 59.6	+1.8
	baz=150						
N54A	Moraine State	106.51	321	P	PKiKP	00 05 60.0	+2.2
	baz=152						
VYHS	Vyhne	111.19	31	ePKIKP	PKiKP	00 06 17.0	+11
VYHS				pmax	pmax		
	comp=Z,6.0nm,1.1s						
VYHS	Vyhne	111.19	31	eP	PKiKP	00 06 17.0	+11
LANS	Liptovska Anna	111.96	31	ePKIKP	PKiKP	00 06 15.3	+7.5
LANS				pmax	pmax		
	comp=Z,9.0nm,1.4s						
LANS	Liptovska Anna	111.96	31	eP	PKiKP	00 06 15.3	+7.5
CRVS	Cervenica-Dubn	112.33	32	ePKIKP	PKiKP	00 06 13.9	+5.4
CRVS	Cervenica-Dubn	112.33	32	eP	PKiKP	00 06 13.8	+5.3
KOLS	Kolonicke sedl	112.60	33	ePKIKP	PKiKP	00 06 13.6	+4.6
KOLS				pmax	pmax		
	comp=Z,11nm,1.1s						
KOLS	Kolonicke sedl	112.60	33	eP	PKiKP	00 06 13.6	+4.6
STHS	Stebnicka Huta	112.72	32	ePKIKP	PKiKP	00 06 11.9	+2.7
STHS	Stebnicka Huta	112.72	32	eP	PKiKP	00 06 11.8	+2.6
SDCO	Great Sand Dun	114.47	302	P	PKiKP	00 06 14.6	+1.2
	baz=143						
OGNE	Ogallala	115.42	306	P	PKiKP	00 06 16.7	+1.9
	baz=143						
MVCO	Mesa Verde	115.49	299	P	PKiKP	00 06 16.9	+1.6
	baz=142						
WUAZ	Wupatki	115.59	296	P	PKiKP	00 06 16.8	+1.4
	baz=142						
IKP	In-Ko-Pah, Jac	115.77	291	P	PKiKP	00 06 17.2	+1.4
	baz=142						
SWSC	Sam W. Stewart	115.84	291	P	PKiKP	00 06 17.2	+1.5
	baz=142						
PDMCI	Parker Dam,Lak	116.04	293	P	PKiKP	00 06 17.5	+1.4
	baz=142						
ISCO	Idaho Springs	116.16	303	P	PKiKP	00 06 18.1	+1.6
	baz=142						
BC3	Big Chuckawall	116.22	292	P	PKiKP	00 06 18.2	+1.6
	baz=141						
AKASG	Malin Array Be	116.35	36	PKP	PKiKP	00 06 15.6	-0.5
	comp=Z,0.2nm,0.3s,baz=236,slow=1.5,SNR=4.5						
EYMN	Ely	116.72	317	P	PKiKP	00 06 19.0	+2.0
	baz=146						
EDW2	Edwards Air Fo	118.49	291	P	PKiKP	00 06 21.8	+0.9
	baz=140,SNR=7.0						
QSM	Queen of Sheba	118.74	292	PKPdf	PKiKP	00 06 22.5	+1.2
MNK	Minsk	119.17	33	i PKIKP	PKiKP	00 06 20.4	-1.0
MNK				i		00 07 42.6	
MNK				i PPP	PPP	00 10 12.9	
MNK				i		00 13 25.1	
MNK				i PS	PS	00 17 25.7	-6.4
MNK				i SS	SS	00 23 57.0	-0.3
MNK				i SSS	SSS	00 28 28.2	
MNK				pmax	pmax		
	comp=N,15nm,0.9s						
MNK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MNK				pmax	pmax		
	comp=E,5.0nm,1.2s						
MNK				MLR	MLR		
	comp=E,19nm,21.0s						
MNK				MLR	MLR		
	comp=Z,88nm,21.0s						
MNK				MLR	MLR		
	comp=N,97nm,18.0s						
ISA	Isabella, Lake	119.34	291	P	PKiKP	00 06 24.0	+1.4
	baz=140						
PKM	Mcpherson Peak	119.45	289	P	PKiKP	00 06 24.1	+1.1
	baz=140						
CWC	Cottonwood Cre	119.73	292	P	PKiKP	00 06 24.7	+1.3
	baz=140						
DUG	Dugway, Tooele	119.93	298	PKIKP	PKiKP	00 06 24.4	+0.7
DUG	Dugway, Tooele	119.93	298	P	PKiKP	00 06 24.9	+1.3
	baz=140						
DUG	Dugway, Tooele	119.93	298	PKPdf	PKiKP	00 06 24.4	+0.7
ULM	Lac du Bonnet	120.27	316	PKP	PKiKP	00 06 23.1	-0.6
	comp=N,2.1nm,0.7s,baz=188,slow=5.9,SNR=4.0						
PDAR	Pinedale Array	120.33	302	PKP	PKiKP	00 06 23.6	-0.9
	comp=N,0.8nm,0.8s,baz=116,slow=3.4,SNR=4.3						
NOA	NORSAR Array B	120.75	21	PKP	PKiKP	00 06 24.6	+0.1
	comp=N,1.0nm,0.7s,baz=208,slow=2.1,SNR=3.4						
NVAR	Mina Array Bea	121.36	293	PKP	PKiKP	00 06 27.7	+1.1
	comp=N,1.4nm,0.7s,baz=137,slow=3.0,SNR=11						
MOOW	Moose Ponds	121.64	302	PKPdf	PKiKP	00 06 27.6	+0.6
FXWY	Fox Creek	121.69	302	PKPdf	PKiKP	00 06 27.6	+0.5
LAO	LASA Array	121.80	307	P	PKiKP	00 06 27.6	+0.6
	baz=140						
RLMT	Red Lodge	121.98	304	P	PKiKP	00 06 28.6	+1.0
	baz=139						
H17A	Grant Village	122.05	303	P	PKiKP	00 06 28.7	+0.8
	baz=139						
DGMT	Dagmar	122.27	310	P	PKiKP	00 06 29.6	+1.7
	baz=140						
HLID	Hailey	123.25	300	P	PKiKP	00 06 31.6	+1.4
	baz=138						
BOZ	Bozeman (W)	123.44	303	P	PKiKP	00 06 32.0	+1.6
	baz=138						
EGMT	Eagleton	124.38	306	P	PKiKP	00 06 33.3	+1.2
	baz=138						
FINES	FINESS Array B	124.53	28	PKP	PKiKP	00 06 31.8	0.0
	comp=N,3.7nm,0.5s,baz=253,slow=1.4,SNR=49						
O03E	Paynes Creek	124.55	292	P	PKiKP	00 06 33.7	+1.0
	baz=137						
O02D	Mt. Diablo Mer	124.98	291	P	PKiKP	00 06 35.0	+1.4
	baz=137						
CMAR	Chiang Mai Arr	125.11	111	PKP	PKiKP	00 06 34.5	+0.1
	comp=N,0.8nm,0.3s,baz=224,slow=3.8,SNR=1.9						
PLID	Pearl Lake	125.15	300	PKPdf	PKiKP	00 06 34.4	+0.5
MSO	Missoula	125.43	303	P	PKiKP	00 06 35.3	+1.0
	baz=137						
N02D	Trinity Center	125.52	292	P	PKiKP	00 06 36.0	+1.4
	baz=137						
M04C	Macdoel	125.66	293	P	PKiKP	00 06 36.2	+1.3
	baz=137						
M02C	Callahan	125.90	292	P	PKiKP	00 06 36.7	+1.4
	baz=136						
L04D	Klamath Falls	126.21	293	P	PKiKP	00 06 37.1	+1.1
	baz=136						
BTK	Batken	126.33	71	PKIKP	PKiKP	00 06 36.8	+0.5
BTK	Batken	126.33	71	PKPdf	PKiKP	00 06 36.8	+0.5
J05D	Fort Rock, OR	126.44	295	P	PKiKP	00 06 37.8	+1.4
	baz=136						
L02E	Cave Junction	126.84	293	P	PKiKP	00 06 38.4	+1.3
	baz=136						
J04D	Umpqua Nationa	126.85	294	P	PKiKP	00 06 38.4	+1.1
	baz=136						
I05D	Terrebonne, OR	127.25	296	P	PKiKP	00 06 39.0	+1.1
	baz=135						
K02D	Willamette Mer	127.25	293	P	PKiKP	00 06 39.2	+1.2
	baz=136						
I04A	Tendick Farm,	127.40	295	P	PKiKP	00 06 39.5	+1.4
	baz=135						
J01E	Myrtle Point	127.72	293	P	PKiKP	00 06 39.8	+1.1
	baz=135						
I03D	Drain, OR	127.81	294	P	PKiKP	00 06 40.5	+1.5
	baz=135						
G05D	Wamic, OR	127.88	297	P	PKiKP	00 06 40.4	+1.3
	baz=135						
NEW	Newport	127.97	302	P	PKiKP	00 06 40.2	+1.0
	baz=135						
KLMR	Klimovskoe	127.97	35	ePKIKP	PKiKP	00 06 37.2	-1.5
KLMR				pmax	pmax		
	comp=Z,17nm,1.4s						
KLMR	Klimovskoe	127.97	35	ePKPdf	PKiKP	00 06 37.2	-1.5
KLMR				AMP		00 06 41.0	
	comp=Z,17nm,1.4s						
H04D	Lebanon	128.08	295	P	PKiKP	00 06 40.7	+1.3
	baz=135						
I02E	Swisshome, OR	128.35	294	P	PKiKP	00 06 40.8	+0.8
	baz=135						
G03D	McMinnville, O	128.83	295	P	PKiKP	00 06 42.2	+1.3
	baz=134						
E04D	Cinebar	129.42	297	P	PKiKP	00 06 43.6	+1.5
	baz=134						
D03D	Eldon	130.35	298	P	PKiKP	00 06 45.6	+1.7
	baz=133						
B05A	Bryant	130.36	299	P	PKiKP	00 06 44.8	+0.9
	baz=133						
QIZ	Qiongzhong	131.06	122	PKP	PKiKP	00 06 46.1	-0.1
QIZ				PP	PP	00 08 55.1	-8.2
QIZ	Qiongzhong	131.06	122	SS	SS	00 26 28.6	+2.2
QIZ				LR	LR		
	comp=N,130nm,15.7s						
QIZ				LR	LR		
	comp=E,220nm,16.7s						
QIZ				LR	LR		
	comp=Z,270nm,16.0s						
ARCES	ARCESS Array B	131.09	22	PKP	PKiKP	00 06 44.0	-0.7
	comp=Z,2.8nm,0.6s,baz=222,slow=3.4,SNR=23						
ARU	Arti	131.85	48	i PKIKP	PKiKP	00 06 45.3	-1.3
BRVK	Borovoye	134.90	58	i PKIKP	PKiKP	00 06 51.3	-1.6
GYA	Guiyang	135.71	113	⇓PKP	PKiKP	00 06 55.6	0.0
GYA				PP	PP	00 09 36.0	+2.8
GYA				SKKS		00 16 26.1	
GYA				AMB	AMB		
	comp=Z,98nm,4.6s						
GYA				LR	LR		
	comp=N,79nm,4.1s						
GYA				LR	LR		
	comp=E,82nm,3.8s						
GYA				LR	LR		
	comp=Z,72nm,4.2s						
YKA	Yellowknife Ar	136.20	318	PKP	PKiKP	00 06 52.6	-2.7
	comp=Z,2.0nm,0.6s,baz=119,slow=3.9,SNR=8.5						
MK31	Makanchi Array	137.01	72	i PKIKP	PKPdf	00 06 53.1	-2.5
MKAR	Makanchi Array	137.01	72	PKP	PKiKP	00 06 55.6	-1.8
	comp=Z,0.6nm,0.7s,baz=212,slow=1.1,SNR=5.1						
MKAR				SKP		00 10 20.4	
	comp=Z,1.0nm,0.8s,baz=246,slow=2.4,SNR=6.5						
KURK	Kurchatov	137.54	65	i PKIKP	PKPdf	00 06 55.0	-1.4
WMQ	Urumqi	138.02	79	eP	PKiKP	00 06 59.8	+0.1
WMQ				pmax	pmax		
	comp=Z,160nm,5.5s						
DGZ	Jazzator, Alta	141.51	71	i PKIKP	PKiKP	00 07 05.0	-1.8
ZALV	Zalesovo Beam	142.51	64	PKP	PKPdf	00 07 04.7	-0.6
	comp=Z,0.9nm,0.4s,baz=250,slow=4.9,SNR=4.1						
ZALV				SKPbc	SKiKP	00 10 34.8	-0.3
	comp=Z,0.3nm,0.5s,baz=240,slow=2.8,SNR=3.8						
A36M	Sachs Harbour	144.26	328	PKPdf	PKPdf	00 07 07.3	-0.6
N31M	Braeburn, Yuko	144.30	309	P	PKPdf	00 07 07.9	-0.4
	baz=114						
HYT	Haines Junctio	144.79	307	P	PKiKP	00 07 09.9	-3.2
	baz=114						
PNL	Peninsula	145.16	305	P	PKiKP	00 07 10.9	-2.8
	baz=115						
M30M	Minto, Yukon	145.18	310	P	PKiKP	00 07 10.7	-3.0
	baz=112						
YUK4	Talbot Arm	145.50	308	P	PKiKP	00 07 11.8	-2.9
	baz=113,SNR=14						
PINM	Pinnacle	145.73	305	P	PKiKP	00 07 12.2	-2.8
	baz=114,SNR=5.4						
INK	Inuvik	145.84	321	PKPbc	PKiKP	00 07 12.2	-2.6
	comp=Z,37nm,0.7s,baz=77,slow=3.2,SNR=93						
INK	Inuvik	145.84	321	P	PKiKP	00 07 12.2	-2.6
	baz=107,SNR=33						
INK	Inuvik	145.84	321	PKPdf	PKiKP	00 07 11.5	-3.3
NJ2	Nanjing	146.36	122	eP	PKiKP	00 07 15.0	-2.1
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
YUK3	Moose Creek	146.47	308	P	PKiKP	00 07 14.3	-2.4
	baz=111,SNR=5.7						
MESA	MESA	146.54	304	P	PKiKP	00 07 15.1	-1.7
	baz=112						
CTG	Chitna Glacier	146.57	306	P	PKiKP	00 07 14.8	-1.9
	baz=112,SNR=6.8						
I29M	Ogilvie Camp,	146.76	314	P	PKiKP	00 07 14.4	-2.5
	baz=108,SNR=18						
DAWY	Dawson	146.80	312	P	PKiKP	00 07 14.9	-2.1
	baz=109,SNR=28						
DAWY	Dawson	146.80	312		PKiKP	00 07 15.0	-2.1
BVCY	Beaver Creek	146.88	309	P	PKiKP	00 07 16.1	-1.1
	baz=110						
BGLC	Bering Glacier	147.14	304	P	PKiKP	00 07 16.5	-1.2
	baz=112						
CRQE	Cirque	147.28	305	P	PKiKP	00 07 16.9	-1.3
	baz=111						
M27K	Edge Creek, AK	147.30	308	P	PKiKP	00 07 16.7	-1.6
	baz=109,SNR=7.3						
MCARA	McCarthy VSAT	147.48	306	P	PKPab	00 07 17.3	-1.5
	baz=110						
BCAR	Beaver Creek A	147.49	310		PKPab	00 07 17.0	-1.9
L27K	Beaver Creek,	147.51	309	P	PKPab	00 07 17.2	-1.7
	baz=108,SNR=15						
L27K	Beaver Creek,	147.51	309		PKPab	00 07 17.3	-1.6
KAIM	Kayak Island	147.60	303	P	PKPab	00 07 18.2	-1.1
	baz=112						
VRDI	Verde Repeater	147.62	306		PKPab	00 07 18.0	-1.6
EGAK	Eagle	147.75	313	P	PKiKP	00 07 17.1	-1.8
	baz=106,SNR=7.1						
GLB	Gilahina Butte	147.85	306		PKPab	00 07 18.6	-1.8
BMRM	Bremner River	148.05	305	P	PKPab	00 07 18.8	-2.4
	baz=110,SNR=5.8						
BMRM	Bremner River	148.05	305		PKPab	00 07 19.4	-1.8
L26K	Log Cabin Wild	148.16	309	P	PKPab	00 07 19.1	-2.4
	baz=108,SNR=9.6						
N25K	Chitina, Valde	148.26	306	P	PKPab	00 07 19.8	-2.3
	baz=109						
Q23K	Middleton Isla	148.33	302	P	PKPab	00 07 19.7	-2.4
	baz=111						
EYAK	Cordova Ski Ar	148.44	304	P	PKPab	00 07 20.3	-2.3
	baz=110						
J26L	Joseph Creek	148.67	312	P	PKPab	00 07 20.5	-3.1
	baz=105,SNR=20						
SCRK	Sand Creek	148.71	311	P	PKPab	00 07 20.7	-3.1
	baz=106,SNR=19						
SCRK	Sand Creek	148.71	311		PKPab	00 07 20.7	-3.1
HARP	HAARP	148.76	307	P	PKPab	00 07 21.0	-3.0
	baz=107						
KLU	Klutina	148.83	306	P	PKPab	00 07 21.1	-3.2
	baz=108,SNR=16						
RIDG	Independent Ri	149.01	310	P	PKPab	00 07 21.7	-3.3
	baz=105,SNR=6.4						
PAX	Paxson	149.07	308	P	PKiKP	00 07 21.3	-0.5
	baz=106,SNR=16						
M24K	Tolsona, Glenn	149.13	307	P	PKPab	00 07 22.4	-3.2
	baz=107,SNR=7.2						
NRIK	Noril'sk	149.16	39	PKPbc	PKPab	00 07 21.8	-3.6
	comp=Z,1.6nm,0.4s,baz=302,slow=0.8,SNR=7.6						
NRIK	Noril'sk	149.16	39	PKIKP	PKiKP	00 07 19.5	-2.2
NRIK	Noril'sk	149.16	39		PKiKP	00 07 19.5	-2.2
GLI	Glacier Island	149.17	304	P	PKPab	00 07 21.8	-3.8
	baz=108						
HHC	Hu-ho-hao-te	149.31	102	eP	PKPdf	00 07 16.0	-1.5
J25K	Salcha River,	149.45	312	P	PKiKP	00 07 22.3	-0.2
	baz=104,SNR=9.8						
SCM	Sheep Creek Mo	149.57	306	P	PKiKP	00 07 23.0	+0.2
	baz=107,SNR=6.8						
BMAR	Burnt Mountain	149.71	317		PKiKP	00 07 23.1	+0.2
PRP	Porcupine Dome	149.72	313	P	PKiKP	00 07 22.9	-0.2
	baz=102,SNR=9.5						
DHY	Denali Highway	149.93	308	P	PKiKP	00 07 24.0	+0.3
	baz=105						
KNK	Knik Glacier	149.97	305	P	PKiKP	00 07 23.6	0.0
	baz=107,SNR=6.1						
WAT6	Susitna Watana	149.97	307	P	PKiKP	00 07 23.9	+0.2
	baz=105						
SML	Sawmill	150.02	305	P	PKiKP	00 07 23.7	0.0
	baz=106,SNR=10						
SEW	Seward	150.03	302	P	PKiKP	00 07 23.7	0.0
	baz=108						
SEW	Seward	150.03	302		PKiKP	00 07 24.0	+0.3
HDA	Harding Lake	150.07	311	P	PKiKP	00 07 23.6	-0.2
	baz=103						
ILAR	Eielson Array	150.12	312	PKPbc	PKiKP	00 07 23.5	-0.3
	comp=Z,39nm,0.8s,baz=134,slow=1.9,SNR=135						
PMR	Palmer	150.33	305	P	PKiKP	00 07 24.6	+0.3
	baz=106						
WAT1	Susitna Watana	150.39	307	P	PKiKP	00 07 24.6	+0.1
	baz=104						
POKR	Poker Plat Res	150.42	312	P	PKiKP	00 07 23.9	-0.5
	baz=101,SNR=7.1						
ZAK	Zakamensk	150.46	80	ePKIKP	PKiKP	00 07 23.3	-1.8
ZAK				e		00 07 42.3	
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.7s						
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.5s						
RC01	Rabbit Creek A	150.46	304	P	PKiKP	00 07 25.0	+0.4
	baz=106						
BRSE	Bradley Lake S	150.53	301	P	PKiKP	00 07 25.2	+0.4
	baz=108						

COLA	College	150.55	312	P	PKiKP	00 07 24.8	+0.2
	baz=101						
TCOL	CIGO, UAF Yank	150.55	312	P	PKiKP	00 07 24.6	-0.1
	baz=101						
RND	Reindeer	150.66	308	PKIKP	PKiKP	00 07 26.0	+0.9
RND	Reindeer	150.66	308		PKiKP	00 07 26.0	+0.9
H24K	Noodor Dome	150.74	313	P	PKiKP	00 07 25.2	+0.1
	baz=100						
MCK	McKinley	150.77	309	P	PKiKP	00 07 25.6	+0.4
	baz=102						
KDAK	Kodiak Island	150.78	296	PKIKP	PKiKP	00 07 26.0	+0.7
KDAK	Kodiak Island	150.78	296	P	PKiKP	00 07 25.8	+0.4
	baz=110						
KDAK	Kodiak Island	150.78	296		PKiKP	00 07 26.0	+0.7
M22K	Willow	150.82	305	P	PKiKP	00 07 25.6	+0.3
	baz=105,SNR=7.2						
SONM	Songino Array	150.83	87	PKPbc	PKiKP	00 07 25.7	-0.3
	comp=Z,1.7nm,0.4s,baz=223,slow=3.4,SNR=31						
SONM	Songino Array	150.83	87		PKiKP	00 07 25.9	-0.1
OHAK	Old Harbor	150.94	295	P	PKiKP	00 07 26.1	+0.5
	baz=111						
OHAK	Old Harbor	150.94	295		PKiKP	00 07 26.4	+0.8
HOM	Homer	150.94	300	P	PKiKP	00 07 25.7	+0.1
	baz=108						
NEA2	Nenana	151.01	311	P	PKiKP	00 07 25.5	-0.1
	baz=101						
SUA	Susitna One	151.04	304	P	PKiKP	00 07 26.1	+0.2
	baz=105						
CUT	Chulitna	151.06	306	P	PKiKP	00 07 26.1	+0.3
	baz=104,SNR=12						
SII	Sitkinak Islan	151.15	293	P	PKiKP	00 07 26.7	+0.5
	baz=112						
I23K	Minto, Yukon-K	151.23	312	P	PKiKP	00 07 25.8	-0.2
	baz=100,SNR=5.6						
TRF	Thorofare Moun	151.30	308	P	PKiKP	00 07 26.9	+0.4
	baz=102						
H23K	Yukon River	151.41	313	P	PKiKP	00 07 26.7	+0.2
	baz=98						
SKT	Skwentna	151.53	305	P	PKiKP	00 07 27.1	+0.3
	baz=104,SNR=17						
SPCR	Spurr Chakacha	151.65	303	P	PKiKP	00 07 27.3	+0.1
	baz=105						
TOLK	Toolik Lake Re	151.71	319	P	PKiKP	00 07 27.5	+0.5
	baz=93						
TOLK	Toolik Lake Re	151.71	319		PKiKP	00 07 27.6	+0.6
P19K	Oil Pt	151.71	300	P	PKiKP	00 07 27.2	0.0
	baz=107						
BPAW	Bear Paw Mtn.	151.74	309	P	PKiKP	00 07 27.4	+0.2
	baz=100,SNR=24						
BPAW	Bear Paw Mtn.	151.74	309		PKiKP	00 07 27.4	+0.2
MLY	Manley	151.79	311	P	PKiKP	00 07 27.9	+0.6
	baz=99						
COLD	Coldfoot	151.84	316	P	PKiKP	00 07 28.3	+1.0
	baz=95						
COLD	Coldfoot	151.84	316		PKiKP	00 07 28.6	+1.3
PPLA	Purkeypile	152.03	307	P	PKiKP	00 07 28.3	+0.3
	baz=102						
CAST	Castle Rocks	152.09	308	P	PKiKP	00 07 27.8	-0.1
	baz=101,SNR=8.0						
CHUM	Lake Minchumin	152.27	309	P	PKiKP	00 07 28.6	+0.3
	baz=100,SNR=5.5						
O19K	Port Alsworth	152.39	301	P	PKiKP	00 07 28.6	0.0
	baz=105						
P18K	Big Mountain,	152.61	299	P	PKiKP	00 07 29.2	0.0
	baz=106						
N19K	Bonanza Creek	152.62	302	P	PKiKP	00 07 29.0	-0.2
	baz=104						
O18K	Koktuh Hills	152.73	300	P	PKiKP	00 07 29.3	0.0
	baz=105						
H21K	Melozitna Rive	152.73	313	P	PKiKP	00 07 30.0	+0.8
	baz=96						
M19K	Big River Lodg	152.83	304	P	PKiKP	00 07 29.8	+0.3
	baz=102						
K20K	Telida	152.96	307	P	PKiKP	00 07 29.9	+0.2
	baz=99,SNR=5.1						
J20K	Nowinta River	153.12	309	P	PKiKP	00 07 30.5	+0.6
	baz=98						
IMAR	Indian Mountai	153.15	313		PKiKP	00 07 30.6	+0.6
CHGN	Chignik	153.25	291	P	PKiKP	00 07 31.2	+0.7
	baz=110						
CHNA	Chernabura Isl	153.33	287	P	PKiKP	00 07 32.9	+2.3
	baz=112						
TTA	Tatalina	153.76	306	P	PKiKP	00 07 33.4	+1.9
	baz=99						
A21K	Barrow	154.00	325	P	PKiKP	00 07 34.0	+2.5
	baz=81						

NNC 08 23:50:16.3±5.6**, 36°.95N×70°.55E, h0^{km}, mb3.7, mpv3.3, 4C-2D, Error ellipse: s-maj=44.0km s-min=38.6km az=165.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	6.14	360	⇓P	Pn	23 51 49.0	+0.7
	0.5nm,0.2s,baz=175,slow=12,SNR=9.3						
KK31				⇑S	Sn	23 52 59.5	+0.3
	0.5nm,0.3s,baz=180,slow=22,SNR=3.8						
AAK	Ala-Archa	6.44	27	⇑P	Pn	23 51 52.6	+0.1
	1.3nm,0.7s						
AAK				⇑S	Sn	23 53 09.9	+3.2
	2.8nm,0.7s						
TKM2	Tokmak 2	7.11	31	⇑P	Pn	23 52 00.7	-1.0
	1.8nm,0.5s						
TKM2				⇓S	Sn	23 53 23.4	+0.1
	1.2nm,0.6s						

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*IDC **08** 23:55:19.1±1.4, 37°.05N×22°.79E, h0^{km}, mb3.6/6, mb1 3.6/8, mb1mx3.5/32, mbtmp3.5/8, ML3.1/2, Error ellipse: s-maj=31.3km s-min=22.2km az=163.0*

*ATH **08** 23:55:20.9, 36°.88N×22°.72E, h18^{km}±2^{km}, ML3.1/29, Error ellipse: s-maj=2.3km s-min=0.8km az=138.0*

*THE **08** 23:55:20.9, 36°.90N×22°.70E, h6^{km}±1^{km}, ML3.1/9, Error ellipse: s-maj=1.3km s-min=0.4km az=221.0*

ISC 08 23:55:20.7±0.9**, 36°.90N**±0°.02×**22°.69E**±0°.02**, h15^{km}**±6^{km}**, n78, σ0^{s}.74**/101**, mb3.5**/6**, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLI	Veliai	0.27	132	P	Pg	23 55 26.4	0.0
VLI				S	Sg	23 55 29.9	-0.4
	9µm,0.3s						
VLI	Veliai	0.27	132	P	Pg	23 55 26.4	0.0
VLI				S	Sg	23 55 30.3	+0.1
VLI				AML	AML	23 55 30.8	
	comp=N,17173µm,0.4s						
VLI				AML	AML	23 55 31.3	
	comp=E,19558µm,0.2s						
MNVA	Monemvasia	0.35	127	P	Pg	23 55 27.6	-0.3
MNVA				S	Sg	23 55 32.2	-0.5
MNVA				AML	AML	23 55 32.8	
	comp=E,5275µm,0.3s						
MNVA				AML	AML	23 55 33.5	
	comp=N,4913µm,0.2s						
ITM	Ithomi	0.67	295	P	Pg	23 55 33.8	-0.1
ITM	Ithomi	0.67	295	P	Pg	23 55 33.8	-0.1
ITM				AML	AML	23 55 48.6	
	comp=N,2446µm,0.5s						
ITM				AML	AML	23 55 48.8	
	comp=E,2111µm,0.4s						
KTHR	Kythira	0.68	158	P	Pg	23 55 33.9	-0.1
KTHR				S	Sb	23 55 43.9	+0.2
	comp=E,3µm,0.3s						
KTHA	Kythira Island	0.71	155	P	Pg	23 55 34.5	0.0
KTHA				S	Sb	23 55 44.9	+0.6
	comp=E,2µm,0.3s						
KTHA	Kythira Island	0.71	155	P	Pg	23 55 33.9	-0.5
KTHA				S	Sg	23 55 42.8	-1.0
KTHA				AML	AML	23 55 47.1	
	comp=E,5318µm,0.3s						
KTHA				AML	AML	23 55 47.1	
	comp=N,2982µm,0.4s						
PYL	PYLOS	0.76	270	P	Pg	23 55 35.1	-0.4
PYL				S	Sb	23 55 46.1	+0.2
	comp=N,1µm,0.3s						
PYL	PYLOS	0.76	270	P	Pg	23 55 35.0	-0.5
PYL				S	Sg	23 55 45.2	-0.3
PYL				AML	AML	23 55 50.4	
	comp=E,2666µm,0.3s						
PYL				AML	AML	23 55 50.5	
	comp=N,2260µm,0.3s						
EPID	Epidavros	0.79	25	P	Pg	23 55 36.2	+0.1
EPID				S	Sg	23 55 45.8	-0.8
GUR	Goura	1.07	345	P	Pb	23 55 40.6	-0.5
GUR	Goura	1.07	345	P	Pb	23 55 40.3	-0.8
GUR				AML	AML	23 56 00.6	
	comp=E,4361µm,0.3s						
GUR				AML	AML	23 56 05.2	
	comp=N,4502µm,0.3s						
THAL	Thalero	1.14	359	P	Pb	23 55 42.0	-0.1
THAL				AML	AML	23 56 02.0	
	comp=N,4430µm,0.4s						
THAL				AML	AML	23 56 09.1	
	comp=E,6256µm,0.3s						
ANKY	Antikythira Is	1.14	154	P	Pb	23 55 42.2	+0.1
ANKY	Antikythira Is	1.14	154	P	Pb	23 55 41.9	-0.2
ANKY				AML	AML	23 55 59.3	
	comp=E,2036µm,0.3s						
ANKY				AML	AML	23 56 01.7	
	comp=N,1950µm,0.4s						
LTK	Loutraki	1.15	11	P	Pb	23 55 42.5	+0.2
LTK				S	Sn	23 55 58.3	+0.5
	comp=N,915nm,0.4s						
LTK	Loutraki	1.15	11	P	Pb	23 55 42.4	+0.2
LTK				S	Sb	23 55 57.5	+0.5
LTK				AML	AML	23 56 02.5	
	comp=E,1708µm,0.4s						
LTK				AML	AML	23 56 05.1	
	comp=N,2127µm,0.5s						
KLV	Kalavryta, Ach	1.22	340	P	Pn	23 55 43.1	-0.3
KLV				S	Sg	23 56 00.8	+0.6
	comp=N,445nm,0.5s						
KLV	Kalavryta, Ach	1.22	340	P	Pn	23 55 43.0	-0.3
KLV				S	Sb	23 55 59.5	+0.3
KLV				AML	AML	23 56 04.4	
	comp=E,1095µm,0.5s						
KLV				AML	AML	23 56 12.0	
	comp=N,884µm,0.6s						
VLY	Voula,Athens	1.30	42	P	Pn	23 55 44.2	-0.1
VLY				S	Sg	23 56 02.8	+0.2
	comp=N,1µm,0.3s						
VLY	Voula,Athens	1.30	42	P	Pn	23 55 44.2	-0.1
VLY				AML	AML	23 56 05.0	
	comp=E,2696µm,0.4s						
VLY				AML	AML	23 56 05.2	
	comp=N,2006µm,0.4s						
DRO	Drossia	1.31	324	P	Pn	23 55 45.1	+0.5
DRO	Drossia	1.31	324	P	Pn	23 55 44.8	+0.2
DRO				S	Sg	23 56 03.0	0.0
DRO				AML	AML	23 56 15.3	
	comp=E,1187µm,0.6s						
DRO				AML	AML	23 56 16.2	
	comp=N,1582µm,0.4s						
ATH	Athens Observa	1.35	37	P	Pn	23 55 45.3	+0.3
ATH				S	Sg	23 56 04.0	-0.2
	comp=N,582nm,0.3s						
ATH	Athens Observa	1.35	37	P	Pn	23 55 44.7	-0.3
ATH				AML	AML	23 56 07.2	
	comp=N,981µm,0.3s						
ATH				AML	AML	23 56 08.4	
	comp=E,1371µm,0.4s						
ATHU	Athens Univers	1.38	39	P	Pn	23 55 46.0	+0.5
ATHU	Athens Univers	1.38	39	P	Pn	23 55 45.3	-0.1
ATHU				AML	AML	23 56 07.5	
	comp=E,358µm,0.5s						
ATHU				AML	AML	23 56 08.6	
	comp=N,478µm,0.4s						
MHLO	Agia Marina, M	1.39	98	P	Pn	23 55 45.8	+0.2
MHLO				S	Sb	23 56 04.8	+0.8
MHLO	Agia Marina, M	1.39	98	P	Pn	23 55 45.9	+0.2
MHLO				AML	AML	23 56 09.0	
	comp=N,6590µm,0.4s						
MHLO				AML	AML	23 56 10.3	
	comp=E,8498µm,0.5s						
VIL2	Platees	1.39	19	P	Pn	23 55 45.5	-0.2
VIL2				AML	AML	23 56 08.8	
	comp=E,1640µm,0.4s						
VIL2				AML	AML	23 56 14.3	
	comp=N,929µm,0.5s						
ALIK	Aliki, Aigiali	1.44	342	P	Pb	23 55 47.3	+0.1
LAKA	Lakka	1.46	337	P	Pn	23 55 47.1	+0.5
LAKA				AML	AML	23 56 15.3	
	comp=E,1595µm,0.6s						
LAKA				AML	AML	23 56 16.6	
	comp=N,3073µm,0.8s						
PTL	Penteli	1.48	39	P	Pn	23 55 46.9	0.0
PTL				S	Sb	23 56 07.4	+0.7
	comp=N,685nm,0.5s						
PTL	Penteli	1.48	39	P	Pn	23 55 47.1	+0.2
PTL				S	Sn	23 56 06.3	+0.2
PTL				AML	AML	23 56 11.0	
	comp=E,1846µm,0.7s						
PTL				AML	AML	23 56 14.5	
	comp=N,1046µm,0.5s						
RLS	Riolos of Patr	1.51	320	P	Pn	23 55 48.2	+0.9
RLS	Riolos of Patr	1.51	320	P	Pn	23 55 48.2	+0.9
RLS				AML	AML	23 56 19.9	
	comp=E,476µm,0.5s						
RLS				AML	AML	23 56 22.4	
	comp=N,1018µm,0.8s						
DION	Dionisos Attik	1.54	40	P	Pn	23 55 48.0	+0.3
DION	Dionisos Attik	1.54	40	P	Pn	23 55 47.9	+0.2
DION				AML	AML	23 56 14.9	
	comp=E,2016µm,0.5s						
DION				AML	AML	23 56 18.1	
	comp=N,1311µm,0.6s						
TRIZ	Trizonia	1.55	342	P	Pb	23 55 48.9	-0.2
UPR	University Cam	1.56	333	P	Pb	23 55 49.2	-0.1
VTN	Vitineika	1.57	311	P	Pg	23 55 50.7	-0.2
SERG	Sergoula	1.59	342	P	Pb	23 55 49.8	-0.2
EFP	Efpalio	1.65	338	P	Pb	23 55 50.8	0.0
EFP				AML	AML	23 56 24.5	
	comp=E,407µm,0.5s						
EFP				AML	AML	23 56 26.4	
	comp=N,611µm,0.8s						
LTHK	Lithakia	1.69	299	P	Pb	23 55 51.4	0.0
LKR	Lokris	1.77	8	P	Pn	23 55 51.2	+0.4
LKR	Lokris	1.77	8	P	Pn	23 55 51.2	+0.4
LKR				AML	AML	23 56 14.1	
	comp=E,555µm,0.3s						
LKR				AML	AML	23 56 16.6	
	comp=N,551µm,0.4s						
IMMV	Iera Moni Meta	1.77	144	P	Pn	23 55 51.3	+0.4
IMMV	Iera Moni Meta	1.77	144	P	Pn	23 55 51.0	+0.1
IMMV				AML	AML	23 56 17.3	
	comp=N,1400µm,0.3s						
IMMV				AML	AML	23 56 31.1	
	comp=E,1205µm,0.7s						
KARY	Karystos	1.79	50	P	Pn	23 55 51.2	0.0
VAM	Vamos	1.93	140	P	Pn	23 55 53.5	+0.5
VAM	Vamos	1.93	140	P	Pn	23 55 53.4	+0.4
VAM				AML	AML	23 56 23.3	
	comp=E,921µm,0.2s						
VAM				AML	AML	23 56 29.4	
	comp=N,1166µm,0.4s						
PVO	Paravola	1.95	332	P	Pb	23 55 56.5	+0.5
PVO				AML	AML	23 56 31.0	
	comp=N,924µm,0.4s						
PVO				AML	AML	23 56 39.5	
	comp=E,579µm,0.7s						
PSDA	Pessada-Kefalo	2.07	307	P	Pb	23 55 58.1	+0.1
VLS	Valsamata	2.10	308	P	Pb	23 55 58.9	+0.3
EVR	Evrytania	2.13	341	P	Pb	23 55 58.0	-1.2
EVR				AML	AML	23 56 36.6	
	comp=E,402µm,0.7s						
EVR				AML	AML	23 56 44.0	
	comp=N,493µm,0.7s						
MAKR	Makrakomi, Fth	2.16	348	P	Pn	23 55 58.1	+1.9
MAKR				AML	AML	23 56 37.4	
	comp=N,198µm,0.5s						
MAKR				AML	AML	23 56 41.6	
	comp=E,296µm,0.9s						
KEF4	Livadi, Kephal	2.25	308	P	Pb	23 56 01.9	+0.7
GVD	Gavdhos	2.35	151	P	Pb	23 56 02.2	-0.5
GVD				AML	AML	23 56 46.0	
	comp=N,509µm,0.5s						
GVD				AML	AML	23 56 50.1	
	comp=E,472µm,0.4s						
NYDR	Nydri-Lefkada	2.40	320	P	Pb	23 56 04.2	+0.6
LKD2	Lefkada island	2.48	320	P	Pb	23 56 04.8	-0.2
LKD2				AML	AML	23 56 48.0	
	comp=N,298µm,0.9s						
LKD2				AML	AML	23 56 55.0	
	comp=E,266µm,0.5s						
DBRK	Dubrovnik	6.74	330	ePn	Pn	23 56 59.0	-0.2
STON	Ston	7.09	329	ePn	Pn	23 57 03.9	0.0
MAKA	Makarska	7.72	328	ePn	Pn	23 57 11.9	-0.6
MAKA				Sn	Sn	23 58 37.9	-1.9
RICI	Ricice	7.84	329	ePn	Pn	23 57 14.7	+0.4
RICI				Sn	Sn	23 58 41.1	-1.6
HVAR	Hvar	7.89	325	ePn	Pn	23 57 13.2	-1.7
KIJV	Kijevo	8.56	328	ePn	Pn	23 57 24.3	+0.1
KIJV				Sn	Sn	23 58 58.6	-1.9
ZIRJ	Zirje	8.63	324	ePn	Pn	23 57 25.3	+0.2
ZIRJ				Sn	Sn	23 58 58.9	-3.3
MORI	Morici	8.76	325	ePn	Pn	23 57 27.7	+0.8
BRTR	Keskin Array B	9.06	69	Pn	Pn	23 57 32.6	+1.5
	comp=E,0.0nm,0.3s,baz=258,slow=14,SNR=2.1						
DUGI	Dugi Otok	9.16	323	ePn	Pn	23 57 32.9	+0.5
GERES	GERESS Array B	13.63	334	Pn	Pn	23 58 33.3	-0.2
	comp=E,0.1nm,0.3s,baz=159,slow=8.4,SNR=1.9						
ESDC	Sonseca Array	21.08	286	P	P	00 00 05.9	+1.4
	comp=E,0.6nm,1.0s,baz=81,slow=12,SNR=4.1						
FINES	FINESS Array B	24.66	4	P	P	00 00 39.2	-1.4
	comp=E,7.8nm,1.2s,baz=163,slow=8.0,SNR=2.3						
NOA	NORSAR Array B	25.23	347	P	P	00 00 45.8	-0.1
	comp=E,0.7nm,0.7s,baz=160,slow=9.9,SNR=2.3						
TORD	Torodi Ar. Bea	30.21	224	P	P	00 01 32.7	+1.9
	comp=E,0.3nm,0.6s,baz=33,slow=10,SNR=2.1						
MKAR	Makanchi Array	44.52	58	P	P	00 03 30.9	-0.7
	comp=E,0.2nm,0.3s,baz=270,slow=8.1,SNR=14						
ZALV	Zalesovo Beam	45.27	47	P	P	00 03 36.6	-0.9
	comp=E,2.2nm,0.3s,baz=270,slow=8.6,SNR=11						

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*IDC **09** 00:15:41.0±1.2, 24°.31N×121°.57E, h0^{km}, mb3.7/4, mb1 3.9/5, mb1mx3.6/40, mbtmp3.7/5, ML3.8/1, MS3.5/4, Ms1 3.5/4, ms1mx2.7/46, Error ellipse: s-maj=69.6km s-min=21.0km az=69.0*

*NIED **09** 00:15:51.0, 24°.68N×122°.34E, h98^{km}, MW3.8, Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M_{rr}0.19; $M_{\theta\theta}$-0.12; $M_{\phi\phi}$-0.07; $M_{r\theta}$-1.24; $M_{\theta\phi}$2.06; $M_{\phi r}$-4.76; Fault plane solution: $M_0$5.27000×10^{14} NP1:ϕ_s9.00000°, δ89.00000°, λ-112.00000°. NP2:ϕ_s278.00000°, δ22.00000°, λ-1.00000°.*

*JMA **09** 00:15:50.9±0.2, 24°.68N×122°.34E, h98^{km}±2^{km}, M3.8*

*TAP **09** 00:15:51.6, 24°.68N×122°.37E, h95^{km}, ML4.4, C*

*NEIC **09** 00:15:52.1±1.9, 24°.59N±0°.05×122°.41E±0°.05, h87^{km}±7^{km}, mb4.4/5, ML4.6(TAP), Error ellipse: s-maj=8.1km s-min=5.7km az=150.0*

ISC 09 00:15:51.5±0.7**, 24°.67N**±0°.03×**122°.37E**±0°.02**, h98^{km}**±5^{km}**, n145, σ0^{s}.94**/236**, mb4.1**/6**, 23C-1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	Suao	0.48	263	⇑iP	Pn	00 16 06.6	-0.3
	baz=261						
TWC				S	Sn	00 16 17.0	-1.5
	baz=261						
TWB1	Santiao Chiao	0.49	314	i P	Pn	00 16 06.8	-0.2
	baz=308						
TWB1				eS	Sn	00 16 17.5	-1.0
	baz=308						
NTC	Toucheng	0.53	291	P	Pn	00 16 07.0	-0.2
	baz=289						
NTC				eS	Sn	00 16 18.5	-0.6
	baz=289						
JYNG	Yonagunijimaku	0.56	112	P	Pn	00 16 07.6	+0.1
JYNG				S	Sn	00 16 19.4	-0.1
ILA	Ilan	0.58	280	P	Pn	00 16 07.8	+0.2
	baz=278						
ILA				eS	Sn	00 16 18.8	-0.9
	baz=278						
TIPB	Shuangxi	0.58	301	⇑iP	Pn	00 16 07.6	-0.1
	baz=295						
TIPB				S	Sn	00 16 18.9	-1.0
	baz=295						
EWUT	Wuta	0.59	248	⇑P	Pn	00 16 08.0	+0.3
	baz=246						
EWUT				eS	Sn	00 16 19.6	-0.2
	baz=246						
NDS	Dongshan	0.60	267	⇑P	Pn	00 16 08.0	+0.2
	baz=265						
NDS				S	Sn	00 16 19.3	-0.8
	baz=265						
YOJ	Yonaguni jima	0.62	109	⇓iP	Pn	00 16 08.1	+0.1
	baz=116						
YOJ				S	Sn	00 16 19.8	-0.5
	baz=116						
YOJ	Yonaguni jima	0.62	109	P	Pn	00 16 08.0	+0.1
YOJ				S	Sn	00 16 20.0	-0.3
YOJ	Yonaguni jima	0.62	109		Pn	00 16 07.9	0.0
YOJ				Sn	Sn	00 16 18.8	-1.5
YOJ	Yonaguni jima	0.62	109	P	Pn	00 16 07.9	-0.1
ENA	Nanau	0.62	248	⇑iP	Pn	00 16 08.3	+0.2
	baz=243						
ENA				S	Sn	00 16 20.2	-0.2
	baz=243						
TWE	Neicheng	0.65	275	⇑iP	Pn	00 16 08.3	+0.1
	baz=275						
TWE				S	Sn	00 16 20.2	-0.5
	baz=275						
NWF	Wu-fen Shan	0.67	307	⇑iP	Pn	00 16 08.5	-0.1
	baz=300						
NWF				S	Sn	00 16 21.4	+0.1
	baz=300						
WFSB	Wu-fen Shan	0.67	307	⇑iP	Pn	00 16 08.4	0.0
	baz=300						
WFSB				eS	Sn	00 16 20.6	-0.5
	baz=300						
EHP	Heping Village	0.68	238	eP	Pn	00 16 08.1	-0.4
	baz=236						
EHP				eS	Sn	00 16 21.0	-0.3
	baz=236						
ENTT	Nioudou	0.73	268	⇑iP	Pn	00 16 09.4	+0.4
	baz=270						
ENTT				eS	Sn	00 16 22.9	+0.7
	baz=270						
NDT	Datong Townshi	0.79	265	⇑iP	Pn	00 16 10.2	+0.6
	baz=266						
NDT				S	Sn	00 16 23.3	+0.2
	baz=266						
NWLT	Wulai	0.80	278	P	Pn	00 16 09.6	-0.1
	baz=280						
NHY	Taipei	0.82	297	eP	Pn	00 16 09.8	-0.1
	baz=296						
NHDH	Xindian Distri	0.82	291	P	Pn	00 16 09.7	-0.2
	baz=283						
NHDH				eS	Sn	00 16 22.7	-1.0
	baz=283						
NWRT	Kuosheng	0.84	310	eP	Pn	00 16 09.6	-0.4
	baz=302						
ETL	Fush Village	0.85	234	P	Pn	00 16 10.0	-0.3
	baz=232						
ETL				eS	Sn	00 16 23.7	-0.6
	baz=232						
TATO	Taipei	0.86	291	eP	Pn	00 16 09.6	-0.7
	baz=284						
TATO				eS	Sn	00 16 22.9	-1.5
	baz=284						
TATO	Taipei	0.86	291		Pn	00 16 10.0	-0.3
NACB	Ninganchiao	0.86	235	eP	Pn	00 16 09.8	-0.5
	baz=229						
NACB				eS	Sn	00 16 23.7	-0.7
	baz=229						
NACB	Ninganchiao	0.86	235		Pn	00 16 09.8	-0.5
TAP	Taipei	0.87	295	eP	Pn	00 16 10.0	-0.4
	baz=294						
TAP				eS	Sn	00 16 23.3	-1.2
	baz=294						
YM01	YM01	0.87	303	⇑iP	Pn	00 16 10.2	-0.2
	baz=295						
YM01				S	Sn	00 16 23.6	-1.0
	baz=295						
YHNB	Yeheng	0.91	270	⇑P	Pn	00 16 11.2	+0.4
	baz=276						
YHNB				S	Sn	00 16 25.1	-0.3
	baz=276						
YHNB	Yeheng	0.91	270		Pn	00 16 11.0	+0.2
YHNB	Yeheng	0.91	270	P	Pn	00 16 10.9	0.0
TWD	Chiawan	0.92	231	P	Pn	00 16 10.6	-0.3
	baz=229						
TWD				S	Sn	00 16 24.8	-0.6
	baz=229						
NSK	Sanguang	0.92	271	⇑iP	Pn	00 16 11.3	+0.3
	baz=276						
NSK				i S	Sn	00 16 25.4	-0.3
	baz=276						
ANP	Anpu	0.93	304	eP	Pn	00 16 10.6	-0.5
	baz=295						
ETLH	Xiulin Townshi	0.93	241	P	Pn	00 16 11.1	-0.1
	baz=233						
ETLH				S	Sn	00 16 25.1	-0.8
	baz=233						
NNSB	Datong	0.93	255	⇑iP	Pn	00 16 11.4	+0.2

	baz=249						
NNSB				S	Sn	00 16 25.9	0.0
	baz=249						
NNS	**Nan Shan**	0.94	256	⇑*i*P	Pn	00 16 11.4	+0.2
	baz=249						
NNS				*i* S	Sn	00 16 25.8	-0.3
	baz=249						
NTST	**Danshui**	0.97	301	P	Pn	00 16 11.4	-0.1
	baz=300						
NTST				S	Sn	00 16 25.8	-0.7
	baz=300						
HWA	**Hwalien**	0.98	226	P	Pn	00 16 11.7	+0.2
	baz=218						
HWA				S	Sn	00 16 27.1	+0.5
	baz=218						
FUSS	**Fushou**	1.11	248	P	Pn	00 16 13.8	+0.5
	baz=242						
FUSS				S	Sn	00 16 29.6	-0.1
	baz=242						
NCU	**National Centr**	1.12	286	⇑*i*P	Pn	00 16 13.3	+0.3
	baz=277						
NCU				*i* S	Sn	00 16 29.9	+0.5
	baz=277						
NCUH	**Zhongli**	1.12	286	P	Pn	00 16 13.3	+0.2
	baz=277						
NCUH				S	Sn	00 16 29.5	+0.1
	baz=277						
WHF	**Hehuan Shan**	1.14	243	⇑*i*P	Pn	00 16 13.9	+0.2
	baz=241						
WHF				*i* S	Sn	00 16 30.2	-0.3
	baz=241						
TDCB	**Techi**	1.18	250	⇑*i*P	Pn	00 16 14.7	+0.7
	baz=242						
TDCB				*i* S	Sn	00 16 30.5	-0.4
	baz=242						
ESL	**Shilin**	1.21	225	P	Pn	00 16 13.5	-0.6
	baz=232						
ESL				S	Sn	00 16 29.7	-1.5
	baz=232						
LIOB	**Emei**	1.24	269	*i* P	Pn	00 16 14.8	+0.4
	baz=268						
LIOB				*i* S	Sn	00 16 32.0	+0.1
	baz=268						
NSTT	**Nanjuang**	1.25	269	⇑*i*P	Pn	00 16 14.7	+0.1
	baz=267						
NSTT				*i* S	Sn	00 16 31.9	-0.1
	baz=267						
CHGB	**Renai**	1.25	241	⇑*i*P	Pn	00 16 15.4	+0.6
	baz=233						
CHGB				*i* S	Sn	00 16 32.0	-0.5
	baz=233						
SBCB	**Hsinchu**	1.27	276	P	Pn	00 16 15.0	+0.2
	baz=275						
SBCB				S	Sn	00 16 32.2	-0.3
	baz=275						
IRIF	**Iriomote-Funau**	1.28	105	P	Pn	00 16 14.8	-0.1
IRIF				S	Sn	00 16 32.4	-0.3
HSN	**Hsinchu**	1.28	276	⇑*i*P	Pn	00 16 14.9	-0.1
	baz=276						
HSN				*i* S	Sn	00 16 32.1	-0.6
	baz=276						
OWD	**Renai**	1.30	237	P	Pn	00 16 15.7	+0.3
	baz=231						
OWD				S	Sn	00 16 33.2	-0.3
	baz=231						
EGFH	**Guangfu**	1.32	221	P	Pn	00 16 14.9	-0.6
	baz=229						
EGFH				S	Sn	00 16 32.5	-1.0
	baz=229						
WHP	**Taichung City**	1.36	254	⇑*i*P	Pn	00 16 17.0	+1.1
	baz=252						
WHP				*i* S	Sn	00 16 35.2	+0.7
	baz=252						
HATJ	**Hateruma jima**	1.44	115	P	Pn	00 16 17.4	+0.5
HATJ				S	Sn	00 16 36.0	-0.1
NMLH	**Miaoli**	1.45	265	P	Pn	00 16 17.4	+0.4
	baz=264						
NMLH				S	Sn	00 16 36.0	-0.3
	baz=264						
HGSD	**Ruisui**	1.46	217	P	Pn	00 16 17.0	-0.2
	baz=209						
HGSD				S	Sn	00 16 36.0	-0.5
	baz=209						
WCS	**Beigang Elemen**	1.47	246	*e*P	Pn	00 16 18.3	+1.1
	baz=239						
WCS				*e*S	Sn	00 16 37.4	+0.7
	baz=239						
NSY	**Sanyi**	1.49	261	P	Pn	00 16 18.2	+0.7
	baz=259						
NSY				S	Sn	00 16 37.6	+0.3
	baz=259						
TWQ1	**Liyutan**	1.49	258	⇑*i*P	Pn	00 16 17.9	+0.3
	baz=257						
TWQ1				S	Sn	00 16 37.3	0.0
	baz=257						
EHY	**Hungye**	1.50	220	*e*P	Pn	00 16 16.8	-1.0
	baz=226						
JKRS	**Kuro-shima**	1.55	106	P	Pn	00 16 18.6	+0.3
JKRS				S	Sn	00 16 38.8	+0.2
SMLT	**Sun Moon Lake**	1.56	240	P	Pn	00 16 19.4	+1.0
	baz=233						
SMLT				S	Sn	00 16 40.5	+1.6
	baz=233						
SSLB	**Suanglung**	1.56	236	*e*P	Pn	00 16 18.9	+0.4
	baz=232						
SSLB				*e*S	Sn	00 16 40.0	+1.0
	baz=232						
SSLB	**Suanglung**	1.56	236		Pn	00 16 18.6	+0.1
SSLB	**Suanglung**	1.56	236	P	Pn	00 16 19.2	+0.7
TYC	**Yuchr**	1.58	241	P	Pn	00 16 19.7	+1.1
	baz=240						
TYC				S	Sn	00 16 40.4	+1.2
	baz=240						
YULB	**Yu-li**	1.61	218	P	Pn	00 16 18.1	-0.9
	baz=217						
YULB				*e*S	Sn	00 16 37.7	-2.1
	baz=217						
YULB	**Yu-li**	1.61	218		Pn	00 16 18.1	-0.9
WDJ	**Dajia District**	1.61	259	P	Pn	00 16 19.6	+0.5
	baz=258						
WDJ				S	Sn	00 16 40.1	+0.2
	baz=258						
EYUL	**Yuli**	1.63	216	*e*P	Pn	00 16 19.9	+0.6
	baz=223						
EYUL				*e*S	Sn	00 16 41.5	+1.2
	baz=223						
TCU	**Taichung**	1.63	252	*e*P	Pn	00 16 19.7	+0.4
	baz=250						
TCU				*e*S	Sn	00 16 40.4	0.0
	baz=250						
JIJ	**Ishigaki jima**	1.64	100	P	Pn	00 16 19.2	-0.2
JIJ				S	Sn	00 16 39.7	-0.9
WJS	**Zhushan**	1.72	241	*e*P	Pn	00 16 21.4	+0.9
	baz=250						
WJS				*e*S	Sn	00 16 44.2	+1.8
	baz=250						
WCHH	**Zhanghua**	1.76	251	*e*P	Pn	00 16 21.1	+0.3
	baz=249						
WCHH				*e*S	Sn	00 16 43.5	+0.3
	baz=249						
JISG	**Ishigakijimahi**	1.77	92	P	Pn	00 16 20.9	0.0
JISG				S	Sn	00 16 43.1	-0.3
FULB	**Fuli**	1.77	214	*e*P	Pn	00 16 21.0	0.0
	baz=223						
FULB				S	Sn	00 16 43.3	-0.2
	baz=223						
CHKT	**Chengkung**	1.81	211	P	Pn	00 16 20.8	-0.8
	baz=203						
CHKT				S	Sn	00 16 42.3	-2.2
	baz=203						
ALS	**Alishan**	1.84	232	P	Pn	00 16 23.2	+1.0
	baz=224						
ALS				S	Sn	00 16 46.9	+1.4
	baz=224						
CHN5	**Tsauling**	1.88	236	P	Pn	00 16 23.6	+1.0
	baz=244						
CHN5				S	Sn	00 16 47.7	+1.5
	baz=244						
ELDTW	**Lidau**	1.93	220	*e*P	Pn	00 16 22.7	-0.5
	baz=214						
ELDTW				*e*S	Sn	00 16 45.7	-1.6
	baz=214						
WDLH	**Douliu**	1.94	240	*e*P	Pn	00 16 24.0	+0.8
	baz=249						
WDLH				*e*S	Sn	00 16 48.5	+1.1
	baz=249						
EDH	**Donghe**	1.95	210	*e*S	Sn	00 16 45.9	-1.7
	baz=204						
WRL	**Guolierlin Hig**	1.98	248	*e*S	Sn	00 16 47.4	-0.8
	baz=254						
WTK	**Tuku**	2.06	242	*e*P	Pn	00 16 25.3	+0.6
	baz=241						
CHN2	**Minshiung**	2.07	237	*e*P	Pn	00 16 25.9	+1.0
	baz=246						
CHN2				*e*S	Sn	00 16 51.8	+1.3
	baz=246						
STYH	**Taoyuan**	2.09	225	*e*P	Pn	00 16 26.1	+1.0
	baz=216						
LONT	**Longtian**	2.09	213	*e*P	Pn	00 16 24.7	-0.5
	baz=212						
TPUB	**Ta-pu**	2.10	230	*e*P	Pn	00 16 26.1	+0.8
	baz=229						
TPUB				*e*S	Sn	00 16 51.5	+0.4
	baz=229						
TPUB	**Ta-pu**	2.10	230		Pn	00 16 26.2	+0.9
TPUB				Sn	Sn	00 16 53.3	+2.2
TPUB	**Ta-pu**	2.10	230	P	Pn	00 16 26.3	+1.0
JTJ	**Tarama**	2.12	90	P	Pn	00 16 25.8	+0.3
JTJ				S	Sn	00 16 51.7	+0.2
CHY	**Chiayi**	2.13	237	*e*P	Pn	00 16 26.4	+0.7
	baz=246						
CHY				*e*S	Sn	00 16 52.0	+0.2
	baz=246						
WTP	**Ta-pu**	2.14	229	*e*P	Pn	00 16 27.1	+1.1
	baz=228						
WTP				*e*S	Sn	00 16 52.9	+0.7
	baz=228						
LDUT	**Ludao**	2.15	203	*e*P	Pn	00 16 25.2	-0.7
	baz=206						
LDUT				*e*S	Sn	00 16 50.1	-2.2
	baz=206						
TWGBT	**Beinan**	2.19	213	*e*P	Pn	00 16 25.6	-0.9
	baz=212						
TWGBT				*e*S	Sn	00 16 50.5	-2.7
	baz=212						
TWG	**Pinlang**	2.19	213		Pn	00 16 25.7	-0.8
TWG				Sn	Sn	00 16 51.3	-2.0
WSF	**Szhu**	2.22	243	*e*S	Sn	00 16 54.3	+0.5
	baz=241						
TWK	**Hsinying**	2.22	231	P	Pn	00 16 27.6	+0.7
	baz=230						
TWK				S	Sn	00 16 54.4	+0.4
	baz=230						
CHN1	**Nanshi**	2.24	229	*e*P	Pn	00 16 28.1	+0.9
	baz=228						
CHN1				S	Sn	00 16 54.9	+0.4
	baz=228						
SGST	**Jiashian**	2.28	226	*e*P	Pn	00 16 28.0	+0.4
	baz=225						
SGST				*e*S	Sn	00 16 55.5	+0.3
	baz=225						
SLGT	**Liugui**	2.30	224	*e*P	Pn	00 16 29.3	+1.4
	baz=232						
SLGT				*e*S	Sn	00 16 56.8	+1.0
	baz=232						
ICHU	**Yijhu**	2.32	236	*e*P	Pn	00 16 28.3	+0.2
	baz=235						
ICHU				*e*S	Sn	00 16 55.9	-0.3
	baz=235						
CHN8	**Yiju**	2.38	237	*e*P	Pn	00 16 29.6	+0.7
	baz=235						
CHN8				*e*S	Sn	00 16 57.2	-0.3
	baz=235						
ECL	**Taimali**	2.44	213	*e*P	Pn	00 16 28.2	-1.5
	baz=211						
SSD	**Sandimen**	2.49	220	*e*P	Pn	00 16 31.4	+0.9
	baz=219						
SSD				*e*S	Sn	00 17 01.8	+1.5
	baz=219						
JIRB	**Irabujima**	2.55	86	S	Sn	00 17 01.1	-0.6
MASBT	**Mashibuluo**	2.60	218	*e*P	Pn	00 16 32.8	+0.9
	baz=217						
MASBT				*e*S	Sn	00 17 03.0	+0.2
	baz=217						
JIKM	**Ikemajima**	2.62	84	S	Sn	00 17 03.5	+0.1
MATB	**Ma-tsu**	2.65	304	*e*P	Pn	00 16 31.6	-0.9
	baz=303						
EAST	**Anshuo**	2.67	212	*e*P	Pn	00 16 31.9	-1.0
	baz=206						
JMJ2	**Miyako jima3**	2.69	88	P	Pn	00 16 33.6	+0.6
JMJ2				S	Sn	00 17 04.6	-0.3
LAY	**Lan-yu**	2.73	196	*e*P	Pn	00 16 32.5	-1.1
	baz=195						
LAY				*e*S	Sn	00 17 02.7	-3.2
	baz=195						
JOGS	**Gusukube**	2.76	87	*e*S	Sn	00 17 06.1	-0.6
SCZT	**Fangliau**	2.80	216	*e*P	Pn	00 16 35.3	+0.8
	baz=213						
PNG	**Penghu**	2.80	248	*e*P	Pn	00 16 33.3	-1.2
	baz=246						
PHUB	**P'eng-hu**	2.81	246	*e*P	Pn	00 16 33.9	-0.7
	baz=245						
PHUB				*e*S	Sn	00 17 05.3	-2.5
	baz=245						
SLIU	**Shizi**	2.84	211	*e*P	Pn	00 16 34.6	-0.5
	baz=206						
PTMZ	**Houxiangcun**	2.98	278	*e*P	Pn	00 16 36.1	-0.8
	baz=276						
XPSS	**Dashiqiu**	2.99	319	*e*P	Pn	00 16 35.4	-1.6
	baz=319						
LYJJ	**Jianjiangzhen**	3.01	309	*e*P	Pn	00 16 36.0	-1.4
	baz=308						
VCHM	**Qimei**	3.06	242	*e*P	Pn	00 16 37.5	-0.5
	baz=233						
VCHM				*e*S	Sn	00 17 12.0	-1.9
	baz=233						
TWK1	**Hengchun**	3.07	208	*e*P	Pn	00 16 38.7	+0.5
	baz=200						
TWK1				*e*S	Sn	00 17 11.9	-2.2
	baz=200						
TWKBT	**Hengchun**	3.07	208	*e*P	Pn	00 16 38.7	+0.5
	baz=200						
TWKBT				*e*S	Sn	00 17 13.6	-0.6
	baz=200						
MHZQ	**Yeshan**	3.34	296	*e*P	Pn	00 16 40.9	-0.9
	baz=295						
KNM	**Kinmen**	3.60	267	*e*P	Pn	00 16 46.3	+1.1
	baz=266						
KNMB	**Chin-men Tao**	3.63	268	*e*P	Pn	00 16 44.2	-1.5
	baz=266						
KNMB	**Chin-men Tao**	3.63	268	Pn	Pn	00 16 45.0	-0.7
AXDP	**Jialang**	4.01	274	*e*P	Pn	00 16 50.0	-0.8
	baz=273						
ZPLA	**Ao Xicun**	4.28	261	*e*P	Pn	00 16 53.5	-0.9
	baz=260						
ZPLA				*e*S	Sn	00 17 39.7	-3.7
	baz=260						
KSRS	**Korea Array**	13.60	19	Pn	P	00 19 04.8	-1.0
	0.4nm,0.3s,baz=198,slow=11,SNR=8.1						
BJT	**Baijiatuau**	16.17	343		P	00 19 38.9	+4.7
MDJ	**Mudanjiang**	20.75	15	P	Pn	00 20 27.4	-0.1
MDJ				IAmb	IAmb	00 20 50.9	
	comp=Z,19nm,1.4s						
SONM	**Songino Array**	26.36	335	P	P	00 21 17.8	-0.8
	comp=Z,0.2nm,0.5s,baz=146,slow=10,SNR=2.2						
MKAR	**Makanchi Array**	38.75	315	P	P	00 23 05.5	-0.8
	comp=Z,0.2nm,0.4s,baz=106,slow=8.7,SNR=5.2						
FITZ	**Fitzroy Crossi**	42.63	175	LR	LR	00 44 05.7	
	comp=Z,44nm,18.6s,baz=172,slow=40						
COEN	**Coen**	43.43	150	P	P	00 23 45.1	+0.3
COEN				IAmb	IAmb	00 24 06.3	
	comp=Z,14nm,1.4s						
WRA	**Warramunga Arr**	45.85	164	P	P	00 24 03.5	-0.5
	comp=Z,3.4nm,0.7s,baz=347,slow=8.7,SNR=14						
WRA				LR	LR	00 44 30.2	
	comp=Z,45nm,19.8s,baz=145,slow=38						
ASAR	**Alice Springs**	49.33	166	P	P	00 24 31.1	+0.1
	comp=Z,1.1nm,0.7s,baz=344,slow=7.1,SNR=14						
HRA	**Herat**	52.55	295	P	P	00 24 56.6	+1.3
GEYT	**Alibeck**	55.49	300	LR	LR	00 53 25.4	
	comp=Z,87nm,18.4s,baz=5.0,slow=41						
BBOO	**Buckleboo**	58.63	167	P	P	00 25 37.7	-0.7
BBOO				IAmb	IAmb	00 26 00.7	
	comp=Z,4.6nm,1.2s						
ARCES	**ARCESS Array B**	69.50	338	LR	LR	00 59 57.8	
	comp=Z,30nm,20.3s,baz=275,slow=38						

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*NEIC **09** 00:18:23.2, 19°.75S×71°.14W, h22^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M$_{rr}$7.92; M$_{\theta\theta}$0.74; M$_{\phi\phi}$-8.65; M$_{r\theta}$2.70; M$_{\theta\phi}$1.65; M$_{\phi r}$3.08; Fault plane solution: M$_0$9.41000×10^{14} NP1:φ$_s$9.87000°, δ56.92000°, λ113.80000°. NP2:φ$_s$150.93000°, δ39.94000°, λ58.23000°. Principal axes: T 9.4725, Plg68.0000°, Azm330.0000°; N -0.1272, Plg20.0000°, Azm176.0000°; P -9.3452, Plg9.0000°, Azm83.0000°;*

*NEIC **09** 00:18:23.4±1.7, 19°.82S±0°.04×71°.00W±0°.06, h20^{km}±6^{km}, mb4.0/7, Mwr3.9/41, ML4.0(GUC) Error ellipse: s-maj=7.8km s-min=5.2km az=98.0*

*GUC **09** 00:18:25.1±0.8, 19°.80S×70°.98W, h34^{km}±3^{km}, ML4.0*

*IDC **09** 00:18:31.6±4.0, 19°.77S×70°.45W, h76^{km}±29^{km}, mb3.6/3, mb1 3.7/6, mb1mx3.4/33, mbtmp3.9/6, MS3.0/2, Ms1 3.0/2, ms1mx2.8/22, Error ellipse: s-maj=58.1km s-min=15.2km az=92.0*

ISC 09 00:18:23.9±1.4**, 19°.83S**±0°.03×**71°.06W**±0°.08**, h42**^{km}±16^{km}**, n54, σ1.^{s}33**/69**, mb4.0**/5**, 6C-3D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	**Pisagua**	0.91	76	⇓*i*P	Pn	00 18 39.0	-1.4
PSGC				*i* S	Sn	00 18 50.0	-2.4
PSGCX	**Pisagua**	0.91	76		Pn	00 18 38.9	-1.5
PSGCX					Sn	00 18 49.7	-2.7
TA02	**Huaiquique**	0.98	117	*i* P	Pn	00 18 40.8	-0.3
TA02				*i* S	Sn	00 18 53.3	-0.6
TA02				IAML		00 18 55.0	
	comp=N,8μm,0.1s						
TA02	**Huaiquique**	0.98	117		Pn	00 18 40.9	-0.3
TA02				Sn	Sn	00 18 53.6	-0.3
TA01	**Diego Aracena**	1.10	132	⇓*i*P	Pn	00 18 43.5	+0.5
TA01				*i* S	Sn	00 18 57.4	+0.4
TA01				IAML		00 19 02.4	
	comp=E,4μm,0.6s						
TA01	**Diego Aracena**	1.10	132		Pn	00 18 43.5	+0.5
TA01				Sn	Sn	00 18 57.0	0.0
HMBC	**Humberstone**	1.19	112	⇓*i*P	Pn	00 18 44.4	+0.1
HMBC				*i* S	Sn	00 18 59.2	-0.1
HMBC				IAML		00 19 02.5	
	comp=N,6μm,0.3s						
PATCX	**Punta Patache**	1.30	140	⇑*i*P	Pn	00 18 46.5	+0.7
PATCX				*i* S	Sn	00 19 02.5	+0.4
PATCX	**Punta Patache**	1.30	140	Pn	Pn	00 18 46.3	+0.5
PATCX					Sn	00 19 02.5	+0.4
PB11	**IPOC Station P**	1.32	87		Pn	00 18 45.9	-0.2
PB11					Sn	00 19 02.6	0.0
PB12	**IPOC Station P**	1.39	30	⇑*i*P	Pn	00 18 47.3	+0.3
PB12				*i* S	Sn	00 19 05.1	+1.0
PB12	**IPOC Station P**	1.39	30	Pn	Pn	00 18 47.2	+0.2
AP01	**Chacalluta**	1.60	25	*e*P	Pn	00 18 50.3	+0.6
AP01				*i* S	Sn	00 19 11.5	+2.4
AP01				IAML		00 19 15.9	
	comp=N,5μm,0.3s						
AP01	**Chacalluta**	1.60	25	Pn	Pn	00 18 49.9	+0.2
PB08	**IPOC Station P**	1.82	100	⇑*i*P	Pn	00 18 53.9	+0.7
PB08				*i* S	Sn	00 19 16.6	+1.4
PB08				IAML		00 19 21.0	
	comp=N,2μm,0.4s						
PB08	**IPOC Station P**	1.82	100		Pn	00 18 53.6	+0.5
PB08					Sn	00 19 16.5	+1.4
PB02	**IPOC Station P**	1.84	144	⇑*i*P	Pn	00 18 54.3	+1.1
PB02				*e*S	Sn	00 19 14.4	-0.9
PB02				IAML		00 19 24.9	
	comp=E,4μm,0.6s						
PB01	**IPOC Station P**	1.91	130	⇑*i*P	Pn	00 18 55.2	+1.1
PB01				*i* S	Sn	00 19 17.8	+0.9
PB01				IAML		00 19 26.8	
	comp=E,2μm,0.6s						
PB01	**IPOC Station P**	1.91	130		Pn	00 18 55.2	+1.1
PB01				Sn	Sn	00 19 17.7	+0.7
PB16	**IPOC Station P**	2.08	45	⇑*i*P	Pn	00 18 58.0	+1.0
PB16				*i* S	Sn	00 19 25.8	+3.8
PB16				IAML		00 19 30.4	
	comp=E,2μm,0.4s						
PB16	**IPOC Station P**	2.08	45		Pn	00 18 57.8	+0.9
PB07	**IPOC Station P**	2.19	150	*e*P	Pn	00 18 58.7	+0.7
PB07				IAML		00 19 36.8	
	comp=E,1μm,0.4s						
PB07	**IPOC Station P**	2.19	150		Pn	00 18 58.9	+0.9
PB03	**IPOC Station P**	2.52	151	*e*P	Pn	00 19 03.8	+1.1
PB03				IAML		00 19 51.2	
	comp=E,579nm,0.6s						
PB09	**IPOC Station P**	2.59	139	Pn	Pn	00 19 04.8	+1.2
PB04	**IPOC Station P**	2.64	161	*e*P	Pn	00 19 04.7	+0.6
PB04				IAML		00 19 59.2	
	comp=E,699nm,0.4s						
PB04	**IPOC Station P**	2.64	161		Pn	00 19 04.8	+0.6
PB05	**IPOC Station P**	3.12	165	*e*P	Pn	00 19 11.1	+0.4
PB05				*e*S	Sn	00 19 45.4	-1.4
PB05				IAML		00 20 11.3	
	comp=N,354nm,0.8s						
PB06	**IPOC Station P**	3.18	154	*e*P	Pn	00 19 12.3	+0.7
PB06				*e*S	Sn	00 19 47.3	-1.2
PB06				IAML		00 20 08.5	
	comp=N,551nm,0.4s						
PB06	**IPOC Station P**	3.18	154		Pn	00 19 12.1	+0.4
LVC	**Limon Verde**	3.42	145	P	Pn	00 19 18.0	+2.9
	comp=N,5.7nm,0.3s,baz=341,slow=8.2,SNR=51						
LVC				S	Sn	00 19 56.8	+2.2
	comp=N,15nm,0.3s,baz=53,slow=21,SNR=7.3						
LVC				LR	LR	00 20 53.5	
	comp=N,196nm,18.3s,baz=329,slow=45						
LVC	**Limon Verde**	3.42	145	Pn	Pn	00 19 16.0	+0.9
PB15	**IPOC Station P**	3.68	157		Pn	00 19 18.7	+0.2
PB10	**IPOC Station P**	3.70	173	Pn	Pn	00 19 18.5	-0.1
LPAZ	**La Paz**	4.49	39	P	Pn	00 19 34.4	+4.4
	comp=N,2.6nm,0.3s,baz=220,slow=6.6,SNR=33						
LPAZ	**La Paz**	4.49	39	Pn	Pn	00 19 33.2	+3.2
PB14	**IPOC Station P**	4.81	173	Pn	Pn	00 19 34.9	+0.6
AC02	**Maricunga**	7.20	166	Pn	Pn	00 20 08.6	+1.5
SIV	**San Ignacio**	10.24	70	P	Pn	00 20 49.3	+0.9
	comp=N,1.4nm,0.3s,baz=266,slow=8.8,SNR=26						
SIV				LR	LR	00 25 08.6	
	comp=N,88nm,21.9s,baz=274,slow=41						
ETMB	**Extrema**	11.00	26	Pn	Pn	00 20 58.2	-0.5
PTLB	**Pontes e Lacer**	12.17	71	Pn	Pn	00 21 15.2	+0.4
VILB	**Vilhena**	12.46	58	Pn	Pn	00 21 19.6	+0.9
H03N1	**Juan Fernandez**	15.26	206	T	T	00 38 05.8	
	baz=33,slow=72,SNR=61						
H03N2	**Juan Fernandez**	15.27	206	T	T	00 37 49.1	
	baz=33,slow=72,SNR=52						
H03N3	**Juan Fernandez**	15.28	206	T	T	00 38 19.6	
	baz=33,slow=72,SNR=27						
MACA	**Manacapuru-AM**	19.41	33		P	00 22 45.0	-1.8
MACA				IAmb	IAmb	00 22 56.1	
	comp=Z,8.8nm,0.6s						
PLCA	**Paso Flores**	20.84	179	P	Pn	00 23 09.8	+4.8
	comp=Z,2.0nm,0.9s,baz=350,slow=17,SNR=2.2						
PTGA	**Pitinga**	21.86	31	P	P	00 23 13.0	-0.3
	comp=Z,3.3nm,0.2s,baz=180,slow=20,SNR=7.0						
PTGA	**Pitinga**	21.86	31	IAmb	IAmb	00 23 17.3	
	comp=Z,3.4nm,0.8s						
BOAV	**Boa Vista**	24.39	26	P	P	00 23 39.5	+1.1
BOAV				IAmb	IAmb	00 23 41.1	
	comp=Z,4.3nm,0.8s						
ZARC	**Zaragoza, Cauc**	27.40	352	P	P	00 24 04.9	-0.8
ZARC				IAmb	IAmb	00 24 14.3	
	comp=Z,2.7nm,1.0s						
MOTC	**Monteria, Cord**	28.78	351	P	P	00 24 14.1	-3.9
MOTC				IAmb	IAmb	00 24 14.5	
	comp=Z,2.7nm,0.7s						
TORD	**Torodi Ar. Bea**	78.71	72	P	P	00 30 23.9	+1.4
	comp=Z,1.1nm,0.7s,baz=252,slow=4.1,SNR=6.7						
MKAR	**Makanchi Array**	145.40	33	PKPbc	PKPab	00 37 57.6	0.0
	comp=Z,0.4nm,0.7s,baz=316,slow=4.0,SNR=2.7						

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*FUNV **09** 00:27:27.8, 8°.43N×71°.40W, h8^{km}, MW3.0*

ISC 09 00:27:27.2±1.2**, 8°.51N**±0°.03×**71°.39W**±0°.02**, h9**^{km}±10^{km}**, n30, σ1.^{s}72**/55**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	**Socops**	0.57	113	*e*P	Pg	00 27 38.3	0.0
SOCV				*e*S	Sb	00 27 47.1	-0.6
SOCV				*i*		00 27 47.7	
	comp=Z,7μm,0.3s						
SOCV	**Socops**	0.57	113	*e*P	Pb	00 27 39.2	-0.3
SOCV				*e*S	Sg	00 27 46.1	+0.3
SDV	**Santo Domingo**	0.84	63	*e*P	Pg	00 27 43.7	+0.4
SDV				*e*S	Sg	00 27 55.8	+1.6
SDV				*i*		00 27 59.0	
	comp=Z,128nm,0.2s						
CAPV	**Capacho**	1.12	235	*e*P	Pg	00 27 46.8	-2.0
CAPV				*e*S	Sg	00 28 01.9	-1.3
PAMC	**Pamplona, Colo**	1.74	228	*e*P	Pb	00 27 59.2	-0.5
PAMC				*e*S	Sg	00 28 22.8	-0.5

MCQV	Machiques	1.91	324	eP	Pn	00 28 01.1	+1.2
MCQV				eS	Sn	00 28 26.1	+2.0
OCAC	Ocana	1.93	262	eP	Pn	00 28 00.3	-0.1
OCAC				eS	Sn	00 28 26.1	+1.2
OCAC				i		00 28 28.0	
	comp=Z,663nm,0.4s						
TAMC	Tame, Arauca	2.10	191	eP	Pb	00 28 04.5	-1.0
TAMC				eS	Sg	00 28 33.9	-0.8
TAMC				i		00 28 35.7	
	comp=Z,120nm,0.5s						
ELOV	Elorza	2.41	128	eP	Pb	00 28 09.1	-1.7
ELOV				eS	Sb	00 28 41.2	+0.6
ELOV				i		00 28 49.7	
	comp=Z,692nm,0.5s						
BARC	Barichara	2.60	223	eP	Pb	00 28 14.3	+0.1
BARC				eS	Sb	00 28 45.0	-1.4
SIQV	Siquisique	2.64	36	eP	Pn	00 28 11.0	+0.9
SIQV				eS	Sn	00 28 42.0	-0.3
SMLC	San Martn de	2.67	276	eP	Pn	00 28 13.3	+2.8
SMLC				eS	Sb	00 28 46.7	-1.5
SMLC				i		00 28 47.3	
	comp=Z,59nm,0.4s						
BRRC	Barranca, Sant	2.69	239	eP	Pb	00 28 15.5	-0.1
BRRC				eS	Sb	00 28 48.2	-0.6
RUSC	La Rusia	3.09	213	eP	Pn	00 28 18.0	+1.3
RUSC				eS	Sb	00 28 56.6	-4.2
MAPV	Macapo	3.18	65	eP	Pn	00 28 17.9	+0.4
MAPV				eS	Sn	00 28 54.6	-1.0
URIC	Uribia, Colomb	3.23	349	eP	Pn	00 28 21.3	+3.1
URIC				eS	Sn	00 28 54.7	-2.1
URIC				i		00 29 12.0	
	comp=Z,20nm,0.3s						
BAUV	El Baul	3.34	82	eP	Pn	00 28 20.2	+0.6
BAUV				eS	Sn	00 28 57.7	-1.7
ZARC	Zaragoza, Cauc	3.58	254	eP	Pn	00 28 24.8	+1.7
ZARC				eS	Sn	00 29 06.1	+0.6
ZARC				i		00 29 19.6	
	comp=Z,20nm,0.3s						
MONV	Montecano	3.70	22	eP	Pn	00 28 25.1	+0.5
MONV				eS	Sn	00 29 07.4	-1.0
SMRC	Santa Marta, M	3.85	314	eP	Pn	00 28 23.2	-3.4
SMRC				eS	Sn	00 29 07.8	-4.2
SMRC				i		00 29 23.0	
	comp=Z,14nm,0.3s						
SPBC	San Pablo de B	3.89	223	eP	Pn	00 28 27.4	0.0
SPBC				i		00 29 30.3	
	comp=Z,72nm,0.2s						
SJCC	San Jacinto, C	3.99	291	eP	Pn	00 28 29.2	+0.6
SJCC				eS	Sn	00 29 17.0	+1.4
SJCC				i		00 29 19.6	
	comp=Z,11nm,0.4s						
UREC	San Jos de Ur	4.17	260	eP	Pn	00 28 33.8	+2.7
UREC				eS	Sn	00 29 21.8	+1.7
UREC				i		00 29 40.6	
	comp=Z,9.5nm,0.4s						
MOTC	Monteria, Cord	4.24	274	eP	Pn	00 28 32.4	+0.3
MOTC				eS	Sn	00 29 22.8	+1.1
MOTC				i		00 29 28.0	
	comp=Z,4.6nm,0.5s						
PTGC	Puerto Gaitan,	4.34	190	eP	Pg	00 28 53.4	+2.9
PTGC				i		00 30 09.8	
	comp=Z,47nm,0.4s						
CHIC	Chingaza	4.50	211	eP	Pn	00 28 36.8	+0.7
CHIC				eS	Sn	00 29 28.7	0.0
NORC	Norcasia	4.53	230	eP	Pn	00 28 38.5	+2.5
NORC				eS	Sn	00 29 32.3	+3.5
NORC				i		00 29 47.5	
	comp=Z,9.8nm,0.5s						
HELC	Santa Helena	4.71	241	eP	Pn	00 28 37.6	-1.2
HELC				i		00 29 53.3	
	comp=Z,5.1nm,0.5s						
GUY2C	Guyana, Caldas	5.12	231	eP	Pn	00 28 47.2	+2.6
GUY2C				i		00 29 04.7	
	comp=Z,5.1nm,0.5s						
ORTC	Ortega, Tolima	5.96	220	eP	Pn	00 28 57.9	+2.0
ORTC				eS	Sn	00 30 02.7	-1.6

IDC 09 00:27:53.5±6.1, 5°.94S×150°.90E, h81^{km}±50^{km}, mb3.2/4, mb1 3.5/5, mb1mx3.2/27, mbtmp3.6/5, ML1.7/1, Error ellipse: s-maj=62.8km s-min=36.6km az=119.0

ISC 09 00:27:49.1±1.4, 5°.9S±0°.3×151°.2E±0°.3, h43^{km}, n9, σ1^{s}.83/7, mb3.4/4, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	5.29	228	P	Pn	00 29 07.9	+2.3
	1.9nm,0.3s,baz=80,slow=7.5,SNR=4.6						
PMG				S	Sn	00 30 04.0	-1.3
	3.9nm,0.3s,baz=97,slow=23,SNR=1.9						
WRA	Warramunga Arr	21.51	228	P	P	00 32 32.6	-2.0
	0.6nm,0.5s,baz=53,slow=10,SNR=2.0						
ASAR	Alice Springs	24.26	221	P	P	00 33 02.1	-0.3
	0.5nm,0.6s,baz=52,slow=8.9,SNR=6.7						
SONM	Songino Array	66.38	329	P	P	00 38 34.1	+0.4
	0.3nm,0.6s,baz=137,slow=7.2,SNR=2.6						
NVAR	Mina Array Bea	94.04	52	P	P	00 41 03.5	+0.1
	0.2nm,0.2s,baz=250,slow=7.1,SNR=1.8						
H03N3	Juan Fernandez	118.54	133	T	T	02 56 48.1	
	baz=249						
H03N2	Juan Fernandez	118.55	133	T	T	02 56 46.0	
	baz=249						
H03N1	Juan Fernandez	118.56	133	T	T	02 56 49.1	
	baz=249						
TORD	Torodi Ar. Bea	149.05	286	PKPbc	PKPbc	00 47 32.2	-1.5
	1.8nm,0.7s,baz=86,slow=2.5,SNR=18						

IDC 09 00:42:13.0±1.2, 4°.84S×29°.67E, h0^{km}, mb3.7/7, mb1 3.8/8, mb1mx3.6/37, mbtmp3.7/8, ML3.9/1, MS3.8/2, Ms1 3.6/2, ms1mx3.0/30, Error ellipse: s-maj=27.8km s-min=21.9km az=149.0

NEIC 09 00:42:14.2±1.5, 5°.00S±0°.07×29°.7E±0°.1, h10^{km}±2^{km}, mb4.3/6, Error ellipse: s-maj=22.6km s-min=12.3km az=267.0

ISC 09 00:42:14.0±0.6, 4°.91S±0°.06×29°.81E±0°.07, h10^{km}, n23, σ1^{s}.93/27, mb3.9/9, Lake Tanganyika region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MBAR	Mbarara	4.38	12	Pn	Pn	00 43 23.1	+2.4
TEBE	Entebbe	5.60	28	eP	Pn	00 43 41.4	+3.9
TEBE				eS	Sn	00 44 40.9	-1.3
KOND	Kondoa	5.96	90	i P	Pn	00 43 45.2	+2.8
KOND				e		00 43 46.0	
	baz=291,slow=6.5						
KOND				i S	Sn	00 44 50.5	-0.4
KMBO	Kilima Mbogo	8.33	63	Pn	Pn	00 44 16.2	+1.1
	1.3nm,0.3s,baz=233,slow=18,SNR=22						
KMBO				Sn	Sn	00 45 45.0	-4.4
	18nm,0.3s,baz=210,slow=20,SNR=14						
KMBO				Lg	Lg	00 46 41.8	
	3.9nm,0.3s,baz=276,slow=19,SNR=6.5						
KMBO	Kilima Mbogo	8.33	63		Pn	00 44 16.7	+1.6
KIBK	Kibwezi	8.61	73	Pn	Pn	00 44 19.8	+1.0
LODK	Lodwar	9.96	34		Pn	00 44 38.1	+0.7
ZOMB	Zomba	11.75	153	i P	Pn	00 45 04.1	+2.3
ZOMB				S	Sn	00 47 11.0	-2.1
ZOMB	Zomba	11.75	153	i P	Pn	00 45 04.1	+2.3
ZOMB				S	Sn	00 47 11.0	-2.1
BOSA	Boshof	23.97	190	P	P	00 47 30.1	+1.3
	1.6nm,0.5s,baz=20,slow=8.6,SNR=8.2						
BOSA				LR	LR	00 56 32.9	
	comp=Z,53nm,18.9s,baz=6.0,slow=36						
BOSA	Boshof	23.97	190	P	P	00 47 27.4	-1.5
TORD	Torodi Ar. Bea	33.19	303	P	P	00 48 50.1	-1.1
	0.9nm,0.7s,baz=116,slow=8.5,SNR=8.5						
TORD	Torodi Ar. Bea	33.19	303	P	P	00 48 50.8	-0.4
TORD				IAmb	IAmb	00 49 09.5	
	comp=Z,1.8nm,0.8s						
DBIC	Dimbokro	36.47	288	P	P	00 49 18.1	-1.4
	comp=Z,2.2nm,0.8s,baz=103,slow=3.9,SNR=1.8						
DBIC	Dimbokro	36.47	288	P	P	00 49 17.5	-2.1
DBIC				IAmb	IAmb	00 49 28.4	
	comp=Z,6.4nm,1.1s						
BRTR	Keskin Array B	44.55	4	P	P	00 50 27.1	+0.8
	comp=Z,0.5nm,0.5s,baz=199,slow=8.5,SNR=3.6						
TIP	Timpagrande	45.50	346	P	P	00 50 32.1	-1.6
VLC	Villacollemand	51.88	342	P	P	00 51 23.1	+0.4
VLC				IAmb	IAmb	00 51 33.7	
	comp=Z,4.9nm,1.0s						
ESDC	Sonseca Array	54.19	328	P	P	00 51 40.0	+0.2
	comp=Z,0.5nm,0.9s,baz=141,slow=8.3,SNR=3.3						
GERES	GERESS Array B	55.35	347	P	P	00 51 48.0	-0.1
	comp=Z,0.1nm,0.4s,baz=166,slow=9.1,SNR=2.4						
AKBB	Malin Array Si	55.39	360	P	P	00 51 48.5	+0.3
AKBB				IAmb	IAmb	00 51 56.5	
	comp=Z,4.3nm,0.9s						
MKAR	Makanchi Array	69.20	36	P	P	00 53 20.9	-0.1
	comp=Z,0.4nm,0.8s,baz=251,slow=5.9,SNR=3.1						
SONM	Songino Array	84.67	41	LR	LR	01 35 30.6	
	comp=Z,157nm,18.1s,baz=155,slow=38						

IDC 09 00:42:41.8±1.3, 6°.76N×94°.27E, h0^{km}, mb3.6/7, mb1 3.7/9, mb1mx3.6/41, mbtmp3.6/9, ML3.7/2, MS3.6/2, Ms1 3.6/2, ms1mx2.8/41, Error ellipse: s-maj=51.8km s-min=19.8km az=55.0

ISC 09 00:42:46.0±1.1, 6°.8N±0°.1×94°.3E±0°.2, h26^{km}, n14, σ0^{s}.75/10, mb3.5/7, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	Prapat	6.06	131	Pn	Pn	00 44 15.2	+1.2
	0.5nm,0.3s,baz=320,slow=9.5,SNR=7.8						
PSI				Sn	Sn	00 45 21.6	-1.1
	0.5nm,0.3s,baz=257,slow=20,SNR=1.9						
CMAR	Chiang Mai Arr	12.43	21	Pn	Pn	00 45 41.6	+0.2
	0.3nm,0.3s,baz=204,slow=12,SNR=2.1						
PALK	Pallekele	13.54	273	LR	LR	00 50 52.9	
	comp=Z,64nm,19.2s,baz=203,slow=36						
H08S3	Diego Garcia H	26.08	237	T	T	01 14 53.6	
	baz=56,slow=75,SNR=82						
H08S2	Diego Garcia H	26.08	237	T	T	01 14 49.1	
	baz=56,slow=75,SNR=74						
H08S1	Diego Carcia H	26.10	237	T	T	01 14 52.0	
	baz=56,slow=75,SNR=30						
MKAR	Makanchi Array	41.17	347	P	P	00 50 27.8	-0.5
	0.5nm,0.6s,baz=162,slow=8.4,SNR=4.7						
SONM	Songino Array	42.17	12	P	P	00 50 36.5	0.0
	0.2nm,0.4s,baz=191,slow=7.0,SNR=2.8						
WRA	Warramunga Arr	47.49	125	P	P	00 51 18.2	-1.0
	0.3nm,0.7s,baz=307,slow=8.9,SNR=4.8						
ZALV	Zalesovo Beam	47.64	352	P	P	00 51 19.7	-0.1
	0.4nm,0.3s,baz=170,slow=13,SNR=1.8						
ASAR	Alice Springs	49.09	129	P	P	00 51 31.7	+0.2
	0.2nm,0.4s,baz=308,slow=7.5,SNR=1.6						
CTA	Charters Tower	57.62	119	LR	LR	01 19 00.8	
	comp=Z,177nm,18.9s,baz=230,slow=38						
BRTR	Keskin Array B	63.27	311	P	P	00 53 12.8	0.0
	0.3nm,0.6s,baz=93,slow=3.0,SNR=1.7						
FINES	FINESS Array B	73.75	332	P	P	00 54 17.7	+0.1
	3.2nm,1.0s,baz=111,slow=4.3,SNR=4.4						

IDC 09 00:44:11.6±1.9, 30°.50S×177°.43W, h0^{km}, mb4.1/3, mb1 4.2/4, mb1mx3.8/34, mbtmp4.1/4, ML3.1/1, Error ellipse: s-maj=42.2km s-min=23.4km az=100.0

NEIC 09 00:44:14.3±1.3, 30°.41S±0°.05×177°.6W±0°.2, h10^{km}±2^{km}, mb4.2/7, Error ellipse: s-maj=25.8km s-min=8.7km az=89.0

ISC 09 00:44:16.0±1.8, 30°.41S±0°.07×177°.5W±0°.2, h33^{km}, n28, σ1^{s}.28/19, mb4.2/7, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.22	341	Pn	Pn	00 44 36.9	+0.1
	101nm,0.3s,baz=155,slow=19,SNR=12						
RAO				Sn	Sn	00 44 49.9	-2.2
	290nm,0.3s,baz=62,slow=23,SNR=14						
RAO	Raoul Island	1.22	341		Pn	00 44 36.8	+0.1
RAO					Sn	00 44 49.5	-2.5
URZ	Urewera	9.03	208	Pn	Pn	00 46 22.4	-1.5
	0.2nm,0.3s,baz=301,slow=23,SNR=3.0						
URZ				Sn	Sn	00 48 02.9	-1.5
	1.7nm,0.3s,baz=122,slow=24,SNR=2.9						
URZ	Urewera	9.03	208		Sn	00 48 03.8	-0.5
CTAO	Charters Tower	34.26	279	P	P	00 51 01.2	+2.1
STKA	Stephens Creek	34.93	257	P	P	00 51 06.2	+1.4
	1.9nm,0.6s,baz=79,slow=7.2,SNR=8.0						
STKA	Stephens Creek	34.93	257	IAmb	IAmb	00 51 08.1	
	comp=Z,0.7nm,1.0s						
BBOO	Buckleboo	39.41	254	P	P	00 51 43.5	+0.7
BBOO				IAmb	IAmb	00 51 49.2	
	comp=Z,6.6nm,1.4s						
AS31	Alice Springs	43.57	267	P	P	00 52 17.1	0.0
ASAR	Alice Springs	43.57	267	P	P	00 52 17.8	+0.7
	comp=Z,0.7nm,0.5s,baz=104,slow=7.3,SNR=13						
ASAR	Alice Springs	43.57	267	P	P	00 52 16.9	-0.2
WR0	Warramunga Arr	44.38	272	P	P	00 52 24.2	+0.6
WR0				IAmb	IAmb	00 52 42.9	
	comp=Z,5.8nm,1.4s						
WB2	Warramunga Arr	44.55	272	P	P	00 52 25.3	+0.3
WB2				IAmb	IAmb	00 52 28.6	
	comp=Z,5.0nm,1.2s						
WRA	Warramunga Arr	44.56	272	P	P	00 52 24.7	-0.3
	comp=Z,1.5nm,0.3s,baz=111,slow=7.8,SNR=24						
WB0	Warramunga Arr	44.59	272	P	P	00 52 25.7	+0.5
WB0				IAmb	IAmb	00 52 43.5	
	comp=Z,8.6nm,1.4s						
H03S2	Juan Fernandez	80.07	123	T	T	02 25 38.6	
	baz=237,slow=74,SNR=8.0						
H03S1	Juan Fernandez	80.08	123	T	T	02 25 44.2	
	baz=237,slow=74,SNR=6.6						
H03S3	Juan Fernandez	80.09	123	T	T	02 25 38.6	
	baz=237,slow=74,SNR=7.0						
H03N3	Juan Fernandez	80.26	123	T	T	02 25 54.3	
	baz=237						
H03N2	Juan Fernandez	80.26	123	T	T	02 25 53.7	
	baz=237,slow=74						
H03N1	Juan Fernandez	80.28	123	T	T	02 25 50.8	
	baz=237,slow=74						
H10S3	ASCENSION HYDR	37.52	154	T	T	03 38 00.6	
	baz=8.8						
H10S2	ASCENSION HYDR	37.52	154	T	T	03 38 04.6	
	baz=211						
H10N3	ASCENSION HYDR	38.60	154	T	T	03 39 28.7	
	baz=204,slow=75,SNR=4.2						
H10N1	ASCENSION HYDR	38.60	154	T	T	03 39 21.8	
	baz=204,slow=75,SNR=5.3						
H10N2	ASCENSION HYDR	38.62	154	T	T	03 39 20.9	
	baz=204,slow=75,SNR=6.0						
FINES	FINESS Array B	145.31	340	PKPbc	PKPab	01 03 50.7	+1.2
	comp=Z,1.1nm,0.7s,baz=58,slow=3.4,SNR=9.5						
TORD	Torodi Ar. Bea	162.81	177	PKPab	PKPab	01 05 03.2	-0.9
	comp=Z,0.3nm,0.8s,baz=195,slow=3.6,SNR=1.4						

KRNET 09 00:45:43.0±0.1, 39°.21N×71°.63E, h14^{km}, mb3.2

SOME 09 00:45:42.1, 39°.37N×72°.00E, h10^{km}

IDC 09 00:45:43.5±1.5, 39°.09N×71°.46E, h0^{km}, mb3.7/3, mb1 3.7/5, mb1mx3.4/43, mbtmp3.6/5, ML2.9/2, Error ellipse: s-maj=40.3km s-min=24.7km az=148.0

NNC 09 00:45:43.4±4.7, 39°.12N×71°.09E, h0^{km}, mb4.1, mpv3.7, Error ellipse: s-maj=34.5km s-min=20.1km az=10.0

ISC 09 00:45:44.5±0.8, 39°.45N±0°.04×71°.59E±0°.03, h12^{km}±6^{km}, n40, σ2^{s}.29/59, mb3.9/3, 24C-12D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	Karamyk	0.17	78	⇑iP	Pg	00 45 49.3	+0.6
	baz=26						
DRK				⇑iS	Sg	00 45 53.4	+1.8
	baz=26						
BTK	Batken	0.85	316	⇑iP	Pn	00 46 03.1	+0.7
	baz=24						
BTK				⇑iS	Sn	00 46 17.4	+2.6
	baz=24						
GAR	Garm	1.08	246	⇓eP	Pg	00 46 02.7	-2.7
	baz=59						
GAR				⇓iS	Sg	00 46 17.1	-2.4
	baz=59						
OHH	Osh	1.42	40	⇑iP	Pg	00 46 12.6	+0.8
	baz=34						
OHH				⇑iS	Sg	00 46 33.6	+3.4
	baz=34						
SFK	Sufi-Kurgan	1.58	68	⇑iP	Pg	00 46 13.5	-1.5
	baz=60						
SFK				⇑iS	Sg	00 46 35.8	+0.3
	baz=60						
CHGR	Chuyangaron	2.05	248	⇓iP	Pn	00 46 19.6	+0.8
	baz=55						
CHGR				⇓iS	Sb	00 46 45.8	-1.3
	baz=55						
TRKS	Terek-Say	2.11	351	⇑iP	Pg	00 46 23.8	-1.2
	baz=51						
TRKS				⇑iS	Sg	00 46 53.4	+1.0
	baz=51						
SALK	Salom-Alik	2.23	49	⇑eP	Pb	00 46 24.9	0.0
	baz=44						
SALK				⇑eS	Sg	00 46 55.2	-1.1
	baz=44						
IUG	Iuzhnay	2.94	337	eP	Pg	00 46 39.5	-1.4
	348nm,0.3s						
IUG				eS	Sg	00 47 20.1	+1.0
	129nm,0.4s						
IUG	Iuzhnay	2.94	337	Pg	Pg	00 46 39.8	-1.2
	399nm,0.4s						
IUG				Lg	Lg	00 47 23.9	
	129nm,0.4s						
MNAS	Manas	3.12	13	⇓eP	Pb	00 46 38.3	-1.6
	baz=11						
MNAS				⇓iS	Sb	00 47 18.2	+0.3
	baz=11						
AML	Almayashu	3.12	30	P	Pb	00 46 41.2	+1.0
	SNR=59						
AML	Almayashu	3.12	30	⇑iP	Pb	00 46 38.1	-2.1
	baz=28						
AML				⇑iS	Sb	00 47 18.0	-0.4
	baz=28						
MRKS	Merke	3.52	20	eP	Pb	00 46 45.9	-0.9
	8.9nm,0.4s						
MRKS				eS	Sb	00 47 32.3	+2.8
	7.3nm,0.3s						
UCH	Uchtor	3.56	38	P	Pb	00 46 46.5	-1.1
	SNR=15						
UCH	Uchtor	3.56	38	⇑iP	Pb	00 46 43.8	-3.8
	baz=35						
UCH				⇑eS	Sb	00 47 27.6	-3.3
	baz=35						
EKS2	Erkin-Say	3.61	27	P	Pb	00 46 47.4	-1.0
	SNR=18						
EKS2	Erkin-Say	3.61	27	⇑eP	Pb	00 46 44.6	-3.8
	baz=25						
EKS2				⇑eS	Sb	00 47 29.7	-2.5
	baz=25						
KK31	Karatay Array	3.74	348	⇓Pn	Pb	00 46 48.6	-1.9
	2.2nm,0.3s,baz=176,slow=13,SNR=69						
KK31				⇑Pg	Pg	00 46 58.4	+2.1
	2.2nm,0.3s,baz=166,slow=18,SNR=7.6						
KK31				⇑Sn	Sb	00 47 35.4	-0.4
	6.4nm,0.5s						
KK31				⇑Lg	Lg	00 47 49.4	
	7.1nm,0.5s,baz=181,slow=33,SNR=5.2						
BRLS	Borolday	3.82	340	eP	Pg	00 46 54.1	-3.5
	2.2nm,0.3s						
BRLS				eS	Sg	00 47 45.8	-1.3
	18nm,0.3s						
BRLS	Borolday	3.82	340	Pg	Pb	00 46 52.8	+1.0
	4.6nm,0.2s						
BRLS				Lg	Lg	00 47 45.8	
	18nm,0.3s						
AAK	Ala-Archa	3.87	34	P	Pb	00 46 51.1	-1.8
	SNR=13						
AAK	Ala-Archa	3.87	34	⇑Pn	Pb	00 46 50.8	-2.0
	4.4nm,0.3s						
AAK				⇓Sn	Sb	00 47 42.3	+2.6
	10nm,0.8s						
AAK	Ala-Archa	3.87	34	⇓eP	Pb	00 46 48.2	-4.6
	baz=31						
AAK				⇓iS	Sb	00 47 35.5	-4.2
	baz=31						
KBK	Karagaybulak	4.09	37	P	Pb	00 46 55.0	-1.5
	SNR=10						
CHMS	Chumysh	4.28	33	P	Pb	00 46 56.9	-2.8
	SNR=18						
USP	Ospenovka	4.40	29	P	Pb	00 46 58.0	-3.7
	SNR=12						
TKM2	Tokmak 2	4.61	40	P	Pb	00 47 00.9	-4.4
	SNR=13						
TKM2	Tokmak 2	4.61	40	⇑Pn	Pb	00 47 00.6	-4.7
	5.0nm,0.6s						
TKM2				⇑Sn	Sb	00 48 00.3	-0.5
	3.6nm,0.7s						
KST	Kastek	4.88	41	eP	Pb	00 47 08.1	-1.8
	4.1nm,0.8s						
KST				eS	Sb	00 48 11.2	+2.7
	3.9nm,0.7s						
DGS	Degeres	4.93	38	eP	Pb	00 47 12.4	+1.6
	1.4nm,0.3s						
DGS				eS	Sg	00 48 17.8	-5.0
	6.5nm,0.7s						
KRBS	Karabastau	5.24	35	Pg	Pg	00 47 21.6	-3.2
	2.1nm,0.4s						
KRBS				Lg	Lg	00 48 33.7	
	2.6nm,0.4s						
KUU	Kurty	5.69	37	Pg	Pg	00 47 28.7	-4.8
KUU				Lg	Lg	00 48 46.9	
BTLS	Baital	5.88	17	Pg	Pg	00 47 36.5	-0.6
	1.3nm,0.4s						
BTLS				Lg	Lg	00 48 59.6	
	1.3nm,0.4s						
MKAR	Makanchi Array	10.72	43	Pn	Pn	00 48 23.7	+5.9
	0.1nm,0.3s,baz=236,slow=10,SNR=2.2						
AB31	Akbulak array	12.85	324	⇓Pn	Pn	00 48 48.5	+1.6
	0.8nm,0.6s,baz=129,slow=14,SNR=16						
AB31				⇓Sn	Sn	00 51 11.4	+1.6
	0.2nm,0.4s,baz=138,slow=25,SNR=5.9						
ZALV	Zalesovo Beam	17.07	27	P	P	00 49 48.2	+3.8
	0.3nm,0.3s,baz=207,slow=11,SNR=5.6						
FINES	FINESS Array B	35.34	324	P	P	00 52 42.1	+2.8
	1.9nm,1.0s,baz=110,slow=16,SNR=1.4						
TORD	Torodi Ar. Bea	66.28	268	P	P	00 56 33.0	+0.2
	0.3nm,0.8s,baz=55,slow=5.8,SNR=4.9						
WRA	Warramunga Arr	83.17	123	P	P	00 58 11.1	+0.5
	1.1nm,1.2s,baz=321,slow=4.5,SNR=2.8						

IDC 09 00:47:48.1±1.1, 4°.28N×126°.69E, h0^{km}, mb3.6/6, mb1 3.8/7, mb1mx3.6/37, mbtmp3.7/7, ML3.7/1, MS2.8/1, Ms1 3.0/1, ms1mx2.3/41, Error ellipse: s-maj=75.1km s-min=18.1km az=68.0

ISC 09 00:47:55.2±1.2, 4°.3N±0°.2×126°.8E±0°.5, h50^{km}, n9, σ1^{s}.30/7, mb3.6/6, 1C, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCP	Kidapawan	3.22	327	⇑eP	Pn	00 48 44.5	+1.1
SIJI	Sorong	6.76	139	Pn	Pn	00 49 30.0	-2.0
	1.6nm,0.3s,baz=232,slow=24,SNR=2.4						
FITZ	Fitzroy Crossi	22.27	183	P	P	00 52 47.8	-0.4
	1.7nm,0.7s,baz=360,slow=9.7,SNR=2.3						
WRA	Warramunga Arr	25.17	163	P	P	00 53 15.0	-1.2
	1.1nm,0.6s,baz=343,slow=11,SNR=8.2						
ASAR	Alice Springs	28.62	166	P	P	00 53 45.6	-1.5
	0.2nm,0.5s,baz=344,slow=6.7,SNR=2.0						
CMAR	Chiang Mai Arr	30.69	300	LR	LR	01 08 00.1	
	comp=Z,14nm,18.4s,baz=212,slow=40						
STKA	Stephens Creek	38.60	160	P	P	00 55 15.0	+1.4
	0.5nm,0.3s,baz=335,slow=10,SNR=3.5						
SONM	Songino Array	46.82	341	P	P	00 56 20.1	-0.1
	0.3nm,0.4s,baz=169,slow=9.3,SNR=2.3						
MKAR	Makanchi Array	57.17	325	P	P	00 57 35.8	-1.2
	0.3nm,0.3s,baz=117,slow=8.3,SNR=8.4						
MKAR				PcP	PcP	00 58 30.6	-0.6
	0.3nm,0.6s,baz=108,slow=4.0,SNR=2.0						

NIC 09 00:59:15.4±0.0, 35°.70N×28°.43E, h82^{km}±6^{km}, Ml3.3/3

ATH 09 00:59:16.9, 35°.69N×28°.70E, h10^{km}±31^{km}, ML2.5/2, Error ellipse: s-maj=31.6km s-min=2.1km az=0.0

THE 09 00:59:18.3, 35°.80N×28°.74E, h9^{km}±6^{km}, ML2.4/2, Error ellipse: s-maj=10.4km s-min=2.0km az=188.0

ISC 09 00:59:16.6±1.6, 35°.74N±0°.07×28°.69E±0°.03, h5^{km}±13^{km}, n16, σ1^{s}.28/23, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARG	Arkhangelos	0.66	316	P	Pg	00 59 30.1	+0.7
ARG				S	Sb	00 59 41.4	+1.2
	572nm,0.3s						
ARG	Arkhangelos	0.66	316	P	Pg	00 59 29.8	+0.4
ARG				S	Sb	00 59 40.5	+0.3
ARG				AML	AML	00 59 43.6	
	comp=N,734μm,0.2s						
ARG				AML	AML	00 59 45.6	
	comp=E,1534μm,0.4s						
ARG	Arkhangelos	0.66	316	P	Pg	00 59 29.8	+0.4
ARG				S	Sb	00 59 42.0	+1.9
KSL	Kastellorizon	0.83	60	P	Pg	00 59 32.2	-0.4
KSL				S	Sb	00 59 45.6	+0.6
	comp=E,245nm,0.4s						
KSL	Kastellorizon	0.83	60	P	Pg	00 59 32.0	-0.5
KSL				S	Sb	00 59 45.3	+0.3
KSL				AML	AML	00 59 52.4	

	comp=N,430µm,0.4s						
KSL				AML	AML	00 59 55.5	
	comp=E,556µm,0.5s						
KSL	**Kastellorizon**	**0.83**	**60**	P	**Pb**	**00 59 33.6**	**+0.1**
KSL				S	**Sn**	**00 59 50.7**	**+3.2**
KSL				AML	AML	00 59 51.5	
	comp=E,0.6nm,0.5s						
KSL				AML	AML	00 59 51.5	
	comp=E,0.6nm,0.5s						
KSL				AML	AML	00 59 52.2	
	comp=E,0.4nm,0.3s						
KSL				AML	AML	00 59 52.2	
	comp=E,0.4nm,0.3s						
DAT	**Datca**	**1.34**	**318**	P	**Pn**	**00 59 41.9**	**-0.1**
ELL	**Elmali**	**1.41**	**44**	P	**Pn**	**00 59 42.5**	**-0.5**
YER	**Yerkesik**	**1.44**	**347**	P	**Pn**	**00 59 42.5**	**-0.8**
YER				S	**Sn**	**00 59 59.3**	**-3.2**
ZKR	**Zakros**	**2.12**	**254**	P	**Pb**	**00 59 55.4**	**+0.1**
NPS	**Neapolis**	**2.56**	**260**	P	**Pb**	**01 00 01.9**	**-1.0**
AKMS	**Akamas**	**3.06**	**102**	P	**Pn**	**01 00 04.5**	**-1.1**
AKMS				AML	AML	01 00 26.8	
	comp=E,0.3nm,1.1s						
AKMS				AML	AML	01 00 29.7	
	comp=E,0.2nm,1.2s						
ALFC	**Alefka**	**3.24**	**99**	P	**Pn**	**01 00 08.3**	**+0.2**
ALFC				AML	AML	01 00 46.1	
	comp=E,0.1nm,0.6s						
ALFC				AML	AML	01 00 46.4	
	comp=E,0.1nm,0.7s						
NATA	**Nata**	**3.31**	**106**	P	**Pn**	**01 00 09.0**	**-0.1**
ASGA	**Asgata**	**3.85**	**103**	P	**Pn**	**01 00 15.7**	**-0.6**
MVOU	**Mavrovouni**	**4.10**	**99**	P	**Pn**	**01 00 19.7**	**-0.1**

MAN 09 01:05:53.6, 11°.11N×124°.61E, h4^{km}, mb4.4, ML3.3, MS3.0, 2C-1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSLP	**Maasin**	**1.00**	**166**	⇑eP	Pg	01 06 12.2	-0.6
MSLP				eS	Sn	01 06 29.3	+0.3
LLP	**Lapu-Lapu**	**1.01**	**219**	⇑iP	Pg	01 06 13.3	+0.3
LLP				i S	Sn	01 06 29.2	-0.1
TBP	**Tagbilaran**	**1.59**	**208**	⇓eP	Pn	01 06 22.5	-0.1
TBP				i S	Sg	01 06 46.5	+1.7

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*NEIC **09** 01:07:24.8±0.9, 15°.3S±0°.1×178°.7W±0°.2, h399^{km}±9^{km}, mb4.1/11, Error ellipse: s-maj=23.1km s-min=16.2km az=95.0*

*IDC **09** 01:07:24.8±2.9, 15°.27S×178°.65W, h416^{km}±20^{km}, mb3.5/4, mb1 3.6/5, mb1mx3.2/46, mbtmp4.3/5, Error ellipse: s-maj=40.8km s-min=36.1km az=123.0*

ISC 09 01:07:23.6±1.1**, 15°.2S**±0°.2×**178°.6W**±0°.2**, h400^{km}, n26, σ1^{s}05**/27**, mb4.0**/10**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.09**	**231**	P	**Pn**	**01 08 36.8**	**+0.2**
	24nm,0.3s,baz=340,slow=18,SNR=16						
MSVF				S	**S**	**01 09 38.8**	**+3.0**
	baz=360,slow=24,SNR=0.4						
MSVF	**Nonsavu**	**4.09**	**231**		**Pn**	**01 08 36.6**	**0.0**
LIFNC	**LIFOU**	**14.57**	**245**	P	**P**	**01 10 30.1**	**-1.3**
PINNC	**Pines Island,**	**15.12**	**239**		**P**	**01 10 36.3**	**-1.0**
URZ	**Urewera**	**23.30**	**189**	P	**P**	**01 11 57.1**	**-0.8**
	1.1nm,0.3s,baz=301,slow=24,SNR=1.1						
URZ	**Urewera**	**23.30**	**189**		**P**	**01 11 57.1**	**-0.8**
URZ				IAmb	IAmb	01 12 24.7	
	comp=Z,8.7nm,1.0s						
THZ	**Tophouse**	**27.49**	**194**	P	**P**	**01 12 34.6**	**-0.5**
THZ				IAmb	IAmb	01 13 03.5	
	comp=Z,7.4nm,1.1s						
LBZ	**Lake Benmore**	**30.63**	**196**	P	**P**	**01 13 02.1**	**-0.5**
ARMA	**Armidale**	**31.23**	**236**	P	**P**	**01 13 08.5**	**+0.4**
ARMA				IAmb	IAmb	01 13 37.7	
	comp=Z,6.7nm,1.0s						
WKZ	**Wanaka**	**31.36**	**197**	P	**P**	**01 13 08.5**	**-0.5**
MLZ	**Mavora Lakes**	**32.11**	**198**	P	**P**	**01 13 14.6**	**-0.9**
MLZ				IAmb	IAmb	01 13 38.6	
	comp=Z,12nm,1.1s						
STKA	**Stephens Creek**	**39.84**	**238**	P	**P**	**01 14 20.0**	**-0.4**
	comp=Z,1.7nm,0.7s,baz=45,slow=5.7,SNR=5.3						
STKA	**Stephens Creek**	**39.84**	**238**	P	**P**	**01 14 20.8**	**+0.4**
BBOO	**Buckleboo**	**44.61**	**239**	P	**P**	**01 14 58.2**	**-0.1**
BBOO				IAmb	IAmb	01 14 59.4	
	comp=Z,7.4nm,1.1s						
WB0	**Warramunga Arr**	**44.95**	**257**	P	**P**	**01 15 00.0**	**-1.2**
WRA	**Warramunga Arr**	**45.00**	**257**	P	**P**	**01 15 00.6**	**-0.9**
	comp=Z,1.8nm,0.9s,baz=84,slow=6.9,SNR=2.2						
AS31	**Alice Springs**	**45.40**	**252**	P	**P**	**01 15 04.5**	**-0.2**
AS31				IAmb	IAmb	01 15 05.0	
	comp=Z,4.9nm,0.4s						
ASAR	**Alice Springs**	**45.41**	**252**	P	**P**	**01 15 03.9**	**-0.9**
	comp=Z,11nm,0.3s,baz=84,slow=8.4,SNR=77						
FORT	**Forrest**	**51.04**	**243**	P	**P**	**01 15 46.7**	**-0.3**
KSAR	**Wonju Array Be**	**72.57**	**318**	P	**P**	**01 18 09.8**	**+1.2**
QSPA	**South Pole Qui**	**74.86**	**180**	P	**P**	**01 18 22.5**	**+1.1**
QSPA				IAmb	IAmb	01 18 23.6	
	comp=Z,3.4nm,0.7s						
CLL	**Collm**	**142.77**	**348**	ePKPdf	**PKPdf**	**01 26 12.0**	**+2.0**
GEC2	**GERESS Array S**	**144.94**	**346**	PKPdf	**PKPdf**	**01 26 14.1**	**+0.1**
GERES	**GERESS Array B**	**144.94**	**346**	PKPbc	**PKPdf**	**01 26 13.4**	**-0.5**
	comp=Z,0.5nm,0.5s,baz=46,slow=3.9,SNR=7.1						
GERES	**GERESS Array B**	**144.94**	**346**		**PKPdf**	**01 26 13.3**	**-0.6**
FNA	**Florina**	**149.13**	**330**	PKPbc	**PKPbc**	**01 26 25.1**	**-0.7**

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*IDC **09** 01:07:53.1±1.1, 8°.00S×125°.38E, h0^{km}, mb3.9/4, mb1 4.2/8, mb1mx3.9/41, mbtmp4.1/8, ML3.7/4, MS3.1/6, Ms1 3.2/6, ms1mx2.8/41, Error ellipse: s-maj=37.3km s-min=18.6km az=80.0*

*NEIC **09** 01:07:56.3±1.2, 7°.99S±0°.07×125°.23E±0°.08, h10^{km}±1^{km}, mb4.3/8, Error ellipse: s-maj=14.4km s-min=10.3km az=49.0*

*DJA **09** 01:08:05.0±0.6, 8°S±4°×12°5E±°, h10^{km}, M3.8/7, mb4.1/2, mB4.6/1, MLv3.7/7, Mw(mB)3.8/1*

ISC 09 01:07:57.0±0.7**, 8°.13S**±0°.05×**125°.30E**±0°.07**, h26^{km}, n39, σ1^{s}81**/35**, mb4.1**/8**, MS3.3**/3**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**1.92**	**212**	P	**Pb**	**01 08 32.3**	**+1.0**
SOEI	**Soe**	**1.92**	**212**		**Pb**	**01 08 29.9**	**-1.4**
BATI	**Baumata**	**2.62**	**218**	Pn	**Pn**	**01 08 39.6**	**+1.8**
	7.9nm,0.3s,baz=0.0,slow=20,SNR=10						
BATI				LR	LR	01 09 11.5	
	comp=Z,61nm,21.3s,baz=34,slow=28						
BATI				Sn	**Sb**	**01 09 12.9**	**-2.3**
	8.3nm,0.3s,baz=102,slow=19,SNR=5.6						
BATI	**Baumata**	**2.62**	**218**	P	**Pn**	**01 08 40.0**	**+2.2**
MMRI	**Maumere**	**3.07**	**260**	P	**Pn**	**01 08 46.5**	**+2.6**
MMRI	**Maumere**	**3.07**	**260**	Pn	**Pn**	**01 08 45.5**	**+1.6**
EDFI	**Ende, Flores**	**3.63**	**260**	P	**Pn**	**01 08 51.6**	**0.0**
BSSI	**Bau Bau, Buton**	**5.17**	**292**	P	**Pn**	**01 09 15.8**	**+3.1**
BKSI	**Bulukumba**	**5.85**	**298**	P	**Pn**	**01 09 23.7**	**+1.6**
	0.1nm509nm11nm,0.6s						
SANI	**Sanana**	**6.07**	**6**	P	**Pb**	**01 09 40.0**	**-2.2**
MTN	**Manton Dam**	**7.41**	**130**	Pn	Pn	01 09 47.6	+4.1
KNRA	**Kununurra**	**8.23**	**156**	Pn	**Pn**	**01 09 57.3**	**+2.4**
FITZ	**Fitzroy Crossi**	**9.92**	**178**	Pn	**Pn**	**01 10 17.1**	**-0.9**
	0.5nm,0.3s,baz=7.0,slow=11,SNR=16						
FITZ				Sn	**Sn**	**01 12 03.8**	**-4.7**
	0.2nm,0.3s,baz=310,slow=16,SNR=3.0						
FITZ	**Fitzroy Crossi**	**9.92**	**178**	Pn	**Pn**	**01 10 19.1**	**+1.1**
WB0	**Warramunga Arr**	**14.54**	**144**	Pn	**Pn**	**01 11 20.1**	**-1.1**
WRA	**Warramunga Arr**	**14.65**	**144**	Pn	**Pn**	**01 11 21.6**	**-1.1**
	0.5nm,0.3s,baz=319,slow=13,SNR=21						
WRA				Sn	**Sn**	**01 14 01.9**	**-2.4**
	0.3nm,0.3s,baz=314,slow=22,SNR=5.6						
WRA	**Warramunga Arr**	**14.65**	**144**	Pn	**Pn**	**01 11 21.9**	**-0.8**
WB2	**Warramunga Arr**	**14.66**	**144**	Pn	**Pn**	**01 11 22.4**	**-0.4**
WR0	**Warramunga Arr**	**14.78**	**144**	Pn	**Pn**	**01 11 23.4**	**-1.0**
DAV	**Davao City (W)**	**15.10**	**1**	LR	LR	01 17 34.5	
	comp=Z,54nm,20.2s,baz=168,slow=39						
AS31	**Alice Springs**	**17.52**	**153**	P	**P**	**01 12 03.3**	**+2.7**
ASAR	**Alice Springs**	**17.52**	**153**	P	**P**	**01 12 01.4**	**+0.8**
	0.3nm,0.3s,baz=332,slow=12,SNR=3.1						
LEM	**Lembang**	**17.58**	**273**	LR	LR	01 19 30.2	
	comp=Z,153nm,19.5s,baz=72,slow=40						
GIRL	**Giralia**	**17.93**	**215**		**P**	**01 12 05.2**	**+0.1**
COEN	**Coen**	**18.47**	**110**	P	**Pn**	**01 12 13.7**	**+2.4**
PMG	**Port Moresby**	**21.64**	**95**	LR	LR	01 22 55.4	
	comp=Z,82nm,18.6s,baz=266,slow=42						
BBOO	**Buckleboo**	**26.51**	**159**	P	**P**	**01 13 34.4**	**+1.9**
BBOO				IAmb	IAmb	01 13 38.6	
	comp=Z,7.8nm,1.3s						
STKA	**Stephens Creek**	**28.08**	**150**	P	**P**	**01 13 47.4**	**+0.8**
	comp=Z,0.5nm,0.3s,baz=315,slow=5.7,SNR=1.2						
CMAR	**Chiang Mai Arr**	**37.07**	**316**	LR	LR	01 32 55.9	
	comp=Z,46nm,18.6s,baz=85,slow=41						
SONM	**Songino Array**	**58.17**	**345**	P	**P**	**01 17 47.4**	**-1.5**
	comp=Z,0.2nm,0.3s,baz=197,slow=4.5,SNR=1.7						
MK31	**Makanchi Array**	**66.71**	**329**	P	**P**	**01 18 46.0**	**+0.2**
MK31				IAmb	IAmb	01 19 03.7	
	comp=Z,2.8nm,1.4s						
MKAR	**Makanchi Array**	**66.71**	**329**	P	**P**	**01 18 45.9**	**+0.1**
	comp=Z,0.9nm,0.6s,baz=129,slow=8.2,SNR=10						
MKAR	**Makanchi Array**	**66.71**	**329**	P	**P**	**01 18 46.2**	**+0.4**
MAKZ	**Makanchi**	**66.88**	**329**	P	**P**	**01 18 47.5**	**+0.6**
MAKZ				IAmb	IAmb	01 18 48.0	
	comp=Z,1.8nm,1.0s						
ZALV	**Zalesovo Beam**	**70.62**	**336**	P	**P**	**01 19 09.9**	**0.0**
	comp=Z,0.8nm,0.5s,baz=115,slow=3.6,SNR=4.2						
ZALV	**Zalesovo Beam**	**70.62**	**336**	P	**P**	**01 19 09.8**	**-0.2**
KURK	**Kurchatov**	**71.13**	**331**	P	**P**	**01 19 13.2**	**0.0**
KURK				IAmb	IAmb	01 19 16.1	
	comp=Z,2.1nm,0.8s						
VNDA	**Vanda**	**71.94**	**172**	P	P	01 19 21.5	+3.8
KBZ	**Khabaz**	**90.11**	**314**	LR	LR	02 09 00.4	
	comp=Z,17nm,19.0s,baz=272,slow=41						

IDC 09 01:17:44.3±7.9**, 40°.39S×78°.10E, h0^{km}, mb3.7**/4**, mb1 3.9**/4**, mb1mx3.6**/24**, mbtmp3.7**/4**, MS3.7**/6**, Ms1 3.6**/6**, ms1mx3.3**/31**, Error ellipse: s-maj=262.4km s-min=47.4km az=35.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAW	**Mawson**	**28.53**	**192**	LR	LR	01 33 08.2	
	comp=Z,107nm,18.9s,baz=35,slow=32						
H01W2	**Cape Leeuwin H**	**28.92**	**91**	T	T	01 53 43.3	
	baz=248,slow=74,SNR=21						
H01W3	**Cape Leeuwin H**	**28.92**	**91**	T	T	01 53 50.9	
	baz=248,slow=74,SNR=18						
H01W1	**Cape Leeuwin H**	**28.93**	**91**	T	T	01 53 49.1	
	baz=248,slow=74,SNR=20						
H08S2	**Diego Garcia H**	**32.99**	**350**	T	T	01 58 49.1	
	baz=172						
H08S1	**Diego Carcia H**	**32.99**	**350**	T	T	01 58 48.1	
	baz=172						
H08S3	**Diego Garcia H**	**33.01**	**350**	T	T	01 58 51.9	
	baz=172						
BOSA	**Boshof**	**44.51**	**268**	LR	LR	01 40 14.0	
	comp=Z,106nm,21.6s,baz=182,slow=30						
ASAR	**Alice Springs**	**49.36**	**88**	P	P	01 26 35.6	-0.1
	0.1nm,0.4s,baz=233,slow=6.7,SNR=7.8						
ASAR				LR	LR	01 45 19.2	
	comp=Z,139nm,19.4s,baz=246,slow=34						
VNDA	**Vanda**	**49.60**	**164**	LR	LR	01 46 15.2	
	comp=Z,49nm,18.0s,baz=315,slow=34						
STKA	**Stephens Creek**	**51.01**	**102**	P	P	01 26 47.9	-0.1
	0.5nm,0.3s,baz=225,slow=8.6,SNR=2.9						
STKA				LR	LR	01 43 31.6	
	comp=Z,73nm,20.7s,baz=204,slow=30						
WRA	**Warramunga Arr**	**51.81**	**84**	P	P	01 26 54.1	-0.1
	0.5nm,0.8s,baz=239,slow=8.3,SNR=3.2						
WRA				LR	LR	01 45 53.7	
	comp=Z,59nm,21.0s,baz=150,slow=33						
MKAR	**Makanchi Array**	**86.88**	**3**	P	P	01 30 30.4	0.0
	0.6nm,0.8s,baz=174,slow=5.2,SNR=4.5						

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*NEIC **09** 01:18:08.8±1.0, 59°.35N±0°.03×153°.14W±0°.07, h102^{km}±4^{km}, Error ellipse: s-maj=5.2km s-min=4.5km az=122.0*

*ANF **09** 01:18:09.1±0.2, 59°.35N×153°.10W, h96^{km}±2^{km}, ML4.1/49, Error ellipse: s-maj=2.1km s-min=1.8km az=25.0*

*AEIC **09** 01:18:10.1±1.0, 59°.35N±0°.03×153°.09W±0°.06, h97^{km}±4^{km}, ML3.7, mb4.1/1(NEIC), ML4.0/122(NEIC), Error ellipse: s-maj=4.9km s-min=4.2km az=136.0*

ISC 09 01:18:08.6±1.0**, 59°.32N**±0°.03×**153°.09W**±0°.04**, h106^{km}**±6^{km}**, n280, σ0^{s}73**/320**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AU22	**Augustine Moun**	**0.14**	**290**		**Pn**	**01 18 23.3**	**0.0**
AU22					**Sn**	**01 18 33.6**	**-0.7**
AUQ	**Augustine Qik'**	**0.17**	**282**		**Pn**	**01 18 23.5**	**0.0**
AGU	**Augustine-Summ**	**0.18**	**283**		**Pn**	**01 18 23.5**	**-0.1**
AUCH	**Augustine Cone**	**0.19**	**283**		**Pn**	**01 18 23.7**	**+0.1**
AUL	**Augustine Lava**	**0.19**	**289**		**Pn**	**01 18 23.5**	**0.0**
AUW	**Augustine West**	**0.20**	**284**		**Pn**	**01 18 23.7**	**+0.2**
P19K	**Oil Pt**	**0.34**	**348**	P	**Pn**	**01 18 23.8**	**-0.3**
	baz=166,SNR=18						
P19K				S	**Sn**	**01 18 34.6**	**-1.2**
	baz=166						
P19K	**Oil Pt**	**0.34**	**348**		**Pn**	**01 18 23.7**	**-0.4**
P19K				Sn	**Sn**	**01 18 34.5**	**-1.2**
OPT	**Oil Point**	**0.34**	**348**		**Pn**	**01 18 23.9**	**-0.2**
Q19K	**Cape Douglas,**	**0.49**	**216**	P	**Pn**	**01 18 24.9**	**-0.1**
	baz=34,SNR=9.2						
Q19K				S	**Sn**	**01 18 36.8**	**-0.4**
	baz=34						
Q19K	**Cape Douglas,**	**0.49**	**216**		**Pn**	**01 18 24.6**	**-0.4**
Q19K					**Sn**	**01 18 36.4**	**-0.9**
Q19K				IAML		01 18 37.6	
	comp=N,6µm,0.7s						
ILS	**Iliamna Low So**	**0.64**	**1**		**Pn**	**01 18 25.6**	**-0.5**
ILS					**Sn**	**01 18 38.0**	**-1.4**
ILSW	**Iliamna Southw**	**0.66**	**358**		**Pn**	**01 18 25.9**	**-0.5**
ILSW					**Sn**	**01 18 38.1**	**-1.7**
IVE	**Iliamna Volcan**	**0.70**	**3**		**Pn**	**01 18 26.3**	**-0.4**
IVE					**Sn**	**01 18 38.6**	**-1.7**
O20K	**Slope Mountain**	**0.80**	**17**	P	**Pn**	**01 18 27.5**	**-0.1**
	baz=198,SNR=24						
O20K				S	**Sn**	**01 18 40.7**	**-1.0**
	baz=198						
O20K	**Slope Mountain**	**0.80**	**17**		**Pn**	**01 18 27.5**	**-0.1**
O20K					**Sn**	**01 18 41.2**	**-0.6**
HOM	**Homer**	**0.81**	**65**	P	**Pn**	**01 18 28.0**	**+0.5**
	baz=248,SNR=11						
HOM				S	**Sn**	**01 18 41.9**	**+0.1**
	baz=248						
HOM	**Homer**	**0.81**	**65**		**Pn**	**01 18 27.3**	**-0.2**
HOM				Sn	**Sn**	**01 18 41.9**	**+0.1**
HOM				IAML		01 18 43.3	
	comp=E,5µm,0.6s						
CNPM	**China Poot**	**0.97**	**77**	Pn	**Pn**	**01 18 29.1**	**-0.1**
CNPM				Sn	**Sn**	**01 18 44.6**	**0.0**
KAPH	**Katmai Pasha**	**0.98**	**222**		**Pn**	**01 18 29.6**	**+0.3**
KAPH					**Sn**	**01 18 45.0**	**+0.1**
O19K	**Port Alsworth**	**1.07**	**325**	P	**Pn**	**01 18 30.0**	**-0.2**
	baz=143,SNR=97						
O19K				S	**Sn**	**01 18 45.4**	**-1.1**
	baz=143						
O19K	**Port Alsworth**	**1.07**	**325**		**Pn**	**01 18 29.9**	**-0.2**
O19K				Sn	**Sn**	**01 18 45.2**	**-1.3**
P18K	**Big Mountain,**	**1.10**	**275**	P	**Pn**	**01 18 30.1**	**-0.4**
	baz=91						
P18K				S	**Sn**	**01 18 45.7**	**-1.4**
	baz=91						
P18K	**Big Mountain,**	**1.10**	**275**	Pn	**Pn**	**01 18 28.8**	**-1.8**
P18K				Sn	**Sn**	**01 18 44.8**	**-2.3**
RED	**Redoubt Volcan**	**1.11**	**8**		**Pn**	**01 18 30.5**	**-0.3**
RED					**Sn**	**01 18 46.5**	**-0.9**
RDSO	**Redoubt South**	**1.15**	**9**		**Pn**	**01 18 31.0**	**-0.2**
RDSO					**Sn**	**01 18 47.4**	**-0.9**
RSO	**Redoubt South**	**1.16**	**8**		**Pn**	**01 18 30.8**	**-0.6**
RDWB	**Redoubt West**	**1.18**	**6**		**Pn**	**01 18 31.3**	**-0.3**
RDWB					**Sn**	**01 18 47.8**	**-1.1**
O18K	**Koktuh Hills**	**1.20**	**297**	P	**Pn**	**01 18 31.5**	**-0.2**
	baz=114,SNR=12						
O18K				S	**Sn**	**01 18 48.0**	**-1.1**
	baz=114						
O18K	**Koktuh Hills**	**1.20**	**297**		**Pn**	**01 18 31.4**	**-0.2**
O18K					**Sn**	**01 18 47.9**	**-1.3**
BRLK	**Bradley Lake**	**1.21**	**67**		**Pn**	**01 18 31.6**	**-0.1**
BRLK				IAML		01 18 51.8	
	comp=E,1µm,0.3s						
NCT	**North Crescent**	**1.25**	**4**		**Pn**	**01 18 32.1**	**-0.2**
NCT					**Sn**	**01 18 49.8**	**-0.4**
BRSE	**Bradley Lake S**	**1.27**	**70**	P	**Pn**	**01 18 32.3**	**-0.1**
	baz=253,SNR=29						
BRSE				S	**Sn**	**01 18 50.1**	**-0.4**
	baz=253						
BRSE	**Bradley Lake S**	**1.27**	**70**		**Pn**	**01 18 32.5**	**0.0**
RDJH	**Redoubt Jeurge**	**1.28**	**6**		**Pn**	**01 18 32.5**	**-0.2**
DFR	**Drift River**	**1.29**	**9**		**Pn**	**01 18 32.7**	**-0.1**
DFR					**Sn**	**01 18 50.7**	**-0.4**
KAKN	**Katmai Knife C**	**1.45**	**226**		**Pn**	**01 18 34.9**	**+0.2**
KDAK	**Kodiak Island**	**1.57**	**170**	P	**Pn**	**01 18 35.7**	**-0.2**
	baz=351						
KDAK				S	**Sn**	**01 18 55.9**	**-0.8**
	baz=351						
KDAK	**Kodiak Island**	**1.57**	**170**	Pn	**Pn**	**01 18 35.1**	**-0.9**
KDAK	**Kodiak Island**	**1.57**	**170**	Sn	**Sn**	**01 18 55.5**	**-1.2**
N19K	**Bonanza Creek**	**1.65**	**336**	P	**Pn**	**01 18 37.2**	**+0.1**
	baz=154,SNR=226						
N19K				S	**Sn**	**01 18 57.9**	**-0.9**
	baz=154						
N19K	**Bonanza Creek**	**1.65**	**336**		**Pn**	**01 18 36.8**	**-0.3**
CAPN	**Captain Cook N**	**1.75**	**33**	P	**Pn**	**01 18 40.1**	**+1.9**
	baz=215						
CAPN	**Captain Cook N**	**1.75**	**33**	Pn	**Pn**	**01 18 39.7**	**+1.6**
CAPN					**Sn**	**01 19 01.1**	**+0.5**
SLKM	**Skilak Lake**	**1.87**	**49**		**Pn**	**01 18 40.1**	**+0.3**
CKT	**Bend**	**1.94**	**13**		**Pn**	**01 18 40.9**	**+0.2**
SPCR	**Spurr Chakacha**	**1.94**	**13**	P	**Pn**	**01 18 40.8**	**+0.1**
	baz=194,SNR=44						
SPCR				S	**Sn**	**01 19 04.5**	**-0.5**
	baz=194						
SPCR	**Spurr Chakacha**	**1.94**	**13**		**Pn**	**01 18 40.8**	**+0.1**
SPCR					**Sn**	**01 19 04.8**	**-0.3**
SPU	**Mount Spurr**	**1.94**	**15**		**Pn**	**01 18 40.4**	**-0.2**
SPCN	**Chakachatna No**	**1.96**	**13**		**Pn**	**01 18 41.3**	**+0.4**
SPBG	**Spurr Blockage**	**1.98**	**10**		**Pn**	**01 18 41.5**	**+0.4**
SEW	**Seward**	**2.00**	**65**	P	**Pn**	**01 18 41.2**	**-0.2**
	baz=249,SNR=12						
SEW				S	**Sn**	**01 19 04.7**	**-1.8**
	baz=249						
SEW	**Seward**	**2.00**	**65**	Pn	**Pn**	**01 18 40.9**	**-0.5**
SPCP	**Crater Peak Br**	**2.01**	**13**		**Pn**	**01 18 41.9**	**+0.3**
SPCG	**Spurr Capps Gl**	**2.05**	**15**		**Pn**	**01 18 42.4**	**+0.3**
O22K	**Cooper Landing**	**2.06**	**54**	P	**Pn**	**01 18 42.1**	**0.0**
	baz=238						
O22K				S	**Sn**	**01 19 06.4**	**-1.3**
	baz=238						
O22K	**Cooper Landing**	**2.06**	**54**		**Pn**	**01 18 42.0**	**-0.1**
O22K				Sn	**Sn**	**01 19 05.9**	**-1.8**
OHAK	**Old Harbor**	**2.11**	**183**	P	**Pn**	**01 18 42.3**	**-0.5**
	baz=2.8,SNR=15						
OHAK				S	**Sn**	**01 19 06.8**	**-2.0**
	baz=2.8						
OHAK	**Old Harbor**	**2.11**	**183**	Pn	**Pn**	**01 18 41.9**	**-0.9**
SVW2	**Sparrevohn**	**2.17**	**326**		**Pn**	**01 18 43.0**	**-0.6**
STLK	**Strandline Lak**	**2.27**	**15**		**Pn**	**01 18 45.2**	**+0.3**
FIS	**Fire Island**	**2.32**	**37**	Pn	**Pn**	**01 18 46.4**	**+0.9**
FIS				IAML		01 19 31.2	
	comp=E,963nm,1.1s						
FIS				IAML		01 19 36.7	
	comp=N,998nm,0.7s						
PLK1	**Peulik 1**	**2.39**	**232**		**Pn**	**01 18 47.5**	**+1.1**
RC01	**Rabbit Creek A**	**2.44**	**42**	P	**Pn**	**01 18 47.3**	**+0.3**
	baz=225,SNR=14						
RC01				S	**Sn**	**01 19 15.6**	**-1.0**
	baz=225						
RC01	**Rabbit Creek A**	**2.44**	**42**	Pn	**Pn**	**01 18 46.7**	**-0.3**
RC01				IAML		01 19 16.9	
	comp=N,688nm,0.4s						
RC01				IAML		01 19 19.3	
	comp=E,746nm,0.4s						
SUA	**Susitna One**	**2.44**	**27**	P	**Pn**	**01 18 47.9**	**+0.7**
	baz=210,SNR=52						
SUA	**Susitna One**	**2.44**	**27**	Pn	**Pn**	**01 18 48.0**	**+0.8**
M19K	**Big River Lodg**	**2.67**	**347**	P	**Pn**	**01 18 50.1**	**0.0**
	baz=165						
M19K	**Big River Lodg**	**2.67**	**347**	Pn	**Pn**	**01 18 49.5**	**-0.6**
SKT	**Skwentna**	**2.78**	**15**	P	**Pn**	**01 18 51.6**	**+0.1**
	baz=197,SNR=32						
SKT	**Skwentna**	**2.78**	**15**	Pn	**Pn**	**01 18 51.1**	**-0.3**
SKT				IAML		01 19 27.6	
	comp=E,403nm,0.5s						
SKT				IAML		01 19 27.7	
	comp=N,334nm,0.6s						
SII	**Sitkinak Islan**	**2.83**	**192**	Pn	**Pn**	**01 18 52.0**	**-0.2**
SII				IAML		01 19 42.5	
	comp=N,304nm,0.8s						
PWL	**Port Wells**	**2.84**	**55**	P	**Pn**	**01 18 52.3**	**-0.1**
	baz=240,SNR=33						
PWL				S	**Sn**	**01 19 23.5**	**-2.4**
	baz=240						
PWL	**Port Wells**	**2.84**	**55**		**Pn**	**01 18 52.3**	**-0.1**
PWL				IAML		01 19 27.0	
	comp=N,852nm,0.4s						
M22K	**Willow**	**2.85**	**30**	P	**Pn**	**01 18 53.2**	**+0.8**
	baz=213,SNR=28						
M22K	**Willow**	**2.85**	**30**		**Pn**	**01 18 53.1**	**+0.8**
L19K	**White Mountain**	**3.00**	**344**	P	**Pn**	**01 18 54.4**	**0.0**
	baz=162,SNR=61						
L19K	**White Mountain**	**3.00**	**344**	Pn	**Pn**	**01 18 54.1**	**-0.3**
PMR	**Palmer**	**3.01**	**39**	P	**Pn**	**01 18 54.1**	**-0.4**
	baz=223,SNR=24						
PMR				S	**Sn**	**01 19 27.4**	**-2.5**
	baz=223						
PMR	**Palmer**	**3.01**	**39**		**Pn**	**01 18 54.0**	**-0.4**
PMR				IAML		01 19 30.1	
	comp=N,202nm,0.7s						
PMR				IAML		01 19 33.2	
	comp=E,256nm,0.6s						
KNK	**Knik Glacier**	**3.11**	**46**	P	**Pn**	**01 18 55.6**	**-0.3**
	baz=230,SNR=21						
KNK				S	**Sn**	**01 19 30.6**	**-1.9**
	baz=230						
KNK	**Knik Glacier**	**3.11**	**46**		**Pn**	**01 18 55.1**	**-0.9**
KNK				IAML		01 19 33.2	
	comp=N,361nm,0.4s						
L20K	**Farewell, AK**	**3.19**	**353**	P	**Pn**	**01 18 56.8**	**-0.2**
	baz=173						
L20K	**Farewell, AK**	**3.19**	**353**		**Pn**	**01 18 57.4**	**+0.4**
GHO	**Glory Hole Cre**	**3.21**	**38**		**Pn**	**01 18 57.4**	**+0.1**
GHO				IAML		01 19 38.6	
	comp=N,384nm,0.4s						
GLI	**Glacier Island**	**3.38**	**60**	P	**Pn**	**01 18 58.5**	**-1.0**
	baz=246,SNR=7.7						
GLI	**Glacier Island**	**3.38**	**60**		**Pn**	**01 18 58.2**	**-1.3**
CUT	**Chulitna**	**3.39**	**23**	P	**Pn**	**01 18 59.7**	**+0.1**
	baz=205,SNR=24						
CUT	**Chulitna**	**3.39**	**23**		**Pn**	**01 18 59.6**	**+0.1**
SML	**Sawmill**	**3.43**	**41**	P	**Pn**	**01 18 59.9**	**-0.3**
	baz=226,SNR=23						
SML				S	**Sn**	**01 19 37.8**	**-2.2**
	baz=226						
SML	**Sawmill**	**3.43**	**41**		**Pn**	**01 18 59.9**	**-0.3**
SML				IAML		01 19 40.4	
	comp=N,367nm,0.8s						
Q23K	**Middleton Isla**	**3.45**	**85**	P	**Pn**	**01 19 00.5**	**+0.1**
	baz=272						
Q23K	**Middleton Isla**	**3.45**	**85**	Pn	**Pn**	**01 18 59.9**	**-0.5**
Q23K				IAML		01 19 43.9	
	comp=E,302nm,1.8s						
MID	**Middleton Isla**	**3.46**	**85**	Pn	**Pn**	**01 19 00.0**	**-0.5**
MID				IAML		01 19 43.9	
	comp=E,298nm,1.7s						
MID				IAML		01 21 06.5	
	comp=N,263nm,2.2s						
HIN	**Hinchinbrook I**	**3.49**	**69**		**Pn**	**01 19 00.9**	**-0.1**
HIN				IAML		01 19 44.0	
	comp=E,333nm,0.9s						
FID	**Port Fidalgo**	**3.61**	**64**		**Pn**	**01 19 01.4**	**-1.3**
PPLA	**Purkeypile**	**3.61**	**7**	P	**Pn**	**01 19 03.7**	**+0.9**
	baz=187,SNR=13						
PPLA	**Purkeypile**	**3.61**	**7**	Pn	**Pn**	**01 19 03.2**	**+0.5**
JPK	**Jack Peak**	**3.68**	**59**		**Pn**	**01 19 03.5**	**-0.1**
CHIR	**Chirikof Islan**	**3.77**	**202**	Pn	**Pn**	**01 19 04.0**	**-0.7**
CHIR				IAML		01 19 47.2	
	comp=E,177nm,1.7s						
CHIR				IAML		01 20 45.1	
	comp=N,194nm,2.8s						
SCM	**Sheep Creek Mo**	**3.80**	**46**	P	**Pn**	**01 19 05.2**	**+0.1**
	baz=231						
SCM	**Sheep Creek Mo**	**3.80**	**46**	Pn	**Pn**	**01 19 04.5**	**-0.6**
SCM				IAML		01 19 49.1	
	comp=E,265nm,0.9s						
SCM				IAML		01 19 53.2	
	comp=N,213nm,0.7s						
TT01	**Tatalina**	**3.87**	**340**		**Pn**	**01 19 05.8**	**-0.3**
TTA	**Tatalina**	**3.89**	**340**	P	**Pn**	**01 19 06.0**	**-0.4**
	baz=157,SNR=19						
TTA	**Tatalina**	**3.89**	**340**		**Pn**	**01 19 05.7**	**-0.7**
EYAK	**Cordova Ski Ar**	**3.89**	**68**	P	**Pn**	**01 19 05.8**	**-0.5**

	baz=255						
EYAK	Cordova Ski Ar	3.89	68		Pn	01 19 05.7	-0.7
DIV	Divide	4.08	60		Pn	01 19 08.8	-0.1
K20K	Telida	4.08	354	P	Pn	01 19 08.8	0.0
	baz=173,SNR=16						
K20K	Telida	4.08	354		Pn	01 19 08.9	+0.1
WAT7	Susitna Watana	4.08	29		Pn	01 19 09.0	0.0
CAST	Castle Rocks	4.14	6	P	Pn	01 19 09.7	0.0
	baz=187,SNR=36						
CAST	Castle Rocks	4.14	6		Pn	01 19 09.8	0.0
WAT1	Susitna Watana	4.15	30	P	Pn	01 19 09.9	0.0
	baz=214						
WAT1	Susitna Watana	4.15	30		Pn	01 19 09.4	-0.5
CHGN	Chignik	4.16	226	Pn	Pn	01 19 10.6	+0.7
CHGN				IAML		01 19 56.8	
	comp=N,91nm,0.2s						
CHGN				IAML		01 20 00.2	
	comp=E,113nm,0.1s						
KLU	Klutina	4.17	55	P	Pn	01 19 09.9	-0.2
	baz=242,SNR=21						
KLU	Klutina	4.17	55		Pn	01 19 10.2	0.0
KLU				IAML		01 19 59.1	
	comp=N,293nm,0.4s						
KLU				IAML		01 20 00.3	
	comp=E,261nm,0.4s						
WAT6	Susitna Watana	4.18	36	P	Pn	01 19 10.1	-0.3
	baz=221,SNR=30						
WAT6	Susitna Watana	4.18	36		Pn	01 19 10.2	-0.3
TRF	Thorofare Moun	4.36	17	P	Pn	01 19 12.6	-0.2
	baz=199						
TRF	Thorofare Moun	4.36	17	Pn	Pn	01 19 12.6	-0.2
TRF				IAML		01 20 05.5	
	comp=N,152nm,0.3s						
TRF				IAML		01 20 06.0	
	comp=E,149nm,0.4s						
KTH	Kantishna Hill	4.37	13		Pn	01 19 12.8	-0.1
KTH				IAML		01 20 26.5	
	comp=E,118nm,0.8s						
M24K	Tolsona, Glenn	4.40	48	P	Pn	01 19 13.5	+0.3
	baz=234,SNR=14						
M24K	Tolsona, Glenn	4.40	48		Pn	01 19 13.6	+0.3
M24K				IAML		01 20 22.7	
	comp=N,160nm,1.2s						
KAIM	Kayak Island	4.45	78	P	Pn	01 19 14.5	+0.7
	baz=266						
KAIM	Kayak Island	4.45	78	Pn	Pn	01 19 14.6	+0.8
PS12	TAPS Pump St12	4.50	58		Pn	01 19 15.1	+0.6
BMRM	Bremner River	4.55	65	P	Pn	01 19 14.9	-0.4
	baz=253,SNR=8.3						
BMRM	Bremner River	4.55	65		Pn	01 19 15.1	-0.2
HMT	Hamilton	4.57	73	Pn	Pn	01 19 15.3	-0.2
RND	Reindeer	4.58	25	Pn	Pn	01 19 15.9	+0.2
RND				IAML		01 20 12.6	
	comp=E,78nm,0.5s						
CHUM	Lake Minchumin	4.59	4	P	Pn	01 19 15.8	+0.1
	baz=185,SNR=23						
CHUM	Lake Minchumin	4.59	4		Pn	01 19 15.9	+0.1
PS11	TAPS Pump St11	4.65	50		Pn	01 19 16.5	-0.1
DHY	Denali Highway	4.67	34	P	Pn	01 19 16.7	-0.2
	baz=219						
DHY	Denali Highway	4.67	34		Pn	01 19 16.9	-0.1
DHY				IAML		01 20 12.9	
	comp=E,197nm,0.7s						
SUCK	Suckling Hills	4.78	77	Pn	Pn	01 19 18.9	+0.6
SUCK				IAML		01 20 25.1	
	comp=E,189nm,2.5s						
N25K	Chitina, Valde	4.79	58	P	Pn	01 19 18.4	-0.1
	baz=245,SNR=10						
N25K	Chitina, Valde	4.79	58	Pn	Pn	01 19 18.7	+0.3
N25K				IAML		01 20 11.6	
	comp=N,82nm,0.7s						
N25K				IAML		01 20 15.4	
	comp=E,93nm,0.5s						
MCK	McKinley	4.85	22	P	Pn	01 19 19.6	+0.4
	baz=206,SNR=28						
MCK	McKinley	4.85	22		Pn	01 19 19.7	+0.4
MCK				IAML		01 20 16.1	
	comp=E,95nm,0.4s						
MCK				IAML		01 20 16.1	
	comp=N,109nm,0.4s						
BERG	Berg Lake	4.85	73		Pn	01 19 19.4	+0.1
BPAW	Bear Paw Mtn.	4.90	11	P	Pn	01 19 19.2	-0.8
	baz=193,SNR=14						
BPAW	Bear Paw Mtn.	4.90	11		Pn	01 19 19.8	-0.2
J20K	Nowinta River	4.90	355	P	Pn	01 19 19.8	-0.1
	baz=174,SNR=22						
J20K	Nowinta River	4.90	355		Pn	01 19 19.9	-0.1
HARP	HAARP	4.96	48	P	Pn	01 19 20.6	-0.1
	baz=235,SNR=7.7						
HARP	HAARP	4.96	48		Pn	01 19 21.0	+0.3
GRIN	Grindle Hills	5.03	75		Pn	01 19 22.3	+0.6
BGLC	Bering Glacier	5.03	77		Pn	01 19 21.6	0.0
GLB	Gilahina Butte	5.07	61	Pn	Pn	01 19 22.6	+0.3
GLB				IAML		01 20 19.1	
	comp=N,108nm,0.3s						
GLB				IAML		01 20 19.8	
	comp=E,107nm,0.4s						
KHIT	Khitrov Hills	5.08	73		Pn	01 19 22.6	+0.1
BWN	Browne	5.16	18		Pn	01 19 23.5	0.0
VRDI	Verde Repeater	5.16	64	Pn	Pn	01 19 23.7	0.0
VRDI				IAML		01 20 22.1	
	comp=E,56nm,0.6s						
VRDI				IAML		01 20 22.5	
	comp=N,114nm,0.3s						
CRQM	Cirque	5.19	70		Pn	01 19 24.3	+0.2
CRQM				IAML		01 20 21.3	
	comp=E,115nm,0.5s						
CRQM				IAML		01 20 26.0	
	comp=N,113nm,0.9s						
PAX	Paxson	5.20	42	P	Pn	01 19 24.0	0.0
	baz=229,SNR=20						
PAX	Paxson	5.20	42		Pn	01 19 24.3	+0.2
CRQE	Cirque	5.21	70	P	Pn	01 19 24.2	-0.1
	baz=259,SNR=9.4						
SNH	Sunshine Point	5.26	76	Pn	Pn	01 19 25.6	+0.8
SNH				IAML		01 22 24.9	
	comp=E,132nm,2.6s						
WAX	Waxell Ridge	5.28	73		Pn	01 19 25.1	0.0
TGL	Tana Glacier	5.34	70		Pn	01 19 26.2	+0.2
TGL				IAML		01 20 28.2	
	comp=N,76nm,0.4s						
MCARA	McCarthy VSAT	5.41	63	P	Pn	01 19 27.1	+0.3
	baz=252						
MCARA	McCarthy VSAT	5.41	63		Pn	01 19 27.4	+0.6
BARK	Barkley Ridge	5.45	74		Pn	01 19 28.1	+0.6
ISLE	Juniper Island	5.55	72		Pn	01 19 29.2	+0.3
KIAG	Kiagna River	5.60	69		Pn	01 19 29.6	0.0
PTPK	Patty Peak	5.61	66		Pn	01 19 29.9	+0.2
NEA2	Nenana	5.62	18	P	Pn	01 19 29.1	-0.5
	baz=202,SNR=17						
NEA2	Nenana	5.62	18		Pn	01 19 29.2	-0.5
BALM	Baldy	5.63	68		Pn	01 19 30.1	+0.1
BAGL	Bagley Icefiel	5.66	73		Pn	01 19 30.8	+0.6
WRH	Wood River Hil	5.68	22	Pn	Pn	01 19 29.9	-0.6
MESA	MESA	5.70	77	P	Pn	01 19 31.4	+0.5
	baz=266,SNR=6.3						
MESA	MESA	5.70	77	Pn	Pn	01 19 31.6	+0.7
GCSA	Galena City Sc	5.73	344	P	Pn	01 19 30.9	-0.2
	baz=160						
GCSA	Galena City Sc	5.73	344		Pn	01 19 30.9	-0.2
MENT	Mentasta	5.81	47	Pn	Pn	01 19 32.6	+0.3
YAH	Yahtse	5.82	75	Pn	Pn	01 19 33.2	+0.6
M26K	Nabesna, AK	5.82	54	P	Pn	01 19 33.2	+0.8
	baz=243,SNR=14						
M26K	Nabesna, AK	5.82	54	Pn	Pn	01 19 33.3	+0.8
MLY	Manley	5.83	10	P	Pn	01 19 32.5	-0.1
	baz=192						
MLY	Manley	5.83	10	Pn	Pn	01 19 32.9	+0.3
GRNC	Granite Creek	5.86	71	Pn	Pn	01 19 33.4	+0.2
HDA	Harding Lake	5.87	27	P	Pn	01 19 32.8	-0.2
	baz=212,SNR=14						
HDA	Harding Lake	5.87	27	Pn	Pn	01 19 32.9	-0.2
CCB	Clear Creek Bu	5.89	23	Pn	Pn	01 19 32.7	-0.7
I21K	Tanana	5.90	5	P	Pn	01 19 33.5	+0.1
	baz=186,SNR=9.1						
I21K	Tanana	5.90	5		Pn	01 19 33.9	+0.4
RIDG	Independent Ri	5.93	38	P	Pn	01 19 34.6	+0.7
	baz=226,SNR=5.7						
RIDG	Independent Ri	5.93	38	Pn	Pn	01 19 34.8	+0.9
BARN	Barnard Glacie	5.96	68	Pn	Pn	01 19 35.5	+1.0
L26K	Log Cabin Wild	6.00	48		Pn	01 19 35.4	+0.5
RKAV	Rock Avalanche	6.01	76		Pn	01 19 36.1	+1.1
TCOL	CIGO, UAF Yank	6.09	22	P	Pn	01 19 35.5	-0.4
	baz=206,SNR=11						
TCOL	CIGO, UAF Yank	6.09	22	Pn	Pn	01 19 35.4	-0.6
COLA	College	6.09	22	P	Pn	01 19 35.5	-0.4
	baz=206						
COLA	College	6.09	22		Pn	01 19 35.6	-0.4
CTG	Chitna Glacier	6.10	69	P	Pn	01 19 36.9	+0.6
	baz=260,SNR=15						
MDM	Murphy Dome	6.10	20	Pn	Pn	01 19 35.8	-0.3
CTGM	Chitina Glacie	6.10	69	Pn	Pn	01 19 36.7	+0.4
I23K	Minto, Yukon-K	6.10	15	P	Pn	01 19 35.9	-0.3
	baz=198,SNR=40						
I23K	Minto, Yukon-K	6.10	15	Pn	Pn	01 19 35.7	-0.4
CHX	Chaix Hills	6.11	78		Pn	01 19 37.4	+1.0
TABL	Table Mountain	6.12	74	Pn	Pn	01 19 37.4	+0.8
DOT	Dot Lake	6.12	41		Pn	01 19 36.8	+0.3
IL31		6.20	25	Pn	Pn	01 19 36.9	-0.5
ILAR	Eielson Array	6.20	25	Pn	Pn	01 19 36.7	-0.7
LOGN	Logan Glacier	6.24	71	Pn	Pn	01 19 38.4	+0.3
M27K	Edge Creek, AK	6.27	56	P	Pn	01 19 38.8	+0.2
	baz=246						
M27K	Edge Creek, AK	6.27	56		Pn	01 19 39.1	+0.5
SAMH	Samovar Hills	6.28	77		Pn	01 19 39.6	+0.9
H21K	Melozitna Rive	6.36	1	P	Pn	01 19 39.1	-0.6
	baz=181,SNR=7.1						
H21K	Melozitna Rive	6.36	1		Pn	01 19 39.0	-0.6
SCRK	Sand Creek	6.37	39	P	Pn	01 19 39.2	-0.7
	baz=227,SNR=22						
SCRK	Sand Creek	6.37	39	Pn	Pn	01 19 39.6	-0.3
POKR	Poker Plat Res	6.39	22	P	Pn	01 19 39.4	-0.6
	baz=207,SNR=9.2						
POKR	Poker Plat Res	6.39	22	Pn	Pn	01 19 39.7	-0.3
PS07	TAPS Pump Stn7	6.41	18		Pn	01 19 40.2	-0.2
J25K	Salcha River,	6.43	31	P	Pn	01 19 40.3	-0.5
	baz=218,SNR=23						
J25K	Salcha River,	6.43	31		Pn	01 19 40.3	-0.5
YUK2	White River	6.53	63		Pn	01 19 42.7	+0.7
PCA	Pinnacle	6.54	78		Pn	01 19 43.1	+0.9
PINM	Pinnacle	6.54	78	P	Pn	01 19 42.8	+0.5
	baz=269						
L27K	Beaver Creek,	6.61	51	P	Pn	01 19 43.8	+0.8
	baz=241						
L27K	Beaver Creek,	6.61	51	Pn	Pn	01 19 43.5	+0.4
BC03		6.63	51		Pn	01 19 43.3	0.0
BCAR	Beaver Creek A	6.63	51	Pn	Pn	01 19 43.8	+0.5
IM03		6.69	358		Pn	01 19 44.4	+0.3
IMAR	Indian Mountai	6.69	358	Pn	Pn	01 19 44.5	+0.3
YUK3	Moose Creek	6.70	63	P	Pn	01 19 45.1	+0.6
	baz=254,SNR=8.9						
YUK3	Moose Creek	6.70	63		Pn	01 19 45.1	+0.6
H23K	Yukon River	6.73	13	P	Pn	01 19 44.2	-0.6
	baz=196						
H23K	Yukon River	6.73	13	Pn	Pn	01 19 44.1	-0.6
PS06	TAPS Pump Stn6	6.74	12		Pn	01 19 44.8	0.0
BCPM	Bancas Point	6.85	79	Pn	Pn	01 19 47.2	+0.8
J26L	Joseph Creek	6.87	37	P	Pn	01 19 46.5	-0.1
	baz=225,SNR=26						
J26L	Joseph Creek	6.87	37		Pn	01 19 46.2	-0.4
H24K	Noodor Dome	6.97	18	P	Pn	01 19 47.1	-0.8
	baz=203						
H24K	Noodor Dome	6.97	18	Pn	Pn	01 19 47.2	-0.8
PNL	Peninsula	6.98	81	P	Pn	01 19 48.4	+0.2
	baz=273,SNR=14						
PNL	Peninsula	6.98	81		Pn	01 19 48.5	+0.2
PRP	Porcupine Dome	7.14	26	P	Pn	01 19 50.1	-0.2
	baz=213,SNR=22						
PRP	Porcupine Dome	7.14	26	Pn	Pn	01 19 50.1	-0.2
YUK4	Talbot Arm	7.45	68	P	Pn	01 19 56.0	+1.4
	baz=260						
YUK6	Outpost Mounta	7.53	71	P	Pn	01 19 56.4	+0.6
	baz=264						
YUK6	Outpost Mounta	7.53	71		Pn	01 19 56.1	+0.3
EGAK	Eagle	7.83	41	P	Pn	01 19 59.9	+0.4
	baz=231,SNR=8.1						
EGAK	Eagle	7.83	41		Pn	01 19 59.1	-0.5
HYT	Haines Junctio	7.94	72	P	Pn	01 20 02.2	+0.9
	baz=266						
HYT	Haines Junctio	7.94	72		Pn	01 20 02.5	+1.2
DAWY	Dawson	8.05	48	P	Pn	01 20 03.3	+0.6
	baz=240						
DAWY	Dawson	8.05	48	Pn	Pn	01 20 03.2	+0.6
FYU	Fort Yukon	8.10	23	Pn	Pn	01 20 02.2	-1.0
M30M	Minto, Yukon	8.57	61	P	Pn	01 20 10.0	+0.3
	baz=255						
M30M	Minto, Yukon	8.57	61		Pn	01 20 10.1	+0.4
N31M	Braeburn, Yuko	8.84	68	P	Pn	01 20 13.5	+0.2
	baz=264,SNR=8.6						
BM03	Burnt Mountain	8.96	21		Pn	01 20 14.2	-0.8
BMAR	Burnt Mountain	8.98	21	Pn	Pn	01 20 14.1	-1.1
BM01	Burnt Mountain	9.01	22		Pn	01 20 14.4	-1.1
SKAG	Skagway	9.06	81	P	Pn	01 20 16.8	+0.4
	baz=277,SNR=12						
SKAG	Skagway	9.06	81	Pn	Pn	01 20 16.7	+0.4
WHY	Whitehorse	9.22	74	P	Pn	01 20 18.1	-0.5
	baz=270,SNR=5.9						
WHY	Whitehorse	9.22	74	Pn	Pn	01 20 19.3	+0.7
BESE	Bessie Mountai	9.45	87	Pn	Pn	01 20 23.3	+1.6
TOLK	Toolik Lake Re	9.48	8	P	Pn	01 20 22.6	+0.5
	baz=191						
TOLK	Toolik Lake Re	9.48	8	Pn	Pn	01 20 22.7	+0.7
SIT	Sitka	9.65	96	Pn	Pn	01 20 23.9	-0.4
JIS	Juneau Island	9.76	88	Pn	Pn	01 20 28.0	+2.1
P33M	Teslin, Yukon	10.26	76	P	Pn	01 20 32.3	-0.3
	baz=274,SNR=6.0						
P33M	Teslin, Yukon	10.26	76		Pn	01 20 32.9	+0.2
WRAK	Wrangell Islan	11.41	96	Pn	Pn	01 20 50.1	+2.0
CRAG	Craig	11.43	101	Pn	Pn	01 20 48.9	+0.5
DLBC	Dease Lake	11.95	84	Pn	Pn	01 20 57.9	+2.5
INK	Inuvik	12.41	35	Pn	Pn	01 21 01.0	-0.3
MOBC	Moresby Island	13.24	109	Pn	Pn	01 21 14.6	+2.3
RUBB	Prince Rupert	13.44	102	Pn	Pn	01 21 16.1	+1.4
GRNB	Grenville Isla	13.84	103	Pn	Pn	01 21 22.2	+2.2
A36M	Sachs Harbour	16.87	30	P	Pn	01 21 57.1	-0.7
	baz=236,SNR=5.4						
A36M	Sachs Harbour	16.87	30	Pn	Pn	01 21 57.8	0.0
A36M				IAmb	IAmb	01 22 00.7	
	comp=Z,10nm,0.9s						

WEL 09 01:34:44.4±0.9, 37˚S±6˚×17˚7E±˚, h206^{km}±8^{km}, M3.4/29, ML3.4/6, MLv3.4/29, Error ellipse: s-maj=0.0km s-min=0.0km az=72.3, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HAZ	Te Kaha	1.06	167	P	Pn	01 35 14.4	-0.8
MXZ	Matakaoa Point	1.07	142	P	Pn	01 35 14.7	-0.6
MXZ				S	S	01 35 40.0	+0.7
RUGZ	Raukumara Rang	1.25	173	P	Pn	01 35 15.8	-1.0
PKGZ	Pakihiroa	1.26	158	P	Pn	01 35 16.7	-0.1
WMGZ	Waiomatatini S	1.33	146	P	Pn	01 35 17.1	-0.1
WMGZ				S	S	01 35 43.6	+1.0
OPRZ	Ohinepanea	1.34	213	P	Pn	01 35 17.2	-0.1
KUZ	Kuaotunu	1.41	269	P	Pn	01 35 17.4	-0.5
MARZ	Manawahe	1.41	207	P	Pn	01 35 18.8	+0.8
PUZ	Puketiti	1.48	155	P	Pn	01 35 18.4	-0.2
PUZ				S	S	01 35 45.3	+0.3
EDRZ	Edgecumbe	1.50	203	P	Pn	01 35 19.4	+0.6
TWGZ	Tauwhareparae	1.51	165	P	Pn	01 35 19.3	+0.5
TWGZ				S	S	01 35 46.7	+1.3
URZ	Urewera	1.56	191	P	Pn	01 35 18.9	-0.2
URZ				S	S	01 35 47.0	+0.9
URZ	Urewera	1.56	191	P	Pn	01 35 18.9	-0.3
MWZ	Matawai	1.61	178	P	Pn	01 35 19.6	-0.1
MKRZ	Makatiti	1.63	209	P	Pn	01 35 21.4	+1.5
OMRZ	Omania	1.64	212	P	Pn	01 35 21.1	+1.1
GRZ	Great Barrier	1.69	286	P	Pn	01 35 19.2	-1.2
TARZ	Mount Tarawera	1.70	207	P	Pn	01 35 21.6	+1.0
TKGZ	Te Karaka	1.74	170	P	Pn	01 35 20.9	0.0
TKGZ				S	S	01 35 49.8	+0.8
RAGZ	Rawiri	1.77	181	P	Pn	01 35 21.4	+0.2
CNGZ	Carnagh Statio	1.85	162	P	Pn	01 35 22.2	+0.3
TOZ	Tahuroa Road	1.87	237	P	Pn	01 35 22.9	+0.8
WIAZ	Waiheke Island	1.88	267	P	Pn	01 35 22.0	-0.3
HRRZ	Handcock Road	1.92	209	P	Pn	01 35 23.6	+1.0
RTZ	Ruatahuna	1.93	192	P	Pn	01 35 22.2	-0.5
PRRZ	Plateau Road	1.97	205	P	Pn	01 35 23.5	+0.4
RIGZ	Rimuhau	1.99	174	P	Pn	01 35 23.3	0.0
ALRZ	Allen Road	2.04	206	P	Pn	01 35 24.4	+0.5
SNGZ	Shannon Statio	2.06	183	P	Pn	01 35 24.0	0.0
WPRZ	Whakapapatarin	2.08	210	P	Pn	01 35 24.9	+0.8
MTHZ	Maungataniwha	2.19	193	P	Pn	01 35 24.9	-0.4
RAHZ	Arahi	2.21	188	P	Pn	01 35 25.8	+0.2
PRGZ	Paritu Road	2.22	172	P	Pn	01 35 25.9	+0.2
MRHZ	Matea Rd	2.27	201	P	Pn	01 35 25.9	-0.3
KNZ	Kokohu	2.30	176	P	Pn	01 35 26.0	-0.5
WHHZ	Waihua	2.36	185	P	Pn	01 35 27.2	0.0
WHHZ				S	S	01 36 00.9	+0.8
NMHZ	Naumai	2.43	192	P	Pn	01 35 28.3	+0.3
MHGZ	Mahia Peninsul	2.45	172	P	Pn	01 35 27.9	-0.3
BKZ	Black Stump Fm	2.56	197	P	Pn	01 35 28.6	-0.8
BKZ				S	S	01 36 03.9	-0.2
BKZ	Black Stump Fm	2.56	197	P	Pn	01 35 28.8	-0.6
ARHZ	Aropaoanui	2.57	188	P	Pn	01 35 29.3	0.0
RITZ	Rihia Road	2.59	209	P	Pn	01 35 30.0	+0.3
WCZ	Waipu Caves	2.65	286	P	Pn	01 35 29.1	-1.2
KATZ	Kakaramea	2.65	212	P	Pn	01 35 30.9	+0.3
HIZ	Hauiti	2.74	229	P	Pn	01 35 32.5	+1.1
HIZ	Hauiti	2.74	229	P	Pn	01 35 32.1	+0.7
NTVZ	North Tongarir	2.77	210	P	Pn	01 35 31.9	+0.1
TMVZ	Te Maari	2.77	210	P	Pn	01 35 31.6	-0.2
ETVZ	East Tongariro	2.79	210	P	Pn	01 35 31.7	-0.3
MCHZ	McNeill Hill	2.79	192	P	Pn	01 35 31.7	-0.2
WTVZ	West Tongariro	2.82	211	P	Pn	01 35 32.2	-0.2
NNVZ	North Ngauruho	2.82	211	P	Pn	01 35 32.4	-0.1
KWHZ	Kaweka Forest	2.82	197	P	Pn	01 35 31.8	-0.6
KWHZ				S	S	01 36 09.8	+0.4
OTVZ	Oturere	2.83	210	P	Pn	01 35 32.3	-0.2
TWVZ	Taurewa	2.84	214	P	Pn	01 35 32.6	-0.1
SNVZ	South Ngauruho	2.86	210	P	Pn	01 35 32.6	-0.3
NGZ	Ngauruhoe	2.86	211	P	Pn	01 35 32.8	-0.1
TUVZ	Tukino	2.92	209	P	Pn	01 35 33.1	-0.5
CKHZ	Cape Kidnapper	2.95	186	P	Pn	01 35 33.0	-0.7
CKHZ				S	S	01 36 12.2	+0.3
FWVZ	Far West T-bar	2.95	210	P	Pn	01 35 33.3	-0.7
WHVZ	Whangaehu Hut	2.96	210	P	Pn	01 35 33.6	-0.5
BHHZ	Black Hill Sta	2.98	202	P	Pn	01 35 33.1	-1.1
TRVZ	Turoa	2.99	210	P	Pn	01 35 33.9	-0.5
WNVZ	Wahianoa	2.99	209	P	Pn	01 35 33.8	-0.6
MOVZ	Moawhango	3.01	206	P	Pn	01 35 33.3	-1.2
KRHZ	Kereru	3.04	196	P	Pn	01 35 33.8	-1.1
PKVZ	Pokaka	3.06	213	P	Pn	01 35 34.7	-0.4
KAHZ	Kahuranaki	3.10	189	P	Pn	01 35 34.9	-0.7
VRZ	Vera Road	3.22	221	P	Pn	01 35 37.4	+0.5
PXZ	Pawanui	3.34	188	P	Pn	01 35 36.9	-1.4
PNHZ	Pukenui	3.34	197	P	Pn	01 35 36.8	-1.6
WPHZ	Waipukurau	3.44	193	P	Pn	01 35 38.0	-1.5
TSZ	Takapari Road	3.54	199	P	Pn	01 35 39.0	-1.8
PRHZ	Porangahau	3.60	190	P	Pn	01 35 40.0	-1.5
WAZ	Wanganui	3.61	212	P	Pn	01 35 40.7	-0.8
LREZ	Lake Rotokare	3.65	221	P	Pn	01 35 42.2	+0.1
NEZ	North Egmont	3.69	225	P	Pn	01 35 43.6	+1.0
PKE	Pukeiti	3.70	227	P	Pn	01 35 43.7	+1.0
DVHZ	Dannevirke	3.72	196	P	Pn	01 35 40.8	-2.1
KHEZ	Kahui Hut	3.75	226	P	Pn	01 35 44.2	+0.8
ANWZ	Angora Road	3.81	192	P	Pn	01 35 42.5	-1.6
POWZ	Post Office Ro	3.90	200	P	Pn	01 35 43.3	-1.9
PRWZ	Pori Road	4.00	197	P	Pn	01 35 44.5	-2.0
BFZ	Birch Farm	4.07	193	P	Pn	01 35 44.9	-2.3
BFZ	Birch Farm	4.07	193	P	Pn	01 35 44.4	-2.8
MRZ	Mangatainoka R	4.20	200	P	Pn	01 35 46.2	-2.7
TIWZ	Tintock	4.24	197	P	Pn	01 35 46.6	-2.8
CPWZ	Castlepoint	4.30	193	P	Pn	01 35 48.6	-1.5
HOWZ	Holdsworth Sta	4.44	200	P	Pn	01 35 48.9	-3.0
OGWZ	Otaki Gorge	4.47	203	P	Pn	01 35 49.5	-2.7
TMWZ	Te Maipa	4.55	195	P	Pn	01 35 50.5	-2.7
KIW	Kapiti Island	4.59	205	P	Pn	01 35 50.7	-3.1
MTW	Mount Morrison	4.69	199	P	Pn	01 35 51.7	-3.3
CAW	Cannon Point	4.76	202	P	Pn	01 35 52.7	-3.3
TRWZ	Traveller	4.87	196	P	Pn	01 35 54.3	-3.0
PAWZ	Paruwai Farm	4.92	198	P	Pn	01 35 54.4	-3.5
DUWZ	D’Urville Isla	4.93	213	P	Pn	01 35 54.8	-3.3
MSWZ	Moikau Station	5.00	200	P	Pn	01 35 55.4	-3.5
WEL	Wellington	5.02	204	P	Pn	01 35 55.9	-3.2
SNZO	South Karori	5.06	204	P	Pn	01 35 56.1	-3.6
BHW	Baring Head	5.10	203	P	Pn	01 35 56.4	-3.7
TCW	Tory Channel	5.13	208	P	Pn	01 35 56.8	-3.7
PLWZ	Palliser	5.14	199	P	Pn	01 35 57.0	-3.7
TUWZ	Tuamarina	5.45	209	P	Pn	01 36 00.6	-3.9
CMWZ	Cape Campbell	5.62	206	P	Pn	01 36 02.9	-4.0
QRZ	Quartz Range	5.63	222	P	Pn	01 36 03.0	-4.0
QRZ	Quartz Range	5.63	222	P	Pn	01 36 03.2	-3.8
BSWZ	Blackbirch Sta	5.71	208	P	Pn	01 36 04.3	-3.7
THZ	Tophouse	6.16	214	P	Pn	01 36 10.1	-3.6
KHZ	Kahutara	6.45	207	P	Pn	01 36 13.4	-4.0
KHZ	Kahutara	6.45	207	P	Pn	01 36 13.5	-3.9
GVZ	Greta Valley S	7.11	207	P	Pn	01 36 21.9	-4.2
LTZ	Lake Taylor	7.26	212	P	Pn	01 36 23.7	-4.3
OKCZ	Okains Bay	7.76	204	P	Pn	01 36 30.4	-4.1
MQZ	McQueen’s Vall	7.89	206	P	Pn	01 36 30.8	-5.3
ARCZ	Arundel	8.67	212	P	Pn	01 36 41.5	-4.7
TMZ	Timaru	9.10	211	P	Pn	01 36 47.2	-4.6
ODZ	Otahua Downs	9.79	210	P	Pn	01 36 56.3	-4.3
JCZ	Jackson Bay	9.89	219	P	Pn	01 36 57.2	-4.9

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*IDC **09** 01:37:39.5±1.1, 27˚.72N×57˚.79E, h0^{km}, mb3.6/10, mb1 3.8/12, mb1mx3.6/49, mbtmp3.7/12, ML2.9/2, MS2.9/2, Ms1 2.9/2, ms1mx2.5/43, Error ellipse: s-maj=24.4km s-min=21.5km az=164.0*

*OMAN **09** 01:37:40.9±0.3, 27˚.74N×57˚.95E, h10^{km}, Error ellipse: s-maj=6.8km s-min=5.7km az=344.0*

*THR **09** 01:37:42.6±0.6, 27˚.64N×57˚.87E, h15^{km}, ML3.8*

*SGS **09** 01:37:42.6, 27˚.75N×57˚.89E, h7^{km}, Ml4.0*

*TEH **09** 01:37:42.4, 27˚.66N×57˚.84E, h14^{km}, ML4.1*

*DSN **09** 01:37:45.5±2.5, 27˚.22N×58˚.07E, h10^{km}, ML3.5/11, Error ellipse: s-maj=38.7km s-min=16.7km az=162.0*

ISC 09 01:37:41.7±0.6, 27˚.67N±0˚.04×57˚.82E±0˚.05, h10^{km}, n128, σ1§93/138, mb3.9/8, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHNJ	Kahnooj	0.29	340	*e*Pg	Pg	01 37 48.8	+1.2
IBND	Bandar-abas	1.16	259	*e*Pg	Pn	01 38 05.6	+1.7
GENO	Geno	1.49	260	*e*Pn	Pn	01 38 10.4	+1.7
GENO				*e*		01 38 35.5	
	comp=Z,43µm,0.4s						
KBAM	BAM	1.56	21	*e*Pn	Pb	01 38 10.1	-0.6
KBAM				*e*		01 38 31.7	
	comp=Z,26µm,0.3s						
NGRK	Negar Kerman	2.19	334	*e*Pn	Pb	01 38 21.0	-0.5
NGRK				*e*		01 38 55.1	
	comp=Z,7µm,0.2s						
CHMN	Cheshme madani	2.19	354	*e*Pn	Pb	01 38 21.1	-0.6
SHME	Shamm	2.21	223	*e*P	Pn	01 38 19.7	+1.4
	SNR=51						
SHME	Shamm	2.21	223	*e*Pn	Pn	01 38 19.7	+1.4
SHME	Shamm	2.21	223	P	Pn	01 38 20.0	+1.6
	SNR=39						
BANOM	Banah	2.21	218	*e*P	Pn	01 38 19.5	+1.0
	SNR=67						
BANOM				S	Sn	01 38 46.6	+0.7
BANOM	Banah	2.21	218	*e*Pn	Pn	01 38 19.6	+1.1
BANOM	Banah	2.21	218	P	Pn	01 38 20.1	+1.6
	SNR=29						
BANOM				S	Sn	01 38 48.9	+3.0
KRBR	Kerman	2.48	338	*e*Pn	Pb	01 38 25.4	-1.1
KRBR				IAML		01 39 03.5	
	comp=N,377nm,0.4s						
KRBR				IAML		01 39 05.2	
	comp=E,350nm,0.4s						
KRBR	Kerman	2.48	338	*e*Pn	Pb	01 38 25.4	-1.1
TVBK	TV Kerman	2.48	338	*e*Pn	Pn	01 38 24.8	+2.3
TVBK				*e*		01 38 34.7	
	comp=Z,8µm,0.3s						
MDH	Madha	2.73	210	P	Pn	01 38 24.9	-0.7
MDH	Madha	2.73	210	*e*Pn	Pn	01 38 25.0	-0.6
MDH	Madha	2.73	210	P	Pn	01 38 25.4	-0.2
	SNR=16						
MDH				S	Sn	01 38 57.4	-1.3
MASF	Masafi	2.73	213	P	Pn	01 38 28.0	+2.3
	SNR=16						
MSFE	Esma-Masafi	2.74	213	*e*P	Pn	01 38 28.1	+2.3
	SNR=18						
MSFE	Esma-Masafi	2.74	213	*e*Pn	Pn	01 38 25.7	-0.1
UMQ	Umm Al-Quwin	2.88	223	*e*Pn	Pn	01 38 28.0	+0.3
UMQ	Umm Al-Quwin	2.88	223	P	Pn	01 38 30.6	+3.0
UMQ				S	Sb	01 39 08.8	+0.2
KHGB	Koh Gabri	2.94	337	*e*Pn	Pn	01 38 32.1	+3.4
KHGB				*e*		01 38 36.2	
	comp=Z,2µm,0.3s						
LAR1	LAR	3.06	271	*e*Pn	Pn	01 38 31.3	+1.2
LAR1				*e*		01 39 30.1	
	comp=Z,8µm,0.4s						
UOSS	Minazif	3.08	208	P	Pn	01 38 29.6	-0.8
UOSS	Minazif	3.08	208	*e*Pn	Pn	01 38 29.5	-0.9

UOSS	Minazif	3.08	208	P	Pn	01 38 30.0	-0.4
ZHDN	Zahedan	3.14	56	ePn	Pn	01 38 33.6	+2.2
CHBR	Chabahar	3.15	130	ePn	Pn	01 38 32.9	+1.5
CHBR	Chabahar	3.15	130	ePn	Pn	01 38 32.9	+1.5
HATD	Hatta, Dubai	3.22	209	eP	Pn	01 38 31.6	-0.7
	SNR=8.6						
HATD	Hatta, Dubai	3.22	209	ePn	Pn	01 38 31.7	-0.6
HATD	Hatta, Dubai	3.22	209	P	Pn	01 38 31.9	-0.4
	SNR=8.9						
ZHSF	Zahedan	3.24	53	ePn	Pn	01 38 35.1	+2.4
ZHSF	Zahedan	3.24	53	ePn	Pn	01 38 35.1	+2.4
NAZ	Nazwa, Dubai	3.30	216	P	Pn	01 38 35.3	+1.9
NAZ	Nazwa, Dubai	3.30	216	ePn	Pn	01 38 33.8	+0.4
NAZ	Nazwa, Dubai	3.30	216	P	Pn	01 38 36.0	+2.5
	SNR=5.0						
ASHO	Ashiyiah	3.37	208	i P	Pn	01 38 37.0	+2.5
	SNR=26						
ASHO	Ashiyiah	3.37	208	ePn	Pn	01 38 34.6	+0.1
ASHO	Ashiyiah	3.37	208	P	Pn	01 38 35.1	+0.6
	SNR=38						
ASHO				S	Sn	01 39 19.1	+4.5
FAQ	Al Faqa, Dubai	3.54	215	i P	Pn	01 38 38.4	+1.7
	SNR=15						
FAQ	Al Faqa, Dubai	3.54	215	ePn	Pn	01 38 38.2	+1.5
FAQ	Al Faqa, Dubai	3.54	215	P	Pn	01 38 38.9	+2.2
	SNR=15						
SOHO	SOHO	3.71	198	P	Pn	01 38 37.9	-1.1
SOHO	SOHO	3.71	198	ePn	Pn	01 38 37.8	-1.3
SOHO	SOHO	3.71	198	P	Pn	01 38 38.3	-0.8
NGCH	Negor - Chabah	3.76	127	ePn	Pn	01 38 40.9	+1.2
ASUD	Al Ashush, Dub	3.77	217	i P	Pn	01 38 42.1	+2.3
	SNR=58						
ASUD	Al Ashush, Dub	3.77	217	ePn	Pn	01 38 42.2	+2.3
ASUD	Al Ashush, Dub	3.77	217	P	Pn	01 38 42.2	+2.3
	SNR=58						
ASUD				S	Sn	01 39 28.7	+4.3
ALNE	Al Ain	4.06	208	i P	Pn	01 38 45.9	+2.0
	SNR=13						
ALNE	Al Ain	4.06	208	ePn	Pn	01 38 45.5	+1.7
ALNE	Al Ain	4.06	208	P	Pn	01 38 46.2	+2.4
	SNR=9.9						
ALNE				S	Sn	01 39 34.4	+3.0
SRVN	Saravan	4.07	93	ePn	Pn	01 38 46.8	+2.6
HOQ	Hoqain	4.10	187	P	Pn	01 38 44.2	-0.3
	SNR=28						
BIDO	Bidbid	4.14	176	ePn	Pn	01 38 44.3	-0.7
BIDO	Bidbid	4.14	176	P	Pn	01 38 45.8	+0.7
LMD1	Lamerd	4.15	266	ePn	Pn	01 38 46.5	+1.4
NHDN	Nehbandan	4.18	27	ePn	Pn	01 38 48.5	+2.8
QIR1	Qir	4.30	282	ePn	Pn	01 38 49.1	+1.9
BSRN	Basiran	4.42	15	ePn	Pn	01 38 51.1	+2.1
BSRN	Basiran	4.42	15	ePn	Pn	01 38 51.1	+2.1
ARQ	Araqi	4.47	195	P	Pn	01 38 52.2	+2.6
	SNR=82						
ARQ				S	Sn	01 39 43.8	+2.0
WSAR	Wadi Sarin	4.48	170	Pn	Pn	01 38 50.5	+0.9
	comp=Z,3.7nm,0.3s,baz=337,slow=5.9,SNR=153						
WSAR				Sn	Sn	01 39 39.0	-2.8
	comp=Z,21nm,0.3s,baz=0.0,slow=9.1,SNR=12						
WSAR	Wadi Sarin	4.48	170	P	Pn	01 38 50.8	+1.2
	SNR=10						
SMDO	Samad	4.60	177	P	Pn	01 38 52.6	+1.2
	SNR=22						
IMEH	Mehriz	4.64	324	ePn	Pn	01 38 54.9	+2.8
IKOO	Kooshah	4.84	12	ePn	Pn	01 38 57.4	+2.5
BSY	Bisya	4.94	187	P	Pn	01 38 58.3	+2.3
	SNR=8.2						
BSY				S	Sn	01 39 54.7	+1.4
WBK	Wadi Bani Khal	5.15	168	P	Pn	01 38 59.8	+0.9
	SNR=82						
ITEG	Tejag	5.27	9	ePn	Pn	01 39 03.3	+2.7
JMDO	Jabal Madar	5.29	177	P	Pn	01 39 02.6	+1.8
	SNR=8.7						
IDAH	Dahanechah	5.35	19	ePn	Pn	01 39 05.0	+3.1
ICHK	Chekchek	5.43	328	ePn	Pn	01 39 05.4	+2.4
YZKH	Yazd	5.47	330	ePn	Pn	01 39 06.6	+3.3
YZKH	Yazd	5.47	330	ePn	Pn	01 39 06.6	+3.3
UMZA	Um Al Zommool	5.49	207	P	Pn	01 39 04.4	+0.8
ISAD	Sadrabad	5.55	321	ePn	Pn	01 39 06.9	+2.3
JLN	Jalan Bani Buh	5.69	165	P	Pn	01 39 07.0	+0.8
	SNR=28						
IMON	Monand	5.73	16	ePn	Pn	01 39 10.2	+3.2
GHWR	Ruwais	5.79	231	P	Pn	01 39 07.2	-0.5
AFRZ	Afriz	5.83	10	ePn	Pn	01 39 10.8	+2.5
TABS	Tabas	5.99	354	ePn	Pn	01 39 14.0	+3.5
TABS				IAML		01 41 09.9	
	comp=N,17nm,0.7s						
TABS	Tabas	5.99	354	ePn	Pn	01 39 14.0	+3.5
IRAM	Ramesheh	6.27	312	ePn	Pn	01 39 16.6	+2.1
SHRT	Shahrakht	6.32	19	ePn	Pn	01 39 17.6	+2.6
SHRT	Shahrakht	6.32	19	ePn	Pn	01 39 17.6	+2.6
KLNJ	Kolanjah	6.37	303	ePn	Pn	01 39 17.9	+1.9
SHMA	Al-Shehemyia	6.39	255	P	Pn	01 39 17.6	+1.7
ANAR	Anarak	6.54	328	ePn	Pn	01 39 21.0	+3.0
TRNA	Turayna	6.62	245	P	Pn	01 39 19.3	+0.3
MHTO	MHTO	6.66	179	P	Pn	01 39 21.7	+2.1
IGAR	Gharneh	6.88	315	ePn	Pn	01 39 24.8	+2.0
IZEF	Zefreh	7.04	319	ePn	Pn	01 39 26.9	+1.8
SLWS		7.05	248	P	Pn	01 39 25.2	+0.2
SLWS				S	Sn	01 40 42.1	-3.2
IBRJ	Brojen	7.09	308	ePn	Pn	01 39 28.1	+2.3
SHK1	Shahrekord	7.59	309	ePn	Pn	01 39 34.4	+1.7
IKLH	Kolahrood	7.79	318	ePn	Pn	01 39 38.0	+2.7
IPIR	Pirpir	7.80	311	ePn	Pn	01 39 37.8	+2.2
TBJM	Torbat-e-JAM	7.87	15	ePn	Pn	01 39 39.7	+3.3
KRSH	Karshahi	7.95	323	ePn	Pn	01 39 40.3	+2.8
QAMS	Qamsar	8.19	319	ePn	Pn	01 39 42.9	+2.1
ISFB	Sefidab	8.20	326	ePn	Pn	01 39 43.5	+2.7
QRN	Al-Qurain	8.80	279	eP	Pn	01 39 48.8	-0.3
KBD	Kabd	9.04	282	eP	Pn	01 39 52.4	+0.1
UMR	Umm Al-Rimmam	9.08	284	eP	Pn	01 39 52.5	-0.2
MIB	Mutribah	9.44	285	eP	Pn	01 39 57.7	-0.1
DOK	Doka	9.63	201	P	Pn	01 39 59.9	-0.5
	SNR=14						
RMAH	Rumah	10.07	259	P	Pn	01 40 05.8	-0.6
HSAM	Samen	10.25	312	ePn	Pn	01 40 09.5	+0.4
DMTO	DMTO	10.26	196	P	Pn	01 40 07.8	-1.2
WHFO	Wadi Hawf	10.40	202	P	Pn	01 40 11.8	+0.8
	SNR=36						
ABTO	Aybut	11.09	203	P	Pn	01 40 19.8	-0.7
	SNR=26						
GNI	Garni	16.49	322	Pn	Pn	01 41 33.1	-0.2
	comp=N,0.3nm,0.3s,baz=68,slow=11,SNR=1.2						
MMAI	Mount Meron Ar	20.05	291	P	P	01 42 13.0	-2.2
	comp=N,1.7nm,0.8s,baz=100,slow=16,SNR=2.1						
MMAI				LR	LR	01 52 10.5	
	comp=N,44nm,18.5s,baz=40,slow=44						
AAK	Ala-Archa	20.16	38	P	P	01 42 15.9	-0.5
	comp=N,1.6nm,0.8s,baz=233,slow=18,SNR=2.0						
BRTR	Keskin Array B	23.36	307	P	P	01 42 50.6	+0.2
	comp=N,1.0nm,0.8s,baz=121,slow=7.2,SNR=3.5						
MKAR	Makanchi Array	27.09	39	P	P	01 43 23.2	-1.4
	comp=N,0.2nm,0.4s,baz=234,slow=6.3,SNR=4.6						
ZALV	Zalesovo Beam	32.89	30	P	P	01 44 14.7	-1.0
	comp=N,0.7nm,0.3s,baz=237,slow=9.3,SNR=4.1						
FINES	FINESS Array B	39.87	337	P	P	01 45 13.0	-2.1
	comp=N,6.0nm,1.2s,baz=143,slow=10,SNR=1.1						
CLL	Collm	41.02	318	eP	P	01 45 25.0	+0.1
TLY	Talaya	41.73	42	LR	LR	02 05 26.2	
	comp=N,11nm,21.1s,baz=352,slow=40						
ARCES	ARCESS Array B	45.89	345	P	P	01 46 03.2	-0.7
	comp=N,2.3nm,0.9s,baz=96,slow=2.1,SNR=5.6						
ESDC	Sonseca Array	51.87	300	P	P	01 46 50.7	+0.3
	comp=N,0.3nm,1.0s,baz=66,slow=6.6,SNR=1.3						
TORD	Torodi Ar. Bea	54.13	266	P	P	01 47 05.4	-1.9
	comp=N,0.7nm,0.4s,baz=64,slow=7.7,SNR=24						
WRA	Warramunga Arr	87.83	114	P	P	01 50 31.2	-0.4
	comp=N,0.3nm,0.8s,baz=320,slow=4.0,SNR=2.2						

IDC 09 01:54:12.6±9.7**, 4°.89S**×**154°.18E, h113**^{km}±66^{km}**, mb3.4**/3**, mb1 3.7**/4**, mb1mx3.2**/45**, mbtmp3.9**/4**, Error ellipse: s-maj=109.3km s-min=61.2km az=126.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	8.29	237	P	Pn	01 56 10.2	+0.2
	2.9nm,0.3s,baz=51,slow=18,SNR=4.8						
PMG				S	Sn	01 57 42.7	+0.8
	1.9nm,0.3s,baz=83,slow=14,SNR=1.3						
WRA	Warramunga Arr	24.43	231	P	P	01 59 21.3	+0.4
	1.1nm,0.6s,baz=56,slow=9.9,SNR=15						
ASAR	Alice Springs	27.03	224	P	P	01 59 44.4	0.0
	0.4nm,0.7s,baz=63,slow=8.5,SNR=6.3						
FITZ	Fitzroy Crossi	30.83	242	P	P	02 00 17.4	-0.7
	1.5nm,0.5s,baz=46,slow=6.7,SNR=7.0						
TORD	Torodi Ar. Bea	151.64	289	PKPbc	PKPbc	02 13 54.8	0.0
	0.1nm,0.3s,baz=54,slow=2.1,SNR=2.3						

OMAN 09 01:55:00.1±1.2**, 25°.14N**×**62°.05E, h29**^{km}±62^{km}**, mb4.4**/2**, ml3.2**/7**, Error ellipse: s-maj=86.6km s-min=9.5km az=254.0, Southwestern Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WSAR	Wadi Sarin	3.65	240	P	Pn	01 55 53.0	-1.7
WSAR				S	Sn	01 56 37.6	+0.8
WBK	Wadi Bani Khal	3.78	229	P	Pn	01 55 54.4	-2.0
	SNR=26						
WBK				S	Sn	01 56 40.1	+0.2
JLN	Jalan Bani Buh	3.83	220	P	Pn	01 55 54.3	-2.9
JLN				S	Sn	01 56 41.9	+0.6
SMDO	Samad	4.20	241	P	Pn	01 56 02.3	0.0
JMDO	Jabal Madar	4.54	234	P	Pn	01 56 06.8	-0.2
	SNR=18						
JMDO				S	Sn	01 57 00.7	+1.8
HOQ	Hoqain	4.59	251	P	Pn	01 56 07.0	-0.7
	SNR=7.5						
BSY	Bisya	5.04	243	P	Pn	01 56 14.2	+0.4
MDH	Madha	5.21	273	P	Pn	01 56 15.3	-0.9
MDH				S	Sn	01 57 15.5	+0.2
BANOM	Banah	5.25	280	P	Pn	01 56 15.7	-1.0
	SNR=7.8						
UOSS	Minazif	5.31	269	P	Pn	01 56 16.2	-1.2
ARQ	Araqi	5.35	252	P	Pn	01 56 19.9	+1.8
	SNR=5.8						
SHME	Shamm	5.41	281	P	Pn	01 56 19.8	+0.9
ASHO	Ashiyiah	5.46	267	P	Pn	01 56 20.2	+0.6
	SNR=9.5						

IDC 09 02:02:41.2±3.2**, 5°.85S**×**150°.27E, h0**^{km}**, mb3.5**/3**, mb1 3.8**/4**, mb1mx3.5**/32**, mbtmp3.7**/4**, ML1.8**/1**, Error ellipse: s-maj=108.1km s-min=40.2km az=119.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	4.69	221	Pn	Pn	02 03 54.8	+1.5
	3.2nm,0.3s,baz=37,slow=9.7,SNR=5.0						
PMG				Sn	Sn	02 04 44.5	-3.9
	5.8nm,0.3s,baz=55,slow=20,SNR=11						
WRA	Warramunga Arr	20.88	226	P	P	02 07 24.7	-0.5
	2.1nm,0.5s,baz=52,slow=11,SNR=27						
ASAR	Alice Springs	23.70	220	P	P	02 07 54.4	-0.6
	0.3nm,0.3s,baz=55,slow=8.9,SNR=5.3						
FITZ	Fitzroy Crossi	26.95	241	P	P	02 08 24.6	-0.1
	0.5nm,0.4s,baz=72,slow=9.6,SNR=2.1						
TORD	Torodi Ar. Bea	148.20	285	PKPbc	PKPbc	02 22 30.0	-0.3
	0.3nm,0.3s,baz=96,slow=2.6,SNR=11						

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*IDC **09** 02:02:59.1±1.0, 4°.55S×101°.78E, h0*^{km}*, mb4.1/12, mb1 4.2/15, mb1mx4.0/43, mbtmp4.2/15, ML4.2/3, MS3.3/7, Ms1 3.3/7, ms1mx3.0/34, Error ellipse: s-maj=36.7km s-min=13.2km az=49.0*

*NEIC **09** 02:03:02.8±2.0, 4°.57S±0°.06×101°.85E±0°.07, h20*^{km}*±3*^{km}*, mb4.4/21, Error ellipse: s-maj=10.7km s-min=8.0km az=48.0*

*DJA **09** 02:03:04.0±0.4, 5°S±2°×10°2E±°, h12*^{km}*±3*^{km}*, M4.7/19, mb4.6/5, mB5.6/2, MLv4.7/19, Mw(mB)5.1/2*

ISC 09 02:03:04.6±0.5**, 4°.56S**±0°.07×**101°.86E**±0°.05**, h37**^{km}**, n91,** σ1^s**42**/82**, mb4.3**/26**, MS3.3**/6**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNAI	Manna	1.11	80	P	Pn	02 03 23.1	-0.5
MNAI	Manna	1.11	80	Pn	Pn	02 03 22.4	-1.2
KSI	Kapahiang	1.16	39	P	Pn	02 03 23.5	-0.9
MASI	Maura Aman, Be	1.46	15	P	Pn	02 03 28.8	+0.3
LHSI	Lahat	1.81	66	P	Pn	02 03 33.3	0.0
LWLI	Liwa	2.24	102	P	Pn	02 03 40.3	+1.0
MDSI	Maura Dua	2.32	88	P	Pn	02 03 39.5	-0.7
MDSI				S	Sn	02 04 05.9	-1.5
KRJI	Kerinci	2.48	351	P	Pn	02 03 44.7	+2.1
PPSI	Pulau Pagai	2.56	314	P	Pn	02 03 45.8	+2.2
KASI	Kota Agung	2.80	110	P	Pn	02 03 46.5	-0.3
KLSI		2.87	93	P	Pn	02 03 48.3	+0.5
KLI	Kotabumi	3.00	96	P	Pn	02 03 59.6	+10
PMBI	Palembang	3.33	61	Pn	Pn	02 03 55.4	+1.3
JMBI	JAMBI	3.41	32	P	Pn	02 03 58.9	+3.7
PDSI	Padang	3.88	339	P	Pn	02 04 03.1	+1.3
SISI	Saibi	4.24	319	P	Pn	02 04 08.6	+2.0
PPI	Padang Panjang	4.33	340	P	Pn	02 04 09.2	+1.3
CGJI	Cibinong	4.33	118	P	Pn	02 04 07.9	0.0
DSRI	Dabo	4.88	34	P	Pn	02 04 17.3	+1.8
BKNI	Bangkinang	4.92	350	P	Pn	02 04 30.3	+14
BKNI	Bangkinang	4.92	350	Pn	Pn	02 04 15.1	-1.0
DBJI	Dramaga	5.26	112	P	Pn	02 04 26.2	+5.5
LEM	Lembang	6.16	112	Pn	Pn	02 04 33.0	-0.2
	9.6nm,0.3s,baz=311,slow=20,SNR=2.2						
LEM				Sn	Sn	02 05 47.0	+4.4
	1.6nm,0.3s,baz=319,slow=20,SNR=1.4						
LEM				LR	LR	02 07 26.4	
	comp=Z,251nm,18.5s,baz=320,slow=43						
XMIS	Christmas Isla	6.98	148	Pn	Pn	02 04 41.4	-3.0
GSI	Gunungsitoli	7.23	324	P	Pn	02 04 48.8	+1.1
GSI	Gunungsitoli	7.23	324	Pn	Pn	02 04 47.9	+0.2
RPSI	Rantau Prapat	7.78	338		Pn	02 04 54.8	-0.5
PSI	Prapat	7.88	338	Pn	Pn	02 04 54.8	-2.0
	1.7nm,0.3s,baz=159,slow=11,SNR=8.0						
COCO	West Island	9.06	213	Pn	Pn	02 05 12.2	-0.7
TPTI		9.06	329	P	Pn	02 05 15.4	+2.4
	8.2nm,0.7s						
UGM	Wanagama	9.24	112		Pn	02 05 13.9	-1.5
JAGI	Jajag, Banyuwa	12.82	108	Pn	Pn	02 06 04.8	+0.5
KAPI	Kappang	17.84	92	P	P	02 07 11.7	+1.2
	1.2nm,0.3s,baz=315,slow=15,SNR=4.5						
BKSI	Bulukumba	18.21	93	P	Pn	02 07 15.9	+1.2
	25nm,0.9s						
MPSI	Mapaga	18.67	75	P	Pn	02 07 22.0	+1.8
TOLI2	Tolitoli	19.73	74		P	02 07 31.6	+0.3
UBPT	Khong Chiam	20.03	10		P	02 07 33.3	-1.2
UBPT				IAmb	IAmb	02 07 37.0	
	comp=Z,27nm,0.9s						
MRSI	Marisa	20.68	77	P	Pn	02 07 44.4	+0.3
CMAR	Chiang Mai Arr	23.05	353	P	P	02 08 05.8	-1.1
	comp=Z,0.8nm,0.3s,baz=180,slow=8.5,SNR=11						
CMAR				LR	LR	02 16 28.8	
	comp=Z,41nm,20.8s,baz=175,slow=35						
CMAR	Chiang Mai Arr	23.05	353	P	P	02 08 03.9	-3.0
CHTO	Chiang Mai	23.40	353	P	P	02 08 09.2	-1.2
DAV	Davao City (W)	26.34	64	LR	LR	02 19 37.2	
	comp=Z,39nm,20.3s,baz=124,slow=38						
FITZ	Fitzroy Crossi	26.87	122	P	P	02 08 43.6	+1.5
	comp=Z,2.3nm,0.7s,baz=3.1,slow=2.4,SNR=5.4						
FITZ				LR	LR	02 21 07.0	
	comp=Z,71nm,19.7s,baz=9.5,slow=40						
H08S2	Diego Garcia H	29.35	263	T	T	02 39 28.8	
	baz=83,slow=75						
H08S3	Diego Garcia H	29.36	263	T	T	02 39 30.7	
	baz=83,slow=75						
H08S1	Diego Carcia H	29.37	263	T	T	02 39 31.6	
	baz=83,slow=75						
H01W3	Cape Leeuwin H	32.25	161	T	T	02 43 27.3	
	baz=339,slow=76,SNR=48						
H01W2	Cape Leeuwin H	32.26	161	T	T	02 43 24.4	
	baz=339,slow=76,SNR=53						
H01W1	Cape Leeuwin H	32.26	161	T	T	02 43 28.4	
	baz=339,slow=76,SNR=17						
RAMN	Ramite	34.63	336	eP	P	02 09 52.7	+2.0
	comp=Z,5.6nm,0.3s						
WB0	Warramunga Arr	35.11	118	P	P	02 09 54.5	-0.3
WB0				IAmb	IAmb	02 10 20.9	
	comp=Z,3.8nm,1.1s						
WRA	Warramunga Arr	35.13	119	P	P	02 09 54.8	-0.1
	comp=Z,0.8nm,0.6s,baz=299,slow=9.2,SNR=10						
WRA				LR	LR	02 26 27.4	
	comp=Z,51nm,19.1s,baz=165,slow=40						
WRA	Warramunga Arr	35.13	119	P	P	02 09 54.4	-0.6
WB2	Warramunga Arr	35.14	119	P	P	02 09 54.7	-0.3
WB2				IAmb	IAmb	02 10 02.9	
	comp=Z,3.2nm,0.8s						
WR0	Warramunga Arr	35.31	118	P	P	02 09 56.9	+0.4
WR0				IAmb	IAmb	02 10 11.9	
	comp=Z,9.5nm,1.4s						
JIRN	Jiri	35.42	336	eP	P	02 09 58.5	+0.8
	comp=Z,3.3nm,0.3s						
ASAR	Alice Springs	36.27	125	P	P	02 10 04.1	-0.6
	comp=Z,1.1nm,0.7s,baz=301,slow=7.9,SNR=14						
ASAR	Alice Springs	36.27	125	P	P	02 10 03.3	-1.4
GKN	Gorkha	36.38	334	eP	P	02 10 06.3	+0.6
	comp=Z,2.4nm,0.2s						
KOLN	Koldanda	36.65	332	eP	P	02 10 09.6	+1.6
	comp=Z,2.9nm,0.3s						
PYUN	Piuthan	37.22	332	eP	P	02 10 14.6	+1.8
	comp=Z,6.1nm,0.3s						
CTAO	Charters Tower	45.86	114	P	P	02 11 23.1	-0.5
STKA	Stephens Creek	46.08	131	P	P	02 11 25.4	+0.3
	comp=Z,1.0nm,0.6s,baz=300,slow=9.8,SNR=4.1						
STKA	Stephens Creek	46.08	131	P	P	02 11 25.6	+0.5
NIL	Nilore	46.65	327	P	P	02 11 29.1	-0.5
KSH	Kashi	49.93	334	P	P	02 11 53.7	-1.2
KSH				pP	pP	02 12 00.0	-5.4
KSH				PcP	PcP	02 13 10.2	-4.7
KSH				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KSH				LR	LR		
	comp=N,260nm,6.0s						
KSH				LR	LR		
	comp=E,160nm,5.0s						
KSH				LR	LR		
	comp=Z,57nm,8.1s						
SONM	Songino Array	52.33	4	P	P	02 12 13.0	+0.2
	comp=Z,2.7nm,0.6s,baz=185,slow=9.9,SNR=17						
SONM	Songino Array	52.33	4	P	P	02 12 12.7	-0.1
SONM				IAmb	IAmb	02 12 25.8	
	comp=Z,2.6nm,0.6s						
MK31	Makanchi Array	53.98	343	P	P	02 12 24.9	0.0
MKAR	Makanchi Array	53.98	343	P	P	02 12 24.6	-0.3
	comp=Z,2.5nm,0.6s,baz=147,slow=8.1,SNR=24						
MAKZ	Makanchi	54.09	343	P	P	02 12 25.9	+0.3
MAKZ				IAmb	IAmb	02 12 46.1	
	comp=Z,4.0nm,1.2s						
USRK	Ussuriysk Ar.	55.58	26	P	P	02 12 35.4	-1.0
	comp=Z,1.7nm,0.7s,baz=203,slow=4.0,SNR=7.2						
USRK	Ussuriysk Ar.	55.58	26	P	P	02 12 35.6	-0.9
KURK	Kurchatov	58.58	343	P	P	02 12 57.0	-0.5
KURK				IAmb	IAmb	02 13 17.6	
	comp=Z,3.7nm,0.9s						
ZAA0	Zalesovo Array	60.02	348	P	P	02 13 06.9	-0.5
ZALV	Zalesovo Beam	60.02	348	P	P	02 13 06.8	-0.6
	comp=Z,3.2nm,0.6s,baz=170,slow=4.9,SNR=19						
ZALV				LR	LR	02 39 50.1	
	comp=Z,33nm,19.1s,baz=56,slow=37						
ZALV	Zalesovo Beam	60.02	348	P	P	02 13 07.1	-0.3
BRVK	Borovoye	63.28	339	P	P	02 13 28.8	-0.6
BRVK				IAmb	IAmb	02 13 42.2	
	comp=Z,1.6nm,0.7s						
ABKAR	Akbulak array	64.76	331	P	P	02 13 38.5	-0.8
BKZ	Black Stump Fm	75.23	129	P	P	02 14 44.0	+0.2
BKZ				IAmb	IAmb	02 15 03.2	
	comp=Z,4.8nm,0.8s						
BOSA	Boshof	76.07	242	LR	LR	02 43 35.6	
	comp=Z,48nm,19.3s,baz=358,slow=32						
BR131	Keskin Array S	76.41	313	P	P	02 14 49.8	-0.8
BR131				IAmb	IAmb	02 14 51.2	
	comp=Z,5.0nm,0.9s						
BRTR	Keskin Array B	76.41	313	P	P	02 14 50.3	-0.4
	comp=Z,1.5nm,0.8s,baz=118,slow=6.6,SNR=9.0						
BURAR	Bucovina Array	84.39	319	P	P	02 15 34.8	+1.5
BURAR				IAmb	IAmb	02 15 35.5	
	comp=Z,1.2nm,0.7s						
BUR08	Bucovina Ar. S	84.41	319	P	P	02 15 35.0	+1.6
FINES	FINESS Array B	87.22	332	P	P	02 15 47.9	+1.0
	comp=Z,1.6nm,0.9s,baz=107,slow=4.7,SNR=3.6						
ARCES	ARCESS Array B	89.50	340	P	P	02 15 58.9	+1.4
	comp=Z,1.9nm,0.9s,baz=101,slow=4.7,SNR=1.3						
BDFB	Brasilia	144.05	235	PKP	PKPdf	02 22 36.1	-1.4
	comp=Z,0.7nm,0.6s,baz=45,slow=2.9,SNR=3.2						
TXAR	Lajitas Array	145.49	42	PKPbc	PKPab	02 22 40.0	+0.1
	comp=Z,1.0nm,0.6s,baz=299,slow=1.0,SNR=12						
TXAR	Lajitas Array	145.49	42		PKPdf	02 22 39.0	-0.6
LPAZ	La Paz	157.04	205	PKP	PKPdf	02 22 58.5	+0.4
	comp=Z,0.8nm,0.5s,baz=225,slow=2.9,SNR=2.8						

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*IDC **09** 02:14:10.2±5.2, 38°.73N×67°.17E, h0*^{km}*, mb3.6/1, mb1 3.7/3, mb1mx3.3/36, mbtmp3.7/3, ML3.2/2, Error ellipse: s-maj=235.7km s-min=23.1km az=149.0*

ISC 09 02:13:55.2±3.0**, 34°.5N**±0°.3×**71°.2E**±0°.4**, h35**^{km}**, n11,** σ0^s**82**/10**, 1D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	7.90	13	P	Pn	02 15 47.6	-0.4
	SNR=74						
UCH	Uchtor	8.17	17	P	Pn	02 15 52.4	+0.7
	SNR=40						
EKS2	Erkin-Say	8.43	13	P	Pn	02 15 54.2	-0.8
	SNR=15						
KBK	Karagaybulak	8.69	18	P	Pn	02 15 59.5	+1.0
	SNR=12						
CHMS	Chumysh	8.96	17	P	Pn	02 16 02.0	-0.1
	SNR=5.7						
TKM2	Tokmak 2	9.11	21	P	Pn	02 16 05.5	+1.1
	SNR=13						
TKM2	Tokmak 2	9.11	21	⇓Pn	Pn	02 16 05.0	+0.6
	16nm,0.5s						
USP	Ospenovka	9.16	15	P	Pn	02 16 04.6	-0.3
	SNR=5.4						
MKAR	Makanchi Array	14.89	31	Pn	Pn	02 17 22.1	-0.9
	0.2nm,0.3s,baz=232,slow=14,SNR=11						
ZALV	Zalesovo Beam	21.71	22	P	P	02 18 37.3	-5.8
	0.3nm,0.3s,baz=219,slow=10,SNR=4.4						
TORD	Torodi Ar. Bea	65.88	270	P	P	02 24 37.9	+0.1
	0.3nm,0.4s,baz=61,slow=5.1,SNR=6.1						

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*FUNV **09** 02:21:26.0, 8°.50N×71°.43W, h1*^{km}*, MW3.5*

ISC 09 02:21:26.5±1.2**, 8°.56N**±0°.03×**71°.35W**±0°.02**, h10**^{km}±9^{km}**, n49,** σ1^s**53**/90**, 1D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	Socops	0.56	120	eP	Pg	02 21 37.0	-0.3
SOCV				eS	Sg	02 21 45.3	+0.5
SOCV	Socops	0.56	120	eP	Pg	02 21 37.1	-0.2
SOCV				eS	Sg	02 21 45.5	+0.8
SDV	Santo Domingo	0.77	65	eP	Pb	02 21 42.5	+0.3
SDV				eS	Sn	02 21 54.6	-0.8
CAPV	Capacho	1.18	234	eP	Pb	02 21 45.8	-3.4
CAPV				eS	Sb	02 22 01.4	-3.2
PAMC	Pamplona, Colo	1.81	228	eP	Pn	02 21 57.9	-0.3
PAMC				eS	Sb	02 22 23.0	+0.1
PAMC				i		02 22 25.3	
	comp=Z,804nm,0.3s						
MCQV	Machiques	1.89	322	eP	Pn	02 21 59.2	+0.4
MCQV				eS	Sn	02 22 22.9	+0.2
OCAC	Ocana	1.98	261	eP	Pn	02 21 53.9	-6.3
OCAC				eS	Sn	02 22 24.9	-0.3
OCAC				i		02 22 27.5	
	comp=Z,3µm,0.3s						
TAMC	Tame, Arauca	2.16	192	eP	Pn	02 22 04.2	+1.6
TAMC				eS	Sb	02 22 33.3	+0.7
LL1C	La Loma 1 Cana	2.39	294	eP	Pb	02 22 08.7	-0.9
LL1C				eS	Sb	02 22 39.7	+0.5
ELOV	Elorza	2.41	130	eP	Pn	02 22 07.1	+1.1
ELOV				eS	Sn	02 22 35.9	+0.3
SIQV	Siquisique	2.57	36	eP	Pn	02 22 10.0	+1.8
SIQV				eS	Sn	02 22 41.0	+1.4
BARC	Barichara	2.67	223	eP	Pn	02 22 09.7	-0.1
BARC				eS	Sb	02 22 47.7	+0.1
BARC				i		02 22 51.2	
	comp=Z,411nm,0.4s						
SMLC	San Martn de	2.71	275	eP	Pn	02 22 09.5	-0.5
SMLC				eS	Sb	02 22 46.9	-1.4
BRRC	Barranca, Sant	2.75	239	eP	Pn	02 22 10.8	+0.1
BRRC				eS	Sb	02 22 50.9	+1.2
BRRC				i		02 22 58.4	
	comp=Z,136nm,0.5s						
MAPV	Macapo	3.12	66	eP	Pn	02 22 17.3	+1.5
MAPV				eS	Sn	02 22 54.3	+1.2
ARGC	Ariguani, Magd	3.14	294	eP	Pn	02 22 16.8	+0.8
ARGC				eS	Sb	02 23 03.3	+2.5
RUSC	La Rusia	3.16	213	eP	Pn	02 22 17.1	+0.3
RUSC				eS	Sb	02 23 02.8	+0.9
URIC	Uribia, Colomb	3.18	349	eP	Pn	02 22 15.9	-0.7
URIC				eS	Sn	02 22 55.0	+0.3
BAUV	El Baul	3.29	83	eP	Pn	02 22 18.9	+0.9
BAUV				eS	Sn	02 22 57.5	+0.3

JACV	Jacura	3.53	44	*e*P	Pn	02 22 22.6	+1.2
JACV				*e*S	Sn	02 23 04.1	+0.9
MONV	Montecano	3.63	22	*e*P	Pn	02 22 23.6	+0.8
MONV				*e*S	Sn	02 23 05.2	-0.6
ZARC	Zaragoza, Cauc	3.64	253	*e*P	Pn	02 22 22.3	-0.6
SMRC	Santa Marta, M	3.84	313	*e*P	Pn	02 22 24.6	-1.0
SMRC				*e*S	Sn	02 23 13.2	+2.4
TURV	Turiamo	3.93	61	*e*P	Pn	02 22 27.4	+0.4
TURV				*e*S	Sn	02 23 13.6	+0.4
BENV	Beln	3.95	69	*e*P	Pn	02 22 28.0	+0.7
BENV				*e*S	Sn	02 23 13.6	-0.2
SPBC	San Pablo de B	3.96	223	*e*P	Pn	02 22 27.3	-0.1
SPBC				*e*S	Sn	02 23 14.7	+0.7
SJCC	San Jacinto, C	4.01	290	*e*P	Pn	02 22 29.2	+1.1
SJCC				*e*S	Sn	02 23 16.3	+1.1
UREC	San Jos de Ur	4.22	259	*e*P	Pn	02 22 31.1	+0.1
MOTC	Monteria, Cord	4.28	273	⇓*e*P	Pn	02 22 32.0	+0.4
MOTC				*e*S	Sn	02 23 21.2	-0.5
MOTC				*i*		02 23 48.7	
	comp=Z,51nm,0.8s						
PTGC	Puerto Gaitan,	4.41	190	*e*P	Pn	02 22 33.8	+0.3
PTGC				*e*S	Sb	02 23 41.1	+3.9
PTGC				*i*		02 23 57.0	
	comp=Z,238nm,0.6s						
TACV	Tcata	4.54	69	*e*P	Pn	02 22 36.0	+0.7
TACV				*e*S	Sn	02 23 27.2	-1.1
CHIC	Chingaza	4.57	211	*e*P	Pn	02 22 36.4	+0.3
CHIC				*e*S	Sn	02 23 26.1	-3.4
CHIC				*i*		02 24 07.4	
	comp=Z,28nm,0.6s						
NORC	Norcasia	4.59	230	*e*P	Pn	02 22 38.5	+2.5
NORC				*e*S	Sn	02 23 28.8	-0.8
NORC				*i*		02 23 47.1	
	comp=Z,31nm,0.5s						
ROSC	El Rosal	4.73	219	*e*P	Pn	02 22 38.6	+0.3
ROSC				*e*S	Sg	02 24 00.6	+2.0
HELC	Santa Helena	4.77	241	*e*P	Pn	02 22 39.2	+0.4
HELC				*i*		02 23 55.1	
	comp=Z,546nm,0.3s						
PAYV	Puerto Ayacuch	4.81	130	*e*P	Pn	02 22 39.1	0.0
PAYV				*e*S	Sn	02 23 32.4	-2.5
CACV	CAICARA DEL OR	4.86	101	*e*P	Pb	02 22 46.5	-5.3
CACV				*e*S	Sb	02 23 46.6	-3.7
LCBC	Los crdobas,	4.97	274	*e*P	Pn	02 22 41.3	+0.1
LCBC				*e*S	Sn	02 23 39.3	+0.4
LCBC				*e*S	Sn	02 23 40.3	+1.4
LCBC				*i*		02 23 46.1	
	comp=Z,37nm,0.8s						
VILC	Villavicencio,	5.00	208	*e*P	Pn	02 22 41.5	-0.2
VILC				*e*S	Sn	02 23 37.3	-2.4
MERV	Las Mercedes	5.04	82	*e*P	Pn	02 22 42.7	+0.6
MERV				*e*S	Sn	02 23 38.7	-1.7
GUY2C	Guyana, Caldas	5.19	231	*e*P	Pn	02 22 44.8	+0.1
GUY2C				*i*		02 23 54.2	
	comp=Z,35nm,0.5s						
CBOC	Ciudad Bolivar	5.35	240	*e*P	Pn	02 22 48.2	+1.6
CBOC				*i*		02 24 14.6	
	comp=Z,14nm,0.6s						
BIRV	Birongo	5.36	69	*e*P	Pn	02 22 47.4	+0.8
BIRV				*e*S	Sn	02 23 46.9	-1.4
CAPC	Capurgana	5.94	271	*e*P	Pn	02 22 53.3	-1.2
CAPC				*e*S	Sn	02 23 59.4	-3.3
CAPC				*i*		02 24 06.5	
	comp=Z,6.3nm,0.3s						
ORTC	Ortega, Tolima	6.03	220	*e*P	Pn	02 22 55.0	-0.8
ORTC				*e*S	Sn	02 24 03.6	-1.5
ORTC				*i*		02 24 09.0	
	comp=Z,23nm,0.3s						
PLMC	San Jos del P	6.10	234	*e*P	Pn	02 22 57.7	+0.9
PRGV	PARIAGUAN	6.63	88	*e*P	Pn	02 23 04.3	+0.3
PRGV				*e*S	Sn	02 24 15.6	-4.1
YOTC	Yotoco, Valle	6.74	228	*e*P	Pn	02 23 05.7	0.0
YOTC				*e*S	Sn	02 24 27.6	+5.1
PTLC	Puerto Leguiza	9.02	203	*e*P	Pn	02 23 38.1	+1.2

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*NOU **09** 02:26:33.4, 20°.02S×175°.44W, h492km, mb4.7/30, Tonga Islands*

*NEIC **09** 02:27:11.0±1.9, 20°.16S±0°.02×179°.1W±0°.1, h671km±7km, mb4.3/122, Error ellipse: s-maj=14.1km s-min=2.3km az=89.0*

*IDC **09** 02:27:10.1±0.9, 20°.13S×179°.14W, h668km±10km, mb3.7/20, mb1 3.9/24, mb1mx3.9/37, mbtmp4.7/24, Error ellipse: s-maj=11.9km s-min=9.7km az=150.0*

ISC 09 02:27:09.6±0.3, **20°.18S**±0°.05×**179°.10W**±0°.05, **h665km**, **n264**, σ**1ˢ10**/267, **mb4.4**/93, **19C-24D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.63	312	P	P	02 28 39.7	+1.9
	72nm,0.3s,baz=164,slow=2.9,SNR=324						
MSVF	Nonsavu	3.63	312	P	P	02 28 40.0	+2.2
NIUE	Niue	8.72	84	P	P	02 29 18.0	+0.3
RAO	Raoul Island	9.10	173	P	P	02 29 21.0	0.0
	86nm,0.3s,baz=193,slow=23,SNR=10						
RAO				S	S	02 31 07.7	-1.0
	37nm,0.3s,baz=83,slow=22,SNR=5.6						
AFI	Afiamalu	9.38	49	P	P	02 29 23.1	-0.8
	22nm,0.3s,baz=57,slow=2.2,SNR=21						
AFI				S	S	02 31 09.4	-4.3
	baz=50,slow=19,SNR=1.4						
FUNA	Funafuti	11.70	352	P	P	02 29 45.2	-0.3
MARNC	Mare, Loyalty	12.10	262	P	P	02 29 48.7	-0.3
MARNC	Mare, Loyalty	12.10	262	P	P	02 29 49.4	+0.4
PINNC	Pines Island,	12.76	257	P	P	02 29 56.4	+1.3
PINNC	Pines Island,	12.76	257	P	P	02 29 56.4	+1.3
LIFNC	LIFOU	12.81	265	P	P	02 29 54.5	-1.0
YATNC	Mamie plateau,	13.20	259	P	P	02 30 01.0	+1.9
OUENC	Ouen Island, N	13.29	258	P	P	02 30 01.2	+1.3
DZM	Mont Dzumac	13.62	259	*e*P	P	02 30 04.6	+1.5
	23nm,0.8s						
DZM	Mont Dzumac	13.62	259	P	P	02 30 05.2	+2.2
	3.0nm,0.3s,baz=131,slow=19,SNR=23						
DZM				S	S	02 32 24.9	+0.6
	baz=329,slow=18,SNR=5.8						
DZM	Mont Dzumac	13.62	259	P	P	02 30 04.5	+1.5
DZM	Mont Dzumac	13.62	259	P	P	02 30 04.5	+1.5
ONTNC	Ouen Toro	13.63	258	P	P	02 30 05.8	+2.8
NOUC	Port Laguerre	13.75	259	P	P	02 30 05.7	+1.6
KOUNC	Koumac, New Ca	15.58	266	P	P	02 30 23.6	+2.7
OUZ	Omahuta	16.31	202	P	P	02 30 30.6	+3.3
OUZ				IAmb	IAmb	02 30 31.6	
	comp=Z,24nm,0.6s						
URZ	Urewera	18.32	190	P	P	02 30 45.2	-0.2
	comp=Z,0.6nm,0.3s,baz=301,slow=24,SNR=3.5						
URZ				S	S	02 33 34.5	-5.3
	comp=Z,0.3nm,0.3s,baz=300,slow=24,SNR=2.5						
KNTN	Kanton	18.74	24	P	P	02 30 49.6	0.0
SNZO	South Karori	21.72	193	P	P	02 31 18.1	+2.4
SNZO				IAmb	IAmb	02 31 18.5	
	comp=Z,18nm,0.8s						
BHW	Baring Head	21.78	192	P	P	02 31 16.1	-0.2
QRZ	Quartz Range	21.79	197	P	P	02 31 17.3	+0.9
QRZ				IAmb	IAmb	02 31 31.1	
	comp=Z,17nm,1.2s						
TUWZ	Tuamarina	22.00	194	P	P	02 31 18.7	+0.5
THZ	Tophouse	22.56	196	P	P	02 31 24.1	+0.7
THZ				IAmb	IAmb	02 31 31.5	
	comp=Z,24nm,1.2s						
KHZ	Kahutara	23.03	194	P	P	02 31 27.6	+0.3
LTZ	Lake Taylor	23.68	196	P	P	02 31 33.3	+0.2
LTZ				IAmb	IAmb	02 31 35.4	
	comp=Z,13nm,0.6s						
LBZ	Lake Benmore	25.74	198	P	P	02 31 50.0	-1.2
LBZ				IAmb	IAmb	02 31 55.0	
	comp=Z,15nm,1.0s						
WKZ	Wanaka	26.49	199	P	P	02 31 57.5	-0.2
EIDS	Eidsvold	27.94	254	P	P	02 32 11.6	+1.1
EIDS				IAmb	IAmb	02 32 40.3	
	comp=Z,6.4nm,1.0s						
PPT	Papeete	28.05	90	P	P	02 32 11.9	+0.3
	comp=Z,21nm,0.5s,baz=79,slow=4.3,SNR=6.3						
PPTF	Pamatai, Papee	28.05	90	P	P	02 32 12.5	+0.8
PMOR	Pomariorio Ree	30.16	85	*e*P	P	02 32 30.4	+0.7
	comp=Z,127nm,1.0s						
VAH	Vaihoa	30.36	86	*e*P	P	02 32 31.9	+0.6
	comp=Z,186nm,1.2s						
CAN	Canberra	31.84	235	P	P	02 32 44.9	+1.1
CAN				IAmb	IAmb	02 32 45.3	
	comp=Z,8.9nm,0.8s						
CTA	Charters Tower	32.49	264	P	P	02 32 49.8	+0.4
	comp=Z,36nm,0.4s,baz=86,slow=10,SNR=20						
CTAO	Charters Tower	32.49	264	P	P	02 32 50.0	+0.7
CTAO	Charters Tower	32.49	264	P	P	02 32 49.7	+0.4
CMSA	Cobar Meteorol	33.50	243	P	P	02 32 58.6	+1.0
	comp=Z,18nm,0.7s						
QLP	Quilpie	34.17	252	P	P	02 33 03.7	+0.5
	comp=Z,39nm,0.5s						
PMG	Port Moresby	34.26	283	P	P	02 33 02.6	-1.5
PMG	Port Moresby	34.26	283	P	P	02 33 04.9	+0.8
PMG	Port Moresby	34.26	283	P	P	02 33 04.9	+0.8
MTSU	Mount Surprise	34.57	267	P	P	02 33 07.1	+0.4
	comp=Z,29nm,0.7s						
PATS	Pohnpei	34.84	318	P	P	02 33 08.9	0.0
TOO	Toolangi	35.26	233	P	P	02 33 13.5	+1.4
COEN	Coen	36.53	274	P	P	02 33 23.3	+0.6
COEN	Coen	36.53	274	P	P	02 33 23.2	+0.6
	comp=Z,58nm,1.1s						
STKA	Stephens Creek	37.00	244	P	P	02 33 27.1	+0.7
	comp=Z,5.1nm,0.9s,baz=79,slow=9.1,SNR=10						
STKA				ScP	ScP	02 38 14.2	+0.5
	comp=Z,0.4nm,0.3s,baz=122,slow=2.3,SNR=3.1						
STKA	Stephens Creek	37.00	244	P	P	02 33 27.2	+0.9
STKA	Stephens Creek	37.00	244	P	P	02 33 28.2	+1.9
	comp=Z,1.3nm,0.9s						
INKA	Innaminka	37.33	250	P	P	02 33 31.1	+2.1
	comp=Z,31nm,2.1s						
QIS	Mount Isa	38.64	262	P	P	02 33 40.4	+0.7
	comp=Z,13nm,1.4s						
LCRK	Leigh Creek	39.71	246	P	P	02 33 49.9	+1.9
	comp=Z,27nm,0.5s						
BBOO	Buckleboo	41.77	243	P	P	02 34 04.4	+0.2
BBOO				IAmb	IAmb	02 34 05.4	
	comp=Z,8.7nm,0.7s						
OOD	Oodnadatta	41.81	251	P	P	02 34 05.9	+1.4
	comp=Z,28nm,1.1s						
MULG	Mulgathing	43.29	247	P	P	02 34 16.2	+0.2
	comp=Z,40nm,0.6s						
WR0	Warramunga Arr	43.43	262	P	P	02 34 16.6	-0.6
WR0				IAmb	IAmb	02 34 18.4	
	comp=Z,23nm,1.1s						
AS31	Alice Springs	43.58	257	P	P	02 34 18.5	+0.2
AS31				IAmb	IAmb	02 34 20.4	
	comp=Z,10.0nm,0.5s						
ASAR	Alice Springs	43.59	257	P	P	02 34 18.4	0.0
	comp=Z,28nm,0.6s,baz=89,slow=8.5,SNR=325						
ASAR				PcP	PcP	02 35 50.1	-0.1
	comp=Z,3.3nm,0.6s,baz=95,slow=4.6,SNR=7.3						
ASAR				ScP	ScP	02 38 40.5	+0.5
	comp=Z,0.7nm,0.7s,baz=111,slow=4.4,SNR=5.4						
ASAR				S	S	02 39 60.0	-2.4
	comp=Z,20nm,1.0s,baz=91,slow=15,SNR=60						
ASAR	Alice Springs	43.59	257	P	P	02 34 18.5	+0.1
WRAB	Tennant Creek	43.61	262	P	P	02 34 18.2	-0.3
WRAB	Tennant Creek	43.61	262	P	P	02 34 18.1	-0.5
WRA	Warramunga Arr	43.62	262	P	P	02 34 18.0	-0.7
	comp=Z,18nm,0.4s,baz=97,slow=8.1,SNR=431						
WRA				PcP	PcP	02 35 48.3	-2.1
	comp=Z,3.3nm,0.9s,baz=95,slow=3.9,SNR=3.3						
WRA				ScP	ScP	02 38 39.3	-0.9
	comp=Z,1.2nm,0.8s,baz=96,slow=3.8,SNR=4.1						
WRA				S	S	02 39 59.0	-3.9
	comp=Z,5.6nm,0.8s,baz=94,slow=13,SNR=4.6						
WRA				ScS	ScS	02 43 03.6	-1.3
	comp=Z,0.4nm,0.7s,baz=108,slow=5.4,SNR=2.7						
WRA	Warramunga Arr	43.62	262	P	P	02 34 17.4	-1.3
MLH	Mauna Loa	45.76	32	P	P	02 34 35.6	+0.5
HMH	Humu‘ula Sheep	45.81	32	P	P	02 34 36.3	+0.8
FORT	Forrest	48.47	246	P	P	02 34 54.5	-0.4
GUMO	Guam	48.80	311	P	P	02 34 57.7	+0.3
FAKI	Fak Fak	50.42	283	P	P	02 35 08.8	-0.5
FAKI				IAmb	IAmb	02 35 10.7	
	comp=Z,22nm,0.9s						
FAKI	Fak Fak	50.42	283	P	P	02 35 08.6	-0.7
FITZ	Fitzroy Crossi	52.04	262	IAmb	IAmb	02 35 21.8	
	comp=Z,13nm,0.5s						
SOEI	Soe	55.45	272	P	P	02 35 46.3	+1.4
TNTI	Ternate	56.38	285	P	P	02 35 50.3	-0.7
SANI	Sanana	56.50	281	P	P	02 35 51.5	-0.4
PSA00	Pilbara Seismi	56.73	257	P	P	02 35 52.5	-0.8
PSA00				IAmb	IAmb	02 35 54.2	
	comp=Z,24nm,0.8s						
MBWA	Marble Bar	56.91	257	P	P	02 35 53.9	-0.7
MBWA				IAmb	IAmb	02 35 55.0	
	comp=Z,21nm,0.8s						
VNDA	Vanda	58.14	185	P	P	02 36 03.6	+1.8
	comp=Z,1.0nm,0.4s,baz=15,slow=6.5,SNR=16						
VNDA	Vanda	58.14	185	P	P	02 36 03.6	+1.8
MORW	Morawa	58.99	248	P	P	02 36 07.7	-0.7
GIRL	Giralia	61.64	255	P	P	02 36 26.7	+0.9
PLAI	Plampang	61.83	271	P	P	02 36 26.8	-0.4
TOLI2	Tolitoli	62.52	282	P	P	02 36 31.3	-0.3
TOLI2				IAmb	IAmb	02 36 32.3	
	comp=Z,20nm,1.0s						
TOLI2	Tolitoli	62.52	282	P	P	02 36 31.9	+0.3
JHJ	Hachijo jima 2	65.95	323	P	P	02 36 52.5	-0.2
	comp=Z,59nm,0.4s,baz=249,slow=23,SNR=4.9						
UGM	Wanagama	68.93	269	P	P	02 37 10.8	-0.5
MJAR	Matsushiro Arr	69.34	324	P	P	02 37 12.4	-0.7
	comp=Z,8.3nm,0.6s,baz=145,slow=6.5,SNR=16						
MJAR	Matsushiro Arr	69.34	324	P	P	02 37 12.9	-0.2
MJAR				IAmb	IAmb	02 37 13.7	
	comp=Z,6.7nm,0.7s						
MAJO	Matsushiro	69.34	324	P	P	02 37 13.2	+0.1
MAJO				IAmb	IAmb	02 37 14.0	
	comp=Z,12nm,0.8s						
MAT	Matsushiro	69.34	324	P	P	02 37 12.5	-0.6
QSPA	South Pole Qui	69.89	180	P	P	02 37 16.9	+0.8
QSPA				IAmb	IAmb	02 37 18.0	
	comp=Z,10.0nm,0.8s						
JWT	Wachi	70.03	322	P	P	02 37 17.5	+0.3
JWT				IAmb	IAmb	02 37 18.6	
	comp=Z,19nm,0.9s						
JHS	Saijyo	71.19	320	P	P	02 37 24.3	+0.3
YULB	Yu-li	72.46	304	P	P	02 37 29.9	-1.7
YULB				IAmb	IAmb	02 37 35.8	
	comp=Z,15nm,1.1s						
SSLB	Suanglung	72.93	304	P	P	02 37 33.1	-1.2
PEA0B	Petropavlovsk-	75.70	346	P	P	02 37 49.3	+0.3
PETK	Petropavlovsk-	75.70	346	P	P	02 37 48.9	-0.1
	comp=Z,11nm,0.7s,baz=129,slow=5.9,SNR=10						
PETK	Petropavlovsk-	75.70	346	P	P	02 37 48.7	-0.3
KSRS	Korea Array	75.96	319	P	P	02 37 51.8	+1.0
	comp=Z,3.4nm,0.6s,baz=133,slow=6.1,SNR=9.6						
USA0B	Ussuriysk Arra	78.12	326	P	P	02 38 03.0	+0.8
USA0B				IAmb	IAmb	02 38 04.3	
	comp=Z,11nm,0.8s						
USRK	Ussuriysk Ar.	78.12	326	P	P	02 38 02.9	+0.6
	comp=Z,8.4nm,0.7s,baz=128,slow=2.9,SNR=15						
USRK	Ussuriysk Ar.	78.12	326	P	P	02 38 03.0	+0.8
HOPS	Hopland Field	78.80	41	P	P	02 38 07.5	+1.4
HOPS				IAmb	IAmb	02 38 25.1	
	comp=Z,10.0nm,1.1s						
KMRM	Mail Ridge	79.17	40	P	P	02 38 09.9	+1.9
KMRM				IAmb	IAmb	02 38 10.6	
	comp=Z,15nm,0.8s						
ISA	Isabella, Lake	79.85	46	IAmb	IAmb	02 38 13.5	
	comp=Z,7.5nm,1.1s						
CMB	Columbia Colle	79.93	43	IAmb	IAmb	02 38 14.3	
	comp=Z,5.8nm,0.9s						
WDC	Whiskeytown Da	80.09	40	P	P	02 38 13.9	+1.2
SLBS	Sierra La Lagu	80.25	60	P	P	02 38 15.2	+1.1
SLBS				IAmb	IAmb	02 38 16.9	
	comp=Z,12nm,0.9s						
YBH	Yreka Blue Hor	80.69	39	P	P	02 38 17.3	+1.4
YBH				IAmb	IAmb	02 38 17.9	
	comp=Z,5.7nm,0.8s						
QSM	Queen of Sheba	81.11	47	IAmb	IAmb	02 38 19.6	
	comp=Z,4.5nm,0.5s						
GWY	Greenwater Val	81.37	47	IAmb	IAmb	02 38 21.5	
	comp=Z,6.1nm,0.6s						
CN2	Changchun	81.41	323	*e*P	P	02 38 17.5	-1.9
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
NVAR	Mina Array Bea	81.51	44	P	P	02 38 21.3	+1.0
	comp=Z,2.9nm,0.6s,baz=224,slow=8.5,SNR=24						
PAHR	Pah Rah Range	81.53	42	P	P	02 38 21.4	+1.1
PAHR				IAmb	IAmb	02 38 21.8	
	comp=Z,4.5nm,0.7s						
NV11	Mina Array Sit	81.60	44	IAmb	IAmb	02 38 23.7	
	comp=Z,6.8nm,1.1s						
113A	Mohawk Valley,	81.63	51	IAmb	IAmb	02 38 24.1	
	comp=Z,6.8nm,1.0s						
HSIG		81.91	55	IAmb	IAmb	02 38 24.8	
	comp=Z,7.3nm,0.7s						
KVN	Kaiserville	81.98	43	P	P	02 38 23.5	+0.8
KVN				IAmb	IAmb	02 38 25.4	
	comp=Z,5.3nm,0.8s						
PMSA	Palmer Station	81.99	157	P	P	02 38 22.4	+0.4
PMSA				IAmb	IAmb	02 38 45.6	
	comp=Z,17nm,1.1s						
UBPT	Khong Chiam	82.05	289	IAmb	IAmb	02 38 24.9	
	comp=Z,9.4nm,0.9s						
MOD	Modoc Plateau	82.23	40	IAmb	IAmb	02 38 25.6	
	comp=Z,8.9nm,0.6s						
K05A	Summer Lake	82.36	39	P	P	02 38 25.9	+1.4
K05A				IAmb	IAmb	02 38 26.4	
	comp=Z,8.5nm,0.7s						
H04A	Detroit Lake	82.79	37	P	P	02 38 26.9	+0.6
H04A				IAmb	IAmb	02 38 27.9	
	comp=Z,5.1nm,0.7s						
WISH	Wishkah	83.43	34	P	P	02 38 31.0	+1.7
TUC	Tucson	83.60	52	P	P	02 38 32.3	+1.6
319A	Douglas	84.29	54	IAmb	IAmb	02 38 36.8	
	comp=Z,8.9nm,0.6s						
U15A	North Rim	84.51	48	IAmb	IAmb	02 38 38.1	
	comp=Z,9.9nm,0.7s						
ELK	Elko	84.75	43	P	P	02 38 36.8	+0.4
	baz=264,slow=4.4						
G08A	Pilot Rock	84.99	38	P	P	02 38 38.2	+1.0
PKCU	Pink Cliffs	85.01	47	IAmb	IAmb	02 38 43.1	
	comp=Z,6.4nm,0.9s						
X18A	Snowflake	85.27	51	IAmb	IAmb	02 38 41.4	
	comp=Z,4.6nm,0.7s						
MTPU	Mount Pierson	85.39	47	IAmb	IAmb	02 38 44.0	
	comp=Z,4.3nm,0.7s						
SEY	Seymchan	85.83	347	P	P	02 38 40.8	+0.2
	comp=Z,7.9nm,0.8s,baz=152,slow=5.4,SNR=7.5						
D08A	Wollman Farm,	86.03	36	P	P	02 38 42.8	+0.8
D08A				IAmb	IAmb	02 38 43.7	
	comp=Z,4.0nm,0.6s						
TRF	Thorofare Moun	86.35	13	IAmb	IAmb	02 38 43.3	
	comp=Z,8.4nm,0.8s						
F10A	Beach Ranch, E	86.38	38	IAmb	IAmb	02 38 44.9	
	comp=Z,9.7nm,0.8s						
Q16A	Castle Valley	86.51	46	P	P	02 38 46.1	+1.4
B08A	Colville Reser	86.56	35	IAmb	IAmb	02 38 45.4	
	comp=Z,4.1nm,0.7s						
PLID	Pearl Lake	86.61	39	P	P	02 38 45.5	+0.5
PLID				IAmb	IAmb	02 38 49.1	
	comp=Z,3.7nm,0.8s						
TMUT	Trail Mountain	86.67	46	IAmb	IAmb	02 38 52.7	
	comp=Z,4.0nm,0.6s						
SRU	San Rafael Swe	87.05	46	IAmb	IAmb	02 38 49.3	
	comp=Z,4.1nm,0.7s						
MNTX	Cornudas Mount	87.41	55	P	P	02 38 50.0	+1.2
TX32	Lajitas Array	87.76	58	IAmb	IAmb	02 38 53.5	
	comp=Z,6.2nm,0.9s						
TXAR	Lajitas Array	87.76	58	P	P	02 38 51.9	+1.3
	comp=Z,3.4nm,0.7s,baz=218,slow=6.1,SNR=59						
CCB	Clear Creek Bu	87.93	13	IAmb	IAmb	02 38 50.1	
	comp=Z,6.5nm,0.8s						
ANMO	Albuquerque	88.01	52	P	P	02 38 52.3	+0.5
	comp=Z,1.4nm,0.6s,baz=212,slow=4.7,SNR=8.0						
MDM	Murphy Dome	88.11	13	IAmb	IAmb	02 38 51.9	
	comp=Z,10.0nm,1.1s						
DLBC	Dease Lake	88.16	23	P	P	02 38 52.5	+0.8
	comp=Z,1.4nm,0.8s,baz=237,slow=5.7,SNR=1.8						
ILAR	Eielson Array	88.23	13	P	P	02 38 50.9	-0.9
	comp=Z,2.1nm,0.8s,baz=230,slow=5.2,SNR=16						
KMI	Kunming	88.28	297	⇑P	P	02 38 54.7	+1.4
KMI				pmax	pmax		
	comp=Z,10.0nm,1.3s						
SNAA	Sanae	88.36	179	P	P	02 38 51.8	-0.8
HHC	Hu-ho-hao-te	88.39	315	*e*P	P	02 38 56.5	+3.2
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,120nm,5.3s						
RDMU	Red Mountain	88.39	46	IAmb	IAmb	02 38 55.4	
	comp=Z,4.2nm,0.7s						
AHID	Auburn Hatcher	88.44	43	P	P	02 38 53.9	+0.3
AHID				IAmb	IAmb	02 38 56.8	
	comp=Z,4.6nm,0.9s						
VNA3	Neumayer Olymp	88.53	177	P	P	02 38 52.7	-0.6
DLMT	Dillon	88.81	40	P	P	02 38 56.2	+1.0
DLMT				IAmb	IAmb	02 38 57.5	
	comp=Z,3.1nm,0.7s						
VNA2	Neumayer--Watz	88.96	177	P	P	02 38 52.8	-2.5
	baz=193,slow=4.6						
CMAR	Chiang Mai Arr	89.03	290	P	P	02 38 58.4	+1.8
	comp=Z,5.5nm,0.8s,baz=124,slow=3.1,SNR=36						
LOHW	Long Hollow	89.17	43	IAmb	IAmb	02 38 59.1	
	comp=Z,3.0nm,0.8s						
VNA1	Neumayer--Stat	89.19	177	P	P	02 38 55.5	-0.8
YHL	Hebgen Lake	89.42	41	IAmb	IAmb	02 39 03.2	
	comp=Z,2.5nm,0.7s						
PDAR	Pinedale Array	89.44	44	P	P	02 38 58.5	+0.2
	comp=Z,1.5nm,0.6s,baz=190,slow=3.4,SNR=18						
PLCA	Paso Flores	90.25	134	P	P	02 39 03.3	+1.3
	comp=Z,2.1nm,0.6s,baz=258,slow=3.8,SNR=12						
PLCA	Paso Flores	90.25	134	P	P	02 39 03.3	+1.3
PLCA				IAmb	IAmb	02 39 04.6	
	comp=Z,2.7nm,0.8s						
SONM	Songino Array	94.83	319	P	P	02 39 24.3	+1.6
	comp=Z,0.6nm,0.9s,baz=108,slow=4.7,SNR=2.5						
ZALV	Zalesovo Beam	109.59	321	PKiKP	PKiKP	02 44 24.6	-1.8
	comp=Z,0.5nm,0.3s,baz=278,slow=1.0,SNR=3.6						
MKAR	Makanchi Array	110.22	314	PKiKP	PKiKP	02 44 26.6	-1.3
	comp=Z,0.6nm,0.6s,baz=228,slow=0.6,SNR=8.0						
MKAR	Makanchi Array	110.22	314		PKiKP	02 44 26.5	-1.4
BOSA	Boshof	126.09	207	PKP	PKPdf	02 44 59.1	-0.1
	comp=Z,2.1nm,0.8s,baz=158,slow=5.4,SNR=4.3						
BOSA	Boshof	126.09	207		PKPdf	02 44 58.6	-0.6
ARCES	ARCESS Array B	128.41	349	PKP	PKPdf	02 45 01.4	-0.7
	comp=Z,1.6nm,0.7s,baz=58,slow=1.9,SNR=10						
FINES	FINESS Array B	135.17	343	PKhKP	PKPpre	02 45 09.8	
	comp=Z,2.2nm,0.9s,baz=259,slow=1.9,SNR=4.4						
FINES				PKP	PKPdf	02 45 14.7	-0.2
	comp=Z,1.9nm,0.7s,baz=79,slow=2.3,SNR=7.4						
FINES				SKPbc	SKPbc	02 47 44.3	-0.8
	comp=Z,2.6nm,0.9s,baz=67,slow=6.4,SNR=4.3						
NOA	NORSAR Array B	138.53	352	PKP	PKPdf	02 45 21.5	+0.2
	comp=Z,1.6nm,1.0s,baz=14,slow=3.8,SNR=2.0						
AKASG	Malin Array Be	142.23	330	PKhKP	PKPpre	02 45 24.1	
	comp=Z,12nm,0.6s,baz=42,slow=4.5,SNR=57						
AKASG	Malin Array Be	142.23	330		PKPpre	02 45 24.2	
DEL	Delary	142.49	348	*i* P	PKPdf	02 45 24.6	-3.8
DEL				IAmb	IAmb	02 45 25.9	
	comp=Z,4.7nm,0.6s						
LODK	Lodwar	142.51	248		PKPdf	02 45 28.1	-1.8
BSD	Bornholm Skovb	143.54	346	*i* P	PKPbc	02 45 28.6	-0.9
BSD				IAmb	IAmb	02 45 29.5	
	comp=Z,32nm,0.9s						
GAZ	Gaziantep	144.18	306	PKPdf	PKPdf	02 45 31.1	-1.1
SORM	Soroca	144.38	328	⇓P	PKPdf	02 45 31.7	-0.3
MILM	Milestii Mici	144.95	326	⇓P	PKPdf	02 45 32.0	-1.0
VASR	Vaslui	145.66	326	⇓P	PKPbc	02 45 36.3	+0.2
BR131	Keskin Array S	145.85	312		PKPbc	02 45 36.6	-0.4
BRTR	Keskin Array B	145.85	312	PKPbc	PKPbc	02 45 36.6	-0.5
	comp=Z,5.0nm,0.8s,baz=131,slow=3.5,SNR=22						
BRTR	Keskin Array B	145.85	312	PKPbc	PKPbc	02 45 36.4	-0.7
TLCR		146.04	324	⇑P	PKPbc	02 45 37.3	+0.1
BURAR	Bucovina Array	146.27	330	⇓P	PKPbc	02 45 38.0	+0.1
TESR	Tescani	146.33	327	⇑P	PKPbc	02 45 37.3	-0.7
CFR	Carcaliu	146.42	324	⇓P	PKPbc	02 45 37.4	-0.8
TPGR	Topolog	146.46	323	⇑P	PKPbc	02 45 38.5	+0.1
HARR	Harsova	146.84	324	⇑P	PKPbc	02 45 38.7	-0.6
CRVS	Cervenica-Dubn	146.93	335	*e*PKP	PKPbc	02 45 39.8	+0.3
CRVS				*e*		02 45 43.6	
COVR	Voineasa-Covas	147.01	327	⇑P	PKPbc	02 45 39.2	-0.6
DOPR	Dopca	147.34	328	⇓P	PKPbc	02 45 40.8	+0.2
OSTC	Ostas	147.35	342	⇑*e*PKP	PKPbc	02 45 41.0	+0.5
CHVC	Chvalec	147.37	342	⇑*e*PKP	PKPbc	02 45 40.9	+0.3
LANS	Liptovska Anna	147.49	337	*e*PKP	PKiKP	02 45 41.9	-0.5
LANS				*e*		02 45 46.8	
DPC	Dobruska-Polom	147.50	342	⇑*e*PKP	PKPbc	02 45 41.1	+0.2
DPC				*e*PKPAB	PKPab	02 45 46.3	+0.8
CLL	Collm	147.50	346	⇓*i*PKPbc	PKPbc	02 45 40.6	-0.2
	comp=Z,18nm,0.8s						
CLL				*i* PKPab	PKPab	02 45 45.1	-0.3
	comp=Z,9.0nm,0.7s						
KRLC	Kraliky	147.60	341	⇑*e*PKP	PKPbc	02 45 41.2	0.0
MORC	Moravsky Berou	147.62	340	*e*PKP	PKPbc	02 45 41.2	-0.1
BRG	Berggiesshubel	147.68	344	*e*PKP	PKPbc	02 45 41.3	0.0
BRG				Amp		02 45 42.3	
	comp=Z,7.9nm,0.8s						
CJR	Cluj-Napoca	147.68	330	⇓P	PKPbc	02 45 41.5	0.0
PVCC	Panska Ves	147.83	344	⇑*e*PKP	PKPbc	02 45 42.3	+0.6
VOIR		147.88	327	⇓P	PKPbc	02 45 42.2	+0.1
DRGR		148.03	331	⇓P	PKPbc	02 45 41.9	-0.5
ARR	Arges	148.14	327	⇑P	PKPbc	02 45 43.2	+0.5

VYHS	**Vyhne**	148.26	337	*e*PKP	PKPbc	02 45 43.2	+0.3
VYHS				*e*		02 45 49.5	
PRU	**Pruhonice**	148.33	343	⇑*e*PKP	PKPbc	02 45 42.7	-0.3
VRAC	**Vranov**	148.33	340	*e*PKP	PKPbc	02 45 43.0	0.0
PSZ	**Piszkesteto**	148.34	335	⇓P	PKPbc	02 45 43.7	+0.5
PSZ	**Piszkesteto**	148.34	335	*e*P	PKiKP	02 45 44.5	+0.3
PSZ	**Piszkesteto**	148.34	335	PKPbc	PKPbc	02 45 42.6	-0.5
JAVC	**Velka Javorina**	148.37	339	*e*PKP	PKiKP	02 45 44.3	+0.1
KRUC	**Moravsky**	148.61	340	*e*PKP	PKPbc	02 45 43.5	-0.2
TREC	**Trest**	148.69	341	⇑*e*PKP	PKPbc	02 45 43.9	0.0
SMOL	**Smolenice**	148.75	339	*e*PKP	PKiKP	02 45 44.8	-0.2
SMOL				*e*		02 45 52.0	
SIRR	**Siria**	148.90	332	⇓P	PKPbc	02 45 44.0	-0.5
MODS	**Modra-Piesok**	148.92	339	*e*PKP	PKPbc	02 45 44.0	-0.5
MODS				*e*		02 45 52.1	
GZR	**Gura Zlata**	149.04	329	⇑P	PKPbc	02 45 44.1	-0.8
MEM	**Membach**	149.36	354	*d*PKPbc	PKPbc	02 45 45.6	+0.2
BTNL	**Ternell**	149.37	353	*d*PKPbc	PKPbc	02 45 45.1	-0.4
KHC	**Kasperske Hory**	149.37	344	⇑*e*PKP	PKPbc	02 45 45.5	-0.1
KHC				*e*PKPAB	PKPab	02 45 54.1	+0.8
BZS	**Buzias**	149.42	331	⇓P	PKPbc	02 45 45.2	-0.5
CKRC	**Cesky Krumlov**	149.46	342	⇑*e*PKP	PKPbc	02 45 45.4	-0.3
PLVB	**Pleven**	149.50	325	⇓P	PKPbc	02 45 46.0	0.0
HERR	**Herculane**	149.59	329	⇑P	PKPbc	02 45 45.9	-0.2
GEC2	**GERESS Array S**	149.60	343		PKPbc	02 45 44.7	-1.5
GERES	**GERESS Array B**	149.60	343	PKPbc	PKPbc	02 45 45.6	-0.6
	comp=Z,4.6nm,0.8s,baz=36,slow=2.5,SNR=24						
SNF	**Seneffe**	149.61	356	*d*PKPbc	PKPbc	02 45 46.0	0.0
SNF				*d*PKPab	PKPab	02 45 54.4	+0.3
SOP	**Sopron**	149.76	339	*e*P	PKPbc	02 45 46.7	+0.3
CONA	**Conrad Observa**	149.78	340	*e*P	PKPbc	02 45 46.7	+0.1
	comp=Z,7.8nm,0.9s						
CONA				*e*P	PKPab	02 45 56.1	+1.0
	comp=Z,6.7nm,1.0s						
BMRD	**Maredsous**	149.78	355	*d*PKPbc	PKPbc	02 45 46.4	0.0
BMRD				*d*PKPab	PKPab	02 45 54.5	-0.3
MPLH	**Magyarpolny**	149.85	337	*e*P	PKPbc	02 45 46.9	+0.2
MDVR	**Moldovita**	150.00	330	⇑P	PKPbc	02 45 46.9	-0.3
DOU	**Dourbes**	150.00	355	*d*PKPbc	PKPbc	02 45 47.1	+0.2
WLF	**Walferdange**	150.28	353	*d*PKPbc	PKPbc	02 45 47.8	+0.2
WLF				*d*PKPab	PKPab	02 45 56.8	-0.2
MOA	**Molln**	150.34	342	*e*P	PKPbc	02 45 47.3	-0.6
	comp=Z,0.1nm,0.3s						
MOA				*e*P	PKPab	02 45 57.6	+0.2
	comp=Z,2.7nm,0.8s						
ARSA	**Arzberg**	150.48	340	*e*P	PKiKP	02 45 48.6	0.0
	comp=Z,3.3nm,0.8s						
ARSA				*e*P	PKPab	02 45 57.9	-0.1
	comp=Z,5.4nm,0.9s						
KOVH	**Kovagotottos**	150.54	335	*e*P	PKPbc	02 45 47.8	-0.5
VTS	**Vitosha**	150.77	325	⇓P	PKPbc	02 45 48.7	-0.5
VTS	**Vitosha**	150.77	325	PKPbc	PKPbc	02 45 48.6	-0.6
SOKA	**Soboth**	151.15	340	*e*P	PKPbc	02 45 49.2	-0.6
	comp=Z,3.7nm,1.0s						
SOKA				*e*P	PKPab	02 46 01.1	+0.2
	comp=Z,5.6nm,1.1s						
KBA	**Koelnbreinsper**	151.31	342	*i* P	PKPab	02 46 00.8	-0.9
	comp=Z,3.1nm,0.6s						
OBKA	**Obir**	151.45	340	*e*P	PKPbc	02 45 49.6	-0.9
	comp=Z,2.5nm,1.1s						
OBKA				*e*P	PKPab	02 46 01.9	-0.3
	comp=Z,2.5nm,0.9s						
WATA	**Walderalm**	151.55	345	*e*P	PKPbc	02 45 50.2	-0.5
	comp=Z,2.4nm,0.6s						
WATA				*e*P	PKPab	02 46 02.8	+0.2
	comp=Z,8.2nm,1.1s						
WTTA	**Wattenberg**	151.60	345	*e*P	PKPbc	02 45 50.5	-0.4
WTTA				*e*P	PKPab	02 46 02.9	0.0
	comp=Z,4.2nm,0.6s						
RETA	**Reutte**	151.60	346	*i* P	PKPab	02 46 02.8	+0.1
	comp=Z,8.0nm,1.1s,SNR=4.2						
MYKA	**Terra Mystica**	151.63	341	*e*P	PKPbc	02 45 49.8	-1.1
	comp=Z,1.9nm,0.6s						
MYKA				*e*P	PKPab	02 46 02.6	-0.3
	comp=Z,3.1nm,0.8s						
MOTA	**Moosalm**	151.65	345	*e*P	PKPbc	02 45 50.0	-0.9
	comp=Z,6.2nm,1.0s						
MOTA				*e*P	PKPab	02 46 03.1	0.0
	comp=Z,2.5nm,0.9s						
SQTA	**Sankt Quirin**	151.74	345	*e*P	PKPbc	02 45 50.7	-0.5
	comp=Z,5.3nm,1.0s						
SQTA				*e*P	PKPab	02 46 03.7	+0.3
	comp=Z,7.3nm,1.3s						
ABTA	**Abfaltersbach**	151.84	343	*e*P	PKPbc	02 45 50.4	-0.9
	comp=Z,5.6nm,0.8s						
ABTA				*e*P	PKPab	02 46 03.5	-0.4
	comp=Z,2.3nm,0.6s						
LJU	**Ljubljana**	151.87	340	*i* PKPbc	PKPbc	02 45 50.6	-0.7
DAVA	**Damuels**	151.98	347	*e*P	PKPab	02 46 03.4	-1.1
	comp=Z,6.2nm,0.8s						
FETA	**Feichten**	152.04	346	*e*P	PKPbc	02 45 51.8	-0.1
	comp=Z,2.5nm,0.8s						
FETA				*e*P	PKPab	02 46 05.0	+0.2
	comp=Z,6.8nm,1.2s						
BOJS	**Bojanci**	152.10	338	*i* PKPbc	PKPbc	02 45 51.6	-0.2
TUE	**Stuetta**	152.87	347	PKPbc	PKPbc	02 45 53.2	-0.6
ESDC	**Sonseca Array**	160.12	11	PKPab	PKPab	02 46 39.3	-0.4
	comp=Z,1.1nm,0.9s,baz=338,slow=4.7,SNR=7.0						
ESDC	**Sonseca Array**	160.12	11		PKPab	02 46 39.5	-0.3
KEST	**Kesra**	162.81	336	PKPab	PKPab	02 46 51.8	0.0
	comp=Z,3.3nm,0.8s,baz=334,slow=6.2,SNR=4.4						
TORD	**Torodi Ar. Bea**	172.97	186	PKP	PKPdf	02 46 03.6	-1.7
	comp=Z,0.6nm,0.7s,baz=306,slow=1.4,SNR=5.0						
TORD				PKPab	PKPab	02 47 36.1	-0.8
	comp=Z,0.3nm,0.9s,baz=176,slow=4.2,SNR=5.2						

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*IDC **09** 02:38:47.6±1.5, 21°.64N×143°.05E, h298^{km}±14^{km}, mb3.6/17, mb1 3.8/20, mb1mx3.6/48, mbtmp4.3/20, Error ellipse: s-maj=17.8km s-min=8.1km az=90.0*

*NEIC **09** 02:38:48.9±1.3, 21°.61N±0°.08×143°.0E±0°.2, h305^{km}±7^{km}, mb4.0/50, Error ellipse: s-maj=22.2km s-min=11.3km az=76.0*

ISC 09 02:38:49.0±0.5**, 21°.64N**±0°.06×**143°.0E**±0°.1**, h311**^{km}**, n86,** σ**0^{s}.80**/90**, mb4.0**/40**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	**Chichijima**	5.49	352	P	Pn	02 40 12.3	-0.1
	29nm,0.3s,baz=325,slow=22,SNR=19						
JCJ				S	S	02 41 17.1	-2.8
	1.6nm,0.3s,baz=242,slow=18,SNR=1.8						
JCJ	**Chichijima**	5.49	352		Pn	02 40 11.7	-0.8
GUMO	**Guam**	8.20	167	P	Pn	02 40 45.2	+0.1
	2.9nm,0.3s,baz=264,slow=9.2,SNR=2.1						
GUMO	**Guam**	8.20	167	Pn	Pn	02 40 45.0	-0.1
JMN	**Monobe**	14.50	328		P	02 42 00.8	+0.8
JWT	**Wachi**	15.14	335	Pn	Pn	02 42 08.9	+0.3
JWT				IAmb	IAmb	02 42 09.9	
	comp=Z,7.1nm,0.6s						
MJAR	**Matsushiro Arr**	15.43	345	P	P	02 42 07.8	-2.4
	comp=Z,0.2nm,0.3s,baz=143,slow=12,SNR=2.0						
MJAR	**Matsushiro Arr**	15.43	345		P	02 42 10.6	+0.5
JHS	**Saijyo**	15.90	329	P	Pn	02 42 17.3	-0.1
JMM	**Marumori**	16.29	354	P	P	02 42 20.7	+1.3
JSD	**Sado**	16.85	347	P	P	02 42 25.8	+0.3
ERM	**Erimo**	20.32	0	P	P	02 43 03.5	+1.2
KSRS	**Korea Array**	20.47	324	P	P	02 43 03.9	+0.1
	comp=Z,2.9nm,0.6s,baz=146,slow=9.2,SNR=11						
USA0B	**Ussuriysk Arra**	24.28	340	P	P	02 43 37.4	-1.3
USA0B				IAmb	IAmb	02 43 50.9	
	comp=Z,5.5nm,1.1s						
USRK	**Ussuriysk Ar.**	24.28	340	P	P	02 43 37.6	-1.1
	comp=Z,2.2nm,0.6s,baz=158,slow=8.5,SNR=7.3						
USRK	**Ussuriysk Ar.**	24.28	340	P	P	02 43 37.8	-0.9
KLR	**Kul'dur**	28.96	345	P	P	02 44 20.5	+0.4
	comp=Z,11nm,0.6s,baz=158,slow=7.6,SNR=41						
SONM	**Songino Array**	39.28	321	P	P	02 45 49.2	+0.7
	comp=Z,0.5nm,0.4s,baz=136,slow=7.0,SNR=5.3						
SONM	**Songino Array**	39.28	321	P	P	02 45 48.8	+0.4
CTAO	**Charters Tower**	41.59	175	P	P	02 46 07.3	0.0
CTAO				IAmb	IAmb	02 46 08.0	
	comp=Z,7.2nm,1.0s						
WB0	**Warramunga Arr**	42.00	192	P	P	02 46 10.0	-0.7
WB0				IAmb	IAmb	02 46 10.8	
	comp=Z,5.0nm,0.5s						
WR0	**Warramunga Arr**	42.16	192	P	P	02 46 11.2	-0.7
WR0				IAmb	IAmb	02 46 12.1	
	comp=Z,4.4nm,0.5s						
WRAB	**Tennant Creek**	42.17	192	P	P	02 46 11.2	-0.8
WRAB				IAmb	IAmb	02 46 11.8	
	comp=Z,9.3nm,0.6s						
WB2	**Warramunga Arr**	42.18	192	P	P	02 46 11.7	-0.4
WB2				IAmb	IAmb	02 46 12.2	
	comp=Z,14nm,1.1s						
WRA	**Warramunga Arr**	42.19	192	P	P	02 46 11.5	-0.7
	comp=Z,6.9nm,0.6s,baz=16,slow=9.4,SNR=118						
WRA				PcP	PcP	02 47 59.5	-0.6
	comp=Z,0.5nm,0.7s,baz=4.7,slow=3.3,SNR=2.9						
WRA	**Warramunga Arr**	42.19	192	P	P	02 46 11.6	-0.6
FITZ	**Fitzroy Crossi**	43.00	205	P	P	02 46 18.1	-0.5
	comp=Z,3.8nm,0.6s,baz=32,slow=10.0,SNR=17						
AS31	**Alice Springs**	45.89	192	P	P	02 46 40.1	-1.2
ASAR	**Alice Springs**	45.90	192	P	P	02 46 40.4	-1.0
	comp=Z,0.9nm,0.4s,baz=16,slow=12,SNR=30						
ASAR				PcP	PcP	02 48 14.2	+1.4
	comp=Z,0.1nm,0.3s,baz=16,slow=4.8,SNR=1.8						
UNV	**Unalaska Valle**	49.75	37	P	P	02 47 10.8	+0.4
AKUT	**Akutan**	50.26	37	P	P	02 47 13.8	-0.3
STKA	**Stephens Creek**	53.23	182	P	P	02 47 35.6	-0.5
	comp=Z,2.7nm,0.5s,baz=4.7,slow=7.3,SNR=10						
STKA	**Stephens Creek**	53.23	182	P	P	02 47 35.4	-0.7
ZALV	**Zalesovo Beam**	54.16	322	P	P	02 47 42.3	-0.3
	comp=Z,0.8nm,0.4s,baz=124,slow=9.6,SNR=2.3						
MK31	**Makanchi Array**	54.62	313	P	P	02 47 47.0	+0.9
MKAR	**Makanchi Array**	54.62	313	P	P	02 47 46.6	+0.5
	comp=Z,0.5nm,0.6s,baz=84,slow=8.9,SNR=6.0						
KURK	**Kurchatov**	57.41	317	P	P	02 48 05.3	-0.2
KDAK	**Kodiak Island**	58.34	35	P	P	02 48 11.5	-0.4
	comp=Z,10nm,0.9s,baz=211,slow=5.9,SNR=4.3						
KDAK	**Kodiak Island**	58.34	35	P	P	02 48 12.0	+0.1
K20K	**Telida**	58.79	28	P	P	02 48 15.9	+1.0
J20K	**Nowinta River**	58.97	27	P	P	02 48 17.1	+1.1
J20K				IAmb	IAmb	02 48 17.8	
	comp=Z,2.7nm,0.5s						
IMAR	**Indian Mountai**	59.61	25	P	P	02 48 21.2	+0.8
SKT	**Skwentna**	59.63	30	P	P	02 48 20.4	-0.2
SKT				IAmb	IAmb	02 48 31.4	
	comp=Z,5.6nm,1.2s						
CAST	**Castle Rocks**	59.67	28	P	P	02 48 21.7	+0.8
CAST				IAmb	IAmb	02 48 22.4	
	comp=Z,4.7nm,0.8s						
H21K	**Melozitna Rive**	59.90	26	P	P	02 48 23.5	+1.1
H21K				IAmb	IAmb	02 48 24.0	
	comp=Z,3.8nm,0.7s						
BPAW	**Bear Paw Mtn.**	60.30	28	P	P	02 48 25.8	+0.7
BPAW				IAmb	IAmb	02 48 26.3	
	comp=Z,6.7nm,0.8s						
GHO	**Glory Hole Cre**	60.81	30	P	P	02 48 28.6	-0.1
GHO				IAmb	IAmb	02 48 36.5	
	comp=Z,12nm,1.1s						
PWL	**Port Wells**	60.96	31	P	P	02 48 29.5	-0.1
KNK	**Knik Glacier**	60.98	31	P	P	02 48 30.0	+0.3
SML	**Sawmill**	61.09	30	P	P	02 48 30.9	+0.3
I23K	**Minto, Yukon-K**	61.19	26	P	P	02 48 32.5	+1.5
MDM	**Murphy Dome**	61.63	27	P	P	02 48 34.8	+0.7
TOLK	**Toolik Lake Re**	61.84	23	P	P	02 48 36.5	+1.2
TOLK				IAmb	IAmb	02 48 37.0	
	comp=Z,4.5nm,0.7s						
H24K	**Noodor Dome**	61.92	26	P	P	02 48 36.9	+0.9
H24K				IAmb	IAmb	02 48 38.1	
	comp=Z,3.2nm,0.8s						
IL31		62.16	27	P	P	02 48 36.5	-0.9
ILAR	**Eielson Array**	62.16	27	P	P	02 48 36.5	-1.1
	comp=Z,1.8nm,0.6s,baz=257,slow=5.2,SNR=25						
KLU	**Klutina**	62.19	31	P	P	02 48 38.5	+0.6
KLU				IAmb	IAmb	02 48 46.0	
	comp=Z,2.6nm,0.9s						
PAX	**Paxson**	62.56	29	P	P	02 48 40.6	+0.3
PAX				IAmb	IAmb	02 49 07.5	
	comp=Z,3.1nm,1.2s						
BRVK	**Borovoye**	62.68	320	P	P	02 48 41.3	+0.2
BRVK				IAmb	IAmb	02 48 42.2	
	comp=Z,2.5nm,0.6s						
BMRM	**Bremner River**	62.78	32	P	P	02 48 42.5	+0.8
KK31	**Karatay Array**	62.97	308	P	P	02 48 44.0	+0.8
KKAR	**Karatay Array**	62.97	308	P	P	02 48 43.7	+0.5
DOT	**Dot Lake**	63.26	29	P	P	02 48 44.8	0.0
DOT				IAmb	IAmb	02 49 11.7	
	comp=Z,5.3nm,1.0s						
SCRK	**Sand Creek**	63.32	28	P	P	02 48 45.5	+0.2
SCRK				IAmb	IAmb	02 48 46.0	
	comp=Z,3.8nm,0.6s						
BMAR	**Burnt Mountain**	63.47	24	P	P	02 48 47.6	+1.5
BCAR	**Beaver Creek A**	64.24	29	P	P	02 48 51.8	+0.7
DAWY	**Dawson**	65.35	28	P	P	02 48 59.0	+0.8
DAWY				IAmb	IAmb	02 48 59.7	
	comp=Z,4.1nm,0.9s						
HYT	**Haines Junctio**	66.25	32	P	P	02 49 05.3	+1.2
HYT				IAmb	IAmb	02 49 08.5	
	comp=Z,2.1nm,0.8s						
INK	**Inuvik**	67.69	24	P	P	02 49 12.6	-0.2
	comp=Z,2.1nm,0.8s,baz=240,slow=3.5,SNR=6.3						
INK	**Inuvik**	67.69	24	P	P	02 49 12.8	+0.1
ABKAR	**Akbulak array**	69.48	316	P	P	02 49 24.5	+0.3
ABKAR				IAmb	IAmb	02 49 24.9	
	comp=Z,2.1nm,0.7s						
A36M	**Sachs Harbour**	70.15	19	P	P	02 49 28.1	+0.3
A36M				IAmb	IAmb	02 49 56.4	
	comp=Z,6.5nm,1.1s						
EUNU	**Eureka**	75.18	8	P	P	02 49 57.4	+0.2
YKA	**Yellowknife Ar**	76.58	28	P	P	02 50 04.8	-0.4
	comp=Z,2.3nm,0.6s,baz=299,slow=4.3,SNR=6.5						
ARCES	**ARCESS Array B**	78.93	341	P	P	02 50 18.4	+0.3
	comp=Z,2.9nm,0.5s,baz=76,slow=9.1,SNR=26						
ARCES	**ARCESS Array B**	78.93	341	P	P	02 50 18.3	+0.3
ARCES				IAmb	IAmb	02 50 44.2	
	comp=Z,1.9nm,0.8s						
NEW	**Newport**	80.43	42	P	P	02 50 27.1	+0.6
NEW				IAmb	IAmb	02 50 27.4	
	comp=Z,1.4nm,0.6s						
FIA1	**FINESS Array S**	83.17	334	P	P	02 50 39.9	-0.5
FINES	**FINESS Array B**	83.17	334	P	P	02 50 39.6	-0.7
	comp=Z,2.6nm,0.5s,baz=64,slow=4.8,SNR=34						
NVAR	**Mina Array Bea**	83.31	51	P	P	02 50 42.2	+0.4
	comp=Z,0.7nm,0.7s,baz=280,slow=6.1,SNR=6.2						
NVAR	**Mina Array Bea**	83.31	51	P	P	02 50 42.1	+0.3
LRM	**Limekiln Ridge**	84.33	43	P	P	02 50 47.2	+0.3
PLCA	**Paso Flores**	145.84	132	PKPbc	PKPbc	02 57 52.4	+0.2
	comp=Z,4.2nm,0.6s,baz=236,slow=3.5,SNR=19						
PLCA	**Paso Flores**	145.84	132		PKPbc	02 57 52.5	+0.3
LPAZ	**La Paz**	150.10	85	PKPbc	PKPbc	02 58 04.8	+0.2
	comp=Z,1.0nm,0.5s,baz=260,slow=1.7,SNR=8.8						
LPAZ	**La Paz**	150.10	85	PKPdf	PKPdf	02 57 58.0	-1.3
LPAZ				PKPbc	PKiKP	02 58 05.3	-0.1

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*IDC **09** 02:54:50.9±1.3, 8°.06S×125°.11E, h0^{km}, mb3.8/3, mb1 3.8/6, mb1mx3.6/28, mbtmp3.7/6, ML3.5/3, MS3.3/3, Ms1 3.3/3, ms1mx2.6/37, Error ellipse: s-maj=41.7km s-min=21.0km az=81.0*

ISC 09 02:54:55.6±1.3**, 8°.20S**±0°.09×**125°.4E**±0°.1**, h35**^{km}**, n9,** σ**2^{s}.01**/11**, mb3.8**/3**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	2.60	220	Pn	Pn	02 55 33.5	-1.7
	8.8nm,0.3s,baz=4.7,slow=8.6,SNR=2.1						
BATI				Sn	Sn	02 56 07.4	+1.7
	5.4nm,0.3s,baz=158,slow=7.9,SNR=4.6						
BATI				LR	LR	02 56 48.0	
	comp=Z,288nm,18.5s,baz=62,slow=46						
FITZ	**Fitzroy Crossi**	9.84	178	Pn	Pn	02 57 15.3	+0.7
	0.2nm,0.3s,baz=16,slow=7.2,SNR=5.9						
FITZ				Sn	Sn	02 59 02.8	-1.2
	0.5nm,0.3s,baz=72,slow=13,SNR=4.4						
WRA	**Warramunga Arr**	14.55	144	Pn	Pn	02 58 18.4	-0.7
	0.2nm,0.3s,baz=319,slow=13,SNR=24						
WRA				Sn	Sn	03 00 59.0	-0.3
	0.1nm,0.3s,baz=317,slow=24,SNR=6.2						
ASAR	**Alice Springs**	17.42	153	P	P	02 58 59.7	+2.7
	0.3nm,0.3s,baz=334,slow=13,SNR=13						
ASAR				S	Sn	03 02 05.8	-3.2
	0.0nm,0.3s,baz=324,slow=19,SNR=3.7						
LEM	**Lembang**	17.64	273	LR	LR	03 06 47.0	
	comp=Z,56nm,18.6s,baz=50,slow=41						
CTA	**Charters Tower**	23.42	122	LR	LR	03 08 51.4	
	comp=Z,167nm,19.9s,baz=60,slow=36						
STKA	**Stephens Creek**	27.98	150	P	P	03 00 45.5	+2.4
	0.7nm,0.6s,baz=329,slow=12,SNR=1.9						
MKAR	**Makanchi Array**	66.81	329	P	P	03 05 43.2	-0.5
	0.7nm,0.7s,baz=124,slow=6.0,SNR=6.5						
ZALV	**Zalesovo Beam**	70.71	336	P	P	03 06 06.8	-1.0
	0.4nm,0.4s,baz=134,slow=4.2,SNR=2.3						

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*NEIC **09** 03:01:52.7±1.8, 30°.26S±0°.06×71°.44W±0°.09, h40^{km}±13^{km}, mb4.1/2, ML4.0(GUC), Error ellipse: s-maj=13.1km s-min=5.4km az=123.0*

*GUC **09** 03:01:52.1±0.6, 30°.24S×71°.42W, h45^{km}±2^{km}, ML4.0*

ISC 09 03:01:52.3±0.9**, 30°.25S**±0°.03×**71°.45W**±0°.07**, h33**^{km}**, n37,** σ**1^{s}.12**/50**, 2C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	**La Serena**	0.38	29	⇓*i*P	Pn	03 02 02.2	+0.7
CO05				*e*S	Sn	03 02 08.9	+1.3
CO05				IAML		03 02 11.4	
	comp=E,19µm,0.5s						
CO05	**La Serena**	0.38	29	Pn	Pn	03 02 02.2	+0.7
CO05				Sn	Sn	03 02 09.1	+1.6
CO06	**Fray Jorge**	0.45	201	⇑*i*P	Pn	03 02 02.6	+0.1
CO06	**Fray Jorge**	0.45	201	Pn	Pn	03 02 02.6	+0.1
GO04	**Tololo Observa**	0.57	82	⇓*i*P	Pn	03 02 03.9	-0.4
GO04				*i* S	Sn	03 02 12.4	-0.2
GO04				IAML		03 02 13.6	
	comp=N,31µm,0.4s						
GO04	**Tololo Observa**	0.57	82	Pn	Pn	03 02 03.9	-0.4
GO04				Sn	Sn	03 02 12.2	-0.4
LCO	**Las Campanas**	1.40	28	*e*P	Pn	03 02 15.1	-0.6
LCO				*i* S	Sb	03 02 33.5	-2.1
LCO	**Las Campanas**	1.40	28	Pn	Pn	03 02 15.6	-0.1
AC04	**Llanos de Chal**	2.06	9	⇑*i*P	Pn	03 02 25.4	+0.7
AC04				*i* S	Sn	03 02 50.6	+1.3
AC04				IAML		03 02 58.5	
	comp=E,2µm,0.5s						
AC04	**Llanos de Chal**	2.06	9		Pn	03 02 25.3	+0.6
VA06	**Catapilco**	2.31	177	*e*P	Pn	03 02 28.2	+0.2
VA06				*e*S	Sn	03 02 56.4	+1.2
VA06				IAML		03 03 06.4	
	comp=N,777nm,0.6s						
VA03	**San Esteban**	2.62	163	*e*P	Pn	03 02 33.5	+1.1
VA03				*e*S	Sn	03 03 04.8	+1.6
VA03				IAML		03 03 24.8	
	comp=E,443nm,0.2s						
VA03	**San Esteban**	2.62	163	Pn	Pn	03 02 33.5	+1.1
ROCH	**El Roble**	2.74	172	*e*P	Pn	03 02 34.6	+0.5
ROCH				*e*S	Sn	03 03 08.5	+2.2
ROCH				IAML		03 03 29.3	
	comp=N,326nm,0.6s						
VA01	**Torpederas**	2.77	183	Pn	Pn	03 02 33.6	-0.8
GO03	**Copiap**	2.85	22	*e*P	Pn	03 02 36.3	+0.7
GO03				*i* S	Sn	03 03 10.1	+1.3
GO03				IAML		03 03 20.5	
	comp=N,808nm,0.2s						
GO03	**Copiap**	2.85	22	Pn	Pn	03 02 36.3	+0.7
PEL	**Peldehue**	2.96	168	*e*P	Pn	03 02 37.9	+0.9
PEL				*e*S	Sn	03 03 13.3	+2.0
PEL				IAML		03 03 24.3	
	comp=E,217nm,0.4s						
MT02	**Curacav**	3.01	175	*e*P	Pn	03 02 37.7	0.0
MT02				*e*S	Sn	03 03 12.4	-0.3
MT02	**Curacav**	3.01	175	Pn	Pn	03 02 37.5	-0.3
MT05	**Renca**	3.19	169	*e*P	Pn	03 02 41.6	+1.4
MT05				*e*S	Sn	03 03 18.7	+1.6
MT05				IAML		03 03 35.0	
	comp=E,472nm,0.3s						
MT05	**Renca**	3.19	169	Pn	Pn	03 02 40.9	+0.6
VA05	**Santo Domingo**	3.40	182	IAML		03 03 36.7	
	comp=N,312nm,0.4s						
VA05	**Santo Domingo**	3.40	182	Pn	Pn	03 02 41.9	-1.2
MT09	**Talagante**	3.54	174	*e*P	Pn	03 02 45.3	+0.2
MT09				*e*S	Sn	03 03 26.2	+0.4
MT09				IAML		03 03 43.8	
	comp=E,211nm,0.7s						
MT09	**Talagante**	3.54	174	Pn	Pn	03 02 45.3	+0.2
MT01	**Popeta**	3.61	177	Pn	Pn	03 02 45.7	-0.2
AC02	**Maricunga**	3.97	31	Pn	Pn	03 02 52.9	+1.5
BO01	**Tunca**	4.14	176	Pn	Pn	03 02 53.0	-0.3
BO02	**Sierra Bellavi**	4.56	173	Pn	Pn	03 02 59.2	+0.1
GO05	**Huala**	4.76	185	Pn	Pn	03 03 00.2	-1.6
VA04	**Juan Fernndez**	7.13	240	Pn	Pn	03 03 32.9	-1.4
LVC	**Limon Verde**	7.94	17	Pn	Pn	03 03 44.1	-1.7
LC01	**Cunco**	8.63	182	Pn	Pn	03 03 52.7	-2.2
LPAZ	**La Paz**	14.23	13	P	Pn	03 05 13.8	+1.7
ETMB	**Extrema**	20.91	15	P	P	03 06 31.9	-0.2
ETMB				IAmb	IAmb	03 06 35.7	
	comp=Z,6.7nm,1.1s						
BOAV	**Boa Vista**	34.10	20	P	P	03 08 32.9	-1.1
BOAV				IAmb	IAmb	03 08 33.2	
	comp=Z,2.5nm,0.8s						

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*IDC **09** 03:02:00.4±0.9, 2°.14S×125°.91E, h0^{km}, mb4.0/6, mb1 4.3/11, mb1mx4.0/35, mbtmp4.2/11, ML4.4/3, MS2.8/2, Ms1 2.9/2, ms1mx2.4/44, Error ellipse: s-maj=23.4km s-min=16.6km az=61.0*

*DJA **09** 03:02:04.3±0.3, 2°S±3°×12°6E±°, h18^{km}±3^{km}, M4.4/17, mb4.8/7, mB5.0/7, MLv4.3/17, Mw(mB)4.3/7*

*NEIC **09** 03:02:05.0±2.2, 2°.05S±0°.07×125°.85E±0°.07, h36^{km}±9^{km}, mb4.3/14, Error ellipse: s-maj=11.4km s-min=8.7km az=57.0*

ISC 09 03:02:04.0±0.9**, 2°.12S**±0°.06×**125°.84E**±0°.06**, h29**^{km}±6^{km}**, n47,** σ**1^{s}.32**/50**, mb4.2**/10**, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANI	**Sanana**	0.17	63	P	Pb	03 02 09.4	-0.3
SANI				S	Sb	03 02 13.6	0.0
LBMI	**Labuha**	2.22	48	P	Pn	03 02 39.7	+0.7
LBMI				S	Sn	03 03 05.6	+0.1
LUWI	**Luwuk**	3.25	289	P	Pn	03 02 53.2	+0.1
LUWI	**Luwuk**	3.25	289	Pn	Pn	03 02 52.3	-0.8
MSAI	**Masohi**	3.32	112	P	Pn	03 02 56.1	+2.1
GTOI	**Gorontalo**	3.94	314	P	Pn	03 03 05.6	+3.0
MRSI	**Marisa**	4.68	303	P	Pn	03 03 13.6	+0.8
SWI	**Sorong**	5.56	77	P	Pn	03 03 26.0	+1.1
SIJI	**Sorong**	5.57	77	Pn	Pn	03 03 24.8	-0.2
	5.2nm,0.3s,baz=57,slow=22,SNR=25						
SIJI				Sn	Sn	03 04 28.0	-0.1
	2.9nm,0.3s,baz=340,slow=23,SNR=7.8						
TOLI2	**Tolitoli**	5.99	302	Pn	Pn	03 03 30.9	+0.1
MPSI	**Mapaga**	6.42	292	P	Pn	03 03 37.9	+1.1
	0.1nm479nm16nm,0.4s						
FAKI	**Fak Fak**	6.45	97	P	Pn	03 03 37.9	+0.7
	0.1nm8.3nm,0.4s						
FAKI	**Fak Fak**	6.45	97	Pn	Pn	03 03 37.1	-0.1
BKSI	**Bulukumba**	6.53	241	P	Pn	03 03 41.0	+2.8
	0.9nm3µm140nm,0.7s						
BSSI	**Bau Bau, Buton**	6.66	233	P	Pn	03 03 41.8	+1.7
	0.4nm2µm86nm,0.7s						
KAPI	**Kappang**	6.72	245	Pn	Pn	03 03 42.9	+2.0
	15nm,0.3s,baz=147,slow=4.8,SNR=19						
KAPI				Sn	Sn	03 04 55.8	-0.7
	4.4nm,0.3s,baz=85,slow=18,SNR=1.9						
KAPI	**Kappang**	6.72	245	Pn	Pn	03 03 43.1	+2.3
SOEI	**Soe**	7.74	192	P	Pn	03 03 58.4	+3.4
	0.3nm94nm,0.8s						
SOEI	**Soe**	7.74	192	Pn	Pn	03 03 57.1	+2.1
EDFI	**Ende, Flores**	7.77	212	P	Pn	03 03 58.1	+2.7
	0.2nm751nm37nm,0.6s						
BATI	**Baumata**	8.31	195	Pn	Pn	03 04 03.7	+0.9
	baz=348,slow=19,SNR=1.2						
FITZ	**Fitzroy Crossi**	15.88	181	Pn	Pn	03 05 44.5	-1.1
	0.0nm,0.3s,baz=19,slow=20,SNR=1.9						
FITZ				LR	LR	03 13 28.7	
	comp=Z,17nm,20.3s,baz=160,slow=43						
FITZ	**Fitzroy Crossi**	15.88	181	P	P	03 05 48.9	-0.2
WB0	**Warramunga Arr**	19.43	155	P	P	03 06 27.6	-0.7
WB0				IAmb	IAmb	03 06 31.6	
	comp=Z,17nm,0.7s						
WRA	**Warramunga Arr**	19.56	155	P	P	03 06 29.3	-0.5
	comp=Z,1.1nm,0.3s,baz=332,slow=12,SNR=89						
WRA	**Warramunga Arr**	19.56	155	P	P	03 06 29.3	-0.5
WB2	**Warramunga Arr**	19.57	155	P	P	03 06 29.3	-0.5
WB2				IAmb	IAmb	03 06 33.2	
	comp=Z,21nm,0.7s						
WR0	**Warramunga Arr**	19.66	155	P	P	03 06 29.0	-1.9
WR0				IAmb	IAmb	03 06 34.9	
	comp=Z,19nm,1.1s						
COEN	**Coen**	20.78	125	P	P	03 06 42.9	-0.2
COEN				IAmb	IAmb	03 06 46.3	
	comp=Z,9.4nm,0.8s						
PMG	**Port Moresby**	22.40	110	P	P	03 07 01.0	+0.5
	comp=Z,6.6nm,0.3s,baz=306,slow=6.6,SNR=7.9						
PMG	**Port Moresby**	22.40	110	P	P	03 07 01.3	+0.9
AS31	**Alice Springs**	22.79	161	P	P	03 07 03.1	-1.5
AS31				IAmb	IAmb	03 07 05.1	
	comp=Z,2.1nm,0.8s						
ASAR	**Alice Springs**	22.80	161	P	P	03 07 04.2	-0.5
	comp=Z,7.8nm,0.8s,baz=344,slow=12,SNR=80						

ASAR	Alice Springs	22.80	161	P	P	03 07 03.1	-1.5
TPUB	Ta-pu	25.78	349	P	P	03 07 32.8	+0.1
BBOO	Buckleboo	32.00	164	P	P	03 08 27.2	-0.8
BBOO				IAmb	IAmb	03 08 28.6	
	comp=Z,8.4nm,1.3s						
STKA	Stephens Creek	33.11	155	P	P	03 08 37.2	-0.6
	comp=Z,6.5nm,1.2s,baz=325,slow=6.7,SNR=5.5						
STKA	Stephens Creek	33.11	155	P	P	03 08 37.4	-0.4
CMAR	Chiang Mai Arr	33.45	309	LR	LR	03 22 59.7	
	comp=Z,30nm,20.5s,baz=190,slow=38						
SONM	Songino Array	52.58	344	P	P	03 11 16.1	+0.8
	comp=Z,0.4nm,0.6s,baz=144,slow=6.5,SNR=1.8						
MK31	Makanchi Array	61.91	328	P	P	03 12 21.8	+0.7
MK31				IAmb	IAmb	03 12 30.1	
	comp=Z,2.2nm,1.1s						
MKAR	Makanchi Array	61.91	328	P	P	03 12 22.0	+1.0
	comp=Z,1.2nm,0.7s,baz=129,slow=8.7,SNR=13						
MKAR	Makanchi Array	61.91	328	P	P	03 12 21.2	+0.2
ZALV	Zalesovo Beam	65.42	335	P	P	03 12 45.1	+1.1
	comp=Z,0.3nm,0.3s,baz=148,slow=8.5,SNR=2.1						
ZALV	Zalesovo Beam	65.42	335	P	P	03 12 43.9	-0.1
KURK	Kurchatov	66.23	329	P	P	03 12 49.4	+0.1
KK31	Karatay Array	66.97	319	P	P	03 12 53.2	-1.1
KK31				IAmb	IAmb	03 13 04.1	
	comp=Z,1.7nm,0.9s						

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*IDC **09** 03:13:54.0±0.8, 8°.75N×71°.50W, h0^{km}, mb3.5/7, mb1 3.8/10, mb1mx3.7/28, mbtmp3.7/10, ML3.3/3, MS3.0/2, Ms1 3.1/2, ms1mx2.6/30, Error ellipse: s-maj=18.5km s-min=9.0km az=166.0*

*FUNV **09** 03:13:55.9, 8°.50N×71°.40W, h2^{km}, MW3.4*

ISC 09 03:13:54.5±1.2, **8°.59N**±0°.03×**71°.44W**±0°.02, **h5**^{km}±8^{km}, **n66**, σ1^{s}.**68**/98, **mb3.5**/7, **4D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.65	117	*e*P	Pg	03 14 06.2	-0.9
SOCV				*e*S	Sg	03 14 15.0	-0.5
SOCV	Socops	0.65	117	⇓*i*P	Pg	03 14 06.4	-0.7
SOCV				*e*S	Sg	03 14 15.2	-0.3
SDV	Santo Domingo	0.85	69	Pg	Pg	03 14 11.5	+0.6
	41nm,0.3s,baz=288,slow=1.1,SNR=237						
SDV				Lg	Lg	03 14 22.8	
	133nm,0.3s,baz=250,slow=14,SNR=22						
SDV				LR	LR	03 14 45.7	
	comp=Z,209nm,20.6s,baz=284,slow=59						
SDV	Santo Domingo	0.85	69	*e*P	Pg	03 14 11.5	+0.6
SDV				*e*S	Sg	03 14 22.8	+0.8
PAMC	Pamplona, Colo	1.76	225	*e*P	Pn	03 14 27.0	+0.9
PAMC				*e*S	Sn	03 14 48.3	-0.8
MCQV	Machiques	1.81	323	⇓*e*P	Pb	03 14 28.3	+0.1
MCQV				*e*S	Sg	03 14 53.1	+0.3
OCAC	Ocana	1.89	260	*e*P	Pn	03 14 28.0	+0.3
OCAC				*e*S	Sn	03 14 53.5	+1.6
TAMC	Tame, Arauca	2.17	189	*e*P	Pn	03 14 32.4	+1.1
TAMC				*e*S	Sn	03 15 01.4	+2.8
LL1C	La Loma 1 Cana	2.29	295	*e*P	Pb	03 14 36.8	+0.4
LL1C				*e*S	Sg	03 15 07.3	-1.0
ELOV	Elorza	2.50	129	*e*P	Pn	03 14 37.8	+2.0
ELOV				*e*S	Sb	03 15 13.6	+2.6
ELOV	Elorza	2.50	129	*e*P	Pn	03 14 36.3	+0.4
ELOV				*e*S	Sn	03 15 04.8	-2.0
SIQV	Siquisique	2.61	38	*e*P	Pn	03 14 39.2	+1.9
SIQV				*e*S	Sn	03 15 11.0	+1.6
SMLC	San Martn de	2.61	275	*e*P	Pn	03 14 37.2	-0.1
SMLC				*e*S	Sb	03 15 14.3	+0.1
BARC	Barichara	2.63	221	*e*P	Pn	03 14 39.0	+1.2
BARC				*e*S	Sb	03 15 14.7	-0.3
BRRC	Barranca, Sant	2.69	237	⇓*e*P	Pn	03 14 39.6	+1.2
BRRC				*e*S	Sb	03 15 17.8	+1.3
ARGC	Ariguani, Magd	3.04	295	*e*P	Pn	03 14 43.5	+0.2
RUSC	La Rusia	3.13	211	*e*P	Pn	03 14 45.7	+0.6
RUSC				*e*S	Sn	03 15 24.3	+1.2
URIC	Uribia, Colomb	3.14	350	*e*P	Pn	03 14 47.2	+2.5
URIC				*e*S	Sn	03 15 21.1	-1.5
MAPV	Macapo	3.19	67	*e*P	Pn	03 14 47.1	+1.7
BAUV	El Baul	3.38	84	*e*P	Pn	03 14 49.0	+1.0
BAUV				*e*S	Sn	03 15 26.6	-1.8
ZARC	Zaragoza, Cauc	3.56	252	*e*P	Pn	03 14 50.7	+0.3
ZARC				*e*S	Sn	03 15 35.8	+3.0
JACV	Jacura	3.58	46	*e*P	Pn	03 14 52.4	+1.7
JACV				*e*S	Sn	03 15 32.8	-0.7
MONV	Montecano	3.65	23	*e*P	Pn	03 14 53.3	+1.7
SMRC	Santa Marta, M	3.75	313	*e*P	Pn	03 14 53.4	+0.2
SMRC				*e*S	Sn	03 15 34.6	-3.1
SJCC	San Jacinto, C	3.91	290	*e*P	Pn	03 14 57.5	+2.1
SJCC				*e*S	Sn	03 15 44.1	+2.3
SPBC	San Pablo de B	3.91	222	*e*P	Pn	03 14 56.4	+1.0
SPBC				*e*S	Sn	03 15 43.4	+1.6
TURV	Turiamo	4.00	62	*e*P	Pn	03 14 57.7	+1.1
BENV	Beln	4.03	70	*e*P	Pn	03 14 58.1	+1.1
UREC	San Jos de Ur	4.14	259	*i* P	Pn	03 14 59.2	+0.8
UREC				*e*P	Pn	03 14 59.2	+0.8
MOTC	Monteria, Cord	4.18	273	⇓*e*P	Pn	03 15 00.4	+1.3
MOTC				*e*S	Sn	03 15 51.2	+2.9
PTGC	Puerto Gaitan,	4.41	189	*e*P	Pn	03 15 02.8	+0.5
NORC	Norcasia	4.54	229	*e*P	Pn	03 15 03.7	-0.3
NORC				*e*S	Sn	03 15 58.3	+1.1
NORC				*i*		03 16 14.4	
	comp=Z,29nm,0.5s						
CHIC	Chingaza	4.54	210	*e*P	Pn	03 15 04.9	+0.6
CHIC				*e*S	Sn	03 15 56.1	-1.7
TACV	Tcata	4.62	70	*e*P	Pn	03 15 05.0	-0.1
ROSC	El Rosal	4.69	218	Pn	Pn	03 15 09.2	+2.8
	comp=Z,5.5nm,0.3s,baz=241,slow=3.4,SNR=12						
ROSC				Sn	Sn	03 16 06.3	+4.9
	comp=Z,10nm,0.3s,baz=170,slow=14,SNR=5.2						
ROSC				Lg	Lg	03 16 25.7	
	comp=Z,5.0nm,0.3s,baz=278,slow=23,SNR=6.2						
ROSC	El Rosal	4.69	218	*e*P	Pn	03 15 08.8	+2.4
HELC	Santa Helena	4.70	240	*e*P	Pn	03 15 07.3	+0.8
HELC				*e*S	Sb	03 16 14.7	-0.1
LCBC	Los crdobas,	4.88	274	*e*P	Pn	03 15 09.2	+0.6
CACV	CAICARA DEL OR	4.96	101	*e*P	Pn	03 15 16.3	+6.6
DBBC	Dabeiba	4.98	252	*e*P	Pn	03 15 11.3	+1.2
VILC	Villavicencio,	4.98	207	*e*P	Pn	03 15 09.6	-0.5
VILC				*e*S	Sn	03 16 09.8	+1.7
MERV	Las Mercedes	5.12	82	*e*P	Pn	03 15 12.2	+0.2
GUY2C	Guyana, Caldas	5.13	230	*e*P	Pn	03 15 13.1	+0.5
CBOC	Ciudad Bolivar	5.28	239	*e*P	Pn	03 15 16.4	+2.1
BIRV	Birongo	5.43	69	*e*P	Pn	03 15 16.4	+0.1
ANIL	Santa Ana	5.66	224	*e*P	Pn	03 15 17.9	-1.7
ANIL				*e*S	Sn	03 16 28.4	+3.1
ORTC	Ortega, Tolima	5.99	219	*e*P	Pn	03 15 23.9	0.0
ORTC				*e*S	Sn	03 16 33.4	+0.4
PLMC	San Jos del P	6.04	233	*e*P	Pn	03 15 26.5	+1.8
GUVC	San Jose del G	6.12	191	*e*P	Pn	03 15 25.6	0.0
YOTC	Yotoco, Valle	6.68	227	*e*P	Pn	03 15 35.1	+1.6
PRGV	PARIAGUAN	6.72	88	*e*P	Pn	03 15 33.1	-0.8
MACC	Macarena, Meta	6.83	201	*e*P	Pn	03 15 33.1	-2.4
MACC				*e*S	Sn	03 16 51.8	-2.0
PCRV	Puerto La Cruz	6.90	76	Pn	Pn	03 15 36.9	+0.5
	comp=Z,1.4nm,0.3s,baz=186,slow=6.3,SNR=12						
PCRV				Sn	Sn	03 16 57.4	+2.0
	comp=Z,1.8nm,0.3s,baz=126,slow=1.6,SNR=3.8						
PCRV	Puerto La Cruz	6.90	76	*e*P	Pn	03 15 36.0	-0.4
GARC	Garzon, Huila	7.53	213	*e*P	Pn	03 15 45.0	-0.3
GARC				*e*S	Sn	03 17 04.9	-6.3
SJG	San Juan	10.78	28	Pn	Pn	03 16 27.6	-1.9
	comp=Z,1.1nm,0.3s,baz=211,slow=18,SNR=2.1						
ATAH	Atahualpa	17.09	204	LR	LR	03 24 58.3	
	comp=Z,53nm,19.1s,baz=38,slow=39						
CMIG	Matias Romero	24.35	293	P	P	03 19 14.0	+0.3
	comp=Z,2.1nm,1.0s,baz=144,slow=8.7,SNR=1.2						
LPAZ	La Paz	24.93	172	P	P	03 19 22.0	+2.4
	comp=Z,1.9nm,0.9s,baz=333,slow=9.3,SNR=4.7						
LPAZ				LR	LR	03 29 48.2	
	comp=Z,38nm,19.7s,baz=52,slow=38						
SIV	San Ignacio	26.49	157	P	P	03 19 35.9	+2.9
	comp=Z,1.4nm,1.1s,baz=335,slow=14,SNR=3.1						
TXAR	Lajitas Array	36.60	309	P	P	03 21 00.7	-1.3
	comp=Z,0.3nm,0.9s,baz=133,slow=6.6,SNR=2.2						
PDAR	Pinedale Array	47.68	322	P	P	03 22 32.9	+0.5
	comp=Z,0.2nm,0.4s,baz=118,slow=9.5,SNR=3.9						
ESDC	Sonseca Array	67.25	51	P	P	03 24 51.3	+1.0
	comp=Z,0.2nm,0.8s,baz=246,slow=9.7,SNR=1.7						
TORD	Torodi Ar. Bea	71.76	79	P	P	03 25 17.9	-0.6
	comp=Z,0.2nm,0.8s,baz=276,slow=5.5,SNR=1.6						
ASAR	Alice Springs	151.48	235	PKPbc	PKPbc	03 33 49.1	-1.6
	comp=Z,0.3nm,0.5s,baz=136,slow=2.4,SNR=5.0						
WRA	Warramunga Arr	152.63	243	PKPbc	PKPbc	03 33 51.1	-2.1
	comp=Z,0.8nm,0.8s,baz=104,slow=2.8,SNR=6.1						

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*IDC **09** 03:35:57.0±1.1, 53°.56N×159°.90W, h0^{km}, mb3.9/10, mb1 4.1/14, mb1mx3.8/61, mbtmp3.9/14, ML3.5/4, MS3.1/4, Ms1 3.1/4, ms1mx2.6/69, Error ellipse: s-maj=27.0km s-min=19.1km az=178.0*

*NEIC **09** 03:35:59.9±1.9, 53°.72N±0°.06×159°.72W±0°.09, h12^{km}±6^{km}, mb4.2/10, ML3.6/10, ML3.6/58(AEIC), Error ellipse: s-maj=10.3km s-min=6.5km az=147.0*

*AEIC **09** 03:36:01.1±2.2, 53°.47N±0°.07×159°.5W±0°.1, h8^{km}±5^{km}, Error ellipse: s-maj=10.9km s-min=8.6km az=155.0*

ISC 09 03:35:58.4±1.9, **53°.67N**±0°.06×**159°.77W**±0°.04, **h7**^{km}±12^{km}, **n115**, σ1^{s}.**21**/116, **mb4.1**/14, **MS3.0**/4, **South of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNBA	Chernabura Isl	1.16	5		Pg	03 36 20.7	+0.1
CNBA					Sg	03 36 37.1	+1.4
SDPT	Sand Point	1.74	347	Pn	Pn	03 36 29.1	+0.2
SDPT				Sn	Sn	03 36 48.2	-3.1
SDPT				IAML		03 37 05.2	
	comp=E,238nm,1.0s						
SDPT				IAML		03 37 09.5	
	comp=N,187nm,0.7s						
DT1	Dutton Round H	2.06	316		Pn	03 36 34.2	+0.8
HAG	Hague Volcano	2.07	324		Pb	03 36 35.0	-1.2
PS4A	Pavlof South-4	2.08	325		Pb	03 36 35.1	-1.3
PVV	Pavlof Volcano	2.08	326		Pn	03 36 34.9	+1.3
PVV					Sn	03 37 01.4	+1.6
FALS	False Pass	2.45	301		Sn	03 37 08.4	-0.5
FALS	False Pass	2.45	301	Pn	Pn	03 36 38.8	+0.1
BRPK	Brown Peak	2.54	294		Pb	03 36 41.0	-3.2
ISLZ	Isanotski Laza	2.55	296		Pn	03 36 41.0	+0.8
ISLZ					Sn	03 37 11.0	-0.4
VNHG	Veniaminof 1	2.58	7		Pn	03 36 41.6	+0.9
ISNN	Isanotski Nort	2.63	298		Pb	03 36 42.6	-3.2
SSLS	Shishaldin Sou	2.70	295		Pn	03 36 43.4	+1.2
SSLS					Sn	03 37 15.2	0.0
SSLN	Shishaldin Nor	2.73	297		Pn	03 36 43.6	+0.9
CHGN	Chignik	2.75	16	Pn	Pn	03 36 42.9	0.0
SSBA	Shishaldin	2.79	295		Pn	03 36 44.6	+1.2
SSBA					Sn	03 37 17.9	+0.5
WESE	West Dahl East	2.95	288		Pn	03 36 46.6	+0.9
WESN	West Dahl Nort	2.98	290		Pn	03 36 46.5	+0.5
CHIR	Chirikof Islan	3.23	46	Pn	Pn	03 36 47.9	-1.6
CHIR				IAML		03 38 02.3	
	comp=E,197nm,1.8s						
CHIR				IAML		03 38 11.3	
	comp=N,340nm,2.0s						
ANPK	Aniakchak Peak	3.32	16		Pn	03 36 50.9	+0.1
AKSA	Akutan Strait	3.54	280		Pn	03 36 54.0	+0.3
AKSA					Sn	03 37 34.7	-1.0
AKUT	Akutan	3.58	280	Pn	Pn	03 36 55.9	+1.6
UNV	Unalaska Valle	4.00	275		Pn	03 37 00.9	+0.9
MTBL	Makushin Table	4.11	277		Pn	03 37 02.0	+0.4
MSW	Makushin Switc	4.17	276		Pn	03 37 02.8	+0.4
MSW					Sn	03 37 49.3	-2.0
MAPS	Pakushin South	4.26	275		Pn	03 37 04.2	+0.5
MAPS					Sn	03 37 51.6	-2.0
SII	Sitkinak Islan	4.32	46		Pn	03 37 03.7	-0.8
OHAK	Old Harbor	5.13	43	Pn	Pn	03 37 14.8	-0.7
OHAK				IAML		03 38 46.2	
	comp=N,42nm,2.3s						
OHAK				IAML		03 40 05.8	
	comp=E,63nm,2.6s						
NIKH	Nikolski High	5.49	266		Pn	03 37 20.1	-0.4
KDAK	Kodiak Island	5.79	42	Pn	Pn	03 37 23.6	-0.9
	comp=E,1.4nm,0.3s,baz=225,slow=8.1,SNR=19						
KDAK				Sn	Sn	03 38 26.0	-5.1
	comp=E,0.7nm,0.3s,baz=142,slow=22,SNR=1.3						
KDAK	Kodiak Island	5.79	42		Pn	03 37 23.4	-1.2
Q19K	Cape Douglas,	6.28	30	Pn	Pn	03 37 32.3	+1.0
O18K	Koktuh Hills	6.69	20	Pn	Pn	03 37 36.8	-0.1
AUQ	Augustine Qik'	6.70	29		Pn	03 37 36.6	-0.4
N19K	Bonanza Creek	7.71	20	Pn	Pn	03 37 51.6	+0.5
SEW	Seward	8.57	37	Pn	Pn	03 38 02.9	+0.3
SPBG	Spurr Blockage	8.59	25		Pn	03 38 01.6	-1.4
M19K	Big River Lodg	8.74	17	Pn	Pn	03 38 06.7	+1.7
L19K	White Mountain	8.93	15	Pn	Pn	03 38 08.8	+1.1
SUA	Susitna One	9.19	28	Pn	Pn	03 38 12.3	+1.1
PWL	Port Wells	9.49	36	Pn	Pn	03 38 15.3	-0.1
TTA	Tatalina	9.50	10	Pn	Pn	03 38 16.2	+0.7
PMR	Palmer	9.77	31	Pn	Pn	03 38 19.9	+0.8
KNK	Knik Glacier	9.85	33	Pn	Pn	03 38 18.9	-1.3
HIN	Hinchinbrook I	9.87	42	Pn	Pn	03 38 20.5	-0.1
GHO	Glory Hole Cre	9.97	31	Pn	Pn	03 38 21.9	0.0
FID	Port Fidalgo	10.10	40		Pn	03 38 21.7	-2.0
K20K	Telida	10.16	15	Pn	Pn	03 38 25.4	+0.9
SML	Sawmill	10.18	32	Pn	Pn	03 38 25.1	+0.3
EYAK	Cordova Ski Ar	10.26	42		Pn	03 38 24.9	-1.0
KAIM	Kayak Island	10.48	47	Pn	Pn	03 38 29.6	+0.7
SCM	Sheep Creek Mo	10.53	34		Pn	03 38 29.3	-0.3
KLU	Klutina	10.78	38		Pn	03 38 32.8	-0.2
SUCK	Suckling Hills	10.83	47	Pn	Pn	03 38 34.1	+0.4
BMRM	Bremner River	10.97	42	Pn	Pn	03 38 34.9	-0.6
M24K	Tolsona, Glenn	11.11	35	Pn	Pn	03 38 38.2	+0.7
N25K	Chitina, Valde	11.35	39	Pn	Pn	03 38 41.0	+0.2
DHY	Denali Highway	11.43	30	Pn	Pn	03 38 42.0	-0.1
GLB	Gilahina Butte	11.55	41	Pn	Pn	03 38 43.0	-0.6
VRDI	Verde Repeater	11.58	43	Pn	Pn	03 38 44.1	+0.1
TGL	Tana Glacier	11.58	45	Pn	Pn	03 38 44.5	+0.5
BAGL	Bagley Icefiel	11.77	47		Pn	03 38 45.6	-0.9
KIAG	Kiagna River	11.87	45		Pn	03 38 46.4	-1.6
YAH	Yahtse	11.87	48	Pn	Pn	03 38 48.6	+0.6
PAX	Paxson	11.95	33	Pn	Pn	03 38 49.2	+0.3
GRNC	Granite Creek	12.03	47	Pn	Pn	03 38 50.8	+0.5
TABL	Table Mountain	12.17	49	Pn	Pn	03 38 51.7	-0.4
BARN	Barnard Glacie	12.23	46	Pn	Pn	03 38 53.8	+0.8
CTGM	Chitina Glacie	12.32	46	Pn	Pn	03 38 53.9	-0.3
LOGN	Logan Glacier	12.40	47	Pn	Pn	03 38 55.6	+0.3
PCA	Pinnacle	12.43	51	Pn	Pn	03 38 56.5	+0.9
M26K	Nabesna, AK	12.43	39	Pn	Pn	03 38 56.2	+0.6
BCPM	Bancas Point	12.67	52	Pn	Pn	03 38 59.4	+0.6
IMAR	Indian Mountai	12.71	11	Pn	Pn	03 39 00.1	+0.8
ILAR	Eielson Array	12.91	25	Pn	Pn	03 38 59.4	-2.6
	comp=E,0.2nm,0.3s,baz=218,slow=13,SNR=13						
ILAR	Eielson Array	12.91	25	Pn	Pn	03 38 58.6	-3.4
SCRK	Sand Creek	13.13	32	Pn	Pn	03 39 04.6	-0.6
BCAR	Beaver Creek A	13.28	38	Pn	Pn	03 39 06.7	-0.4
DAWY	Dawson	14.74	37	Pn	Pn	03 39 28.5	+1.4
WHY	Whitehorse	15.14	53	Pn	Pn	03 39 32.3	-0.2
WHY				IAmb	IAmb	03 39 45.5	
	comp=Z,7.6nm,1.2s						
BMAR	Burnt Mountain	15.62	22	Pn	Pn	03 39 37.5	-1.2
TOLK	Toolik Lake Re	15.77	14	P	P	03 39 46.1	+1.5
DLBC	Dease Lake	17.20	62	P	Pn	03 39 58.4	-0.5
	comp=Z,0.0nm,0.3s,baz=235,slow=16,SNR=1.5						
GRNB	Grenville Isla	17.57	77	P	Pn	03 40 04.4	+0.8
INK	Inuvik	19.18	30	P	P	03 40 23.3	+1.2
	comp=Z,0.7nm,0.3s,baz=239,slow=11,SNR=15						
INK	Inuvik	19.18	30	P	P	03 40 23.1	+1.0
INK				IAmb	IAmb	03 40 35.9	
	comp=Z,15nm,1.1s						
A36M	Sachs Harbour	23.61	26	P	P	03 41 11.0	+1.6
A36M				IAmb	IAmb	03 41 21.1	
	comp=Z,11nm,0.9s						
PETK	Petropavlovsk-	25.10	286	P	P	03 41 24.0	+0.7
	comp=Z,1.8nm,0.6s,baz=88,slow=11,SNR=1.8						
PETK	Petropavlovsk-	25.10	286	P	P	03 41 23.4	0.0
SEY	Seymchan	26.19	310	LR	LR	03 53 50.7	
	comp=Z,35nm,18.8s,baz=80,slow=41						
NVAR	Mina Array Bea	32.04	101	P	P	03 42 25.4	-0.2
	comp=Z,0.3nm,0.6s,baz=285,slow=9.4,SNR=3.1						
HUH	Hualalai	34.05	173	P	P	03 42 44.8	+1.4
HMH	Humu‘ula Sheep	34.16	173	P	P	03 42 45.4	+1.0
TIXI	Tiksi	34.66	328	LR	LR	03 58 38.0	
	comp=Z,29nm,18.2s,baz=2.0,slow=39						
KLR	Kul'dur	41.41	293	LR	LR	04 00 08.4	
	comp=Z,17nm,20.2s,baz=331,slow=35						
H11N2	WAKE ISLAND Hy	42.44	230	T	T	04 29 13.7	
	baz=31,slow=74						
H11N3	WAKE ISLAND Hy	42.44	230	T	T	04 29 14.1	
	baz=31,slow=74						
H11N1	WAKE ISLAND Hy	42.45	230	T	T	04 29 15.5	
	baz=31						
H11S1	WAKE ISLAND Hy	43.59	229	T	T	04 30 38.7	
	baz=29,slow=76,SNR=19						
H11S2	WAKE ISLAND Hy	43.60	229	T	T	04 30 41.8	
	baz=29,slow=76,SNR=12						
H11S3	WAKE ISLAND Hy	43.61	229	T	T	04 30 42.1	
	baz=29,slow=76,SNR=17						
WMOK	Wichita Mounta	46.09	89	P	P	03 44 22.8	0.0
WMOK				IAmb	IAmb	03 44 24.0	
	comp=Z,2.4nm,1.1s						
TX31	Lajitas Ar. Si	47.04	98	P	P	03 44 31.4	+0.9
TX31				IAmb	IAmb	03 44 44.7	
	comp=Z,6.6nm,1.1s						
TX32	Lajitas Array	47.04	98	P	P	03 44 31.5	+1.1
TX32				IAmb	IAmb	03 44 44.7	
	comp=Z,2.3nm,1.1s						
TXAR	Lajitas Array	47.04	98	P	P	03 44 31.2	+0.8
	comp=Z,0.7nm,0.7s,baz=300,slow=6.2,SNR=9.7						
NRIK	Noril'sk	47.94	334	P	P	03 44 36.6	-0.2
	comp=Z,0.9nm,0.3s,baz=50,slow=7.9,SNR=1.8						
ZALV	Zalesovo Beam	60.18	322	P	P	03 46 05.3	-1.1
	comp=Z,0.4nm,0.3s,baz=353,slow=6.2,SNR=1.7						
ZALV				LR	LR	04 15 03.7	
	comp=Z,19nm,18.1s,baz=0.0,slow=39						
ZALV	Zalesovo Beam	60.18	322	P	P	03 46 07.1	+0.8
FINES	FINESS Array B	65.14	357	P	P	03 46 39.0	-0.3
	comp=Z,3.9nm,1.0s,baz=23,slow=7.5,SNR=2.8						
FINES	FINESS Array B	65.14	357	P	P	03 46 39.7	+0.4
MKAR	Makanchi Array	66.90	319	P	P	03 46 51.2	+0.3
	comp=Z,0.2nm,0.4s,baz=53,slow=5.6,SNR=1.9						
ABKAR	Akbulak array	72.11	334	P	P	03 47 24.2	+1.2
CMAR	Chiang Mai Arr	81.82	290	P	P	03 48 17.8	-0.3
	comp=Z,0.9nm,0.4s,baz=19,slow=8.6,SNR=1.1						
ESDC	Sonseca Array	84.72	19	P	P	03 48 34.3	+1.4
	comp=Z,0.4nm,1.0s,baz=341,slow=4.3,SNR=4.5						
WRA	Warramunga Arr	92.51	239	P	P	03 49 08.0	-2.0
	comp=Z,0.6nm,0.9s,baz=45,slow=5.7,SNR=4.2						

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*IDC **09** 03:37:27.5±0.8, 52°.99N×161°.46E, h0^{km}, mb3.7/8, mb1 4.0/9, mb1mx3.7/51, mbtmp3.7/9, ML3.7/1, MS2.6/5, Ms1 2.6/5, ms1mx2.4/66, Error ellipse: s-maj=44.9km s-min=15.6km az=148.0*

*KRSC **09** 03:37:31.7±0.8, 53°.73N×160°.94E, h60^{km}±15^{km}, ML4.5*

*MOS **09** 03:37:32.9±0.6, 53°.70N×160°.95E, h69^{km}, mb4.2/4, Error ellipse: s-maj=8.7km s-min=4.2km az=76.5*

ISC 09 03:37:33.4±0.9, **53°.72N**±0°.03×**160°.94E**±0°.04, **h49**^{km}±10^{km}, **n112**, σ1^{s}.**29**/148, **mb3.9**/12, **1C-2D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.83	222	PN	Pn	03 37 49.3	+0.6
SPN				S	Sn	03 38 00.8	+0.9
SPN	Mys Shipunski	0.83	222	*i* P	Pn	03 37 49.3	+0.6
SPN				*e*S	Sn	03 38 00.8	+0.9
KII	Karymskiy	0.94	291	PN	Pn	03 37 50.2	-0.1
KII				S	Sn	03 38 01.7	-1.0
KII	Karymskiy	0.94	291	*e*P	Pn	03 37 50.2	-0.1
KII				*e*S	Sn	03 38 01.7	-1.0
MKZ	Mys Kozlova	0.96	29	PN	Pn	03 37 51.1	+0.6
MKZ				S	Sn	03 38 03.9	+0.7
MKZ	Mys Kozlova	0.96	29	*i* P	Pn	03 37 51.1	+0.6
MKZ				*e*S	Sn	03 38 03.9	+0.7
NLC	Nalytchevo	1.10	241	PN	Pn	03 37 52.7	+0.3
NLC				S	Sn	03 38 07.2	+0.8
NLC	Nalytchevo	1.10	241	*e*P	Pn	03 37 52.7	+0.3
NLC				*e*S	Sn	03 38 07.2	+0.8
SMAR	Somma	1.35	251	PN	Pn	03 37 56.5	+0.4
SMAR	Somma	1.35	251	*e*P	Pn	03 37 56.5	+0.4
UGLR	Uglovaya	1.36	249	PN	Pn	03 37 57.0	+0.9
UGLR	Uglovaya	1.36	249	*e*P	Pn	03 37 57.0	+0.9
KRER	Koryakskii	1.37	253	PN	Pn	03 37 57.3	+1.0
KRER				S	Sn	03 38 13.9	+0.5
KRER	Koryakskii	1.37	253	*i* P	Pn	03 37 57.3	+1.0
KRER				*e*S	Sn	03 38 13.9	+0.5
AVH	Avacha	1.39	252	PN	Pn	03 37 57.2	+0.8
AVH				S	Sn	03 38 14.7	+1.0
AVH	Avacha	1.39	252	*e*P	Pn	03 37 57.2	+0.8
AVH				*e*S	Sn	03 38 14.7	+1.0
KOK	Koryaka	1.44	254	PN	Pn	03 37 57.9	+0.8
KOK	Koryaka	1.44	254	*i* P	Pn	03 37 57.9	+0.8
DALK	Dalny	1.48	243	PN	Pn	03 37 57.9	+0.4
DALK				S	Sn	03 38 16.1	+0.5
DALK	Dalny	1.48	243	*e*P	Pn	03 37 57.9	+0.4
DALK				*e*S	Sn	03 38 16.1	+0.5
TUMD	Tumrok D	1.52	348	*i* P	Pn	03 37 58.1	-0.1
TUMD				*e*S	Sn	03 38 15.9	-0.9
PET	Petropavlovsk	1.53	244	⇓*i*PN	Pn	03 37 58.9	+0.6
PET				*e*S	Sn	03 38 17.6	+0.6
PET				pmax	pmax		
	comp=Z,957nm,0.4s						
PET				smax	smax		
	comp=E,2μm,0.5s						
PET				smax	smax		
	comp=N,2μm,0.5s						
PET	Petropavlovsk	1.53	244	*e*P	Pn	03 37 58.9	+0.6
PET				*e*S	Sn	03 38 18.1	+1.1
TUMR	Tumrok	1.64	344	PN	Pn	03 38 00.5	+0.7
TUMR				S	Sn	03 38 20.2	+0.4
TUMR	Tumrok	1.64	344	*i* P	Pn	03 38 00.5	+0.7
TUMR				*e*S	Sn	03 38 20.2	+0.4
GNL	Ganaly	1.78	271	PN	Pn	03 38 02.2	+0.4
GNL				S	Sn	03 38 22.9	-0.4
GNL	Ganaly	1.78	271	*e*P	Pn	03 38 02.2	+0.4
GNL				*e*S	Sn	03 38 22.9	-0.4
KRMR	Karymshinskiy	1.91	243	PN	Pn	03 38 04.4	+1.0
KRMR				S	Sn	03 38 27.5	+1.4
KRMR	Karymshinskiy	1.91	243	*e*P	Pn	03 38 04.4	+1.0
KRMR				*e*S	Sn	03 38 27.5	+1.4
RUS	Russkaya	1.95	230	PN	Pn	03 38 04.3	+0.4
RUS				S	Sn	03 38 27.4	+0.2
RUS	Russkaya	1.95	230	*e*P	Pn	03 38 04.3	+0.4
RUS				*e*S	Sn	03 38 27.4	+0.2
PEA0B	Petropavlovsk-	2.03	254	*d i*PN	Pn	03 38 05.8	+0.7
PETK	Petropavlovsk-	2.03	254	Pn	Pn	03 38 04.9	-0.2
	comp=N,90nm,0.3s,baz=83,slow=18,SNR=610						
PETK				Sn	Sn	03 38 30.6	+1.3
	comp=N,64nm,0.3s,baz=96,slow=27,SNR=9.2						
PETK				LR	LR	03 39 07.2	
	comp=N,102nm,21.7s,baz=32,slow=44						
MTVR	Mutnovka	2.07	234	PN	Pn	03 38 06.7	+0.9
MTVR				S	Sn	03 38 31.3	+0.9
MTVR	Mutnovka	2.07	234	*e*P	Pn	03 38 06.7	+0.9
MTVR				*e*S	Sn	03 38 31.3	+0.9
GRL	Gorelyy	2.08	237	PN	Pn	03 38 07.2	+1.3
GRL				S	Sn	03 38 31.8	+1.1
GRL	Gorelyy	2.08	237	*e*P	Pn	03 38 07.2	+1.3
GRL				*e*S	Sn	03 38 31.8	+1.1
KMNR	Kamenistaya	2.08	349	PN	Pn	03 38 06.4	+0.5
KMNR	Kamenistaya	2.08	349	*e*P	Pn	03 38 06.4	+0.5
BZGR	Bezymyannyi-Gr	2.23	357	PN	Pn	03 38 09.2	+1.2
BZGR	Bezymyannyi-Gr	2.23	357	*e*P	Pn	03 38 09.2	+1.2
BZWR	Bezymyannyi-We	2.27	354	PN	Pn	03 38 10.1	+1.6
BZWR	Bezymyannyi-We	2.27	354	*e*P	Pn	03 38 10.1	+1.6
KIRR	Kirishev	2.27	352	PN	Pn	03 38 09.5	+1.0
KIRR	Kirishev	2.27	352	*e*P	Pn	03 38 09.5	+1.0
ASAK	Asacha	2.27	235	PN	Pn	03 38 10.0	+1.6
ASAK				S	Sn	03 38 36.5	+1.3
ASAK	Asacha	2.27	235	*e*P	Pn	03 38 10.0	+1.6
ASAK				*e*S	Sn	03 38 36.5	+1.3
KPT	Kopyto	2.29	350	PN	Pn	03 38 10.0	+1.2
KPT	Kopyto	2.29	350	*e*P	Pn	03 38 10.0	+1.2
ZLN	Zelenaya	2.31	358	PN	Pn	03 38 10.7	+1.7
ZLN	Zelenaya	2.31	358	*e*P	Pn	03 38 10.7	+1.7
APC	Apacha	2.40	252	PN	Pn	03 38 11.7	+1.6
APC				S	Sn	03 38 39.8	+1.5
APC	Apacha	2.40	252	*e*P	Pn	03 38 11.7	+1.6
APC				*e*S	Sn	03 38 39.8	+1.5
CIRR	Tsirk	2.41	357	PN	Pn	03 38 11.9	+1.5
CIRR	Tsirk	2.41	357	*e*P	Pn	03 38 11.9	+1.5
KOZ	Kozyrevsk	2.43	346	PN	Pn	03 38 11.3	+0.8
KOZ	Kozyrevsk	2.43	346	*e*P	Pn	03 38 11.3	+0.8
KRSR	Krestovskiy	2.52	355	PN	Pn	03 38 13.1	+1.3
KRSR	Krestovskiy	2.52	355	*e*P	Pn	03 38 13.1	+1.3
ESO	Esso	2.56	331	PN	Pn	03 38 14.9	+2.5
ESO	Esso	2.56	331	*e*P	Pn	03 38 14.9	+2.5
KDTR	Khodutka, Kamc	2.58	223	PN	Pn	03 38 13.7	+1.1
KDTR				S	Sn	03 38 42.8	0.0
KDTR	Khodutka, Kamc	2.58	223	*e*P	Pn	03 38 13.7	+1.1
KDTR				*e*S	Sn	03 38 42.8	0.0
KLY	Klyuchi	2.61	357	PN	Pn	03 38 14.3	+1.3
KLY				S	Sn	03 38 43.7	+0.3
KLY	Klyuchi	2.61	357	*e*P	Pn	03 38 14.3	+1.3
KLY				*e*S	Sn	03 38 43.7	+0.3
KBTR	Krutoberegovo	2.72	23	PN	Pn	03 38 15.4	+0.8
KBTR				S	Sn	03 38 46.0	-0.2
KBTR	Krutoberegovo	2.72	23	*e*P	Pn	03 38 15.4	+0.8

KBTR				*e*S	Sn	03 38 46.0	-0.2
KBG	Krutoberegovo	2.74	21	PN	Pn	03 38 15.7	+0.9
KBG				S	Sn	03 38 46.5	-0.1
KBG	Krutoberegovo	2.74	21	*e*P	Pn	03 38 15.7	+0.9
KBG				*e*S	Sn	03 38 46.5	-0.1
BDR	Baidarnaya	2.86	3	PN	Pn	03 38 17.7	+1.1
BDR	Baidarnaya	2.86	3	*e*P	Pn	03 38 17.7	+1.1
SMKR	Semkarok	2.89	6	PN	Pn	03 38 18.4	+1.5
SMKR	Semkarok	2.89	6	*e*P	Pn	03 38 18.4	+1.5
MIPR	Malaya Ipel'ka	2.91	242	PN	Pn	03 38 18.9	+1.8
MIPR	Malaya Ipel'ka	2.91	242	*e*P	Pn	03 38 18.9	+1.8
SRKR	Sorokina	2.95	2	PN	Pn	03 38 19.3	+1.6
SRKR	Sorokina	2.95	2	*e*P	Pn	03 38 19.3	+1.6
BKI	Bering	3.29	61	PN	Pn	03 38 23.3	+0.9
BKI				S	Sn	03 38 58.4	-1.9
BKI	Bering	3.29	61	*e*P	Pn	03 38 23.3	+0.9
BKI				*e*S	Sn	03 38 58.4	-1.9
PAU	Pauzhetka	3.38	230	PN	Pn	03 38 25.5	+2.0
PAU	Pauzhetka	3.38	230	*e*P	Pn	03 38 25.5	+2.0
SKR	Severo-Kuril's	4.25	226	*e*PN	Pn	03 38 37.1	+1.7
SKR				*e*S	Sn	03 39 24.8	+1.2
SKR				pmax	pmax		
	comp=Z,148nm,1.0s						
SKR				smax	smax		
	comp=E,282nm,1.1s						
SKR				smax	smax		
	comp=N,290nm,1.2s						
SKR				MLR	MLR		
	comp=Z,900nm,13.0s						
MA2	Magadan	8.11	320	LR	LR	03 43 55.2	
	comp=Z,14nm,19.0s,baz=72,slow=44						
MA2	Magadan	8.11	320	*e*PN	Pn	03 39 29.4	+1.0
KUR	Kuril'sk	12.00	230	*e*PN	Pn	03 40 19.5	-2.0
BILL	Bilibino	14.59	8⇑	*e*P	Pn	03 40 54.9	-1.7
BILL				*e*S	Sn	03 43 40.6	+3.9
BILL				pmax	pmax		
	comp=Z,22nm,1.7s						
BILL				MLR	MLR		
	comp=Z,74nm,17.0s						
ASAJ	Asahikawa	15.37	239	LR	LR	03 47 41.5	
	comp=Z,20nm,20.0s,baz=178,slow=40						
ERM	Erimo	16.66	233	*i* P	Pn	03 41 20.3	-2.9
KLR	Kul'dur	18.66	268	P	P	03 41 46.6	-0.3
	comp=Z,0.2nm,0.3s,baz=66,slow=12,SNR=2.4						
KLR				LR	LR	03 49 51.9	
	comp=Z,21nm,20.7s,baz=86,slow=39						
KLR	Kul'dur	18.66	268	*e*P	P	03 41 44.7	-2.2
KLR				pmax	pmax		
	comp=Z,5.0nm,1.4s						
USA0B	Ussuriysk Arra	21.12	255	*e*P	P	03 42 12.5	-1.2
TIXI	Tiksi	22.73	334	*i* P	P	03 42 30.3	-0.4
MJA0	Matsu Arr-Jizo	23.31	232	*e*P	P	03 42 35.9	-1.0
MJA0				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MAJO	Matsushiro	23.33	232	*i* P	P	03 42 35.1	-1.9
MAJO				pmax	pmax		
	comp=Z,16nm,1.5s						
MJAR	Matsushiro Arr	23.33	232	P	P	03 42 35.9	-1.1
	comp=Z,4.6nm,0.9s,baz=22,slow=11,SNR=9.4						
ILAR	Eielson Array	28.02	46	P	P	03 43 23.4	+4.1
	comp=Z,0.3nm,0.7s,baz=276,slow=8.0,SNR=2.0						
INK	Inuvik	33.06	38	P	P	03 44 08.0	+4.3
	comp=Z,1.3nm,0.7s,baz=250,slow=15,SNR=2.4						
H11N2	WAKE ISLAND Hy	34.23	170	T	T	04 21 05.2	
	baz=354,slow=76,SNR=91						
H11N3	WAKE ISLAND Hy	34.25	170	T	T	04 21 05.6	
	baz=354,slow=76,SNR=78						
H11N1	WAKE ISLAND Hy	34.25	170	T	T	04 21 06.5	
	baz=354,slow=76,SNR=95						
H11S1	WAKE ISLAND Hy	35.42	171	T	T	04 22 27.0	
	baz=359						
H11S3	WAKE ISLAND Hy	35.44	171	T	T	04 22 21.4	
	baz=359						
H11S2	WAKE ISLAND Hy	35.44	171	T	T	04 22 21.0	
	baz=359						
NRIK	Noril'sk	35.69	324	LR	LR	04 00 08.9	
	comp=Z,39nm,18.7s,baz=25,slow=37						
NRIK	Noril'sk	35.69	324	*i* P	P	03 44 22.5	-3.9
NRIK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
JOW	Kunigami	36.08	235	P	P	03 44 30.4	+0.2
	comp=Z,7.1nm,0.5s,baz=29,slow=9.9,SNR=4.8						
KURK	Kurchatov	47.83	302	*e*P	P	03 46 03.8	-1.9
KURK				pmax	pmax		
	comp=Z,2.0nm,1.6s						
NVAR	Mina Array Bea	55.06	71	P	P	03 47 00.8	+0.7
	comp=Z,0.5nm,0.6s,baz=298,slow=7.0,SNR=5.6						
PDAR	Pinedale Array	56.78	62	P	P	03 47 12.6	+0.2
	comp=Z,0.4nm,0.7s,baz=349,slow=3.0,SNR=4.4						
TXAR	Lajitas Array	69.93	68	P	P	03 48 40.2	+0.8
	comp=Z,0.9nm,0.5s,baz=298,slow=4.7,SNR=19						
WRA	Warramunga Arr	76.86	206	P	P	03 49 18.1	-1.7
	comp=Z,0.4nm,0.7s,baz=21,slow=5.8,SNR=4.7						
ASAR	Alice Springs	80.54	205	P	P	03 49 37.7	-2.4
	comp=Z,0.2nm,0.5s,baz=27,slow=6.3,SNR=2.4						

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*IDC **09** 03:49:33.1±0.6, 8.°50N×71.°38W, h0^{km}, mb3.9/13, mb1 4.2/18, mb1mx4.0/43, mbtmp4.1/18, ML4.2/5, MS3.3/6, Ms1 3.3/6, ms1mx2.9/40, Error ellipse: s-maj=14.2km s-min=8.2km az=153.0*

*NEIC **09** 03:49:34.6±1.9, 8.°53N±0.°06×71.°35W±0.°05, h10^{km}±4^{km}, mb4.3/32, Mwr3.7(CAR), Error ellipse: s-maj=9.6km s-min=6.1km az=151.0*

*FUNV **09** 03:49:35.0, 8.°48N×71.°38W, h1^{km}, MW3.7*

*VAO **09** 03:49:35.5±0.4, 8.°49N×71.°28W, h10^{km}, mb4.2*

*CAR **09** 03:49:36.4±2.5, 8.°55N±0.°06×71.°45W±0.°05, h5^{km}±4^{km}, Error ellipse: s-maj=9.1km s-min=6.1km az=151.0*

ISC 09 03:49:34.2±1.2, **8.°52N**±0.°03×**71.°35W**±0.°03, **h12**^{km}±7^{km}, **n183**, σ**1.^{s}53**/231, **mb4.2**/25, **MS3.4**/3, **3C-4D**, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.54	115	*e*P	Pg	03 49 44.9	+0.3
SOCV				*e*S	Sg	03 49 52.4	+0.5
SOCV	Socops	0.54	115	*e*P	Pg	03 49 45.0	+0.3
SOCV				*e*S	Sb	03 49 53.7	+0.3
SDV	Santo Domingo	0.80	62	Pg	Pg	03 49 50.4	+0.7
	363nm,0.3s,baz=192,slow=3.8,SNR=1206						
SDV				Lg	Lg	03 50 01.0	
	895nm,0.3s,baz=78,slow=19,SNR=18						
SDV				LR	LR	03 50 26.8	
	comp=Z,923nm,18.1s,baz=358,slow=65						
SDV	Santo Domingo	0.80	62⇓	*e*P	Pg	03 49 50.3	+0.7
SDV				*e*S	Sb	03 50 01.9	+0.9
SDV	Santo Domingo	0.80	62	*e*P	Pg	03 49 50.4	+0.7
SDV				*e*S	Sg	03 50 00.7	+0.6
SDV	Santo Domingo	0.80	62		Pg	03 49 50.2	+0.5
PAMC	Pamplona, Colo	1.78	229	*e*P	Pn	03 50 05.4	+0.2
PAMC				*e*S	Sb	03 50 29.5	0.0
MCQV	Machiques	1.92	323⇑	*i*P	Pn	03 50 07.5	+0.7
MCQV				*e*S	Sn	03 50 32.8	+1.8
OCAC	Ocana	1.97	262	*e*P	Pn	03 50 07.6	0.0
OCAC				*e*S	Sn	03 50 33.0	+0.7
OCAC	Ocana	1.97	262	Pn	Pn	03 50 07.6	0.0
TAMC	Tame, Arauca	2.11	192	*e*P	Pn	03 50 10.3	+0.8
TAMC				*e*S	Sb	03 50 39.3	+0.6
ELOV	Elorza	2.38	129	*e*P	Pb	03 50 16.3	-0.8
ELOV				*e*S	Sb	03 50 47.1	+0.6
ELOV	Elorza	2.38	129	*e*P	Pn	03 50 15.2	+2.1
ELOV				*e*S	Sn	03 50 42.9	+0.6
LL1C	La Loma 1 Cana	2.41	295	*e*P	Pn	03 50 14.3	+0.9
LL1C				*e*S	Sb	03 50 47.4	+0.2
DABV	Dabajuro	2.49	16	*e*P	Pn	03 50 16.6	+2.0
SIQV	Siquisique	2.61	36	*e*P	Pn	03 50 18.2	+1.9
SIQV				*e*S	Sn	03 50 50.2	+2.3
BARC	Barichara	2.64	224	*e*P	Pn	03 50 17.9	+1.0
BARC				*e*S	Sb	03 50 53.4	-0.6
SMLC	San Martn de	2.71	276	*e*P	Pn	03 50 17.2	-0.3
SMLC				*e*S	Sn	03 50 53.4	+3.0
BRRC	Barranca, Sant	2.73	239	*e*P	Pn	03 50 19.1	+1.3
BRRC				*e*S	Sb	03 50 58.0	+1.6
RUSC	La Rusia	3.12	214	*e*P	Pn	03 50 24.6	+0.8
RUSC				*e*S	Sb	03 51 09.2	+0.9
MAPV	Macapo	3.14	65	*e*P	Pn	03 50 25.6	+2.0
ARGC	Ariguani, Magd	3.16	295	*e*P	Pn	03 50 23.6	-0.2
ARGC				*e*S	Sb	03 51 10.8	+2.0
URIC	Uribia, Colomb	3.23	349	*e*P	Pn	03 50 24.3	-0.4
URIC				*e*S	Sn	03 51 02.4	-0.9
URIC	Uribia, Colomb	3.23	349	Pn	Pn	03 50 23.5	-1.3
BAUV	El Baul	3.30	82	*e*P	Pn	03 50 27.8	+2.1
BAUV				*e*S	Sn	03 51 07.2	+2.3
BAUV	El Baul	3.30	82	*e*P	Pn	03 50 27.0	+1.3
BAUV				*e*S	Sn	03 51 05.5	+0.6
JACV	Jacura	3.56	44	*e*P	Pn	03 50 31.3	+1.9
JACV				*e*S	Sn	03 51 12.0	+0.5
ZARC	Zaragoza, Cauc	3.62	254	*e*P	Pn	03 50 30.8	+0.6
ZARC				*e*S	Sn	03 51 12.2	-0.8
ZARC	Zaragoza, Cauc	3.62	254	Pn	Pn	03 50 30.1	-0.1
MONV	Montecano	3.68	22⇑	*e*P	Pn	03 50 32.4	+1.5
MONV				*e*S	Sn	03 51 15.0	+0.7
SMRC	Santa Marta, M	3.87	313	*e*P	Pn	03 50 33.5	0.0
SMRC				*e*S	Sn	03 51 15.7	-3.3
SPBC	San Pablo de B	3.92	224	*e*P	Pn	03 50 35.3	+0.9
SPBC				*e*S	Sn	03 51 21.5	+1.0
TURV	Turiamo	3.96	61	*e*P	Pn	03 50 36.5	+1.6
BENV	Beln	3.97	68	*e*P	Pn	03 50 37.1	+2.1
BENV				*e*S	Sn	03 51 21.4	-0.2
SJCC	San Jacinto, C	4.02	290	*e*P	Pn	03 50 36.6	+0.8
SJCC				*e*S	Sn	03 51 23.0	+0.1
SJCC	San Jacinto, C	4.02	290		Pn	03 50 36.5	+0.8
UREC	San Jos de Ur	4.21	260	*e*P	Pn	03 50 39.3	+1.0
HATO	Hato, Curacao	4.33	33	Pn	Pn	03 50 40.7	+0.7
PTGC	Puerto Gaitan,	4.36	190	*e*P	Pn	03 50 39.3	-1.1
PTGC				*e*S	Sb	03 51 39.5	-3.9
CHIC	Chingaza	4.53	212⇑	*e*P	Pn	03 50 43.4	+0.4
CHIC				*e*S	Sn	03 51 34.1	-1.8
TACV	Tcata	4.56	69⇓	*e*P	Pn	03 50 44.9	+1.8
TACV				*e*S	Sn	03 51 35.7	-0.5
NORC	Norcasia	4.56	230	*e*P	Pn	03 50 42.8	-0.4
NORC				*e*S	Sn	03 51 37.1	+0.8
ROSC	El Rosal	4.70	219	Pn	Pn	03 50 47.0	+1.7
	25nm,0.3s,baz=47,slow=21,SNR=24						
ROSC				Sn	Sn	03 51 46.6	+6.6
	51nm,0.3s,baz=53,slow=20,SNR=6.2						
ROSC				Lg	Lg	03 52 03.0	
	29nm,0.3s,baz=350,slow=18,SNR=6.6						
ROSC	El Rosal	4.70	219	*e*P	Pn	03 50 47.4	+2.1
ROSC				*e*S	Sn	03 51 42.4	+2.4
ROSC	El Rosal	4.70	219	Pn	Pn	03 50 47.4	+2.1
HELC	Santa Helena	4.75	241	*e*P	Pn	03 50 47.1	+1.1
CARV	Caracas	4.79	65	*e*P	Pn	03 50 47.5	+1.2
CACV	CAICARA DEL OR	4.86	101⇓	*e*P	Pb	03 50 55.4	-3.8
VILC	Villavicencio,	4.96	208	*e*P	Pn	03 50 49.1	+0.5
VILC				*e*S	Sn	03 51 46.1	+0.1
LCBC	Los crdobas,	4.97	274	*e*P	Pn	03 50 49.8	+1.0
LCBC				*e*S	Sn	03 51 47.9	+1.6
DBBC	Dabeiba	5.04	253	*e*P	Pn	03 50 52.7	+2.9
MERV	Las Mercedes	5.04	81⇓	*e*P	Pn	03 50 51.3	+1.6
GUY2C	Guyana, Caldas	5.16	231	*e*P	Pn	03 50 52.9	+1.2
GUY2C				*e*S	Sn	03 51 54.9	+3.4
CBOC	Ciudad Bolivar	5.32	241	*e*P	Pn	03 50 54.5	+0.8
BIRV	Birongo	5.38	68	*e*P	Pn	03 50 55.4	+1.1
BIRV				*e*S	Sn	03 51 55.0	-1.3
ANIL	Santa Ana	5.68	225	*e*P	Pn	03 51 00.9	+2.2
ANIL				*e*S	Sn	03 52 06.1	+2.0
CAPC	Capurgana	5.94	272	*e*P	Pn	03 50 59.5	-2.5
CAPC				*e*S	Sn	03 52 06.3	-3.8
CAP2	Capurgana	5.95	272	Pn	Pn	03 51 00.2	-2.0
ORTC	Ortega, Tolima	6.00	220	*e*P	Pn	03 51 02.8	-0.1
ORTC				*e*S	Sn	03 52 11.6	0.0
GUVC	San Jose del G	6.07	192	*e*P	Pn	03 51 03.8	0.0
GUVC				*e*S	Sn	03 52 12.6	-0.7
PLMC	San Jos del P	6.07	234	*e*P	Pn	03 51 05.1	+1.1
PLMC				*e*S	Sn	03 52 17.7	+4.2
SOLC	Bahia Solano	6.43	250	*e*P	Pn	03 51 10.7	+1.9
PTAC	Punta Ardita,	6.54	258	*e*P	Pn	03 51 10.3	-0.1
PRGV	PARIAGUAN	6.63	87	*e*P	Pn	03 51 12.3	+0.7
YOTC	Yotoco, Valle	6.70	228	*e*P	Pn	03 51 13.8	+1.1
MACC	Macarena, Meta	6.80	202	*e*P	Pn	03 51 12.2	-1.7
MACC				*e*S	Sn	03 52 27.8	-3.6
PCRV	Puerto La Cruz	6.83	75	Pn	Pn	03 51 17.3	+3.0
	8.8nm,0.3s,baz=280,slow=3.7,SNR=85						
PCRV				Sn	Sn	03 52 34.5	+2.5
	12nm,0.3s,baz=140,slow=23,SNR=5.9						
PCRV				Lg	Lg	03 53 12.8	
	3.3nm,0.3s,baz=28,slow=23,SNR=1.9						
PCRV	Puerto La Cruz	6.83	75	*e*P	Pn	03 51 15.5	+1.2
PLCV	Puerto La Cruz	6.87	76		Pn	03 51 17.3	+2.4
BETC	Betania	7.08	215	*e*P	Pn	03 51 16.6	-1.3
MARP	Paez Belalcaza	7.26	219	*e*P	Pn	03 51 17.5	-3.0
MARP				*e*S	Sn	03 52 40.8	-2.4
CUMV	Cumana_UDO	7.31	74	*e*P	Pn	03 51 21.0	+0.1
GARC	Garzon, Huila	7.52	213	*e*P	Pn	03 51 23.4	-0.6
PCON	Cinco Dias	7.94	220	*e*P	Pn	03 51 30.7	+0.7
SOTA	Rioblanco	8.22	220	*e*P	Pn	03 51 31.9	-2.0
BCIP	Isla Barro Col	8.41	275	*e*P	Pn	03 51 36.7	+0.6
BCIP	Isla Barro Col	8.41	275	Pn	Pn	03 51 35.8	-0.2
PTLC	Puerto Leguiza	8.97	203	*e*P	Pn	03 51 46.8	+3.0
RIOV	Rio Grande	9.45	92	*e*P	Pn	03 51 49.6	-0.6
TRN	Trinidad (W)	10.03	77	*e*P	Pn	03 51 58.8	+0.5
TRN	Trinidad (W)	10.03	77	*e*S	Sn	03 53 46.1	-4.8
CRPR	Cabo Rojo, PR	10.29	23	Pn	Pn	03 52 00.2	-1.6
DR12	Loma Pena Alta	10.39	10		Pn	03 52 02.7	-0.5
SDDR	Presa de Saban	10.40	0	Pn	Pn	03 52 04.8	+1.3
ICMP	Isla Caja de M	10.43	26	Pn	Pn	03 52 03.8	+0.1
OBIP	Obispado Ponce	10.53	25	Pn	Pn	03 52 04.2	-0.9
PDPR	Patillas Dam,	10.77	28	Pn	Pn	03 52 06.9	-1.5
SJG	San Juan	10.79	27	Pn	Pn	03 52 07.4	-1.3
	5.1nm,0.3s,baz=186,slow=15,SNR=15						
SJG				Sn	Sn	03 54 03.7	-5.8
	2.6nm,0.3s,baz=18,slow=13,SNR=5.8						
SJG				LR	LR	03 56 44.5	
	comp=Z,64nm,19.4s,baz=200,slow=40						
SJG	San Juan	10.79	27	Pn	Pn	03 52 07.7	-1.0
HUMP	Col San Antoni	10.96	29	Pn	Pn	03 52 09.6	-1.4
GCPR	Guaynabo City	11.00	27	Pn	Pn	03 52 10.9	-0.6
CBYP	Canovanas	11.07	28	Pn	Pn	03 52 12.2	-0.3
MTDJ	Mount Denham	11.37	329	Pn	Pn	03 52 15.4	-1.3
CUPR	Culebra, Puert	11.38	31	Pn	Pn	03 52 16.5	-0.2
STVI	Saint Thomas	11.58	32	Pn	Pn	03 52 19.6	+0.1
FDF	Fort de France	11.74	57	Pn	Pn	03 52 20.9	-0.9
GTBY	Guantanamo Bay	11.91	343	Pn	Pn	03 52 23.6	-0.4
BOAV	Boa Vista	12.37	119	*e*P	Pn	03 52 30.2	-0.1
BOAV	Boa Vista	12.37	119	Pn	Pn	03 52 29.5	-0.8
TBTG	Tabatinga, AM	12.70	173	*e*P	Pn	03 52 34.8	0.0
TBTG	Tabatinga, AM	12.70	173	Pn	Pn	03 52 33.3	-1.5
PTGA	Pitinga	14.60	128	Pn	Pn	03 52 59.2	-1.6
	1.3nm,0.3s,baz=303,slow=15,SNR=11						
PTGA				Sn	Sn	03 55 34.8	-7.8
	1.3nm,0.3s,baz=37,slow=16,SNR=4.9						
PTGA				Lg	Lg	03 57 13.0	
	4.3nm,0.3s,baz=34,slow=23,SNR=8.3						
PTGA				LR	LR	03 59 12.9	
	comp=Z,67nm,18.1s,baz=308,slow=40						
PTGA	Pitinga	14.60	128	Pn	Pn	03 52 59.5	-1.3
MACA	Manacapuru-AM	15.74	137	*e*P	Pn	03 53 17.3	+1.4
CZSB	Cruzeiro do Su	16.20	185	Pn	Pn	03 53 19.8	-2.0
CZSB				IAmb	IAmb	03 53 26.8	
	comp=Z,15nm,0.7s						
ATAH	Atahualpa	17.06	205	P	Pn	03 53 30.6	-2.6
	comp=Z,0.1nm,0.3s,baz=62,slow=15,SNR=1.7						
ATAH				LR	LR	04 01 49.1	
	comp=Z,58nm,19.4s,baz=8.1,slow=43						
MTO3	Montecristo	18.59	290		P	03 53 51.9	+0.2
MDP	Montagnes des	18.88	99	P	P	03 53 55.7	+1.0
	comp=Z,1.4nm,0.3s,baz=274,slow=12,SNR=11						
MDP				Lg	Lg	03 59 26.6	
	comp=Z,0.6nm,0.3s,baz=162,slow=21,SNR=3.6						
ETMB	Extrema	18.92	164	*e*P	Pn	03 53 56.9	+1.2
ETMB	Extrema	18.92	164	P	P	03 53 53.6	-1.4
SAML	Samuel	19.16	155	*e*P	P	03 53 58.5	+0.8
SAML	Samuel	19.16	155	P	P	03 53 56.4	-1.3
MALB	Monte Alegre	19.90	120	*e*P	P	03 54 07.3	+1.4
ITTB	Itaituba	20.16	129	*e*P	P	03 54 10.0	+1.4
MCPB	Macapa, AP	21.15	114	*e*P	P	03 54 20.7	+1.2
NPGB	Novo Progresso	22.20	134	*e*P	P	03 54 31.3	+0.5
VILB	Vilhena	24.03	152	*e*P	P	03 54 51.1	+1.7
CLDB	Colider	24.71	141	*e*P	P	03 54 56.5	+1.0
PDRB	Porto dos Gac	24.72	144	*e*P	P	03 54 57.0	+1.3
LPAZ	La Paz	24.85	173	P	P	03 54 59.0	+1.5
	comp=Z,1.9nm,0.5s,baz=318,slow=5.6,SNR=12						
LPAZ				LR	LR	04 05 30.9	
	comp=Z,102nm,20.3s,baz=44,slow=39						
LPAZ	La Paz	24.85	173	*e*P	P	03 54 58.9	+1.4
LPAZ	La Paz	24.85	173	P	P	03 54 59.4	+1.9
LPAZ				IAmb	IAmb	03 55 02.6	
	comp=Z,10nm,1.4s						
TMAB	Tom-Au,PA,Br	25.58	114	*e*P	P	03 55 04.8	+1.4
PRPB	Parauapebas	25.96	124	*e*P	P	03 55 08.0	+1.0
SIV	San Ignacio	26.39	157	P	P	03 55 11.8	+1.0
	comp=Z,3.7nm,1.1s,baz=327,slow=7.0,SNR=5.9						
SIV				Lg	Lg	04 03 34.0	
	comp=Z,5.8nm,0.9s,baz=278,slow=22,SNR=3.0						
SIV				LR	LR	04 06 14.8	
	comp=Z,127nm,20.9s,baz=109,slow=38						
SNDB	Serra Nova Dou	28.49	135	*e*P	P	03 55 30.7	+1.0
SALV	Santo Antonio	28.79	147	*e*P	P	03 55 32.6	+0.3
SMTB	Santa Maria do	29.30	126	*e*P	P	03 55 38.0	+1.1
PEXB	Peixe	30.74	131	*e*P	P	03 55 50.5	+0.9
ARAG	Araguaiana, MT	30.88	141	*e*P	P	03 55 51.7	+0.9
AQDB	Aquidauana	32.66	152	*e*P	P	03 56 07.5	+1.1
WHAR	Wooly Hollow	32.83	327	P	P	03 56 07.9	+0.2
WHAR				IAmb	IAmb	03 56 30.7	
	comp=Z,4.7nm,1.1s						
FCAR	Ozark Folk Cen	33.20	328	P	P	03 56 11.6	+0.6
FCAR				IAmb	IAmb	03 56 14.5	
	comp=Z,10nm,1.5s						
SDBA	SAO DESIDERIO	33.51	128	*e*P	P	03 56 14.3	+0.3
T42A	Van Buren	33.57	331	P	P	03 56 15.0	+0.8
T42A				IAmb	IAmb	03 56 32.7	
	comp=Z,3.4nm,1.1s						
U40A	Yellville	33.93	328	P	P	03 56 17.6	+0.2
OK030	Cody Creek RV	35.81	323	P	P	03 56 33.3	-0.4
OK030				IAmb	IAmb	03 56 36.3	
	comp=Z,6.5nm,0.8s						
OK031	S. Brethren Rd	35.86	323	P	P	03 56 33.6	-0.5
WMOK	Wichita Mounta	36.25	320	P	P	03 56 36.8	-0.7
WMOK				IAmb	IAmb	03 56 39.8	
	comp=Z,2.1nm,0.9s						
TX32	Lajitas Array	36.72	309		P	03 56 42.5	+0.8
TXAR	Lajitas Array	36.72	309	P	P	03 56 41.2	-0.4
	comp=Z,0.4nm,0.6s,baz=130,slow=7.7,SNR=5.9						
TXAR				PcP	PcP	03 59 06.8	+2.5
	comp=Z,0.3nm,0.7s,baz=132,slow=5.0,SNR=4.1						
TXAR	Lajitas Array	36.72	309	P	P	03 56 41.7	+0.1
TXAR					PcP	03 59 06.3	+2.1
MNTX	Cornudas Mount	39.14	311	P	P	03 57 01.7	-0.2
CMC01	Camacan, BA	39.47	127	*e*P	P	03 57 04.8	0.0
SDCO	Great Sand Dun	42.39	319	P	P	03 57 30.5	+1.5
ISCO	Idaho Springs	43.65	321	P	P	03 57 40.3	+1.1
B35A	Bob, Littlefor	43.98	339	P	P	03 57 42.6	+1.2
SMCO	Snowmass	44.15	319	P	P	03 57 44.3	+0.9
SMCO				IAmb	IAmb	03 57 47.3	
	comp=Z,3.0nm,1.1s						
ULM	Lac du Bonnet	46.33	338	P	P	03 58 01.2	+1.2
	comp=Z,1.7nm,0.5s,baz=150,slow=10.0,SNR=2.2						
ULM				LR	LR	04 19 05.1	
	comp=Z,39nm,18.2s,baz=121,slow=38						
ULM	Lac du Bonnet	46.33	338	P	P	03 57 59.9	-0.1
BW06	Boulder Array	47.79	322	P	P	03 58 11.3	-0.5
BW06				IAmb	IAmb	03 58 25.3	
	comp=Z,4.1nm,1.2s						
PD31	Pinedale Array	47.79	322	P	P	03 58 11.6	-0.3
PD31				IAmb	IAmb	03 58 25.3	
	comp=Z,3.9nm,1.3s						
PDAR	Pinedale Array	47.79	322	P	P	03 58 12.1	+0.3
	comp=Z,0.8nm,0.4s,baz=120,slow=11,SNR=11						
PDAR	Pinedale Array	47.79	322	P	P	03 58 11.4	-0.4
LOHW	Long Hollow	48.90	322	P	P	03 58 21.4	+1.0
LOHW				IAmb	IAmb	03 58 24.1	
	comp=Z,1.1nm,0.8s						
PLCA	Paso Flores	49.01	179	P	P	03 58 20.5	-0.5
	comp=Z,1.8nm,0.5s,baz=354,slow=7.8,SNR=6.9						
PLCA	Paso Flores	49.01	179	*e*P	P	03 58 20.7	-0.3
MOOW	Moose Ponds	49.06	322	P	P	03 58 21.6	0.0
HLID	Hailey	51.22	320	P	P	03 58 39.5	+1.5
NVAR	Mina Array Bea	51.59	313	P	P	03 58 43.2	+2.4
	comp=Z,0.4nm,0.6s,baz=109,slow=6.9,SNR=5.5						
NVAR	Mina Array Bea	51.59	313	P	P	03 58 41.5	+0.7
JTMT	Jette	53.32	325	P	P	03 58 52.9	-0.6
JTMT				IAmb	IAmb	03 58 54.3	
	comp=Z,6.9nm,1.4s						
F10A	Beach Ranch, E	54.15	322	P	P	03 58 59.6	+0.1
F10A				IAmb	IAmb	03 59 19.7	
	comp=Z,2.0nm,0.8s						
PESTR	Estremoz	64.32	51	P	P	04 00 09.9	0.0
PESTR				IAmb	IAmb	04 00 10.6	
	comp=Z,2.0nm,0.9s						
KOWA	Kowa	66.06	78	P	P	04 00 21.6	-0.1
SUMG	Summit	67.02	10	P	P	04 00 27.1	-0.1
ESDC	Sonseca Array	67.23	51	P	P	04 00 29.1	+0.3
	comp=Z,0.6nm,0.6s,baz=268,slow=6.3,SNR=8.9						
TORD	Torodi Ar. Bea	71.68	79	P	P	04 00 56.0	-0.7
	comp=Z,1.2nm,0.8s,baz=294,slow=6.8,SNR=8.7						
TORD	Torodi Ar. Bea	71.68	79	P	P	04 00 55.5	-1.2
TORD				IAmb	IAmb	04 01 00.0	
	comp=Z,1.8nm,1.1s						
INK	Inuvik	72.05	340	P	P	04 00 57.4	-0.4
	comp=Z,1.0nm,0.6s,baz=172,slow=6.7,SNR=2.2						
BMAR	Burnt Mountain	75.77	338	P	P	04 01 20.1	+0.4
SENIN	Lac Senin/Sane	76.06	44	P	P	04 01 22.4	+0.4
SENIN				IAmb	IAmb	04 01 29.2	
	comp=Z,3.4nm,0.9s						
ILAR	Eielson Array	76.19	335	P	P	04 01 24.3	+2.2
	comp=Z,0.3nm,0.6s,baz=99,slow=5.1,SNR=7.3						
BPAW	Bear Paw Mtn.	77.86	334	P	P	04 01 32.9	+1.3
H21K	Melozitna Rive	78.77	335	P	P	04 01 37.3	+0.7
FINES	FINESS Array B	86.12	29	P	P	04 02 14.3	-0.7
	comp=Z,2.0nm,0.9s,baz=273,slow=5.4,SNR=1.6						
AKASG	Malin Array Be	90.11	39	P	P	04 02 34.8	+0.5
	comp=Z,0.1nm,0.3s,baz=292,slow=4.9,SNR=1.7						
ASAR	Alice Springs	151.52	235	PKPbc	PKiKP	04 09 30.9	+1.2
	comp=Z,1.5nm,0.8s,baz=115,slow=2.4,SNR=9.7						
ASAR	Alice Springs	151.52	235		PKPbc	04 09 27.5	-1.7
CMAR	Chiang Mai Arr	151.54	20	PKPbc	PKPbc	04 09 30.2	+0.9
	comp=Z,0.7nm,0.3s,baz=242,slow=4.5,SNR=5.3						
CMAR	Chiang Mai Arr	151.54	20	PKPbc	PKPbc	04 09 27.8	-1.6
WRA	Warramunga Arr	152.68	243	PKPbc	PKPbc	04 09 31.4	-0.6
	comp=Z,2.5nm,0.7s,baz=109,slow=1.9,SNR=15						
WRA	Warramunga Arr	152.68	243	PKPbc	PKPbc	04 09 31.0	-0.9

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*IDC **09** 04:03:13.2±1.2, 1.°92S×125.°92E, h0^{km}, mb3.9/4, mb1 4.1/7, mb1mx3.8/35, mbtmp4.0/7, ML4.0/3, MS3.1/2, Ms1 3.1/2, ms1mx2.5/52, Error ellipse: s-maj=27.0km s-min=22.5km az=34.0*

*DJA **09** 04:03:16.4±0.5, 2°S±4°×12°6E±°, h15^{km}±4^{km}, M4.1/15, mb4.1/6, mB4.9/5, MLv4.0/15, Mw(mB)4.2/5*

ISC 09 04:03:17.0±1.2, **2.°00S**±0.°09×**125.°87E**±0.°06, **h26**^{km}±9^{km}, **n20**, σ**0.^{s}96**/20, **mb3.8**/4, **Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANI	Sanana	0.13	112	P	Pb	04 03 21.8	-0.2
LBMI	Labuha	2.12	50	P	Pn	04 03 50.7	0.0
KMSI	Cibinong	3.18	324	P	Pn	04 04 04.4	-0.9
MSAI	Masohi	3.33	114	P	Pn	04 04 09.0	+1.6
GTOI	Gorontalo	3.88	312	P	Pn	04 04 17.1	+2.2
APSI	Ampana	4.36	284	P	Pn	04 04 21.6	+0.1
MRSI	Marisa	4.64	302	P	Pn	04 04 25.7	+0.3
SWI	Sorong	5.50	78	P	Pn	04 04 38.5	+1.2
SIJI	Sorong	5.51	78	Pn	Pn	04 04 37.3	-0.1
	8.1nm,0.3s,baz=236,slow=14,SNR=11						
SIJI				Sn	Sn	04 05 39.3	-0.6
	2.9nm,0.3s,baz=293,slow=23,SNR=2.8						
MPSI	Mapaga	6.41	291	P	Pn	04 04 50.2	+0.5
	0.1nm562nm7.7nm,0.6s						
FAKI	Fak Fak	6.44	98	P	Pn	04 04 50.6	+0.5
	0.1nm9.4nm,0.8s						
BKSI	Bulukumba	6.62	240	P	Pn	04 04 53.3	+0.7
	0.2nm721nm28nm,0.5s						
BSSI	Bau Bau, Buton	6.76	232	P	Pn	04 04 54.3	-0.3
	0.1nm379nm16nm,0.5s						
KAPI	Kappang	6.80	244	Pn	Pn	04 04 56.7	+1.6
	3.1nm,0.3s,baz=140,slow=3.2,SNR=17						
KAPI				LR	LR	04 07 44.6	
	comp=Z,102nm,19.1s,baz=113,slow=39						
WRA	Warramunga Arr	19.66	156	P	P	04 07 44.3	+0.2
	0.4nm,0.3s,baz=333,slow=12,SNR=18						
PMG	Port Moresby	22.41	110	P	P	04 08 14.1	+0.3
	8.2nm,0.3s,baz=280,slow=9.4,SNR=3.3						
ASAR	Alice Springs	22.90	161	P	P	04 08 18.9	0.0
	1.3nm,0.7s,baz=340,slow=12,SNR=6.4						
STKA	Stephens Creek	33.21	155	LR	LR	04 25 03.6	
	comp=Z,50nm,20.4s,baz=206,slow=39						
MKAR	Makanchi Array	61.82	327	P	P	04 13 33.9	+0.1
	0.8nm,0.7s,baz=127,slow=8.2,SNR=6.5						
ILAR	Eielson Array	90.61	25	P	P	04 16 15.9	-0.9
	0.3nm,0.9s,baz=279,slow=3.9,SNR=1.7						

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*NEIC **09** 04:12:20.2±1.6, 0.°36N±0.°09×122.°0E±0.°1, h190^{km}±7^{km}, mb4.2/22, Error ellipse: s-maj=18.3km s-min=9.8km az=53.0*

*IDC **09** 04:12:22.3±2.1, 0.°29N×122.°11E, h215^{km}±20^{km}, mb3.7/14, mb1 3.8/16, mb1mx3.6/49, mbtmp4.2/16, MS2.7/1,* *Ms1 2.7/1, ms1mx2.2/48, Error ellipse: s-maj=23.6km s-min=8.3km az=65.0*

*DJA **09** 04:12:22.2±0.5, 0°N±3°×12°2E±°, h166^{km}±5^{km}, M4.2/14, mb4.4/5, mB4.6/3, MLv4.2/14, Mw(mB)3.9/3*

ISC 09 04:12:19.8±0.7, 0°.35N±0°.05×122°.06E±0°.06, h191^{km}±6^{km}, n86, σ1^{s}.20/97, mb4.2/35, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRSI	Marisa	0.17	318	P	Pn	04 12 44.7	-0.3
GTOI	Gorontalo	1.00	73	P	Pn	04 12 48.5	-0.1
GTOI				S	Sn	04 13 09.9	-0.9
APSI	Ampana	1.32	198	P	Pn	04 12 52.0	+0.9
TOLI2	Tolitoli	1.48	301	Pn	Pn	04 12 52.3	-0.2
LUWI	Luwuk	1.56	153	P	Pn	04 12 54.0	+0.7
LUWI				S	Sn	04 13 18.8	-0.5
LUWI	Luwuk	1.56	153	Pn	Pn	04 12 53.8	+0.5
KMSI	Cibinong	1.94	83	P	Pn	04 12 58.9	+1.9
MPSI	Mapaga	2.16	270	P	Pn	04 13 00.0	+0.6
TTSI	Tana Toraja	4.05	214	P	Pn	04 13 23.3	+1.4
SGKI	Sangatta, Kali	4.54	259	P	Pn	04 13 28.1	0.0
BNSI	Bone	5.11	202	P	Pn	04 13 37.9	+2.5
	0.6nm2μm212nm,0.8s						
KAPI	Kappang	5.80	203	P	Pn	04 13 45.1	+0.6
	3.0nm,0.3s,baz=47,slow=8.5,SNR=27						
KAPI				S	Sn	04 14 50.0	-1.3
	1.0nm,0.3s,baz=94,slow=21,SNR=1.4						
KAPI				LR	LR	04 16 24.9	
	comp=Z,66nm,18.6s,baz=82,slow=42						
KAPI	Kappang	5.80	203	Pn	Pn	04 13 44.5	+0.1
BKSI	Bulukumba	5.96	199	P	Pn	04 13 48.0	+1.6
	0.2nm624nm78nm,1.1s						
BSSI	Bau Bau, Buton	6.64	194	P	Pn	04 13 58.0	+2.7
	0.1nm28nm,0.9s						
EDFI	Ende, Flores	9.05	182	P	Pn	04 14 28.4	+1.5
MTN	Manton Dam	15.90	146		Pn	04 15 54.1	+0.6
MTN				IAmb	IAmb	04 15 54.7	
	comp=Z,9.7nm,0.8s						
MTN	Manton Dam	15.90	146	P	Pn	04 15 54.0	+0.5
	comp=Z,19nm,0.6s						
KNRA	Kununurra	17.25	158	P	Pn	04 16 08.8	-0.8
KNRA				IAmb	IAmb	04 16 11.1	
	comp=Z,14nm,1.0s						
KNRA	Kununurra	17.25	158	P	P	04 16 08.5	+0.4
	comp=Z,19nm,1.1s						
FITZ	Fitzroy Crossi	18.67	169	P	P	04 16 23.6	+0.1
	comp=Z,0.5nm,0.3s,baz=358,slow=8.3,SNR=33						
FITZ				S	S	04 19 43.7	-2.5
	comp=Z,0.1nm,0.3s,baz=356,slow=19,SNR=10						
FITZ	Fitzroy Crossi	18.67	169	P	P	04 16 23.7	+0.1
FITZ				IAmb	IAmb	04 16 24.6	
	comp=Z,4.5nm,0.8s						
FITZ	Fitzroy Crossi	18.67	169	P	P	04 16 23.4	-0.2
	comp=Z,6.7nm,1.0s						
UBPT	Khong Chiam	22.10	313	P	P	04 17 01.6	+1.7
UBPT				IAmb	IAmb	04 17 02.7	
	comp=Z,7.9nm,0.6s						
PSI	Prapat	23.25	276	P	P	04 17 11.4	+0.8
	comp=Z,1.7nm,0.4s,baz=77,slow=9.3,SNR=5.7						
WB0	Warramunga Arr	23.37	150	P	P	04 17 10.7	-0.7
WB0				IAmb	IAmb	04 17 12.6	
	comp=Z,9.1nm,0.9s						
WRAB	Tennant Creek	23.48	150	P	P	04 17 12.1	-0.3
WRAB				IAmb	IAmb	04 17 13.8	
	comp=Z,5.9nm,0.8s						
WRAB	Tennant Creek	23.48	150	P	P	04 17 12.6	+0.1
WRA	Warramunga Arr	23.49	150	P	P	04 17 12.1	-0.4
	comp=Z,5.2nm,0.7s,baz=326,slow=11,SNR=66						
WRA				PcP	PcP	04 20 51.9	-1.0
	comp=Z,0.6nm,0.8s,baz=330,slow=2.2,SNR=5.1						
WRA				S	S	04 21 13.8	+1.8
	comp=Z,0.3nm,0.9s,baz=333,slow=14,SNR=2.7						
WRA	Warramunga Arr	23.49	150	P	P	04 17 11.4	-1.1
WB2	Warramunga Arr	23.49	150	P	P	04 17 12.3	-0.3
WB2				IAmb	IAmb	04 17 13.8	
	comp=Z,5.8nm,0.7s						
WB2				PcP	PcP	04 20 52.3	-0.6
WR0	Warramunga Arr	23.60	149	P	P	04 17 13.1	-0.5
WRKA	Warakurna	25.95	167	P	P	04 17 34.4	-0.4
	comp=Z,15nm,0.7s						
AS31	Alice Springs	26.50	155	P	P	04 17 39.8	0.0
ASAR	Alice Springs	26.50	155	P	P	04 17 39.9	+0.1
	comp=Z,2.0nm,0.6s,baz=344,slow=14,SNR=35						
ASAR				PcP	PcP	04 20 59.3	-0.4
	comp=Z,0.9nm,0.4s,baz=348,slow=2.2,SNR=9.3						
ASAR				S	S	04 21 57.1	-2.6
	comp=Z,0.8nm,0.8s,baz=338,slow=19,SNR=6.1						
ASAR	Alice Springs	26.50	155	P	P	04 17 38.5	-1.3
ASAR				PcP	PcP	04 20 59.2	-0.4
CMAR	Chiang Mai Arr	28.97	310	P	P	04 18 04.0	+2.3
	comp=Z,1.9nm,0.3s,baz=133,slow=8.2,SNR=6.6						
MORW	Morawa	29.81	191	P	P	04 18 08.6	-0.4
OOD	Oodnadatta	30.89	156	P	P	04 18 18.6	+0.1
	comp=Z,7.5nm,2.9s						
FORT	Forrest	31.48	170	P	P	04 18 23.5	-0.1
FORT	Forrest	31.48	170	P	P	04 18 23.3	-0.3
	comp=Z,24nm,0.7s						
MULG	Mulgathing	32.54	160	P	P	04 18 32.8	-0.1
	comp=Z,7.4nm,1.8s						
NWAO	Narrogin (SRO)	33.41	187	P	P	04 18 39.8	-0.6
	comp=Z,4.3nm,0.8s,baz=3.8,slow=15,SNR=1.3						
NWAO	Narrogin (SRO)	33.41	187	P	P	04 18 39.7	-0.7
BBOO	Buckleboo	35.53	159	P	P	04 18 57.6	-1.0
BBOO				IAmb	IAmb	04 19 12.2	
	comp=Z,5.0nm,1.1s						
STKA	Stephens Creek	37.01	152	P	P	04 19 11.4	+0.3
	comp=Z,5.8nm,0.7s,baz=317,slow=8.7,SNR=15						
STKA	Stephens Creek	37.01	152	P	P	04 19 11.1	-0.1
STKA	Stephens Creek	37.01	152	P	P	04 19 13.1	+1.9
	comp=Z,1.9nm,0.9s						
RMQ	Roma	37.06	138	P	P	04 19 16.2	+4.4
	comp=Z,3.9nm,0.5s						
HTT	Hallett	37.16	156	P	P	04 19 13.3	+0.8
	comp=Z,9.2nm,1.1s						
SHL	Shillong	38.42	313	P	P	04 19 23.8	+0.4
SHL				IAmb	IAmb	04 19 25.9	
	comp=Z,7.0nm,0.8s						
MJAR	Matsushiro Arr	39.00	21	P	P	04 19 26.4	-1.4
	comp=Z,0.8nm,0.3s,baz=207,slow=2.4,SNR=1.6						
ODAN	Odare	42.48	311	*e*P	P	04 19 58.1	+1.4
	comp=Z,4.4nm,0.3s						
TAPN	Taplejung	42.51	312	*e*P	P	04 19 58.4	+1.4
RAMN	Ramite	43.13	311	*e*P	P	04 20 04.0	+2.1
	comp=Z,27nm,0.5s						
CAN	Canberra	43.49	147	P	P	04 20 05.0	+0.6
CAN				IAmb	IAmb	04 20 06.4	
	comp=Z,3.7nm,0.6s						
JIRN	Jiri	43.81	311	*e*P	P	04 20 09.1	+1.6
	comp=Z,20nm,0.4s						
GUN	Gumba	44.18	311	*e*P	P	04 20 11.8	+1.4
	comp=Z,27nm,0.4s						
PKIN	Phulchoki	44.37	311	*e*P	P	04 20 13.1	+1.3
	comp=Z,4.6nm,0.3s						
KKN	Kakani	44.57	311	*e*P	P	04 20 14.9	+1.6
	comp=Z,7.2nm,0.4s						
DMN	Daman	44.61	311	*e*P	P	04 20 15.3	+1.6
GKN	Gorkha	45.16	311	*e*P	P	04 20 19.1	+1.1
KOLN	Koldanda	45.84	310	*e*P	P	04 20 24.6	+1.3
DANN	Dangsing	46.01	311	*e*P	P	04 20 25.7	+1.0
PYUN	Piuthan	46.47	310	*e*P	P	04 20 29.8	+1.6
SONM	Songino Array	49.22	346	P	P	04 20 50.3	+1.5
	comp=Z,5.1nm,0.6s,baz=164,slow=9.1,SNR=9.7						
SONM	Songino Array	49.22	346	P	P	04 20 49.6	+0.8
MK31	Makanchi Array	57.82	329	P	P	04 21 52.0	+0.6
MK31				IAmb	IAmb	04 21 53.2	
	comp=Z,3.8nm,0.7s						
MKAR	Makanchi Array	57.82	329	P	P	04 21 52.3	+1.0
	comp=Z,5.0nm,0.6s,baz=122,slow=9.0,SNR=48						
MKAR				PcP	PcP	04 22 41.0	-0.7
	comp=Z,0.6nm,0.6s,baz=145,slow=5.3,SNR=2.0						
MKAR	Makanchi Array	57.82	329	P	P	04 21 51.8	+0.5
MAKZ	Makanchi	58.00	329	P	P	04 21 53.0	+0.5
MAKZ				IAmb	IAmb	04 21 53.9	
	comp=Z,3.1nm,0.8s						
ZALV	Zalesovo Beam	61.61	336	P	P	04 22 16.7	-0.3
	comp=Z,1.1nm,0.3s,baz=134,slow=6.2,SNR=9.1						
ZALV	Zalesovo Beam	61.61	336	P	P	04 22 15.8	-1.1
KURK	Kurchatov	62.21	330	P	P	04 22 20.5	-0.5
KKAR	Karatay Array	62.64	320	P	P	04 22 24.4	+0.3
AMKA	Amchitka	69.89	34	P	P	04 23 09.7	-0.2
ABKAR	Akbulak array	71.88	322	P	P	04 23 21.7	-0.3
VNDA	Vanda	80.72	172	P	P	04 24 11.2	0.0
	comp=Z,0.9nm,0.7s,baz=323,slow=6.5,SNR=5.7						
VNDA	Vanda	80.72	172	P	P	04 24 11.4	+0.2
BRTR	Keskin Array B	88.56	310	P	P	04 24 50.4	-1.0
	comp=Z,1.2nm,0.8s,baz=111,slow=5.4,SNR=5.2						
BRTR	Keskin Array B	88.56	310	P	P	04 24 50.6	-0.8
ILAR	Eielson Array	90.14	25	P	P	04 24 57.6	-0.4
	comp=Z,0.2nm,0.6s,baz=262,slow=6.3,SNR=1.5						
AKASG	Malin Array Be	91.53	321	P	P	04 25 03.1	-1.6
	comp=Z,0.2nm,0.2s,baz=75,slow=3.9,SNR=1.8						
EKA	Eskdalemuir Ar	108.94	330	Pdiff	Pdif	04 26 21.1	-1.7
	comp=Z,1.8nm,0.8s,baz=70,slow=4.7,SNR=1.7						
TORD	Torodi Ar. Bea	119.41	285	PKP	PKPdf	04 30 46.1	-1.4
	comp=Z,0.8nm,0.7s,baz=30,slow=2.4,SNR=6.3						
TORD	Torodi Ar. Bea	119.41	285		PKPdf	04 30 46.2	-1.3

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*IDC **09** 04:19:22.0±1.6, 8°.01S×125°.17E, h0^{km}, mb3.6/1, mb1 3.8/6, mb1mx3.5/59, mbtmp3.7/6, ML3.3/5, MS3.1/2, Ms1 3.1/2, ms1mx2.5/42, Error ellipse: s-maj=39.6km s-min=24.3km az=91.0*

ISC 09 04:19:26.6±1.1, 8°.13S±0°.08×125°.3E±0°.1, h35^{km}, n7, σ1^{s}.13/10, Timor region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	2.62	218	Pn	Pn	04 20 06.4	-0.1
	11nm,0.3s,baz=82,slow=5.3,SNR=5.7						
BATI				Sn	Sn	04 20 37.8	+0.7
	5.2nm,0.3s,baz=158,slow=23,SNR=9.4						
BATI				LR	LR	04 21 14.6	
	comp=Z,176nm,20.6s,baz=76,slow=43						
SIJI	Sorong	9.35	40	Pn	Pn	04 21 38.8	-0.3
	1.1nm,0.3s,baz=217,slow=22,SNR=6.5						
FITZ	Fitzroy Crossi	9.92	178	Pn	Pn	04 21 47.0	+0.3
	0.1nm,0.3s,baz=359,slow=12,SNR=3.2						
FITZ				Sn	Sn	04 23 34.5	-2.5
	0.4nm,0.3s,baz=302,slow=19,SNR=5.5						
WRA	Warramunga Arr	14.66	144	Pn	Pn	04 22 52.0	+0.4
	0.1nm,0.3s,baz=319,slow=13,SNR=12						
WRA				Sn	Sn	04 25 32.9	0.0
	0.1nm,0.3s,baz=318,slow=26,SNR=5.1						
ASAR	Alice Springs	17.52	153	P	P	04 23 30.5	+1.3
	0.0nm,0.3s,baz=323,slow=11,SNR=9.2						
ASAR				S	Sn	04 26 42.4	-0.1
	0.1nm,0.3s,baz=328,slow=23,SNR=8.6						
MKAR	Makanchi Array	66.70	329	P	P	04 30 13.6	-0.5
	0.4nm,0.8s,baz=142,slow=7.3,SNR=4.2						
RAR	Rarotonga	73.11	110	LR	LR	04 59 57.7	
	comp=Z,29nm,21.2s,baz=166,slow=33						

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*IDC **09** 04:23:22.4±2.6, 33°.13S×178°.07W, h0^{km}, mb4.2/5, mb1 4.3/7, mb1mx3.9/49, mbtmp4.1/7, ML3.7/2, Error ellipse: s-maj=53.7km s-min=33.9km az=116.0*

*WEL **09** 04:23:22.4±1.0, 33°S±11°×17°8W±2°4, h176^{km}±23^{km}, M4.5/6, mB4.3/1, MLv4.5/6, Mw(mB)3.4/1, Error ellipse: s-maj=0.0km s-min=0.0km az=112.9*

*NEIC **09** 04:23:24.9±1.0, 33°.09S±0°.04×178°.1W±0°.2, h10^{km}±2^{km}, mb4.5/10, Error ellipse: s-maj=32.2km s-min=6.0km az=95.0*

ISC 09 04:23:22.2±1.8, 33°.13S±0°.09×177°.6W±0°.2, h26^{km}, n51, σ1^{s}.78/61, mb4.5/11, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	3.86	356	P	Pn	04 24 18.5	-1.4
GLKZ				S	Sn	04 24 58.9	-5.6
RAO	Raoul Island	3.87	356	Pn	Pn	04 24 24.0	+3.9
MXZ	Matakaoa Point	5.55	216	Pn	Pn	04 24 43.4	+0.3
WMGZ	Waiomatatini S	5.71	214	P	Pn	04 24 46.5	+1.2
WMGZ				S	Sn	04 25 52.1	+2.2
PKGZ	Pakihiroa	5.92	215	P	Pn	04 24 46.8	-1.5
PKGZ				S	Sn	04 25 55.7	+0.4
HAZ	Te Kaha	5.97	218	P	Pn	04 24 48.2	-0.7
HAZ				S	Sn	04 25 58.0	+1.6
PUZ	Puketiti	5.98	213	P	Pn	04 24 46.8	-2.3
PUZ				S	Sn	04 25 57.4	+0.6
URZ	Urewera	6.70	219	Pn	Pn	04 24 58.7	-0.1
	1.3nm,0.3s,baz=301,slow=24,SNR=9.0						
URZ				Sn	Sn	04 26 12.7	-1.5
	7.1nm,0.3s,baz=121,slow=24,SNR=3.5						
URZ	Urewera	6.70	219		Pn	04 24 58.3	-0.5
RAHZ	Arahi	7.21	215	P	Sn	04 26 28.0	+1.0
WHHZ	Waihua	7.27	214	P	Sn	04 26 29.2	+0.8
NMHZ	Naumai	7.49	216	P	Pn	04 25 10.7	+0.9
NMHZ				P	Sn	04 26 34.7	+0.8
ARHZ	Aropaoanui	7.53	214	P	Sn	04 26 35.2	+0.5
BKZ	Black Stump Fm	7.70	217	Pn	Pn	04 25 12.0	-0.6
MCHZ	McNeill Hill	7.81	215	P	Sn	04 26 40.7	-1.1
KWHZ	Kaweka Forest	7.93	216	P	Pn	04 25 14.0	-1.9
KWHZ				S	Sn	04 26 42.2	-2.5
KAHZ	Kahuranaki	8.01	212	P	Pn	04 25 14.9	-2.1
KAHZ				P	Sn	04 26 43.1	-3.5
TMVZ	Te Maari	8.07	220	P	Sn	04 26 47.0	-1.3
ETVZ	East Tongariro	8.08	220	P	Sn	04 26 48.0	-0.6
KRHZ	Kereru	8.12	215	P	Pn	04 25 17.7	-0.8
KRHZ				P	Sn	04 26 47.6	-1.9
BHHZ	Black Hill Sta	8.16	217	P	Pn	04 25 19.2	+0.2
BHHZ				P	Sn	04 26 50.0	-0.4
PXZ	Pawanui	8.21	211	P	Sn	04 26 50.1	-1.4
MOVZ	Moawhango	8.26	219	P	Sn	04 26 50.3	-2.5
MTVZ	Mangateitei	8.39	220	P	Sn	04 26 46.5	-10
PNHZ	Pukenui	8.42	215	P	Sn	04 26 53.5	-3.2
WPHZ	Waipukurau	8.42	213	S	Sn	04 26 53.3	-3.5
DVHZ	Dannevirke	8.74	213	P	Sn	04 26 59.9	-4.7
BFZ	Birch Farm	9.01	211	Pn	Pn	04 25 29.5	-1.2
THZ	Tophouse	11.46	218	Pn	Pn	04 26 02.0	-2.1
KHZ	Kahutara	11.62	215	Pn	Pn	04 26 06.1	-0.2
DZM	Mont Dzumac	17.91	304	P	Pn	04 27 29.9	+0.3
	0.4nm,0.3s,baz=133,slow=18,SNR=7.4						
EIDS	Eidsvold	28.33	278	P	P	04 29 15.6	+1.6
EIDS				IAmb	IAmb	04 29 33.6	
	comp=Z,18nm,1.5s						
STKA	Stephens Creek	34.30	261	P	P	04 30 06.0	-0.4
	comp=Z,0.4nm,0.4s,baz=100,slow=11,SNR=1.8						
CTA	Charters Tower	34.66	283	P	P	04 30 11.2	+1.5
	comp=Z,1.6nm,0.3s,baz=111,slow=8.6,SNR=2.0						
CTAO	Charters Tower	34.66	283	P	P	04 30 10.7	+0.9
BBOO	Buckleboo	38.64	257	P	P	04 30 43.9	+0.3
BBOO				IAmb	IAmb	04 31 00.2	
	comp=Z,17nm,1.4s						
AS31	Alice Springs	43.38	270	P	P	04 31 23.6	+0.9
ASAR	Alice Springs	43.38	270	P	P	04 31 23.6	+1.0
	comp=Z,2.8nm,0.6s,baz=112,slow=7.6,SNR=34						
ASAR	Alice Springs	43.38	270	P	P	04 31 23.0	+0.3
WR0	Warramunga Arr	44.43	275	P	P	04 31 31.7	+0.6
WR0				IAmb	IAmb	04 31 32.2	
	comp=Z,2.8nm,0.6s						
WB2	Warramunga Arr	44.60	275	P	P	04 31 33.4	+0.9
WB2				IAmb	IAmb	04 31 33.5	
	comp=Z,5.1nm,0.5s						
WRAB	Tennant Creek	44.60	275	P	P	04 31 32.2	-0.3
WRAB				IAmb	IAmb	04 31 47.1	
	comp=Z,3.8nm,0.8s						
WRA	Warramunga Arr	44.61	275	P	P	04 31 33.2	+0.7
	comp=Z,4.1nm,0.5s,baz=113,slow=7.9,SNR=66						
WRA	Warramunga Arr	44.61	275	P	P	04 31 33.3	+0.7
WB0	Warramunga Arr	44.65	275	P	P	04 31 33.7	+0.8
WB0				IAmb	IAmb	04 31 34.1	
	comp=Z,5.7nm,0.8s						
KNRA	Kununurra	51.30	276	P	P	04 32 25.4	+0.9
FITZ	Fitzroy Crossi	52.75	272	P	P	04 32 36.0	+0.8
	comp=Z,0.6nm,0.3s,baz=144,slow=7.1,SNR=1.2						
FITZ	Fitzroy Crossi	52.75	272	P	P	04 32 36.6	+1.4
FIA1	FINESS Array S	147.81	339	PKPbc	PKPab	04 43 08.3	+1.8
FINES	FINESS Array B	147.81	339	PKPbc	PKPab	04 43 07.3	+0.9
	comp=Z,1.2nm,0.4s,baz=40,slow=4.5,SNR=12						
FINES	FINESS Array B	147.81	339		PKPab	04 43 07.2	+0.7

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*TUL **09** 04:24:33.9±1.0, 35°.98N±0°.01×96°.82W±0°.02, h5^{km}, ML2.7, mb_Lg2.5/15(NEIC), Error ellipse: s-maj=2.3km s-min=1.7km az=138.0*

*IASPEI **09** 04:24:34.0±1.0, 35°.99N±0°.03×96°.82W±0°.03, h6^{km}±6^{km}, Error ellipse: s-maj=4.4km s-min=3.0km az=130.3, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*ANF **09** 04:24:34.0±0.2, 35°.99N×96°.82W, h5^{km}, ML2.8/8, Error ellipse: s-maj=2.7km s-min=1.9km az=156.0*

*NEIC **09** 04:24:34.0±0.7, 35°.99N±0°.01×96°.82W±0°.02, h6^{km}±3^{km}, Error ellipse: s-maj=2.5km s-min=1.3km az=135.0*

ISC 09 04:24:34.1±0.9, 35°.99N±0°.02×96°.82W±0°.02, h5^{km}±6^{km}, n52, σ0^{s}.51/68, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK031	S. Brethren Rd	0.04	203	Pg	Pg	04 24 35.2	-0.2
OK031				Sg	Sg	04 24 35.9	-0.3
OK030	Cody Creek RV	0.07	155		Pg	04 24 35.8	0.0
OK030				Sg	Sg	04 24 37.0	0.0
QUOK	Quay	0.20	27	Pg	Pg	04 24 38.5	+0.3
QUOK				Sg	Sg	04 24 41.7	+0.8
OK029	Liberty Lake	0.55	250	Pg	Pg	04 24 44.8	0.0
OK029				Sg	Sg	04 24 52.1	+0.2
OK001	Jones High Sch	0.57	222	Pg	Pg	04 24 45.0	-0.1
OK001				Sg	Sg	04 24 53.1	+0.5
OK025	Westminster Rd	0.59	226	Pg	Pg	04 24 45.2	-0.2
OK025				Sg	Sg	04 24 53.7	+0.6
BCOK	Bluff Creek, N	0.72	243	Pg	Pg	04 24 47.8	-0.2
BCOK				Sg	Sg	04 24 57.6	+0.2
OKCFA	Oklahoma City	0.77	222	Pg	Pg	04 24 48.6	-0.3
OKCFA				Sg	Sg	04 24 59.2	+0.3
OKCFA	Oklahoma City	0.77	222	P	Pg	04 24 48.4	-0.5
	baz=42						
OKCFA				S	Sg	04 24 59.4	+0.4
	baz=42						
OKCSW	OKLAHOMA CITY	0.77	221		Pg	04 24 48.4	-0.5
BLOK	Blackwell	0.83	338	Pg	Pg	04 24 50.1	-0.1
TUL1	Leonard	0.84	95	Pg	Pg	04 24 49.9	-0.4
TUL1				Sg	Sg	04 25 01.0	-0.2
TUL1	Leonard	0.84	95	P	Pg	04 24 49.8	-0.4
	baz=275						
TUL1				S	Sg	04 25 00.9	-0.2
	baz=275						
FNO	Franklin	0.87	213	Pg	Pg	04 24 50.2	-0.7
FNO				Sg	Sg	04 25 02.3	+0.2
T35A	Sooner Cattle	0.96	15		Pg	04 24 52.3	-0.2
T35A				Sg	Sg	04 25 05.1	+0.1
T35B	Sooner Cattle	0.96	15	P	Pg	04 24 52.4	-0.2
	baz=195						
T35B				S	Sg	04 25 05.1	+0.1
	baz=195						
CROK	Carrier	1.07	299		Pg	04 24 54.3	-0.4
KAN13	South Haven SW	1.15	333		Pg	04 24 55.9	-0.3
KAN13				Sg	Sg	04 25 11.2	0.0
GC02	Grant County #	1.20	316		Pg	04 24 56.7	-0.5
GC02				Sg	Sb	04 25 13.3	+0.2
KAN17	Caldwell West	1.30	324		Pn	04 24 58.4	-0.5
KAN09	Caldwell North	1.31	331		Pn	04 24 58.8	-0.3
KAN14	Manchester OK	1.33	317		Pn	04 24 59.1	-0.3
KS20	Mayfield South	1.37	335	Pn	Pn	04 24 59.7	-0.2
KAN01	Argonia South	1.39	327		Pn	04 24 59.9	-0.2
OK032	Salt Plains WL	1.39	306		Pn	04 24 59.8	-0.3
KAN05	Bluff City Nor	1.40	323		Pn	04 25 00.3	0.0
KAN10	Anthony SW Sta	1.53	318	Pn	Pn	04 25 01.7	-0.3
KAN16	Harper SW Stat	1.59	321	Pn	Pn	04 25 02.9	-0.1
X34A	Smith Ranch, M	1.61	211	Pn	Pn	04 25 02.9	-0.3
X34A				IAmb_Lg		04 25 26.8	
	comp=Z,32nm,1.0s						
U32A	Winter Ranch,	1.81	283	Pn	Pn	04 25 06.0	+0.1
U32A				IAmb_Lg		04 25 34.6	
	comp=Z,26nm,1.0s						
U32A	Winter Ranch,	1.81	283	P	Pn	04 25 06.6	+0.7
	baz=102						
U32A				Sb	Sg	04 25 31.8	-0.4
	baz=102						
X37A	Clayton	1.83	139	Pn	Pn	04 25 06.7	+0.4
X37A				IAmb_Lg		04 25 32.4	
	comp=Z,24nm,1.1s						
X37A	Clayton	1.83	139	P	Pn	04 25 06.4	+0.2
	baz=320						
X37A				Sb	Sg	04 25 32.4	-0.6
	baz=320						
LOOK	Love County	2.02	189	Pn	Pn	04 25 09.2	+0.4
LOOK				IAmb_Lg		04 25 40.4	
	comp=Z,31nm,1.0s						
U38A	Gravette	2.02	76	Sb	Sg	04 25 37.9	-1.2
	baz=258						
WMOK	Wichita Mounta	2.03	233	P	Pn	04 25 09.7	+0.7
	baz=52						
WMOK				Sb	Sb	04 25 38.0	+0.9
	baz=52						
W39A	Magazine	2.60	107	Pn	Pn	04 25 17.1	+0.3
W39A	Magazine	2.60	107	P	Pn	04 25 17.6	+0.8
	baz=288						
Z35A	Perchaven, San	2.68	188	Pn	Pn	04 25 17.8	0.0
MIAR	Mount Ida	3.02	118	Pn	Pn	04 25 23.4	+0.8
MIAR				IAmb_Lg		04 26 17.2	
	comp=Z,11nm,1.0s						
MIAR	Mount Ida	3.02	118	P	Pn	04 25 23.6	+1.0
	baz=299						
KSU1	Kansas State U	3.11	3		Pn	04 25 25.1	+1.3
KSU1				IAmb_Lg		04 26 19.4	
	comp=Z,13nm,0.7s						
X40A	Basin Creek Fa	3.59	114	Pn	Pn	04 25 29.7	-0.7
CBKS	Cedar Bluff	3.65	321	IAmb_Lg		04 26 36.7	
	comp=Z,13nm,0.9s						
WHAR	Wooly Hollow	3.76	99	Pn	Pn	04 25 32.1	-0.5
W41B	Gary Mavity, V	3.81	101	P	Pn	04 25 33.7	+0.2
	baz=284						
ABTX	Abilene, Hawle	4.09	216	Pn	Pn	04 25 36.4	-0.9
AMTX	Amarillo	4.12	256	IAmb_Lg		04 26 51.2	
	comp=Z,16nm,0.7s						
R40A	Maddies Statio	4.30	56	Pn	Pn	04 25 40.3	+0.1
P38A	Dawn	4.47	35	Pn	Pn	04 25 43.0	+0.6
N33A	J Bar K, Exete	4.77	354	Pn	Pn	04 25 45.5	-1.1
CCM	Cathedral Cave	4.91	64	IAmb_Lg		04 27 14.0	
	comp=Z,13nm,0.8s						

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*IDC **09** 04:27:22.6±0.8, 15°.40N×147°.18E, h0^{km}, mb4.1/15, mb1 4.3/16, mb1mx4.0/67, mbtmp4.1/16, ML4.1/1, MS3.0/1, Ms1 3.0/1, ms1mx2.4/46, Error ellipse: s-maj=27.4km s-min=16.4km az=116.0*

*NEIC **09** 04:27:29.1±1.5, 15°.5N±0°.1×146°.90E±0°.04, h38^{km}±8^{km}, mb4.5/14, Error ellipse: s-maj=16.8km s-min=5.2km az=187.0*

ISC 09 04:27:28.1±0.7, 15°.5N±0°.1×147°.0E±0°.1, h33^{km}, n51, σ1^{s}.04/43, mb4.3/22, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	2.78	228	Pn	Pn	04 28 10.4	+0.2
	27nm,0.3s,baz=52,slow=12,SNR=6.2						
GUMO				Sn	Sn	04 28 43.5	+0.8
	33nm,0.3s,baz=22,slow=19,SNR=8.1						
GUMO	Guam	2.78	228	Pn	Pn	04 28 08.5	-1.8
PATS	Pohnpei	14.02	126		Pn	04 30 34.5	-10
JAY	Jayapura	18.92	200	LR	LR	04 39 05.3	
	comp=Z,45nm,19.7s,slow=37						
H11S3	WAKE ISLAND Hy	19.08	78	T	T	04 51 10.3	
	baz=253,slow=79,SNR=37						
H11S1	WAKE ISLAND Hy	19.09	78	T	T	04 51 14.4	
	baz=253,slow=79,SNR=20						
H11S2	WAKE ISLAND Hy	19.09	78	T	T	04 51 07.3	
	baz=253,slow=79,SNR=30						
H11N1	WAKE ISLAND Hy	19.43	75	T	T	04 51 32.9	
	baz=260,slow=75,SNR=11						
H11N2	WAKE ISLAND Hy	19.44	75	T	T	04 51 36.6	
	baz=260,slow=75,SNR=7.9						
H11N3	WAKE ISLAND Hy	19.45	75	T	T	04 51 40.9	
	baz=260,slow=75,SNR=8.9						
SIJI	Sorong	22.47	225	P	P	04 32 26.1	+1.4
	9.4nm,0.6s,baz=31,slow=14,SNR=5.3						
FAKI	Fak Fak	23.38	220	P	P	04 32 33.5	-0.5
FAKI				IAmb	IAmb	04 32 36.3	
	comp=Z,28nm,1.1s						
CTA	Charters Tower	35.34	181	P	P	04 34 22.8	+2.2
	comp=Z,3.7nm,0.2s,baz=351,slow=3.5,SNR=5.4						
KNRA	Kununurra	35.80	211	P	P	04 34 25.8	+1.3
WB0	Warramunga Arr	37.14	200	P	P	04 34 34.4	-1.6
WB0				IAmb	IAmb	04 34 51.3	
	comp=Z,8.2nm,1.4s						
WR0	Warramunga Arr	37.27	200	P	P	04 34 34.5	-2.5
WB2	Warramunga Arr	37.32	200	P	P	04 34 36.5	-1.0
WRA	Warramunga Arr	37.32	200	P	P	04 34 36.0	-1.5
	comp=Z,1.4nm,0.8s,baz=22,slow=9.2,SNR=9.8						
ASAR	Alice Springs	40.94	198	P	P	04 35 06.7	-1.1
	comp=Z,0.3nm,0.9s,baz=21,slow=8.0,SNR=2.2						
SONM	Songino Array	46.44	323	P	P	04 35 53.0	+1.1
	comp=Z,0.7nm,0.6s,baz=133,slow=11,SNR=4.1						
GSTR	Great Sitkin T	46.85	31	P	P	04 35 55.0	+0.1
ZALV	Zalesovo Beam	61.33	323	P	P	04 37 40.6	+0.2
	comp=Z,0.5nm,0.3s,baz=100,slow=6.0,SNR=1.8						
ZALV	Zalesovo Beam	61.33	323	P	P	04 37 38.8	-1.7

MK31	Makanchi Array	61.60	315	P	P	04 37 42.3	-0.2
MK31				IAmb	IAmb	04 38 06.3	
	comp=Z,2.4nm,1.1s						
MKAR	Makanchi Array	61.60	315	P	P	04 37 43.2	+0.8
	comp=Z,0.6nm,0.4s,baz=88,slow=9.1,SNR=8.6						
MKAR	Makanchi Array	61.60	315	P	P	04 37 41.6	-0.8
L19K	White Mountain	61.79	27	P	P	04 37 43.3	-0.1
MAKZ	Makanchi	61.81	315	P	P	04 37 42.7	-1.2
MAKZ				IAmb	IAmb	04 37 51.4	
	comp=Z,2.6nm,0.9s						
KURK	Kurchatov	64.50	319	P	P	04 38 01.1	-0.5
KURK				IAmb	IAmb	04 38 03.5	
	comp=Z,12nm,1.4s						
KURBB	Kurchatov Arra	64.55	319	P	P	04 38 02.1	+0.2
	comp=Z,1.6nm,0.5s,baz=100,slow=6.4,SNR=6.5						
ILAR	Eielson Array	66.00	25	P	P	04 38 09.8	-1.3
	comp=Z,1.3nm,0.8s,baz=260,slow=4.4,SNR=6.6						
ILAR	Eielson Array	66.00	25	P	P	04 38 09.6	-1.4
GRNC	Granite Creek	67.48	30	P	P	04 38 21.0	+0.2
BMAR	Burnt Mountain	67.59	23	P	P	04 38 22.0	+0.9
BCAR	Beaver Creek A	67.84	28	P	P	04 38 23.5	+0.6
HYT	Haines Junctio	69.56	30	P	P	04 38 34.0	+0.3
HYT				IAmb	IAmb	04 38 36.5	
	comp=Z,5.3nm,0.8s						
BVAR	Borovoye Array	69.75	321	P	P	04 38 34.8	0.0
	comp=Z,1.2nm,0.5s,baz=140,slow=5.1,SNR=5.7						
KKAR	Karatay Array	69.79	311	P	P	04 38 35.5	+0.2
INK	Inuvik	71.86	23	P	P	04 38 47.3	0.0
	comp=Z,3.6nm,0.8s,baz=249,slow=5.2,SNR=7.5						
INK	Inuvik	71.86	23	P	P	04 38 47.8	+0.4
INK				IAmb	IAmb	04 38 49.0	
	comp=Z,4.3nm,0.8s						
DLBC	Dease Lake	73.30	33	P	P	04 38 56.1	-0.1
	comp=Z,1.9nm,0.8s,baz=252,slow=3.2,SNR=4.3						
DLBC	Dease Lake	73.30	33	P	P	04 38 57.3	+1.0
DLBC				IAmb	IAmb	04 39 07.8	
	comp=Z,5.9nm,1.2s						
ABKAR	Akbulak array	76.55	318	P	P	04 39 14.6	-0.5
YKA	Yellowknife Ar	80.25	28	P	P	04 39 35.5	+0.2
	comp=Z,1.8nm,0.9s,baz=273,slow=3.5,SNR=2.4						
NVAR	Mina Array Bea	84.15	52	P	P	04 39 56.1	-0.4
	comp=Z,0.8nm,0.7s,baz=264,slow=5.9,SNR=6.2						
ARCES	ARCESS Array B	85.93	343	P	P	04 40 05.4	+0.8
	comp=Z,3.5nm,0.9s,baz=67,slow=9.3,SNR=1.8						
ARCES	ARCESS Array B	85.93	343	P	P	04 40 05.6	+1.0
FINES	FINESS Array B	90.33	336	P	P	04 40 26.2	+0.6
	comp=Z,1.7nm,0.9s,baz=66,slow=4.9,SNR=1.8						
FINES	FINESS Array B	90.33	336	P	P	04 40 25.0	-0.6
DBIC	Dimbokro	144.48	306	PKP	PKPdf	04 47 01.1	-1.1
	comp=Z,3.6nm,0.7s,baz=52,slow=2.4,SNR=6.5						
DBIC	Dimbokro	144.48	306		PKPbc	04 47 00.4	-0.2

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*JMA **09** 04:27:43.8±0.1, 39°.27N×142°.90E, h15^{km}±2^{km}, M4.2*
*NIED **09** 04:27:43.8, 39°.27N×142°.90E, h15^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.19; $M_{\theta\theta}$1.17; $M_{\phi\phi}$-0.97; $M_{r\theta}$-0.13; $M_{\theta\phi}$-0.46; $M_{\phi r}$-0.54; Fault plane solution: $M_0$1.30000×10^{15} NP1: ϕ_s60.00000°, δ73.00000°, λ-160.00000°. NP2: ϕ_s323.00000°, δ71.00000°, λ-18.00000°.*
*NEIC **09** 04:27:46.9±3.0, 39°.26N±0°.07×143°.2E±0°.1, h30^{km}±7^{km}, mb4.4/12 Error ellipse: s-maj=17.6km s-min=8.4km az=114.0*
*IDC **09** 04:27:49.7±2.5, 39°.34N×142°.88E, h41^{km}±23^{km}, mb3.7/20, mb1 3.8/24, mb1mx3.7/67, mbtmp3.9/24, ML3.6/3, MS3.1/10, Ms1 3.1/10, ms1mx2.9/51, Error ellipse: s-maj=19.8km s-min=15.4km az=97.0*
ISC 09 04:27:44.4±2.0, **39°.27N**±0°.04×**142°.89E**±0°.06, **h7**^{km}±11^{km}, **n75**, σ**1^s.85**/76, **mb4.2**/26, **MS3.0**/5, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	0.88	290	P	Pg	04 28 00.4	-0.9
MIYJ				eS	Sg	04 28 12.5	-0.3
OFUJ	Ofunato	0.97	259	P	Pg	04 28 02.0	-1.0
JTH	Tanohata	1.03	310	P	Pg	04 28 03.1	-1.2
JTH				eS	Sg	04 28 17.1	-0.6
JKMT	Kesennumamotoy	1.19	248	P	Pn	04 28 05.7	-1.8
JKMT				S	Sb	04 28 20.7	-2.3
JOM	Ohasama	1.25	280	P	Pn	04 28 06.6	-1.7
JOM				S	Sb	04 28 23.2	-1.5
JMK	Ichinoseki	1.34	257	P	Pn	04 28 07.8	-1.7
JMK				eS	Sb	04 28 24.8	-2.3
JKZ	Kuzumaki	1.40	301	P	Pn	04 28 09.2	-1.2
JIO	Ouri	1.45	236	P	Pn	04 28 09.3	-1.8
JIO				eS	Sn	04 28 27.4	-2.9
JANG	Nango	1.52	317	P	Pn	04 28 10.6	-1.5
JANG				eS	Sn	04 28 30.6	-1.6
JRG	Rokugo	1.75	275	P	Pn	04 28 15.5	+0.3
JMM	Marumori	2.16	230	Pn	Pn	04 28 19.9	-0.9
ERM	Erimo	2.75	4		Pn	04 28 28.0	-0.8
JYT	Yasato	3.71	216	Pn	Pn	04 28 42.4	+0.3
JEW	Eniwo	3.73	344		Pn	04 28 43.7	+1.4
JSD	Sado	3.83	253	Pn	Pn	04 28 47.5	+3.8
MJAR	Matsushiro Arr	4.59	235	P	Pn	04 28 56.2	+1.9
	1.1nm,0.3s,baz=39,slow=13,SNR=23						
MJAR				LR	LR	04 30 51.4	
	comp=Z,168nm,18.6s,baz=35,slow=39						
MJAR	Matsushiro Arr	4.59	235		Pn	04 28 56.8	+2.4
MAJO	Matsushiro	4.60	235		Pn	04 28 56.7	+2.4
MAT	Matsushiro	4.60	235	P	Pn	04 28 56.6	+2.3
MAT				eS	Sn	04 29 49.8	+1.8
ASAJ	Asahikawa	4.84	358	P	Pn	04 28 59.2	+1.5
	1.9nm,0.3s,baz=202,slow=8.1,SNR=3.3						
ASAJ				S	Sn	04 29 54.1	+0.1
	0.6nm,0.3s,baz=202,slow=16,SNR=1.4						
ASAJ				LR	LR	04 31 18.8	
	comp=Z,386nm,20.8s,baz=168,slow=44						
JKA	Kamikawa-asahi	4.84	358	Pn	Pn	04 28 57.9	+0.2
JGF	Kuroka	5.73	232		Pn	04 29 11.7	+1.8
JHJ	Hachijo jima 2	6.63	203	P	Pn	04 29 25.5	+3.2
	15nm,0.3s,baz=64,slow=18,SNR=1.9						
JHJ				S	Sn	04 30 32.9	-5.3
	8.6nm,0.3s,baz=66,slow=22,SNR=1.3						
JWT	Wachi	7.17	239	Pn	Pn	04 29 33.2	+3.5
JHS	Saijyo	8.89	244	Pn	Pn	04 29 57.1	+3.8
JMN	Monobe	9.12	235	Pn	Pn	04 29 59.8	+3.4
USRK	Ussuriysk Ar.	9.52	305	P	Pn	04 30 05.2	+3.5
	baz=77,slow=20,SNR=2.5						
USRK	Ussuriysk Ar.	9.52	305	Pn	Pn	04 30 05.8	+4.1
KSRS	Korea Array	11.89	266	P	Pn	04 30 40.4	+6.1
	0.1nm,0.3s,baz=67,slow=14,SNR=1.5						
KSRS				LR	LR	04 34 25.1	
	comp=Z,57nm,19.8s,baz=64,slow=33						
JCJ	Chichijima	12.16	183	LR	LR	04 39 15.6	
	comp=Z,19nm,18.2s,baz=110,slow=56						
KLR	Kul'dur	12.74	325	P	Pn	04 30 50.8	+4.8
	0.1nm,0.3s,baz=118,slow=19,SNR=1.6						
PETK	Petropavlovsk-	17.17	31	LR	LR	04 37 38.1	
	comp=Z,39nm,21.4s,baz=207,slow=34						
MA2	Magadan	20.93	11	LR	LR	04 42 12.4	
	comp=Z,38nm,18.8s,baz=288,slow=41						
YAK	Yakutsk	24.18	345	LR	LR	04 43 08.4	
	comp=Z,75nm,19.7s,baz=258,slow=38						
SEY	Seymchan	24.38	11	P	P	04 33 02.9	+0.1
	7.2nm,0.8s,baz=195,slow=6.6,SNR=8.6						
SEY				LR	LR	04 43 57.7	
	comp=Z,41nm,19.7s,baz=205,slow=40						
SONM	Songino Array	27.58	300	P	P	04 33 31.9	-0.3
	1.1nm,0.6s,baz=91,slow=8.2,SNR=4.5						
H11N2	WAKE ISLAND Hy	28.42	126	T	T	05 03 14.5	
	baz=319,slow=74,SNR=420						
H11N1	WAKE ISLAND Hy	28.43	126	T	T	05 03 21.0	
	baz=319,slow=74,SNR=286						
H11N3	WAKE ISLAND Hy	28.43	126	T	T	05 03 20.7	
	baz=319,slow=74,SNR=324						
DAV	Davao City (W)	35.65	210	LR	LR	04 48 29.0	
	comp=Z,27nm,19.8s,baz=88,slow=35						
ZAA0	Zalesovo Array	41.30	311	P	P	04 35 31.6	+1.3
ZALV	Zalesovo Beam	41.30	311	P	P	04 35 30.0	-0.3
	1.4nm,0.5s,baz=78,slow=7.5,SNR=2.6						
ZALV	Zalesovo Beam	41.30	311		P	04 35 29.8	-0.5
CMAR	Chiang Mai Arr	43.21	254	P	P	04 35 47.0	+0.8
	1.2nm,0.3s,baz=67,slow=6.8,SNR=4.5						
MK31	Makanchi Array	43.95	300	P	P	04 35 50.4	-1.5
MKAR	Makanchi Array	43.95	300	P	P	04 35 51.4	-0.6
	1.3nm,0.5s,baz=80,slow=8.9,SNR=8.6						
KURK	Kurchatov	45.50	307	P	P	04 36 03.1	-1.1
KURK				IAmb	IAmb	04 36 16.1	
	comp=Z,5.7nm,0.8s						
KURBB	Kurchatov Arra	45.57	306	P	P	04 36 04.1	-0.6
	comp=Z,1.9nm,0.5s,baz=80,slow=8.2,SNR=9.5						
IL31		46.99	33	P	P	04 36 15.7	0.0
IL31				IAmb	IAmb	04 36 34.4	
	comp=Z,3.3nm,0.8s						
ILAR	Eielson Array	46.99	33	P	P	04 36 15.3	-0.4
	comp=Z,0.8nm,0.7s,baz=265,slow=6.1,SNR=6.2						
ILAR	Eielson Array	46.99	33	P	P	04 36 14.1	-1.6
BVAR	Borovoye Array	49.95	311	P	P	04 36 38.0	-0.8
	comp=Z,1.1nm,0.8s,baz=64,slow=12,SNR=4.7						
AAK	Ala-Archa	50.48	297	P	P	04 36 44.3	+1.3
	comp=Z,1.8nm,0.5s,baz=135,slow=1.4,SNR=2.7						
KK31	Karatay Array	53.03	299	P	P	04 37 01.4	-0.6
KK31				IAmb	IAmb	04 37 07.5	
	comp=Z,2.3nm,0.7s						
KKAR	Karatay Array	53.03	299	P	P	04 37 01.0	-1.0
ARU	Arti	55.47	318	P	P	04 37 19.2	-0.3
	comp=Z,1.9nm,0.4s,baz=151,slow=8.1,SNR=4.5						
ARU	Arti	55.47	318	P	P	04 37 18.5	-1.0
CHGR	Chuyangaron	55.77	295	P	P	04 37 20.9	-1.2
ABKAR	Akbulak array	57.40	309	P	P	04 37 32.6	-0.7
AKTO	Aktyubinsk	58.06	311	P	P	04 37 39.2	+1.3
	comp=Z,1.1nm,0.6s,baz=69,slow=12,SNR=7.6						
WB0	Warramunga Arr	59.27	189	P	P	04 37 46.3	-0.3
WB0				IAmb	IAmb	04 38 05.7	
	comp=Z,3.4nm,1.0s						
WR0	Warramunga Arr	59.44	189	P	P	04 37 47.6	-0.2
WB2	Warramunga Arr	59.44	189	P	P	04 37 46.5	-1.3
WB2				IAmb	IAmb	04 38 05.5	
	comp=Z,4.9nm,1.1s						
WRA	Warramunga Arr	59.45	189	P	P	04 37 47.9	0.0
	comp=Z,2.0nm,0.9s,baz=5.9,slow=7.0,SNR=8.5						
WRA	Warramunga Arr	59.45	189	P	P	04 37 46.7	-1.2
ARCES	ARCESS Array B	62.31	339	P	P	04 38 08.6	+1.7
	comp=Z,5.5nm,0.9s,baz=50,slow=9.9,SNR=3.1						
ASAR	Alice Springs	63.17	189	P	P	04 38 15.2	+2.2
	comp=Z,0.2nm,0.4s,baz=356,slow=5.6,SNR=2.7						
FINES	FINESS Array B	67.38	332	P	P	04 38 39.8	-0.1
	comp=Z,0.8nm,0.7s,baz=52,slow=9.0,SNR=5.9						
FINES	FINESS Array B	67.38	332	P	P	04 38 39.4	-0.5
SUMG	Summit	68.44	0	P	P	04 38 46.6	-0.3
SUMG				IAmb	IAmb	04 39 00.3	
	comp=Z,3.2nm,1.0s						
HFS	Hagfors	72.52	336	P	P	04 39 12.4	+0.9
	comp=Z,2.5nm,0.8s,baz=97,slow=4.8,SNR=1.3						
NOA	NORSAR Array B	72.57	338	P	P	04 39 11.4	-0.5
	comp=Z,2.1nm,1.0s,baz=26,slow=4.3,SNR=2.2						
NVAR	Mina Array Bea	72.73	54	P	P	04 39 13.5	0.0
	comp=Z,0.4nm,0.7s,baz=295,slow=8.6,SNR=2.4						
AKASG	Malin Array Be	73.23	323	P	P	04 39 15.6	-0.3
	comp=Z,0.9nm,0.6s,baz=47,slow=5.8,SNR=1.7						
TXAR	Lajitas Array	87.84	53	P	P	04 40 34.8	0.0
	comp=Z,0.3nm,0.8s,baz=243,slow=0.2,SNR=2.6						
TXAR				LR	LR	05 13 59.9	
	comp=Z,33nm,21.1s,baz=0.0,slow=32						

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*PDG **09** 04:28:12.6±0.1, 43°.00N×17°.93E, h2^{km}, ML2.5/13, Error ellipse: s-maj=0.2km s-min=0.2km az=90.0*
*BEO **09** 04:28:13.5±0.3, 42°.97N×17°.88E, h5^{km}±3^{km}, ML2.3/11*
*RHSSO **09** 04:28:13.4±0.2, 42°.97N×17°.93E, h3^{km}±2^{km}, ML2.4/13*
ISC 09 04:28:12.9±1.0, **42°.98N**±0°.02×**17°.92E**±0°.01, **h5**^{km}±9^{km}, **n67**, σ**1^s.05**/123, **9C-10D, Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STON	Ston	0.19	236	ePg	Pg	04 28 16.6	0.0
STON				eSg	Sg	04 28 20.1	+0.9
STON	Ston	0.19	236	⇓iPg	Pg	04 28 16.6	0.0
STON				eSg	Sg	04 28 20.0	+0.9
STON	Ston	0.19	236	ePg	Pg	04 28 16.6	0.0
STON				Sg	Sg	04 28 19.7	+0.5
DBRK	Dubrovnik	0.35	151	ePg	Pg	04 28 19.8	+0.1
DBRK				Sg	Sg	04 28 25.2	+0.9
TREB	Trebinje	0.41	129	ePg	Pg	04 28 20.6	-0.2
TREB				eSg	Sg	04 28 27.2	+1.0
TREB	Trebinje	0.41	129	⇑iPg	Pg	04 28 20.5	-0.2
TREB				eSg	Sg	04 28 27.2	+1.0
BRY	Bratogost	0.46	99	⇑iPg	Pg	04 28 21.3	-0.5
BRY				eSg	Sg	04 28 28.6	+0.8
BRY	Bratogost	0.46	99	⇑iPg	Pg	04 28 21.2	-0.5
BRY				eSg	Sg	04 28 28.4	+0.6
HCY	Herceg Novi	0.68	141	⇑iPg	Pg	04 28 25.3	-0.6
HCY				eSg	Sg	04 28 35.6	+0.9
HCY	Herceg Novi	0.68	141	⇑iPg	Pg	04 28 25.3	-0.6
HCY				i Sg	Sb	04 28 36.3	-0.6
MAKA	Makarska	0.73	295	ePg	Pg	04 28 25.3	-1.5
MAKA				Sg	Sg	04 28 36.8	+0.6
UPM	Unac-Piva	0.76	72	⇓iPg	Pg	04 28 26.0	-1.4
UPM				eSg	Sg	04 28 38.1	+0.9
UPM	Unac-Piva	0.76	72	ePg	Pg	04 28 26.1	-1.4
UPM				i Sg	Sg	04 28 38.1	+0.9
RICI	Ricice	0.77	312	ePg	Pg	04 28 26.0	-1.7
RICI				Sg	Sg	04 28 37.9	+0.3
NKME	Niksic	0.79	105	⇑iPg	Pg	04 28 27.6	-0.4
NKME				i Sg	Sb	04 28 39.6	-0.5
NKY	Niksic	0.81	101	⇑iPg	Pg	04 28 27.6	-0.8
NKY				i Sg	Sb	04 28 40.1	-0.6
CEME	Cevo	0.85	120	ePg	Pg	04 28 28.0	-1.2
CEME				i Sg	Sb	04 28 41.9	0.0
BUM	Brajici-Budva	0.99	133	⇓iPg	Pg	04 28 31.0	-0.8
BUM				i Sg	Sn	04 28 46.7	-1.1
HVAR	Hvar	1.09	281	ePg	Pb	04 28 32.0	-2.2
HVAR				Sg	Sg	04 28 48.4	+0.3
PDG	Podgorica	1.13	119	ePg	Pb	04 28 33.7	-1.1
PDG				eSg	Sn	04 28 51.4	+0.3
PDG	Podgorica	1.13	119	ePg	Pb	04 28 33.2	-1.6
PDG				eSg	Sb	04 28 49.4	-0.3
TTG	Podgorica	1.13	119	⇓iPg	Pb	04 28 33.5	-1.3
TTG				i Sg	Sn	04 28 51.3	+0.2
PLE	Pljevlja	1.13	71	⇑iPg	Pb	04 28 33.5	-1.5
PLE				i Sg	Sn	04 28 50.9	-0.5
KOME	Kolasin	1.18	96	⇓iPg	Pb	04 28 34.5	-1.3
KOME				i Sg	Sn	04 28 52.8	+0.2
DRME	Dracevica, Mon	1.23	130	ePg	Pn	04 28 35.5	-1.2
DRME				eSg	Sb	04 28 52.4	-0.2
DRME	Dracevica, Mon	1.23	130	⇑iPg	Pn	04 28 35.4	-1.2
DRME				i Sg	Sn	04 28 54.7	+1.2
RUDO	Rudo	1.24	58	⇓iPg	Pn	04 28 35.1	-1.7
RUDO				eSg	Sb	04 28 52.8	-0.2
HAPS	Han Pijesak,Bl	1.34	34	ePg	Pn	04 28 37.5	-0.8
HAPS				eSg	Sb	04 28 55.9	0.0
BBLS	Lazići	1.40	50	ePg	Pn	04 28 38.7	-0.4
BBLS				eSg	Sg	04 28 58.6	+0.7
BBLS	Lazići	1.40	50	ePg	Pn	04 28 38.5	-0.6
BBLS				eSg	Sn	04 28 57.8	-0.2
ULC	Ulcinj	1.41	135	⇓iPg	Pn	04 28 38.1	-1.1
ULC				i Sg	Sg	04 29 01.1	+2.9
IVA	Berane	1.46	94	⇓iPg	Pn	04 28 39.4	-0.5
IVA				i Sg	Sg	04 29 02.2	+2.6
KIJV	Kijevo	1.50	313	ePn	Pn	04 28 39.5	-0.9
KIJV				Sn	Sg	04 29 02.0	+0.8
SJES	Sjenica	1.53	79	ePg	Pb	04 28 41.7	-0.1
SJES				eSg	Sg	04 29 04.0	+1.9
PVY	Plav	1.55	104	⇓iPg	Pn	04 28 41.3	+0.1
PVY				i Sg	Sg	04 29 05.5	+2.8
MGRS	Mrkonjic Grad	1.56	337	ePn	Pn	04 28 41.7	+0.4
MGRS				eSn	Sg	04 29 03.2	+0.2
ZIRJ	Zirje	1.79	293	ePn	Pn	04 28 44.3	-0.1
ZIRJ				Sn	Sb	04 29 08.7	-0.1
MORI	Morici	1.84	300	ePn	Pn	04 28 45.3	+0.2
BLY	Banja Luka	1.85	344	ePg	Pb	04 28 48.1	+1.0
BLY				eSg	Sg	04 29 13.1	+0.9
BLY	Banja Luka	1.85	344	ePn	Pb	04 28 46.5	-0.6
BLY				eSn	Sb	04 29 10.3	-0.2
DIVS	Divibare	1.88	53	ePn	Pn	04 28 46.2	+0.5
DIVS				eSg	Sg	04 29 14.1	+0.9
DIVS	Divibare	1.88	53	ePn	Pn	04 28 45.8	+0.1
DIVS				eSn	Sn	04 29 09.8	0.0
MRAK	Mrakovica	2.16	340	⇓iPn	Pn	04 28 50.8	+1.2
MRAK				eSn	Sn	04 29 17.5	+0.7
PRIJ	Prijedor	2.18	337	ePn	Pn	04 28 50.1	+0.4
PRIJ				eSn	Sn	04 29 18.1	+1.1
TRUS	Trudelj	2.19	55	ePn	Pn	04 28 50.4	+0.5
UDBI	Udbina	2.20	316	ePn	Pb	04 28 52.1	-1.0
UDBI				Sn	Sb	04 29 21.1	+0.5
GRUS	Gruza	2.23	65	ePn	Pn	04 28 51.2	+0.8
GRUS				eSg	Sg	04 29 25.1	+0.6
DUGI	Dugi Otok	2.31	297	i Pn	Pn	04 28 53.0	+1.4
DUGI				Sn	Sn	04 29 21.8	+1.4
SELS	Selova	2.36	83	ePn	Pn	04 28 53.2	+1.0
PLIT	Plitvice	2.52	320	ePn	Pn	04 28 56.2	+1.7
FRGS	Fruska Gora	2.57	31	ePn	Pn	04 28 56.4	+1.3
FRGS				eSn	Sn	04 29 28.1	+1.3
NVLJ	Novalja	2.72	307	ePn	Pn	04 28 58.2	+1.1
NVLJ				Sn	Sb	04 29 33.5	-2.0
MOSL	Moslavina	2.76	343	ePn	Pn	04 28 58.1	+0.3
BARS	Barje	2.87	92	ePn	Pn	04 29 01.1	+1.9
RABC	Rab	2.88	309	ePn	Pn	04 29 01.0	+1.7
OZLJ	Ozalj	3.17	327	ePn	Pn	04 29 02.0	-1.2
KALN	Kalnik	3.32	342	ePn	Pn	04 29 03.8	-1.6
CRES	Cresnjev	3.35	329	ePn	Pn	04 29 06.9	+1.1
CRES				eSn	Sn	04 29 46.2	+0.3
SMRN	Sveta Marina	3.41	308	ePn	Pn	04 29 07.5	+1.0
RIY	Rijeka	3.41	315	ePn	Pn	04 29 08.0	+1.4
RIY				eSn	Sn	04 29 47.5	+0.2
LOBO	Lobor	3.44	338	ePn	Pn	04 29 06.5	-0.6
CEY	Cerknica	3.73	319	ePn	Pn	04 29 11.7	+0.7
CEY				eSn	Sn	04 29 55.3	0.0
SOKA	Soboth	4.23	332	ePn	Pn	04 29 17.8	-0.2
	0.8nm,0.1s						
SOKA				eSn	Sn	04 30 08.4	+0.6
	1.2nm,0.2s						
OBKA	Obir	4.27	327	ePn	Pn	04 29 19.1	+0.5
	0.3nm,0.2s						
OBKA				eSn	Sn	04 30 11.3	+2.6
	0.6nm,0.2s						
ARSA	Arzberg	4.59	339	ePn	Pn	04 29 24.2	+1.2
	0.7nm,0.2s						
ARSA				eSn	Sn	04 30 18.0	+1.3
	0.5nm,0.2s						
ABTA	Abfaltersbach	5.38	316	i Pn	Pn	04 29 34.3	+0.5
	0.7nm,0.3s						
ABTA				eSn	Sn	04 30 37.4	+1.3
	0.1nm,0.1s						
MOA	Molln	5.51	333	ePn	Pn	04 29 36.0	+0.5
	0.1nm,0.1s						
MOA				eSn	Sn	04 30 40.3	+1.2
	1.0nm,0.3s						

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*IDC **09** 04:32:00.3±7.1, 34°.57N×136°.68E, h118^{km}±108^{km}, mb3.5/2, mb1 3.7/3, mb1mx3.0/58, mbtmp3.8/3, ML2.7/1, MS3.4/2, Ms1 3.4/2, ms1mx2.7/39, Error ellipse: s-maj=95.5km s-min=51.3km az=30.0*
*JMA **09** 04:32:04.2±0.1, 36°.20N×137°.30E, h252^{km}±2^{km}, M3.0*
ISC 09 04:32:03.3±1.4, **36°.2N**±0°.1×**137°.30E**±0°.09, **h258**^{km}±9^{km}, **n20**, σ**0^s.57**/27, **Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JGN	Niukaw	0.04	24	P	Pn	04 32 36.6	+0.2
JYTA	Yamagatataniai	0.75	218	P	Pn	04 32 38.1	+0.1
JYTA				eS	S	04 33 04.7	-0.5
JKG	Kaga	0.78	277	P	Pn	04 32 38.4	+0.4
MAT	Matsushiro	0.82	64	P	Pn	04 32 38.4	+0.2
MAT				S	S	04 33 06.0	+0.3
MAT	Matsushiro	0.82	64	P	Pn	04 32 38.6	+0.4
MAT				eS	S	04 33 05.4	-0.3
MJAR	Matsushiro Arr	0.82	64	P	Pn	04 32 38.1	-0.1
	1.8nm,0.3s,baz=209,slow=19,SNR=30						
MJAR				S	S	04 33 07.1	+1.4
	0.2nm,0.3s,baz=218,slow=19,SNR=6.9						
JAO	Obara	0.92	182	P	Pn	04 32 38.8	-0.1
JNY	Yasuok	0.95	151	P	Pn	04 32 38.8	-0.2
JNY				eS	S	04 33 06.2	-0.9
JYN	Shimob	1.23	124	P	Pn	04 32 41.1	+0.5
JRY	Ryogami san	1.31	97	P	Pn	04 32 41.8	+0.7
JRY				eS	S	04 33 10.4	-0.4
HMMJ	Hamamatsu 2	1.37	165	P	Pn	04 32 41.9	+0.4
HMMJ				eS	S	04 33 11.3	-0.3
JHU	Hanno	1.64	101	P	Pn	04 32 44.0	+0.6
JHU				eS	S	04 33 14.9	-0.2
JOD2	Odawara 2	1.73	122	P	Pn	04 32 44.8	+0.7
JAG	Ashikaga	1.76	82	P	Pn	04 32 44.3	0.0
JAG				eS	S	04 33 16.1	-0.6
JIE	Ise	1.86	195	P	Pn	04 32 46.1	+0.9
JKN2	Miekihoku	2.12	204	P	Pn	04 32 48.2	+0.7
JOW	Kunigami	12.09	222	LR	LR	04 37 57.4	
	comp=Z,124nm,19.3s,baz=4.0,slow=34						
WRA	Warramunga Arr	55.89	183	P	P	04 41 14.1	-0.5
	1.4nm,0.4s,baz=359,slow=7.6,SNR=26						
ASAR	Alice Springs	59.62	184	P	P	04 41 40.5	0.0
	0.2nm,0.3s,baz=8.0,slow=15,SNR=2.2						
AKASG	Malin Array Be	72.90	321	LR	LR	05 16 10.6	
	comp=Z,38nm,18.4s,baz=240,slow=36						

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*NEIC **09** 04:46:26.9, 23°.57S×68°.83W, h110^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.87; $M_{\theta\theta}$-0.01; $M_{\phi\phi}$0.88; $M_{r\theta}$0.17; $M_{\theta\phi}$-0.09; $M_{\phi r}$-0.79; Fault plane solution: $M_0$1.19000×10^{17} NP1: ϕ_s179.30000°, δ24.01000°, λ-81.54000°. NP2: ϕ_s350.05000°, δ66.26000°, λ-93.75000°. Principal axes: T 1.2003, Plg21.0000°, Azm83.0000°; N -0.0167, Plg3.0000°, Azm352.0000°; P -1.1836, Plg69.0000°, Azm253.0000°;*
*VAO **09** 04:46:26.7±0.2, 23°.46S×68°.76W, h89^{km}, mb5.3*
*NEIC **09** 04:46:27.9±2.4, 23°.58S±0°.05×68°.95W±0°.06, h101^{km}±3^{km}, mb5.6/526, Mwr5.3/52, Mww5.3, Mwr5.3(GUC), Error ellipse: s-maj=7.9km s-min=6.4km az=107.0*
*GUC **09** 04:46:27.8±1.2, 23°.48S×69°.03W, h116^{km}±6^{km}, ML5.4, MW5.3*
*MOS **09** 04:46:29.3±1.2, 23°.23S×68°.86W, h119^{km}, mb5.6/25, Error ellipse: s-maj=13.2km s-min=6.9km az=98.7*
*GCMT **09** 04:46:29.7±0.1, 23°.51S±0°.01×69°.23W±0°.01, h123^{km}, MW5.3/130, Moment Tensor Solution. s110,c166; s130,c213; Duration: 1^s.1 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.78±.01; $M_{\theta\theta}$-0.05±.02; $M_{\phi\phi}$0.83±.02; $M_{r\theta}$-0.00±.01; $M_{\theta\phi}$0.10±.02; $M_{\phi r}$-0.83±.01; Best double couple: $M_0$1.16200×10^{17} NP1: ϕ_s191.00000°, δ23.00000°, λ-81.00000°. NP2: ϕ_s2.00000°, δ68.00000°, λ-94.00000°. Principal axes: T 1.1910, Plg23.0000°, Azm94.0000°; N -0.0580, Plg3.0000°, Azm3.0000°; P -1.1330, Plg67.0000°, Azm265.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **09** 04:46:29.2±0.3, 23°.41S×68°.82W, h112^{km}±2^{km}, mb4.9/32, mb1 4.9/36, mb1mx4.9/39, mbtmp5.2/36, MS4.2/14, Ms1 4.1/14, ms1mx4.0/18 Error ellipse: s-maj=10.3km s-min=8.0km az=79.0*
*NEIC **09** 04:46:30, 23°.47S×68°.93W, h110^{km}, Moment Tensor Solution. Duration: 6^s.0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.96; $M_{\theta\theta}$-0.10; $M_{\phi\phi}$1.06; $M_{r\theta}$-0.03; $M_{\theta\phi}$-0.06; $M_{\phi r}$-0.70; Fault plane solution: $M_0$1.24000×10^{17} NP1: ϕ_s173.00000°, δ28.00000°, λ-96.00000°. NP2: ϕ_s0.00000°, δ62.00000°, λ-86.00000°. Principal axes: T 1.2801, Plg17.0000°, Azm88.0000°; N -0.0945, Plg3.0000°, Azm179.0000°; P -1.1856, Plg72.0000°, Azm278.0000°;*
ISC 09 04:46:28.3±0.2, **23°.47S**±0°.03×**68°.90W**±0°.03, **h108**^{km}±1^{km}, **h108**^{km}**:pP-P**, **n1034**, σ**1^s.32**/927, **mb5.5**/322, **10C-16D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB15	IPOC Station P	0.58	296	⇓iP	Pn	04 46 45.3	-0.4
PB15				i S	Sn	04 46 58.5	-0.4
PB15	IPOC Station P	0.58	296		Pn	04 46 45.1	-0.6
PB15				Sn	Sn	04 46 57.8	-1.1
PB15	IPOC Station P	0.58	296	i P	Pn	04 46 45.0	-0.8
AF01	San Pedro de A	0.84	53		Pn	04 46 49.3	+1.2
LVC	Limon Verde	0.85	360	P	Pn	04 46 48.6	+0.3
	4µm,0.3s,baz=152,slow=8.8						
LVC				S	Sn	04 47 04.4	+1.1
	19µm,0.3s,baz=107,slow=19,SNR=44						
LVC				LR	LR	04 47 05.5	
	comp=Z,4µm,18.8s,baz=36,slow=45						
LVC	Limon Verde	0.85	360	i P	Pn	04 46 48.4	+0.2
LVC				i S	Sn	04 47 03.0	-0.3
LVC	Limon Verde	0.85	360		Pn	04 46 48.6	+0.3
LVC				Sn	Sn	04 47 03.7	+0.4
LVC	Limon Verde	0.85	360	i P	Pn	04 46 48.0	-0.3
PB06	IPOC Station P	0.97	321	⇓iP	Pn	04 46 49.0	-0.3
PB06				i S	Sn	04 47 04.5	-0.5
PB06				IAML		04 47 05.9	
	comp=E,178µm,0.5s						
PB06	IPOC Station P	0.97	321		Pn	04 46 48.6	-0.7
PB06				Sn	Sn	04 47 04.2	-0.8
PB06	IPOC Station P	0.97	321	i P	Pn	04 46 49.0	-0.3
PB05	IPOC Station P	1.34	297	i P	Pn	04 46 52.2	-1.0
PB05				i S	Sn	04 47 10.0	-2.1

PB05				IAML		04 47 12.7	
	comp=E,56µm,0.8s						
PB05	IPOC Station P	1.34	297	*i* P	Pn	04 46 52.0	-1.2
PB10	IPOC Station P	1.52	268	⇓*i*P	Pn	04 46 53.8	-1.3
PB10				*i* S	Sn	04 47 13.4	-2.2
PB10				IAML		04 47 15.5	
	comp=E,44µm,0.7s						
PB10	IPOC Station P	1.52	268		Pn	04 46 53.9	-1.3
PB10	IPOC Station P	1.52	268	*i* P	Pn	04 46 53.0	-2.2
PB04	IPOC Station P	1.61	314	⇓*i*P	Pn	04 46 55.6	-0.8
PB04				*i* S	Sn	04 47 16.1	-1.8
PB04				IAML		04 47 18.8	
	comp=N,55µm,0.2s						
PB04	IPOC Station P	1.61	314		Pn	04 46 55.5	-1.0
PB04	IPOC Station P	1.61	314	*i* P	Pn	04 46 55.0	-1.5
PB03	IPOC Station P	1.61	331	⇓*i*P	Pn	04 46 56.3	-0.3
PB03				*i* S	Sn	04 47 17.1	-0.9
PB03				IAML		04 47 18.6	
	comp=E,62µm,0.1s						
PB03	IPOC Station P	1.61	331	*i* P	Pn	04 46 56.0	-0.5
PB14	IPOC Station P	1.79	230	⇑*i*P	Pn	04 46 57.4	-1.5
PB14				*e*S	Sn	04 47 18.9	-3.2
PB14				IAML		04 47 21.4	
	comp=E,39µm,0.4s						
PB14	IPOC Station P	1.79	230		Pn	04 46 57.3	-1.5
PB14	IPOC Station P	1.79	230	*i* P	Pn	04 46 57.0	-1.9
PB07	IPOC Station P	1.96	332	⇓*i*P	Pn	04 47 00.3	-0.5
PB07				*i* S	Sn	04 47 23.2	-2.4
PB07				IAML		04 47 26.5	
	comp=E,26µm,0.4s						
PB07	IPOC Station P	1.96	332	Pn	Pn	04 47 00.5	-0.3
PB07	IPOC Station P	1.96	332	*i* P	Pn	04 47 00.0	-0.8
PB02	IPOC Station P	2.33	337	⇓*i*P	Pn	04 47 04.9	-0.5
PB02				*i* S	Sn	04 47 33.2	-0.8
PB02	IPOC Station P	2.33	337	*i* P	Pn	04 47 05.0	-0.5
PB01	IPOC Station P	2.47	347	⇓*i*P	Pn	04 47 07.1	-0.3
PB01				*e*S	Sn	04 47 34.8	-2.6
PB01				IAML		04 47 42.4	
	comp=N,17µm,0.2s						
PB01	IPOC Station P	2.47	347	Pn	Pn	04 47 07.4	0.0
PB01	IPOC Station P	2.47	347	*i* P	Pn	04 47 07.0	-0.3
PATCX	Punta Patache	2.88	336	*i* P	Pn	04 47 11.2	-1.5
PATCX				IAML		04 48 11.4	
	comp=E,16µm,0.8s						
PATCX	Punta Patache	2.88	336	Pn	Pn	04 47 11.3	-1.4
PATCX	Punta Patache	2.88	336	*i* P	Pn	04 47 11.0	-1.7
TA01	Diego Aracena	3.12	337	⇓*i*P	Pn	04 47 13.9	-1.9
TA01				IAML		04 48 15.9	
	comp=E,6µm,0.5s						
TA01	Diego Aracena	3.12	337		Pn	04 47 14.1	-1.8
TA01	Diego Aracena	3.12	337	*i* P	Pn	04 47 14.0	-1.8
HJA	Humahuaca	3.22	86	*i* P	Pn	04 47 21.0	+3.5
HMBC	Humberstone	3.30	344	⇓*i*P	Pn	04 47 16.7	-1.7
HMBC				IAML		04 48 18.3	
	comp=E,9µm,0.4s						
PB08	IPOC Station P	3.32	356	*i* P	Pn	04 47 18.7	-0.1
PB08	IPOC Station P	3.32	356	Pn	Pn	04 47 18.9	0.0
PB08	IPOC Station P	3.32	356	*i* P	Pn	04 47 19.0	+0.2
SLA	San Lorenzo	3.35	113	*i* P	Pn	04 47 22.0	+3.0
AC02	Maricunga	3.36	183	⇑*i*P	Pn	04 47 19.0	-0.5
AC02	Maricunga	3.36	183	Pn	Pn	04 47 17.9	-1.6
AC02	Maricunga	3.36	183	*i* P	Pn	04 47 19.0	-0.5
TA02	Huaiquique	3.38	340	Pn	Pn	04 47 17.7	-1.6
TA02	Huaiquique	3.38	340	*i* P	Pn	04 47 17.0	-2.3
YJA	Yavi	3.38	68	*i* P	Pn	04 47 23.0	+3.3
FSA	Cafayete	3.74	135	*i* P	Pn	04 47 26.0	+1.7
PB11	IPOC Station P	3.75	349	Pn	Pn	04 47 23.4	-1.1
PB11	IPOC Station P	3.75	349	*i* P	Pn	04 47 23.0	-1.5
PSGCX	Pisagua	4.01	343	Pn	Pn	04 47 25.8	-2.2
PSGCX	Pisagua	4.01	343	*i* P	Pn	04 47 25.0	-2.9
GO03	Copiap	4.28	196		Pn	04 47 28.7	-2.7
GO03	Copiap	4.28	196	*i* P	Pn	04 47 28.0	-3.4
AHML	Horco Molle	4.62	136	*i* P	Pn	04 47 37.0	+1.0
TINO	Tinogasta	4.73	166	*i* P	Pn	04 47 39.0	+1.4
PB12	IPOC Station P	5.01	344	*i* P	Pn	04 47 38.0	-3.3
AC04	Llanos de Chal	5.11	202		Pn	04 47 37.4	-5.1
AC04	Llanos de Chal	5.11	202	*i* P	Pn	04 47 37.0	-5.5
PB16	IPOC Station P	5.14	354		Pn	04 47 43.7	+0.2
AP01	Chacalluta	5.25	345		Pn	04 47 42.2	-2.2
AP01	Chacalluta	5.25	345	*i* P	Pn	04 47 43.0	-1.4
VCA	Vinchina	5.29	173	*i* P	Pn	04 47 45.0	-0.1
LCO	Las Campanas	5.75	196	P	Pn	04 47 46.8	-4.7
LCO	Las Campanas	5.75	196		Pn	04 47 46.8	-4.7
LCO	Las Campanas	5.75	196	*i* P	Pn	04 47 47.0	-4.5
AGUA	GUANDACOL	6.01	177	*i* P	Pn	04 47 54.0	-0.8
ACLC	CERRO LA CRUZ	6.19	164	*i* P	Pn	04 47 56.0	-1.3
ACDV	Cuesta del Vie	6.68	182	*i* P	Pn	04 48 02.0	-2.0
AROD	Rodeo	6.69	184	*i* P	Pn	04 48 04.0	-0.3
CO05	La Serena	6.76	197	Pn	Pn	04 47 59.1	-5.8
GO04	Tololo Observa	6.89	194		Pn	04 48 02.4	-4.5
ACCO	Cerro Coronel	7.09	181	*i* P	Pn	04 48 07.0	-2.7
LPAZ	La Paz	7.18	6	P	Pn	04 48 11.9	+0.7
	comp=E,3.1nm,0.3s,baz=188,slow=8.6,SNR=69						
LPAZ	La Paz	7.18	6	*e*P	Pn	04 48 09.6	-1.6
LPAZ	La Paz	7.18	6		Pn	04 48 11.5	+0.3
AVFE	Valle Fertil	7.28	170	*i* P	Pn	04 48 10.0	-2.0
ACHE	Chepes	7.92	166	*i* P	Pn	04 48 19.0	-1.8
RTLS	Leoncito	8.31	182	*i* P	Pn	04 48 23.0	-3.2
RTCV	Cerro Valdivia	8.37	178	*i* P	Pn	04 48 24.0	-2.8
AUSP	Uspallata	8.73	183	*i* P	Pn	04 48 29.0	-3.0
ASAL	Salagasta	9.09	180	*i* P	Pn	04 48 34.0	-2.6
ARCO	CERRO ARCO	9.34	180	*i* P	Pn	04 48 38.0	-2.1
AAGR	Agrelo	9.58	180	*i* P	Pn	04 48 41.0	-2.3
VA01	Torpederas	9.82	194	Pn	Pn	04 48 43.5	-2.9
MT05	Renca	10.02	189		Pn	04 48 45.4	-3.8
MT09	Talagante	10.43	190		Pn	04 48 49.6	-5.2
SIV	San Ignacio	10.47	46	P	Pn	04 48 52.3	-3.1
	comp=E,29nm,0.3s,baz=238,slow=11,SNR=309						
SIV				S	Sn	04 50 42.9	-7.9
	comp=E,4.9nm,0.3s,baz=145,slow=20,SNR=1.4						
SIV	San Ignacio	10.47	46		Sn	04 50 42.9	-7.9
CPUP	Villa Florida	10.89	108	P	Pn	04 48 59.1	-1.8
	comp=E,0.9nm,0.3s,baz=282,slow=12,SNR=20						
CPUP				LR	LR	04 53 47.1	
	comp=E,3µm,19.4s,baz=285,slow=40						
CPUP	Villa Florida	10.89	108	*e*P	Pn	04 48 57.2	-3.7
CPUP	Villa Florida	10.89	108		Pn	04 48 57.2	-3.7
BO02	Sierra Bellavi	11.40	188		Pn	04 49 06.0	-1.9
GO05	Huala	11.80	192		Pn	04 49 10.4	-2.7
PTLB	Pontes e Lacer	12.18	51	*e*P	Pn	04 49 14.3	-3.9
PTLB	Pontes e Lacer	12.18	51	Pn	Pn	04 49 14.7	-3.5
ML02	Panimavida	12.45	190	Pn	Pn	04 49 19.3	-2.3
ITQB	Itaqui	12.60	122	*e*P	Pn	04 49 21.5	-2.2
ITQB	Itaqui	12.60	122	Pn	Pn	04 49 20.8	-2.9
AQDB	Aquidauana	12.61	79	*e*P	Pn	04 49 21.5	-2.3
AQDB	Aquidauana	12.61	79	Pn	Pn	04 49 21.4	-2.3
VILB	Vilhena	13.32	40	*e*P	Pn	04 49 30.7	-2.5
VILB	Vilhena	13.32	40	Pn	Pn	04 49 30.5	-2.8
VA04	Juan Fernndez	13.37	218	Pn	Pn	04 49 28.4	-5.2
ETMB	Extrema	13.81	11	Pn	Pn	04 49 35.8	-3.8
PP1B	Ponte de Pedra	14.37	69	*e*P	Pn	04 49 45.1	-1.6
SALV	Santo Antonio	14.53	61	*e*P	Pn	04 49 45.5	-3.2
TRCB	Terra Rica	14.98	91	*e*P	Pn	04 49 52.1	-2.4
TRCB	Terra Rica	14.98	91		Pn	04 49 52.3	-2.2
CPSB	Cacapava Do Su	15.42	120	*e*P	Pn	04 49 57.2	-2.6
PTGB	Pitanga	15.43	98	*e*P	Pn	04 49 58.9	-1.3
SAML	Samuel	15.44	22	P	Pn	04 49 56.3	-4.0
SAML				pmax	pmax		
	comp=Z,42nm,1.4s						
SAML	Samuel	15.44	22	*e*P	Pn	04 49 57.0	-3.2
SAML	Samuel	15.44	22	*e*P	Pn	04 49 57.3	-2.9
SAML	Samuel	15.44	22	Pn	Pn	04 49 56.3	-4.0
PLTB	Pedras Altas	15.87	125	*e*P	Pn	04 50 02.9	-2.6
PLTB	Pedras Altas	15.87	125	Pn	Pn	04 50 02.2	-3.3
CZSB	Cruzeiro do Su	16.07	346	*e*P	Pn	04 50 07.9	-0.2
CZSB	Cruzeiro do Su	16.07	346	Pn	Pn	04 50 07.7	-0.3
CZSB				IAmb	IAmb	04 50 12.2	
	comp=Z,294nm,0.9s						
LR03	Panguipulli	16.38	189		Pn	04 50 11.5	-0.3
PCMB	Pacaembu	16.41	87	*e*P	Pn	04 50 10.4	-1.8
PDRB	Porto dos Gac	16.53	47	*e*P	Pn	04 50 11.3	-2.4
PLCA	Paso Flores	17.27	184	P	P	04 50 22.1	-0.4
	comp=Z,1.7nm,0.3s,baz=7.6,slow=13,SNR=26						
PLCA				S	Sn	04 53 35.1	+0.1
	comp=Z,0.0nm,0.3s,baz=39,slow=21,SNR=2.4						
PLCA				PcP	PcP	04 54 59.6	+0.1
	comp=Z,0.4nm,0.3s,baz=27,slow=4.4,SNR=5.0						
PLCA	Paso Flores	17.27	184	*e*P	P	04 50 21.6	-1.0
PLCA	Paso Flores	17.27	184	P	P	04 50 21.1	-1.4
PLCA				PcP	PcP	04 55 00.6	+1.1
LL04	Puerto Octay	17.64	189	P	P	04 50 23.7	-2.8
ITRB	Iturama	17.65	81	*e*P	P	04 50 26.4	-0.4
CLDB	Colider	17.69	47	*e*P	P	04 50 26.7	-0.6
FRTB	Fartura	17.75	93	*e*P	P	04 50 27.4	-0.6
ARAG	Araguaiana, MT	17.85	67	*e*P	P	04 50 28.9	-0.1
LL03	Petrohue	17.86	189	P	P	04 50 28.3	-0.7
TIJ01	Guaruva-PR	18.22	100	*e*P	P	04 50 33.1	-0.1
LL05	Los Muermos	18.29	191	P	P	04 50 32.4	-1.3
LL05				IAmb	IAmb	04 50 35.9	
	comp=Z,348nm,1.1s						
TER01	Tubaro-SC	18.47	110	*e*P	P	04 50 34.0	-1.8
ATAH	Atahualpa	18.62	329	P	Pn	04 50 39.5	0.0
	comp=Z,1.2nm,0.3s,baz=161,slow=9.5,SNR=19						
BB19B	Bebedouro	19.01	87	*e*P	P	04 50 40.4	-1.4
TBTG	Tabatinga, AM	19.19	357	*e*P	P	04 50 44.5	+0.8
TBTG	Tabatinga, AM	19.19	357	*e*P	P	04 50 44.8	+1.1
TBTG	Tabatinga, AM	19.19	357	P	P	04 50 44.4	+0.8
SPB	Sao Paulo	19.69	95		P	04 50 49.3	+0.3
SPB				IAmb	IAmb	04 50 52.2	
	comp=Z,252nm,1.2s						
RCLB	Rio Claro- Sao	19.71	91	*e*P	P	04 50 47.5	-1.8
PET01	Itanhaem-SP	19.80	97	*e*P	P	04 50 48.7	-1.5
LL02	Futaleuf	19.82	186	P	P	04 50 49.1	-1.2
IPMB	Ipameri, GO	20.10	78	*e*P	P	04 50 51.5	-2.1
VAO	Valinhos	20.17	93	*e*P	P	04 50 53.0	-1.3
SNDB	Serra Nova Dou	20.27	59	*e*P	P	04 50 53.2	-2.2
NPGB	Novo Progresso	20.88	41	*e*P	P	04 50 59.6	-2.4
BDFB	Brasilia	21.15	72	P	P	04 51 03.3	-1.7
	comp=Z,176nm,0.8s,baz=241,slow=8.3,SNR=107						
BDFB				S	S	04 54 50.5	-3.9
	comp=Z,10nm,0.9s,baz=164,slow=20,SNR=1.5						
BDFB				LR	LR	05 00 43.7	
	comp=Z,1µm,18.3s,baz=250,slow=41						
PARB	Paraibuna	21.37	94	*e*P	P	04 51 04.8	-2.3
MACA	Manacapuru-AM	21.70	23	*e*P	P	04 51 09.8	-0.8
COYC	Coyhaique	22.20	186	P	P	04 51 13.5	-2.2
BSCB	Bom Sucesso	22.47	88	*e*P	P	04 51 17.0	-1.8
PEXB	Peixe	22.61	64	*e*P	P	04 51 17.7	-2.4
ITTB	Itaituba	22.85	36	*e*P	P	04 51 21.3	-1.2
MAN01	Angra dos Reis	22.93	93	*e*P	P	04 51 22.1	-1.3
VAS01	Vassouras-RJ	23.48	92	*e*P	P	04 51 27.1	-1.3
DIAM	Diamantina, MG	24.11	82	*e*P	P	04 51 33.9	-0.4
PTLC	Puerto Leguiza	24.18	345	*e*P	P	04 51 30.6	-4.1
PTGA	Pitinga	24.21	22	P	P	04 51 35.1	+0.2
	comp=Z,20nm,0.4s,baz=202,slow=11,SNR=59						
PTGA				S	S	04 55 46.3	+0.5
	comp=Z,12nm,0.8s,baz=257,slow=23,SNR=7.4						
PTGA				LR	LR	05 02 01.9	
	comp=Z,500nm,20.6s,baz=214,slow=39						
PTGA	Pitinga	24.21	22	P	P	04 51 34.1	-0.8
MC01	Montes Claros	24.37	79	*e*P	P	04 51 34.5	-2.0
DUB01	Friburgo-RJ	24.49	92	*e*P	P	04 51 38.0	+0.5
JANB	Januaria	24.65	75	*e*P	P	04 51 36.7	-2.3
SMTB	Santa Maria do	25.05	58	*e*P	P	04 51 42.0	-0.6
PRPB	Parauapebas	25.16	50	*e*P	P	04 51 42.4	-1.3
CAM01	Campos-RJ	25.19	92	*e*P	P	04 51 43.7	-0.2
SDBA	SAO DESIDERIO	25.30	68	*e*P	P	04 51 43.5	-1.5
OTAV	Otavalo	25.32	337	*e*P	P	04 51 45.1	-0.5
OTAV	Otavalo	25.32	337	*e*P	P	04 51 45.4	-0.2
OTAV	Otavalo	25.32	337	P	P	04 51 46.4	+0.8
OTAV				PcP	PcP	04 55 17.8	+1.8
CUSE	Cuicocha Este	25.37	337	*e*P	P	04 51 46.0	+0.1
PAC1	Pacto, Paraso	25.47	336	*e*P	P	04 51 47.5	+0.9
TULM	Tulcn-Chalpat	25.54	339	*e*P	P	04 51 50.5	+2.9
MALB	Monte Alegre	25.75	36	*e*P	P	04 51 48.8	-0.2
GCUF	Volcan Galeras	25.88	340	*e*P	P	04 51 51.2	+0.5
MACC	Macarena, Meta	25.91	349	*e*P	P	04 51 45.0	-5.4
ALF01	Guarapari-ES	26.26	89	*e*P	P	04 51 52.3	-1.2
SJMB	Sao Joao De Ma	26.27	85	*e*P	P	04 51 51.8	-1.9
GARC	Garzon, Huila	26.29	345	*e*P	P	04 51 55.5	+1.4
SOTA	Rioblanco	26.53	343	*e*P	P	04 51 58.5	+2.0
BSFB	Barra de Sao F	26.55	85	*e*P	P	04 51 55.6	-0.6
PCON	Cinco Dias	26.66	343	*e*P	P	04 51 59.4	+1.7
BETC	Betania	26.76	345	*e*P	P	04 51 58.6	+0.5
RIB01	Linhares ES	26.84	87	*e*P	P	04 51 58.8	0.0
BOAV	Boa Vista	26.97	19	*e*P	P	04 52 00.8	+0.9
BOAV	Boa Vista	26.97	19	P	P	04 51 59.9	0.0
MARP	Paez Belalcaza	27.04	344	*e*P	P	04 52 02.2	+1.4
NAN01	Guarapari, ES	27.48	84	*e*P	P	04 52 03.2	-1.2
VILC	Villavicencio,	27.81	350	*e*P	P	04 52 07.7	+0.1
ORTC	Ortega, Tolima	27.90	346	*e*P	P	04 52 08.5	+0.2
GUA01	Guaratinga, BA	28.15	81	*e*P	P	04 52 10.9	+0.5
MCPB	Macapa, AP	28.20	38	*e*P	P	04 52 10.2	-0.7
YOTC	Yotoco, Valle	28.23	344	*e*P	P	04 52 11.8	+0.5
CHIC	Chingaza	28.32	350	*e*P	P	04 52 11.8	-0.6
ANIL	Santa Ana	28.50	346	*e*P	P	04 52 13.0	-0.9
ROSC	El Rosal	28.63	349	P	P	04 52 16.1	+1.0
	comp=Z,17nm,0.8s,baz=129,slow=19,SNR=7.6						
ROSC				LR	LR	05 03 51.2	
	comp=Z,510nm,18.2s,baz=217,slow=36						
ROSC	El Rosal	28.63	349	P	P	04 52 15.6	+0.5
CMC01	Camacan, BA	28.82	79	*e*P	P	04 52 15.7	-0.8
NBIT	Itapeh - BA	29.05	78	*e*P	P	04 52 18.3	-0.2
TMAB	Tom-Au,PA,Br	29.08	47	*e*P	P	04 52 18.8	+0.1
PLMC	San Jos del P	29.10	345	*e*P	P	04 52 18.4	-0.6
GUY2C	Guyana, Caldas	29.20	347	*e*P	P	04 52 20.0	-0.3
EFI	East Falkland	29.38	166	*ce*P	P	04 52 19.3	-1.6
EFI				pmax	pmax		
	comp=Z,51nm,0.8s						
EFI	East Falkland	29.38	166	P	P	04 52 19.3	-1.6
EFI				PcP	PcP	04 55 25.5	+1.0
SPBC	San Pablo de B	29.38	349	*e*P	P	04 52 20.0	-1.4
GDU01	Guandu, BA	29.39	76	*e*P	P	04 52 20.0	-1.5
NORC	Norcasia	29.43	348	*e*P	P	04 52 20.4	-1.5
RUSC	La Rusia	29.46	352	*e*P	P	04 52 23.3	+0.7
TAMC	Tame, Arauca	29.85	354	*e*P	P	04 52 24.1	-1.5
CBOC	Ciudad Bolivar	29.97	346	*e*P	P	04 52 25.8	-1.0
NBPN	Ponto Novo - B	30.09	70	*e*P	P	04 52 26.6	-1.2
HELC	Santa Helena	30.18	347	*e*P	P	04 52 27.9	-0.9
ELOV	Elorza	30.29	359	*e*P	P	04 52 29.0	-0.3
PAMC	Pamplona, Colo	30.84	353	*e*P	P	04 52 33.2	-1.6
DBBC	Dabeiba	31.13	346	*e*P	P	04 52 36.7	-0.2
ZARC	Zaragoza, Cauc	31.32	349	*e*P	P	04 52 35.6	-2.8
ZARC	Zaragoza, Cauc	31.32	349	P	P	04 52 37.2	-1.2
ZARC				PcP	PcP	04 55 31.2	+1.1
USHA	Ushuaia	31.33	179	P	P	04 52 38.1	0.0
	comp=Z,8.9nm,0.7s,baz=11,slow=10,SNR=6.3						
ROSB	Rosrio	31.51	53	*e*P	P	04 52 40.1	-0.1
UREC	San Jos de Ur	31.70	347	*e*P	P	04 52 40.6	-1.2
OCAC	Ocana	31.80	352	*e*P	P	04 52 38.9	-4.0
OCAC	Ocana	31.80	352	P	P	04 52 39.8	-3.1
OCAC				PcP	PcP	04 55 32.2	+0.6
NBLA	Lagarto - SE	32.12	73	*e*P	P	04 52 43.9	-1.7
SDV	Santo Domingo	32.20	357	P	P	04 52 45.4	-1.0
	comp=Z,25nm,0.8s,baz=176,slow=7.3,SNR=26						
SDV	Santo Domingo	32.20	357	*e*P	P	04 52 45.9	-0.5
SDV	Santo Domingo	32.20	357	P	P	04 52 44.9	-1.5
SDV	Santo Domingo	32.20	357	P	P	04 52 45.4	-1.0
SMLC	San Martn de	32.47	350	*e*P	P	04 52 46.3	-2.1
MDP	Montagnes des	32.53	31	P	P	04 52 48.9	-0.2
	comp=Z,13nm,0.8s,baz=205,slow=12,SNR=14						
MDP	Montagnes des	32.53	31	P	P	04 52 48.9	-0.2
NBPS	Pedro II - PI	32.59	59	*e*P	P	04 52 48.0	-1.7
MOTC	Monteria, Cord	32.72	348	*e*P	P	04 52 50.1	-0.6
MOTC	Monteria, Cord	32.72	348	P	P	04 52 50.2	-0.5
MOTC				PcP	PcP	04 55 34.6	+0.6
CAPC	Capurgana	32.96	345	*e*P	P	04 52 53.0	+0.2
CAP2	Capurgana	32.97	345	P	P	04 52 53.6	+0.7
CAP2				IAmb	IAmb	04 52 56.5	
	comp=Z,75nm,1.0s						
NBMA	Muriti-CE	33.06	66	*e*P	P	04 52 53.1	-0.8
NBPB	Pedra_Branca-C	33.39	62	*e*P	P	04 52 56.3	-0.4
PCRV	Puerto La Cruz	33.70	8	P	P	04 52 59.1	-0.1
	comp=Z,5.9nm,0.5s,baz=209,slow=0.6,SNR=5.7						
SJCC	San Jacinto, C	33.72	349	*e*P	P	04 52 58.7	-0.8
SJCC	San Jacinto, C	33.72	349	P	P	04 52 58.4	-1.1
SJCC				IAmb	IAmb	04 53 01.5	
	comp=Z,84nm,1.3s						
NBAN	Anadia - AL	34.05	72	*e*P	P	04 53 00.8	-1.6
NBMO	Morrinhos-CE	34.35	59	*e*P	P	04 53 04.0	-1.0
NBLV	Livramento - P	34.62	68	*e*P	P	04 53 07.2	-0.2
BRU2	Volcan	34.78	336	IAmb	IAmb	04 53 16.8	
	comp=Z,105nm,1.1s						
RIOS	Rincon, Osa	35.02	334	P	P	04 53 12.8	+2.2
NBCL	Cascavel-CE	35.20	62	*e*P	P	04 53 11.3	-0.9
NBPA	Parau_RN	35.31	65	*e*P	P	04 53 12.4	-0.8
SRBA	San Rafael, Bu	35.44	335	P	P	04 53 16.6	+2.2
SRBA				IAmb	IAmb	04 53 17.8	
	comp=Z,116nm,1.1s						
SRBA				PcP	PcP	04 55 42.5	+0.5
TOSP	Speyside	35.51	14	P	P	04 53 15.0	+0.2
NBRF	Rio Formoso -	35.51	71	*e*P	P	04 53 15.8	+0.9
PEZE	Perez Zeledon,	35.70	334	IAmb	IAmb	04 53 20.1	
	comp=Z,66nm,0.9s						
RIMA	Rio Macho	36.13	334	P	P	04 53 22.7	+2.3
RIMA				IAmb	IAmb	04 53 23.8	
	comp=Z,92nm,1.1s						
NBPV	Pedro Velho	36.49	68	*e*P	P	04 53 23.5	+0.2
RPN	Rapa Nui	36.63	256	P	P	04 53 26.1	+1.8
	comp=Z,170nm,0.9s,baz=83,slow=4.0,SNR=7.7						
RPN	Rapa Nui	36.63	256	P	P	04 53 25.6	+1.3
JTS	Las Juntas de	37.04	333	P	P	04 53 29.4	+1.5
	comp=Z,23nm,0.8s,baz=195,slow=3.3,SNR=15						
JTS	Las Juntas de	37.04	333	*d i*P	P	04 53 29.2	+1.3
JTS				pmax	pmax		
	comp=Z,111nm,1.7s						
JTS	Las Juntas de	37.04	333	P	P	04 53 29.6	+1.7
HZTE	Horizontes, Gu	37.69	333	P	P	04 53 35.8	+2.4
ACON	Acoyapa	38.65	334	P	P	04 53 41.9	+0.5
OBIP	Obispado Ponce	41.32	3	P	P	04 54 02.2	-1.2
OBIP				IAmb	IAmb	04 54 04.1	
	comp=Z,103nm,1.4s						
PDPR	Patillas Dam,	41.33	4	P	P	04 54 00.9	-2.5
TGUH	Tegucigalpa,Un	41.40	332	*e*P	P	04 54 02.9	-1.3
SJG	San Juan	41.41	4	P	P	04 54 02.4	-1.7
	comp=Z,15nm,0.6s,baz=114,slow=5.7,SNR=8.9						
PMSA	Palmer Station	41.42	177	P	P	04 54 04.3	+0.6
	comp=Z,26nm,0.7s,baz=353,slow=4.6,SNR=13						
PMSA	Palmer Station	41.42	177	*e*P	P	04 54 03.7	0.0
CBYP	Canovanas	41.59	4	P	P	04 54 03.9	-1.8
CBYP				IAmb	IAmb	04 54 05.4	
	comp=Z,89nm,1.4s						
SNET	Serv Nac Est T	41.94	330	IAmb	IAmb	04 54 12.1	
	comp=Z,158nm,1.1s						
MTO3	Montecristo	42.62	330	IAmb	IAmb	04 54 16.6	
	comp=Z,77nm,0.9s						
SC01	Santiago de lo	42.67	357	P	P	04 54 13.7	-0.7
SC01				IAmb	IAmb	04 54 14.8	
	comp=Z,63nm,0.9s						
ESQI	Esquipulas	42.76	330	IAmb	IAmb	04 54 17.9	
	comp=Z,104nm,0.9s						
LCCY	Blossom Villag	44.24	345	P	P	04 54 27.2	+0.2
SOR	Soroa	47.98	342	P	P	04 54 56.3	0.0
SOR				pmax	pmax		
	comp=Z,68nm,1.0s						
SOR	Soroa	47.98	342	P	P	04 54 56.3	0.0
SOR				IAmb	IAmb	04 54 57.5	
	comp=Z,68nm,1.0s						
TLIG	Tlapa	50.03	322	P	P	04 55 13.5	+1.4
TLIG				IAmb	IAmb	04 55 14.4	
	comp=Z,40nm,0.8s						
061Z	Ochoppi	50.40	346	P	P	04 55 15.1	+0.5
060A	Indiantown	51.41	347	P	P	04 55 22.8	+0.6
DWPF	Disney Wildern	52.68	346	P	P	04 55 31.9	+0.3
	baz=166						
MOIG	Morelia	53.20	321	P	P	04 55 37.4	+1.5
TIGA	Tifton	56.38	345	P	P	04 55 58.1	-0.1
	baz=164						
ZAIG	Zacatecas	56.42	322	P	P	04 56 00.7	+1.6
BRAL	Brewton	57.04	341	P	P	04 56 03.0	+0.1
	baz=160						
NHSC	New Hope	57.28	349	P	P	04 56 04.5	-0.1
	baz=168						
152A	Waverly Hall	57.83	344	IAmb	IAmb	04 56 08.9	
	comp=Z,67nm,1.1s						
Y60A	Bolivia	57.84	351	P	P	04 56 08.6	+0.2
KVTX	Kingsville	57.92	329	P	P	04 56 10.1	+0.9
346A	Big Creek Wild	57.99	339	IAmb	IAmb	04 56 10.5	
	comp=Z,75nm,0.9s						
Y57A	Sumter	58.20	349	P	P	04 56 11.3	+0.3
VNA3	Neumayer Olymp	58.22	161	P	P	04 56 10.9	+0.1
GOGA	Godfrey	58.24	346	P	P	04 56 10.5	-0.8
GOGA				pmax	pmax		
	comp=Z,37nm,1.1s						
GOGA	Godfrey	58.24	346	P	P	04 56 10.6	-0.7
	baz=164,SNR=5.6						
GOGA	Godfrey	58.24	346	P	P	04 56 10.5	-0.8
VNA1	Neumayer--Stat	58.44	160	P	P	04 56 13.2	+0.9
344A	Westbrook Farm	58.47	338	P	P	04 56 12.9	-0.1
344A				IAmb	IAmb	04 56 14.2	
	comp=Z,53nm,0.8s						
X58A	Rowland	58.55	350	P	P	04 56 14.0	+0.5
VNA2	Neumayer--Watz	58.80	160	P	P	04 56 15.1	+0.2
	baz=285,slow=7.9						
CNNC	Cliffs of the	59.00	351	P	P	04 56 16.9	+0.3
	baz=170,SNR=7.3						
CNNC	Cliffs of the	59.00	351	P	P	04 56 17.2	+0.7
HKT	Hockley	59.08	333	*i* P	P	04 56 16.8	-0.3
HKT				pmax	pmax		
	comp=Z,56nm,1.3s						
VBMS	Vicksburg	59.10	339	P	P	04 56 17.1	-0.2
	baz=157						
Z47A	Carrollton	59.24	341	P	P	04 56 17.2	-1.0
833A	Chaparral WMA,	59.29	329	P	P	04 56 19.1	+0.4
	baz=147,SNR=47						
KMSC	Kings Mountain	59.47	348	P	P	04 56 20.1	+0.3
	baz=167,SNR=10						
KMSC	Kings Mountain	59.47	348	P	P	04 56 20.4	+0.6
X51A	Calhoun	59.67	345	P	P	04 56 20.6	-0.6
V58A	Windy Hill, Pi	59.73	350	P	P	04 56 21.6	+0.1
FPAL	Fort Paine	59.83	344	IAmb	IAmb	04 56 22.7	
	comp=Z,66nm,1.1s						
NATX	Nacogdoches	60.19	335	P	P	04 56 25.5	+0.6
	baz=153,SNR=14						
NATX	Nacogdoches	60.19	335	P	P	04 56 25.2	+0.4
V53A	Saluda	60.27	347	IAmb	IAmb	04 56 26.3	
	comp=Z,58nm,1.1s						
SNAA	Sanae	60.43	161	P	P	04 56 26.1	0.0
SNAA	Sanae	60.43	161	*ce*P	P	04 56 26.0	0.0
SNAA				pmax	pmax		
	comp=Z,122nm,1.7s						
SNAA	Sanae	60.43	161	P	P	04 56 25.4	-0.7
SNAA				IAmb	IAmb	04 56 27.2	
	comp=Z,68nm,1.0s						
CPCT	Cooper Cave	60.44	345	IAmb	IAmb	04 56 27.2	
	comp=Z,76nm,1.0s						
TKL	Tuckaleechee C	60.47	346	P	P	04 56 25.9	-0.7
	comp=Z,56nm,0.9s,baz=167,slow=9.1,SNR=31						
TKL				pP	pP	04 56 53.6	-0.2
	comp=Z,36nm,1.0s,baz=156,slow=11,SNR=6.1						
TKL				sP	sP	04 57 05.6	-0.4
	comp=Z,30nm,0.9s,baz=165,slow=11,SNR=5.0						
TKL	Tuckaleechee C	60.47	346	P	P	04 56 25.8	-0.8
TKL				IAmb	IAmb	04 56 27.2	
	comp=Z,80nm,1.0s						
435B	Jarrell	60.55	332	P	P	04 56 27.5	+0.2
	baz=150,SNR=8.8						
435B	Jarrell	60.55	332	IAmb	IAmb	04 56 28.5	
	comp=Z,53nm,0.9s						
V51A	Loudon	60.73	346	IAmb	IAmb	04 56 29.0	
	comp=Z,46nm,0.9s						
Z41A	Richland Creek	60.84	337	P	P	04 56 29.4	+0.3
	baz=155,SNR=11						
237A	Washetta, Mont	60.86	334	P	P	04 56 29.6	+0.2
PLAL	Pickwick Lake	60.91	342	IAmb	IAmb	04 56 29.6	
	comp=Z,70nm,0.9s						
T57A	Hurt	60.93	351	IAmb	IAmb	04 56 31.3	
	comp=Z,57nm,0.9s						
TZTN	Tazewell	61.27	347	P	P	04 56 31.6	-0.5
	baz=165						
TZTN	Tazewell	61.27	347	IAmb	IAmb	04 56 32.7	
	comp=Z,67nm,1.3s						
JCT	Junction City	61.29	330	P	P	04 56 32.5	+0.1
	baz=148,SNR=91						
BLA	Blacksburg	61.32	350	P	P	04 56 32.4	0.0
BLA				pmax	pmax		
	comp=Z,52nm,0.9s						
BLA	Blacksburg	61.32	350	P	P	04 56 32.7	+0.3
	baz=168,SNR=8.2						
BLA	Blacksburg	61.32	350	P	P	04 56 32.4	0.0
BLA				IAmb	IAmb	04 56 35.1	
	comp=Z,52nm,0.9s						
HPIG		61.42	323	IAmb	IAmb	04 56 35.7	
	comp=Z,123nm,1.3s						
CLTN	Cedars of Leba	61.48	344	IAmb	IAmb	04 56 34.1	
	comp=Z,73nm,0.9s						
SLBS	Sierra La Lagu	61.53	317	P	P	04 56 35.2	+1.1
WHTX	Lake Whitney,	61.54	332	P	P	04 56 34.0	+0.1
	baz=150,SNR=14						
WHTX	Lake Whitney,	61.54	332	IAmb	IAmb	04 56 35.1	
	comp=Z,63nm,0.9s						
S57A	Dark Hollow, R	61.63	351	IAmb	IAmb	04 56 36.2	
	comp=Z,73nm,0.9s						
Z38A	Mt. Pleasant	61.65	335	IAmb	IAmb	04 56 36.2	
	comp=Z,70nm,0.8s						
R58B	Mineral	61.68	352	P	P	04 56 35.1	+0.3
R58B				IAmb	IAmb	04 56 36.6	
	comp=Z,87nm,0.9s						

U49A	Red Boiling Sp	61.75	345	IAmb	IAmb	04 56 35.7	
	comp=Z,100nm,1.5s						
CBN	Corbin Frederi	61.86	352	P	P	04 56 36.1	+0.2
	baz=171,SNR=5.5						
WVT	Waverly	61.92	343	P	P	04 56 35.1	-1.3
WVT				pmax	pmax		
	comp=Z,104nm,0.8s						
WVT	Waverly	61.92	343	P	P	04 56 35.5	-0.9
	baz=160						
WVT	Waverly	61.92	343	P	P	04 56 35.1	-1.3
X40A	Basin Creek Fa	61.96	338	P	P	04 56 36.7	0.0
	baz=155						
T50A	Nancy	62.01	346	P	P	04 56 35.9	-1.1
T50A				IAmb	IAmb	04 56 37.4	
	comp=Z,58nm,1.1s						
S54A	Dingess, Beckl	62.05	349	P	P	04 56 36.9	-0.4
HALT	Halls	62.14	341	IAmb	IAmb	04 56 37.5	
	comp=Z,56nm,0.8s						
TXAR	Lajitas Array	62.24	326	P	P	04 56 39.2	+0.4
	comp=Z,20nm,0.7s,baz=147,slow=8.4,SNR=225						
TXAR				sP	sP	04 57 18.8	+0.6
	comp=Z,16nm,1.0s,baz=157,slow=3.8,SNR=3.7						
MIAR	Mount Ida	62.27	337	P	P	04 56 38.1	-0.7
MIAR				pmax	pmax		
	comp=Z,66nm,0.9s						
MIAR	Mount Ida	62.27	337	P	P	04 56 38.5	-0.3
	baz=154,SNR=31						
MIAR	Mount Ida	62.27	337	P	P	04 56 38.1	-0.7
MIAR				IAmb	IAmb	04 56 39.8	
	comp=Z,66nm,0.8s						
S51A	Beattyville	62.33	347	P	P	04 56 38.3	-0.8
W41B	Gary Mavity, V	62.38	339	P	P	04 56 39.1	-0.4
	baz=156,SNR=18						
PEBM	Pemiscott Bayo	62.48	341	P	P	04 56 39.8	-0.3
WHAR	Wooly Hollow	62.50	339	IAmb	IAmb	04 56 41.0	
	comp=Z,47nm,0.8s						
PENMO	Penman	62.73	341	P	P	04 56 41.5	-0.3
LCAR	Lake Charles	62.84	340	P	P	04 56 41.4	-1.2
LCAR				IAmb	IAmb	04 56 42.9	
	comp=Z,52nm,0.8s						
Q56A	Snyder Ridge,	62.92	351	IAmb	IAmb	04 56 45.2	
	comp=Z,85nm,0.8s						
HENM	Henderson Moun	62.93	342	IAmb	IAmb	04 56 44.5	
	comp=Z,94nm,0.9s						
W39A	Magazine	62.93	337	P	P	04 56 43.5	+0.4
	baz=154,SNR=29						
W39A	Magazine	62.93	337	IAmb	IAmb	04 56 44.7	
	comp=Z,80nm,0.8s						
X37A	Clayton	62.97	336	P	P	04 56 43.2	-0.3
X37A				IAmb	IAmb	04 56 44.9	
	comp=Z,109nm,0.9s						
FCAR	Ozark Folk Cen	62.99	339	IAmb	IAmb	04 56 44.0	
	comp=Z,71nm,1.2s						
ABTX	Abilene, Hawle	63.03	331	P	P	04 56 43.9	0.0
	baz=148,SNR=31						
ABTX	Abilene, Hawle	63.03	331	P	P	04 56 43.7	-0.2
ABTX				IAmb	IAmb	04 56 45.2	
	comp=Z,93nm,0.9s						
LOOK	Love County	63.16	334	P	P	04 56 44.4	-0.3
P57A	Homestead Farm	63.20	352	IAmb	IAmb	04 56 47.1	
	comp=Z,58nm,0.8s						
P60A	Greenville	63.26	354	P	P	04 56 45.3	+0.1
	baz=173,SNR=7.8						
PBMO	Poplar Bluff	63.27	341	IAmb	IAmb	04 56 45.8	
	comp=Z,82nm,0.8s						
WCI	Wyandotte Cave	63.51	345	P	P	04 56 44.7	-2.2
WCI				pmax	pmax		
	comp=Z,76nm,0.9s						
WCI	Wyandotte Cave	63.51	345	P	P	04 56 45.9	-1.0
	baz=162						
WCI	Wyandotte Cave	63.51	345	P	P	04 56 44.7	-2.2
WCI				IAmb	IAmb	04 56 46.9	
	comp=Z,76nm,0.9s						
MVL	Millersville	63.52	354	IAmb	IAmb	04 56 48.7	
	comp=Z,53nm,0.9s						
Q51A	Peebles	63.62	347	IAmb	IAmb	04 56 48.2	
	comp=Z,54nm,1.1s						
MCWV	Mont Chateau	63.62	351	P	P	04 56 48.3	+0.7
	baz=169,SNR=10						
MCWV	Mont Chateau	63.62	351	IAmb	IAmb	04 56 49.2	
	comp=Z,67nm,0.8s						
U40A	Yellville	63.66	339	P	P	04 56 47.7	-0.3
	baz=156,SNR=42						
U40A	Yellville	63.66	339	P	P	04 56 47.3	-0.7
U40A				IAmb	IAmb	04 56 48.6	
	comp=Z,74nm,0.8s						
P53A	Whipple	63.70	349	IAmb	IAmb	04 56 49.3	
	comp=Z,83nm,1.1s						
S44A	Carbondale	63.78	342	P	P	04 56 47.5	-1.1
S44A				IAmb	IAmb	04 56 49.0	
	comp=Z,86nm,0.8s						
SIUC	Southern Illin	63.79	342	IAmb	IAmb	04 56 49.1	
	comp=Z,80nm,0.8s						
X34A	Smith Ranch, M	63.95	334	IAmb	IAmb	04 56 51.1	
	comp=Z,88nm,0.8s						
HHAR	Hobbs	63.96	338	IAmb	IAmb	04 56 50.9	
	comp=Z,151nm,1.4s						
P52A	Corning	63.98	349	P	P	04 56 49.4	-0.5
	baz=167,SNR=7.5						
P52A	Corning	63.98	349	IAmb	IAmb	04 56 50.5	
	comp=Z,47nm,0.9s						
P51A	Williamsport	64.00	348	IAmb	IAmb	04 56 50.4	
	comp=Z,98nm,1.4s						
LUPA	Lehigh Univers	64.02	355	P	P	04 56 50.8	+0.6
BRNJ	Basking Ridge	64.04	355	IAmb	IAmb	04 56 52.2	
	comp=Z,50nm,0.8s						
O56A	Blue Knob Stat	64.04	352	P	P	04 56 51.0	+0.6
	baz=170,SNR=14						
O56A	Blue Knob Stat	64.04	352	P	P	04 56 50.4	-0.1
O56A				IAmb	IAmb	04 56 52.4	
	comp=Z,94nm,1.1s						
MGMO	Mountain Grove	64.19	339	IAmb	IAmb	04 56 52.2	
	comp=Z,64nm,0.8s						
U38A	Gravette	64.26	337	IAmb	IAmb	04 56 52.6	
	comp=Z,40nm,0.8s						
TUL1	Leonard	64.30	336	P	P	04 56 51.9	-0.2
	baz=153,SNR=27						
TUL1	Leonard	64.30	336	P	P	04 56 51.1	-1.1
TUL1				IAmb	IAmb	04 56 53.1	
	comp=Z,112nm,0.9s						
PAL	Palisades	64.31	356	P	P	04 56 52.2	+0.1
	baz=175						
SSPA	Standing Stone	64.32	352	P	P	04 56 52.6	+0.4
	baz=171						
SSPA	Standing Stone	64.32	352	P	P	04 56 52.6	+0.4
FNO	Franklin	64.35	334	IAmb	IAmb	04 56 53.0	
	comp=Z,41nm,0.8s						
N59A	State Game Lan	64.37	354	P	P	04 56 53.4	+0.9
	baz=173,SNR=7.5						
N58A	Sunbury	64.39	353	P	P	04 56 52.5	-0.1
N58A				IAmb	IAmb	04 56 54.5	
	comp=Z,76nm,1.0s						
P49A	Miami Univ. Ec	64.39	346	P	P	04 56 51.5	-1.1
	baz=164,SNR=12						
P49A	Miami Univ. Ec	64.39	346	IAmb	IAmb	04 56 52.6	
	comp=Z,72nm,1.1s						
O52A	Adamsville	64.39	349	IAmb	IAmb	04 56 53.3	
	comp=Z,42nm,0.8s						
O53A	New Philadelph	64.42	350	P	P	04 56 52.5	-0.3
	baz=168,SNR=8.5						
O53A	New Philadelph	64.42	350	IAmb	IAmb	04 56 53.8	
	comp=Z,47nm,0.9s						
OLIL	Olney	64.44	343	IAmb	IAmb	04 56 52.8	
	comp=Z,42nm,0.8s						
WSPT	Westport, CT	64.44	356	P	P	04 56 53.5	+0.6
WSPT				IAmb	IAmb	04 56 54.8	
	comp=Z,146nm,1.5s						
WMOK	Wichita Mounta	64.46	333	P	P	04 56 52.4	-0.9
	baz=150,SNR=18						
TRNY	Table Rock, Ra	64.47	356	P	P	04 56 53.2	0.0
P48A	Milroy	64.48	346	IAmb	IAmb	04 56 53.0	
	comp=Z,81nm,1.2s						
OKCFA	Oklahoma City	64.51	334	IAmb	IAmb	04 56 54.1	
	comp=Z,49nm,1.0s						
YLE	Yale	64.56	357	IAmb	IAmb	04 56 55.9	
	comp=Z,124nm,1.2s						
M63A	Gales Ferry	64.61	357	P	P	04 56 54.6	+0.6
M63A				IAmb	IAmb	04 56 55.4	
	comp=Z,68nm,1.4s						
CCM	Cathedral Cave	64.70	341	P	P	04 56 53.4	-1.3
CCM				pmax	pmax		
	comp=Z,103nm,0.8s						
CCM	Cathedral Cave	64.70	341	P	P	04 56 54.1	-0.5
	baz=157						
CCM	Cathedral Cave	64.70	341	P	P	04 56 53.4	-1.3
ACSO	Alum Creek Sta	64.71	348	P	P	04 56 54.3	-0.4
	baz=166,SNR=16						
ACSO	Alum Creek Sta	64.71	348	IAmb	IAmb	04 56 55.3	
	comp=Z,85nm,0.9s						
M65A	Busby, Falmout	64.72	359	P	P	04 56 55.2	+0.5
	baz=178						
BCOK	Bluff Creek, N	64.78	334		P	04 56 54.7	-0.6
BCOK				IAmb	IAmb	04 56 55.8	
	comp=Z,66nm,0.8s						
OK029	Liberty Lake	64.84	335	P	P	04 56 54.7	-1.0
Q44A	Meyer Farm, Va	64.84	343	IAmb	IAmb	04 56 55.4	
	comp=Z,91nm,1.1s						
N53A	Lisbon	64.90	350	IAmb	IAmb	04 56 57.1	
	comp=Z,83nm,1.4s						
N54A	Moraine State	64.92	351	P	P	04 56 56.5	+0.4
	baz=169,SNR=14						
N54A	Moraine State	64.92	351	IAmb	IAmb	04 56 57.7	
	comp=Z,100nm,1.1s						
M57A	Sunshine Farm,	64.92	353	P	P	04 56 56.7	+0.6
M57A				IAmb	IAmb	04 56 58.0	
	comp=Z,43nm,0.9s						
SLM	Saint Louis	64.93	342	IAmb	IAmb	04 56 56.4	
	comp=Z,91nm,1.2s						
O49A	Covington	64.94	347	IAmb	IAmb	04 56 56.5	
	comp=Z,85nm,1.1s						
KSCT	Kent School, K	65.00	356	IAmb	IAmb	04 56 58.5	
	comp=Z,77nm,1.4s						
KSPA	Keystone Colle	65.00	354	P	P	04 56 56.6	0.0
KSPA				IAmb	IAmb	04 56 58.4	
	comp=Z,46nm,0.8s						
MNTX	Cornudas Mount	65.02	326	P	P	04 56 56.6	-0.3
	baz=143,SNR=85						
MNTX	Cornudas Mount	65.02	326	IAmb	IAmb	04 56 57.9	
	comp=Z,65nm,0.9s						
P46A	Rosedale	65.04	344	IAmb	IAmb	04 56 56.7	
	comp=Z,60nm,0.9s						
R40A	Maddies Statio	65.23	340	IAmb	IAmb	04 56 58.8	
	comp=Z,100nm,0.9s						
M55A	Ridgway	65.25	352	IAmb	IAmb	04 56 59.7	
	comp=Z,100nm,0.8s						
N51A	Ashland	65.27	349	IAmb	IAmb	04 56 58.8	
	comp=Z,57nm,1.1s						
M54A	Oil Creek Stat	65.41	351	P	P	04 56 59.3	0.0
	baz=169,SNR=21						
T35A	Sooner Cattle	65.46	336	IAmb	IAmb	04 57 00.8	
	comp=Z,109nm,1.1s						
M53A	WI Miller and	65.49	350	P	P	04 56 59.9	+0.1
	baz=168,SNR=7.6						
SRIG	Santa Rosalia	65.58	318	IAmb	IAmb	04 57 03.2	
	comp=Z,58nm,0.8s						
MSTX	Muleshoe	65.58	329	P	P	04 57 00.7	0.0
	baz=146,SNR=53						
BLOK	Blackwell	65.59	335		P	04 57 00.5	0.0
ALLY	Alegheny Colle	65.62	351	IAmb	IAmb	04 57 01.7	
	comp=Z,95nm,0.8s						
BINY	Binghamton	65.66	354	P	P	04 57 01.5	+0.7
	baz=173,SNR=18						
BINY	Binghamton	65.66	354	P	P	04 57 01.4	+0.6
BINY				IAmb	IAmb	04 57 02.9	
	comp=Z,108nm,1.1s						
P43A	Skaggs, Pawnee	65.67	343	IAmb	IAmb	04 57 01.0	
	comp=Z,100nm,0.9s						
L61B	Northampton	65.68	357	P	P	04 57 01.5	+0.6
	baz=176,SNR=13						
HRV	Adam Dziewonsk	65.69	358	P	P	04 57 02.0	+1.0
HRV				pmax	pmax		
	comp=Z,101nm,0.9s						
HRV	Adam Dziewonsk	65.69	358	P	P	04 57 01.9	+1.0
	baz=177						
HRV	Adam Dziewonsk	65.69	358	P	P	04 57 02.0	+1.0
HRV				IAmb	IAmb	04 57 03.1	
	comp=Z,101nm,0.8s						
M52A	Chesterland	65.70	350	IAmb	IAmb	04 57 01.9	
	comp=Z,59nm,0.8s						
SFIN	Lafayette	65.74	345	P	P	04 56 59.5	-1.8
	baz=162,SNR=11						
SFIN	Lafayette	65.74	345	IAmb	IAmb	04 57 01.0	
	comp=Z,76nm,1.1s						
L56A	Greenwood	65.76	353	IAmb	IAmb	04 57 03.0	
	comp=Z,61nm,0.8s						
AMTX	Amarillo	65.84	331	P	P	04 57 02.0	-0.3
	baz=147						
AMTX	Amarillo	65.84	331	IAmb	IAmb	04 57 03.2	
	comp=Z,70nm,1.1s						
M50A	Fremont	65.86	348	IAmb	IAmb	04 57 02.6	
	comp=Z,56nm,1.1s						
O44A	Mansfield	65.87	344	IAmb	IAmb	04 57 01.8	
	comp=Z,88nm,1.4s						
K62A	Royalston	65.87	357	P	P	04 57 02.1	-0.1
K62A				IAmb	IAmb	04 57 04.3	
	comp=Z,103nm,1.5s						
N47A	Urbana	65.89	346	IAmb	IAmb	04 57 02.4	
	comp=Z,96nm,1.2s						
KAN13	South Haven SW	65.91	335	IAmb	IAmb	04 57 03.7	
	comp=Z,99nm,0.8s						
GC02	Grant County #	65.92	335	P	P	04 57 02.3	-0.3
OK032	Salt Plains WL	66.02	335	IAmb	IAmb	04 57 04.1	
	comp=Z,55nm,0.8s						
KAN17	Caldwell West	66.05	335	IAmb	IAmb	04 57 04.5	
	comp=Z,58nm,0.7s						
KAN14	Manchester OK	66.05	335	IAmb	IAmb	04 57 04.3	
	comp=Z,72nm,1.2s						
ERPA	Erie	66.05	351	P	P	04 57 03.4	0.0
	baz=169,SNR=9.1						
KS20	Mayfield South	66.13	335	P	P	04 57 03.5	-0.4
KAN05	Bluff City Nor	66.15	335	IAmb	IAmb	04 57 05.2	
	comp=Z,73nm,0.7s						
K57A	Scipio Center	66.24	354	IAmb	IAmb	04 57 05.9	
	comp=Z,82nm,0.9s						
KAN06	Argonia West S	66.26	335	IAmb	IAmb	04 57 06.0	
	comp=Z,88nm,0.8s						
P40A	Paris	66.30	341	P	P	04 57 04.0	-1.0
MMNY	Mt. Morris Dam	66.39	353	IAmb	IAmb	04 57 06.9	
	comp=Z,104nm,1.1s						
HDIL	Hopedale	66.46	343	P	P	04 57 04.7	-1.3
	baz=160,SNR=12						
HDIL	Hopedale	66.46	343	IAmb	IAmb	04 57 05.9	
	comp=Z,65nm,0.8s						
J61A	Chester	66.56	357	IAmb	IAmb	04 57 09.1	
	comp=Z,82nm,0.9s						
L48A	N Adams	66.65	347	IAmb	IAmb	04 57 07.2	
	comp=Z,165nm,1.4s						
FFD	Franklin Falls	66.65	358	IAmb	IAmb	04 57 09.5	
	comp=Z,120nm,1.2s						
QSPA	South Pole Qui	66.73	180	P	P	04 57 07.9	+0.2
AAM	Ann Arbor	66.84	348	P	P	04 57 07.6	-0.8
	baz=165						
319A	Douglas	66.85	323	P	P	04 57 09.8	+1.0
121A	Cookes Peak, D	66.93	325	P	P	04 57 10.8	+1.5
	baz=141,SNR=49						
121A	Cookes Peak, D	66.93	325	IAmb	IAmb	04 57 11.6	
	comp=Z,58nm,0.8s						
I62A	Tamworth	67.05	358	IAmb	IAmb	04 57 12.0	
	comp=Z,62nm,1.0s						
L46A	Eue Claire	67.11	346	IAmb	IAmb	04 57 09.8	
	comp=Z,132nm,1.2s						
I63A	Otisfield	67.20	359	P	P	04 57 11.8	+1.2
I63A				IAmb	IAmb	04 57 13.2	
	comp=Z,60nm,0.8s						
NCB	Newcomb	67.28	356	IAmb	IAmb	04 57 13.0	
	comp=Z,76nm,1.1s						
KSU1	Kansas State U	67.43	337	P	P	04 57 11.5	-0.6
	baz=153,SNR=22						
KSU1	Kansas State U	67.43	337	IAmb	IAmb	04 57 12.7	
	comp=Z,82nm,0.9s						
LBNH	Lisbon	67.43	358	P	P	04 57 12.9	+0.8
LBNH				pmax	pmax		
	comp=Z,89nm,1.0s						
LBNH	Lisbon	67.43	358	P	P	04 57 13.3	+1.3
	baz=177,SNR=10						
LBNH	Lisbon	67.43	358	P	P	04 57 12.8	+0.8
LBNH				IAmb	IAmb	04 57 14.5	
	comp=Z,89nm,1.0s						
PECO	Prince Edward	67.48	354	IAmb	IAmb	04 57 13.7	
	comp=Z,102nm,1.0s						
BNM	Barren Site	67.60	327	P	P	04 57 14.0	+0.3
L44A	Lake County Fo	67.64	345	P	P	04 57 12.2	-1.2
	baz=161,SNR=8.1						
L44A	Lake County Fo	67.64	345	IAmb	IAmb	04 57 13.6	
	comp=Z,71nm,1.0s						
Y22D	IRIS PASSCAL I	67.69	326	P	P	04 57 15.6	+1.5
	baz=142,SNR=6.1						
Y22D	IRIS PASSCAL I	67.69	326	IAmb	IAmb	04 57 17.0	
	comp=Z,88nm,1.1s						
WVL	Waterville	67.70	359	P	P	04 57 14.6	+0.8
WVL				IAmb	IAmb	04 57 16.1	
	comp=Z,125nm,1.1s						
LENM	Lemitar	67.79	326	P	P	04 57 15.2	+0.4
LONY	Lake Ozonia	67.95	356	P	P	04 57 16.2	+0.9
	baz=174,SNR=18						
LONY	Lake Ozonia	67.95	356	IAmb	IAmb	04 57 17.2	
	comp=Z,91nm,0.9s						
J47A	Sunmer	67.97	348	IAmb	IAmb	04 57 15.8	
	comp=Z,98nm,1.1s						
FRNY	Flat Rock	68.10	356	IAmb	IAmb	04 57 18.2	
	comp=Z,108nm,0.8s						
DELO	Deloro Mine	68.12	353	IAmb	IAmb	04 57 17.6	
	comp=Z,129nm,1.5s						
ANMO	Albuquerque	68.14	327	*d i*P	P	04 57 17.8	+0.8
ANMO				pmax	pmax		
	comp=Z,99nm,0.9s						
ANMO	Albuquerque	68.14	327	P	P	04 57 18.3	+1.3
	baz=143						
ANMO	Albuquerque	68.14	327	P	P	04 57 17.3	+0.3
ANMO				IAmb	IAmb	04 57 19.4	
	comp=Z,83nm,0.8s						
GGN	Saint George	68.28	2	IAmb	IAmb	04 57 19.6	
	comp=Z,78nm,1.1s						
I49A	Point Hope	68.28	349	IAmb	IAmb	04 57 17.6	
	comp=Z,76nm,0.8s						
G65A	Princeton	68.34	1	IAmb	IAmb	04 57 20.0	
	comp=Z,85nm,1.1s						
CBKS	Cedar Bluff	68.36	334	P	P	04 57 17.7	-0.3
CBKS				pmax	pmax		
	comp=Z,216nm,0.9s						
CBKS	Cedar Bluff	68.36	334	P	P	04 57 18.7	+0.6
	baz=150,SNR=32						
CBKS	Cedar Bluff	68.36	334	P	P	04 57 17.7	-0.3
TUC	Tucson	68.39	323	P	P	04 57 19.2	+0.7
TUC				pmax	pmax		
	comp=Z,107nm,1.1s						
TUC	Tucson	68.39	323	P	P	04 57 19.8	+1.3
	baz=139						
TUC	Tucson	68.39	323	P	P	04 57 19.2	+0.7
TUC				IAmb	IAmb	04 57 21.0	
	comp=Z,107nm,1.1s						
PKME	Peaks-Kenny Pk	68.40	360	P	P	04 57 19.3	+1.2
	baz=180,SNR=11						
PKME	Peaks-Kenny Pk	68.40	360	IAmb	IAmb	04 57 20.1	
	comp=Z,101nm,0.9s						
SADO	Sadowa	68.55	352	P	P	04 57 18.8	-0.2
	comp=Z,90nm,1.0s,baz=216,slow=2.3,SNR=40						
SADO	Sadowa	68.55	352	IAmb	IAmb	04 57 20.0	
	comp=Z,74nm,0.8s						
PLVO	Plevna	68.58	354	IAmb	IAmb	04 57 20.8	
	comp=Z,92nm,1.2s						
MNTQ	Montreal, Queb	68.77	356	P	P	04 57 21.2	+0.8
SCIA	State Center	68.83	341	P	P	04 57 20.5	-0.4
	baz=156,SNR=11						
SCIA	State Center	68.83	341	IAmb	IAmb	04 57 21.6	
	comp=Z,109nm,0.9s						
JFWS	Jewell Farm	68.92	343	P	P	04 57 20.5	-0.9
JFWS				pmax	pmax		
	comp=Z,97nm,0.8s						
JFWS	Jewell Farm	68.92	343	P	P	04 57 21.1	-0.2
	baz=159,SNR=29						
JFWS	Jewell Farm	68.92	343	P	P	04 57 20.5	-0.9
JFWS				IAmb	IAmb	04 57 22.0	
	comp=Z,97nm,0.8s						
LIC	Lamto	68.94	73	*e*PKP2	P	04 57 22.7	+0.5
	comp=Z,44nm,0.9s						
T25A	Trinidad	68.94	330	P	P	04 57 23.0	+1.0
	baz=145,SNR=29						
T25A	Trinidad	68.94	330	IAmb	IAmb	04 57 24.3	
	comp=Z,110nm,1.3s						
F64A	Sherman	69.00	0	P	P	04 57 22.2	+0.4
F64A				IAmb	IAmb	04 57 23.9	
	comp=Z,95nm,1.0s						
LMN	Caledonia Moun	69.09	3	P	P	04 57 22.2	-0.1
LMN				IAmb	IAmb	04 57 24.0	
	comp=Z,81nm,1.1s						
TIC	Toumodi	69.14	73	*e*PKP2	P	04 57 23.3	-0.2
KIC	Kosan Boka	69.26	73	*e*PKP2	P	04 57 24.0	-0.1
	comp=Z,19nm,0.3s						
214A	Organ Pipe Nat	69.28	321	P	P	04 57 25.6	+1.7
	baz=137,SNR=56						
214A	Organ Pipe Nat	69.28	321	IAmb	IAmb	04 57 26.8	
	comp=Z,137nm,1.1s						
DBIC	Dimbokro	69.30	73	P	P	04 57 24.5	+0.1
	comp=Z,18nm,0.8s,baz=224,slow=5.5,SNR=16						
DBIC				pP	pP	04 57 52.2	0.0
	comp=Z,32nm,1.0s,baz=242,slow=4.3,SNR=5.6						
DBIC				sP	sP	04 58 06.5	+2.3
	comp=Z,22nm,0.8s,baz=231,slow=4.6,SNR=4.1						
DBIC				LR	LR	05 28 12.1	
	comp=Z,130nm,19.2s,baz=239,slow=36						
DBIC	Dimbokro	69.30	73	P	P	04 57 24.0	-0.4
TAOE	Nuku Hiva Isla	69.37	269	*e*P	P	04 57 26.4	+1.4
	comp=Z,293nm,1.2s						
TAOE				*e*S	S	05 06 19.6	-4.2
	comp=Z,148nm,25.2s						
TAOE	Nuku Hiva Isla	69.37	269	*e*LR	LR	05 18 15.5	
	comp=Z,337nm,29.9s						
K38A	Parkersburg	69.37	341	IAmb	IAmb	04 57 24.7	
	comp=Z,97nm,0.9s						
GLMI	Grayling	69.46	348	P	P	04 57 24.1	-0.6
	baz=165,SNR=6.2						
GLMI	Grayling	69.46	348	IAmb	IAmb	04 57 25.6	
	comp=Z,97nm,0.9s						
I42A	Draeger Farm,	69.50	345	IAmb	IAmb	04 57 25.7	
	comp=Z,85nm,0.8s						
TRQ	Mont Tremblant	69.55	356	IAmb	IAmb	04 57 26.7	
	comp=Z,109nm,0.8s						
X18A	Snowflake	69.61	325	P	P	04 57 27.3	+1.2
KSCO	Kaye Shedlock’	69.71	333	P	P	04 57 27.3	+0.7
	baz=147,SNR=23						
E62A	Clayton Lake	69.76	360	IAmb	IAmb	04 57 28.7	
	comp=Z,62nm,0.8s						
H43A	Windswept, Lux	69.78	346	IAmb	IAmb	04 57 27.1	
	comp=Z,73nm,0.8s						
SFX	San Felipe	69.82	319	P	P	04 57 28.3	+1.1
SFX				IAmb	IAmb	04 57 29.6	
	comp=Z,64nm,0.8s						
SDCO	Great Sand Dun	69.94	330	P	P	04 57 29.4	+1.3
	baz=145,SNR=92						
SDCO	Great Sand Dun	69.94	330	IAmb	IAmb	04 57 30.5	
	comp=Z,165nm,1.4s						
W18A	Petrified Fore	69.95	325	P	P	04 57 29.5	+1.4
	baz=140,SNR=12						
W18A	Petrified Fore	69.95	325	P	P	04 57 29.1	+0.9
W18A				IAmb	IAmb	04 57 30.8	
	comp=Z,138nm,1.1s						
BGNE	Belgrade	70.02	337	P	P	04 57 28.4	+0.2
	baz=152,SNR=24						
D62A	Allapoint, All	70.22	360	IAmb	IAmb	04 57 31.2	
	comp=Z,82nm,0.9s						
X16A	Lo Mia Camp, P	70.33	324	IAmb	IAmb	04 57 33.4	
	comp=Z,96nm,1.1s						
BATG	Bathurst New B	70.46	2	P	P	04 57 31.3	+0.6
S22A	4UR Ranch, Cre	70.56	329	P	P	04 57 32.9	+1.0
	baz=143,SNR=26						
Q24A	Divide	70.77	331	P	P	04 57 34.3	+1.0
	baz=145,SNR=24						
I37A	Lemond, Waseca	70.81	342	IAmb	IAmb	04 57 33.7	
	comp=Z,113nm,0.8s						
Y14A	Wickenburg	70.84	322	IAmb	IAmb	04 57 36.0	
	comp=Z,74nm,1.2s						
E46A	Sault Ste Mari	70.89	349	IAmb	IAmb	04 57 33.9	
	comp=Z,63nm,0.8s						
MVCO	Mesa Verde	70.94	327	P	P	04 57 35.4	+1.2
	baz=142,SNR=73						
MVCO	Mesa Verde	70.94	327	P	P	04 57 34.9	+0.7
MVCO				IAmb	IAmb	04 57 36.6	
	comp=Z,93nm,0.9s						
CPBX	Cerro Prieto	71.08	320	IAmb	IAmb	04 57 38.0	
	comp=Z,104nm,1.2s						
OGNE	Ogallala	71.09	334	P	P	04 57 35.6	+0.7
	baz=148,SNR=7.9						
OGNE	Ogallala	71.09	334	IAmb	IAmb	04 57 36.7	
	comp=Z,118nm,1.1s						
WUAZ	Wupatki	71.12	324	P	P	04 57 36.9	+1.7
	baz=139,SNR=98						
WUAZ	Wupatki	71.12	324	P	P	04 57 36.2	+1.0
WUAZ				IAmb	IAmb	04 57 38.2	
	comp=Z,147nm,1.0s						
GLA	Glamis	71.25	320	P	P	04 57 37.2	+1.3
	baz=136,SNR=11						
E43A	Lone Tree Farm	71.42	347	P	P	04 57 36.2	-0.4
E43A				IAmb	IAmb	04 57 37.2	
	comp=Z,61nm,0.8s						
ECSD	EROS Data Cent	71.55	339	P	P	04 57 37.2	-0.2
	baz=153,SNR=34						
ECSD	EROS Data Cent	71.55	339	IAmb	IAmb	04 57 38.4	
	comp=Z,109nm,1.2s						
COWI	Conover	71.63	345	IAmb	IAmb	04 57 38.8	
	comp=Z,80nm,1.2s						

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ISCO  Idaho Springs     71.66 331  P      P      04 57 38.6  0.0
ISCO                               pmax   pmax
      comp=Z,46nm,1.1s
ISCO  Idaho Springs     71.66 331  P      P      04 57 39.7 +1.1
      baz=145,SNR=43
ISCO  Idaho Springs     71.66 331  P      P      04 57 38.5  0.0
IKP   In-Ko-Pah, Jac    71.72 319  P      P      04 57 40.3 +1.5
      baz=135,SNR=26
SWSC  Sam W. Stewart    71.74 320  P      P      04 57 40.2 +1.4
      baz=135,SNR=18
SPMN  Marine on St.     71.75 342  P      P      04 57 37.9 -0.6
      baz=157,SNR=24
SPMN  Marine on St.     71.75 342  IAmb   IAmb   04 57 39.1
      comp=Z,93nm,0.9s
PDMCI Parker Dam,Lak    71.75 322  P      P      04 57 39.9 +1.1
      baz=137,SNR=18
SMCO  Snowmass          71.77 330  IAmb   IAmb   04 57 42.0
      comp=Z,54nm,0.8s
BC3   Big Chuckawall    72.04 320  P      P      04 57 42.1 +1.4
      baz=136,SNR=49
MONP2 Monument Peak     72.08 319  P      P      04 57 42.5 +1.4
      baz=135,SNR=25
BAR   Barrett           72.08 319  IAmb   IAmb   04 57 43.4
      comp=Z,75nm,1.0s
W13A  Hualapai Mount    72.19 322  P      P      04 57 42.9 +1.1
IRM   Iron Mountain     72.22 321  P      P      04 57 43.2 +1.5
      baz=136,SNR=56
U15A  North Rim         72.30 324  IAmb   IAmb   04 57 45.5
      comp=Z,95nm,1.1s
NEE2  Needles Airpor    72.36 322  P      P      04 57 43.8 +1.4
      baz=137,SNR=7.6
109C  Camp Elliot, M    72.48 319  P      P      04 57 44.5 +1.2
      baz=134,SNR=7.2
F36A  Milaca            72.54 342  IAmb   IAmb   04 57 43.8
      comp=Z,81nm,0.8s
TPFO  Pinon Flats       72.60 320  P      P      04 57 45.6 +1.5
      baz=135,SNR=30
PFO   Pinyon Flats O    72.60 320  P      P      04 57 44.9 +0.8
PFO                                pmax   pmax
      comp=Z,67nm,1.3s
PFO   Pinyon Flats O    72.60 320  P      P      04 57 45.6 +1.5
      baz=135,SNR=31
PFO   Pinyon Flats O    72.60 320  P      P      04 57 44.9 +0.8
BELC  Belle Mtn. Jos    72.61 320  P      P      04 57 45.6 +1.4
      baz=135,SNR=24
E38A  The Farm, Brul    72.69 344  IAmb   IAmb   04 57 44.9
      comp=Z,105nm,1.1s
N23A  Red Feather La    72.70 331  P      P      04 57 45.7 +1.0
      baz=145,SNR=35
TBI   Tubuai            72.87 252  eS     S      05 07 02.2 -1.6
      comp=Z,112nm,23.5s
TBI   Tubuai            72.87 252  eLR    LR     05 19 48.2
      comp=Z,260nm,30.5s
SUSD  Miller            72.96 338  P      P      04 57 45.7 -0.1
      baz=151,SNR=6.1
SUSD  Miller            72.96 338  IAmb   IAmb   04 57 46.8
      comp=Z,117nm,0.8s
GMRC  Granite Mounta    72.97 321  P      P      04 57 47.8 +1.6
      baz=136,SNR=90
MURC  Murrieta          73.03 319  P      P      04 57 48.1 +1.6
      baz=134,SNR=17
PKCU  Pink Cliffs       73.07 325  P      P      04 57 47.8 +0.8
O20A  White River Ci    73.13 329  P      P      04 57 48.4 +1.3
      baz=143,SNR=64
O20A  White River Ci    73.13 329  IAmb   IAmb   04 57 49.6
      comp=Z,124nm,0.9s
F33A  5 Mile Ranch,     73.33 340  IAmb   IAmb   04 57 48.5
      comp=Z,69nm,0.8s
BBRC  Big Bear Solar    73.33 320  P      P      04 57 50.4 +1.9
      baz=135
HEC   Hector,Ludlow     73.39 321  P      P      04 57 50.4 +1.8
      baz=135,SNR=20
SRU   San Rafael Swe    73.42 327  IAmb   IAmb   04 57 51.0
      comp=Z,88nm,0.8s
SCI2  San Clemente I    73.42 318  P      P      04 57 50.0 +1.2
      baz=133
MEH   Mehetia           73.43 257  eP     P      04 57 50.9 +1.7
      comp=Z,26nm,1.0s
TUQ   Turquoise Moun    73.58 321  P      P      04 57 51.3 +1.4
      baz=136,SNR=35
CIS   Catalina Islan    73.63 318  P      P      04 57 51.4 +1.4
      baz=134,SNR=5.2
P18A  Preston Nutter    73.69 328  P      P      04 57 51.5 +0.9
P18A                               IAmb   IAmb   04 57 53.1
      comp=Z,81nm,0.9s
CCUT  Cedar City        73.70 325  IAmb   IAmb   04 57 54.0
      comp=Z,126nm,1.0s
FMP   Fort Macarthur    73.77 319  P      P      04 57 52.4 +1.6
      baz=134
KOWA  Kowa              73.80  66  P      P      04 57 51.8 +0.5
      comp=Z,25nm,0.9s,baz=247,slow=6.0,SNR=62
KOWA  Kowa              73.80  66  P      P      04 57 51.3 -0.1
RRX   Edison Barstow    73.81 320  P      P      04 57 52.9 +1.9
      baz=135
P17A  Butcher Ranch,    73.81 327  IAmb   IAmb   04 57 53.5
      comp=Z,99nm,1.0s
RWWY  Rawlins           73.90 331  IAmb   IAmb   04 57 53.0
      comp=Z,63nm,0.9s
SBA   Scott Base        73.90 190  P      P      04 57 52.0 +1.0
SBA                                pmax   pmax
      comp=Z,101nm,1.4s
SBA   Scott Base        73.90 190  P      P      04 57 52.0 +1.0
SBA                                IAmb   IAmb   04 57 54.0
      comp=Z,101nm,1.4s
SHPR  Sheep Range       73.92 323  IAmb   IAmb   04 57 54.7
      comp=Z,69nm,1.1s
EYMN  Ely               73.93 344  P      P      04 57 50.9 -0.5
      baz=159,SNR=14
EYMN  Ely               73.93 344  P      P      04 57 50.8 -0.5
EYMN                               IAmb   IAmb   04 57 52.0
      comp=Z,63nm,0.9s
VAH   Vaihoa            73.93 260  eP     P      04 57 53.8 +1.6
      comp=Z,162nm,1.0s
GSC   Goldstone, Bar    73.99 321  P      P      04 57 53.8 +1.6
GSC                                pmax   pmax
      comp=Z,90nm,1.3s
GSC   Goldstone, Bar    73.99 321  P      P      04 57 53.6 +1.4
      baz=135,SNR=52
GSC   Goldstone, Bar    73.99 321  P      P      04 57 53.8 +1.6
GSC                                IAmb   IAmb   04 57 55.0
      comp=Z,90nm,1.2s
PASC  Pasadena Art C    74.02 319  P      P      04 57 53.8 +1.5
PASC                               IAmb   IAmb   04 57 55.0
      comp=Z,103nm,1.2s
RDMU  Red Mountain      74.09 329  IAmb   IAmb   04 57 54.9
      comp=Z,59nm,0.8s
SHOC  Shoshone, Teco    74.11 322  P      P      04 57 53.9 +1.1
      baz=136,SNR=5.4
DECC  Green Verdugo     74.17 319  P      P      04 57 54.4 +1.3
      baz=134,SNR=7.9
SNCC  San Nicolas Is    74.21 318  P      P      04 57 54.4 +1.0
      baz=133
PMOR  Pomariorio Ree    74.26 260  eP     P      04 57 55.7 +1.6
      comp=Z,162nm,1.1s
K22A  Casper            74.38 332  P      P      04 57 55.4 +1.1
      baz=145,SNR=20
K22A  Casper            74.38 332  IAmb   IAmb   04 57 56.6
      comp=Z,96nm,1.2s
EDW2  Edwards Air Fo    74.40 320  P      P      04 57 55.6 +1.1
      baz=134,SNR=34
QSM   Queen of Sheba    74.50 321  P      P      04 57 54.6 -0.4
QSM                                IAmb   IAmb   04 57 57.4
      comp=Z,60nm,0.9s
PRN   Pahroc Range      74.51 323  IAmb   IAmb   04 57 58.4
      comp=Z,82nm,1.1s
GWY   Greenwater Val    74.54 322  IAmb   IAmb   04 57 57.8
      comp=Z,83nm,0.9s
RSSD  Black Hills       74.56 335  P      P      04 57 56.0 +0.5
RSSD                               pmax   pmax
      comp=Z,66nm,0.9s
RSSD  Black Hills       74.56 335  P      P      04 57 56.4 +0.9
      baz=147
RSSD  Black Hills       74.56 335  P      P      04 57 56.0 +0.5
RSSD                               IAmb   IAmb   04 57 57.4
      comp=Z,66nm,0.9s
LRMC  Laurel Mtn Rad    74.63 320  P      P      04 57 57.2 +1.3
      baz=134,SNR=7.6
OSI   Osito Audit: C    74.65 319  P      P      04 57 57.1 +1.1
      baz=134
OSI   Osito Audit: C    74.65 319  IAmb   IAmb   04 57 58.3
      comp=Z,80nm,1.1s
MPU   Maple Canyon      74.67 327  IAmb   IAmb   04 57 58.6
      comp=Z,63nm,1.0s
SYO   Syowa Base        74.67 159⇊ eP     P      04 57 55.8 +0.3
SYO   Syowa Base        74.67 159⇅ ePcP   PcP    04 58 08.0 -1.2
SYO   Syowa Base        74.67 159⇈ epP    pP     04 58 18.6 -5.3
PSUT  Pine Spring       74.69 325  IAmb   IAmb   04 57 59.1
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      comp=Z,64nm,0.9s
SCZ2  Santa Cruz Isl    74.78 318  P      P      04 57 57.9 +1.2
      baz=133,SNR=5.3
FURC  Furnace Creek,    74.85 322  P      P      04 57 58.5 +1.6
      baz=135,SNR=63
PAE   Paea              74.86 257  eP     P      04 57 59.3 +1.8
      comp=Z,21nm,1.1s
PPT2  Papeete2          74.88 257  eP     P      04 57 59.3 +1.6
      comp=Z,105nm,1.4s
PPT2                               eS     S      05 07 23.5 -3.1
      comp=Z,203nm,24.5s
PPT2  Papeete2          74.88 257  eLR    LR     05 20 49.3
      comp=Z,1µm,34.0s
B35A  Bob, Littlefor    74.88 343  IAmb   IAmb   04 57 57.7
      comp=Z,74nm,0.9s
PPT   Papeete           74.88 257  P      P      04 57 59.9 +2.2
      comp=Z,54nm,0.9s,baz=42,slow=12,SNR=3.6
PPT                                LR     LR     05 21 37.4
      comp=Z,156nm,19.6s,baz=146,slow=28
VNDA  Vanda             74.92 190  P      P      04 57 58.3 +1.4
      comp=Z,22nm,0.9s,baz=135,slow=5.3,SNR=97
VNDA  Vanda             74.92 190  P      P      04 57 57.6 +0.7
JLU   Jordanelle        75.02 328  P      P      04 57 58.8 +0.6
JLU                                IAmb   IAmb   04 58 00.6
      comp=Z,52nm,0.8s
ARVC  Arvin             75.06 320  P      P      04 57 59.7 +1.4
      baz=134,SNR=8.6
SBC   Santa Barbara     75.13 318  P      P      04 58 00.0 +1.4
      baz=133
ISA   Isabella, Lake    75.22 320  P      P      04 58 00.9 +1.6
      baz=134,SNR=59
ISA   Isabella, Lake    75.22 320  IAmb   IAmb   04 58 02.0
      comp=Z,76nm,0.9s
SPR3  Spring Creek 3    75.29 325  IAmb   IAmb   04 58 02.2
      comp=Z,61nm,1.0s
DUG   Dugway, Tooele    75.39 327  P      P      04 58 01.5 +1.3
      baz=139,SNR=73
DUG   Dugway, Tooele    75.39 327  IAmb   IAmb   04 58 02.9
      comp=Z,72nm,1.0s
AGMN  Agassiz Nation    75.42 342  P      P      04 57 59.9  0.0
      baz=155,SNR=33
AGMN  Agassiz Nation    75.42 342  P      P      04 57 59.7 -0.3
AGMN                               IAmb   IAmb   04 58 01.0
      comp=Z,79nm,0.9s
R11A  Troy Canyon, C    75.48 324  P      P      04 58 02.4 +1.6
      baz=137,SNR=99
R11A  Troy Canyon, C    75.48 324  IAmb   IAmb   04 58 03.8
      comp=Z,112nm,1.4s
PKM   Mcpherson Peak    75.49 319  P      P      04 58 02.5 +1.5
      baz=133,SNR=30
GRAC  Grapevine Rang    75.51 322  P      P      04 58 02.4 +1.5
      baz=135,SNR=26
CWC   Cottonwood Cre    75.53 321  P      P      04 58 02.6 +1.5
      baz=134
VES   Vestal, Richgr    75.70 320  P      P      04 58 03.2 +1.3
      baz=134,SNR=53
BW06  Boulder Array     75.81 330  P      P      04 58 03.0 +0.3
      baz=142,SNR=28
BW06  Boulder Array     75.81 330  P      P      04 58 02.6  0.0
PDAR  Pinedale Array    75.81 330  P      P      04 58 03.0 +0.3
      comp=Z,8.5nm,0.7s,baz=134,slow=7.2,SNR=63
PDAR                               sP     sP     04 58 44.0 +1.2
      comp=Z,4.7nm,0.8s,baz=126,slow=9.1,SNR=2.4
HWUT  Hardware Ranch    75.85 328  IAmb   IAmb   04 58 05.9
      comp=Z,61nm,0.7s
SMMC  Simmler           75.89 319  P      P      04 58 04.7 +1.7
      baz=133,SNR=31
TIN   Tinemaha, Big     76.04 321  P      P      04 58 05.6 +1.6
      baz=134,SNR=40
SPUT  South Promonto    76.05 328  IAmb   IAmb   04 58 06.1
      comp=Z,80nm,0.8s
MDND  Maddock           76.16 339  P      P      04 58 05.0 +0.7
      baz=151,SNR=67
TPH   Tonopah           76.19 323  P      P      04 58 05.8 +0.9
TPH                                pmax   pmax
      comp=Z,364nm,1.0s
TPH   Tonopah           76.19 323  P      P      04 58 05.8 +0.9
VOG   Valley Oaks Go    76.21 320  P      P      04 58 05.0 +0.3
      baz=133
PAGB  Antelope Grade    76.32 319  IAmb   IAmb   04 58 08.2
      comp=Z,158nm,1.3s
HVU   Hansel Valley     76.57 328  IAmb   IAmb   04 58 08.8
      comp=Z,62nm,0.9s
MLAC  Mammoth, Mammo76.79 321      P      P      04 58 09.8 +1.5
      baz=134,SNR=22
REDW  Red Top Meadow    76.87 330  IAmb   IAmb   04 58 10.8
      comp=Z,62nm,0.9s
SNOW  Snow King Moun    76.90 330  P      P      04 58 09.3 +0.5
SNOW                               IAmb   IAmb   04 58 11.1
      comp=Z,73nm,0.8s
PMPB  Monarch Peak      76.98 319  P      P      04 58 10.5 +1.3
PMPB                               IAmb   IAmb   04 58 12.1
      comp=Z,78nm,0.9s
TPAW  Teton Pass        77.01 330  IAmb   IAmb   04 58 11.8
      comp=Z,70nm,0.9s
LHV   Little Huntoon    77.03 322  IAmb   IAmb   04 58 12.3
      comp=Z,80nm,1.1s
ELK   Elko              77.04 326  IAmb   IAmb   04 58 11.8
      comp=Z,55nm,0.9s
NVAR  Mina Array Bea    77.04 322  P      P      04 58 10.9 +1.2
      comp=Z,22nm,0.9s,baz=155,slow=6.5,SNR=120
NVAR                               sP     sP     04 58 51.4 +1.6
      comp=Z,19nm,1.0s,baz=139,slow=6.8,SNR=4.3
NVAR                               LR     LR     05 29 13.9
      comp=Z,56nm,19.5s,baz=92,slow=33
FXWY  Fox Creek         77.16 330  P      P      04 58 10.5 +0.3
ULM   Lac du Bonnet     77.19 343  P      P      04 58 09.6 -0.3
      comp=Z,58nm,0.7s,baz=155,slow=5.7,SNR=108
ULM                                LR     LR     05 37 37.7
      comp=Z,80nm,18.4s,baz=127,slow=40
ULM   Lac du Bonnet     77.19 343  IAmb   IAmb   04 58 10.7
      comp=Z,64nm,0.7s
RYN   Ryan              77.30 322  P      P      04 58 11.7 +0.6
FLWY  Flagg Ranch       77.36 331  IAmb   IAmb   04 58 14.0
      comp=Z,121nm,0.9s
KVN   Kaiserville       77.36 323  IAmb   IAmb   04 58 13.6
      comp=Z,101nm,1.1s
RLMT  Red Lodge         77.54 332  P      P      04 58 13.2 +0.8
      baz=143,SNR=38
RLMT  Red Lodge         77.54 332  IAmb   IAmb   04 58 14.1
      comp=Z,48nm,0.7s
H17A  Grant Village     77.55 331  P      P      04 58 14.1 +1.7
      baz=142,SNR=16
LAO   LASA Array        77.55 335  P      P      04 58 13.0 +0.8
      baz=145,SNR=39
LAO   LASA Array        77.55 335  IAmb   IAmb   04 58 14.1
      comp=Z,113nm,1.0s
YMP   Mirror Lake Pl    77.63 331  P      P      04 58 14.0 +1.0
SAO   San Andreas Ge    77.73 319  P      P      04 58 14.0 +0.7
SAO                                pmax   pmax
      comp=Z,32nm,1.0s
SAO   San Andreas Ge    77.73 319  P      P      04 58 14.0 +0.7
YMR   Madison River     77.93 331  IAmb   IAmb   04 58 17.6
      comp=Z,118nm,1.0s
CMB   Columbia Colle    77.96 321  P      P      04 58 14.6  0.0
CMB                                pmax   pmax
      comp=Z,16nm,0.9s
CMB   Columbia Colle    77.96 321  P      P      04 58 14.6  0.0
YHH   Holmes Hill       77.98 331  IAmb   IAmb   04 58 17.8
      comp=Z,150nm,1.2s
SCHQ  Schefferville     78.00   1  P      P      04 58 14.6 +0.2
      comp=Z,29nm,0.8s,baz=204,slow=3.9,SNR=16
TORD  Torodi Ar. Bea    78.02  70  P      P      04 58 15.7 +0.3
      comp=Z,33nm,0.7s,baz=257,slow=5.2,SNR=267
TORD                               pP     pP     04 58 43.9 +0.2
      comp=Z,17nm,0.7s,baz=254,slow=4.8,SNR=3.9
TORD                               sP     sP     04 58 56.8 +1.2
      comp=Z,8.6nm,0.4s,baz=256,slow=4.9,SNR=2.3
TORD                               LR     LR     05 33 14.4
      comp=Z,180nm,18.1s,baz=230,slow=36
PNTR  Pine Nut          78.23 322  IAmb   IAmb   04 58 19.1
      comp=Z,119nm,0.9s
QLMT  Earthquake Lak    78.27 331  P      P      04 58 17.6 +1.3
DGMT  Dagmar            78.27 337  P      P      04 58 17.1 +1.1
      baz=147,SNR=49
VCNR  Virginia City     78.40 322  P      P      04 58 18.5 +1.3
HLID  Hailey            78.70 328  P      P      04 58 20.5 +1.7
      baz=138,SNR=189
HLID  Hailey            78.70 328  IAmb   IAmb   04 58 21.6
      comp=Z,129nm,0.9s
BOZ   Bozeman (W)       78.95 331  P      P      04 58 20.9 +0.9
      baz=141,SNR=12
DLMT  Dillon            79.21 330  P      P      04 58 21.8 +0.4
DLMT                               IAmb   IAmb   04 58 23.9
      comp=Z,94nm,1.2s
MFID  Camas Ranch       79.29 327  IAmb   IAmb   04 58 24.5
      comp=Z,147nm,1.4s
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TSUM  Tsumeb            79.48 106  P      P      04 58 23.3 -0.2
ORV   Oroville          79.63 321  IAmb   IAmb   04 58 26.2
      comp=Z,147nm,1.1s
EGMT  Eagleton          80.05 334  P      P      04 58 26.2 +0.3
      baz=143,SNR=25
EGMT  Eagleton          80.05 334  IAmb   IAmb   04 58 27.5
      comp=Z,103nm,1.1s
O03E  Paynes Creek      80.29 322  P      P      04 58 27.3  0.0
      baz=132,SNR=31
MOD   Modoc Plateau     80.55 324  IAmb   IAmb   04 58 31.0
      comp=Z,83nm,1.0s
J08A  Circle Bar Ran    80.59 326  IAmb   IAmb   04 58 31.3
      comp=Z,121nm,1.2s
PLID  Pearl Lake        80.60 328  IAmb   IAmb   04 58 31.1
      comp=Z,106nm,0.8s
O02D  Mt. Diablo Mer    80.78 321  P      P      04 58 30.2 +0.3
      baz=132,SNR=12
WDC   Whiskeytown Da    80.90 322  IAmb   IAmb   04 58 31.0
      comp=Z,47nm,0.7s
KCPM  Cahto Peak        80.92 320  P      P      04 58 31.9 +1.2
KCPM                               IAmb   IAmb   04 58 33.5
      comp=Z,101nm,1.1s
MSO   Missoula          80.93 331  P      P      04 58 32.0 +1.4
      baz=139,SNR=16
BMO   Blue Mountains    81.07 327  P      P      04 58 31.2 -0.1
BMO                                pmax   pmax
      comp=Z,110nm,1.3s
BMO   Blue Mountains    81.07 327  P      P      04 58 31.2 -0.1
BMO                                IAmb   IAmb   04 58 33.5
      comp=Z,110nm,1.2s
N02D  Trinity Center    81.26 322  P      P      04 58 32.4  0.0
      baz=132,SNR=18
M04C  Macdoel           81.31 323  P      P      04 58 33.3 +0.5
      baz=132,SNR=31
KMRM  Mail Ridge        81.34 321  IAmb   IAmb   04 58 35.6
      comp=Z,188nm,1.3s
M02C  Callahan          81.62 322  P      P      04 58 34.6 +0.3
      baz=132,SNR=6.7
JTMT  Jette             81.77 331  IAmb   IAmb   04 58 37.1
      comp=Z,57nm,0.8s
K04D  Chiloquin, OR     81.83 324  P      P      04 58 36.1 +0.7
      baz=132,SNR=8.8
F10A  Beach Ranch, E    81.83 328  P      P      04 58 35.1 -0.2
F10A                               IAmb   IAmb   04 58 38.8
      comp=Z,93nm,1.3s
L04D  Klamath Falls     81.86 323  P      P      04 58 36.0 +0.3
      baz=132,SNR=7.2
J05D  Fort Rock, OR     82.00 324  P      P      04 58 37.3 +0.9
      baz=133,SNR=30
J04D  Umpqua Nationa    82.44 324  P      P      04 58 39.5 +0.8
      baz=132,SNR=14
MAW   Mawson            82.45 163  P      P      04 58 38.8 +0.6
      comp=Z,68nm,0.9s,baz=216,slow=6.6,SNR=80
MAW                                pP     pP     04 59 07.5 +0.4
      comp=Z,23nm,1.0s,baz=211,slow=5.9,SNR=3.4
MAW                                LR     LR     05 35 02.9
      comp=Z,89nm,21.4s,baz=238,slow=35
MAW   Mawson            82.45 163  P      P      04 58 38.1 -0.1
BOSA  Boshof            82.53 118  P      P      04 58 39.9 +0.3
      comp=Z,12nm,0.9s,baz=253,slow=3.6,SNR=21
BOSA                               pP     pP     04 59 08.1 -0.2
      comp=Z,10nm,0.8s,baz=260,slow=2.8,SNR=4.5
BOSA                               LR     LR     05 32 54.6
      comp=Z,123nm,18.2s,baz=222,slow=34
BOSA  Boshof            82.53 118  P      P      04 58 39.6 +0.1
L02E  Cave Junction     82.54 322  P      P      04 58 40.1 +1.0
      baz=131,SNR=5.9
RAR   Rarotonga         82.56 250  P      P      04 58 40.6 +0.9
      comp=Z,16nm,0.8s,baz=146,slow=11,SNR=2.7
WALA  Waterton Lakes    82.60 332  IAmb   IAmb   04 58 41.1
      comp=Z,93nm,0.9s
I05D  Terrebonne, OR    82.77 325  P      P      04 58 41.4 +1.2
      baz=133,SNR=34
FFC   Flin Flon         82.89 341  P      P      04 58 40.0 -0.5
FFC                                pmax   pmax
      comp=Z,58nm,1.3s
FFC   Flin Flon         82.89 341  P      P      04 58 40.0 -0.5
K02D  Willamette Mer    82.93 323  P      P      04 58 42.1 +1.0
      baz=131,SNR=11
I04A  Tendick Farm,     82.97 324  P      P      04 58 41.2 -0.1
      baz=132,SNR=7.7
DBO   Dodson Butte      82.97 323  P      P      04 58 41.9 +0.5
DBO                                IAmb   IAmb   04 58 43.6
      comp=Z,86nm,1.2s
MDT   Midelt            83.00  50  P      P      04 58 43.4 +1.7
      comp=Z,4.0nm,0.8s,baz=304,slow=5.5,SNR=12
MDT                                pP     pP     04 59 11.8 +1.1
      comp=Z,7.2nm,0.9s,baz=259,slow=7.7,SNR=6.3
MDT   Midelt            83.00  50  P      P      04 58 43.4 +1.7
HAWA  Hanford           83.26 327  IAmb   IAmb   04 58 44.7
      comp=Z,47nm,0.8s
G05D  Wamic, OR         83.37 326  P      P      04 58 44.6 +1.4
      baz=133,SNR=11
J01E  Myrtle Point      83.38 323  P      P      04 58 44.4 +1.1
      baz=131
I03D  Drain, OR         83.41 324  P      P      04 58 44.3 +0.8
      baz=131
NEW   Newport           83.44 330  P      P      04 58 43.5 -0.1
      baz=137,SNR=14
PCVE  Castro Verde      83.44  44  eP     P      04 58 45.4 +1.6
      comp=Z,40nm,1.5s
PCVE                               epP    pP     04 59 14.0 +1.3
H04A  Detroit Lake      83.45 325  IAmb   IAmb   04 58 45.0
      comp=Z,46nm,0.9s
MESJ  Messejana         83.45  44  epP    pP     04 59 13.8 +1.1
PVAQ  Vaqueiros         83.52  45  eS     S      05 09 06.6  +10
PVAQ  Vaqueiros         83.52  45  eLR    LR     05 27 00.1
      comp=Z,116nm,16.0s
BUCK  Buck Mountain     83.55 324  IAmb   IAmb   04 58 46.0
      comp=Z,98nm,0.8s
HOOD  Mount Hood Mea    83.60 326  IAmb   IAmb   04 58 46.7
      comp=Z,111nm,1.4s
H04D  Lebanon           83.63 324  P      P      04 58 44.9 +0.3
      baz=132
C09A  Chrisman Ranch    83.64 329  P      P      04 58 44.5 -0.1
PBEJ  Beja              83.78  44  eP     P      04 58 47.0 +1.5
      comp=Z,33nm,1.6s
PBEJ                               epP    pP     04 59 15.4 +1.0
F05D  White Salmon      83.88 326  P      P      04 58 46.8 +1.0
      baz=133
I02E  Swisshome, OR     83.95 324  P      P      04 58 47.4 +1.2
      baz=131
EVO   Evora             83.99  44  eP     P      04 58 47.3 +0.8
      comp=Z,28nm,1.9s
PSBE  So Bento          84.08  42  eP     P      04 58 49.1 +2.1
      comp=Z,58nm,2.0s
PSBE                               epP    pP     04 59 16.7 +0.8
PMTG  Montargil         84.17  43  eP     P      04 58 48.8 +1.4
      comp=Z,70nm,1.9s
PMTG                               epP    pP     04 59 17.1 +0.7
G03D  McMinnville, O    84.37 325  P      P      04 58 49.1 +0.9
      baz=132
PBAR  Barrancos         84.40  44  eP     P      04 58 50.0 +1.4
      comp=Z,36nm,1.6s
PBAR                               epP    pP     04 59 18.3 +0.7
F04A  Amboy             84.41 326  P      P      04 58 48.3 -0.1
F04A                               IAmb   IAmb   04 58 50.0
      comp=Z,78nm,1.0s
PESTR Estremoz          84.45  43  eP     P      04 58 50.2 +1.3
      comp=Z,39nm,1.7s
PESTR Estremoz          84.45  43  P      P      04 58 49.3 +0.4
PCAS  Casmilo, Conde    84.59  42  eP     P      04 58 50.9 +1.4
      comp=Z,49nm,2.0s
PCAS                               epP    pP     04 59 18.7 +0.2
COI   Coimbra           84.73  42  eP     P      04 58 51.8 +1.6
      comp=Z,66nm,1.9s
COI                                epP    pP     04 59 20.1 +0.9
F04D  Rainier, OR       84.81 326  P      P      04 58 51.5 +1.0
      baz=132
E04D  Cinebar           84.90 326  P      P      04 58 51.1 +0.2
      baz=132
PMRV  Marv??o           84.91  43  eP     P      04 58 52.0 +0.8
      comp=Z,23nm,1.7s
PMRV  Marv??o           84.91  43  eS     S      05 09 14.1 +3.2
PMRV  Marv??o           84.91  43  eLR    LR     05 27 19.5
      comp=Z,92nm,18.0s
C06D  Leavenworth       84.99 328  P      P      04 58 51.7 +0.4
      baz=134
D05A  Enumclaw          85.03 327  P      P      04 58 51.6 +0.1
D05A                               IAmb   IAmb   04 58 53.0
      comp=Z,84nm,0.9s
PCBR  Castelo Branco    85.10  43  eP     P      04 58 53.3 +1.2
      comp=Z,34nm,1.9s
PCBR                               epP    pP     04 59 21.5 +0.5
PVIS  Viseu             85.35  42  eP     P      04 58 54.1 +0.7
      comp=Z,42nm,1.6s
MTE   Manteigas         85.38  42  eP     P      04 58 54.1 +0.5
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      comp=Z,33nm,1.2s
MTE                               epP     pP      04 59 22.6  0.0
MTE                               eS      S       05 09 17.4 +1.7
MTE   Manteigas         85.38  42 eLR     LR      05 27 35.8
      comp=Z,94nm,20.0s
D04E  Lakebay           85.42 326  P      P       04 58 54.5 +1.1
      baz=132
B06A  Marblemount       85.69 328  IAmb   IAmb    04 58 55.6
      comp=Z,64nm,0.8s
PVRL  Vila Real         85.79  41 eP      P       04 58 56.4 +0.8
      comp=Z,51nm,1.9s
PVRL                              epP     pP      04 59 25.0 +0.5
POLO  Lamas de Olo      85.80  41 eP      P       04 58 56.5 +0.8
      comp=Z,20nm,1.8s
POLO                              epP     pP      04 59 25.1 +0.4
B05A  Bryant            85.81 328  P      P       04 58 55.2 -0.2
      baz=133,SNR=11
D03D  Eldon             85.82 327  P      P       04 58 56.1 +0.6
      baz=132,SNR=9.0
PCAB  Cabril            85.86  41 eP      P       04 58 56.6 +0.7
      comp=Z,39nm,2.1s
PCAB                              epP     pP      04 59 25.3 +0.4
PGAV  Gavieira, Arco    85.87  41 eP      P       04 58 56.6 +0.6
PGAV                              epP     pP      04 59 25.1 +0.1
PGAV                              eS      S       05 09 21.9 +1.5
PGAV  Gavieira, Arco    85.87  41 eLR     LR      05 28 30.9
      comp=Z,92nm,18.0s
IVI   Ivigtut           86.02  10  IAmb   IAmb    04 58 58.2
      comp=Z,73nm,1.0s
NLWA  Neilton Lookou    86.12 326  IAmb   IAmb    04 58 58.9
      comp=Z,50nm,1.0s
MVO   Moncorvo          86.15  42 eP      P       04 58 58.3 +0.9
      comp=Z,56nm,2.2s
MVO                               epP     pP      04 59 26.6 +0.2
MVO                               eS      S       05 09 22.2 -0.9
MVO   Moncorvo          86.15  42 eLR     LR      05 27 56.2
      comp=Z,87nm,20.0s
B04A  Port Angeles      86.38 327  IAmb   IAmb    04 59 00.1
      comp=Z,46nm,0.9s
A04D  Lummi Island      86.42 328  P      P       04 58 59.1 +0.7
      baz=132,SNR=20
PBRG  Braganca          86.70  41 epP     pP      04 59 28.1 -0.9
PBRG                               A      A       04 59 31.2
      comp=Z,32nm,1.7s
PAB   San Pablo         86.91  44  P      P       04 59 02.2 +1.1
PAB                                pmax   pmax
      comp=Z,27nm,1.2s
PAB   San Pablo         86.91  44  P      P       04 59 02.2 +1.1
ESDC  Sonseca Array     87.23  44  P      P       04 59 03.3 +0.7
      comp=Z,2.7nm,0.9s,baz=258,slow=4.1,SNR=17
ESDC                               pP     pP      04 59 31.8 +0.1
      comp=Z,12nm,1.2s,baz=234,slow=4.9,SNR=9.7
ESDC                               LR     LR      05 38 34.9
      comp=Z,88nm,18.0s,baz=235,slow=36
ESBB  Sonseca Array     87.23  44  P      P       04 59 02.8 +0.1
LLLB  Lillooet          87.30 329  IAmb   IAmb    04 59 03.7
      comp=Z,50nm,1.0s
CBB   Campbell River    88.59 327  IAmb   IAmb    04 59 10.3
      comp=Z,51nm,0.9s
CASY  Casey             90.54 180  P      P       04 59 18.4 +0.6
DY2G  Dye2              91.29   9 i P     P       04 59 21.9 +0.6
DY2G                               IAmb   IAmb    04 59 22.9
      comp=Z,67nm,0.9s
BKZ   Black Stump Fm    92.76 225  IAmb   IAmb    04 59 32.5
      comp=Z,58nm,1.4s
URZ   Urewera           92.85 226  P      P       04 59 29.9 +0.8
      comp=Z,12nm,0.9s,baz=120,slow=23,SNR=4.4
URZ   Urewera           92.85 226  IAmb   IAmb    04 59 32.0
      comp=Z,38nm,1.3s
YKA   Yellowknife Ar    93.03 341  P      P       04 59 29.2 +0.1
      comp=Z,31nm,0.8s,baz=130,slow=5.8,SNR=44
YKA                                pP     pP      04 59 59.2 +0.9
      comp=Z,4.4nm,0.8s,baz=129,slow=5.8,SNR=2.0
YKA                                sP     sP      05 00 10.5 +0.5
      comp=Z,8.2nm,0.8s,baz=131,slow=5.5,SNR=4.1
YKA                                LR     LR      05 46 43.1
      comp=Z,37nm,18.9s,baz=0.0,slow=39
GRNB  Grenville Isla    93.19 329  IAmb   IAmb    04 59 32.3
      comp=Z,20nm,0.9s
THZ   Tophouse          93.54 221  P      P       04 59 33.9 +1.7
NNZ   Nelson            93.57 222  P      P       04 59 33.1 +0.8
NNZ                                IAmb   IAmb    04 59 35.1
      comp=Z,36nm,0.9s
KEST  Kesra             94.48  53  P      P       04 59 37.9 +1.4
      comp=Z,2.2nm,0.8s,baz=218,slow=4.6,SNR=3.7
KEST                               pP     pP      05 00 07.0 +1.3
      comp=Z,4.5nm,0.9s,baz=239,slow=11,SNR=3.6
KEST                               LR     LR      05 41 23.3
      comp=Z,134nm,20.9s,baz=208,slow=35
ICESG Greenland Ices    94.70  10 i P     P       04 59 37.6 +0.5
ICESG                              IAmb   IAmb    04 59 38.5
      comp=Z,15nm,0.8s
BORG  Borgarnes         95.28  19  P      P       04 59 40.8 +1.4
      comp=Z,25nm,1.2s,baz=248,slow=5.4,SNR=2.4
CRAG  Craig             95.63 329  P      P       04 59 41.7 +0.5
      baz=124
WRAK  Wrangell Islan    95.80 330  P      P       04 59 42.5 +0.6
      baz=124
WRAK  Wrangell Islan    95.80 330  IAmb   IAmb    04 59 43.7
      comp=Z,26nm,1.1s
SUMG  Summit            97.99   9 i P     P       04 59 52.0  0.0
P33M  Teslin, Yukon     98.13 333  P      Pdif    04 59 52.7 +0.2
      baz=124,SNR=5.7
SKAG  Skagway           98.80 332  P      Pdif    04 59 56.0 +0.7
      baz=122
WHY   Whitehorse        99.24 333  P      Pdif    04 59 57.4 -0.1
      baz=122
DAVA  Damuels           99.70  43 eP      Pdif    05 00 01.6 +1.7
      comp=Z,3.6nm,0.9s
DAVA                              eP      pP      05 00 29.6 +0.2
      comp=Z,8.2nm,1.3s
M31M  Drury Creek, Y    99.85 334  P      Pdif    04 59 60.0 -0.1
      baz=122
N31M  Braeburn, Yuko   100.04 333  P      Pdif    05 00 01.1 +0.2
      baz=121
FETA  Feichten         100.12  43 eP      Pdif    05 00 02.0 +0.2
      comp=Z,2.5nm,1.0s
FETA                              eP      pP      05 00 31.5 +0.2
      comp=Z,8.3nm,1.3s
RETA  Reutte           100.33  43 eP      Pdif    05 00 02.8 +0.2
      comp=Z,8.0nm,1.3s
RETA                              eP      pP      05 00 31.7 -0.4
      comp=Z,6.5nm,1.6s
HYT   Haines Junctio   100.43 332  P      Pdif    05 00 03.7 +0.9
      baz=120
MOTA  Moosalm          100.48  43 eP      Pdif    05 00 04.1 +0.7
      comp=Z,9.2nm,1.4s
MOTA                              eP      pP      05 00 32.8 -0.1
      comp=Z,11nm,1.3s
SQTA  Sankt Quirin     100.50  43 eP      Pdif    05 00 04.1 +0.6
      comp=Z,7.5nm,0.8s
SQTA                              eP      pPdif   05 00 32.4 -0.4
      comp=Z,7.7nm,1.0s
PNL   Peninsula        100.69 331  P      Pdif    05 00 04.7 +0.9
      baz=118
WATA  Walderalm        100.78  43 eP      Pdif    05 00 05.7 +1.0
      comp=Z,6.7nm,1.1s
WATA                              eP      pP      05 00 34.5 +0.3
      comp=Z,5.6nm,0.9s
WTTA  Wattenberg       100.79  43 eP      Pdif    05 00 05.4 +0.6
      comp=Z,14nm,1.3s
WTTA                              eP      pP      05 00 34.2 -0.2
      comp=Z,7.8nm,0.8s
M30M  Minto, Yukon     101.01 334  P      Pdif    05 00 05.7 +0.5
      baz=120
ABTA  Abfaltersbach    101.14  44 eP      Pdif    05 00 33.2  +27
      comp=Z,7.5nm,1.1s
YUK4  Talbot Arm       101.17 333  P      Pdif    05 00 07.0 +0.9
      baz=119
NEEM  North Greenlan   101.25   4 i P     Pdif    05 00 07.8 +1.5
MYKA  Terra Mystica    101.82  44 eP      Pdif    05 00 10.8 +1.5
      comp=Z,1.4nm,0.4s
MYKA                              eP      pP      05 00 39.1 +0.2
      comp=Z,4.9nm,1.1s
YUK3  Moose Creek      102.14 333  P      Pdif    05 00 11.3 +0.8
      baz=117
OBKA  Obir             102.36  45 eP      Pdif    05 00 12.4 +0.7
      comp=Z,2.5nm,0.8s
OBKA                              eP      pPdif   05 00 42.2 +1.1
      comp=Z,4.8nm,1.3s
A36M  Sachs Harbour    102.59 345  P      Pdif    05 00 12.6 +0.6
      baz=128
GERES GERESS Array B   102.66  42  P      Pdif    05 00 12.9 -0.1
      comp=Z,0.2nm,0.4s,baz=284,slow=39,SNR=2.5
GERES                              PKiKP  PKiKP   05 04 33.5 +0.2
      comp=Z,1.0nm,0.8s,baz=195,slow=1.9,SNR=4.7
GERES                              PKKPbc PKKPbc  05 16 13.4 -0.2
      comp=Z,0.9nm,0.8s,baz=127,slow=2.0,SNR=4.4
GERES                              PKKPab PKKPdf  05 16 35.1  +14
      comp=Z,0.5nm,0.6s,baz=335,slow=4.7,SNR=4.8
DAWY  Dawson           102.75 335  P      Pdif    05 00 13.2 +0.3
      baz=118
INK   Inuvik           102.78 340  P      Pdif    05 00 12.9  0.0
      comp=Z,7.8nm,1.0s,baz=112,slow=5.7,SNR=4.0
INK   Inuvik           102.78 340  P      Pdif    05 00 13.5 +0.6
      baz=122
I29M  Ogilvie Camp,    102.95 336  P      Pdif    05 00 14.2 +0.4
      baz=118
M27K  Edge Creek, AK   103.00 333  P      Pdif    05 00 14.6 +0.4
      baz=116
MCARA McCarthy VSAT    103.07 332  P      Pdif    05 00 14.9 +0.6
      baz=115
KAIM  Kayak Island     103.09 330  P      Pdif    05 00 15.0 +0.6
      baz=114
CLL   Collm            103.13  40 eSP     SP      05 13 31.0 +2.7
L27K  Beaver Creek,    103.28 333  P      Pdif    05 00 16.0 +0.7
      baz=116
BMRM  Bremner River    103.59 331  P      Pdif    05 00 17.4 +0.7
      baz=114
CONA  Conrad Observa   103.69  44 eP      Pdif    05 00 19.5 +1.9
      comp=Z,1.1nm,0.7s
CONA                              eP      pPdif   05 00 43.9 -3.1
      comp=Z,2.9nm,1.2s
EGAK  Eagle            103.76 335  P      Pdif    05 00 17.8 +0.5
      baz=116
EYAK  Cordova Ski Ar   103.94 330  P      Pdif    05 00 18.9 +0.7
      baz=113
KLU   Klutina          104.39 331  P      Pdif    05 00 20.8 +0.5
      baz=113
SCRK  Sand Creek       104.54 334  P      Pdif    05 00 21.3 +0.3
      baz=114
J26L  Joseph Creek     104.58 334  P      Pdif    05 00 21.2 +0.1
      baz=114
M24K  Tolsona, Glenn   104.73 332  P      Pdif    05 00 22.6 +0.8
      baz=112
SEW   Seward           105.50 329  P      PKiKP   05 04 38.5 +0.5
      baz=110
PMR   Palmer           105.86 331  P      PKiKP   05 04 39.4 +0.8
      baz=110
HDA   Harding Lake     105.91 334  P      PKiKP   05 04 39.9 +1.2
      baz=111
ILAR  Eielson Array    106.01 334  Pdiff  Pdif    05 00 27.1 -0.2
      comp=Z,1.2nm,0.8s,baz=147,slow=3.0,SNR=9.5
ILAR                               PKiKP  PKiKP   05 04 38.7 -0.2
      comp=Z,0.9nm,0.9s,baz=119,slow=1.1,SNR=4.3
ILAR  Eielson Array    106.01 334 i P     Pdif    05 00 26.3 -1.1
ILAR  Eielson Array    106.01 334         Pdif    05 00 26.3 -1.1
POKR  Poker Plat Res   106.35 334  P      PKiKP   05 04 40.8 +1.3
      baz=110
HOM   Homer            106.39 328  P      PKiKP   05 04 40.0 +0.3
      baz=108
MCK   McKinley         106.49 333  P      PKiKP   05 04 40.1 +0.3
      baz=110
CAPN  Captain Cook N   106.51 330  P      PKiKP   05 04 40.0 +0.1
      baz=108
CHIR  Chirikof Islan   107.29 324  P      PKiKP   05 04 42.2 +0.8
      baz=106
BPAW  Bear Paw Mtn.    107.47 333  P      PKiKP   05 04 42.2 +0.6
      baz=108
CAST  Castle Rocks     107.73 332  P      PKiKP   05 04 42.9 +0.7
      baz=107
P18K  Big Mountain,    108.06 328  P      PKiKP   05 04 43.2 +0.3
      baz=106
N19K  Bonanza Creek    108.09 329  P      PKiKP   05 04 43.5 +0.5
      baz=106
COLD  Coldfoot         108.10 336  P      PKiKP   05 04 43.6 +0.9
      baz=107
L20K  Farewell, AK     108.26 331  P      PKiKP   05 04 43.8 +0.6
      baz=106
TOLK  Toolik Lake Re   108.29 338  P      PKiKP   05 04 43.8 +0.7
      baz=108
DZM   Mont Dzumac      109.66 234 ePS     PS      05 14 49.5 +0.1
      comp=Z,91nm,28.9s
DZM   Mont Dzumac      109.66 234 eLR     LR      05 36 56.2
      comp=Z,145nm,28.2s
FINES FINESS Array B   112.68  31  PKKPbc PKKPbc  05 15 40.1 -2.0
      comp=Z,2.8nm,0.9s,baz=62,slow=4.5,SNR=3.4
FINES                              PKKPab PKKPab  05 15 49.0 +2.1
      comp=Z,2.7nm,1.1s,baz=45,slow=8.4,SNR=4.1
AKASG Malin Array Be   112.84  43  PKiKP  PKiKP   05 04 51.7 -0.4
      comp=Z,2.2nm,0.6s,baz=264,slow=2.5,SNR=15
AKASG                              PKKPbc PKKPbc  05 15 40.2 -1.1
      comp=Z,1.6nm,0.5s,baz=69,slow=3.8,SNR=11
ARCES ARCESS Array B   113.30  22  PKKPbc PKKPbc  05 15 38.4 -2.0
      comp=Z,1.4nm,0.5s,baz=88,slow=3.0,SNR=14
ARCES                              PKKPab PKKPab  05 15 44.6 +0.6
      comp=Z,7.1nm,0.8s,baz=38,slow=4.6,SNR=6.2
BRTR  Keskin Array B   113.94  55  PKiKP  PKiKP   05 04 55.1 +0.3
      comp=Z,2.4nm,0.8s,baz=186,slow=3.5,SNR=10
BRTR                               PKKPab PKKPab  05 15 43.6 +1.1
      comp=Z,1.1nm,0.8s,baz=86,slow=5.1,SNR=4.1
BRTR  Keskin Array B   113.94  55  PKiKP  PKiKP   05 04 54.5 -0.3
BNN   Bunyan           115.46  57         PKPdf   05 04 57.6 -0.2
OBN   Obninsk          117.70  39⇓ePKIKP  PKPdf   05 05 01.1 -0.2
OBN                               e               05 05 31.2
OBN                                pmax   pmax
      comp=Z,28nm,1.1s
STKA  Stephens Creek   117.71 209  PKP    PKiKP   05 05 02.5 +0.3
      comp=Z,4.1nm,0.8s,baz=89,slow=1.7,SNR=6.8
STKA                               PKKPbc PKKPbc  05 15 24.1  0.0
      comp=Z,1.1nm,0.5s,baz=15,slow=9.0,SNR=3.5
LPSR  Galich'ya Gora   119.03  42 ePKIKP  PKPdf   05 05 03.8 -0.1
LPSR                               pmax   pmax
      comp=Z,20nm,0.9s
VSR   Storozhevoye     119.14  43 ePKIKP  PKPdf   05 05 03.1 -1.1
VSR                                pmax   pmax
      comp=Z,20nm,1.4s
KLMR  Klimovskoe       119.17  32 ePKIKP  PKPdf   05 05 01.3 -2.7
KLMR                              e               05 05 33.3
KLMR                               pmax   pmax
      comp=Z,23nm,0.9s
KLMR  Klimovskoe       119.17  32 ePKPdf  PKPdf   05 05 01.3 -2.7
KLMR                               AMP            05 05 05.1
      comp=Z,23nm,0.9s
KLMR                              epPKPdf pPKPdf  05 05 33.4 -1.0
VORD  Divnogorie       119.21  43 ePKIKP  PKPdf   05 05 02.7 -1.6
VORD                               pmax   pmax
      comp=Z,10.0nm,0.9s
VRH   Novokhopyorsk    120.75  43 ePKIKP  PKPdf   05 05 06.2 -1.1
VRH                                pmax   pmax
      comp=Z,30nm,1.2s
SHA1  Shidzhatmaz      121.16  52 i PKIKP PKPdf   05 05 08.5 -0.2
KIV   Kislovodsk       121.19  52 ePKIKP  PKPdf   05 05 08.0 -0.5
KIV                                pmax   pmax
      comp=Z,17nm,1.0s
KIV   Kislovodsk       121.19  52  PKPdf  PKiKP   05 05 08.7 +0.1
KBZ   Khabaz           121.33  52  PKP    PKiKP   05 05 09.6 +0.8
      comp=Z,13nm,0.9s,baz=199,slow=1.3,SNR=16
KBZ                                pPKP   pPKPdf  05 05 40.7 +1.6
      comp=Z,7.1nm,0.9s,baz=349,slow=0.7,SNR=3.5
ZEI   Tsey             122.01  53 i PKIKP PKiKP   05 05 10.4 -0.1
ZEI                                pmax   pmax
      comp=Z,3.0nm,0.8s
BILL  Bilibino         124.34 338⇑ePKIKP  PKPdf   05 05 13.8 +0.1
BILL                              e               05 05 44.1
BILL                               pmax   pmax
      comp=Z,13nm,1.0s
KIRV  Kirov            124.44  34 i PKIKP PKPdf   05 05 14.1  0.0
CTA   Charters Tower   124.78 221  PKP    PKPdf   05 05 15.8 -0.3
      comp=Z,13nm,0.9s,baz=252,slow=1.0,SNR=12
CTAO  Charters Tower   124.78 221  PKIKP  PKPdf   05 05 15.2 -0.9
CTAO  Charters Tower   124.78 221  PKPdf  PKPdf   05 05 15.2 -0.9
AS31  Alice Springs    128.18 207  PKPdf  PKPdf   05 05 21.7 -0.9
ASAR  Alice Springs    128.18 207  PKP    PKPdf   05 05 22.5 -0.1
      comp=Z,24nm,0.8s,baz=208,slow=1.3,SNR=10
ASAR                               pPKP   pPKPdf  05 05 52.2 -0.7
      comp=Z,4.7nm,0.8s,baz=145,slow=2.6,SNR=2.9
ASAR  Alice Springs    128.18 207  PKPdf  PKPdf   05 05 21.8 -0.8
ARU   Arti             129.76  35  PKP    PKiKP   05 05 25.6 +0.4
      comp=Z,2.3nm,0.2s,baz=231,slow=1.1,SNR=14
ARU                                pPKP   pPKPdf  05 05 56.1 +1.2
      comp=Z,1.6nm,0.3s,baz=270,slow=2.3,SNR=1.4
ARU   Arti             129.76  35 i PKIKP PKiKP   05 05 24.9 -0.3
ARU                                               05 07 36.7
ARU                                SS     SS      05 24 50.6 -1.3
ARU   Arti             129.76  35         PKiKP   05 05 25.1 -0.1
TIXI  Tiksi            130.74 353  PKP    PKPdf   05 05 25.7 -0.1
      comp=Z,12nm,0.9s,baz=37,slow=2.3,SNR=11
TIXI                               pPKP   pPKPdf  05 05 54.7 -1.6
      comp=Z,2.9nm,0.3s,baz=303,slow=6.0,SNR=3.3
AKTO  Aktyubinsk       131.08  43  PKP    PKPdf   05 05 27.4 +0.3
      comp=Z,6.7nm,1.0s,baz=260,slow=1.8,SNR=13
WR0   Warramunga Arr   131.16 210  PKPdf  PKPdf   05 05 27.6 -0.6
WB2   Warramunga Arr   131.26 210  PKPdf  PKPdf   05 05 27.7 -0.8
WRA   Warramunga Arr   131.26 210  PKP    PKPdf   05 05 28.1 -0.4
      comp=Z,37nm,1.1s,baz=158,slow=1.5,SNR=8.2
WRA                                pPKP   pPKPdf  05 05 58.1 -0.7
      comp=Z,8.1nm,1.0s,baz=159,slow=1.4,SNR=3.7
WRA                                SKPbc  SKPbc   05 08 43.5 -0.1
      comp=Z,8.4nm,1.0s,baz=150,slow=3.8,SNR=9.6
WRA                                SKP            05 08 53.2
      comp=Z,0.9nm,0.7s,baz=156,slow=1.8,SNR=5.8
WRA   Warramunga Arr   131.26 210         PKPdf   05 05 27.1 -1.4
WRAB  Tennant Creek    131.26 210c iPKIKP PKPdf   05 05 26.8 -1.7
WRAB                               pmax   pmax
      comp=Z,67nm,1.7s
WRAB  Tennant Creek    131.26 210  PKPdf  PKPdf   05 05 27.7 -0.8
WB0   Warramunga Arr   131.39 210  PKPdf  PKPdf   05 05 28.4 -0.4
SEY   Seymchan         131.89 336 i PKIKP PKPdf   05 05 28.0 -0.2
PMG   Port Moresby     131.93 231  PKP    PKiKP   05 05 30.7 -0.1
      comp=Z,6.8nm,0.4s,baz=48,slow=2.0,SNR=13
NRIK  Noril'sk         131.99  11  PKP    PKPdf   05 05 28.6 +0.3
      comp=Z,7.9nm,1.0s,baz=43,slow=1.2,SNR=9.2
NRIK                               pPKP   pPKPdf  05 05 59.5 +0.8
      comp=Z,4.1nm,0.8s,baz=11,slow=4.5,SNR=2.7
NRIK  Noril'sk         131.99  11  PKPdf  PKPdf   05 05 28.5 +0.3
AB31  Akbulak array    132.57  44 i PKIKP PKiKP   05 05 30.6 -0.5
ABKAR Akbulak array    132.57  44  PKPdf  PKPdf   05 05 29.8 -0.2
GEYT  Alibeck          132.81  59  PKP    PKPdf   05 05 31.1 +0.2
      comp=Z,2.8nm,0.6s,baz=290,slow=22,SNR=1.5
PETK  Petropavlovsk-   134.13 322  PKP    PKPdf   05 05 33.5 +0.7
      comp=Z,76nm,1.4s,baz=151,slow=3.4,SNR=8.0
FITZ  Fitzroy Crossi   136.31 200  PKP    PKPdf   05 05 38.5 +0.6
      comp=Z,15nm,0.8s,baz=180,slow=4.4,SNR=12
FITZ                               SKPbc  SKPbc   05 09 00.3 -0.1
      comp=Z,2.8nm,0.9s,baz=166,slow=5.9,SNR=3.2
FITZ  Fitzroy Crossi   136.31 200  PKPdf  PKPdf   05 05 36.5 -1.5
BRVK  Borovoye         137.32  36  PKIKP  PKPdf   05 05 39.0 +0.3
BRVK  Borovoye         137.32  36  PKPdf  PKPdf   05 05 39.0 +0.3
BVAR  Borovoye Array   137.39  36  PKP    PKPdf   05 05 39.7 +0.8
      comp=Z,8.7nm,0.9s,baz=225,slow=10,SNR=30
BVAR                               pPKP   pPKPdf  05 06 10.5 +1.1
      comp=Z,7.5nm,1.0s,baz=261,slow=7.2,SNR=3.6
YAK   Yakutsk          139.42 347  PKP    PKPdf   05 05 42.9 +0.7
      comp=Z,7.1nm,0.4s,baz=232,slow=3.3,SNR=1.5
KK31  Karatay Array    141.29  50 i PKIKP PKiKP   05 05 49.7 +0.6
KKAR  Karatay Array    141.29  50  PKIKP  PKPdf   05 05 46.0 -0.3
KKAR  Karatay Array    141.29  50  PKPdf  PKPdf   05 05 46.0 -0.3
KURK  Kurchatov        142.95  35  PKIKP  PKPdf   05 05 46.3 -2.7
KURK  Kurchatov        142.95  35         PKPpre  05 05 46.3
KURBB Kurchatov Arra   142.96  35  PKP    PKPdf   05 05 46.7 -2.3
      comp=Z,8.3nm,0.8s,baz=301,slow=3.1,SNR=36
KURBB                              pPKP   pPKPdf  05 06 20.4 +0.8
      comp=Z,3.1nm,0.4s,baz=305,slow=3.3,SNR=3.7
KURBB Kurchatov Arra   142.96  35  PKIKP  PKPdf   05 05 45.9 -3.1
EKS2  Erkin-Say        143.71  49  P      PKPdf   05 05 50.1 -0.7
      SNR=17
ZALV  Zalesovo Beam    143.72  26  PKP    PKPbc   05 05 48.4 +0.3
      comp=Z,34nm,0.7s,baz=298,slow=3.2,SNR=94
ZALV                               pPKP   pPKPdf  05 06 19.9 -0.8
      comp=Z,30nm,1.1s,baz=294,slow=1.5,SNR=3.2
AML   Almayashu        143.83  50  P      PKPdf   05 05 50.9 -0.5
      SNR=26
USP   Ospenovka        143.99  48  P      PKPdf   05 05 50.5 -0.7
      SNR=8.0
AAK   Ala-Archa        144.21  49  PKP    PKPdf   05 05 51.6 -0.1
      comp=Z,28nm,0.8s,baz=244,slow=3.6,SNR=57
AAK                                pPKP   pPKPdf  05 06 21.5 -0.7
      comp=Z,10nm,0.9s,baz=261,slow=4.4,SNR=2.4
AAK   Ala-Archa        144.21  49  P      PKPdf   05 05 51.6 -0.1
      SNR=28
AAK   Ala-Archa        144.21  49  PKPdf  PKPdf   05 05 51.1 -0.6
CHMS  Chumysh          144.26  48  P      PKPdf   05 05 50.9 -0.7
      SNR=14
UCH   Uchtor           144.37  49  P      PKPdf   05 05 52.6 +0.3
      SNR=47
KBK   Karagaybulak     144.52  49  P      PKPdf   05 05 53.2 +0.9
      SNR=25
TKM2  Tokmak 2         144.87  48  P      PKPdf   05 05 53.8 +0.9
      SNR=6.1
TKM2  Tokmak 2         144.87  48  PKIKP  PKPdf   05 05 52.9  0.0
POO   Poona            144.95  91 eP      PKPbc   05 05 52.0 -1.0
NIL   Nilore           145.41  64  PKIKP  PKPdf   05 05 53.5 -0.4
NIL   Nilore           145.41  64         PKPdf   05 05 53.5 -0.4
YSS   Yuzh-Sakhalins   145.48 321 ePKP2   PKPab   05 05 54.3 +0.2
YSS                                pmax   pmax
      comp=Z,180nm,1.0s
YSS                                pmax   pmax
      comp=Z,600nm,2.3s
YSS   Yuzh-Sakhalins   145.48 321         PKPdf   05 05 53.4  0.0
ULHL  Ulahol           145.56  49  P      PKPab   05 05 56.0 +1.1
      SNR=28
BOD   Bodaibo          145.62 357 ePKP2   PKPdf   05 05 53.6 +0.2
BOD                                pmax   pmax
      comp=Z,220nm,1.5s
ARXS  Arharly          145.82  45 ePKP2   PKPbc   05 05 54.8 -0.2
KSH   Kashi            146.30  53  PKPbc  PKPbc   05 05 56.2 -0.5
KSH                                sPKP           05 06 30.6
GRNR  Gornyy           146.40 331⇓iPKP2   PKPbc   05 05 56.0 -0.5
GRNR                               pmax   pmax
      comp=Z,80nm,1.0s
GUMO  Guam             146.58 259  PKIKP  PKPdf   05 05 56.9 +0.6
GUMO  Guam             146.58 259         PKPdf   05 05 56.9 +0.6
FAKI  Fak Fak          146.64 221         PKPdf   05 05 57.3 +0.7
PALK  Pallekele        146.68 114  PKPbc  PKPdf   05 05 56.4 -0.2
      comp=Z,13nm,0.9s,baz=132,slow=6.6,SNR=3.0
MAKZ  Makanchi         147.01  38  PKIKP  PKPdf   05 05 56.5 +0.3
MAKZ  Makanchi         147.01  38  PKPdf  PKPdf   05 05 56.6 +0.5
MK31  Makanchi Array   147.20  38 i PKP2  PKPdf   05 05 57.6 +1.1
MKAR  Makanchi Array   147.20  38  PKPbc  PKPdf   05 05 57.1 +0.6
      comp=Z,42nm,0.8s,baz=328,slow=1.5,SNR=128
MKAR                               pPKPab pPKPab  05 06 29.6 -0.9
      comp=Z,39nm,0.9s,baz=302,slow=2.7,SNR=7.4
MKAR  Makanchi Array   147.20  38  PKPdf  PKPdf   05 05 56.5  0.0
PDGK  Podgornoye       147.29  45  PKIKP  PKPdf   05 05 57.3 +0.4
ZEA   Zeya             147.40 342 ePKIKP  PKPdf   05 05 57.3 +0.8
ZEA                               e               05 06 29.6
ZEA                                pmax   pmax
      comp=N,30nm,1.1s
ZEA                                pmax   pmax
      comp=Z,60nm,1.1s
ERM   Erimo            147.56 312 i PKIKP PKPdf   05 05 58.5 +1.4
DGZ   Jazzator, Alta   147.91  29 i PKHKP PKPpre  05 05 55.0
JAGI  Jajag, Banyuwa   148.12 186         PKPbc   05 06 02.1 -0.1
HYB   Hyderabad        148.96  95 i PKP   PKPbc   05 06 03.0 -1.4
HYB                               epPKP   pPKPbc  05 06 35.0 +0.4
KLR   Kul'dur          149.57 333  PKPbc  PKPbc   05 06 04.9  0.0
      comp=Z,20nm,0.7s,baz=50,slow=2.3,SNR=32
KLR                                pPKPbc pPKPbc  05 06 35.2  0.0
      comp=Z,18nm,1.0s,baz=52,slow=2.8,SNR=4.0
KLR   Kul'dur          149.57 333 i PKIKP PKPdf   05 05 59.7 -0.5
MOY   Mondy            150.79  13 ePKIKP  PKPdf   05 06 02.4 +0.2
MOY                               e               05 06 39.4
MOY                                pmax   pmax
      comp=Z,146nm,2.0s
TLY   Talaya           151.25  10 ePKIKP  PKiKP   05 06 09.4 +0.1
TLY                                pmax   pmax
      comp=Z,96nm,1.5s
WMQ   Urumqi           152.03  38 ePKPbc  PKPdf   05 06 03.5 -0.8
ZAK   Zakamensk        152.45  11 ePKIKP  PKPdf   05 06 05.4 +0.7
ZAK                                pmax   pmax
      comp=Z,30nm,1.3s
USRK  Ussuriysk Ar.    153.14 325  PKP    PKPdf   05 06 05.8  0.0
      comp=Z,10.0nm,1.1s,baz=48,slow=2.1,SNR=7.3
USRK                               PKPbc  PKPbc   05 06 13.1 -0.2
      comp=Z,20nm,1.0s,baz=34,slow=1.7,SNR=13
USRK                               PKPab  PKPab   05 06 25.7 +0.4
      comp=Z,9.7nm,0.8s,baz=39,slow=0.4,SNR=4.6
USRK                               pPKPbc pPKPbc  05 06 44.0 +0.4
      comp=Z,13nm,1.1s,baz=18,slow=0.6,SNR=2.6
USRK  Ussuriysk Ar.    153.14 325         PKPdf   05 06 05.4 -0.4
USRK                                      PKPbc   05 06 13.3  0.0
USRK                               PKPab  PKPab   05 06 24.9 -0.3
MJAR  Matsushiro Arr   153.25 305  PKP    PKPdf   05 06 06.6 +0.3
      comp=Z,1.6nm,0.6s,baz=252,slow=2.5,SNR=7.5
MJAR                               PKPbc  PKPbc   05 06 13.6 -0.2
      comp=Z,20nm,1.0s,baz=80,slow=1.8,SNR=18
MJAR                               PKPab  PKPab   05 06 26.2 +0.1
      comp=Z,29nm,0.9s,baz=77,slow=1.8,SNR=18
MJAR                               pPKPab sPKPbc  05 06 56.8 +1.1
      comp=Z,11nm,1.0s,baz=54,slow=1.0,SNR=3.2
MAJO  Matsushiro       153.25 305  PKIKP  PKPbc   05 06 13.5 -0.3
MAJO  Matsushiro       153.25 305         PKPbc   05 06 13.5 -0.3
MAT   Matsushiro       153.25 305  PKP    PKPbc   05 06 13.5 -0.3
SONM  Songino Array    155.40   8  PKP    PKPdf   05 06 09.7 +0.6
      comp=Z,9.5nm,0.9s,baz=320,slow=0.7,SNR=36
SONM                               PKPab  PKPab   05 06 34.8  0.0
      comp=Z,13nm,0.8s,baz=324,slow=4.7,SNR=18
SONM  Songino Array    155.40   8  PKPdf  PKPdf   05 06 09.2 +0.1
```

SONM				PKPab	PKPab	05 06 35.3	+0.5
KSRS	Korea Array	159.93	318	PKP	PKPdf	05 06 15.7	+0.9
	comp=Z,15nm,1.0s,baz=86,slow=0.5,SNR=26						
KSRS				PKPab	PKPab	05 06 55.6	+1.0
	comp=Z,17nm,0.9s,baz=59,slow=4.4,SNR=19						
KSRS				pPKPab	pPKPab	05 07 24.1	+0.1
	comp=Z,3.5nm,0.9s,baz=39,slow=4.7,SNR=1.5						
KSAR	Wonju Array Be	159.96	318	PKIKP	PKPdf	05 06 15.0	+0.2
KSAR						05 06 55.0	
KSAR	Wonju Array Be	159.96	318	PKPdf	PKPdf	05 06 15.0	+0.2
KSAR				PKPab	PKPab	05 06 55.0	+0.2
GTA	Gaotai	161.44	28	⇓PKP	PKPdf	05 06 17.4	+0.8
GTA				pPKP	pPKPdf	05 06 46.4	-0.8
HHC	Hu-ho-hao-te	162.66	359	ePKP	PKPdf	05 06 18.4	+0.7
HHC				pPKP	pPKPdf	05 06 47.8	-0.6
HHC				SS	SS	05 31 10.6	+7.1
BTO	Baotou	162.89	3	ePKP	PKPdf	05 06 18.4	+0.5
LZH	Lanzhou	165.94	25	PKP	PKPdf	05 06 22.3	+1.4
CMAR	Chiang Mai Arr	167.60	111	PKP	PKPdf	05 06 23.2	+0.8
	comp=Z,1.2nm,0.4s,baz=260,slow=1.8,SNR=18						
CMAR				pPKP	pPKPdf	05 06 53.2	+0.2
	comp=Z,1.0nm,0.5s,baz=305,slow=3.2,SNR=1.3						
CMAR				PKPab	PKPab	05 07 28.8	-0.3
	comp=Z,0.8nm,0.3s,baz=250,slow=4.5,SNR=4.5						
CMAR				pPKPab	pPKPab	05 07 58.0	-0.4
	comp=Z,1.1nm,0.3s,baz=256,slow=5.0,SNR=2.2						
NJ2	Nanjing	169.03	323	ePKP	PKPdf	05 06 23.8	+0.8
XAN	Xi'an	169.29	10	PKP	PKPdf	05 06 24.3	+1.2
KMI	Kunming	172.20	76	⇑PKP	PKPdf	05 06 26.0	+0.8
WHN	Wuhan	172.38	338	PKP	PKPdf	05 06 25.8	+1.0
WHN				PKPab	PKPab	05 07 48.9	-0.7
WHN				PP	PP	05 11 39.4	-0.6
GYA	Guiyang	175.00	53	⇑PKP	PKPdf	05 06 26.5	+0.5
GYA				PP	PP	05 11 56.2	+2.1
GYA				SKKS		05 18 32.7	
GYA				AMB	AMB		
	comp=Z,72nm,5.5s						
GYA				LR	LR		
	comp=Z,160nm,8.1s						
QIZ	Qiongzhong	175.43	165	PKP	PKPdf	05 06 27.0	+0.8
QIZ				PP	PP	05 11 55.6	+0.9
QIZ				SS	SS	05 33 12.7	+2.1
QIZ				LR	LR		
	comp=Z,200nm,13.9s						
QIZ				LR	LR		
	comp=Z,160nm,13.3s						

WEL 09 05:39:51.5±1.2, 31°S±11°×17°8E±2°6, h241^{km}±36^{km}, M4.6/2, ML4.6/5, MLv4.6/2, Error ellipse: s-maj=0.0km s-min=0.0km az=109.6, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.64	68	S	S	05 41 37.3	-0.1
GRZ	Great Barrier	5.99	202	P	Pn	05 41 17.9	-1.3
HAZ	Te Kaha	7.04	183	P	Pn	05 41 34.5	+2.1
HAZ				S	S	05 42 54.5	+1.2
RUGZ	Raukumara Rang	7.25	183	P	Pn	05 41 37.0	+1.7
RUGZ				S	S	05 42 58.3	-0.2
URZ	Urewera	7.58	187	P	Pn	05 41 41.5	+2.1
URZ				S	S	05 43 08.7	+2.6
MWZ	Matawai	7.62	184	P	Pn	05 41 41.1	+1.1
MWZ				S	S	05 43 06.2	-0.9
RIGZ	Rimuhau	7.98	183	P	Pn	05 41 45.5	+1.0
RIGZ				S	S	05 43 17.6	+2.2
NMHZ	Naumai	8.45	188	P	Pn	05 41 51.0	+0.6
NMHZ				S	S	05 43 27.0	+0.8
BKZ	Black Stump Fm	8.55	189	P	Pn	05 41 52.0	+0.2
BKZ				S	S	05 43 27.1	-1.6
KWHZ	Kaweka Forest	8.82	189	P	Pn	05 41 54.3	-0.8
KWHZ				S	S	05 43 33.9	-1.0
KAHZ	Kahuranaki	9.13	187	P	Pn	05 41 58.1	-1.0
KAHZ				S	S	05 43 39.6	-2.4
PRHZ	Porangahau	9.62	187	P	Pn	05 42 03.5	-1.8

IDC 09 05:50:21.8±1.9, 30°.67S×71°.01W, h0^{km}, mb3.9/3, mb1 4.0/6, mb1mx3.7/26, mbtmp3.9/6, ML3.8/3, MS3.1/1, Ms1 3.1/1, ms1mx2.7/23, Error ellipse: s-maj=47.2km s-min=34.9km az=85.0

SJA 09 05:50:26.0, 30°.24S×71°.65W, h10^{km}, ML4.0

NEIC 09 05:50:28.1±2.7, 30°.23S±0°.04×71°.6W±0°.1, h53^{km}±8^{km}, Error ellipse: s-maj=13.9km s-min=2.8km az=110.0

GUC 09 05:50:28.7±0.9, 30°.28S×71°.39W, h50^{km}±3^{km}, ML4.4

ISC 09 05:50:27.9±0.8, 30°.28S±0°.03×71°.59W±0°.06, h49^{km}±8^{km}, n93, σ1^{s}68/102, mb4.1/6, 3C-8D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.40	186	⇑iP	Pn	05 50 39.0	+1.0
CO06	Fray Jorge	0.40	186		Pn	05 50 38.9	+1.0
CO06					Sn	05 50 46.6	+1.5
CO05	La Serena	0.47	40	⇓iP	Pn	05 50 38.5	-0.2
CO05				i S	Sn	05 50 45.8	-0.7
CO05	La Serena	0.47	40		Pn	05 50 38.5	-0.2
CO05					Sn	05 50 45.8	-0.7
GO04	Tololo Observa	0.69	81	⇓iP	Pn	05 50 40.2	-1.5
GO04				i S	Sn	05 50 48.7	-2.9
GO04				IAML		05 50 50.0	
	comp=N,45µm,0.5s						
GO04	Tololo Observa	0.69	81		Pn	05 50 40.2	-1.5
GO04	Tololo Observa	0.69	81	i P	Pn	05 50 40.0	-1.7
LCO	Las Campanas	1.48	32	i P	Pn	05 50 52.1	-0.3
LCO	Las Campanas	1.48	32	Pn	Pn	05 50 52.0	-0.3
LCO	Las Campanas	1.48	32	i P	Pn	05 50 52.0	-0.3
AROD	Rodeo	1.83	87	i P	Pn	05 50 58.0	+0.8
AC04	Llanos de Chal	2.12	12	⇑iP	Pn	05 51 01.7	+0.9
AC04				eS	Sn	05 51 28.4	+2.5
AC04				IAML		05 51 34.7	
	comp=E,2µm,0.8s						
AC04	Llanos de Chal	2.12	12	Pn	Pn	05 51 01.2	+0.4
AC04	Llanos de Chal	2.12	12	i P	Pn	05 51 01.0	+0.2
ACDV	Cuesta del Vie	2.14	88	i P	Pn	05 51 02.0	+0.8
ACCO	Cerro Coronel	2.20	99	i P	Pn	05 51 04.0	+1.8
VA06	Catapilco	2.29	174	⇓iP	Pn	05 51 04.5	+1.3
VA06				i S	Sn	05 51 32.7	+2.6
VA06				IAML		05 51 42.7	
	comp=N,3µm,0.5s						
VA03	San Esteban	2.63	161	⇑iP	Pn	05 51 09.1	+1.2
VA03				i S	Sn	05 51 40.3	+1.6
VA03				IAML		05 51 49.0	
	comp=E,1µm,0.3s						
VA03	San Esteban	2.63	161		Pn	05 51 09.0	+1.0
VA03	San Esteban	2.63	161	i P	Pn	05 51 09.0	+1.0
AUSP	Uspallata	2.70	136	i P	Pn	05 51 11.0	+1.9
ROCH	El Roble	2.73	170	⇓iP	Pn	05 51 10.7	+1.3
ROCH				eS	Sn	05 51 43.6	+2.3
ROCH				IAML		05 51 54.9	
	comp=E,1µm,0.4s						
ROC1	El Roble	2.73	170	i P	Pn	05 51 10.0	+0.5
VA01	Torpederas	2.73	181	eP	Pn	05 51 09.9	+0.6
VA01	Torpederas	2.73	181	i P	Pn	05 51 10.0	+0.7
AGUA	GUANDACOL	2.80	74	i P	Pn	05 51 13.0	+2.7
GO03	Copiap	2.93	24	eP	Pn	05 51 12.7	+0.8
GO03				eS	Sn	05 51 46.5	+0.5
GO03				IAML		05 51 56.9	
	comp=N,694nm,0.5s						
GO03	Copiap	2.93	24	Pn	Pn	05 51 12.8	+0.8
GO03	Copiap	2.93	24	i P	Pn	05 51 13.0	+1.0
PEL	Peldehue	2.96	165	i P	Pn	05 51 13.9	+1.6
PEL				i S	Sn	05 51 48.1	+1.5
PEL				IAML		05 51 59.1	
	comp=E,643nm,0.4s						
PEL	Peldehue	2.96	165	i P	Pn	05 51 14.0	+1.6
MT02	Curacav	3.00	173	⇓iP	Pn	05 51 13.6	+0.7
MT02				i S	Sn	05 51 49.1	+1.6
MT02	Curacav	3.00	173		Pn	05 51 13.7	+0.7
MT02	Curacav	3.00	173	i P	Pn	05 51 13.0	+0.1
MT05	Renca	3.19	167	eP	Pn	05 51 17.0	+1.4
MT05				eS	Sn	05 51 53.7	+1.4
MT05				IAML		05 52 11.3	
	comp=E,2µm,0.4s						
MT05	Renca	3.19	167		Pn	05 51 16.9	+1.4
MT05	Renca	3.19	167	i P	Pn	05 51 17.0	+1.4
ASAL	Salagasta	3.29	135	i P	Pn	05 51 20.0	+3.0
VCA	Vinchina	3.32	63	i P	Pn	05 51 20.0	+2.5
VA05	Santo Domingo	3.37	180	⇓iP	Pn	05 51 18.5	+0.5
VA05				IAML		05 52 12.1	
	comp=E,1µm,0.4s						
VA05	Santo Domingo	3.37	180	Pn	Pn	05 51 18.5	+0.5
ARCO	CERRO ARCO	3.41	139	i P	Pn	05 51 22.0	+3.2
MT09	Talagante	3.52	172	⇓iP	Pn	05 51 21.6	+1.4
MT09				eS	Sn	05 52 02.1	+1.4
MT09				IAML		05 52 15.3	
	comp=E,575nm,0.2s						
AVFE	Valle Fertil	3.58	97	i P	Pn	05 51 21.0	0.0
MT01	Popeta	3.58	176	⇓iP	Pn	05 51 21.9	+0.9
MT01				i S	Sn	05 52 03.6	+1.6
MT01				IAML		05 52 19.0	
	comp=E,478nm,0.4s						
MT01	Popeta	3.58	176	i P	Pn	05 51 22.0	+1.0
AAGR	Agrelo	3.65	141	i P	Pn	05 51 25.0	+3.0
AC02	Maricunga	4.05	33	Pn	Pn	05 51 28.7	+0.8
AC02	Maricunga	4.05	33	i P	Pn	05 51 29.0	+1.1
ACLC	CERRO LA CRUZ	4.11	79	i P	Pn	05 51 29.0	+0.6
BO01	Tunca	4.12	174	Pn	Pn	05 51 28.8	+0.5
BO01	Tunca	4.12	174	i P	Pn	05 51 29.0	+0.7
ACHE	Chepes	4.33	103	i P	Pn	05 51 32.0	+0.7
APLL	PUNTA DE LOS L	4.37	93	i P	Pn	05 51 32.0	+0.2
BO02	Sierra Bellavi	4.55	172		Pn	05 51 35.2	+1.0
BO02	Sierra Bellavi	4.55	172	i P	Pn	05 51 36.0	+1.7
GO05	Huala	4.73	183		Pn	05 51 36.3	-0.3
GO05	Huala	4.73	183	i P	Pn	05 51 36.0	-0.6
RFA	San Rafael	5.20	150	i P	Pn	05 51 44.0	+0.9
ML02	Panimavida	5.47	179		Pn	05 51 46.8	0.0
PB14	IPOC Station P	5.73	11		Pn	05 51 48.3	-2.4
FSA	Cafayete	6.46	51	i P	Pn	05 52 01.0	+0.4
AHML	Horco Molle	6.51	59	i P	Pn	05 52 00.0	-1.1
PB10	IPOC Station P	6.80	8	i P	Pn	05 52 05.0	-0.1
H03N1	Juan Fernandez	6.98	241	T	T	05 59 20.9	
	baz=70,slow=72,SNR=777						
H03N2	Juan Fernandez	7.00	241	T	T	05 59 15.1	
	baz=70,slow=72,SNR=796						
H03N3	Juan Fernandez	7.00	241	T	T	05 59 04.8	
	baz=70,slow=72,SNR=679						
VA04	Juan Fernndez	7.01	240		Pn	05 52 09.1	+1.2
LVC	Limon Verde	8.01	18	Pn	Pn	05 52 21.9	-0.1
	comp=E,0.5nm,0.3s,baz=189,slow=7.6,SNR=2.3						
LVC				Sn	Sn	05 53 58.5	+7.1
	comp=E,2.1nm,0.3s,baz=208,slow=4.6,SNR=4.4						
LVC	Limon Verde	8.01	18	i P	Pn	05 52 22.0	0.0
LC01	Cunco	8.60	182	Pn	Pn	05 52 28.6	-1.2
LR03	Panguipulli	9.35	184	Pn	Pn	05 52 39.5	-0.5
LL04	Puerto Octay	10.63	183	Pn	Pn	05 52 56.1	-1.3
PSGCX	Pisagua	10.72	7	Pn	Pn	05 52 55.1	-3.8
ITQB	Itaqui	12.99	91	Pn	Pn	05 53 26.1	-3.6
LPAZ	La Paz	14.28	14	Pn	Pn	05 53 50.3	+2.4
	comp=E,0.5nm,0.3s,baz=186,slow=7.6,SNR=22						
LPAZ	La Paz	14.28	14	Pn	Pn	05 53 49.1	+1.2
SIV	San Ignacio	17.18	36	P	Pn	05 54 24.0	-0.5
	comp=E,0.2nm,0.3s,baz=195,slow=12,SNR=14						
ETMB	Extrema	20.97	15	P	P	05 55 07.3	+0.4
ETMB				IAmb	IAmb	05 55 12.0	
	comp=Z,8.1nm,1.1s						
SAML	Samuel	22.63	22	P	P	05 55 24.9	+0.2
ATAH	Atahualpa	23.90	343	P	P	05 55 42.8	+5.2
	comp=Z,3.1nm,0.8s,baz=155,slow=17,SNR=2.5						
ATAH				LR	LR	06 03 22.5	
	comp=Z,44nm,18.8s,baz=101,slow=32						
BDFB	Brasilia	26.06	61	P	P	05 55 54.9	-2.1
	comp=Z,1.8nm,0.6s,baz=219,slow=6.5,SNR=4.8						
BDFB	Brasilia	26.06	61	P	P	05 55 56.1	-0.9
BDFB				IAmb	IAmb	05 55 58.3	
	comp=Z,4.7nm,1.1s						
MACA	Manacapuru-AM	28.88	23	P	P	05 56 21.9	-0.1
MACA				IAmb	IAmb	05 56 22.6	
	comp=Z,5.7nm,0.5s						
BOAV	Boa Vista	34.17	20	P	P	05 57 08.5	0.0
BOAV				IAmb	IAmb	05 57 09.6	
	comp=Z,3.2nm,0.8s						
ROSC	El Rosal	35.02	355	P	P	05 57 14.3	-1.9
ROSC				IAmb	IAmb	05 57 25.0	
	comp=Z,9.4nm,0.7s						
GRGR	Grenville	43.24	14	P	P	05 58 23.6	-0.9
TORD	Torodi Ar. Bea	82.59	70	P	P	06 02 45.8	-0.2
	comp=Z,0.5nm,0.6s,baz=256,slow=5.8,SNR=6.0						
H11S2	WAKE ISLAND Hy	126.13	272	T	T	08 28 13.8	
	baz=115,slow=74,SNR=15						
H11S1	WAKE ISLAND Hy	126.14	272	T	T	08 28 15.1	
	baz=115,slow=74,SNR=14						
H11S3	WAKE ISLAND Hy	126.15	272	T	T	08 28 16.7	
	baz=115,slow=74,SNR=15						
KURBB	Kurchatov Arra	149.82	39	PKPbc	PKiKP	06 10 12.5	-0.5
	comp=Z,0.4nm,0.5s,baz=285,slow=2.8,SNR=3.2						
ZALV	Zalesovo Beam	150.84	29	PKPbc	PKiKP	06 10 15.6	+0.6
	comp=Z,1.9nm,0.5s,baz=322,slow=3.3,SNR=6.4						

EAF 09 05:50:55.4±0.6, 25°.36S×29°.97E, h10^{km}, MD3.6

BUL 09 05:50:55.5±0.3, 25°.37S×29°.84E, h10^{km}, MD3.7, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOPA	Mopani	2.32	38	eP	Pn	05 51 32.2	-1.6
MOPA				eS	Sn	05 51 59.2	-3.3
MOPA	Mopani	2.32	38	eP	Pn	05 51 32.2	-1.6
MOPA				eS	Sn	05 51 59.2	-3.3
MSNA	Messina	3.01	3	eP	Pn	05 51 43.1	-0.3
MSNA				eS	Sn	05 52 17.7	-1.9
MSNA	Messina	3.01	3	eP	Pn	05 51 43.1	-0.3
MSNA				eS	Sn	05 52 17.7	-1.9
MATP	Matopo	5.07	346	eP	Pn	05 52 11.2	-0.6
MATP				eS	Sn	05 53 06.3	-4.2
MATP	Matopo	5.07	346	eP	Pn	05 52 11.2	-0.6
MATP				eS	Sn	05 53 06.3	-4.2

IDC 09 05:52:38.6±2.7, 5°.89N×93°.16E, h0^{km}, mb3.4/3, mb1 3.7/5, mb1mx3.4/52, mbtmp3.5/5, ML4.0/2, Error ellipse: s-maj=89.4km s-min=25.6km az=60.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	6.51	118	Pn	Pn	05 54 16.1	+0.2
	0.6nm,0.3s,baz=316,slow=14,SNR=2.3						
CMAR	Chiang Mai Arr	13.71	24	Pn	Pn	05 55 55.0	+0.6
	0.8nm,0.3s,baz=218,slow=11,SNR=5.0						
MKAR	Makanchi Array	41.82	349	P	P	06 00 29.8	-0.3
	1.0nm,0.7s,baz=166,slow=8.8,SNR=7.3						
WRA	Warramunga Arr	47.95	123	P	P	06 01 18.5	-0.8
	0.2nm,0.7s,baz=300,slow=9.8,SNR=1.9						
ASAR	Alice Springs	49.43	128	P	P	06 01 31.4	+0.6
	0.3nm,0.7s,baz=312,slow=7.3,SNR=5.1						

IDC 09 05:55:01.1±1.2, 6°.36N×94°.36E, h0^{km}, mb3.8/8, mb1 3.9/9, mb1mx3.7/52, mbtmp3.8/9, ML3.3/1, Error ellipse: s-maj=61.1km s-min=20.3km az=49.0

NEIC 09 05:55:04.1±1.9, 6°.6N±0°.3×94°.9E±0°.3, h10^{km}±2^{km}, mb4.2/6, Error ellipse: s-maj=73.6km s-min=17.3km az=224.0

ISC 09 05:55:03.5±1.0, 6°.6N±0°.2×94°.7E±0°.3, h10^{km}, n24, σ1^{s}31/20, mb4.0/12, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	2.58	121	Pn	Pn	05 55 42.8	-2.5
PSI	Prapat	5.61	132	Pn	Pn	05 56 30.2	+3.1
	0.7nm,0.3s,baz=332,slow=14,SNR=2.5						
CMAR	Chiang Mai Arr	12.52	19	Pn	Pn	05 58 09.4	+7.6
	0.2nm,0.3s,baz=208,slow=13,SNR=1.5						
H08S3	Diego Garcia H	26.29	238	T	T	06 27 39.8	
	baz=57,slow=74						
H08S2	Diego Garcia H	26.29	238	T	T	06 27 55.4	
	baz=57						
H08S1	Diego Carcia H	26.30	238	T	T	06 27 51.2	
	baz=57,slow=74						
MKAR	Makanchi Array	41.49	347	P	P	06 02 50.5	-0.3
	0.6nm,0.7s,baz=163,slow=5.1,SNR=4.7						
MKAR	Makanchi Array	41.49	347	P	P	06 02 51.5	+0.7
KK31	Karatay Array	42.19	333	P	P	06 02 56.9	+0.4
KK31				IAmb	IAmb	06 02 58.6	
	comp=Z,2.8nm,1.0s						
KKAR	Karatay Array	42.19	333	P	P	06 02 57.1	+0.6
SONM	Songino Array	42.31	12	P	P	06 02 59.3	+1.7
	comp=Z,1.0nm,1.0s,baz=192,slow=5.5,SNR=3.6						
WB0	Warramunga Arr	46.99	125	P	P	06 03 35.0	-0.2
WB0				IAmb	IAmb	06 03 36.0	
	comp=Z,6.9nm,1.5s						
WRA	Warramunga Arr	47.03	125	P	P	06 03 35.4	-0.1
	comp=Z,0.4nm,0.8s,baz=305,slow=9.1,SNR=2.2						
WRA	Warramunga Arr	47.03	125	P	P	06 03 34.7	-0.9
WB2	Warramunga Arr	47.04	125	P	P	06 03 34.6	-1.1
WR0	Warramunga Arr	47.21	125	P	P	06 03 35.2	-1.7
WR0				IAmb	IAmb	06 03 47.5	
	comp=Z,2.4nm,0.9s						
ASAR	Alice Springs	48.63	129	P	P	06 03 48.2	+0.3
	comp=Z,0.4nm,0.7s,baz=300,slow=7.5,SNR=3.4						
ABKAR	Akbulak array	51.65	332	P	P	06 04 11.0	+0.5
ABKAR	Akbulak array	51.65	332	P	P	06 04 10.8	+0.3
ABKAR				IAmb	IAmb	06 04 12.4	
	comp=Z,3.1nm,0.9s						
BRTR	Keskin Array B	63.72	311	P	P	06 05 34.6	-1.2
	comp=Z,1.2nm,0.9s,baz=107,slow=7.0,SNR=3.6						
FINES	FINESS Array B	74.14	332	P	P	06 06 38.6	-1.3
	comp=Z,2.8nm,0.9s,baz=100,slow=5.8,SNR=5.3						
FINES	FINESS Array B	74.14	332	P	P	06 06 39.8	-0.2
ARCES	ARCESS Array B	76.69	340	P	P	06 06 54.7	+0.2
	comp=Z,7.0nm,1.2s,baz=44,slow=7.9,SNR=5.0						
GERES	GERESS Array B	79.19	318	P	P	06 07 07.9	-1.0
	comp=Z,0.6nm,0.8s,baz=79,slow=7.3,SNR=2.5						

FUNV 09 05:55:59.2, 8°.50N×71°.38W, h1^{km}, MW3.0

ISC 09 05:55:57.7±1.6, 8°.53N±0°.03×71°.39W±0°.03, h6^{km}±12^{km}, n41, σ1^{s}83/75, 1C, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.58	115	⇑eP	Pg	05 56 09.4	+0.6
SOCV				eS	Sb	05 56 18.2	-0.5
SDV	Santo Domingo	0.82	65	eP	Pb	05 56 14.7	+0.1
SDV				eS	Sb	05 56 26.8	+0.9
SDV				i		05 56 27.4	
	comp=Z,254nm,0.3s						
PAMC	Pamplona, Colo	1.76	228	eP	Pn	05 56 29.7	+0.5
PAMC				eS	Sn	05 56 51.4	-0.8
PAMC				i		05 56 56.3	
	comp=Z,482nm,0.4s						
MCQV	Machiques	1.89	323	eP	Pn	05 56 31.5	+1.0
MCQV				eS	Sn	05 56 57.0	+2.3
OCAC	Ocana	1.94	261	eP	Pn	05 56 31.4	0.0
OCAC				eS	Sn	05 56 56.1	0.0
OCAC				i		05 56 58.6	
	comp=Z,3µm,0.9s						
TAMC	Tame, Arauca	2.12	191	eP	Pg	05 56 37.8	-0.6
TAMC				eS	Sb	05 57 02.9	-0.4
TAMC				i		05 57 12.4	
	comp=Z,248nm,0.5s						
LL1C	La Loma 1 Cana	2.37	295	eP	Pn	05 56 39.2	+2.1
LL1C				eS	Sn	05 57 07.5	+1.0
LL1C				i		05 57 14.0	
	comp=Z,532nm,0.6s						
ELOV	Elorza	2.42	129	eP	Pb	05 56 40.9	-0.8
ELOV				eS	Sb	05 57 12.1	+0.2
ELOV	Elorza	2.42	129	eP	Pn	05 56 39.1	+1.2
DABV	Dabajuro	2.49	17	eP	Pn	05 56 40.6	+1.8
SIQV	Siquisique	2.62	36	eP	Pn	05 56 42.7	+2.1
SIQV				eS	Sn	05 57 14.4	+1.6
BARC	Barichara	2.62	223	eP	Pb	05 56 44.8	-0.6
BARC				eS	Sn	05 57 15.0	+1.8
BARC				i		05 57 22.8	
	comp=Z,202nm,0.5s						
BRRC	Barranca, Sant	2.71	239	eP	Pn	05 56 43.0	+1.2
BRRC				eS	Sb	05 57 20.3	+0.2
BRRC				i		05 57 26.0	
	comp=Z,58nm,0.6s						
RUSC	La Rusia	3.12	213	eP	Pn	05 56 49.1	+1.2
RUSC				eS	Sn	05 57 26.8	+1.0
RUSC				i		05 57 36.6	
	comp=Z,64nm,0.5s						
URIC	Uribia, Colomb	3.21	349	eP	Pb	05 56 53.5	-1.6
URIC				eS	Sn	05 57 25.8	-1.4
URIC				i		05 57 41.2	
	comp=Z,64nm,0.8s						
BAUV	El Baul	3.33	83	eP	Pn	05 56 52.0	+1.6
BAUV				eS	Sn	05 57 29.6	-0.7
JACV	Jacura	3.58	45	eP	Pn	05 56 55.2	+1.5
JACV				eS	Sn	05 57 36.2	-0.2
ZARC	Zaragoza, Cauc	3.59	254	eP	Pn	05 56 55.4	+1.4
ZARC				eS	Sn	05 57 34.7	-2.1
ZARC				i		05 57 50.5	
	comp=Z,50nm,0.3s						
MONV	Montecano	3.67	22	eP	Pn	05 56 56.3	+1.2
SMRC	Santa Marta, M	3.83	313	eP	Pn	05 56 57.5	+0.2
SMRC				eS	Sn	05 57 38.6	-4.0
SMRC				i		05 57 51.2	
	comp=Z,35nm,0.4s						
SPBC	San Pablo de B	3.91	223	eP	Pn	05 56 59.9	+1.4
SPBC				eS	Sn	05 57 42.9	-1.9
SPBC				i		05 58 07.8	
	comp=Z,33nm,0.4s						
SJCC	San Jacinto, C	3.98	290	eP	Pn	05 57 00.3	+0.9
SJCC				eS	Sn	05 57 46.5	0.0
SJCC				i		05 58 13.9	
	comp=Z,31nm,0.5s						
BENV	Beln	4.00	69	eP	Pn	05 57 01.2	+1.6
BENV				eS	Sn	05 57 45.0	-1.9
UREC	San Jos de Ur	4.18	260	eP	Pn	05 57 03.3	+1.2
UREC				eS	Sn	05 57 48.9	-2.4
UREC				i		05 58 09.2	
	comp=Z,21nm,0.6s						
MOTC	Monteria, Cord	4.24	274	eP	Pn	05 57 03.6	+0.7
MOTC				eS	Sn	05 57 53.1	+0.4
MOTC				i		05 58 16.1	
	comp=Z,20nm,0.6s						
PTGC	Puerto Gaitan,	4.37	190	eP	Pn	05 57 06.9	+2.2
PTGC				eS	Sb	05 58 10.6	+2.6
PTGC				i		05 58 37.1	
	comp=Z,78nm,0.4s						
CHIC	Chingaza	4.53	211	eP	Pn	05 57 08.4	+1.2
CHIC				eS	Sn	05 57 59.4	-0.9
CHIC				i		05 58 08.2	
	comp=Z,22nm,0.5s						
NORC	Norcasia	4.54	230	eP	Pn	05 57 07.6	+0.4
NORC				eS	Sn	05 58 00.8	+0.4
NORC				i		05 58 20.8	
	comp=Z,18nm,0.5s						
TACV	Tcata	4.59	69	eP	Pn	05 57 08.6	+0.8
TACV				eS	Sn	05 57 58.7	-2.7
ROSC	El Rosal	4.69	219	eP	Pn	05 57 13.4	+4.0
ROSC				eS	Sn	05 57 58.9	-5.5
ROSC				i		05 58 36.2	
	comp=Z,16nm,0.6s						
HELC	Santa Helena	4.72	241	eP	Pn	05 57 10.1	+0.3
HELC				eS	Sn	05 58 07.4	+2.2
HELC				i		05 58 24.8	
	comp=Z,12nm,0.4s						
CACV	CAICARA DEL OR	4.89	101	eP	Pb	05 57 20.1	-3.7
VILC	Villavicencio,	4.96	208	eP	Pn	05 57 13.1	+0.3
VILC				eS	Sn	05 58 09.9	-0.7
VILC				i		05 58 19.1	
	comp=Z,2µm,0.4s						
MERV	Las Mercedes	5.08	82	eP	Pn	05 57 15.2	+0.8
GUY2C	Guyana, Caldas	5.14	230	eP	Pn	05 57 18.0	+2.3
GUY2C				eS	Sn	05 58 15.1	-0.5
GUY2C				i		05 58 47.7	
	comp=Z,20nm,0.6s						
CBOC	Ciudad Bolivar	5.30	240	eP	Pn	05 57 20.6	+2.9
CBOC				eS	Sn	05 58 21.9	+2.7
CBOC				i		05 58 47.4	
	comp=Z,7.2nm,0.6s						
BIRV	Birongo	5.40	69	eP	Pn	05 57 19.6	+0.7
BIRV				eS	Sn	05 58 19.2	-2.3
ANIL	Santa Ana	5.66	225	eP	Pn	05 57 27.5	+4.7
ANIL				eS	Sn	05 58 25.6	-2.7
ANIL				i		05 58 35.7	
	comp=Z,26nm,0.4s						
ORTC	Ortega, Tolima	5.99	220	eP	Pn	05 57 27.6	+0.7
ORTC				eS	Sn	05 58 34.9	-1.0
ORTC				i		05 58 45.2	
	comp=Z,14nm,0.6s						
PRGV	PARIAGUAN	6.67	88	eP	Pn	05 57 35.9	-0.4
PCRV	Puerto La Cruz	6.86	76	eP	Pn	05 57 39.3	+0.4

NOU 09 06:02:04.4, 17°.28S×168°.13E, h38^{km}, mb4.2/10, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	0.45	173	P	Pn	06 02 15.9	+1.7
RTV	Rentapao	0.58	151	P	Pn	06 02 17.0	+0.7
LIFNC	LIFOU	3.58	193	P	Pn	06 02 55.4	-2.0
MARNC	Mare, Loyalty	4.18	181	P	Pn	06 03 06.1	+0.5

YATNC	Mamie plateau,	4.89	194	P	Pn	06 03 15.1	-0.4
NOUC	Port Laguerre	5.09	199	P	Pn	06 03 18.7	+0.5
ONTNC	Ouen Toro	5.24	197	P	Pn	06 03 20.5	+0.2
OUENC	Ouen Island, N	5.25	193	P	Pn	06 03 21.6	+1.2

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*IDC **09** 06:02:31.8±1.2, 6°.30N×94°.46E, h0^{km}, mb3.9/11, mb1 4.0/12, mb1mx3.8/55, mbtmp3.9/12, ML3.4/1, Error ellipse: s-maj=60.0km s-min=15.9km az=52.0*

*NEIC **09** 06:02:34.4±0.8, 6°.3N±0°.1×94°.6E±0°.2, h10^{km}±2^{km}, mb4.4/13, Error ellipse: s-maj=38.1km s-min=3.4km az=229.0*

ISC 09 06:02:39.0±0.9, **6°.4N**±0°.1×**94°.7E**±0°.2, **h50^{km}, n33, σ0^{s}.83**/30, **mb4.2**/17, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	2.51	118	Pn	Pn	06 03 16.2	-1.2
PSI	Prapat	5.53	131	Pn	Pn	06 03 59.2	+0.3
	1.0nm,0.3s,baz=324,slow=16,SNR=2.5						
CMAR	Chiang Mai Arr	12.64	19	Pn	P	06 05 45.4	-0.7
	0.9nm,0.3s,baz=206,slow=15,SNR=5.3						
H08S3	Diego Garcia H	26.21	238	T	T	06 35 00.8	
	baz=57,slow=75,SNR=40						
H08S2	Diego Garcia H	26.22	238	T	T	06 34 50.2	
	baz=57,slow=75,SNR=48						
H08S1	Diego Carcia H	26.23	238	T	T	06 34 57.4	
	baz=57,slow=75,SNR=37						
NIL	Nilore	33.61	327	P	P	06 09 14.0	-0.7
DRK	Karamyk	38.84	331	P	P	06 09 59.8	+0.1
FITZ	Fitzroy Crossi	39.05	129	P	P	06 10 00.4	-0.9
	1.1nm,0.6s,baz=29,slow=23,SNR=2.3						
FITZ	Fitzroy Crossi	39.05	129	P	P	06 10 01.1	-0.2
GAR	Garm	39.20	329	P	P	06 10 02.1	-0.4
GAR				IAmb	IAmb	06 10 02.9	
	comp=Z,10nm,1.1s						
AAK	Ala-Archa	40.25	337	P	P	06 10 11.3	+0.1
	comp=Z,1.6nm,0.6s,baz=292,slow=8.8,SNR=3.3						
MK31	Makanchi Array	41.61	347	P	P	06 10 22.8	+0.6
MKAR	Makanchi Array	41.61	347	P	P	06 10 21.9	-0.3
	comp=Z,0.7nm,0.6s,baz=171,slow=8.3,SNR=7.1						
MKAR	Makanchi Array	41.61	347	P	P	06 10 22.8	+0.6
SONM	Songino Array	42.44	12	P	P	06 10 29.8	+0.8
	comp=Z,0.9nm,0.7s,baz=200,slow=8.4,SNR=5.8						
SONM	Songino Array	42.44	12	P	P	06 10 30.6	+1.5
KURBB	Kurchatov Arra	46.08	346	P	P	06 10 57.8	-0.1
	comp=Z,0.8nm,0.6s,baz=170,slow=7.1,SNR=5.5						
KURK	Kurchatov	46.14	346	P	P	06 11 00.8	+2.4
KURK				IAmb	IAmb	06 11 11.5	
	comp=Z,7.5nm,1.5s						
WB0	Warramunga Arr	46.92	125	P	P	06 11 05.4	+0.4
WB0				IAmb	IAmb	06 11 33.8	
	comp=Z,5.7nm,1.2s						
WRA	Warramunga Arr	46.96	125	P	P	06 11 06.0	+0.6
	comp=Z,0.4nm,0.7s,baz=304,slow=8.8,SNR=7.6						
WRA	Warramunga Arr	46.96	125	P	P	06 11 05.3	0.0
WB2	Warramunga Arr	46.97	125	P	P	06 11 05.4	0.0
WB2				IAmb	IAmb	06 11 13.3	
	comp=Z,2.3nm,0.8s						
WR0	Warramunga Arr	47.13	125	P	P	06 11 07.9	+1.3
WR0				IAmb	IAmb	06 11 26.9	
	comp=Z,3.2nm,1.0s						
ASAR	Alice Springs	48.55	129	P	P	06 11 18.3	+0.7
	comp=Z,0.4nm,0.4s,baz=305,slow=7.5,SNR=5.6						
ASAR	Alice Springs	48.55	129	P	P	06 11 16.6	-1.1
ABKAR	Akbulak array	51.77	332	P	P	06 11 41.8	+0.3
ABKAR				IAmb	IAmb	06 11 44.0	
	comp=Z,2.5nm,0.7s						
BBOO	Buckleboo	55.36	137	P	P	06 12 08.4	+0.2
BRTR	Keskin Array B	63.80	311	P	P	06 13 05.2	-1.2
	comp=Z,0.2nm,0.3s,baz=64,slow=19,SNR=2.9						
FINES	FINESS Array B	74.25	332	P	P	06 14 11.1	+0.5
	comp=Z,3.7nm,0.8s,baz=104,slow=5.3,SNR=21						
FINES	FINESS Array B	74.25	332	P	P	06 14 10.8	+0.3
ARCES	ARCESS Array B	76.81	340	P	P	06 14 25.0	-0.1
	comp=Z,2.5nm,0.8s,baz=57,slow=4.5,SNR=4.6						
HFS	Hagfors	79.98	330	P	P	06 14 42.6	-0.2
	comp=Z,3.5nm,0.9s,baz=96,slow=12,SNR=2.2						

IDC 09 06:05:06.2±349.0, **74°.21N×55°.73W, h0^{km}, Error ellipse: s-maj=94.3km s-min=81.9km az=73.0, Western Kalaallit Nunaat**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I18DK	QAANAAQ INFRAS	4.66	321	*i*		06 37 30.0	
	baz=130,slow=341,SNR=1.3						
I37NO	I37NO	22.46	65	*i*		08 21 30.0	
	baz=317,slow=340,SNR=1.0						
I43RU	DUBNA INFRASON	37.38	65	*i*		09 51 40.0	
	baz=336,slow=331,SNR=1.5						

IDC 09 06:08:02.7±2.0, **0°.90N×126°.57E, h0^{km}, mb3.7**/3, **mb1 3.9**/3, **mb1mx3.5**/40, **mbtmp3.7**/3, **Error ellipse: s-maj=168.5km s-min=25.9km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.07	160	P	P	06 12 57.9	-1.6
	1.0nm,0.5s,baz=339,slow=11,SNR=11						
ASAR	Alice Springs	25.44	164	P	P	06 13 33.7	+1.3
	1.4nm,0.7s,baz=337,slow=8.1,SNR=8.6						
MKAR	Makanchi Array	59.79	326	P	P	06 18 09.6	-0.2
	0.4nm,0.4s,baz=117,slow=8.0,SNR=5.5						

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*IDC **09** 06:08:45.3±1.0, 6°.33N×94°.64E, h0^{km}, mb3.8/12, mb1 3.9/14, mb1mx3.7/50, mbtmp3.8/14, ML4.1/2, MS4.1/3, Ms1 4.0/3, ms1mx3.3/50, Error ellipse: s-maj=45.0km s-min=16.0km az=52.0*

*NEIC **09** 06:08:47.8±1.0, 6°.43N±0°.07×94°.71E±0°.09, h10^{km}±2^{km}, mb4.4/14, Error ellipse: s-maj=16.4km s-min=11.0km az=298.0*

ISC 09 06:08:47.2±0.7, **6°.4N**±0°.1×**94°.6E**±0°.1, **h10^{km}, n39, σ0^{s}.83**/33, **mb4.0**/18, **MS4.2**/3, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	2.56	116		Pn	06 09 29.2	+0.4
PSI	Prapat	5.56	130	Pn	Pn	06 10 11.8	+1.7
	2.3nm,0.3s,baz=326,slow=12,SNR=7.7						
CMAR	Chiang Mai Arr	12.72	19	Pn	Pn	06 11 48.2	0.0
	0.6nm,0.3s,baz=200,slow=15,SNR=1.5						
H08S3	Diego Garcia H	26.11	238	T	T	06 40 56.9	
	baz=57,slow=75,SNR=60						
H08S2	Diego Garcia H	26.11	238	T	T	06 40 56.5	
	baz=57,slow=75,SNR=61						
H08S1	Diego Carcia H	26.13	238	T	T	06 40 57.9	
	baz=57,slow=75,SNR=67						
FITZ	Fitzroy Crossi	39.09	129	P	P	06 16 12.3	-2.6
	0.8nm,0.5s,baz=72,slow=16,SNR=1.6						
FITZ	Fitzroy Crossi	39.09	129	P	P	06 16 13.9	-0.9
GAR	Garm	39.21	329	P	P	06 16 15.4	-0.4
GAR				IAmb	IAmb	06 16 24.1	
	comp=Z,6.2nm,0.6s						
BTK	Batken	39.77	331	P	P	06 16 20.5	+0.1
BTK				IAmb	IAmb	06 16 30.6	
	comp=Z,6.2nm,1.1s						
MKAR	Makanchi Array	41.65	347	P	P	06 16 35.0	-0.7
	comp=Z,0.5nm,0.6s,baz=167,slow=7.5,SNR=5.3						
MKAR	Makanchi Array	41.65	347	P	P	06 16 35.8	+0.1
KKAR	Karatay Array	42.31	334	P	P	06 16 42.6	+1.3
SONM	Songino Array	42.51	12	P	P	06 16 42.2	-0.7
	comp=Z,0.6nm,0.7s,baz=195,slow=11,SNR=4.5						
SONM	Songino Array	42.51	12	P	P	06 16 42.4	-0.5
GEYT	Alibeck	45.64	319	P	P	06 17 07.5	-0.6
	comp=Z,1.4nm,0.5s,baz=359,slow=15,SNR=1.4						
KURBB	Kurchatov Arra	46.11	346	P	P	06 17 11.9	+0.4
	comp=Z,0.7nm,0.7s,baz=168,slow=6.3,SNR=5.4						
WB0	Warramunga Arr	46.96	125	P	P	06 17 17.8	-0.9
WB0				IAmb	IAmb	06 17 39.2	
	comp=Z,4.2nm,1.1s						
WRA	Warramunga Arr	47.00	125	P	P	06 17 18.8	-0.2
	comp=Z,0.4nm,0.8s,baz=306,slow=9.0,SNR=3.4						
WRA	Warramunga Arr	47.00	125	P	P	06 17 18.2	-0.8
WB2	Warramunga Arr	47.01	125	P	P	06 17 18.7	-0.4
WB2				IAmb	IAmb	06 17 39.7	
	comp=Z,6.6nm,1.4s						
WR0	Warramunga Arr	47.17	125	P	P	06 17 19.7	-0.6
WR0				IAmb	IAmb	06 17 30.1	
	comp=Z,3.4nm,1.1s						
ZALV	Zalesovo Beam	48.09	352	P	P	06 17 27.5	+0.6
	comp=Z,0.5nm,0.5s,baz=174,slow=2.9,SNR=1.7						
ASAR	Alice Springs	48.59	129	P	P	06 17 30.7	-0.6
	comp=Z,0.4nm,0.5s,baz=301,slow=7.6,SNR=6.4						
ASAR	Alice Springs	48.59	129	P	P	06 17 30.4	-0.9
FORT	Forrest	48.87	141	P	P	06 17 33.3	+0.1
ABKAR	Akbulak array	51.77	332	P	P	06 17 55.5	+0.5
ABKAR				IAmb	IAmb	06 18 04.4	
	comp=Z,4.5nm,1.1s						
ABKAR	Akbulak array	51.77	332	P	P	06 17 55.5	+0.5
OPO	Ambohidratompo	52.94	241	LR	LR	06 36 53.1	
	comp=Z,189nm,18.5s,baz=144,slow=32						
BRTR	Keskin Array B	63.78	311	P	P	06 19 19.4	-0.4
	comp=Z,0.3nm,0.4s,baz=30,slow=33,SNR=1.5						
FIA1	FINESS Array S	74.25	332	P	P	06 20 24.4	+0.1
FINES	FINESS Array B	74.26	332	P	P	06 20 24.4	+0.1
	comp=Z,1.5nm,0.6s,baz=102,slow=6.4,SNR=9.4						
FINES	FINESS Array B	74.26	332	P	P	06 20 24.1	-0.2
BOSA	Boshof	75.22	238	LR	LR	06 52 14.4	
	comp=Z,92nm,19.1s,baz=64,slow=35						
ARCES	ARCESS Array B	76.83	340	P	P	06 20 40.1	+1.1
	comp=Z,2.7nm,0.8s,baz=54,slow=7.9,SNR=2.2						
ARCES	ARCESS Array B	76.83	340	P	P	06 20 39.1	+0.1
ARCES				IAmb	IAmb	06 21 07.0	
	comp=Z,11nm,1.4s						
GERES	GERESS Array B	79.27	318	P	P	06 20 53.2	+0.2
	comp=Z,0.2nm,0.3s,baz=95,slow=11,SNR=1.7						
KEST	Kesra	82.50	305	LR	LR	07 01 59.5	
	comp=Z,110nm,21.6s,baz=270,slow=39						
TXAR	Lajitas Array	140.37	25	PKP	PKPdf	06 28 18.4	+0.9
	comp=Z,0.1nm,0.5s,baz=227,slow=2.2,SNR=1.1						

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*IDC **09** 06:12:11.6±0.4, 6°.54N×94°.87E, h0^{km}, mb4.8/35, mb1 4.8/38, mb1mx4.8/48, mbtmp4.7/38, ML4.6/3, MS4.2/36, Ms1 4.2/36, ms1mx4.2/47, Error ellipse: s-maj=13.6km s-min=9.9km az=46.0*

*MOS **09** 06:12:12.7±1.0, 6°.55N×94°.84E, h22^{km}, mb5.5/51, MS4.4/5, Error ellipse: s-maj=8.6km s-min=4.0km az=114.3*

*NEIC **09** 06:12:14.0±1.7, 6°.52N±0°.07×94°.88E±0°.03, h12^{km}±3^{km}, mb5.3/108, Error ellipse: s-maj=11.2km s-min=3.7km az=195.0*

*BJI **09** 06:12:13.7±0.0, 6°.15N×94°.67E, h43^{km}, mB5.0/36, mb4.9/63, Ms4.9/62, Ms7 4.7/56*

*DJA **09** 06:12:13.5±0.2, 6°N±2°×9°5E±°, h10^{km}, M5.1/66, mb5.3/66, mB5.6/30, MLv5.4/7, Mw(mB)5.0/30, MwMwp5.3/2, Mwp5.5/2*

*GCMT **09** 06:12:16.7±0.2, 6°.54N±0°.01×94°.90E±0°.01, h20^{km}±1^{km}, MW5.1/103, Moment Tensor Solution. s41,c52; s103,c163; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.12±.14; $M_{\theta\theta}$-2.71±.10; $M_{\phi\phi}$3.83±.12; $M_{r\theta}$-1.83±.27; $M_{\theta\phi}$2.80±.11; $M_{\phi r}$0.83±.22; Best double couple: $M_0$4.84900×10^{16} NP1:ϕ_s62.00000°, δ69.00000°, λ-20.00000°. NP2:ϕ_s159.00000°, δ71.00000°, λ-158.00000°. Principal axes: T 4.8690, Plg2.0000°, Azm290.0000°; N -0.0390, Plg62.0000°, Azm197.0000°; P -4.8300, Plg28.0000°, Azm21.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*KLM **09** 06:12:19, 6°.51N×94°.98E, h40^{km}, mb5.2*

ISC 09 06:12:17.0±0.2, **6°.49N**±0°.03×**94°.79E**±0°.04, **h35^{km}, n628, σ1^{s}.63**/618, **mb5.1**/167, **MS4.4**/55, **23C-15D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	2.49	120	P	Pn	06 12 54.5	-0.5
LHMI	Lhok Sumawe	2.49	120	Pn	Pn	06 12 53.7	-1.2
TPTI		3.99	143	P	Pn	06 13 14.6	-1.1
SNSI	Sinabang, Aceh	4.33	159	P	Pn	06 13 19.0	-1.4
TSI	Tuntungan	4.79	128	P	Pn	06 13 25.8	-0.9
PSI	Prapat	5.51	131	Pn	Pn	06 13 37.7	+0.9
	19nm,0.3s,baz=300,slow=14,SNR=29						
PBA	Port Blair	5.52	339	*e*P	Pn	06 13 36.0	-0.8
PBA				*e*S	Sn	06 14 38.8	-0.1
GSI	Gunungsitoli	5.85	152	P	Pn	06 13 40.2	-1.1
	1.7nm4µm282nm,0.7s						
GSI	Gunungsitoli	5.85	152	Pn	Pn	06 13 40.4	-0.9
KULM	Kulim	5.95	101	P	Pn	06 13 41.0	-1.7
IPM	Ipoh	6.52	107	P	Pn	06 13 48.0	-2.5
DGPR	DIGLIPUR	6.90	345	*e*P	Pn	06 13 57.9	+2.3
DGPR				IAmb	IAmb	06 14 05.2	
	comp=Z,968nm,2.1s						
MNSI	Mandailing Nat	7.40	140	P	Pn	06 14 01.9	-0.7
	comp=Z,0.6nmcomp=Z,150nm,0.5s						
JRMM	Jerantut	8.08	108	P	Pn	06 14 10.0	-1.9
BKNI	Bangkinang	8.74	134	P	Pn	06 14 19.6	-1.4
	comp=Z,215nm,0.7s						
SISI	Saibi	8.87	151	P	Pn	06 14 21.2	-1.5
	comp=Z,82nm,0.8s						
PPI	Padang Panjang	8.88	141	P	Pn	06 14 21.7	-1.2
	comp=Z,772nmcomp=Z,63nm,0.9s						
PDSI	Padang	9.28	142	P	Pn	06 14 26.8	-1.6
	comp=Z,1µmcomp=Z,61nm,0.6s						
KRJI	Kerinci	10.82	142	P	Pn	06 14 48.4	-1.1
	comp=Z,494nm,0.8s						
PBKT	Sadao Pong	11.71	31		Pn	06 15 02.8	+1.2
DSRI	Dabo	11.97	125	P	Pn	06 15 04.2	-1.1
	comp=Z,875nmcomp=Z,25nm,1.2s						
MASI	Maura Aman, Be	12.12	142	P	Pn	06 15 05.7	-1.6
	comp=Z,2µmcomp=Z,152nm,0.8s						
CM31	Chiang Mai Arr	12.57	18	P	Pn	06 15 15.5	+2.1
	SNR=12						
CM31	Chiang Mai Arr	12.57	18		Pn	06 15 14.8	+1.4
CMAR	Chiang Mai Arr	12.57	18	Pn	Pn	06 15 12.5	-0.9
	comp=Z,2.8nm,0.3s,baz=206,slow=14,SNR=39						
CMAR				LR	LR	06 20 15.5	
	comp=Z,635nm,20.9s,baz=253,slow=39						
CMAR	Chiang Mai Arr	12.57	18	Pn	Pn	06 15 13.5	+0.1
KSI	Kapahiang	12.73	142	P	Pn	06 15 13.9	-1.8
	comp=Z,18µmcomp=Z,127nm,0.7s						
CHTO	Chiang Mai	12.90	18	P	Pn	06 15 19.0	+1.0
CHTO	Chiang Mai	12.90	18	P	Pn	06 15 19.4	+1.4
CHTO	Chiang Mai	12.90	18	Pn	Pn	06 15 19.0	+1.0
LHSI	Lahat	13.46	139	P	Pn	06 15 23.6	-1.9
	comp=Z,5µmcomp=Z,239nm,1.0s						
UBPT	Khong Chiam	13.65	49	Pn	Pn	06 15 26.3	-1.8
PALK	Pallekele	14.01	274	Pn	Pn	06 15 34.2	+1.1
	comp=Z,0.9nm,0.3s,baz=197,slow=16,SNR=2.6						
PALK				Sn	Sn	06 17 57.3	-10
	comp=Z,2.1nm,0.3s,baz=279,slow=18,SNR=3.4						
PALK				LR	LR	06 20 57.1	
	comp=Z,2µm,18.3s,baz=196,slow=37						
PALK	Pallekele	14.01	274	P	Pn	06 15 35.4	+2.3
PALK				S	Sn	06 18 00.8	-6.6
PALK	Pallekele	14.01	274	Pn	Pn	06 15 34.5	+1.4
MDSI	Maura Dua	14.38	139	P	Pn	06 15 34.8	-3.3
	comp=Z,48nm,1.1s						
DLV	T Lat	14.57	67	Pn	Pn	06 15 35.7	-5.2
LWLI	Liwa	14.71	141	P	Pn	06 15 39.9	-2.8
	comp=Z,152nm,0.8s						
KLSI		14.89	138	P	Pn	06 15 42.1	-3.0
	comp=Z,35nm,0.8s						
KASI	Kota Agung	15.37	141	P	Pn	06 15 46.7	-4.7
	comp=Z,2µmcomp=Z,127nm,0.8s						
CGJI	Cibinong	16.96	140	P	Pn	06 16 09.0	-2.7
	comp=Z,2µmcomp=Z,39nm,0.5s						
SLVN	Son La	17.20	30	P	P	06 16 16.2	+0.2
SBUM	Sibu	17.83	102	P	P	06 16 23.0	0.0
STKI	Sintang	17.83	110	P	Pn	06 16 21.5	-1.1
IMP	Imphal	18.26	358	*e*P	P	06 16 27.4	-0.3
IMP				IAmb	IAmb	06 16 40.7	
	comp=Z,56nm,1.1s						
LEM	Lembang	18.41	136	LR	LR	06 24 40.4	
	comp=Z,3µm,18.1s,baz=306,slow=41						
COCO	West Island	18.67	174	P	Pn	06 16 37.2	+4.5
KOHI	KOHIMA	19.14	358	*e*P	P	06 16 36.8	-0.6
KOHI				IAmb	IAmb	06 16 39.4	
	comp=Z,119nm,0.9s						
SHL	Shillong	19.18	352	P	P	06 16 37.5	-0.4
SHL				pmax	pmax		
	comp=Z,64nm,0.9s						
SHL	Shillong	19.18	352	*e*P	P	06 16 37.9	0.0
SHL				IAmb	IAmb	06 16 42.9	
	comp=Z,30nm,0.6s						
SHL	Shillong	19.18	352	P	P	06 16 38.0	+0.1
	SNR=15						
SHL	Shillong	19.18	352	P	P	06 16 37.5	-0.4
BOK	Bokaro	19.22	334	*e*P	Pn	06 16 38.9	-0.4
BOK				IAmb	IAmb	06 16 48.8	
	comp=Z,126nm,0.4s						
HYB	Hyderabad	19.22	306	*i* P	P	06 16 38.0	-0.3
	comp=Z,100nm,1.0s						
HYB				*e*S	Sn	06 20 13.0	-1.1
HYB	Hyderabad	19.22	306	*e*P	P	06 16 37.4	-0.9
HYB				IAmb	IAmb	06 16 39.8	
	comp=Z,40nm,0.9s						
QIZ	Qiongzhong	19.24	48	P	Pn	06 16 39.4	-0.2
QIZ				sP	sP	06 16 52.4	+1.4
QIZ				S	Sn	06 20 11.5	-2.9
QIZ				pmax	pmax		
	comp=Z,11nm,1.1s						
QIZ				LR	LR		
	comp=Z,4µm,16.3s						
QIZ				LR	LR		
	comp=Z,2µm,17.3s						
QIZ				LR	LR		
	comp=Z,1µm,14.5s						
QIZ	Qiongzhong	19.24	48		P	06 16 36.4	-2.0
KPJI	Karang Pucung	19.69	134	P	P	06 16 40.7	-2.6
	comp=Z,49nm,0.7s						
MOKO	MOKOCHONG	19.73	359	*e*P	P	06 16 44.4	+0.6
MOKO				IAmb	IAmb	06 16 48.4	
	comp=Z,123nm,0.7s						
DHUB	DHUBRI	19.96	347	*e*P	P	06 16 44.7	-1.5
DHUB				IAmb	IAmb	06 16 47.8	
	comp=Z,53nm,0.7s						
XMIS	Christmas Isla	20.03	147	P	P	06 16 46.1	-1.0
XMIS				IAmb	IAmb	06 16 58.2	
	comp=Z,102nm,0.8s						
KMI	Kunming	20.04	21	⇓P	Pn	06 16 50.0	+0.8
KMI				pP	sP	06 17 01.4	+1.6
KMI				sP	pwP	06 17 06.1	+6.5
KMI				S	Sn	06 20 36.3	+2.5
KMI				sS	sS	06 20 47.2	+2.5
KMI				SS	SnSn	06 20 57.8	+9.0
KMI				pmax	pmax		
	comp=Z,41nm,0.9s						
KMI				pmax	pmax		
	comp=Z,160nm,3.7s						
KMI				LR	LR		
	comp=Z,590nm,16.5s						
KMI				LR	LR		
	comp=Z,1µm,12.4s						
KMI				LR	LR		
	comp=Z,900nm,10.0s						
SMRI	Semarang	20.61	130	P	P	06 16 52.8	-0.6
	comp=Z,149nm,0.9s						
SMRI	Semarang	20.61	130	P	P	06 16 50.3	-3.0
SMRI				IAmb	IAmb	06 17 05.2	
	comp=Z,105nm,0.8s						
LKP	Lekhapani	20.76	3	*e*P	P	06 16 54.5	-0.3
ODAN	Odare	21.45	342	*e*P	P	06 17 01.0	-1.6
	comp=Z,60nm,0.8s						
SPMM	Sapulut	21.65	94	P	P	06 17 06.0	+1.4
RAMN	Ramite	21.79	340	*e*P	P	06 17 04.7	-1.6
	comp=Z,30nm,0.5s						
TAPN	Taplejung	21.81	343	*e*P	P	06 17 04.7	-1.9
	comp=Z,32nm,0.5s						
BBKI	Banjar Baru	22.33	116	P	P	06 17 11.6	-0.3
	comp=Z,6µmcomp=Z,127nm,1.4s						
JIRN	Jiri	22.59	340	*e*P	P	06 17 12.7	-2.2
PKI	Pulchoki	22.78	338	*e*P	P	06 17 15.3	-1.7
	comp=Z,64nm,0.6s						
PKIN	Phulchoki	22.79	338	*e*P	P	06 17 15.3	-1.7
	comp=Z,60nm,0.6s						
GYA	Guiyang	22.86	28	⇑P	P	06 17 18.3	+0.7
GYA				pP	sP	06 17 30.2	+0.1
GYA				S	S	06 21 27.0	+2.0
GYA				sS	Sn	06 21 45.2	+3.7
GYA				pmax	pmax		
	comp=Z,30nm,1.1s						
GYA				pmax	pmax		
	comp=Z,180nm,3.5s						
GYA				LR	LR		
	comp=Z,3µm,14.1s						
GYA				LR	LR		
	comp=Z,1µm,11.0s						
GYA				LR	LR		
	comp=Z,2µm,15.5s						
GUN	Gumba	22.92	339	*e*P	P	06 17 15.9	-2.5
DMN	Daman	22.93	337	*e*P	P	06 17 16.8	-1.6
KKN	Kakani	23.03	338	*e*P	P	06 17 17.5	-1.9
	comp=Z,98nm,0.8s						
LSA	Lhasa	23.34	352	P	P	06 17 23.0	+0.2
LSA				pmax	pmax		
	comp=Z,56nm,0.8s						
LSA	Lhasa	23.34	352	P	P	06 17 21.4	-1.4
LSA	Lhasa	23.34	352	P	P	06 17 23.0	+0.2
LSA				IAmb	IAmb	06 17 45.6	
	comp=Z,56nm,0.8s						
KMMI	Kalianget	23.39	125	P	P	06 17 23.1	+0.3
	comp=Z,4µmcomp=Z,161nm,1.1s						
GKN	Gorkha	23.46	337	*e*P	P	06 17 21.5	-2.2
BLJI	Banyuglugur	23.49	127	P	P	06 17 24.2	+0.4
POO	Poona	23.65	302	*e*P	P	06 17 25.9	+0.5
POO				IAmb	IAmb	06 17 30.6	
	comp=Z,32nm,1.0s						
KOLN	Koldanda	23.68	335	*e*P	P	06 17 24.3	-1.5
	comp=Z,108nm,0.8s						
ABJI	Asem Bagus	24.03	126	P	P	06 17 29.5	+0.6
DANN	Dangsing	24.12	336	*e*P	P	06 17 28.6	-1.4
PYUN	Piuthan	24.23	334	*e*P	P	06 17 30.0	-0.9
	comp=Z,84nm,0.4s						
JAGI	Jajag, Banyuwa	24.36	127	P	P	06 17 32.3	+0.3
	comp=Z,87nm,1.2s						
JAGI	Jajag, Banyuwa	24.36	127	P	P	06 17 30.2	-1.8
JAGI				IAmb	IAmb	06 17 54.8	
	comp=Z,88nm,1.0s						
SRBI	Singaraja	24.99	125	P	P	06 17 37.9	+0.2
	comp=Z,3µmcomp=Z,316nm,0.7s						
MPSI	Mapaga	25.79	103	P	P	06 17 45.5	+0.5
	comp=Z,1µmcomp=Z,135nm,0.9s						
H08S3	Diego Garcia H	26.30	238	T	T	06 44 28.9	
	baz=57,slow=75,SNR=513						
H08S2	Diego Garcia H	26.30	238	T	T	06 44 31.9	
	baz=57,slow=75,SNR=213						
H08S1	Diego Carcia H	26.31	238	T	T	06 44 30.0	
	baz=57,slow=75,SNR=358						
TOLI2	Tolitoli	26.47	101	P	P	06 17 49.8	-1.4
SONA	Sohna	27.38	324	*e*P	P	06 17 58.5	-0.6
ENH	Enshi	27.40	28	P	P	06 17 58.7	-0.7
ENH				IAmb	IAmb	06 18 20.4	
	comp=Z,55nm,1.2s						
KAPI	Kappang	27.41	114	P	P	06 17 58.9	-0.7
	comp=Z,6.5nm,0.4s,baz=281,slow=6.6,SNR=6.3						
KAPI	Kappang	27.41	114	P	P	06 17 57.8	-1.8
KAPI				pmax	pmax		
	comp=Z,50nm,1.3s						
KAPI	Kappang	27.41	114	P	P	06 17 57.8	-1.8
KAPI				IAmb	IAmb	06 18 07.1	
	comp=Z,50nm,1.2s						
AYAN	Aya Nagar	27.53	325	*e*P	P	06 18 00.7	+0.2
KUDL	Kundal	27.65	323	*e*P	P	06 18 01.2	-0.4
MRSI	Marisa	27.74	101	P	P	06 18 02.6	0.0
	comp=Z,78nm,0.9s						
APSI	Ampana	27.80	104	P	P	06 18 03.9	+0.8
	comp=Z,910nmcomp=Z,75nm,1.1s						
BKSI	Bulukumba	27.88	114	P	P	06 18 03.4	-0.4
	comp=Z,715nmcomp=Z,48nm,1.1s						
GTOI	Gorontalo	28.75	101	P	P	06 18 11.4	-0.2
	comp=Z,362nmcomp=Z,40nm,1.0s						
LUWI	Luwuk	28.92	104	P	P	06 18 12.6	-0.5
	comp=Z,11µmcomp=Z,278nm,0.8s						
LUWI	Luwuk	28.92	104	P	P	06 18 12.5	-0.5
SMLA	Simla	29.56	328	*e*P	P	06 18 17.8	-0.7
SMLA				IAmb	IAmb	06 18 18.5	
	comp=Z,9.5nm,0.7s						
WHN	Wuhan	30.17	35	P	P	06 18 25.2	+1.3
WHN				pP	pP	06 18 32.1	-1.1
WHN				S	S	06 23 25.7	+4.8
WHN				LR	LR		
	comp=Z,3µm,18.1s						
WHN				LR	LR		
	comp=Z,3µm,12.7s						
WHN				LR	LR		
	comp=Z,5µm,14.9s						
XAN	Xi'an	30.38	24	P	P	06 18 25.6	-0.2
XAN				pmax	pmax		
	comp=Z,62nm,0.9s						
LZH	Lanzhou	30.61	15	*e*P	P	06 18 28.6	+0.6
LZH				pP	sP	06 18 41.7	+0.4
LZH				sP	pwP	06 18 47.6	+7.1
LZH				PP	PP	06 19 34.8	-2.7
LZH				*e*S	S	06 23 29.4	+1.4

LZH				SS	SnSn	06 25 09.2	+2.3
LZH				pmax	pmax		
	comp=Z,23nm,1.1s						
LZH				pmax	pmax		
	comp=Z,120nm,5.2s						
LZH				LR	LR		
	comp=Z,710nm,11.9s						
LZH				LR	LR		
	comp=Z,990nm,12.7s						
LZH				LR	LR		
	comp=Z,580nm,14.1s						
EDFI	Ende, Flores	30.80	119	P	P	06 18 29.2	-0.6
	comp=Z,12nm,1.0s						
DHRM	DHARAMSHALA	30.89	328	*e*P	P	06 18 29.5	-1.1
DHRM				IAmb	IAmb	06 18 38.0	
	comp=Z,50nm,0.8s						
SANI	Sanana	32.28	104	P	P	06 18 42.5	-0.3
	comp=Z,599nmcomp=Z,30nm,1.1s						
GTA	Gaotai	33.09	7	*e*P	P	06 18 51.5	+1.8
GTA				pP	sP	06 19 04.6	+1.6
GTA				sP	pwP	06 19 10.7	+8.5
GTA				S	S	06 24 06.4	-0.2
GTA				SS	SnSn	06 26 10.0	+2.9
GTA				pmax	pmax		
	comp=Z,17nm,1.1s						
GTA				pmax	pmax		
	comp=Z,74nm,5.8s						
GTA				LR	LR		
	comp=Z,520nm,14.5s						
GTA				LR	LR		
	comp=Z,550nm,13.8s						
GTA				LR	LR		
	comp=Z,510nm,16.0s						
SOEI	Soe	33.51	119	P	P	06 18 53.7	+0.1
	comp=Z,48nm,0.9s						
SOEI	Soe	33.51	119	P	P	06 18 52.0	-1.7
SOEI				IAmb	IAmb	06 19 08.3	
	comp=Z,37nm,0.8s						
NIL	Nilore	33.60	326	P	P	06 18 52.7	-1.4
NIL				pmax	pmax		
	comp=Z,205nm,0.6s						
NIL	Nilore	33.60	326	P	P	06 18 53.1	-1.0
NIL	Nilore	33.60	326	P	P	06 18 52.6	-1.4
NJ2	Nanjing	33.93	38	*e*P	P	06 18 57.5	+0.6
NJ2				pmax	pmax		
	comp=Z,28nm,0.9s						
SSE	Sheshan	34.80	42	P	P	06 19 06.0	+1.6
SSE				S	S	06 24 36.0	+3.1
SSE				pmax	pmax		
	comp=Z,19nm,0.6s						
SSE				pmax	pmax		
	comp=Z,120nm,3.5s						
SSE				LR	LR		
	comp=Z,600nm,15.7s						
SSE				LR	LR		
	comp=Z,740nm,15.9s						
TIA	Tai'an	35.97	32	⇓P	P	06 19 15.2	+0.7
TIA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
TIA				pmax	pmax		
	comp=Z,110nm,5.2s						
TIA				LR	LR		
	comp=Z,750nm,15.7s						
TIA				LR	LR		
	comp=Z,910nm,13.2s						
TIA				LR	LR		
	comp=Z,1µm,14.7s						
BTO	Baotou	36.61	20	*e*P	P	06 19 20.2	+0.2
BTO				S	S	06 25 01.2	+0.5
BTO				LR	LR		
	comp=Z,2µm,13.7s						
BTO				LR	LR		
	comp=Z,3µm,16.3s						
KBL	Kabul	36.66	323	P	P	06 19 20.4	-0.3
KBL				pmax	pmax		
	comp=Z,11nm,0.8s						
KBL	Kabul	36.66	323	P	P	06 19 23.5	+2.8
KBL	Kabul	36.66	323	P	P	06 19 20.4	-0.3
MBWA	Marble Bar	36.80	139	P	P	06 19 15.5	-6.3
KSH	Kashi	36.99	336	P	P	06 19 21.0	-2.4
KSH				pP	pP	06 19 33.5	+0.6
KSH				sP	sP	06 19 38.2	+1.4
KSH				pmax	pmax		
	comp=Z,15nm,0.5s						
KSH				LR	LR		
	comp=Z,590nm,23.9s						
KSH				LR	LR		
	comp=Z,880nm,20.1s						
KSH				LR	LR		
	comp=Z,670nm,22.3s						
SWI	Sorong	37.13	100	P	P	06 19 24.2	-0.5
	comp=Z,75nm,0.9s						
SIJI	Sorong	37.13	100	LR	LR	06 37 21.0	
	comp=Z,127nm,19.4s,baz=265,slow=41						
PSA00	Pilbara Seismi	37.17	139	P	P	06 19 23.5	-1.4
PSA00				IAmb	IAmb	06 19 32.1	
	comp=Z,51nm,1.4s						
PSA00	Pilbara Seismi	37.17	139	P	P	06 19 23.5	-1.4
PSA00				IAmb	IAmb	06 19 32.8	
	comp=Z,22nm,1.2s						
HHC	Hu-ho-hao-te	37.36	21	⇓*i*P	P	06 19 35.9	+9.5
HHC				pP	sP	06 19 48.2	+8.6
HHC				S	S	06 25 20.5	+8.4
HHC				sS	ScP	06 25 38.1	+8.3
HHC				pmax	pmax		
	comp=Z,72nm,0.9s						
HHC				pmax	pmax		
	comp=Z,190nm,5.4s						
HHC				LR	LR		
	comp=N,850nm,13.3s						
HHC				LR	LR		
	comp=E,890nm,15.7s						
HHC				LR	LR		
	comp=Z,980nm,15.1s						
JLN	Jalan Bani Buh	37.51	298	P	P	06 19 29.8	+2.0
	SNR=12						
WMQ	Urumqi	37.70	352	*e*P	P	06 19 29.3	+0.1
WMQ				pP	pwP	06 19 40.7	-1.2
WMQ				sP	sP	06 19 47.9	+5.3
WMQ				pmax	pmax		
	comp=Z,26nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,120nm,3.9s						
WMQ				LR	LR		
	comp=Z,520nm,16.1s						
WMQ				LR	LR		
	comp=Z,430nm,15.5s						
WMQ				LR	LR		
	comp=Z,290nm,20.3s						
WBK	Wadi Bani Khal	38.05	299	P	P	06 19 34.6	+2.2
TARG	Taragay, Kyrgy	38.21	339	P	P	06 19 34.0	+0.1
MHTO	MHTO	38.44	296	P	P	06 19 41.6	+5.9
BJT	Baijiatuau	38.51	27	P	P	06 19 36.2	+0.2
BJT				pmax	pmax		
	comp=Z,55nm,1.1s						
BJT	Baijiatuau	38.51	27	P	P	06 19 36.1	+0.2
BJT				IAmb	IAmb	06 19 47.4	
	comp=Z,55nm,1.1s						
DQM	DQM	38.53	294	P	P	06 19 38.3	+1.8
FAKI	Fak Fak	38.55	103	P	P	06 19 35.0	-1.7
	comp=Z,2µmcomp=Z,53nm,0.9s						
FAKI	Fak Fak	38.55	103	P	P	06 19 35.1	-1.7
FAKI				IAmb	IAmb	06 19 43.4	
	comp=Z,42nm,0.9s						
WSAR	Wadi Sarin	38.55	299	P	P	06 19 38.5	+1.9
	comp=Z,13nm,0.8s,baz=116,slow=8.7,SNR=10						
WSAR	Wadi Sarin	38.55	299	P	P	06 19 38.9	+2.2
	SNR=10						
JMDO	Jabal Madar	38.73	298	P	P	06 19 43.3	+5.2
DRK	Karamyk	38.83	331	P	P	06 19 38.7	-0.3
SHLS	Shalkode	38.94	342	*e*P	P	06 19 37.9	-1.9
	baz=342						
SHLS	Shalkode	38.94	342	*e*P	P	06 19 37.8	-1.9
SMDO	Samad	39.00	299	P	P	06 19 42.0	+1.6
FITZ	Fitzroy Crossi	39.04	129	P	P	06 19 38.8	-1.8
	comp=Z,18nm,0.7s,baz=320,slow=6.3,SNR=51						
FITZ				LR	LR	06 38 14.5	
	comp=Z,533nm,19.6s,baz=326,slow=40						
FITZ	Fitzroy Crossi	39.04	129	P	P	06 19 39.2	-1.4
	baz=39,SNR=5.8						
FITZ	Fitzroy Crossi	39.04	129	P	P	06 19 39.1	-1.6
FITZ				IAmb	IAmb	06 19 46.7	
	comp=Z,65nm,0.8s						
UZB	Uzynbulak	39.07	342	*e*P	P	06 19 39.7	-1.1
	baz=342						
UZB	Uzynbulak	39.07	342	*e*P	P	06 19 39.7	-1.1
BIDO	Bidbid	39.09	300	P	P	06 19 43.4	+2.3
	SNR=21						
PDGK	Podgornoye	39.09	342	P	P	06 19 40.3	-0.7
SATY	Saty	39.19	341	*e*P	P	06 19 41.5	-0.3
	baz=341						
SATY	Saty	39.19	341	*e*P	P	06 19 41.5	-0.3
GAR	Garm	39.19	329	P	P	06 19 40.7	-1.2
ULHL	Ulahol	39.22	338	P	P	06 19 42.6	+0.4
	SNR=8.1						
KPKS	Kokpek	39.46	341	*e*P	P	06 19 43.5	-0.5
	baz=341						
KPKS	Kokpek	39.46	341	*e*P	P	06 19 43.5	-0.5
CHGR	Chuyangaron	39.53	328	P	P	06 19 43.3	-1.4
BSY	Bisya	39.64	298	P	P	06 19 48.0	+2.2
	SNR=16						
TNSS	Tian-Shan	39.66	339	*e*P	P	06 19 45.2	-0.8
	baz=339						
MDOK	Medeo	39.74	340	*e*P	P	06 19 45.2	-1.2
	baz=340						
MDOK	Medeo	39.74	340	*e*P	P	06 19 45.2	-1.2
BTK	Batken	39.75	331	P	P	06 19 46.6	+0.1
BTK				pmax	pmax		
	comp=Z,96nm,0.8s						
BTK	Batken	39.75	331	P	P	06 19 46.6	+0.1
BTK				IAmb	IAmb	06 19 50.7	
	comp=Z,96nm,0.8s						
HOQ	Hoqain	39.81	299	P	P	06 19 49.1	+2.0
	SNR=14						
AAA	Alma-Ata	39.82	339	*e*P	P	06 19 46.5	-0.6
	baz=339						
AAA	Alma-Ata	39.82	339	*e*P	P	06 19 46.4	-0.6
SHAO	Shalim	39.86	290	P	P	06 19 50.0	+2.4
UCH	Uchtor	39.87	336	P	P	06 19 48.3	+0.4
	SNR=27						
TKM2	Tokmak 2	40.05	338	P	P	06 19 49.4	+0.3
	SNR=15						
TKM2	Tokmak 2	40.05	338	P	P	06 19 47.7	-1.4
KBK	Karagaybulak	40.07	337	P	P	06 19 49.7	+0.5
	SNR=18						
AML	Almayashu	40.13	335	P	P	06 19 50.0	0.0
	SNR=58						
AML	Almayashu	40.13	335	P	P	06 19 50.0	0.0
KNRA	Kununurra	40.21	124	P	P	06 19 53.8	+3.3
	baz=40,SNR=5.5						
AAK	Ala-Archa	40.23	337	P	P	06 19 51.2	+0.7
	comp=Z,21nm,0.9s,baz=172,slow=7.5,SNR=26						
AAK				LR	LR	06 37 58.0	
	comp=Z,699nm,21.3s,baz=157,slow=38						
AAK	Ala-Archa	40.23	337	P	P	06 19 51.2	+0.7
	SNR=24						
AAK	Ala-Archa	40.23	337	P	P	06 19 50.5	0.0
AAK	Ala-Archa	40.23	337	P	P	06 19 51.1	+0.7
DL2	Dalian	40.36	33	*e*P	P	06 19 52.6	+1.2
DL2				pP	pP	06 20 00.9	+0.1
DL2				*e*S	S	06 26 01.4	+4.2
DL2				pmax	pmax		
	comp=Z,47nm,1.0s						
DL2				LR	LR		
	comp=Z,840nm,16.8s						
DL2				LR	LR		
	comp=Z,1µm,14.8s						
DL2				LR	LR		
	comp=Z,690nm,14.7s						
ARXS	Arharly	40.41	341	*e*P	P	06 19 51.7	-0.2
ARQ	Araqi	40.42	299	P	P	06 19 57.4	+5.2
DMTO	DMTO	40.43	290	P	P	06 19 58.7	+6.4
CHMS	Chumysh	40.43	337	P	P	06 19 52.1	+0.1
	SNR=8.7						
EKS2	Erkin-Say	40.53	336	P	P	06 19 53.5	+0.5
	SNR=32						
KUU	Kurty	40.62	339	*e*P	P	06 19 51.9	-1.7
	baz=339						
KUU	Kurty	40.62	339	*e*P	P	06 19 51.9	-1.7
USP	Ospenovka	40.76	337	P	P	06 19 54.7	0.0
	SNR=21						
MORW	Morawa	40.84	151	P	P	06 19 59.8	+4.3
	baz=41,SNR=3.6						
SGDS	Sogindy	40.87	337	*e*P	P	06 19 54.0	-1.6
	baz=337						
TDK	Taldyqorghan	40.94	342	*e*P	P	06 19 54.9	-1.2
	baz=342						
TDK	Taldyqorghan	40.94	342	*e*P	P	06 19 54.9	-1.2
UOSS	Minazif	41.22	301	P	P	06 20 05.2	+6.4
UOSS	Minazif	41.22	301	P	P	06 19 59.5	+0.7
HATD	Hatta, Dubai	41.24	301	P	P	06 20 03.9	+4.9
ASHO	Ashiyiah	41.26	300	P	P	06 20 05.0	+5.9
MDH	Madha	41.26	301	P	P	06 20 04.7	+5.6
ALNE	Al Ain	41.32	299	P	P	06 20 05.1	+5.5
	SNR=15						
DOK	Doka	41.37	291	P	P	06 20 06.3	+6.2
MASF	Masafi	41.40	301	P	P	06 20 06.4	+6.1
UMZA	Um Al Zommool	41.43	297	P	P	06 20 06.1	+5.7
BANOM	Banah	41.48	302	P	P	06 20 06.4	+5.5
WHFO	Wadi Hawf	41.57	290	P	P	06 20 07.5	+5.7
MK31	Makanchi Array	41.58	347	*i* P	P	06 20 00.2	-1.2
MK31	Makanchi Array	41.58	347	P	P	06 20 00.5	-0.9
MKAR	Makanchi Array	41.58	347	P	P	06 20 00.6	-0.7
	comp=Z,21nm,0.8s,baz=166,slow=7.8,SNR=65						
MKAR				LR	LR	06 42 19.2	
	comp=Z,171nm,18.4s,baz=164,slow=44						
MKAR	Makanchi Array	41.58	347	P	P	06 20 00.2	-1.2
MKAR	Makanchi Array	41.58	347	P	P	06 20 00.2	-1.2
MAKZ	Makanchi	41.66	347	P	P	06 20 01.4	-0.6
MAKZ	Makanchi	41.66	347	P	P	06 20 01.6	-0.5
ZSN	Zaisan	41.69	350	*e*P	P	06 20 01.3	-1.1
	baz=350						
ZSN	Zaisan	41.69	350	*e*P	P	06 20 01.2	-1.1
IUG	Iuzhnay	41.75	332	*e*P	P	06 20 02.0	-0.9
	baz=332						
IUG	Iuzhnay	41.75	332	*e*P	P	06 20 02.0	-0.9
DZA	Taraz	41.75	334	*e*P	P	06 20 00.8	-2.2
	baz=334						
DZA	Taraz	41.75	334	*e*P	P	06 20 00.7	-2.2
ASUD	Al Ashush, Dub	41.86	300	P	P	06 20 05.8	+1.8
	SNR=16						
KK31	Karatay Array	42.28	333	*i* P	P	06 20 06.9	-0.3
KK31	Karatay Array	42.28	333	P	P	06 20 06.9	-0.3
KK31				IAmb	IAmb	06 20 15.5	
	comp=Z,49nm,0.9s						
KKAR	Karatay Array	42.28	333	P	P	06 20 06.9	-0.3
KKAR				pmax	pmax		
	comp=Z,49nm,0.9s						
KKAR	Karatay Array	42.28	333	P	P	06 20 06.4	-0.8
KKAR	Karatay Array	42.28	333	P	P	06 20 06.9	-0.3
KKAR				IAmb	IAmb	06 20 15.5	
	comp=Z,49nm,0.9s						
SONM	Songino Array	42.38	12	P	P	06 20 08.0	0.0
	comp=Z,21nm,0.8s,baz=194,slow=7.2,SNR=43						
SONM				PcP	PcP	06 22 01.3	+0.4
	comp=Z,3.1nm,0.6s,baz=203,slow=4.6,SNR=2.5						
SONM	Songino Array	42.38	12	P	P	06 20 08.1	0.0
BTLS	Baital	42.44	338	*e*P	P	06 20 06.2	-2.3
	baz=338						
BTLS	Baital	42.44	338	*e*P	P	06 20 06.1	-2.3
BRLS	Borolday	42.53	333	*e*P	P	06 20 06.3	-3.0
	baz=332						
BRLS	Borolday	42.53	333	*e*P	P	06 20 06.2	-3.0
ULN	Ulaanbaatar	42.54	12	*ce*P	P	06 20 08.5	-0.9
ULN				pmax	pmax		
	comp=Z,14nm,0.6s						
ULN	Ulaanbaatar	42.54	12	P	P	06 20 03.7	-5.7
ULN	Ulaanbaatar	42.54	12	P	P	06 20 09.3	-0.1
KSRS	Korea Array	43.10	40	P	P	06 20 13.6	-0.3
	comp=Z,4.9nm,1.0s,baz=222,slow=9.9,SNR=8.0						
KSRS				LR	LR	06 38 53.9	
	comp=Z,437nm,19.8s,baz=230,slow=37						
MUN	Mundaring	43.37	153	P	P	06 20 17.7	+1.7
	baz=44,SNR=3.7						
DGZ	Jazzator, Alta	43.51	353	*i* P	P	06 20 14.0	-3.2
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.7s						
GHWR	Ruwais	43.80	298	P	P	06 20 25.0	+5.3
ZAK	Zakamensk	44.33	8	*e*P	P	06 20 22.1	-1.6
ZAK				*e*		06 22 05.6	
ZAK				pmax	pmax		
	comp=Z,16nm,1.4s						
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.4s						
NWAO	Narrogin (SRO)	44.63	153	LR	LR	06 37 59.7	
	comp=Z,387nm,21.9s,baz=339,slow=35						
NWAO	Narrogin (SRO)	44.63	153	P	P	06 20 26.7	+0.5
NWAO				pmax	pmax		
	comp=Z,19nm,0.8s						
NWAO	Narrogin (SRO)	44.63	153	P	P	06 20 26.7	+0.5
NWAO				IAmb	IAmb	06 20 32.5	
	comp=Z,19nm,0.8s						
WRKA	Warakurna	45.22	135	P	P	06 20 30.6	-0.5
	baz=45,SNR=16						
SEM	Semipalatinsk	45.44	347	*e*P	P	06 20 31.9	-0.8
	baz=347						
SEM	Semipalatinsk	45.44	347	*e*P	P	06 20 31.9	-0.8
TRNA	Turayna	45.47	298	P	P	06 20 38.4	+5.4
TLY	Talaya	45.64	8	P	P	06 20 33.4	-0.7
	comp=Z,2.0nm,0.3s,baz=273,slow=24,SNR=1.8						
GEYT	Alibeck	45.66	319	P	P	06 20 34.4	0.0
	comp=Z,6.6nm,0.5s,baz=187,slow=10,SNR=8.3						
GEYT				LR	LR	06 43 07.9	
	comp=Z,260nm,18.4s,baz=100,slow=41						
GEYT	Alibeck	45.66	319	P	P	06 20 33.9	-0.6
GYA0B	ALIBECK ARRAY	45.66	319	P	P	06 20 34.3	-0.1
GYA0B				IAmb	IAmb	06 20 43.7	
	comp=Z,32nm,1.0s						
CN2	Changchun	45.87	31	*e*P	P	06 20 32.5	-3.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KURBB	Kurchatov Arra	46.04	346	P	P	06 20 36.2	-0.9
KURK	Kurchatov	46.10	346	*ce*P	P	06 20 36.5	-1.1
KURK				pmax	pmax		
	comp=Z,47nm,1.3s						
KURK	Kurchatov	46.10	346	P	P	06 20 37.5	-0.1
KURK	Kurchatov	46.10	346	P	P	06 20 37.5	-0.1
KURK				IAmb	IAmb	06 20 41.5	
	comp=Z,35nm,1.1s						
WB0	Warramunga Arr	46.90	125	P	P	06 20 42.8	-1.6
WB0				IAmb	IAmb	06 21 09.8	
	comp=Z,18nm,0.7s						
WRA	Warramunga Arr	46.94	125	P	P	06 20 43.9	-0.8
	comp=Z,7.3nm,0.8s,baz=305,slow=9.1,SNR=41						
WRA				LR	LR	06 42 17.7	
	comp=Z,596nm,20.2s,baz=285,slow=38						
WRA	Warramunga Arr	46.94	125	*i* P	P	06 20 43.4	-1.3
WRA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
WRA	Warramunga Arr	46.94	125	P	P	06 20 44.2	-0.5
WRAB	Tennant Creek	46.95	125	*ce*P	P	06 20 43.7	-1.1
WRAB				pmax	pmax		
	comp=Z,14nm,1.0s						
WRAB	Tennant Creek	46.95	125	P	P	06 20 43.6	-1.1
WRAB				IAmb	IAmb	06 20 51.1	
	comp=Z,27nm,0.8s						
WB2	Warramunga Arr	46.95	125	P	P	06 20 42.5	-2.3
WB2				IAmb	IAmb	06 20 50.7	
	comp=Z,29nm,0.9s						
WC3	Warramunga Arr	46.98	125	P	P	06 20 44.2	-0.8
	baz=47						
WR0	Warramunga Arr	47.11	125	P	P	06 20 44.7	-1.3
WR0				IAmb	IAmb	06 20 52.5	
	comp=Z,31nm,0.8s						
BRZS	Berezniki	47.16	341	*e*P	P	06 20 45.1	-0.8
	baz=341						
BRZS	Berezniki	47.16	341	*e*P	P	06 20 45.1	-0.8
ZAA0	Zalesovo Array	48.01	352	P	P	06 20 52.2	-0.2
ZAA0				IAmb	IAmb	06 21 07.5	
	comp=Z,21nm,0.9s						
ZALV	Zalesovo Beam	48.01	352	P	P	06 20 52.2	-0.3
	comp=Z,9.8nm,0.8s,baz=175,slow=7.3,SNR=32						
ZALV	Zalesovo Beam	48.01	352	P	P	06 20 51.7	-0.7
ZALV	Zalesovo Beam	48.01	352	P	P	06 20 51.7	-0.7
AS31	Alice Springs	48.54	129	P	P	06 20 55.9	-1.2
ASAR	Alice Springs	48.54	129	P	P	06 20 55.9	-1.2
	comp=Z,7.5nm,0.5s,baz=300,slow=7.8,SNR=45						
ASAR				LR	LR	06 43 59.4	
	comp=Z,376nm,19.7s,baz=300,slow=39						
ASAR	Alice Springs	48.54	129	P	P	06 20 55.8	-1.3
ASAR	Alice Springs	48.54	129	P	P	06 20 55.8	-1.3
JGF	Kuroka	48.59	47	P	P	06 20 55.6	-1.7
JGF				IAmb	IAmb	06 21 07.7	
	comp=Z,13nm,0.8s						
MDJ	Mudanjiang	48.60	33	P	P	06 20 57.4	+0.2
MDJ				pP	pwP	06 21 09.5	-1.0
MDJ				sP	sP	06 21 15.0	+4.4
MDJ				S	S	06 27 57.2	+0.4
MDJ				pmax	pmax		
	comp=Z,23nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,300nm,5.4s						
MDJ				LR	LR		
	comp=Z,940nm,14.3s						
MDJ				LR	LR		
	comp=Z,1µm,15.9s						
MDJ				LR	LR		
	comp=Z,1µm,16.1s						
MDJ	Mudanjiang	48.60	33	P	P	06 20 56.6	-0.7
MDJ				IAmb	IAmb	06 21 10.9	
	comp=Z,43nm,1.1s						
FORT	Forrest	48.86	141	P	P	06 20 59.3	-0.1
	baz=49,SNR=20						
FORT	Forrest	48.86	141	P	P	06 20 58.3	-1.1
JCJ	Chichijima	49.42	60	P	P	06 21 03.0	-0.8
	comp=Z,39nm,0.8s,baz=291,slow=21,SNR=1.4						
MJAR	Matsushiro Arr	49.63	47	LR	LR	06 43 24.7	
	comp=Z,341nm,18.7s,baz=270,slow=38						
USRK	Ussuriysk Ar.	49.67	35	P	P	06 21 05.6	+0.3
	comp=Z,6.8nm,0.8s,baz=246,slow=7.6,SNR=7.8						
USRK				LR	LR	06 43 38.2	
	comp=Z,447nm,18.9s,baz=213,slow=38						
USRK	Ussuriysk Ar.	49.67	35	P	P	06 21 05.4	+0.1
USRK	Ussuriysk Ar.	49.67	35	P	P	06 21 05.4	+0.1
GUMO	Guam	49.74	78	LR	LR	06 39 20.7	
	comp=Z,82nm,21.5s,baz=264,slow=33						
RDF	Al-Radifah	49.80	303	*e*P	P	06 21 05.8	-0.9
BRVK	Borovoye	50.56	341	P	P	06 21 11.4	-0.6
BRVK	Borovoye	50.56	341	P	P	06 21 11.5	-0.4
BRVK	Borovoye	50.56	341	P	P	06 21 11.6	-0.4
BRVK				IAmb	IAmb	06 21 18.3	
	comp=Z,24nm,0.7s						
ATD	Arta Tunnel	51.49	280	P	P	06 21 21.3	+1.7
	comp=Z,5.0nm,0.3s,baz=324,slow=5.2,SNR=3.5						
ATD				LR	LR	06 39 42.6	
	comp=Z,170nm,21.9s,baz=112,slow=32						
QIS	Mount Isa	51.59	123	P	P	06 21 20.5	+0.3
	baz=52,SNR=7.3						
AB31	Akbulak array	51.75	332	*e*P	P	06 21 20.7	-0.3
ABKAR	Akbulak array	51.75	332	P	P	06 21 20.5	-0.5
ABKAR	Akbulak array	51.75	332	P	P	06 21 20.8	-0.2
ABKAR				IAmb	IAmb	06 21 29.9	
	comp=Z,131nm,1.1s						
KLR	Kul'dur	52.76	30	P	P	06 21 29.1	+0.6
	comp=Z,4.5nm,1.0s,baz=266,slow=5.8,SNR=6.3						
KLR				LR	LR	06 46 60.0	
	comp=Z,317nm,18.3s,baz=226,slow=40						
KLR	Kul'dur	52.76	30	*i* P	P	06 21 27.3	-1.1
KLR				pmax	pmax		
	comp=Z,15nm,1.0s						
OPO	Ambohidratompo	53.12	241	P	P	06 21 33.8	+2.0
	comp=Z,2.8nm,0.6s,baz=112,slow=22,SNR=2.1						
BOD	Bodaibo	53.35	13	*e*P	P	06 21 32.6	0.0
BOD				pmax	pmax		
	comp=Z,37nm,1.4s						
AKTO	Aktyubinsk	53.47	332	LR	LR	06 47 37.0	
	comp=Z,258nm,18.2s,baz=142,slow=40						
AKTO	Aktyubinsk	53.47	332	P	P	06 21 33.0	-0.7
ZEA	Zeya	53.96	23	*e*P	P	06 21 39.6	+2.4
ZEA				pmax	pmax		
	comp=N,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=E,10.0nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,20nm,0.7s						
ZEA				MLR	MLR		
	comp=N,300nm,15.0s						
ZEA				MLR	MLR		
	comp=E,300nm,15.0s						
ZEA				MLR	MLR		
	comp=Z,300nm,16.0s						
PMG	Port Moresby	54.52	106	P	P	06 21 42.0	+0.1
	comp=Z,5.7nm,0.2s,baz=203,slow=11,SNR=1.2						
PMG				LR	LR	06 48 59.1	
	comp=Z,194nm,19.1s,baz=303,slow=40						
PMG	Port Moresby	54.52	106	P	P	06 21 39.3	-2.6
PMG				pmax	pmax		
	comp=Z,28nm,0.9s						
PMG	Port Moresby	54.52	106	P	P	06 21 39.3	-2.6
PMG				IAmb	IAmb	06 21 49.9	
	comp=Z,28nm,0.9s						
VOI	Vohitsoka	54.84	238	P	P	06 21 50.9	+6.6
MAK	Makhachkala	55.18	319	*e*P	P	06 21 43.4	-2.8
MAK				*e*		06 23 45.6	
MAK				*e*S	S	06 29 24.9	-2.2
MAK				*e*SS	SS	06 33 07.6	-4.0
MAK				pmax	pmax		

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           comp=Z,278nm,1.0s
BBOO  Buckleboo         55.36 138   P      P       06 21 46.6  -1.1
           baz=56,SNR=13
BBOO  Buckleboo         55.36 138   P      P       06 21 46.6  -1.1
BBOO                                IAmb   IAmb    06 21 53.9
           comp=Z,58nm,1.0s
GNI   Garni             55.86 315 ceP      P       06 21 50.3  -1.1
GNI                                 pmax   pmax
           comp=Z,22nm,1.0s
SVE   Sverdlovsk        56.92 338  eP      P       06 21 59.1  +0.7
SVE                                 pmax   pmax
           comp=Z,59nm,0.7s
CTA   Charters Tower    57.08 119   LR     LR      06 49 03.9
           comp=Z,220nm,18.9s,baz=280,slow=39
GURO  Guroymak-BITLI    57.23 312   P      P       06 22 01.4  +0.2
KIBK  Kibwezi           57.32 263   P      P       06 22 02.7  +0.5
ARU   Arti              57.41 337c iP      P       06 22 01.5  -0.4
ARU                                                06 24 05.8
ARU                                 S      S       06 29 58.4  +2.1
ARU                                 SS     SS      06 33 44.4  -1.9
ARU                                 pmax   pmax
           comp=Z,33nm,0.8s
ARU                                 MLR    MLR
           comp=Z,402nm,19.0s
ARU   Arti              57.41 337   P      P       06 22 02.4  +0.5
ARU                                 IAmb   IAmb    06 22 09.4
           comp=Z,37nm,0.7s
YSS   Yuzh-Sakhalins    57.48  37  eP      P       06 22 02.0  -0.6
YSS                                e               06 22 12.2
YSS                                 MLR    MLR
           comp=Z,400nm,18.0s
YSS                                 MLR    MLR
           comp=N,500nm,19.0s
ZEI   Tsey              57.49 317  eP      P       06 22 01.1  -1.9
ZEI                                 pmax   pmax
           comp=Z,7.0nm,1.0s
HTT   Hallett           57.67 136   P      P       06 22 03.7  -0.4
           baz=58,SNR=25
KMBO  Kilima Mbogo      57.92 265   P      P       06 22 08.7  +2.1
           comp=Z,4.6nm,0.8s,baz=65,slow=11,SNR=11
KMBO  Kilima Mbogo      57.92 265   P      P       06 22 11.2  +4.7
KMBO  Kilima Mbogo      57.92 265   P      P       06 22 08.8  +2.3
KMBO                                IAmb   IAmb    06 22 16.4
           comp=Z,20nm,0.9s
QLP   Quilpie           58.09 127   P      P       06 22 06.6  -0.6
           baz=58,SNR=7.1
KBZ   Khabaz            58.54 318   P      P       06 22 10.0   0.0
           comp=Z,7.8nm,0.9s,baz=199,slow=7.3,SNR=8.5
KBZ                                 LR     LR      06 50 38.8
           comp=Z,76nm,19.2s,baz=128,slow=39
KBZ   Khabaz            58.54 318 ceP      P       06 22 07.7  -2.4
KBZ                                 pmax   pmax
           comp=Z,17nm,1.1s
STKA  Stephens Creek    58.69 133   P      P       06 22 10.5  -0.8
           comp=Z,22nm,0.7s,baz=313,slow=9.3,SNR=14
STKA                                LR     LR      06 52 27.3
           comp=Z,287nm,18.0s,baz=302,slow=41
STKA  Stephens Creek    58.69 133   P      P       06 22 10.6  -0.8
           baz=59,SNR=11
STKA  Stephens Creek    58.69 133   P      P       06 22 10.4  -0.8
SHA1  Shidzhatmaz       58.70 318  iP      P       06 22 10.8  -0.7
KIV   Kislovodsk        58.77 318  eP      P       06 22 10.3  -1.5
KIV                                 pmax   pmax
           comp=Z,32nm,1.1s
KIV                                 MLR    MLR
           comp=Z,90nm,17.0s
LODK  Lodwar            59.26 270   P      P       06 22 20.4  +4.7
LODK  Lodwar            59.26 270   P      P       06 22 16.9  +1.3
BELG  Belogornoye       59.82 329   LR     LR      06 50 56.8
           comp=Z,92nm,20.9s,baz=169,slow=39
YAK   Yakutsk           61.10  18  eP      P       06 22 26.7  -0.6
YAK                                e               06 22 33.4
YAK                                 pmax   pmax
           comp=Z,19nm,0.9s
YAK                                 pmax   pmax
           comp=E,8.0nm,0.9s
YAK   Yakutsk           61.10  18   P      P       06 22 27.1  -0.3
CMSA  Cobar Meteorol    61.53 131   P      P       06 22 29.9  -0.9
           baz=62,SNR=27
RMQ   Roma              61.70 125   P      P       06 22 32.5  +0.4
           baz=62,SNR=9.5
BNN   Bunyan            61.94 311   P      P       06 22 34.0  +0.4
VRH   Novokhopyorsk     62.43 325  eP      P       06 22 34.5  -1.9
VRH                                 pmax   pmax
           comp=Z,30nm,1.0s
KIRV  Kirov             62.53 335  iP      P       06 22 36.3  -0.7
ANN   Anapa             62.59 318  eP      P       06 22 42.2  +4.6
ANN                                 pmax   pmax
           comp=Z,94nm,1.3s
NRIK  Noril'sk          62.95 357   P      P       06 22 38.8  -0.9
           comp=Z,4.5nm,0.5s,baz=159,slow=8.7,SNR=3.5
NRIK  Noril'sk          62.95 357 ceP      P       06 22 38.9  -0.7
NRIK                                pmax   pmax
           comp=Z,13nm,0.8s
NRIK  Noril'sk          62.95 357   P      P       06 22 39.8  +0.2
NRIK                                IAmb   IAmb    06 22 47.7
           comp=Z,13nm,0.8s
BR131 Keskin Array S    63.82 311   P      P       06 22 44.2  -2.0
BR131                               pmax   pmax
           comp=Z,38nm,0.8s
BR131 Keskin Array S    63.82 311   P      P       06 22 47.3  +1.1
           SNR=9.4
BR131 Keskin Array S    63.82 311   P      P       06 22 44.2  -2.0
BRTR  Keskin Array B    63.82 311   P      P       06 22 44.4  -1.7
           comp=Z,12nm,0.8s,baz=126,slow=7.3,SNR=22
BRTR                                LR     LR      06 52 31.0
           comp=Z,288nm,21.9s,baz=122,slow=38
BRTR  Keskin Array B    63.82 311   P      P       06 22 44.2  -2.0
BRTR  Keskin Array B    63.82 311   P      P       06 22 44.1  -2.0
VSR   Storozhevoye      63.89 325  eP      P       06 22 42.8  -3.3
VSR                                 pmax   pmax
           comp=Z,30nm,1.2s
MBAR  Mbarara           64.30 266  iP      P       06 22 50.2  +0.4
MBAR  Mbarara           64.30 266   P      P       06 22 53.9  +4.2
MBAR  Mbarara           64.30 266   P      P       06 22 50.7  +0.9
MBAR                                IAmb   IAmb    06 22 59.3
           comp=Z,34nm,1.4s
TOO   Toolangi          64.41 137   P      P       06 22 50.4  +0.6
           baz=64,SNR=13
TOO   Toolangi          64.41 137   P      P       06 22 50.0  +0.1
TOO                                 pmax   pmax
           comp=Z,86nm,1.2s
TOO   Toolangi          64.41 137   P      P       06 22 50.0  +0.1
LPSR  Galich'ya Gora    64.59 326  eP      P       06 22 48.7  -2.0
LPSR                                pmax   pmax
           comp=Z,10.0nm,0.9s
YNG   Young             64.84 133   P      P       06 22 52.8   0.0
           baz=65,SNR=5.4
CAN   Canberra          65.76 133   P      P       06 22 58.3  -0.4
CAN                                 pmax   pmax
           comp=Z,36nm,0.7s
CAN   Canberra          65.76 133   P      P       06 22 58.3  -0.4
PRGR  Permogore         65.86 337  eP      P       06 22 57.6  -1.2
PRGR                                pmax   pmax
           comp=Z,81nm,1.3s
CNB   Canberra Magne    66.02 133   P      P       06 23 00.4   0.0
           baz=66,SNR=5.1
ELL   Elmali            66.07 307   P      P       06 23 00.4  -0.4
ELL                                 pmax   pmax
           comp=Z,268nm,0.9s
ELL   Elmali            66.07 307   P      P       06 23 00.3  -0.4
MOS   Moscow            66.59 329  eP      P       06 23 01.9  -1.7
MOS                                e               06 23 14.8
MOS                                 pmax   pmax
           comp=Z,67nm,0.8s
OBN   Obninsk           66.89 328   LR     LR      06 57 25.7
           comp=Z,30nm,18.1s,baz=158,slow=41
OBN   Obninsk           66.89 328⇑eP      P       06 23 04.8  -0.7
OBN                                e               06 23 37.6
OBN                                e               06 25 33.2
OBN                                ePPP    PPP     06 27 06.0
OBN                                 pmax   pmax
           comp=Z,53nm,1.3s
OBN                                 MLR    MLR
           comp=Z,202nm,17.0s
KLMR  Klimovskoe        67.98 334  eP      P       06 23 09.0  -3.3
KLMR                               e               06 23 35.7
KLMR                                pmax   pmax
           comp=Z,67nm,1.0s
KLMR  Klimovskoe        67.98 334  eP      P       06 23 09.0  -3.3
KLMR                                AMP            06 23 20.5
           comp=Z,67nm,1.0s
KLMR                               ePcP    PcP     06 23 35.8  -2.6
KLMR                                LQ     LQ      06 48 03.5
KLMR                                LQ     LQ      06 48 03.5
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KLMR                                LR     LR      06 54 00.3
TIXI  Tiksi             68.46  11   LR     LR      06 56 03.6
           comp=Z,312nm,19.2s,baz=232,slow=38
TIXI  Tiksi             68.46  11 ceP      P       06 23 14.0  -1.1
TIXI  Tiksi             68.46  11   P      P       06 23 13.9  -1.2
TIRR  Tirgusor          68.68 315  ⇓P      P       06 23 14.8  -2.2
TIRR  Tirgusor          68.68 315   P      P       06 23 16.8  -0.2
TIRR                                pmax   pmax
           comp=Z,74nm,1.1s
TIRR  Tirgusor          68.68 315   P      P       06 23 16.8  -0.2
PETK  Petropavlovsk-    68.76  35   LR     LR      06 57 17.1
           comp=Z,151nm,18.0s,baz=229,slow=39
CFR   Carcaliu          69.03 316  ⇑P      P       06 23 17.3  -1.8
HARR  Harsova           69.07 315  ⇑P      P       06 23 17.6  -1.9
AKASG Malin Array Be    69.63 322   P      P       06 23 21.0  -1.8
           comp=Z,5.8nm,0.7s,baz=87,slow=5.2,SNR=11
AKASG                               LR     LR      06 56 59.3
           comp=Z,121nm,21.8s,baz=135,slow=39
AKASG Malin Array Be    69.63 322   P      P       06 23 21.0  -1.8
AKASG Malin Array Be    69.63 322   P      P       06 23 21.5  -1.3
AKBB  Malin Array Si    69.63 322   P      P       06 23 21.7  -1.1
AKBB                                pmax   pmax
           comp=Z,52nm,1.5s
AKBB  Malin Array Si    69.63 322   P      P       06 23 21.7  -1.1
AKBB                                IAmb   IAmb    06 23 34.4
           comp=Z,52nm,1.5s
ALN   Alexandroupoli    69.74 311   P      P       06 23 23.0  -0.6
ALN                                 pmax   pmax
           comp=Z,22nm,1.0s
ALN   Alexandroupoli    69.74 311   P      P       06 23 23.0  -0.6
ALN                                 IAmb   IAmb    06 23 32.1
           comp=Z,22nm,1.0s
VRI   Vrincioaia        70.14 316  ⇑P      P       06 23 25.2  -0.8
PLOR  Plostina          70.19 316  ⇓P      P       06 23 25.5  -0.9
TESR  Tescani           70.32 317  ⇑P      P       06 23 26.3  -0.9
COVR  Voineasa-Covas    70.50 316  ⇓P      P       06 23 27.1  -1.1
MLR   Muntele Rosu      70.61 316  ⇑P      P       06 23 28.3  -0.8
MLR   Muntele Rosu      70.61 316   P      P       06 23 29.0  -0.1
MLR                                 pmax   pmax
           comp=Z,63nm,1.1s
MLR   Muntele Rosu      70.61 316   P      P       06 23 29.0  -0.1
DOPR  Dopca             71.08 316  ⇑P      P       06 23 30.0  -1.7
VOIR                    71.22 316  ⇑P      P       06 23 31.5  -1.2
MNK   Minsk             71.43 326  iP      P       06 23 33.4  -0.3
MNK                                i               06 26 11.5
MNK                                iPPP    PPP     06 27 55.1
MNK                                iS      S       06 32 52.2  +2.7
MNK                                 pmax   pmax
           comp=N,34nm,0.9s
MNK                                 pmax   pmax
           comp=E,5.0nm,0.9s
MNK                                 pmax   pmax
           comp=Z,61nm,0.9s
MNK                                 MLR    MLR
           comp=N,185nm,19.0s
MNK                                 MLR    MLR
           comp=E,26nm,19.0s
MNK                                 MLR    MLR
           comp=Z,107nm,19.0s
MNK   Minsk             71.43 326  iP      P       06 23 33.4  -0.2
           comp=E,5.0nm,0.9s
MNK                                iP      P       06 23 33.4  -0.2
           comp=N,34nm,0.9s
MNK                                iP      P       06 23 33.4  -0.2
           comp=Z,61nm,0.9s,baz=105
MNK                                iPP     PP      06 26 11.6  -0.8
MNK                                iPPP    PPP     06 27 55.1
MNK                                iS      S       06 32 52.2  +2.7
MNK                                iSS     SS      06 37 05.7   -19
MNK                                iSSS    SSS     06 41 24.8
MNK                                iLQ     LQ      06 49 39.6
MNK                                iLR     LR      06 52 44.2
MNK                                iLRM    MLR     06 55 39.5
           comp=N,185nm,19.0s
MNK                                iLRM    MLR     06 56 14.5
           comp=E,26nm,18.9s
MNK                                iLRM    MLR     06 56 40.0
           comp=Z,107nm,18.9s
ARR   Arges             71.49 316  ⇓P      P       06 23 32.7  -1.6
BURAR Bucovina Array    71.50 318  ⇓P      P       06 23 34.2  -0.2
BURAR Bucovina Array    71.50 318   P      P       06 23 34.0  -0.4
BURAR                               IAmb   IAmb    06 23 43.6
           comp=Z,16nm,0.9s
BUR08 Bucovina Ar. S    71.52 318   P      P       06 23 34.2  -0.3
BUR08                               IAmb   IAmb    06 23 44.0
           comp=Z,23nm,1.1s
VTS   Vitosha           72.07 313  ⇑P      P       06 23 36.5  -1.5
VTS   Vitosha           72.07 313   P      P       06 23 37.2  -0.8
VTS                                 pmax   pmax
           comp=Z,20nm,1.0s
VTS   Vitosha           72.07 313   P      P       06 23 37.2  -0.8
VTS                                 IAmb   IAmb    06 23 46.9
           comp=Z,20nm,1.0s
NACGM Naroch            72.15 326  iP      P       06 23 37.8  -0.2
VAY   Valandovo         72.40 311  iP      P       06 23 34.6  -5.1
ITM   Ithomi            72.46 307   P      P       06 23 39.8  -0.5
ITM                                 IAmb   IAmb    06 23 48.1
           comp=Z,38nm,0.9s
ISAL  Salakas           72.68 326  eP      P       06 23 41.5  +0.4
LVV   L'vov             72.68 320  eP      P       06 23 40.4  -0.9
STIP  Stip              72.73 312  iP      P       06 23 39.0  -2.7
GZR   Gura Zlata        72.79 315  ⇑P      P       06 23 41.2  -0.9
HERR  Herculane         72.97 315  ⇓P      P       06 23 42.5  -0.6
DRGR                    73.04 317  ⇑P      P       06 23 41.3  -2.3
LVZ   Lovozero          73.08 340   P      P       06 23 44.7  +1.4
LVZ                                 pmax   pmax
           comp=Z,43nm,0.7s
LVZ   Lovozero          73.08 340   P      P       06 23 44.7  +1.4
VSU   Vasula            73.10 329  eP      P       06 23 43.8  +0.3
FNA   Florina           73.23 311   P      P       06 23 45.1  +0.3
FNA                                 pmax   pmax
           comp=Z,21nm,1.0s
FNA   Florina           73.23 311   P      P       06 23 45.1  +0.3
FNA                                 IAmb   IAmb    06 23 58.2
           comp=Z,21nm,1.0s
BOVS  Bovan             73.31 314  ⇑P      P       06 23 43.3  -1.9
APA   Apatity           73.36 339⇑iP      P       06 23 45.2  +0.2
APA                                 pmax   pmax
           comp=Z,41nm,0.8s
APA                                 MLR    MLR
           comp=Z,1µm,16.0s
MDVR  Moldovita         73.45 315  ⇓P      P       06 23 45.1  -1.0
KWP   Kalwaria Pacla    73.50 320   P      P       06 23 45.9  -0.3
KWP                                 pmax   pmax
           comp=Z,291nm,0.9s
KWP   Kalwaria Pacla    73.50 320   P      P       06 23 45.9  -0.3
UZH   Uzhgorod          73.61 319  eP      P       06 23 49.4  +2.7
UZH                                e               06 24 08.3
BZS   Buzias            73.63 316  ⇑P      P       06 23 46.4  -0.6
SIRR  Siria             73.69 316  ⇓P      P       06 23 47.1  -0.2
OHR   Ohrid             73.70 311  iP      P       06 23 45.1  -2.5
PABE  Paberze           73.86 326  eP      P       06 23 48.0  -0.1
PABE  Paberze           73.86 326   P      P       06 23 47.5  -0.5
SUW   Suwalki           74.00 324  eP      P       06 23 47.8  -1.1
SUW   Suwalki           74.00 324  eP      P       06 23 48.2  -0.7
SUW   Suwalki           74.00 324   P      P       06 23 48.0  -0.9
SUW                                 pmax   pmax
           comp=Z,230nm,1.0s
SUW   Suwalki           74.00 324   P      P       06 23 48.0  -0.9
CRVS  Cervenica-Dubn    74.19 319  eP      P       06 23 51.8  +1.6
CRVS                                pmax   pmax
           comp=Z,28nm,0.9s
CRVS  Cervenica-Dubn    74.19 319  eP      P       06 23 51.8  +1.6
FIA1  FINESS Array S    74.23 332   P      P       06 23 49.5  -0.6
FINES FINESS Array B    74.23 332   P      P       06 23 49.4  -0.7
           comp=Z,24nm,0.6s,baz=98,slow=5.7,SNR=145
FINES                               LR     LR      07 00 02.8
           comp=Z,155nm,18.2s,baz=110,slow=39
FINES FINESS Array B    74.23 332   P      P       06 23 50.0  -0.2
STHS  Stebnicka Huta    74.41 319  eP      P       06 23 53.3  +1.8
STHS                                pmax   pmax
           comp=Z,6.0nm,0.9s
STHS  Stebnicka Huta    74.41 319  eP      P       06 23 53.3  +1.8
PUK   Puka              74.47 312   P      P       06 23 51.1  -1.0
PUK                                 IAmb   IAmb    06 24 00.2
           comp=Z,50nm,1.3s
DIVS  Divibare          74.60 314   P      P       06 23 51.8  -0.9
MTSE  Matsula           74.65 329  eP      P       06 23 52.9  +0.3
PDG   Podgorica         74.97 312  ⇓P      P       06 23 53.5  -1.4
PDG   Podgorica         74.97 312   P      P       06 23 53.8  -1.1
PDG                                 IAmb   IAmb    06 24 04.8
           comp=Z,29nm,0.8s
NIE   Niedzica          75.02 319  eP      P       06 23 57.1  +2.1
PBUR  Paburge           75.09 326  eP      P       06 23 55.2   0.0
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PSZ   Piszkesteto       75.09 318  ⇓P      P       06 23 55.1  -0.4
PSZ   Piszkesteto       75.09 318  eP      P       06 23 54.7  -0.8
PSZ   Piszkesteto       75.09 318   P      P       06 23 55.3  -0.2
PSZ   Piszkesteto       75.09 318   P      P       06 23 55.3  -0.2
PSZ                                 IAmb   IAmb    06 24 08.8
           comp=Z,19nm,0.9s
SLIT  Slitere, Latvi    75.20 328  eP      P       06 23 55.9  +0.1
BOSA  Boshof            75.40 238   P      P       06 23 58.7  +1.0
           comp=Z,11nm,0.6s,baz=73,slow=4.4,SNR=18
BOSA  Boshof            75.40 238   P      P       06 23 58.3  +0.6
BOSA                                pmax   pmax
           comp=Z,19nm,0.9s
BOSA  Boshof            75.40 238   P      P       06 23 58.3  +0.6
BOSA                                IAmb   IAmb    06 24 06.5
           comp=Z,19nm,0.8s
OJC   Ojcow             75.44 320  eP      P       06 23 56.8  -0.6
OJC   Ojcow             75.44 320   P      P       06 23 56.8  -0.6
OJC                                 pmax   pmax
           comp=Z,90nm,1.3s
OJC   Ojcow             75.44 320   P      P       06 23 56.8  -0.6
DZM   Mont Dzumac       75.63 115  eP      P       06 24 00.7  +1.6
           comp=Z,47nm,1.4s
DZM   Mont Dzumac       75.63 115  eLR     LR      06 47 12.6
           comp=Z,290nm,22.6s
VYHS  Vyhne             75.86 318  eP      P       06 23 59.3  -0.6
VYHS                                pmax   pmax
           comp=Z,14nm,1.3s
VYHS  Vyhne             75.86 318  eP      P       06 23 59.3  -0.6
KOVH  Kovagotottos      76.12 316  eP      P       06 24 00.6  -0.8
STON  Ston              76.15 312  iP      P       06 23 59.5  -2.0
TIH   Tihany            76.34 317  eP      P       06 24 03.0  +0.5
KEV   Kevo              76.35 341   P      P       06 24 02.7  +0.5
KEV                                 pmax   pmax
           comp=Z,91nm,1.5s
KEV   Kevo              76.35 341   P      P       06 24 02.7  +0.5
MPLH  Magyarpolny       76.60 317  eP      P       06 24 04.0  -0.1
RICI  Ricice            76.61 313  iP      P       06 24 02.2  -2.0
JAVC  Velka Javorina    76.67 319  eP      P       06 24 04.9  +0.4
MAKA  Makarska          76.68 313  iP      P       06 24 02.1  -2.5
ARA0  ARCESS Array S    76.78 340  eP      P       06 24 04.9  +0.3
ARCES ARCESS Array B    76.78 340   P      P       06 24 03.8  -0.9
           comp=Z,6.2nm,0.6s,baz=85,slow=5.4,SNR=36
ARCES                               LR     LR      07 01 05.3
           comp=Z,309nm,18.9s,baz=95,slow=38
ARCES ARCESS Array B    76.78 340   P      P       06 24 04.3  -0.3
ARCES                               IAmb   IAmb    06 24 14.5
           comp=Z,28nm,0.8s
MORC  Moravsky Berou    76.84 320  ⇓P      P       06 24 05.5  +0.1
MORC  Moravsky Berou    76.84 320   P      P       06 24 04.6  -0.8
MORC                                pmax   pmax
           comp=Z,28nm,0.9s
MORC  Moravsky Berou    76.84 320  eP      P       06 24 05.0  -0.4
MORC  Moravsky Berou    76.84 320   P      P       06 24 04.6  -0.8
MORC                                IAmb   IAmb    06 24 15.4
           comp=Z,28nm,0.9s
AAL   Aland             76.85 330  eP      P       06 24 06.4  +1.3
MODS  Modra-Piesok      76.88 318  eP      P       06 24 07.4  +1.7
MODS                                pmax   pmax
           comp=Z,13nm,0.8s
MODS  Modra-Piesok      76.88 318  eP      P       06 24 07.4  +1.7
ZST   Bratislava        76.98 318  eP      P       06 24 06.5  +0.3
ZST                                 pmax   pmax
           comp=Z,32nm,0.9s
ZST   Bratislava        76.98 318  eP      P       06 24 06.5  +0.3
BEHE  Becsehely         77.07 316  eP      P       06 24 03.9  -2.8
SOP   Sopron            77.31 317  eP      P       06 24 09.2  +1.1
MAW   Mawson            77.32 192   P      P       06 24 08.4  +0.8
           comp=Z,3.2nm,0.6s,baz=346,slow=15,SNR=5.0
MAW   Mawson            77.32 192   P      P       06 24 09.5  +1.9
           baz=78,SNR=8.3
MAW   Mawson            77.32 192   P      P       06 24 08.1  +0.6
MAW                                 pmax   pmax
           comp=Z,4.0nm,0.9s
MAW   Mawson            77.32 192   P      P       06 24 08.1  +0.6
KRLC  Kraliky           77.36 320  eP      P       06 24 08.0  -0.3
KRLC  Kraliky           77.36 320  eP      P       06 24 08.0  -0.3
KTK1  Kautokeino        77.41 340  eP      P       06 24 08.2   0.0
VRAC  Vranov            77.41 319  eP      P       06 24 07.8  -0.8
KOGS  Kog               77.43 316  eP      P       06 24 08.2  -0.6
KRUC  Moravsky          77.52 319  eP      P       06 24 08.5  -0.7
DPC   Dobruska-Polom    77.67 320  eP      P       06 24 10.2  +0.1
DPC   Dobruska-Polom    77.67 320  eP      P       06 24 10.2  +0.1
HAMF  Hammerfest        77.69 341  eP      P       06 24 10.0  +0.3
ZIRJ  Zirje             77.70 313  iP      P       06 24 07.6  -2.7
OSTC  Ostas             77.76 320  eP      P       06 24 13.4  +2.9
CONA  Conrad Observa    77.79 318  eP      P       06 24 11.5  +0.7
           comp=Z,9.4nm,0.9s
CHVC  Chvalec           77.86 320  eP      P       06 24 13.5  +2.4
UPP   Uppsala           77.98 330  eP      P       06 24 12.0  +0.6
ARSA  Arzberg           77.98 317  eP      P       06 24 12.0  +0.1
           comp=Z,13nm,1.0s
BOJS  Bojanci           78.07 315  iP      P       06 24 11.7  -0.6
SOKA  Soboth            78.28 316  eP      P       06 24 13.7  +0.1
           comp=Z,22nm,1.0s
OBKA  Obir              78.61 316  eP      P       06 24 15.5   0.0
           comp=Z,20nm,1.1s
CEY   Cerknica          78.66 315  iP      P       06 24 14.8  -0.9
MOA   Molln             78.86 317  eP      P       06 24 17.3  +0.6
           comp=Z,11nm,1.1s
CKRC  Cesky Krumlov     78.88 318  eP      P       06 24 24.0  +7.2
TRO   Tromso            79.04 340  eP      P       06 24 17.2   0.0
HOPEN Hopen             79.06 347  eP      P       06 24 17.2   0.0
TRI   Trieste           79.12 315   P      P       06 24 17.7  -0.4
TRI                                 pmax   pmax
           comp=Z,16nm,0.8s
TRI   Trieste           79.12 315   P      P       06 24 17.7  -0.4
TRI                                 IAmb   IAmb    06 24 28.4
           comp=Z,16nm,0.8s
BRG   Berggiesshubel    79.22 320  eP      P       06 24 18.1  -0.5
BRG                                 Amp            06 24 20.8
           comp=Z,4.8nm,1.1s
BRG   Berggiesshubel    79.22 320   P      P       06 24 23.1  +4.6
BRG                                 Amp            06 24 28.0
           comp=Z,16nm,1.1s
MYKA  Terra Mystica     79.24 316  eP      P       06 24 19.6  +0.7
           comp=Z,8.6nm,0.9s
GEC2  GERESS Array S    79.28 318   P      P       06 24 19.0  -0.1
GEC2                                IAmb   IAmb    06 24 28.3
           comp=Z,27nm,0.9s
GERES GERESS Array B    79.28 318   P      P       06 24 18.7  -0.3
           comp=Z,8.0nm,0.7s,baz=86,slow=5.8,SNR=23
GERES                               LR     LR      07 04 00.4
           comp=Z,63nm,21.0s,baz=70,slow=39
GERES GERESS Array B    79.28 318   P      P       06 24 18.9  -0.2
KHC   Kasperske Hory    79.38 319  eP      P       06 24 22.4  +2.9
KHC                                e               06 24 30.2
KHC   Kasperske Hory    79.38 319  eP      P       06 24 22.4  +2.9
KHC                                ex      x       06 24 30.2
RUE   Ruedersdorf       79.41 322  eP      P       06 24 19.7  +0.2
NRCA  Norcia            79.52 312   P      P       06 24 20.9  +0.5
ZOU   Zoufplan          79.70 316   P      P       06 24 20.9  -0.6
ZOU                                 IAmb   IAmb    06 24 39.1
           comp=Z,31nm,1.0s
CLL   Collm             79.83 321  eP      P       06 24 20.0  -1.9
CLL                                e               06 24 24.0
CLL                                e               06 24 28.0
CLL   Collm             79.83 321  eP      P       06 24 20.0  -1.9
CLL                                epP     PcP     06 24 24.0  -5.4
           comp=Z,15nm,1.1s
CLL                                e(sP)   pP      06 24 28.0  -4.2
CLL                                 LmV            07 05 00.0
           comp=Z,100nm,20.1s
HFS   Hagfors           79.97 330   P      P       06 24 21.6  -0.9
           comp=Z,9.2nm,0.7s,baz=104,slow=6.3,SNR=23
FAUS  Fauske            80.01 337  eP      P       06 24 22.0  -0.5
ABTA  Abfaltersbach     80.02 316  eP      P       06 24 23.7  +0.6
           comp=Z,9.3nm,0.9s
SUR   Sutherland        80.08 236   P      P       06 24 25.7  +1.9
SUR   Sutherland        80.08 236   P      P       06 24 24.9  +1.0
SUR                                 IAmb   IAmb    06 24 41.2
           comp=Z,25nm,1.1s
STEI  Steigen           80.09 338  eP      P       06 24 23.4  +0.5
MOR8  Moi Rana          80.20 336  eP      P       06 24 22.9  -0.7
NBB30 Finnes            80.56 337  eP      P       06 24 25.9  +0.4
CTI   Castel Tesino     80.61 316   P      P       06 24 25.0  -1.3
CTI                                 pmax   pmax
           comp=Z,96nm,1.5s
CTI   Castel Tesino     80.61 316   P      P       06 24 25.0  -1.3
WTTA  Wattenberg        80.63 317  eP      P       06 24 26.7  +0.2
           comp=Z,8.9nm,0.8s
WATA  Walderalm         80.67 317  eP      P       06 24 26.6  -0.1
           comp=Z,7.9nm,0.7s
LOF   Lofoten           80.75 338  eP      P       06 24 26.6  +0.2
SQTA  Sankt Quirin      80.92 317  eP      P       06 24 29.4  +1.4
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	comp=Z,13nm,0.9s						
MOTA	Moosalm	80.99	317	*e*P	P	06 24 29.0	+0.6
	comp=Z,17nm,1.0s						
NC602	NORSAR Array S	81.07	330	*e*P	P	06 24 29.2	+0.8
NSS	Namsos	81.09	334	*e*P	P	06 24 27.9	-0.4
WIN	Windhoek	81.20	246	P	P	06 24 30.5	+0.5
WIN				pmax	pmax		
	comp=Z,11nm,0.7s						
WIN	Windhoek	81.20	246	P	P	06 24 30.5	+0.5
RETA	Reutte	81.22	317	*e*P	P	06 24 31.6	+2.1
	comp=Z,11nm,0.9s						
FETA	Feichten	81.24	316	*e*P	P	06 24 30.3	+0.5
	comp=Z,8.7nm,1.4s						
NB2	NORSAR Subarra	81.25	331	P	P	06 24 28.1	-1.2
	comp=Z,3.2nm,0.7s,baz=90,slow=5.9						
NB2	NORSAR Subarra	81.25	331	P	P	06 24 28.1	-1.2
	baz=90,slow=5.9						
NOA	NORSAR Array B	81.25	331	P	P	06 24 28.4	-0.9
	comp=Z,1.4nm,0.8s,baz=316,slow=23,SNR=5.4						
NOA				LR	LR	07 03 59.7	
	comp=Z,91nm,18.7s,baz=100,slow=38						
SPA0	Spitsbergen Ar	81.32	348	*e*P	P	06 24 29.2	-0.2
DAVA	Damuels	81.82	317	*e*P	P	06 24 32.8	0.0
	comp=Z,9.5nm,0.8s						
KBS	Kingsbay	82.30	349	*e*P	P	06 24 34.6	+0.1
DOMB	Dombas	82.31	332	*e*P	P	06 24 34.0	-0.8
VSL	Villasalto	82.38	309	P	P	06 24 35.1	-0.6
KEST	Kesra	82.56	305	P	P	06 24 36.9	+0.1
	comp=Z,9.0nm,0.8s,baz=266,slow=2.8,SNR=5.9						
KEST	Kesra	82.56	305	P	P	06 24 36.9	+0.1
KEST	Kesra	82.56	305	P	P	06 24 37.1	+0.3
KEST				IAmb	IAmb	06 24 48.2	
	comp=Z,14nm,0.8s						
MOL	Molde	83.01	332	*e*P	P	06 24 38.1	-0.3
SYO	Syowa Base	84.28	197	⇓*e*sP	sP	06 24 52.8	-6.2
THZ	Tophouse	85.49	133	P	P	06 24 49.7	-1.8
THZ				IAmb	IAmb	06 24 57.6	
	comp=Z,31nm,0.9s						
NOR	Nord	86.70	352	*i* P	P	06 24 55.6	-1.1
DAG	Danmarks Havn	88.96	348	*i* P	P	06 25 12.3	+4.7
DAG				IAmb	IAmb	06 25 13.1	
	comp=Z,3.5nm,0.5s						
VNDA	Vanda	91.45	168	P	P	06 25 20.0	+0.9
	comp=Z,0.8nm,0.6s,baz=284,slow=6.8,SNR=6.5						
VNDA				LR	LR	07 04 05.9	
	comp=Z,129nm,19.5s,baz=308,slow=34						
VNDA	Vanda	91.45	168	P	P	06 25 20.0	+0.9
TORD	Torodi Ar. Bea	91.54	283	P	P	06 25 21.2	+0.4
	comp=Z,2.0nm,0.8s,baz=80,slow=3.9,SNR=10						
TORD				PKKPbc	PKKPbc	06 42 40.7	-0.1
	comp=Z,0.2nm,0.4s,baz=293,slow=3.9,SNR=1.9						
TORD				LR	LR	07 05 00.1	
	comp=Z,206nm,20.3s,baz=70,slow=35						
TORD	Torodi Ar. Bea	91.54	283	P	P	06 25 19.1	-1.8
ESDC	Sonseca Array	92.60	310	P	P	06 25 25.1	-0.3
	comp=Z,0.8nm,0.6s,baz=40,slow=3.9,SNR=7.4						
ESDC	Sonseca Array	92.60	310	P	P	06 25 26.0	+0.6
NEEM	North Greenlan	94.04	353	*i* P	P	06 25 31.4	-0.1
SUMG	Summit	95.63	347	*i* P	P	06 25 46.3	+7.3
SUMG				IAmb	IAmb	06 25 47.6	
	comp=Z,3.0nm,0.8s						
ILAR	Eielson Array	95.78	22	P	P	06 25 43.4	+4.0
	comp=Z,0.5nm,0.5s,baz=293,slow=4.0,SNR=7.9						
ILAR				PP	PP	06 29 25.5	-5.4
	comp=Z,0.8nm,0.8s,baz=301,slow=7.2,SNR=4.1						
ILAR				LR	LR	07 13 41.7	
	comp=Z,116nm,18.5s,baz=312,slow=39						
A36M	Sachs Harbour	97.47	12	P	P	06 25 45.5	-1.3
A36M				IAmb	IAmb	06 26 00.7	
	comp=Z,13nm,0.8s						
DBIC	Dimbokro	98.77	278	LR	LR	07 09 54.3	
	comp=Z,188nm,19.1s,baz=96,slow=35						
PPT2	Papeete2	116.34	106	*e*LR	LR	07 06 04.2	
	comp=Z,162nm,26.8s						
F10A	Beach Ranch, E	120.48	25	PKPdf	PKPdf	06 31 04.7	-0.6
MSO	Missoula	121.11	23		PKPdf	06 31 05.4	-1.0
EGMT	Eagleton	121.58	19	PKPdf	PKPdf	06 31 07.0	-0.2
PLID	Pearl Lake	121.70	25	PKPdf	PKPdf	06 31 07.2	-0.5
ULM	Lac du Bonnet	122.74	8	PKP	PKPdf	06 31 08.0	-1.3
	comp=Z,2.7nm,0.6s,baz=16,slow=2.3,SNR=7.0						
ULM	Lac du Bonnet	122.74	8	PKIKP	PKPdf	06 31 08.0	-1.3
HLID	Hailey	123.61	25	PKPdf	PKiKP	06 31 11.5	-0.1
NVAR	Mina Array Bea	125.76	32	PKP	PKiKP	06 31 16.7	+0.5
	comp=Z,1.6nm,0.8s,baz=289,slow=1.6,SNR=11						
NVAR	Mina Array Bea	125.76	32		PKPdf	06 31 15.2	-0.5
BW06	Boulder Array	126.21	22		PKPdf	06 31 15.7	-0.8
PD31	Pinedale Array	126.21	22		PKPdf	06 31 16.3	-0.2
PDAR	Pinedale Array	126.21	22	PKP	PKPdf	06 31 15.9	-0.6
	comp=Z,1.6nm,0.8s,baz=35,slow=1.1,SNR=11						
PDAR	Pinedale Array	126.21	22	PKPdf	PKPdf	06 31 15.5	-1.0
F33A	5 Mile Ranch,	126.97	10		PKPdf	06 31 17.0	-0.6
NBCL	Cascavel-CE	133.24	270	*e*P	PKiKP	06 31 34.8	+3.2
NBMA	Muriti-CE	133.90	266	*e*P	PKiKP	06 31 36.5	+3.6
NBMO	Morrinhos-CE	134.90	272	*e*P	PKiKP	06 31 38.4	+3.5
NBPN	Ponto Novo - B	135.32	261	*e*P	PKiKP	06 31 39.8	+4.0
BSCB	Bom Sucesso	138.30	246	*e*P	PKiKP	06 31 43.9	+2.2
TXAR	Lajitas Array	140.21	26	PKP	PKPdf	06 31 41.8	-1.2
	comp=Z,1.2nm,0.7s,baz=208,slow=0.7,SNR=12						
TXAR				PP	PP	06 34 43.7	+4.3
	comp=Z,0.8nm,1.0s,baz=336,slow=2.0,SNR=2.9						
TXAR	Lajitas Array	140.21	26	PKPdf	PKPdf	06 31 43.6	+0.7
JCT	Junction City	140.67	20	PKIKP	PKPdf	06 31 42.6	-1.1
JCT	Junction City	140.67	20	PKPdf	PKPdf	06 31 42.6	-1.1
CPSB	Cacapava Do Su	141.84	227	*e*P	PKiKP	06 31 51.3	+2.7
BDFB	Brasilia	142.43	253	PKhKP	PKPpre	06 31 43.6	
	comp=Z,1.6nm,0.4s,baz=182,slow=3.4,SNR=5.2						
PLCA	Paso Flores	143.46	199	PKP	PKPbc	06 31 45.8	+0.2
	comp=Z,2.9nm,0.7s,baz=292,slow=2.9,SNR=7.4						
PLCA	Paso Flores	143.46	199	PKPdf	PKPdf	06 31 48.1	-0.3
ITQB	Itaqui	144.55	226	PKPdf	PKPbc	06 31 49.6	+0.5
ARAG	Araguaiana, MT	146.01	252	*e*P	PKiKP	06 31 58.9	+1.4
MCPB	Macapa, AP	146.37	279	*e*P	PKiKP	06 31 58.7	+0.3
CPUP	Villa Florida	146.90	230	PKPbc	PKPbc	06 31 56.8	+0.2
	comp=Z,3.1nm,0.8s,baz=101,slow=1.9,SNR=6.9						
CPUP	Villa Florida	146.90	230	PKIKP	PKPdf	06 31 53.4	-1.2
CPUP	Villa Florida	146.90	230	PKPdf	PKPdf	06 31 53.4	-1.2
AQDB	Aquidauana	148.19	241	*e*P	PKiKP	06 32 02.1	+0.2
AQDB	Aquidauana	148.19	241	PKPdf	PKPdf	06 31 56.2	-0.6
ML02	Panimavida	148.23	202		PKPdf	06 31 55.1	-1.4
MALB	Monte Alegre	148.80	277	*e*P	PKiKP	06 32 03.3	-0.1
BO02	Sierra Bellavi	148.84	203		PKPdf	06 31 56.6	-1.1
GO05	Huala	149.09	202		PKPdf	06 31 56.3	-1.7
SALV	Santo Antonio	149.61	250	*e*P	PKPbc	06 32 04.1	+0.2
MT02	Curacav	150.32	204		PKPdf	06 31 57.9	-2.1
NPGB	Novo Progresso	150.35	267	*e*P	PKPbc	06 32 04.5	-1.3
BOAV	Boa Vista	153.82	289		PKPdf	06 32 05.7	0.0
VILB	Vilhena	154.54	253		PKPdf	06 32 03.1	-3.6
LPAZ	La Paz	160.65	238	PKP	PKPdf	06 32 15.8	+0.8
	comp=Z,1.4nm,0.6s,baz=42,slow=4.7,SNR=8.2						
LPAZ	La Paz	160.65	238	*e*P	PKPdf	06 32 21.2	+6.2
TBTG	Tabatinga, AM	164.59	278	*e*P	PKPdf	06 32 23.4	+5.2

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*ANF **09** 06:17:42.7±0.3, 36°.85N×97°.70W, h5^{km}, ML3.0/7, Error ellipse: s-maj=3.4km s-min=2.6km az=19.0*
*NEIC **09** 06:17:43.0±0.7, 36°.83N±0°.01×97°.68W±0°.02, h4^{km}±7^{km}, Error ellipse: s-maj=2.3km s-min=1.2km az=219.0*
*TUL **09** 06:17:42.6±1.2, 36°.85N±0°.01×97°.69W±0°.02, h5^{km}±7^{km}, ML3.0, mb_Lg2.6/14(NEIC), Error ellipse: s-maj=2.2km s-min=1.6km az=222.0*
ISC 09 06:17:43.0±1.0, **36°.83N**±0°.02×**97°.68W**±0°.02, **h6**^{km}±9^{km}, **n70**, σ**0^s.51**/94, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GC02	Grant County #	0.14	278	Pg	Pg	06 17 45.9	-0.1
GC02				Sg	Sg	06 17 48.3	+0.2
KAN17	Caldwell West	0.22	343	Pg	Pg	06 17 47.4	-0.1
KAN17				Sg	Sg	06 17 50.6	+0.1
KAN13	South Haven SW	0.24	42		Pg	06 17 47.9	0.0
KAN13				Sg	Sg	06 17 51.4	+0.3
KAN14	Manchester OK	0.26	299		Pg	06 17 47.9	-0.2
KAN14				Sg	Sg	06 17 51.5	0.0
KAN09	Caldwell North	0.31	10	Pg	Pg	06 17 48.9	-0.3
KAN09				Sg	Sg	06 17 53.3	0.0
KAN05	Bluff City Nor	0.32	331		Pg	06 17 49.0	-0.3
KAN05				Sg	Sg	06 17 53.3	-0.1
KAN01	Argonia South	0.33	349		Pg	06 17 49.2	-0.2
KAN01				Sg	Sg	06 17 53.8	0.0
BLOK	Blackwell	0.38	100	Pg	Pg	06 17 50.4	-0.1
BLOK				Sg	Sg	06 17 55.8	+0.4
CROK	Carrier	0.41	217	Pg	Pg	06 17 50.9	0.0
CROK				Sg	Sg	06 17 56.6	+0.4
KS20	Mayfield South	0.41	14		Pg	06 17 50.8	-0.3
KS20				Sg	Sg	06 17 56.4	0.0
OK032	Salt Plains WL	0.42	267		Pg	06 17 51.2	-0.1
OK032				Sg	Sg	06 17 56.9	+0.1
KAN06	Argonia West S	0.44	341		Pg	06 17 51.3	-0.3
KAN06				Sg	Sg	06 17 56.7	-0.6
KAN10	Anthony SW Sta	0.44	312	Pg	Pg	06 17 51.3	-0.3
KAN10				Sg	Sg	06 17 57.2	-0.2
KAN08	Anthony NE Sta	0.46	330		Pg	06 17 51.6	-0.3
KAN08				Sg	Sg	06 17 58.1	+0.2
KAN16	Harper SW Stat	0.50	322	Pg	Pg	06 17 52.4	-0.3
KAN16				Sg	Sg	06 17 59.1	-0.1
KAN12	Harper NE Stat	0.53	332	Pg	Pg	06 17 52.8	-0.4
KAN12				Sg	Sg	06 17 59.5	-0.7
T35A	Sooner Cattle	0.94	84		Pg	06 18 00.7	-0.4
T35A				Sg	Sg	06 18 13.4	0.0
T35B	Sooner Cattle	0.94	84	P	Pg	06 18 00.7	-0.5
	baz=266						
T35B				S	Sg	06 18 13.4	0.0
	baz=266						
QUOK	Quay	1.02	130		Pg	06 18 02.2	-0.5
QUOK				Sg	Sg	06 18 15.6	-0.4
OK029	Liberty Lake	1.05	170		Pg	06 18 02.9	-0.3
OK029				Sg	Sg	06 18 17.0	+0.2
OK031	S. Brethren Rd	1.11	142		Pg	06 18 03.8	-0.5
OK031				Sg	Sg	06 18 18.3	-0.4
U32A	Winter Ranch,	1.15	247	Pg	Pg	06 18 04.3	-0.8
U32A					Sg	06 18 19.7	-0.4
U32A	Winter Ranch,	1.15	247	P	Pg	06 18 04.4	-0.8
	baz=66						
OK030	Cody Creek RV	1.16	141		Pg	06 18 04.5	-0.7
OK030				Sg	Sg	06 18 20.3	+0.1
BCOK	Bluff Creek, N	1.17	177		Pg	06 18 05.0	-0.5
BCOK				Sg	Sg	06 18 20.9	+0.1
OK025	Westminster Rd	1.28	167		Pg	06 18 06.9	-0.7
OKCFA	Oklahoma City	1.43	172		Pn	06 18 09.4	0.0
OKCFA				IAmb_Lg		06 18 31.0	
	comp=Z,44nm,0.7s						
OKCFA	Oklahoma City	1.43	172	S	Sn	06 18 29.0	+0.6
	baz=352						
OKCSW	OKLAHOMA CITY	1.44	172		Pn	06 18 09.6	+0.1
FNO	Franklin	1.59	172	Pn	Pn	06 18 11.9	+0.3
TUL1	Leonard	1.78	120	Pn	Pn	06 18 14.6	+0.3
TUL1	Leonard	1.78	120	P	Pn	06 18 14.6	+0.3
	baz=302						
TUL1				S	Sb	06 18 39.0	+0.3
	baz=302						
R32A	Long Quarter,	1.79	333		Pn	06 18 15.2	+0.8
R32A	Long Quarter,	1.79	333	S	Sb	06 18 38.6	-0.3
	baz=152						
X34A	Smith Ranch, M	2.23	183	Pn	Pn	06 18 21.7	+1.2
WMOK	Wichita Mounta	2.27	203		Pn	06 18 21.3	+0.2
WMOK	Wichita Mounta	2.27	203	P	Pn	06 18 21.2	+0.2
	baz=22						
KSU1	Kansas State U	2.42	20	Pn	Pn	06 18 23.7	+0.5
KSU1				IAmb_Lg		06 19 01.5	
	comp=Z,34nm,1.0s						
CBKS	Cedar Bluff	2.56	321		Pn	06 18 24.9	-0.2
CBKS	Cedar Bluff	2.56	321	Sb	Sb	06 19 01.8	+0.6
	baz=140						
U38A	Gravette	2.68	97	Pn	Pn	06 18 26.7	0.0
LOOK	Love County	2.86	172		Pn	06 18 29.4	+0.2
X37A	Clayton	2.92	139	Pn	Pn	06 18 29.5	-0.5
X37A	Clayton	2.92	139	P	Pn	06 18 30.7	+0.7
	baz=321						
HHAR	Hobbs	3.06	99		Pn	06 18 32.7	+0.7
HHAR	Hobbs	3.06	99	P	Pn	06 18 32.7	+0.7
	baz=282						
Z35A	Perchaven, San	3.51	174	Pn	Pn	06 18 38.0	-0.1
W39A	Magazine	3.56	116		Pn	06 18 38.4	-0.3
W39A				IAmb_Lg		06 19 37.3	
	comp=Z,13nm,0.8s						
S39A	Bolivar	3.58	75		Pn	06 18 39.2	+0.1
AMTX	Amarillo	3.78	240		Pn	06 18 41.4	-0.5
AMTX				IAmb_Lg		06 19 49.2	
	comp=Z,13nm,0.7s						
U40A	Yellville	3.92	96	Pn	Pn	06 18 43.0	-0.7
MIAR	Mount Ida	4.05	123		Pn	06 18 44.7	-0.7
Z38A	Mt. Pleasant	4.19	147		Pn	06 18 48.1	+0.6
P38A	Dawn	4.30	48	Pn	Pn	06 18 48.5	-0.4
P38A				IAmb_Lg		06 20 00.7	
	comp=Z,20nm,0.8s						
N35A	Tabor	4.33	21		Pn	06 18 48.2	-1.1
MGMO	Mountain Grove	4.35	84		Pn	06 18 49.3	-0.3
MGMO				IAmb_Lg		06 20 01.3	
	comp=Z,11nm,0.7s						
KSCO	Kaye Shedlock’	4.47	301		Pn	06 18 51.5	0.0
R40A	Maddies Statio	4.54	70	Pn	Pn	06 18 52.4	+0.1
FCAR	Ozark Folk Cen	4.58	100	Pn	Pn	06 18 53.1	+0.2
X40A	Basin Creek Fa	4.59	119	Pn	Pn	06 18 53.0	+0.1
WHAR	Wooly Hollow	4.63	108	Pn	Pn	06 18 52.7	-0.8
L34A	Svendsen Farm,	5.23	11	IAmb_Lg		06 20 32.1	
	comp=Z,14nm,0.8s						
CCM	Cathedral Cave	5.27	75	Pn	Pn	06 19 01.7	-0.5
T42A	Van Buren	5.28	86		Pn	06 19 02.9	+0.4
OGNE	Ogallala	5.33	322	Pn	Pn	06 19 03.4	+0.2
OGNE				IAmb_Lg		06 20 32.6	
	comp=Z,11nm,0.7s						
T25A	Trinidad	5.39	275	Pn	Pn	06 19 04.0	-0.2
PBMO	Poplar Bluff	5.82	88	Pn	Pn	06 19 08.1	-1.7
FVM	French Village	5.89	77	Pn	Pn	06 19 12.4	+1.6
SDCO	Great Sand Dun	6.30	281	Pn	Pn	06 19 17.9	+1.2
JCT	Junction City	6.58	196	Pn	Pn	06 19 20.4	+0.1

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*IDC **09** 06:18:52.1±0.8, 6°.50N×94°.72E, h0^{km}, mb3.9/12, mb1 4.0/13, mb1mx3.8/44, mbtmp3.9/13, ML3.6/1, MS3.6/1, Ms1 3.6/1, ms1mx2.9/54, Error ellipse: s-maj=36.2km s-min=17.1km az=55.0*
*NEIC **09** 06:18:55.7±1.5, 6°.76N±0°.09×95°.0E±0°.2, h10^{km}±1^{km}, mb4.3/11, Error ellipse: s-maj=29.2km s-min=12.6km az=249.0*
ISC 09 06:18:54.3±0.6, **6°.7N**±0°.1×**94°.8E**±0°.2, **h10**^{km}, **n35**, σ**0^s.90**/31, **mb4.2**/18, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	Lhok Sumawe	2.54	124		Pn	06 19 35.6	0.0
PSI	Prapat	5.59	133	Pn	Pn	06 20 18.1	+0.3
	1.9nm,0.3s,baz=293,slow=14,SNR=2.3						
GSI	Gunungsitoli	5.98	153	Pn	Pn	06 20 25.2	+2.2
H08S3	Diego Garcia H	26.43	238	T	T	06 51 20.7	
	baz=57						
H08S2	Diego Garcia H	26.43	238	T	T	06 51 27.2	
	baz=57						
H08S1	Diego Carcia H	26.44	238	T	T	06 51 41.7	
	baz=57						
FITZ	Fitzroy Crossi	39.11	129	P	P	06 26 23.5	+1.3
FITZ				IAmb	IAmb	06 26 27.2	
	comp=Z,4.3nm,0.8s						
MK31	Makanchi Array	41.42	347	P	P	06 26 41.7	+0.6
MKAR	Makanchi Array	41.42	347	P	P	06 26 41.4	+0.4
	comp=Z,0.6nm,0.4s,baz=160,slow=9.6,SNR=8.2						
MKAR	Makanchi Array	41.42	347	P	P	06 26 40.8	-0.2
KK31	Karatay Array	42.15	333	P	P	06 26 48.4	+1.3
KK31				IAmb	IAmb	06 26 56.9	
	comp=Z,4.9nm,1.1s						
KKAR	Karatay Array	42.15	333	P	P	06 26 47.5	+0.4
SONM	Songino Array	42.20	12	P	P	06 26 48.8	+1.3
	comp=Z,2.5nm,0.7s,baz=192,slow=8.4,SNR=9.0						
SONM	Songino Array	42.20	12	P	P	06 26 48.3	+0.8
SONM				IAmb	IAmb	06 26 50.1	
	comp=Z,2.4nm,0.8s						
KURK	Kurchatov	45.95	346	P	P	06 27 18.0	+0.6
KURK				IAmb	IAmb	06 27 19.7	
	comp=Z,4.5nm,1.0s						
JAY	Jayapura	46.69	100	LR	LR	06 49 44.4	
	comp=Z,59nm,19.5s,slow=40						
WB0	Warramunga Arr	46.96	125	P	P	06 27 24.8	-1.0
WB0				IAmb	IAmb	06 27 32.3	
	comp=Z,3.9nm,0.9s						
WRA	Warramunga Arr	47.00	125	P	P	06 27 24.8	-1.3
	comp=Z,0.8nm,0.7s,baz=306,slow=8.9,SNR=2.3						
WB2	Warramunga Arr	47.01	125	P	P	06 27 25.7	-0.5
WR0	Warramunga Arr	47.17	125	P	P	06 27 27.6	+0.1
ZALV	Zalesovo Beam	47.85	352	P	P	06 27 32.9	+0.8
	comp=Z,1.1nm,0.5s,baz=174,slow=6.4,SNR=3.5						
ZALV	Zalesovo Beam	47.85	352	P	P	06 27 31.9	-0.2
AS31	Alice Springs	48.61	130	P	P	06 27 37.1	-1.5
ASAR	Alice Springs	48.61	130	P	P	06 27 37.8	-0.9
	comp=Z,0.7nm,0.6s,baz=304,slow=7.6,SNR=3.9						
ASAR	Alice Springs	48.61	130	P	P	06 27 38.6	0.0
ABKAR	Akbulak array	51.62	331	P	P	06 28 01.6	+0.6
ABKAR				IAmb	IAmb	06 28 11.5	
	comp=Z,4.0nm,0.8s						
STKA	Stephens Creek	58.77	134	P	P	06 28 52.1	-0.8
	comp=Z,0.7nm,0.4s,baz=287,slow=22,SNR=1.9						
BRTR	Keskin Array B	63.74	311	P	P	06 29 25.8	-0.9
	comp=Z,1.0nm,0.7s,baz=139,slow=5.3,SNR=2.0						
AKASG	Malin Array Be	69.53	322	P	P	06 30 02.3	-1.0
	comp=Z,0.9nm,0.5s,baz=89,slow=5.2,SNR=2.3						
FIA1	FINESS Array S	74.10	332	P	P	06 30 30.5	0.0
FIA1				IAmb	IAmb	06 30 57.3	
	comp=Z,9.3nm,1.2s						
FINES	FINESS Array B	74.10	332	P	P	06 30 30.5	-0.1
	comp=Z,3.1nm,0.6s,baz=97,slow=5.9,SNR=11						
FINES	FINESS Array B	74.10	332	P	P	06 30 29.7	-0.9
BOSA	Boshof	75.53	238	P	P	06 30 39.0	-0.6
	comp=Z,1.0nm,0.7s,baz=260,slow=18,SNR=1.3						
ARCES	ARCESS Array B	76.64	340	P	P	06 30 44.7	-0.4
	comp=Z,0.9nm,0.5s,baz=92,slow=6.2,SNR=6.2						
GERES	GERESS Array B	79.19	318	P	P	06 30 59.5	-0.2
	comp=Z,0.4nm,0.7s,baz=102,slow=4.3,SNR=1.6						

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*IDC **09** 06:27:52.2±1.6, 6°.68N×94°.34E, h0^{km}, mb3.7/7, mb1 3.9/9, mb1mx3.7/52, mbtmp3.8/9, ML3.3/1, Error ellipse: s-maj=65.3km s-min=19.8km az=57.0*
ISC 09 06:27:53.5±1.4, **6°.6N**±0°.2×**94°.3E**±0°.2, **h10**^{km}, **n12**, σ**0^s.84**/9, **mb3.7**/7, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	Prapat	5.96	130	Pn	Pn	06 29 21.3	-0.6
	0.8nm,0.3s,baz=323,slow=16,SNR=2.5						
CMAR	Chiang Mai Arr	12.57	21	Pn	Pn	06 30 53.2	+0.6
	baz=205,slow=15,SNR=1.0						
H08S3	Diego Garcia H	26.00	237	T	T	07 00 18.7	
	baz=57,slow=75,SNR=4.2						
H08S2	Diego Garcia H	26.00	237	T	T	07 00 07.1	
	baz=57,slow=75,SNR=3.3						
H08S1	Diego Carcia H	26.01	237	T	T	07 00 05.8	
	baz=57,slow=75,SNR=3.2						
MKAR	Makanchi Array	41.32	347	P	P	06 35 39.3	-0.2
	0.4nm,0.7s,baz=153,slow=6.8,SNR=4.1						
SONM	Songino Array	42.32	12	P	P	06 35 46.5	-1.2
	0.3nm,0.4s,baz=134,slow=43,SNR=2.2						
KURBB	Kurchatov Arra	45.78	346	P	P	06 36 15.8	+0.6
	0.3nm,0.5s,baz=164,slow=6.5,SNR=3.2						
WRA	Warramunga Arr	47.40	125	P	P	06 36 29.4	+0.9
	0.5nm,0.6s,baz=305,slow=8.9,SNR=2.3						
ASAR	Alice Springs	48.99	129	P	P	06 36 41.4	+0.7
	0.4nm,0.5s,baz=321,slow=9.9,SNR=5.0						
FINES	FINESS Array B	73.88	332	P	P	06 39 28.8	+0.3
	1.1nm,0.5s,baz=85,slow=4.0,SNR=2.4						
ARCES	ARCESS Array B	76.48	340	P	P	06 39 42.9	-0.5
	3.2nm,1.1s,baz=46,slow=5.2,SNR=5.6						

NNC 09 06:39:30.4±2.6, **54°.28N×87°.12E, h0^{km}, mb3.5, mpv3.2, 5C-3D, Error ellipse: s-maj=21.7km s-min=19.9km az=158.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KURK	Kurchatov	6.30	239	⇑Pn	Pn	06 41 03.8	-0.7
	1.6nm,0.8s						
KURK				⇑Lg	Lg	06 42 50.5	
	6.1nm,1.0s						
KURBB	Kurchatov Arra	6.40	239	⇑Pn	Pn	06 41 05.5	-0.3
	3.1nm,0.8s						
KURBB				⇓Sn	Sn	06 42 20.9	+1.3
	3.0nm,0.7s						
KURBB				⇓Lg	Lg	06 42 56.1	
	7.3nm,0.8s						
MK31	Makanchi Array	8.10	204	⇑Pn	Pn	06 41 30.6	+1.4
	0.3nm,0.5s,baz=28,slow=14,SNR=7.8						
MK31				⇓Sn	Sn	06 43 01.7	+0.3
	1.4nm,0.8s,baz=25,slow=26,SNR=3.9						
MK31				⇑Lg	Lg	06 43 48.5	
	3.4nm,1.1s,baz=358,slow=32,SNR=4.5						

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*IDC **09** 06:40:27.5±1.1, 6°.32N×94°.58E, h0^{km}, mb3.8/11, mb1 3.9/13, mb1mx3.7/54, mbtmp3.8/13, ML3.7/2, MS3.3/3, Ms1 3.3/3, ms1mx2.9/51, Error ellipse: s-maj=48.2km s-min=16.5km az=52.0*
ISC 09 06:40:29.2±0.9, **6°.4N**±0°.1×**94°.6E**±0°.2, **h10**^{km}, **n18**, σ**0^s.90**/14, **mb3.8**/11, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	Prapat	5.58	129	Pn	Pn	06 41 53.8	+1.4
	1.7nm,0.3s,baz=328,slow=11,SNR=5.5						
PSI				LR	LR	06 44 17.3	
	comp=Z,194nm,21.4s,baz=3.0,slow=41						
CMAR	Chiang Mai Arr	12.74	19	Pn	Pn	06 43 30.2	-0.3
	0.2nm,0.3s,baz=196,slow=16,SNR=1.6						
CMAR				LR	LR	06 48 08.7	
	comp=Z,96nm,18.2s,baz=270,slow=36						
H08S3	Diego Garcia H	26.08	238	T	T	07 13 23.6	
	baz=59						
H08S2	Diego Garcia H	26.08	238	T	T	07 13 30.5	
	baz=59						
H08S1	Diego Carcia H	26.10	238	T	T	07 13 26.4	
	baz=59						
FITZ	Fitzroy Crossi	39.10	129	P	P	06 47 55.6	-1.4
	0.7nm,0.5s,baz=262,slow=11,SNR=1.3						
MKAR	Makanchi Array	41.65	347	P	P	06 48 18.1	+0.4
	0.5nm,0.7s,baz=159,slow=8.6,SNR=2.5						
SONM	Songino Array	42.53	12	P	P	06 48 25.4	+0.3
	0.8nm,0.7s,baz=201,slow=8.7,SNR=3.7						
WRA	Warramunga Arr	47.02	125	P	P	06 49 01.0	-0.2
	0.5nm,0.7s,baz=302,slow=9.1,SNR=3.5						
ZALV	Zalesovo Beam	48.10	352	P	P	06 49 09.8	+0.9
	0.5nm,0.4s,baz=170,slow=38,SNR=1.7						
ASAR	Alice Springs	48.61	129	P	P	06 49 13.4	0.0
	0.3nm,0.5s,baz=303,slow=7.9,SNR=5.7						
AKTO	Aktyubinsk	53.48	332	P	P	06 49 49.9	+0.2
	1.6nm,0.8s,baz=101,slow=10.0,SNR=5.4						
BRTR	Keskin Array B	63.76	311	P	P	06 51 02.4	+0.7
	0.6nm,0.5s,baz=134,slow=9.3,SNR=2.3						
MBAR	Mbarara	64.11	266	LR	LR	07 15 49.5	
	comp=Z,35nm,18.3s,baz=314,slow=33						
AKASG	Malin Array Be	69.61	322	P	P	06 51 38.1	-0.5
	0.3nm,0.4s,baz=94,slow=4.2,SNR=1.4						
FINES	FINESS Array B	74.25	332	P	P	06 52 06.4	+0.1
	1.7nm,0.6s,baz=105,slow=6.8,SNR=9.4						
ARCES	ARCESS Array B	76.83	340	P	P	06 52 20.8	-0.2
	2.7nm,0.9s,baz=110,slow=7.8,SNR=2.0						
TXAR	Lajitas Array	140.39	25	PKP	PKiKP	07 00 00.3	-1.8
	0.2nm,0.9s,baz=354,slow=3.3,SNR=1.6						

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*RHSSO **09** 06:46:52.1±0.7, 42°.75N×20°.33E, h7^{km}±3^{km}, ML1.7/6*
*BEO **09** 06:46:52.3±0.3, 42°.74N×20°.33E, h0^{km}, ML1.6/9*
*TIR **09** 06:47:05.6, 41°.94N×20°.06E, h1^{km}, Md2.7, Ml0.9*
ISC 09 06:46:50.9±1.0, **42°.72N**±0°.02×**20°.31E**±0°.02, **h13**^{km}±9^{km}, **n29**, σ**0^s.86**/52, **4C, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SJES	Sjenica	0.60	335	*e*Pg	Pg	06 47 02.3	-0.4
SJES				*e*Sg	Sg	06 47 10.1	-0.6
PUK	Puka	0.74	205	P	Pg	06 47 06.2	+0.8
	baz=311						
PUK				S	Sb	06 47 16.5	+0.7
	baz=311						
PUK				AMP			
	comp=N,0.1nm,0.3s,baz=311						
SELS	Selova	0.78	49	*e*Pg	Pg	06 47 05.7	-0.3
SELS				*e*Sg	Sb	06 47 16.5	-0.3
PDG	Podgorica	0.83	250	*e*Pg	Pg	06 47 07.4	+0.3
PDG				*e*Sg	Sg	06 47 18.3	+0.3
PDG	Podgorica	0.83	250	⇑*i*Pg	Pg	06 47 07.3	+0.2
PDG				*e*Sg	Sb	06 47 18.9	+0.6
DRME	Dracevica, Mon	0.99	238	⇑*i*Pg	Pb	06 47 10.2	+0.3
DRME				*e*Sg	Sn	06 47 24.4	0.0
PHP	Peshkopia	1.04	175	P	Pb	06 47 07.3	-3.5
	baz=131						
PHP				S	Sn	06 47 26.7	+1.1
	baz=131						
PHP				AMP			
	comp=N,0.1nm,0.4s,baz=131						
BARS	Barje	1.11	84	*e*Pg	Pg	06 47 12.9	+0.6
BARS				*e*Sg	Sb	06 47 26.5	+0.1
RUDO	Rudo	1.14	323	*e*Pg	Pb	06 47 11.4	-1.0
RUDO				*e*Sg	Sg	06 47 27.5	-0.1

UPM	Unac-Piva	1.14	296	⇑*i*Pg	Pb	06 47 12.8	+0.1
UPM				*e*Sg	Sn	06 47 28.5	+0.1
GRUS	Gruza	1.21	14	*e*Pg	Pg	06 47 14.4	+0.2
GRUS				*e*Sg	Sn	06 47 30.0	+0.2
BRY	Bratogost	1.32	279	⇑*i*Pg	Pn	06 47 15.7	+0.5
BRY				*e*Sg	Sg	06 47 34.3	+0.8
BBLS	Lazići	1.33	330	*e*Pg	Pn	06 47 15.6	+0.3
BBLS	Lazići	1.33	330	*e*Pg	Pn	06 47 15.5	+0.3
BBLS				*e*Sg	Sn	06 47 33.1	+0.3
BOVS	Bovan	1.37	47	*e*Pg	Pb	06 47 16.8	+0.4
BOVS				*e*Sg	Sg	06 47 34.7	-0.4
HCY	Herceg Novi	1.37	259	*e*Pg	Pg	06 47 17.3	0.0
HCY				*e*Sg	Sg	06 47 36.2	+1.1
DIVS	Divibare	1.40	350	*e*Pg	Pb	06 47 16.9	-0.1
DIVS				*e*Sg	Sg	06 47 35.8	-0.3
DIVS	Divibare	1.40	350	*e*Pg	Pb	06 47 17.4	+0.4
DIVS				*e*Sg	Sg	06 47 35.3	-0.8
TREB	Trebinje	1.45	271	*e*Pg	Pb	06 47 18.3	+0.6
TREB				*e*Sg	Sg	06 47 38.4	+0.8
TRUS	Trudelj	1.51	3	*e*Pg	Pg	06 47 19.7	-0.2
DBRK	Dubrovnik	1.60	269	*e*Pn	Pn	06 47 16.2	-2.7
BOSS	Bosilegrad	1.61	97	*e*Pg	Pb	06 47 21.1	+0.5
BOSS				*e*Sg	Sb	06 47 41.7	+0.8
HAPS	Han Pijesak,BI	1.69	324	*e*Pn	Pb	06 47 21.6	-0.4
HAPS				*e*Sn	Sb	06 47 43.5	+0.3
ZAGS	Zajecar	1.78	51	*e*Sg	Pb	06 47 23.7	+0.3
ZAGS	Zajecar	1.78	51	*e*Pg	Sg	06 47 48.5	+0.3
STON	Ston	1.93	275	*e*Pg	Pg	06 47 27.7	-0.3
STON				*e*Sg	Sg	06 47 54.4	+1.4
STON	Ston	1.93	275	*e*Pn	Pb	06 47 25.1	-0.9
STON				*e*Sn	Sb	06 47 49.8	-0.1
RICI	Ricice	2.46	290	*e*Pn	Pb	06 47 35.1	+0.1
RICI				Sn	Sg	06 48 08.4	-1.4
MAKA	Makarska	2.48	284	*e*Pn	Pb	06 47 35.6	+0.2

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*IDC **09** 06:55:60.0±0.9, 6°.37N×94°.57E, h0^{km}, mb3.9/15, mb1 4.0/17, mb1mx3.9/50, mbtmp3.9/17, ML4.0/2, MS3.3/1, Ms1 3.3/1, ms1mx2.7/45, Error ellipse: s-maj=41.8km s-min=15.8km az=54.0*

*NEIC **09** 06:56:02.6±1.9, 6°.5N±0°.2×94°.8E±0°.1, h10^{km}±2^{km}, mb4.4/14, Error ellipse: s-maj=35.6km s-min=8.9km az=210.0*

ISC 09 06:56:01.5±0.7**, 6°.4N**±0°.1×**94°.6E**±0°.1**, h10^{km}, n40, σ1s.02**/37**, mb4.1**/23**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	Lhok Sumawe	2.58	117	Pn	Pn	06 56 42.5	-0.9
PSI	Prapat	5.58	130	Pn	Pn	06 57 26.1	+1.3
	2.0nm,0.3s,baz=333,slow=15,SNR=5.3						
PSI				LR	LR	06 59 49.2	
	comp=Z,271nm,18.5s,baz=300,slow=40						
CMAR	Chiang Mai Arr	12.70	19	Pn	Pn	06 59 04.7	+2.3
	0.4nm,0.3s,baz=200,slow=16,SNR=1.2						
SLVN	Son La	17.35	30	P	P	07 00 03.4	-2.0
H08S3	Diego Garcia H	26.11	238	T	T	07 28 58.1	
	baz=58,slow=75,SNR=14						
H08S2	Diego Garcia H	26.12	238	T	T	07 28 54.5	
	baz=58,slow=75,SNR=13						
H08S1	Diego Carcia H	26.13	238	T	T	07 28 59.5	
	baz=58,slow=75,SNR=14						
NIL	Nilore	33.59	327	P	P	07 02 41.0	-1.1
BTK	Batken	39.75	331	P	P	07 03 33.3	-1.3
BTK				IAmb	IAmb	07 03 43.1	
	comp=Z,7.5nm,1.0s						
AAK	Ala-Archa	40.25	337	P	P	07 03 38.7	-0.1
	comp=Z,0.5nm,0.3s,baz=159,slow=6.4,SNR=2.2						
MK31	Makanchi Array	41.63	347	P	P	07 03 50.4	+0.5
MKAR	Makanchi Array	41.63	347	P	P	07 03 50.0	0.0
	comp=Z,0.4nm,0.6s,baz=198,slow=7.5,SNR=3.1						
MKAR	Makanchi Array	41.63	347	P	P	07 03 49.7	-0.2
KK31	Karatay Array	42.29	334	P	P	07 03 56.5	+1.1
KK31				IAmb	IAmb	07 04 04.5	
	comp=Z,2.7nm,0.8s						
KKAR	Karatay Array	42.29	334	P	P	07 03 55.0	-0.4
KKAR				IAmb	IAmb	07 04 04.5	
	comp=Z,2.7nm,0.8s						
SONM	Songino Array	42.50	12	P	P	07 03 56.8	-0.4
	comp=Z,2.0nm,0.9s,baz=198,slow=8.2,SNR=8.0						
SONM	Songino Array	42.50	12	P	P	07 03 56.7	-0.4
KURBB	Kurchatov Arra	46.09	346	P	P	07 04 27.3	+1.6
	comp=Z,0.8nm,0.5s,baz=173,slow=6.9,SNR=2.4						
WB0	Warramunga Arr	46.98	125	P	P	07 04 32.7	-0.5
WB0				IAmb	IAmb	07 04 45.7	
	comp=Z,8.6nm,1.4s						
WRA	Warramunga Arr	47.02	125	P	P	07 04 32.7	-0.8
	comp=Z,1.1nm,0.9s,baz=304,slow=10,SNR=3.2						
WB2	Warramunga Arr	47.03	125	P	P	07 04 31.8	-1.8
WB2				IAmb	IAmb	07 04 49.1	
	comp=Z,4.4nm,1.1s						
WR0	Warramunga Arr	47.19	125	P	P	07 04 33.5	-1.3
WR0				IAmb	IAmb	07 04 57.1	
	comp=Z,6.1nm,1.3s						
ZAA0	Zalesovo Array	48.08	352	P	P	07 04 41.0	-0.2
ZAA0				IAmb	IAmb	07 04 41.8	
	comp=Z,5.1nm,1.4s						
ZALV	Zalesovo Beam	48.08	352	P	P	07 04 40.4	-0.8
	comp=Z,0.5nm,0.3s,baz=160,slow=4.7,SNR=4.9						
ZALV	Zalesovo Beam	48.08	352	P	P	07 04 40.8	-0.4
ASAR	Alice Springs	48.61	129	P	P	07 04 45.3	-0.5
	comp=Z,0.7nm,0.5s,baz=298,slow=8.1,SNR=5.2						
BVAR	Borovoye Array	50.53	341	P	P	07 04 59.9	-0.1
	comp=Z,0.3nm,0.4s,baz=201,slow=16,SNR=2.2						
ABKAR	Akbulak array	51.75	332	P	P	07 05 09.5	+0.3
ABKAR				IAmb	IAmb	07 05 17.9	
	comp=Z,5.5nm,1.1s						
ABKAR	Akbulak array	51.75	332	P	P	07 05 10.2	+1.0
STKA	Stephens Creek	58.74	133	P	P	07 06 00.8	+0.9
	comp=Z,1.7nm,0.6s,baz=308,slow=15,SNR=3.7						
BRTR	Keskin Array B	63.76	311	P	P	07 06 34.8	+0.8
	comp=Z,1.0nm,0.8s,baz=104,slow=23,SNR=2.5						
TIXI	Tiksi	68.58	11	P	P	07 07 04.4	+0.3
	comp=Z,1.7nm,0.5s,baz=281,slow=6.1,SNR=2.0						
AKASG	Malin Array Be	69.61	322	P	P	07 07 09.5	-1.4
	comp=Z,0.2nm,0.3s,baz=91,slow=4.6,SNR=2.0						
FIA1	FINESS Array S	74.23	332	P	P	07 07 38.4	-0.2
FINES	FINESS Array B	74.24	332	P	P	07 07 37.8	-0.7
	comp=Z,2.2nm,0.4s,baz=106,slow=4.5,SNR=17						
FINES	FINESS Array B	74.24	332	P	P	07 07 38.2	-0.4
ARCES	ARCESS Array B	76.81	340	P	P	07 07 52.6	-0.6
	comp=Z,3.0nm,0.9s,baz=96,slow=5.6,SNR=6.0						
GERES	GERESS Array B	79.25	318	P	P	07 08 08.4	+1.1
	comp=Z,0.3nm,0.3s,baz=120,slow=7.3,SNR=2.5						
NVAR	Mina Array Bea	125.92	32	PKP	PKiKP	07 15 06.6	+1.5
	comp=Z,0.3nm,0.7s,baz=251,slow=2.8,SNR=1.8						
TXAR	Lajitas Array	140.35	25	PKP	PKiKP	07 15 33.9	-0.4
	comp=Z,0.2nm,0.6s,baz=208,slow=1.7,SNR=1.6						

IDC 09 06:56:57.6±1.9**, 6°.50N**×**94°.40E, h0^{km}, mb3.8**/6**, mb1 4.0**/6**, mb1mx3.6**/45**, mbtmp3.8**/6**, Error ellipse: s-maj=94.1km s-min=24.6km az=56.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	41.48	347	P	P	07 04 46.5	+0.2
	0.3nm,0.5s,baz=168,slow=7.4,SNR=1.5						
SONM	Songino Array	42.45	12	P	P	07 04 54.2	-0.2
	0.5nm,0.7s,baz=181,slow=11,SNR=1.8						
WRA	Warramunga Arr	47.27	125	P	P	07 05 32.9	-0.2
	0.8nm,0.8s,baz=303,slow=9.3,SNR=2.0						
ASAR	Alice Springs	48.85	129	P	P	07 05 45.3	0.0
	0.2nm,0.4s,baz=304,slow=7.8,SNR=4.1						
FINES	FINESS Array B	74.04	332	P	P	07 08 35.2	+0.1
	0.9nm,0.5s,baz=117,slow=5.9,SNR=4.5						
ARCES	ARCESS Array B	76.64	340	P	P	07 08 49.8	-0.2
	3.5nm,1.0s,baz=104,slow=9.4,SNR=1.7						

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*IDC **09** 07:00:55.6±1.3, 6°.61N×94°.85E, h0^{km}, mb3.7/9, mb1 3.8/10, mb1mx3.6/47, mbtmp3.7/10, ML3.4/1, MS3.8/1, Ms1 3.8/1, ms1mx2.9/42, Error ellipse: s-maj=62.6km s-min=19.1km az=54.0*

ISC 09 07:00:57.6±1.2**, 6°.7N**±0°.2×**94°.9E**±0°.3**, h10^{km}, n14, σ0s.98**/10**, mb3.8**/9**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	Prapat	5.57	134	Pn	Pn	07 02 21.6	+0.9
	1.1nm,0.3s,baz=311,slow=9.5,SNR=2.5						
H08S3	Diego Garcia H	26.51	238	T	T	07 33 55.3	
	baz=61						
H08S2	Diego Garcia H	26.52	238	T	T	07 33 52.0	
	baz=61						
H08S1	Diego Carcia H	26.53	238	T	T	07 33 54.3	
	baz=61						
MKAR	Makanchi Array	41.39	347	P	P	07 08 44.1	-0.1
	0.2nm,0.6s,baz=145,slow=7.9,SNR=3.4						
SONM	Songino Array	42.14	12	P	P	07 08 50.6	+0.2
	0.4nm,0.6s,baz=205,slow=6.4,SNR=4.3						
KURBB	Kurchatov Arra	45.86	346	P	P	07 09 21.4	+1.3
	0.2nm,0.4s,baz=170,slow=6.7,SNR=1.8						
WRA	Warramunga Arr	46.96	125	P	P	07 09 27.3	-1.9
	0.4nm,0.6s,baz=303,slow=9.6,SNR=1.9						
ZALV	Zalesovo Beam	47.81	352	P	P	07 09 34.8	-0.4
	0.3nm,0.3s,baz=140,slow=5.6,SNR=1.6						
ASAR	Alice Springs	48.58	130	P	P	07 09 41.8	+0.1
	0.6nm,0.6s,baz=302,slow=7.4,SNR=5.6						
KLR	Kul'dur	52.51	30	LR	LR	07 34 24.5	
	comp=Z,91nm,18.1s,baz=101,slow=38						
BRTR	Keskin Array B	63.77	311	P	P	07 11 30.3	0.0
	0.9nm,0.7s,baz=118,slow=3.0,SNR=2.6						
FINES	FINESS Array B	74.10	332	P	P	07 12 33.2	-0.7
	1.1nm,0.4s,baz=92,slow=5.3,SNR=12						
ARCES	ARCESS Array B	76.62	340	P	P	07 12 48.5	+0.2
	3.0nm,0.8s,baz=104,slow=6.6,SNR=3.7						

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*IDC **09** 07:02:53.2±0.5, 6°.66N×94°.82E, h0^{km}, mb4.2/21, mb1 4.3/23, mb1mx4.1/49, mbtmp4.2/23, ML4.3/2, Error ellipse: s-maj=22.8km s-min=12.1km az=57.0*

*DJA **09** 07:02:56.3±0.4, 6°N±4°×9°4E±°, h10^{km}, M4.8/19, mB5.5/5, mb4.6/19, MLv4.8/4, Mw(mB)5.0/5*

*NEIC **09** 07:02:56.4±1.9, 6°.58N±0°.07×94°.64E±0°.08, h10^{km}±1^{km}, mb4.7/37, Error ellipse: s-maj=13.8km s-min=11.3km az=294.0*

ISC 09 07:02:55.3±0.4**, 6°.61N**±0°.07×**94°.66E**±0°.08**, h10^{km}, n96, σ1s.30**/92**, mb4.6**/42**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	Lhok Sumawe	2.65	121	P	Pb	07 03 42.4	-0.6
LHMI	Lhok Sumawe	2.65	121	Pn	Pn	07 03 35.8	-2.4
TPTI		4.17	143	P	Pn	07 04 01.3	+2.3
PSI	Prapat	5.69	132	Pn	Pn	07 04 18.8	-1.2
	2.4nm,0.3s,baz=262,slow=7.0,SNR=6.6						
GSI	Gunungsitoli	6.02	151	Pn	Pn	07 04 25.0	+0.5
MNSI	Mandailing Nat	7.58	139	P	Pn	07 04 44.3	-1.6
PPI	Padang Panjang	9.06	141	P	Pn	07 05 05.6	-0.6
	13nm,0.9s						
PBKT	Sadao Pong	11.67	31	Pn	Pn	07 05 44.9	+2.9
CMAR	Chiang Mai Arr	12.49	19	Pn	Pn	07 05 52.7	-0.7
	1.4nm,0.3s,baz=205,slow=15,SNR=2.5						
CHTO	Chiang Mai	12.83	19	Pn	Pn	07 05 58.7	+0.8
LHSI	Lahat	13.63	139	P	Pn	07 06 09.8	+1.0
	39nm,0.8s						
PPBI	Pangkal Pinang	14.39	127	P	P	07 06 24.0	-2.3
MDSI	Maura Dua	14.55	139	P	Pn	07 06 18.5	-3.0
	457nm9.7nm,0.9s						
KLSI		15.06	138	P	Pn	07 06 29.7	+1.2
	9.4nm,0.8s						
SLVN	Son La	17.15	31		Pn	07 06 57.4	+2.0
SHL	Shillong	19.04	352	P	P	07 07 16.7	-1.2
NGJI	Ngawi	21.76	129	P	P	07 07 50.1	+2.7
	34nm,0.8s						
KMMI	Kalianget	23.56	125	P	P	07 08 10.2	+4.0
	10µm42nm,1.0s						
SRBI	Singaraja	25.16	125	P	P	07 08 22.6	+1.6
	83nm,1.3s						
MPSI	Mapaga	25.93	103	P	P	07 08 27.6	-0.5
	332nm24nm,0.9s						
H08S3	Diego Garcia H	26.26	238	T	T	07 35 51.4	
	baz=58,slow=75,SNR=5.8						
H08S2	Diego Garcia H	26.26	238	T	T	07 35 52.5	
	baz=58,slow=75,SNR=6.4						
H08S1	Diego Carcia H	26.27	238	T	T	07 35 53.3	
	baz=58,slow=75,SNR=4.9						
GTOI	Gorontalo	28.89	101	P	P	07 08 54.5	-0.2
	4.8nm,0.9s						
LUWI	Luwuk	29.07	104	P	P	07 08 59.4	+3.2
	58nm,1.2s						
LUWI	Luwuk	29.07	104	P	P	07 08 55.4	-0.8
XAN	Xi'an	30.32	24	P	P	07 09 08.0	+0.8
XAN				pP	pwP	07 09 16.2	+3.6
XAN				pmax	pmax		
	comp=Z,16nm,1.0s						
GTA	Gaotai	32.98	7	*e*P	P	07 09 31.7	+1.0
GTA				pP	pwP	07 09 40.0	+3.8
GTA				sP	sP	07 09 43.9	+10
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NIL	Nilore	33.43	326	P	P	07 09 33.6	-0.9
TARG	Taragay, Kyrgy	38.05	339	P	P	07 10 13.7	-0.8
TARG				IAmb	IAmb	07 10 24.4	
	comp=Z,8.0nm,1.1s						
DRK	Karamyk	38.66	331	P	P	07 10 20.6	+1.1
FAKI	Fak Fak	38.70	103	P	P	07 10 19.9	0.0
FAKI				IAmb	IAmb	07 10 32.6	
	comp=Z,11nm,0.9s						
GAR	Garm	39.02	329	P	P	07 10 22.0	-0.4
GAR				IAmb	IAmb	07 10 32.1	
	comp=Z,30nm,1.2s						
FITZ	Fitzroy Crossi	39.21	129	P	P	07 10 20.6	-3.4
	comp=Z,15nm,0.8s,baz=314,slow=6.0,SNR=11						
FITZ	Fitzroy Crossi	39.21	129	P	P	07 10 23.9	-0.1
FITZ				IAmb	IAmb	07 10 27.3	
	comp=Z,17nm,0.8s						
CHGR	Chuyangaron	39.36	328	P	P	07 10 25.1	-0.1
CHGR				IAmb	IAmb	07 10 33.9	
	comp=Z,34nm,1.3s						
BTK	Batken	39.58	331	P	P	07 10 28.1	+1.0
BTK				IAmb	IAmb	07 10 35.1	
	comp=Z,13nm,0.8s						
AAK	Ala-Archa	40.07	337	P	P	07 10 31.5	+0.4
	comp=Z,4.1nm,1.0s,baz=218,slow=2.0,SNR=7.0						
AAK	Ala-Archa	40.07	337	P	P	07 10 32.7	+1.6
AAK				IAmb	IAmb	07 10 42.1	
	comp=Z,14nm,1.2s						
KNRA	Kununurra	40.38	124	P	P	07 10 35.4	+1.6
MK31	Makanchi Array	41.43	347	P	P	07 10 42.9	+0.8
MKAR	Makanchi Array	41.43	347	P	P	07 10 41.6	-0.5
	comp=Z,1.7nm,0.8s,baz=163,slow=8.9,SNR=7.4						
MKAR	Makanchi Array	41.43	347	P	P	07 10 42.5	+0.4
KK31	Karatay Array	42.12	333	P	P	07 10 48.7	+0.9
KKAR	Karatay Array	42.12	333	P	P	07 10 48.4	+0.6
SONM	Songino Array	42.28	12	P	P	07 10 47.2	-2.0
	comp=Z,3.9nm,0.9s,baz=192,slow=8.1,SNR=15						
SONM	Songino Array	42.28	12	P	P	07 10 50.1	+0.9
KURBB	Kurchatov Arra	45.89	346	P	P	07 11 17.5	-0.5
	comp=Z,0.5nm,0.4s,baz=179,slow=7.3,SNR=3.4						
KURK	Kurchatov	45.96	346	P	P	07 11 18.6	+0.2
KURK				IAmb	IAmb	07 11 26.0	
	comp=Z,5.9nm,0.8s						
WB0	Warramunga Arr	47.07	125	P	P	07 11 26.6	-1.1
WB0				IAmb	IAmb	07 11 32.1	
	comp=Z,4.7nm,0.6s						
WRA	Warramunga Arr	47.11	125	P	P	07 11 26.7	-1.4
	comp=Z,2.9nm,0.8s,baz=304,slow=9.3,SNR=18						
WRA				PcP	PcP	07 12 59.8	-0.1
	comp=Z,0.5nm,0.5s,baz=304,slow=2.9,SNR=1.3						
WRA	Warramunga Arr	47.11	125	P	P	07 11 29.1	+1.0
WRAB	Tennant Creek	47.12	125	P	P	07 11 28.3	+0.2
WRAB				IAmb	IAmb	07 11 32.6	
	comp=Z,5.6nm,0.7s						
WB2	Warramunga Arr	47.12	125	P	P	07 11 29.2	+1.1
WB2				IAmb	IAmb	07 11 56.5	
	comp=Z,7.0nm,0.9s						
WR0	Warramunga Arr	47.28	125	P	P	07 11 30.2	+0.9
WR0				IAmb	IAmb	07 11 32.6	
	comp=Z,8.7nm,1.0s						
ZAA0	Zalesovo Array	47.87	352	P	P	07 11 33.7	+0.3
ZAA0				IAmb	IAmb	07 11 44.4	
	comp=Z,7.3nm,1.2s						
ZALV	Zalesovo Beam	47.87	352	P	P	07 11 32.6	-0.8
	comp=Z,3.5nm,1.0s,baz=168,slow=9.1,SNR=7.0						
ZALV	Zalesovo Beam	47.87	352	P	P	07 11 33.3	-0.1
ASAR	Alice Springs	48.71	129	P	P	07 11 39.0	-1.5
	comp=Z,3.2nm,0.7s,baz=302,slow=7.3,SNR=16						
ASAR	Alice Springs	48.71	129	P	P	07 11 41.0	+0.6
AS31	Alice Springs	48.71	129	P	P	07 11 40.7	+0.2
FORT	Forrest	49.03	141	P	P	07 11 42.9	+0.2
BVAR	Borovoye Array	50.35	341	P	P	07 11 51.5	-0.9
	comp=Z,0.9nm,0.7s,baz=183,slow=13,SNR=3.8						
BRVK	Borovoye	50.41	341	P	P	07 11 53.2	+0.4
ABKAR	Akbulak array	51.58	332	P	P	07 12 02.3	+0.5
ABKAR	Akbulak array	51.58	332	P	P	07 12 02.3	+0.5
BBOO	Buckleboo	55.53	138	P	P	07 12 30.5	-0.5
BBOO				IAmb	IAmb	07 12 34.8	
	comp=Z,14nm,1.0s						
ARU	Arti	57.25	337	P	P	07 12 41.0	-1.8
	comp=Z,2.1nm,0.2s,baz=83,slow=16,SNR=1.2						
KMBO	Kilima Mbogo	57.81	265	P	P	07 12 47.7	-0.1
	comp=Z,0.7nm,0.3s,baz=111,slow=14,SNR=3.1						
STKA	Stephens Creek	58.87	133	P	P	07 12 54.4	-0.2
	comp=Z,5.6nm,0.9s,baz=301,slow=7.2,SNR=8.5						
STKA	Stephens Creek	58.87	133	P	P	07 12 55.3	+0.7
BR131	Keskin Array S	63.64	311	P	P	07 13 26.7	-0.4
BR131				IAmb	IAmb	07 13 35.8	
	comp=Z,6.8nm,0.8s						
BRTR	Keskin Array B	63.64	311	P	P	07 13 26.4	-0.8
	comp=Z,1.2nm,0.8s,baz=116,slow=6.6,SNR=2.1						
BRTR	Keskin Array B	63.64	311	P	P	07 13 26.6	-0.6
TOO	Toolangi	64.58	137	P	P	07 13 34.3	+1.2
TOO				IAmb	IAmb	07 13 38.9	
	comp=Z,7.7nm,0.9s						
KLMR	Klimovskoe	67.81	334	*e*	P	07 13 48.9	-4.5
KLMR				AMP		07 14 02.1	
	comp=Z,34nm,1.4s						
TIXI	Tiksi	68.36	11	P	P	07 13 55.7	-0.9
	comp=Z,3.4nm,1.0s,baz=252,slow=3.2,SNR=1.9						
TIXI	Tiksi	68.36	11	P	P	07 13 56.1	-0.6
AKASG	Malin Array Be	69.46	322	P	P	07 14 02.9	-1.0
	comp=Z,0.2nm,0.3s,baz=91,slow=4.9,SNR=3.0						
FIA1	FINESS Array S	74.06	332	P	P	07 14 31.1	-0.2
FINES	FINESS Array B	74.06	332	P	P	07 14 30.7	-0.6
	comp=Z,4.0nm,0.7s,baz=116,slow=4.4,SNR=8.9						
FINES	FINESS Array B	74.06	332	P	P	07 14 31.1	-0.2
BOSA	Boshof	75.36	238	P	P	07 14 40.6	+0.9
	comp=Z,3.9nm,1.1s,baz=72,slow=7.4,SNR=3.9						
BOSA	Boshof	75.36	238	P	P	07 14 39.8	+0.2
BOSA				IAmb	IAmb	07 14 52.8	
	comp=Z,13nm,1.2s						
ARCES	ARCESS Array B	76.62	340	P	P	07 14 46.7	+0.8
	comp=Z,1.5nm,0.7s,baz=93,slow=7.5,SNR=5.7						
ARCES	ARCESS Array B	76.62	340	P	P	07 14 47.1	+1.1
ARCES				IAmb	IAmb	07 14 54.7	
	comp=Z,13nm,1.2s						
GERES	GERESS Array B	79.11	318	P	P	07 14 59.8	-0.5
	comp=Z,1.3nm,0.9s,baz=92,slow=6.0,SNR=5.9						
NOA	NORSAR Array B	81.08	331	P	P	07 15 11.9	+1.3
	comp=Z,1.9nm,0.9s,baz=93,slow=5.4,SNR=3.3						
TORD	Torodi Ar. Bea	91.39	283	P	P	07 16 00.7	-1.7
	comp=Z,0.4nm,0.9s,baz=41,slow=5.9,SNR=2.9						
PDAR	Pinedale Array	126.14	22	PKP	PKPdf	07 21 58.4	-0.4
	comp=Z,0.3nm,0.7s,baz=338,slow=6.8,SNR=2.5						
PDAR	Pinedale Array	126.14	22	PKPdf	PKPdf	07 21 59.7	+0.9
TXAR	Lajitas Array	140.15	25	PKP	PKPdf	07 22 23.8	-1.4
	comp=Z,0.1nm,0.5s,baz=207,slow=1.4,SNR=2.4						
PLCA	Paso Flores	143.54	199	PKP	PKPbc	07 22 28.6	+0.5
	comp=Z,1.0nm,0.6s,baz=206,slow=18,SNR=1.8						
CPUP	Villa Florida	146.88	230	PKPbc	PKPbc	07 22 39.8	+1.0
	comp=Z,1.1nm,0.7s,baz=122,slow=8.3,SNR=4.4						
CPUP	Villa Florida	146.88	230		PKPdf	07 22 35.5	-1.4
LPAZ	La Paz	160.60	239	PKPab	PKPab	07 23 39.7	+0.9
	comp=Z,1.1nm,0.9s,baz=155,slow=1.8,SNR=4.5						

IDC 09 07:04:06.6±5.1**, 6°.56N**×**94°.22E, h0^{km}, mb4.1**/3**, mb1 4.3**/3**, mb1mx3.6**/46**, mbtmp4.1**/3**, MS3.7**/1**, Ms1 3.7**/1**, ms1mx3.1**/43**, Error ellipse: s-maj=396.7km s-min=36.2km az=48.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	47.45	125	P	P	07 12 43.3	-0.2
	1.4nm,0.8s,baz=304,slow=8.6,SNR=0.8						
JCJ	Chichijima	49.87	60	LR	LR	07 32 31.7	
	comp=Z,74nm,18.6s,baz=324,slow=34						
FINES	FINESS Array B	73.90	332	P	P	07 15 42.9	-0.4
	0.9nm,0.4s,baz=92,slow=4.6,SNR=4.0						
ARCES	ARCESS Array B	76.52	340	P	P	07 15 58.9	+0.6
	3.1nm,0.9s,baz=108,slow=8.6,SNR=1.5						

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*IDC **09** 07:05:10.2±0.8, 6°.42N×94°.63E, h0^{km}, mb4.1/17, mb1 4.2/19, mb1mx4.0/50, mbtmp4.1/19, ML4.3/2, Error ellipse: s-maj=30.6km s-min=15.5km az=56.0*

*NEIC **09** 07:05:13.9±1.4, 6°.64N±0°.09×94°.83E±0°.10, h10^{km}±1^{km}, mb4.6/17, Error ellipse: s-maj=16.4km s-min=15.7km az=266.0*

ISC 09 07:05:12.7±0.6**, 6°.52N**±0°.10×**94°.7E**±0°.1**, h10^{km}, n52, σ1s.09**/45**, mb4.3**/23**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	Lhok Sumawe	2.61	119	Pn	Pn	07 05 54.1	-0.9
PSI	Prapat	5.63	131	Pn	Pn	07 06 36.1	-0.6
	3.0nm,0.3s,baz=327,slow=16,SNR=1.6						
GSI	Gunungsitoli	5.94	151	Pn	Pn	07 06 42.1	+1.2
CMAR	Chiang Mai Arr	12.58	19	Pn	Pn	07 08 13.0	+1.2
	1.1nm,0.3s,baz=199,slow=13,SNR=1.6						
H08S3	Diego Garcia H	26.21	238	T	T	07 38 02.7	
	baz=56,slow=74,SNR=11						
H08S2	Diego Garcia H	26.21	238	T	T	07 37 27.8	
	baz=56,SNR=8.6						
H08S1	Diego Carcia H	26.23	238	T	T	07 38 11.8	
	baz=56,slow=74,SNR=12						
NIL	Nilore	33.50	327	P	P	07 11 51.9	-0.6
GAR	Garm	39.10	329	P	P	07 12 41.0	+0.6
GAR				IAmb	IAmb	07 12 49.1	
	comp=Z,14nm,0.8s						
FITZ	Fitzroy Crossi	39.16	129	P	P	07 12 39.1	-1.8
	comp=Z,3.4nm,0.9s,baz=38,slow=8.1,SNR=3.3						
FITZ	Fitzroy Crossi	39.16	129	P	P	07 12 42.2	+1.2
FITZ				IAmb	IAmb	07 12 47.6	
	comp=Z,15nm,1.1s						
BTK	Batken	39.66	331	P	P	07 12 45.6	+0.6
BTK				IAmb	IAmb	07 12 58.0	
	comp=Z,14nm,0.9s						
AAK	Ala-Archa	40.15	337	P	P	07 12 48.3	-0.8
	comp=Z,3.6nm,0.9s,baz=155,slow=7.4,SNR=3.3						
AAK	Ala-Archa	40.15	337	P	P	07 12 49.3	+0.2
MK31	Makanchi Array	41.51	347	P	P	07 12 59.9	-0.3
MKAR	Makanchi Array	41.51	347	P	P	07 13 00.5	+0.3
	comp=Z,1.1nm,0.6s,baz=173,slow=7.7,SNR=4.6						
MKAR	Makanchi Array	41.51	347	P	P	07 13 00.1	-0.1
MAKZ	Makanchi	41.60	347	P	P	07 13 00.8	-0.1
KKAR	Karatay Array	42.20	334	P	P	07 13 05.5	-0.3
SONM	Songino Array	42.37	12	P	P	07 13 08.0	+0.7
	comp=Z,4.1nm,0.8s,baz=195,slow=8.6,SNR=9.9						
SONM	Songino Array	42.37	12	P	P	07 13 07.2	-0.1
SONM				IAmb	IAmb	07 13 16.6	
	comp=Z,8.8nm,1.3s						
H01W3	Cape Leeuwin H	45.10	157	T	T	08 02 00.1	
	baz=329						
H01W2	Cape Leeuwin H	45.11	157	T	T	08 02 16.4	
	baz=329						
H01W1	Cape Leeuwin H	45.11	157	T	T	08 02 02.8	
	baz=329						
KURBB	Kurchatov Arra	45.98	346	P	P	07 13 36.1	+0.1
	comp=Z,1.0nm,0.6s,baz=176,slow=7.1,SNR=3.7						
WB0	Warramunga Arr	47.02	125	P	P	07 13 44.6	0.0
WB0				IAmb	IAmb	07 14 12.4	
	comp=Z,4.5nm,0.9s						
WRA	Warramunga Arr	47.06	125	P	P	07 13 43.8	-1.2
	comp=Z,1.5nm,0.8s,baz=303,slow=9.3,SNR=1.9						
WRA	Warramunga Arr	47.06	125	P	P	07 13 46.3	+1.2
WB2	Warramunga Arr	47.07	125	P	P	07 13 46.6	+1.5
WB2				IAmb	IAmb	07 14 11.6	
	comp=Z,7.0nm,0.9s						
WR0	Warramunga Arr	47.24	125	P	P	07 13 47.4	+1.0
ZAA0	Zalesovo Array	47.96	352	P	P	07 13 50.9	-0.5
ZAA0				IAmb	IAmb	07 14 11.1	
	comp=Z,10nm,1.4s						
ZALV	Zalesovo Beam	47.96	352	P	P	07 13 51.3	-0.1
	comp=Z,1.1nm,0.4s,baz=169,slow=8.5,SNR=3.7						
ZALV	Zalesovo Beam	47.96	352	P	P	07 13 50.9	-0.5
ASAR	Alice Springs	48.66	129	P	P	07 13 55.6	-1.8
	comp=Z,0.8nm,0.4s,baz=297,slow=7.9,SNR=5.6						
BVAR	Borovoye Array	50.43	341	P	P	07 14 10.1	-0.3
	comp=Z,1.0nm,0.7s,baz=185,slow=16,SNR=3.2						
ABKAR	Akbulak array	51.66	332	P	P	07 14 20.1	+0.4
ABKAR	Akbulak array	51.66	332	P	P	07 14 19.7	0.0
ABKAR				IAmb	IAmb	07 14 21.5	
	comp=Z,8.1nm,0.8s						
ARU	Arti	57.33	337	P	P	07 14 59.4	-1.4
	comp=Z,1.9nm,0.2s,baz=306,slow=5.6,SNR=3.7						
BR131	Keskin Array S	63.70	311	P	P	07 15 46.1	+1.2
BRTR	Keskin Array B	63.70	311	P	P	07 15 43.3	-1.5
	comp=Z,1.3nm,0.8s,baz=34,slow=16,SNR=2.0						
BRTR	Keskin Array B	63.70	311	P	P	07 15 43.9	-0.9
KLMR	Klimovskoe	67.89	334	*e*	P	07 16 15.3	+4.1
KLMR				AMP		07 16 17.7	

	comp=Z,24nm,1.5s						
AKASG	**Malin Array Be**	**69.53**	**322**	P	**P**	**07 16 19.9**	**-1.7**
	comp=Z,0.7nm,0.5s,baz=92,slow=4.5,SNR=2.6						
FIA1	**FINESS Array S**	**74.14**	**332**	P	**P**	**07 16 49.0**	**-0.1**
FINES	**FINESS Array B**	**74.14**	**332**	P	**P**	**07 16 48.9**	**-0.3**
	comp=Z,4.5nm,0.8s,baz=97,slow=5.2,SNR=7.6						
FINES	**FINESS Array B**	**74.14**	**332**	P	**P**	**07 16 49.2**	**+0.1**
BOSA	**Boshof**	**75.31**	**238**	P	**P**	**07 16 57.2**	**+0.5**
	comp=Z,1.6nm,0.8s,baz=106,slow=14,SNR=2.3						
ARCES	**ARCESS Array B**	**76.71**	**340**	P	**P**	**07 17 03.6**	**-0.2**
	comp=Z,4.7nm,0.9s,baz=91,slow=6.1,SNR=4.1						
GERES	**GERESS Array B**	**79.17**	**318**	P	**P**	**07 17 16.6**	**-1.5**
	comp=Z,0.7nm,0.7s,baz=91,slow=7.9,SNR=2.8						
TORD	**Torodi Ar. Bea**	**91.41**	**283**	P	**P**	**07 18 19.8**	**-0.1**
	comp=Z,0.3nm,0.7s,baz=36,slow=4.3,SNR=2.6						
IMAR	**Indian Mountai**	**92.68**	**22**	P	**P**	**07 18 24.2**	**-0.5**
TXAR	**Lajitas Array**	**140.23**	**25**	PKhKP	PKPpre	07 24 38.0	
	comp=Z,0.2nm,0.7s,baz=316,slow=3.8,SNR=1.9						

BJI ***09*** *07:07:39.2±0.0, 6°.01N×94°.36E, h20^{km}, mB4.8/18, mb4.6/39, Ms4.7/12, Ms7 4.4/13*

IDC ***09*** *07:07:41.5±0.5, 6°.66N×94°.95E, h0^{km}, mb4.4/26, mb1 4.4/26, mb1mx4.3/50, mbtmp4.4/26, MS3.8/1, Ms1 3.8/1, ms1mx3.1/40, Error ellipse: s-maj=21.7km s-min=12.6km az=61.0*

NEIC ***09*** *07:07:44.3±1.6, 6°.54N±0°.10×94°.63E±0°.10, h13^{km}±5^{km}, mb4.8/42, Error ellipse: s-maj=17.5km s-min=9.1km az=46.0*

ISC 09 07:07:43.6±0.4**, 6°.55N**±0°.06×**94°.64E**±0°.06**, h10**^{km}**, n124, σ1^s.35**/126**, mb4.6**/60**, MS4.3**/6**, 1C-1D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	**Lhok Sumawe**	**2.64**	**120**	Pn	**Pn**	**07 08 25.0**	**-1.3**
PBA	**Port Blair**	**5.41**	**340**	Pn	**Pn**	**07 09 03.9**	**-0.6**
PSI	**Prapat**	**5.66**	**131**	Pn	**Pn**	**07 09 08.6**	**+0.6**
	3.5nm,0.3s,baz=319,slow=13,SNR=1.4						
GSI	**Gunungsitoli**	**5.97**	**151**	Pn	**Pn**	**07 09 12.2**	**0.0**
PALK	**Pallekele**	**13.86**	**274**	Pn	**Pn**	**07 10 57.4**	**-3.0**
DLV	**T Lat**	**14.68**	**68**		**P**	**07 11 16.0**	**-2.0**
SLVN	**Son La**	**17.22**	**30**		**P**	**07 11 46.2**	**+0.2**
SHL	**Shillong**	**19.10**	**352**	P	**P**	**07 12 07.0**	**+0.1**
QIZ	**Qiongzhong**	**19.31**	**49**	P	**P**	**07 12 09.8**	**+0.8**
QIZ				S	**S**	**07 15 49.0**	**+1.3**
QIZ				pmax	pmax		
	comp=Z,9.0nm,1.5s						
KMI	**Kunming**	**20.03**	**22**	⇑P	Pn	07 12 22.8	+3.9
KMI				sP	pwP	07 12 35.0	+13
KMI				pmax	pmax		
	comp=Z,23nm,0.8s						
H08S3	**Diego Garcia H**	**26.21**	**238**	T	T	07 40 45.2	
	baz=60,slow=74,SNR=3.6						
H08S2	**Diego Garcia H**	**26.21**	**238**	T	T	07 40 43.9	
	baz=60						
H08S1	**Diego Carcia H**	**26.22**	**238**	T	T	07 40 48.5	
	baz=60,slow=74,SNR=3.5						
LUWI	**Luwuk**	**29.07**	**104**	P	**P**	**07 13 44.7**	**+0.1**
WHN	**Wuhan**	**30.20**	**35**	⇓P	**P**	**07 13 58.1**	**+3.7**
WHN				S	**S**	**07 18 57.2**	**+3.4**
WHN				LR	LR		
	comp=Z,1μm,18.3s						
XAN	**Xi'an**	**30.38**	**24**	P	**P**	**07 13 55.6**	**-0.4**
XAN				pP	pwP	07 14 06.4	+5.7
XAN				pmax	pmax		
	comp=Z,26nm,1.0s						
LZH	**Lanzhou**	**30.59**	**15**	*e*P	**P**	**07 13 58.4**	**+0.5**
LZH				pP	pwP	07 14 05.5	+2.8
LZH				sP	sP	07 14 09.3	+7.8
LZH				pmax	pmax		
	comp=Z,16nm,1.1s						
LZH				LR	LR		
	comp=N,220nm,14.1s						
LZH				LR	LR		
	comp=E,340nm,14.1s						
LZH				LR	LR		
	comp=Z,190nm,14.9s						
DAV	**Davao City (W)**	**30.72**	**87**	LR	LR	07 26 55.1	
	comp=Z,168nm,19.2s,baz=282,slow=38						
GTA	**Gaotai**	**33.05**	**7**	*e*P	**P**	**07 14 19.8**	**+0.3**
GTA				pP	pwP	07 14 30.5	+6.2
GTA				sP	sP	07 14 34.1	+11
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,88nm,6.1s						
GTA				LR	LR		
	comp=N,180nm,13.8s						
GTA				LR	LR		
	comp=E,330nm,11.3s						
GTA				LR	LR		
	comp=Z,190nm,12.7s						
NIL	**Nilore**	**33.47**	**327**	P	**P**	**07 14 23.3**	**+0.1**
NJ2	**Nanjing**	**33.97**	**39**	*e*P	**P**	**07 14 29.7**	**+2.2**
NJ2				pmax	pmax		
	comp=Z,16nm,0.6s						
HHC	**Hu-ho-hao-te**	**37.35**	**21**	*e*P	**P**	**07 15 00.2**	**+3.6**
HHC				pmax	pmax		
	comp=Z,18nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,5.8s						
HHC				LR	LR		
	comp=N,420nm,16.2s						
HHC				LR	LR		
	comp=E,1μm,15.2s						
HHC				LR	LR		
	comp=Z,710nm,14.5s						
WMQ	**Urumqi**	**37.62**	**352**	*e*P	**P**	**07 14 59.3**	**+0.5**
WMQ				pmax	pmax		
	comp=Z,21nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,140nm,4.7s						
WSAR	**Wadi Sarin**	**38.40**	**299**	P	**P**	**07 15 08.2**	**+2.6**
	2.0nm,0.5s,baz=92,slow=15,SNR=2.7						
DRK	**Karamyk**	**38.70**	**331**	P	**P**	**07 15 08.7**	**+0.5**
FAKI	**Fak Fak**	**38.70**	**103**	P	**P**	**07 15 08.7**	**+0.4**
FAKI				IAmb	IAmb	07 15 14.4	
	comp=Z,15nm,0.9s						
GAR	**Garm**	**39.06**	**329**	P	**P**	**07 15 11.0**	**-0.1**
FITZ	**Fitzroy Crossi**	**39.19**	**129**	P	**P**	**07 15 09.7**	**-2.5**
	comp=Z,5.1nm,0.8s,baz=320,slow=6.7,SNR=11						
FITZ	**Fitzroy Crossi**	**39.19**	**129**	P	**P**	**07 15 10.3**	**-1.8**
CHGR	**Chuyangaron**	**39.41**	**328**	P	**P**	**07 15 12.2**	**-1.6**
BTK	**Batken**	**39.63**	**331**	P	**P**	**07 15 16.3**	**+0.6**
BTK				IAmb	IAmb	07 15 18.9	
	comp=Z,26nm,0.8s						
UCH	**Uchtor**	**39.76**	**336**	P	**P**	**07 15 17.4**	**+0.2**
	SNR=5.4						
KBK	**Karagaybulak**	**39.95**	**337**	P	**P**	**07 15 19.0**	**+0.5**
	SNR=5.2						
AML	**Almayashu**	**40.01**	**336**	P	**P**	**07 15 19.7**	**+0.5**
	SNR=14						
AAK	**Ala-Archa**	**40.12**	**337**	P	**P**	**07 15 19.7**	**-0.1**
	comp=Z,7.4nm,1.0s,baz=175,slow=8.1,SNR=9.2						
AAK	**Ala-Archa**	**40.12**	**337**	P	**P**	**07 15 20.4**	**+0.6**
	SNR=6.8						
AAK	**Ala-Archa**	**40.12**	**337**	P	**P**	**07 15 20.2**	**+0.4**
AAK				IAmb	IAmb	07 15 21.5	
	comp=Z,14nm,1.1s						
EKS2	**Erkin-Say**	**40.42**	**336**	P	**P**	**07 15 23.0**	**+0.7**
	SNR=6.3						
USP	**Ospenovka**	**40.65**	**337**	P	**P**	**07 15 24.1**	**0.0**
	SNR=9.2						
MK31	**Makanchi Array**	**41.48**	**347**	P	**P**	**07 15 30.4**	**-0.4**
MKAR	**Makanchi Array**	**41.48**	**347**	P	**P**	**07 15 30.3**	**-0.6**
	comp=Z,2.2nm,0.7s,baz=161,slow=7.7,SNR=6.7						
MKAR	**Makanchi Array**	**41.48**	**347**	P	**P**	**07 15 30.5**	**-0.4**
MAKZ	**Makanchi**	**41.57**	**347**	P	**P**	**07 15 31.1**	**-0.5**
KK31	**Karatay Array**	**42.16**	**334**	P	**P**	**07 15 36.4**	**-0.1**
KK31				IAmb	IAmb	07 15 37.8	
	comp=Z,15nm,1.0s						
KKAR	**Karatay Array**	**42.16**	**334**	P	**P**	**07 15 36.4**	**-0.1**
SONM	**Songino Array**	**42.35**	**12**	P	**P**	**07 15 37.8**	**-0.3**
	comp=Z,6.3nm,0.9s,baz=196,slow=9.1,SNR=14						
SONM	**Songino Array**	**42.35**	**12**	P	**P**	**07 15 38.2**	**+0.2**
GYA0B	**ALIBECK ARRAY**	**45.52**	**319**	P	**P**	**07 16 04.7**	**+1.1**
GYA0B				IAmb	IAmb	07 16 05.3	
	comp=Z,6.5nm,0.8s						
KURBB	**Kurchatov Arra**	**45.95**	**346**	P	**P**	**07 16 06.5**	**-0.2**
	comp=Z,2.2nm,0.7s,baz=170,slow=7.0,SNR=9.8						
KURK	**Kurchatov**	**46.01**	**346**	P	**P**	**07 16 07.3**	**+0.1**
KURK				IAmb	IAmb	07 16 16.2	
	comp=Z,10nm,1.1s						
WB0	**Warramunga Arr**	**47.05**	**125**	P	**P**	**07 16 14.5**	**-1.3**
WB0				IAmb	IAmb	07 16 21.1	
	comp=Z,5.7nm,1.0s						
WRA	**Warramunga Arr**	**47.09**	**125**	P	**P**	**07 16 13.6**	**-2.6**
	comp=Z,1.8nm,0.9s,baz=304,slow=8.9,SNR=4.3						
WRA	**Warramunga Arr**	**47.09**	**125**	P	**P**	**07 16 14.7**	**-1.5**
WRAB	**Tennant Creek**	**47.10**	**125**	P	**P**	**07 16 15.8**	**-0.4**
WRAB				IAmb	IAmb	07 16 23.8	
	comp=Z,5.6nm,0.7s						
WB2	**Warramunga Arr**	**47.10**	**125**	P	**P**	**07 16 14.7**	**-1.6**
WB2				IAmb	IAmb	07 16 23.8	
	comp=Z,6.1nm,0.7s						
WR0	**Warramunga Arr**	**47.27**	**125**	P	**P**	**07 16 15.8**	**-1.8**
WR0				IAmb	IAmb	07 16 25.1	
	comp=Z,8.2nm,1.0s						
ZAA0	**Zalesovo Array**	**47.93**	**352**	P	**P**	**07 16 21.7**	**-0.4**
ZAA0				IAmb	IAmb	07 16 22.7	
	comp=Z,8.2nm,1.1s						
ZALV	**Zalesovo Beam**	**47.93**	**352**	P	**P**	**07 16 22.0**	**-0.1**
	comp=Z,6.3nm,0.9s,baz=168,slow=7.6,SNR=8.3						
ZALV	**Zalesovo Beam**	**47.93**	**352**	P	**P**	**07 16 21.6**	**-0.5**
ASAR	**Alice Springs**	**48.69**	**129**	P	**P**	**07 16 25.9**	**-2.6**
	comp=Z,1.2nm,0.8s,baz=305,slow=7.2,SNR=5.9						
ASAR	**Alice Springs**	**48.69**	**129**	P	**P**	**07 16 27.6**	**-1.0**
AS31	**Alice Springs**	**48.69**	**129**	P	**P**	**07 16 26.8**	**-1.7**
FORT	**Forrest**	**49.00**	**141**	P	**P**	**07 16 30.1**	**-0.6**
BVAR	**Borovoye Array**	**50.40**	**341**	P	**P**	**07 16 40.3**	**-0.8**
	comp=Z,2.5nm,0.7s,baz=180,slow=16,SNR=7.3						
BRVK	**Borovoye**	**50.46**	**341**	P	**P**	**07 16 40.7**	**-0.8**
BRVK				IAmb	IAmb	07 16 49.0	
	comp=Z,5.0nm,0.7s						
ABKAR	**Akbulak array**	**51.63**	**332**	P	**P**	**07 16 50.6**	**+0.2**
ABKAR	**Akbulak array**	**51.63**	**332**	P	**P**	**07 16 50.8**	**+0.5**
ABKAR				IAmb	IAmb	07 16 51.7	
	comp=Z,31nm,1.1s						
AKTO	**Aktyubinsk**	**53.34**	**332**	P	**P**	**07 17 03.0**	**-0.1**
	comp=Z,8.6nm,0.8s,baz=137,slow=7.5,SNR=11						
ARU	**Arti**	**57.30**	**337**	P	**P**	**07 17 30.4**	**-1.1**
	comp=Z,2.4nm,0.2s,baz=179,slow=3.6,SNR=5.7						
ARU	**Arti**	**57.30**	**337**	P	**P**	**07 17 31.5**	**0.0**
ARU				IAmb	IAmb	07 17 32.0	
	comp=Z,14nm,1.1s						
KMBO	**Kilima Mbogo**	**57.78**	**265**	P	**P**	**07 17 39.2**	**+3.2**
	comp=Z,0.9nm,0.3s,baz=55,slow=12,SNR=2.6						
STKA	**Stephens Creek**	**58.84**	**133**	P	**P**	**07 17 42.4**	**-0.3**
	comp=Z,2.5nm,0.7s,baz=312,slow=17,SNR=3.6						
STKA	**Stephens Creek**	**58.84**	**133**	P	**P**	**07 17 42.5**	**-0.2**
BELG	**Belogornoye**	**59.69**	**329**	P	**P**	**07 17 47.7**	**-0.5**
	comp=Z,12nm,0.4s,baz=127,slow=2.2,SNR=6.3						
NRIK	**Noril'sk**	**62.88**	**357**	P	**P**	**07 18 08.2**	**-1.4**
	comp=Z,2.0nm,0.5s,baz=178,slow=4.9,SNR=2.5						
BR131	**Keskin Array S**	**63.67**	**311**	P	**P**	**07 18 15.2**	**-0.4**
BR131				IAmb	IAmb	07 18 17.7	
	comp=Z,8.2nm,0.7s						
BRTR	**Keskin Array B**	**63.67**	**311**	P	**P**	**07 18 14.6**	**-1.0**
	comp=Z,4.5nm,0.8s,baz=116,slow=8.4,SNR=7.5						
BRTR	**Keskin Array B**	**63.67**	**311**	P	**P**	**07 18 14.3**	**-1.3**
KLMR	**Klimovskoe**	**67.86**	**334**	*e*P	P	07 18 37.6	-4.4
KLMR				AMP		07 18 39.9	
	comp=Z,22nm,1.5s						
AKASG	**Malin Array Be**	**69.50**	**322**	P	**P**	**07 18 50.8**	**-1.6**
	comp=Z,0.8nm,0.4s,baz=90,slow=4.8,SNR=6.9						
AKASG	**Malin Array Be**	**69.50**	**322**	P	**P**	**07 18 50.4**	**-2.0**
AKASG				IAmb	IAmb	07 19 06.0	
	comp=Z,3.8nm,1.3s						
MNK	**Minsk**	**71.30**	**326**	*i* P	**P**	**07 19 02.3**	**-1.0**
	comp=E,2.0nm,1.0s						
MNK				*i* P	**P**	**07 19 02.3**	**-1.0**
	comp=N,32nm,1.0s						
MNK				*i* P	**P**	**07 19 02.3**	**-1.0**
	comp=Z,24nm,1.0s,baz=106						
MNK				*i* PcP	**PcP**	**07 19 21.8**	**-1.3**
MNK				*i* PP	**PP**	**07 21 40.4**	**-1.0**
MNK				*i* PPP	PPP	07 23 23.9	
MNK				*i* S	**S**	**07 28 15.7**	**-5.2**
MNK				*i* SS	**SS**	**07 32 53.3**	**-1.7**
MNK				*i* SSS	SSS	07 36 12.9	
MNK				*i* LQ	LQ	07 41 31.3	
MNK				*i* LR	LR	07 43 13.5	
MNK				*i* LRM	MLR	07 48 04.6	
	comp=Z,135nm,19.6s						
MNK				*i* LRM	MLR	07 49 08.2	
	comp=E,83nm,19.5s						
MNK				*i* LRM	MLR	07 49 08.5	
	comp=N,483nm,19.5s						
BURAR	**Bucovina Array**	**71.36**	**318**	P	**P**	**07 19 03.7**	**-0.3**
NACGM	**Naroch**	**72.02**	**326**	*i* P	**P**	**07 19 07.8**	**+0.2**
LVZ	**Lovozero**	**72.97**	**340**	P	**P**	**07 19 13.4**	**+0.3**
VSU	**Vasula**	**72.98**	**329**	*e*P	**P**	**07 19 13.2**	**-0.1**
PABE	**Paberze**	**73.73**	**326**	*e*P	**P**	**07 19 17.8**	**0.0**
CRVS	**Cervenica-Dubn**	**74.05**	**319**	*e*P	**P**	**07 19 23.5**	**+3.6**
FIA1	**FINESS Array S**	**74.11**	**332**	P	**P**	**07 19 19.5**	**-0.4**
FINES	**FINESS Array B**	**74.11**	**332**	P	**P**	**07 19 19.5**	**-0.4**
	comp=N,8.0nm,0.4s,baz=95,slow=5.5,SNR=59						
FINES	**FINESS Array B**	**74.11**	**332**	P	**P**	**07 19 19.6**	**-0.3**
MTSE	**Matsula**	**74.52**	**329**	*e*P	**P**	**07 19 22.5**	**+0.1**
OJC	**Ojcow**	**75.30**	**320**	P	**P**	**07 19 26.8**	**-0.3**
OJC				IAmb	IAmb	07 19 30.5	
	comp=Z,8.9nm,0.6s						
BOSA	**Boshof**	**75.31**	**238**	P	**P**	**07 19 28.8**	**+1.1**
	comp=Z,4.3nm,0.6s,baz=75,slow=4.3,SNR=13						
BOSA	**Boshof**	**75.31**	**238**	P	**P**	**07 19 29.4**	**+1.7**
BOSA				IAmb	IAmb	07 19 32.8	
	comp=Z,5.7nm,0.7s						
ARCES	**ARCESS Array B**	**76.67**	**340**	P	**P**	**07 19 34.2**	**-0.3**
	comp=Z,2.7nm,0.5s,baz=96,slow=5.4,SNR=9.8						
ARCES	**ARCESS Array B**	**76.67**	**340**	P	**P**	**07 19 34.0**	**-0.5**
MAW	**Mawson**	**77.35**	**192**	P	**P**	**07 19 39.7**	**+1.5**
	comp=Z,0.5nm,0.3s,baz=319,slow=7.5,SNR=1.2						
CONA	**Conrad Observa**	**77.65**	**318**	*e*P	**P**	**07 19 41.1**	**+0.6**
	comp=Z,3.2nm,0.8s						
ARSA	**Arzberg**	**77.84**	**317**	*e*P	**P**	**07 19 41.8**	**+0.3**
	comp=Z,5.4nm,1.2s						
SOKA	**Soboth**	**78.14**	**316**	*e*P	**P**	**07 19 43.4**	**0.0**
	comp=Z,2.1nm,0.3s						
OBKA	**Obir**	**78.46**	**316**	*e*P	**P**	**07 19 45.3**	**+0.1**
	comp=Z,4.6nm,0.7s						
MYKA	**Terra Mystica**	**79.09**	**316**	*e*P	**P**	**07 19 48.1**	**-0.4**
	comp=Z,4.7nm,0.8s						
GERES	**GERESS Array B**	**79.14**	**318**	P	**P**	**07 19 48.8**	**0.0**
	comp=Z,1.9nm,0.6s,baz=93,slow=6.7,SNR=11						
GERES	**GERESS Array B**	**79.14**	**318**	P	**P**	**07 19 49.8**	**+0.9**
STAL	**STALIGIAL**	**79.73**	**316**	P	**P**	**07 19 51.8**	**-0.2**
STAL				IAmb	IAmb	07 20 03.6	
	comp=Z,14nm,1.0s						
ABTA	**Abfaltersbach**	**79.88**	**316**	*e*P	**P**	**07 19 52.3**	**-0.6**
	comp=Z,1.2nm,0.5s						
CTI	**Castel Tesino**	**80.46**	**315**	P	**P**	**07 19 56.5**	**+0.4**
CTI				IAmb	IAmb	07 19 59.5	
	comp=Z,7.1nm,0.8s						
WTTA	**Wattenberg**	**80.48**	**317**	*e*P	**P**	**07 19 56.1**	**-0.1**
	comp=Z,2.3nm,0.5s						
WATA	**Walderalm**	**80.53**	**317**	*e*P	**P**	**07 19 56.3**	**-0.1**
	comp=Z,3.6nm,0.5s						
SQTA	**Sankt Quirin**	**80.77**	**317**	*e*P	**P**	**07 19 57.1**	**-0.6**
	comp=Z,2.3nm,0.4s						
MOTA	**Moosalm**	**80.85**	**317**	*e*P	**P**	**07 19 57.6**	**-0.5**
	comp=Z,7.0nm,0.9s						
RETA	**Reutte**	**81.08**	**317**	*e*P	**P**	**07 19 58.9**	**-0.4**
	comp=Z,1.9nm,0.5s						
FETA	**Feichten**	**81.10**	**316**	*e*P	**P**	**07 19 59.6**	**+0.1**
	comp=Z,3.7nm,1.2s						
NB2	**NORSAR Subarra**	**81.12**	**331**	P	**P**	**07 19 58.5**	**-0.7**
	comp=Z,17nm,1.4s,baz=91,slow=5.9						
NOA	**NORSAR Array B**	**81.12**	**331**	P	**P**	**07 19 59.3**	**+0.1**
	comp=Z,1.8nm,0.8s,baz=91,slow=5.7,SNR=4.9						
DAVA	**Damuels**	**81.68**	**317**	*e*P	**P**	**07 20 02.8**	**+0.3**
	comp=Z,0.2nm,0.3s						
KEST	**Kesra**	**82.41**	**305**	P	**P**	**07 20 05.6**	**-0.9**
	comp=Z,2.4nm,0.6s,baz=197,slow=6.3,SNR=2.7						
TORD	**Torodi Ar. Bea**	**91.39**	**283**	P	**P**	**07 20 51.9**	**+1.2**
	comp=Z,0.7nm,0.6s,baz=91,slow=4.8,SNR=4.8						
PDAR	**Pinedale Array**	**126.21**	**22**	PKP	**PKPdf**	**07 26 44.4**	**-2.8**
	comp=Z,0.4nm,0.7s,baz=60,slow=2.4,SNR=2.3						
MDP	**Montagnes des**	**145.35**	**289**	PKPbc	**PKPbc**	**07 27 23.0**	**+0.1**
	comp=Z,6.5nm,0.8s,baz=62,slow=18,SNR=1.8						
CPUP	**Villa Florida**	**146.83**	**230**	PKPbc	**PKPbc**	**07 27 27.6**	**+0.6**
	comp=Z,1.5nm,0.6s,baz=168,slow=2.6,SNR=4.9						
LPAZ	**La Paz**	**160.55**	**239**	PKPab	**PKPab**	**07 28 30.1**	**+3.2**
	comp=Z,1.0nm,0.8s,baz=104,slow=2.0,SNR=3.7						
ATAH	**Atahualpa**	**173.06**	**265**	PKPab	**PKPab**	**07 29 24.1**	**+2.0**
	comp=Z,2.6nm,0.6s,baz=81,slow=10,SNR=2.5						

IDC 09 07:08:48.3±1.6**, 6°.44N**×**94°.64E, h0**^{km}**, mb4.3**/8**, mb1 4.4**/8**, mb1mx3.9**/49**, mbtmp4.3**/8**, MS4.0**/1**, Ms1 4.0**/1**, ms1mx3.2**/41**, Error ellipse: s-maj=82.3km s-min=20.2km az=54.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**39.12**	**129**	P	P	07 16 17.0	-0.8
	4.0nm,0.8s,baz=297,slow=4.5,SNR=2.6						
MKAR	**Makanchi Array**	**41.59**	**347**	P	P	07 16 37.8	-0.1
	1.0nm,0.7s,baz=175,slow=7.3,SNR=1.8						
SONM	**Songino Array**	**42.46**	**12**	P	P	07 16 45.0	-0.1
	2.7nm,0.8s,baz=190,slow=9.2,SNR=4.2						
WRA	**Warramunga Arr**	**47.03**	**125**	P	P	07 17 21.9	0.0
	2.3nm,0.8s,baz=304,slow=9.1,SNR=1.7						
ASAR	**Alice Springs**	**48.62**	**129**	P	P	07 17 34.8	+0.6
	1.0nm,0.6s,baz=301,slow=7.8,SNR=1.8						
OPO	**Ambohidratompo**	**52.97**	**241**	LR	LR	07 37 09.3	
	comp=Z,155nm,21.8s,baz=141,slow=32						
AKTO	**Aktyubinsk**	**53.44**	**332**	P	P	07 18 10.5	+0.5
	3.6nm,0.7s,baz=139,slow=9.4,SNR=2.2						
FINES	**FINESS Array B**	**74.21**	**332**	P	P	07 20 26.6	-0.2
	5.2nm,0.5s,baz=98,slow=6.4,SNR=11						
ARCES	**ARCESS Array B**	**76.78**	**340**	P	P	07 20 41.4	-0.1
	7.4nm,1.2s,baz=102,slow=8.5,SNR=1.6						

IDC ***09*** *07:13:24.8±0.4, 6°.41N×94°.67E, h0^{km}, mb4.5/33, mb1 4.5/34, mb1mx4.5/51, mbtmp4.5/34, ML4.5/1, MS4.1/31, Ms1 4.1/31, ms1mx4.0/43, Error ellipse: s-maj=16.6km s-min=10.6km az=51.0*

BJI ***09*** *07:13:25.5±0.0, 6°.14N×94°.70E, h27^{km}, mB5.0/24, mb4.6/48, Ms4.8/23, Ms7 4.4/23*

NEIC ***09*** *07:13:27.2±1.9, 6°.51N±0°.07×94°.73E±0°.08, h10^{km}±1^{km}, mb4.9/76, Error ellipse: s-maj=14.8km s-min=10.2km az=55.0*

GCMT ***09*** *07:13:29.8±0.3, 6°.49N±0°.02×94°.91E±0°.02, h17^{km}±1^{km}, MW4.8/92, Moment Tensor Solution. s11,c12; s92,c122; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.02±.12; M$_{\theta\theta}$-2.16±.10; M$_{\phi\phi}$2.18±.10; M$_{r\theta}$-0.71±.29; M$_{\theta\phi}$0.53±.09; M$_{\phi r}$-0.53±.27; Best double couple: M$_0$2.40200×10^{16} NP1:φ$_s$142.00000°, δ68.00000°, λ-179.00000°. NP2: φ$_s$52.00000°, δ89.00000°, λ-22.00000°. Principal axes: T 2.4040, Plg15.0000°, Azm99.0000°; N -0.0010, Plg68.0000°, Azm230.0000°; P -2.4000, Plg15.0000°, Azm5.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***09*** *07:13:31.7±0.5, 6°N±5°×9°5E±1°1, h10^{km}, M5.1/10, mB5.8/5, mb4.8/10, MLv5.1/6, Mw(mB)5.4/5*

ISC 09 07:13:26.5±0.3**, 6°.48N**±0°.05×**94°.64E**±0°.06**, h10**^{km}**, n208, σ1^s.27**/199**, mb4.7**/88**, MS4.2**/35**, 1C-1D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	**Lhok Sumawe**	**2.61**	**118**	P	**Pn**	**07 14 08.0**	**-0.7**
LHMI	**Lhok Sumawe**	**2.61**	**118**	Pn	**Pn**	**07 14 07.5**	**-1.2**
MLSI	**Meulaboh, Aceh**	**2.81**	**141**	P	**Pn**	**07 14 12.8**	**+1.3**
TPTI		**4.08**	**142**	P	**Pn**	**07 14 29.8**	**+0.9**
TPTI				S	**Sn**	**07 15 19.8**	**+3.1**
PBA	**Port Blair**	**5.48**	**340**	Pn	**Pn**	**07 14 47.3**	**-0.8**
PSI	**Prapat**	**5.62**	**130**	Pn	**Pn**	**07 14 51.0**	**+0.8**
	13nm,0.3s,baz=326,slow=14,SNR=18						
PSI				LR	LR	07 17 07.7	
	comp=Z,720nm,21.8s,baz=175,slow=40						
GSI	**Gunungsitoli**	**5.91**	**150**	P	**Pn**	**07 14 52.7**	**-1.5**
	0.6nm94nm,0.7s						
GSI	**Gunungsitoli**	**5.91**	**150**		**Pn**	**07 14 52.9**	**-1.3**
MNSI	**Mandailing Nat**	**7.49**	**139**	P	**Pn**	**07 15 16.2**	**+0.3**
	1.5nm28μm70nm,0.7s						
BKNI	**Bangkinang**	**8.84**	**134**	Pn	**Pn**	**07 15 34.7**	**+0.3**
PPI	**Padang Panjang**	**8.97**	**140**	P	**Pn**	**07 15 37.4**	**+1.2**
PDSI	**Padang**	**9.36**	**141**	P	**Pn**	**07 15 42.6**	**+1.0**
	3μm30nm,0.6s						
CMAR	**Chiang Mai Arr**	**12.62**	**19**	Pn	**Pn**	**07 16 29.4**	**+3.2**
	0.5nm,0.3s,baz=210,slow=14,SNR=6.2						
CMAR				LR	LR	07 21 15.5	
	comp=Z,584nm,18.8s,baz=253,slow=37						
LHSI	**Lahat**	**13.54**	**139**	P	**Pn**	**07 16 37.4**	**-1.4**
	4μm96nm,1.0s						
MNAI	**Manna**	**13.59**	**142**	Pn	**Pn**	**07 16 37.5**	**-2.0**
PALK	**Pallekele**	**13.86**	**274**	LR	LR	07 22 11.1	
	comp=Z,1μm,18.0s,baz=198,slow=38						
MDSI	**Maura Dua**	**14.46**	**139**	P	**Pn**	**07 16 51.2**	**-0.2**
	912nm23nm,0.9s						
DLV	**T Lat**	**14.70**	**67**	Pn	**Pn**	**07 16 55.8**	**+1.0**
KLSI		**14.98**	**138**	P	**Pn**	**07 16 58.4**	**-0.1**
	17nm,0.9s						
SLVN	**Son La**	**17.28**	**30**	Pn	**Pn**	**07 17 26.5**	**-1.6**
LEM	**Lembang**	**18.50**	**135**	LR	LR	07 26 00.9	
	comp=Z,2μm,18.0s,baz=304,slow=41						
SHL	**Shillong**	**19.16**	**352**		**P**	**07 17 48.8**	**-1.6**
QIZ	**Qiongzhong**	**19.35**	**48**	P	**P**	**07 17 52.4**	**+0.1**
QIZ				S	**Sn**	**07 21 28.4**	**-2.2**
QIZ				pmax	pmax		
	comp=Z,11nm,1.6s						
QIZ				LR	LR		
	comp=N,3μm,16.3s						
QIZ				LR	LR		
	comp=E,2μm,17.5s						
QIZ				LR	LR		
	comp=Z,840nm,14.7s						
KMI	**Kunming**	**20.10**	**22**	⇑P	Pn	07 18 04.5	+2.0
KMI				pP	pwP	07 18 11.9	+6.1
KMI				sP	sP	07 18 15.6	+12
KMI				S	**S**	**07 21 43.9**	**-2.8**
KMI				pmax	pmax		
	comp=Z,29nm,0.8s						
KMI				pmax	pmax		
	comp=Z,140nm,3.5s						
KMI				LR	LR		
	comp=N,1μm,13.5s						
KMI				LR	LR		
	comp=E,970nm,11.7s						
KMI				LR	LR		
	comp=Z,880nm,15.8s						
ODAN	**Odare**	**21.41**	**342**	*e*P	P	07 18 24.7	+10
	69nm,1.0s						
RAMN	**Ramite**	**21.75**	**340**	*e*P	P	07 18 27.7	+9.1
	29nm,0.5s						
JIRN	**Jiri**	**22.54**	**340**	*e*P	**P**	**07 18 28.8**	**+1.6**
GYA	**Guiyang**	**22.94**	**29**	⇓P	**P**	**07 18 32.6**	**+1.5**
GYA				sP	pwP	07 18 46.7	+10
GYA				S	**S**	**07 22 40.0**	**-1.4**
GYA				ScP	**ScP**	**07 25 57.4**	**-2.3**
GYA				pmax	pmax		
	comp=Z,15nm,1.0s						
GYA				pmax	pmax		
	comp=Z,260nm,6.4s						
GYA				LR	LR		
	comp=N,1μm,14.6s						
GYA				LR	LR		
	comp=E,840nm,12.7s						
GYA				LR	LR		
	comp=Z,630nm,19.7s						
LSA	**Lhasa**	**23.33**	**352**	P	**P**	**07 18 34.6**	**-0.9**
GKN	**Gorkha**	**23.42**	**337**	*e*P	**P**	**07 18 35.3**	**-0.7**
KOLN	**Koldanda**	**23.63**	**335**	*e*P	**P**	**07 18 38.9**	**+0.7**
	58nm,0.8s						
DANN	**Dangsing**	**24.07**	**336**	*e*P	**P**	**07 18 38.1**	**-4.4**
	48nm,0.8s						
H08S3	**Diego Garcia H**	**26.17**	**238**	T	T	07 46 10.5	
	baz=59,slow=75,SNR=142						
H08S2	**Diego Garcia H**	**26.17**	**238**	T	T	07 46 26.3	
	baz=59,slow=75,SNR=135						
H08S1	**Diego Carcia H**	**26.19**	**238**	T	T	07 46 14.4	
	baz=59,slow=75,SNR=100						
ENH	**Enshi**	**27.48**	**29**	P	**P**	**07 19 12.4**	**-0.7**
ENH				IAmb	IAmb	07 19 29.3	
	comp=Z,20nm,1.2s						
KAPI	**Kappang**	**27.54**	**114**	LR	LR	07 30 57.3	
	comp=Z,476nm,19.3s,baz=287,slow=38						
KAPI	**Kappang**	**27.54**	**114**	P	**P**	**07 19 12.7**	**-1.0**
KAPI				IAmb	IAmb	07 19 21.7	
	comp=Z,23nm,1.2s						
LUWI	**Luwuk**	**29.05**	**104**	P	**P**	**07 19 26.4**	**-0.8**
WHN	**Wuhan**	**30.26**	**35**	P	**P**	**07 19 41.4**	**+3.7**
WHN				LR	LR		
	comp=Z,1μm,11.4s						
WHN				LR	LR		
	comp=Z,2μm,13.8s						
WHN				LR	LR		
	comp=Z,2μm,13.2s						

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XAN   Xi'an             30.45  24  P      P       07 19 39.9 +0.5
XAN                                pP     pwP     07 19 48.7 +4.6
XAN                                pmax   pmax
      comp=Z,32nm,1.0s
LZH   Lanzhou           30.65  15 eP      P       07 19 42.6 +1.2
LZH                                pP     pwP     07 19 50.9 +4.8
LZH                                sP     sP      07 19 56.2  +11
LZH                                pmax   pmax
      comp=Z,19nm,1.1s
LZH                                LR     LR
      comp=Z,410nm,10.3s
LZH                                LR     LR
      comp=Z,720nm,11.9s
LZH                                LR     LR
      comp=Z,300nm,14.6s
GTA   Gaotai            33.12   7 eP      P       07 20 03.8 +0.9
GTA                                pP     pwP     07 20 09.9 +2.2
GTA                                sP     sP      07 20 13.0 +6.5
GTA                                pmax   pmax
      comp=Z,6.0nm,1.0s
GTA                                pmax   pmax
      comp=Z,47nm,5.6s
GTA                                LR     LR
      comp=Z,340nm,12.7s
GTA                                LR     LR
      comp=Z,450nm,12.4s
GTA                                LR     LR
      comp=Z,330nm,13.5s
BATI  Baumata           33.32 120  LR     LR      07 35 12.8
      comp=Z,962nm,19.8s,baz=296,slow=39
NIL   Nilore            33.53 327  P      P       07 20 06.3 -0.2
NJ2   Nanjing           34.03  38 eP      P       07 20 12.3 +1.5
NJ2                                pmax   pmax
      comp=Z,16nm,0.6s
KBL   Kabul             36.58 323  P      P       07 20 34.7 +1.7
KSH   Kashi             36.94 336  P      P       07 20 34.6 -1.4
KSH                                pP     pwP     07 20 44.4 +3.6
KSH                                sP     sP      07 20 48.3 +8.8
KSH                                PcP    PcP     07 22 54.3 -3.0
KSH                                pmax   pmax
      comp=Z,7.0nm,0.9s
KSH                                LR     LR
      comp=Z,880nm,14.4s
KSH                                LR     LR
      comp=Z,470nm,15.1s
KSH                                LR     LR
      comp=Z,310nm,17.0s
PSA00 Pilbara Seismi    37.26 139  P      P       07 20 37.3 -1.4
SIJI  Sorong            37.27 100  P      P       07 20 38.3 -0.7
      comp=Z,4.8nm,0.4s,baz=273,slow=18,SNR=2.0
HHC   Hu-ho-hao-te      37.42  21 eP      P       07 20 41.6 +1.6
HHC                                pmax   pmax
      comp=Z,15nm,1.0s
HHC                                pmax   pmax
      comp=Z,150nm,5.4s
WMQ   Urumqi            37.69 352 eP      P       07 20 44.9 +2.7
TARG  Taragay, Kyrgy    38.16 339  P      P       07 20 47.3 +0.7
WSAR  Wadi Sarin        38.44 300  P      P       07 20 51.3 +2.6
      comp=Z,3.2nm,0.6s,baz=323,slow=16,SNR=5.8
WSAR                               LR     LR      07 38 09.4
      comp=Z,142nm,18.4s,baz=126,slow=39
FAKI  Fak Fak           38.69 103  P      P       07 20 49.2 -1.7
FAKI                               IAmb   IAmb    07 20 57.6
      comp=Z,29nm,1.0s
DRK   Karamyk           38.77 331  P      P       07 20 52.7 +1.1
GAR   Garm              39.12 329  P      P       07 20 54.2 -0.2
FITZ  Fitzroy Crossi    39.14 129  P      P       07 20 53.1 -1.5
      comp=Z,14nm,1.0s,baz=337,slow=5.9,SNR=15
FITZ  Fitzroy Crossi    39.14 129  P      P       07 20 53.9 -0.7
FITZ                               IAmb   IAmb    07 21 01.7
      comp=Z,25nm,1.1s
CHGR  Chuyangaron       39.46 328  P      P       07 20 56.7 -0.5
BTK   Batken            39.69 331  P      P       07 21 00.4 +1.4
BTK                                IAmb   IAmb    07 21 11.5
      comp=Z,43nm,0.9s
UCH   Uchtor            39.83 336  P      P       07 21 01.7 +1.1
      SNR=11
KBK   Karagaybulak      40.02 337  P      P       07 21 03.9 +2.1
      SNR=6.9
AML   Almayashu         40.07 336  P      P       07 21 03.7 +1.1
      SNR=24
AAK   Ala-Archa         40.18 337  P      P       07 21 05.2 +2.0
      comp=Z,10nm,0.9s,baz=149,slow=4.2,SNR=14
AAK                                LR     LR      07 39 57.5
      comp=Z,398nm,18.5s,baz=156,slow=40
AAK   Ala-Archa         40.18 337  P      P       07 21 05.2 +2.0
      SNR=6.8
AAK   Ala-Archa         40.18 337  P      P       07 21 04.7 +1.5
AAK                                IAmb   IAmb    07 21 14.7
      comp=Z,26nm,1.2s
KNRA  Kununurra         40.33 123  P      P       07 21 03.5 -1.0
KNRA                               IAmb   IAmb    07 21 28.7
      comp=Z,45nm,1.4s
EKS2  Erkin-Say         40.48 336  P      P       07 21 07.3 +1.6
      SNR=9.3
USP   Ospenovka         40.71 337  P      P       07 21 08.3 +0.9
      SNR=14
MTN   Manton Dam        41.03 118  P      P       07 21 08.1 -2.3
MK31  Makanchi Array    41.55 347  P      P       07 21 14.6 +0.4
MKAR  Makanchi Array    41.55 347  P      P       07 21 14.4 +0.2
      comp=Z,2.9nm,0.6s,baz=165,slow=8.3,SNR=16
MKAR                               LR     LR      07 43 16.5
      comp=Z,103nm,19.5s,baz=165,slow=43
MKAR  Makanchi Array    41.55 347  P      P       07 21 14.2 -0.1
MAKZ  Makanchi          41.63 347  P      P       07 21 15.0 +0.1
KK31  Karatay Array     42.23 334  P      P       07 21 20.9 +1.1
KK31                               IAmb   IAmb    07 21 22.1
      comp=Z,16nm,0.9s
KKAR  Karatay Array     42.23 334  P      P       07 21 20.2 +0.4
SONM  Songino Array     42.41  12  P      P       07 21 22.5 +1.1
      comp=Z,9.7nm,0.8s,baz=192,slow=8.2,SNR=47
SONM                               LR     LR      07 42 23.4
      comp=Z,221nm,19.7s,baz=188,slow=41
SONM  Songino Array     42.41  12  P      P       07 21 22.4 +1.0
SONM                               IAmb   IAmb    07 21 30.8
      comp=Z,17nm,1.2s
ULN   Ulaanbaatar       42.58  12  P      P       07 21 22.8  0.0
KSRS  Korea Array       43.20  40  P      P       07 21 28.1 +0.3
      comp=Z,4.3nm,1.0s,baz=224,slow=8.8,SNR=6.2
KSRS                               LR     LR      07 39 34.8
      comp=Z,216nm,18.4s,baz=235,slow=36
NWAO  Narrogin (SRO)    44.69 153  LR     LR      07 38 53.0
      comp=Z,180nm,20.3s,baz=316,slow=34
H01W3 Cape Leeuwin H    45.06 157  T      T       08 10 16.3
      baz=330,slow=76,SNR=6.2
H01W2 Cape Leeuwin H    45.08 157  T      T       08 10 33.5
      baz=330,slow=76,SNR=5.7
H01W1 Cape Leeuwin H    45.08 157  T      T       08 10 12.3
      baz=330,slow=76,SNR=3.9
GEYT  Alibeck           45.57 319  P      P       07 21 45.9 -0.9
      comp=Z,2.1nm,0.5s,baz=197,slow=18,SNR=3.7
GEYT                               LR     LR      07 43 07.8
      comp=Z,151nm,19.1s,baz=165,slow=39
GYA0B ALIBECK ARRAY     45.57 319  P      P       07 21 48.2 +1.4
GYA0B                              IAmb   IAmb    07 21 58.4
      comp=Z,11nm,0.8s
TLY   Talaya            45.67   8  LR     LR      07 42 25.5
      comp=Z,214nm,18.4s,baz=181,slow=38
CN2   Changchun         45.95  31 eP      P       07 21 50.2 +0.5
CN2                                pmax   pmax
      comp=Z,10.0nm,1.1s
KURBB Kurchatov Arra    46.01 346  P      P       07 21 50.7 +0.7
      comp=Z,2.9nm,0.7s,baz=169,slow=6.8,SNR=14
KURK  Kurchatov         46.08 346  P      P       07 21 52.5 +2.0
KURK                               IAmb   IAmb    07 22 01.5
      comp=Z,12nm,1.1s
WB0   Warramunga Arr    47.01 125  P      P       07 21 57.7 -0.6
WB0                                IAmb   IAmb    07 22 04.5
      comp=Z,7.0nm,0.6s
WRA   Warramunga Arr    47.05 125  P      P       07 21 57.4 -1.3
      comp=Z,3.2nm,0.6s,baz=304,slow=9.1,SNR=24
WRA                                LR     LR      07 44 20.5
      comp=Z,327nm,19.1s,baz=200,slow=40
WRA   Warramunga Arr    47.05 125  P      P       07 21 59.2 +0.5
WRAB  Tennant Creek     47.06 125  P      P       07 21 55.8 -2.9
WRAB                               IAmb   IAmb    07 22 05.1
      comp=Z,8.4nm,0.6s
WB2   Warramunga Arr    47.06 125  P      P       07 21 57.9 -0.9
WB2                                IAmb   IAmb    07 22 25.8
      comp=Z,8.1nm,0.8s
WR0   Warramunga Arr    47.23 125  P      P       07 21 58.5 -1.6
WR0                                IAmb   IAmb    07 22 22.8
      comp=Z,22nm,1.3s
ZAA0  Zalesovo Array    48.00 352  P      P       07 22 05.3 -0.2
ZAA0                               IAmb   IAmb    07 22 14.6
      comp=Z,12nm,1.2s
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ZALV  Zalesovo Beam     48.00 352  P      P       07 22 05.9 +0.4
      comp=Z,5.0nm,0.7s,baz=167,slow=7.4,SNR=16
ZALV  Zalesovo Beam     48.00 352  P      P       07 22 05.8 +0.3
AS31  Alice Springs     48.65 129  P      P       07 22 09.2 -1.9
ASAR  Alice Springs     48.65 129  P      P       07 22 09.7 -1.4
      comp=Z,2.5nm,0.5s,baz=299,slow=8.0,SNR=36
ASAR                               LR     LR      07 44 52.1
      comp=Z,237nm,19.8s,baz=298,slow=39
ASAR  Alice Springs     48.65 129  P      P       07 22 10.3 -0.8
MDJ   Mudanjiang        48.69  33  P      P       07 22 12.0 +1.0
MDJ                                pP     pwP     07 22 26.1  +10
MDJ                                S      S       07 29 13.4 -0.1
MDJ                                pmax   pmax
      comp=Z,21nm,1.5s
MDJ                                pmax   pmax
      comp=Z,160nm,3.7s
MDJ                                LR     LR
      comp=Z,880nm,14.3s
MDJ                                LR     LR
      comp=Z,660nm,13.2s
MDJ                                LR     LR
      comp=Z,820nm,14.9s
MDJ   Mudanjiang        48.69  33  P      P       07 22 12.1 +1.1
FORT  Forrest           48.95 141  P      P       07 22 13.5 +0.4
MJAR  Matsushiro Arr    49.74  47  P      P       07 22 21.2 +2.0
      comp=Z,1.3nm,0.4s,baz=243,slow=5.5,SNR=4.8
USRK  Ussuriysk Ar.     49.76  35  P      P       07 22 20.4 +1.2
      comp=Z,7.8nm,1.0s,baz=240,slow=6.2,SNR=5.2
USRK  Ussuriysk Ar.     49.76  35  P      P       07 22 20.1 +1.0
BVAR  Borovoye Array    50.46 341  P      P       07 22 24.3 -0.1
      comp=Z,2.8nm,0.7s,baz=182,slow=16,SNR=9.4
BRVK  Borovoye          50.52 341  P      P       07 22 25.3 +0.5
BRVK                               IAmb   IAmb    07 22 34.4
      comp=Z,11nm,1.0s
ATD   Arta Tunnel       51.35 280  LR     LR      07 41 16.8
      comp=Z,105nm,20.5s,baz=80,slow=32
ABKAR Akbulak array     51.69 332  P      P       07 22 34.3 +0.7
AKTO  Aktyubinsk        53.41 332  P      P       07 22 47.0 +0.6
      comp=Z,7.7nm,0.8s,baz=142,slow=8.2,SNR=18
BBOO  Buckleboo         55.45 137  P      P       07 23 00.4 -1.1
KIBK  Kibwezi           57.18 263  P      P       07 23 14.1 -0.2
ARU   Arti              57.36 337  P      P       07 23 15.2 +0.4
      comp=Z,2.2nm,0.5s,baz=331,slow=1.8,SNR=11
ARU   Arti              57.36 337  P      P       07 23 15.2 +0.4
ARU                                IAmb   IAmb    07 23 24.7
      comp=Z,21nm,1.0s
KMBO  Kilima Mbogo      57.78 265  P      P       07 23 20.5 +1.7
      comp=Z,7.8nm,0.9s,baz=48,slow=8.0,SNR=13
KMBO  Kilima Mbogo      57.78 265  P      P       07 23 21.6 +2.8
KMBO                               IAmb   IAmb    07 23 23.4
      comp=Z,10nm,1.1s
KBZ   Khabaz            58.45 318  P      P       07 23 22.2 -0.4
      comp=Z,4.4nm,0.9s,baz=170,slow=6.5,SNR=5.1
KBZ                                LR     LR      07 52 03.3
      comp=Z,75nm,18.5s,baz=137,slow=40
STKA  Stephens Creek    58.79 133  P      P       07 23 24.1 -1.1
      comp=Z,4.9nm,0.7s,baz=304,slow=6.8,SNR=5.4
STKA                               LR     LR      07 53 21.8
      comp=Z,223nm,18.1s,baz=290,slow=41
STKA  Stephens Creek    58.79 133  P      P       07 23 24.9 -0.3
LODK  Lodwar            59.11 270  P      P       07 23 26.7 -1.2
BELG  Belogornoye       59.75 329  P      P       07 23 31.4 -0.1
      comp=Z,27nm,0.9s,baz=37,slow=0.1,SNR=10
NRIK  Noril'sk          62.95 357  P      P       07 23 52.8 -0.1
      comp=Z,1.7nm,0.4s,baz=141,slow=3.0,SNR=2.3
NRIK  Noril'sk          62.95 357  P      P       07 23 53.4 +0.6
NRIK                               IAmb   IAmb    07 24 02.4
      comp=Z,7.5nm,1.1s
BR131 Keskin Array S    63.72 311  P      P       07 23 57.8 -0.9
BR131                              IAmb   IAmb    07 24 08.4
      comp=Z,14nm,0.9s
BRTR  Keskin Array B    63.72 311  P      P       07 23 58.3 -0.4
      comp=Z,4.3nm,0.8s,baz=123,slow=7.5,SNR=12
BRTR                               LR     LR      07 54 18.7
      comp=Z,119nm,20.1s,baz=124,slow=38
BRTR  Keskin Array B    63.72 311  P      P       07 23 57.8 -0.9
TOO   Toolangi          64.50 137  P      P       07 24 04.9 +1.1
TOO                                IAmb   IAmb    07 24 05.3
      comp=Z,10nm,0.9s
ELL   Elmali            65.96 307  P      P       07 24 13.7 +0.4
OBN   Obninsk           66.82 328  P      P       07 24 18.2 -0.1
      comp=Z,6.6nm,0.4s,baz=180,slow=5.1,SNR=1.8
OBN   Obninsk           66.82 328  P      P       07 24 17.3 -1.0
KLMR  Klimovskoe        67.92 334 eP      P       07 24 24.3 -0.9
KLMR                               AMP            07 24 34.6
      comp=Z,56nm,1.4s
KLMR                              ePP     PP      07 26 55.7 +0.8
TIXI  Tiksi             68.50  11  P      P       07 24 27.7 -0.9
PETK  Petropavlovsk-    68.85  35  LR     LR      07 54 17.7
      comp=Z,87nm,21.9s,baz=230,slow=36
AKASG Malin Array Be    69.55 322  P      P       07 24 34.9 -0.7
      comp=Z,1.6nm,0.6s,baz=97,slow=4.2,SNR=9.9
AKASG                              LR     LR      08 01 25.4
      comp=Z,51nm,18.2s,baz=90,slow=41
AKASG Malin Array Be    69.55 322  P      P       07 24 34.4 -1.2
AKBB  Malin Array Si    69.55 322  P      P       07 24 34.4 -1.2
AKBB                               IAmb   IAmb    07 24 44.6
      comp=Z,6.1nm,0.8s
MLR   Muntele Rosu      70.51 316  P      P       07 24 42.1 +0.3
MLR                                IAmb   IAmb    07 24 43.2
      comp=Z,18nm,1.1s
MNK   Minsk             71.35 326 i P     P       07 24 44.8 -1.7
      comp=E,3.0nm,1.0s
MNK                               i P     P       07 24 44.8 -1.7
      comp=N,28nm,1.0s
MNK                               i P     P       07 24 44.8 -1.7
      comp=Z,30nm,1.0s,baz=105
MNK                               i PcP   PcP     07 25 04.1 -2.1
MNK                               i PP    PP      07 27 23.2 -1.5
MNK                               i PPP   PPP     07 29 06.8
MNK                               i S     S       07 34 01.2 -3.2
MNK                               i SS    SS      07 37 47.3  -51
MNK                               i SSS   SSS     07 42 24.1
MNK                               i LQ    LQ      07 46 20.7
MNK                               i LR    LR      07 52 54.2
MNK                               i LRM   MLR     08 00 05.8
      comp=N,119nm,19.2s
MNK                               i LRM   MLR     08 00 36.2
      comp=E,13nm,19.2s
MNK                               i LRM   MLR     08 01 16.2
      comp=Z,156nm,18.6s
BURAR Bucovina Array    71.41 318  P      P       07 24 47.6 +0.4
BUR08 Bucovina Ar. S    71.43 318  P      P       07 24 48.0 +0.7
BUR08                              IAmb   IAmb    07 24 55.8
      comp=Z,16nm,1.5s
NACGM Naroch            72.07 326 i P     P       07 24 51.6 +0.8
VSU   Vasula            73.03 329 eP      P       07 24 57.1 +0.6
FNA   Florina           73.13 311  P      P       07 24 58.7 +1.1
FNA                                IAmb   IAmb    07 25 08.3
      comp=Z,8.4nm,1.1s
KWP   Kalwaria Pacla    73.41 320  P      P       07 24 59.3 +0.4
CASY  Casey             73.49 173  P      P       07 24 59.7 +0.7
KOLS  Kolonicke sedl    73.58 319 eP      P       07 25 00.2 +0.3
PABE  Paberze           73.78 326 eP      P       07 25 01.3 +0.3
PABE  Paberze           73.78 326  P      P       07 25 01.1 +0.2
SUW   Suwalki           73.92 324 eP      P       07 24 59.3 -2.5
SUW   Suwalki           73.92 324  P      P       07 25 02.5 +0.7
LBTB  Lobatse           74.02 242  P      P       07 25 02.2 -0.9
LBTB                               IAmb   IAmb    07 25 15.5
      comp=Z,10nm,1.1s
CRVS  Cervenica-Dubn    74.10 319 eP      P       07 25 02.9 -0.1
FIA1  FINESS Array S    74.17 332  P      P       07 25 03.0 -0.1
FIA1                               IAmb   IAmb    07 25 09.9
      comp=Z,20nm,0.9s
FINES FINESS Array B    74.17 332  P      P       07 25 03.3 +0.2
      comp=Z,11nm,0.7s,baz=103,slow=5.5,SNR=26
FINES                              LR     LR      08 00 36.5
      comp=Z,111nm,18.6s,baz=116,slow=38
VLO   Vlora             74.53 310  P      P       07 25 07.3 +1.7
PDG   Podgorica         74.87 312  P      P       07 25 07.0 -0.5
PDG                                IAmb   IAmb    07 25 19.9
      comp=Z,8.1nm,0.7s
BOSA  Boshof            75.28 238  P      P       07 25 11.6 +1.3
      comp=Z,8.7nm,1.0s,baz=86,slow=4.8,SNR=8.7
BOSA                               LR     LR      07 57 05.8
      comp=Z,49nm,18.3s,baz=40,slow=35
BOSA  Boshof            75.28 238  P      P       07 25 11.0 +0.7
BOSA                               IAmb   IAmb    07 25 13.8
      comp=Z,16nm,1.3s
OJC   Ojcow             75.36 320  P      P       07 25 10.4 +0.1
OJC                                IAmb   IAmb    07 25 11.5
      comp=Z,9.9nm,0.7s
ARCES ARCESS Array B    76.74 340  P      P       07 25 17.7  0.0
      comp=Z,2.8nm,0.6s,baz=102,slow=7.1,SNR=19
ARCES                              LR     LR      08 01 58.5
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      comp=Z,284nm,18.5s,baz=135,slow=38
MORC  Moravsky Berou    76.75 320  P      P       07 25 19.1 +0.9
MORC                               IAmb   IAmb    07 25 29.8
      comp=Z,6.6nm,0.9s
KRLC  Kraliky           77.27 320 eP      P       07 25 22.0 +0.8
KRLC                              ex      x       07 25 28.6
MAW   Mawson            77.28 192  P      P       07 25 21.3 +0.6
      comp=Z,1.0nm,0.5s,baz=37,slow=10,SNR=2.2
MAW                                LR     LR      07 57 11.1
      comp=Z,69nm,18.4s,baz=52,slow=34
DPC   Dobruska-Polom    77.59 320 eP      P       07 25 23.5 +0.5
DPC                               ex      x       07 25 31.8
CONA  Conrad Observa    77.70 318 eP      P       07 25 23.3 -0.4
      comp=Z,2.8nm,1.0s
ARSA  Arzberg           77.89 317 eP      P       07 25 25.0 +0.3
      comp=Z,2.1nm,0.5s
SOKA  Soboth            78.19 316 eP      P       07 25 27.0 +0.5
      comp=Z,8.3nm,1.0s
OBKA  Obir              78.52 316 eP      P       07 25 29.0 +0.7
      comp=Z,4.1nm,0.8s
BRG   Berggiesshubel    79.14 320 eP      P       07 25 32.0 +0.6
BRG                                Amp            07 25 33.1
      comp=Z,3.4nm,0.7s
MYKA  Terra Mystica     79.14 316 eP      P       07 25 31.1 -0.5
      comp=Z,1.3nm,0.5s
GEC2  GERESS Array S    79.19 318  P      P       07 25 32.6 +0.6
GEC2                               IAmb   IAmb    07 25 39.5
      comp=Z,9.4nm,1.1s
GERES GERESS Array B    79.19 318  P      P       07 25 32.7 +0.8
      comp=Z,4.4nm,0.9s,baz=90,slow=5.5,SNR=17
GERES GERESS Array B    79.19 318  P      P       07 25 32.2 +0.2
KHC   Kasperske Hory    79.29 319 eP      P       07 25 33.0 +0.6
KHC                               ex      x       07 25 41.7
ZOU   Zoufplan          79.60 316  P      P       07 25 33.5 -0.9
CLL   Collm             79.75 321 eP      P       07 25 35.0 +0.2
      comp=Z,4.0nm,0.8s
STAL  STALIGIAL         79.78 316  P      P       07 25 35.5 +0.4
STAL                               IAmb   IAmb    07 25 43.2
      comp=Z,29nm,1.3s
ABTA  Abfaltersbach     79.93 316 eP      P       07 25 35.8 -0.2
      comp=Z,1.8nm,0.4s
CTI   Castel Tesino     80.51 316  P      P       07 25 39.5 +0.3
CTI                                IAmb   IAmb    07 25 46.7
      comp=Z,9.8nm,0.9s
WTTA  Wattenberg        80.53 317 eP      P       07 25 38.5 -0.8
      comp=Z,3.6nm,0.7s
WATA  Walderalm         80.58 317 eP      P       07 25 38.7 -0.8
      comp=Z,6.9nm,0.9s
SQTA  Sankt Quirin      80.83 317 eP      P       07 25 40.6 -0.2
      comp=Z,3.8nm,0.7s
MOTA  Moosalm           80.90 317 eP      P       07 25 41.1 -0.1
      comp=Z,4.3nm,0.7s
RETA  Reutte            81.13 317 eP      P       07 25 42.4 +0.1
      comp=Z,2.6nm,0.6s
FETA  Feichten          81.15 316 eP      P       07 25 42.6 -0.1
      comp=Z,2.8nm,0.9s
NB2   NORSAR Subarra    81.18 331  P      P       07 25 41.4 -0.9
      comp=Z,25nm,1.7s,baz=92,slow=5.6
NB2   NORSAR Subarra    81.18 331  P      P       07 25 41.4 -0.9
      baz=92,slow=5.6
NOA   NORSAR Array B    81.18 331  P      P       07 25 41.9 -0.5
      comp=Z,2.8nm,1.0s,baz=92,slow=5.5,SNR=4.9
NOA                                LR     LR      08 03 59.5
      comp=Z,98nm,19.4s,baz=90,slow=37
DAVA  Damuels           81.73 317 eP      P       07 25 45.6  0.0
      comp=Z,5.0nm,0.8s
KEST  Kesra             82.45 305  P      P       07 25 49.9 +0.3
      comp=Z,5.0nm,0.9s,baz=318,slow=8.4,SNR=4.7
TORD  Torodi Ar. Bea    91.40 283  P      P       07 26 34.1 +0.5
      comp=Z,1.1nm,0.7s,baz=90,slow=4.7,SNR=6.6
TORD                               LR     LR      08 06 03.1
      comp=Z,109nm,20.2s,baz=210,slow=34
TORD  Torodi Ar. Bea    91.40 283  P      P       07 26 30.6 -3.0
TORD                               IAmb   IAmb    07 26 45.4
      comp=Z,6.1nm,1.5s
VNDA  Vanda             91.47 168  LR     LR      08 01 46.5
      comp=Z,90nm,20.5s,baz=312,slow=32
ESDC  Sonseca Array     92.49 310  P      P       07 26 38.6 +0.3
      comp=Z,0.8nm,0.8s,baz=55,slow=3.5,SNR=4.3
ILAR  Eielson Array     95.84  22  LR     LR      08 12 37.5
      comp=Z,95nm,18.9s,baz=282,slow=37
DBIC  Dimbokro          98.62 278  LR     LR      08 11 36.2
      comp=Z,100nm,18.4s,baz=129,slow=35
NVAR  Mina Array Bea   125.84  32  PKP    PKiKP   07 32 30.2 +0.4
      comp=Z,0.6nm,0.8s,baz=241,slow=1.5,SNR=4.1
PDAR  Pinedale Array   126.27  22  PKP    PKPdf   07 32 29.3 -0.9
      comp=Z,0.4nm,0.6s,baz=42,slow=4.6,SNR=3.6
TXAR  Lajitas Array    140.28  25  PKP    PKPdf   07 32 55.8 -0.8
      comp=Z,0.5nm,0.7s,baz=171,slow=1.0,SNR=5.8
PLCA  Paso Flores      143.41 199  PKP    PKPbc   07 32 59.8 +0.9
      comp=Z,2.3nm,0.9s,baz=16,slow=7.4,SNR=3.2
PLCA  Paso Flores      143.41 199         PKPbc   07 33 00.2 +1.3
CPUP  Villa Florida    146.79 230  PKPbc  PKPdf   07 33 08.7 +0.8
      comp=Z,3.2nm,0.8s,baz=39,slow=3.8,SNR=6.3
CPUP  Villa Florida    146.79 230         PKPdf   07 33 05.8 -2.1
SIV   San Ignacio      154.40 246  PKPbc  PKPbc   07 33 27.0 -1.4
      comp=Z,1.3nm,1.0s,baz=135,slow=2.9,SNR=4.4
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*IDC **09** 07:21:27.5±1.7, 6°.26N×94°.35E, h0^{km}, mb3.9/6, mb1 4.0/7, mb1mx3.7/52, mbtmp3.9/7, ML3.5/1, Error ellipse: s-maj=81.0km s-min=19.4km az=54.0*

*NEIC **09** 07:21:33±1.3, 6°.6N±0°.2×94°.8E±0°.2, h25^{km}±8^{km}, mb4.4/11, Error ellipse: s-maj=35.6km s-min=14.3km az=220.0*

ISC 09 07:21:30.7±1.3, **6°.6N**±0°.3×**94°.8E**±0°.3, **h10^{km}, n26,** σ**0^{s}.98**/23, **mb4.4**/13, **Nicobar Islands region**

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Code  Station Name        Δ°   AZ°   Phase ID        Time        Res
                                   Op     ISC      h  m  s     ISC
LHMI  Lhok Sumawe        2.54 122  Pn     Pn      07 22 10.6 -1.4
PSI   Prapat             5.59 132  Pn     Pn      07 22 55.8 +1.7
      1.4nm,0.3s,baz=331,slow=17,SNR=6.0
H08S3 Diego Garcia H    26.36 238  T      T       07 54 25.1
      baz=58,slow=75,SNR=2.3
H08S2 Diego Garcia H    26.36 238  T      T       07 54 25.5
      baz=58,slow=75,SNR=2.5
H08S1 Diego Carcia H    26.37 238  T      T       07 54 25.2
      baz=58,slow=75,SNR=3.2
FITZ  Fitzroy Crossi    39.11 129  P      P       07 28 58.8 +0.3
FITZ                               IAmb   IAmb    07 29 19.9
      comp=Z,7.1nm,0.8s
MKAR  Makanchi Array    41.47 347  P      P       07 29 18.2 +0.5
      comp=Z,0.2nm,0.4s,baz=170,slow=7.9,SNR=2.1
MKAR  Makanchi Array    41.47 347  P      P       07 29 18.0 +0.2
KK31  Karatay Array     42.18 333  P      P       07 29 23.0 -0.7
KK31                               IAmb   IAmb    07 29 30.0
      comp=Z,2.0nm,0.7s
KKAR  Karatay Array     42.18 333  P      P       07 29 23.4 -0.3
SONM  Songino Array     42.27  12  P      P       07 29 26.0 +1.6
      comp=Z,0.9nm,0.8s,baz=184,slow=5.9,SNR=6.2
SONM  Songino Array     42.27  12  P      P       07 29 24.9 +0.4
WB0   Warramunga Arr    46.96 125  P      P       07 30 01.0 -1.2
WB0                                IAmb   IAmb    07 30 04.1
      comp=Z,4.6nm,1.2s
WRA   Warramunga Arr    47.01 125  P      P       07 30 01.3 -1.3
      comp=Z,0.9nm,0.8s,baz=304,slow=9.2,SNR=10
WRA   Warramunga Arr    47.01 125  P      P       07 30 01.9 -0.6
WB2   Warramunga Arr    47.02 125  P      P       07 30 01.6 -1.0
WB2                                IAmb   IAmb    07 30 22.4
      comp=Z,5.1nm,1.1s
WR0   Warramunga Arr    47.18 125  P      P       07 30 05.4 +1.6
WR0                                IAmb   IAmb    07 30 12.7
      comp=Z,4.4nm,1.1s
ASAR  Alice Springs     48.61 130  P      P       07 30 14.7 -0.3
      comp=Z,0.9nm,0.5s,baz=297,slow=7.8,SNR=11
ASAR  Alice Springs     48.61 130  P      P       07 30 13.9 -1.0
ABKAR Akbulak array     51.65 331  P      P       07 30 38.0 +0.5
ABKAR                              IAmb   IAmb    07 30 47.1
      comp=Z,6.2nm,1.2s
ABKAR Akbulak array     51.65 331  P      P       07 30 37.0 -0.6
FIA1  FINESS Array S    74.13 332  P      P       07 33 06.4 -0.7
FIA1                               IAmb   IAmb    07 33 09.9
      comp=Z,10nm,1.1s
FINES FINESS Array B    74.13 332  P      P       07 33 05.8 -1.2
      comp=Z,1.2nm,0.4s,baz=87,slow=4.0,SNR=9.8
FINES FINESS Array B    74.13 332  P      P       07 33 06.8 -0.3
ARCES ARCESS Array B    76.67 340  P      P       07 33 21.7 +0.1
      comp=Z,4.2nm,1.0s,baz=98,slow=6.5,SNR=2.0
ARCES ARCESS Array B    76.67 340  P      P       07 33 21.4 -0.1
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*IDC **09** 07:25:52.9±4.2, 44°.98N×148°.50E, h0^{km}, mb3.8/4, mb1 3.8/5, mb1mx3.6/43, mbtmp3.8/5, ML3.5/1, Error ellipse: s-maj=95.9km s-min=49.0km az=151.0*

*MOS **09** 07:25:57.1±1.2, 44°.31N×148°.30E, h67^{km}, mb4.3/5, Error*

ellipse: s-maj=12.8km s-min=10.5km az=164.5

*NIED **09** 07:25:58.8, 43°.98N×147°.93E, h0^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.68; $M_{\theta\theta}$-0.14; $M_{\phi\phi}$0.82; $M_{r\theta}$1.00; $M_{\theta\phi}$-0.08; $M_{\phi r}$0.85; Fault plane solution: $M_0$1.49000×10^{15} NP1: ϕ_s217.00000°, δ78.00000°, λ-69.00000°. NP2: ϕ_s336.00000°, δ24.00000°, λ-149.00000°.*

*JMA **09** 07:25:58.7±0.3, 43°.98N×147°.93E, h0^{km}, M4.6*

*SKHL **09** 07:25:59.3±0.6, 44°.40N×148°.20E, h75^{km}±4^{km}, mb5.2/3*

ISC 09 07:25:56.5±2.0, **44°.26N**±0°.07×**148°.4E**±0°.1, **h44**^{km}±16^{km}, **n56,** σ1^{s}**50**/69, **mb4.0**/7, **7C-5D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.05	338	d iPN	Pn	07 26 15.4	+0.7
KUR				iS	Sn	07 26 27.4	-0.8
KUR				pmax	pmax		
	comp=Z,1µm,0.4s						
KUR				pmax	pmax		
	comp=E,525nm,0.1s						
KUR				pmax	pmax		
	comp=N,348nm,0.3s						
KUR				smax	smax		
	comp=E,3µm,0.5s						
KUR				smax	smax		
	comp=N,1µm,0.3s						
KUR	Kuril'sk	1.05	338	iP	Pn	07 26 15.1	+0.4
KUR				AMB	AMB	07 26 15.9	
	comp=N,1µm,0.4s						
KUR				iS	Sn	07 26 27.4	-0.8
KUR				A	A	07 26 28.0	
	comp=N,1µm,0.4s						
KUR				A	A	07 26 28.0	
	comp=N,3µm,0.4s						
YUK	Yuzh-Kuril'sk	1.85	264	d iPN	Pn	07 26 26.8	+1.1
YUK				eS	Sn	07 26 47.2	-0.8
YUK				pmax	pmax		
	comp=N,260nm,0.1s						
YUK				pmax	pmax		
	comp=E,250nm,0.1s						
YUK				pmax	pmax		
	comp=Z,1µm,0.1s						
YUK				smax	smax		
	comp=N,2µm,0.4s						
YUK				smax	smax		
	comp=E,2µm,0.4s						
YUK	Yuzh-Kuril'sk	1.85	264	iP	Pn	07 26 26.8	+1.1
YUK				AMB	AMB	07 26 28.0	
	comp=E,750nm,0.2s						
YUK				eS	Sn	07 26 45.7	-2.3
YUK				A	A	07 26 49.0	
	comp=E,2µm,0.4s						
YUK				A	A	07 26 49.0	
	comp=E,3µm,0.4s						
NEM2	Nemuro 2	2.13	246	P	Pn	07 26 29.9	+0.3
NEM2				eS	Sn	07 26 52.1	-2.7
NMR	Nemuro--Hokkai	2.14	246	⇓iPN	Pn	07 26 29.9	+0.3
NMR				iS	Sn	07 26 53.0	-2.0
NMR				pmax	pmax		
	comp=N,136nm,0.1s						
NMR	Nemuro--Hokkai	2.14	246	iP	Pn	07 26 30.0	+0.3
NMR				iS	Sn	07 26 53.2	-1.8
GLVR	Golovnino	2.16	257	ePN	Pn	07 26 31.0	+1.2
GLVR				eS	Sn	07 26 55.7	+0.3
GLVR				pmax	pmax		
	comp=Z,333nm,0.1s						
GLVR				smax	smax		
	comp=N,4µm,0.2s						
GLVR				smax	smax		
	comp=E,1µm,0.2s						
GLVR	Golovnino	2.16	257	eP	Pn	07 26 31.1	+1.2
GLVR				AMB	AMB	07 26 32.0	
	comp=E,330nm,0.3s						
GLVR				eS	Sn	07 26 55.0	-0.4
GLVR				A	A	07 27 00.0	
	comp=E,3µm,0.4s						
GLVR				A	A	07 27 00.0	
	comp=E,1µm,0.4s						
RUSJ	Misakicho	2.29	267	⇓iPN	Pn	07 26 33.4	+1.7
RUSJ				eS	Sn	07 26 58.8	+0.2
JRA	Rausu	2.40	263	P	Pn	07 26 34.7	+1.5
JRA				eS	Sn	07 27 01.3	0.0
JNSB	Nemuroshibetsu	2.51	260	P	Pn	07 26 36.3	+1.5
JKHN	Kushirohamanak	2.64	245	P	Pn	07 26 37.5	+1.0
JNK	Nakash	2.76	257	P	Pn	07 26 39.3	+1.1
JNK				eS	Sn	07 27 09.1	-1.1
AKK	Akkeshi	2.88	246	eP	Pn	07 26 40.7	+0.9
AKK				eS	Sn	07 27 10.8	-2.4
JAK	Akkeshi	2.98	246	P	Pn	07 26 42.0	+0.8
JAK				eS	Sn	07 27 14.1	-1.6
JTKR	Abashiri--Toko	3.26	266	P	Pn	07 26 48.6	+3.5
JAR	Ashorobuto	3.50	256	P	Pn	07 26 50.0	+1.6
JAR				eS	Sn	07 27 27.9	-0.7
JOB	Onbets	3.60	249	P	Pn	07 26 51.1	+1.4
JOB				eS	Sn	07 27 29.5	-1.3
JMP	Maruseppu	3.65	268	P	Pn	07 26 52.3	+1.8
JCH	Churui	4.03	248	P	Pn	07 26 56.8	+1.1
JCH				eS	Sn	07 27 39.1	-2.5
JKK2	Kamakawa 2	4.11	267	P	Pn	07 26 59.4	+2.7
JKA	Kamikawa-asahi	4.19	270	eP	Pn	07 27 00.2	+2.4
ASAJ	Asahikawa	4.19	270	Pn	Pn	07 27 00.2	+2.4
	comp=E,2.2nm,0.3s,baz=74,slow=18,SNR=6.2						
ASAJ				Sn	Sn	07 27 56.7	+11
	comp=E,5.2nm,0.3s,baz=342,slow=33,SNR=2.3						
JFR	Furan	4.36	257	P	Pn	07 27 03.1	+2.9
ERM	Erimo	4.46	242	⇑ePN	Pn	07 27 05.0	+3.5
JNBK	Urakawa-nobuka	4.59	246	P	Pn	07 27 04.3	+1.0
YSS	Yuzh-Sakhalins	4.80	306	ePN	Pn	07 27 07.0	+0.8
YSS				MLR	MLR		
	comp=Z,700nm,12.0s						
YSS	Yuzh-Sakhalins	4.80	306	eP	Pn	07 27 07.0	+0.8
JKB	Kayabe	5.91	249	P	Pn	07 27 23.0	+1.6
JKB				eS	Sn	07 28 26.1	-1.6
MAJO	Matsushiro	10.95	229	⇑ePN	Pn	07 28 30.4	-0.1
VLA	Vladivostok	12.03	270	⇑ePN	Pn	07 28 44.1	-1.1
VLA	Vladivostok	12.03	270	eP	Pn	07 28 44.1	-1.1
BILL	Bilibino	25.62	15	⇓eP	P	07 31 21.5	+0.1
BILL				e		07 31 59.9	
BILL				pmax	pmax		
	comp=Z,7.0nm,1.4s						
BILL				MLR	MLR		
	comp=Z,78nm,16.0s						
BILL	Bilibino	25.62	15	eP	P	07 31 21.5	+0.1
H11N2	WAKE ISLAND Hy	28.91	142	T	T	08 02 41.5	
	baz=332,slow=76,SNR=90						
H11N1	WAKE ISLAND Hy	28.92	142	T	T	08 02 41.5	
	baz=332,slow=76,SNR=66						
H11N3	WAKE ISLAND Hy	28.93	142	T	T	08 02 42.3	
	baz=332,slow=76,SNR=79						
SONM	Songino Array	29.12	292	P	P	07 31 54.0	+0.8
	comp=Z,0.5nm,0.6s,baz=81,slow=9.3,SNR=3.4						
SONM	Songino Array	29.12	292	P	P	07 31 54.0	+0.8
H11S1	WAKE ISLAND Hy	29.90	143	T	T	08 03 53.3	
	baz=333,slow=76,SNR=113						
H11S3	WAKE ISLAND Hy	29.91	143	T	T	08 03 54.2	
	baz=333,slow=76,SNR=108						
H11S2	WAKE ISLAND Hy	29.92	143	T	T	08 04 04.0	
	baz=333,slow=76,SNR=74						
NRIK	Noril'sk	39.25	331	⇑eP	P	07 33 18.1	-2.1
NRIK				pmax	pmax		
	comp=Z,13nm,4.8s						
COLA	College	40.12	36	⇑eP	P	07 33 27.2	-0.3
COLA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ZALV	Zalesovo Beam	41.42	307	PcP	PcP	07 35 36.4	+0.8
	comp=Z,1.0nm,0.4s,baz=112,slow=4.0,SNR=4.2						
MK31	Makanchi Array	45.16	298	⇑eP	P	07 34 08.8	+0.1
MKAR	Makanchi Array	45.16	298	P	P	07 34 08.6	-0.1
	comp=Z,0.8nm,0.6s,baz=81,slow=8.6,SNR=7.1						
KURK	Kurchatov	46.01	304	P	P	07 34 14.4	-0.8
KURK						07 35 52.7	
KURK	Kurchatov	46.01	304	eP	P	07 34 14.4	-0.8
KURBB	Kurchatov Arra	46.09	304	P	P	07 34 14.4	-1.6
	comp=Z,0.4nm,0.4s,baz=73,slow=8.3,SNR=2.7						
KURBB				PcP	PcP	07 35 52.7	+1.2
	comp=Z,0.5nm,0.3s,baz=73,slow=3.5,SNR=8.4						
AAK	Ala-Archa	51.96	296	⇑eP	P	07 35 00.1	-1.1
AAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
AAK	Ala-Archa	51.96	296	eP	P	07 35 00.1	-1.1
FINES	FINESS Array B	64.83	333	P	P	07 36 29.6	-0.8
	comp=Z,1.3nm,0.6s,baz=8.5,slow=2.8,SNR=5.0						
FINES	FINESS Array B	64.83	333	iP	P	07 36 31.5	+1.1
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA	Warramunga Arr	65.17	195	iP	P	07 36 34.4	+1.4
WRA				pmax	pmax		
	comp=Z,7.0nm,0.6s						

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*IDC **09** 07:27:05.9±0.9, 13°.89N×58°.23W, h0^{km}, mb3.8/8, mb1 4.2/11, mb1mx3.9/33, mbtmp3.9/11, ML4.3/3, MS3.3/1, Ms1 3.3/1, ms1mx2.7/32, Error ellipse: s-maj=23.4km s-min=20.8km az=85.0*

*NEIC **09** 07:27:07.3±1.7, 13°.94N±0°.06×58°.2W±0°.1, h22^{km}±8^{km}, mb4.0/6, Error ellipse: s-maj=19.0km s-min=7.3km az=77.0*

*TRN **09** 07:27:09.6, 13°.96N×58°.48W, h96^{km}, MD4.1*

ISC 09 07:27:08.5±1.7, **13°.93N**±0°.04×**58°.34W**±0°.06, **h26**^{km}±12^{km}, **n97,** σ1^{s}**89**/118, **mb3.7**/8, **North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBSP	Saint Philip	1.37	233	eP	Pb	07 27 33.8	+0.3
BBSP				eS	Sb	07 27 52.5	+2.0
BBGH	Gun Hill	1.43	237	eP	Pb	07 27 34.7	+0.3
BBGH				eS	Sb	07 27 52.7	+0.5
BBGH	Gun Hill	1.43	237	Pn	Pb	07 27 34.8	+0.3
BCHC	Barbados, Cave	1.49	238	eP	Pb	07 27 36.1	+0.5
BCHC				eS	Sb	07 27 54.9	+0.8
H05S1	Guadeloupe/Mar	2.47	282	Pn	Pn	07 27 46.4	-0.8
H05S1				Sn	Sn	07 28 14.0	-2.6
	SNR=59						
MPOM	Morne Pois Mar	2.50	282	eP	Pn	07 27 47.0	-0.5
MPOM				eS	Sn	07 28 16.0	-1.2
MPOM	Morne Pois Mar	2.50	282	Pn	Pn	07 27 46.9	-0.6
MCLT	Moule a Chique	2.54	265	eP	Pn	07 27 48.1	0.0
MCLT				eS	Sn	07 28 16.1	-2.1
MCLT	Moule a Chique	2.54	265	Pn	Pn	07 27 42.7	-5.4
MVM	Montagne Vaucl	2.56	284	eP	Pn	07 27 48.4	0.0
SLBI	Saint Lucia, B	2.56	272	eP	Pn	07 27 48.3	-0.1
SLBI				eS	Sn	07 28 16.9	-1.8
ILAM	Ilet Lapin Mar	2.60	289	eS	Sn	07 28 18.3	-1.3
ILAM	Ilet Lapin Mar	2.60	289	Pn	Pn	07 27 48.8	0.0
LPMF	Morne Lapointe	2.63	284	eP	Pn	07 27 48.9	-0.4
ZAM	Aeronautique	2.69	284	eP	Pn	07 27 49.9	-0.2
TRMF	Trois Ilets	2.70	283	eP	Pn	07 27 50.2	-0.1
BIM	Bigot	2.71	283	eP	Pn	07 27 50.6	+0.1
BIM				eS	Sn	07 28 20.3	-2.2
BIM	Bigot	2.71	283		Pn	07 27 50.9	+0.4
FDF	Fort de France	2.84	287	eP	Pn	07 27 52.6	+0.3
FDF				eS	Sn	07 28 24.6	-1.1
FDF	Fort de France	2.84	287		Pn	07 27 52.8	+0.5
BAMF	Morne Balai	2.86	288	eP	Pn	07 27 53.5	+0.9
GBMF	Grand Be	2.87	288	eP	Pn	07 27 53.6	+0.9
PML	Morne Lenard	2.88	287	eP	Pn	07 27 53.6	+0.7
SVN	Savane Anatole	2.89	289	eP	Pn	07 27 53.9	+0.9
SVN	Savane Anatole	2.89	289		Pn	07 27 53.4	+0.5
SVB	Belmont	2.91	257	eP	Pn	07 27 53.1	-0.1
SVB				eS	Sn	07 28 25.2	-2.1
SVB	Belmont	2.91	257		Pn	07 27 53.3	+0.1
SVOC	Richmond Hill,	2.91	255	eP	Pn	07 27 53.5	+0.3
SVOC	Richmond Hill,	2.91	255	e	Pb	07 28 02.7	+2.9
SVOC				eS	Sn	07 28 25.0	-2.3
PCM	Pelee Case Pet	2.92	288	eP	Pn	07 27 54.1	+0.8
DLPL	La Plaine	3.14	297	eS	Sn	07 28 31.4	-1.7
MDN	Morne-Daniel	3.26	295	eP	Pn	07 27 58.5	+0.5
MDN				eS	Sn	07 28 34.2	-1.8
GCMP	Grenada, Carri	3.33	245	eP	Pn	07 27 59.5	+0.5
GCMP				eS	Sn	07 28 35.9	-2.0
DSLB	Salisbury	3.34	297	eP	Pn	07 28 00.2	+1.1
TOSP	Speyside	3.39	220	eP	Pn	07 28 01.4	+1.6
TOSP				eS	Sn	07 28 39.2	+0.2
TOSP	Speyside	3.39	220	Pn	Pn	07 28 01.3	+1.6
MDCT	Cottage Hill,	3.46	299	eP	Pn	07 28 03.3	+2.6
MDCT				eS	Sn	07 28 41.0	+0.2
MAGL	Barre de l'ile	3.48	306	eP	Pn	07 28 01.2	+0.2
MAGL				eS	Sn	07 28 39.3	-2.1
H05N1	Guadeloupe/Mar	3.54	312	Pn	Pn	07 28 00.3	-1.5
H05N1				Sn	Sn	07 28 38.8	-4.1
	SNR=15						
GRSS	Sisters	3.58	243	eP	Pn	07 28 03.1	+0.7
GRSS				eS	Sn	07 28 42.5	-1.4
GRHS	Sauteurs	3.64	243	eP	Pn	07 28 04.6	+1.4
GRHS				eS	Sn	07 28 42.9	-2.5
GRGR	Grenville	3.70	241	eP	Pn	07 28 04.5	+0.5
GRGR				eS	Sn	07 28 45.8	-1.0
GRGR	Grenville	3.70	241	Pn	Pn	07 28 04.1	+0.1
TDBA	Terre de Bas,	3.71	301	eP	Pn	07 28 04.0	-0.2
TDBA				eS	Sn	07 28 44.3	-2.9
CBE	Ff, Capester	3.81	304	eP	Pn	07 28 06.7	+1.1
GRFF	Grenada Fort F	3.81	241	eP	Pn	07 28 05.2	-0.3
GRFF				eS	Sn	07 28 47.2	-2.3
TRN	Trinidad (W)	4.43	223	eP	Pn	07 28 16.0	+1.9
TRN	Trinidad (W)	4.43	223	eS	Sn	07 29 01.5	-3.4
ANBD	Bethesda, Anti	4.53	314	eP	Pn	07 28 15.2	-0.2
ANBD	Bethesda, Anti	4.53	314	eS	Sn	07 29 03.8	-3.5
ANWB	Willy Bob	4.98	319	eP	Pn	07 28 21.1	-0.5
ANWB	Willy Bob	4.98	319	eS	Sn	07 29 15.1	-3.3
SMRT	St. Maarten	6.12	313	Pn	Pn	07 28 36.7	-0.7
PCRV	Puerto La Cruz	7.21	239	Pn	Pn	07 28 53.1	+0.8
	5.8nm,0.3s,baz=78,slow=3.4,SNR=22						
PCRV				Sn	Sn	07 30 09.6	-3.7
	baz=346,slow=9.6,SNR=1.2						
PCRV				LR	LR	07 32 27.6	
	comp=Z,217nm,21.1s,slow=44						
CUPR	Culebra, Puert	7.97	304	Pn	Pn	07 29 03.2	+0.5
MTP	Monte Pirata	8.08	302	Pn	Pn	07 29 02.6	-1.7
CBYP	Canovanas	8.42	302	Pn	Pn	07 29 08.9	0.0
GCPR	Guaynabo City	8.62	301		Pn	07 29 13.0	+1.3
AOPR	Arecibo Observ	9.20	300	Pn	Pn	07 29 20.3	+0.6
AGPR	Aguadilla, PR	9.56	299	Pn	Pn	07 29 24.9	+0.4
MDP	Montagnes des	10.42	147	Pn	Pn	07 29 34.2	-2.1
	1.9nm,0.3s,baz=335,slow=16,SNR=16						
MDP				Sn	Sn	07 31 19.3	-13
	6.7nm,0.3s,baz=305,slow=18,SNR=14						
BAUV	El Baul	10.73	243	eP	Pn	07 29 41.8	+1.1
BAUV	El Baul	10.73	243	eS	Sn	07 31 31.4	-8.5
BAUV	El Baul	10.73	243	Pn	Pn	07 29 41.7	+1.1
DR12	Loma Pena Alta	11.64	296	Pn	Pn	07 29 51.5	-1.7
BOAV	Boa Vista	11.67	191		Pn	07 29 52.2	-1.2
PTGA	Pitinga	14.66	186	Pn	Pn	07 30 32.5	-1.8
	1.4nm,0.3s,baz=354,slow=22,SNR=20						
PTGA				Sn	Sn	07 33 04.2	-12
	1.8nm,0.3s,baz=266,slow=18,SNR=6.7						
PTGA	Pitinga	14.66	186		Pn	07 30 30.3	-4.0
OCAC	Ocana	15.75	251	eP	Pn	07 30 44.0	-4.9
OCAC	Ocana	15.75	251	Pn	Pn	07 30 45.4	-3.5
OCAC				IAmb	IAmb	07 30 58.8	
	comp=Z,5.7nm,0.5s						
SMLC	San Martn de	16.25	253	eP	Pn	07 30 53.1	-2.0
BARC	Barichara	16.32	245	eP	P	07 31 02.7	+3.6
RUSC	La Rusia	16.57	243	eP	P	07 31 06.4	+4.3
SJCC	San Jacinto, C	16.96	258		P	07 31 05.3	-0.6
SJCC				IAmb	IAmb	07 31 21.9	
	comp=Z,10nm,1.2s						
MACA	Manacapuru-AM	17.14	188		Pn	07 31 05.2	-1.3
MACA				IAmb	IAmb	07 31 28.9	
	comp=Z,8.4nm,0.5s						
ZARC	Zaragoza, Cauc	17.44	250	eP	Pn	07 31 07.5	-2.7
ZARC	Zaragoza, Cauc	17.44	250	P	Pn	07 31 09.9	-0.3
SPBC	San Pablo de B	17.54	244	eP	P	07 31 12.2	-0.2
CHIC	Chingaza	17.77	240	eP	P	07 31 17.0	+1.7
GUVC	San Jose del G	18.09	233	eP	P	07 31 33.2	+15
NORC	Norcasia	18.28	245	eP	P	07 31 22.0	+1.5
HELC	Santa Helena	18.58	247	eP	Pn	07 31 24.9	+0.3
DBBC	Dabeiba	18.86	250	eP	P	07 31 26.6	-0.4
GUY2C	Guyana, Caldas	18.88	244	eP	P	07 31 26.6	-1.0
CBOC	Ciudad Bolivar	19.16	247	eP	P	07 31 29.4	-0.9
PLMC	San Jos del P	19.83	245	eP	Pn	07 31 39.2	-0.1
ATAH	Atahualpa	28.89	225	P	P	07 33 08.5	+2.6
	comp=Z,4.9nm,1.0s,baz=119,slow=7.4,SNR=4.1						
LPAZ	La Paz	31.55	198	P	P	07 33 30.4	+0.8
	comp=Z,0.9nm,0.8s,baz=20,slow=11,SNR=3.7						
LPAZ	La Paz	31.55	198	P	P	07 33 27.9	-1.7
TXAR	Lajitas Array	44.55	298	P	P	07 35 19.9	+1.3
	comp=Z,0.4nm,0.7s,baz=122,slow=7.9,SNR=4.9						
TXAR	Lajitas Array	44.55	298	P	P	07 35 17.4	-1.1
MNTX	Cornudas Mount	46.44	301	P	P	07 35 33.5	+0.1
PDAR	Pinedale Array	52.43	314	P	P	07 36 21.2	+1.9
	comp=Z,0.9nm,0.7s,baz=108,slow=9.7,SNR=5.9						
PLCA	Paso Flores	55.55	191	P	P	07 36 43.3	+1.6
	comp=Z,1.8nm,0.8s,baz=61,slow=19,SNR=2.6						
NVAR	Mina Array Bea	58.01	307	P	P	07 37 02.3	+2.8
	comp=Z,0.5nm,0.6s,baz=87,slow=7.7,SNR=5.2						
TORD	Torodi Ar. Bea	58.23	83	P	P	07 37 02.7	+1.6
	comp=Z,0.7nm,0.8s,baz=316,slow=6.5,SNR=3.1						
GERES	GERESS Array B	67.83	43	P	P	07 38 05.2	+0.7
	comp=Z,0.2nm,0.3s,baz=224,slow=4.8,SNR=3.4						

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*IDC **09** 07:27:58.4±0.6, 6°.66N×95°.05E, h0^{km}, mb4.1/18, mb1 4.2/18, mb1mx4.1/39, mbtmp4.1/18, MS3.8/9, Ms1 3.9/9, ms1mx3.5/43, Error ellipse: s-maj=27.6km s-min=14.4km az=55.0*

*NEIC **09** 07:28:00.6±2.2, 6°.63N±0°.10×94°.80E±0°.08, h10^{km}±1^{km}, mb4.7/31, Error ellipse: s-maj=16.4km s-min=13.2km az=198.0*

*DJA **09** 07:28:03.1±1.7, 6°N±6°×9°4E±1°3, h35^{km}±15^{km}, M4.7/6, mb4.7/6, mB5.3/2, MLv4.7/6, Mw(mB)4.8/2*

ISC 09 07:28:00.7±0.4, **6°.61N**±0°.07×**94°.81E**±0°.09, **h10**^{km}**, n91,** σ1^{s}**53**/80, **mb4.5**/39, **MS3.8**/6, **1D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	2.53	123	P	Pn	07 28 43.8	+1.9
LHMI	Lhok Sumawe	2.53	123	Pn	Pn	07 28 40.3	-1.5
MLSI	Meulaboh, Aceh	2.82	146	P	Pn	07 28 45.5	-0.3
TPTI		4.08	144	P	Pn	07 29 02.0	-1.2
PSI	Prapat	5.58	132	Pn	Pn	07 29 24.6	+0.7
	5.0nm,0.3s,baz=322,slow=14,SNR=22						
GSI	Gunungsitoli	5.95	152	P	Pn	07 29 28.5	-0.4
	0.3nm2µm37nm,0.7s						
GSI	Gunungsitoli	5.95	152		Pn	07 29 30.6	+1.7
MNSI	Mandailing Nat	7.49	140	P	Pn	07 29 51.4	+1.4
	0.5nm35nm,0.4s						
CMAR	Chiang Mai Arr	12.45	19	Pn	Pn	07 31 01.3	+3.2
	0.6nm,0.3s,baz=208,slow=15,SNR=4.5						
CMAR				LR	LR	07 35 27.3	
	comp=Z,389nm,20.3s,baz=240,slow=36						
PALK	Pallekele	14.02	274	LR	LR	07 36 13.4	
	comp=Z,622nm,20.3s,baz=198,slow=35						
SLVN	Son La	17.08	30	P	P	07 32 02.2	+0.6
LEM	Lembang	18.48	136	LR	LR	07 40 23.8	
	comp=Z,779nm,18.4s,baz=290,slow=41						
ODAN	Odare	21.34	342	eP	P	07 32 45.5	-2.8
	18nm,0.7s						
RAMN	Ramite	21.68	340	eP	P	07 32 50.3	-1.7
	22nm,0.6s						
TAPN	Taplejung	21.70	343	eP	P	07 32 49.5	-2.8
JIRN	Jiri	22.48	340	eP	P	07 33 00.3	-0.4
	24nm,0.7s						
PKIN	Phulchoki	22.69	338	eP	P	07 33 03.1	+0.3
	13nm,0.5s						
GUN	Gumba	22.81	339	eP	P	07 33 04.5	+0.3
DMN	Daman	22.82	337	eP	P	07 33 05.8	+1.6
KOLN	Koldanda	23.58	334	eP	P	07 33 15.5	+3.6
	20nm,0.7s						
DANN	Dangsing	24.02	335	eP	P	07 33 20.6	+4.4
	26nm,0.7s						
H08S3	Diego Garcia H	26.38	238	T	T	08 00 14.3	
	baz=59,slow=74,SNR=52						
H08S2	Diego Garcia H	26.38	238	T	T	08 00 51.0	
	baz=59,SNR=45						
H08S1	Diego Carcia H	26.39	238	T	T	08 00 21.4	
	baz=59,slow=74,SNR=37						
KAPI	Kappang	27.45	114	LR	LR	07 45 29.1	
	comp=Z,264nm,18.8s,baz=302,slow=39						
KAPI	Kappang	27.45	114	P	P	07 33 48.1	+1.0
KAPI				IAmb	IAmb	07 33 49.5	
	comp=Z,15nm,1.0s						
NIL	Nilore	33.51	326	P	P	07 34 38.7	-1.8
WSAR	Wadi Sarin	38.51	299	P	P	07 35 25.6	+2.0
	comp=Z,2.0nm,0.6s,baz=124,slow=15,SNR=1.4						
GAR	Garm	39.09	329	P	P	07 35 27.0	-1.3
GAR				IAmb	IAmb	07 35 38.3	
	comp=Z,20nm,0.8s						
FITZ	Fitzroy Crossi	39.10	129	P	P	07 35 25.6	-2.9
FITZ				IAmb	IAmb	07 35 32.5	
	comp=Z,6.8nm,0.7s						
CHGR	Chuyangaron	39.44	328	P	P	07 35 29.6	-1.6
CHGR				IAmb	IAmb	07 35 36.2	
	comp=Z,19nm,0.7s						
AAK	Ala-Archa	40.12	337	P	P	07 35 36.7	-0.2
	comp=Z,2.0nm,0.7s,baz=187,slow=11,SNR=3.1						
MK31	Makanchi Array	41.46	347	P	P	07 35 46.6	-1.0
MKAR	Makanchi Array	41.46	347	P	P	07 35 47.2	-0.4
	comp=Z,1.1nm,0.6s,baz=168,slow=8.3,SNR=11						
MKAR				LR	LR	07 56 43.8	
	comp=Z,69nm,19.4s,baz=164,slow=42						
MAKZ	Makanchi	41.54	347	P	P	07 35 49.3	+0.9
KKAR	Karatay Array	42.18	333	P	P	07 35 52.7	-0.9
SONM	Songino Array	42.25	12	P	P	07 35 54.1	-0.2
	comp=Z,3.3nm,0.9s,baz=193,slow=9.4,SNR=12						
SONM				PcP	PcP	07 37 46.8	-1.4
	comp=Z,0.3nm,0.5s,baz=184,slow=4.3,SNR=1.6						
SONM				LR	LR	07 55 33.7	
	comp=Z,152nm,18.8s,baz=188,slow=39						
SONM	Songino Array	42.25	12	P	P	07 35 54.4	+0.1
KSRS	Korea Array	42.99	40	LR	LR	07 54 48.8	
	comp=Z,118nm,19.5s,baz=235,slow=38						
NWAO	Narrogin (SRO)	44.73	153	LR	LR	07 53 55.4	
	comp=Z,97nm,20.3s,baz=88,slow=35						
NWAO	Narrogin (SRO)	44.73	153	P	P	07 36 14.1	-0.2
NWAO				IAmb	IAmb	07 36 17.7	
	comp=Z,17nm,1.0s						
H01W3	Cape Leeuwin H	45.12	157	T	T	08 24 39.3	
	baz=328						
H01W2	Cape Leeuwin H	45.14	157	T	T	08 24 47.0	
	baz=328						
H01W1	Cape Leeuwin H	45.14	157	T	T	08 24 59.0	
	baz=328						
GEYT	Alibeck	45.58	319	P	P	07 36 22.4	+1.3
	comp=Z,2.1nm,0.5s,baz=137,slow=20,SNR=2.4						
KURBB	Kurchatov Arra	45.93	346	P	P	07 36 23.6	+0.1
	comp=Z,1.4nm,0.3s,baz=170,slow=6.9,SNR=7.9						
KURK	Kurchatov	45.99	346	P	P	07 36 22.8	-1.2
KURK				IAmb	IAmb	07 36 32.8	
	comp=Z,3.4nm,0.7s						
WB0	Warramunga Arr	46.95	125	P	P	07 36 30.8	-1.3
WB0				IAmb	IAmb	07 36 36.3	
	comp=Z,5.4nm,0.7s						
WRA	Warramunga Arr	47.00	125	P	P	07 36 30.6	-1.9
	comp=Z,2.1nm,0.9s,baz=304,slow=9.2,SNR=31						
WRA	Warramunga Arr	47.00	125	P	P	07 36 31.4	-1.0
WRAB	Tennant Creek	47.00	125	P	P	07 36 30.7	-1.8
WB2	Warramunga Arr	47.01	125	P	P	07 36 30.8	-1.7
WR0	Warramunga Arr	47.17	125	P	P	07 36 32.7	-1.1
WR0				IAmb	IAmb	07 36 38.6	
	comp=Z,5.9nm,0.8s						
ZAA0	Zalesovo Array	47.89	352	P	P	07 36 38.6	-0.2
ZAA0				IAmb	IAmb	07 37 05.4	
	comp=Z,8.9nm,1.4s						
ZALV	Zalesovo Beam	47.89	352	P	P	07 36 38.0	-0.8
	comp=Z,1.4nm,0.7s,baz=150,slow=6.2,SNR=7.5						
ZALV	Zalesovo Beam	47.89	352	P	P	07 36 38.6	-0.2
AS31	Alice Springs	48.60	130	P	P	07 36 44.0	-0.9
ASAR	Alice Springs	48.60	130	P	P	07 36 42.5	-2.5
	comp=Z,1.2nm,0.5s,baz=299,slow=7.5,SNR=19						
ASAR	Alice Springs	48.60	130	P	P	07 36 43.1	-1.8
USRK	Ussuriysk Ar.	49.55	35	P	P	07 36 52.8	+1.0
BVAR	Borovoye Array	50.39	341	P	P	07 36 56.7	-1.4
	comp=Z,2.3nm,0.6s,baz=193,slow=12,SNR=8.4						
BRVK	Borovoye	50.45	341	P	P	07 36 58.0	-0.5
BRVK				IAmb	IAmb	07 37 11.4	
	comp=Z,5.5nm,1.1s						
ATD	Arta Tunnel	51.49	279	LR	LR	07 55 17.5	
	comp=Z,61nm,20.1s,baz=50,slow=32						
ABKAR	Akbulak array	51.65	331	P	P	07 37 06.7	-0.9
ABKAR	Akbulak array	51.65	331	P	P	07 37 07.0	-0.5
ABKAR				IAmb	IAmb	07 37 14.0	
	comp=Z,7.0nm,0.7s						
BBOO	Buckleboo	55.44	138	P	P	07 37 34.0	-1.7
BBOO				IAmb	IAmb	07 37 38.5	
	comp=Z,14nm,1.1s						
STKA	Stephens Creek	58.76	134	P	P	07 37 56.3	-2.9
	comp=Z,1.5nm,0.8s,baz=325,slow=17,SNR=4.0						
STKA	Stephens Creek	58.76	134	P	P	07 38 00.6	+1.4
BRTR	Keskin Array B	63.75	311	P	P	07 38 32.1	-1.0
	comp=Z,3.4nm,0.7s,baz=125,slow=7.9,SNR=3.7						
BRTR	Keskin Array B	63.75	311	P	P	07 38 33.2	+0.1
TOO	Toolangi	64.49	137	P	P	07 38 39.4	+1.6
TOO				IAmb	IAmb	07 38 45.3	
	comp=Z,6.5nm,1.0s						
CAN	Canberra	65.83	133	P	P	07 38 47.4	+0.8
CAN				IAmb	IAmb	07 38 54.0	
	comp=Z,7.9nm,1.0s						
TIXI	Tiksi	68.34	11	P	P	07 39 00.7	-1.1
AKASG	Malin Array Be	69.55	322	P	P	07 39 08.7	-1.1
	comp=Z,2.2nm,0.7s,baz=91,slow=4.9,SNR=5.1						

LVZ	Lovozero	72.97	340	P	P	07 39 29.8	-0.4
FIA1	FINESS Array S	74.13	332	P	P	07 39 34.9	-2.1
FIA1				IAmb	IAmb	07 39 38.8	
	comp=Z,11nm,0.9s						
FINES	FINESS Array B	74.13	332	P	P	07 39 35.5	-1.5
	comp=Z,4.4nm,0.6s,baz=100,slow=5.2,SNR=18						
FINES	FINESS Array B	74.13	332	P	P	07 39 35.1	-1.9
BOSA	Boshof	75.48	238	P	P	07 39 47.2	+1.6
	comp=Z,1.9nm,0.9s,baz=75,slow=6.1,SNR=5.5						
BOSA	Boshof	75.48	238	P	P	07 39 45.7	0.0
BOSA				IAmb	IAmb	07 40 03.5	
	comp=Z,4.2nm,1.0s						
ARCES	ARCESS Array B	76.67	340	P	P	07 39 50.8	-0.8
	comp=Z,2.4nm,0.6s,baz=60,slow=4.9,SNR=7.7						
ARCES	ARCESS Array B	76.67	340	P	P	07 39 51.0	-0.5
GERES	GERESS Array B	79.20	318	P	P	07 40 04.8	-1.4
	comp=Z,0.4nm,0.4s,baz=106,slow=4.4,SNR=4.1						
SYO	Syowa Base	84.40	197⇓	eP	P	07 40 35.2	+2.3
TORD	Torodi Ar. Bea	91.53	283	P	P	07 41 10.0	+1.6
	comp=Z,0.5nm,0.8s,baz=97,slow=3.0,SNR=2.9						
IMAR	Indian Mountai	92.54	22	P	P	07 41 12.5	+0.5
ULM	Lac du Bonnet	122.62	8	PKP	PKPdf	07 46 56.2	-0.5
	comp=Z,2.3nm,0.7s,baz=12,slow=2.4,SNR=4.3						
NVAR	Mina Array Bea	125.65	32	PKP	PKiKP	07 47 03.5	-0.1
	comp=Z,0.2nm,0.5s,baz=225,slow=5.0,SNR=2.0						
PDAR	Pinedale Array	126.09	22	PKP	PKPdf	07 47 04.0	0.0
	comp=Z,0.8nm,0.8s,baz=72,slow=0.5,SNR=6.5						
TXAR	Lajitas Array	140.09	26	PKP	PKiKP	07 47 32.7	-0.2
	comp=Z,0.7nm,0.6s,baz=175,slow=1.1,SNR=11						
CPUP	Villa Florida	146.99	230	PKPbc	PKPbc	07 47 44.7	+0.3
	comp=Z,2.5nm,0.8s,baz=49,slow=10,SNR=2.2						

IDC 09 07:30:09.5±3.2**, 5°.84N×93°.85E, h0km, mb3.7**/4**, mb1 3.9**/4**, mb1mx3.5**/37**, mbtmp3.7**/4**, MS4.0**/1**, Ms1 4.0**/1**, ms1mx3.0**/45**, Error ellipse: s-maj=190.5km s-min=28.1km az=53.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	42.00	348	P	P	07 38 02.5	-0.1
	0.4nm,0.6s,baz=166,slow=7.4,SNR=1.8						
WRA	Warramunga Arr	47.35	124	P	P	07 38 45.2	-0.5
	0.8nm,0.8s,baz=303,slow=9.1,SNR=1.5						
ASAR	Alice Springs	48.87	128	P	P	07 38 57.7	+0.3
	0.4nm,0.4s,baz=293,slow=7.2,SNR=1.6						
ASAR				LR	LR	07 59 35.1	
	comp=Z,142nm,19.4s,baz=296,slow=36						
FINES	FINESS Array B	74.36	332	P	P	07 41 48.9	0.0
	1.1nm,0.6s,baz=130,slow=4.3,SNR=1.5						

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*IDC **09** 07:36:42.7±0.8, 6°.31N×94°.45E, h0km, mb4.0/12, mb1 4.1/14, mb1mx4.0/35, mbtmp4.0/14, ML4.0/2, MS3.6/2, Ms1 3.7/2, ms1mx3.1/41, Error ellipse: s-maj=37.8km s-min=15.6km az=53.0*

*NEIC **09** 07:36:45.3±1.2, 6°.4N±0°.2×94°.65E±0°.08, h10km±1km, mb4.4/24, Error ellipse: s-maj=29.4km s-min=4.9km az=207.0*

ISC 09 07:36:44.6±0.6**, 6°.4N**±0°.1×**94°.6E**±0°.1**, h10km, n49, σ0ˢ.91**/45**, mb4.2**/24**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	2.63	115	Pn	Pn	07 37 26.4	-0.8
PSI	Prapat	5.61	129	Pn	Pn	07 38 11.2	+2.9
	5.0nm,0.3s,baz=317,slow=13,SNR=23						
CMAR	Chiang Mai Arr	12.77	19	Pn	Pn	07 39 46.7	+0.2
	0.3nm,0.3s,baz=207,slow=14,SNR=2.3						
CMAR				LR	LR	07 44 22.8	
	comp=Z,180nm,18.2s,baz=212,slow=36						
SLVN	Son La	17.43	30	P	Pn	07 40 47.7	-0.4
LEM	Lembang	18.47	135	LR	LR	07 49 11.3	
	comp=Z,279nm,18.9s,baz=215,slow=40						
H08S3	Diego Garcia H	26.02	238	T	T	08 09 03.0	
	baz=57,slow=75,SNR=80						
H08S2	Diego Garcia H	26.03	238	T	T	08 09 08.1	
	baz=57,slow=75,SNR=47						
H08S1	Diego Carcia H	26.04	238	T	T	08 09 04.8	
	baz=57,slow=75,SNR=36						
NIL	Nilore	33.59	327	P	P	07 43 24.8	-0.4
DRK	Karamyk	38.83	331	P	P	07 44 11.1	+0.8
FITZ	Fitzroy Crossi	39.13	129	P	P	07 44 11.7	-1.0
FITZ				IAmb	IAmb	07 44 17.9	
	comp=Z,5.0nm,0.8s						
GAR	Garm	39.19	330	P	P	07 44 13.2	+0.2
CHGR	Chuyangaron	39.52	328	P	P	07 44 15.4	-0.4
CHGR				IAmb	IAmb	07 44 22.0	
	comp=Z,13nm,0.8s						
BTK	Batken	39.76	331	P	P	07 44 18.8	+1.1
BTK				IAmb	IAmb	07 44 25.7	
	comp=Z,11nm,0.8s						
AAK	Ala-Archa	40.26	337	P	P	07 44 23.3	+1.3
AAK				IAmb	IAmb	07 44 33.3	
	comp=Z,3.7nm,0.8s						
MK31	Makanchi Array	41.66	347	P	P	07 44 33.1	-0.1
MKAR	Makanchi Array	41.66	347	P	P	07 44 32.8	-0.5
	comp=Z,1.1nm,0.5s,baz=170,slow=7.5,SNR=12						
MKAR	Makanchi Array	41.66	347	P	P	07 44 33.1	-0.1
MAKZ	Makanchi	41.74	347	P	P	07 44 34.2	+0.3
MAKZ				IAmb	IAmb	07 44 40.5	
	comp=Z,2.9nm,0.7s						
KK31	Karatay Array	42.30	334	P	P	07 44 39.5	+0.9
KK31				IAmb	IAmb	07 44 45.9	
	comp=Z,8.5nm,1.0s						
KKAR	Karatay Array	42.30	334	P	P	07 44 38.9	+0.3
KKAR	Karatay Array	42.30	334	P	P	07 44 39.2	+0.7
KKAR				IAmb	IAmb	07 44 46.0	
	comp=Z,8.5nm,1.0s						
SONM	Songino Array	42.56	12	P	P	07 44 41.0	+0.3
	comp=Z,2.8nm,0.9s,baz=193,slow=9.3,SNR=13						
SONM	Songino Array	42.56	12	P	P	07 44 40.7	0.0
WB0	Warramunga Arr	47.02	124	P	P	07 45 14.8	-1.7
WB0				IAmb	IAmb	07 45 22.7	
	comp=Z,2.9nm,0.7s						
WRA	Warramunga Arr	47.06	125	P	P	07 45 16.1	-0.7
	comp=Z,1.6nm,0.9s,baz=306,slow=9.3,SNR=4.3						
WRA	Warramunga Arr	47.06	125	P	P	07 45 15.8	-1.1
WB2	Warramunga Arr	47.07	125	P	P	07 45 16.3	-0.6
WR0	Warramunga Arr	47.23	125	P	P	07 45 17.6	-0.6
WR0				IAmb	IAmb	07 45 35.3	
	comp=Z,4.5nm,0.9s						
ZALV	Zalesovo Beam	48.11	352	P	P	07 45 24.1	-0.4
	comp=Z,0.7nm,0.4s,baz=146,slow=8.6,SNR=5.4						
AS31	Alice Springs	48.64	129	P	P	07 45 27.9	-1.2
ASAR	Alice Springs	48.64	129	P	P	07 45 28.6	-0.6
	comp=Z,0.8nm,0.5s,baz=299,slow=7.8,SNR=15						
ASAR	Alice Springs	48.64	129	P	P	07 45 28.8	-0.4
ABKAR	Akbulak array	51.76	332	P	P	07 45 53.2	+0.9
ABKAR	Akbulak array	51.76	332	P	P	07 45 53.0	+0.7
ABKAR				IAmb	IAmb	07 45 59.8	
	comp=Z,8.8nm,0.9s						
STKA	Stephens Creek	58.77	133	P	P	07 46 43.1	-0.1
	comp=Z,1.4nm,0.6s,baz=290,slow=4.1,SNR=3.9						
STKA	Stephens Creek	58.77	133	P	P	07 46 42.4	-0.9
BRTR	Keskin Array B	63.73	311	P	P	07 47 16.2	-0.7
	comp=Z,1.4nm,0.7s,baz=149,slow=6.4,SNR=2.8						
AKASG	Malin Array Be	69.60	322	P	P	07 47 53.4	-0.6
	comp=Z,1.3nm,0.7s,baz=91,slow=5.1,SNR=2.5						
FIA1	FINESS Array S	74.24	332	P	P	07 48 21.7	+0.1
FIA1				IAmb	IAmb	07 48 49.9	
	comp=Z,7.1nm,0.9s						
FINES	FINESS Array B	74.24	332	P	P	07 48 21.0	-0.7
	comp=Z,4.3nm,0.4s,baz=101,slow=5.6,SNR=30						
FINES	FINESS Array B	74.24	332	P	P	07 48 21.5	-0.2
ARCES	ARCESS Array B	76.83	340	P	P	07 48 36.3	-0.1
	comp=Z,2.6nm,0.7s,baz=85,slow=5.5,SNR=9.3						
ARCES	ARCESS Array B	76.83	340	P	P	07 48 37.1	+0.7
GERES	GERESS Array B	79.23	318	P	P	07 48 49.9	-0.4
	comp=Z,1.0nm,0.8s,baz=85,slow=4.3,SNR=5.4						
TORD	Torodi Ar. Bea	91.34	283	P	P	07 49 51.5	0.0
	comp=Z,0.2nm,0.5s,baz=120,slow=2.6,SNR=1.9						
VNDA	Vanda	91.36	168	P	P	07 49 49.4	-0.8
VNDA				IAmb	IAmb	07 49 58.4	
	comp=Z,1.3nm,0.8s						
PDAR	Pinedale Array	126.42	22	PKP	PKiKP	07 55 51.0	+1.9
	comp=Z,0.4nm,0.7s,baz=101,slow=3.2,SNR=3.9						
TXAR	Lajitas Array	140.43	25	PKP	PKPdf	07 56 16.5	+1.5
	comp=Z,0.2nm,0.6s,baz=45,slow=0.3,SNR=2.3						

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*IDC **09** 07:43:04.5±1.7, 6°.61N×94°.94E, h0km, mb3.7/6, mb1 3.8/7, mb1mx3.6/38, mbtmp3.7/7, ML3.5/1, Error ellipse: s-maj=87.8km s-min=20.7km az=55.0*

ISC 09 07:43:05.4±1.8**, 6°.6N**±0°.3×**94°.8E**±0°.5**, h10km, n11, σ1ˢ.31**/8**, mb3.7**/6**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	5.58	132	Pn	Pn	07 44 29.5	+0.8
	1.5nm,0.3s,baz=323,slow=15,SNR=5.9						
H08S3	Diego Garcia H	26.32	238	T	T	08 16 03.0	
	baz=57,slow=74,SNR=3.1						
H08S2	Diego Garcia H	26.32	238	T	T	08 15 57.0	
	baz=57,slow=74,SNR=3.1						
H08S1	Diego Carcia H	26.34	238	T	T	08 15 27.0	
	baz=57,SNR=3.1						
MKAR	Makanchi Array	41.49	347	P	P	07 50 51.7	-1.0
	0.2nm,0.5s,baz=147,slow=27,SNR=2.9						
SONM	Songino Array	42.30	12	P	P	07 50 59.9	+0.5
	1.0nm,0.9s,baz=196,slow=9.0,SNR=3.9						
WRA	Warramunga Arr	47.00	125	P	P	07 51 36.6	-0.6
	0.2nm,0.5s,baz=303,slow=9.8,SNR=2.6						
ASAR	Alice Springs	48.60	130	P	P	07 51 48.9	-0.8
	0.8nm,0.6s,baz=299,slow=8.0,SNR=5.8						
FINES	FINESS Array B	74.15	332	P	P	07 54 43.2	+1.3
	1.5nm,0.6s,baz=94,slow=5.0,SNR=9.1						
ARCES	ARCESS Array B	76.70	340	P	P	07 54 57.7	+1.2
	3.2nm,1.0s,baz=114,slow=9.0,SNR=1.5						
TXAR	Lajitas Array	140.14	26	PKP	PKiKP	08 02 36.2	-1.6
	1.6nm,1.4s,baz=308,slow=3.0,SNR=2.1						

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*IDC **09** 07:51:01.9±2.2, 6°.37N×94°.73E, h0km, mb3.6/5, mb1 3.7/6, mb1mx3.6/39, mbtmp3.6/6, ML3.3/1, MS3.2/1, Ms1 3.2/1, ms1mx2.6/50, Error ellipse: s-maj=93.7km s-min=22.6km az=57.0*

ISC 09 07:51:03.3±2.1**, 6°.4N**±0°.3×**94°.6E**±0°.5**, h10km, n10, σ1ˢ.39**/6**, mb3.5**/5**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	5.57	129	Pn	Pn	07 52 27.5	+1.1
	1.0nm,0.3s,baz=314,slow=13,SNR=4.9						
H08S3	Diego Garcia H	26.06	238	T	T	08 23 18.5	
	baz=57,slow=75,SNR=4.9						
H08S2	Diego Garcia H	26.06	238	T	T	08 23 18.7	
	baz=57,slow=75,SNR=6.4						
H08S1	Diego Carcia H	26.08	238	T	T	08 23 23.9	
	baz=57,slow=75,SNR=5.3						
MKAR	Makanchi Array	41.67	347	P	P	07 58 53.2	+1.2
	0.5nm,0.6s,baz=165,slow=9.4,SNR=4.6						
SONM	Songino Array	42.55	12	P	P	07 58 58.5	-0.8
	0.6nm,0.7s,baz=198,slow=9.1,SNR=3.4						
NWAO	Narrogin (SRO)	44.59	153	LR	LR	08 17 10.5	
	comp=Z,32nm,20.7s,baz=188,slow=35						
WRA	Warramunga Arr	47.02	125	P	P	07 59 34.5	-0.8
	0.5nm,0.7s,baz=306,slow=8.8,SNR=3.0						
ASAR	Alice Springs	48.60	129	P	P	07 59 46.2	-1.3
	0.2nm,0.6s,baz=299,slow=8.2,SNR=2.0						
FINES	FINESS Array B	74.26	332	P	P	08 02 40.3	-0.1
	1.5nm,0.9s,baz=90,slow=3.5,SNR=1.4						

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*NOU **09** 07:58:36.8, 31°.17S×177°.91W, h384km, mb4.6/23, Kermadec Islands Region*

*NEIC **09** 07:58:58.3±2.0, 32°.0S±0°.1×179°.64E±0°.10, h435km±6km, mb4.5/48, Error ellipse: s-maj=16.2km s-min=10.0km az=212.0*

*IDC **09** 07:58:59.4±1.5, 31°.88S×179°.45E, h446km±15km, mb3.9/16, mb1 4.0/19, mb1mx3.8/37, mbtmp4.7/19, Error ellipse: s-maj=14.8km s-min=11.0km az=160.0*

*WEL **09** 07:59:02.3±0.8, 32°S±6°×18°0W±1°3, h333km±17km, M5.4/19, mB5.8/17, MLv5.8/19, Mw(mB)5.3/17, Error ellipse: s-maj=0.0km s-min=0.0km az=108.4*

ISC 09 07:58:57.7±0.3**, 32°.05S**±0°.05×**179°.73E**±0°.07**, h439km, n245, σ1ˢ.81**/260**, mb4.4**/46**, 1C, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.44	37	P	P	08 00 04.7	-2.8
RAO	Raoul Island	3.45	37	P	P	08 00 05.0	-2.5
	67nm,0.3s,baz=78,slow=12,SNR=7.1						
RAO				S	S	08 00 56.2	-8.0
	124nm,0.3s,baz=88,slow=22,SNR=3.2						
RAO	Raoul Island	3.45	37	P	P	08 00 04.1	-3.5
RIZ	Raoul Island	3.45	36	P	P	08 00 03.5	-4.0
GRZ	Great Barrier	5.49	219	P	P	08 00 28.0	+1.8
MXZ	Matakaoa Point	5.62	192	P	P	08 00 25.3	-2.3
MXZ				S	S	08 01 37.1	-4.0
MXZ	Matakaoa Point	5.62	192		P	08 00 26.3	-1.3
KUZ	Kuaotunu	5.74	214	P	P	08 00 30.6	+1.9
WMGZ	Waiomatatini S	5.86	190	P	P	08 00 29.9	-0.1
WMGZ				S	S	08 01 42.7	-2.8
HAZ	Te Kaha	5.91	195	P	P	08 00 32.6	+2.1
HAZ				S	S	08 01 42.7	-3.9
WCZ	Waipu Caves	5.92	228	P	P	08 00 32.8	+2.1
PKGZ	Pakihiroa	5.98	193	P	P	08 00 32.4	+1.0
PKGZ				S	S	08 01 40.9	-7.0
OUZ	Omahuta	6.01	237	P	P	08 00 33.4	+1.8
OUZ	Omahuta	6.01	237		P	08 00 33.0	+1.3
OUZ	Omahuta	6.01	237	P	P	08 00 32.9	+1.3
WIAZ	Waiheke Island	6.07	217	P	P	08 00 34.4	+2.2
PUZ	Puketiti	6.13	191	P	P	08 00 33.8	+1.0
PUZ				S	S	08 01 46.2	-4.5
RUGZ	Raukumara Rang	6.14	195	P	P	08 00 34.0	+1.0
RUGZ				S	S	08 01 43.9	-7.2
WHRZ	Whale Island	6.22	201	P	P	08 00 36.0	+2.2
WHRZ				S	S	08 01 53.0	+0.6
TWGZ	Tauwhareparae	6.28	193	P	P	08 00 36.1	+1.7
TWGZ				S	S	08 01 50.5	-3.1
ETAZ	East Tamaki Re	6.29	218	P	P	08 00 36.6	+2.0
MWZ	Matawai	6.52	195	P	P	08 00 36.8	-0.3
MWZ				S	S	08 01 53.8	-4.5
CNGZ	Carnagh Statio	6.54	191	P	P	08 00 37.0	-0.2
CNGZ				S	S	08 01 54.6	-3.9
URZ	Urewera	6.56	198	P	P	08 00 35.7	-1.7
	557nm,0.3s,baz=120,slow=24,SNR=213						
URZ				S	S	08 01 55.5	-3.4
	379nm,0.3s,baz=210,slow=23,SNR=21						
URZ	Urewera	6.56	198	P	P	08 00 38.0	+0.6
URZ				S	S	08 01 55.5	-3.4
URZ	Urewera	6.56	198		P	08 00 35.1	-2.3
TKGZ	Te Karaka	6.56	193	P	P	08 00 36.4	-1.1
TKGZ				S	S	08 01 54.6	-4.3
RAGZ	Rawiri	6.70	196	P	P	08 00 37.8	-1.3
RAGZ				S	S	08 01 57.9	-4.0
RIGZ	Rimuhau	6.83	193	P	P	08 00 40.7	+0.3
RIGZ				S	S	08 02 00.4	-3.9
SNGZ	Shannon Statio	6.99	196	P	P	08 00 41.3	-0.8
SNGZ				S	S	08 02 03.7	-3.8
PRGZ	Paritu Road	7.02	192	P	P	08 00 44.2	+1.8
PRGZ				S	S	08 02 07.4	-0.6
MTHZ	Maungataniwha	7.18	198	P	P	08 00 44.2	0.0
MTHZ				S	S	08 02 08.8	-2.5
BKZ	Black Stump Fm	7.57	199	P	P	08 00 45.3	-3.0
BKZ	Black Stump Fm	7.57	199	P	P	08 00 45.5	-2.9
HIZ	Hauiti	7.58	210	P	P	08 00 49.3	+0.9
BFZ	Birch Farm	9.06	197	P	P	08 01 02.3	-2.1
SNZO	South Karori	10.08	202	P	P	08 01 14.5	-1.1
BHW	Baring Head	10.12	201	P	P	08 01 15.4	-0.6
PLWZ	Palliser	10.15	199	P	P	08 01 14.4	-2.0
QRZ	Quartz Range	10.50	211	P	P	08 01 19.2	-1.0
QRZ	Quartz Range	10.50	211	P	P	08 01 18.2	-2.0
KHZ	Kahutara	11.46	204	P	P	08 01 28.6	-2.0
RPZ	Rata Peaks	13.50	208	P	P	08 01 52.2	-0.6
MSVF	Nonsavu	14.34	354	P	P	08 02 00.1	-2.1
	1.4nm,0.3s,baz=259,slow=20,SNR=8.0						
MSVF	Nonsavu	14.34	354	P	P	08 02 00.8	-1.4
PINNC	Pines Island,	14.39	308	P	P	08 02 02.1	-0.6
ODZ	Otahua Downs	14.78	206	P	P	08 02 06.2	-0.3
OUENC	Ouen Island, N	14.93	307	P	P	08 02 00.6	-7.9
ONTNC	Ouen Toro	15.27	306	P	P	08 02 12.3	+0.1
DZM	Mont Dzumac	15.44	307	eP	P	08 02 13.8	-0.2
	130nm,1.1s						
DZM	Mont Dzumac	15.44	307	P	P	08 02 12.6	-1.4
	1.2nm,0.3s,baz=123,slow=14,SNR=14						
DZM	Mont Dzumac	15.44	307	P	P	08 02 14.3	+0.3
NIUE	Niue	15.92	38	P	P	08 01 39.2	-40
AFI	Afiamalu	19.66	25	P	P	08 02 58.2	+1.3
	3.1nm,0.3s,baz=77,slow=8.2,SNR=7.1						
ARMA	Armidale	24.06	266	P	P	08 03 38.9	+2.3
EIDS	Eidsvold	25.94	278	P	P	08 03 53.6	+0.3
EIDS				IAmb	IAmb	08 03 54.4	
	comp=Z,17nm,1.1s						
TOO	Toolangi	28.54	249	P	P	08 04 18.2	+2.1
CMSA	Cobar Meteorol	28.87	262	P	P	08 04 19.8	+0.8
	comp=Z,15nm,0.8s						
KNTN	Kanton	30.21	17	P	P	08 04 30.0	-0.8
CTA	Charters Tower	32.21	283	P	P	08 04 47.9	-0.3
	comp=Z,9.8nm,0.5s,baz=114,slow=10,SNR=30						
CTA	Charters Tower	32.21	283	P	P	08 04 48.4	+0.3
	comp=Z,22nm,0.6s						
CTAO	Charters Tower	32.21	283	P	P	08 04 48.6	+0.4
CTAO				IAmb	IAmb	08 04 49.0	
	comp=Z,13nm,0.6s						
CTAO	Charters Tower	32.21	283	P	P	08 04 48.3	+0.2
STKA	Stephens Creek	32.24	260	P	P	08 04 48.2	0.0
	comp=Z,1.5nm,0.5s,baz=107,slow=12,SNR=8.4						
STKA	Stephens Creek	32.24	260	P	P	08 04 48.3	0.0
STKA	Stephens Creek	32.24	260	P	P	08 04 49.6	+1.4
	comp=Z,1.0nm,2.1s						
HTT	Hallett	34.20	256	P	P	08 05 06.7	+1.7
LCRK	Leigh Creek	35.37	261	P	P	08 05 14.4	-0.4
	comp=Z,16nm,0.6s						
BBOO	Buckleboo	36.67	257	P	P	08 05 25.5	-0.2
BBOO	Buckleboo	36.67	257	P	P	08 05 25.1	-0.5
	comp=Z,11nm,1.1s						
QIS	Mount Isa	37.55	278	P	P	08 05 32.6	-0.4
	comp=Z,4.3nm,0.9s						
OOD	Oodnadatta	38.21	265	P	P	08 05 38.3	-0.1
	comp=Z,12nm,1.1s						
MULG	Mulgathing	38.90	260	P	P	08 05 43.0	-1.0
	comp=Z,8.8nm,1.0s						
AS31	Alice Springs	41.12	270	P	P	08 06 00.7	-1.3
ASAR	Alice Springs	41.12	270	P	P	08 06 01.1	-0.9
	comp=Z,5.5nm,0.6s,baz=105,slow=7.4,SNR=83						
ASAR				ScP	ScP	08 10 58.9	-0.1
	comp=Z,1.5nm,0.7s,baz=122,slow=3.9,SNR=8.7						
ASAR				S	S	08 11 34.0	-8.3
	comp=Z,0.8nm,0.9s,baz=112,slow=15,SNR=4.7						
ASAR	Alice Springs	41.12	270	P	P	08 06 00.3	-1.7
WR0	Warramunga Arr	42.08	275	P	P	08 06 08.5	-1.2
WR0				IAmb	IAmb	08 06 09.4	
	comp=Z,7.9nm,0.6s						
WB2	Warramunga Arr	42.25	275	P	P	08 06 10.1	-1.0
WRAB	Tennant Creek	42.25	275	P	P	08 06 09.9	-1.2
WRAB				IAmb	IAmb	08 06 11.0	
	comp=Z,11nm,0.7s						
WRAB	Tennant Creek	42.25	275	P	P	08 06 10.6	-0.5
WRA	Warramunga Arr	42.26	275	P	P	08 06 09.9	-1.2
	comp=Z,11nm,0.5s,baz=114,slow=7.5,SNR=133						
WRA				ScP	ScP	08 11 04.2	+0.6
	comp=Z,2.5nm,0.7s,baz=112,slow=3.8,SNR=12						
WRA				S	S	08 11 57.1	-1.8
	comp=Z,2.5nm,1.0s,baz=112,slow=18,SNR=5.0						
WRA	Warramunga Arr	42.26	275	P	P	08 06 10.0	-1.2
WB0	Warramunga Arr	42.29	275	P	P	08 06 10.3	-1.1
WB0				IAmb	IAmb	08 06 11.3	
	comp=Z,15nm,0.7s						
FORT	Forrest	43.77	257	P	P	08 06 22.5	-0.3
FORT	Forrest	43.77	257	P	P	08 06 22.0	-0.8
VNDA	Vanda	46.27	185	ScP	ScP	08 11 21.5	+2.5
	comp=Z,2.7nm,0.8s,baz=347,slow=3.4,SNR=14						
KNRA	Kununurra	48.93	277	P	P	08 07 02.3	-0.1
KNRA				IAmb	IAmb	08 07 06.0	
	comp=Z,25nm,1.1s						
FITZ	Fitzroy Crossi	50.45	272	P	P	08 07 13.2	-0.6
	comp=Z,3.1nm,0.6s,baz=150,slow=7.4,SNR=11						
FITZ	Fitzroy Crossi	50.45	272	P	P	08 07 13.7	-0.1
FAKI	Fak Fak	53.14	293	P	P	08 07 30.8	-2.5
MORW	Morawa	54.21	255	P	P	08 07 41.1	+0.3
MORW				IAmb	IAmb	08 07 48.8	
	comp=Z,33nm,1.5s						
QSPA	South Pole Qui	58.06	180	P	P	08 08 09.8	+2.7
	comp=Z,2.7nm,0.7s,baz=294,slow=0.7,SNR=16						
QSPA				ScP	ScP	08 12 12.2	+1.7
	comp=Z,1.4nm,0.8s,baz=327,slow=2.8,SNR=2.9						
QSPA	South Pole Qui	58.06	180	P	P	08 08 09.0	+1.8
PMSA	Palmer Station	71.56	156	P	P	08 09 32.2	-0.4
PMSA				IAmb	IAmb	08 09 53.9	
	comp=Z,6.7nm,0.9s						
SNAA	Sanae	76.55	179	P	P	08 10 02.6	+1.4
SNAA	Sanae	76.55	179	P	P	08 10 02.4	+1.3
VNA3	Neumayer Olymp	76.78	177	P	P	08 10 03.9	+1.5
VNA2	Neumayer--Watz	77.19	178	P	P	08 10 06.1	+1.5
	baz=183,slow=3.4						
VNA1	Neumayer--Stat	77.43	177	P	P	08 10 07.7	+1.9
MJAR	Matsushiro Arr	78.52	327	P	P	08 10 10.7	-1.6
	comp=Z,1.0nm,0.4s,baz=188,slow=4.6,SNR=4.8						
ASAJ	Asahikawa	83.03	334	P	P	08 10 36.8	+1.2
	comp=Z,18nm,1.0s,baz=241,slow=16,SNR=2.0						
KSRS	Korea Array	84.37	321	P	P	08 10 42.4	0.0
	comp=Z,3.4nm,0.8s,baz=134,slow=4.2,SNR=6.6						
NJ2	Nanjing	85.87	312	eP	P	08 10 49.7	-0.1
NJ2				pmax	pmax		
	comp=Z,12nm,0.8s						
PEA0B	Petropavlovsk-	86.95	347	P	P	08 10 55.3	+0.8
PETK	Petropavlovsk-	86.95	347	P	P	08 10 54.3	-0.2
	comp=Z,20nm,0.6s,baz=126,slow=7.5,SNR=50						
CIS	Catalina Islan	87.38	48	P	P	08 10 59.5	+2.5
	baz=228						
USRK	Ussuriysk Ar.	87.49	328	P	P	08 10 56.8	-0.4
	comp=Z,3.0nm,0.8s,baz=155,slow=15,SNR=4.2						
PKM	Mcpherson Peak	87.51	46	P	P	08 11 00.2	+2.4
	baz=228						
FMP	Fort Macarthur	87.66	47	P	P	08 11 00.7	+2.4
	baz=229						
109C	Camp Elliot, M	87.87	49	P	P	08 11 01.7	+2.4
	baz=229						
ARVC	Arvin	88.27	46	P	P	08 11 03.4	+2.3
	baz=228						
MURC	Murrieta	88.28	48	P	P	08 11 03.5	+2.2
	baz=229						
MONP2	Monument Peak	88.31	49	P	P	08 11 04.3	+2.6
	baz=230,SNR=6.3						
IKP	In-Ko-Pah, Jac	88.36	49	P	P	08 11 04.2	+2.4
	baz=230						
VES	Vestal, Richgr	88.59	45	P	P	08 11 04.1	+1.6
	baz=228,SNR=6.3						
EDW2	Edwards Air Fo	88.62	47	P	P	08 11 04.9	+2.1
	baz=229,SNR=6.3						
SWSC	Sam W. Stewart	88.75	49	P	P	08 11 05.8	+2.4
	baz=230,SNR=5.7						
TPFO	Pinon Flats	88.75	49	P	P	08 11 05.9	+2.3
	baz=230						
PFO	Pinyon Flats O	88.75	49	P	P	08 11 06.0	+2.3
	comp=Z,5.4nm,0.8s,baz=250,slow=3.8,SNR=12						
PFO	Pinyon Flats O	88.75	49	P	P	08 11 05.9	+2.3
	baz=230						
PFO	Pinyon Flats O	88.75	49	P	P	08 11 04.7	+1.1
PFO				IAmb	IAmb	08 11 07.0	
	comp=Z,6.6nm,0.8s						
ISA	Isabella, Lake	88.84	46	P	P	08 11 06.0	+2.1
	baz=228,SNR=8.0						
ISA	Isabella, Lake	88.84	46	P	P	08 11 04.6	+0.7
ISA				IAmb	IAmb	08 11 07.1	
	comp=Z,8.6nm,0.9s						
CMB	Columbia Colle	89.29	43	P	P	08 11 06.2	+0.4
CMB				IAmb	IAmb	08 11 08.5	
	comp=Z,6.9nm,0.9s						
BELC	Belle Mtn. Jos	89.30	48	P	P	08 11 08.8	+2.7
	baz=230,SNR=8.9						
O02D	Mt. Diablo Mer	89.41	40	P	P	08 11 09.0	+2.6
	baz=226						
BC3	Big Chuckawall	89.42	49	P	P	08 11 09.4	+2.8
	baz=230						
GLA	Glamis	89.44	50	P	P	08 11 09.9	+3.2
	baz=230,SNR=5.6						
GLA	Glamis	89.44	50	P	P	08 11 06.8	+0.1
HSIG		89.56	55	P	P	08 11 07.0	-0.3
HSIG				IAmb	IAmb	08 11 10.7	
	comp=Z,10nm,1.2s						
CWC	Cottonwood Cre	89.59	46	P	P	08 11 09.8	+2.3
	baz=229						
HEC	Hector,Ludlow	89.62	48	P	P	08 11 09.8	+2.3
	baz=230						
GSC	Goldstone, Bar	89.63	47	P	P	08 11 09.5	+2.0
	baz=229,SNR=5.4						
GSC	Goldstone, Bar	89.63	47	P	P	08 11 07.6	0.0
GSC				IAmb	IAmb	08 11 10.2	
	comp=Z,4.4nm,0.8s						
TIN	Tinemaha, Big	89.91	45	P	P	08 11 10.9	+2.1
	baz=229						
IRM	Iron Mountain	89.94	49	P	P	08 11 11.6	+2.6
	baz=230,SNR=6.3						
113A	Mohawk Valley,	89.96	51	P	P	08 11 12.1	+3.1
113A				IAmb	IAmb	08 11 12.8	
	comp=Z,7.5nm,1.1s						
N02D	Trinity Center	90.01	40	P	P	08 11 11.5	+2.3

	baz=226						
GMRC	**Granite Mounta**	**90.01**	**48**	P	**P**	**08 11 11.3**	**+1.8**
	baz=230						
O03E	**Paynes Creek**	**90.03**	**41**	P	**P**	**08 11 11.5**	**+2.2**
	baz=226						
214A	**Organ Pipe Nat**	**90.08**	**52**	P	**P**	**08 11 12.5**	**+2.8**
	baz=232,SNR=5.1						
214A	**Organ Pipe Nat**	**90.08**	**52**	P	**P**	**08 11 09.0**	**-0.7**
214A				IAmb	IAmb	08 11 13.6	
	comp=Z,8.0nm,0.9s						
M02C	**Callahan**	**90.22**	**39**	P	**P**	**08 11 12.6**	**+2.5**
	baz=226						
TUQ	**Turquoise Moun**	**90.27**	**47**	P	**P**	**08 11 12.8**	**+2.2**
	baz=230						
SHOC	**Shoshone, Teco**	**90.34**	**47**	P	**P**	**08 11 13.2**	**+2.4**
	baz=230						
FURC	**Furnace Creek,**	**90.35**	**46**	P	**P**	**08 11 13.2**	**+2.5**
	baz=229						
GRAC	**Grapevine Rang**	**90.39**	**45**	P	**P**	**08 11 13.3**	**+2.3**
	baz=229,SNR=5.9						
YBH	**Yreka Blue Hor**	**90.53**	**39**	P	**P**	**08 11 13.4**	**+1.8**
	comp=Z,3.5nm,0.8s,baz=250,slow=4.1,SNR=9.1						
PDMCI	**Parker Dam,Lak**	**90.68**	**49**	P	**P**	**08 11 15.0**	**+2.7**
	baz=231						
K02D	**Willamette Mer**	**90.70**	**38**	P	**P**	**08 11 15.0**	**+2.7**
	baz=225						
NVAR	**Mina Array Bea**	**90.77**	**44**	P	**P**	**08 11 14.8**	**+1.8**
	comp=Z,4.8nm,0.8s,baz=223,slow=8.0,SNR=42						
RYN	**Ryan**	**90.77**	**44**	P	**P**	**08 11 14.4**	**+1.5**
RYN				IAmb	IAmb	08 11 14.9	
	comp=Z,2.9nm,0.8s						
NV11	**Mina Array Sit**	**90.86**	**44**	P	**P**	**08 11 14.8**	**+1.5**
NV11				IAmb	IAmb	08 11 15.5	
	comp=Z,3.4nm,0.8s						
PAHR	**Pah Rah Range**	**90.99**	**42**	P	**P**	**08 11 15.6**	**+1.7**
PAHR				IAmb	IAmb	08 11 15.8	
	comp=Z,4.1nm,0.8s						
M04C	**Macdoel**	**91.04**	**40**	P	**P**	**08 11 16.0**	**+2.0**
	baz=226						
L04D	**Klamath Falls**	**91.09**	**39**	P	**P**	**08 11 16.2**	**+2.0**
	baz=226						
TPH	**Tonopah**	**91.18**	**45**	P	**P**	**08 11 16.6**	**+1.8**
Y14A	**Wickenburg**	**91.18**	**50**	P	**P**	**08 11 17.4**	**+2.6**
KVN	**Kaiserville**	**91.30**	**44**	P	**P**	**08 11 16.9**	**+1.6**
KVN				IAmb	IAmb	08 11 17.7	
	comp=Z,4.5nm,0.7s						
TUC	**Tucson**	**91.66**	**53**	P	**P**	**08 11 20.0**	**+3.0**
	baz=233						
TUC	**Tucson**	**91.66**	**53**	P	**P**	**08 11 18.9**	**+1.9**
TUC				IAmb	IAmb	08 11 21.0	
	comp=Z,4.5nm,0.8s						
J04D	**Umpqua Nationa**	**91.90**	**38**	P	**P**	**08 11 20.2**	**+2.2**
	baz=226						
MOD	**Modoc Plateau**	**91.95**	**40**	P	**P**	**08 11 20.0**	**+1.8**
PRN	**Pahroc Range**	**92.06**	**46**	P	**P**	**08 11 20.9**	**+2.1**
PRN				IAmb	IAmb	08 11 22.3	
	comp=Z,4.6nm,0.9s						
I04A	**Tendick Farm,**	**92.12**	**38**	P	**P**	**08 11 21.1**	**+2.3**
	baz=226						
R11A	**Troy Canyon, C**	**92.34**	**45**	P	**P**	**08 11 21.9**	**+1.7**
	baz=230						
R11A	**Troy Canyon, C**	**92.34**	**45**	P	**P**	**08 11 20.8**	**+0.7**
J05D	**Fort Rock, OR**	**92.39**	**39**	P	**P**	**08 11 22.3**	**+2.1**
	baz=227						
X16A	**Lo Mia Camp, P**	**92.50**	**51**	P	**P**	**08 11 23.5**	**+2.5**
I05D	**Terrebonne, OR**	**93.06**	**38**	P	**P**	**08 11 25.4**	**+2.2**
	baz=227						
U15A	**North Rim**	**93.18**	**48**	P	**P**	**08 11 26.0**	**+1.8**
U15A				IAmb	IAmb	08 11 27.5	
	comp=Z,4.4nm,0.8s						
WUAZ	**Wupatki**	**93.21**	**50**	P	**P**	**08 11 26.3**	**+2.0**
	baz=232						
SZCU	**Shurtz Canyon**	**93.40**	**47**	P	**P**	**08 11 25.8**	**+0.7**
J08A	**Circle Bar Ran**	**93.93**	**40**	P	**P**	**08 11 28.3**	**+1.0**
J08A				IAmb	IAmb	08 11 30.2	
	comp=Z,3.5nm,1.0s						
ELK	**Elko**	**94.07**	**44**	P	**P**	**08 11 29.2**	**+1.1**
ELK				IAmb	IAmb	08 11 30.4	
	comp=Z,2.4nm,0.8s						
TXAR	**Lajitas Array**	**94.91**	**58**	P	**P**	**08 11 33.9**	**+1.8**
	comp=Z,0.8nm,0.9s,baz=205,slow=5.5,SNR=5.7						
HHC	**Hu-ho-hao-te**	**96.00**	**315**	*e*P	**P**	**08 11 37.1**	**+0.4**
HHC				pmax	pmax		
	comp=Z,19nm,1.0s						
HHC				pmax	pmax		
	comp=Z,130nm,5.9s						
HVU	**Hansel Valley**	**96.17**	**44**	P	**P**	**08 11 38.9**	**+1.4**
HLID	**Hailey**	**96.33**	**42**	P	**P**	**08 11 40.3**	**+2.2**
	baz=231						
PDAR	**Pinedale Array**	**98.67**	**45**	P	**P**	**08 11 51.1**	**+2.4**
	comp=Z,0.8nm,0.7s,baz=206,slow=3.8,SNR=7.5						
TIGA	**Tifton**	**111.01**	**65**	P	**PKiKP**	**08 16 42.0**	**+1.7**
	baz=245						
EYMN	**Ely**	**112.26**	**47**	P	**PKiKP**	**08 16 44.5**	**+2.3**
	baz=247						
WMQ	**Urumqi**	**112.72**	**308**	*e*P	**PKiKP**	**08 16 43.8**	**+0.5**
MCWV	**Mont Chateau**	**117.02**	**58**	P	**PKPdf**	**08 16 52.6**	**+1.1**
	baz=250						
MK31	**Makanchi Array**	**117.34**	**310**		**PKPdf**	**08 16 51.5**	**-0.5**
MKAR	**Makanchi Array**	**117.34**	**310**	PKP	**PKPdf**	**08 16 51.2**	**-0.7**
	comp=Z,1.6nm,0.6s,baz=205,slow=1.8,SNR=13						
N54A	**Moraine State**	**117.37**	**57**	P	**PKPdf**	**08 16 53.0**	**+0.7**
	baz=250						
MAKZ	**Makanchi**	**117.55**	**310**		**PKPdf**	**08 16 51.7**	**-0.7**
ZALV	**Zalesovo Beam**	**117.96**	**318**	PKP	**PKPdf**	**08 16 51.9**	**-1.0**
	comp=Z,1.7nm,0.5s,baz=156,slow=2.9,SNR=7.9						
NRIK	**Noril'sk**	**120.34**	**336**	PKP	**PKPdf**	**08 16 56.4**	**-0.7**
	comp=Z,2.7nm,0.5s,baz=68,slow=3.2,SNR=7.2						
NRIK	**Noril'sk**	**120.34**	**336**		**PKPdf**	**08 16 56.7**	**-0.3**
N59A	**State Game Lan**	**120.38**	**58**	P	**PKPdf**	**08 16 59.0**	**+1.0**
	baz=252						
BINY	**Binghamton**	**120.61**	**57**	P	**PKPdf**	**08 16 59.6**	**+1.2**
	baz=253						
KURK	**Kurchatov**	**120.77**	**313**	PKPdf	**PKPdf**	**08 16 57.9**	**-0.5**
L61B	**Northampton**	**123.03**	**57**	P	**PKPdf**	**08 17 03.9**	**+0.8**
	baz=255						
GAR	**Garm**	**123.43**	**298**		**PKPdf**	**08 17 04.0**	**0.0**
LBNH	**Lisbon**	**124.01**	**55**	P	**PKPdf**	**08 17 06.2**	**+1.3**
	baz=256						
KK31	**Karatay Array**	**124.35**	**303**	PKPdf	**PKPdf**	**08 17 05.4**	**-0.2**
KKAR	**Karatay Array**	**124.35**	**303**		**PKPdf**	**08 17 04.9**	**-0.7**
KKAR	**Karatay Array**	**124.35**	**303**		**PKPdf**	**08 17 05.4**	**-0.2**
PKME	**Peaks-Kenny Pk**	**126.06**	**55**	P	**PKPdf**	**08 17 10.2**	**+1.5**
	baz=259						
BRVK	**Borovoye**	**126.28**	**315**		**PKPdf**	**08 17 09.0**	**+0.1**
KMBO	**Kilima Mbogo**	**131.53**	**234**	SKPbc	**SKPbc**	**08 20 05.3**	**+1.1**
	comp=Z,2.3nm,0.4s,baz=88,slow=1.0,SNR=5.8						
GEYT	**Alibeck**	**132.47**	**294**	SKPbc	**SKPbc**	**08 20 06.9**	**+0.4**
	comp=Z,7.7nm,0.8s,baz=151,slow=3.4,SNR=7.5						
ABKAR	**Akbulak array**	**132.48**	**310**	PKPdf	**PKPdf**	**08 17 20.5**	**-0.3**
ARU	**Arti**	**133.10**	**319**	SKPbc	**SKPbc**	**08 20 08.9**	**+1.0**
	comp=Z,2.5nm,0.5s,baz=138,slow=3.7,SNR=2.8						
ARU	**Arti**	**133.10**	**319**		**PKPdf**	**08 17 20.9**	**-0.8**
SPA0	**Spitsbergen Ar**	**133.20**	**355**	*e*PKPdf	**PKPdf**	**08 17 22.8**	**+1.4**
AKTO	**Aktyubinsk**	**133.74**	**311**	SKP		08 20 13.4	
	comp=Z,2.7nm,0.6s,baz=76,slow=4.4,SNR=8.6						
ARA0	**ARCESS Array S**	**139.75**	**346**	*e*PKPdf	**PKPdf**	**08 17 35.0**	**+1.3**
ARCES	**ARCESS Array B**	**139.75**	**346**	PKhKP	PKPpre	08 17 27.1	
	comp=Z,1.7nm,0.5s,baz=52,slow=3.2,SNR=11						
KTK1	**Kautokeino**	**140.64**	**347**	*e*PKPdf	**PKPdf**	**08 17 35.7**	**+0.4**
JETT	**Jettan, Norway**	**140.68**	**349**	*e*PKPdf	**PKPdf**	**08 17 36.6**	**+1.2**
STEI	**Steigen**	**142.95**	**350**	*e*PKPdf	**PKPdf**	**08 17 39.9**	**+0.5**
LOF	**Lofoten**	**142.99**	**351**	*e*PKPdf	**PKPdf**	**08 17 39.9**	**+0.4**
FAUS	**Fauske**	**143.46**	**350**	*e*PKPdf	PKPab	08 17 38.0	-0.3
KBZ	**Khabaz**	**144.36**	**302**	PKP	PKPbc	08 17 40.5	-1.7
	comp=Z,8.6nm,0.9s,baz=59,slow=5.4,SNR=9.0						
KONS	**Konsvik**	**144.59**	**351**	*e*PKPbc	PKPbc	08 17 42.1	-0.1
MOR8	**Moi Rana**	**144.71**	**350**	*e*PKPbc	PKPbc	08 17 41.5	-1.1
FIA1	**FINESS Array S**	**145.97**	**338**		**PKPdf**	**08 17 46.2**	**+1.4**
FINES	**FINESS Array B**	**145.97**	**338**	PKPbc	**PKPdf**	**08 17 46.1**	**+1.3**
	comp=Z,40nm,0.5s,baz=46,slow=4.0,SNR=226						
NSS	**Namsos**	**146.62**	**350**	*e*PKPbc	**PKPbc**	**08 17 50.2**	**+2.1**
VSU	**Vasula**	**147.88**	**333**	*e*P	**PKPbc**	**08 17 52.0**	**+0.4**
MTSE	**Matsula**	**148.76**	**336**	*e*P	**PKPbc**	**08 17 54.2**	**+0.4**
DOMB	**Dombas**	**149.39**	**351**	*e*PKPbc	**PKPbc**	**08 17 55.3**	**-0.1**
UPP	**Uppsala**	**149.74**	**342**	*e*P	**PKPab**	**08 18 02.5**	**-0.9**
NC303	**NORSAR Array S**	**149.84**	**349**		**PKPbc**	**08 17 56.4**	**-0.1**
NB2	**NORSAR Subarra**	**150.04**	**349**	PKP	**PKPbc**	**08 17 57.0**	**0.0**
	comp=Z,5.4nm,0.6s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**150.04**	**349**	PKPbc	**PKPbc**	**08 17 56.9**	**-0.1**
	comp=Z,11nm,0.7s,baz=16,slow=4.1,SNR=29						
NOA				PKPab	**PKPab**	**08 18 03.9**	**-0.8**
	comp=Z,5.7nm,0.7s,baz=24,slow=3.3,SNR=13						
NC602	**NORSAR Array S**	**150.27**	**348**	*e*PKPbc	**PKPbc**	**08 17 57.2**	**-0.3**
SKAR	**Skarslia**	**150.81**	**351**	*e*PKPbc	**PKPbc**	**08 17 59.3**	**+0.4**
PABE	**Paberze**	**151.02**	**331**	*e*P	**PKPbc**	**08 17 60.0**	**+0.6**
AKASG	**Malin Array Be**	**151.35**	**319**	PKPbc	**PKPbc**	**08 18 00.1**	**-0.2**
	comp=Z,12nm,0.6s,baz=46,slow=2.3,SNR=34						
AKBB	**Malin Array Si**	**151.35**	**319**		**PKPbc**	**08 18 00.1**	**-0.2**
BRTR	**Keskin Array B**	**151.60**	**295**	PKPbc	**PKPbc**	**08 18 00.9**	**-0.5**
	comp=Z,4.5nm,0.6s,baz=139,slow=4.5,SNR=10						
BRTR	**Keskin Array B**	**151.60**	**295**		**PKPbc**	**08 18 00.6**	**-0.9**
KONO	**Kongsberg**	**151.62**	**349**	*e*PKPbc	**PKPbc**	**08 18 00.9**	**+0.3**
ODD1	**Odda**	**151.75**	**353**	*e*PKPbc	**PKPbc**	**08 18 02.1**	**+1.2**
SUW	**Suwalki**	**152.38**	**330**	*e*P	**PKPbc**	**08 18 02.9**	**+0.5**
DBIC	**Dimbokro**	**154.39**	**169**	PKP	**PKPdf**	**08 18 00.3**	**+1.0**
	comp=Z,1.9nm,0.6s,baz=207,slow=1.9,SNR=3.9						
DBIC				PKPbc	**PKiKP**	**08 18 08.8**	**+0.8**
	comp=Z,1.4nm,0.3s,baz=157,slow=2.2,SNR=5.0						
CLL	**Collm**	**158.42**	**337**	⇑*i*PKPab	**PKPab**	**08 18 40.3**	**-0.4**
	comp=Z,12nm,0.7s						
CLL	**Collm**	**158.42**	**337**	PKPdf	**PKPdf**	**08 18 01.2**	**-2.1**
CLL					**PKPab**	**08 18 39.4**	**-1.3**
GERES	**GERESS Array B**	**160.19**	**332**	PKP	**PKPdf**	**08 18 04.2**	**-1.4**
	comp=Z,0.6nm,0.3s,baz=292,slow=10,SNR=5.1						
GERES				PKPab	**PKPab**	**08 18 47.2**	**-1.4**
	comp=Z,0.2nm,0.4s,baz=103,slow=2.1,SNR=3.8						
TORD	**Torodi Ar. Bea**	**161.10**	**186**	PKP	**PKPdf**	**08 18 07.5**	**+0.1**
	comp=Z,1.2nm,0.9s,baz=351,slow=2.1,SNR=6.1						
TORD				PKPab	**PKPab**	**08 18 53.3**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=186,slow=4.0,SNR=7.0						
TORD	**Torodi Ar. Bea**	**161.10**	**186**		**PKPdf**	**08 18 06.3**	**-1.2**

IDC 09 08:12:38.9±1.4**,6°.44N**×**94°.88E,h0**^{km}**,mb4.2**/11**, mb1 4.3**/11**,mb1mx4.2**/58**,mbtmp4.2**/11**,Error ellipse: s-maj=55.8km s-min=15.9km az=55.0,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**5.41**	**132**	Pn	Pn	08 14 05.9	+4.9
	2.2nm,0.3s,baz=321,slow=14,SNR=14						
SIJI	**Sorong**	**37.03**	**100**	P	P	08 19 51.2	+0.3
	5.5nm,0.5s,baz=233,slow=20,SNR=1.6						
FITZ	**Fitzroy Crossi**	**38.93**	**129**	P	P	08 20 06.7	-0.1
	7.4nm,1.1s,baz=319,slow=5.2,SNR=15						
MKAR	**Makanchi Array**	**41.64**	**347**	P	P	08 20 28.6	-0.4
	2.8nm,1.0s,baz=175,slow=7.9,SNR=8.1						
SONM	**Songino Array**	**42.40**	**12**	P	P	08 20 36.3	+1.0
	2.0nm,0.9s,baz=193,slow=8.7,SNR=7.3						
KURBB	**Kurchatov Arra**	**46.11**	**346**	P	P	08 21 04.1	-0.6
	0.7nm,0.7s,baz=166,slow=7.2,SNR=7.4						
WRA	**Warramunga Arr**	**46.84**	**125**	P	P	08 21 10.6	-0.3
	1.0nm,0.7s,baz=304,slow=8.7,SNR=7.3						
ZALV	**Zalesovo Beam**	**48.07**	**352**	P	P	08 21 20.1	0.0
	1.4nm,0.7s,baz=143,slow=5.0,SNR=4.0						
ASAR	**Alice Springs**	**48.44**	**130**	P	P	08 21 23.3	-0.1
	0.6nm,0.5s,baz=300,slow=7.8,SNR=6.7						
USRK	**Ussuriysk Ar.**	**49.65**	**35**	P	P	08 21 30.8	-1.5
	1.4nm,0.7s,baz=243,slow=5.1,SNR=2.4						
FINES	**FINESS Array B**	**74.32**	**332**	P	P	08 24 17.3	-0.7
	2.7nm,0.7s,baz=72,slow=4.5,SNR=4.2						
ARCES	**ARCESS Array B**	**76.86**	**340**	P	P	08 24 33.4	+0.9
	12nm,0.9s,baz=77,slow=7.6,SNR=8.2						

MOS ***09*** *08:12:43.7±1.0,6°.38N×94°.69E,h12*^{km}*,mb5.6/61, MS5.3/46,Error ellipse: s-maj=7.2km s-min=3.8km az=111.1*

IDC ***09*** *08:12:44.2±0.3,6°.57N×94°.95E,h0*^{km}*,mb4.9/47, mb1 5.0/49,mb1mx4.9/59,mbtmp4.9/49,ML4.6/2,Error ellipse: s-maj=13.6km s-min=8.2km az=49.0*

NEIC ***09*** *08:12:46.0±2.5,6°.41N±0°.05×94°.80E±0°.05,h10*^{km}*±1*^{km}*, mb5.5/129,Ms_20 5.5/181,Mwb5.5/34,Mww5.5, Mwc5.6(GCMT),Error ellipse: s-maj=9.7km s-min=6.4km az=128.0*

BGR ***09*** *08:12:46.0±0.0,6°.63N×95°.17E,h10*^{km}*,mb5.0*

DJA ***09*** *08:12:47.9±1.2,6°N±3°×9°5E±°,h20*^{km}*±13*^{km}*,M5.3/20, mb5.3/20,mB5.7/17,MLv5.7/8,Mw(mB)5.2/17, MwMwp5.1/12,Mwp5.4/12*

BJI ***09*** *08:12:47.9±0.0,6°.34N×94°.43E,h42*^{km}*,mB5.4/61, mb5.2/76,Ms5.9/86,Ms7 5.7/79*

NEIC ***09*** *08:12:49.8,6°.37N×94°.81E,h4*^{km}*,Moment Tensor Solution. Moment tensor: Scale 10*^{17}*Nm;* M_{rr}*0.10;* $M_{\theta\theta}$*-2.21;* $M_{\phi\phi}$*2.11;* $M_{r\theta}$*-0.43;* $M_{\theta\phi}$*0.43;* $M_{\phi r}$*-1.04; Fault plane solution:* M_0*2.47000×10*^{17} *NP1:*ϕ_s*138.22000°, δ67.38000°,λ169.15000°. NP2:*ϕ_s*232.44000°,δ79.99000°, λ22.99000°. Principal axes: T 2.6177, Plg23.0000°, Azm97.0000°; N -0.3175, Plg65.0000°, Azm255.0000°; P -2.3003, Plg9.0000°, Azm4.0000°;*

GCMT ***09*** *08:12:49.6±0.1,6°.51N±0°.01×94°.90E±0°.01,h16*^{km}*, MW5.7/142,Moment Tensor Solution. s114,c183; s142,c280; Duration: 1*^{s}*6 Moment tensor: Scale 10*^{17} *Nm;* M_{rr}*-0.32±.04;* $M_{\theta\theta}$*-2.89±.04;* $M_{\phi\phi}$*3.21±.04;* $M_{r\theta}$*-1.88±.14;* $M_{\theta\phi}$*0.65±.03;* $M_{\phi r}$*-0.66±.10; Best double couple:* M_0*3.69600×10*^{17} *NP1:*ϕ_s*144.00000°,δ60.00000°, λ-170.00000°. NP2:*ϕ_s*49.00000°,δ81.00000°, λ-30.00000°. Principal axes: T 3.4990, Plg14.0000°, Azm100.0000°; N 0.3930, Plg58.0000°, Azm215.0000°; P -3.8930, Plg27.0000°, Azm3.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

KLM ***09*** *08:12:50,6°.49N×94°.80E,h32*^{km}*,mb5.7*

NEIC ***09*** *08:12:51,6°.18N×94°.70E,h16*^{km}*,Moment Tensor Solution. Duration: 4*^{s}*0 Moment tensor: Scale 10*^{17}*Nm;* M_{rr}*-0.16;* $M_{\theta\theta}$*-2.10;* $M_{\phi\phi}$*2.26;* $M_{r\theta}$*0.48;* $M_{\theta\phi}$*0.49;* $M_{\phi r}$*0.03; Fault plane solution:* M_0*2.29000×10*^{17} *NP1:* ϕ_s*322.00000°,δ80.00000°,λ-172.00000°. NP2:* ϕ_s*231.00000°,δ82.00000°,λ-10.00000°. Principal axes: T 2.3169, Plg2.0000°, Azm277.0000°; N -0.0594, Plg77.0000°, Azm16.0000°; P -2.2575, Plg13.0000°, Azm186.0000°;*

NEIC ***09*** *08:12:51,6°.51N×94°.88E,h18*^{km}*,Moment Tensor Solution. Duration: 3*^{s}*2 Moment tensor: Scale 10*^{17}*Nm;* M_{rr}*-0.05;* $M_{\theta\theta}$*-3.34;* $M_{\phi\phi}$*3.40;* $M_{r\theta}$*-0.99;* $M_{\theta\phi}$*0.94;* $M_{\phi r}$*-0.28; Fault plane solution:* M_0*3.65000×10*^{17} *NP1:* ϕ_s*144.00000°,δ75.00000°,λ-174.00000°. NP2:* ϕ_s*52.00000°,δ85.00000°,λ-15.00000°. Principal axes: T 3.5751, Plg7.0000°, Azm99.0000°; N 0.1415, Plg74.0000°, Azm213.0000°; P -3.7166, Plg15.0000°, Azm7.0000°;*

ISC 09 08:12:47.1±0.4**,6°.43N**±0°.03×**94°.71E**±0°.03**,h19**^{km}±1^{km}**, h19**^{km}**:pP-P,n854,**σ**1**^{s}**80**/847**,mb5.3**/216**,MS5.5**/151**, 35C-34D,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	**Lhok Sumawe**	**2.53**	**118**	P	**Pn**	**08 13 26.8**	**-0.4**
LHMI				S	**Sb**	**08 13 59.6**	**-3.1**
LHMI	**Lhok Sumawe**	**2.53**	**118**	Pn	**Pn**	**08 13 26.5**	**-0.7**
MLSI	**Meulaboh, Aceh**	**2.73**	**142**	P	**Pn**	**08 13 30.7**	**+0.7**
TPTI		**4.00**	**142**	P	**Pn**	**08 13 48.7**	**+1.3**
TPTI				S	**Sn**	**08 14 33.3**	**-0.5**
TSI	**Tuntungan**	**4.82**	**127**	P	**Pn**	**08 14 00.7**	**+2.0**
PSI	**Prapat**	**5.54**	**130**	Pn	**Pn**	**08 14 10.2**	**+1.6**
	16nm,0.3s,baz=302,slow=9.9,SNR=43						
PSI				Sn	**Sn**	**08 15 13.8**	**+1.8**
	15nm,0.3s,baz=88,slow=22,SNR=1.8						
PBA	**Port Blair**	**5.54**	**340**	P	**Pb**	**08 14 19.9**	**-3.5**
PBA	**Port Blair**	**5.54**	**340**	Pn	**Pn**	**08 14 12.0**	**+3.3**
GSI	**Gunungsitoli**	**5.84**	**151**	P	**Pn**	**08 14 12.4**	**-0.4**
	5.3nm23µm9µm323nm,1.1s						
GSI	**Gunungsitoli**	**5.84**	**151**	Pn	**Pn**	**08 14 12.3**	**-0.5**
IPM	**Ipoh**	**6.58**	**107**	P	**Pn**	**08 14 21.0**	**-2.0**
MNSI	**Mandailing Nat**	**7.41**	**139**	P	**Pn**	**08 14 36.0**	**+1.6**
	2.2nm13µm13µm212nm,0.5s						
JRMM	**Jerantut**	**8.14**	**108**	P	**Pn**	**08 14 42.0**	**-2.4**
BKNI	**Bangkinang**	**8.76**	**134**	P	**Pn**	**08 14 51.8**	**-1.0**
	8µm6µm332nm,1.3s						
BKNI	**Bangkinang**	**8.76**	**134**	Pn	**Pn**	**08 14 52.4**	**-0.4**
SISI	**Saibi**	**8.86**	**150**	P	**Pn**	**08 14 55.6**	**+1.4**
	9µm2µm147nm,1.2s						
PPI	**Padang Panjang**	**8.89**	**140**	P	**Pn**	**08 14 55.3**	**+0.6**
PDSI	**Padang**	**9.28**	**142**	P	**Pn**	**08 14 59.1**	**-1.0**
	3µm98nm,1.0s						
KRJI	**Kerinci**	**10.82**	**141**	P	**Pn**	**08 15 22.3**	**+1.1**
	5µm663nm,1.5s						
PBKT	**Sadao Pong**	**11.80**	**31**		**Pn**	**08 15 36.4**	**+1.9**
JMBI	**JAMBI**	**11.99**	**132**	P	**Pn**	**08 15 39.2**	**+2.1**
	163nm,1.3s						
DSRI	**Dabo**	**12.01**	**124**	P	**Pn**	**08 15 39.0**	**+1.6**
	4µm3µm53nm,1.2s						
MASI	**Maura Aman, Be**	**12.12**	**141**	P	**Pn**	**08 15 38.0**	**-1.0**
	5µm330nm,1.2s						
CM31	**Chiang Mai Arr**	**12.65**	**19**	P	**Pn**	**08 15 48.5**	**+2.3**
	SNR=25						
CM31	**Chiang Mai Arr**	**12.65**	**19**		**Pn**	**08 15 47.8**	**+1.6**
CMAR	**Chiang Mai Arr**	**12.65**	**19**	Pn	**Pn**	**08 15 47.4**	**+1.2**
	1.5nm,0.3s,baz=212,slow=14,SNR=30						
KSI	**Kapahiang**	**12.74**	**142**	P	**Pn**	**08 15 46.1**	**-1.3**
	25µm354nm,0.8s						
CHTO	**Chiang Mai**	**12.98**	**18**	P	**Pn**	**08 15 51.5**	**+0.7**
CHTO	**Chiang Mai**	**12.98**	**18**	Pn	**Pn**	**08 15 51.5**	**+0.7**
LHSI	**Lahat**	**13.46**	**139**	P	**Pn**	**08 15 55.6**	**-1.7**
	3µm271nm,1.0s						
MNAI	**Manna**	**13.52**	**142**	P	P	08 16 16.4	+9.3
UBPT	**Khong Chiam**	**13.75**	**49**	Pn	**Pn**	**08 16 02.2**	**+1.0**
PALK	**Pallekele**	**13.93**	**274**	Pn	**Pn**	**08 16 07.4**	**+3.6**
	0.7nm,0.3s,baz=190,slow=11,SNR=4.4						
PALK				Sn	Sn	08 18 28.8	-9.2
	1.3nm,0.3s,baz=277,slow=22,SNR=1.7						
PALK	**Pallekele**	**13.93**	**274**	P	**Pn**	**08 16 04.7**	**+1.0**
PALK	**Pallekele**	**13.93**	**274**	P	**Pn**	**08 16 07.3**	**+3.6**
PALK				P	**Pn**	**08 16 07.3**	**+3.6**
PALK				S	**Sn**	**08 18 35.2**	**-2.8**
PALK				S	**Sn**	**08 18 35.2**	**-2.8**
PALK	**Pallekele**	**13.93**	**274**	Pn	**Pn**	**08 16 04.7**	**+1.0**
PPBI	**Pangkal Pinang**	**14.25**	**126**	P	**Pn**	**08 16 05.6**	**-2.5**
	6µm31µm156nm,1.2s						
MDSI	**Maura Dua**	**14.39**	**139**	P	**Pn**	**08 16 07.3**	**-2.6**
	1µm855nm94nm,1.0s						
DLV	**T Lat**	**14.66**	**67**	Pn	**Pn**	**08 16 13.4**	**-0.5**
LWLI	**Liwa**	**14.71**	**140**	P	**Pn**	**08 16 15.6**	**+1.1**
KLSI		**14.90**	**138**	P	**Pn**	**08 16 16.1**	**-0.9**
	890nm60nm,0.9s						
KASI	**Kota Agung**	**15.38**	**140**	P	**Pn**	**08 16 21.0**	**-2.2**
	119nm,0.9s						
KSM	**Kuching**	**16.32**	**107**	P	**P**	**08 16 36.0**	**-2.3**
CGJI	**Cibinong**	**16.97**	**140**	P	P	08 16 53.2	+7.7
SLVN	**Son La**	**17.29**	**30**		**P**	**08 16 48.5**	**-0.5**
DBJI	**Dramaga**	**17.63**	**137**	P	**P**	**08 16 52.8**	**0.0**
STKI	**Sintang**	**17.89**	**110**	P	**P**	**08 16 59.8**	**+4.1**
SBUM	**Sibu**	**17.90**	**102**	P	**P**	**08 16 56.0**	**+0.2**
IMP	**Imphal**	**18.31**	**358**	*e*P	**Pn**	**08 17 00.5**	**+0.2**
LEM	**Lembang**	**18.42**	**135**	P	**Pn**	**08 17 00.9**	**-0.9**
	7.5nm,0.3s,baz=317,slow=19,SNR=1.4						
COCO	**West Island**	**18.62**	**173**	P	**P**	**08 17 01.7**	**-1.9**
COCO				pmax	pmax		
	comp=Z,539nm,1.3s						
COCO	**West Island**	**18.62**	**173**	P	**P**	**08 17 01.7**	**-1.9**
COCO				IAmb	IAmb	08 17 37.5	
	comp=Z,539nm,1.2s						
HYB	**Hyderabad**	**19.19**	**306**	*i* P	**P**	**08 17 11.0**	**+1.0**
	comp=Z,120nm,1.0s						
HYB				*e*S	**S**	**08 20 52.0**	**+5.1**
KOHI	**KOHIMA**	**19.19**	**358**	*e*P	**P**	**08 17 10.5**	**+0.4**
SHL	**Shillong**	**19.22**	**352**	P	**P**	**08 17 08.8**	**-1.6**
SHL				pmax	pmax		
	comp=Z,80nm,0.8s						
SHL	**Shillong**	**19.22**	**352**	P	**Pn**	**08 17 11.9**	**+0.5**
	SNR=22						
SHL	**Shillong**	**19.22**	**352**	P	**P**	**08 17 08.8**	**-1.6**
HYD	**Hyderabad**	**19.28**	**306**	*e*P	**P**	**08 17 11.0**	**0.0**
HYD				*e*S	**S**	**08 20 52.0**	**+3.2**
QIZ	**Qiongzhong**	**19.34**	**48**	⇓*i*P	**Pn**	**08 17 12.8**	**+0.1**
QIZ				S	**Sn**	**08 20 47.9**	**-1.4**
QIZ				pmax	pmax		
	comp=Z,99nm,0.6s						
QIZ				LR	LR		
	comp=Z,43µm,15.7s						
QIZ				LR	LR		
	comp=Z,25µm,19.1s						
QIZ				LR	LR		
	comp=Z,13µm,14.8s						
QIZ	**Qiongzhong**	**19.34**	**48**		**Pn**	**08 17 13.0**	**+0.3**
QIZ				IAmb	IAmb	08 17 24.1	
	comp=Z,269nm,1.4s						
MOKO	**MOKOCHONG**	**19.78**	**359**	*e*P	**P**	**08 17 16.3**	**-0.2**
MOKO				IAmb	IAmb	08 17 33.4	
	comp=Z,179nm,1.3s						
DHUB	**DHUBRI**	**20.00**	**348**	*e*P	**P**	**08 17 17.9**	**-0.8**
DHUB				IAmb	IAmb	08 17 34.7	
	comp=Z,103nm,0.3s						
XMIS	**Christmas Isla**	**20.02**	**147**	P	**P**	**08 17 19.2**	**+0.1**
XMIS				IAmb	IAmb	08 17 42.3	
	comp=Z,308nm,1.0s						
KMI	**Kunming**	**20.12**	**22**	⇓P	Pn	08 17 23.4	+1.2
KMI				pP	pwP	08 17 33.3	+5.2
KMI				sP	sP	08 17 38.2	+11
KMI				PP	**PnPn**	**08 17 42.0**	**+5.1**
KMI				S	Sn	08 21 08.9	+0.6
KMI				pmax	pmax		
	comp=Z,68nm,1.0s						
KMI				pmax	pmax		
	comp=Z,1µm,8.5s						
KMI				LR	LR		
	comp=Z,8µm,13.2s						
KMI				LR	LR		
	comp=Z,18µm,11.6s						
KMI				LR	LR		
	comp=Z,12µm,15.3s						
ITAN	**ITANAGAR**	**20.62**	**358**	*e*P	**P**	**08 17 23.8**	**-1.7**
ITAN				IAmb	IAmb	08 17 47.0	
	comp=Z,185nm,0.6s						
SMRI	**Semarang**	**20.63**	**130**	P	Pn	08 17 27.1	-0.9
SMRI				IAmb	IAmb	08 17 42.8	
	comp=Z,294nm,1.1s						
LKP	**Lekhapani**	**20.82**	**3**	*e*P	**P**	**08 17 28.1**	**+0.6**
LKP				IAmb	IAmb	08 17 33.8	
	comp=Z,399nm,1.6s						
DIBR	**DIBRUGARH**	**20.93**	**1**	*e*P	Pn	08 17 31.1	-0.2
DIBR				IAmb	IAmb	08 17 34.7	
	comp=Z,205nm,0.7s						
UGM	**Wanagama**	**21.26**	**132**	P	P	08 17 49.0	+17
UGM	**Wanagama**	**21.26**	**132**	IAMs_20	IAMs_20	08 26 01.8	
	comp=Z,20µm,19.0s						
ODAN	**Odare**	**21.48**	**342**	*e*P	**P**	**08 17 36.0**	**+1.0**
GTK	**Tadong**	**21.57**	**345**	*e*P	**P**	**08 17 38.1**	**+2.2**
GTK				IAmb	IAmb	08 17 59.2	
	comp=Z,57nm,0.4s						
NGJI	**Ngawi**	**21.61**	**129**	P	**P**	**08 17 40.5**	**+4.2**
BWJI	**Bawean**	**21.68**	**124**	P	P	08 17 47.7	+11
SPMM	**Sapulut**	**21.72**	**93**	P	**P**	**08 17 39.0**	**+1.5**
RAMN	**Ramite**	**21.82**	**340**	*e*P	**P**	**08 17 39.6**	**+1.0**
	comp=Z,55nm,0.6s						
TAPN	**Taplejung**	**21.84**	**343**	*e*P	**P**	**08 17 39.9**	**+0.9**
	comp=Z,358nm,0.9s						
BBKI	**Banjar Baru**	**22.38**	**115**	P	**P**	**08 17 45.2**	**+0.7**
JIRN	**Jiri**	**22.61**	**340**	*e*P	**P**	**08 17 47.7**	**+0.4**
	comp=Z,233nm,0.9s						
PKI	**Pulchoki**	**22.81**	**338**	*e*P	**P**	**08 17 49.4**	**+0.1**
PKIN	**Phulchoki**	**22.82**	**338**	*e*P	**P**	**08 17 49.5**	**+0.2**
	comp=Z,182nm,0.8s						
GUN	**Gumba**	**22.95**	**340**	*e*P	**P**	**08 17 50.8**	**0.0**
	comp=Z,226nm,0.8s						
GYA	**Guiyang**	**22.95**	**28**	⇓P	**P**	**08 17 52.2**	**+1.6**
GYA				pP	pwP	08 18 01.9	+3.4
GYA				S	**S**	**08 22 00.3**	**+0.2**
GYA				pmax	pmax		
	comp=Z,50nm,0.9s						
GYA				pmax	pmax		
	comp=Z,2µm,8.8s						
GYA				LR	LR		
	comp=Z,19µm,14.0s						
GYA				LR	LR		
	comp=Z,11µm,12.1s						
GYA				LR	LR		
	comp=Z,12µm,17.0s						
DMN	**Daman**	**22.95**	**338**	*e*P	**P**	**08 17 50.8**	**+0.1**
	comp=Z,125nm,0.8s						
KKN	**Kakani**	**23.05**	**338**	*e*P	**P**	**08 17 51.5**	**-0.2**
	comp=Z,255nm,1.0s						
LSA	**Lhasa**	**23.39**	**352**	P	**P**	**08 17 54.2**	**-1.2**
LSA				pmax	pmax		
	comp=Z,131nm,1.3s						
LSA	**Lhasa**	**23.39**	**352**	P	**P**	**08 17 55.4**	**0.0**
LSA				P	**P**	**08 17 55.4**	**0.0**
LSA	**Lhasa**	**23.39**	**352**	P	**P**	**08 17 54.1**	**-1.2**
LSA				IAmb	IAmb	08 18 39.9	
	comp=Z,131nm,1.3s						
KMMI	**Kalianget**	**23.42**	**125**	P	**P**	**08 17 56.1**	**+0.8**
SMKI	**Samarinda**	**23.47**	**106**	P	**P**	**08 18 02.2**	**+6.3**
GKN	**Gorkha**	**23.49**	**337**	*e*P	**P**	**08 17 55.5**	**-0.5**
BLJI	**Banyuglugur**	**23.52**	**126**	P	**P**	**08 17 57.7**	**+1.4**
KOLN	**Koldanda**	**23.70**	**335**	*e*P	**P**	**08 17 57.5**	**-0.6**
	comp=Z,172nm,0.9s						
ABJI	**Asem Bagus**	**24.06**	**126**	P	**P**	**08 18 03.7**	**+2.2**
DANN	**Dangsing**	**24.14**	**336**	*e*P	**P**	**08 18 01.8**	**-0.6**

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      comp=Z,190nm,1.0s
PYUN  Piuthan           24.25 334 eP       P        08 18 03.2 -0.1
JAGI  Jajag, Banyuwa    24.39 127  P       P        08 18 10.3 +5.8
JAGI  Jajag, Banyuwa    24.39 127  P       P        08 18 02.6 -1.9
JAGI                               IAmb    IAmb     08 18 13.6
      comp=Z,253nm,1.3s
JAGI                               IAMs_20 IAMs_20  08 28 03.8
      comp=Z,13µm,22.0s
GZH   Guangzhou         24.43  45  P       P        08 18 11.6 +6.9
GZH                                S       S        08 22 34.4  +11
GZH                                LR      LR
      comp=Z,46µm,16.8s
GZH                                LR      LR
      comp=Z,26µm,17.1s
SRBI  Singaraja         25.02 125  P       P        08 18 10.9 +0.7
IGBI  Denpasar          25.39 126  P       P        08 18 20.4 +6.9
MPSI  Mapaga            25.86 103  P       P        08 18 18.9 +1.1
H08S3 Diego Garcia H    26.20 238  T       T        08 45 04.0
      baz=57,slow=75,SNR=3101
H08S2 Diego Garcia H    26.20 238  T       T        08 45 11.5
      baz=57,slow=75,SNR=1140
H08S1 Diego Carcia H    26.21 238  T       T        08 45 05.3
      baz=57,slow=75,SNR=1189
TTSI  Tana Toraja       26.78 110  P       P        08 18 31.9 +5.7
SONA  Sohna             27.38 325 eP       P        08 18 31.9 +0.5
LQP   Lukban            27.46  72⇓eP       P        08 18 33.0 +0.5
KAPI  Kappang           27.47 114  P       P        08 18 31.0 -1.3
      comp=Z,8.1nm,0.8s,baz=302,slow=8.7,SNR=6.9
KAPI  Kappang           27.47 114  P       P        08 18 30.4 -1.9
KAPI                               pmax    pmax
      comp=Z,193nm,1.5s
KAPI                               MLR     MLR
      comp=Z,9µm,20.0s
KAPI  Kappang           27.47 114  P       P        08 18 33.5 +1.1
KAPI  Kappang           27.47 114  P       P        08 18 30.4 -1.9
KAPI                               IAmb    IAmb     08 18 41.2
      comp=Z,193nm,1.4s
KAPI  Kappang           27.47 114  IAMs_20 IAMs_20  08 29 56.1
      comp=Z,9µm,20.0s
ENH   Enshi             27.49  29  P       P        08 18 31.4 -1.0
ENH                                IAmb    IAmb     08 18 49.3
      comp=Z,84nm,1.1s
ENH                                IAMs_20 IAMs_20  08 30 05.5
      comp=Z,13µm,19.0s
AYAN  Aya Nagar         27.53 325 eP       P        08 18 33.5 +0.8
PLAI  Plampang          27.54 123  P       P        08 18 48.6  +16
NDI   New Delhi         27.63 325 eP       P        08 18 33.8 +0.1
KUDL  Kundal            27.65 323 eP       P        08 18 34.7 +0.8
PAGZ  Pagadian          28.49  85⇑eP       P        08 18 42.6 +1.1
VJP   Vajepar           28.84 309 eP       P        08 18 46.9 +2.4
LUWI  Luwuk             28.98 104  P       P        08 18 46.1 +0.2
TBP   Tagbilaran        29.04  82⇑iP       P        08 18 46.0 -0.4
TAPR  Tapar             29.31 307 eP       P        08 18 50.7 +2.0
QZH   Quanzhou          29.36  49  P       P        08 18 55.0 +5.9
QZH                                S       S        08 23 46.0 +4.0
QZH                                LR      LR
      comp=Z,22µm,13.7s
QZH                                LR      LR
      comp=Z,11µm,13.9s
QZH                                LR      LR
      comp=Z,14µm,14.4s
TPUB  Ta-pu             30.06  53  IAMs_20 IAMs_20  08 30 07.5
      comp=Z,8µm,20.0s
TWG   Pinlang           30.18  55  IAMs_20 IAMs_20  08 31 24.9
      comp=Z,7µm,18.0s
WHN   Wuhan             30.26  35 ⇑P       P        08 18 58.3 +1.3
WHN                                sP      pwP      08 19 11.9 +6.7
WHN                                S       S        08 24 02.7 +6.7
WHN                                pmax    pmax
      comp=Z,65nm,1.1s
WHN                                pmax    pmax
      comp=Z,1µm,6.2s
WHN                                LR      LR
      comp=Z,17µm,9.3s
WHN                                LR      LR
      comp=Z,25µm,12.0s
WHN                                LR      LR
      comp=Z,41µm,12.5s
XAN   Xi'an             30.47  24  P       P        08 18 59.0 +0.1
XAN                                S       S        08 23 58.4 -0.8
XAN                                SS      SnSn     08 25 37.9 +2.2
XAN                                pmax    pmax
      comp=Z,46nm,1.0s
XAN                                pmax    pmax
      comp=Z,210nm,3.5s
XAN                                LR      LR
      comp=Z,4µm,10.6s
XAN                                LR      LR
      comp=Z,16µm,13.0s
XAN                                LR      LR
      comp=Z,22µm,14.6s
SSLB  Suanglung         30.56  53  P       P        08 18 59.7 -0.1
SSLB                               IAmb    IAmb     08 19 10.9
      comp=Z,111nm,1.7s
YULB  Yu-li             30.64  54  P       P        08 19 01.4 +0.9
DAV   Davao City (W)    30.66  87  P       P        08 19 02.5 +1.7
LZH   Lanzhou           30.69  15 eP       P        08 19 02.5 +1.6
LZH                                pP      pwP      08 19 09.2 +0.5
LZH                                sP      sP       08 19 15.2 +6.9
LZH                                PP      PnPn     08 20 04.7 +3.9
LZH                               eS       S        08 24 02.2 -0.6
LZH                                pmax    pmax
      comp=Z,57nm,1.0s
LZH                                pmax    pmax
      comp=Z,340nm,4.9s
LZH                                LR      LR
      comp=Z,3µm,13.8s
LZH                                LR      LR
      comp=Z,10µm,12.2s
LZH                                LR      LR
      comp=Z,5µm,14.6s
NACB  Ninganchiao       31.26  53  P       P        08 19 06.3 +0.4
NACB                               IAmb    IAmb     08 19 20.5
      comp=Z,62nm,1.1s
NACB                               IAMs_20 IAMs_20  08 31 41.4
      comp=Z,9µm,19.0s
MMRI  Maumere           31.26 118  IAMs_20 IAMs_20  08 32 29.8
      comp=Z,8µm,20.0s
TATO  Taipei            31.58  51  IAMs_20 IAMs_20  08 31 09.1
      comp=Z,10µm,19.0s
GTA   Gaotai            33.16   7 eP       P        08 19 23.1 +0.5
GTA                                pP      pwP      08 19 32.5 +2.1
GTA                                sP      sP       08 19 36.3 +6.3
GTA                                PcP     PcP      08 22 05.3 -0.1
GTA                                S       S        08 24 39.0 -2.3
GTA                                ScS     ScS      08 29 47.0 -2.4
GTA                                pmax    pmax
      comp=Z,14nm,1.0s
GTA                                pmax    pmax
      comp=Z,310nm,6.9s
GTA                                LR      LR
      comp=Z,5µm,14.2s
GTA                                LR      LR
      comp=Z,6µm,13.8s
GTA                                LR      LR
      comp=Z,5µm,12.7s
SOEI  Soe               33.55 118  P       P        08 19 24.7 -1.6
SOEI                               IAmb    IAmb     08 19 56.9
      comp=Z,94nm,1.1s
SOEI                               IAMs_20 IAMs_20  08 33 50.5
      comp=Z,13µm,22.0s
NIL   Nilore            33.60 327  P       P        08 19 26.4  0.0
NIL                                pmax    pmax
      comp=Z,209nm,0.8s
NIL                                MLR     MLR
      comp=Z,5µm,18.0s
NIL   Nilore            33.60 327  P       P        08 19 22.8 -3.6
NIL                                P       P        08 19 22.8 -3.6
NIL   Nilore            33.60 327  P       P        08 19 26.4  0.0
NJ2   Nanjing           34.03  38 eP       P        08 19 31.6 +1.6
NJ2                                pP      pwP      08 19 39.8 +1.9
NJ2                                S       S        08 24 54.2 -0.5
NJ2                                sS      sS       08 25 13.2  +10
NJ2                                pmax    pmax
      comp=Z,25nm,0.6s
NJ2                                pmax    pmax
      comp=Z,590nm,4.4s
NJ2                                LR      LR
      comp=Z,20µm,16.1s
NJ2                                LR      LR
      comp=Z,16µm,15.6s
NJ2                                LR      LR
      comp=Z,12µm,12.8s
SSE   Sheshan           34.89  42  P       P        08 19 36.8 -0.8
SSE                                S       S        08 25 12.2 +4.1
SSE                                pmax    pmax
      comp=Z,17nm,0.7s
SSE                                pmax    pmax
      comp=Z,110nm,3.5s
SSE                                LR      LR
      comp=Z,8µm,16.1s
SSE                                LR      LR
      comp=Z,7µm,17.8s
TIY   Taiyuan           35.07  25⇑iP       P        08 19 43.0 +3.9
TIY                                S       S        08 25 11.2 +0.4
TIY                                pmax    pmax
      comp=Z,520nm,4.2s
TIY                                LR      LR
      comp=Z,10µm,13.5s
TIY                                LR      LR
      comp=Z,9µm,11.0s
TIY                                LR      LR
      comp=Z,11µm,12.7s
TIA   Tai'an            36.06  32 ⇑P       P        08 19 48.6 +1.0
TIA                                S       S        08 25 27.9 +2.0
TIA                                pmax    pmax
      comp=Z,15nm,1.3s
TIA                                pmax    pmax
      comp=Z,250nm,4.2s
TIA                                LR      LR
      comp=Z,6µm,13.1s
TIA                                LR      LR
      comp=Z,11µm,14.5s
TIA                                LR      LR
      comp=Z,9µm,14.5s
KBL   Kabul             36.66 323  P       P        08 19 52.8 -0.1
KBL                                pmax    pmax
      comp=Z,18nm,0.9s
KBL   Kabul             36.66 323  P       P        08 19 53.0 +0.1
      SNR=9.6
KBL                                P       P        08 19 53.0 +0.1
      SNR=9.6
KBL   Kabul             36.66 323  P       P        08 19 52.8 -0.1
BTO   Baotou            36.69  20 eP       P        08 19 50.2 -2.8
BTO                                PP      PP       08 21 20.8 +4.1
BTO                                S       S        08 25 31.5 -4.1
KSH   Kashi             37.01 336  P       P        08 19 54.0 -1.8
KSH                                pP      pwP      08 20 02.7 -1.3
KSH                                S       S        08 25 34.6 -6.0
KSH                                SS      SnSn     08 28 06.6 -7.9
KSH                                pmax    pmax
      comp=Z,31nm,0.9s
KSH                                LR      LR
      comp=Z,2µm,24.4s
KSH                                LR      LR
      comp=Z,5µm,25.1s
KSH                                LR      LR
      comp=Z,5µm,22.3s
PSA00 Pilbara Seismi    37.18 139  P       P        08 19 55.8 -1.4
PSA00                              IAmb    IAmb     08 20 05.9
      comp=Z,175nm,1.6s
PSA00 Pilbara Seismi    37.18 139  P       P        08 19 56.1 -1.1
PSA00                              IAmb    IAmb     08 20 05.9
      comp=Z,92nm,1.6s
SIJI  Sorong            37.20 100  P       P        08 19 55.7 -1.9
      comp=Z,37nm,1.0s,baz=314,slow=9.0,SNR=9.9
HHC   Hu-ho-hao-te      37.44  21⇑iP       P        08 20 01.5 +2.1
HHC                                pP      pwP      08 20 11.3 +4.1
HHC                                sP      sP       08 20 15.2 +8.2
HHC                                PP      PnPn     08 21 30.5 +4.7
HHC                                S       S        08 25 48.4 +1.3
HHC                                sS      ScP      08 26 04.1 -0.3
HHC                                SS      SnSn     08 28 23.1 -1.8
HHC                                pmax    pmax
      comp=Z,60nm,1.1s
HHC                                pmax    pmax
      comp=Z,380nm,5.3s
HHC                                LR      LR
      comp=Z,9µm,17.5s
HHC                                LR      LR
      comp=Z,9µm,13.7s
HHC                                LR      LR
      comp=Z,11µm,17.8s
JLN   Jalan Bani Buh    37.47 298  P       P        08 20 01.9 +2.1
      SNR=20
JLN                                P       P        08 20 01.9 +2.1
      SNR=20
WMQ   Urumqi            37.75 352 eP       P        08 20 06.5 +4.6
WMQ                                pP      pwP      08 20 09.7 -0.3
WMQ                                sP      sP       08 20 21.9  +12
WMQ                                S       S        08 25 51.8 +0.2
WMQ                                pmax    pmax
      comp=Z,42nm,1.1s
WMQ                                pmax    pmax
      comp=Z,510nm,5.3s
WMQ                                LR      LR
      comp=Z,4µm,14.9s
WMQ                                LR      LR
      comp=Z,2µm,17.5s
WMQ                                LR      LR
      comp=Z,2µm,17.9s
JOW   Kunigami          37.83  54  P       P        08 20 01.7 -1.1
WBK   Wadi Bani Khal    38.01 299  P       P        08 20 07.4 +3.0
      SNR=6.2
WBK                                P       P        08 20 07.4 +3.0
      SNR=6.2
TARG  Taragay, Kyrgy    38.23 339  P       P        08 20 06.5  0.0
TARG                               IAmb    IAmb     08 20 15.2
      comp=Z,77nm,1.3s
MHTO  MHTO              38.39 296  P       P        08 20 13.3 +5.8
      SNR=7.2
MHTO                               P       P        08 20 13.3 +5.8
      SNR=7.2
DQM   DQM               38.48 294  P       P        08 20 15.3 +7.0
DQM                                P       P        08 20 15.3 +7.0
WSAR  Wadi Sarin        38.51 300  P       P        08 20 11.1 +2.5
      comp=Z,11nm,0.7s,baz=139,slow=6.8,SNR=12
WSAR  Wadi Sarin        38.51 300  P       P        08 20 09.6 +1.0
      SNR=12
BJT   Baijiatuau        38.60  27  P       P        08 20 11.0 +1.9
BJT                                pmax    pmax
      comp=Z,77nm,1.0s
BJT                                MLR     MLR
      comp=Z,4µm,21.0s
BJT   Baijiatuau        38.60  27  P       P        08 20 11.0 +1.9
BJT                                IAmb    IAmb     08 20 13.0
      comp=Z,77nm,1.0s
FAKI  Fak Fak           38.62 103  P       P        08 20 07.9 -1.7
FAKI                               IAmb    IAmb     08 20 17.1
      comp=Z,179nm,1.3s
JMDO  Jabal Madar       38.69 298  P       P        08 20 19.1 +9.0
      SNR=6.9
JMDO                               P       P        08 20 19.1 +9.0
      SNR=6.9
PRZ   Przheval'sk       38.70 341  P       P        08 20 10.9 +0.8
PRZ                                pmax    pmax
      comp=Z,55nm,1.0s
PRZ   Przheval'sk       38.70 341  P       P        08 20 10.9 +0.8
SMDO  Samad             38.96 299  P       P        08 20 22.0  +10
      SNR=12
SMDO                               P       P        08 20 22.0  +10
      SNR=12
SHLS  Shalkode          38.97 342 eP       P        08 20 10.1 -2.2
      baz=343
SHLS  Shalkode          38.97 342 eP       P        08 20 10.9 -1.4
BIDO  Bidbid            39.04 300  P       P        08 20 16.4 +3.4
      SNR=34
FITZ  Fitzroy Crossi    39.06 129  P       P        08 20 12.4 -0.8
      comp=Z,35nm,0.9s,baz=313,slow=6.3,SNR=32
FITZ                               ScP     S        08 26 11.3 -0.5
      comp=Z,12nm,1.2s,baz=359,slow=6.6,SNR=4.9
UZB   Uzynbulak         39.10 342 eP       P        08 20 12.6 -0.8
      baz=342
UZB   Uzynbulak         39.10 342 eP       P        08 20 12.6 -0.8
PDGK  Podgornoye        39.12 342  P       P        08 20 13.2 -0.3
GAR   Garm              39.20 329  P       P        08 20 13.6 -0.6
SAUI  Saumlaki          39.20 111  IAMs_20 IAMs_20  08 38 47.1
      comp=Z,8µm,19.0s
SATY  Saty              39.22 341 eP       P        08 20 14.0 -0.4
      baz=341
SATY  Saty              39.22 341 eP       P        08 20 13.9 -0.4
ULHL  Ulahol            39.25 338  P       P        08 20 14.4 -0.3
      SNR=18
KPKS  Kokpek            39.49 342 eP       P        08 20 15.6 -1.0
      baz=342
KPKS  Kokpek            39.49 342 eP       P        08 20 15.6 -1.0
CHGR  Chuyangaron       39.54 328  P       P        08 20 16.2 -0.9
TNSS  Tian-Shan         39.69 340 eP       P        08 20 17.9 -0.7
      baz=340
BTK   Batken            39.76 331  P       P        08 20 20.1 +1.2
BTK                                pmax    pmax
      comp=Z,121nm,0.8s
BTK   Batken            39.76 331  P       P        08 20 20.1 +1.2
BTK                                IAmb    IAmb     08 20 22.2
      comp=Z,121nm,0.8s
MDOK  Medeo             39.76 340 eP       P        08 20 18.3 -0.6
      baz=340
MDOK  Medeo             39.76 340 eP       P        08 20 18.3 -0.6
HOQ   Hoqain            39.77 299  P       P        08 20 22.4 +3.3
      SNR=23
HOQ                                P       P        08 20 22.4 +3.3
      SNR=23
SHAO  Shalim            39.80 290  P       P        08 20 22.7 +3.2
AAA   Alma-Ata          39.85 340 eP       P        08 20 18.9 -0.6
      baz=340
AAA   Alma-Ata          39.85 340 eP       P        08 20 18.9 -0.6
UCH   Uchtor            39.90 336  P       P        08 20 21.0 +0.6
      SNR=36
TKM2  Tokmak 2          40.07 338  P       P        08 20 21.7 +0.1
      SNR=18
TKM2  Tokmak 2          40.07 338  P       P        08 20 20.9 -0.7
KBK   Karagaybulak      40.09 337  P       P        08 20 22.5 +0.8
      SNR=22
AML   Almayashu         40.15 336  P       P        08 20 21.8 -0.6
      SNR=19
AML   Almayashu         40.15 336 iP       P        08 20 17.8 -4.7
      SNR=105
AAK   Ala-Archa         40.25 337  P       P        08 20 23.6 +0.6
      comp=Z,31nm,0.9s,baz=168,slow=6.0,SNR=5.4
AAK   Ala-Archa         40.25 337  P       P        08 20 24.0 +1.0
      SNR=26
AAK   Ala-Archa         40.25 337 iP       P        08 20 20.2 -2.8
      SNR=29
AAK   Ala-Archa         40.25 337c iP      P        08 20 23.4 +0.4
AAK                                pmax    pmax
      comp=Z,88nm,1.2s
AAK                                MLR     MLR
      comp=Z,18µm,21.0s
AAK   Ala-Archa         40.25 337  P       P        08 20 23.0  0.0
AAK                                IAmb    IAmb     08 20 35.5
      comp=Z,80nm,1.1s
AAK   Ala-Archa         40.25 337  IAMs_20 IAMs_20  08 38 09.1
      comp=Z,6µm,21.0s
KNRA  Kununurra         40.25 123  P       P        08 20 22.8 -0.3
      baz=40,SNR=5.5
KNRA  Kununurra         40.25 123  P       P        08 20 22.6 -0.5
FRU1  Bishkek           40.34 337  P       P        08 20 24.9 +1.3
FRU1                               pmax    pmax
      comp=Z,81nm,1.3s
FRU1  Bishkek           40.34 337  P       P        08 20 24.9 +1.3
ARQ   Araqi             40.38 299  P       P        08 20 27.6 +3.4
      SNR=8.3
ARQ                                P       P        08 20 27.6 +3.4
      SNR=8.3
CHKK  Chushkaly         40.39 340 eP       P        08 20 23.4 -0.6
      baz=340
ARXS  Arharly           40.44 341 eP       P        08 20 24.1 -0.3
DL2   Dalian            40.45  33  P       P        08 20 26.3 +1.8
DL2                                pP      pwP      08 20 35.4 +3.0
DL2                                S       S        08 26 35.8 +3.5
DL2                                SS      SS       08 29 26.3 -5.6
DL2                                pmax    pmax
      comp=Z,45nm,1.0s
DL2                                pmax    pmax
      comp=Z,250nm,6.5s
DL2                                LR      LR
      comp=Z,7µm,14.2s
DL2                                LR      LR
      comp=Z,7µm,13.9s
DL2                                LR      LR
      comp=Z,5µm,15.0s
CHMS  Chumysh           40.46 337  P       P        08 20 24.9 +0.4
      SNR=12
SOCY  Socotra           40.55 281  P       P        08 20 28.6 +2.8
SOCY                               IAmb    IAmb     08 20 36.3
      comp=Z,171nm,1.5s
SOCY                               IAMs_20 IAMs_20  08 34 45.4
      comp=Z,6µm,20.0s
EKS2  Erkin-Say         40.55 336  P       P        08 20 26.3 +0.8
      SNR=39
SOHO  SOHO              40.62 300 iP       P        08 20 28.6 +2.5
      SNR=6.5
KUU   Kurty             40.65 340 eP       P        08 20 24.8 -1.3
      baz=340
KUU   Kurty             40.65 340 eP       P        08 20 24.8 -1.3
USP   Ospenovka         40.78 337  P       P        08 20 27.2  0.0
      SNR=32
MORW  Morawa            40.83 151  P       P        08 20 29.6 +1.8
HRA   Herat             40.89 317  P       P        08 20 31.5 +3.0
SGDS  Sogindy           40.89 338 eP       P        08 20 27.4 -0.8
      baz=338
MTN   Manton Dam        40.95 118  P       P        08 20 29.3 +0.4
      baz=41,SNR=3.4
MTN   Manton Dam        40.95 118  P       P        08 20 28.2 -0.7
MTN                                IAmb    IAmb     08 20 37.3
      comp=Z,271nm,1.9s
TDK   Taldyqorghan      40.97 342 eP       P        08 20 27.4 -1.4
      baz=342
TDK   Taldyqorghan      40.97 342 eP       P        08 20 27.3 -1.4
UOSS  Minazif           41.18 301 iP       P        08 20 31.3 +0.6
      SNR=6.0
UOSS  Minazif           41.18 301  P       P        08 20 33.8 +3.1
HATD  Hatta, Dubai      41.20 301 iP       P        08 20 33.8 +2.9
      SNR=7.0
HATD  Hatta, Dubai      41.20 301  P       P        08 20 41.0  +10
      SNR=7.3
HATD                               P       P        08 20 41.0  +10
      SNR=7.3
ASHO  Ashiyiah          41.21 300 iP       P        08 20 33.0 +2.0
      SNR=9.4
MDH   Madha             41.22 301  P       P        08 20 30.8 -0.2
ALNE  Al Ain            41.27 299 iP       P        08 20 34.2 +2.7
      SNR=8.4
ALNE  Al Ain            41.27 299  P       P        08 20 35.0 +3.5
      SNR=24
ALNE                               P       P        08 20 35.0 +3.5
      SNR=24
MSFE  Esma-Masafi       41.36 301  P       P        08 20 38.6 +6.3
MK31  Makanchi Array    41.61 347d iP      P        08 20 33.6 -0.4
MK31                               pmax    pmax
      comp=Z,35nm,0.8s
MK31  Makanchi Array    41.61 347  P       P        08 20 33.5 -0.5
MKAR  Makanchi Array    41.61 347  P       P        08 20 33.6 -0.4
      comp=Z,16nm,0.7s,baz=168,slow=7.6,SNR=28
MKAR  Makanchi Array    41.61 347  P       P        08 20 30.6 -3.4
MKAR  Makanchi Array    41.61 347  P       P        08 20 30.6 -3.4
FAQ   Al Faqa, Dubai    41.63 300  P       P        08 20 43.6 +9.2
      SNR=6.9
NAZ   Nazwa, Dubai      41.66 301  P       P        08 20 44.0 +9.3
      SNR=5.7
NAZ                                P       P        08 20 44.0 +9.3
      SNR=5.7
MAKZ  Makanchi          41.70 347  P       P        08 20 31.0 -3.7
MAKZ                               pmax    pmax
      comp=Z,26nm,0.8s
MAKZ                               MLR     MLR
      comp=Z,2µm,20.0s
MAKZ  Makanchi          41.70 347  P       P        08 20 31.0 -3.7
ZSN   Zaisan            41.73 350 eP       P        08 20 34.5 -0.5
      baz=350
ZSN   Zaisan            41.73 350 eP       P        08 20 34.4 -0.5
IUG   Iuzhnay           41.76 332 eP       P        08 20 32.4 -3.1
      baz=332
IUG   Iuzhnay           41.76 332 eP       P        08 20 32.3 -3.1
DZA   Taraz             41.77 334 eP       P        08 20 33.1 -2.2
      baz=334
DZA   Taraz             41.77 334 eP       P        08 20 33.9 -1.4
ASUD  Al Ashush, Dub    41.82 300 iP       P        08 20 35.8 -0.2
      SNR=17
ASUD  Al Ashush, Dub    41.82 300  P       P        08 20 39.1 +3.1
      SNR=27
ASUD                               P       P        08 20 39.1 +3.1
      SNR=27
TJN   Taejon            42.19  40deP       P        08 20 40.3 +1.5
KK31  Karatay Array     42.30 334  P       P        08 20 36.0 -3.7
KK31                               pmax    pmax
      comp=Z,78nm,1.0s
KK31  Karatay Array     42.30 334  P       P        08 20 36.0 -3.7
KK31                               IAmb    IAmb     08 20 47.6
      comp=Z,78nm,0.9s
KKAR  Karatay Array     42.30 334  P       P        08 20 35.3 -4.3
KKAR  Karatay Array     42.30 334  P       P        08 20 35.3 -4.3
SONM  Songino Array     42.45  12  P       P        08 20 41.3 +0.3
      comp=Z,33nm,0.8s,baz=194,slow=7.1,SNR=41
SONM                               PcP     PcP      08 22 33.2 -0.5
      comp=Z,4.2nm,0.8s,baz=204,slow=4.2,SNR=1.8
SONM  Songino Array     42.45  12  P       P        08 20 41.8 +0.8
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SONM                                IAmb      IAmb      08 20 49.5
      comp=Z,65nm,1.0s
BTLS  Baital            42.46 338  eP        P         08 20 40.1  -0.9
      baz=338
BTLS                               eS        S         08 26 59.5  -2.4
      baz=338
BTLS  Baital            42.46 338  eP        P         08 20 40.0  -0.9
BTLS                               eS        S         08 26 59.5  -2.4
BRLS  Borolday          42.54 333  eP        P         08 20 39.1  -2.5
      baz=332
BRLS  Borolday          42.54 333  eP        P         08 20 39.1  -2.5
ULN   Ulaanbaatar       42.62  12d iP        P         08 20 42.6  +0.3
ULN                                 pmax      pmax
      comp=Z,19nm,0.6s
ULN                                 MLR       MLR
      comp=Z,3µm,16.0s
ULN   Ulaanbaatar       42.62  12   P         P         08 20 43.1  +0.8
ULN                                 IAmb      IAmb      08 20 54.1
      comp=Z,93nm,1.5s
KSRS  Korea Array       43.20  40   P         P         08 20 46.3  -0.7
      comp=Z,9.6nm,0.9s,baz=226,slow=8.4,SNR=17
KSRS                                ScP       ScP       08 26 26.6  -0.1
      comp=Z,1.4nm,0.8s,baz=208,slow=5.0,SNR=4.8
DGZ   Jazzator, Alta    43.56 353⇓eP        P         08 20 49.7  -0.2
DGZ                                 pmax      pmax
      comp=Z,4.0nm,0.9s
DGZ                                 MLR       MLR
      comp=Z,2µm,17.0s
SNY   Shenyang          43.59  32 ⇑P        P         08 20 51.2  +1.1
SNY                                 S         S         08 27 21.4  +2.9
SNY                                 pmax      pmax
      comp=Z,41nm,0.9s
SNY                                 LR        LR
      comp=Z,10µm,16.6s
SNY                                 LR        LR
      comp=Z,4µm,14.9s
SNY                                 LR        LR
      comp=Z,10µm,17.3s
ZAK   Zakamensk         44.39   8  eP        P         08 20 57.4  +0.9
ZAK                                 pmax      pmax
      comp=Z,37nm,1.3s
ZAK                                 pmax      pmax
      comp=Z,26nm,1.4s
ZAK                                 pmax      pmax
      comp=Z,15nm,1.4s
NWAO  Narrogin (SRO)    44.61 153   P         P         08 20 58.3  -0.1
      comp=Z,13nm,0.8s,baz=328,slow=7.6,SNR=7.3
NWAO  Narrogin (SRO)    44.61 153   P         P         08 21 00.0  +1.6
      baz=45,SNR=5.7
NWAO                                P         P         08 21 00.0  +1.6
      baz=45,SNR=5.7
NWAO  Narrogin (SRO)    44.61 153   P         P         08 20 58.8  +0.4
SMPI  Sarmi             44.72  99   P         P         08 21 07.2  +7.6
H01W3 Cape Leeuwin H    44.99 157   T         T         09 09 29.7
      baz=331,slow=76,SNR=14
H01W2 Cape Leeuwin H    45.01 157   T         T         09 09 49.6
      baz=331,slow=76,SNR=6.2
H01W1 Cape Leeuwin H    45.01 157   T         T         09 09 19.9
      baz=331,slow=76,SNR=13
WRKA  Warakurna         45.24 135   P         P         08 21 03.6   0.0
      baz=45,SNR=25
JMN   Monobe            45.29  48   P         P         08 21 05.9  +2.0
JMN                                 IAmb      IAmb      08 21 22.9
      comp=Z,80nm,1.2s
JHS   Saijyo            45.35  46   P         P         08 21 05.1  +0.8
JHS                                 IAmb      IAmb      08 21 15.5
      comp=Z,111nm,1.3s
TRNA  Turayna           45.42 299   P         P         08 21 07.0  +2.0
SEM   Semipalatinsk     45.48 347  eP        P         08 21 03.6  -1.8
      baz=347
SEM   Semipalatinsk     45.48 347  eP        P         08 21 03.5  -1.8
GEYT  Alibeck           45.65 319   P         P         08 21 07.3  +0.7
      comp=Z,11nm,0.8s,baz=140,slow=9.7,SNR=9.4
GYA0B ALIBECK ARRAY     45.65 319   P         P         08 21 07.4  +0.7
GYA0B                               IAmb      IAmb      08 21 16.6
      comp=Z,29nm,0.7s
TLY   Talaya            45.71   8   P         P         08 21 06.4  -0.6
      comp=Z,14nm,0.9s,baz=258,slow=3.9,SNR=6.4
TLY   Talaya            45.71   8  eP        P         08 21 08.3  +1.4
TLY                                eS        S         08 27 52.9  +3.7
TLY                                eSS       ScS       08 31 03.8  +1.6
TLY                                eSSS      SSS       08 32 09.6
TLY                                 pmax      pmax
      comp=Z,96nm,1.3s
TLY                                 MLR       MLR
      comp=Z,7µm,14.0s
TLY   Talaya            45.71   8   IAMs_20   IAMs_20   08 41 03.3
      comp=Z,4µm,22.0s
CN2   Changchun         45.96  31  eP        P         08 21 08.8  -0.2
CN2                                eS        S         08 27 49.6  -3.3
CN2                                eSS       ScS       08 31 07.2  +3.2
CN2                                 pmax      pmax
      comp=Z,30nm,1.0s
CN2                                 LR        LR
      comp=Z,4µm,16.0s
CN2                                 LR        LR
      comp=Z,7µm,16.0s
CN2                                 LR        LR
      comp=Z,5µm,17.0s
KURBB Kurchatov Arra    46.08 346   P         P         08 21 10.1  +0.3
      comp=Z,12nm,0.7s,baz=170,slow=7.1,SNR=42
KURBB Kurchatov Arra    46.08 346   P         P         08 21 09.4  -0.4
KURK  Kurchatov         46.14 346ceP        P         08 21 09.9  -0.4
KURK                                pmax      pmax
      comp=Z,15nm,1.0s
KURK                                MLR       MLR
      comp=Z,4µm,22.0s
KURK  Kurchatov         46.14 346   P         P         08 21 09.2  -1.1
KURK                                P         P         08 21 09.2  -1.1
KURK  Kurchatov         46.14 346   P         P         08 21 10.3  +0.1
KURK                                IAmb      IAmb      08 21 18.7
      comp=Z,73nm,1.1s
WB0   Warramunga Arr    46.93 125   P         P         08 21 14.4  -2.6
WRA   Warramunga Arr    46.98 125   P         P         08 21 15.9  -1.4
      comp=Z,13nm,0.8s,baz=305,slow=8.2,SNR=17
WRA                                 ScP       ScP       08 26 44.3  +1.6
      comp=Z,4.8nm,1.1s,baz=310,slow=4.0,SNR=5.0
WRA   Warramunga Arr    46.98 125   P         P         08 21 16.2  -1.1
WRAB  Tennant Creek     46.98 125⇓eP        P         08 21 16.6  -0.7
WRAB                                pmax      pmax
      comp=Z,18nm,0.8s
WRAB                                MLR       MLR
      comp=Z,5µm,20.0s
WRAB  Tennant Creek     46.98 125   P         P         08 21 16.0  -1.3
WRAB  Tennant Creek     46.98 125   IAMs_20   IAMs_20   08 42 38.6
      comp=Z,5µm,19.0s
WB2   Warramunga Arr    46.98 125   P         P         08 21 16.4  -1.0
WR0   Warramunga Arr    47.15 125   P         P         08 21 16.4  -2.3
WR0                                 IAmb      IAmb      08 21 27.4
      comp=Z,96nm,1.4s
BRZS  Berezniki         47.18 341  eP        P         08 21 17.7  -0.8
      baz=341
BRZS  Berezniki         47.18 341  eP        P         08 21 17.6  -0.8
HIA   Hailar            47.63  22⇑iP        P         08 21 22.7  +0.7
HIA                                 pmax      pmax
      comp=Z,9.0nm,0.7s
HIA                                 MLR       MLR
      comp=Z,8µm,17.0s
HIA   Hailar            47.63  22   P         P         08 21 21.7  -0.3
HIA                                 IAmb      IAmb      08 21 42.0
      comp=Z,40nm,0.9s
CIT   Chita             48.04  16  eP        P         08 21 25.0  -0.2
CIT                                e                    08 21 32.4
ZAA0  Zalesovo Array    48.05 352   P         P         08 21 23.7  -1.5
ZAA0                                IAmb      IAmb      08 21 36.9
      comp=Z,56nm,1.1s
ZALV  Zalesovo Beam     48.05 352   P         P         08 21 25.0  -0.2
      comp=Z,24nm,0.9s,baz=153,slow=5.0,SNR=14
ZALV  Zalesovo Beam     48.05 352   P         P         08 21 24.2  -1.0
ZALV  Zalesovo Beam     48.05 352   P         P         08 21 24.2  -1.0
INU   Inuyama           48.33  47   P         P         08 21 26.1  -1.5
INU                                 IAmb      IAmb      08 21 38.3
      comp=Z,49nm,1.0s
AS31  Alice Springs     48.57 129   P         P         08 21 25.5  -4.2
ASAR  Alice Springs     48.57 129   P         P         08 21 29.1  -0.5
      comp=Z,20nm,0.9s,baz=304,slow=7.1,SNR=14
ASAR                                PcP       PcP       08 22 55.9  +0.5
      comp=Z,13nm,1.0s,baz=301,slow=4.2,SNR=4.7
ASAR                                ScP       ScP       08 26 50.3  +0.9
      comp=Z,2.1nm,1.0s,baz=294,slow=6.4,SNR=4.1
ASAR                                S         S         08 28 27.9  -2.8
      comp=Z,2.2nm,0.8s,baz=290,slow=13,SNR=8.0
ASAR  Alice Springs     48.57 129   P         P         08 21 27.5  -2.1
ASAR  Alice Springs     48.57 129   P         P         08 21 27.5  -2.1
JGF   Kuroka            48.69  47   P         P         08 21 29.8  -0.7
JGF                                 IAmb      IAmb      08 21 45.1
      comp=Z,39nm,1.1s
MDJ   Mudanjiang        48.70  33   P         P         08 21 32.0  +1.7
MDJ                                 pP        pwP       08 21 40.4  +2.1
MDJ                                 sP        sP        08 21 47.2  +9.3
MDJ                                 S         S         08 28 32.9  +1.0
MDJ                                 pmax      pmax
      comp=Z,66nm,1.2s
MDJ                                 pmax      pmax
      comp=Z,220nm,3.6s
MDJ                                 LR        LR
      comp=Z,10µm,13.8s
MDJ                                 LR        LR
      comp=Z,9µm,16.0s
MDJ                                 LR        LR
      comp=Z,8µm,14.0s
MDJ   Mudanjiang        48.70  33   P         P         08 21 30.5  +0.2
MDJ                                 IAMs_20   IAMs_20   08 43 57.5
      comp=Z,5µm,18.0s
FORT  Forrest           48.87 141   P         P         08 21 31.7   0.0
VLA   Vladivostok       49.04  36deP        P         08 21 34.7  +1.8
VLA                                 pmax      pmax
      comp=Z,58nm,1.0s
VLA                                 MLR       MLR
      comp=Z,6µm,16.0s
MAJO  Matsushiro        49.73  47deP        P         08 21 39.0  +0.7
MAJO                                pmax      pmax
      comp=Z,23nm,1.3s
MAJO  Matsushiro        49.73  47   P         P         08 21 37.7  -0.7
MAJO  Matsushiro        49.73  47   IAMs_20   IAMs_20   08 41 23.5
      comp=Z,5µm,21.0s
MAT   Matsushiro        49.73  47   P         P         08 21 38.9  +0.6
MAT                                 S         S         08 28 48.4  +1.8
MJAR  Matsushiro Arr    49.73  47   P         P         08 21 39.6  +1.3
      comp=Z,22nm,1.2s,baz=241,slow=6.6,SNR=18
MJAR                                ScP       ScP       08 26 54.5  +0.3
      comp=Z,0.6nm,0.5s,baz=230,slow=2.8,SNR=4.5
MJAR  Matsushiro Arr    49.73  47   P         P         08 21 38.8  +0.5
MJAR                                pmax      pmax
      comp=Z,58nm,1.7s
MJAR  Matsushiro Arr    49.73  47   P         P         08 21 38.8  +0.5
MJAR                                IAmb      IAmb      08 21 51.3
      comp=Z,58nm,1.7s
USA0B Ussuriysk Arra    49.76  35   P         P         08 21 40.1  +1.7
USA0B                               pmax      pmax
      comp=Z,43nm,1.1s
USA0B Ussuriysk Arra    49.76  35   P         P         08 21 40.0  +1.7
USA0B                               IAmb      IAmb      08 21 49.5
      comp=Z,43nm,1.1s
USRK  Ussuriysk Ar.     49.76  35   P         P         08 21 39.0  +0.6
      comp=Z,21nm,1.0s,baz=244,slow=5.8,SNR=16
USRK  Ussuriysk Ar.     49.76  35   P         P         08 21 39.6  +1.2
USRK  Ussuriysk Ar.     49.76  35   P         P         08 21 39.6  +1.2
BVAR  Borovoye Array    50.53 341   P         P         08 21 43.6  -0.5
      comp=Z,11nm,0.8s,baz=185,slow=14,SNR=40
BRVK  Borovoye          50.59 341   P         P         08 21 43.7  -0.8
BRVK  Borovoye          50.59 341   P         P         08 21 43.8  -0.8
BRVK                                IAmb      IAmb      08 21 52.5
      comp=Z,54nm,1.1s
BRVK  Borovoye          50.59 341   IAMs_20   IAMs_20   08 46 11.5
      comp=Z,4µm,19.0s
ATD   Arta Tunnel       51.42 280   P         P         08 21 53.5  +2.0
      comp=Z,23nm,0.9s,baz=79,slow=3.7,SNR=7.0
ATD   Arta Tunnel       51.42 280   P         P         08 21 55.5  +4.0
      SNR=6.2
QIS   Mount Isa         51.62 122   P         P         08 21 52.7  -0.2
      baz=52,SNR=8.7
AB31  Akbulak array     51.76 332 i P         P         08 21 47.4  -6.0
ABKAR Akbulak array     51.76 332   P         P         08 21 48.6  -4.8
ABKAR Akbulak array     51.76 332   P         P         08 21 48.2  -5.2
ABKAR                               IAmb      IAmb      08 22 01.5
      comp=Z,142nm,1.1s
JMM   Marumori          52.16  46   P         P         08 21 56.0  -0.6
KLR   Kul'dur           52.85  30⇑eP        P         08 22 02.9  +1.4
KLR                                 MLR       MLR
      comp=Z,3µm,16.0s
OPO   Ambohidratompo    53.02 241   P         P         08 22 06.7  +3.2
      comp=Z,8.3nm,1.0s,baz=63,slow=8.4,SNR=4.1
MANU  Manus Island      53.24  97   P         P         08 22 02.1  -2.9
BOD   Bodaibo           53.42  13  eP        P         08 22 06.3  +0.7
BOD                                 pmax      pmax
      comp=Z,98nm,1.5s
AKTO  Aktyubinsk        53.48 332   P         P         08 22 06.0  -0.1
      comp=Z,33nm,0.9s,baz=130,slow=7.5,SNR=44
AKTO                                S         S         08 29 35.5  -2.4
      comp=Z,2.2nm,0.9s,baz=288,slow=23,SNR=7.1
ZEA   Zeya              54.05  23  eP        P         08 22 11.0  +0.8
ZEA                                eS        S         08 29 48.0  +2.6
ZEA                                eSS       SS        08 33 33.8  +6.8
ZEA                                 pmax      pmax
      comp=E,10.0nm,1.0s
ZEA                                 pmax      pmax
      comp=N,20nm,0.9s
ZEA                                 pmax      pmax
      comp=Z,20nm,1.2s
ZEA                                 pmax      pmax
      comp=N,200nm,6.9s
ZEA                                 pmax      pmax
      comp=Z,200nm,9.8s
ZEA                                 smax      smax
      comp=N,200nm,14.5s
ZEA                                 smax      smax
      comp=E,300nm,15.3s
ZEA                                 MLR       MLR
      comp=N,5µm,15.0s
ZEA                                 MLR       MLR
      comp=E,3µm,15.0s
ZEA                                 MLR       MLR
      comp=Z,4µm,13.0s
PMG   Port Moresby      54.58 106   P         P         08 22 12.8  -2.0
PMG                                 pmax      pmax
      comp=Z,43nm,1.2s
PMG                                 MLR       MLR
      comp=Z,2µm,19.0s
PMG   Port Moresby      54.58 106   P         P         08 22 12.8  -2.0
PMG                                 IAmb      IAmb      08 22 32.9
      comp=Z,43nm,1.1s
MTSU  Mount Surprise    54.69 117   P         P         08 22 16.1  +0.6
      baz=55,SNR=4.8
JEW   Eniwo             54.81  41   P         P         08 22 14.7  -1.3
MAK   Makhachkala       55.17 319  eP        P         08 22 13.6  -4.9
MAK                                e                    08 24 18.7
MAK                                eS        S         08 29 50.6   -10
MAK                                eSS       SS        08 33 37.3  -7.8
MAK                                 pmax      pmax
      comp=Z,229nm,1.2s
BBOO  Buckleboo         55.37 137   P         P         08 22 20.0  -0.2
      baz=56,SNR=9.9
BBOO  Buckleboo         55.37 137   P         P         08 22 18.6  -1.6
FURI  Furi              55.54 276   IAMs_20   IAMs_20   08 42 50.9
      comp=Z,5µm,21.0s
ERM   Erimo             55.57  43   IAMs_20   IAMs_20   08 45 10.3
      comp=Z,4µm,18.0s
GNI   Garni             55.84 315   P         P         08 22 23.3  -0.4
      comp=Z,11nm,0.3s,baz=195,slow=9.4,SNR=3.4
GNI   Garni             55.84 315deP        P         08 22 23.0  -0.7
GNI                                 pmax      pmax
      comp=Z,22nm,1.0s
GNI                                 MLR       MLR
      comp=Z,1µm,19.0s
GNI   Garni             55.84 315   P         P         08 22 23.5  -0.2
GNI                                 IAmb      IAmb      08 22 39.1
      comp=Z,28nm,0.7s
GRNR  Gornyy            56.15  31  eP        P         08 22 26.9  +1.4
GRNR                                MLR       MLR
      comp=E,2µm,15.0s
GRNR                                MLR       MLR
      comp=N,2µm,16.0s
GRNR                                MLR       MLR
      comp=Z,3µm,13.0s
GROC  Groznyy           56.39 319  eP        P         08 22 28.1  +0.7
GROC                               e                    08 24 35.1
GROC                                pmax      pmax
      comp=Z,41nm,0.5s
SVE   Sverdlovsk        56.94 338deP        P         08 22 31.4  +0.4
SVE                                eS        S         08 30 25.5  +1.5
SVE                                 pmax      pmax
      comp=Z,144nm,1.4s
SVE                                 MLR       MLR
      comp=Z,5µm,21.0s
CTAO  Charters Tower    57.12 119   P         P         08 22 32.2  -0.7
CTAO                                pmax      pmax
      comp=Z,32nm,1.2s
CTAO                                MLR       MLR
      comp=Z,3µm,21.0s
CTAO  Charters Tower    57.12 119   P         P         08 22 32.2  -0.7
CTAO  Charters Tower    57.12 119   IAMs_20   IAMs_20   08 47 33.0
      comp=Z,3µm,21.0s
GURO  Guroymak-BITLI    57.21 312   P         P         08 22 33.1  -0.4
KIBK  Kibwezi           57.23 263   P         P         08 22 37.0  +3.1
      SNR=5.3
KIBK  Kibwezi           57.23 263   P         P         08 22 35.1  +1.2
ARU   Arti              57.43 337   P         P         08 22 34.5  +0.1
      comp=Z,7.3nm,0.6s,baz=145,slow=3.7,SNR=23
ARU                                 S         S         08 30 28.3  -2.1
      comp=Z,0.6nm,0.3s,baz=209,slow=24,SNR=5.5
ARU   Arti              57.43 337c iP        P         08 22 34.1  -0.4
ARU                                                     08 23 27.6
ARU                                 S         S         08 30 29.8  -0.7
ARU                                 SS        SS        08 34 19.4  -0.9
ARU                                 pmax      pmax
      comp=Z,26nm,0.8s
ARU                                 MLR       MLR
      comp=Z,4µm,20.0s
ARU   Arti              57.43 337   P         P         08 22 34.3  -0.2
ARU                                 IAmb      IAmb      08 22 42.6
      comp=Z,84nm,1.1s
ARU                                 IAMs_20   IAMs_20   08 48 58.6
      comp=Z,3µm,20.0s
ZEI   Tsey              57.48 317  eP        P         08 22 33.9  -1.4
ZEI                                 pmax      pmax
      comp=Z,13nm,1.0s
YSS   Yuzh-Sakhalins    57.58  37⇓eP        P         08 22 37.4  +1.7
YSS                                e                    08 22 45.1
YSS                                e                    08 24 44.7
YSS                                eS        S         08 30 30.9  -1.8
YSS                                ePS       PnS       08 30 46.0  +1.2
YSS                                eSS       SS        08 34 22.3  -0.6
YSS                                 pmax      pmax
      comp=Z,70nm,1.3s
YSS                                 MLR       MLR
      comp=Z,3µm,15.0s
YSS                                 MLR       MLR
      comp=N,3µm,16.0s
YSS   Yuzh-Sakhalins    57.58  37   P         P         08 22 36.3  +0.6
YSS                                 IAMs_20   IAMs_20   08 49 30.6
      comp=Z,3µm,18.0s
HTT   Hallett           57.68 136   P         P         08 22 36.6  -0.1
      baz=58,SNR=22
KMBO  Kilima Mbogo      57.83 265   P         P         08 22 41.8  +3.4
      comp=Z,23nm,1.0s,baz=47,slow=8.0,SNR=32
KMBO  Kilima Mbogo      57.83 265 i P         P         08 22 41.8  +3.4
      SNR=20
KMBO  Kilima Mbogo      57.83 265   P         P         08 22 36.8  -1.5
KMBO                                pmax      pmax
      comp=Z,27nm,1.1s
KMBO  Kilima Mbogo      57.83 265   P         P         08 22 36.8  -1.5
QLP   Quilpie           58.12 127   P         P         08 22 40.1  +0.3
      baz=58,SNR=11
YUK   Yuzh-Kuril'sk     58.23  41   P         P         08 22 40.7  +0.5
YUK                                eS        S         08 30 38.7  -2.5
YUK                                 MLR       MLR
      comp=Z,3µm,20.0s
UGL   Uglegorsk         58.24  35  eP        P         08 22 51.8   +12
UGL                                eS        S         08 30 54.7   +13
UGL                                 MLR       MLR
      comp=E,4µm,17.0s
UGL                                 MLR       MLR
      comp=N,3µm,14.0s
UGL                                 MLR       MLR
      comp=Z,5µm,17.0s
NEY   Neytrino          58.46 318⇑eP        P         08 22 44.1  +2.0
NEY                                 pmax      pmax
      comp=Z,2.0nm,0.9s
NEY                                 MLR       MLR
      comp=Z,798nm,22.0s
KBZ   Khabaz            58.53 318   P         P         08 22 42.3  -0.1
      comp=Z,13nm,1.0s,baz=134,slow=5.3,SNR=13
KBZ   Khabaz            58.53 318ceP        P         08 22 41.8  -0.6
KBZ                                 pmax      pmax
      comp=Z,13nm,0.9s
STKA  Stephens Creek    58.71 133   P         P         08 22 42.0  -1.9
      comp=Z,17nm,0.9s,baz=307,slow=7.4,SNR=15
STKA  Stephens Creek    58.71 133   P         P         08 22 43.8  -0.1
      baz=59,SNR=16
STKA  Stephens Creek    58.71 133   P         P         08 22 43.1  -0.8
KIV   Kislovodsk        58.76 318   P         P         08 22 44.2  +0.1
KIV   Kislovodsk        58.76 318  eP        P         08 22 43.5  -0.7
KIV                                eS        S         08 30 46.2  -2.3
KIV                                eSS       SS        08 34 41.4  -0.5
KIV                                 pmax      pmax
      comp=Z,48nm,1.0s
KIV                                 pmax      pmax
      comp=Z,32nm,3.4s
KIV                                 MLR       MLR
      comp=Z,758nm,17.0s
KIV   Kislovodsk        58.76 318   P         P         08 22 43.9  -0.3
KIV                                 IAmb      IAmb      08 22 56.8
      comp=Z,44nm,0.9s
LODK  Lodwar            59.17 270   P         P         08 22 51.0  +3.4
      SNR=9.6
LODK  Lodwar            59.17 270   P         P         08 22 49.0  +1.5
LODK                                IAMs_20   IAMs_20   08 47 02.3
      comp=Z,2µm,19.0s
ASF   Jabal al Asfar    59.47 304   P         P         08 22 51.0  +1.7
      comp=Z,7.7nm,0.9s,baz=76,slow=4.8,SNR=6.4
TYV   Tymovskoe         59.48  33  eP        P         08 22 59.3   +10
TYV                                e                    08 31 24.4
TYV                                 pmax      pmax
      comp=Z,300nm,5.5s
TYV                                 pmax      pmax
      comp=Z,31nm,1.6s
TYV                                 MLR       MLR
      comp=E,5µm,17.0s
TYV                                 MLR       MLR
      comp=Z,5µm,17.0s
NKL   Nikolayevsk       59.68  30  eP        P         08 22 47.7  -2.5
NKL                                e                    08 24 59.6
NKL                                eS        S         08 30 56.8  -3.1
NKL                                 pmax      pmax
      comp=Z,40nm,1.1s
NKL                                 pmax      pmax
      comp=E,7.0nm,0.7s
NKL                                 pmax      pmax
      comp=N,565nm,0.6s
NKL                                 smax      smax
      comp=E,14nm,1.4s
NKL                                 smax      smax
      comp=N,2µm,2.0s
NKL                                 MLR       MLR
      comp=E,19nm,14.0s
NKL                                 MLR       MLR
      comp=N,11µm,16.0s
NKL                                 MLR       MLR
      comp=Z,2µm,14.0s
BELG  Belogornoye       59.83 329   P         P         08 22 50.9  -0.3
      comp=Z,88nm,0.9s,baz=24,slow=0.4,SNR=18
GHAJ  Ghor Haditha      60.41 302   IAMs_20   IAMs_20   08 53 55.2
      comp=Z,2µm,18.0s
GAZ   Gaziantep         60.43 309   P         P         08 22 55.1  -0.7
GAZ                                 IAmb      IAmb      08 23 01.9
      comp=Z,62nm,1.3s
SOC   Sochi             60.61 317  eP        P         08 22 52.4  -4.4
SOC                                e                    08 25 06.2
SOC                                ePPP      PPP       08 26 36.3
SOC                                eS        S         08 31 05.2  -7.0
SOC                                eSS       SS        08 35 05.8  -4.9
SOC                                eSSS      SSS       08 37 48.3
SOC                                 MLR       MLR
      comp=Z,958nm,21.0s
MMAI  Mount Meron Ar    60.88 304   P         P         08 23 00.1  +1.2
      comp=Z,14nm,0.8s,baz=93,slow=7.5,SNR=5.3
YAK   Yakutsk           61.19  18  eP        P         08 23 00.2  -0.1
YAK                                e*PP      pwP       08 23 10.1  +1.7
YAK                                ePPP      PPP       08 26 41.3
YAK                                eS        S         08 31 13.5  -5.3
YAK                                e*SS      sS        08 31 27.8  -0.3
YAK                                e                    08 32 52.0
YAK                                eSS       SS        08 35 25.4  +6.4
YAK                                 pmax      pmax
      comp=Z,59nm,1.0s
YAK                                 pmax      pmax
      comp=E,22nm,1.2s
YAK                                 pmax      pmax
      comp=N,23nm,1.1s
YAK                                 pmax      pmax
      comp=Z,10.0nm,0.7s
YAK                                 pmax      pmax
      comp=E,24nm,1.3s
YAK                                 smax      smax
      comp=N,47nm,2.3s
YAK                                 smax      smax
      comp=E,276nm,13.8s
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YAK                                MLR      MLR
      comp=Z,4µm,13.0s
YAK                                MLR      MLR
      comp=E,4µm,16.0s
YAK                                MLR      MLR
      comp=N,2µm,14.0s
YAK   Yakutsk          61.19  18   P        P         08 22 60.0  -0.3
YAK                                IAMs_20  IAMs_20   08 52 05.1
      comp=Z,3µm,18.0s
CMSA  Cobar Meteorol   61.56 131   P        P         08 23 03.5  +0.2
      baz=62,SNR=14
RMQ   Roma             61.74 125   P        P         08 23 06.2  +1.5
      baz=62,SNR=11
BNN   Bunyan           61.91 311   P        P         08 23 05.9   0.0
VRH   Novokhopyorsk    62.43 325  eP        P         08 23 07.4  -1.5
VRH                                pmax     pmax
      comp=Z,70nm,0.8s
KIRV  Kirov            62.55 335   P        P         08 23 09.3  -0.2
      comp=Z,34nm,0.8s,baz=158,slow=2.1,SNR=11
KIRV  Kirov            62.55 335deP         P         08 23 09.5   0.0
ANN   Anapa            62.57 318  eP        P         08 23 18.4  +8.4
ANN                                pmax     pmax
      comp=Z,60nm,0.9s
ANN                                MLR      MLR
      comp=Z,1µm,18.0s
NRIK  Noril'sk         63.00 357   P        P         08 23 11.7  -0.7
      comp=Z,6.8nm,0.8s,baz=160,slow=7.6,SNR=14
NRIK  Noril'sk         63.00 357   P        P         08 23 11.9  -0.5
VORD  Divnogorie       63.71 325  eP        P         08 23 15.2  -2.2
VORD                               pmax     pmax
      comp=Z,60nm,1.2s
BR131 Keskin Array S   63.79 311   P        P         08 23 17.1  -1.3
BR131                              pmax     pmax
      comp=Z,47nm,0.8s
BR131 Keskin Array S   63.79 311   P        P         08 23 17.9  -0.5
      SNR=10
BR131                              P        P         08 23 17.9  -0.5
      SNR=10
BR131 Keskin Array S   63.79 311   P        P         08 23 17.1  -1.3
BRTR  Keskin Array B   63.79 311   P        P         08 23 17.5  -0.9
      comp=Z,12nm,0.8s,baz=126,slow=7.1,SNR=26
BRTR  Keskin Array B   63.79 311   P        P         08 23 17.2  -1.2
BRTR  Keskin Array B   63.79 311   P        P         08 23 17.2  -1.2
VSR   Storozhevoye     63.89 325  eP        P         08 23 15.2  -3.4
VSR                                pmax     pmax
      comp=Z,50nm,1.1s
MBAR  Mbarara          64.22 266   P        P         08 23 24.6  +3.0
MBAR                               P        P         08 23 24.6  +3.0
MBAR  Mbarara          64.22 266   IAMs_20  IAMs_20   08 48 22.9
      comp=Z,3µm,20.0s
TOO   Toolangi         64.42 137   P        P         08 23 23.8  +1.5
      baz=64,SNR=10.0
TOO   Toolangi         64.42 137   P        P         08 23 22.3  -0.1
TOO                                pmax     pmax
      comp=Z,68nm,1.1s
TOO   Toolangi         64.42 137   P        P         08 23 22.3  -0.1
ANTO  Ankara           64.46 311 ⇓P         P         08 23 22.5  -0.2
ANTO  Ankara           64.46 311   P        P         08 23 22.5  -0.2
ANTO                               pmax     pmax
      comp=Z,60nm,1.3s
ANTO                               MLR      MLR
      comp=Z,1µm,22.0s
ANTO  Ankara           64.46 311   P        P         08 23 22.5  -0.2
ANTO                               IAmb     IAmb      08 23 29.4
      comp=Z,60nm,1.3s
LPSR  Galich'ya Gora   64.59 326  eP        P         08 23 22.2  -1.0
LPSR                               pmax     pmax
      comp=Z,50nm,0.9s
YNG   Young            64.86 133   P        P         08 23 25.7  +0.4
      baz=65,SNR=6.6
CAN   Canberra         65.78 133   P        P         08 23 31.5  +0.2
CAN                                pmax     pmax
      comp=Z,284nm,1.8s
CAN                                MLR      MLR
      comp=Z,4µm,20.0s
CAN   Canberra         65.78 133   P        P         08 23 31.4  +0.2
CAN                                IAMs_20  IAMs_20   08 52 41.1
      comp=Z,3µm,20.0s
MDUB  Mudurnu          65.79 312   P        P         08 23 30.8  -0.6
PRGR  Permogore        65.89 337  eP        P         08 23 30.5  -0.9
PRGR                              eS        S         08 32 15.7  -1.7
PRGR                               pmax     pmax
      comp=Z,103nm,0.8s
ELL   Elmali           66.04 307   P        P         08 23 32.8  -0.3
ELL                                pmax     pmax
      comp=Z,450nm,1.0s
ELL   Elmali           66.04 307   P        P         08 23 32.8  -0.3
CNB   Canberra Magne   66.04 133   P        P         08 23 33.2  +0.2
      baz=66,SNR=8.6
MOS   Moscow           66.60 329  eP        P         08 23 33.5  -2.6
MOS                               e                   08 23 41.3
MOS                                pmax     pmax
      comp=Z,97nm,1.0s
MOS                                pmax     pmax
      comp=Z,100nm,1.1s
OBN   Obninsk          66.89 328 ⇓P         P         08 23 37.9  -0.1
OBN   Obninsk          66.89 328   P        P         08 23 37.3  -0.6
      comp=Z,9.0nm,0.6s,baz=24,slow=0.3,SNR=8.5
OBN   Obninsk          66.89 328d iP        P         08 23 37.6  -0.4
OBN                               e                   08 24 02.7
OBN                               e                   08 26 09.8
OBN                               ePPP      PPP       08 27 38.8
OBN                               eS        S         08 32 24.1  -5.7
OBN                                pmax     pmax
      comp=Z,80nm,1.3s
OBN                                MLR      MLR
      comp=Z,2µm,18.0s
OBN   Obninsk          66.89 328   P        P         08 23 37.5  -0.4
OBN   Obninsk          66.89 328   IAMs_20  IAMs_20   08 57 16.4
      comp=Z,2µm,20.0s
SKR   Severo-Kuril's   67.15  37  eP        P         08 23 29.9   -10
SKR                               eS        S         08 32 36.4  +3.3
SKR                                pmax     pmax
      comp=Z,100nm,4.1s
SKR                                MLR      MLR
      comp=Z,900nm,14.0s
MA2   Magadan          67.78  27⇓eP         P         08 23 42.8  -0.7
MA2                                pmax     pmax
      comp=Z,24nm,1.2s
MA2                                MLR      MLR
      comp=Z,2µm,15.0s
MA2   Magadan          67.78  27   IAMs_20  IAMs_20   08 57 25.5
      comp=Z,3µm,18.0s
KLMR  Klimovskoe       67.99 334  eP        P         08 23 43.7  -1.1
KLMR                              e                   08 24 10.1
KLMR                              ePPP      PPP       08 27 59.2
KLMR                              eS        S         08 32 40.4  -2.4
KLMR                               pmax     pmax
      comp=Z,176nm,1.4s
KLMR  Klimovskoe       67.99 334  eP        P         08 23 43.7  -1.1
KLMR                               AMP                08 23 52.6
      comp=Z,176nm,1.4s
KLMR                              ePcP      PcP       08 24 10.2  -0.8
KLMR                              ePPP      PPP       08 27 59.2
KLMR                              eS        S         08 32 40.5  -2.4
KLMR                              eS        S         08 32 40.5  -2.4
KLMR                              eSSS      SSS       08 40 17.8
KLMR                              eSSS      SSS       08 40 17.8
KLMR                               LQ       LQ        08 48 15.0
KLMR                               LQ       LQ        08 48 15.0
KLMR                               LR       LR        08 54 10.4
PURM  Purcari          68.15 318 ⇑P         P         08 23 45.4  -0.6
TIXI  Tiksi            68.53  11   P        P         08 23 47.4  -0.6
TIXI                               pmax     pmax
      comp=Z,47nm,0.9s
TIXI                               MLR      MLR
      comp=Z,3µm,19.0s
TIXI  Tiksi            68.53  11   P        P         08 23 47.4  -0.6
TIXI                               IAmb     IAmb      08 23 57.1
      comp=Z,47nm,0.9s
TIXI                               IAMs_20  IAMs_20   08 56 28.2
      comp=Z,3µm,19.0s
TIRR  Tirgusor         68.67 315 ⇑P         P         08 23 48.6  -0.8
TIRR  Tirgusor         68.67 315   P        P         08 23 49.6  +0.2
TIRR                               pmax     pmax
      comp=Z,60nm,0.9s
TIRR  Tirgusor         68.67 315   P        P         08 23 49.6  +0.2
TPGR  Topolog          68.75 316 ⇑P         P         08 23 49.9   0.0
MILM  Milestii Mici    68.95 318 ⇑P         P         08 23 50.0  -1.0
MILM  Milestii Mici    68.95 318 i P        P         08 23 50.0  -1.0
MILM                             i                    08 23 52.0
MILM                               MLR      MLR
      comp=Z,1µm,17.5s
CFR   Carcaliu         69.02 316 ⇑P         P         08 23 51.7  +0.2
HARR  Harsova          69.05 315 ⇑P         P         08 23 52.0  +0.2
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PET   Petropavlovsk    69.37  35   IAMs_20  IAMs_20   08 52 52.4
      comp=Z,2µm,20.0s
SORM  Soroca           69.54 319 ⇑P         P         08 23 54.3  -0.4
SIGR  SIGRI            69.60 309   P        P         08 23 56.1  +0.8
AKASG Malin Array Be   69.63 322   P        P         08 23 53.8  -1.4
      comp=Z,7.8nm,0.8s,baz=90,slow=4.7,SNR=30
AKASG                              PP       PP        08 26 23.1  -6.1
      comp=Z,3.0nm,0.9s,baz=96,slow=6.6,SNR=1.6
AKBB  Malin Array Si   69.63 322deP         P         08 23 54.1  -1.1
AKBB  Malin Array Si   69.63 322   P        P         08 23 53.5  -1.7
AKBB                               IAmb     IAmb      08 24 01.4
      comp=Z,23nm,0.8s
ALN   Alexandroupoli   69.72 311   P        P         08 23 55.5  -0.4
ALN   Alexandroupoli   69.72 311   P        P         08 23 55.6  -0.4
ALN                                pmax     pmax
      comp=Z,59nm,1.2s
ALN   Alexandroupoli   69.72 311   P        P         08 23 55.6  -0.3
ALN                                IAmb     IAmb      08 24 03.3
      comp=Z,59nm,1.2s
RAZG  Razgrad          69.84 314 ⇑P         P         08 23 56.8  +0.2
IDI   Anoyia           69.85 305   P        P         08 23 57.1  +0.1
      comp=Z,24nm,0.6s,baz=84,slow=6.7,SNR=15
SEY   Seymchan         70.00  24⇑eP         P         08 23 56.5  -0.8
SMTH  Samothraki Isl   70.03 311   P        P         08 23 57.1  -0.9
ISR   Istrita          70.11 316 ⇓P         P         08 23 58.8  +0.5
VRI   Vrincioaia       70.13 316 ⇓P         P         08 23 58.5   0.0
RDO   Rodhopi          70.14 311   P        P         08 23 59.8  +1.3
LIA   Limnos Island    70.21 310   P        P         08 23 58.5  -0.5
TESR  Tescani          70.31 317 ⇑P         P         08 23 59.4  -0.1
MLR   Muntele Rosu     70.59 316 ⇑P         P         08 24 02.4  +0.9
MLR   Muntele Rosu     70.59 316   P        P         08 24 02.1  +0.6
      comp=Z,24nm,1.0s,baz=116,slow=5.5,SNR=7.5
MLR   Muntele Rosu     70.59 316   P        P         08 24 01.0  -0.4
MLR                                pmax     pmax
      comp=Z,92nm,1.1s
MLR                                MLR      MLR
      comp=Z,1µm,21.0s
MLR   Muntele Rosu     70.59 316   P        P         08 24 01.0  -0.4
PLVB  Pleven           71.16 314 ⇓P         P         08 24 03.8  -0.9
VOIR                   71.20 316 ⇑P         P         08 24 04.2  -0.9
MNK   Minsk            71.43 326 i P        P         08 24 04.8  -1.3
MNK                              i                    08 24 24.2
MNK                              i                    08 26 43.1
MNK                              i PPP      PPP       08 28 26.6
MNK                              i S        S         08 33 19.6  -3.9
MNK                              i SSS      SSS       08 41 09.3
MNK                                pmax     pmax
      comp=E,8.0nm,1.0s
MNK                                pmax     pmax
      comp=Z,74nm,0.9s
MNK                                pmax     pmax
      comp=N,23nm,1.0s
MNK                                MLR      MLR
      comp=N,718nm,20.0s
MNK                                MLR      MLR
      comp=E,156nm,20.0s
MNK   Minsk            71.43 326 i P        P         08 24 04.9  -1.3
      comp=E,8.0nm,1.0s
MNK                              i P        P         08 24 04.9  -1.3
      comp=N,23nm,1.0s
MNK                              i P        P         08 24 04.9  -1.3
      comp=Z,74nm,0.9s,baz=106
MNK                              i PcP      PcP       08 24 24.2  -1.4
MNK                              i PP       PP        08 26 43.1  -1.5
MNK                              i PPP      PPP       08 28 26.7
MNK                              i S        S         08 33 19.7  -3.8
MNK                              i SS       SS        08 37 46.2   -12
MNK                              i SSS      SSS       08 41 09.4
MNK                              i LQ       LQ        08 51 47.0
MNK                              i LR       LR        08 56 21.1
MNK                              i LRM      MLR       08 59 34.5
      comp=N,718nm,19.8s
MNK                              i LRM      MLR       08 59 55.7
      comp=E,156nm,19.8s
MNK                              i LRM      MLR       09 00 49.1
      comp=Z,1µm,19.8s
ARR   Arges            71.48 316 ⇓P         P         08 24 06.0  -0.7
BURAR Bucovina Array   71.49 318 ⇓P         P         08 24 06.6  -0.2
BURAR Bucovina Array   71.49 318   P        P         08 24 06.6  -0.2
BUR08 Bucovina Ar. S   71.50 318   P        P         08 24 06.8  -0.1
PUL   Pulkovo          71.74 331⇑eP         P         08 24 08.5  +0.6
PUL                                pmax     pmax
      comp=Z,138nm,0.7s
PUL                                MLR      MLR
      comp=Z,1µm,21.0s
VTS   Vitosha          72.05 313 ⇑P         P         08 24 09.8  -0.5
VTS   Vitosha          72.05 313   P        P         08 24 09.6  -0.7
VTS                                pmax     pmax
      comp=Z,38nm,1.1s
VTS   Vitosha          72.05 313   P        P         08 24 09.6  -0.7
VTS                                IAmb     IAmb      08 24 17.6
      comp=Z,38nm,1.1s
NACGM Naroch           72.15 326 i P        P         08 24 10.4  -0.1
VAY   Valandovo        72.38 311 i P        P         08 24 17.6  +5.5
ITM   Ithomi           72.43 307   P        P         08 24 11.3  -1.2
LVV   L'vov            72.68 320  eP        P         08 24 18.6  +4.9
ISAL  Salakas          72.68 326  eP        P         08 24 14.8  +1.2
STIP  Stip             72.71 312 i P        P         08 24 12.1  -1.9
GZR   Gura Zlata       72.77 315 ⇓P         P         08 24 14.2  -0.3
HERR  Herculane        72.95 315 ⇓P         P         08 24 15.6  +0.2
DRGR                   73.03 317 ⇑P         P         08 24 16.1  +0.1
LVZ   Lovozero         73.10 340⇑eP         P         08 24 15.0  -0.9
LVZ                                pmax     pmax
      comp=Z,81nm,2.4s
LVZ                                MLR      MLR
      comp=Z,4µm,19.0s
LVZ   Lovozero         73.10 340   P        P         08 24 15.1  -0.8
VSU   Vasula           73.11 329  eP        P         08 24 16.1  +0.1
VSU   Vasula           73.11 329d iP        P         08 24 15.8  -0.3
VSU                                pmax     pmax
      comp=Z,214nm,1.0s
VSU                                MLR      MLR
      comp=Z,4µm,19.0s
FNA   Florina          73.21 311   P        P         08 24 15.8  -1.3
FNA                                pmax     pmax
      comp=Z,35nm,1.0s
FNA   Florina          73.21 311   P        P         08 24 15.8  -1.3
FNA                                IAmb     IAmb      08 24 23.2
      comp=Z,35nm,1.0s
BOVS  Bovan            73.30 314 ⇓P         P         08 24 16.3  -1.2
APA   Apatity          73.39 339⇓iP         P         08 24 12.9  -4.7
APA                                pmax     pmax
      comp=Z,62nm,0.9s
CASY  Casey            73.44 173   P        P         08 24 18.5  +0.7
CASY  Casey            73.44 173   IAMs_20  IAMs_20   08 50 26.1
      comp=Z,3µm,20.0s
MDVR  Moldovita        73.44 315 ⇓P         P         08 24 17.9  -0.5
KWP   Kalwaria Pacla   73.49 320   P        P         08 24 18.1  -0.4
KWP                                pmax     pmax
      comp=Z,810nm,1.2s
KWP   Kalwaria Pacla   73.49 320   P        P         08 24 18.1  -0.4
UZH   Uzhgorod         73.59 319  eP        P         08 24 23.0  +3.8
UZH                               e                   08 24 33.1
BZS   Buzias           73.61 316 ⇑P         P         08 24 18.8  -0.5
KOLS  Kolonicke sedl   73.66 319  eP        P         08 24 21.4  +1.8
KOLS                               pmax     pmax
      comp=Z,12nm,0.9s
KOLS  Kolonicke sedl   73.66 319  eP        P         08 24 21.4  +1.8
SIRR  Siria            73.67 316 ⇑P         P         08 24 19.4  -0.3
OHR   Ohrid            73.68 311 i P        P         08 24 18.5  -1.5
PABE  Paberze          73.86 326  eP        P         08 24 20.6   0.0
PABE  Paberze          73.86 326   P        P         08 24 19.7  -0.8
SUW   Suwalki          74.00 324  eP        P         08 24 21.7  +0.3
SUW   Suwalki          74.00 324   P        P         08 24 20.7  -0.7
SUW                                pmax     pmax
      comp=Z,174nm,1.0s
SUW   Suwalki          74.00 324   P        P         08 24 20.7  -0.7
LBTB  Lobatse          74.05 242   P        P         08 24 22.3  -0.1
LBTB                               pmax     pmax
      comp=Z,37nm,1.1s
LBTB  Lobatse          74.05 242   P        P         08 24 22.2  -0.1
LBTB                               IAmb     IAmb      08 24 28.6
      comp=Z,37nm,1.1s
CRVS  Cervenica-Dubn   74.18 319  eP        P         08 24 23.5  +0.9
CRVS  Cervenica-Dubn   74.18 319  eP        P         08 24 23.5  +0.9
FIA1  FINESS Array S   74.24 332   P        P         08 24 22.1  -0.6
FINES FINESS Array B   74.24 332   P        P         08 24 22.0  -0.6
      comp=Z,24nm,0.6s,baz=72,slow=6.2,SNR=40
STHS  Stebnicka Huta   74.40 319  eP        P         08 24 25.0  +1.1
STHS                               pmax     pmax
      comp=Z,5.0nm,0.8s
STHS  Stebnicka Huta   74.40 319  eP        P         08 24 25.0  +1.1
PUK   Puka             74.45 312   P        P         08 24 23.1  -1.3
PUK                                IAmb     IAmb      08 24 31.4
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      comp=Z,58nm,1.0s
DIVS  Divibare         74.58 314  eP        P         08 24 24.3  -0.8
DIVS  Divibare         74.58 314   P        P         08 24 24.1  -1.1
MTSE  Matsula          74.65 329  eP        P         08 24 25.5  +0.4
KECS  Kecovo           74.76 318  eP        P         08 24 26.6  +0.6
KECS                               pmax     pmax
      comp=Z,6.0nm,0.9s
KECS  Kecovo           74.76 318  eP        P         08 24 26.6  +0.6
FRGS  Fruska Gora      74.82 315  eP        P         08 24 31.1  +4.7
PDG   Podgorica        74.95 312 ⇓P         P         08 24 26.2  -1.0
PDG   Podgorica        74.95 312  eP        P         08 24 26.0  -1.2
PDG   Podgorica        74.95 312   P        P         08 24 26.0  -1.2
PDG                                IAmb     IAmb      08 24 33.8
      comp=Z,42nm,1.0s
BBLS  Lazi&#263;i      74.98 314  eP        P         08 24 27.0  -0.4
DRME  Dracevica, Mon   74.98 312  eP        P         08 24 26.1  -1.3
NIE   Niedzica         75.01 319  eP        P         08 24 28.5  +1.0
PSZ   Piszkesteto      75.08 318 ⇑P         P         08 24 27.9  -0.1
PSZ   Piszkesteto      75.08 318  eP        P         08 24 27.6  -0.4
PSZ   Piszkesteto      75.08 318   P        P         08 24 27.6  -0.4
PSZ                                pmax     pmax
      comp=Z,40nm,0.9s
PSZ   Piszkesteto      75.08 318   P        P         08 24 27.6  -0.4
PSZ                                IAmb     IAmb      08 24 35.5
      comp=Z,40nm,0.9s
PBUR  Paburge          75.09 326  eP        P         08 24 28.7  +1.0
UPM   Unac-Piva        75.28 313  eP        P         08 24 28.0  -1.3
BOSA  Boshof           75.30 238   P        P         08 24 31.6  +2.0
      comp=Z,29nm,1.0s,baz=87,slow=6.5,SNR=22
BOSA  Boshof           75.30 238   P        P         08 24 30.1  +0.5
BOSA                               pmax     pmax
      comp=Z,40nm,1.0s
BOSA  Boshof           75.30 238   P        P         08 24 30.1  +0.5
BOSA                               IAmb     IAmb      08 24 40.1
      comp=Z,40nm,1.0s
HAPS  Han Pijesak,Bl   75.33 314  eP        P         08 24 28.9  -0.6
OJC   Ojcow            75.44 320  eP        P         08 24 30.1  +0.2
OJC   Ojcow            75.44 320   P        P         08 24 29.2  -0.6
OJC                                pmax     pmax
      comp=Z,56nm,0.8s
OJC   Ojcow            75.44 320   P        P         08 24 29.2  -0.6
OJC                                IAmb     IAmb      08 24 37.5
      comp=Z,56nm,0.8s
LANS  Liptovska Anna   75.51 319  eP        P         08 24 31.7  +1.3
LANS                               pmax     pmax
      comp=Z,3.0nm,0.7s
LANS  Liptovska Anna   75.51 319  eP        P         08 24 31.7  +1.3
HCY   Herceg Novi      75.52 312  eP        P         08 24 28.4  -2.1
BRY   Bratogost        75.52 313  eP        P         08 24 28.7  -2.0
TREB  Trebinje         75.64 312  eP        P         08 24 29.8  -1.4
DZM   Mont Dzumac      75.68 115  eP        P         08 24 30.9  -1.0
      comp=Z,71nm,1.6s
DZM   Mont Dzumac      75.68 115  eLR       LR        08 47 51.4
      comp=Z,2µm,22.1s
DZM   Mont Dzumac      75.68 115   P        P         08 24 30.1  -1.8
      comp=Z,9.5nm,1.2s,baz=283,slow=19,SNR=2.1
MORH  Mrgy, Hungar     75.74 316  eP        P         08 24 31.2  -0.5
KLNR  Kaliningrad      75.82 325⇑eP         P         08 24 32.3  +0.4
KLNR                               pmax     pmax
      comp=Z,151nm,1.1s
VYHS  Vyhne            75.85 318  eP        P         08 24 32.2  -0.1
VYHS                               pmax     pmax
      comp=Z,13nm,1.0s
VYHS  Vyhne            75.85 318  eP        P         08 24 32.2  -0.1
KOVH  Kovagotottos     76.11 316  eP        P         08 24 33.5  -0.3
CSKK  Cskako           76.12 317  eP        P         08 24 33.8   0.0
STON  Ston             76.13 312  eP        P         08 24 30.6  -3.3
TIH   Tihany           76.33 317  eP        P         08 24 35.1  +0.2
KEV   Kevo             76.38 341   P        P         08 24 34.6  -0.2
KEV                                pmax     pmax
      comp=Z,48nm,0.9s
KEV                                MLR      MLR
      comp=Z,4µm,21.0s
KEV   Kevo             76.38 341   P        P         08 24 34.6  -0.2
KEV                                IAmb     IAmb      08 24 42.3
      comp=Z,48nm,0.9s
MPLH  Magyarpolny      76.59 317  eP        P         08 24 36.4  -0.1
RICI  Ricice           76.59 313 i P        P         08 24 34.6  -2.0
BLY   Banja Luka       76.64 314  eP        P         08 24 34.7  -2.1
JAVC  Velka Javorina   76.66 319  eP        P         08 24 37.7  +0.8
ARA0  ARCESS Array S   76.81 340  eP        P         08 24 37.8  +0.5
ARCES ARCESS Array B   76.81 340   P        P         08 24 37.4  +0.1
      comp=Z,14nm,0.8s,baz=98,slow=5.0,SNR=8.4
ARCES ARCESS Array B   76.81 340   P        P         08 24 37.6  +0.3
ARCES                              IAmb     IAmb      08 24 45.7
      comp=Z,50nm,0.9s
MORC  Moravsky Berou   76.83 320 ⇓P         P         08 24 38.0  +0.1
MORC  Moravsky Berou   76.83 320   P        P         08 24 38.3  +0.4
MORC                               pmax     pmax
      comp=Z,38nm,1.0s
MORC  Moravsky Berou   76.83 320  eP        P         08 24 38.0  +0.1
MORC  Moravsky Berou   76.83 320   P        P         08 24 38.3  +0.4
MORC                               IAmb     IAmb      08 24 48.0
      comp=Z,38nm,0.9s
AAL   Aland            76.86 330  eP        P         08 24 37.9  +0.2
MRAK  Mrakovica        76.86 315  eP        P         08 24 37.7  -0.5
MODS  Modra-Piesok     76.87 318  eP        P         08 24 38.0  -0.1
MODS                               pmax     pmax
      comp=Z,8.0nm,1.0s
MODS  Modra-Piesok     76.87 318  eP        P         08 24 38.0  -0.1
ZST   Bratislava       76.97 318  eP        P         08 24 39.4  +0.8
ZST                                pmax     pmax
      comp=Z,63nm,0.9s
ZST   Bratislava       76.97 318  eP        P         08 24 39.4  +0.8
BEHE  Becsehely        77.06 316  eP        P         08 24 39.1   0.0
BEHE  Becsehely        77.06 316  eP        P         08 24 43.5  +4.4
HVAR  Hvar             77.07 313 i P        P         08 24 29.0   -10
MAW   Mawson           77.24 192   P        P         08 24 42.4  +2.8
      comp=Z,7.1nm,0.9s,baz=26,slow=6.3,SNR=10
MAW   Mawson           77.24 192   P        P         08 24 42.8  +3.2
      baz=78,SNR=6.3
SOP   Sopron           77.30 317  eP        P         08 24 40.8  +0.3
KRLC  Kraliky          77.35 320  eP        P         08 24 41.5  +0.7
KRLC                              e                   08 24 47.0
KRLC                               MLR      MLR
      comp=Z,1µm,15.5s
KRLC  Kraliky          77.35 320  eP        P         08 24 41.5  +0.7
KRLC                              epP       pwP       08 24 47.0  -2.0
KRLC                               AMS      AMS       09 04 40.0
      comp=Z,1µm,15.5s
VRAC  Vranov           77.40 319  eP        P         08 24 41.0  -0.1
KOGS  Kog              77.42 316 i P        P         08 24 41.2  +0.1
KOGS                             i PcP      pwP       08 24 47.8  -1.6
KTK1  Kautokeino       77.44 340  eP        P         08 24 41.0  +0.2
KRUC  Moravsky         77.51 319  eP        P         08 24 41.5  -0.1
UDBI  Udbina           77.64 314 i P        P         08 24 41.6  -0.9
MORI  Morici           77.64 313 i P        P         08 24 40.9  -1.6
DPC   Dobruska-Polom   77.67 320  eP        P         08 24 43.6  +1.1
DPC                               e                   08 24 48.3
DPC                                MLR      MLR
      comp=Z,1µm,16.2s
DPC   Dobruska-Polom   77.67 320  eP        P         08 24 43.6  +1.1
DPC                               epP       pwP       08 24 48.3  -2.5
DPC                                AMS      AMS       09 04 50.0
      comp=Z,1µm,16.2s
ZIRJ  Zirje            77.68 313 i P        P         08 24 40.8  -1.8
HAMF  Hammerfest       77.72 341  eP        P         08 24 42.0  -0.4
OSTC  Ostas            77.75 320  eP        P         08 24 45.0  +2.0
OSTC                              ex        x         08 24 51.1
OSTC                               AMS      AMS       09 05 10.0
      comp=Z,1µm,22.4s
CONA  Conrad Observa   77.78 318  eP        P         08 24 43.3   0.0
      comp=Z,14nm,0.9s
CHVC  Chvalec          77.86 320  eP        P         08 24 44.8  +1.2
CHVC                               AMS      AMS       09 04 30.0
      comp=Z,1µm,19.8s
UPC   Upice            77.88 320  eP        P         08 24 44.7  +1.0
UPC                                MLR      MLR
      comp=Z,1µm,16.4s
UPC   Upice            77.88 320  eP        P         08 24 44.7  +1.0
UPC                                AMS      AMS       09 05 10.0
      comp=Z,1µm,16.4s
CRES  Cresnjev         77.93 315  eP        P         08 24 43.5  -0.6
ARSA  Arzberg          77.97 317 i P        P         08 24 45.0  +0.8
      comp=Z,11nm,1.3s,SNR=6.5
UPP   Uppsala          77.98 330  eP        P         08 24 44.5  +0.5
BOJS  Bojanci          78.05 315 i P        P         08 24 44.9  +0.1
BOJS                              ePcP      pwP       08 24 51.2  -1.7
SOKA  Soboth           78.27 316 i P        P         08 24 46.6  +0.6
      comp=Z,88nm,1.2s,SNR=18
NVLJ  Novalja          78.28 314 i P        P         08 24 44.5  -1.5
JETT  Jettan, Norway   78.54 340  eP        P         08 24 47.4  +0.4
LJU   Ljubljana        78.59 316  eP        P         08 24 47.7   0.0
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Code	Station	Δ	Az	Op	ISC	Time	Res
LJU	Ljubljana	78.59	316	i P	P	08 24 48.2	+0.5
LJU				i PcP	pwP	08 24 54.7	-1.2
RIY	Rijeka	78.59	315	eP	P	08 24 44.1	-3.6
OBKA	Obir	78.59	316	i P	P	08 24 48.4	+0.6
	comp=Z,10.0nm,0.7s,SNR=13						
CEY	Cerknica	78.64	315	eP	P	08 24 47.6	-0.4
PRU	Pruhonice	78.78	320	eP	P	08 24 49.2	+0.5
PRU				e		08 24 55.6	
PRU				MLR	MLR		
	comp=Z,1µm,18.1s						
PRU	Pruhonice	78.78	320	eP	P	08 24 49.2	+0.5
PRU				epP	pwP	08 24 55.6	-1.3
PRU				AMS	AMS	09 05 40.0	
	comp=Z,1µm,18.1s						
PVCC	Panska Ves	78.80	320	AMS	AMS	09 05 30.0	
	comp=Z,1µm,16.5s						
MOA	Molln	78.85	317	eP	P	08 24 49.4	+0.2
	comp=Z,18nm,1.0s						
PRA	Prague	78.86	320	AMS	AMS	09 05 40.0	
	comp=Z,1µm,17.5s						
CKRC	Cesky Krumlov	78.87	318	eP	P	08 24 50.0	+0.8
CKRC				ex	x	08 24 56.4	
CKRC				AMS	AMS	09 00 20.0	
	comp=Z,800nm,19.6s						
TRO	Tromso	79.07	340	eP	P	08 24 49.6	-0.2
TRI	Trieste	79.11	315	P	P	08 24 50.0	-0.5
TRI				pmax	pmax		
	comp=Z,24nm,0.8s						
TRI	Trieste	79.11	315	P	P	08 24 50.0	-0.5
BRG	Berggiesshubel	79.22	320	eP	P	08 24 51.9	+0.8
	comp=Z,15nm,0.9s,baz=90,slow=5.3						
BRG	Berggiesshubel	79.22	320	eP	P	08 24 51.7	+0.7
BRG				Amp		08 24 52.5	
	comp=Z,9.5nm,1.1s						
BRG				pP	pwP	08 24 58.2	-1.1
BRG				Amp		08 24 59.2	
	comp=Z,23nm,1.0s						
BRG				Amp		09 05 54.0	
	comp=N,0.5nm,17.5s						
BRG				Amp		09 06 01.0	
	comp=E,0.7nm,15.9s						
BRG				Amp		09 06 06.0	
	comp=Z,1.3nm,19.2s						
MYKA	Terra Mystica	79.22	316	eP	P	08 24 51.5	+0.3
	comp=Z,22nm,0.9s						
GEC2	GERESS Array S	79.27	318	eP	P	08 24 52.3	+0.8
	comp=Z,31nm,0.8s,baz=90,slow=5.3						
GEC2	GERESS Array S	79.27	318	P	P	08 24 51.8	+0.2
GEC2				IAmb	IAmb	08 25 02.0	
	comp=Z,40nm,0.9s						
GERES	GERESS Array B	79.27	318	P	P	08 24 52.0	+0.5
	comp=Z,11nm,0.8s,baz=90,slow=6.0,SNR=36						
GERES	GERESS Array B	79.27	318	P	P	08 24 51.1	-0.4
GERES	GERESS Array B	79.27	318	P	P	08 24 51.1	-0.4
KHC	Kasperske Hory	79.36	319	eP	P	08 24 52.3	+0.4
KHC				e		08 24 57.2	
KHC				MLR	MLR		
	comp=Z,700nm,19.0s						
KHC	Kasperske Hory	79.36	319	eP	P	08 24 52.3	+0.4
KHC				epP	sP	08 24 57.2	-2.4
KHC				AMS	AMS	09 06 00.0	
	comp=Z,700nm,19.0s						
RUE	Ruedersdorf	79.41	322	eP	P	08 24 52.7	+0.7
	comp=Z,50nm,0.8s,baz=90,slow=5.3						
KBA	Koelnbreinsper	79.44	317	eP	P	08 24 52.9	+0.4
	comp=Z,11nm,0.6s						
NRCA	Norcia	79.50	312	P	P	08 24 52.2	-0.7
NRCA				IAmb	IAmb	08 25 00.9	
	comp=Z,38nm,1.1s						
FBE	Freiberg	79.59	320	eP	P	08 24 54.1	+1.1
	comp=Z,24nm,0.8s,baz=90,slow=5.3						
ZOU	Zoufplan	79.68	316	P	P	08 24 54.0	+0.1
ZOU				IAmb	IAmb	08 25 10.9	
	comp=Z,60nm,1.0s						
WET	Wettzell	79.83	319	eP	P	08 24 55.2	+0.8
	comp=Z,16nm,0.8s,baz=90,slow=5.3						
CLL	Collm	79.83	321	eP	P	08 24 55.0	+0.7
CLL				i		08 25 00.4	
CLL				MLR	MLR		
	comp=Z,800nm,21.3s						
CLL	Collm	79.83	321	eP	P	08 24 55.0	+0.7
CLL				i sP	pwP	08 25 00.4	-2.2
	comp=Z,19nm,1.1s						
CLL				e		08 25 10.0	
CLL				e(S)	S	08 34 38.0	-19
CLL				ePS		08 35 42.0	
CLL				e		08 36 30.0	
CLL				eSSS	SSS	08 43 36.0	
CLL				e		08 44 36.0	
CLL				LmV		09 06 00.0	
	comp=Z,800nm,21.3s						
CLL	Collm	79.83	321	eP	P	08 24 54.7	+0.4
	comp=Z,10nm,0.9s,baz=90,slow=5.3						
RJOB	Jochberg	79.84	317	eP	P	08 24 55.6	+1.0
	comp=Z,19nm,0.8s,baz=90,slow=5.3						
SUR	Sutherland	79.98	236	IAMs_20	IAMs_20	08 59 13.3	
	comp=Z,2µm,18.0s						
ABTA	Abfaltersbach	80.00	316	eP	P	08 24 55.1	-0.4
	comp=Z,5.9nm,0.7s						
FAUS	Fauske	80.03	337	eP	P	08 24 54.5	-0.5
TSUM	Tsumeb	80.04	249	IAMs_20	IAMs_20	08 56 44.7	
	comp=Z,2µm,20.0s						
STEI	Steigen	80.12	338	eP	P	08 24 55.9	+0.4
TANN	Tannenbergstha	80.14	320	eP	P	08 24 56.8	+0.6
	comp=Z,9.0nm,1.1s,baz=90,slow=5.3						
NKC	Novy Kostel	80.14	320	AMS	AMS	09 06 00.0	
	comp=Z,2µm,17.8s						
WERN	Wernitzgruen	80.19	320	eP	P	08 24 57.2	+0.8
	comp=Z,5.3nm,0.8s,baz=90,slow=5.3						
GUNZ	Gunzen	80.22	320	eP	P	08 24 57.3	+0.8
	comp=Z,8.0nm,0.9s,baz=90,slow=5.3						
WERD	Werda	80.24	320	eP	P	08 24 57.3	+0.6
	comp=Z,6.7nm,0.9s,baz=90,slow=5.3						
ROTZ	Rotzenmuhle	80.28	319	eP	P	08 24 58.0	+1.1
	comp=Z,2.4nm,0.8s,baz=90,slow=5.3						
MANZ	Manzenberg	80.35	320	eP	P	08 24 58.5	+1.2
	comp=Z,3.8nm,0.9s,baz=90,slow=5.3						
WTTA	Wattenberg	80.61	317	i P	P	08 24 57.9	-1.0
	comp=Z,19nm,1.2s,SNR=9.9						
WATA	Walderalm	80.65	317	eP	P	08 24 58.7	-0.4
	comp=Z,6.6nm,0.7s						
MOX	Moxa	80.68	320	eP	P	08 24 59.7	+0.7
	comp=Z,4.8nm,0.8s,baz=90,slow=5.3						
LOF	Lofoten	80.78	338	eP	P	08 24 57.6	-1.4
KONS	Konsvik	80.78	336	eP	P	08 24 59.2	0.0
FUR	Furstenfeldbru	80.87	318	eP	P	08 25 00.3	+0.2
	comp=Z,18nm,0.8s,baz=90,slow=5.3						
SQTA	Sankt Quirin	80.90	317	eP	P	08 24 59.9	-0.5
	comp=Z,10nm,0.9s						
GRF	Grafenberg Arr	80.92	319	eP	P	08 25 01.4	+1.1
	comp=Z,15nm,0.7s,baz=90,slow=5.3						
MOTA	Moosalm	80.98	317	eP	P	08 25 00.4	-0.4
	comp=Z,14nm,1.1s						
NC405	NORSAR Array S	81.02	331	P	P	08 25 00.1	-0.5
NC405				IAmb	IAmb	08 25 01.0	
	comp=Z,114nm,1.4s						
NC602	NORSAR Array S	81.08	330	eP	P	08 24 59.8	-1.1
NSS	Namsos	81.11	334	eP	P	08 25 00.8	-0.1
RETA	Reutte	81.21	317	i P	P	08 25 01.9	0.0
	comp=Z,22nm,1.4s,SNR=11						
FETA	Feichten	81.23	316	i P	P	08 25 02.1	-0.1
	comp=Z,11nm,1.1s,SNR=9.9						
NB2	NORSAR Subarra	81.26	331	P	P	08 25 01.1	-0.8
	comp=Z,24nm,1.0s,baz=92,slow=5.9						
NB2	NORSAR Subarra	81.26	331	P	P	08 25 01.1	-0.8
	baz=92,slow=5.9						
NOA	NORSAR Array B	81.26	331	P	P	08 25 01.0	-0.8
	comp=Z,7.8nm,0.9s,baz=93,slow=5.5,SNR=12						
NOA				PP	PP	08 27 53.5	-14
	comp=Z,2.0nm,1.0s,baz=109,slow=7.3,SNR=3.4						
ASSE	Asse, Remlinge	81.30	322	eP	P	08 25 02.6	+0.5
	comp=Z,11nm,1.1s,baz=90,slow=5.3						
SPA0	Spitsbergen Ar	81.36	348	eP	P	08 25 01.9	-0.2
OSL	Oslo	81.46	330	eP	P	08 25 03.2	+0.3
CLZ	Clausthal	81.48	321	eP	P	08 25 03.9	+0.6
	comp=Z,13nm,0.8s,baz=90,slow=5.3						
BSEG	Bad Segeberg	81.54	323	eP	P	08 25 04.3	+0.9
	comp=Z,28nm,0.9s,baz=90,slow=5.3						
UBR	Ueberruh	81.65	317	eP	P	08 25 04.4	+0.1
	comp=Z,15nm,0.9s,baz=90,slow=5.3						
NRDL	Niedersach Rie	81.65	322	eP	P	08 25 05.1	+1.1
	comp=Z,14nm,0.9s,baz=90,slow=5.3						
DAVA	Damuels	81.81	317	eP	P	08 25 05.6	+0.4
	comp=Z,16nm,0.9s						
STU	Stuttgart	82.25	318	eP	P	08 25 10.6	+3.2
	comp=Z,37nm,0.9s,baz=90,slow=5.3						
DOMB	Dombas	82.32	332	eP	P	08 25 07.9	+0.4
KEST	Kesra	82.53	305	P	P	08 25 10.0	+0.9
	comp=Z,13nm,0.9s,baz=246,slow=1.8,SNR=12						
KEST	Kesra	82.53	305	P	P	08 25 10.2	+1.0
	SNR=5.5						
KEST				P	P	08 25 10.2	+1.0
	SNR=5.5						
KEST	Kesra	82.53	305	P	P	08 25 09.1	0.0
KEST				IAmb	IAmb	08 25 17.6	
	comp=Z,37nm,1.0s						
SKAR	Skarslia	82.67	330	eP	P	08 25 09.5	+0.2
TNS	Taunus Mts	82.71	320	eP	P	08 25 10.5	+0.7
	comp=Z,9.5nm,0.9s,baz=90,slow=5.3						
BFO	Black Forest	82.83	318	eP	P	08 25 10.5	+0.1
	comp=Z,10nm,0.8s,baz=90,slow=5.3						
MOL	Molde	83.03	332	eP	P	08 25 10.8	-0.2
IBBN	Ibbenburen	83.09	322	eP	P	08 25 12.3	+0.7
	comp=Z,21nm,0.8s,baz=90,slow=5.3						
BUG	Bochum--Univer	83.42	321	eP	P	08 25 14.0	+0.7
	baz=90,slow=5.3						
ODD1	Odda	83.52	330	eP	P	08 25 14.4	+0.7
AHRW	Bad Neuenahr-A	83.58	320	eP	P	08 25 15.1	+1.0
	comp=Z,11nm,0.9s,baz=90,slow=5.3						
SENIN	Lac Senin/Sane	83.61	316	P	P	08 25 14.2	-0.4
SENIN				IAmb	IAmb	08 25 27.7	
	comp=Z,24nm,1.1s						
SYO	Syowa Base	84.20	197	eP	P	08 25 19.0	+2.2
SYO	Syowa Base	84.20	197	epP	pP	08 25 23.2	+0.7
WLF	Walferdange	84.21	319	eP	P	08 25 18.5	+1.0
	comp=Z,10.0nm,0.8s,baz=90,slow=5.3						
THZ	Tophouse	85.51	133	IAMs_20	IAMs_20	09 02 21.6	
	comp=Z,2µm,20.0s						
HIZ	Hauiti	86.31	129	IAMs_20	IAMs_20	09 05 57.8	
	comp=Z,2µm,20.0s						
NOR	Nord	86.75	352	i P	P	08 25 28.1	-1.4
NOR				IAmb	IAmb	08 25 42.1	
	comp=Z,16nm,1.0s						
URZ	Urewera	88.00	129	IAMs_20	IAMs_20	09 05 57.7	
	comp=Z,2µm,19.0s						
MXZ	Matakaoa Point	88.83	128	IAMs_20	IAMs_20	09 07 42.5	
	comp=Z,2µm,20.0s						
DAG	Danmarks Havn	89.00	348	i P	P	08 25 38.0	-2.3
A21K	Barrow	89.84	18	IAMs_20	IAMs_20	09 10 38.5	
	comp=Z,2µm,18.0s						
ALE	Alert	90.57	357	IAMs_20	IAMs_20	09 09 45.2	
	comp=Z,2µm,21.0s						
VNDA	Vanda	91.41	168	P	P	08 25 51.9	+0.5
	comp=Z,1.8nm,0.9s,baz=284,slow=6.6,SNR=9.1						
VNDA				PP	PP	08 29 32.6	+3.5
	comp=Z,2.9nm,1.1s,baz=299,slow=6.1,SNR=3.1						
VNDA	Vanda	91.41	168	P	P	08 25 51.1	-0.3
VNDA				pmax	pmax		
	comp=Z,9.0nm,1.2s						
VNDA	Vanda	91.41	168	P	P	08 25 51.1	-0.3
TORD	Torodi Ar. Bea	91.47	283	P	P	08 25 54.0	+0.9
	comp=Z,6.3nm,1.0s,baz=85,slow=4.2,SNR=16						
TORD				PP	PP	08 29 30.6	-0.5
	comp=Z,1.6nm,1.1s,baz=77,slow=5.5,SNR=3.5						
TORD	Torodi Ar. Bea	91.47	283	P	P	08 25 53.5	+0.4
DSB	Dublin	91.48	324	IAMs_20	IAMs_20	09 12 13.0	
	comp=Z,2µm,22.0s						
ESDC	Sonseca Array	92.57	310	P	P	08 25 58.4	+0.6
	comp=Z,3.0nm,1.0s,baz=54,slow=4.4,SNR=12						
ESDC	Sonseca Array	92.57	310	P	P	08 25 58.1	+0.3
IMAR	Indian Mountai	92.75	22	P	P	08 25 58.5	+0.6
PAB	San Pablo	92.89	310	P	P	08 25 59.9	+0.6
PAB				pmax	pmax		
	comp=Z,9.0nm,1.0s						
PAB	San Pablo	92.89	310	P	P	08 25 59.9	+0.6
H21K	Melozitna Rive	93.23	23	P	P	08 26 01.5	+1.3
	baz=293						
H21K	Melozitna Rive	93.23	23	P	P	08 25 59.7	-0.5
H21K				IAmb	IAmb	08 26 25.3	
	comp=Z,23nm,1.2s						
H21K				IAMs_20	IAMs_20	09 09 01.0	
	comp=Z,2µm,22.0s						
K20K	Telida	93.61	25	P	P	08 26 03.3	+1.3
	baz=292						
K20K	Telida	93.61	25	IAMs_20	IAMs_20	09 13 25.1	
	comp=Z,2µm,18.0s						
NEEM	North Greenlan	94.08	353	i P	P	08 26 04.0	-0.2
MLY	Manley	94.28	23	IAMs_20	IAMs_20	09 07 08.7	
	comp=Z,2µm,20.0s						
H23K	Yukon River	94.39	22	IAMs_20	IAMs_20	09 09 37.5	
	comp=Z,2µm,22.0s						
CAST	Castle Rocks	94.41	24	IAMs_20	IAMs_20	09 08 49.2	
	comp=Z,2µm,20.0s						
I23K	Minto, Yukon-K	94.75	22	IAMs_20	IAMs_20	09 13 45.3	
	comp=Z,2µm,19.0s						
NEA2	Nenana	95.11	23	IAMs_20	IAMs_20	09 13 47.8	
	comp=Z,1µm,18.0s						
TRF	Thorofare Moun	95.13	24	IAMs_20	IAMs_20	09 17 36.3	
	comp=Z,2µm,18.0s						
MDM	Murphy Dome	95.27	22	IAMs_20	IAMs_20	09 11 06.8	
	comp=Z,1µm,18.0s						
TCOL	CIGO, UAF Yank	95.45	22	IAMs_20	IAMs_20	09 11 11.6	
	comp=Z,1µm,21.0s						
COLA	College	95.45	22	IAMs_20	IAMs_20	09 11 11.6	
	comp=Z,1µm,21.0s						
POKR	Poker Plat Res	95.49	22	IAMs_20	IAMs_20	09 09 54.8	
	comp=Z,2µm,21.0s						
MCK	McKinley	95.55	24	IAMs_20	IAMs_20	09 11 48.4	
	comp=Z,2µm,22.0s						
SUMG	Summit	95.67	347	i P	P	08 26 10.4	-1.3
RND	Reindeer	95.73	24	IAMs_20	IAMs_20	09 13 37.1	
	comp=Z,2µm,18.0s						
ILAR	Eielson Array	95.86	22	P	P	08 26 09.7	-2.5
	comp=Z,0.4nm,0.9s,baz=258,slow=3.6,SNR=2.2						
ILAR				PP	PP	08 29 59.2	-4.6
	comp=Z,0.6nm,0.7s,baz=289,slow=7.0,SNR=4.1						
PRP	Porcupine Dome	96.00	21	IAMs_20	IAMs_20	09 11 06.2	
	comp=Z,2µm,22.0s						
RC01	Rabbit Creek A	96.38	26	IAMs_20	IAMs_20	09 15 45.4	
	comp=Z,1µm,18.0s						
TULEG	Thule	96.61	356	IAMs_20	IAMs_20	09 15 58.9	
	comp=Z,1µm,20.0s						
O22K	Cooper Landing	96.65	27	IAMs_20	IAMs_20	09 16 27.5	
	comp=Z,2µm,21.0s						
SML	Sawmill	96.67	25	IAMs_20	IAMs_20	09 16 39.0	
	comp=Z,2µm,18.0s						
KOWA	Kowa	96.79	285	IAMs_20	IAMs_20	09 11 03.9	
	comp=Z,2µm,19.0s						
RIDG	Independent Ri	97.15	23	IAMs_20	IAMs_20	09 15 02.6	
	comp=Z,1µm,19.0s						
SCRK	Sand Creek	97.35	22	IAMs_20	IAMs_20	09 10 23.0	
	comp=Z,2µm,22.0s						
A36M	Sachs Harbour	97.55	12	IAMs_20	IAMs_20	09 18 59.0	
	comp=Z,1µm,20.0s						
GLI	Glacier Island	97.63	26	IAMs_20	IAMs_20	09 17 13.3	
	comp=Z,2µm,19.0s						
KLU	Klutina	97.83	25	IAMs_20	IAMs_20	09 16 13.7	
	comp=Z,2µm,18.0s						
FID	Port Fidalgo	97.95	26	IAMs_20	IAMs_20	09 17 20.9	
	comp=Z,2µm,18.0s						
EGAK	Eagle	97.96	21	IAMs_20	IAMs_20	09 12 55.0	
	comp=Z,2µm,21.0s						
L26K	Log Cabin Wild	98.10	23	IAMs_20	IAMs_20	09 19 18.6	
	comp=Z,1µm,18.0s						
N25K	Chitina, Valde	98.33	25	IAMs_20	IAMs_20	09 09 43.8	
	comp=Z,1µm,22.0s						
EPYK	Eagle Plains	98.51	19	IAMs_20	IAMs_20	09 19 46.6	
	comp=Z,2µm,19.0s						
M26K	Nabesna, AK	98.56	23	IAMs_20	IAMs_20	09 15 58.0	
	comp=Z,2µm,20.0s						
BMRM	Bremner River	98.65	25	IAMs_20	IAMs_20	09 17 53.2	
	comp=Z,2µm,20.0s						
L27K	Beaver Creek,	98.66	23	IAMs_20	IAMs_20	09 16 00.6	
	comp=Z,2µm,19.0s						
DBIC	Dimbokro	98.69	278	P	Pdif	08 26 28.6	+2.5
	comp=Z,4.0nm,0.9s,baz=148,slow=2.9,SNR=2.5						
VRDI	Verde Repeater	99.00	25	IAMs_20	IAMs_20	09 15 16.4	
	comp=Z,1µm,19.0s						
M27K	Edge Creek, AK	99.03	23	IAMs_20	IAMs_20	09 14 08.2	
	comp=Z,1µm,21.0s						
MCARA	McCarthy VSAT	99.09	24	IAMs_20	IAMs_20	09 17 05.9	
	comp=Z,1µm,20.0s						
CRQM	Cirque	99.37	25	IAMs_20	IAMs_20	09 12 31.0	
	comp=Z,1µm,21.0s						
TGL	Tana Glacier	99.50	25	IAMs_20	IAMs_20	09 12 34.9	
	comp=Z,1µm,20.0s						
WAX	Waxell Ridge	99.65	25	IAMs_20	IAMs_20	09 10 48.9	
	comp=Z,2µm,19.0s						
GRNC	Granite Creek	99.96	25	IAMs_20	IAMs_20	09 16 04.0	
	comp=Z,1µm,19.0s						
LOGN	Logan Glacier	100.22	24	IAMs_20	IAMs_20	09 17 05.8	
	comp=Z,1µm,18.0s						
TBI	Tubuai	116.22	113	ePS	PS	08 42 11.7	-6.3
	comp=Z,203nm,27.2s						
TBI	Tubuai	116.22	113	eLQ	LQ	09 01 39.8	
	comp=Z,954nm,42.5s						
TBI				eLR	LR	09 06 40.0	
	comp=Z,1µm,24.2s						
PPT2	Papeete2	116.41	106	ePS	PS	08 42 14.3	-5.8
	comp=Z,237nm,26.8s						
PPT2	Papeete2	116.41	106	eLQ	LQ	09 01 43.2	
	comp=Z,571nm,30.8s						
PPT2				eLR	LR	09 06 46.5	
	comp=Z,926nm,22.2s						
MSO	Missoula	121.20	23	P	PKiKP	08 31 40.5	+1.2
	baz=326						
EGMT	Eagleton	121.66	19	P	PKiKP	08 31 40.8	+0.6
	baz=331						
PLID	Pearl Lake	121.79	25	PKPdf	PKPdf	08 31 40.1	-0.4
ULM	Lac du Bonnet	122.81	8	PKP	PKPdf	08 31 41.2	-0.8
	comp=Z,4.8nm,0.6s,baz=324,slow=3.3,SNR=10						
ULM	Lac du Bonnet	122.81	8	PKIKP	PKPdf	08 31 41.1	-1.0
ULM	Lac du Bonnet	122.81	8	PKPdf	PKPdf	08 31 41.1	-1.0
DLMT	Dillon	122.94	23	IAMs_20	IAMs_20	09 32 12.6	
	comp=Z,1µm,21.0s						
BOZ	Bozeman (W)	123.10	22	P	PKiKP	08 31 43.8	+0.6
	baz=328						
HLID	Hailey	123.69	25	P	PKiKP	08 31 45.5	+1.0
	baz=324						
LAO	LASA Array	123.94	17	P	PKiKP	08 31 46.0	+1.3
	baz=335						
RLMT	Red Lodge	124.36	20	P	PKiKP	08 31 46.7	+0.9
	baz=331						
MDND	Maddock	124.50	12	P	PKPdf	08 31 45.9	+0.5
	baz=343						
NVAR	Mina Array Bea	125.85	32	PKP	PKPdf	08 31 48.7	+0.2
	comp=Z,1.7nm,0.7s,baz=316,slow=1.7,SNR=12						
BW06	Boulder Array	126.30	22	P	PKPdf	08 31 49.8	+0.6
	baz=330						
PDAR	Pinedale Array	126.30	22	PKP	PKPdf	08 31 49.5	+0.3
	comp=Z,3.4nm,0.9s,baz=349,slow=1.5,SNR=16						
PDAR				PKKPbc	PKKPbc	08 41 24.9	+1.9
	comp=Z,0.4nm,0.7s,baz=131,slow=6.5,SNR=3.9						
PDAR	Pinedale Array	126.30	22	PKPdf	PKPdf	08 31 49.4	+0.1
RSSD	Black Hills	126.92	17	P	PKiKP	08 31 51.3	+0.4
	baz=336						
DUG	Dugway, Tooele	127.13	26	P	PKiKP	08 31 52.4	+1.0
	baz=325						
SHOC	Shoshone, Teco	128.82	32	P	PKiKP	08 31 55.9	+1.2
	baz=319						
GSC	Goldstone, Bar	128.98	33	P	PKiKP	08 31 56.4	+1.3
	baz=318						
ECSD	EROS Data Cent	129.03	11	P	PKiKP	08 31 55.5	+0.6
	baz=345						
O20A	White River Ci	129.07	23	P	PKiKP	08 31 55.7	+0.4
	baz=330						
N23A	Red Feather La	129.23	20	P	PKiKP	08 31 56.3	+0.6
	baz=333						
GMRC	Granite Mounta	129.99	33	P	PKiKP	08 31 58.8	+1.6
	baz=319						
PFO	Pinyon Flats O	130.42	35	P	PKiKP	08 31 59.3	+1.2
	baz=318						
JFWS	Jewell Farm	130.69	5	P	PKPdf	08 31 58.1	+0.8
	baz=353						
IRM	Iron Mountain	130.74	33	P	PKiKP	08 32 00.4	+1.8
	baz=319						
MVCO	Mesa Verde	131.47	25	P	PKiKP	08 32 01.3	+1.0
	baz=328						
ANMO	Albuquerque	134.26	24	P	PKiKP	08 32 06.2	+0.3
	baz=330						
MSTX	Muleshoe	136.55	21	P	PKPdf	08 32 10.0	+1.3
	baz=334						
U40A	Yellville	136.85	9	P	PKPdf	08 32 10.3	+1.2
	baz=349						
MNTX	Cornudas Mount	137.51	26	P	PKPdf	08 32 11.8	+1.3
	baz=330						
WVT	Waverly	137.60	3	P	PKPdf	08 32 10.8	+0.3
	baz=356						
W39A	Magazine	137.83	10	P	PKPdf	08 32 12.1	+1.2
	baz=347						
ABTX	Abilene, Hawle	138.83	19	P	PKiKP	08 32 14.9	-0.2
	baz=338						
SPB	Sao Paulo	139.82	241	IAMs_20	IAMs_20	09 30 08.4	
	comp=Z,939nm,20.0s						
TXAR	Lajitas Array	140.29	26	PKP	PKiKP	08 32 18.4	+0.1
	comp=Z,1.9nm,0.7s,baz=262,slow=0.9,SNR=14						
TXAR				PP	PP	08 35 14.0	+1.7
	comp=Z,1.5nm,1.1s,baz=336,slow=4.2,SNR=3.8						
TXAR	Lajitas Array	140.29	26	PKIKP	PKPdf	08 32 14.6	-1.1
TXAR	Lajitas Array	140.29	26	PKPdf	PKPdf	08 32 14.6	-1.1
BDFB	Brasilia	142.34	253	PKP	PKPdf	08 32 17.8	-1.9
	comp=Z,3.0nm,0.4s,baz=148,slow=7.1,SNR=5.7						
PTGB	Pitanga	143.35	237	eP	PKPdf	08 32 23.2	+2.0
PLCA	Paso Flores	143.38	199	PKP	PKPdf	08 32 20.6	-0.2
	comp=Z,6.1nm,0.8s,baz=300,slow=0.5,SNR=7.6						
PLCA	Paso Flores	143.38	199	PKIKP	PKPdf	08 32 20.1	-0.8
PLCA	Paso Flores	143.38	199	PKPdf	PKPdf	08 32 20.1	-0.8
ITRB	Iturama	143.60	245	eP	PKiKP	08 32 26.9	+1.8
PCMB	Pacaembu	143.81	242	eP	PKPdf	08 32 22.0	0.0
ITQB	Itaqui	144.45	226	eP	PKPab	08 32 18.3	-2.8
CPUP	Villa Florida	146.80	230	PKPbc	PKPbc	08 32 29.2	+0.4
	comp=Z,11nm,0.8s,baz=109,slow=3.1,SNR=14						
CPUP	Villa Florida	146.80	230	PKP2	PKPdf	08 32 28.0	+1.0
CPUP	Villa Florida	146.80	230		PKPdf	08 32 28.0	+1.0
SMRT	St. Maarten	147.25	318	IAMs_20	IAMs_20	09 40 33.8	
	comp=Z,741nm,20.0s						
SABA	Saba	147.67	318	IAMs_20	IAMs_20	09 37 34.0	
	comp=Z,750nm,18.0s						
AQDB	Aquidauana	148.09	241		PKPbc	08 32 32.1	-0.4
HUMP	Col San Antoni	148.95	322	PKPdf	PKPdf	08 32 26.4	-4.3
HUMP					sPKPdf	08 32 35.2	-3.4
BO01	Tunca	149.23	203	PKPdf	PKPdf	08 32 28.3	-2.6
BO01					PKPbc	08 32 35.5	+0.5
OBIP	Obispado Ponce	149.48	323	PKPdf	PKPdf	08 32 27.9	-3.7
OBIP					sPKPdf	08 32 35.6	-3.9
ITTB	Itaituba	150.50	272	eP	PKPdf	08 32 34.6	+1.2
SDDR	Presa de Saban	151.22	332	IAMs_20	IAMs_20	09 48 39.1	
	comp=Z,700nm,20.0s						
MTDJ	Mount Denham	154.33	343	IAMs_20	IAMs_20	09 50 51.1	
	comp=Z,810nm,20.0s						
TGUH	Tegucigalpa,Un	159.55	6	IAMs_20	IAMs_20	09 54 11.9	
	comp=Z,642nm,21.0s						
SNET	Serv Nac Est T	159.64	11	IAMs_20	IAMs_20	09 51 10.1	
	comp=Z,736nm,21.0s						
PSGCX	Pisagua	160.28	227	PKPdf	PKPdf	08 32 43.5	-3.0
PSGCX				PKPab	PKPab	08 33 24.1	-2.8
LPAZ	La Paz	160.54	238	PKP	PKPdf	08 32 47.5	0.0
	comp=Z,2.5nm,0.8s,baz=268,slow=1.7,SNR=11						
LPAZ	La Paz	160.54	238	PKIKP	PKPdf	08 32 45.1	-2.4
LPAZ						08 33 25.1	
LPAZ	La Paz	160.54	238	PKPdf	PKPdf	08 32 45.1	-2.4
LPAZ				PKPab	PKPab	08 33 25.1	-3.7
ROSC	El Rosal	164.34	315	PKP	PKPdf	08 32 51.8	+0.7
	comp=Z,10nm,0.8s,baz=296,slow=7.0,SNR=4.4						
ROSC	El Rosal	164.34	315	PKIKP	PKPdf	08 32 48.4	-2.7
ROSC						08 33 43.0	
ROSC	El Rosal	164.34	315		PKPdf	08 32 48.4	-2.7
ROSC				PKPab	PKPab	08 33 43.0	-2.1

NEIC ***09*** *08:26:07.5±1.5, 12°.85S±0°.09×166°.9E±0°.1, h112^{km}±7^{km}, mb4.8/51, Error ellipse: s-maj=16.7km s-min=12.3km az=72.0*

IDC ***09*** *08:26:07.2±0.9, 12°.90S×166°.74E, h108^{km}±6^{km}, mb4.4/17, mb1 4.5/19, mb1mx4.4/30, mbtmp4.8/19, MS4.6/2, Ms1 4.6/2, ms1mx3.4/34, Error ellipse: s-maj=17.1km s-min=11.7km az=105.0*

BJI ***09*** *08:26:08.1±0.0, 12°.27S×166°.85E, h110^{km}, mB5.6/9, mb4.8/29*

NOU ***09*** *08:26:09.1, 12°.89S×166°.72E, h115^{km}, mb5.0/41, Santa Cruz Islands*

ISC 09 08:26:06.1±0.4**, 12°.89S**±0°.05×**166°.84E**±0°.07**, h100**^{km}**, n164,** σ1^{s}**34**/161**, mb4.8**/66**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	7.58	296	P	Pn	08 27 53.5	-0.5
	9.5nm,0.3s,baz=274,slow=12,SNR=1.3						
HNR				S	Sn	08 29 17.2	-1.2
	42nm,0.3s,baz=82,slow=18,SNR=6.6						
HNR	Honiara	7.58	296	Pn	Pn	08 27 55.1	+1.1
HNR	Honiara	7.58	296	P	Pn	08 28 01.5	+7.5
LIFNC	LIFOU	7.86	177	Pn	Pn	08 27 58.4	+0.7
KOUNC	Koumac, New Ca	8.00	197	P	Pn	08 28 02.0	+2.3
MARNC	Mare, Loyalty	8.62	173	Pn	Pn	08 28 08.9	+0.8
MARNC	Mare, Loyalty	8.62	173	P	Pn	08 28 09.8	+1.7
YATNC	Mamie plateau,	9.12	180	P	Pn	08 28 16.4	+1.5

DZM	Mont Dzumac	9.14	182	*e*Pn	Pn	08 28 18.0	+2.7
	142nm,0.7s						
DZM				*e*Sn	Sn	08 29 54.8	-1.6
	118nm,0.6s						
DZM	Mont Dzumac	9.14	182	P	Pn	08 28 18.0	+2.7
	13nm,0.3s,baz=320,slow=13,SNR=157						
DZM				S	Sn	08 29 53.0	-3.4
	9.6nm,0.3s,baz=137,slow=23,SNR=11						
DZM				LR	LR	08 31 43.4	
	comp=Z,206nm,18.3s,baz=32,slow=37						
DZM	Mont Dzumac	9.14	182	Pn	Pn	08 28 17.7	+2.4
DZM	Mont Dzumac	9.14	182	P	Pn	08 28 18.0	+2.7
NOUC	Port Laguerre	9.18	183	P	Pn	08 28 18.6	+3.0
ONTNC	Ouen Toro	9.38	182	Pn	Pn	08 28 20.7	+2.4
ONTNC	Ouen Toro	9.38	182	P	Pn	08 28 21.4	+3.1
OUENC	Ouen Island, N	9.48	180	Pn	Pn	08 28 21.9	+2.2
OUENC	Ouen Island, N	9.48	180	P	Pn	08 28 23.1	+3.4
PINNC	Pines Island,	9.69	177	Pn	Pn	08 28 24.3	+1.7
PINNC	Pines Island,	9.69	177	P	Pn	08 28 25.0	+2.4
MSVF	Nonsavu	11.84	115	Pn	Pn	08 28 52.1	+0.3
RK1H	Rockhampton Ha	18.70	234	P	P	08 30 18.5	+1.8
	53nm,0.7s						
EIDS	Eidsvold	19.36	228	P	P	08 30 25.3	+1.3
EIDS				IAmb	IAmb	08 30 26.3	
	comp=Z,64nm,0.8s						
EIDS	Eidsvold	19.36	228	P	P	08 30 25.2	+1.3
	comp=Z,96nm,0.9s						
LHI	Lord Howe Isla	19.88	200	P	P	08 30 26.8	-2.7
LHI				IAmb	IAmb	08 30 34.4	
	comp=Z,60nm,1.1s						
CTA	Charters Tower	20.98	247	P	P	08 30 41.9	+0.4
	comp=Z,43nm,0.8s,baz=77,slow=12,SNR=46						
CTA	Charters Tower	20.98	247	P	P	08 30 42.0	+0.4
	comp=Z,72nm,1.0s						
CTAO	Charters Tower	20.98	247	P	P	08 30 42.1	+0.6
CTAO				IAmb	IAmb	08 30 45.1	
	comp=Z,52nm,0.8s						
CTAO	Charters Tower	20.98	247	P	P	08 30 41.8	+0.3
PATS	Pohnpei	21.35	336	P	P	08 30 45.8	+0.4
PATS	Pohnpei	21.35	336	P	P	08 30 47.0	+1.6
RMQ	Roma	21.70	229	P	P	08 30 49.8	+0.6
	comp=Z,93nm,0.9s						
MANU	Manus Island	22.08	298	P	P	08 30 50.8	-2.5
MTSU	Mount Surprise	22.31	254	P	P	08 30 55.9	+0.2
	comp=Z,32nm,0.9s						
ARMA	Armidale	22.41	216	P	P	08 30 56.5	-0.2
ARMA				IAmb	IAmb	08 30 59.0	
	comp=Z,63nm,0.9s						
ARMA	Armidale	22.41	216	P	P	08 30 57.3	+0.7
	comp=Z,80nm,1.1s						
COEN	Coen	23.04	265	P	P	08 31 01.1	-1.9
COEN	Coen	23.04	265	P	P	08 31 04.3	+1.3
	comp=Z,18nm,0.9s						
MGCD	Mangrove Creek	24.81	213	P	P	08 31 21.5	+2.6
	comp=Z,39nm,0.9s						
QLP	Quilpie	25.20	234	P	P	08 31 22.5	-0.1
	comp=Z,74nm,0.9s						
SYDH	Sydney Hard Ro	25.43	213	P	P	08 31 27.3	+2.7
	comp=Z,20nm,0.8s						
URZ	Urewera	26.87	162	P	P	08 31 36.7	-0.8
URZ				IAmb	IAmb	08 31 59.4	
	comp=Z,32nm,1.4s						
CMSA	Cobar Meteorol	26.89	223	P	P	08 31 38.5	+0.8
	comp=Z,28nm,1.0s						
YNG	Young	27.11	215	P	P	08 31 42.0	+2.3
	comp=Z,15nm,0.9s						
BKZ	Black Stump Fm	27.54	164	P	P	08 31 43.5	0.0
CAN	Canberra	27.55	213	P	P	08 31 43.8	+0.1
INKA	Innaminka	28.50	235	P	P	08 31 52.3	+0.2
	comp=Z,78nm,1.1s						
TUWZ	Tuamarina	29.11	169	P	P	08 31 54.0	-3.3
SNZO	South Karori	29.14	168	P	P	08 31 59.0	+1.4
SNZO				IAmb	IAmb	08 32 18.1	
	comp=Z,24nm,0.9s						
THZ	Tophouse	29.25	171	P	P	08 31 58.8	0.0
MSWZ	Moikau Station	29.36	167	P	P	08 31 59.6	0.0
STKA	Stephens Creek	29.90	227	P	P	08 32 04.8	+0.2
	comp=Z,23nm,0.7s,baz=45,slow=8.6,SNR=61						
STKA	Stephens Creek	29.90	227	P	P	08 32 05.0	+0.4
STKA	Stephens Creek	29.90	227	P	P	08 32 04.8	+0.2
	comp=Z,8.8nm,1.2s						
LTZ	Lake Taylor	30.16	172	P	P	08 32 07.6	+0.9
LTZ				IAmb	IAmb	08 32 08.3	
	comp=Z,17nm,0.8s						
TOO	Toolangi	31.11	214	P	P	08 32 15.6	+0.4
TOO				IAmb	IAmb	08 32 16.0	
	comp=Z,13nm,1.0s						
H11S2	WAKE ISLAND Hy	31.18	360	T	T	09 03 06.9	
	baz=184,slow=76,SNR=12						
H11S3	WAKE ISLAND Hy	31.18	360	T	T	09 03 00.9	
	baz=184,slow=76,SNR=8.5						
H11S1	WAKE ISLAND Hy	31.20	360	T	T	09 03 06.2	
	baz=184,slow=76,SNR=6.4						
LCRK	Leigh Creek	31.68	232	P	P	08 32 20.0	-0.3
	comp=Z,58nm,0.8s						
WR0	Warramunga Arr	31.73	253	P	P	08 32 19.6	-1.2
WB0	Warramunga Arr	31.84	253	P	P	08 32 20.4	-1.4
WB2	Warramunga Arr	31.90	253	P	P	08 32 20.5	-1.8
WB2				IAmb	IAmb	08 32 21.8	
	comp=Z,12nm,0.7s						
WRAB	Tennant Creek	31.90	253	P	P	08 32 20.9	-1.4
WRAB				IAmb	IAmb	08 32 21.2	
	comp=Z,12nm,0.8s						
WRAB	Tennant Creek	31.90	253	P	P	08 32 21.1	-1.2
WRA	Warramunga Arr	31.91	253	P	P	08 32 20.9	-1.5
	comp=Z,12nm,0.6s,baz=86,slow=9.3,SNR=103						
WRA				ScP	ScP	08 38 44.4	-0.9
	comp=Z,1.3nm,0.9s,baz=81,slow=3.8,SNR=5.9						
WRA	Warramunga Arr	31.91	253	P	P	08 32 19.9	-2.5
MLZ	Mavora Lakes	32.39	178	P	P	08 32 26.7	+0.5
MLZ				IAmb	IAmb	08 32 49.9	
	comp=Z,39nm,1.4s						
H11N1	WAKE ISLAND Hy	32.40	0	T	T	09 04 35.4	
	baz=183,slow=76,SNR=6.3						
H11N3	WAKE ISLAND Hy	32.40	0	T	T	09 04 36.4	
	baz=183,slow=76,SNR=2.8						
H11N2	WAKE ISLAND Hy	32.41	0	T	T	09 04 36.7	
	baz=183,slow=76,SNR=2.7						
OOD	Oodnadatta	32.63	238	P	P	08 32 30.1	+1.5
	comp=Z,16nm,1.0s						
HTT	Hallett	32.64	227	P	P	08 32 28.9	+0.2
	comp=Z,49nm,1.1s						
AS31	Alice Springs	32.98	246	P	P	08 32 30.7	-1.0
AS31				IAmb	IAmb	08 32 31.7	
	comp=Z,9.3nm,0.6s						
ASAR	Alice Springs	32.98	246	P	P	08 32 30.1	-1.6
	comp=Z,28nm,0.7s,baz=70,slow=9.8,SNR=280						
ASAR				pP	pP	08 32 56.0	+3.4
	comp=Z,4.0nm,0.7s,baz=67,slow=9.6,SNR=2.7						
ASAR				ScP	ScP	08 38 47.6	-1.3
	comp=Z,1.3nm,0.9s,baz=77,slow=2.9,SNR=8.5						
ASAR	Alice Springs	32.98	246	P	P	08 32 30.4	-1.4
WHYH	Whyalla	33.40	228	P	P	08 32 35.1	-0.1
	comp=Z,39nm,0.8s						
BBOO	Buckleboo	34.41	230	P	P	08 32 43.5	-0.5
BBOO	Buckleboo	34.41	230	P	P	08 32 43.8	-0.2
	comp=Z,69nm,1.0s						
MTN	Manton Dam	34.79	266	P	P	08 32 47.1	-0.3
MTN				IAmb	IAmb	08 32 47.9	
	comp=Z,21nm,0.8s						
MULG	Mulgathing	34.88	235	P	P	08 32 47.6	-0.4
	comp=Z,24nm,1.3s						
KNRA	Kununurra	36.97	261	P	P	08 33 05.4	-0.7
KNRA	Kununurra	36.97	261	P	P	08 33 06.8	+0.8
	comp=Z,44nm,1.0s						
WRKA	Warakurna	38.27	246	P	P	08 33 15.8	-1.2
	comp=Z,66nm,0.8s						
FORT	Forrest	39.91	237	P	P	08 33 30.4	-0.1
FORT	Forrest	39.91	237	P	P	08 33 30.2	-0.3
	comp=Z,135nm,0.8s						
FITZ	Fitzroy Crossi	39.98	257	P	P	08 33 30.4	-0.8
	baz=78,slow=11						
FITZ	Fitzroy Crossi	39.98	257	IAmb	IAmb	08 33 32.4	
	comp=Z,15nm,1.1s						
FITZ	Fitzroy Crossi	39.98	257	P	P	08 33 31.6	+0.4
	comp=Z,15nm,1.4s						
SANI	Sanana	41.84	281	P	P	08 33 47.3	+0.7
	comp=Z,10nm,1.1s						
SANI	Sanana	41.84	281	P	P	08 33 48.0	+1.4
	comp=Z,10nm,1.1s						
EDFI	Ende, Flores	44.49	271	P	P	08 34 08.0	-0.1
	comp=Z,7.9nm,0.9s						
PSA00	Pilbara Seismi	45.56	252	P	P	08 34 15.7	-0.7
PSA00				IAmb	IAmb	08 34 17.3	
	comp=Z,24nm,1.1s						
PSA00	Pilbara Seismi	45.56	252	P	P	08 34 16.9	+0.5
	comp=Z,34nm,1.0s						
MEEK	Meekatharra	47.13	246	P	P	08 34 28.4	-0.2
NWAO	Narrogin (SRO)	49.35	238	P	P	08 34 44.5	-1.0
MORW	Morawa	49.71	243	P	P	08 34 48.2	-0.2
JOW	Kunigami	54.42	317	LR	LR	08 58 23.2	
	comp=Z,307nm,18.5s,baz=236,slow=36						
JMN	Monobe	55.98	327	P	P	08 35 34.5	+0.2
MJAR	Matsushiro Arr	56.09	332	P	P	08 35 33.8	-1.2
	comp=Z,11nm,0.9s,baz=171,slow=7.4,SNR=17						
MJAR	Matsushiro Arr	56.09	332	P	P	08 35 34.3	-0.7
MJAR				IAmb	IAmb	08 35 35.8	
	comp=Z,6.5nm,0.8s						
MAJO	Matsushiro	56.09	332	P	P	08 35 34.7	-0.3
MAT	Matsushiro	56.09	332	P	P	08 35 33.3	-1.7
ASAJ	Asahikawa	60.88	340	P	P	08 36 09.3	+1.2
	comp=Z,24nm,0.6s,baz=209,slow=7.2,SNR=25						
KSRS	Korea Array	61.99	326	P	P	08 36 14.4	-1.3
	comp=Z,2.9nm,0.9s,baz=138,slow=7.0,SNR=5.7						
NJ2	Nanjing	64.07	315	*e*P	P	08 36 30.6	+1.0
NJ2				pmax	pmax		
	comp=Z,21nm,0.6s						
VNDA	Vanda	64.68	181	P	P	08 36 33.1	+0.2
	comp=Z,2.5nm,0.8s,baz=358,slow=7.0,SNR=13						
VNDA	Vanda	64.68	181	P	P	08 36 33.4	+0.5
SBA	Scott Base	64.97	180	P	P	08 36 36.5	+1.7
SBA				IAmb	IAmb	08 36 37.2	
	comp=Z,16nm,0.9s						
USA0B	Ussuriysk Arra	65.06	333	P	P	08 36 37.5	+1.7
USA0B				IAmb	IAmb	08 36 38.5	
	comp=Z,25nm,1.2s						
USRK	Ussuriysk Ar.	65.06	333	P	P	08 36 37.0	+1.1
	comp=Z,11nm,0.9s,baz=145,slow=4.9,SNR=12						
USRK	Ussuriysk Ar.	65.06	333	P	P	08 36 36.9	+1.1
PETK	Petropavlovsk-	66.19	354	P	P	08 36 43.4	+0.5
	comp=Z,7.1nm,0.8s,baz=183,slow=13,SNR=5.6						
PETK	Petropavlovsk-	66.19	354	P	P	08 36 42.8	-0.1
MDJ	Mudanjiang	66.47	332	P	P	08 36 45.7	+0.8
MDJ				pmax	pmax		
	comp=Z,28nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,610nm,7.1s						
MDJ	Mudanjiang	66.47	332	P	P	08 36 44.6	-0.2
CN2	Changchun	67.86	329	*e*P	P	08 36 52.8	-0.9
CN2				pmax	pmax		
	comp=Z,30nm,0.8s						
CMAR	Chiang Mai Arr	73.82	294	P	P	08 37 31.1	+0.7
	comp=Z,1.9nm,0.4s,baz=118,slow=5.7,SNR=6.0						
CMAR	Chiang Mai Arr	73.82	294	P	P	08 37 29.6	-0.8
HHC	Hu-ho-hao-te	73.92	320	*e*P	P	08 37 32.3	+1.7
HHC				pmax	pmax		
	comp=Z,25nm,1.0s						
LZH	Lanzhou	76.78	312	*e*P	P	08 37 46.1	-1.1
LZH				pP	pP	08 38 12.6	+0.4
LZH				sP	sP	08 38 25.2	+2.4
LZH				pmax	pmax		
	comp=Z,17nm,1.2s						
QSPA	South Pole Qui	77.13	180	P	P	08 37 47.7	-0.8
QSPA				IAmb	IAmb	08 37 49.7	
	comp=Z,28nm,1.1s						
ULN	Ulaanbaatar	80.41	324	P	P	08 38 06.3	-0.5
BILL	Bilibino	80.71	360	P	P	08 38 08.3	+0.5
SONM	Songino Array	80.77	324	P	P	08 38 09.1	+0.4
	comp=Z,1.2nm,0.5s,baz=140,slow=6.1,SNR=14						
GTA	Gaotai	81.10	314	*e*P	P	08 38 11.9	+1.3
GTA				pP	pP	08 38 37.8	+1.9
GTA				sP	sP	08 38 48.5	+2.1
GTA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MAW	Mawson	83.42	202	P	P	08 38 21.4	-0.7
	comp=Z,3.2nm,0.7s,baz=118,slow=5.7,SNR=7.1						
WRH	Wood River Hil	84.34	18	P	P	08 38 26.0	-0.6
WRH				IAmb	IAmb	08 38 27.1	
	comp=Z,8.7nm,0.9s						
CCB	Clear Creek Bu	84.55	18	P	P	08 38 26.8	-0.9
HDA	Harding Lake	84.64	18	P	P	08 38 27.7	-0.5
TCOL	CIGO, UAF Yank	84.69	18	P	P	08 38 28.2	-0.2
TCOL				IAmb	IAmb	08 38 28.8	
	comp=Z,16nm,0.9s						
COLA	College	84.70	18	P	P	08 38 27.8	-0.6
COLA				IAmb	IAmb	08 38 28.8	
	comp=Z,16nm,0.9s						
IL31		84.92	18	P	P	08 38 27.8	-1.7
IL31				IAmb	IAmb	08 38 30.0	
	comp=Z,9.4nm,0.9s						
ILAR	Eielson Array	84.92	18	P	P	08 38 28.7	-0.9
	comp=Z,6.0nm,0.8s,baz=234,slow=6.1,SNR=41						
ILAR				pP	pwP	08 38 58.2	+0.6
	comp=Z,1.0nm,0.7s,baz=244,slow=5.2,SNR=2.3						
ILAR	Eielson Array	84.92	18	P	P	08 38 29.1	-0.5
NVAR	Mina Array Bea	86.40	49	pP	pP	08 39 08.2	+4.8
	comp=Z,0.7nm,0.8s,baz=225,slow=8.7,SNR=3.5						
EGAK	Eagle	86.73	20	P	P	08 38 38.2	-0.3
EGAK				IAmb	IAmb	08 38 39.5	
	comp=Z,6.3nm,0.8s						
TIXI	Tiksi	88.09	349	P	P	08 38 44.5	-0.4
WMQ	Urumqi	91.14	315	*e*P	P	08 39 00.2	+0.3
MK31	Makanchi Array	95.59	317	P	P	08 39 20.0	-0.2
MK31				IAmb	IAmb	08 39 21.0	
	comp=Z,4.0nm,1.1s						
MKAR	Makanchi Array	95.59	317	P	P	08 39 20.2	0.0
	comp=Z,2.9nm,0.9s,baz=102,slow=6.5,SNR=14						
MKAR				pP	pP	08 39 47.2	+1.0
	comp=Z,1.3nm,0.8s,baz=99,slow=7.5,SNR=5.0						
MKAR	Makanchi Array	95.59	317	P	P	08 39 19.8	-0.5
ZALV	Zalesovo Beam	95.66	324	P	P	08 39 19.3	-1.0
	comp=Z,2.9nm,0.7s,baz=104,slow=4.7,SNR=10						
TXAR	Lajitas Array	95.77	61	pP	pP	08 39 51.5	+4.1
	comp=Z,0.4nm,0.8s,baz=248,slow=4.4,SNR=3.5						
MAKZ	Makanchi	95.80	317	P	P	08 39 20.9	-0.4
MAKZ				IAmb	IAmb	08 39 22.0	
	comp=Z,4.5nm,1.1s						
YKA	Yellowknife Ar	96.11	27	LR	LR	09 17 12.1	
	comp=Z,501nm,21.7s,baz=0.0,slow=32						
NRIK	Noril'sk	98.21	339	P	P	08 39 31.5	-0.1
	comp=Z,1.0nm,0.4s,baz=97,slow=4.8,SNR=6.2						
NRIK	Noril'sk	98.21	339	P	P	08 39 31.1	-0.5
NRIK				IAmb	IAmb	08 39 31.6	
	comp=Z,3.9nm,0.8s						
ARCES	ARCESS Array B	118.37	346	PKP	PKPdf	08 44 40.0	-1.3
	comp=Z,2.6nm,0.8s,baz=77,slow=2.6,SNR=7.3						
PBRG	Braganca	150.65	350	*e*PKPab	PKPab	08 45 54.4	+0.5
POLO	Lamas de Olo	151.23	352	*e*PKPbc	PKPbc	08 45 48.4	+0.1
POLO	Lamas de Olo	151.23	352	*e*PKPab	PKPab	08 45 57.5	+1.1
PVRL	Vila Real	151.32	351	*e*PKPbc	PKPbc	08 45 48.7	+0.3
PVRL	Vila Real	151.32	351	*e*PKPab	PKPab	08 45 57.9	+1.2
MVO	Moncorvo	151.32	350	*e*PKPbc	PKPbc	08 45 48.8	+0.3
PVIS	Viseu	151.89	351	*e*PKPbc	PKPbc	08 45 49.7	-0.1
ESDC	Sonseca Array	152.11	345	PKPbc	PKPbc	08 45 49.0	-1.3
	comp=Z,1.0nm,0.8s,baz=9.4,slow=2.6,SNR=5.3						
ESDC				PKPab	PKPab	08 46 00.8	+0.7
	comp=Z,3.7nm,0.7s,baz=12,slow=4.0,SNR=17						
MTE	Manteigas	152.15	351	*e*PKPbc	PKPbc	08 45 50.5	+0.1
PMRV	Marv??o	153.07	350	*e*PKPbc	PKPbc	08 45 51.7	-0.7
PMTG	Montargil	153.56	351	*e*PKPab	PKPab	08 46 07.4	+1.3
PBAR	Barrancos	154.23	349	*e*PKPab	PKPab	08 46 09.7	+0.8
PBEJ	Beja	154.52	350	*e*PKPab	PKPab	08 46 11.7	+1.5
TORD	Torodi Ar. Bea	165.52	273	PKPab	PKPab	08 46 58.4	-0.5
	comp=Z,0.7nm,0.9s,baz=82,slow=3.5,SNR=3.2						
TORD	Torodi Ar. Bea	165.52	273	PKPdf	PKPdf	08 45 55.9	-4.1
TORD					PKPab	08 46 56.7	-2.2
DBIC	Dimbokro	169.75	234	PKPab	PKPab	08 47 16.2	-1.2
	comp=Z,6.7nm,1.1s,baz=151,slow=7.7,SNR=3.1						

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*IDC **09** 08:38:44.9±1.8, 14°.67S×170°.31E, h618^{km}±18^{km}, mb3.2/8, mb1 3.4/9, mb1mx3.1/28, mbtmp4.2/9, Error ellipse: s-maj=24.8km s-min=20.4km az=152.0*

*NEIC **09** 08:38:45.2±0.7, 14°.7S±0°.2×170°.5E±0°.2, h637^{km}±15^{km}, mb4.2/18, Error ellipse: s-maj=29.7km s-min=23.1km az=219.0*

ISC 09 08:38:43.1±0.8**, 14°.6S**±0°.1×**170°.3E**±0°.1**, h600**^{km}**, n31, σ1^{s}.56**/35**, mb4.1**/17**, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	8.29	205	P	P	08 40 48.6	+3.4
	0.9nm,0.3s,baz=126,slow=20,SNR=14						
DZM	Mont Dzumac	8.29	205	P	P	08 40 48.2	+2.9
CTA	Charters Tower	23.56	253	P	P	08 43 09.8	+1.0
	2.7nm,0.8s,baz=82,slow=11,SNR=5.9						
CTAO	Charters Tower	23.56	253	P	P	08 43 10.3	+1.6
CTAO				IAmb	IAmb	08 43 11.9	
	comp=Z,6.0nm,1.0s						
BKZ	Black Stump Fm	25.09	169	P	P	08 43 20.7	-1.4
STKA	Stephens Creek	31.33	232	P	P	08 44 17.4	+1.2
	comp=Z,5.4nm,0.4s,baz=62,slow=8.8,SNR=34						
STKA				ScP	ScP	08 49 36.2	-2.0
	comp=Z,1.0nm,0.7s,baz=84,slow=9.2,SNR=4.5						
STKA	Stephens Creek	31.33	232	P	P	08 44 17.1	+0.8
TOO	Toolangi	31.75	219	P	P	08 44 20.8	+1.0
TOO				IAmb	IAmb	08 44 21.3	
	comp=Z,7.8nm,0.6s						
WR0	Warramunga Arr	34.49	256	P	P	08 44 43.6	+0.6
WR0				IAmb	IAmb	08 44 54.0	
	comp=Z,3.1nm,1.1s						
WB0	Warramunga Arr	34.62	256	P	P	08 44 44.5	+0.4
WB0				IAmb	IAmb	08 44 44.7	
	comp=Z,4.7nm,0.6s						
WB2	Warramunga Arr	34.67	256	P	P	08 44 44.9	+0.4
WB2				IAmb	IAmb	08 44 45.4	
	comp=Z,3.9nm,0.8s						
WRA	Warramunga Arr	34.68	256	P	P	08 44 44.7	+0.1
	comp=Z,2.1nm,0.6s,baz=86,slow=9.1,SNR=28						
WRA				S	S	08 49 28.3	-5.1
	comp=Z,0.5nm,0.7s,baz=89,slow=14,SNR=2.8						
WRA				ScP	ScP	08 49 48.8	-1.5
	comp=Z,0.7nm,0.7s,baz=86,slow=3.4,SNR=6.9						
WRA	Warramunga Arr	34.68	256	P	P	08 44 44.4	-0.2
AS31	Alice Springs	35.44	250	P	P	08 44 51.2	+0.3
AS31				IAmb	IAmb	08 44 51.8	
	comp=Z,2.7nm,0.4s						
ASAR	Alice Springs	35.44	250	P	P	08 44 51.2	+0.4
	comp=Z,4.1nm,0.4s,baz=76,slow=9.4,SNR=81						
ASAR				ScP	ScP	08 49 51.8	-1.3
	comp=Z,1.2nm,0.8s,baz=88,slow=3.8,SNR=12						
ASAR	Alice Springs	35.44	250	P	P	08 44 51.0	+0.1
BBOO	Buckleboo	35.98	234	P	P	08 44 55.9	+0.8
MTN	Manton Dam	38.03	268	P	P	08 45 13.6	+1.5
MTN				IAmb	IAmb	08 45 39.6	
	comp=Z,15nm,1.2s						
KNRA	Kununurra	40.04	263	P	P	08 45 28.5	+0.4
KNRA				IAmb	IAmb	08 45 49.2	
	comp=Z,22nm,1.1s						
FORT	Forrest	41.88	240	P	P	08 45 42.6	+0.1
PSA00	Pilbara Seismi	48.27	254	P	P	08 46 31.4	0.0
PSA00				IAmb	IAmb	08 46 55.3	
	comp=Z,33nm,1.4s						
NWAO	Narrogin (SRO)	51.32	239	P	P	08 46 53.1	-0.4
VNDA	Vanda	63.09	182	P	P	08 48 11.9	-0.7
	comp=Z,0.8nm,0.6s,baz=3.5,slow=4.9,SNR=10						
VNDA	Vanda	63.09	182	P	P	08 48 11.4	-1.2
CASY	Casey	64.77	203	P	P	08 48 22.6	-0.8
CASY				IAmb	IAmb	08 48 23.0	
	comp=Z,2.9nm,0.6s						
QSPA	South Pole Qui	75.45	180	P	P	08 49 25.0	-1.6
CMAR	Chiang Mai Arr	77.56	293	P	P	08 49 40.7	+1.8
	comp=Z,1.1nm,0.3s,baz=99,slow=5.5,SNR=4.6						
CMAR	Chiang Mai Arr	77.56	293	P	P	08 49 39.1	+0.3
NVAR	Mina Array Bea	84.99	48	P	P	08 50 18.0	+1.3
	comp=Z,0.9nm,0.8s,baz=245,slow=7.5,SNR=5.4						
ILAR	Eielson Array	85.51	17	P	P	08 50 17.4	-0.9
	comp=Z,0.5nm,0.8s,baz=242,slow=4.8,SNR=6.0						
TORD	Torodi Ar. Bea	168.81	264	PKPab	PKPab	08 58 58.3	-0.1
	comp=Z,0.5nm,0.8s,baz=66,slow=4.9,SNR=2.7						

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*IDC **09** 08:49:18.3±2.3, 20°.91S×178°.80W, h571^{km}±21^{km}, mb3.4/8, mb1 3.6/10, mb1mx3.3/34, mbtmp4.3/10, Error ellipse: s-maj=56.3km s-min=15.6km az=153.0*

*NEIC **09** 08:49:18.6±1.1, 21°.0S±0°.1×178°.7W±0°.1, h576^{km}±12^{km}, mb4.1/18, Error ellipse: s-maj=22.1km s-min=17.6km az=203.0*

ISC 09 08:49:16.5±0.8**, 21°.1S**±0°.2×**178°.6W**±0°.1**, h550**^{km}**, n35, σ0^{s}.93**/35**, mb4.1**/18**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.55	316	P	P	08 50 45.7	+2.9
	5.5nm,0.3s,baz=148,slow=4.0,SNR=34						
DZM	Mont Dzumac	13.91	263	P	P	08 52 15.0	+0.1
	0.8nm,0.3s,baz=119,slow=15,SNR=10						
DZM	Mont Dzumac	13.91	263	P	P	08 52 15.4	+0.6
EIDS	Eidsvold	28.12	255	P	P	08 54 25.5	+0.8
EIDS				IAmb	IAmb	08 54 25.8	
	comp=Z,6.6nm,1.1s						
ARMA	Armidale	28.28	245	P	P	08 54 27.3	+1.2
ARMA				IAmb	IAmb	08 54 35.1	
	comp=Z,10nm,1.2s						
CTA	Charters Tower	32.84	265	P	P	08 55 04.9	-0.5
	baz=89,slow=9.7,SNR=17						
CTAO	Charters Tower	32.84	265	P	P	08 55 05.3	0.0
PMG	Port Moresby	34.89	284	P	P	08 55 22.2	-0.4
STKA	Stephens Creek	37.00	245	P	P	08 55 40.1	+0.3
	comp=Z,2.1nm,0.4s,baz=85,slow=13,SNR=13						
STKA	Stephens Creek	37.00	245	P	P	08 55 40.2	+0.3
BBOO	Buckleboo	41.76	244	P	P	08 56 17.7	-0.3
BBOO				IAmb	IAmb	08 56 36.6	
	comp=Z,16nm,1.3s						
WR0	Warramunga Arr	43.74	263	P	P	08 56 33.0	-0.8
WR0				IAmb	IAmb	08 56 44.3	
	comp=Z,9.4nm,1.5s						
AS31	Alice Springs	43.80	257	P	P	08 56 33.7	-0.6
AS31				IAmb	IAmb	08 56 34.2	
	comp=Z,1.5nm,0.7s						
ASAR	Alice Springs	43.80	257	P	P	08 56 33.6	-0.6
	comp=Z,5.6nm,0.5s,baz=90,slow=8.4,SNR=120						
ASAR				ScP	ScP	09 01 07.5	-0.6
	comp=Z,0.5nm,0.7s,baz=99,slow=4.2,SNR=7.2						
ASAR	Alice Springs	43.80	257	P	P	08 56 33.3	-1.0
WB0	Warramunga Arr	43.91	263	P	P	08 56 33.8	-1.2
WB0				IAmb	IAmb	08 56 34.1	
	comp=Z,3.7nm,0.4s						
WB2	Warramunga Arr	43.92	263	P	P	08 56 34.1	-1.0
WB2				IAmb	IAmb	08 56 34.3	
	comp=Z,4.1nm,0.8s						
WRAB	Tennant Creek	43.92	263	P	P	08 56 33.9	-1.3
WRAB				IAmb	IAmb	08 56 34.3	
	comp=Z,2.9nm,0.8s						
WRA	Warramunga Arr	43.93	263	P	P	08 56 33.9	-1.3
	comp=Z,1.5nm,0.3s,baz=96,slow=7.3,SNR=128						
WRA	Warramunga Arr	43.93	263	P	P	08 56 34.1	-1.2
FORT	Forrest	48.52	247	P	P	08 57 09.2	-0.6
KNRA	Kununurra	50.02	267	P	P	08 57 20.2	-0.9
FITZ	Fitzroy Crossi	52.36	263	P	P	08 57 37.8	-0.2
FITZ				IAmb	IAmb	08 57 38.4	
	comp=Z,12nm,1.4s						
SIJI	Sorong	52.80	286	P	P	08 57 39.8	-1.5
	comp=Z,12nm,0.8s,baz=124,slow=3.6,SNR=4.5						
VNDA	Vanda	57.30	185	P	P	08 58 12.5	+1.0
QSPA	South Pole Qui	69.00	180	P	P	08 59 27.2	+0.2
NVAR	Mina Array Bea	81.85	44	P	P	09 00 38.6	-0.2
	comp=Z,0.7nm,0.6s,baz=225,slow=7.2,SNR=5.8						
NVAR	Mina Array Bea	81.85	44	P	P	09 00 38.4	-0.4
NV11	Mina Array Sit	81.94	44	P	P	09 00 38.7	-0.5
NV11				IAmb	IAmb	09 00 40.4	
	comp=Z,2.8nm,1.2s						
TXAR	Lajitas Array	87.87	58	P	P	09 01 08.4	+0.3
	comp=Z,0.5nm,0.8s,baz=219,slow=7.6,SNR=6.5						
TXAR	Lajitas Array	87.87	58	P	P	09 01 07.7	-0.4
CMAR	Chiang Mai Arr	89.74	290	P	P	09 01 16.8	-0.1
	comp=Z,0.8nm,0.3s,baz=101,slow=2.9,SNR=1.8						
PDAR	Pinedale Array	89.79	43	P	P	09 01 15.9	-1.0
	comp=Z,0.7nm,0.7s,baz=169,slow=3.9,SNR=6.1						
PDAR	Pinedale Array	89.79	43	P	P	09 01 16.1	-0.8
AKASG	Malin Array Be	143.21	330	PKhKP	PKPpre	09 07 43.5	
	comp=Z,0.4nm,0.3s,baz=44,slow=4.2,SNR=5.4						

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*IDC **09** 09:01:42.8±0.9, 6°.50N×94°.01E, h0^{km}, mb4.0/15, mb1 4.0/17, mb1mx3.8/56, mbtmp3.9/17, ML3.5/2, MS3.9/2, Ms1 3.9/2, ms1mx3.2/48, Error ellipse: s-maj=40.6km s-min=15.6km az=57.0*

*NEIC **09** 09:01:47.1±2.5, 6°.4N±0°.2×94°.1E±0°.2, h22^{km}±10^{km}, mb4.3/7, Error ellipse: s-maj=39.7km s-min=13.6km az=225.0*

ISC 09 09:01:44.9±0.6**, 6°.42N**±0°.09×**94°.07E**±0°.09**, h10**^{km}**, n45, σ2^{s}.37**/39**, mb4.3**/24**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	Lhok Sumawe	3.10	112	Pn	Pn	09 02 34.0	+0.1
PSI	Prapat	6.03	126	Pn	Pn	09 03 16.6	+2.3
	0.9nm,0.3s,baz=332,slow=14,SNR=3.0						
PSI				Sn	Sn	09 04 24.3	+0.8
	1.1nm,0.3s,baz=299,slow=9.8,SNR=3.7						
RPSI	Rantau Prapat	6.09	127		Pn	09 03 16.6	+1.5
RPSI					Sn	09 04 24.3	-0.6
CMAR	Chiang Mai Arr	12.88	21	Pn	Pn	09 04 46.3	-1.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	0.1nm,0.3s,baz=210,slow=12,SNR=1.3						
PALK	Pallekele	13.30	274	Sn	Sn	09 07 22.2	+0.1
	0.3nm,0.3s,baz=168,slow=19,SNR=1.7						
PALK				LR	LR	09 09 35.0	
	comp=Z,562nm,18.1s,baz=178,slow=36						
LEM	Lembang	18.86	134	LR	LR	09 13 55.2	
	comp=Z,321nm,20.4s,baz=175,slow=39						
RAMN	Ramite	21.62	342	eP	P	09 06 40.3	+4.7
	14nm,0.6s						
TAPN	Taplejung	21.68	345	eP	P	09 06 39.1	+2.8
	46nm,0.9s						
JIRN	Jiri	22.41	341	eP	P	09 06 48.0	+3.8
	26nm,0.8s						
PKI	Pulchoki	22.59	340	eP	P	09 06 50.4	+4.3
	33nm,0.7s						
PKIN	Phulchoki	22.60	340	eP	P	09 06 51.2	+5.1
	33nm,0.6s						
KOLN	Koldanda	23.45	336	eP	P	09 07 00.5	+5.7
DANN	Dangsing	23.90	337	eP	P	09 07 04.2	+4.9
H08S3	Diego Garcia H	25.66	237	T	T	09 34 00.2	
	baz=56,slow=75,SNR=94						
H08S2	Diego Garcia H	25.66	237	T	T	09 34 02.2	
	baz=56,slow=75,SNR=67						
H08S1	Diego Carcia H	25.67	237	T	T	09 34 03.3	
	baz=56,slow=75,SNR=84						
XAN	Xi'an	30.73	25	P	P	09 08 03.7	+3.3
MKAR	Makanchi Array	41.48	348	P	P	09 09 30.8	-1.3
	1.4nm,0.8s,baz=168,slow=7.4,SNR=8.0						
SONM	Songino Array	42.59	12	P	P	09 09 40.1	-1.2
	1.9nm,0.8s,baz=195,slow=9.2,SNR=3.8						
SONM	Songino Array	42.59	12	IAmb	IAmb	09 10 06.3	
	comp=Z,4.7nm,1.3s						
H01W3	Cape Leeuwin H	45.23	157	T	T	09 59 24.9	
	baz=330						
H01W2	Cape Leeuwin H	45.25	157	T	T	09 59 27.1	
	baz=330						
H01W1	Cape Leeuwin H	45.25	157	T	T	09 59 28.8	
	baz=330						
KURBB	Kurchatov Arra	45.93	346	P	P	09 10 05.2	-2.6
	comp=Z,1.1nm,0.2s,baz=174,slow=7.1,SNR=2.8						
WB0	Warramunga Arr	47.45	124	P	P	09 10 20.1	-0.2
WB0				IAmb	IAmb	09 10 48.3	
	comp=Z,5.0nm,1.2s						
WRA	Warramunga Arr	47.49	124	P	P	09 10 21.0	+0.4
	comp=Z,0.3nm,0.6s,baz=305,slow=8.8,SNR=3.5						
WRA				PcP	PcP	09 11 51.5	+0.6
	comp=Z,0.5nm,0.8s,baz=313,slow=3.1,SNR=2.1						
WRA	Warramunga Arr	47.49	124	P	P	09 10 21.1	+0.5
WRAB	Tennant Creek	47.49	124	P	P	09 10 19.9	-0.6
WRAB				IAmb	IAmb	09 10 46.7	
	comp=Z,3.0nm,0.8s						
WB2	Warramunga Arr	47.50	124	P	P	09 10 22.3	+1.6
WR0	Warramunga Arr	47.66	124	P	P	09 10 22.0	+0.1
WR0				IAmb	IAmb	09 10 42.3	
	comp=Z,5.0nm,1.2s						
ZALV	Zalesovo Beam	47.98	353	P	P	09 10 22.5	-1.3
	comp=Z,1.0nm,0.5s,baz=151,slow=6.4,SNR=5.7						
ASAR	Alice Springs	49.05	129	P	P	09 10 33.7	+1.1
	comp=Z,0.4nm,0.7s,baz=311,slow=7.0,SNR=3.2						
ASAR				PcP	PcP	09 11 55.3	-1.1
	comp=Z,0.3nm,0.8s,baz=302,slow=4.2,SNR=1.0						
BVAR	Borovoye Array	50.34	342	P	P	09 10 41.0	-0.9
	comp=Z,1.1nm,0.7s,baz=172,slow=12,SNR=5.0						
ABKAR	Akbulak array	51.47	332	P	P	09 10 51.5	+1.0
AKTO	Aktyubinsk	53.19	332	P	P	09 11 02.2	-1.0
	comp=Z,0.9nm,0.5s,baz=143,slow=19,SNR=1.4						
ARU	Arti	57.20	337	P	P	09 11 31.0	-1.0
	comp=Z,2.8nm,0.2s,baz=286,slow=10,SNR=1.4						
STKA	Stephens Creek	59.16	133	P	P	09 11 44.8	-1.5
	comp=Z,1.2nm,0.8s,baz=288,slow=15,SNR=1.8						
TIXI	Tiksi	68.66	11	P	P	09 12 47.4	-0.7
	comp=Z,3.5nm,0.7s,baz=218,slow=2.9,SNR=4.8						
TIXI	Tiksi	68.66	11	IAmb	IAmb	09 12 52.6	
	comp=Z,4.1nm,0.5s						
FINES	FINESS Array B	73.96	332	P	P	09 13 19.3	-1.0
	comp=Z,0.9nm,0.5s,baz=191,slow=1.9,SNR=4.6						
ARCES	ARCESS Array B	76.60	340	P	P	09 13 34.6	-0.9
	comp=Z,6.8nm,1.1s,baz=76,slow=7.5,SNR=2.6						
GERES	GERESS Array B	78.86	318	P	P	09 13 47.2	-1.3
	comp=Z,0.4nm,0.5s,baz=86,slow=6.1,SNR=1.8						
NB2	NORSAR Subarra	80.96	331	P	P	09 14 06.3	+6.7
	comp=Z,2.3nm,0.8s,baz=96,slow=5.1						
TORD	Torodi Ar. Bea	90.86	283	P	P	09 14 49.2	-0.3
	comp=Z,0.3nm,0.9s,baz=90,slow=3.0,SNR=2.1						
TXAR	Lajitas Array	140.57	25	PKP	PKPdf	09 21 13.2	-2.3
	comp=Z,0.1nm,0.7s,baz=334,slow=6.0,SNR=1.2						

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*IDC **09** 09:20:23.9±1.4, 51°.59N×175°.14W, h0km, mb3.6/5, mb1 3.9/7, mb1mx3.7/54, mbtmp3.7/7, ML3.7/2, Error ellipse: s-maj=43.6km s-min=22.6km az=173.0*

*AEIC **09** 09:20:28±0.5, 51°.35N±0°.09×175°.00W±0°.04, h26km±6km, ML3.3/21, mb4.0/5(NEIC), Error ellipse: s-maj=12.9km s-min=3.4km az=171.0*

*NEIC **09** 09:20:29.7±0.8, 51°.43N±0°.10×175°.03W±0°.04, h39km±12km, Error ellipse: s-maj=14.7km s-min=2.6km az=168.0*

ISC 09 09:20:29.5±0.9, **51°.4N**±0°.1×**175°.00W**±0°.06, **h40**km, **n43**, σ**0ˢ.79**/36, **mb3.6**/5, **Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSIG	Igitkin Island	0.81	315		Pn	09 20 44.0	-0.5
GSMY	Great Sitkin M	0.91	314		Pn	09 20 45.6	-0.2
GSCK	Great Sitkin C	0.94	310		Pn	09 20 45.9	-0.3
GSTR	Great Sitkin T	0.95	316		Pn	09 20 46.3	-0.1
GSTD	Great Sitkin T	0.96	312		Pn	09 20 46.4	-0.1
GSTD					Sn	09 20 59.7	+0.6
ETKA	Kagalaska Isla	0.99	298		Pn	09 20 46.4	-0.4
GSSP	Great Sitkin S	1.00	313		Pn	09 20 47.0	0.0
KOFP	Korovin Flat P	1.03	33		Pn	09 20 47.6	+0.2
KOKL	Mount Kliuchef	1.03	28		Pn	09 20 47.7	+0.1
KOSE	Korovin Southe	1.10	32		Pn	09 20 48.8	+0.4
KOSE					Sn	09 21 03.3	+0.8
ADK	Adak	1.15	295	Pn	Pn	09 20 48.8	-0.3
KIWB	Kanaga Island	1.41	289		Pn	09 20 52.3	-0.4
KIKV	Kanaga Island	1.43	290		Pn	09 20 52.4	-0.5
KIMD	Kanaga Island	1.44	285		Pn	09 20 52.6	-0.4
TAFP	Tanaga Falls P	1.92	286		Pn	09 21 00.3	+0.6
TAFP					Sn	09 21 24.0	+1.4
TASE	Tanaga Southea	1.94	284		Pn	09 21 00.4	+0.4
GAEA	Gareloi East	2.37	280		Pn	09 21 06.8	+1.0
GANE	Gareloi Northe	2.39	281		Pn	09 21 07.0	+0.9
AMKA	Amchitka	3.57	272	Pn	Pn	09 21 21.6	-0.7
UNV	Unalaska Valle	5.71	61	Pn	Pn	09 21 52.3	+0.6
SDPT	Sand Point	9.53	60	Pn	Pn	09 22 43.9	0.0
KDAK	Kodiak Island	14.43	55	Pn	Pn	09 23 49.1	-1.7
	0.3nm,0.3s,baz=242,slow=4.0,SNR=1.9						
CNPM	China Poot	15.66	50	Pn	Pn	09 24 08.8	+1.8
CNPM				IAmb	IAmb	09 24 24.6	
	comp=Z,38nm,1.2s						
HDA	Harding Lake	19.56	38		Pn	09 24 55.1	+0.1
HDA				IAmb	IAmb	09 24 59.8	
	comp=Z,6.4nm,0.7s						
IL31		19.76	37	P	P	09 24 56.3	+0.7
ILAR	Eielson Array	19.76	37	P	P	09 24 54.5	-1.2
	comp=Z,0.2nm,0.3s,baz=222,slow=10,SNR=19						
SCRK	Sand Creek	20.54	40	P	P	09 25 04.5	+0.2
INK	Inuvik	26.08	34	P	P	09 25 58.4	-0.4
	comp=Z,1.1nm,0.8s,baz=200,slow=14,SNR=2.1						
H11N2	WAKE ISLAND Hy	34.68	211	T	T	10 04 32.6	
	baz=20,slow=76,SNR=7.2						
H11N3	WAKE ISLAND Hy	34.69	211	T	T	10 04 31.2	
	baz=20,slow=76,SNR=8.4						
H11N1	WAKE ISLAND Hy	34.70	211	T	T	10 04 34.1	
	baz=20,slow=76,SNR=8.6						
H11S1	WAKE ISLAND Hy	35.89	211	T	T	10 06 01.0	
	baz=19,slow=76,SNR=9.7						
H11S2	WAKE ISLAND Hy	35.90	211	T	T	10 06 01.5	
	baz=19,slow=76,SNR=9.8						
H11S3	WAKE ISLAND Hy	35.90	211	T	T	10 06 01.0	
	baz=19,slow=76,SNR=3.0						
PDAR	Pinedale Array	44.02	75	P	P	09 28 34.4	+1.2
	comp=Z,1.2nm,0.5s,baz=310,slow=4.3,SNR=15						
SONM	Songino Array	48.74	299	P	P	09 29 08.8	-1.3
	comp=Z,0.3nm,0.4s,baz=34,slow=10,SNR=4.0						
SONM	Songino Array	48.74	299	IAmb	IAmb	09 29 12.8	
	comp=Z,0.9nm,1.2s						
TXAR	Lajitas Array	56.29	84	P	P	09 30 06.0	0.0
	comp=Z,0.6nm,0.8s,baz=285,slow=3.8,SNR=5.4						
MKAR	Makanchi Array	61.85	311	P	P	09 30 43.1	-1.2
	comp=Z,0.2nm,0.5s,baz=55,slow=6.9,SNR=1.8						
H03N2	Juan Fernandez	118.88	108	T	T	11 49 57.6	
	baz=319						
H03N1	Juan Fernandez	118.89	108	T	T	11 49 59.8	
	baz=319						
H03N3	Juan Fernandez	118.89	108	T	T	11 49 52.7	
	baz=319						
MAW	Mawson	147.97	218	PKPbc	PKPbc	09 40 09.2	+0.3
	comp=Z,1.5nm,0.6s,baz=127,slow=20,SNR=2.5						

IDC 09 09:25:27.0±10.0, **0°.38S**×**100°.03E**, **h0**km, **mb3.3**/3, **mb1 3.5**/3, **mb1mx3.3**/47, **mbtmp3.3**/3, **Error ellipse: s-maj=353.2km s-min=34.3km az=65.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	38.80	122	P	P	09 32 52.7	-1.2
	0.1nm,0.3s,baz=297,slow=9.2,SNR=1.5						
ASAR	Alice Springs	40.19	128	P	P	09 33 06.2	+0.7
	0.1nm,0.3s,baz=301,slow=7.9,SNR=8.2						
SONM	Songino Array	48.34	6	P	P	09 34 10.4	-0.1
	0.3nm,0.5s,baz=190,slow=7.3,SNR=1.9						

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*IDC **09** 09:33:14.9±1.7, 33°.40S×177°.98W, h0km, mb4.1/4, mb1 4.4/6, mb1mx4.0/39, mbtmp4.2/6, ML4.2/2, MS3.6/3, Ms1 3.6/3, ms1mx3.0/48, Error ellipse: s-maj=50.7km s-min=26.9km az=139.0*

ISC 09 09:33:20.9±1.6, **33°.1S**±0°.1×**178°.1W**±0°.3, **h34**km, **n9**, σ**0ˢ.36**/8, **mb4.1**/4, **MS3.5**/3, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	3.85	2	Pn	Pn	09 34 17.4	-0.4
	28nm,0.3s,baz=342,slow=23,SNR=1.4						
RAO				Sn	Sn	09 35 02.2	+0.3
	32nm,0.3s,baz=235,slow=23,SNR=1.8						
URZ	Urewera	6.44	216	Pn	Pn	09 34 47.4	-5.9
	2.9nm,0.3s,baz=121,slow=24,SNR=41						
URZ				Sn	Sn	09 35 56.8	-8.8
	12nm,0.3s,baz=301,slow=23,SNR=8.5						
PMG	Port Moresby	39.75	298	LR	LR	09 55 29.8	
	comp=Z,58nm,21.5s,baz=324,slow=33						
ASAR	Alice Springs	42.94	270	P	P	09 41 16.8	+0.1
	3.2nm,0.7s,baz=110,slow=7.1,SNR=36						
ASAR				PcP	PcP	09 43 06.5	-0.5
	0.3nm,0.6s,baz=130,slow=4.2,SNR=1.5						
WRA	Warramunga Arr	44.17	275	P	P	09 41 26.5	-0.1
	1.9nm,0.7s,baz=118,slow=7.8,SNR=25						
FITZ	Fitzroy Crossi	52.31	272	P	P	09 42 29.6	+0.2
	1.8nm,0.7s,baz=128,slow=6.1,SNR=8.1						
FITZ				LR	LR	10 02 53.4	
	comp=Z,41nm,18.7s,baz=242,slow=34						
NVAR	Mina Array Bea	90.29	43	P	P	09 46 18.6	+0.2
	0.6nm,0.7s,baz=210,slow=5.8,SNR=4.8						
KDAK	Kodiak Island	93.06	13	LR	LR	10 21 34.6	
	comp=Z,76nm,19.6s,baz=151,slow=31						
FINES	FINESS Array B	147.64	338	PKPbc	PKPbc	09 53 01.0	+0.1
	3.3nm,0.8s,baz=341,slow=2.9,SNR=5.3						

IDC 09 09:42:08.5±2.0, **8°.32S**×**125°.22E**, **h0**km, **mb3.6**/1, **mb1 3.7**/5, **mb1mx3.5**/44, **mbtmp3.5**/5, **ML3.4**/4, **Error ellipse: s-maj=40.9km s-min=26.7km az=86.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	2.42	219	Pn	Pn	09 42 49.2	-0.2
	5.0nm,0.3s,baz=105,slow=23,SNR=1.6						
BATI				Sn	Sn	09 43 20.3	+0.5
	7.9nm,0.3s,baz=66,slow=8.6,SNR=1.6						
FITZ	Fitzroy Crossi	9.73	178	Pn	Pn	09 44 30.6	+0.8
	0.4nm,0.3s,baz=2.8,slow=9.0,SNR=9.4						
FITZ				Sn	Sn	09 46 12.0	-7.8
	0.6nm,0.3s,baz=303,slow=21,SNR=4.5						
WRA	Warramunga Arr	14.54	144	Pn	Pn	09 45 33.7	-2.0
	0.2nm,0.3s,baz=317,slow=13,SNR=10						
WRA				Sn	Sn	09 48 07.5	-10
	0.1nm,0.3s,baz=320,slow=25,SNR=2.2						
ASAR	Alice Springs	17.38	152	P	P	09 46 13.4	-0.6
	0.1nm,0.3s,baz=324,slow=12,SNR=5.6						
MKAR	Makanchi Array	66.84	329	P	P	09 53 02.2	0.0
	0.5nm,0.7s,baz=128,slow=6.1,SNR=3.1						

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*IDC **09** 09:43:27.8±2.1, 24°.09S×179°.67W, h501km±25km, mb3.2/6, mb1 3.5/9, mb1mx3.2/39, mbtmp4.2/9, Error ellipse: s-maj=32.3km s-min=18.2km az=152.0*

*NOU **09** 09:43:28.9, 23°.75S×179°.41W, h550km, mb3.9/17, South of Fiji Islands*

ISC 09 09:43:28.6±0.8, **24°.06S**±0°.09×**179°.7W**±0°.1, **h512**km, **n33**, σ**1ˢ.51**/33, **mb3.8**/7, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	6.63	341	P	P	09 45 10.4	-1.4
	3.8nm,0.3s,baz=138,slow=23,SNR=25						
MSVF	Nonsavu	6.63	341	P	P	09 45 10.5	-1.3
TAVE	Taveuni	7.31	359	P	P	09 45 18.1	-0.4
DGTI	Dogotuki	7.74	356	P	P	09 45 21.8	-1.0
OUZ	Omahuta	12.55	206	P	P	09 46 18.1	+5.3
AFI	Afiamalu	12.57	38	P	P	09 46 13.7	+0.3
	1.4nm,0.3s,baz=260,slow=16,SNR=2.3						
AFI				S	S	09 48 16.6	-13
	0.8nm,0.3s,baz=90,slow=20,SNR=1.6						
URZ	Urewera	14.41	190	P	P	09 46 31.8	-0.6
	1.2nm,0.3s,baz=301,slow=23,SNR=11						
URZ				S	S	09 49 00.3	-3.6
	0.1nm,0.3s,baz=301,slow=24,SNR=1.9						
URZ	Urewera	14.41	190	P	P	09 46 34.9	+2.6
BKZ	Black Stump Fm	15.40	191	P	P	09 46 44.3	+1.5
DUWZ	D'Urville Isla	17.53	196	P	P	09 47 05.4	+1.4
TCW	Tory Channel	17.83	195	P	P	09 47 08.1	+1.4
QRZ	Quartz Range	17.94	199	P	P	09 47 10.1	+2.4
QRZ	Quartz Range	17.94	199	P	P	09 47 10.3	+2.6
THZ	Tophouse	18.70	197	P	P	09 47 16.8	+2.1
DSZ	Denniston Nort	19.00	200	P	P	09 47 20.2	+2.7
KHZ	Kahutara	19.15	195	P	P	09 47 20.2	+1.5
KHZ	Kahutara	19.15	195	P	P	09 47 20.6	+2.0
GVZ	Greta Valley S	19.79	196	P	P	09 47 26.4	+1.9
LTZ	Lake Taylor	19.82	198	P	P	09 47 25.5	+0.7
CTA	Charters Tower	31.74	270	P	P	09 49 11.0	+0.5
	4.8nm,0.4s,baz=95,slow=11,SNR=15						
CTA	Charters Tower	31.74	270	P	P	09 49 10.6	+0.2
	14nm,1.3s						
CTAO	Charters Tower	31.74	270	P	P	09 49 10.9	+0.5
MTSU	Mount Surprise	34.01	273	P	P	09 49 30.1	+0.4
	3.1nm,0.9s						
OOD	Oodnadatta	40.12	255	P	P	09 50 20.6	+0.8
MULG	Mulgathing	41.37	251	P	P	09 50 29.6	-0.2
ASAR	Alice Springs	42.27	261	P	P	09 50 37.2	+0.2
	1.1nm,0.4s,baz=96,slow=7.6,SNR=20						
WRAB	Tennant Creek	42.65	266	P	P	09 50 39.6	-0.4
WRA	Warramunga Arr	42.66	266	P	P	09 50 39.5	-0.5
	2.2nm,0.4s,baz=98,slow=8.4,SNR=42						
FORT	Forrest	46.50	250	P	P	09 51 09.5	-0.1
WRKA	Warakurna	47.06	258	P	P	09 51 13.5	-0.4
FITZ	Fitzroy Crossi	51.08	266	P	P	09 51 44.3	+0.6
	0.9nm,0.4s,baz=103,slow=8.6,SNR=2.2						
TXAR	Lajitas Array	90.29	58	P	P	09 55 34.8	-0.2
	0.3nm,0.7s,baz=204,slow=6.5,SNR=5.3						
PDAR	Pinedale Array	92.62	44	P	P	09 55 45.5	0.0
	0.1nm,0.5s,baz=234,slow=4.6,SNR=1.4						

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*SKHL **09** 09:46:09.7±0.5, 45°.40N×151°.80E, h156km±2km, mb5.0/3, msha5.7/3*

*IDC **09** 09:46:12.5±2.0, 47°.06N×150°.61E, h185km±19km, mb3.4/14, mb1 3.6/19, mb1mx3.5/56, mbtmp3.9/19, MS3.9/1, Ms1 3.9/1, ms1mx2.6/37, Error ellipse: s-maj=17.5km s-min=10.6km az=151.0*

ISC 09 09:46:12.5±0.7, **46°.8N**±0°.1×**150°.68E**±0°.10, **h200**km, **n52**, σ**1ˢ.74**/43, **mb3.6**/14, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.50	233	eP	Pn	09 46 55.2	-1.1
KUR				AMB	AMB	09 47 00.3	
	59nm,0.5s						
KUR				eS	Sn	09 47 31.2	+0.7
KUR				A	A	09 47 35.0	
	250nm,0.5s						
KUR				A	A	09 47 35.0	
	100nm,0.5s						
YUK	Yuzh-Kuril'sk	4.37	233	eP	Pn	09 47 16.7	-2.1
YUK				AMB	AMB	09 47 18.0	
	170nm,0.4s						
YUK				eS	Sn	09 48 08.9	-2.0
YUK				A	A	09 48 13.0	
	330nm,0.6s						
YUK				A	A	09 48 13.0	
	180nm,0.6s						
GLVR	Golovnino	4.75	232	eP	Pn	09 47 21.5	-2.1
GLVR				AMB	AMB	09 47 22.7	
	72nm,0.3s						
GLVR				eS	Sn	09 48 17.3	-2.3
GLVR				A	A	09 48 19.0	
	285nm,0.3s						
GLVR				A	A	09 48 19.0	
	169nm,0.3s						
NEM2	Nemuro 2	4.89	227	P	Pn	09 47 21.7	-3.7
NEM2				eS	Sn	09 48 16.3	-6.6
JNK	Nakash	5.29	235	P	Pn	09 47 29.4	-1.1
JTKR	Abashiri--Toko	5.54	242	P	Pn	09 47 33.4	-0.3
JAK	Akkeshi	5.69	230	P	Pn	09 47 32.5	-3.2
JAK				eS	Sn	09 48 35.6	-5.9
JMP	Maruseppu	5.86	244	P	Pn	09 47 38.0	+0.2
JAR	Ashorobuto	6.01	237	P	Pn	09 47 39.1	-0.7
JOB	Onbets	6.22	234	P	Pn	09 47 40.4	-2.2
ASAJ	Asahikawa	6.28	248	P	Pn	09 47 44.5	+1.2
	9.0nm,0.3s,baz=69,slow=13,SNR=77						
ASAJ	Asahikawa	6.28	248	P	Pn	09 47 44.5	+1.2
JKK2	Kamakawa 2	6.30	245	P	Pn	09 47 44.1	+0.5
JCH	Churui	6.68	234	P	Pn	09 47 45.6	-2.8
JCH				eS	Sn	09 48 58.3	-6.2
JFR	Furan	6.78	241	P	Pn	09 47 49.5	-0.3
JAB	Ashibetsu	6.82	244	P	Pn	09 47 51.1	+0.8
JNBK	Urakawa-nobuka	7.24	234	P	Pn	09 47 51.9	-3.8
PETK	Petropavlovsk-	7.78	33	P	Pn	09 47 58.2	-4.4
	0.5nm,0.3s,baz=200,slow=12,SNR=12						
JNB	Noboribetsu	8.12	241	P	Pn	09 48 04.8	-2.4
JKB	Kayabe	8.47	238	P	Pn	09 48 08.5	-3.3
JSH	Shimam	8.63	245	P	Pn	09 48 13.2	-0.6
JYM2	Yakumo 2	8.73	241	P	Pn	09 48 13.0	-2.1
JSR	Shiriuchi	9.05	238	P	Pn	09 48 16.8	-2.5
JTM	Tenmabayashi	9.18	233	P	Pn	09 48 16.3	-4.7
JANG	Nango	9.23	229	P	Pn	09 48 16.8	-4.9
JOSM	Okushiri--Mats	9.29	244	P	Pn	09 48 20.5	-1.9
JRG	Rokugo	10.41	228	P	Pn	09 48 33.5	-3.4
KLR	Kul'dur	12.91	288	P	Pn	09 49 08.3	-0.3
	0.1nm,0.3s,baz=104,slow=15,SNR=3.8						
USRK	Ussuriysk Ar.	13.37	266	P	Pn	09 49 15.2	+0.8
	baz=71,slow=13,SNR=19						
KSRS	Korea Array	19.23	249	P	Pn	09 50 23.9	-0.8
	0.6nm,0.3s,baz=56,slow=11,SNR=8.9						
SONM	Songino Array	29.74	289	P	P	09 52 00.4	+0.4
	0.5nm,0.8s,baz=76,slow=8.9,SNR=3.1						
H11N2	WAKE ISLAND Hy	30.07	148	T	T	10 23 37.6	
	baz=338,slow=75,SNR=32						
H11N1	WAKE ISLAND Hy	30.08	148	T	T	10 23 36.8	
	baz=338,slow=75,SNR=27						
H11N3	WAKE ISLAND Hy	30.09	148	T	T	10 23 39.3	
	baz=338,slow=75,SNR=30						
H11S1	WAKE ISLAND Hy	31.13	150	T	T	10 24 58.5	
	baz=339						
H11S3	WAKE ISLAND Hy	31.14	150	T	T	10 24 59.0	
	baz=339,slow=74,SNR=22						
H11S2	WAKE ISLAND Hy	31.15	150	T	T	10 24 59.1	
	baz=339,slow=74,SNR=25						
ILAR	Eielson Array	37.56	39	P	P	09 53 07.2	+0.2
	0.3nm,0.6s,baz=264,slow=7.0,SNR=5.3						
INK	Inuvik	42.52	32	P	P	09 53 48.1	+0.5
	0.6nm,0.2s,baz=302,slow=9.5,SNR=12						
MKAR	Makanchi Array	45.44	296	P	P	09 54 11.6	+0.4
	1.3nm,0.6s,baz=68,slow=7.6,SNR=9.4						
MKAR				PcP	PcP	09 55 48.7	+2.0
	0.4nm,0.5s,baz=51,slow=3.0,SNR=2.4						
KURBB	Kurchatov Arra	46.04	303	P	P	09 54 15.3	-0.5
	1.7nm,0.6s,baz=71,slow=8.8,SNR=12						
BBB	Bella Bella	50.42	52	LR	LR	10 15 38.6	
	comp=Z,124nm,21.0s,baz=95,slow=35						
CMAR	Chiang Mai Arr	50.76	254	P	P	09 54 55.0	+2.8
	0.9nm,0.4s,baz=39,slow=7.7,SNR=7.3						
FINES	FINESS Array B	63.28	334	P	P	09 56 18.2	-1.1
	2.0nm,0.6s,baz=45,slow=8.4,SNR=7.1						
NVAR	Mina Array Bea	63.89	61	P	P	09 56 25.1	+1.1
	0.6nm,0.5s,baz=296,slow=7.5,SNR=6.7						
PDAR	Pinedale Array	66.06	53	P	P	09 56 39.1	+1.2
	1.0nm,0.7s,baz=265,slow=2.0,SNR=7.9						
NOA	NORSAR Array B	67.64	340	P	P	09 56 46.7	-0.6
	0.7nm,0.6s,baz=52,slow=9.1,SNR=2.5						
WRA	Warramunga Arr	68.03	197	P	P	09 56 51.4	+1.2
	0.5nm,0.8s,baz=12,slow=6.3,SNR=2.9						
AKASG	Malin Array Be	70.58	325	P	P	09 57 03.9	-1.5
	0.3nm,0.3s,baz=37,slow=6.2,SNR=4.1						
ASAR	Alice Springs	71.74	196	P	P	09 57 15.6	+2.8
	0.8nm,0.8s,baz=17,slow=5.6,SNR=8.2						
TXAR	Lajitas Array	78.92	59	P	P	09 57 55.2	+1.4
	0.8nm,0.6s,baz=299,slow=4.1,SNR=14						
PLCA	Paso Flores	149.87	94	PKPbc	PKiKP	10 05 39.9	+0.7
	1.8nm,1.1s,baz=236,slow=5.7,SNR=4.8						

IDC 09 10:04:51.2±11.0, **20°.43S**×**177°.33W**, **h514**km±58km, **mb3.0**/3, **mb1 3.1**/5, **mb1mx2.8**/38, **mbtmp3.9**/5, **Error ellipse: s-maj=271.0km s-min=40.4km az=59.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.12	301	P	P	10 06 20.2	0.0
	1.2nm,0.3s,baz=250,slow=23,SNR=9.5						
URZ	Urewera	18.41	194	P	P	10 08 34.4	0.0
	0.3nm,0.3s,baz=302,slow=23,SNR=2.1						
STKA	Stephens Creek	38.38	244	P	P	10 11 27.7	-0.5
	1.7nm,0.7s,baz=101,slow=16,SNR=2.2						
ASAR	Alice Springs	45.15	257	P	P	10 12 21.8	0.0
	1.5nm,0.5s,baz=98,slow=7.4,SNR=38						
WRA	Warramunga Arr	45.23	262	P	P	10 12 22.4	-0.1
	0.3nm,0.3s,baz=96,slow=7.3,SNR=21						

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*KRNET **09** 10:11:05.8±0.1, 41°.03N×70°.29E, h14km, mb2.6*

*NNC **09** 10:11:06.3±2.6, 40°.99N×70°.35E, h0km, mb3.2, mpv2.8, Error ellipse: s-maj=22.5km s-min=13.9km az=24.0*

ISC 09 10:11:06.6±1.9, **41°.03N**±0°.04×**70°.41E**±0°.09, **h10**km±13km, **n11**, σ**1ˢ.85**/19, **11C-11D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRKS	Terek-Say	0.74	48	⇑iP	Pg	10 11 20.9	-0.2
	baz=57						
TRKS				⇑iS	Sg	10 11 32.1	+1.3
	baz=57						
BTK	Batken	1.02	162	⇓eP	Pb	10 11 25.7	-0.8
	baz=57						
BTK				⇓iS	Sn	10 11 40.3	-1.3
	baz=57						
DRK	Karamyk	1.88	145	⇓iP	Pb	10 11 41.3	0.0
	baz=43						
DRK				⇓iS	Sg	10 12 07.9	+0.8
	baz=43						
KK31	Karatay Array	2.07	2	⇑Pn	Pb	10 11 43.1	-1.3
	2.2nm,0.4s,baz=190,slow=15,SNR=29						
KK31				⇓Lg	Lg	10 12 13.4	
	1.9nm,0.3s,baz=192,slow=31,SNR=6.5						
MNAS	Manas	2.14	47	⇑eP	Pb	10 11 45.9	+0.3
	baz=48						
MNAS				⇑iS	Sb	10 12 14.3	+2.0
	baz=48						
SALK	Salom-Alik	2.59	92	⇓eP	Pb	10 11 52.3	-1.0
	baz=92						
SALK				⇓eS	Sb	10 12 25.7	+0.4
	baz=92						
AML	Almayashu	2.70	65	⇑iP	Pb	10 11 53.4	-1.9
	baz=66						
AML				⇑iS	Sb	10 12 28.4	-0.3
	baz=66						
EKS2	Erkin-Say	3.00	56	⇓eP	Pb	10 11 57.5	-2.8
	baz=57						
EKS2				⇓iS	Sb	10 12 35.3	-1.7
	baz=57						
UCH	Uchtor	3.30	67	⇑eP	Pn	10 12 01.8	+2.9
	baz=68						
UCH				⇑eS	Sb	10 12 42.9	-3.2
	baz=68						
AAK	Ala-Archa	3.45	61	⇑Pg	Pg	10 12 11.0	-1.8
	1.9nm,0.7s						
AAK				⇓Lg	Lg	10 12 57.3	
	2.8nm,0.7s						
TKM2	Tokmak 2	4.31	62	⇓Pg	Pb	10 12 24.4	+1.9
	4.3nm,1.1s						

TKM2				⇑Lg	Lg	10 13 26.0	
	3.1nm,0.7s						

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*TUL **09** 10:18:09.9±1.2, 36°.76N±0°.02×98°.08W±0°.03, h7^{km}±5^{km}, ML3.7, mb_Lg3.6/98(NEIC), Error ellipse: s-maj=3.4km s-min=2.3km az=75.0*
*NEIC **09** 10:18:10.3±1.1, 36°.75N±0°.02×98°.04W±0°.04, h8^{km}±4^{km}, Error ellipse: s-maj=5.1km s-min=2.1km az=97.0*
*ANF **09** 10:18:12.2±0.5, 36°.73N×98°.05W, h25^{km}±4^{km}, ML4.6/17, Error ellipse: s-maj=2.2km s-min=1.6km az=29.0*
ISC 09 10:18:10.2±0.8**, 36°.74N**±0°.02×**98°.05W**±0°.02**, h10**^{km}±6^{km}**, n143, σ0^{s}.78**/151**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK032	**Salt Plains WL**	0.14	296		Pg	10 18 12.8	-0.5
OK032				Sg	Sg	10 18 14.8	-0.8
GC02	**Grant County #**	0.19	54	Pg	Pg	10 18 14.3	+0.1
GC02				Sg	Sg	10 18 17.3	+0.4
KAN14	**Manchester OK**	0.23	18		Pg	10 18 14.7	-0.1
KAN14				Sg	Sg	10 18 18.0	0.0
CROK	**Carrier**	0.24	167	Pg	Pg	10 18 15.4	+0.3
CROK				Sg	Sg	10 18 19.0	+0.6
KAN17	**Caldwell West**	0.38	37	Pg	Pg	10 18 17.7	0.0
KAN17				Sg	Sg	10 18 23.0	+0.3
KAN10	**Anthony SW Sta**	0.38	355	Pg	Pg	10 18 17.4	-0.3
KAN10				Sg	Sg	10 18 22.3	-0.5
KAN05	**Bluff City Nor**	0.39	21		Pg	10 18 17.7	-0.2
KAN05				Sg	Sg	10 18 23.1	-0.1
KAN01	**Argonia South**	0.47	30		Pg	10 18 19.3	-0.1
KAN01				Sg	Sg	10 18 25.5	-0.2
KAN16	**Harper SW Stat**	0.48	359	Pg	Pg	10 18 19.2	-0.4
KAN16				Sg	Sg	10 18 25.3	-0.7
KAN08	**Anthony NE Sta**	0.49	8		Pg	10 18 19.4	-0.3
KAN08				Sg	Sg	10 18 26.2	+0.1
KAN09	**Caldwell North**	0.53	41	Pg	Pg	10 18 20.2	-0.1
KAN09				Sg	Sg	10 18 26.9	-0.5
KAN06	**Argonia West S**	0.53	17		Pg	10 18 20.2	-0.2
KAN06				Sg	Sg	10 18 27.0	-0.5
KAN13	**South Haven SW**	0.53	59		Pg	10 18 20.5	0.0
KAN13				Sg	Sg	10 18 27.6	0.0
KAN12	**Harper NE Stat**	0.56	4	Pg	Pg	10 18 20.7	-0.3
KAN12				Sg	Sg	10 18 27.6	-0.8
KS20	**Mayfield South**	0.63	39		Pg	10 18 22.1	-0.2
BLOK	**Blackwell**	0.67	88	Pg	Pg	10 18 23.1	0.0
BLOK				Sg	Sg	10 18 32.4	+0.4
U32A	**Winter Ranch,**	0.85	245	Pg	Pg	10 18 25.7	-0.7
U32A	**Winter Ranch,**	0.85	245	P	Pg	10 18 25.8	-0.7
	baz=65,SNR=98						
OK029	**Liberty Lake**	1.06	153	Pg	Pg	10 18 30.2	-0.3
OK029					Sg	10 18 44.5	+0.2
BCOK	**Bluff Creek, N**	1.14	162	Pg	Pg	10 18 31.1	-1.0
BCOK				Sg	Sg	10 18 46.7	-0.1
QUOK	**Quay**	1.22	117		Pb	10 18 33.2	-0.2
QUOK				Sg	Sb	10 18 49.7	+0.4
T35A	**Sooner Cattle**	1.25	81		Pn	10 18 33.4	-0.3
T35A				Sg	Sb	10 18 49.6	-0.3
T35B	**Sooner Cattle**	1.25	81	P	Pn	10 18 33.3	-0.4
	baz=262,SNR=567						
T35B				S	Sn	10 18 50.8	+0.1
	baz=262						
OK031	**S. Brethren Rd**	1.25	128		Pn	10 18 33.5	-0.3
OK031				Sg	Sb	10 18 50.6	+0.4
OK025	**Westminster Rd**	1.29	153		Pn	10 18 34.4	0.0
OK030	**Cody Creek RV**	1.31	128		Pn	10 18 34.5	0.0
OKCFA	**Oklahoma City**	1.41	160	Pn	Pn	10 18 35.9	0.0
OKCFA	**Oklahoma City**	1.41	160	P	Pn	10 18 36.1	+0.1
	baz=340,SNR=21						
OKCFA				S	Sg	10 18 55.8	+0.4
	baz=340						
OKCSW	**OKLAHOMA CITY**	1.42	159		Pn	10 18 36.2	+0.1
FNO	**Franklin**	1.57	160	Pn	Pn	10 18 38.6	+0.4
R32A	**Long Quarter,**	1.76	343		Pn	10 18 41.6	+0.9
R32A	**Long Quarter,**	1.76	343	P	Pn	10 18 41.6	+0.9
	baz=162,SNR=261						
R32A				S	Sb	10 19 04.6	-0.1
	baz=162						
TUL1	**Leonard**	2.00	114	P	Pn	10 18 44.6	+0.6
	baz=295,SNR=40						
TUL1				Sb	Sb	10 19 13.3	+1.6
	baz=295						
TUL1	**Leonard**	2.00	114		Pn	10 18 45.2	+1.1
TUL1	**Leonard**	2.00	114	P	Pn	10 18 44.7	+0.6
	baz=295,SNR=163						
TUL1				S	Sb	10 19 13.1	+1.3
	baz=295						
WMOK	**Wichita Mounta**	2.08	197	P	Pn	10 18 46.0	+0.7
	baz=17,SNR=81						
WMOK				Sb	Sb	10 19 14.9	+0.8
	baz=17						
WMOK	**Wichita Mounta**	2.08	197		Pn	10 18 46.3	+1.0
WMOK	**Wichita Mounta**	2.08	197	P	Pn	10 18 46.0	+0.7
	baz=17,SNR=204						
WMOK				S	Sb	10 19 14.5	+0.4
	baz=17						
X34A	**Smith Ranch, M**	2.14	175		Pn	10 18 47.1	+1.1
CBKS	**Cedar Bluff**	2.46	328	P	Pn	10 18 51.0	+0.5
	baz=147						
CBKS				S	Sn	10 19 22.2	+1.5
	baz=147						
CBKS	**Cedar Bluff**	2.46	328	Pn	Pn	10 18 51.6	+1.2
CBKS	**Cedar Bluff**	2.46	328	P	Pn	10 18 51.1	+0.6
	baz=147,SNR=16						
CBKS				S	Sn	10 19 22.0	+1.3
	baz=147						
KSU1	**Kansas State U**	2.62	25	P	Pn	10 18 53.1	+0.5
	baz=206,SNR=40						
KSU1				Sb	Sb	10 19 30.3	+0.9
	baz=206						
KSU1	**Kansas State U**	2.62	25	Pn	Pn	10 18 53.4	+0.8
KSU1				IAmb_Lg		10 19 39.4	
	comp=Z,212nm,0.7s						
KSU1	**Kansas State U**	2.62	25	P	Pn	10 18 53.2	+0.7
	baz=206,SNR=52						
LOOK	**Love County**	2.83	165		Pn	10 18 55.9	+0.4
U38A	**Gravette**	2.96	95	Pn	Pn	10 18 57.8	+0.5
U38A				IAmb_Lg		10 19 51.9	
	comp=Z,116nm,0.8s						
U38A	**Gravette**	2.96	95	P	Pn	10 18 58.3	+0.9
	baz=277,SNR=70						
X37A	**Clayton**	3.06	134	Pn	Pn	10 18 59.2	+0.6
X37A	**Clayton**	3.06	134	P	Pn	10 18 59.4	+0.8
	baz=316,SNR=55						
HHAR	**Hobbs**	3.34	97		Pn	10 19 03.6	+1.0
HHAR				IAmb_Lg		10 20 01.6	
	comp=Z,138nm,0.8s						
Z35A	**Perchaven, San**	3.46	169		Pn	10 19 04.6	+0.4
Z35A	**Perchaven, San**	3.46	169	P	Pn	10 19 05.2	+1.0
	baz=350						
AMTX	**Amarillo**	3.48	239	P	Pn	10 19 05.7	+1.2
	baz=57						
AMTX				Sb	Sb	10 19 58.1	+3.7
	baz=57						
AMTX	**Amarillo**	3.48	239	Pn	Pn	10 19 06.0	+1.5
AMTX				IAmb_Lg		10 20 07.2	
	comp=Z,129nm,0.8s						
W39A	**Magazine**	3.79	113	P	Pn	10 19 09.4	+0.8
	baz=295						
W39A	**Magazine**	3.79	113		Pn	10 19 09.6	+0.9
S39A	**Bolivar**	3.89	74	Pn	Pn	10 19 10.5	+0.4
S39A	**Bolivar**	3.89	74	P	Pn	10 19 10.6	+0.4
	baz=257,SNR=43						
N33A	**J Bar K, Exete**	4.02	7		Pn	10 19 11.2	-0.7
N33A				IAmb_Lg		10 20 17.9	
	comp=Z,88nm,0.8s						
U40A	**Yellville**	4.20	94	P	Pn	10 19 14.8	+0.5
	baz=277,SNR=11						
U40A				S	Sn	10 20 03.4	-0.2
	baz=277						
U40A	**Yellville**	4.20	94	Pn	Pn	10 19 14.9	+0.5
U40A				IAmb_Lg		10 20 27.4	
	comp=Z,144nm,0.8s						
U40A	**Yellville**	4.20	94	P	Pn	10 19 15.0	+0.6
	baz=277,SNR=36						
U40A				P	Pn	10 19 15.0	+0.6
	baz=277,SNR=36						
MIAR	**Mount Ida**	4.25	120	P	Pn	10 19 15.9	+0.9
	baz=302						
MIAR				S	Sn	10 20 04.8	+0.1
	baz=302						
MIAR	**Mount Ida**	4.25	120	IAmb_Lg		10 20 30.0	
	comp=Z,89nm,0.7s						
KSCO	**Kaye Shedlock'**	4.27	303	P	Pn	10 19 15.3	-0.1
	baz=121,SNR=12						
KSCO				S	Sn	10 20 05.4	0.0
	baz=121						
KSCO	**Kaye Shedlock'**	4.27	303		Pn	10 19 16.4	+1.0
Z38A	**Mt. Pleasant**	4.29	143		Pn	10 19 13.7	-1.9
Z38A				IAmb_Lg		10 20 30.9	
	comp=Z,158nm,0.9s						
ABTX	**Abilene, Hawle**	4.31	198	P	Pn	10 19 16.1	+0.2
	baz=17						
ABTX	**Abilene, Hawle**	4.31	198		Pn	10 19 16.5	+0.7
ABTX				IAmb_Lg		10 20 27.6	
	comp=Z,104nm,0.8s						
N35A	**Tabor**	4.52	24		Pn	10 19 18.8	0.0
P38A	**Dawn**	4.58	50		Pn	10 19 21.1	+1.5
P38A				IAmb_Lg		10 20 36.8	
	comp=Z,133nm,0.8s						
MGMO	**Mountain Grove**	4.65	83	IAmb_Lg		10 20 39.4	
	comp=Z,74nm,0.7s						
BGNE	**Belgrade**	4.66	359	P	Pn	10 19 20.9	+0.2
	baz=179						
BGNE	**Belgrade**	4.66	359		Pn	10 19 20.9	+0.2
BGNE				IAmb_Lg		10 20 46.6	
	comp=Z,159nm,0.9s						
MSTX	**Muleshoe**	4.75	236	P	Pn	10 19 22.4	+0.5
	baz=53						
MSTX	**Muleshoe**	4.75	236		Pn	10 19 22.1	+0.2
WHTX	**Lake Whitney,**	4.76	174	P	Pn	10 19 22.3	+0.2
	baz=354,SNR=12						
WHTX				S	Sn	10 20 16.1	-1.3
	baz=354						
WHTX	**Lake Whitney,**	4.76	174	P	Pn	10 19 22.5	+0.5
	baz=354,SNR=47						
X40A	**Basin Creek Fa**	4.81	116	P	Pn	10 19 24.2	+1.5
	baz=300						
X40A				S	Sn	10 20 18.1	-0.3
	baz=300						
R40A	**Maddies Statio**	4.85	70	IAmb_Lg		10 20 57.0	
	comp=Z,72nm,0.9s						
W41B	**Gary Mavity, V**	4.96	107	P	Pn	10 19 25.6	+0.9
	baz=290						
W41B				S	Sn	10 20 21.7	-0.5
	baz=290						
WLAR	**White Oak Lake**	5.06	126	IAmb_Lg		10 21 03.7	
	comp=Z,100nm,1.0s						
237A	**Washetta, Mont**	5.08	158		Pn	10 19 25.9	-0.5
T25A	**Trinidad**	5.11	276	P	Pn	10 19 27.8	+0.8
	baz=93						
T25A				S	Sn	10 20 26.2	0.0
	baz=93						
T25A	**Trinidad**	5.11	276		Pn	10 19 27.9	+0.9
T25A				IAmb_Lg		10 20 56.4	
	comp=Z,147nm,0.7s						
OGNE	**Ogallala**	5.22	325	P	Pn	10 19 29.7	+1.2
	baz=142,SNR=7.0						
OGNE				S	Sn	10 20 29.3	+0.5
	baz=142						
OGNE	**Ogallala**	5.22	325	IAmb_Lg		10 20 55.9	
	comp=Z,117nm,0.7s						
P40A	**Paris**	5.49	58	IAmb_Lg		10 21 06.6	
	comp=Z,71nm,0.7s						
N38A	**Joes South For**	5.53	41	IAmb_Lg		10 21 19.2	
	comp=Z,115nm,0.7s						
N38A	**Joes South For**	5.53	41	P	Pn	10 19 32.6	+0.1
	baz=224,SNR=8.2						
Z41A	**Richland Creek**	5.53	127	S	Sn	10 20 34.6	-1.8
	baz=311						
CCM	**Cathedral Cave**	5.58	74	P	Pn	10 19 33.3	0.0
	baz=258						
CCM	**Cathedral Cave**	5.58	74		Pn	10 19 34.3	+1.1
CCM				IAmb_Lg		10 21 09.3	
	comp=Z,68nm,0.7s						
T42A	**Van Buren**	5.59	85	IAmb_Lg		10 21 14.4	
	comp=Z,53nm,0.7s						
LCAR	**Lake Charles**	5.60	95	IAmb_Lg		10 21 12.9	
	comp=Z,63nm,0.8s						
NATX	**Nacogdoches**	5.71	150	S	Sn	10 20 40.0	-0.6
	baz=332						
CCAR	**Cane Creek**	5.86	117	IAmb_Lg		10 21 27.3	
	comp=Z,119nm,0.8s						
K31A	**O'Neill**	5.90	355		Pn	10 19 37.5	-0.2
K31A				IAmb_Lg		10 21 27.5	
	comp=Z,131nm,0.8s						
435B	**Jarrell**	5.96	176	P	Pn	10 19 38.6	+0.1
	baz=356						
435B				S	Sn	10 20 45.6	-1.2
	baz=356						
435B	**Jarrell**	5.96	176	IAmb_Lg		10 21 33.9	
	comp=Z,68nm,0.8s						
Q24A	**Divide**	6.04	294	P	Pn	10 19 40.7	+0.8
	baz=109						
Q24A				S	Sn	10 20 48.8	-0.4
	baz=109						
PBMO	**Poplar Bluff**	6.12	87	IAmb_Lg		10 21 26.0	
	comp=Z,80nm,0.7s						
FVM	**French Village**	6.20	76	IAmb_Lg		10 21 30.2	
	comp=Z,70nm,0.8s						
SCIA	**State Center**	6.38	35	IAmb_Lg		10 21 47.6	
	comp=Z,103nm,0.8s						
JCT	**Junction City**	6.41	194	P	Pn	10 19 45.5	+0.7
	baz=13						
SLM	**Saint Louis**	6.48	71	IAmb_Lg		10 21 38.8	
	comp=Z,47nm,0.7s						
GNAR	**Gosnell**	6.53	94	IAmb_Lg		10 21 39.4	
	comp=Z,100nm,0.7s						
ISCO	**Idaho Springs**	6.69	299	P	Pn	10 19 49.0	+0.2
	baz=115						
ISCO	**Idaho Springs**	6.69	299		Pn	10 19 49.1	+0.4
ISCO				IAmb_Lg		10 21 51.7	
	comp=Z,44nm,0.9s						
MET	**Memphis--Engin**	6.78	101	IAmb_Lg		10 21 49.8	
	comp=Z,105nm,0.8s						
143A	**Socs Landing,**	6.79	124	IAmb_Lg		10 22 00.3	
	comp=Z,55nm,0.8s						
S44A	**Carbondale**	7.08	80	IAmb_Lg		10 21 57.7	
	comp=Z,84nm,0.8s						
SIUC	**Southern Illin**	7.12	79	IAmb_Lg		10 22 08.2	
	comp=Z,77nm,0.7s						
P43A	**Skaggs, Pawnee**	7.32	64		Pn	10 19 57.0	-0.1
P43A				IAmb_Lg		10 22 01.6	
	comp=Z,100nm,0.9s						
Q44A	**Meyer Farm, Va**	7.47	70	IAmb_Lg		10 22 12.3	
	comp=Z,93nm,1.0s						
L40A	**Anamosa**	7.50	43		Pn	10 19 58.6	-0.9
L40A				IAmb_Lg		10 22 09.7	
	comp=Z,70nm,0.8s						
Y45A	**Yeager Farm, C**	7.52	110	IAmb_Lg		10 22 22.8	
	comp=Z,92nm,0.9s						
VBMS	**Vicksburg**	7.68	124	IAmb_Lg		10 22 37.0	
	comp=Z,34nm,1.0s						
Y22D	**IRIS PASSCAL I**	7.71	252		Pn	10 20 03.5	+0.8
SUSD	**Miller**	7.72	355	IAmb_Lg		10 22 27.3	
	comp=Z,47nm,0.8s						
HDIL	**Hopedale**	7.84	58	P	Pn	10 20 04.6	+0.3
	baz=244						
HDIL	**Hopedale**	7.84	58	Pn	Pn	10 20 03.9	-0.3
MNTX	**Cornudas Mount**	7.88	232		Pn	10 20 02.7	-2.2
I37A	**Lemond, Waseca**	8.09	25	IAmb_Lg		10 22 43.2	
	comp=Z,84nm,0.9s						
OLIL	**Olney**	8.13	73	IAmb_Lg		10 22 39.7	
	comp=Z,76nm,1.1s						
O44A	**Mansfield**	8.26	63	IAmb_Lg		10 22 34.7	
	comp=Z,80nm,0.8s						
L42A	**Oliver, Polo**	8.35	48	IAmb_Lg		10 22 39.2	
	comp=Z,63nm,0.8s						
JFWS	**Jewell Farm**	8.60	42	P	Pn	10 20 14.3	-0.4
	baz=227						
JFWS	**Jewell Farm**	8.60	42	IAmb_Lg		10 22 54.1	
	comp=Z,53nm,0.8s						
RWWY	**Rawlins**	8.65	308	IAmb_Lg		10 22 53.4	
	comp=Z,53nm,1.1s						
RSSD	**Black Hills**	8.67	330	P	Pn	10 20 17.2	+1.4
	baz=146						
RSSD	**Black Hills**	8.67	330		Pn	10 20 16.0	+0.2
TX31	**Lajitas Ar. Si**	8.76	214	P	Pn	10 20 17.1	+0.1
	baz=31,SNR=5.5						
TXAR	**Lajitas Array**	8.76	214	Pn	Pn	10 20 16.6	-0.4
K22A	**Casper**	8.80	315	IAmb_Lg		10 22 59.1	
	comp=Z,38nm,0.8s						
121A	**Cookes Peak, D**	9.05	245	P	Pn	10 20 21.7	+0.6
	baz=60						
F33A	**5 Mile Ranch,**	9.19	8	IAmb_Lg		10 23 07.5	
	comp=Z,27nm,0.9s						
SFIN	**Lafayette**	9.32	64	P	Pn	10 20 24.7	+0.2
	baz=250						
SPMN	**Marine on St.**	9.36	23	P	Pn	10 20 26.0	+0.9
	baz=207						
SPMN	**Marine on St.**	9.36	23	IAmb_Lg		10 23 27.2	
	comp=Z,26nm,0.9s						
L44A	**Lake County Fo**	9.53	52	P	Pn	10 20 27.8	+0.3
	baz=238						
E28A	**Huff**	10.02	349	IAmb_Lg		10 23 49.1	
	comp=Z,33nm,0.9s						

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*JMA **09** 10:31:46.3, 39°.64N×142°.11E, h48^{km}±1^{km}, M3.4*
JMA Felt I J1.
*IDC **09** 10:31:48.4±2.7, 39°.64N×142°.08E, h74^{km}±24^{km}, mb3.4/6, mb1 3.5/9, mb1mx3.4/35, mbtmp3.7/9, MS3.1/2, Ms1 3.1/2, ms1mx2.4/26, Error ellipse: s-maj=31.5km s-min=19.3km az=96.0*
ISC 09 10:31:46.1±1.1**, 39°.65N**±0°.04×**142°.12E**±0°.09**, h47**^{km}±8^{km}**, n27, σ1^{s}.19**/30**, mb3.7**/6**, 7D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	0.24	253	⇓P	Pn	10 31 54.7	+0.2
MIYJ				S	Sn	10 32 00.4	0.0
JTH	**Tanohata**	0.35	326	⇓P	Pn	10 31 55.8	+0.3
JTH				S	Sn	10 32 02.4	+0.2
JKEN	**Kujiedanarisaw**	0.64	331	⇓P	Pn	10 31 59.0	0.0
JKEN				S	Sn	10 32 08.3	+0.1
JOM	**Ohasama**	0.66	255	⇓P	Pn	10 31 59.5	+0.3
JOM				S	Sn	10 32 09.0	+0.3
OFUJ	**Ofunato**	0.66	212	P	Pn	10 31 59.2	-0.1
OFUJ				S	Sn	10 32 08.0	-0.7
JKZ	**Kuzumaki**	0.69	299	⇓P	Pn	10 32 00.1	+0.4
JKZ				S	Sn	10 32 09.8	+0.2
JANG	**Nango**	0.86	328	⇓P	Pn	10 32 01.9	0.0
JANG				S	Sn	10 32 13.4	-0.1
JMK	**Ichinoseki**	0.98	225	P	Pn	10 32 03.8	+0.3
JMK				S	Sn	10 32 16.6	+0.3
JRG	**Rokugo**	1.17	258	P	Pn	10 32 06.6	+0.5
JAH	**Hinai**	1.26	296	⇓P	Pn	10 32 07.8	+0.5
MJAR	**Matsushiro Arr**	4.37	226	P	Pn	10 32 52.6	+2.6
	0.2nm,0.3s,baz=36,slow=13,SNR=20						
MJAR				LR	LR	10 34 52.6	
	comp=Z,55nm,18.9s,baz=80,slow=42						
MAT	**Matsushiro**	4.37	226	P	Pn	10 32 53.3	+3.3
MAT				*e*S	Sn	10 33 41.8	+2.2
ASAJ	**Asahikawa**	4.48	4	P	Pn	10 32 53.0	+1.6
	1.4nm,0.3s,baz=187,slow=20,SNR=8.6						
ASAJ				S	Sn	10 33 42.9	+0.6
	0.3nm,0.3s,baz=185,slow=17,SNR=1.7						
USRK	**Ussuriysk Ar.**	8.81	304	P	Pn	10 33 53.0	+2.1
	baz=128,slow=15,SNR=5.1						
H11N2	**WAKE ISLAND Hy**	29.12	126	T	T	11 08 14.9	
	baz=318,slow=76,SNR=258						
H11N1	**WAKE ISLAND Hy**	29.13	126	T	T	11 08 14.5	
	baz=318,slow=76,SNR=183						
H11N3	**WAKE ISLAND Hy**	29.14	126	T	T	11 08 15.2	
	baz=318,slow=76,SNR=258						
H11S1	**WAKE ISLAND Hy**	29.91	128	T	T	11 09 13.6	
	baz=320,slow=76,SNR=21						
H11S3	**WAKE ISLAND Hy**	29.92	128	T	T	11 09 15.2	
	baz=320,slow=76,SNR=18						
H11S2	**WAKE ISLAND Hy**	29.93	128	T	T	11 09 15.0	
	baz=320,slow=76,SNR=19						
ZALV	**Zalesovo Beam**	40.61	310	P	P	10 39 19.2	-1.8
	0.8nm,0.4s,baz=95,slow=8.0,SNR=3.9						
MKAR	**Makanchi Array**	43.25	300	P	P	10 39 42.4	-0.3
	0.8nm,0.6s,baz=82,slow=8.1,SNR=5.8						
ILAR	**Eielson Array**	47.01	34	P	P	10 40 12.3	+0.1
	0.4nm,0.7s,baz=267,slow=6.1,SNR=4.3						
WRA	**Warramunga Arr**	59.72	188	P	P	10 41 45.1	-0.9
	1.0nm,1.1s,baz=4.5,slow=7.3,SNR=4.3						
GEYT	**Alibeck**	63.08	298	LR	LR	11 12 11.8	
	comp=Z,65nm,18.4s,baz=340,slow=38						
ASAR	**Alice Springs**	63.45	188	P	P	10 42 10.0	-1.0
	0.3nm,0.7s,baz=356,slow=4.7,SNR=2.2						
FINES	**FINESS Array B**	66.77	332	P	P	10 42 32.2	+0.1
	2.0nm,0.9s,baz=43,slow=6.3,SNR=1.7						

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*FUNV **09** 11:04:45.9, 8°.48N×71°.37W, h5^{km}, MW3.3*
*IDC **09** 11:04:48.3±0.8, 8°.50N×71°.15W, h48^{km}±9^{km}, mb3.4/5, mb1 3.8/8, mb1mx3.6/36, mbtmp3.7/8, ML3.2/3, Error ellipse: s-maj=23.1km s-min=11.4km az=135.0*
ISC 09 11:04:43.2±2.6**, 8°.55N**±0°.03×**71°.34W**±0°.02**, h5**^{km}±17^{km}**, n55, σ1^{s}.66**/92**, mb3.6**/5**, 2C-3D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	**Socops**	0.55	119	⇑*i*P	Pb	11 04 55.7	+0.3
SOCV				*e*S	Sb	11 05 03.1	-0.4
SOCV	**Socops**	0.55	119	*e*P	Pb	11 04 55.7	+0.3
SOCV				*e*S	Sb	11 05 03.8	+0.3
SDV	**Santo Domingo**	0.78	64	P	Pb	11 05 00.5	+1.2
	42nm,0.3s,baz=291,slow=16,SNR=49						
SDV				S	Sn	11 05 12.8	-0.4
	112nm,0.3s,baz=101,slow=21,SNR=14						
SDV	**Santo Domingo**	0.78	64	*e*P	Pn	11 05 00.8	-0.2
SDV				*e*S	Sn	11 05 12.5	-0.7
PAMC	**Pamplona, Colo**	1.80	228	*e*P	Pn	11 05 16.3	+0.8
PAMC				*e*S	Sb	11 05 39.9	-0.2
MCQV	**Machiques**	1.90	322	⇑*i*P	Pb	11 05 18.1	-0.3
MCQV				*e*S	Sb	11 05 43.6	+1.1
OCAC	**Ocana**	1.98	261	*e*P	Pn	11 05 18.1	+0.5
OCAC				*e*S	Sn	11 05 43.0	+0.1
TAMC	**Tame, Arauca**	2.15	192	*e*P	Pn	11 05 21.0	+1.2
TAMC				*e*S	Sb	11 05 48.6	-1.0
DABV	**Dabajuro**	2.46	16	*e*P	Pb	11 05 27.3	-0.6
DABV				*e*S	Sb	11 05 57.5	-1.1
SIQV	**Siquisique**	2.58	36	*e*P	Pn	11 05 28.4	+2.7
SIQV				*e*S	Sb	11 06 00.8	-1.3
BARC	**Barichara**	2.67	223	*e*P	Pn	11 05 28.8	+1.7
BARC				*e*S	Sb	11 06 02.9	-1.9
SMLC	**San Martn de**	2.71	276	*e*P	Pn	11 05 27.2	-0.3
SMLC				*e*S	Sb	11 06 04.5	-1.4
CVALL	**Valledupar, Ce**	2.71	316	*e*P	Pn	11 05 28.2	+0.6
CVALL				*e*S	Sn	11 06 00.4	-0.5
BRRC	**Barranca, Sant**	2.75	239	*e*P	Pn	11 05 29.4	+1.4
BRRC				*e*S	Sb	11 06 06.1	-0.9
ARGC	**Ariguani, Magd**	3.15	295	*e*P	Pn	11 05 34.0	+0.5
RUSC	**La Rusia**	3.15	213	*e*P	Pn	11 05 35.5	+1.5
RUSC				*e*S	Sn	11 06 13.9	+1.6
BAUV	**El Baul**	3.29	83	*e*P	Pn	11 05 37.6	+2.3
BAUV				*e*S	Sn	11 06 16.2	+1.3
JACV	**Jacura**	3.54	44	*e*P	Pn	11 05 41.1	+2.2
JACV				*e*S	Sn	11 06 22.4	+1.3
ZARC	**Zaragoza, Cauc**	3.64	253	*e*P	Pn	11 05 40.6	+0.3
ZARC				*e*S	Sn	11 06 26.3	+2.6
MONV	**Montecano**	3.64	22	*e*P	Pn	11 05 42.6	+2.2
MONV				*e*S	Sn	11 06 25.3	+1.5
SMRC	**Santa Marta, M**	3.85	313	*e*P	Pn	11 05 42.5	-0.7
SMRC				*e*S	Sn	11 06 28.4	-0.5
BENV	**Beln**	3.95	69	*e*P	Pn	11 05 47.5	+2.8
BENV				*e*S	Sn	11 06 32.2	+0.7
SPBC	**San Pablo de B**	3.95	223	*e*P	Pn	11 05 46.4	+1.7
SPBC				*e*S	Sn	11 06 31.2	-0.3
SJCC	**San Jacinto, C**	4.02	290	⇓*e*P	Pn	11 05 47.2	+1.6
SJCC				*e*S	Sn	11 06 34.9	+1.7
UREC	**San Jos de Ur**	4.22	260	*e*P	Pn	11 05 49.0	+0.6
MOTC	**Monteria, Cord**	4.28	273	⇓*e*P	Pn	11 05 50.2	+1.1
MOTC				*e*S	Sn	11 06 40.7	+1.2
PTGC	**Puerto Gaitan,**	4.39	190	*e*P	Pn	11 05 50.9	+0.2
TACV	**Tcata**	4.54	69	*e*P	Pn	11 05 54.8	+2.1
CHIC	**Chingaza**	4.56	212	⇓*e*P	Pn	11 05 54.9	+1.6
CHIC				*e*S	Sn	11 06 44.6	-2.4
NORC	**Norcasia**	4.59	230	*e*P	Pn	11 05 54.5	+1.2
NORC				*e*S	Sn	11 06 48.0	+0.8
ROSC	**El Rosal**	4.72	219	P	Pn	11 05 57.9	+2.3
	8.6nm,0.3s,baz=300,slow=22,SNR=3.6						
ROSC				S	Sn	11 06 54.6	+3.6
	7.8nm,0.3s,baz=4.0,slow=24,SNR=2.5						
HELC	**Santa Helena**	4.77	241	*e*P	Pn	11 05 59.5	+3.4
HELC				*e*S	Sn	11 06 51.8	-0.3
CACV	**CAICARA DEL OR**	4.85	101	*e*P	Pb	11 06 06.1	-2.7
VILC	**Villavicencio,**	4.99	208	*e*P	Pn	11 06 00.1	+1.1
VILC				*e*S	Sn	11 06 53.8	-3.4
MERV	**Las Mercedes**	5.03	82	*e*P	Pn	11 06 00.8	+1.4
DBBC	**Dabeiba**	5.06	253	*e*P	Pn	11 06 03.6	+3.7
GUY2C	**Guyana, Caldas**	5.18	231	*e*P	Pn	11 06 03.8	+1.8
GUY2C				*e*S	Sn	11 07 03.4	+1.0
CBOC	**Ciudad Bolivar**	5.35	240	*e*P	Pn	11 06 07.2	+3.2
CBOC				*e*S	Sn	11 07 04.9	-1.2
BIRV	**Birongo**	5.36	69	*e*P	Pn	11 06 05.6	+1.7
ANIL	**Santa Ana**	5.70	225	*e*P	Pn	11 06 09.5	+0.5
ANIL				*e*S	Sn	11 07 15.9	+0.9

CAPC	Capurgana	5.95	271	eP	Pn	11 06 10.3	-1.7
CAPC				eS	Sn	11 07 15.9	-4.6
ORTC	Ortega, Tolima	6.03	220	eP	Pn	11 06 14.1	+1.0
ORTC				eS	Sn	11 07 21.3	-1.3
PLMC	San Jos del P	6.10	234	eP	Pn	11 06 16.9	+2.7
PLMC				eS	Sn	11 07 25.9	+1.4
PRGV	PARIAGUAN	6.62	88	eP	Pn	11 06 22.5	+1.2
PCRV	Puerto La Cruz	6.81	76	P	Pn	11 06 25.6	+1.6
	0.6nm,0.3s,baz=27,slow=16,SNR=2.7						
PCRV				S	Sn	11 07 38.6	-3.4
	1.2nm,0.3s,baz=7.9,slow=20,SNR=1.5						
PCRV	Puerto La Cruz	6.81	76	eP	Pn	11 06 24.6	+0.7
PTGA	Pitinga	14.61	129	P	Pn	11 08 09.9	-0.9
	0.4nm,0.3s,baz=312,slow=18,SNR=7.4						
TXAR	Lajitas Array	36.70	309	P	P	11 11 51.4	-0.2
	0.1nm,0.5s,baz=128,slow=7.4,SNR=4.6						
TXAR				PcP	PcP	11 14 14.4	0.0
	0.3nm,0.7s,baz=108,slow=4.1,SNR=4.5						
PDAR	Pinedale Array	47.77	322	P	P	11 13 22.6	+0.8
	1.3nm,0.4s,baz=126,slow=11,SNR=21						
NVAR	Mina Array Bea	51.57	313	P	P	11 13 50.5	-0.4
	0.2nm,0.5s,baz=110,slow=7.8,SNR=2.3						
INK	Inuvik	72.02	340	P	P	11 16 07.8	-0.1
	0.7nm,0.5s,baz=197,slow=0.6,SNR=4.6						
ILAR	Eielson Array	76.16	335	P	P	11 16 32.2	+0.1
	0.3nm,0.6s,baz=102,slow=3.9,SNR=6.3						
CMAR	Chiang Mai Arr	151.50	20	PKPbc	PKPdf	11 24 35.2	+1.9
	0.4nm,0.3s,baz=8.5,slow=1.8,SNR=1.4						
ASAR	Alice Springs	151.54	235	PKPbc	PKPbc	11 24 38.5	-0.9
	0.5nm,0.6s,baz=127,slow=2.7,SNR=9.5						
WRA	Warramunga Arr	152.70	243	PKPbc	PKPbc	11 24 41.2	-0.9
	0.8nm,0.5s,baz=109,slow=2.8,SNR=16						

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*IDC **09** 11:35:19.9±1.6, 7°.88S×125°.45E, h0^{km}, mb3.8/2, mb1 3.8/6, mb1mx3.6/47, mbtmp3.7/6, ML3.6/4, MS2.9/3, Ms1 2.9/3, ms1mx2.5/37, Error ellipse: s-maj=52.4km s-min=23.7km az=77.0*

*DJA **09** 11:35:26.2±0.4, 8°S±3°×12°5E±°, h10^{km}, M3.9/9, mb4.3/4, mB4.6/1, MLv3.6/9, Mw(mB)3.9/1*

ISC 09 11:35:19.3±0.9**, 7°.97S**±0°.06×**125°.54E**±0°.10**, h10**^{km}**, n16, σ2^{s}.61**/16**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	Soe	2.17	215	P	Pn	11 35 55.3	-0.4
BATI	Baumata	2.89	220	Pn	Pn	11 36 08.2	+2.7
	6.2nm,0.3s,baz=42,slow=6.7,SNR=5.1						
BATI				Sn	Sn	11 36 38.0	-2.4
	7.1nm,0.3s,baz=225,slow=23,SNR=2.0						
BATI	Baumata	2.89	220	P	Pn	11 36 05.1	-0.4
MMRI	Maumere	3.33	258	P	Pn	11 36 10.7	-0.8
EDFI	Ende, Flores	3.88	258	P	Pn	11 36 17.4	-1.8
BSSI	Bau Bau, Buton	5.33	290	P	Pn	11 36 40.3	+1.4
SANI	Sanana	5.90	4	P	Pb	11 36 58.3	-4.0
	0.0nm8.0nm,0.4s						
BKSI	Bulukumba	5.99	296	P	Pn	11 36 49.0	+1.0
	0.0nm562nm8.9nm,0.6s						
KAPI	Kappang	6.45	297	LR	LR	11 40 11.1	
	comp=Z,30nm,20.1s,baz=220,slow=46						
FITZ	Fitzroy Crossi	10.07	179	Pn	Pn	11 37 45.5	+1.5
	0.4nm,0.3s,baz=1.0,slow=10,SNR=11						
FITZ				Sn	Sn	11 39 29.0	-8.2
	0.2nm,0.3s,baz=329,slow=17,SNR=3.1						
WRA	Warramunga Arr	14.64	145	Pn	Pn	11 38 50.0	+3.2
	0.3nm,0.3s,baz=319,slow=13,SNR=14						
WRA				Sn	Sn	11 41 25.4	-3.8
	0.1nm,0.3s,baz=319,slow=26,SNR=1.8						
ASAR	Alice Springs	17.55	154	P	P	11 39 28.3	+2.9
	0.2nm,0.3s,baz=321,slow=10.0,SNR=22						
ASAR				S	Sn	11 42 36.9	-3.0
	0.1nm,0.3s,baz=318,slow=21,SNR=7.9						
LEM	Lembang	17.80	272	LR	LR	11 47 37.5	
	comp=Z,61nm,19.5s,baz=144,slow=42						
HNR	Honiara	34.04	95	LR	LR	11 56 48.2	
	comp=Z,39nm,18.9s,baz=324,slow=38						
MKAR	Makanchi Array	66.69	329	P	P	11 46 13.3	+2.8
	0.4nm,0.7s,baz=118,slow=6.0,SNR=2.5						
KURBB	Kurchatov Arra	71.09	330	P	P	11 46 38.2	+0.4
	0.9nm,0.5s,baz=134,slow=5.2,SNR=4.3						

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*EAF **09** 11:49:12.1±0.9, 23°.29S×27°.33E, h10^{km}, MD3.5*

BUL 09 11:49:09.6±3.8**, 23°.50S**×**27°.38E, h10**^{km}**, MD3.6, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSNA	Messina	2.70	65	eP	Pn	11 49 55.5	+2.4
MSNA				eS	Sn	11 50 26.4	+0.5
MSNA	Messina	2.70	65	eP	Pn	11 49 55.5	+2.4
MSNA				eS	Sn	11 50 26.4	+0.5
MATP	Matopo	3.23	19	eP	Pn	11 50 00.2	-0.3
MATP				eS	Sn	11 50 35.0	-4.2
MATP	Matopo	3.23	19	eP	Pn	11 50 00.2	-0.3
MATP				eS	Sn	11 50 35.0	-4.2
MOPA	Mopani	3.69	91	eP	Pn	11 50 09.5	+2.7
MOPA				eS	Sn	11 50 51.0	+0.6
MOPA	Mopani	3.69	91	eP	Pn	11 50 09.5	+2.7
MOPA				eS	Sn	11 50 51.0	+0.6

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*IDC **09** 12:28:30.5±0.6, 25°.60N×102°.20E, h0^{km}, mb3.9/17, mb1 4.0/18, mb1mx3.8/65, mbtmp3.9/18, ML3.7/1, MS3.2/8, Ms1 3.2/8, ms1mx3.0/52, Error ellipse: s-maj=21.2km s-min=12.3km az=78.0*

*NEIC **09** 12:28:36.1±1.6, 25°.54N±0°.06×101°.98E±0°.09, h35^{km}±6^{km}, Error ellipse: s-maj=14.9km s-min=4.1km az=125.0*

ISC 09 12:28:32.8±0.5**, 25°.68N**±0°.07×**102°.10E**±0°.10**, h10**^{km}**, n50, σ1^{s}.35**/39**, mb4.1**/21**, MS3.1**/7**, Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLVN	Son La	4.63	159	Pn	Pn	12 29 41.1	-1.8
CHTO	Chiang Mai	7.43	204	Pg	Pg	12 30 47.3	-7.9
CM31	Chiang Mai Arr	7.76	203	Pg	Pg	12 30 54.0	-7.5
CMAR	Chiang Mai Arr	7.76	203	Pn	Pn	12 30 24.4	-1.6
	0.3nm,0.3s,baz=16,slow=11,SNR=1.9						
CMAR				Pg	Pb	12 30 51.6	+4.0
	1.1nm,0.3s,baz=7.3,slow=16,SNR=22						
CMAR				Lg	Lg	12 32 34.1	
	1.0nm,0.3s,baz=13,slow=30,SNR=7.9						
CMAR				LR	LR	12 33 46.7	
	comp=Z,74nm,18.5s,baz=55,slow=41						
CMAR	Chiang Mai Arr	7.76	203		Pn	12 30 23.0	-3.0
ENH	Enshi	7.97	53		Pn	12 30 30.5	+1.7
QIZ	Qiongzhong	9.75	131	Pn	Pn	12 30 53.3	+0.1
SONM	Songino Array	22.37	8	P	P	12 33 32.1	+0.9
	1.1nm,0.5s,baz=182,slow=10,SNR=4.3						
SONM	Songino Array	22.37	8	P	P	12 33 30.1	-1.1
SONM				IAmb	IAmb	12 33 41.4	
	comp=Z,3.4nm,0.9s						
ULN	Ulaanbaatar	22.48	9	P	P	12 33 31.8	-0.6
ULN				IAmb	IAmb	12 33 44.1	
	comp=Z,6.9nm,1.1s						
PSI	Prapat	22.95	188	P	P	12 33 37.4	-0.2
	comp=Z,3.4nm,0.4s,baz=23,slow=4.2,SNR=7.1						
JOW	Kunigami	23.49	81	LR	LR	12 44 23.6	
	comp=Z,58nm,18.0s,baz=285,slow=41						
KSRS	Korea Array	24.85	56	P	P	12 33 54.0	-1.5
	comp=Z,1.6nm,0.9s,baz=277,slow=38,SNR=2.2						
KSRS				LR	LR	12 44 43.3	
	comp=Z,38nm,18.4s,baz=274,slow=39						
MK31	Makanchi Array	26.31	328	P	P	12 34 07.1	-1.5
MKAR	Makanchi Array	26.31	328	P	P	12 34 09.6	+1.0
	comp=Z,0.7nm,0.6s,baz=135,slow=11,SNR=6.2						
MKAR	Makanchi Array	26.31	328	P	P	12 34 08.0	-0.6
AAK	Ala-Archa	28.25	314	P	P	12 34 27.0	+0.7
	comp=Z,1.5nm,0.7s,baz=153,slow=7.2,SNR=6.0						
AAK				LR	LR	12 47 39.3	
	comp=Z,45nm,21.9s,baz=218,slow=40						
AAK	Ala-Archa	28.25	314	P	P	12 34 25.9	-0.4
AAK				IAmb	IAmb	12 34 37.1	
	comp=Z,2.8nm,1.0s						
DAV	Davao City (W)	29.05	126	LR	LR	12 45 32.7	
	comp=Z,34nm,20.4s,baz=3.0,slow=35						
USRK	Ussuriysk Ar.	30.44	45	P	P	12 34 45.0	-0.5
	comp=Z,2.9nm,0.7s,baz=258,slow=13,SNR=6.0						
USRK	Ussuriysk Ar.	30.44	45	P	P	12 34 46.4	+0.9
KURBB	Kurchatov Arra	30.79	330	P	P	12 34 48.9	+0.4
	comp=Z,0.3nm,0.4s,baz=142,slow=7.7,SNR=5.2						
KURBB				PcP	PcP	12 37 45.3	-0.4
	comp=Z,0.3nm,0.7s,baz=145,slow=2.3,SNR=1.8						
KURK	Kurchatov	30.82	330	P	P	12 34 47.6	-1.1
KURK				IAmb	IAmb	12 34 54.8	
	comp=Z,2.5nm,1.1s						
ZALV	Zalesovo Beam	31.03	340	P	P	12 34 51.9	+1.4
	comp=Z,0.5nm,0.3s,baz=159,slow=10,SNR=4.8						
ZALV				LR	LR	12 46 13.0	
	comp=Z,55nm,18.2s,baz=251,slow=34						
MJAR	Matsushiro Arr	32.58	62	LR	LR	12 49 12.6	
	comp=Z,45nm,18.7s,baz=60,slow=38						
ABKAR	Akbulak array	40.20	317	P	P	12 36 08.9	-0.4
NRIK	Noril'sk	44.53	353	P	P	12 36 43.7	-0.5
	comp=Z,0.9nm,0.4s,baz=165,slow=7.1,SNR=1.5						
FITZ	Fitzroy Crossi	49.17	150	P	P	12 37 19.0	-2.2
	comp=Z,2.7nm,1.1s,baz=328,slow=9.5,SNR=2.1						
WB0	Warramunga Arr	55.00	142	P	P	12 38 01.9	-2.8
WB0				IAmb	IAmb	12 38 22.3	
	comp=Z,6.6nm,1.4s						
WRA	Warramunga Arr	55.12	142	P	P	12 38 03.7	-1.7
	comp=Z,1.6nm,0.9s,baz=332,slow=8.4,SNR=18						
WRA	Warramunga Arr	55.12	142	P	P	12 38 04.2	-1.3
WB2	Warramunga Arr	55.12	142	P	P	12 38 03.4	-2.1
WB2				IAmb	IAmb	12 38 19.0	
	comp=Z,6.0nm,1.3s						
WR0	Warramunga Arr	55.24	142	P	P	12 38 05.3	-1.1
ATD	Arta Tunnel	57.47	268	LR	LR	13 00 50.5	
	comp=Z,38nm,21.7s,baz=164,slow=34						
AS31	Alice Springs	57.92	145	P	P	12 38 23.8	-1.6
ASAR	Alice Springs	57.92	145	P	P	12 38 24.2	-1.1
	comp=Z,0.8nm,0.4s,baz=327,slow=6.8,SNR=37						
ASAR	Alice Springs	57.92	145	P	P	12 38 23.6	-1.8
KEV	Kevo	61.00	337	P	P	12 38 45.6	-0.4
FINES	FINESS Array B	61.14	328	P	P	12 38 46.9	-0.2
	comp=Z,1.8nm,0.8s,baz=108,slow=7.5,SNR=1.4						
ARCES	ARCESS Array B	61.51	337	P	P	12 38 48.0	-1.5
	comp=Z,2.8nm,1.0s,baz=94,slow=7.8,SNR=5.1						
HFS	Hagfors	67.31	327	P	P	12 39 27.4	-0.3
	comp=Z,4.0nm,1.1s,baz=99,slow=8.9,SNR=1.3						
NOA	NORSAR Array B	68.30	328	P	P	12 39 33.2	-0.8
	comp=Z,0.7nm,0.7s,baz=47,slow=5.0,SNR=1.4						
IMAR	Indian Mountai	72.36	25	P	P	12 39 59.2	+0.6
H23K	Yukon River	73.99	24	P	P	12 40 08.8	+0.5
I23K	Minto, Yukon-K	74.37	25	P	P	12 40 11.5	+1.0
BMAR	Burnt Mountain	74.95	22	P	P	12 40 15.2	+1.3
ILAR	Eielson Array	75.48	24	P	P	12 40 15.6	-1.4
	comp=Z,0.2nm,0.5s,baz=287,slow=5.1,SNR=7.0						
ILAR	Eielson Array	75.48	24	P	P	12 40 17.4	+0.5
TXAR	Lajitas Array	119.97	26	PKP	PKPdf	12 47 24.3	0.0
	comp=Z,0.2nm,0.7s,baz=315,slow=0.1,SNR=2.1						
TXAR	Lajitas Array	119.97	26		PKPdf	12 47 22.8	-1.5

IDC 09 13:05:50.8±11.0**, 6°.24N**×**95°.29E, h0**^{km}**, mb3.2**/2**, mb1 3.5**/3**, mb1mx3.3**/43**, mbtmp3.3**/3**, ML3.7**/1**, MS3.0**/1**, Ms1 3.0**/1**, ms1mx2.5**/18**, Error ellipse: s-maj=299.0km s-min=45.4km az=82.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	12.66	16	Pn	Pn	13 08 52.3	0.0
	0.1nm,0.3s,baz=203,slow=16,SNR=1.3						
PALK	Pallekele	14.53	275	LR	LR	13 13 30.2	
	comp=Z,60nm,19.1s,baz=202,slow=32						
H08S3	Diego Garcia H	26.59	239	T	T	13 38 05.8	
	baz=56,slow=75,SNR=4.4						
H08S2	Diego Garcia H	26.60	239	T	T	13 37 57.5	
	baz=56,slow=75,SNR=3.5						
H08S1	Diego Carcia H	26.61	239	T	T	13 38 05.1	
	baz=56,slow=75,SNR=3.9						
WRA	Warramunga Arr	46.39	125	P	P	13 14 19.0	-0.4
	0.4nm,0.8s,baz=304,slow=8.6,SNR=2.0						
ASAR	Alice Springs	47.99	130	P	P	13 14 32.1	+0.1
	0.2nm,0.8s,baz=306,slow=8.0,SNR=2.2						

IDC 09 13:32:05.1±999.0**, 50°.64N**×**54°.72E, h0**^{km}**, Error ellipse: s-maj=776.0km s-min=47.7km az=94.0, Western Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I31KZ	AKTYUBINSK INF	2.13	95	i		13 47 50.0	
	baz=277,slow=322,SNR=5.9						
I46RU	ZALESOVO INFRA	18.64	68	i		15 25 00.0	
	baz=269,slow=326,SNR=1.1						
I34MN	SONGINO INFRAS	33.32	74	i		16 52 10.0	
	baz=293,slow=319,SNR=1.0						

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*FUNV **09** 13:34:12.6, 8°.48N×71°.42W, h2^{km}, MW4.1*

*NEIC **09** 13:34:13.3±1.7, 8°.58N±0°.06×71°.36W±0°.03, h11^{km}±4^{km}, mb4.7/83, Mwr4.1(CAR), Error ellipse: s-maj=9.3km s-min=2.1km az=158.0*

*IDC **09** 13:34:14.0±3.0, 8°.60N×71°.35W, h20^{km}±18^{km}, mb4.2/19, mb1 4.4/23, mb1mx4.2/48, mbtmp4.4/23, ML4.0/4, MS3.5/15, Ms1 3.5/15, ms1mx3.4/37, Error ellipse: s-maj=12.8km s-min=12.3km az=80.0*

*VAO **09** 13:34:16.6±0.3, 8°.46N×71°.06W, h10^{km}, mb4.5*

ISC 09 13:34:12.3±0.7**, 8°.56N**±0°.02×**71°.37W**±0°.02**, h10**^{km}±4^{km}**, n252, σ1^{s}.49**/298**, mb4.6**/54**, MS3.6**/11**, 7C-6D, Fault plane solution: NP1:**ϕ_s115.38078°, δ64.63597°, λ-28.85469°. **NP2:**ϕ_s218.66124°, δ64.14658°, λ-151.57483°. **Principal axes:** T Plg0.3121°, Azm167.1138°; N Plg52.3183°, Azm257.5179°; P Plg37.6800°, Azm76.8728°; **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	Socops	0.58	118	eP	Pg	13 34 23.2	-0.3
SOCV				eS	Sg	13 34 31.2	+0.1
SOCV	Socops	0.58	118	eP	Pg	13 34 23.4	-0.1
SOCV				eS	Sb	13 34 32.5	-0.2
SDV	Santo Domingo	0.80	66	Pg	Pb	13 34 28.4	+0.1
	178nm,0.3s,baz=241,slow=15,SNR=340						
SDV				Lg	Lg	13 34 39.0	
	289nm,0.3s,baz=266,slow=16,SNR=20						
SDV				LR	LR	13 35 04.8	
	comp=Z,1μm,19.7s,baz=20,slow=67						
SDV	Santo Domingo	0.80	66	⇓iP	Pb	13 34 28.5	+0.1
SDV				eS	Sb	13 34 39.6	+0.3
SDV	Santo Domingo	0.80	66	eP	Pg	13 34 28.1	+0.3
SDV	Santo Domingo	0.80	66		Pg	13 34 28.2	+0.4
SDV				Sg	Sg	13 34 37.3	-1.0
CAPV	Capacho	1.16	234	eP	Pb	13 34 32.4	-2.1
CAPV				eS	Sb	13 34 48.0	-1.7
PAMC	Pamplona, Colo	1.79	228	eP	Pn	13 34 44.8	+1.2
PAMC				eS	Sb	13 35 08.4	+0.4
MCQV	Machiques	1.88	322	⇑eP	Pn	13 34 45.4	+0.9
MCQV				eS	Sb	13 35 09.9	-0.2
OCAC	Ocana	1.95	261	eP	Pn	13 34 45.8	+0.2
OCAC				eS	Sn	13 35 10.6	+0.3
OCAC	Ocana	1.95	261		Pn	13 34 45.5	-0.1
TAMC	Tame, Arauca	2.15	191	eP	Pn	13 34 49.5	+1.3
TAMC				eS	Sb	13 35 17.9	-0.2
LL1C	La Loma 1 Cana	2.37	295	eP	Pn	13 34 52.4	+1.2
LL1C				eS	Sb	13 35 23.9	-0.4
ELOV	Elorza	2.43	129	eP	Pn	13 34 54.0	+2.0
ELOV				eS	Sb	13 35 27.1	+1.1
ELOV	Elorza	2.43	129	eP	Pn	13 34 52.7	+0.7
ELOV				eS	Sn	13 35 22.4	+0.7
DABV	Dabajuro	2.46	17	⇑eP	Pn	13 34 54.6	+2.2
SIQV	Siquisique	2.59	36	eP	Pn	13 34 56.3	+2.0
BARC	Barichara	2.65	223	eP	Pn	13 34 57.1	+1.8
BARC				eS	Sn	13 35 30.6	+2.9
SMLC	San Martn de	2.68	275	eP	Pn	13 34 54.9	-0.6
SMLC				eS	Sb	13 35 31.4	-1.9
CVALL	Valledupar, Ce	2.69	316	eP	Pn	13 34 55.6	0.0
CVALL				eS	Sn	13 35 27.1	-1.1
BRRC	Barranca, Sant	2.73	238	eP	Pn	13 34 58.1	+2.0
BRRC				eS	Sb	13 35 34.5	-0.2
ARGC	Ariguani, Magd	3.12	295	eP	Pn	13 35 01.6	+0.1
ARGC				eS	Sn	13 35 41.5	+2.7
MAPV	Macapo	3.14	66	eP	Pn	13 35 03.2	+1.3
RUSC	La Rusia	3.14	213	eP	Pn	13 35 03.3	+1.0
RUSC				eS	Sn	13 35 41.4	+1.2
URIC	Uribia, Colomb	3.19	349	eP	Pn	13 35 03.1	+0.7
URIC	Uribia, Colomb	3.19	349		Pn	13 35 01.5	-0.9
BAUV	El Baul	3.31	83	⇓eP	Pn	13 35 05.7	+1.5
BAUV				eS	Sn	13 35 44.2	+0.5
JACV	Jacura	3.55	45	eP	Pn	13 35 08.5	+1.0
JACV				eS	Sn	13 35 50.2	+0.7
ZARC	Zaragoza, Cauc	3.61	253	eP	Pn	13 35 08.4	+0.1
ZARC				eS	Sn	13 35 54.8	+3.8
MONV	Montecano	3.65	22	⇑eP	Pn	13 35 10.2	+1.4
MONV				eS	Sn	13 35 53.0	+1.1
SMRC	Santa Marta, M	3.82	313	eP	Pn	13 35 09.7	-1.5
SMRC				eS	Sn	13 35 52.8	-3.4
SPBC	San Pablo de B	3.94	223	eP	Pn	13 35 14.4	+1.5
SPBC				eS	Sn	13 35 59.2	0.0
TURV	Turiamo	3.96	61	eP	Pn	13 35 13.8	+0.7
TURV				eS	Sn	13 35 59.5	0.0
BENV	Beln	3.98	69	eP	Pn	13 35 15.0	+1.6
BENV				eS	Sn	13 36 00.4	+0.3
SJCC	San Jacinto, C	3.99	290	⇑iP	Pn	13 35 14.7	+1.2
SJCC				eS	Sn	13 36 00.7	+0.3
SJCC	San Jacinto, C	3.99	290		Pn	13 35 14.4	+0.9
UREC	San Jos de Ur	4.20	259	eP	Pn	13 35 17.3	+0.9
UREC				eS	Sn	13 36 06.2	+0.7
MOTC	Monteria, Cord	4.25	273	⇑iP	Pn	13 35 17.8	+0.7
MOTC	Monteria, Cord	4.25	273	Pn	Pn	13 35 17.5	+0.5
HATO	Hato, Curacao	4.31	33	Pn	Pn	13 35 19.2	+1.3
PTGC	Puerto Gaitan,	4.39	190	eP	Pn	13 35 19.0	-0.1
CHIC	Chingaza	4.55	211	eP	Pn	13 35 22.6	+1.1
CHIC				eS	Sn	13 36 13.0	-1.8
TACV	Tcata	4.57	70	eP	Pn	13 35 22.7	+1.2
TACV				eS	Sn	13 36 13.7	-1.0
NORC	Norcasia	4.57	230	eP	Pn	13 35 22.2	+0.6
NORC				eS	Sn	13 36 15.7	+0.9
ROSC	El Rosal	4.71	219	Pn	Pn	13 35 25.8	+2.0
	17nm,0.3s,baz=349,slow=18,SNR=18						
ROSC				Sn	Sn	13 36 20.9	+2.2
	20nm,0.3s,baz=8.9,slow=23,SNR=4.1						
ROSC				Lg	Lg	13 36 39.5	
	19nm,0.3s,baz=154,slow=24,SNR=4.5						
ROSC	El Rosal	4.71	219	eP	Pn	13 35 26.2	+2.4
ROSC				eS	Sn	13 36 22.3	+3.6
ROSC	El Rosal	4.71	219		Pn	13 35 25.9	+2.1
HELC	Santa Helena	4.75	241	eP	Pn	13 35 26.4	+2.1
HELC				eS	Sn	13 36 22.0	+2.5
CARV	Caracas	4.79	66	eP	Pn	13 35 25.9	+1.3
PAYV	Puerto Ayacuch	4.83	130	eP	Pn	13 35 25.0	0.0
PAYV				eS	Sn	13 36 18.1	-2.9
CACV	CAICARA DEL OR	4.88	101	eP	Pb	13 35 33.9	-4.0
CACV				eS	Sb	13 36 33.2	-3.6
LCBC	Los crdobas,	4.95	274	eP	Pn	13 35 27.0	+0.3
LCBC				eS	Sn	13 36 25.8	+1.8
VILC	Villavicencio,	4.98	208	eP	Pn	13 35 28.0	+0.8
VILC				eS	Sn	13 36 22.2	-2.9
DBBC	Dabeiba	5.03	253	eP	Pn	13 35 31.7	+3.8
MERV	Las Mercedes	5.06	82	eP	Pn	13 35 29.2	+0.9
MERV				eS	Sn	13 36 24.3	-2.5
GUY2C	Guyana, Caldas	5.17	230	eP	Pn	13 35 32.0	+1.9
GUY2C				eS	Sn	13 36 32.9	+2.9
CBOC	Ciudad Bolivar	5.32	240	eP	Pn	13 35 35.1	+3.0
BIRV	Birongo	5.38	69	eP	Pn	13 35 33.4	+0.8
BIRV				eS	Sn	13 36 32.1	-2.6
ANIL	Santa Ana	5.69	225	eP	Pn	13 35 38.8	+1.6
ANIL				eS	Sn	13 36 43.0	+0.3
CAPC	Capurgana	5.91	271	eP	Pn	13 35 38.0	-2.0
CAPC				eS	Sn	13 36 42.9	-4.9
CAP2	Capurgana	5.92	271		Pn	13 35 37.6	-2.5
ORTC	Ortega, Tolima	6.01	220	eP	Pn	13 35 41.9	+0.6
ORTC				eS	Sn	13 36 49.6	-0.7
PLMC	San Jos del P	6.08	234	eP	Pn	13 35 44.7	+2.4
PTAC	Punta Ardita,	6.53	258	eP	Pn	13 35 48.8	+0.4
PRGV	PARIAGUAN	6.65	88	⇓iP	Pn	13 35 50.6	+0.5
PRGV				eS	Sn	13 37 01.2	-4.8
YOTC	Yotoco, Valle	6.71	228	eP	Pn	13 35 51.7	+0.7
YOTC				eS	Sn	13 37 11.0	+3.3
MACC	Macarena, Meta	6.83	201	eP	Pn	13 35 50.8	-1.8
PCRV	Puerto La Cruz	6.84	76	Pn	Pn	13 35 55.2	+2.5
	7.1nm,0.3s,baz=348,slow=2.7,SNR=18						
PCRV				Sn	Sn	13 37 12.3	+1.6
	8.0nm,0.3s,baz=144,slow=19,SNR=6.9						
PCRV	Puerto La Cruz	6.84	76	eP	Pn	13 35 53.6	+0.8
PLCV	Puerto La Cruz	6.88	76		Sn	13 37 12.3	+0.6
BETC	Betania	7.10	215	eP	Pn	13 35 56.0	-0.3
MARP	Paez Belalcaza	7.28	219	eP	Pn	13 35 59.1	+0.1
CUMV	Cumana_UDO	7.32	75	eP	Pn	13 35 59.5	+0.2
GARC	Garzon, Huila	7.54	213	eP	Pn	13 36 02.7	+0.1
GARC				eS	Sn	13 37 24.5	-3.8
BCIP	Isla Barro Col	8.39	275	Pn	Pn	13 36 13.4	-0.6
RIOV	Rio Grande	9.47	92	eP	Pn	13 36 27.0	-1.8
BANI	BANI	9.83	6	Pn	Pn	13 36 32.5	-1.3
CRPR	Cabo Rojo, PR	10.27	23	Pn	Pn	13 36 36.6	-3.1
DR12	Loma Pena Alta	10.35	11		Pn	13 36 39.5	-1.4
SDDR	Presa de Saban	10.37	0		Pn	13 36 41.4	+0.3
OBIP	Obispado Ponce	10.51	26	Pn	Pn	13 36 42.9	-0.1
AOPR	Arecibo Observ	10.72	24	Pn	Pn	13 36 46.5	+0.6
PDPR	Patillas Dam,	10.75	28	Pn	Pn	13 36 46.2	-0.1
SJG	San Juan	10.77	28	Pn	Pn	13 36 45.7	-0.9
	1.8nm,0.3s,baz=233,slow=15,SNR=1.2						
SJG				Sn	Sn	13 38 41.5	-5.7
	0.7nm,0.3s,baz=319,slow=19,SNR=2.4						
SJG				LR	LR	13 41 14.2	
	comp=Z,141nm,20.7s,baz=228,slow=39						
SJG	San Juan	10.77	28	Pn	Pn	13 36 46.5	-0.1
SC01	Santiago de lo	10.82	3	Pn	Pn	13 36 48.0	+0.6
OTAV	Otavalo	10.86	221	eP	Pn	13 36 54.4	+6.0
OTAV	Otavalo	10.86	221	Pn	Pn	13 36 48.7	+0.3
HUMP	Col San Antoni	10.94	29	Pn	Pn	13 36 49.1	+0.2
GCPR	Guaynabo City	10.97	27	Pn	Pn	13 36 49.4	0.0
MTP	Monte Pirata	11.04	30	Pn	Pn	13 36 50.6	+0.2
CBYP	Canovanas	11.04	28	Pn	Pn	13 36 50.3	-0.1
MTDJ	Mount Denham	11.33	329	Pn	Pn	13 36 53.6	-0.7
CUPR	Culebra, Puert	11.36	31	Pn	Pn	13 36 55.6	+1.0
STVI	Saint Thomas	11.56	32	Pn	Pn	13 36 57.8	+0.4
FDF	Fort de France	11.74	58	Pn	Pn	13 36 58.7	-1.3
GTBY	Guantanamo Bay	11.87	343	Pn	Pn	13 37 01.8	+0.2
SABA	Saba	11.99	40	Pn	Pn	13 37 03.2	-0.1
BOAV	Boa Vista	12.41	119	eP	Pn	13 37 09.7	+0.6
BOAV	Boa Vista	12.41	119	Pn	Pn	13 37 08.3	-0.8
GRTK	Grand Turk	12.88	1	Pn	Pn	13 37 14.9	-0.6
ACON	Acoyapa	14.00	285	Pn	Pn	13 37 30.9	+0.1
FSCY	Frank Sound, G	14.31	319	Pn	Pn	13 37 32.3	-2.7
PTGA	Pitinga	14.64	129	Pn	Pn	13 37 37.5	-2.1
	1.5nm,0.3s,baz=309,slow=14,SNR=17						
PTGA				Sn	Sn	13 40 15.3	-6.8
	1.4nm,0.3s,baz=227,slow=20,SNR=8.2						
PTGA				Lg	Lg	13 41 48.4	
	3.7nm,0.3s,baz=18,slow=23,SNR=4.5						
PTGA				LR	LR	13 43 51.8	
	comp=Z,164nm,20.6s,baz=284,slow=39						
MACA	Manacapuru-AM	15.78	137	Pn	Pn	13 37 52.5	-2.3
MACA				IAmb	IAmb	13 38 18.7	
	comp=Z,24nm,0.6s						
CZSB	Cruzeiro do Su	16.23	185		Pn	13 37 57.5	-3.0
ATAH	Atahualpa	17.09	204	P	P	13 38 16.0	+2.4
	comp=Z,0.6nm,0.3s,baz=45,slow=9.0,SNR=6.9						
ATAH				LR	LR	13 45 26.4	
	comp=Z,243nm,20.6s,baz=9.1,slow=39						
MTO3	Montecristo	18.55	290	P	P	13 38 29.7	+0.1
MDP	Montagnes des	18.91	99	P	P	13 38 32.9	-0.4
	comp=Z,1.6nm,0.3s,baz=283,slow=12,SNR=7.8						
MDP				Lg	Lg	13 44 01.2	
	comp=Z,0.6nm,0.3s,baz=191,slow=19,SNR=4.9						
MDP				LR	LR	13 46 16.2	
	comp=Z,68nm,20.9s,baz=288,slow=38						
ETMB	Extrema	18.96	164	eP	Pn	13 38 36.5	+2.0
ETMB	Extrema	18.96	164	P	P	13 38 33.2	-0.6
SAML	Samuel	19.21	155	eP	Pn	13 38 37.3	-0.1
SAML	Samuel	19.21	155	P	P	13 38 35.8	-0.7
MALB	Monte Alegre	19.94	120	eP	Pn	13 38 46.3	0.0
ITTB	Itaituba	20.20	129	eP	Pn	13 38 49.3	0.0
MCPB	Macapa, AP	21.19	114	eP	P	13 38 59.1	+1.0
NPGB	Novo Progresso	22.25	134	eP	P	13 39 10.9	+1.4
VILB	Vilhena	24.08	152	eP	P	13 39 31.1	+3.0
CMIG	Matias Romero	24.42	293	LR	LR	13 51 34.1	
	comp=Z,89nm,18.4s,baz=112,slow=43						
CLDB	Colider	24.75	141	eP	P	13 39 35.7	+1.4
PDRB	Porto dos Gac	24.77	144	eP	P	13 39 35.7	+1.3
LPAZ	La Paz	24.89	173	P	P	13 39 37.8	+1.6
	comp=Z,5.1nm,0.8s,baz=348,slow=11,SNR=17						
LPAZ				Lg	Lg	13 47 20.4	
	comp=Z,1.1nm,0.3s,baz=354,slow=10,SNR=1.5						
LPAZ				LR	LR	13 50 19.0	
	comp=Z,174nm,21.2s,baz=6.0,slow=39						
LPAZ	La Paz	24.89	173	eP	P	13 39 38.2	+2.0
LPAZ	La Paz	24.89	173	P	P	13 39 36.3	+0.2
LPAZ				IAmb	IAmb	13 39 50.5	
	comp=Z,9.6nm,0.9s						
TMAB	Tom-Au,PA,Br	25.62	114	eP	P	13 39 44.5	+2.3
PRPB	Parauapebas	26.00	124	eP	P	13 39 47.5	+1.8
154A	Montrose	26.29	337	P	P	13 39 45.8	-2.3
Y58A	Scranton	26.36	344	P	P	13 39 46.7	-1.9
SIV	San Ignacio	26.44	157	P	P	13 39 50.0	+0.5
	comp=Z,6.5nm,1.0s,baz=331,slow=8.3,SNR=12						

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SIV                                 Lg     Lg      13 48 09.0
       comp=Z,25nm,0.9s,baz=250,slow=19,SNR=8.1
SIV                                 LR     LR      13 50 41.8
       comp=Z,277nm,18.1s,baz=288,slow=37
PTLB   Pontes e Lacer     26.75 153 eP     P       13 39 55.4 +3.0
PB16   IPOC Station P     26.78 176 P      P       13 39 51.4 -1.8
PB16                                IAmb   IAmb    13 39 57.3
       comp=Z,7.6nm,0.7s
PB12   IPOC Station P     27.02 178 P      P       13 39 54.0 -0.8
PB12                                IAmb   IAmb    13 40 12.1
       comp=Z,20nm,1.4s
PSGCX  Pisagua            28.00 177 P      P       13 40 05.4 +1.8
PSGCX                               IAmb   IAmb    13 40 31.8
       comp=Z,10nm,1.2s
PB11   IPOC Station P     28.19 177 P      P       13 40 03.6 -1.7
PB11                                IAmb   IAmb    13 40 09.1
       comp=Z,15nm,0.8s
SNDB   Serra Nova Dou     28.54 135 eP     P       13 40 10.9 +2.5
PB08   IPOC Station P     28.60 176 P      P       13 40 09.0 -0.3
PB08                                IAmb   IAmb    13 40 34.9
       comp=Z,9.0nm,0.8s
TKL    Tuckaleechee C     29.26 339 LR     LR      13 51 41.5
       comp=Z,154nm,20.9s,baz=151,slow=36
TKL    Tuckaleechee C     29.26 339 P      P       13 40 13.7 -0.9
TKL                                 IAmb   IAmb    13 40 25.1
       comp=Z,19nm,1.4s
SMTB   Santa Maria do     29.34 126 eP     P       13 40 17.3 +1.8
PEXB   Peixe              30.78 131 eP     P       13 40 30.0 +1.8
ARAG   Araguaiana, MT     30.93 141 eP     P       13 40 29.8 +0.3
PB10   IPOC Station P     31.88 179 P      P       13 40 37.1 -0.7
AQDB   Aquidauana         32.71 152 eP     P       13 40 47.2 +2.1
WHAR   Wooly Hollow       32.78 327 P      P       13 40 47.3 +1.7
WHAR                                IAmb   IAmb    13 40 48.9
       comp=Z,12nm,1.0s
BDFB   Brasilia           33.37 136 P      P       13 40 52.1 +1.0
       comp=Z,1.4nm,0.5s,baz=343,slow=9.8,SNR=3.1
BDFB                                LR     LR      13 55 12.9
       comp=Z,150nm,19.3s,baz=98,slow=38
BDFB   Brasilia           33.37 136 IAmb   IAmb    13 41 18.4
       comp=Z,14nm,1.5s
BLO    Bloomington        33.38 338 P      P       13 40 51.7 +0.9
M55A   Ridgway            33.43 350 P      P       13 40 52.1 +0.9
M55A                                IAmb   IAmb    13 41 13.8
       comp=Z,20nm,1.3s
W39A   Magazine           33.53 326 P      P       13 40 53.7 +1.5
SDBA   SAO DESIDERIO      33.55 128 eP     P       13 40 54.9 +2.2
U40A   Yellville          33.89 328 P      P       13 40 55.6 +0.3
ABTX   Abilene, Hawle     35.48 316 P      P       13 41 09.4 +0.3
ABTX                                IAmb   IAmb    13 41 12.1
       comp=Z,12nm,1.1s
OK031  S. Brethren Rd     35.82 323 P      P       13 41 12.0  0.0
M44A   Midewin, Midew     35.88 338 P      P       13 41 12.7 +0.3
QUOK   Quay               35.89 324 P      P       13 41 13.4 +0.8
QUOK                                IAmb   IAmb    13 41 15.1
       comp=Z,14nm,0.9s
WMOK   Wichita Mounta     36.20 320 P      P       13 41 14.4 -0.9
WMOK                                IAmb   IAmb    13 41 17.8
       comp=Z,7.2nm,0.9s
NBPN   Ponto Novo - B     36.52 121 eP     P       13 41 20.0 +1.7
BLOK   Blackwell          36.59 324 P      P       13 41 19.0 +0.4
BLOK                                IAmb   IAmb    13 41 23.6
       comp=Z,14nm,1.0s
TXAR   Lajitas Array      36.67 309 P      P       13 41 18.9 -0.7
       comp=Z,0.9nm,0.7s,baz=125,slow=8.7,SNR=12
TXAR                                PcP    PcP     13 43 43.2 +0.8
       comp=Z,1.0nm,0.6s,baz=136,slow=4.4,SNR=7.6
TXAR                                LR     LR      13 59 07.4
       comp=Z,24nm,19.1s,baz=0.0,slow=41
TXAR   Lajitas Array      36.67 309 P      P       13 41 18.7 -0.8
TX31   Lajitas Ar. Si     36.68 309 P      P       13 41 18.6 -0.9
TX32   Lajitas Array      36.68 309 P      P       13 41 19.3 -0.3
PLVO   Plevna             36.68 353 P      P       13 41 21.3 +2.0
PLVO                                IAmb   IAmb    13 41 39.3
       comp=Z,12nm,1.3s
SADO   Sadowa             36.70 351 P      P       13 41 20.4 +1.0
       comp=Z,5.6nm,0.6s,baz=189,slow=2.3,SNR=3.3
SADO   Sadowa             36.70 351 P      P       13 41 20.4 +1.0
SADO                                IAmb   IAmb    13 41 23.1
       comp=Z,13nm,1.1s
CPUP   Villa Florida      37.27 159 LR     LR      13 56 55.7
       comp=Z,116nm,18.4s,baz=16,slow=36
KSU1   Kansas State U     37.91 327 P      P       13 41 30.9 +1.2
KSU1                                IAmb   IAmb    13 41 31.8
       comp=Z,12nm,0.8s
JFWS   Jewell Farm        38.02 337 P      P       13 41 31.6 +0.9
JFWS                                IAmb   IAmb    13 41 34.1
       comp=Z,16nm,1.0s
MSTX   Muleshoe           38.39 316 P      P       13 41 35.5 +1.5
MSTX                                IAmb   IAmb    13 41 37.2
       comp=Z,8.3nm,0.9s
NBLA   Lagarto - SE       38.65 120 eP     P       13 41 36.0 -0.3
RCLB   Rio Claro- Sao     38.65 143 eP     P       13 41 37.9 +1.7
N35A   Tabor              38.73 330 P      P       13 41 37.2 +0.6
MNTX   Cornudas Mount     39.09 311 P      P       13 41 40.0 +0.1
NBIT   Itapeh - BA        39.33 126 eP     P       13 41 44.1 +2.1
NBAN   Anadia - AL        39.36 117 eP     P       13 41 43.6 +1.4
CMC01  Camacan, BA        39.51 127 eP     P       13 41 44.4 +1.0
GUA01  Guaratinga, BA     39.99 129 eP     P       13 41 48.9 +1.4
RIB01  Linhares ES        41.22 132 eP     P       13 41 59.5 +2.0
T25A   Trinidad           41.29 319 P      P       13 41 58.9 +0.7
T25A                                IAmb   IAmb    13 42 05.4
       comp=Z,12nm,1.1s
SDCO   Great Sand Dun     42.35 319 P      P       13 42 07.7 +0.7
TER01  Tubaro-SC          42.67 151 eP     P       13 42 11.1 +1.8
ISCO   Idaho Springs      43.61 321 P      P       13 42 17.6 +0.4
SMCO   Snowmass           44.11 319 P      P       13 42 21.7 +0.4
WUAZ   Wupatki            45.29 312 P      P       13 42 29.8 -0.7
WUAZ                                IAmb   IAmb    13 42 34.7
       comp=Z,6.6nm,1.1s
SFX    San Felipe         46.22 305 P      P       13 42 38.2 +0.5
SFX                                 IAmb   IAmb    13 42 38.9
       comp=Z,6.9nm,0.9s
ULM    Lac du Bonnet      46.28 338 P      P       13 42 37.8 -0.2
       comp=Z,8.4nm,1.0s,baz=126,slow=2.8,SNR=4.8
ULM                                 LR     LR      14 02 24.2
       comp=Z,77nm,21.5s,baz=130,slow=36
SCHQ   Schefferville      46.29   4 P      P       13 42 37.8 -0.1
       comp=Z,4.2nm,0.5s,baz=204,slow=7.9,SNR=7.6
SCHQ                                LR     LR      14 03 10.2
       comp=Z,68nm,18.7s,baz=72,slow=38
SCHQ   Schefferville      46.29   4 IAmb   IAmb    13 42 45.6
       comp=Z,21nm,1.2s
LC01   Cunco              47.21 181 P      P       13 42 44.0 -1.4
BW06   Boulder Array      47.74 322 P      P       13 42 49.7 -0.1
BW06                                IAmb   IAmb    13 42 54.4
       comp=Z,7.9nm,1.0s
PD31   Pinedale Array     47.74 322 P      P       13 42 49.5 -0.3
PD31                                IAmb   IAmb    13 42 54.4
       comp=Z,7.8nm,1.1s
PDAR   Pinedale Array     47.74 322 P      P       13 42 49.7 -0.1
       comp=Z,7.4nm,1.1s,baz=122,slow=9.1,SNR=17
PDAR                                LR     LR      14 06 14.6
       comp=Z,28nm,18.6s,baz=88,slow=40
LOHW   Long Hollow        48.85 322 P      P       13 42 58.7 +0.4
LOHW                                IAmb   IAmb    13 43 01.7
       comp=Z,5.8nm,0.9s
REDW   Red Top Meadow     48.86 322 P      P       13 42 58.8 +0.4
REDW                                IAmb   IAmb    13 43 01.8
       comp=Z,8.1nm,0.9s
SPR3   Spring Creek 3     48.96 315 P      P       13 42 59.3 -0.1
BGU    Big Grassy Mou     48.98 318 P      P       13 42 59.7 +0.4
BGU                                 IAmb   IAmb    13 43 02.4
       comp=Z,5.9nm,1.0s
MOOW   Moose Ponds        49.01 322 P      P       13 42 59.2 -0.3
PLCA   Paso Flores        49.05 179 P      P       13 43 00.6 +1.0
       comp=Z,9.3nm,0.7s,baz=2.9,slow=9.5,SNR=4.6
PLCA   Paso Flores        49.05 179 P      P       13 42 59.8 +0.2
FXWY   Fox Creek          49.12 322 P      P       13 43 00.3 -0.1
GCMT   Greycliff          49.56 325 P      P       13 43 04.3 +0.7
QLMT   Earthquake Lak     50.02 323 P      P       13 43 08.5 +1.2
BOZ    Bozeman (W)        50.57 324 P      P       13 43 12.1 +0.8
MCMT   McKenzie Canyo     50.87 323 P      P       13 43 14.4 +0.7
LRM    Limekiln Ridge     51.17 324 P      P       13 43 16.7 +0.8
HLID   Hailey             51.17 320 P      P       13 43 17.2 +1.3
HRY    Holter Researc     51.31 325 P      P       13 43 17.5 +0.6
NVAR   Mina Array Bea     51.54 313 P      P       13 43 19.1 +0.3
       comp=Z,0.3nm,0.5s,baz=118,slow=7.1,SNR=4.2
NVAR                                PcP    PcP     13 44 33.2 +0.3
       comp=Z,0.7nm,0.7s,baz=155,slow=4.7,SNR=2.7
MFID   Camas Ranch        52.00 320 P      P       13 43 23.3 +1.2
YERR   Yerington          52.43 313 P      P       13 43 24.1 -1.3
YERR                                IAmb   IAmb    13 43 51.4
       comp=Z,6.1nm,0.7s
PLID   Pearl Lake         52.92 321 P      P       13 43 28.8 -0.2
F10A   Beach Ranch, E     54.10 322 P      P       13 43 37.6 +0.1
F10A                                IAmb   IAmb    13 43 40.1
       comp=Z,4.9nm,0.9s
G08A   Pilot Rock         54.86 320 P      P       13 43 43.5 +0.5
C09A   Chrisman Ranch     55.62 323 P      P       13 43 49.0 +0.7
C09A                                IAmb   IAmb    13 43 51.4
       comp=Z,8.4nm,0.7s
YBH    Yreka Blue Hor     55.91 315 LR     LR      14 10 11.7
       comp=Z,62nm,19.1s,baz=145,slow=39
EDM    Edmonton           55.93 331 P      P       13 43 49.7 -0.8
EDM                                 IAmb   IAmb    13 43 52.5
       comp=Z,8.6nm,0.9s
LTY    Liberty            56.80 322 P      P       13 43 56.4 -0.4
LTY                                 IAmb   IAmb    13 44 02.3
       comp=Z,10nm,1.4s
KBO    Bosley Butte       57.14 315 P      P       13 44 00.1 +0.8
RADR   Rader Ridge        58.41 320 P      P       13 44 09.4 +1.3
HOLB   Holberg            62.67 323 P      P       13 44 39.4 +2.3
HOLB                                IAmb   IAmb    13 45 08.3
       comp=Z,5.6nm,1.2s
DBIC   Dimbokro           65.89  87 P      P       13 44 58.3 -0.6
       comp=Z,3.6nm,0.8s,baz=281,slow=7.4,SNR=4.3
DBIC   Dimbokro           65.89  87 P      P       13 44 58.0 -0.8
KOWA   Kowa               66.07  78 P      P       13 44 60.0 -0.1
DLBC   Dease Lake         66.65 331 P      P       13 45 04.0 +0.9
       comp=Z,4.7nm,0.9s,baz=158,slow=5.1,SNR=7.3
DLBC   Dease Lake         66.65 331 P      P       13 45 03.5 +0.4
DLBC                                IAmb   IAmb    13 45 06.6
       comp=Z,4.2nm,0.8s
PAB    San Pablo          66.91  51 P      P       13 45 05.1  0.0
PAB                                 IAmb   IAmb    13 45 24.8
       comp=Z,11nm,1.4s
SUMG   Summit             66.98  10 P      P       13 45 04.8 -0.5
SUMG                                IAmb   IAmb    13 45 05.9
       comp=Z,4.4nm,0.7s
ESDC   Sonseca Array      67.22  51 P      P       13 45 07.4 +0.3
       comp=Z,1.3nm,0.7s,baz=268,slow=6.3,SNR=7.8
ESDC   Sonseca Array      67.22  51 P      P       13 45 07.5 +0.5
ESBB   Sonseca Array      67.22  51 P      P       13 45 07.1 +0.1
ESBB                                IAmb   IAmb    13 45 14.6
       comp=Z,4.9nm,1.2s
TULEG  Thule              67.97   1 P      P       13 45 11.4 +0.5
SCO    Scoresbysund       69.18  16 P      P       13 45 19.2 +0.6
A36M   Sachs Harbour      71.22 345 P      P       13 45 30.8 -0.3
TORD   Torodi Ar. Bea     71.70  79 P      P       13 45 34.1 -1.0
       comp=Z,2.6nm,0.7s,baz=287,slow=5.9,SNR=15
TORD   Torodi Ar. Bea     71.70  79 P      P       13 45 34.1 -1.0
EUNU   Eureka             71.84 357 P      P       13 45 34.6 -0.3
EUNU                                IAmb   IAmb    13 45 42.9
       comp=Z,7.7nm,1.4s
INK    Inuvik             72.00 340 P      P       13 45 35.1 -0.7
       comp=Z,2.8nm,0.6s,baz=98,slow=5.0,SNR=14
INK    Inuvik             72.00 340 P      P       13 45 35.4 -0.4
INK                                 IAmb   IAmb    13 45 38.6
       comp=Z,3.5nm,0.8s
EPYK   Eagle Plains       72.45 337 P      P       13 45 39.0 +0.4
EPYK                                IAmb   IAmb    13 45 58.3
       comp=Z,9.5nm,1.3s
M27K   Edge Creek, AK     73.46 333 P      P       13 45 45.5 +0.6
SENIN  Lac Senin/Sane     76.04  44 P      P       13 46 00.1 -0.2
SENIN                               IAmb   IAmb    13 46 01.6
       comp=Z,5.9nm,0.8s
DAVOX  Davos/Dischmat     77.83  44 P      P       13 46 11.1 +0.8
       comp=Z,4.9nm,0.7s,baz=306,slow=4.0,SNR=8.0
NOA    NORSAR Array B     78.98  29 P      P       13 46 16.8 +0.6
       comp=Z,0.9nm,0.7s,baz=268,slow=5.6,SNR=1.9
GERES  GERESS Array B     80.38  42 P      P       13 46 24.0 -0.1
       comp=Z,0.9nm,0.6s,baz=260,slow=8.0,SNR=3.9
FINES  FINESS Array B     86.10  29 P      P       13 46 53.3 +0.1
       comp=Z,2.5nm,0.9s,baz=229,slow=5.4,SNR=1.4
VNA3   Neumayer Olymp     89.32 163 P      P       13 47 08.7 +0.3
VNA1   Neumayer--Stat     89.44 163 P      P       13 47 09.4 +0.5
VNA2   Neumayer--Watz     89.83 163 P      P       13 47 10.9 +0.2
       baz=287,slow=3.3
SNAA   Sanae              91.47 163 P      P       13 47 18.8 +0.3
CMAR   Chiang Mai Arr    151.51  20 PKP    PKPdf   13 54 01.9 +0.4
       comp=Z,0.6nm,0.4s,baz=335,slow=4.0,SNR=1.9
CMAR                                PKPbc  sPKPdf  13 54 06.9 +0.1
       comp=Z,0.5nm,0.4s,baz=325,slow=2.9,SNR=7.8
ASAR   Alice Springs     151.52 235 PKP    PKPdf   13 54 00.9 -0.4
       comp=Z,0.7nm,1.1s,baz=116,slow=2.7,SNR=5.0
ASAR                                PKPbc  pPKPdf  13 54 06.1 +0.6
       comp=Z,2.5nm,0.6s,baz=123,slow=2.7,SNR=40
WRA    Warramunga Arr    152.68 243 PKP    PKPdf   13 54 02.7 -0.5
       comp=Z,0.5nm,0.8s,baz=106,slow=2.3,SNR=2.8
WRA                                 PKPbc  sPKPdf  13 54 09.0 +0.4
       comp=Z,4.0nm,0.6s,baz=110,slow=2.4,SNR=46
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NNC 09 13:46:20.1±3.7**, 37°.66N**×**71°.97E, h0^{km}, mb3.7, mpv3.3, 4C-1D Error ellipse: s-maj=30.4km s-min=27.0km az=34.0, Afghanistan-Tajikistan border region**

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Code   Station Name          Δ°  AZ°   Phase ID        Time      Res
                                    Op     ISC       h  m  s     ISC
AAK    Ala-Archa           5.34  20 ⇓Pn    Pn      13 47 42.1 +1.0
       2.7nm,0.5s
AAK                                 ⇑Sn    Sn      13 48 44.1 +0.7
       1.7nm,0.7s
KK31   Karatay Array       5.55 349 ⇑Pn    Pn      13 47 43.2 -0.8
       0.6nm,0.3s,baz=167,slow=13,SNR=5.3
KK31                                ⇑Sn    Sn      13 48 50.1 +1.6
       0.3nm,0.2s,baz=174,slow=21,SNR=4.1
TKM2   Tokmak 2            5.94  27 ⇑Pn    Pn      13 47 49.3 -0.3
       2.2nm,0.5s
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*IDC **09** 13:51:27.8±1.0, 51°.70N×173°.53W, h0^{km}, mb4.2/24, mb1 4.3/26, mb1mx4.1/83, mbtmp4.2/26, ML3.9/2, MS3.3/5, Ms1 3.3/5, ms1mx3.0/54, Error ellipse: s-maj=31.0km s-min=12.0km az=5.0*

*AEIC **09** 13:51:30±2.2, 51°.44N±0°.10×173°.39W±0°.06, h30^{km}±5^{km}, Error ellipse: s-maj=14.1km s-min=5.6km az=174.0*

*NEIC **09** 13:51:33.0±1.7, 51°.64N±0°.07×173°.44W±0°.06, h35^{km}±2^{km}, mb4.4/167, ML3.7/21(AEIC), Error ellipse: s-maj=11.5km s-min=6.1km az=164.0*

ISC 09 13:51:32.6±0.5**, 51°.56N**±0°.09×**173°.43W**±0°.04**, h37^{km}, n235,** σ0^{s}.**82**/225**, mb4.3**/66**, MS3.0**/3**, Andreanof Islands**

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Code   Station Name          Δ°  AZ°   Phase ID        Time      Res
                                    Op     ISC       h  m  s     ISC
KOFP   Korovin Flat P      0.83 330        Pn      13 51 47.8 +0.1
KOKL   Mount Kliuchef      0.90 328        Pn      13 51 48.8 +0.1
GSIG   Igitkin Island      1.61 286        Pn      13 51 57.9 -0.4
GSMY   Great Sitkin M      1.70 288        Pn      13 51 59.6 -0.1
GSTR   Great Sitkin T      1.72 289        Pn      13 52 00.2 +0.4
GSCK   Great Sitkin C      1.76 286        Pn      13 52 00.3 -0.1
GSTD   Great Sitkin T      1.76 287        Pn      13 52 00.5  0.0
GSTD                                       Sn      13 52 22.9 +1.2
ADK    Adak                2.05 280        Pn      13 52 04.0 -0.4
ADK                                        Sn      13 52 29.8 +1.1
KIWB   Kanaga Island       2.33 279        Pn      13 52 08.1 -0.2
KIKV   Kanaga Island       2.35 279        Pn      13 52 08.7 +0.1
KIMD   Kanaga Island       2.38 276        Pn      13 52 08.6 -0.4
TAPA   Tanaga Point A      2.74 277        Pn      13 52 14.4 +0.5
TAFP   Tanaga Falls P      2.85 279        Pn      13 52 15.9 +0.4
TASE   Tanaga Southea      2.88 277        Pn      13 52 16.2 +0.3
NIKH   Nikolski High       3.15  62        Pn      13 52 20.1 +0.6
NIKH                                       Sn      13 52 56.0 +0.2
GANE   Gareloi Northe      3.34 277        Pn      13 52 22.6 +0.5
OKFG   Magazine Ridge      3.85  59        Pn      13 52 29.7 +0.5
MAPS   Pakushin South      4.54  58        Pn      13 52 38.8 +0.1
AMKA   Amchitka            4.55 271 Pn     Pn      13 52 38.4 -0.3
UNV    Unalaska Valle      4.79  59        Pn      13 52 43.1 +1.0
AKUT   Akutan              5.31  58 Pn     Pn      13 52 49.9 +0.7
SDPT   Sand Point          8.61  59 Pn     Pn      13 53 34.8 +0.3
OHAK   Old Harbor         13.01  56 Pn     Pn      13 54 32.4 -2.2
O18K   Koktuh Hills       13.17  44 Pn     Pn      13 54 35.1 -1.8
Q19K   Cape Douglas,      13.45  49 Pn     Pn      13 54 38.7 -1.9
KDAK   Kodiak Island      13.54  54 Pn     Pn      13 54 39.0 -2.8
       0.9nm,0.3s,baz=273,slow=7.5,SNR=13
RSO    Redoubt South      14.54  44 P      P       13 55 02.2 +0.6
L19K   White Mountain     14.64  36 Pn     Pn      13 54 56.3 -0.5
CNPM   China Poot         14.82  49 Pn     Pn      13 54 59.1 -0.1
BRLK   Bradley Lake       15.08  48 Pn     Pn      13 55 01.3 -1.3
BRLK                                IAmb   IAmb    13 55 23.5
       comp=Z,15nm,1.0s
K20K   Telida             15.67  34        Pn      13 55 11.8 +1.6
SKT    Skwentna           15.81  40 Pn     Pn      13 55 10.7 -1.4
SKT                                 IAmb   IAmb    13 55 15.9
       comp=Z,21nm,1.4s
SEW    Seward             15.88  48 Pn     Pn      13 55 11.0 -1.9
SEW                                 IAmb   IAmb    13 55 24.7
       comp=Z,28nm,1.2s
SUA    Susitna One        15.88  43 Pn     Pn      13 55 12.1 -1.0
PPLA   Purkeypile         16.06  37 Pn     Pn      13 55 15.3 -0.2
RC01   Rabbit Creek A     16.14  45 Pn     Pn      13 55 16.7 +0.4
RC01                                IAmb   IAmb    13 55 25.8
       comp=Z,30nm,1.5s
J20K   Nowinta River      16.18  31 P      P       13 55 20.2 +0.6
CAST   Castle Rocks       16.41  35 Pn     Pn      13 55 19.9 +0.2
CUT    Chulitna           16.54  40 Pn     Pn      13 55 21.5 +0.1
CUT                                 IAmb   IAmb    13 55 34.8
       comp=Z,56nm,1.4s
PMR    Palmer             16.63  43        Pn      13 55 23.3 +0.8
KNK    Knik Glacier       16.84  44 Pn     Pn      13 55 23.7 -1.5
KNK                                 IAmb   IAmb    13 55 42.5
       comp=Z,30nm,1.3s
KTH    Kantishna Hill     16.91  36 P      P       13 55 28.3 +0.5
KTH                                 IAmb   IAmb    13 55 31.5
       comp=Z,16nm,0.9s
SML    Sawmill            17.06  43 Pn     Pn      13 55 26.6 -1.4
SML                                 IAmb   IAmb    13 55 37.0
       comp=Z,23nm,1.4s
TRF    Thorofare Moun     17.09  37 P      P       13 55 30.2 +0.4
TRF                                 IAmb   IAmb    13 55 51.4
       comp=Z,28nm,1.5s
PET    Petropavlovsk      17.10 286 P      Pn      13 55 30.3 +1.9
PET                                 IAmb   IAmb    13 55 42.9
       comp=Z,16nm,1.0s
BPAW   Bear Paw Mtn.      17.21  35 P      P       13 55 31.4 +0.4
GLI    Glacier Island     17.25  47 P      P       13 55 32.3 +0.9
GLI                                 IAmb   IAmb    13 55 57.2
       comp=Z,78nm,1.2s
FID    Port Fidalgo       17.48  48 Pn     Pn      13 55 31.5 -1.7
SCM    Sheep Creek Mo     17.51  44 Pn     Pn      13 55 32.0 -1.5
SCM                                 IAmb   IAmb    13 55 47.0
       comp=Z,17nm,0.9s
I21K   Tanana             17.55  31 Pn     Pn      13 55 32.7 -1.2
IMAR   Indian Mountai     17.57  27        Pn      13 55 33.7 -0.5
RND    Reindeer           17.61  38        Pn      13 55 34.2 -0.5
H21K   Melozitna Rive     17.61  29 P      P       13 55 36.2 +0.7
PEA0B  Petropavlovsk-     17.66 286 P      Pn      13 55 36.5 +1.0
PEA0B                               IAmb   IAmb    13 55 48.9
       comp=Z,43nm,1.3s
PETK   Petropavlovsk-     17.66 286 P      Pn      13 55 35.7 +0.3
       comp=Z,0.5nm,0.3s,baz=91,slow=13,SNR=16
PETK                                LR     LR      14 01 38.8
       comp=Z,55nm,21.1s,baz=106,slow=35
MCK    McKinley           17.75  37        Pn      13 55 36.4 -0.1
MCK                                 IAmb   IAmb    13 55 58.4
       comp=Z,22nm,1.4s
EYAK   Cordova Ski Ar     17.76  49 P      Pn      13 55 37.5 +1.0
EYAK                                IAmb   IAmb    13 55 37.6
       comp=Z,57nm,1.2s
BWN    Browne             17.79  36 P      P       13 55 38.3 +0.9
BWN                                 IAmb   IAmb    13 55 49.2
       comp=Z,27nm,0.6s
MLY    Manley             17.86  32 P      Pn      13 55 38.3 +0.5
DIV    Divide             17.94  47 P      Pn      13 55 39.1 +0.2
DIV                                 IAmb   IAmb    13 56 02.8
       comp=Z,30nm,1.4s
KLU    Klutina            18.00  46 P      Pn      13 55 37.5 -2.0
DHY    Denali Highway     18.03  40 P      Pn      13 55 38.6 -1.4
M24K   Tolsona, Glenn     18.12  44 P      Pn      13 55 39.5 -1.5
M24K                                IAmb   IAmb    13 55 59.5
       comp=Z,25nm,1.1s
NEA2   Nenana             18.17  35 P      Pn      13 55 40.1 -1.5
I23K   Minto, Yukon-K     18.39  33 P      P       13 55 42.4 -1.6
I23K                                IAmb   IAmb    13 55 50.8
       comp=Z,17nm,1.1s
WRH    Wood River Hil     18.46  36 P      P       13 55 43.0 -1.8
N25K   Chitina, Valde     18.63  46 P      P       13 55 46.1 -0.7
N25K                                IAmb   IAmb    13 55 57.9
       comp=Z,21nm,1.3s
CCB    Clear Creek Bu     18.66  36 P      P       13 55 45.6 -1.3
CCB                                 IAmb   IAmb    13 55 49.7
       comp=Z,8.8nm,0.5s
MDM    Murphy Dome        18.68  34 P      P       13 55 46.2 -0.9
PAX    Paxson             18.77  42 P      P       13 55 48.1 -0.1
HDA    Harding Lake       18.85  37 P      P       13 55 48.8 -0.3
HDA                                 IAmb   IAmb    13 55 53.5
       comp=Z,17nm,1.1s
GLB    Gilahina Butte     18.93  47 P      P       13 55 50.2 +0.1
VRDI   Verde Repeater     19.04  48 P      P       13 55 51.1 -0.2
VRDI                                IAmb   IAmb    13 56 05.2
       comp=Z,30nm,1.4s
POKR   Poker Plat Res     19.05  35 P      P       13 55 50.5 -0.7
CRQM   Cirque             19.05  49 P      P       13 55 51.5 +0.1
CRQM                                IAmb   IAmb    13 56 15.1
       comp=Z,31nm,1.3s
IL31                      19.06  36 P      P       13 55 50.7 -0.5
ILAR   Eielson Array      19.06  36 P      P       13 55 50.2 -1.1
       comp=Z,1.7nm,0.3s,baz=226,slow=9.2,SNR=69
ILAR                                LR     LR      14 02 15.8
       comp=Z,36nm,19.8s,baz=255,slow=34
ILAR   Eielson Array      19.06  36 P      P       13 55 50.6 -0.7
MCARA  McCarthy VSAT      19.28  48 Pn     Pn      13 55 56.0 +1.1
MCARA                               IAmb   IAmb    13 56 16.7
       comp=Z,40nm,1.5s
H24K   Noodor Dome        19.30  32 P      P       13 55 54.4 +0.4
H24K                                IAmb   IAmb    13 55 58.5
       comp=Z,21nm,1.1s
RIDG   Independent Ri     19.35  40 P      P       13 55 54.3 -0.2
COLD   Coldfoot           19.45  27 P      P       13 55 56.7 +1.1
MENT   Mentasta           19.49  43 P      P       13 55 57.1 +1.0
MENT                                IAmb   IAmb    13 56 10.8
       comp=Z,26nm,1.5s
M26K   Nabesna, AK        19.61  45 P      P       13 55 57.5  0.0
YAH    Yahtse             19.62  51 P      P       13 55 57.6 -0.2
YAH                                 IAmb   IAmb    13 56 00.4
       comp=Z,48nm,1.2s
DOT    Dot Lake           19.63  41 P      P       13 55 57.2 -0.4
L26K   Log Cabin Wild     19.68  43 P      P       13 55 57.9 -0.2
L26K                                IAmb   IAmb    13 56 05.4
       comp=Z,8.3nm,0.5s
GRNC   Granite Creek      19.70  50 P      P       13 55 58.6  0.0
GRNC                                IAmb   IAmb    13 56 21.9
       comp=Z,20nm,1.2s
SCRK   Sand Creek         19.80  40 P      P       13 55 58.6 -0.9
SCRK                                IAmb   IAmb    13 56 00.7
       comp=Z,7.2nm,0.5s
PRP    Porcupine Dome     19.94  35 P      P       13 56 00.8 -0.3
CTGM   Chitina Glacie     19.96  49 P      P       13 56 00.9 -0.5
CTGM                                IAmb   IAmb    13 56 05.1
       comp=Z,37nm,1.2s
LOGN   Logan Glacier      20.08  50 P      P       13 56 02.0 -0.7
LOGN                                IAmb   IAmb    13 56 18.4
       comp=Z,18nm,1.0s
M27K   Edge Creek, AK     20.09  45 P      P       13 56 02.4 -0.3
PCA    Pinnacle           20.30  52 P      P       13 56 05.6 +0.7
PCA                                 IAmb   IAmb    13 56 34.0
       comp=Z,70nm,1.4s
L27K   Beaver Creek,      20.34  43 P      P       13 56 06.4 +1.0
BCAR   Beaver Creek A     20.36  43 P      P       13 56 05.9 +0.3
BCPM   Bancas Point       20.58  53 P      P       13 56 08.3 +0.3
BCPM                                IAmb   IAmb    13 56 32.4
       comp=Z,29nm,1.0s
FYU    Fort Yukon         20.60  32 P      P       13 56 08.5 +0.5
FYU                                 IAmb   IAmb    13 56 15.2
       comp=Z,11nm,0.9s
TOLK   Toolik Lake Re     20.60  25 P      P       13 56 08.2 +0.1
EGAK   Eagle              21.25  39 P      P       13 56 15.0  0.0
EGAK                                IAmb   IAmb    13 56 16.2
       comp=Z,29nm,0.7s
BMAR   Burnt Mountain     21.29  31 P      P       13 56 16.5 +0.9
SEY    Seymchan           21.42 315 LR     LR      14 04 52.8
       comp=Z,58nm,19.3s,baz=74,slow=38
MA2    Magadan            21.54 306 LR     LR      14 04 39.1
       comp=Z,62nm,18.2s,baz=101,slow=37
DAWY   Dawson             21.70  42 P      P       13 56 18.9 -1.1
HYT    Haines Junctio     21.77  51 P      P       13 56 19.6 -1.2
EPYK   Eagle Plains       23.56  37 P      P       13 56 38.0 -1.2
INK    Inuvik             25.41  34 P      P       13 56 56.2 +0.2
       comp=Z,4.1nm,0.6s,baz=232,slow=7.5,SNR=21
INK    Inuvik             25.41  34 P      P       13 56 56.0  0.0
INK                                 IAmb   IAmb    13 56 57.7
       comp=Z,22nm,1.4s
DLBC   Dease Lake         25.45  57 P      P       13 56 58.2 +1.6
       comp=Z,4.3nm,0.8s,baz=260,slow=9.3,SNR=7.8
DLBC   Dease Lake         25.45  57 P      P       13 56 56.5 -0.2
DLBC                                IAmb   IAmb    13 57 03.3
       comp=Z,8.2nm,1.1s
A36M   Sachs Harbour      29.31  28 P      P       13 57 31.2 +0.2
A36M                                IAmb   IAmb    13 57 32.5
       comp=Z,5.3nm,0.9s
OZB    Mount Ozzard       30.32  76 P      P       13 57 40.4 +0.1
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LON	Longmire	33.52	77	P	P	13 58 08.5	+0.2
LON				IAmb	IAmb	13 58 24.0	
	comp=Z,2.1nm,0.8s						
F04A	Amboy	33.53	79	P	P	13 58 08.4	+0.1
F04A				IAmb	IAmb	13 58 22.3	
	comp=Z,14nm,1.2s						
KLR	Kul'dur	34.34	288	P	P	13 58 14.6	-0.7
	comp=Z,1.0nm,0.4s,baz=70,slow=8.4,SNR=5.0						
MWH	Moku‘aweowe	34.95	150	P	P	13 58 21.0	-0.5
HAWA	Hanford	35.07	77	P	P	13 58 23.1	+1.4
HAWA				IAmb	IAmb	13 58 36.4	
	comp=Z,3.9nm,0.7s						
H11N2	WAKE ISLAND Hy	35.32	213	T	T	14 36 33.6	
	baz=21,slow=75,SNR=11						
H11N3	WAKE ISLAND Hy	35.33	213	T	T	14 36 35.7	
	baz=21,slow=75,SNR=13						
H11N1	WAKE ISLAND Hy	35.34	213	T	T	14 36 36.3	
	baz=21,slow=75,SNR=12						
YBH	Yreka Blue Hor	35.52	86	P	P	13 58 27.7	+1.9
	comp=Z,1.2nm,0.6s,baz=326,slow=3.6,SNR=1.9						
YBH	Yreka Blue Hor	35.52	86	IAmb	IAmb	13 58 36.4	
	comp=Z,8.6nm,1.3s						
NEW	Newport	35.65	73	P	P	13 58 27.6	+0.9
	comp=Z,3.3nm,0.9s,baz=292,slow=10,SNR=4.2						
NEW	Newport	35.65	73	IAmb	IAmb	13 58 29.0	
	comp=Z,3.6nm,0.9s						
EDM	Edmonton	35.76	63	P	P	13 58 28.6	+1.0
K05A	Summer Lake	36.11	83	P	P	13 58 32.8	+1.9
K05A				IAmb	IAmb	13 58 46.0	
	comp=Z,5.6nm,1.0s						
I07A	Izee	36.24	80	P	P	13 58 33.1	+1.1
I07A				IAmb	IAmb	13 58 35.6	
	comp=Z,8.5nm,1.5s						
H11S1	WAKE ISLAND Hy	36.52	213	T	T	14 37 50.4	
	baz=18,slow=74						
H11S2	WAKE ISLAND Hy	36.54	213	T	T	14 37 51.4	
	baz=18,slow=74						
H11S3	WAKE ISLAND Hy	36.54	213	T	T	14 37 48.2	
	baz=18						
USRK	Ussuriysk Ar.	36.59	280	P	P	13 58 34.3	-0.4
	comp=Z,3.1nm,0.7s,baz=46,slow=8.3,SNR=6.6						
MOD	Modoc Plateau	36.92	84	P	P	13 58 39.6	+1.8
MOD				IAmb	IAmb	13 58 52.3	
	comp=Z,2.8nm,0.8s						
WALA	Waterton Lakes	37.18	70	P	P	13 58 40.9	+1.0
WALA				IAmb	IAmb	13 58 56.5	
	comp=Z,5.7nm,1.1s						
J08A	Circle Bar Ran	37.26	81	P	P	13 58 41.6	+1.0
J08A				IAmb	IAmb	13 58 56.9	
	comp=Z,4.9nm,1.2s						
PLID	Pearl Lake	37.87	77	P	P	13 58 45.4	-0.4
PNTR	Pine Nut	38.99	87	P	P	13 58 56.6	+1.3
PNTR				IAmb	IAmb	13 59 09.8	
	comp=Z,6.8nm,0.7s						
JWT	Wachi	39.69	266	P	P	13 59 01.1	+0.1
JWT				IAmb	IAmb	13 59 28.4	
	comp=Z,29nm,1.5s						
BCYI	Bear Canyon	39.85	76	P	P	13 59 03.0	+0.5
MCMT	McKenzie Canyo	39.91	75	P	P	13 59 03.3	+0.4
KVN	Kaiserville	39.94	86	P	P	13 59 03.9	+0.7
EGMT	Eagleton	40.10	69	P	P	13 59 05.2	+0.9
EGMT				IAmb	IAmb	13 59 06.6	
	comp=Z,10nm,0.7s						
NVAR	Mina Array Bea	40.19	87	P	P	13 59 06.3	+1.0
	comp=Z,0.8nm,0.6s,baz=287,slow=8.0,SNR=8.3						
BOZ	Bozeman (W)	40.23	73	P	P	13 59 05.8	+0.2
BOZ				IAmb	IAmb	13 59 07.0	
	comp=Z,2.5nm,0.6s						
NV11	Mina Array Sit	40.28	87	P	P	13 59 06.3	+0.2
ELK	Elko	40.72	82	P	P	13 59 10.4	+0.7
YHL	Hebgen Lake	40.90	74	P	P	13 59 11.6	+0.4
YHL				IAmb	IAmb	13 59 32.4	
	comp=Z,5.7nm,1.3s						
YHH	Holmes Hill	41.13	74	P	P	13 59 13.9	+0.8
YHH				IAmb	IAmb	13 59 28.9	
	comp=Z,4.6nm,1.1s						
LCH	Last Change Ra	41.34	88	P	P	13 59 15.6	+0.8
JMN	Monobe	41.66	266	P	P	13 59 17.1	-0.2
RLMT	Red Lodge	41.90	73	P	P	13 59 20.1	+0.8
RLMT				IAmb	IAmb	13 59 35.6	
	comp=Z,7.2nm,1.1s						
DUG	Dugway, Tooele	42.54	81	P	P	13 59 25.3	+0.8
DUG				IAmb	IAmb	13 59 26.5	
	comp=Z,8.6nm,1.4s						
PRN	Pahroc Range	42.85	86	P	P	13 59 27.7	+0.7
PRN				IAmb	IAmb	13 59 29.3	
	comp=Z,6.0nm,1.1s						
LAO	LASA Array	42.85	69	P	P	13 59 27.8	+0.9
LAO				IAmb	IAmb	13 59 28.4	
	comp=Z,5.0nm,0.8s						
BW06	Boulder Array	43.03	76	P	P	13 59 29.1	+0.6
PD31	Pinedale Array	43.03	76	P	P	13 59 29.0	+0.4
PDAR	Pinedale Array	43.03	76	P	P	13 59 29.2	+0.7
	comp=Z,1.1nm,0.4s,baz=317,slow=3.2,SNR=18						
PDAR	Pinedale Array	43.03	76	P	P	13 59 28.9	+0.4
DGMT	Dagmar	43.08	66	P	P	13 59 29.5	+0.9
DGMT				IAmb	IAmb	13 59 53.0	
	comp=Z,5.4nm,0.8s						
GSC	Goldstone, Bar	43.09	89	P	P	13 59 29.6	+0.7
GSC				IAmb	IAmb	13 59 43.9	
	comp=Z,3.7nm,0.7s						
TMUT	Trail Mountain	44.07	81	P	P	13 59 37.8	+0.8
TMUT				IAmb	IAmb	14 00 03.2	
	comp=Z,2.4nm,0.6s						
RDMU	Red Mountain	44.31	78	P	P	13 59 39.9	+1.1
RDMU				IAmb	IAmb	13 59 54.3	
	comp=Z,4.0nm,0.8s						
SRU	San Rafael Swe	44.60	81	P	P	13 59 42.0	+0.8
SRU				IAmb	IAmb	13 59 55.4	
	comp=Z,3.1nm,0.7s						
O20A	White River Ci	45.38	78	P	P	13 59 47.8	+0.5
O20A				IAmb	IAmb	14 00 12.7	
	comp=Z,8.0nm,1.1s						
RSSD	Black Hills	45.56	71	P	P	13 59 49.5	+0.8
RSSD				IAmb	IAmb	13 59 50.4	
	comp=Z,8.0nm,1.4s						
NRIK	Noril'sk	45.92	331	P	P	13 59 51.0	0.0
	comp=Z,1.5nm,0.5s,baz=67,slow=6.9,SNR=3.9						
NRIK	Noril'sk	45.92	331	P	P	13 59 51.1	+0.1
NRIK				IAmb	IAmb	13 59 51.4	
	comp=Z,3.0nm,0.7s						
E28A	Huff	46.10	66	P	P	13 59 53.6	+0.9
E28A				IAmb	IAmb	14 00 03.7	
	comp=Z,7.0nm,0.7s						
ULM	Lac du Bonnet	46.74	59	P	P	13 59 57.9	+0.3
	comp=Z,1.5nm,0.4s,baz=297,slow=6.5,SNR=4.6						
ULM	Lac du Bonnet	46.74	59	P	P	13 59 57.2	-0.4
SMCO	Snowmass	46.74	78	P	P	13 59 57.4	-0.9
SMCO				IAmb	IAmb	14 00 06.7	
	comp=Z,3.5nm,1.3s						
AGMN	Agassiz Nation	47.84	62	P	P	14 00 06.0	-0.2
AGMN				IAmb	IAmb	14 00 07.5	
	comp=Z,8.6nm,0.9s						
BJT	Baijiatuau	48.61	285	P	P	14 00 11.1	-1.2
B35A	Bob, Littlefor	48.97	60	P	P	14 00 14.5	-0.4
SONM	Songino Array	49.53	299	P	P	14 00 20.0	+0.6
	comp=Z,2.0nm,0.6s,baz=48,slow=7.9,SNR=11						
SONM	Songino Array	49.53	299	P	P	14 00 19.3	-0.1
ECSD	EROS Data Cent	50.11	67	P	P	14 00 23.4	-0.3
ECSD				IAmb	IAmb	14 00 24.0	
	comp=Z,9.8nm,1.2s						
121A	Cookes Peak, D	50.54	85	P	P	14 00 28.3	+1.0
121A				IAmb	IAmb	14 00 51.1	
	comp=Z,2.9nm,1.1s						
F36A	Milaca	50.56	63	P	P	14 00 27.4	+0.3
F36A				IAmb	IAmb	14 00 28.6	
	comp=Z,3.5nm,0.7s						
SUMG	Summit	52.27	16	P	P	14 00 40.0	+0.1
SUMG				IAmb	IAmb	14 01 06.2	
	comp=Z,8.6nm,1.3s						
G40A	Rib Lake	52.76	62	P	P	14 00 43.3	-0.2
G40A				IAmb	IAmb	14 00 51.5	
	comp=Z,15nm,1.4s						
COWI	Conover	52.82	60	P	P	14 00 43.6	-0.4
E43A	Lone Tree Farm	53.80	59	P	P	14 00 51.2	+0.1
KAN13	South Haven SW	53.87	74	P	P	14 00 52.0	+0.2
KAN13				IAmb	IAmb	14 01 06.5	
	comp=Z,7.1nm,0.8s						
N38A	Joes South For	53.90	68	P	P	14 00 51.3	-0.6
L40A	Anamosa	54.23	65	P	P	14 00 53.3	-1.0
I42A	Draeger Farm,	54.35	62	P	P	14 00 54.7	-0.4
E46A	Sault Ste Mari	55.23	57	P	P	14 01 02.1	+0.5
X34A	Smith Ranch, M	55.27	76	P	P	14 01 01.9	-0.1
TXAR	Lajitas Array	55.30	85	P	P	14 01 02.1	-0.2
	comp=Z,0.4nm,0.4s,baz=303,slow=6.8,SNR=9.3						
P40A	Paris	55.42	68	P	P	14 01 02.6	-0.3
U40A	Yellville	57.07	72	P	P	14 01 13.5	-1.3
U40A				IAmb	IAmb	14 01 26.5	
	comp=Z,4.8nm,0.7s						
T42A	Van Buren	57.65	70	P	P	14 01 17.6	-1.2
T42A				IAmb	IAmb	14 01 18.3	
	comp=Z,11nm,1.4s						
SCHQ	Schefferville	57.72	41	P	P	14 01 18.9	-0.2
	comp=Z,4.8nm,0.7s,baz=306,slow=8.7,SNR=2.4						
SCHQ	Schefferville	57.72	41	P	P	14 01 18.9	-0.2
ARCES	ARCESS Array B	58.42	352	P	P	14 01 23.4	-0.4
	comp=Z,4.4nm,1.0s,baz=356,slow=3.8,SNR=5.9						
ARCES				PcP	PcP	14 02 14.2	+0.1
	comp=Z,1.2nm,0.5s,baz=45,slow=5.2,SNR=5.6						
ARCES	ARCESS Array B	58.42	352	IAmb	IAmb	14 01 32.4	
	comp=Z,13nm,1.4s						
N49A	Columbus Grove	58.94	62	P	P	14 01 27.5	-0.3
SADO	Sadowa	59.00	56	P	P	14 01 27.6	-0.5
IVI	Ivigtut	59.40	27	P	P	14 01 29.5	-1.1
PLVO	Plevna	59.87	55	P	P	14 01 35.2	+1.0
NRS	Narsarsuaq	60.21	26	P	P	14 01 35.4	-0.7
KURK	Kurchatov	61.27	316	P	P	14 01 44.0	+0.4
KURBB	Kurchatov Arra	61.37	316	P	P	14 01 44.0	-0.3
	comp=Z,1.5nm,0.5s,baz=45,slow=7.2,SNR=7.4						
LONY	Lake Ozonia	61.43	53	P	P	14 01 44.4	-0.4
LONY				IAmb	IAmb	14 01 45.3	
	comp=Z,9.1nm,1.1s						
M55A	Ridgway	61.50	58	P	P	14 01 45.5	+0.2
L56A	Greenwood	61.66	57	P	P	14 01 47.0	+0.6
NCB	Newcomb	62.07	54	P	P	14 01 49.3	+0.1
J59A	Piesco	62.29	54	P	P	14 01 50.8	+0.1
D62A	Allapoint, All	62.33	48	P	P	14 01 51.3	+0.5
E62A	Clayton Lake	62.45	49	P	P	14 01 52.1	+0.5
M57A	Sunshine Farm,	62.46	58	P	P	14 01 52.5	+0.7
SSPA	Standing Stone	62.55	59	P	P	14 01 53.0	+0.6
BVAR	Borovoye Array	62.86	322	P	P	14 01 54.1	-0.1
	comp=Z,2.5nm,0.5s,baz=333,slow=3.6,SNR=15						
G62A	West of Eustis	62.99	51	P	P	14 01 55.4	+0.2
Q56A	Snyder Ridge,	62.99	61	P	P	14 01 55.8	+0.4
R55A	Marlinton	63.02	62	P	P	14 01 56.4	+0.7
R55A				IAmb	IAmb	14 02 02.1	
	comp=Z,7.2nm,0.9s						
H62A	Milan	63.16	52	P	P	14 01 56.7	+0.4
P57A	Homestead Farm	63.31	60	P	P	14 01 58.0	+0.6
F64A	Sherman	63.55	49	P	P	14 01 58.9	-0.1
ARU	Arti	64.15	331	P	P	14 02 02.8	+0.1
	comp=Z,1.5nm,0.5s,baz=49,slow=6.1,SNR=6.0						
ARU	Arti	64.15	331	P	P	14 02 02.4	-0.3
GGN	Saint George	64.82	49	P	P	14 02 07.2	0.0
LMN	Caledonia Moun	65.20	47	P	P	14 02 09.9	+0.1
FINES	FINESS Array B	66.27	350	P	P	14 02 15.7	-0.6
	comp=Z,1.3nm,0.7s,baz=28,slow=8.6,SNR=3.8						
HFS	Hagfors	68.51	356	P	P	14 02 29.9	-0.6
	comp=Z,0.9nm,0.4s,baz=29,slow=3.4,SNR=6.6						
BELG	Belogornoye	70.80	335	P	P	14 02 44.3	-0.4
	comp=Z,6.2nm,0.8s,baz=64,slow=5.9,SNR=4.1						
CMAR	Chiang Mai Arr	74.31	280	P	P	14 03 06.8	+0.6
	comp=Z,0.8nm,0.8s,baz=28,slow=6.5,SNR=5.4						
AKASG	Malin Array Be	76.31	345	P	P	14 03 16.1	-1.1
	comp=Z,1.2nm,0.3s,baz=16,slow=5.9,SNR=4.8						
AKASG	Malin Array Be	76.31	345	IAmb	IAmb	14 03 21.3	
	comp=Z,1.1nm,1.1s						
AKBB	Malin Array Si	76.31	345	P	P	14 03 16.2	-0.9
AKBB				IAmb	IAmb	14 03 27.4	
	comp=Z,12nm,1.5s						
GERES	GERESS Array B	79.79	355	P	P	14 03 36.8	+0.2
	comp=Z,0.3nm,0.2s,baz=90,slow=2.9,SNR=3.6						
BURAR	Bucovina Array	79.92	347	P	P	14 03 37.6	+0.3
BURAR				IAmb	IAmb	14 04 02.1	
	comp=Z,3.5nm,1.4s						
ESDC	Sonseca Array	88.68	8	P	P	14 04 22.2	+0.4
	comp=Z,0.6nm,0.8s,baz=344,slow=4.3,SNR=1.7						
ESDC	Sonseca Array	88.68	8	IAmb	IAmb	14 04 22.6	
	comp=Z,0.8nm,0.9s						
URZ	Urewera	89.83	187	LR	LR	14 39 12.3	
	comp=Z,73nm,19.6s,baz=211,slow=32						

NEIC **09** *13:57:36.9±1.6, 6°.98S±0°.09×150°.80E±0°.07, h11^{km}±3^{km}, mb5.5/156, Ms_20 4.7/29, Mwb5.1/14, Mww5.1, Mwc5.1(GCMT), Error ellipse: s-maj=12.5km s-min=10.6km az=179.0*

NEIC **09** *13:57:37.5, 7°.01S×150°.79E, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$-4.55; M$_{\theta\theta}$4.34; M$_{\phi\phi}$0.21; M$_{r\theta}$1.13; M$_{\theta\phi}$0.38; M$_{\phi r}$1.28; Fault plane solution: M$_0$4.78000×10^{16} NP1:φ$_s$96.80000°, δ38.51000°, λ-69.98000°. NP2:φ$_s$251.83000°, δ54.19000°, λ-105.24000°. Principal axes: T 4.5486, Plg8.0000°, Azm353.0000°; N 0.4370, Plg12.0000°, Azm261.0000°; P -4.9856, Plg75.0000°, Azm115.0000°;*

MOS **09** *13:57:38.5±0.9, 7°.04S×150°.74E, h37^{km}, mb5.6/44, MS4.4/5 Error ellipse: s-maj=8.7km s-min=5.8km az=101.2*

BJI **09** *13:57:39.8±0.0, 6°.69S×150°.86E, h40^{km}, mB5.3/42, mb5.0/59, Ms4.8/30, Ms7 4.6/32*

IDC **09** *13:57:40.7±0.5, 6°.99S×150°.80E, h37^{km}±4^{km}, mb4.8/38, mb1 4.8/41, mb1mx4.7/57, mbtmp5.0/41, ML3.6/3, MS4.3/27, Ms1 4.3/27, ms1mx4.3/35, Error ellipse: s-maj=11.8km s-min=9.9km az=92.0*

DJA **09** *13:57:41.3±0.7, 7°S±5°×15°1E±°, h43^{km}±7^{km}, M5.1/50, mB5.6/28, mb5.2/50, MLv5.5/1, Mw(mB)5.0/28*

NEIC **09** *13:57:42, 7°.12S×150°.85E, h17^{km}, Moment Tensor Solution. Duration: 1^{s}8 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-4.49; M$_{\theta\theta}$4.20; M$_{\phi\phi}$0.29; M$_{r\theta}$-4.35; M$_{\theta\phi}$1.36; M$_{\phi r}$-0.86; Fault plane solution: M$_0$6.36000×10^{16} NP1: φ$_s$248.00000°, δ23.00000°, λ-98.00000°. NP2:φ$_s$77.00000°, δ67.00000°, λ-86.00000°. Principal axes: T 6.4146, Plg22.0000°, Azm164.0000°; N -0.1112, Plg3.0000°, Azm256.0000°; P -6.3034, Plg68.0000°, Azm354.0000°;*

GCMT **09** *13:57:42.4±0.2, 7°.08S±0°.01×150°.84E±0°.02, h13^{km}, MW5.1/107, Moment Tensor Solution. s60,c83; s107,c168; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-3.94±.15; M$_{\theta\theta}$3.60±.10; M$_{\phi\phi}$0.34±.09; M$_{r\theta}$-3.26±.27; M$_{\theta\phi}$1.16±.07; M$_{\phi r}$0.04±.26; Best double couple: M$_0$5.12500×10^{16} NP1:φ$_s$242.00000°, δ27.00000°, λ-110.00000°. NP2:φ$_s$84.00000°, δ65.00000°, λ-80.00000°. Principal axes: T 5.0600, Plg19.0000°, Azm166.0000°; N 0.1300, Plg9.0000°, Azm259.0000°; P -5.1890, Plg69.0000°, Azm13.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC **09** *13:57:43, 6°.98S×150°.70E, h16^{km}, Moment Tensor Solution. Duration: 15^{s}8 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-4.66; M$_{\theta\theta}$3.96; M$_{\phi\phi}$0.70; M$_{r\theta}$-4.05; M$_{\theta\phi}$1.99; M$_{\phi r}$1.63; Fault plane solution: M$_0$6.48000×10^{16} NP1: φ$_s$225.00000°, δ33.00000°, λ-131.00000°. NP2: φ$_s$91.00000°, δ66.00000°, λ-66.00000°. Principal axes: T 5.8889, Plg18.0000°, Azm165.0000°; N 1.0464, Plg21.0000°, Azm262.0000°; P -6.9353, Plg62.0000°, Azm37.0000°;*

ISC 09 13:57:40.7±0.2**, 7°.04S**±0°.04×**150°.82E**±0°.04**, h40^{km}, n653, σ0^{s}97**/639**, mb5.3**/176**, MS4.4**/50**, 41C-58D, Fault plane solution: NP1:**φ$_s$249.09357°**,** δ27.95928°**,** λ-130.35153°. **NP2:**φ$_s$112.98038°**,** δ69.06555°**,** λ-71.03324°. **Principal axes:** T Plg21.8344°**,** Azm188.6458°**;** N Plg17.6718°**,** Azm285.9797°**;** P Plg61.3092°**,** Azm51.5820°**; New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.32	237	Pn	Pn	13 58 45.8	+1.8
	35nm,0.3s,baz=67,slow=6.5,SNR=76						
PMG				Sn	Sn	13 59 34.7	+1.6
	67nm,0.3s,baz=71,slow=21,SNR=3.2						
PMG				LR	LR	14 00 44.2	
	comp=Z,6µm,18.2s,baz=10,slow=42						
PMG	Port Moresby	4.32	237	P	Pn	13 58 41.6	-2.3
PMG	Port Moresby	4.32	237		Pn	13 58 41.6	-2.3
PMG	Port Moresby	4.32	237	P	Pn	13 58 46.3	+2.4
PMG	Port Moresby	4.32	237	P	Pn	13 58 46.3	+2.4
HNR	Honiara	9.34	105	Pn	Pn	13 59 54.1	+1.2
	2.7nm,0.3s,baz=225,slow=10.0,SNR=3.9						
HNR				LR	LR	14 02 51.1	
	comp=Z,2µm,20.8s,baz=274,slow=33						
HNR	Honiara	9.34	105	P	Pn	13 59 52.6	-0.3
HNR	Honiara	9.34	105		Pn	13 59 52.6	-0.3
HNR	Honiara	9.34	105	P	Pn	13 59 55.0	+2.1
HNR	Honiara	9.34	105	P	Pn	13 59 55.3	+2.4
JAY	Jayapura	11.04	294	LR	LR	14 04 22.1	
	comp=Z,2µm,18.6s,baz=104,slow=36						
MTSU	Mount Surprise	12.72	209	P	Pn	14 00 38.2	-1.0
	baz=13,SNR=38						
CTA	Charters Tower	13.71	198	Pn	Pn	14 00 53.0	+0.3
	0.5nm,0.3s,baz=24,slow=14,SNR=9.6						
CTA				LR	LR	14 06 10.1	
	comp=Z,1µm,18.7s,baz=12,slow=37						
CTA	Charters Tower	13.71	198	P	Pn	14 00 53.0	+0.3
CTAO	Charters Tower	13.71	198	P	Pn	14 00 52.5	-0.1
CTAO	Charters Tower	13.71	198	Pn	Pn	14 00 52.5	-0.1
CTAO	Charters Tower	13.71	198	P	Pn	14 00 54.2	+1.6
QIS	Mount Isa	17.28	218	P	Pn	14 01 39.0	-0.2
	baz=17,SNR=66						
EIDS	Eidsvold	18.23	179	P	P	14 01 50.5	-0.1
	baz=18,SNR=17						
KOUNC	Koumac, New Ca	18.72	137	P	Pn	14 01 58.4	+1.6
KDU	Kakadu	18.92	251	P	P	14 01 57.9	-0.4
	baz=19,SNR=38						
FAKI	Fak Fak	18.95	282	P	P	14 01 58.8	+0.2
	1µm80nm,1.2s						
FAKI	Fak Fak	18.95	282		P	14 01 58.6	0.0
FAKI	Fak Fak	18.95	282	P	Pn	14 01 59.9	+0.3
RMQ	Roma	19.44	186	P	P	14 02 04.3	+0.4
	baz=20,SNR=30						
MTN	Manton Dam	20.23	252	P	P	14 02 13.1	+0.5
	baz=20,SNR=5.9						
WB0	Warramunga Arr	20.36	230	P	P	14 02 14.1	+0.1
WR0	Warramunga Arr	20.36	229	P	P	14 02 14.0	0.0
QLP	Quilpie	20.42	197	P	P	14 02 15.0	+0.4
	baz=21,SNR=86						
SIJI	Sorong	20.44	287	P	P	14 02 14.8	-0.2
	32nm,0.3s,baz=111,slow=23,SNR=4.2						
SIJI				LR	LR	14 11 22.5	
	comp=Z,734nm,19.0s,baz=122,slow=40						
WRAB	Tennant Creek	20.48	230	P	P	14 02 15.4	0.0
WRAB				pmax	pmax		
	comp=Z,89nm,0.8s						
WRAB	Tennant Creek	20.48	230		P	14 02 15.3	0.0
WRAB	Tennant Creek	20.48	230	P	P	14 02 15.5	0.0
WB2	Warramunga Arr	20.49	230	P	P	14 02 15.4	-0.1
WRA	Warramunga Arr	20.50	230	P	P	14 02 15.7	+0.1
	comp=Z,59nm,0.7s,baz=56,slow=11,SNR=342						
WRA				S	S	14 06 00.1	-2.9
	comp=Z,7.3nm,1.1s,baz=55,slow=19,SNR=6.3						
WRA				LR	LR	14 10 31.2	
	comp=Z,974nm,18.5s,baz=55,slow=38						
WRA	Warramunga Arr	20.50	230	P	P	14 02 15.5	-0.1
WRA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
WRA	Warramunga Arr	20.50	230	P	P	14 02 15.5	-0.1
LIFNC	LIFOU	20.96	132	P	P	14 02 19.4	-1.1
LIFNC				IAmb	IAmb	14 02 20.9	
	comp=Z,218nm,1.1s						
LIFNC	LIFOU	20.96	132	P	Pn	14 02 23.2	0.0
BNDI	Bandanaira	20.96	276	P	Pn	14 02 22.1	-1.2
NOUC	Port Laguerre	21.15	137	P	P	14 02 23.7	+1.2
DZM	Mont Dzumac	21.23	136	*e*P	P	14 02 23.5	+0.1
	comp=Z,329nm,1.3s						
DZM				*e*LR	LR	14 07 30.2	
	comp=Z,3µm,23.8s						
DZM	Mont Dzumac	21.23	136	P	P	14 02 23.8	+0.4
	comp=Z,73nm,1.0s,baz=350,slow=9.4,SNR=22						
DZM				LR	LR	14 09 25.7	
	comp=Z,2µm,20.8s,baz=312,slow=33						
DZM	Mont Dzumac	21.23	136	P	P	14 02 23.5	+0.1
DZM	Mont Dzumac	21.23	136	P	P	14 02 24.3	+0.9
GUMO	Guam	21.33	344	P	P	14 02 23.8	-0.7
	comp=Z,102nm,0.6s,baz=168,slow=15,SNR=9.0						
GUMO				LR	LR	14 08 51.8	
	comp=Z,897nm,21.3s,baz=128,slow=32						
GUMO	Guam	21.33	344	P	P	14 02 24.3	-0.2
GUMO				pmax	pmax		
	comp=Z,729nm,1.4s						
GUMO	Guam	21.33	344	P	P	14 02 24.3	-0.2
GUMO	Guam	21.33	344	P	P	14 02 25.4	+0.9
ONTNC	Ouen Toro	21.39	137	P	P	14 02 24.8	-0.3
ONTNC	Ouen Toro	21.39	137	P	P	14 02 27.8	+2.7
YATNC	Mamie plateau,	21.52	136	P	P	14 02 28.2	+1.6
OUENC	Ouen Island, N	21.73	136	P	P	14 02 29.0	+0.3
OUENC	Ouen Island, N	21.73	136	P	P	14 02 33.2	+4.5
	comp=Z,58nm,1.4s						
MSAI	Masohi	22.11	278	P	P	14 02 32.2	-0.7
	comp=Z,170nmcomp=Z,13nm,0.9s						
AS31	Alice Springs	23.18	223	P	P	14 02 44.0	-0.1
ASAR	Alice Springs	23.18	223	P	P	14 02 43.7	-0.4
	comp=Z,37nm,0.7s,baz=55,slow=8.8,SNR=353						
ASAR				S	S	14 06 53.0	-0.2
	comp=Z,4.9nm,1.0s,baz=41,slow=17,SNR=7.1						
ASAR				LR	LR	14 12 02.7	
	comp=Z,1µm,18.3s,baz=51,slow=37						
ASAR	Alice Springs	23.18	223	P	P	14 02 44.1	0.0
ASAR	Alice Springs	23.18	223	P	P	14 02 44.1	0.0
KNRA	Kununurra	23.25	246	P	P	14 02 44.3	-0.5
	baz=23,SNR=53						
ARMA	Armidale	23.27	178	P	P	14 02 44.5	-0.5
	baz=23,SNR=31						
ARMA	Armidale	23.27	178	P	P	14 02 43.9	-1.1
LBMI	Labuha	24.11	284	P	P	14 02 52.7	-0.3
	comp=Z,2µmcomp=Z,108nm,1.7s						
CMSA	Cobar Meteorol	24.84	190	P	P	14 02 59.6	+0.2
	baz=25,SNR=51						
SANI	Sanana	25.24	280	P	P	14 03 02.9	-0.4
	comp=Z,2µmcomp=Z,52nm,1.1s						
SANI	Sanana	25.24	280	P	P	14 03 03.4	+0.1
MGCD	Mangrove Creek	26.04	179	P	P	14 03 11.3	+1.0
	baz=26,SNR=5.4						
STKA	Stephens Creek	26.17	198	P	P	14 03 10.9	-0.6
	comp=Z,95nm,1.0s,baz=359,slow=8.5,SNR=43						
STKA				LR	LR	14 14 21.6	
	comp=Z,1µm,18.3s,baz=12,slow=38						
STKA	Stephens Creek	26.17	198	P	P	14 03 11.0	-0.5
	baz=26,SNR=50						
STKA	Stephens Creek	26.17	198*c*	*i*P	P	14 03 10.4	-1.1
STKA	Stephens Creek	26.17	198	P	P	14 03 10.9	-0.6
SOEI	Soe	26.40	262	P	P	14 03 13.3	-0.7
	comp=Z,2µmcomp=Z,153nm,1.1s						
SOEI	Soe	26.40	262	P	P	14 03 15.2	+1.2
RIV	Riverview	26.66	179	P	P	14 03 15.7	-0.1
	baz=27,SNR=4.8						
FITZ	Fitzroy Crossi	26.88	244	P	P	14 03 18.4	+0.4
	comp=Z,31nm,0.6s,baz=58,slow=8.1,SNR=101						
FITZ				LR	LR	14 14 53.4	
	comp=Z,871nm,18.0s,baz=52,slow=38						
FITZ	Fitzroy Crossi	26.88	244	P	P	14 03 18.5	+0.4
	baz=27,SNR=86						
BATI	Baumata	27.03	261	P	P	14 03 19.9	+0.4
	comp=Z,30nm,0.8s,baz=126,slow=19,SNR=5.7						
BATI				LR	LR	14 16 06.5	
	comp=Z,713nm,20.2s,baz=113,slow=41						
BATI	Baumata	27.03	261	P	P	14 03 19.2	-0.3
	comp=Z,1µmcomp=Z,113nm,1.1s						
YNG	Young	27.22	184	P	P	14 03 21.4	+0.5
	baz=27,SNR=22						
KMSI	Cibinong	27.83	285	P	P	14 03 26.2	-0.4
	comp=Z,106nm,0.6s						
WRKA	Warakurna	28.00	228	P	P	14 03 28.0	-0.1
	baz=28,SNR=27						
CNB	Canberra Magne	28.17	183	P	P	14 03 29.2	-0.3
	baz=28,SNR=12						
CAN	Canberra	28.20	183	P	P	14 03 29.4	-0.3
CAN				pmax	pmax		
	comp=Z,57nm,1.1s						
CAN				MLR	MLR		
	comp=Z,2µm,18.0s						
CAN	Canberra	28.20	183	P	P	14 03 29.4	-0.3
CAN				IAmb	IAmb	14 03 34.2	
	comp=Z,57nm,1.1s						
CAN				IAMs_20	IAMs_20	14 14 47.0	
	comp=Z,2µm,18.0s						
CAN	Canberra	28.20	183	P	P	14 03 30.2	+0.5
MMRI	Maumere	28.36	265	P	P	14 03 40.2	+8.8
HTT	Hallett	28.48	201	P	P	14 03 32.3	0.0
	baz=29,SNR=24						
LUWI	Luwuk	28.59	281	P	P	14 03 32.8	-0.7
	comp=Z,2µmcomp=Z,109nm,1.3s						
LUWI	Luwuk	28.59	281	P	P	14 03 31.4	-2.1
LUWI				IAmb	IAmb	14 03 40.3	
	comp=Z,78nm,0.9s						
LUWI	Luwuk	28.59	281	P	P	14 03 36.8	+3.3
MSVF	Nonsavu	28.60	114	P	P	14 03 34.7	+1.2
	comp=Z,11nm,0.9s,baz=278,slow=9.9,SNR=3.3						
MSVF				LR	LR	14 13 40.9	
	comp=Z,722nm,18.3s,baz=290,slow=34						

GTOI	**Gorontalo**	**28.77**	**284**	P	**P**	**14 03 34.4**	**-0.7**
	comp=Z,254nmcomp=Z,28nm,1.0s						
EDFI	**Ende, Flores**	**28.90**	**265**	P	**P**	**14 03 35.0**	**-1.3**
	comp=Z,428nmcomp=Z,44nm,1.2s						
BBOO	**Buckleboo**	**29.08**	**206**	P	**P**	**14 03 37.4**	**-0.2**
	baz=29,SNR=5.0						
MRSI	**Marisa**	**29.76**	**283**	P	**P**	**14 03 42.3**	**-1.5**
	comp=Z,676nmcomp=Z,14nm,0.4s						
BASI	**Baing, Sumba**	**30.06**	**262**	P	P	14 03 39.0	-7.5
BSSI	**Bau Bau, Buton**	**30.14**	**270**	P	**P**	**14 03 47.5**	**+0.3**
	comp=Z,641nmcomp=Z,45nm,1.2s						
BKSI	**Bulukumba**	**30.57**	**271**	P	**P**	**14 03 51.2**	**+0.3**
	comp=Z,461nmcomp=Z,21nm,1.4s						
ARPS	**Mount Arapiles**	**30.71**	**194**	P	**P**	**14 03 52.6**	**+0.7**
	baz=31,SNR=5.7						
TOO	**Toolangi**	**30.78**	**188**	P	**P**	**14 03 53.2**	**+0.7**
	baz=31,SNR=5.8						
KAPI	**Kappang**	**30.96**	**272**	P	**P**	**14 03 55.2**	**+0.8**
	comp=Z,9.1nm,0.7s,baz=127,slow=2.9,SNR=5.6						
TOLI2	**Tolitoli**	**31.05**	**284**	P	**P**	**14 03 53.7**	**-1.5**
TOLI2	**Tolitoli**	**31.05**	**284**	P	**P**	**14 03 56.7**	**+1.5**
TTSI	**Tana Toraja**	**31.13**	**276**	P	**P**	**14 03 55.9**	**0.0**
	comp=Z,2µmcomp=Z,39nm,1.2s						
WBSI	**Waikabubak, Su**	**31.20**	**263**	P	**P**	**14 03 56.8**	**+0.2**
	comp=Z,1µmcomp=Z,86nm,0.8s						
MPSI	**Mapaga**	**31.71**	**282**	P	**P**	**14 03 59.2**	**-1.8**
	comp=Z,364nmcomp=Z,27nm,0.9s						
FORT	**Forrest**	**31.82**	**219**	P	**P**	**14 04 01.9**	**+0.1**
	baz=32,SNR=12						
PLAI	**Plampang**	**32.77**	**265**	P	**P**	**14 04 10.0**	**-0.3**
	comp=Z,75nm,0.8s						
PLAI	**Plampang**	**32.77**	**265**	P	**P**	**14 04 12.1**	**+1.8**
MBWA	**Marble Bar**	**33.17**	**242**	IAMs_20	IAMs_20	14 19 08.7	
	comp=Z,981nm,18.0s						
JCJ	**Chichijima**	**34.95**	**346**	LR	LR	14 18 30.5	
	comp=Z,271nm,18.5s,baz=187,slow=36						
OUZ	**Omahuta**	**34.99**	**146**	IAMs_20	IAMs_20	14 17 04.2	
	comp=Z,1µm,20.0s						
TAU	**Tasmania Unive**	**35.86**	**184**	P	**P**	**14 04 34.8**	**-1.9**
TAU				pmax	pmax		
	comp=Z,113nm,1.4s						
TAU	**Tasmania Unive**	**35.86**	**184**	P	**P**	**14 04 34.8**	**-1.9**
TAU				IAmb	IAmb	14 04 42.4	
	comp=Z,113nm,1.4s						
BBKI	**Banjar Baru**	**36.00**	**274**	P	**P**	**14 04 38.1**	**-0.2**
	comp=Z,20nm,0.8s						
SPMM	**Sapulut**	**36.22**	**288**	P	**P**	**14 04 39.0**	**-1.2**
MEEK	**Meekatharra**	**36.29**	**234**	P	**P**	**14 04 41.3**	**+0.5**
	baz=36,SNR=37						
JAGI	**Jajag, Banyuwa**	**36.35**	**265**	P	**P**	**14 04 39.3**	**-2.1**
	comp=Z,71nm,0.7s						
JAGI	**Jajag, Banyuwa**	**36.35**	**265**	P	**P**	**14 04 39.2**	**-2.1**
JAGI				IAmb	IAmb	14 04 41.8	
	comp=Z,82nm,1.0s						
JAGI	**Jajag, Banyuwa**	**36.35**	**265**	P	**P**	**14 04 43.0**	**+1.7**
KMMI	**Kalianget**	**36.57**	**268**	P	**P**	**14 04 43.3**	**+0.1**
	comp=Z,26nm,1.4s						
BWJI	**Bawean**	**37.93**	**270**	P	**P**	**14 04 55.0**	**+0.2**
	comp=Z,91nm,1.2s						
GIRL	**Giralia**	**38.48**	**242**	P	**P**	**14 04 59.4**	**+0.2**
	baz=39,SNR=3.5						
URZ	**Urewera**	**39.14**	**146**	P	**P**	**14 05 04.4**	**-0.1**
	comp=Z,9.7nm,1.0s,baz=307,slow=20,SNR=3.8						
URZ				LR	LR	14 19 44.8	
	comp=Z,1µm,19.1s,baz=30,slow=34						
URZ	**Urewera**	**39.14**	**146**	IAmb	IAmb	14 05 05.4	
	comp=Z,47nm,1.4s						
URZ				IAMs_20	IAMs_20	14 19 13.8	
	comp=Z,1µm,19.0s						
PBKI	**Pangkalan Bun**	**39.23**	**274**	P	**P**	**14 05 05.4**	**-0.3**
	comp=Z,3µmcomp=Z,250nm,1.3s						
PCJI	**Pacitan**	**39.30**	**266**	P	**P**	**14 05 06.0**	**-0.2**
	comp=Z,79nm,0.8s						
MORW	**Morawa**	**39.42**	**232**	P	**P**	**14 05 07.5**	**+0.4**
	baz=40,SNR=11						
BKZ	**Black Stump Fm**	**39.46**	**148**	IAMs_20	IAMs_20	14 23 08.5	
	comp=Z,1µm,19.0s						
BKZ	**Black Stump Fm**	**39.46**	**148**	P	**P**	**14 05 09.8**	**+2.5**
BLDU	**Ballidu**	**39.63**	**229**	P	**P**	**14 05 09.1**	**+0.3**
	baz=40,SNR=6.2						
SBUM	**Sibu**	**39.66**	**282**	P	**P**	**14 05 10.0**	**+0.8**
STKI	**Sintang**	**39.87**	**279**	P	**P**	**14 05 11.6**	**+0.6**
	comp=Z,6µmcomp=Z,26nm,0.8s						
TUWZ	**Tuamarina**	**39.94**	**153**	P	**P**	**14 05 10.1**	**-1.1**
JOW	**Kunigami**	**40.14**	**328**	LR	LR	14 21 03.8	
	comp=Z,332nm,18.7s,baz=114,slow=35						
LTZ	**Lake Taylor**	**40.31**	**155**	P	**P**	**14 05 14.0**	**-0.3**
PLWZ	**Palliser**	**40.66**	**152**	P	**P**	**14 05 16.2**	**-1.0**
MUN	**Mundaring**	**40.68**	**228**	P	**P**	**14 05 17.6**	**+0.2**
	baz=41,SNR=4.7						
MLZ	**Mavora Lakes**	**41.02**	**161**	P	**P**	**14 05 19.9**	**-0.2**
KPJI	**Karang Pucung**	**41.55**	**267**	P	**P**	**14 05 25.5**	**+0.6**
	comp=Z,74nm,1.3s						
TWG	**Pinlang**	**41.57**	**316**	IAMs_20	IAMs_20	14 20 01.3	
	comp=Z,692nm,21.0s						
YULB	**Yu-li**	**41.80**	**317**	IAMs_20	IAMs_20	14 19 29.6	
	comp=Z,986nm,20.0s						
NACB	**Ninganchiao**	**42.14**	**318**	IAMs_20	IAMs_20	14 19 32.4	
	comp=Z,874nm,20.0s						
TPUB	**Ta-pu**	**42.19**	**316**	IAMs_20	IAMs_20	14 21 24.9	
	comp=Z,853nm,20.0s						
SSLB	**Suanglung**	**42.30**	**317**	IAMs_20	IAMs_20	14 21 18.8	
	comp=Z,1µm,19.0s						
YHNB	**Yeheng**	**42.62**	**319**	P	**P**	**14 05 32.8**	**-0.7**
YHNB				IAmb	IAmb	14 05 41.0	
	comp=Z,117nm,1.2s						
YHNB	**Yeheng**	**42.62**	**319**	P	**P**	**14 05 35.2**	**+1.7**
	comp=Z,92nm,1.3s						
KNMB	**Chin-men Tao**	**44.50**	**316**	IAMs_20	IAMs_20	14 19 49.0	
	comp=Z,633nm,22.0s						
JWT	**Wachi**	**44.54**	**342**	P	**P**	**14 05 47.3**	**-1.4**
JWT				IAmb	IAmb	14 05 52.9	
	comp=Z,53nm,1.0s						
PPBI	**Pangkal Pinang**	**44.78**	**274**	P	**P**	**14 05 51.6**	**+0.6**
MJAR	**Matsushiro Arr**	**44.94**	**346**	P	**P**	**14 05 51.0**	**-0.9**
	comp=Z,3.1nm,0.8s,baz=167,slow=9.3,SNR=5.4						
MJAR				PcP	**PcP**	**14 07 32.9**	**+0.1**
	comp=Z,3.0nm,0.7s,baz=172,slow=2.6,SNR=5.9						
MJAR				LR	LR	14 23 55.7	
	comp=Z,309nm,18.8s,baz=170,slow=35						
MJAR	**Matsushiro Arr**	**44.94**	**346**	P	**P**	**14 05 51.0**	**-0.9**
MJAR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MAJO	**Matsushiro**	**44.94**	**346**	P	**P**	**14 05 50.4**	**-1.4**
MAJO				pmax	pmax		
	comp=Z,26nm,1.5s						
MAJO	**Matsushiro**	**44.94**	**346**	P	**P**	**14 05 50.4**	**-1.4**
MAT	**Matsushiro**	**44.94**	**346**	P	**P**	**14 05 50.3**	**-1.6**
JHS	**Saijyo**	**45.03**	**339**	P	**P**	**14 05 51.7**	**-0.9**
KLSI		**45.90**	**270**	P	**P**	**14 06 00.4**	**+0.6**
	comp=Z,11nm,1.7s						
DLV	**T Lat**	**46.13**	**294**	P	**P**	**14 06 01.3**	**-0.6**
DLV				IAmb	IAmb	14 06 02.6	
	comp=Z,59nm,1.0s						
DLV	**T Lat**	**46.13**	**294**	P	**P**	**14 06 00.7**	**-1.2**
MDSI	**Maura Dua**	**46.46**	**270**	P	**P**	**14 06 02.8**	**-1.5**
	comp=Z,28nm,1.4s						
LWLI	**Liwa**	**46.53**	**270**	P	**P**	**14 06 04.3**	**-0.7**
	comp=Z,5µmcomp=Z,70nm,1.2s						
DSRI	**Dabo**	**46.57**	**276**	P	**P**	**14 06 06.0**	**+0.9**
	comp=Z,34nm,1.3s						
MIDW	**Midway**	**46.60**	**40**	P	**P**	**14 06 03.7**	**-1.4**
LHSI	**Lahat**	**47.18**	**271**	P	**P**	**14 06 09.5**	**-0.4**
	comp=Z,35nm,1.4s						
QIZ	**Qiongzhong**	**47.98**	**303**	P	**P**	**14 06 14.9**	**-1.1**
QIZ				S	**S**	**14 13 14.5**	**+3.1**
QIZ				pmax	pmax		
	comp=Z,16nm,1.7s						
QIZ				LR	LR		
	comp=Z,180nm,14.5s						
QIZ				LR	LR		
	comp=Z,140nm,15.7s						
QIZ				LR	LR		
	comp=Z,230nm,20.1s						
JTM	**Tenmabayashi**	**48.43**	**350**	P	**P**	**14 06 17.2**	**-1.8**
KSRS	**Korea Array**	**49.16**	**336**	P	**P**	**14 06 24.5**	**-0.2**
	comp=Z,16nm,0.9s,baz=155,slow=8.6,SNR=31						
KSRS				LR	LR	14 26 57.2	
	comp=Z,197nm,18.4s,baz=167,slow=36						
KSAR	**Wonju Array Be**	**49.17**	**336**	P	**P**	**14 06 24.2**	**-0.6**
KSAR	**Wonju Array Be**	**49.17**	**336**	P	**P**	**14 06 24.1**	**-0.6**
KS19	**Wonju Array Si**	**49.23**	**336**	P	**P**	**14 06 23.9**	**-1.4**
KS19				IAmb	IAmb	14 06 28.9	
	comp=Z,58nm,1.4s						
NJ2	**Nanjing**	**49.40**	**324**	*e*P	**P**	**14 06 28.6**	**+1.9**
NJ2				pmax	pmax		
	comp=Z,11nm,0.8s						
NJ2				LR	LR		
	comp=Z,480nm,18.5s						
NJ2				LR	LR		
	comp=Z,520nm,19.9s						
NJ2				LR	LR		
	comp=Z,790nm,20.8s						
INCN	**Inchon**	**49.72**	**335**	P	**P**	**14 06 30.8**	**+1.7**
PPI	**Padang Panjang**	**50.71**	**275**	P	**P**	**14 06 35.5**	**-1.4**
	comp=Z,15nm,0.9s						
IPM	**Ipoh**	**51.00**	**282**	P	**P**	**14 06 40.0**	**+0.8**
WHN	**Wuhan**	**51.17**	**319**	P	**P**	**14 06 40.0**	**-0.1**
KULM	**Kulim**	**51.55**	**282**	P	**P**	**14 06 44.0**	**+0.8**
MNSI	**Mandailing Nat**	**51.71**	**277**	P	**P**	**14 06 43.6**	**-0.9**
	comp=Z,863nmcomp=Z,37nm,1.0s						
PSI	**Prapat**	**52.71**	**279**	P	**P**	**14 06 51.6**	**-0.4**
	comp=Z,12nm,0.9s,baz=146,slow=4.1,SNR=25						
USRK	**Ussuriysk Ar.**	**53.77**	**343**	P	**P**	**14 06 59.1**	**0.0**
	comp=Z,9.9nm,1.1s,baz=118,slow=6.6,SNR=2.9						
USRK	**Ussuriysk Ar.**	**53.77**	**343**	P	**P**	**14 06 58.8**	**-0.3**
USRK	**Ussuriysk Ar.**	**53.77**	**343**	P	**P**	**14 06 58.8**	**-0.3**
GSI	**Gunungsitoli**	**53.77**	**277**	P	**P**	**14 06 59.3**	**-0.4**
	comp=Z,47nm,1.3s						
GSI	**Gunungsitoli**	**53.77**	**277**	P	**P**	**14 06 57.5**	**-2.2**
GSI				IAmb	IAmb	14 07 01.5	
	comp=Z,84nm,1.4s						
GSI	**Gunungsitoli**	**53.77**	**277**	P	**P**	**14 07 01.3**	**+1.6**
SLVN	**Son La**	**53.98**	**303**	P	**P**	**14 07 00.6**	**-0.6**
GYA	**Guiyang**	**54.24**	**310**	⇓P	**P**	**14 07 03.9**	**+0.8**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ENH	**Enshi**	**54.29**	**315**	P	**P**	**14 07 02.2**	**-1.1**
ENH				IAmb	IAmb	14 07 06.8	
	comp=Z,40nm,1.3s						
ENH				IAMs_20	IAMs_20	14 26 41.3	
	comp=Z,538nm,20.0s						
KMI	**Kunming**	**56.66**	**306**	⇑P	**P**	**14 07 21.6**	**+1.0**
KMI				pmax	pmax		
	comp=Z,20nm,1.1s						
KMI				pmax	pmax		
	comp=Z,170nm,8.0s						
KMI				LR	LR		
	comp=Z,200nm,18.7s						
KMI				LR	LR		
	comp=Z,160nm,19.2s						
KMI				LR	LR		
	comp=Z,200nm,25.6s						
BJT	**Baijiatuau**	**56.70**	**329**	P	**P**	**14 07 19.1**	**-1.3**
BJT				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BJT				MLR	MLR		
	comp=Z,300nm,20.0s						
BJT	**Baijiatuau**	**56.70**	**329**	P	**P**	**14 07 19.1**	**-1.3**
XAN	**Xi'an**	**56.93**	**319**	P	**P**	**14 07 21.1**	**-1.1**
XAN				pmax	pmax		
	comp=Z,19nm,1.1s						
CMAR	**Chiang Mai Arr**	**57.09**	**297**	P	**P**	**14 07 23.8**	**+0.2**
	comp=Z,5.8nm,0.9s,baz=123,slow=5.5,SNR=31						
CMAR				PcP	**PcP**	**14 08 18.6**	**+0.5**
	comp=Z,5.5nm,1.0s,baz=111,slow=3.0,SNR=4.8						
CMAR				LR	LR	14 32 51.3	
	comp=Z,44nm,19.4s,baz=156,slow=37						
CMAR				PKP2bc		14 37 26.6	
	comp=Z,0.6nm,0.6s,baz=280,slow=3.5,SNR=5.9						
CMAR	**Chiang Mai Arr**	**57.09**	**297**	P	**P**	**14 07 22.7**	**-0.8**
CMAR	**Chiang Mai Arr**	**57.09**	**297**	P	**P**	**14 07 22.7**	**-0.8**
CHTO	**Chiang Mai**	**57.22**	**298**	P	**P**	**14 07 24.1**	**-0.4**
CHTO				pmax	pmax		
	comp=Z,24nm,1.4s						
CHTO	**Chiang Mai**	**57.22**	**298**	P	**P**	**14 07 24.1**	**-0.4**
CHTO	**Chiang Mai**	**57.22**	**298**	P	**P**	**14 07 26.3**	**+1.9**
SKR	**Severo-Kuril’s**	**57.67**	**4**	*e*P	**P**	**14 07 27.5**	**+0.6**
SKR				*e*S	**S**	**14 15 24.0**	**+1.5**
SKR				pmax	pmax		
	comp=Z,100nm,5.4s						
SKR				MLR	MLR		
	comp=Z,200nm,15.0s						
KLR	**Kul'dur**	**58.47**	**345**	P	**P**	**14 07 33.0**	**+0.4**
	comp=Z,6.5nm,1.0s,baz=170,slow=9.8,SNR=3.8						
KLR				PcP	**PcP**	**14 08 23.5**	**+0.7**
	comp=Z,17nm,1.0s,baz=154,slow=2.3,SNR=11						
KLR				LR	LR	14 30 56.8	
	comp=Z,126nm,18.9s,baz=171,slow=34						
KLR	**Kul'dur**	**58.47**	**345**	*de*P	**P**	**14 07 34.3**	**+1.7**
KLR				pmax	pmax		
	comp=Z,13nm,1.3s						
PPT2	**Papeete2**	**58.96**	**106**	*e*S	**S**	**14 15 37.0**	**-3.8**
	comp=Z,302nm,23.2s						
PPT2				*e*LQ	LQ	14 22 28.4	
	comp=Z,700nm,31.2s						
PPT2				*e*LR	LR	14 24 52.3	
	comp=Z,152nm,23.0s						
TBI	**Tubuai**	**59.47**	**113**	*e*S	**S**	**14 15 43.6**	**-3.4**
	comp=Z,214nm,26.2s						
TBI				*e*LR	LR	14 25 14.2	
	comp=Z,305nm,31.2s						
HHC	**Hu-ho-hao-te**	**59.76**	**326**	*e*P	**P**	**14 07 43.9**	**+2.1**
HHC				S	**S**	**14 15 53.2**	**+2.9**
HHC				pmax	pmax		
	comp=Z,18nm,1.1s						
HHC				pmax	pmax		
	comp=Z,210nm,5.5s						
HHC				LR	LR		
	comp=Z,350nm,19.0s						
HHC				LR	LR		
	comp=Z,250nm,18.8s						
HHC				LR	LR		
	comp=Z,580nm,18.4s						
PEA0B	**Petropavlovsk-**	**60.20**	**5**	⇑*e*P	**P**	**14 07 45.1**	**+0.6**
PEA0B	**Petropavlovsk-**	**60.20**	**5**	P	**P**	**14 07 42.8**	**-1.8**
PEA0B				IAmb	IAmb	14 07 56.8	
	comp=Z,45nm,1.2s						
PETK	**Petropavlovsk-**	**60.20**	**5**	P	**P**	**14 07 43.2**	**-1.3**
	comp=Z,15nm,0.9s,baz=169,slow=8.3,SNR=16						
PETK				LR	LR	14 29 58.9	
	comp=Z,223nm,21.2s,baz=184,slow=32						
PETK	**Petropavlovsk-**	**60.20**	**5**	P	**P**	**14 07 42.7**	**-1.8**
PETK	**Petropavlovsk-**	**60.20**	**5**	P	**P**	**14 07 42.6**	**-1.8**
PET	**Petropavlovsk**	**60.20**	**5**	P	**P**	**14 07 43.3**	**-1.1**
PET				IAmb	IAmb	14 07 55.3	
	comp=Z,32nm,1.2s						
LZH	**Lanzhou**	**61.50**	**318**	*e*P	**P**	**14 07 54.4**	**+0.5**
LZH				sS	sS	14 16 26.2	-3.0
LZH				pmax	pmax		
	comp=Z,38nm,1.3s						
LZH				pmax	pmax		
	comp=Z,250nm,4.9s						
LZH				LR	LR		
	comp=Z,280nm,16.0s						
LZH				LR	LR		
	comp=Z,270nm,15.7s						
LZH				LR	LR		
	comp=Z,250nm,16.3s						
HIA	**Hailar**	**62.30**	**338**	P	**P**	**14 07 58.1**	**-0.7**
HIA				pmax	pmax		
	comp=Z,25nm,0.9s						
HIA	**Hailar**	**62.30**	**338**	P	**P**	**14 07 58.1**	**-0.7**
HIA				IAmb	IAmb	14 07 59.5	
	comp=Z,25nm,0.9s						
ZEA	**Zeya**	**63.74**	**345**	*e*P	**P**	**14 08 07.7**	**-0.5**
ZEA				pmax	pmax		
	comp=Z,20nm,0.9s						
ZEA				MLR	MLR		
	comp=N,100nm,20.0s						
ZEA				MLR	MLR		
	comp=Z,100nm,21.0s						
CASY	**Casey**	**65.31**	**197**	P	**P**	**14 08 18.1**	**-0.2**
CASY				IAmb	IAmb	14 08 30.2	
	comp=Z,14nm,0.7s						
SHL	**Shillong**	**65.78**	**302**	P	**P**	**14 08 22.0**	**-0.3**
SHL				pmax	pmax		
	comp=Z,126nm,1.3s						
SHL	**Shillong**	**65.78**	**302**	P	**P**	**14 08 22.0**	**-0.3**
GTA	**Gaotai**	**65.99**	**319**	*e*P	**P**	**14 08 23.3**	**-0.1**
GTA				pP	pP	14 08 31.9	-1.6
GTA				sP	sP	14 08 36.4	-1.0
GTA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,100nm,5.4s						
GTA				LR	LR		
	comp=Z,87nm,17.1s						
GTA				LR	LR		
	comp=Z,150nm,18.9s						
GTA				LR	LR		
	comp=Z,210nm,18.5s						
MA2	**Magadan**	**66.40**	**360**	P	**P**	**14 08 25.0**	**-0.4**
MA2				pmax	pmax		
	comp=Z,45nm,1.4s						
MA2	**Magadan**	**66.40**	**360**	P	**P**	**14 08 25.0**	**-0.4**
MA2				IAmb	IAmb	14 08 41.2	
	comp=Z,45nm,1.4s						
ULN	**Ulaanbaatar**	**66.88**	**330**	*di*P	**P**	**14 08 28.9**	**-0.1**
ULN				pmax	pmax		
	comp=Z,16nm,1.0s						
ULN	**Ulaanbaatar**	**66.88**	**330**	P	**P**	**14 08 28.7**	**-0.3**
ULN	**Ulaanbaatar**	**66.88**	**330**	IAMs_20	IAMs_20	14 40 41.2	
	comp=Z,273nm,18.0s						
SONM	**Songino Array**	**67.19**	**329**	P	**P**	**14 08 30.8**	**-0.1**
	comp=Z,18nm,1.0s,baz=139,slow=5.7,SNR=38						
SONM				pP	**pP**	**14 08 42.1**	**+1.1**
	comp=Z,3.6nm,0.5s,baz=149,slow=4.0,SNR=4.1						
SONM				PKP2ab		14 37 04.0	
	comp=Z,0.4nm,0.3s,baz=337,slow=1.9,SNR=4.9						
SONM				LR	LR	14 38 02.7	
	comp=Z,259nm,20.4s,baz=148,slow=36						
SONM	**Songino Array**	**67.19**	**329**	P	**P**	**14 08 30.4**	**-0.5**
SONM				pmax	pmax		
	comp=Z,19nm,1.0s						
SONM	**Songino Array**	**67.19**	**329**	P	**P**	**14 08 30.4**	**-0.5**
LSA	**Lhasa**	**67.91**	**306**	P	**P**	**14 08 35.8**	**-0.4**
LSA				pmax	pmax		
	comp=Z,15nm,1.1s						
LSA	**Lhasa**	**67.91**	**306**	P	**P**	**14 08 35.8**	**-0.4**
NIKH	**Nikolski High**	**68.86**	**25**	P	**P**	**14 08 41.0**	**0.0**
	baz=224						
SEY	**Seymchan**	**69.78**	**1**	P	**P**	**14 08 46.8**	**+0.2**
	comp=Z,3.2nm,0.7s,baz=160,slow=3.9,SNR=6.3						
TAPN	**Taplejung**	**69.90**	**302**	*e*P	**P**	**14 08 48.0**	**-0.4**
	comp=Z,93nm,1.1s						
ODAN	**Odare**	**70.01**	**302**	*e*P	**P**	**14 08 49.0**	**0.0**
	comp=Z,163nm,1.0s						
ZAK	**Zakamensk**	**70.40**	**330**	*e*P	**P**	**14 08 49.3**	**-1.5**
ZAK				*e*		14 09 07.6	
ZAK				pmax	pmax		
	comp=Z,28nm,1.3s						
ZAK				pmax	pmax		
	comp=Z,17nm,1.3s						
UNV	**Unalaska Valle**	**70.47**	**25**	P	**P**	**14 08 50.3**	**-0.6**
	baz=226						
VNDA	**Vanda**	**70.68**	**177**	P	**P**	**14 08 52.5**	**+0.5**
	comp=Z,5.5nm,1.0s,baz=337,slow=6.9,SNR=11						
VNDA				LR	LR	14 36 13.7	
	comp=Z,128nm,18.4s,baz=7.0,slow=33						
VNDA	**Vanda**	**70.68**	**177**	P	**P**	**14 08 51.6**	**-0.4**
VNDA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
VNDA	**Vanda**	**70.68**	**177**	P	**P**	**14 08 51.6**	**-0.4**
YAK	**Yakutsk**	**70.79**	**350**	P	**P**	**14 08 52.4**	**-0.3**
	comp=Z,4.2nm,0.4s,baz=124,slow=2.9,SNR=7.8						
YAK	**Yakutsk**	**70.79**	**350**	*e*P	**P**	**14 08 52.6**	**-0.1**
YAK				pmax	pmax		
	comp=Z,34nm,1.2s						
YAK				pmax	pmax		
	comp=N,14nm,1.3s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.1s						
YAK	**Yakutsk**	**70.79**	**350**	P	**P**	**14 08 52.1**	**-0.6**
YAK				IAmb	IAmb	14 08 54.3	
	comp=Z,55nm,1.3s						
TLY	**Talaya**	**71.05**	**331**	P	**P**	**14 08 55.1**	**+0.5**
	comp=Z,2.5nm,0.4s,baz=124,slow=3.6,SNR=5.2						
TLY	**Talaya**	**71.05**	**331**	*e*P	**P**	**14 08 55.2**	**+0.6**
TLY				pmax	pmax		
	comp=Z,42nm,1.0s						
TLY				MLR	MLR		
	comp=Z,195nm,11.0s						
BOD	**Bodaibo**	**71.19**	**340**	*e*P	**P**	**14 08 54.5**	**-0.8**
BOD				pmax	pmax		
	comp=Z,15nm,1.2s						
JIRN	**Jiri**	**71.28**	**302**	*e*P	**P**	**14 08 56.7**	**-0.2**
	comp=Z,59nm,0.9s						
SPIA	**Saint Paul Isl**	**71.43**	**21**	P	**P**	**14 08 56.3**	**-0.4**
	baz=221						
GUN	**Gumba**	**71.62**	**302**	*e*P	**P**	**14 08 59.0**	**+0.1**
PKI	**Pulchoki**	**71.91**	**302**	*e*P	**P**	**14 09 00.5**	**-0.2**
PKIN	**Phulchoki**	**71.92**	**302**	*e*P	**P**	**14 08 59.9**	**-0.8**
KKN	**Kakani**	**72.08**	**302**	*e*P	**P**	**14 09 01.5**	**-0.1**
DMN	**Daman**	**72.17**	**302**	*e*P	**P**	**14 09 02.3**	**+0.1**
MOY	**Mondy**	**72.33**	**330**	*e*P	**P**	**14 09 02.6**	**+0.2**
MOY				pmax	pmax		
	comp=Z,36nm,1.7s						
FALS	**False Pass**	**72.48**	**26**	P	**P**	**14 09 02.9**	**-0.1**
	baz=228						
GKN	**Gorkha**	**72.69**	**302**	*e*P	**P**	**14 09 04.8**	**-0.3**
KOLN	**Koldanda**	**73.50**	**302**	*e*P	**P**	**14 09 09.8**	**-0.2**
DANN	**Dangsing**	**73.53**	**302**	*e*P	**P**	**14 09 09.6**	**-0.7**
SDPT	**Sand Point**	**74.09**	**26**	P	**P**	**14 09 12.8**	**+0.3**
	baz=231						
SDPT	**Sand Point**	**74.09**	**26**	P	**P**	**14 09 12.8**	**+0.3**
PYUN	**Piuthan**	**74.11**	**302**	*e*P	**P**	**14 09 13.1**	**-0.4**
	comp=Z,196nm,1.1s						
CHNA	**Chernabura Isl**	**74.16**	**27**	P	**P**	**14 09 13.1**	**+0.1**
	baz=232						
CHGN	**Chignik**	**75.59**	**26**	P	**P**	**14 09 21.2**	**+0.1**
	baz=232						
CHGN	**Chignik**	**75.59**	**26**	P	**P**	**14 09 21.3**	**+0.1**
BILL	**Bilibino**	**75.70**	**6**	*de*P	**P**	**14 09 22.5**	**+0.9**
BILL				*e*		14 09 35.4	
BILL				*e*		14 12 13.5	
BILL				*e*S	**S**	**14 19 00.1**	**+0.2**
BILL				pmax	pmax		
	comp=Z,83nm,2.5s						
BILL	**Bilibino**	**75.70**	**6**	P	**P**	**14 09 22.1**	**+0.5**
BILL				IAmb	IAmb	14 09 23.5	
	comp=Z,59nm,1.2s						
GAMB	**Gambell**	**76.06**	**16**	P	**P**	**14 09 23.9**	**+0.2**
	baz=218						
WMQ	**Urumqi**	**76.07**	**318**	*e*P	**P**	**14 09 25.2**	**+0.9**
WMQ				pmax	pmax		
	comp=Z,29nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,340nm,4.7s						
WMQ				LR	LR		
	comp=Z,220nm,19.9s						
CHIR	**Chirikof Islan**	**76.57**	**28**	P	**P**	**14 09 26.7**	**-0.1**
	baz=235						
CHIR	**Chirikof Islan**	**76.57**	**28**	P	**P**	**14 09 26.6**	**-0.2**
SII	**Sitkinak Islan**	**77.65**	**28**	P	**P**	**14 09 33.5**	**+0.6**
	baz=236						
SII	**Sitkinak Islan**	**77.65**	**28**	P	**P**	**14 09 33.9**	**+1.0**
OHAK	**Old Harbor**	**78.43**	**27**	P	**P**	**14 09 37.3**	**+0.2**
	baz=237						
OHAK	**Old Harbor**	**78.43**	**27**	P	**P**	**14 09 37.8**	**+0.6**
OHAK				IAmb	IAmb	14 09 39.6	
	comp=Z,87nm,1.1s						
TNA	**Tin City**	**78.48**	**16**	P	**P**	**14 09 37.4**	**+0.1**
	baz=222						
ANM	**Nome**	**78.49**	**18**	P	**P**	**14 09 36.9**	**-0.5**
	baz=224						
DGZ	**Jazzator, Alta**	**78.69**	**324**	*de*P	**P**	**14 09 38.8**	**-0.2**
DGZ				pmax	pmax		
	comp=Z,17nm,1.0s						
P18K	**Big Mountain,**	**78.80**	**25**	P	**P**	**14 09 39.0**	**-0.2**
	baz=235						
P18K	**Big Mountain,**	**78.80**	**25**	P	**P**	**14 09 38.7**	**-0.5**
P18K				IAmb	IAmb	14 09 40.7	
	comp=Z,29nm,0.8s						
KDAK	**Kodiak Island**	**79.05**	**27**	P	**P**	**14 09 40.7**	**+0.2**
	comp=Z,72nm,1.0s,baz=224,slow=3.0,SNR=11						
KDAK	**Kodiak Island**	**79.05**	**27**	P	**P**	**14 09 41.0**	**+0.5**
KDAK				pmax	pmax		
	comp=Z,93nm,1.1s						
KDAK	**Kodiak Island**	**79.05**	**27**	P	**P**	**14 09 40.3**	**-0.3**
	baz=238						
KDAK	**Kodiak Island**	**79.05**	**27**	P	**P**	**14 09 41.0**	**+0.5**
KDAK				IAmb	IAmb	14 09 42.6	
	comp=Z,93nm,1.1s						
O18K	**Koktuh Hills**	**79.07**	**25**	P	**P**	**14 09 40.9**	**+0.2**
	baz=235						
O18K	**Koktuh Hills**	**79.07**	**25**	P	**P**	**14 09 40.7**	**0.0**
O18K				IAmb	IAmb	14 09 41.6	
	comp=Z,29nm,0.9s						
Q19K	**Cape Douglas,**	**79.21**	**26**	P	**P**	**14 09 41.8**	**+0.4**
	baz=236,SNR=8.4						
Q19K	**Cape Douglas,**	**79.21**	**26**	P	**P**	**14 09 41.5**	**0.0**
ZSN	**Zaisan**	**79.34**	**321**	*e*P	**P**	**14 09 40.2**	**-2.3**
	baz=321						
ZSN	**Zaisan**	**79.34**	**321**	*e*P	**P**	**14 09 40.1**	**-2.3**
O19K	**Port Alsworth**	**79.64**	**25**	P	**P**	**14 09 43.8**	**+0.1**
	baz=236						
O19K	**Port Alsworth**	**79.64**	**25**	P	**P**	**14 09 43.6**	**0.0**
SVW2	**Sparrevohn**	**79.65**	**23**	P	**P**	**14 09 44.9**	**+1.1**

SVW2				IAmb	IAmb	14 09 47.2	
	comp=Z,44nm,0.8s						
P19K	Oil Pt	79.79	25	P	P	14 09 45.1	+0.5
	baz=237,SNR=8.1						
P19K	Oil Pt	79.79	25	P	P	14 09 44.3	-0.3
TIXI	Tiksi	79.86	353	P	P	14 09 44.7	0.0
	comp=Z,1.2nm,0.3s,baz=133,slow=12,SNR=4.0						
TIXI	Tiksi	79.86	353	⇓*e*P	P	14 09 45.2	+0.6
N19K	Bonanza Creek	79.92	24	P	P	14 09 46.2	+0.8
	baz=235,SNR=5.3						
N19K	Bonanza Creek	79.92	24	P	P	14 09 45.3	-0.1
N19K				IAmb	IAmb	14 09 47.2	
	comp=Z,26nm,0.8s						
O20K	Slope Mountain	80.28	25	P	P	14 09 47.4	+0.2
	baz=237						
RSO	Redoubt South	80.43	25	P	P	14 09 47.7	-0.6
HOM	Homer	80.47	26	P	P	14 09 48.6	+0.4
	baz=238						
L19K	White Mountain	80.56	23	P	P	14 09 50.0	+1.3
	baz=235,SNR=23						
L19K	White Mountain	80.56	23	P	P	14 09 49.6	+0.9
L19K				IAmb	IAmb	14 09 51.1	
	comp=Z,65nm,0.8s						
TTA	Tatalina	80.56	22	P	P	14 09 49.9	+1.1
TTA				pmax	pmax		
	comp=Z,30nm,1.0s						
TTA	Tatalina	80.56	22	P	P	14 09 49.6	+0.8
	baz=234,SNR=5.1						
TTA	Tatalina	80.56	22	P	P	14 09 49.9	+1.1
CNPM	China Poot	80.58	26	P	P	14 09 49.7	+0.8
M19K	Big River Lodg	80.58	23	P	P	14 09 50.2	+1.4
	baz=235,SNR=7.4						
M19K	Big River Lodg	80.58	23	P	P	14 09 49.7	+0.9
M19K				IAmb	IAmb	14 09 51.0	
	comp=Z,37nm,0.9s						
MK31	Makanchi Array	80.73	320	*c i*P	P	14 09 49.9	0.0
MK31	Makanchi Array	80.73	320	P	P	14 09 49.8	-0.2
MKAR	Makanchi Array	80.73	320	P	P	14 09 49.8	-0.2
	comp=Z,17nm,1.0s,baz=109,slow=5.5,SNR=23						
MKAR	Makanchi Array	80.73	320	P	P	14 09 49.6	-0.3
MKAR	Makanchi Array	80.73	320	P	P	14 09 49.6	-0.3
BRLK	Bradley Lake	80.85	26	P	P	14 09 50.9	+0.6
BRLK				IAmb	IAmb	14 09 52.7	
	comp=Z,78nm,1.0s						
BRSE	Bradley Lake S	80.90	26	P	P	14 09 50.5	-0.1
	baz=239						
MAKZ	Makanchi	80.94	320	P	P	14 09 51.2	+0.1
MAKZ				pmax	pmax		
	comp=Z,52nm,1.2s						
MAKZ	Makanchi	80.94	320	P	P	14 09 51.2	+0.1
MAKZ				IAmb	IAmb	14 09 53.3	
	comp=Z,52nm,1.1s						
SPCR	Spurr Chakacha	81.06	24	P	P	14 09 51.2	-0.2
	baz=237						
L20K	Farewell, AK	81.10	23	P	P	14 09 52.9	+1.3
	baz=236,SNR=11						
CAPN	Captain Cook N	81.26	25	P	P	14 09 52.9	+0.5
	baz=238						
GCSA	Galena City Sc	81.35	20	P	P	14 09 53.7	+0.9
	baz=233,SNR=5.7						
SHLS	Shalkode	81.42	315	*e*P	P	14 09 50.9	-2.9
	comp=Z,44nm,1.5s,baz=316						
SHLS	Shalkode	81.42	315	*e*P	P	14 09 50.9	-2.9
SHLS				pmax	pmax		
	comp=Z,44nm,1.5s						
K20K	Telida	81.53	22	P	P	14 09 55.1	+1.3
	baz=235,SNR=15						
K20K	Telida	81.53	22	P	P	14 09 54.6	+0.8
K20K				IAmb	IAmb	14 09 56.3	
	comp=Z,52nm,0.9s						
SEW	Seward	81.65	26	P	P	14 09 55.1	+0.7
	baz=240,SNR=7.7						
SEW	Seward	81.65	26	P	P	14 09 55.1	+0.7
SEW				IAmb	IAmb	14 09 56.2	
	comp=Z,86nm,1.0s						
SEW	Seward	81.65	26	IAmb	IAmb	14 09 56.2	
	comp=Z,86nm,1.0s						
RDOG	Red Dog Mine	81.66	16	P	P	14 09 54.9	+0.5
	baz=226						
O22K	Cooper Landing	81.72	26	P	P	14 09 55.1	+0.3
	baz=240						
O22K	Cooper Landing	81.72	26	P	P	14 09 55.1	+0.3
UZB	Uzynbulak	81.72	315	*e*P	P	14 09 54.0	-1.6
	comp=Z,39nm,1.2s,baz=315						
UZB	Uzynbulak	81.72	315	*e*P	P	14 09 53.9	-1.6
UZB				pmax	pmax		
	comp=Z,39nm,1.2s						
SUA	Susitna One	81.80	24	P	P	14 09 55.2	-0.2
	baz=239,SNR=8.9						
SUA	Susitna One	81.80	24	P	P	14 09 55.1	-0.3
SUA				IAmb	IAmb	14 09 57.1	
	comp=Z,41nm,0.9s						
ZAA0	Zalesovo Array	81.93	327	P	P	14 09 55.0	-1.1
ZALV	Zalesovo Beam	81.93	327	P	P	14 09 54.9	-1.2
	comp=Z,7.4nm,0.6s,baz=114,slow=5.0,SNR=16						
ZALV				LR	LR	14 46 09.3	
	comp=Z,161nm,19.8s,baz=107,slow=36						
ZALV	Zalesovo Beam	81.93	327	P	P	14 09 54.6	-1.5
J20K	Nowinta River	81.97	21	P	P	14 09 57.4	+1.3
	baz=235,SNR=13						
J20K	Nowinta River	81.97	21	P	P	14 09 56.2	+0.1
J20K				IAmb	IAmb	14 09 58.6	
	comp=Z,66nm,0.9s						
PPLA	Purkeypile	81.98	23	P	P	14 09 56.8	+0.4
	baz=237						
PPLA	Purkeypile	81.98	23	P	P	14 09 56.8	+0.4
PPLA				IAmb	IAmb	14 10 02.6	
	comp=Z,29nm,1.0s						
RC01	Rabbit Creek A	82.02	25	P	P	14 09 56.8	+0.3
	baz=240,SNR=12						
RC01	Rabbit Creek A	82.02	25	P	P	14 09 56.4	-0.1
RC01				IAmb	IAmb	14 09 58.4	
	comp=Z,71nm,1.0s						
RC01	Rabbit Creek A	82.02	25	IAmb	IAmb	14 09 58.4	
	comp=Z,71nm,1.0s						
KPKS	Kokpek	82.06	316	*e*P	P	14 09 56.5	-0.7
	comp=Z,27nm,1.2s,baz=316						
KPKS	Kokpek	82.06	316	*e*P	P	14 09 56.4	-0.7
KPKS				pmax	pmax		
	comp=Z,27nm,1.2s						
SATY	Saty	82.13	315	*e*P	P	14 09 56.9	-0.7
	baz=315						
SATY	Saty	82.13	315	*e*P	P	14 09 56.8	-0.8
M22K	Willow	82.20	24	P	P	14 09 57.3	0.0
	baz=239,SNR=6.7						
CAST	Castle Rocks	82.31	22	P	P	14 09 57.9	0.0
	baz=237,SNR=23						
CAST	Castle Rocks	82.31	22	P	P	14 09 57.9	0.0
CAST				IAmb	IAmb	14 09 59.6	
	comp=Z,60nm,0.8s						
CHUM	Lake Minchumin	82.47	22	P	P	14 09 59.6	+0.9
	baz=237,SNR=26						
CUT	Chulitna	82.48	24	P	P	14 09 59.1	+0.3
	baz=239						
CUT	Chulitna	82.48	24	P	P	14 09 58.4	-0.4
CUT				IAmb	IAmb	14 09 60.0	
	comp=Z,71nm,0.9s						
PWL	Port Wells	82.50	26	P	P	14 09 59.5	+0.5
	baz=241,SNR=14						
PWL	Port Wells	82.50	26	P	P	14 09 59.6	+0.7
PMR	Palmer	82.53	25	P	P	14 09 59.1	+0.1
PMR				pmax	pmax		
	comp=Z,42nm,1.0s						
PMR	Palmer	82.53	25	P	P	14 09 59.2	+0.2
	baz=240,SNR=10						
PMR	Palmer	82.53	25	P	P	14 09 59.0	+0.1
PMR				IAmb	IAmb	14 10 00.3	
	comp=Z,42nm,1.0s						
GHO	Glory Hole Cre	82.70	25	P	P	14 09 59.8	-0.3
GHO				IAmb	IAmb	14 10 01.5	
	comp=Z,44nm,0.8s						
TDK	Taldyqorghan	82.71	317	*e*P	P	14 10 00.1	-0.4
	baz=317						
TDK	Taldyqorghan	82.71	317	*e*P	P	14 10 00.0	-0.4
KNK	Knik Glacier	82.72	25	P	P	14 10 00.6	+0.5
	baz=241						
KNK	Knik Glacier	82.72	25	P	P	14 10 00.4	+0.3
KNK				IAmb	IAmb	14 10 02.4	
	comp=Z,38nm,1.0s						
MAW	Mawson	82.76	203	P	P	14 10 01.0	+0.8
	comp=Z,12nm,0.9s,baz=85,slow=4.5,SNR=10						
MAW				pP	pP	14 10 12.1	+1.5
	comp=Z,20nm,1.0s,baz=91,slow=7.2,SNR=10						
MAW				LR	LR	14 44 43.1	
	comp=Z,325nm,20.5s,baz=63,slow=34						
MAW	Mawson	82.76	203	P	P	14 10 00.4	+0.3
	baz=83,SNR=7.9						
KTH	Kantishna Hill	82.82	23	P	P	14 10 00.3	-0.3
KTH				IAmb	IAmb	14 10 01.9	
	comp=Z,65nm,1.0s						
KTH	Kantishna Hill	82.82	23	IAmb	IAmb	14 10 01.9	
	comp=Z,65nm,1.0s						
ARXS	Arharly	82.87	316	*e*P	P	14 10 01.6	+0.2
KSH	Kashi	82.91	311	P	P	14 10 03.9	+2.2
KSH				pP	pP	14 10 10.2	-1.8
KSH				pmax	pmax		
	comp=Z,55nm,1.6s						
KSH				pmax	pmax		
	comp=Z,270nm,7.0s						
QSPA	South Pole Qui	82.93	180	P	P	14 10 01.3	-0.1
QSPA				IAmb	IAmb	14 10 13.7	
	comp=Z,19nm,0.7s						
SML	Sawmill	82.97	25	P	P	14 10 01.9	+0.5
	baz=241,SNR=17						
SML	Sawmill	82.97	25	P	P	14 10 01.9	+0.5
TRF	Thorofare Moun	83.01	23	P	P	14 10 01.3	-0.5
	baz=239,SNR=12						
TRF	Thorofare Moun	83.01	23	P	P	14 10 01.1	-0.7
TRF				IAmb	IAmb	14 10 03.8	
	comp=Z,42nm,0.9s						
TRF	Thorofare Moun	83.01	23	IAmb	IAmb	14 10 03.7	
	comp=Z,42nm,0.9s						
GLI	Glacier Island	83.04	26	P	P	14 10 02.0	+0.3
	baz=242						
GLI	Glacier Island	83.04	26	P	P	14 10 02.5	+0.8
BPAW	Bear Paw Mtn.	83.09	22	P	P	14 10 01.6	-0.3
	baz=238,SNR=10						
BPAW	Bear Paw Mtn.	83.09	22	P	P	14 10 01.3	-0.6
BPAW				IAmb	IAmb	14 10 02.9	
	comp=Z,39nm,1.1s						
BPAW	Bear Paw Mtn.	83.09	22	IAmb	IAmb	14 10 02.9	
	comp=Z,39nm,1.1s						
MDOK	Medeo	83.11	315	*e*P	P	14 10 02.5	-0.3
	baz=315						
MDOK	Medeo	83.11	315	*e*P	P	14 10 02.4	-0.3
IMAR	Indian Mountai	83.14	20	P	P	14 10 02.6	+0.5
TNSS	Tian-Shan	83.15	315	*e*P	P	14 10 03.4	+0.1
	baz=315						
AAA	Alma-Ata	83.22	315	*e*P	P	14 10 02.2	-1.0
	baz=315						
AAA	Alma-Ata	83.22	315	*e*P	P	14 10 02.2	-1.0
SEM	Semipalatinsk	83.24	323	*e*P	P	14 10 00.9	-2.5
	baz=323						
SEM	Semipalatinsk	83.24	323	*e*P	P	14 10 00.8	-2.5
H21K	Melozitna Rive	83.28	20	P	P	14 10 03.8	+0.8
	baz=236						
H21K	Melozitna Rive	83.28	20	P	P	14 10 03.0	+0.1
I21K	Tanana	83.31	21	P	P	14 10 03.9	+0.9
	baz=237,SNR=16						
I21K	Tanana	83.31	21	P	P	14 10 03.1	+0.1
I21K				IAmb	IAmb	14 10 06.7	
	comp=Z,68nm,1.0s						
CHKK	Chushkaly	83.35	316	*e*P	P	14 10 03.6	-0.1
	baz=316						
WAT1	Susitna Watana	83.38	24	P	P	14 10 03.2	-0.3
	baz=241						
SCM	Sheep Creek Mo	83.40	25	P	P	14 10 04.2	+0.5
SCM				pmax	pmax		
	comp=Z,88nm,1.0s						
SCM	Sheep Creek Mo	83.40	25	P	P	14 10 04.4	+0.8
	baz=242,SNR=8.4						
SCM	Sheep Creek Mo	83.40	25	P	P	14 10 04.2	+0.5
EYAK	Cordova Ski Ar	83.48	26	P	P	14 10 04.3	+0.3
	baz=243						
RND	Reindeer	83.55	23	P	P	14 10 04.1	-0.3
RND				pmax	pmax		
	comp=Z,85nm,0.9s						
RND	Reindeer	83.55	23	P	P	14 10 04.1	-0.3
WAT6	Susitna Watana	83.58	24	P	P	14 10 04.9	+0.2
	baz=241,SNR=12						
MLY	Manley	83.67	21	P	P	14 10 05.5	+0.5
	baz=238,SNR=22						
MCK	McKinley	83.68	23	P	P	14 10 04.7	-0.3
MCK				pmax	pmax		
	comp=Z,134nm,0.9s						
MCK	McKinley	83.68	23	P	P	14 10 04.8	-0.3
	baz=240,SNR=43						
MCK	McKinley	83.68	23	P	P	14 10 04.7	-0.3
BWN	Browne	83.69	22	P	P	14 10 05.2	+0.1
DIV	Divide	83.73	26	P	P	14 10 05.5	+0.1
KUU	Kurty	83.81	316	*e*P	P	14 10 05.7	-0.5
	baz=316						
KUU	Kurty	83.81	316	*e*P	P	14 10 05.6	-0.5
KLU	Klutina	83.83	26	P	P	14 10 06.0	0.0
	baz=243,SNR=21						
KLU	Klutina	83.83	26	P	P	14 10 05.9	0.0
DHY	Denali Highway	83.97	24	P	P	14 10 06.9	+0.3
	baz=242						
DHY	Denali Highway	83.97	24	P	P	14 10 06.2	-0.4
DHY				IAmb	IAmb	14 10 16.0	
	comp=Z,55nm,1.0s						
DHY	Denali Highway	83.97	24	IAmb	IAmb	14 10 16.0	
	comp=Z,55nm,1.0s						
M24K	Tolsona, Glenn	84.01	25	P	P	14 10 06.9	+0.2
	baz=243,SNR=7.7						
M24K	Tolsona, Glenn	84.01	25	P	P	14 10 06.8	0.0
NEA2	Nenana	84.06	22	P	P	14 10 06.4	-0.5
	baz=240,SNR=21						
NEA2	Nenana	84.06	22	IAMs_20	IAMs_20	14 54 34.5	
	comp=Z,368nm,19.0s						
TKM2	Tokmak 2	84.07	314	P	P	14 10 09.0	+1.3
	SNR=23						
BMRM	Bremner River	84.17	26	P	P	14 10 08.3	+0.7
	baz=244						
BMRM	Bremner River	84.17	26	P	P	14 10 07.8	+0.2
I23K	Minto, Yukon-K	84.23	22	P	P	14 10 07.9	+0.2
	baz=240						
KURK	Kurchatov	84.33	323	*d i*P	P	14 10 08.2	-0.3
KURK				pmax	pmax		
	comp=Z,79nm,1.3s						
KURK	Kurchatov	84.33	323	P	P	14 10 07.9	-0.6
KURK				IAmb	IAmb	14 10 10.2	
	comp=Z,63nm,1.1s						
KURBB	Kurchatov Arra	84.35	322	P	P	14 10 08.4	-0.3
	comp=Z,25nm,0.9s,baz=111,slow=3.9,SNR=34						
KURBB				pP	pP	14 10 20.0	+0.9
	comp=Z,12nm,0.9s,baz=116,slow=3.5,SNR=6.6						
BGLC	Bering Glacier	84.40	27	P	P	14 10 08.4	-0.3
	baz=246						
N25K	Chitina, Valde	84.45	26	P	P	14 10 09.6	+0.6
	baz=244,SNR=6.0						
N25K	Chitina, Valde	84.45	26	P	P	14 10 09.0	-0.1
N25K				IAmb	IAmb	14 10 20.6	
	comp=Z,42nm,1.1s						
N25K	Chitina, Valde	84.45	26	IAmb	IAmb	14 10 20.6	
	comp=Z,42nm,1.1s						
KBK	Karagaybulak	84.46	314	P	P	14 10 11.3	+1.7
	SNR=15						
H23K	Yukon River	84.51	21	P	P	14 10 09.3	+0.1
H23K				IAmb	IAmb	14 10 11.2	
	comp=Z,30nm,0.9s						
MDM	Murphy Dome	84.55	22	P	P	14 10 08.9	-0.5
MDM				IAmb	IAmb	14 10 10.2	
	comp=Z,36nm,1.2s						
MDM	Murphy Dome	84.55	22	IAmb	IAmb	14 10 10.1	
	comp=Z,36nm,1.2s						
CCB	Clear Creek Bu	84.56	22	P	P	14 10 08.6	-0.8
CCB				IAmb	IAmb	14 10 10.8	
	comp=Z,43nm,0.9s						
CCB	Clear Creek Bu	84.56	22	IAmb	IAmb	14 10 10.8	
	comp=Z,43nm,0.9s						
HARP	HAARP	84.56	25	P	P	14 10 10.4	+0.9
	baz=244						
TCOL	CIGO, UAF Yank	84.65	22	P	P	14 10 09.4	-0.5
	baz=241,SNR=13						
TCOL	CIGO, UAF Yank	84.65	22	P	P	14 10 09.3	-0.5
COLA	College	84.65	22	P	P	14 10 09.3	-0.5
	baz=241						
COLA	College	84.65	22	P	P	14 10 09.1	-0.7
UCH	Uchtor	84.67	314	P	P	14 10 12.9	+1.8
	SNR=50						
CHMS	Chumysh	84.69	314	P	P	14 10 11.8	+1.2
	SNR=37						
PAX	Paxson	84.69	24	P	P	14 10 10.3	0.0
PAX				pmax	pmax		
	comp=Z,24nm,1.1s						
PAX	Paxson	84.69	24	P	P	14 10 10.3	0.0
	baz=243,SNR=8.3						
PAX	Paxson	84.69	24	P	P	14 10 10.3	0.0
PAX				IAmb	IAmb	14 10 13.3	
	comp=Z,24nm,1.1s						
PAX	Paxson	84.69	24	IAmb	IAmb	14 10 13.3	
	comp=Z,24nm,1.1s						
GLB	Gilahina Butte	84.72	26	P	P	14 10 11.0	+0.6
FRU1	Bishkek	84.73	314	P	P	14 10 11.8	+0.9
FRU1				pmax	pmax		
	comp=Z,98nm,1.2s						
FRU1	Bishkek	84.73	314	P	P	14 10 11.8	+0.9
CRQM	Cirque	84.73	27	P	P	14 10 11.6	+1.0
WAX	Waxell Ridge	84.73	27	P	P	14 10 11.1	+0.6
CRQE	Cirque	84.75	27	P	P	14 10 10.5	-0.1
	baz=246						
HDA	Harding Lake	84.77	23	P	P	14 10 09.9	-0.6
	baz=242,SNR=6.5						
AAK	Ala-Archa	84.78	314	P	P	14 10 12.7	+1.5
	SNR=36						
AAK	Ala-Archa	84.78	314	*d i*P	P	14 10 12.1	+0.8
AAK				pmax	pmax		
	comp=Z,355nm,1.7s						
AAK	Ala-Archa	84.78	314	P	P	14 10 11.7	+0.4
AAK				IAmb	IAmb	14 10 13.6	
	comp=Z,57nm,0.9s						
VRDI	Verde Repeater	84.79	26	P	P	14 10 11.5	+0.6
TGL	Tana Glacier	84.87	27	P	P	14 10 11.2	-0.1
SGDS	Sogindy	84.89	315	*e*P	P	14 10 11.2	-0.5
	comp=Z,38nm,1.2s,baz=315						
POKR	Poker Plat Res	84.92	22	P	P	14 10 10.8	-0.5
	baz=241,SNR=8.6						
POKR	Poker Plat Res	84.92	22	P	P	14 10 10.5	-0.8
POKR				IAmb	IAmb	14 10 13.2	
	comp=Z,21nm,0.9s						
USP	Ospenovka	84.94	315	P	P	14 10 13.3	+1.4
	SNR=62						
ILAR	Eielson Array	84.96	22	P	P	14 10 10.8	-0.7
ILAR	Eielson Array	84.96	22	P	P	14 10 10.8	-0.7
COLD	Coldfoot	85.01	20	P	P	14 10 12.9	+1.2
	baz=239						
COLD	Coldfoot	85.01	20	P	P	14 10 12.1	+0.4
COLD				IAmb	IAmb	14 10 14.1	
	comp=Z,34nm,1.1s						
MCARA	McCarthy VSAT	85.04	26	P	P	14 10 12.8	+0.9
	baz=246,SNR=7.0						
H24K	Noodor Dome	85.11	21	P	P	14 10 12.5	+0.2
	baz=241						
H24K	Noodor Dome	85.11	21	P	P	14 10 11.4	-0.8
H24K				IAmb	IAmb	14 10 14.1	
	comp=Z,28nm,1.1s						
AML	Almayashu	85.23	313	P	P	14 10 14.9	+1.1
	SNR=112						
RIDG	Independent Ri	85.28	24	P	P	14 10 13.7	+0.5
	baz=244,SNR=5.1						
EKS2	Erkin-Say	85.30	314	P	P	14 10 14.9	+1.1
	SNR=53						
MENT	Mentasta	85.40	25	P	P	14 10 12.5	-1.2
MENT				IAmb	IAmb	14 10 15.7	
	comp=Z,37nm,1.2s						
A21K	Barrow	85.46	15	P	P	14 10 14.2	+0.5
	baz=232						
J25K	Salcha River,	85.47	23	P	P	14 10 14.4	+0.3
	baz=243,SNR=64						
M26K	Nabesna, AK	85.47	25	P	P	14 10 13.8	-0.4
DOT	Dot Lake	85.56	24	P	P	14 10 14.5	0.0
DOT				IAmb	IAmb	14 10 16.8	
	comp=Z,66nm,1.0s						
L26K	Log Cabin Wild	85.59	25	P	P	14 10 15.6	+0.9
	baz=245,SNR=15						
L26K	Log Cabin Wild	85.59	25	P	P	14 10 15.3	+0.6
CTG	Chitna Glacier	85.62	27	P	P	14 10 15.9	+0.9
	baz=247,SNR=12						
CTGM	Chitina Glacie	85.62	27	P	P	14 10 14.5	-0.6
BTLS	Baital	85.69	316	*e*P	P	14 10 14.8	-0.8
	comp=Z,111nm,1.5s,baz=316						
BTLS	Baital	85.69	316	*e*P	P	14 10 14.7	-0.8
BTLS				pmax	pmax		
	comp=Z,111nm,1.5s						
LOGN	Logan Glacier	85.72	27	P	P	14 10 14.9	-0.7
LOGN				IAmb	IAmb	14 10 23.7	
	comp=Z,54nm,1.0s						
SCRK	Sand Creek	85.73	24	P	P	14 10 15.9	+0.4
	baz=245,SNR=20						
SCRK	Sand Creek	85.73	24	P	P	14 10 15.1	-0.4
SCRK				IAmb	IAmb	14 10 18.1	
	comp=Z,24nm,0.9s						
PINM	Pinnacle	85.79	28	P	P	14 10 16.5	+0.8
	baz=248						
PRP	Porcupine Dome	85.82	22	P	P	14 10 15.4	-0.6
	baz=243						
PRP	Porcupine Dome	85.82	22	P	P	14 10 14.7	-1.2
PRP				IAMs_20	IAMs_20	14 48 25.1	
	comp=Z,326nm,19.0s						
M27K	Edge Creek, AK	85.93	26	P	P	14 10 17.8	+1.3
	baz=247,SNR=26						
M27K	Edge Creek, AK	85.93	26	P	P	14 10 17.4	+0.9
TOLK	Toolik Lake Re	85.95	18	P	P	14 10 17.2	+0.9
	baz=239						
TOLK	Toolik Lake Re	85.95	18	P	P	14 10 16.5	+0.1
TOLK				IAmb	IAmb	14 10 18.5	
	comp=Z,32nm,0.8s						
DRK	Karamyk	86.03	310	P	P	14 10 17.6	-0.2
DRK				IAmb	IAmb	14 10 19.7	
	comp=Z,81nm,1.2s						
PNL	Peninsula	86.03	29	P	P	14 10 17.8	+0.8
	baz=249						
J26L	Joseph Creek	86.12	23	P	P	14 10 18.1	+0.7
	baz=245,SNR=19						
L27K	Beaver Creek,	86.23	25	P	P	14 10 18.9	+1.0
	baz=247,SNR=19						
L27K	Beaver Creek,	86.23	25	P	P	14 10 18.2	+0.4
L27K				IAmb	IAmb	14 10 20.3	
	comp=Z,42nm,1.1s						
BCAR	Beaver Creek A	86.25	25	P	P	14 10 18.1	+0.1
YUK3	Moose Creek	86.32	26	P	P	14 10 20.0	+1.4
	baz=248,SNR=12						
BVCY	Beaver Creek	86.39	26	P	P	14 10 20.1	+1.5
	baz=248,SNR=6.0						
FYU	Fort Yukon	86.40	21	P	P	14 10 18.4	-0.2
FYU				IAmb	IAmb	14 10 20.7	
	comp=Z,85nm,1.2s						
BTK	Batken	86.89	311	P	P	14 10 20.9	-0.8
BTK				pmax	pmax		
	comp=Z,79nm,1.5s						
BTK	Batken	86.89	311	P	P	14 10 20.9	-0.8
BTK				IAmb	IAmb	14 10 23.2	
	comp=Z,79nm,1.5s						
YUK6	Outpost Mounta	86.97	27	P	P	14 10 21.6	-0.1
	baz=250						
YUK4	Talbot Arm	86.97	27	P	P	14 10 23.6	+1.9
	baz=250,SNR=9.4						
BMAR	Burnt Mountain	87.02	20	P	P	14 10 22.0	+0.4
GAR	Garm	87.06	310	P	P	14 10 21.9	-0.7
DZA	Taraz	87.11	314	*e*P	P	14 10 22.2	-0.5
	baz=314						
DZA	Taraz	87.11	314	*e*P	P	14 10 22.1	-0.5
EGAK	Eagle	87.18	23	P	P	14 10 23.4	+1.0
	baz=247,SNR=48						
EGAK	Eagle	87.18	23	P	P	14 10 22.5	+0.1
KBL	Kabul	87.22	305	P	P	14 10 21.9	-1.7
KBL				pmax	pmax		
	comp=Z,12nm,1.1s						
KBL	Kabul	87.22	305	P	P	14 10 21.9	-1.7
HYT	Haines Junctio	87.32	28	P	P	14 10 24.8	+1.5
	baz=251,SNR=20						
NRIK	Noril'sk	87.44	342	P	P	14 10 22.6	-1.0
	comp=Z,17nm,0.8s,baz=116,slow=4.4,SNR=25						
NRIK				LR	LR	14 50 14.9	
	comp=Z,138nm,19.7s,baz=117,slow=36						
NRIK	Noril'sk	87.44	342	*d i*P	P	14 10 22.6	-1.0
NRIK				pmax	pmax		
	comp=Z,37nm,1.1s						
NRIK	Noril'sk	87.44	342	P	P	14 10 22.8	-0.8
NRIK				IAmb	IAmb	14 10 24.3	
	comp=Z,28nm,1.0s						
DAWY	Dawson	87.62	24	P	P	14 10 26.0	+1.3
	baz=249,SNR=39						
KK31	Karatay Array	87.74	314	P	P	14 10 25.4	-0.2
KK31				pmax	pmax		
	comp=Z,88nm,1.2s						
KK31	Karatay Array	87.74	314	P	P	14 10 25.4	-0.2
KKAR	Karatay Array	87.74	314	P	P	14 10 25.2	-0.4
KKAR				pmax	pmax		
	comp=Z,88nm,1.2s						
KKAR	Karatay Array	87.74	314	P	P	14 10 25.6	0.0
KKAR	Karatay Array	87.74	314	P	P	14 10 25.2	-0.4
KKAR				IAmb	IAmb	14 10 27.2	
	comp=Z,88nm,1.2s						
BRZS	Berezniki	87.78	321	*e*P	P	14 10 23.4	-2.3
	baz=321						
BRZS	Berezniki	87.78	321	*e*P	P	14 10 23.3	-2.3

CHGR	Chuyangaron	87.88	309	P	P	14 10 25.9	-0.6
IUG	Iuzhnay	87.89	313	eP	P	14 10 26.2	-0.4
	baz=313						
IUG	Iuzhnay	87.89	313	eP	P	14 10 26.1	-0.4
SKAG	Skagway	87.92	29	P	P	14 10 26.9	+0.8
	baz=253						
SKAG	Skagway	87.92	29	P	P	14 10 26.2	+0.2
BRLS	Borolday	88.21	314	eP	P	14 10 26.5	-1.4
	baz=313						
BRLS	Borolday	88.21	314	eP	P	14 10 26.5	-1.4
M30M	Minto, Yukon	88.22	26	P	P	14 10 28.6	+1.1
	baz=251,SNR=28						
J29M	Klondike Camp	88.24	24	P	P	14 10 29.1	+1.5
	baz=250						
N31M	Braeburn, Yuko	88.32	27	P	P	14 10 29.5	+1.5
	baz=252,SNR=23						
WHY	Whitehorse	88.49	28	P	P	14 10 30.1	+1.2
	baz=253,SNR=12						
WHY	Whitehorse	88.49	28	P	P	14 10 29.0	+0.1
WHY				IAmb	IAmb	14 10 32.9	
	comp=Z,33nm,0.9s						
I29M	Ogilvie Camp,	88.52	23	P	P	14 10 29.5	+0.7
	baz=250						
WRAK	Wrangell Islan	88.60	33	P	P	14 10 30.4	+1.1
	baz=255						
M31M	Drury Creek, Y	89.17	27	P	P	14 10 32.7	+0.8
	baz=253,SNR=14						
P33M	Teslin, Yukon	89.35	29	P	P	14 10 33.8	+0.9
	baz=255,SNR=6.8						
EPYK	Eagle Plains	89.48	23	P	P	14 10 34.0	+0.7
	baz=251						
EPYK	Eagle Plains	89.48	23	P	P	14 10 33.3	0.0
EPYK				IAmb	IAmb	14 10 36.5	
	comp=Z,56nm,1.0s						
BVAR	Borovoye Array	89.85	323	P	P	14 10 34.8	-0.5
	comp=Z,6.5nm,0.8s,baz=180,slow=7.4,SNR=7.9						
BRVK	Borovoye	89.92	323	ceP	P	14 10 35.2	-0.4
BRVK				pmax	pmax		
	comp=Z,27nm,1.5s						
DLBC	Dease Lake	90.30	31	P	P	14 10 37.3	-0.1
	comp=Z,17nm,1.1s,baz=306,slow=2.4,SNR=7.9						
SYO	Syowa Base	90.91	200	⇓epP	P	14 10 44.0	+4.0
INK	Inuvik	91.24	21	P	P	14 10 41.1	-0.3
	comp=Z,29nm,1.0s,baz=234,slow=5.9,SNR=27						
INK	Inuvik	91.24	21	P	P	14 10 40.8	-0.6
INK				pmax	pmax		
	comp=Z,34nm,1.1s						
INK	Inuvik	91.24	21	P	P	14 10 41.5	+0.1
	baz=254						
INK	Inuvik	91.24	21	P	P	14 10 40.8	-0.6
INK				IAmb	IAmb	14 10 43.8	
	comp=Z,34nm,1.1s						
J01E	Myrtle Point	91.31	47	P	P	14 10 42.4	+0.2
	baz=262						
O02D	Mt. Diablo Mer	91.74	50	P	P	14 10 45.1	+0.6
	baz=262						
M02C	Callahan	91.85	49	P	P	14 10 44.3	-0.7
	baz=262						
N02D	Trinity Center	91.91	49	P	P	14 10 44.8	-0.5
	baz=262						
YBH	Yreka Blue Hor	92.00	48	P	P	14 10 46.5	+0.8
	comp=Z,5.4nm,1.1s,baz=190,slow=6.6,SNR=3.9						
YBH	Yreka Blue Hor	92.00	48	P	P	14 10 46.5	+0.8
YBH				pmax	pmax		
	comp=Z,16nm,1.4s						
G03D	McMinnville, O	92.07	45	P	P	14 10 45.3	-0.5
	baz=262						
H04D	Lebanon	92.35	46	P	P	14 10 46.9	-0.2
	baz=262						
L04D	Klamath Falls	92.37	48	P	P	14 10 47.3	-0.2
	baz=263						
O03E	Paynes Creek	92.50	50	P	P	14 10 47.8	-0.2
	baz=263						
J04D	Umpqua Nationa	92.64	47	P	P	14 10 47.7	-1.0
	baz=263						
ORV	Oroville	92.64	51	P	P	14 10 48.3	-0.3
ORV				pmax	pmax		
	comp=Z,18nm,1.5s						
ORV	Oroville	92.64	51	P	P	14 10 48.3	-0.3
M04C	Macdoel	92.66	48	P	P	14 10 48.5	-0.3
	baz=263						
E04D	Cinebar	92.73	44	P	P	14 10 49.1	+0.3
	baz=263						
HRA	Herat	92.76	304	P	P	14 10 48.6	-0.9
HRA				IAmb	IAmb	14 10 50.5	
	comp=Z,22nm,1.1s						
J05D	Fort Rock, OR	93.28	47	P	P	14 10 51.8	+0.1
	baz=264						
I05D	Terrebonne, OR	93.32	46	P	P	14 10 51.6	-0.1
	baz=264						
G05D	Wamic, OR	93.44	45	P	P	14 10 52.2	+0.1
	baz=264						
PKM	Mcpherson Peak	93.46	55	P	P	14 10 52.9	+0.2
	baz=264						
SBC	Santa Barbara	93.49	56	P	P	14 10 52.6	0.0
	baz=264						
PNTR	Pine Nut	94.06	51	P	P	14 10 54.1	-1.3
PNTR				IAmb	IAmb	14 10 57.9	
	comp=Z,17nm,1.1s						
VES	Vestal, Richgr	94.15	55	P	P	14 10 55.9	+0.3
	baz=264						
PAHR	Pah Rah Range	94.29	51	P	P	14 10 56.8	+0.5
CIS	Catalina Islan	94.46	57	P	P	14 10 57.7	+0.5
	baz=265						
ISA	Isabella, Lake	94.62	55	P	P	14 10 58.7	+0.8
ISA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
ISA	Isabella, Lake	94.62	55	P	P	14 10 58.7	+0.8
	baz=265						
ISA	Isabella, Lake	94.62	55	P	P	14 10 58.7	+0.8
A36M	Sachs Harbour	94.77	18	P	P	14 10 58.6	+1.0
	baz=262						
A36M	Sachs Harbour	94.77	18	P	P	14 10 57.5	-0.1
A36M				IAmb	IAmb	14 11 00.1	
	comp=Z,15nm,0.8s						
LHV	Little Huntoon	94.83	52	P	P	14 10 59.7	+1.0
LHV				IAmb	IAmb	14 11 01.6	
	comp=Z,20nm,1.1s						
EDW2	Edwards Air Fo	94.94	56	P	P	14 10 59.9	+0.6
	baz=265						
PNT	Penticton	95.00	41	P	P	14 10 54.1	-5.1
PNT				pmax	pmax		
	comp=Z,17nm,1.1s						
NVAR	Mina Array Bea	95.01	52	P	P	14 11 00.9	+1.2
	comp=Z,8.5nm,1.0s,baz=260,slow=6.0,SNR=39						
NVAR				LR	LR	14 48 33.1	
	comp=Z,170nm,19.1s,baz=273,slow=32						
NVAR	Mina Array Bea	95.01	52	P	P	14 11 00.4	+0.6
CWC	Cottonwood Cre	95.01	54	P	P	14 11 00.5	+0.7
	baz=265						
G08A	Pilot Rock	95.10	45	P	P	14 11 00.2	+0.3
G08A				IAmb	IAmb	14 11 01.8	
	comp=Z,17nm,1.5s						
NV11	Mina Array Sit	95.12	52	P	P	14 11 01.0	+0.8
NV11				IAmb	IAmb	14 11 02.7	
	comp=Z,22nm,1.2s						
KVN	Kaiserville	95.22	51	P	P	14 11 01.3	+0.6
KVN				pmax	pmax		
	comp=Z,17nm,1.4s						
KVN	Kaiserville	95.22	51	P	P	14 11 01.3	+0.6
KVN				IAmb	IAmb	14 11 02.9	
	comp=Z,18nm,1.4s						
J08A	Circle Bar Ran	95.29	47	P	P	14 11 01.3	+0.5
ABKAR	Akbulak array	95.85	319	P	P	14 11 01.4	-1.7
GSC	Goldstone, Bar	95.95	55	P	P	14 11 05.2	+1.2
	baz=266						
FURC	Furnace Creek,	95.99	54	P	P	14 11 05.5	+1.5
	baz=266						
MONP2	Monument Peak	96.08	58	P	P	14 11 06.0	+1.2
	baz=266						
PFO	Pinyon Flats O	96.11	57	P	P	14 11 05.4	+0.6
	comp=Z,6.3nm,1.0s,baz=255,slow=5.5,SNR=5.3						
PFO	Pinyon Flats O	96.11	57	P	P	14 11 06.0	+1.2
	baz=266						
TPFO	Pinon Flats	96.11	57	P	P	14 11 06.3	+1.5
	baz=266						
HEC	Hector,Ludlow	96.30	56	P	P	14 11 07.0	+1.4
	baz=266						
GEYT	Alibeck	96.41	307	P	P	14 11 05.7	-0.3
	comp=Z,5.6nm,0.9s,baz=105,slow=6.9,SNR=6.2						
GEYT	Alibeck	96.41	307	P	P	14 11 04.7	-1.3
GEYT				IAmb	IAmb	14 11 07.5	
	comp=Z,24nm,1.4s						
BELC	Belle Mtn. Jos	96.52	57	P	P	14 11 07.4	+0.7
	baz=266						
NEW	Newport	96.57	42	P	P	14 11 07.7	+1.2
	baz=267						
SWSC	Sam W. Stewart	96.61	58	P	P	14 11 09.4	+2.5
	baz=266						
TUQ	Turquoise Moun	96.68	55	P	P	14 11 08.1	+0.7
	baz=266						
GMRC	Granite Mounta	96.85	56	P	P	14 11 08.5	+0.3
	baz=266						
BC3	Big Chuckawall	96.95	57	P	P	14 11 09.8	+1.2
	baz=266						
ARU	Arti	97.06	326	P	P	14 11 06.9	-1.5
ARU						14 15 03.6	
ARU				S	SKSac	14 21 39.5	-2.8
ARU				SS	SS	14 29 08.7	+3.1
R11A	Troy Canyon, C	97.13	52	P	Pdif	14 11 09.7	+0.2
	baz=267						
AKTO	Aktyubinsk	97.16	320	P	P	14 11 07.9	-1.1
	comp=Z,6.4nm,1.1s,baz=73,slow=7.1,SNR=4.3						
IRM	Iron Mountain	97.23	56	P	Pdif	14 11 10.0	+0.2
	baz=266						
GLA	Glamis	97.43	58	P	Pdif	14 11 11.6	+0.9
	baz=266						
HLID	Hailey	98.25	47	P	Pdif	14 11 14.7	+0.3
	baz=268						
BOZ	Bozeman (W)	100.27	45	P	Pdif	14 11 23.6	+0.3
	baz=270						
BW06	Boulder Array	101.80	48	P	Pdif	14 11 29.8	-0.5
	baz=271						
PDAR	Pinedale Array	101.80	48	P	Pdif	14 11 29.9	-0.3
	comp=Z,0.7nm,0.6s,baz=241,slow=1.5,SNR=5.5						
PDAR				PP	PP	14 15 42.0	+0.7
	comp=Z,1.2nm,1.0s,baz=248,slow=4.8,SNR=5.1						
BELG	Belogornoye	103.60	322	Pdiff	Pdif	14 11 36.6	-1.0
	comp=Z,3.7nm,0.7s,baz=52,slow=7.6,SNR=3.9						
LAO	LASA Array	103.97	44	P	Pdif	14 11 39.7	+0.1
	baz=275						
RSSD	Black Hills	105.74	46	P	PKiKP	14 16 00.4	-0.1
	baz=276						
T25A	Trinidad	105.98	53	P	PKiKP	14 16 00.5	-0.6
	baz=273						
ARCES	ARCESS Array B	108.41	342	PKiKP	PKiKP	14 16 04.6	+0.1
	comp=Z,3.0nm,0.8s,baz=29,slow=2.1,SNR=3.7						
NACGM	Naroch	114.85	328	i PKP	PKPdf	14 16 23.4	+6.4
AKBB	Malin Array Si	115.13	323	⇓iPKIKP	PKiKP	14 16 16.2	-1.5
W41B	Gary Mavity, V	115.98	54	P	PKPdf	14 16 18.6	-1.2
	baz=280						
CCM	Cathedral Cave	116.22	51	P	PKPdf	14 16 18.9	-1.3
	baz=282						
KLNR	Kaliningrad	118.36	330	⇓iPKIKP	PKPdf	14 16 22.7	-1.0
DIVS	Divibare	123.50	319		PKPdf	14 16 33.0	-1.2
CLL	Collm	123.81	330	ePKIKP	PKPdf	14 16 34.0	-0.4
CLL	Collm	123.81	330	ePKPdf	PKPdf	14 16 34.0	-0.4
CLL				ePP	PP	14 18 19.0	+1.8
CLL				Lm	MLR	15 11 00.0	
	comp=Z,300nm,18.8s						
FNA	Florina	123.92	315	PKIKP	PKPdf	14 16 33.9	-1.1
FNA	Florina	123.92	315		PKPdf	14 16 33.9	-1.1
CKRC	Cesky Krumlov	124.56	326	ePKPDF	PKiKP	14 16 36.4	+0.1
KHC	Kasperske Hory	124.79	327	ePKIKP	PKiKP	14 16 36.9	+0.2
KHC	Kasperske Hory	124.79	327	ePKPDF	PKiKP	14 16 36.9	+0.2
GERES	GERESS Array B	124.88	327	PKP	PKPdf	14 16 36.5	-0.1
	comp=Z,2.2nm,0.7s,baz=48,slow=1.5,SNR=7.9						
STAL	STALIGIAL	126.89	325		PKPdf	14 16 40.0	-0.6
NRCA	Norcia	128.50	321		PKPdf	14 16 43.4	-0.4
LPAZ	La Paz	135.02	121	PKP	PKPdf	14 16 58.1	+0.6
	comp=Z,0.7nm,0.3s,baz=147,slow=2.2,SNR=4.8						
LPAZ	La Paz	135.02	121	PKIKP	PKPdf	14 16 57.2	-0.3
LPAZ	La Paz	135.02	121		PKPdf	14 16 57.2	-0.3
ESDC	Sonseca Array	140.40	329	PP	PP	14 20 04.9	+1.0
	comp=Z,0.6nm,0.7s,baz=46,slow=7.3,SNR=4.0						
PTGA	Pitinga	148.33	103		PKPbc	14 17 23.2	-0.7
BOAV	Boa Vista	148.43	97	PKPbc	PKPbc	14 17 23.8	-0.4
TORD	Torodi Ar. Bea	149.03	284	PKP	PKPdf	14 17 21.1	-0.5
	comp=Z,34nm,0.8s,baz=60,slow=2.4,SNR=5.6						
TORD				PKPbc	PKPbc	14 17 25.6	0.0
	comp=Z,27nm,0.7s,baz=71,slow=2.3,SNR=133						
TORD				pPKPbc	pPKPbc	14 17 37.5	+1.0
	comp=Z,13nm,0.9s,baz=56,slow=4.2,SNR=13						
TORD				PP	PP	14 20 57.9	+0.8
	comp=Z,4.2nm,1.0s,baz=63,slow=5.4,SNR=7.3						
TORD	Torodi Ar. Bea	149.03	284	PKPbc	PKPbc	14 17 24.8	-0.8
BDFB	Brasilia	150.74	140	PKPbc	PKPbc	14 17 30.2	+0.3
	comp=Z,9.7nm,0.6s,baz=186,slow=1.7,SNR=11						
BDFB				pPKPbc	pPKPbc	14 17 41.9	+1.2
	comp=Z,9.1nm,0.7s,baz=153,slow=4.5,SNR=6.4						
BDFB	Brasilia	150.74	140	PKIKP	PKPbc	14 17 29.8	-0.1
BDFB	Brasilia	150.74	140	PKPbc	PKPbc	14 17 29.8	-0.1
KIC	Kosan Boka	155.72	270	ePKP2	PKPab	14 17 58.6	+0.6
	comp=Z,28nm,0.6s						
DBIC	Dimbokro	155.85	271	PKPab	PKPab	14 17 58.8	+0.3
	comp=Z,8.3nm,0.7s,baz=114,slow=4.7,SNR=9.6						
DBIC				pPKPab	pPKPab	14 18 10.5	+1.4
	comp=Z,9.0nm,0.6s,baz=90,slow=2.7,SNR=5.6						
LIC	Lamto	156.00	269	ePKP2	PKPab	14 17 59.7	+0.5
	comp=Z,60nm,1.3s						
TIC	Toumodi	156.01	271	ePKP2	PKPab	14 17 59.8	+0.5

NNC ***09*** *13:58:40.7±1.7, 36°.99N×71°.09E, h0km, mb5.4, mpv5.4 Error ellipse: s-maj=17.0km s-min=9.0km az=158.0*

IDC ***09*** *13:58:42.0±2.6, 36°.49N×71°.42E, h164km±23km, mb4.1/25, mb1 4.2/31, mb1mx4.0/61, mbtmp4.7/31, MS3.4/6, Ms1 3.5/6, ms1mx2.9/54, Error ellipse: s-maj=14.3km s-min=9.6km az=178.0*

MOS ***09*** *13:58:43.7±0.9, 36°.70N×71°.49E, h187km, mb4.7/32, Error ellipse: s-maj=5.7km s-min=3.6km az=92.6*

BJI ***09*** *13:58:45.6±0.0, 36°.86N×71°.49E, h199km, mB4.7/12, mb4.3/18*

NEIC ***09*** *13:58:45.5±1.4, 36°.72N±0°.05×71°.36E±0°.08, h186km±4km, mb4.6/86, Error ellipse: s-maj=9.6km s-min=7.0km az=107.0*

SOME ***09*** *13:58:49.1, 37°.33N×71°.68E, h0km*

ISC 09 13:58:45.9±0.3**, 36°.75N**±0°.03×**71°.34E**±0°.03**, h200km, n478, σ1^{s}.89**/511**, mb4.5**/93**, 52C-39D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAR	Garm	2.39	340		Pn	13 59 27.6	-1.0
CHGR	Chuyangaron	2.57	318	Pn	Pn	13 59 29.3	-1.4
DRK	Karamyk	2.75	7		Pn	13 59 32.2	-0.6
KBL	Kabul	2.89	221	PN	Pn	13 59 33.2	-1.3
KBL	Kabul	2.89	221	P	Pn	13 59 33.5	-1.1
KBL	Kabul	2.89	221		Pn	13 59 33.2	-1.3
CEP	Cherat	2.96	171	⇓P	Pn	13 59 33.9	-1.3
BTK	Batken	3.33	353	PN	Pn	13 59 39.3	-0.1
BTK	Batken	3.33	353	Pn	Pn	13 59 39.3	-0.1
CHCP	Chirah Chowk	3.46	152	P	Pn	13 59 40.2	-1.0
THW	Thamme Wali	3.96	175	⇓P	Pn	13 59 46.0	-1.3
KSH	Kashi	4.58	52	P	Pn	13 59 48.9	-6.1
KSH				S	Sn	14 00 36.5	-13
KSH				smax	smax		
	comp=N,3µm,0.4s						
KSH				smax	smax		
	comp=E,2µm,0.4s						
SARP	Sargodha	4.94	167	⇓P	Pn	13 59 57.5	-2.1
JMU	Jammu	4.98	143	eP	Pn	13 59 58.5	-1.5
JMU				eS	Sn	14 00 53.5	-4.9
IUG	Iuzhnay	5.48	350	eP	Pn	14 00 06.0	-0.4
	24µm,0.3s						
IUG				eS	Sn	14 01 06.4	-3.8
	3µm,0.5s						
IUG	Iuzhnay	5.48	350	⇓iP	Pn	14 00 05.9	-0.6
	baz=348						
IUG				eS	Sn	14 01 06.5	-3.8
	baz=348						
IUG	Iuzhnay	5.48	350	d iPN	Pn	14 00 05.9	-0.6
AML	Almayashu	5.67	18	P	Pn	14 00 07.5	-1.7
	SNR=1679						
AML	Almayashu	5.67	18	i P	Pn	14 00 08.1	-1.1
	SNR=1754						
AML	Almayashu	5.67	18	P	Pn	14 00 08.1	-1.1
CHM	Chimkent	5.72	347	eP	Pn	14 00 09.0	-0.4
	baz=345						
CHM				eS	Sn	14 01 12.3	-3.3
	baz=345						
CHM	Chimkent	5.72	347	ePN	Pn	14 00 09.0	-0.4
UCH	Uchtor	5.99	23	P	Pn	14 00 12.1	-1.3
	SNR=876						
DZA	Taraz	6.13	360	eP	Pn	14 00 14.2	-0.6
	1µm,0.3s						
DZA				eS	Sn	14 01 20.4	-4.8
	4µm,0.4s						
DZA	Taraz	6.13	360	eP	Pn	14 00 14.0	-0.8
	baz=359						
DZA				eS	Sn	14 01 20.5	-4.7
	baz=359						
DZA	Taraz	6.13	360	ePN	Pn	14 00 13.9	-0.8
MRKS	Merke	6.16	13	eP	Pn	14 00 14.4	-0.8
	361nm,0.3s						
MRKS				eS	Sn	14 01 21.3	-4.7
	2µm,0.5s						
EKS2	Erkin-Say	6.19	17	P	Pn	14 00 14.8	-0.9
	SNR=332						
AAK	Ala-Archa	6.36	21	P	Pn	14 00 16.8	-1.0
	160nm,0.3s,baz=188,slow=5.6,SNR=1241						
AAK				S	Sn	14 01 26.3	-4.4
	40nm,0.3s,baz=139,slow=23,SNR=21						
AAK				LR	LR	14 02 37.7	
	comp=Z,78nm,18.9s,baz=216,slow=36						
AAK	Ala-Archa	6.36	21	P	Pn	14 00 17.1	-0.7
	SNR=520						
AAK	Ala-Archa	6.36	21	i P	Pn	14 00 17.1	-0.7
	SNR=782						
AAK	Ala-Archa	6.36	21	c iPN	Pn	14 00 16.9	-1.0
AAK				pmax	pmax		
	comp=Z,71nm,0.5s						
AAK	Ala-Archa	6.36	21	P	Pn	14 00 17.5	-0.4
AAK	Ala-Archa	6.36	21	⇑P	Pn	14 00 14.9	-2.9
	comp=Z,128nm,0.3s						
AAK				⇑S	Sn	14 01 26.3	-4.4
	comp=Z,291nm,0.5s						
AAK	Ala-Archa	6.36	21		Pn	14 00 17.0	-0.9
KK31	Karatay Array	6.38	355	PN	Pn	14 00 16.9	-1.0
KK31	Karatay Array	6.38	355	⇓P	Pn	14 00 13.9	-4.1
	comp=Z,286nm,0.5s,baz=175,slow=12,SNR=2809						
KK31				⇓S	Sn	14 01 25.6	-5.3
	comp=Z,320nm,0.5s,baz=174,slow=23,SNR=22						
KK31	Karatay Array	6.38	355		Pn	14 00 16.9	-1.0
KKAR	Karatay Array	6.38	355	PN	Pn	14 00 16.9	-1.0
KKAR	Karatay Array	6.38	355		Pn	14 00 16.9	-1.0
BRLS	Borolday	6.38	350	eP	Pn	14 00 13.8	-4.1
	comp=Z,426nm,0.2s						
BRLS				eS	Sn	14 01 20.1	-11
	comp=Z,490nm,0.3s						
BRLS	Borolday	6.38	350	eP	Pn	14 00 13.8	-4.1
	baz=347						
BRLS				eS	Sn	14 01 20.3	-11
	baz=347						
BRLS	Borolday	6.38	350	ePN	Pn	14 00 13.7	-4.2
KBK	Karagaybulak	6.52	24	P	Pn	14 00 18.8	-1.2
	SNR=200						
FRU1	Bishkek	6.56	22	PN	Pn	14 00 19.7	-0.6
FRU1	Bishkek	6.56	22		Pn	14 00 19.7	-0.6
ULHL	Ulahol	6.67	33	P	Pn	14 00 20.6	-1.3
	SNR=18						
CHMS	Chumysh	6.77	22	P	Pn	14 00 22.0	-1.1
	SNR=106						
BHK	Bhakra	6.78	140	eP	Pn	14 00 19.0	-4.4
BHK				eS	Sn	14 01 36.2	-4.4
USP	Ospenovka	6.94	19	P	Pn	14 00 23.7	-1.6
	SNR=168						
TKM2	Tokmak 2	6.98	27	P	Pn	14 00 24.7	-1.2
	SNR=355						
TKM2	Tokmak 2	6.98	27	⇑P	Pn	14 00 23.3	-2.6
	comp=Z,135nm,0.5s						
TKM2				⇑S	Sn	14 01 40.8	-4.5
	comp=Z,198nm,0.7s						
SGDS	Sogindy	7.15	20	⇑iP	Pn	14 00 26.2	-1.8
	baz=20						
SGDS				eS	Sn	14 01 44.4	-4.8
	baz=20						
KST	Kastek	7.22	28	eP	Pn	14 00 28.1	-0.9
	comp=Z,124nm,0.4s						
KST				eS	Sn	14 01 45.8	-5.1
	comp=Z,214nm,0.7s						
DGS	Degeres	7.32	26	eP	Pn	14 00 29.2	-1.1
	comp=Z,45nm,0.5s						
DGS				eS	Sn	14 01 48.0	-5.2
	comp=Z,82nm,0.9s						
TNSS	Tian-Shan	7.61	33	eP	Pn	14 00 32.5	-1.9
	baz=34						
AAA	Alma-Ata	7.74	32	eP	Pn	14 00 34.9	-0.8
	baz=33						
AAA	Alma-Ata	7.74	32	ePN	Pn	14 00 34.9	-0.8
MDOK	Medeo	7.76	33	eP	Pn	14 00 34.7	-1.4
	baz=33						
MDOK	Medeo	7.76	33	ePN	Pn	14 00 34.6	-1.4
MDOK	Medeo	7.76	33	⇑P	Pn	14 00 35.0	-1.0
	comp=Z,65nm,0.6s						
MDOK				S	Sn	14 02 02.7	-1.0
	comp=Z,38nm,0.7s						
KNDC	Almaty	7.77	32	⇓P	Pn	14 00 36.2	+0.2
	comp=Z,217nm,0.9s						
KNDC				⇑S	Sn	14 02 03.9	+0.2
	comp=Z,235nm,0.8s						
HRA	Herat	7.78	255	Pn	Pn	14 00 35.6	-0.9
PRZ	Przheval'sk	7.90	41	PN	Pn	14 00 37.2	-0.7
PRZ	Przheval'sk	7.90	41	Pn	Pn	14 00 37.2	-0.7
KUU	Kurty	8.09	27	eP	Pn	14 00 38.1	-2.1
	baz=27						
KUU	Kurty	8.09	27	ePN	Pn	14 00 38.0	-2.1
CHKK	Chushkaly	8.30	30	eP	Pn	14 00 40.5	-2.5
	baz=30						
SATY	Saty	8.31	39	eP	Pn	14 00 41.3	-2.0
	baz=40						
SATY				eS	Sn	14 02 12.9	-3.9
	baz=40						
SATY	Saty	8.31	39	ePN	Pn	14 00 41.2	-2.0
BTLS	Baital	8.53	13	⇓iP	Pn	14 00 44.4	-1.5
	baz=13						
BTLS				eS	Sn	14 02 16.4	-5.2
	baz=13						
BTLS	Baital	8.53	13	d iPN	Pn	14 00 44.4	-1.5
UZB	Uzynbulak	8.69	40	eP	Pn	14 00 46.4	-1.8
	baz=41						
UZB	Uzynbulak	8.69	40	ePN	Pn	14 00 46.4	-1.8
KPKS	Kokpek	8.75	38	eP	Pn	14 00 47.0	-1.9
	baz=39						
KPKS	Kokpek	8.75	38	ePN	Pn	14 00 47.0	-1.9
SHLS	Shalkode	8.93	42	eP	Pn	14 00 52.2	+0.9
	baz=44						
SHLS	Shalkode	8.93	42	eP	Pn	14 00 52.1	+0.9
ARXS	Arharly	8.94	32	ePN	Pn	14 00 49.6	-1.7
PDGK	Podgornoye	9.06	41	⇓P	Pn	14 00 51.7	-1.3
	comp=Z,17nm,0.7s						
PDGK				⇑S	Sn	14 02 33.4	-1.2
	comp=Z,50nm,0.9s						
NDI	New Delhi	9.44	147	eP	Pn	14 00 55.0	-2.9
NDI				eP	Pn	14 00 55.3	-2.6
NDI				eS	Sn	14 02 32.0	-12
AYAN	Aya Nagar	9.58	148	eP	Pn	14 00 56.7	-2.9
AYAN				eS	Sn	14 02 35.6	-11
KUDL	Kundal	9.62	152	eP	Pn	14 00 57.3	-2.9
KUDL				eS	Sn	14 02 36.7	-11
KUDL				IAML		14 02 42.1	
	comp=N,0.0nm,0.3s						
SONA	Sohna	9.76	149	eP	Pn	14 00 59.5	-2.6
SONA				eS	Sn	14 02 39.4	-12
JASL	Jaisalmer	9.80	182	eP	Pn	14 00 59.7	-3.0
TDK	Taldyqorghan	9.82	31	eP	Pn	14 01 00.9	-1.8
	baz=31						
TDK	Taldyqorghan	9.82	31	eP	Pn	14 01 00.9	-1.8
GEYT	Alibeck	10.60	280	P	Pn	14 01 10.1	-2.7
	comp=N,7.0nm,0.3s,baz=112,slow=11,SNR=48						
GEYT				S	Sn	14 03 03.6	-7.5
	comp=N,12nm,0.3s,baz=106,slow=19,SNR=3.6						
GEYT				LR	LR	14 06 04.6	
	comp=N,57nm,18.5s,baz=320,slow=41						
GYA0B	ALIBECK ARRAY	10.60	280	⇓P	Pn	14 01 10.0	-2.8
GYA0B				⇑S	Sn	14 03 07.5	-3.6
GYA0B	ALIBECK ARRAY	10.60	280	Pn	Pn	14 01 09.8	-3.0
AJM	Ajmer	10.62	164	eP	Pn	14 01 10.5	-2.7
MAKZ	Makanchi	12.79	35	P	Pn	14 01 38.9	-1.7
MAKZ	Makanchi	12.79	35	⇑P	Pn	14 01 41.2	+0.6
	comp=N,32nm,0.7s						
MAKZ	Makanchi	12.79	35	Pn	Pn	14 01 38.9	-1.7
MK31	Makanchi Array	12.93	36	c iP	Pn	14 01 41.2	-1.1
MK31	Makanchi Array	12.93	36	⇓P	Pn	14 01 43.3	+1.0
	comp=N,11nm,0.5s,baz=213,slow=9.3,SNR=129						
MK31	Makanchi Array	12.93	36		Pn	14 01 41.1	-1.2
MKAR	Makanchi Array	12.93	36	P	Pn	14 01 41.2	-1.1
	comp=N,1.5nm,0.3s,baz=218,slow=12,SNR=47						
MKAR	Makanchi Array	12.93	36		Pn	14 01 40.9	-1.4
PYUN	Piuthan	13.07	128	eP	Pn	14 01 40.9	-3.6
	comp=N,298nm,0.3s						
BRZS	Berezniki	13.26	4	eP	Pn	14 01 44.6	-1.9
	baz=3.4						
BRZS	Berezniki	13.26	4	eP	Pn	14 01 44.5	-1.9
DANN	Dangsing	13.40	125	eP	Pn	14 01 45.9	-2.8
	comp=N,184nm,0.2s						

KOLN	**Koldanda**	**13.69**	**127**	*e*P	**Pn**	**14 01 49.6**	**-2.6**
GKN	**Gorkha**	**14.21**	**124**	*e*P	**Pn**	**14 01 56.5**	**-2.1**
	comp=N,153nm,0.4s						
WMQ	**Urumqi**	**14.33**	**55**	*e*P	**Pn**	**14 01 58.8**	**-1.0**
WMQ				pmax	pmax		
	comp=N,18nm,0.9s						
WMQ				pmax	pmax		
	comp=N,180nm,5.3s						
ZSN	**Zaisan**	**14.64**	**39**	*e*P	**Pn**	**14 02 03.1**	**-0.4**
	baz=40						
ZSN	**Zaisan**	**14.64**	**39**	*e*P	**Pn**	**14 02 03.1**	**-0.4**
KKN	**Kakani**	**14.78**	**123**	*e*P	**Pn**	**14 02 03.8**	**-1.9**
DMN	**Daman**	**14.78**	**124**	*e*P	**Pn**	**14 02 04.0**	**-1.7**
KURBB	**Kurchatov Arra**	**14.80**	**18**	P	**Pn**	**14 02 02.8**	**-2.6**
	comp=N,2.3nm,0.3s,baz=208,slow=11,SNR=51						
KURBB				S	**S**	**14 04 44.4**	**-5.2**
	baz=206,slow=23,SNR=2.3						
KURBB	**Kurchatov Arra**	**14.80**	**18**	⇓P	**P**	**14 02 09.0**	**+2.7**
	comp=N,32nm,0.5s						
KURK	**Kurchatov**	**14.90**	**18***c*	*i*P	**Pn**	**14 02 04.9**	**-1.8**
KURK				pmax	pmax		
	comp=Z,48nm,1.3s						
KURK	**Kurchatov**	**14.90**	**18**	P	**Pn**	**14 02 04.6**	**-2.1**
KURK	**Kurchatov**	**14.90**	**18**	⇑P	**P**	**14 02 08.8**	**+1.3**
	comp=Z,29nm,0.8s						
KURK	**Kurchatov**	**14.90**	**18**	Pn	**Pn**	**14 02 04.0**	**-2.8**
PKIN	**Phulchoki**	**15.00**	**124**	*e*P	**Pn**	**14 02 06.5**	**-1.9**
	comp=Z,120nm,0.4s						
AB31	**Akbulak array**	**15.00**	**330**	⇑P	**Pn**	**14 02 08.1**	**+0.2**
	comp=Z,20nm,0.4s,baz=139,slow=10,SNR=1307						
AB31				⇑S	**S**	**14 04 52.7**	**-1.6**
	comp=Z,50nm,0.7s,baz=147,slow=23,SNR=18						
ABKAR	**Akbulak array**	**15.00**	**330**	Pn	**Pn**	**14 02 06.3**	**-1.6**
PKI	**Pulchoki**	**15.01**	**124**	*e*P	**Pn**	**14 02 07.0**	**-1.6**
	comp=Z,95nm,0.3s						
SEM	**Semipalatinsk**	**15.08**	**22**	*e*P	**Pn**	**14 02 07.9**	**-1.3**
	baz=23						
SEM	**Semipalatinsk**	**15.08**	**22**	*e*P	**Pn**	**14 02 07.8**	**-1.3**
JIRN	**Jiri**	**15.48**	**122**	*e*P	**Pn**	**14 02 12.7**	**-1.6**
	comp=Z,237nm,0.4s						
RAMN	**Ramite**	**16.21**	**123**	*e*P	**P**	**14 02 21.3**	**-1.2**
BVAR	**Borovoye Array**	**16.29**	**358**	P	**Pn**	**14 02 23.2**	**-0.2**
	comp=Z,9.7nm,0.3s,baz=189,slow=18,SNR=75						
BVAR				S	**S**	**14 05 19.6**	**-3.4**
	comp=Z,1.9nm,0.3s,baz=181,slow=29,SNR=4.5						
BRVK	**Borovoye**	**16.32**	**358**	⇑*e*P	**P**	**14 02 23.3**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,86nm,1.0s						
BRVK	**Borovoye**	**16.32**	**358**	P	**Pn**	**14 02 24.0**	**+0.2**
BRVK	**Borovoye**	**16.32**	**358**	⇓P	**Pn**	**14 02 26.9**	**+3.1**
	comp=Z,101nm,1.1s						
BRVK	**Borovoye**	**16.32**	**358**	P	**P**	**14 02 22.8**	**-0.3**
AKTO	**Aktyubinsk**	**16.70**	**329**	P	**Pn**	**14 02 28.9**	**+0.5**
	comp=Z,15nm,0.3s,baz=139,slow=10,SNR=241						
AKTO				S	**S**	**14 05 27.6**	**-3.9**
	comp=Z,1.0nm,0.3s,baz=120,slow=17,SNR=2.8						
AKTO				LR	LR	14 09 47.0	
	comp=Z,52nm,20.2s,baz=261,slow=39						
AKTO	**Aktyubinsk**	**16.70**	**329**	⇓P	**Pn**	**14 02 30.4**	**+2.0**
	comp=Z,117nm,0.9s						
AKTO				⇓S	**Sn**	**14 05 34.4**	**-1.9**
	comp=Z,56nm,0.7s						
TAPN	**Taplejung**	**16.73**	**119**	*e*P	**P**	**14 02 27.8**	**-0.3**
	comp=Z,107nm,0.4s						
BANOM	**Banah**	**16.76**	**234**	*i* P	**P**	**14 02 27.8**	**-0.4**
	SNR=16						
BANOM	**Banah**	**16.76**	**234**	P	**Pn**	**14 02 28.8**	**-0.6**
SHME	**Shamm**	**16.78**	**235**	*i* P	**P**	**14 02 28.1**	**-0.3**
	SNR=7.2						
ODAN	**Odare**	**16.81**	**121**	*e*P	**Pn**	**14 02 29.1**	**-1.1**
	comp=Z,159nm,0.6s						
MDH	**Madha**	**17.20**	**233**	P	**P**	**14 02 32.4**	**-0.6**
MDH	**Madha**	**17.20**	**233**	P	**Pn**	**14 02 33.5**	**-1.0**
MASF	**Masafi**	**17.23**	**233**	P	**Pn**	**14 02 35.1**	**+0.1**
MSFE	**Esma-Masafi**	**17.24**	**233**	*i* P	**P**	**14 02 33.1**	**-0.4**
	SNR=8.2						
WSAR	**Wadi Sarin**	**17.37**	**223**	P	**Pn**	**14 02 35.9**	**-0.7**
	comp=Z,1.0nm,0.3s,baz=82,slow=6.3,SNR=17						
WSAR	**Wadi Sarin**	**17.37**	**223**	P	**Pn**	**14 02 37.1**	**+0.5**
DGZ	**Jazzator, Alta**	**17.41**	**37***d*	*i*P	**Pn**	**14 02 36.3**	**-0.7**
DGZ				pmax	pmax		
	comp=Z,27nm,1.2s						
UOSS	**Minazif**	**17.51**	**232**	*i* P	**Pn**	**14 02 36.8**	**-1.3**
	SNR=7.3						
UOSS	**Minazif**	**17.51**	**232**	P	**Pn**	**14 02 36.9**	**-1.3**
UOSS	**Minazif**	**17.51**	**232**	P	**P**	**14 02 36.1**	**-0.2**
UOSS				IAmb	IAmb	14 02 40.6	
	comp=Z,36nm,0.8s						
HATD	**Hatta, Dubai**	**17.64**	**232**	P	**Pn**	**14 02 38.7**	**-1.0**
HATD	**Hatta, Dubai**	**17.64**	**232**	P	**Pn**	**14 02 39.0**	**-0.7**
WBK	**Wadi Bani Khal**	**17.70**	**221**	P	**Pn**	**14 02 41.7**	**+1.2**
ASHO	**Ashiyiah**	**17.79**	**232**	*i* P	**Pn**	**14 02 40.1**	**-1.3**
	SNR=39						
ASHO	**Ashiyiah**	**17.79**	**232**	P	**Pn**	**14 02 40.4**	**-1.1**
	SNR=20						
SMDO	**Samad**	**17.83**	**224**	P	**Pn**	**14 02 41.3**	**-0.8**
HOQ	**Hoqain**	**17.84**	**227**	P	**Pn**	**14 02 41.6**	**-0.5**
JLN	**Jalan Bani Buh**	**17.86**	**219**	P	**Pn**	**14 02 42.1**	**-0.1**
SOHO	**SOHO**	**17.89**	**229**	P	**P**	**14 02 39.9**	**-0.6**
SOHO	**SOHO**	**17.89**	**229**	P	**P**	**14 02 40.1**	**-0.4**
LSA	**Lhasa**	**17.99**	**107**	P	**P**	**14 02 42.0**	**0.0**
LSA				pmax	pmax		
	comp=Z,14nm,0.7s						
LSA	**Lhasa**	**17.99**	**107**	P	**P**	**14 02 42.0**	**0.0**
LSA				IAmb	IAmb	14 02 46.9	
	comp=Z,14nm,0.7s						
FAQ	**Al Faqa, Dubai**	**18.04**	**233**	P	**P**	**14 02 42.3**	**+0.1**
FAQ	**Al Faqa, Dubai**	**18.04**	**233**	P	**P**	**14 02 42.6**	**+0.5**
ASUD	**Al Ashush, Dub**	**18.29**	**233**	*i* P	**P**	**14 02 44.8**	**-0.1**
	SNR=7.5						
ASUD	**Al Ashush, Dub**	**18.29**	**233**	P	**Pn**	**14 02 46.1**	**-1.2**
	SNR=12						
JMDO	**Jabal Madar**	**18.36**	**222**	P	**Pn**	**14 02 47.3**	**-0.8**
ALNE	**Al Ain**	**18.43**	**231**	*i* P	**P**	**14 02 46.6**	**+0.1**
	SNR=8.6						
ALNE	**Al Ain**	**18.43**	**231**	P	**P**	**14 02 47.0**	**+0.6**
ARQ	**Araqi**	**18.50**	**228**	P	**Pn**	**14 02 48.5**	**-1.3**
BSY	**Bisya**	**18.56**	**225**	P	**Pn**	**14 02 49.5**	**-1.1**
MAK	**Makhachkala**	**19.29**	**296**	*e*P	**P**	**14 02 57.0**	**+1.5**
MAK				*e*S	**S**	**14 06 25.6**	**+2.7**
MAK				pmax	pmax		
	comp=Z,139nm,1.0s						
MAK				MLR	MLR		
	comp=Z,108nm,14.0s						
MHTO	**MHTO**	**19.56**	**220**	P	**Pn**	**14 03 00.2**	**-2.2**
ZAA0	**Zalesovo Array**	**19.57**	**24**	P	**P**	**14 02 58.4**	**0.0**
ZALV	**Zalesovo Beam**	**19.57**	**24**	P	**P**	**14 02 58.5**	**+0.2**
	comp=Z,8.1nm,0.3s,baz=222,slow=11,SNR=114						
UMZA	**Um Al Zommool**	**19.79**	**229**	P	**P**	**14 03 00.9**	**-0.1**
MZWR	**Madinat Zayed**	**19.84**	**234**	P	**P**	**14 03 01.9**	**+0.4**
HYB	**Hyderabad**	**20.29**	**160**	*i* P	**P**	**14 03 07.0**	**+0.6**
GHWR	**Ruwais**	**20.36**	**236**	P	**P**	**14 03 07.3**	**+0.2**
SHMA	**Al-Shehemyia**	**20.48**	**244**	P	**P**	**14 03 07.9**	**-0.4**
GROC	**Groznyy**	**20.57**	**296**	*e*P	**P**	**14 03 10.9**	**+1.8**
GROC				*e**PP	**pP**	**14 03 41.6**	**-1.1**
GROC				pmax	pmax		
	comp=Z,52nm,0.6s						
SHL	**Shillong**	**20.77**	**117**	P	**P**	**14 03 11.3**	**-0.4**
SHL				pmax	pmax		
	comp=Z,23nm,0.7s						
SHL	**Shillong**	**20.77**	**117**	P	**P**	**14 03 11.3**	**-0.4**
SHL				IAmb	IAmb	14 03 17.2	
	comp=Z,23nm,0.7s						
TRNA	**Turayna**	**20.99**	**241**	P	**P**	**14 03 12.0**	**-1.8**
UMR	**Umm Al-Rimmam**	**21.01**	**257**	*e*P	**P**	**14 03 15.1**	**+1.1**
GNI	**Garni**	**21.08**	**287**	P	**P**	**14 03 17.6**	**+2.8**
	comp=Z,23nm,0.7s,baz=156,slow=9.1,SNR=9.7						
GNI	**Garni**	**21.08**	**287***d*	*i*P	**P**	**14 03 18.2**	**+3.4**
GNI				*i* *PP	**pP**	**14 03 46.8**	**-1.8**
GNI				pmax	pmax		
	comp=Z,55nm,1.3s						
GNI	**Garni**	**21.08**	**287**	P	**P**	**14 03 18.2**	**+3.4**
GNI	**Garni**	**21.08**	**287**	P	**P**	**14 03 14.7**	**-0.1**
KBD	**Kabd**	**21.20**	**256**	*e*P	**P**	**14 03 16.7**	**+0.7**
QRN	**Al-Qurain**	**21.22**	**255**	*e*P	**P**	**14 03 16.4**	**+0.2**
SVE	**Sverdlovsk**	**21.33**	**344**	⇓*e*P	**P**	**14 03 18.1**	**+1.1**
SVE				*e*S	S	14 07 14.9	+14
SVE				pmax	pmax		
	comp=Z,29nm,0.9s						
RDF	**Al-Radifah**	**21.42**	**256**	*e*P	**P**	**14 03 18.7**	**+0.4**
ARU	**Arti**	**21.49**	**340**	P	**P**	**14 03 19.4**	**+0.7**
	comp=Z,5.7nm,0.5s,baz=156,slow=7.8,SNR=20						
ARU				LR	LR	14 13 00.1	
	comp=Z,82nm,19.6s,baz=283,slow=39						
ARU	**Arti**	**21.49**	**340***d*	*i*P	**P**	**14 03 19.5**	**+0.9**
ARU				*PP	**pP**	**14 03 48.7**	**-4.5**
ARU				S	**S**	**14 07 06.9**	**+3.4**
ARU				pmax	pmax		
	comp=Z,35nm,1.1s						
ARU	**Arti**	**21.49**	**340**	P	**P**	**14 03 19.0**	**+0.4**
ARU				IAmb	IAmb	14 03 20.4	
	comp=Z,44nm,1.2s						
ZEI	**Tsey**	**21.88**	**294**	*e*P	**P**	**14 03 25.3**	**+2.2**
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GTA	**Gaotai**	**22.53**	**75**	*e*P	**P**	**14 03 32.0**	**+2.9**
GTA				sP	sP	14 04 33.4	+2.0
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KBZ	**Khabaz**	**22.73**	**297**	P	**P**	**14 03 32.3**	**+1.7**
	comp=Z,9.2nm,0.6s,baz=108,slow=4.5,SNR=19						
KBZ	**Khabaz**	**22.73**	**297***c*	*i*P	**P**	**14 03 32.0**	**+1.4**
KBZ				pmax	pmax		
	comp=Z,9.0nm,0.6s						
NEY	**Neytrino**	**22.80**	**295**	⇓*e*P	**P**	**14 03 34.8**	**+3.3**
NEY				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GOF	**Gofitskoye**	**22.85**	**300**	⇑*e*P	**P**	**14 03 35.6**	**+3.9**
GOF				pmax	pmax		
	comp=Z,38nm,0.8s						
BELG	**Belogornoye**	**22.87**	**321**	P	**P**	**14 03 33.6**	**+1.9**
	comp=Z,37nm,0.8s,baz=125,slow=2.4,SNR=17						
KIV	**Kislovodsk**	**22.92**	**297**	*e*P	**P**	**14 03 34.6**	**+2.2**
KIV				*e*S	**S**	**14 07 32.6**	**+5.6**
KIV				pmax	pmax		
	comp=Z,19nm,1.0s						
SHAO	**Shalim**	**23.24**	**221**	*i* P	**P**	**14 03 37.0**	**+1.5**
	SNR=7.0						
SHAO	**Shalim**	**23.24**	**221**	P	**P**	**14 03 36.7**	**+1.3**
SHAO				P	**P**	**14 03 37.0**	**+1.5**
	SNR=7.0						
DOK	**Doka**	**23.57**	**225**	P	**P**	**14 03 39.2**	**+0.8**
DMTO	**DMTO**	**23.85**	**222**	P	**P**	**14 03 41.8**	**+0.8**
WHFO	**Wadi Hawf**	**24.33**	**224**	P	**P**	**14 03 46.0**	**+0.5**
	SNR=8.0						
RBK	**Rabkut**	**24.43**	**223**	P	**P**	**14 03 46.6**	**+0.3**
ABTO	**Aybut**	**25.05**	**224**	P	**P**	**14 03 52.1**	**+0.1**
RAYN	**Ar Rayn**	**25.85**	**247**	*i* P	**P**	**14 03 59.2**	**+0.1**
	SNR=23						
RAYN	**Ar Rayn**	**25.85**	**247**	P	**P**	**14 03 58.9**	**-0.2**
RAYN				pmax	pmax		
	comp=Z,20nm,0.7s						
RAYN	**Ar Rayn**	**25.85**	**247**	P	**P**	**14 03 60.0**	**+0.8**
RAYN	**Ar Rayn**	**25.85**	**247**	P	**P**	**14 03 58.9**	**-0.2**
KIRV	**Kirov**	**26.14**	**334**	⇓*e*P	**P**	**14 04 03.5**	**+2.3**
SONM	**Songino Array**	**27.97**	**56**	P	**P**	**14 04 19.4**	**+1.5**
	comp=Z,0.7nm,0.4s,baz=265,slow=9.0,SNR=6.2						
SONM	**Songino Array**	**27.97**	**56**	P	**P**	**14 04 19.6**	**+1.7**
SONM				pmax	pmax		
	comp=Z,2.0nm,1.2s						
SONM	**Songino Array**	**27.97**	**56**	P	**P**	**14 04 19.6**	**+1.7**
SOCY	**Socotra**	**29.01**	**217**	P	**P**	**14 04 25.7**	**-1.7**
BR131	**Keskin Array S**	**29.62**	**287**	P	**P**	**14 04 34.6**	**+2.0**
BR131				pmax	pmax		
	comp=Z,15nm,0.6s						
BR131	**Keskin Array S**	**29.62**	**287**	P	**P**	**14 04 34.5**	**+2.0**
BRTR	**Keskin Array B**	**29.62**	**287**	P	**P**	**14 04 35.0**	**+2.5**
	comp=Z,9.1nm,0.6s,baz=102,slow=8.9,SNR=20						
BRTR	**Keskin Array B**	**29.62**	**287**	P	**P**	**14 04 34.5**	**+2.0**
CMAR	**Chiang Mai Arr**	**30.34**	**119**	P	**P**	**14 04 39.8**	**+0.8**
	comp=Z,0.5nm,0.3s,baz=319,slow=11,SNR=4.0						
PALK	**Pallekele**	**30.56**	**161**	P	**P**	**14 04 40.6**	**-0.3**
PALK				pmax	pmax		
	comp=Z,38nm,1.4s						
PALK	**Pallekele**	**30.56**	**161**	P	**P**	**14 04 40.6**	**-0.3**
KLMR	**Klimovskoe**	**31.40**	**330**	*e*P	**P**	**14 04 48.0**	**+0.3**
KLMR				*e**SP	**sP**	**14 05 50.2**	**-2.5**
KLMR				pmax	pmax		
	comp=Z,15nm,1.3s						
KLMR	**Klimovskoe**	**31.40**	**330**	*e*P	**P**	**14 04 48.1**	**+0.3**
KLMR				AMP		14 05 06.0	
	comp=Z,15nm,1.3s						
KLMR				*e*sP	**sP**	**14 05 50.2**	**-2.5**
HHC	**Hu-ho-hao-te**	**31.42**	**70**	*e*P	**P**	**14 04 50.2**	**+1.9**
HHC				pmax	pmax		
	comp=Z,14nm,0.9s						
HHC				pmax	pmax		
	comp=Z,60nm,5.1s						
AKASG	**Malin Array Be**	**33.00**	**308**	P	**P**	**14 05 03.1**	**+1.2**
	comp=Z,9.8nm,0.3s,baz=80,slow=7.4,SNR=44						
AKASG	**Malin Array Be**	**33.00**	**308**	P	**P**	**14 05 02.9**	**+1.1**
AKASG				IAmb	IAmb	14 05 04.8	
	comp=Z,8.9nm,0.6s						
AKBB	**Malin Array Si**	**33.00**	**308**	⇑*e*P	**P**	**14 05 02.9**	**+1.1**
AKBB	**Malin Array Si**	**33.00**	**308**	P	**P**	**14 05 02.8**	**+0.9**
AKBB				IAmb	IAmb	14 05 04.7	
	comp=Z,11nm,0.5s						
TPGR	**Topolog**	**33.16**	**298**	⇑P	**P**	**14 05 05.3**	**+2.0**
SORM	**Soroca**	**33.29**	**304**	⇑P	**P**	**14 05 05.6**	**+1.2**
SORM	**Soroca**	**33.29**	**304**	⇑P	**P**	**14 05 05.6**	**+1.2**
CFR	**Carcaliu**	**33.36**	**298**	⇓P	**P**	**14 05 07.2**	**+2.2**
CFR	**Carcaliu**	**33.36**	**298**	⇓P	**P**	**14 05 07.2**	**+2.2**
VLDR	**Vladesti**	**33.40**	**300**	⇑P	**P**	**14 05 07.4**	**+2.0**
NRIK	**Noril'sk**	**33.83**	**10**	P	**P**	**14 05 10.4**	**+1.6**
	comp=Z,5.8nm,0.6s,baz=200,slow=5.2,SNR=9.5						
NRIK	**Noril'sk**	**33.83**	**10***d*	*i*P	**P**	**14 05 10.3**	**+1.6**
NRIK				pmax	pmax		
	comp=Z,7.0nm,0.6s						
NRIK	**Noril'sk**	**33.83**	**10**	P	**P**	**14 05 09.8**	**+1.1**
NRIK				IAmb	IAmb	14 05 11.3	
	comp=Z,7.1nm,0.7s						
VRI	**Vrincioaia**	**34.34**	**300**	⇓P	**P**	**14 05 16.1**	**+2.6**
VRI	**Vrincioaia**	**34.34**	**300**	⇓P	**P**	**14 05 16.1**	**+2.6**
TESR	**Tescani**	**34.39**	**301**	⇑P	**P**	**14 05 16.2**	**+2.3**
PLOR	**Plostina**	**34.40**	**300**	⇑P	**P**	**14 05 16.5**	**+2.5**
PLOR	**Plostina**	**34.40**	**300**	⇑P	**P**	**14 05 16.5**	**+2.5**
ISR	**Istrita**	**34.49**	**298**	⇓P	**P**	**14 05 18.2**	**+3.4**
ISR	**Istrita**	**34.49**	**298**	⇓P	**P**	**14 05 18.2**	**+3.4**
NEHR	**Nehoiu**	**34.66**	**299**	⇑P	P	14 05 24.9	+8.8
COVR	**Voineasa-Covas**	**34.71**	**300**	⇑P	**P**	**14 05 19.6**	**+2.9**
MLR	**Muntele Rosu**	**34.90**	**299**	⇑P	**P**	**14 05 22.1**	**+3.7**
MLR	**Muntele Rosu**	**34.90**	**299**	⇑P	**P**	**14 05 22.1**	**+3.7**
MLR	**Muntele Rosu**	**34.90**	**299**	P	**P**	**14 05 20.0**	**+1.6**
DOPR	**Dopca**	**35.27**	**300**	⇑P	**P**	**14 05 24.0**	**+2.5**
BURAR	**Bucovina Array**	**35.38**	**303**	⇑P	**P**	**14 05 24.6**	**+2.1**
BURAR	**Bucovina Array**	**35.38**	**303**	⇑P	**P**	**14 05 24.6**	**+2.1**
BURAR	**Bucovina Array**	**35.38**	**303**	P	**P**	**14 05 24.2**	**+1.7**
BUR08	**Bucovina Ar. S**	**35.39**	**303**	P	**P**	**14 05 24.2**	**+1.7**
MTUR	**Matau**	**35.53**	**298**	⇑P	**P**	**14 05 27.4**	**+3.7**
MTUR	**Matau**	**35.53**	**298**	⇑P	**P**	**14 05 27.4**	**+3.7**
VOIR		**35.53**	**299**	⇑P	**P**	**14 05 26.2**	**+2.4**
VOIR		**35.53**	**299**	⇑P	**P**	**14 05 26.2**	**+2.4**
ARR	**Arges**	**35.83**	**299**	⇓P	**P**	**14 05 28.5**	**+2.3**
ARCR	**ARCALIA**	**35.97**	**302**	⇑P	**P**	**14 05 27.2**	**-0.2**
LVV	**L'vov**	**36.23**	**306**	*e*P	**P**	**14 05 30.2**	**+0.7**
LOT	**Lotru**	**36.43**	**299**	⇓P	**P**	**14 05 33.8**	**+2.3**
VTS	**Vitosha**	**37.08**	**294**	⇑P	**P**	**14 05 39.0**	**+2.0**
VTS	**Vitosha**	**37.08**	**294**	⇑P	**P**	**14 05 39.0**	**+2.0**
VTS	**Vitosha**	**37.08**	**294**	P	**P**	**14 05 37.7**	**+0.8**
DRGR		**37.10**	**301**	⇑P	**P**	**14 05 39.7**	**+2.7**
DRGR		**37.10**	**301**	⇑P	**P**	**14 05 39.7**	**+2.7**
GZR	**Gura Zlata**	**37.13**	**299**	⇑P	**P**	**14 05 38.8**	**+1.6**
GZR	**Gura Zlata**	**37.13**	**299**	⇑P	**P**	**14 05 38.8**	**+1.6**
IDI	**Anoyia**	**37.32**	**282**	P	**P**	**14 05 40.0**	**+1.1**
	comp=Z,3.3nm,0.3s,baz=44,slow=2.3,SNR=6.5						
LVZ	**Lovozero**	**37.33**	**338**	P	**P**	**14 05 39.8**	**+1.3**
LVZ				pmax	pmax		
	comp=Z,86nm,1.5s						
LVZ	**Lovozero**	**37.33**	**338**	P	**P**	**14 05 39.8**	**+1.3**
KOLS	**Kolonicke sedl**	**37.36**	**305**	*e*P	**P**	**14 05 39.9**	**+0.8**
KOLS	**Kolonicke sedl**	**37.36**	**305**	*e*P	**P**	**14 05 39.9**	**+0.8**
FIA1	**FINESS Array S**	**37.43**	**326**	P	**P**	**14 05 41.0**	**+1.6**
FIA1				IAmb	IAmb	14 05 52.7	
	comp=Z,39nm,1.4s						
FINES	**FINESS Array B**	**37.43**	**326**	P	**P**	**14 05 41.0**	**+1.6**
	comp=Z,3.2nm,0.3s,baz=119,slow=9.5,SNR=42						
FINES	**FINESS Array B**	**37.43**	**326**	P	**P**	**14 05 40.9**	**+1.5**
SIRR	**Siria**	**37.85**	**300**	⇑P	**P**	**14 05 44.9**	**+1.7**
CRVS	**Cervenica-Dubn**	**37.89**	**305**	*e*P	**P**	**14 05 43.7**	**+0.2**
CRVS	**Cervenica-Dubn**	**37.89**	**305**	*e*P	**P**	**14 05 43.7**	**+0.2**
BZS	**Buzias**	**37.93**	**299**	⇑P	**P**	**14 05 46.2**	**+2.4**
BZS	**Buzias**	**37.93**	**299**	⇑P	**P**	**14 05 46.2**	**+2.4**
MDVR	**Moldovita**	**37.93**	**298**	⇑P	**P**	**14 05 46.3**	**+2.3**
SRIT	**Nakonsritamara**	**38.00**	**130**	P	**P**	**14 05 46.3**	**+1.6**
BOVS	**Bovan**	**38.06**	**296**	⇑P	**P**	**14 05 46.8**	**+1.8**
OJC	**Ojcow**	**38.97**	**307**	P	**P**	**14 05 53.7**	**+1.2**
OJC				pmax	pmax		
	comp=Z,13nm,1.1s						
OJC	**Ojcow**	**38.97**	**307**	P	**P**	**14 05 53.7**	**+1.2**
OJC				IAmb	IAmb	14 05 55.6	
	comp=Z,13nm,1.1s						
ITM	**Ithomi**	**39.12**	**286**	P	**P**	**14 05 53.9**	**0.0**
NJ2	**Nanjing**	**39.17**	**82**	*e*P	**P**	**14 05 54.8**	**+0.5**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
LANS	**Liptovska Anna**	**39.20**	**305**	*e*P	**P**	**14 05 57.3**	**+2.9**
LANS				pmax	pmax		
	comp=Z,3.0nm,0.5s						
LANS	**Liptovska Anna**	**39.20**	**305**	*e*P	**P**	**14 05 57.3**	**+2.9**
DIVS	**Divibare**	**39.23**	**297**	P	**P**	**14 05 55.6**	**+0.8**
DIVS				IAmb	IAmb	14 05 57.7	
	comp=Z,5.7nm,0.7s						
FRGS	**Fruska Gora**	**39.24**	**299**	⇓P	**P**	**14 05 57.2**	**+2.5**
VYHS	**Vyhne**	**39.64**	**304**	*e*P	**P**	**14 06 00.2**	**+2.1**
VYHS				pmax	pmax		
	comp=Z,10.0nm,1.2s						
VYHS	**Vyhne**	**39.64**	**304**	*e*P	**P**	**14 06 00.2**	**+2.1**
MORH	**Mrgy, Hungar**	**39.94**	**301**	⇑P	**P**	**14 06 03.1**	**+2.6**
MORH	**Mrgy, Hungar**	**39.94**	**301**	*e*P	**P**	**14 06 02.4**	**+1.9**
MORC	**Moravsky Berou**	**40.44**	**306**	⇓P	**P**	**14 06 06.9**	**+2.3**
MORC	**Moravsky Berou**	**40.44**	**306**	⇓P	**P**	**14 06 06.9**	**+2.3**
MORC	**Moravsky Berou**	**40.44**	**306**	*e*P	**P**	**14 06 07.0**	**+2.4**
MORC	**Moravsky Berou**	**40.44**	**306**	P	**P**	**14 06 05.8**	**+1.2**
KEV	**Kevo**	**40.67**	**338**	P	**P**	**14 06 07.4**	**+1.3**
KEV				pmax	pmax		
	comp=Z,29nm,1.2s						
KEV	**Kevo**	**40.67**	**338**	P	**P**	**14 06 07.4**	**+1.3**
KEV				IAmb	IAmb	14 06 15.9	
	comp=Z,29nm,1.2s						
ARA0	**ARCESS Array S**	**41.02**	**337**	*e*P	**P**	**14 06 10.3**	**+1.3**
ARCES	**ARCESS Array B**	**41.02**	**337**	P	**P**	**14 06 10.8**	**+1.7**
	comp=Z,2.6nm,0.3s,baz=117,slow=9.3,SNR=38						
ARCES	**ARCESS Array B**	**41.02**	**337**	P	**P**	**14 06 10.3**	**+1.3**
ARCES				IAmb	IAmb	14 06 11.2	
	comp=Z,17nm,1.4s						
VRAC	**Vranov**	**41.08**	**306**	⇓P	**P**	**14 06 12.3**	**+2.5**
VRAC	**Vranov**	**41.08**	**306**	⇓P	**P**	**14 06 12.3**	**+2.5**
VRAC	**Vranov**	**41.08**	**306**	*e*P	**P**	**14 06 12.2**	**+2.5**
DPC	**Dobruska-Polom**	**41.20**	**307**	*e*P	**P**	**14 06 13.2**	**+2.4**
DPC	**Dobruska-Polom**	**41.20**	**307**	*e*P	**P**	**14 06 13.2**	**+2.4**
MOSL	**Moslavina**	**41.32**	**300**	*i* P	**P**	**14 06 13.3**	**+1.5**
CHVC	**Chvalec**	**41.36**	**308**	*e*P	**P**	**14 06 14.8**	**+2.7**
RICI	**Ricice**	**41.37**	**297**	*i* P	**P**	**14 06 13.3**	**+1.0**
UPC	**Upice**	**41.39**	**307**	*e*P	**P**	**14 06 14.9**	**+2.6**
UPC	**Upice**	**41.39**	**307**	*e*P	**P**	**14 06 14.9**	**+2.6**
MAKA	**Makarska**	**41.49**	**296**	*i* P	**P**	**14 06 14.0**	**+0.8**
DLV	**T Lat**	**41.49**	**117**	P	**P**	**14 06 12.9**	**-0.9**
KTK1	**Kautokeino**	**41.50**	**336**	*e*P	**P**	**14 06 14.3**	**+1.4**
CONA	**Conrad Observa**	**41.67**	**304**	*e*P	**P**	**14 06 17.0**	**+2.2**
	comp=Z,12nm,0.9s,SNR=6.1						
HVAR	**Hvar**	**41.92**	**296**	*i* P	**P**	**14 06 17.8**	**+1.1**
GROS	**Grobnik**	**42.08**	**301**	*i* P	**P**	**14 06 19.8**	**+1.8**
HAMF	**Hammerfest**	**42.09**	**338**	*e*P	**P**	**14 06 18.8**	**+1.1**
OZLJ	**Ozalj**	**42.22**	**300**	*i* P	**P**	**14 06 21.1**	**+2.1**
PLIT	**Plitvice**	**42.22**	**299**	*i* P	**P**	**14 06 20.8**	**+1.7**
PERS	**Pernice**	**42.32**	**302**	*i* P	**P**	**14 06 21.9**	**+1.9**
SOKA	**Soboth**	**42.37**	**302**	*e*P	**P**	**14 06 22.5**	**+2.1**
	comp=Z,12nm,0.5s,SNR=12						
ZIRJ	**Zirje**	**42.41**	**297**	*i* P	**P**	**14 06 21.2**	**+0.6**
TIP	**Timpagrande**	**42.56**	**291**	P	**P**	**14 06 23.2**	**+1.2**
BRG	**Berggiesshubel**	**42.69**	**308**	*e*P	**P**	**14 06 24.9**	**+2.2**
BRG				Amp		14 06 27.0	
	comp=Z,9.4nm,0.9s						
SGRT	**San Giovanni R**	**42.71**	**294**	P	**P**	**14 06 24.2**	**+1.0**
SGRT				IAmb	IAmb	14 06 25.3	
	comp=Z,16nm,0.5s						
MOA	**Molln**	**42.74**	**304**	*e*P	**P**	**14 06 25.6**	**+2.3**
	comp=Z,13nm,1.0s						
DUGI	**Dugi Otok**	**42.77**	**298**	*i* P	**P**	**14 06 24.5**	**+1.0**
NVLJ	**Novalja**	**42.80**	**299**	*i* P	**P**	**14 06 24.6**	**+0.8**
RABC	**Rab**	**42.83**	**299**	*i* P	**P**	**14 06 24.9**	**+0.9**
GERES	**GERESS Array B**	**43.01**	**305**	P	**P**	**14 06 27.0**	**+1.5**
	comp=Z,0.7nm,0.3s,baz=81,slow=8.2,SNR=6.6						
GERES	**GERESS Array B**	**43.01**	**305**	P	**P**	**14 06 27.3**	**+1.8**
GERES	**GERESS Array B**	**43.01**	**305**	P	**P**	**14 06 27.3**	**+1.8**
KHC	**Kasperske Hory**	**43.06**	**306**	*e*P	**P**	**14 06 28.3**	**+2.4**
KHC	**Kasperske Hory**	**43.06**	**306**	*e*P	**P**	**14 06 28.3**	**+2.4**
TRO	**Tromso**	**43.15**	**336**	*e*P	**P**	**14 06 26.8**	**+0.6**
SMRN	**Sveta Marina**	**43.22**	**300**	*i* P	**P**	**14 06 28.0**	**+0.9**
CLL	**Collm**	**43.25**	**309**	*e*P	**P**	**14 06 29.0**	**+1.7**
CLL	**Collm**	**43.25**	**309**	*e*P	**P**	**14 06 29.0**	**+1.7**
MYKA	**Terra Mystica**	**43.33**	**302**	*i* P	**P**	**14 06 29.8**	**+1.7**
	comp=Z,3.5nm,0.6s						
TRI	**Trieste**	**43.38**	**301**	P	**P**	**14 06 28.6**	**+0.2**
TRI				pmax	pmax		
	comp=Z,8.0nm,0.6s						
TRI	**Trieste**	**43.38**	**301**	P	**P**	**14 06 28.6**	**+0.2**
TRI				IAmb	IAmb	14 06 31.0	
	comp=Z,8.3nm,0.6s						
JRMM	**Jerantut**	**43.45**	**131**	P	**P**	**14 06 29.0**	**-0.3**
ROBS	**Robic**	**43.47**	**301**	*i* P	**P**	**14 06 30.7**	**+1.6**
YAK	**Yakutsk**	**43.60**	**36***de*	P	**P**	**14 06 29.9**	**0.0**
YAK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
FAUS	**Fauske**	**43.71**	**332**	*e*P	**P**	**14 06 32.2**	**+1.6**
MOR8	**Moi Rana**	**43.73**	**331**	*e*P	**P**	**14 06 31.8**	**+0.9**
ZOU	**Zoufplan**	**43.79**	**302**	P	**P**	**14 06 32.8**	**+0.8**
STEI	**Steigen**	**43.87**	**333**	*e*P	**P**	**14 06 33.3**	**+1.4**
STAL	**STALIGIAL**	**44.02**	**302**	P	**P**	**14 06 34.4**	**+0.9**
STAL				IAmb	IAmb	14 06 36.2	
	comp=Z,11nm,0.6s						
ABTA	**Abfaltersbach**	**44.08**	**302**	*i* P	**P**	**14 06 34.9**	**+0.9**
	comp=Z,4.0nm,0.6s						
NC405	**NORSAR Array S**	**44.11**	**323**	P	**P**	**14 06 34.3**	**+0.3**
NC602	**NORSAR Array S**	**44.16**	**322**	*e*P	**P**	**14 06 35.6**	**+1.2**
NC602	**NORSAR Array S**	**44.16**	**322**	P	**P**	**14 06 35.1**	**+0.7**
NC303	**NORSAR Array S**	**44.29**	**323**	P	**P**	**14 06 36.9**	**+1.5**
NB201	**NORSAR Array S**	**44.31**	**323**	P	**P**	**14 06 36.5**	**+0.9**
KONS	**Konsvik**	**44.33**	**331**	*e*P	**P**	**14 06 38.1**	**+2.5**
NB2	**NORSAR Subarra**	**44.34**	**323**	P	**P**	**14 06 36.7**	**+0.8**
	comp=Z,5.4nm,0.5s,baz=97,slow=7.9						
NB2	**NORSAR Subarra**	**44.34**	**323**	P	**P**	**14 06 36.7**	**+0.8**
	baz=97,slow=7.9						
NOA	**NORSAR Array B**	**44.34**	**323**	P	**P**	**14 06 36.5**	**+0.6**
	comp=Z,1.0nm,0.3s,baz=96,slow=7.7,SNR=45						
NRCA	**Norcia**	**44.38**	**297**	P	**P**	**14 06 38.1**	**+1.6**
NSS	**Namsos**	**44.43**	**328**	*e*P	**P**	**14 06 38.2**	**+1.8**
NAO01	**NORSAR Array S**	**44.49**	**323**	P	**P**	**14 06 37.9**	**+0.9**
LOF	**Lofoten**	**44.54**	**333**	*e*P	**P**	**14 06 38.7**	**+1.4**
NBO00	**NORSAR Array S**	**44.56**	**323**	P	**P**	**14 06 37.3**	**-0.3**
NC204	**NORSAR Array S**	**44.58**	**323**	P	**P**	**14 06 38.6**	**+0.8**
NC204				IAmb	IAmb	14 07 01.8	
	comp=Z,53nm,1.4s						
WTTA	**Wattenberg**	**44.59**	**303**	*e*P	**P**	**14 06 39.2**	**+1.0**
	comp=Z,8.1nm,0.6s						
WATA	**Walderalm**	**44.62**	**303**	*i* P	**P**	**14 06 39.2**	**+0.8**
	comp=Z,5.3nm,0.5s						
MURB	**Monte Urbino**	**44.71**	**297**	P	**P**	**14 06 41.9**	**+2.8**
MURB				IAmb	IAmb	14 06 43.3	
	comp=Z,30nm,0.7s						
KLR	**Kul'dur**	**44.77**	**54**	P	**P**	**14 06 39.8**	**+0.4**
	comp=Z,1.1nm,0.5s,baz=263,slow=5.7,SNR=5.5						
CTI	**Castel Tesino**	**44.78**	**301**	P	**P**	**14 06 40.1**	**+0.4**
CTI				pmax	pmax		
	comp=Z,14nm,0.6s						
CTI	**Castel Tesino**	**44.78**	**301**	P	**P**	**14 06 40.1**	**+0.4**
CTI				IAmb	IAmb	14 06 41.7	
	comp=Z,14nm,0.6s						
MOTA	**Moosalm**	**44.93**	**303**	*i* P	**P**	**14 06 41.5**	**+0.6**
	comp=Z,7.6nm,0.6s						
KONO	**Kongsberg**	**45.06**	**321**	*e*P	**P**	**14 06 43.0**	**+1.5**
RETA	**Reutte**	**45.14**	**304**	*i* P	**P**	**14 06 43.2**	**+0.7**
	comp=Z,4.9nm,0.7s						
FETA	**Feichten**	**45.24**	**303**	*i* P	**P**	**14 06 44.1**	**+0.8**
	comp=Z,6.2nm,0.5s						
TIXI	**Tiksi**	**45.44**	**22**	P	**P**	**14 06 45.0**	**+0.7**
	comp=Z,8.7nm,0.3s,baz=290,slow=3.2,SNR=14						
TIXI	**Tiksi**	**45.44**	**22**	P	**P**	**14 06 44.9**	**+0.7**
TIXI				IAmb	IAmb	14 06 47.7	
	comp=Z,8.6nm,0.3s						
SALO	**Salr**	**45.63**	**301**	P	**P**	**14 06 47.6**	**+1.3**
SALO				IAmb	IAmb	14 06 49.0	
	comp=Z,20nm,0.7s						
SKAR	**Skarslia**	**45.75**	**322**	*e*P	**P**	**14 06 47.6**	**+0.7**
DAVA	**Damuels**	**45.77**	**303**	*i* P	**P**	**14 06 48.5**	**+1.1**
	comp=Z,28nm,0.5s,SNR=13						
VLC	**Villacollemand**	**46.03**	**299**	P	**P**	**14 06 50.1**	**+0.7**
VLC				IAmb	IAmb	14 06 52.6	
	comp=Z,12nm,0.9s						
MOL	**Molde**	**46.19**	**325**	*e*P	**P**	**14 06 50.8**	**+0.5**
TUE	**Stuetta**	**46.27**	**302**	P	**P**	**14 06 51.8**	**+0.3**

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MSSA  Maissana          46.61 299   P      P       14 06 54.5 +0.6
MSSA                                IAmb   IAmb    14 07 04.2
      comp=Z,39nm,1.4s
LODK  Lodwar            46.84 234   P      P       14 06 57.3 +1.3
SPB2  Spitsbergen Ar    47.31 347   P      P       14 07 00.7 +1.9
SPB2                                IAmb   IAmb    14 07 17.8
      comp=Z,32nm,1.1s
SPA0  Spitsbergen Ar    47.31 347  eP      P       14 07 00.5 +1.7
SPITS Spitsbergen Ar    47.31 347   P      P       14 07 00.7 +1.9
SPITS                               pmax   pmax
      comp=Z,33nm,1.2s
ECH   Echery            47.40 305   P      P       14 07 01.6 +1.6
ECH                                 pmax   pmax
      comp=Z,8.0nm,1.1s
ECH   Echery            47.40 305   P      P       14 07 01.6 +1.6
SENIN Lac Senin/Sane    47.68 303   P      P       14 07 03.3 +0.9
SENIN                               IAmb   IAmb    14 07 05.3
      comp=Z,18nm,0.8s
VSL   Villasalto        47.97 293   P      P       14 07 05.5 +1.1
BNI   Bardonecchia      48.41 301   P      P       14 07 09.0 +1.2
BNI                                 pmax   pmax
      comp=Z,8.0nm,1.0s
BNI   Bardonecchia      48.41 301   P      P       14 07 09.0 +1.2
KBS   Kingsbay          48.43 347   P      P       14 07 09.0 +1.7
KBS                                 pmax   pmax
      comp=Z,27nm,1.1s
KBS   Kingsbay          48.43 347   P      P       14 07 09.0 +1.7
KBS                                 IAmb   IAmb    14 07 19.1
      comp=Z,27nm,1.1s
KMBO  Kilima Mbogo      49.20 228   P      P       14 07 15.3 +1.0
      comp=Z,2.1nm,0.5s,baz=40,slow=13,SNR=4.0
KMBO  Kilima Mbogo      49.20 228   P      P       14 07 14.5 +0.1
KMBO                                pmax   pmax
      comp=Z,3.0nm,0.7s
KMBO  Kilima Mbogo      49.20 228   P      P       14 07 14.5 +0.1
KEST  Kesra             49.22 288   P      P       14 07 16.1 +2.0
      comp=Z,4.8nm,0.5s,baz=56,slow=1.9,SNR=9.1
KEST  Kesra             49.22 288   P      P       14 07 15.4 +1.3
KIBK  Kibwezi           49.71 226   P      P       14 07 18.7 +0.7
KIBK                                IAmb   IAmb    14 07 21.8
      comp=Z,9.0nm,0.7s
SSB   Saint Sauveur     49.81 302   P      P       14 07 19.5 +1.1
SSB                                 pmax   pmax
      comp=Z,9.0nm,0.5s
SSB   Saint Sauveur     49.81 302   P      P       14 07 19.5 +1.1
SSB                                 IAmb   IAmb    14 07 20.6
      comp=Z,8.8nm,0.5s
MBAR  Mbarara           52.88 235ceP      P       14 07 42.8 +1.2
CART  Cartagena         56.26 294   P      P       14 08 06.7 +1.2
ESBB  Sonseca Array     57.58 298   P      P       14 08 15.9 +1.1
ESBB                                IAmb   IAmb    14 08 16.7
      comp=Z,6.2nm,0.8s
ESDC  Sonseca Array     57.58 298   P      P       14 08 16.0 +1.2
      comp=Z,7.9nm,0.9s,baz=59,slow=7.4,SNR=38
ESDC  Sonseca Array     57.58 298   P      P       14 08 15.7 +0.8
PAB   San Pablo         57.91 298   P      P       14 08 18.3 +1.2
PAB                                 pmax   pmax
      comp=Z,5.0nm,1.1s
PAB   San Pablo         57.91 298   P      P       14 08 18.3 +1.2
MVO   Moncorvo          59.14 301  eP      P       14 08 27.2 +1.6
PVRL  Vila Real         59.57 301  eP      P       14 08 29.9 +1.4
POLO  Lamas de Olo      59.59 301  eP      P       14 08 29.8 +1.1
PGAV  Gavieira, Arco    59.67 302  eP      P       14 08 30.8 +1.6
MTE   Manteigas         59.81 300  eP      P       14 08 31.8 +1.6
MTE   Manteigas         59.81 300   P      P       14 08 31.9 +1.7
MTE                                 IAmb   IAmb    14 08 32.9
      comp=Z,9.3nm,0.8s
PVIS  Viseu             59.92 300  eP      P       14 08 32.5 +1.6
PMRV  Marv??o           60.11 299  eP      P       14 08 33.5 +1.4
PMTG  Montargil         60.84 299  eP      P       14 08 38.1 +1.0
SUMG  Summit            60.91 341   P      P       14 08 38.6 +1.1
SUMG                                pmax   pmax
      comp=Z,10.0nm,1.3s
SUMG  Summit            60.91 341   P      P       14 08 38.6 +1.1
SUMG                                IAmb   IAmb    14 08 44.0
      comp=Z,9.5nm,1.3s
PBEJ  Beja              61.04 298  eP      P       14 08 39.2 +0.8
      comp=Z,20nm,1.8s
PVAQ  Vaqueiros         61.20 297  eP      P       14 08 41.0 +1.5
PVAQ  Vaqueiros         61.20 297   P      P       14 08 40.5 +1.0
PVAQ                                IAmb   IAmb    14 08 41.6
      comp=Z,8.0nm,0.6s
PCVE  Castro Verde      61.33 297  eP      P       14 08 40.6 +0.2
MESJ  Messejana         61.37 297  eP      P       14 08 42.2 +1.6
PBDV  Barranco-do-Ve    61.42 297  eP      P       14 08 43.4 +2.3
PNCL  Nicolau / Gran    61.47 298  eP      P       14 08 43.1 +1.8
PTEO  Sao Teotonio      61.86 297  eP      P       14 08 45.4 +1.5
      comp=Z,50nm,1.9s
PFVI  Vila Bisbo        62.12 297   P      P       14 08 47.2 +1.6
VOI   Vohitsoka         62.78 206   P      P       14 08 50.9 +0.7
VOI                                 IAmb   IAmb    14 08 51.3
      comp=Z,7.0nm,0.6s
TNTI  Ternate           62.82 111   P      P       14 08 50.6  0.0
TNTI                                IAmb   IAmb    14 08 54.4
      comp=Z,9.3nm,0.7s
TORD  Torodi Ar. Bea    66.00 269   P      P       14 09 10.1 -1.1
      comp=Z,19nm,0.6s,baz=44,slow=5.7,SNR=134
TORD  Torodi Ar. Bea    66.00 269   P      P       14 09 10.0 -1.2
TORD                                IAmb   IAmb    14 09 10.9
      comp=Z,13nm,0.7s
ILULI Ilulissat         66.25 341   P      P       14 09 13.4 +1.5
ILULI                               pmax   pmax
      comp=Z,21nm,0.9s
ILULI Ilulissat         66.25 341   P      P       14 09 13.4 +1.5
SFJD  Kangerlussuaq     67.62 339   P      P       14 09 21.7 +1.1
SFJD                                pmax   pmax
      comp=Z,16nm,1.2s
SFJD  Kangerlussuaq     67.62 339   P      P       14 09 21.7 +1.1
SFJD                                IAmb   IAmb    14 09 23.7
      comp=Z,16nm,1.1s
KOWA  Kowa              69.83 273   P      P       14 09 34.7 -0.4
KOWA                                IAmb   IAmb    14 09 35.4
      comp=Z,16nm,0.8s
TOLK  Toolik Lake Re    70.61  15   P      P       14 09 40.2 +1.2
TOLK                                IAmb   IAmb    14 09 56.8
      comp=Z,13nm,1.5s
A36M  Sachs Harbour     70.93   5   P      P       14 09 42.7 +1.9
COLD  Coldfoot          71.65  16   P      P       14 09 46.6 +1.4
IMAR  Indian Mountai    71.85  18   P      P       14 09 47.0 +0.6
H21K  Melozitna Rive    72.34  18   P      P       14 09 50.9 +1.5
H21K                                IAmb   IAmb    14 10 04.4
      comp=Z,15nm,0.9s
BMAR  Burnt Mountain    72.63  14   P      P       14 09 53.0 +1.9
MLY   Manley            73.36  17   P      P       14 09 56.5 +1.2
INK   Inuvik            73.61   9   P      P       14 09 58.5 +1.8
      comp=Z,1.3nm,0.4s,baz=330,slow=5.6,SNR=10
INK   Inuvik            73.61   9   P      P       14 09 58.3 +1.6
INK                                 IAmb   IAmb    14 10 01.4
      comp=Z,12nm,1.5s
FITZ  Fitzroy Crossi    74.82 127   P      P       14 10 04.0 -0.3
      comp=Z,2.1nm,0.7s,baz=339,slow=6.8,SNR=6.9
DBIC  Dimbokro          74.99 267   P      P       14 10 04.9 -0.7
      comp=Z,4.1nm,0.5s,baz=51,slow=5.6,SNR=14
DBIC  Dimbokro          74.99 267   P      P       14 10 04.7 -0.8
DBIC                                IAmb   IAmb    14 10 07.8
      comp=Z,27nm,1.4s
LBTB  Lobatse           75.05 222   P      P       14 10 05.6 -0.1
LBTB                                pmax   pmax
      comp=Z,6.0nm,0.6s
LBTB  Lobatse           75.05 222   P      P       14 10 05.5 -0.1
LBTB                                IAmb   IAmb    14 10 06.5
      comp=Z,6.3nm,0.6s
KIC   Kosan Boka        75.08 267  eP      P       14 10 05.3 -0.8
      comp=Z,12nm,0.5s
TIC   Toumodi           75.13 267  eP      P       14 10 05.6 -0.8
TSUM  Tsumeb            75.29 232   P      P       14 10 07.1 -0.1
LIC   Lamto             75.38 267  eP      P       14 10 06.9 -0.9
      comp=Z,79nm,1.9s
BOSA  Boshof            78.12 220   P      P       14 10 22.1 -0.7
      comp=Z,1.7nm,0.5s,baz=37,slow=6.6,SNR=6.0
BOSA  Boshof            78.12 220   P      P       14 10 22.6 -0.3
BOSA                                pmax   pmax
      comp=Z,10.0nm,1.4s
BOSA  Boshof            78.12 220   P      P       14 10 22.6 -0.3
BOSA                                IAmb   IAmb    14 10 24.2
      comp=Z,10nm,1.4s
YKA   Yellowknife Ar    80.98   3   P      P       14 10 39.0 +1.3
      comp=Z,1.2nm,0.5s,baz=349,slow=5.5,SNR=6.0
YKA                                 LR     LR      14 51 42.0
      comp=Z,148nm,20.0s,baz=0.0,slow=39
YKA   Yellowknife Ar    80.98   3   P      P       14 10 39.0 +1.3
WRA   Warramunga Arr    81.89 122   P      P       14 10 42.1 -1.0
      comp=Z,2.2nm,0.5s,baz=324,slow=4.7,SNR=42
WRA   Warramunga Arr    81.89 122   IAmb   IAmb    14 10 42.6
      comp=Z,0.2nm,0.8s
WRAB  Tennant Creek     81.89 122⇓eP      P       14 10 42.1 -1.0
WRAB                                pmax   pmax
      comp=Z,3.0nm,0.8s
SCHQ  Schefferville     81.97 337   P      P       14 10 44.8 +1.7
      comp=Z,10nm,1.1s,baz=37,slow=10,SNR=2.2
ASAR  Alice Springs     84.17 125   P      P       14 10 53.8 -1.0
      comp=Z,2.3nm,0.6s,baz=312,slow=5.0,SNR=22
ULM   Lac du Bonnet     92.64 352   LR     LR      14 56 39.7
      comp=Z,171nm,19.1s,baz=307,slow=37
PLCA  Paso Flores      150.17 251   PKPbc  PKiKP   14 18 13.5 -0.1
      comp=Z,3.3nm,1.1s,baz=153,slow=2.3,SNR=3.7
```

VIE 09 14:03:26.0±0.2**, 46°.96N**×**11°.65E, h0^{km}, mb1.2**/1**, ml0.8**/5**, Error ellipse: s-maj=3.3km s-min=1.4km az=2.0 15 km SE of Gries am Brenner Suspected Mining explosion., Northern Italy**

```
Code  Station Name       Δ°   AZ°     Phase ID          Time     Res
                                     Op     ISC       h  m  s   ISC
WTTA  Wattenberg         0.30 358  i Pg    Pg      14 03 32.0 +0.2
      1.5nm,0.1s
WATA  Walderalm          0.38 353  ePg     Pg      14 03 33.6 +0.3
      1.6nm,0.1s
FETA  Feichten           0.63 276  ePg     Pg      14 03 38.2 +0.2
      0.2nm,0.1s
FETA                               eSg     Sg      14 03 46.4 +0.1
      0.1nm,0.1s
```

RHSSO 09 14:04:02.4±0.7**, 44°.10N**×**19°.19E, h6^{km}**±4^{km}**, ML1.1**/3**, Northwestern Balkan Peninsula**

```
Code  Station Name       Δ°   AZ°     Phase ID          Time     Res
                                     Op     ISC       h  m  s   ISC
HAPS  Han Pijesak,BI     0.17 265  ePg     Pg      14 04 05.9  0.0
HAPS                               eSg     Sg      14 04 09.4 +1.1
BBLS  Lazi&#263;i        0.28 147  ePg     Pg      14 04 07.9 -0.1
BBLS                               eSg     Sg      14 04 13.0 +1.3
RUDO  Rudo               0.50 165  ePg     Pg      14 04 11.5 -0.6
RUDO                               eSg     Sg      14 04 18.9 +0.3
DIVS  Divibare           0.58  90  ePg     Pg      14 04 12.6 -0.9
DIVS                               eSg     Sg      14 04 21.5 +0.4
```

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*IDC **09** 14:05:44.0±0.8, 51°.57N×173°.47W, h0^{km}, mb3.9/15, mb1 4.1/16, mb1mx3.9/51, mbtmp3.9/16, ML3.7/2, MS3.2/1, Ms1 3.2/1, ms1mx2.6/47, Error ellipse: s-maj=27.3km s-min=14.6km az=171.0*

*AEIC **09** 14:05:47.6±2.7, 51°.49N±0°.09×173°.39W±0°.09, h49^{km}±6^{km}, Error ellipse: s-maj=12.6km s-min=7.7km az=172.0*

*NEIC **09** 14:05:50.4±1.6, 51°.67N±0°.09×173°.50W±0°.09, h44^{km}±7^{km}, mb4.7/57, Error ellipse: s-maj=12.6km s-min=7.9km az=171.0*

ISC 09 14:05:49.2±0.6**, 51°.6N**±0°.1×**173°.43W**±0°.05**, h37^{km}, n117,** σ**0^{s}.99**/109**, mb4.5**/30**, 5C-8D, Fault plane solution: NP1:** ϕ_s87.20085°**,** δ69.13603°**,** λ114.32506°. **NP2:** ϕ_s215.43425°**,** δ31.62775°**,** λ42.77804°. **Principal axes:** T Plg58.6405°, Azm31.2352°**;** N Plg22.6377°, Azm258.0550°**;** P Plg20.5024°, Azm159.0835°**;**
Andreanof Islands

```
Code  Station Name       Δ°   AZ°     Phase ID          Time     Res
                                     Op     ISC       h  m  s   ISC
KOFP  Korovin Flat P     0.83 330          Pn      14 06 04.7 +0.3
KOSE  Korovin Southe     0.88 334          Pn      14 06 05.6 +0.5
KOKL  Mount Kliuchef     0.91 328          Pn      14 06 05.7 +0.3
GSMY  Great Sitkin M     1.70 288          Pn      14 06 15.9 -0.4
GSTR  Great Sitkin T     1.72 289  Pn      Pn      14 06 17.5 +1.0
GSTD  Great Sitkin T     1.76 288          Pn      14 06 15.9 -1.2
ADK   Adak               2.05 280  Pn      Pn      14 06 20.5 -0.6
KIWB  Kanaga Island      2.34 279  Pn      Pn      14 06 25.1 +0.1
KIKV  Kanaga Island      2.35 279          Pn      14 06 25.4 +0.3
KIMD  Kanaga Island      2.38 276          Pn      14 06 25.6 +0.1
TAFP  Tanaga Falls P     2.85 279          Pn      14 06 32.5 +0.4
TASE  Tanaga Southea     2.88 277          Pn      14 06 33.4 +0.9
NIKH  Nikolski High      3.15  61          Pn      14 06 36.8 +0.7
GANE  Gareloi Northe     3.34 277          Pn      14 06 39.1 +0.4
MAPS  Pakushin South     4.55  58          Pn      14 06 56.3 +1.0
AMKA  Amchitka           4.55 271  Pn      Pn      14 06 54.0 -1.4
UNV   Unalaska Valle     4.79  59  Pn      Pn      14 06 58.8 +0.1
LSSE  Little Sitkin      4.99 277          Pn      14 07 01.7 +0.3
FALS  False Pass         6.86  57  Pn      Pn      14 07 27.3 +0.2
SMY   Shemya             7.77 284  Pn      Pn      14 07 39.9 +0.4
SDPT  Sand Point         8.61  59  Pn      Pn      14 07 51.6 +0.6
CNBA  Chernabura Isl     8.93  63  Pn      Pn      14 07 55.9 +0.5
KDAK  Kodiak Island     13.54  54  Pn      Pn      14 08 54.8 -3.7
      0.3nm,0.3s,baz=226,slow=3.5,SNR=14
RSO   Redoubt South     14.54  44  P       P       14 09 18.8 +0.5
M19K  Big River Lodg    14.65  38  Pn      Pn      14 09 14.6 +1.1
TTA   Tatalina          14.72  33  P       P       14 09 18.5 -1.6
CNPM  China Poot        14.82  49  P       P       14 09 20.4 -0.8
BRLK  Bradley Lake      15.08  48  Pn      Pn      14 09 18.4 -0.9
BRLK                               IAmb    IAmb    14 09 34.3
      comp=Z,41nm,1.3s
SEW   Seward            15.88  48  Pn      Pn      14 09 27.5 -2.0
RC01  Rabbit Creek A    16.15  45  Pn      Pn      14 09 33.4 +0.4
KTH   Kantishna Hill    16.91  36  P       P       14 09 45.1 +0.7
SML   Sawmill           17.07  43  Pn      Pn      14 09 44.4 -0.2
TRF   Thorofare Moun    17.09  37  P       P       14 09 46.6 +0.2
PET   Petropavlovsk     17.10 286  P       P       14 09 45.9 -0.5
BPAW  Bear Paw Mtn.     17.21  35  P       P       14 09 48.6 +1.0
GLI   Glacier Island    17.25  47          Pn      14 09 47.1 +0.3
FID   Port Fidalgo      17.48  48  P       Pn      14 09 47.1 -2.7
FID                                IAmb    IAmb    14 10 05.0
      comp=Z,89nm,1.1s
SCM   Sheep Creek Mo    17.51  44  P       Pn      14 09 48.4 -1.8
SCM                                IAmb    IAmb    14 10 06.1
      comp=Z,88nm,1.0s
RND   Reindeer          17.61  38          P       14 09 51.9 -0.3
RND                                IAmb    IAmb    14 10 06.2
      comp=Z,85nm,0.9s
PETK  Petropavlovsk-    17.67 286  P       Pn      14 09 51.5 -0.6
      comp=Z,0.3nm,0.3s,baz=94,slow=15,SNR=6.6
MCK   McKinley          17.75  37          P       14 09 53.6  0.0
KLU   Klutina           18.00  46          Pn      14 09 55.2 -1.0
DHY   Denali Highway    18.03  40          P       14 09 57.1 +0.3
M24K  Tolsona, Glenn    18.12  44  P       P       14 09 57.6  0.0
M24K                               IAmb    IAmb    14 10 09.1
      comp=Z,123nm,1.1s
KAIM  Kayak Island      18.22  51  P       Pn      14 10 00.2 +1.4
I23K  Minto, Yukon-K    18.40  33  P       Pn      14 10 01.5 +0.6
WRH   Wood River Hil    18.46  36  P       P       14 10 00.4 -0.9
WRH                                IAmb    IAmb    14 10 10.6
      comp=Z,66nm,1.0s
N25K  Chitina, Valde    18.63  46  P       P       14 10 02.9 -0.4
CCB   Clear Creek Bu    18.66  36  P       P       14 10 01.9 -1.6
MDM   Murphy Dome       18.68  34  P       P       14 10 00.7 -3.1
PAX   Paxson            18.77  42  P       P       14 10 03.8 -1.1
HDA   Harding Lake      18.85  37  P       P       14 10 05.1 -0.6
HDA                                IAmb    IAmb    14 10 13.5
      comp=Z,35nm,1.0s
GLB   Gilahina Butte    18.94  47  P       P       14 10 05.5 -1.2
GLB                                IAmb    IAmb    14 10 13.0
      comp=Z,74nm,1.0s
VRDI  Verde Repeater    19.04  48  P       P       14 10 08.3 +0.4
VRDI                               IAmb    IAmb    14 10 14.0
      comp=Z,74nm,1.1s
IL31                    19.06  36  P       P       14 10 07.3 -0.6
IL31                               IAmb    IAmb    14 10 12.7
      comp=Z,47nm,0.8s
ILAR  Eielson Array     19.06  36  P       P       14 10 07.3 -0.6
      comp=Z,0.9nm,0.3s,baz=224,slow=8.9,SNR=69
ILAR  Eielson Array     19.06  36  P       P       14 10 07.4 -0.6
EGAK  Eagle             21.25  39  P       P       14 10 32.5 +0.9
EGAK                               IAmb    IAmb    14 10 37.5
      comp=Z,44nm,0.9s
HYT   Haines Junctio    21.77  51  P       P       14 10 36.8 -0.6
HYT                                IAmb    IAmb    14 10 44.6
      comp=Z,39nm,1.2s
INK   Inuvik            25.41  34  P       P       14 11 12.7  0.0
      comp=Z,2.5nm,0.4s,baz=238,slow=5.8,SNR=7.9
YKA   Yellowknife Ar    32.66  47  LR      LR      14 25 50.6
      comp=Z,39nm,19.8s,baz=0.0,slow=37
H11N2 WAKE ISLAND Hy    35.32 213  T       T       14 50 40.7
      baz=21,slow=76,SNR=10
H11N3 WAKE ISLAND Hy    35.33 213  T       T       14 50 38.3
      baz=21,slow=76,SNR=10
H11N1 WAKE ISLAND Hy    35.34 213  T       T       14 50 39.4
      baz=21,slow=76,SNR=9.1
I07A  Izee              36.24  80  P       P       14 12 49.4 +0.8
H11S1 WAKE ISLAND Hy    36.52 213  T       T       14 52 10.3
      baz=20,slow=75,SNR=21
H11S2 WAKE ISLAND Hy    36.54 213  T       T       14 52 06.6
      baz=20,slow=75,SNR=19
H11S3 WAKE ISLAND Hy    36.54 213  T       T       14 52 06.4
      baz=20,slow=75,SNR=12
USA0B Ussuriysk Arra    36.59 280  P       P       14 12 51.0 -0.3
USA0B                              IAmb    IAmb    14 13 01.6
      comp=Z,21nm,1.4s
USRK  Ussuriysk Ar.     36.59 280  P       P       14 12 51.1 -0.2
      comp=Z,1.7nm,0.6s,baz=54,slow=9.2,SNR=6.1
WALA  Waterton Lakes    37.18  70  P       P       14 12 57.4 +0.9
JWT   Wachi             39.70 266  P       P       14 13 18.6 +1.1
MCMT  McKenzie Canyo    39.91  75  P       P       14 13 20.4 +0.9
EGMT  Eagleton          40.10  69  P       P       14 13 21.7 +0.7
EGMT                               IAmb    IAmb    14 13 23.4
      comp=Z,7.4nm,0.8s
NVAR  Mina Array Bea    40.19  87  P       P       14 13 23.4 +1.4
      comp=Z,0.9nm,0.9s,baz=290,slow=10,SNR=3.1
NVAR  Mina Array Bea    40.19  87  P       P       14 13 22.0 +0.1
YHH   Holmes Hill       41.13  74  P       P       14 13 30.7 +0.9
KSRS  Korea Array       42.98 275  P       P       14 13 46.5 +1.9
      comp=Z,0.9nm,0.7s,baz=52,slow=7.9,SNR=2.2
BW06  Boulder Array     43.03  76  P       P       14 13 45.9 +0.7
PD31  Pinedale Array    43.03  76  P       P       14 13 46.1 +0.9
PDAR  Pinedale Array    43.03  76  P       P       14 13 46.1 +0.9
      comp=Z,0.7nm,0.4s,baz=289,slow=5.6,SNR=6.1
PDAR  Pinedale Array    43.03  76  P       P       14 13 46.0 +0.9
ULM   Lac du Bonnet     46.74  59  P       P       14 14 14.2 -0.1
      comp=Z,2.7nm,0.9s,baz=312,slow=12,SNR=1.9
SONM  Songino Array     49.53 299  P       P       14 14 36.9 +0.9
      comp=Z,1.2nm,0.4s,baz=58,slow=5.8,SNR=12
SONM  Songino Array     49.53 299  P       P       14 14 36.3 +0.3
ECSD  EROS Data Cent    50.11  67  P       P       14 14 40.0 -0.3
ECSD                               IAmb    IAmb    14 14 40.8
      comp=Z,7.4nm,1.3s
ILULI Ilulissat         52.37  22  P       P       14 14 55.3 -1.6
E43A  Lone Tree Farm    53.80  59  P       P       14 15 07.8 +0.1
N38A  Joes South For    53.90  68  P       P       14 15 08.7 +0.2
TXAR  Lajitas Array     55.30  85  P       P       14 15 19.2 +0.2
      comp=Z,0.2nm,0.4s,baz=305,slow=6.9,SNR=4.6
P40A  Paris             55.42  68  P       P       14 15 19.1 -0.5
P40A                               IAmb    IAmb    14 15 20.3
      comp=Z,5.1nm,0.7s
SCHQ  Schefferville     57.72  41  P       P       14 15 36.1 +0.4
      comp=Z,2.7nm,0.8s,baz=324,slow=8.7,SNR=1.2
ARCES ARCESS Array B    58.43 352  P       P       14 15 40.2 -0.2
      comp=Z,6.9nm,1.0s,baz=9.8,slow=7.4,SNR=8.0
ARCES ARCESS Array B    58.43 352  IAmb    IAmb    14 15 52.0
      comp=Z,13nm,1.4s
J59A  Piesco            62.29  54  P       P       14 16 07.9 +0.7
J59A                               IAmb    IAmb    14 16 11.4
      comp=Z,6.4nm,1.1s
MK31  Makanchi Array    62.50 311  P       P       14 16 08.1 -0.5
MKAR  Makanchi Array    62.50 311  P       P       14 16 08.0 -0.6
      comp=Z,0.6nm,0.3s,baz=48,slow=6.3,SNR=20
MKAR  Makanchi Array    62.50 311  P       P       14 16 08.2 -0.4
SSPA  Standing Stone    62.55  59  P       P       14 16 09.8 +0.8
MAKZ  Makanchi          62.63 312  P       P       14 16 09.1 -0.4
G62A  West of Eustis    62.99  51  P       P       14 16 12.0 +0.1
ARU   Arti              64.15 331  P       P       14 16 18.8 -0.5
ARU                                IAmb    IAmb    14 16 19.9
      comp=Z,4.3nm,0.4s
FIA1  FINESS Array S    66.28 350  P       P       14 16 30.6 -2.4
FINES FINESS Array B    66.28 350  P       P       14 16 32.4 -0.6
      comp=Z,4.4nm,1.0s,baz=19,slow=8.8,SNR=3.4
FINES FINESS Array B    66.28 350  P       P       14 16 31.1 -1.9
AAK   Ala-Archa         69.26 313  P       P       14 16 52.8 +0.4
ABKAR Akbulak array     69.75 326  P       P       14 16 55.2 +0.2
ABKAR                              IAmb    IAmb    14 16 56.3
      comp=Z,8.7nm,1.4s
KKAR  Karatay Array     70.67 316  P       P       14 17 00.7  0.0
CMAR  Chiang Mai Arr    74.31 280  P       P       14 17 24.2 +1.4
      comp=Z,0.4nm,0.7s,baz=26,slow=7.0,SNR=2.2
JIRN  Jiri              74.87 295  eP      P       14 17 27.4 +1.0
      comp=Z,21nm,0.7s
CHGR  Chuyangaron       74.88 314  P       P       14 17 26.0 +0.1
CHGR                               IAmb    IAmb    14 17 27.1
      comp=Z,8.9nm,0.8s
RAMN  Ramite            75.19 295  eP      P       14 17 28.7 +0.7
      comp=Z,8.3nm,0.4s
GKN   Gorkha            75.48 297  eP      P       14 17 30.0 +0.4
      comp=Z,8.0nm,0.4s
DANN  Dangsing          75.70 298  eP      P       14 17 31.9 +0.9
      comp=Z,16nm,0.5s
PYUN  Piuthan           76.32 298  eP      P       14 17 35.3 +0.8
      comp=Z,10nm,0.5s
WRA   Warramunga Arr    84.56 228  P       P       14 18 16.9 -1.4
      comp=Z,0.2nm,0.6s,baz=32,slow=5.9,SNR=1.8
ASAR  Alice Springs     87.98 227  P       P       14 18 34.9 -0.2
      comp=Z,0.4nm,0.8s,baz=21,slow=5.8,SNR=7.2
```

SJA 09 14:16:12.0, 22°.27S×**68°.91W, h36^{km}, ML4.0, Northern Chile**

```
Code  Station Name       Δ°   AZ°     Phase ID          Time     Res
                                     Op     ISC       h  m  s   ISC
LVC   Limon Verde        0.34 180  i P     Pn      14 16 22.0 +1.2
PB06  IPOC Station P     0.75 235  i P     Pn      14 16 27.0 +0.8
PB07  IPOC Station P     1.05 301  i P     Pn      14 16 31.0 +0.6
PB15  IPOC Station P     1.07 209  i P     Pn      14 16 29.0 -1.6
PB04  IPOC Station P     1.15 267  i P     Pn      14 16 32.0 +0.3
PB02  IPOC Station P     1.32 316  i P     Pn      14 16 35.0 +1.0
PB01  IPOC Station P     1.33 336  i P     Pn      14 16 34.0 -0.2
PATCX Punta Patache      1.85 321  i P     Pn      14 16 41.0 -0.3
ACLC  CERRO LA CRUZ      7.34 167  i P     Pn      14 17 58.0 +1.2
```

NOU 09 14:21:17.3, 21°.96S×**169°.52E, h0^{km}, mb4.2**/9**, Southeast of Loyalty Islands, Southeast of Loyalty Islands**

```
Code  Station Name       Δ°   AZ°     Phase ID          Time     Res
                                     Op     ISC       h  m  s   ISC
PINNC Pines Island,      2.03 251  P       Pn      14 21 52.6 -0.1
YATNC Mamie plateau,     2.44 267  P       Pn      14 21 57.5 -1.0
OUENC Ouen Island, N     2.52 259  P       Pn      14 21 59.7 +0.1
DZM   Mont Dzumac        2.86 267  ePn     Pn      14 22 04.5 +0.3
      45nm,0.3s
DZM                                eSn     Sn      14 22 36.8 -2.6
      76nm,0.3s
DZM   Mont Dzumac        2.86 267  P       Pn      14 22 04.0 -0.2
ONTNC Ouen Toro          2.86 262  P       Pn      14 22 04.6 +0.3
NOUC  Port Laguerre      2.99 267  P       Pn      14 22 05.7 -0.3
KOUNC Koumac, New Ca     5.08 285  P       Pn      14 22 35.0 +0.3
```

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*ISK **09** 14:24:45.8, 38°.53N×26°.37E, h14^{km}, ML3.9/79*

*DDA **09** 14:24:45.8, 38°.53N×26°.37E, h7^{km}±2^{km}, MW3.8*

*THE **09** 14:24:46.8, 38°.51N×26°.34E, h8^{km}, ML3.7/9, Error ellipse: s-maj=0.8km s-min=0.4km az=209.0*

*ATH **09** 14:24:46.9, 38°.52N×26°.35E, h12^{km}±3^{km}, ML3.8/6, Error ellipse: s-maj=3.6km s-min=1.3km az=181.0*

*SOF **09** 14:24:48.8, 42°.26N×21°.68E, h5^{km}, MD3.9*

*IDC **09** 14:24:57.4±1.8, 37°.82N×25°.49E, h0^{km}, mb3.3/2, mb1 3.5/3, mb1mx3.3/34, mbtmp3.4/3, ML3.1/1, Error ellipse: s-maj=60.7km s-min=23.5km az=163.0*

ISC 09 14:24:47.0±1.0**, 38°.53N**±0°.02×**26°.36E**±0°.02**, h5^{km}**±8^{km}**, n194,** σ**1^{s}.42**/226**, mb3.6**/3**, 13C, Aegean Sea**

```
Code  Station Name       Δ°   AZ°     Phase ID          Time     Res
                                     Op     ISC       h  m  s   ISC
KRBN  Karaburun          0.16  68  PG      Pg      14 24 50.2 -0.1
KRBN                               SG      Sg      14 24 53.3 +0.9
CESE  eme                0.21 194  PG      Pg      14 24 50.9 -0.2
URLA  Izmir              0.25 133  i P     Pg      14 24 51.5 -0.4
URLA                               i S     Sg      14 24 55.5 +0.3
URLA  Izmir              0.25 133  PG      Pg      14 24 51.5 -0.4
URLA                               SG      Sg      14 24 55.9 +0.7
CHOS  Chios island       0.28 239  P       Pg      14 24 52.6 +0.1
CHOS                               S       Sg      14 24 56.0 -0.2
      58μm,0.2s
CHOS  Chios island       0.28 239  P       Pg      14 24 52.6 +0.1
CHOS                               S       Sg      14 24 56.7 +0.4
CHOS                               AML     AML     14 24 57.4
CHOS                               AML     AML     14 24 57.6
CHOS  Chios island       0.28 239  PG      Pg      14 24 52.6 +0.1
ZEYE  Izmir, Urla-Ze     0.31 159  i P     Pg      14 24 52.6 -0.5
ZEYE                               i S     Sg      14 24 57.1 -0.1
FOCM  Foa                0.34  58  PG      Pg      14 24 53.0 -0.6
CAND  Candarli           0.55  39  PG      Pg      14 24 56.9 -0.6
BLCB  Balcova            0.55 105  P       Pg      14 24 56.8 -0.9
BLCB                               S       Sg      14 25 05.4 +0.5
BLCB  Balcova            0.55 105  PG      Pg      14 24 56.8 -0.9
```

GMLD	Gumuldur	0.63	136	PG	Pg	14 24 58.2	-0.9
GMLD				SG	Sg	14 25 07.1	-0.2
DGB	zmir	0.63	139	*i* P	Pg	14 24 57.8	-1.4
DGB				*i* S	Sg	14 25 07.0	-0.3
DKL	Dikili	0.69	38	PG	Pg	14 24 58.9	-1.3
ZEDA	zmir-Bergama	0.71	52	*i* P	Pg	14 24 59.2	-1.4
ZEDA				*i* S	Sb	14 25 11.2	-0.7
PRK	Paraskevi	0.72	354	P	Pg	14 25 01.2	+0.4
PRK				S	Sb	14 25 12.2	+0.1
	24µm,0.5s						
PRK	Paraskevi	0.72	354	P	Pg	14 25 01.2	+0.4
PRK				S	Sb	14 25 11.1	-1.0
PRK				AML	AML	14 25 13.6	
	comp=E,61001µm,0.5s						
PRK				AML	AML	14 25 14.7	
	comp=N,32116µm,0.5s						
SIGR	SIGRI	0.79	330	P	Pg	14 25 01.8	-0.3
SIGR				S	Sb	14 25 13.5	-0.6
	comp=N,9µm,0.4s						
SIGR	SIGRI	0.79	330	P	Pg	14 25 01.5	-0.6
SIGR				S	Sg	14 25 11.9	-0.5
SIGR				AML	AML	14 25 14.3	
	comp=E,19394µm,0.5s						
SIGR				AML	AML	14 25 14.9	
	comp=N,16069µm,0.4s						
SIGR	SIGRI	0.79	330	PG	Pg	14 25 01.9	-0.2
SMG	Samos	0.90	155	P	Pg	14 25 03.9	-0.4
SMG				S	Sb	14 25 17.6	+0.1
	comp=N,10µm,0.4s						
SMG	Samos	0.90	155	P	Pg	14 25 03.6	-0.7
SMG				S	Sg	14 25 16.5	+0.4
SMG				AML	AML	14 25 17.8	
	comp=E,26306µm,0.6s						
SMG				AML	AML	14 25 17.9	
	comp=N,15983µm,0.2s						
GPNR	Gulpinar-Canak	0.94	349	PG	Pg	14 25 05.1	0.0
KOCA	Canakkale, Ayv	0.98	350	*i* P	Pg	14 25 04.8	-1.1
KOCA				*i* S	Sg	14 25 18.8	0.0
GCAM	G?zelcaml?	1.08	140	PG	Pg	14 25 06.2	-1.5
BUHA	Balikesir, Bur	1.12	30	*i* P	Pg	14 25 06.2	-2.3
BUHA				*i* S	Sb	14 25 23.3	-0.3
AKS	Akhisar	1.19	73	PN	Pg	14 25 08.9	-0.9
GOMA	Golmarmara-Man	1.23	81	PN	Pg	14 25 09.3	-1.3
DDIM	Aydin, Didim	1.28	147	*i* P	Pg	14 25 09.7	-1.8
DDIM				*i* S	Sb	14 25 28.3	+0.1
EZN	Ezine	1.29	359	P	Pn	14 25 09.9	-1.8
EZN				S	Sn	14 25 29.0	-0.4
	comp=N,3µm,0.5s						
EZN	Ezine	1.29	359	PN	Pn	14 25 09.6	-2.1
BOZC	Bozcaada	1.33	350	*i* P	Pn	14 25 10.1	-2.2
BOZC	Bozcaada	1.33	350	PN	Pn	14 25 09.9	-2.3
AYDB	Zeytinkoy-Aydi	1.34	115	PN	Pn	14 25 10.4	-2.1
STEP	BALIKESIR_Sava	1.35	51	*i* P	Pn	14 25 10.0	-2.6
STEP				*i* S	Sb	14 25 30.6	+0.2
SKY	Skiros Island	1.46	284	P	Pn	14 25 13.3	-0.7
SKY	Skiros Island	1.46	284	P	Pn	14 25 12.2	-1.8
ECEA	Canakkale, Ece	1.52	355	*i* P	Pn	14 25 12.6	-2.2
ECEA				*i* S	Sb	14 25 35.2	0.0
YKAV	Yalikavak-Bodr	1.58	152	PN	Pn	14 25 15.0	-0.7
KARY	Karystos	1.59	252	P	Pn	14 25 14.0	-1.9
BALB	Balikesir	1.62	46	PN	Pn	14 25 14.9	-1.3
LIA	Limnos Island	1.64	326	P	Pn	14 25 14.7	-1.8
LIA				S	Sn	14 25 36.4	-1.6
	comp=N,772nm,0.6s						
LIA	Limnos Island	1.64	326	P	Pn	14 25 15.8	-0.7
LIA				S	Sb	14 25 38.8	0.0
LIA				AML	AML	14 25 40.9	
	comp=E,1802µm,0.5s						
LIA				AML	AML	14 25 41.3	
	comp=N,1197µm,0.7s						
BODT	Bodrum	1.65	153	P	Pn	14 25 14.5	-2.1
BODT				S	Sn	14 25 36.5	-1.7
BODT	Bodrum	1.65	153	PN	Pn	14 25 14.9	-1.7
MLSB	Milas	1.67	137	PN	Pn	14 25 14.8	-2.1
GADA	Gvkgeada	1.69	348	P	Pn	14 25 15.5	-1.8
GADA	Gvkgeada	1.69	348	PN	Pn	14 25 15.7	-1.6
GOKC	Gokceada-Canak	1.70	348	PN	Pn	14 25 15.3	-2.0
MANT	Manisa	1.72	91	*i* P	Pn	14 25 15.8	-2.0
MANT				*i* S	Sb	14 25 40.8	-0.6
KYMI	Kymi, Euboea I	1.78	274	P	Pn	14 25 15.8	-2.6
KYMI				S	Sn	14 25 38.4	-2.9
	comp=N,250nm,0.8s						
KYMI	Kymi, Euboea I	1.78	274	P	Pb	14 25 19.6	-0.5
KULA	Kula-Manisa	1.80	90	P	Pn	14 25 17.3	-1.5
KULA				S	Sn	14 25 41.8	-0.3
KULA	Kula-Manisa	1.80	90	PN	Pn	14 25 17.4	-1.4
GONE	Gonen-Balikesi	1.83	34	PN	Pn	14 25 17.7	-1.4
KOSK	Kos Island	1.84	164	PN	Pn	14 25 17.9	-1.4
LPK	Lapseki	1.86	9	PN	Pn	14 25 17.8	-1.8
GELI	Tayfur-Gelibol	1.87	3	PN	Pn	14 25 17.9	-1.7
DION	Dionisos Attik	1.96	257	P	Pn	14 25 18.9	-2.1
KRBG	Karabiga-Canak	2.00	21	PN	Pn	14 25 19.2	-2.2
PTL	Penteli	2.02	257	P	Pn	14 25 20.3	-1.5
NIS1	Nisyros Isl.	2.03	161	P	Pn	14 25 20.7	-1.2
NIS1	Nisyros Isl.	2.03	161	PN	Pn	14 25 20.3	-1.6
SMTH	Samothraki Isl	2.04	342	P	Pn	14 25 20.0	-2.0
SMTH	Samothraki Isl	2.04	342	P	Pn	14 25 23.1	+1.1
SMTH				S	Sb	14 25 50.1	-0.1
SMTH				AML	AML	14 25 51.5	
	comp=N,366µm,0.5s						
SMTH				AML	AML	14 25 52.9	
	comp=E,616µm,0.4s						
DAT	Datca	2.04	151	P	Pn	14 25 20.1	-2.0
DAT	Datca	2.04	151	*i* P	Pn	14 25 19.8	-2.4
DAT	Datca	2.04	151	PN	Pn	14 25 19.7	-2.4
DST	Dursunbey	2.06	58	PN	Pn	14 25 21.7	-0.6
YER	Yerkesik	2.06	132	P	Pn	14 25 20.6	-1.8
YER	Yerkesik	2.06	132	PN	Pn	14 25 21.1	-1.3
ENZZ	Sultanice-Enez	2.08	355	PN	Pn	14 25 21.7	-0.8
ATHU	Athens Univers	2.11	255	P	Pn	14 25 21.7	-1.2
SIMA	Simav-Kutahya	2.12	74	PN	Pn	14 25 21.9	-1.3
VLY	Voula,Athens	2.13	252	P	Pn	14 25 21.8	-1.5
ERIK	Erikli-Kesan	2.14	3	PN	Pn	14 25 21.9	-1.4
EDC	Edincik	2.15	32	PN	Pn	14 25 21.7	-1.9
ATH	Athens Observa	2.16	256	P	Pn	14 25 22.1	-1.5
ENEZ	Enez	2.21	356	P	Pn	14 25 23.2	-1.0
ENEZ				S	Sn	14 25 51.3	-0.6
ENEZ	Enez	2.21	356	PN	Pn	14 25 23.3	-1.0
RKY	Sarkoy-Tekirda	2.24	16	PN	Pn	14 25 24.1	-0.7
THR3	Thira Island,	2.25	200	P	Pn	14 25 22.4	-2.5
SNT5	Nea Kammeni, S	2.26	200	P	Pn	14 25 22.5	-2.5
STAX	Taxiarchis Har	2.26	200	P	Pn	14 25 22.4	-2.6
MRMT	Marmara Adasi	2.28	24	PN	Pn	14 25 24.4	-0.9
MAR6	Marsite Statio	2.28	18	PN	Pn	14 25 23.9	-1.4
SHAP	Saphane-Kutahy	2.29	77	PN	Pn	14 25 25.2	-0.3
MAR2	Marsite Statio	2.30	18	PN	Pn	14 25 24.9	-0.7
THR6	Thira Island,	2.30	200	P	Pn	14 25 23.1	-2.5
TURN	Turunc	2.30	139	PN	Pn	14 25 24.7	-0.9
KCTX	Karacabey (Bur	2.32	41	PN	Pn	14 25 24.9	-1.0
MAR3	Marsite Statio	2.32	18	PN	Pn	14 25 24.7	-1.2
GZKV	Gazikoy-Tekird	2.33	18	PN	Pn	14 25 25.2	-0.8
ALN	Alexandroupoli	2.38	354	P	Pn	14 25 25.2	-1.4
ALN				S	Sn	14 25 55.8	-0.3
	comp=E,470nm,0.8s						
ALN	Alexandroupoli	2.38	354	PN	Pn	14 25 25.8	-0.8
MHLO	Agia Marina, M	2.41	221	P	Pn	14 25 24.1	-3.0
VILL	Villia	2.43	262	P	Pn	14 25 26.0	-1.4
THAS	Thassos island	2.43	329	P	Pn	14 25 25.0	-2.3
GEDZ	Gediz	2.44	77	PN	Pn	14 25 26.3	-1.2
ORLT	Orhaneli	2.48	52	PN	Pn	14 25 26.9	-1.2
DALY	Dalyan (Mula)	2.50	133	PN	Pn	14 25 26.6	-1.6
PAIG	Paliouri	2.51	305	P	Pn	14 25 26.7	-1.7
OUR	Ouranopolis	2.58	315	P	Pn	14 25 27.6	-1.8
OUR	Ouranopolis	2.58	315	PN	Pn	14 25 27.8	-1.6
TVSB	Tavsanli	2.58	68	PN	Pn	14 25 29.1	-0.5
UKOP	Uzunkopru-Edir	2.60	4	PN	Pn	14 25 29.1	-0.6
XOR	Xorichti	2.61	290	P	Pn	14 25 27.6	-2.2
MDNY	Mudanya-Bursa	2.68	46	PN	Pn	14 25 29.7	-1.1
RDO	Rodhopi	2.69	347	P	Pn	14 25 29.3	-1.6
RDO	Rodhopi	2.69	347	PN	Pn	14 25 29.5	-1.4
ARG	Arkhangelos	2.71	148	P	Pn	14 25 29.7	-1.4
ARG	Arkhangelos	2.71	148	PN	Pn	14 25 30.2	-0.9
LTK	Loutraki	2.72	260	P	Pn	14 25 30.5	-0.9
LTK				S	Sn	14 26 04.0	-0.6
	comp=E,230nm,0.7s						
CAME	Cameli-Denizli	2.82	123	PN	Pn	14 25 32.7	-0.1
KAVA	Kavala	2.84	331	P	Pn	14 25 31.1	-1.9
FETY	Fethiye	2.87	130	P	Pn	14 25 32.6	-0.9
FETY				S	Sn	14 26 08.1	-0.3
FETY	Fethiye	2.87	130	*i* P	Pn	14 25 32.2	-1.3
FETY	Fethiye	2.87	130	PN	Pn	14 25 32.7	-0.8
GEMT	Gemlik	2.90	48	PN	Pn	14 25 32.9	-0.9
BASM	Basmaki-Afyon	2.97	101	PN	Pn	14 25 34.1	-0.7
TRML	Termal-Yalova	3.00	45	PN	Pn	14 25 34.9	-0.3
SLVT	Silivri	3.05	27	PN	Pn	14 25 34.9	-0.9
YLV	Yalova	3.09	48	PN	Pn	14 25 35.5	-1.0
CTKS	Kestanelik-??a	3.17	31	PN	Pn	14 25 36.3	-1.1
AUBOZ	BOZOYUK	3.17	63	PN	Pn	14 25 36.9	-0.6
CAVI	Cavuskoy	3.17	57	PN	Pn	14 25 36.8	-0.8
AGG	Agios Georgios	3.19	280	P	Pn	14 25 36.9	-0.9
AGG	Agios Georgios	3.19	280	PN	Pn	14 25 37.6	-0.2
KDZ	Kurdzhali	3.20	347	*i* P	Pn	14 25 36.2	-1.7
GUR	Goura	3.22	261	P	Pn	14 25 36.9	-1.4
ADVT	Abdulvahap	3.23	53	PN	Pn	14 25 38.2	-0.1
BGKT	Bogazkoy	3.23	34	PN	Pn	14 25 37.4	-1.0
HORT	Hortiatis	3.26	310	PN	Pn	14 25 37.9	-0.9
SOH	Sokhos	3.26	316	P	Pn	14 25 37.5	-1.3
VLI	Veliai	3.27	237	P	Pn	14 25 36.7	-2.2
KAVV	Kandilli-Istan	3.27	39	PN	Pn	14 25 37.9	-1.0
ISK	Istanbul-Kandi	3.27	39	PN	Pn	14 25 38.2	-0.7
SHUT	Suhut-Afyon	3.29	88	PN	Pn	14 25 37.9	-1.3
CTYL	Yalikoy Yolu	3.29	26	PN	Pn	14 25 38.5	-0.7
EDRB	Edirne	3.32	5	PN	Pn	14 25 37.4	-2.2
ELL	Elmali	3.33	121	PN	Pn	14 25 39.3	-0.6
MAKR	Makrakomi, Fth	3.34	280	P	Pn	14 25 38.3	-1.6
SRS	Serrai	3.35	321	P	Pn	14 25 38.4	-1.6
KLV	Kalavryta, Ach	3.35	263	P	Pn	14 25 38.5	-1.6
NVR	Nevrokopi	3.41	326	P	Pn	14 25 39.2	-1.6
KLYT	Kilyos	3.41	36	PN	Pn	14 25 39.3	-1.5
ZKR	Zakros	3.41	182	PN	Pn	14 25 40.7	-0.2
HRT	Hereke	3.43	47	PN	Pn	14 25 40.1	-1.0
IDI	Anoyia	3.45	200	P	Pn	14 25 40.1	-1.3
BORA	Eskisehir	3.45	66	PN	Pn	14 25 40.3	-1.2
AKAS	Kas	3.46	131	PN	Pn	14 25 40.1	-1.5
LAKA	Lakka	3.46	267	P	Pn	14 25 40.9	-0.6
KTHA	Kythira Island	3.47	230	P	Pn	14 25 39.5	-2.2
EFP	Efpalio	3.50	270	P	Pn	14 25 40.8	-1.2
KTHR	Kythira	3.51	231	P	Pn	14 25 40.3	-1.9
KORT	Korkueli	3.51	115	PN	Pn	14 25 41.7	-0.6
DIM	Dimitrovgrad	3.57	350	*e*P	Pn	14 25 41.4	-1.6
IMMV	Iera Moni Meta	3.61	213	PN	Pn	14 25 42.8	-0.8
ANKY	Antikythira Is	3.61	224	P	Pn	14 25 41.3	-2.3
SRCK	Saricakaya, Es	3.64	64	PN	Pn	14 25 43.9	0.0
SILT	Sile	3.64	43	PN	Pn	14 25 43.7	-0.2
DRO	Drossia	3.71	262	P	Pn	14 25 44.4	-0.6
GULT	Gulveren	3.73	58	PN	Pn	14 25 44.8	-0.5
KNT	Kendrikon	3.74	316	P	Pn	14 25 44.8	-0.6
KNT	Kendrikon	3.74	316	PN	Pn	14 25 44.8	-0.6
ITM	Ithomi	3.76	250	PN	Pn	14 25 44.8	-0.9
SAUV	Serdivan-Sakar	3.77	53	PN	Pn	14 25 45.9	+0.1
GRG	Griva	3.90	310	PN	Pn	14 25 47.0	-0.6
JMB	Yambol	3.93	2	*i* P	Pg	14 26 00.7	-1.7
SVRH	Sivrihisar-ESK	4.12	76	PN	Pn	14 25 50.9	+0.2
AUSIV	SIVRIHISAR	4.13	76	PN	Pn	14 25 50.9	0.0
MDUB	Mudurnu	4.21	61	PN	Pn	14 25 51.9	-0.1
STIP	Stip	4.50	316	*i* Pn	Pn	14 25 53.9	-1.9
ROIA	ROIAK	4.62	9	*i* P	Pn	14 25 56.2	-1.3
VTS	Vitosha	4.72	331	⇑P	Pn	14 25 56.6	-2.5
PRD	Provadia	4.73	9	*i* P	Pn	14 25 56.9	-2.0
BRTR	Keskin Array B	5.78	76	Pn	Pg	14 26 37.6	-0.1
	comp=E,0.4nm,0.3s,baz=263,slow=15,SNR=9.2						
BRTR				Sn	Sg	14 27 56.0	+3.3
	comp=E,0.3nm,0.3s,baz=255,slow=28,SNR=5.7						
TIRR	Tirgusor	6.12	14	⇑P	Pn	14 26 18.9	+0.9
BOVS	Bovan	6.19	327	⇑P	Pn	14 26 17.8	-1.3
MLR	Muntele Rosu	6.96	358	⇑P	Pn	14 26 28.9	-0.8
VOIR		6.97	352	⇑P	Pn	14 26 28.5	-1.2
LOT	Lotru	7.17	345	⇑P	Pn	14 26 35.1	+2.5
COVR	Voineasa-Covas	7.31	359	⇑P	Pn	14 26 35.0	+0.6
PLOR	Plostina	7.32	2	⇑P	Pn	14 26 34.5	0.0
VRI	Vrincioaia	7.33	2	⇑P	Pn	14 26 34.6	-0.1
GZR	Gura Zlata	7.36	340	⇑P	Pn	14 26 37.4	+2.3
TESR	Tescani	7.98	1	⇑P	Pn	14 26 42.8	-0.8
DRGR		8.68	343	⇑P	Pn	14 27 02.3	+9.0
BURAR	Bucovina Array	9.12	355	⇑P	Pn	14 27 04.4	+5.2
CLL	Collm	15.86	328	*e*(P)	Pn	14 28 32.0	+1.1
ESDC	Sonseca Array	23.51	282	P	P	14 30 04.0	+6.1
	comp=E,0.3nm,0.5s,baz=82,slow=9.6,SNR=2.1						
TORD	Torodi Ar. Bea	33.44	228	P	P	14 31 29.5	+2.6
	comp=E,0.5nm,0.7s,baz=38,slow=9.7,SNR=3.3						
KSH	Kashi	38.16	72	P	P	14 32 04.9	-2.5
KSH				pmax	pmax		
	comp=Z,3.0nm,0.5s						

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*NOU **09** 14:39:47.5, 39°.02S×176°.24E, h123^{km}, MLv4.2/9, North Island, New Zealand*

*NEIC **09** 14:39:50.9±1.1, 38°.98S±0°.05×176°.22E±0°.09, h91^{km}±5^{km}, mb4.5/11, Error ellipse: s-maj=10.5km s-min=6.3km az=110.0*

*WEL **09** 14:39:52.0, 39°S±2°×17°6E±°, h73^{km}±5^{km}, M3.8/78, ML4.0/78, MLv3.8/78, Error ellipse: s-maj=0.0km s-min=0.0km az=93.0*

*IDC **09** 14:39:52.6±1.0, 37°.89S×176°.18E, h91^{km}±26^{km}, mb3.5/4, mb1 3.7/4, mb1mx3.5/29, mbtmp3.8/4, Error ellipse: s-maj=72.0km s-min=28.1km az=49.0*

ISC 09 14:39:50.5±0.7, **39°.02S**±0°.04×**176°.13E**±0°.04, **h93**^{km}±5^{km}, **n192**, σ**1^{s}.14**/196, **mb4.1**/11, **North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATZ	Hinemaiaia	0.13	349	P	Pn	14 40 03.0	-0.6
HATZ				S	Sn	14 40 11.8	-1.6
RITZ	Rihia Road	0.21	282	P	Pn	14 40 03.9	0.0
MRHZ	Matea Rd	0.30	51	P	Pn	14 40 03.5	-0.8
MRHZ				S	Sn	14 40 12.7	-1.7
RATZ	Rangitukua	0.32	299	P	Pn	14 40 03.9	-0.5
BKZ	Black Stump Fm	0.32	117	P	Pn	14 40 04.3	-0.1
BKZ				S	Sn	14 40 14.3	-0.4
BKZ	Black Stump Fm	0.32	117	Pn	Pn	14 40 04.3	-0.1
BKZ				Sn	Sn	14 40 13.9	-0.8
BKZ	Black Stump Fm	0.32	117	P	Pn	14 40 04.3	-0.1
KATZ	Kakaramea	0.34	278	P	Pn	14 40 04.5	-0.1
TMVZ	Te Maari	0.34	254	P	Pn	14 40 04.8	+0.2
ETVZ	East Tongariro	0.34	250	P	Pn	14 40 04.8	+0.2
NTVZ	North Tongarir	0.36	258	P	Pn	14 40 04.7	+0.1
WHTZ	Whakaora	0.38	340	P	Pn	14 40 04.5	-0.3
KRVZ	Karewarewa	0.38	259	P	Pn	14 40 04.8	0.0
OTVZ	Oturere	0.39	248	P	Pn	14 40 05.1	+0.2
SNVZ	South Ngauruho	0.41	246	P	Pn	14 40 05.3	+0.3
NNVZ	North Ngauruho	0.41	254	P	Pn	14 40 05.2	+0.2
WTVZ	West Tongariro	0.43	257	P	Pn	14 40 05.1	0.0
NGZ	Ngauruhoe	0.44	249	P	Pn	14 40 05.3	+0.1
WATZ	Wairara	0.44	316	P	Pn	14 40 04.5	-0.5
TUVZ	Tukino	0.44	236	P	Pn	14 40 05.6	+0.4
KWHZ	Kaweka Forest	0.46	150	P	Pn	14 40 05.8	+0.5
BHHZ	Black Hill Sta	0.47	186	P	Pn	14 40 05.9	+0.5
MOVZ	Moawhango	0.48	217	P	Pn	14 40 05.7	+0.3
ALRZ	Allen Road	0.49	20	P	Pn	14 40 04.6	-0.8
WHVZ	Whangaehu Hut	0.49	238	P	Pn	14 40 06.1	+0.4
FWVZ	Far West T-bar	0.50	242	P	Pn	14 40 06.0	+0.2
WPRZ	Whakapapatarin	0.50	3	P	Pn	14 40 04.7	-0.8
WNVZ	Wahianoa	0.51	233	P	Pn	14 40 06.2	+0.4
TRVZ	Turoa	0.53	238	P	Pn	14 40 06.4	+0.5
NMHZ	Naumai	0.54	98	P	Pn	14 40 06.6	+0.7
TWVZ	Taurewa	0.54	265	P	Pn	14 40 05.9	0.0
PRRZ	Plateau Road	0.56	22	P	Pn	14 40 05.0	-1.0
KUTZ	Kaahu Road	0.58	336	P	Pn	14 40 05.8	-0.4
MTHZ	Maungataniwha	0.58	73	P	Pn	14 40 06.0	-0.2
MCHZ	McNeill Hill	0.61	134	P	Pn	14 40 07.7	+1.3
MTVZ	Mangateitei	0.62	234	P	Pn	14 40 07.2	+0.6
HRRZ	Handcock Road	0.64	11	P	Pn	14 40 06.1	-0.7
KRHZ	Kereru	0.65	163	P	Pn	14 40 07.7	+0.9
PKVZ	Pokaka	0.66	246	P	Pn	14 40 07.5	+0.6
GRRZ	Galatos Road	0.67	359	P	Pn	14 40 06.6	-0.4
HSRZ	Hossack Road	0.72	8	P	Pn	14 40 06.8	-0.6
ARHZ	Aropaoanui	0.72	110	P	Pn	14 40 08.0	+0.7
MUGZ	Murupara	0.74	43	P	Pn	14 40 06.8	-0.8
RRRZ	Republican Roa	0.75	24	P	Pn	14 40 06.9	-0.8
RAHZ	Arahi	0.76	82	P	Pn	14 40 08.2	+0.4
RTZ	Ruatahuna	0.78	59	P	Pn	14 40 07.6	-0.5
HLRZ	Highlands Stat	0.79	13	P	Pn	14 40 08.0	-0.1
TLZ	Tolley Road	0.83	326	P	Pn	14 40 08.3	-0.3
TARZ	Mount Tarawera	0.84	21	P	Pn	14 40 08.1	-0.6
UTU	Utuhina	0.85	4	P	Pn	14 40 08.4	-0.3
WHHZ	Waihua	0.86	94	P	Pn	14 40 09.2	+0.4
PNHZ	Pukenui	0.89	176	P	Pn	14 40 09.9	+0.6
NGRZ	Ngongotaha	0.92	3	P	Pn	14 40 09.1	-0.4
MKRZ	Makatiti	0.92	17	P	Pn	14 40 09.3	-0.3
OMRZ	Omania	0.94	12	P	Pn	14 40 09.0	-0.6
KAHZ	Kahuranaki	0.97	143	P	Pn	14 40 11.2	+1.2
CKHZ	Cape Kidnapper	0.97	131	P	Pn	14 40 11.1	+1.1
SNGZ	Shannon Statio	0.98	76	P	Pn	14 40 10.2	+0.1
KARZ	Kaharoa	1.00	5	P	Pn	14 40 10.0	-0.4
EDRZ	Edgecumbe	1.03	28	P	Pn	14 40 10.1	-0.7
LIRZ	Lichensteins R	1.04	11	P	Pn	14 40 10.2	-0.6
TSZ	Takapari Road	1.04	187	P	Pn	14 40 11.5	+0.7
VRZ	Vera Road	1.07	264	P	Pn	14 40 11.7	+0.7
WPHZ	Waipukurau	1.07	167	P	Pn	14 40 12.0	+0.8
URZ	Urewera	1.08	46	P	Pn	14 40 10.3	-1.0
	380nm,0.3s,baz=242,slow=8.2,SNR=4031						
URZ				S	Sn	14 40 24.7	-2.3
	491nm,0.3s,baz=106,slow=20,SNR=26						
URZ	Urewera	1.08	46	P	Pn	14 40 10.5	-0.8
URZ	Urewera	1.08	46		Pn	14 40 10.5	-0.8
URZ	Urewera	1.08	46	P	Pn	14 40 10.5	-0.8
HIZ	Hauiti	1.11	297	P	Pn	14 40 11.9	+0.3
HIZ	Hauiti	1.11	297		Pn	14 40 11.7	+0.1
HIZ	Hauiti	1.11	297	P	Pn	14 40 12.0	+0.3
MARZ	Manawahe	1.12	23	P	Pn	14 40 11.0	-0.8
RAGZ	Rawiri	1.14	63	P	Pn	14 40 11.7	-0.3
WAZ	Wanganui	1.15	230	P	Pn	14 40 13.4	+1.4
PXZ	Pawanui	1.16	151	P	Pn	14 40 13.0	+0.8
KMRZ	Kaimai	1.18	353	P	Pn	14 40 12.3	-0.3
KNZ	Kokohu	1.21	90	P	Pn	14 40 12.4	-0.3
OPRZ	Ohinepanea	1.22	16	P	Pn	14 40 12.2	-0.8
DVHZ	Dannevirke	1.28	179	P	Pn	14 40 13.9	+0.3
MWZ	Matawai	1.29	58	P	Pn	14 40 13.3	-0.6
TGRZ	Tauranga	1.30	5	P	Pn	14 40 13.5	-0.3
PRHZ	Porangahau	1.30	163	P	Pn	14 40 14.6	+0.7
RIGZ	Rimuhau	1.32	77	P	Pn	14 40 13.7	-0.4
OHWZ	Ohakea	1.34	208	P	Pn	14 40 15.6	+1.3
WHRZ	Whale Island	1.34	30	P	Pn	14 40 15.7	+1.3
PRGZ	Paritu Road	1.37	86	P	Pn	14 40 14.5	-0.2
TOZ	Tahuroa Road	1.38	339	P	Pn	14 40 14.7	-0.1
MHGZ	Mahia Peninsul	1.39	96	P	Pn	14 40 15.2	+0.2
POWZ	Post Office Ro	1.40	191	P	Pn	14 40 15.3	+0.3
MHEZ	Mangahewa	1.40	267	P	Pn	14 40 16.7	+1.6
LREZ	Lake Rotokare	1.41	251	P	Pn	14 40 16.4	+1.3
ANWZ	Angora Road	1.46	169	P	Pn	14 40 16.5	+0.7
TKGZ	Te Karaka	1.47	67	P	Pn	14 40 15.7	-0.2
DREZ	Durham Road	1.51	263	P	Pn	14 40 18.0	+1.6
PRWZ	Pori Road	1.54	184	P	Pn	14 40 17.2	+0.5
PREZ	Palmer Road	1.56	258	P	Pn	14 40 19.0	+1.9
NEZ	North Egmont	1.60	260	P	Pn	14 40 19.2	+1.6
RUGZ	Raukumara Rang	1.61	50	P	Pn	14 40 16.8	-1.0
BFZ	Birch Farm	1.66	177	P	Pn	14 40 18.4	+0.1
BFZ	Birch Farm	1.66	177	Pn	Pn	14 40 18.2	-0.1
BFZ	Birch Farm	1.66	177	P	Pn	14 40 18.6	+0.2
KHEZ	Kahui Hut	1.66	260	P	Pn	14 40 20.0	+1.5
PKE	Pukeiti	1.67	263	P	Pn	14 40 19.7	+1.2
TWGZ	Tauwhareparae	1.68	60	P	Pn	14 40 18.7	0.0
MRZ	Mangatainoka R	1.69	194	P	Pn	14 40 18.6	-0.1
CNGZ	Carnagh Statio	1.71	72	P	Pn	14 40 19.2	+0.2
MYRZ	Mayor Island	1.74	3	P	Pn	14 40 19.6	+0.2
TIWZ	Tintock	1.76	186	P	Pn	14 40 19.7	0.0
NBEZ	Newall Road No	1.77	261	P	Pn	14 40 20.8	+1.0
NMEZ	Namu Road	1.79	257	P	Pn	14 40 21.4	+1.4
HAZ	Te Kaha	1.81	46	P	Pn	14 40 19.0	-1.4
CPWZ	Castlepoint	1.89	178	P	Pn	14 40 21.8	+0.6
PKGZ	Pakihiroa	1.91	54	P	Pn	14 40 21.3	-0.3
PUZ	Puketiti	1.92	61	P	Pn	14 40 21.1	-0.7
HOWZ	Holdsworth Sta	1.93	194	P	Pn	14 40 21.4	-0.5
OGWZ	Otaki Gorge	1.94	202	P	Pn	14 40 21.7	-0.2
KIW	Kapiti Island	2.06	207	P	Pn	14 40 23.1	-0.4
TMWZ	Te Maipa	2.09	185	P	Pn	14 40 23.5	-0.5
WMGZ	Waiomatatini S	2.16	57	P	Pn	14 40 24.2	-0.6
MTW	Mount Morrison	2.19	192	P	Pn	14 40 24.3	-0.9
CAW	Cannon Point	2.23	201	P	Pn	14 40 25.1	-0.8
MXZ	Matakaoa Point	2.25	50	P	Pn	14 40 25.6	-0.5
MXZ	Matakaoa Point	2.25	50		Pn	14 40 25.1	-0.9
ETAZ	East Tamaki Re	2.27	335	P	Pn	14 40 26.3	0.0
AWAZ	Awhitu Peninsu	2.28	329	P	Pn	14 40 26.6	+0.1
KUZ	Kuaotunu	2.29	352	P	Pn	14 40 26.4	-0.3
WIAZ	Waiheke Island	2.36	340	P	Pn	14 40 27.4	-0.1
TRWZ	Traveller	2.40	188	P	Pn	14 40 27.1	-0.9
EPAZ	Eden Park BICE	2.41	333	P	Pn	14 40 25.9	-2.1
PAWZ	Paruwai Farm	2.42	193	P	Pn	14 40 27.1	-1.2
WTAZ	Waiatarua	2.42	329	P	Pn	14 40 28.6	+0.3
MBAZ	Motutapu North	2.45	336	P	Pn	14 40 28.6	0.0
DUWZ	D’Urville Isla	2.46	223	P	Pn	14 40 27.9	-0.8
MSWZ	Moikau Station	2.48	195	P	Pn	14 40 27.9	-1.3
MSWZ	Moikau Station	2.48	195	Pn	Pn	14 40 27.7	-1.4
WEL	Wellington	2.49	204	P	Pn	14 40 28.1	-1.1
SNZO	South Karori	2.53	205	Pn	Pn	14 40 28.1	-1.6
SNZO	South Karori	2.53	205	P	Pn	14 40 28.4	-1.3
RVAZ	Riverhead Bore	2.56	331	P	Pn	14 40 30.1	0.0
BHW	Baring Head	2.57	202	P	Pn	14 40 28.8	-1.4
BHW	Baring Head	2.57	202	Pn	Pn	14 40 28.4	-1.9
TCW	Tory Channel	2.60	212	P	Pn	14 40 29.6	-1.1
ABAZ	Army Bay	2.63	337	P	Pn	14 40 31.2	+0.2
PLWZ	Palliser	2.63	194	P	Pn	14 40 29.6	-1.5
PLWZ	Palliser	2.63	194	Pn	Pn	14 40 29.3	-1.8
GRZ	Great Barrier	2.82	349	P	Pn	14 40 33.3	-0.3
TUWZ	Tuamarina	2.93	214	P	Pn	14 40 33.7	-1.3
TUWZ	Tuamarina	2.93	214	Pn	Pn	14 40 33.5	-1.6
NNZ	Nelson	3.04	223	P	Pn	14 40 35.0	-1.5
NNZ	Nelson	3.04	223	Pn	Pn	14 40 34.8	-1.7
CMWZ	Cape Campbell	3.09	208	P	Pn	14 40 36.1	-1.1
CMWZ	Cape Campbell	3.09	208	Pn	Pn	14 40 36.0	-1.2
BSWZ	Blackbirch Sta	3.19	212	P	Pn	14 40 37.2	-1.4
BSWZ	Blackbirch Sta	3.19	212	Pn	Pn	14 40 36.5	-2.1
QRZ	Quartz Range	3.30	236	P	Pn	14 40 38.7	-1.3
QRZ	Quartz Range	3.30	236	Pn	Pn	14 40 38.4	-1.6
QRZ	Quartz Range	3.30	236	P	Pn	14 40 39.1	-0.9
WCZ	Waipu Caves	3.39	335	P	Pn	14 40 41.5	+0.2
THZ	Tophouse	3.68	221	P	Pn	14 40 43.5	-1.7
THZ	Tophouse	3.68	221	Pn	Pn	14 40 43.4	-1.7
KHZ	Kahutara	3.92	209	P	Pn	14 40 46.1	-2.3
KHZ	Kahutara	3.92	209	Pn	Pn	14 40 46.0	-2.3
KHZ	Kahutara	3.92	209	P	Pn	14 40 46.3	-2.1
DSZ	Denniston Nort	4.28	229	P	Pn	14 40 50.9	-2.3
OUZ	Omahuta	4.30	331	P	Pn	14 40 54.0	+0.4
MQZ	McQueen’s Vall	5.36	208	Pn	Pn	14 41 03.5	-4.4
WVZ	Waitaha Valley	5.74	223	P	Pn	14 41 11.4	-1.7
RPZ	Rata Peaks	6.04	218	P	Pn	14 41 15.0	-2.2
RPZ	Rata Peaks	6.04	218	P	Pn	14 41 15.2	-2.1
GCSZ	Gaunt Creek Bo	6.13	224	P	Pn	14 41 16.5	-1.9
FOZ	Fox Glacier	6.55	225	P	Pn	14 41 21.8	-2.3
LBZ	Lake Benmore	6.96	218	P	Pn	14 41 27.5	-2.2
CTZ	Chatham Island	7.21	133	P	Pn	14 41 34.3	+1.2
ODZ	Otahua Downs	7.27	212	Pn	Pn	14 41 29.5	-4.4
ODZ	Otahua Downs	7.27	212	P	Pn	14 41 30.4	-3.5
MLZ	Mavora Lakes	8.69	221	Pn	Pn	14 41 50.6	-2.7
WHZ	Wether Hill Ro	9.14	219	P	Pn	14 41 60.0	+0.6
AS31	Alice Springs	38.81	281	P	P	14 47 06.8	+0.4
ASAR	Alice Springs	38.81	281	P	P	14 47 07.1	+0.7
	1.9nm,0.9s,baz=121,slow=7.7,SNR=30						
VNDA	Vanda	39.08	185	P	P	14 47 19.5	+12
	0.6nm,0.8s,baz=354,slow=7.5,SNR=5.6						
TARA	Tarawa	40.29	355	P	P	14 47 17.7	-0.9
TARA				IAmb	IAmb	14 47 26.2	
	comp=Z,67nm,0.7s						
WB2	Warramunga Arr	40.61	286	P	P	14 47 21.9	+0.6
WB2				IAmb	IAmb	14 47 40.6	
	comp=Z,4.4nm,1.1s						
WRAB	Tennant Creek	40.62	286	P	P	14 47 22.2	+0.8
WRAB				IAmb	IAmb	14 47 22.2	
	comp=Z,5.9nm,1.2s						
WRA	Warramunga Arr	40.62	286	P	P	14 47 21.9	+0.5
	comp=Z,1.1nm,0.7s,baz=125,slow=8.2,SNR=13						
WB0	Warramunga Arr	40.69	286	P	P	14 47 22.3	+0.4
WB0				IAmb	IAmb	14 47 48.2	
	comp=Z,3.3nm,1.1s						
CASY	Casey	45.27	211	P	P	14 47 59.0	+0.6
CASY				IAmb	IAmb	14 48 11.7	
	comp=Z,2.2nm,0.8s						
FITZ	Fitzroy Crossi	48.31	281	P	P	14 48 23.6	+1.0
	comp=Z,1.5nm,0.9s,baz=121,slow=5.9,SNR=1.6						
QSPA	South Pole Qui	51.10	180	P	P	14 48 45.8	+2.4
QSPA				IAmb	IAmb	14 48 54.1	
	comp=Z,5.2nm,1.4s						
MLOA	Mauna Loa Obse	64.00	30	P	P	14 50 13.9	-0.8
KEKH	Kekaha	64.77	25	P	P	14 50 19.0	-0.1
MIDW	Midway	67.17	6	P	P	14 50 35.2	+0.9
MIDW				IAmb	IAmb	14 51 03.6	
	comp=Z,66nm,0.8s						
ARCES	ARCESS Array B	145.66	342	PKP	PKPdf	14 59 16.7	-0.1
	comp=Z,3.4nm,0.9s,baz=53,slow=2.7,SNR=4.9						

*NEIC **09** 14:55:52.3±1.2, 0°.14S±0°.06×123°.50E±0°.07, h76^{km}±10^{km}, mb4.1/13, Error ellipse: s-maj=10.9km s-min=7.8km az=113.0*

*IDC **09** 14:55:53.5±2.6, 0°.17S×123°.57E, h94^{km}±25^{km}, mb3.5/8, mb1 3.7/10, mb1mx3.5/40, mbtmp3.9/10, MS2.8/3, Ms1 2.9/3, ms1mx2.5/31, Error ellipse: s-maj=31.3km s-min=14.4km az=75.0*

*DJA **09** 14:55:55.2±0.3, 0°S±3°×12°3E±°, h68^{km}±8^{km}, M4.2/18, mb4.4/6, mB4.5/5, MLv4.3/18, Mw(mB)3.7/5*

ISC 09 14:55:53.4±0.7**, 0°.24S**±0°.04×**123°.37E**±0°.06**, h97**^{km}±7^{km}**, n42,** σ1^{s}.**41**/47**, mb3.8**/13**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GTOI	Gorontalo	0.94	338	P	Pn	14 56 13.9	+1.0
GTOI				S	Sn	14 56 29.2	+1.7
LUWI	Luwuk	1.00	217	P	Pn	14 56 13.5	0.0
LUWI				S	Sn	14 56 27.6	-1.0
LUWI	Luwuk	1.00	217		Pn	14 56 13.2	-0.3
LUWI				Sn	Sn	14 56 28.0	-0.7
KMSI	Cibinong	1.01	37	P	Pn	14 56 14.1	+0.4
KMSI				S	Sn	14 56 28.7	-0.3
MRSI	Marisa	1.59	296	P	Pn	14 56 19.6	-1.0
MRSI				S	Sn	14 56 39.2	-2.1
TOLI2	Tolitoli	2.91	297		Pn	14 56 37.4	-0.5
SANI	Sanana	3.18	124	P	Pn	14 56 39.5	-2.0
MPSI	Mapaga	3.52	279	P	Pn	14 56 47.4	+1.4
TNTI	Ternate	4.12	76	P	Pn	14 56 55.7	+1.5
TNTI	Ternate	4.12	76	Pn	Pn	14 56 51.1	-3.1
LBMI	Labuha	4.15	95	P	Pn	14 56 57.5	+2.9
TTSI	Tana Toraja	4.51	232	P	Pn	14 57 00.1	+0.6
KAPI	Kappang	5.96	217	P	Pn	14 57 21.0	+1.8
	5.4nm,0.3s,baz=53,slow=5.1,SNR=7.3						
KAPI				S	Sn	14 58 24.6	-1.6
	1.1nm,0.3s,baz=70,slow=23,SNR=8.2						
KAPI				LR	LR	14 59 22.7	
	comp=Z,40nm,18.3s,baz=146,slow=34						
KAPI	Kappang	5.96	217		Pn	14 57 20.5	+1.3
BKSI	Bulukumba	6.00	213	P	Pn	14 57 21.2	+1.5
	0.1nm423nm10nm,1.3s						
MSAI	Masohi	6.36	119	P	Pn	14 57 27.0	+2.4
	0.1nm9.9nm,0.7s						
BSSI	Bau Bau, Buton	6.53	206	P	Pn	14 57 29.3	+2.4
FAKI	Fak Fak	9.27	107	Pn	Pn	14 58 01.2	-3.0
FITZ	Fitzroy Crossi	17.89	173	P	Pn	14 59 56.7	+0.7
	0.2nm,0.3s,baz=14,slow=8.3,SNR=6.4						
WB0	Warramunga Arr	22.21	152	P	P	15 00 41.5	-0.7
WB0				IAmb	IAmb	15 00 44.1	
	comp=Z,5.7nm,0.8s						
WRAB	Tennant Creek	22.33	152	P	P	15 00 43.5	+0.1
WRAB				IAmb	IAmb	15 00 45.6	
	comp=Z,2.8nm,0.6s						
WRA	Warramunga Arr	22.34	152	P	P	15 00 43.2	-0.2
	comp=Z,2.8nm,0.6s,baz=335,slow=10,SNR=38						
WRA	Warramunga Arr	22.34	152	P	P	15 00 43.0	-0.5
WR0	Warramunga Arr	22.45	151	P	P	15 00 44.1	-0.5
WR0				IAmb	IAmb	15 00 46.9	
	comp=Z,2.8nm,0.8s						
PSI	Prapat	24.62	277	LR	LR	15 12 58.0	
	comp=Z,45nm,18.1s,baz=28,slow=41						
ASAR	Alice Springs	25.44	157	P	P	15 01 13.2	+0.8
	comp=Z,0.9nm,0.6s,baz=330,slow=8.6,SNR=17						
ASAR				PcP	PcP	15 04 42.1	-0.1
	comp=Z,0.5nm,0.6s,baz=338,slow=1.7,SNR=6.1						
ASAR				ScP	ScP	15 08 12.8	-0.2
	comp=Z,0.5nm,1.1s,baz=338,slow=2.3,SNR=1.6						
CMAR	Chiang Mai Arr	30.35	309	P	P	15 01 58.0	+1.7
	comp=Z,0.3nm,0.4s,baz=140,slow=7.4,SNR=6.5						
CMAR				LR	LR	15 16 10.5	
	comp=Z,14nm,18.3s,baz=235,slow=40						
JCJ	Chichijima	32.65	32	P	P	15 02 15.4	-1.0
JMN	Monobe	35.20	15	P	P	15 02 37.4	-1.0
JWT	Wachi	37.08	16	P	P	15 02 53.2	-1.1
MJAR	Matsushiro Arr	39.10	19	P	P	15 03 09.6	-1.7
	comp=Z,2.4nm,0.8s,baz=192,slow=9.3,SNR=7.1						
MJAR	Matsushiro Arr	39.10	19	IAmb	IAmb	15 03 16.4	
	comp=Z,3.5nm,1.3s						
CAN	Canberra	42.30	148	P	P	15 03 39.5	+1.8
CAN				IAmb	IAmb	15 03 40.8	
	comp=Z,8.3nm,0.9s						
USRK	Ussuriysk Ar.	44.91	9	P	P	15 03 57.7	-0.7
SONM	Songino Array	50.11	345	P	P	15 04 39.2	+0.4
	comp=Z,0.3nm,0.5s,baz=157,slow=7.7,SNR=3.7						
SONM	Songino Array	50.11	345	IAmb	IAmb	15 04 41.8	
	comp=Z,0.2nm,0.6s						
MK31	Makanchi Array	59.01	328	P	P	15 05 43.5	+0.4
MK31				IAmb	IAmb	15 05 46.4	
	comp=Z,2.5nm,1.1s						
MKAR	Makanchi Array	59.01	328	P	P	15 05 43.5	+0.4
	comp=Z,0.2nm,0.6s,baz=131,slow=6.5,SNR=1.6						
PEA0B	Petropavlovsk-	60.36	23	P	P	15 05 52.1	-0.1
PETK	Petropavlovsk-	60.36	23	P	P	15 05 52.4	+0.2
	comp=Z,1.2nm,0.6s,baz=201,slow=7.7,SNR=4.3						
MA2	Magadan	63.37	15	P	P	15 06 10.7	-1.5
VNDA	Vanda	79.96	172	P	P	15 07 51.5	+0.1
	comp=Z,0.6nm,0.7s,baz=319,slow=7.7,SNR=4.7						

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*TUL **09** 14:58:55.2±0.5, 36°.942N±0°.007×97°.84W±0°.02, h5^{km}±4^{km}, ML2.6, mb_Lg2.4/9(NEIC), Error ellipse: s-maj=2.0km s-min=0.6km az=116.0*

NEIC 09 14:58:55.4±0.6**, 36°.921N**±0°.010×**97°.81W**±0°.02**, h7**^{km}±4^{km}**, Error ellipse: s-maj=2.2km s-min=1.4km az=109.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GC02	Grant County #	0.08	212	Pg	Pg	14 58 57.6	+0.2
GC02				Sg	Sg	14 58 58.8	0.0
KAN17	Caldwell West	0.13	15	Pg	Pg	14 58 58.2	+0.1
KAN17				Sg	Sg	14 59 00.0	0.0
KAN14	Manchester OK	0.13	286		Pg	14 58 57.8	-0.4
KAN05	Bluff City Nor	0.20	344		Pg	14 58 59.1	-0.2
KAN01	Argonia South	0.23	9		Pg	14 59 00.1	0.0
KAN01				Sg	Sg	14 59 03.2	0.0
KAN09	Caldwell North	0.26	35	Pg	Pg	14 59 00.7	+0.2
KAN09				Sg	Sg	14 59 03.9	-0.2
KAN13	South Haven SW	0.28	71		Pg	14 59 01.4	+0.6
KAN10	Anthony SW Sta	0.31	311	Pg	Pg	14 59 01.0	-0.4
KAN10				Sg	Sg	14 59 05.0	-0.6
KAN06	Argonia West S	0.33	353		Pg	14 59 01.6	-0.2
KAN08	Anthony NE Sta	0.33	337		Pg	14 59 01.6	-0.3
KAN08				Sg	Sg	14 59 06.3	0.0
OK032	Salt Plains WL	0.34	250		Pg	14 59 01.9	-0.2
KAN16	Harper SW Stat	0.37	326	Pg	Pg	14 59 02.2	-0.3
KAN16				Sg	Sg	14 59 06.9	-0.6
KS20	Mayfield South	0.37	33	Pg	Pg	14 59 02.6	+0.1
KAN12	Harper NE Stat	0.41	338	Pg	Pg	14 59 02.9	-0.4
CROK	Carrier	0.44	199	Pg	Pg	14 59 04.2	+0.3
BLOK	Blackwell	0.50	108	Pg	Pg	14 59 05.5	+0.4
T35A	Sooner Cattle	1.04	90	Pg	Pg	14 59 15.3	+0.1
U32A	Winter Ranch,	1.10	241	Pg	Pg	14 59 16.5	0.0
OK029	Liberty Lake	1.16	166	Pg	Pg	14 59 17.4	-0.2
QUOK	Quay	1.16	130	Pg	Pg	14 59 17.5	-0.1
OK031	S. Brethren Rd	1.24	141		Pb	14 59 19.0	-0.2
BCOK	Bluff Creek, N	1.27	173		Pn	14 59 19.4	-0.2
OK030	Cody Creek RV	1.29	140		Pn	14 59 19.7	-0.2
OK025	Westminster Rd	1.39	164	Pn	Pb	14 59 21.7	0.0
R32A	Long Quarter,	1.66	335		Pn	14 59 25.5	+0.4
FNO	Franklin	1.69	169	Pn	Pn	14 59 26.1	+0.7
TUL1	Leonard	1.91	121	Pn	Pn	14 59 29.2	+0.8
TUL1				IAmb_Lg		14 59 58.8	
	comp=Z,26nm,0.8s						
X34A	Smith Ranch, M	2.31	181	Pn	Pn	14 59 34.7	+0.7
KSU1	Kansas State U	2.37	23	IAmb_Lg		15 00 15.1	
	comp=Z,18nm,1.1s						
HHAR	Hobbs	3.17	100	Pn	Pn	14 59 46.7	+0.9
MGMO	Mountain Grove	4.44	85	IAmb_Lg		15 01 26.3	
	comp=Z,5.3nm,0.7s						
SMCO	Snowmass	7.58	290	IAmb_Lg		15 03 04.5	
	comp=Z,6.7nm,0.9s						

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*IDC **09** 14:59:20.8±1.1, 29°.60S×71°.94W, h0^{km}, mb3.9/4, mb1 4.0/8, mb1mx3.8/27, mbtmp3.9/8, ML3.7/4, MS3.4/1, Ms1 3.4/1, ms1mx2.8/23, Error ellipse: s-maj=44.4km s-min=23.0km az=98.0*

*NEIC **09** 14:59:20.1±2.1, 29°.46S±0°.05×72°.22W±0°.03, h10^{km}±2^{km}, mb4.5/2, Error ellipse: s-maj=8.8km s-min=3.7km az=203.0*

*GUC **09** 14:59:22.7±0.6, 29°.47S×72°.21W, h15^{km}±15^{km}, ML3.9*

ISC 09 14:59:22.1±0.7**, 29°.46S**±0°.05×**72°.15W**±0°.09**, h25**^{km}**, n49,** σ1^{s}.**67**/49**, mb4.2**/5**, 1D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO05	La Serena	0.92	120	*e*P	Pn	14 59 38.6	-0.9
CO05				*e*S	Sb	14 59 50.0	-1.2
CO05				IAML		14 59 59.6	
	comp=E,7µm,0.8s						
CO05	La Serena	0.92	120		Pn	14 59 38.5	-1.0
CO05				Sg	Sb	14 59 51.0	-0.2
CO06	Fray Jorge	1.29	160	⇓*i*P	Pn	14 59 43.6	-1.1
CO06				*e*S	Sn	14 59 57.5	-3.6
CO06	Fray Jorge	1.29	160	Pn	Pn	14 59 43.6	-1.1
LCO	Las Campanas	1.34	71	*e*P	Pn	14 59 46.0	+0.5
GO04	Tololo Observa	1.38	122	*e*P	Pn	14 59 46.1	+0.1
GO04	Tololo Observa	1.38	122		Pn	14 59 46.2	+0.1
AC04	Llanos de Chal	1.56	37	*e*P	Pn	14 59 48.4	0.0
AC04	Llanos de Chal	1.56	37		Pn	14 59 48.4	0.0
CO03	El Pedregal	1.87	138	Pn	Pn	14 59 52.8	+0.1
GO03	Copiap	2.51	43	*e*P	Pn	15 00 02.1	+0.7
GO03				IAML		15 00 48.2	
	comp=N,372nm,0.4s						
GO03	Copiap	2.51	43		Pn	15 00 01.5	+0.1
VA06	Catapilco	3.18	167	IAML		15 01 22.4	
	comp=E,360nm,0.3s						
VA03	San Esteban	3.57	158		Pn	15 00 17.5	+1.4
ROCH	El Roble	3.64	165	*e*P	Pn	15 00 17.0	-0.1
ZON	Zonda	3.65	126		Pn	15 00 18.4	+1.3
AC02	Maricunga	3.73	46		Pn	15 00 18.6	0.0
MT02	Curacav	3.89	167	Pn	Pn	15 00 19.1	-1.3
MT05	Renca	4.11	163	Pn	Pn	15 00 23.6	+0.2
MT09	Talagante	4.42	167		Pn	15 00 28.0	+0.2
MT01	Popeta	4.46	170		Pn	15 00 27.6	-0.7
BO01	Tunca	5.00	170		Pn	15 00 35.6	-0.1
PB14	IPOC Station P	5.06	18		Pn	15 00 34.9	-1.7
BO02	Sierra Bellavi	5.45	168		Pn	15 00 41.5	-0.3
GO05	Huala	5.54	178	Pn	Pn	15 00 41.0	-2.1
PB10	IPOC Station P	6.09	14	Pn	Pn	15 00 48.8	-1.8
PB15	IPOC Station P	6.67	22	Pn	Pn	15 00 58.0	-0.8
H03N1	Juan Fernandez	7.01	234	T	T	15 09 03.9	
	baz=64,slow=71,SNR=173						
H03N2	Juan Fernandez	7.02	234	T	T	15 08 51.1	
	baz=64,slow=71,SNR=162						
H03N3	Juan Fernandez	7.03	234	T	T	15 08 50.1	
	baz=64,slow=71,SNR=174						
PB06	IPOC Station P	7.11	20	Pn	Pn	15 01 02.7	-2.0
LVC	Limon Verde	7.41	24	Pn	Pn	15 01 09.7	+0.6
	comp=E,0.4nm,0.3s,baz=259,slow=13,SNR=1.6						
LVC				Sn	Sn	15 02 29.2	-3.5
	comp=E,0.5nm,0.3s,baz=356,slow=7.6,SNR=1.4						
PB07	IPOC Station P	7.96	15	Pn	Pn	15 01 15.0	-1.5
PB01	IPOC Station P	8.71	17	Pn	Pn	15 01 24.6	-2.2
LC01	Cunco	9.42	179		Pn	15 01 34.8	-1.5
PSGCX	Pisagua	9.99	11	Pn	Pn	15 01 41.9	-2.3
PLCA	Paso Flores	11.33	174	Pn	Pn	15 02 03.0	+0.6
	comp=E,0.2nm,0.3s,baz=343,slow=11,SNR=3.4						
LPAZ	La Paz	13.62	17	Pn	P	15 02 39.1	-4.0
	comp=E,0.3nm,0.3s,baz=197,slow=6.4,SNR=7.7						
LPAZ	La Paz	13.62	17	Pn	Pn	15 02 34.3	0.0
SIV	San Ignacio	16.84	40	Pn	P	15 03 18.9	+0.6
	comp=E,0.2nm,0.3s,baz=219,slow=10,SNR=11						
SIV				LR	LR	15 10 25.1	
	comp=E,142nm,21.1s,baz=272,slow=40						
USHA	Ushuaia	25.50	175	P	P	15 04 49.0	+0.7
	comp=E,5.6nm,0.7s,baz=352,slow=7.1,SNR=1.6						
ROSC	El Rosal	34.16	356	P	P	15 06 05.8	0.0
ROSC				IAmb	IAmb	15 06 32.5	
	comp=Z,8.3nm,0.6s						
TXAR	Lajitas Array	65.75	330	P	P	15 10 08.9	+3.9
	comp=Z,0.2nm,0.7s,baz=142,slow=7.4,SNR=2.2						
DBIC	Dimbokro	73.86	73	P	P	15 10 57.2	+2.0
	comp=Z,1.6nm,0.7s,baz=236,slow=7.3,SNR=1.5						
TORD	Torodi Ar. Bea	82.77	71	P	P	15 11 46.0	+1.5
	comp=Z,0.9nm,0.8s,baz=244,slow=4.8,SNR=5.0						
TORD	Torodi Ar. Bea	82.77	71	P	P	15 11 45.3	+0.9
TORD				IAmb	IAmb	15 11 56.2	
	comp=Z,1.6nm,0.8s						
WRA	Warramunga Arr	124.64	211	PKP	PKiKP	15 18 22.4	+1.9
	comp=Z,0.2nm,0.7s,baz=147,slow=1.8,SNR=1.2						
ZALV	Zalesovo Beam	150.35	28	PKPbc	PKPab	15 19 13.9	-3.2
	comp=Z,3.2nm,0.5s,baz=296,slow=3.4,SNR=15						
MKAR	Makanchi Array	153.65	42	PKPbc	PKiKP	15 19 21.2	+2.5
	comp=Z,0.3nm,0.7s,baz=318,slow=2.4,SNR=1.9						

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*NEIC **09** 15:00:45.9±1.6, 51°.43N±0°.09×173°.0W±0°.1, h4^{km}±3^{km}, ML3.2/3(AEIC), Error ellipse: s-maj=14.3km s-min=8.8km az=202.0*

*AEIC **09** 15:00:46±1.6, 51°.53N±0°.08×173°.1W±0°.1, h1^{km}±8^{km}, Error ellipse: s-maj=12.3km s-min=7.8km az=215.0*

*IDC **09** 15:00:48.0±8.2, 52°.20N×173°.37W, h0^{km}, mb3.9/4, mb1 4.0/6, mb1mx3.6/54, mbtmp3.8/6, ML3.4/2, Error ellipse: s-maj=196.7km s-min=27.9km az=161.0*

ISC 09 15:00:44.7±1.5**, 51°.4N**±0°.2×**172°.91W**±0°.08**, h10**^{km}**, n26,** σ1^{s}.**07**/20**, mb4.0**/4**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOFP	Korovin Flat P	1.13	320		Pb	15 01 06.8	+0.4
KOSE	Korovin Southe	1.17	323		Pb	15 01 07.3	+0.4
KOKL	Mount Kliuchef	1.21	319		Pb	15 01 07.5	-0.2
KONE	Korovin Northe	1.23	323		Pb	15 01 07.9	-0.1
GSIG	Igitkin Island	1.96	288		Pn	15 01 19.0	+1.0
GSMY	Great Sitkin M	2.05	289		Pb	15 01 20.8	-1.2
GSTR	Great Sitkin T	2.07	290	Pn	Pn	15 01 17.5	-2.0
GSTD	Great Sitkin T	2.11	289		Pn	15 01 21.0	+0.9
ADK	Adak	2.40	283		Pn	15 01 25.2	+1.3
KIWB	Kanaga Island	2.68	281	Pn	Pn	15 01 27.9	+0.1
KIMD	Kanaga Island	2.72	279		Pn	15 01 30.2	+1.8
UNV	Unalaska Valle	4.60	56	Pn	Pn	15 01 56.1	+1.9
AMKA	Amchitka	4.88	273	Pn	Pn	15 01 59.1	+1.1
KDAK	Kodiak Island	13.37	54	Pn	Pn	15 03 53.2	-1.0
	0.2nm,0.3s,baz=192,slow=2.6,SNR=13						
PETK	Petropavlovsk-	18.02	287	P	Pn	15 04 55.5	+0.6
	0.1nm,0.3s,baz=82,slow=26,SNR=1.9						
ILAR	Eielson Array	18.99	35	P	P	15 05 06.0	0.0
	0.5nm,0.3s,baz=237,slow=9.9,SNR=34						
INK	Inuvik	25.35	33	P	P	15 06 11.5	+0.2
	1.5nm,0.4s,baz=239,slow=7.2,SNR=12						
H11N2	WAKE ISLAND Hy	35.38	214	T	T	15 45 41.6	
	baz=21,slow=76,SNR=8.0						
H11N3	WAKE ISLAND Hy	35.39	214	T	T	15 45 42.2	
	baz=21,slow=76,SNR=8.4						
H11N1	WAKE ISLAND Hy	35.40	214	T	T	15 45 46.6	
	baz=21,slow=76,SNR=8.5						
H11S1	WAKE ISLAND Hy	36.58	214	T	T	15 47 09.5	
	baz=312,slow=74,SNR=18						
H11S2	WAKE ISLAND Hy	36.60	214	T	T	15 47 10.7	
	baz=17,slow=74,SNR=12						
H11S3	WAKE ISLAND Hy	36.60	214	T	T	15 47 07.4	
SONM	Songino Array	49.88	300	P	P	15 09 37.3	-0.8
	0.3nm,0.3s,baz=35,slow=8.4,SNR=2.1						
ARCES	ARCESS Array B	58.61	353	P	P	15 10 40.8	-0.3
	3.5nm,0.9s,baz=21,slow=7.7,SNR=1.8						
MKAR	Makanchi Array	62.83	312	P	P	15 11 10.1	-0.2
	0.3nm,0.3s,baz=45,slow=6.5,SNR=11						

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*IDC **09** 15:02:51.4±2.3, 1°.04N×126°.83E, h0^{km}, mb3.2/3, mb1 3.5/3, mb1mx3.3/39, mbtmp3.3/3, Error ellipse: s-maj=178.4km s-min=28.3km az=66.0*

*DJA **09** 15:02:55.8±0.3, 1°N±5°×12°6E±°, h10^{km}, M2.9/6, MLv2.9/6*

ISC 09 15:02:57.2±1.4**, 0°.7N**±0°.1×**126°.2E**±0°.1**, h35**^{km}**, n6,** σ**0**^{s}.**44**/7**, mb3.3**/3**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.17	86	P	Pn	15 03 16.9	-0.3
TNTI				S	Sn	15 03 32.3	+0.4
LBMI	Labuha	1.86	135	P	Pn	15 03 26.2	-0.4
SANI	Sanana	2.73	184	P	Pn	15 03 38.5	-0.1
WRA	Warramunga Arr	22.00	159	P	P	15 07 48.5	-0.1
	0.2nm,0.3s,baz=340,slow=11,SNR=6.0						
ASAR	Alice Springs	25.34	163	P	P	15 08 21.8	+0.6
	0.6nm,0.8s,baz=345,slow=12,SNR=10						
MKAR	Makanchi Array	59.76	327	P	P	15 12 58.7	-0.1
	0.2nm,0.5s,baz=124,slow=7.3,SNR=2.3						

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*IDC **09** 15:18:10.9±1.6, 4°.32S×143°.25E, h80^{km}±13^{km}, mb3.8/14, mb1 4.0/18, mb1mx3.9/39, mbtmp4.2/18, MS3.1/8, Ms1 3.1/8, ms1mx2.9/34, Error ellipse: s-maj=14.5km s-min=8.5km az=80.0*

*DJA **09** 15:18:10.5±1.6, 4°S±8°×14°4E±1°2, h152^{km}±8^{km}, M4.6/16, mB5.0/7, mb4.4/16, MLv4.9/2, Mw(mB)4.3/7*

*NEIC **09** 15:18:11.1±1.2, 4°.3S±0°.1×143°.25E±0°.08, h77^{km}±6^{km}, mb4.1/17, Error ellipse: s-maj=17.6km s-min=7.1km az=217.0*

ISC 09 15:18:12.7±0.5**, 4°.34S**±0°.06×**143°.19E**±0°.08**, h100**^{km}**, n65,** σ1^{s}.**64**/63**, mb4.2**/23**, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	3.07	306	P	Pn	15 18 57.4	-2.1
	18nm,0.3s,baz=152,slow=12,SNR=102						
JAY				S	Sn	15 19 33.9	-1.6
	16nm,0.3s,baz=312,slow=23,SNR=6.2						
JAY				LR	LR	15 19 55.1	
	comp=Z,281nm,21.0s,baz=109,slow=34						
SMPI	Sarmi	5.04	297	P	Pn	15 19 25.5	-0.5
	0.4nm1µm99nm,1.1s						
PMG	Port Moresby	6.39	142	P	Pn	15 19 43.3	-1.0
	3.0nm,0.3s,baz=332,slow=5.1,SNR=24						
PMG				S	Sn	15 20 52.9	-3.1
	1.1nm,0.3s,baz=124,slow=20,SNR=1.0						
PMG				LR	LR	15 22 33.8	
	comp=Z,250nm,19.1s,baz=307,slow=41						
PMG	Port Moresby	6.39	142		Pn	15 19 42.6	-1.7
SRPI	Serui, Papua	7.36	289	P	Pn	15 19 57.8	+0.3
	0.6nm60nm,0.6s						
BAKI	Biak	7.73	294	P	Pn	15 20 02.3	-0.3
FAKI	Fak Fak	11.01	277	P	Pn	15 20 48.4	+1.2
	22nm,0.7s						
FAKI	Fak Fak	11.01	277	Pn	Pn	15 20 48.4	+1.2
SIJI	Sorong	12.39	286	P	Pn	15 21 04.9	-0.8
	1.0nm,0.3s,baz=71,slow=13,SNR=5.8						
SIJI				LR	LR	15 26 40.4	
	comp=Z,58nm,20.5s,baz=84,slow=41						
SWI	Sorong	12.40	286	P	Pn	15 21 05.9	+0.1
	8µm33nm,0.4s						
CTAO	Charters Tower	15.93	169		Pn	15 21 51.7	+0.4
CTAO				IAmb	IAmb	15 22 01.2	
	comp=Z,21nm,1.2s						
SANI	Sanana	17.32	277	P	P	15 22 07.0	-1.3
	comp=Z,15nm,1.2s						
WB0	Warramunga Arr	17.57	208		P	15 22 10.7	-0.2
WB0				IAmb	IAmb	15 22 30.8	
	comp=Z,9.4nm,0.9s						
WR0	Warramunga Arr	17.66	208		P	15 22 12.0	0.0
WR0				IAmb	IAmb	15 22 41.2	
	comp=Z,6.8nm,0.7s						
WRAB	Tennant Creek	17.73	208		Pn	15 22 13.2	-0.1
WRAB				IAmb	IAmb	15 22 28.6	
	comp=Z,8.4nm,0.8s						
WB2	Warramunga Arr	17.73	208	P	P	15 22 12.5	-0.3
WRA	Warramunga Arr	17.74	208	P	P	15 22 12.7	-0.2
	comp=Z,0.4nm,0.3s,baz=26,slow=13,SNR=21						
WRA				S	S	15 25 33.1	+1.2
	comp=Z,0.1nm,0.3s,baz=34,slow=19,SNR=4.7						
WRA				LR	LR	15 30 02.2	
	comp=Z,55nm,19.7s,baz=205,slow=40						
SOEI	Soe	19.52	253	P	P	15 22 32.3	-0.2
	comp=Z,70nm,1.0s						
SOEI	Soe	19.52	253	P	P	15 22 32.7	+0.2
KMSI	Cibinong	19.80	284	P	P	15 22 31.4	-4.0
	comp=Z,59nm,0.5s						
BATI	Baumata	20.21	252	P	P	15 22 41.1	+1.2
	comp=Z,9.1nm,0.4s,baz=302,slow=22,SNR=2.4						
BATI	Baumata	20.21	252	P	P	15 22 37.8	-2.1
	comp=Z,29nm,0.8s						
DAV	Davao City (W)	20.91	303	LR	LR	15 29 28.8	
	comp=Z,25nm,21.6s,baz=318,slow=32						
AS31	Alice Springs	21.20	204	P	P	15 22 50.0	-0.4
ASAR	Alice Springs	21.20	204	P	P	15 22 51.1	+0.7
	comp=Z,1.1nm,0.5s,baz=33,slow=10.0,SNR=25						
ASAR				S	S	15 26 42.1	+1.5
	comp=Z,0.7nm,0.7s,baz=22,slow=23,SNR=1.8						
ASAR				LR	LR	15 30 41.6	
	comp=Z,80nm,20.8s,baz=88,slow=35						
ASAR	Alice Springs	21.20	204	P	P	15 22 50.7	+0.3
MRSI	Marisa	21.76	282	P	P	15 22 52.0	-4.5
	comp=Z,17nm,0.6s						
EDFI	Ende, Flores	21.79	257	P	P	15 22 54.3	-2.6
	comp=Z,11nm,0.7s						
FITZ	Fitzroy Crossi	21.95	230	P	P	15 22 58.8	+0.4
	comp=Z,3.0nm,0.6s,baz=70,slow=7.0,SNR=25						
FITZ				LR	LR	15 32 55.0	
	comp=Z,35nm,20.2s,baz=84,slow=40						
BSSI	Bau Bau, Buton	22.67	264	P	P	15 23 00.9	-5.1
	comp=Z,11nm,0.9s						
BKSI	Bulukumba	23.00	267	P	P	15 23 05.9	-3.3
	comp=Z,376nmcomp=Z,10nm,0.7s						
TOLI2	Tolitoli	23.03	283	P	P	15 23 09.2	-0.4
TOLI2				IAmb	IAmb	15 23 37.7	
	comp=Z,7.7nm,0.7s						
TTSI	Tana Toraja	23.35	272	P	P	15 23 08.6	-3.9
	comp=Z,12nm,1.0s						
DZM	Mont Dzumac	28.61	130	LR	LR	15 34 32.5	
	comp=Z,75nm,18.4s,baz=174,slow=34						
CAN	Canberra	31.29	171	P	P	15 24 25.1	+1.7
MJAR	Matsushiro Arr	40.94	354	P	P	15 25 45.5	0.0
	comp=Z,2.3nm,0.8s,baz=184,slow=6.4,SNR=4.8						
MJAR	Matsushiro Arr	40.94	354	IAmb	IAmb	15 25 54.0	
	comp=Z,1.3nm,0.7s						
KSRS	Korea Array	43.94	342	P	P	15 26 10.4	+0.6
	comp=Z,3.7nm,0.7s,baz=161,slow=8.9,SNR=9.8						
JTM	Tenmabayashi	44.95	358	P	P	15 26 17.7	0.0
TUWZ	Tuamarina	46.06	148	P	P	15 26 26.8	+0.3
BSWZ	Blackbirch Sta	46.22	148	P	P	15 26 28.2	+0.4
PLWZ	Palliser	46.86	147	P	P	15 26 34.2	+1.3
CMAR	Chiang Mai Arr	49.13	299	P	P	15 26 51.4	+0.8
	comp=Z,1.1nm,0.5s,baz=121,slow=6.4,SNR=13						
USRK	Ussuriysk Ar.	49.36	349	P	P	15 26 52.3	+0.4
	comp=Z,5.1nm,0.8s,baz=177,slow=7.7,SNR=6.9						
HHC	Hu-ho-hao-te	53.48	330	*e*P	P	15 27 25.5	+2.6
HHC				pmax	pmax		
	comp=Z,11nm,1.0s						
HHC				pmax	pmax		
	comp=Z,150nm,5.5s						
PETK	Petropavlovsk-	58.53	10	P	P	15 27 59.1	+0.5
	comp=Z,6.0nm,0.9s,baz=209,slow=8.5,SNR=4.5						
SONM	Songino Array	61.16	333	P	P	15 28 17.9	+1.1
	comp=Z,0.6nm,0.6s,baz=160,slow=7.6,SNR=4.1						
SONM	Songino Array	61.16	333	IAmb	IAmb	15 28 19.0	
	comp=Z,2.7nm,1.2s						
WMQ	Urumqi	69.08	320	*e*P	P	15 29 10.2	+2.1
VNDA	Vanda	73.80	176	P	P	15 29 36.5	+0.8
	comp=Z,0.6nm,0.8s,baz=340,slow=7.9,SNR=7.2						
MK31	Makanchi Array	73.82	321	P	P	15 29 37.0	+0.5
MK31				IAmb	IAmb	15 29 40.1	
	comp=Z,1.8nm,0.8s						
MKAR	Makanchi Array	73.82	321	P	P	15 29 36.9	+0.4
	comp=Z,3.1nm,0.7s,baz=103,slow=8.2,SNR=22						
MKAR	Makanchi Array	73.82	321	P	P	15 29 36.6	+0.2
MAKZ	Makanchi	74.03	321	P	P	15 29 38.0	+0.3
KSH	Kashi	75.46	313	P	P	15 29 48.4	+2.2
KSH				pmax	pmax		
	comp=Z,4.0nm,0.5s						
ZAA0	Zalesovo Array	75.61	329	P	P	15 29 45.9	-0.7
ZAA0				IAmb	IAmb	15 29 47.5	
	comp=Z,2.4nm,0.6s						
ZALV	Zalesovo Beam	75.61	329	P	P	15 29 46.4	-0.2
	comp=Z,2.8nm,0.7s,baz=99,slow=5.1,SNR=11						
ZALV	Zalesovo Beam	75.61	329	P	P	15 29 46.0	-0.6
NRIK	Noril'sk	82.56	343	P	P	15 30 24.6	+0.5
	comp=Z,2.1nm,0.5s,baz=112,slow=3.5,SNR=6.3						
NRIK	Noril'sk	82.56	343	P	P	15 30 24.9	+0.7
NRIK				IAmb	IAmb	15 30 25.7	
	comp=Z,3.4nm,0.8s						
ILAR	Eielson Array	85.48	24	P	P	15 30 37.6	-1.5
	comp=Z,0.9nm,0.8s,baz=243,slow=5.3,SNR=7.2						
PLCA	Paso Flores	125.54	149	PKP	PKiKP	15 37 03.4	+0.2
	comp=Z,1.7nm,0.7s,baz=276,slow=4.4,SNR=3.7						
TORD	Torodi Ar. Bea	141.00	285	PKhKP	PKPpre	15 37 28.0	
	comp=Z,0.5nm,0.7s,baz=50,slow=2.6,SNR=2.5						
LPAZ	La Paz	142.86	124	PKhKP	PKPpre	15 37 33.6	
	comp=Z,1.1nm,0.4s,baz=242,slow=2.8,SNR=4.6						
DBIC	Dimbokro	148.11	276	PKPbc	PKPbc	15 37 48.0	+0.1
	comp=Z,2.2nm,0.6s,baz=45,slow=1.6,SNR=4.4						

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*TUL **09** 15:19:14.8±0.8, 36°.94N±0°.01×97°.84W±0°.01, h5^{km}±5^{km}, ML2.8, mb_Lg2.6/18(NEIC), Error ellipse: s-maj=1.7km s-min=1.3km az=121.0*

NEIC 09 15:19:14.9±0.5**, 36°.92N**±0°.01×**97°.84W**±0°.01**, h6**^{km}±4^{km}**, Error ellipse: s-maj=1.6km s-min=1.1km az=166.0,**

Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GC02	Grant County #	0.07	196	Pg	Pg	15 19 17.1	+0.4
KAN14	Manchester OK	0.11	289		Pg	15 19 17.4	+0.1
KAN14				Sg	Sg	15 19 19.0	+0.1
KAN17	Caldwell West	0.13	25	Pg	Pg	15 19 17.7	-0.1
KAN17				Sg	Sg	15 19 19.5	-0.2
KAN05	Bluff City Nor	0.19	351	Pg	Pg	15 19 18.6	-0.1
KAN05				Sg	Sg	15 19 21.1	-0.2
KAN01	Argonia South	0.24	15		Pg	15 19 19.6	-0.1
KAN01				Sg	Sg	15 19 22.6	-0.2
KAN09	Caldwell North	0.28	39	Pg	Pg	15 19 20.2	-0.1
KAN09				Sg	Sg	15 19 23.9	-0.2
KAN10	Anthony SW Sta	0.29	314	Pg	Pg	15 19 20.6	-0.1
KAN10				Sg	Sg	15 19 24.2	-0.3
KAN13	South Haven SW	0.30	72		Pg	15 19 20.9	+0.1
KAN13				Sg	Sg	15 19 25.0	+0.2
KAN08	Anthony NE Sta	0.32	340		Pg	15 19 21.1	-0.1
KAN08				Sg	Sg	15 19 25.5	0.0
OK032	Salt Plains WL	0.32	249		Pg	15 19 21.2	0.0
KAN06	Argonia West S	0.33	357		Pg	15 19 21.2	-0.2
KAN16	Harper SW Stat	0.35	329	Pg	Pg	15 19 21.7	-0.2
KAN16				Sg	Sg	15 19 26.5	-0.1
KS20	Mayfield South	0.38	36	Pg	Pg	15 19 22.2	-0.2
KS20				Sg	Sg	15 19 26.9	-0.5
KAN12	Harper NE Stat	0.40	341	Pg	Pg	15 19 22.4	-0.3
CROK	Carrier	0.43	196	Pg	Pg	15 19 23.8	+0.4
BLOK	Blackwell	0.52	108	Pg	Pg	15 19 25.1	+0.1
T35A	Sooner Cattle	1.06	90		Pg	15 19 34.9	-0.4
U32A	Winter Ranch,	1.08	240	Pg	Pg	15 19 35.1	-0.6
OK029	Liberty Lake	1.16	165	Pg	Pg	15 19 36.9	-0.3
QUOK	Quay	1.18	129	Pg	Pg	15 19 37.1	-0.4
OK031	S. Brethren Rd	1.26	140	Pg	Pn	15 19 38.4	-0.5
BCOK	Bluff Creek, N	1.28	172		Pn	15 19 38.8	-0.4
OK030	Cody Creek RV	1.30	139		Pn	15 19 39.2	-0.4
OK025	Westminster Rd	1.40	163		Pb	15 19 41.2	-0.2
OKCFA	Oklahoma City	1.54	168	Pn	Pn	15 19 42.8	0.0
OKCFA				IAmb_Lg		15 20 07.1	
	comp=Z,69nm,0.8s						
OKCSW	OKLAHOMA CITY	1.55	168		Pn	15 19 43.1	+0.1
R32A	Long Quarter,	1.65	335		Pn	15 19 44.9	+0.4
FNO	Franklin	1.70	168	Pn	Pn	15 19 45.6	+0.5
FNO				IAmb_Lg		15 20 10.5	
	comp=Z,25nm,1.1s						
TUL1	Leonard	1.93	121	Pn	Pn	15 19 48.4	+0.2
TUL1				IAmb_Lg		15 20 19.6	
	comp=Z,56nm,0.9s						
WMOK	Wichita Mounta	2.31	200	Pn	Pn	15 19 53.8	+0.2
WMOK				IAmb_Lg		15 20 33.0	
	comp=Z,16nm,0.9s						
KSU1	Kansas State U	2.38	24	Pn	Pn	15 19 54.2	-0.2
CBKS	Cedar Bluff	2.42	322	IAmb_Lg		15 20 28.9	
	comp=Z,15nm,0.9s						
X37A	Clayton	3.07	139	Pn	Pn	15 20 04.3	+0.4
X37A				IAmb_Lg		15 21 00.3	
	comp=Z,16nm,0.9s						
S39A	Bolivar	3.68	77	Pn	Pn	15 20 12.5	+0.3
S39A				IAmb_Lg		15 21 16.6	
	comp=Z,10nm,0.7s						
W39A	Magazine	3.71	116	Pn	Pn	15 20 12.9	+0.2
AMTX	Amarillo	3.73	238	IAmb_Lg		15 21 13.6	
	comp=Z,11nm,0.9s						
P40A	Paris	5.25	58	IAmb_Lg		15 22 02.0	
	comp=Z,8.3nm,0.9s						
PBMO	Poplar Bluff	5.94	89	IAmb_Lg		15 22 23.6	
	comp=Z,9.3nm,0.8s						

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*IDC **09** 15:30:27.3±1.2, 51°.59N×172°.90W, h0^{km}, mb3.6/8, mb1 3.8/10, mb1mx3.6/51, mbtmp3.6/10, ML3.4/2, MS2.8/1, Ms1 2.8/1, ms1mx2.3/42, Error ellipse: s-maj=36.9km s-min=19.5km az=171.0*

*NEIC **09** 15:30:28.4±1.5, 51°.38N±0°.10×172°.87W±0°.10, h17^{km}±5^{km}, mb3.9/27, ML3.1/11(AEIC), Error ellipse: s-maj=14.1km s-min=8.4km az=165.0*

*AEIC **09** 15:30:28±1.7, 51°.26N±0°.08×173°.00W±0°.08, h25^{km}±4^{km}, Error ellipse: s-maj=12.4km s-min=5.1km az=205.0*

ISC 09 15:30:27.8±0.8**, 51°.36N**±0°.09×**172°.89W**±0°.05**, h10^{km}, n60, σ1ˢ.11**/55**, mb3.8**/10**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOFP	Korovin Flat P	1.18	321		Pb	15 30 50.0	-0.3
KOKL	Mount Kliuchef	1.26	320		Pn	15 30 51.0	-0.5
KOKL					Sb	15 31 08.3	+0.4
KONE	Korovin Northe	1.28	324		Pn	15 30 51.6	-0.2
GSIG	Igitkin Island	1.99	290		Pn	15 31 01.0	-0.5
GSMY	Great Sitkin M	2.08	290		Pn	15 31 02.1	-0.6
GSTR	Great Sitkin T	2.10	292	Pn	Pn	15 31 01.2	-1.8
GSTD	Great Sitkin T	2.14	290		Pn	15 31 03.3	-0.3
GSTD					Sn	15 31 28.5	-1.8
ADK	Adak	2.42	284		Pn	15 31 05.8	-1.5
ADK					Sn	15 31 37.5	+0.4
KIMD	Kanaga Island	2.74	280		Pn	15 31 10.8	-1.0
UNV	Unalaska Valle	4.62	55	Pn	Pn	15 31 37.3	-0.3
AMKA	Amchitka	4.89	273	Pn	Pn	15 31 38.8	-2.5
KDAK	Kodiak Island	13.39	53	Pn	Pn	15 33 35.7	-1.9
	0.2nm,0.3s,baz=323,slow=4.0,SNR=9.4						
BRLK	Bradley Lake	14.96	47	P	Pn	15 34 02.2	+3.1
RC01	Rabbit Creek A	16.05	44	P	P	15 34 15.6	-1.2
J20K	Nowinta River	16.18	30	P	P	15 34 18.1	-0.1
J20K				IAmb	IAmb	15 34 44.2	
	comp=Z,9.7nm,1.2s						
KTH	Kantishna Hill	16.88	35	P	P	15 34 25.3	-0.7
KTH				IAmb	IAmb	15 34 40.2	
	comp=Z,10nm,1.3s						
RND	Reindeer	17.56	37	P	Pn	15 34 33.2	+0.7
RND				IAmb	IAmb	15 34 46.3	
	comp=Z,15nm,1.4s						
H21K	Melozitna Rive	17.63	28	Pn	Pn	15 34 32.0	-1.2
H21K				IAmb	IAmb	15 34 51.3	
	comp=Z,12nm,1.5s						
KLU	Klutina	17.90	45		Pn	15 34 35.2	-1.4
M24K	Tolsona, Glenn	18.03	43	P	Pn	15 34 38.5	+0.2
PETK	Petropavlovsk-	18.04	287	P	P	15 34 39.6	+0.8
	comp=Z,0.2nm,0.3s,baz=94,slow=13,SNR=6.0						
I23K	Minto, Yukon-K	18.38	32	P	P	15 34 42.7	+0.3
I23K				IAmb	IAmb	15 34 45.2	
	comp=Z,15nm,1.5s						
WRH	Wood River Hil	18.43	35	P	P	15 34 42.3	-0.7
WRH				IAmb	IAmb	15 34 53.9	
	comp=Z,8.2nm,1.5s						
N25K	Chitina, Valde	18.53	45		P	15 34 44.2	0.0
CCB	Clear Creek Bu	18.63	35	P	P	15 34 43.8	-1.3
CCB				IAmb	IAmb	15 35 08.0	
	comp=Z,8.5nm,1.5s						
MDM	Murphy Dome	18.66	34	P	P	15 34 44.8	-0.7
MDM				IAmb	IAmb	15 35 11.6	
	comp=Z,8.7nm,1.5s						
PAX	Paxson	18.69	41	P	P	15 34 45.5	-0.5
PAX				IAmb	IAmb	15 34 53.1	
	comp=Z,8.5nm,1.4s						
H23K	Yukon River	18.74	31	P	P	15 34 45.2	-1.3
HDA	Harding Lake	18.81	36	P	P	15 34 46.9	-0.3
IL31		19.03	35	P	P	15 34 47.5	-2.0
ILAR	Eielson Array	19.03	35	P	P	15 34 48.4	-1.2
	comp=Z,0.4nm,0.3s,baz=230,slow=9.4,SNR=32						
RIDG	Independent Ri	19.29	39	P	P	15 34 51.8	-0.7
RIDG				IAmb	IAmb	15 35 12.3	
	comp=Z,14nm,1.3s						
H24K	Noodor Dome	19.29	32	P	P	15 34 52.3	-0.2
DOT	Dot Lake	19.56	40	P	P	15 34 54.1	-1.4
BILL	Bilibino	19.57	336	Pn	P	15 34 56.1	+0.6
BILL				IAmb	IAmb	15 35 05.8	
	comp=Z,16nm,1.4s						
SCRK	Sand Creek	19.74	39	P	P	15 34 56.2	-1.3
TOLK	Toolik Lake Re	20.64	24	P	P	15 35 06.7	-0.5
TOLK				IAmb	IAmb	15 35 17.6	
	comp=Z,13nm,1.4s						
EGAK	Eagle	21.19	39	P	P	15 35 12.4	-0.7
EGAK				IAmb	IAmb	15 35 26.8	
	comp=Z,4.1nm,0.7s						
BMAR	Burnt Mountain	21.29	30	P	P	15 35 14.0	-0.2
DAWY	Dawson	21.63	41	P	P	15 35 16.8	-1.0
DAWY				IAmb	IAmb	15 35 31.5	
	comp=Z,7.7nm,1.5s						
MA2	Magadan	21.93	306	LR	LR	15 44 18.5	
	comp=Z,25nm,18.7s,baz=68,slow=38						
INK	Inuvik	25.39	33	P	P	15 35 53.9	-0.9
	comp=Z,2.0nm,0.5s,baz=220,slow=3.8,SNR=15						
INK	Inuvik	25.39	33	IAmb	IAmb	15 35 57.5	
	comp=Z,3.2nm,0.9s						
H11N2	WAKE ISLAND Hy	35.34	214	T	T	16 15 33.0	
	baz=21,slow=76,SNR=7.8						
H11N3	WAKE ISLAND Hy	35.35	214	T	T	16 15 30.6	
	baz=21,slow=76,SNR=13						
H11N1	WAKE ISLAND Hy	35.36	214	T	T	16 15 35.0	
	baz=21,slow=76,SNR=8.9						
NEW	Newport	35.39	73	P	P	15 37 21.5	-1.9
H11S1	WAKE ISLAND Hy	36.54	214	T	T	16 16 59.4	
	baz=20,slow=75,SNR=14						
H11S2	WAKE ISLAND Hy	36.56	214	T	T	16 16 55.0	
	baz=20,slow=75,SNR=10						
H11S3	WAKE ISLAND Hy	36.56	214	T	T	16 16 54.7	
	baz=20,slow=75,SNR=4.4						
USRK	Ussuriysk Ar.	36.95	281	P	P	15 37 37.2	+0.4
	comp=Z,1.2nm,0.6s,baz=51,slow=11,SNR=1.7						
PDAR	Pinedale Array	42.76	76	P	P	15 38 26.5	+1.1
	comp=Z,0.2nm,0.5s,baz=331,slow=7.2,SNR=2.5						
SONM	Songino Array	49.92	300	P	P	15 39 22.2	+0.8
	comp=Z,0.3nm,0.4s,baz=61,slow=9.0,SNR=2.3						
TXAR	Lajitas Array	54.98	85	P	P	15 40 00.1	+0.9
	comp=Z,0.1nm,0.5s,baz=299,slow=8.2,SNR=1.7						
MK31	Makanchi Array	62.88	312	P	P	15 40 53.0	-0.7
MKAR	Makanchi Array	62.88	312	P	P	15 40 53.1	-0.6
	comp=Z,0.2nm,0.3s,baz=47,slow=6.0,SNR=6.2						
AAK	Ala-Archa	69.64	313	P	P	15 41 37.8	+0.5
	comp=Z,0.5nm,0.3s,baz=58,slow=2.5,SNR=2.4						
ABKAR	Akbulak array	70.10	326	P	P	15 41 39.2	-0.6
KKAR	Karatay Array	71.04	316	P	P	15 41 45.6	-0.1
ASAR	Alice Springs	88.09	227	P	P	15 43 20.0	+1.7
	comp=Z,0.2nm,0.5s,baz=25,slow=4.9,SNR=8.9						

IDC 09 15:30:34.7±1.6**, 7°.04N**×**94°.88E, h0^{km}, mb3.7**/7**, mb1 3.8**/9**, mb1mx3.7**/47**, mbtmp3.7**/9**, ML3.2**/1**, MS3.4**/6**, Ms1 3.4**/6**, ms1mx3.2**/37**, Error ellipse: s-maj=61.6km s-min=18.2km az=62.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	Prapat	5.83	136	Pn	Pn	15 32 04.2	+1.6
	0.6nm,0.3s,baz=326,slow=14,SNR=16						
PSI				LR	LR	15 35 02.5	
	comp=Z,157nm,21.3s,baz=297,slow=45						
CMAR	Chiang Mai Arr	12.02	19	Pn	Pn	15 33 29.5	+2.1
	baz=206,slow=34,SNR=1.3						
CMAR				LR	LR	15 38 16.5	
	comp=Z,124nm,18.8s,baz=252,slow=38						
PALK	Pallekele	14.07	272	LR	LR	15 38 55.4	
	comp=Z,193nm,20.3s,baz=194,slow=36						
H08S3	Diego Garcia H	26.66	237	T	T	16 02 55.2	
	baz=56,slow=75,SNR=10.0						
H08S2	Diego Garcia H	26.67	237	T	T	16 02 54.1	
	baz=56,slow=75,SNR=7.7						
H08S1	Diego Carcia H	26.68	237	T	T	16 02 55.4	
	baz=56,slow=75,SNR=4.5						
FITZ	Fitzroy Crossi	39.32	130	P	P	15 38 06.7	+0.8
	1.3nm,0.9s,baz=305,slow=12,SNR=1.5						
MKAR	Makanchi Array	41.06	347	P	P	15 38 20.4	+0.5
	1.5nm,1.0s,baz=160,slow=7.8,SNR=5.7						
MKAR				LR	LR	15 57 22.5	
	comp=Z,37nm,20.2s,baz=190,slow=39						
SONM	Songino Array	41.82	12	P	P	15 38 26.1	-0.2
	0.6nm,0.8s,baz=187,slow=10,SNR=4.2						
GEYT	Alibeck	45.30	318	LR	LR	15 58 27.9	
	comp=Z,59nm,19.3s,baz=260,slow=37						
WRA	Warramunga Arr	47.19	125	P	P	15 39 08.8	-0.7
	0.7nm,0.8s,baz=308,slow=8.7,SNR=3.3						
WRA				LR	LR	16 01 50.9	
	comp=Z,63nm,18.1s,baz=210,slow=40						
ZALV	Zalesovo Beam	47.47	352	P	P	15 39 09.4	-1.8
	0.5nm,0.6s,baz=183,slow=5.3,SNR=4.6						
ASAR	Alice Springs	48.83	130	P	P	15 39 21.6	-0.6
	0.9nm,0.8s,baz=304,slow=7.8,SNR=9.2						
ESDC	Sonseca Array	92.31	310	P	P	15 43 48.2	+0.9
	0.6nm,0.7s,baz=46,slow=5.5,SNR=1.8						

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*IDC **09** 15:43:05.5±2.1, 31°.69S×71°.88W, h0^{km}, mb4.3/3, mb1 4.1/4, mb1mx3.8/33, mbtmp4.1/4, ML3.6/1, MS3.3/3, Ms1 3.3/3, ms1mx3.0/30, Error ellipse: s-maj=76.0km s-min=29.4km az=100.0*

*GUC **09** 15:43:06.3±0.7, 31°.78S×72°.18W, h20^{km}, ML4.0*

*NEIC **09** 15:43:06.3±1.4, 31°.78S±0°.04×72°.1W±0°.1, h10^{km}±1^{km}, mb4.4/5, ML4.0(GUC), Error ellipse: s-maj=15.9km s-min=6.8km az=274.0*

ISC 09 15:43:07.0±0.8**, 31°.77S**±0°.05×**72°.16W**±0°.08**, h17^{km}, n59, σ0ˢ.67**/53**, mb4.3**/4**, 2C-1D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VA06	Catapilco	1.07	138	⇓*i*P	Pb	15 43 26.1	-1.0
VA06				*e*S	Sb	15 43 39.9	-1.1
VA06				IAML		15 43 44.1	
	comp=E,6µm,0.6s						
CO06	Fray Jorge	1.18	22	*e*P	Pn	15 43 27.3	-1.5
CO06	Fray Jorge	1.18	22		Pn	15 43 28.0	-0.8
VA01	Torpederas	1.32	161	*e*P	Pn	15 43 29.6	-1.1
VA01	Torpederas	1.32	161		Pn	15 43 29.3	-1.4
ROCH	El Roble	1.54	141	*i* P	Pn	15 43 33.4	-0.5
ROCH				*e*S	Sn	15 43 53.5	-0.2
ROCH				IAML		15 44 02.6	
	comp=E,3µm,0.3s						
CO03	El Pedregal	1.56	54		Pn	15 43 34.1	0.0
VA03	San Esteban	1.68	127	⇑*i*P	Pn	15 43 35.6	-0.2
VA03				*e*S	Sn	15 43 56.2	-0.8
VA03				IAML		15 44 01.8	
	comp=N,3µm,0.5s						
VA03	San Esteban	1.68	127		Pn	15 43 35.6	-0.2
MT02	Curacav	1.72	150	⇑*i*P	Pn	15 43 35.8	-0.4
MT02	Curacav	1.72	150		Pn	15 43 35.7	-0.4
VA05	Santo Domingo	1.94	167	*e*P	Pn	15 43 39.1	-0.1
VA05				IAML		15 44 15.1	
	comp=E,3µm,0.4s						
VA05	Santo Domingo	1.94	167		Pn	15 43 39.0	-0.1
GO04	Tololo Observa	1.97	37	*e*P	Pn	15 43 39.9	0.0
GO04	Tololo Observa	1.97	37		Pn	15 43 39.6	-0.3
CO05	La Serena	2.01	23	*e*P	Pn	15 43 41.0	+0.9
CO05				IAML		15 44 16.0	
	comp=N,1µm,0.5s						
CO05	La Serena	2.01	23		Pn	15 43 39.2	-0.9
MT05	Renca	2.01	144	*e*P	Pn	15 43 40.9	+0.6
MT05				IAML		15 44 20.0	
	comp=E,2µm,0.6s						
MT05	Renca	2.01	144		Pn	15 43 40.4	+0.1
MT01	Popeta	2.22	160	*e*P	Pn	15 43 42.7	-0.4
MT01				IAML		15 44 23.7	
	comp=E,646nm,0.3s						
MT01	Popeta	2.22	160		Pn	15 43 42.8	-0.4
MT09	Talagante	2.23	154	*e*P	Pn	15 43 43.8	+0.4
MT09				IAML		15 44 26.5	
	comp=N,1µm,0.6s						
MT09	Talagante	2.23	154		Pn	15 43 43.6	+0.3
BO04	La Punta	2.57	150	*e*P	Pn	15 43 48.3	+0.4
LMEL	Las Melosas	2.65	142	*e*P	Pn	15 43 49.4	+0.3
LMEL				IAML		15 44 33.7	
	comp=N,669nm,0.4s						
BO01	Tunca	2.77	161	*e*P	Pn	15 43 50.8	+0.2
BO01				IAML		15 44 45.0	
	comp=N,175nm,0.6s						
BO01	Tunca	2.77	161		Pn	15 43 50.7	+0.2
ZON	Zonda	2.97	87		Pn	15 43 53.9	+0.4
LCO	Las Campanas	3.02	25	*e*P	Pn	15 43 54.2	-0.1
BO02	Sierra Bellavi	3.23	159	*e*P	Pn	15 43 57.5	+0.5
BO02				IAML		15 44 48.8	
	comp=N,663nm,0.3s						
BO02	Sierra Bellavi	3.23	159		Pn	15 43 57.3	+0.3
GO05	Huala	3.24	177	*e*P	Pn	15 43 56.4	-0.7
GO05	Huala	3.24	177		Pn	15 43 56.4	-0.7
AC04	Llanos de Chal	3.67	15		Pn	15 44 02.2	-0.9
GO03	Copiap	4.48	22		Pn	15 44 14.2	-0.1
AC02	Maricunga	5.58	29		Pn	15 44 29.1	-0.6
H03N1	Juan Fernandez	5.94	252	T	T	15 51 27.2	
	baz=82,slow=72,SNR=577						
H03N3	Juan Fernandez	5.95	252	T	T	15 51 18.1	
	baz=82,slow=72,SNR=470						
H03N2	Juan Fernandez	5.96	252	T	T	15 51 16.2	
	baz=82,slow=72,SNR=490						
LC01	Cunco	7.12	178	Pn	Pn	15 44 50.2	-0.2
PLCA	Paso Flores	9.04	172	Pn	Pn	15 45 17.8	+1.0
	comp=N,0.2nm,0.3s,baz=292,slow=20,SNR=1.6						
PLCA	Paso Flores	9.04	172		Pn	15 45 16.1	-0.7
LL03	Petrohue	9.35	181	Pn	Pn	15 45 20.3	-0.7
LVC	Limon Verde	9.57	18	LR	LR	15 48 59.7	
	comp=N,80nm,21.4s,baz=46,slow=38						
PB11	IPOC Station P	12.17	11	Pn	Pn	15 45 59.7	-0.1
CPUP	Villa Florida	14.05	71	LR	LR	15 52 37.7	
	comp=N,91nm,19.4s,baz=29,slow=42						
ETMB	Extrema	22.53	15	P	P	15 48 06.8	+0.7
BDFB	Brasilia	27.22	59	P	P	15 48 49.4	-1.0
	comp=N,2.7nm,0.6s,baz=229,slow=9.3,SNR=3.8						
BDFB				LR	LR	16 00 46.1	
	comp=N,174nm,18.5s,baz=353,slow=39						
BDFB	Brasilia	27.22	59	IAmb	IAmb	15 48 51.0	
	comp=Z,14nm,1.3s						
SNAA	Sanae	53.69	158	P	P	15 52 28.6	+1.1
	comp=Z,3.1nm,0.8s,baz=306,slow=5.4,SNR=8.2						
SNAA	Sanae	53.69	158	IAmb	IAmb	15 52 29.4	
	comp=Z,3.5nm,0.8s						
QSPA	South Pole Qui	58.46	180	P	P	15 53 03.3	+1.4
QSPA				IAmb	IAmb	15 53 17.7	
	comp=Z,3.6nm,1.1s						
TORD	Torodi Ar. Bea	83.55	70	P	P	15 55 34.4	-0.1
	comp=Z,1.3nm,0.7s,baz=240,slow=4.8,SNR=8.6						
TORD	Torodi Ar. Bea	83.55	70	P	P	15 55 34.6	0.0
TORD				IAmb	IAmb	15 55 35.7	
	comp=Z,1.9nm,0.8s						
H11S2	WAKE ISLAND Hy	125.67	271	T	T	18 21 14.0	
	baz=115,slow=74,SNR=4.0						
H11S1	WAKE ISLAND Hy	125.69	271	T	T	18 21 10.9	
	baz=115						
H11S3	WAKE ISLAND Hy	125.69	271	T	T	18 21 09.6	
	baz=115,slow=74,SNR=4.0						
ZALV	Zalesovo Beam	152.37	30	PKPbc	PKiKP	16 03 02.4	+0.6
	comp=Z,1.2nm,0.5s,baz=321,slow=2.2,SNR=5.4						
ZALV				PKPab	PKPab	16 03 11.8	+0.2
	comp=Z,2.5nm,0.7s,baz=291,slow=3.2,SNR=7.5						
ZALV	Zalesovo Beam	152.37	30	PKPbc	PKiKP	16 03 02.0	+0.2

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*IDC **09** 15:50:58.4±0.9, 8°.37N×71°.41W, h0^{km}, mb3.7/4, mb1 4.0/6, mb1mx3.7/29, mbtmp3.8/6, ML3.8/2, Error ellipse: s-maj=27.6km s-min=10.6km az=148.0*

*FUNV **09** 15:51:00.1, 8°.47N×71°.43W, h1^{km}, MW3.3*

ISC 09 15:51:00.2±1.2**, 8°.49N**±0°.03×**71°.38W**±0°.02**, h8^{km}**±8^{km}**, n51, σ1ˢ.64**/81**, mb3.8**/4**, 4C-1D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	Socops	0.56	112	*e*P	Pg	15 51 11.4	+0.5
SOCV				*e*S	Sg	15 51 19.1	+0.9
SOCV	Socops	0.56	112	*e*P	Pg	15 51 11.5	+0.5
SOCV				*e*S	Sb	15 51 20.0	-0.3
SDV	Santo Domingo	0.83	62	Pg	Pg	15 51 16.5	+0.2
	38nm,0.3s,baz=311,slow=17,SNR=44						
SDV				Lg	Lg	15 51 28.3	
	149nm,0.3s,baz=275,slow=6.6,SNR=20						
SDV	Santo Domingo	0.83	62	*e*P	Pg	15 51 16.4	+0.1
SDV				*e*S	Sb	15 51 28.1	-0.4
CAPV	Capacho	1.11	236	*e*P	Pg	15 51 20.3	-1.3
CAPV				*e*S	Sg	15 51 34.5	-1.6
PAMC	Pamplona, Colo	1.74	229	*e*P	Pn	15 51 32.3	+1.2
PAMC				*e*S	Sb	15 51 56.0	+1.3
MCQV	Machiques	1.93	324	*e*P	Pn	15 51 33.2	0.0
MCQV				*e*S	Sn	15 51 57.7	+0.1
OCAC	Ocana	1.94	263	*e*P	Pn	15 51 33.7	+0.2
OCAC				*e*S	Sn	15 51 59.3	+1.2
TAMC	Tame, Arauca	2.08	191	*e*P	Pb	15 51 39.4	+1.2
TAMC				*e*S	Sg	15 52 07.7	+0.5
LL1C	La Loma 1 Cana	2.39	296	*e*S	Sn	15 52 10.9	+1.8
ELOV	Elorza	2.39	128	*e*P	Pb	15 51 42.4	-1.1
ELOV				*e*S	Sb	15 52 14.4	+1.2
ELOV	Elorza	2.39	128	*e*P	Pn	15 51 40.0	+0.4
ELOV				*e*S	Sn	15 52 09.4	+0.3
BARC	Barichara	2.60	224	*e*P	Pn	15 51 44.4	+1.7
SIQV	Siquisique	2.65	36	*e*P	Pn	15 51 44.0	+0.9
SIQV				*e*S	Sn	15 52 16.3	+0.8
SMLC	San Martn de	2.68	277	*e*P	Pn	15 51 44.0	+0.4
SMLC				*e*S	Sn	15 52 12.4	-3.8
BRRC	Barranca, Sant	2.69	239	*e*P	Pb	15 51 48.8	+0.2
BRRC				*e*S	Sb	15 52 24.8	+3.0
RUSC	La Rusia	3.09	213	*e*P	Pn	15 51 51.1	+1.5
RUSC				*e*S	Sn	15 52 29.2	+2.2
ARGC	Ariguani, Magd	3.14	296	*e*P	Pn	15 51 52.3	+2.3
ARGC				*e*S	Sn	15 52 26.8	-0.9
BAUV	El Baul	3.33	82	*e*P	Pn	15 51 53.4	+0.8
BAUV				*e*S	Sn	15 52 31.4	-0.9
ZARC	Zaragoza, Cauc	3.59	254	*e*P	Pn	15 51 55.7	-0.4
ZARC				*e*S	Sn	15 52 38.2	-0.5
MONV	Montecano	3.71	22	⇑*e*P	Pn	15 51 58.2	+0.4
MONV				*e*S	Sn	15 52 40.7	-1.0
SPBC	San Pablo de B	3.88	224	*e*P	Pn	15 52 01.8	+1.5
SPBC				*e*S	Sn	15 52 47.4	+1.2
SJCC	San Jacinto, C	4.00	291	⇓*e*P	Pn	15 52 03.0	+1.1
SJCC				*e*S	Sn	15 52 49.6	+0.6
BENV	Beln	4.01	68	*e*P	Pn	15 52 02.7	+0.8
BENV				*e*S	Sn	15 52 48.5	-0.7
UREC	San Jos de Ur	4.18	260	*e*P	Pn	15 52 05.2	+1.0
UREC				*e*S	Sn	15 52 52.5	-0.8
MOTC	Monteria, Cord	4.25	274	⇑*i*P	Pn	15 52 06.1	+0.9
MOTC				*e*S	Sn	15 52 56.7	+1.7
PTGC	Puerto Gaitan,	4.33	190	*e*P	Pn	15 52 08.0	+1.7
PTGC				*e*S	Sg	15 53 16.1	-3.2
CHIC	Chingaza	4.49	212	*e*P	Pn	15 52 10.3	+1.4
CHIC				*e*S	Sn	15 53 02.9	+1.3
TACV	Tcata	4.60	69	*e*P	Pn	15 52 11.0	+1.0
ROSC	El Rosal	4.66	219	Pn	Pn	15 52 12.2	+1.1
	3.2nm,0.3s,baz=293,slow=21,SNR=5.3						
PAYV	Puerto Ayacuch	4.79	129	*e*P	Pn	15 52 12.4	-0.2
CACV	CAICARA DEL OR	4.88	101	*e*P	Pb	15 52 21.4	-4.5
VILC	Villavicencio,	4.92	208	⇑*e*P	Pn	15 52 15.8	+1.2
VILC				*e*S	Sn	15 53 10.7	-1.1
DBBC	Dabeiba	5.01	253	*e*P	Pn	15 52 16.2	+0.5
MERV	Las Mercedes	5.08	81	*e*P	Pn	15 52 17.1	+0.5
GUY2C	Guyana, Caldas	5.12	231	*e*P	Pn	15 52 19.3	+1.7
GUY2C				*e*S	Sn	15 53 16.6	-0.6
CBOC	Ciudad Bolivar	5.29	241	*e*P	Pn	15 52 22.4	+2.8
CBOC				*e*S	Sn	15 53 18.7	-2.2
BIRV	Birongo	5.41	68	*e*P	Pn	15 52 21.3	+0.1
BIRV				*e*S	Sn	15 53 20.5	-3.2
ANIL	Santa Ana	5.64	225	*e*P	Pn	15 52 26.0	+1.5
ANIL				*e*S	Sn	15 53 22.5	-7.2
ORTC	Ortega, Tolima	5.96	220	*e*P	Pn	15 52 29.9	+1.1
ORTC				*e*S	Sn	15 53 26.9	-10
PLMC	San Jos del P	6.03	234	⇑*e*P	Pn	15 52 32.2	+2.4
PLMC				*e*S	Sn	15 53 28.2	-11
PRGV	PARIAGUAN	6.66	87	*e*P	Pn	15 52 37.9	-0.6
PCRV	Puerto La Cruz	6.86	75	Pn	Pn	15 52 43.9	+2.8
	1.5nm,0.3s,baz=168,slow=6.9,SNR=3.8						
PCRV				Sn	Sn	15 54 01.9	+2.3
	3.4nm,0.3s,baz=326,slow=19,SNR=7.3						
PCRV	Puerto La Cruz	6.86	75	*e*P	Pn	15 52 40.7	-0.5
PTGA	Pitinga	14.60	128	Pn	Pn	15 54 26.0	-1.3
	0.4nm,0.3s,baz=308,slow=17,SNR=5.5						
PDAR	Pinedale Array	47.79	322	P	P	15 59 39.2	+0.8
	0.6nm,0.5s,baz=182,slow=36,SNR=2.6						
PLCA	Paso Flores	48.98	179	P	P	15 59 46.6	-0.7
	2.2nm,0.8s,baz=0.1,slow=7.2,SNR=5.0						
TORD	Torodi Ar. Bea	71.72	79	P	P	16 02 24.1	+0.6
	0.3nm,0.5s,baz=288,slow=6.0,SNR=2.6						
ILAR	Eielson Array	76.19	335	P	P	16 02 49.4	+0.7
	0.4nm,0.8s,baz=92,slow=4.5,SNR=4.4						
ASAR	Alice Springs	151.48	235	PKPbc	PKPbc	16 10 53.7	-2.0
	0.5nm,0.7s,baz=118,slow=3.2,SNR=8.9						
WRA	Warramunga Arr	152.64	243	PKPbc	PKPbc	16 10 56.9	-1.5
	0.6nm,0.5s,baz=109,slow=2.8,SNR=14						

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*IDC **09** 15:51:53.6±0.9, 8°.42N×71°.44W, h0^{km}, mb3.7/4, mb1 4.0/6, mb1mx3.7/28, mbtmp3.8/6, ML3.7/2, Error ellipse: s-maj=27.8km s-min=11.2km az=152.0*

*NEIC **09** 15:51:57.6±2.5, 8°.47N±0°.08×71°.26W±0°.06, h15^{km}±6^{km}, mb4.0/3, Error ellipse: s-maj=13.0km s-min=5.6km az=144.0*

ISC 09 15:51:55.5±0.6**, 8°.45N**±0°.04×**71°.31W**±0°.04**, h8^{km}, n45, σ2ˢ.17**/46**, mb3.9**/6**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	Socops	0.48	110	*e*S	Sg	15 52 10.4	-0.6
SDV	Santo Domingo	0.80	57	Pg	Pb	15 52 12.6	+0.8
	25nm,0.3s,baz=228,slow=23,SNR=1.3						
SDV				Lg	Lg	15 52 24.0	
	172nm,0.3s,baz=280,slow=19,SNR=9.2						
SDV	Santo Domingo	0.80	57	*e*S	Sg	15 52 16.0	-5.3
SDV	Santo Domingo	0.80	57	Pg	Pb	15 52 12.2	+0.4

SDV				Sg	Sg	15 52 22.0	+0.7
PAMC	Pamplona, Colo	1.77	231	*e*S	Sb	15 52 51.4	+0.4
OCAC	Ocana	2.00	264	*e*S	Sn	15 52 54.8	-0.3
OCAC	Ocana	2.00	264	Pn	Pn	15 52 29.8	-0.1
TAMC	Tame, Arauca	2.06	194	*e*S	Sg	15 53 02.2	+0.5
ELOV	Elorza	2.31	128	*e*S	Sg	15 53 09.2	-0.7
LL1C	La Loma 1 Cana	2.47	296	*e*S	Sn	15 53 04.5	-2.0
BARC	Barichara	2.62	225	*e*S	Sn	15 53 11.8	+1.4
BRRC	Barranca, Sant	2.73	241	*e*S	Sb	15 53 19.8	+1.5
SMLC	San Martn de	2.75	278	*e*S	Sn	15 53 15.9	+2.3
RUSC	La Rusia	3.09	215	*e*S	Sn	15 53 25.3	+2.8
BAUV	El Baul	3.27	81	Pn	Pn	15 52 46.3	-0.8
ZARC	Zaragoza, Cauc	3.64	255	*e*S	Sn	15 53 33.3	-2.2
ZARC	Zaragoza, Cauc	3.64	255	Pn	Pn	15 52 53.8	+1.6
SPBC	San Pablo de B	3.90	225	*e*S	Sn	15 53 42.9	+0.9
SJCC	San Jacinto, C	4.08	291	*e*S	Sn	15 53 46.3	-0.2
UREC	San Jos de Ur	4.24	261	*e*S	Sn	15 53 46.6	-3.7
PTGC	Puerto Gaitan,	4.30	191	*e*S	Sg	15 54 08.7	-5.1
MOTC	Monteria, Cord	4.32	275	*e*S	Sn	15 53 47.6	-4.6
CHIC	Chingaza	4.49	213	*e*S	Sn	15 53 56.1	-0.9
ROSC	El Rosal	4.67	220	Pn	Pn	15 53 07.5	+0.7
	9.8nm,0.3s,baz=196,slow=16,SNR=3.7						
VILC	Villavicencio,	4.92	209	*e*S	Sg	15 54 33.2	-0.4
BIRV	Birongo	5.36	68	Pn	Pn	15 53 17.4	+1.4
ANIL	Santa Ana	5.66	226	*e*S	Sn	15 54 21.1	-4.5
ORTC	Ortega, Tolima	5.97	221	*e*S	Sn	15 54 18.7	-14
CAP2	Capurgana	5.99	272	Pn	Pn	15 53 26.8	+2.3
PLMC	San Jos del P	6.07	235	*e*S	Sn	15 54 36.4	+1.0
PCRV	Puerto La Cruz	6.80	75	Pn	Pn	15 53 38.9	+3.1
	0.9nm,0.3s,baz=168,slow=16,SNR=1.3						
PCRV				Sn	Sn	15 54 57.2	+3.7
	3.0nm,0.3s,baz=34,slow=24,SNR=2.8						
PLCV	Puerto La Cruz	6.85	75		Pn	15 53 38.9	+2.6
DR12	Loma Pena Alta	10.45	10	Pn	Pn	15 54 23.7	-2.1
SDDR	Presa de Saban	10.47	0	Pn	Pn	15 54 26.6	+0.5
PTGA	Pitinga	14.52	128	Pn	Pn	15 55 21.3	-0.2
	0.6nm,0.3s,baz=322,slow=21,SNR=2.5						
BW06	Boulder Array	47.87	322	P	P	16 00 36.0	+1.6
BW06				IAmb	IAmb	16 00 45.7	
	comp=Z,1.3nm,1.0s						
PDAR	Pinedale Array	47.87	322	P	P	16 00 33.4	-1.0
	comp=Z,0.6nm,0.5s,baz=126,slow=10.0,SNR=2.6						
PDAR	Pinedale Array	47.87	322	P	P	16 00 36.0	+1.7
PLCA	Paso Flores	48.94	179	P	P	16 00 42.3	-0.1
	comp=Z,2.2nm,0.8s,baz=7.2,slow=7.3,SNR=4.7						
PLCA	Paso Flores	48.94	179	P	P	16 00 42.2	-0.1
PLCA				IAmb	IAmb	16 00 45.4	
	comp=Z,2.1nm,0.8s						
MOOW	Moose Ponds	49.13	323	P	P	16 00 46.6	+2.5
MOOW				IAmb	IAmb	16 00 46.8	
	comp=Z,0.9nm,0.7s						
TORD	Torodi Ar. Bea	71.66	79	P	P	16 03 17.5	-1.0
	comp=Z,0.4nm,0.5s,baz=289,slow=5.6,SNR=2.5						
ILAR	Eielson Array	76.26	335	P	P	16 03 44.0	-0.5
	comp=Z,0.2nm,0.5s,baz=116,slow=4.9,SNR=5.4						
ASAR	Alice Springs	151.51	235	PKPbc	PKPbc	16 11 49.8	-1.4
	comp=Z,0.8nm,0.7s,baz=114,slow=3.1,SNR=8.6						
WRA	Warramunga Arr	152.68	243	PKPbc	PKPbc	16 11 52.7	-1.2
	comp=Z,1.3nm,0.6s,baz=108,slow=2.7,SNR=13						

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*JMA **09** 15:57:45.0±0.1,35.°86N×140.°12E,h55^{km}±1^{km},M3.0*

*IDC **09** 15:57:51.1±1.0,36.°60N×138.°20E,h156^{km}±5^{km},mb2.8/3,mb1 3.1/3,mb1mx2.8/35,mbtmp3.3/3,Error ellipse: s-maj=28.4km s-min=3.6km az=154.0*

ISC 09 15:57:44.8±1.1,**35.°84N**±0.°04×**140.°12E**±0.°05,**h61**^{km}±10^{km},**n17,**σ1^{s}05/26,**mb3.5**/3,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSMT	Sammumatsuo	0.33	127	P	Pn	15 57 55.6	+0.4
TOK	Tokyo	0.34	243	P	Pn	15 57 56.1	+0.9
JIHU	Itakohorinouch	0.35	69	P	Pn	15 57 55.3	0.0
JYT	Yasato	0.39	8	P	Pn	15 57 55.2	-0.5
JYT				*e*S	Sn	15 58 02.8	-0.8
JAG	Ashikaga	0.80	317	P	Pn	15 58 00.0	-0.2
JAG				*e*S	Sn	15 58 11.2	-0.4
JRY	Ryogami san	1.01	280	P	Pn	15 58 03.3	+0.4
JOD2	Odawara 2	1.02	236	P	Pn	15 58 02.8	-0.3
JOD2				S	Sn	15 58 15.8	-1.0
BSO3	Boso 3	1.08	163	P	Pn	15 58 02.9	-0.8
BSO3				S	Sn	15 58 18.1	+0.3
JKT	Katashina	1.16	323	P	Pn	15 58 04.3	-0.7
JKT				S	Sn	15 58 19.8	-0.3
JIM2	Oshima 3	1.26	207	P	Pn	15 58 04.9	-1.3
JIM2				*e*S	Sn	15 58 21.3	-1.0
JYN	Shimob	1.33	255	P	Pn	15 58 07.4	+0.2
JYN				S	Sn	15 58 24.1	0.0
JFNN	Fujinakano	1.34	242	P	Pn	15 58 07.3	0.0
JFNN				S	Sn	15 58 23.8	-0.4
MJAR	Matsushiro Arr	1.70	295	P	Pn	15 58 11.6	-0.6
	1.1nm,0.3s,baz=334,slow=14,SNR=57						
MJAR				S	Sn	15 58 29.9	-3.0
	1.2nm,0.3s,baz=18,slow=33,SNR=4.2						
MAT	Matsushiro	1.70	295	P	Pn	15 58 12.9	+0.7
MAT				S	Sn	15 58 34.9	+2.0
MKAR	Makanchi Array	43.88	303	P	P	16 05 28.8	-16
	0.2nm,0.6s,baz=96,slow=12,SNR=1.5						
WRA	Warramunga Arr	55.75	187	P	P	16 07 15.2	-0.1
	0.4nm,0.5s,baz=360,slow=7.4,SNR=13						
ASAR	Alice Springs	59.48	187	P	P	16 07 43.0	+1.6
	0.2nm,0.5s,baz=23,slow=12,SNR=6.1						

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*BJI **09** 16:03:41.4±0.0,51.°70N×173.°00W,h10^{km},mB6.4/77,mb6.0/59,Ms6.6/95,Ms7 6.5/90*

*MOS **09** 16:03:42.8±1.0,51.°68N×173.°02W,h13^{km},mb6.0/137,MS6.3/94,Error ellipse: s-maj=5.3km s-min=4.2km az=97.9*

*IDC **09** 16:03:43.1±0.3,51.°73N×173.°07W,h0^{km},mb5.3/51,mb1 5.3/53,mb1mx5.3/60,mbtmp5.3/53,ML4.5/2,MS6.2/53,Ms1 6.2/53,ms1mx6.1/64,Error ellipse: s-maj=11.5km s-min=8.1km az=160.0*

*NEIC **09** 16:03:45.7,51.°73N×173.°07W,h19^{km},Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M$_{rr}$1.59; M$_{\theta\theta}$-1.58; M$_{\phi\phi}$-0.01; M$_{r\theta}$1.61; M$_{\theta\phi}$-0.74; M$_{\phi r}$0.91; Fault plane solution: M$_0$2.55000×10^{18} NP1:φ$_s$256.36000°,δ22.10000°,λ103.18000°. NP2:φ$_s$62.18000°,δ68.51000°,λ84.71000°. Principal axes: T 2.4051, Plg66.0000°, Azm323.0000°; N 0.2607, Plg5.0000°, Azm64.0000°; P -2.6658, Plg23.0000°, Azm156.0000°;*

*AEIC **09** 16:03:45.7±2.1,51.°56N±0.°07×173.°03W±0.°06,h7^{km}±3^{km} Error ellipse: s-maj=9.5km s-min=5.6km az=189.0*

*NEIC **09** 16:03:46.1±1.7,51.°64N±0.°09×173.°08W±0.°02,h15^{km}±1^{km},mb6.0/773,Ms_20 6.3/351,Mwb6.2/98,Mww6.5,ML5.5/52(AEIC),Mwc6.4(GCMT),Error ellipse: s-maj=14.7km s-min=2.7km az=170.0*

*NEIC **09** 16:03:50,51.°44N×173.°07W,h16^{km},Moment Tensor Solution. Duration: 10^{s}0 Moment tensor: Scale 10^{18}Nm; M$_{rr}$3.52; M$_{\theta\theta}$-3.58; M$_{\phi\phi}$0.06; M$_{r\theta}$5.90; M$_{\theta\phi}$-1.02; M$_{\phi r}$2.29; Fault plane solution: M$_0$7.33000×10^{18} NP1: φ$_s$262.00000°,δ15.00000°,λ102.00000°. NP2: φ$_s$70.00000°,δ75.00000°,λ87.00000°. Principal axes: T 7.1766, Plg60.0000°, Azm335.0000°; N 0.2914, Plg3.0000°, Azm70.0000°; P -7.4680, Plg30.0000°, Azm162.0000°;*

*NEIC **09** 16:03:51,51.°55N×173.°05W,h15^{km},Moment Tensor Solution. Duration: 7^{s}8 Moment tensor: Scale 10^{18}Nm; M$_{rr}$3.56; M$_{\theta\theta}$-3.53; M$_{\phi\phi}$-0.03; M$_{r\theta}$3.07; M$_{\theta\phi}$-1.19; M$_{\phi r}$1.50; Fault plane solution: M$_0$5.07000×10^{18} NP1: φ$_s$260.00000°,δ24.00000°,λ102.00000°. NP2: φ$_s$67.00000°,δ66.00000°,λ85.00000°. Principal axes: T 4.9158, Plg68.0000°, Azm326.0000°; N 0.2872, Plg5.0000°, Azm69.0000°; P -5.2029, Plg21.0000°, Azm161.0000°;*

*GCMT **09** 16:03:51.1±0.0,51.°55N×173.°02W,h16^{km},MW6.5/166,Moment Tensor Solution. s163,c405; s166,c682; Duration: 4^{s}1 Moment tensor: Scale 10^{18}Nm; M$_{rr}$3.78±.02; M$_{\theta\theta}$-3.64±.02; M$_{\phi\phi}$-0.14±.01; M$_{r\theta}$4.07±.07; M$_{\theta\phi}$-1.24±.01; M$_{\phi r}$1.79±.05; Best double couple: M$_0$5.92000×10^{18} NP1:φ$_s$258.00000°,δ21.00000°,λ99.00000°. NP2:φ$_s$68.00000°,δ69.00000°,λ86.00000°. Principal axes: T 5.8060, Plg65.0000°, Azm332.0000°; N 0.2220, Plg3.0000°, Azm69.0000°; P -6.0340, Plg24.0000°, Azm160.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*BGR **09** 16:03:54.7±0.0,52.°50N×173.°50W,h56^{km}±1^{km},mb5.9,Ms6.2*

ISC 09 16:03:45.4±0.4,**51.°50N**±0.°03×**173.°02W**±0.°02,**h17**^{km}±2^{km},**h17**^{km}**:pP-P,n2262,**σ**1**^{s}**93**/2506,**mb5.9**/653,**MS6.3**/315,**363C-163D,Fault plane solution: NP1:**φ$_s$311.66452°,δ31.06647°,λ126.08762°. **NP2:**φ$_s$91.26901°,δ65.35376°,λ70.46274°. **Principal axes:** T Plg64.2317°, Azm328.3164°; N Plg17.6953°, Azm99.6864°; P Plg18.1082°, Azm195.6751°; **Fault plane solution: NP1:**φ$_s$193.96266°,δ33.21724°,λ46.50728°. **NP2:** φ$_s$62.55629°,δ66.58308°,λ114.26024°. **Principal axes:** T Plg60.7602°, Azm9.0543°; N Plg22.1505°, Azm232.4017°; P Plg18.0922°, Azm134.7591°; **Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOFP	Korovin Flat P	1.02	320		Pb	16 04 04.4	-0.4
KOSE	Korovin Southe	1.06	323		Pb	16 04 05.4	0.0
KOKL	Mount Kliuchef	1.10	319		Pb	16 04 05.6	-0.5
GSMY	Great Sitkin M	1.96	287		Pn	16 04 18.4	+0.5
GSTR	Great Sitkin T	1.98	289	Pn	Pn	16 04 17.3	-0.9
GSTD	Great Sitkin T	2.02	287		Pn	16 04 20.0	+1.2
ADK	Adak	2.31	281	Pn	Pn	16 04 21.9	-0.8
ADK	Adak	2.31	281		Sb	16 04 53.4	-1.6
KIWB	Kanaga Island	2.60	279	Pn	Pn	16 04 26.5	-0.1
KIKV	Kanaga Island	2.61	280		Pn	16 04 28.4	+1.5
KICM	Kanaga Island	2.63	281		Pn	16 04 27.7	+0.5
KIMD	Kanaga Island	2.64	277		Pn	16 04 28.6	+1.3
NIKH	Nikolski High	2.95	58	P	Pn	16 04 33.4	+1.9
	baz=246						
NIKH	Nikolski High	2.95	58		Pn	16 04 32.5	+1.0
NIKH					Sn	16 05 08.7	+2.1
TAFP	Tanaga Falls P	3.12	279		Pn	16 04 35.1	+1.3
TASE	Tanaga Southea	3.14	278		Pn	16 04 35.2	+1.0
OKSP	Okmok Steeple	3.39	57		Pn	16 04 38.2	+0.7
OKCE	Okmok Cone E	3.54	55		Pn	16 04 42.0	+2.4
OKNC	Okmok New Cone	3.58	55		Pn	16 04 42.5	+2.4
GAEA	Gareloi East	3.58	277		Pn	16 04 42.7	+2.5
OKTU	Okmok Mt. Tuli	3.58	56		Pn	16 04 42.0	+1.8
GALAA	Gareloi Lava P	3.59	276		Pn	16 04 43.0	+2.7
GASW	Gareloi Southw	3.65	277		Pn	16 04 43.6	+2.5
MAPS	Pakushin South	4.36	56		Pn	16 04 53.0	+2.1
MREP	Makushin Rep’t	4.46	56		Pn	16 04 53.4	+1.0
MSW	Makushin Switc	4.50	55		Pn	16 04 53.8	+1.1
MNAT	Makushin Natee	4.53	56		Pn	16 04 56.0	+2.8
CERAA	Semis’ Rag’d T	4.56	278		Pn	16 04 56.2	+2.6
UNV	Unalaska Valle	4.61	57	P	Pn	16 04 54.6	+0.4
	baz=245,SNR=27						
UNV	Unalaska Valle	4.61	57	Pn	Pn	16 04 54.7	+0.5
CESW	Semis’ Southwe	4.63	278		Pn	16 04 56.4	+1.8
AMKA	Amchitka	4.81	272		Pn	16 04 56.8	-0.2
AMKA	Amchitka	4.81	272		Sn	16 05 55.9	+3.6
AKMO	Akutan Morgan	4.98	56		Pn	16 05 01.8	+2.5
AKBBA	Akutan Broad B	5.02	56		Pn	16 05 02.0	+2.0
AKGG	Akutan Green G	5.04	55		Pn	16 05 02.9	+2.7
AKLV	Akutan Long Va	5.04	55		Pn	16 05 01.8	+1.5
AKSA	Akutan Strait	5.16	56		Pn	16 05 04.4	+2.5
LSPA	Little Sitkin	5.25	278		Pn	16 05 05.0	+2.0
LSNW	Little Sitkin	5.28	278		Pn	16 05 05.5	+1.9
WECS	Westdahl Cape	5.82	55		Pn	16 05 13.9	+2.9
SPIA	Saint Paul Isl	5.91	15	P	Pn	16 05 16.0	+3.9
	baz=198						
SPIA	Saint Paul Isl	5.91	15	Pn	Pn	16 05 07.3	-4.8
SSBA	Shishaldin	6.27	55		Pn	16 05 19.3	+2.1
SSLN	Shishaldin Nor	6.36	55		Pn	16 05 20.4	+2.0
ISLZ	Isanotski Laza	6.47	56		Pn	16 05 22.6	+2.8
FALS	False Pass	6.68	56	P	Pn	16 05 23.6	+1.0
	baz=246,SNR=26						
FALS	False Pass	6.68	56		Pn	16 05 22.3	-0.3
SMY	Shemya	8.03	284	P	Pn	16 05 39.6	-1.6
SMY	Shemya	8.03	284	Pn	Pn	16 05 39.6	-1.6
SDPT	Sand Point	8.42	58	P	Pn	16 05 47.8	+1.2
	baz=249						
SDPT	Sand Point	8.42	58	Pn	Pn	16 05 45.8	-0.7
CNBA	Chernabura Isl	8.72	62	Pn	Pn	16 05 50.0	-0.7
CHNA	Chernabura Isl	8.73	62	P	Pn	16 05 50.6	-0.1
	baz=254						
VNSG	Veniaminof 6	9.45	55		Pn	16 06 01.6	+1.0
CHGN	Chignik	9.86	55	P	Pn	16 06 07.0	+0.7
	baz=248						
CHGN	Chignik	9.86	55		Pn	16 06 03.9	-2.4
CHIR	Chirikof Islan	11.18	60	P	Pn	16 06 23.2	-1.2
	baz=256						
CHIR	Chirikof Islan	11.18	60	Pn	Pn	16 06 21.7	-2.6
SII	Sitkinak Islan	12.16	58	P	Pn	16 06 37.0	-0.7
	baz=254						
SII	Sitkinak Islan	12.16	58		Pn	16 06 34.7	-3.0
GAMB	Gambell	12.33	3	P	Pn	16 06 40.9	+1.0
	baz=184,SNR=6.9						
GAMB	Gambell	12.33	3	Pn	Pn	16 06 37.3	-2.6
P18K	Big Mountain,	12.79	45	P	Pn	16 06 46.6	+0.3
	baz=240,SNR=22						
P18K	Big Mountain,	12.79	45		Pn	16 06 42.8	-3.5
OHAK	Old Harbor	12.83	56	P	Pn	16 06 45.9	-0.9
	baz=253						
OHAK	Old Harbor	12.83	56	Pn	Pn	16 06 44.0	-2.8
O18K	Koktuh Hills	13.04	43	P	Pn	16 06 49.1	-0.6
	baz=239,SNR=19						
O18K	Koktuh Hills	13.04	43		Pn	16 06 48.8	-0.9
Q19K	Cape Douglas,	13.29	48	P	Pn	16 06 52.7	-0.4
	baz=245,SNR=9.1						
Q19K	Cape Douglas,	13.29	48		Pn	16 06 52.0	-1.1
KDAK	Kodiak Island	13.37	54	Pn	Pn	16 06 49.9	-4.3
	1.8nm,0.3s,baz=243,slow=3.7,SNR=36						
KDAK				Sn	Sn	16 09 22.5	+0.3
	1.6nm,0.3s,baz=168,slow=21,SNR=1.2						
KDAK	Kodiak Island	13.37	54	P	Pn	16 06 50.5	-3.7
KDAK						16 09 22.5	
KDAK	Kodiak Island	13.37	54	P	Pn	16 06 52.7	-1.5
	baz=252						
KDAK	Kodiak Island	13.37	54		Pn	16 06 50.5	-3.7
SVW2	Sparrevohn	13.59	38		Pn	16 06 53.4	-3.9
O19K	Port Alsworth	13.60	43	P	Pn	16 06 56.5	-0.8
	baz=239,SNR=9.3						
ANM	Nome	13.69	14	P	Pn	16 07 00.8	+2.2
	baz=201						
P19K	Oil Pt	13.80	46	P	Pn	16 07 01.2	+1.1
	baz=243						
N19K	Bonanza Creek	13.86	41	P	Pn	16 07 01.3	+0.3
	baz=237,SNR=32						
N19K	Bonanza Creek	13.86	41		Pn	16 06 59.6	-1.4
O20K	Slope Mountain	14.28	45	P	Pn	16 07 07.7	+1.0
	baz=243						
TNA	Tin City	14.34	9	P	Pn	16 07 10.5	+3.1
	baz=193						
TNA	Tin City	14.34	9		Pn	16 07 03.4	-4.0
HOM	Homer	14.53	48	P	Pn	16 07 10.9	+0.9
	baz=246						
HOM	Homer	14.53	48	Pn	Pn	16 07 08.8	-1.2
M19K	Big River Lodg	14.54	37	P	Pn	16 07 10.8	+0.6
	baz=233						
L19K	White Mountain	14.54	36	P	Pn	16 07 09.2	-1.0
	baz=232,SNR=48						
L19K	White Mountain	14.54	36		Pn	16 07 08.9	-1.3
TTA	Tatalina	14.63	32	P	Pn	16 07 10.0	-1.6
TTA	Tatalina	14.63	32	P	Pn	16 07 11.2	-0.3
	baz=227,SNR=43						
TTA	Tatalina	14.63	32	Pn	Pn	16 07 10.0	-1.6
CNPM	China Poot	14.66	48	Pn	Pn	16 07 09.9	-2.0
BRLK	Bradley Lake	14.93	48		Pn	16 07 12.3	-3.1
BRSE	Bradley Lake S	14.98	48	P	Pn	16 07 16.8	+0.6
	baz=247,SNR=23						
SPCR	Spurr Chakacha	15.01	42	P	Pn	16 07 16.6	+0.1
	baz=240,SNR=17						
SPU	Mount Spurr	15.06	42	Pn	Pn	16 07 16.3	-1.0
L20K	Farewell, AK	15.08	36	P	Pn	16 07 17.2	-0.3
	baz=233,SNR=34						
CAPN	Captain Cook N	15.24	44	P	Pn	16 07 20.0	+0.4
	baz=243						
CAPN	Captain Cook N	15.24	44	P	P	16 07 23.6	-0.9
CAPN				IAmb	IAmb	16 07 34.3	
	comp=Z,1µm,1.2s						
K20K	Telida	15.57	33	P	Pn	16 07 23.3	-0.7
	baz=230,SNR=57						
K20K	Telida	15.57	33		P	16 07 27.2	-1.0
GCSA	Galena City Sc	15.70	26	P	Pn	16 07 25.0	-0.6
	baz=220,SNR=32						
SEW	Seward	15.72	48	P	Pn	16 07 23.6	-2.3
	baz=248,SNR=16						
SEW	Seward	15.72	48	Pn	Pn	16 07 22.2	-3.7
O22K	Cooper Landing	15.75	46	P	Pn	16 07 25.8	-0.4
	baz=246,SNR=65						
O22K	Cooper Landing	15.75	46	Pn	Pn	16 07 23.8	-2.4
O22K				IAmb	IAmb	16 07 36.7	
	comp=Z,747nm,0.6s						
SUA	Susitna One	15.75	42	P	Pn	16 07 27.3	+0.9
	baz=241						
SUA	Susitna One	15.75	42	Pn	Pn	16 07 24.8	-1.6
FIS	Fire Island	15.82	44	Pn	Pn	16 07 25.5	-1.6
FIS				IAmb	IAmb	16 07 53.0	
	comp=Z,666nm,1.0s						
PPLA	Purkeypile	15.96	36	P	Pn	16 07 29.0	0.0
	baz=234,SNR=18						
PPLA	Purkeypile	15.96	36	P	P	16 07 31.8	-0.7
PPLA				IAmb	IAmb	16 07 56.4	
	comp=Z,1µm,1.4s						
RC01	Rabbit Creek A	16.01	44	P	Pn	16 07 28.4	-1.2
	baz=244,SNR=10						
RC01	Rabbit Creek A	16.01	44	Pn	Pn	16 07 27.6	-1.9
J20K	Nowinta River	16.10	31	P	Pn	16 07 31.5	+0.8
	baz=227,SNR=40						
J20K	Nowinta River	16.10	31		P	16 07 32.9	-1.1
M22K	Willow	16.15	42	P	Pn	16 07 31.4	+0.1
	baz=242						
CAST	Castle Rocks	16.31	35	P	Pn	16 07 33.9	+0.5
	baz=233,SNR=49						
CAST	Castle Rocks	16.31	35	P	P	16 07 35.2	-1.1
CUT	Chulitna	16.42	40	P	Pn	16 07 34.0	-0.8
	baz=239,SNR=30						
CUT	Chulitna	16.42	40	P	P	16 07 36.9	-0.6
CUT				IAmb	IAmb	16 07 57.4	
	comp=Z,1µm,1.1s						
PMR	Palmer	16.49	43	P	Pn	16 07 34.4	-1.3
PMR				pmax	pmax		
	comp=Z,73nm,0.8s						
PMR	Palmer	16.49	43	P	Pn	16 07 33.9	-1.8
	baz=244						
PMR	Palmer	16.49	43	Pn	Pn	16 07 34.4	-1.3
CHUM	Lake Minchumin	16.51	33	P	Pn	16 07 36.7	+0.7
	baz=232,SNR=48						
PWL	Port Wells	16.53	46	P	Pn	16 07 34.9	-1.3
	baz=247,SNR=21						
PWL	Port Wells	16.53	46		Pn	16 07 33.2	-3.0
GHO	Glory Hole Cre	16.66	43	Pn	Pn	16 07 36.5	-1.5
KNK	Knik Glacier	16.70	44	P	Pn	16 07 36.9	-1.6
	baz=245,SNR=20						
KNK	Knik Glacier	16.70	44		Pn	16 07 35.6	-2.8
KTH	Kantishna Hill	16.81	36	P	P	16 07 40.9	-1.0
SML	Sawmill	16.93	43	P	Pn	16 07 39.9	-1.4
	baz=244,SNR=22						
SML	Sawmill	16.93	43	Pn	Pn	16 07 39.2	-2.1
Q23K	Middleton Isla	16.98	52	P	Pn	16 07 40.9	-1.0
	baz=255						
Q23K	Middleton Isla	16.98	52	P	P	16 07 43.4	-0.3
Q23K				IAmb	IAmb	16 08 06.2	
	comp=Z,948nm,0.8s						
TRF	Thorofare Moun	16.98	36	P	Pn	16 07 41.0	-1.1
	baz=236,SNR=27						
TRF	Thorofare Moun	16.98	36	P	Pn	16 07 42.6	+0.6
MID	Middleton Isla	16.98	52	P	P	16 07 43.3	-0.4
MID				pmax	pmax		
	comp=Z,927nm,0.8s						
MID	Middleton Isla	16.98	52	P	P	16 07 43.3	-0.4
MID				IAmb	IAmb	16 08 06.1	
	comp=Z,927nm,0.8s						
GLI	Glacier Island	17.10	47	P	Pn	16 07 42.9	-0.4
	baz=249						
GLI	Glacier Island	17.10	47	Pn	Pn	16 07 42.2	-1.2
BPAW	Bear Paw Mtn.	17.11	34	P	Pn	16 07 43.1	-0.4
	baz=233,SNR=73						
BPAW	Bear Paw Mtn.	17.11	34	P	Pn	16 07 44.0	+0.5
HIN	Hinchinbrook I	17.20	49	Pn	Pn	16 07 42.6	-2.1
RDOG	Red Dog Mine	17.32	13	P	P	16 07 47.1	-0.4
	baz=202						
WAT1	Susitna Watana	17.32	40	P	Pn	16 07 45.1	-1.1
	baz=241						
FID	Port Fidalgo	17.33	47		Pn	16 07 43.8	-2.5
PET	Petropavlovsk	17.36	286*c*	*i*P	P	16 07 48.9	+0.9
PET				*e*S	Sn	16 10 59.0	-0.4
PET				pmax	pmax		
	comp=Z,21µm,8.3s						
PET				pmax	pmax		
	comp=Z,29µm,11.9s						
PET				pmax	pmax		
	comp=Z,178nm,1.5s						
PET				MLR	MLR		
	comp=Z,68µm,19.0s						
PET				MLR	MLR		
	comp=Z,57µm,18.0s						
PET	Petropavlovsk	17.36	286	P	Pn	16 07 46.4	-0.3
SCM	Sheep Creek Mo	17.37	44	P	Pn	16 07 44.8	-2.1
SCM				pmax	pmax		
	comp=Z,673nm,1.0s						
SCM	Sheep Creek Mo	17.37	44	P	Pn	16 07 45.7	-1.2
	baz=246,SNR=24						
SCM	Sheep Creek Mo	17.37	44		Pn	16 07 44.8	-2.1
I21K	Tanana	17.47	30	P	Pn	16 07 48.4	+0.4
	baz=229,SNR=122						
RND	Reindeer	17.50	38	P	Pn	16 07 48.1	-0.3
RND				pmax	pmax		
	comp=Z,389nm,1.2s						
RND	Reindeer	17.50	38		Pn	16 07 48.1	-0.3
IMAR	Indian Mountai	17.50	27		Pn	16 07 47.9	-0.5
WAT6	Susitna Watana	17.53	41	P	Pn	16 07 47.3	-1.6
	baz=243,SNR=25						
H21K	Melozitna Rive	17.54	28	P	Pn	16 07 49.1	+0.2
	baz=226						
H21K	Melozitna Rive	17.54	28	P	Pn	16 07 48.6	-0.2
EYAK	Cordova Ski Ar	17.60	48	P	Pn	16 07 48.4	-1.2
	baz=252						
EYAK	Cordova Ski Ar	17.60	48	Pn	Pn	16 07 47.5	-2.1
MCK	McKinley	17.64	37	P	Pn	16 07 48.0	-2.2
MCK				pmax	pmax		
	comp=Z,337nm,1.0s						
MCK	McKinley	17.64	37	P	Pn	16 07 48.3	-1.8
	baz=238,SNR=90						
MCK	McKinley	17.64	37	Pn	Pn	16 07 48.0	-2.2
MLY	Manley	17.77	32	P	Pn	16 07 51.9	+0.2
	baz=231,SNR=77						
MLY	Manley	17.77	32	P	Pn	16 07 51.5	-0.2
DIV	Divide	17.79	47	Pn	Pn	16 07 50.1	-1.9
KLU	Klutina	17.85	45	P	Pn	16 07 51.7	-1.1
	baz=249,SNR=25						
KLU	Klutina	17.85	45	Pn	Pn	16 07 49.7	-3.1
DHY	Denali Highway	17.91	40	P	Pn	16 07 52.7	-0.9
	baz=242						
DHY	Denali Highway	17.91	40	Pn	Pn	16 07 52.2	-1.4
PEA0B	Petropavlovsk-	17.93	287	P	P	16 07 54.5	+0.2
PEA0B				pmax	pmax		
	comp=Z,348nm,1.2s						
PEA0B	Petropavlovsk-	17.93	287	P	P	16 07 54.5	+0.2
PETK	Petropavlovsk-	17.93	287	P	Pn	16 07 52.9	-0.8
	comp=Z,5.0nm,0.3s,baz=76,slow=8.5,SNR=68						
PETK				LR	LR	16 14 17.1	
	comp=Z,68µm,21.1s,baz=88,slow=36						
PETK				ScP	ScP	16 15 59.0	-4.0
	comp=Z,0.1nm,0.3s,baz=100,slow=3.4,SNR=4.4						
PETK	Petropavlovsk-	17.93	287	P	P	16 07 54.1	-0.2
M24K	Tolsona, Glenn	17.98	43	P	Pn	16 07 53.8	-0.5
	baz=247,SNR=25						
M24K	Tolsona, Glenn	17.98	43		Pn	16 07 52.6	-1.8
KAIM	Kayak Island	18.06	51	P	Pn	16 07 55.1	-0.1
	baz=256						
KAIM	Kayak Island	18.06	51	P	P	16 07 55.5	-0.1
RAGM	Ragged Mountai	18.06	50		Pn	16 07 54.4	-1.0
NEA2	Nenana	18.07	34	P	Pn	16 07 54.1	-1.4
	baz=235,SNR=33						
NEA2	Nenana	18.07	34	Pn	Pn	16 07 53.3	-2.2
HMT	Hamilton	18.24	50	P	Pn	16 07 57.3	-0.2
BMRM	Bremner River	18.27	48	P	Pn	16 07 57.5	-0.5
	baz=252						
BMRM	Bremner River	18.27	48	P	Pn	16 07 57.2	-0.7
I23K	Minto, Yukon-K	18.30	33	P	Pn	16 07 57.7	-0.5
	baz=233,SNR=127						
I23K	Minto, Yukon-K	18.30	33	P	Pn	16 07 57.8	-0.4
WRH	Wood River Hil	18.36	35	P	P	16 07 57.9	-1.0
SUCK	Suckling Hills	18.41	51	P	P	16 07 58.8	-0.6
N25K	Chitina, Valde	18.48	46	P	P	16 07 59.0	-1.4
	baz=250,SNR=7.8						
N25K	Chitina, Valde	18.48	46	P	P	16 07 59.7	-0.7
BERG	Berg Lake	18.53	50	P	P	16 08 00.2	-0.6
BERG				IAmb	IAmb	16 08 20.4	
	comp=Z,710nm,1.2s						

HARP	**HAARP**	**18.54**	**43**	P	**P**	**16 08 00.6**	**-0.3**
	baz=247,SNR=32						
CCB	**Clear Creek Bu**	**18.56**	**35**	P	**P**	**16 07 59.9**	**-1.1**
MDM	**Murphy Dome**	**18.58**	**34**	P	**P**	**16 08 00.2**	**-1.2**
PAX	**Paxson**	**18.64**	**41**	P	**P**	**16 08 01.4**	**-0.7**
PAX				pmax	pmax		
	comp=Z,234nm,1.1s						
PAX	**Paxson**	**18.64**	**41**	P	**P**	**16 08 00.3**	**-1.8**
	baz=245,SNR=43						
PAX	**Paxson**	**18.64**	**41**	P	**P**	**16 08 01.4**	**-0.7**
BGLC	**Bering Glacier**	**18.66**	**51**	P	**P**	**16 08 01.5**	**-0.7**
	baz=256						
H23K	**Yukon River**	**18.66**	**31**	P	**P**	**16 08 00.0**	**-2.2**
	baz=232,SNR=45						
H23K	**Yukon River**	**18.66**	**31**	P	**P**	**16 08 00.9**	**-1.3**
TCOL	**CIGO, UAF Yank**	**18.66**	**35**	P	**P**	**16 08 00.6**	**-1.7**
	baz=237,SNR=30						
TCOL	**CIGO, UAF Yank**	**18.66**	**35**	P	**P**	**16 08 01.1**	**-1.1**
COLA	**College**	**18.67**	**35**	P	**P**	**16 08 01.3**	**-1.0**
COLA				pmax	pmax		
	comp=Z,208nm,0.9s						
COLA	**College**	**18.67**	**35**	P	**P**	**16 08 00.4**	**-1.9**
	baz=237						
COLA	**College**	**18.67**	**35**	P	**P**	**16 08 01.3**	**-1.0**
HDA	**Harding Lake**	**18.74**	**36**	P	**P**	**16 08 01.5**	**-1.6**
	baz=239,SNR=114						
HDA	**Harding Lake**	**18.74**	**36**	P	**P**	**16 08 02.4**	**-0.7**
GLB	**Gilahina Butte**	**18.79**	**47**	P	**P**	**16 08 02.5**	**-1.2**
VRDI	**Verde Repeater**	**18.88**	**48**	P	**P**	**16 08 03.4**	**-1.5**
SNH	**Sunshine Point**	**18.89**	**51**		**P**	**16 08 03.8**	**-1.0**
SNH				IAmb	IAmb	16 08 25.4	
	comp=Z,1µm,0.9s						
CRQM	**Cirque**	**18.89**	**49**	P	**P**	**16 08 04.0**	**-1.0**
CRQM				IAmb	IAmb	16 08 24.9	
	comp=Z,946nm,1.1s						
CRQE	**Cirque**	**18.91**	**49**	P	**P**	**16 08 05.1**	**-0.1**
	baz=255,SNR=13						
WAX	**Waxell Ridge**	**18.95**	**50**	P	**P**	**16 08 04.2**	**-1.3**
WAX				IAmb	IAmb	16 08 32.4	
	comp=Z,1µm,1.2s						
POKR	**Poker Plat Res**	**18.95**	**34**	P	**P**	**16 08 03.5**	**-1.9**
	baz=237,SNR=42						
POKR	**Poker Plat Res**	**18.95**	**34**	P	**P**	**16 08 03.9**	**-1.5**
IL31		**18.96**	**36**	P	**P**	**16 08 04.1**	**-1.4**
ILAR	**Eielson Array**	**18.96**	**36**	P	**P**	**16 08 02.0**	**-3.5**
	comp=Z,2.7nm,0.3s,baz=234,slow=8.8,SNR=134						
ILAR				LR	LR	16 16 00.1	
	comp=Z,89µm,19.6s,baz=248,slow=39						
ILAR				ScP	**ScP**	**16 16 01.6**	**-3.5**
	baz=278,slow=2.6,SNR=2.0						
ILAR				P3KPbc		16 42 38.9	
	comp=Z,0.0nm,0.3s,baz=47,slow=2.3,SNR=6.6						
ILAR	**Eielson Array**	**18.96**	**36**	P	**P**	**16 08 04.4**	**-1.1**
ILAR	**Eielson Array**	**18.96**	**36**	P	**P**	**16 08 04.4**	**-1.1**
TGL	**Tana Glacier**	**19.04**	**49**	P	**P**	**16 08 05.4**	**-1.1**
TGL				IAmb	IAmb	16 08 25.7	
	comp=Z,912nm,1.1s						
MCARA	**McCarthy VSAT**	**19.13**	**47**	P	**P**	**16 08 06.9**	**-0.5**
	baz=253,SNR=14						
MCARA	**McCarthy VSAT**	**19.13**	**47**	P	**P**	**16 08 06.5**	**-0.9**
H24K	**Noodor Dome**	**19.21**	**32**	P	**P**	**16 08 07.2**	**-1.1**
	baz=234						
H24K	**Noodor Dome**	**19.21**	**32**	P	**P**	**16 08 07.2**	**-1.1**
H24K				IAmb	IAmb	16 08 30.9	
	comp=Z,706nm,0.9s						
RIDG	**Independent Ri**	**19.23**	**40**	P	**P**	**16 08 07.5**	**-1.0**
	baz=244,SNR=84						
RIDG	**Independent Ri**	**19.23**	**40**	P	**P**	**16 08 07.2**	**-1.3**
RIDG				IAmb	IAmb	16 08 30.9	
	comp=Z,1µm,1.5s						
ISLE	**Juniper Island**	**19.23**	**50**	P	**P**	**16 08 08.1**	**-0.6**
ISLE				IAmb	IAmb	16 08 36.4	
	comp=Z,1µm,1.1s						
MESA	**MESA**	**19.32**	**51**	P	**P**	**16 08 08.7**	**-1.0**
	baz=258						
MESA	**MESA**	**19.32**	**51**	P	**P**	**16 08 08.9**	**-0.8**
MESA				IAmb	IAmb	16 08 33.9	
	comp=Z,976nm,1.2s						
SKR	**Severo-Kuril's**	**19.34**	**280**	*e*P	**P**	**16 08 09.0**	**-0.7**
SKR				*e*S	**Sn**	**16 11 41.4**	**-5.7**
SKR				pmax	pmax		
	comp=Z,172nm,1.1s						
SKR				pmax	pmax		
	comp=Z,12µm,12.3s						
SKR				pmax	pmax		
	comp=Z,13µm,12.3s						
SKR				MLR	MLR		
	comp=Z,47µm,19.0s						
SKR				MLR	MLR		
	comp=Z,43µm,19.0s						
MENT	**Mentasta**	**19.36**	**42**	P	**P**	**16 08 08.8**	**-1.1**
COLD	**Coldfoot**	**19.39**	**27**	P	**P**	**16 08 10.7**	**+0.5**
	baz=227,SNR=57						
BILL	**Bilibino**	**19.41**	**336**	*ce*P	**P**	**16 08 09.6**	**-0.8**
BILL				*i* S	**Sn**	**16 11 45.4**	**-3.2**
BILL				pmax	pmax		
	comp=Z,231nm,1.3s						
BILL				MLR	MLR		
	comp=Z,59µm,15.0s						
J25K	**Salcha River,**	**19.44**	**37**	P	**P**	**16 08 08.9**	**-1.9**
	baz=241,SNR=835						
YAH	**Yahtse**	**19.46**	**51**	P	**P**	**16 08 10.2**	**-1.0**
M26K	**Nabesna, AK**	**19.47**	**44**	P	**P**	**16 08 10.7**	**-0.5**
	baz=250						
M26K	**Nabesna, AK**	**19.47**	**44**	P	**P**	**16 08 09.7**	**-1.5**
DOT	**Dot Lake**	**19.50**	**40**	P	**P**	**16 08 10.4**	**-1.1**
GRNC	**Granite Creek**	**19.54**	**50**	P	**P**	**16 08 11.1**	**-1.1**
GRNC				IAmb	IAmb	16 08 33.3	
	comp=Z,828nm,1.0s						
L26K	**Log Cabin Wild**	**19.55**	**42**	P	**P**	**16 08 11.5**	**-0.4**
	baz=248,SNR=20						
L26K	**Log Cabin Wild**	**19.55**	**42**	P	**P**	**16 08 11.0**	**-1.0**
L26K				IAmb	IAmb	16 08 36.6	
	comp=Z,866nm,1.4s						
BARN	**Barnard Glacie**	**19.67**	**49**	P	**P**	**16 08 11.7**	**-1.8**
SCRK	**Sand Creek**	**19.68**	**39**	P	**P**	**16 08 11.5**	**-2.0**
	baz=245,SNR=64						
SCRK	**Sand Creek**	**19.68**	**39**	P	**P**	**16 08 11.4**	**-2.1**
TABL	**Table Mountain**	**19.77**	**51**	P	**P**	**16 08 12.8**	**-1.9**
TABL				IAmb	IAmb	16 08 34.9	
	comp=Z,1µm,1.1s						
CTG	**Chitna Glacier**	**19.80**	**49**	P	**P**	**16 08 14.0**	**-0.8**
	baz=256,SNR=22						
CTGM	**Chitina Glacie**	**19.80**	**49**	P	**P**	**16 08 13.6**	**-1.3**
CTGM				IAmb	IAmb	16 08 42.8	
	comp=Z,830nm,1.2s						
PRP	**Porcupine Dome**	**19.84**	**35**	P	**P**	**16 08 12.8**	**-2.5**
	baz=239,SNR=85						
PRP	**Porcupine Dome**	**19.84**	**35**	P	**P**	**16 08 13.2**	**-2.1**
LOGN	**Logan Glacier**	**19.92**	**50**	P	**P**	**16 08 14.6**	**-1.6**
LOGN				IAmb	IAmb	16 08 37.2	
	comp=Z,672nm,0.9s						
M27K	**Edge Creek, AK**	**19.95**	**45**	P	**P**	**16 08 14.2**	**-2.3**
	baz=252						
J26L	**Joseph Creek**	**20.07**	**38**	P	**P**	**16 08 15.6**	**-2.2**
	baz=244,SNR=251						
PCA	**Pinnacle**	**20.13**	**52**	P	**P**	**16 08 17.5**	**-0.9**
PCA				IAmb	IAmb	16 08 40.9	
	comp=Z,987nm,0.9s						
PINM	**Pinnacle**	**20.13**	**52**	P	**P**	**16 08 18.0**	**-0.4**
	baz=260,SNR=32						
L27K	**Beaver Creek,**	**20.21**	**43**	P	**P**	**16 08 18.9**	**-0.2**
	baz=250,SNR=22						
L27K	**Beaver Creek,**	**20.21**	**43**	P	**P**	**16 08 17.8**	**-1.3**
L27K				IAMs_20	IAMs_20	16 16 15.4	
	comp=Z,113µm,20.0s						
BCAR	**Beaver Creek A**	**20.23**	**43**	P	**P**	**16 08 18.2**	**-1.2**
BCPM	**Bancas Point**	**20.41**	**53**	P	**P**	**16 08 20.4**	**-1.1**
BCPM				IAmb	IAmb	16 08 42.0	
	comp=Z,802nm,0.9s						
YUK3	**Moose Creek**	**20.41**	**47**	P	**P**	**16 08 19.8**	**-1.8**
	baz=255,SNR=20						
BVCY	**Beaver Creek**	**20.42**	**45**	P	**P**	**16 08 19.6**	**-1.9**
	baz=253						
PNL	**Peninsula**	**20.49**	**53**	P	**P**	**16 08 22.3**	**+0.1**
	baz=262,SNR=18						
FYU	**Fort Yukon**	**20.51**	**32**	P	**P**	**16 08 21.2**	**-1.2**
FYU				IAMs_20	IAMs_20	16 16 55.6	
	comp=Z,115µm,19.0s						
TOLK	**Toolik Lake Re**	**20.55**	**25**	P	**P**	**16 08 21.3**	**-1.6**
	baz=226,SNR=96						
TOLK	**Toolik Lake Re**	**20.55**	**25**	P	**P**	**16 08 21.5**	**-1.3**
TOLK				IAmb	IAmb	16 08 39.5	
	comp=Z,502nm,0.9s						
EGAK	**Eagle**	**21.13**	**39**	P	**P**	**16 08 27.5**	**-1.6**
	baz=247,SNR=265						
EGAK	**Eagle**	**21.13**	**39**	P	**P**	**16 08 27.7**	**-1.4**
YUK4	**Talbot Arm**	**21.16**	**49**	P	**P**	**16 08 28.4**	**-1.3**
	baz=258						
BMAR	**Burnt Mountain**	**21.21**	**31**	P	**P**	**16 08 29.7**	**-0.3**
YUK6	**Outpost Mounta**	**21.21**	**50**	P	**P**	**16 08 30.0**	**-0.2**
	baz=260,SNR=18						
A21K	**Barrow**	**21.23**	**15**	P	**P**	**16 08 29.3**	**-0.8**
	baz=209						
A21K	**Barrow**	**21.23**	**15**	P	**P**	**16 08 28.6**	**-1.5**
A21K				IAmb	IAmb	16 08 53.1	
	comp=Z,486nm,1.0s						
A21K				IAMs_20	IAMs_20	16 17 37.7	
	comp=Z,192µm,19.0s						
DAWY	**Dawson**	**21.58**	**41**	P	**P**	**16 08 32.8**	**-1.2**
	baz=251,SNR=63						
DAWY	**Dawson**	**21.58**	**41**	P	**P**	**16 08 32.0**	**-1.9**
HYT	**Haines Junctio**	**21.60**	**51**	P	**P**	**16 08 34.5**	**+0.1**
	baz=261,SNR=39						
HYT	**Haines Junctio**	**21.60**	**51**	P	**P**	**16 08 34.0**	**-0.4**
HYT				IAmb	IAmb	16 09 00.3	
	comp=Z,330nm,0.9s						
SEY	**Seymchan**	**21.65**	**315**	P	**P**	**16 08 34.6**	**0.0**
	comp=Z,173nm,1.2s,baz=107,slow=10,SNR=30						
SEY				LR	LR	16 16 56.1	
	comp=Z,69µm,20.0s,baz=108,slow=37						
SEY	**Seymchan**	**21.65**	**315**	*c* *i*P	**P**	**16 08 35.5**	**+0.9**
MA2	**Magadan**	**21.79**	**306**	P	**P**	**16 08 37.7**	**+1.6**
	comp=Z,70nm,0.9s,baz=85,slow=13,SNR=20						
MA2				LR	LR	16 16 55.1	
	comp=Z,99µm,18.6s,baz=102,slow=37						
MA2	**Magadan**	**21.79**	**306**	*c* *i*P	**P**	**16 08 37.3**	**+1.1**
MA2				pmax	pmax		
	comp=Z,37nm,1.1s						
MA2				MLR	MLR		
	comp=Z,113µm,17.0s						
MA2	**Magadan**	**21.79**	**306**	IAMs_20	IAMs_20	16 16 24.7	
	comp=Z,112µm,20.0s						
J29M	**Klondike Camp**	**22.19**	**41**	P	**P**	**16 08 40.2**	**-0.4**
	baz=251,SNR=18						
M30M	**Minto, Yukon**	**22.28**	**46**	P	**P**	**16 08 40.4**	**-1.1**
	baz=257						
I29M	**Ogilvie Camp,**	**22.47**	**39**	P	**P**	**16 08 41.6**	**-1.9**
	baz=249,SNR=129						
I29M				S	**S**	**16 12 48.6**	**-0.5**
	baz=249						
SIT	**Sitka**	**22.48**	**61**	P	**P**	**16 08 42.6**	**-1.0**
SIT				pmax	pmax		
	comp=Z,442nm,0.9s						
SIT	**Sitka**	**22.48**	**61**	P	**P**	**16 08 44.2**	**+0.6**
	baz=272,SNR=15						
SIT	**Sitka**	**22.48**	**61**	P	**P**	**16 08 42.6**	**-1.0**
SIT				IAmb	IAmb	16 09 03.2	
	comp=Z,442nm,0.9s						
SKAG	**Skagway**	**22.52**	**55**	P	**P**	**16 08 43.3**	**-0.7**
	baz=267,SNR=23						
SKAG				S	**S**	**16 12 48.4**	**-1.8**
	baz=267						
SKAG	**Skagway**	**22.52**	**55**	P	**P**	**16 08 42.8**	**-1.3**
N31M	**Braeburn, Yuko**	**22.54**	**49**	P	**P**	**16 08 43.5**	**-0.8**
	baz=261,SNR=10						
N31M				S	**S**	**16 12 51.3**	**+0.8**
	baz=261						
BESE	**Bessie Mountai**	**22.73**	**57**	P	**P**	**16 08 45.2**	**-1.1**
BESE				IAmb	IAmb	16 09 03.5	
	comp=Z,1µm,1.4s						
WHY	**Whitehorse**	**22.86**	**52**	P	**P**	**16 08 46.7**	**-1.0**
	baz=264,SNR=26						
WHY				S	**S**	**16 12 58.4**	**+2.0**
	baz=264						
WHY	**Whitehorse**	**22.86**	**52**	P	**P**	**16 08 46.8**	**-1.0**
WHY				IAmb	IAmb	16 09 17.4	
	comp=Z,538nm,1.2s						
MAYO	**Mayo, Yukon**	**22.92**	**44**	P	**P**	**16 08 46.3**	**-2.0**
	baz=256						
MAYO				S	**S**	**16 12 54.4**	**-2.9**
	baz=256						
JIS	**Juneau Island**	**22.97**	**58**	P	**P**	**16 08 47.5**	**-1.3**
JIS				IAmb	IAmb	16 09 08.3	
	comp=Z,665nm,1.0s						
M31M	**Drury Creek, Y**	**23.30**	**48**	P	**P**	**16 08 49.8**	**-2.4**
	baz=261						
M31M				S	**S**	**16 13 04.5**	**+0.8**
	baz=261						
EPYK	**Eagle Plains**	**23.45**	**37**	P	**P**	**16 08 51.4**	**-2.2**
	baz=249,SNR=122						
EPYK				S	**S**	**16 13 00.1**	**-6.0**
	baz=249						
EPYK	**Eagle Plains**	**23.45**	**37**	P	**P**	**16 08 51.2**	**-2.4**
EPYK				IAmb	IAmb	16 09 14.9	
	comp=Z,569nm,1.1s						
EPYK				IAMs_20	IAMs_20	16 18 43.5	
	comp=Z,138µm,18.0s						
FARO	**Faro, Yukon**	**23.79**	**48**	P	**P**	**16 08 55.3**	**-1.7**
	baz=262						
FARO				S	**S**	**16 13 10.3**	**-1.3**
	baz=262						
CRAG	**Craig**	**23.83**	**65**	P	**P**	**16 08 56.6**	**-0.7**
	baz=278						
CRAG				S	**S**	**16 13 15.0**	**+2.8**
	baz=278						
CRAG	**Craig**	**23.83**	**65**	P	**P**	**16 08 58.4**	**+1.1**
CRAG				IAmb	IAmb	16 09 23.3	
	comp=Z,798nm,1.4s						
P33M	**Teslin, Yukon**	**23.84**	**53**	P	**P**	**16 08 57.6**	**+0.1**
	baz=267,SNR=45						
P33M				S	**S**	**16 13 14.3**	**+1.9**
	baz=267						
WRAK	**Wrangell Islan**	**24.16**	**62**	P	**P**	**16 09 00.0**	**-0.4**
	baz=276,SNR=17						
WRAK				S	**S**	**16 13 23.1**	**+5.7**
	baz=276						
WRAK	**Wrangell Islan**	**24.16**	**62**	P	**P**	**16 09 01.2**	**+0.9**
WRAK				IAmb	IAmb	16 09 18.6	
	comp=Z,453nm,1.3s						
WRAK				IAMs_20	IAMs_20	16 18 49.0	
	comp=Z,95µm,20.0s						
DIB	**Dawson Inlet,**	**24.59**	**70**	P	**P**	**16 09 05.3**	**+1.0**
DIB				IAmb	IAmb	16 09 32.5	
	comp=Z,399nm,1.4s						
MMPY	**Sheldon Lake,**	**24.81**	**47**	P	**P**	**16 09 04.5**	**-1.8**
	baz=263						
MMPY				S	**S**	**16 13 27.3**	**-0.6**
	baz=263						
MOBC	**Moresby Island**	**24.90**	**70**	P	**P**	**16 09 08.7**	**+1.4**
DLBC	**Dease Lake**	**25.26**	**57**	P	**P**	**16 09 11.4**	**+1.0**
	comp=Z,106nm,0.8s,baz=272,slow=9.7,SNR=64						
DLBC				LR	LR	16 19 43.8	
	comp=Z,81µm,20.2s,baz=294,slow=38						
DLBC	**Dease Lake**	**25.26**	**57**	P	**P**	**16 09 11.5**	**+1.0**
INK	**Inuvik**	**25.32**	**34**	P	**P**	**16 09 09.4**	**-1.3**
	comp=Z,94nm,0.5s,baz=230,slow=7.7,SNR=91						
INK				LR	LR	16 20 17.2	
	comp=Z,92µm,18.7s,baz=228,slow=40						
INK	**Inuvik**	**25.32**	**34**	P	**P**	**16 09 08.3**	**-2.4**
	baz=249,SNR=181						
INK				S	**S**	**16 13 33.6**	**-2.2**
	baz=249						
INK	**Inuvik**	**25.32**	**34**	P	**P**	**16 09 08.9**	**-1.9**
INK				IAmb	IAmb	16 09 16.3	
	comp=Z,361nm,0.7s						
HG4B	**Hotspring**	**25.56**	**72**	P	**P**	**16 09 14.1**	**+0.9**
RUBB	**Prince Rupert**	**25.65**	**67**	P	**P**	**16 09 14.9**	**+1.0**
RUBB				IAmb	IAmb	16 09 38.6	
	comp=Z,248nm,1.0s						
WTLY	**Watson Lake, Y**	**25.84**	**53**	P	**P**	**16 09 16.4**	**+0.6**
	baz=271						
GRNB	**Grenville Isla**	**25.92**	**68**	P	**P**	**16 09 17.5**	**+1.1**
GRNB				IAmb	IAmb	16 09 36.4	
	comp=Z,457nm,1.4s						
TGTN	**Hyland Airport**	**26.12**	**50**	P	**P**	**16 09 18.0**	**-0.3**
	baz=268						
TGTN				S	**S**	**16 13 50.5**	**+1.7**
	baz=268						
KUR	**Kuril'sk**	**26.49**	**272**	*c* *i*P	**P**	**16 09 20.9**	**-0.7**
KUR				*e*		16 10 01.2	
KUR				*i* S	**S**	**16 13 56.5**	**+1.8**
KUR				*e*SS	**SnSn**	**16 14 59.0**	**+2.8**
KUR				*e*SSS	SSS	16 15 14.2	
KUR				pmax	pmax		
	comp=Z,19µm,8.8s						
KUR				pmax	pmax		
	comp=E,11µm,9.4s						
KUR				pmax	pmax		
	comp=N,5µm,8.6s						
KUR				pmax	pmax		
	comp=Z,2µm,1.8s						
KUR				pmax	pmax		
	comp=E,1µm,2.1s						
KUR				pmax	pmax		
	comp=N,459nm,1.4s						
KUR				MLR	MLR		
	comp=Z,31µm,19.0s						
KUR				MLR	MLR		
	comp=N,9µm,13.0s						
KUR				MLR	MLR		
	comp=E,32µm,16.0s						
BBB	**Bella Bella**	**27.42**	**71**	P	**P**	**16 09 31.6**	**+1.7**
	comp=E,28nm,1.0s,baz=293,slow=5.4,SNR=6.7						
BBB				LR	LR	16 19 14.1	
	comp=E,29µm,19.2s,baz=288,slow=34						
BBB	**Bella Bella**	**27.42**	**71**	P	**P**	**16 09 31.1**	**+1.2**
TYV	**Tymovskoe**	**27.48**	**286**	*e*P	**P**	**16 09 31.5**	**+1.0**
TYV				*e*S	**S**	**16 14 14.0**	**+3.8**
TYV				pmax	pmax		
	comp=Z,41nm,1.4s						
TYV				pmax	pmax		
	comp=Z,5µm,6.8s						
TYV				smax	smax		
	comp=N,6.0nm,1.7s						
TYV				smax	smax		
	comp=E,11nm,1.7s						
TYV				smax	smax		
	comp=N,5µm,9.9s						
TYV				smax	smax		
	comp=E,6µm,9.9s						
TYV				MLR	MLR		
	comp=E,62µm,20.0s						
TYV				MLR	MLR		
	comp=Z,70µm,20.0s						
NKL	**Nikolayevsk**	**27.97**	**292**	*e*P	**P**	**16 09 34.2**	**-0.6**
NKL				*e*S	**S**	**16 14 16.5**	**-1.4**
NKL				pmax	pmax		
	comp=E,4.0nm,1.0s						
NKL				pmax	pmax		
	comp=N,316nm,0.7s						
NKL				pmax	pmax		
	comp=Z,120nm,1.6s						
NKL				smax	smax		
	comp=E,3.0nm,1.7s						
NKL				smax	smax		
	comp=N,2µm,1.3s						
NKL				MLR	MLR		
	comp=E,206nm,16.0s						
NKL				MLR	MLR		
	comp=N,22µm,23.0s						
NKL				MLR	MLR		
	comp=Z,24µm,18.0s						
YUK	**Yuzh-Kuril'sk**	**28.32**	**271**	*d* *i*P	**P**	**16 09 38.9**	**+0.9**
YUK				*e*		16 10 26.1	
YUK				*e*PPP	PPP	16 10 38.4	
YUK				*i* S	**S**	**16 14 26.4**	**+2.8**
YUK				SS	**SnSn**	**16 15 43.7**	**+2.8**
YUK				*e*SSS	SSS	16 16 01.5	
YUK				pmax	pmax		
	comp=Z,3µm,1.3s						
YUK				pmax	pmax		
	comp=Z,2µm,1.3s						
YUK				pmax	pmax		
	comp=N,1µm,1.0s						
YUK				pmax	pmax		
	comp=E,1µm,1.5s						
YUK				MLR	MLR		
	comp=Z,31µm,19.0s						
YUK				MLR	MLR		
	comp=Z,13µm,15.0s						
YUK				MLR	MLR		
	comp=E,26µm,17.0s						
WRGLY	**Wrigley**	**28.41**	**46**	P	**P**	**16 09 38.2**	**-0.4**
	baz=269						
UGL	**Uglegorsk**	**28.46**	**283**	*e*P	**P**	**16 09 40.6**	**+1.4**
UGL				*e*S	**S**	**16 14 30.7**	**+5.0**
UGL				pmax	pmax		
	comp=Z,300nm,0.9s						
UGL				pmax	pmax		
	comp=Z,10µm,13.0s						
UGL				smax	smax		
	comp=E,7µm,16.0s						
UGL				smax	smax		
	comp=N,8µm,15.0s						
UGL				MLR	MLR		
	comp=E,27µm,16.0s						
UGL				MLR	MLR		
	comp=N,20µm,12.0s						
UGL				MLR	MLR		
	comp=Z,37µm,15.0s						
TLCB	**Telegraph Cove**	**28.70**	**73**	P	**P**	**16 09 41.8**	**+0.5**
YSS	**Yuzh-Sakhalins**	**28.90**	**279**	α*e*P	**P**	**16 09 44.0**	**+0.9**
YSS				*e*S	**S**	**16 14 29.6**	**-3.0**
YSS				*e*SS	**SnSn**	**16 16 04.8**	**+10**
YSS				pmax	pmax		
	comp=Z,10µm,3.6s						
YSS				pmax	pmax		
	comp=N,2µm,3.3s						
YSS				pmax	pmax		
	comp=E,4µm,2.9s						
YSS				pmax	pmax		
	comp=Z,480nm,1.4s						
YSS				MLR	MLR		
	comp=E,37µm,19.0s						
YSS				MLR	MLR		
	comp=Z,75µm,19.0s						
YSS	**Yuzh-Sakhalins**	**28.90**	**279**	P	**P**	**16 09 42.9**	**-0.2**
YSS				IAMs_20	IAMs_20	16 20 41.7	
	comp=Z,109µm,20.0s						
A36M	**Sachs Harbour**	**29.24**	**28**	P	**P**	**16 09 44.4**	**-1.5**
	baz=252,SNR=66						
A36M				S	**S**	**16 14 34.1**	**-3.5**
	baz=252						
A36M	**Sachs Harbour**	**29.24**	**28**	P	**P**	**16 09 44.9**	**-1.0**
A36M				IAmb	IAmb	16 09 51.9	
	comp=Z,126nm,0.8s						
A36M				IAMs_20	IAMs_20	16 23 05.2	
	comp=Z,70µm,20.0s						
CBB	**Campbell River**	**29.76**	**74**	P	**P**	**16 09 51.2**	**+0.4**
OZB	**Mount Ozzard**	**30.09**	**76**	P	**P**	**16 09 54.3**	**+0.5**
ASAJ	**Asahikawa**	**30.32**	**274**	P	**P**	**16 09 57.0**	**+1.2**
	comp=Z,331nm,0.9s,baz=60,slow=7.8,SNR=31						
ASAJ				LR	LR	16 21 47.5	
	comp=Z,40µm,21.2s,baz=76,slow=36						
ASAJ	**Asahikawa**	**30.32**	**274**	P	**P**	**16 09 57.0**	**+1.2**
CLRS	**Cowichan Lake**	**30.97**	**75**	P	**P**	**16 10 01.8**	**+0.3**
C03A	**Quillayute Air**	**31.07**	**77**	P	**P**	**16 10 03.2**	**+0.9**
C03A				IAmb	IAmb	16 10 22.1	
	comp=Z,359nm,1.4s						
ERM	**Erimo**	**31.07**	**270**	*ce*P	**P**	**16 10 05.5**	**+3.1**
ERM				pmax	pmax		
	comp=Z,610nm,1.3s						
ERM				MLR	MLR		
	comp=Z,54µm,18.0s						
ERM	**Erimo**	**31.07**	**270**	P	**P**	**16 10 02.7**	**+0.3**
GRNR	**Gornyy**	**31.22**	**289**	⇑*i*P	**P**	**16 10 04.2**	**+0.5**
GRNR				*e*S	**S**	**16 15 12.9**	**+3.8**
GRNR				pmax	pmax		
	comp=E,10.0nm,0.9s						
GRNR				pmax	pmax		
	comp=N,5.0nm,0.8s						
GRNR				pmax	pmax		
	comp=Z,20nm,1.3s						
GRNR				smax	smax		
	comp=N,4.0nm,1.1s						
GRNR				MLR	MLR		
	comp=E,12µm,19.0s						
GRNR				MLR	MLR		
	comp=N,15µm,20.0s						
GRNR				MLR	MLR		
	comp=Z,17µm,18.0s						
LLLB	**Lillooet**	**31.62**	**71**	P	**P**	**16 10 07.4**	**+0.2**
LLLB				IAmb	IAmb	16 10 30.1	
	comp=Z,153nm,1.0s						
JEW	**Eniwo**	**31.69**	**272**	P	**P**	**16 10 07.7**	**-0.2**
NLWA	**Neilton Lookou**	**31.73**	**78**	P	**P**	**16 10 09.1**	**+0.9**
NLWA				IAmb	IAmb	16 10 30.9	
	comp=Z,110nm,0.9s						
A04D	**Lummi Island**	**31.87**	**75**	P	**P**	**16 10 08.2**	**-1.2**
	baz=295						
A04D				S	**S**	**16 15 20.6**	**+1.4**
	baz=295						
YAK	**Yakutsk**	**32.05**	**312**	*e*P	**P**	**16 10 08.8**	**-2.0**
YAK				*e*		16 11 14.1	
YAK				*e*PPP	PPP	16 11 32.2	
YAK				*e*		16 13 06.4	
YAK				*e*S	**S**	**16 15 28.8**	**+7.1**
YAK				*e*		16 20 39.9	

YAK				pmax	pmax		
	comp=Z,72nm,1.4s						
YAK				pmax	pmax		
	comp=E,46nm,1.2s						
YAK				pmax	pmax		
	comp=N,18nm,1.4s						
YAK				pmax	pmax		
	comp=Z,2µm,5.4s						
YAK				pmax	pmax		
	comp=E,1µm,4.0s						
YAK				pmax	pmax		
	comp=N,284nm,4.7s						
YAK				smax	smax		
	comp=E,3µm,4.8s						
YAK				smax	smax		
	comp=N,738nm,4.5s						
YAK				MLR	MLR		
	comp=Z,163µm,18.0s						
YAK				MLR	MLR		
	comp=E,97µm,16.0s						
YAK				MLR	MLR		
	comp=N,38µm,17.0s						
YAK	Yakutsk	32.05	312	P	P	16 10 08.9	-1.9
D03D	Eldon	32.14	77	P	P	16 10 12.9	+1.0
	baz=296,SNR=18						
D03D				S	S	16 15 26.3	+2.8
	baz=296						
KIP	Kipapa	32.22	153	⇑eP	P	16 10 13.1	+0.4
KIP				pmax	pmax		
	comp=Z,120nm,1.4s						
KIP				MLR	MLR		
	comp=Z,33µm,17.0s						
KIP	Kipapa	32.22	153	IAMs_20	IAMs_20	16 22 11.5	
	comp=Z,48µm,19.0s						
E03A	Lebam	32.30	79	P	P	16 10 14.4	+1.3
E03A				IAmb	IAmb	16 10 43.8	
	comp=Z,227nm,1.0s						
TIXI	Tiksi	32.33	330	c iP	P	16 10 13.0	-0.2
TIXI	Tiksi	32.33	330	P	P	16 10 09.0	-4.2
TIXI				IAMs_20	IAMs_20	16 24 18.9	
	comp=Z,78µm,19.0s						
B05A	Bryant	32.43	75	P	P	16 10 14.1	-0.2
	baz=296,SNR=21						
B05A				S	S	16 15 28.4	+0.5
	baz=296						
D04E	Lakebay	32.49	77	P	P	16 10 11.8	-3.0
	baz=297						
D04E				S	S	16 15 32.7	+3.8
	baz=297						
YKA	Yellowknife Ar	32.50	47	P	P	16 10 13.7	-1.1
	comp=Z,5.1nm,0.4s,baz=43,slow=4.3,SNR=28						
YKA				PcP	PcP	16 13 01.4	+0.3
	comp=Z,2.5nm,0.5s,baz=302,slow=1.5,SNR=1.5						
YKA				LR	LR	16 25 08.4	
	comp=Z,84µm,18.1s,baz=0.0,slow=40						
YKA	Yellowknife Ar	32.50	47	P	P	16 10 14.4	-0.4
YKA	Yellowknife Ar	32.50	47	P	P	16 10 14.4	-0.4
B06A	Marblemount	32.69	75	P	P	16 10 17.4	+0.8
HEBO	Mount Hebo	32.81	81	P	P	16 10 19.3	+1.5
HEBO				IAmb	IAmb	16 10 40.0	
	comp=Z,215nm,0.9s						
F04D	Rainier, OR	32.85	79	P	P	16 10 16.9	-1.1
	baz=298						
F04D				S	S	16 15 35.3	+0.8
	baz=298						
E04D	Cinebar	32.90	78	P	P	16 10 20.2	+1.7
	baz=298,SNR=31						
E04D				S	S	16 15 37.1	+1.8
	baz=298						
D05A	Enumclaw	32.97	77	P	P	16 10 20.3	+1.3
JTM	Tenmabayashi	33.05	269	P	P	16 10 21.6	+1.7
G03D	McMinnville, O	33.11	81	P	P	16 10 18.5	-1.9
	baz=300						
G03D				S	S	16 15 37.5	-1.0
	baz=300						
LON	Longmire	33.28	78	P	P	16 10 22.2	+0.4
LON				pmax	pmax		
	comp=Z,78nm,0.9s						
LON	Longmire	33.28	78	P	P	16 10 22.2	+0.4
F04A	Amboy	33.29	79	P	P	16 10 22.4	+0.6
F04A				IAmb	IAmb	16 10 40.6	
	comp=Z,325nm,1.4s						
I02E	Swisshome, OR	33.30	83	P	P	16 10 19.3	-2.6
	baz=301						
I02E				S	S	16 15 44.6	+3.1
	baz=301						
C06D	Leavenworth	33.30	75	P	P	16 10 22.4	+0.4
	baz=296						
C06D				S	S	16 15 42.0	+0.4
	baz=296						
COR	Corvallis	33.40	82	P	P	16 10 23.5	+0.7
COR				pmax	pmax		
	comp=Z,267nm,1.1s						
COR	Corvallis	33.40	82	P	P	16 10 23.4	+0.7
COR				IAmb	IAmb	16 10 43.1	
	comp=Z,267nm,1.1s						
TEY	Ternei	33.59	279	⇓eP	P	16 10 24.7	+0.3
TEY				e		16 11 37.9	
TEY				eS	S	16 15 41.7	-4.2
TEY				pmax	pmax		
	comp=E,30nm,1.6s						
TEY				pmax	pmax		
	comp=Z,110nm,1.9s						
TEY				pmax	pmax		
	comp=E,2µm,3.8s						
TEY				pmax	pmax		
	comp=Z,4µm,3.6s						
TEY				pmax	pmax		
	comp=N,1µm,9.8s						
TEY				smax	smax		
	comp=E,3µm,9.1s						
TEY				smax	smax		
	comp=N,2µm,7.6s						
TEY				MLR	MLR		
	comp=E,22µm,19.0s						
TEY				MLR	MLR		
	comp=N,8µm,18.0s						
TEY				MLR	MLR		
	comp=Z,31µm,20.0s						
KEBM	Edson Butte	33.64	85	P	P	16 10 26.1	+1.1
KEBM				IAmb	IAmb	16 10 43.5	
	comp=Z,378nm,1.1s						
J01E	Myrtle Point	33.74	85	P	P	16 10 26.5	+0.7
	baz=302						
J01E				S	S	16 15 50.5	+2.2
	baz=302						
LTY	Liberty	33.74	76	P	P	16 10 26.7	+0.9
H04D	Lebanon	33.78	82	P	P	16 10 24.6	-1.6
	baz=301						
H04D				S	S	16 15 49.2	+0.3
	baz=301						
BUCK	Buck Mountain	33.79	82	P	P	16 10 27.4	+1.1
BUCK				IAmb	IAmb	16 10 48.1	
	comp=Z,220nm,1.2s						
I03D	Drain, OR	33.82	83	P	P	16 10 27.6	+1.1
	baz=302						
I03D				S	S	16 15 52.5	+2.9
	baz=302						
F05D	White Salmon	33.90	79	P	P	16 10 26.7	-0.5
	baz=299						
F05D				S	S	16 15 50.8	0.0
	baz=299						
H04A	Detroit Lake	34.04	81	P	P	16 10 28.5	0.0
H04A				IAmb	IAmb	16 10 49.8	
	comp=Z,211nm,0.8s						
HOOD	Mount Hood Mea	34.05	80	P	P	16 10 28.2	-0.4
HOOD				IAmb	IAmb	16 10 55.6	
	comp=Z,182nm,0.9s						
B08A	Colville Reser	34.05	74	P	P	16 10 28.9	+0.3
B08A				IAmb	IAmb	16 10 44.9	
	comp=Z,112nm,0.8s						
KBO	Bosley Butte	34.06	86	P	P	16 10 29.6	+0.8
K02D	Willamette Mer	34.15	85	P	P	16 10 30.7	+1.2
	baz=303,SNR=9.0						
K02D				S	S	16 15 56.6	+1.7
	baz=303						
DBO	Dodson Butte	34.19	84	P	P	16 10 30.5	+0.7
DBO				IAmb	IAmb	16 10 51.5	
	comp=Z,161nm,0.9s						
G05D	Wamic, OR	34.30	80	P	P	16 10 31.7	+1.0
	baz=300,SNR=11						
G05D				S	S	16 15 58.9	+1.8
	baz=300						
I04A	Tendick Farm,	34.35	83	P	P	16 10 31.7	+0.5
	baz=302,SNR=24						
I04A				S	S	16 15 59.2	+1.3
	baz=302						
L02E	Cave Junction	34.48	86	P	P	16 10 31.5	-0.8
	baz=304						
L02E				S	S	16 16 02.8	+2.9
	baz=304						
E07A	Sunnyside	34.56	77	P	P	16 10 33.9	+1.0
KLR	Kul'dur	34.60	289	P	P	16 10 32.2	-1.0
	comp=Z,18nm,0.5s,baz=68,slow=7.6,SNR=46						
KLR				LR	LR	16 24 19.0	
	comp=Z,42µm,21.3s,baz=69,slow=36						
KLR	Kul'dur	34.60	289	ceP	P	16 10 32.5	-0.7
KLR				pmax	pmax		
	comp=Z,225nm,1.6s						
KLR				MLR	MLR		
	comp=Z,44µm,20.0s						
KRMB	Red Mountain	34.64	87	P	P	16 10 35.0	+1.3
KRMB				IAmb	IAmb	16 10 59.2	
	comp=Z,193nm,1.3s						
HUMO	Hull Mountain	34.64	85	P	P	16 10 34.9	+1.2
HUMO				IAMs_20	IAMs_20	16 23 46.8	
	comp=Z,40µm,18.0s						
HMH	Humu'ula Sheep	34.69	150	P	P	16 10 35.8	+1.2
HMH				IAmb	IAmb	16 10 55.9	
	comp=Z,264nm,1.3s						
I05D	Terrebonne, OR	34.74	81	P	P	16 10 34.9	+0.4
	baz=301,SNR=19						
I05D				S	S	16 16 05.6	+1.7
	baz=301						
JOHN	Johnston Islan	34.80	174	IAMs_20	IAMs_20	16 24 04.8	
	comp=Z,51µm,20.0s						
J04D	Umpqua Nationa	34.83	83	P	P	16 10 36.2	+0.7
	baz=302,SNR=13						
J04D				S	S	16 16 07.6	+2.0
	baz=302						
F07A	Phinny Hill Vi	34.83	78	P	P	16 10 35.7	+0.5
F07A				IAmb	IAmb	16 10 53.0	
	comp=Z,328nm,1.4s						
HAWA	Hanford	34.83	77	P	P	16 10 35.9	+0.7
HAWA				IAmb	IAmb	16 10 56.8	
	comp=Z,118nm,0.8s						
D08A	Wollman Farm,	34.89	76	P	P	16 10 36.1	+0.4
D08A				IAmb	IAmb	16 10 56.7	
	comp=Z,112nm,0.9s						
C09A	Chrisman Ranch	34.94	74	P	P	16 10 36.3	+0.2
C09A				IAmb	IAmb	16 10 55.1	
	comp=Z,122nm,1.0s						
KKO	Keanakako`i	34.95	150	P	P	16 10 38.1	+1.4
KKO				IAmb	IAmb	16 10 50.8	
	comp=Z,204nm,1.0s						
RIM	Rim	34.95	150	P	P	16 10 37.1	+0.5
RIM				IAmb	IAmb	16 11 03.7	
	comp=Z,296nm,1.3s						
JMM	Marumori	34.96	265	P	P	16 10 36.5	+0.2
JMM				IAmb	IAmb	16 10 52.9	
	comp=Z,366nm,1.2s						
JCC	Jacoby Creek,	34.96	88	P	P	16 10 37.9	+1.6
JCC				IAmb	IAmb	16 10 54.5	
	comp=Z,246nm,1.2s						
PUH	Pauahi	34.99	150	P	P	16 10 37.5	+0.6
PUH				IAmb	IAmb	16 10 43.8	
	comp=Z,249nm,1.1s						
E08A	Dider Farm, El	35.07	76	P	P	16 10 38.2	+0.9
E08A				IAmb	IAmb	16 10 55.8	
	comp=Z,220nm,1.5s						
KHMM	Horse Mountain	35.11	88	P	P	16 10 39.3	+1.4
KHMM				IAmb	IAmb	16 11 02.7	
	comp=Z,353nm,1.3s						
L04D	Klamath Falls	35.26	85	P	P	16 10 39.1	0.0
	baz=304,SNR=13						
L04D				S	S	16 16 15.0	+2.9
	baz=304						
YBH	Yreka Blue Hor	35.27	86	P	P	16 10 38.8	-0.4
YBH				pmax	pmax		
	comp=Z,122nm,1.1s						
YBH				MLR	MLR		
	comp=Z,33µm,18.0s						
YBH	Yreka Blue Hor	35.27	86	P	P	16 10 38.8	-0.4
J05D	Fort Rock, OR	35.35	83	P	P	16 10 40.5	+0.5
	baz=302,SNR=37						
J05D				S	S	16 16 15.4	+2.0
	baz=302						
M02C	Callahan	35.37	86	P	P	16 10 40.4	+0.4
	baz=304,SNR=24						
M02C				S	S	16 16 16.8	+3.1
	baz=304						
K04D	Chiloquin, OR	35.38	84	P	P	16 10 39.6	-0.5
	baz=303						
K04D				S	S	16 16 14.8	+0.9
	baz=303						
ZEA	Zeya	35.41	298	eP	P	16 10 38.3	-1.8
ZEA				eS	S	16 16 06.2	-7.6
ZEA				pmax	pmax		
	comp=Z,2µm,11.9s						
ZEA				pmax	pmax		
	comp=E,80nm,0.9s						
ZEA				pmax	pmax		
	comp=N,50nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,130nm,1.0s						
ZEA				smax	smax		
	comp=N,1µm,11.8s						
ZEA				smax	smax		
	comp=E,3µm,16.8s						
ZEA				MLR	MLR		
	comp=E,36µm,16.0s						
ZEA				MLR	MLR		
	comp=N,15µm,18.0s						
ZEA				MLR	MLR		
	comp=Z,47µm,17.0s						
H11N2	WAKE ISLAND Hy	35.42	214	T	T	16 48 47.5	
	baz=21,slow=76,SNR=2329						
NEW	Newport	35.42	73	P	P	16 10 39.4	-0.9
NEW				pmax	pmax		
	comp=Z,278nm,1.3s						
NEW				MLR	MLR		
	comp=Z,30µm,20.0s						
NEW	Newport	35.42	73	P	P	16 10 40.1	-0.2
	baz=297,SNR=36						
NEW				S	S	16 16 13.8	-0.5
	baz=297						
NEW	Newport	35.42	73	P	P	16 10 39.4	-0.9
NEW				IAmb	IAmb	16 10 54.1	
	comp=Z,278nm,1.3s						
H11N3	WAKE ISLAND Hy	35.42	214	T	T	16 48 57.5	
	baz=21,slow=76,SNR=1457						
H11N1	WAKE ISLAND Hy	35.44	214	T	T	16 48 45.3	
	baz=21,slow=76,SNR=1148						
KMRM	Mail Ridge	35.50	89	P	P	16 10 41.2	0.0
KMRM				IAmb	IAmb	16 11 00.2	
	comp=Z,163nm,0.9s						
EDM	Edmonton	35.56	63	P	P	16 10 40.6	-0.9
EDM				pmax	pmax		
	comp=Z,501nm,1.2s						
EDM	Edmonton	35.56	63	P	P	16 10 40.6	-0.9
E09A	Wood Farm, Sta	35.62	76	P	P	16 10 41.3	-0.7
E09A				IAmb	IAmb	16 11 05.8	
	comp=Z,125nm,1.0s						
N02D	Trinity Center	35.70	87	P	P	16 10 43.7	+0.8
	baz=305,SNR=18						
N02D				S	S	16 16 21.3	+2.5
	baz=305						
G08A	Pilot Rock	35.72	78	P	P	16 10 42.2	-0.8
M04C	Macdoel	35.78	85	P	P	16 10 44.1	+0.5
	baz=304,SNR=30						
M04C				S	S	16 16 22.5	+2.3
	baz=304						
K05A	Summer Lake	35.86	83	P	P	16 10 45.1	+0.7
K05A				IAmb	IAmb	16 11 04.7	
	comp=Z,343nm,1.1s						
KCPM	Cahto Peak	35.89	89	P	P	16 10 44.9	+0.4
KCPM				IAmb	IAmb	16 11 11.2	
	comp=Z,174nm,1.0s						
I07A	Izee	36.00	80	P	P	16 10 44.9	-0.6
I07A				IAmb	IAmb	16 11 05.1	
	comp=Z,198nm,1.2s						
WDC	Whiskeytown Da	36.02	87	P	P	16 10 45.8	+0.3
WDC				pmax	pmax		
	comp=Z,236nm,1.3s						
WDC	Whiskeytown Da	36.02	87	P	P	16 10 45.8	+0.3
WDC				IAmb	IAmb	16 11 09.9	
	comp=Z,236nm,1.2s						
O02D	Mt. Diablo Mer	36.10	88	P	P	16 10 46.5	+0.2
	baz=306,SNR=25						
O02D				S	S	16 16 28.5	+3.6
	baz=306						
JYT	Yasato	36.36	264	P	P	16 10 48.3	-0.1
JYT				IAmb	IAmb	16 11 04.5	
	comp=Z,311nm,0.8s						
F10A	Beach Ranch, E	36.44	76	P	P	16 10 48.8	-0.3
H11S1	WAKE ISLAND Hy	36.62	213	T	T	16 50 13.7	
	baz=20,slow=76,SNR=5834						
HOPS	Hopland Field	36.62	90	IAMs_20	IAMs_20	16 24 34.8	
	comp=Z,57µm,18.0s						
H11S2	WAKE ISLAND Hy	36.63	213	T	T	16 50 12.5	
	baz=20,slow=76,SNR=4150						
H11S3	WAKE ISLAND Hy	36.63	213	T	T	16 50 20.2	
	baz=20,slow=76,SNR=1492						
O03E	Paynes Creek	36.65	87	P	P	16 10 50.9	0.0
	baz=306,SNR=50						
O03E				S	S	16 16 35.3	+2.0
	baz=306						
MOD	Modoc Plateau	36.67	84	P	P	16 10 51.8	+0.5
MOD				IAmb	IAmb	16 11 17.0	
	comp=Z,185nm,1.1s						
MOD				IAMs_20	IAMs_20	16 25 49.5	
	comp=Z,50µm,18.0s						
USA0B	Ussuriysk Arra	36.85	281	P	P	16 10 52.1	-0.4
USA0B	Ussuriysk Arra	36.85	281	P	P	16 10 52.1	-0.4
USRK	Ussuriysk Ar.	36.85	281	P	P	16 10 51.7	-0.9
	comp=Z,32nm,0.5s,baz=55,slow=9.8,SNR=48						
USRK				LR	LR	16 25 22.9	
	comp=Z,57µm,21.4s,baz=58,slow=35						
USRK	Ussuriysk Ar.	36.85	281	P	P	16 10 51.9	-0.6
USRK	Ussuriysk Ar.	36.85	281	P	P	16 10 51.9	-0.6
GDXM	Geysers	36.90	90	P	P	16 10 54.4	+1.2
GDXM				IAmb	IAmb	16 11 11.9	
	comp=Z,243nm,1.2s						
BMO	Blue Mountains	36.95	78	P	P	16 10 53.5	0.0
BMO				pmax	pmax		
	comp=Z,69nm,1.0s						
BMO				MLR	MLR		
	comp=Z,23µm,22.0s						
BMO	Blue Mountains	36.95	78	P	P	16 10 53.5	0.0
WALA	Waterton Lakes	36.96	70	P	P	16 10 54.0	+0.4
WALA				IAmb	IAmb	16 11 15.6	
	comp=Z,176nm,1.1s						
J08A	Circle Bar Ran	37.02	81	P	P	16 10 54.5	+0.4
J08A				IAmb	IAmb	16 11 20.8	
	comp=Z,204nm,1.1s						
MCCM	Marconi Confer	37.25	91	IAMs_20	IAMs_20	16 22 23.6	
	comp=Z,44µm,21.0s						
ORV	Oroville	37.27	88	P	P	16 10 56.2	0.0
ORV				pmax	pmax		
	comp=Z,132nm,1.3s						
ORV				MLR	MLR		
	comp=Z,21µm,21.0s						
ORV	Oroville	37.27	88	P	P	16 10 56.2	0.0
JTMT	Jette	37.35	72	P	P	16 10 56.4	-0.6
JTMT				IAmb	IAmb	16 11 15.2	
	comp=Z,164nm,1.1s						
MJAR	Matsushiro Arr	37.39	266	P	P	16 10 57.8	+0.4
	comp=Z,35nm,1.0s,baz=57,slow=7.2,SNR=44						
MJAR				ScP	ScP	16 16 57.4	-4.6
	comp=Z,1.9nm,0.8s,baz=356,slow=1.6,SNR=2.5						
MJAR				LR	LR	16 25 43.7	
	comp=Z,31µm,21.1s,baz=55,slow=35						
MJAR				PKKP	PKKPdf	16 35 14.1	-3.7
	comp=Z,1.8nm,0.6s,baz=198,slow=3.8,SNR=5.1						
MJAR	Matsushiro Arr	37.39	266	P	P	16 10 57.7	+0.4
MJAR				pmax	pmax		
	comp=Z,267nm,1.3s						
MJAR	Matsushiro Arr	37.39	266	P	P	16 10 57.6	+0.4
MJAR				IAmb	IAmb	16 11 03.9	
	comp=Z,267nm,1.2s						
MAJO	Matsushiro	37.39	266	c iP	P	16 10 59.1	+1.8
MAJO				pmax	pmax		
	comp=Z,198nm,1.5s						
MAJO				MLR	MLR		
	comp=Z,32µm,20.0s						
MAJO	Matsushiro	37.39	266	P	P	16 10 56.8	-0.5
MAJO				IAmb	IAmb	16 11 03.7	
	comp=Z,703nm,1.5s						
MAT	Matsushiro	37.39	266	P	P	16 10 57.4	+0.1
MAT				S	S	16 16 45.8	+1.2
MJB9	Matsu-Tunnel	37.39	266	P	P	16 10 57.1	-0.2
MJB9				IAmb	IAmb	16 11 13.8	
	comp=Z,532nm,1.4s						
WVOR	Wild Horse Val	37.41	82	P	P	16 10 58.3	+0.7
WVOR				pmax	pmax		
	comp=Z,175nm,0.9s						
WVOR				MLR	MLR		
	comp=Z,31µm,20.0s						
WVOR	Wild Horse Val	37.41	82	P	P	16 10 58.3	+0.7
WVOR				IAmb	IAmb	16 11 18.4	
	comp=Z,175nm,0.9s						
VLA	Vladivostok	37.49	279	ceP	P	16 10 58.2	+0.3
VLA				pmax	pmax		
	comp=Z,334nm,1.3s						
VLA				MLR	MLR		
	comp=Z,43µm,20.0s						
PLID	Pearl Lake	37.63	77	P	P	16 10 59.5	0.0
MSO	Missoula	38.00	73	P	P	16 11 02.5	+0.1
	baz=300,SNR=23						
MSO				S	S	16 16 50.1	-3.7
	baz=300						
MSO	Missoula	38.00	73	P	P	16 11 02.5	+0.1
MSO				IAmb	IAmb	16 11 27.8	
	comp=Z,251nm,1.2s						
MSO				IAMs_20	IAMs_20	16 27 27.2	
	comp=Z,36µm,18.0s						
MDJ	Mudanjiang	38.10	283	P	P	16 11 02.2	-0.9
MDJ				sP	pP	16 11 06.6	-0.3
MDJ				S	S	16 16 55.2	+0.1
MDJ				pmax			
	comp=Z,6µm,10.3s						
MDJ				LR	LR		
	comp=Z,33µm,20.9s						
MDJ				LR	LR		
	comp=Z,83µm,20.3s						
MDJ				LR	LR		
	comp=Z,110µm,21.1s						
MDJ	Mudanjiang	38.10	283	P	P	16 11 02.0	-1.1
RES	Resolute Bay	38.12	25	P	P	16 11 01.4	-1.5
RES				pmax	pmax		
	comp=Z,33nm,0.9s						
RES	Resolute Bay	38.12	25	P	P	16 11 01.4	-1.5
MSHR	Mys Shultsa	38.23	279	ceP	P	16 11 04.4	+0.2
MSHR				pmax	pmax		
	comp=Z,440nm,1.3s						
MSHR				MLR	MLR		
	comp=Z,32µm,20.0s						
MPK	Martis Peak	38.34	87	P	P	16 11 05.6	0.0
MPK				IAmb	IAmb	16 11 23.7	
	comp=Z,351nm,1.2s						
RUBR	Rubicon Trail	38.41	88	P	P	16 11 07.1	+1.0
RUBR				IAmb	IAmb	16 11 35.8	
	comp=Z,178nm,0.9s						
EMB	Emerald Bay	38.48	88	P	P	16 11 08.0	+1.3
PAHR	Pah Rah Range	38.50	86	P	P	16 11 07.3	+0.5
PAHR				IAmb	IAmb	16 11 24.7	
	comp=Z,241nm,1.1s						
JGF	Kuroka	38.52	265	P	P	16 11 07.5	+0.6
JGF				IAmb	IAmb	16 11 23.6	
	comp=Z,322nm,1.2s						
VCNR	Virginia City	38.58	87	P	P	16 11 07.9	+0.4
VCNR				IAmb	IAmb	16 11 33.3	
	comp=Z,171nm,0.9s						
MFID	Camas Ranch	38.61	79	P	P	16 11 07.7	+0.1
PNTR	Pine Nut	38.73	87	P	P	16 11 09.8	+1.0
PNTR				IAmb	IAmb	16 11 30.8	
	comp=Z,276nm,0.7s						
CMB	Columbia Colle	38.88	89	P	P	16 11 10.9	+1.1
CMB				pmax	pmax		
	comp=Z,71nm,1.1s						
CMB	Columbia Colle	38.88	89	P	P	16 11 10.9	+1.1
CMB				IAMs_20	IAMs_20	16 23 11.4	
	comp=Z,46µm,22.0s						
INU	Inuyama	38.90	265	P	P	16 11 10.3	+0.4
SAO	San Andreas Ge	39.00	92	P	P	16 11 11.0	+0.2
SAO				pmax	pmax		
	comp=Z,165nm,1.2s						
SAO				MLR	MLR		
	comp=Z,29µm,20.0s						
SAO	San Andreas Ge	39.00	92	P	P	16 11 11.0	+0.2
YERR	Yerington	39.02	87	P	P	16 11 11.8	+0.7
YERR				IAmb	IAmb	16 11 35.3	
	comp=Z,216nm,1.2s						
EUNU	Eureka	39.18	16	P	P	16 11 10.8	-1.1
HRY	Holter Researc	39.31	72	P	P	16 11 13.6	+0.1
LRM	Limekiln Ridge	39.40	74	P	P	16 11 13.7	-0.6
HLID	Hailey	39.40	78	P	P	16 11 15.1	+0.9
	baz=303,SNR=42						
HLID				S	S	16 17 14.4	-0.7
	baz=303						

HLID	Hailey	39.40	78	P	P	16 11 14.1	-0.2
BMN	Battle Mountai	39.42	84	P	P	16 11 14.4	-0.1
BMN	Battle Mountai	39.42	84	P	P	16 11 14.4	-0.1
DLMT	Dillon	39.55	74	P	P	16 11 15.1	-0.4
BCYI	Bear Canyon	39.61	76	P	P	16 11 16.0	-0.1
MCMT	McKenzie Canyo	39.67	75	P	P	16 11 16.0	-0.6
RYN	Ryan	39.68	87	P	P	16 11 16.6	0.0
KVN	Kaiserville	39.69	86	P	P	16 11 16.8	0.0
KVN				pmax	pmax		
	comp=Z,135nm,1.2s						
KVN	Kaiserville	39.69	86	P	P	16 11 16.8	0.0
PMPB	Monarch Peak	39.75	92	P	P	16 11 18.8	+1.6
PMPB				IAmb	IAmb	16 11 44.7	
	comp=Z,334nm,1.4s						
EGMT	Eagleton	39.88	69	P	P	16 11 18.1	0.0
	baz=300,SNR=54						
EGMT				S	S	16 17 19.9	-2.1
	baz=300						
EGMT	Eagleton	39.88	69	P	P	16 11 18.2	+0.1
EGMT				IAmb	IAmb	16 11 39.9	
	comp=Z,252nm,1.0s						
EGMT				IAMs_20	IAMs_20	16 28 01.7	
	comp=Z,34µm,21.0s						
LHV	Little Huntoon	39.92	87	P	P	16 11 19.1	+0.7
LHV				IAmb	IAmb	16 11 43.0	
	comp=Z,295nm,1.3s						
NVAR	Mina Array Bea	39.94	87	P	P	16 11 19.8	+0.9
	comp=Z,30nm,0.8s,baz=293,slow=8.4,SNR=46						
NVAR				LR	LR	16 24 34.3	
	comp=Z,22µm,21.8s,baz=299,slow=31						
NVAR	Mina Array Bea	39.94	87	P	P	16 11 19.3	+0.5
MDPB	Devils Postpil	39.94	89	P	P	16 11 19.6	+0.7
JWT	Wachi	39.95	267	P	P	16 11 19.1	+0.4
JWT				IAmb	IAmb	16 11 27.1	
	comp=Z,520nm,1.4s						
BOZ	Bozeman (W)	40.00	73	P	P	16 11 19.2	-0.1
BOZ				pmax	pmax		
	comp=Z,136nm,0.9s						
BOZ				MLR	MLR		
	comp=Z,30µm,18.0s						
BOZ	Bozeman (W)	40.00	73	P	P	16 11 18.4	-0.8
	baz=302,SNR=54						
BOZ				S	S	16 17 22.1	-2.0
	baz=302						
BOZ	Bozeman (W)	40.00	73	P	P	16 11 19.2	-0.1
BOZ				IAMs_20	IAMs_20	16 28 41.3	
	comp=Z,30µm,18.0s						
NV11	Mina Array Sit	40.03	87	P	P	16 11 20.1	+0.5
MLAC	Mammoth, Mammo	40.09	88	P	P	16 11 19.0	-1.2
	baz=309						
PAGB	Antelope Grade	40.40	92	P	P	16 11 23.5	+1.0
PAGB				IAmb	IAmb	16 11 53.2	
	comp=Z,229nm,1.3s						
ELK	Elko	40.47	82	P	P	16 11 23.7	+0.4
ELK				pmax	pmax		
	comp=Z,89nm,0.8s						
ELK				MLR	MLR		
	comp=Z,44µm,18.0s						
ELK	Elko	40.47	82	P	P	16 11 23.7	+0.4
ELK				IAMs_20	IAMs_20	16 28 07.8	
	comp=Z,44µm,18.0s						
QLMT	Earthquake Lak	40.53	74	P	P	16 11 23.7	+0.1
VOG	Valley Oaks Go	40.57	90	P	P	16 11 23.2	-0.6
	baz=310						
VOG				S	S	16 17 33.9	+1.6
	baz=310						
YHL	Hebgen Lake	40.67	74	P	P	16 11 24.9	0.0
YHL				IAmb	IAmb	16 11 43.6	
	comp=Z,180nm,1.0s						
BOD	Bodaibo	40.77	308	*e*P	P	16 11 23.0	-2.2
BOD				pmax	pmax		
	comp=Z,128nm,2.1s						
SMMC	Simmler	40.83	92	P	P	16 11 25.3	-0.7
	baz=311						
SMMC				S	S	16 17 38.2	+1.9
	baz=311						
TPH	Tonopah	40.83	87	P	P	16 11 26.5	+0.3
TPH				pmax	pmax		
	comp=Z,743nm,1.3s						
TPH	Tonopah	40.83	87	P	P	16 11 26.5	+0.3
TIN	Tinemaha, Big	40.83	89	P	P	16 11 26.7	+0.6
	baz=309,SNR=7.3						
TIN				S	S	16 17 38.7	+2.2
	baz=309						
YMR	Madison River	40.89	74	P	P	16 11 26.9	+0.2
YMR				IAmb	IAmb	16 11 43.6	
	comp=Z,184nm,1.0s						
YHH	Holmes Hill	40.90	74	P	P	16 11 26.6	-0.2
YNR	Norris Junctio	41.04	74	P	P	16 11 28.1	+0.2
YNR				IAmb	IAmb	16 11 47.8	
	comp=Z,213nm,1.1s						
CN2	Changchun	41.05	284	*e*P	P	16 11 26.6	-1.1
CN2				*e*S	S	16 17 36.9	-2.5
CN2				*e*SS	SS	16 20 33.2	-8.2
CN2				pmax	pmax		
	comp=Z,5µm,7.0s						
CN2				LR	LR		
	comp=Z,60µm,21.0s						
CN2				LR	LR		
	comp=Z,51µm,21.0s						
CN2				LR	LR		
	comp=Z,93µm,22.0s						
VES	Vestal, Richgr	41.06	91	P	P	16 11 28.1	+0.2
	baz=310,SNR=13						
VES				S	S	16 17 40.5	+0.9
	baz=310						
GCMT	Greycliff	41.07	72	P	P	16 11 28.2	+0.1
LCH	Last Change Ra	41.08	88	P	P	16 11 28.6	+0.3
FFC	Flin Flon	41.09	57	P	P	16 11 27.5	-0.5
FFC				pmax	pmax		
	comp=Z,235nm,1.2s						
FFC				MLR	MLR		
	comp=Z,72µm,20.0s						
FFC	Flin Flon	41.09	57	P	P	16 11 27.4	-0.5
FFC				IAmb	IAmb	16 11 44.7	
	comp=Z,235nm,1.1s						
YUF	Upper Falls	41.14	74	P	P	16 11 28.8	0.0
YUF				IAmb	IAmb	16 11 46.0	
	comp=Z,237nm,1.3s						
PKM	Mcpherson Peak	41.22	92	P	P	16 11 29.9	+0.5
	baz=311,SNR=8.3						
PKM				S	S	16 17 45.6	+3.2
	baz=311						
H17A	Grant Village	41.28	74	P	P	16 11 29.8	-0.1
	baz=303,SNR=30						
H17A				S	S	16 17 46.5	+3.2
	baz=303						
H17A	Grant Village	41.28	74	P	P	16 11 30.2	+0.3
LKWY	Lake	41.29	74	P	P	16 11 30.6	+0.6
LKWY				pmax	pmax		
	comp=Z,135nm,0.9s						
LKWY	Lake	41.29	74	P	P	16 11 30.6	+0.6
CWC	Cottonwood Cre	41.31	89	P	P	16 11 29.3	-0.8
	baz=310						
CWC				S	S	16 17 45.5	+1.9
	baz=310						
YMP	Mirror Lake Pl	41.34	74	P	P	16 11 30.3	-0.2
YMP				IAmb	IAmb	16 11 47.7	
	comp=Z,262nm,1.3s						
FLWY	Flagg Ranch	41.37	75	P	P	16 11 31.2	+0.6
HVU	Hansel Valley	41.40	79	P	P	16 11 30.8	0.0
HVU				pmax	pmax		
	comp=Z,79nm,0.9s						
HVU	Hansel Valley	41.40	79	P	P	16 11 30.8	0.0
GRAC	Grapevine Rang	41.40	88	P	P	16 11 31.2	+0.4
	baz=309,SNR=10						
GRAC				S	S	16 17 47.2	+2.4
	baz=309						
FXWY	Fox Creek	41.42	76	P	P	16 11 31.4	+0.4
JCJ	Chichijima	41.49	251	P	P	16 11 31.8	+0.3
	comp=Z,213nm,1.2s,baz=287,slow=18,SNR=4.9						
JCJ	Chichijima	41.49	251	P	P	16 11 31.6	0.0
JCJ				IAmb	IAmb	16 11 54.5	
	comp=Z,625nm,1.2s						
MOOW	Moose Ponds	41.53	75	P	P	16 11 31.7	-0.3
TPAW	Teton Pass	41.55	76	P	P	16 11 31.6	-0.5
ISA	Isabella, Lake	41.55	91	P	P	16 11 32.1	0.0
ISA				pmax	pmax		
	comp=Z,123nm,1.1s						
ISA	Isabella, Lake	41.55	91	P	P	16 11 31.7	-0.3
	baz=310,SNR=38						
ISA				S	S	16 17 48.0	+0.8
	baz=310						
ISA	Isabella, Lake	41.55	91	P	P	16 11 32.1	0.0
JHS	Saijyo	41.56	268	P	P	16 11 32.3	+0.3
JHS				IAmb	IAmb	16 11 50.3	
	comp=Z,349nm,1.4s						
HIA	Hailar	41.57	294*c*	*i*P	P	16 11 30.9	-1.0
HIA				pmax	pmax		
	comp=Z,80nm,1.1s						
HIA				MLR	MLR		
	comp=Z,31µm,16.0s						
HIA	Hailar	41.57	294	P	P	16 11 30.1	-1.8
SBC	Santa Barbara	41.57	93	P	P	16 11 29.0	-3.0
	baz=311						
SBC				S	S	16 17 50.2	+3.0
	baz=311						
RLMT	Red Lodge	41.67	73	P	P	16 11 33.2	+0.1
	baz=303,SNR=46						
RLMT				S	S	16 17 48.5	-0.5
	baz=303						
RLMT	Red Lodge	41.67	73	P	P	16 11 32.5	-0.6
RLMT				IAmb	IAmb	16 11 52.0	
	comp=Z,432nm,1.4s						
RLMT				IAMs_20	IAMs_20	16 30 26.4	
	comp=Z,35µm,19.0s						
ARVC	Arvin	41.68	91	P	P	16 11 31.6	-1.3
	baz=311						
ARVC				S	S	16 17 50.2	+1.4
	baz=311						
REDW	Red Top Meadow	41.68	76	P	P	16 11 32.9	-0.3
R11A	Troy Canyon, C	41.68	85	P	P	16 11 32.9	-0.3
	baz=308,SNR=69						
R11A				S	S	16 17 48.3	-0.9
	baz=308						
R11A	Troy Canyon, C	41.68	85	P	P	16 11 33.5	+0.3
SNOW	Snow King Moun	41.68	76	P	P	16 11 32.9	-0.3
BGU	Big Grassy Mou	41.73	80	P	P	16 11 33.6	+0.1
AHID	Auburn Hatcher	41.86	77	P	P	16 11 35.3	+0.7
AHID				IAMs_20	IAMs_20	16 30 03.0	
	comp=Z,33µm,18.0s						
SPUT	South Promonto	41.87	79	P	P	16 11 35.1	+0.5
SCZ2	Santa Cruz Isl	41.91	93	P	P	16 11 33.2	-1.7
	baz=312						
SCZ2				S	S	16 17 53.8	+1.5
	baz=312						
JMN	Monobe	41.91	266	P	P	16 11 35.2	+0.3
JMN				IAmb	IAmb	16 11 51.2	
	comp=Z,409nm,1.2s						
FURC	Furnace Creek,	42.05	88	P	P	16 11 36.1	+0.1
	baz=310,SNR=9.7						
FURC				S	S	16 17 55.5	+1.2
	baz=310						
SPR3	Spring Creek 3	42.07	84	P	P	16 11 36.6	+0.1
OSI	Osito Audit: C	42.08	92	P	P	16 11 35.2	-1.1
	baz=311						
OSI				S	S	16 17 56.4	+1.6
	baz=311						
OSI	Osito Audit: C	42.08	92	P	P	16 11 36.4	+0.1
OSI				IAmb	IAmb	16 12 00.2	
	comp=Z,186nm,1.1s						
LRMC	Laurel Mtn Rad	42.17	90	P	P	16 11 35.7	-1.5
	baz=310						
LRMC				S	S	16 17 56.4	0.0
	baz=310						
HWUT	Hardware Ranch	42.24	79	P	P	16 11 37.5	-0.2
DUG	Dugway, Tooele	42.29	81	P	P	16 11 38.2	+0.1
DUG				pmax	pmax		
	comp=Z,291nm,1.3s						
DUG				MLR	MLR		
	comp=Z,35µm,19.0s						
DUG	Dugway, Tooele	42.29	81	P	P	16 11 38.1	-0.1
	baz=307,SNR=52						
DUG				S	S	16 17 58.9	+0.7
	baz=307						
DUG	Dugway, Tooele	42.29	81	P	P	16 11 38.2	+0.1
DUG				IAmb	IAmb	16 11 57.4	
	comp=Z,291nm,1.2s						
DUG				IAMs_20	IAMs_20	16 28 58.9	
	comp=Z,35µm,19.0s						
GWY	Greenwater Val	42.35	89	P	P	16 11 38.5	-0.2
EDW2	Edwards Air Fo	42.36	91	P	P	16 11 38.9	+0.3
	baz=311,SNR=22						
EDW2				S	S	16 18 00.9	+1.9
	baz=311						
SNCC	San Nicolas Is	42.48	94	P	P	16 11 38.8	-0.7
	baz=312						
SNCC				S	S	16 18 03.5	+2.8
	baz=312						
SNCC	San Nicolas Is	42.48	94	P	P	16 11 41.0	+1.5
DECC	Green Verdugo	42.55	92	P	P	16 11 39.8	-0.4
	baz=312						
DECC				S	S	16 18 05.0	+3.1
	baz=312						
PRN	Pahroc Range	42.59	86	P	P	16 11 40.9	+0.3
PRN				IAmb	IAmb	16 12 00.1	
	comp=Z,265nm,1.0s						
TCUT	Toone Canyon	42.62	79	P	P	16 11 41.0	+0.2
TCUT				IAmb	IAmb	16 12 01.6	
	comp=Z,225nm,1.1s						
LAO	LASA Array	42.63	69	P	P	16 11 41.1	+0.4
	baz=302,SNR=13						
LAO				S	S	16 18 02.3	-0.5
	baz=302						
LAO	LASA Array	42.63	69	P	P	16 11 40.9	+0.2
LAO				IAmb	IAmb	16 11 57.2	
	comp=Z,371nm,1.4s						
LAO				IAMs_20	IAMs_20	16 29 49.4	
	comp=Z,31µm,20.0s						
PSUT	Pine Spring	42.64	84	P	P	16 11 41.2	+0.1
PASC	Pasadena Art C	42.70	92	P	P	16 11 42.2	+0.9
PASC	Pasadena Art C	42.70	92	IAMs_20	IAMs_20	16 28 59.1	
	comp=Z,29µm,18.0s						
MWC	Mount Wilson	42.75	92	P	P	16 11 42.0	+0.1
MWC				pmax	pmax		
	comp=Z,250nm,1.2s						
MWC	Mount Wilson	42.75	92	P	P	16 11 42.0	+0.1
MWC				IAmb	IAmb	16 11 59.8	
	comp=Z,250nm,1.1s						
SHOC	Shoshone, Teco	42.78	89	P	P	16 11 40.7	-1.3
	baz=310,SNR=25						
SHOC				S	S	16 18 06.0	+0.9
	baz=310						
BW06	Boulder Array	42.80	76	P	P	16 11 42.3	0.0
	baz=305,SNR=84						
BW06				S	S	16 18 04.3	-1.3
	baz=305						
BW06	Boulder Array	42.80	76	P	P	16 11 42.2	0.0
BW06				IAmb	IAmb	16 12 00.2	
	comp=Z,206nm,1.1s						
PD31	Pinedale Array	42.80	76	P	P	16 11 42.1	-0.2
PDAR	Pinedale Array	42.80	76	P	P	16 11 42.4	+0.1
	comp=Z,39nm,1.0s,baz=305,slow=4.9,SNR=91						
PDAR				LR	LR	16 29 01.6	
	comp=Z,14µm,20.0s,baz=299,slow=36						
PDAR				PKPPKP	P'P'df	16 43 35.9	-8.6
	comp=Z,0.7nm,0.8s,baz=144,slow=3.3,SNR=3.8						
PDAR	Pinedale Array	42.80	76	P	P	16 11 41.9	-0.4
GSC	Goldstone, Bar	42.83	90	P	P	16 11 42.4	0.0
GSC				pmax	pmax		
	comp=Z,274nm,1.1s						
GSC	Goldstone, Bar	42.83	90	P	P	16 11 42.5	0.0
	baz=311,SNR=76						
GSC				S	S	16 18 08.1	+2.1
	baz=311						
GSC	Goldstone, Bar	42.83	90	P	P	16 11 42.4	0.0
GSC				IAmb	IAmb	16 12 00.2	
	comp=Z,274nm,1.1s						
DGMT	Dagmar	42.87	66	P	P	16 11 41.3	-1.3
	baz=302						
DGMT				S	S	16 18 06.0	-0.2
	baz=302						
DGMT	Dagmar	42.87	66	IAMs_20	IAMs_20	16 31 28.4	
	comp=Z,36µm,18.0s						
NLU	North Lily Min	42.89	81	P	P	16 11 42.8	-0.2
NLU				IAmb	IAmb	16 12 02.1	
	comp=Z,190nm,1.1s						
JLU	Jordanelle	42.89	80	P	P	16 11 42.8	-0.4
HWCB	Hwacheon	42.93	276	P	P	16 11 46.0	+2.8
	SNR=19						
FMP	Fort Macarthur	42.94	93	P	P	16 11 43.2	0.0
	baz=312						
FMP				S	S	16 18 08.1	+0.7
	baz=312						
RRX	Edison Barstow	42.98	90	P	P	16 11 43.0	-0.6
	baz=311						
RRX				S	S	16 18 10.2	+2.1
	baz=311						
BFSC	Mount Baldy Ra	42.98	91	P	P	16 11 43.0	-0.8
	baz=312						
BFSC				S	S	16 18 09.4	+1.0
	baz=312						
CIS	Catalina Islan	43.06	93	P	P	16 11 43.3	-1.1
	baz=312						
CIS				S	S	16 18 09.6	+0.2
	baz=312						
SHPR	Sheep Range	43.09	87	P	P	16 11 44.4	-0.3
KSCWO	Cheorwon	43.11	276	P	P	16 11 46.8	+2.2
	SNR=19						
MPU	Maple Canyon	43.13	80	P	P	16 11 44.4	-0.6
FCC	Fort Churchill	43.22	48	P	P	16 11 44.9	-0.3
FCC				pmax	pmax		
	comp=Z,159nm,1.0s						
FCC	Fort Churchill	43.22	48	P	P	16 11 44.9	-0.3
FCC				IAmb	IAmb	16 12 02.6	
	comp=Z,159nm,0.9s						
KSRS	Korea Array	43.25	275	P	P	16 11 46.5	+0.9
	comp=Z,94nm,1.2s,baz=56,slow=6.7,SNR=39						
KSRS				LR	LR	16 29 15.2	
	comp=Z,23µm,20.5s,baz=54,slow=35						
KS19	Wonju Array Si	43.25	275	P	P	16 11 44.7	-1.1
KS19				IAmb	IAmb	16 12 04.4	
	comp=Z,376nm,1.1s						
SCI2	San Clemente I	43.26	94	P	P	16 11 44.5	-1.4
	baz=313						
SCI2				S	S	16 18 13.3	+1.1
	baz=313						
GAPB	Gapyeong	43.27	276	P	P	16 11 49.0	+3.2
	SNR=14						
KSAR	Wonju Array Be	43.28	275	P	P	16 11 45.0	-0.9
KSAR	Wonju Array Be	43.28	275	P	P	16 11 45.0	-0.9
TUQ	Turquoise Moun	43.29	89	P	P	16 11 46.6	+0.3
	baz=310,SNR=17						
TUQ				S	S	16 18 14.4	+1.5
	baz=310						
SNY	Shenyang	43.30	283	⇑P	P	16 11 45.8	-0.3
SNY				S	S	16 18 10.8	-1.8
SNY				pmax	pmax		
	comp=Z,450nm,2.5s						
SNY				LR	LR		
	comp=Z,58µm,19.9s						
SNY				LR	LR		
	comp=Z,9µm,18.2s						
SNY				LR	LR		
	comp=Z,61µm,21.8s						
HEC	Hector,Ludlow	43.43	90	P	P	16 11 47.8	+0.5
	baz=311,SNR=44						
HEC				S	S	16 18 16.4	+1.6
	baz=311						
BBRC	Big Bear Solar	43.43	91	P	P	16 11 45.6	-1.9
	baz=312						
BBRC				S	S	16 18 15.9	+0.8
	baz=312						
TCRU	Three Creeks R	43.47	83	P	P	16 11 47.6	-0.2
YNCB	YEONCHEON	43.50	276	P	P	16 11 52.7	+5.0
	SNR=7.4						
YNCB	YEONCHEON	43.50	276	P	P	16 11 49.5	+1.8
	SNR=9.0						
CCUT	Cedar City	43.55	85	P	P	16 11 48.2	-0.2
CIT	Chita	43.63	301	*e*P	P	16 11 47.8	-0.9
CIT				*e*		16 18 22.8	
CIT				*e*		16 21 44.6	
CIT				pmax	pmax		
	comp=Z,527nm,2.5s						
MURC	Murrieta	43.70	92	P	P	16 11 47.7	-1.7
	baz=312						
MURC				S	S	16 18 19.8	+1.1
	baz=312						
MSU	Marysvale	43.70	83	P	P	16 11 47.3	-2.3
MSU	Marysvale	43.70	83	P	P	16 11 47.3	-2.3
KSMUS	Musan	43.70	276	P	P	16 11 51.5	+2.2
	SNR=13						
TULEG	Thule	43.70	19	*i* P	P	16 11 49.0	+0.1
TULEG	Thule	43.70	19	P	P	16 11 47.0	-1.8
TULEG				IAMs_20	IAMs_20	16 33 11.7	
	comp=Z,50µm,18.0s						
TMUT	Trail Mountain	43.82	81	P	P	16 11 50.5	-0.1
TMUT				IAmb	IAmb	16 12 09.9	
	comp=Z,303nm,1.2s						
KSSEO	Seoul	43.85	276	P	P	16 11 56.3	+5.7
	SNR=7.0						
KSSEO	Seoul	43.85	276	P	P	16 11 55.0	+4.4
	SNR=8.8						
KSSEO	Seoul	43.85	276	P	P	16 11 52.4	+1.9
	SNR=8.8						
GMRC	Granite Mounta	43.88	89	P	P	16 11 51.4	+0.4
	baz=311,SNR=81						
GMRC				S	S	16 18 23.4	+1.9
	baz=311						
KSSWO	Suwon	43.96	275	P	P	16 11 55.7	+4.3
	SNR=10						
KSSWO	Suwon	43.96	275	P	P	16 11 53.1	+1.7
	SNR=23						
LCMT	Little Creek M	43.97	85	P	P	16 11 51.1	-0.6
LCMT				IAmb	IAmb	16 12 09.4	
	comp=Z,285nm,1.5s						
MTPU	Mount Pierson	43.98	83	P	P	16 11 51.2	-0.9
KSCPR	CHUPUNGNYEONG	43.99	274	P	P	16 11 54.9	+3.1
	SNR=15						
P17A	Butcher Ranch,	44.00	80	P	P	16 11 51.8	-0.2
P17A				IAmb	IAmb	16 12 10.5	
	comp=Z,235nm,1.4s						
INCN	Inchon	44.03	276	P	P	16 11 51.2	-0.8
INCN				pmax	pmax		
	comp=Z,967nm,1.3s						
INCN				MLR	MLR		
	comp=Z,14µm,19.0s						
INCN	Inchon	44.03	276	P	P	16 11 51.2	-0.8
PYTK	Pyeongtaek	44.05	275	P	P	16 11 56.7	+4.6
	SNR=10						
KSCEA	Cheonan	44.05	275	P	P	16 11 56.8	+4.6
	SNR=7.1						
RDMU	Red Mountain	44.06	78	P	P	16 11 52.1	-0.5
RDMU				IAmb	IAmb	16 12 11.5	
	comp=Z,390nm,1.1s						
SHHB	Siheung-si	44.07	276	P	P	16 11 58.0	+5.7
	SNR=7.7						
SHHB	Siheung-si	44.07	276	P	P	16 11 56.1	+3.8
	SNR=9.5						
Q16A	Castle Valley	44.07	81	P	P	16 11 52.7	+0.1
Q16A				IAmb	IAmb	16 12 12.0	
	comp=Z,307nm,1.2s						
PFO	Pinyon Flats O	44.15	91	P	P	16 11 53.1	0.0
PFO				pmax	pmax		
	comp=Z,134nm,1.3s						
PFO				MLR	MLR		
	comp=Z,31µm,22.0s						
PFO	Pinyon Flats O	44.15	91	P	P	16 11 53.6	+0.5
	baz=312,SNR=11						
PFO				S	S	16 18 25.1	-0.3
	baz=312						
PFO	Pinyon Flats O	44.15	91	P	P	16 11 53.1	0.0
PFO	Pinyon Flats O	44.15	91	IAMs_20	IAMs_20	16 25 48.3	
	comp=Z,31µm,22.0s						
TPFO	Pinon Flats	44.15	91	P	P	16 11 53.7	+0.5
	baz=312,SNR=27						
TPFO				S	S	16 18 25.6	+0.1
	baz=312						
BELC	Belle Mtn. Jos	44.18	90	P	P	16 11 52.3	-1.1
	baz=312,SNR=26						
BELC				S	S	16 18 27.1	+1.2
	baz=312						
HAWB	Hwaseong-si	44.19	275	P	P	16 11 59.0	+5.7
	SNR=6.4						
P18A	Preston Nutter	44.21	80	P	P	16 11 53.0	-0.8
P18A				IAmb	IAmb	16 12 12.4	
	comp=Z,274nm,1.0s						
109C	Camp Elliot, M	44.22	92	P	P	16 11 53.0	-0.6
	baz=313						
109C				S	S	16 18 28.7	+2.4
	baz=313						
109C	Camp Elliot, M	44.22	92	P	P	16 11 53.5	-0.1
109C				IAmb	IAmb	16 12 14.1	
	comp=Z,173nm,0.9s						
KNB	Kanab	44.23	85	P	P	16 11 53.2	-0.6
KNB				pmax	pmax		
	comp=Z,245nm,1.5s						
KNB	Kanab	44.23	85	P	P	16 11 53.2	-0.6
KNB				IAmb	IAmb	16 12 11.7	
	comp=Z,245nm,1.5s						
TJN	Taejon	44.27	274*ce*	P	P	16 11 55.6	+1.7
PKCU	Pink Cliffs	44.28	84	P	P	16 11 53.8	-0.6
KOJ2	Gongju-si	44.35	274	P	P	16 11 59.0	+4.4
	SNR=19						
SRU	San Rafael Swe	44.36	81	P	P	16 11 54.8	-0.1
SRU				pmax	pmax		
	comp=Z,255nm,1.1s						
SRU	San Rafael Swe	44.36	81	P	P	16 11 54.8	-0.1

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SRU                                  IAmb     IAmb     16 12 14.1
      comp=Z,255nm,1.1s
EURB  Uiryeong-eup     44.37 272     P        P        16 11 59.0 +4.3
      SNR=13
KSKCH Geochang         44.41 273     P        P        16 11 58.5 +3.4
      SNR=8.7
KUJA  Jangpyeong       44.45 272     P        P        16 11 60.0 +4.6
      SNR=6.8
NEE2  Needles Airpor   44.54  89     P        P        16 11 55.2 -0.9
      baz=311
NEE2                                 S        S        16 18 31.7 +0.8
      baz=311
KSSES Seosan           44.58 275     P        P        16 12 04.0 +7.6
      SNR=5.6
KSSES Seosan           44.58 275     P        P        16 12 01.0 +4.6
      SNR=6.8
HAMB  Hamyang          44.58 273     P        P        16 12 01.0 +4.5
      SNR=7.0
IRM   Iron Mountain    44.61  90     P        P        16 11 55.7 -1.0
      baz=312,SNR=30
IRM                                  S        S        16 18 33.1 +1.1
      baz=312
BAR   Barrett          44.63  92     P        P        16 11 56.5 -0.4
BAR                                  IAmb     IAmb     16 12 16.7
      comp=Z,128nm,0.9s
MONP2 Monument Peak    44.65  92     P        P        16 11 57.0 -0.2
      baz=312,SNR=28
MONP2                                S        S        16 18 34.6 +1.7
      baz=312
K22A  Casper           44.69  74     P        P        16 11 56.0 -1.4
      baz=306
K22A                                 S        S        16 18 30.6 -2.6
      baz=306
K22A  Casper           44.69  74     P        P        16 11 56.2 -1.3
K22A                                 IAmb     IAmb     16 12 26.3
      comp=Z,180nm,1.1s
BC3   Big Chuckawall   44.75  90     P        P        16 11 57.1 -0.8
      baz=312,SNR=13
BC3                                  S        S        16 18 35.0 +0.9
      baz=312
W13A  Hualapai Mount   44.78  88     P        P        16 11 58.0 -0.4
W13A                                 IAmb     IAmb     16 12 15.7
      comp=Z,182nm,1.4s
PORA  Boryeong         44.80 275     P        P        16 12 03.0 +4.8
      SNR=12
YKDB  Yokjido          44.83 272     P        P        16 12 06.1 +7.7
      SNR=5.6
RWWY  Rawlins          44.84  76     P        P        16 11 56.8 -2.0
RWWY                                 IAmb     IAmb     16 12 14.1
      comp=Z,200nm,1.2s
RWWY                                 IAMs_20  IAMs_20  16 32 19.7
      comp=Z,33µm,18.0s
NAWB  Namwon           44.86 273     P        P        16 12 03.0 +4.3
      SNR=11
CBX   Cerro Bola       44.89  93     P        P        16 11 58.7 -0.4
KSNAH Namhae           44.92 272     P        P        16 12 02.2 +3.1
      SNR=9.7
U15A  North Rim        44.93  85     P        P        16 11 59.6 +0.1
U15A                                 IAmb     IAmb     16 12 17.2
      comp=Z,252nm,1.1s
GWYB  Gwangyang        44.98 272     P        P        16 12 04.1 +4.4
      SNR=8.6
SWSC  Sam W. Stewart   45.00  91     P        P        16 11 57.8 -2.0
      baz=312
SWSC                                 S        S        16 18 39.5 +2.0
      baz=312
IKP   In-Ko-Pah, Jac   45.01  92     P        P        16 11 59.9 -0.1
      baz=313,SNR=11
IKP                                  S        S        16 18 38.7 +0.9
      baz=313
SUCA  Sunchang         45.05 273     P        P        16 12 05.0 +4.8
      SNR=11
O20A  White River Ci   45.14  78     P        P        16 12 00.6 -0.5
      baz=308,SNR=48
O20A                                 S        S        16 18 37.0 -2.8
      baz=308
O20A  White River Ci   45.14  78     P        P        16 12 00.5 -0.5
O20A                                 IAmb     IAmb     16 12 18.4
      comp=Z,314nm,1.0s
PDMCI Parker Dam,Lak   45.14  89     P        P        16 12 01.2 +0.3
      baz=311,SNR=31
PDMCI                                S        S        16 18 40.7 +1.2
      baz=311
SMKB  Mukjeong-gil     45.21 274     P        P        16 12 08.0 +6.6
      SNR=7.2
RSSD  Black Hills      45.33  71     P        P        16 12 02.0 -0.6
RSSD                                 pmax     pmax
      comp=Z,102nm,0.9s
RSSD  Black Hills      45.33  71     P        P        16 12 01.5 -1.1
      baz=305
RSSD                                 S        S        16 18 40.0 -2.5
      baz=305
RSSD  Black Hills      45.33  71     P        P        16 12 01.9 -0.6
RSSD                                 IAmb     IAmb     16 12 20.6
      comp=Z,102nm,0.9s
BOSB  Boseong-gun      45.40 273     P        P        16 12 09.0 +6.0
      SNR=5.5
GLA   Glamis           45.54  91     P        P        16 12 03.9 -0.2
GLA                                  pmax     pmax
      comp=Z,113nm,0.9s
GLA   Glamis           45.54  91     P        P        16 12 04.0 -0.1
      baz=312,SNR=11
GLA                                  S        S        16 18 45.9 +0.5
      baz=312
GLA   Glamis           45.54  91     P        P        16 12 03.9 -0.2
GLA                                  IAmb     IAmb     16 12 26.2
      comp=Z,112nm,0.8s
JSU   Suzuyama         45.54 267     P        P        16 12 03.3 -0.9
JSU                                  IAmb     IAmb     16 12 20.4
      comp=Z,289nm,1.2s
MDND  Maddock          45.80  64     P        P        16 12 05.1 -1.0
      baz=304
MDND                                 S        S        16 18 48.6 -0.3
      baz=304
MDND  Maddock          45.80  64     P        P        16 12 06.2 +0.2
E28A  Huff             45.89  66     P        P        16 12 06.4 -0.3
N23A  Red Feather La   46.08  76     P        P        16 12 08.1 -0.5
      baz=307,SNR=32
N23A                                 S        S        16 18 52.6 -0.9
      baz=307
WUAZ  Wupatki          46.08  85     P        P        16 12 09.1 +0.6
      baz=311,SNR=62
WUAZ                                 S        S        16 18 55.4 +2.0
      baz=311
WUAZ  Wupatki          46.08  85     P        P        16 12 08.6 +0.1
WUAZ                                 IAmb     IAmb     16 12 26.1
      comp=Z,239nm,1.3s
WUAZ                                 IAMs_20  IAMs_20  16 28 41.7
      comp=Z,43µm,20.0s
Y14A  Wickenburg       46.09  88     P        P        16 12 08.4 -0.1
NRIK  Noril'sk         46.10 331     P        P        16 12 07.0 -1.0
      comp=Z,14nm,0.7s,baz=64,slow=5.6,SNR=18
NRIK                                 PcP      PcP      16 13 44.2 +0.4
      comp=Z,29nm,1.0s,baz=88,slow=4.2,SNR=3.6
NRIK                                 LR       LR       16 33 51.2
      comp=Z,26µm,18.4s,baz=40,slow=39
NRIK  Noril'sk         46.10 331ceP           P        16 12 06.8 -1.2
NRIK                                 pmax     pmax
      comp=Z,105nm,1.6s
NRIK                                 MLR      MLR
      comp=Z,42µm,17.0s
NRIK  Noril'sk         46.10 331     P        P        16 12 06.5 -1.6
DL2   Dalian           46.24 281⇓iP           P        16 12 09.3 -0.2
DL2                                  sP       pwP      16 12 21.2 +2.1
DL2                                  PP       PP       16 13 59.9 +2.0
DL2                                  S        S        16 18 55.6 +0.3
DL2                                  pmax     pmax
      comp=Z,220nm,1.1s
DL2                                  pmax     pmax
      comp=Z,5µm,5.8s
DL2                                  LR       LR
      comp=Z,24µm,19.2s
DL2                                  LR       LR
      comp=Z,18µm,20.2s
DL2                                  LR       LR
      comp=Z,27µm,16.7s
113A  Mohawk Valley,   46.39  90     P        P        16 12 10.3 -0.5
NEEM  North Greenlan   46.42  15⇑iP           P        16 12 10.0 -0.8
SMCO  Snowmass         46.50  78     P        P        16 12 10.5 -1.5
NOR   Nord             46.53   5⇑iP           P        16 12 12.5 +1.1
ULM   Lac du Bonnet    46.55  60     P        P        16 12 12.2 +0.4
      comp=Z,7.5nm,0.5s,baz=308,slow=9.5,SNR=10
ULM                                  LR       LR       16 31 56.1
      comp=Z,32µm,21.2s,baz=320,slow=36
ULM   Lac du Bonnet    46.55  60     P        P        16 12 10.0 -1.7
ULM                                  IAmb     IAmb     16 12 29.4
      comp=Z,192nm,1.2s
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X16A  Lo Mia Camp, P   46.75  86     P        P        16 12 13.8 -0.1
X16A                                 IAmb     IAmb     16 12 31.6
      comp=Z,89nm,1.1s
MVCO  Mesa Verde       46.78  81     P        P        16 12 14.2 +0.1
      baz=310,SNR=28
MVCO                                 S        S        16 19 01.8 -1.8
      baz=310
MVCO  Mesa Verde       46.78  81     P        P        16 12 13.7 -0.5
MVCO                                 IAmb     IAmb     16 12 32.8
      comp=Z,203nm,1.4s
ISCO  Idaho Springs    46.95  77     P        P        16 12 14.8 -0.7
ISCO                                 pmax     pmax
      comp=Z,135nm,1.4s
ISCO                                 MLR      MLR
      comp=Z,38µm,18.0s
ISCO  Idaho Springs    46.95  77     P        P        16 12 15.2 -0.3
      baz=308,SNR=18
ISCO                                 S        S        16 19 04.9 -1.1
      baz=308
ISCO  Idaho Springs    46.95  77     P        P        16 12 14.8 -0.7
ISCO                                 IAmb     IAmb     16 12 34.4
      comp=Z,135nm,1.4s
ISCO                                 IAMs_20  IAMs_20  16 35 32.5
      comp=Z,38µm,18.0s
W18A  Petrified Fore   47.36  85     P        P        16 12 18.9 +0.3
      baz=311,SNR=24
W18A                                 S        S        16 19 13.0 +1.3
      baz=311
W18A  Petrified Fore   47.36  85     P        P        16 12 18.5 -0.1
W18A                                 IAmb     IAmb     16 12 46.3
      comp=Z,276nm,1.3s
S22A  4UR Ranch, Cre   47.48  80     P        P        16 12 18.9 -0.7
      baz=310,SNR=65
S22A                                 S        S        16 19 14.0 +0.4
      baz=310
214A  Organ Pipe Nat   47.53  90     P        P        16 12 19.7 -0.1
      baz=313,SNR=12
214A                                 S        S        16 19 16.4 +2.4
      baz=313
214A  Organ Pipe Nat   47.53  90     P        P        16 12 19.5 -0.3
214A                                 IAmb     IAmb     16 12 42.2
      comp=Z,121nm,1.2s
X18A  Snowflake        47.61  85     P        P        16 12 20.2 -0.3
X18A                                 IAmb     IAmb     16 12 37.4
      comp=Z,177nm,1.4s
AGMN  Agassiz Nation   47.63  62     P        P        16 12 19.4 -0.9
      baz=305
AGMN                                 S        S        16 19 11.4 -3.6
      baz=305
AGMN  Agassiz Nation   47.63  62     P        P        16 12 19.5 -0.9
AGMN                                 IAMs_20  IAMs_20  16 34 25.9
      comp=Z,43µm,19.0s
D32A  Dogwood Acres,   47.66  64     P        P        16 12 19.4 -1.1
D32A                                 IAmb     IAmb     16 12 42.3
      comp=Z,117nm,0.8s
Q24A  Divide           47.74  77     P        P        16 12 20.6 -1.1
      baz=309
Q24A                                 S        S        16 19 16.6 -0.8
      baz=309
SUSD  Miller           48.12  68     P        P        16 12 22.3 -1.8
      baz=307
SUSD                                 S        S        16 19 17.9 -4.0
      baz=307
SUSD  Miller           48.12  68     P        P        16 12 22.9 -1.3
SDCO  Great Sand Dun   48.29  79     P        P        16 12 26.4 +0.5
      baz=310,SNR=52
SDCO                                 S        S        16 19 22.9 -2.2
      baz=310
SDCO  Great Sand Dun   48.29  79     P        P        16 12 25.8 -0.1
SDCO                                 IAmb     IAmb     16 12 44.2
      comp=Z,127nm,1.1s
IRK   Irkutsk          48.37 305    eP        P        16 12 24.4 -1.6
IRK                                 e                  16 22 19.8
IRK                                  pmax     pmax
      comp=Z,405nm,3.4s
OGNE  Ogallala         48.41  73     P        P        16 12 26.2 -0.3
      baz=308
OGNE                                 S        S        16 19 25.2 -1.1
      baz=308
OGNE  Ogallala         48.41  73     P        P        16 12 26.5  0.0
TUC   Tucson           48.56  88     P        P        16 12 27.8  0.0
TUC                                  pmax     pmax
      comp=Z,161nm,1.3s
TUC                                  MLR      MLR
      comp=Z,24µm,18.0s
TUC   Tucson           48.56  88     P        P        16 12 27.5 -0.3
      baz=313
TUC                                  S        S        16 19 29.1 +0.4
      baz=313
TUC   Tucson           48.56  88     P        P        16 12 27.8  0.0
TUC                                  IAmb     IAmb     16 12 45.2
      comp=Z,162nm,1.3s
TUC   Tucson           48.56  88     IAMs_20  IAMs_20  16 33 12.8
      comp=Z,24µm,18.0s
UPNV  Upernavik        48.62  21   i P        P        16 12 25.6 -2.0
B35A  Bob, Littlefor   48.77  61     P        P        16 12 28.1 -1.0
B35A                                 IAmb     IAmb     16 12 46.5
      comp=Z,81nm,0.8s
F33A  5 Mile Ranch,    48.81  65     P        P        16 12 28.1 -1.4
F33A                                 IAmb     IAmb     16 12 51.1
      comp=Z,94nm,0.9s
BJT   Baijiatuau       48.88 286     P        P        16 12 28.4 -1.6
BJT                                  pmax     pmax
      comp=Z,159nm,1.3s
BJT                                  MLR      MLR
      comp=Z,66µm,20.0s
BJT   Baijiatuau       48.88 286     P        P        16 12 28.4 -1.6
BJT                                  IAmb     IAmb     16 12 54.4
      comp=Z,158nm,1.3s
TLY   Talaya           49.01 305     P        P        16 12 31.1 +0.2
      comp=Z,18nm,0.5s,baz=33,slow=7.2,SNR=20
TLY                                  LR       LR       16 34 18.0
      comp=Z,41µm,19.6s,baz=49,slow=38
TLY   Talaya           49.01 305c iP          P        16 12 31.3 +0.4
TLY                                 e                  16 14 27.2
TLY                                 ePPP      PPP      16 15 13.8
TLY                                 eS        S        16 19 37.1 +2.8
TLY                                  pmax     pmax
      comp=Z,391nm,1.8s
TLY                                  MLR      MLR
      comp=Z,99µm,16.0s
TLY   Talaya           49.01 305     P        P        16 12 31.7 +0.8
TLY   Talaya           49.01 305     P        P        16 12 29.0 -1.9
TLY                                  IAmb     IAmb     16 12 36.3
      comp=Z,170nm,1.4s
TLY                                  IAMs_20  IAMs_20  16 34 04.6
      comp=Z,37µm,19.0s
JMZ   Minamidaito 2    49.07 260     P        P        16 12 31.6 -0.1
JMZ                                  IAmb     IAmb     16 12 55.1
      comp=Z,284nm,1.1s
KSCO  Kaye Shedlock’   49.25  76     P        P        16 12 33.4 +0.4
      baz=309,SNR=24
KSCO                                 S        S        16 19 36.7 -1.6
      baz=309
KSCO  Kaye Shedlock’   49.25  76     P        P        16 12 32.6 -0.5
K31A  O'Neill          49.32  70     P        P        16 12 32.5 -0.9
T25A  Trinidad         49.35  79     P        P        16 12 34.3 +0.4
      baz=310,SNR=64
T25A                                 S        S        16 19 39.9  0.0
      baz=310
T25A  Trinidad         49.35  79     P        P        16 12 33.8 -0.1
ULN   Ulaanbaatar      49.41 299ceP           P        16 12 33.3 -0.9
ULN                                  pmax     pmax
      comp=Z,105nm,1.3s
ULN                                  MLR      MLR
      comp=Z,80µm,19.0s
ULN   Ulaanbaatar      49.41 299     P        P        16 12 32.9 -1.3
ULN   Ulaanbaatar      49.41 299     P        P        16 12 32.7 -1.4
ULN                                  IAmb     IAmb     16 12 51.0
      comp=Z,95nm,0.9s
ANMO  Albuquerque      49.51  82ceP           P        16 12 35.4 +0.2
ANMO                                 pmax     pmax
      comp=Z,28nm,1.7s
ANMO                                 MLR      MLR
      comp=Z,27µm,17.0s
ANMO  Albuquerque      49.51  82     P        P        16 12 35.2  0.0
      baz=312
ANMO                                 S        S        16 19 41.9 -0.2
      baz=312
ANMO  Albuquerque      49.51  82     P        P        16 12 35.1  0.0
ANMO                                 IAmb     IAmb     16 12 52.3
      comp=Z,141nm,1.4s
ANMO  Albuquerque      49.51  82     IAMs_20  IAMs_20  16 33 59.0
      comp=Z,27µm,18.0s
LENM  Lemitar          49.70  83     P        P        16 12 36.7 +0.1
SONM  Songino Array    49.78 299     P        P        16 12 36.8 -0.2
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      comp=Z,29nm,0.6s,baz=57,slow=6.2,SNR=65
SONM                                 PcP      PcP      16 14 00.0 +2.4
      comp=Z,8.9nm,0.7s,baz=90,slow=1.6,SNR=1.4
SONM                                 ScP      ScP      16 17 51.6 -0.7
      comp=Z,3.0nm,0.9s,baz=81,slow=38,SNR=3.7
SONM                                 LR       LR       16 34 38.8
      comp=Z,92µm,19.5s,baz=54,slow=37
SONM                                 P4KPbc            16 50 27.9
      comp=Z,2.5nm,1.0s,baz=73,slow=2.7,SNR=7.8
SONM  Songino Array    49.78 299     P        P        16 12 35.9 -1.1
SONM                                 IAmb     IAmb     16 12 40.0
      comp=Z,147nm,1.4s
Y22D  IRIS PASSCAL I   49.79  84     P        P        16 12 37.3  0.0
      baz=312
Y22D                                 S        S        16 19 48.3 +2.3
      baz=312
Y22D  IRIS PASSCAL I   49.79  84     P        P        16 12 37.5 +0.3
Y22D                                 IAmb     IAmb     16 12 59.2
      comp=Z,197nm,1.0s
Y22D                                 IAMs_20  IAMs_20  16 31 07.7
      comp=Z,49µm,21.0s
KBS   Kingsbay         49.80 359     P        P        16 12 36.7 +0.2
KBS                                  pmax     pmax
      comp=Z,41nm,0.8s
KBS                                  MLR      MLR
      comp=Z,44µm,18.0s
KBS   Kingsbay         49.80 359   i P        P        16 12 35.5 -1.0
KBS   Kingsbay         49.80 359    eP        P        16 12 36.7 +0.2
KBS                                  IVmB_BB           16 12 39.3
      comp=Z,4µm,3.9s
KBS                                 eS        S        16 19 45.9 +1.2
KBS                                  IVMs_BB  IVMs_BB  16 35 10.1
      comp=Z,17µm,19.3s
KBS   Kingsbay         49.80 359     P        P        16 12 36.7 +0.2
KBS   Kingsbay         49.80 359     IAMs_20  IAMs_20  16 35 21.3
      comp=Z,44µm,18.0s
ECSD  EROS Data Cent   49.89  67     P        P        16 12 36.6 -1.2
      baz=308,SNR=22
ECSD                                 S        S        16 19 43.0 -3.9
      baz=308
ECSD  EROS Data Cent   49.89  67     P        P        16 12 36.1 -1.7
ECSD  EROS Data Cent   49.89  67     IAMs_20  IAMs_20  16 35 35.2
      comp=Z,40µm,18.0s
BNM   Barren Site      49.92  83     P        P        16 12 38.3 -0.1
ZAK   Zakamensk        49.94 304    eP        P        16 12 36.9 -1.3
ZAK                                  pmax     pmax
      comp=Z,163nm,1.4s
319A  Douglas          50.13  88     P        P        16 12 39.0 -0.8
NUUG  Nuugaatsiaq      50.14  21   i P        P        16 12 39.5 +0.3
JOW   Kunigami         50.17 264     P        P        16 12 41.6 +1.6
      comp=Z,64nm,1.0s,baz=25,slow=8.8,SNR=7.9
JOW   Kunigami         50.17 264     P        P        16 12 39.7 -0.3
JOW                                  IAmb     IAmb     16 12 55.5
      comp=Z,211nm,1.2s
EYMN  Ely              50.22  60     P        P        16 12 38.5 -1.7
      baz=307,SNR=7.6
EYMN                                 S        S        16 19 46.5 -4.9
      baz=307
EYMN  Ely              50.22  60     P        P        16 12 39.3 -0.9
EYMN                                 IAmb     IAmb     16 12 59.7
      comp=Z,160nm,1.1s
EYMN  Ely              50.22  60     IAMs_20  IAMs_20  16 36 04.2
      comp=Z,38µm,18.0s
121A  Cookes Peak, D   50.28  86     P        P        16 12 41.4 +0.4
      baz=313,SNR=32
121A                                 S        S        16 19 52.9 -0.1
      baz=313
121A  Cookes Peak, D   50.28  86     P        P        16 12 40.5 -0.6
F36A  Milaca           50.36  63     P        P        16 12 39.9 -1.4
F36A                                 IAmb     IAmb     16 13 03.5
      comp=Z,124nm,1.1s
MOY   Mondy            50.36 306    eP        P        16 12 41.9 +0.6
MOY                                  pmax     pmax
      comp=Z,446nm,2.9s
BGNE  Belgrade         50.42  70     P        P        16 12 40.3 -1.6
      baz=309
BGNE                                 S        S        16 19 51.6 -2.8
      baz=309
BGNE  Belgrade         50.42  70     P        P        16 12 41.0 -0.9
SPA0  Spitsbergen Ar   50.46 358    eP        P        16 12 41.0 -0.6
SPITS Spitsbergen Ar   50.46 358     P        P        16 12 38.7 -2.9
SPITS                                pmax     pmax
      comp=Z,77nm,1.1s
TIA   Tai'an           50.72 281   ⇑P         P        16 12 43.7 -0.4
TIA                                  pP       pwP      16 12 55.3 +1.7
TIA                                  PP       PP       16 14 43.2 +3.3
TIA                                  S        S        16 20 01.3 +2.8
TIA                                  pmax     pmax
      comp=Z,160nm,1.2s
TIA                                  pmax     pmax
      comp=Z,5µm,7.6s
TIA                                  LR       LR
      comp=Z,18µm,18.2s
TIA                                  LR       LR
      comp=Z,37µm,20.6s
TIA                                  LR       LR
      comp=Z,29µm,21.4s
HSIG                   50.72  91     P        P        16 12 43.3 -0.8
GUMO  Guam             50.72 237     P        P        16 12 45.8 +1.5
      comp=Z,153nm,1.0s,baz=113,slow=23,SNR=4.5
GUMO  Guam             50.72 237     P        P        16 12 42.9 -1.4
DAG   Danmarks Havn    50.96   7   i P        P        16 12 43.0 -2.3
DAG                                  IAmb     IAmb     16 12 46.2
      comp=Z,136nm,1.4s
E38A  The Farm, Brul   50.99  61     P        P        16 12 44.1 -1.9
E38A                                 IAmb     IAmb     16 13 08.3
      comp=Z,244nm,1.2s
XMAS  Kiritimati       50.99 160     IAMs_20  IAMs_20  16 31 53.0
      comp=Z,45µm,19.0s
HHC   Hu-ho-hao-te     51.10 289    eP        P        16 12 48.2 +1.2
HHC                                  pP       sP       16 12 52.8 +0.4
HHC                                  sP       pwP      16 12 54.8 -1.8
HHC                                  S        S        16 20 02.2 -1.8
HHC                                  sS       pS       16 20 08.0 -0.5
HHC                                  SS       SS       16 23 34.2 -4.5
HHC                                  pmax     pmax
      comp=Z,85nm,1.3s
HHC                                  pmax     pmax
      comp=Z,7µm,6.0s
HHC                                  LR       LR
      comp=Z,27µm,18.2s
HHC                                  LR       LR
      comp=Z,35µm,15.7s
HHC                                  LR       LR
      comp=Z,43µm,18.5s
SRIG  Santa Rosalia    51.11  94     P        P        16 12 46.3 -0.8
CBKS  Cedar Bluff      51.12  74     P        P        16 12 45.8 -1.3
CBKS                                 pmax     pmax
      comp=Z,582nm,1.3s
CBKS  Cedar Bluff      51.12  74     P        P        16 12 47.5 +0.4
      baz=310,SNR=11
CBKS                                 S        S        16 20 01.4 -2.7
      baz=310
CBKS  Cedar Bluff      51.12  74     P        P        16 12 45.8 -1.3
L34A  Svendsen Farm,   51.12  69     P        P        16 12 45.0 -2.0
SPMN  Marine on St.    51.15  63     P        P        16 12 45.8 -1.3
      baz=308
SPMN                                 S        S        16 20 02.3 -2.0
      baz=308
SPMN  Marine on St.    51.15  63     P        P        16 12 45.3 -1.8
SPMN                                 IAmb     IAmb     16 13 02.1
      comp=Z,126nm,1.1s
N33A  J Bar K, Exete   51.26  71     P        P        16 12 46.6 -1.4
N33A                                 IAmb     IAmb     16 13 06.5
      comp=Z,312nm,1.0s
TARA  Tarawa           51.35 198     P        P        16 12 50.4 +1.4
TARA                                 IAmb     IAmb     16 12 53.9
      comp=Z,354nm,1.5s
TARA  Tarawa           51.35 198     IAMs_20  IAMs_20  16 30 38.1
      comp=Z,30µm,20.0s
I37A  Lemond, Waseca   51.55  65     P        P        16 12 48.8 -1.5
EPT   El Paso          51.60  85     IAMs_20  IAMs_20  16 37 24.7
      comp=Z,19µm,18.0s
SSE   Sheshan          51.61 273     P        P        16 12 52.7 +1.9
SSE                                  pP       sP       16 12 56.0 -0.2
SSE                                  S        S        16 20 12.4 +1.5
SSE                                  pmax     pmax
      comp=Z,4µm,7.5s
SSE                                  LR       LR
      comp=Z,6µm,18.1s
HSPB  Hornsund (broa   51.65 358    eP        P        16 12 50.6 +0.1
HSPB                                 IVmB_BB           16 13 01.7
      comp=Z,2µm,3.9s
HSPB                                eS        S        16 20 14.0 +3.6
HSPB                                 IVMs_BB  IVMs_BB  16 36 54.4
      comp=Z,14µm,19.2s
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HOPEN	**Hopen**	**51.74**	**355**	*e*P	**P**	**16 12 51.3**	**+0.1**
HOPEN				IVmB_BB		16 12 53.8	
	comp=Z,3µm,1.8s						
HOPEN				*e*S	**S**	**16 20 11.5**	**-0.1**
HOPEN				IVMs_BB	IVMs_BB	16 36 42.5	
	comp=Z,15µm,18.2s						
R32A	**Long Quarter,**	**51.98**	**74**	P	**P**	**16 12 53.1**	**-0.5**
BTO	**Baotou**	**52.16**	**290**	P	**P**	**16 12 54.9**	**-0.1**
BTO				PP	**PP**	**16 14 55.2**	**+2.2**
BTO				S	**S**	**16 20 20.5**	**+1.9**
N35A	**Tabor**	**52.24**	**69**	P	**P**	**16 12 53.2**	**-2.2**
SUMG	**Summit**	**52.25**	**16**	P	**P**	**16 12 53.5**	**-2.0**
SUMG				pmax	pmax		
	comp=Z,116nm,1.0s						
SUMG	**Summit**	**52.25**	**16**	*i* P	**P**	**16 12 54.6**	**-0.9**
SUMG	**Summit**	**52.25**	**16**	P	**P**	**16 12 53.5**	**-2.0**
SUMG				IAmb	IAmb	16 13 18.9	
	comp=Z,116nm,1.0s						
ILULI	**Ilulissat**	**52.32**	**23**	P	**P**	**16 12 53.1**	**-2.5**
ILULI				pmax	pmax		
	comp=Z,99nm,1.3s						
ILULI				MLR	MLR		
	comp=Z,30µm,18.0s						
ILULI	**Ilulissat**	**52.32**	**23**	P	**P**	**16 12 53.1**	**-2.5**
ILULI				IAMs_20	IAMs_20	16 38 18.7	
	comp=Z,30µm,18.0s						
D41A	**Chassel**	**52.34**	**59**	P	**P**	**16 12 53.3**	**-2.7**
D41A				IAmb	IAmb	16 13 19.8	
	comp=Z,140nm,0.9s						
MNTX	**Cornudas Mount**	**52.35**	**85**	P	**P**	**16 12 56.7**	**+0.3**
	baz=314,SNR=49						
MNTX				S	**S**	**16 20 22.8**	**+1.7**
	baz=314						
MNTX	**Cornudas Mount**	**52.35**	**85**	P	**P**	**16 12 56.0**	**-0.3**
MNTX				IAmb	IAmb	16 13 13.6	
	comp=Z,140nm,1.2s						
NJ2	**Nanjing**	**52.41**	**276**	⇑*i*P	**P**	**16 12 56.3**	**-0.5**
NJ2				PP	**PP**	**16 14 54.8**	**-0.5**
NJ2				ScP	**ScP**	**16 18 07.6**	**+4.0**
NJ2				S	**S**	**16 20 21.6**	**-0.3**
NJ2				pmax	pmax		
	comp=Z,6µm,6.9s						
NJ2				LR	LR		
	comp=Z,30µm,17.1s						
NJ2				LR	LR		
	comp=Z,17µm,20.8s						
NJ2				LR	LR		
	comp=Z,30µm,21.8s						
MSTX	**Muleshoe**	**52.43**	**81**	P	**P**	**16 12 57.1**	**0.0**
	baz=312,SNR=17						
MSTX				S	**S**	**16 20 23.9**	**+1.4**
	baz=312						
MSTX	**Muleshoe**	**52.43**	**81**	P	**P**	**16 12 55.9**	**-1.2**
MSTX				IAmb	IAmb	16 13 15.4	
	comp=Z,270nm,1.0s						
AMTX	**Amarillo**	**52.49**	**79**	P	**P**	**16 12 56.0**	**-1.5**
	baz=312						
AMTX				S	**S**	**16 20 20.5**	**-2.7**
	baz=312						
AMTX	**Amarillo**	**52.49**	**79**	P	**P**	**16 12 56.5**	**-1.0**
AMTX				IAmb	IAmb	16 13 15.2	
	comp=Z,156nm,1.1s						
G40A	**Rib Lake**	**52.56**	**62**	P	**P**	**16 12 56.3**	**-1.5**
G40A				IAmb	IAmb	16 13 14.5	
	comp=Z,128nm,1.0s						
TIY	**Taiyuan**	**52.59**	**286**	⇑P	**P**	**16 12 59.8**	**+1.7**
TIY				S	**S**	**16 20 24.4**	**0.0**
TIY				pmax	pmax		
	comp=Z,490nm,1.5s						
TIY				pmax	pmax		
	comp=Z,5µm,4.0s						
TIY				LR	LR		
	comp=Z,7µm,14.3s						
TIY				LR	LR		
	comp=Z,29µm,19.1s						
TIY				LR	LR		
	comp=Z,49µm,20.6s						
COWI	**Conover**	**52.63**	**61**	P	**P**	**16 12 56.9**	**-1.3**
COWI				IAMs_20	IAMs_20	16 37 46.9	
	comp=Z,33µm,19.0s						
K38A	**Parkersburg**	**52.77**	**66**	P	**P**	**16 12 57.3**	**-2.0**
K38A				IAmb	IAmb	16 13 14.1	
	comp=Z,333nm,1.4s						
KSU1	**Kansas State U**	**52.80**	**72**	P	**P**	**16 12 58.7**	**-0.9**
	baz=311						
KSU1				S	**S**	**16 20 23.3**	**-3.8**
	baz=311						
KSU1	**Kansas State U**	**52.80**	**72**	P	**P**	**16 12 57.5**	**-2.0**
KSU1				IAmb	IAmb	16 13 17.0	
	comp=Z,230nm,1.1s						
SCIA	**State Center**	**52.98**	**67**	P	**P**	**16 13 00.6**	**-0.3**
	baz=310,SNR=10						
SCIA				S	**S**	**16 20 27.3**	**-2.2**
	baz=310						
SCIA	**State Center**	**52.98**	**67**	P	**P**	**16 12 59.8**	**-1.1**
SCIA				IAmb	IAmb	16 13 17.0	
	comp=Z,459nm,1.4s						
SCIA				IAMs_20	IAMs_20	16 35 04.0	
	comp=Z,34µm,21.0s						
U32A	**Winter Ranch,**	**53.14**	**76**		**P**	**16 13 01.5**	**-0.6**
U32A				IAmb	IAmb	16 13 20.1	
	comp=Z,254nm,1.1s						
U32A				IAMs_20	IAMs_20	16 37 32.4	
	comp=Z,18µm,18.0s						
DBG	**Daneborg**	**53.14**	**9**	*i* P	**P**	**16 13 00.3**	**-1.3**
DBG				IAmb	IAmb	16 13 02.1	
	comp=Z,109nm,1.4s						
KAN16	**Harper SW Stat**	**53.15**	**74**		**P**	**16 13 01.3**	**-0.9**
KAN16				IAmb	IAmb	16 13 19.6	
	comp=Z,170nm,1.3s						
I40A	**Norwalk**	**53.20**	**64**	P	**P**	**16 13 01.3**	**-1.2**
I40A				IAmb	IAmb	16 13 17.2	
	comp=Z,250nm,1.3s						
KAN10	**Anthony SW Sta**	**53.20**	**75**		**P**	**16 13 01.9**	**-0.7**
KAN08	**Anthony NE Sta**	**53.20**	**74**	P	**P**	**16 13 00.7**	**-1.9**
KAN08				IAmb	IAmb	16 13 20.4	
	comp=Z,97nm,0.8s						
OK032	**Salt Plains WL**	**53.34**	**75**	P	**P**	**16 13 02.5**	**-1.0**
OK032				IAmb	IAmb	16 13 21.2	
	comp=Z,232nm,1.2s						
KAN05	**Bluff City Nor**	**53.34**	**74**	P	**P**	**16 13 01.9**	**-1.7**
KAN05				IAmb	IAmb	16 13 21.0	
	comp=Z,140nm,1.1s						
KAN01	**Argonia South**	**53.38**	**74**	P	**P**	**16 13 02.3**	**-1.6**
KAN01				IAmb	IAmb	16 13 21.4	
	comp=Z,228nm,1.1s						
F42A	**Maple Grove Fa**	**53.39**	**60**	P	**P**	**16 13 02.4**	**-1.4**
F42A				IAmb	IAmb	16 13 20.9	
	comp=Z,237nm,1.1s						
KAN14	**Manchester OK**	**53.39**	**75**	P	**P**	**16 13 02.3**	**-1.6**
KAN17	**Caldwell West**	**53.45**	**74**		**P**	**16 13 02.8**	**-1.6**
KAN17				IAmb	IAmb	16 13 21.8	
	comp=Z,245nm,1.1s						
E43A	**Lone Tree Farm**	**53.61**	**59**	P	**P**	**16 13 04.0**	**-1.5**
E43A				IAmb	IAmb	16 13 23.1	
	comp=Z,113nm,0.6s						
KAN13	**South Haven SW**	**53.64**	**74**	P	**P**	**16 13 04.6**	**-1.2**
CROK	**Carrier**	**53.67**	**75**		**P**	**16 13 04.7**	**-1.3**
CROK				IAmb	IAmb	16 13 22.9	
	comp=Z,130nm,0.9s						
N38A	**Joes South For**	**53.69**	**68**	P	**P**	**16 13 04.5**	**-1.6**
BLOK	**Blackwell**	**53.97**	**74**		**P**	**16 13 06.8**	**-1.3**
BLOK				IAmb	IAmb	16 13 25.8	
	comp=Z,322nm,1.2s						
BJO1	**Bjornoya**	**54.02**	**356**	*e*P	**P**	**16 13 07.4**	**-0.6**
BJO1				*e*S	**S**	**16 20 42.1**	**-0.7**
BJO1				IVMs_BB	IVMs_BB	16 40 40.7	
	comp=Z,9µm,19.4s						
L40A	**Anamosa**	**54.02**	**66**	P	**P**	**16 13 07.1**	**-1.4**
L40A				IAmb	IAmb	16 13 23.1	
	comp=Z,356nm,1.3s						
JFWS	**Jewell Farm**	**54.03**	**64**	P	**P**	**16 13 07.0**	**-1.6**
JFWS				pmax	pmax		
	comp=Z,173nm,1.2s						
JFWS	**Jewell Farm**	**54.03**	**64**	P	**P**	**16 13 07.7**	**-0.8**
	baz=310,SNR=16						
JFWS				S	**S**	**16 20 38.4**	**-5.3**
	baz=310						
JFWS	**Jewell Farm**	**54.03**	**64**	P	**P**	**16 13 07.0**	**-1.6**
JFWS				IAmb	IAmb	16 13 30.4	
	comp=Z,173nm,1.1s						
KNTN	**Kanton**	**54.08**	**178**	P	**P**	**16 13 09.4**	**+0.3**
KNTN				IAmb	IAmb	16 13 28.2	
	comp=Z,101nm,1.0s						
KNTN				IAMs_20	IAMs_20	16 34 07.8	
	comp=Z,19µm,19.0s						
SFJD	**Kangerlussuaq**	**54.12**	**24**	P	**P**	**16 13 06.6**	**-2.2**
SFJD				pmax	pmax		
	comp=Z,94nm,1.2s						
SFJD				MLR	MLR		
	comp=Z,41µm,20.0s						
SFJD	**Kangerlussuaq**	**54.12**	**24**	*e*P	**P**	**16 13 10.7**	**+1.9**
SFJD	**Kangerlussuaq**	**54.12**	**24**	P	**P**	**16 13 06.6**	**-2.2**
SFJD	**Kangerlussuaq**	**54.12**	**24**	IAMs_20	IAMs_20	16 38 43.1	
	comp=Z,41µm,20.0s						
I42A	**Draeger Farm,**	**54.15**	**63**	P	**P**	**16 13 07.9**	**-1.5**
I42A				IAmb	IAmb	16 13 31.9	
	comp=Z,172nm,1.0s						
P38A	**Dawn**	**54.27**	**69**	P	**P**	**16 13 08.8**	**-1.6**
P38A				IAmb	IAmb	16 13 27.9	
	comp=Z,236nm,0.9s						
T35A	**Sooner Cattle**	**54.29**	**74**		**P**	**16 13 09.2**	**-1.4**
T35A				IAmb	IAmb	16 13 30.5	
	comp=Z,113nm,0.8s						
WMOK	**Wichita Mounta**	**54.36**	**77**	P	**P**	**16 13 10.1**	**-1.0**
WMOK				pmax	pmax		
	comp=Z,176nm,1.1s						
WMOK				MLR	MLR		
	comp=Z,30µm,18.0s						
WMOK	**Wichita Mounta**	**54.36**	**77**	P	**P**	**16 13 10.9**	**-0.3**
	baz=313,SNR=26						
WMOK				S	**S**	**16 20 47.0**	**-1.5**
	baz=313						
WMOK	**Wichita Mounta**	**54.36**	**77**	P	**P**	**16 13 10.1**	**-1.0**
WMOK				IAmb	IAmb	16 13 28.7	
	comp=Z,176nm,1.1s						
WMOK	**Wichita Mounta**	**54.36**	**77**	IAMs_20	IAMs_20	16 37 52.5	
	comp=Z,30µm,18.0s						
H43A	**Windswept, Lux**	**54.41**	**61**	P	**P**	**16 13 09.5**	**-1.8**
H43A				IAmb	IAmb	16 13 33.8	
	comp=Z,301nm,1.1s						
BCOK	**Bluff Creek, N**	**54.46**	**76**		**P**	**16 13 10.9**	**-0.9**
BCOK				IAmb	IAmb	16 13 29.0	
	comp=Z,188nm,1.1s						
OK029	**Liberty Lake**	**54.46**	**75**		**P**	**16 13 10.4**	**-1.4**
QUOK	**Quay**	**54.66**	**75**		**P**	**16 13 12.2**	**-1.1**
QUOK				IAmb	IAmb	16 13 30.7	
	comp=Z,196nm,1.2s						
OK025	**Westminster Rd**	**54.68**	**75**		**P**	**16 13 13.0**	**-0.4**
OK025				IAmb	IAmb	16 13 31.2	
	comp=Z,190nm,1.2s						
OK025				IAMs_20	IAMs_20	16 40 14.0	
	comp=Z,19µm,19.0s						
OKCFA	**Oklahoma City**	**54.72**	**76**	P	**P**	**16 13 13.2**	**-0.4**
OKCFA				IAmb	IAmb	16 13 31.0	
	comp=Z,165nm,1.0s						
OK031	**S. Brethren Rd**	**54.73**	**75**		**P**	**16 13 12.8**	**-0.9**
OK031				IAMs_20	IAMs_20	16 38 49.3	
	comp=Z,20µm,18.0s						
OK030	**Cody Creek RV**	**54.78**	**75**	P	**P**	**16 13 12.8**	**-1.3**
OK030				IAMs_20	IAMs_20	16 38 41.6	
	comp=Z,18µm,18.0s						
FNO	**Franklin**	**54.85**	**76**		**P**	**16 13 13.2**	**-1.5**
FNO				IAmb	IAmb	16 13 32.8	
	comp=Z,288nm,1.4s						
ICESG	**Greenland Ices**	**54.94**	**19**	*i* P	**P**	**16 13 12.7**	**-2.5**
L42A	**Oliver, Polo**	**54.95**	**65**	P	**P**	**16 13 13.1**	**-2.2**
L42A				IAmb	IAmb	16 13 39.6	
	comp=Z,127nm,0.9s						
X34A	**Smith Ranch, M**	**55.03**	**77**		**P**	**16 13 15.1**	**-0.9**
X34A				IAmb	IAmb	16 13 36.6	
	comp=Z,185nm,1.2s						
TX31	**Lajitas Ar. Si**	**55.04**	**86**	P	**P**	**16 13 15.2**	**-1.0**
TX32	**Lajitas Array**	**55.04**	**86**	P	**P**	**16 13 15.1**	**-1.2**
TX32				IAmb	IAmb	16 13 33.0	
	comp=Z,142nm,1.2s						
TXAR	**Lajitas Array**	**55.05**	**86**	P	**P**	**16 13 15.7**	**-0.6**
	comp=Z,12nm,0.6s,baz=295,slow=5.2,SNR=67						
TXAR				PKKP	**PKKPdf**	**16 35 01.9**	**+2.0**
	comp=Z,0.1nm,0.3s,baz=129,slow=8.4,SNR=4.6						
TXAR				LR	LR	16 35 39.0	
	comp=Z,11µm,19.2s,baz=0.0,slow=35						
TXAR				PKPPKP	P'P'df	16 43 11.1	-15
	comp=Z,0.6nm,0.9s,baz=165,slow=5.2,SNR=3.6						
TXAR	**Lajitas Array**	**55.05**	**86**	P	**P**	**16 13 15.2**	**-1.0**
E46A	**Sault Ste Mari**	**55.05**	**58**	P	**P**	**16 13 14.5**	**-1.4**
E46A				IAmb	IAmb	16 13 33.6	
	comp=Z,229nm,1.1s						
N41A	**Harden Midland**	**55.12**	**67**	P	**P**	**16 13 15.3**	**-1.2**
YOJ	**Yonaguni jima**	**55.15**	**266**	P	**P**	**16 13 16.0**	**-0.9**
YOJ				pmax	pmax		
	comp=Z,346nm,1.2s						
YOJ	**Yonaguni jima**	**55.15**	**266**	P	**P**	**16 13 16.0**	**-0.9**
SLBS	**Sierra La Lagu**	**55.16**	**95**	P	**P**	**16 13 16.4**	**-0.6**
SLBS				IAmb	IAmb	16 13 40.1	
	comp=Z,104nm,0.9s						
SLBS	**Sierra La Lagu**	**55.16**	**95**	IAMs_20	IAMs_20	16 35 35.4	
	comp=Z,23µm,18.0s						
G45A	**Suttons Bay**	**55.19**	**60**	P	**P**	**16 13 15.9**	**-1.1**
G45A				IAmb	IAmb	16 13 36.3	
	comp=Z,125nm,1.1s						
P40A	**Paris**	**55.20**	**68**	P	**P**	**16 13 15.7**	**-1.4**
K43A	**Burlington**	**55.24**	**63**	P	**P**	**16 13 15.1**	**-2.2**
K43A				IAmb	IAmb	16 13 40.0	
	comp=Z,304nm,1.1s						
ABTX	**Abilene, Hawle**	**55.27**	**80**	P	**P**	**16 13 17.2**	**-0.6**
	baz=314,SNR=16						
ABTX				S	**S**	**16 20 58.6**	**-2.0**
	baz=314						
ABTX	**Abilene, Hawle**	**55.27**	**80**	P	**P**	**16 13 16.8**	**-0.9**
ABTX				IAmb	IAmb	16 13 34.9	
	comp=Z,264nm,1.1s						
TUL1	**Leonard**	**55.39**	**74**	P	**P**	**16 13 17.5**	**-1.0**
	baz=313,SNR=7.8						
TUL1				S	**S**	**16 20 58.7**	**-3.4**
	baz=313						
TUL1	**Leonard**	**55.39**	**74**		**P**	**16 13 17.6**	**-0.9**
TUL1				IAmb	IAmb	16 13 35.6	
	comp=Z,189nm,1.1s						
HPIG		**55.49**	**89**	P	**P**	**16 13 18.9**	**-0.7**
DY2G	**Dye2**	**55.61**	**23**	*i* P	**P**	**16 13 19.4**	**-0.6**
S39A	**Bolivar**	**55.67**	**71**	P	**P**	**16 13 18.4**	**-2.1**
S39A				IAmb	IAmb	16 13 37.0	
	comp=Z,86nm,1.1s						
TATO	**Taipei**	**55.73**	**268**	IAMs_20	IAMs_20	16 35 53.5	
	comp=Z,24µm,22.0s						
L44A	**Lake County Fo**	**55.82**	**64**	P	**P**	**16 13 19.5**	**-2.0**
	baz=312						
L44A				S	**S**	**16 21 02.8**	**-4.9**
	baz=312						
L44A	**Lake County Fo**	**55.82**	**64**	P	**P**	**16 13 19.8**	**-1.7**
L44A				IAmb	IAmb	16 13 43.8	
	comp=Z,245nm,1.0s						
LOOK	**Love County**	**55.84**	**77**		**P**	**16 13 21.1**	**-0.7**
U38A	**Gravette**	**55.88**	**73**		**P**	**16 13 20.1**	**-1.9**
U38A				IAmb	IAmb	16 13 37.4	
	comp=Z,268nm,1.4s						
GLMI	**Grayling**	**55.89**	**59**	P	**P**	**16 13 20.7**	**-1.3**
	baz=311						
GLMI				S	**S**	**16 21 06.3**	**-2.2**
	baz=311						
GLMI	**Grayling**	**55.89**	**59**	P	**P**	**16 13 20.1**	**-1.9**
R40A	**Maddies Statio**	**55.89**	**70**	P	**P**	**16 13 20.0**	**-2.1**
R40A				IAmb	IAmb	16 13 26.2	
	comp=Z,71nm,0.6s						
YHNB	**Yeheng**	**56.02**	**268**	IAMs_20	IAMs_20	16 37 09.3	
	comp=Z,20µm,21.0s						
HDIL	**Hopedale**	**56.11**	**66**	P	**P**	**16 13 22.5**	**-1.1**
	baz=312						
HDIL				S	**S**	**16 21 07.0**	**-4.6**
	baz=312						
HDIL	**Hopedale**	**56.11**	**66**	P	**P**	**16 13 22.1**	**-1.5**
HDIL				IAMs_20	IAMs_20	16 37 20.7	
	comp=Z,29µm,20.0s						
WHN	**Wuhan**	**56.24**	**278**	⇓*i*P	**P**	**16 13 25.0**	**+0.3**
WHN				sP	**pwP**	**16 13 33.2**	**-1.1**
WHN				S	**S**	**16 21 12.2**	**-1.4**
WHN				pmax	pmax		
	comp=Z,4µm,2.6s						
WHN				LR	LR		
	comp=Z,39µm,16.1s						
WHN				LR	LR		
	comp=Z,39µm,15.4s						
NACB	**Ninganchiao**	**56.25**	**267**	P	**P**	**16 13 22.9**	**-1.8**
NACB				IAmb	IAmb	16 13 41.7	
	comp=Z,286nm,1.5s						
HHAR	**Hobbs**	**56.25**	**73**	P	**P**	**16 13 22.9**	**-1.8**
HHAR				IAmb	IAmb	16 13 39.9	
	comp=Z,172nm,1.2s						
Z35A	**Perchaven, San**	**56.25**	**77**	P	**P**	**16 13 23.6**	**-1.1**
Z35A				IAmb	IAmb	16 13 42.0	
	comp=Z,189nm,0.9s						
M44A	**Midewin, Midew**	**56.27**	**64**	P	**P**	**16 13 22.7**	**-2.0**
M44A				IAmb	IAmb	16 13 41.4	
	comp=Z,191nm,0.9s						
ZAA0	**Zalesovo Array**	**56.51**	**316**	P	**P**	**16 13 24.4**	**-1.9**
ZALV	**Zalesovo Beam**	**56.51**	**316**	P	**P**	**16 13 25.3**	**-1.0**
	comp=Z,8.9nm,0.6s,baz=40,slow=7.1,SNR=20						
ZALV				PcP	**PcP**	**16 14 23.3**	**+0.5**
	comp=Z,24nm,0.8s,baz=43,slow=4.6,SNR=6.2						
ZALV				LR	LR	16 39 36.7	
	comp=Z,38µm,18.3s,baz=45,slow=38						
ZALV	**Zalesovo Beam**	**56.51**	**316**	P	**P**	**16 13 24.4**	**-1.8**
X37A	**Clayton**	**56.53**	**75**		**P**	**16 13 25.8**	**-0.9**
X37A				IAmb	IAmb	16 13 44.8	
	comp=Z,285nm,1.1s						
SCO	**Scoresbysund**	**56.54**	**11**	P	**P**	**16 13 24.6**	**-1.6**
SCO				pmax	pmax		
	comp=Z,109nm,1.5s						
SCO				MLR	MLR		
	comp=Z,23µm,19.0s						
SCO	**Scoresbysund**	**56.54**	**11**	*i* P	**P**	**16 13 25.0**	**-1.2**
SCO	**Scoresbysund**	**56.54**	**11**	P	**P**	**16 13 24.6**	**-1.6**
SCO				IAMs_20	IAMs_20	16 40 39.6	
	comp=Z,23µm,19.0s						
P43A	**Skaggs, Pawnee**	**56.59**	**67**	P	**P**	**16 13 25.7**	**-1.3**
P43A				IAmb	IAmb	16 13 43.1	
	comp=Z,220nm,0.9s						
JCT	**Junction City**	**56.65**	**82**	P	**P**	**16 13 26.2**	**-1.4**
JCT				pmax	pmax		
	comp=Z,203nm,1.3s						
JCT				MLR	MLR		
	comp=Z,34µm,18.0s						
JCT	**Junction City**	**56.65**	**82**	P	**P**	**16 13 26.8**	**-0.9**
	baz=315,SNR=16						
JCT				S	**S**	**16 21 15.3**	**-3.8**
	baz=315						
JCT	**Junction City**	**56.65**	**82**	P	**P**	**16 13 26.2**	**-1.4**
JCT				IAmb	IAmb	16 13 44.1	
	comp=Z,203nm,1.2s						
JCT				IAMs_20	IAMs_20	16 38 03.0	
	comp=Z,34µm,18.0s						
CCM	**Cathedral Cave**	**56.65**	**69**	P	**P**	**16 13 25.7**	**-1.8**
CCM				pmax	pmax		
	comp=Z,164nm,1.1s						
CCM				MLR	MLR		
	comp=Z,24µm,20.0s						
CCM	**Cathedral Cave**	**56.65**	**69**	P	**P**	**16 13 26.0**	**-1.5**
	baz=313						
CCM				S	**S**	**16 21 12.9**	**-5.9**
	baz=313						
CCM	**Cathedral Cave**	**56.65**	**69**	P	**P**	**16 13 25.7**	**-1.8**
CCM				IAmb	IAmb	16 13 42.3	
	comp=Z,164nm,1.1s						
CCM	**Cathedral Cave**	**56.65**	**69**	IAMs_20	IAMs_20	16 39 03.3	
	comp=Z,24µm,20.0s						
MGMO	**Mountain Grove**	**56.65**	**71**	P	**P**	**16 13 25.3**	**-2.3**
MGMO				IAmb	IAmb	16 13 43.1	
	comp=Z,197nm,1.1s						
J47A	**Sunmer**	**56.83**	**61**	P	**P**	**16 13 27.3**	**-1.3**
J47A				IAmb	IAmb	16 13 44.9	
	comp=Z,116nm,1.1s						
L46A	**Eue Claire**	**56.83**	**63**	P	**P**	**16 13 27.8**	**-0.9**
L46A				IAmb	IAmb	16 13 44.8	
	comp=Z,211nm,1.1s						
U40A	**Yellville**	**56.84**	**72**	P	**P**	**16 13 27.2**	**-1.8**
	baz=313,SNR=48						
U40A				S	**S**	**16 21 14.7**	**-6.8**
	baz=313						
U40A	**Yellville**	**56.84**	**72**	P	**P**	**16 13 26.6**	**-2.4**
U40A				IAmb	IAmb	16 13 44.4	
	comp=Z,201nm,1.1s						
U40A				IAMs_20	IAMs_20	16 38 58.9	
	comp=Z,25µm,20.0s						
SLM	**Saint Louis**	**56.85**	**68**	P	**P**	**16 13 27.6**	**-1.3**
SLM				pmax	pmax		
	comp=Z,368nm,1.2s						
SLM	**Saint Louis**	**56.85**	**68**	P	**P**	**16 13 27.6**	**-1.3**
O44A	**Mansfield**	**56.85**	**66**	P	**P**	**16 13 27.7**	**-1.2**
O44A				IAmb	IAmb	16 13 42.7	
	comp=Z,327nm,1.5s						
SSLB	**Suanglung**	**56.93**	**267**	P	**P**	**16 13 28.6**	**-1.1**
SSLB				IAMs_20	IAMs_20	16 37 40.3	
	comp=Z,24µm,20.0s						
WHTX	**Lake Whitney,**	**57.05**	**79**	P	**P**	**16 13 30.9**	**+0.6**
	baz=314,SNR=22						
WHTX				S	**S**	**16 21 22.4**	**-1.8**
	baz=314						
WHTX	**Lake Whitney,**	**57.05**	**79**	P	**P**	**16 13 29.7**	**-0.7**
W39A	**Magazine**	**57.08**	**73**	P	**P**	**16 13 30.0**	**-0.6**
	baz=313,SNR=35						
W39A				S	**S**	**16 21 20.5**	**-4.0**
	baz=313						
W39A	**Magazine**	**57.08**	**73**	P	**P**	**16 13 29.4**	**-1.2**
W39A				IAMs_20	IAMs_20	16 39 31.2	
	comp=Z,20µm,22.0s						
XAN	**Xi'an**	**57.16**	**285**	P	**P**	**16 13 30.9**	**-0.3**
XAN				PP	**PP**	**16 15 41.0**	**+3.1**
XAN				S	**S**	**16 21 29.1**	**+3.3**
XAN				pmax	pmax		
	comp=Z,6µm,8.4s						
XAN				LR	LR		
	comp=Z,30µm,22.2s						
XAN				LR	LR		
	comp=Z,21µm,23.3s						
XAN				LR	LR		
	comp=Z,54µm,23.1s						
FVM	**French Village**	**57.17**	**69**	P	**P**	**16 13 29.3**	**-1.9**
FVM				pmax	pmax		
	comp=Z,325nm,1.3s						
FVM	**French Village**	**57.17**	**69**	P	**P**	**16 13 29.3**	**-1.9**
FVM				IAmb	IAmb	16 13 46.5	
	comp=Z,325nm,1.2s						
JMIC	**Jan Mayen**	**57.31**	**6**	*e*P	**P**	**16 13 31.0**	**-0.7**
JMIC				IVmB_BB		16 13 32.2	
	comp=Z,3µm,1.9s						
JMIC				*e*S	**S**	**16 21 27.9**	**+1.2**
JMIC				IVMs_BB	IVMs_BB	16 40 14.1	
	comp=Z,7µm,4.9s						
Q44A	**Meyer Farm, Va**	**57.37**	**67**	P	**P**	**16 13 31.0**	**-1.6**
T42A	**Van Buren**	**57.43**	**70**	P	**P**	**16 13 30.8**	**-2.2**
T42A				IAmb	IAmb	16 13 45.6	
	comp=Z,79nm,0.9s						
SFIN	**Lafayette**	**57.47**	**65**	P	**P**	**16 13 32.1**	**-1.2**
	baz=313,SNR=10						
SFIN				S	**S**	**16 21 24.7**	**-4.9**
	baz=313						
SFIN	**Lafayette**	**57.47**	**65**	P	**P**	**16 13 31.7**	**-1.6**
SFIN				IAmb	IAmb	16 13 54.9	
	comp=Z,226nm,0.9s						
TPUB	**Ta-pu**	**57.49**	**267**	IAMs_20	IAMs_20	16 37 59.1	
	comp=Z,24µm,21.0s						
QZH	**Quanzhou**	**57.57**	**270**	⇑*i*P	**P**	**16 13 35.8**	**+1.7**
QZH				S	**S**	**16 21 33.1**	**+1.9**
QZH				pmax	pmax		
	comp=Z,400nm,2.0s						
QZH				pmax	pmax		
	comp=Z,6µm,10.6s						
QZH				LR	LR		
	comp=Z,8µm,17.7s						
QZH				LR	LR		
	comp=Z,6µm,16.7s						
QZH				LR	LR		
	comp=Z,11µm,19.6s						
HAMF	**Hammerfest**	**57.57**	**353**	*e*P	**P**	**16 13 33.8**	**+0.3**
HAMF				*e*S	**S**	**16 21 28.0**	**-2.0**
HAMF				IVMs_BB	IVMs_BB	16 40 31.2	
	comp=Z,14µm,18.6s						
FCAR	**Ozark Folk Cen**	**57.59**	**72**	P	**P**	**16 13 32.0**	**-2.1**
FCAR				IAmb	IAmb	16 13 51.3	
	comp=Z,256nm,0.9s						
SCHQ	**Schefferville**	**57.60**	**41**	P	**P**	**16 13 32.7**	**-1.3**
	comp=Z,18nm,0.7s,baz=317,slow=6.9,SNR=15						
SCHQ				LR	LR	16 39 41.8	
	comp=Z,58µm,18.0s,baz=318,slow=38						
SCHQ	**Schefferville**	**57.60**	**41**	P	**P**	**16 13 32.1**	**-1.8**
SCHQ				IAmb	IAmb	16 13 41.0	
	comp=Z,80nm,0.7s						
MIAR	**Mount Ida**	**57.64**	**74**	P	**P**	**16 13 33.7**	**-0.9**
MIAR				pmax	pmax		
	comp=Z,517nm,1.1s						
MIAR				MLR	MLR		
	comp=Z,20µm,19.0s						
MIAR	**Mount Ida**	**57.64**	**74**	P	**P**	**16 13 34.2**	**-0.3**
	baz=314,SNR=65						
MIAR				S	**S**	**16 21 29.2**	**-2.8**
	baz=314						
MIAR	**Mount Ida**	**57.64**	**74**	P	**P**	**16 13 33.7**	**-0.9**

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MIAR                                 IAMs_20 IAMs_20  16 40 39.3
      comp=Z,20µm,19.0s
Z38A  Mt. Pleasant      57.68  76    P       P        16 13 34.4 -0.4
Z38A                                 IAmb    IAmb     16 13 55.0
      comp=Z,181nm,0.8s
435B  Jarrell           57.80  80    P       P        16 13 34.7 -1.0
      baz=315
435B                                 S       S        16 21 33.3 -1.0
      baz=315
435B  Jarrell           57.80  80    P       P        16 13 35.2 -0.6
435B                                 IAmb    IAmb     16 13 52.4
      comp=Z,188nm,1.1s
L48A  N Adams           57.91  62    P       P        16 13 34.5 -1.8
L48A                                 IAmb    IAmb     16 13 57.9
      comp=Z,148nm,0.9s
WHAR  Wooly Hollow      57.91  72    P       P        16 13 35.1 -1.3
WHAR                                 IAmb    IAmb     16 13 52.8
      comp=Z,214nm,1.1s
N47A  Urbana            57.92  63    P       P        16 13 34.4 -2.0
N47A                                 IAmb    IAmb     16 13 58.4
      comp=Z,303nm,1.1s
P46A  Rosedale          57.92  65    P       P        16 13 34.8 -1.7
P46A                                 IAmb    IAmb     16 13 58.0
      comp=Z,188nm,1.1s
PBMO  Poplar Bluff      57.99  70    P       P        16 13 35.1 -1.9
W41B  Gary Mavity, V    58.01  72    P       P        16 13 35.4 -1.7
      baz=314,SNR=37
W41B                                 S       S        16 21 32.2 -4.6
      baz=314
OLIL  Olney             58.01  67    P       P        16 13 35.4 -1.7
237A  Washetta, Mont    58.05  78    P       P        16 13 36.8 -0.6
LCAR  Lake Charles      58.05  71    P       P        16 13 35.3 -2.0
LCAR                                 IAmb    IAmb     16 13 52.1
      comp=Z,94nm,1.0s
S44A  Carbondale        58.05  68    P       P        16 13 36.1 -1.2
S44A                                 IAmb    IAmb     16 13 52.7
      comp=Z,144nm,0.9s
SIUC  Southern Illin    58.06  68    P       P        16 13 36.3 -1.1
SIUC                                 IAmb    IAmb     16 13 52.7
      comp=Z,161nm,0.9s
ISOG  Isortoq, Green    58.07  21  i P       P        16 13 36.4 -0.6
AAM   Ann Arbor         58.09  61    P       P        16 13 36.6 -1.0
      baz=313
AAM                                  S       S        16 21 35.5 -2.2
      baz=313
AAM   Ann Arbor         58.09  61    IAMs_20 IAMs_20  16 38 40.4
      comp=Z,30µm,20.0s
X40A  Basin Creek Fa    58.13  73    P       P        16 13 37.0 -1.0
      baz=314,SNR=20
X40A                                 S       S        16 21 35.6 -2.8
      baz=314
X40A  Basin Creek Fa    58.13  73    P       P        16 13 35.8 -2.1
X40A                                 IAmb    IAmb     16 13 55.0
      comp=Z,211nm,1.1s
X40A                                 IAMs_20 IAMs_20  16 40 23.1
      comp=Z,25µm,20.0s
KEV   Kevo              58.17 352    IAMs_20 IAMs_20  16 37 39.2
      comp=Z,31µm,22.0s
DGZ   Jazzator, Alta    58.24 311c iP        P        16 13 37.7 -1.1
DGZ                                  pmax    pmax
      comp=Z,51nm,1.3s
DGZ                                  MLR     MLR
      comp=Z,49µm,17.0s
ANGG  Ammassalik, Gr    58.30  20    IAMs_20 IAMs_20  16 41 55.5
      comp=Z,28µm,19.0s
K50A  Casco             58.33  60    P       P        16 13 37.0 -2.3
K50A                                 IAmb    IAmb     16 13 55.6
      comp=Z,152nm,1.2s
833A  Chaparral WMA,    58.41  83    P       P        16 13 40.2 +0.2
      baz=316,SNR=12
833A                                 S       S        16 21 38.8 -3.4
      baz=316
PARMO Parma             58.46  70    P       P        16 13 38.5 -1.7
WLAR  White Oak Lake    58.51  74    P       P        16 13 39.1 -1.5
ARA0  ARCESS Array S    58.52 352   eP       P        16 13 40.2  0.0
ARCES ARCESS Array B    58.52 352    P       P        16 13 38.8 -1.4
      comp=Z,4.6nm,0.4s,baz=18,slow=6.8,SNR=22
ARCES                                LR      LR       16 39 24.8
      comp=Z,24µm,20.9s,baz=15,slow=37
ARCES ARCESS Array B    58.52 352    P       P        16 13 36.7 -3.5
HENM  Henderson Moun    58.59  69    P       P        16 13 40.1 -1.0
BLO   Bloomington       58.62  65    P       P        16 13 39.4 -1.9
BLO                                  pmax    pmax
      comp=Z,240nm,0.9s
BLO   Bloomington       58.62  65    P       P        16 13 39.4 -1.9
N49A  Columbus Grove    58.74  62    P       P        16 13 40.0 -2.1
N49A                                 IAmb    IAmb     16 14 04.5
      comp=Z,127nm,0.9s
PEBM  Pemiscott Bayo    58.78  70    P       P        16 13 41.2 -1.2
LZH   Lanzhou           58.79 290  ⇑P        P        16 13 43.1 +0.3
LZH                                  pP      sP       16 13 47.9 -0.3
LZH                                  sP      pwP      16 13 51.8 -0.6
LZH                                  PP      PP       16 15 48.0 -4.4
LZH                                 eS       S        16 21 44.5 -2.8
LZH                                  sS      sS       16 21 56.4 +2.6
LZH                                  SS      SS       16 25 34.6 -5.4
LZH                                  pmax    pmax
      comp=Z,360nm,1.1s
LZH                                  pmax    pmax
      comp=Z,6µm,4.6s
LZH                                  LR      LR
      comp=Z,31µm,17.6s
LZH                                  LR      LR
      comp=Z,42µm,15.7s
LZH                                  LR      LR
      comp=Z,43µm,19.8s
GNAR  Gosnell           58.79  70    P       P        16 13 41.4 -1.1
SADO  Sadowa            58.82  56    P       P        16 13 41.4 -1.2
SADO                                 IAmb    IAmb     16 14 06.8
      comp=Z,93nm,0.9s
GTA   Gaotai            58.84 295  ⇑P        P        16 13 42.1 -0.9
GTA                                  pP      pP       16 13 45.3 -1.7
GTA                                  sP      sP       16 13 48.3 -0.2
GTA                                  PP      PP       16 15 52.9 +0.1
GTA                                  S       S        16 21 44.1 -3.7
GTA                                  ScS     ScS      16 23 30.9 -1.3
GTA                                  pmax    pmax
      comp=Z,4µm,8.0s
GTA                                  LR      LR
      comp=Z,35µm,15.3s
GTA                                  LR      LR
      comp=Z,45µm,17.4s
GTA                                  LR      LR
      comp=Z,60µm,17.4s
JETT  Jettan, Norway    58.85 355   eP       P        16 13 42.0 -0.6
TRO   Tromso            58.86 355   eP       P        16 13 41.5 -1.0
TRO                                  IVmB_BB          16 13 54.5
      comp=Z,2µm,3.9s
TRO                                 eS       S        16 21 47.2 +0.3
TRO                                  IVMs_BB IVMs_BB  16 36 29.6
      comp=Z,7µm,18.7s
T45A  Paducah           58.87  69    P       P        16 13 41.5 -1.6
LPAR  Lepanto           58.87  71    P       P        16 13 41.4 -1.7
NATX  Nacogdoches       58.91  77    P       P        16 13 42.5 -1.0
      baz=315
NATX                                 S       S        16 21 46.1 -2.5
      baz=315
NATX  Nacogdoches       58.91  77    P       P        16 13 42.5 -1.0
NATX                                 IAMs_20 IAMs_20  16 40 37.4
      comp=Z,20µm,18.0s
Z41A  Richland Creek    59.00  74    P       P        16 13 42.8 -1.2
      baz=314
Z41A                                 S       S        16 21 47.6 -2.1
      baz=314
LNXT  Lenox             59.00  70    P       P        16 13 42.4 -1.6
GLAT  Glass             59.01  70    P       P        16 13 42.2 -1.8
M50A  Fremont           59.03  61    P       P        16 13 42.3 -1.8
M50A                                 IAmb    IAmb     16 14 00.8
      comp=Z,96nm,1.1s
P48A  Milroy            59.04  64    P       P        16 13 42.4 -1.9
LVZ   Lovozero          59.13 348ceP         P        16 13 42.5 -2.0
LVZ                                  pmax    pmax
      comp=Z,141nm,1.3s
LVZ   Lovozero          59.13 348    P       P        16 13 41.9 -2.7
LVZ                                  IAmb    IAmb     16 14 00.5
      comp=Z,151nm,1.1s
LVZ                                  IAMs_20 IAMs_20  16 42 04.6
      comp=Z,26µm,19.0s
O49A  Covington         59.15  63    P       P        16 13 43.3 -1.8
O49A                                 IAmb    IAmb     16 14 06.3
      comp=Z,77nm,0.9s
CCAR  Cane Creek        59.16  73    P       P        16 13 44.0 -1.1
KTK1  Kautokeino        59.20 353   eP       P        16 13 44.6 -0.3
KTK1                                 IVmB_BB          16 13 52.9
      comp=Z,3µm,14.4s

KTK1                                eS       S        16 21 53.9 +2.5
KTK1                                 IVMs_BB IVMs_BB  16 44 33.2
      comp=Z,10µm,14.2s
HALT  Halls             59.22  70    P       P        16 13 43.9 -1.6
IVI   Ivigtut           59.33  28    P       P        16 13 43.8 -2.0
IVI                                  IAmb    IAmb     16 14 09.9
      comp=Z,71nm,1.0s
P49A  Miami Univ. Ec    59.39  64    P       P        16 13 45.7 -1.0
      baz=314,SNR=10
P49A                                 S       S        16 21 50.8 -3.8
      baz=314
P49A  Miami Univ. Ec    59.39  64    P       P        16 13 45.1 -1.6
WCI   Wyandotte Cave    59.39  66    P       P        16 13 45.6 -1.1
WCI                                  pmax    pmax
      comp=Z,319nm,1.3s
WCI                                  MLR     MLR
      comp=Z,41µm,18.0s
WCI   Wyandotte Cave    59.39  66    P       P        16 13 45.6 -1.1
      baz=314
WCI                                  S       S        16 21 52.1 -2.6
      baz=314
WCI   Wyandotte Cave    59.39  66    P       P        16 13 45.6 -1.1
ENH   Enshi             59.43 281    P       P        16 13 45.8 -1.3
HKT   Hockley           59.46  79d iP        P        16 13 48.4 +1.2
HKT                                  pmax    pmax
      comp=Z,38nm,1.1s
HKT                                  MLR     MLR
      comp=Z,26µm,16.0s
HKT   Hockley           59.46  79    P       P        16 13 48.1 +0.9
HKT                                  IAmb    IAmb     16 14 04.3
      comp=Z,222nm,1.4s
HKT   Hockley           59.46  79    IAMs_20 IAMs_20  16 40 36.6
      comp=Z,20µm,18.0s
APA   Apatity           59.60 349⇓iP         P        16 13 45.7 -2.0
APA                                 i                 16 16 08.0
PLVO  Plevna            59.69  55    P       P        16 13 48.2 -0.5
N51A  Ashland           59.73  61    P       P        16 13 48.2 -0.8
DELO  Deloro Mine       59.78  56    P       P        16 13 48.2 -1.0
DELO                                 IAmb    IAmb     16 14 07.0
      comp=Z,247nm,1.2s
T47A  Sharon Grove      59.78  68    P       P        16 13 47.3 -2.1
W45A  Hickory Valley    59.84  70    P       P        16 13 48.5 -1.3
M52A  Chesterland       59.86  60    P       P        16 13 48.5 -1.4
M52A                                 IAmb    IAmb     16 14 12.1
      comp=Z,123nm,0.9s
ACSO  Alum Creek Sta    59.87  62    P       P        16 13 49.0 -1.0
      baz=314,SNR=7.0
ACSO                                 S       S        16 21 57.2 -3.7
      baz=314
ACSO  Alum Creek Sta    59.87  62    P       P        16 13 48.8 -1.2
ACSO                                 IAmb    IAmb     16 14 11.6
      comp=Z,134nm,1.1s
ACSO                                 IAMs_20 IAMs_20  16 41 00.8
      comp=Z,27µm,18.0s
KVTX  Kingsville        59.90  83    IAMs_20 IAMs_20  16 38 31.2
      comp=Z,20µm,18.0s
WVT   Waverly           59.95  69    P       P        16 13 49.6 -1.0
WVT                                  pmax    pmax
      comp=Z,393nm,1.4s
WVT                                  MLR     MLR
      comp=Z,19µm,20.0s
WVT   Waverly           59.95  69    P       P        16 13 49.1 -1.5
      baz=314
WVT                                  S       S        16 21 58.5 -3.5
      baz=314
WVT   Waverly           59.95  69    P       P        16 13 49.6 -1.0
WVT   Waverly           59.95  69    IAMs_20 IAMs_20  16 41 13.8
      comp=Z,19µm,20.0s
R49A  Shelbyville       59.99  65    P       P        16 13 49.0 -1.8
R49A                                 IAmb    IAmb     16 14 06.7
      comp=Z,254nm,1.4s
J54A  Appleton          60.11  57    P       P        16 13 49.5 -2.1
J54A                                 IAmb    IAmb     16 14 15.1
      comp=Z,200nm,1.2s
TRQ   Mont Tremblant    60.14  52    P       P        16 13 49.8 -2.0
NRS   Narsarsuaq        60.15  26    IAMs_20 IAMs_20  16 41 51.7
      comp=Z,33µm,20.0s
ERPA  Erie              60.20  59    P       P        16 13 51.5 -0.7
      baz=314,SNR=7.5
ERPA                                 S       S        16 22 00.3 -4.7
      baz=314
ERPA  Erie              60.20  59    P       P        16 13 50.4 -1.8
143A  Socs Landing,     60.23  74    P       P        16 13 50.7 -1.7
MEDO  Medina            60.28  57    P       P        16 13 51.0 -1.7
MEDO                                 IAmb    IAmb     16 14 15.3
      comp=Z,177nm,1.1s
M53A  WI Miller and     60.30  60    P       P        16 13 52.2 -0.7
      baz=314,SNR=13
M53A                                 S       S        16 22 02.7 -3.7
      baz=314
M53A  WI Miller and     60.30  60    P       P        16 13 51.5 -1.5
P51A  Williamsport      60.35  63    P       P        16 13 51.9 -1.4
P51A                                 IAmb    IAmb     16 14 07.3
      comp=Z,182nm,1.4s
ZAIG  Zacatecas         60.43  90    P       P        16 13 53.1 -1.3
ALLY  Alegheny Colle    60.44  59    P       P        16 13 52.6 -1.2
R50A  Paris             60.47  65    P       P        16 13 53.2 -1.0
PECO  Prince Edward     60.51  56    P       P        16 13 53.2 -1.1
Q51A  Peebles           60.51  63    P       P        16 13 53.3 -1.1
Y45A  Yeager Farm, C    60.52  72    P       P        16 13 53.2 -1.3
LOF   Lofoten           60.59 357   eP       P        16 13 54.6 +0.2
LOF                                  IVmB_BB          16 13 58.0
      comp=Z,3µm,4.4s
LOF                                 eS       S        16 22 12.7 +3.5
LOF                                  IVMs_BB IVMs_BB  16 37 53.0
      comp=Z,6µm,22.7s
O52A  Adamsville        60.59  62    P       P        16 13 53.2 -1.7
342A  Flagon Creek P    60.60  76    P       P        16 13 54.4 -0.7
PLAL  Pickwick Lake     60.61  70    P       P        16 13 53.2 -1.9
PLAL                                 IAMs_20 IAMs_20  16 42 58.3
      comp=Z,21µm,19.0s
N53A  Lisbon            60.65  60    P       P        16 13 53.5 -1.8
N53A                                 IAmb    IAmb     16 14 12.4
      comp=Z,232nm,1.2s
STEI  Steigen           60.73 356   eP       P        16 13 54.7 -0.7
P52A  Corning           60.76  62    P       P        16 13 55.3 -0.8
      baz=315,SNR=5.9
P52A                                 S       S        16 22 06.6 -5.6
      baz=315
P52A  Corning           60.76  62    P       P        16 13 54.1 -1.9
P52A                                 IAmb    IAmb     16 14 17.4
      comp=Z,112nm,1.0s
P52A                                 IAMs_20 IAMs_20  16 40 27.2
      comp=Z,27µm,21.0s
M54A  Oil Creek Stat    60.80  59    P       P        16 13 55.4 -0.9
      baz=315,SNR=8.9
M54A                                 S       S        16 22 08.6 -4.1
      baz=315
M54A  Oil Creek Stat    60.80  59    P       P        16 13 54.3 -2.0
M54A                                 IAmb    IAmb     16 14 16.2
      comp=Z,144nm,1.0s
V48A  Smith Brothers    60.81  68    P       P        16 13 54.6 -1.9
V48A                                 IAmb    IAmb     16 14 13.3
      comp=Z,193nm,1.1s
O53A  New Philadelph    60.84  61    P       P        16 13 56.2 -0.4
      baz=315,SNR=9.6
O53A                                 S       S        16 22 08.4 -4.8
      baz=315
O53A  New Philadelph    60.84  61    P       P        16 13 54.3 -2.3
O53A                                 IAmb    IAmb     16 14 18.3
      comp=Z,231nm,1.2s
CLTN  Cedars of Leba    60.85  68    P       P        16 13 55.2 -1.5
U49A  Red Boiling Sp    60.88  67    P       P        16 13 55.4 -1.5
U49A                                 IAmb    IAmb     16 14 12.9
      comp=Z,185nm,1.2s
N54A  Moraine State     61.00  60    P       P        16 13 57.3 -0.5
      baz=315,SNR=13
N54A                                 S       S        16 22 10.9 -4.5
      baz=315
N54A  Moraine State     61.00  60    P       P        16 13 56.3 -1.4
SEM   Semipalatinsk     61.01 316⇑iP         P        16 13 55.9 -2.0
      baz=316
SEM                                 eS       S        16 22 12.6 -3.0
      baz=316
SEM                                 eLR      LR       16 40 37.4
      comp=Z,16µm,16.7s,baz=316
SEM   Semipalatinsk     61.01 316c iP        P        16 13 55.8 -2.0
SEM                                 eS       S        16 22 12.5 -3.0
SEM                                  MLR     MLR
      comp=Z,16µm,17.0s
ZSN   Zaisan            61.04 311⇑iP         P        16 13 56.7 -1.2
      comp=Z,534nm,3.3s,baz=311
ZSN                                 eS       S        16 22 14.2 -1.4
      baz=311
ZSN   Zaisan            61.04 311c iP        P        16 13 56.6 -1.2

ZSN                                 eS       S        16 22 14.1 -1.5
ZSN                                  pmax    pmax
      comp=Z,535nm,3.3s
J56A  Wolcott           61.04  56    P       P        16 13 55.8 -2.1
J56A                                 IAmb    IAmb     16 14 06.7
      comp=Z,166nm,1.0s
T50A  Nancy             61.06  66    P       P        16 13 56.4 -1.7
VBMS  Vicksburg         61.10  74    P       P        16 13 57.6 -0.9
      baz=315
VBMS                                 S       S        16 22 14.7 -1.9
      baz=315
VBMS  Vicksburg         61.10  74    P       P        16 13 57.6 -0.9
VBMS                                 IAMs_20 IAMs_20  16 42 26.7
      comp=Z,21µm,20.0s
MNTQ  Montreal, Queb    61.11  52    P       P        16 13 55.9 -2.4
Q52A  Bidwell           61.15  63    P       P        16 13 56.6 -2.2
Q52A                                 IAmb    IAmb     16 14 15.1
      comp=Z,132nm,1.1s
LMQ   La Malbaie        61.24  49    P       P        16 13 57.1 -2.1
LONY  Lake Ozonia       61.25  54    P       P        16 13 58.4 -0.9
      baz=316,SNR=17
LONY                                 S       S        16 22 15.2 -3.3
      baz=316
LONY  Lake Ozonia       61.25  54    P       P        16 13 57.1 -2.3
LONY                                 IAmb    IAmb     16 14 16.0
      comp=Z,254nm,1.1s
P53A  Whipple           61.27  62    P       P        16 13 57.9 -1.7
FAUS  Fauske            61.27 356   eP       P        16 13 58.4 -0.8
FAUS                                 IVmBBB           16 14 00.8
      comp=Z,3µm,4.6s
FAUS                                eS       S        16 22 19.8 +1.8
FAUS                                 IVMs_BB IVMs_BB  16 48 59.8
      comp=Z,6µm,20.2s
M55A  Ridgway           61.31  59    P       P        16 13 58.4 -1.4
S51A  Beattyville       61.34  65    P       P        16 13 59.2 -0.8
S51A                                 IAmb    IAmb     16 14 21.6
      comp=Z,120nm,1.1s
O54A  Avella            61.34  61    P       P        16 13 59.2 -0.8
J57A  Williamstown      61.39  55    P       P        16 13 59.5 -0.8
KURK  Kurchatov         61.49 317ceP         P        16 13 59.3 -1.5
KURK                                 pmax    pmax
      comp=Z,193nm,1.3s
KURK                                 MLR     MLR
      comp=Z,83µm,18.0s
KURK  Kurchatov         61.49 317    P       P        16 13 59.1 -1.7
KURK  Kurchatov         61.49 317    P       P        16 13 59.0 -1.7
KURK                                 IAmb    IAmb     16 14 19.1
      comp=Z,84nm,0.7s
344A  Westbrook Farm    61.51  74    P       P        16 14 00.6 -0.7
X48A  Hartselle         61.59  70    P       P        16 13 59.8 -2.0
KURBB Kurchatov Arra    61.59 317    PKPPKP           16 43 13.5
      comp=Z,0.4nm,0.6s,baz=241,slow=2.8,SNR=6.2
KURBB Kurchatov Arra    61.59 317    P       P        16 14 00.1 -1.4
FRNY  Flat Rock         61.60  53    P       P        16 13 59.5 -2.2
FRNY                                 IAmb    IAmb     16 14 17.3
      comp=Z,132nm,1.0s
K57A  Scipio Center     61.60  56    P       P        16 14 00.3 -1.4
K57A                                 IAmb    IAmb     16 14 10.6
      comp=Z,163nm,0.9s
146A  Union             61.67  72    P       P        16 14 00.8 -1.6
SWET  Sewanee           61.70  68    P       P        16 14 00.4 -2.2
SWET                                 IAmb    IAmb     16 14 17.9
      comp=Z,215nm,1.4s
R53A  Hurricane         61.77  63    P       P        16 14 01.5 -1.5
J58A  Remsen            61.79  55    P       P        16 14 00.6 -2.4
Z47A  Carrollton        61.87  71    P       P        16 14 02.1 -1.5
NCB   Newcomb           61.90  54    P       P        16 14 01.6 -2.2
NCB                                  IAmb    IAmb     16 14 27.9
      comp=Z,155nm,1.1s
MOQ   Mont Orford       61.92  52    P       P        16 14 02.0 -1.9
Q54A  Coxs Mills        61.93  62    P       P        16 14 02.1 -2.0
Q54A                                 IAmb    IAmb     16 14 26.1
      comp=Z,122nm,0.8s
MCWV  Mont Chateau      62.00  61    P       P        16 14 03.8 -0.6
      baz=315
MCWV                                 S       S        16 22 26.5 -1.5
      baz=315
MCWV  Mont Chateau      62.00  61    P       P        16 14 02.5 -1.9
MCWV                                 IAMs_20 IAMs_20  16 41 55.9
      comp=Z,30µm,21.0s
BORG  Borgarnes         62.03  13    P       P        16 14 02.0 -2.2
BORG                                 pmax    pmax
      comp=Z,179nm,1.5s
BORG                                 MLR     MLR
      comp=Z,19µm,18.0s
BORG  Borgarnes         62.03  13    P       P        16 14 02.0 -2.2
BORG                                 IAmb    IAmb     16 14 07.1
      comp=Z,179nm,1.4s
BORG  Borgarnes         62.03  13    IAMs_20 IAMs_20  16 45 07.6
      comp=Z,19µm,18.0s
W50A  Signal Mountai    62.07  68    P       P        16 14 03.3 -1.7
NBB13 Alf Garage        62.10 357   eP       P        16 14 04.5 -0.2
J59A  Piesco            62.12  55    P       P        16 14 04.0 -1.2
TZTN  Tazewell          62.13  66    P       P        16 14 05.0 -0.4
      baz=315,SNR=14
TZTN                                 S       S        16 22 26.5 -3.3
      baz=315
TZTN  Tazewell          62.13  66    P       P        16 14 05.0 -0.4
D62A  Allapoint, All    62.18  49    P       P        16 14 03.7 -1.8
GZH   Guangzhou         62.19 273    P       P        16 14 02.1 -3.8
GZH                                  PP      PP       16 16 18.2 -4.4
GZH                                  S       S        16 22 23.4 -7.4
GZH                                  pmax    pmax
      comp=Z,7µm,7.1s
GZH                                  LR      LR
      comp=Z,9µm,18.3s
GZH                                  LR      LR
      comp=Z,10µm,18.7s
V51A  Loudon            62.20  67    P       P        16 14 03.9 -2.0
V51A                                 IAmb    IAmb     16 14 19.9
      comp=Z,151nm,1.1s
HKC   Hong Kong Obse    62.25 271  ⇑P        P        16 14 09.0 +2.7
WMQ   Urumqi            62.25 306    P       P        16 14 06.2  0.0
WMQ                                  pP      pP       16 14 10.2  0.0
WMQ                                  sP      pwP      16 14 16.7 +0.8
WMQ                                  PcS     PcS      16 18 52.0 +2.8
WMQ                                  S       S        16 22 31.2  0.0
WMQ                                  SKS     ScS      16 23 58.2 +0.8
WMQ                                  pmax    pmax
      comp=Z,110nm,1.3s
WMQ                                  pmax    pmax
      comp=Z,6µm,6.5s
WMQ                                  LR      LR
      comp=Z,52µm,21.1s
WMQ                                  LR      LR
      comp=Z,28µm,22.1s
WMQ                                  LR      LR
      comp=Z,24µm,26.3s
BINY  Binghamton        62.25  56    P       P        16 14 05.1 -1.0
      baz=316,SNR=15
BINY                                 S       S        16 22 29.1 -2.1
      baz=316
BINY  Binghamton        62.25  56    P       P        16 14 04.5 -1.7
O56A  Blue Knob Stat    62.26  60    P       P        16 14 04.9 -1.4
      baz=316,SNR=13
O56A                                 S       S        16 22 28.2 -3.1
      baz=316
O56A  Blue Knob Stat    62.26  60    P       P        16 14 04.3 -1.9
O56A                                 IAmb    IAmb     16 14 28.6
      comp=Z,188nm,1.1s
M57A  Sunshine Farm,    62.27  58    P       P        16 14 04.5 -1.7
M57A                                 IAmb    IAmb     16 14 29.8
      comp=Z,132nm,1.1s
E62A  Clayton Lake      62.29  49    P       P        16 14 04.5 -1.8
E62A                                 IAmb    IAmb     16 14 23.0
      comp=Z,157nm,1.0s
346A  Big Creek Wild    62.32  74    P       P        16 14 06.2 -0.5
CPCT  Cooper Cave       62.35  67    P       P        16 14 06.1 -0.7
CPCT                                 IAmb    IAmb     16 14 23.1
      comp=Z,106nm,1.1s
FPAL  Fort Paine        62.36  69    P       P        16 14 05.9 -1.1
SSPA  Standing Stone    62.36  59    P       P        16 14 06.0 -0.9
      baz=316
SSPA                                 S       S        16 22 30.2 -2.4
      baz=316
SSPA  Standing Stone    62.36  59    P       P        16 14 06.1 -0.8
SSPA                                 IAmb    IAmb     16 14 24.2
      comp=Z,190nm,1.1s
SSPA  Standing Stone    62.36  59    IAMs_20 IAMs_20  16 41 26.4
      comp=Z,33µm,20.0s
VT1   Waterbury         62.38  53    P       P        16 14 06.2 -0.7
Y49A  Blount Mountai    62.38  70    P       P        16 14 05.4 -1.7
Y49A                                 IAmb    IAmb     16 14 24.2
      comp=Z,193nm,1.2s
S54A  Dingess, Beckl    62.50  63    P       P        16 14 06.6 -1.4
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MOR8	**Moi Rana**	**62.52**	**357**	*e*P	**P**	**16 14 06.6**	**-0.9**
MOR8				IVmB_BB		16 14 08.7	
	comp=Z,3µm,3.3s						
MOR8				*e*S	**S**	**16 22 32.8**	**-1.0**
MOR8				IVMs_BB	IVMs_BB	16 44 07.3	
	comp=Z,6µm,20.1s						
ACCN	**Adirondack Com**	**62.60**	**54**	P	**P**	**16 14 06.7**	**-1.7**
F62A	**Pittston Farm,**	**62.60**	**50**	P	**P**	**16 14 06.6**	**-1.8**
TKL	**Tuckaleechee C**	**62.63**	**66**	P	**P**	**16 14 07.8**	**-0.9**
TKL				pmax	pmax		
	comp=Z,404nm,1.4s						
TKL	**Tuckaleechee C**	**62.63**	**66**	P	**P**	**16 14 07.8**	**-0.9**
MK31	**Makanchi Array**	**62.73**	**312**	*c* *i*P	**P**	**16 14 07.3**	**-2.0**
MK31				pmax	pmax		
	comp=Z,60nm,1.1s						
MK31	**Makanchi Array**	**62.73**	**312**	P	**P**	**16 14 06.8**	**-2.4**
MKAR	**Makanchi Array**	**62.73**	**312**	P	**P**	**16 14 07.6**	**-1.7**
	comp=Z,9.0nm,0.4s,baz=46,slow=6.2,SNR=55						
MKAR				LR	LR	16 43 16.4	
	comp=Z,35µm,18.1s,baz=32,slow=38						
MKAR				PKPPKP	P'P'df	16 43 26.1	+8.1
	comp=Z,1.8nm,1.0s,baz=236,slow=5.7,SNR=4.6						
MKAR	**Makanchi Array**	**62.73**	**312**	P	**P**	**16 14 07.1**	**-2.1**
L59A	**Walton**	**62.75**	**56**	P	**P**	**16 14 08.7**	**-0.8**
X51A	**Calhoun**	**62.78**	**68**	P	**P**	**16 14 08.3**	**-1.4**
Q56A	**Snyder Ridge,**	**62.80**	**61**	P	**P**	**16 14 08.2**	**-1.6**
Q56A				IAmb	IAmb	16 14 27.2	
	comp=Z,204nm,1.4s						
G62A	**West of Eustis**	**62.83**	**51**	P	**P**	**16 14 08.4**	**-1.5**
KSPA	**Keystone Colle**	**62.83**	**57**	P	**P**	**16 14 08.9**	**-1.0**
KSPA				IAmb	IAmb	16 14 28.1	
	comp=Z,216nm,1.3s						
N58A	**Sunbury**	**62.84**	**58**	P	**P**	**16 14 09.0**	**-1.1**
N58A				IAmb	IAmb	16 14 33.5	
	comp=Z,247nm,1.3s						
LBNH	**Lisbon**	**62.85**	**52**	P	**P**	**16 14 09.2**	**-0.9**
	baz=317,SNR=15						
LBNH				S	**S**	**16 22 36.1**	**-2.5**
	baz=317						
MAKZ	**Makanchi**	**62.86**	**312**	P	**P**	**16 14 08.3**	**-1.9**
MAKZ	**Makanchi**	**62.86**	**312**	P	**P**	**16 14 08.1**	**-2.1**
W52A	**Murphy**	**62.94**	**67**	P	**P**	**16 14 09.4**	**-1.5**
W52A				IAmb	IAmb	16 14 25.0	
	comp=Z,141nm,1.1s						
PQI	**Presque Isle**	**62.96**	**48**	P	**P**	**16 14 08.9**	**-1.8**
PQI				IAmb	IAmb	16 14 17.4	
	comp=Z,100nm,0.7s						
H62A	**Milan**	**62.99**	**52**	P	**P**	**16 14 09.7**	**-1.3**
HNH	**Hanover**	**63.06**	**53**	P	**P**	**16 14 09.8**	**-1.7**
HNH				IAmb	IAmb	16 14 28.2	
	comp=Z,209nm,1.2s						
TRY	**Troy**	**63.07**	**55**	P	**P**	**16 14 10.0**	**-1.5**
BRVK	**Borovoye**	**63.07**	**323**	*c* *i*P	**P**	**16 14 09.8**	**-1.6**
BRVK				pmax	pmax		
	comp=Z,203nm,1.4s						
BRVK				MLR	MLR		
	comp=Z,98µm,18.0s						
BRVK	**Borovoye**	**63.07**	**323**	P	**P**	**16 14 09.5**	**-1.9**
BRVK				IAmb	IAmb	16 14 15.7	
	comp=Z,126nm,1.1s						
PRGR	**Permogore**	**63.08**	**340**	*e*P	**P**	**16 14 10.8**	**-0.5**
PRGR				pmax	pmax		
	comp=Z,95nm,1.3s						
P57A	**Homestead Farm**	**63.12**	**60**	P	**P**	**16 14 09.9**	**-2.0**
U54A	**Nelsons Funny**	**63.13**	**65**	P	**P**	**16 14 10.1**	**-2.0**
F63A	**Nahmakanta, Br**	**63.16**	**50**	P	**P**	**16 14 10.2**	**-1.9**
V53A	**Saluda**	**63.17**	**66**	P	**P**	**16 14 11.0**	**-1.4**
J61A	**Chester**	**63.19**	**53**	P	**P**	**16 14 10.7**	**-1.6**
PAGS	**Pennsylvania G**	**63.28**	**58**	P	**P**	**16 14 11.5**	**-1.4**
PAGS				IAmb	IAmb	16 14 35.4	
	comp=Z,150nm,1.0s						
N59A	**State Game Lan**	**63.29**	**57**	P	**P**	**16 14 12.5**	**-0.5**
	baz=316,SNR=12						
N59A				S	**S**	**16 22 41.0**	**-3.1**
	baz=316						
SVE	**Sverdlovsk**	**63.36**	**330**	*e*P	**P**	**16 14 12.8**	**-0.4**
SVE				*e*S	**S**	**16 22 44.8**	**+0.3**
SVE				*e*		16 26 53.2	
SVE				pmax	pmax		
	comp=Z,127nm,1.6s						
SVE				MLR	MLR		
	comp=Z,54µm,17.0s						
SVE				MLR	MLR		
	comp=E,20µm,17.0s						
SVE				MLR	MLR		
	comp=N,26µm,16.0s						
PKME	**Peaks-Kenny Pk**	**63.39**	**50**	P	**P**	**16 14 12.7**	**-0.9**
	baz=318,SNR=13						
PKME				S	**S**	**16 22 41.8**	**-3.4**
	baz=318						
PKME	**Peaks-Kenny Pk**	**63.39**	**50**	P	**P**	**16 14 12.0**	**-1.6**
F64A	**Sherman**	**63.40**	**49**	P	**P**	**16 14 11.9**	**-1.8**
BATG	**Bathurst New B**	**63.41**	**47**	P	**P**	**16 14 12.1**	**-1.7**
BATG				IAmb	IAmb	16 14 29.0	
	comp=Z,257nm,1.4s						
BLA	**Blacksburg**	**63.42**	**63**	P	**P**	**16 14 12.1**	**-1.9**
BLA				pmax	pmax		
	comp=Z,435nm,1.2s						
BLA				MLR	MLR		
	comp=Z,35µm,19.0s						
BLA	**Blacksburg**	**63.42**	**63**	P	**P**	**16 14 11.9**	**-2.1**
	baz=316,SNR=18						
BLA				S	**S**	**16 22 42.3**	**-3.7**
	baz=316						
BLA	**Blacksburg**	**63.42**	**63**	P	**P**	**16 14 12.1**	**-1.9**
FFD	**Franklin Falls**	**63.55**	**53**	P	**P**	**16 14 12.7**	**-2.0**
FFD				IAmb	IAmb	16 14 32.0	
	comp=Z,161nm,1.0s						
MOIG	**Morelia**	**63.58**	**91**	P	**P**	**16 14 14.7**	**-0.8**
MOIG				IAmb	IAmb	16 14 40.8	
	comp=Z,136nm,1.0s						
MVL	**Millersville**	**63.64**	**58**	P	**P**	**16 14 13.7**	**-1.6**
MVL				IAmb	IAmb	16 14 38.0	
	comp=Z,132nm,1.0s						
I63A	**Otisfield**	**63.65**	**52**	P	**P**	**16 14 14.3**	**-1.1**
LUPA	**Lehigh Univers**	**63.72**	**57**	P	**P**	**16 14 14.4**	**-1.5**
WVL	**Waterville**	**63.73**	**51**	P	**P**	**16 14 14.2**	**-1.6**
L61B	**Northampton**	**63.77**	**54**	P	**P**	**16 14 15.2**	**-1.0**
	baz=317,SNR=9.0						
L61B				S	**S**	**16 22 48.5**	**-1.6**
	baz=317						
ODNJ	**Ogdensburg**	**63.78**	**56**	P	**P**	**16 14 15.0**	**-1.2**
ODNJ				IAmb	IAmb	16 14 25.1	
	comp=Z,123nm,0.9s						
250A	**Grady**	**63.80**	**71**	P	**P**	**16 14 15.4**	**-1.1**
SDMD	**Soldier's Deli**	**63.80**	**59**	P	**P**	**16 14 15.2**	**-1.3**
SDMD				IAmb	IAmb	16 14 39.4	
	comp=Z,101nm,1.1s						
S57A	**Dark Hollow, R**	**63.84**	**62**	P	**P**	**16 14 15.4**	**-1.3**
S57A				IAmb	IAmb	16 14 39.3	
	comp=Z,172nm,1.0s						
K62A	**Royalston**	**63.84**	**54**	P	**P**	**16 14 15.5**	**-1.2**
GYA	**Guiyang**	**63.89**	**280**	⇓P	**P**	**16 14 19.2**	**+1.9**
GYA				S	**S**	**16 22 52.1**	**-0.1**
GYA				SS	**SS**	**16 27 01.4**	**+1.3**
GYA				pmax	pmax		
	comp=Z,60nm,1.0s						
GYA				pmax	pmax		
	comp=Z,6µm,7.0s						
GYA				LR	LR		
	comp=Z,10µm,25.3s						
GYA				LR	LR		
	comp=Z,16µm,20.6s						
GYA				LR	LR		
	comp=Z,7µm,18.8s						
KSCT	**Kent School, K**	**63.89**	**55**	P	**P**	**16 14 16.1**	**-0.8**
BRAL	**Brewton**	**63.91**	**72**	P	**P**	**16 14 15.5**	**-1.8**
	baz=316						
BRAL				S	**S**	**16 22 48.9**	**-3.3**
	baz=316						
BRAL	**Brewton**	**63.91**	**72**	IAMs_20	IAMs_20	16 45 35.1	
	comp=Z,17µm,18.0s						
TRNY	**Table Rock, Ra**	**63.93**	**56**	P	**P**	**16 14 16.2**	**-1.1**
TRNY				IAmb	IAmb	16 14 39.1	
	comp=Z,133nm,1.1s						
V55A	**Taylorsville**	**63.95**	**65**	P	**P**	**16 14 16.5**	**-1.0**
U56A	**King**	**64.06**	**64**	P	**P**	**16 14 16.9**	**-1.4**
QUA2	**Belchertown**	**64.06**	**54**	P	**P**	**16 14 16.9**	**-1.2**
WUPA	**West Chester U**	**64.08**	**58**	P	**P**	**16 14 16.6**	**-1.6**
WUPA				IAmb	IAmb	16 14 38.4	
	comp=Z,66nm,1.1s						
BRNJ	**Basking Ridge**	**64.09**	**57**	P	**P**	**16 14 16.9**	**-1.3**
BRNJ				IAmb	IAmb	16 14 27.4	
	comp=Z,145nm,0.8s						
P60A	**Greenville**	**64.15**	**58**	P	**P**	**16 14 17.5**	**-1.2**
	baz=317						
P60A				S	**S**	**16 22 52.7**	**-2.2**
	baz=317						
P60A	**Greenville**	**64.15**	**58**	P	**P**	**16 14 17.5**	**-1.2**
P60A				IAmb	IAmb	16 14 38.9	
	comp=Z,102nm,1.1s						
PAL	**Palisades**	**64.19**	**56**	P	**P**	**16 14 17.5**	**-1.5**
PAL				pmax	pmax		
	comp=Z,319nm,1.1s						
PAL				MLR	MLR		
	comp=Z,44µm,18.0s						
PAL	**Palisades**	**64.19**	**56**	P	**P**	**16 14 18.5**	**-0.5**
	baz=317,SNR=16						
PAL				S	**S**	**16 22 52.5**	**-2.8**
	baz=317						
PAL	**Palisades**	**64.19**	**56**	P	**P**	**16 14 17.5**	**-1.5**
152A	**Waverly Hall**	**64.22**	**69**	P	**P**	**16 14 17.4**	**-1.9**
152A				IAmb	IAmb	16 14 34.2	
	comp=Z,179nm,1.1s						
T57A	**Hurt**	**64.22**	**63**	P	**P**	**16 14 17.4**	**-1.8**
T57A				IAmb	IAmb	16 14 41.8	
	comp=Z,132nm,0.9s						
NSS	**Namsos**	**64.24**	**358**	*e*P	**P**	**16 14 17.9**	**-1.0**
G65A	**Princeton**	**64.26**	**49**	P	**P**	**16 14 17.6**	**-1.7**
R58B	**Mineral**	**64.28**	**61**	P	**P**	**16 14 18.2**	**-1.4**
R58B				IAmb	IAmb	16 14 42.1	
	comp=Z,146nm,1.1s						
HRV	**Adam Dziewonsk**	**64.30**	**54**	P	**P**	**16 14 17.3**	**-2.4**
HRV				pmax	pmax		
	comp=Z,276nm,1.2s						
HRV				MLR	MLR		
	comp=Z,39µm,20.0s						
HRV	**Adam Dziewonsk**	**64.30**	**54**	P	**P**	**16 14 19.2**	**-0.5**
	baz=318						
HRV				S	**S**	**16 22 54.1**	**-2.5**
	baz=318						
HRV	**Adam Dziewonsk**	**64.30**	**54**	P	**P**	**16 14 17.3**	**-2.4**
CPNY	**Central Park**	**64.32**	**56**	P	**P**	**16 14 18.6**	**-1.3**
ARU	**Arti**	**64.33**	**331**	*c* *i*P	**P**	**16 14 18.2**	**-1.4**
ARU						16 14 48.8	
ARU						16 16 35.5	
ARU				PPP	PPP	16 18 09.1	
ARU				S	**S**	**16 22 56.5**	**0.0**
ARU						16 24 12.0	
ARU				SSS	SSS	16 30 01.2	
ARU				pmax	pmax		
	comp=Z,89nm,1.0s						
ARU				pmax	pmax		
	comp=Z,3µm,9.7s						
ARU				MLR	MLR		
	comp=Z,63µm,18.0s						
ARU	**Arti**	**64.33**	**331**	P	**P**	**16 14 17.4**	**-2.2**
ARU				IAmb	IAmb	16 14 25.9	
	comp=Z,88nm,0.7s						
PAULI	**Pauline**	**64.35**	**66**	P	**P**	**16 14 18.9**	**-1.1**
WSPT	**Westport, CT**	**64.37**	**56**	P	**P**	**16 14 19.2**	**-0.9**
CBN	**Corbin Frederi**	**64.38**	**60**	P	**P**	**16 14 19.0**	**-1.3**
	baz=317						
CBN				S	**S**	**16 22 55.9**	**-1.9**
	baz=317						
KMSC	**Kings Mountain**	**64.39**	**65**	P	**P**	**16 14 19.8**	**-0.6**
	baz=316,SNR=31						
KMSC				S	**S**	**16 22 55.0**	**-3.0**
	baz=316						
KMSC	**Kings Mountain**	**64.39**	**65**	P	**P**	**16 14 19.0**	**-1.4**
GOGA	**Godfrey**	**64.41**	**68**	P	**P**	**16 14 19.1**	**-1.4**
GOGA				pmax	pmax		
	comp=Z,255nm,1.2s						
GOGA				MLR	MLR		
	comp=Z,22µm,21.0s						
GOGA	**Godfrey**	**64.41**	**68**	P	**P**	**16 14 19.8**	**-0.7**
	baz=316,SNR=19						
GOGA				S	**S**	**16 22 52.2**	**-6.1**
	baz=316						
GOGA	**Godfrey**	**64.41**	**68**	P	**P**	**16 14 19.1**	**-1.4**
GOGA	**Godfrey**	**64.41**	**68**	IAMs_20	IAMs_20	16 42 08.8	
	comp=Z,22µm,21.0s						
YLE	**Yale**	**64.47**	**55**	P	**P**	**16 14 20.2**	**-0.6**
YLE				IAmb	IAmb	16 14 44.0	
	comp=Z,181nm,1.1s						
N62A	**Caumsett State**	**64.48**	**56**	P	**P**	**16 14 19.5**	**-1.3**
UCCT	**U. Connecticut**	**64.48**	**54**	P	**P**	**16 14 19.4**	**-1.5**
WES	**Weston**	**64.51**	**53**	P	**P**	**16 14 19.3**	**-1.7**
WES				pmax	pmax		
	comp=Z,256nm,1.0s						
WES				MLR	MLR		
	comp=Z,41µm,20.0s						
WES	**Weston**	**64.51**	**53**	P	**P**	**16 14 19.3**	**-1.7**
HODGE	**Hodges**	**64.52**	**67**	P	**P**	**16 14 19.6**	**-1.6**
BRZS	**Berezniki**	**64.53**	**319**	⇑*i*P	**P**	**16 14 18.9**	**-2.2**
	comp=Z,62nm,1.6s,baz=320						
BRZS	**Berezniki**	**64.53**	**319**	*c* *i*P	**P**	**16 14 18.9**	**-2.2**
BRZS				pmax	pmax		
	comp=Z,62nm,1.6s						
BCX	**Boston College**	**64.62**	**53**	P	**P**	**16 14 19.5**	**-2.2**
BCX				IAmb	IAmb	16 14 37.9	
	comp=Z,211nm,1.3s						
GGN	**Saint George**	**64.66**	**49**	P	**P**	**16 14 20.2**	**-1.7**
EMMW	**East Machias**	**64.68**	**49**	P	**P**	**16 14 20.6**	**-1.5**
BRYW	**Bryant College**	**64.74**	**54**	P	**P**	**16 14 21.1**	**-1.5**
BRYW				IAmb	IAmb	16 14 39.9	
	comp=Z,213nm,1.1s						
M63A	**Gales Ferry**	**64.86**	**55**	P	**P**	**16 14 21.7**	**-1.6**
352A	**Blakely**	**64.95**	**70**	P	**P**	**16 14 22.7**	**-1.4**
KIRV	**Kirov**	**64.96**	**337**	*ce*P	**P**	**16 14 22.9**	**-0.7**
KLMR	**Klimovskoe**	**65.00**	**343**	*c* *i*P	**P**	**16 14 22.7**	**-1.2**
KLMR				*e*		16 16 53.2	
KLMR				PPP	PPP	16 18 21.8	
KLMR				*e*S	**S**	**16 23 05.4**	**+0.8**
KLMR				*e*SS	**SS**	**16 27 18.3**	**+2.9**
KLMR				pmax	pmax		
	comp=Z,112nm,1.3s						
KLMR	**Klimovskoe**	**65.00**	**343**	⇑*i*P	**P**	**16 14 22.7**	**-1.2**
KLMR				*i* P	**P**	**16 14 22.7**	**-1.2**
KLMR				⇓*i*P	**P**	**16 14 22.7**	**-1.2**
KLMR				AMP		16 14 38.1	
	comp=Z,112nm,1.3s						
KLMR				*e*PP	**PP**	**16 16 53.2**	**+7.0**
KLMR				PPP	PPP	16 18 21.8	
KLMR				*e*S	**S**	**16 23 05.5**	**+0.8**
KLMR				*e*S	**S**	**16 23 05.5**	**+0.8**
KLMR				*e*SS	**SS**	**16 27 18.4**	**+3.0**
KLMR				*e*SS	**SS**	**16 27 18.4**	**+3.0**
KLMR				*e*SSS	SSS	16 30 17.9	
KLMR				*e*SSS	SSS	16 30 17.9	
KLMR				LQ	LQ	16 38 56.7	
KLMR				LQ	LQ	16 38 56.7	
KLMR				LR	LR	16 43 21.4	
KLMR				AMP		16 49 25.9	
	comp=Z,26µm,17.9s						
Q61A	**Milford**	**65.00**	**59**	P	**P**	**16 14 23.7**	**-0.5**
	baz=317						
Q61A				S	**S**	**16 23 04.5**	**-0.7**
	baz=317						
HNR	**Honiara**	**65.02**	**210**	P	**P**	**16 14 25.1**	**+0.6**
	comp=Z,31nm,1.1s,baz=44,slow=15,SNR=1.7						
HNR				LR	LR	16 38 37.0	
	comp=Z,11µm,20.2s,baz=20,slow=32						
JSC	**Jenkinsville**	**65.05**	**66**	P	**P**	**16 14 23.5**	**-1.2**
JSC				pmax	pmax		
	comp=Z,261nm,1.0s						
JSC	**Jenkinsville**	**65.05**	**66**	P	**P**	**16 14 23.5**	**-1.2**
LMN	**Caledonia Moun**	**65.06**	**47**	P	**P**	**16 14 22.7**	**-1.9**
L64A	**Middleborough**	**65.08**	**54**	P	**P**	**16 14 23.6**	**-1.1**
UNM	**Universidad Na**	**65.09**	**90**	IAMs_20	IAMs_20	16 41 21.9	
	comp=Z,18µm,19.0s						
W57A	**Gilead**	**65.14**	**64**	P	**P**	**16 14 23.9**	**-1.4**
V58A	**Windy Hill, Pi**	**65.17**	**63**	P	**P**	**16 14 24.6**	**-0.8**
T59A	**Double "B" Far**	**65.18**	**61**	P	**P**	**16 14 24.4**	**-1.0**
154A	**Montrose**	**65.19**	**68**	P	**P**	**16 14 24.2**	**-1.4**
M65A	**Busby, Falmout**	**65.45**	**54**	P	**P**	**16 14 26.4**	**-0.8**
	baz=318						
M65A				S	**S**	**16 23 08.8**	**-2.0**
	baz=318						
M65A	**Busby, Falmout**	**65.45**	**54**	P	**P**	**16 14 26.0**	**-1.2**
TBLU	**Trondheim**	**65.56**	**358**	*e*P	**P**	**16 14 25.5**	**-2.0**
TBLU				*e*S	**S**	**16 23 10.0**	**-1.5**
TBLU				IVMs_BB	IVMs_BB	16 42 48.9	
	comp=Z,7µm,17.0s						
DRLN	**Deer Lake**	**65.59**	**40**	P	**P**	**16 14 26.8**	**-1.1**
DRLN				IAmb	IAmb	16 14 50.5	
	comp=Z,234nm,1.4s						
Y57A	**Sumter**	**65.74**	**66**	P	**P**	**16 14 28.3**	**-0.8**
TIGA	**Tifton**	**65.76**	**70**	P	**P**	**16 14 27.2**	**-2.1**
	baz=317						
TIGA				S	**S**	**16 23 09.4**	**-5.5**
	baz=317						
TDK	**Taldyqorghan**	**65.87**	**313**	*e*P	**P**	**16 14 28.4**	**-1.4**
	comp=Z,126nm,1.2s,baz=313						
TDK				*e*S	**S**	**16 23 14.8**	**-1.2**
	baz=313						
TDK				*e*LR	LR	16 43 32.6	
	comp=Z,21µm,17.8s,baz=313						
TDK	**Taldyqorghan**	**65.87**	**313**	*e*P	**P**	**16 14 28.4**	**-1.4**
TDK				*e*S	**S**	**16 23 14.7**	**-1.2**
TDK				pmax	pmax		
	comp=Z,126nm,1.2s						
TDK				MLR	MLR		
	comp=Z,21µm,18.0s						
255A	**Hazlehurst**	**66.06**	**68**	P	**P**	**16 14 29.8**	**-1.4**
553A	**Crawfordville**	**66.18**	**71**	P	**P**	**16 14 30.5**	**-1.5**
CNNC	**Cliffs of the**	**66.26**	**63**	P	**P**	**16 14 30.8**	**-1.6**
	baz=318						
CNNC				S	**S**	**16 23 17.7**	**-3.1**
	baz=318						
MOL	**Molde**	**66.27**	**360**	*e*P	**P**	**16 14 31.8**	**-0.3**
MOL				*e*S	**S**	**16 23 20.0**	**-0.2**
MOL				IVMs_BB	IVMs_BB	16 47 08.6	
	comp=Z,5µm,6.7s						
FIA1	**FINESS Array S**	**66.37**	**350**	P	**P**	**16 14 31.1**	**-1.6**
FIA1				IAmb	IAmb	16 14 48.8	
	comp=Z,139nm,1.4s						
FINES	**FINESS Array B**	**66.38**	**350**	P	**P**	**16 14 30.7**	**-2.1**
	comp=Z,3.9nm,0.4s,baz=14,slow=6.1,SNR=23						
FINES				LR	LR	16 47 11.0	
	comp=Z,18µm,18.1s,baz=18,slow=39						
TAOE	**Nuku Hiva Isla**	**66.46**	**144**	*e*S	**S**	**16 23 22.9**	**-0.8**
	comp=Z,11µm,25.2s						
TAOE	**Nuku Hiva Isla**	**66.46**	**144**	*e*LR	LR	16 34 31.0	
	comp=Z,31µm,21.3s						
TAOE	**Nuku Hiva Isla**	**66.46**	**144**	*e*T	T	17 26 36.3	
	comp=Z,60nm,0.3s						
NHSC	**New Hope**	**66.52**	**66**	P	**P**	**16 14 31.8**	**-2.4**
	baz=318						
NHSC				S	**S**	**16 23 21.6**	**-2.5**
	baz=318						
NHSC	**New Hope**	**66.52**	**66**	P	**P**	**16 14 33.1**	**-1.0**
JAY	**Jayapura**	**66.57**	**232**	P	**P**	**16 14 35.2**	**+0.5**
	comp=Z,9.7nm,0.8s,baz=337,slow=1.7,SNR=12						
JAY				LR	LR	16 38 34.1	
	comp=Z,14µm,21.1s,baz=17,slow=31						
V61A	**Roper**	**66.58**	**62**	P	**P**	**16 14 33.4**	**-1.1**
PDGK	**Podgornoye**	**66.63**	**311**	P	**P**	**16 14 33.5**	**-1.4**
RGRS	**Roger Stewart**	**66.66**	**66**	P	**P**	**16 14 34.2**	**-0.8**
AKN	**Aaknes**	**66.67**	**360**	*e*P	**P**	**16 14 34.6**	**0.0**
AKN				IVmBBB		16 14 45.6	
	comp=Z,5µm,6.4s						
AKN				*e*S	**S**	**16 23 27.0**	**+1.9**
AKN				IVMs_BB	IVMs_BB	16 46 08.9	
	comp=Z,9µm,4.4s						
ARXS	**Arharly**	**66.74**	**312**	*e*P	P	16 14 19.3	-16
SHLS	**Shalkode**	**66.78**	**311**	⇑*i*P	**P**	**16 14 33.6**	**-2.3**
	comp=Z,196nm,1.5s,baz=311						
SHLS				*e*S	**S**	**16 23 22.2**	**-5.0**
	baz=311						
SHLS	**Shalkode**	**66.78**	**311**	*c* *i*P	**P**	**16 14 33.5**	**-2.3**
SHLS				*e*S	**S**	**16 23 22.2**	**-5.0**
SHLS				pmax	pmax		
	comp=Z,196nm,1.5s						
DOMB	**Dombas**	**66.79**	**359**	*e*P	**P**	**16 14 35.0**	**-0.5**
DOMB				IVmB_BB		16 14 42.6	
	comp=Z,6µm,4.9s						
DOMB				*e*S	**S**	**16 23 29.1**	**+2.5**
DOMB				IVMs_BB	IVMs_BB	16 42 18.4	
	comp=Z,7µm,5.4s						
TLIG	**Tlapa**	**66.80**	**91**	P	**P**	**16 14 36.3**	**0.0**
GBN	**Guysborough**	**66.88**	**45**	P	**P**	**16 14 35.8**	**-0.5**
DAV	**Davao City (W)**	**66.90**	**251**	P	**P**	**16 14 37.6**	**+0.9**
	comp=Z,93nm,0.3s,baz=45,slow=3.0,SNR=6.7						
DAV				LR	LR	16 41 39.9	
	comp=Z,8µm,19.3s,baz=68,slow=34						
KPKS	**Kokpek**	**66.91**	**311**	⇑*i*P	**P**	**16 14 35.8**	**-0.9**
	comp=Z,52nm,1.5s,baz=312						
KPKS				*e*S	**S**	**16 23 29.1**	**+0.4**
	baz=312						
KPKS	**Kokpek**	**66.91**	**311**	*c* *i*P	**P**	**16 14 35.7**	**-0.9**
KPKS				*e*S	**S**	**16 23 29.1**	**+0.4**
KPKS				pmax	pmax		
	comp=Z,52nm,1.5s						
UZB	**Uzynbulak**	**66.99**	**311**	⇑*i*P	**P**	**16 14 35.8**	**-1.5**
	comp=Z,47nm,1.3s,baz=311						
UZB				*e*S	**S**	**16 23 30.4**	**+0.5**
	baz=311						
UZB	**Uzynbulak**	**66.99**	**311**	*c* *i*P	**P**	**16 14 35.7**	**-1.5**
UZB				*e*S	**S**	**16 23 30.3**	**+0.4**
UZB				pmax	pmax		
	comp=Z,47nm,1.3s						
SMPI	**Sarmi**	**67.12**	**234**	P	**P**	**16 14 40.5**	**+2.4**
	comp=Z,7µmcomp=Z,2µmcomp=Z,62nm,1.6s						
456A	**Hilliard**	**67.20**	**69**	P	**P**	**16 14 37.2**	**-1.4**
FOO	**Floro**	**67.24**	**1**	*e*P	**P**	**16 14 38.4**	**+0.1**
FOO				*e*S	**S**	**16 23 33.3**	**+1.4**
KMI	**Kunming**	**67.27**	**282**	⇑P	**P**	**16 14 39.3**	**0.0**
KMI				pP	pP	16 14 43.1	-0.2
KMI				PP	**PP**	**16 17 09.9**	**+2.6**
KMI				S	**S**	**16 23 31.7**	**-2.1**
KMI				sS	pS	16 23 39.1	+0.4
KMI				SKS	**SKSac**	**16 24 35.5**	**-0.8**
KMI				SS	**SS**	**16 27 51.6**	**-1.3**
KMI				pmax	pmax		
	comp=Z,160nm,1.8s						
KMI				pmax	pmax		
	comp=Z,6µm,7.4s						
KMI				LR	LR		
	comp=Z,15µm,19.1s						
KMI				LR	LR		
	comp=Z,13µm,20.1s						
KMI				LR	LR		
	comp=Z,20µm,15.4s						
SATY	**Saty**	**67.35**	**311**	⇑*i*P	**P**	**16 14 38.6**	**-0.9**
	comp=Z,44nm,1.0s,baz=311						
SATY				*i* S	**S**	**16 23 35.0**	**+0.9**
	baz=311						
SATY	**Saty**	**67.35**	**311**	*c* *i*P	**P**	**16 14 38.6**	**-0.9**
SATY				*i* S	**S**	**16 23 35.0**	**+0.9**
SATY				pmax	pmax		
	comp=Z,44nm,1.0s						
QIZ	**Qiongzhong**	**67.38**	**272**	P	**P**	**16 14 40.0**	**+0.2**
QIZ				PP	**PP**	**16 17 09.2**	**+1.0**
QIZ				S	**S**	**16 23 35.9**	**+1.1**
QIZ				SS	**SS**	**16 27 53.3**	**-1.2**
QIZ				pmax	pmax		
	comp=Z,5µm,7.6s						
QIZ				LR	LR		
	comp=Z,6µm,17.2s						
QIZ				LR	LR		
	comp=Z,13µm,20.6s						
QIZ				LR	LR		
	comp=Z,9µm,20.6s						
CHKK	**Chushkaly**	**67.40**	**313**	*e*P	**P**	**16 14 37.7**	**-2.0**
	baz=313						
PUL	**Pulkovo**	**67.48**	**347**	⇑*e*P	**P**	**16 14 40.3**	**+0.5**
PUL				pmax	pmax		
	comp=Z,78nm,1.2s						
PUL				MLR	MLR		
	comp=Z,22µm,21.0s						
NC204	**NORSAR Array S**	**67.53**	**358**	P	**P**	**16 14 38.2**	**-2.0**
NC204				IAmb	IAmb	16 14 42.0	
	comp=Z,127nm,1.2s						
NC303	**NORSAR Array S**	**67.57**	**358**	P	**P**	**16 14 38.3**	**-2.1**
KUU	**Kurty**	**67.67**	**313**	⇑*i*P	**P**	**16 14 39.5**	**-1.9**
	comp=Z,103nm,1.4s,baz=313						
KUU				*i* S	**S**	**16 23 37.3**	**-0.5**
	baz=313						
KUU	**Kurty**	**67.67**	**313**	*c* *i*P	**P**	**16 14 39.4**	**-1.9**
KUU				*i* S	**S**	**16 23 37.2**	**-0.5**
KUU				pmax	pmax		
	comp=Z,103nm,1.4s						
NC405	**NORSAR Array S**	**67.67**	**358**	P	**P**	**16 14 38.9**	**-2.1**
NC405				IAmb	IAmb	16 14 55.9	
	comp=Z,84nm,0.9s						
HYA	**Hoyanger**	**67.68**	**0**	*e*P	**P**	**16 14 40.7**	**-0.4**
NB201	**NORSAR Array S**	**67.75**	**358**	P	**P**	**16 14 39.8**	**-1.8**
NB201				IAmb	IAmb	16 15 04.9	
	comp=Z,94nm,0.9s						
NB2	**NORSAR Subarra**	**67.76**	**358**	P	**P**	**16 14 40.0**	**-1.6**
	comp=Z,157nm,2.0s,baz=1.2,slow=6.5						
NB2	**NORSAR Subarra**	**67.76**	**358**	P	**P**	**16 14 40.0**	**-1.6**
	baz=1.2,slow=6.5						
NOA	**NORSAR Array B**	**67.76**	**358**	P	**P**	**16 14 39.3**	**-2.3**

	comp=Z,7.3nm,0.8s,baz=1.8,slow=6.3,SNR=15						
NOA				LR	LR	16 43 28.2	
	comp=Z,9µm,20.2s,baz=10.0,slow=35						
NBO00	**NORSAR Array S**	67.78	358	P	P	16 14 39.7	-2.0
NBO00				IAmb	IAmb	16 14 50.2	
	comp=Z,96nm,1.4s						
BAKI	**Biak**	67.78	237	P	P	16 14 43.3	+1.0
	comp=Z,147nm,1.6s						
SUE	**Sulen**	67.78	1	*e*P	P	16 14 40.8	-0.8
SUE				*e*S	S	16 23 42.7	+4.3
PRZ	**Przheval'sk**	67.80	311	P	P	16 14 41.0	-1.4
PRZ				pmax	pmax		
	comp=Z,204nm,1.5s						
PRZ	**Przheval'sk**	67.80	311	P	P	16 14 41.0	-1.4
PRZ				IAmb	IAmb	16 15 04.5	
	comp=Z,204nm,1.4s						
BTLS	**Baital**	67.80	315⇑	*i*P	P	16 14 41.1	-1.1
	comp=Z,46nm,1.1s,baz=315						
BTLS				*e*S	S	16 23 38.4	-0.8
	baz=315						
BTLS				*e*SS	SS	16 28 08.2	+8.4
	baz=315						
BTLS	**Baital**	67.80	315*c*	*i*P	P	16 14 41.0	-1.1
BTLS				*e*S	S	16 23 38.4	-0.8
BTLS				pmax	pmax		
	comp=Z,46nm,1.1s						
656A	**Willston**	67.90	70	P	P	16 14 42.7	-0.3
656A				IAmb	IAmb	16 15 01.1	
	comp=Z,198nm,1.0s						
MDOK	**Medeo**	67.91	312	*e*P	P	16 14 41.7	-1.3
	baz=312						
MDOK				*e*S	S	16 23 44.5	+3.7
	baz=312						
MDOK				*e*LR	LR	16 44 49.2	
	comp=Z,14µm,17.0s,baz=312						
MDOK	**Medeo**	67.91	312	*e*P	P	16 14 41.6	-1.4
MDOK				*e*S	S	16 23 44.5	+3.7
MDOK				MLR	MLR		
	comp=Z,14µm,17.0s						
AAA	**Alma-Ata**	67.93	312	*e*P	P	16 14 42.1	-1.0
	baz=312						
AAA				*e*S	S	16 23 42.4	+1.4
	baz=312						
AAA				*e*SS	SS	16 28 15.2	+13
	baz=312						
AAA				*e*LR	LR	16 45 58.7	
	comp=Z,19µm,16.9s,baz=312						
AAA	**Alma-Ata**	67.93	312	*e*P	P	16 14 42.1	-1.0
AAA				*e*S	S	16 23 42.4	+1.4
AAA				MLR	MLR		
	comp=Z,19µm,17.0s						
NAO01	**NORSAR Array S**	67.96	358	P	P	16 14 40.7	-2.2
TNSS	**Tian-Shan**	68.05	312	*e*P	P	16 14 42.3	-1.9
	baz=312						
NC602	**NORSAR Array S**	68.06	358	*e*P	P	16 14 43.2	-0.3
NC602				*e*S	S	16 23 40.9	-0.8
NC602				IVMs_BB	IVMs_BB	16 43 14.9	
	comp=Z,6µm,20.5s						
NC602	**NORSAR Array S**	68.06	358	P	P	16 14 42.0	-1.5
NC602				IAmb	IAmb	16 15 06.3	
	comp=Z,156nm,1.4s						
SKAR	**Skarslia**	68.16	359	*e*P	P	16 14 43.0	-1.2
SKAR				*e*S	S	16 23 44.4	+1.2
SKAR				IVMs_BB	IVMs_BB	16 40 42.5	
	comp=Z,7µm,4.7s						
SRPI	**Serui, Papua**	68.28	236	P	P	16 14 47.4	+1.9
	comp=Z,5µmcomp=Z,3µmcomp=Z,102nm,2.3s						
ASK	**Askoy**	68.36	1	*e*P	P	16 14 44.9	-0.5
BER	**Bergen**	68.46	1	*e*P	P	16 14 47.0	+1.0
BER				IVmB_BB		16 14 52.7	
	comp=Z,5µm,3.1s						
BER				*e*S	S	16 23 47.7	+1.2
BER				IVMs_BB	IVMs_BB	16 48 33.9	
	comp=Z,7µm,4.8s						
TARG	**Taragay, Kyrgy**	68.66	311	P	P	16 14 47.1	-1.0
TARG				IAmb	IAmb	16 15 09.9	
	comp=Z,57nm,0.8s						
UPP	**Uppsala**	68.66	354	*e*P	P	16 14 47.6	+0.3
TKM2	**Tokmak 2**	68.76	313	P	P	16 14 48.1	-0.4
	SNR=104						
TKM2	**Tokmak 2**	68.76	313	P	P	16 14 47.4	-1.1
SGDS	**Sogindy**	68.79	314⇑	*i*P	P	16 14 47.7	-0.8
	comp=Z,62nm,1.3s,baz=314						
SGDS				*e*S	S	16 23 49.1	-2.0
	baz=314						
SGDS				*e*SS	SS	16 28 29.7	+15
	baz=314						
OSL	**Oslo**	68.87	358	*e*P	P	16 14 48.1	-0.4
OSL				*e*S	S	16 23 53.6	+2.1
OSL				IVMs_BB	IVMs_BB	16 40 58.8	
	comp=Z,7µm,23.9s						
ODD1	**Odda**	68.94	0	*e*P	P	16 14 49.0	-0.1
ULHL	**Ulahol**	68.99	312	P	P	16 14 52.1	+2.2
	SNR=6.8						
USP	**Ospenovka**	68.99	314	P	P	16 14 49.1	-0.6
	SNR=127						
CHMS	**Chumysh**	69.09	313	P	P	16 14 50.0	-0.2
	SNR=59						
KONO	**Kongsberg**	69.18	359⇑	*e*P	P	16 14 49.9	-0.6
KONO				pmax	pmax		
	comp=Z,79nm,1.3s						
KONO	**Kongsberg**	69.18	359	IVmBBB		16 14 49.6	
	comp=Z,3µm,4.3s						
KONO				*e*P	P	16 14 50.0	-0.6
KONO				*e*S	S	16 23 56.4	+1.2
KONO				IVMs_BB	IVMs_BB	16 53 54.9	
	comp=Z,8µm,16.6s						
KONO	**Kongsberg**	69.18	359	P	P	16 14 48.0	-2.5
KONO				IAmb	IAmb	16 14 51.7	
	comp=Z,102nm,1.4s						
VSU	**Vasula**	69.22	349	*e*P	P	16 14 50.4	-0.2
VSU	**Vasula**	69.22	349*c*	*e*P	P	16 14 49.7	-1.0
VSU				pmax	pmax		
	comp=Z,259nm,1.3s						
VSU				MLR	MLR		
	comp=Z,71µm,21.0s						
KBK	**Karagaybulak**	69.27	313	P	P	16 14 51.4	-0.2
	SNR=68						
SLVN	**Son La**	69.36	279	P	P	16 14 51.6	-0.7
SLVN				IAmb	IAmb	16 15 12.3	
	comp=Z,109nm,0.9s						
SLVN				IAMs_20	IAMs_20	16 46 14.1	
	comp=Z,22µm,20.0s						
MSVF	**Nonsavu**	69.38	189	P	P	16 14 54.9	+2.7
	comp=Z,9.2nm,0.9s,baz=315,slow=4.3						
MSVF				LR	LR	16 41 41.6	
	comp=Z,23µm,19.4s,baz=354,slow=33						
MSVF	**Nonsavu**	69.38	189⇑	*e*P	P	16 14 56.2	+4.0
MSVF				pmax	pmax		
	comp=Z,126nm,3.1s						
MSVF	**Nonsavu**	69.38	189	P	P	16 14 54.3	+2.1
MSVF				IAmb	IAmb	16 15 07.9	
	comp=Z,83nm,1.1s						
MSVF	**Nonsavu**	69.38	189	IAMs_20	IAMs_20	16 42 28.4	
	comp=Z,27µm,19.0s						
BLS5	**Blasjo**	69.43	0	*e*P	P	16 14 51.6	-0.5
BLS5				IVmB_BB		16 15 01.3	
	comp=Z,3µm,4.7s						
BLS5				*e*S	S	16 23 58.8	+0.6
BLS5				IVMs_BB	IVMs_BB	16 55 45.5	
	comp=Z,7µm,5.5s						
CMIG	**Matias Romero**	69.46	88	P	P	16 14 53.2	+0.4
	comp=Z,38nm,1.2s,baz=279,slow=2.4,SNR=2.6						
DWPF	**Disney Wildern**	69.48	71	P	P	16 14 52.1	-0.7
	baz=319						
DWPF				S	S	16 23 55.8	-3.7
	baz=319						
DWPF	**Disney Wildern**	69.48	71	IAMs_20	IAMs_20	16 48 22.2	
	comp=Z,20µm,18.0s						
AAK	**Ala-Archa**	69.49	313	P	P	16 14 52.7	-0.2
	SNR=91						
AAK	**Ala-Archa**	69.49	313	*i* P	P	16 14 52.1	-0.9
	SNR=178						
AAK	**Ala-Archa**	69.49	313*c*	*i*P	P	16 14 52.3	-0.6
AAK				pmax	pmax		
	comp=Z,893nm,1.3s						
AAK				MLR	MLR		
	comp=Z,73µm,19.0s						
AAK	**Ala-Archa**	69.49	313	P	P	16 14 52.4	-0.6
AAK	**Ala-Archa**	69.49	313	P	P	16 14 52.0	-0.9
AAK	**Ala-Archa**	69.49	313	IAMs_20	IAMs_20	16 46 36.6	
	comp=Z,25µm,19.0s						
SGSI	**Sangihe**	69.64	249	P	P	16 14 54.9	+0.9
	comp=Z,142nm,1.1s						
PMG	**Port Moresby**	69.70	222	LR	LR	16 41 10.1	
	comp=Z,12µm,20.7s,baz=30,slow=32						
PMG	**Port Moresby**	69.70	222	P	P	16 14 54.7	+0.5
PMG				pmax	pmax		
	comp=Z,136nm,1.2s						
PMG				MLR	MLR		
	comp=Z,12µm,20.0s						
PMG	**Port Moresby**	69.70	222	P	P	16 14 54.7	+0.5
PMG				IAmb	IAmb	16 15 14.5	
	comp=Z,136nm,1.2s						
PMOR	**Pomariorio Ree**	69.75	154	*e*P	P	16 14 54.6	+0.2
	comp=Z,276nm,1.3s						
PMOR	**Pomariorio Ree**	69.75	154	*e*T	T	17 30 42.7	
	comp=Z,21nm,0.2s						
LKP	**Lekhapani**	69.79	289	*e*P	P	16 14 56.3	+1.5
LKP				IAmb	IAmb	16 15 11.2	
	comp=Z,1µm,1.5s						
EKS2	**Erkin-Say**	69.80	314	P	P	16 14 54.2	-0.6
	SNR=109						
UCH	**Uchtor**	69.80	313	P	P	16 14 55.1	-0.1
	SNR=77						
AB31	**Akbulak array**	69.94	326	*i* P	P	16 14 53.9	-1.4
ABKAR	**Akbulak array**	69.94	326	P	P	16 14 53.8	-1.5
ABKAR	**Akbulak array**	69.94	326	P	P	16 14 53.9	-1.5
ABKAR				IAmb	IAmb	16 15 02.6	
	comp=Z,68nm,0.8s						
VAH	**Vaihoa**	70.05	154	*e*P	P	16 14 56.1	-0.1
	comp=Z,232nm,1.2s						
SWI	**Sorong**	70.11	241	P	P	16 14 56.9	+0.1
	comp=Z,10µmcomp=Z,6µmcomp=Z,346nm,1.2s						
MOS	**Moscow**	70.15	342	*e*P	P	16 14 54.5	-2.0
MOS				*e*S	S	16 24 06.5	-0.1
MOS				pmax	pmax		
	comp=Z,87nm,0.7s						
MOS				pmax	pmax		
	comp=Z,4µm,8.9s						
MOS				MLR	MLR		
	comp=N,36µm,19.0s						
MOS				MLR	MLR		
	comp=E,16µm,19.0s						
MOS				MLR	MLR		
	comp=Z,38µm,19.0s						
DIBR	**DIBRUGARH**	70.24	289	*e*P	P	16 14 58.3	+0.7
AML	**Almayashu**	70.25	313	P	P	16 14 58.0	+0.1
	SNR=102						
AML	**Almayashu**	70.25	313	*i* P	P	16 14 57.3	-0.6
	SNR=53						
AML	**Almayashu**	70.25	313	P	P	16 14 57.9	+0.1
SNART	**Snartemo**	70.52	360	*e*P	P	16 14 58.7	0.0
HOMB	**Homborsund**	70.58	359	*i* P	P	16 15 00.0	+0.9
HOMB				*i* P	P	16 15 00.0	+0.9
HOMB				*i* P	P	16 15 00.0	+0.9
HOMB	**Homborsund**	70.58	359	*e*P	P	16 14 58.6	-0.5
HOMB				IVmB_BB		16 15 00.9	
	comp=Z,4µm,4.5s						
HOMB				*e*S	S	16 24 12.8	+1.2
HOMB				IVMs_BB	IVMs_BB	16 45 22.9	
	comp=Z,6µm,5.5s						
DZA	**Taraz**	70.70	315	*e*P	P	16 14 58.3	-1.9
	baz=316						
DZA				*e*S	S	16 24 14.9	+1.3
	baz=316						
DZA	**Taraz**	70.70	315	*e*P	P	16 14 58.3	-1.9
DZA				*e*S	S	16 24 14.8	+1.3
LSA	**Lhasa**	70.76	294	P	P	16 15 02.0	+0.7
LSA	**Lhasa**	70.76	294	P	P	16 15 01.3	0.0
LSA				pmax	pmax		
	comp=Z,280nm,0.7s						
LSA				MLR	MLR		
	comp=Z,28µm,20.0s						
LSA	**Lhasa**	70.76	294	P	P	16 15 01.2	0.0
KK31	**Karatay Array**	70.89	316	*i* P	P	16 15 00.4	-0.9
KK31	**Karatay Array**	70.89	316	P	P	16 14 60.0	-1.3
KK31				IAmb	IAmb	16 15 05.5	
	comp=Z,72nm,0.8s						
KKAR	**Karatay Array**	70.89	316	P	P	16 15 00.0	-1.3
KKAR	**Karatay Array**	70.89	316	P	P	16 14 60.0	-1.3
KKAR	**Karatay Array**	70.89	316	P	P	16 14 59.9	-1.4
KKAR				IAmb	IAmb	16 15 05.5	
	comp=Z,72nm,0.8s						
OBN	**Obninsk**	70.94	343⇑	*e*P	P	16 15 00.1	-1.2
OBN				*e*		16 15 20.5	
OBN				*e*		16 17 40.2	
OBN				pmax	pmax		
	comp=Z,112nm,1.3s						
OBN	**Obninsk**	70.94	343	P	P	16 14 59.2	-2.0
OBN				IAmb	IAmb	16 15 17.3	
	comp=Z,56nm,0.7s						
TNTI	**Ternate**	70.94	246	P	P	16 15 03.8	+1.9
	comp=Z,6µmcomp=Z,5µmcomp=Z,150nm,2.2s						
TNTI	**Ternate**	70.94	246	P	P	16 15 01.1	-0.8
TNTI				IAmb	IAmb	16 15 30.0	
	comp=Z,242nm,1.5s						
BORU	**Boraas**	71.12	357	*i* P	P	16 15 02.7	+0.3
JORH	**JORHAT**	71.17	289	*e*P	P	16 15 04.4	+1.2
ITAN	**ITANAGAR**	71.18	290	*e*P	P	16 15 04.4	+1.1
KSH	**Kashi**	71.25	310	P	P	16 15 06.5	+2.8
KSH				pP	sP	16 15 10.6	+1.4
KSH				sP	pwP	16 15 12.3	-1.2
KSH				S	S	16 24 25.5	+5.2
KSH				ScS	SKSac	16 25 04.3	-1.6
KSH				SS	SS	16 28 59.3	+5.9
KSH				pmax	pmax		
	comp=Z,330nm,1.4s						
KSH				pmax	pmax		
	comp=Z,7µm,9.3s						
KSH				LR	LR		
	comp=Z,62µm,15.5s						
KSH				LR	LR		
	comp=Z,49µm,18.9s						
FAKI	**Fak Fak**	71.28	239	P	P	16 15 04.6	+0.7
	comp=Z,9µmcomp=Z,6µmcomp=Z,267nm,2.0s						
FAKI	**Fak Fak**	71.28	239	P	P	16 15 03.9	-0.1
MOKO	**MOKOCHONG**	71.33	289	*e*P	P	16 15 06.0	+1.7
061Z	**Ochoppi**	71.46	72	P	P	16 15 05.1	+0.2
PPT	**Papeete**	71.77	156	LR	LR	16 43 12.4	
	comp=Z,16µm,18.7s,baz=320,slow=33						
CCIG	**Comitan**	71.78	87	P	P	16 15 07.1	-0.1
PPT2	**Papeete2**	71.79	156	*e*S	S	16 24 26.4	-0.1
	comp=Z,52µm,27.0s						
PPT2	**Papeete2**	71.79	156	*e*LR	LR	16 37 04.2	
	comp=Z,26µm,22.5s						
PPT2	**Papeete2**	71.79	156	*e*T	T	17 33 15.5	
	comp=Z,10nm,0.3s						
PPTF	**Pamatai, Papee**	71.79	156	IAMs_20	IAMs_20	16 42 04.1	
	comp=Z,17µm,20.0s						
PAE	**Paea**	71.86	156	*e*T	T	17 33 20.1	
	comp=Z,3.2nm,0.3s						
LBMI	**Labuha**	72.02	245	P	P	16 15 09.0	+0.6
	comp=Z,7µmcomp=Z,5µmcomp=Z,239nm,1.9s						
KOHI	**KOHIMA**	72.02	289	*e*P	P	16 15 09.1	+0.5
ISAL	**Salakas**	72.12	349	*e*P	P	16 15 08.5	+0.1
DEL	**Delary**	72.24	356	*i* P	P	16 15 08.0	-1.2
BLEU	**Blekinge**	72.31	355	*i* P	P	16 15 10.0	+0.4
BLEU				AMP		16 15 12.8	
	comp=Z,1µm,0.5s						
MUD	**Monsted U'grnd**	72.39	359	*i* P	P	16 15 12.0	+2.0
PABE	**Paberze**	72.43	350	*e*P	P	16 15 10.0	-0.3
PABE	**Paberze**	72.43	350	P	P	16 15 07.8	-2.5
PABE				IAmb	IAmb	16 15 26.7	
	comp=Z,304nm,1.2s						
PABE				IAMs_20	IAMs_20	16 52 11.1	
	comp=Z,25µm,20.0s						
SOR	**Soroa**	72.51	75	P	P	16 15 10.5	-0.8
SOR				pmax	pmax		
	comp=Z,171nm,1.2s						
SOR	**Soroa**	72.51	75	P	P	16 15 10.5	-0.8
SOR				IAmb	IAmb	16 15 29.0	
	comp=Z,171nm,1.2s						
BJUU	**Bjuv**	72.67	356	*i* P	P	16 15 13.8	+2.1
BJUU				AMP		16 15 17.5	
	comp=Z,1µm,0.7s						
NACGM	**Naroch**	72.69	348	*i* P	P	16 15 10.2	-1.7
LPSR	**Galich'ya Gora**	72.84	340	*e*P	P	16 15 10.7	-2.1
LPSR				pmax	pmax		
	comp=Z,100nm,1.4s						
LPSR				MLR	MLR		
	comp=Z,24µm,18.0s						
MNK	**Minsk**	72.93	347	*i* P	P	16 15 10.5	-2.8
MNK				*i*		16 15 26.9	
MNK				*i* S	S	16 24 31.4	-7.4
MNK				*i*		16 25 13.1	
MNK				*i* SS	SS	16 29 18.5	+0.6
MNK				pmax	pmax		
	comp=Z,58nm,1.0s						
MNK				pmax	pmax		
	comp=N,69nm,1.0s						
MNK				pmax	pmax		
	comp=E,3.0nm,1.0s						
MNK				MLR	MLR		
	comp=Z,21µm,19.0s						
MNK				MLR	MLR		
	comp=N,16µm,19.0s						
MNK				MLR	MLR		
	comp=E,1µm,19.0s						
MNK	**Minsk**	72.93	347	*i* P	P	16 15 10.6	-2.7
	comp=E,3.0nm,1.0s						
MNK				*i* P	P	16 15 10.6	-2.7
	comp=N,69nm,1.0s						
MNK				*i* P	P	16 15 10.6	-2.7
	comp=Z,58nm,1.0s,baz=14						
MNK				*i* PcP	PcP	16 15 26.9	-3.3
MNK				*i* PP	PP	16 17 45.8	-9.1
MNK				*i* PPP	PPP	16 19 27.8	
MNK				*i* S	S	16 24 31.5	-7.3
MNK				*i* SS	SS	16 29 18.5	+0.6
MNK				*i* SSS	SSS	16 32 44.4	
MNK				*i* LQ	LQ	16 42 39.9	
MNK				*i* LR	LR	16 46 23.6	
MNK				*i* LRM	MLR	16 49 38.0	
	comp=Z,21µm,19.0s						
MNK				*i* LRM	MLR	16 49 41.8	
	comp=N,16µm,19.0s						
MNK				*i* LRM	MLR	16 50 37.1	
	comp=E,1µm,19.4s						
KMSI	**Cibinong**	73.05	249	P	P	16 15 15.2	+0.6
	comp=E,3µmcomp=E,239nm,0.8s						
LUNU	**Lund**	73.10	356	*i* P	P	16 15 17.2	+2.9
BTK	**Batken**	73.21	314	P	P	16 15 14.2	-1.2
BTK				pmax	pmax		
	comp=Z,272nm,1.2s						
BTK	**Batken**	73.21	314	P	P	16 15 14.2	-1.2
BTK				IAmb	IAmb	16 15 20.0	
	comp=Z,272nm,1.1s						
ESK	**Eskdalemuir**	73.21	6	IAMs_20	IAMs_20	16 53 24.1	
	comp=Z,22µm,18.0s						
DRK	**Karamyk**	73.23	313	P	P	16 15 13.7	-2.0
DRK				IAmb	IAmb	16 15 23.1	
	comp=Z,123nm,0.7s						
RAR	**Rarotonga**	73.33	167	LR	LR	16 43 08.0	
	comp=Z,26µm,19.4s,baz=14,slow=32						
MSAI	**Masohi**	73.45	242	P	P	16 15 18.5	+1.6
	comp=Z,272nmcomp=Z,19nm,0.8s						
SHL	**Shillong**	73.45	290	P	P	16 15 15.3	-1.8
SHL				pmax	pmax		
	comp=Z,1µm,1.3s						
SHL	**Shillong**	73.45	290	P	P	16 15 16.3	-0.8
	SNR=141						
SHL	**Shillong**	73.45	290	P	P	16 15 15.3	-1.8
SILR	**SILCHAR**	73.50	289	*e*P	P	16 15 19.3	+2.1
VRH	**Novokhopyorsk**	73.52	338	*e*P	P	16 15 15.5	-1.3
VRH				pmax	pmax		
	comp=Z,150nm,0.7s						
GTOI	**Gorontalo**	73.57	250	P	P	16 15 17.2	-0.4
	comp=Z,6µmcomp=Z,1µmcomp=Z,44nm,1.1s						
VORR	**Voronezh**	73.65	340	P	P	16 15 14.0	-3.6
VORR				pmax	pmax		
	comp=Z,300nm,1.2s						
SUW	**Suwalki**	73.98	350	*e*P	P	16 15 18.2	-1.3
SUW				*e*PcP	PcP	16 15 32.4	-2.4
SUW				*e*SS	SS	16 30 04.9	+31
SUW				*e*L	L	16 48 08.9	
	comp=Z,24µm,22.7s						
SUW	**Suwalki**	73.98	350	*e*P	P	16 15 19.3	-0.2
SUW	**Suwalki**	73.98	350	P	P	16 15 16.8	-2.7
SUW				pmax	pmax		
	comp=Z,436nm,1.4s						
SUW				MLR	MLR		
	comp=Z,23µm,19.0s						
SUW	**Suwalki**	73.98	350	P	P	16 15 16.8	-2.7
SUW				IAMs_20	IAMs_20	16 50 32.3	
	comp=Z,23µm,19.0s						
GTK	**Tadong**	74.02	294	*e*P	P	16 15 21.4	+1.1
LIFNC	**LIFOU**	74.02	199	IAMs_20	IAMs_20	16 43 35.8	
	comp=Z,20µm,20.0s						
SANI	**Sanana**	74.03	245	P	P	16 15 20.1	-0.2
	comp=Z,10µmcomp=Z,4µmcomp=Z,181nm,1.5s						
VSR	**Storozhevoye**	74.09	340	*e*P	P	16 15 18.9	-1.3
VSR				pmax	pmax		
	comp=Z,180nm,1.3s						
VSR				MLR	MLR		
	comp=Z,35µm,18.0s						
RGN	**Rugen**	74.19	356	IAMs_20	IAMs_20	16 53 57.6	
	comp=Z,13µm,20.0s						
SPMM	**Sapulut**	74.25	257	P	P	16 15 22.0	+0.3
GAR	**Garm**	74.30	314	P	P	16 15 19.1	-2.7
VORD	**Divnogorie**	74.30	339	*e*P	P	16 15 19.4	-2.0
VORD				pmax	pmax		
	comp=Z,180nm,0.9s						
CHTO	**Chiang Mai**	74.31	280	P	P	16 15 20.2	-1.8
CHTO				pmax	pmax		
	comp=Z,206nm,1.5s						
CHTO				MLR	MLR		
	comp=Z,14µm,18.0s						
CHTO	**Chiang Mai**	74.31	280	P	P	16 15 22.0	0.0
CHTO	**Chiang Mai**	74.31	280	P	P	16 15 20.2	-1.8
CHTO				IAmb	IAmb	16 15 41.3	
	comp=Z,206nm,1.4s						
CHTO	**Chiang Mai**	74.31	280	IAMs_20	IAMs_20	16 52 52.8	
	comp=Z,14µm,18.0s						
MRSI	**Marisa**	74.33	250	P	P	16 15 22.5	+0.5
	comp=Z,12µmcomp=Z,6µmcomp=Z,378nm,1.1s						
TOLI2	**Tolitoli**	74.50	252	P	P	16 15 21.9	-1.2
TOLI2				IAmb	IAmb	16 15 41.4	
	comp=Z,281nm,1.3s						
TAPN	**Taplejung**	74.51	294	*e*P	P	16 15 24.0	+0.6
	comp=Z,3µm,1.4s						
CM31	**Chiang Mai Arr**	74.58	280	P	P	16 15 25.7	+2.1
	SNR=76						
CM31	**Chiang Mai Arr**	74.58	280	P	P	16 15 23.0	-0.5
CM31				IAmb	IAmb	16 15 40.7	
	comp=Z,314nm,1.4s						
CMAR	**Chiang Mai Arr**	74.58	280	P	P	16 15 23.4	-0.1
	comp=Z,22nm,0.9s,baz=28,slow=6.1,SNR=85						
CMAR				LR	LR	16 53 04.0	
	comp=Z,8µm,18.1s,baz=86,slow=40						
CMAR	**Chiang Mai Arr**	74.58	280	P	P	16 15 23.1	-0.5
PBKT	**Sadao Pong**	74.76	277	P	P	16 15 24.0	-0.5
BSEG	**Bad Segeberg**	74.90	358	*e*P	P	16 15 23.8	-0.9
	comp=Z,185nm,1.5s,baz=3.0,slow=5.6						
MTO3	**Montecristo**	74.94	86	P	P	16 15 24.9	-1.0
DSB	**Dublin**	75.02	8	IAMs_20	IAMs_20	16 50 26.0	
	comp=Z,15µm,19.0s						
LUWI	**Luwuk**	75.06	249	P	P	16 15 26.2	-0.1
	comp=Z,12µmcomp=Z,8µmcomp=Z,536nm,1.3s						
LUWI	**Luwuk**	75.06	249	P	P	16 15 24.9	-1.4
ODAN	**Odare**	75.06	294	*e*P	P	16 15 26.3	-0.2
	comp=Z,1µm,1.6s						
CHGR	**Chuyangaron**	75.10	314	P	P	16 15 25.3	-1.1
GUN	**Gumba**	75.11	296	*e*P	P	16 15 26.9	0.0
JIRN	**Jiri**	75.13	296	*e*P	P	16 15 27.0	-0.1
	comp=Z,2µm,1.3s						
GKP	**Gorka Klasztor**	75.25	354	*e*P	P	16 15 26.4	-0.4
GKP				*e*SS	SS	16 30 21.8	+29
GKP				*e*L	L	16 56 08.3	
	comp=Z,28µm,19.2s						
GKP	**Gorka Klasztor**	75.25	354	*e*P	P	16 15 27.0	+0.2
RAMN	**Ramite**	75.44	295	*e*P	P	16 15 28.5	-0.2
	comp=Z,210nm,0.5s						
DZM	**Mont Dzumac**	75.44	200	*e*P	P	16 15 28.0	-0.3
	comp=Z,156nm,1.2s						
DZM				*e*S	S	16 25 07.1	-0.6
	comp=Z,16µm,26.5s						
DZM				*e*SS	SS	16 29 58.7	-0.2
	comp=Z,9µm,26.9s						
DZM				*e*LR	LR	16 38 44.3	
	comp=Z,28µm,21.0s						
DZM	**Mont Dzumac**	75.44	200	P	P	16 15 29.5	+1.2
	comp=Z,24nm,1.1s,baz=46,slow=8.6,SNR=8.8						
DZM				LR	LR	16 43 52.4	
	comp=Z,26µm,20.2s,baz=30,slow=32						
DZM	**Mont Dzumac**	75.44	200	P	P	16 15 28.7	+0.4
KKN	**Kakani**	75.54	296	*e*P	P	16 15 29.2	-0.1
BBSR	**BB Station**	75.54	56	IAMs_20	IAMs_20	16 51 45.0	
	comp=Z,20µm,19.0s						
SNET	**Serv Nac Est T**	75.56	86	IAMs_20	IAMs_20	16 44 35.8	
	comp=Z,14µm,22.0s						
PKI	**Pulchoki**	75.64	296	*e*P	P	16 15 29.6	-0.3
PKIN	**Phulchoki**	75.64	296	*e*P	P	16 15 29.4	-0.5
	comp=Z,940nm,1.4s						
MPSI	**Mapaga**	75.64	252	P	P	16 15 29.7	0.0
	comp=Z,11µmcomp=Z,4µmcomp=Z,217nm,1.2s						
ONTNC	**Ouen Toro**	75.67	200	P	P	16 15 29.6	+0.1

GKN	Gorkha	75.73	297	eP	P	16 15 30.0	-0.3
DMN	Daman	75.78	296	eP	P	16 15 31.1	+0.4
	comp=Z,1µm,1.4s						
DANN	Dangsing	75.95	298	eP	P	16 15 31.5	-0.2
RUE	Ruedersdorf	76.23	356	eP	P	16 15 32.9	+0.4
RUE	Ruedersdorf	76.23	356	eP	P	16 15 31.3	-1.1
	baz=3.0,slow=5.6						
NRDL	Niedersach Rie	76.34	358	eP	P	16 15 31.8	-1.2
	comp=Z,192nm,1.9s,baz=3.0,slow=5.6						
BEL	Belsk	76.38	351	eP	P	16 15 33.1	-0.2
BEL				eSS	SS	16 30 41.3	+31
BEL				eL	L	16 55 46.4	
	comp=Z,20µm,17.3s						
AKASG	Malin Array Be	76.44	346	P	P	16 15 31.1	-2.5
	comp=Z,7.8nm,0.4s,baz=17,slow=6.0,SNR=26						
AKASG				LR	LR	16 53 57.9	
	comp=Z,21µm,19.6s,baz=15,slow=40						
AKASG	Malin Array Be	76.44	346	P	P	16 15 30.9	-2.8
AKBB	Malin Array Si	76.44	346	deP	P	16 15 31.6	-2.1
AKBB	Malin Array Si	76.44	346	P	P	16 15 31.0	-2.7
AKBB				IAmb	IAmb	16 15 48.8	
	comp=Z,78nm,1.0s						
FLTG	Flechtingen	76.48	357	eP	P	16 15 32.3	-1.6
	comp=Z,62nm,1.0s,baz=3.0,slow=5.6						
KOLN	Koldanda	76.49	298	eP	P	16 15 34.5	-0.2
TGUH	Tegucigalpa,Un	76.50	84	P	P	16 15 35.0	+0.2
TGUH				IAmb	IAmb	16 16 01.0	
	comp=Z,282nm,1.4s						
TGUH				IAMs_20	IAMs_20	16 45 16.3	
	comp=Z,16µm,22.0s						
IBBN	Ibbenburen	76.56	360	eP	P	16 15 33.3	-1.0
	comp=Z,282nm,1.5s,baz=3.0,slow=5.6						
IBBN				epP	PcP	16 15 49.1	+3.2
PYUN	Piuthan	76.57	298	eP	P	16 15 34.9	-0.2
LCCY	Blossom Villag	76.64	75	P	P	16 15 35.0	-0.3
ASSE	Asse, Remlinge	76.69	358	eP	P	16 15 34.0	-1.1
	comp=Z,235nm,1.9s,baz=3.0,slow=5.6						
CLZ	Clausthal	76.99	358	eP	P	16 15 36.0	-0.9
	comp=Z,188nm,1.4s,baz=3.0,slow=5.6						
NIL	Nilore	77.25	308	P	P	16 15 37.8	-0.8
NIL				pmax	pmax		
	comp=Z,400nm,1.0s						
NIL				MLR	MLR		
	comp=Z,26µm,20.0s						
NIL	Nilore	77.25	308	P	P	16 15 37.8	-0.8
GTTG	Gottingen	77.30	358	eP	P	16 15 37.5	-1.0
	comp=Z,171nm,1.3s,baz=3.0,slow=5.6						
TBI	Tubuai	77.35	158	eS	S	16 25 28.3	0.0
	comp=Z,24µm,32.2s						
TBI	Tubuai	77.35	158	eLR	LR	16 39 32.6	
	comp=Z,29µm,24.5s						
TBI	Tubuai	77.35	158	eT	T	17 40 09.8	
	comp=Z,31nm,0.3s						
BUG	Bochum--Univer	77.43	360	eP	P	16 15 37.7	-1.5
	comp=Z,169nm,1.6s,baz=3.0,slow=5.6						
CLL	Collm	77.44	356	eP	P	16 15 38.0	-1.3
CLL				i		16 15 44.8	
CLL				eS	S	16 25 28.0	-0.9
CLL				pmax	pmax		
	comp=Z,119nm,1.4s						
CLL				MLR	MLR		
	comp=Z,12µm,21.0s						
CLL	Collm	77.44	356	eP	P	16 15 38.0	-1.3
	comp=Z,149nm,1.8s						
CLL				i pP	sP	16 15 44.8	0.0
CLL				i Pmax		16 15 52.9	
	comp=Z,119nm,1.4s						
CLL				ePPP	PPP	16 20 30.0	
CLL				eS	S	16 25 28.0	-0.9
CLL				ePS	PnS	16 26 18.0	+10
CLL				e		16 27 24.0	
CLL				eSS	SS	16 30 36.0	+10
CLL				eSSSS		16 36 06.0	
CLL				LmV		16 51 00.0	
	comp=N,9µm,22.0s						
CLL				LmV		16 51 00.0	
	comp=E,6µm,19.0s						
CLL				LmV		16 51 00.0	
	comp=Z,12µm,21.0s						
CLL	Collm	77.44	356	eP	P	16 15 37.7	-1.6
	comp=Z,119nm,1.4s,baz=3.0,slow=5.6						
CLL	Collm	77.44	356	IAMs_20	IAMs_20	16 51 41.6	
	comp=Z,12µm,21.0s						
NEUB	Neuenburg	77.58	357	eP	P	16 15 39.0	-1.2
	comp=Z,249nm,1.3s,baz=3.0,slow=5.6						
KSP	Ksiaz	77.73	354	eP	P	16 15 40.0	-0.9
KSP				eS	S	16 25 35.7	+3.6
KSP				eSS	SS	16 30 56.5	+26
KSP				eL	L	16 56 37.0	
	comp=Z,16µm,19.7s						
FBE	Freiberg	77.81	356	eP	P	16 15 40.4	-1.0
	comp=Z,344nm,1.5s,baz=3.0,slow=5.6						
BRG	Berggiesshubel	77.83	355	eP	P	16 15 40.1	-1.5
	comp=Z,135nm,1.3s,baz=3.0,slow=5.6						
BRG				epP	PcP	16 15 55.4	+3.9
BRG	Berggiesshubel	77.83	355	eP	P	16 15 40.7	-0.8
BRG				Amp		16 15 45.1	
	comp=Z,21nm,0.7s						
BRG	Berggiesshubel	77.83	355	P	P	16 15 47.9	+6.4
BRG				Amp		16 15 48.6	
	comp=Z,34nm,0.8s						
BRG	Berggiesshubel	77.83	355	P	P	16 15 55.9	+14
BRG				Amp		16 15 57.5	
	comp=Z,96nm,1.2s						
BRG	Berggiesshubel	77.83	355	S	S	16 25 34.0	+0.8
SMKI	Samarinda	77.88	254	P	P	16 15 43.6	+1.3
	comp=Z,20µmcomp=Z,5µmcomp=Z,211nm,2.1s						
CHVC	Chvalec	78.00	354	eP	P	16 15 41.5	-1.0
CHVC				AMS	AMS	16 58 20.0	
	comp=Z,16µm,17.7s						
LVV	L'vov	78.02	349	eP	P	16 15 41.3	-1.3
LVV				e		16 18 40.3	
LVV				e		16 20 34.0	
LVV				eS	S	16 25 30.4	-4.8
LVV				e		16 26 11.2	
LVV				e		16 30 36.4	
LVV				e		16 33 47.2	
LVV				pmax	pmax		
	comp=Z,140nm,1.4s						
OSTC	Ostas	78.02	354	eP	P	16 15 41.9	-0.7
OSTC				ex	x	16 15 44.1	
OSTC				eS	S	16 25 40.5	+5.2
OSTC				AMS	AMS	16 58 20.0	
	comp=Z,16µm,18.6s						
UBBA	Unterbreizbach	78.02	358	eP	P	16 15 41.5	-1.0
	comp=Z,173nm,1.8s,baz=3.0,slow=5.6						
OJC	Ojcow	78.07	352	eP	P	16 15 41.9	-1.0
OJC				eS	S	16 25 41.5	+5.7
OJC				eSS	SS	16 31 04.3	+28
OJC				eL	L	16 57 09.6	
	comp=Z,18µm,18.7s						
OJC	Ojcow	78.07	352	P	P	16 15 41.1	-1.8
OJC				pmax	pmax		
	comp=Z,84nm,1.2s						
OJC	Ojcow	78.07	352	P	P	16 15 41.1	-1.8
MOX	Moxa	78.15	357	eP	P	16 15 42.2	-1.1
	comp=Z,214nm,1.7s,baz=3.0,slow=5.6						
MOX				eL	L	16 55 17.1	
	comp=Z,12µm,20.0s						
DPC	Dobruska-Polom	78.21	354	eP	P	16 15 42.9	-0.8
DPC				eS	S	16 25 35.4	-2.1
DPC				MLR	MLR		
	comp=Z,17µm,18.0s						
DPC	Dobruska-Polom	78.21	354	eP	P	16 15 42.9	-0.8
DPC				eS	S	16 25 35.4	-2.1
DPC				AMS	AMS	16 58 40.0	
	comp=Z,17µm,18.0s						
MEM	Membach	78.26	1	dP	P	16 15 43.9	0.0
	comp=Z,28nm,1.4s						
BTNL	Ternell	78.29	1	dP	P	16 15 44.1	0.0
	comp=Z,25nm,1.3s						
WERD	Werda	78.33	357	eP	P	16 15 43.2	-1.1
	comp=Z,227nm,1.8s,baz=3.0,slow=5.6						
AHRW	Bad Neuenahr-A	78.33	360	eP	P	16 15 43.3	-1.0
	comp=Z,188nm,1.6s,baz=3.0,slow=5.6						
SNF	Seneffe	78.34	2	dP	P	16 15 44.1	-0.3
TANN	Tannenbergstha	78.35	356	eP	P	16 15 43.5	-1.1
	comp=Z,207nm,1.7s,baz=3.0,slow=5.6						
KWP	Kalwaria Pacla	78.36	350	P	P	16 15 42.3	-2.2
KWP				pmax	pmax		
	comp=Z,2µm,1.3s						
KWP				MLR	MLR		
	comp=Z,186µm,18.0s						
KWP	Kalwaria Pacla	78.36	350	P	P	16 15 42.3	-2.2
TTSI	Tana Toraja	78.40	250	P	P	16 15 45.3	+0.2
	comp=Z,9µmcomp=Z,5µmcomp=Z,253nm,1.6s						
GUNZ	Gunzen	78.41	357	eP	P	16 15 43.9	-0.9
	comp=Z,138nm,1.4s,baz=3.0,slow=5.6						
BCLA	Clavier	78.44	1	dP	P	16 15 44.6	-0.3
KRLC	Kraliky	78.46	354	eP	P	16 15 44.6	-0.5
KRLC				MLR	MLR		
	comp=Z,15µm,17.2s						
KRLC	Kraliky	78.46	354	eP	P	16 15 44.6	-0.5
KRLC				AMS	AMS	17 02 50.0	
	comp=Z,15µm,17.2s						
BGES	Gesves	78.48	1	dP	P	16 15 44.3	-0.8
	comp=Z,22nm,1.1s						
WERN	Wernitzgruen	78.48	356	eP	P	16 15 44.2	-1.0
	baz=3.0,slow=5.6						
WERN				epP	pwP	16 16 00.2	+5.2
KBL	Kabul	78.53	312	P	P	16 15 43.9	-2.1
KBL				pmax	pmax		
	comp=Z,185nm,1.2s						
KBL	Kabul	78.53	312	P	P	16 15 44.6	-1.4
	SNR=100						
KBL	Kabul	78.53	312	P	P	16 15 43.9	-2.1
KBL				IAmb	IAmb	16 15 47.8	
	comp=Z,185nm,1.1s						
NKC	Novy Kostel	78.53	356	eP	P	16 15 45.5	0.0
NKC				e		16 15 47.9	
NKC				eS	S	16 25 39.6	-1.3
NKC				MLR	MLR		
	comp=Z,13µm,17.0s						
NKC	Novy Kostel	78.53	356	eP	P	16 15 45.5	0.0
NKC				ex	x	16 15 47.9	
NKC				eS	S	16 25 39.6	-1.3
NKC				AMS	AMS	17 00 50.0	
	comp=Z,13µm,17.0s						
BMRD	Maredsous	78.56	1	dP	P	16 15 44.9	-0.7
	comp=Z,35nm,1.1s						
SBUM	Sibu	78.62	260	P	P	16 15 47.0	+0.6
TNS	Taunus Mts	78.64	359	eP	P	16 15 45.0	-1.1
	comp=Z,135nm,1.6s,baz=3.0,slow=5.6						
PRU	Pruhonice	78.68	355	eP	P	16 15 44.9	-1.4
PRU				e		16 15 48.5	
PRU				eS	S	16 25 46.5	+4.1
PRU				MLR	MLR		
	comp=Z,20µm,16.6s						
PRU	Pruhonice	78.68	355	eP	P	16 15 44.9	-1.4
PRU				epP	pP	16 15 48.5	-1.8
PRU				eS	S	16 25 46.5	+4.1
PRU				AMS	AMS	17 01 10.0	
	comp=Z,20µm,16.6s						
MORC	Moravsky Berou	78.70	353	⇓P	P	16 15 45.6	-0.8
MORC	Moravsky Berou	78.70	353	⇓P	P	16 15 45.6	-0.8
MORC	Moravsky Berou	78.70	353	eP	P	16 15 45.0	-1.4
MORC				eS	S	16 25 40.8	-1.9
MORC	Moravsky Berou	78.70	353	P	P	16 15 44.9	-1.6
RCHB	Rochefort	78.71	1	dP	P	16 15 44.3	-2.0
	comp=Z,27nm,1.4s						
DOU	Dourbes	78.76	2	dP	P	16 15 46.5	-0.2
	comp=Z,20nm,1.1s						
MANZ	Manzenberg	78.80	357	eP	P	16 15 45.7	-1.2
	comp=Z,69nm,2.2s,baz=3.0,slow=5.6						
NIE	Niedzica	78.82	351	eP	P	16 15 46.9	-0.1
NIE				eSS	SS	16 30 42.3	-4.8
NIE				eL	L	16 50 52.0	
	comp=Z,13µm,22.8s						
GOF	Gofitskoye	78.90	335	⇑iP	P	16 15 46.4	-1.1
GOF				eS	S	16 25 45.3	+0.4
GOF				pmax	pmax		
	comp=Z,421nm,1.4s						
GOF				smax	smax		
	comp=N,44nm,0.9s						
GOF				smax	smax		
	comp=E,142nm,1.4s						
ROTZ	Rotzenmuhle	79.01	357	eP	P	16 15 47.1	-0.9
	comp=E,55nm,1.9s,baz=3.0,slow=5.6						
SORM	Soroca	79.07	346	⇓P	P	16 15 46.4	-2.0
SORM	Soroca	79.07	346	⇓P	P	16 15 46.4	-2.0
GRF	Grafenberg Arr	79.12	357	eP	P	16 15 48.0	-0.7
	comp=E,281nm,1.4s,baz=3.0,slow=5.6						
GRF				eL	L	16 58 35.9	
	comp=E,13µm,18.7s						
LANS	Liptovska Anna	79.16	352	eP	P	16 15 49.3	+0.3
LANS				pmax	pmax		
	comp=Z,8.0nm,0.9s						
LANS	Liptovska Anna	79.16	352	eP	P	16 15 49.3	+0.3
WLF	Walferdange	79.21	1	dP	P	16 15 48.5	-0.7
	comp=Z,25nm,1.6s						
WLF	Walferdange	79.21	1	P	P	16 15 46.7	-2.5
WLF				pmax	pmax		
	comp=Z,96nm,1.5s						
WLF				MLR	MLR		
	comp=Z,13µm,20.0s						
WLF	Walferdange	79.21	1	eP	P	16 15 48.4	-0.7
	comp=Z,180nm,1.6s,baz=3.0,slow=5.6						
WLF	Walferdange	79.21	1	P	P	16 15 46.7	-2.5
WLF				IAMs_20	IAMs_20	16 56 45.5	
	comp=Z,13µm,20.0s						
NDI	New Delhi	79.22	303	eP	P	16 15 48.0	-1.6
NDI				eP	pP	16 15 48.8	-4.8
VRAC	Vranov	79.23	354	⇑P	P	16 15 48.4	-0.9
VRAC	Vranov	79.23	354	⇑P	P	16 15 48.4	-0.9
VRAC	Vranov	79.23	354	eP	P	16 15 48.4	-0.9
VRAC				eS	S	16 25 45.1	-3.2
MTDJ	Mount Denham	79.29	74	P	P	16 15 47.8	-2.3
MTDJ				IAmb	IAmb	16 16 08.3	
	comp=Z,370nm,1.4s						
MTDJ				IAMs_20	IAMs_20	16 53 34.5	
	comp=Z,13µm,20.0s						
UZH	Uzhgorod	79.39	350	eP	P	16 15 48.0	-2.1
UZH				e		16 15 55.4	
UZH				e		16 18 46.0	
UZH				eS	S	16 25 42.0	-7.9
ACON	Acoyapa	79.41	84	P	P	16 15 50.0	-0.7
GTBY	Guantanamo Bay	79.42	71	IAMs_20	IAMs_20	16 52 49.8	
	comp=Z,23µm,21.0s						
AYAN	Aya Nagar	79.43	303	eP	P	16 15 50.0	-0.7
KRUC	Moravsky	79.49	354	eP	P	16 15 49.6	-1.1
KRUC	Moravsky	79.49	354	eS	S	16 25 50.2	-0.8
MAK	Makhachkala	79.56	331	eP	P	16 15 44.2	-6.9
MAK				e		16 18 48.3	
MAK				eS	S	16 25 39.2	-13
MAK				eSS	SS	16 30 55.1	-3.3
MAK				eSSS	SSS	16 34 25.0	
MAK				pmax	pmax		
	comp=Z,390nm,1.8s						
KHC	Kasperske Hory	79.59	356	eP	P	16 15 50.8	-0.5
KHC				e		16 15 54.0	
KHC				e		16 16 03.0	
KHC				eS	S	16 25 55.8	+3.7
KHC				MLR	MLR		
	comp=Z,15µm,19.6s						
KHC	Kasperske Hory	79.59	356	eP	P	16 15 50.8	-0.5
KHC				epP	pP	16 15 54.0	-1.3
KHC				ex	x	16 16 03.0	
KHC				eS	S	16 25 55.8	+3.7
KHC				AMS	AMS	16 55 30.0	
	comp=Z,15µm,19.6s						
JAVC	Velka Javorina	79.60	353	eP	P	16 15 51.3	-0.1
JAVC	Velka Javorina	79.60	353	eS	S	16 25 53.9	+1.6
WET	Wettzell	79.61	356	eP	P	16 15 50.4	-1.0
	comp=Z,135nm,1.8s,baz=3.0,slow=5.6						
SONA	Sohna	79.64	303	eP	P	16 15 51.3	-0.6
MTKI	Muara Teweh, K	79.66	255	P	P	16 15 52.2	+0.1
	comp=Z,8µmcomp=Z,6µmcomp=Z,119nm,2.1s						
CTA	Charters Tower	79.71	219	LR	LR	16 47 52.8	
	comp=Z,5µm,19.7s,baz=27,slow=33						
CTAO	Charters Tower	79.71	219	P	P	16 15 52.9	+0.8
CTAO				pmax	pmax		
	comp=Z,63nm,0.9s						
CTAO	Charters Tower	79.71	219	P	P	16 15 52.9	+0.8
GROC	Groznyy	79.84	332	eP	P	16 15 52.7	0.0
GROC				e		16 18 57.8	
GROC				eS	S	16 26 02.5	+7.6
GROC				pmax	pmax		
	comp=Z,42nm,0.6s						
CKRC	Cesky Krumlov	79.86	355	eP	P	16 15 52.0	-0.7
CKRC				eS	S	16 25 55.8	+0.8
CKRC				AMS	AMS	16 55 50.0	
	comp=Z,20µm,20.5s						
GEC2	GERESS Array S	79.87	355	eP	P	16 15 51.5	-1.4
	comp=Z,89nm,1.4s,baz=3.0,slow=5.6						
GEC2	GERESS Array S	79.87	355	P	P	16 15 49.9	-3.0
GERES	GERESS Array B	79.87	355	P	P	16 15 51.9	-1.0
	comp=Z,5.3nm,0.5s,baz=31,slow=5.4,SNR=17						
GERES	GERESS Array B	79.87	355	P	P	16 15 50.0	-3.0
VYHS	Vyhne	79.87	352	eP	P	16 15 53.9	+1.1
VYHS				eS	SKSac	16 26 10.6	+1.7
VYHS	Vyhne	79.87	352	eP	P	16 15 53.9	+1.1
VYHS				e		16 16 07.6	
SMOL	Smolenice	79.96	353	eP	P	16 15 53.9	+0.6
SMOL	Smolenice	79.96	353	eP	P	16 15 53.9	+0.6
BUR08	Bucovina Ar. S	80.00	348	P	P	16 15 51.4	-2.3
KIV	Kislovodsk	80.02	335	⇑P	P	16 15 55.8	+2.0
KIV	Kislovodsk	80.02	335	i P	P	16 15 53.0	-0.8
	SNR=11						
KIV	Kislovodsk	80.02	335	eP	P	16 15 53.1	-0.7
KIV				e		16 18 54.1	
KIV				eS	S	16 25 56.3	-0.7
KIV				eSS	SS	16 31 06.6	+1.1
KIV				eSSS	SSS	16 34 31.8	
KIV				pmax	pmax		
	comp=Z,79nm,1.0s						
KIV				pmax	pmax		
	comp=Z,480nm,3.9s						
KIV	Kislovodsk	80.02	335	P	P	16 15 53.9	+0.1
KIV	Kislovodsk	80.02	335	P	P	16 15 51.1	-2.7
KIV				IAMs_20	IAMs_20	16 57 37.3	
	comp=Z,19µm,19.0s						
KAPI	Kappang	80.03	249	P	P	16 15 55.5	+1.5
	comp=Z,19nm,0.9s,baz=320,slow=0.7,SNR=18						
KAPI				LR	LR	16 49 36.4	
	comp=Z,3µm,19.9s,baz=51,slow=34						
KAPI	Kappang	80.03	249	P	P	16 15 54.3	+0.3
KAPI				IAmb	IAmb	16 16 10.8	
	comp=Z,206nm,1.4s						
BURAR	Bucovina Array	80.03	348	⇑P	P	16 15 52.5	-1.3
BURAR	Bucovina Array	80.03	348	⇑P	P	16 15 52.5	-1.3
BURAR	Bucovina Array	80.03	348	P	P	16 15 51.1	-2.7
KUDL	Kundal	80.04	303	eP	P	16 15 53.2	-0.7
BKSI	Bulukumba	80.06	248	P	P	16 15 54.7	+0.5
	comp=Z,9µmcomp=Z,4µmcomp=Z,172nm,1.4s						
STU	Stuttgart	80.09	359	eP	P	16 15 52.7	-1.3
	comp=Z,477nm,1.7s,baz=3.0,slow=5.6						
KIS	Kishinev	80.10	345	eLR	LR	16 15 53.0	
	comp=Z,11µm,16.0s						
KIS	Kishinev	80.10	345	PM		16 16 03.0	
	comp=Z,2µm,10.5s						
KIS	Kishinev	80.10	345	ePS		16 26 57.0	
KIS	Kishinev	80.10	345	eP	P	16 15 53.0	-1.0
KIS				e		16 25 59.0	
KIS				e		16 26 03.0	
KIS				e		16 26 12.0	
KIS				ePS	PnS	16 26 57.0	+15
KIS				pmax	pmax		
	comp=Z,2µm,10.5s						
MODS	Modra-Piesok	80.11	353	eP	P	16 15 53.2	-0.9
MODS				eS	S	16 26 00.2	+2.5
MODS				eSS	SS	16 31 15.1	+8.6
MODS				pmax	pmax		
	comp=Z,77nm,1.3s						
MODS	Modra-Piesok	80.11	353	eP	P	16 15 53.2	-0.9
MODS				e		16 16 08.6	
MODS				eS	S	16 26 00.2	+2.5
MODS				eSS	SS	16 31 15.1	+8.6
MODS				eL	L	16 48 32.3	
KBZ	Khabaz	80.17	334	P	P	16 15 54.5	+0.1
	comp=Z,16nm,0.8s,baz=104,slow=2.6,SNR=18						
KBZ				LR	LR	16 57 37.8	
	comp=Z,23µm,18.3s,baz=26,slow=40						
KBZ	Khabaz	80.17	334	c iP	P	16 15 53.6	-0.8
KBZ				pmax	pmax		
	comp=Z,63nm,0.8s						
KBZ				MLR	MLR		
	comp=Z,26µm,21.0s						
MILM	Milestii Mici	80.18	345	⇑P	P	16 15 54.9	+0.5
MILM	Milestii Mici	80.18	345	i P	P	16 15 52.0	-2.4
MILM				eS	S	16 25 58.0	-0.3
MILM				e		16 26 01.0	
MILM				ePS	PnS	16 26 55.0	+12
MILM				pmax	pmax		
	comp=Z,4µm,10.7s						
BMR	Baia Mare	80.19	349	⇑P	P	16 15 51.0	-3.5
BMR	Baia Mare	80.19	349	⇑P	P	16 15 51.0	-3.5
NCK	Nalchik	80.20	334	⇓eP	P	16 15 54.7	0.0
NCK				pmax	pmax		
	comp=Z,179nm,1.3s						
NCK				MLR	MLR		
	comp=Z,15µm,19.0s						
CEI	Carei	80.30	349	⇑P	P	16 16 05.5	+10
ZST	Bratislava	80.30	353	eP	P	16 15 55.7	+0.6
ZST				eS	S	16 25 59.4	-0.2
ZST				pmax	pmax		
	comp=Z,161nm,1.4s						
ZST	Bratislava	80.30	353	eP	P	16 15 55.7	+0.6
ZST				e		16 16 09.8	
ZST				eS	S	16 25 59.4	-0.2
PSZ	Piszkesteto	80.34	351	⇑P	P	16 15 55.3	-0.1
PSZ	Piszkesteto	80.34	351	eP	P	16 15 54.8	-0.6
PSZ	Piszkesteto	80.34	351	⇑P	P	16 15 55.3	-0.1
PSZ	Piszkesteto	80.34	351	P	P	16 15 53.8	-1.6
PSZ				IAMs_20	IAMs_20	16 57 14.4	
	comp=Z,19µm,19.0s						
GEYT	Alibeck	80.35	321	P	P	16 15 55.5	-0.1
	comp=Z,113nm,1.2s,baz=58,slow=3.7,SNR=29						
GEYT				LR	LR	16 55 25.4	
	comp=Z,57µm,18.1s,baz=35,slow=39						
GEYT	Alibeck	80.35	321	P	P	16 15 53.8	-1.8
GEYT				IAmb	IAmb	16 16 00.4	
	comp=Z,177nm,1.4s						
GYA0B	ALIBECK ARRAY	80.35	321	P	P	16 15 53.8	-1.8
GYA0B				IAmb	IAmb	16 16 13.2	
	comp=Z,136nm,1.1s						
PURM	Purcari	80.38	344	⇓P	P	16 16 00.3	+4.8
ORTG	Ortega, Santa	80.46	85	P	P	16 15 55.3	-1.2
BSSI	Bau Bau, Buton	80.51	248	P	P	16 15 56.5	-0.1
	comp=Z,6µmcomp=Z,2µmcomp=Z,56nm,1.7s						
RAO	Raoul Island	80.52	184	LR	LR	16 46 23.2	
	comp=Z,13µm,20.0s,baz=20,slow=32						
RAO	Raoul Island	80.52	184	IAMs_20	IAMs_20	16 46 32.1	
	comp=Z,14µm,20.0s						
GRTK	Grand Turk	80.52	67	IAMs_20	IAMs_20	16 51 52.2	
	comp=Z,23µm,21.0s						
ANN	Anapa	80.53	339	eP	P	16 15 55.8	-0.5
ANN				e*PP	pP	16 15 59.1	-1.3
ANN				e		16 19 04.3	
ANN				eS	S	16 26 01.0	-1.0
ANN				pmax	pmax		
	comp=N,40nm,1.0s						
ANN				pmax	pmax		
	comp=Z,100nm,1.1s						
ANN				pmax	pmax		
	comp=E,39nm,1.0s						
ANN				MLR	MLR		
	comp=N,15µm,23.0s						
ANN				MLR	MLR		
	comp=E,20µm,20.0s						
ANN				MLR	MLR		
	comp=Z,17µm,20.0s						
BFO	Black Forest	80.54	359	P	P	16 15 54.2	-2.3
BFO				pmax	pmax		
	comp=Z,149nm,1.5s						
BFO				MLR	MLR		
	comp=Z,14µm,18.0s						
BFO	Black Forest	80.54	359	eP	P	16 15 55.2	-1.2
	comp=Z,160nm,1.5s,baz=3.0,slow=5.6						
BFO	Black Forest	80.54	359	P	P	16 15 54.1	-2.3
BFO				IAmb	IAmb	16 16 13.7	
	comp=Z,149nm,1.5s						
BFO				IAMs_20	IAMs_20	16 56 35.7	
	comp=Z,14µm,18.0s						
VASR	Vaslui	80.61	346	⇓P	P	16 15 60.0	+3.2
FUR	Furstenfeldbru	80.64	357	eP	P	16 15 55.9	-1.1
	comp=Z,324nm,1.8s,baz=3.0,slow=5.6						
CONA	Conrad Observa	80.66	354	eP	P	16 15 56.5	-0.6
	comp=Z,80nm,1.1s,SNR=28						
ECH	Echery	80.66	360	P	P	16 15 54.9	-2.2
ECH				pmax	pmax		
	comp=Z,91nm,1.1s						
ECH				MLR	MLR		
	comp=Z,12µm,19.0s						
ECH	Echery	80.66	360	P	P	16 15 54.9	-2.2
ECH				IAMs_20	IAMs_20	16 56 31.9	
	comp=Z,12µm,19.0s						
ARCR	ARCALIA	80.66	348	⇑P	P	16 15 58.3	+1.2
NEY	Neytrino	80.66	334	⇑eP	P	16 15 57.2	-0.2
NEY				pmax	pmax		
	comp=Z,19nm,1.8s						
NEY				MLR	MLR		
	comp=Z,14µm,17.0s						
ZEI	Tsey	80.77	333	eP	P	16 15 55.8	-2.2

ZEI				pmax	pmax		
	comp=Z,17nm,0.7s						
KBKI	Kotabaru	80.77	253	P	P	16 15 57.8	-0.2
	comp=Z,56nm,1.6s						
CLF	Chambon-Foret	80.77	3	P	P	16 15 55.9	-1.6
CLF				IAmb	IAmb	16 16 15.5	
	comp=Z,294nm,1.5s						
CLF				IAMs_20	IAMs_20	16 55 13.8	
	comp=Z,19µm,20.0s						
MESR	Meseseni	80.77	349	⇑P	P	16 15 55.9	-1.8
MOA	Molln	80.83	355	eP	P	16 15 56.9	-1.1
	comp=Z,27nm,1.6s						
JTS	Las Juntas de	80.83	85	P	P	16 16 00.1	+1.7
	comp=Z,11nm,1.0s,baz=11,slow=12,SNR=5.5						
BUD	Budapest	80.85	352	eP	P	16 15 48.0	-10
BUD	Budapest	80.85	352	eP	P	16 15 52.6	-5.4
SOP	Sopron	80.85	353	eP	P	16 15 58.7	+0.6
SOP	Sopron	80.85	353	eP	P	16 16 01.4	+3.4
TESR	Tescani	80.91	346	⇑P	P	16 16 02.6	+4.2
BSZH	Besenyszg	80.92	351	⇑P	P	16 15 58.7	+0.3
BSZH	Besenyszg	80.92	351	eP	P	16 15 58.6	+0.3
STKI	Sintang	80.95	259	P	P	16 15 59.6	+0.6
	comp=Z,81nm,2.0s						
RJOB	Jochberg	81.01	356	eP	P	16 15 57.9	-1.1
	comp=Z,44nm,1.1s,baz=3.0,slow=5.6						
CSKK	Cskako	81.04	352	eP	P	16 15 56.0	-3.1
ONI	Oni	81.08	334	P	P	16 15 57.2	-2.2
ONI				pmax	pmax		
	comp=Z,41nm,0.9s						
ONI	Oni	81.08	334	P	P	16 15 57.2	-2.2
SIM	Simferopol'	81.11	341	eP	P	16 16 00.4	+0.9
SIM				pmax	pmax		
	comp=Z,48nm,0.7s						
SIM				MLR	MLR		
	comp=Z,13µm,16.0s						
CJR	Cluj-Napoca	81.12	349	⇑P	P	16 16 02.9	+3.3
CJR	Cluj-Napoca	81.12	349	⇑P	P	16 16 02.9	+3.3
SOC	Sochi	81.13	337c	iP	P	16 15 58.6	-1.0
SOC				e		16 19 01.3	
SOC				ePPP	PPP	16 21 00.5	
SOC				eS	S	16 26 09.2	+0.8
SOC				eSS	SS	16 31 20.7	-1.2
SOC				eSSS	SSS	16 34 44.4	
SOC				pmax	pmax		
	comp=Z,58nm,0.9s						
SOC				MLR	MLR		
	comp=Z,19µm,21.0s						
DRGR		81.16	349	⇑P	P	16 15 59.0	-0.8
DRGR		81.16	349	⇑P	P	16 15 59.0	-0.8
UBR	Ueberruh	81.16	358	eP	P	16 15 58.8	-1.0
	comp=Z,176nm,1.5s,baz=3.0,slow=5.6						
UBR				epP	pwP	16 16 14.6	+5.0
	comp=Z,176nm,1.5s						
MPLH	Magyarpolny	81.29	353	eP	P	16 16 00.5	+0.1
MPLH	Magyarpolny	81.29	353	eP	P	16 16 00.1	-0.3
SOEI	Soe	81.31	242	P	P	16 16 01.3	+0.3
	comp=Z,12µmcomp=Z,5µmcomp=Z,136nm,1.4s						
SOEI	Soe	81.31	242	P	P	16 16 00.5	-0.5
SOEI				IAmb	IAmb	16 16 23.1	
	comp=Z,210nm,1.3s						
VARL	Varlezi	81.32	345	⇑P	P	16 16 06.5	+5.9
RETA	Reutte	81.34	357	i P	P	16 15 59.7	-1.1
	comp=Z,56nm,1.6s						
VLDR	Vladesti	81.34	345	⇑P	P	16 16 02.6	+1.9
ARSA	Arzberg	81.35	354	eP	P	16 16 00.3	-0.5
	comp=Z,62nm,1.1s,SNR=11						
OZUR		81.44	347	⇑P	P	16 16 02.9	+1.6
WATA	Walderalm	81.46	357	eP	P	16 16 00.9	-0.6
	comp=Z,79nm,1.5s,SNR=14						
MOTA	Moosalm	81.47	357	eP	P	16 16 00.6	-0.9
	comp=Z,73nm,1.6s,SNR=20						
SCTR	Scanteiesti	81.52	345	⇓P	P	16 16 03.6	+2.0
VRI	Vrincioaia	81.53	346	⇑P	P	16 16 03.2	+1.5
VRI	Vrincioaia	81.53	346	⇑P	P	16 16 03.2	+1.5
TIH	Tihany	81.53	352	eP	P	16 16 01.5	-0.2
WTTA	Wattenberg	81.53	357	eP	P	16 16 01.4	-0.5
	comp=Z,92nm,1.6s,SNR=18						
MMRI	Maumere	81.53	245	P	P	16 16 01.1	-1.0
	comp=Z,8µmcomp=Z,216nm,1.4s						
MMRI	Maumere	81.53	245	P	P	16 16 01.3	-0.8
PLOR	Plostina	81.55	346	⇓P	P	16 16 02.0	+0.1
PLOR				⇓P	PcP	16 16 08.2	+0.3
PLOR	Plostina	81.55	346	⇓P	P	16 16 02.0	+0.1
DAVA	Damuels	81.56	358	eP	P	16 16 02.0	0.0
	comp=Z,42nm,1.6s,SNR=10						
ODBI	Odobesti	81.58	346	⇓P	P	16 16 03.0	+1.1
SQTA	Sankt Quirin	81.59	357	eP	P	16 16 01.6	-0.6
	comp=Z,76nm,1.6s,SNR=18						
DOPR	Dopca	81.62	347	⇑P	P	16 16 02.5	+0.3
COVR	Voineasa-Covas	81.62	347	⇑P	P	16 16 02.5	+0.2
KBA	Koelnbreinsper	81.65	356	eP	P	16 16 02.9	+0.4
	comp=Z,188nm,1.0s,SNR=15						
IZVR	Izvoarele	81.68	345	⇑P	P	16 16 04.3	+1.8
BBKI	Banjar Baru	81.69	254	P	P	16 16 02.8	-0.1
	comp=Z,3µmcomp=Z,90nm,2.2s						
HRA	Herat	81.70	317	P	P	16 16 01.0	-2.1
HRA				IAmb	IAmb	16 16 06.0	
	comp=Z,184nm,1.2s						
SIRR	Siria	81.79	350	⇓P	P	16 16 01.9	-1.2
FETA	Feichten	81.80	357	eP	P	16 16 02.8	-0.6
	comp=Z,53nm,1.6s,SNR=8.9						
AMBH	Ambrzfalva	81.81	350	⇑P	P	16 16 06.3	+3.2
TLCR		81.86	345	⇓P	P	16 16 03.0	-0.4
TLCR		81.86	345	⇓P	P	16 16 03.0	-0.4
EDFI	Ende, Flores	81.94	245	P	P	16 16 02.8	-1.5
	comp=Z,5µmcomp=Z,2µmcomp=Z,80nm,1.5s						
SOKA	Soboth	81.95	354	eP	P	16 16 03.2	-0.8
	comp=Z,118nm,1.2s,SNR=44						
CFR	Carcaliu	81.98	345	⇑P	P	16 16 03.5	-0.6
CFR	Carcaliu	81.98	345	⇑P	P	16 16 03.5	-0.6
MLR	Muntele Rosu	82.01	347	⇑P	P	16 16 04.9	+0.4
MLR	Muntele Rosu	82.01	347	P	P	16 16 01.8	-2.6
MLR				pmax	pmax		
	comp=Z,100nm,1.2s						
MLR				MLR	MLR		
	comp=Z,22µm,20.0s						
MLR	Muntele Rosu	82.01	347	P	P	16 16 01.8	-2.6
MLR				IAmb	IAmb	16 16 21.9	
	comp=Z,100nm,1.2s						
ABTA	Abfaltersbach	82.02	356	eP	P	16 16 03.4	-0.9
	comp=Z,54nm,1.5s,SNR=17						
BATI	Baumata	82.02	243	LR	LR	16 46 24.2	
	comp=Z,2µm,21.3s,baz=40,slow=31						
BATI	Baumata	82.02	243	P	P	16 16 05.0	+0.4
	comp=Z,6µmcomp=Z,2µmcomp=Z,110nm,1.1s						
NEHR	Nehoiu	82.02	346	⇓P	P	16 16 07.7	+3.4
DEV	Deva	82.03	349	⇑P	P	16 16 04.6	+0.3
DEV	Deva	82.03	349	⇑P	P	16 16 04.6	+0.3
MYKA	Terra Mystica	82.08	355	eP	P	16 16 04.4	-0.3
	comp=Z,43nm,1.4s,SNR=8.0						
KOGS	Kog	82.10	354	eP	P	16 16 04.7	0.0
KOGS				e		16 26 42.8	
MORH	Mrgy, Hungar	82.14	352	⇑P	P	16 16 01.6	-3.3
MORH	Mrgy, Hungar	82.14	352	eP	P	16 16 01.8	-3.1
MORH	Mrgy, Hungar	82.14	352	eP	P	16 16 05.0	+0.1
MORH	Mrgy, Hungar	82.14	352	eP	P	16 16 01.9	-3.1
OBKA	Obir	82.15	355	eP	P	16 16 03.8	-1.3
	comp=Z,55nm,0.9s,SNR=13						
AKH	Akhalkalaki	82.16	333	⇑P	P	16 16 05.7	+0.4
ZOU	Zoufplan	82.19	356	P	P	16 16 02.1	-3.3
VOIR		82.19	347	⇑P	P	16 16 07.0	+1.7
VOIR		82.19	347	⇑P	P	16 16 07.0	+1.7
TPGR	Topolog	82.25	345	⇓P	P	16 16 03.7	-1.8
ISR	Istrita	82.28	346	⇓P	P	16 16 07.2	+1.4
ISR	Istrita	82.28	346	⇓P	P	16 16 07.2	+1.4
ARR	Arges	82.31	348	⇑P	P	16 16 05.7	-0.2
KOVH	Kovagotottos	82.32	352	eP	P	16 16 04.4	-1.4
KOVH	Kovagotottos	82.32	352	eP	P	16 16 05.5	-0.3
AJM	Ajmer	82.34	303	eP	P	16 16 06.1	-0.3
LOT	Lotru	82.35	348	⇓P	P	16 16 08.6	+2.4
TUE	Stuetta	82.38	358	P	P	16 16 03.9	-2.6
TUE				IAmb	IAmb	16 16 24.4	
	comp=Z,155nm,1.2s						
TUE				IAMs_20	IAMs_20	16 52 48.5	
	comp=Z,15µm,20.0s						
MTUR	Matau	82.39	347	⇑P	P	16 16 09.4	+3.0
MTUR	Matau	82.39	347	⇑P	P	16 16 09.4	+3.0
KALN	Kalnik	82.40	353	i P	P	16 16 00.3	-6.1
SDDR	Presa de Saban	82.41	69	IAMs_20	IAMs_20	16 53 24.5	
	comp=Z,20µm,21.0s						
LOBO	Lobor	82.41	354	i P	P	16 16 03.1	-3.2
PGOR	Pogoanele	82.42	346	⇑P	P	16 16 07.5	+1.1
SECR		82.44	346	⇓P	P	16 16 03.1	-3.4
BZS	Buzias	82.44	350	⇑P	P	16 16 05.0	-1.5
BZS	Buzias	82.44	350	⇑P	P	16 16 05.0	-1.5
CADS	Cadrg	82.48	355	i P	P	16 16 05.7	-1.1
HARR	Harsova	82.49	345	⇑P	P	16 16 06.6	-0.1
HARR	Harsova	82.49	345	⇑P	P	16 16 06.6	-0.1
STAL	STALIGIAL	82.49	356	P	P	16 16 03.9	-2.9
SENIN	Lac Senin/Sane	82.51	360	IAMs_20	IAMs_20	16 57 08.9	
	comp=Z,11µm,20.0s						
GZR	Gura Zlata	82.53	349	⇑P	P	16 16 05.8	-1.2
GZR	Gura Zlata	82.53	349	⇑P	P	16 16 05.8	-1.2
TLBR	Topalu	82.61	345	⇑P	P	16 16 07.2	-0.1
LJU	Ljubljana	82.62	355	i P	P	16 16 07.0	-0.5
LJU				eSKSac	S	16 26 20.4	-3.2
LJU				e		16 26 37.9	
LJU				e		16 27 28.5	
LJU				eSS	SS	16 31 47.6	+3.8
TIRR	Tirgusor	82.64	345	⇓P	P	16 16 07.1	-0.4
TIRR	Tirgusor	82.64	345	P	P	16 16 06.5	-1.0
TIRR				pmax	pmax		
	comp=Z,741nm,1.4s						
TIRR				MLR	MLR		
	comp=Z,75µm,20.0s						
TIRR	Tirgusor	82.64	345	P	P	16 16 06.5	-1.0
BCA	Borcka	82.64	334	⇑P	P	16 16 05.5	-2.1
AMRR	Amara	82.66	345	⇑P	P	16 16 09.7	+2.1
AMRR	Amara	82.66	345	⇑P	P	16 16 09.7	+2.1
PTJ	Puntijarka	82.66	354	i P	P	16 16 03.1	-4.6
BANR	Banloc	82.72	350	⇑P	P	16 16 06.8	-1.1
CTI	Castel Tesino	82.75	357	P	P	16 16 05.7	-2.5
CTI				pmax	pmax		
	comp=Z,49nm,1.2s						
CTI	Castel Tesino	82.75	357	P	P	16 16 05.7	-2.5
SULR		82.76	346	⇓P	P	16 16 06.0	-2.1
STFAR	Stefanesti-Arg	82.76	347	⇑P	P	16 16 12.5	+4.2
CRES	Cresnjev	82.78	354	eP	P	16 16 06.6	-1.7
MOSL	Moslavina	82.90	353	i P	P	16 16 04.6	-4.3
MFTR	Murfatlar	82.91	345	⇓P	P	16 16 07.1	-1.9
CEY	Cerknica	82.93	355	eP	P	16 16 08.0	-1.1
GNI	Garni	82.96	332	P	P	16 16 09.0	-0.6
GNI	Garni	82.96	332	⇑eP	P	16 16 10.3	+0.8
GNI				pmax	pmax		
	comp=Z,180nm,2.5s						
GNI				MLR	MLR		
	comp=Z,11µm,24.0s						
GNI	Garni	82.96	332	P	P	16 16 09.5	0.0
GNI	Garni	82.96	332	P	P	16 16 07.5	-2.0
GNI				IAmb	IAmb	16 16 33.3	
	comp=Z,161nm,1.5s						
OZLJ	Ozalj	82.99	354	i P	P	16 16 04.6	-4.7
TRI	Trieste	82.99	355	P	P	16 16 07.0	-2.4
TRI				pmax	pmax		
	comp=Z,14nm,0.8s						
TRI	Trieste	82.99	355	P	P	16 16 07.0	-2.4
PBKI	Pangkalan Bun	83.01	257	P	P	16 16 10.8	+1.0
	comp=Z,4µmcomp=Z,249nm,1.7s						
HERR	Herculane	83.07	349	⇑P	P	16 16 08.9	-0.9
RASA	Rasa	83.08	346	⇓P	P	16 16 16.2	+6.4
FRGS	Fruska Gora	83.08	351	⇑P	P	16 16 07.9	-2.0
FRGS	Fruska Gora	83.08	351	eP	P	16 16 09.0	-0.9
HUMR	Humele	83.09	347	⇓P	P	16 16 10.5	+0.6
SALO	Salr	83.21	357	P	P	16 16 09.7	-0.9
SALO				IAmb	IAmb	16 16 27.4	
	comp=Z,99nm,1.1s						
SGRR	Singureni	83.25	346	⇑P	P	16 16 10.0	-0.7
MDVR	Moldovita	83.25	349	⇑P	P	16 16 10.0	-0.8
RIY	Rijeka	83.34	355	i P	P	16 16 10.3	-0.8
TEOL	Teolo	83.43	357	P	P	16 16 09.9	-1.8
TEOL				IAmb	IAmb	16 16 28.0	
	comp=Z,180nm,1.0s						
COPA	Copaceanca	83.44	347	⇑P	P	16 16 10.1	-1.6
CDITO	Canoas	83.45	85	P	P	16 16 10.7	-1.5
CDITO				IAmb	IAmb	16 16 39.2	
	comp=Z,140nm,1.1s						
MRAK	Mrakovica	83.48	353	eP	P	16 16 13.0	+1.0
JRMM	Jerantut	83.55	268	P	P	16 16 13.0	+0.3
KTUT	Trabzon	83.56	336	⇑P	P	16 16 14.3	+2.0
SSB	Saint Sauveur	83.58	2	P	P	16 16 11.0	-1.4
SSB				pmax	pmax		
	comp=Z,41nm,1.1s						
SSB				MLR	MLR		
	comp=Z,12µm,21.0s						
SSB	Saint Sauveur	83.58	2	P	P	16 16 11.0	-1.4
SSB	Saint Sauveur	83.58	2	IAMs_20	IAMs_20	16 56 57.1	
	comp=Z,12µm,21.0s						
PBA	Port Blair	83.60	281	P	P	16 16 14.8	+1.9
PBA	Port Blair	83.60	281	P	P	16 16 12.4	-0.6
PBA				IAmb	IAmb	16 16 26.1	
	comp=Z,159nm,0.8s						
KULM	Kulim	83.61	270	P	P	16 16 13.0	0.0
SMRN	Sveta Marina	83.64	355	i P	P	16 16 10.3	-2.3
KALB	Balgarevo	83.66	344	⇑P	P	16 16 15.8	+3.0
DR12	Loma Pena Alta	83.67	68	P	P	16 16 13.0	-0.3
VLAD	Vladila	83.69	347	⇑P	P	16 16 04.0	-8.9
PLIT	Plitvice	83.71	354	i P	P	16 16 07.5	-5.7
BLY	Banja Luka	83.72	353	eP	P	16 16 13.3	+0.2
RAZG	Razgrad	83.81	346	⇑P	P	16 16 14.5	+0.9
BNI	Bardonecchia	83.83	0	P	P	16 16 12.7	-1.2
BNI				pmax	pmax		
	comp=Z,121nm,1.3s						
BNI				MLR	MLR		
	comp=Z,12µm,20.0s						
BNI	Bardonecchia	83.83	0	P	P	16 16 12.7	-1.2
BNI				IAmb	IAmb	16 16 30.3	
	comp=Z,121nm,1.3s						
BNI				IAMs_20	IAMs_20	16 58 58.6	
	comp=Z,11µm,20.0s						
ZIMR		83.89	347	⇑P	P	16 16 09.9	-4.1
ZIMR		83.89	347	⇑P	P	16 16 09.9	-4.1
RABC	Rab	83.89	354	i P	P	16 16 11.8	-2.2
JASL	Jaisalmer	83.90	306	eP	P	16 16 15.2	+0.9
WBSI	Waikabubak, Su	83.97	246	P	P	16 16 13.2	-1.6
	comp=Z,5µmcomp=Z,319nm,1.6s						
BZK	Bozkurt	83.99	340	⇓P	P	16 16 16.9	+2.4
IPM	Ipoh	84.00	270	P	P	16 16 15.0	0.0
DIKM	Dikmen	84.02	339	⇑P	P	16 16 15.4	+0.7
UDBI	Udbina	84.05	354	i P	P	16 16 14.6	-0.3
NVLJ	Novalja	84.07	354	i P	P	16 16 08.9	-6.0
DIVS	Divibare	84.11	351	eP	P	16 16 13.6	-1.7
DIVS	Divibare	84.11	351	P	P	16 16 12.4	-2.8
DIVS				IAMs_20	IAMs_20	16 53 32.2	
	comp=Z,15µm,22.0s						
HAPS	Han Pijesak,BI	84.23	351	eP	P	16 16 15.4	-0.5
PLAI	Plampang	84.24	248	P	P	16 16 15.8	-0.3
	comp=Z,7µmcomp=Z,4µmcomp=Z,183nm,1.6s						
PLVB	Pleven	84.26	347	⇑P	P	16 16 15.4	-0.5
BOVS	Bovan	84.39	349	⇑P	P	16 16 14.4	-2.1
BBLS	Lazići	84.40	351	eP	P	16 16 15.2	-1.5
KIJV	Kijevo	84.52	353	i P	P	16 16 17.5	+0.3
MSSA	Maissana	84.54	358	P	P	16 16 15.0	-2.4
MSSA				IAmb	IAmb	16 16 32.7	
	comp=Z,53nm,1.0s						
DUGI	Dugi Otok	84.63	354	i P	P	16 16 11.8	-6.0
WR0	Warramunga Arr	84.63	229	P	P	16 16 17.7	-0.3
WR0				IAmb	IAmb	16 16 36.8	
	comp=Z,129nm,1.4s						
RUDO	Rudo	84.65	351	eP	P	16 16 16.4	-1.5
VLC	Villacollemand	84.67	358	IAMs_20	IAMs_20	17 01 04.0	
	comp=Z,14µm,21.0s						
TWSI	Taliwang, Sumb	84.69	249	P	P	16 16 18.2	-0.2
	comp=Z,4µmcomp=Z,2µmcomp=Z,56nm,1.8s						
WRAB	Tennant Creek	84.70	229c	eP	P	16 16 18.4	+0.1
WRAB				pmax	pmax		
	comp=Z,61nm,1.3s						
WRAB	Tennant Creek	84.70	229	P	P	16 16 17.7	-0.6
WRAB				IAmb	IAmb	16 16 35.0	
	comp=Z,160nm,1.4s						
WB2	Warramunga Arr	84.71	229	P	P	16 16 17.4	-0.9
WB2				IAmb	IAmb	16 16 35.1	
	comp=Z,149nm,1.4s						
MORI	Morici	84.71	354	i P	P	16 16 13.2	-5.0
WRA	Warramunga Arr	84.71	229	P	P	16 16 17.6	-0.8
	comp=Z,22nm,1.0s,baz=32,slow=5.9,SNR=70						
WRA				PKKP	PKKPdf	16 34 08.1	-11
	comp=Z,0.8nm,1.1s,baz=206,slow=1.7,SNR=7.0						
WRA				LR	LR	16 49 58.2	
	comp=Z,7µm,21.5s,baz=30,slow=33						
WRA	Warramunga Arr	84.71	229	P	P	16 16 17.3	-1.1
BWJI	Bawean	84.90	254	P	P	16 16 19.7	+0.3
	comp=Z,7µmcomp=Z,3µmcomp=Z,147nm,1.2s						
ZIRJ	Zirje	84.93	354	i P	P	16 16 14.6	-4.6
RICI	Ricice	84.97	353	i P	P	16 16 16.1	-3.5
KMMI	Kalianget	85.06	252	P	P	16 16 18.8	-1.5
	comp=Z,13µmcomp=Z,6µmcomp=Z,216nm,1.9s						
UPM	Unac-Piva	85.11	351	eP	P	16 16 23.3	+2.9
KDZE	Karadeniz Ereo	85.14	342	⇑P	P	16 16 20.7	+0.3
SRBI	Singaraja	85.15	251	P	P	16 16 20.4	-0.3
	comp=Z,9µmcomp=Z,3µmcomp=Z,105nm,1.1s						
MAKA	Makarska	85.19	353	i P	P	16 16 17.5	-3.0
VTS	Vitosha	85.20	348	⇑P	P	16 16 20.4	-0.5
VTS	Vitosha	85.20	348	⇑P	P	16 16 20.4	-0.5
VTS	Vitosha	85.20	348	P	P	16 16 18.9	-2.0
OSSC	Osservatorio P	85.28	357	P	P	16 16 18.5	-2.6
OSSC				IAmb	IAmb	16 16 35.5	
	comp=Z,100nm,1.2s						
HVAR	Hvar	85.34	353	i P	P	16 16 17.5	-3.8
BRY	Bratogost	85.44	352	eP	P	16 16 20.6	-1.4
EDRB	Edirne	85.45	345	P	P	16 16 24.9	+3.0
MURB	Monte Urbino	85.49	356	P	P	16 16 20.4	-1.8
ABJI	Asem Bagus	85.50	252	P	P	16 16 20.7	-1.7
	comp=Z,10µmcomp=Z,3µmcomp=Z,78nm,1.4s						
STON	Ston	85.55	352	eP	P	16 16 19.9	-2.4
STON	Ston	85.55	352	i P	P	16 16 16.1	-6.3
DSRI	Dabo	85.63	264	P	P	16 16 23.8	+0.6
	comp=Z,8µmcomp=Z,2µmcomp=Z,78nm,2.0s						
TREB	Trebinje	85.64	352	eP	P	16 16 21.3	-1.6
DBRK	Dubrovnik	85.71	352	i P	P	16 16 17.5	-5.7
BLJI	Banyuglugur	85.84	252	P	P	16 16 24.5	+0.4
	comp=Z,5µmcomp=Z,1µmcomp=Z,18nm,1.1s						
PDG	Podgorica	85.84	351	⇑P	P	16 16 21.8	-2.1
PDG	Podgorica	85.84	351	eP	P	16 16 22.7	-1.1
PDG	Podgorica	85.84	351	P	P	16 16 21.4	-2.4
PDG				IAmb	IAmb	16 16 43.2	
	comp=Z,66nm,0.8s						
OBIP	Obispado Ponce	85.85	66	P	P	16 16 24.2	-0.1
NRCA	Norcia	85.89	355	P	P	16 16 22.8	-1.4
NRCA				IAmb	IAmb	16 16 39.4	
	comp=Z,58nm,0.9s						
HCY	Herceg Novi	85.90	351	eP	P	16 16 21.5	-2.6
GCPR	Guaynabo City	85.94	66	P	P	16 16 24.1	-0.5
GCPR				IAmb	IAmb	16 16 42.9	
	comp=Z,187nm,1.1s						
PGAV	Gavieira, Arco	85.97	11	eP	P	16 16 25.0	+0.4
	comp=Z,80nm,1.6s						
PGAV	Gavieira, Arco	85.97	11	eS	S	16 26 57.5	0.0
PGAV	Gavieira, Arco	85.97	11	eLQ	LQ	16 39 30.1	
PGAV				eLR	LR	16 45 05.7	
	comp=Z,15µm,20.0s						
LHMI	Lhok Sumawe	85.97	273	P	P	16 16 26.0	+1.1
	comp=Z,21µmcomp=Z,10µmcomp=Z,218nm,1.1s						
LHMI	Lhok Sumawe	85.97	273	P	P	16 16 24.4	-0.5
PPBI	Pangkal Pinang	85.98	261	P	P	16 16 25.3	+0.4
	comp=Z,12µmcomp=Z,4µmcomp=Z,90nm,2.0s						
PAYG	Puerto Ayora	85.99	96	IAMs_20	IAMs_20	16 49 53.5	
	comp=Z,11µm,18.0s						
SJG	San Juan	86.06	66	P	P	16 16 25.1	-0.2
	comp=Z,7.9nm,0.4s,baz=344,slow=4.1,SNR=4.8						
SJG	San Juan	86.06	66	P	P	16 16 24.0	-1.3
SJG				IAmb	IAmb	16 16 43.1	
	comp=Z,192nm,1.4s						
SJG	San Juan	86.06	66	IAMs_20	IAMs_20	16 55 31.0	
	comp=Z,13µm,20.0s						
JAGI	Jajag, Banyuwa	86.08	251	P	P	16 16 24.3	-1.1
	comp=Z,7µmcomp=Z,2µmcomp=Z,73nm,1.6s						
DRME	Dracevica, Mon	86.09	351	eP	P	16 16 23.5	-1.6
PDPR	Patillas Dam,	86.21	66	P	P	16 16 24.7	-1.3
PDPR				IAmb	IAmb	16 16 43.7	
	comp=Z,69nm,0.9s						
BR131	Keskin Array S	86.21	340	P	P	16 16 24.5	-1.4
BR131				pmax	pmax		
	comp=Z,64nm,1.0s						
BR131	Keskin Array S	86.21	340	P	P	16 16 24.5	-1.4
BR131				IAmb	IAmb	16 16 44.4	
	comp=Z,64nm,1.0s						
BRTR	Keskin Array B	86.21	340	P	P	16 16 24.5	-1.4
	comp=Z,18nm,1.1s,baz=29,slow=2.8,SNR=16						
BRTR				LR	LR	17 01 49.7	
	comp=Z,12µm,19.1s,baz=40,slow=40						
BRTR	Keskin Array B	86.21	340	P	P	16 16 24.4	-1.6
STIP	Stip	86.24	349	i P	P	16 16 24.6	-1.3
PCAB	Cabril	86.25	11	eP	P	16 16 26.2	+0.3
	comp=Z,81nm,1.7s						
ANTO	Ankara	86.25	340	P	P	16 16 24.5	-1.5
ANTO				pmax	pmax		
	comp=Z,161nm,1.4s						
ANTO				MLR	MLR		
	comp=Z,18µm,18.0s						
ANTO	Ankara	86.25	340	P	P	16 16 24.5	-1.5
ANTO				IAmb	IAmb	16 16 43.8	
	comp=Z,161nm,1.4s						
PBRG	Braganca	86.31	10	eP	P	16 16 26.3	+0.1
	comp=Z,84nm,1.6s						
RDO	Rodhopi	86.32	346	P	P	16 16 28.6	+2.4
AQU	L'Aquila	86.36	355	P	P	16 16 24.3	-2.2
AQU				pmax	pmax		
	comp=Z,93nm,0.9s						
AQU				MLR	MLR		
	comp=Z,16µm,21.0s						
AQU	L'Aquila	86.36	355	P	P	16 16 24.3	-2.2
AQU				IAmb	IAmb	16 16 51.4	
	comp=Z,93nm,0.9s						
AQU				IAMs_20	IAMs_20	16 58 49.5	
	comp=Z,16µm,21.0s						
NVR	Nevrokopi	86.36	347	P	P	16 16 29.5	+3.0
MTP	Monte Pirata	86.41	65	P	P	16 16 26.4	-0.6
MTP				IAmb	IAmb	16 16 45.6	
	comp=Z,123nm,0.9s						
PHP	Peshkopia	86.45	350	P	P	16 16 28.8	+1.8
ALN	Alexandroupoli	86.49	346	P	P	16 16 29.7	+2.6
ALN	Alexandroupoli	86.49	346	P	P	16 16 25.3	-1.8
ALN				pmax	pmax		
	comp=Z,177nm,1.3s						
ALN	Alexandroupoli	86.49	346	P	P	16 16 25.3	-1.8
ALN				IAmb	IAmb	16 16 44.5	
	comp=Z,177nm,1.3s						
STVI	Saint Thomas	86.55	65	P	P	16 16 26.6	-1.1
STVI				IAmb	IAmb	16 16 46.8	
	comp=Z,80nm,0.7s						
VAY	Valandovo	86.56	348	i P	P	16 16 26.6	-0.8
POLO	Lamas de Olo	86.61	11	eP	P	16 16 26.6	-1.2
	comp=Z,45nm,1.6s						
PSI	Prapat	86.62	270	P	P	16 16 28.3	+0.1
	comp=Z,16nm,0.6s,baz=357,slow=3.8,SNR=39						
PSI				LR	LR	16 53 38.1	
	comp=Z,4µm,21.8s,baz=360,slow=35						
KAVA	Kavala	86.62	347	P	P	16 16 30.4	+2.7
SRS	Serrai	86.63	348	P	P	16 16 30.4	+2.6
KNT	Kendrikon	86.68	348	P	P	16 16 30.6	+2.6
RPSI	Rantau Prapat	86.70	270	P	P	16 16 28.3	-0.2
PVRL	Vila Real	86.72	11	eP	P	16 16 28.7	+0.4
	comp=Z,96nm,1.7s						
SGRT	San Giovanni R	86.81	353	P	P	16 16 26.8	-2.0
SGRT				IAmb	IAmb	16 16 47.9	
	comp=Z,48nm,0.7s						
NGJI	Ngawi	86.81	254	P	P	16 16 29.3	+0.4
	comp=Z,873nmcomp=Z,52nm,1.0s						
TIR	Tirane	86.85	350	P	P	16 16 27.4	-1.5
TIR				pmax	pmax		
	comp=Z,185nm,1.1s						
TIR				MLR	MLR		
	comp=Z,20µm,18.0s						
TIR	Tirane	86.85	350	P	P	16 16 27.4	-1.5
TIR				IAmb	IAmb	16 16 48.6	
	comp=Z,185nm,1.1s						
VJP	Vajepar	86.88	305	eP	P	16 16 28.4	-0.8
MVO	Moncorvo	86.91	11	eP	P	16 16 29.2	0.0
	comp=Z,69nm,1.3s						
MVO	Moncorvo	86.91	11	eS	S	16 27 07.2	+0.6
MVO				eSS	SS	16 32 55.8	+8.6
MVO				eLQ	LQ	16 40 04.4	
MVO				eLR	LR	16 45 21.8	
	comp=Z,15µm,18.0s						
RGRI	Rengat	86.93	266	P	P	16 16 31.2	+1.6
GRG	Griva	86.94	348	P	P	16 16 32.5	+3.2
SOH	Sokhos	86.95	348	P	P	16 16 31.3	+1.9
THAS	Thassos island	86.97	347	P	P	16 16 31.3	+1.9
OHR	Ohrid	86.98	350	i P	P	16 16 28.8	-0.8
SMTH	Samothraki Isl	86.98	346	P	P	16 16 31.4	+1.9
JUMK	Jumkunaria	87.12	305	eP	P	16 16 30.1	-0.4
OUZ	Omahuta	87.15	191	P	P	16 16 30.6	+0.6
OUZ				IAmb	IAmb	16 16 56.9	
	comp=Z,95nm,1.5s						
OUZ				IAMs_20	IAMs_20	16 51 08.7	
	comp=Z,10µm,20.0s						
SMRI	Semarang	87.18	255	P	P	16 16 30.6	-0.1
	comp=Z,12µmcomp=Z,154nm,1.4s						
BKNI	Bangkinang	87.21	267	P	P	16 16 31.5	+0.6
	comp=Z,14µmcomp=Z,4µmcomp=Z,232nm,1.1s						
FNA	Florina	87.24	349	P	P	16 16 33.0	+2.2
FNA	Florina	87.24	349	P	P	16 16 29.0	-1.8

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FNA                                pmax      pmax
      comp=Z,103nm,0.7s
FNA   Florina           87.24 349  P         P         16 16 29.0 -1.8
FNA                                IAmb      IAmb      16 16 48.8
      comp=Z,103nm,0.7s
PVIS  Viseu             87.25  11 eP         P         16 16 29.5 -1.4
      comp=Z,71nm,1.2s
OUR   Ouranopolis       87.34 347  P         P         16 16 33.0 +1.8
TPTI                    87.35 272  P         P         16 16 33.4 +1.8
      comp=Z,4µmcomp=Z,909nmcomp=Z,12nm,0.9s
PMBI  Palembang         87.42 262  P         P         16 16 32.9 +1.0
      comp=Z,13µmcomp=Z,7µmcomp=Z,234nm,0.4s
FITZ  Fitzroy Crossi    87.47 237  P         P         16 16 31.9 -0.1
      comp=Z,39nm,1.0s,baz=62,slow=6.4,SNR=28
FITZ                               LR        LR        16 52 28.4
      comp=Z,6µm,20.9s,baz=42,slow=33
EZN   Ezine             87.49 345  P         P         16 16 34.0 +2.1
HYB   Hyderabad         87.50 295 i P        P         16 16 30.0 -2.4
      comp=Z,400nm,1.0s
HYB                               eS         S         16 27 14.0 +1.0
HYB                               eLR        LR
      comp=Z,12nm,20.0s
HYD   Hyderabad         87.55 295 eP         P         16 16 30.0 -2.6
TAPR  Tapar             87.60 305 eP         P         16 16 33.2 +0.5
TAPR                              i x        x         16 19 51.0
LIA   Limnos Island     87.60 346  P         P         16 16 34.2 +1.7
MTE   Manteigas         87.60  11 eP         P         16 16 32.3 -0.3
      comp=Z,57nm,1.2s
MTE   Manteigas         87.60  11 eS         S         16 27 12.4 -0.9
MTE                               eSS        SS        16 33 05.9 +8.5
MTE                               eLQ        LQ        16 40 04.3
MTE                               eLR        LR        16 46 11.8
      comp=Z,11µm,20.0s
MTE   Manteigas         87.60  11  P         P         16 16 30.5 -2.1
MTE                                IAMs_20   IAMs_20   16 56 41.9
      comp=Z,12µm,20.0s
PAOL  Paolisi           87.61 354  P         P         16 16 30.8 -1.8
PAOL                               IAmb      IAmb      16 16 49.0
      comp=Z,67nm,1.3s
NEST  Nestorio          87.64 349  P         P         16 16 35.6 +2.8
KZN   Kozani            87.66 349  P         P         16 16 35.2 +2.3
COI   Coimbra           87.68  12 eP         P         16 16 33.1 +0.2
COI   Coimbra           87.68  12  IAMs_20   IAMs_20   16 57 32.1
      comp=Z,13µm,20.0s
MNSI  Mandailing Nat    87.76 268  P         P         16 16 30.8 -2.8
      comp=Z,10µmcomp=Z,3µmcomp=Z,58nm,0.8s
GAZ   Gaziantep         87.81 336  P         P         16 16 31.6 -2.1
GAZ                                IAmb      IAmb      16 16 40.1
      comp=Z,52nm,1.0s
UGM   Wanagama          87.81 255  P         P         16 16 32.9 -0.9
      comp=Z,7µmcomp=Z,198nm,1.5s
PCAS  Casmilo, Conde    87.82  12 eP         P         16 16 33.4 -0.2
      comp=Z,72nm,1.3s
MATE  Matera            87.83 353 ⇑P         P         16 16 33.1 -0.4
SMRT  St. Maarten       87.85  64  IAMs_20   IAMs_20   17 00 02.6
      comp=Z,17µm,19.0s
LSK   Leskovik          87.95 350  P         P         16 16 36.4 +2.1
KPRO  Kipourio          88.06 349  P         P         16 16 36.6 +1.8
SABA  Saba              88.10  64  IAMs_20   IAMs_20   16 56 22.4
      comp=Z,15µm,21.0s
AS31  Alice Springs     88.12 227  P         P         16 16 34.6 -0.4
ASAR  Alice Springs     88.13 227  P         P         16 16 34.8 -0.3
      comp=Z,24nm,0.8s,baz=28,slow=4.7,SNR=184
ASAR                               PKKP      PKKPdf    16 34 04.6 -9.0
      comp=Z,0.2nm,0.7s,baz=117,slow=4.2,SNR=5.5
ASAR                               PKKPbc    PKKPbc    16 34 25.7 +7.3
      comp=Z,0.6nm,0.6s,baz=201,slow=1.9,SNR=6.5
ASAR                               PKPPKP              16 42 43.9
      comp=Z,0.9nm,0.9s,baz=179,slow=1.7,SNR=5.0
ASAR                               LR        LR        16 51 48.1
      comp=Z,6µm,21.6s,baz=38,slow=33
ASAR  Alice Springs     88.13 227  P         P         16 16 34.6 -0.5
UCM   Universidad Co    88.13   8  P         P         16 16 33.8 -1.2
UCM                                S         S         16 27 12.6 -5.8
PCBR  Castelo Branco    88.16  11 eP         P         16 16 34.5 -0.7
      comp=Z,49nm,1.5s
SIGR  SIGRI             88.17 345  P         P         16 16 37.3 +2.1
PPI   Padang Panjang    88.22 267  P         P         16 16 34.6 -1.2
      comp=Z,398nmcomp=Z,31nm,0.7s
SCTE  Santa Cesarea     88.25 351  P         P         16 16 33.1 -2.5
SCTE                               IAmb      IAmb      16 16 50.8
      comp=Z,140nm,1.1s
PSBE  So Bento          88.32  12 eP         P         16 16 36.2 +0.2
      comp=Z,106nm,1.5s
SEUS  St. Eustatius     88.35  64  IAMs_20   IAMs_20   16 56 17.9
      comp=Z,16µm,21.0s
THL   Klokotos Trika    88.36 348  P         P         16 16 37.3 +1.2
XOR   Xorichti          88.40 347  P         P         16 16 38.4 +2.0
PDSI  Padang            88.53 267  P         P         16 16 36.2 -1.1
      comp=Z,5µmcomp=Z,2µmcomp=Z,28nm,1.4s
PMRV  Marv??o           88.58  11 eP         P         16 16 36.7 -0.5
      comp=Z,71nm,1.5s
PMRV  Marv??o           88.58  11 eS         S         16 27 18.3 -4.3
PMRV                              eSS        SS        16 33 18.0 +6.5
PMRV                              eLQ        LQ        16 40 05.0
PMRV                              eLR        LR        16 46 41.4
      comp=Z,12µm,18.0s
IGT   Igoumenitsa       88.59 350  P         P         16 16 39.6 +2.4
GSI   Gunungsitoli      88.62 270  P         P         16 16 38.1 +0.4
      comp=Z,17µmcomp=Z,6µmcomp=Z,166nm,1.6s
GSI   Gunungsitoli      88.62 270  P         P         16 16 36.0 -1.7
ISP   Isparta           88.69 342  IAMs_20   IAMs_20   17 03 04.0
      comp=Z,16µm,20.0s
ESBB  Sonseca Array     88.70   8  P         P         16 16 35.5 -2.2
ESDC  Sonseca Array     88.70   8  P         P         16 16 35.8 -2.0
      comp=Z,9.3nm,0.9s,baz=350,slow=4.3,SNR=34
ESDC                               PKPPKP              16 42 42.1
      comp=Z,0.6nm,0.8s,baz=181,slow=1.3,SNR=5.1
ESDC                               LR        LR        16 56 21.7
      comp=Z,3µm,19.2s,baz=310,slow=36
ESDC  Sonseca Array     88.70   8  P         P         16 16 35.5 -2.3
LEM   Lembang           88.72 257  P         P         16 16 38.5 +0.3
      comp=Z,9.7nm,0.3s,baz=134,slow=23,SNR=1.7
LEM                                LR        LR        16 53 32.4
      comp=Z,3µm,21.1s,baz=36,slow=34
LEM   Lembang           88.72 257  P         P         16 16 38.6 +0.3
      comp=Z,5µmcomp=Z,1µmcomp=Z,29nm,1.0s
PAB   San Pablo         88.79   9  P         P         16 16 35.6 -2.6
PAB                                pmax      pmax
      comp=Z,63nm,1.5s
PAB                                MLR       MLR
      comp=Z,8µm,21.0s
PAB   San Pablo         88.79   9  P         P         16 16 35.6 -2.6
TNG   Tangerang         88.80 259  P         P         16 16 38.6 +0.2
TNG                                P         PcP       16 16 39.8 -0.2
PMAFR Mafra             88.80  13 eP         P         16 16 37.0 -1.2
      comp=Z,171nm,1.7s
KLSI                    88.82 261  P         P         16 16 37.0 -1.6
      comp=Z,4µmcomp=Z,754nmcomp=Z,19nm,1.3s
PMTG  Montargil         88.83  12 eP         P         16 16 36.9 -1.4
      comp=Z,44nm,1.5s
PMTG  Montargil         88.83  12 ePP        PP        16 20 03.8 -2.7
AGG   Agios Georgios    88.86 348  P         P         16 16 39.2 +0.7
AGG   Agios Georgios    88.86 348  P         P         16 16 35.9 -2.6
AGG                                pmax      pmax
      comp=Z,55nm,1.0s
AGG   Agios Georgios    88.86 348  P         P         16 16 35.9 -2.6
AGG                                IAmb      IAmb      16 16 60.0
      comp=Z,55nm,1.0s
MAKR  Makrakomi, Fth    88.89 348  P         P         16 16 40.5 +1.8
LHSI  Lahat             88.89 263  P         P         16 16 38.0 -0.9
      comp=Z,3µmcomp=Z,58nm,1.1s
MAHO  Mahon             88.95   2  P         P         16 16 37.0 -1.9
MAHO                               S         S         16 27 27.8 +1.8
MDSI  Maura Dua         89.00 262  P         P         16 16 39.2 -0.2
      comp=Z,5µmcomp=Z,1µmcomp=Z,19nm,1.5s
MXZ   Matakaoa Point    89.02 187  IAMs_20   IAMs_20   16 52 06.2
      comp=Z,18µm,20.0s
EVR   Evrytania         89.03 348  P         P         16 16 41.4 +2.0
PMST  Lisbon--Monsan    89.03  13 eP         P         16 16 39.6 +0.3
      comp=Z,117nm,1.5s
LIS   Lisbon            89.05  13 eP         P         16 16 39.1 -0.3
LIS                               ePP        PP        16 20 08.4 +0.2
LIS                               eSKSac     SKSac     16 27 08.5 +0.2
LIS                                IAMs_20   IAMs_20   17 00 03.2
      comp=Z,17µm,25.7s
LIS   Lisbon            89.05  13 eP         P         16 16 39.1 -0.3
LIS                               i                    16 20 08.4
LIS                               e                    16 27 08.4
SBJI  Serang            89.08 259  P         P         16 16 38.3 -1.4
      comp=Z,143nm,0.4s
PESTR Estremoz          89.11  11 eP         P         16 16 38.7 -1.0
      comp=Z,83nm,1.5s
PESTR Estremoz          89.11  11  P         P         16 16 36.7 -3.0
HATO  Hato, Curacao     89.13  72  IAMs_20   IAMs_20   16 59 52.0
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      comp=Z,15µm,21.0s
MASI  Maura Aman, Be    89.16 264  P         P         16 16 39.0 -1.2
      comp=Z,4µmcomp=Z,148nm,2.3s
POO   Poona             89.22 299⇓iP         P         16 16 41.0 +0.5
      comp=Z,650nm,1.2s
LKD2  Lefkada island    89.29 349  P         P         16 16 42.8 +2.2
TIP   Timpagrande       89.29 352 ⇓P         P         16 16 38.2 -2.4
TIP   Timpagrande       89.29 352  P         P         16 16 37.3 -3.3
TIP                                IAmb      IAmb      16 16 55.1
      comp=Z,66nm,1.3s
TIP                                IAMs_20   IAMs_20   16 58 35.2
      comp=Z,13µm,21.0s
VSL   Villasalto        89.35 358  IAMs_20   IAMs_20   17 03 37.9
      comp=Z,13µm,19.0s
PVO   Paravola          89.36 349  P         P         16 16 44.4 +3.6
EVO   Evora             89.38  12  P         P         16 16 38.6 -2.3
EVO                                S         S         16 27 27.2 -2.9
EVO   Evora             89.38  12 eP         P         16 16 40.1 -0.9
      comp=Z,46nm,1.6s
EVGI  Lefkada island    89.46 349  P         P         16 16 42.6 +1.3
EFP   Efpalio           89.50 348  P         P         16 16 43.9 +2.4
KARY  Karystos          89.54 346  P         P         16 16 43.4 +1.7
VILL  Villia            89.57 347  P         P         16 16 43.2 +1.3
LAKA  Lakka             89.67 348  P         P         16 16 44.7 +2.3
SISI  Saibi             89.71 268  P         P         16 16 42.8  0.0
      comp=Z,7µmcomp=Z,3µmcomp=Z,96nm,1.4s
PNCL  Nicolau / Gran    89.73  12 eP         P         16 16 42.2 -0.4
      comp=Z,93nm,1.5s
URZ   Urewera           89.80 188  P         P         16 16 43.8 +1.4
      comp=Z,12nm,0.8s,baz=303,slow=22,SNR=6.1
URZ                                LR        LR        16 50 18.4
      comp=Z,15µm,20.7s,baz=31,slow=31
URZ   Urewera           89.80 188  IAMs_20   IAMs_20   16 54 27.0
      comp=Z,17µm,19.0s
KLV   Kalavryta, Ach    89.84 348  P         P         16 16 44.8 +1.6
PBEJ  Beja              89.90  12 eP         P         16 16 42.9 -0.5
      comp=Z,69nm,1.5s
GUR   Goura             89.92 348  P         P         16 16 44.1 +0.5
DRO   Drossia           89.99 348  P         P         16 16 46.5 +2.7
MESJ  Messejana         90.04  12 eP         P         16 16 43.7 -0.4
MESJ                              ePP        PP        16 20 16.2 +0.1
MESJ                              eSKSac     SKSac     16 27 14.5 +0.4
MESJ                              eSS        SS        16 33 35.0 +2.2
MESJ                               IAMs_20   IAMs_20   17 00 55.6
      comp=Z,13µm,20.1s
MESJ  Messejana         90.04  12 eP         P         16 16 43.6 -0.4
MESJ                              e                    16 20 16.2
MESJ                              e                    16 27 14.4
MESJ                              eSS        SS        16 33 34.9 +2.2
MESJ  Messejana         90.04  12 eP         P         16 16 45.0 +1.0
      comp=Z,35nm,1.7s
PTEO  Sao Teotonio      90.26  12 eP         P         16 16 45.2 +0.1
      comp=Z,78nm,1.4s
HIZ   Hauiti            90.27 189  P         P         16 16 44.1 -0.6
HIZ                                IAMs_20   IAMs_20   16 51 57.3
      comp=Z,18µm,20.0s
PCVE  Castro Verde      90.27  12 eP         P         16 16 44.5 -0.6
      comp=Z,72nm,1.5s
CEL   Celeste           90.27 353  IAMs_20   IAMs_20   17 00 38.2
      comp=Z,8µm,20.0s
MORF  Marmelete         90.51  12 eP         P         16 16 45.8 -0.5
MORF                              ePP        PP        16 20 20.0 +0.1
MORF                              eSKSac     SKSac     16 27 17.2 +0.2
MORF                              eSS        SS        16 33 41.7 +2.1
MORF                               IAMs_20   IAMs_20   17 00 33.9
      comp=Z,16µm,17.2s
MORF  Marmelete         90.51  12 eP         P         16 16 45.8 -0.5
MORF                              e                    16 20 20.0
MORF                              e                    16 27 17.2
MORF                              eSS        SS        16 33 41.7 +2.0
MORF  Marmelete         90.51  12 eP         P         16 16 45.6 -0.7
      comp=Z,92nm,1.4s
PVAQ  Vaqueiros         90.53  12 eP         P         16 16 45.9 -0.4
      comp=Z,74nm,1.6s
PVAQ  Vaqueiros         90.53  12 ePP        PP        16 20 21.9 +1.8
PVAQ                              eS         SKSac     16 27 25.5 +8.5
PVAQ                              eSS        SS        16 33 46.7 +6.8
PVAQ                              eLQ        LQ        16 40 32.1
PVAQ                              eLR        LR        16 47 47.1
      comp=Z,13µm,16.0s
PFVI  Vila Bisbo        90.66  13 eP         P         16 16 48.0 +1.1
      comp=Z,122nm,1.5s
PBDV  Barranco-do-Ve    90.67  12 eP         P         16 16 50.9 +3.9
      comp=Z,108nm,1.9s
ITM   Ithomi            90.72 348  P         P         16 16 49.2 +1.9
ITM   Ithomi            90.72 348  P         P         16 16 45.2 -2.0
ITM                                IAmb      IAmb      16 17 09.8
      comp=Z,61nm,0.8s
SDV   Santo Domingo     90.73  75  P         P         16 16 48.4 +0.6
      comp=Z,10.0nm,0.3s,baz=3.1,slow=7.9,SNR=6.6
SDV   Santo Domingo     90.73  75  IAMs_20   IAMs_20   16 58 59.9
      comp=Z,14µm,21.0s
BKZ   Black Stump Fm    90.76 188  P         P         16 16 46.2 -0.8
BKZ                                IAMs_20   IAMs_20   16 59 17.3
      comp=Z,17µm,19.0s
CORL  Corleone          90.81 355  P         P         16 16 44.4 -3.2
CORL                               IAmb      IAmb      16 17 02.4
      comp=Z,85nm,1.4s
CSS   Mathiatis         90.84 339  P         P         16 16 44.7 -3.2
CSS                                IAmb      IAmb      16 16 50.6
      comp=Z,146nm,1.4s
ARNO  Arenosillo        90.95  11  P         P         16 16 48.0 -0.3
ARNO                               S         S         16 27 47.1 +2.5
CART  Cartagena         91.01   6  P         P         16 16 45.0 -3.5
CART                               S         S         16 27 42.4 -2.7
VLI   Veliai            91.04 347  P         P         16 16 49.1 +0.4
CLTB  Caltabellotta     91.12 355  P         P         16 16 45.8 -3.4
CLTB                               IAmb      IAmb      16 16 52.7
      comp=Z,84nm,1.4s
CLTB                               IAMs_20   IAMs_20   17 05 52.8
      comp=Z,16µm,18.0s
SHME  Shamm             91.53 317 i P        P         16 16 49.2 -2.0
      SNR=8.0
SHME  Shamm             91.53 317  P         P         16 16 51.1  0.0
      SNR=6.4
EMAL  Malaga-Limoner    91.54   9  P         P         16 16 49.6 -1.4
EMAL                               S         S         16 27 49.0 -0.9
BANOM Banah             91.58 317 i P        P         16 16 49.7 -1.7
      SNR=7.9
BANOM Banah             91.58 317  P         P         16 16 51.0 -0.4
MIB   Mutribah          91.60 326 eP         P         16 16 49.9 -1.5
SFS   San Fernando      91.64  11  P         P         16 16 52.5 +1.0
SFS                                S         S         16 27 57.4 +6.5
UMR   Umm Al-Rimmam     91.70 325 eP         P         16 16 50.1 -1.8
ANKY  Antikythira Is    91.83 347  P         P         16 16 53.9 +1.5
KBD   Kabd              92.05 325 eP         P         16 16 52.1 -1.4
STKA  Stephens Creek    92.11 217  P         P         16 16 55.1 +1.7
      comp=Z,16nm,0.7s,baz=353,slow=4.3,SNR=19
STKA                               LR        LR        16 53 17.8
      comp=Z,14µm,21.9s,baz=23,slow=32
STKA  Stephens Creek    92.11 217c iP        P         16 16 54.7 +1.3
STKA  Stephens Creek    92.11 217  P         P         16 16 52.1 -1.3
MASF  Masafi            92.12 317  P         P         16 16 52.7 -1.3
      SNR=6.8
MDH   Madha             92.13 317 i P        P         16 16 51.2 -2.7
      SNR=6.8
MDH   Madha             92.13 317  P         P         16 16 52.5 -1.4
IMMV  Iera Moni Meta    92.13 346  P         P         16 16 55.1 +1.3
MSFE  Esma-Masafi       92.13 317 i P        P         16 16 51.6 -2.4
      SNR=6.1
UMQ   Umm Al-Quwin      92.20 317  P         P         16 16 53.2 -1.1
UMQ   Umm Al-Quwin      92.20 317  P         P         16 16 55.9 +1.7
BFZ   Birch Farm        92.28 188  IAMs_20   IAMs_20   16 52 19.6
      comp=Z,18µm,20.0s
CEU   Ceuta             92.30  10  P         P         16 16 52.8 -1.7
CEU                                S         S         16 27 56.7 -0.1
RDF   Al-Radifah        92.33 325 eP         P         16 16 53.4 -1.4
UOSS  Minazif           92.48 317 i P        P         16 16 53.1 -2.4
      SNR=8.2
UOSS  Minazif           92.48 317  P         P         16 16 52.4 -3.2
UOSS                               IAmb      IAmb      16 17 11.2
      comp=Z,63nm,1.1s
UOSS  Minazif           92.48 317  IAMs_20   IAMs_20   17 00 44.9
      comp=Z,15µm,22.0s
HATD  Hatta, Dubai      92.61 317 i P        P         16 16 54.0 -2.2
      SNR=9.8
HATD  Hatta, Dubai      92.61 317  P         P         16 16 55.7 -0.5
      SNR=11
NAZ   Nazwa, Dubai      92.67 317 i P        P         16 16 55.0 -1.5
      SNR=9.7
NAZ   Nazwa, Dubai      92.67 317  P         P         16 16 56.0 -0.5
      SNR=20
ASHO  Ashiyiah          92.77 317 i P        P         16 16 54.5 -2.5
      SNR=22
ASHO  Ashiyiah          92.77 317  P         P         16 16 55.1 -1.8
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      SNR=12
QRZ   Quartz Range      92.81 191  IAMs_20   IAMs_20   16 54 40.6
      comp=Z,14µm,20.0s
BIDO  Bidbid            92.88 314  P         P         16 16 57.2 -0.2
      SNR=8.0
WSAR  Wadi Sarin        92.89 314  LR        LR        17 04 13.9
      comp=Z,19µm,20.3s,baz=66,slow=39
WSAR  Wadi Sarin        92.89 314  P         P         16 16 57.5  0.0
      SNR=18
FAQ   Al Faqa, Dubai    92.91 317 i P        P         16 16 55.6 -2.0
      SNR=8.0
FAQ   Al Faqa, Dubai    92.91 317  P         P         16 16 56.9 -0.7
      SNR=11
SOHO  SOHO              93.04 316 i P        P         16 16 55.7 -2.4
      SNR=16
SOHO  SOHO              93.04 316  P         P         16 16 56.9 -1.3
NNZ   Nelson            93.10 190  IAMs_20   IAMs_20   17 04 19.2
      comp=Z,14µm,18.0s
KEST  Kesra             93.11 358  P         P         16 16 57.8 -0.6
      comp=Z,19nm,1.3s,baz=263,slow=3.3,SNR=6.0
PVLZ  Peæn de           93.13   9  P         P         16 16 53.0 -5.3
PVLZ                               S         S         16 28 02.3 -1.8
ASUD  Al Ashush, Dub    93.13 317 i P        P         16 16 55.8 -2.7
      SNR=25
ASUD  Al Ashush, Dub    93.13 317  P         P         16 16 57.0 -1.6
      SNR=19
HOQ   Hoqain            93.19 315  P         P         16 16 57.9 -0.9
      SNR=11
PCRV  Puerto La Cruz    93.27  69  P         P         16 17 01.9 +2.5
      comp=Z,11nm,0.8s,baz=326,slow=11,SNR=3.5
WBK   Wadi Bani Khal    93.28 313  P         P         16 16 58.8 -0.5
      SNR=24
SMDO  Samad             93.31 314  P         P         16 16 58.3 -1.2
      SNR=26
PMPS  Porto Santo       93.34  19 eP         P         16 17 01.4 +2.0
      comp=Z,212nm,1.4s
PMOZ  Porto Moniz, M    93.38  20 eP         P         16 17 02.4 +2.7
      comp=Z,176nm,1.6s
PMOZ  Porto Moniz, M    93.38  20 ePP        PP        16 20 45.4 +2.6
PMOZ                              eS         SKSac     16 27 45.1  +12
PMOZ  Porto Moniz, M    93.38  20 eLQ        LQ        16 41 33.8
PMOZ                              eLR        LR        16 48 03.4
      comp=Z,9µm,18.0s
GRGR  Grenville         93.42  66  IAMs_20   IAMs_20   17 00 34.0
      comp=Z,12µm,20.0s
ALNE  Al Ain            93.45 316 i P        P         16 16 57.7 -2.4
      SNR=7.4
ALNE  Al Ain            93.45 316  P         P         16 16 57.9 -2.1
      SNR=16
JLN   Jalan Bani Buh    93.48 313  P         P         16 17 01.0 +0.8
      SNR=27
PMAR  Madeira           93.54  20 eP         P         16 17 02.4 +1.8
      comp=Z,254nm,1.5s
THZ   Tophouse          93.69 191  IAMs_20   IAMs_20   16 55 57.9
      comp=Z,14µm,20.0s
ARQ   Araqi             93.75 316  P         P         16 17 00.0 -1.4
      SNR=34
SHMA  Al-Shehemyia      93.82 321  P         P         16 17 01.4 -0.3
JMDO  Jabal Madar       93.89 314  P         P         16 17 01.1 -1.0
      SNR=27
BSY   Bisya             93.97 315  P         P         16 17 02.3 -0.2
      SNR=26
KHZ   Kahutara          94.27 190  IAMs_20   IAMs_20   16 53 15.1
      comp=Z,15µm,20.0s
PALK  Pallekele         94.34 287  LR        LR        17 03 09.8
      comp=Z,14µm,20.7s,baz=147,slow=38
PALK  Pallekele         94.34 287  IAMs_20   IAMs_20   17 02 57.7
      comp=Z,13µm,20.0s
MZWR  Madinat Zayed     94.51 318  P         P         16 17 03.7 -1.2
AVE   Averroes          94.62  12  P         P         16 17 03.6 -1.7
AVE                                S         S         16 28 20.3 +2.9
IFR   Ifrane            94.68  10  P         P         16 17 04.2 -1.6
IFR                                S         S         16 28 21.6 +3.3
TRNA  Turayna           94.73 320  P         P         16 17 04.9 -1.0
GHWR  Ruwais            94.75 319  P         P         16 17 05.3 -0.7
LTZ   Lake Taylor       94.77 191  IAMs_20   IAMs_20   16 54 36.4
      comp=Z,16µm,20.0s
UMZA  Um Al Zommool     94.89 316  P         P         16 17 05.1 -1.5
MHTO  MHTO              95.15 313  P         P         16 17 07.0 -0.9
      SNR=48
OXZ   Oxford            95.33 191  IAMs_20   IAMs_20   16 54 04.4
      comp=Z,13µm,21.0s
MQZ   McQueen's Vall    95.64 190  IAMs_20   IAMs_20   16 56 58.4
      comp=Z,15µm,20.0s
RPN   Rapa Nui          96.15 127  IAMs_20   IAMs_20   16 51 41.7
      comp=Z,7µm,19.0s
WKZ   Wanaka            97.20 193  IAMs_20   IAMs_20   16 53 39.7
      comp=Z,17µm,21.0s
MLZ   Mavora Lakes      97.86 193  IAMs_20   IAMs_20   16 55 18.0
      comp=Z,14µm,20.0s
RAYN  Ar Rayn           98.00 325 i P        P         16 17 18.5 -2.3
      SNR=28
RAYN  Ar Rayn           98.00 325  P         P         16 17 18.7 -2.1
RAYN                               pmax      pmax
      comp=Z,57nm,1.4s
RAYN                               MLR       MLR
      comp=Z,3µm,21.0s
RAYN  Ar Rayn           98.00 325  P         P         16 17 20.0 -0.8
RAYN  Ar Rayn           98.00 325  P         P         16 17 18.7 -2.1
RAYN                               IAmb      IAmb      16 17 35.9
      comp=Z,57nm,1.4s
DCZ   Deep Cove         98.09 194  IAMs_20   IAMs_20   16 54 49.3
      comp=Z,8µm,21.0s
WHZ   Wether Hill Ro    98.39 193  IAMs_20   IAMs_20   16 56 16.3
      comp=Z,14µm,20.0s
SHAO  Shalim            98.80 314  Pdiff     P         16 17 21.8 -2.6
SHAO  Shalim            98.80 314  P         P         16 17 22.3 -2.2
PYZ   Puysegur Point    98.85 194  IAMs_20   IAMs_20   16 59 42.3
      comp=Z,10µm,20.0s
DOK   Doka              98.94 315  P         P         16 17 22.6 -2.5
WHFO  Wadi Hawf         99.72 315  P         Pdif      16 17 28.7 +0.1
RBK   Rabkut            99.89 315  P         Pdif      16 17 28.4 -0.9
TAU   Tasmania Unive   100.14 208  IAMs_20   IAMs_20   17 09 07.0
      comp=Z,9µm,18.0s
ABTO  Aybut            100.42 315  P         Pdif      16 17 32.4 +0.7
BOAV  Boa Vista        101.92  71 eP         Pdif      16 17 46.7 +8.4
CZSB  Cruzeiro do Su   102.43  87 eP         Pdif      16 17 49.7 +9.1
KAAM  Kaadhehdhoo      104.33 289  IAMs_20   IAMs_20   17 12 41.0
      comp=Z,7µm,19.0s
SOCY  Socotra          104.66 312  IAMs_20   IAMs_20   17 08 11.4
      comp=Z,9µm,22.0s
PTGA  Pitinga          104.75  72  Pdiff     Pdif      16 17 55.4 +4.5
      comp=Z,1.8nm,0.3s,baz=327,slow=22,SNR=2.1
PTGA  Pitinga          104.75  72  IAMs_20   IAMs_20   17 05 52.6
      comp=Z,11µm,21.0s
MACA  Manacapuru-AM    106.25  74 eP         Pdif      16 18 05.9 +8.3
SACV  Santiago Islan   108.64  31  IAMs_20   IAMs_20   17 06 55.8
      comp=Z,12µm,19.0s
SAML  Samuel           109.28  80  IAMs_20   IAMs_20   17 15 10.0
      comp=Z,9µm,19.0s
DGAR  Diego Garcia     110.94 285  IAMs_20   IAMs_20   17 16 26.0
      comp=Z,7µm,18.0s
LPAZ  La Paz           111.83  89  PP        PP        16 23 10.3 +7.3
      comp=Z,2.0nm,0.9s,baz=18,slow=14,SNR=4.0
LPAZ  La Paz           111.83  89 eP         Pdif      16 18 31.7 +8.7
TORD  Torodi Ar. Bea   115.46   6  PKP       PKiKP     16 22 25.8 -0.7
      comp=Z,1.0nm,0.5s,baz=345,slow=2.0,SNR=5.3
TORD                               PKKPbc    PKKPbc    16 32 59.1 +1.1
      comp=Z,1.5nm,1.0s,baz=102,slow=0.8,SNR=3.7
TORD                               SKKP                16 37 16.0
      comp=Z,3.6nm,1.1s,baz=167,slow=3.0,SNR=4.0
TORD  Torodi Ar. Bea   115.46   6            PKiKP     16 22 26.4 -0.1
PB10  IPOC Station P   115.69  96  IAMs_20   IAMs_20   17 22 38.5
      comp=Z,7µm,18.0s
SIV   San Ignacio      116.00  83  PP        PP        16 23 27.4 -4.5
      comp=Z,2.1nm,0.9s,baz=336,slow=6.4,SNR=4.3
PB15  IPOC Station P   116.14  95  IAMs_20   IAMs_20   17 00 34.3
      comp=Z,6µm,22.0s
PB14  IPOC Station P   116.59  97  IAMs_20   IAMs_20   17 01 28.6
      comp=Z,6µm,21.0s
H03N2 Juan Fernandez   117.73 110  T         T         18 32 03.8
      baz=309,slow=76,SNR=54
H03N1 Juan Fernandez   117.75 110  T         T         18 32 24.8
      baz=313,slow=76,SNR=59
H03N3 Juan Fernandez   117.75 110  T         T         18 32 16.3
      SNR=40
MSEY  Mahe Island      118.43 302  IAMs_20   IAMs_20   17 13 18.8
      comp=Z,8µm,20.0s
LCO   Las Campanas     119.56 100  IAMs_20   IAMs_20   17 09 04.8
      comp=Z,7µm,18.0s
PEXB  Peixe            120.72  69 eP         PKiKP     16 22 44.3 +7.6
PP1B  Ponte de Pedra   121.05  79 eP         PKiKP     16 22 45.2 +8.0
DBIC  Dimbokro         121.17  14  PKP       PKiKP     16 22 38.2 +0.6
      comp=Z,6.3nm,0.9s,baz=21,slow=2.7,SNR=5.2
DBIC  Dimbokro         121.17  14  PKIKP     PKPdf     16 22 36.7 -0.8
DBIC  Dimbokro         121.17  14            PKPdf     16 22 36.7 -0.8
NBPA  Parau_RN         121.62  54 eP         PKiKP     16 22 44.0 +5.5
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PEL	Peldehue	122.46	104	IAMs_20	IAMs_20	17 08 22.1	
	comp=Z,8µm,18.0s						
KMBO	Kilima Mbogo	123.71	323	PKP	PKiKP	16 22 43.6	+0.6
	comp=Z,3.6nm,0.8s,baz=230,slow=18,SNR=6.7						
KMBO				PP	PP	16 24 25.5	+1.1
	comp=Z,7.5nm,1.2s,baz=29,slow=7.2,SNR=3.8						
KMBO	Kilima Mbogo	123.71	323	IAMs_20	IAMs_20	17 22 19.8	
	comp=Z,8µm,20.0s						
ITRB	Iturama	125.41	77	*e*P	PKiKP	16 22 51.7	+5.9
CPUP	Villa Florida	125.98	88	PKP	PKiKP	16 22 46.6	-0.1
	comp=Z,1.9nm,0.8s,baz=347,slow=4.5,SNR=4.2						
CPUP	Villa Florida	125.98	88	PKIKP	PKPdf	16 22 46.1	-0.2
CPUP	Villa Florida	125.98	88		PKPdf	16 22 46.1	-0.2
PLCA	Paso Flores	127.58	111	PKP	PKiKP	16 22 49.4	-0.2
	comp=Z,6.8nm,1.1s,baz=11,slow=4.1,SNR=5.7						
PLCA				PKPPKP		16 41 17.1	
	comp=Z,1.4nm,0.8s,baz=178,slow=6.9,SNR=2.9						
PLCA	Paso Flores	127.58	111	PKPdf	PKiKP	16 22 49.9	+0.3
SBA	Scott Base	129.69	185	PKIKP	PKiKP	16 22 53.2	+0.6
SBA				MLR	MLR		
	comp=Z,6µm,20.0s						
SBA	Scott Base	129.69	185	PKPdf	PKiKP	16 22 53.2	+0.6
SBA	Scott Base	129.69	185	IAMs_20	IAMs_20	17 13 04.7	
	comp=Z,6µm,20.0s						
VNDA	Vanda	129.70	187	PKP	PKiKP	16 22 52.6	-0.1
	comp=Z,2.1nm,1.1s,baz=299,slow=3.9,SNR=5.2						
VNDA				SKPab	SKPbc	16 26 12.8	-0.2
	comp=Z,10nm,1.3s,baz=0.6,slow=4.7,SNR=5.3						
VNDA	Vanda	129.70	187	PKPdf	PKiKP	16 22 53.0	+0.4
COYC	Coyhaique	129.71	116	IAMs_20	IAMs_20	17 07 36.5	
	comp=Z,5µm,20.0s						
CASY	Casey	130.89	211	IAMs_20	IAMs_20	17 13 52.2	
	comp=Z,5µm,20.0s						
LPA	La Plata	131.49	96	PKIKP	PKiKP	16 23 02.0	+4.5
LPA				PP	PP	16 25 15.3	-0.9
LPA				PKS	PKSdf	16 26 25.1	-7.8
LPA				PKIKS		16 26 44.7	
LPA				PPP	PPP	16 28 03.3	
LPA				SKIKS		16 30 06.0	
LPA				SDIFF		16 33 27.9	
LPA				PS	PS	16 35 27.1	-2.5
LPA				PSP	PSP	16 37 07.6	
LPA				SS	SS	16 42 16.1	-33
LPA				SSS	SSS	16 47 31.0	
RER	Riviere de l'E	131.66	290	IAMs_20	IAMs_20	17 23 20.6	
	comp=Z,5µm,19.0s						
PLTB	Pedras Altas	132.10	90	PKPdf	PKPdf	16 22 57.7	-0.1
VOI	Vohitsoka	137.34	299	IAMs_20	IAMs_20	17 33 58.4	
	comp=Z,6µm,19.0s						
EFI	East Falkland	140.80	117	IAMs_20	IAMs_20	17 34 36.0	
	comp=Z,8µm,18.0s						
QSPA	South Pole Qui	141.26	180	PKhKP	PKPpre	16 23 09.5	
	comp=Z,2.7nm,0.6s,baz=274,slow=0.5,SNR=17						
QSPA	South Pole Qui	141.26	180	PKPdf	PKPdf	16 23 14.9	+1.2
QSPA	South Pole Qui	141.26	180	IAMs_20	IAMs_20	17 27 52.5	
	comp=Z,6µm,19.0s						
SHEL	Horse Pasture	143.11	21	IAMs_20	IAMs_20	17 27 27.2	
	comp=Z,6µm,19.0s						
MATP	Matopo	144.71	323	*e*P	PKPdf	16 23 21.3	0.0
MATP	Matopo	144.71	323	*e*P	PKPdf	16 23 21.3	0.0
MSNA	Messina	145.85	320	*e*P	PKPab	16 23 24.6	+0.4
MSNA	Messina	145.85	320	*e*P	PKPab	16 23 24.6	+0.4
MOPA	Mopani	146.32	317	*e*P	PKPbc	16 23 24.6	-0.4
MOPA	Mopani	146.32	317	*e*P	PKPbc	16 23 24.6	-0.4
TSUM	Tsumeb	146.70	342		PKPbc	16 23 26.2	-0.2
MAW	Mawson	148.80	218	PKPbc	PKPbc	16 23 31.1	+0.7
	comp=Z,27nm,0.8s,baz=98,slow=3.2,SNR=22						
MAW	Mawson	148.80	218	PKPdf	PKPdf	16 23 27.7	+1.2
LBTB	Lobatse	149.96	325	PKP2	PKPbc	16 23 34.2	-0.6
LBTB	Lobatse	149.96	325		PKPbc	16 23 34.2	-0.6
WIN	Windhoek	150.07	341	PKHKP	PKPpre	16 23 29.0	
WIN	Windhoek	150.07	341	PKPdf	PKPdf	16 23 29.0	-1.3
CRZF	Crozet Islands	150.47	262	IAMs_20	IAMs_20	17 46 21.9	
	comp=Z,7µm,20.0s						
BOSA	Boshof	153.35	322	PKPbc	PKPbc	16 23 41.4	-1.1
	comp=Z,8.1nm,0.5s,baz=23,slow=2.4,SNR=25						
BOSA	Boshof	153.35	322	PKIKP	PKPdf	16 23 34.4	-0.6
BOSA	Boshof	153.35	322	PKPdf	PKPdf	16 23 34.4	-0.6
SYO	Syowa Base	156.62	209	⇓*e*PKPdf	PKPdf	16 23 40.0	+2.1
SYO	Syowa Base	156.62	209	⇓*e*pPKPdf	pPKPdf	16 23 43.4	+1.3
VNA3	Neumayer Olymp	158.80	165	PKPdf	PKPdf	16 23 41.5	+0.8
SNAA	Sanae	159.28	171	PKPdf	PKPdf	16 23 41.1	-0.2
SNAA	Sanae	159.28	171	PKIKP	PKPdf	16 23 40.5	-0.8
SNAA				MLR	MLR		
	comp=Z,11µm,20.0s						
SNAA	Sanae	159.28	171	PKPdf	PKPdf	16 23 40.5	-0.8
VNA2	Neumayer--Watz	159.43	167	PKPdf	PKPdf	16 23 38.7	-2.7
VNA1	Neumayer--Stat	159.55	165	PKPdf	PKPdf	16 23 41.5	0.0

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*AEIC **09** 16:07:30±1.3, 51°.4N±0°.1×172°.84W±0°.08, h26^{km}±8^{km}*
Error ellipse: s-maj=17.4km s-min=7.5km az=178.0

NEIC 09 16:07:30.1±1.2**, 51°.58N**±0°.07×**172°.87W**±0°.04**, h10**^{km}±2^{km}**,**
ML4.1(AEIC)**, Error ellipse: s-maj=12.5km s-min=3.8km**
az=172.0, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOFP	Korovin Flat P	1.03	313		Pn	16 07 50.4	-0.3
KOSE	Korovin Southe	1.06	317		Pn	16 07 51.0	-0.1
KOKL	Mount Kliuchef	1.11	313		Pb	16 07 51.4	0.0
KONE	Korovin Northe	1.12	317		Pb	16 07 51.3	-0.3
KOWE	Korovin West	1.16	313		Pn	16 07 52.5	0.0
GSIG	Igitkin Island	1.94	283		Pn	16 08 02.4	-0.7
GSMY	Great Sitkin M	2.03	284		Pn	16 08 03.9	-0.5
GSTD	Great Sitkin T	2.09	284		Pn	16 08 05.2	0.0
ADK	Adak	2.39	279		Pn	16 08 08.2	-1.1
ADK					Sn	16 08 39.0	+0.3
KIWB	Kanaga Island	2.68	278	Pn	Pn	16 08 12.8	-0.5
SDPT	Sand Point	8.30	58	Pn	Pn	16 09 30.3	-0.1
CNBA	Chernabura Isl	8.61	63	Pn	Pn	16 09 34.5	-0.1
IL31		18.84	36	P	P	16 11 49.9	+0.2
ILAR	Eielson Array	18.84	36	P	P	16 11 49.6	-0.2
DOT	Dot Lake	19.38	40	P	P	16 11 55.5	-0.3
SCRK	Sand Creek	19.56	40	P	P	16 11 57.0	-0.7
PRP	Porcupine Dome	19.72	35		P	16 11 59.2	-0.4
EGAK	Eagle	21.01	39	P	P	16 12 14.1	+0.7

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*DDA **09** 16:24:25.4, 39°.24N×27°.88E, h7^{km}±2^{km}, ML2.0*
*ISK **09** 16:24:25.6, 39°.23N×27°.85E, h9^{km}, ML2.2/28*

ISC 09 16:24:25.5±0.9**, 39°.23N**±0°.02×**27°.87E**±0°.02**, h10**^{km}±8^{km}**,**
n46, σ**0^s.45**/59**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STEP	BALIKESIR_Sava	0.19	320	*i* P	Pg	16 24 29.6	+0.1
STEP				*i* S	Sg	16 24 32.5	+0.2
STEP				IAML		16 24 33.0	
	comp=N,282nm,0.5s						
STEP				IAML		16 24 34.0	
	comp=E,346nm,0.3s						
AKHS	Akhisar	0.36	187	*i* P	Pg	16 24 32.9	+0.3
AKHS				*i* S	Sb	16 24 39.1	-0.6
AKS	Akhisar	0.36	187	PG	Pg	16 24 33.2	+0.6
BALB	Balikesir	0.41	1	PG	Pb	16 24 34.2	-0.7
BALB				SG	Sb	16 24 40.8	-0.3
BALY	Balya	0.54	339	*i* P	Pg	16 24 36.2	+0.1
BALY				*i* S	Sg	16 24 43.7	+0.4
DURS	Dursunbey	0.59	52	*i* P	Pg	16 24 36.2	-0.9
DURS				*i* S	Sg	16 24 45.3	+0.3
BUHA	Balikesir, Bur	0.67	294	*i* P	Pg	16 24 38.8	+0.3
BUHA				*i* S	Sb	16 24 48.8	0.0
ZEDA	zmir-Bergama	0.67	247	*i* P	Pg	16 24 38.7	+0.1
ZEDA				*i* S	Sb	16 24 48.9	+0.2
DEMI	Demirci	0.68	106	*i* P	Pg	16 24 38.8	0.0
DEMI				*i* S	Sg	16 24 46.8	-0.9
DKL	Dikili	0.77	258	PG	Pb	16 24 40.9	-0.1
GONE	Gonen-Balikesi	0.82	350	PG	Pb	16 24 42.0	0.0
SIMA	Simav-Kutahya	0.88	99	PG	Pb	16 24 42.9	0.0
CAND	Candarli	0.88	252	PG	Pg	16 24 42.5	+0.1
MANT	Manisa	0.91	144	*i* P	Pn	16 24 44.5	-0.1
MANT				*i* S	Sg	16 24 54.8	-0.3
AYVA	Ayvalik	0.92	275	*i* P	Pn	16 24 45.1	+0.6
AYVA				*i* S	Sn	16 24 58.1	+0.3
AYVA				IAML		16 25 01.0	
	comp=N,95nm,0.4s						
AYVA				IAML		16 25 01.0	
	comp=E,49nm,0.6s						
KULA	Kula-Manisa	0.94	139	PG	Pb	16 24 44.3	+0.2
FOCM	Foa	1.03	240	PG	Pg	16 24 44.9	-0.4
USAK	Uak-Merkez	1.03	120	*i* P	Pg	16 24 45.2	-0.2
USAK				*i* S	Sg	16 24 58.3	-0.5
USAK				IAML		16 25 29.0	
	comp=E,78nm,1.7s						
BLCB	Balcova	1.07	218	PG	Pg	16 24 46.0	0.0
KNL	Balıkesir	1.07	346	*i* P	Pn	16 24 46.6	0.0
KNL				*i* S	Sg	16 24 59.8	-0.3
KNL				IAML		16 25 07.0	
	comp=E,32nm,0.5s						
SHAP	Saphane-Kutahy	1.07	101	PN	Pn	16 24 46.9	+0.2
KCTX	Karacabey (Bur	1.10	20	PN	Pn	16 24 47.2	+0.2
EDC	Edincik	1.11	360	PN	Pb	16 24 47.1	+0.2
ORLT	Orhaneli	1.13	44	PN	Pn	16 24 47.9	+0.4
GEDZ	Gediz	1.21	98	PN	Pn	16 24 49.6	+1.0
KRBG	Karabiga-Canak	1.24	339	PN	Pg	16 24 49.7	+0.3
TVSB	Tavsanli	1.25	80	PN	Pg	16 24 50.3	+0.7
AYDB	Zeytinkoy-Aydi	1.28	179	PN	Pn	16 24 49.9	+0.2
URLA	Izmir	1.32	229	PN	Pg	16 24 50.8	-0.2
ULDT	Uludag	1.33	47	*i* P	Pg	16 24 51.2	0.0
ULDT				*i* S	Sb	16 25 07.9	-0.1
ULDT				IAML		16 25 12.0	
	comp=E,28nm,0.4s						
ULDT				IAML		16 25 40.0	
	comp=N,20nm,1.7s						
EZN	Ezine	1.33	297	PN	Pg	16 24 50.9	-0.3
MDNY	Mudanya-Bursa	1.38	34	PN	Pb	16 24 51.6	+0.2
MRMT	Marmara Adasi	1.39	351	PN	Pn	16 24 51.3	+0.3
LPK	Lapseki	1.43	323	PN	Pn	16 24 51.7	+0.2
BOZC	Bozcaada	1.53	294	PN	Pn	16 24 53.4	+0.4
MAR6	Marsite Statio	1.54	343	PN	Pn	16 24 53.5	+0.4
RKY	Sarkoy-Tekirda	1.55	340	PN	Pn	16 24 53.7	+0.5
SIGR	SIGRI	1.57	270	PN	Pb	16 24 54.2	-0.4
GZKV	Gazikoy-Tekird	1.57	345	PN	Pb	16 24 54.4	-0.3
MAR3	Marsite Statio	1.57	344	PN	Pb	16 24 54.3	-0.4
GELI	Tayfur-Gelibol	1.58	318	PN	Pb	16 24 54.4	-0.5
CHOS	Chios island	1.65	240	PN	Pb	16 24 55.6	-0.5
TRML	Termal-Yalova	1.70	36	PN	Pb	16 24 56.5	-0.4
YLV	Yalova	1.76	40	PN	Pb	16 24 57.3	-0.7
ERIK	Erikli-Kesan	1.78	324	PN	Pb	16 24 57.3	-0.9
CAVI	Cavuskoy	1.80	57	PN	Pn	16 24 57.8	+1.1

NNC 09 16:37:24.7±8.5**, 37°.01N**×**70°.80E, h0**^{km}**, mb3.9, mpv3.5,**
4C-1D, Error ellipse: s-maj=68.1km s-min=61.7km
az=22.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.58	23	P	Pn	16 38 50.4	+1.1
	SNR=32						
UCH	Uchtor	5.95	28	P	Pn	16 38 55.4	+0.9
	SNR=12						
KK31	Karatay Array	6.09	358	⇑Pn	Pn	16 38 54.9	-1.0
	0.4nm,0.2s,baz=172,slow=12						
KK31				⇓Sn	Sn	16 40 06.5	+0.1
	2.6nm,0.5s,baz=175,slow=26						
EKS2	Erkin-Say	6.09	21	P	Pn	16 38 56.6	+0.5
	SNR=7.9						
AAK	Ala-Archa	6.30	26	P	Pn	16 38 59.8	+0.8
	SNR=5.3						
AAK	Ala-Archa	6.30	26	⇑Pn	Pn	16 38 59.4	+0.4
	1.4nm,0.3s						
AAK				⇑Sn	Sn	16 40 14.5	+2.8
	3.8nm,0.7s						
TKM2	Tokmak 2	6.96	30	P	Pn	16 39 08.2	+0.1
	SNR=13						
TKM2	Tokmak 2	6.96	30	⇑Pn	Pn	16 39 08.1	0.0
	4.7nm,0.5s						

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*SJA **09** 16:41:12±4.3, 22°.31S±0°.07×66°.05W±0°.09, h277^{km}±6^{km},*
Error ellipse: s-maj=0.0km s-min=0.0km az=210.0
*NEIC **09** 16:41:13.8±1.9, 22°.35S±0°.08×66°.0W±0°.1, h248^{km}±7^{km},*
mb4.4/13, Md4.0(SJA), Error ellipse: s-maj=13.8km
s-min=11.4km az=101.0
*IDC **09** 16:41:13.4±1.0, 22°.29S×66°.05W, h252^{km}±8^{km}, mb3.4/4,*
mb1 3.5/9, mb1mx3.3/25, mbtmp4.0/9, Error ellipse:
s-maj=18.1km s-min=12.8km az=138.0
*VAO **09** 16:41:14.1±0.3, 22°.27S×66°.03W, h256^{km}, mb4.0*

ISC 09 16:41:13.4±0.6**, 22°.32S**±0°.05×**66°.10W**±0°.04**, h257**^{km}±6^{km}**,**
n152, σ**1^s.08**/172**, mb4.2**/9**, 9C, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YJA	Yavi	0.56	75	*i* P	Pn	16 41 50.1	+2.2
YJA				IAML		16 41 50.5	
	comp=Z,724nm,0.5s						
YJA				*e*S	S	16 42 16.3	+1.4
YJA				IAML		16 42 18.2	
	comp=Z,90nm,0.5s						
HJA	Humahuaca	1.09	144	*i* P	Pn	16 41 52.2	+2.1
HJA				IAML		16 42 25.6	
	comp=Z,48nm,0.5s						
AF01	San Pedro de A	2.02	251		Pn	16 41 53.7	-3.3
AZAP	Zapla	2.12	153	*i* P	Pn	16 41 58.8	+1.0
AZAP				*e*S	S	16 42 33.4	+0.5
AZAP				IAML		16 42 34.0	
	comp=Z,80nm,0.5s						
ASTB	Santa Barbara	2.22	137	*i* P	Pn	16 41 59.9	+1.3
ASTB				IAML		16 42 00.2	
	comp=Z,38nm,0.6s						
ASTB				IAML		16 42 37.0	
	comp=Z,3.3nm,1.4s						
SLA	San Lorenzo	2.45	167	*i* P	Pn	16 42 02.5	+1.6
SLA				*e*S	S	16 42 38.6	+0.1
SLA				IAML		16 42 57.9	
	comp=Z,26nm,0.7s						
ALOL	LOMAS DE OLMED	2.46	128	*i* P	Pn	16 42 01.5	+0.8
ALOL				*e*S	S	16 42 37.4	-0.9
LVC	Limon Verde	2.61	263	P	Pn	16 42 04.4	+1.7
	comp=Z,56nm,0.3s,baz=73,slow=7.1,SNR=412						
LVC				S	S	16 42 41.6	-0.1
	comp=Z,17nm,0.3s,baz=285,slow=22,SNR=11						
LVC	Limon Verde	2.61	263	*i* P	Pn	16 42 04.2	+1.5
LVC	Limon Verde	2.61	263	*e*P	Pn	16 42 04.3	+1.7
LVC	Limon Verde	2.61	263	*i* P	Pn	16 42 04.4	+1.7
LVC				*e*S	S	16 42 42.4	+0.7
LVC				IAML		16 42 45.6	
	comp=Z,44nm,0.2s						
PB06	IPOC Station P	3.23	263	⇑*i*P	Pn	16 42 10.0	+0.9
PB06				*e*S	S	16 42 52.6	-0.5
PB06	IPOC Station P	3.23	263		Pn	16 42 10.1	+1.1
PB06	IPOC Station P	3.23	263	*i* P	Pn	16 42 10.5	+1.4
PB06				*e*S	S	16 42 53.0	-0.1
PB06				IAML		16 42 58.5	
	comp=Z,327nm,0.2s						
PB15	IPOC Station P	3.23	253	*e*P	Pn	16 42 09.8	+0.7
PB15				*e*S	S	16 42 52.8	-0.4
PB15	IPOC Station P	3.23	253		Pn	16 42 10.6	+1.5
PB15	IPOC Station P	3.23	253	*i* P	Pn	16 42 10.8	+1.7
PB15				*e*S	S	16 42 53.1	-0.1
PB01	IPOC Station P	3.39	291	⇑*i*P	Pn	16 42 12.0	+1.2
PB01				*e*S	S	16 42 56.0	-0.3
PB01	IPOC Station P	3.39	291		Pn	16 42 12.0	+1.2
PB01	IPOC Station P	3.39	291	*i* P	Pn	16 42 12.2	+1.4
PB01				*e*S	S	16 42 56.1	-0.2
PB01				IAML		16 42 58.4	
	comp=Z,448nm,0.2s						
PB03	IPOC Station P	3.39	274	⇑*i*P	Pn	16 42 11.8	+1.0
PB03				*e*S	S	16 42 54.8	-1.6
PB03	IPOC Station P	3.39	274	*i* P	Pn	16 42 12.0	+1.2
PB03				IAML		16 42 59.9	
	comp=Z,322nm,0.3s						
PB07	IPOC Station P	3.56	279	⇑*i*P	Pn	16 42 13.8	+1.0
PB07				*e*S	S	16 42 57.8	-1.9
PB07	IPOC Station P	3.56	279		Pn	16 42 13.7	+1.0
PB07	IPOC Station P	3.56	279	*i* P	Pn	16 42 14.1	+1.3
PB07				IAML		16 43 02.9	
	comp=Z,218nm,0.4s						
PB08	IPOC Station P	3.58	307	⇑*i*P	Pn	16 42 15.3	+2.1
PB08				*e*S	S	16 43 01.1	+0.6
PB08	IPOC Station P	3.58	307		Pn	16 42 15.3	+2.1
PB08	IPOC Station P	3.58	307	*i* P	Pn	16 42 15.5	+2.3
PB08				IAML		16 43 06.1	
	comp=Z,125nm,0.2s						
PB02	IPOC Station P	3.66	285	⇑*i*P	Pn	16 42 14.6	+0.8
PB02				*e*S	S	16 43 00.4	-1.4
PB02	IPOC Station P	3.66	285	*i* P	Pn	16 42 14.9	+1.1
PB02				IAML		16 43 04.7	
	comp=Z,620nm,0.2s						
PB04	IPOC Station P	3.75	269	⇑*i*P	Pn	16 42 15.7	+0.9
PB04				*e*S	S	16 43 01.4	-2.2
PB04	IPOC Station P	3.75	269		Pn	16 42 15.7	+0.9
PB04	IPOC Station P	3.75	269	*i* P	Pn	16 42 15.8	+1.0
FSA	Cafayete	3.78	178	*i* P	Pn	16 42 15.8	+0.6
PB05	IPOC Station P	3.83	261	⇑*i*P	Pn	16 42 16.4	+0.8
PB05				*e*S	S	16 43 02.5	-2.6
PB05	IPOC Station P	3.83	261	*i* P	Pn	16 42 16.5	+0.8
PB05				IAML		16 43 10.2	
	comp=Z,163nm,0.2s						
PATCX	Punta Patache	4.05	291	*e*P	Pn	16 42 19.1	+0.8
PATCX	Punta Patache	4.05	291		Pn	16 42 19.1	+0.8
PATCX	Punta Patache	4.05	291	*i* P	Pn	16 42 19.3	+1.0
PATCX				IAML		16 43 15.3	
	comp=Z,269nm,0.4s						
HMBC	Humberstone	4.07	299	*i* P	Pn	16 42 19.1	+0.6
TA01	Diego Aracena	4.18	294	*i* P	Pn	16 42 20.1	+0.5
TA01	Diego Aracena	4.18	294		Pn	16 42 20.2	+0.5
TA01	Diego Aracena	4.18	294	*i* P	Pn	16 42 20.2	+0.5
PB11	IPOC Station P	4.18	307	⇑*i*P	Pn	16 42 20.8	+0.9
PB11	IPOC Station P	4.18	307		Pn	16 42 20.7	+0.9
PB11	IPOC Station P	4.18	307	*i* P	Pn	16 42 20.9	+0.9
PB11				IAML		16 43 14.9	
	comp=Z,334nm,0.1s						
PB10	IPOC Station P	4.27	253	*i* P	Pn	16 42 20.7	0.0
PB10	IPOC Station P	4.27	253	Pn	Pn	16 42 21.0	+0.2
PB10	IPOC Station P	4.27	253	*i* P	Pn	16 42 21.4	+0.6
PB10				IAML		16 43 15.8	
	comp=Z,177nm,0.3s						
TA02	Huaiquique	4.27	298	*e*P	Pn	16 42 21.2	+0.4
TA02	Huaiquique	4.27	298		Pn	16 42 21.0	+0.2
TA02	Huaiquique	4.27	298	*i* P	Pn	16 42 21.8	+1.0
PB14	IPOC Station P	4.57	239	*e*P	Pn	16 42 24.7	+0.1
PB14	IPOC Station P	4.57	239	Pn	Pn	16 42 24.6	+0.1
PB14	IPOC Station P	4.57	239	*i* P	Pn	16 42 24.8	+0.3
PB14				IAML		16 43 22.7	
	comp=Z,408nm,0.3s						
PSGCX	Pisagua	4.63	305	Pn	Pn	16 42 25.2	0.0
PB16	IPOC Station P	5.09	321		Pn	16 42 33.0	+1.7
AC02	Maricunga	5.27	211	Pn	Pn	16 42 33.5	+0.2
AC02	Maricunga	5.27	211	*i* P	Pn	16 42 33.7	+0.5
PB12	IPOC Station P	5.41	312	*i* P	Pn	16 42 34.0	-0.6
PB12	IPOC Station P	5.41	312		Pn	16 42 34.0	-0.6
PB12	IPOC Station P	5.41	312	*i* P	Pn	16 42 34.0	-0.6
PB12				IAML		16 43 43.1	
	comp=Z,89nm,0.2s						
AP01	Chacalluta	5.59	314	Pn	Pn	16 42 37.0	+0.2
AP01	Chacalluta	5.59	314	*i* P	Pn	16 42 37.2	+0.5
LPAZ	La Paz	6.30	342	P	Pn	16 42 47.4	+1.2
	comp=Z,0.7nm,0.3s,baz=145,slow=9.5,SNR=7.5						
LPAZ				S	S	16 43 58.1	-2.2
LPAZ	La Paz	6.30	342	*e*P	Pn	16 42 46.6	+0.4
LPAZ	La Paz	6.30	342	Pn	Pn	16 42 46.8	+0.6
GO03	Copiap	6.45	215	Pn	Pn	16 42 46.1	-1.3
GO03	Copiap	6.45	215	*i* P	Pn	16 42 46.3	-1.1
VCA	Vinchina	6.67	196	*i* P	Pn	16 42 50.7	+0.5
VCA				IAML		16 44 29.3	
	comp=Z,15nm,0.5s						
ACLC	CERRO LA CRUZ	7.12	186	*i* P	Pn	16 42 55.3	-0.5
ACLC				IAML		16 44 17.4	
	comp=Z,13nm,0.5s						
AC04	Llanos de Chal	7.39	217	Pn	Pn	16 42 57.2	-1.8
LCO	Las Campanas	7.85	211	*i* P	Pn	16 43 03.7	-1.4
LCO				IAML		16 44 31.0	
	comp=Z,191nm,0.3s						
SIV	San Ignacio	7.89	38	P	Pn	16 43 05.2	-0.3
	comp=Z,1.4nm,0.3s,baz=229,slow=9.7,SNR=28						
SIV				S	S	16 44 24.8	-11
	baz=247,slow=18,SNR=0.8						
APLL	PUNTA DE LOS L	8.05	183	*i* P	Pn	16 43 06.0	-1.4
AVFE	Valle Fertil	8.39	188	*i* P	Pn	16 43 10.0	-1.8
AVFE				IAML		16 44 46.4	
	comp=Z,9.2nm,0.4s						
ACHE	Chepes	8.82	183	*i* P	Pn	16 43 15.7	-1.5
GO04	Tololo Observa	8.88	207	Pn	Pn	16 43 16.6	-1.5
CO03	El Pedregal	9.42	205	Pn	Pn	16 43 24.2	-0.6
PTLB	Pontes e Lacer	9.49	45	*e*P	Pn	16 43 25.7	0.0
PTLB	Pontes e Lacer	9.49	45	Pn	Pn	16 43 25.2	-0.4
CO06	Fray Jorge	9.68	210	Pn	Pn	16 43 26.6	-1.3
AQDB	Aquidauana	9.87	81	*e*P	Pn	16 43 30.6	+0.3
MRA	San Martin	10.07	178	*i* P	Pn	16 43 31.0	-1.8
MRA				IAML		16 45 58.8	
	comp=Z,2.0nm,1.7s						
PP1B	Ponte de Pedra	11.55	68	*e*P	Pn	16 43 50.6	-0.8
SALV	Santo Antonio	11.72	59	*e*P	Pn	16 43 53.2	-0.4
MT02	Curacav	11.77	201	Pn	Pn	16 43 52.7	-1.3
ETMB	Extrema	12.43	359	*e*P	Pn	16 44 02.3	0.0
ETMB	Extrema	12.43	359	P	Pn	16 44 02.8	+0.4
TRCB	Terra Rica	12.46	95	P	P	16 44 05.2	+0.4
BO01	Tunca	12.80	199	P	P	16 44 08.7	+0.3
PTGB	Pitanga	13.10	103	*e*P	P	16 44 11.0	-1.0
PCMB	Pacaembu	13.79	90	*e*P	Pn	16 44 18.4	-0.5
CPSB	Cacapava Do Su	13.91	128	*e*P	Pn	16 44 19.8	-0.4
PDRB	Porto dos Gac	13.91	42	*e*P	Pn	16 44 20.0	-0.5
PLTB	Pedras Altas	14.57	133	*e*P	P	16 44 28.1	0.0
PLTB	Pedras Altas	14.57	133	P	Pn	16 44 26.5	-1.7
ITRB	Iturama	14.93	83	*e*P	Pn	16 44 32.9	+0.2
ARAG	Araguaiana, MT	15.02	67	*e*P	Pn	16 44 34.1	+0.3
CLDB	Colider	15.06	43	*e*P	Pn	16 44 34.2	-0.1
FRTB	Fartura	15.29	97	*e*P	Pn	16 44 36.8	-0.1
BB19B	Bebedouro	16.38	89	*e*P	Pn	16 44 48.8	-1.1
TER01	Tubaro-SC	16.53	115	*e*P	P	16 44 49.2	-0.5
RCLB	Rio Claro- Sao	17.18	94	*e*P	P	16 44 57.3	+0.4
SPB	Sao Paulo	17.24	98	*e*P	Pn	16 44 58.4	-1.5
IPMB	Ipameri, GO	17.34	79	*e*P	Pn	16 44 59.5	-1.7
PET01	Itanhaem-SP	17.41	100	*e*P	Pn	16 45 00.3	-1.5
SNDB	Serra Nova Dou	17.48	56	*e*P	P	16 45 00.5	+0.3
BDFB	Brasilia	18.34	72	P	P	16 45 09.7	+0.1
	comp=Z,0.6nm,0.3s,baz=256,slow=10,SNR=6.7						
BDFB	Brasilia	18.34	72	P	P	16 45 09.4	-0.2
BDFB				IAmb	IAmb	16 45 11.7	
	comp=Z,17nm,1.3s						
NPGB	Novo Progresso	18.38	36	*e*P	P	16 45 09.3	-0.7
TBTG	Tabatinga, AM	18.40	348	*e*P	P	16 45 10.7	+0.7
PLCA	Paso Flores	18.74	191	P	P	16 45 14.3	+0.7
	comp=Z,0.1nm,0.3s,baz=3.5,slow=11,SNR=3.4						
PLCA	Paso Flores	18.74	191	*e*P	P	16 45 14.6	+1.0
PEXB	Peixe	19.79	62	*e*P	P	16 45 24.7	-0.2
ITTB	Itaituba	20.48	31	*e*P	P	16 45 31.2	-1.1
LL02	Futaleuf	21.36	192	PcP	PcP	16 49 34.4	+0.5
DIAM	Diamantina, MG	21.41	83	*e*P	P	16 45 42.0	+0.3
MC01	Montes Claros	21.61	79	*e*P	P	16 45 42.9	-0.7
JANB	Januaria	21.85	74	*e*P	P	16 45 45.2	-0.6
DUB01	Friburgo-RJ	21.97	94	*e*P	P	16 45 46.9	+0.1
SMTB	Santa Maria do	22.26	56	*e*P	P	16 45 49.5	+0.1
PRPB	Parauapebas	22.47	47	*e*P	P	16 45 50.9	-0.5
SDBA	SAO DESIDERIO	22.48	68	*e*P	P	16 45 50.4	-1.1
MALB	Monte Alegre	23.37	31	*e*P	P	16 45 59.4	-0.1
GDU01	Guandu, BA	26.60	76	*e*P	P	16 46 27.3	-1.3
NBPN	Ponto Novo - B	27.27	69	*e*P	P	16 46 33.4	-1.2
NBPS	Pedro II - PI	29.79	57	*e*P	P	16 46 56.3	-0.6
NBMA	Muriti-CE	30.24	65	*e*P	P	16 46 60.0	-0.9
NBPB	Pedra_Branca-C	30.58	61	*e*P	P	16 47 03.6	-0.2
NBAN	Anadia - AL	31.24	71	*e*P	P	16 47 08.2	-1.4
NBLV	Livramento - P	31.80	67	*e*P	P	16 47 14.1	-0.5
TXAR	Lajitas Array	62.81	323	P	P	16 51 13.2	+0.9
	comp=Z,0.3nm,0.6s,baz=143,slow=9.8,SNR=4.0						
CCM	Cathedral Cave	64.54	338	P	P	16 51 22.8	-0.3
S39A	Bolivar	64.95	336	P	P	16 51 26.3	+0.5
S39A				IAmb	IAmb	16 51 27.3	
	comp=Z,5.1nm,0.7s						
OK029	Liberty Lake	64.98	332	P	P	16 51 26.6	+0.6
R40A	Maddies Statio	65.11	338	P	P	16 51 26.6	-0.1
R40A				IAmb	IAmb	16 51 27.8	
	comp=Z,4.5nm,0.6s						
N49A	Columbus Grove	65.12	345	P	P	16 51 26.1	-0.8
N49A				IAmb	IAmb	16 51 42.4	
	comp=Z,5.7nm,0.7s						
QSPA	South Pole Qui	67.88	180	P	P	16 51 45.7	+1.6
I42A	Draeger Farm,	69.13	343	P	P	16 51 52.1	+0.2
SDCO	Great Sand Dun	70.30	328	P	P	16 52 01.2	+1.6
ECSD	EROS Data Cent	71.45	337	P	P	16 52 06.3	+0.3
ECSD				IAmb	IAmb	16 52 11.6	
	comp=Z,6.5nm,1.4s						
F36A	Milaca	72.29	340	P	P	16 52 10.8	-0.1
F36A				IAmb	IAmb	16 52 16.4	
	comp=Z,12nm,1.2s						
TORD	Torodi Ar. Bea	75.20	69	P	P	16 52 27.8	-0.6
	comp=Z,1.3nm,0.5s,baz=255,slow=5.0,SNR=16						
TORD	Torodi Ar. Bea	75.20	69	IAmb	IAmb	16 52 40.4	
	comp=Z,7.4nm,0.7s						
PDAR	Pinedale Array	76.14	329	P	P	16 52 34.5	+1.1
	comp=Z,0.6nm,0.8s,baz=128,slow=6.8,SNR=5.3						
ULM	Lac du Bonnet	76.91	341	P	P	16 52 37.8	+0.6
	comp=Z,2.4nm,0.6s,baz=180,slow=5.1,SNR=2.2						
HLID	Hailey	79.14	326	P	P	16 52 52.5	+2.6

MCMT	McKenzie Canyo	79.27	328	P	P	16 52 52.8	+2.2
ASAR	Alice Springs	130.32	204	PKP	PKPdf	16 59 54.5	+0.5
	comp=Z,0.3nm,0.4s,baz=126,slow=1.7,SNR=16						
ASAR				SKPbc	SKPbc	17 02 53.1	+0.3
	comp=Z,0.3nm,0.8s,baz=146,slow=3.0,SNR=5.3						
WRA	Warramunga Arr	133.49	207	PKP	PKPdf	17 00 00.8	+0.8
	comp=Z,0.4nm,0.3s,baz=154,slow=2.0,SNR=14						
WRA				SKPbc	SKPbc	17 03 03.4	-0.6
	comp=Z,0.8nm,0.9s,baz=151,slow=3.2,SNR=4.1						
MKAR	Makanchi Array	144.71	39	PKP	PKPdf	17 00 19.9	+0.4
	comp=Z,1.3nm,0.6s,baz=328,slow=3.0,SNR=13						

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*MOS **09** 17:03:04.4±1.0, 17°.94N×146°.93E, h40^{km}, mb5.2/29, Error ellipse: s-maj=9.6km s-min=5.1km az=114.8*

*BJI **09** 17:03:04.0±0.0, 17°.99N×147°.15E, h43^{km}, mB5.6/3, mb4.8/55, Ms5.3/5, Ms7 5.0/4*

*NEIC **09** 17:03:06.9±2.1, 17°.97N±0°.09×147°.0E±0°.1, h49^{km}±5^{km}, mb5.0/108, Error ellipse: s-maj=16.8km s-min=12.2km az=102.0*

*IDC **09** 17:03:08.2±1.5, 17°.89N×146°.92E, h55^{km}±12^{km}, mb4.3/42, mb1 4.4/45, mb1mx4.3/66, mbtmp4.6/45, MS4.7/1, Ms1 4.7/1, ms1mx4.0/47, Error ellipse: s-maj=13.2km s-min=8.1km az=101.0*

ISC 09 17:03:06.8±1.0, **17°.96N**±0°.05×**147°.01E**±0°.07, **h49**^{km}±8^{km}, **n393**, σ**1^{s}26**/394, **mb5.0**/162, **MS4.9**/4, **17C-8D, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	4.81	206	P	Pn	17 04 17.7	+1.0
	32nm,0.3s,baz=71,slow=1.9,SNR=30						
GUMO				S	Sn	17 05 11.8	+0.6
	12nm,0.3s,baz=8.8,slow=17,SNR=1.6						
GUMO	Guam	4.81	206	Pn	Pn	17 04 17.6	+0.8
JCJ	Chichijima	10.12	335	P	Pn	17 05 29.8	+0.2
	3.0nm,0.3s,baz=253,slow=18,SNR=1.3						
JCJ	Chichijima	10.12	335	Pn	Pn	17 05 27.1	-2.5
PATS	Pohnpei	15.61	134	Pn	Pn	17 06 36.1	-7.7
H11S3	WAKE ISLAND Hy	18.70	85	T	T	17 26 03.1	
	baz=278,slow=74,SNR=74						
H11S1	WAKE ISLAND Hy	18.72	85	T	T	17 26 13.9	
	baz=278,slow=74,SNR=60						
H11S2	WAKE ISLAND Hy	18.72	85	T	T	17 26 12.2	
	baz=278,slow=74,SNR=55						
H11N1	WAKE ISLAND Hy	18.90	82	T	T	17 26 23.2	
	baz=268,slow=75,SNR=121						
H11N2	WAKE ISLAND Hy	18.91	81	T	T	17 26 18.6	
	baz=268,slow=75,SNR=62						
H11N3	WAKE ISLAND Hy	18.92	82	T	T	17 26 19.5	
	baz=268,slow=75,SNR=106						
JOW	Kunigami	19.42	300	P	Pn	17 07 31.4	+0.7
	3.3nm,0.3s,baz=123,slow=11,SNR=4.6						
JOW	Kunigami	19.42	300	P	P	17 07 29.0	-0.1
INU	Inuyama	19.46	335	P	P	17 07 28.1	-1.4
INU				IAmb	IAmb	17 07 45.3	
	comp=Z,49nm,0.8s						
JGF	Kuroka	19.55	336	P	P	17 07 30.9	+0.5
JMN	Monobe	19.62	326	P	P	17 07 31.1	-0.2
MJAR	Matsushiro Arr	20.07	339	P	P	17 07 36.8	+0.7
	comp=Z,11nm,0.8s,baz=173,slow=9.5,SNR=23						
MJAR	Matsushiro Arr	20.07	339	P	P	17 07 36.1	0.0
MJAR				pmax	pmax		
	comp=Z,26nm,0.7s						
MJAR	Matsushiro Arr	20.07	339	P	P	17 07 36.1	0.0
MAJO	Matsushiro	20.08	339	⇑eP	Pn	17 07 38.1	-0.2
MAJO				pmax	pmax		
	comp=Z,6.0nm,0.5s						
MAJO	Matsushiro	20.08	339	P	P	17 07 36.0	-0.2
MAJO				IAmb	IAmb	17 07 44.1	
	comp=Z,62nm,0.7s						
MAT	Matsushiro	20.08	339	P	P	17 07 37.2	+1.0
MAT				eS	Sn	17 11 24.1	+0.7
JWT	Wachi	20.10	331	P	P	17 07 35.5	-1.0
JWT				IAmb	IAmb	17 07 52.9	
	comp=Z,54nm,1.0s						
JSU	Suzuyama	20.16	315	P	P	17 07 36.2	-1.0
JMM	Marumori	20.57	346	P	P	17 07 40.3	-1.1
JHS	Saijyo	21.00	327	P	P	17 07 44.9	-1.3
JHS				IAmb	IAmb	17 08 04.5	
	comp=Z,41nm,0.9s						
JAY	Jayapura	21.27	198	P	P	17 07 49.6	+0.3
	comp=Z,30nm,0.8s,baz=354,slow=8.8,SNR=14						
JSD	Sado	21.42	341	P	P	17 07 48.7	-1.9
SMPI	Sarmi	21.44	203	P	P	17 07 51.2	+0.2
	comp=Z,30nm,1.5s						
JTM	Tenmabayashi	23.32	349	P	P	17 08 10.3	-0.2
DAV	Davao City (W)	23.52	245	LR	LR	17 18 33.4	
	comp=Z,2µm,18.2s,baz=8.0,slow=40						
SWI	Sorong	24.29	221	P	P	17 08 19.7	-0.1
	comp=Z,2µmcomp=Z,142nm,1.2s						
SIJI	Sorong	24.29	221	P	P	17 08 18.6	-1.2
	comp=Z,36nm,0.9s,baz=27,slow=9.8,SNR=25						
YULB	Yu-li	24.64	287	P	P	17 08 22.5	-0.4
YULB				IAmb	IAmb	17 08 29.1	
	comp=Z,55nm,1.4s						
YHNB	Yeheng	24.77	290	P	P	17 08 24.8	+0.6
SSLB	Suanglung	25.00	288	P	P	17 08 26.5	+0.2
SSLB				IAmb	IAmb	17 08 29.8	
	comp=Z,51nm,0.9s						
TJN	Taejon	25.25	321	⇑eP	P	17 08 28.4	+0.1
FAKI	Fak Fak	25.34	216	P	P	17 08 29.1	-0.2
FAKI				IAmb	IAmb	17 08 50.4	
	comp=Z,23nm,0.8s						
KSRS	Korea Array	25.65	323	P	P	17 08 32.7	+0.8
	comp=Z,28nm,0.9s,baz=148,slow=9.0,SNR=48						
KSAR	Wonju Array Be	25.66	323	P	P	17 08 30.3	-1.7
KSAR	Wonju Array Be	25.66	323	P	P	17 08 30.3	-1.7
KS19	Wonju Array Si	25.71	323	P	P	17 08 30.1	-2.4
KS19				IAmb	IAmb	17 08 33.5	
	comp=Z,83nm,1.2s						
TNTI	Ternate	25.77	231	P	P	17 08 32.4	-0.9
	comp=Z,647nmcomp=Z,34nm,1.1s						
TNTI	Ternate	25.77	231	P	P	17 08 32.9	-0.3
TNTI				IAmb	IAmb	17 08 45.1	
	comp=Z,39nm,1.1s						
LBMI	Labuha	26.64	228	P	P	17 08 40.1	-1.1
	comp=Z,27nm,0.9s						
PMG	Port Moresby	27.19	180	P	P	17 08 45.5	-0.5
	comp=Z,16nm,0.9s,baz=348,slow=12,SNR=5.9						
PMG	Port Moresby	27.19	180	P	P	17 08 44.9	-1.1
PMG				pmax	pmax		
	comp=Z,41nm,0.9s						
PMG	Port Moresby	27.19	180	P	P	17 08 44.9	-1.1
PMG				IAmb	IAmb	17 08 58.7	
	comp=Z,41nm,0.8s						
KMSI	Cibinong	28.47	235	P	P	17 08 57.3	-0.2
	comp=Z,39nm,0.8s						
SANI	Sanana	28.71	228	P	P	17 08 57.5	-2.1
	comp=Z,14nm,1.1s						
NJ2	Nanjing	29.01	304	eP	P	17 09 02.7	+0.6
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
USRK	Ussuriysk Ar.	29.05	337	P	P	17 09 04.0	+1.6
	comp=Z,7.6nm,0.8s,baz=150,slow=10,SNR=14						
USRK	Ussuriysk Ar.	29.05	337	P	P	17 09 01.1	-1.3
USRK	Ussuriysk Ar.	29.05	337	P	P	17 09 01.1	-1.3
USA0B	Ussuriysk Arra	29.05	337	⇑iP	P	17 09 04.6	+2.3
MRSI	Marisa	30.15	238	P	P	17 09 13.3	+0.9
	comp=Z,55nm,0.9s						
MDJ	Mudanjiang	30.32	335	P	P	17 09 14.0	+0.4
MDJ				sP	sP	17 09 32.6	+2.0
MDJ				pmax	pmax		
	comp=Z,18nm,1.8s						
MDJ	Mudanjiang	30.32	335	P	P	17 09 13.5	-0.1
LUWI	Luwuk	30.42	234	P	P	17 09 13.5	-1.3
	comp=Z,49nm,1.1s						
LUWI	Luwuk	30.42	234	P	P	17 09 12.4	-2.4
TOLI2	Tolitoli	30.72	240	P	P	17 09 16.3	-1.1
TOLI2				IAmb	IAmb	17 09 29.0	
	comp=Z,36nm,0.8s						
MPSI	Mapaga	31.89	240	P	P	17 09 27.6	-0.1
	comp=Z,20nm,1.0s						
SPMM	Sapulut	32.64	250	P	P	17 09 36.0	+1.6
KLR	Kul'dur	33.55	342	ceP	P	17 09 42.8	+1.0
KLR				pmax	pmax		
	comp=Z,30nm,0.9s						
GRNR	Gornyy	33.81	348	⇑iP	P	17 09 43.4	-0.7
GRNR				pmax	pmax		
	comp=Z,3.0nm,1.3s						
GRNR				MLR	MLR		
	comp=E,670nm,15.0s						
GRNR				MLR	MLR		
	comp=N,860nm,16.0s						
GRNR				MLR	MLR		
	comp=Z,2µm,13.0s						
TTSI	Tana Toraja	33.97	235	P	P	17 09 46.9	+1.0
	comp=Z,61nm,1.0s						
BJT	Baijiatuau	34.52	316	P	P	17 09 47.2	-3.2
BJT				pmax	pmax		
	comp=Z,13nm,1.1s						
BJT	Baijiatuau	34.52	316	P	P	17 09 47.2	-3.2
BJT				IAmb	IAmb	17 09 51.7	
	comp=Z,12nm,1.1s						
BKSI	Bulukumba	35.20	231	P	P	17 09 56.3	-0.2
	comp=Z,20nm,1.2s						
KAPI	Kappang	35.27	232	P	P	17 09 57.5	+0.3
	comp=Z,3.6nm,0.3s,baz=240,slow=14,SNR=3.7						
KAPI	Kappang	35.27	232	P	P	17 09 57.3	+0.1
KAPI				pmax	pmax		
	comp=Z,38nm,1.1s						
KAPI	Kappang	35.27	232	P	P	17 09 57.3	+0.1
BSSI	Bau Bau, Buton	35.48	230	P	P	17 09 58.5	-0.4
	comp=Z,28nm,1.1s						
SOEI	Soe	35.53	221	P	P	17 09 59.6	+0.1
	comp=Z,23nm,0.9s						
SOEI	Soe	35.53	221	P	P	17 09 57.5	-2.0
SOEI				IAmb	IAmb	17 10 21.9	
	comp=Z,19nm,0.9s						
PETK	Petropavlovsk-	36.06	11	P	P	17 10 05.2	+1.8
	comp=Z,1.5nm,0.7s,baz=171,slow=10,SNR=1.3						
ENH	Enshi	36.21	297	P	P	17 10 03.2	-2.0
MTKI	Muara Teweh, K	36.76	243	P	P	17 10 09.6	-0.3
KBKI	Kotabaru	37.02	238	P	P	17 10 10.5	-1.6
	comp=Z,34nm,0.9s						
SBUM	Sibu	37.43	250	P	P	17 10 17.0	+1.4
HHC	Hu-ho-hao-te	38.00	314	eP	P	17 10 21.4	+1.1
HHC				pmax	pmax		
	comp=Z,18nm,1.1s						
GYA	Guiyang	38.17	290	⇑P	P	17 10 24.1	+2.2
GYA				pmax	pmax		
	comp=Z,19nm,0.8s						
BBKI	Banjar Baru	38.19	239	P	P	17 10 21.6	-0.4
	comp=Z,14nm,1.1s						
HIA	Hailar	38.20	331	P	P	17 10 21.1	-0.7
HIA				pmax	pmax		
	comp=Z,25nm,0.8s						
HIA	Hailar	38.20	331	P	P	17 10 21.1	-0.7
ZEA	Zeya	38.86	341	eP	P	17 10 28.0	+0.9
ZEA				pmax	pmax		
	comp=E,10.0nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.1s						
STKI	Sintang	39.19	247	P	P	17 10 28.9	-1.6
	comp=Z,15nm,1.0s						
WB0	Warramunga Arr	39.48	199	P	P	17 10 31.3	-1.5
WB0				IAmb	IAmb	17 10 43.3	
	comp=Z,22nm,0.7s						
WR0	Warramunga Arr	39.62	199	P	P	17 10 32.8	-1.1
WR0				IAmb	IAmb	17 10 44.5	
	comp=Z,18nm,0.8s						
WRAB	Tennant Creek	39.65	199	deP	P	17 10 34.4	+0.3
WRAB				pmax	pmax		
	comp=Z,25nm,1.7s						
WRAB	Tennant Creek	39.65	199	P	P	17 10 33.7	-0.4
WRAB				IAmb	IAmb	17 10 44.8	
	comp=Z,26nm,0.8s						
WB2	Warramunga Arr	39.66	199	P	P	17 10 32.9	-1.3
WB2				IAmb	IAmb	17 10 45.0	
	comp=Z,27nm,0.9s						
WRA	Warramunga Arr	39.67	199	P	P	17 10 33.1	-1.1
	comp=Z,5.4nm,0.9s,baz=25,slow=8.0,SNR=28						
WRA				PcP	PcP	17 12 41.2	+0.8
	comp=Z,3.6nm,0.8s,baz=22,slow=1.7,SNR=5.2						
WRA				ScP	ScP	17 16 22.1	-3.3
	comp=Z,0.2nm,0.7s,baz=7.6,slow=3.2,SNR=1.1						
WRA	Warramunga Arr	39.67	199	P	P	17 10 32.5	-1.8
TWSI	Taliwang, Sumb	39.86	231	P	P	17 10 34.8	-1.1
	comp=Z,59nm,0.9s						
PBKI	Pangkalan Bun	40.42	243	P	P	17 10 40.5	-0.1
	comp=Z,90nm,1.0s						
SLVN	Son La	40.64	282	P	P	17 10 43.1	+0.6
SRBI	Singaraja	40.69	233	P	P	17 10 42.0	-0.8
	comp=Z,42nm,1.0s						
KMMI	Kalianget	41.01	236	P	P	17 10 44.4	-1.0
	comp=Z,37nm,1.2s						
ABJI	Asem Bagus	41.26	234	P	P	17 10 48.2	+0.7
	comp=Z,62nm,1.5s						
BWJI	Bawean	41.34	238	P	P	17 10 47.0	-1.2
	comp=Z,83nm,1.2s						
LZH	Lanzhou	42.09	304	eP	P	17 10 56.2	+1.9
LZH				pP	pwP	17 11 09.0	-2.1
LZH				sP	sP	17 11 15.6	+4.0
LZH				pmax	pmax		
	comp=Z,12nm,0.9s						
GMJI	Gumukmas	42.16	235	P	P	17 10 55.9	+1.0
	comp=Z,42nm,1.0s						
CIT	Chita	42.97	330	eP	P	17 11 01.0	-0.1
CIT				e		17 11 09.8	
CIT				e		17 21 14.2	
CIT				pmax	pmax		
	comp=Z,72nm,1.2s						
AS31	Alice Springs	43.30	198	P	P	17 11 03.2	-0.8
ASAR	Alice Springs	43.30	198	P	P	17 11 03.6	-0.4
	comp=Z,3.7nm,0.7s,baz=21,slow=8.3,SNR=50						
ASAR				PcP	PcP	17 12 53.4	+1.0
	comp=Z,1.9nm,0.6s,baz=32,slow=3.0,SNR=6.4						
ASAR				ScP	ScP	17 16 40.1	+0.4
	comp=Z,1.4nm,1.0s,baz=354,slow=3.0,SNR=5.9						
ASAR	Alice Springs	43.30	198	P	P	17 11 02.7	-1.4
ASAR						17 12 53.4	
ASAR	Alice Springs	43.30	198	P	P	17 11 02.7	-1.4
PCJI	Pacitan	43.90	237	P	P	17 11 09.9	+1.0
	comp=Z,111nm,1.3s						
DZM	Mont Dzumac	44.10	154	P	P	17 11 14.0	+3.5
	comp=Z,16nm,1.1s,baz=84,slow=15,SNR=4.2						
ULN	Ulaanbaatar	44.12	322	⇑eP	P	17 11 11.3	+0.8
ULN				pmax	pmax		
	comp=Z,14nm,0.8s						
ULN	Ulaanbaatar	44.12	322	P	P	17 11 11.7	+1.2
ULN	Ulaanbaatar	44.12	322	P	P	17 11 10.0	-0.5
SONM	Songino Array	44.49	321	P	P	17 11 14.3	+0.8
	comp=Z,8.8nm,0.8s,baz=136,slow=8.9,SNR=48						
SONM				PcP	PP	17 12 57.6	-0.3
	comp=Z,4.5nm,0.8s,baz=143,slow=3.8,SNR=5.8						
SONM				ScP	ScP	17 16 45.7	+1.3
	comp=Z,1.6nm,1.0s,baz=151,slow=3.8,SNR=4.6						
SONM	Songino Array	44.49	321	P	P	17 11 13.2	-0.3
SONM				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SONM	Songino Array	44.49	321	P	P	17 11 13.2	-0.3
SEY	Seymchan	45.08	3	P	P	17 11 20.4	+2.6
	comp=Z,2.9nm,0.8s,baz=174,slow=7.4,SNR=4.1						
CHTO	Chiang Mai	45.51	279	P	P	17 11 21.3	-0.5
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CHTO	Chiang Mai	45.51	279	P	P	17 11 23.3	+1.5
CHTO	Chiang Mai	45.51	279	P	P	17 11 21.3	-0.5
CM31	Chiang Mai Arr	45.55	278	P	P	17 11 24.6	+2.4
	SNR=8.1						
CM31	Chiang Mai Arr	45.55	278	P	P	17 11 22.5	+0.3
CM31				IAmb	IAmb	17 11 24.8	
	comp=Z,16nm,0.9s						
CMAR	Chiang Mai Arr	45.55	278	P	P	17 11 23.8	+1.6
	comp=Z,11nm,0.9s,baz=71,slow=6.3,SNR=75						
CMAR				PcP	PcP	17 13 01.4	+1.2
	comp=Z,4.1nm,0.9s,baz=92,slow=1.7,SNR=7.5						
CMAR	Chiang Mai Arr	45.55	278	i P	P	17 11 24.2	+2.0
CMAR				pmax	pmax		
	comp=Z,12nm,0.9s						
CMAR	Chiang Mai Arr	45.55	278	P	P	17 11 22.5	+0.3
DSRI	Dabo	45.57	251	P	P	17 11 22.9	+0.6
YAK	Yakutsk	45.68	349	P	P	17 11 23.4	+1.0
	comp=Z,11nm,0.6s,baz=150,slow=1.0,SNR=10.0						
YAK	Yakutsk	45.68	349	eP	P	17 11 22.9	+0.4
YAK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.4s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.4s						
YAK	Yakutsk	45.68	349	P	P	17 11 20.1	-2.4
JRMM	Jerantut	45.76	258	P	P	17 11 26.0	+2.2
GTA	Gaotai	45.98	308	eP	P	17 11 26.1	+0.7
GTA				pP	pP	17 11 36.5	-1.0
GTA				sP	pwP	17 11 42.4	0.0
GTA				PcP	PcP	17 13 03.1	+1.6
GTA				ScP	ScP	17 16 54.3	+3.5
GTA				pmax	pmax		
	comp=E,4.0nm,1.5s						
LEM	Lembang	46.03	241	P	P	17 11 25.6	-0.5
	comp=E,7.3nm,0.4s,baz=264,slow=2.1,SNR=4.0						
DBJI	Dramaga	46.61	242	P	P	17 11 29.1	-1.4
	comp=E,3µmcomp=E,20nm,0.7s						
BOD	Bodaibo	46.68	336	eP	P	17 11 30.4	0.0
BOD				pmax	pmax		
	comp=Z,11nm,2.1s						
JMBI	JAMBI	46.92	250	P	P	17 11 32.4	-0.5
	comp=Z,36nm,0.6s						
BLSI	Bandar Lampung	47.27	245	P	P	17 11 35.6	-0.1
KLSI		47.38	246	P	P	17 11 37.1	+0.6
	comp=Z,32nm,1.3s						
ZAK	Zakamensk	47.48	323	eP	P	17 11 36.5	-0.5
ZAK				e		17 13 06.1	
ZAK				pmax	pmax		
	comp=Z,17nm,1.1s						
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.5s						
MDSI	Maura Dua	47.76	246	P	P	17 11 39.3	-0.2
	comp=Z,12nm,1.1s						
TLY	Talaya	47.88	325	P	P	17 11 41.1	+1.2
	comp=Z,5.0nm,0.7s,baz=132,slow=7.5,SNR=9.0						
TLY				PcP	PcP	17 13 09.3	+1.5
	comp=Z,3.7nm,0.6s,baz=229,slow=11,SNR=3.1						
TLY	Talaya	47.88	325	eP	P	17 11 41.4	+1.5
TLY				pmax	pmax		
	comp=Z,78nm,1.8s						
TLY	Talaya	47.88	325	P	P	17 11 37.3	-2.6
TLY				IAmb	IAmb	17 11 42.1	
	comp=Z,27nm,1.3s						
KASI	Kota Agung	48.00	245	P	P	17 11 40.2	-1.1
	comp=Z,40nm,1.4s						
LWLI	Liwa	48.13	246	P	P	17 11 42.0	-0.4
	comp=Z,95nm,1.1s						
KSI	Kapahiang	48.76	248	P	P	17 11 45.5	-1.8
	comp=Z,54nm,0.9s						
MASI	Maura Aman, Be	48.84	249	P	P	17 11 48.3	+0.4
	comp=Z,74nm,1.2s						
MOY	Mondy	49.34	324	eP	P	17 11 52.7	+1.4
MOY				pmax	pmax		
	comp=Z,29nm,1.4s						
PPI	Padang Panjang	49.35	253	P	P	17 11 50.6	-1.1
	comp=Z,12nm,0.4s						
PSI	Prapat	49.45	258	P	P	17 11 53.6	+0.9
	comp=Z,15nm,0.9s,baz=94,slow=3.8,SNR=20						
PSI				PcP	PcP	17 13 14.7	+0.3
	comp=Z,2.8nm,0.4s,baz=23,slow=0.7,SNR=4.0						
PDSI	Padang	49.48	253	P	P	17 11 52.1	-0.6
	comp=Z,11nm,1.1s						
RPSI	Rantau Prapat	49.49	258	P	P	17 11 53.6	+0.8
MNSI	Mandailing Nat	49.60	255	P	P	17 11 54.2	+0.6
STKA	Stephens Creek	49.82	186	P	P	17 11 54.1	-0.8
	comp=Z,4.9nm,1.1s,baz=350,slow=11,SNR=4.5						
STKA	Stephens Creek	49.82	186	⇓eP	P	17 11 54.3	-0.6
STKA	Stephens Creek	49.82	186	P	P	17 11 53.7	-1.2
SISI	Saibi	50.90	253	P	P	17 12 03.0	-0.4
	comp=Z,48nm,1.1s						
GSI	Gunungsitoli	51.26	257	P	P	17 12 07.3	+1.2
	comp=Z,76nm,1.1s						
GSI	Gunungsitoli	51.26	257	P	P	17 12 06.0	-0.2
SHL	Shillong	51.45	289	P	P	17 12 07.1	-0.6
SHL				pmax	pmax		
	comp=Z,9.0nm,0.6s						
SHL	Shillong	51.45	289	P	P	17 12 07.1	-0.6
SHL				IAmb	IAmb	17 12 10.2	
	comp=Z,8.8nm,0.6s						
LSA	Lhasa	51.98	294	P	P	17 12 14.2	+2.3
LSA	Lhasa	51.98	294	P	P	17 12 10.8	-1.1
LSA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
LSA	Lhasa	51.98	294	P	P	17 12 10.8	-1.1
LSA				IAmb	IAmb	17 12 15.5	
	comp=Z,9.7nm,0.9s						
CAN	Canberra	53.02	178	P	P	17 12 19.3	+0.4
CAN				pmax	pmax		
	comp=Z,22nm,1.2s						
CAN	Canberra	53.02	178	P	P	17 12 19.3	+0.4
CAN				IAmb	IAmb	17 12 31.4	
	comp=Z,22nm,1.2s						
TIXI	Tiksi	54.74	353	P	P	17 12 31.5	+0.6
	comp=Z,4.8nm,0.5s,baz=168,slow=4.9,SNR=4.7						
TIXI	Tiksi	54.74	353	⇑eP	P	17 12 31.0	+0.1
TIXI	Tiksi	54.74	353	P	P	17 12 29.4	-1.5
TIXI				IAmb	IAmb	17 12 43.8	
	comp=Z,7.5nm,0.8s						
TAPN	Taplejung	55.08	291	eP	P	17 12 36.0	+1.5
ODAN	Odare	55.40	291	eP	P	17 12 38.1	+1.4
	comp=Z,56nm,1.2s						
KRAR	Krasnoyarsk	55.47	326	⇓eP	P	17 12 37.3	+0.9
WMQ	Urumqi	55.73	311	eP	P	17 12 40.7	+2.1
WMQ				pP	pP	17 12 48.4	-2.6
WMQ				sP	sP	17 12 56.1	-0.1
WMQ				pmax	pmax		
	comp=Z,27nm,1.3s						
WMQ				LR	LR		
	comp=Z,1µm,21.1s						
WMQ				LR	LR		
	comp=Z,1µm,21.1s						
WMQ				LR	LR		
	comp=Z,790nm,19.9s						
JIRN	Jiri	56.41	292	eP	P	17 12 45.3	+1.2
	comp=Z,71nm,0.9s						
DGZ	Jazzator, Alta	56.90	318	⇑iP	P	17 12 47.6	+0.6
DGZ				pmax	pmax		
	comp=Z,17nm,1.1s						
PKIN	Phulchoki	57.12	292	eP	P	17 12 49.4	+0.4
	comp=Z,16nm,0.7s						
KKN	Kakani	57.21	292	eP	P	17 12 50.7	+1.1
	comp=Z,39nm,0.9s						
DMN	Daman	57.37	292	eP	P	17 12 52.1	+1.3
GKN	Gorkha	57.76	292	eP	P	17 12 54.6	+1.2
	comp=Z,106nm,1.1s						
DANN	Dangsing	58.50	293	eP	P	17 12 59.7	+0.9
	comp=Z,126nm,0.7s						
KOLN	Koldanda	58.69	292	eP	P	17 13 01.0	+1.0
	comp=Z,57nm,0.9s						
PYUN	Piuthan	59.20	292	eP	P	17 13 04.5	+1.0
	comp=Z,89nm,1.0s						
ZAA0	Zalesovo Array	59.35	323	P	P	17 13 03.5	-0.3
ZALV	Zalesovo Beam	59.35	323	P	P	17 13 04.0	+0.2
	comp=Z,11nm,0.7s,baz=102,slow=7.1,SNR=45						
ZALV				PcP	PcP	17 13 51.1	-0.2
	comp=Z,4.0nm,0.7s,baz=108,slow=4.8,SNR=4.3						
ZALV	Zalesovo Beam	59.35	323	P	P	17 13 03.5	-0.3
MK31	Makanchi Array	59.87	314	i P	P	17 13 08.0	+0.4
MK31	Makanchi Array	59.87	314	P	P	17 13 08.2	+0.7
MK31				IAmb	IAmb	17 13 09.9	
	comp=Z,9.0nm,0.9s						
MKAR	Makanchi Array	59.87	314	P	P	17 13 08.2	+0.6
	comp=Z,8.8nm,0.7s,baz=94,slow=9.1,SNR=58						
MKAR				ScP	ScP	17 17 52.0	+1.3
	comp=Z,2.4nm,1.0s,baz=95,slow=6.5,SNR=5.7						
MKAR	Makanchi Array	59.87	314	i P	P	17 13 08.8	+1.2
MKAR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MKAR	Makanchi Array	59.87	314	P	P	17 13 07.7	+0.1
MAKZ	Makanchi	60.08	314	P	P	17 13 09.8	+0.7
MAKZ	Makanchi	60.08	314	P	P	17 13 09.7	+0.7
MAKZ				IAmb	IAmb	17 13 11.5	
	comp=Z,13nm,0.8s						
CNPM	China Poot	60.45	31	P	P	17 13 10.9	-0.4
PDGK	Podgornoye	61.63	310	P	P	17 13 20.8	+1.1
SML	Sawmill	62.41	29	P	P	17 13 24.3	-0.2
PRZ	Przheval'sk	62.41	309	P	P	17 13 24.8	-0.3
PRZ				pmax	pmax		
	comp=Z,17nm,0.7s						
PRZ	Przheval'sk	62.41	309	P	P	17 13 24.8	-0.3
BWN	Browne	62.52	26	P	P	17 13 25.8	+0.6
KURK	Kurchatov	62.65	318	deP	P	17 13 26.9	+0.7
KURK				pmax	pmax		
	comp=Z,26nm,1.3s						
KURK	Kurchatov	62.65	318	P	P	17 13 25.8	-0.4
KURBB	Kurchatov Arra	62.70	318	P	P	17 13 27.2	+0.7
	comp=Z,12nm,0.7s,baz=97,slow=6.9,SNR=69						
KURBB	Kurchatov Arra	62.70	318	P	P	17 13 26.6	+0.1
NRIK	Noril'sk	62.73	340	P	P	17 13 27.5	+1.0
	comp=Z,18nm,0.7s,baz=113,slow=8.0,SNR=33						
NRIK	Noril'sk	62.73	340	c iP	P	17 13 27.4	+1.0
NRIK				pmax	pmax		
	comp=Z,26nm,0.9s						
NRIK	Noril'sk	62.73	340	P	P	17 13 26.1	-0.4
ARXS	Arharly	62.85	311	eP	P	17 13 28.7	+0.8
BKZ	Black Stump Fm	63.17	155	P	P	17 13 27.5	-2.3
BKZ				IAmb	IAmb	17 13 39.0	
	comp=Z,17nm,1.1s						
MDOK	Medeo	63.41	310	P	P	17 13 32.5	+0.8

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ILAR  Eielson Array       63.76  26    P       P       17 13 36.0 +2.7
      comp=Z,4.9nm,0.9s,baz=260,slow=5.3,SNR=14
TOLK  Toolik Lake Re      63.82  21    P       P       17 13 31.9 -1.8
KSH   Kashi               64.31 306    P       P       17 13 41.1 +3.5
KSH                                    pP      pwP     17 13 53.4 -1.5
KSH                                    sP      sP      17 13 58.5 +3.1
KSH                                    pmax    pmax
      comp=Z,17nm,1.1s
TKM2  Tokmak 2            64.48 310    P       P       17 13 40.0 +1.2
      SNR=11
TKM2  Tokmak 2            64.48 310    P       P       17 13 39.4 +0.7
KBK   Karagaybulak        64.96 309    P       P       17 13 43.6 +1.7
      SNR=9.6
CHMS  Chumysh             65.09 310    P       P       17 13 44.1 +1.6
      SNR=5.4
FRU1  Bishkek             65.19 309    P       P       17 13 42.8 -0.4
FRU1                                   pmax    pmax
      comp=Z,14nm,1.0s
FRU1  Bishkek             65.19 309    P       P       17 13 42.8 -0.4
FRU1                                   IAmb    IAmb    17 13 45.8
      comp=Z,14nm,1.0s
USP   Ospenovka           65.27 310    P       P       17 13 45.2 +1.5
      SNR=6.8
AAK   Ala-Archa           65.30 309    P       P       17 13 44.9 +0.8
      comp=Z,2.8nm,0.6s,baz=125,slow=5.6,SNR=12
AAK   Ala-Archa           65.30 309  i P       P       17 13 44.9 +0.8
      SNR=7.1
AAK   Ala-Archa           65.30 309⇓eP       P       17 13 44.4 +0.4
AAK                                    pmax    pmax
      comp=Z,34nm,1.7s
AAK   Ala-Archa           65.30 309    P       P       17 13 45.8 +1.8
AAK   Ala-Archa           65.30 309    P       P       17 13 42.9 -1.1
BMAR  Burnt Mountain      65.30  23    P       P       17 13 41.2 -2.2
UCH   Uchtor              65.30 309    P       P       17 13 46.1 +1.7
      SNR=19
BCAR  Beaver Creek A      65.64  28    P       P       17 13 45.1 -0.6
EKS2  Erkin-Say           65.82 309    P       P       17 13 48.4 +1.0
      SNR=5.8
AML   Almayashu           65.91 309    P       P       17 13 49.5 +1.2
      SNR=15
AML   Almayashu           65.91 309  i P       P       17 13 49.5 +1.2
      SNR=15
AML   Almayashu           65.91 309    P       P       17 13 50.1 +1.8
DRK   Karamyk             67.53 306    P       P       17 13 57.6 -0.9
DRK                                    IAmb    IAmb    17 14 01.2
      comp=Z,14nm,1.0s
BRVK  Borovoye            67.89 321ceP       P       17 14 00.5 +0.3
BRVK                                   pmax    pmax
      comp=Z,17nm,0.7s
BRVK  Borovoye            67.89 321    P       P       17 14 01.3 +1.1
BRVK  Borovoye            67.89 321    P       P       17 14 00.2 +0.1
KK31  Karatay Array       68.19 310    P       P       17 14 03.1 +0.8
KK31  Karatay Array       68.19 310    P       P       17 14 01.8 -0.5
KK31                                   IAmb    IAmb    17 14 05.2
      comp=Z,18nm,0.8s
KKAR  Karatay Array       68.19 310    P       P       17 14 02.6 +0.3
KKAR                                   pmax    pmax
      comp=Z,18nm,0.9s
KKAR  Karatay Array       68.19 310    P       P       17 14 01.5 -0.8
KKAR  Karatay Array       68.19 310    P       P       17 14 02.6 +0.3
KKAR                                   IAmb    IAmb    17 14 05.2
      comp=Z,18nm,0.8s
BTK   Batken              68.23 307    P       P       17 14 02.0 -0.7
BTK                                    pmax    pmax
      comp=Z,17nm,1.5s
BTK   Batken              68.23 307    P       P       17 14 02.0 -0.7
BTK                                    IAmb    IAmb    17 14 04.1
      comp=Z,17nm,1.4s
GAR   Garm                68.72 306    P       P       17 14 05.9  0.0
GAR                                    IAmb    IAmb    17 14 07.9
      comp=Z,21nm,0.8s
INK   Inuvik              69.56  23    P       P       17 14 10.2  0.0
      comp=Z,3.0nm,0.7s,baz=291,slow=3.0,SNR=6.1
INK   Inuvik              69.56  23    P       P       17 14 10.3  0.0
INK                                    pmax    pmax
      comp=Z,7.0nm,1.1s
INK   Inuvik              69.56  23    P       P       17 14 10.3  0.0
CHGR  Chuyangaron         69.66 305    P       P       17 14 11.3 -0.3
KBL   Kabul               70.31 301    P       P       17 14 14.6 -1.2
KBL                                    pmax    pmax
      comp=Z,36nm,1.2s
KBL   Kabul               70.31 301    P       P       17 14 16.3 +0.5
      SNR=12
KBL   Kabul               70.31 301    P       P       17 14 14.6 -1.2
DLBC  Dease Lake          71.22  33    P       P       17 14 22.0 +1.3
      comp=Z,3.6nm,0.6s,baz=226,slow=2.5,SNR=6.2
DLBC  Dease Lake          71.22  33    P       P       17 14 21.4 +0.8
DLBC                                   IAmb    IAmb    17 14 32.5
      comp=Z,16nm,1.2s
RUBB  Prince Rupert       71.41  38    P       P       17 14 20.9 -0.8
RUBB                                   IAmb    IAmb    17 14 32.5
      comp=Z,19nm,1.0s
A36M  Sachs Harbour       72.37  19    P       P       17 14 27.2  0.0
A36M                                   IAmb    IAmb    17 14 32.7
      comp=Z,14nm,0.9s
SVE   Sverdlovsk          73.19 325⇑eP       P       17 14 33.4 +1.0
SVE                                    pmax    pmax
      comp=Z,21nm,1.0s
ARU   Arti                74.38 325c iP      P       17 14 39.9 +0.5
ARU                                    PPP     PPP     17 19 07.0
ARU                                    S       S       17 24 13.3 +3.2
ARU                                    pmax    pmax
      comp=Z,37nm,1.3s
ARU   Arti                74.38 325    P       P       17 14 39.7 +0.3
ARU                                    IAmb    IAmb    17 14 42.5
      comp=Z,24nm,0.9s
AB31  Akbulak array       74.72 317    P       P       17 14 40.4 -1.1
ABKAR Akbulak array       74.72 317    P       P       17 14 40.5 -1.0
ABKAR Akbulak array       74.72 317    P       P       17 14 41.1 -0.3
ABKAR                                  IAmb    IAmb    17 14 43.6
      comp=Z,15nm,0.8s
HRA   Herat               75.87 302    P       P       17 14 48.0 -0.6
HRA                                    IAmb    IAmb    17 14 50.3
      comp=Z,16nm,1.1s
YKA   Yellowknife Ar      78.06  28    P       P       17 15 02.5 +2.4
      comp=Z,5.1nm,0.9s,baz=294,slow=4.7,SNR=4.0
EUNU  Eureka              78.28   8    P       P       17 15 02.5 +1.4
GEYT  Alibeck             78.33 306    P       P       17 15 02.0 -0.2
      comp=Z,4.3nm,0.8s,baz=202,slow=7.5,SNR=6.5
GEYT  Alibeck             78.33 306    P       P       17 15 02.9 +0.7
GYA0B ALIBECK ARRAY       78.33 306    P       P       17 15 01.7 -0.5
GYA0B                                  IAmb    IAmb    17 15 04.1
      comp=Z,22nm,1.4s
YBH   Yreka Blue Hor      78.48  50    P       P       17 15 04.4 +1.4
      comp=Z,3.9nm,0.9s,baz=315,slow=5.9,SNR=4.0
YBH   Yreka Blue Hor      78.48  50    P       P       17 15 04.4 +1.4
YBH                                    pmax    pmax
      comp=Z,23nm,1.3s
YBH   Yreka Blue Hor      78.48  50    IAmb    IAmb    17 15 11.5
      comp=Z,23nm,1.3s
KIRV  Kirov               78.74 328c iP      P       17 15 04.7 +0.8
B08A  Colville Reser      79.17  43    P       P       17 15 07.0 +0.3
B08A                                   IAmb    IAmb    17 15 17.1
      comp=Z,13nm,1.0s
E07A  Sunnyside           79.29  45    P       P       17 15 04.7 -2.5
PRGR  Permogore           79.65 332  eP      P       17 15 08.0 -0.8
PRGR                                   pmax    pmax
      comp=Z,59nm,0.9s
D08A  Wollman Farm,       79.78  44    P       P       17 15 09.7 -0.2
D08A                                   IAmb    IAmb    17 15 20.5
      comp=Z,15nm,1.1s
RES   Resolute Bay        79.84  14    P       P       17 15 10.2 +0.5
      comp=Z,5.4nm,0.8s,baz=358,slow=2.3,SNR=5.3
RES   Resolute Bay        79.84  14    P       P       17 15 10.2 +0.5
RES                                    pmax    pmax
      comp=Z,9.0nm,1.0s
RES   Resolute Bay        79.84  14    IAmb    IAmb    17 15 18.3
      comp=Z,9.1nm,1.0s
ORV   Oroville            79.91  52    P       P       17 15 10.8  0.0
ORV                                    pmax    pmax
      comp=Z,4.0nm,0.9s
ORV   Oroville            79.91  52    P       P       17 15 10.8  0.0
C09A  Chrisman Ranch      80.01  43    P       P       17 15 11.2 +0.1
NEW   Newport             80.62  42    P       P       17 15 16.3 +1.8
      comp=Z,2.8nm,0.6s,baz=255,slow=8.3,SNR=5.3
NEW   Newport             80.62  42    P       P       17 15 15.3 +0.9
NEW                                    pmax    pmax
      comp=Z,15nm,1.0s
NEW   Newport             80.62  42    P       P       17 15 15.3 +0.9
NEW                                    IAmb    IAmb    17 15 25.5
      comp=Z,14nm,1.0s
JLN   Jalan Bani Buh      81.26 290    P       P       17 15 19.0 +0.7
WBK   Wadi Bani Khal      81.53 291    P       P       17 15 20.8 +1.1
BELG  Belogornoye         81.54 322deP       P       17 15 20.2 +1.1
BELG                                   pmax    pmax
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      comp=Z,14nm,0.9s
WSAR  Wadi Sarin          81.66 292    P       P       17 15 20.2 -0.1
      comp=Z,10nm,0.7s,baz=110,slow=6.5,SNR=13
BIDO  Bidbid              82.03 292    P       P       17 15 23.6 +1.3
      SNR=5.3
SMDO  Samad               82.22 292    P       P       17 15 24.2 +0.8
JMDO  Jabal Madar         82.37 291    P       P       17 15 24.8 +0.7
KVN   Kaiserville         82.58  51    P       P       17 15 25.9 +0.7
KVN                                    pmax    pmax
      comp=Z,7.0nm,0.9s
KVN   Kaiserville         82.58  51    P       P       17 15 25.9 +0.7
NVAR  Mina Array Bea      82.61  52    P       P       17 15 27.4 +2.1
      comp=Z,1.6nm,0.7s,baz=264,slow=6.2,SNR=8.9
NVAR  Mina Array Bea      82.61  52    P       P       17 15 24.6 -0.8
KLMR  Klimovskoe          82.69 332  eP      P       17 15 24.4 -0.5
KLMR                                   pmax    pmax
      comp=Z,60nm,1.0s
KLMR  Klimovskoe          82.69 332  eP      P       17 15 24.5 -0.5
KLMR  Klimovskoe          82.69 332    AMP             17 15 26.4
      comp=Z,60nm,1.0s
HOQ   Hoqain              82.73 292    P       P       17 15 26.7 +0.8
      SNR=8.6
MHTO  MHTO                82.87 290    P       P       17 15 27.5 +0.8
      SNR=14
BANOM Banah               82.95 295    P       P       17 15 28.7 +1.6
BANOM Banah               82.95 295    P       P       17 15 28.7 +1.6
SHME  Shamm               83.05 295    P       P       17 15 28.5 +0.9
BSY   Bisya               83.06 292    P       P       17 15 28.7 +0.9
MDH   Madha               83.13 294    P       P       17 15 28.6 +0.6
MDH   Madha               83.13 294    P       P       17 15 28.9 +0.9
MASF  Masafi              83.23 294    P       P       17 15 30.1 +1.5
MSFE  Esma-Masafi         83.23 294    P       P       17 15 30.0 +1.4
SOHO  SOHO                83.25 293  i P       P       17 15 29.5 +0.8
      SNR=7.3
SOHO  SOHO                83.25 293    P       P       17 15 29.7 +1.1
UOSS  Minazif             83.31 294    P       P       17 15 29.5 +0.6
UOSS  Minazif             83.31 294    P       P       17 15 29.7 +0.7
UOSS  Minazif             83.31 294    P       P       17 15 29.2 +0.3
UOSS                                   IAmb    IAmb    17 15 30.4
      comp=Z,15nm,0.8s
HATD  Hatta, Dubai        83.41 294  i P       P       17 15 30.2 +0.7
      SNR=8.1
HATD  Hatta, Dubai        83.41 294    P       P       17 15 30.7 +1.2
ASHO  Ashiyiah            83.51 294  i P       P       17 15 30.8 +0.7
      SNR=6.6
ASHO  Ashiyiah            83.51 294    P       P       17 15 31.0 +0.9
ARCES ARCESS Array B      83.57 342    P       P       17 15 28.8 -0.6
      comp=Z,5.8nm,0.6s,baz=60,slow=7.7,SNR=4.4
NAZ   Nazwa, Dubai        83.77 294    P       P       17 15 32.6 +1.2
      SNR=5.2
FAQ   Al Faqa, Dubai      83.90 294  i P       P       17 15 33.0 +1.0
      SNR=7.4
FAQ   Al Faqa, Dubai      83.90 294    P       P       17 15 32.7 +0.7
ALNE  Al Ain              83.96 293    P       P       17 15 33.8 +1.5
ALNE  Al Ain              83.96 293    P       P       17 15 33.6 +1.3
      SNR=11
ELK   Elko                84.16  49    P       P       17 15 34.2 +0.9
      comp=Z,4.5nm,1.0s,baz=263,slow=8.9,SNR=4.7
ELK   Elko                84.16  49    P       P       17 15 33.1 -0.3
ELK                                    pmax    pmax
      comp=Z,11nm,1.1s
ELK   Elko                84.16  49    P       P       17 15 33.1 -0.3
ELK                                    IAmb    IAmb    17 15 43.9
      comp=Z,11nm,1.1s
ASUD  Al Ashush, Dub      84.17 294  i P       P       17 15 34.3 +0.9
      SNR=6.5
ASUD  Al Ashush, Dub      84.17 294    P       P       17 15 34.5 +1.2
UMZA  Um Al Zommool       84.87 292    P       P       17 15 37.3 +0.4
VRH   Novokhopyorsk       85.39 322  eP      P       17 15 37.0 -1.9
VRH                                    pmax    pmax
      comp=Z,7.0nm,0.4s
HVU   Hansel Valley       85.58  48    P       P       17 15 39.5 -0.8
HVU                                    pmax    pmax
      comp=Z,10.0nm,1.0s
HVU   Hansel Valley       85.58  48    P       P       17 15 39.5 -0.8
HVU                                    IAmb    IAmb    17 15 57.2
      comp=Z,9.5nm,1.0s
YHL   Hebgen Lake         85.59  44    P       P       17 15 40.6 +0.1
YHL                                    IAmb    IAmb    17 15 51.8
      comp=Z,8.9nm,0.9s
YHH   Holmes Hill         85.84  44    P       P       17 15 41.3 -0.4
YHH                                    IAmb    IAmb    17 15 54.8
      comp=Z,7.0nm,1.1s
SHAO  Shalim              85.85 287    P       P       17 15 43.0 +1.2
SHAO  Shalim              85.85 287    P       P       17 15 42.7 +0.9
PSUT  Pine Spring         85.90  51    P       P       17 15 39.2 -2.9
PSUT                                   IAmb    IAmb    17 16 00.8
      comp=Z,10nm,1.0s
LPSR  Galich'ya Gora      86.40 324  eP      P       17 15 39.6 -4.3
LPSR                                   pmax    pmax
      comp=Z,5.0nm,0.6s
GHWR  Ruwais              86.50 294    P       P       17 15 46.5 +1.5
DMTO  DMTO                86.55 287    P       P       17 15 46.0 +0.6
OBN   Obninsk             86.57 327⇑eP       P       17 15 44.3 -0.3
OBN                                  eS      S       17 26 12.0 -5.5
OBN                                    pmax    pmax
      comp=Z,10.0nm,0.4s
OBN                                    MLR     MLR
      comp=Z,1µm,17.0s
NLU   North Lily Min      86.71  49    P       P       17 15 45.2 -0.8
NLU                                    IAmb    IAmb    17 15 57.0
      comp=Z,4.8nm,0.8s
VSR   Storozhevoye        86.86 323  eP      P       17 15 45.1 -1.1
VSR                                    pmax    pmax
      comp=Z,10.0nm,0.7s
VORD  Divnogorie          86.89 323  eP      P       17 15 44.0 -2.3
VORD                                   pmax    pmax
      comp=Z,10.0nm,0.8s
DOK   Doka                87.02 288    P       P       17 15 48.3 +0.6
ZEI   Tsey                87.22 314  eP      P       17 15 47.8 -0.6
ZEI                                    pmax    pmax
      comp=Z,3.0nm,1.0s
RBK   Rabkut              87.29 287    P       P       17 15 49.8 +0.8
PDAR  Pinedale Array      87.45  46    P       P       17 15 51.0 +1.4
      comp=Z,0.6nm,0.6s,baz=318,slow=2.0,SNR=3.6
KBZ   Khabaz              87.54 315    P       P       17 15 49.4 -0.2
      comp=Z,7.1nm,1.0s,baz=90,slow=2.3,SNR=7.9
KBZ   Khabaz              87.54 315⇓eP       P       17 15 48.4 -1.2
KBZ                                    pmax    pmax
      comp=Z,8.0nm,0.9s
WHFO  Wadi Hawf           87.56 288    P       P       17 15 50.7 +0.4
KIV   Kislovodsk          87.59 316    P       P       17 15 50.8 +0.7
KIV   Kislovodsk          87.59 316  eP      P       17 15 51.0 +0.9
KIV                                    pmax    pmax
      comp=Z,10.0nm,1.0s
U15A  North Rim           87.79  52    P       P       17 15 50.9 -0.5
U15A                                   IAmb    IAmb    17 16 02.2
      comp=Z,7.2nm,1.0s
FINES FINESS Array B      88.07 336    P       P       17 15 51.4 -0.4
      comp=Z,9.1nm,0.7s,baz=64,slow=5.2,SNR=34
LAO   LASA Array          88.10  41    P       P       17 15 52.3 -0.1
LAO                                    IAmb    IAmb    17 15 57.8
      comp=Z,9.5nm,1.0s
Y14A  Wickenburg          88.11  55    P       P       17 15 53.1 +0.5
ABTO  Aybut               88.16 288    P       P       17 15 53.2  0.0
WUAZ  Wupatki             88.81  53    P       P       17 15 56.1 +0.1
X16A  Lo Mia Camp, P      89.15  54    P       P       17 15 57.4 -0.4
TUC   Tucson              90.43  56    P       P       17 16 00.5 -3.1
TUC                                    pmax    pmax
      comp=Z,6.0nm,1.2s
TUC   Tucson              90.43  56    P       P       17 16 00.5 -3.1
TUC                                    IAmb    IAmb    17 16 21.5
      comp=Z,5.7nm,1.1s
ISAL  Salakas             91.45 331  eP      P       17 16 08.0 +0.3
NACGM Naroch              91.52 330  i P       P       17 16 08.5 +0.5
SLIT  Slitere, Latvi      91.91 334  eP      P       17 16 10.4 +0.7
PABE  Paberze             92.48 331  eP      P       17 16 12.9 +0.5
AKASG Malin Array Be      92.61 326    P       P       17 16 12.4 -0.8
      comp=Z,1.2nm,0.6s,baz=48,slow=5.2,SNR=5.7
AKASG Malin Array Be      92.61 326    IAmb    IAmb    17 16 12.9
      comp=Z,2.7nm,1.2s
ANMO  Albuquerque         92.74  52⇑eP       P       17 16 13.7 -0.7
ANMO                                   pmax    pmax
      comp=Z,1.0nm,0.9s
RAYN  Ar Rayn             93.02 296    P       P       17 16 15.0 -0.7
RAYN  Ar Rayn             93.02 296    P       P       17 16 14.0 -1.7
RAYN                                   pmax    pmax
      comp=Z,5.0nm,0.9s
RAYN  Ar Rayn             93.02 296    P       P       17 16 14.0 -1.7
RAYN                                   IAmb    IAmb    17 16 15.9
      comp=Z,5.2nm,0.9s
SUW   Suwalki             93.75 331  eP      P       17 16 17.9 -0.5
SUW   Suwalki             93.75 331    P       P       17 16 17.1 -1.2
SUW                                    pmax    pmax
      comp=Z,61nm,1.1s
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SUW   Suwalki             93.75 331    P       P       17 16 17.1 -1.2
BNN   Bunyan              94.41 313    P       P       17 16 20.5 -1.4
BRTR  Keskin Array B      95.51 315    P       P       17 16 26.4 -0.6
      comp=Z,3.0nm,0.8s,baz=114,slow=3.0,SNR=4.9
TXAR  Lajitas Array       97.22  56    P       Pdif    17 16 37.2 +2.3
      comp=Z,0.1nm,0.5s,baz=132,slow=1.9,SNR=3.5
CLL   Collm              100.17 333  ePP     PP      17 20 51.0 -1.8
SYO   Syowa Base         112.86 202⇓ePdiff   Pdif    17 17 43.1 -0.2
LSZ   Lusaka             121.54 263    PKP     PKiKP   17 21 56.3 +0.1
      comp=Z,5.6nm,0.8s,baz=90,slow=1.5,SNR=12
SNAA  Sanae              123.44 191    PKPdf   PKiKP   17 21 58.5 +0.2
SNAA  Sanae              123.44 191c iPKIKP  PKiKP   17 21 58.7 +0.5
SNAA                                   pmax    pmax
      comp=Z,4.0nm,1.3s
VNA2  Neumayer--Watz     124.87 190    PKPdf   PKiKP   17 22 01.6 +0.6
VNA3  Neumayer Olymp     124.94 189    PKPdf   PKiKP   17 22 02.1 +0.9
VNA1  Neumayer--Stat     125.25 190    PKPdf   PKiKP   17 22 02.3 +0.6
BOSA  Boshof             125.90 247    PKP     PKiKP   17 22 04.8 +0.4
      comp=Z,2.0nm,0.9s,baz=45,slow=1.4,SNR=1.8
TORD  Torodi Ar. Bea     133.88 310    PKP     PKPdf   17 22 19.7 +0.3
      comp=Z,2.3nm,0.8s,baz=8.0,slow=2.5,SNR=11
TORD  Torodi Ar. Bea     133.88 310    PKPdf   PKPdf   17 22 15.2 -4.2
PLCA  Paso Flores        140.59 133    PKP     PKPdf   17 22 29.4 -1.8
      comp=Z,0.8nm,0.5s,baz=295,slow=4.8,SNR=3.0
PLCA  Paso Flores        140.59 133    PKIKP   PKPdf   17 22 27.4 -3.8
PLCA  Paso Flores        140.59 133            PKPdf   17 22 27.4 -3.8
DBIC  Dimbokro           142.98 309    PKhKP   PKPpre  17 22 32.8
      comp=Z,5.7nm,0.9s,baz=102,slow=4.2,SNR=4.2
LPAZ  La Paz             146.41  93    PKPbc   PKPbc   17 22 44.0 -0.1
      comp=Z,3.9nm,0.4s,baz=351,slow=1.9,SNR=6.8
LPAZ  La Paz             146.41  93    PKP2    PKPdf   17 22 43.3 +0.6
LPAZ  La Paz             146.41  93            PKPdf   17 22 43.3 +0.6
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IDC ***09*** *17:08:40.1±0.8, 51.°43N×175.°14W, h0km, mb3.7/7, mb1 4.0/9, mb1mx3.7/64, mbtmp3.7/9, ML3.2/2, Error ellipse: s-maj=35.2km s-min=20.8km az=167.0*

AEIC ***09*** *17:08:45±1.6, 51.°44N±0.°08×175.°02W±0.°07, h26km±5km, Error ellipse: s-maj=11.2km s-min=6.0km az=169.0*

NEIC ***09*** *17:08:47.1±2.2, 51.°50N±0.°07×175.°05W±0.°07, h43km±7km, mb4.1/23, ML3.5/18(AEIC), Error ellipse: s-maj=10.2km s-min=6.4km az=166.0*

ISC 09 17:08:45.8±0.7**, 51.°4N**±0.°1×**174.°99W**±0.°05**, h40**km**, n68, σ0.s94**/62**, mb3.9**/10**, Andreanof Islands**

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Code  Station Name          Δ°   AZ°    Phase ID            Time      Res
                                        Op      ISC       h  m  s     ISC
GSIG  Igitkin Island       0.83 316            Pn      17 09 00.3 -0.7
GSMY  Great Sitkin M       0.93 315            Pn      17 09 01.9 -0.5
GSCK  Great Sitkin C       0.96 311            Pn      17 09 02.3 -0.5
GSTR  Great Sitkin T       0.97 317            Pn      17 09 02.8 -0.2
GSTD  Great Sitkin T       0.98 313            Pn      17 09 02.8 -0.3
GSTD                                           Sn      17 09 16.1 +0.3
KOFP  Korovin Flat P       1.04  32            Pn      17 09 03.9 -0.1
KOKL  Mount Kliuchef       1.05  27            Pn      17 09 03.9 -0.2
KOSE  Korovin Southe       1.11  31            Pn      17 09 05.4 +0.4
ADK   Adak                 1.16 296            Pn      17 09 05.5 -0.1
ADK                                            Sn      17 09 20.6 +0.4
KIWB  Kanaga Island        1.42 290            Pn      17 09 09.3 +0.1
KIKV  Kanaga Island        1.44 290            Pn      17 09 09.5 +0.1
KIMD  Kanaga Island        1.45 286            Pn      17 09 09.4 -0.1
TAFP  Tanaga Falls P       1.93 286            Pn      17 09 17.0 +0.9
TAFP                                           Sn      17 09 40.6 +1.4
TASE  Tanaga Southea       1.95 284            Pn      17 09 17.3 +0.9
GANE  Gareloi Northe       2.40 282            Pn      17 09 23.9 +1.4
AMKA  Amchitka             3.58 272    Pn      Pn      17 09 37.6 -1.0
UNV   Unalaska Valle       5.72  61    Pn      Pn      17 10 08.3 +0.2
AKUT  Akutan               6.23  60    Pn      Pn      17 10 16.0 +0.9
FALS  False Pass           7.78  59    Pn      Pn      17 10 38.8 +2.6
SDPT  Sand Point           9.53  60    Pn      Pn      17 11 00.6 +0.3
CHGN  Chignik             10.95  57    Pn      Pn      17 11 19.3 -0.3
OHAK  Old Harbor          13.91  57    Pn      Pn      17 11 59.8 -0.3
KDAK  Kodiak Island       14.44  55    Pn      Pn      17 12 04.6 -2.6
      0.5nm,0.3s,baz=179,slow=4.2,SNR=12
L19K  White Mountain      15.36  38    P       P       17 12 25.0 +1.3
CNPM  China Poot          15.67  49    Pn      Pn      17 12 23.8 +0.4
BRLK  Bradley Lake        15.92  49    Pn      Pn      17 12 27.8 +1.2
PETK  Petropavlovsk-      16.78 287    Pn      Pn      17 12 36.5 -1.1
      0.1nm,0.3s,baz=88,slow=16,SNR=2.1
KTH   Kantishna Hill      17.62  37            P       17 12 49.1 +0.4
KTH                                    IAmb    IAmb    17 12 57.3
      comp=Z,14nm,0.9s
TRF   Thorofare Moun      17.81  38    Pn      Pn      17 12 48.8 -1.7
TRF                                    IAmb    IAmb    17 12 59.5
      comp=Z,19nm,1.3s
SML   Sawmill             17.86  44            Pn      17 12 50.8 -0.1
SML                                    IAmb    IAmb    17 13 07.7
      comp=Z,21nm,1.4s
BPAW  Bear Paw Mtn.       17.90  36    P       P       17 12 52.9 +1.2
SCM   Sheep Creek Mo      18.31  45            P       17 12 55.8 -0.4
SCM                                    IAmb    IAmb    17 12 56.0
      comp=Z,20nm,1.3s
RND   Reindeer            18.35  39    P       P       17 12 55.6 -1.0
RND                                    IAmb    IAmb    17 13 04.3
      comp=Z,18nm,1.5s
I23K  Minto, Yukon-K      19.07  34    P       Pn      17 13 06.6 +1.1
I23K                                   IAmb    IAmb    17 13 24.7
      comp=Z,28nm,1.4s
WRH   Wood River Hil      19.17  37    P       Pn      17 13 07.5 +0.8
CCB   Clear Creek Bu      19.36  36    P       Pn      17 13 09.1 +0.1
MDM   Murphy Dome         19.37  35    P       P       17 13 08.8 +1.0
MDM                                    IAmb    IAmb    17 13 15.5
      comp=Z,12nm,1.2s
HDA   Harding Lake        19.57  38    P       P       17 13 10.9 +1.0
HDA                                    IAmb    IAmb    17 13 16.5
      comp=Z,9.5nm,0.8s
IL31                      19.77  37    P       P       17 13 12.2 +0.1
ILAR  Eielson Array       19.77  37    P       P       17 13 12.3 +0.2
      comp=Z,0.3nm,0.3s,baz=221,slow=9.5,SNR=24
H24K  Noodor Dome         19.97  33    P       Pn      17 13 16.1 -0.2
H24K                                   IAmb    IAmb    17 13 20.4
      comp=Z,19nm,1.2s
RIDG  Independent Ri      20.11  41    P       P       17 13 16.4 +0.6
RIDG                                   IAmb    IAmb    17 13 22.4
      comp=Z,7.0nm,0.6s
DOT   Dot Lake            20.39  41    P       P       17 13 19.3 +0.4
SCRK  Sand Creek          20.55  40    P       P       17 13 21.1 +0.4
L27K  Beaver Creek,       21.13  44    P       P       17 13 28.1 +1.1
BCAR  Beaver Creek A      21.15  44    P       P       17 13 28.4 +1.2
TOLK  Toolik Lake Re      21.17  26    P       P       17 13 28.6 +1.4
TOLK                                   IAmb    IAmb    17 13 39.6
      comp=Z,9.5nm,1.1s
BMAR  Burnt Mountain      21.94  32    P       P       17 13 37.1 +1.6
EGAK  Eagle               21.99  40    P       P       17 13 37.3 +1.2
EGAK                                   IAmb    IAmb    17 13 43.8
      comp=Z,12nm,0.9s
DAWY  Dawson              22.48  42    P       P       17 13 42.6 +1.3
DAWY                                   IAmb    IAmb    17 13 59.2
      comp=Z,7.8nm,1.0s
H11N2 WAKE ISLAND Hy      34.66 211    T       T       17 53 00.2
      baz=20,slow=76,SNR=10
H11N3 WAKE ISLAND Hy      34.67 211    T       T       17 53 00.6
      baz=20,slow=76,SNR=12
H11N1 WAKE ISLAND Hy      34.68 211    T       T       17 53 03.4
      baz=20,slow=76,SNR=19
H11S1 WAKE ISLAND Hy      35.87 211    T       T       17 54 50.8
      baz=19,slow=76,SNR=29
H11S2 WAKE ISLAND Hy      35.89 211    T       T       17 54 51.3
      baz=19,slow=76,SNR=24
H11S3 WAKE ISLAND Hy      35.89 211    T       T       17 54 46.3
      baz=19,slow=76,SNR=13
PDAR  Pinedale Array      44.02  75    P       P       17 16 50.1 +0.6
      comp=Z,1.6nm,0.6s,baz=316,slow=4.3,SNR=8.1
TXAR  Lajitas Array       56.28  84    P       P       17 18 22.9 +0.6
      comp=Z,0.8nm,0.7s,baz=7.6,slow=7.0,SNR=6.9
MKAR  Makanchi Array      61.87 311    P       P       17 18 59.6 -1.1
      comp=Z,0.4nm,0.4s,baz=50,slow=6.7,SNR=9.7
CMAR  Chiang Mai Arr      73.38 279    P       P       17 20 14.0 +0.3
      comp=Z,0.2nm,0.3s,baz=292,slow=35,SNR=1.8
WRA   Warramunga Arr      83.73 227    P       P       17 21 10.0 -0.4
      comp=Z,0.6nm,0.9s,baz=32,slow=5.9,SNR=3.0
ASAR  Alice Springs       87.16 226    P       P       17 21 27.4 -0.1
      comp=Z,0.6nm,0.8s,baz=21,slow=4.9,SNR=7.3
ESDC  Sonseca Array       88.97   7    P       P       17 21 34.7 -1.4
      comp=Z,0.2nm,0.5s,baz=350,slow=4.5,SNR=3.0
H03N2 Juan Fernandez     118.87 108    T       T       19 38 03.7
H03N1 Juan Fernandez     118.88 108    T       T       19 38 04.9
      baz=319,slow=74,SNR=4.9
H03N3 Juan Fernandez     118.88 108    T       T       19 38 08.6
      baz=70,slow=74,SNR=4.6
MAW   Mawson             147.96 218    PKPbc   PKPbc   17 28 25.1 -0.1
      comp=Z,1.9nm,0.7s,baz=128,slow=21,SNR=3.6
LBTB  Lobatse            149.30 321    PKPbc   PKiKP   17 28 31.3  0.0
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comp=Z,5.2nm,0.9s,baz=23,slow=3.6,SNR=5.3

NNC ***09*** *17:23:47.8±1.2, 45°.47N×84°.09E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=9.6km s-min=4.5km az=103.0*
SOME ***09*** *17:23:50.3, 45°.57N×83°.87E, h15^{km}*
ISC 09 17:23:49.9±1.4**, 45°.51N**±0°.05×**83°.82E**±0°.08**, h10^{km}, n28, σ2^{s}44**/40**, 6C-4D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MK31	Makanchi Array	1.67	321	⇓Pn	Pb	17 24 20.6	-0.2
	4.9nm,0.3s,baz=135,slow=16,SNR=332						
MK31				⇓Sn	Sg	17 24 44.9	+1.4
	3.4nm,0.2s,baz=133,slow=27,SNR=16						
MAKZ	Makanchi	1.82	316	⇑Pn	Pb	17 24 23.1	-0.3
	2.5nm,0.3s						
MAKZ				⇑Sn	Sg	17 24 49.7	+1.2
	5.4nm,0.3s						
ZSN	Zaisan	2.07	20	*e*P	Pn	17 24 25.1	+0.4
	15nm,0.3s						
ZSN				*e*S	Sn	17 24 50.5	-0.1
	79nm,1.0s						
DJR	Jarkent	3.10	249	*e*P	Pb	17 24 47.4	+2.3
	1.4nm,0.2s						
DJR				*e*S	Sg	17 25 28.8	-0.6
	9.5nm,0.4s						
DJR	Jarkent	3.10	249	Pg	Pb	17 24 47.4	+2.3
	1.4nm,0.2s						
DJR				Lg	Lg	17 25 28.8	
	9.5nm,0.4s						
KAPS	Kapalarasan	3.15	267	*e*P	Pg	17 24 49.5	-0.8
	1.4nm,0.2s						
KAPS				*e*S	Sg	17 25 31.9	+0.8
	12nm,0.4s						
KAPS	Kapalarasan	3.15	267	Pg	Pg	17 24 49.5	-0.8
	1.4nm,0.2s						
KAPS				Lg	Lg	17 25 31.9	
	12nm,0.4s						
KTMS	Ketmen	3.23	231	*e*P	Pb	17 24 49.6	+2.2
	1.7nm,0.1s						
KTMS				*e*S	Sb	17 25 32.1	+5.3
	15nm,0.2s						
KTMS	Ketmen	3.23	231	Pg	Pb	17 24 49.6	+2.2
	1.7nm,0.1s						
KTMS				Lg	Lg	17 25 32.1	
	15nm,0.2s						
PDGK	Podgornoye	3.79	236	Pg	Pb	17 24 59.9	+2.8
	0.5nm,0.3s						
PDGK				Lg	Lg	17 25 49.8	
	5.1nm,0.7s						
PDGK	Podgornoye	3.79	236	⇓Pg	Pb	17 25 00.3	+3.2
	2.4nm,0.9s						
PDGK				⇑Lg	Lg	17 25 53.2	
	12nm,0.8s						
SHLS	Shalkode	3.91	235	*e*P	Pb	17 24 57.9	-1.2
	2.8nm,0.2s						
SHLS				*e*S	Sb	17 25 46.3	-0.2
	20nm,0.5s						
SHLS	Shalkode	3.91	235	Pg	Pb	17 24 57.8	-1.2
	2.8nm,0.2s						
SHLS				Lg	Lg	17 25 46.3	
	20nm,0.5s						
BLB	Baldybastay	4.06	251	Pg	Pg	17 25 06.0	-1.6
	3.7nm,0.3s						
BLB				Lg	Lg	17 26 00.6	
	14nm,0.2s						
UZB	Uzynbulak	4.18	237	*e*P	Pb	17 25 06.4	+2.8
	1.9nm,0.2s						
UZB				*e*S	Sg	17 26 01.3	-2.7
	7.5nm,0.7s						
UZB	Uzynbulak	4.18	237	Pg	Pb	17 25 06.4	+2.8
	1.9nm,0.2s						
UZB				Lg	Lg	17 26 01.3	
	7.5nm,0.7s						
ARXS	Arharly	4.45	255	*e*P	Pb	17 25 12.3	+4.0
	1.9nm,0.4s						
ARXS				*e*S	Sg	17 26 11.1	-1.8
	7.5nm,0.8s						
SATY	Saty	4.59	240	*e*P	Pg	17 25 15.7	-2.2
	1.3nm,0.1s						
SATY				*e*S	Sg	17 26 16.9	-0.6
	13nm,0.4s						
SATY	Saty	4.59	240	Pg	Pg	17 25 15.7	-2.2
	1.3nm,0.1s						
SATY				Lg	Lg	17 26 16.9	
	13nm,0.4s						
KOTS	Kotyrbulak	5.32	247	*e*P	Pb	17 25 27.2	+4.1
	1.6nm,0.4s						
KOTS				*e*S	Sg	17 26 36.5	-4.2
	9.6nm,0.5s						
KOTS	Kotyrbulak	5.32	247	Pg	Pb	17 25 27.2	+4.1
	1.6nm,0.4s						
KOTS				Lg	Lg	17 26 36.5	
	9.6nm,0.5s						
MDOK	Medeo	5.39	247	*e*P	Pg	17 25 30.6	-2.6
	0.5nm,0.2s						
MDOK				*e*S	Sg	17 26 42.3	-0.8
	6.0nm,0.6s						
KTBS	Karatobe	5.40	253	*e*P	Pg	17 25 30.2	-3.2
	0.3nm,0.2s						
KTBS				*e*S	Sg	17 26 41.4	-1.9
	8.9nm,0.6s						
KTBS	Karatobe	5.40	253	Pg	Pg	17 25 30.2	-3.2
	0.3nm,0.2s						
KTBS				Lg	Lg	17 26 41.4	
	8.9nm,0.6s						
DGS	Degeres	6.20	251	*e*P	Pg	17 25 45.0	-3.6
	1.6nm,0.5s						
DGS				*e*S	Sg	17 27 06.9	-1.9
	5.1nm,0.5s						
DGS	Degeres	6.20	251	Pg	Pg	17 25 45.0	-3.6
	1.6nm,0.5s						
DGS				Lg	Lg	17 27 06.9	
	5.1nm,0.5s						
KURBB	Kurchatov Arra	6.22	327	⇑Pn	Pn	17 25 21.1	-0.7
	1.4nm,0.5s						
KURBB				⇑Lg	Lg	17 27 08.9	
	10nm,0.6s						
KURK	Kurchatov	6.26	328	⇑Pn	Pn	17 25 21.3	-1.0
	3.2nm,1.2s						
KURK				⇓Lg	Lg	17 27 10.5	
	5.3nm,0.6s						

IDC ***09*** *17:24:05.1±0.9, 51°.81N×173°.13W, h0^{km}, mb3.9/18, mb1 4.0/19, mb1mx3.9/54, mbtmp3.9/19, ML4.1/1, Error ellipse: s-maj=26.0km s-min=16.2km az=173.0*
AEIC ***09*** *17:24:07±1.3, 51°.4N±0°.1×173°.16W±0°.04, h25^{km}±8^{km}, Error ellipse: s-maj=17.0km s-min=3.2km az=175.0*
NEIC ***09*** *17:24:09.0±1.0, 51°.6N±0°.1×173°.21W±0°.04, h33^{km}±20^{km}, ML3.6(AEIC), Error ellipse: s-maj=18.8km s-min=1.6km az=171.0*
ISC 09 17:24:06.3±0.7**, 51°.6N**±0°.1×**173°.16W**±0°.05**, h10^{km}, n47, σ1^{s}17**/40**, mb3.9**/19**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOFP	Korovin Flat P	0.91	320		Pg	17 24 25.4	+1.6
KOSE	Korovin Southe	0.94	324		Pg	17 24 26.3	+1.8
KOKL	Mount Kliuchef	0.98	319		Pg	17 24 26.5	+1.2
KONE	Korovin Northe	1.01	324		Pg	17 24 27.1	+1.4
GSIG	Igitkin Island	1.77	284		Pn	17 24 37.2	+0.2
GSMY	Great Sitkin M	1.86	285		Pn	17 24 37.9	-0.4
GSTR	Great Sitkin T	1.87	287		Pn	17 24 38.0	-0.5
GSTD	Great Sitkin T	1.92	285		Pn	17 24 38.6	-0.5
ADK	Adak	2.21	279		Pn	17 24 43.5	+0.4
ADK	Adak	2.21	279		Pn	17 24 43.6	+0.4
KIWB	Kanaga Island	2.50	278		Pn	17 24 45.2	-1.8
KIMD	Kanaga Island	2.55	276		Pn	17 24 48.4	+0.7
NIKH	Nikolski High	2.98	61		Pn	17 24 54.3	+0.6
TASE	Tanaga Southea	3.05	277		Pn	17 24 54.7	+0.1
UNV	Unalaska Valle	4.63	58	Pn	Pn	17 25 17.5	+1.1
AMKA	Amchitka	4.72	270	Pn	Pn	17 25 17.6	0.0
Q19K	Cape Douglas,	13.30	49	Pn	Pn	17 27 16.7	+1.7
KDAK	Kodiak Island	13.39	54	Pn	Pn	17 27 14.7	-1.5
	0.3nm,0.3s,baz=303,slow=2.4,SNR=12						
KDAK	Kodiak Island	13.39	54	Pn	Pn	17 27 16.4	+0.2
CNPM	China Poot	14.68	49	Pn	Pn	17 27 34.4	+0.6
BRLK	Bradley Lake	14.93	48	Pn	Pn	17 27 37.2	0.0
ILAR	Eielson Array	18.94	36	P	P	17 28 25.8	-1.4
	0.6nm,0.3s,baz=222,slow=9.2,SNR=44						
DLBC	Dease Lake	25.29	57	P	P	17 29 34.8	+2.2
	2.5nm,0.9s,baz=11,slow=16,SNR=3.5						
INK	Inuvik	25.30	34	P	P	17 29 31.6	-0.9
	2.1nm,0.4s,baz=241,slow=8.8,SNR=12						

H11N2	WAKE ISLAND Hy	35.44	214	T	T	18 09 06.6	
	baz=21,slow=76,SNR=31						
H11N3	WAKE ISLAND Hy	35.45	214	T	T	18 09 07.2	
	baz=21,slow=76,SNR=29						
H11N1	WAKE ISLAND Hy	35.46	214	T	T	18 09 05.6	
	baz=21,slow=76,SNR=26						
H11S1	WAKE ISLAND Hy	36.64	213	T	T	18 10 27.9	
	baz=20,slow=75,SNR=53						
H11S2	WAKE ISLAND Hy	36.65	213	T	T	18 10 26.3	
	baz=20,slow=75,SNR=38						
H11S3	WAKE ISLAND Hy	36.66	213	T	T	18 10 29.2	
	baz=20,slow=75,SNR=17						
USRK	Ussuriysk Ar.	36.75	281	P	P	17 31 12.6	-1.1
	1.0nm,0.6s,baz=24,slow=6.1,SNR=4.7						
NVAR	Mina Array Bea	40.02	87	P	P	17 31 42.0	+0.5
	0.3nm,0.6s,baz=297,slow=9.9,SNR=2.7						
PDAR	Pinedale Array	42.86	76	P	P	17 32 04.7	-0.1
	2.3nm,1.1s,baz=297,slow=1.3,SNR=2.7						
KSRS	Korea Array	43.15	275	P	P	17 32 09.1	+2.3
	1.3nm,0.7s,baz=46,slow=7.9,SNR=2.7						
SONM	Songino Array	49.67	299	P	P	17 32 57.7	-0.4
	0.4nm,0.3s,baz=77,slow=6.0,SNR=4.7						
TXAR	Lajitas Array	55.12	85	P	P	17 33 37.5	-1.3
	0.2nm,0.4s,baz=297,slow=5.5,SNR=4.4						
ARCES	ARCESS Array B	58.42	352	P	P	17 34 00.3	-1.2
	3.0nm,0.8s,baz=8.6,slow=6.0,SNR=6.0						
MKAR	Makanchi Array	62.61	311	P	P	17 34 29.0	-1.5
	0.3nm,0.3s,baz=48,slow=6.2,SNR=10.0						
BVAR	Borovoye Array	62.94	323	P	P	17 34 32.1	-0.5
	1.9nm,0.4s,baz=190,slow=1.5,SNR=24						
ARU	Arti	64.21	331	P	P	17 34 40.0	-0.9
	0.8nm,0.3s,baz=53,slow=5.0,SNR=5.5						
FINES	FINESS Array B	66.28	350	P	P	17 34 52.7	-1.5
	1.5nm,0.8s,baz=12,slow=7.7,SNR=1.0						
NOA	NORSAR Array B	67.67	358	P	P	17 35 02.0	-1.1
	2.8nm,1.2s,baz=3.9,slow=6.6,SNR=1.8						
AAK	Ala-Archa	69.37	313	P	P	17 35 13.8	-0.3
	1.3nm,0.5s,baz=117,slow=4.2,SNR=5.7						
AKTO	Aktyubinsk	69.47	328	P	P	17 35 13.3	-1.2
	2.2nm,0.5s,baz=62,slow=4.4,SNR=8.3						
CMAR	Chiang Mai Arr	74.48	280	P	P	17 35 45.8	+0.8
	0.8nm,0.8s,baz=23,slow=7.5,SNR=6.1						
WRA	Warramunga Arr	84.70	229	P	P	17 36 42.9	+2.6
	0.1nm,0.4s,baz=34,slow=6.1,SNR=1.7						
ASAR	Alice Springs	88.12	227	P	P	17 36 56.9	-0.2
	0.4nm,0.8s,baz=24,slow=5.3,SNR=2.4						

IDC ***09*** *17:31:11.3±0.6, 16°.76S×14°.38W, h0^{km}, mb4.3/15, mb1 4.4/15, mb1mx4.2/32, mbtmp4.3/15, Error ellipse: s-maj=27.0km s-min=14.5km az=113.0*
NEIC ***09*** *17:31:13.3±1.6, 16°.84S±0°.05×14°.3W±0°.1, h11^{km}±4^{km}, mb4.7/24, Error ellipse: s-maj=15.4km s-min=6.6km az=71.0*
ISC 09 17:31:12.6±0.5**, 16°.80S**±0°.09×**14°.32W**±0°.08**, h10^{km}, n85, σ0^{s}97**/78**, mb4.7**/25**, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10S2	ASCENSION HYDR	7.80	358	T	T	17 41 06.3	
	baz=178,slow=74,SNR=45						
H10S3	ASCENSION HYDR	7.81	357	T	T	17 41 12.3	
	baz=42,slow=74,SNR=110						
H10N1	ASCENSION HYDR	8.90	359	T	T	17 42 32.3	
	baz=189,slow=80,SNR=11						
H10N3	ASCENSION HYDR	8.91	359	T	T	17 42 27.6	
	baz=189,slow=80,SNR=31						
H10N2	ASCENSION HYDR	8.92	359	T	T	17 42 32.7	
	baz=189,slow=80,SNR=9.1						
NBAN	Anadia - AL	22.51	286	*e*P	P	17 36 11.9	-0.8
NBPV	Pedro Velho	22.96	294	*e*P	P	17 36 17.4	-0.1
NBLA	Lagarto - SE	23.50	281	*e*P	P	17 36 22.1	-0.8
NBLV	Livramento - P	23.99	290	*e*P	P	17 36 26.5	-1.2
NBIT	Itapeh - BA	24.23	271	*e*P	P	17 36 29.3	-0.6
CMC01	Camacan, BA	24.26	270	*e*P	P	17 36 30.0	-0.2
LIC	Lamto	24.65	23	*e*P	P	17 36 34.0	+0.3
	75nm,1.2s						
NBPA	Parau_RN	24.87	294	*e*P	P	17 36 34.7	-1.1
KIC	Kosan Boka	24.89	23	*e*P	P	17 36 36.0	+0.2
	40nm,1.0s						
TIC	Toumodi	25.04	22	*e*P	P	17 36 37.4	+0.1
DBIC	Dimbokro	25.13	23	P	P	17 36 37.8	-0.2
	20nm,0.9s,baz=206,slow=9.4,SNR=11						
DBIC	Dimbokro	25.13	23	P	P	17 36 38.2	+0.2
DBIC				IAmb	IAmb	17 36 40.4	
	comp=Z,18nm,0.8s						
NBMA	Muriti-CE	25.65	289	*e*P	P	17 36 41.9	-0.9
NBPN	Ponto Novo - B	25.80	280	*e*P	P	17 36 43.6	-0.6
NBPB	Pedra_Branca-C	27.16	291	*e*P	P	17 36 57.5	+1.0
NBPS	Pedro II - PI	29.33	292	*e*P	P	17 37 14.9	-1.0
SDBA	SAO DESIDERIO	29.90	274	*e*P	P	17 37 19.6	-1.4
BDFB	Brasilia	32.36	267	P	P	17 37 41.3	-1.4
KOWA	Kowa	32.72	19	P	P	17 37 45.9	+0.3
	comp=Z,5.5nm,0.6s,baz=200,slow=9.1,SNR=14						
KOWA	Kowa	32.72	19	IAmb	IAmb	17 37 47.0	
	comp=Z,7.6nm,0.9s						
SMTB	Santa Maria do	33.35	280	*e*P	P	17 37 52.0	+0.7
TORD	Torodi Ar. Bea	33.70	29	P	P	17 37 54.4	+0.2
	comp=Z,21nm,0.8s,baz=213,slow=8.8,SNR=82						
TORD	Torodi Ar. Bea	33.70	29	P	P	17 37 53.9	-0.4
ARAG	Araguaiana, MT	35.98	266	*e*P	P	17 38 14.9	+0.9
SALV	Santo Antonio	39.66	265	*e*P	P	17 38 45.6	+0.4
MCPB	Macapa, AP	40.60	290	*e*P	P	17 38 52.0	-1.0
CLDB	Colider	40.65	273	*e*P	P	17 38 54.4	+1.0
ITQB	Itaqui	40.71	244	*e*P	P	17 38 54.4	+0.6
ITQB	Itaqui	40.71	244	P	P	17 38 53.3	-0.4
ITQB				IAmb	IAmb	17 38 55.6	
	comp=Z,19nm,1.1s						
LSZ	Lusaka	40.82	94	P	P	17 38 56.7	+1.7
	comp=Z,0.9nm,0.3s,baz=75,slow=2.0,SNR=4.2						
CPUP	Villa Florida	40.95	249	P	P	17 38 55.8	+0.1
	comp=Z,1.0nm,0.4s,baz=92,slow=11,SNR=2.9						
CPUP	Villa Florida	40.95	249	IAmb	IAmb	17 39 03.5	
	comp=Z,8.9nm,1.3s						
HOPE	Hope Point	41.16	200	P	P	17 38 54.5	-2.5
NPGB	Novo Progresso	41.23	279	*e*P	P	17 38 59.2	+1.0
PDRB	Porto dos Gac	41.38	271	*e*P	P	17 38 59.7	+0.3
MALB	Monte Alegre	42.00	286	*e*P	P	17 39 05.3	+0.9
ITTB	Itaituba	42.44	282	*e*P	P	17 39 08.5	+0.4
PTLB	Pontes e Lacer	43.01	265	P	P	17 39 12.6	-0.1
VILB	Vilhena	44.44	268	*e*P	P	17 39 26.4	+2.2
SIV	San Ignacio	44.78	264	P	P	17 39 27.4	+0.4
	comp=Z,2.0nm,0.7s,baz=99,slow=9.3,SNR=7.0						
MBAR	Mbarara	47.19	75	P	P	17 39 44.0	-2.1
MBAR				IAmb	IAmb	17 40 06.2	
	comp=Z,3.9nm,0.8s						
PTGA	Pitinga	47.69	285	P	P	17 39 49.8	0.0
PTGA				IAmb	IAmb	17 40 00.4	
	comp=Z,15nm,1.5s						
SAML	Samuel	48.17	273	*e*P	P	17 39 55.5	+1.9
BOAV	Boa Vista	49.43	288	*e*P	P	17 40 03.5	+0.2
ETMB	Extrema	50.86	271	*e*P	P	17 40 14.2	0.0
ETMB	Extrema	50.86	271	P	P	17 40 14.1	-0.1
LPAZ	La Paz	51.45	262	*e*P	P	17 40 20.8	+1.5
AC02	Maricunga	51.52	249	P	P	17 40 20.1	+0.6
AC02				IAmb	IAmb	17 40 27.8	
	comp=Z,15nm,1.4s						
PB08	IPOC Station P	51.93	257	P	P	17 40 21.7	-0.8
PB08				IAmb	IAmb	17 40 31.1	
	comp=Z,7.3nm,0.9s						
BO02	Sierra Bellavi	53.23	239	P	P	17 40 32.3	+0.7
BO02				IAmb	IAmb	17 40 38.7	
	comp=Z,15nm,1.1s						
MT09	Talagante	53.32	240	P	P	17 40 32.2	-0.2
MT09				IAmb	IAmb	17 40 38.5	
	comp=Z,6.2nm,0.8s						
PLCA	Paso Flores	53.75	232	*e*P	P	17 40 38.4	+3.0
SNAA	Sanae	55.28	176	P	P	17 40 46.6	+0.6
	comp=Z,1.9nm,0.9s,baz=339,slow=7.3,SNR=4.6						
SNAA	Sanae	55.28	176	P	P	17 40 46.1	+0.2
SNAA				IAmb	IAmb	17 40 47.4	
	comp=Z,7.6nm,1.3s						
KEST	Kesra	56.85	23	P	P	17 40 58.9	+1.2
	comp=Z,10.0nm,1.0s,baz=221,slow=5.1,SNR=6.6						
KEST	Kesra	56.85	23	P	P	17 40 59.6	+1.9
ESDC	Sonseca Array	57.01	10	P	P	17 40 59.4	+0.8
	comp=Z,1.6nm,0.8s,baz=190,slow=6.7,SNR=11						
ESDC	Sonseca Array	57.01	10	P	P	17 40 56.8	-1.9
CZSB	Cruzeiro do Su	57.59	271	*e*P	P	17 41 03.8	+0.6
CZSB	Cruzeiro do Su	57.59	271	P	P	17 41 02.7	-0.6
SDV	Santo Domingo	61.26	290	*e*P	P	17 41 28.8	0.0
ZARC	Zaragoza, Cauc	64.54	287	P	P	17 41 51.0	+0.5
ZARC				IAmb	IAmb	17 41 57.0	
	comp=Z,8.5nm,1.1s						
OTAV	Otavalo	65.38	278	*e*P	P	17 41 55.8	-0.6
GERES	GERESS Array B	69.94	19	P	P	17 42 23.1	-1.0
	comp=Z,0.8nm,0.6s,baz=204,slow=2.9,SNR=4.5						
GERES	GERESS Array B	69.94	19	P	P	17 42 23.6	-0.6
BRTR	Keskin Array B	71.83	37	P	P	17 42 36.6	+0.7
	comp=Z,3.6nm,0.9s,baz=212,slow=4.4,SNR=6.0						
BRTR	Keskin Array B	71.83	37	P	P	17 42 36.7	+0.9
MLR	Muntele Rosu	71.94	29	P	P	17 42 36.5	+0.2
QSPA	South Pole Qui	73.37	180	P	P	17 42 45.7	+1.0
	comp=Z,3.5nm,0.7s,baz=196,slow=0.5,SNR=20						
QSPA	South Pole Qui	73.37	180	P	P	17 42 45.0	+0.4
QSPA				IAmb	IAmb	17 42 46.7	
	comp=Z,12nm,1.3s						
AKASG	Malin Array Be	77.30	27	P	P	17 43 06.8	-0.4
	comp=Z,4.0nm,0.6s,baz=224,slow=4.9,SNR=6.0						
AKASG	Malin Array Be	77.30	27	P	P	17 43 06.3	-0.9
FINES	FINESS Array B	84.34	18	P	P	17 43 44.5	0.0
	comp=Z,2.8nm,0.8s,baz=180,slow=5.7,SNR=6.8						
FINES	FINESS Array B	84.34	18	P	P	17 43 45.0	+0.4
VNDA	Vanda	85.84	179	P	P	17 43 52.2	+0.1
	comp=Z,1.1nm,0.9s,baz=245,slow=5.3,SNR=6.5						
VNDA	Vanda	85.84	179	P	P	17 43 51.6	-0.4
ILAR	Eielson Array	122.50	338	PKP	PKPdf	17 50 07.1	-0.7
	comp=Z,0.4nm,0.7s,baz=6.4,slow=3.6,SNR=4.5						
SONM	Songino Array	122.81	44	PKP	PKPdf	17 50 08.7	-0.5
	comp=Z,0.3nm,0.6s,baz=305,slow=5.1,SNR=2.5						
ASAR	Alice Springs	129.19	141	PKP	PKPdf	17 50 21.6	-0.4
	comp=Z,0.9nm,0.8s,baz=220,slow=1.6,SNR=8.6						
WRA	Warramunga Arr	132.24	139	PKP	PKPdf	17 50 27.0	-0.8
	comp=Z,0.7nm,0.8s,baz=212,slow=3.6,SNR=4.7						

NNC 09 17:38:17.1±4.7**, 37°.12N×70°.76E, h0^{km}, mb3.9, mpv3.5, 2C-4D, Error ellipse: s-maj=36.8km s-min=31.3km az=169.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	5.98	358	⇑Pn	Pn	17 39 48.0	+1.0
	3.3nm,0.3s,baz=176,slow=12,SNR=60						
KK31				⇓Sn	Sn	17 40 57.7	+1.4
	1.5nm,0.5s,baz=181,slow=23,SNR=7.2						
AAK	Ala-Archa	6.22	26	⇑Pn	Pn	17 39 50.2	-0.1
	0.8nm,0.3s						
AAK				⇓Sn	Sn	17 41 02.8	+0.6
	3.6nm,0.7s						
TKM2	Tokmak 2	6.88	31	⇓Pn	Pn	17 39 58.8	-0.7
	3.8nm,1.4s						
TKM2				⇓Sn	Sn	17 41 19.8	+1.2
	1.7nm,1.0s						

NOU ***09*** *17:41:39.0, 37°.67S×176°.69E, h244^{km}, mb3.6/7, North Island, New Zealand*
WEL 09 17:41:51.1±0.6**, 38°S**±3°×**17°6E**±°**, h146^{km}**±5^{km}**, M2.8**/59**, ML2.1**/10**, MLv2.8**/59**, Error ellipse: s-maj=0.0km s-min=0.0km az=141.9, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OMRZ	Omania	0.07	191	P	Pn	17 42 11.3	+0.7
KARZ	Kaharoa	0.12	280	P	Pn	17 42 11.4	+0.7
MKRZ	Makatiti	0.12	148	P	Pn	17 42 12.0	+1.2
NGRZ	Ngongotaha	0.17	249	P	Pn	17 42 11.8	+1.0
HLRZ	Highlands Stat	0.21	188	P	Pn	17 42 11.8	+0.9
TARZ	Mount Tarawera	0.22	155	P	Pn	17 42 11.7	+0.7
MARZ	Manawahe	0.23	76	P	Pn	17 42 11.7	+0.7
OPRZ	Ohinepanea	0.24	34	P	Pn	17 42 11.4	+0.5
EDRZ	Edgecumbe	0.28	104	P	Pn	17 42 11.5	+0.4
HSRZ	Hossack Road	0.29	203	P	Pn	17 42 11.9	+0.8
RRRZ	Republican Roa	0.31	162	P	Pn	17 42 11.6	+0.4
TGRZ	Tauranga	0.33	342	P	Pn	17 42 11.9	+0.7
HRRZ	Handcock Road	0.36	193	P	Pn	17 42 11.9	+0.6
GRRZ	Galatos Road	0.38	215	P	Pn	17 42 12.2	+0.8
KMRZ	Kaimai	0.40	299	P	Pn	17 42 12.3	+0.8
PRRZ	Plateau Road	0.46	180	P	Pn	17 42 12.1	+0.4
WPRZ	Whakapapatarin	0.51	200	P	Pn	17 42 12.6	+0.6
ALRZ	Allen Road	0.52	184	P	Pn	17 42 12.5	+0.5
MUGZ	Murupara	0.53	146	P	Pn	17 42 12.1	+0.1
URZ	Urewera	0.61	111	P	Pn	17 42 12.5	0.0
URZ				S	Sn	17 42 29.5	+0.7
URZ	Urewera	0.61	111	P	Pn	17 42 12.4	-0.1
KUTZ	Kaahu Road	0.63	225	P	Pn	17 42 13.4	+0.7
TLZ	Tolley Road	0.73	246	P	Pn	17 42 14.0	+0.7
RTZ	Ruatahuna	0.74	141	P	Pn	17 42 13.6	+0.2
RTZ				S	Sn	17 42 31.6	+1.0
TOZ	Tahuroa Road	0.77	293	P	Pn	17 42 14.4	+0.9
TOZ				S	Sn	17 42 32.6	+2.0
MRHZ	Matea Rd	0.79	178	P	Pn	17 42 13.9	+0.1
WATZ	Wairara	0.84	217	P	Pn	17 42 14.6	+0.5
HATZ	Hinemaiaia	0.88	195	P	Pn	17 42 14.1	-0.3
MTHZ	Maungataniwha	0.89	156	P	Pn	17 42 14.6	+0.1
MTHZ				S	Sn	17 42 33.6	+1.2
RAGZ	Rawiri	0.93	120	P	Pn	17 42 15.2	+0.4
RAGZ				S	Sn	17 42 35.0	+1.9
MWZ	Matawai	0.94	108	P	Pn	17 42 15.1	+0.1
MWZ				S	Sn	17 42 33.7	+0.5
RATZ	Rangitukua	0.96	210	P	Pn	17 42 15.3	+0.2
RUGZ	Raukumara Rang	1.02	86	P	Pn	17 42 15.0	-0.7
RITZ	Rihia Road	1.02	204	P	Pn	17 42 15.6	-0.1
RAHZ	Arahi	1.03	148	P	Pn	17 42 16.2	+0.5
RAHZ				S	Sn	17 42 36.4	+1.8
SNGZ	Shannon Statio	1.05	135	P	Pn	17 42 16.4	+0.5
KATZ	Kakaramea	1.08	210	P	Pn	17 42 16.4	+0.1
NMHZ	Naumai	1.10	163	P	Pn	17 42 17.2	+0.8
BKZ	Black Stump Fm	1.13	176	P	Pn	17 42 16.4	-0.2
BKZ				S	Sn	17 42 35.4	-0.8
BKZ	Black Stump Fm	1.13	176	P	Pn	17 42 16.3	-0.3
HAZ	Te Kaha	1.14	76	P	Pn	17 42 16.2	-0.4
NTVZ	North Tongarir	1.20	208	P	Pn	17 42 17.3	0.0
TMVZ	Te Maari	1.20	206	P	Pn	17 42 17.4	0.0
KRVZ	Karewarewa	1.21	209	P	Pn	17 42 17.4	0.0
ETVZ	East Tongariro	1.22	206	P	Pn	17 42 17.5	0.0
TKGZ	Te Karaka	1.22	110	P	Pn	17 42 17.9	+0.5
WHHZ	Waihua	1.23	148	P	Pn	17 42 17.9	+0.4
WHHZ				S	Sn	17 42 39.4	+1.6
WTVZ	West Tongariro	1.24	210	P	Pn	17 42 17.8	0.0
NNVZ	North Ngauruho	1.25	209	P	Pn	17 42 17.9	+0.1
OTVZ	Oturere	1.26	207	P	Pn	17 42 18.2	+0.2
OTVZ				S	Sn	17 42 38.4	-0.2
TWGZ	Tauwhareparae	1.26	97	P	Pn	17 42 18.5	+0.6
RIGZ	Rimuhau	1.27	122	P	Pn	17 42 18.3	+0.4
TWVZ	Taurewa	1.27	216	P	Pn	17 42 18.0	0.0
SNVZ	South Ngauruho	1.29	207	P	Pn	17 42 18.3	+0.1
NGZ	Ngauruhoe	1.29	208	P	Pn	17 42 18.4	+0.1
NGZ				S	Sn	17 42 40.3	+1.2
HIZ	Hauiti	1.29	248	P	Pn	17 42 18.9	+0.7
HIZ	Hauiti	1.29	248	P	Pn	17 42 18.8	+0.7
ARHZ	Aropaoanui	1.31	159	P	Pn	17 42 18.6	+0.4
ARHZ				S	Sn	17 42 39.5	+0.3
PKGZ	Pakihiroa	1.34	84	P	Pn	17 42 18.7	0.0
TUVZ	Tukino	1.35	205	P	Pn	17 42 18.9	0.0
TUVZ				S	Sn	17 42 40.0	-0.3
FWVZ	Far West T-bar	1.38	208	P	Pn	17 42 18.9	-0.3
KWHZ	Kaweka Forest	1.38	179	P	Pn	17 42 19.0	-0.1
WHVZ	Whangaehu Hut	1.39	207	P	Pn	17 42 19.2	-0.2
DRZ	Dome Shelter	1.39	207	P	Pn	17 42 19.5	0.0
KUZ	Kuaotunu	1.40	337	P	Pn	17 42 19.7	+0.5
KNZ	Kokohu	1.41	135	P	Pn	17 42 19.2	0.0
TRVZ	Turoa	1.42	207	P	Pn	17 42 19.7	0.0
MCHZ	McNeill Hill	1.42	170	P	Pn	17 42 19.8	+0.4
WNVZ	Wahianoa	1.43	205	P	Pn	17 42 19.5	-0.2
MOVZ	Moawhango	1.45	200	P	Pn	17 42 19.2	-0.7
PRGZ	Paritu Road	1.47	127	P	Pn	17 42 19.9	0.0
BHHZ	Black Hill Sta	1.47	190	P	Pn	17 42 19.5	-0.5
PUZ	Puketiti	1.48	92	P	Pn	17 42 19.8	-0.2
PKVZ	Pokaka	1.49	213	P	Pn	17 42 20.1	-0.1
CNGZ	Carnagh Statio	1.50	108	P	Pn	17 42 21.0	+0.7
ETAZ	East Tamaki Re	1.59	313	P	Pn	17 42 22.1	+0.8
MXZ	Matakaoa Point	1.59	73	P	Pn	17 42 21.6	+0.4
WIAZ	Waiheke Island	1.60	321	P	Pn	17 42 22.1	+0.8
KRHZ	Kereru	1.60	181	P	Pn	17 42 20.8	-0.5
WMGZ	Waiomatatini S	1.62	83	P	Pn	17 42 21.6	+0.1
MHGZ	Mahia Peninsul	1.63	133	P	Pn	17 42 21.9	+0.2
AWAZ	Awhitu Peninsu	1.70	305	P	Pn	17 42 22.9	+0.5
CKHZ	Cape Kidnapper	1.70	162	P	Pn	17 42 22.5	0.0
MBAZ	Motutapu North	1.74	316	P	Pn	17 42 23.7	+0.8
KAHZ	Kahuranaki	1.79	168	P	Pn	17 42 23.3	-0.2
PNHZ	Pukenui	1.88	184	P	Pn	17 42 23.5	-0.9
ABAZ	Army Bay	1.90	319	P	Pn	17 42 25.6	+0.9
GRZ	Great Barrier	1.94	337	P	Pn	17 42 25.7	+0.6
PXZ	Pawanui	2.02	170	P	Pn	17 42 25.4	-0.8
WPHZ	Waipukurau	2.02	179	P	Pn	17 42 25.1	-1.0

WAZ	Wanganui	2.03	212	P	Pn	17 42 25.5	-0.8
TSZ	Takapari Road	2.04	189	P	Pn	17 42 25.3	-1.1
NEZ	North Egmont	2.17	235	P	Pn	17 42 28.8	+0.7
PKE	Pukeiti	2.21	238	P	Pn	17 42 29.1	+0.7
PRHZ	Porangahau	2.23	175	P	Pn	17 42 27.5	-1.1
KHEZ	Kahui Hut	2.24	235	P	Pn	17 42 29.5	+0.6
DVHZ	Dannevirke	2.26	184	P	Pn	17 42 27.4	-1.6
POWZ	Post Office Ro	2.40	191	P	Pn	17 42 29.2	-1.5
ANWZ	Angora Road	2.42	178	P	Pn	17 42 29.6	-1.2
PRWZ	Pori Road	2.53	187	P	Pn	17 42 30.9	-1.4
BFZ	Birch Farm	2.64	182	P	Pn	17 42 31.8	-1.9
BFZ	Birch Farm	2.64	182	P	Pn	17 42 31.7	-2.0
WCZ	Waipu Caves	2.66	321	P	Pn	17 42 34.5	+0.6
MRZ	Mangatainoka R	2.69	193	P	Pn	17 42 32.1	-2.2
TIWZ	Tintock	2.76	188	P	Pn	17 42 33.2	-2.0
CPWZ	Castlepoint	2.87	183	P	Pn	17 42 35.2	-1.3
OGWZ	Otaki Gorge	2.93	198	P	Pn	17 42 34.9	-2.3
HOWZ	Holdsworth Sta	2.93	193	P	Pn	17 42 34.8	-2.6
KIW	Kapiti Island	3.04	202	P	Pn	17 42 35.9	-2.8
TMWZ	Te Maipa	3.09	187	P	Pn	17 42 36.8	-2.5
MTW	Mount Morrison	3.19	192	P	Pn	17 42 37.6	-3.0
CAW	Cannon Point	3.23	198	P	Pn	17 42 38.3	-2.8
DUWZ	D’Urville Isla	3.35	214	P	Pn	17 42 40.0	-2.8
TRWZ	Traveller	3.40	189	P	Pn	17 42 40.3	-3.0
PAWZ	Paruwai Farm	3.42	192	P	Pn	17 42 40.4	-3.2
MSWZ	Moikau Station	3.48	194	P	Pn	17 42 41.1	-3.4
SNZO	South Karori	3.52	201	P	Pn	17 42 42.0	-2.8
BHW	Baring Head	3.56	199	P	Pn	17 42 41.9	-3.5
TCW	Tory Channel	3.56	207	P	Pn	17 42 42.1	-3.3
OUZ	Omahuta	3.60	321	P	Pn	17 42 46.7	+0.7
PLWZ	Palliser	3.63	194	P	Pn	17 42 42.8	-3.6
TUWZ	Tuamarina	3.87	208	P	Pn	17 42 46.1	-3.4
NNZ	Nelson	3.93	215	P	Pn	17 42 47.1	-3.2
QRZ	Quartz Range	4.08	226	P	Pn	17 42 48.7	-3.5
QRZ	Quartz Range	4.08	226	P	Pn	17 42 47.9	-4.3
BSWZ	Blackbirch Sta	4.15	207	P	Pn	17 42 49.7	-3.3
THZ	Tophouse	4.58	215	P	Pn	17 42 55.3	-3.5
KHZ	Kahutara	4.88	206	P	Pn	17 42 58.9	-3.8
KHZ	Kahutara	4.88	206	P	Pn	17 42 58.9	-3.8
GVZ	Greta Valley S	5.54	206	P	Pn	17 43 07.1	-4.5
AMCZ	Amberley	5.87	208	P	Pn	17 43 18.8	+3.0
OKCZ	Okains Bay	6.21	203	P	Pn	17 43 15.9	-4.6
MQZ	McQueen’s Vall	6.33	205	P	Pn	17 43 16.2	-5.8

IDC ***09*** *17:48:41.7±0.5, 8°.50N×71°.44W, h0km, mb4.2/20, mb1 4.4/24, mb1mx4.3/42, mbtmp4.3/24, ML4.4/4, MS4.1/1, Ms1 4.1/1, ms1mx3.6/34, Error ellipse: s-maj=12.6km s-min=9.0km az=161.0*

FUNV ***09*** *17:48:43.4, 8°.46N×71°.41W, h2km, MW3.8*

NEIC ***09*** *17:48:44.4±1.9, 8°.56N±0°.06×71°.37W±0°.04, h12km±4km, mb4.6/56, Error ellipse: s-maj=9.1km s-min=5.0km az=150.0*

VAO ***09*** *17:48:47.0±1.2, 8°.31N×71°.28W, h10km, mb4.7*

ISC 09 17:48:43.5±1.2**, 8°.56N**±0°.02×**71°.38W**±0°.02**, h11**km±7km**, n205, σ1.s46**/252**, mb4.6**/47**, 1D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.59	118	eP	Pg	17 48 54.6	-0.4
SOCV				eS	Sg	17 49 01.7	-1.0
SOCV	Socops	0.59	118	eP	Pg	17 48 54.5	-0.4
SOCV				eS	Sg	17 49 02.6	-0.1
SDV	Santo Domingo	0.81	66	Pg	Pg	17 48 59.7	+0.6
	159nm,0.3s,baz=206,slow=11,SNR=140						
SDV				Lg	Lg	17 49 10.8	
	983nm,0.3s,baz=300,slow=10.0,SNR=32						
SDV	Santo Domingo	0.81	66	iP	Pg	17 48 59.7	+0.6
SDV				eS	Sb	17 49 11.0	+0.3
SDV	Santo Domingo	0.81	66	Pg	Pg	17 48 59.2	+0.1
CAPV	Capacho	1.16	233	eP	Pn	17 49 03.6	-2.2
CAPV				eS	Sb	17 49 18.2	-2.5
PAMC	Pamplona, Colo	1.78	227	eP	Pn	17 49 15.3	+0.5
PAMC				eS	Sn	17 49 38.1	+0.4
MCQV	Machiques	1.87	322	eP	Pn	17 49 16.5	+1.0
MCQV				eS	Sb	17 49 41.5	+0.4
OCAC	Ocana	1.95	261	eP	Pn	17 49 17.0	+0.3
OCAC				eS	Sn	17 49 41.7	+0.5
OCAC	Ocana	1.95	261	Pn	Pn	17 49 16.5	-0.2
TAMC	Tame, Arauca	2.15	191	eP	Pn	17 49 21.1	+1.7
TAMC				eS	Sb	17 49 50.0	+0.7
LL1C	La Loma 1 Cana	2.36	295	eP	Pn	17 49 24.8	+2.6
LL1C				eS	Sb	17 49 54.5	-0.8
ELOV	Elorza	2.44	129	eP	Pn	17 49 25.5	+2.2
ELOV				eS	Sb	17 49 57.5	0.0
ELOV	Elorza	2.44	129	eP	Pn	17 49 23.3	+0.1
ELOV				eS	Sn	17 49 52.8	-0.3
SIQV	Siquisique	2.59	37	eP	Pn	17 49 27.6	+2.1
SIQV				eS	Sb	17 49 59.6	-2.3
SMLC	San Martn de	2.67	275	eP	Pn	17 49 26.6	0.0
SMLC				eS	Sn	17 49 58.3	-0.6
CVALL	Valledupar, Ce	2.68	316	eP	Pn	17 49 27.3	+0.7
CVALL				eS	Sn	17 50 00.1	+0.9
BRRC	Barranca, Sant	2.73	238⇓	eP	Pn	17 49 28.5	+1.2
BRRC				eS	Sb	17 50 04.5	-1.3
ARGC	Ariguani, Magd	3.11	295	eP	Pn	17 49 33.2	+0.6
ARGC				eS	Sn	17 50 10.5	+0.7
RUSC	La Rusia	3.15	213	eP	Pn	17 49 34.4	+0.9
RUSC				eS	Sn	17 50 12.9	+1.6
URIC	Uribia, Colomb	3.18	349	iP	Pn	17 49 33.9	+0.4
URIC	Uribia, Colomb	3.18	349	Pn	Pn	17 49 32.5	-1.0
BAUV	El Baul	3.32	83	eP	Pn	17 49 36.0	+0.5
BAUV				eS	Sn	17 50 14.6	-0.4
BAUV	El Baul	3.32	83	Pn	Pn	17 49 37.1	+1.6
ZARC	Zaragoza, Cauc	3.60	253	eP	Pn	17 49 39.6	+0.2
ZARC				eS	Sn	17 50 20.6	-1.4
ZARC	Zaragoza, Cauc	3.60	253	Pn	Pn	17 49 40.0	+0.6
MONV	Montecano	3.65	22	eP	Pn	17 49 41.4	+1.5
MONV				eS	Sn	17 50 24.1	+1.1
SMRC	Santa Marta, M	3.81	313	eP	Pn	17 49 41.6	-0.6
SMRC				eS	Sn	17 50 24.8	-2.4
SPBC	San Pablo de B	3.94	223	eP	Pn	17 49 45.4	+1.4
SPBC				eS	Sn	17 50 33.2	+3.0
TURV	Turiamo	3.96	61	eP	Pn	17 49 45.2	+0.9
TURV				eS	Sn	17 50 30.1	-0.7
SJCC	San Jacinto, C	3.98	290	eP	Pn	17 49 46.5	+2.0
SJCC				eS	Sn	17 50 33.5	+2.1
SJCC	San Jacinto, C	3.98	290		Pn	17 49 45.3	+0.7
BENV	Beln	3.98	69	eP	Pn	17 49 46.0	+1.4
BENV				eS	Sn	17 50 30.6	-0.8
UREC	San Jos de Ur	4.19	259	eP	Pn	17 49 48.3	+0.9
UREC				eS	Sn	17 50 37.5	+1.1
MOTC	Monteria, Cord	4.24	273	eP	Pn	17 49 49.3	+1.2
MOTC				eS	Sn	17 50 39.3	+1.6
MOTC	Monteria, Cord	4.24	273	Pn	Pn	17 49 49.1	+1.0
PTGC	Puerto Gaitan,	4.40	190	eP	Pn	17 49 50.4	+0.1
PTGC				eS	Sb	17 50 59.1	+5.1
CHIC	Chingaza	4.55	211	eP	Pn	17 49 53.8	+1.0
CHIC				eS	Sn	17 50 46.0	0.0
NORC	Norcasia	4.57	230	eP	Pn	17 49 52.6	0.0
NORC				eS	Sn	17 50 43.8	-2.1
ROSC	El Rosal	4.71	218	Pn	Pn	17 49 56.6	+1.7
	14nm,0.3s,baz=87,slow=3.4,SNR=52						
ROSC				Sn	Sn	17 50 54.3	+4.5
	28nm,0.3s,baz=191,slow=16,SNR=5.2						
ROSC	El Rosal	4.71	218	iP	Pn	17 49 57.3	+2.4
ROSC				eS	Sn	17 50 50.0	+0.2
HELC	Santa Helena	4.74	240	eP	Pn	17 49 57.0	+1.7
HELC				eS	Sn	17 50 51.9	+1.4
PAYV	Puerto Ayacuch	4.84	130	eP	Pn	17 49 55.5	-0.8
PAYV				eS	Sn	17 50 48.3	-4.1
LCBC	Los crdobas,	4.94	274	eP	Pn	17 49 59.1	+1.4
LCBC				eS	Sn	17 50 57.2	+2.3
VILC	Villavicencio,	4.98	208	eP	Pn	17 49 59.0	+0.6
VILC				eS	Sn	17 50 54.0	-2.2
DBBC	Dabeiba	5.03	253	eP	Pn	17 50 00.5	+1.5
MERV	Las Mercedes	5.07	82	eP	Pn	17 49 59.7	+0.2
MERV				eS	Sn	17 50 55.7	-2.4
GUY2C	Guyana, Caldas	5.16	230	eP	Pn	17 50 02.5	+1.3
GUY2C				eS	Sn	17 51 03.6	+2.5
CBOC	Ciudad Bolivar	5.32	240	eP	Pn	17 50 06.0	+2.9
BIRV	Birongo	5.39	69	eP	Pn	17 50 03.8	-0.1
BIRV				eS	Sn	17 51 03.2	-2.8
BIRV	Birongo	5.39	69	Pn	Pn	17 50 02.8	-1.1
ANIL	Santa Ana	5.69	225	eP	Pn	17 50 09.9	+1.7
ANIL				eS	Sn	17 51 11.4	-2.3
CAPC	Capurgana	5.91	271	eP	Pn	17 50 11.8	+0.7
CAPC				eS	Sn	17 51 14.9	-3.8
CAP2	Capurgana	5.92	271	Pn	Pn	17 50 11.2	0.0
ORTC	Ortega, Tolima	6.01	220	eP	Pn	17 50 13.0	+0.5
ORTC				eS	Sn	17 51 20.9	-0.6
PLMC	San Jos del P	6.08	234	eP	Pn	17 50 15.5	+2.0
PLMC				eS	Sn	17 51 22.2	-0.9
GUVC	San Jose del G	6.11	192	eP	Pn	17 50 14.0	+0.2
PTAC	Punta Ardita,	6.52	258	eP	Pn	17 50 19.9	+0.4
YOTC	Yotoco, Valle	6.71	228	eP	Pn	17 50 22.8	+0.6
YOTC				eS	Sn	17 51 37.9	-0.9
MACC	Macarena, Meta	6.83	201	eP	Pn	17 50 22.7	-1.1
PCRV	Puerto La Cruz	6.84	76	Pn	Pn	17 50 26.6	+2.6
	6.8nm,0.3s,baz=319,slow=2.5,SNR=20						
PCRV				Sn	Sn	17 51 45.8	+3.8
	20nm,0.3s,baz=132,slow=15,SNR=14						
PLCV	Puerto La Cruz	6.89	76		Pn	17 50 26.6	+2.1
PLCV					Sn	17 51 45.8	+2.8
BETC	Betania	7.10	215	eP	Pn	17 50 27.7	+0.2
MARP	Paez Belalcaza	7.28	219	eP	Pn	17 50 30.1	-0.1
GARC	Garzon, Huila	7.54	213	eP	Pn	17 50 34.5	+0.8
PCON	Cinco Dias	7.96	219	eP	Pn	17 50 40.9	+1.2
BCIP	Isla Barro Col	8.38	275	Pn	Pn	17 50 46.4	+1.4
DR12	Loma Pena Alta	10.35	11		Pn	17 51 11.5	-0.5
SDDR	Presa de Saban	10.36	0		Pn	17 51 12.1	-0.1
PRSN	Puerto Rico Se	10.44	23	Pn	Pn	17 51 11.8	-1.5
AGPR	Aguadilla, PR	10.68	22	Pn	Pn	17 51 16.7	+0.1
AOPR	Arecibo Observ	10.71	24		Pn	17 51 15.7	-1.3
PDPR	Patillas Dam,	10.75	28		Pn	17 51 17.0	-0.4
SJG	San Juan	10.77	28	Pn	Pn	17 51 18.2	+0.5
	4.6nm,0.3s,baz=205,slow=12,SNR=6.6						
SJG				Sn	Sn	17 53 12.3	-6.1
	1.4nm,0.3s,baz=323,slow=23,SNR=2.2						
SJG				LR	LR	17 55 09.1	
	comp=Z,925nm,19.8s,baz=60,slow=36						
SJG	San Juan	10.77	28		Pn	17 51 17.2	-0.6
SC01	Santiago de lo	10.82	3	Pn	Pn	17 51 18.5	0.0
OTAV	Otavalo	10.86	221	eP	Pn	17 51 20.9	+1.4
OTAV	Otavalo	10.86	221	Pn	Pn	17 51 20.7	+1.2
GCPR	Guaynabo City	10.97	27		Pn	17 51 20.4	-0.1
MTP	Monte Pirata	11.04	30	Pn	Pn	17 51 21.1	-0.4
CBYP	Canovanas	11.04	29		Pn	17 51 20.9	-0.7
MTDJ	Mount Denham	11.32	329	Pn	Pn	17 51 25.3	-0.1
CUPR	Culebra, Puert	11.36	31	Pn	Pn	17 51 25.9	+0.1
STVI	Saint Thomas	11.56	32	Pn	Pn	17 51 28.4	-0.2
BOAV	Boa Vista	12.42	119	Pn	Pn	17 51 39.4	-1.0
BBGH	Gun Hill	12.47	68	Pn	Pn	17 51 40.2	-0.8
TBTG	Tabatinga, AM	12.75	173	eP	Pn	17 51 42.8	-2.1
TBTG	Tabatinga, AM	12.75	173	Pn	Pn	17 51 42.4	-2.5
FSCY	Frank Sound, G	14.30	319	Pn	Pn	17 52 03.4	-2.7
PTGA	Pitinga	14.65	129	Pn	Pn	17 52 09.4	-1.5
	1.3nm,0.3s,baz=308,slow=14,SNR=15						
PTGA				Sn	Sn	17 54 47.0	-6.3
	1.6nm,0.3s,baz=238,slow=15,SNR=6.8						
PTGA				Lg	Lg	17 56 19.3	
	3.1nm,0.3s,baz=31,slow=22,SNR=2.6						
CZSB	Cruzeiro do Su	16.24	185		Pn	17 52 30.4	-1.4
CZSB				IAmb	IAmb	17 52 37.0	
	comp=Z,28nm,0.9s						
SOR	Soroa	18.02	323	P	P	17 52 55.9	+1.3
MTO3	Montecristo	18.55	290	P	P	17 53 00.6	-0.1
MDP	Montagnes des	18.92	99	P	Pn	17 53 06.3	+1.2
	comp=Z,1.1nm,0.3s,baz=278,slow=12,SNR=5.8						
MDP				Lg	Lg	17 58 34.3	
	comp=Z,0.3nm,0.3s,baz=156,slow=16,SNR=4.7						
ETMB	Extrema	18.97	164	P	P	17 53 04.3	-0.7
MALB	Monte Alegre	19.95	120	eP	Pn	17 53 17.5	-0.1
ITTB	Itaituba	20.21	129	eP	Pn	17 53 21.2	+0.6
MCPB	Macapa, AP	21.20	114	eP	P	17 53 30.9	+1.6
NPGB	Novo Progresso	22.26	134	eP	P	17 53 42.0	+1.2
VILB	Vilhena	24.09	152	eP	P	17 54 01.4	+2.1
VILB	Vilhena	24.09	152	P	P	17 53 59.2	-0.1
CLDB	Colider	24.76	141	eP	P	17 54 06.4	+0.9
PDRB	Porto dos Gac	24.78	144	eP	P	17 54 06.4	+0.8
LPAZ	La Paz	24.90	173	P	P	17 54 07.8	+0.5
	comp=Z,7.1nm,0.6s,baz=9.5,slow=9.5,SNR=22						
LPAZ	La Paz	24.90	173	eP	P	17 54 08.0	+0.6
LPAZ	La Paz	24.90	173	P	P	17 54 07.5	+0.2
LPAZ				IAmb	IAmb	17 54 17.0	
	comp=Z,16nm,0.9s						
PRPB	Parauapebas	26.01	124	eP	P	17 54 19.1	+2.2
SIV	San Ignacio	26.44	157	P	P	17 54 21.1	+0.4
	comp=Z,10.0nm,1.1s,baz=327,slow=8.8,SNR=18						
SIV				Lg	Lg	18 02 38.8	
	comp=Z,32nm,0.9s,baz=250,slow=20,SNR=10						
PTLB	Pontes e Lacer	26.76	153	eP	P	17 54 24.6	+1.1
PTLB	Pontes e Lacer	26.76	153	P	P	17 54 24.3	+0.7
PB16	IPOC Station P	26.79	176	P	P	17 54 24.7	+0.3
PB16				IAmb	IAmb	17 54 27.3	
	comp=Z,12nm,0.9s						
PB11	IPOC Station P	28.20	177	P	P	17 54 36.5	-0.1
SNDB	Serra Nova Dou	28.55	135	eP	P	17 54 41.2	+1.6
PB08	IPOC Station P	28.61	176	P	P	17 54 39.3	-1.2
PB08				IAmb	IAmb	17 54 44.3	
	comp=Z,9.1nm,1.1s						
SALV	Santo Antonio	28.84	147	eP	P	17 54 42.6	+0.4
SMTB	Santa Maria do	29.35	126	eP	P	17 54 48.4	+1.7
PP1B	Ponte de Pedra	30.68	148	eP	P	17 55 00.4	+1.8
PEXB	Peixe	30.79	131	eP	P	17 55 01.2	+1.7
ARAG	Araguaiana, MT	30.94	141	eP	P	17 55 02.1	+1.4
LVC	Limon Verde	31.07	176	eP	P	17 55 04.5	+2.2
NBPS	Pedro II - PI	32.51	112	eP	P	17 55 15.1	+0.3
AQDB	Aquidauana	32.72	152	eP	P	17 55 18.0	+1.7
AQDB	Aquidauana	32.72	152	P	P	17 55 17.2	+0.8
AQDB				IAmb	IAmb	17 55 18.3	
	comp=Z,11nm,1.0s						
435B	Jarrell	32.97	316	P	P	17 55 19.8	+1.3
S44A	Carbondale	33.20	334	P	P	17 55 20.9	+0.4
SIUC	Southern Illin	33.21	334	P	P	17 55 21.6	+1.1
BLO	Bloomington	33.37	338	P	P	17 55 23.6	+1.7
BDFB	Brasilia	33.38	136	P	P	17 55 23.4	+1.1
	comp=Z,1.7nm,0.5s,baz=331,slow=13,SNR=3.4						
BDFB	Brasilia	33.38	136	P	P	17 55 23.3	+1.1
BDFB				IAmb	IAmb	17 55 24.8	
	comp=Z,5.5nm,0.9s						
NBMO	Morrinhos-CE	33.40	109	eP	P	17 55 23.3	+0.8
T42A	Van Buren	33.51	331	P	P	17 55 24.6	+1.4
T42A				IAmb	IAmb	17 55 28.3	
	comp=Z,7.4nm,1.2s						
SDBA	SAO DESIDERIO	33.56	128	eP	P	17 55 26.0	+2.1
FVM	French Village	33.97	333	P	P	17 55 27.6	+0.5
FVM				IAmb	IAmb	17 55 30.9	
	comp=Z,14nm,1.1s						
NBPN	Ponto Novo - B	36.53	121	eP	P	17 55 50.4	+0.9
TXAR	Lajitas Array	36.67	309	P	P	17 55 50.8	+0.2
	comp=Z,0.3nm,0.4s,baz=132,slow=9.7,SNR=4.2						
TXAR				PcP	PcP	17 58 13.4	-0.1
	comp=Z,0.5nm,0.3s,baz=138,slow=6.8,SNR=5.5						
JFWS	Jewell Farm	38.01	337	P	P	17 56 01.9	+0.2
JFWS				IAmb	IAmb	17 56 05.0	
	comp=Z,19nm,1.1s						
MSTX	Muleshoe	38.38	316	P	P	17 56 06.0	+0.9
GDU01	Guandu, BA	38.56	125	eP	P	17 56 08.3	+1.6
RCLB	Rio Claro- Sao	38.66	143	eP	P	17 56 08.6	+1.2
I40A	Norwalk	38.99	338	P	P	17 56 09.6	-0.3
I40A				IAmb	IAmb	17 56 13.3	
	comp=Z,9.4nm,0.9s						
MNTX	Cornudas Mount	39.09	311	P	P	17 56 10.4	-0.6
CMC01	Camacan, BA	39.52	127	eP	P	17 56 16.0	+1.3
ZON	Zonda	39.96	176	P	P	17 56 16.8	-1.4
CAM01	Campos-RJ	41.98	136	eP	P	17 56 36.6	+1.7
MT09	Talagante	42.10	180	P	P	17 56 35.3	-0.6
MT09				IAmb	IAmb	17 56 36.2	
	comp=Z,12nm,0.8s						
SDCO	Great Sand Dun	42.34	319	P	P	17 56 38.6	+0.6
BO01	Tunca	42.72	180	P	P	17 56 39.6	-1.1
BO01				IAmb	IAmb	17 56 41.1	
	comp=Z,13nm,1.1s						
BO02	Sierra Bellavi	43.12	179	P	P	17 56 43.7	-0.4
PLTB	Pedras Altas	43.55	158	P	P	17 56 46.1	-1.5
PLTB				IAmb	IAmb	17 56 46.9	
	comp=Z,22nm,1.4s						
ISCO	Idaho Springs	43.60	321	P	P	17 56 48.3	0.0
W18A	Petrified Fore	43.91	313	P	P	17 56 51.2	+0.5
W18A				IAmb	IAmb	17 56 56.5	
	comp=Z,8.0nm,1.2s						
SMCO	Snowmass	44.10	319	P	P	17 56 52.4	0.0
SMCO				IAmb	IAmb	17 56 57.3	
	comp=Z,8.1nm,1.2s						
ULM	Lac du Bonnet	46.28	338	P	P	17 57 09.0	-0.1
	comp=Z,2.6nm,0.5s,baz=160,slow=9.8,SNR=4.3						
SCHQ	Schefferville	46.29	4	P	P	17 57 09.7	+0.6
	comp=Z,13nm,1.2s,baz=186,slow=10,SNR=2.6						
LC01	Cunco	47.22	181	P	P	17 57 15.4	-1.1
BW06	Boulder Array	47.73	322	P	P	17 57 22.4	+1.5
BW06				IAmb	IAmb	17 57 24.4	
	comp=Z,6.1nm,1.1s						
PD31	Pinedale Array	47.73	322	P	P	17 57 21.0	+0.1
PD31				IAmb	IAmb	17 57 24.4	
	comp=Z,6.0nm,1.1s						
PDAR	Pinedale Array	47.73	322	P	P	17 57 21.4	+0.5
	comp=Z,1.6nm,0.5s,baz=120,slow=8.8,SNR=15						
PDAR	Pinedale Array	47.73	322	P	P	17 57 21.7	+0.8
LOHW	Long Hollow	48.84	322	P	P	17 57 30.4	+1.0
LOHW				IAmb	IAmb	17 57 33.8	
	comp=Z,11nm,1.4s						
SNOW	Snow King Moun	48.85	322	P	P	17 57 29.6	+0.1
REDW	Red Top Meadow	48.85	322	P	P	17 57 30.9	+1.4
REDW				IAmb	IAmb	17 57 33.3	
	comp=Z,10nm,1.1s						
MOOW	Moose Ponds	49.00	322	P	P	17 57 31.3	+0.7
PLCA	Paso Flores	49.05	179	P	P	17 57 29.9	-0.9
	comp=Z,13nm,0.8s,baz=350,slow=8.7,SNR=27						
PLCA	Paso Flores	49.05	179	P	P	17 57 30.3	-0.4
FXWY	Fox Creek	49.11	322	P	P	17 57 33.4	+1.9
FXWY				IAmb	IAmb	17 57 49.1	
	comp=Z,6.9nm,1.4s						
LL04	Puerto Octay	49.23	181	P	P	17 57 30.6	-1.4
YHL	Hebgen Lake	49.88	323	P	P	17 57 39.5	+2.1
YHL				IAmb	IAmb	17 57 43.6	
	comp=Z,16nm,1.3s						
QLMT	Earthquake Lak	50.01	323	P	P	17 57 40.0	+1.7
MCMT	McKenzie Canyo	50.86	323	P	P	17 57 44.2	-0.5
NVAR	Mina Array Bea	51.53	313	P	P	17 57 50.3	+0.4
	comp=Z,0.3nm,0.5s,baz=110,slow=7.8,SNR=1.8						
PLID	Pearl Lake	52.91	321	P	P	17 58 00.4	+0.4
F10A	Beach Ranch, E	54.10	322	P	P	17 58 08.7	+0.2
F10A				IAmb	IAmb	17 58 12.7	
	comp=Z,9.9nm,1.4s						
G08A	Pilot Rock	54.85	320	P	P	17 58 12.8	-1.3
C09A	Chrisman Ranch	55.61	323	P	P	17 58 19.4	0.0
C09A				IAmb	IAmb	17 58 23.0	
	comp=Z,7.4nm,0.8s						
EDM	Edmonton	55.92	331	P	P	17 58 21.2	-0.4
B08A	Colville Reser	56.50	324	P	P	17 58 26.2	+0.4
B08A				IAmb	IAmb	17 58 29.4	
	comp=Z,6.9nm,1.1s						
DBIC	Dimbokro	65.89	87	P	P	17 59 29.6	-0.4
	comp=Z,2.9nm,0.7s,baz=264,slow=6.6,SNR=2.2						
MDT	Midelt	65.91	58	P	P	17 59 29.8	-0.1
	comp=Z,2.2nm,1.0s,baz=239,slow=5.3,SNR=3.6						
KOWA	Kowa	66.08	78	P	P	17 59 31.1	-0.1
	comp=Z,4.5nm,0.6s,baz=279,slow=6.0,SNR=15						
DLBC	Dease Lake	66.64	331	P	P	17 59 35.2	+1.0
	comp=Z,3.1nm,0.8s,baz=161,slow=9.8,SNR=4.6						
SUMG	Summit	66.98	10	P	P	17 59 36.3	-0.1
SUMG				IAmb	IAmb	17 59 39.7	
	comp=Z,7.1nm,0.9s						
ESDC	Sonseca Array	67.22	51	P	P	17 59 38.7	+0.5
	comp=Z,0.9nm,0.6s,baz=261,slow=7.8,SNR=6.9						
TORD	Torodi Ar. Bea	71.70	79	P	P	18 00 05.1	-1.2
	comp=Z,2.5nm,0.7s,baz=286,slow=5.8,SNR=16						
TORD	Torodi Ar. Bea	71.70	79	P	P	18 00 04.8	-1.5
INK	Inuvik	72.00	340	P	P	18 00 07.3	+0.3
	comp=Z,1.9nm,0.8s,baz=48,slow=8.2,SNR=5.3						
INK	Inuvik	72.00	340	IAmb	IAmb	18 00 30.0	
	comp=Z,9.7nm,1.5s						
BCAR	Beaver Creek A	73.58	333	P	P	18 00 17.9	+1.3
ECH	Echery	76.03	42	P	P	18 00 32.0	+1.0
ECH				IAmb	IAmb	18 00 34.2	
	comp=Z,5.7nm,0.9s						
SENIN	Lac Senin/Sane	76.05	44	P	P	18 00 32.1	+0.7
SENIN				IAmb	IAmb	18 00 35.1	
	comp=Z,6.0nm,0.8s						
ILAR	Eielson Array	76.13	335	P	P	18 00 31.6	+0.3
	comp=Z,0.5nm,0.6s,baz=100,slow=3.9,SNR=6.7						
DAVA	Damuels	77.84	43	eP	P	18 00 41.9	+0.5
	comp=Z,8.8nm,1.1s						
FETA	Feichten	78.42	44	eP	P	18 00 45.5	+0.9
	comp=Z,6.2nm,0.7s						
SQTA	Sankt Quirin	78.75	44	eP	P	18 00 47.6	+1.2
	comp=Z,3.9nm,0.8s						
ABTA	Abfaltersbach	79.64	44	eP	P	18 00 51.5	+0.2
	comp=Z,4.8nm,1.1s						
GERES	GERESS Array B	80.38	42	P	P	18 00 55.3	0.0
	comp=Z,1.5nm,0.7s,baz=268,slow=7.6,SNR=5.6						
FINES	FINESS Array B	86.10	29	P	P	18 01 24.4	0.0
	comp=Z,13nm,1.1s,baz=180,slow=32,SNR=3.3						
VNA3	Neumayer Olymp	89.33	163	P	P	18 01 40.3	+0.7
VNA1	Neumayer--Stat	89.45	163	P	P	18 01 41.3	+1.2
VNA2	Neumayer--Watz	89.83	163	P	P	18 01 43.0	+1.0
	baz=317,slow=6.6						
AKASG	Malin Array Be	90.09	39	P	P	18 01 45.3	+1.6
	comp=Z,0.2nm,0.3s,baz=282,slow=4.5,SNR=1.8						
SNAA	Sanae	91.48	163	P	P	18 01 50.1	+0.5
CMAR	Chiang Mai Arr	151.50	20	PKPbc	PKPbc	18 08 38.2	-0.5
	comp=Z,2.5nm,1.1s,baz=325,slow=3.2,SNR=11						
ASAR	Alice Springs	151.52	235	PKPbc	PKPbc	18 08 37.6	-1.1
	comp=Z,4.6nm,0.7s,baz=118,slow=2.6,SNR=23						
WRA	Warramunga Arr	152.67	243	PKPbc	PKPbc	18 08 39.9	-1.5
	comp=Z,8.1nm,0.7s,baz=114,slow=2.3,SNR=21						

FUNV ***09*** *17:54:01.3, 8°.45N×71°.40W, h2km, MW3.0*

ISC 09 17:54:00.8±1.2**, 8°.52N**±0°.03×**71°.39W**±0°.02**, h8**km±10km**, n24, σ1.s39**/39**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.58	114	eP	Pg	17 54 12.2	+0.1
SOCV				eS	Sg	17 54 19.6	0.0
SOCV	Socops	0.58	114	eP	Pg	17 54 12.4	+0.3
SOCV				eS	Sb	17 54 20.2	-1.6
SDV	Santo Domingo	0.83	64	eP	Pg	17 54 17.6	+0.7
SDV				eS	Sg	17 54 28.2	+0.5
CAPV	Capacho	1.12	234	eP	Pg	17 54 21.3	-1.1
CAPV				eS	Sg	17 54 36.9	0.0
PAMC	Pamplona, Colo	1.75	228	eP	Pb	17 54 33.6	+0.1
PAMC				eS	Sb	17 54 56.2	+0.4
OCAC	Ocana	1.93	262	eP	Pn	17 54 34.8	+0.7
OCAC				eS	Sn	17 54 59.7	+1.1
TAMC	Tame, Arauca	2.11	191	eP	Pb	17 54 39.3	-0.1
TAMC				eS	Sb	17 55 06.3	+0.5
ELOV	Elorza	2.42	128	eP	Pb	17 54 43.0	-1.6
ELOV				eS	Sb	17 55 15.2	+0.5
ELOV	Elorza	2.42	128	eP	Pn	17 54 40.6	-0.1
ELOV				eS	Sn	17 55 10.4	-0.2
DABV	Dabajuro	2.50	17	eP	Pn	17 54 43.3	+1.4
DABV				eS	Sn	17 55 14.3	+1.8
SIQV	Siquisique	2.63	36	eP	Pn	17 54 45.0	+1.3
SMLC	San Martn de	2.66	276	eP	Pn	17 54 42.5	-1.6
SMLC				eS	Sn	17 55 19.6	+3.0
BRRC	Barranca, Sant	2.69	239	eP	Pn	17 54 47.1	+2.5
BRRC				eS	Sb	17 55 22.3	-0.3
RUSC	La Rusia	3.10	213	eS	Sn	17 55 29.4	+1.2
BAUV	El Baul	3.34	83	eP	Pn	17 54 53.5	+0.1
BAUV				eS	Sn	17 55 32.0	-1.3
ZARC	Zaragoza, Cauc	3.58	254	eS	Sn	17 55 39.3	0.0
MONV	Montecano	3.69	22	eP	Pn	17 54 59.1	+1.0
MONV				eS	Sn	17 55 41.7	-0.2
SMRC	Santa Marta, M	3.83	313	eP	Pn	17 54 58.2	-2.0
SMRC				eS	Sn	17 55 41.7	-3.8
SPBC	San Pablo de B	3.90	223	eP	Pn	17 55 03.7	+2.5
SPBC				eS	Sn	17 55 46.0	-1.2
BENV	Beln	4.01	69	eP	Pn	17 55 03.8	+1.1
MOTC	Monteria, Cord	4.23	274	eP	Pn	17 55 06.9	+1.2
PAYV	Puerto Ayacuch	4.82	129	eP	Pn	17 55 13.3	-0.5
CACV	CAICARA DEL OR	4.90	101	eP	Pb	17 55 21.9	-5.1
BIRV	Birongo	5.41	69	eP	Pn	17 55 22.4	+0.4

NEIC ***09*** *17:56:42.8±2.2, 48°.8N±0°.1×172°.8W±0°.2, h15km±9km, Error ellipse: s-maj=17.0km s-min=14.2km az=56.0*

IDC ***09*** *17:57:04.5±2.8, 51°.60N×173°.00W, h0km, mb3.8/6, mb1 3.9/7, mb1mx3.7/52, mbtmp3.7/7, ML3.9/1, Error ellipse: s-maj=71.2km s-min=27.1km az=175.0*

AEIC ***09*** *17:57:05±0.7, 51°.3N±0°.1×173°.00W±0°.09, h4km±8km, ML3.1/6, Error ellipse: s-maj=16.1km s-min=7.8km az=170.0*

ISC 09 17:57:04.8±1.4**, 51°.2N**±0°.2×**172°.90W**±0°.07**, h10**km**, n17, σ0.s74**/15**, mb3.9**/6**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOSE	Korovin Southe	1.33	328		Sb	17 57 47.5	+0.6
GSIG	Igitkin Island	2.03	293		Pn	17 57 39.2	+0.1
GSTR	Great Sitkin T	2.15	295	Pn	Pn	17 57 40.7	0.0
GSCK	Great Sitkin C	2.18	292		Pn	17 57 41.3	+0.2
GSTD	Great Sitkin T	2.19	294		Pn	17 57 41.4	+0.2

GSTD					Sn	17 58 08.1	-0.2
ADK	**Adak**	2.45	287		Pn	17 57 44.9	+0.1
MNAT	**Makushin Natee**	4.63	53		Pn	17 58 15.6	+0.9
UNV	**Unalaska Valle**	4.70	54	Pn	Pn	17 58 16.1	+0.5
SDPT	**Sand Point**	8.51	56	Pn	Pn	17 59 07.9	0.0
KDAK	**Kodiak Island**	13.47	53	Pn	Pn	18 00 12.8	-2.9
	0.1nm,0.3s,baz=167,slow=20,SNR=2.1						
ILAR	**Eielson Array**	19.14	35	P	P	18 01 25.9	-1.9
	0.4nm,0.3s,baz=236,slow=9.2,SNR=22						
INK	**Inuvik**	25.50	33	P	P	18 02 32.4	-0.5
	2.4nm,0.5s,baz=232,slow=11,SNR=9.5						
PDAR	**Pinedale Array**	42.79	76	P	P	18 05 03.4	+0.7
	0.4nm,0.5s,baz=308,slow=3.1,SNR=4.2						
SONM	**Songino Array**	49.98	300	P	P	18 05 59.4	+0.4
	0.2nm,0.4s,baz=57,slow=10,SNR=2.2						
MKAR	**Makanchi Array**	62.96	312	P	P	18 07 30.6	-0.7
	0.2nm,0.3s,baz=46,slow=6.1,SNR=6.1						
FINES	**FINESS Array B**	66.66	350	P	P	18 07 53.1	-1.9
	2.3nm,0.9s,baz=0.0,slow=8.3,SNR=1.5						
AKASG	**Malin Array Be**	76.72	346	P	P	18 08 54.0	-1.8
	0.5nm,0.4s,baz=18,slow=7.0,SNR=2.2						

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*INET **09** 17:58:43.9,11°.56N×85°.64W,h2^{km},MW2.0*
UCR 09 17:58:19.2±0.8**,11°.41N×85°.85W,h198**^{km}±4^{km}**,MW3.6,**
5C,Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HZTE	**Horizontes, Gu**	0.73	160	⇑iP	Pn	17 58 47.7	+0.4
HZTE				eS	Sn	17 59 09.5	+0.5
GB1A	**Borinquen Arri**	0.74	143	i P	Pn	17 58 47.6	+0.3
GB1A				i S	Sn	17 59 10.6	+1.5
BUEV	**Buena Vista**	0.75	144	⇑iP	Pn	17 58 47.5	+0.1
GUAB	**Guayabo de Bag**	0.93	139	i P	Pn	17 58 48.6	+0.2
VMAR	**Armenia, Volca**	0.93	129	⇑iP	Pn	17 58 48.6	+0.1
VMAR				eS	Sn	17 59 11.3	+0.3
COLC	**Colonia**	0.97	139	i P	Pn	17 58 48.9	+0.2
ACAL	**Aguas Claras**	1.11	134	i P	Pn	17 58 50.5	+0.7
GUAI	**GUAI**	1.18	163	⇑iP	Pn	17 58 50.7	+0.6
GUAI				i S	Sn	17 59 14.4	+0.2
SAJU	**San Juanillo,**	1.34	174	eP	Pn	17 58 51.7	+0.3
CEDE	**Laguna Cedeo**	1.45	129	eP	Pn	17 58 53.3	+0.9
ARE1	**Arenal 1**	1.46	130	eP	Pn	17 58 53.0	+0.6
CASO	**Castillo**	1.46	131	i P	Pn	17 58 53.5	+0.9
INDI	**Punta indio, G**	1.57	167	⇑iP	Pn	17 58 53.8	+0.3
RIMA	**Rio Macho**	2.55	130	eP	Pn	17 59 05.1	+1.3

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*IDC **09** 18:02:07.7±0.7,10°.92S×161°.49E,h0^{km},mb4.3/18,*
mb1 4.4/21,mb1mx4.2/42,mbtmp4.3/21,ML4.0/3,Error
ellipse: s-maj=20.5km s-min=14.8km az=96.0
*NEIC **09** 18:02:09.8±1.1,10°.87S±0°.05×161°.5E±0°.1,h10^{km}±1^{km},*
mb4.6/18,Error ellipse: s-maj=18.1km s-min=8.4km
az=97.0
ISC 09 18:02:11.6±0.5**,11°.03S**±0°.07×**161°.51E**±0°.09**,h28**^{km}**,n58,**
σ**1^{s}29**/53**,mb4.4**/26**,Bougainville-Solomon Islands**
region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	2.21	316	Pn	Pn	18 02 46.1	-0.3
	83nm,0.3s,baz=141,slow=7.1,SNR=38						
HNR				Sn	Sn	18 03 13.7	+0.9
	385nm,0.3s,baz=198,slow=20,SNR=12						
HNR	**Honiara**	2.21	316		Pn	18 02 45.2	-1.1
LIFNC	**LIFOU**	11.15	151	Pn	Pn	18 04 46.7	-2.5
DZM	**Mont Dzumac**	11.95	157	Pn	Pn	18 05 01.4	+1.2
	0.5nm,0.3s,baz=343,slow=19,SNR=10						
DZM				Sn	Sn	18 07 10.1	-2.7
	0.3nm,0.3s,baz=265,slow=19,SNR=2.0						
DZM	**Mont Dzumac**	11.95	157	Pn	Pn	18 04 59.7	-0.6
MARNC	**Mare, Loyalty**	12.13	150	Pn	Pn	18 05 01.2	-1.4
PMG	**Port Moresby**	14.21	275	Pn	P	18 05 35.1	-3.0
	0.1nm,0.3s,baz=21,slow=12,SNR=1.6						
PMG	**Port Moresby**	14.21	275		P	18 05 39.7	+1.5
CTA	**Charters Tower**	17.22	237	P	Pn	18 06 10.2	0.0
	0.5nm,0.3s,baz=75,slow=13,SNR=10						
CTAO	**Charters Tower**	17.22	237		P	18 06 11.5	-0.1
JAY	**Jayapura**	22.30	291	P	P	18 07 06.1	-1.0
	11nm,0.6s,baz=123,slow=4.8,SNR=3.6						
WR0	**Warramunga Arr**	27.43	248	P	P	18 07 55.3	+0.1
WB0	**Warramunga Arr**	27.51	248	P	P	18 07 56.1	+0.1
WB0				IAmb	IAmb	18 07 57.7	
	comp=Z,18nm,1.1s						
WRAB	**Tennant Creek**	27.59	248	P	P	18 07 57.1	+0.4
WRAB				IAmb	IAmb	18 08 00.6	
	comp=Z,12nm,1.1s						
WB2	**Warramunga Arr**	27.59	248	P	P	18 07 57.1	+0.4
WB2				IAmb	IAmb	18 08 00.7	
	comp=Z,13nm,1.2s						
WRA	**Warramunga Arr**	27.60	248	P	P	18 07 56.6	-0.2
	comp=Z,7.2nm,1.0s,baz=77,slow=9.8,SNR=18						
WRA	**Warramunga Arr**	27.60	248	P	P	18 07 57.5	+0.7
STKA	**Stephens Creek**	27.72	219	P	P	18 07 58.5	+0.8
	comp=Z,7.6nm,1.0s,baz=52,slow=8.4,SNR=6.2						
STKA	**Stephens Creek**	27.72	219	P	P	18 08 00.3	+2.6
ASAR	**Alice Springs**	29.12	241	P	P	18 08 09.9	-0.4
	comp=Z,2.7nm,0.9s,baz=72,slow=9.7,SNR=19						
ASAR	**Alice Springs**	29.12	241	P	P	18 08 09.6	-0.7
H11S2	**WAKE ISLAND Hy**	29.78	10	T	T	18 39 00.2	
	baz=188,slow=75,SNR=25						
H11S3	**WAKE ISLAND Hy**	29.78	10	T	T	18 39 20.1	
	baz=188,slow=75,SNR=17						
H11S1	**WAKE ISLAND Hy**	29.80	10	T	T	18 39 17.4	
	baz=188,slow=75,SNR=16						
H11N1	**WAKE ISLAND Hy**	31.01	10	T	T	18 40 37.3	
	baz=188,slow=76,SNR=13						
H11N3	**WAKE ISLAND Hy**	31.01	10	T	T	18 40 33.8	
	baz=188,slow=76,SNR=11						
H11N2	**WAKE ISLAND Hy**	31.02	10	T	T	18 40 41.6	
	baz=188,slow=76,SNR=7.4						
BKZ	**Black Stump Fm**	31.04	157	P	P	18 08 28.8	+1.7
BKZ				IAmb	IAmb	18 08 35.4	
	comp=Z,11nm,1.5s						
KAPI	**Kappang**	41.74	275	P	P	18 09 58.9	+0.2
	comp=Z,11nm,0.9s,baz=141,slow=6.5,SNR=4.1						
KAPI	**Kappang**	41.74	275	P	P	18 09 58.6	-0.1
KAPI				IAmb	IAmb	18 10 00.9	
	comp=Z,18nm,1.1s						
TOLI2	**Tolitoli**	42.25	284	P	P	18 10 02.6	-0.2
TOLI2				IAmb	IAmb	18 10 03.6	
	comp=Z,6.9nm,0.8s						
JAGI	**Jajag, Banyuwa**	46.70	269	P	P	18 10 38.3	-0.2
MJAR	**Matsushiro Arr**	52.16	336	P	P	18 11 18.6	-1.1
	comp=Z,1.3nm,0.6s,baz=159,slow=9.0,SNR=2.9						
JKA	**Kamikawa-asahi**	57.51	344	P	P	18 11 58.9	+0.6
ASAJ	**Asahikawa**	57.51	344	P	P	18 11 58.9	+0.6
	comp=Z,12nm,0.9s,baz=217,slow=10,SNR=1.6						
KSRS	**Korea Array**	57.60	329	P	P	18 11 57.8	-1.2
	comp=Z,0.9nm,0.8s,baz=161,slow=7.6,SNR=3.4						
USRK	**Ussuriysk Ar.**	61.16	336	P	P	18 12 22.4	-1.1
	comp=Z,3.4nm,0.8s,baz=146,slow=6.1,SNR=5.6						
GSI	**Gunungsitoli**	64.72	277	P	P	18 12 47.8	0.0
KLR	**Kul'dur**	65.47	339	P	P	18 12 52.3	+0.3
	comp=Z,0.7nm,0.5s,baz=124,slow=11,SNR=1.7						
VNDA	**Vanda**	66.48	180	P	P	18 12 59.8	+1.7
	comp=Z,2.6nm,0.8s,baz=338,slow=5.8,SNR=19						
VNDA	**Vanda**	66.48	180	P	P	18 12 60.0	+1.9
VNDA				IAmb	IAmb	18 13 00.8	
	comp=Z,5.1nm,1.1s						
SBA	**Scott Base**	66.87	179	P	P	18 13 02.8	+2.2
SBA				IAmb	IAmb	18 13 04.4	
	comp=Z,4.7nm,1.1s						
CMAR	**Chiang Mai Arr**	68.31	295	P	P	18 13 11.8	+1.1
	comp=Z,0.7nm,0.5s,baz=127,slow=4.7,SNR=5.7						
CMAR	**Chiang Mai Arr**	68.31	295	P	P	18 13 09.2	-1.5
LZH	**Lanzhou**	71.70	314	eP	P	18 13 23.3	-8.1
SEY	**Seymchan**	74.07	356	P	P	18 13 44.4	-0.2
	comp=Z,2.1nm,0.3s,baz=105,slow=8.6,SNR=10						
ULN	**Ulaanbaatar**	75.89	326	P	P	18 13 56.0	+0.4
ULN				IAmb	IAmb	18 14 06.7	
	comp=Z,3.3nm,0.8s						
GTA	**Gaotai**	76.08	315	eP	P	18 13 58.2	+1.2
GTA				pP	pP	18 14 01.6	-2.7
GTA				sP	sP	18 14 04.6	-2.3
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,50nm,5.4s						
GTA				LR	LR		
	comp=N,800nm,19.6s						
GTA				LR	LR		
	comp=E,700nm,17.8s						
GTA				LR	LR		
	comp=Z,1μm,19.6s						
SONM	**Songino Array**	76.24	325	P	P	18 13 58.4	+0.8
	comp=Z,3.1nm,0.8s,baz=144,slow=5.9,SNR=21						
SONM	**Songino Array**	76.24	325	P	P	18 13 58.7	+1.1
SONM				IAmb	IAmb	18 14 06.0	
	comp=Z,3.5nm,0.8s						
YAK	**Yakutsk**	76.96	345	P	P	18 14 00.1	-1.1
	comp=Z,4.9nm,0.6s,baz=128,slow=1.3,SNR=9.7						
YAK	**Yakutsk**	76.96	345	P	P	18 14 01.4	+0.2
ILAR	**Eielson Array**	84.86	20	P	P	18 14 42.9	-0.5
	comp=Z,0.5nm,0.5s,baz=237,slow=5.2,SNR=11						
NVAR	**Mina Array Bea**	89.22	51	P	P	18 15 07.0	+1.6
	comp=Z,0.4nm,0.5s,baz=303,slow=6.9,SNR=2.1						
MKAR	**Makanchi Array**	90.68	318	P	P	18 15 11.4	-0.4
	comp=Z,0.5nm,0.6s,baz=89,slow=5.9,SNR=7.9						
MKAR	**Makanchi Array**	90.68	318	P	P	18 15 10.7	-1.1
TORD	**Torodi Ar. Bea**	160.15	278	PKPab	PKPab	18 22 50.4	+0.8
	comp=Z,1.5nm,0.9s,baz=90,slow=4.2,SNR=6.7						
TORD	**Torodi Ar. Bea**	160.15	278		PKPab	18 22 46.4	-3.1

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*DNK **09** 18:17:25.6±0.5,79°.39N×0°.60E,h2^{km}±12^{km},ML1.6*
BER 09 18:17:22.4±1.7**,80°.13N×0°.12W,h10**^{km}**,ML1.8,**
Confirmed Earthquake,North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	2.51	113	i P	Pn	18 18 02.8	-0.4
KBS	**Kingsbay**	2.51	113	eP	Pn	18 18 01.5	-1.7
KBS				eS	Sn	18 18 28.8	-5.0
KBS				IAML		18 18 30.9	
	comp=Z,7.1nm,0.4s						
NOR	**Nord**	3.02	307	i P	Pg	18 18 21.9	+1.8
NOR	**Nord**	3.02	307	eP	Pn	18 18 08.4	-1.7
NOR				eS	Sn	18 18 41.9	-4.3
BRBB	**Barentsburg B**	3.40	120	eP	Pn	18 18 15.2	-0.1
BRBB				eS	Sn	18 18 51.3	-4.3
BRBA	**Barentsburg A**	3.42	120	eS	Sn	18 18 52.1	-4.0
BRBA				IAML		18 18 55.4	
	comp=Z,6.2nm,0.2s						
SPA0	**Spitsbergen Ar**	3.67	114	eP	Pn	18 18 18.5	-0.6
SPA0				eS	Sn	18 18 57.9	-4.4
SPA0				IAML		18 19 02.8	
	comp=Z,5.7nm,1.1s						
DBG	**Daneborg**	7.29	227	e	Pn	18 19 05.2	-3.6
	baz=35,slow=14						
DBG				i P	Pn	18 19 06.5	-2.2
DBG				i S	Sn	18 20 21.2	-10
DBG				IAML		18 20 26.2	
	comp=Z,2.1nm,0.4s						

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*IDC **09** 18:25:08.1±0.7,1°.84N×126°.73E,h0^{km},mb3.8/11,*
mb1 3.9/14,mb1mx3.8/34,mbtmp3.8/14,ML3.3/3,Error
ellipse: s-maj=32.2km s-min=14.6km az=71.0
*DJA **09** 18:25:12.8±0.3,2°N±3°×12°7E±°,h10^{km},M4.0/12,mb4.3/4,*
MLv3.8/12
ISC 09 18:25:14.5±0.6**,1°.84N**±0°.06×**126°.64E**±0°.08**,h47**^{km}**,n26,**
σ**1^{s}50**/27**,mb3.7**/11**,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	1.29	146	P	Pn	18 25 35.9	-0.1
TNTI				S	Sn	18 25 54.5	+2.4
SGSI	**Sangihe**	2.14	329	P	Pn	18 25 48.7	+0.9
LBMI	**Labuha**	2.61	161	P	Pn	18 25 55.2	+1.0
KMSI	**Cibinong**	2.94	245	P	Pn	18 25 59.1	+0.4
GTOI	**Gorontalo**	3.82	252	P	Pn	18 26 11.6	+0.8
SANI	**Sanana**	3.92	190	P	Pn	18 26 10.3	-1.9
LUWI	**Luwuk**	4.81	234	P	Pn	18 26 23.9	-0.6
MRSI	**Marisa**	4.89	254	P	Pn	18 26 25.4	-0.1
DAV	**Davao City (W)**	5.30	349	Sn	Sn	18 27 26.8	-4.2
	78nm,0.3s,baz=257,slow=12,SNR=3.1						
SIJI	**Sorong**	5.35	120	Pn	Pn	18 26 29.6	-2.3
	0.2nm,0.3s,baz=295,slow=10,SNR=3.0						
MPSI	**Mapaga**	6.91	258	P	Pn	18 26 52.5	-0.7
	0.1nm16nm,0.9s						
BKSI	**Bulukumba**	9.65	222	P	Pn	18 27 29.5	-1.3
	6.6nm,0.5s						
KAPI	**Kappang**	9.68	225	Pn	Pn	18 27 30.2	-1.1
	0.8nm,0.3s,baz=94,slow=8.2,SNR=2.0						
BSSI	**Bau Bau, Buton**	10.03	218	P	Pn	18 27 35.1	-1.0
FITZ	**Fitzroy Crossi**	19.84	183	P	P	18 29 39.4	-2.1
	0.1nm,0.3s,baz=256,slow=7.4,SNR=2.8						
WRA	**Warramunga Arr**	22.93	161	P	P	18 30 13.3	-1.5
	1.7nm,0.5s,baz=340,slow=11,SNR=17						
ASAR	**Alice Springs**	26.32	165	P	P	18 30 46.3	+0.2
	0.4nm,0.5s,baz=348,slow=14,SNR=18						
CMAR	**Chiang Mai Arr**	31.78	303	P	P	18 31 36.5	+1.9
	0.2nm,0.6s,baz=134,slow=5.2,SNR=2.7						
STKA	**Stephens Creek**	36.41	158	P	P	18 32 13.5	-1.1
	2.5nm,1.1s,baz=350,slow=11,SNR=1.8						
SONM	**Songino Array**	49.05	342	P	P	18 33 57.4	+0.4
	0.5nm,0.7s,baz=149,slow=9.1,SNR=2.6						
PETK	**Petropavlovsk-**	57.20	22	P	P	18 34 57.2	+0.5
	4.3nm,1.0s,baz=208,slow=4.9,SNR=1.9						
MKAR	**Makanchi Array**	59.05	326	P	P	18 35 10.1	+0.3
	1.4nm,0.4s,baz=119,slow=8.0,SNR=19						
ZALV	**Zalesovo Beam**	62.22	334	P	P	18 35 30.7	-0.5
	0.4nm,0.4s,baz=116,slow=6.8,SNR=1.8						
VNDA	**Vanda**	81.58	173	P	P	18 37 27.4	+0.7
	0.4nm,0.5s,baz=10,slow=7.9,SNR=4.2						
ILAR	**Eielson Array**	86.83	25	P	P	18 37 53.5	-0.2
	0.1nm,0.5s,baz=260,slow=5.4,SNR=1.0						
FINES	**FINESS Array B**	93.44	332	P	P	18 38 26.2	+1.5
	1.4nm,1.0s,baz=77,slow=4.6,SNR=0.7						

IDC 09 18:51:46.2±59.0**,16°.97S**×**179°.86W,h0**^{km}**,mb3.8**/3**,**
mb1 4.0/3**,mb1mx3.6**/37**,mbtmp3.8**/3**,Error ellipse:**
s-maj=1079.0km s-min=165.8km az=77.0,Fiji Islands
region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	37.89	240	P	P	18 59 05.0	-0.3
	1.7nm,0.8s,baz=82,slow=7.1,SNR=3.3						
WRA	**Warramunga Arr**	43.45	259	P	P	18 59 51.3	-0.1
	0.2nm,0.4s,baz=92,slow=7.8,SNR=4.8						
ASAR	**Alice Springs**	43.72	253	P	P	18 59 53.5	-0.1
	2.0nm,0.6s,baz=87,slow=8.3,SNR=40						

IDC 09 18:56:33.6±6.0**,7°.92S**×**128°.43E,h214**^{km}±64^{km}**,mb2.9**/1**,**
mb1 2.7/5**,mb1mx2.6**/38**,mbtmp3.2**/5**,Error ellipse:**
s-maj=64.2km s-min=21.8km az=47.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	5.23	244	P	Pn	18 57 49.5	-1.9
	0.6nm,0.3s,baz=114,slow=19,SNR=1.5						
BATI				S	S	18 58 54.8	+2.2
	0.5nm,0.3s,baz=60,slow=20,SNR=1.3						
FITZ	**Fitzroy Crossi**	10.48	195	P	Pn	18 58 58.5	-0.4
	0.1nm,0.3s,baz=25,slow=13,SNR=2.4						
FITZ				S	S	19 00 56.3	0.0
	0.0nm,0.3s,baz=25,slow=14,SNR=1.8						
WRA	**Warramunga Arr**	13.25	155	P	Pn	18 59 34.6	+0.6
	0.0nm,0.3s,baz=322,slow=13,SNR=1.7						
WRA				S	S	19 02 00.2	-0.5
	0.1nm,0.3s,baz=335,slow=22,SNR=2.0						
ASAR	**Alice Springs**	16.52	162	P	Pn	19 00 13.4	-0.2
	baz=333,slow=10,SNR=4.1						
ASAR				S	S	19 03 13.1	-1.4
	0.0nm,0.3s,baz=22,slow=38,SNR=2.0						
MKAR	**Makanchi Array**	68.15	328	P	P	19 07 10.8	0.0
	0.1nm,0.3s,baz=145,slow=5.3,SNR=1.8						

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*IDC **09** 18:57:51.4±0.7,8°.31N×71°.37W,h0^{km},mb3.8/8,*
mb1 4.1/11,mb1mx3.9/33,mbtmp3.9/11,ML3.9/3,MS3.4/1,
Ms1 3.4/1,ms1mx3.0/33,Error ellipse: s-maj=18.0km
s-min=10.0km az=140.0
*NEIC **09** 18:57:54.2±1.7,8°.48N±0°.06×71°.36W±0°.04,h10^{km}±1^{km},*
mb4.0/3,Error ellipse: s-maj=9.9km s-min=6.9km
az=340.0
*FUNV **09** 18:57:54.3,8°.47N×71°.41W,h2^{km},MW3.4*
ISC 09 18:57:52.4±1.4**,8°.54N**±0°.03×**71°.36W**±0°.02**,h2**^{km}±9^{km}**,n63,**
σ**1^{s}77**/94**,mb3.7**/9**,1C,Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	**Socops**	0.56	117	eP	Pb	18 58 05.2	+0.3
SDV	**Santo Domingo**	0.80	64	Pg	Pn	18 58 10.3	-0.6
	60nm,0.3s,baz=248,slow=16,SNR=46						
SDV				Lg	Lg	18 58 21.7	
	192nm,0.3s,baz=238,slow=19,SNR=20						
SDV	**Santo Domingo**	0.80	64	eP	Pb	18 58 09.9	+0.8
SDV				eS	Sn	18 58 21.8	-1.6
CAPV	**Capacho**	1.16	235	eP	Pb	18 58 14.2	-1.1
CAPV				eS	Sg	18 58 29.8	+0.1
PAMC	**Pamplona, Colo**	1.78	228	eP	Pn	18 58 26.3	+1.6
PAMC				eS	Sb	18 58 50.5	+1.4
MCQV	**Machiques**	1.90	322	eP	Pn	18 58 27.2	+1.3
MCQV				eS	Sn	18 58 52.1	+1.7
OCAC	**Ocana**	1.96	261	eP	Pn	18 58 27.8	+0.9
OCAC				eS	Sn	18 58 53.8	+1.7
OCAC	**Ocana**	1.96	261		Pn	18 58 27.5	+0.6
OCAC				Sn	Sn	18 58 53.3	+1.2
TAMC	**Tame, Arauca**	2.13	192	eP	Pb	18 58 32.3	+0.5
TAMC				eS	Sg	18 59 02.1	+1.2
ELOV	**Elorza**	2.40	129	eP	Pg	18 58 39.9	+1.3
ELOV				eS	Sg	18 59 08.5	-1.3
ELOV	**Elorza**	2.40	129	eP	Pn	18 58 34.4	+1.6
ELOV				eS	Sn	18 59 03.3	+0.4
DABV	**Dabajuro**	2.48	17	eP	Pb	18 58 36.5	-1.1
DABV				eS	Sn	18 59 06.3	+1.7
SIQV	**Siquisique**	2.60	36	eP	Pb	18 58 38.4	-1.4
SIQV				eS	Sn	18 59 09.8	+2.1
SMLC	**San Martn de**	2.70	276	eP	Pn	18 58 37.5	+0.7
SMLC				eS	Sn	18 59 09.1	-1.0
BRRC	**Barranca, Sant**	2.73	239	eP	Pn	18 58 34.5	-2.8
BRRC				eS	Sn	18 59 07.1	-3.8
RUSC	**La Rusia**	3.13	213	eP	Pn	18 58 45.5	+2.3
RUSC				eS	Sn	18 59 23.6	+2.1
URIC	**Uribia, Colomb**	3.21	349	Pn	Pn	18 58 44.5	+0.7
BAUV	**El Baul**	3.30	83	eP	Pn	18 58 47.4	+2.2
BAUV				eS	Sn	18 59 25.8	+0.7
BAUV	**El Baul**	3.30	83	Pn	Pn	18 58 46.6	+1.5
ZARC	**Zaragoza, Cauc**	3.62	254	eP	Pn	18 58 50.3	+0.8
ZARC				eS	Sn	18 59 31.4	-1.5
ZARC	**Zaragoza, Cauc**	3.62	254		Pn	18 58 49.8	+0.3
MONV	**Montecano**	3.66	22	eP	Pn	18 58 52.2	+2.1
MONV				eS	Sn	18 59 34.3	+0.4
SMRC	**Santa Marta, M**	3.85	313	eP	Pn	18 58 51.6	-1.0
SMRC				eS	Sn	18 59 36.0	-2.5
SPBC	**San Pablo de B**	3.93	223	eP	Pn	18 58 55.9	+2.0
SPBC				eS	Sn	18 59 42.8	+2.0
BENV	**Beln**	3.97	69	eP	Pn	18 58 56.7	+2.2
SJCC	**San Jacinto, C**	4.01	290	eP	Pn	18 58 57.0	+2.0
SJCC				eS	Sn	18 59 44.7	+2.2
SJCC	**San Jacinto, C**	4.01	290		Pn	18 58 55.9	+0.9
UREC	**San Jos de Ur**	4.21	260	eP	Pn	18 58 59.4	+1.7
MOTC	**Monteria, Cord**	4.26	274	eP	Pn	18 59 00.1	+1.7
MOTC				eS	Sn	18 59 50.3	+1.5
MOTC	**Monteria, Cord**	4.26	274		Pn	18 58 59.6	+1.2
PTGC	**Puerto Gaitan,**	4.38	190	eP	Pg	18 59 22.4	+6.0
PTGC				eS	Sg	19 00 10.0	-3.1
CHIC	**Chingaza**	4.54	211	⇑iP	Pn	18 59 04.6	+2.0
CHIC				eS	Sn	18 59 57.1	+0.9
ROSC	**El Rosal**	4.71	219	Pn	Pn	18 59 07.0	+2.2
	6.3nm,0.3s,baz=324,slow=17,SNR=8.2						
ROSC				Sn	Sn	19 00 03.7	+3.5
	4.0nm,0.3s,baz=120,slow=20,SNR=4.2						
ROSC				Lg	Lg	19 00 27.6	
	5.3nm,0.3s,baz=66,slow=20,SNR=3.5						
ROSC				LR	LR	19 01 12.4	
	comp=Z,383nm,19.3s,baz=190,slow=44						
ROSC	**El Rosal**	4.71	219		Pn	18 59 04.7	-0.1
HELC	**Santa Helena**	4.75	241	eP	Pn	18 58 57.3	-8.1
HELC				eS	Sn	19 00 00.4	-0.9
VILC	**Villavicencio,**	4.97	208	eP	Pn	18 59 10.0	+1.8
VILC				eS	Sn	19 00 08.0	+1.6
MERV	**Las Mercedes**	5.05	82	eP	Pn	18 59 10.7	+1.4
MERV				eS	Sn	19 00 05.7	-2.5
GUY2C	**Guyana, Caldas**	5.16	231	eP	Pn	18 59 12.8	+1.7
GUY2C				eS	Sn	19 00 11.3	-0.3
BIRV	**Birongo**	5.38	69	eP	Pn	18 59 15.3	+1.6
BIRV				eS	Sn	19 00 14.8	-1.5
BIRV	**Birongo**	5.38	69	Pn	Pn	18 59 16.9	+3.2
ANIL	**Santa Ana**	5.68	225	eP	Pn	18 59 21.4	+3.2
ANIL				eS	Sn	19 00 24.4	+0.2
MACC	**Macarena, Meta**	6.81	201	eP	Pn	18 59 32.8	-0.7
MACC				eS	Sn	19 00 48.9	-2.8
PCRV	**Puerto La Cruz**	6.83	76	Pn	Pn	18 59 34.0	+0.2
	1.1nm,0.3s,baz=348,slow=17,SNR=1.4						
PCRV				Sn	Sn	19 00 56.2	+4.0
	3.6nm,0.3s,baz=210,slow=16,SNR=7.4						
PLCV	**Puerto La Cruz**	6.87	76		Pn	18 59 34.0	-0.3
PLCV					Sn	19 00 56.2	+3.0
DR12	**Loma Pena Alta**	10.37	10	Pn	Pn	19 00 21.4	-1.0
SJG	**San Juan**	10.78	27	Pn	Pn	19 00 27.9	0.0
	1.7nm,0.3s,baz=288,slow=19,SNR=2.2						
PTGA	**Pitinga**	14.62	128	Pn	Pn	19 01 17.6	-2.8
	0.5nm,0.3s,baz=328,slow=19,SNR=5.7						
PTGA				Lg	Lg	19 05 30.5	
	1.0nm,0.3s,baz=325,slow=22,SNR=2.5						
PTGA	**Pitinga**	14.62	128	Pn	Pn	19 01 20.4	-0.1
ETMB	**Extrema**	18.94	164		P	19 02 14.0	-0.9
ETMB				IAmb	IAmb	19 02 27.6	
	comp=Z,5.4nm,1.3s						
SAML	**Samuel**	19.18	155		Pn	19 02 18.1	-0.3
SAML				IAmb	IAmb	19 02 23.0	
	comp=Z,52nm,1.1s						
LPAZ	**La Paz**	24.87	173	P	P	19 03 14.7	-2.7
	comp=Z,0.6nm,0.3s,baz=274,slow=10.0,SNR=1.5						
SIV	**San Ignacio**	26.41	157	P	P	19 03 28.2	-2.5
	comp=Z,0.8nm,0.8s,baz=358,slow=14,SNR=2.0						
PDAR	**Pinedale Array**	47.77	322	P	P	19 06 32.1	+0.7
	comp=Z,0.5nm,0.4s,baz=127,slow=10,SNR=9.7						
PLCA	**Paso Flores**	49.03	179	P	P	19 06 38.4	-2.5
	comp=Z,1.8nm,0.7s,baz=351,slow=7.2,SNR=5.4						
PLCA	**Paso Flores**	49.03	179	P	P	19 06 39.9	-0.9
PLCA				IAmb	IAmb	19 06 41.3	
	comp=Z,1.2nm,0.8s						
NVAR	**Mina Array Bea**	51.57	313	P	P	19 06 59.8	-0.7
	comp=Z,0.3nm,0.5s,baz=102,slow=8.4,SNR=2.2						
ESDC	**Sonseca Array**	67.22	51	P	P	19 08 51.4	+2.9
	comp=Z,0.3nm,0.6s,baz=257,slow=4.8,SNR=2.9						
TORD	**Torodi Ar. Bea**	71.69	79	P	P	19 09 16.0	-0.5
	comp=Z,0.6nm,0.9s,baz=295,slow=6.2,SNR=3.1						
ILAR	**Eielson Array**	76.16	335	P	P	19 09 43.8	+2.0
	comp=Z,0.4nm,0.8s,baz=96,slow=5.5,SNR=3.0						
FINES	**FINESS Array B**	86.11	29	P	P	19 10 34.2	-0.6
	comp=Z,8.1nm,1.2s,baz=270,slow=6.9,SNR=1.5						
ASAR	**Alice Springs**	151.52	235	PKPbc	PKPbc	19 17 48.1	-1.0
	comp=Z,0.7nm,0.7s,baz=119,slow=3.0,SNR=9.9						
CMAR	**Chiang Mai Arr**	151.52	20	PKPbc	PKPbc	19 17 49.2	+0.1
	comp=Z,0.2nm,0.7s,baz=29,slow=9.6,SNR=2.1						
WRA	**Warramunga Arr**	152.68	243	PKPbc	PKPbc	19 17 50.4	-1.4
	comp=Z,0.9nm,0.5s,baz=108,slow=2.8,SNR=16						

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*IDC **09** 18:58:22.4±4.0,4°.93S×101°.72E,h0^{km},mb3.5/6,*
mb1 3.6/6,mb1mx3.4/44,mbtmp3.5/6,MS3.4/1,Ms1 3.4/1,
ms1mx3.2/42,Error ellipse: s-maj=163.0km s-min=21.1km
az=56.0
*DJA **09** 18:58:27.4±0.3,4°S±2°×10°2E±°,h10^{km},M3.7/12,*
MLv3.7/12
ISC 09 18:58:28.1±0.9**,3°.95S**±0°.05×**102°.49E**±0°.06**,h10**^{km}**,n21,**
σ**2^{s}04**/20**,mb3.5**/6**,Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSI	**Kapahiang**	0.31	19	P	Pg	18 58 33.9	-0.5
KSI				S	Sb	18 58 38.9	-2.1
MNAI	**Manna**	0.62	131	P	Pg	18 58 40.0	-0.1
MNAI				S	Sb	18 58 49.6	-0.1
MASI	**Maura Aman, Be**	0.84	343	P	Pg	18 58 42.8	-1.5
LHSI	**Lahat**	1.04	83	P	Pg	18 58 47.3	-0.7
LHSI				S	Sn	18 59 02.4	-0.8
MDSI	**Maura Dua**	1.76	108	P	Pn	18 58 58.6	-0.1
LWLI	**Liwa**	1.89	124	P	Pn	18 59 00.3	-0.2
KLSI		2.35	108	P	Pn	18 59 07.4	+0.6
KASI	**Kota Agung**	2.54	128	P	Pn	18 59 08.4	-0.9
PPSI	**Pulau Pagai**	2.74	295	P	Pn	18 59 11.2	-1.0
DSRI	**Dabo**	4.03	31	P	Pn	18 59 29.8	-0.1
LEM	**Lembang**	5.85	119	LR	LR	19 02 57.8	
	comp=Z,351nm,19.2s,baz=172,slow=45						
CMAR	**Chiang Mai Arr**	22.54	351	P	P	19 03 32.9	+4.4
	0.4nm,0.4s,baz=191,slow=9.4,SNR=5.7						
H01W3	**Cape Leeuwin H**	32.62	162	T	T	19 38 48.6	
	baz=339,slow=76,SNR=12						
H01W2	**Cape Leeuwin H**	32.63	162	T	T	19 38 53.0	
	baz=339,slow=76,SNR=14						
H01W1	**Cape Leeuwin H**	32.63	162	T	T	19 38 53.0	

	baz=339,slow=76,SNR=10						
WRA	Warramunga Arr	34.87	120	P	P	19 05 17.1	-2.9
	0.3nm,0.5s,baz=300,slow=8.9,SNR=7.0						
ASAR	Alice Springs	36.10	126	P	P	19 05 26.8	-3.7
	0.3nm,0.8s,baz=301,slow=7.9,SNR=6.5						
SONM	Songino Array	51.68	3	P	P	19 07 38.9	+3.6
	1.0nm,1.0s,baz=186,slow=11,SNR=5.1						
MKAR	Makanchi Array	53.59	343	P	P	19 07 49.1	-0.3
	0.5nm,0.7s,baz=181,slow=8.5,SNR=2.9						
ZALV	Zalesovo Beam	59.56	348	P	P	19 08 33.9	+2.2
	0.7nm,0.5s,baz=144,slow=5.5,SNR=4.0						
TXAR	Lajitas Array	144.61	42	PKPbc	PKPdf	19 18 05.0	-0.9
	0.2nm,0.6s,baz=242,slow=1.7,SNR=1.9						

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*NEIC **09** 19:14:36.2±0.4, 18°.8N±0°.4×64°.1W±0°.1, h47km±52km, Error ellipse: s-maj=54.6km s-min=5.4km az=163.0*
*RSPR **09** 19:14:36.7, 18°.99N×64°.19W, h36km±12km, MD3.0/3*
ISC 09 19:14:35.5±4.7**, 18°.9N**±0°.4×**64°.2W**±0°.3**, h22**km**, n11, σ0ˢ27**/16**, 5C, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STVI	Saint Thomas	0.88	235	⇑*e*P	Pn	19 14 52.7	+0.1
STVI	Saint Thomas	0.88	235	⇑*e*P	Pn	19 14 52.7	+0.1
STVI				*e*S	Sn	19 15 04.9	+0.1
STVI	Saint Thomas	0.88	235		Pn	19 14 52.7	+0.1
STVI					Sn	19 15 04.9	+0.1
CUPR	Culebra, Puert	1.17	242	⇑*e*P	Pn	19 14 56.3	-0.3
CUPR	Culebra, Puert	1.17	242	*e*S	Sn	19 15 11.5	-0.4
CUPR	Culebra, Puert	1.17	242		Pn	19 14 56.3	-0.3
CUPR					Sn	19 15 11.5	-0.4
MTP	Monte Pirata	1.50	240	⇑*e*P	Pn	19 15 01.0	-0.1
MTP	Monte Pirata	1.50	240	⇑*e*P	Pn	19 15 01.0	-0.1
MTP				*e*S	Sn	19 15 20.3	+0.3
MTP	Monte Pirata	1.50	240		Pn	19 15 01.0	-0.1
MTP					Sn	19 15 20.3	+0.3
CBYP	Canovanas	1.69	250	Pn	Pn	19 15 04.2	+0.4
PDPR	Patillas Dam,	1.93	245	Pn	Pn	19 15 07.0	-0.1

TRN 09 19:15:24.7, 15°.74N×61°.09W, h43km, MD2.9, 1D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAGL	Barre de l'ile	0.28	318	*e*P	Pn	19 15 33.5	+0.5
MAGL				*e*S	Sn	19 15 39.3	+0.5
MDVC	Dominica, Viel	0.33	247	*e*P	Pn	19 15 34.9	+1.3
MDVC				*e*S	Sn	19 15 42.3	+2.5
MDPV	Dominica, Penn	0.34	250	*e*P	Pn	19 15 35.3	+1.6
MDPV				*e*S	Sn	19 15 42.9	+2.8
MDCT	Cottage Hill,	0.38	251	*e*P	Pn	19 15 38.3	+4.2
MDCT				*e*S	Sn	19 15 45.3	+4.6
DSLB	Salisbury	0.44	226	*e*P	Pn	19 15 36.6	+1.8
DSLB				*e*S	Sn	19 15 44.1	+2.0
MDN	Morne-Daniel	0.51	215	*e*P	Pn	19 15 37.5	+1.8
MDN				*e*S	Sn	19 15 46.0	+2.4
TDBA	Terre de Bas,	0.54	281	*e*P	Pn	19 15 37.8	+1.7
TDBA				*e*S	Sn	19 15 46.5	+2.3
TBG	Guadaloupe-3	0.55	281	*e*P	Pn	19 15 37.9	+1.7
TBG				*e*S	Sn	19 15 46.7	+2.4
CBE	Ff, Capester	0.59	303	*e*P	Pn	19 15 38.2	+1.4
CBE	Ff, Capester	0.59	303	⇓*e*P	Pn	19 15 38.2	+1.4
CBE				*e*S	Sn	19 15 47.8	+2.2
BAMF	Morne Balai	0.93	184	*e*P	Pn	19 15 43.4	+2.1
CXM	Morne La Croix	0.93	185	*e*P	Pn	19 15 43.0	+1.5
PCM	Pelee Case Pet	0.93	187	*e*P	Pn	19 15 43.1	+1.7
GBMF	Grand Be	0.94	184	*e*P	Pn	19 15 42.9	+1.3
PML	Morne Lenard	0.96	185	*e*P	Pn	19 15 43.6	+1.8
FDF	Fort de France	1.01	183	*e*P	Pn	19 15 43.7	+1.3
LPMF	Morne Lapointe	1.17	174	*e*P	Pn	19 15 45.8	+1.2
MVM	Montagne Vaucl	1.20	171	*e*P	Pn	19 15 46.5	+1.4
TRMF	Trois Ilets	1.20	178	*e*P	Pn	19 15 46.4	+1.4
BIM	Bigot	1.22	179	*e*P	Pn	19 15 47.3	+2.0
BIM				*e*S	Sn	19 16 02.4	+1.8
MPOM	Morne Pois Mar	1.31	170	*e*P	Pn	19 15 48.0	+1.5
MPOM				*e*S	Sn	19 16 04.0	+1.2
ANBD	Bethesda, Anti	1.45	334	*e*S	Sn	19 16 06.2	0.0

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*IDC **09** 19:20:08.0±1.1, 24°.15N×126°.02E, h0km, mb3.6/5, mb1 3.8/6, mb1mx3.5/39, mbtmp3.6/6, ML3.1/1, Error ellipse: s-maj=32.0km s-min=21.3km az=86.0*
*JMA **09** 19:20:11.1±0.1, 24°.19N×125°.98E, h65km±3km, M3.3*
ISC 09 19:20:11.8±2.5**, 24°.18N**±0°.08×**126°.00E**±0°.05**, h29**km±17km**, n26, σ1ˢ14**/37**, mb3.4**/5**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOGS	Gusukube	0.79	317	P	Pn	19 20 26.6	-0.5
JOGS				*e*S	Sb	19 20 37.9	+0.5
JMJ2	Miyako jima3	0.83	313	P	Pn	19 20 26.9	-0.7
JMJ2				*e*S	Sb	19 20 38.6	+0.1
JMJ	Miyako jima 2	0.90	315	P	Pn	19 20 27.1	-1.5
JIRB	Irabujima	0.99	311	P	Pn	19 20 29.0	-0.8
JIRB				*e*S	Sn	19 20 42.5	-0.4
JIKM	Ikemajima	1.01	317	P	Pn	19 20 29.5	-0.5
JTJ	Tarama	1.27	291	P	Pn	19 20 32.8	-0.8
JTJ				S	Sn	19 20 48.7	-1.0
JISG	Ishigakijimahi	1.59	285	P	Pn	19 20 37.2	-0.9
JISG				*e*S	Sn	19 20 57.0	-0.7
JIJ	Ishigaki jima	1.70	277	P	Pn	19 20 38.8	-0.8
JIJ				*e*S	Sn	19 20 59.1	-1.4
JKRS	Kuro-shima	1.82	272	P	Pn	19 20 40.7	-0.5
JKRS				S	Sn	19 21 02.5	-0.8
HATJ	Hateruma jima	2.01	267	P	Pn	19 20 42.9	-0.9
HATJ				*e*S	Sn	19 21 05.3	-2.7
IRIF	Iriomote-Funau	2.08	275	P	Pn	19 20 44.1	-0.6
IRIF				*e*S	Sn	19 21 08.4	-1.3
JKE	Kume jima 2	2.25	18	P	Pn	19 20 46.3	-0.9
JJT3	Tamagusuku3	2.54	39	P	Pn	19 20 50.9	-0.2
JJT3				S	Sn	19 21 20.0	-1.1
JAGN	Aguni-jima	2.65	25	P	Pn	19 20 52.6	0.0
JNTH	Nagotoyohara	2.96	38	P	Pn	19 20 56.1	-0.8
JOW	Kunigami	3.35	37	Pn	Pn	19 21 01.8	-0.5
	3.3nm,0.3s,baz=180,slow=11,SNR=24						
JOW				Pg		19 21 09.3	
	5.6nm,0.3s,baz=130,slow=26,SNR=2.5						
JOW				Sn	Sn	19 21 37.9	-3.2
	7.3nm,0.3s,baz=120,slow=27,SNR=2.0						
JOW	Kunigami	3.35	37	P	Pn	19 21 01.8	-0.5
YHNB	Yeheng	4.24	278	P	Pn	19 21 14.9	+0.3
SSLB	Suanglung	4.63	266	P	Pn	19 21 18.7	-1.2
TPUB	Ta-pu	5.00	261	P	Pn	19 21 24.7	-0.3
SONM	Songino Array	28.28	332	P	P	19 26 05.3	+2.5
	0.2nm,0.3s,baz=147,slow=10,SNR=4.6						
MKAR	Makanchi Array	41.45	314	P	P	19 27 55.6	-0.4
	0.2nm,0.4s,baz=100,slow=10.0,SNR=7.6						
WRA	Warramunga Arr	44.60	169	P	P	19 28 21.9	+0.2
	0.5nm,0.7s,baz=344,slow=8.4,SNR=3.6						
ASAR	Alice Springs	48.18	170	P	P	19 28 50.2	+0.4
	0.2nm,0.5s,baz=351,slow=7.2,SNR=2.3						
FINES	FINESS Array B	73.64	330	P	P	19 31 43.3	+0.9
	7.1nm,1.2s,baz=59,slow=8.3,SNR=3.9						
ROSC	El Rosal	145.01	37	PKPbc	PKPbc	19 39 46.4	-0.7
	39nm,0.4s,baz=270,slow=4.0,SNR=12						

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*ISN **09** 19:51:57.5±1.2, 33°.21N×48°.09E, h15km±8km, ML2.9*
*TEH **09** 19:51:58.9, 33°.37N×48°.03E, h8km, ML3.2*
ISC 09 19:52:00.5±0.9**, 33°.37N**±0°.03×**47°.98E**±0°.03**, h10**km**, n38, σ0ˢ97**/42**, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IKFM	Kafar-mosalman	0.19	323	*e*Pg	Pg	19 52 03.7	-0.8
IKFM				*e*Sg	Sg	19 52 07.9	+0.7
IDOB	Doab	0.44	21	*e*Pg	Pg	19 52 07.5	-1.8
DHL1	Dehloran	0.91	221	*e*Pg	Pg	19 52 16.5	-1.5
DHL1				*e*Sg	Sg	19 52 30.2	+0.4
DHL1				*e*		19 52 37.9	
	comp=Z,11µm,0.3s						
HSAM	Samen	0.98	31	*e*Pg	Pg	19 52 16.8	-2.6
KCHF	Cheshme Sefid,	1.19	319	*e*Pg	Pb	19 52 22.6	-0.7
KCHF				*e*		19 52 45.7	
	comp=Z,7µm,0.3s						
KER	Kermanshah	1.23	325	*e*Pg	Pn	19 52 23.5	-0.4
IALM	Almabolaq	1.49	6	*e*Pg	Pn	19 52 27.5	-0.1
IGHG	Ghaleghazi	1.52	309	*e*Pg	Pn	19 52 28.6	+0.7
IGHG				*e*		19 52 59.8	
	comp=Z,3µm,0.5s						
KHMZ	Khomeyn	1.69	77	*e*Pg	Pn	19 52 30.2	-0.1
HAGD	Aghdareh	1.73	33	*e*Pn	Pn	19 52 30.5	-0.4
HAGD				*e*		19 52 35.5	
	comp=Z,3µm,0.2s						
IBDR	Badra	1.74	262	*e*Pg	Pn	19 52 30.0	-0.7
IBDR				*e*Sg	Sn	19 52 54.0	+1.0
IBDR				AML	AML	19 52 59.8	
	comp=N,132nm,0.4s						
IBDR				AML	AML	19 53 00.9	
	comp=E,139nm,0.4s						
IDHR	Dehrash	1.87	315	*e*Pn	Pb	19 52 34.8	-0.1
AMIS	Naft Sefid	2.03	147	*e*Pn	Pn	19 52 34.7	0.0
AMIS				*e*		19 53 12.5	
	comp=Z,3µm,0.6s						
ASAO	Ashtian	2.06	55	*e*Pn	Pn	19 52 36.1	+0.7
AHWZ	Ahwaz	2.11	164	*e*Pg	Pb	19 52 40.0	+1.2
IPIR	Pirpir	2.54	105	*e*Pn	Pn	19 52 42.2	+0.2
IPIR				*e*		19 53 20.9	
	comp=Z,662nm,0.6s						
IRAZ	Razeghan	2.59	38	*e*Pn	Pn	19 52 44.3	+1.7
SHK1	Shahrekord	2.65	112	*e*Pn	Pn	19 52 43.3	-0.2
QABG	Abgarm-Qazvin	2.68	29	*e*Pn	Pn	19 52 44.4	+0.5
NSR	Nassriya	2.83	214	*e*Pg	Pn	19 52 38.0	-7.7
NSR				*e*Sg	Sn	19 53 08.0	-12
QAMS	Qamsar	2.87	82	*e*Pn	Pn	19 52 46.9	+0.3
QAMS				*e*		19 53 44.4	
	comp=Z,489nm,0.5s						
IQOM	Qom	2.95	59	*e*Pn	Pn	19 52 48.5	+0.9
GHVR	GHOM	2.97	67	*e*Pn	Pn	19 52 47.7	0.0
IKLH	Kolahrood	3.01	90	*e*Pn	Pn	19 52 49.5	+1.0
BHD	Baghdad	3.02	269	*e*Pn	Pn	19 52 48.0	-0.3
BHD				*e*Sn	Sn	19 53 25.0	+0.5
ZNJK	Zanjan	3.34	10	*e*Pn	Pn	19 52 54.6	+1.6
THKV	Tehran--Karaj	3.48	42	*e*Pn	Pn	19 52 55.6	+0.7
IVRN	Varamin	3.50	61	*e*Pn	Pn	19 52 55.7	+0.7
KRSH	Karshahi	3.51	79	*e*Pn	Pn	19 52 55.6	+0.3
CHTH	Charan	3.62	45	*e*Pn	Pn	19 52 58.0	+1.2
IKRK	Kirkuk	3.63	305	*e*Pn	Pn	19 52 57.0	+0.3
IKRK				*e*Sn	Sn	19 53 42.0	+2.4
ISFB	Sefidab	3.67	73	*e*Pn	Pn	19 52 57.9	+0.5
IZEF	Zefreh	3.68	96	*e*Pn	Pn	19 52 58.0	+0.4
QALM	Alamut, Qazvin	3.75	35	*e*Pn	Pn	19 52 59.8	+1.1
KLNJ	Kolanjah	3.86	127	*e*Pn	Pn	19 52 59.6	-0.7
IDMV	Damavand	4.00	56	*e*Pn	Pn	19 53 02.7	+0.6
IRAM	Ramesheh	4.03	112	*e*Pn	Pn	19 53 02.6	+0.2
IFIR	Firoozkooh	4.54	59	*e*Pn	Pn	19 53 09.9	+0.4

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*IDC **09** 20:11:37.5±0.7, 35°.01N×26°.69E, h0km, mb3.8/6, mb1 3.9/6, mb1mx3.6/28, mbtmp3.8/6, Error ellipse: s-maj=23.2km s-min=10.9km az=145.0*
*DDA **09** 20:11:37.9, 34°.85N×26°.44E, h7km±5km, ML3.1*
*ISK **09** 20:11:38.7, 35°.05N×26°.69E, h5km, ML3.4/16*
*ATH **09** 20:11:40.0, 35°.00N×26°.68E, h13km±2km, ML3.4/7, Error ellipse: s-maj=3.9km s-min=1.9km az=166.0*
*THE **09** 20:11:41.6, 35°.06N×26°.61E, h0km, ML3.2/7, Error ellipse: s-maj=2.9km s-min=0.7km az=157.0*
ISC 09 20:11:38.3±1.3**, 34°.94N**±0°.04×**26°.69E**±0°.02**, h6**km±9km**, n106, σ1ˢ45**/139**, mb3.7**/6**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZKR	Zakros	0.42	294	P	Pb	20 11 47.7	-0.6
ZKR				S	Sb	20 11 54.3	-0.6
	8µm,0.3s						
ZKR	Zakros	0.42	294	P	Pb	20 11 47.6	-0.6
ZKR				S	Sb	20 11 53.5	-1.4
ZKR				AML	AML	20 11 54.4	
	comp=N,12070µm,0.3s						
ZKR				AML	AML	20 11 54.9	
	comp=E,20582µm,0.4s						
ZKR	Zakros	0.42	294	PG	Pb	20 11 47.5	-0.7
ZKR				SG	Sb	20 11 54.4	-0.5
STIA	Sitia Lasithi	0.55	298	P	Pb	20 11 49.9	-0.5
STIA				S	Sb	20 11 58.8	+0.2
FRMA	Ierapetra Chan	0.79	275	P	Pg	20 11 52.8	-0.6
FRMA				S	Sg	20 12 04.4	+0.8
NPS	Neapolis	0.94	290	P	Pb	20 11 57.5	+0.5
NPS				S	Sn	20 12 12.2	+0.3
	comp=E,3µm,0.4s						
NPS	Neapolis	0.94	290	P	Pb	20 11 57.1	+0.1
NPS				S	Sb	20 12 10.0	+0.3
NPS				AML	AML	20 12 15.7	
	comp=N,4614µm,0.5s						
NPS				AML	AML	20 12 16.1	
	comp=E,9129µm,0.7s						
HRKL	Herakleio	1.35	286	P	Pg	20 12 05.8	+1.6
HRKL				S	Sn	20 12 23.1	+1.1
HRKL	Herakleio	1.35	286	PN	Pg	20 12 05.4	+1.2
HRKL				SN	Sn	20 12 24.9	+2.9
KSTL	Kastelli Herak	1.37	286	P	Pn	20 12 01.1	-2.9
KSTL				S	Sb	20 12 16.9	-5.3
IDI	Anoyia	1.51	284	P	Pg	20 12 08.1	+0.8
IDI				S	Sg	20 12 26.4	-0.6
	comp=E,702nm,0.4s						
IDI	Anoyia	1.51	284	P	Pg	20 12 07.4	+0.1
IDI				AML	AML	20 12 35.1	
	comp=N,1522µm,0.3s						
IDI				AML	AML	20 12 49.4	
	comp=E,1482µm,0.7s						
TMBK	Timbaki Herakl	1.58	275	P	Pg	20 12 08.6	-0.1
TMBK				S	Sg	20 12 29.1	-0.1
	comp=E,715nm,1.0s						
NIS1	Nisyros Isl.	1.70	13	P	Pb	20 12 09.7	-0.4
NIS1	Nisyros Isl.	1.70	13	P	Pb	20 12 09.8	-0.2
NIS1	Nisyros Isl.	1.70	13	PN	Pb	20 12 09.2	-0.9
ARG	Arkhangelos	1.73	42	P	Pg	20 12 11.7	+0.3
ARG				S	Sg	20 12 34.0	+0.2
	comp=E,488nm,0.5s						
ARG	Arkhangelos	1.73	42	P	Pg	20 12 10.8	-0.6
ARG				AML	AML	20 12 43.8	
	comp=N,976µm,0.5s						
ARG				AML	AML	20 12 44.0	
	comp=E,1393µm,0.9s						
ARG	Arkhangelos	1.73	42	PN	Pb	20 12 10.0	-0.5
THR6	Thira Island,	1.76	324	P	Pb	20 12 10.1	-0.9
THR8	Santorini-Mono	1.76	326	P	Pb	20 12 09.9	-1.1
THR9	Santorini-Faro	1.78	323	P	Pb	20 12 10.4	-0.9
STAX	Taxiarchis Har	1.79	325	P	Pb	20 12 10.3	-1.2
THR7	Fira-Santorini	1.80	326	P	Pb	20 12 10.4	-1.3
SNT5	Nea Kammeni, S	1.80	325	P	Pb	20 12 10.4	-1.2
THR3	Thira Island,	1.80	325	P	Pb	20 12 10.4	-1.3
THT2	Imerovigli	1.81	326	P	Pb	20 12 11.3	-0.6
THR2	Thira island,	1.81	326	P	Pb	20 12 10.8	-1.1
KOSK	Kos Island	1.82	7	P	Pb	20 12 11.1	-0.9
KOSK				S	Sg	20 12 35.7	-1.1
	comp=E,528nm,0.5s						
KOSK	Kos Island	1.82	7	PN	Pb	20 12 11.1	-0.9
THR5	Thira Island,	1.83	324	P	Pn	20 12 10.8	+0.5
PRNS	Prines Rethymn	1.84	284	P	Pg	20 12 13.3	-0.3
CMBO	Columbo, Santo	1.85	326	P	Pb	20 12 11.9	-0.6
CMBO	Columbo, Santo	1.85	326	P	Pb	20 12 11.9	-0.6
CMBO				S	Sb	20 12 35.0	-0.9
CMBO				AML	AML	20 12 40.6	
	comp=N,4416µm,0.6s						
CMBO				AML	AML	20 12 42.2	
	comp=E,3334µm,0.6s						
DAT	Datca	1.92	22	P	Pb	20 12 12.8	-1.1
DAT	Datca	1.92	22	*i* P	Pb	20 12 12.8	-1.1
DAT				*i* S	Sn	20 12 35.7	-0.6
DAT	Datca	1.92	22	PN	Pn	20 12 12.3	+0.6
VAM	Vamos	2.09	283	P	Pb	20 12 16.5	-0.2
VAM				S	Sb	20 12 42.3	-0.6
	comp=E,548nm,0.7s						
VAM	Vamos	2.09	283	P	Pb	20 12 16.2	-0.4
VAM				AML	AML	20 12 54.3	
	comp=E,978µm,0.6s						
VAM				AML	AML	20 12 57.0	
	comp=N,1006µm,0.4s						
GVD	Gavdhos	2.14	268	P	Pb	20 12 17.0	-0.5
GVD	Gavdhos	2.14	268	PN	Pb	20 12 17.0	-0.5
BODT	Bodrum	2.17	13	P	Pb	20 12 16.4	-1.7
BODT	Bodrum	2.17	13	PN	Pn	20 12 15.8	+0.7
BDRM	Kayabasi	2.20	16	*i* P	Pn	20 12 16.4	+0.9
BDRM				*i* S	Sn	20 12 43.6	+0.5
TURN	Turunc	2.22	34	PN	Pn	20 12 16.9	+1.2
IMMV	Iera Moni Meta	2.28	284	P	Pb	20 12 18.6	-1.2
IMMV	Iera Moni Meta	2.28	284	P	Pb	20 12 19.2	-0.6
IMMV				AML	AML	20 13 12.0	
	comp=E,1303µm,0.9s						
IMMV				AML	AML	20 13 27.0	
	comp=N,1217µm,0.9s						
IMMV	Iera Moni Meta	2.28	284	PN	Pb	20 12 18.4	-1.4
DALY	Dalyan (Mula)	2.46	40	*i* P	Pb	20 12 21.3	-1.6
DALY				*i* S	Sb	20 12 53.4	-0.1
DALY				IAML		20 13 19.0	
	comp=N,88nm,0.9s						
DALY	Dalyan (Mula)	2.46	40	PN	Pn	20 12 20.2	+1.3
KNDR	Palaiochora Ch	2.48	278	P	Pb	20 12 21.9	-1.4
KNDR	Palaiochora Ch	2.48	278	PN	Pb	20 12 22.1	-1.2
MLSB	Milas	2.51	20	PN	Pn	20 12 20.8	+1.1
YER	Yerkesik	2.54	30	PN	Pn	20 12 21.5	+1.3
DDIM	Aydin, Didim	2.55	10	*i* P	Pg	20 12 27.3	+0.2
DDIM				*i* S	Sg	20 13 00.5	+0.4
DDIM				IAML		20 13 18.0	
	comp=E,137nm,0.9s						
DDIM				IAML		20 13 58.0	
	comp=N,96nm,1.3s						
MHLO	Agia Marina, M	2.55	314	P	Pn	20 12 21.0	+0.8
FETY	Fethiye	2.58	48	P	Pb	20 12 22.8	-2.2
FETY	Fethiye	2.58	48	PN	Pn	20 12 22.5	+1.9
MULA	Mugla, Merkez-	2.66	29	*i* P	Pb	20 12 24.8	-1.6
MULA				*i* S	Sb	20 12 57.2	-2.2
MULA				IAML		20 13 17.0	
	comp=E,55nm,0.9s						
AKAS	Kas	2.70	61	*i* P	Pn	20 12 23.8	+1.3
AKAS				*i* S	Sn	20 12 55.1	-0.5
AKAS	Kas	2.70	61	PN	Pn	20 12 24.0	+1.5
SMG	Samos	2.76	2	P	Pn	20 12 24.0	+0.8
GCAM	G?zelcaml?	2.79	9	*i* P	Pn	20 12 25.2	+1.7
GCAM				*i* S	Sg	20 13 10.7	+2.9
GCAM	G?zelcaml?	2.79	9	PN	Pn	20 12 24.6	+1.1
AYDN	Tasoluk	2.88	19	*i* P	Pn	20 12 26.2	+1.4
AYDN				*i* S	Sn	20 13 01.6	+1.8
CAME	Cameli-Denizli	2.91	46	PN	Pn	20 12 26.9	+1.5
CAEL	Denizli, Camel	3.04	44	*i* P	Pn	20 12 30.0	+2.8
CAEL				*i* S	Sg	20 13 17.9	+1.8
TAVA	DENIZLI_Tavas	3.09	35	*i* P	Pn	20 12 29.7	+1.9
TAVA				*i* S	Sb	20 13 09.0	-2.8
TAVA				IAML		20 13 22.0	
	comp=E,53nm,0.6s						
TAVA				IAML		20 13 25.0	
	comp=N,54nm,0.6s						
DGB	zmir	3.10	3	*i* P	Pn	20 12 28.6	+0.8
DGB				*i* S	Sn	20 13 05.2	-0.1
AYDB	Zeytinkoy-Aydi	3.15	18	PN	Pn	20 12 29.9	+1.3
ELL	Elmali	3.17	55	PN	Pn	20 12 31.0	+2.0
KTHA	Kythira Island	3.23	295	P	Pn	20 12 31.2	+1.6
KTHR	Kythira	3.28	295	P	Pn	20 12 32.8	+2.6
AKUM	Antalya-Kumluc	3.28	64	*i* P	Pn	20 12 29.8	-0.5
AKUM				*i* S	Sn	20 13 07.8	-1.8
AKUM				IAML		20 13 53.0	
	comp=E,34nm,1.9s						
ZEYE	Izmir, Urla-Ze	3.29	357	*i* P	Pn	20 12 30.2	-0.2
ZEYE				*i* S	Sn	20 13 06.6	-3.3
URLA	Izmir	3.41	359	*i* P	Pn	20 12 32.1	0.0
URLA				*i* S	Sn	20 13 15.6	+2.7
URLA	Izmir	3.41	359	PN	Pn	20 12 33.4	+1.3
BLCB	Balcova	3.45	5	PN	Pn	20 12 33.9	+1.3
CHOS	Chios island	3.47	352	P	Pn	20 12 33.2	+0.2
CHOS	Chios island	3.47	352	PN	Pn	20 12 33.9	+0.9
VLI	Veliai	3.52	301	P	Pn	20 12 34.7	+1.1
KORT	Korkueli	3.61	54	PN	Pn	20 12 37.2	+2.3
ATHU	Athens Univers	3.82	323	P	Pn	20 12 39.6	+1.9
ZEDA	zmir-Bergama	4.03	4	*i* P	Pn	20 12 40.2	-0.3
ZEDA				*i* S	Sn	20 13 28.9	+0.8
PASA	Karahalli, USA	4.08	33	*i* P	Pn	20 12 41.2	-0.1
PASA				*i* S	Sn	20 13 33.5	+4.1
KYMI	Kymi, Euboea I	4.23	331	P	Pn	20 12 44.6	+1.3
PRK	Paraskevi	4.31	356	P	Pn	20 12 46.4	+2.0
SIGR	SIGRI	4.31	351	P	Pn	20 12 44.7	+0.3
ITM	Ithomi	4.46	301	P	Pn	20 12 48.3	+1.8
PYL	PYLOS	4.46	297	P	Pn	20 12 47.0	+0.5
GUR	Goura	4.60	312	P	Pn	20 12 50.7	+2.1
LKR	Lokris	4.74	322	P	Pn	20 12 51.3	+1.0
KLV	Kalavryta, Ach	4.79	312	P	Pn	20 12 53.0	+1.9
SEDI	Konya, Seydise	4.80	57	*i* P	Pn	20 12 54.9	+3.6
SEDI				*i* S	Sn	20 13 49.5	+2.2
SEDI				IAML		20 13 58.0	
	comp=E,18nm,0.7s						
SEDI				IAML		20 14 02.0	
	comp=N,20nm,0.9s						
DRO	Drossia	5.01	308	P	Pn	20 12 56.0	+1.9
LAKA	Lakka	5.02	312	P	Pn	20 12 55.2	+1.0
LIA	Limnos Island	5.09	347	P	Pn	20 12 55.9	+0.8
AGG	Agios Georgios	5.36	321	P	Pn	20 13 00.7	+1.8
MAKR	Makrakomi, Fth	5.46	319	P	Pn	20 13 02.3	+2.1
ALN	Alexandroupoli	5.96	355	P	Pn	20 13 07.8	+0.7
ESDC	Sonseca Array	24.77	290	P	P	20 17 00.4	-0.5
	comp=N,0.4nm,0.7s,baz=82,slow=9.3,SNR=3.3						
FINES	FINESS Array B	26.52	359	P	P	20 17 16.2	-0.2
	comp=N,4.2nm,0.9s,baz=206,slow=9.1,SNR=2.6						
TORD	Torodi Ar. Bea	31.33	232	P	P	20 18 00.1	+0.4
	comp=N,0.5nm,0.6s,baz=33,slow=8.9,SNR=6.2						
ARCES	ARCESS Array B	34.65	359	P	P	20 18 27.6	-0.6
	comp=N,3.8nm,1.0s,baz=179,slow=9.0,SNR=1.2						
MKAR	Makanchi Array	42.85	56	P	P	20 19 36.7	-0.5
	comp=N,0.4nm,0.6s,baz=262,slow=8.6,SNR=7.8						
ZALV	Zalesovo Beam	44.25	46	P	P	20 19 48.3	0.0
	comp=N,1.0nm,0.6s,baz=268,slow=8.4,SNR=4.1						

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*FUNV **09** 20:12:48.6, 8°.48N×71°.34W, h2km, MW3.0*
ISC 09 20:12:48.0±1.2**, 8°.60N**±0°.03×**71°.33W**±0°.03**, h8**km±10km**, n23, σ1ˢ13**/42**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.57	124	*e*P	Pg	20 12 58.9	0.0
SOCV				*e*S	Sg	20 13 07.3	+0.8
SOCV	Socops	0.57	124	*e*P	Pg	20 12 58.6	-0.3
SOCV				*e*S	Sg	20 13 07.0	+0.6
SDV	Santo Domingo	0.75	68	*e*P	Pb	20 13 04.0	+0.6
SDV				*e*S	Sn	20 13 16.2	-0.4
PAMC	Pamplona, Colo	1.84	227	*e*P	Pn	20 13 20.2	-0.1
PAMC				*e*S	Sn	20 13 44.8	+0.8
PAMC				*i*		20 13 46.0	
	comp=Z,211nm,0.4s						
MCQV	Machiques	1.86	321	*e*P	Pb	20 13 21.9	-0.3
MCQV				*e*S	Sg	20 13 47.6	-0.4
OCAC	Ocana	2.00	260	*e*P	Pn	20 13 22.0	-0.1
OCAC				*e*S	Sn	20 13 47.5	+0.1
TAMC	Tame, Arauca	2.20	192	*e*P	Pn	20 13 25.8	+0.9
TAMC				*e*S	Sb	20 13 55.4	0.0
DABV	Dabajuro	2.41	17	*e*P	Pb	20 13 30.2	-1.3
DABV				*e*S	Sb	20 14 01.1	-0.3
ELOV	Elorza	2.43	131	*e*P	Pn	20 13 27.3	-0.6
ELOV				*e*S	Sn	20 13 56.2	-1.5
SIQV	Siquisique	2.53	36	*e*P	Pn	20 13 31.2	+1.8
BARC	Barichara	2.71	223	*e*P	Pn	20 13 32.4	+0.4
BARC				*e*S	Sn	20 14 05.0	-0.1
SMLC	San Martn de	2.71	274	*e*P	Pn	20 13 30.8	-1.1
SMLC				*e*S	Sn	20 14 06.8	+1.9
BRRC	Barranca, Sant	2.79	238	*e*S	Sb	20 14 11.8	-0.5
RUSC	La Rusia	3.20	213	*e*P	Pn	20 13 39.0	0.0
RUSC				*e*S	Sb	20 14 24.2	-0.5
BAUV	El Baul	3.27	84	*e*P	Pn	20 13 40.5	+1.0
BAUV				*e*S	Sn	20 14 18.2	-0.4
ZARC	Zaragoza, Cauc	3.66	253	*e*P	Pn	20 13 43.5	-1.4
ZARC				*e*S	Sn	20 14 30.2	+1.9
BENV	Beln	3.93	70	*e*P	Pn	20 13 49.2	+0.6
BENV				*e*S	Sn	20 14 34.8	-0.2
SPBC	San Pablo de B	4.00	223	*e*P	Pn	20 13 49.3	-0.3
SJCC	San Jacinto, C	4.01	289	*e*P	Pn	20 13 50.0	+0.2
SJCC				*e*S	Sn	20 14 37.4	+0.5
TACV	Tcata	4.52	70	*e*P	Pn	20 13 57.2	+0.5
TACV				*e*S	Sn	20 14 48.5	-1.0
CHIC	Chingaza	4.61	211	*e*P	Pn	20 13 58.4	+0.1
CHIC				*e*S	Sn	20 14 49.6	-2.6
GUY2C	Guyana, Caldas	5.22	230	*e*P	Pn	20 14 08.0	+1.2
GUY2C				*e*S	Sn	20 15 11.3	+3.8
BIRV	Birongo	5.33	69	*e*P	Pn	20 14 08.4	+0.6

DJA 09 20:16:27.0±0.5**, 11°S**±5°×**11°7E**±°**, h10**km**, M3.9**/12**, mb3.9**/5**, MLv3.8**/12**, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	2.29	7	P	Pn	20 17 05.8	+1.0
PLAI				S	Sn	20 17 32.8	-0.2
WBSI	Waikabubak, Su	2.37	52	P	Pn	20 17 05.3	-0.7
WBSI				S	Sn	20 17 32.9	-2.4
TWSI	Taliwang, Sumb	2.43	346	P	Pn	20 17 07.8	+1.0

TWSI				S	Sn	20 17 36.3	-0.4
BASI	Baing, Sumba	3.16	74	P	Pn	20 17 15.6	-1.3
IGBI	Denpasar	3.24	314	P	Pn	20 17 18.5	+0.5
SRBI	Singaraja	3.75	323	P	Pn	20 17 25.0	0.0
JAGI	Jajag, Banyuwa	4.21	308	P	Pn	20 17 30.9	-0.4
EDFI	Ende, Flores	4.76	61	P	Pn	20 17 37.7	-1.2
GMJI	Gumukmas	4.88	305	P	Pn	20 17 40.2	-0.4
BLJI	Banyuglugur	5.09	311	P	Pn	20 17 43.9	+0.5
	0.2nm14nm,0.5s						
BSSI	Bau Bau, Buton	5.76	31	P	Pn	20 17 54.0	+1.4
	0.1nm3.2nm,0.7s						
BKSI	Bulukumba	6.31	25	P	Pn	20 18 01.4	+1.2
	0.0nm5.0nm,0.8s						
PWJI	Pagerwojo	6.39	298	P	Pn	20 18 01.3	0.0
	29nm,1.2s						

IDC ***09*** *20:25:01.6±10.0, 1°.08N×124°.03E, h222km±115km, mb3.5/7, mb1 3.5/8, mb1mx3.2/34, mbtmp3.9/8, Error ellipse: s-maj=53.9km s-min=19.1km az=69.0*
DJA ***09*** *20:25:03.0±0.5, 1°N±5°×12°4E±°, h225km±4km, M3.7/13, mb3.6/1, MLv3.8/13*
ISC 09 20:25:03.4±0.8**, 1°.08N**±0°.09×**124°.44E**±0°.07**, h250km, n15, σ2ˢ06**/17**, mb3.6**/7**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	Cibinong	0.68	222	P	Pn	20 25 35.6	-1.3
KMSI				S	S	20 25 59.6	-3.7
GTOI	Gorontalo	1.49	253	P	Pn	20 25 40.7	-1.0
GTOI				S	S	20 26 08.5	-3.3
LUWI	Luwuk	2.69	218	P	Pn	20 25 51.0	-1.6
TNTI	Ternate	2.94	96	P	Pn	20 25 52.6	-2.7
SANI	Sanana	3.48	154	P	Pn	20 25 59.3	-1.9
LBMI	Labuha	3.51	119	P	Pn	20 26 00.1	-1.4
MPSI	Mapaga	4.60	261	P	Pn	20 26 13.5	-0.9
FITZ	Fitzroy Crossi	19.10	177	P	P	20 29 08.3	+0.4
	0.1nm,0.3s,baz=356,slow=8.4,SNR=1.3						
WRA	Warramunga Arr	23.04	156	P	P	20 29 48.7	+1.7
	4.0nm,0.4s,baz=334,slow=10,SNR=59						
ASAR	Alice Springs	26.27	160	P	P	20 30 18.2	+2.1
	0.7nm,0.5s,baz=339,slow=7.4,SNR=24						
STKA	Stephens Creek	36.59	155	P	P	20 31 48.5	+2.6
	1.0nm,0.4s,baz=335,slow=6.9,SNR=6.6						
USRK	Ussuriysk Ar.	43.45	8	P	P	20 32 42.9	+1.0
	1.4nm,0.4s,baz=186,slow=7.1,SNR=4.7						
SONM	Songino Array	49.13	344	P	P	20 33 26.8	+0.7
	0.9nm,0.8s,baz=155,slow=8.2,SNR=6.4						
MKAR	Makanchi Array	58.47	327	P	P	20 34 33.0	-0.5
	0.6nm,0.3s,baz=126,slow=8.0,SNR=24						
ZALV	Zalesovo Beam	61.94	335	P	P	20 34 56.1	-0.6
	0.5nm,0.3s,baz=130,slow=7.5,SNR=4.5						

IDC ***09*** *20:42:45.4±1.1, 7°.99S×125°.34E, h0km, mb3.3/1, mb1 3.6/4, mb1mx3.4/33, mbtmp3.5/4, ML3.3/3, Error ellipse: s-maj=13.5km s-min=7.4km az=175.0*
DJA ***09*** *20:42:49.0±1.6, 8°S±7°×12°5E±1°3, h10km, M3.1/6, MLv3.1/6*
ISC 09 20:42:47.9±1.3**, 8°.13S**±0°.08×**125°.1E**±0°.1**, h27km, n9, σ1ˢ59**/10**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	Soe	1.82	208	P	Pn	20 43 18.1	+0.5
BATI	Baumata	2.51	215	Pn	Pb	20 43 30.9	-1.5
	5.8nm,0.3s,baz=173,slow=3.6,SNR=8.7						
BATI				Sn	Sb	20 44 05.2	+2.3
	3.4nm,0.3s,baz=88,slow=20,SNR=3.5						
BATI	Baumata	2.51	215	P	Pn	20 43 27.5	+0.4
MMRI	Maumere	2.90	260	P	Pn	20 43 30.5	-1.8
EDFI	Ende, Flores	3.45	260	P	Pn	20 43 39.4	-0.6
BSSI	Bau Bau, Buton	5.00	293	P	Pn	20 44 02.0	+0.7
WRA	Warramunga Arr	14.75	144	Pn	Pn	20 46 13.2	-1.6
	0.1nm,0.3s,baz=318,slow=13,SNR=8.9						
ASAR	Alice Springs	17.59	152	P	P	20 46 53.4	+1.2
	0.1nm,0.3s,baz=336,slow=13,SNR=13						
MKAR	Makanchi Array	66.62	329	P	P	20 53 37.3	+1.2
	0.2nm,0.6s,baz=136,slow=7.7,SNR=1.5						

NNC 09 20:47:37.8±20.0**, 38°.03N**×**72°.53E, h0km, mb3.8, mpv3.4, 1C-4D, Error ellipse: s-maj=155.8km s-min=116.1km az=166.0, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	4.19	12	P	Pn	20 48 44.1	+0.7
	SNR=30						
UCH	Uchtor	4.46	19	P	Pn	20 48 47.5	+0.5
	SNR=16						
EKS2	Erkin-Say	4.72	11	P	Pn	20 48 51.4	+1.0
	SNR=9.8						
AAK	Ala-Archa	4.84	17	P	Pn	20 48 52.6	+0.6
	SNR=18						
AAK	Ala-Archa	4.84	17	⇓Pn	Pn	20 48 52.3	+0.2
	5.6nm,0.5s						
AAK				⇓Sn	Sn	20 49 52.6	+3.8
	4.2nm,0.7s						
KK31	Karatay Array	5.30	344	Pn	Pn	20 48 56.0	-2.1
	1.5nm,0.5s,baz=150,slow=14,SNR=18						
KK31				⇑Sn	Sn	20 49 58.2	-1.8
	3.7nm,0.3s,baz=146,slow=22,SNR=14						
TKM2	Tokmak 2	5.42	25	P	Pn	20 48 60.0	0.0
	SNR=5.4						
TKM2	Tokmak 2	5.42	25	⇓Pn	Pn	20 48 59.2	-0.7
	4.2nm,1.0s						
TKM2				⇓Sn	Sn	20 50 06.2	+3.1
	1.8nm,0.8s						

IDC ***09*** *20:47:48.4±1.4, 8°.23N×71°.37W, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.4/43, mbtmp3.5/2, Error ellipse: s-maj=43.7km s-min=12.5km az=143.0*
FUNV ***09*** *20:47:51.4, 8°.44N×71°.42W, h2km, MW3.2*
ISC 09 20:47:50.9±1.2**, 8°.50N**±0°.03×**71°.38W**±0°.02**, h5km**±9km**, n37, σ1ˢ83**/67**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	Socops	0.56	112	eP	Pg	20 48 02.7	+1.0
SOCV				eS	Sg	20 48 10.6	+1.6
SDV	Santo Domingo	0.83	62	Pg	Pg	20 48 08.4	+1.5
	27nm,0.3s,baz=248,slow=12,SNR=32						
SDV				Lg	Lg	20 48 19.9	
	58nm,0.3s,baz=312,slow=22,SNR=16						
CAPV	Capacho	1.12	236	eP	Pg	20 48 11.3	-1.1
CAPV				eS	Sg	20 48 25.9	-0.9
PAMC	Pamplona, Colo	1.74	229	eP	Pg	20 48 24.2	-0.1
PAMC				eS	Sg	20 48 48.0	+1.0
MCQV	Machiques	1.92	324	eP	Pn	20 48 24.7	+0.4
MCQV				eS	Sn	20 48 49.9	+1.1
OCAC	Ocana	1.94	263	eP	Pn	20 48 25.1	+0.5
OCAC				eS	Sn	20 48 50.1	+0.7
TAMC	Tame, Arauca	2.09	191	eP	Pb	20 48 28.9	-0.4
TAMC				eS	Sg	20 48 59.0	+0.9
LL1C	La Loma 1 Cana	2.39	296	eP	Pn	20 48 33.0	+2.3
LL1C				eS	Sb	20 49 04.3	+0.2
ELOV	Elorza	2.40	128	eP	Pb	20 48 33.9	-0.7
ELOV				eS	Sg	20 49 06.8	-1.2
ELOV	Elorza	2.40	128	eP	Pn	20 48 30.8	0.0
ELOV				eS	Sn	20 49 00.3	-0.3
DABV	Dabajuro	2.52	17	eP	Pn	20 48 34.1	+1.5
DABV				eS	Sn	20 49 04.5	+0.9
BARC	Barichara	2.60	223	eP	Pb	20 48 38.5	+0.3
BARC				eS	Sb	20 49 09.6	-1.0
SMLC	San Martn de	2.68	277	eP	Pn	20 48 34.5	-0.2
SMLC				eS	Sn	20 49 09.1	+1.6
BRRC	Barranca, Sant	2.69	239	eP	Pb	20 48 38.0	-1.5
BRRC				eS	Sg	20 49 14.9	-2.6
RUSC	La Rusia	3.09	213	eP	Pn	20 48 42.5	+1.7
RUSC				eS	Sn	20 49 20.7	+2.3
ARGC	Ariguani, Magd	3.14	296	eS	Sb	20 49 28.2	+2.5
URIC	Uribia, Colomb	3.24	349	eP	Pn	20 48 41.0	-1.5
URIC				eS	Sn	20 49 19.6	-1.8
BAUV	El Baul	3.33	82	eP	Pn	20 48 44.3	+0.6
BAUV				eS	Sn	20 49 22.5	-1.1
ZARC	Zaragoza, Cauc	3.59	254	i P	Pn	20 48 47.6	+0.4
ZARC				eS	Sb	20 49 39.2	+0.5
SMRC	Santa Marta, M	3.86	314	eP	Pn	20 48 48.8	-2.1
SMRC				eS	Sn	20 49 31.9	-4.8
SJCC	San Jacinto, C	4.00	291	eP	Pn	20 48 53.8	+0.9
SJCC				eS	Sn	20 49 41.8	+1.5
BENV	Beln	4.01	68	eP	Pn	20 48 54.1	+1.0
BENV				eS	Sn	20 49 39.5	-0.9
MOTC	Monteria, Cord	4.25	274	eP	Pn	20 48 57.2	+1.0
MOTC				eS	Sn	20 49 48.0	+1.8
PTGC	Puerto Gaitan,	4.33	190	eP	Pg	20 49 14.3	+0.3
PTGC				eS	Sg	20 50 06.6	-3.7
CHIC	Chingaza	4.50	211	eP	Pn	20 49 01.9	+1.8
CHIC				eS	Sn	20 49 51.7	-1.2
NORC	Norcasia	4.53	230	eP	Pn	20 49 01.6	+1.4
NORC				eS	Sn	20 49 54.8	+1.5
HELC	Santa Helena	4.71	241	eP	Pn	20 49 06.7	+3.7
HELC				eS	Sn	20 50 01.2	+3.0
PAYV	Puerto Ayacuch	4.80	129	eP	Pn	20 49 03.6	-0.3
VILC	Villavicencio,	4.92	208	eP	Pn	20 49 07.1	+1.4
VILC				eS	Sn	20 50 02.1	-1.1
GUY2C	Guyana, Caldas	5.12	231	eP	Pn	20 49 10.0	+1.3
GUY2C				eS	Sn	20 50 10.1	+1.7
ANIL	Santa Ana	5.64	225	eP	Pn	20 49 20.3	+4.6
ANIL				eS	Sn	20 50 23.3	+2.2
ORTC	Ortega, Tolima	5.96	220	eP	Pn	20 49 21.4	+1.5
ORTC				eS	Sn	20 50 28.7	+0.1
MACC	Macarena, Meta	6.77	201	eP	Pn	20 49 30.1	-0.9
MACC				eS	Sn	20 50 44.2	-4.4
PDAR	Pinedale Array	47.78	322	P	P	20 56 29.4	-0.2
	0.7nm,0.4s,baz=120,slow=10,SNR=11						
TORD	Torodi Ar. Bea	71.72	79	P	P	20 59 12.9	-1.7
	0.1nm,0.5s,baz=279,slow=7.4,SNR=1.9						
ASAR	Alice Springs	151.48	235	PKPbc	PKPdf	21 07 44.2	+3.3
	0.2nm,0.6s,baz=83,slow=2.9,SNR=2.2						
WRA	Warramunga Arr	152.64	243	PKPbc	PKPbc	21 07 48.3	-1.4
	0.4nm,0.5s,baz=104,slow=2.7,SNR=2.3						

IDC 09 20:48:11.2±2.0**, 31°.81S**×**178°.97W, h0km, mb4.3**/3**, mb1 4.5**/4**, mb1mx3.9**/35**, mbtmp4.3**/4**, ML3.7**/1**, Error ellipse: s-maj=48.5km s-min=31.0km az=57.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	7.19	205	Pn	Pn	20 49 56.3	-1.3
	1.1nm,0.3s,baz=120,slow=24,SNR=25						
URZ				Sn	Sn	20 51 10.2	-10
	9.2nm,0.3s,baz=222,slow=17,SNR=10						
ASAR	Alice Springs	42.23	269	P	P	20 56 06.2	-0.1
	1.8nm,0.7s,baz=107,slow=7.7,SNR=18						
WRA	Warramunga Arr	43.35	274	P	P	20 56 15.6	+0.1
	1.7nm,0.3s,baz=115,slow=7.6,SNR=22						
QSPA	South Pole Qui	58.30	180	P	P	20 58 08.0	+0.4
	3.6nm,0.6s,baz=45,slow=2.4,SNR=14						
FINES	FINESS Array B	146.16	339	PKPbc	PKPdf	21 07 51.3	-0.4
	2.5nm,0.8s,baz=32,slow=5.4,SNR=5.8						

IDC ***09*** *20:48:56.2±2.1, 43°.91N×144°.23E, h0km, mb3.9/4, mb1 3.9/5, mb1mx3.5/51, mbtmp3.8/5, ML2.4/1, Error ellipse: s-maj=48.0km s-min=16.6km az=104.0*
SKHL ***09*** *20:49:11.2±0.4, 43°.20N×143°.80E, h141km±7km, mb4.5/2, msha5.0/3*
JMA ***09*** *20:49:11.6±0.1, 43°.22N×143°.79E, h137km±1km, M3.2*
ISC 09 20:49:10.9±0.9**, 43°.19N**±0°.06×**143°.79E**±0°.04**, h141km**±6km**, n25, σ0ˢ71**/41**, mb3.8**/4**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAR	Ashorobuto	0.11	352	P	Pn	20 49 30.3	+0.5
JAR				eS	Sn	20 49 44.1	-0.2
JOB	Onbets	0.29	173	P	Pn	20 49 31.0	+0.7
JOB				eS	Sn	20 49 45.6	+0.7
JCH	Churui	0.66	209	P	Pn	20 49 32.4	+0.3
JCH				eS	Sn	20 49 47.6	-0.5
JAK	Akkeshi	0.69	106	P	Pn	20 49 32.5	+0.2
JAK				eS	Sn	20 49 48.3	-0.2
JNK	Nakash	0.79	59	P	Pn	20 49 33.2	+0.2
JTKR	Abashiri--Toko	0.79	6	P	Pn	20 49 33.1	+0.2
JTKR				eS	Sn	20 49 49.2	-0.6
AKK	Akkeshi	0.79	102	eP	Pn	20 49 33.4	+0.4
AKK				eS	Sn	20 49 49.7	-0.1
JFR	Furan	0.88	269	P	Pn	20 49 34.3	+0.6
JFR				eS	Sn	20 49 50.7	-0.3
JMP	Maruseppu	0.88	339	P	Pn	20 49 33.9	+0.2
JMP				eS	Sn	20 49 50.5	-0.7
JKHN	Kushirohamanak	1.01	96	P	Pn	20 49 35.2	+0.4
JKHN				eS	Sn	20 49 52.9	-0.1
JKK2	Kamakawa 2	1.02	312	P	Pn	20 49 35.3	+0.4
JKK2				eS	Sn	20 49 53.2	-0.1
JNBK	Urakawa-nobuka	1.19	220	P	Pn	20 49 36.9	+0.4
JNBK				eS	Sn	20 49 55.6	-0.4
GLVR	Golovnino	1.37	66	eP	Pn	20 49 39.0	+0.7
GLVR				eS	Sn	20 49 59.6	+0.3
GLVR				A	A	20 50 03.0	
	107nm,0.2s						
GLVR				A	A	20 50 03.0	
	281nm,0.2s						
NMR	Nemuro--Hokkai	1.43	82	i P	Pn	20 49 38.9	0.0
NMR				i S	Sn	20 49 59.3	-1.0
NEM2	Nemuro 2	1.44	82	P	Pn	20 49 38.9	-0.1
NEM2				eS	Sn	20 49 58.8	-1.7
JHR	Hokuryu	1.60	291	P	Pn	20 49 41.6	+0.8
YUK	Yuzh-Kuril'sk	1.73	60	eP	Pn	20 49 43.2	+1.0
YUK				AMB	AMB	20 49 47.0	
	101nm,0.3s						
YUK				eS	Sn	20 50 07.0	+0.8
YUK				A	A	20 50 11.0	
	152nm,0.2s						
YUK				A	A	20 50 11.0	
	198nm,0.2s						
JEW	Eniwo	1.75	259	P	Pn	20 49 43.5	+1.0
JSE	Soyaes	1.97	334	P	Pn	20 49 45.2	+0.2
KUR	Kuril'sk	3.57	54	eP	Pn	20 50 07.3	+2.1
KUR				AMB	AMB	20 50 15.0	
	70nm,0.9s						
KUR				eS	Sn	20 50 47.4	+0.1
KUR				A	A	20 50 57.4	
	30nm,0.9s						
KUR				A	A	20 50 57.4	
	60nm,0.9s						
MJAR	Matsushiro Arr	7.90	215	Pn	Pn	20 51 03.0	0.0
	0.0nm,0.3s,baz=24,slow=15,SNR=2.2						
SONM	Songino Array	26.43	293	P	P	20 54 35.2	+0.7
	0.8nm,0.8s,baz=96,slow=8.7,SNR=4.2						
MKAR	Makanchi Array	42.67	297	P	P	20 56 53.5	+0.1
	0.3nm,0.5s,baz=82,slow=8.2,SNR=1.7						
FINES	FINESS Array B	64.24	332	P	P	20 59 29.2	-1.1
	3.1nm,0.9s,baz=50,slow=9.2,SNR=3.9						
HFS	Hagfors	69.23	336	P	P	21 00 01.2	-0.7
	3.9nm,1.0s,baz=54,slow=7.3,SNR=4.2						

IDC 09 20:56:10.5±2.0**, 8°.04S**×**125°.38E, h0km, mb3.6**/1**, mb1 3.8**/5**, mb1mx3.5**/29**, mbtmp3.6**/5**, ML3.3**/4**, Error ellipse: s-maj=41.7km s-min=26.8km az=86.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	2.74	218	Pn	Pn	20 56 56.9	+1.1
	4.7nm,0.3s,baz=156,slow=7.5,SNR=7.4						
BATI				Sn	Sn	20 57 28.9	-0.7
	4.8nm,0.3s,baz=130,slow=23,SNR=6.1						
FITZ	Fitzroy Crossi	10.00	179	Pn	Pn	20 58 34.1	-1.5
	0.1nm,0.3s,baz=2.7,slow=11,SNR=1.8						
FITZ				Sn	Sn	21 00 20.9	-7.7
	0.4nm,0.3s,baz=131,slow=22,SNR=5.8						
WRA	Warramunga Arr	14.68	145	Pn	Pn	20 59 38.9	-0.7
	0.2nm,0.3s,baz=319,slow=13,SNR=14						
WRA				Sn	Sn	21 02 15.8	-7.3
	0.2nm,0.3s,baz=316,slow=28,SNR=3.2						
ASAR	Alice Springs	17.56	153	P	P	21 00 18.2	+0.1
	0.1nm,0.3s,baz=329,slow=12,SNR=11						
MKAR	Makanchi Array	66.67	329	P	P	21 07 03.1	-0.1
	0.7nm,0.9s,baz=120,slow=7.3,SNR=2.4						

FUNV ***09*** *21:37:38.9, 8°.48N×71°.39W, h2km, MW3.3*
ISC 09 21:37:38.0±1.2**, 8°.52N**±0°.03×**71°.37W**±0°.02**, h6km**±10km**, n26, σ1ˢ40**/47**, 1D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	Socops	0.56	114	i P	Pg	21 37 49.6	+0.8
SOCV				eS	Sg	21 37 57.4	+1.1
SOCV	Socops	0.56	114	eP	Pg	21 37 49.7	+0.8
SOCV				eS	Sb	21 37 58.4	-0.2
SDV	Santo Domingo	0.82	63	eP	Pb	21 37 54.9	+0.1
SDV				eS	Sb	21 38 06.4	+0.2
CAPV	Capacho	1.14	235	eP	Pg	21 37 58.9	-1.0
CAPV				eS	Sg	21 38 14.5	-0.1
PAMC	Pamplona, Colo	1.76	228	eP	Pb	21 38 11.5	+0.5
PAMC				eS	Sg	21 38 35.7	+1.0
MCQV	Machiques	1.91	323	eP	Pn	21 38 12.3	+1.2
MCQV				eS	Sb	21 38 37.4	0.0
OCAC	Ocana	1.95	262	eP	Pn	21 38 12.2	+0.5
OCAC				eS	Sn	21 38 37.4	+0.8
TAMC	Tame, Arauca	2.11	191	eP	Pb	21 38 16.3	-0.4
TAMC				eS	Sg	21 38 46.5	+0.6
ELOV	Elorza	2.40	129	eP	Pn	21 38 18.6	+0.6
ELOV				eS	Sn	21 38 47.4	-0.3
DABV	Dabajuro	2.50	17	eP	Pn	21 38 20.2	+1.0
DABV				eS	Sn	21 38 50.6	+0.5
SIQV	Siquisique	2.62	36	eP	Pn	21 38 21.8	+0.8
SIQV				eS	Sn	21 38 53.4	+0.3
SMLC	San Martn de	2.68	276	eP	Pb	21 38 25.3	-1.2
SMLC				eS	Sb	21 38 58.8	-0.9
RUSC	La Rusia	3.11	213	eP	Pn	21 38 29.9	+1.8
RUSC				eS	Sg	21 39 15.8	-2.3
BAUV	El Baul	3.32	82	eP	Pn	21 38 31.3	+0.7
BAUV				eS	Sn	21 39 09.9	-0.4
JACV	Jacura	3.58	44	eP	Pn	21 38 34.6	+0.5
JACV				eS	Sn	21 39 16.1	-0.7
ZARC	Zaragoza, Cauc	3.60	254	eP	Pn	21 38 36.6	+2.2
MONV	Montecano	3.69	22	⇓iP	Pn	21 38 37.1	+1.5
MONV				eS	Sn	21 39 18.6	-0.8
SMRC	Santa Marta, M	3.85	313	eP	Pn	21 38 36.5	-1.3
SPBC	San Pablo de B	3.91	223	eP	Pb	21 38 43.6	-3.9
BENV	Beln	3.99	69	eP	Pn	21 38 40.5	+0.6
BENV				eS	Sn	21 39 25.9	-1.1
SJCC	San Jacinto, C	4.00	290	eP	Pn	21 38 41.3	+1.3
MOTC	Monteria, Cord	4.25	274	eP	Pn	21 38 44.2	+0.9
MOTC				eS	Sn	21 39 34.5	+1.2
CHIC	Chingaza	4.52	211	eP	Pn	21 38 49.2	+1.8
CHIC				eS	Sn	21 39 42.7	+2.3
NORC	Norcasia	4.54	230	eP	Pn	21 38 47.1	-0.4
NORC				eS	Sn	21 39 44.1	+3.4
TACV	Tcata	4.58	69	eP	Pn	21 38 48.8	+0.8
PAYV	Puerto Ayacuch	4.80	130	eP	Pn	21 38 50.5	-0.5
PAYV				eS	Sn	21 39 43.6	-3.4

NNC ***09*** *21:45:01.0±3.4, 40°.02N×69°.03E, h0km, mb3.3, mpv2.9, Error ellipse: s-maj=28.0km s-min=13.9km az=7.0*
ISU ***09*** *21:45:01, 40°.04N×68°.95E, h10km*
ISC 09 21:45:02.8±1.7**, 40°.06N**±0°.06×**68°.92E**±0°.04**, h11km**±13km**, n11, σ0ˢ56**/21**, 5C-2D, Southeastern Uzbekistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZI	Dzhizak	0.84	274	P	Sb	21 45 31.0	+0.1
TAS	Tashkent	1.30	13	eP	Pb	21 45 27.0	-0.3
TAS				eS	Sn	21 45 45.0	+0.7
TGS	TashGRES	1.44	18	eP	Pn	21 45 28.0	-0.9
TGS				eS	Sn	21 45 47.0	-0.8
BTK	Batken	1.46	89	eP	Pn	21 45 29.0	-0.3
BTK				eS	Sg	21 45 50.0	+0.2
SAM	Samarkand	1.53	256	eP	Pb	21 45 31.0	-0.3
SAM				eS	Sg	21 45 52.0	-0.1
CHMG	Chimgan	1.70	29	eP	Pn	21 45 32.0	-0.7
CHMG				eS	Sg	21 45 57.0	-0.7
CHRV	Charvak	1.76	26	eP	Pn	21 45 34.0	+0.6
CHRV				eS	Sg	21 46 00.0	+0.5
NUT	Nurota	2.52	282	eP	Pn	21 45 44.0	+0.2
NUT				eS	Sn	21 46 15.0	+0.4
KK31	Karatay Array	3.27	21	⇑Pn	Pn	21 45 53.4	-0.6
	0.3nm,0.2s,baz=32,slow=16,SNR=12						
KK31				Pg	Pb	21 46 01.9	+1.0
	0.9nm,0.2s,baz=204,slow=16,SNR=19						
KK31				Lg	Lg	21 46 44.7	
	11nm,0.5s,baz=203,slow=31,SNR=9.9						
AAK	Ala-Archa	4.92	57	⇑Pg	Pb	21 46 29.6	+0.4
	2.0nm,0.7s						
AAK				⇓Sn	Sn	21 47 13.9	-0.1
	1.3nm,0.4s						
AAK				⇑Lg	Lg	21 47 34.0	
	4.6nm,0.9s						
TKM2	Tokmak 2	5.77	58	⇓Pg	Pb	21 46 43.8	+0.1
	1.8nm,0.8s						
TKM2				⇑Sn	Sn	21 47 35.3	+0.3
	1.0nm,0.7s						
TKM2				⇑Lg	Lg	21 48 01.5	
	5.3nm,0.7s						

SOME ***09*** *21:52:41.0, 43°.37N×82°.30E, h0km*
NNC ***09*** *21:52:44.8±1.5, 43°.45N×82°.30E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=13.6km s-min=4.9km az=138.0*
ISC 09 21:52:39.4±2.0**, 43°.37N**±0°.07×**82°.44E**±0°.07**, h11km**±13km**, n40, σ1ˢ39**/62**, 3C-7D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DJR	Jarkent	2.14	298	eP	Pg	21 53 21.4	+1.0
	24nm,0.3s						
DJR				eS	Sg	21 53 50.8	+2.6
	60nm,0.4s						
DJR	Jarkent	2.14	298	Pg	Pg	21 53 21.5	+1.0
	37nm,0.4s						
DJR				Lg	Lg	21 53 49.5	
	60nm,0.4s						
PDGK	Podgornoye	2.15	270	Pg	Pg	21 53 21.5	+0.9
	26nm,0.3s						
PDGK				Lg	Lg	21 53 49.8	
	104nm,0.5s						
PDGK	Podgornoye	2.15	270	⇑Pn	Pg	21 53 20.7	+0.1
	22nm,0.4s						
PDGK				⇓Sn	Sg	21 53 50.1	+1.7
	130nm,0.5s						
SHLS	Shalkode	2.18	265	eP	Pn	21 53 17.2	+1.6
	85nm,0.4s						
SHLS				eS	Sn	21 53 43.6	+0.8
	156nm,0.5s						
UZB	Uzynbulak	2.50	266	eP	Pg	21 53 27.0	-0.3
	10nm,0.4s						
UZB				eS	Sg	21 54 00.4	+0.6
	72nm,0.4s						
UZB	Uzynbulak	2.50	266	Pg	Pg	21 53 27.0	-0.3
	10nm,0.4s						
UZB				Lg	Lg	21 53 58.8	
	72nm,0.4s						
KAPS	Kapalarasan	2.92	312	eP	Pb	21 53 33.8	+2.3
	2.5nm,0.1s						
KAPS				eS	Sg	21 54 11.5	-1.7
	33nm,0.6s						
SATY	Saty	2.96	265	eP	Pg	21 53 35.3	-0.8
	6.0nm,0.1s						
SATY				eS	Sg	21 54 14.4	-0.1
	45nm,0.1s						
SATY	Saty	2.96	265	Pg	Pg	21 53 36.2	+0.1
	6.0nm,0.1s						
SATY				Lg	Lg	21 54 14.4	
	45nm,0.1s						
KURS	Kuram	3.11	274	eP	Pg	21 53 38.5	-0.4
	1.6nm,0.2s						
KURS				eS	Sg	21 54 19.6	+0.4
	9.1nm,0.6s						
KURS	Kuram	3.11	274	Pg	Pg	21 53 39.1	+0.2
	1.6nm,0.2s						
KURS				Lg	Lg	21 54 19.4	
	9.1nm,0.6s						
MK31	Makanchi Array	3.42	358	Pn	Pb	21 53 38.4	-1.7
	0.4nm,0.1s,baz=181,slow=14,SNR=184						
MK31				Pg	Pg	21 53 45.6	+0.7
	1.5nm,0.2s,baz=170,slow=16,SNR=96						
MK31				Lg	Lg	21 54 33.8	
	12nm,0.4s,baz=180,slow=28,SNR=6.3						
ARXS	Arharly	3.44	286	eP	Pg	21 53 43.3	-1.9
	2.4nm,0.2s						
ARXS				eS	Sg	21 54 28.1	-1.7
	20nm,0.4s						
ARXS	Arharly	3.44	286	Pg	Pg	21 53 43.9	-1.3
	2.4nm,0.2s						
ARXS				Lg	Lg	21 54 28.0	
	20nm,0.4s						
MAKZ	Makanchi	3.45	355	⇑Pn	Pb	21 53 38.6	-1.8
	3.3nm,1.0s						
MAKZ				⇑Pg	Pg	21 53 47.5	+2.0
	2.9nm,0.3s						
MAKZ				⇓Sn	Sb	21 54 20.2	-2.2
	1.8nm,0.3s						

MAKZ				⇓Lg	Lg	21 54 32.3	
	4.3nm,0.6s						
KOTS	**Kotyrbulak**	**3.89**	**270**	*e*P	**Pg**	**21 53 52.4**	**-1.4**
	10nm,0.5s						
KOTS				*e*S	**Sg**	**21 54 43.6**	**-0.6**
	32nm,0.8s						
KOTS	**Kotyrbulak**	**3.89**	**270**	Pg	**Pg**	**21 53 53.3**	**-0.6**
	10nm,0.5s						
KOTS				Lg	Lg	21 54 43.6	
	32nm,0.8s						
MDOK	**Medeo**	**3.94**	**269**	*e*P	**Pg**	**21 53 54.3**	**-0.5**
	3.1nm,0.4s						
MDOK				*e*S	**Sg**	**21 54 46.9**	**+1.1**
	14nm,0.5s						
MDOK	**Medeo**	**3.94**	**269**	Pg	**Pg**	**21 53 55.8**	**+1.0**
	3.3nm,0.7s						
MDOK				Lg	Lg	21 54 49.1	
	12nm,0.5s						
MDOK	**Medeo**	**3.94**	**269**	Pg	**Pg**	**21 53 55.3**	**+0.5**
	3.1nm,0.4s						
MDOK				Lg	Lg	21 54 47.1	
	14nm,0.5s						
CHKK	**Chushkaly**	**3.98**	**279**	*e*P	**Pg**	**21 53 54.2**	**-1.5**
	0.9nm,0.1s						
CHKK				*e*S	**Sg**	**21 54 47.1**	**-0.2**
	19nm,0.3s						
CHKK	**Chushkaly**	**3.98**	**279**	Pg	**Pg**	**21 53 54.8**	**-0.9**
	1.6nm,0.1s						
CHKK				Lg	Lg	21 54 46.5	
	19nm,0.3s						
TNSS	**Tian-Shan**	**4.03**	**267**	*e*P	**Pg**	**21 53 55.9**	**-0.6**
	1.7nm,0.3s						
TNSS				*e*S	**Sg**	**21 54 49.8**	**+1.1**
	5.6nm,0.7s						
TNSS	**Tian-Shan**	**4.03**	**267**	Pg	**Pg**	**21 53 56.0**	**-0.5**
	1.7nm,0.3s						
TNSS				Lg	Lg	21 54 48.7	
	5.6nm,0.7s						
KTBS	**Karatobe**	**4.20**	**277**	*e*P	**Pg**	**21 53 57.8**	**-2.0**
	2.1nm,0.5s						
KTBS				*e*S	**Sg**	**21 54 53.0**	**-1.1**
	23nm,0.3s						
KTBS	**Karatobe**	**4.20**	**277**	Pg	**Pg**	**21 54 00.1**	**+0.4**
	2.1nm,0.5s						
KTBS				Lg	Lg	21 54 55.5	
	23nm,0.3s						
MTBS	**Maitube**	**4.39**	**269**	*e*P	**Pg**	**21 54 02.2**	**-1.3**
	3.2nm,0.3s						
MTBS				*e*S	**Sg**	**21 55 00.7**	**+0.3**
	13nm,0.4s						
MTBS	**Maitube**	**4.39**	**269**	Pg	**Pg**	**21 54 02.6**	**-0.9**
	3.2nm,0.3s						
MTBS				Lg	Lg	21 55 00.4	
	13nm,0.4s						
ZSN	**Zaisan**	**4.42**	**22**	*e*P	**Pg**	**21 54 03.4**	**-0.6**
	4.2nm,0.5s						
ZSN				*e*S	**Sg**	**21 55 02.4**	**+1.1**
	7.2nm,0.6s						
KUU	**Kurty**	**4.46**	**279**	*e*P	**Pg**	**21 54 03.2**	**-1.5**
	1.8nm,0.4s						
KUU				*e*S	**Sg**	**21 55 01.9**	**-0.5**
	19nm,0.4s						
KUU	**Kurty**	**4.46**	**279**	Pg	**Pg**	**21 54 03.8**	**-0.9**
	1.8nm,0.4s						
KUU				Lg	Lg	21 55 02.2	
	19nm,0.4s						
KST	**Kastek**	**4.74**	**268**	*e*P	**Pg**	**21 54 08.5**	**-1.6**
	2.2nm,0.3s						
KST				*e*S	**Sg**	**21 55 11.1**	**-0.5**
	19nm,0.7s						
KST	**Kastek**	**4.74**	**268**	Pg	**Pg**	**21 54 09.6**	**-0.6**
	2.2nm,0.3s						
KST				Lg	Lg	21 55 11.8	
	19nm,0.7s						
DGS	**Degeres**	**4.86**	**271**	*e*P	**Pg**	**21 54 09.6**	**-2.9**
	1.4nm,0.3s						
DGS				*e*S	**Sg**	**21 55 13.4**	**-2.1**
	13nm,0.6s						
DGS	**Degeres**	**4.86**	**271**	Pg	**Pg**	**21 54 09.4**	**-3.1**
	1.4nm,0.3s						
DGS				Lg	Lg	21 55 11.6	
	13nm,0.6s						
KRBS	**Karabastau**	**4.92**	**276**	*e*P	**Pg**	**21 54 12.3**	**-1.4**
	0.8nm,0.2s						
KRBS				*e*S	**Sg**	**21 55 17.9**	**+0.4**
	10nm,0.5s						
KRBS	**Karabastau**	**4.92**	**276**	Pg	**Pg**	**21 54 11.1**	**-2.6**
	0.8nm,0.2s						
KRBS				Lg	Lg	21 55 14.2	
	10nm,0.5s						
TKM2	**Tokmak 2**	**5.02**	**267**	⇓Pg	**Pg**	**21 54 13.5**	**-2.1**
	1.4nm,0.8s						
TKM2				⇓Lg	Lg	21 55 21.9	
	8.1nm,0.6s						
AAK	**Ala-Archa**	**5.87**	**266**	⇓Pg	**Pg**	**21 54 32.2**	**+0.5**
	1.6nm,0.8s						
AAK				⇓Lg	Lg	21 55 50.0	
	9.3nm,1.2s						

*IDC **09** 22:23:21.0±0.6, 28°.77N×139°.70E, h374^{km}±6^{km}, mb3.6/19, mb1 3.7/25, mb1mx3.6/37, mbtmp4.4/25, Error ellipse: s-maj=11.7km s-min=7.7km az=77.0*

*JMA **09** 22:23:21.6±0.3, 28°.96N×140°.42E, h404^{km}±4^{km}, M3.9*

*NEIC **09** 22:23:22.2±1.7, 28°.76N±0°.08×139°.7E±0°.1, h386^{km}±7^{km}, mb4.2/75, Error ellipse: s-maj=15.6km s-min=11.5km az=86.0*

ISC 09 22:23:21.4±0.5, **28°.87N**±0°.05×**140°.01E**±0°.07, **h394**^{km}±5^{km}, **n188,** σ**1^{s}.44**/177, **mb4.1**/75, **4D, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.62**	**132**	P	**P**	**22 24 21.0**	**-0.2**
CBIJ				*e*S	**S**	**22 25 08.0**	**-1.5**
JCJ	**Chichijima**	**2.62**	**132**	P	**P**	**22 24 21.4**	**+0.2**
	93nm,0.3s,baz=340,slow=21,SNR=61						
JCJ				S	**S**	**22 25 07.3**	**-2.1**
	72nm,0.3s,baz=200,slow=5.8,SNR=4.8						
JCJ	**Chichijima**	**2.62**	**132**	Pn	**P**	**22 24 21.0**	**-0.2**
JHH2	**Haha-jima-NKT2**	**2.95**	**139**	P	**P**	**22 24 23.6**	**-0.2**
JHH2				*e*S	**S**	**22 25 13.0**	**-1.2**
JHJ2	**Mitsune**	**4.23**	**358**	S	**S**	**22 25 34.4**	**-0.7**
JHJ2	**Mitsune**	**4.23**	**358**	Pn	**P**	**22 24 36.4**	**+1.2**
JHJ	**Hachijo jima 2**	**4.24**	**357**	P	**P**	**22 24 36.2**	**+0.9**
	36nm,0.3s,baz=61,slow=21,SNR=19						
JHJ				S	**S**	**22 25 33.2**	**-2.1**
	38nm,0.3s,baz=73,slow=21,SNR=9.0						
BSO4	**Boso 4**	**6.11**	**3**	P	**P**	**22 24 56.0**	**+1.3**
JIE	**Ise**	**6.18**	**334**	P	**P**	**22 24 58.3**	**+2.6**
HMMJ	**Hamamatsu 2**	**6.27**	**343**	P	**P**	**22 24 58.4**	**+1.7**
JOD2	**Odawara 2**	**6.42**	**353**	P	**P**	**22 24 59.5**	**+1.2**
JNY	**Yasuok**	**6.72**	**345**	P	**P**	**22 25 03.4**	**+1.0**
INU	**Inuyama**	**6.94**	**339**	Pn	**P**	**22 25 05.7**	**+0.9**
JHU	**Hanno**	**6.99**	**355**	P	**P**	**22 25 04.9**	**-0.4**
JHU				*e*S	**S**	**22 26 23.8**	**-5.2**
JGF	**Kuroka**	**7.07**	**342**	Pn	**P**	**22 25 06.5**	**+0.2**
JMN	**Monobe**	**7.13**	**314**	Pn	**P**	**22 25 08.4**	**+1.3**
JRY	**Ryogami san**	**7.18**	**353**	P	**P**	**22 25 07.8**	**+0.2**
JRY				*e*S	**S**	**22 26 30.4**	**-2.7**
JYT	**Yasato**	**7.33**	**1**	P	**P**	**22 25 09.6**	**+0.4**
JYT	**Yasato**	**7.33**	**1**	Pn	**P**	**22 25 09.2**	**0.0**
JWT	**Wachi**	**7.49**	**330**	Pn	**P**	**22 25 12.0**	**+1.1**
JAG	**Ashikaga**	**7.54**	**357**	P	**P**	**22 25 10.7**	**-0.9**
JHO	**Hitachi**	**7.73**	**3**	*e*S	**S**	**22 26 40.9**	**-3.6**
MJAR	**Matsushiro Arr**	**7.79**	**349**	P	**P**	**22 25 13.3**	**-1.1**
	0.3nm,0.3s,baz=187,slow=15,SNR=8.9						
MJAR				S	**S**	**22 26 43.4**	**-2.6**
	0.2nm,0.3s,baz=139,slow=14,SNR=4.7						
MJAR	**Matsushiro Arr**	**7.79**	**349**		**P**	**22 25 14.6**	**+0.2**
MAJO	**Matsushiro**	**7.80**	**349**	Pn	**P**	**22 25 14.1**	**-0.3**
MAT	**Matsushiro**	**7.80**	**349**	P	**P**	**22 25 13.7**	**-0.7**
MAT				S	**S**	**22 26 41.7**	**-4.2**
JMZ	**Minamidaito 2**	**8.38**	**251**		P	22 25 17.6	-3.6
JHS	**Saijyo**	**8.46**	**318**		**P**	**22 25 23.1**	**+1.1**
JMM	**Marumori**	**8.99**	**4**	P	**P**	**22 25 29.7**	**+1.9**
JSD	**Sado**	**9.25**	**351**		**P**	**22 25 31.2**	**+0.4**
JOW	**Kunigami**	**10.58**	**262**	P	P	22 25 43.0	-2.7
	6.3nm,0.3s,baz=96,slow=7.6,SNR=8.3						
JOW	**Kunigami**	**10.58**	**262**		**P**	**22 25 45.0**	**-0.6**
JTM	**Tenmabayashi**	**11.92**	**4**	P	**P**	**22 26 03.3**	**+3.1**
KSRS	**Korea Array**	**13.24**	**313**	P	**P**	**22 26 14.9**	**+0.1**
	0.4nm,0.3s,baz=118,slow=11,SNR=6.6						
ERM	**Erimo**	**13.36**	**10**	P	P	22 26 19.8	+3.8
USA0B	**Ussuriysk Arra**	**16.58**	**339**	P	**P**	**22 26 51.8**	**+0.9**
USA0B				IAmb	IAmb	22 26 58.8	
	comp=Z,6.4nm,0.8s						
USRK	**Ussuriysk Ar.**	**16.58**	**339**	P	**P**	**22 26 52.7**	**+1.8**
	baz=144,slow=8.6,SNR=16						
USRK	**Ussuriysk Ar.**	**16.58**	**339**	P	**P**	**22 26 52.2**	**+1.3**
NACB	**Ninganchiao**	**17.12**	**258**	P	P	22 26 52.5	-4.5
NACB				IAmb	IAmb	22 27 09.5	
	comp=Z,19nm,0.7s						
YHNB	**Yeheng**	**17.15**	**260**	P	**P**	**22 26 54.8**	**-2.6**
YHNB				IAmb	IAmb	22 26 59.0	
	comp=Z,18nm,0.6s						
YULB	**Yu-li**	**17.66**	**256**	P	**P**	**22 26 60.0**	**-2.7**
SSLB	**Suanglung**	**17.81**	**258**	P	**P**	**22 27 02.7**	**-1.6**
TPUB	**Ta-pu**	**18.26**	**257**	P	**P**	**22 27 06.2**	**-2.9**
KNMB	**Chin-men Tao**	**19.80**	**262**	P	**P**	**22 27 23.3**	**-1.2**
TIA	**Tai'an**	**20.60**	**297**	⇓P	**P**	**22 27 30.2**	**-1.5**
TIA				pmax	pmax		
	comp=Z,13nm,0.6s						
KLR	**Kul'dur**	**21.29**	**345**	P	**P**	**22 27 40.0**	**+2.3**
	comp=Z,3.3nm,0.4s,baz=165,slow=7.2,SNR=11						
WHN	**Wuhan**	**22.33**	**281**	⇓P	**P**	**22 27 46.6**	**-0.9**
ENH	**Enshi**	**26.54**	**281**	P	**P**	**22 28 23.9**	**-1.4**
XAN	**Xi'an**	**26.95**	**289**	P	**P**	**22 28 27.8**	**-1.0**
XAN				pmax	pmax		
	comp=Z,42nm,0.6s						
LZH	**Lanzhou**	**31.21**	**293**	*e*P	**P**	**22 29 05.4**	**-0.9**
LZH				pmax	pmax		
	comp=Z,22nm,1.0s						
LBMI	**Labuha**	**31.69**	**204**	P	**P**	**22 29 10.1**	**-0.3**
	comp=Z,14nm,0.7s						
ULN	**Ulaanbaatar**	**31.71**	**316**	P	**P**	**22 29 11.1**	**+0.7**
ULN				IAmb	IAmb	22 29 11.8	
	comp=Z,8.2nm,1.1s						
SONM	**Songino Array**	**32.10**	**315**	P	**P**	**22 29 13.9**	**+0.2**
	comp=Z,1.7nm,0.6s,baz=122,slow=8.0,SNR=15						
SONM				PcP	**PcP**	**22 31 53.0**	**+1.0**
	comp=Z,0.7nm,0.4s,baz=133,slow=3.1,SNR=7.7						
SONM				ScP	**ScP**	**22 34 58.1**	**+0.6**
	comp=Z,0.7nm,0.8s,baz=161,slow=3.4,SNR=4.6						
SONM	**Songino Array**	**32.10**	**315**	P	**P**	**22 29 13.8**	**+0.1**
GTOI	**Gorontalo**	**32.44**	**213**	P	**P**	**22 29 15.7**	**-1.1**
	comp=Z,7.0nm,0.8s						
MRSI	**Marisa**	**33.09**	**215**	P	**P**	**22 29 21.3**	**-1.2**
	comp=Z,28nm,1.1s						
TOLI2	**Tolitoli**	**33.15**	**217**	P	**P**	**22 29 21.9**	**-1.0**
TOLI2				IAmb	IAmb	22 29 22.6	
	comp=Z,7.9nm,0.9s						
KMI	**Kunming**	**33.33**	**272**	⇓P	**P**	**22 29 23.8**	**-0.9**
KMI				pmax	pmax		
	comp=Z,18nm,1.0s						
SLVN	**Son La**	**33.44**	**265**	P	**P**	**22 29 24.3**	**-1.2**
SLVN				IAmb	IAmb	22 29 25.8	
	comp=Z,13nm,0.9s						
SANI	**Sanana**	**33.56**	**206**	P	**P**	**22 29 24.3**	**-2.1**
	comp=Z,46nm,0.5s						
APSI	**Ampana**	**34.44**	**214**	P	**P**	**22 29 32.2**	**-1.7**
	comp=Z,265nmcomp=Z,28nm,0.7s						
GTA	**Gaotai**	**34.63**	**298**	⇓P	**P**	**22 29 34.7**	**-0.8**
GTA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MMPI	**Merauke**	**37.12**	**179**	P	**P**	**22 29 57.6**	**+1.2**
MTKI	**Muara Teweh, K**	**38.17**	**223**	P	**P**	**22 30 04.3**	**-0.8**
CHTO	**Chiang Mai**	**38.70**	**264**	P	**P**	**22 30 08.1**	**-1.4**
CHTO				IAmb	IAmb	22 30 09.3	
	comp=Z,9.8nm,0.8s						
CM31	**Chiang Mai Arr**	**38.84**	**264**	P	**P**	**22 30 08.4**	**-2.2**
CMAR	**Chiang Mai Arr**	**38.84**	**264**	P	**P**	**22 30 09.6**	**-1.1**
	comp=Z,1.4nm,0.3s,baz=48,slow=9.4,SNR=19						
CMAR				PcP	**sP**	**22 32 14.4**	**+5.6**
	comp=Z,0.8nm,0.3s,baz=62,slow=0.9,SNR=6.2						
CMAR	**Chiang Mai Arr**	**38.84**	**264**	P	**P**	**22 30 09.1**	**-1.5**
KAPI	**Kappang**	**38.92**	**213**	P	**P**	**22 30 10.2**	**-1.1**
KAPI				IAmb	IAmb	22 30 12.0	
	comp=Z,7.0nm,0.8s						
BKSI	**Bulukumba**	**39.01**	**213**	P	**P**	**22 30 11.3**	**-0.7**
KBKI	**Kotabaru**	**39.34**	**220**	P	**P**	**22 30 13.3**	**-1.4**
	comp=Z,12nm,0.7s						
STKI	**Sintang**	**39.55**	**229**	P	**P**	**22 30 14.8**	**-1.6**
	comp=Z,2µmcomp=Z,9.8nm,0.4s						
BBKI	**Banjar Baru**	**40.22**	**221**	P	**P**	**22 30 20.2**	**-1.7**
MMRI	**Maumere**	**41.04**	**207**	P	**P**	**22 30 27.8**	**-0.7**
SOEI	**Soe**	**41.30**	**204**	P	**P**	**22 30 29.4**	**-1.3**
	comp=Z,13nm,0.9s						
EDFI	**Ende, Flores**	**41.37**	**208**	P	**P**	**22 30 30.6**	**-0.6**
	comp=Z,8.1nm,0.8s						
MTN	**Manton Dam**	**42.35**	**193**	P	**P**	**22 30 38.5**	**-0.4**
MTN				IAmb	IAmb	22 30 39.5	
	comp=Z,7.6nm,1.0s						
COEN	**Coen**	**42.69**	**175**	P	**P**	**22 30 43.8**	**+2.2**
KNRA	**Kununurra**	**45.60**	**195**	P	**P**	**22 31 03.9**	**-0.5**
TAPN	**Taplejung**	**45.84**	**281**	*e*P	**P**	**22 31 06.0**	**-0.6**
ODAN	**Odare**	**46.24**	**281**	*e*P	**P**	**22 31 09.0**	**-0.6**
	comp=Z,22nm,0.5s						
ZALV	**Zalesovo Beam**	**46.88**	**318**	P	**P**	**22 31 13.4**	**-0.4**
	comp=Z,1.1nm,0.5s,baz=97,slow=6.1,SNR=5.3						
ZALV				PcP	**PcP**	**22 32 39.8**	**+0.6**
	comp=Z,2.0nm,0.5s,baz=94,slow=4.1,SNR=7.9						
ZALV	**Zalesovo Beam**	**46.88**	**318**	P	**P**	**22 31 13.3**	**-0.4**
ZALV				PcP	**PcP**	**22 32 39.4**	**+0.2**
RAMN	**Ramite**	**46.90**	**281**	*e*P	**P**	**22 31 14.1**	**-0.5**
	comp=Z,19nm,0.4s						
JIRN	**Jiri**	**47.07**	**282**	*e*P	**P**	**22 31 15.9**	**-0.2**
MNSI	**Mandailing Nat**	**47.61**	**241**	P	**P**	**22 31 18.9**	**-0.9**
	comp=Z,33nm,0.7s						
PKIN	**Phulchoki**	**47.77**	**282**	*e*P	**P**	**22 31 20.4**	**-0.9**
MDSI	**Maura Dua**	**47.81**	**232**	P	**P**	**22 31 20.5**	**-0.8**
	comp=Z,606nmcomp=Z,28nm,0.9s						
KKN	**Kakani**	**47.81**	**283**	*e*P	**P**	**22 31 21.0**	**-0.6**
MK31	**Makanchi Array**	**47.86**	**308**	P	**P**	**22 31 20.8**	**-0.6**
MKAR	**Makanchi Array**	**47.86**	**308**	P	**P**	**22 31 21.2**	**-0.2**
	comp=Z,5.1nm,0.7s,baz=89,slow=8.9,SNR=49						
MKAR				PcP	**PcP**	**22 32 43.8**	**+0.8**
	comp=Z,2.0nm,0.6s,baz=80,slow=4.1,SNR=9.2						
MKAR				ScP	**ScP**	**22 35 58.7**	**-0.2**
	comp=Z,0.9nm,0.6s,baz=78,slow=3.1,SNR=4.8						
MKAR	**Makanchi Array**	**47.86**	**308**	P	**P**	**22 31 20.8**	**-0.6**
MKAR				PcP	**PcP**	**22 32 43.3**	**+0.4**
MAKZ	**Makanchi**	**48.08**	**308**	P	**P**	**22 31 22.7**	**-0.3**
MAKZ				IAmb	IAmb	22 31 24.5	
	comp=Z,5.1nm,0.7s						
GKN	**Gorkha**	**48.31**	**283**	*e*P	**P**	**22 31 24.5**	**-0.7**
	comp=Z,5.9nm,0.3s						
WB0	**Warramunga Arr**	**48.66**	**187**	P	**P**	**22 31 27.2**	**-0.5**
WR0	**Warramunga Arr**	**48.83**	**187**	P	**P**	**22 31 28.8**	**-0.2**
WR0				IAmb	IAmb	22 31 30.2	
	comp=Z,8.5nm,1.1s						
WB2	**Warramunga Arr**	**48.84**	**187**	P	**P**	**22 31 27.7**	**-1.3**
WB2				IAmb	IAmb	22 31 30.7	
	comp=Z,6.5nm,0.9s						
WRA	**Warramunga Arr**	**48.84**	**187**	P	**P**	**22 31 28.3**	**-0.7**
	comp=Z,3.9nm,0.5s,baz=5.8,slow=7.8,SNR=30						
WRA				PcP	**pP**	**22 32 48.0**	**+1.1**
	comp=Z,3.5nm,0.7s,baz=0.6,slow=3.9,SNR=10.0						
WRA				ScP	**ScP**	**22 36 03.8**	**+0.5**
	comp=Z,1.3nm,0.8s,baz=359,slow=4.6,SNR=5.9						
WRA	**Warramunga Arr**	**48.84**	**187**	P	**P**	**22 31 28.0**	**-1.0**
GSI	**Gunungsitoli**	**48.85**	**244**	P	**P**	**22 31 28.1**	**-1.1**
	comp=Z,3µmcomp=Z,61nm,0.9s						
GSI	**Gunungsitoli**	**48.85**	**244**	P	**P**	**22 31 27.2**	**-2.0**
DANN	**Dangsing**	**48.97**	**284**	*e*P	**P**	**22 31 30.1**	**-0.2**
KOLN	**Koldanda**	**49.26**	**283**	*e*P	**P**	**22 31 32.0**	**-0.4**
	comp=Z,24nm,0.8s						
SISI	**Saibi**	**49.34**	**240**	P	**P**	**22 31 31.4**	**-1.5**
	comp=Z,12nm,0.5s						
PPSI	**Pulau Pagai**	**49.60**	**237**	P	**P**	**22 31 33.6**	**-1.2**
	comp=Z,124nm,1.0s						
PYUN	**Piuthan**	**49.69**	**284**	*e*P	**P**	**22 31 35.4**	**-0.2**
	comp=Z,48nm,0.3s						
NRIK	**Noril'sk**	**50.30**	**339**	P	**P**	**22 31 40.5**	**+1.4**
	comp=Z,3.6nm,0.6s,baz=114,slow=11,SNR=5.1						
NRIK	**Noril'sk**	**50.30**	**339**	P	**P**	**22 31 39.8**	**+0.6**
KURK	**Kurchatov**	**50.37**	**314**	P	**P**	**22 31 39.5**	**-0.4**
KURK				IAmb	IAmb	22 31 40.6	
	comp=Z,8.6nm,0.8s						
PRZ	**Przheval'sk**	**50.82**	**303**	P	**P**	**22 31 43.2**	**-0.5**
PRZ				IAmb	IAmb	22 31 45.5	
	comp=Z,19nm,0.8s						
TARG	**Taragay, Kyrgy**	**51.34**	**302**	P	**P**	**22 31 48.1**	**+0.3**
TARG				IAmb	IAmb	22 31 49.9	
	comp=Z,6.7nm,0.9s						
AS31	**Alice Springs**	**52.56**	**187**	P	**P**	**22 31 56.9**	**+0.5**
ASAR	**Alice Springs**	**52.57**	**187**	P	**P**	**22 31 56.8**	**+0.4**
	comp=Z,2.8nm,0.6s,baz=18,slow=12,SNR=40						
ASAR				PcP	**PcP**	**22 33 02.6**	**+2.0**
	comp=Z,2.1nm,0.8s,baz=11,slow=4.6,SNR=11						
ASAR	**Alice Springs**	**52.57**	**187**	P	**P**	**22 31 56.2**	**-0.2**
TKM2	**Tokmak 2**	**52.83**	**304**	P	**P**	**22 31 58.9**	**+0.5**
	SNR=7.7						
KSH	**Kashi**	**53.02**	**299**	P	**P**	**22 32 03.0**	**+3.3**
KSH				pmax	pmax		
	comp=Z,15nm,0.9s						
KBK	**Karagaybulak**	**53.33**	**303**	P	**P**	**22 32 02.4**	**+0.4**
	SNR=11						
AAK	**Ala-Archa**	**53.67**	**304**	P	**P**	**22 32 04.5**	**+0.2**
	SNR=6.2						
AAK	**Ala-Archa**	**53.67**	**304**	P	**P**	**22 32 04.0**	**-0.4**
AAK				IAmb	IAmb	22 32 04.9	
	comp=Z,4.0nm,0.6s						
UCH	**Uchtor**	**53.71**	**303**	P	**P**	**22 32 06.0**	**+0.9**
	SNR=9.7						
PSA00	**Pilbara Seismi**	**53.79**	**203**	P	**P**	**22 32 04.3**	**-0.9**
PSA00				IAmb	IAmb	22 32 05.7	
	comp=Z,9.2nm,0.9s						
J20K	**Nowinta River**	**53.91**	**30**	P	P	22 32 09.3	+3.8
J20K				IAmb	IAmb	22 32 11.4	
	comp=Z,6.2nm,0.8s						
KDAK	**Kodiak Island**	**54.12**	**38**	P	P	22 32 10.0	+3.0
	comp=Z,7.2nm,0.9s,baz=303,slow=2.5,SNR=21						
KDAK	**Kodiak Island**	**54.12**	**38**	P	P	22 32 10.3	+3.2
KDAK				IAmb	IAmb	22 32 33.0	
	comp=Z,15nm,1.1s						
EKS2	**Erkin-Say**	**54.19**	**304**	P	**P**	**22 32 08.1**	**0.0**
	SNR=5.7						
AML	**Almayashu**	**54.33**	**303**	P	**P**	**22 32 10.2**	**+0.9**
	SNR=17						
IMAR	**Indian Mountai**	**54.34**	**27**	P	P	22 32 11.8	+3.2
PPLA	**Purkeypile**	**54.63**	**31**	P	P	22 32 15.7	+4.8
PPLA				IAmb	IAmb	22 32 44.3	
	comp=Z,6.4nm,1.0s						
H21K	**Melozitna Rive**	**54.68**	**28**	P	P	22 32 15.2	+4.2
EIDS	**Eidsvold**	**54.97**	**168**	P	**P**	**22 32 15.3**	**+1.7**
BRLK	**Bradley Lake**	**55.07**	**35**	P	P	22 32 17.5	+3.7
BRLK				IAmb	IAmb	22 32 46.8	
	comp=Z,16nm,1.1s						
BRVK	**Borovoye**	**55.49**	**317**	P	**P**	**22 32 16.9**	**0.0**
BRVK				IAmb	IAmb	22 32 18.1	
	comp=Z,6.3nm,0.9s						
RND	**Reindeer**	**56.18**	**31**	P	P	22 32 24.9	+3.2
KNK	**Knik Glacier**	**56.30**	**33**	P	P	22 32 26.2	+3.7
KNK				IAmb	IAmb	22 32 42.6	
	comp=Z,7.6nm,1.0s						
NIL	**Nilore**	**56.38**	**293**	P	**P**	**22 32 24.8**	**+1.3**
KK31	**Karatay Array**	**56.49**	**305**	P	**P**	**22 32 24.2**	**+0.1**
KKAR	**Karatay Array**	**56.49**	**305**	P	**P**	**22 32 24.3**	**+0.2**
H24K	**Noodor Dome**	**56.72**	**28**	P	P	22 32 29.6	+4.2
BTK	**Batken**	**56.83**	**301**	P	**P**	**22 32 26.6**	**0.0**
SCM	**Sheep Creek Mo**	**56.85**	**33**	P	P	22 32 29.8	+3.5
SCM				IAmb	IAmb	22 32 53.1	
	comp=Z,5.9nm,1.0s						
ILAR	**Eielson Array**	**57.09**	**29**	P	P	22 32 30.6	+2.7
	comp=Z,1.4nm,0.9s,baz=253,slow=4.9,SNR=12						
ILAR	**Eielson Array**	**57.09**	**29**	P	P	22 32 30.9	+3.0
GAR	**Garm**	**57.43**	**300**	P	**P**	**22 32 31.0**	**+0.2**
GAR				IAmb	IAmb	22 32 31.5	
	comp=Z,16nm,0.6s						
RIDG	**Independent Ri**	**57.98**	**30**	P	P	22 32 37.5	+3.4
BMAR	**Burnt Mountain**	**58.10**	**26**	P	P	22 32 39.5	+4.7
DOT	**Dot Lake**	**58.33**	**31**	P	P	22 32 39.2	+2.7
DOT				IAmb	IAmb	22 32 40.4	
	comp=Z,4.5nm,0.7s						
SCRK	**Sand Creek**	**58.35**	**30**	P	P	22 32 40.0	+3.3
SCRK				IAmb	IAmb	22 32 40.7	
	comp=Z,4.3nm,0.8s						
CHGR	**Chuyangaron**	**58.39**	**300**	P	**P**	**22 32 36.9**	**-0.5**
BERG	**Berg Lake**	**58.66**	**34**	P	P	22 32 42.4	+3.7
BERG				IAmb	IAmb	22 32 42.9	
	comp=Z,23nm,1.1s						
WAX	**Waxell Ridge**	**59.07**	**34**	P	P	22 32 45.4	+3.8
WAX				IAmb	IAmb	22 32 46.1	
	comp=Z,21nm,0.9s						
ISLE	**Juniper Island**	**59.31**	**34**	P	P	22 32 46.8	+3.5
ISLE				IAmb	IAmb	22 33 04.0	
	comp=Z,32nm,1.2s						
L27K	**Beaver Creek,**	**59.36**	**31**	P	P	22 32 47.2	+3.7
BCAR	**Beaver Creek A**	**59.38**	**31**	P	P	22 32 47.6	+4.0
KBL	**Kabul**	**59.52**	**295**	P	**P**	**22 32 45.4**	**+0.2**
FORT	**Forrest**	**60.40**	**192**	P	**P**	**22 32 50.7**	**0.0**
FORT				IAmb	IAmb	22 33 14.1	
	comp=Z,29nm,1.1s						
STKA	**Stephens Creek**	**60.44**	**178**	P	**P**	**22 32 51.7**	**+0.7**
	comp=Z,1.1nm,0.4s,baz=114,slow=6.7,SNR=3.8						
EPYK	**Eagle Plains**	**61.25**	**27**	P	P	22 33 00.0	+4.0
EPYK				IAmb	IAmb	22 33 00.7	
	comp=Z,8.1nm,0.8s						
ARU	**Arti**	**61.84**	**321**	P	**P**	**22 33 00.4**	**+0.3**
INK	**Inuvik**	**62.22**	**25**	P	P	22 33 05.4	+3.1
	comp=Z,0.9nm,0.5s,baz=290,slow=5.3,SNR=8.0						
INK	**Inuvik**	**62.22**	**25**	P	P	22 33 04.9	+2.6
ABKAR	**Akbulak array**	**62.48**	**313**	P	**P**	**22 33 04.5**	**+0.2**
ARCES	**ARCESS Array B**	**71.23**	**340**	P	**P**	**22 34 00.4**	**+1.8**
	comp=Z,4.3nm,0.6s,baz=67,slow=8.6,SNR=34						
ARCES	**ARCESS Array B**	**71.23**	**340**	P	**P**	**22 34 00.2**	**+1.6**
ARCES				IAmb	IAmb	22 34 08.5	
	comp=Z,6.3nm,1.1s						
KBZ	**Khabaz**	**75.39**	**312**	P	**P**	**22 34 24.0**	**+1.0**
	comp=Z,18nm,0.7s,baz=101,slow=3.4,SNR=42						
KIV	**Kislovodsk**	**75.43**	**312**	P	**P**	**22 34 25.2**	**+1.9**
FIA1	**FINESS Array S**	**75.50**	**333**	P	**P**	**22 34 24.0**	**+0.8**
FINES	**FINESS Array B**	**75.50**	**333**	P	**P**	**22 34 24.3**	**+1.1**
	comp=Z,3.1nm,0.3s,baz=74,slow=4.9,SNR=61						
PABE	**Paberze**	**79.86**	**329**	P	**P**	**22 34 48.2**	**+1.0**
AKASG	**Malin Array Be**	**80.05**	**323**	P	**P**	**22 34 48.6**	**+0.3**
	comp=Z,3.9nm,0.6s,baz=50,slow=5.3,SNR=16						
AKASG	**Malin Array Be**	**80.05**	**323**	P	**P**	**22 34 49.1**	**+0.8**
AKASG				IAmb	IAmb	22 34 49.8	
	comp=Z,4.1nm,1.1s						
AKBB	**Malin Array Si**	**80.05**	**323**	P	**P**	**22 34 48.8**	**+0.6**
AKBB				IAmb	IAmb	22 34 49.4	
	comp=Z,6.8nm,0.7s						
HRY	**Holter Researc**	**80.77**	**41**	P	**P**	**22 34 52.7**	**+0.4**
NVAR	**Mina Array Bea**	**80.92**	**51**	P	P	22 34 56.8	+3.3
	comp=Z,1.5nm,0.7s,baz=277,slow=5.9,SNR=12						
NC405	**NORSAR Array S**	**81.02**	**337**	P	**P**	**22 34 53.3**	**+0.1**
NB2	**NORSAR Subarra**	**81.24**	**337**	P	**P**	**22 34 54.4**	**0.0**
	comp=Z,0.9nm,0.5s,baz=46,slow=5.1						
NOA	**NORSAR Array B**	**81.24**	**337**	P	**P**	**22 34 55.2**	**+0.8**
	comp=Z,0.8nm,0.5s,baz=54,slow=6.6,SNR=11						
GAZ	**Gaziantep**	**82.31**	**308**	P	**P**	**22 35 00.4**	**0.0**
BNN	**Bunyan**	**82.38**	**310**	P	**P**	**22 35 01.9**	**+1.0**
RAYN	**Ar Rayn**	**82.68**	**293**	P	**P**	**22 35 03.2**	**+0.7**
BR131	**Keskin Array S**	**83.38**	**312**	P	**P**	**22 35 07.1**	**+1.2**
BRTR	**Keskin Array B**	**83.38**	**312**	P	**P**	**22 35 06.8**	**+0.9**
	comp=Z,5.1nm,0.7s,baz=91,slow=4.9,SNR=9.6						
BRTR	**Keskin Array B**	**83.38**	**312**	P	**P**	**22 35 07.2**	**+1.2**
BUR08	**Bucovina Ar. S**	**83.97**	**322**	P	**P**	**22 35 09.7**	**+1.1**
BUR08				IAmb	IAmb	22 35 09.9	
	comp=Z,2.5nm,0.9s						
BURAR	**Bucovina Array**	**83.97**	**322**	P	**P**	**22 35 09.7**	**+1.1**
BURAR				IAmb	IAmb	22 35 10.7	
	comp=Z,3.3nm,1.1s						
GERES	**GERESS Array B**	**88.99**	**328**	P	**P**	**22 35 32.8**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=39,slow=6.3,SNR=3.5						
TORD	**Torodi Ar. Bea**	**121.97**	**310**	PKP	**PKiKP**	**22 41 31.2**	**+0.6**
	comp=Z,1.2nm,0.4s,baz=64,slow=0.7,SNR=26						
LPAZ	**La Paz**	**151.24**	**70**	PKPbc	**PKPab**	**22 42 34.0**	**-6.0**
	comp=Z,1.3nm,0.7s,baz=277,slow=2.6,SNR=4.5						
PLCA	**Paso Flores**	**152.40**	**124**	PKPbc	**PKiKP**	**22 42 34.8**	**+3.0**
	comp=Z,1.3nm,0.7s,baz=260,slow=6.1,SNR=3.5						

*IDC **09** 22:37:24.1±2.5, 13°.32N×92°.11W, h0^{km}, mb4.0/7, mb1 4.2/10, mb1mx3.9/39, mbtmp3.9/10, ML3.5/3, MS3.5/4, Ms1 3.5/4, ms1mx2.9/32, Error ellipse: s-maj=65.4km s-min=21.2km az=31.0*

*SNET **09** 22:37:26.3±1.0, 13°.22N×92°.01W, h0^{km}±986^{km}, ML3.5*

*UCR **09** 22:37:26.3±0.8, 13°.17N×92°.26W, h48^{km}, ML3.4, mb4.4(NEIC)*

*NEIC **09** 22:37:32.6±1.7, 13°.58N±0°.10×92°.0W±0°.1, h48^{km}±10^{km}, mb4.4/9, Error ellipse: s-maj=16.9km s-min=10.4km az=46.0*

ISC 09 22:37:29.9±1.1, **13°.4N**±0°.1×**92°.17W**±0°.08, **h37**^{km}**, n45,** σ**1^{s}.20**/53, **mb4.2**/11, **MS3.5**/4, **Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTAL	**Retalhuleu**	**1.20**	**23**		**Pn**	**22 37 50.0**	**-0.2**
HUEH	**Huehuetenango**	**2.00**	**19**	Pn	**Pn**	**22 38 01.5**	**0.0**
CEVE	**Cerro Verde**	**2.51**	**80**	*e*P	**Pn**	**22 38 07.2**	**-1.3**
CEVE	**Cerro Verde**	**2.51**	**80**	*e*P	**Pn**	**22 38 07.2**	**-1.3**
JAYA	**Jayaque - finc**	**2.66**	**84**	*e*P	**Pn**	**22 38 08.0**	**-2.4**

JAYA				*e*S	Sn	22 38 40.7	-0.8
JAYA				IAML		22 38 45.4	
	comp=Z,252nm,0.2s						
JAYA	Jayaque - finc	2.66	84	*e*P	Pn	22 38 08.0	-2.4
JAYA				*e*S	Sn	22 38 40.7	-0.8
JAYA				IAML		22 38 45.4	
	comp=Z,252nm,0.2s						
TACO	Tacachico	2.80	78	*e*P	Pn	22 38 10.8	-1.4
TACO				*e*S	Sn	22 38 46.0	+1.3
TACO	Tacachico	2.80	78	*e*P	Pn	22 38 10.8	-1.4
TACO				*e*S	Sn	22 38 46.0	+1.3
CCIG	Comitan	2.85	1	Pn	Pn	22 38 14.4	+1.3
MTO3	Montecristo	2.90	70	Pn	Pn	22 38 12.5	-1.3
ESQI	Esquipulas	2.98	67	Pn	Pn	22 38 14.0	-0.7
SJTE	Alcalda de S	3.09	86	*e*P	Pn	22 38 15.0	-1.2
SJTE				*e*S	Sn	22 38 52.8	+0.9
SJTE	Alcalda de S	3.09	86	*e*P	Pn	22 38 15.0	-1.2
SJTE				*e*S	Sn	22 38 52.8	+0.9
COEG	Centro de Oper	3.21	86	*e*P	Pn	22 38 16.6	-1.2
COEG				IAML		22 38 18.2	
	comp=Z,113nm,0.3s						
COEG				*e*S	Sn	22 38 55.1	+0.1
COEG	Centro de Oper	3.21	86	*e*P	Pn	22 38 16.6	-1.2
COEG				IAML		22 38 18.2	
	comp=Z,113nm,0.3s						
COEG				*e*S	Sn	22 38 55.1	+0.1
SCLA	Alcaldia de Sa	3.36	85	*e*P	Pn	22 38 19.0	-1.0
SCLA	Alcaldia de Sa	3.36	85	*e*P	Pn	22 38 19.0	-1.0
CMIG	Matias Romero	4.50	325	Pn	Pn	22 38 34.7	-0.8
	comp=Z,3.3nm,0.3s,baz=161,slow=8.9,SNR=24						
CMIG				Sn	Sn	22 39 24.7	-1.9
	comp=Z,6.6nm,0.3s,baz=118,slow=9.6,SNR=4.6						
HZTE	Horizontes, Gu	6.97	112	Pn	Pn	22 39 09.7	+0.1
ORTG	Ortega, Santa	7.24	114	Pn	Pn	22 39 14.1	+0.8
JTS	Las Juntas de	7.72	113	Pn	Pn	22 39 16.3	-3.6
	comp=Z,0.3nm,0.3s,baz=319,slow=9.3,SNR=2.5						
RIMA	Rio Macho	8.91	113	Pn	Pn	22 39 37.9	+1.5
TX32	Lajitas Array	19.10	328	P	Pn	22 41 50.7	0.0
TXAR	Lajitas Array	19.10	328	P	P	22 41 50.1	+0.5
	comp=Z,0.1nm,0.3s,baz=156,slow=9.7,SNR=9.2						
TXAR	Lajitas Array	19.10	328	P	Pn	22 41 51.0	+0.3
TX31	Lajitas Ar. Si	19.10	328	P	Pn	22 41 50.9	+0.2
Z47A	Carrollton	20.05	10	P	P	22 41 59.2	-0.7
Z47A				IAmb	IAmb	22 42 09.2	
	comp=Z,22nm,0.8s						
SDV	Santo Domingo	21.60	100	P	P	22 42 15.8	-1.3
	comp=Z,10nm,0.7s,baz=329,slow=9.4,SNR=1.9						
V48A	Smith Brothers	22.75	11	P	P	22 42 28.0	-0.9
V48A				IAmb	IAmb	22 42 36.7	
	comp=Z,7.4nm,0.7s						
TKL	Tuckaleechee C	23.41	17	P	P	22 42 35.9	+0.3
	comp=Z,6.7nm,0.9s,baz=180,slow=9.0,SNR=3.8						
TKL				LR	LR	22 52 57.7	
	comp=Z,126nm,18.3s,baz=228,slow=40						
TKL	Tuckaleechee C	23.41	17	P	P	22 42 35.4	-0.2
S44A	Carbondale	24.32	6	P	P	22 42 43.7	-0.4
SIUC	Southern Illin	24.35	6	P	P	22 42 43.6	-0.7
SIUC				IAmb	IAmb	22 42 45.0	
	comp=Z,17nm,0.8s						
T50A	Nancy	24.41	14	P	P	22 42 44.0	-0.9
T50A				IAmb	IAmb	22 42 46.3	
	comp=Z,4.5nm,0.6s						
SJG	San Juan	25.46	76	LR	LR	22 52 02.0	
	comp=Z,46nm,20.3s,baz=294,slow=34						
NVAR	Mina Array Bea	34.02	322	P	P	22 44 12.0	+1.3
	comp=Z,1.2nm,0.7s,baz=136,slow=8.4,SNR=11						
NVAR	Mina Array Bea	34.02	322	P	P	22 44 12.7	+2.0
SCHQ	Schefferville	45.83	20	P	P	22 45 47.8	-0.3
	comp=Z,3.6nm,0.7s,baz=207,slow=2.3,SNR=1.8						
SCHQ				LR	LR	23 06 05.2	
	comp=Z,112nm,20.0s,baz=253,slow=38						
BCAR	Beaver Creek A	60.51	337	P	P	22 47 36.6	+0.5
ILAR	Eielson Array	63.31	337	P	P	22 47 54.5	-0.4
	comp=Z,1.3nm,0.9s,baz=137,slow=4.7,SNR=11						
ILAR	Eielson Array	63.31	337	P	P	22 47 54.8	0.0
BMAR	Burnt Mountain	63.78	340	P	P	22 47 58.3	+0.4
TOLK	Toolik Lake Re	66.01	340	P	P	22 48 12.0	-0.5
TOLK				IAmb	IAmb	22 48 25.9	
	comp=Z,6.2nm,1.2s						
ESDC	Sonseca Array	80.21	52	P	P	22 49 36.2	-0.8
	comp=Z,0.2nm,0.6s,baz=278,slow=4.7,SNR=4.8						
NOA	NORSAR Array B	84.74	28	P	P	22 50 01.9	+1.8
	comp=Z,1.8nm,0.9s,baz=302,slow=4.9,SNR=2.3						
NOA				LR	LR	23 26 21.4	
	comp=Z,20nm,20.4s,baz=225,slow=35						

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*UCR **09** 22:39:05.1±1.1, 13°.13N×92°.27W, h35^{km}±551^{km}, ML3.9*

SNET 09 22:39:04.9±1.1**, 13°.13N×92°.28W, h34**^{km}±567^{km}**, ML4.1, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTR	El Retiro	2.67	73	*e*P	Pn	22 39 45.9	+0.3
RTR	El Retiro	2.67	73	*e*P	Pn	22 39 45.9	+0.3
CEVE	Cerro Verde	2.67	75	*e*P	Pn	22 39 46.0	+0.3
CEVE				IAML		22 40 22.1	
	comp=Z,978nm,0.4s						
CEVE	Cerro Verde	2.67	75	*e*P	Pn	22 39 46.0	+0.3
CEVE				IAML		22 40 22.1	
	comp=Z,978nm,0.4s						
JAYA	Jayaque - finc	2.80	79	*e*P	Pn	22 39 47.2	-0.2
JAYA				*e*S	Sn	22 40 19.9	-0.2
JAYA				IAML		22 40 24.4	
	comp=Z,527nm,0.3s						
JAYA	Jayaque - finc	2.80	79	*e*P	Pn	22 39 47.2	-0.2
JAYA				*e*S	Sn	22 40 19.9	-0.2
JAYA				IAML		22 40 24.4	
	comp=Z,527nm,0.3s						
PMON	Piamonte	2.94	78	*e*P	Pn	22 39 49.5	+0.2
PMON				*e*S	Sn	22 40 24.4	+0.9
PMON	Piamonte	2.94	78	*e*P	Pn	22 39 49.5	+0.2
PMON				*e*S	Sn	22 40 24.4	+0.9
TACO	Tacachico	2.96	73	*e*P	Pn	22 39 50.4	+0.8
TACO				*e*S	Sn	22 40 25.8	+1.9
TACO	Tacachico	2.96	73	*e*P	Pn	22 39 50.4	+0.8
TACO				*e*S	Sn	22 40 25.8	+1.9
BOQS	Boqueron	2.98	78	*e*P	Pn	22 39 50.7	+0.8
BOQS	Boqueron	2.98	78	*e*P	Pn	22 39 50.7	+0.8
MTO3	Montecristo	3.10	66	*e*P	Pn	22 39 52.0	+0.4
MTO3	Montecristo	3.10	66	*e*P	Pn	22 39 52.0	+0.4
ESQI	Esquipulas	3.18	63	*e*P	Pn	22 39 53.4	+0.7
SJTE	Alcalda de S	3.22	81	*e*P	Pn	22 39 54.2	+1.1
SJTE				*e*S	Sn	22 40 31.9	+1.6
SJTE	Alcalda de S	3.22	81	*e*P	Pn	22 39 54.2	+1.1
SJTE				*e*S	Sn	22 40 31.9	+1.6
PAVA	Las Pavas	3.30	80	*e*P	Pn	22 39 55.4	+1.1
PAVA	Las Pavas	3.30	80	*e*P	Pn	22 39 55.4	+1.1
COEG	Centro de Oper	3.34	81	*e*P	Pn	22 39 55.3	+0.5
COEG				*e*S	Sn	22 40 34.5	+1.1
COEG	Centro de Oper	3.34	81	*e*P	Pn	22 39 55.3	+0.5
COEG				*e*S	Sn	22 40 34.5	+1.1
SCLA	Alcaldia de Sa	3.50	80	*e*P	Pn	22 39 58.2	+1.3
SCLA	Alcaldia de Sa	3.50	80	*e*P	Pn	22 39 58.2	+1.3
LCND	La Caada	4.27	87	*e*P	Pn	22 40 08.0	+0.4
LCND	La Caada	4.27	87	*e*P	Pn	22 40 08.0	+0.4

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*IDC **09** 22:41:30.7±0.4, 35°.27S×14°.98W, h0^{km}, mb4.2/5, mb1 4.2/5, mb1mx4.0/26, mbtmp4.2/5, MS4.1/15, Ms1 4.1/15, ms1mx4.0/21, Error ellipse: s-maj=19.9km s-min=5.2km az=90.0*

*NEIC **09** 22:41:32.3±1.4, 35°.3S±0°.1×15°.4W±0°.1, h10^{km}±1^{km}, mb4.9/26, Error ellipse: s-maj=23.9km s-min=6.7km az=146.0*

*GCMT **09** 22:41:35.3±0.3, 35°.36S±0°.04×15°.16W±0°.02, h18^{km}±1^{km}, MW4.9/81, Moment Tensor Solution. s30,c32; s81,c107; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.16±.21; $M_{\theta\theta}$0.70±.14; $M_{\phi\phi}$2.45±.13; $M_{r\theta}$0.59±.46; $M_{\theta\phi}$-0.69±.08; $M_{\phi r}$-0.67±.30; Best double couple: $M_0$3.05600×10^{16} NP1:ϕ_s165.00000°, δ37.00000°, λ-82.00000°. NP2: ϕ_s335.00000°, δ53.00000°, λ-96.00000°. Principal axes: T 2.8080, Plg8.0000°, Azm70.0000°; N 0.4910, Plg5.0000°, Azm339.0000°; P -3.3040, Plg81.0000°, Azm218.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 09 22:41:31.1±0.5**, 35°.4S**±0°.1×**15°.29W**±0°.08**, h10**^{km}**, n97, σ1^{s}.67**/81**, mb4.8**/18**, MS4.1**/15**, Tristan da Cunha region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H09N1	TRISTAN DA CUN	2.93	126	Pn	Pn	22 42 17.8	+0.1
	SNR=45						
H09N1				Sn	Sn	22 42 48.8	-4.1
H09N1				T	T	22 45 30.5	
	SNR=110						
H09W1	TRISTAN DA CUN	2.93	126	Pn	Pn	22 42 18.1	+0.4
	SNR=32						
H09W1				Sn	Sn	22 42 48.9	-4.1
H09W1				T	T	22 45 34.3	
	SNR=358						
H10S2	ASCENSION HYDR	26.32	1	T	T	23 14 08.9	
	baz=181,slow=74,SNR=223						
H10S3	ASCENSION HYDR	26.32	1	T	T	23 14 12.5	
	baz=39,slow=74,SNR=646						
CAM01	Campos-RJ	26.71	293	*e*P	P	22 47 07.9	-2.8
ALF01	Guarapari-ES	26.75	297	*e*P	P	22 47 08.5	-2.6
RIB01	Linhares ES	27.34	299	*e*P	P	22 47 13.5	-2.9
H10N1	ASCENSION HYDR	27.43	2	T	T	23 15 33.7	
	baz=180,slow=73,SNR=52						
H10N3	ASCENSION HYDR	27.43	2	T	T	23 15 33.4	
	baz=180,slow=73,SNR=361						
H10N2	ASCENSION HYDR	27.45	2	T	T	23 15 33.8	
	baz=180,slow=73,SNR=107						
MAN01	Angra dos Reis	27.88	289	*e*P	P	22 47 18.0	-3.3
BSFB	Barra de Sao F	27.98	299	*e*P	P	22 47 19.6	-2.5
NAN01	Guarapari, ES	28.14	302	*e*P	P	22 47 21.1	-2.4
SJMB	Sao Joao De Ma	28.31	299	*e*P	P	22 47 22.6	-2.4
GUA01	Guaratinga, BA	28.79	304	*e*P	P	22 47 26.6	-2.8
TER01	Tubaro-SC	29.41	274	*e*P	P	22 47 33.2	-1.6
CMC01	Camacan, BA	29.48	306	*e*P	P	22 47 33.9	-1.5
NBIT	Itapeh - BA	29.74	307	*e*P	P	22 47 35.2	-2.5
PET01	Itanhaem-SP	29.75	283	*e*P	P	22 47 35.4	-2.4
SPB	Sao Paulo	30.22	284	*e*P	P	22 47 39.6	-2.4
DIAM	Diamantina, MG	30.36	297	*e*P	P	22 47 40.5	-2.9
TIJ01	Guaruva-PR	30.65	280	*e*P	P	22 47 43.7	-2.2
GDU01	Guandu, BA	30.73	309	*e*P	P	22 47 45.5	-1.0
MC01	Montes Claros	31.59	299	*e*P	P	22 47 52.5	-1.7
NBAN	Anadia - AL	31.97	318	*e*P	P	22 47 58.8	+1.3
PLTB	Pedras Altas	32.00	265	*e*P	P	22 47 57.9	+0.3
PLTB	Pedras Altas	32.00	265	P	P	22 47 58.2	+0.6
PLTB				IAmb	IAmb	22 47 59.2	
	comp=Z,19nm,1.3s						
NBRF	Rio Formoso -	32.19	321	*e*P	P	22 48 00.7	+1.3
CPSB	Cacapava Do Su	32.28	268	*e*P	P	22 48 00.3	+0.2
BB19B	Bebedouro	32.41	287	*e*P	P	22 47 58.6	-2.7
JANB	Januaria	32.96	301	*e*P	P	22 48 04.3	-1.9
NBPN	Ponto Novo - B	33.31	311	*e*P	P	22 48 07.6	-1.6
IPMB	Ipameri, GO	33.94	292	*e*P	P	22 48 12.6	-2.1
PCMB	Pacaembu	34.27	284	*e*P	P	22 48 16.0	-1.5
BOSA	Boshof	34.86	90	LR	LR	23 00 20.4	
	comp=Z,384nm,18.1s,baz=236,slow=33						
ITQB	Itaqui	35.13	267	*e*P	P	22 48 25.5	+0.6
ITQB	Itaqui	35.13	267	P	P	22 48 25.4	+0.5
SDBA	SAO DESIDERIO	35.21	303	*e*P	P	22 48 24.3	-1.5
NBMA	Muriti-CE	35.24	317	*e*P	P	22 48 26.7	+0.8
BDFB	Brasilia	35.25	295	LR	LR	23 00 23.3	
	comp=Z,443nm,20.5s,baz=134,slow=32						
NBPA	Parau_RN	35.70	321	*e*P	P	22 48 32.6	+2.7
CPUP	Villa Florida	36.98	272	LR	LR	23 01 27.3	
	comp=Z,341nm,20.5s,baz=120,slow=32						
PEXB	Peixe	37.79	300	*e*P	P	22 48 46.5	-1.3
ARAG	Araguaiana, MT	38.05	292	*e*P	P	22 48 48.2	-1.7
SMTB	Santa Maria do	39.58	304	*e*P	P	22 49 02.0	-0.8
SNDB	Serra Nova Dou	40.04	297	*e*P	P	22 49 05.4	-1.2
SALV	Santo Antonio	40.92	288	*e*P	P	22 49 12.5	-1.4
DBIC	Dimbokro	42.98	15	P	P	22 49 30.6	0.0
	comp=Z,4.6nm,1.0s,baz=189,slow=15,SNR=3.5						
DBIC	Dimbokro	42.98	15	P	P	22 49 29.8	-0.8
DBIC				IAmb	IAmb	22 49 36.3	
	comp=Z,17nm,1.2s						
PRPB	Parauapebas	43.04	304	*e*P	P	22 49 30.5	-0.7
PLCA	Paso Flores	43.23	246	LR	LR	23 06 45.7	
	comp=Z,202nm,21.0s,baz=104,slow=35						
PLCA	Paso Flores	43.23	246	*e*P	P	22 49 41.2	+8.6
LSZ	Lusaka	43.68	74	P	P	22 49 38.3	+1.8
PTLB	Pontes e Lacer	43.88	285	*e*P	P	22 49 38.3	+0.4
PTLB	Pontes e Lacer	43.88	285	P	P	22 49 37.3	-0.6
CLDB	Colider	44.09	294	*e*P	P	22 49 38.7	-1.0
PDRB	Porto dos Gac	44.32	292	*e*P	P	22 49 41.4	-0.2
BO01	Tunca	45.25	254	P	P	22 49 48.6	-0.2
BO01				IAmb	IAmb	22 49 49.5	
	comp=Z,24nm,1.2s						
MT09	Talagante	45.37	255	P	P	22 49 49.1	-0.8
MT09				IAmb	IAmb	22 49 50.6	
	comp=Z,34nm,1.4s						
MT01	Popeta	45.55	255	P	P	22 49 50.9	-0.2
MT01				IAmb	IAmb	22 49 54.4	
	comp=Z,23nm,1.3s						
NPGB	Novo Progresso	46.30	298	*e*P	P	22 49 56.9	-0.4
AC02	Maricunga	46.40	265	P	P	22 49 58.2	-0.3
AC02				IAmb	IAmb	22 49 59.9	
	comp=Z,13nm,1.2s						
PB07	IPOC Station P	49.29	271	P	P	22 50 20.4	-0.1
PB08	IPOC Station P	49.45	273	P	P	22 50 21.0	-1.1
PB08				IAmb	IAmb	22 50 22.9	
	comp=Z,25nm,1.2s						
LPAZ	La Paz	50.61	278	P	P	22 50 33.2	+2.0
	comp=Z,1.0nm,0.6s,baz=136,slow=7.9,SNR=3.6						
LPAZ				LR	LR	23 11 25.7	
	comp=Z,175nm,19.9s,baz=122,slow=35						
LPAZ	La Paz	50.61	278	*e*P	P	22 50 31.6	+0.5
PB16	IPOC Station P	50.65	275	P	P	22 50 30.4	-1.0
PB16				IAmb	IAmb	22 50 31.4	
	comp=Z,12nm,1.3s						
KOWA	Kowa	50.75	14	P	P	22 50 31.1	-0.3
KOWA				IAmb	IAmb	22 50 36.2	
	comp=Z,18nm,1.4s						
TORD	Torodi Ar. Bea	50.89	22	P	P	22 50 31.9	-0.5
	comp=Z,7.8nm,1.1s,baz=199,slow=7.3,SNR=19						
TORD				LR	LR	23 07 25.7	
	comp=Z,229nm,22.0s,baz=240,slow=31						
TORD	Torodi Ar. Bea	50.89	22	P	P	22 50 31.5	-0.9
SAML	Samuel	50.93	289	P	P	22 50 32.1	-0.7
ETMB	Extrema	52.76	286	*e*P	P	22 50 46.0	-0.5
ETMB	Extrema	52.76	286	P	P	22 50 45.3	-1.2
ETMB				IAmb	IAmb	22 50 47.1	
	comp=Z,13nm,1.1s						
MACA	Manacapuru-AM	52.81	297	*e*P	P	22 50 46.7	-0.2
MAW	Mawson	53.36	152	P	P	22 50 51.2	+1.0
	comp=Z,4.8nm,0.7s,baz=282,slow=7.7,SNR=13						
MAW				LR	LR	23 09 00.4	
	comp=Z,101nm,20.8s,baz=237,slow=31						
PTGA	Pitinga	53.97	300	P	P	22 50 55.1	-0.4
PTGA				IAmb	IAmb	22 50 59.1	
	comp=Z,14nm,1.3s						
QSPA	South Pole Qui	54.86	180	P	P	22 51 03.2	+1.8
BOAV	Boa Vista	56.57	302	*e*P	P	22 51 14.8	+0.6
BOAV	Boa Vista	56.57	302	P	P	22 51 14.1	-0.1
BOAV				IAmb	IAmb	22 51 16.5	
	comp=Z,14nm,1.4s						
TBTG	Tabatinga, AM	59.10	289	*e*P	P	22 51 34.2	+2.3
KMBO	Kilima Mbogo	59.46	67	LR	LR	23 15 11.6	
	comp=Z,471nm,19.0s,baz=259,slow=34						
LODK	Lodwar	61.12	62	P	P	22 51 47.4	+1.5
LODK				IAmb	IAmb	22 51 49.6	
	comp=Z,14nm,1.4s						
VNDA	Vanda	67.34	179	P	P	22 52 28.1	+2.4
	comp=Z,0.9nm,0.9s,baz=146,slow=3.6,SNR=3.7						
VNDA	Vanda	67.34	179	P	P	22 52 27.2	+1.5
ROSC	El Rosal	68.25	293	LR	LR	23 21 15.4	
	comp=Z,367nm,18.1s,baz=127,slow=35						
SDV	Santo Domingo	68.25	299	P	P	22 52 31.1	-1.5
SDV				IAmb	IAmb	22 52 33.2	
	comp=Z,13nm,1.1s						
OCAC	Ocana	69.75	296	P	P	22 52 40.2	-1.6
MOTC	Monteria, Cord	71.84	295	P	P	22 52 53.9	-0.5
SJCC	San Jacinto, C	72.22	296	P	P	22 52 56.3	-0.4
KEST	Kesra	74.39	21	LR	LR	23 22 44.9	
	comp=Z,190nm,20.1s,baz=254,slow=33						
ESDC	Sonseca Array	75.43	9	LR	LR	23 24 05.0	
	comp=Z,51nm,18.8s,baz=240,slow=34						
COVE	Coope Vega, Sa	79.65	291	P	P	22 53 38.6	-0.5
GERES	GERESS Array B	87.75	19	LR	LR	23 31 03.3	
	comp=Z,73nm,20.6s,baz=268,slow=34						
KBZ	Khabaz	94.87	38	LR	LR	23 38 18.2	
	comp=Z,62nm,18.1s,baz=210,slow=36						
NOA	NORSAR Array B	98.50	13	LR	LR	23 37 52.8	
	comp=Z,31nm,18.5s,baz=225,slow=34						
GEYT	Alibeck	99.70	50	LR	LR	23 39 07.4	
	comp=Z,132nm,20.3s,baz=60,slow=35						
ILAR	Eielson Array	138.89	331	PKP	PKiKP	23 00 58.8	-0.2
	comp=Z,0.5nm,0.8s,baz=90,slow=0.1,SNR=5.0						

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*ANF **09** 22:42:06.0±0.2, 37°.11N×97°.59W, h5^{km}, ML5.0/16, Error ellipse: s-maj=3.0km s-min=2.8km az=57.0*

*NEIC **09** 22:42:06.6±1.7, 37°.12N±0°.03×97°.62W±0°.03, h4^{km}±6^{km}, mb4.1/6, mb_Lg4.0/112, ML4.1/28, Mwr3.6/45, Error ellipse: s-maj=4.3km s-min=2.8km az=200.0*

*IASPEI **09** 22:42:06.2±0.9, 37°.12N±0°.03×97°.60W±0°.02, h7^{km}±6^{km}, Error ellipse: s-maj=4.1km s-min=3.4km az=26.4, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*NEIC **09** 22:42:06.6, 37°.13N×97°.58W, h3^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-0.76; $M_{\theta\theta}$2.64; $M_{\phi\phi}$-1.88; $M_{r\theta}$-0.89; $M_{\theta\phi}$1.67; $M_{\phi r}$-0.42; Fault plane solution: $M_0$3.05000×10^{14} NP1:ϕ_s297.68000°, δ77.43000°, λ6.24000°. NP2:ϕ_s206.32000°, δ83.91000°, λ167.36000°. Principal axes: T 3.4214, Plg13.0000°, Azm161.0000°; N -0.9789, Plg76.0000°, Azm1.0000°; P -2.4425, Plg5.0000°, Azm253.0000°;*

*NEIC **09** 22:42:06.6±1.3, 37°.12N±0°.03×97°.60W±0°.02, h6^{km}±6^{km} Error ellipse: s-maj=4.3km s-min=2.5km az=204.0*

*IDC **09** 22:42:06.6±1.6, 37°.19N×97°.69W, h0^{km}, mb3.5/1, mb1 3.9/6, mb1mx3.7/40, mbtmp3.6/6, ML3.6/5, MS2.9/2, Ms1 2.9/2, ms1mx2.4/29, Error ellipse: s-maj=23.5km s-min=11.0km az=106.0*

ISC 09 22:42:06.2±0.7**, 37°.13N**±0°.02×**97°.59W**±0°.02**, h8**^{km}±4^{km}**, n266, σ1^{s}.03**/301**, Kansas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN09	Caldwell North	0.03	274	Pg	Pg	22 42 07.5	-0.2
KAN09				Sg	Sg	22 42 08.0	-0.7
KS20	Mayfield South	0.10	15		Pg	22 42 09.3	+0.7
KS20				Sg	Sg	22 42 11.2	+0.9
KAN01	Argonia South	0.14	278		Pg	22 42 09.2	0.0
KAN01				Sg	Sg	22 42 11.0	-0.3
KAN13	South Haven SW	0.15	145		Pg	22 42 10.1	+0.7
KAN13				Sg	Sg	22 42 12.4	+0.9
KS21	Milan North St	0.16	338	Pg	Pg	22 42 10.2	+0.6
KS21				Sg	Sg	22 42 12.0	0.0
KAN17	Caldwell West	0.17	238	Pg	Pg	22 42 09.7	0.0
KAN17				Sg	Sg	22 42 11.8	-0.2
KAN05	Bluff City Nor	0.23	264		Pg	22 42 10.8	0.0
KAN05				Sg	Sg	22 42 13.8	-0.1
KAN06	Argonia West S	0.25	298		Pg	22 42 11.3	+0.2
KAN06				Sg	Sg	22 42 14.9	+0.5
KAN08	Anthony NE Sta	0.32	287		Pg	22 42 12.7	+0.2
KAN08					Sg	22 42 17.0	+0.2
KAN14	Manchester OK	0.35	240		Pg	22 42 13.0	0.0
KAN14					Sg	22 42 17.4	-0.3
GC02	Grant County #	0.36	218	Pg	Pg	22 42 13.2	0.0
KAN12	Harper NE Stat	0.37	296		Pg	22 42 13.6	+0.2
KAN16	Harper SW Stat	0.39	284		Pg	22 42 14.0	+0.1
KAN16				Sg	Sg	22 42 19.2	+0.1
KAN10	Anthony SW Sta	0.41	269	Pg	Pg	22 42 14.2	+0.1
KAN10					Sg	22 42 19.5	0.0
BLOK	Blackwell	0.48	141	Pg	Pg	22 42 16.0	+0.6
BLOK				Sg	Sg	22 42 22.8	+1.2
OK032	Salt Plains WL	0.60	237		Pg	22 42 17.6	-0.1
OK032				Sg	Sg	22 42 25.5	-0.1
CROK	Carrier	0.70	207	Pg	Pg	22 42 19.7	-0.1
T35A	Sooner Cattle	0.89	104		Pb	22 42 23.8	0.0
T35A				Sg	Sb	22 42 35.8	0.0
T35B	Sooner Cattle	0.89	104	P	Pb	22 42 23.8	0.0
	baz=284,SNR=968						
T35B				S	Sb	22 42 35.8	-0.1
	baz=284						
QUOK	Quay	1.19	143		Pb	22 42 29.1	0.0
OK031	S. Brethren Rd	1.32	153		Pn	22 42 31.2	+0.2
OK031				Sg	Sn	22 42 48.9	+0.1
OK029	Liberty Lake	1.34	175	Pn	Pb	22 42 31.4	-0.1
OK029				Sg	Sg	22 42 49.3	+0.1
U32A	Winter Ranch,	1.36	237	Pn	Pn	22 42 31.4	-0.2
U32A	Winter Ranch,	1.36	237	P	Pn	22 42 31.4	-0.2
	baz=56,SNR=141						
OK030	Cody Creek RV	1.37	152		Pb	22 42 31.9	-0.1
BCOK	Bluff Creek, N	1.48	181		Pb	22 42 33.6	-0.2
OK005	Luther M Schoo	1.51	168		Pb	22 42 34.4	-0.1
OK025	Westminster Rd	1.56	173		Pb	22 42 35.2	-0.2
OK025				Sg	Sg	22 42 56.7	+0.3
R32A	Long Quarter,	1.56	326		Pb	22 42 35.3	-0.1
R32A	Long Quarter,	1.56	326	P	Pb	22 42 35.4	-0.1
	baz=146,SNR=265						
OK001	Jones High Sch	1.59	171	Pn	Pb	22 42 35.6	-0.2
OKCFA	Oklahoma City	1.72	176		Pb	22 42 37.4	-0.7
OKCFA	Oklahoma City	1.72	176	P	Pb	22 42 37.3	-0.7
	baz=356,SNR=28						
OKCFA				Sb	Sg	22 43 01.2	-0.2
	baz=356						
OKCSW	OKLAHOMA CITY	1.73	176		Pb	22 42 37.6	-0.6
FNO	Franklin	1.88	175	Pn	Pn	22 42 39.4	+0.8
TUL1	Leonard	1.89	130	P	Pb	22 42 40.1	-0.9
	baz=310,SNR=103						
TUL1				Sb	Sb	22 43 05.9	+1.1
	baz=310						
TUL1	Leonard	1.89	130	Pn	Pb	22 42 40.3	-0.6
TUL1				IAmb_Lg		22 43 08.0	
	comp=Z,566nm,0.7s						
TUL1	Leonard	1.89	130	P	Pb	22 42 40.4	-0.6
	baz=310,SNR=111						
TUL1				S	Sb	22 43 05.8	+1.1
	baz=310						
KSU1	Kansas State U	2.11	21	P	Pb	22 42 43.4	-1.2
	baz=202,SNR=63						
KSU1				S	Sb	22 43 11.9	+0.9
	baz=202						
KSU1	Kansas State U	2.11	21	Pn	Pb	22 42 43.6	-1.0
KSU1	Kansas State U	2.11	21	P	Pb	22 42 43.5	-1.2
	baz=202,SNR=127						
KSU1				S	Sb	22 43 12.4	+1.3
	baz=202						
CBKS	Cedar Bluff	2.39	315	P	Pn	22 42 47.3	+1.6
	baz=135,SNR=66						
CBKS				Sb	Sb	22 43 20.5	+1.4
	baz=135						
CBKS	Cedar Bluff	2.39	315	Pn	Pn	22 42 47.0	+1.3
CBKS	Cedar Bluff	2.39	315	P	Pn	22 42 47.0	+1.3
	baz=135,SNR=139						
CBKS				S	Sb	22 43 20.5	+1.4
	baz=135						
X34A	Smith Ranch, M	2.54	185		Pn	22 42 49.0	+1.4
X34A				IAmb_Lg		22 43 29.0	
	comp=Z,610nm,0.8s						
WMOK	Wichita Mounta	2.58	202	P	Pn	22 42 48.8	+0.5
	baz=21,SNR=33						
WMOK				S	Sn	22 43 20.6	+0.7
	baz=21						
WMOK	Wichita Mounta	2.58	202		Pn	22 42 49.0	+0.7
WMOK	Wichita Mounta	2.58	202	P	Pn	22 42 49.1	+0.8
	baz=21,SNR=96						
U38A	Gravette	2.66	104	Pn	Pn	22 42 51.2	+1.8
HHAR	Hobbs	3.05	105		Pn	22 42 56.5	+1.8
HHAR	Hobbs	3.05	105	P	Pn	22 42 56.6	+1.8
	baz=287						
X37A	Clayton	3.11	144	Pn	Pn	22 42 57.3	+1.7
X37A				IAmb_Lg		22 43 53.8	
	comp=Z,578nm,0.7s						
X37A	Clayton	3.11	144	P	Pn	22 42 57.3	+1.7
	baz=325,SNR=62						
LOOK	Love County	3.15	174		Pn	22 42 57.2	+1.1
LOOK				IAmb_Lg		22 43 52.1	
	comp=Z,306nm,0.7s						
S39A	Bolivar	3.44	79	Pn	Pn	22 43 01.3	+1.2
S39A	Bolivar	3.44	79	P	Pn	22 43 01.3	+1.2
	baz=262,SNR=185						
N33B	J Bar K, Exete	3.60	2	P	Pn	22 43 03.5	+1.2
	baz=182						
N33A	J Bar K, Exete	3.60	2	Pn	Pn	22 43 03.5	+1.2
W39A	Magazine	3.63	121	P	Pn	22 43 03.1	+0.3
	baz=303						
W39A				S	Sn	22 43 47.0	+1.2
	baz=303						
W39A	Magazine	3.63	121	Pn	Pn	22 43 03.2	+0.5
W39A	Magazine	3.63	121	P	Pn	22 43 03.5	+0.7
	baz=303						
Z35A	Perchaven, San	3.80	176	Pn	Pn	22 43 05.8	+0.6
Z35A	Perchaven, San	3.80	176	S	Sn	22 43 51.3	+1.3
	baz=356						
U40A	Yellville	3.88	100	P	Pn	22 43 07.4	+1.2

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     baz=283
U40A                               S        Sn       22 43 53.3 +1.4
     baz=283
U40A Yellville           3.88 100  Pn       Pn       22 43 07.5 +1.4
U40A Yellville           3.88 100  P        Pn       22 43 07.5 +1.4
     baz=283,SNR=208
U40A                               P        Pn       22 43 07.5 +1.4
     baz=283,SNR=208
AMTX Amarillo            4.01 237  Sb       Sb       22 44 09.9 +4.1
     baz=55
AMTX Amarillo            4.01 237  Pn       Pn       22 43 10.1 +2.1
AMTX                               IAmb_Lg           22 44 12.5
     comp=Z,325nm,1.0s
N35A Tabor               4.02  22  Pn       Pn       22 43 09.6 +1.6
N35A Tabor               4.02  22  P        Pn       22 43 09.9 +1.9
     baz=203,SNR=13
P38A Dawn                4.04  51  Pn       Pn       22 43 09.6 +1.2
P38A                               IAmb_Lg           22 44 15.6
     comp=Z,285nm,0.9s
P38A Dawn                4.04  51  P        Pn       22 43 09.6 +1.2
     baz=233,SNR=11
MIAR Mount Ida           4.16 127  P        Pn       22 43 09.9  0.0
     baz=309,SNR=6.8
MIAR                               S        Sn       22 43 59.4 +0.6
     baz=309
MIAR Mount Ida           4.16 127  Pn       Pn       22 43 10.9 +1.0
MIAR Mount Ida           4.16 127  P        Pn       22 43 11.1 +1.2
     baz=309,SNR=28
MGMO Mountain Grove      4.25  88           Pn       22 43 12.6 +1.4
MGMO                               IAmb_Lg           22 44 23.5
     comp=Z,371nm,0.8s
BGNE Belgrade            4.29 354  P        Pn       22 43 13.0 +1.1
     baz=174,SNR=7.0
BGNE                               S        Sn       22 44 02.8 +0.7
     baz=174
BGNE Belgrade            4.29 354  Pn       Pn       22 43 12.9 +1.1
BGNE                               IAmb_Lg           22 44 31.6
     comp=Z,388nm,0.9s
BGNE Belgrade            4.29 354  P        Pn       22 43 12.9 +1.1
     baz=174,SNR=49
R40A Maddies Statio      4.37  73           Pn       22 43 13.9 +1.1
R40A Maddies Statio      4.37  73  P        Pn       22 43 14.0 +1.1
     baz=256,SNR=104
KSCO Kaye Shedlock’      4.40 297  P        Pn       22 43 14.2 +0.8
     baz=114,SNR=5.3
KSCO                               S        Sn       22 44 06.1 +1.3
     baz=114
KSCO Kaye Shedlock’      4.40 297  Pn       Pn       22 43 14.2 +0.8
KSCO                               IAmb_Lg           22 44 30.4
     comp=Z,288nm,0.7s
KSCO Kaye Shedlock’      4.40 297  P        Pn       22 43 14.4 +1.0
     baz=114,SNR=13
Z38A Mt. Pleasant        4.41 150  Pn       Pn       22 43 14.4 +1.0
Z38A                               IAmb_Lg           22 44 32.7
     comp=Z,382nm,0.8s
FCAR Ozark Folk Cen      4.57 104           Pn       22 43 16.5 +0.8
FCAR                               IAmb_Lg           22 44 33.4
     comp=Z,348nm,0.7s
WHAR Wooly Hollow        4.66 112  Pn       Pn       22 43 17.8 +0.9
X40A Basin Creek Fa      4.68 123  P        Pn       22 43 17.6 +0.5
     baz=306
X40A                               S        Sn       22 44 12.1 +0.5
     baz=306
X40A Basin Creek Fa      4.68 123           Pn       22 43 18.3 +1.2
X40A                               IAmb_Lg           22 44 35.3
     comp=Z,376nm,0.8s
W41B Gary Mavity, V      4.74 113  P        Pn       22 43 18.2 +0.2
     baz=296
W41B                               S        Sn       22 44 13.0 -0.1
     baz=296
W41B Gary Mavity, V      4.74 113  P        Pn       22 43 18.8 +0.9
     baz=296,SNR=31
ABTX Abilene, Hawle      4.81 201  P        Pn       22 43 19.1 +0.1
     baz=20
ABTX                               S        Sn       22 44 14.3 -0.5
     baz=20
ABTX Abilene, Hawle      4.81 201  Pn       Pn       22 43 19.5 +0.6
L34A Svendsen Farm,      4.92  11           Pn       22 43 21.1 +0.7
L34A Svendsen Farm,      4.92  11  P        Pn       22 43 21.1 +0.7
     baz=192
P40A Paris               4.97  60  Pn       Pn       22 43 21.5 +0.4
P40A                               IAmb_Lg           22 44 48.9
     comp=Z,320nm,1.1s
P40A Paris               4.97  60  P        Pn       22 43 21.6 +0.6
     baz=243,SNR=16
N38A Joes South For      4.98  42           Pn       22 43 22.1 +0.8
N38A                               IAmb_Lg           22 44 50.9
     comp=Z,412nm,0.8s
N38A Joes South For      4.98  42  P        Pn       22 43 22.3 +1.0
     baz=224,SNR=26
WLAR White Oak Lake      5.02 132  Pn       Pn       22 43 23.7 +1.9
CCM  Cathedral Cave      5.12  78  P        Pn       22 43 23.8 +0.7
     baz=262
CCM                                S        Sn       22 44 23.0 +0.5
     baz=262
CCM  Cathedral Cave      5.12  78  Pn       Pn       22 43 23.8 +0.7
CCM  Cathedral Cave      5.12  78  P        Pn       22 43 24.1 +1.0
     baz=262,SNR=9.0
WHTX Lake Whitney,       5.13 179  P        Pn       22 43 23.8 +0.4
     baz=359,SNR=8.2
WHTX                               S        Sn       22 44 21.9 -0.8
     baz=359
WHTX Lake Whitney,       5.13 179  Pn       Pn       22 43 23.8 +0.4
WHTX                               IAmb_Lg           22 44 58.7
     comp=Z,274nm,1.2s
WHTX Lake Whitney,       5.13 179  P        Pn       22 43 23.8 +0.4
     baz=359,SNR=34
OGNE Ogallala            5.14 319  P        Pn       22 43 25.3 +1.6
     baz=137,SNR=8.2
OGNE                               S        Sn       22 44 24.2 +1.0
     baz=137
OGNE Ogallala            5.14 319  Pn       Pn       22 43 25.7 +2.1
OGNE                               IAmb_Lg           22 44 59.0
     comp=Z,358nm,0.7s
OGNE Ogallala            5.14 319  P        Pn       22 43 25.5 +1.9
     baz=137,SNR=16
T42A Van Buren           5.19  89           Pn       22 43 25.1 +1.0
T42A                               IAmb_Lg           22 44 56.0
     comp=Z,179nm,0.9s
T42A Van Buren           5.19  89  P        Pn       22 43 25.2 +1.1
     baz=273,SNR=34
MSTX Muleshoe            5.28 235  Pn       Pn       22 43 24.5 -1.0
LCAR Lake Charles        5.28 100           Pn       22 43 26.3 +0.9
LCAR                               IAmb_Lg           22 44 59.8
     comp=Z,221nm,0.9s
237A Washetta, Mont      5.33 164           Pn       22 43 26.5 +0.5
237A Washetta, Mont      5.33 164  P        Pn       22 43 26.8 +0.7
     baz=344,SNR=16
T25A Trinidad            5.45 272  P        Pn       22 43 28.4 +0.4
     baz=88,SNR=15
T25A Trinidad            5.45 272  Pn       Pn       22 43 28.4 +0.4
T25A                               IAmb_Lg           22 45 03.2
     comp=Z,239nm,0.7s
Z41A Richland Creek      5.50 133  P        Pn       22 43 28.8 +0.4
     baz=316
Z41A                               S        Sn       22 44 30.1 -1.8
     baz=316
K31A O'Neill             5.55 351  Pn       Pn       22 43 30.6 +1.4
K31A                               IAmb_Lg           22 45 15.8
     comp=Z,372nm,0.8s
K31A O'Neill             5.55 351  P        Pn       22 43 30.7 +1.5
     baz=171,SNR=15
PBMO Poplar Bluff        5.74  91  Pn       Pn       22 43 32.9 +1.1
PBMO                               IAmb_Lg           22 45 13.7
     comp=Z,326nm,0.7s
FVM  French Village      5.75  79           Pn       22 43 32.3 +0.5
FVM                                IAmb_Lg           22 45 14.8
     comp=Z,194nm,1.0s
FVM  French Village      5.75  79  P        Pn       22 43 32.5 +0.6
     baz=264,SNR=16
SCIA State Center        5.84  34  P        Pn       22 43 34.3 +1.2
     baz=217
SCIA                               S        Sn       22 44 40.6 +0.3
     baz=217
SCIA State Center        5.84  34  Pn       Pn       22 43 34.8 +1.7
SCIA                               IAmb_Lg           22 45 15.1
     comp=Z,333nm,0.9s
NATX Nacogdoches         5.88 155  P        Pn       22 43 33.8 +0.1
     baz=336
NATX                               S        Sn       22 44 39.3 -2.0
     baz=336
NATX Nacogdoches         5.88 155  IAmb_Lg           22 45 29.4
     comp=Z,154nm,0.7s
SLM  Saint Louis         6.00  73           Pn       22 43 36.1 +0.8
SLM                                IAmb_Lg           22 45 18.6
     comp=Z,183nm,0.8s
LPAR Lepanto             6.07 102  Pn       Pn       22 43 36.7 +0.4
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Q24A Divide              6.24 289  P        Pn       22 43 39.3 +0.4
     baz=105,SNR=6.2
Q24A                               S        Sn       22 44 49.1 -1.5
     baz=105
SDCO Great Sand Dun      6.33 278  P        Pn       22 43 41.0 +0.9
     baz=93,SNR=9.6
SDCO Great Sand Dun      6.33 278  Pn       Pn       22 43 42.0 +2.0
SDCO Great Sand Dun      6.33 278  P        Pn       22 43 41.3 +1.2
     baz=93,SNR=17
435B Jarrell             6.33 180  P        Pn       22 43 39.7 -0.2
     baz=360
435B                               S        Sn       22 44 50.8 -1.7
     baz=360
435B Jarrell             6.33 180           Pn       22 43 39.9  0.0
435B                               IAmb_Lg           22 45 40.3
     comp=Z,234nm,0.7s
N41A Harden Midland      6.34  54  Pn       Pn       22 43 40.2 +0.2
N41A                               IAmb_Lg           22 45 29.2
     comp=Z,287nm,0.9s
PVMO Portageville        6.37  94  IAmb_Lg           22 45 26.9
     comp=Z,314nm,0.9s
ECSD EROS Data Cent      6.63   6  P        Pn       22 43 44.8 +0.9
     baz=187,SNR=10
ECSD                               S        Sn       22 44 58.0 -1.8
     baz=187
ECSD EROS Data Cent      6.63   6           Pn       22 43 44.9 +0.9
ECSD EROS Data Cent      6.63   6  P        Pn       22 43 44.9 +0.9
     baz=187,SNR=19
K38A Parkersburg         6.63  32  Pn       Pn       22 43 44.1 +0.1
K38A                               IAmb_Lg           22 45 46.4
     comp=Z,179nm,0.8s
S44A Carbondale          6.65  83           Pn       22 43 44.4 +0.1
S44A                               IAmb_Lg           22 45 39.4
     comp=Z,284nm,0.8s
S44A Carbondale          6.65  83  P        Pn       22 43 44.4 +0.1
     baz=268,SNR=20
SIUC Southern Illin      6.69  82           Pn       22 43 44.7  0.0
143A Socs Landing,       6.73 129  IAmb_Lg           22 45 55.0
     comp=Z,236nm,0.8s
P43A Skaggs, Pawnee      6.81  66  Pn       Pn       22 43 46.9 +0.5
P43A                               IAmb_Lg           22 45 48.3
     comp=Z,170nm,0.7s
P43A Skaggs, Pawnee      6.81  66  P        Pn       22 43 46.9 +0.5
     baz=251,SNR=30
ISCO Idaho Springs       6.84 295  P        Pn       22 43 47.9 +0.8
     baz=111,SNR=5.5
ISCO Idaho Springs       6.84 295  Pn       Pn       22 43 47.9 +0.8
ISCO                               IAmb_Lg           22 45 55.3
     comp=Z,128nm,0.8s
ISCO Idaho Springs       6.84 295  P        Pn       22 43 48.1 +1.0
     baz=111,SNR=12
JCT  Junction City       6.89 196  P        Pn       22 43 47.3 -0.2
     baz=15
JCT                                S        Sn       22 45 04.5 -1.7
     baz=15
JCT  Junction City       6.89 196  Pn       Pn       22 43 47.2 -0.4
JCT                                IAmb_Lg           22 45 52.3
     comp=Z,227nm,0.8s
L40A Anamosa             6.95  43  Pn       Pn       22 43 48.0 -0.4
L40A                               IAmb_Lg           22 45 46.5
     comp=Z,144nm,0.8s
Q44A Meyer Farm, Va      6.99  73  Pn       Pn       22 43 49.2 +0.3
Q44A                               IAmb_Lg           22 46 00.4
     comp=Z,256nm,1.0s
Q44A Meyer Farm, Va      6.99  73  P        Pn       22 43 49.6 +0.8
     baz=258,SNR=26
342A Flagon Creek P      7.21 141  IAmb_Lg           22 46 08.0
     comp=Z,118nm,1.2s
HDIL Hopedale            7.32  60  P        Pn       22 43 54.2 +0.8
     baz=245
HDIL Hopedale            7.32  60  Pn       Pn       22 43 53.8 +0.5
HDIL                               IAmb_Lg           22 46 11.9
     comp=Z,243nm,0.8s
Y45A Yeager Farm, C      7.32 114  IAmb_Lg           22 46 20.0
     comp=Z,220nm,0.9s
SUSD Miller              7.38 352  P        Pn       22 43 55.1 +1.0
     baz=172
SUSD Miller              7.38 352  Pn       Pn       22 43 54.1 -0.1
SUSD                               IAmb_Lg           22 46 19.0
     comp=Z,174nm,0.9s
ANMO Albuquerque         7.51 256  Pn       Pn       22 43 58.8 +2.6
     comp=Z,0.5nm,0.3s,baz=67,slow=13,SNR=6.6
ANMO                               Lg       Lg       22 46 00.3
     comp=Z,5.0nm,0.3s,baz=166,slow=22,SNR=4.5
ANMO Albuquerque         7.51 256  Pn       Pn       22 43 57.8 +1.5
N23A Red Feather La      7.51 303  P        Pn       22 43 57.1 +0.8
     baz=118
I37A Lemond, Waseca      7.57  24  IAmb_Lg           22 46 14.8
     comp=Z,246nm,1.1s
OLIL Olney               7.67  75  IAmb_Lg           22 46 14.6
     comp=Z,155nm,0.9s
O44A Mansfield           7.75  64  IAmb_Lg           22 46 22.6
     comp=Z,150nm,0.8s
L42A Oliver, Polo        7.81  49  Pn       Pn       22 44 00.5 +0.3
L42A                               IAmb_Lg           22 46 16.2
     comp=Z,201nm,0.8s
L42A Oliver, Polo        7.81  49  P        Pn       22 44 01.1 +0.9
     baz=234,SNR=11
WVT  Waverly             7.91  94  P        Pn       22 44 01.3 -0.2
     baz=280
WVT  Waverly             7.91  94  Pn       Pn       22 44 00.5 -1.0
BNM  Barren Site         7.94 251  Pn       Pn       22 44 03.3 +1.1
PLAL Pickwick Lake       8.00 103  Pn       Pn       22 44 02.4 -0.3
PLAL                               IAmb_Lg           22 46 29.8
     comp=Z,89nm,0.8s
JFWS Jewell Farm         8.06  42  P        Pn       22 44 03.7 +0.1
     baz=227
JFWS Jewell Farm         8.06  42  Pn       Pn       22 44 03.3 -0.2
JFWS                               IAmb_Lg           22 46 37.9
     comp=Z,137nm,0.7s
Y22D IRIS PASSCAL I      8.19 251  IAmb_Lg           22 46 42.3
     comp=Z,164nm,0.8s
735A Kenedy              8.26 181  Pn       Pn       22 44 07.0 +0.7
735A                               IAmb_Lg           22 46 48.8
     comp=Z,122nm,1.0s
146A Union               8.32 120  IAmb_Lg           22 46 49.9
     comp=Z,168nm,1.1s
T47A Sharon Grove        8.38  88  Pn       Pn       22 44 08.2 +0.3
MNTX Cornudas Mount      8.42 232  P        Pn       22 44 08.7 +0.3
     baz=48
MNTX Cornudas Mount      8.42 232  Pn       Pn       22 44 08.9 +0.4
RSSD Black Hills         8.53 327  P        Pn       22 44 11.2 +1.1
     baz=143
RSSD Black Hills         8.53 327  Pn       Pn       22 44 11.5 +1.4
M44A Midewin, Midew      8.53  57  Pn       Pn       22 44 09.1 -0.9
M44A                               IAmb_Lg           22 46 43.2
     comp=Z,117nm,1.1s
I40A Norwalk             8.58  36  Pn       Pn       22 44 10.9 +0.2
I40A Norwalk             8.58  36  P        Pn       22 44 11.1 +0.4
     baz=220,SNR=8.0
Z47A Carrollton          8.72 114  Pn       Pn       22 44 15.1 +2.4
Z47A                               IAmb_Lg           22 46 52.2
     comp=Z,143nm,1.1s
F33A 5 Mile Ranch,       8.75   6  Pn       Pn       22 44 12.9 -0.1
F33A                               IAmb_Lg           22 46 42.3
     comp=Z,96nm,1.0s
V48A Smith Brothers      8.79  96  Pn       Pn       22 44 14.3 +0.8
SFIN Lafayette           8.81  65  P        Pn       22 44 13.8  0.0
     baz=252
SFIN Lafayette           8.81  65  Pn       Pn       22 44 14.2 +0.3
SPMN Marine on St.       8.85  23  P        Pn       22 44 14.7 +0.4
     baz=206
833A Chaparral WMA,      8.92 190  P        Pn       22 44 15.1 -0.2
     baz=9.2
BLO  Bloomington         8.95  73  Pn       Pn       22 44 16.1 +0.3
X48A Hartselle           8.97 104  Pn       Pn       22 44 16.2 +0.1
L44A Lake County Fo      9.00  53  P        Pn       22 44 16.5 +0.1
     baz=239
L44A Lake County Fo      9.00  53  Pn       Pn       22 44 16.5 +0.1
L44A                               IAmb_Lg           22 47 06.3
     comp=Z,148nm,1.0s
WCI  Wyandotte Cave      9.02  80  P        Pn       22 44 16.8 +0.1
     baz=266
WCI  Wyandotte Cave      9.02  80  Pn       Pn       22 44 16.8 +0.1
WCI  Wyandotte Cave      9.02  80  P        Pn       22 44 16.9 +0.1
     baz=266,SNR=11
K43A Burlington          9.02  49  Pn       Pn       22 44 16.2 -0.5
K43A                               IAmb_Lg           22 47 10.2
     comp=Z,144nm,0.8s
F36A Milaca              9.23  18  Pn       Pn       22 44 19.7 +0.1
TX31 Lajitas Ar. Si      9.29 215  Pn       Pn       22 44 19.6 -1.1
TX32 Lajitas Array       9.29 215  Pn       Pn       22 44 20.0 -0.7
TXAR Lajitas Array       9.29 215  Pn       Pn       22 44 19.7 -0.9
     comp=Z,0.5nm,0.3s,baz=44,slow=12,SNR=17
TXAR                               Lg       Lg       22 46 56.8
     comp=Z,6.0nm,0.3s,baz=189,slow=30,SNR=7.4
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TXAR Lajitas Array       9.29 215  Pn       Pn       22 44 20.1 -0.5
I42A Draeger Farm,       9.44  42  Pn       Pn       22 44 21.6 -0.8
U49A Red Boiling Sp      9.49  90  Pn       Pn       22 44 23.7 +0.6
SWET Sewanee             9.61  98  Pn       Pn       22 44 26.4 +1.5
E28A Huff                9.71 347  Pn       Pn       22 44 25.8 -0.4
E28A                               IAmb_Lg           22 47 21.5
     comp=Z,94nm,0.9s
P48A Milroy              9.84  73  P        Pn       22 44 26.9 -1.0
     baz=260,SNR=7.1
P48A                               P        Pn       22 44 26.9 -1.0
     baz=260,SNR=7.1
G40A Rib Lake            9.84  32  Pn       Pn       22 44 26.9 -1.1
R49A Shelbyville         9.90  80  Pn       Pn       22 44 28.3 -0.5
FPAL Fort Paine         10.06 101  Pn       Pn       22 44 31.1 +0.1
W50A Signal Mountai     10.11  97  Pn       Pn       22 44 33.9 +2.2
T50A Nancy              10.19  87  Pn       Pn       22 44 33.7 +1.0
P49A Miami Univ. Ec     10.39  73  P        Pn       22 44 34.4 -1.1
     baz=261
P49A Miami Univ. Ec     10.39  73  Pn       Pn       22 44 34.6 -0.9
R50A Paris              10.57  80  Pn       Pn       22 44 38.0  0.0
V51A Loudon             10.74  93  Pn       Pn       22 44 42.4 +2.1
PD31 Pinedale Array     10.77 305  Pn       Pn       22 44 40.0 -0.9
PDAR Pinedale Array     10.77 305  Pn       Pn       22 44 41.2 +0.3
     comp=Z,0.4nm,0.3s,baz=116,slow=13,SNR=4.6
PDAR                               Lg       Lg       22 47 40.4
     comp=Z,2.2nm,0.3s,baz=107,slow=26,SNR=5.5
PDAR                               LR       LR       22 49 23.5
     comp=Z,65nm,20.9s,baz=72,slow=41
PDAR Pinedale Array     10.77 305  Pn       Pn       22 44 40.0 -0.9
COWI Conover            10.96  33  Pn       Pn       22 44 43.1 -0.1
N49A Columbus Grove     11.09  66  Pn       Pn       22 44 44.5 -0.5
S51A Beattyville        11.15  83  Pn       Pn       22 44 45.6 -0.3
AGMN Agassiz Nation     11.23   6  P        Pn       22 44 45.2 -1.8
     baz=187
TKL  Tuckaleechee C     11.23  93  Lg       Lg       22 47 55.0
     comp=Z,2.3nm,0.3s,baz=10,slow=22,SNR=12
L48A N Adams            11.23  61  Pn       Pn       22 44 45.9 -1.1
L48A N Adams            11.23  61  P        Pn       22 44 46.5 -0.5
     baz=249,SNR=5.4
L48A                               P        Pn       22 44 46.5 -0.5
     baz=249,SNR=5.4
LAO  LASA Array         11.51 329  P        Pn       22 44 49.5 -1.3
     baz=143
LAO  LASA Array         11.51 329  Pn       Pn       22 44 50.2 -0.6
EYMN Ely                11.70  21  P        Pn       22 44 51.6 -1.7
     baz=205
ACSO Alum Creek Sta     11.82  70  Pn       Pn       22 44 53.9 -1.2
V53A Saluda             11.99  93  Pn       Pn       22 44 57.5 -0.1
M50A Fremont            12.05  65  Pn       Pn       22 44 57.6 -0.5
Q52A Bidwell            12.22  77  Pn       Pn       22 44 59.2 -1.2
DGMT Dagmar             12.32 339  P        Pn       22 45 01.5 -0.4
     baz=155
DGMT Dagmar             12.32 339  Pn       Pn       22 45 01.0 -0.9
P52A Corning            12.38  74  P        Pn       22 45 01.4 -1.3
     baz=263
P52A Corning            12.38  74  Pn       Pn       22 45 01.6 -1.1
R53A Hurricane          12.44  80  Pn       Pn       22 45 02.4 -1.1
GLMI Grayling           12.44  48  P        Pn       22 45 01.9 -1.6
     baz=236
GLMI Grayling           12.44  48  Pn       Pn       22 45 02.0 -1.5
GCMT Greycliff          12.52 317  Pn       Pn       22 45 04.4 -0.3
U54A Nelsons Funny      12.65  88  Pn       Pn       22 45 05.0 -1.5
O52A Adamsville         12.67  72  Pn       Pn       22 45 05.3 -1.3
S54A Dingess, Beckl     12.95  82  Pn       Pn       22 45 09.6 -1.0
O53A New Philadelph     13.16  71  P        Pn       22 45 11.3 -2.2
     baz=262
ULM  Lac du Bonnet      13.17   5  Pn       Pn       22 45 08.8 -4.6
     comp=Z,0.7nm,0.3s,baz=188,slow=13,SNR=7.2
ULM                                Sn       Sn       22 47 29.3  -11
     comp=Z,1.0nm,0.3s,baz=272,slow=23,SNR=3.1
ULM                                Lg       Lg       22 48 53.9
     comp=Z,0.7nm,0.3s,baz=286,slow=13,SNR=4.2
V55A Taylorsville       13.24  91  Pn       Pn       22 45 13.7 -0.7
Q54A Coxs Mills         13.33  77  Pn       Pn       22 45 14.4 -1.3
R55A Marlinton          13.88  80  Pn       Pn       22 45 21.7 -1.5
MCWV Mont Chateau       14.14  74  P        P        22 45 34.9 +0.5
M54A Oil Creek Stat     14.54  67  P        Pn       22 45 30.1 -2.2
     baz=258
T57A Hurt               14.64  85  Pn       Pn       22 45 32.5 -1.1
NVAR Mina Array Bea     16.43 281  Pn       Pn       22 45 58.5 +1.2
     comp=Z,0.1nm,0.3s,baz=114,slow=11,SNR=3.5
PECO Prince Edward      17.04  60  P        P        22 46 06.0 -0.5
PECO                               IAmb     IAmb     22 46 11.9
     comp=Z,22nm,1.4s
NEW  Newport            18.11 314  LR       LR       22 52 49.4
     comp=Z,38nm,20.1s,baz=136,slow=36
J59A Piesco             18.68  63  P        P        22 46 24.5 -0.2
NCB  Newcomb            18.99  62  P        P        22 46 26.7 -1.4
KSCT Kent School, K     19.15  69  P        P        22 46 29.3 -0.6
KSCT                               IAmb     IAmb     22 46 36.1
     comp=Z,21nm,1.5s
FRNY Flat Rock          19.64  59  P        P        22 46 34.5 -0.7
FRNY                               IAmb     IAmb     22 46 48.1
     comp=Z,7.8nm,1.2s
K62A Royalston          20.18  66  P        Pn       22 46 42.4 -0.7
K62A                               IAmb     IAmb     22 46 44.2
     comp=Z,11nm,1.1s
MOQ  Mont Orford        20.67  59  P        P        22 46 47.2 +0.8
ILAR Eielson Array      39.96 330  P        P        22 49 42.4 +1.6
     comp=Z,0.4nm,0.5s,baz=110,slow=7.5,SNR=6.7
```

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*NOU **09** 22:48:19.4, 37°.34S×176°.42E, h358^{km}, MLv3.5/5, North Island, New Zealand*

WEL 09 22:48:41.8, 38°S±16°×**17°7E**±2°4**, h187**^{km}±28^{km}**, M2.4**/27**, MLv2.4**/27**, Error ellipse: s-maj=0.0km s-min=0.0km az=111.2, North Island**

```
Code Station Name         Δ°  AZ°   Phase ID          Time      Res
                                   Op       ISC       h  m  s   ISC
RTZ  Ruatahuna           0.43 127  P        Pn       22 49 07.9 +0.7
URZ  Urewera             0.46  78  P        Pn       22 49 06.3 -0.8
URZ  Urewera             0.46  78  P        Pn       22 49 06.2 -1.0
MRHZ Matea Rd            0.49 191  P        Pn       22 49 08.2 +0.8
MTHZ Maungataniwha       0.55 154  P        Pn       22 49 08.9 +1.4
RAGZ Rawiri              0.70 102  P        Pn       22 49 08.8 +0.4
NMHZ Naumai              0.77 164  P        Pn       22 49 11.0 +2.2
MWZ  Matawai             0.78  89  P        Pn       22 49 08.2 -0.5
BKZ  Black Stump Fm      0.81 182  P        Pn       22 49 10.2 +1.3
BKZ  Black Stump Fm      0.81 182  P        Pn       22 49 10.2 +1.3
ARHZ Aropaoanui          0.97 158  P        Pn       22 49 11.9 +2.0
RUGZ Raukumara Rang      0.98  67  P        Pn       22 49 07.1 -3.1
TMVZ Te Maari            1.00 220  P        Pn       22 49 10.6 +0.3
NTVZ North Tongarir      1.00 222  P        Pn       22 49 10.7 +0.5
ETVZ East Tongariro      1.01 219  P        Pn       22 49 10.7 +0.4
RIGZ Rimuhau             1.02 110  P        Pn       22 49 11.0 +0.6
OTVZ Oturere             1.05 220  P        Pn       22 49 11.1 +0.4
WTVZ West Tongariro      1.06 224  P        Pn       22 49 10.9 +0.2
KWHZ Kaweka Forest       1.07 185  P        Pn       22 49 10.4 -0.3
SNVZ South Ngauruho      1.08 220  P        Pn       22 49 11.4 +0.5
MCHZ McNeill Hill        1.09 173  P        Pn       22 49 12.9 +2.1
NGZ  Ngauruhoe           1.10 221  P        Pn       22 49 11.3 +0.3
TWVZ Taurewa             1.12 230  P        Pn       22 49 10.6 -0.5
HAZ  Te Kaha             1.15  59  P        Pn       22 49 07.5 -3.8
FWVZ Far West T-bar      1.18 220  P        Pn       22 49 11.7 -0.1
BHHZ Black Hill Sta      1.19 198  P        Pn       22 49 12.4 +0.8
MOVZ Moawhango           1.21 210  P        Pn       22 49 11.8  0.0
TRVZ Turoa               1.22 219  P        Pn       22 49 12.3 +0.2
PKGZ Pakihiroa           1.30  69  P        Pn       22 49 09.8 -2.8
CNGZ Carnagh Statio      1.32  96  P        Pn       22 49 12.3 -0.4
MHGZ Mahia Peninsul      1.33 127  P        Pn       22 49 13.5 +0.8
KAHZ Kahuranaki          1.46 170  P        Pn       22 49 15.6 +1.6
PNHZ Pukenui             1.58 189  P        Pn       22 49 16.3 +1.3
WMGZ Waiomatatini S      1.58  71  P        Pn       22 49 11.0 -4.0
MXZ  Matakaoa Point      1.61  61  P        Pn       22 49 10.5 -4.8
TSZ  Takapari Road       1.76 195  P        Pn       22 49 16.6 -0.1
PRHZ Porangahau          1.91 178  P        Pn       22 49 18.9 +0.6
NBEZ Newall Road No      2.27 246  P        Pn       22 49 20.7 -1.5
BFZ  Birch Farm          2.33 185  P        Pn       22 49 22.4 -0.5
BFZ  Birch Farm          2.33 185  P        Pn       22 49 22.5 -0.4
MRZ  Mangatainoka R      2.42 198  P        Pn       22 49 22.1 -1.7
HOWZ Holdsworth Sta      2.66 197  P        Pn       22 49 24.5 -2.1
OGWZ Otaki Gorge         2.67 203  P        Pn       22 49 24.4 -2.3
KIW  Kapiti Island       2.80 206  P        Pn       22 49 25.2 -3.0
DUWZ D’Urville Isla      3.17 219  P        Pn       22 49 27.6 -5.1
MSWZ Moikau Station      3.21 198  P        Pn       22 49 30.4 -2.9
TCW  Tory Channel        3.34 211  P        Pn       22 49 30.5 -4.2
PLWZ Palliser            3.36 197  P        Pn       22 49 31.4 -3.6
TUWZ Tuamarina           3.66 212  P        Pn       22 49 33.5 -5.3
QRZ  Quartz Range        3.96 230  P        Pn       22 49 33.9 -8.6
QRZ  Quartz Range        3.96 230  P        Pn       22 49 35.2 -7.3
KHZ  Kahutara            4.66 208  P        Pn       22 49 44.9 -6.4
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KHZ	**Kahutara**	**4.66**	**208**	P	Pn	22 49 45.1	-6.2

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*IDC **09** 23:04:09.9±2.5, 2°.66N×96°.22E, h0^{km}, mb3.8/5, mb1 3.9/6, mb1mx3.6/33, mbtmp3.8/6, ML4.2/1, MS3.5/1, Ms1 3.5/1, ms1mx2.6/44, Error ellipse: s-maj=95.0km s-min=31.0km az=58.0*

ISC 09 23:04:16.2±2.1, 2°.9N±0°.3×96°.6E±0°.5, h33^{km}, n13, σ0^s.52/6, mb3.6/5, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**15.61**	**8**	Pn	**P**	**23 07 57.4**	**-0.4**
	0.3nm,0.3s,baz=199,slow=13,SNR=2.1						
H08S2	**Diego Garcia H**	**26.22**	**246**	T	T	23 36 13.3	
	baz=68,slow=76,SNR=4.1						
H08S3	**Diego Garcia H**	**26.23**	**246**	T	T	23 36 20.7	
	baz=68,slow=76,SNR=4.6						
H08S1	**Diego Carcia H**	**26.24**	**246**	T	T	23 36 20.4	
	baz=68,slow=76,SNR=4.6						
H01W3	**Cape Leeuwin H**	**41.06**	**158**	T	T	23 55 14.2	
	baz=333,slow=76,SNR=6.8						
H01W2	**Cape Leeuwin H**	**41.08**	**158**	T	T	23 55 15.6	
	baz=333,slow=76,SNR=5.7						
H01W1	**Cape Leeuwin H**	**41.08**	**158**	T	T	23 55 14.8	
	baz=333,slow=76,SNR=5.9						
WRA	**Warramunga Arr**	**43.48**	**123**	P	**P**	**23 12 16.6**	**-0.1**
	0.5nm,0.7s,baz=299,slow=8.6,SNR=2.8						
KSRS	**Korea Array**	**44.81**	**36**	LR	LR	23 32 29.2	
	comp=Z,54nm,20.1s,baz=190,slow=38						
MKAR	**Makanchi Array**	**45.43**	**346**	P	**P**	**23 12 31.6**	**-0.3**
	0.3nm,0.4s,baz=159,slow=8.7,SNR=11						
SONM	**Songino Array**	**45.54**	**9**	P	**P**	**23 12 33.1**	**+0.3**
	0.3nm,0.3s,baz=198,slow=8.9,SNR=4.1						
ZALV	**Zalesovo Beam**	**51.77**	**351**	P	**P**	**23 13 21.2**	**+0.7**
	0.5nm,0.4s,baz=165,slow=6.0,SNR=2.3						
ARCES	**ARCESS Array B**	**80.72**	**340**	P	**P**	**23 16 25.6**	**-0.1**
	3.6nm,0.9s,baz=93,slow=3.6,SNR=4.1						

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*ECGS **09** 23:08:39.1, 1°.17S±0°.01×29°.312E±0°.007, h4^{km}±2^{km}, ML2.5, Error ellipse: s-maj=2.3km s-min=1.1km az=161.6, smi:local/1a8e9948-e550-40fe-880d-bda9a27f6084 Note: Depth/Latitude/Longitude errors are calculated from covariance matrix as 1D marginal (Lon/Lat errors as great circle degrees) while OriginUncertainty min/max horizontal errors are calculated from 2D error ellipsoid and are therefore seemingly higher compared to 1D errors. Error estimates can be reconstructed from the following original NonLinLoc error statistics line:STATISTICS ExpectX 34.1454 Y 38.0334 Z 5.44331 CovXX 0.690569 XY -0.525701 XZ -0.394294 YY 2.09301 YZ -0.149206 ZZ 7.40246 EllAz1 71.5375 Dip1 3.4872 Len1 1.31481 Az2 341.526 Dip2 0.184984 Len2 2.82958 Len3 5.120693e+00*

ISC 09 23:08:37.3±1.0, 1°.13S±0°.04×29°.33E±0°.05, h10^{km}, n16, σ0^s.55/18, Lake Tanganyika region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBGA	**Luboga**	**0.26**	**237**	*i* S	**Sg**	**23 08 47.0**	**+0.7**
LBGA	**Luboga**	**0.26**	**237**	*i* P	**Pb**	**23 08 43.6**	**-0.6**
KTSH	**Kitshanga**	**0.31**	**248**	*i* S	**Sg**	**23 08 48.2**	**+0.6**
KTSH	**Kitshanga**	**0.31**	**248**	*i* P	**Pb**	**23 08 44.4**	**-0.6**
BUTK	**Butaka**	**0.41**	**172**	*i* S	**Sg**	**23 08 51.4**	**+0.3**
BUTK	**Butaka**	**0.41**	**172**	*i* P	**Pg**	**23 08 46.3**	**+0.8**
KBTI	**Kibati**	**0.44**	**187**	*i* P	**Pg**	**23 08 46.7**	**+0.6**
KBTI	**Kibati**	**0.44**	**187**	*i* S	**Sg**	**23 08 52.3**	**+0.3**
GOM	**Goma**	**0.56**	**191**	*i* P	**Pg**	**23 08 49.0**	**+0.7**
IDJ	**Idjwi**	**0.97**	**196**	*i* S	**Sg**	**23 09 08.7**	**-0.1**
IDJ	**Idjwi**	**0.97**	**196**	*i* P	**Pg**	**23 08 56.3**	**+0.2**
LWI	**Lwiro**	**1.23**	**206**	*i* P	**Pn**	**23 09 00.5**	**-0.2**
LWI	**Lwiro**	**1.23**	**206**	*i* S	**Sb**	**23 09 16.3**	**-0.4**
KIL	**Kilembe**	**1.48**	**27**	*e*P	**Pb**	**23 09 04.5**	**-0.5**
KIL				*e*S	**Sg**	**23 09 25.8**	**+0.8**
MBAR	**Mbarara**	**1.50**	**70**	*i* P	**Pg**	**23 09 06.2**	**+0.2**
MBAR	**Mbarara**	**1.50**	**70**	*e*P	**Pg**	**23 09 06.3**	**+0.2**
MBAR				*e*S	**Sg**	**23 09 25.8**	**+0.2**

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*IDC **09** 23:16:49.7±1.1, 13°.16N×92°.15W, h0^{km}, mb3.9/10, mb1 4.1/12, mb1mx4.0/39, mbtmp3.9/12, ML3.9/2, MS3.3/6, Ms1 3.3/6, ms1mx3.1/31, Error ellipse: s-maj=40.0km s-min=17.2km az=43.0*

*UCR **09** 23:16:51.9±1.2, 13°.10N×92°.26W, h53^{km}±91^{km}, ML3.5, mb4.2(NEIC)*

*SNET **09** 23:16:51.8±1.2, 13°.09N×92°.26W, h51^{km}±102^{km}, ML3.8*

*GCG **09** 23:16:54.1±0.6, 13°.44N×92°.23W, h17^{km}±493^{km}, MD4.1*

*NEIC **09** 23:16:57.3, 13°.42N×92°.05W, h39^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$-2.10; M$_{\theta\theta}$1.42; M$_{\phi\phi}$0.68; M$_{r\theta}$1.24; M$_{\theta\phi}$-0.47; M$_{\phi r}$-0.80; Fault plane solution: M$_0$2.42000×10^{15} NP1:ϕ_s113.71000°, δ26.02000°, λ-95.43000°. NP2:ϕ_s299.75000°, δ64.10000°, λ-87.36000°. Principal axes: T 2.1550, Plg19.0000°, Azm28.0000°; N 0.4593, Plg2.0000°, Azm119.0000°; P -2.6143, Plg71.0000°, Azm215.0000°;*

*NEIC **09** 23:16:57.3±1.5, 13°.42N±0°.10×92°.05W±0°.06, h40^{km}±14^{km}, mb4.3/38, Mwr4.2/16 Error ellipse: s-maj=15.8km s-min=5.5km az=206.0*

ISC 09 23:16:54.8±2.4, 13°.28N±0°.07×92°.20W±0°.05, h31^{km}±16^{km}, n119, σ1^s.22/141, mb4.2/27, MS3.5/5, 2C, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTAL	**Retalhuleu**	**1.33**	**22**	*e*P	**Pn**	**23 17 16.3**	**-1.0**
RTAL				*e*S	**Sb**	**23 17 36.4**	**+0.6**
RTAL				IAML		23 17 45.1	
	comp=Z,796nm,0.5s						
RTAL	**Retalhuleu**	**1.33**	**22**	Pn	**Pn**	**23 17 16.0**	**-1.2**
STG3	**Santiaguito 3,**	**1.54**	**23**	*e*P	**Pn**	**23 17 19.4**	**-1.0**
FUG	**Fuego 3**	**1.75**	**49**	*e*P	**Pn**	**23 17 22.7**	**-0.6**
HUEH	**Huehuetenango**	**2.13**	**18**	*e*P	**Pn**	**23 17 28.3**	**-0.2**
HUEH				*e*S	**Sb**	**23 17 57.3**	**-1.8**
HUEH	**Huehuetenango**	**2.13**	**18**	Pn	**Pn**	**23 17 28.2**	**-0.2**
NBG	**Las Nubes**	**2.22**	**54**	*e*P	**Pn**	**23 17 29.9**	**+0.1**
NBG				*e*S	**Sn**	**23 17 57.9**	**+1.7**
RTR	**El Retiro**	**2.56**	**76**	*e*P	**Pn**	**23 17 32.8**	**-1.5**
RTR	**El Retiro**	**2.56**	**76**	*e*P	**Pn**	**23 17 32.8**	**-1.5**
CEVE	**Cerro Verde**	**2.56**	**78**	*e*P	**Pn**	**23 17 33.0**	**-1.5**
CEVE				*e*S	**Sn**	**23 18 06.2**	**+1.4**
CEVE				IAML		23 18 08.8	
	comp=Z,1µm,0.5s						
CEVE	**Cerro Verde**	**2.56**	**78**	*e*P	**Pn**	**23 17 33.0**	**-1.5**
CEVE				*e*S	**Sn**	**23 18 06.2**	**+1.4**
CEVE				IAML		23 18 08.8	
	comp=Z,1µm,0.5s						
SNJE	**San Jose**	**2.59**	**77**	*e*P	**Pn**	**23 17 33.7**	**-1.1**
SNJE	**San Jose**	**2.59**	**77**	*e*P	**Pn**	**23 17 33.7**	**-1.1**
UNIC	**Universidad Ca**	**2.67**	**75**	*e*P	**Pn**	**23 17 34.2**	**-1.6**
UNIC	**Universidad Ca**	**2.67**	**75**	*e*P	**Pn**	**23 17 34.2**	**-1.6**
JAYA	**Jayaque - finc**	**2.70**	**82**	*e*P	**Pn**	**23 17 34.1**	**-2.1**
JAYA				*e*S	**Sn**	**23 18 07.2**	**-0.8**
JAYA				IAML		23 18 10.5	
	comp=Z,437nm,0.2s						
JAYA	**Jayaque - finc**	**2.70**	**82**	*e*P	**Pn**	**23 17 34.1**	**-2.1**
JAYA				*e*S	**Sn**	**23 18 07.2**	**-0.8**
JAYA				IAML		23 18 10.5	
	comp=Z,437nm,0.2s						
CEDA	**San Andres**	**2.78**	**79**	*e*S	**Sn**	**23 18 10.2**	**+0.5**
CEDA	**San Andres**	**2.78**	**79**	*e*S	**Sn**	**23 18 10.2**	**+0.5**
PMON	**Piamonte**	**2.84**	**81**	*e*P	**Pn**	**23 17 36.2**	**-1.9**
PMON				*e*S	**Sn**	**23 18 12.1**	**+0.7**
PMON	**Piamonte**	**2.84**	**81**	*e*P	**Pn**	**23 17 36.2**	**-1.9**
PMON				*e*S	**Sn**	**23 18 12.1**	**+0.7**
TACO	**Tacachico**	**2.85**	**76**	*e*P	**Pn**	**23 17 36.6**	**-1.6**
TACO				*e*S	**Sn**	**23 18 11.0**	**-0.5**
TACO	**Tacachico**	**2.85**	**76**	*e*P	**Pn**	**23 17 36.6**	**-1.6**
TACO				*e*S	**Sn**	**23 18 11.0**	**-0.5**
BOQS	**Boqueron**	**2.88**	**81**	*e*P	**Pn**	**23 17 37.4**	**-1.4**
BOQS	**Boqueron**	**2.88**	**81**	*e*P	**Pn**	**23 17 37.4**	**-1.4**
SNET	**Serv Nac Est T**	**2.92**	**82**	Pn	**Pn**	**23 17 37.1**	**-2.0**
MTO3	**Montecristo**	**2.97**	**68**	*e*P	**Pn**	**23 17 38.6**	**-1.5**
MTO3				*e*S	**Sn**	**23 18 17.1**	**+2.3**
MTO3				IAML		23 18 19.2	
	comp=Z,158nm,0.4s						
MTO3	**Montecristo**	**2.97**	**68**	*e*P	**Pn**	**23 17 38.6**	**-1.5**
MTO3				*e*S	**Sn**	**23 18 17.1**	**+2.3**
MTO3				IAML		23 18 19.2	
	comp=Z,158nm,0.4s						
MTO3	**Montecristo**	**2.97**	**68**	Pn	**Pn**	**23 17 38.5**	**-1.5**
CCIG	**Comitan**	**2.98**	**1**	Pn	**Pn**	**23 17 41.7**	**+1.6**
MRL	**Marmol**	**3.03**	**54**	*e*P	**Pn**	**23 17 41.3**	**+0.5**
LFU	**La Fuente**	**3.04**	**81**	*e*P	**Pn**	**23 17 39.8**	**-1.0**
LFU	**La Fuente**	**3.04**	**81**	*e*P	**Pn**	**23 17 39.8**	**-1.0**
ESQI	**Esquipulas**	**3.05**	**65**	*e*P	**Pn**	**23 17 40.0**	**-1.1**
ESQI				*e*S	**Sn**	**23 18 18.6**	**+2.0**
ESQI				IAML		23 18 22.9	
	comp=Z,115nm,0.5s						
ESQI	**Esquipulas**	**3.05**	**65**	Pn	**Pn**	**23 17 39.7**	**-1.3**
LFRS	**El Faro**	**3.07**	**83**	*e*P	**Pn**	**23 17 39.9**	**-1.4**
LFRS	**El Faro**	**3.07**	**83**	*e*P	**Pn**	**23 17 39.9**	**-1.4**
SJTE	**Alcalda de S**	**3.12**	**84**	⇑*i*P	**Pn**	**23 17 41.2**	**-0.8**
SJTE				*e*S	**Sn**	**23 18 17.8**	**-0.6**
SJTE				IAML		23 18 22.4	
	comp=Z,107nm,0.3s						
SJTE	**Alcalda de S**	**3.12**	**84**	⇑*i*P	**Pn**	**23 17 41.2**	**-0.8**
SJTE				*e*S	**Sn**	**23 18 17.8**	**-0.6**
SJTE				IAML		23 18 22.4	
	comp=Z,107nm,0.3s						
PAVA	**Las Pavas**	**3.20**	**82**	*e*P	**Pn**	**23 17 42.2**	**-1.0**
PAVA				*e*S	**Sn**	**23 18 19.6**	**-0.7**
PAVA	**Las Pavas**	**3.20**	**82**	*e*P	**Pn**	**23 17 42.2**	**-1.0**
PAVA				*e*S	**Sn**	**23 18 19.6**	**-0.7**
COEG	**Centro de Oper**	**3.25**	**84**	*e*P	**Pn**	**23 17 42.2**	**-1.5**
COEG				*e*S	**Sn**	**23 18 21.2**	**-0.2**
COEG				IAML		23 18 31.0	
	comp=Z,232nm,0.5s						
COEG	**Centro de Oper**	**3.25**	**84**	*e*P	**Pn**	**23 17 42.2**	**-1.5**
COEG				*e*S	**Sn**	**23 18 21.2**	**-0.2**
COEG				IAML		23 18 31.0	
	comp=Z,232nm,0.5s						
SCLA	**Alcaldia de Sa**	**3.40**	**83**	*e*P	**Pn**	**23 17 44.8**	**-1.1**
SCLA				*e*S	**Sn**	**23 18 25.9**	**+0.7**
SCLA	**Alcaldia de Sa**	**3.40**	**83**	*e*P	**Pn**	**23 17 44.8**	**-1.1**
SCLA				*e*S	**Sn**	**23 18 25.9**	**+0.7**
PACA	**Pacayal**	**3.78**	**87**	*e*P	**Pn**	**23 17 50.1**	**-0.9**
PACA				*e*S	**Sn**	**23 18 33.6**	**-0.9**
PACA	**Pacayal**	**3.78**	**87**	*e*P	**Pn**	**23 17 50.1**	**-0.9**
PACA				*e*S	**Sn**	**23 18 33.6**	**-0.9**
LCND	**La Caada**	**4.20**	**89**	*e*P	**Pn**	**23 17 55.0**	**-1.7**
LCND				*e*S	**Sn**	**23 18 42.8**	**-1.9**
LCND	**La Caada**	**4.20**	**89**	*e*P	**Pn**	**23 17 55.0**	**-1.7**
LCND				*e*S	**Sn**	**23 18 42.8**	**-1.9**
CMIG	**Matias Romero**	**4.59**	**326**	Pn	**Pn**	**23 18 00.7**	**-1.4**
	comp=Z,3.4nm,0.3s,baz=167,slow=14,SNR=26						
CMIG				Sn	**Sn**	**23 18 51.5**	**-2.8**
	comp=Z,12nm,0.3s,baz=260,slow=12,SNR=4.9						
CMIG				LR	LR	23 19 05.8	
	comp=Z,38nm,20.5s,baz=152,slow=29						
TGUH	**Tegucigalpa,Un**	**4.85**	**80**	Pn	**Pn**	**23 18 04.2**	**-1.6**
CRIN	**San Cristobal**	**5.05**	**96**	Pn	**Pn**	**23 18 08.9**	**+0.3**
CNGN	**Cerro Negro**	**5.42**	**98**	Pn	**Pn**	**23 18 14.8**	**+1.2**
HZTE	**Horizontes, Gu**	**6.95**	**111**	Pn	**Pn**	**23 18 35.5**	**+1.0**
TLIG	**Tlapa**	**7.47**	**306**	Pn	**Pn**	**23 18 42.3**	**+0.6**
JTS	**Las Juntas de**	**7.70**	**112**	Pn	**Pn**	**23 18 46.8**	**+2.0**
	comp=Z,0.4nm,0.3s,baz=33,slow=14,SNR=4.2						
RIMA	**Rio Macho**	**8.89**	**112**	Pn	**Pn**	**23 19 03.9**	**+2.6**
SRBA	**San Rafael, Bu**	**9.56**	**114**		**Pn**	**23 19 12.0**	**+1.5**
MOIG	**Morelia**	**10.71**	**308**	Pn	**Pn**	**23 19 27.3**	**+1.0**
SOR	**Soroa**	**12.87**	**41**	Pn	**Pn**	**23 19 56.3**	**+0.6**
SJCC	**San Jacinto, C**	**17.01**	**100**	P	**P**	**23 20 51.4**	**-0.9**
SJCC				IAmb	IAmb	23 21 01.2	
	comp=Z,38nm,0.8s						
TX32	**Lajitas Array**	**19.19**	**328**	P	**Pn**	**23 21 17.2**	**-0.1**
TXAR	**Lajitas Array**	**19.19**	**328**	P	**Pn**	**23 21 17.7**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=153,slow=12,SNR=20						
TX31	**Lajitas Ar. Si**	**19.19**	**328**	P	**Pn**	**23 21 17.1**	**-0.1**
Z47A	**Carrollton**	**20.18**	**10**	P	**P**	**23 21 26.6**	**-0.2**
ABTX	**Abilene, Hawle**	**20.42**	**342**	P	**P**	**23 21 30.4**	**+0.9**
ABTX				IAmb	IAmb	23 21 34.7	
	comp=Z,15nm,1.1s						
154A	**Montrose**	**20.96**	**22**	P	**P**	**23 21 34.1**	**-1.2**
Y49A	**Blount Mountai**	**21.15**	**13**	P	**P**	**23 21 37.0**	**-0.3**
Y49A				IAmb	IAmb	23 21 53.7	
	comp=Z,15nm,1.2s						
GOGA	**Godfrey**	**21.56**	**20**	P	**P**	**23 21 41.6**	**-0.1**
GOGA				IAmb	IAmb	23 21 50.9	
	comp=Z,7.9nm,0.7s						
X48A	**Hartselle**	**21.59**	**12**	P	**P**	**23 21 41.2**	**-0.8**
SDV	**Santo Domingo**	**21.61**	**99**	P	**P**	**23 21 42.2**	**-0.4**
	comp=Z,3.0nm,0.3s,baz=293,slow=7.7,SNR=6.8						
MNTX	**Cornudas Mount**	**21.97**	**329**	P	**P**	**23 21 46.7**	**+0.6**
FPAL	**Fort Paine**	**21.99**	**15**	P	**P**	**23 21 46.6**	**+0.2**
FPAL				IAmb	IAmb	23 21 57.8	
	comp=Z,21nm,1.3s						
WMOK	**Wichita Mounta**	**22.18**	**346**	P	**P**	**23 21 47.0**	**-1.3**
SWET	**Sewanee**	**22.56**	**13**	P	**P**	**23 21 51.4**	**-1.1**
W50A	**Signal Mountai**	**22.69**	**15**	P	**P**	**23 21 53.0**	**-0.9**
W50A				IAmb	IAmb	23 22 00.0	
	comp=Z,18nm,1.4s						
HODGE	**Hodges**	**22.73**	**22**	P	**P**	**23 21 52.2**	**-2.0**
HODGE				IAmb	IAmb	23 22 00.6	
	comp=Z,14nm,1.2s						
WVT	**Waverly**	**23.09**	**9**	P	**P**	**23 21 56.4**	**-1.5**
WVT				IAmb	IAmb	23 21 58.9	
	comp=Z,5.8nm,0.7s						
CPCT	**Cooper Cave**	**23.13**	**16**	P	**P**	**23 21 58.1**	**-0.3**
AMTX	**Amarillo**	**23.15**	**340**	P	**P**	**23 21 59.8**	**+1.1**
AMTX				IAmb	IAmb	23 22 02.5	
	comp=Z,14nm,0.7s						
TKL	**Tuckaleechee C**	**23.54**	**17**	P	**P**	**23 22 01.4**	**-1.0**
	comp=Z,5.0nm,0.8s,baz=194,slow=14,SNR=4.5						
TKL	**Tuckaleechee C**	**23.54**	**17**	P	**P**	**23 22 02.0**	**-0.4**
TKL				IAmb	IAmb	23 22 12.9	
	comp=Z,15nm,1.2s						
U49A	**Red Boiling Sp**	**23.84**	**13**	P	**P**	**23 22 04.3**	**-1.0**
U49A				IAmb	IAmb	23 22 15.9	
	comp=Z,22nm,1.4s						
V53A	**Saluda**	**23.84**	**19**	P	**P**	**23 22 04.3**	**-1.1**
V53A				IAmb	IAmb	23 22 22.7	
	comp=Z,11nm,1.1s						
T47A	**Sharon Grove**	**24.04**	**10**	P	**P**	**23 22 06.5**	**-0.6**
S39A	**Bolivar**	**24.33**	**358**	P	**P**	**23 22 09.8**	**+0.1**
S44A	**Carbondale**	**24.45**	**6**	P	**P**	**23 22 10.1**	**-0.8**
T50A	**Nancy**	**24.54**	**14**	P	**P**	**23 22 10.2**	**-1.5**
T50A				IAmb	IAmb	23 22 18.8	
	comp=Z,6.0nm,0.8s						
V55A	**Taylorsville**	**24.55**	**22**	P	**P**	**23 22 10.9**	**-1.0**
V55A				IAmb	IAmb	23 22 19.3	
	comp=Z,7.3nm,0.8s						
R40A	**Maddies Statio**	**24.91**	**360**	P	**P**	**23 22 15.4**	**+0.4**
U54A	**Nelsons Funny**	**24.94**	**20**	P	**P**	**23 22 15.6**	**+0.1**
U54A				IAmb	IAmb	23 22 16.7	
	comp=Z,13nm,0.8s						
ANMO	**Albuquerque**	**25.13**	**332**	P	**P**	**23 22 18.5**	**+1.2**
	comp=Z,1.2nm,0.7s,baz=142,slow=9.5,SNR=4.3						
ANMO	**Albuquerque**	**25.13**	**332**	P	**P**	**23 22 17.3**	**0.0**
WCI	**Wyandotte Cave**	**25.39**	**11**	P	**P**	**23 22 18.4**	**-1.0**
S51A	**Beattyville**	**25.44**	**16**	P	**P**	**23 22 19.9**	**+0.1**
S51A				IAmb	IAmb	23 22 27.9	
	comp=Z,13nm,1.0s						
P48A	**Milroy**	**26.75**	**12**	P	**P**	**23 22 31.7**	**0.0**
P48A				IAmb	IAmb	23 22 46.5	
	comp=Z,7.6nm,1.2s						
T59A	**Double "B" Far**	**26.99**	**27**	P	**P**	**23 22 32.7**	**-1.1**
Q54A	**Coxs Mills**	**27.50**	**19**	P	**P**	**23 22 37.9**	**-0.6**
Q54A				IAmb	IAmb	23 22 41.2	
	comp=Z,4.8nm,0.9s						
O54A	**Avella**	**28.74**	**19**	P	**P**	**23 22 48.2**	**-1.3**
O54A				IAmb	IAmb	23 22 50.4	
	comp=Z,16nm,1.4s						
PDAR	**Pinedale Array**	**32.99**	**336**	P	**P**	**23 23 27.6**	**+0.3**
	comp=Z,0.9nm,0.8s,baz=136,slow=9.6,SNR=5.4						
REDW	**Red Top Meadow**	**34.01**	**335**	P	**P**	**23 23 36.2**	**+0.1**
NVAR	**Mina Array Bea**	**34.11**	**322**	P	**P**	**23 23 38.6**	**+1.6**
	comp=Z,1.6nm,0.7s,baz=134,slow=8.2,SNR=13						
NVAR	**Mina Array Bea**	**34.11**	**322**	P	**P**	**23 23 38.2**	**+1.2**
TPAW	**Teton Pass**	**34.15**	**335**	P	**P**	**23 23 37.5**	**+0.1**
TPAW				IAmb	IAmb	23 23 40.4	
	comp=Z,8.4nm,1.3s						
MCMT	**McKenzie Canyo**	**36.03**	**335**	P	**P**	**23 23 54.3**	**+0.7**
LPAZ	**La Paz**	**37.81**	**140**	LR	LR	23 40 00.6	
	comp=Z,30nm,18.1s,baz=308,slow=37						
HOOD	**Mount Hood Mea**	**40.54**	**328**	P	**P**	**23 24 33.5**	**+2.1**
LVC	**Limon Verde**	**42.35**	**147**	LR	LR	23 40 54.5	
	comp=Z,7.2nm,21.5s,baz=242,slow=34						
SIV	**San Ignacio**	**42.35**	**132**	P	**P**	**23 24 44.2**	**-2.2**
	comp=Z,1.2nm,0.7s,baz=304,slow=9.7,SNR=6.7						
SCHQ	**Schefferville**	**45.96**	**20**	LR	LR	23 45 30.4	
	comp=Z,167nm,18.1s,baz=208,slow=37						
YKA	**Yellowknife Ar**	**51.67**	**347**	LR	LR	23 51 16.5	
	comp=Z,39nm,18.2s,baz=0.0,slow=40						
ILAR	**Eielson Array**	**63.42**	**337**	P	**P**	**23 27 21.2**	**0.0**
	comp=Z,1.7nm,0.9s,baz=136,slow=4.5,SNR=16						
ESDC	**Sonseca Array**	**80.31**	**51**	P	**P**	**23 29 03.5**	**+0.4**
	comp=Z,0.5nm,0.8s,baz=290,slow=4.6,SNR=4.1						
NOA	**NORSAR Array B**	**84.86**	**28**	P	**P**	**23 29 27.2**	**+0.8**
	comp=Z,1.0nm,0.7s,baz=285,slow=4.6,SNR=2.6						
TORD	**Torodi Ar. Bea**	**90.74**	**76**	P	**P**	**23 29 55.7**	**+0.2**
	comp=Z,0.2nm,0.6s,baz=292,slow=3.9,SNR=2.0						
PETK	**Petropavlovsk-**	**91.12**	**326**	LR	LR	00 09 25.0	
	comp=Z,125nm,19.6s,baz=92,slow=35						
WRA	**Warramunga Arr**	**135.03**	**255**	PKP	**PKPdf**	**23 36 09.9**	**-1.9**
	comp=Z,0.6nm,0.8s,baz=81,slow=0.6,SNR=3.1						
CMAR	**Chiang Mai Arr**	**146.60**	**341**	PKPbc	**PKPdf**	**23 36 33.1**	**+0.4**
	comp=Z,1.7nm,0.4s,baz=341,slow=3.6,SNR=9.7						
KAPI	**Kappang**	**147.43**	**282**	PKPbc	**PKPbc**	**23 36 36.8**	**+0.1**
	comp=Z,1.4nm,0.3s,baz=75,slow=7.4,SNR=3.6						

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*IDC **09** 23:23:41.0±5.1, 5°.97S×148°.71E, h99^{km}±51^{km}, mb3.7/3, mb1 4.0/5, mb1mx3.4/41, mbtmp4.1/5, Error ellipse: s-maj=83.2km s-min=28.0km az=135.0*

*NEIC **09** 23:23:43.6±1.4, 6°.0S±0°.2×148°.8E±0°.1, h123^{km}±17^{km}, mb4.1/9, Error ellipse: s-maj=29.8km s-min=12.1km az=139.0*

ISC 09 23:23:41.6±1.0, 6°.0S±0°.1×148°.7E±0°.2, h100^{km}, n20, σ0^s.93/20, mb4.0/4, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.74**	**204**	P	**Pn**	**23 24 38.7**	**+1.4**
	4.8nm,0.3s,baz=262,slow=7.3,SNR=2.2						
PMG				S	**Sn**	**23 25 19.5**	**-1.0**
	8.4nm,0.3s,baz=230,slow=18,SNR=2.9						
PMG	**Port Moresby**	**3.74**	**204**	Pn	**Pn**	**23 24 39.6**	**+2.3**
RABL	**Rabaul**	**3.87**	**63**	Pn	**Pn**	**23 24 40.6**	**+1.5**
COEN	**Coen**	**9.63**	**214**	Pn	**Pn**	**23 25 58.1**	**+0.8**
WB0	**Warramunga Arr**	**19.54**	**224**	P	**P**	**23 28 01.5**	**+0.1**
WB0				IAmb	IAmb	23 28 02.2	
	comp=Z,3.5nm,0.8s						
WR0	**Warramunga Arr**	**19.57**	**223**	P	**P**	**23 28 02.0**	**+0.3**
WR0				IAmb	IAmb	23 28 02.2	
	comp=Z,3.1nm,0.6s						
WB2	**Warramunga Arr**	**19.69**	**224**	P	**P**	**23 28 03.3**	**+0.2**
WB2				IAmb	IAmb	23 28 03.7	
	comp=Z,6.4nm,0.5s						
WRA	**Warramunga Arr**	**19.70**	**224**	P	**P**	**23 28 03.2**	**0.0**
	comp=Z,0.9nm,0.3s,baz=49,slow=11,SNR=28						
WRA	**Warramunga Arr**	**19.70**	**224**	P	**P**	**23 28 02.8**	**-0.3**
KNRA	**Kununurra**	**21.82**	**242**	P	**P**	**23 28 24.7**	**-1.2**
AS31	**Alice Springs**	**22.64**	**217**	P	**P**	**23 28 34.0**	**-0.5**
ASAR	**Alice Springs**	**22.64**	**217**	P	**P**	**23 28 34.4**	**-0.1**
	comp=Z,1.5nm,0.5s,baz=52,slow=9.2,SNR=19						
ASAR	**Alice Springs**	**22.64**	**217**	P	**P**	**23 28 34.1**	**-0.4**
DZM	**Mont Dzumac**	**23.45**	**135**	P	**P**	**23 28 41.8**	**-0.6**
DZM				IAmb	IAmb	23 29 30.5	
	comp=Z,17nm,1.5s						
FITZ	**Fitzroy Crossi**	**25.54**	**240**	P	**P**	**23 29 00.6**	**-0.6**
	comp=Z,3.1nm,0.5s,baz=52,slow=8.8,SNR=18						
FITZ	**Fitzroy Crossi**	**25.54**	**240**	P	**P**	**23 29 00.9**	**-0.2**
FITZ				IAmb	IAmb	23 29 03.8	
	comp=Z,12nm,1.5s						
TOO	**Toolangi**	**31.59**	**185**	P	P	23 29 51.3	-3.6
BHW	**Baring Head**	**42.30**	**150**	P	**P**	**23 31 24.7**	**-0.7**
ILAR	**Eielson Array**	**84.79**	**23**	P	**P**	**23 36 03.9**	**-0.6**
	comp=Z,1.0nm,0.6s,baz=246,slow=4.9,SNR=15						
TORD	**Torodi Ar. Bea**	**146.73**	**285**	PKPbc	**PKPdf**	**23 43 11.3**	**+0.1**
	comp=Z,0.4nm,0.9s,baz=66,slow=2.4,SNR=1.9						

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*NEIC **09** 23:35:18.0±0.8, 37°.11N±0°.04×97°.62W±0°.02, h7^{km}±6^{km}, Error ellipse: s-maj=5.7km s-min=2.3km az=196.0*

NEIC 09 23:35:17.8±0.6, 37°.12N±0°.04×97°.62W±0°.02, h4^{km}±7^{km}, mb_Lg2.5/12, ML2.6/24, Error ellipse: s-maj=5.7km s-min=2.0km az=194.0, Kansas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAN09	**Caldwell North**	**0.01**	**356**	Pg	Pg	23 35 18.6	0.0
KAN01	**Argonia South**	**0.12**	**285**		Pg	23 35 20.4	+0.2
KS20	**Mayfield South**	**0.12**	**25**		Pg	23 35 20.4	+0.2
KAN17	**Caldwell West**	**0.14**	**236**	Pg	Pg	23 35 20.9	+0.3
KAN13	**South Haven SW**	**0.16**	**135**		Pg	23 35 21.2	+0.3
KS21	**Milan North St**	**0.17**	**347**		Pg	23 35 21.3	+0.2
KS21					Sg	23 35 23.8	+0.5
KAN05	**Bluff City Nor**	**0.20**	**266**		Pg	23 35 22.0	+0.2
KAN06	**Argonia West S**	**0.23**	**303**		Pg	23 35 22.3	+0.1
KAN08	**Anthony NE Sta**	**0.30**	**290**		Pg	23 35 23.8	+0.1
KAN14	**Manchester OK**	**0.32**	**239**		Pg	23 35 24.1	+0.1
GC02	**Grant County #**	**0.33**	**216**	Pg	Pg	23 35 24.5	+0.3
KAN12	**Harper NE Stat**	**0.35**	**300**	Pg	Pg	23 35 24.6	+0.1
KAN16	**Harper SW Stat**	**0.37**	**286**	Pg	Pg	23 35 25.5	+0.5
KAN10	**Anthony SW Sta**	**0.38**	**270**	Pg	Pg	23 35 25.3	+0.1
KAN10					Sg	23 35 30.6	+0.4
BLOK	**Blackwell**	**0.48**	**138**	Pg	Pg	23 35 27.2	+0.1
OK032	**Salt Plains WL**	**0.57**	**236**		Pg	23 35 28.5	-0.3
CROK	**Carrier**	**0.68**	**206**	Pg	Pg	23 35 30.8	-0.1
T35A	**Sooner Cattle**	**0.91**	**103**		Pg	23 35 35.0	-0.2
QUOK	**Quay**	**1.20**	**142**		Pg	23 35 40.3	-0.4
OK031	**S. Brethren Rd**	**1.33**	**152**	Pn	Pn	23 35 42.6	-0.5
OK029	**Liberty Lake**	**1.33**	**174**	Pn	Pn	23 35 42.6	-0.6
U32A	**Winter Ranch,**	**1.34**	**237**		Pn	23 35 42.7	-0.6
OK030	**Cody Creek RV**	**1.37**	**150**		Pn	23 35 43.3	-0.4
BCOK	**Bluff Creek, N**	**1.46**	**180**		Pn	23 35 44.9	-0.1
OK025	**Westminster Rd**	**1.56**	**172**		Pn	23 35 46.2	-0.1
R32A	**Long Quarter,**	**1.56**	**327**		Pn	23 35 46.2	-0.1
OKCFA	**Oklahoma City**	**1.71**	**175**	Pn	Pn	23 35 48.5	+0.1
OKCSW	**OKLAHOMA CITY**	**1.72**	**175**	Pn	Pn	23 35 48.3	-0.2
FNO	**Franklin**	**1.87**	**175**	Pn	Pn	23 35 51.0	+0.4
TUL1	**Leonard**	**1.91**	**129**	Pn	Pn	23 35 51.2	+0.2
TUL1				IAmb_Lg		23 36 18.1	
	comp=Z,29nm,0.8s						
KSU1	**Kansas State U**	**2.13**	**22**	Pn	Pn	23 35 53.8	-0.4
KSU1	**Kansas State U**	**2.13**	**22**	IAmb_Lg		23 36 25.6	
	comp=Z,26nm,0.9s						
CBKS	**Cedar Bluff**	**2.38**	**316**	Pn	Pn	23 35 57.4	-0.2
X34A	**Smith Ranch, M**	**2.52**	**184**		Pn	23 35 59.4	-0.2
WMOK	**Wichita Mounta**	**2.56**	**202**	Pn	Pn	23 36 00.1	0.0
U38A	**Gravette**	**2.68**	**104**		Pn	23 36 01.9	+0.1
HHAR	**Hobbs**	**3.07**	**105**		Pn	23 36 07.6	+0.5
X37A	**Clayton**	**3.12**	**144**	Pn	Pn	23 36 08.2	+0.4
LOOK	**Love County**	**3.15**	**173**	Pn	Pn	23 36 07.7	-0.5
S39A	**Bolivar**	**3.47**	**79**	Pn	Pn	23 36 12.6	+0.1
W39A	**Magazine**	**3.65**	**121**		Pn	23 36 15.9	+0.9
U40A	**Yellville**	**3.90**	**100**	Pn	Pn	23 36 19.0	+0.4
U40A				IAmb_Lg		23 37 22.8	
	comp=Z,14nm,0.8s						
MGMO	**Mountain Grove**	**4.27**	**88**	IAmb_Lg		23 37 34.5	
	comp=Z,12nm,0.9s						
R40A	**Maddies Statio**	**4.40**	**73**	Pn	Pn	23 36 25.1	-0.2
R40A				IAmb_Lg		23 37 38.5	
	comp=Z,7.0nm,0.7s						
FCAR	**Ozark Folk Cen**	**4.59**	**104**	Pn	Pn	23 36 27.9	-0.2
X40A	**Basin Creek Fa**	**4.69**	**123**	IAmb_Lg		23 37 46.4	
	comp=Z,8.6nm,0.8s						

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*TUL **09** 23:48:32.5±0.8, 36°.95N±0°.02×97°.82W±0°.03, h3^{km}±7^{km}, ML2.5, mb_Lg2.5/13(NEIC), Error ellipse: s-maj=3.4km s-min=2.7km az=45.0*

NEIC 09 23:48:32.7±0.8, 36°.92N±0°.02×97°.81W±0°.02, h6^{km}±6^{km}, Error ellipse: s-maj=3.1km s-min=1.9km az=122.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GC02	**Grant County #**	**0.08**	**208**	Pg	Pg	23 48 34.9	+0.4
GC02				Sg	Sg	23 48 36.5	+0.8
KAN14	**Manchester OK**	**0.12**	**287**		Pg	23 48 35.1	-0.2
KAN14				Sg	Sg	23 48 36.5	-0.6
KAN17	**Caldwell West**	**0.13**	**18**	Pg	Pg	23 48 35.3	-0.1
KAN17				Sg	Sg	23 48 36.9	-0.3
KAN05	**Bluff City Nor**	**0.19**	**346**		Pg	23 48 36.2	-0.3
KAN05				Sg	Sg	23 48 39.2	0.0
KAN01	**Argonia South**	**0.24**	**11**		Pg	23 48 37.2	-0.2
KAN01				Sg	Sg	23 48 40.3	-0.2
KAN09	**Caldwell North**	**0.27**	**36**	Pg	Pg	23 48 37.8	-0.1
KAN09				Sg	Sg	23 48 41.1	-0.4
KAN13	**South Haven SW**	**0.28**	**71**		Pg	23 48 38.4	+0.1
KAN10	**Anthony SW Sta**	**0.30**	**312**	Pg	Pg	23 48 38.4	-0.2
KAN06	**Argonia West S**	**0.33**	**354**		Pg	23 48 38.8	-0.3
KAN08	**Anthony NE Sta**	**0.33**	**338**		Pg	23 48 38.9	-0.3
OK032	**Salt Plains WL**	**0.34**	**250**		Pg	23 48 39.4	+0.1
KAN16	**Harper SW Stat**	**0.36**	**327**	Pg	Pg	23 48 39.5	-0.3

KS20	Mayfield South	0.37	34		Pg	23 48 39.8	-0.2
CROK	Carrier	0.44	198	Pg	Pg	23 48 41.6	+0.5
BLOK	Blackwell	0.51	108	Pg	Pg	23 48 42.6	+0.2
T35A	Sooner Cattle	1.04	90		Pg	23 48 52.6	-0.1
U32A	Winter Ranch,	1.10	241	Pg	Pg	23 48 53.3	-0.4
OK029	Liberty Lake	1.16	165		Pg	23 48 54.8	-0.1
QUOK	Quay	1.16	130	Pg	Pg	23 48 54.8	-0.2
OK031	S. Brethren Rd	1.25	141	Pg	Pg	23 48 56.1	-0.5
BCOK	Bluff Creek, N	1.27	172		Pn	23 48 56.6	-0.5
OK030	Cody Creek RV	1.29	140		Pn	23 48 56.9	-0.4
OK025	Westminster Rd	1.39	164		Pn	23 48 58.8	+0.1
OKCFA	Oklahoma City	1.53	169	Pn	Pn	23 49 00.5	-0.1
OKCFA				IAmb_Lg		23 49 24.5	
	comp=Z,29nm,0.8s						
OKCSW	OKLAHOMA CITY	1.54	169	Pn	Pn	23 49 01.1	+0.3
R32A	Long Quarter,	1.66	335	Pn	Pn	23 49 02.5	+0.1
FNO	Franklin	1.69	168	Pn	Pn	23 49 03.4	+0.5
FNO				IAmb_Lg		23 49 27.9	
	comp=Z,14nm,1.0s						
TUL1	Leonard	1.92	121		Pn	23 49 06.9	+1.0
TUL1				IAmb_Lg		23 49 36.3	
	comp=Z,28nm,0.8s						
WMOK	Wichita Mounta	2.31	200		Pn	23 49 12.3	+0.9
X34A	Smith Ranch, M	2.31	180		Pn	23 49 11.3	-0.1
X34A				IAmb_Lg		23 49 46.2	
	comp=Z,16nm,1.3s						
KSU1	Kansas State U	2.38	23	Pn	Pn	23 49 12.2	0.0
KSU1				IAmb_Lg		23 49 50.4	
	comp=Z,35nm,0.9s						
CBKS	Cedar Bluff	2.43	322	Pn	Pn	23 49 12.5	-0.5
U38A	Gravette	2.80	99	Pn	Pn	23 49 18.2	+0.1
LOOK	Love County	2.97	170	Pn	Pn	23 49 20.5	+0.1
LOOK				IAmb_Lg		23 50 12.5	
	comp=Z,10nm,0.9s						
X37A	Clayton	3.06	139		Pn	23 49 22.5	+0.8
HHAR	Hobbs	3.18	100	Pn	Pn	23 49 23.6	+0.3
N35A	Tabor	4.28	23	Pn	Pn	23 49 37.5	-0.9
P38A	Dawn	4.32	50	Pn	Pn	23 49 39.4	+0.5
BGNE	Belgrade	4.49	357	Pn	Pn	23 49 41.5	+0.2
R40A	Maddies Statio	4.61	71	Pn	Pn	23 49 43.5	+0.6
FCAR	Ozark Folk Cen	4.70	101	Pn	Pn	23 49 46.0	+1.8
SMCO	Snowmass	7.57	290	IAmb_Lg		23 52 44.3	
	comp=Z,5.6nm,0.9s						

IDC ***09*** *23:54:08.4±0.5, 51°.53N×173°.03W, h0^{km}, mb4.6/33, mb1 4.7/33, mb1mx4.7/42, mbtmp4.6/33, MS4.0/32, Ms1 4.0/32, ms1mx3.9/53, Error ellipse: s-maj=17.5km s-min=10.1km az=175.0*

BGR ***09*** *23:54:09.7±0.0, 50°.35N×171°.71W, h47^{km}, mb4.5*

AEIC ***09*** *23:54:11±1.7, 51°.35N±0°.06×172°.90W±0°.08, h39^{km}±5^{km}, Error ellipse: s-maj=9.2km s-min=7.0km az=172.0*

BJI ***09*** *23:54:12.1±0.0, 51°.79N×173°.22W, h29^{km}, mB5.1/35, mb5.0/54, Ms4.7/26, Ms7 4.4/25*

MOS ***09*** *23:54:12.7±0.8, 51°.54N×172°.89W, h43^{km}, mb5.0/63, MS4.0/8, Error ellipse: s-maj=6.9km s-min=5.6km az=100.4*

GCMT ***09*** *23:54:13.4±0.4, 51°.49N±0°.03×172°.71W±0°.07, h18^{km}±1^{km}, MW4.9/67, Moment Tensor Solution. s25,c27; s67,c80; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.28±.20; M$_{\theta\theta}$-1.94±.15; M$_{\phi\phi}$-0.33±.11; M$_{r\theta}$1.05±.33; M$_{\theta\phi}$-0.48±.08; M$_{\phi r}$0.50±.35; Best double couple: M$_{0}$2.46700×10^{16} NP1:ϕ_{s}258.00000°, δ31.00000°, λ97.00000°. NP2: ϕ_{s}70.00000°, δ59.00000°, λ86.00000°. Principal axes: T 2.5780, Plg76.0000°, Azm328.0000°; N -0.2210, Plg4.0000°, Azm72.0000°; P -2.3550, Plg14.0000°, Azm163.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***09*** *23:54:14.4±1.5, 51°.41N±0°.06×172°.90W±0°.07, h44^{km}±6^{km}, mb5.0/502, ML4.3(AEIC) Error ellipse: s-maj=8.8km s-min=6.1km az=154.0*

ISC 09 23:54:14.6±0.6, **51°.45N**±0°.06×**172°.87W**±0°.03, **h47**^{km}±5^{km}, **h46^{km}:pP-P, n992,** σ**0^{s}.92**/906, **mb4.9**/337, **MS4.2**/44, **51C-20D, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOFP	Korovin Flat P	1.12	318		Pn	23 54 32.7	-1.2
KOFP					Sn	23 54 48.4	+0.3
KOKL	Mount Kliuchef	1.20	317		Pn	23 54 33.7	-1.3
GSIG	Igitkin Island	1.97	287		Pn	23 54 43.4	-2.0
GSMY	Great Sitkin M	2.06	288		Pn	23 54 45.2	-1.5
GSTR	Great Sitkin T	2.08	289	Pn	Pn	23 54 46.7	-0.3
GSTD	Great Sitkin T	2.12	288		Pn	23 54 45.8	-1.8
GSTD					Sn	23 55 11.8	-0.9
ADK	Adak	2.41	282	P	Pn	23 54 50.3	-1.2
ADK						23 55 18.4	
ADK	Adak	2.41	282		Pn	23 54 50.3	-1.2
ADK					Sn	23 55 18.4	-1.3
KIWB	Kanaga Island	2.69	280		Pn	23 54 54.8	-0.6
KIMD	Kanaga Island	2.74	278		Pn	23 54 53.8	-2.2
NIKH	Nikolski High	2.90	57	P	Pn	23 54 57.1	-1.1
	baz=238						
NIKH	Nikolski High	2.90	57		Pn	23 54 56.9	-1.4
TAFP	Tanaga Falls P	3.21	280		Pn	23 55 01.7	-0.8
TAFP					Sn	23 55 38.7	-0.8
OKSO	Okmok South	3.46	55		Pn	23 55 04.9	-1.0
OKCE	Okmok Cone E	3.49	54		Pn	23 55 05.3	-1.0
OKTU	Okmok Mt. Tuli	3.53	55		Pn	23 55 06.3	-0.7
OKFG	Magazine Ridge	3.61	55		Pn	23 55 07.1	-0.9
GANE	Gareloi Northe	3.70	278		Pn	23 55 07.1	-2.0
MAPS	Pakushin South	4.32	55		Pn	23 55 16.9	-0.7
MREP	Makushin Rep't	4.42	55		Pn	23 55 17.4	-1.7
MSW	Makushin Switc	4.45	54		Pn	23 55 18.7	-0.8
MNAT	Makushin Natee	4.49	55		Pn	23 55 19.2	-0.7
UNV	Unalaska Valle	4.56	56	P	Pn	23 55 19.8	-1.1
	baz=239						
UNV	Unalaska Valle	4.56	56	Pn	Pn	23 55 20.0	-0.9
AMKA	Amchitka	4.90	272	Pn	Pn	23 55 24.9	-0.7
ZRO	Akutan Zero	4.95	55		Pn	23 55 27.0	+0.7
AKUT	Akutan	5.08	55	Pn	Pn	23 55 27.0	-1.0
SPIA	Saint Paul Isl	5.94	14		Pn	23 55 39.9	+0.1
FALS	False Pass	6.63	55	P	Pn	23 55 48.4	-0.9
	baz=242						
SDPT	Sand Point	8.37	57	P	Pn	23 56 11.8	-1.4
	baz=246						
SDPT	Sand Point	8.37	57	Pn	Pn	23 56 11.4	-1.7
CNBA	Chernabura Isl	8.67	62	Pn	Pn	23 56 14.6	-2.6
CHNA	Chernabura Isl	8.67	62	P	Pn	23 56 17.0	-0.3
	baz=252						
CHGN	Chignik	9.82	55	P	Pn	23 56 31.9	-1.0
	baz=246						
CHGN	Chignik	9.82	55	Pn	Pn	23 56 31.3	-1.6
CHIR	Chirikof Islan	11.13	60	P	Pn	23 56 49.9	-0.9
	baz=253						
SII	Sitkinak Islan	12.11	58	P	Pn	23 57 03.4	-0.8
	baz=252						
SII	Sitkinak Islan	12.11	58	Pn	Pn	23 57 01.8	-2.5
GAMB	Gambell	12.37	2	P	Pn	23 57 05.2	-2.5
	baz=183						
P18K	Big Mountain,	12.76	45	P	Pn	23 57 11.8	-1.3
	baz=239						
OHAK	Old Harbor	12.78	56	P	Pn	23 57 12.0	-1.3
	baz=251						
OHAK	Old Harbor	12.78	56	Pn	Pn	23 57 09.7	-3.7
O18K	Koktuh Hills	13.01	43	P	Pn	23 57 15.0	-1.5
	baz=237						
O18K	Koktuh Hills	13.01	43	Pn	Pn	23 57 17.3	+0.8
Q19K	Cape Douglas,	13.26	48	P	Pn	23 57 18.2	-1.7
	baz=244						
Q19K	Cape Douglas,	13.26	48	Pn	Pn	23 57 18.3	-1.6
KDAK	Kodiak Island	13.32	54	Pn	Pn	23 57 16.8	-4.0
	0.7nm,0.3s,baz=268,slow=7.7,SNR=14						
KDAK	Kodiak Island	13.32	54	⇑eP	Pn	23 57 22.2	+1.4
KDAK	Kodiak Island	13.32	54		Pn	23 57 17.4	-3.4
O19K	Port Alsworth	13.57	43	P	Pn	23 57 22.7	-1.4
	baz=238						
SVW2	Sparrevohn	13.58	38		Pn	23 57 25.2	+1.0
N19K	Bonanza Creek	13.84	40	P	Pn	23 57 26.2	-1.7
	baz=235						
N19K	Bonanza Creek	13.84	40		Pn	23 57 29.3	+1.3
O20K	Slope Mountain	14.25	45	P	Pn	23 57 32.5	-0.9
	baz=241						
TNA	Tin City	14.38	8	P	Pn	23 57 32.7	-2.2
	baz=192						
RSO	Redoubt South	14.38	43	Pn	Pn	23 57 37.5	+2.3
L19K	White Mountain	14.53	35	P	Pn	23 57 35.9	-1.1
	baz=230,SNR=10						
L19K	White Mountain	14.53	35		P	23 57 42.5	-0.2
TTA	Tatalina	14.63	32	P	Pn	23 57 40.2	+1.8
TTA	Tatalina	14.63	32	P	Pn	23 57 37.1	-1.3
	baz=226,SNR=9.3						
TTA	Tatalina	14.63	32		Pn	23 57 40.2	+1.8
CNPM	China Poot	14.63	48	Pn	Pn	23 57 37.9	-0.6
BRLK	Bradley Lake	14.89	48	Pn	Pn	23 57 40.4	-1.4
BRSE	Bradley Lake S	14.95	48	P	Pn	23 57 41.8	-0.8
	baz=246,SNR=7.8						
SPCR	Spurr Chakacha	14.98	41	P	Pn	23 57 42.5	-0.6
	baz=238						
SPU	Mount Spurr	15.04	42	P	P	23 57 48.1	-0.2
L20K	Farewell, AK	15.07	36	P	Pn	23 57 43.5	-0.6
	baz=231						
SEW	Seward	15.69	47	P	Pn	23 57 50.5	-1.6
	baz=246						
SEW	Seward	15.69	47	Pn	Pn	23 57 52.6	+0.5
GCSA	Galena City Sc	15.71	26	P	Pn	23 57 50.6	-1.7
	baz=219						
O22K	Cooper Landing	15.72	46	P	Pn	23 57 51.6	-0.9
	baz=245						
O22K	Cooper Landing	15.72	46	P	P	23 57 54.6	-1.2
O22K				IAmb	IAmb	23 58 13.0	
	comp=Z,116nm,0.7s						
SUA	Susitna One	15.72	42	P	Pn	23 57 51.8	-1.0
	baz=240						
SUA	Susitna One	15.72	42	Pn	Pn	23 57 53.3	+0.5
PPLA	Purkeypile	15.94	36	P	Pn	23 57 54.8	-0.7
	baz=233						
PPLA	Purkeypile	15.94	36		P	23 57 57.4	-1.1
RC01	Rabbit Creek A	15.98	44	P	Pn	23 57 54.4	-1.5
	baz=243						
RC01	Rabbit Creek A	15.98	44	Pn	Pn	23 57 54.2	-1.6
J20K	Nowinta River	16.10	30	P	Pn	23 57 56.5	-0.8
	baz=226,SNR=13						
J20K	Nowinta River	16.10	30	P	Pn	23 57 58.5	+1.1
CAST	Castle Rocks	16.30	35	P	Pn	23 57 59.2	-0.7
	baz=232,SNR=22						
CAST	Castle Rocks	16.30	35		Pn	23 58 00.4	+0.5
CUT	Chulitna	16.40	39	P	Pn	23 58 00.2	-0.9
	baz=238						
PWL	Port Wells	16.50	46	P	Pn	23 58 01.4	-1.0
	baz=246						
PWL	Port Wells	16.50	46		Pn	23 58 01.0	-1.5
CHUM	Lake Minchumin	16.50	33	P	Pn	23 58 01.0	-1.5
	baz=230,SNR=8.0						
KNK	Knik Glacier	16.68	44	P	Pn	23 58 03.5	-1.2
	baz=244						
KNK	Knik Glacier	16.68	44	Pn	Pn	23 58 02.9	-1.8
KTH	Kantishna Hill	16.79	35	IAmb	IAmb	23 58 08.8	
	comp=Z,106nm,1.3s						
SML	Sawmill	16.91	43	P	Pn	23 58 06.4	-1.1
	baz=243,SNR=5.1						
SML	Sawmill	16.91	43	Pn	Pn	23 58 06.2	-1.3
Q23K	Middleton Isla	16.94	52	P	Pn	23 58 07.1	-0.8
	baz=253						
TRF	Thorofare Moun	16.97	36	P	Pn	23 58 07.4	-1.0
	baz=235						
GLI	Glacier Island	17.06	46	P	Pn	23 58 08.2	-1.3
	baz=248						
GLI	Glacier Island	17.06	46	Pn	Pn	23 58 06.8	-2.7
BPAW	Bear Paw Mtn.	17.10	34	P	Pn	23 58 08.1	-1.8
	baz=232,SNR=11						
BPAW	Bear Paw Mtn.	17.10	34	P	P	23 58 11.2	+0.1
BPAW				IAmb	IAmb	23 58 14.0	
	comp=Z,62nm,1.0s						
HIN	Hinchinbrook I	17.17	48	Pn	Pn	23 58 09.2	-1.6
FID	Port Fidalgo	17.30	47	Pn	Pn	23 58 09.8	-2.6
SCM	Sheep Creek Mo	17.34	43	P	Pn	23 58 12.1	-1.0
SCM				pmax	pmax		
	comp=Z,51nm,1.0s						
SCM	Sheep Creek Mo	17.34	43	P	Pn	23 58 11.7	-1.4
	baz=244,SNR=7.9						
SCM	Sheep Creek Mo	17.34	43	P	Pn	23 58 12.1	-1.0
I21K	Tanana	17.46	30	P	Pn	23 58 13.3	-1.0
	baz=228,SNR=42						
I21K	Tanana	17.46	30	P	P	23 58 16.3	+1.2
I21K				IAmb	IAmb	23 58 18.3	
	comp=Z,88nm,1.0s						
PET	Petropavlovsk	17.46	286	eP	Pn	23 58 14.7	+0.2
PET				eS	Sn	00 01 24.5	-3.2
PET				pmax	pmax		
	comp=Z,58nm,1.3s						
PET				MLR	MLR		
	comp=Z,400nm,16.0s						
IMAR	Indian Mountai	17.50	26		P	23 58 16.3	+0.7
WAT6	Susitna Watana	17.51	41	P	Pn	23 58 12.9	-2.2
	baz=242						
H21K	Melozitna Rive	17.54	28	P	Pn	23 58 13.4	-1.9
	baz=225						
H21K	Melozitna Rive	17.54	28	P	P	23 58 15.9	0.0
EYAK	Cordova Ski Ar	17.57	48	P	Pn	23 58 14.1	-1.6
	baz=251						
MCK	McKinley	17.63	37	P	Pn	23 58 14.8	-1.6
	baz=237,SNR=16						
DIV	Divide	17.76	46	Pn	Pn	23 58 16.7	-1.4
MLY	Manley	17.76	32	P	Pn	23 58 16.6	-1.5
	baz=230,SNR=22						
MLY	Manley	17.76	32	P	P	23 58 19.0	+0.5
KLU	Klutina	17.82	45	P	Pn	23 58 16.6	-2.3
	baz=248						
DHY	Denali Highway	17.89	40	P	Pn	23 58 17.8	-2.0
	baz=241						
M24K	Tolsona, Glenn	17.95	43	P	Pn	23 58 18.5	-2.0
	baz=245,SNR=6.7						
M24K	Tolsona, Glenn	17.95	43	IAmb	IAmb	23 58 21.8	
	comp=Z,75nm,1.1s						
KAIM	Kayak Island	18.02	51	P	Pn	23 58 19.2	-2.1
	baz=254						
RAGM	Ragged Mountai	18.02	49		Pn	23 58 21.1	-0.3
PEA0B	Petropavlovsk-	18.03	287	⇑eP	Pn	23 58 20.2	-1.2
PEA0B	Petropavlovsk-	18.03	287		Pn	23 58 20.9	-0.5
PETK	Petropavlovsk-	18.03	287	P	Pn	23 58 21.3	-0.1
	comp=Z,0.6nm,0.3s,baz=90,slow=15,SNR=7.3						
NEA2	Nenana	18.07	34	P	P	23 58 19.7	-2.0
	baz=234,SNR=10						
NEA2	Nenana	18.07	34	P	P	23 58 20.1	-1.6
HMT	Hamilton	18.21	50		P	23 58 22.1	-1.2
BMRM	Bremner River	18.24	48	P	P	23 58 21.9	-1.8
	baz=251						
BMRM	Bremner River	18.24	48		P	23 58 23.0	-0.7
I23K	Minto, Yukon-K	18.30	32	P	P	23 58 22.0	-2.2
	baz=232,SNR=22						
I23K	Minto, Yukon-K	18.30	32	P	P	23 58 24.2	0.0
WRH	Wood River Hil	18.34	35	P	P	23 58 22.2	-2.6
SUCK	Suckling Hills	18.37	51		P	23 58 25.1	0.0
SUCK				IAmb	IAmb	23 58 48.2	
	comp=Z,162nm,1.3s						
N25K	Chitina, Valde	18.45	46	P	P	23 58 24.5	-1.7
	baz=249						
N25K	Chitina, Valde	18.45	46	P	P	23 58 25.2	-0.9
HARP	HAARP	18.51	43	P	P	23 58 24.8	-1.9
	baz=246,SNR=8.3						
PAX	Paxson	18.62	41	P	P	23 58 25.8	-2.1
	baz=244						
COLA	College	18.66	34	⇑iP	Pn	23 58 29.5	+0.6
COLA				pmax	pmax		
	comp=Z,14nm,0.7s						
H23K	Yukon River	18.66	31	P	P	23 58 26.4	-1.8
	baz=230						
HDA	Harding Lake	18.73	36	P	P	23 58 27.2	-1.8
	baz=238,SNR=13						
HDA	Harding Lake	18.73	36	P	P	23 58 28.1	-0.9
SNH	Sunshine Point	18.85	51	P	Pn	23 58 31.3	-0.1
SNH				IAmb	IAmb	23 58 35.2	
	comp=Z,190nm,1.1s						
VRDI	Verde Repeater	18.85	47	P	P	23 58 29.7	-0.9
CRQM	Cirque	18.86	49	IAmb	IAmb	23 58 39.1	
	comp=Z,77nm,1.1s						
CRQE	Cirque	18.88	49	P	P	23 58 29.1	-1.7
	baz=254						
WAX	Waxell Ridge	18.91	50	IAmb	IAmb	23 58 34.3	
	comp=Z,74nm,1.0s						
POKR	Poker Plat Res	18.94	34	P	P	23 58 29.3	-2.0
	baz=236,SNR=5.3						
ILAR	Eielson Array	18.94	35	P	P	23 58 28.2	-3.1
	comp=Z,1.2nm,0.3s,baz=237,slow=10,SNR=55						
ILAR				LR	LR	00 06 41.2	
	comp=Z,555nm,18.5s,baz=238,slow=40						
ILAR	Eielson Array	18.94	35	P	P	23 58 29.2	-2.2
ILAR	Eielson Array	18.94	35	P	P	23 58 29.2	-2.2
TGL	Tana Glacier	19.00	49	P	P	23 58 31.1	-1.0
TGL				IAmb	IAmb	23 58 41.8	
	comp=Z,46nm,0.8s						
MCARA	McCarthy VSAT	19.09	47	P	P	23 58 31.4	-1.7
	baz=252						
MCARA	McCarthy VSAT	19.09	47	IAmb	IAmb	23 58 40.6	
	comp=Z,55nm,1.0s						
ISLE	Juniper Island	19.20	50	P	P	23 58 34.1	-0.2
ISLE				IAmb	IAmb	23 58 44.9	
	comp=Z,40nm,0.9s						
H24K	Noodor Dome	19.20	32	P	P	23 58 32.5	-1.7
	baz=233,SNR=33						
H24K	Noodor Dome	19.20	32	IAmb	IAmb	23 58 36.3	
	comp=Z,68nm,0.9s						
RIDG	Independent Ri	19.21	39	P	P	23 58 33.2	-1.1
	baz=243,SNR=9.7						
MESA	MESA	19.28	51	P	P	23 58 34.3	-1.0
	baz=256						
MESA	MESA	19.28	51	IAmb	IAmb	23 58 36.8	
	comp=Z,74nm,1.0s						
MENT	Mentasta	19.33	42	P	Pn	23 58 36.5	-0.6
COLD	Coldfoot	19.39	27	P	P	23 58 34.3	-1.9
	baz=226,SNR=39						
COLD	Coldfoot	19.39	27	IAmb	IAmb	23 58 38.6	
	comp=Z,81nm,1.1s						
J25K	Salcha River,	19.42	37	P	P	23 58 34.7	-2.0
	baz=240,SNR=62						
SKR	Severo-Kuril's	19.43	280	eP	Pn	23 58 39.2	+0.9
SKR				eS	Sn	00 02 15.8	+0.5
SKR				pmax	pmax		
	comp=Z,200nm,4.7s						
SKR				MLR	MLR		
	comp=Z,300nm,19.0s						
BILL	Bilibino	19.49	336	⇓eP	P	23 58 37.0	-0.3
BILL				eS	Sn	00 02 17.8	+1.4
BILL				pmax	pmax		
	comp=Z,17nm,0.8s						
BILL				MLR	MLR		
	comp=Z,448nm,15.0s						
BILL	Bilibino	19.49	336	P	P	23 58 36.9	-0.3
BILL				IAmb	IAmb	23 58 48.8	
	comp=Z,40nm,0.8s						
GRNC	Granite Creek	19.51	50	P	P	23 58 37.3	-0.4
GRNC				IAmb	IAmb	23 58 43.0	
	comp=Z,56nm,1.0s						
L26K	Log Cabin Wild	19.52	42	P	P	23 58 35.9	-1.8
	baz=247,SNR=14						
L26K	Log Cabin Wild	19.52	42	P	P	23 58 37.6	-0.2
BARN	Barnard Glacie	19.64	49	P	P	23 58 38.0	-1.1
SCRK	Sand Creek	19.66	39	P	P	23 58 37.3	-2.0
	baz=244,SNR=25						
SCRK	Sand Creek	19.66	39	P	P	23 58 37.6	-1.7
CTG	Chitna Glacier	19.76	49	P	P	23 58 38.8	-1.7
	baz=255						
CTGM	Chitina Glacie	19.76	49	P	P	23 58 39.3	-1.2
CTGM				IAmb	IAmb	23 58 55.9	
	comp=Z,38nm,0.9s						
PRP	Porcupine Dome	19.83	34	P	P	23 58 39.5	-1.7
	baz=238,SNR=6.6						
PRP	Porcupine Dome	19.83	34	P	P	23 58 39.7	-1.5
LOGN	Logan Glacier	19.89	50	P	P	23 58 41.2	-0.7
LOGN				IAmb	IAmb	23 58 50.9	
	comp=Z,40nm,0.8s						
M27K	Edge Creek, AK	19.92	45	P	P	23 58 40.4	-1.8
	baz=251,SNR=6.9						
M27K	Edge Creek, AK	19.92	45	P	P	23 58 41.0	-1.1
J26L	Joseph Creek	20.05	38	P	P	23 58 41.9	-1.7
	baz=243,SNR=93						
PCA	Pinnacle	20.09	52	P	P	23 58 43.3	-0.7
PCA				IAmb	IAmb	23 58 46.1	
	comp=Z,74nm,0.9s						
L27K	Beaver Creek,	20.18	43	P	P	23 58 43.9	-1.0
	baz=249,SNR=8.5						
L27K	Beaver Creek,	20.18	43	P	P	23 58 45.1	+0.2
BCAR	Beaver Creek A	20.20	43	P	P	23 58 45.2	+0.1
BCPM	Bancas Point	20.37	52	P	P	23 58 46.9	-0.1
BCPM				IAmb	IAmb	23 58 49.1	
	comp=Z,113nm,1.1s						
YUK3	Moose Creek	20.38	47	P	P	23 58 46.2	-1.1
	baz=254						
BVCY	Beaver Creek	20.39	45	P	P	23 58 46.8	-0.3
	baz=252,SNR=6.5						
PNL	Peninsula	20.45	53	P	P	23 58 48.0	+0.2
	baz=261						
FYU	Fort Yukon	20.50	32	P	P	23 58 47.2	-1.1
TOLK	Toolik Lake Re	20.55	24	P	P	23 58 48.1	-0.8
	baz=225,SNR=14						
TOLK	Toolik Lake Re	20.55	24	P	P	23 58 49.2	+0.3
TOLK				IAmb	IAmb	23 59 05.7	
	comp=Z,31nm,0.8s						
EGAK	Eagle	21.11	39	P	P	23 58 53.5	-1.3
	baz=246,SNR=43						
EGAK	Eagle	21.11	39	IAmb	IAmb	23 59 01.9	
	comp=Z,51nm,0.7s						
YUK4	Talbot Arm	21.12	49	P	P	23 58 54.5	-0.7
	baz=257						
BMAR	Burnt Mountain	21.21	30	P	P	23 58 55.4	-0.5
DAWY	Dawson	21.55	41	P	P	23 58 58.6	-1.1
	baz=250,SNR=12						
HYT	Haines Junctio	21.57	51	P	P	23 58 58.1	-1.9
	baz=260,SNR=9.4						
HYT	Haines Junctio	21.57	51	P	P	23 58 59.9	0.0
HYT				IAmb	IAmb	23 59 04.5	
	comp=Z,25nm,0.7s						
SEY	Seymchan	21.74	315	P	P	23 59 02.1	+0.5
	comp=Z,10nm,0.7s,baz=128,slow=13,SNR=16						
SEY				LR	LR	00 09 11.4	
	comp=Z,286nm,18.0s,baz=93,slow=42						
M30M	Minto, Yukon	22.25	46	P	P	23 59 06.1	-1.0
	baz=256						
SIT	Sitka	22.43	61	P	P	23 59 08.8	-0.2
	baz=271						
I29M	Ogilvie Camp,	22.45	39	P	P	23 59 07.1	-2.1
	baz=248,SNR=29						
SKAG	Skagway	22.48	54	P	P	23 59 08.5	-1.1
	baz=266,SNR=7.9						
SKAG	Skagway	22.48	54	P	P	23 59 08.2	-1.3
SKAG				IAmb	IAmb	23 59 11.9	
	comp=Z,72nm,0.8s						
N31M	Braeburn, Yuko	22.50	49	P	P	23 59 09.1	-0.7
	baz=260						
BESE	Bessie Mountai	22.68	57	P	P	23 59 11.6	-0.2
BESE				IAmb	IAmb	23 59 32.0	
	comp=Z,43nm,1.0s						
WHY	Whitehorse	22.82	51	P	P	23 59 12.6	-0.6
	baz=263						
WHY	Whitehorse	22.82	51	P	P	23 59 13.5	+0.3
WHY				IAmb	IAmb	23 59 21.1	
	comp=Z,44nm,1.3s						
JIS	Juneau Island	22.92	58	P	P	23 59 14.7	+0.6
JIS				IAmb	IAmb	23 59 31.0	
	comp=Z,64nm,1.2s						
EPYK	Eagle Plains	23.43	37	P	P	23 59 17.2	-2.0
	baz=248,SNR=18						
EPYK	Eagle Plains	23.43	37	IAmb	IAmb	23 59 19.8	
	comp=Z,62nm,1.1s						
MIDW	Midway	23.46	190	P	P	23 59 17.5	-2.1
CRAG	Craig	23.77	65	P	P	23 59 22.5	+0.1
	baz=277						
P33M	Teslin, Yukon	23.80	53	P	P	23 59 22.1	-0.7
	baz=266						
WRAK	Wrangell Islan	24.10	62	P	P	23 59 24.8	-0.7
	baz=275						
WRAK	Wrangell Islan	24.10	62	P	P	23 59 24.1	-1.3
WRAK				IAmb	IAmb	23 59 50.5	
	comp=Z,35nm,1.1s						
DIB	Dawson Inlet,	24.52	70	P	P	23 59 29.2	-0.2
MOBC	Moresby Island	24.84	70	P	P	23 59 31.7	-0.5
MOBC				IAmb	IAmb	23 59 36.1	
	comp=Z,34nm,1.1s						
DLBC	Dease Lake	25.21	57	P	P	23 59 37.4	+1.7
	comp=Z,30nm,0.9s,baz=279,slow=9.9,SNR=29						
DLBC	Dease Lake	25.21	57	P	P	23 59 37.0	+1.4
DLBC				IAmb	IAmb	23 59 40.6	
	comp=Z,37nm,0.9s						
INK	Inuvik	25.31	33	P	P	23 59 35.9	-0.4
	comp=Z,61nm,0.9s,baz=234,slow=10,SNR=110						
INK	Inuvik	25.31	33	P	P	23 59 35.6	-0.6
	baz=248,SNR=51						
INK	Inuvik	25.31	33	IAmb	IAmb	23 59 37.8	
	comp=Z,60nm,0.8s						
RUBB	Prince Rupert	25.59	67	P	P	23 59 39.4	+0.5
RUBB				IAmb	IAmb	23 59 41.3	
	comp=Z,23nm,1.0s						
GRNB	Grenville Isla	25.86	68	P	P	23 59 39.7	-1.8
TGTN	Hyland Airport	26.08	50	P	P	23 59 43.4	-0.1
	baz=268						
BBB	Bella Bella	27.35	71	P	P	23 59 55.8	+0.9
	comp=Z,7.8nm,0.9s,baz=288,slow=8.1,SNR=3.7						
BBB	Bella Bella	27.35	71	P	P	23 59 55.6	+0.8
YSS	Yuzh-Sakhalins	28.99	279	eP	P	00 00 10.7	+1.1

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YSS                                   pmax   pmax
       comp=Z,50nm,1.1s
YSS                                   MLR    MLR
       comp=Z,500nm,14.0s
A36M   Sachs Harbour      29.24  28   P      P      00 00 11.0 -0.5
       baz=251,SNR=10
A36M   Sachs Harbour      29.24  28   P      P      00 00 11.1 -0.5
A36M                                  IAmb   IAmb   00 00 15.4
       comp=Z,15nm,0.8s
ASAJ   Asahikawa          30.41 274   P      P      00 00 23.9 +1.8
       comp=Z,16nm,0.9s,baz=61,slow=17,SNR=3.5
LLLB   Lillooet           31.55  71   P      P      00 00 32.5 +0.2
LLLB                                  IAmb   IAmb   00 00 34.9
       comp=Z,16nm,1.1s
D03D   Eldon              32.07  77   P      P      00 00 36.6 -0.1
       baz=296,SNR=6.9
YAK    Yakutsk            32.15 312   LR     LR     00 14 17.4
       comp=Z,548nm,18.1s,baz=89,slow=38
YAK    Yakutsk            32.15 312⇑e P      P      00 00 36.6 -0.6
YAK                                   pmax   pmax
       comp=Z,10.0nm,0.5s
E03A   Lebam              32.22  79   P      P      00 00 38.5 +0.5
E03A                                  IAmb   IAmb   00 00 42.3
       comp=Z,35nm,1.1s
B05A   Bryant             32.36  75   P      P      00 00 39.0 -0.2
       baz=295,SNR=7.6
D04E   Lakebay            32.42  77   P      P      00 00 39.8  0.0
       baz=296
YKA    Yellowknife Ar     32.47  47   P      P      00 00 41.8 +1.8
       comp=Z,3.7nm,0.9s,baz=280,slow=17,SNR=5.7
YKA                                   LR     LR     00 15 50.0
       comp=Z,592nm,18.9s,baz=0.0,slow=40
YKA    Yellowknife Ar     32.47  47ce P      P      00 00 43.2 +3.2
YKA                                   pmax   pmax
       comp=Z,3.0nm,0.7s
B06A   Marblemount        32.62  75   P      P      00 00 42.1 +0.6
B06A                                  IAmb   IAmb   00 00 43.4
       comp=Z,20nm,1.1s
E04D   Cinebar            32.83  78   P      P      00 00 43.9 +0.6
       baz=297,SNR=8.2
D05A   Enumclaw           32.89  77   P      P      00 00 44.7 +0.8
D05A                                  IAmb   IAmb   00 00 47.1
       comp=Z,37nm,0.9s
G03D   McMinnville, O     33.03  81   P      P      00 00 44.9 -0.2
       baz=299
LON    Longmire           33.20  78   P      P      00 00 47.8 +1.1
LON                                   pmax   pmax
       comp=Z,8.0nm,1.0s
LON    Longmire           33.20  78   P      P      00 00 47.8 +1.1
F04A   Amboy              33.21  79   P      P      00 00 47.2 +0.5
F04A                                  IAmb   IAmb   00 00 49.1
       comp=Z,36nm,1.3s
I02E   Swisshome, OR      33.22  83   P      P      00 00 47.6 +0.9
       baz=300
I03D   Drain, OR          33.74  83   P      P      00 00 51.0 -0.3
       baz=301
H04A   Detroit Lake       33.96  81   P      P      00 00 53.4 +0.2
H04A                                  IAmb   IAmb   00 00 55.7
       comp=Z,38nm,1.2s
HOOD   Mount Hood Mea     33.97  80   P      P      00 00 54.0 +0.5
HOOD                                  IAmb   IAmb   00 01 01.2
       comp=Z,25nm,1.1s
KBO    Bosley Butte       33.98  86   P      P      00 00 54.5 +1.0
KBO                                   IAmb   IAmb   00 00 57.7
       comp=Z,20nm,1.1s
B08A   Colville Reser     33.98  74   P      P      00 00 53.7 +0.2
B08A                                  IAmb   IAmb   00 00 55.5
       comp=Z,21nm,0.9s
K02D   Willamette Mer     34.06  85   P      P      00 00 54.0 -0.3
       baz=302
DBO    Dodson Butte       34.10  84   P      P      00 00 54.4 -0.2
DBO                                   IAmb   IAmb   00 01 21.5
       comp=Z,16nm,1.2s
G05D   Wamic, OR          34.22  80   P      P      00 00 55.5 -0.1
       baz=299
I04A   Tendick Farm,      34.27  83   P      P      00 00 56.4 +0.4
       baz=301
L02E   Cave Junction      34.39  86   P      P      00 00 57.2 +0.2
       baz=303
E07A   Sunnyside          34.48  77   P      P      00 00 57.7 -0.1
E07A                                  IAmb   IAmb   00 00 59.5
       comp=Z,9.5nm,0.9s
HUMO   Hull Mountain      34.55  85   P      P      00 00 59.8 +1.4
HUMO                                  IAmb   IAmb   00 01 09.9
       comp=Z,14nm,1.3s
I05D   Terrebonne, OR     34.66  81   P      P      00 01 00.2 +0.9
       baz=300
KLR    Kul'dur            34.70 289   LR     LR     00 14 53.7
       comp=Z,184nm,20.2s,baz=90,slow=36
KLR    Kul'dur            34.70 289ce P      P      00 00 58.7 -0.9
KLR                                   pmax   pmax
       comp=Z,6.0nm,1.1s
J04D   Umpqua Nationa     34.74  83   P      P      00 01 00.6 +0.3
       baz=302
F07A   Phinny Hill Vi     34.75  78   P      P      00 01 00.3 +0.3
F07A                                  IAmb   IAmb   00 01 02.6
       comp=Z,26nm,1.2s
HAWA   Hanford            34.76  77   P      P      00 00 59.5 -0.6
HAWA                                  IAmb   IAmb   00 01 02.4
       comp=Z,22nm,0.9s
D08A   Wollman Farm,      34.82  76   P      P      00 01 01.0 +0.4
D08A                                  IAmb   IAmb   00 01 02.3
       comp=Z,11nm,0.8s
C09A   Chrisman Ranch     34.87  74   P      P      00 01 01.2 +0.1
C09A                                  IAmb   IAmb   00 01 02.9
       comp=Z,15nm,0.8s
E08A   Dider Farm, El     35.00  76   P      P      00 01 02.9 +0.7
E08A                                  IAmb   IAmb   00 01 04.1
       comp=Z,23nm,1.4s
L04D   Klamath Falls      35.17  85   P      P      00 01 04.5 +0.6
       baz=303
YBH    Yreka Blue Hor     35.18  86   P      P      00 01 06.1 +2.2
       comp=Z,5.0nm,0.8s,baz=307,slow=6.1,SNR=12
YBH    Yreka Blue Hor     35.18  86   P      P      00 01 04.2 +0.2
YBH                                   pmax   pmax
       comp=Z,12nm,1.2s
YBH    Yreka Blue Hor     35.18  86   P      P      00 01 04.2 +0.2
YBH                                   IAmb   IAmb   00 01 07.1
       comp=Z,12nm,1.1s
J05D   Fort Rock, OR      35.27  83   P      P      00 01 05.0 +0.3
       baz=302,SNR=6.9
M02C   Callahan           35.28  87   P      P      00 01 04.9 +0.1
       baz=304
K04D   Chiloquin, OR      35.29  84   P      P      00 01 05.0 +0.1
       baz=302
NEW    Newport            35.35  73   P      P      00 01 06.0 +0.7
       comp=Z,15nm,0.9s,baz=298,slow=7.4,SNR=20
NEW    Newport            35.35  73   P      P      00 01 05.8 +0.5
NEW                                   pmax   pmax
       comp=Z,25nm,1.1s
NEW    Newport            35.35  73   P      P      00 01 05.6 +0.3
       baz=296,SNR=13
NEW    Newport            35.35  73   P      P      00 01 05.8 +0.5
NEW                                   IAmb   IAmb   00 01 07.0
       comp=Z,25nm,1.1s
H11N2  WAKE ISLAND Hy     35.43 214   T      T      00 39 22.7
       baz=21,slow=75,SNR=32
H11N3  WAKE ISLAND Hy     35.44 214   T      T      00 39 23.0
       baz=21,slow=75,SNR=58
H11N1  WAKE ISLAND Hy     35.45 214   T      T      00 39 21.2
       baz=21,slow=75,SNR=28
EDM    Edmonton           35.50  63   P      P      00 01 06.0 -0.5
EDM                                   pmax   pmax
       comp=Z,44nm,1.1s
EDM    Edmonton           35.50  63   P      P      00 01 06.0 -0.5
ZEA    Zeya               35.51 298 e P      P      00 01 01.0 -5.5
ZEA                                   pmax   pmax
       comp=Z,10.0nm,1.3s
ZEA                                   MLR    MLR
       comp=E,200nm,15.0s
ZEA                                   MLR    MLR
       comp=N,200nm,17.0s
ZEA                                   MLR    MLR
       comp=Z,300nm,14.0s
E09A   Wood Farm, Sta     35.54  76   P      P      00 01 07.0 +0.1
E09A                                  IAmb   IAmb   00 01 08.6
       comp=Z,18nm,1.0s
N02D   Trinity Center     35.61  87   P      P      00 01 07.7 +0.1
       baz=304
G08A   Pilot Rock         35.64  78   P      P      00 01 08.8 +0.9
M04C   Macdoel            35.70  85   P      P      00 01 09.0 +0.6
       baz=303
K05A   Summer Lake        35.77  83   P      P      00 01 09.7 +0.5
K05A                                  IAmb   IAmb   00 01 12.2
       comp=Z,41nm,1.2s
I07A   Izee               35.92  80   P      P      00 01 11.0 +0.7
I07A                                  IAmb   IAmb   00 01 12.7
       comp=Z,19nm,1.2s
O02D   Mt. Diablo Mer     36.01  88   P      P      00 01 11.5 +0.4
       baz=305
F10A   Beach Ranch, E     36.36  76   P      P      00 01 14.3 +0.3
O03E   Paynes Creek       36.56  87   P      P      00 01 16.4 +0.7
       baz=305,SNR=12
MOD    Modoc Plateau      36.59  84   P      P      00 01 16.3 +0.2
MOD                                   IAmb   IAmb   00 01 18.1
       comp=Z,11nm,0.9s
H11S1  WAKE ISLAND Hy     36.63 214   T      T      00 40 41.2
       baz=20,slow=76,SNR=30
H11S2  WAKE ISLAND Hy     36.64 214   T      T      00 40 48.5
       baz=20,slow=76,SNR=43
H11S3  WAKE ISLAND Hy     36.64 214   T      T      00 40 42.6
       baz=20,slow=76,SNR=16
BMO    Blue Mountains     36.88  78   P      P      00 01 18.6 +0.2
BMO                                   pmax   pmax
       comp=Z,7.0nm,1.2s
BMO    Blue Mountains     36.88  78   P      P      00 01 18.6 +0.2
WALA   Waterton Lakes     36.89  70   P      P      00 01 18.9 +0.3
WALA                                  IAmb   IAmb   00 01 20.4
       comp=Z,30nm,1.1s
J08A   Circle Bar Ran     36.94  81   P      P      00 01 19.0 +0.1
J08A                                  IAmb   IAmb   00 01 21.2
       comp=Z,17nm,1.2s
USA0B  Ussuriysk Arra     36.95 281⇓e P      P      00 01 18.2 -0.7
USRK   Ussuriysk Ar.      36.95 281   P      P      00 01 18.4 -0.4
       comp=Z,7.6nm,0.9s,baz=70,slow=7.8,SNR=7.6
USRK   Ussuriysk Ar.      36.95 281   P      P      00 01 18.1 -0.8
USRK   Ussuriysk Ar.      36.95 281   P      P      00 01 18.1 -0.8
JTMT   Jette              37.28  72   P      P      00 01 22.0 +0.1
JTMT                                  IAmb   IAmb   00 01 23.6
       comp=Z,26nm,1.3s
WVOR   Wild Horse Val     37.33  82   P      P      00 01 22.8 +0.5
WVOR                                  pmax   pmax
       comp=Z,19nm,1.1s
WVOR   Wild Horse Val     37.33  82   P      P      00 01 22.8 +0.5
WVOR                                  IAmb   IAmb   00 01 24.7
       comp=Z,18nm,1.1s
MAJO   Matsushiro         37.48 266⇑e P      P      00 01 23.4 -0.1
MAJO                                  pmax   pmax
       comp=Z,15nm,1.1s
MJAR   Matsushiro Arr     37.48 266   P      P      00 01 23.5  0.0
       comp=Z,2.7nm,0.6s,baz=46,slow=8.1,SNR=5.7
MJAR                                  LR     LR     00 14 48.4
       comp=Z,191nm,21.9s,baz=45,slow=33
MJAR   Matsushiro Arr     37.48 266   IAmb   IAmb   00 01 25.0
       comp=Z,8.8nm,1.4s
PLID   Pearl Lake         37.55  77   P      P      00 01 23.1 -1.1
MSO    Missoula           37.92  73   P      P      00 01 27.2  0.0
       baz=299,SNR=13
MSO    Missoula           37.92  73   IAmb   IAmb   00 01 28.8
       comp=Z,22nm,1.2s
RES    Resolute Bay       38.12  25   P      P      00 01 28.6 +0.1
       comp=Z,5.0nm,1.0s,baz=259,slow=15,SNR=3.9
MSHR   Mys Shultsa        38.32 279⇑e P      P      00 01 31.4 +0.9
MSHR                                  pmax   pmax
       comp=Z,18nm,0.9s
PAHR   Pah Rah Range      38.41  86   P      P      00 01 32.4 +0.9
PAHR                                  IAmb   IAmb   00 01 33.8
       comp=Z,22nm,1.1s
VCNR   Virginia City      38.49  87   P      P      00 01 32.5 +0.3
VCNR                                  IAmb   IAmb   00 01 34.8
       comp=Z,26nm,1.3s
MFID   Camas Ranch        38.53  79   P      P      00 01 32.7 +0.2
PNTR   Pine Nut           38.64  87   P      P      00 01 33.8 +0.3
PNTR                                  IAmb   IAmb   00 01 56.8
       comp=Z,21nm,0.8s
CMB    Columbia Colle     38.79  89   P      P      00 01 35.1 +0.6
CMB                                   pmax   pmax
       comp=Z,10.0nm,1.3s
CMB    Columbia Colle     38.79  89   P      P      00 01 35.1 +0.6
YERR   Yerington          38.93  87   P      P      00 01 36.1 +0.2
YERR                                  IAmb   IAmb   00 01 38.3
       comp=Z,15nm,1.1s
HLID   Hailey             39.32  78   P      P      00 01 39.5 +0.3
       baz=303,SNR=9.8
HLID   Hailey             39.32  78   P      P      00 01 39.4 +0.3
BMN    Battle Mountai     39.34  84   P      P      00 01 40.1 +0.8
BMN                                   pmax   pmax
       comp=Z,6.0nm,0.8s
BMN    Battle Mountai     39.34  84   P      P      00 01 40.1 +0.8
DLMT   Dillon             39.47  74   P      P      00 01 40.8 +0.5
BCYI   Bear Canyon        39.54  76   P      P      00 01 41.0 +0.1
RYN    Ryan               39.59  87   P      P      00 01 41.2 -0.2
RYN                                   IAmb   IAmb   00 01 59.7
       comp=Z,11nm,0.9s
KVN    Kaiserville        39.60  86   P      P      00 01 42.1 +0.6
KVN                                   pmax   pmax
       comp=Z,8.0nm,1.1s
KVN    Kaiserville        39.60  86   P      P      00 01 42.1 +0.6
EGMT   Eagleton           39.82  69   P      P      00 01 43.2 +0.2
       baz=299,SNR=21
LHV    Little Huntoon     39.83  87   P      P      00 01 43.7 +0.6
LHV                                   IAmb   IAmb   00 01 46.1
       comp=Z,26nm,1.5s
NVAR   Mina Array Bea     39.85  87   P      P      00 01 44.8 +1.2
       comp=Z,5.6nm,0.9s,baz=293,slow=8.3,SNR=22
NVAR                                  LR     LR     00 16 37.3
       comp=Z,159nm,18.9s,baz=282,slow=34
NVAR   Mina Array Bea     39.85  87   P      P      00 01 44.5 +0.9
MDPB   Devils Postpil     39.85  89   P      P      00 01 45.1 +1.4
BOZ    Bozeman (W)        39.93  74   P      P      00 01 44.0 -0.1
       baz=301,SNR=8.8
BOZ    Bozeman (W)        39.93  74   IAmb   IAmb   00 01 45.5
       comp=Z,15nm,0.9s
NV11   Mina Array Sit     39.94  87   P      P      00 01 44.5 +0.2
JWT    Wachi              40.03 267   P      P      00 01 45.2 +0.3
JWT                                   IAmb   IAmb   00 02 04.1
       comp=Z,52nm,1.3s
ELK    Elko               40.39  82   P      P      00 01 49.0 +0.9
ELK                                   pmax   pmax
       comp=Z,5.0nm,0.9s
ELK    Elko               40.39  82   P      P      00 01 49.0 +0.9
YHL    Hebgen Lake        40.59  74   P      P      00 01 49.1 -0.6
YHL                                   IAmb   IAmb   00 01 51.4
       comp=Z,21nm,1.1s
TPH    Tonopah            40.74  87   P      P      00 01 50.1 -0.8
TPH                                   pmax   pmax
       comp=Z,32nm,0.9s
TPH    Tonopah            40.74  87   P      P      00 01 50.1 -0.8
TPH                                   IAmb   IAmb   00 01 53.1
       comp=Z,32nm,0.9s
YMR    Madison River      40.82  74   P      P      00 01 52.0 +0.4
YMR                                   IAmb   IAmb   00 01 53.8
       comp=Z,18nm,1.1s
YHH    Holmes Hill        40.83  74   P      P      00 01 51.6 -0.1
YHH                                   IAmb   IAmb   00 01 53.2
       comp=Z,21nm,1.0s
VES    Vestal, Richgr     40.97  91   P      P      00 01 53.4 +0.8
       baz=310
YNR    Norris Junctio     40.97  74   P      P      00 01 52.9 +0.1
YNR                                   IAmb   IAmb   00 01 55.6
       comp=Z,20nm,1.0s
LCH    Last Change Ra     40.99  88   P      P      00 01 53.3 +0.4
GCMT   Greycliff          41.00  72   P      P      00 01 53.1 +0.1
FFC    Flin Flon          41.05  57   P      P      00 01 53.5 +0.5
FFC                                   pmax   pmax
       comp=Z,9.0nm,1.0s
FFC    Flin Flon          41.05  57   P      P      00 01 53.5 +0.5
YPP    Pitchstone Pla     41.13  75   P      P      00 01 55.1 +0.9
H17A   Grant Village      41.20  74   P      P      00 01 55.8 +1.0
       baz=303,SNR=7.0
H17A   Grant Village      41.20  74   P      P      00 01 54.9 +0.1
CWC    Cottonwood Cre     41.22  89   P      P      00 01 55.9 +1.1
       baz=309
YMP    Mirror Lake Pl     41.27  74   P      P      00 01 55.1 -0.2
FLWY   Flagg Ranch        41.30  75   P      P      00 01 55.6 +0.2
HVU    Hansel Valley      41.32  79   P      P      00 01 55.8 +0.2
HVU                                   pmax   pmax
       comp=Z,8.0nm,1.0s
HVU    Hansel Valley      41.32  79   P      P      00 01 55.8 +0.2
FXWY   Fox Creek          41.34  76   P      P      00 01 55.9  0.0
MOOW   Moose Ponds        41.45  75   P      P      00 01 56.2 -0.5
ISA    Isabella, Lake     41.46  91   P      P      00 01 56.5 -0.3
ISA                                   pmax   pmax
       comp=Z,10.0nm,1.0s
ISA    Isabella, Lake     41.46  91   P      P      00 01 57.0 +0.2
       baz=310,SNR=5.3
ISA    Isabella, Lake     41.46  91   P      P      00 01 56.5 -0.3
TPAW   Teton Pass         41.47  76   P      P      00 01 57.0 +0.1
R11A   Troy Canyon, C     41.59  85   P      P      00 01 57.9  0.0
       baz=307,SNR=12
R11A   Troy Canyon, C     41.59  85   P      P      00 01 57.7 -0.2
RLMT   Red Lodge          41.60  73   P      P      00 01 58.4 +0.5
       baz=302,SNR=15
RLMT   Red Lodge          41.60  73   P      P      00 01 58.0  0.0
RLMT                                  IAmb   IAmb   00 01 59.9
       comp=Z,34nm,1.1s
REDW   Red Top Meadow     41.60  76   P      P      00 01 58.4 +0.4
REDW                                  IAmb   IAmb   00 02 01.0
       comp=Z,27nm,1.4s
SNOW   Snow King Moun     41.60  76   P      P      00 01 58.0  0.0
LOHW   Long Hollow        41.61  75   P      P      00 01 57.7 -0.4
BGU    Big Grassy Mou     41.65  80   P      P      00 01 57.8 -0.5
HIA    Hailar             41.67 295di P      P      00 01 57.4 -0.8
HIA                                   pmax   pmax
       comp=Z,13nm,0.9s
HIA    Hailar             41.67 295   P      P      00 01 57.0 -1.2
HIA                                   IAmb   IAmb   00 01 58.1
       comp=Z,12nm,0.7s
AHID   Auburn Hatcher     41.78  77   P      P      00 01 59.9 +0.4
SPR3   Spring Creek 3     41.98  84   P      P      00 02 01.6 +0.3
HWUT   Hardware Ranch     42.16  79   P      P      00 02 02.8 +0.3
DUG    Dugway, Tooele     42.21  81   P      P      00 02 03.6 +0.7
DUG                                   pmax   pmax
       comp=Z,17nm,1.2s
DUG    Dugway, Tooele     42.21  81   P      P      00 02 03.5 +0.7
       baz=306,SNR=8.4
DUG    Dugway, Tooele     42.21  81   P      P      00 02 03.6 +0.7
DUG                                   IAmb   IAmb   00 02 05.0
       comp=Z,17nm,1.1s
GWY    Greenwater Val     42.26  89   P      P      00 02 03.2 -0.2
EDW2   Edwards Air Fo     42.27  91   P      P      00 02 03.4 +0.1
       baz=310
QSM    Queen of Sheba     42.28  89   P      P      00 02 03.2 -0.1
PRN    Pahroc Range       42.51  86   P      P      00 02 06.1 +0.7
PRN                                   IAmb   IAmb   00 02 07.5
       comp=Z,31nm,1.1s
TCUT   Toone Canyon       42.54  79   P      P      00 02 06.3 +0.7
TCUT                                  IAmb   IAmb   00 02 13.4
       comp=Z,24nm,0.9s
PSUT   Pine Spring        42.56  84   P      P      00 02 05.9  0.0
LAO    LASA Array         42.56  69   P      P      00 02 05.2 -0.4
       baz=302
LAO    LASA Array         42.56  69   P      P      00 02 05.9 +0.3
LAO                                   IAmb   IAmb   00 02 07.5
       comp=Z,26nm,1.1s
CTU    Camp Tracy         42.58  80   P      P      00 02 05.3 -0.5
MWC    Mount Wilson       42.66  92   P      P      00 02 06.3 -0.3
MWC                                   pmax   pmax
       comp=Z,20nm,1.2s
MWC    Mount Wilson       42.66  92   P      P      00 02 06.3 -0.3
MWC                                   IAmb   IAmb   00 02 33.0
       comp=Z,20nm,1.2s
BW06   Boulder Array      42.72  76   P      P      00 02 07.4 +0.3
       baz=304,SNR=17
BW06   Boulder Array      42.72  76   P      P      00 02 07.4 +0.3
BW06                                  IAmb   IAmb   00 02 08.6
       comp=Z,22nm,1.1s
PD31   Pinedale Array     42.72  76   P      P      00 02 07.1  0.0
PD31                                  IAmb   IAmb   00 02 08.6
       comp=Z,20nm,1.1s
PDAR   Pinedale Array     42.72  76   P      P      00 02 07.5 +0.3
       comp=Z,9.3nm,0.8s,baz=305,slow=4.1,SNR=54
GSC    Goldstone, Bar     42.74  90   P      P      00 02 07.3 +0.1
       baz=310,SNR=10
GSC    Goldstone, Bar     42.74  90   IAmb   IAmb   00 02 09.0
       comp=Z,22nm,1.0s
DGMT   Dagmar             42.81  66   P      P      00 02 06.7 -0.8
       baz=301,SNR=6.4
DGMT   Dagmar             42.81  66   IAmb   IAmb   00 02 09.1
       comp=Z,52nm,1.2s
NLU    North Lily Min     42.81  81   P      P      00 02 08.2 +0.4
JLU    Jordanelle         42.81  80   P      P      00 02 07.8 -0.1
BFSC   Mount Baldy Ra     42.90  92   P      P      00 02 08.7 +0.2
       baz=311
CIS    Catalina Islan     42.97  93   P      P      00 02 09.7 +0.7
       baz=312
SHPR   Sheep Range        43.00  87   P      P      00 02 08.9 -0.5
MPU    Maple Canyon       43.05  81   P      P      00 02 09.7  0.0
SCI2   San Clemente I     43.17  94   P      P      00 02 11.4 +0.8
       baz=312
TUQ    Turquoise Moun     43.20  89   P      P      00 02 11.4 +0.4
       baz=310
HEC    Hector,Ludlow      43.34  90   P      P      00 02 12.9 +0.8
       baz=310
KSRS   Korea Array        43.34 275   P      P      00 02 12.9 +1.1
       comp=Z,1.5nm,0.6s,baz=66,slow=7.1,SNR=3.3
KSRS                                  LR     LR     00 20 16.7
       comp=Z,88nm,19.1s,baz=42,slow=36
KSAR   Wonju Array Be     43.37 275   P      P      00 02 12.9 +0.8
KSAR   Wonju Array Be     43.37 275   P      P      00 02 12.9 +0.8
TCRU   Three Creeks R     43.39  83   P      P      00 02 12.7 +0.2
CCUT   Cedar City         43.47  85   P      P      00 02 13.9 +0.7
MURC   Murrieta           43.60  92   P      P      00 02 14.6 +0.5
       baz=311
SZCU   Shurtz Canyon      43.62  84   P      P      00 02 14.3 -0.1
TULEG  Thule              43.72  19   P      P      00 02 14.8 +0.4
TULEG                                 IAmb   IAmb   00 02 31.2
       comp=Z,19nm,1.2s
TMUT   Trail Mountain     43.74  81   P      P      00 02 15.7 +0.3
GMRC   Granite Mounta     43.79  89   P      P      00 02 15.8 +0.1
       baz=310,SNR=9.6
LCMT   Little Creek M     43.88  85   P      P      00 02 16.7 +0.3
MTPU   Mount Pierson      43.90  83   P      P      00 02 16.4 -0.4
P17A   Butcher Ranch,     43.92  81   P      P      00 02 16.4 -0.4
RDMU   Red Mountain       43.99  79   P      P      00 02 17.7 +0.4
RDMU                                  IAmb   IAmb   00 02 19.1
       comp=Z,24nm,1.1s
Q16A   Castle Valley      43.99  81   P      P      00 02 18.2 +0.8
Q16A                                  IAmb   IAmb   00 02 19.6
       comp=Z,16nm,1.0s
PFO    Pinyon Flats O     44.06  91   P      P      00 02 18.1 +0.3
       comp=Z,6.0nm,0.8s,baz=325,slow=8.4,SNR=5.6
PFO    Pinyon Flats O     44.06  91   P      P      00 02 17.1 -0.7
PFO                                   pmax   pmax
       comp=Z,12nm,1.1s
PFO    Pinyon Flats O     44.06  91   P      P      00 02 17.8 -0.1
       baz=311
PFO    Pinyon Flats O     44.06  91   P      P      00 02 17.1 -0.7
TPFO   Pinon Flats        44.06  91   P      P      00 02 18.1 +0.2
       baz=311
BELC   Belle Mtn. Jos     44.09  90   P      P      00 02 18.1  0.0
       baz=311
109C   Camp Elliot, M     44.13  93   P      P      00 02 18.8 +0.5
       baz=312
P18A   Preston Nutter     44.13  80   P      P      00 02 18.9 +0.3
P18A                                  IAmb   IAmb   00 02 20.6
       comp=Z,16nm,1.0s
KNB    Kanab              44.14  85   P      P      00 02 19.3 +0.8
KNB                                   pmax   pmax
       comp=Z,12nm,1.1s
KNB    Kanab              44.14  85   P      P      00 02 19.3 +0.8
SRU    San Rafael Swe     44.27  81   P      P      00 02 20.0 +0.4
SRU                                   pmax   pmax
       comp=Z,11nm,0.8s
SRU    San Rafael Swe     44.27  81   P      P      00 02 20.0 +0.4
SRU                                   IAmb   IAmb   00 02 21.7
       comp=Z,11nm,0.8s
NEE2   Needles Airpor     44.45  89   P      P      00 02 20.9 +0.1
       baz=310
IRM    Iron Mountain      44.52  90   P      P      00 02 21.8 +0.3
       baz=311
BAR    Barrett            44.54  92   P      P      00 02 21.6  0.0
BAR                                   IAmb   IAmb   00 02 41.7
       comp=Z,26nm,1.2s
MONP2  Monument Peak      44.56  92   P      P      00 02 22.4 +0.5
       baz=312
K22A   Casper             44.62  74   P      P      00 02 21.6 -0.7
       baz=305
K22A   Casper             44.62  74   P      P      00 02 21.3 -1.0
K22A                                  IAmb   IAmb   00 02 23.3
       comp=Z,16nm,1.1s
BC3    Big Chuckawall     44.66  90   P      P      00 02 23.0 +0.4
       baz=311
W13A   Hualapai Mount     44.70  88   P      P      00 02 23.2 +0.1
W13A                                  IAmb   IAmb   00 02 24.7
       comp=Z,16nm,1.4s
RWWY   Rawlins            44.77  76   IAmb   IAmb   00 02 23.7
       comp=Z,17nm,1.1s
CBX    Cerro Bola         44.80  93   P      P      00 02 23.9 +0.2
U15A   North Rim          44.84  85   P      P      00 02 24.6 +0.4
U15A                                  IAmb   IAmb   00 02 26.4
       comp=Z,15nm,1.0s
IKP    In-Ko-Pah, Jac     44.91  92   P      P      00 02 25.1 +0.5
       baz=312
PDMCI  Parker Dam,Lak     45.05  89   P      P      00 02 26.2 +0.6
       baz=311,SNR=6.3
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O20A	White River Ci	45.06	78	P	P	00 02 25.7	-0.1
	baz=307,SNR=10						
O20A	White River Ci	45.06	78	P	P	00 02 25.6	-0.3
O20A				IAmb	IAmb	00 02 27.1	
	comp=Z,32nm,1.2s						
RSSD	Black Hills	45.26	71	P	P	00 02 26.7	-0.8
RSSD				pmax	pmax		
	comp=Z,44nm,1.5s						
RSSD	Black Hills	45.26	71	P	P	00 02 27.1	-0.3
	baz=305						
RSSD	Black Hills	45.26	71	P	P	00 02 26.7	-0.8
RSSD				IAmb	IAmb	00 02 28.4	
	comp=Z,44nm,1.5s						
GLA	Glamis	45.45	91	P	P	00 02 28.9	+0.1
GLA				pmax	pmax		
	comp=Z,13nm,0.9s						
GLA	Glamis	45.45	91	P	P	00 02 29.0	+0.1
	baz=312						
GLA	Glamis	45.45	91	P	P	00 02 28.9	+0.1
GLA				IAmb	IAmb	00 02 30.4	
	comp=Z,13nm,0.9s						
MDND	Maddock	45.74	64	P	P	00 02 30.3	-0.6
	baz=303,SNR=13						
MDND	Maddock	45.74	64	P	P	00 02 31.5	+0.6
WUAZ	Wupatki	46.00	85	P	P	00 02 33.4	+0.1
	baz=310						
WUAZ	Wupatki	46.00	85	P	P	00 02 33.1	-0.2
WUAZ				IAmb	IAmb	00 02 35.2	
	comp=Z,16nm,1.0s						
Y14A	Wickenburg	46.00	88	P	P	00 02 33.4	+0.2
N23A	Red Feather La	46.01	76	P	P	00 02 33.3	-0.1
	baz=307,SNR=6.7						
NRIK	Noril'sk	46.18	331	P	P	00 02 33.8	-0.3
	comp=Z,1.0nm,0.4s,baz=70,slow=9.9,SNR=4.3						
113A	Mohawk Valley,	46.30	90	P	P	00 02 35.0	-0.4
NEEM	North Greenlan	46.45	15	*i* P	P	00 02 35.3	-1.2
ULM	Lac du Bonnet	46.49	60	P	P	00 02 36.2	-0.5
	comp=Z,8.4nm,1.0s,baz=293,slow=10.0,SNR=6.2						
ULM				LR	LR	00 23 41.1	
	comp=Z,241nm,18.7s,baz=325,slow=38						
ULM	Lac du Bonnet	46.49	60	⇓*e*P	P	00 02 36.6	-0.2
ULM	Lac du Bonnet	46.49	60	IAmb	IAmb	00 02 37.8	
	comp=Z,19nm,1.1s						
NOR	Nord	46.58	5	*i* P	P	00 02 35.1	-1.9
NOR				AMP		00 02 36.8	
	comp=Z,8.1nm,0.9s						
X16A	Lo Mia Camp, P	46.67	87	P	P	00 02 39.3	+0.7
MVCO	Mesa Verde	46.70	82	P	P	00 02 38.9	-0.1
	baz=309						
MVCO	Mesa Verde	46.70	82	P	P	00 02 38.8	-0.1
MVCO				IAmb	IAmb	00 03 05.8	
	comp=Z,12nm,1.1s						
ISCO	Idaho Springs	46.87	77	P	P	00 02 41.0	+0.7
ISCO				pmax	pmax		
	comp=Z,10.0nm,1.4s						
ISCO	Idaho Springs	46.87	77	P	P	00 02 39.8	-0.4
	baz=308						
ISCO	Idaho Springs	46.87	77	P	P	00 02 41.0	+0.7
W18A	Petrified Fore	47.27	85	P	P	00 02 43.8	+0.5
	baz=310						
W18A	Petrified Fore	47.27	85	P	P	00 02 43.7	+0.4
W18A				IAmb	IAmb	00 02 45.8	
	comp=Z,12nm,0.8s						
S22A	4UR Ranch, Cre	47.40	80	P	P	00 02 44.4	0.0
	baz=309,SNR=10						
214A	Organ Pipe Nat	47.45	90	P	P	00 02 44.7	+0.2
	baz=312						
214A	Organ Pipe Nat	47.45	90	P	P	00 02 43.8	-0.6
214A				IAmb	IAmb	00 02 46.0	
	comp=Z,11nm,1.1s						
X18A	Snowflake	47.52	85	P	P	00 02 45.9	+0.6
AGMN	Agassiz Nation	47.58	62	P	P	00 02 44.6	-0.7
	baz=304,SNR=9.5						
AGMN	Agassiz Nation	47.58	62	IAmb	IAmb	00 02 46.1	
	comp=Z,32nm,1.1s						
SUSD	Miller	48.05	68	P	P	00 02 48.5	-0.5
	baz=306						
SUSD	Miller	48.05	68	P	P	00 02 48.5	-0.5
SDCO	Great Sand Dun	48.21	79	P	P	00 02 50.4	-0.3
	baz=309,SNR=8.1						
SDCO	Great Sand Dun	48.21	79	P	P	00 02 51.0	+0.3
SDCO				IAmb	IAmb	00 02 52.4	
	comp=Z,8.9nm,1.2s						
OGNE	Ogallala	48.33	73	P	P	00 02 51.2	-0.1
	baz=308						
OGNE	Ogallala	48.33	73	P	P	00 02 51.7	+0.3
TUC	Tucson	48.47	88	P	P	00 02 52.5	0.0
TUC				pmax	pmax		
	comp=Z,8.0nm,1.1s						
TUC	Tucson	48.47	88	P	P	00 02 52.7	+0.2
	baz=312						
TUC	Tucson	48.47	88	P	P	00 02 52.5	0.0
TUC				IAmb	IAmb	00 03 08.3	
	comp=Z,8.2nm,1.1s						
B35A	Bob, Littlefor	48.72	61	IAmb	IAmb	00 02 54.2	
	comp=Z,18nm,1.1s						
F33A	5 Mile Ranch,	48.75	65	IAmb	IAmb	00 02 54.8	
	comp=Z,35nm,1.2s						
BJT	Baijiatuau	48.97	286	P	P	00 02 55.0	-1.1
BJT				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BJT	Baijiatuau	48.97	286	P	P	00 02 55.0	-1.1
BJT				IAmb	IAmb	00 02 57.9	
	comp=Z,10nm,1.1s						
TLY	Talaya	49.11	305	*ce*P	P	00 02 57.4	+0.4
TLY				pmax	pmax		
	comp=Z,11nm,0.9s						
TLY	Talaya	49.11	305	P	P	00 02 57.8	+0.8
TLY				IAmb	IAmb	00 03 00.2	
	comp=Z,10nm,0.8s						
KSCO	Kaye Shedlock’	49.17	76	P	P	00 02 57.8	0.0
	baz=309						
KSCO	Kaye Shedlock’	49.17	76	P	P	00 02 57.8	0.0
KSCO				IAmb	IAmb	00 03 01.0	
	comp=Z,31nm,1.1s						
K31A	O'Neill	49.26	70	P	P	00 02 58.4	+0.1
T25A	Trinidad	49.27	79	P	P	00 02 58.5	-0.2
	baz=310,SNR=9.1						
T25A	Trinidad	49.27	79	IAmb	IAmb	00 03 00.6	
	comp=Z,28nm,1.2s						
ANMO	Albuquerque	49.42	82	LR	LR	00 24 04.7	
	comp=Z,128nm,18.1s,baz=308,slow=36						
ANMO	Albuquerque	49.42	82	*ce*P	P	00 03 00.2	+0.3
ANMO				pmax	pmax		
	comp=Z,7.0nm,1.3s						
ANMO	Albuquerque	49.42	82	P	P	00 02 59.8	-0.1
	baz=311						
ANMO	Albuquerque	49.42	82	P	P	00 03 00.6	+0.7
ULN	Ulaanbaatar	49.51	299	*ce*P	P	00 02 59.8	-0.5
ULN				pmax	pmax		
	comp=Z,12nm,0.8s						
ULN	Ulaanbaatar	49.51	299	P	P	00 03 00.0	-0.3
ULN				IAmb	IAmb	00 03 01.0	
	comp=Z,11nm,0.8s						
LENM	Lemitar	49.62	84	P	P	00 03 02.3	+0.9
ECSD	EROS Data Cent	49.83	67	P	P	00 03 01.7	-0.9
	baz=307,SNR=12						
ECSD	EROS Data Cent	49.83	67	IAmb	IAmb	00 03 02.8	
	comp=Z,31nm,1.1s						
BNM	Barren Site	49.84	83	P	P	00 03 03.7	+0.6
SONM	Songino Array	49.88	300	P	P	00 03 02.9	-0.2
	comp=Z,5.9nm,0.7s,baz=49,slow=7.8,SNR=41						
SONM				LR	LR	00 26 11.2	
	comp=Z,271nm,18.5s,baz=37,slow=39						
SONM	Songino Array	49.88	300	P	P	00 03 03.1	0.0
SONM				IAmb	IAmb	00 03 04.2	
	comp=Z,9.5nm,0.8s						
ZAK	Zakamensk	50.04	304	*e*P	P	00 02 58.9	-5.4
ZAK				*e*		00 04 21.5	
ZAK				pmax	pmax		
	comp=Z,16nm,1.2s						
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
EYMN	Ely	50.17	60	P	P	00 03 04.5	-0.7
	baz=306						
EYMN	Ely	50.17	60	P	P	00 03 04.9	-0.2
EYMN				IAmb	IAmb	00 03 05.9	
	comp=Z,19nm,1.1s						
121A	Cookes Peak, D	50.20	86	P	P	00 03 05.4	-0.3
	baz=312						
121A	Cookes Peak, D	50.20	86	P	P	00 03 06.3	+0.5
121A				IAmb	IAmb	00 03 07.4	
	comp=Z,10nm,1.1s						
F36A	Milaca	50.30	63	IAmb	IAmb	00 03 06.5	
	comp=Z,9.0nm,0.8s						
BGNE	Belgrade	50.36	70	P	P	00 03 06.2	-0.4
	baz=308						
BGNE	Belgrade	50.36	70	P	P	00 03 06.6	-0.1
TIA	Tai'an	50.81	281	P	P	00 03 10.4	+0.3
TIA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
E38A	The Farm, Brul	50.94	61	IAmb	IAmb	00 03 11.4	
	comp=Z,26nm,1.2s						
FRB	Frobisher Bay	50.96	34	LR	LR	00 26 29.4	
	comp=Z,512nm,18.0s,baz=314,slow=38						
CBKS	Cedar Bluff	51.04	74	P	P	00 03 12.1	+0.2
CBKS				pmax	pmax		
	comp=Z,41nm,1.2s						
CBKS	Cedar Bluff	51.04	74	P	P	00 03 11.6	-0.3
	baz=310						
CBKS	Cedar Bluff	51.04	74	P	P	00 03 12.1	+0.2
L34A	Svendsen Farm,	51.05	69	P	P	00 03 11.8	-0.1
SPMN	Marine on St.	51.09	63	P	P	00 03 11.5	-0.5
	baz=308						
SPMN	Marine on St.	51.09	63	P	P	00 03 11.4	-0.6
SPMN				IAmb	IAmb	00 03 12.9	
	comp=Z,26nm,1.1s						
HHC	Hu-ho-hao-te	51.20	289	*e*P	P	00 03 14.7	+1.6
HHC				pmax	pmax		
	comp=Z,15nm,1.1s						
HHC				pmax	pmax		
	comp=Z,120nm,5.4s						
HHC				LR	LR		
	comp=Z,230nm,17.5s						
HHC				LR	LR		
	comp=Z,190nm,17.9s						
HHC				LR	LR		
	comp=Z,150nm,17.9s						
R32A	Long Quarter,	51.91	74	IAmb	IAmb	00 03 19.9	
	comp=Z,35nm,1.3s						
N35A	Tabor	52.17	69	P	P	00 03 19.8	-0.5
MNTX	Cornudas Mount	52.26	85	P	P	00 03 20.9	-0.2
	baz=313,SNR=10						
MNTX	Cornudas Mount	52.26	85	P	P	00 03 21.2	+0.1
SUMG	Summit	52.27	16	P	P	00 03 20.5	-0.5
SUMG				pmax	pmax		
	comp=Z,25nm,1.1s						
SUMG	Summit	52.27	16	*i* P	P	00 03 20.0	-1.0
SUMG	Summit	52.27	16	P	P	00 03 20.5	-0.5
SUMG				IAmb	IAmb	00 03 22.4	
	comp=Z,25nm,1.1s						
MSTX	Muleshoe	52.35	81	P	P	00 03 21.3	-0.4
	baz=312						
MSTX	Muleshoe	52.35	81	P	P	00 03 21.7	-0.1
MSTX				IAmb	IAmb	00 03 23.5	
	comp=Z,14nm,1.1s						
AMTX	Amarillo	52.41	79	P	P	00 03 21.6	-0.6
	baz=312						
G40A	Rib Lake	52.51	62	IAmb	IAmb	00 03 23.2	
	comp=Z,15nm,1.0s						
K38A	Parkersburg	52.71	66	P	P	00 03 23.6	-0.5
KSU1	Kansas State U	52.73	72	P	P	00 03 23.4	-1.0
	baz=310,SNR=5.0						
KSU1	Kansas State U	52.73	72	P	P	00 03 23.9	-0.5
KSU1				IAmb	IAmb	00 03 24.9	
	comp=Z,24nm,1.1s						
SCIA	State Center	52.92	67	P	P	00 03 25.0	-0.7
	baz=309						
SCIA	State Center	52.92	67	P	P	00 03 25.7	0.0
I40A	Norwalk	53.14	64	P	P	00 03 26.5	-0.8
I40A				IAmb	IAmb	00 03 27.9	
	comp=Z,17nm,0.9s						
KAN01	Argonia South	53.31	74	P	P	00 03 27.9	-0.8
KAN01				IAmb	IAmb	00 03 29.8	
	comp=Z,9.9nm,0.8s						
F42A	Maple Grove Fa	53.33	60	P	P	00 03 28.4	-0.3
F42A				IAmb	IAmb	00 03 29.8	
	comp=Z,29nm,1.1s						
KS20	Mayfield South	53.38	74	IAmb	IAmb	00 03 29.1	
	comp=Z,14nm,1.0s						
E43A	Lone Tree Farm	53.56	59	IAmb	IAmb	00 03 31.4	
	comp=Z,31nm,1.1s						
KAN13	South Haven SW	53.57	74	IAmb	IAmb	00 03 31.7	
	comp=Z,22nm,1.0s						
BLOK	Blackwell	53.89	74	P	P	00 03 32.7	-0.3
BLOK				IAmb	IAmb	00 03 51.7	
	comp=Z,8.9nm,0.7s						
L40A	Anamosa	53.96	66	IAmb	IAmb	00 03 34.3	
	comp=Z,30nm,1.1s						
JFWS	Jewell Farm	53.97	64	P	P	00 03 32.5	-0.9
	baz=310,SNR=5.7						
JFWS	Jewell Farm	53.97	64	IAmb	IAmb	00 03 33.4	
	comp=Z,22nm,0.9s						
I42A	Draeger Farm,	54.09	63	P	P	00 03 33.9	-0.4
SFJD	Kangerlussuaq	54.12	24	LR	LR	00 30 06.7	
	comp=Z,204nm,18.6s,baz=322,slow=40						
T35A	Sooner Cattle	54.21	74	IAmb	IAmb	00 03 40.7	
	comp=Z,10.0nm,0.8s						
WMOK	Wichita Mounta	54.29	77	P	P	00 03 35.8	-0.1
WMOK	Wichita Mounta	54.29	77	P	P	00 03 35.5	-0.4
	baz=312,SNR=6.0						
WMOK	Wichita Mounta	54.29	77	P	P	00 03 35.8	-0.1
LPIG	La Paz	54.53	95	LR	LR	00 24 07.2	
	comp=Z,94nm,18.0s,baz=266,slow=33						
QUOK	Quay	54.59	75	P	P	00 03 38.2	+0.2
QUOK				IAmb	IAmb	00 04 07.4	
	comp=Z,8.5nm,0.9s						
OK031	S. Brethren Rd	54.66	75	P	P	00 03 38.4	-0.1
OK031				IAmb	IAmb	00 03 39.3	
	comp=Z,39nm,1.4s						
OK030	Cody Creek RV	54.71	75	P	P	00 03 39.2	+0.3
OK030				IAmb	IAmb	00 03 40.5	
	comp=Z,28nm,1.3s						
FNO	Franklin	54.78	76	P	P	00 03 38.5	-0.9
FNO				IAmb	IAmb	00 03 40.0	
	comp=Z,15nm,1.0s						
L42A	Oliver, Polo	54.88	65	IAmb	IAmb	00 03 40.5	
	comp=Z,25nm,0.9s						
ICESG	Greenland Ices	54.95	19	*i* P	P	00 03 38.8	-1.8
ICESG				AMP		00 03 39.9	
	comp=Z,48nm,0.7s						
X34A	Smith Ranch, M	54.96	77	P	P	00 03 40.8	+0.1
X34A				IAmb	IAmb	00 03 43.2	
	comp=Z,30nm,1.4s						
TX31	Lajitas Ar. Si	54.96	86	P	P	00 03 40.9	0.0
TX32	Lajitas Array	54.96	86	P	P	00 03 40.9	0.0
TX32				IAmb	IAmb	00 03 42.0	
	comp=Z,12nm,1.1s						
TXAR	Lajitas Array	54.96	86	P	P	00 03 41.2	+0.3
	comp=Z,7.8nm,0.9s,baz=299,slow=5.1,SNR=63						
E46A	Sault Ste Mari	55.00	58	P	P	00 03 41.1	+0.3
E46A				IAmb	IAmb	00 03 49.7	
	comp=Z,42nm,1.4s						
N41A	Harden Midland	55.05	67	P	P	00 03 40.7	-0.6
N41A				IAmb	IAmb	00 03 41.6	
	comp=Z,26nm,0.9s						
K43A	Burlington	55.18	63	P	P	00 03 41.7	-0.5
ABTX	Abilene, Hawle	55.19	80	P	P	00 03 41.7	-0.7
	baz=313						
ABTX	Abilene, Hawle	55.19	80	P	P	00 03 41.5	-0.9
ABTX				IAmb	IAmb	00 03 42.9	
	comp=Z,11nm,1.1s						
TUL1	Leonard	55.31	74	P	P	00 03 42.9	-0.4
	baz=312						
TUL1	Leonard	55.31	74	P	P	00 03 42.9	-0.4
TUL1				IAmb	IAmb	00 03 44.7	
	comp=Z,23nm,1.4s						
HPIG		55.40	89	P	P	00 03 43.8	-0.4
HPIG				IAmb	IAmb	00 03 45.2	
	comp=Z,12nm,1.2s						
S39A	Bolivar	55.60	71	IAmb	IAmb	00 03 43.8	
	comp=Z,8.8nm,0.9s						
L44A	Lake County Fo	55.76	64	P	P	00 03 45.5	-0.8
	baz=311						
L44A	Lake County Fo	55.76	64	P	P	00 03 45.6	-0.8
LOOK	Love County	55.77	77	P	P	00 03 46.5	-0.1
LOOK				IAmb	IAmb	00 04 04.1	
	comp=Z,15nm,0.8s						
U38A	Gravette	55.80	73	IAmb	IAmb	00 03 46.9	
	comp=Z,12nm,0.9s						
R40A	Maddies Statio	55.82	70	IAmb	IAmb	00 03 46.0	
	comp=Z,8.9nm,0.8s						
GLMI	Grayling	55.84	59	P	P	00 03 46.0	-0.9
	baz=311						
GLMI	Grayling	55.84	59	P	P	00 03 46.7	-0.1
HDIL	Hopedale	56.05	66	P	P	00 03 47.4	-1.1
	baz=311						
Z35A	Perchaven, San	56.17	77	P	P	00 03 48.6	-0.9
Z35A				IAmb	IAmb	00 03 49.6	
	comp=Z,8.9nm,0.6s						
HHAR	Hobbs	56.18	73	IAmb	IAmb	00 03 49.3	
	comp=Z,12nm,1.2s						
X37A	Clayton	56.46	75	P	P	00 03 51.2	-0.3
X37A				IAmb	IAmb	00 04 10.0	
	comp=Z,8.0nm,0.7s						
P43A	Skaggs, Pawnee	56.52	67	P	P	00 03 51.1	-0.7
JCT	Junction City	56.57	82	P	P	00 03 51.4	-0.9
	baz=314						
CCM	Cathedral Cave	56.58	69	P	P	00 03 51.0	-1.3
CCM				pmax	pmax		
	comp=Z,14nm,1.0s						
CCM	Cathedral Cave	56.58	69	P	P	00 03 50.8	-1.5
	baz=312						
CCM	Cathedral Cave	56.58	69	P	P	00 03 51.0	-1.3
CCM				IAmb	IAmb	00 03 51.8	
	comp=Z,14nm,1.0s						
MGMO	Mountain Grove	56.58	71	IAmb	IAmb	00 03 51.6	
	comp=Z,14nm,0.9s						
ZALV	Zalesovo Beam	56.61	316	P	P	00 03 51.2	-1.0
	comp=Z,0.6nm,0.3s,baz=53,slow=5.6,SNR=5.1						
ZALV				LR	LR	00 30 17.7	
	comp=Z,232nm,18.0s,baz=49,slow=38						
L46A	Eue Claire	56.77	63	P	P	00 03 52.9	-0.7
L46A				IAmb	IAmb	00 03 54.1	
	comp=Z,32nm,1.1s						
U40A	Yellville	56.77	72	P	P	00 03 52.5	-1.2
	baz=312,SNR=8.9						
U40A	Yellville	56.77	72	IAmb	IAmb	00 03 54.0	
	comp=Z,33nm,1.5s						
SLM	Saint Louis	56.78	68	P	P	00 03 52.8	-0.9
SLM				pmax	pmax		
	comp=Z,30nm,0.9s						
SLM	Saint Louis	56.78	68	P	P	00 03 52.8	-0.9
WHTX	Lake Whitney,	56.97	79	P	P	00 03 54.9	-0.2
	baz=314						
WHTX	Lake Whitney,	56.97	79	P	P	00 03 54.9	-0.2
WHTX				IAmb	IAmb	00 03 57.2	
	comp=Z,24nm,1.1s						
W39A	Magazine	57.00	74	P	P	00 03 54.8	-0.5
	baz=313,SNR=7.0						
FVM	French Village	57.11	69	P	P	00 03 55.0	-1.0
FVM				pmax	pmax		
	comp=Z,31nm,1.1s						
FVM	French Village	57.11	69	P	P	00 03 55.0	-1.0
XAN	Xi'an	57.26	285	P	P	00 03 57.2	0.0
XAN				pP	pP	00 04 09.9	+1.0
XAN				pmax	pmax		
	comp=Z,15nm,1.1s						
Q44A	Meyer Farm, Va	57.31	67	P	P	00 03 56.8	-0.6
T42A	Van Buren	57.36	70	IAmb	IAmb	00 03 56.7	
	comp=Z,9.6nm,0.9s						
SFIN	Lafayette	57.41	65	P	P	00 03 57.2	-0.9
	baz=312						
SFIN	Lafayette	57.41	65	P	P	00 03 57.6	-0.5
FCAR	Ozark Folk Cen	57.52	72	IAmb	IAmb	00 03 58.7	
	comp=Z,23nm,1.0s						
MIAR	Mount Ida	57.57	74	P	P	00 03 59.2	-0.1
MIAR				pmax	pmax		
	comp=Z,34nm,1.3s						
MIAR	Mount Ida	57.57	74	P	P	00 03 58.7	-0.6
	baz=313,SNR=13						
MIAR	Mount Ida	57.57	74	P	P	00 03 59.2	-0.1
MIAR				IAmb	IAmb	00 04 00.3	
	comp=Z,34nm,1.3s						
SCHQ	Schefferville	57.57	41	P	P	00 03 59.0	0.0
	comp=Z,12nm,0.9s,baz=294,slow=8.6,SNR=6.5						
SCHQ				LR	LR	00 31 46.4	
	comp=Z,301nm,18.4s,baz=307,slow=39						
TWG	Pinlang	57.65	267	P	P	00 03 58.7	-1.3
WHAR	Wooly Hollow	57.83	72	P	P	00 04 00.5	-0.6
WHAR				IAmb	IAmb	00 04 01.3	
	comp=Z,18nm,1.0s						
L48A	N Adams	57.85	62	P	P	00 04 00.2	-0.9
L48A				IAmb	IAmb	00 04 01.9	
	comp=Z,19nm,1.1s						
P46A	Rosedale	57.86	65	P	P	00 04 00.4	-0.9
PBMO	Poplar Bluff	57.92	70	IAmb	IAmb	00 04 01.6	
	comp=Z,30nm,1.2s						
W41B	Gary Mavity, V	57.94	73	P	P	00 04 01.1	-0.8
	baz=313,SNR=7.6						
OLIL	Olney	57.95	67	P	P	00 04 01.3	-0.6
237A	Washetta, Mont	57.97	78	P	P	00 04 01.9	-0.2
237A				IAmb	IAmb	00 04 12.7	
	comp=Z,15nm,0.8s						
LCAR	Lake Charles	57.98	71	IAmb	IAmb	00 04 01.6	
	comp=Z,8.9nm,1.0s						
S44A	Carbondale	57.99	68	P	P	00 04 01.1	-1.1
SIUC	Southern Illin	57.99	68	P	P	00 04 01.0	-1.2
X40A	Basin Creek Fa	58.06	73	P	P	00 04 02.1	-0.6
	baz=313						
X40A	Basin Creek Fa	58.06	73	IAmb	IAmb	00 04 03.3	
	comp=Z,14nm,1.1s						
833A	Chaparral WMA,	58.33	83	P	P	00 04 04.7	0.0
	baz=315						
DGZ	Jazzator, Alta	58.34	311	*de*P	P	00 04 05.0	+0.3
DGZ				pmax	pmax		
	comp=Z,7.0nm,1.1s						
PARMO	Parma	58.40	70	P	P	00 04 03.8	-1.3
BLO	Bloomington	58.55	65	P	P	00 04 05.7	-0.4
BLO				pmax	pmax		
	comp=Z,42nm,0.9s						
BLO	Bloomington	58.55	65	P	P	00 04 05.7	-0.4
ARCES	ARCESS Array B	58.57	353	P	P	00 04 04.8	-1.0
	comp=Z,3.1nm,0.7s,baz=27,slow=5.6,SNR=8.8						
ARCES				LR	LR	00 32 21.1	
	comp=Z,134nm,18.1s,baz=345,slow=39						
ARCES	ARCESS Array B	58.57	353	IAmb	IAmb	00 04 06.9	
	comp=Z,23nm,1.4s						
SADO	Sadowa	58.77	56	LR	LR	00 31 17.3	
	comp=Z,330nm,18.1s,baz=352,slow=38						
SADO	Sadowa	58.77	56	P	P	00 04 06.5	-1.0
SADO				IAmb	IAmb	00 04 08.1	
	comp=Z,12nm,0.9s						
HICK	Hickman	58.79	69	P	P	00 04 07.2	-0.6
LPAR	Lepanto	58.80	71	P	P	00 04 07.7	-0.2
LZH	Lanzhou	58.89	290	*e*P	P	00 04 09.7	+1.0
LZH				pP	pP	00 04 19.3	-1.2
LZH				sP	sP	00 04 23.2	-2.1
LZH				pmax	pmax		
	comp=Z,48nm,1.1s						
LZH				pmax	pmax		
	comp=Z,140nm,5.4s						
LZH				LR	LR		
	comp=Z,240nm,14.1s						
LZH				LR	LR		
	comp=Z,320nm,14.6s						
LZH				LR	LR		
	comp=Z,230nm,16.0s						
GTA	Gaotai	58.94	295	⇑P	P	00 04 08.8	-0.2
GTA				pP	pP	00 04 16.1	-4.6
GTA				sP	sP	00 04 20.2	-5.3
GTA				pmax	pmax		
	comp=Z,16nm,1.1s						
GTA				pmax	pmax		
	comp=Z,69nm,5.7s						
GTA				LR	LR		
	comp=Z,240nm,17.8s						
GTA				LR	LR		
	comp=Z,340nm,18.2s						
GTA				LR	LR		
	comp=Z,280nm,15.6s						
M50A	Fremont	58.98	61	P	P	00 04 09.7	+0.6
M50A				IAmb	IAmb	00 04 30.0	
	comp=Z,20nm,1.1s						
CCAR	Cane Creek	59.09	73	P	P	00 04 10.0	+0.1
O49A	Covington	59.09	63	P	P	00 04 09.2	-0.7
O49A				IAmb	IAmb	00 04 09.7	
	comp=Z,19nm,1.1s						
UTMT	University of	59.14	69	P	P	00 04 09.9	-0.3
P49A	Miami Univ. Ec	59.33	64	P	P	00 04 10.6	-0.9
	baz=313,SNR=5.8						
WCI	Wyandotte Cave	59.33	66	P	P	00 04 11.5	0.0
WCI				pmax	pmax		
	comp=Z,42nm,0.9s						
WCI	Wyandotte Cave	59.33	66	P	P	00 04 10.8	-0.7
	baz=313						
WCI	Wyandotte Cave	59.33	66	P	P	00 04 11.5	0.0
HKT	Hockley	59.38	79	P	P	00 04 12.0	+0.1
HKT				pmax	pmax		
	comp=Z,17nm,1.5s						
HKT	Hockley	59.38	79	P	P	00 04 12.0	+0.1
HKT				IAmb	IAmb	00 04 13.6	
	comp=Z,16nm,1.5s						
PLVO	Plevna	59.65	55	P	P	00 04 14.2	+0.5
PLVO				IAmb	IAmb	00 04 15.2	
	comp=Z,22nm,1.1s						
DELO	Deloro Mine	59.73	56	IAmb	IAmb	00 04 31.4	
	comp=Z,17nm,1.1s						

W45A	**Hickory Valley**	**59.77**	**70**	P	**P**	**00 04 13.8**	**-0.7**
ACSO	**Alum Creek Sta**	**59.82**	**62**	P	**P**	**00 04 14.0**	**-0.8**
	baz=314						
WVT	**Waverly**	**59.89**	**69**	P	**P**	**00 04 15.4**	**0.0**
WVT				pmax	pmax		
	comp=Z,21nm,1.0s						
WVT	**Waverly**	**59.89**	**69**	P	**P**	**00 04 15.3**	**-0.1**
	baz=314						
WVT	**Waverly**	**59.89**	**69**	P	**P**	**00 04 15.4**	**0.0**
WVT				IAmb	IAmb	00 04 16.2	
	comp=Z,21nm,1.0s						
ERPA	**Erie**	**60.15**	**59**	P	**P**	**00 04 16.5**	**-0.6**
	baz=314						
M53A	**WI Miller and**	**60.25**	**60**	P	**P**	**00 04 17.7**	**-0.1**
	baz=314						
M53A	**WI Miller and**	**60.25**	**60**	IAmb	IAmb	00 04 19.0	
	comp=Z,21nm,0.9s						
ZAIG	**Zacatecas**	**60.34**	**90**	P	**P**	**00 04 18.2**	**-0.8**
ALLY	**Alegheny Colle**	**60.39**	**59**	P	**P**	**00 04 18.9**	**+0.2**
J55A	**Hilton**	**60.50**	**57**	IAmb	IAmb	00 04 20.5	
	comp=Z,21nm,1.1s						
PLAL	**Pickwick Lake**	**60.54**	**70**	P	**P**	**00 04 19.1**	**-0.7**
N53A	**Lisbon**	**60.60**	**61**	IAmb	IAmb	00 04 21.2	
	comp=Z,22nm,1.1s						
WVNY	**West Valley, N**	**60.68**	**58**	P	**P**	**00 04 20.9**	**+0.2**
P52A	**Corning**	**60.70**	**62**	P	**P**	**00 04 20.4**	**-0.5**
	baz=314						
P52A	**Corning**	**60.70**	**62**	P	**P**	**00 04 20.4**	**-0.5**
P52A				IAmb	IAmb	00 04 23.1	
	comp=Z,20nm,1.1s						
M54A	**Oil Creek Stat**	**60.74**	**59**	P	**P**	**00 04 20.7**	**-0.5**
	baz=314						
M54A	**Oil Creek Stat**	**60.74**	**59**	P	**P**	**00 04 20.8**	**-0.4**
M54A				IAmb	IAmb	00 04 22.4	
	comp=Z,22nm,1.0s						
O53A	**New Philadelph**	**60.78**	**61**	P	**P**	**00 04 21.0**	**-0.4**
	baz=314						
O53A	**New Philadelph**	**60.78**	**61**	IAmb	IAmb	00 04 22.3	
	comp=Z,19nm,1.1s						
N54A	**Moraine State**	**60.95**	**60**	P	**P**	**00 04 21.9**	**-0.7**
	baz=314						
N54A	**Moraine State**	**60.95**	**60**	P	**P**	**00 04 22.2**	**-0.4**
J56A	**Wolcott**	**60.99**	**56**	P	**P**	**00 04 22.5**	**-0.3**
J56A				IAmb	IAmb	00 04 42.5	
	comp=Z,23nm,1.1s						
VBMS	**Vicksburg**	**61.02**	**74**	P	**P**	**00 04 23.3**	**+0.2**
	baz=315						
VBMS	**Vicksburg**	**61.02**	**74**	P	**P**	**00 04 23.4**	**+0.2**
LONY	**Lake Ozonia**	**61.21**	**54**	P	**P**	**00 04 23.8**	**-0.6**
	baz=315						
P53A	**Whipple**	**61.22**	**62**	IAmb	IAmb	00 04 24.8	
	comp=Z,14nm,0.8s						
M55A	**Ridgway**	**61.25**	**59**	P	**P**	**00 04 24.8**	**+0.1**
S51A	**Beattyville**	**61.27**	**65**	IAmb	IAmb	00 04 25.5	
	comp=Z,21nm,0.9s						
J57A	**Williamstown**	**61.34**	**56**	P	**P**	**00 04 25.7**	**+0.5**
X48A	**Hartselle**	**61.52**	**70**	IAmb	IAmb	00 04 26.0	
	comp=Z,13nm,1.0s						
K57A	**Scipio Center**	**61.55**	**56**	P	**P**	**00 04 27.0**	**+0.3**
KURK	**Kurchatov**	**61.58**	**317**	P	**P**	**00 04 26.4**	**-0.3**
KURK				pmax	pmax		
	comp=Z,18nm,0.8s						
KURK	**Kurchatov**	**61.58**	**317**	P	**P**	**00 04 26.4**	**-0.3**
NCB	**Newcomb**	**61.85**	**54**	IAmb	IAmb	00 04 50.4	
	comp=Z,8.2nm,0.9s						
MOQ	**Mont Orford**	**61.88**	**52**	P	**P**	**00 04 28.7**	**-0.1**
MCWV	**Mont Chateau**	**61.94**	**61**	P	**P**	**00 04 28.9**	**-0.4**
	baz=315						
BORG	**Borgarnes**	**62.05**	**13**	LR	LR	00 34 59.5	
	comp=Z,30nm,19.5s,baz=338,slow=40						
TZTN	**Tazewell**	**62.07**	**66**	P	**P**	**00 04 30.3**	**+0.1**
	baz=315,SNR=5.2						
J59A	**Piesco**	**62.07**	**55**	IAmb	IAmb	00 04 31.4	
	comp=Z,12nm,0.9s						
V51A	**Loudon**	**62.13**	**67**	P	**P**	**00 04 30.2**	**-0.4**
V51A				IAmb	IAmb	00 04 31.1	
	comp=Z,30nm,1.3s						
D62A	**Allapoint, All**	**62.14**	**49**	P	**P**	**00 04 30.6**	**+0.2**
BINY	**Binghamton**	**62.21**	**57**	P	**P**	**00 04 30.4**	**-0.7**
	baz=315,SNR=5.1						
BINY	**Binghamton**	**62.21**	**57**	P	**P**	**00 04 31.5**	**+0.4**
O56A	**Blue Knob Stat**	**62.21**	**60**	P	**P**	**00 04 30.6**	**-0.5**
	baz=315						
O56A	**Blue Knob Stat**	**62.21**	**60**	IAmb	IAmb	00 04 32.1	
	comp=Z,17nm,0.9s						
M57A	**Sunshine Farm,**	**62.22**	**58**	P	**P**	**00 04 31.4**	**+0.3**
M57A				IAmb	IAmb	00 04 32.6	
	comp=Z,20nm,1.1s						
E62A	**Clayton Lake**	**62.25**	**49**	IAmb	IAmb	00 04 33.6	
	comp=Z,26nm,1.1s						
CPCT	**Cooper Cave**	**62.28**	**67**	P	**P**	**00 04 30.8**	**-0.9**
CPCT				IAmb	IAmb	00 04 48.9	
	comp=Z,22nm,1.5s						
Y49A	**Blount Mountai**	**62.31**	**70**	P	**P**	**00 04 31.2**	**-0.6**
Y49A				IAmb	IAmb	00 04 40.6	
	comp=Z,29nm,1.5s						
SSPA	**Standing Stone**	**62.31**	**59**	P	**P**	**00 04 31.5**	**-0.2**
	baz=315						
SSPA	**Standing Stone**	**62.31**	**59**	P	**P**	**00 04 31.8**	**0.0**
WMQ	**Urumqi**	**62.35**	**306**	*e*P	**P**	**00 04 32.8**	**+0.7**
WMQ				pP	pP	00 04 45.5	+1.6
WMQ				pmax	pmax		
	comp=Z,31nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,190nm,4.5s						
WMQ				LR	LR		
	comp=Z,370nm,19.5s						
WMQ				LR	LR		
	comp=Z,220nm,19.5s						
S54A	**Dingess, Beckl**	**62.45**	**63**	P	**P**	**00 04 32.8**	**+0.1**
V52A	**Sevierville**	**62.54**	**66**	IAmb	IAmb	00 04 34.1	
	comp=Z,20nm,1.1s						
ACCN	**Adirondack Com**	**62.55**	**54**	P	**P**	**00 04 33.5**	**+0.2**
ACCN				IAmb	IAmb	00 04 34.9	
	comp=Z,20nm,1.1s						
TKL	**Tuckaleechee C**	**62.57**	**67**	LR	LR	00 30 46.6	
	comp=Z,133nm,19.9s,baz=319,slow=35						
TKL	**Tuckaleechee C**	**62.57**	**67**	IAmb	IAmb	00 04 34.2	
	comp=Z,16nm,1.0s						
L59A	**Walton**	**62.70**	**56**	P	**P**	**00 04 34.8**	**+0.4**
R55A	**Marlinton**	**62.77**	**62**	P	**P**	**00 04 34.3**	**-0.7**
KSPA	**Keystone Colle**	**62.78**	**57**	P	**P**	**00 04 35.2**	**+0.3**
KSPA				IAmb	IAmb	00 04 36.4	
	comp=Z,25nm,1.2s						
G62A	**West of Eustis**	**62.79**	**51**	P	**P**	**00 04 35.5**	**+0.6**
N58A	**Sunbury**	**62.79**	**58**	P	**P**	**00 04 35.4**	**+0.4**
LBNH	**Lisbon**	**62.81**	**52**	P	**P**	**00 04 34.9**	**-0.1**
	baz=316						
MK31	**Makanchi Array**	**62.82**	**312**	P	**P**	**00 04 34.7**	**-0.4**
MK31				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MK31	**Makanchi Array**	**62.82**	**312**	P	**P**	**00 04 34.7**	**-0.4**
MK31				IAmb	IAmb	00 04 35.9	
	comp=Z,8.5nm,1.0s						
MKAR	**Makanchi Array**	**62.82**	**312**	P	**P**	**00 04 34.7**	**-0.5**
	comp=Z,9.8nm,0.8s,baz=56,slow=6.5,SNR=37						
MKAR	**Makanchi Array**	**62.82**	**312**	P	**P**	**00 04 34.2**	**-0.9**
W52A	**Murphy**	**62.88**	**67**	IAmb	IAmb	00 04 36.2	
	comp=Z,21nm,1.0s						
MAKZ	**Makanchi**	**62.96**	**312**	P	**P**	**00 04 35.6**	**-0.4**
MAKZ				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MAKZ	**Makanchi**	**62.96**	**312**	P	**P**	**00 04 35.6**	**-0.4**
MAKZ				IAmb	IAmb	00 04 36.3	
	comp=Z,10nm,1.1s						
F63A	**Nahmakanta, Br**	**63.12**	**50**	P	**P**	**00 04 36.9**	**-0.2**
F63A				IAmb	IAmb	00 04 38.2	
	comp=Z,25nm,1.1s						
J61A	**Chester**	**63.14**	**54**	P	**P**	**00 04 37.5**	**+0.2**
J61A				IAmb	IAmb	00 04 38.9	
	comp=Z,20nm,1.1s						
PRGR	**Permogore**	**63.16**	**341**	*e*P	**P**	**00 04 36.1**	**-0.9**
PRGR				*e*		00 05 14.7	
PRGR				pmax	pmax		
	comp=Z,60nm,1.2s						
BRVK	**Borovoye**	**63.16**	**323**	*d i*P	**P**	**00 04 37.4**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,20nm,1.0s						
BRVK	**Borovoye**	**63.16**	**323**	P	**P**	**00 04 37.6**	**+0.4**
BRVK				IAmb	IAmb	00 04 38.8	
	comp=Z,22nm,1.1s						
PAGS	**Pennsylvania G**	**63.23**	**58**	P	**P**	**00 04 38.2**	**+0.3**
PAGS				IAmb	IAmb	00 04 39.0	
	comp=Z,17nm,0.9s						
N59A	**State Game Lan**	**63.24**	**57**	P	**P**	**00 04 37.8**	**-0.2**
	baz=316,SNR=5.3						
N59A	**State Game Lan**	**63.24**	**57**	P	**P**	**00 04 38.1**	**+0.1**
PKME	**Peaks-Kenny Pk**	**63.35**	**50**	P	**P**	**00 04 38.1**	**-0.5**
	baz=317						
PKME	**Peaks-Kenny Pk**	**63.35**	**50**	P	**P**	**00 04 37.7**	**-0.8**
BLA	**Blacksburg**	**63.36**	**63**	P	**P**	**00 04 39.0**	**+0.1**
	baz=316,SNR=10						
SVE	**Sverdlovsk**	**63.44**	**330**	*e*P	**P**	**00 04 38.5**	**-0.5**
SVE				pmax	pmax		
	comp=Z,13nm,1.3s						
MVL	**Millersville**	**63.59**	**58**	P	**P**	**00 04 39.6**	**-0.6**
MVL				IAmb	IAmb	00 04 41.6	
	comp=Z,21nm,1.0s						
I63A	**Otisfield**	**63.61**	**52**	P	**P**	**00 04 39.0**	**-1.3**
LUPA	**Lehigh Univers**	**63.67**	**57**	P	**P**	**00 04 41.3**	**+0.5**
LUPA				IAmb	IAmb	00 04 41.9	
	comp=Z,15nm,0.6s						
ODNJ	**Ogdensburg**	**63.73**	**57**	P	**P**	**00 04 41.3**	**+0.2**
ODNJ				IAmb	IAmb	00 04 43.2	
	comp=Z,21nm,1.2s						
L61B	**Northampton**	**63.73**	**54**	P	**P**	**00 04 40.7**	**-0.5**
	baz=317						
SDMD	**Soldier's Deli**	**63.75**	**59**	P	**P**	**00 04 41.8**	**+0.4**
SDMD				IAmb	IAmb	00 04 42.5	
	comp=Z,15nm,0.9s						
S57A	**Dark Hollow, R**	**63.78**	**62**	P	**P**	**00 04 41.7**	**+0.1**
S57A				IAmb	IAmb	00 04 43.2	
	comp=Z,21nm,0.9s						
K62A	**Royalston**	**63.80**	**54**	IAmb	IAmb	00 04 43.2	
	comp=Z,21nm,1.0s						
KSCT	**Kent School, K**	**63.84**	**55**	IAmb	IAmb	00 04 43.1	
	comp=Z,22nm,1.1s						
BRAL	**Brewton**	**63.84**	**72**	P	**P**	**00 04 42.3**	**+0.2**
	baz=316						
TRNY	**Table Rock, Ra**	**63.88**	**56**	P	**P**	**00 04 41.2**	**-0.9**
TRNY				IAmb	IAmb	00 04 43.8	
	comp=Z,32nm,1.4s						
GYA	**Guiyang**	**63.98**	**280**	⇓P	**P**	**00 04 44.5**	**+1.3**
GYA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
U56A	**King**	**64.00**	**64**	P	**P**	**00 04 43.1**	**+0.1**
BRNJ	**Basking Ridge**	**64.04**	**57**	P	**P**	**00 04 43.6**	**+0.5**
P60A	**Greenville**	**64.10**	**58**	P	**P**	**00 04 43.4**	**-0.2**
	baz=316						
PAL	**Palisades**	**64.15**	**56**	P	**P**	**00 04 44.0**	**+0.1**
	baz=317,SNR=5.1						
152A	**Waverly Hall**	**64.15**	**70**	P	**P**	**00 04 42.3**	**-1.7**
152A				IAmb	IAmb	00 04 43.7	
	comp=Z,14nm,1.2s						
HRV	**Adam Dziewonsk**	**64.26**	**54**	P	**P**	**00 04 44.1**	**-0.5**
	baz=317						
CPNY	**Central Park**	**64.28**	**56**	P	**P**	**00 04 44.6**	**-0.1**
WSPT	**Westport, CT**	**64.33**	**56**	P	**P**	**00 04 45.1**	**+0.1**
KMSC	**Kings Mountain**	**64.33**	**65**	P	**P**	**00 04 45.0**	**-0.2**
	baz=316,SNR=13						
KMSC	**Kings Mountain**	**64.33**	**65**	P	**P**	**00 04 45.4**	**+0.2**
CBN	**Corbin Frederi**	**64.33**	**60**	P	**P**	**00 04 45.3**	**+0.2**
GOGA	**Godfrey**	**64.35**	**68**	P	**P**	**00 04 44.4**	**-0.9**
	baz=316,SNR=6.0						
GOGA	**Godfrey**	**64.35**	**68**	IAmb	IAmb	00 04 45.5	
	comp=Z,21nm,0.9s						
ARU	**Arti**	**64.41**	**331**	*c i*P	**P**	**00 04 45.0**	**-0.4**
ARU				S	**S**	**00 13 21.4**	**+1.3**
ARU				pmax	pmax		
	comp=Z,327nm,17.6s						
ARU				MLR	MLR		
	comp=Z,234nm,16.0s						
ARU	**Arti**	**64.41**	**331**	P	**P**	**00 04 44.8**	**-0.5**
ARU				IAmb	IAmb	00 04 45.9	
	comp=Z,9.1nm,0.9s						
HODGE	**Hodges**	**64.45**	**67**	IAmb	IAmb	00 04 46.7	
	comp=Z,24nm,1.0s						
GGN	**Saint George**	**64.63**	**49**	P	**P**	**00 04 46.7**	**-0.3**
M63A	**Gales Ferry**	**64.82**	**55**	P	**P**	**00 04 48.5**	**+0.2**
KIRV	**Kirov**	**65.03**	**337**	LR	LR	00 34 40.3	
	comp=Z,38nm,21.8s,baz=24,slow=37						
KIRV	**Kirov**	**65.03**	**337**	⇓*e*P	**P**	**00 04 49.3**	**0.0**
T59A	**Double "B" Far**	**65.12**	**62**	P	**P**	**00 04 50.5**	**+0.2**
U59A	**Littleton**	**65.44**	**62**	IAmb	IAmb	00 04 53.4	
	comp=Z,19nm,0.9s						
TAOE	**Nuku Hiva Isla**	**66.37**	**144**	*e*LR	LR	00 25 08.2	
	comp=Z,158nm,22.4s						
FINES	**FINESS Array B**	**66.44**	**350**	P	**P**	**00 04 57.8**	**-0.6**
	comp=Z,5.3nm,0.8s,baz=8.5,slow=3.9,SNR=7.8						
FINES				LR	LR	00 37 19.0	
	comp=Z,112nm,18.1s,baz=30,slow=39						
NHSC	**New Hope**	**66.46**	**66**	P	**P**	**00 04 58.8**	**-0.2**
	baz=317						
KMI	**Kunming**	**67.36**	**282**	⇓P	**P**	**00 05 05.9**	**+0.8**
KMI				pmax	pmax		
	comp=Z,8.0nm,1.4s						
NB2	**NORSAR Subarra**	**67.81**	**358**	P	**P**	**00 05 06.7**	**-0.4**
	comp=Z,4.7nm,0.9s,baz=1.4,slow=6.5						
NOA	**NORSAR Array B**	**67.81**	**358**	P	**P**	**00 05 06.8**	**-0.4**
	comp=Z,4.1nm,0.9s,baz=2.2,slow=6.4,SNR=6.5						
NOA				LR	LR	00 35 30.2	
	comp=Z,58nm,18.2s,baz=350,slow=37						
TARG	**Taragay, Kyrgy**	**68.76**	**311**	P	**P**	**00 05 14.2**	**+0.3**
TKM2	**Tokmak 2**	**68.86**	**313**	P	**P**	**00 05 14.8**	**+0.5**
	SNR=21						
USP	**Ospenovka**	**69.09**	**314**	P	**P**	**00 05 16.2**	**+0.7**
	SNR=26						
ULHL	**Ulahol**	**69.09**	**312**	P	**P**	**00 05 16.7**	**+1.0**
	SNR=6.3						
CHMS	**Chumysh**	**69.19**	**313**	P	**P**	**00 05 16.7**	**+0.7**
	SNR=11						
VSU	**Vasula**	**69.28**	**349**	⇑*e*P	**P**	**00 05 16.3**	**+0.1**
VSU				pmax	pmax		
	comp=Z,106nm,1.2s						
KBK	**Karagaybulak**	**69.36**	**313**	P	**P**	**00 05 18.0**	**+0.7**
	SNR=21						
FRU1	**Bishkek**	**69.39**	**313**	P	**P**	**00 05 17.9**	**+0.6**
FRU1				pmax	pmax		
	comp=Z,62nm,1.1s						
FRU1	**Bishkek**	**69.39**	**313**	P	**P**	**00 05 17.9**	**+0.6**
SLVN	**Son La**	**69.45**	**279**	P	**P**	**00 05 18.7**	**+0.7**
SLVN				IAmb	IAmb	00 05 44.7	
	comp=Z,21nm,1.3s						
AAK	**Ala-Archa**	**69.59**	**313**	P	**P**	**00 05 19.3**	**+0.6**
	SNR=35						
AAK	**Ala-Archa**	**69.59**	**313**	*c i*P	**P**	**00 05 19.0**	**+0.3**
AAK				pmax	pmax		
	comp=Z,81nm,0.8s						
AAK	**Ala-Archa**	**69.59**	**313**	P	**P**	**00 05 19.2**	**+0.6**
AAK				IAmb	IAmb	00 05 20.3	
	comp=Z,27nm,0.9s						
PMOR	**Pomariorio Ree**	**69.67**	**154**	*e*T	T	01 21 44.5	
	comp=Z,3.6nm,0.3s						
EKS2	**Erkin-Say**	**69.89**	**314**	P	**P**	**00 05 21.4**	**+0.9**
	SNR=29						
UCH	**Uchtor**	**69.90**	**313**	P	**P**	**00 05 21.7**	**+0.8**
	SNR=11						
AML	**Almayashu**	**70.35**	**314**	P	**P**	**00 05 24.6**	**+0.9**
	SNR=26						
LSA	**Lhasa**	**70.86**	**294**	IAmb	IAmb	00 05 43.5	
	comp=Z,20nm,0.8s						
KK31	**Karatay Array**	**70.98**	**316**	IAmb	IAmb	00 05 28.0	
	comp=Z,14nm,0.9s						
KKAR	**Karatay Array**	**70.98**	**316**	IAmb	IAmb	00 05 28.0	
	comp=Z,14nm,0.9s						
OBN	**Obninsk**	**71.01**	**343**	⇓*e*P	**P**	**00 05 25.8**	**-1.1**
OBN				*e*		00 05 47.6	
OBN				*e*		00 08 04.6	
OBN				pmax	pmax		
	comp=Z,41nm,2.5s						
OBN				MLR	MLR		
	comp=Z,124nm,17.0s						
BELG	**Belogornoye**	**71.04**	**335**	*d i*P	**P**	**00 05 27.3**	**+0.2**
BELG				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KSH	**Kashi**	**71.35**	**310**	P	**P**	**00 05 33.1**	**+3.6**
KSH				pP	pP	00 05 43.3	+1.8
KSH				sP	pwP	00 05 47.2	-0.1
KSH				PcP	**PcP**	**00 05 53.7**	**+4.7**
KSH				pmax	pmax		
	comp=Z,47nm,1.2s						
KSH				LR	LR		
	comp=Z,310nm,9.1s						
KSH				LR	LR		
	comp=Z,310nm,9.5s						
PPT	**Papeete**	**71.69**	**157**	LR	LR	00 31 29.3	
	comp=Z,61nm,21.8s,baz=360,slow=31						
PPT2	**Papeete2**	**71.71**	**157**	*e*LR	LR	00 27 25.9	
	comp=Z,71nm,24.2s						
LPSR	**Galich'ya Gora**	**72.91**	**340**	*e*P	**P**	**00 05 36.8**	**-1.5**
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.4s						
MNK	**Minsk**	**73.00**	**348**	*i* P	**P**	**00 05 38.3**	**-0.5**
MNK				*i*		00 05 54.1	
MNK				*i*		00 08 20.3	
MNK				*i* PPP	PPP	00 10 05.0	
MNK				*i* S	**S**	**00 15 02.6**	**+0.7**
MNK				*i*		00 15 43.1	
MNK				*i* SS	**SS**	**00 19 43.8**	**+2.0**
MNK				pmax	pmax		
	comp=Z,17nm,1.0s						
MNK				pmax	pmax		
	comp=N,17nm,1.0s						
MNK				pmax	pmax		
	comp=E,1.0nm,1.0s						
MNK				MLR	MLR		
	comp=Z,122nm,18.0s						
MNK				MLR	MLR		
	comp=E,65nm,18.0s						
MNK				MLR	MLR		
	comp=N,503nm,18.0s						
DRK	**Karamyk**	**73.33**	**313**	IAmb	IAmb	00 05 43.3	
	comp=Z,19nm,0.9s						
VRH	**Novokhopyorsk**	**73.60**	**338**	*e*P	**P**	**00 05 41.6**	**-0.8**
VRH				pmax	pmax		
	comp=Z,20nm,0.8s						
SUW	**Suwalki**	**74.05**	**350**	IAmb	IAmb	00 05 45.4	
	comp=Z,37nm,1.1s						
VSR	**Storozhevoye**	**74.16**	**340**	*e*P	**P**	**00 05 45.2**	**-0.5**
VSR				pmax	pmax		
	comp=Z,20nm,1.1s						
TAPN	**Taplejung**	**74.61**	**294**	*e*P	**P**	**00 05 49.6**	**+0.5**
	comp=Z,40nm,0.7s						
CMAR	**Chiang Mai Arr**	**74.67**	**280**	P	**P**	**00 05 49.9**	**+0.7**
	comp=Z,2.3nm,0.3s,baz=24,slow=6.9,SNR=16						
CMAR				LR	LR	00 40 34.3	
	comp=Z,42nm,19.6s,baz=40,slow=37						
ODAN	**Odare**	**75.17**	**294**	*e*P	**P**	**00 05 53.2**	**+1.0**
GUN	**Gumba**	**75.21**	**296**	*e*P	**P**	**00 05 53.3**	**+0.7**
JIRN	**Jiri**	**75.23**	**296**	*e*P	**P**	**00 05 53.6**	**+0.8**
DZM	**Mont Dzumac**	**75.43**	**200**	*e*LR	LR	00 29 03.1	
	comp=Z,154nm,20.4s						
RAMN	**Ramite**	**75.55**	**295**	*e*P	**P**	**00 05 54.8**	**+0.4**
	comp=Z,24nm,0.5s						
KKN	**Kakani**	**75.64**	**296**	*e*P	**P**	**00 05 55.6**	**+0.7**
	comp=Z,19nm,0.6s						
PKIN	**Phulchoki**	**75.74**	**296**	*e*P	**P**	**00 05 55.8**	**+0.2**
	comp=Z,10nm,0.6s						
GKN	**Gorkha**	**75.84**	**297**	*e*P	**P**	**00 05 56.0**	**0.0**
	comp=Z,12nm,0.4s						
DANN	**Dangsing**	**76.05**	**298**	*e*P	**P**	**00 05 57.8**	**+0.4**
	comp=Z,76nm,0.8s						
AKASG	**Malin Array Be**	**76.50**	**346**	P	**P**	**00 05 58.4**	**-0.8**
	comp=Z,2.2nm,0.4s,baz=18,slow=5.8,SNR=14						
AKASG				LR	LR	00 42 57.4	
	comp=Z,72nm,20.7s,baz=5.0,slow=38						
AKBB	**Malin Array Si**	**76.50**	**346**	⇓*e*P	**P**	**00 05 58.4**	**-0.8**
AKBB	**Malin Array Si**	**76.50**	**346**	IAmb	IAmb	00 05 59.4	
	comp=Z,9.9nm,1.0s						
FLTG	**Flechtingen**	**76.53**	**357**	*e*P	**P**	**00 05 59.6**	**+0.3**
	comp=Z,5.2nm,0.7s,baz=1.9,slow=5.4						
FLTG				*e*pP	**pP**	**00 06 12.9**	**+1.3**
KOLN	**Koldanda**	**76.59**	**298**	*e*P	**P**	**00 06 00.7**	**+0.4**
	comp=Z,20nm,0.8s						
PYUN	**Piuthan**	**76.67**	**298**	*e*P	**P**	**00 06 01.2**	**+0.4**
	comp=Z,62nm,0.9s						
CLZ	**Clausthal**	**77.04**	**358**	*e*P	**P**	**00 06 03.3**	**+1.1**
	comp=Z,9.1nm,0.9s,baz=1.9,slow=5.4						
TBI	**Tubuai**	**77.27**	**158**	*e*LR	LR	00 29 27.6	
	comp=Z,141nm,32.5s						
NIL	**Nilore**	**77.35**	**309**	P	**P**	**00 06 04.4**	**+0.1**
NIL				pmax	pmax		
	comp=Z,55nm,1.2s						
NIL	**Nilore**	**77.35**	**309**	P	**P**	**00 06 04.4**	**+0.1**
CLL	**Collm**	**77.49**	**356**	*i* P	**P**	**00 06 04.9**	**+0.2**
CLL				pmax	pmax		
	comp=Z,13nm,1.4s						
CLL	**Collm**	**77.49**	**356**	*i* P	**P**	**00 06 04.9**	**+0.2**
	comp=Z,13nm,1.4s						
CLL				*e*PP	**PP**	**00 08 59.0**	**+0.1**
FBE	**Freiberg**	**77.86**	**356**	*e*P	**P**	**00 06 07.9**	**+1.1**
	comp=Z,7.9nm,0.8s,baz=1.9,slow=5.4						
BRG	**Berggiesshubel**	**77.88**	**356**	*e*P	**P**	**00 06 07.3**	**+0.3**
	comp=Z,5.0nm,0.8s,baz=1.9,slow=5.4						
BRG				*e*pP	**pP**	**00 06 20.9**	**+1.6**
BRG	**Berggiesshubel**	**77.88**	**356**	*i* P	**P**	**00 06 07.4**	**+0.5**
BRG				Amp		00 06 08.6	
	comp=Z,5.4nm,0.8s						
BRG	**Berggiesshubel**	**77.88**	**356**	P	P	00 06 20.8	+14
BRG				Amp		00 06 21.4	
	comp=Z,4.2nm,0.7s						
OSTC	**Ostas**	**78.07**	**354**	*e*P	**P**	**00 06 08.3**	**+0.3**
UBBA	**Unterbreizbach**	**78.07**	**358**	*e*pP	pP	00 06 22.7	+2.6
UPC	**Upice**	**78.13**	**354**	*e*P	**P**	**00 06 08.8**	**+0.5**
UPC	**Upice**	**78.13**	**354**	*e*P	**P**	**00 06 08.8**	**+0.5**
PVCC	**Panska Ves**	**78.20**	**355**	*e*P	**P**	**00 06 08.8**	**+0.1**
PVCC	**Panska Ves**	**78.20**	**355**	*e*P	**P**	**00 06 08.8**	**+0.1**
MOX	**Moxa**	**78.21**	**357**	*e*P	**P**	**00 06 09.0**	**+0.3**
	comp=Z,3.9nm,0.7s,baz=1.9,slow=5.4						
DPC	**Dobruska-Polom**	**78.27**	**354**	*e*P	**P**	**00 06 09.0**	**-0.1**
DPC				*e*x	x	00 06 22.4	
GUNZ	**Gunzen**	**78.46**	**357**	*e*P	**P**	**00 06 10.3**	**+0.2**
	baz=1.9,slow=5.4						
WERN	**Wernitzgruen**	**78.54**	**357**	*e*P	**P**	**00 06 11.6**	**+1.0**
	comp=Z,7.0nm,1.0s,baz=1.9,slow=5.4						
NKC	**Novy Kostel**	**78.59**	**357**	*e*P	**P**	**00 06 11.2**	**+0.3**
NKC	**Novy Kostel**	**78.59**	**357**	*e*P	**P**	**00 06 11.2**	**+0.3**
KBL	**Kabul**	**78.63**	**312**	P	**P**	**00 06 11.0**	**-0.6**
KBL				pmax	pmax		
	comp=Z,15nm,0.9s						
KBL	**Kabul**	**78.63**	**312**	P	**P**	**00 06 11.0**	**-0.6**
KBL				IAmb	IAmb	00 06 12.0	
	comp=Z,15nm,0.9s						
TNS	**Taunus Mts**	**78.69**	**359**	*e*P	**P**	**00 06 12.5**	**+1.1**
	comp=Z,5.2nm,0.9s,baz=1.9,slow=5.4						
PRU	**Pruhonice**	**78.74**	**355**	*e*P	**P**	**00 06 11.6**	**0.0**
PRU	**Pruhonice**	**78.74**	**355**	*e*P	**P**	**00 06 11.6**	**0.0**
MORC	**Moravsky Berou**	**78.76**	**353**	⇑P	**P**	**00 06 12.0**	**+0.2**
MORC	**Moravsky Berou**	**78.76**	**353**	⇑P	**P**	**00 06 12.0**	**+0.2**
MORC	**Moravsky Berou**	**78.76**	**353**	*e*P	**P**	**00 06 12.1**	**+0.3**
STHS	**Stebnicka Huta**	**78.79**	**351**	*e*P	**P**	**00 06 11.9**	**-0.1**
DOU	**Dourbes**	**78.80**	**2**	*d*P	**P**	**00 06 12.6**	**+0.6**
	comp=Z,7.2nm,1.3s						
MANZ	**Manzenberg**	**78.85**	**357**	*e*pP	pP	00 06 26.8	+2.1
GOF	**Gofitskoye**	**78.98**	**335**	⇑*e*P	**P**	**00 06 13.2**	**+0.1**
GOF				pmax	pmax		
	comp=Z,64nm,1.3s						
ROTZ	**Rotzenmuhle**	**79.06**	**357**	*e*P	**P**	**00 06 13.7**	**+0.2**
	comp=Z,0.7nm,0.8s,baz=1.9,slow=5.4						
SORM	**Soroca**	**79.14**	**346**	⇑P	**P**	**00 06 13.2**	**-0.6**
SORM	**Soroca**	**79.14**	**346**	⇑P	**P**	**00 06 13.2**	**-0.6**
KOLS	**Kolonicke sedl**	**79.16**	**350**	*e*P	**P**	**00 06 13.6**	**-0.4**
KOLS				pmax	pmax		
	comp=Z,11nm,1.1s						
VRAC	**Vranov**	**79.29**	**354**	⇑P	**P**	**00 06 14.6**	**-0.1**
VRAC	**Vranov**	**79.29**	**354**	⇑P	**P**	**00 06 14.6**	**-0.1**
VRAC	**Vranov**	**79.29**	**354**	*e*P	**P**	**00 06 15.4**	**+0.7**
KRUC	**Moravsky**	**79.55**	**354**	*e*P	**P**	**00 06 16.5**	**+0.4**
KHC	**Kasperske Hory**	**79.64**	**356**	*e*P	**P**	**00 06 17.0**	**+0.3**
KHC	**Kasperske Hory**	**79.64**	**356**	*e*P	**P**	**00 06 17.0**	**+0.3**
JAVC	**Velka Javorina**	**79.66**	**353**	*e*P	**P**	**00 06 18.4**	**+1.6**
WET	**Wettzell**	**79.66**	**356**	*e*P	**P**	**00 06 17.6**	**+0.8**
	baz=1.9,slow=5.4						
CKRC	**Cesky Krumlov**	**79.92**	**355**	*e*P	**P**	**00 06 17.9**	**-0.2**
GEC2	**GERESS Array S**	**79.92**	**356**	*e*P	**P**	**00 06 19.0**	**+0.7**
	comp=Z,2.4nm,0.8s,baz=1.9,slow=5.4						
GERES	**GERESS Array B**	**79.92**	**356**	P	**P**	**00 06 18.6**	**+0.4**
	comp=Z,2.4nm,0.7s,baz=357,slow=5.6,SNR=8.4						
VYHS	**Vyhne**	**79.93**	**352**	*e*P	**P**	**00 06 17.0**	**-1.2**
VYHS				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BURAR	**Bucovina Array**	**80.09**	**348**	⇑P	**P**	**00 06 18.7**	**-0.5**
BURAR	**Bucovina Array**	**80.09**	**348**	⇑P	**P**	**00 06 18.7**	**-0.5**
KIV	**Kislovodsk**	**80.10**	**335**	*e*P	**P**	**00 06 19.0**	**-0.3**
KIV				pmax	pmax		
	comp=Z,11nm,1.0s						
KBZ	**Khabaz**	**80.25**	**335**	P	**P**	**00 06 19.9**	**0.0**
	comp=Z,6.9nm,0.9s,baz=86,slow=2.4,SNR=8.8						
KBZ				LR	LR	00 48 57.8	
	comp=Z,111nm,18.1s,baz=26,slow=41						
KBZ	**Khabaz**	**80.25**	**335**	⇑*e*P	**P**	**00 06 20.0**	**0.0**
KBZ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MTN	**Manton Dam**	**80.27**	**235**	IAmb	IAmb	00 06 21.2	
	comp=Z,19nm,0.8s						
NCK	**Nalchik**	**80.28**	**334**	⇓*e*P	**P**	**00 06 21.0**	**+0.8**
NCK				pmax	pmax		

	comp=Z,33nm,1.1s						
GEYT	**Alibeck**	80.44	321	P	**P**	**00 06 21.6**	**+0.4**
	comp=Z,7.4nm,1.0s,baz=301,slow=1.7,SNR=9.4						
GEYT				LR	LR	00 45 49.5	
	comp=Z,191nm,18.0s,baz=80,slow=39						
GEYT	**Alibeck**	80.44	321	P	**P**	**00 06 22.3**	**+1.1**
GEYT				IAmb	IAmb	00 06 23.5	
	comp=Z,13nm,1.1s						
BFO	**Black Forest**	80.59	359	*e*P	**P**	**00 06 21.6**	**-0.2**
	comp=Z,3.3nm,0.8s,baz=1.9,slow=5.4						
ECH	**Echery**	80.71	360	P	**P**	**00 06 23.0**	**+0.6**
ECH				pmax	pmax		
	comp=Z,12nm,1.1s						
ECH	**Echery**	80.71	360	P	**P**	**00 06 23.0**	**+0.6**
ECH				IAmb	IAmb	00 06 24.2	
	comp=Z,12nm,1.1s						
CONA	**Conrad Observa**	80.71	354	*e*P	**P**	**00 06 23.5**	**+0.9**
	comp=Z,9.5nm,1.2s						
ARCR	**ARCALIA**	80.73	348	⇓P	**P**	**00 06 24.3**	**+1.8**
ZEI	**Tsey**	80.85	333	*e*P	**P**	**00 06 21.0**	**-2.5**
ZEI				pmax	pmax		
	comp=Z,3.0nm,1.0s						
RJOB	**Jochberg**	81.07	356	*e*P	**P**	**00 06 24.8**	**+0.4**
	comp=Z,2.9nm,0.8s,baz=1.9,slow=5.4						
DRGR		81.22	349	⇑P	**P**	**00 06 24.9**	**-0.3**
DRGR		81.22	349	⇑P	**P**	**00 06 24.9**	**-0.3**
RETA	**Reutte**	81.39	358	*e*P	**P**	**00 06 26.3**	**+0.2**
	comp=Z,4.3nm,0.8s						
VLDR	**Vladesti**	81.41	345	⇑P	**P**	**00 06 26.9**	**+0.8**
ARSA	**Arzberg**	81.41	354	*e*P	**P**	**00 06 27.3**	**+1.1**
	comp=Z,3.1nm,0.7s						
WATA	**Walderalm**	81.52	357	*i* P	**P**	**00 06 27.8**	**+0.9**
	comp=Z,4.1nm,0.5s						
MOTA	**Moosalm**	81.52	357	*i* P	**P**	**00 06 27.6**	**+0.7**
	comp=Z,6.4nm,1.0s						
WTTA	**Wattenberg**	81.58	357	*i* P	**P**	**00 06 28.3**	**+1.1**
	comp=Z,7.4nm,0.9s						
DAVA	**Damuels**	81.61	358	*e*P	**P**	**00 06 29.2**	**+1.8**
	comp=Z,6.0nm,1.1s						
PLOR	**Plostina**	81.62	346	⇑P	**P**	**00 06 26.9**	**-0.4**
PLOR	**Plostina**	81.62	346	⇑P	**P**	**00 06 26.9**	**-0.4**
SQTA	**Sankt Quirin**	81.64	357	*i* P	**P**	**00 06 28.3**	**+0.8**
	comp=Z,5.2nm,0.7s						
DOPR	**Dopca**	81.69	347	⇑P	**P**	**00 06 28.6**	**+0.9**
COVR	**Voineasa-Covas**	81.69	347	⇑P	**P**	**00 06 29.2**	**+1.5**
HRA	**Herat**	81.80	317	IAmb	IAmb	00 06 30.2	
	comp=Z,20nm,1.1s						
FETA	**Feichten**	81.86	358	*e*P	**P**	**00 06 29.7**	**+1.0**
	comp=Z,8.2nm,0.9s						
TLCR		81.93	345	⇑P	**P**	**00 06 29.9**	**+1.1**
TLCR		81.93	345	⇑P	**P**	**00 06 29.9**	**+1.1**
SOKA	**Soboth**	82.01	355	*e*P	**P**	**00 06 29.9**	**+0.5**
	comp=Z,12nm,1.2s						
CFR	**Carcaliu**	82.05	345	⇑P	**P**	**00 06 29.3**	**-0.2**
CFR	**Carcaliu**	82.05	345	⇑P	**P**	**00 06 29.3**	**-0.2**
ABTA	**Abfaltersbach**	82.07	356	*i* P	**P**	**00 06 30.2**	**+0.5**
	comp=Z,5.2nm,1.0s						
MYKA	**Terra Mystica**	82.14	355	*e*P	**P**	**00 06 30.5**	**+0.5**
	comp=Z,1.8nm,0.5s						
OBKA	**Obir**	82.21	355	*e*P	**P**	**00 06 31.5**	**+1.1**
	comp=Z,2.4nm,0.6s						
VOIR		82.25	347	⇑P	**P**	**00 06 31.9**	**+1.2**
VOIR		82.25	347	⇑P	**P**	**00 06 31.9**	**+1.2**
TPGR	**Topolog**	82.32	345	⇑P	**P**	**00 06 31.1**	**+0.2**
JURR	**Jurilovca**	82.33	345	⇑P	**P**	**00 06 31.5**	**+0.6**
ARR	**Arges**	82.38	348	⇑P	**P**	**00 06 32.4**	**+1.1**
HARR	**Harsova**	82.56	345	⇓P	**P**	**00 06 32.0**	**-0.1**
HARR	**Harsova**	82.56	345	⇓P	**P**	**00 06 32.0**	**-0.1**
GZR	**Gura Zlata**	82.59	349	⇑P	**P**	**00 06 32.0**	**-0.4**
GZR	**Gura Zlata**	82.59	349	⇑P	**P**	**00 06 32.0**	**-0.4**
TLBR	**Topalu**	82.68	345	⇑P	**P**	**00 06 33.3**	**+0.5**
TIRR	**Tirgusor**	82.70	345	⇓P	**P**	**00 06 33.2**	**+0.3**
TIRR	**Tirgusor**	82.70	345	⇓P	**P**	**00 06 33.2**	**+0.3**
MDVR	**Moldovita**	83.32	350	⇑P	**P**	**00 06 35.6**	**-0.6**
TEOL	**Teolo**	83.49	357	IAmb	IAmb	00 06 38.3	
	comp=Z,20nm,0.9s						
PLVB	**Pleven**	84.33	347	⇑P	**P**	**00 06 41.8**	**+0.5**
BOVS	**Bovan**	84.45	349	⇑P	**P**	**00 06 41.8**	**-0.1**
WR0	**Warramunga Arr**	84.67	229	P	**P**	**00 06 42.9**	**-0.3**
WR0				IAmb	IAmb	00 07 03.9	
	comp=Z,6.3nm,1.0s						
WRAB	**Tennant Creek**	84.74	229	⇑*e*P	**P**	**00 06 43.7**	**+0.2**
WRAB				pmax	pmax		
	comp=Z,15nm,1.7s						
WB2	**Warramunga Arr**	84.74	229	IAmb	IAmb	00 07 05.1	
	comp=Z,13nm,1.4s						
WRA	**Warramunga Arr**	84.75	229	P	**P**	**00 06 42.9**	**-0.7**
	comp=Z,2.6nm,0.8s,baz=33,slow=5.9,SNR=16						
WRA				LR	LR	00 40 20.1	
	comp=Z,51nm,21.6s,baz=130,slow=33						
VTS	**Vitosha**	85.27	348	⇑P	**P**	**00 06 46.4**	**+0.2**
VTS	**Vitosha**	85.27	348	⇑P	**P**	**00 06 46.4**	**+0.2**
GURO	**Guroymak-BITLI**	85.31	333	P	**P**	**00 06 46.7**	**+0.2**
GURO				IAmb	IAmb	00 06 48.7	
	comp=Z,8.1nm,1.4s						
MURB	**Monte Urbino**	85.55	356	P	**P**	**00 06 47.6**	**+0.1**
MURB				IAmb	IAmb	00 07 13.8	
	comp=Z,16nm,1.2s						
PDG	**Podgorica**	85.90	351	P	**P**	**00 06 47.7**	**-1.4**
PDG				IAmb	IAmb	00 07 03.4	
	comp=Z,8.0nm,0.9s						
BRTR	**Keskin Array B**	86.29	340	P	**P**	**00 06 52.0**	**+0.6**
	comp=Z,4.6nm,0.9s,baz=48,slow=4.5,SNR=7.0						
BRTR				LR	LR	00 54 02.8	
	comp=Z,35nm,19.1s,baz=24,slow=42						
BRTR	**Keskin Array B**	86.29	340	P	**P**	**00 06 50.5**	**-0.8**
BRTR	**Keskin Array B**	86.29	340	P	**P**	**00 06 50.5**	**-0.8**
STIP	**Stip**	86.31	349	*i* P	**P**	**00 06 50.8**	**-0.4**
PBRG	**Braganca**	86.34	10	*e*P	**P**	**00 06 52.0**	**+0.6**
	comp=Z,16nm,1.8s						
PBRG				*e*pP	**pP**	**00 07 05.1**	**+1.4**
BNN	**Bunyan**	86.62	338	P	**P**	**00 06 51.9**	**-1.1**
VAY	**Valandovo**	86.63	348	*i* P	**P**	**00 06 53.4**	**+0.6**
POLO	**Lamas de Olo**	86.64	11	*e*P	**P**	**00 06 53.5**	**+0.5**
POLO				*e*pP	**pP**	**00 07 06.8**	**+1.5**
PVRL	**Vila Real**	86.75	11	*e*P	**P**	**00 06 54.1**	**+0.7**
	comp=Z,22nm,1.9s						
PVRL				*e*pP	**pP**	**00 07 07.4**	**+1.7**
MVO	**Moncorvo**	86.94	11	*e*P	**P**	**00 06 54.9**	**+0.5**
MVO				*e*pP	**pP**	**00 07 08.2**	**+1.5**
OHR	**Ohrid**	87.04	350	*i* P	**P**	**00 06 56.1**	**+1.2**
PVIS	**Viseu**	87.28	11	*e*P	**P**	**00 06 56.7**	**+0.7**
PVIS				*e*pP	**pP**	**00 07 09.6**	**+1.3**
FNA	**Florina**	87.30	349	P	**P**	**00 06 55.2**	**-1.0**
FNA				pmax	pmax		
	comp=Z,12nm,0.8s						
FNA	**Florina**	87.30	349	P	**P**	**00 06 55.2**	**-1.0**
FNA				IAmb	IAmb	00 06 57.0	
	comp=Z,12nm,0.8s						
FITZ	**Fitzroy Crossi**	87.52	237	P	**P**	**00 06 57.4**	**+0.2**
FITZ				IAmb	IAmb	00 06 58.9	
	comp=Z,18nm,1.4s						
MTE	**Manteigas**	87.63	11	*e*P	**P**	**00 06 58.0**	**+0.3**
PCAS	**Casmilo, Conde**	87.85	12	*e*P	**P**	**00 06 58.9**	**+0.2**
PCAS				*e*pP	**pP**	**00 07 12.2**	**+1.1**
AS31	**Alice Springs**	88.16	227	IAmb	IAmb	00 07 01.4	
	comp=Z,2.6nm,0.6s						
ASAR	**Alice Springs**	88.16	227	P	**P**	**00 07 00.6**	**+0.4**
	comp=Z,7.9nm,0.8s,baz=33,slow=4.8,SNR=60						
ASAR				LR	LR	00 47 57.8	
	comp=Z,51nm,18.1s,baz=77,slow=37						
ASAR	**Alice Springs**	88.16	227	P	**P**	**00 07 00.3**	**+0.1**
ASAR	**Alice Springs**	88.16	227	P	**P**	**00 07 00.3**	**+0.1**
PCBR	**Castelo Branco**	88.19	11	*e*P	**P**	**00 07 00.6**	**+0.3**
	comp=Z,13nm,1.7s						
PMRV	**Marv??o**	88.61	11	*e*P	**P**	**00 07 02.9**	**+0.6**
	comp=Z,18nm,1.7s						
ESDC	**Sonseca Array**	88.73	9	P	**P**	**00 07 02.9**	**-0.1**
	comp=Z,2.8nm,0.9s,baz=347,slow=4.3,SNR=19						
ESDC	**Sonseca Array**	88.73	9	P	**P**	**00 07 02.3**	**-0.6**
EVO	**Evora**	89.41	12	*e*P	**P**	**00 07 06.2**	**+0.1**
PBAR	**Barrancos**	89.89	11	*e*P	**P**	**00 07 08.7**	**+0.4**
STKA	**Stephens Creek**	92.12	217	P	**P**	**00 07 18.9**	**+0.4**
	comp=Z,4.2nm,0.8s,baz=357,slow=9.4,SNR=5.6						
STKA				LR	LR	00 43 59.2	
	comp=Z,79nm,21.2s,baz=27,slow=32						
STKA	**Stephens Creek**	92.12	217	P	**P**	**00 07 19.2**	**+0.7**
RAYN	**Ar Rayn**	98.08	325	P	**P**	**00 07 45.8**	**-0.4**
RAYN				pmax	pmax		
	comp=Z,6.0nm,1.3s						
RAYN	**Ar Rayn**	98.08	325	P	**P**	**00 07 45.8**	**-0.4**
RAYN				IAmb	IAmb	00 07 48.9	
	comp=Z,6.1nm,1.3s						
TORD	**Torodi Ar. Bea**	115.50	6	PKP	**PKPdf**	**00 12 52.6**	**+1.1**
	comp=Z,0.2nm,0.6s,baz=353,slow=3.3,SNR=2.0						
TORD				PKKPbc	**PKKPbc**	**00 23 23.4**	**+0.6**
	comp=Z,0.3nm,0.8s,baz=176,slow=3.4,SNR=2.1						
H03N2	**Juan Fernandez**	117.63	110	T	T	02 22 50.7	
	baz=309,slow=76,SNR=5.5						
H03N1	**Juan Fernandez**	117.65	110	T	T	02 22 46.2	
	baz=313,slow=76,SNR=7.6						
H03N3	**Juan Fernandez**	117.65	110	T	T	02 21 18.7	
	SNR=9.5						
MAW	**Mawson**	148.81	218	PKPbc	**PKPbc**	**00 13 55.8**	**+0.5**
	comp=Z,5.5nm,0.7s,baz=114,slow=1.2,SNR=13						
BOSA	**Boshof**	153.44	322	PKPbc	**PKPbc**	**00 14 07.7**	**+0.1**
	comp=Z,2.3nm,0.8s,baz=1.9,slow=2.9,SNR=3.9						
BOSA				PKPab	**pPKPbc**	**00 14 20.5**	**+0.2**
	comp=Z,11nm,1.0s,baz=54,slow=5.6,SNR=8.4						
SYO	**Syowa Base**	156.62	209	⇓*e*PKPdf	**PKPdf**	**00 14 04.2**	**+1.4**
SYO	**Syowa Base**	156.62	209	⇑*e*pPKPdf	pPKPdf	00 14 16.7	+1.1

TUL ***10*** *00:05:36.3±1.0, 36°.948N±0°.006×97°.82W±0°.01, h4^{km}±4^{km}, ML2.8, mb_Lg2.6/24(NEIC), Error ellipse: s-maj=1.5km s-min=0.7km az=117.0*

NEIC 10 00:05:36.7±0.8**, 36°.932N**±0°.008×**97°.82W**±0°.01**, h5**^{km}±4^{km}**, Error ellipse: s-maj=1.4km s-min=0.9km az=222.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GC02	**Grant County #**	0.09	203	Pg	Pg	00 05 38.8	+0.2
GC02				Sg	Sg	00 05 40.4	+0.5
KAN14	**Manchester OK**	0.12	282		Pg	00 05 39.1	-0.1
KAN14				Sg	Sg	00 05 40.3	-0.5
KAN17	**Caldwell West**	0.12	20	Pg	Pg	00 05 39.1	-0.1
KAN17				Sg	Sg	00 05 40.8	0.0
KAN05	**Bluff City Nor**	0.18	346		Pg	00 05 40.2	-0.2
KAN05				Sg	Sg	00 05 42.8	0.0
KAN01	**Argonia South**	0.23	12		Pg	00 05 41.1	-0.1
KAN01				Sg	Sg	00 05 44.1	-0.1
KAN09	**Caldwell North**	0.26	38	Pg	Pg	00 05 41.7	-0.1
KAN09				Sg	Sg	00 05 45.3	+0.1
KAN13	**South Haven SW**	0.28	73		Pg	00 05 42.4	+0.1
KAN13				Sg	Sg	00 05 46.3	+0.3
KAN10	**Anthony SW Sta**	0.29	311	Pg	Pg	00 05 42.2	-0.2
KAN10				Sg	Sg	00 05 46.4	0.0
KAN06	**Argonia West S**	0.32	354	Pg	Pg	00 05 42.7	-0.2
KAN06				Sg	Sg	00 05 47.0	-0.1
KAN08	**Anthony NE Sta**	0.32	337		Pg	00 05 42.8	-0.2
OK032	**Salt Plains WL**	0.34	248		Pg	00 05 43.0	-0.4
OK032				Sg	Sg	00 05 48.1	+0.3
KAN16	**Harper SW Stat**	0.35	326	Pg	Pg	00 05 43.3	-0.3
KAN16				Sg	Sg	00 05 48.4	+0.1
KS20	**Mayfield South**	0.36	35		Pg	00 05 43.6	-0.2
KS20				Sg	Sg	00 05 48.5	-0.1
KAN12	**Harper NE Stat**	0.39	338	Pg	Pg	00 05 44.1	-0.3
KAN12				Sg	Sg	00 05 49.4	-0.1
CROK	**Carrier**	0.45	197	Pg	Pg	00 05 45.5	+0.2
CROK				Sg	Sg	00 05 51.9	+0.7
BLOK	**Blackwell**	0.51	109	Pg	Pg	00 05 46.6	0.0
BLOK				Sg	Sg	00 05 53.9	+0.7
T35A	**Sooner Cattle**	1.05	90	Pg	Pg	00 05 56.3	-0.5
T35A				Sg	Sg	00 06 10.1	-0.3
U32A	**Winter Ranch,**	1.10	240		Pg	00 05 57.3	-0.6
U32A				Sg	Sg	00 06 12.4	+0.2
OK029	**Liberty Lake**	1.17	165	Pg	Pg	00 05 58.6	-0.5
QUOK	**Quay**	1.17	130	Pg	Pg	00 05 58.7	-0.5
QUOK				Sg	Sg	00 06 14.5	+0.1
OK031	**S. Brethren Rd**	1.25	141	Pg	Pg	00 06 00.0	-0.8
BCOK	**Bluff Creek, N**	1.28	172		Pg	00 06 00.5	-0.8
OK030	**Cody Creek RV**	1.30	140	Pn	Pn	00 06 00.9	-0.7
OK030				Sn	Sb	00 06 18.9	+0.1
OK025	**Westminster Rd**	1.40	164	Pn	Pn	00 06 02.6	-0.4
OK025				Sn	Sn	00 06 24.2	+2.2
OKCFA	**Oklahoma City**	1.54	169		Pn	00 06 04.6	-0.3
OKCFA				Sn	Sb	00 06 25.8	+0.2
OKCSW	**OKLAHOMA CITY**	1.55	169		Pn	00 06 05.0	-0.1
OKCSW					Sg	00 06 27.1	+0.4
R32A	**Long Quarter,**	1.65	335		Pn	00 06 06.1	-0.3
R32A				Sn	Sn	00 06 27.8	-0.3
FNO	**Franklin**	1.71	168	Pn	Pn	00 06 07.5	+0.3
FNO				Sn	Sg	00 06 31.0	-0.5
TUL1	**Leonard**	1.93	121		Pn	00 06 10.1	-0.1
TUL1					Sb	00 06 36.7	0.0
TUL1				IAmb_Lg		00 06 40.2	
	comp=Z,44nm,0.8s						
WMOK	**Wichita Mounta**	2.33	200		Pn	00 06 16.1	+0.4
WMOK				Sn	Sn	00 06 44.9	+0.2
X34A	**Smith Ranch, M**	2.33	180		Pn	00 06 16.3	+0.6
X34A				IAmb_Lg		00 06 54.4	
	comp=Z,27nm,0.7s						
KSU1	**Kansas State U**	2.37	23		Pn	00 06 16.7	+0.4
CBKS	**Cedar Bluff**	2.42	322		Pn	00 06 16.7	-0.3
U38A	**Gravette**	2.80	99	Pn	Pn	00 06 21.9	-0.4
LOOK	**Love County**	2.98	170	Pn	Pn	00 06 24.2	-0.5
X37A	**Clayton**	3.07	139		Pg	00 06 34.1	-1.4
X37A				IAmb_Lg		00 07 18.9	
	comp=Z,20nm,0.9s						
W39A	**Magazine**	3.70	117	IAmb_Lg		00 07 39.4	
	comp=Z,20nm,0.9s						
AMTX	**Amarillo**	3.74	238	Pn	Pn	00 06 36.0	+0.7
AMTX				IAmb_Lg		00 07 43.7	
	comp=Z,11nm,0.8s						
P38A	**Dawn**	4.31	50	IAmb_Lg		00 08 00.5	
	comp=Z,13nm,1.1s						
Z38A	**Mt. Pleasant**	4.34	147	IAmb_Lg		00 07 58.5	
	comp=Z,14nm,0.7s						
BGNE	**Belgrade**	4.48	357	IAmb_Lg		00 08 08.5	
	comp=Z,14nm,0.8s						
FCAR	**Ozark Folk Cen**	4.71	101	IAmb_Lg		00 08 02.6	
	comp=Z,13nm,1.0s						
X40A	**Basin Creek Fa**	4.73	120	IAmb_Lg		00 08 07.1	
	comp=Z,12nm,1.0s						
OGNE	**Ogallala**	5.18	322	IAmb_Lg		00 08 30.1	
	comp=Z,12nm,0.8s						
K22A	**Casper**	8.80	313	IAmb_Lg		00 10 30.9	
	comp=Z,5.1nm,0.9s						

FUNV ***10*** *00:19:13.1, 8°.50N×71°.44W, h5^{km}, MW3.3*

ISC 10 00:19:11.1±1.2**, 8°.63N**±0°.02×**71°.39W**±0°.02**, h1**^{km}±10^{km}**, n45, σ1^{s}.58**/75**, 1D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	**Socops**	0.63	123	*e*P	**Pg**	**00 19 23.7**	**+0.4**
SOCV				*e*S	**Sg**	**00 19 32.1**	**+0.6**
SOCV	**Socops**	0.63	123	⇓*i*P	**Pg**	**00 19 23.9**	**+0.6**
SOCV				*e*S	**Sg**	**00 19 32.8**	**+1.3**
SDV	**Santo Domingo**	0.79	71	*e*P	**Pb**	**00 19 28.9**	**+1.0**
SDV				*e*S	**Sb**	**00 19 40.5**	**+1.3**
CAPV	**Capacho**	1.19	230	*e*P	**Pg**	**00 19 32.4**	**-1.5**
CAPV				*e*S	**Sg**	**00 19 47.6**	**-1.7**
MCQV	**Machiques**	1.81	322	*e*P	**Pg**	**00 19 45.6**	**-0.2**
MCQV				*e*S	**Sg**	**00 20 09.3**	**+0.1**
PAMC	**Pamplona, Colo**	1.82	225	*e*P	**Pn**	**00 19 43.9**	**-0.1**
PAMC				*e*S	**Sn**	**00 20 08.3**	**+0.4**
OCAC	**Ocana**	1.94	259	*e*P	**Pn**	**00 19 46.0**	**+0.6**
OCAC				*e*S	**Sn**	**00 20 11.4**	**+0.8**
TAMC	**Tame, Arauca**	2.21	190	*e*P	**Pn**	**00 19 49.6**	**+0.6**
TAMC				*e*S	**Sb**	**00 20 19.2**	**-0.7**
DABV	**Dabajuro**	2.40	18	*e*P	**Pb**	**00 19 54.4**	**-0.7**
DABV				*e*S	**Sb**	**00 20 24.7**	**-0.5**
ELOV	**Elorza**	2.49	130	*e*P	**Pn**	**00 19 54.3**	**+1.5**
ELOV				*e*S	**Sn**	**00 20 25.7**	**+1.9**
ELOV	**Elorza**	2.49	130	*e*P	**Pn**	**00 19 53.2**	**+0.4**
ELOV				*e*S	**Sn**	**00 20 22.8**	**-1.0**
SIQV	**Siquisique**	2.54	38	*e*P	**Pb**	**00 19 56.0**	**-1.7**
SIQV				*e*S	**Sb**	**00 20 28.6**	**-0.9**
SMLC	**San Martn de**	2.65	274	*e*P	**Pb**	**00 19 59.1**	**-0.4**
SMLC				*e*S	**Sb**	**00 20 30.2**	**-2.3**
BARC	**Barichara**	2.69	221	*e*P	**Pn**	**00 19 56.7**	**+1.0**
BARC				*e*S	**Sb**	**00 20 33.5**	**-0.4**
BRRC	**Barranca, Sant**	2.75	237	*e*P	**Pn**	**00 19 58.6**	**+2.2**
BRRC				*e*S	**Sb**	**00 20 35.6**	**+0.3**
ARGC	**Ariguani, Magd**	3.07	294	*e*P	**Pn**	**00 20 00.8**	**0.0**
ARGC				*e*S	**Sn**	**00 20 36.2**	**-1.9**
URIC	**Uribia, Colomb**	3.11	349	*e*P	**Pn**	**00 20 02.5**	**+1.1**
RUSC	**La Rusia**	3.19	212	*e*P	**Pn**	**00 20 03.4**	**+0.5**
RUSC				*e*P	**Sn**	**00 20 42.2**	**+0.4**
BAUV	**El Baul**	3.33	84	*e*P	**Pn**	**00 20 05.6**	**+1.2**
BAUV				*e*S	**Sn**	**00 20 44.4**	**-0.1**
MONV	**Montecano**	3.59	23	*e*P	**Pn**	**00 20 10.2**	**+2.2**
MONV				*e*S	**Sn**	**00 20 52.5**	**+1.5**
ZARC	**Zaragoza, Cauc**	3.61	252	*e*P	**Pn**	**00 20 08.2**	**-0.1**
ZARC				*e*S	**Sb**	**00 20 57.8**	**-2.3**
SMRC	**Santa Marta, M**	3.76	312	*e*P	**Pn**	**00 20 08.6**	**-1.7**
SJCC	**San Jacinto, C**	3.94	289	*e*P	**Pn**	**00 20 14.8**	**+1.9**
SJCC				*e*S	**Sn**	**00 21 01.5**	**+1.6**
TURV	**Turiamo**	3.94	62	*e*P	**Pn**	**00 20 14.0**	**+1.2**
TURV				*e*S	**Sn**	**00 20 59.7**	**-0.1**
BENV	**Beln**	3.97	70	*e*P	**Pn**	**00 20 14.8**	**+1.5**
SPBC	**San Pablo de B**	3.98	222	*e*P	**Pn**	**00 20 16.4**	**+3.0**
SPBC				*e*S	**Sn**	**00 21 01.8**	**+1.1**
UREC	**San Jos de Ur**	4.19	258	*e*P	**Pb**	**00 20 27.2**	**+1.5**
MOTC	**Monteria, Cord**	4.22	272	*e*P	**Pn**	**00 20 18.3**	**+1.6**
MOTC				*e*S	**Sn**	**00 21 08.9**	**+2.2**
PTGC	**Puerto Gaitan,**	4.46	190	*e*P	**Pg**	**00 20 39.2**	**+2.4**
PTGC				*e*S	**Sn**	**00 21 11.8**	**-0.8**
TACV	**Tcata**	4.56	70	*e*P	**Pn**	**00 20 22.3**	**+0.9**
NORC	**Norcasia**	4.60	229	*e*P	**Pn**	**00 20 21.6**	**-0.3**
CHIC	**Chingaza**	4.60	210	*e*P	**Pn**	**00 20 22.1**	**-0.1**
CHIC				*e*S	**Sn**	**00 21 13.1**	**-3.5**
HELC	**Santa Helena**	4.76	240	*e*P	**Pn**	**00 20 28.6**	**+4.2**
HELC				*e*S	**Sb**	**00 21 36.9**	**+3.2**
PAYV	**Puerto Ayacuch**	4.89	130	*e*P	**Pn**	**00 20 25.3**	**-0.6**
CACV	**CAICARA DEL OR**	4.92	102	*e*P	**Pb**	**00 20 33.9**	**-4.2**
DBBC	**Dabeiba**	5.03	252	*e*P	**Pn**	**00 20 29.2**	**+1.4**
DBBC				*e*S	**Sn**	**00 21 26.7**	**0.0**
VILC	**Villavicencio,**	5.04	207	*e*P	**Pn**	**00 20 26.6**	**-1.4**
MERV	**Las Mercedes**	5.07	83	*e*P	**Pn**	**00 20 28.7**	**+0.3**
MERV				*e*S	**Sn**	**00 21 25.8**	**-1.9**
GUY2C	**Guyana, Caldas**	5.20	230	*e*P	**Pn**	**00 20 32.1**	**+1.6**
CBOC	**Ciudad Bolivar**	5.34	239	*e*P	**Pn**	**00 20 34.1**	**+1.9**
BIRV	**Birongo**	5.38	70	*e*P	**Pn**	**00 20 32.9**	**+0.4**
ORTC	**Ortega, Tolima**	6.05	219	*e*P	**Pn**	**00 20 39.9**	**-1.9**
ORTC				*e*S	**Sn**	**00 21 53.0**	**+1.1**
PRGV	**PARIAGUAN**	6.67	88	*e*P	**Pn**	**00 20 50.0**	**-0.4**
PCRV	**Puerto La Cruz**	6.84	76	*e*P	**Pn**	**00 20 53.7**	**+0.9**
MACC	**Macarena, Meta**	6.89	201	*e*P	**Pn**	**00 20 51.8**	**-1.6**

NEIC ***10*** *00:31:39.0±1.6, 37°.010N±0°.010×97°.54W±0°.02, h5^{km}±2^{km}, Error ellipse: s-maj=3.1km s-min=2.5km az=65.0*

NEIC 10 00:31:38.8±0.8**, 37°.06N**±0°.01×**97°.53W**±0°.02**, h6**^{km}±6^{km}**, mb_Lg2.6**/18**, ML2.6**/17**, Error ellipse: s-maj=2.5km s-min=1.6km az=56.0, Kansas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAN13	**South Haven SW**	0.06	139	Pg	Pg	00 31 40.6	+0.2
KAN13				Sg	Sg	00 31 41.7	+0.2
KAN09	**Caldwell North**	0.11	317	Pg	Pg	00 31 41.3	+0.1
KAN09				Sg	Sg	00 31 43.1	+0.4
KS20	**Mayfield South**	0.17	353	Pg	Pg	00 31 42.5	+0.2
KS20				Sg	Sg	00 31 45.1	+0.5
KAN17	**Caldwell West**	0.19	266	Pg	Pg	00 31 42.8	+0.1
KAN17				Sg	Sg	00 31 45.6	+0.5
KAN01	**Argonia South**	0.21	297		Pg	00 31 43.1	+0.1
KAN01				Sg	Sg	00 31 46.3	+0.5
KS21	**Milan North St**	0.25	334		Pg	00 31 44.0	+0.2
KS21					Sg	00 31 47.7	+0.5
KAN05	**Bluff City Nor**	0.28	280		Pg	00 31 44.5	+0.2
KAN05				Sg	Sg	00 31 48.4	+0.4
KAN06	**Argonia West S**	0.33	306	Pg	Pg	00 31 45.2	0.0
KAN06				Sg	Sg	00 31 50.0	+0.5
GC02	**Grant County #**	0.34	232	Pg	Pg	00 31 45.6	+0.2
GC02				Sg	Sg	00 31 48.0	-1.8
KAN14	**Manchester OK**	0.36	254		Pg	00 31 46.1	+0.2
KAN14					Sg	00 31 48.4	-2.3
BLOK	**Blackwell**	0.39	140		Pg	00 31 46.4	+0.1
BLOK				Sg	Sg	00 31 51.9	+0.5
KAN08	**Anthony NE Sta**	0.39	295		Pg	00 31 46.6	+0.1
KAN08				Sg	Sg	00 31 52.2	+0.6
KAN12	**Harper NE Stat**	0.45	302	Pg	Pg	00 31 47.4	-0.1
KAN12				Sg	Sb	00 31 55.0	-1.0
KAN10	**Anthony SW Sta**	0.46	278		Pg	00 31 47.8	+0.1
KAN10					Sg	00 31 53.9	+0.2
KAN16	**Harper SW Stat**	0.46	291		Pg	00 31 47.8	0.0
KAN16					Sg	00 31 54.1	+0.3
OK032	**Salt Plains WL**	0.60	245	Pg	Pg	00 31 49.5	-1.0
OK032					Sg	00 31 58.5	+0.2
CROK	**Carrier**	0.66	214		Pg	00 31 51.6	0.0
T35A	**Sooner Cattle**	0.82	100	Pg	Pg	00 31 54.4	-0.3
QUOK	**Quay**	1.10	143	Pn	Pg	00 31 59.7	-0.3
OK029	**Liberty Lake**	1.26	177	Pn	Pg	00 32 02.3	-0.7
BCOK	**Bluff Creek, N**	1.40	183	Pn	Pn	00 32 04.8	-0.2
OK025	**Westminster Rd**	1.48	174	Pn	Pn	00 32 06.2	+0.2
OKCFA	**Oklahoma City**	1.64	178	Pn	Pn	00 32 08.3	+0.1
OKCSW	**OKLAHOMA CITY**	1.65	177		Pn	00 32 08.4	0.0
R32A	**Long Quarter,**	1.65	326	Pn	Pn	00 32 08.9	+0.5
FNO	**Franklin**	1.80	177	Pn	Pn	00 32 10.4	0.0
TUL1	**Leonard**	1.81	129		Pn	00 32 06.2	-4.3
KSU1	**Kansas State U**	2.16	19		Pn	00 32 16.1	+0.7
X34A	**Smith Ranch, M**	2.46	186		Pn	00 32 19.4	-0.2
X34A				IAmb_Lg		00 32 57.2	
	comp=Z,16nm,0.9s						
CBKS	**Cedar Bluff**	2.48	316		Pn	00 32 20.1	+0.4
WMOK	**Wichita Mounta**	2.53	204		Pn	00 32 18.1	-2.4
U38A	**Gravette**	2.60	103	Pn	Pn	00 32 22.0	+0.6
HHAR	**Hobbs**	2.99	104		Pn	00 32 27.5	+0.8
X37A	**Clayton**	3.02	144		Pn	00 32 27.6	+0.4
LOOK	**Love County**	3.07	175		Pn	00 32 27.8	-0.1
S39A	**Bolivar**	3.41	78		Pn	00 32 33.0	+0.5
S39A				IAmb_Lg		00 33 32.8	
	comp=Z,14nm,1.1s						
W39A	**Magazine**	3.55	120		Pn	00 32 34.7	+0.2
U40A	**Yellville**	3.82	99		Pn	00 32 38.3	+0.1
AMTX	**Amarillo**	4.01	238	Pn	Pn	00 32 41.3	+0.5
P38A	**Dawn**	4.05	50		Pn	00 32 42.6	+1.3
P38A				IAmb_Lg		00 33 57.3	
	comp=Z,11nm,0.7s						
N35A	**Tabor**	4.07	21	IAmb_Lg		00 33 54.0	
	comp=Z,16nm,0.7s						
MIAR	**Mount Ida**	4.07	127		Pn	00 32 42.1	+0.4
MGMO	**Mountain Grove**	4.20	87	IAmb_Lg		00 33 51.4	
	comp=Z,10nm,0.8s						
BGNE	**Belgrade**	4.37	354	IAmb_Lg		00 34 00.6	
	comp=Z,18nm,0.8s						
KSCO	**Kaye Shedlock’**	4.47	297	IAmb_Lg		00 34 08.0	
	comp=Z,9.3nm,0.8s						
P40A	**Paris**	4.97	59	IAmb_Lg		00 34 21.1	
	comp=Z,12nm,0.7s						
L34A	**Svendsen Farm,**	4.98	10	IAmb_Lg		00 34 30.5	
	comp=Z,14nm,0.9s						
PBMO	**Poplar Bluff**	5.69	91	IAmb_Lg		00 34 54.9	
	comp=Z,7.7nm,0.8s						

FUNV ***10*** *00:40:14.0, 8°.51N×71°.41W, h1^{km}, MW3.6*

ISC 10 00:40:13.4±1.4**, 8°.57N**±0°.03×**71°.36W**±0°.02**, h6**^{km}±11^{km}**, n57, σ1^{s}.66**/89**, 1D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	**Socops**	0.58	120	*e*P	**Pg**	**00 40 24.4**	**-0.1**
SOCV	**Socops**	0.58	120	⇓*e*P	**Pg**	**00 40 24.8**	**+0.3**
SOCV				*e*S	**Sg**	**00 40 33.7**	**+1.7**
SDV	**Santo Domingo**	0.78	67	*e*P	**Pb**	**00 40 29.8**	**+0.3**
SDV				*e*S	**Sb**	**00 40 41.6**	**+1.2**
CAPV	**Capacho**	1.18	233	*e*P	**Pb**	**00 40 34.1**	**-2.2**
CAPV				*e*S	**Sb**	**00 40 50.0**	**-1.8**
PAMC	**Pamplona, Colo**	1.81	227	*e*P	**Pn**	**00 40 46.4**	**+0.9**
PAMC				*e*S	**Sn**	**00 41 09.9**	**+1.0**
MCQV	**Machiques**	1.87	322	*e*P	**Pn**	**00 40 46.6**	**+0.6**
MCQV				*e*S	**Sb**	**00 41 11.1**	**-0.5**
OCAC	**Ocana**	1.97	260	*e*P	**Pn**	**00 40 47.1**	**-0.3**
OCAC				*e*S	**Sn**	**00 41 12.3**	**-0.2**
TAMC	**Tame, Arauca**	2.17	191	*e*P	**Pn**	**00 40 50.1**	**0.0**
TAMC				*e*S	**Sn**	**00 41 19.0**	**+1.7**
LL1C	**La Loma 1 Cana**	2.37	294	*e*P	**Pb**	**00 40 55.6**	**-0.9**
LL1C				*e*S	**Sb**	**00 41 25.1**	**-0.9**
ELOV	**Elorza**	2.43	130	*e*P	**Pn**	**00 40 55.9**	**+2.2**
ELOV				*e*S	**Sb**	**00 41 27.4**	**-0.3**
ELOV	**Elorza**	2.43	130	*e*P	**Pn**	**00 40 54.5**	**+0.9**
ELOV				*e*S	**Sn**	**00 41 23.9**	**+0.2**
DABV	**Dabajuro**	2.44	17	*e*S	**Sb**	**00 41 28.0**	**-0.1**
DABV	**Dabajuro**	2.44	17	*e*P	**Pb**	**00 40 56.0**	**-1.7**
SIQV	**Siquisique**	2.57	36	*e*P	**Pb**	**00 40 57.9**	**-2.0**
SIQV				*e*S	**Sn**	**00 41 28.1**	**+0.9**
BARC	**Barichara**	2.67	223	*e*P	**Pn**	**00 40 58.6**	**+1.4**
BARC				*e*S	**Sn**	**00 41 32.9**	**+2.9**
SMLC	**San Martn de**	2.69	275	*e*P	**Pn**	**00 40 56.4**	**-0.8**
SMLC				*e*S	**Sn**	**00 41 28.4**	**-1.7**
BRRC	**Barranca, Sant**	2.75	238	*e*P	**Pn**	**00 40 58.5**	**+0.4**
BRRC				*e*S	**Sb**	**00 41 36.5**	**-0.4**

ARGC	Ariguani, Magd	3.12	294	*e*P	Pn	00 41 04.2	+1.0
RUSC	La Rusia	3.17	213	*e*P	Pn	00 41 04.6	+0.4
RUSC				*e*S	Sb	00 41 50.8	+1.4
URIC	Uribia, Colomb	3.17	349	*e*P	Pn	00 41 03.8	0.0
URIC				*e*S	Sn	00 41 41.8	-0.2
BAUV	El Baul	3.30	83	*e*P	Pn	00 41 07.0	+1.4
BAUV				*e*S	Sn	00 41 45.0	-0.2
JACV	Jacura	3.53	45	*e*P	Pn	00 41 10.1	+1.3
JACV				*e*S	Sn	00 41 50.8	-0.1
MONV	Montecano	3.63	22	*e*P	Pn	00 41 11.5	+1.4
ZARC	Zaragoza, Cauc	3.63	253	*e*P	Pn	00 41 05.2	-4.9
ZARC				*e*S	Sn	00 41 51.1	-2.2
SMRC	Santa Marta, M	3.82	313	*e*P	Pn	00 41 12.4	-0.3
TURV	Turiamo	3.94	61	*e*P	Pn	00 41 14.8	+0.3
SPBC	San Pablo de B	3.96	223	*e*P	Pn	00 41 14.2	-0.6
SPBC				*e*S	Sn	00 42 00.7	-0.9
BENV	Beln	3.96	69	*e*P	Pn	00 41 16.1	+1.3
BENV				*e*S	Sn	00 42 01.4	-0.2
SJCC	San Jacinto, C	3.99	290	*e*P	Pn	00 41 16.4	+1.2
SJCC				*e*S	Sn	00 42 02.8	+0.4
UREC	San Jos de Ur	4.21	259	*e*P	Pn	00 41 18.8	+0.6
MOTC	Monteria, Cord	4.26	273	*e*P	Pn	00 41 19.3	+0.5
MOTC				*e*S	Sn	00 42 09.0	+0.1
PTGC	Puerto Gaitan,	4.41	190	*e*P	Pn	00 41 21.3	+0.3
PTGC				*e*S	Sn	00 42 14.4	+1.7
TACV	Tcata	4.55	70	*e*P	Pn	00 41 24.0	+1.1
CHIC	Chingaza	4.57	211	*e*P	Pn	00 41 24.1	+0.6
CHIC				*e*S	Sn	00 42 16.2	-0.9
NORC	Norcasia	4.59	230	*e*P	Pn	00 41 23.4	-0.1
ROSC	El Rosal	4.73	219	*e*P	Pn	00 41 27.8	+2.2
ROSC				*e*S	Sb	00 42 39.4	+4.9
HELC	Santa Helena	4.76	240	*e*P	Pn	00 41 26.8	+0.7
HELC				*e*S	Sn	00 42 25.0	+3.2
PAYV	Puerto Ayacuch	4.83	130	*e*P	Pn	00 41 26.5	-0.2
CACV	CAICARA DEL OR	4.88	102	*e*P	Pb	00 41 35.2	-4.1
LCBC	Los crdobas,	4.96	274	*e*P	Pn	00 41 29.4	+0.9
VILC	Villavicencio,	5.00	208	*e*P	Pn	00 41 29.1	-0.1
VILC				*e*S	Sn	00 42 27.3	-0.2
DBBC	Dabeiba	5.05	252	*e*P	Pn	00 41 29.9	+0.2
MERV	Las Mercedes	5.05	82	*e*P	Pn	00 41 30.4	+0.7
GUY2C	Guyana, Caldas	5.18	230	*e*P	Pn	00 41 33.0	+1.0
GUY2C				*e*S	Sn	00 42 35.0	+2.6
CBOC	Ciudad Bolivar	5.34	240	*e*P	Pn	00 41 36.9	+3.0
BIRV	Birongo	5.37	69	*e*P	Pn	00 41 34.9	+0.8
ANIL	Santa Ana	5.71	225	*e*P	Pn	00 41 41.5	+2.5
ANIL				*e*S	Sn	00 42 46.0	+1.0
ORTC	Ortega, Tolima	6.03	220	*e*P	Pn	00 41 44.6	+1.3
ORTC				*e*S	Sn	00 42 52.2	-0.5
PLMC	San Jos del P	6.10	234	*e*P	Pn	00 41 45.9	+1.7
PLMC				*e*S	Sn	00 42 55.7	+1.3
GUVC	San Jose del G	6.12	192	*e*P	Pn	00 41 43.7	-0.7
GUVC				*e*S	Sn	00 42 46.9	-8.0
PRGV	PARIAGUAN	6.64	88	*e*P	Pn	00 41 51.6	0.0
YOTC	Yotoco, Valle	6.73	228	*e*P	Pn	00 41 54.0	+1.1
PCRV	Puerto La Cruz	6.82	76	*e*P	Pn	00 41 55.1	+1.0
GARC	Garzon, Huila	7.56	213	*e*P	Pn	00 42 02.5	-1.9
PCON	Cinco Dias	7.98	219	*e*P	Pn	00 42 10.9	+0.4
SOTA	Rioblanco	8.26	220	*e*P	Pn	00 42 13.0	-1.2
RIOV	Rio Grande	9.46	92	*e*P	Pn	00 42 28.8	-1.5

*FUNV **10** 00:45:51.8, 8°.52N×71°.41W, h2^{km}, MW3.0*

ISC 10 00:45:51.5±1.2, **8°.54N**±0°.03×**71°.40W**±0°.02, **h8**^{km}±10^{km}, **n33,** σ**1^{s}.43**/48, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	Socops	0.59	116	*e*P	Pg	00 46 02.6	-0.4
SOCV	Socops	0.59	116	*e*P	Pg	00 46 02.9	-0.1
SOCV				*e*S	Sg	00 46 12.1	+1.3
SDV	Santo Domingo	0.83	66	*e*P	Pg	00 46 08.5	+1.0
SDV				*e*S	Sg	00 46 19.7	+1.4
CAPV	Capacho	1.13	234	*e*P	Pg	00 46 12.0	-1.3
CAPV				*e*S	Sb	00 46 28.6	+0.1
PAMC	Pamplona, Colo	1.76	227	*e*P	Pn	00 46 24.0	+1.2
PAMC				*e*S	Sg	00 46 48.1	-0.1
MCQV	Machiques	1.87	323	*e*P	Pn	00 46 24.0	+0.1
OCAC	Ocana	1.93	261	*e*P	Pn	00 46 25.1	+0.3
OCAC				*e*S	Sn	00 46 50.5	+1.2
TAMC	Tame, Arauca	2.13	191	*e*P	Pb	00 46 30.7	+0.2
TAMC				*e*S	Sn	00 46 55.7	+1.5
ELOV	Elorza	2.44	129	*e*P	Pb	00 46 35.0	-0.7
ELOV	Elorza	2.44	129	*e*P	Pn	00 46 32.0	+0.3
ELOV				*e*S	Sn	00 47 02.0	+0.3
DABV	Dabajuro	2.48	18	*e*P	Pn	00 46 33.2	+0.9
SIQV	Siquisique	2.61	37	*e*P	Pn	00 46 35.0	+0.9
SIQV				*e*S	Sn	00 47 05.6	-0.6
BARC	Barichara	2.62	223	*e*P	Pn	00 46 36.3	+1.9
BARC				*e*S	Sb	00 47 10.7	-0.8
SMLC	San Martn de	2.66	276	*e*P	Pn	00 46 34.3	-0.4
SMLC				*e*S	Sb	00 47 10.6	-1.7
BRRC	Barranca, Sant	2.70	238	*e*P	Pn	00 46 36.6	+1.3
RUSC	La Rusia	3.12	213	*e*P	Pn	00 46 43.0	+1.5
RUSC				*e*S	Sg	00 47 29.4	-2.5
URIC	Uribia, Colomb	3.19	349	*e*P	Pn	00 46 42.0	-0.1
URIC				*e*S	Sn	00 47 19.3	-1.1
BAUV	El Baul	3.34	83	*e*P	Pn	00 46 44.5	+0.4
BAUV				*e*S	Sn	00 47 22.7	-1.3
ZARC	Zaragoza, Cauc	3.58	253	*e*P	Pn	00 46 47.2	-0.3
ZARC				*e*S	Sb	00 47 35.8	-3.2
MONV	Montecano	3.67	22	*e*P	Pn	00 46 49.5	+0.9
SMRC	Santa Marta, M	3.81	313	*e*P	Pn	00 46 50.4	-0.2
SPBC	San Pablo de B	3.91	223	*e*P	Pn	00 46 53.5	+1.4
SJCC	San Jacinto, C	3.97	290	*e*P	Pn	00 46 57.4	+4.5
SJCC				*e*S	Sn	00 47 41.4	+1.7
BENV	Beln	4.00	69	*e*P	Pn	00 46 54.0	+0.7
BENV				*e*S	Sn	00 47 39.2	-1.3
UREC	San Jos de Ur	4.17	259	*e*P	Pn	00 46 51.3	-4.3
MOTC	Monteria, Cord	4.23	273	*e*P	Pn	00 46 57.8	+1.4
MOTC				*e*S	Sn	00 47 48.0	+2.0
CHIC	Chingaza	4.53	211	*e*P	Pn	00 47 01.7	+0.9
TACV	Tcata	4.59	69	*e*P	Pn	00 47 01.6	+0.2
HELC	Santa Helena	4.72	241	*e*P	Pn	00 47 05.4	+2.0
PAYV	Puerto Ayacuch	4.84	130	*e*P	Pn	00 47 04.7	0.0
CACV	CAICARA DEL OR	4.91	101	*e*P	Pb	00 47 13.2	-4.6
GUY2C	Guyana, Caldas	5.14	230	*e*P	Pn	00 47 10.6	+1.4
PLMC	San Jos del P	6.05	234	*e*P	Pn	00 47 23.5	+2.0

*IDC **10** 00:47:05.3±5.8, 4°.35S×144°.10E, h75^{km}±48^{km}, mb3.6/5, mb1 3.9/7, mb1mx3.6/28, mbtmp4.0/7, ML4.4/1, Error ellipse: s-maj=45.0km s-min=18.7km az=88.0*

*NEIC **10** 00:47:14.7±1.0, 4°.5S±0°.2×143°.6E±0°.1, h111^{km}±16^{km}, mb4.0/12, Error ellipse: s-maj=24.3km s-min=15.6km az=201.0*

ISC 10 00:47:10.6±1.1, **4°.29S**±0°.09×**143°.8E**±0°.1, **h110**^{km}, **n30,** σ**1^{s}.45**/30, **mb4.1**/11, **New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	3.52	300	P	Pn	00 48 02.2	-1.4
	0.7nm,0.3s,baz=128,slow=19,SNR=1.6						
JAY				S	Sn	00 48 46.9	+2.3
	2.5nm,0.3s,baz=214,slow=13,SNR=4.2						
COEN	Coen	9.63	183	Pn	Pn	00 49 27.1	+0.9
COEN	Coen	9.63	183	P	Pn	00 49 31.8	+5.6
	5.2nm,1.4s						
MTSU	Mount Surprise	13.77	178	P	Pn	00 50 22.6	+1.3
	1.6nm,0.8s						
MTN	Manton Dam	15.10	235	P	P	00 50 41.2	+0.4
WB0	Warramunga Arr	17.89	210	P	P	00 51 11.6	-0.1
WR0	Warramunga Arr	17.98	209		P	00 51 13.0	+0.3
WR0				IAmb	IAmb	00 51 20.0	
	comp=Z,10nm,1.1s						
WRAB	Tennant Creek	18.05	210	P	Pn	00 51 14.2	-0.2
WB2	Warramunga Arr	18.06	210	P	P	00 51 13.5	0.0
WB2				IAmb	IAmb	00 51 14.7	
	comp=Z,11nm,1.0s						
WRA	Warramunga Arr	18.07	210	P	P	00 51 13.0	-0.6
	comp=Z,1.3nm,0.3s,baz=31,slow=12,SNR=38						
WRA				S	S	00 54 29.9	-5.4
	comp=Z,0.1nm,0.3s,baz=43,slow=21,SNR=2.6						
WRA	Warramunga Arr	18.07	210		P	00 51 13.3	-0.3
KNRA	Kununurra	18.59	231	P	Pn	00 51 20.3	-0.5
KNRA	Kununurra	18.59	231	P	P	00 51 20.0	+0.7
	comp=Z,34nm,0.6s						
SOEI	Soe	20.09	253	P	Pn	00 51 44.5	+5.9
	comp=Z,27nm,0.7s						
AS31	Alice Springs	21.49	205	P	P	00 51 51.5	+0.9
ASAR	Alice Springs	21.49	205	P	P	00 51 49.5	-1.1
	comp=Z,3.1nm,0.4s,baz=34,slow=7.6,SNR=44						
ASAR	Alice Springs	21.49	205	P	P	00 51 50.5	-0.1
FITZ	Fitzroy Crossi	22.42	231	P	P	00 51 60.0	-0.5
	comp=Z,4.4nm,0.4s,baz=42,slow=11,SNR=41						
FITZ	Fitzroy Crossi	22.42	231	P	P	00 52 00.3	-0.1
FITZ				IAmb	IAmb	00 52 03.9	
	comp=Z,4.4nm,0.7s						
FITZ	Fitzroy Crossi	22.42	231	P	P	00 51 59.7	-0.7
	comp=Z,9.3nm,1.0s						
OOD	Oodnadatta	24.61	197	P	P	00 52 20.2	-0.5
	comp=Z,36nm,0.7s						
WRKA	Warakurna	25.43	214	P	P	00 52 28.0	-0.2
	comp=Z,6.7nm,1.0s						
ARMA	Armidale	27.03	165	P	P	00 52 44.6	+1.9
ARMA				IAmb	IAmb	00 52 58.9	
	comp=Z,5.8nm,1.1s						
MULG	Mulgathing	27.43	198	P	P	00 52 45.8	-0.3
	comp=Z,21nm,2.4s						
PSA00	Pilbara Seismi	28.88	231	P	P	00 52 59.6	+0.5
PSA00				IAmb	IAmb	00 53 10.7	
	comp=Z,7.2nm,1.1s						
FORT	Forrest	30.22	208	P	P	00 53 11.0	+0.2
MORW	Morawa	36.03	224	P	P	00 54 02.8	+1.4
MORW				IAmb	IAmb	00 54 15.3	
	comp=Z,2.0nm,0.9s						
MKAR	Makanchi Array	74.14	321	P	P	00 58 36.2	+1.2
	comp=Z,0.1nm,0.3s,baz=98,slow=7.3,SNR=4.2						
ZALV	Zalesovo Beam	75.86	329	P	P	00 58 44.7	-0.1
	comp=Z,0.6nm,0.5s,baz=100,slow=5.0,SNR=2.2						
ILAR	Eielson Array	85.20	24	P	P	00 59 32.1	-2.3
	comp=Z,0.8nm,0.7s,baz=253,slow=5.2,SNR=8.9						

*ANF **10** 00:54:03.8±0.3, 36°.42N×97°.77W, h6^{km}, ML3.0/6, Error ellipse: s-maj=4.3km s-min=2.6km az=166.0*

*NEIC **10** 00:54:03.8±1.2, 36°.40N±0°.02×97°.74W±0°.06, h5^{km}±2^{km}, Error ellipse: s-maj=8.0km s-min=3.0km az=72.0*

*TUL **10** 00:54:03.7±1.1, 36°.41N±0°.02×97°.78W±0°.06, h6^{km}±7^{km}, ML2.9, mb_Lg2.7/55(NEIC), Error ellipse: s-maj=6.6km s-min=2.2km az=74.0*

ISC 10 00:54:04.0±1.0, **36°.40N**±0°.02×**97°.78W**±0°.02, **h7**^{km}±11^{km}, **n72,** σ**0^{s}.83**/64, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CROK	Carrier	0.20	301	Pg	Pg	00 54 07.9	-0.1
CROK				Sg	Sg	00 54 10.9	+0.3
GC02	Grant County #	0.45	351	Pg	Pg	00 54 12.5	-0.3
GC02				Sg	Sg	00 54 18.9	+0.2
OK032	Salt Plains WL	0.53	319		Pg	00 54 13.9	-0.4
OK032				Sg	Sg	00 54 21.4	+0.1
KAN14	Manchester OK	0.57	345		Pg	00 54 14.8	-0.3
KAN14				Sg	Sg	00 54 22.6	+0.1
BLOK	Blackwell	0.57	52	Pg	Pg	00 54 14.8	-0.3
BLOK				Sg	Sg	00 54 22.3	-0.3
KAN17	Caldwell West	0.64	1	Pg	Pg	00 54 15.8	-0.5
KAN13	South Haven SW	0.65	21		Pg	00 54 16.2	-0.4
OK029	Liberty Lake	0.66	157	Pg	Pg	00 54 16.4	-0.3
OK029				IAmb_Lg		00 54 25.2	
	comp=Z,82nm,0.8s						
KAN05	Bluff City Nor	0.71	354		Pg	00 54 17.1	-0.5
KAN09	Caldwell North	0.74	10	Pg	Pg	00 54 17.7	-0.6
KAN01	Argonia South	0.75	1		Pg	00 54 17.9	-0.6
BCOK	Bluff Creek, N	0.76	170	Pg	Pg	00 54 18.3	-0.3
KAN10	Anthony SW Sta	0.76	340		Pg	00 54 17.9	-0.8
KAN08	Anthony NE Sta	0.84	349		Pg	00 54 19.3	-0.8
KS20	Mayfield South	0.84	12		Pg	00 54 19.6	-0.6
KAN06	Argonia West S	0.84	355	Pg	Pg	00 54 19.4	-0.9
KAN16	Harper SW Stat	0.85	344	Pg	Pg	00 54 19.7	-0.7
OK031	S. Brethren Rd	0.88	120	Pg	Pg	00 54 19.6	-1.4
OK031				IAmb_Lg		00 54 32.1	
	comp=Z,83nm,0.8s						
QUOK	Quay	0.89	105	Pg	Pg	00 54 20.6	-0.6
OK025	Westminster Rd	0.90	157	Pg	Pg	00 54 20.9	-0.3
KAN12	Harper NE Stat	0.91	349	Pg	Pg	00 54 20.8	-0.7
OK030	Cody Creek RV	0.93	120		Pg	00 54 21.4	-0.5
U32A	Winter Ranch,	0.99	269	Pg	Pg	00 54 22.5	-0.5
U32A	Winter Ranch,	0.99	269	P	Pg	00 54 22.6	-0.5
	baz=88						
U32A				S	Sg	00 54 36.0	+0.2
	baz=88						
OKCFA	Oklahoma City	1.02	165	Pg	Pg	00 54 22.9	-0.8
OKCFA	Oklahoma City	1.02	165	P	Pg	00 54 23.1	-0.5
	baz=345						
T35A	Sooner Cattle	1.14	63		Pg	00 54 24.9	-0.9
T35B	Sooner Cattle	1.14	63	P	Pg	00 54 25.0	-0.8
	baz=244						
T35B				S	Sb	00 54 39.9	-1.1
	baz=244						
FNO	Franklin	1.18	165		Pg	00 54 25.9	-0.8
TUL1	Leonard	1.68	106		Pn	00 54 33.8	-0.1
TUL1	Leonard	1.68	106	P	Pn	00 54 33.8	-0.1
	baz=288						
TUL1				S	Sg	00 54 56.8	-1.2
	baz=288						
X34A	Smith Ranch, M	1.80	182		Pn	00 54 36.3	+0.8
WMOK	Wichita Mounta	1.85	207		Pn	00 54 36.3	0.0
WMOK	Wichita Mounta	1.85	207	P	Pn	00 54 36.6	+0.3
	baz=26						
WMOK				S	Sb	00 55 01.7	+0.1
	baz=26						
R32A	Long Quarter,	2.15	340		Pn	00 54 40.8	+0.5
R32A	Long Quarter,	2.15	340	P	Pn	00 54 41.6	+1.3
	baz=159						
LOOK	Love County	2.46	168	Pn	Pn	00 54 44.4	-0.1
LOOK				IAmb_Lg		00 55 28.1	
	comp=Z,26nm,0.8s						
X37A	Clayton	2.67	132	Pn	Pn	00 54 48.1	+0.6
X37A				IAmb_Lg		00 55 31.3	
	comp=Z,28nm,0.9s						
X37A	Clayton	2.67	132	P	Pn	00 54 48.0	+0.6
	baz=314						
U38A	Gravette	2.73	88		Pn	00 54 49.3	+0.9
U38A				IAmb_Lg		00 55 35.1	
	comp=Z,22nm,0.8s						
KSU1	Kansas State U	2.85	19		Pn	00 54 49.9	0.0
KSU1				IAmb_Lg		00 55 39.6	
	comp=Z,24nm,1.0s						
CBKS	Cedar Bluff	2.87	328	Pg	Pb	00 54 57.1	+1.5
Z35A	Perchaven, San	3.10	172	Pn	Pn	00 54 53.5	+0.2
HHAR	Hobbs	3.10	91		Pn	00 54 53.1	-0.2
W39A	Magazine	3.46	109	IAmb_Lg		00 56 03.2	
	comp=Z,26nm,0.8s						
AMTX	Amarillo	3.52	246		Pb	00 55 06.4	-0.4
AMTX				IAmb_Lg		00 56 04.7	
	comp=Z,18nm,0.9s						
S39A	Bolivar	3.79	69	Pn	Pn	00 55 03.8	+1.0
Z38A	Mt. Pleasant	3.89	143	Pg	Pb	00 55 14.8	+1.9
Z38A				IAmb_Lg		00 56 14.4	
	comp=Z,34nm,0.7s						
MIAR	Mount Ida	3.90	117	Pn	Pn	00 55 06.4	+2.0
MIAR				IAmb_Lg		00 56 09.2	
	comp=Z,17nm,0.8s						
U40A	Yellville	3.97	89		Pn	00 55 05.5	+0.1
ABTX	Abilene, Hawle	4.07	203		Pb	00 55 17.0	+0.8
N33A	J Bar K, Exete	4.33	3	IAmb_Lg		00 56 22.9	
	comp=Z,25nm,0.7s						
WHTX	Lake Whitney,	4.41	176	Pn	Pn	00 55 10.6	-0.8
X40A	Basin Creek Fa	4.46	114	IAmb_Lg		00 56 29.0	
	comp=Z,17nm,0.8s						
MGMO	Mountain Grove	4.48	79	IAmb_Lg		00 56 35.7	
	comp=Z,12nm,0.7s						
WHAR	Wooly Hollow	4.59	102	IAmb_Lg		00 56 32.1	
	comp=Z,21nm,0.9s						
FCAR	Ozark Folk Cen	4.60	95	IAmb_Lg		00 56 26.7	
	comp=Z,10nm,0.8s						
P38A	Dawn	4.64	45	IAmb_Lg		00 56 33.9	
	comp=Z,22nm,0.8s						
KSCO	Kaye Shedlock'	4.64	306	Pg	Pg	00 55 30.3	-2.7
KSCO				IAmb_Lg		00 56 37.2	
	comp=Z,13nm,0.7s						
237A	Washetta, Mont	4.68	159	Pn	Pn	00 55 14.1	-1.0
R40A	Maddies Statio	4.78	65		Pn	00 55 16.8	+0.4
BGNE	Belgrade	5.01	357	Pn	Pn	00 55 18.8	-0.8
BGNE				IAmb_Lg		00 56 48.5	
	comp=Z,20nm,0.8s						
T25A	Trinidad	5.38	280	IAmb_Lg		00 57 05.8	
	comp=Z,12nm,0.7s						
T42A	Van Buren	5.41	81	IAmb_Lg		00 57 01.7	
	comp=Z,11nm,0.8s						
CCM	Cathedral Cave	5.47	70	IAmb_Lg		00 57 04.4	
	comp=Z,11nm,0.8s						
435B	Jarrell	5.61	178	IAmb_Lg		00 57 09.0	
	comp=Z,17nm,0.9s						
N38A	Joes South For	5.64	38	IAmb_Lg		00 57 16.1	
	comp=Z,13nm,0.7s						
FVM	French Village	6.08	73	IAmb_Lg		00 57 16.7	
	comp=Z,12nm,0.8s						
JCT	Junction City	6.15	197	IAmb_Lg		00 57 24.6	
	comp=Z,14nm,0.8s						
ISCO	Idaho Springs	7.05	301	IAmb_Lg		00 58 00.0	
	comp=Z,8.0nm,0.9s						
JFWS	Jewell Farm	8.71	39	IAmb_Lg		00 58 42.4	
	comp=Z,13nm,0.9s						
RSSD	Black Hills	9.07	330	IAmb_Lg		00 59 15.0	
	comp=Z,5.9nm,1.0s						

*TUL **10** 01:03:22.3±1.0, 36°.19N±0°.03×98°.80W±0°.02, h5^{km}±1^{km}, ML2.7, mb_Lg2.2/8(NEIC), Error ellipse: s-maj=4.8km s-min=3.3km az=15.0*

NEIC 10 01:03:22.4±1.5, **36°.21N**±0°.03×**98°.83W**±0°.03, **h12**^{km}±6^{km}, **Error ellipse: s-maj=5.2km s-min=2.9km az=140.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
U32A	Winter Ranch,	0.21	320	Pg	Pg	01 03 27.4	+0.2
U32A				Sg	Sg	01 03 31.2	+0.8
CROK	Carrier	0.74	67	Pg	Pg	01 03 36.1	-0.7
CROK				Sg	Sg	01 03 46.4	-0.3
OK032	Salt Plains WL	0.77	40		Pg	01 03 36.7	-0.7
OK032				Sg	Sg	01 03 47.2	-0.3
GC02	Grant County #	1.01	51	Pg	Pb	01 03 41.1	-0.7
KAN14	Manchester OK	1.02	43		Pb	01 03 41.4	-0.6
KAN10	Anthony SW Sta	1.08	33	Pg	Pb	01 03 42.6	-0.5
BCOK	Bluff Creek, N	1.14	119	Pg	Pb	01 03 43.0	-1.0
KAN05	Bluff City Nor	1.18	41	Pg	Pn	01 03 44.4	-0.4
KAN17	Caldwell West	1.19	46	Pg	Pn	01 03 44.3	-0.6
KAN01	Argonia South	1.27	42		Pn	01 03 46.0	-0.1
KAN06	Argonia West S	1.29	37	Pn	Pn	01 03 46.4	+0.1
KAN09	Caldwell North	1.34	46		Pn	01 03 46.9	-0.1
KAN13	South Haven SW	1.35	53		Pn	01 03 47.0	-0.1
OK025	Westminster Rd	1.37	117	Pn	Pn	01 03 46.8	-0.5
BLOK	Blackwell	1.41	67	Pn	Pn	01 03 48.0	0.0
KS20	Mayfield South	1.44	45		Pn	01 03 48.8	+0.4
WMOK	Wichita Mounta	1.47	178		Pn	01 03 47.7	-1.1
FNO	Franklin	1.50	129	Pn	Pn	01 03 49.1	-0.1
OK030	Cody Creek RV	1.68	99	Pn	Pn	01 03 52.0	+0.4
QUOK	Quay	1.72	91	Pn	Pn	01 03 52.7	+0.6
X34A	Smith Ranch, M	1.80	153		Pn	01 03 53.9	+0.6
T35A	Sooner Cattle	1.99	69		Pn	01 03 56.4	+0.5
T35A				IAmb_Lg		01 04 30.1	
	comp=Z,11nm,0.8s						
R32A	Long Quarter,	2.21	2	Pn	Pn	01 03 59.7	+0.8
LOOK	Love County	2.60	148		Pn	01 04 05.4	+1.2
AMTX	Amarillo	2.68	241	IAmb_Lg		01 04 50.1	
	comp=Z,8.7nm,0.8s						
CBKS	Cedar Bluff	2.69	345	IAmb_Lg		01 04 55.5	
	comp=Z,9.0nm,0.8s						
X37A	Clayton	3.26	119	Pn	Pn	01 04 13.3	0.0
U38A	Gravette	3.60	85	IAmb_Lg		01 05 17.1	
	comp=Z,6.4nm,0.8s						
ABTX	Abilene, Hawle	3.64	191	Pn	Pn	01 04 19.0	+0.4

*NEIC **10** 01:37:50.5±0.7, 36°.32N±0°.01×97°.56W±0°.02, h4^{km}±6^{km}, Error ellipse: s-maj=2.4km s-min=1.6km az=70.0*

*TUL **10** 01:37:50.5±0.8, 36°.32N±0°.01×97°.55W±0°.02, h6^{km}±6^{km}, ML3.5, mb_Lg3.4/86(NEIC), Error ellipse: s-maj=2.4km s-min=1.5km az=68.0*

*ANF **10** 01:37:52.9±1.3, 36°.33N×97°.54W, h26^{km}±14^{km}, ML3.9/7, Error ellipse: s-maj=6.5km s-min=4.0km az=142.0*

ISC 10 01:37:50.6±1.0, **36°.32N**±0°.02×**97°.56W**±0°.02, **h8**^{km}±9^{km}, **n126,** σ**0^{s}.63**/140, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CROK	Carrier	0.39	299	Pg	Pg	01 37 58.4	+0.1
CROK				Sg	Sg	01 38 04.2	+0.6
BLOK	Blackwell	0.52	32	Pg	Pg	01 38 00.8	0.0
BLOK				Sg	Sb	01 38 10.2	+0.4
OK029	Liberty Lake	0.52	171	Pg	Pg	01 38 00.9	+0.1
OK029				Sg	Sg	01 38 08.1	+0.5
GC02	Grant County #	0.59	336	Pg	Pg	01 38 01.8	-0.3
GC02				Sg	Sg	01 38 10.1	+0.3
BCOK	Bluff Creek, N	0.66	184	Pg	Pg	01 38 03.2	-0.1
BCOK				Sg	Sg	01 38 12.4	+0.5
OK031	S. Brethren Rd	0.68	122	Pg	Pg	01 38 03.8	0.0
OK031				Sg	Sg	01 38 13.5	+0.7
KAN13	South Haven SW	0.70	5		Pg	01 38 03.9	-0.2
KAN13				Sg	Sg	01 38 13.4	+0.1
QUOK	Quay	0.70	102	Pg	Pg	01 38 04.0	-0.1
QUOK				Sg	Sg	01 38 13.1	-0.1
OK032	Salt Plains WL	0.72	313		Pg	01 38 04.2	-0.3
OK032				Sg	Sg	01 38 14.0	+0.1
KAN14	Manchester OK	0.72	333		Pg	01 38 04.3	-0.2
KAN14				Sg	Sg	01 38 14.0	+0.1
OK030	Cody Creek RV	0.73	122		Pg	01 38 04.7	-0.1
OK030				Sg	Sg	01 38 14.7	+0.3
OK009	Oakdale Elemen	0.74	172		Pg	01 38 04.8	-0.1
KAN17	Caldwell West	0.75	347	Pg	Pg	01 38 04.7	-0.3
KAN17				Sg	Sg	01 38 14.9	+0.1
OK025	Westminster Rd	0.75	166	Pg	Pg	01 38 04.9	-0.2
OK025				Sg	Sg	01 38 15.4	+0.5
KAN09	Caldwell North	0.82	356	Pg	Pg	01 38 06.2	-0.3
KAN09				Sg	Sg	01 38 17.3	+0.1
KAN05	Bluff City Nor	0.83	342		Pg	01 38 06.3	-0.3
KAN05				Sg	Sg	01 38 16.9	-0.5
KAN01	Argonia South	0.85	349		Pg	01 38 06.7	-0.3
KAN01				Sg	Sg	01 38 18.3	+0.1
OKCFA	Oklahoma City	0.90	175	Pg	Pg	01 38 07.5	-0.5
OKCFA				Sg	Sg	01 38 20.0	+0.3
OKCFA	Oklahoma City	0.90	175	P	Pg	01 38 07.7	-0.3
	baz=354						
OKCFA				S	Sg	01 38 20.0	+0.3
	baz=354						
KS20	Mayfield South	0.91	0		Pg	01 38 07.8	-0.4
KS20				Sg	Sg	01 38 19.9	-0.1
OKCSW	OKLAHOMA CITY	0.91	174		Pg	01 38 07.8	-0.4
OKCSW				Sg	Sg	01 38 20.4	+0.4
KAN10	Anthony SW Sta	0.92	332	Pg	Pg	01 38 07.8	-0.5
KAN10				Sg	Sg	01 38 20.1	-0.1
KAN06	Argonia West S	0.96	345		Pg	01 38 08.7	-0.4
KAN06				Sg	Sg	01 38 21.7	0.0
KAN08	Anthony NE Sta	0.97	340		Pg	01 38 08.8	-0.4
KAN08				Sg	Sg	01 38 21.7	-0.2
KAN16	Harper SW Stat	1.00	336	Pg	Pg	01 38 09.3	-0.5
KAN16				Sg	Sg	01 38 22.6	-0.2
T35A	Sooner Cattle	1.03	54		Pg	01 38 09.9	-0.6
T35A				Sg	Sg	01 38 23.3	-0.6
T35B	Sooner Cattle	1.03	54	P	Pg	01 38 09.9	-0.6
	baz=235,SNR=247						
T35B				S	Sg	01 38 23.4	-0.5
	baz=235						
KAN12	Harper NE Stat	1.04	340	Pg	Pg	01 38 10.2	-0.5
KAN12				Sg	Sg	01 38 23.9	-0.3
FNO	Franklin	1.06	173	Pg	Pg	01 38 10.5	-0.5
FNO				Sg	Sg	01 38 25.1	+0.2
U32A	Winter Ranch,	1.17	274	Pg	Pg	01 38 12.2	-0.8
U32A				Sg	Sg	01 38 27.8	-0.4
U32A	Winter Ranch,	1.17	274	P	Pg	01 38 12.3	-0.8
	baz=93,SNR=56						
U32A				S	Sb	01 38 28.4	0.0
	baz=93						
TUL1	Leonard	1.48	105	P	Pn	01 38 17.2	-0.4
	baz=286						
TUL1				S	Sn	01 38 37.4	+0.3
	baz=286						
TUL1	Leonard	1.48	105	Pn	Pn	01 38 17.2	-0.4
TUL1				Sn	Sn	01 38 37.0	-0.1
TUL1				IAmb_Lg		01 38 39.0	
	comp=Z,118nm,0.8s						
TUL1	Leonard	1.48	105	P	Pn	01 38 17.3	-0.4
	baz=286						
TUL1				S	Sn	01 38 37.1	-0.1
	baz=286						
X34A	Smith Ranch, M	1.73	188		Pb	01 38 22.2	-0.3
X34A				Sg	Sg	01 38 46.0	-0.1
X34A				IAmb_Lg		01 38 48.4	
	comp=Z,190nm,0.8s						
WMOK	Wichita Mounta	1.86	213	P	Pn	01 38 23.4	+0.5
	baz=32						
WMOK				S	Sb	01 38 49.1	+0.7
	baz=32						
WMOK	Wichita Mounta	1.86	213		Pn	01 38 23.1	+0.3
WMOK	Wichita Mounta	1.86	213	P	Pn	01 38 23.4	+0.5

	baz=32,SNR=216						
WMOK				S	Sb	01 38 49.0	+0.6
	baz=32						
R32A	Long Quarter,	2.30	337		Pn	01 38 30.4	+1.7
R32A	Long Quarter,	2.30	337	P	Pn	01 38 30.5	+1.7
	baz=156,SNR=32						
R32A				S	Sn	01 38 58.5	+1.2
	baz=156						
LOOK	Love County	2.34	172		Pn	01 38 28.9	-0.4
X37A	Clayton	2.48	133	Pn	Pn	01 38 31.8	+0.5
X37A				IAmb_Lg		01 39 15.3	
	comp=Z,72nm,0.8s						
X37A	Clayton	2.48	133	P	Pn	01 38 32.3	+1.0
	baz=315,SNR=62						
X37A				S	Sb	01 39 04.2	-1.9
	baz=315						
U38A	Gravette	2.56	86	Pn	Pn	01 38 32.8	+0.4
U38A	Gravette	2.56	86	P	Pn	01 38 33.1	+0.7
	baz=268,SNR=73						
KSU1	Kansas State U	2.88	15	Pn	Pn	01 38 37.0	+0.2
KSU1	Kansas State U	2.88	15	P	Pn	01 38 37.8	+1.0
	baz=195,SNR=28						
HHAR	Hobbs	2.92	90		Pn	01 38 37.8	+0.4
Z35A	Perchaven, San	2.99	175		Pn	01 38 39.4	+1.1
Z35A	Perchaven, San	2.99	175	S	Sn	01 39 15.9	+1.7
	baz=355						
CBKS	Cedar Bluff	3.04	326		Pn	01 38 39.8	+0.8
W39A	Magazine	3.26	109	P	Pn	01 38 42.7	+0.6
	baz=291						
W39A	Magazine	3.26	109		Pn	01 38 42.4	+0.4
W39A				IAmb_Lg		01 39 43.3	
	comp=Z,60nm,0.7s						
W39A	Magazine	3.26	109	P	Pn	01 38 42.5	+0.4
	baz=291,SNR=24						
AMTX	Amarillo	3.65	248	Sb	Sg	01 39 44.6	-3.4
	baz=66						
AMTX	Amarillo	3.65	248	Pn	Pn	01 38 47.5	0.0
AMTX				IAmb_Lg		01 39 49.0	
	comp=Z,72nm,0.8s						
S39A	Bolivar	3.66	67		Pn	01 38 48.2	+0.8
S39A				IAmb_Lg		01 39 48.8	
	comp=Z,122nm,0.9s						
S39A	Bolivar	3.66	67	P	Pn	01 38 47.6	+0.2
	baz=249,SNR=23						
MIAR	Mount Ida	3.70	117	P	Pn	01 38 48.9	+0.9
	baz=300						
MIAR	Mount Ida	3.70	117		Pn	01 38 48.5	+0.4
MIAR	Mount Ida	3.70	117	P	Pn	01 38 49.0	+0.9
	baz=300,SNR=66						
Z38A	Mt. Pleasant	3.71	144	Pn	Pn	01 38 48.7	+0.5
U40A	Yellville	3.80	88		Pn	01 38 49.0	-0.3
U40A	Yellville	3.80	88	P	Pn	01 38 49.1	-0.3
	baz=271,SNR=19						
U40A				P	Pn	01 38 49.1	-0.3
	baz=271,SNR=19						
ABTX	Abilene, Hawle	4.07	206	Pn	Pn	01 38 53.8	+0.7
ABTX				IAmb_Lg		01 40 01.8	
	comp=Z,42nm,0.8s						
X40A	Basin Creek Fa	4.27	114		Pn	01 38 56.4	+0.6
X40A	Basin Creek Fa	4.27	114	P	Pn	01 38 57.1	+1.3
	baz=297,SNR=6.7						
X40A				P	Pn	01 38 57.1	+1.3
	baz=297,SNR=6.7						
WHTX	Lake Whitney,	4.31	179	P	Pn	01 38 57.1	+0.6
	baz=359						
WHTX				S	Sn	01 39 47.0	0.0
	baz=359						
WHTX	Lake Whitney,	4.31	179	Pn	Pn	01 38 56.3	-0.2
WHTX	Lake Whitney,	4.31	179	P	Pn	01 38 56.8	+0.3
	baz=359,SNR=9.9						
MGMO	Mountain Grove	4.33	77		Pn	01 38 56.9	+0.2
MGMO				IAmb_Lg		01 40 19.7	
	comp=Z,64nm,0.9s						
WHAR	Wooly Hollow	4.40	102	Pn	Pn	01 38 57.8	+0.1
WHAR				IAmb_Lg		01 40 16.2	
	comp=Z,62nm,1.0s						
FCAR	Ozark Folk Cen	4.42	94	Pn	Pn	01 38 58.1	+0.2
FCAR				IAmb_Lg		01 40 10.0	
	comp=Z,45nm,0.9s						
W41B	Gary Mavity, V	4.46	103	P	Pn	01 38 58.4	-0.2
	baz=286,SNR=23						
WLAR	White Oak Lake	4.49	124	Pn	Pn	01 38 59.1	+0.2
WLAR				IAmb_Lg		01 40 16.2	
	comp=Z,41nm,0.8s						
237A	Washetta, Mont	4.54	161	Pn	Pn	01 38 59.8	+0.2
237A				IAmb_Lg		01 40 25.5	
	comp=Z,39nm,1.0s						
237A	Washetta, Mont	4.54	161	P	Pn	01 38 59.9	+0.3
	baz=342						
P38A	Dawn	4.58	43	Pn	Pn	01 39 00.3	+0.1
P38A	Dawn	4.58	43	P	Pn	01 39 00.1	-0.1
	baz=225						
R40A	Maddies Statio	4.65	63		Pn	01 39 01.1	0.0
R40A	Maddies Statio	4.65	63	P	Pn	01 39 01.5	+0.4
	baz=246,SNR=23						
N35A	Tabor	4.78	18	Pn	Pn	01 39 03.0	+0.1
N35A	Tabor	4.78	18	P	Pn	01 39 03.1	+0.1
	baz=199,SNR=8.6						
KSCO	Kaye Shedlock’	4.84	305	Pn	Pn	01 39 04.4	+0.6
KSCO				IAmb_Lg		01 40 36.7	
	comp=Z,39nm,0.7s						
MSTX	Muleshoe	4.87	243	Pn	Pn	01 39 05.2	+0.9
BGNE	Belgrade	5.11	355	P	Pn	01 39 07.4	0.0
	baz=175						
BGNE	Belgrade	5.11	355	Pn	Pn	01 39 07.3	-0.2
BGNE				IAmb_Lg		01 40 34.4	
	comp=Z,69nm,0.7s						
BGNE	Belgrade	5.11	355	P	Pn	01 39 07.4	0.0
	baz=175,SNR=8.7						
NATX	Nacogdoches	5.14	151	IAmb_Lg		01 40 48.2	
	comp=Z,40nm,0.8s						
LCAR	Lake Charles	5.18	91	IAmb_Lg		01 40 36.6	
	comp=Z,44nm,0.9s						
T42A	Van Buren	5.24	80	Pn	Pn	01 39 09.0	-0.2
T42A				IAmb_Lg		01 40 45.6	
	comp=Z,56nm,0.8s						
T42A	Van Buren	5.24	80	P	Pn	01 39 09.3	+0.1
	baz=264,SNR=9.6						
CCM	Cathedral Cave	5.33	69	Pn	Pn	01 39 11.3	+0.8
P40A	Paris	5.41	52	IAmb_Lg		01 40 45.9	
	comp=Z,56nm,0.7s						
435B	Jarrell	5.52	180	S	Sn	01 40 15.6	-1.1
	baz=0.2						
435B	Jarrell	5.52	180	IAmb_Lg		01 40 59.7	
	comp=Z,52nm,0.7s						
T25A	Trinidad	5.57	281	Pn	Pn	01 39 13.7	-0.2
N38A	Joes South For	5.61	36	Pn	Pn	01 39 13.2	-1.1
N38A				IAmb_Lg		01 40 59.8	
	comp=Z,86nm,0.7s						
L34A	Svendsen Farm,	5.72	9	IAmb_Lg		01 40 55.1	
	comp=Z,78nm,0.8s						
OGNE	Ogallala	5.80	324	IAmb_Lg		01 40 57.9	
	comp=Z,58nm,0.7s						
FVM	French Village	5.93	72	IAmb_Lg		01 40 59.3	
	comp=Z,91nm,1.0s						
GNAR	Gosnell	6.11	91	IAmb_Lg		01 41 08.2	
	comp=Z,82nm,0.9s						
JCT	Junction City	6.12	199	Pn	Pn	01 39 21.3	0.0
JCT				IAmb_Lg		01 41 09.0	
	comp=Z,49nm,0.9s						
K31A	O'Neill	6.37	352	IAmb_Lg		01 41 16.6	
	comp=Z,80nm,0.8s						
SDCO	Great Sand Dun	6.51	285		Pn	01 39 27.0	0.0
SCIA	State Center	6.52	30	IAmb_Lg		01 41 29.7	
	comp=Z,43nm,0.9s						
HALT	Halls	6.66	91	IAmb_Lg		01 41 39.4	
	comp=Z,56nm,0.9s						
GLAT	Glass	6.68	88	IAmb_Lg		01 41 31.5	
	comp=Z,77nm,0.7s						
S44A	Carbondale	6.78	76	IAmb_Lg		01 41 24.1	
	comp=Z,78nm,0.8s						
SIUC	Southern Illin	6.82	76	IAmb_Lg		01 41 24.5	
	comp=Z,78nm,0.9s						
N41A	Harden Midland	6.84	48	IAmb_Lg		01 41 27.4	
	comp=Z,75nm,0.8s						
W45A	Hickory Valley	6.90	97	IAmb_Lg		01 41 38.0	
	comp=Z,44nm,0.7s						
Y45A	Yeager Farm, C	7.01	108	IAmb_Lg		01 41 42.4	
	comp=Z,37nm,1.0s						
K38A	Parkersburg	7.33	29	IAmb_Lg		01 41 57.7	
	comp=Z,43nm,0.9s						
ECSD	EROS Data Cent	7.45	5	P	Pn	01 39 40.3	+0.8
	baz=186,SNR=5.1						
L40A	Anamosa	7.56	39	IAmb_Lg		01 41 55.1	
	comp=Z,31nm,0.8s						
HDIL	Hopedale	7.74	54	P	Pn	01 39 43.8	+0.2
	baz=239,SNR=6.6						
Y22D	IRIS PASSCAL I	7.99	256	IAmb_Lg		01 42 16.1	
	comp=Z,64nm,1.1s						
O44A	Mansfield	8.11	59	IAmb_Lg		01 42 07.5	
	comp=Z,46nm,0.7s						
SUSD	Miller	8.19	353	IAmb_Lg		01 42 10.5	
	comp=Z,23nm,0.8s						
L42A	Oliver, Polo	8.35	45	IAmb_Lg		01 42 24.5	
	comp=Z,45nm,0.9s						
JFWS	Jewell Farm	8.67	38	P	Pn	01 39 56.1	-0.2
	baz=223						
JFWS	Jewell Farm	8.67	38	IAmb_Lg		01 42 39.7	
	comp=Z,25nm,0.7s						
K22A	Casper	9.38	315	IAmb_Lg		01 43 10.3	
	comp=Z,26nm,0.9s						
L44A	Lake County Fo	9.49	49	IAmb_Lg		01 42 57.1	
	comp=Z,48nm,0.9s						
K43A	Burlington	9.56	45	IAmb_Lg		01 43 06.1	
	comp=Z,43nm,1.1s						

SJA 10 01:38:45.0,22°.08S×70°.95W,h10^{km},ML4.2,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB02	IPOC Station P	1.24	53	*i* P	Pn	01 39 07.0	-1.5
PATCX	Punta Patache	1.46	31	*i* P	Pg	01 39 13.0	0.0
TA01	Diego Aracena	1.67	26	*i* P	Pn	01 39 14.0	-0.3
PB08	IPOC Station P	2.56	41	*i* P	Pn	01 39 28.0	+1.1
PSGCX	Pisagua	2.59	18	*i* P	Pn	01 39 28.0	+0.9
LCO	Las Campanas	6.91	178	*i* P	Pn	01 40 26.0	-0.6
VCA	Vinchina	7.08	160	*i* P	Pn	01 40 29.0	+0.2

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*IASPEI **10** 02:12:34.7±1.1,36°.93N±0°.03×97°.83W±0°.03,h9^{km}±7^{km}, Error ellipse: s-maj=4.2km s-min=3.9km az=141.3,GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*TUL **10** 02:12:34.9±1.0,36°.95N±0°.01×97°.83W±0°.02,h5^{km}±6^{km}, ML2.9,mb_Lg2.7/34(NEIC),Error ellipse: s-maj=2.8km s-min=1.1km az=129.0*

*ANF **10** 02:12:35.7±0.3,36°.92N×97°.80W,h5^{km},ML3.2/9,Error ellipse: s-maj=4.1km s-min=3.3km az=47.0*

*NEIC **10** 02:12:35.1±0.8,36°.92N±0°.02×97°.82W±0°.02,h4^{km}±6^{km}, Error ellipse: s-maj=2.9km s-min=2.4km az=78.0*

ISC 10 02:12:35.1±0.9,**36°.93N**±0°.02×**97°.81W**±0°.02,**h6**^{km}±8^{km}, **n65,**σ**0^s.57**/61,**Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GC02	Grant County #	0.09	205	Pg	Pg	02 12 37.4	+0.4
GC02				Sg	Sg	02 12 38.2	-0.1
KAN17	Caldwell West	0.12	19	Pg	Pg	02 12 37.7	+0.2
KAN14	Manchester OK	0.12	282		Pg	02 12 37.7	+0.1
KAN14				Sg	Sg	02 12 38.7	-0.6
KAN05	Bluff City Nor	0.18	345		Pg	02 12 38.7	0.0
KAN01	Argonia South	0.23	11		Pg	02 12 39.6	+0.1
KAN09	Caldwell North	0.26	37	Pg	Pg	02 12 40.2	+0.1
KAN13	South Haven SW	0.28	73		Pg	02 12 41.0	+0.5
KAN10	Anthony SW Sta	0.30	311	Pg	Pg	02 12 40.8	0.0
KAN06	Argonia West S	0.32	354		Pg	02 12 41.3	+0.1
KAN08	Anthony NE Sta	0.32	337		Pg	02 12 41.4	0.0
OK032	Salt Plains WL	0.34	248		Pg	02 12 42.0	+0.2
KAN16	Harper SW Stat	0.36	326	Pg	Pg	02 12 41.9	0.0
KS20	Mayfield South	0.36	35		Pg	02 12 42.2	+0.1
KAN12	Harper NE Stat	0.39	338	Pg	Pg	02 12 41.9	-0.8
CROK	Carrier	0.45	198	Pg	Pg	02 12 44.0	+0.3
BLOK	Blackwell	0.51	109	Pg	Pg	02 12 45.0	+0.1
T35A	Sooner Cattle	1.04	90		Pg	02 12 55.0	-0.1
T35B	Sooner Cattle	1.04	90	P	Pg	02 12 55.0	-0.1
	baz=272,SNR=58						
T35B				S	Sg	02 13 08.7	+0.1
	baz=272						
U32A	Winter Ranch,	1.10	240	Pg	Pg	02 12 55.7	-0.5
U32A	Winter Ranch,	1.10	240	P	Pg	02 12 55.7	-0.5
	baz=59						
OK029	Liberty Lake	1.17	166		Pg	02 12 57.2	-0.2
QUOK	Quay	1.17	130	Pg	Pg	02 12 57.2	-0.3
OK031	S. Brethren Rd	1.25	141		Pg	02 12 58.6	-0.4
BCOK	Bluff Creek, N	1.28	173		Pg	02 12 59.0	-0.6
OK030	Cody Creek RV	1.30	140		Pg	02 12 59.3	-0.7
OK025	Westminster Rd	1.40	164		Pn	02 13 01.3	+0.1
OKCFA	Oklahoma City	1.54	169		Pn	02 13 03.2	+0.1
OKCFA	Oklahoma City	1.54	169	P	Pb	02 13 03.7	-0.4
	baz=349						
OKCFA				S	Sg	02 13 25.2	+0.6
	baz=349						
OKCSW	OKLAHOMA CITY	1.55	169		Pb	02 13 03.7	-0.5
R32A	Long Quarter,	1.65	335		Pn	02 13 04.7	0.0
R32A	Long Quarter,	1.65	335	P	Pn	02 13 05.3	+0.7
	baz=154,SNR=46						
R32A				S	Sn	02 13 26.6	+0.4
	baz=154						
FNO	Franklin	1.70	169		Pn	02 13 05.6	+0.2
TUL1	Leonard	1.92	121		Pn	02 13 09.0	+0.6
TUL1				IAmb_Lg		02 13 38.8	
	comp=Z,53nm,0.8s						
TUL1	Leonard	1.92	121	P	Pb	02 13 09.6	-1.0
	baz=303,SNR=29						
TUL1				S	Sb	02 13 35.3	+0.5
	baz=303						
WMOK	Wichita Mounta	2.33	200	Pn	Pn	02 13 14.3	+0.4
WMOK	Wichita Mounta	2.33	200	P	Pn	02 13 15.2	+1.3
	baz=19						
X34A	Smith Ranch, M	2.33	180		Pn	02 13 14.8	+0.9
X34A				IAmb_Lg		02 13 55.8	
	comp=Z,45nm,1.1s						
KSU1	Kansas State U	2.37	23		Pn	02 13 15.0	+0.5
KSU1	Kansas State U	2.37	23	P	Pn	02 13 15.2	+0.7
	baz=204,SNR=13						
KSU1				S	Sb	02 13 47.5	-0.1
	baz=204						
CBKS	Cedar Bluff	2.42	322		Pn	02 13 16.6	+1.3
CBKS	Cedar Bluff	2.42	322	P	Pn	02 13 16.8	+1.5
	baz=141,SNR=13						
CBKS				S	Sb	02 13 49.5	+0.4
	baz=141						
U38A	Gravette	2.80	99	Pn	Pn	02 13 20.1	-0.3
X37A	Clayton	3.07	139		Pn	02 13 24.6	+0.5
X37A				IAmb_Lg		02 14 17.2	
	comp=Z,25nm,0.8s						
X37A	Clayton	3.07	139	P	Pn	02 13 24.6	+0.5
	baz=320,SNR=7.1						
HHAR	Hobbs	3.18	101		Pn	02 13 26.0	+0.2
HHAR				IAmb_Lg		02 14 22.6	
	comp=Z,15nm,0.8s						
S39A	Bolivar	3.66	77		Pn	02 13 32.3	+0.1
S39A	Bolivar	3.66	77	P	Pn	02 13 32.7	+0.4
	baz=260,SNR=9.8						
W39A	Magazine	3.69	117	IAmb_Lg		02 14 38.1	
	comp=Z,23nm,0.9s						
AMTX	Amarillo	3.75	238	Pn	Pn	02 13 34.3	+0.8
AMTX				IAmb_Lg		02 14 37.3	
	comp=Z,13nm,0.8s						
U40A	Yellville	4.03	97		Pn	02 13 37.2	-0.1
U40A				IAmb_Lg		02 14 44.7	
	comp=Z,17nm,0.8s						
P38A	Dawn	4.31	50	IAmb_Lg		02 14 58.3	
	comp=Z,12nm,0.8s						
P38A	Dawn	4.31	50	P	Pn	02 13 41.7	+0.5
	baz=233,SNR=5.6						
Z38A	Mt. Pleasant	4.33	147	IAmb_Lg		02 14 56.5	
	comp=Z,23nm,0.9s						
BGNE	Belgrade	4.48	357	IAmb_Lg		02 15 05.7	
	comp=Z,24nm,0.7s						
R40A	Maddies Statio	4.61	71	Pn	Pn	02 13 45.8	+0.5
R40A	Maddies Statio	4.61	71	P	Pn	02 13 46.0	+0.7
	baz=255,SNR=13						
X40A	Basin Creek Fa	4.73	120	IAmb_Lg		02 15 11.2	
	comp=Z,19nm,1.1s						
OGNE	Ogallala	5.18	322	Pn	Pn	02 13 51.8	-1.5
CCM	Cathedral Cave	5.34	76	IAmb_Lg		02 15 32.9	
	comp=Z,16nm,1.2s						
T42A	Van Buren	5.38	87	IAmb_Lg		02 15 31.5	
	comp=Z,8.1nm,1.0s						
435B	Jarrell	6.13	178	IAmb_Lg		02 15 59.3	
	comp=Z,12nm,0.9s						
JCT	Junction City	6.64	195	IAmb_Lg		02 16 18.8	
	comp=Z,7.0nm,0.8s						
S44A	Carbondale	6.86	81	IAmb_Lg		02 16 10.9	
	comp=Z,11nm,1.0s						
K38A	Parkersburg	6.90	33	IAmb_Lg		02 16 17.3	
	comp=Z,13nm,0.7s						
L40A	Anamosa	7.23	43	IAmb_Lg		02 16 42.8	
	comp=Z,9.8nm,0.9s						

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*TUL **10** 02:14:28.8±0.8,36°.95N±0°.05×97°.83W±0°.04,h5^{km}±9^{km}, ML2.6,mb_Lg2.5/6(NEIC),Error ellipse: s-maj=8.3km s-min=1.4km az=149.0*

NEIC 10 02:14:29.1±0.1,**36°.93N**±0°.02×**97°.82W**±0°.04,**h6**^{km}±8^{km}, **Error ellipse: s-maj=5.2km s-min=1.9km az=127.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAN14	Manchester OK	0.12	283	Pg	Pg	02 14 31.6	0.0
KAN14					Sg	02 14 33.4	+0.1
KAN17	Caldwell West	0.12	22	Pg	Pg	02 14 31.7	0.0
KAN17				Sg	Sg	02 14 33.5	0.0
KAN05	Bluff City Nor	0.18	347	Pg	Pg	02 14 32.7	0.0
KAN05				Sg	Sg	02 14 35.3	0.0
KAN01	Argonia South	0.23	13		Pg	02 14 33.6	0.0
KAN01				Sg	Sg	02 14 36.7	0.0
KAN09	Caldwell North	0.26	39	Pg	Pg	02 14 34.2	-0.1
KAN09				Sg	Sg	02 14 37.9	+0.1
KAN13	South Haven SW	0.29	73	Pg	Pg	02 14 34.7	-0.1
KAN10	Anthony SW Sta	0.29	311	Pg	Pg	02 14 34.8	0.0
KAN06	Argonia West S	0.32	355		Pg	02 14 35.3	0.0
KAN08	Anthony NE Sta	0.32	338		Pg	02 14 35.3	0.0
OK032	Salt Plains WL	0.34	248		Pg	02 14 35.8	+0.1
KAN16	Harper SW Stat	0.35	327	Pg	Pg	02 14 35.9	-0.1
OK029	Liberty Lake	1.17	165		Pg	02 14 51.1	-0.5
QUOK	Quay	1.18	130	Pn	Pg	02 14 51.1	-0.5
OK031	S. Brethren Rd	1.26	141	Pn	Pn	02 14 52.6	-0.5
OK025	Westminster Rd	1.40	164		Pn	02 14 54.7	-0.5
OKCSW	OKLAHOMA CITY	1.55	168		Pn	02 14 57.2	-0.1
FNO	Franklin	1.71	168	Pn	Pn	02 14 59.9	+0.5
TUL1	Leonard	1.93	121	IAmb_Lg		02 15 33.5	
	comp=Z,34nm,0.9s						
WMOK	Wichita Mounta	2.32	200	Pn	Pn	02 15 09.4	+1.5
X34A	Smith Ranch, M	2.33	180	Pn	Pn	02 15 09.0	+1.1
X34A				IAmb_Lg		02 15 45.2	
	comp=Z,18nm,1.0s						
U38A	Gravette	2.81	99	IAmb_Lg		02 15 59.3	
	comp=Z,7.7nm,0.8s						

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*TUL **10** 02:14:53±2.6,36°.974N±0°.009×97°.81W±0°.01,h1^{km}±5^{km}, ML2.8,mb_Lg2.6/20(NEIC),Error ellipse: s-maj=1.4km s-min=1.3km az=69.0*

NEIC 10 02:14:53.7±0.4,**36°.934N**±0°.010×**97°.83W**±0°.01,**h6**^{km}±2^{km}, **Error ellipse: s-maj=1.5km s-min=1.2km az=146.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GC02	Grant County #	0.09	196	Pg	Pg	02 14 55.9	+0.2
GC02				Sg	Sg	02 14 57.5	+0.4
KAN14	Manchester OK	0.11	282	Pg	Pg	02 14 56.1	0.0
KAN14				Sg	Sg	02 14 57.9	+0.2
KAN17	Caldwell West	0.12	25	Pg	Pg	02 14 56.3	-0.1
KAN17					Sg	02 14 58.1	0.0
KAN05	Bluff City Nor	0.18	349		Pg	02 14 57.2	-0.1
KAN05				Sg	Sg	02 14 59.8	0.0
KAN01	Argonia South	0.23	14	Pg	Pg	02 14 58.1	-0.1
KAN01				Sg	Sg	02 15 01.2	0.0
KAN09	Caldwell North	0.26	40	Pg	Pg	02 14 58.6	-0.3
KAN09				Sg	Sg	02 15 02.4	0.0
KAN10	Anthony SW Sta	0.28	312	Pg	Pg	02 14 59.3	0.0
KAN10				Sg	Sg	02 15 03.2	+0.1
KAN06	Argonia West S	0.31	356		Pg	02 14 59.8	-0.1
KAN08	Anthony NE Sta	0.31	339		Pg	02 14 59.8	-0.1
KAN16	Harper SW Stat	0.35	327	Pg	Pg	02 15 00.5	0.0
KS20	Mayfield South	0.37	37		Pb	02 15 02.8	+0.1
OK029	Liberty Lake	1.17	165		Pg	02 15 15.8	-0.5
OKCFA	Oklahoma City	1.55	168		Pn	02 15 21.0	-0.8
OKCFA				IAmb_Lg		02 15 45.9	
	comp=Z,64nm,0.8s						
OKCSW	OKLAHOMA CITY	1.56	168		Pn	02 15 19.9	-2.0
FNO	Franklin	1.71	168		Pn	02 15 24.0	0.0
FNO					Sg	02 15 49.3	+0.7
TUL1	Leonard	1.94	121	Pn	Pn	02 15 27.2	+0.1
TUL1				IAmb_Lg		02 15 57.7	
	comp=Z,42nm,0.8s						
WMOK	Wichita Mounta	2.32	200	Pn	Pn	02 15 32.6	+0.1
WMOK				IAmb_Lg		02 16 12.3	
	comp=Z,16nm,0.9s						
X34A	Smith Ranch, M	2.33	180	IAmb_Lg		02 16 08.2	
	comp=Z,33nm,0.9s						
KSU1	Kansas State U	2.37	24	Pn	Pn	02 15 32.1	-1.0
X37A	Clayton	3.08	139	IAmb_Lg		02 16 36.0	
	comp=Z,24nm,0.8s						
S39A	Bolivar	3.67	77	IAmb_Lg		02 16 54.4	
	comp=Z,9.8nm,0.9s						
W39A	Magazine	3.71	117	IAmb_Lg		02 16 55.2	
	comp=Z,16nm,0.8s						
AMTX	Amarillo	3.74	238	IAmb_Lg		02 16 57.2	
	comp=Z,11nm,0.8s						
U40A	Yellville	4.04	97	IAmb_Lg		02 17 03.9	
	comp=Z,14nm,0.8s						
KSCO	Kaye Shedlock’	4.32	300	IAmb_Lg		02 17 20.0	
	comp=Z,14nm,0.8s						
X40A	Basin Creek Fa	4.74	120	IAmb_Lg		02 17 25.4	
	comp=Z,10nm,0.8s						

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*IDC **10** 02:16:34.2±0.5,9°.29S×67°.07E,h0^{km},mb4.3/22, mb1 4.5/22,mb1mx4.3/50,mbtmp4.3/22,MS3.8/30, Ms1 3.8/30,ms1mx3.7/41,Error ellipse: s-maj=17.2km s-min=12.5km az=163.0*

*NEIC **10** 02:16:36.5±1.8,9°.31S±0°.09×67°.14E±0°.06,h10^{km}±1^{km}, mb4.7/26,Error ellipse: s-maj=16.7km s-min=7.5km az=208.0*

*GCMT **10** 02:16:40.5±0.2,9°.29S±0°.01×66°.98E±0°.01,h21^{km}±1^{km}, MW5.0/108,Moment Tensor Solution. s42,c51; s108,c160; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.09±.13; $M_{\theta\theta}$-3.85±.10; $M_{\phi\phi}$3.94±.11; $M_{r\theta}$-0.71±.20; $M_{\theta\phi}$0.90±.09; $M_{\phi r}$0.66±.18; Best double couple: $M_0$4.11400×10^{16} NP1:ϕ_s51.00000°,δ77.00000°, λ-2.00000°. NP2:ϕ_s142.00000°,δ88.00000°, λ-167.00000°. Principal axes: T 4.1210, Plg8.0000°, Azm276.0000°; N -0.0170, Plg76.0000°, Azm151.0000°; P -4.1060, Plg11.0000°, Azm7.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 02:16:36.7±0.5,**9°.26S**±0°.09×**67°.10E**±0°.07,**h15**^{km}**,n98,** σ**1^s.11**/81,**mb4.5**/43,**MS3.8**/30,**Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DGAR	Diego Garcia	5.61	71	Pn	Pn	02 17 58.6	-1.0
MSEY	Mahe Island	12.40	291	Pn	Pn	02 19 33.3	+0.4
PALK	Pallekele	21.30	40	LR	LR	02 27 31.3	
	comp=Z,396nm,21.5s,baz=323,slow=31						
OPO	Ambohidratompo	21.41	242	P	P	02 21 24.7	+0.3
	14nm,1.0s,baz=46,slow=11,SNR=10						
VOI	Vohitsoka	23.21	235	P	P	02 21 42.8	-0.7
VOI				IAmb	IAmb	02 22 02.5	
	comp=Z,20nm,1.1s						
KIBK	Kibwezi	29.69	282	P	P	02 22 42.5	-0.1
KIBK				IAmb	IAmb	02 22 44.5	
	comp=Z,17nm,1.1s						
KMBO	Kilima Mbogo	30.78	283	P	P	02 22 52.9	+0.5
	comp=Z,5.8nm,0.9s,baz=70,slow=10,SNR=12						
KMBO				LR	LR	02 33 26.1	
	comp=Z,114nm,20.2s,baz=128,slow=33						
KMBO	Kilima Mbogo	30.78	283	P	P	02 22 52.8	+0.5
KMBO				IAmb	IAmb	02 22 54.1	
	comp=Z,14nm,1.2s						
LODK	Lodwar	34.05	290	P	P	02 23 21.6	+0.9
MBAR	Mbarara	37.20	281	P	P	02 23 49.0	+1.0
	comp=Z,3.6nm,0.2s,baz=95,slow=9.0,SNR=4.9						
MBAR	Mbarara	37.20	281	P	P	02 23 47.3	-0.6
DSRI	Dabo	38.31	79	P	P	02 23 57.3	+0.1
LSZ	Lusaka	38.45	257	P	P	02 23 58.2	-0.3
	comp=Z,21nm,1.0s,baz=83,slow=7.4,SNR=46						
MATP	Matopo	38.83	249	P	P	02 24 00.8	-0.9
	comp=Z,2.4nm,0.8s,baz=63,slow=19,SNR=4.1						
RAYN	Ar Rayn	38.83	327	P	P	02 24 02.1	+0.7
LEM	Lembang	40.18	90	LR	LR	02 37 57.0	

	comp=Z,103nm,18.9s,baz=230,slow=32						
CMAR	Chiang Mai Arr	41.79	49	P	P	02 24 27.3	+1.3
	comp=Z,2.0nm,0.3s,baz=240,slow=9.4,SNR=12						
CMAR				LR	LR	02 41 01.3	
	comp=Z,87nm,18.2s,baz=272,slow=35						
CMAR	Chiang Mai Arr	41.79	49	P	P	02 24 26.1	+0.2
LBTB	Lobatse	42.44	243	P	P	02 24 30.0	-1.4
	comp=Z,6.7nm,0.9s,baz=99,slow=7.2,SNR=7.2						
LBTB	Lobatse	42.44	243	P	P	02 24 31.6	+0.2
LBTB				IAmb	IAmb	02 24 32.3	
	comp=Z,16nm,1.1s						
BOSA	Boshof	43.72	238	P	P	02 24 40.4	-1.3
	comp=Z,4.4nm,0.6s,baz=70,slow=7.0,SNR=11						
BOSA				LR	LR	02 41 14.1	
	comp=Z,90nm,18.2s,baz=80,slow=34						
BOSA	Boshof	43.72	238	P	P	02 24 40.6	-1.1
GEYT	Alibeck	47.69	350	LR	LR	02 43 31.7	
	comp=Z,102nm,19.0s,baz=280,slow=34						
GAR	Garm	48.10	3	P	P	02 25 15.5	-0.6
BTK	Batken	49.19	4	P	P	02 25 25.0	+0.6
BTK				IAmb	IAmb	02 25 26.5	
	comp=Z,11nm,1.1s						
KSH	Kashi	49.22	9	P	P	02 25 22.4	-2.3
KSH				pP	pP	02 25 26.1	-1.8
KSH				sP	sP	02 25 31.9	+2.7
KSH				pmax	pmax		
	comp=Z,30nm,0.9s						
H01W3	Cape Leeuwin H	49.90	128	T	T	03 19 07.4	
	baz=291,slow=75						
H01W2	Cape Leeuwin H	49.91	128	T	T	03 19 06.6	
	baz=291,slow=75						
H01W1	Cape Leeuwin H	49.92	128	T	T	03 19 08.6	
	baz=291,slow=75						
NWAO	Narrogin (SRO)	51.78	125	LR	LR	02 43 01.5	
	comp=Z,143nm,21.6s,baz=42,slow=31						
AAK	Ala-Archa	52.09	7	P	P	02 25 46.6	+0.3
AAK				IAmb	IAmb	02 25 48.6	
	comp=Z,5.8nm,0.9s						
KKAR	Karatay Array	52.20	3	P	P	02 25 46.7	-0.3
KBZ	Khabaz	57.14	339	P	P	02 26 23.1	+0.3
	comp=Z,4.0nm,1.0s,baz=61,slow=3.0,SNR=4.6						
KBZ				LR	LR	02 50 01.6	
	comp=Z,55nm,18.2s,baz=167,slow=35						
GTA	Gaotai	57.16	30	*e*P	P	02 26 24.7	+1.5
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
FITZ	Fitzroy Crossi	57.36	106	P	P	02 26 26.1	+1.2
	comp=Z,3.6nm,0.9s,baz=267,slow=5.1,SNR=3.8						
MK31	Makanchi Array	57.43	12	P	P	02 26 24.6	-0.3
MKAR	Makanchi Array	57.43	12	P	P	02 26 24.6	-0.2
	comp=Z,1.6nm,0.7s,baz=197,slow=7.5,SNR=12						
MKAR				LR	LR	02 51 14.8	
	comp=Z,82nm,18.1s,baz=198,slow=36						
MKAR	Makanchi Array	57.43	12	P	P	02 26 24.4	-0.4
BRTR	Keskin Array B	57.77	330	P	P	02 26 27.8	+0.3
	comp=Z,1.7nm,0.8s,baz=109,slow=11,SNR=4.5						
BRTR				LR	LR	02 51 00.7	
	comp=Z,125nm,18.1s,baz=152,slow=36						
BRTR	Keskin Array B	57.77	330	P	P	02 26 27.5	0.0
MAW	Mawson	58.34	182	LR	LR	02 45 07.1	
	comp=Z,79nm,21.7s,baz=52,slow=29						
ABKAR	Akbulak array	58.60	355	P	P	02 26 33.2	+0.2
ABKAR	Akbulak array	58.60	355	P	P	02 26 32.5	-0.5
ABKAR				IAmb	IAmb	02 26 34.2	
	comp=Z,19nm,1.4s						
KURK	Kurchatov	60.56	8	P	P	02 26 45.9	-0.5
KURK				IAmb	IAmb	02 26 47.8	
	comp=Z,10nm,1.0s						
BRVK	Borovoye	62.13	2	P	P	02 26 55.9	-1.1
BRVK				IAmb	IAmb	02 26 58.3	
	comp=Z,5.3nm,0.8s						
ZAA0	Zalesovo Array	64.73	11	P	P	02 27 13.8	-0.4
ZAA0				IAmb	IAmb	02 27 14.9	
	comp=Z,4.4nm,0.9s						
ZALV	Zalesovo Beam	64.73	11	P	P	02 27 13.0	-1.2
	comp=Z,3.3nm,0.7s,baz=209,slow=6.3,SNR=16						
ZALV				LR	LR	02 55 01.0	
	comp=Z,50nm,18.1s,baz=173,slow=36						
ZALV	Zalesovo Beam	64.73	11	P	P	02 27 12.9	-1.2
ASAR	Alice Springs	65.15	112	P	P	02 27 17.4	-0.2
	comp=Z,5.5nm,0.9s,baz=258,slow=6.3,SNR=14						
ASAR				LR	LR	02 54 40.7	
	comp=Z,71nm,18.2s,baz=270,slow=35						
ASAR	Alice Springs	65.15	112	P	P	02 27 17.6	0.0
VTS	Vitosha	65.32	326	P	P	02 27 18.6	+0.1
VTS				IAmb	IAmb	02 27 30.7	
	comp=Z,3.7nm,0.9s						
WRA	Warramunga Arr	65.58	108	P	P	02 27 20.0	-0.5
	comp=Z,7.8nm,1.0s,baz=278,slow=6.2,SNR=13						
WRA				LR	LR	02 52 19.7	
	comp=Z,181nm,21.7s,baz=270,slow=33						
WRA	Warramunga Arr	65.58	108	P	P	02 27 19.8	-0.7
WB2	Warramunga Arr	65.59	108	P	P	02 27 19.5	-1.0
SONM	Songino Array	66.64	28	P	P	02 27 27.1	+0.3
	comp=Z,2.9nm,0.7s,baz=212,slow=7.2,SNR=18						
SONM				LR	LR	02 56 05.1	
	comp=Z,97nm,20.2s,baz=204,slow=36						
SONM	Songino Array	66.64	28	P	P	02 27 27.7	+0.9
SONM				IAmb	IAmb	02 27 29.4	
	comp=Z,4.5nm,1.0s						
AKASG	Malin Array Be	68.15	335	P	P	02 27 35.3	-0.9
	comp=Z,0.9nm,0.5s,baz=136,slow=5.6,SNR=6.3						
AKASG				LR	LR	02 59 11.8	
	comp=Z,31nm,18.3s,baz=335,slow=38						
TLY	Talaya	68.37	24	LR	LR	02 57 06.7	
	comp=Z,34nm,20.1s,baz=222,slow=36						
TORD	Torodi Ar. Bea	68.65	288	P	P	02 27 39.0	-1.1
	comp=Z,0.6nm,0.8s,baz=89,slow=4.1,SNR=4.8						
TORD				LR	LR	02 55 33.0	
	comp=Z,152nm,20.3s,baz=115,slow=34						
TORD	Torodi Ar. Bea	68.65	288	P	P	02 27 40.0	-0.1
TORD				IAmb	IAmb	02 27 55.3	
	comp=Z,15nm,2.0s						
KOLS	Kolonicke sedl	70.03	330	*e*P	P	02 27 51.1	+3.2
KEST	Kesra	70.39	313	LR	LR	02 57 25.9	
	comp=Z,65nm,18.7s,baz=289,slow=35						
CRVS	Cervenica-Dubn	70.41	330	*e*P	P	02 27 53.6	+3.4
STKA	Stephens Creek	72.03	120	LR	LR	02 57 01.9	
	comp=Z,88nm,19.0s,baz=223,slow=34						
ARSA	Arzberg	72.49	326	*i* P	P	02 28 05.0	+2.2
	comp=Z,2.9nm,1.0s						
OBKA	Obir	72.61	325	*e*P	P	02 28 06.1	+2.5
	comp=Z,3.2nm,1.3s						
CONA	Conrad Observa	72.70	327	*e*P	P	02 28 05.3	+1.1
	comp=Z,4.0nm,0.9s						
KLMR	Klimovskoe	73.21	346	*e*P	P	02 28 04.7	-2.0
KLMR				AMP		02 28 08.3	
	comp=Z,30nm,1.4s						
KLMR				*e*PP	PP	02 30 46.1	-4.0
KSRS	Korea Array	73.37	46	LR	LR	03 01 22.7	
	comp=Z,53nm,18.1s,baz=244,slow=37						
DBIC	Dimbokro	73.42	280	P	P	02 28 08.8	-0.3
	comp=Z,3.6nm,0.8s,baz=94,slow=4.4,SNR=4.9						
DBIC				LR	LR	02 58 56.6	
	comp=Z,77nm,19.4s,baz=128,slow=35						
MOA	Molln	73.53	326	*e*P	P	02 28 09.3	+0.2
	comp=Z,5.1nm,1.4s						
ABTA	Abfaltersbach	73.90	324	*i* P	P	02 28 12.2	+0.9
	comp=Z,6.2nm,1.0s						
GERES	GERESS Array B	74.41	327	LR	LR	03 00 14.9	
	comp=Z,48nm,20.6s,baz=247,slow=35						
WTTA	Wattenberg	74.69	324	*e*P	P	02 28 17.1	+1.1
	comp=Z,8.4nm,0.7s						
WATA	Walderalm	74.76	324	*i* P	P	02 28 17.8	+1.5
	comp=Z,5.7nm,0.8s						
SNAA	Sanae	75.00	198	P	P	02 28 17.6	+0.3
SNAA	Sanae	75.00	198	P	P	02 28 17.6	+0.3
MOTA	Moosalm	75.03	324	*i* P	P	02 28 19.0	+1.1
	comp=Z,7.1nm,1.0s						
FETA	Feichten	75.08	324	*e*P	P	02 28 19.6	+1.4
	comp=Z,6.9nm,1.0s						
CLL	Collm	76.18	328	*e*(P)	P	02 28 26.0	+1.8
CLL				*e*		02 28 33.0	
VNA2	Neumayer--Watz	76.25	199	P	P	02 28 24.9	+0.6
	baz=65,slow=6.1						
VNA1	Neumayer--Stat	76.47	199	P	P	02 28 25.8	+0.2
SENIN	Lac Senin/Sane	76.79	322	P	P	02 28 28.8	+0.7
SENIN				IAmb	IAmb	02 28 33.7	
	comp=Z,5.0nm,0.9s						
VNA3	Neumayer Olymp	77.03	199	P	P	02 28 29.2	+0.4
FINES	FINESS Array B	77.43	341	LR	LR	03 02 19.3	
	comp=Z,48nm,19.6s,baz=152,slow=35						
NRIK	Noril'sk	79.70	7	LR	LR	03 05 56.8	
	comp=Z,108nm,18.2s,baz=221,slow=37						
MJAR	Matsushiro Arr	80.64	51	LR	LR	03 03 14.8	
	comp=Z,27nm,19.8s,baz=300,slow=35						
QSPA	South Pole Qui	80.78	180	P	P	02 28 50.0	+0.4
QSPA				IAmb	IAmb	02 29 07.6	
	comp=Z,5.1nm,0.9s						
ESDC	Sonseca Array	81.63	312	P	P	02 28 54.8	+0.3
	comp=Z,2.0nm,0.8s,baz=100,slow=4.2,SNR=6.4						
ESDC				LR	LR	03 05 24.2	
	comp=Z,31nm,18.0s,baz=290,slow=36						
VNDA	Vanda	82.05	167	P	P	02 28 56.3	+0.3
	comp=Z,0.4nm,0.8s,baz=248,slow=5.4,SNR=1.5						
VNDA				LR	LR	02 59 12.1	
	comp=Z,78nm,21.6s,baz=324,slow=31						
ARCES	ARCESS Array B	83.69	346	P	P	02 29 04.5	+0.1
	comp=Z,4.3nm,0.9s,baz=136,slow=5.6,SNR=4.3						
SEY	Seymchan	96.03	27	LR	LR	03 14 14.1	
	comp=Z,113nm,21.4s,baz=266,slow=36						
PETK	Petropavlovsk-	97.69	37	LR	LR	03 18 06.1	
	comp=Z,14nm,19.3s,baz=248,slow=38						
PDAR	Pinedale Array	146.50	356	PKPbc	PKPdf	02 36 18.1	+1.4
	comp=Z,0.7nm,0.7s,baz=95,slow=1.1,SNR=6.0						
NVAR	Mina Array Bea	150.55	9	PKPbc	PKPbc	02 36 28.6	-0.1
	comp=Z,1.7nm,0.8s,baz=285,slow=1.8,SNR=8.7						
NVAR	Mina Array Bea	150.55	9		PKPbc	02 36 28.9	+0.2
TXAR	Lajitas Array	158.23	338	PKPab	PKPab	02 37 08.4	+0.5
	comp=Z,0.9nm,0.8s,baz=71,slow=3.3,SNR=9.1						
TXAR	Lajitas Array	158.23	338	PKPdf	PKPdf	02 36 34.2	0.0
TXAR					PKPab	02 37 08.6	+0.7

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*IDC **10** 02:21:54.0±1.9, 2°.93S×127°.89E, h48^{km}±20^{km}, mb3.8/3,*
mb1 4.0/7, mb1mx3.6/38, mbtmp4.1/7, ML4.0/3, MS3.4/4,
Ms1 3.4/4, ms1mx2.8/51, Error ellipse: s-maj=18.6km
s-min=10.9km az=89.0
*DJA **10** 02:21:53.4±0.2, 3°S±3°×12°8E±°, h47^{km}±9^{km}, M4.2/9,*
mb4.4/8, mB4.5/3, MLv4.2/9, Mw(mB)3.7/3
ISC 10 02:21:53.0±0.7, **2°.87S**±0°.07×**127°.79E**±0°.06, **h38**^{km}, **n23**,
σ**1^{s}77**/23, **mb4.0**/3, **Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	Masohi	1.23	113	P	Pn	02 22 16.1	+2.4
SANI	Sanana	1.98	294	P	Pn	02 22 21.5	-2.4
SANI				S	Sn	02 22 43.6	-3.8
SWI	Sorong	4.00	60	P	Pn	02 22 50.9	-0.8
SIJI	Sorong	4.00	60	P	Pn	02 22 51.7	-0.1
	15nm,0.3s,baz=252,slow=8.8,SNR=45						
SIJI				S	Sn	02 23 37.7	+0.2
	6.7nm,0.3s,baz=80,slow=21,SNR=12						
FAKI	Fak Fak	4.45	91	P	Pn	02 22 57.6	-0.4
GTOI	Gorontalo	5.91	306	P	Pn	02 23 20.1	+2.1
	0.1nm162nm12nm,0.8s						
APSI	Ampana	6.44	287	P	Pn	02 23 26.3	+1.0
	0.3nm963nm103nm,1.0s						
SOEI	Soe	7.69	207	P	Pn	02 24 02.0	+19
BKSI	Bulukumba	8.03	252	P	Pn	02 23 49.6	+2.5
	304nm23nm,0.8s						
KAPI	Kappang	8.30	255	P	Pn	02 23 52.3	+1.5
	baz=74,slow=4.8,SNR=5.2						
KAPI				LR	LR	02 27 21.4	
	comp=Z,128nm,19.1s,baz=115,slow=39						
BATI	Baumata	8.36	209	LR	LR	02 27 11.3	
	comp=Z,171nm,18.3s,baz=5.5,slow=38						
EDFI	Ende, Flores	8.42	226	P	Pn	02 23 55.4	+2.8
	7.8nm,0.6s						
FITZ	Fitzroy Crossi	15.28	188	P	Pn	02 25 25.8	-0.3
	0.2nm,0.3s,baz=35,slow=9.5,SNR=9.0						
WRA	Warramunga Arr	18.14	160	P	Pn	02 26 00.6	-1.5
	0.8nm,0.3s,baz=343,slow=12,SNR=15						
WRA				S	Sn	02 29 23.3	-0.2
	0.1nm,0.3s,baz=347,slow=22,SNR=3.1						
KPJI	Karang Pucung	19.30	256	P	Pn	02 26 16.5	+0.4
PMG	Port Moresby	20.32	110	LR	LR	02 36 25.3	
	comp=Z,86nm,18.9s,baz=216,slow=43						
ASAR	Alice Springs	21.51	165	P	P	02 26 37.8	-1.0
	6.4nm,0.8s,baz=343,slow=9.9,SNR=61						
ASAR				S	S	02 30 33.0	-2.3
	1.7nm,0.8s,baz=346,slow=19,SNR=8.1						
MDSI	Maura Dua	23.62	265	P	P	02 27 02.7	+1.9
STKA	Stephens Creek	31.65	157	P	P	02 28 13.6	+0.9
	1.2nm,0.5s,baz=355,slow=12,SNR=2.1						
MKAR	Makanchi Array	63.59	327	P	P	02 32 20.5	+0.6
	1.0nm,0.8s,baz=126,slow=6.6,SNR=6.7						
DLBC	Dease Lake	98.81	31	LR	LR	03 15 25.6	
	comp=Z,66nm,21.6s,baz=324,slow=32						
TORD	Torodi Ar. Bea	125.76	284	PKP	PKPdf	02 40 51.0	-0.6
	0.5nm,0.9s,baz=43,slow=1.6,SNR=2.9						
CPUP	Villa Florida	150.55	171	PKPbc	PKPbc	02 41 41.7	+0.1
	2.9nm,1.0s,baz=91,slow=4.0,SNR=4.5						

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*IDC **10** 02:49:20.6±2.1, 17°.46S×178°.87W, h614^{km}±18^{km}, mb2.9/7,*
mb1 3.3/9, mb1mx3.0/34, mbtmp3.8/9, Error ellipse:
s-maj=91.1km s-min=18.3km az=151.0
ISC 10 02:49:19.3±1.6, **17°.5S**±0°.6×**178°.8W**±0°.4, **h600**^{km}, **n11**,
σ**0^{s}87**/12, **mb3.4**/7, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	3.04	266	P	P	02 50 40.8	+2.0
	3.1nm,0.3s,baz=133,slow=2.9,SNR=20						
DZM	Mont Dzumac	14.63	250	P	P	02 52 23.7	-0.5
	0.2nm,0.3s,baz=66,slow=20,SNR=1.7						
WRA	Warramunga Arr	44.36	259	P	P	02 56 37.6	-0.5
	0.5nm,0.5s,baz=95,slow=7.3,SNR=8.2						
ASAR	Alice Springs	44.56	254	P	P	02 56 39.6	-0.1
	1.8nm,0.5s,baz=86,slow=9.1,SNR=38						
ASAR				PcP	PcP	02 58 08.5	-0.9
	0.3nm,0.4s,baz=101,slow=3.9,SNR=2.2						
NVAR	Mina Array Bea	79.39	44	P	P	03 00 24.8	+0.2
	0.4nm,0.7s,baz=212,slow=8.5,SNR=2.6						
ILAR	Eielson Array	85.59	13	P	P	03 00 54.6	-0.3
	0.4nm,0.4s,baz=225,slow=4.9,SNR=12						
TXAR	Lajitas Array	86.08	58	P	P	03 00 58.7	+0.6
	0.4nm,0.7s,baz=224,slow=6.5,SNR=6.2						
PDAR	Pinedale Array	87.31	44	P	P	03 01 03.5	-0.2
	0.3nm,0.5s,baz=191,slow=4.5,SNR=3.5						
INK	Inuvik	91.61	15	P	P	03 01 22.4	-0.3
	2.1nm,1.1s,baz=209,slow=2.6,SNR=3.1						
ARCES	ARCESS Array B	125.88	350	PKP	PKPdf	03 07 12.5	-0.9
	3.7nm,0.9s,baz=97,slow=2.8,SNR=1.7						
GERES	GERESS Array B	147.16	345	PKPbc	PKPbc	03 07 55.9	-0.3
	0.9nm,0.6s,baz=10,slow=6.0,SNR=1.7						

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*WEL **10** 02:56:07.3±1.1, 37°S±8°×17°8E±°, h5^{km}, M3.4/19,*
ML3.7/19, MLv3.4/19, Error ellipse: s-maj=0.0km
s-min=0.0km az=19.5
*NOU **10** 02:56:08.5, 37°.40S×178°.04E, h26^{km}, MLv3.7/7, Off E.*
Coast of N. Island, N.Z.
ISC 10 02:56:07.8±1.4, **37°.35S**±0°.06×**177°.93E**±0°.04, **h13**^{km}±10^{km},
n86, σ**1^{s}11**/92, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	0.37	125	P	Pg	02 56 15.1	-0.1
MXZ				S	Sg	02 56 20.1	0.0
HAZ	Te Kaha	0.42	196	P	Pg	02 56 16.4	+0.2
PKGZ	Pakihiroa	0.55	168	P	Pg	02 56 18.6	+0.1
WMGZ	Waiomatatini S	0.61	141	P	Pb	02 56 20.3	+0.1
WMGZ				S	Sn	02 56 30.2	-1.6
WIZ	White Island	0.62	253	P	Pg	02 56 20.1	+0.3
RUGZ	Raukumara Rang	0.65	198	P	Pg	02 56 20.4	0.0
PUZ	Puketiti	0.77	160	P	Pn	02 56 23.6	-0.7
PUZ				S	Sn	02 56 35.0	-0.7
TWGZ	Tauwhareparae	0.83	177	P	Pn	02 56 24.9	-0.3
WHRZ	Whale Island	0.91	236	P	Pb	02 56 25.7	+0.2
MWZ	Matawai	1.03	198	P	Pb	02 56 27.4	-0.1
TKGZ	Te Karaka	1.09	183	P	Pg	02 56 29.6	+0.8
TKGZ				S	Sn	02 56 48.7	+5.0
URZ	Urewera	1.12	215	P	Pb	02 56 28.5	-0.4
URZ				S	Sb	02 56 42.4	-0.9
URZ	Urewera	1.12	215	P	Pb	02 56 28.5	-0.4
CNGZ	Carnagh Statio	1.15	169	P	Pg	02 56 31.3	+1.3
MARZ	Manawahe	1.18	237	P	Pn	02 56 29.4	-0.6
OPRZ	Ohinepanea	1.20	245	P	Pn	02 56 29.5	-0.8
EDRZ	Edgecumbe	1.21	231	P	Pn	02 56 29.9	-0.5
RAGZ	Rawiri	1.21	199	P	Pn	02 56 30.4	-0.1
RIGZ	Rimuhau	1.36	186	P	Pg	02 56 34.1	+0.2
TARZ	Mount Tarawera	1.43	232	P	Pn	02 56 33.8	+0.2
MUGZ	Murupara	1.45	219	P	Pn	02 56 33.3	-0.4
MUGZ				S	Sn	02 56 51.1	-1.6
RTZ	Ruatahuna	1.47	210	P	Pn	02 56 33.6	-0.5
RRRZ	Republican Roa	1.49	228	P	Pn	02 56 33.2	-1.1
KARZ	Kaharoa	1.50	243	P	Pn	02 56 34.0	-0.4
SNGZ	Shannon Statio	1.50	198	P	Pb	02 56 35.6	0.0
PRGZ	Paritu Road	1.57	181	P	Pb	02 56 36.6	-0.1
PRRZ	Plateau Road	1.67	226	P	Pn	02 56 36.7	-0.1
KNZ	Kokohu	1.68	187	P	Pn	02 56 37.3	+0.4
RAHZ	Arahi	1.70	203	P	Pn	02 56 37.2	0.0
MTHZ	Maungataniwha	1.73	210	P	Pn	02 56 37.2	-0.4
ALRZ	Allen Road	1.74	226	P	Pn	02 56 37.6	-0.1
MHGZ	Mahia Peninsul	1.80	181	P	Pn	02 56 39.3	+0.8
KUZ	Kuaotunu	1.87	288	P	Pn	02 56 38.5	-0.9
MRHZ	Matea Rd	1.90	218	P	Pn	02 56 39.8	-0.2
NMHZ	Naumai	1.96	207	P	Pn	02 56 41.2	+0.5
TOZ	Tahuroa Road	1.97	258	P	Pn	02 56 39.9	-0.9
ARHZ	Aropaoanui	2.05	201	P	Pb	02 56 44.0	-0.8
BKZ	Black Stump Fm	2.14	212	P	Pn	02 56 42.3	-0.9
BKZ	Black Stump Fm	2.14	212	P	Pn	02 56 43.0	-0.2
GRZ	Great Barrier	2.27	298	P	Pn	02 56 44.5	-0.4
MCHZ	McNeill Hill	2.31	205	P	Pn	02 56 46.9	+1.5
KWHZ	Kaweka Forest	2.39	209	P	Pn	02 56 47.3	+0.7
CKHZ	Cape Kidnapper	2.40	196	P	Pn	02 56 46.6	-0.1
ETAZ	East Tamaki Re	2.43	278	P	Pn	02 56 47.4	+0.2
TMVZ	Te Maari	2.49	224	P	Pn	02 56 48.3	+0.3
MBAZ	Motutapu North	2.50	283	P	Pn	02 56 48.1	+0.1
ETVZ	East Tongariro	2.50	224	P	Pn	02 56 48.4	+0.2
KRVZ	Karewarewa	2.51	225	P	Pn	02 56 48.8	+0.5
OTVZ	Oturere	2.54	224	P	Pn	02 56 49.2	+0.3
NNVZ	North Ngauruho	2.55	225	P	Pn	02 56 49.4	+0.5
WTVZ	West Tongariro	2.55	226	P	Pn	02 56 49.5	+0.5
SNVZ	South Ngauruho	2.57	224	P	Pn	02 56 49.6	+0.4
KAHZ	Kahuranaki	2.58	198	P	Pn	02 56 50.0	+0.8
NGZ	Ngauruhoe	2.59	224	P	Pn	02 56 49.9	+0.5
ABAZ	Army Bay	2.59	286	P	Pn	02 56 49.6	+0.3
BHHZ	Black Hill Sta	2.59	214	P	Pn	02 56 50.6	+1.2
TWVZ	Taurewa	2.61	228	P	Pb	02 56 53.0	-1.4
TUVZ	Tukino	2.62	222	P	Pn	02 56 50.2	+0.3
AWAZ	Awhitu Peninsu	2.64	275	P	Pn	02 56 50.5	+0.5
FWVZ	Far West T-bar	2.67	224	P	Pn	02 56 51.1	+0.4
MOVZ	Moawhango	2.67	219	P	Pn	02 56 50.3	-0.2
HIZ	Hauiti	2.69	244	P	Pn	02 56 51.1	+0.3
WNVZ	Wahianoa	2.69	222	P	Pn	02 56 51.7	+0.7
TRVZ	Turoa	2.70	223	P	Pn	02 56 53.1	+2.0
RVAZ	Riverhead Bore	2.74	281	P	Pn	02 56 51.9	+0.4
PXZ	Pawanui	2.80	197	P	Pn	02 56 52.0	-0.3
PNHZ	Pukenui	2.90	207	P	Pn	02 56 54.5	+0.9
PRHZ	Porangahau	3.08	199	P	Pn	02 56 55.4	-0.8
TSZ	Takapari Road	3.11	209	P	Pn	02 56 57.1	+0.6
WCZ	Waipu Caves	3.21	295	P	Pn	02 56 58.2	+0.3
DVHZ	Dannevirke	3.25	205	P	Pn	02 56 59.3	+0.8
NEZ	North Egmont	3.58	236	P	Pn	02 57 06.1	+3.1
BFZ	Birch Farm	3.58	201	P	Pn	02 57 03.1	+0.2
BFZ	Birch Farm	3.58	201	P	Pn	02 57 02.3	-0.6
PKE	Pukeiti	3.61	238	P	Pn	02 57 07.4	+4.0
KHEZ	Kahui Hut	3.64	237	P	Pn	02 57 07.2	+3.3
MRZ	Mangatainoka R	3.78	208	P	Pn	02 57 07.0	+1.3
HOWZ	Holdsworth Sta	4.01	207	P	Pn	02 57 08.8	-0.1
TMWZ	Te Maipa	4.07	202	P	Pn	02 57 08.8	-1.0
OUZ	Omahuta	4.10	300	P	Pn	02 57 10.9	+0.8
OUZ	Omahuta	4.10	300	P	Pn	02 57 10.7	+0.6
KIW	Kapiti Island	4.22	213	P	Pn	02 57 10.9	-0.9
KHZ	Kahutara	6.08	212	P	Pn	02 57 35.6	-1.7
KHZ	Kahutara	6.08	212	P	Pn	02 57 37.0	-0.3
CTZ	Chatham Island	7.61	149	P	Pn	02 57 59.0	+0.7
ODZ	Otahua Downs	9.44	213	P	Pn	02 58 21.5	-1.9

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*KRSC **10** 02:59:42.6±2.0, 52°.29N×162°.21E, h80^{km}±31^{km}, ML4.0*
*IDC **10** 02:59:43.4±1.9, 52°.91N×162°.24E, h0^{km}, mb3.6/2,*
mb1 4.0/4, mb1mx3.5/41, mbtmp3.7/4, ML4.7/1, MS2.5/1,
Ms1 2.5/1, ms1mx2.0/49, Error ellipse: s-maj=50.1km
s-min=21.0km az=12.0
*MOS **10** 02:59:44.1±0.6, 52°.28N×162°.29E, h34^{km}, mb4.3/3, Error*
ellipse: s-maj=11.4km s-min=6.1km az=123.7
*NEIC **10** 02:59:48.6±1.6, 52°.8N±0°.1×162°.08E±0°.07, h32^{km}±6^{km},*
mb4.2/6, Error ellipse: s-maj=19.9km s-min=4.8km
az=169.0
ISC 10 02:59:46.1±0.9, **52°.30N**±0°.06×**162°.26E**±0°.05, **h35**^{km}, **n71**,
σ**1^{s}45**/98, **mb4.1**/6, **Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPN	Mys Shipunski	1.58	301	PN	Pn	03 00 09.7	-1.9
SPN				S	Sn	03 00 28.5	-2.3
SPN	Mys Shipunski	1.58	301	*e*P	Pn	03 00 09.7	-1.9
SPN				*e*S	Sn	03 00 28.5	-2.3
NLC	Nalytchevo	1.98	297	PN	Pn	03 00 15.9	-1.1
NLC				S	Sn	03 00 39.1	-1.5
NLC	Nalytchevo	1.98	297	*e*P	Pn	03 00 15.9	-1.1
NLC				*e*S	Sn	03 00 39.1	-1.5
DALK	Dalny	2.26	290	PN	Pn	03 00 19.9	-1.0
DALK				S	Sn	03 00 46.4	-1.1
DALK	Dalny	2.26	290	*e*P	Pn	03 00 19.9	-1.0
DALK				*e*S	Sn	03 00 46.4	-1.1
SDLR	Sedlovina	2.27	297	PN	Pn	03 00 20.4	-0.9
SDLR				S	Sn	03 00 46.9	-1.2
SDLR	Sedlovina	2.27	297	*e*P	Pn	03 00 20.4	-0.9
SDLR				*e*S	Sn	03 00 46.9	-1.2
UGLR	Uglovaya	2.28	295	PN	Pn	03 00 20.5	-0.8
UGLR	Uglovaya	2.28	295	*e*P	Pn	03 00 20.5	-0.8
MKZ	Mys Kozlova	2.29	352	PN	Pn	03 00 20.0	-1.3
MKZ				S	Sn	03 00 46.2	-2.0
MKZ	Mys Kozlova	2.29	352	*e*P	Pn	03 00 20.0	-1.3
MKZ				*e*S	Sn	03 00 46.2	-2.0
RUS	Russkaya	2.30	275	PN	Pn	03 00 20.5	-1.0
RUS				S	Sn	03 00 46.6	-2.0
RUS	Russkaya	2.30	275	*e*P	Pn	03 00 20.5	-1.0
RUS				*e*S	Sn	03 00 46.6	-2.0
SMAR	Somma	2.31	296	PN	Pn	03 00 21.1	-0.8
SMAR	Somma	2.31	296	*e*P	Pn	03 00 21.1	-0.8
PET	Petropavlovsk	2.31	290	*e*PN	Pn	03 00 21.4	-0.3
PET				*e*S	Sn	03 00 47.8	-1.1
PET				pmax	pmax		
	comp=Z,31nm,0.5s						
PET				smax	smax		
	comp=E,187nm,0.6s						
PET				smax	smax		
	comp=N,234nm,0.8s						
PET	Petropavlovsk	2.31	290	*e*P	Pn	03 00 21.4	-0.3
PET				*e*S	Sn	03 00 47.8	-1.1
PET	Petropavlovsk	2.31	290	Pn	Pn	03 00 20.0	-1.7
PET				Sn	Sn	03 00 47.3	-1.6
AVH	Avacha	2.35	296	PN	Pn	03 00 21.9	-0.4
AVH	Avacha	2.35	296	*e*P	Pn	03 00 21.9	-0.4
KRER	Koryakskii	2.36	297	PN	Pn	03 00 22.0	-0.5
KRER	Koryakskii	2.36	297	*e*P	Pn	03 00 22.0	-0.5
KOK	Koryaka	2.42	296	PN	Pn	03 00 22.7	-0.5
KOK	Koryaka	2.42	296	*e*P	Pn	03 00 22.7	-0.5
KII	Karymskiy	2.43	317	PN	Pn	03 00 22.8	-0.6
KII	Karymskiy	2.43	317	*e*P	Pn	03 00 22.8	-0.6
MTVR	Mutnovka	2.50	276	*e*S	Sn	03 00 51.8	-2.0
KDTR	Khodutka, Kamc	2.63	261	PN	Pn	03 00 24.3	-1.7
KDTR	Khodutka, Kamc	2.63	261	*e*P	Pn	03 00 24.3	-1.7
KDTR				*e*S	Sn	03 00 53.3	-3.3
ASAK	Asacha	2.67	274	PN	Pn	03 00 26.6	-0.2
ASAK				S	Sn	03 00 57.0	-1.0
ASAK	Asacha	2.67	274	*e*P	Pn	03 00 26.6	-0.2
ASAK				*e*S	Sn	03 00 57.0	-1.0
PEA0B	Petropavlovsk-	2.89	288	PN	Pn	03 00 29.6	0.0
PEA0B	Petropavlovsk-	2.89	288		Pn	03 00 29.6	0.0
PEA0B					Sn	03 01 00.3	-2.9
PETK	Petropavlovsk-	2.89	288	Pn	Pn	03 00 28.9	-0.8
	comp=N,2.8nm,0.3s,baz=96,slow=18,SNR=80						
PETK				Sn	Sn	03 01 03.5	+0.3
	comp=N,6.1nm,0.3s,baz=5.7,slow=31,SNR=12						
PETK	Petropavlovsk-	2.89	288		Pn	03 00 30.4	+0.7
PETK				Sn	Sn	03 01 01.5	-1.7
GNL	Ganaly	2.96	300	PN	Pn	03 00 31.0	+0.3
GNL				S	Sn	03 01 04.1	-0.9
GNL	Ganaly	2.96	300	*e*P	Pn	03 00 31.0	+0.3
GNL				*e*S	Sn	03 01 04.1	-0.9
TUMD	Tumrok D	3.11	340	*e*P	Pn	03 00 32.1	-0.6
TUMD				*e*S	Sn	03 01 06.6	-2.1
APC	Apacha	3.17	283	PN	Pn	03 00 33.5	0.0
APC	Apacha	3.17	283	*e*P	Pn	03 00 33.5	0.0
TUMR	Tumrok	3.24	338	PN	Pn	03 00 32.1	-2.5
TUMR	Tumrok	3.24	338	*e*P	Pn	03 00 34.8	+0.2
TUMR				*e*S	Sn	03 01 11.2	-0.8
BKI	Bering	3.65	36	*e*S	Sn	03 01 17.1	-4.7
KMNR	Kamenistaya	3.67	342	PN	Pn	03 00 40.1	-0.3
KMNR				S	Sn	03 01 22.4	0.0
KMNR	Kamenistaya	3.67	342	*e*P	Pn	03 00 40.1	-0.3

KMNR eS Sn 03 01 22.4 0.0
KBTR Krutoberegovo 3.93 5 PN Pn 03 00 42.4 -1.5
KBTR Krutoberegovo 3.93 5 eP Pn 03 00 42.4 -1.5
KRSR Krestovskiy 4.05 346 PN Pn 03 00 46.0 +0.3
KRSR Krestovskiy 4.05 346 eP Pn 03 00 46.0 +0.3
SKR Severo-Kuril's 4.17 250 ePN Pn 03 00 45.6 -1.5
SKR Severo-Kuril's 4.17 250 eS Sn 03 01 31.3 -3.2
SMKR Semkarok 4.32 354 PN Pn 03 00 49.8 +0.5
SMKR Semkarok 4.32 354 eP Pn 03 00 49.8 +0.5
SMKR eS Sn 03 01 38.5 +0.1
SRKR Sorokina 4.41 352 PN Pn 03 00 50.7 +0.1
SRKR Sorokina 4.41 352 eP Pn 03 00 50.7 +0.1
MA2 Magadan 9.72 323 Pn Pn 03 02 01.3 -2.0
comp=N,0.8nm,0.3s,baz=137,slow=19,SNR=1.5
MA2 Magadan 9.72 323 Pn 03 02 00.5 -2.9
JKA Kamikawa-asahi 15.41 246 Pn P 03 03 25.4 +0.4
ASAJ Asahikawa 15.42 246 P P 03 03 25.4 +0.4
ASAJ pmax pmax
comp=Z,66nm,1.3s
MJAR Matsushiro Arr 23.15 237 LR LR 03 13 52.6
comp=Z,12nm,21.1s,baz=320,slow=36
MAJO Matsushiro 23.15 237 P P 03 04 52.9 +3.7
MAJO pmax pmax
comp=Z,8.0nm,1.0s
MAJO Matsushiro 23.15 237 P P 03 04 52.9 +3.7
MAJO IAmb IAmb 03 05 07.4
comp=Z,7.9nm,1.0s
TOLK Toolik Lake Re 27.82 36 P P 03 05 30.8 -0.9
SML Sawmill 27.84 51 P P 03 05 32.6 +0.7
SML IAmb IAmb 03 05 33.4
comp=Z,11nm,1.4s
MK31 Makanchi Array 49.69 297 P P 03 08 34.6 +0.3
MK31 pmax pmax
comp=Z,2.0nm,1.1s
MK31 Makanchi Array 49.69 297 P P 03 08 34.6 +0.3
MK31 IAmb IAmb 03 08 53.1
comp=Z,1.7nm,1.1s
MKAR Makanchi Array 49.69 297 P P 03 08 34.6 +0.3
comp=Z,0.5nm,0.8s,baz=52,slow=7.9,SNR=2.2
AAK Ala-Archa 56.61 298 P P 03 09 25.8 +0.4
AAK pmax pmax
comp=Z,3.0nm,1.1s
AAK Ala-Archa 56.61 298 P P 03 09 25.8 +0.4
AAK IAmb IAmb 03 09 28.1
comp=Z,2.7nm,1.1s
TXAR Lajitas Array 69.72 68 P P 03 10 53.8 +1.3
comp=Z,0.5nm,0.5s,baz=296,slow=5.1,SNR=16

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*NOU **10** 03:18:40.7, 21°.09S×178°.70W, h609^{km}, mb4.9/14, Fiji Islands Region*
*NEIC **10** 03:18:41.2±1.4, 20°.8S±0°.1×178°.8W±0°.1, h601^{km}±10^{km}, mb4.3/47, Error ellipse: s-maj=21.2km s-min=17.1km az=155.0*
*IDC **10** 03:18:42.8±1.3, 20°.87S×178°.90W, h608^{km}±12^{km}, mb3.6/13, mb1 3.8/16, mb1mx3.6/31, mbtmp4.5/16, Error ellipse: s-maj=23.4km s-min=12.7km az=150.0*
ISC 10 03:18:42.4±0.4, **21°.07S**±0°.07×**178°.84W**±0°.07, **h619**^{km}, **n163**, σ1^s**12**/172, **mb4.3**/38, **43C-1D, Fiji Islands region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MSVF Nonsavu 4.43 318 P P 03 20 11.1 -1.4
26nm,0.3s,baz=147,slow=6.2,SNR=156
MSVF S S 03 21 23.1 -2.7
baz=245,slow=21,SNR=0.7
MSVF Nonsavu 4.43 318 P 03 20 09.7 -2.8
MSVF Nonsavu 4.43 318 P P 03 20 11.1 -1.4
DGTI Dogotuki 4.93 344 P P 03 20 14.2 -1.9
RAO Raoul Island 8.19 174 P P 03 20 42.0 -2.0
24nm,0.3s,baz=171,slow=22,SNR=2.7
RAO S S 03 22 20.5 -3.3
14nm,0.3s,baz=233,slow=23,SNR=1.6
RAO Raoul Island 8.19 174 P P 03 20 44.7 +0.7
NIUE Niue 8.61 78 P P 03 20 46.0 -2.2
NIUE Niue 8.61 78 P P 03 20 45.9 -2.3
MARNC Mare, Loyalty 12.25 266 P P 03 21 22.6 -1.0
MARNC Mare, Loyalty 12.25 266 P P 03 21 23.3 -0.3
RTV Rentapao 12.45 283 P P 03 21 25.9 +0.3
47µm,1.2s
PINNC Pines Island, 12.83 261 P P 03 21 29.2 0.0
LIFNC LIFOU 13.01 269 P P 03 21 28.4 -2.6
LIFNC LIFOU 13.01 269 P P 03 21 29.0 -2.0
YATNC Mamie plateau, 13.31 263 P P 03 21 34.0 0.0
DZM Mont Dzumac 13.73 263 P P 03 21 37.9 -0.2
1.2nm,0.3s,baz=103,slow=20,SNR=11
DZM Mont Dzumac 13.73 263 P P 03 21 37.7 -0.5
DZM Mont Dzumac 13.73 263 P P 03 21 38.3 +0.1
URZ Urewera 17.48 191 S S 03 24 58.2 -4.4
0.1nm,0.3s,baz=299,slow=23,SNR=1.7
RAR Rarotonga 17.79 94 P P 03 22 16.5 +1.2
0.8nm,0.3s,baz=292,slow=14,SNR=2.2
QRZ Quartz Range 21.01 199 P P 03 22 45.0 +0.9
THZ Tophouse 21.77 197 P P 03 22 52.6 +1.6
THZ IAmb IAmb 03 23 08.1
comp=Z,13nm,1.2s
KHZ Kahutara 22.23 195 P P 03 22 52.7 -2.2
EIDS Eidsvold 27.94 255 P P 03 23 46.1 +0.7
ARMA Armidale 28.11 245 P P 03 23 47.9 +0.9
ARMA IAmb IAmb 03 23 50.0
comp=Z,2.9nm,0.8s
CTAO Charters Tower 32.65 265 P P 03 24 26.4 +0.6
STKA Stephens Creek 36.83 245 P P 03 25 01.9 +1.7
comp=Z,1.8nm,0.5s,baz=83,slow=11,SNR=8.6
STKA Stephens Creek 36.83 245 P P 03 25 01.3 +1.1
COEN Coen 36.84 275 P P 03 25 00.8 +0.3
COEN IAmb IAmb 03 25 02.1
comp=Z,6.5nm,0.8s
BBOO Buckleboo 41.59 244 P P 03 25 38.7 +0.5
BBOO IAmb IAmb 03 25 54.1
comp=Z,9.4nm,1.0s
WR0 Warramunga Arr 43.55 263 P P 03 25 53.6 -0.1
WR0 IAmb IAmb 03 25 54.8
comp=Z,3.2nm,0.5s
AS31 Alice Springs 43.62 257 P P 03 25 54.9 +0.7
ASAR Alice Springs 43.62 257 P P 03 25 54.9 +0.7
comp=Z,7.3nm,0.5s,baz=97,slow=7.7,SNR=135
ASAR PcP PcP 03 27 28.5 +1.1
comp=Z,2.2nm,0.6s,baz=103,slow=3.8,SNR=10.0
ASAR ScP ScP 03 30 24.4 +3.5
comp=Z,1.1nm,0.7s,baz=101,slow=4.0,SNR=6.8
ASAR S S 03 31 39.1 -1.5
comp=Z,2.4nm,0.8s,baz=92,slow=15,SNR=16
ASAR Alice Springs 43.62 257 P P 03 25 54.6 +0.4
WB0 Warramunga Arr 43.73 263 P P 03 25 55.3 +0.3
WB0 IAmb IAmb 03 26 05.6
comp=Z,3.8nm,0.6s
WB2 Warramunga Arr 43.73 263 P P 03 25 55.0 -0.1
WB2 IAmb IAmb 03 25 55.9
comp=Z,13nm,1.0s
WRAB Tennant Creek 43.74 263 P P 03 25 54.8 -0.3
WRAB IAmb IAmb 03 25 56.0
comp=Z,10nm,1.0s
WRA Warramunga Arr 43.74 263 P P 03 25 55.1 0.0
comp=Z,2.9nm,0.3s,baz=97,slow=8.6,SNR=34
WRA PcP PcP 03 27 29.0 +1.2
comp=Z,1.0nm,0.6s,baz=89,slow=4.5,SNR=3.6
WRA S S 03 31 39.6 -2.7
comp=Z,1.5nm,0.8s,baz=97,slow=12,SNR=6.3
WRA Warramunga Arr 43.74 263 P P 03 25 54.7 -0.5
FORT Forrest 48.35 247 P P 03 26 30.2 +0.5
MTN Manton Dam 48.38 271 P P 03 26 30.3 +0.2
KNRA Kununurra 49.84 267 P P 03 26 40.3 -0.5
KNRA IAmb IAmb 03 26 41.9
comp=Z,10nm,0.6s
FITZ Fitzroy Crossi 52.17 263 P P 03 26 58.2 +0.6
PSA00 Pilbara Seismi 56.77 257 P P 03 27 29.6 -0.1
PSA00 Pilbara Seismi 56.77 257 P P 03 27 29.8 +0.1
PSA00 IAmb IAmb 03 27 30.8
comp=Z,12nm,0.8s
QSPA South Pole Qui 69.00 180 P P 03 28 50.0 +2.8
MJAR Matsushiro Arr 70.21 324 P P 03 28 54.3 -0.3
comp=Z,4.7nm,0.8s,baz=161,slow=5.8,SNR=8.6
PETK Petropavlovsk- 76.62 346 P P 03 29 30.5 -0.1
comp=Z,5.9nm,0.7s,baz=123,slow=5.5,SNR=9.6
KSRS Korea Array 76.80 319 P P 03 29 32.8 +0.9
comp=Z,1.5nm,0.7s,baz=137,slow=6.4,SNR=3.2
USRK Ussuriysk Ar. 79.00 326 P P 03 29 44.7 +1.2
comp=Z,7.5nm,0.9s,baz=142,slow=3.9,SNR=8.4
NVAR Mina Array Bea 81.98 44 P P 03 30 00.7 +1.4
comp=Z,1.9nm,0.8s,baz=225,slow=8.1,SNR=12
KVN Kaiserville 82.46 43 P P 03 30 00.1 -1.6
TPH Tonopah 82.48 44 P P 03 30 00.5 -1.4
MOD Modoc Plateau 82.76 40 P P 03 30 01.7 -1.3
K05A Summer Lake 82.90 39 P P 03 30 02.7 -1.1
K05A IAmb IAmb 03 30 06.2
comp=Z,6.1nm,0.8s
O18K Koktuh Hills 82.92 12 P P 03 30 03.0 -0.3
O18K IAmb IAmb 03 30 03.6
comp=Z,12nm,0.7s
H04A Detroit Lake 83.36 37 P P 03 30 05.9 +0.1
O19K Port Alsworth 83.41 12 P P 03 30 04.7 -0.9
PINE Pine Mountain 83.52 38 P P 03 30 06.9 +0.1
PINE IAmb IAmb 03 30 09.5
comp=Z,8.5nm,0.8s
SEY Seymchan 86.75 347 P P 03 30 21.9 +0.2
comp=Z,4.5nm,0.7s,baz=173,slow=8.1,SNR=8.0
CAST Castle Rocks 86.79 12 P P 03 30 20.6 -1.3
CAST IAmb IAmb 03 30 21.3
comp=Z,6.8nm,0.8s
VRDI Verde Repeater 86.82 16 P P 03 30 22.1 -0.2
VRDI IAmb IAmb 03 30 31.8
comp=Z,8.9nm,1.2s
N25K Chitina, Valde 86.84 16 P P 03 30 22.2 -0.1
N25K IAmb IAmb 03 30 31.2
comp=Z,5.9nm,0.9s
F10A Beach Ranch, E 86.93 38 P P 03 30 21.7 -1.3
F10A IAmb IAmb 03 30 24.7
comp=Z,7.0nm,0.8s
B08A Colville Reser 87.15 35 P P 03 30 23.5 -0.4
B08A IAmb IAmb 03 30 25.3
comp=Z,4.7nm,0.8s
TRF Thorofare Moun 87.17 12 P P 03 30 22.9 -1.0
RND Reindeer 87.43 13 P P 03 30 24.9 0.0
DHY Denali Highway 87.46 14 P P 03 30 24.9 -0.2
DHY IAmb IAmb 03 30 31.8
comp=Z,5.8nm,1.1s
SNAA Sanae 87.46 179 P P 03 30 27.1 +1.9
MCK McKinley 87.70 13 P P 03 30 25.2 -0.9
TXAR Lajitas Array 88.03 58 P P 03 30 30.7 +2.1
comp=Z,1.0nm,0.8s,baz=219,slow=5.0,SNR=11
I21K Tanana 88.42 11 P P 03 30 28.4 -0.9
WRH Wood River Hil 88.53 13 P P 03 30 29.2 -0.7
DOT Dot Lake 88.71 15 P P 03 30 30.2 -0.6
DOT IAmb IAmb 03 30 31.7
comp=Z,5.3nm,0.8s
HDA Harding Lake 88.72 13 P P 03 30 30.2 -0.7
HDA IAmb IAmb 03 30 30.7
comp=Z,9.6nm,1.1s
CCB Clear Creek Bu 88.74 13 P P 03 30 30.0 -0.9
MDM Murphy Dome 88.93 13 P P 03 30 30.6 -1.2
MDM IAmb IAmb 03 30 32.0
comp=Z,6.0nm,0.9s
SCRK Sand Creek 89.01 15 P P 03 30 31.3 -1.1
SCRK IAmb IAmb 03 30 33.3
comp=Z,5.3nm,1.0s
IL31 89.05 13 P P 03 30 31.4 -0.9
IL31 IAmb IAmb 03 30 32.1
comp=Z,3.9nm,0.9s
ILAR Eielson Array 89.05 13 P P 03 30 31.6 -0.7
comp=Z,2.6nm,0.8s,baz=226,slow=5.4,SNR=23
ILAR Eielson Array 89.05 13 P P 03 30 31.5 -0.9
REDW Red Top Meadow 89.39 43 P P 03 30 36.0 +1.3
REDW IAmb IAmb 03 30 37.5
comp=Z,4.7nm,1.1s
CMAR Chiang Mai Arr 89.56 290 P P 03 30 37.6 +1.8
comp=Z,3.8nm,0.8s,baz=132,slow=2.7,SNR=16
PDAR Pinedale Array 89.92 44 P P 03 30 37.8 +0.6
comp=Z,1.1nm,0.7s,baz=195,slow=3.9,SNR=10.0
DAWY Dawson 90.22 16 P P 03 30 37.2 -0.7
ZALV Zalesovo Beam 110.44 321 PKiKP PKiKP 03 36 03.4 -1.8
comp=Z,0.9nm,0.5s,baz=116,slow=1.3,SNR=4.0
MKAR Makanchi Array 111.02 313 PKiKP PKiKP 03 36 04.0 -2.6
comp=Z,0.3nm,0.4s,baz=90,slow=1.2,SNR=4.4
ARCES ARCESS Array B 129.34 349 PKP PKPdf 03 36 41.4 +0.4
comp=Z,2.9nm,0.6s,baz=343,slow=1.6,SNR=11
FINES FINESS Array B 136.09 343 PKhKP PKPpre 03 36 45.0
comp=Z,5.3nm,1.1s,baz=270,slow=2.9,SNR=4.2
NOA NORSAR Array B 139.45 352 PKP PKiKP 03 37 02.3 -0.4
comp=Z,0.9nm,0.9s,baz=30,slow=2.8,SNR=1.3
BORU Boraas 142.50 350 *i* P PKPdf 03 37 02.6 -3.0
FABU Falkenberg 143.12 349 *i* P PKPab 03 37 04.8 0.0
FABU IAmb IAmb 03 37 05.3
comp=Z,16nm,0.7s
AKASG Malin Array Be 143.12 330 PKhKP PKPpre 03 37 04.5
comp=Z,12nm,0.5s,baz=42,slow=4.5,SNR=72
BLEU Blekinge 143.17 346 *i* P PKPab 03 37 04.4 -0.6
BLEU IAmb IAmb 03 37 04.9
comp=Z,4.6nm,0.6s
DEL Delary 143.41 348 *i* P PKPab 03 37 05.8 -0.1
DEL IAmb IAmb 03 37 06.0
comp=Z,11nm,0.6s
BJUU Bjuv 143.94 349 *i* P PKPbc 03 37 07.2 -0.6
LUNU Lund 144.28 348 *i* P PKPbc 03 37 09.0 +0.2
BSD Bornholm Skovb 144.46 346 *i* P PKPab 03 37 10.1 0.0
BSD IAmb IAmb 03 37 10.6
comp=Z,20nm,0.9s
SORM Soroca 145.27 327 ⇑P PKPbc 03 37 12.2 +0.2
PURM Purcari 145.50 324 ⇑P PKPbc 03 37 13.3 +0.6
BRTR Keskin Array B 146.63 311 PKPbc PKPbc 03 37 16.3 0.0
comp=Z,3.1nm,0.6s,baz=123,slow=4.6,SNR=5.6
VLDR Vladesti 146.90 325 ⇑P PKiKP 03 37 17.7 -0.6
TLCR 146.90 323 ⇑P PKPbc 03 37 17.2 +0.6
SCTR Scanteiesti 147.05 324 ⇑P PKiKP 03 37 18.1 -0.6
JURR Jurilovca 147.12 322 ⇑P PKPbc 03 37 18.0 +0.9
BURAR Bucovina Array 147.16 329 ⇑P PKiKP 03 37 19.6 +0.6
TESR Tescani 147.22 327 ⇑P PKPbc 03 37 18.1 +0.6
CFR Carcaliu 147.28 324 ⇑P PKPbc 03 37 18.3 +0.7
TPGR Topolog 147.32 323 ⇑P PKPbc 03 37 18.1 +0.4
TIRR Tirgusor 147.57 322 ⇑P PKPbc 03 37 19.1 +0.7
VRI Vrincioaia 147.60 326 ⇑P PKPbc 03 37 19.1 +0.6
VRI ⇑P PKPbc 03 37 19.1 +0.6
PLOR Plostina 147.66 326 ⇑P PKPbc 03 37 19.1 +0.5
HARR Harsova 147.70 323 ⇑P PKiKP 03 37 19.8 -0.3
MANR Mangalia 147.85 321 ⇑P PKiKP 03 37 20.2 -0.1
COVR Voineasa-Covas 147.89 326 ⇑ PKPdf 03 37 17.2 +1.9
NEHR Nehoiu 148.12 325 ⇑P PKPbc 03 37 20.4 +0.6
DOPR Dopca 148.23 327 ⇑P PKiKP 03 37 21.4 +0.2
MLR Muntele Rosu 148.26 326 ⇓P PKPbc 03 37 20.3 0.0
OSTC Ostas 148.27 342⇑ ePKP PKiKP 03 37 20.9 -0.2
CHVC Chvalec 148.29 342⇑ ePKP PKiKP 03 37 20.8 -0.4
DPC Dobruska-Polom 148.42 341⇑ ePKP PKPbc 03 37 20.9 +0.5
DPC ePKPAB PKPab 03 37 26.6 +0.4
CLL Collm 148.43 346 ePKPdf PKPdf 03 37 18.0 +2.1
CLL *i* PKPbc PKPbc 03 37 20.6 +0.3
comp=Z,17nm,1.1s
CLL *i* PKPab PKPab 03 37 26.1 0.0
SECR 148.50 325 ⇑P PKPbc 03 37 21.1 +0.4
MORC Moravsky Berou 148.54 339 ePKP PKiKP 03 37 21.6 -0.1
CJR Cluj-Napoca 148.58 330 ⇑P PKiKP 03 37 22.0 +0.1
BRG Berggiesshubel 148.61 344 *i* PKP PKiKP 03 37 21.6 -0.1
BRG Amp 03 37 22.4
comp=Z,6.0nm,0.9s
VOIR 148.76 327 ⇑P PKPbc 03 37 21.6 +0.2
DRGR 148.93 331 ⇑P PKiKP 03 37 22.4 -0.2
ARR Arges 149.03 327 ⇑P PKiKP 03 37 23.5 +0.6
RAZG Razgrad 149.20 323 ⇑P PKPbc 03 37 22.6 +0.2
VRAC Vranov 149.26 340 ⇑P PKPab 03 37 30.8 +1.1
VRAC Vranov 149.26 340 ePKP PKiKP 03 37 23.5 +0.3
VRAC e 03 37 30.4
PRU Pruhonice 149.26 343⇑ ePKP PKPbc 03 37 22.7 +0.4
JAVC Velka Javorina 149.29 338 ePKP PKiKP 03 37 24.6 +1.3
LOT Lotru 149.40 328 ⇑P PKPbc 03 37 22.6 -0.4
KRUC Moravsky 149.53 340 ePKP PKiKP 03 37 23.8 +0.1
KRUC e 03 37 31.1
SIRR Siria 149.80 331 ⇑P PKiKP 03 37 24.8 +0.4
GZR Gura Zlata 149.93 329 ⇑P PKPbc 03 37 24.5 +0.3
VLAD Vladila 150.08 325 ⇑P PKPdf 03 37 18.6 -0.1
KHC Kasperske Hory 150.30 343⇑ ePKP PKiKP 03 37 25.3 -0.1
KHC ePKPAB PKPab 03 37 34.4 +0.4
BZS Buzias 150.31 330 ⇑P PKiKP 03 37 25.7 +0.2
PLVB Pleven 150.37 324 ⇑P PKiKP 03 37 26.1 +0.5
CKRC Cesky Krumlov 150.38 342⇑ ePKP PKPbc 03 37 25.1 0.0
HERR Herculane 150.48 328 ⇑P PKiKP 03 37 26.0 +0.2
GERES GERESS Array B 150.53 343 PKPbc PKiKP 03 37 25.8 -0.1
comp=Z,3.1nm,0.7s,baz=0.0,slow=2.7,SNR=7.4
CONA Conrad Observa 150.70 340 eP PKiKP 03 37 26.9 +0.6
comp=Z,6.0nm,0.7s
MDVR Moldovita 150.89 329 ⇑P PKiKP 03 37 26.9 +0.2
MOA Molln 151.27 341 *i* P PKiKP 03 37 27.5 +0.1
comp=Z,1.8nm,0.5s
VTS Vitosha 151.64 324 ⇑P PKiKP 03 37 28.9 +0.4
BOVS Bovan 151.73 327 ⇑P PKPbc 03 37 28.1 -0.1
SOKA Soboth 152.07 339 *i* P PKPbc 03 37 29.1 +0.1
comp=Z,1.7nm,0.6s
OBKA Obir 152.37 340 eP PKPbc 03 37 29.6 -0.1
comp=Z,2.1nm,0.8s
WATA Walderalm 152.47 345 *i* P PKPbc 03 37 30.0 0.0
comp=Z,3.1nm,0.6s
WATA *i* P PKPab 03 37 43.6 +0.2
comp=Z,6.2nm,1.1s
WTTA Wattenberg 152.52 344 *i* P PKiKP 03 37 30.5 +0.3
comp=Z,3.7nm,0.5s
WTTA *i* P PKPab 03 37 44.1 +0.5
comp=Z,8.1nm,0.9s
RETA Reutte 152.52 346 *i* P PKPab 03 37 43.4 -0.1
comp=Z,5.4nm,0.8s
MYKA Terra Mystica 152.55 341 *i* P PKPbc 03 37 29.7 -0.4
comp=Z,2.2nm,0.5s
MYKA *i* P PKPab 03 37 43.3 -0.3
comp=Z,2.1nm,0.5s
MOTA Moosalm 152.58 345 *i* P PKiKP 03 37 30.3 0.0
comp=Z,6.2nm,1.0s
MOTA *i* P PKPab 03 37 44.0 +0.1
comp=Z,7.6nm,1.1s
SQTA Sankt Quirin 152.67 345 *i* P PKiKP 03 37 30.8 +0.3
comp=Z,3.5nm,0.6s
ABTA Abfaltersbach 152.77 343 eP PKPbc 03 37 30.4 -0.1
comp=Z,4.4nm,0.6s,SNR=6.6
FETA Feichten 152.97 346 *i* P PKiKP 03 37 31.2 +0.1
comp=Z,3.8nm,0.9s
PDG Podgorica 153.83 329 ⇑P PKPbc 03 37 32.7 -0.1
ESDC Sonseca Array 160.95 12 PKPab PKPab 03 38 19.3 -0.9
comp=Z,1.5nm,1.0s,baz=348,slow=4.5,SNR=7.4
TORD Torodi Ar. Bea 172.10 184 PKP PKPdf 03 37 42.2 +0.1
comp=Z,0.4nm,0.8s,baz=336,slow=2.3,SNR=2.8

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*IPEC **10** 03:19:17.9±0.2, 50°.07N×18°.47E, h1^{km}±2^{km}, ML2.1/3, Error ellipse: s-maj=1.9km s-min=1.1km az=163.0*
*PRU **10** 03:19:18.5±0.0, 50°.04N×18°.38E, h0^{km}*
ISC 10 03:19:17.9±0.8, **50°.08N**±0°.03×**18°.42E**±0°.02, **h0**^{km}, **n23**, σ**0**^{s}**96**/43, **Poland**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
RAC Raciborz 0.15 273 ePG Pg 03 19 22.3 +1.6
RAC eSG Sg 03 19 25.5 +2.9
OKC Ostrava-Krasne 0.30 217 ePG Pg 03 19 24.2 +0.6
OKC eSG Sg 03 19 28.3 +0.9
comp=Z,127nm,0.8s
MORC Moravsky Berou 0.64 243 ePg Pg 03 19 30.5 +0.3
baz=64
MORC eSg Sg 03 19 38.5 0.0
35nm,0.3s,baz=64
OJC Ojcow 0.90 80 ePg Pg 03 19 34.9 -0.2
OJC eSg Sg 03 19 46.8 +0.1
KRLC Kraliky 1.06 271 ePG Pg 03 19 37.4 -0.7
KRLC eSG Sg 03 19 51.1 -0.7
comp=Z,44nm,0.7s
LANS Liptovska Anna 1.15 143 ePG Pg 03 19 39.8 -0.1
LANS eSG Sn 03 19 57.7 0.0
LANS eLG Lg 03 20 00.0
JAVC Velka Javorina 1.31 202 ePg Pg 03 19 42.9 -0.1
baz=23
DPC Dobruska-Polom 1.38 282 ePG Pg 03 19 43.4 -0.9
DPC eSG Sg 03 20 02.5 +0.4
comp=Z,36nm,0.5s
VRAC Vranov 1.41 238 ePg Pn 03 19 44.3 -0.6
baz=57
VRAC eSg Sg 03 20 03.0 -0.3
17nm,0.4s,baz=57
OSTC Ostas 1.49 290 ePG Pn 03 19 45.5 -0.5
OSTC eSG Sg 03 20 06.3 +0.4
comp=Z,16nm,0.5s
KSP Ksiaz 1.56 300 ePg Pn 03 19 46.4 -0.5
KSP eSg Sn 03 20 08.1 +0.3
CHVC Chvalec 1.60 290 ePG Pn 03 19 47.4 -0.1
CHVC eSG Sn 03 20 08.8 -0.1
comp=Z,8.0nm,0.6s
UPC Upice 1.60 287 ePG Pn 03 19 48.0 +0.5
UPC eSG Sn 03 20 09.2 +0.3
comp=Z,14nm,0.7s
VYHS Vyhne 1.61 170 ePG Pn 03 19 46.8 -0.7
VYHS eSG Sg 03 20 09.1 -0.4
KRUC Moravsky 1.67 233 ePn Pn 03 19 48.2 -0.1
baz=53
KRUC eSg Sb 03 20 10.7 -0.2
20nm,0.6s,baz=53
MODS Modra-Piesok 1.86 204 ePG Pn 03 19 50.6 -0.4
MODS eSG Sn 03 20 14.4 -0.9
STHS Stebnicka Huta 1.95 109 ePN Pb 03 19 54.2 0.0
STHS eSN Sg 03 20 21.9 +1.5
PRU Pruhonice 2.50 269 eSG Sb 03 20 36.5 +1.5
comp=Z,9.7nm,0.9s
PVCC Panska Ves 2.51 282 eSG Sg 03 20 38.2 -0.3
comp=Z,16nm,0.6s
CKRC Cesky Krumlov 2.96 246 ePG Pb 03 20 12.1 +0.5
CKRC eSG Sg 03 20 51.4 -1.6
BRG Berggiesshubel 2.97 287 Pg Pg 03 20 13.8 -1.0
BRG Sg Sg 03 20 52.0 -1.2
BRG Amp 03 20 56.9
comp=Z,5.3nm,0.4s
KHC Kasperske Hory 3.29 255 ePN Pn 03 20 09.5 -1.2
KHC ePG Pb 03 20 18.5 +1.4
KHC eSG Sg 03 21 01.6 -1.9
comp=Z,11nm,0.7s
NKC Novy Kostel 3.84 275 eSG Sg 03 21 20.0 -1.4
comp=Z,3.7nm,0.5s

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*IDC **10** 03:20:14.5±2.8, 6°.43N×93°.66E, h0^{km}, mb3.5/4, mb1 3.8/6, mb1mx3.5/43, mbtmp3.7/6, ML4.1/2, MS3.4/3, Ms1 3.4/3, ms1mx2.8/34, Error ellipse: s-maj=89.3km s-min=25.5km az=61.0*
ISC 10 03:20:20.4±1.9, **6°.5N**±0°.2×**93°.9E**±0°.3, **h35**^{km}, **n12**, σ**1**^{s}**56**/7, **mb3.4**/4, **MS3.2**/3, **Nicobar Islands region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PSI Prapat 6.17 126 Pn Pn 03 21 49.6 +0.4
1.2nm,0.3s,baz=320,slow=14,SNR=6.4
PSI Sn Sn 03 22 57.0 -1.7
0.6nm,0.3s,baz=277,slow=21,SNR=1.8
CMAR Chiang Mai Arr 12.87 22 Pn Pn 03 23 21.6 +0.6
0.6nm,0.3s,baz=223,slow=13,SNR=0.9
H08S3 Diego Garcia H 25.57 237 T T 03 52 38.9
baz=56,slow=75,SNR=8.7
H08S2 Diego Garcia H 25.57 237 T T 03 52 39.1
baz=56,slow=75,SNR=7.9
H08S1 Diego Carcia H 25.59 237 T T 03 52 40.3
baz=56,slow=75,SNR=8.9
KAPI Kappang 28.19 113 LR LR 03 37 51.3
comp=Z,21nm,18.9s,baz=302,slow=37
MKAR Makanchi Array 41.40 348 P P 03 28 01.2 -2.1
0.5nm,0.6s,baz=170,slow=8.8,SNR=2.7
SONM Songino Array 42.56 12 P P 03 28 12.6 -0.3
0.3nm,0.5s,baz=205,slow=6.4,SNR=1.5
GEYT Alibeck 45.10 319 LR LR 03 51 14.5
comp=Z,28nm,18.2s,baz=20,slow=41
ZALV Zalesovo Beam 47.91 353 P P 03 28 55.6 +0.6
0.5nm,0.3s,baz=182,slow=7.2,SNR=1.9
ASAR Alice Springs 49.20 129 P P 03 29 06.7 +1.2
0.1nm,0.3s,baz=302,slow=7.4,SNR=1.3
TORD Torodi Ar. Bea 90.71 283 LR LR 04 13 22.4
comp=Z,75nm,19.0s,baz=175,slow=35

PRU 10 03:20:56.9±0.0, **50°.35N**×**18°.94E**, **h0**^{km}, **Poland**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
OJC Ojcow 0.57 103 ePg Pg 03 21 08.0 +0.2
OJC eSg Sg 03 21 15.3 +0.2
LANS Liptovska Anna 1.25 164 ePG Pb 03 21 21.2 -0.1
LANS eSG Sg 03 21 36.5 -0.5
DPC Dobruska-Polom 1.68 271 ePG Pn 03 21 27.6 +0.1
DPC eSG Sg 03 21 51.5 +0.8

KRSZO 10 03:21:24.2±1.2, **48°.61N**×**20°.12E**, **h5**^{km}, **ML1.4**/6, **Error ellipse: s-maj=7.3km s-min=5.4km az=71.0, Czech and Slovak Republics**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KECS Kecovo 0.27 117 Pg Pg 03 21 29.0 -0.4
comp=Z,0.4nm,SNR=3.3
KECS Kecovo 0.27 117 ePG Pg 03 21 29.0 -0.5
KECS eSG Sg 03 21 32.9 -0.2
KECS eLG Lg 03 21 34.4
LANS Liptovska Anna 0.69 322 Pg Pg 03 21 37.4 -0.1
SNR=1.9

LANS				Lg	Lg	03 21 46.7	
LANS	Liptovska Anna	0.69	322	*e*SG	Sg	03 21 46.5	0.0
PSZ	Piszkesteto	0.71	192	*e*PG	Pb	03 21 38.5	-0.5
PSZ				*e*SG	Sb	03 21 50.0	+0.9
PSZ	Piszkesteto	0.71	192	Pg	Pb	03 21 38.5	-0.5
	comp=Z,0.1nm,SNR=1.5						
PSZ				Lg	Lg	03 21 50.0	
NIE	Niedzica	0.82	8	Pg	Pg	03 21 39.7	-0.2
	SNR=1.0						
VYHS	Vyhne	0.86	263	Pn	Pn	03 21 43.1	+0.1
	SNR=1.2						
VYHS				Lg	Lg	03 21 53.8	
VYHS	Vyhne	0.86	263	*e*PG	Pn	03 21 42.9	-0.1
CRVS	Cervenica-Dubn	0.93	71	Pg	Pg	03 21 41.6	-0.5
	SNR=1.9						
CRVS	Cervenica-Dubn	0.93	71	*e*PG	Pg	03 21 41.8	-0.3

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*BGR **10** 03:24:39.4±0.0, 21°.53S×177°.81W, h600km*
*NOU **10** 03:24:41.8, 20°.93S×178°.70W, h609km, mb5.1/18, Fiji Islands Region*
*IDC **10** 03:24:42.7±1.1, 20°.82S×179°.01W, h602km±11km, mb3.8/26, mb1 3.9/28, mb1mx3.8/38, mbtmp4.7/28, Error ellipse: s-maj=13.5km s-min=10.1km az=108.0*
*NEIC **10** 03:24:42.4±2.0, 20°.9S±0°.1×178°.8W±0°.1, h598km±7km, mb4.5/118, Error ellipse: s-maj=17.8km s-min=15.1km az=131.0*
ISC 10 03:24:43.2±0.3**, 20°.97S**±0°.06×**178°.93W**±0°.07**, h619**km**,**
n293, σ0s.98/323**, mb4.4**/82**, 44C-1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.30	318	P	P	03 26 11.4	-1.0
	33nm,0.3s,baz=144,slow=12,SNR=273						
MSVF				S	S	03 27 18.8	-6.1
	baz=196,slow=17,SNR=0.4						
MSVF	Nonsavu	4.30	318	P	P	03 26 11.1	-1.2
MSVF					S	03 27 20.4	-4.5
MSVF	Nonsavu	4.30	318	P	P	03 26 11.4	-1.0
TAVE	Taveuni	4.34	348	P	P	03 26 11.3	-1.3
DGTI	Dogotuki	4.81	345	P	P	03 26 14.5	-1.6
RAO	Raoul Island	8.30	174	P	P	03 26 42.3	-3.6
	53nm,0.3s,baz=300,slow=15,SNR=4.3						
RAO				S	S	03 28 21.6	-4.9
	19nm,0.3s,baz=92,slow=22,SNR=1.5						
AFI	Afiamalu	9.79	45	P	P	03 26 55.4	-5.2
	5.0nm,0.3s,baz=66,slow=10,SNR=5.9						
AFI				S	S	03 28 42.7	-10
	4.2nm,0.3s,baz=10,slow=23,SNR=2.6						
MARNC	Mare, Loyalty	12.18	265	P	P	03 27 23.3	-0.3
MARNC	Mare, Loyalty	12.18	265	P	P	03 27 23.7	0.0
RTV	Rentapao	12.35	283	P	P	03 27 26.2	+0.8
	258µm,0.9s						
DVP	Devils Point	12.58	283	P	P	03 27 28.3	+0.6
	236µm,0.8s						
LIFNC	LIFOU	12.93	268	P	P	03 27 29.6	-1.5
YATNC	Mamie plateau,	13.24	263	P	P	03 27 35.5	+1.3
DZM	Mont Dzumac	13.66	263	P	P	03 27 38.0	-0.4
	1.5nm,0.3s,baz=91,slow=18,SNR=17						
DZM	Mont Dzumac	13.66	263	P	P	03 27 38.4	0.0
DZM	Mont Dzumac	13.66	263	P	P	03 27 39.7	+1.4
OUZ	Omahuta	15.64	203	P	P	03 27 58.9	+2.6
OUZ	Omahuta	15.64	203	P	P	03 27 57.1	+0.8
URZ	Urewera	17.57	190	P	P	03 28 12.6	-1.3
	1.3nm,0.3s,baz=299,slow=23,SNR=8.7						
URZ				S	S	03 30 59.5	-5.3
	0.4nm,0.3s,baz=121,slow=23,SNR=2.8						
URZ	Urewera	17.57	190	P	P	03 28 13.1	-0.8
URZ				IAmb	IAmb	03 28 21.1	
	comp=Z,13nm,0.8s						
URZ	Urewera	17.57	190	P	P	03 28 14.2	+0.4
KNTN	Kanton	19.40	22	P	P	03 28 29.0	-1.8
KNTN	Kanton	19.40	22	P	P	03 28 29.0	-1.8
BFZ	Birch Farm	20.07	191	P	P	03 28 38.0	+1.5
SNZO	South Karori	20.98	193	P	P	03 28 44.7	+0.1
QRZ	Quartz Range	21.08	198	P	P	03 28 46.6	+1.0
	comp=Z,17nm,0.6s						
THZ	Tophouse	21.85	197	P	P	03 28 53.7	+1.2
THZ				IAmb	IAmb	03 29 07.3	
	comp=Z,11nm,0.6s						
KHZ	Kahutara	22.30	195	P	P	03 28 56.3	-0.1
PMG	Port Moresby	34.61	284	P	P	03 30 41.6	-1.4
	comp=Z,5.6nm,0.3s,baz=33,slow=7.5,SNR=4.2						
COEN	Coen	36.75	275	P	P	03 31 01.4	+0.8
COEN				IAmb	IAmb	03 31 02.4	
	comp=Z,4.8nm,0.7s						
STKA	Stephens Creek	36.80	245	P	P	03 31 00.3	-0.5
	comp=Z,1.7nm,0.5s,baz=86,slow=11,SNR=6.0						
STKA	Stephens Creek	36.80	245	P	P	03 31 02.1	+1.3
AS31	Alice Springs	43.57	257	P	P	03 31 55.7	+1.1
ASAR	Alice Springs	43.57	257	P	P	03 31 55.4	+0.8
	comp=Z,8.6nm,0.9s,baz=98,slow=7.8,SNR=34						
ASAR				PcP	PcP	03 33 28.6	+0.6
	comp=Z,2.2nm,0.6s,baz=107,slow=4.0,SNR=8.0						
ASAR				ScP	ScP	03 36 23.3	+1.8
	comp=Z,0.9nm,0.6s,baz=103,slow=4.4,SNR=7.0						
ASAR				S	S	03 37 39.5	-1.2
	comp=Z,2.0nm,0.7s,baz=92,slow=15,SNR=18						
ASAR	Alice Springs	43.57	257	P	P	03 31 55.2	+0.6
WB0	Warramunga Arr	43.66	263	P	P	03 31 55.9	+0.6
WB0				IAmb	IAmb	03 31 56.8	
	comp=Z,10.0nm,1.1s						
WB0					S	03 37 42.7	+0.7
WB2	Warramunga Arr	43.67	263	P	P	03 31 55.8	+0.4
WB2				IAmb	IAmb	03 31 56.5	
	comp=Z,13nm,1.1s						
WRA	Warramunga Arr	43.68	263	P	P	03 31 55.0	-0.5
	comp=Z,4.4nm,0.9s,baz=92,slow=5.9,SNR=16						
WRA				S	S	03 37 40.0	-2.2
	comp=Z,1.4nm,0.9s,baz=94,slow=12,SNR=4.9						
WRA	Warramunga Arr	43.68	263	P	P	03 31 56.0	+0.5
KNRA	Kununurra	49.76	267	P	P	03 32 41.7	+0.6
SOEI	Soe	55.65	272	P	P	03 33 24.7	+1.7
SOEI				IAmb	IAmb	03 33 26.3	
	comp=Z,28nm,0.9s						
VNDA	Vanda	57.37	185	P	P	03 33 35.8	+2.2
	comp=Z,1.5nm,0.5s,baz=16,slow=6.5,SNR=18						
VNDA	Vanda	57.37	185	P	P	03 33 36.1	+2.6
TOLI2	Tolitoli	62.86	283	P	P	03 34 12.2	+1.4
JHJ	Hachijo jima 2	66.68	323	P	P	03 34 34.6	+0.3
	comp=Z,56nm,0.7s,baz=44,slow=12,SNR=1.2						
QSPA	South Pole Qui	69.10	180	P	P	03 34 50.5	+1.9
	comp=Z,11nm,0.9s,baz=283,slow=0.5,SNR=50						
QSPA	South Pole Qui	69.10	180	P	P	03 34 50.4	+1.8
QSPA				IAmb	IAmb	03 34 51.4	
	comp=Z,19nm,1.1s						
MJAR	Matsushiro Arr	70.08	324	P	P	03 34 54.6	-0.1
	comp=Z,6.7nm,0.8s,baz=156,slow=5.7,SNR=13						
MJAR	Matsushiro Arr	70.08	324	P	P	03 34 54.6	-0.1
MAT	Matsushiro	70.08	324	P	P	03 34 54.3	-0.4
JKA	Kamikawa-asahi	73.73	332	P	P	03 35 16.5	+1.0
JKA				IAmb	IAmb	03 35 18.5	
	comp=Z,20nm,1.1s						
ASAJ	Asahikawa	73.73	332	P	P	03 35 16.5	+0.9
	comp=Z,9.6nm,0.8s,baz=153,slow=9.0,SNR=1.7						
PETK	Petropavlovsk-	76.51	346	P	P	03 35 30.4	-0.3
	comp=Z,9.7nm,0.7s,baz=132,slow=4.2,SNR=17						
PETK	Petropavlovsk-	76.51	346	P	P	03 35 30.7	-0.1
KSRS	Korea Array	76.67	319	P	P	03 35 33.4	+1.4
	comp=Z,1.6nm,0.6s,baz=134,slow=5.8,SNR=3.0						
USRK	Ussuriysk Ar.	78.87	326	P	P	03 35 45.2	+1.6
	comp=Z,6.9nm,0.7s,baz=124,slow=4.1,SNR=12						
KMRM	Mail Ridge	79.67	40	P	P	03 35 49.1	+1.1
CMB	Columbia Colle	80.40	43	P	P	03 35 52.6	+0.7
WDC	Whiskeytown Da	80.59	40	P	P	03 35 53.7	+1.0
WDC				IAmb	IAmb	03 35 55.2	
	comp=Z,12nm,1.1s						
ORV	Oroville	80.60	41	P	P	03 35 53.4	+0.6
MAW	Mawson	80.83	200	P	P	03 35 54.5	+1.0
	comp=Z,1.1nm,0.7s,baz=112,slow=4.6,SNR=2.8						
MDPB	Devils Postpil	81.00	44	P	P	03 35 56.0	+0.7
MDPB				IAmb	IAmb	03 35 57.4	
	comp=Z,8.7nm,1.0s						
YBH	Yreka Blue Hor	81.20	39	P	P	03 35 57.6	+1.7
	comp=Z,9.9nm,0.8s,baz=178,slow=1.6,SNR=23						
YBH	Yreka Blue Hor	81.20	39	P	P	03 35 56.9	+1.0
YBH				IAmb	IAmb	03 35 58.6	
	comp=Z,15nm,0.9s						
GSC	Goldstone, Bar	81.21	47	P	P	03 35 56.4	+0.2
KDAK	Kodiak Island	81.48	14	P	P	03 35 56.4	-0.4
	comp=Z,6.7nm,0.8s,baz=241,slow=0.8,SNR=7.7						
KDAK	Kodiak Island	81.48	14	P	P	03 35 57.2	+0.4
KDAK				IAmb	IAmb	03 35 57.6	
	comp=Z,21nm,1.1s						
PNTR	Pine Nut	81.51	43	P	P	03 35 58.6	+0.9
PNTR				IAmb	IAmb	03 36 00.0	
	comp=Z,21nm,0.9s						
HUMO	Hull Mountain	81.60	38	P	P	03 35 58.9	+1.0
HUMO				IAmb	IAmb	03 36 00.6	
	comp=Z,16nm,1.1s						
YERR	Yerington	81.68	43	P	P	03 35 59.1	+0.5
YERR				IAmb	IAmb	03 36 00.5	
	comp=Z,17nm,1.1s						
LCH	Last Change Ra	81.72	45	P	P	03 35 58.8	0.0
LHV	Little Huntoon	81.73	44	P	P	03 35 59.2	+0.6
LHV				IAmb	IAmb	03 36 01.1	
	comp=Z,13nm,1.2s						
GWY	Greenwater Val	81.79	46	P	P	03 35 58.7	-0.5
NVAR	Mina Array Bea	81.96	44	P	P	03 36 01.2	+1.1
	comp=Z,4.8nm,0.7s,baz=225,slow=8.0,SNR=34						
NVAR	Mina Array Bea	81.96	44	P	P	03 36 00.5	+0.4
113A	Mohawk Valley,	82.00	51	P	P	03 36 00.8	+0.7
PAHR	Pah Rah Range	82.01	42	P	P	03 36 00.8	+0.6
PAHR				IAmb	IAmb	03 36 02.3	
	comp=Z,8.8nm,0.9s						
NV11	Mina Array Sit	82.06	44	P	P	03 36 01.3	+0.8
KVN	Kaiserville	82.45	43	P	P	03 36 02.7	+0.2
KVN				IAmb	IAmb	03 36 04.2	
	comp=Z,12nm,1.1s						
TPH	Tonopah	82.47	45	P	P	03 36 03.2	+0.6
KLR	Kul'dur	82.49	330	P	P	03 36 02.5	+0.3
	comp=Z,3.4nm,0.8s,baz=106,slow=2.6,SNR=8.7						
MOD	Modoc Plateau	82.73	40	P	P	03 36 03.8	0.0
MOD				IAmb	IAmb	03 36 05.8	
	comp=Z,8.8nm,0.8s						
O18K	Koktuh Hills	82.84	12	P	P	03 36 03.5	-0.2
K05A	Summer Lake	82.87	39	P	P	03 36 04.3	-0.2
Y14A	Wickenburg	83.15	50	P	P	03 36 06.0	+0.1
O19K	Port Alsworth	83.32	12	P	P	03 36 06.3	+0.3
PINE	Pine Mountain	83.49	38	P	P	03 36 08.2	+0.7
PINE				IAmb	IAmb	03 36 10.1	
	comp=Z,21nm,0.8s						
PRN	Pahroc Range	83.54	46	P	P	03 36 08.5	+0.6
WVOR	Wild Horse Val	84.05	40	P	P	03 36 10.9	+0.7
WVOR				IAmb	IAmb	03 36 12.5	
	comp=Z,8.4nm,1.0s						
I07A	Izee	84.49	39	P	P	03 36 13.2	+0.9
I07A				IAmb	IAmb	03 36 14.6	
	comp=Z,11nm,1.0s						
X16A	Lo Mia Camp, P	84.51	50	P	P	03 36 13.1	+0.3
LCMT	Little Creek M	84.56	47	P	P	03 36 12.6	-0.3
319A	Douglas	84.62	54	P	P	03 36 13.0	-0.3
319A				IAmb	IAmb	03 36 16.2	
	comp=Z,12nm,1.0s						
J08A	Circle Bar Ran	84.68	40	P	P	03 36 11.8	-1.4
J08A				IAmb	IAmb	03 36 16.1	
	comp=Z,5.8nm,0.8s						
CCUT	Cedar City	84.76	47	P	P	03 36 14.2	+0.2
SPR3	Spring Creek 3	84.87	45	P	P	03 36 14.9	+0.3
U15A	North Rim	84.92	48	P	P	03 36 15.0	+0.2
U15A				IAmb	IAmb	03 36 17.2	
	comp=Z,9.4nm,0.7s						
PKCU	Pink Cliffs	85.42	47	P	P	03 36 17.3	+0.1
PKCU				IAmb	IAmb	03 36 20.2	
	comp=Z,13nm,1.0s						
G08A	Pilot Rock	85.52	38	P	P	03 36 16.0	-1.3
G08A				IAmb	IAmb	03 36 19.3	
	comp=Z,11nm,1.1s						
GLI	Glacier Island	85.52	15	P	P	03 36 15.7	-1.1
E07A	Sunnyside	85.76	36	P	P	03 36 18.4	+0.2
E07A				IAmb	IAmb	03 36 20.5	
	comp=Z,10nm,0.9s						
MTPU	Mount Pierson	85.81	47	P	P	03 36 18.7	-0.4
HAWA	Hanford	85.84	37	P	P	03 36 19.2	+0.6
HAWA				IAmb	IAmb	03 36 20.8	
	comp=Z,9.8nm,0.8s						
GHO	Glory Hole Cre	85.88	14	P	P	03 36 18.2	-0.3
CUT	Chulitna	86.16	13	P	P	03 36 18.6	-1.1
E08A	Dider Farm, El	86.16	37	P	P	03 36 21.0	+0.9
E08A				IAmb	IAmb	03 36 22.2	
	comp=Z,9.0nm,0.9s						
BMO	Blue Mountains	86.22	39	P	P	03 36 21.1	+0.5
BMO				IAmb	IAmb	03 36 22.3	
	comp=Z,4.7nm,0.8s						
SCM	Sheep Creek Mo	86.30	14	P	P	03 36 20.8	+0.3
KLU	Klutina	86.34	15	P	P	03 36 20.9	+0.2
KLU				IAmb	IAmb	03 36 21.2	
	comp=Z,14nm,1.0s						
D08A	Wollman Farm,	86.57	36	P	P	03 36 22.9	+0.9
D08A				IAmb	IAmb	03 36 24.2	
	comp=Z,14nm,1.1s						
SEY	Seymchan	86.64	347	P	P	03 36 22.2	+0.3
	comp=Z,3.8nm,0.5s,baz=154,slow=4.7,SNR=13						
E09A	Wood Farm, Sta	86.69	37	P	P	03 36 24.1	+1.5
E09A				IAmb	IAmb	03 36 25.1	
	comp=Z,7.1nm,1.0s						
CAST	Castle Rocks	86.71	12	P	P	03 36 21.1	-1.2
N25K	Chitina, Valde	86.77	16	P	P	03 36 23.1	+0.4
N25K				IAmb	IAmb	03 36 23.5	
	comp=Z,10nm,0.6s						
F10A	Beach Ranch, E	86.90	38	P	P	03 36 24.2	+0.5
KTH	Kantishna Hill	87.06	12	P	P	03 36 23.3	-0.7
KTH				IAmb	IAmb	03 36 23.8	
	comp=Z,12nm,0.9s						
BARN	Barnard Glacie	87.08	17	P	P	03 36 25.2	+0.8
TRF	Thorofare Moun	87.09	12	P	P	03 36 23.7	-0.6
TMUT	Trail Mountain	87.10	46	P	P	03 36 25.1	-0.1
B08A	Colville Reser	87.11	35	P	P	03 36 25.1	+0.5
B08A				IAmb	IAmb	03 36 25.9	
	comp=Z,11nm,0.8s						
PLID	Pearl Lake	87.12	39	P	P	03 36 25.5	+0.5
HLID	Hailey	87.25	41	P	P	03 36 25.6	0.0
HLID				IAmb	IAmb	03 36 27.9	
	comp=Z,6.6nm,1.0s						
HVU	Hansel Valley	87.34	43	P	P	03 36 25.4	-0.6
RND	Reindeer	87.35	13	P	P	03 36 25.6	+0.2
C09A	Chrisman Ranch	87.36	36	P	P	03 36 25.0	-0.7
C09A				IAmb	IAmb	03 36 27.5	
	comp=Z,9.7nm,0.9s						
DHY	Denali Highway	87.38	14	P	P	03 36 25.7	0.0
SRU	San Rafael Swe	87.47	46	P	P	03 36 27.6	+0.8
SRU				IAmb	IAmb	03 36 28.6	
	comp=Z,5.2nm,0.8s						
SNAA	Sanae	87.56	179	P	P	03 36 26.7	+0.3
SNAA	Sanae	87.56	179	P	P	03 36 26.8	+0.3
MCK	McKinley	87.62	13	P	P	03 36 26.3	-0.3
VNA3	Neumayer Olymp	87.73	177	P	P	03 36 27.6	+0.5
MNTX	Cornudas Mount	87.73	55	P	P	03 36 28.4	+0.5
XAN	Xi'an	87.73	308	P	P	03 36 29.3	+1.5
XAN				pP	PcP	03 36 37.2	+8.2
XAN				pmax	pmax		
	comp=Z,13nm,1.0s						
M26K	Nabesna, AK	87.85	16	P	P	03 36 28.9	+1.1
M26K				IAmb	IAmb	03 36 29.1	
	comp=Z,11nm,1.1s						
BWN	Browne	87.90	12	P	P	03 36 27.4	-0.5
TX31	Lajitas Ar. Si	88.04	58	P	P	03 36 29.4	0.0
TX31				IAmb	IAmb	03 36 32.1	
	comp=Z,11nm,0.9s						
TX32	Lajitas Array	88.04	58	P	P	03 36 29.4	0.0
TX32				IAmb	IAmb	03 36 32.5	
	comp=Z,4.3nm,1.0s						
TXAR	Lajitas Array	88.04	58	P	P	03 36 31.2	+1.8
	comp=Z,3.1nm,0.8s,baz=219,slow=5.8,SNR=35						
TXAR	Lajitas Array	88.04	58	P	P	03 36 29.6	+0.1
M27K	Edge Creek, AK	88.10	16	P	P	03 36 29.1	0.0
MENT	Mentasta	88.12	15	P	P	03 36 28.6	-0.3
MENT				IAmb	IAmb	03 36 30.2	
	comp=Z,6.9nm,1.0s						
VNA2	Neumayer--Watz	88.16	177	P	P	03 36 29.9	+0.7
	baz=189,slow=3.1						
L26K	Log Cabin Wild	88.28	15	IAmb	IAmb	03 36 30.5	
	comp=Z,4.1nm,0.7s						
L26K				P	P	03 36 30.6	+0.9
I21K	Tanana	88.33	11	P	P	03 36 29.6	-0.2
NEA2	Nenana	88.36	12	P	P	03 36 28.8	-1.2
NEA2				IAmb	IAmb	03 36 30.1	
	comp=Z,4.7nm,0.6s						
VNA1	Neumayer--Stat	88.39	177	P	P	03 36 31.0	+0.9
MLY	Manley	88.42	12	P	P	03 36 29.7	-0.6
MLY				IAmb	IAmb	03 36 29.8	
	comp=Z,5.9nm,0.7s						
WRH	Wood River Hil	88.45	13	P	P	03 36 29.8	-0.5
RIDG	Independent Ri	88.53	14	P	P	03 36 31.1	+0.2
RIDG				IAmb	IAmb	03 36 31.3	
	comp=Z,13nm,1.1s						
H21K	Melozitna Rive	88.62	11	P	P	03 36 31.4	+0.2
H21K				IAmb	IAmb	03 36 33.3	
	comp=Z,10.0nm,0.9s						
DOT	Dot Lake	88.64	15	P	P	03 36 31.7	+0.4
DOT				IAmb	IAmb	03 36 32.2	
	comp=Z,9.0nm,0.8s						
HDA	Harding Lake	88.64	13	P	P	03 36 31.2	0.0
CCB	Clear Creek Bu	88.66	13	P	P	03 36 30.8	-0.5
L27K	Beaver Creek,	88.70	16	P	P	03 36 31.5	-0.1
L27K				IAmb	IAmb	03 36 32.8	
	comp=Z,5.9nm,0.9s						
DLBC	Dease Lake	88.82	23	P	P	03 36 31.1	-1.3
	comp=Z,4.5nm,0.7s,baz=21,slow=4.0,SNR=6.7						
DLBC	Dease Lake	88.82	23	P	P	03 36 31.1	-1.3
DLBC				IAmb	IAmb	03 36 33.8	
	comp=Z,5.7nm,0.8s						
RDMU	Red Mountain	88.83	45	P	P	03 36 33.1	+0.1
RDMU				IAmb	IAmb	03 36 34.7	
	comp=Z,3.8nm,0.7s						
MDM	Murphy Dome	88.85	13	P	P	03 36 31.3	-0.9
TCOL	CIGO, UAF Yank	88.85	13	P	P	03 36 31.7	-0.5
COLA	College	88.85	13	P	P	03 36 31.7	-0.5
MCMT	McKenzie Canyo	88.87	41	P	P	03 36 33.5	+0.3
AHID	Auburn Hatcher	88.91	43	P	P	03 36 33.5	+0.2
AHID				IAmb	IAmb	03 36 36.1	
	comp=Z,5.1nm,1.0s						
SCRK	Sand Creek	88.93	15	P	P	03 36 33.2	+0.4
SCRK				IAmb	IAmb	03 36 34.0	
	comp=Z,7.0nm,1.0s						
IL31		88.97	13	P	P	03 36 31.6	-1.1
IL31				IAmb	IAmb	03 36 33.0	
	comp=Z,12nm,1.1s						
ILAR	Eielson Array	88.97	13	P	P	03 36 32.1	-0.6
	comp=Z,3.1nm,0.4s,baz=217,slow=5.2,SNR=52						
REDW	Red Top Meadow	89.37	43	P	P	03 36 35.8	+0.3
REDW				IAmb	IAmb	03 36 37.4	
	comp=Z,11nm,1.1s						
CMAR	Chiang Mai Arr	89.46	290	P	P	03 36 37.9	+1.8
	comp=Z,3.2nm,0.4s,baz=124,slow=3.2,SNR=18						
CMAR	Chiang Mai Arr	89.46	290	P	P	03 36 36.8	+0.6
SNOW	Snow King Moun	89.48	43	P	P	03 36 36.2	+0.2
SNOW				IAmb	IAmb	03 36 38.1	
	comp=Z,11nm,1.1s						
PLCA	Paso Flores	89.58	134	P	P	03 36 37.9	+1.4
	comp=Z,0.8nm,0.6s,baz=44,slow=21,SNR=2.0						
LOHW	Long Hollow	89.65	42	P	P	03 36 37.4	+0.6
PD31	Pinedale Array	89.90	44	P	P	03 36 38.4	+0.4
PD31				IAmb	IAmb	03 36 39.2	
	comp=Z,2.7nm,0.8s						
PDAR	Pinedale Array	89.90	44	P	P	03 36 38.5	+0.6
	comp=Z,2.7nm,0.7s,baz=207,slow=3.8,SNR=25						
DAWY	Dawson	90.15	16	P	P	03 36 38.5	+0.2
EGAK	Eagle	90.28	15	P	P	03 36 39.2	+0.3
COLD	Coldfoot	90.50	11	P	P	03 36 40.2	+0.4
COLD				IAmb	IAmb	03 36 41.3	
	comp=Z,6.3nm,0.9s						
INK	Inuvik	94.95	15	P	P	03 36 59.9	-0.3
	comp=Z,2.1nm,0.9s,baz=184,slow=2.9,SNR=5.9						
SONM	Songino Array	95.54	319	P	P	03 37 01.7	-1.8
	comp=Z,0.2nm,0.4s,baz=177,slow=2.9,SNR=2.0						
ZALV	Zalesovo Beam	110.31	321	PKiKP	PKiKP	03 42 04.5	-1.3
	comp=Z,1.2nm,0.6s,baz=230,slow=2.3,SNR=5.3						
MKAR	Makanchi Array	110.89	313	PKiKP	PKiKP	03 42 06.2	-1.0
	comp=Z,0.6nm,0.4s,baz=162,slow=0.4,SNR=9.4						
BRVK	Borovoye	118.94	320		PKPdf	03 42 22.3	-0.1
ARU	Arti	125.09	325		PKPdf	03 42 34.3	+0.2
ARCES	ARCESS Array B	129.22	349	PKP	PKPdf	03 42 41.8	+0.1
	comp=Z,3.4nm,0.6s,baz=10,slow=1.0,SNR=3.1						
ARCES	ARCESS Array B	129.22	349		PKPdf	03 42 40.7	-0.9
FINES	FINESS Array B	135.97	343	PKhKP	PKPpre	03 42 41.7	
	comp=Z,4.8nm,1.0s,baz=90,slow=5.7,SNR=2.2						
FINES				PKP	PKPdf	03 42 53.7	-0.8
	comp=Z,2.3nm,0.6s,baz=46,slow=3.9,SNR=6.4						
FINES	FINESS Array B	135.97	343		PKPdf	03 42 54.0	-0.5
NB2	NORSAR Subarra	139.34	352	PKP	PKPpre	03 42 53.4	
	comp=Z,0.5nm,0.5s,baz=16,slow=3.2						
NOA	NORSAR Array B	139.34	352	PKhKP	PKPpre	03 42 51.2	
	comp=Z,0.9nm,0.8s,baz=14,slow=1.9,SNR=6.4						
AKASG	Malin Array Be	143.00	330	PKhKP	PKPpre	03 43 05.2	
	comp=Z,18nm,0.4s,baz=42,slow=4.4,SNR=84						
GAZ	Gaziantep	144.78	305	PKPdf	PKPdf	03 43 11.5	+0.3
SORM	Soroca	145.14	328	⇑P	PKPbc	03 43 12.8	+0.4
PURM	Purcari	145.37	324	⇑P	PKPab	03 43 14.0	-0.7
MILM	Milestii Mici	145.69	326	⇑P	PKPbc	03 43 14.4	+0.3
BSEG	Bad Segeberg	146.34	350	*e*PKPbc	PKPbc	03 43 15.8	+0.2
	baz=18,slow=2.4						
BR131	Keskin Array S	146.50	311		PKPbc	03 43 16.4	-0.4
BRTR	Keskin Array B	146.50	311	PKPbc	PKPbc	03 43 17.1	+0.3
	comp=Z,4.6nm,0.6s,baz=134,slow=4.3,SNR=9.3						
VLDR	Vladesti	146.77	325	⇑P	PKPbc	03 43 17.6	+0.5
TLCR		146.77	323	⇑P	PKPbc	03 43 17.8	+0.8
JURR	Jurilovca	146.99	322	⇑P	PKiKP	03 43 18.6	-0.8
BURAR	Bucovina Array	147.03	329	⇑P	PKiKP	03 43 19.1	-0.5
BURAR	Bucovina Array	147.03	329		PKPbc	03 43 18.7	+0.8
TESR	Tescani	147.09	327	⇑P	PKPbc	03 43 18.6	+0.7
CFR	Carcaliu	147.16	324	⇑P	PKPbc	03 43 18.3	+0.2
TPGR	Topolog	147.19	323	⇑P	PKiKP	03 43 19.2	-0.7
OJC	Ojcow	147.27	338		PKPbc	03 43 18.9	+0.6
TIRR	Tirgusor	147.44	322	⇑P	PKiKP	03 43 19.6	-0.7
VRI	Vrincioaia	147.48	326	⇑P	PKPbc	03 43 19.5	+0.6
PLOR	Plostina	147.53	326	⇑P	PKPbc	03 43 19.7	+0.6
HARR	Harsova	147.57	323	⇑P	PKiKP	03 43 20.2	-0.4
FLTG	Flechtingen	147.72	348	*e*PKPbc	PKPbc	03 43 19.9	+0.6
	baz=18,slow=2.4						
FLTG				*e*PKPab	PKPab	03 43 24.2	+0.3
	baz=18,slow=2.4						
MANR	Mangalia	147.72	321	⇑P	PKPbc	03 43 18.6	-1.0
COVR	Voineasa-Covas	147.76	326	⇑P	PKPbc	03 43 20.2	+0.5
NRDL	Niedersach Rie	147.76	350	*e*PKPbc	PKiKP	03 43 20.3	-0.4
	baz=18,slow=2.4						
NRDL				*e*PKPab	PKPab	03 43 24.5	+0.4
	baz=18,slow=2.4						
OZUR		147.81	327	⇓P	PKiKP	03 43 21.2	+0.1
DOPR	Dopca	148.10	327	⇑P	PKiKP	03 43 22.0	+0.2
MLR	Muntele Rosu	148.14	326	⇑P	PKPbc	03 43 21.3	+0.5
MLR	Muntele Rosu	148.14	326		PKPbc	03 43 21.3	+0.5
OSTC	Ostas	148.15	342	⇑*e*PKP	PKPbc	03 43 20.9	+0.4
CHVC	Chvalec	148.17	342	⇑*e*PKP	PKPbc	03 43 20.6	0.0
UPC	Upice	148.25	342	⇑*e*PKP	PKiKP	03 43 21.6	-0.3
IBBN	Ibbenburen	148.29	352	*e*PKPab	PKPab	03 43 26.1	-0.2
	baz=18,slow=2.4						
DPC	Dobruska-Polom	148.30	341	⇑*e*PKP	PKiKP	03 43 21.9	-0.1
DPC				*e*PKPAB	PKPab	03 43 27.1	+0.6
CLL	Collm	148.31	346	*i* PKPbc	PKPbc	03 43 21.0	+0.2
	comp=Z,21nm,1.1s						
CLL				*i* PKPab	PKPab	03 43 26.6	+0.2
	comp=Z,9.0nm,1.1s						
CLL				*e*pPKPab	pPKPab	03 45 42.0	+0.3
CLL	Collm	148.31	346	*e*PKPbc	PKiKP	03 43 21.6	-0.3
	baz=18,slow=2.4						
CLZ	Clausthal	148.35	349	*e*PKPbc	PKiKP	03 43 21.8	-0.3
	baz=18,slow=2.4						
SECR		148.37	325	⇑P	PKPbc	03 43 21.3	+0.1
MORC	Moravsky Berou	148.42	339	*e*PKP	PKiKP	03 43 22.0	-0.3
CBBR	Cluj-Babes-Bol	148.43	330	⇑P	PKPbc	03 43 21.5	+0.2
CJR	Cluj-Napoca	148.45	330	⇑P	PKiKP	03 43 22.5	0.0
BRG	Berggiesshubel	148.49	344	*e*PKPbc	PKiKP	03 43 22.3	-0.1
	baz=18,slow=2.4						
BRG				*e*PKPab	PKPab	03 43 27.5	+0.3
	baz=18,slow=2.4						
BRG	Berggiesshubel	148.49	344	*i* PKP	PKiKP	03 43 22.2	-0.1
BRG				Amp		03 43 23.6	
	comp=Z,10.0nm,1.0s						
FBE	Freiberg	148.59	345	*e*PKPbc	PKiKP	03 43 22.8	+0.3
	baz=18,slow=2.4						
FBE				*e*PKPab	PKPab	03 43 28.6	+1.0
	baz=18,slow=2.4						
VOIR		148.64	327	⇑P	PKiKP	03 43 22.5	-0.4
GTTG	Gottingen	148.70	349	*e*PKPbc	PKiKP	03 43 22.7	0.0
	baz=18,slow=2.4						
GTTG				*e*PKPab	PKPab	03 43 28.7	+0.6
	baz=18,slow=2.4						
DRGR		148.80	331	⇑P	PKPbc	03 43 22.7	+0.4
ARR	Arges	148.90	327	⇑P	PKiKP	03 43 24.1	+0.6
VRAC	Vranov	149.13	340	⇑P	PKPbc	03 43 23.3	+0.4
VRAC	Vranov	149.13	340	*e*PKP	PKiKP	03 43 23.8	0.0
VRAC				*e*		03 43 30.8	
PRU	Pruhonice	149.14	343	⇑*e*PKP	PKiKP	03 43 23.6	-0.1
PRU				*e*PKPAB	PKPab	03 43 29.8	-0.1
JAVC	Velka Javorina	149.17	338	*e*PKP	PKiKP	03 43 25.0	+1.1
MOX	Moxa	149.24	347	*e*PKPbc	PKiKP	03 43 23.9	0.0
	baz=18,slow=2.4						
TANN	Tannenbergstha	149.27	346	*e*PKPbc	PKiKP	03 43 24.2	+0.1
	baz=18,slow=2.4						
WERD	Werda	149.28	346	*e*PKPbc	PKiKP	03 43 24.1	+0.1
	baz=18,slow=2.4						

HUMR	**Humele**	**149.29**	**325**	⇑P	**PKPbc**	**03 43 23.6**	**+0.2**
GUNZ	**Gunzen** baz=18,slow=2.4	**149.35**	**346**	*e*PKPbc	**PKiKP**	**03 43 24.5**	**+0.3**
GUNZ	baz=18,slow=2.4			*e*PKPab	**PKPab**	**03 43 32.8**	**+1.9**
WERN	**Wernitzgruen** baz=18,slow=2.4	**149.41**	**346**	*e*PKPbc	**PKiKP**	**03 43 24.3**	**0.0**
WERN	baz=18,slow=2.4			*e*PKPab	**PKPab**	**03 43 32.0**	**+0.9**
KRUC	**Moravsky**	**149.41**	**340**	*e*PKP	**PKiKP**	**03 43 24.3**	**0.0**
KRUC				*e*		03 43 31.8	
NKC	**Novy Kostel**	**149.44**	**346**	⇑*e*PKP	**PKiKP**	**03 43 24.1**	**-0.3**
NKC				*e*PKPAB	**PKPab**	**03 43 31.5**	**+0.3**
SIRR	**Siria**	**149.68**	**331**	⇑P	**PKiKP**	**03 43 25.3**	**+0.3**
MANZ	**Manzenberg** baz=18,slow=2.4	**149.75**	**346**	*e*PKPbc	**PKiKP**	**03 43 25.4**	**+0.3**
GZR	**Gura Zlata**	**149.80**	**329**	⇑P	**PKiKP**	**03 43 25.2**	**-0.1**
ROTZ	**Rotzenmuhle** baz=18,slow=2.4	**149.93**	**346**	*e*PKPbc	**PKiKP**	**03 43 25.6**	**+0.2**
KHC	**Kasperske Hory**	**150.18**	**343**	⇑*e*PKP	**PKPbc**	**03 43 25.4**	**0.0**
KHC				*e*PKPAB	**PKPab**	**03 43 34.5**	**+0.2**
BZS	**Buzias**	**150.19**	**330**	⇑P	**PKiKP**	**03 43 26.2**	**+0.2**
TNS	**Taunus Mts** baz=18,slow=2.4	**150.23**	**350**	*e*PKPbc	**PKiKP**	**03 43 26.3**	**+0.3**
TNS	baz=18,slow=2.4			*e*PKPab	**PKPab**	**03 43 34.9**	**+0.4**
PLVB	**Pleven**	**150.24**	**324**	⇑P	**PKiKP**	**03 43 26.5**	**+0.3**
CKRC	**Cesky Krumlov**	**150.26**	**342**	⇑*e*PKP	**PKiKP**	**03 43 26.1**	**0.0**
WET	**Wettzell** baz=18,slow=2.4	**150.35**	**344**	*e*PKPbc	**PKiKP**	**03 43 26.1**	**-0.1**
WET	baz=18,slow=2.4			*e*PKPab	**PKPab**	**03 43 35.9**	**+0.9**
HERR	**Herculane**	**150.35**	**328**	⇑P	**PKPbc**	**03 43 25.9**	**+0.1**
GEC2	**GERESS Array S** baz=18,slow=2.4	**150.41**	**343**	*e*PKPbc	**PKiKP**	**03 43 26.7**	**+0.2**
GEC2	**GERESS Array S**	**150.41**	**343**		**PKPbc**	**03 43 26.2**	**+0.2**
GERES	**GERESS Array B** comp=Z,3.9nm,0.7s,baz=129,slow=1.9,SNR=8.2	**150.41**	**343**	PKPbc	**PKiKP**	**03 43 26.4**	**-0.1**
CONA	**Conrad Observa** comp=Z,10nm,0.7s,SNR=11	**150.58**	**340**	*i* P	**PKiKP**	**03 43 27.1**	**+0.3**
CONA	comp=Z,5.5nm,0.8s			*i* P	**PKPab**	**03 43 37.3**	**+1.2**
BANR	**Banloc**	**150.59**	**331**	⇑P	**PKiKP**	**03 43 27.5**	**+0.7**
MDVR	**Moldovita**	**150.76**	**329**	⇑P	**PKiKP**	**03 43 27.5**	**+0.2**
WLF	**Walferdange** baz=18,slow=2.4	**151.08**	**353**	*e*PKPbc	**PKiKP**	**03 43 28.8**	**+1.0**
MOA	**Molln** comp=Z,3.2nm,0.5s	**151.15**	**341**	*i* P	**PKPbc**	**03 43 27.7**	**+0.1**
MOA	comp=Z,10nm,1.8s			*i* P	**PKPab**	**03 43 40.2**	**+1.7**
FRGS	**Fruska Gora**	**151.36**	**332**	⇑P	**PKPbc**	**03 43 28.3**	**0.0**
STU	**Stuttgart** baz=18,slow=2.4	**151.51**	**349**	*e*PKPbc	**PKiKP**	**03 43 29.3**	**+0.6**
VTS	**Vitosha**	**151.51**	**324**	⇑P	**PKiKP**	**03 43 29.3**	**+0.2**
VTS	**Vitosha**	**151.51**	**324**		**PKiKP**	**03 43 29.0**	**-0.1**
BOVS	**Bovan**	**151.60**	**327**	⇑P	**PKPbc**	**03 43 28.3**	**-0.4**
FUR	**Furstenfeldbru** baz=18,slow=2.4	**151.65**	**346**	*e*PKPab	**PKPab**	**03 43 41.2**	**+0.7**
RJOB	**Jochberg** baz=18,slow=2.4	**151.66**	**343**	*e*PKPbc	**PKiKP**	**03 43 29.3**	**+0.2**
RJOB	baz=18,slow=2.4			*e*PKPab	**PKPab**	**03 43 41.6**	**+1.0**
SOKA	**Soboth** comp=Z,4.0nm,0.9s	**151.94**	**339**	*i* P	**PKPbc**	**03 43 29.6**	**0.0**
BFO	**Black Forest** baz=18,slow=2.4	**152.09**	**350**	*e*PKPbc	**PKiKP**	**03 43 30.0**	**+0.1**
BFO	baz=18,slow=2.4			*e*PKPab	**PKPab**	**03 43 42.2**	**-0.1**
DIVS	**Divibare**	**152.09**	**330**		**PKiKP**	**03 43 30.3**	**+0.1**
WATA	**Walderalm** comp=Z,3.3nm,0.4s,SNR=4.7	**152.35**	**345**	*i* P	**PKPbc**	**03 43 30.4**	**-0.1**
WATA	comp=Z,7.6nm,1.0s			*i* P	**PKPab**	**03 43 43.9**	**+0.2**
UBR	**Ueberruh** baz=18,slow=2.4	**152.37**	**347**	*e*PKPbc	**PKiKP**	**03 43 30.9**	**+0.3**
WTTA	**Wattenberg** comp=Z,7.0nm,0.4s,SNR=11	**152.41**	**344**	*i* P	**PKiKP**	**03 43 30.8**	**0.0**
WTTA	comp=Z,6.3nm,0.5s			*i* P	**PKPab**	**03 43 44.7**	**+0.7**
RETA	**Reutte** comp=Z,4.0nm,0.5s,SNR=4.4	**152.41**	**346**	*e*P	**PKPab**	**03 43 44.3**	**+0.4**
MYKA	**Terra Mystica** comp=Z,3.8nm,0.5s	**152.43**	**341**	*i* P	**PKPbc**	**03 43 30.1**	**-0.5**
MOTA	**Moosalm** comp=Z,11nm,1.2s,SNR=4.8	**152.46**	**345**	*i* P	**PKPbc**	**03 43 30.6**	**-0.2**
MOTA	comp=Z,5.0nm,0.5s			*i* P	**PKPab**	**03 43 44.6**	**+0.5**
PDKS	**Podkum**	**152.50**	**339**	*i* PKPbc	**PKPbc**	**03 43 30.7**	**0.0**
SQTA	**Sankt Quirin** comp=Z,4.5nm,0.6s	**152.55**	**345**	*e*P	**PKPbc**	**03 43 30.9**	**0.0**
SQTA	comp=Z,3.0nm,0.6s			*i* P	**PKPab**	**03 43 44.6**	**+0.1**
LJU	**Ljubljana**	**152.67**	**339**	*i* PKPbc	**PKiKP**	**03 43 31.3**	**+0.1**
CRNS	**Crni Vrh**	**152.72**	**340**	*i* PKPbc	**PKPbc**	**03 43 31.0**	**-0.2**
FETA	**Feichten** comp=Z,3.0nm,0.7s	**152.85**	**345**	*e*P	**PKiKP**	**03 43 31.9**	**+0.2**
FETA	comp=Z,4.1nm,1.1s			*i* P	**PKPab**	**03 43 46.3**	**+0.5**
STAL	**STALIGIAL**	**153.04**	**342**		**PKPbc**	**03 43 31.5**	**-0.4**
FNA	**Florina**	**153.78**	**323**		**PKPbc**	**03 43 33.2**	**-0.4**
ESDC	**Sonseca Array** comp=Z,2.8nm,1.0s,baz=342,slow=4.4,SNR=13	**160.86**	**12**	PKPab	**PKPab**	**03 44 20.6**	**0.0**
KEST	**Kesra** comp=Z,5.5nm,0.8s,baz=310,slow=2.9,SNR=5.2	**163.60**	**335**	PKPab	**PKPab**	**03 44 32.2**	**-0.6**
TORD	**Torodi Ar. Bea** comp=Z,0.8nm,0.9s,baz=41,slow=1.8,SNR=3.8	**172.20**	**184**	PKP	**PKPdf**	**03 43 42.5**	**-0.6**
TORD	comp=Z,0.2nm,0.6s,baz=206,slow=3.5,SNR=4.4			PKPab	**PKPab**	**03 45 11.7**	**+0.6**

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*SOME **10** 03:38:35.1, 39°85N×75°27E, h5km*
*KRNET **10** 03:38:35.2±0.1, 39°54N×75°17E, mb3.1*
*NNC **10** 03:38:39.9±0.7, 39°93N×75°37E, h0km, mb3.7, mpv3.4,*
Error ellipse: s-maj=5.0km s-min=3.4km az=160.0
ISC 10 03:38:33.4±1.8**, 39°76N**±0°06×**75°36E**±0°03**, h2**km±12km**,**
n67, σ1ˢ25/100**, 28C-16D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan** baz=91	**1.45**	**281**	⇓*i*P	**Pn**	**03 39 00.5**	**-0.3**
SFK	baz=91			⇓*i*S	**Sn**	**03 39 19.1**	**-1.4**
SALK	**Salom-Alik** baz=23	**1.62**	**314**	⇑*e*P	**Pg**	**03 39 06.3**	**+1.9**
SALK	baz=23			⇑*e*S	**Sg**	**03 39 28.9**	**+3.4**
OHH	**Osh** baz=99	**2.11**	**292**	⇑*i*P	**Pb**	**03 39 12.2**	**-0.2**
OHH	baz=99			⇑*i*S	**Sb**	**03 39 38.8**	**-0.3**
UCH	**Uchtor** SNR=35	**2.54**	**346**	P	**Pg**	**03 39 21.8**	**-0.4**
UCH	**Uchtor** baz=50	**2.54**	**346**	⇑*e*P	**Pg**	**03 39 21.5**	**-0.6**
UCH	baz=50			⇑*i*S	**Sg**	**03 39 55.6**	**+0.5**
ULHL	**Ulahol** SNR=6.4	**2.57**	**15**	P	**Pg**	**03 39 24.1**	**+1.5**
AML	**Almayashu** SNR=14	**2.68**	**332**	P	**Pb**	**03 39 23.3**	**+1.1**
AML	**Almayashu** baz=37	**2.68**	**332**	⇓*e*P	**Pb**	**03 39 23.2**	**+0.9**
AML	baz=37			⇓*i*S	**Sg**	**03 39 57.9**	**-1.6**
TARG	**Taragay, Kyrgy** baz=42	**2.70**	**43**	⇑*i*P	**Pg**	**03 39 24.5**	**-0.7**
TARG	baz=42			⇑*i*S	**Sg**	**03 40 00.2**	**0.0**
BOOM	**Boomskoye usch** baz=11	**2.76**	**9**	⇑*i*P	**Pg**	**03 39 24.9**	**-1.3**
BOOM	baz=11			⇑*i*S	**Sg**	**03 40 01.1**	**-0.9**
DRK	**Karamyk** baz=70	**2.76**	**265**	⇓*i*P	**Pn**	**03 39 19.8**	**+0.9**
DRK	baz=70			⇓*i*S	**Sn**	**03 39 52.2**	**-0.8**
KBK	**Karagaybulak** SNR=28	**2.91**	**354**	P	**Pg**	**03 39 27.5**	**-1.6**
KBK	**Karagaybulak** baz=57	**2.91**	**354**	⇑*i*P	**Pb**	**03 39 26.9**	**+0.9**
KBK	baz=57			⇑*i*S	**Sg**	**03 40 04.6**	**-2.2**
AAK	**Ala-Archa** SNR=16	**2.94**	**347**	P	**Pb**	**03 39 27.6**	**+1.0**
AAK	**Ala-Archa** 12nm,0.6s	**2.94**	**347**	⇓Pn	**Pb**	**03 39 26.7**	**+0.1**
AAK	39nm,1.1s			⇑Lg	Lg	03 40 06.2	
AAK	**Ala-Archa** baz=51	**2.94**	**347**	⇑*i*P	**Pb**	**03 39 27.2**	**+0.6**
AAK	baz=51			⇑*i*S	**Sg**	**03 40 05.0**	**-3.0**
EKS2	**Erkin-Say** baz=42	**3.13**	**338**	⇑*e*P	**Pb**	**03 39 29.2**	**-0.6**
EKS2	baz=42			⇑*i*S	**Sb**	**03 40 08.6**	**+0.1**
TKM2	**Tokmak 2** SNR=11	**3.16**	**3**	P	**Pb**	**03 39 30.4**	**0.0**
TKM2	**Tokmak 2** 4.3nm,0.5s	**3.16**	**3**	⇑Pn	**Pb**	**03 39 29.9**	**-0.4**
TKM2	46nm,0.8s			⇓Lg	Lg	03 40 15.1	
TKM2	**Tokmak 2** baz=5.0	**3.16**	**3**	⇑*e*P	**Pb**	**03 39 30.5**	**+0.2**
TKM2	baz=5.0			⇑*i*S	**Sg**	**03 40 11.0**	**-3.9**
CHMS	**Chumysh** SNR=6.6	**3.27**	**352**	P	**Pb**	**03 39 31.8**	**-0.2**
KST	**Kastek** 13nm,0.4s	**3.31**	**8**	*e*P	**Pg**	**03 39 37.5**	**+0.7**
KST	103nm,0.9s			*e*S	**Sg**	**03 40 21.7**	**+2.0**
KST	**Kastek** 13nm,0.4s	**3.31**	**8**	Pg	**Pg**	**03 39 36.2**	**-0.5**
KST	103nm,0.9s			Lg	Lg	03 40 19.1	
MRKS	**Merke** 3.4nm,0.5s	**3.39**	**332**	*e*P	**Pb**	**03 39 34.8**	**+0.7**
MRKS	7.4nm,0.3s			*e*S	**Sb**	**03 40 17.7**	**+1.9**
MRKS	**Merke** 6.1nm,0.4s	**3.39**	**332**	Pg	**Pg**	**03 39 38.4**	**+0.1**
MRKS	7.4nm,0.3s			Lg	Lg	03 40 22.6	
IZV	**Izvestkoviy** 10.0nm,0.6s	**3.40**	**16**	*e*P	**Pg**	**03 39 39.0**	**+0.5**
IZV	32nm,0.3s			*e*S	**Sg**	**03 40 25.1**	**+2.4**
IZV	**Izvestkoviy** 10.0nm,0.6s	**3.40**	**16**	Pg	**Pg**	**03 39 39.2**	**+0.6**
IZV	32nm,0.3s			Lg	Lg	03 40 24.5	
MTBS	**Maitube** 2.4nm,0.4s	**3.46**	**13**	*e*P	**Pg**	**03 39 39.6**	**0.0**
MTBS	15nm,0.6s			*e*S	**Sg**	**03 40 26.3**	**+1.8**
MTBS	**Maitube** 3.8nm,0.4s	**3.46**	**13**	Pg	**Pg**	**03 39 39.7**	**0.0**
MTBS	15nm,0.6s			Lg	Lg	03 40 24.8	
MNAS	**Manas** baz=26	**3.47**	**323**	⇓*i*P	**Pb**	**03 39 32.6**	**-3.0**
MNAS	baz=26			⇓*i*S	**Sb**	**03 40 14.5**	**-3.8**
ANVS	**Anan'yevo** baz=29	**3.48**	**29**	⇓*i*P	**Pb**	**03 39 35.4**	**-0.4**
ANVS	baz=29			⇓*i*S	**Sb**	**03 40 19.3**	**+0.7**
TNSS	**Tian-Shan** 6.5nm,0.6s	**3.48**	**20**	*e*P	**Pg**	**03 39 39.9**	**-0.2**
TNSS	16nm,0.5s			*e*S	**Sg**	**03 40 26.7**	**+1.5**
TNSS	**Tian-Shan** 6.5nm,0.6s	**3.48**	**20**	Pg	**Pg**	**03 39 40.4**	**+0.3**
TNSS	16nm,0.5s			Lg	Lg	03 40 26.3	
DGS	**Degeres** 4.7nm,0.8s	**3.49**	**5**	*e*P	**Pg**	**03 39 39.4**	**-0.8**
DGS	23nm,0.7s			*e*S	**Sg**	**03 40 26.4**	**+0.9**
DGS	**Degeres** 7.3nm,0.3s	**3.49**	**5**	Pg	**Pg**	**03 39 40.5**	**+0.3**
DGS	23nm,0.7s			Lg	Lg	03 40 26.6	
BTK	**Batken** baz=80	**3.50**	**276**	⇑*i*P	**Pn**	**03 39 30.6**	**+1.7**
BTK	baz=80			⇑*i*S	**Sn**	**03 40 11.4**	**+0.4**
USP	**Ospenovka** baz=52	**3.56**	**350**	⇑*i*P	**Pb**	**03 39 35.5**	**-1.5**
USP	baz=52			⇑*i*S	**Sb**	**03 40 19.4**	**-1.3**
MDOK	**Medeo** 4.1nm,0.3s	**3.63**	**20**	*e*P	**Pg**	**03 39 42.5**	**-0.4**
MDOK	24nm,0.7s			*e*S	**Sg**	**03 40 30.8**	**+0.9**
MDOK	**Medeo** 4.0nm,0.6s	**3.63**	**20**	⇓Pg	**Pg**	**03 39 42.9**	**+0.1**
MDOK	34nm,0.7s			⇑Lg	Lg	03 40 30.4	
MDOK	**Medeo** 4.1nm,0.3s	**3.63**	**20**	Pg	**Pg**	**03 39 42.6**	**-0.2**
MDOK	24nm,0.7s			Lg	Lg	03 40 30.2	
TRKS	**Terek-Say** baz=3.0	**3.66**	**300**	⇓*i*P	**Pn**	**03 39 33.3**	**+2.2**
TRKS	baz=3.0			⇓*i*S	**Sn**	**03 40 15.6**	**+0.6**
KOTS	**Kotyrbulak** 3.0nm,0.5s	**3.71**	**20**	*e*P	**Pg**	**03 39 44.2**	**-0.2**
KOTS	100nm,0.7s			*e*S	**Sg**	**03 40 34.5**	**+2.0**
KOTS	**Kotyrbulak** 7.1nm,0.7s	**3.71**	**20**	Pg	**Pg**	**03 39 45.1**	**+0.6**
KOTS	100nm,0.7s			Lg	Lg	03 40 34.2	
KRBS	**Karabastau** 4.4nm,0.6s	**3.94**	**3**	*e*P	**Pg**	**03 39 48.2**	**-0.6**
KRBS	11nm,0.8s			*e*S	**Sg**	**03 40 41.0**	**+1.2**
KRBS	**Karabastau** 4.4nm,0.6s	**3.94**	**3**	Pg	**Pg**	**03 39 48.8**	**+0.1**
KRBS	11nm,0.8s			Lg	Lg	03 40 40.9	
SATY	**Saty** 2.5nm,0.5s	**4.01**	**34**	*e*P	**Pg**	**03 39 49.6**	**-0.7**
SATY	6.7nm,0.5s			*e*S	**Sg**	**03 40 42.8**	**+0.6**
SATY	**Saty** 2.9nm,0.5s	**4.01**	**34**	Pg	**Pg**	**03 39 50.2**	**0.0**
SATY	6.7nm,0.5s			Lg	Lg	03 40 43.3	
KTBS	**Karatobe** 3.7nm,0.6s	**4.07**	**14**	*e*P	**Pg**	**03 39 50.7**	**-0.6**
KTBS	48nm,0.8s			*e*S	**Sg**	**03 40 44.7**	**+0.7**
KTBS	**Karatobe** 3.7nm,0.6s	**4.07**	**14**	Pg	**Pg**	**03 39 51.3**	**0.0**
KTBS	48nm,0.8s			Lg	Lg	03 40 44.9	
KUU	**Kurty** 2.8nm,0.3s	**4.19**	**10**	*e*P	**Pg**	**03 39 53.2**	**-0.5**
KUU	33nm,0.9s			*e*S	**Sg**	**03 40 48.8**	**+0.8**
KUU	**Kurty** 2.8nm,0.3s	**4.19**	**10**	Pg	**Pg**	**03 39 53.5**	**-0.1**
KUU	21nm,0.6s			Lg	Lg	03 40 48.9	
CHKK	**Chushkaly** 4.5nm,0.3s	**4.27**	**16**	*e*P	**Pg**	**03 39 54.5**	**-0.6**
CHKK	33nm,0.8s			*e*S	**Sg**	**03 40 51.2**	**+0.9**
CHKK	**Chushkaly** 4.5nm,0.3s	**4.27**	**16**	Pg	**Pg**	**03 39 54.5**	**-0.6**
CHKK	33nm,0.8s			Lg	Lg	03 40 50.8	
KURS	**Kuram** 5.0nm,0.5s	**4.28**	**29**	Pg	**Pg**	**03 39 55.2**	**-0.1**
KURS	7.9nm,0.5s			Lg	Lg	03 40 51.7	
UZB	**Uzynbulak** 2.6nm,0.2s	**4.36**	**38**	*e*P	**Pg**	**03 39 55.2**	**-1.7**
UZB	5.2nm,0.9s			*e*S	**Sg**	**03 40 53.1**	**-0.3**
UZB	**Uzynbulak** 3.2nm,0.3s	**4.36**	**38**	Pg	**Pg**	**03 39 56.2**	**-0.7**
UZB	5.2nm,0.9s			Lg	Lg	03 40 53.3	
IUG	**Iuzhnay** 2.7nm,0.9s	**4.68**	**302**	*e*P	**Pg**	**03 40 01.1**	**-2.0**
IUG	8.7nm,0.9s			*e*S	**Sg**	**03 41 03.7**	**-0.1**
IUG	**Iuzhnay** 61nm,0.2s	**4.68**	**302**	Pg	**Pg**	**03 40 02.8**	**-0.3**
IUG	16nm,0.7s			Lg	Lg	03 41 04.7	
PDGK	**Podgornoye** 1.2nm,0.6s	**4.72**	**40**	Pg	**Pg**	**03 40 03.1**	**-0.7**
PDGK	5.1nm,0.7s			Lg	Lg	03 41 05.1	
PDGK	**Podgornoye** 3.2nm,0.8s	**4.72**	**40**	⇑Pg	**Pg**	**03 40 03.4**	**-0.4**
PDGK	13nm,0.8s			⇓Lg	Lg	03 41 05.3	
ARXS	**Arharly** 2.9nm,0.8s	**4.81**	**22**	*e*P	**Pg**	**03 40 04.0**	**-1.5**
ARXS	8.1nm,0.4s			*e*S	**Sg**	**03 41 07.2**	**-0.7**
ARXS	**Arharly** 2.9nm,0.8s	**4.81**	**22**	Pg	**Pg**	**03 40 04.5**	**-1.1**
ARXS	8.1nm,0.4s			Lg	Lg	03 41 07.9	
BLB	**Baldybastay** 6.6nm,0.4s	**4.92**	**27**	Pg	**Pg**	**03 40 06.6**	**-0.9**
BLB	8.8nm,0.4s			Lg	Lg	03 41 11.5	
KK31	**Karatay Array** 0.8nm,0.7s,baz=122,slow=16,SNR=4.2	**4.94**	**314**	⇑Pg	**Pg**	**03 40 08.2**	**+0.3**
KK31	1.1nm,0.5s,baz=131,slow=29,SNR=5.8			⇑Lg	Lg	03 41 15.1	
KTMS	**Ketmen** 2.1nm,0.5s	**5.25**	**44**	Pg	**Pg**	**03 40 13.2**	**-0.7**
KTMS	4.5nm,0.4s			Lg	Lg	03 41 22.4	
BTLS	**Baital** 3.6nm,0.9s	**5.36**	**350**	Pg	**Pg**	**03 40 15.1**	**-0.9**
BTLS	3.1nm,0.7s			Lg	Lg	03 41 25.8	
KAPS	**Kapalarasan** 2.4nm,0.8s	**6.26**	**27**	Pg	**Pg**	**03 40 31.9**	**-1.3**
KAPS	4.5nm,0.8s			Lg	Lg	03 41 54.8	

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*IDC **10** 03:40:12.9±1.4, 21°04S×174°51W, h0km, mb4.0/6,*
mb1 4.2/7, mb1mx3.9/24, mbtmp3.9/7, ML3.9/1, MS3.5/2,
Ms1 3.5/2, ms1mx2.8/31, Error ellipse: s-maj=53.3km
s-min=26.0km az=139.0
ISC 10 03:40:15.4±1.0**, 21°2S**±0°1×**174°2W**±0°2**, h27**km**, n14,**
σ2ˢ27/10**, mb3.9**/5**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
AFI	**Afiamalu** 8.7nm,0.3s,baz=279,slow=23,SNR=6.6	**7.57**	**18**	Pn	**Pn**	**03 42 00.8**	**-3.3**
AFI	2.5nm,0.3s,baz=140,slow=21,SNR=1.1			Sn	Sn	03 43 16.2	-13
MSVF	**Nonsavu** 1.0nm,0.3s,baz=128,slow=15,SNR=7.0	**8.09**	**294**	Pn	Pb	03 42 18.3	-17
MSVF	comp=Z,507nm,18.1s,baz=120,slow=37			LR	LR	03 45 01.4	
RAO	**Raoul Island** 17nm,0.3s,baz=354,slow=23,SNR=1.6	**8.73**	**202**	Sn	**Sn**	**03 43 54.5**	**-3.0**
RAR	**Rarotonga** 3.3nm,0.3s,baz=267,slow=10.0,SNR=7.6	**13.43**	**93**	Pn	Pn	03 43 18.6	-5.7
DZM	**Mont Dzumac** 0.2nm,0.3s,baz=156,slow=4.9,SNR=2.5	**18.05**	**264**	P	**P**	**03 44 26.8**	**+2.1**
URZ	**Urewera** 0.4nm,0.3s,baz=300,slow=24,SNR=2.4	**18.62**	**202**	P	**Pn**	**03 44 32.5**	**+1.3**
URZ	0.8nm,0.3s,baz=303,slow=23,SNR=2.1			S	Sn	03 47 43.5	-15
PPT	**Papeete** comp=Z,58nm,18.2s,baz=287,slow=36	**23.47**	**85**	LR	LR	03 54 16.5	
ASAR	**Alice Springs** 2.5nm,0.7s,baz=96,slow=7.6,SNR=28	**47.85**	**257**	P	**P**	**03 48 50.4**	**-0.9**
WRA	**Warramunga Arr** 0.8nm,0.6s,baz=99,slow=7.8,SNR=10	**48.05**	**262**	P	**P**	**03 48 51.6**	**-1.3**
MJAR	**Matsushiro Arr** 1.6nm,0.8s,baz=182,slow=4.4,SNR=4.3	**72.91**	**322**	P	**P**	**03 51 42.2**	**0.0**
NVAR	**Mina Array Bea** 0.5nm,0.6s,baz=224,slow=7.6,SNR=5.5	**79.10**	**41**	P	**P**	**03 52 19.6**	**+1.8**
ILAR	**Eielson Array** 0.2nm,0.7s,baz=203,slow=5.8,SNR=1.9	**88.22**	**11**	P	**P**	**03 53 05.4**	**+1.8**
SONM	**Songino Array** 0.3nm,0.5s,baz=50,slow=4.5,SNR=2.3	**98.62**	**318**	P	Pdif	03 53 52.8	+0.8
AKASG	**Malin Array Be** 1.7nm,0.5s,baz=40,slow=4.3,SNR=13	**145.26**	**334**	PKPbc	**PKPdf**	**03 59 51.2**	**+0.7**

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*NNC **10** 03:50:42.0±0.8, 39°80N×75°10E, h0km, mb3.9, mpv3.5,*
Error ellipse: s-maj=6.2km s-min=3.7km az=166.0
*SOME **10** 03:50:44.0, 39°83N×75°28E, h10km*
*KRNET **10** 03:50:46.5±0.1, 39°79N×75°17E, mb3.6*
ISC 10 03:50:39.2±1.4**, 39°64N**±0°04×**75°33E**±0°03**, h17**km±14km**,**
n75, σ1ˢ90/115**, 32C-13D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SALK	**Salom-Alik** baz=17	**1.70**	**317**	⇑*e*P	**Pg**	**03 51 15.0**	**+3.1**
SALK	baz=17			⇑*e*S	**Sg**	**03 51 35.6**	**+1.6**
OHH	**Osh** baz=93	**2.15**	**295**	⇑*e*P	**Pg**	**03 51 23.5**	**+3.1**
OHH	baz=93			⇑*e*S	**Sg**	**03 51 50.0**	**+1.7**
UCH	**Uchtor** SNR=56	**2.66**	**347**	P	**Pg**	**03 51 29.8**	**-0.5**
UCH	**Uchtor** baz=49	**2.66**	**347**	⇓*e*P	**Pg**	**03 51 30.5**	**+0.2**
UCH	baz=49			⇓*i*S	**Sg**	**03 52 02.8**	**-2.0**
ULHL	**Ulahol** SNR=9.5	**2.69**	**15**	P	**Pg**	**03 51 32.3**	**+1.4**
ULHL	**Ulahol** baz=18	**2.69**	**15**	⇑*i*P	**Pg**	**03 51 31.9**	**+1.0**
ULHL	baz=18			⇑*i*S	**Sg**	**03 52 05.1**	**-0.8**
DRK	**Karamyk** baz=64	**2.73**	**268**	⇑*i*P	**Pg**	**03 51 32.6**	**+0.9**
DRK	baz=64			⇑*i*S	**Sg**	**03 52 06.2**	**-1.0**
AML	**Almayashu** SNR=6.0	**2.78**	**334**	P	**Pg**	**03 51 31.7**	**-1.0**
AML	**Almayashu** baz=35	**2.78**	**334**	⇓*i*P	**Pg**	**03 51 32.1**	**-0.5**
AML	baz=35			⇓*e*S	**Sg**	**03 52 05.5**	**-3.3**
BOOM	**Boomskoye usch** baz=12	**2.89**	**9**	⇓*i*P	**Pg**	**03 51 34.2**	**-0.4**
BOOM	baz=12			⇓*i*S	**Sg**	**03 52 09.1**	**-2.9**
KBK	**Karagaybulak** SNR=23	**3.03**	**355**	P	**Pg**	**03 51 35.2**	**-2.2**
KBK	**Karagaybulak** baz=57	**3.03**	**355**	⇓*e*P	**Pg**	**03 51 35.5**	**-1.8**
KBK	baz=57			⇓*i*S	**Sb**	**03 52 11.8**	**+2.2**
FRU1	**Bishkek** baz=52	**3.21**	**351**	⇑*i*P	**Pg**	**03 51 38.3**	**-2.5**
FRU1	baz=52			⇑*i*S	**Sb**	**03 52 16.7**	**+1.9**
EKS2	**Erkin-Say** SNR=5.1	**3.24**	**339**	P	**Pb**	**03 51 38.4**	**+1.9**
EKS2	**Erkin-Say** baz=40	**3.24**	**339**	⇓*i*P	**Pb**	**03 51 38.3**	**+1.9**
EKS2	baz=40			⇓*i*S	**Sb**	**03 52 16.7**	**+1.0**
TKM2	**Tokmak 2** SNR=14	**3.29**	**3**	P	**Pb**	**03 51 38.5**	**+1.3**
TKM2	**Tokmak 2** 13nm,0.7s	**3.29**	**3**	⇓Pg	**Pb**	**03 51 37.6**	**+0.3**
TKM2	77nm,0.8s			⇓Lg	Lg	03 52 22.5	
TKM2	**Tokmak 2** baz=6.0	**3.29**	**3**	⇑*i*P	**Pb**	**03 51 39.7**	**+2.5**
TKM2	baz=6.0			⇑*i*S	**Sb**	**03 52 18.6**	**+1.6**
CHMS	**Chumysh** SNR=12	**3.39**	**353**	P	**Pb**	**03 51 39.4**	**+0.6**
CHMS	**Chumysh** baz=54	**3.39**	**353**	⇑*e*P	**Pb**	**03 51 40.9**	**+2.1**
CHMS	baz=54			⇑*i*S	**Sb**	**03 52 20.2**	**+0.4**
KST	**Kastek** 16nm,0.3s	**3.44**	**8**	*e*P	**Pg**	**03 51 44.3**	**-0.8**
KST	175nm,0.8s			*e*S	**Sg**	**03 52 27.9**	**-1.7**
KST	**Kastek** 16nm,0.3s	**3.44**	**8**	Pg	**Pb**	**03 51 41.8**	**+2.1**
KST				Lg	Lg	03 52 26.3	

	175nm,0.8s						
MRKS	Merke	3.49	334	eP	Pg	03 51 43.6	-2.4
	4.4nm,0.5s						
MRKS				eS	Sb	03 52 25.6	+2.8
	24nm,0.5s						
MRKS	Merke	3.49	334	Pg	Pb	03 51 41.2	+0.6
	7.9nm,0.3s						
MRKS				Lg	Lg	03 52 25.5	
	24nm,0.5s						
BTK	Batken	3.50	278	⇑eP	Pb	03 51 42.9	+2.1
	baz=76						
BTK				⇑iS	Sb	03 52 23.4	+0.3
	baz=76						
IZV	Izvestkoviy	3.53	15	eP	Pg	03 51 47.0	+0.1
	16nm,0.6s						
IZV				eS	Sg	03 52 32.7	+0.1
	45nm,0.4s						
IZV	Izvestkoviy	3.53	15	Pg	Pb	03 51 44.3	+2.9
	16nm,0.6s						
IZV				Lg	Lg	03 52 30.7	
	45nm,0.4s						
MNAS	Manas	3.56	324	⇑iP	Pb	03 51 42.6	+0.7
	baz=24						
MNAS				⇑eS	Sb	03 52 23.4	-1.5
	baz=24						
MTBS	Maitube	3.58	13	eP	Pg	03 51 47.1	-0.8
	4.3nm,0.4s						
MTBS				eS	Sg	03 52 33.4	-1.0
	28nm,0.6s						
MTBS	Maitube	3.58	13	Pg	Pg	03 51 45.3	-2.6
	4.3nm,0.4s						
MTBS				Lg	Lg	03 52 32.6	
	28nm,0.6s						
ANVS	Anan'yevo	3.60	29	⇑iP	Pb	03 51 45.2	+2.6
	baz=31						
ANVS				⇑iS	Sb	03 52 27.8	+1.7
	baz=31						
TNSS	Tian-Shan	3.61	19	eP	Pg	03 51 48.1	-0.3
	9.0nm,0.6s						
TNSS				eS	Sg	03 52 35.4	+0.3
	17nm,0.7s						
TNSS	Tian-Shan	3.61	19	Pg	Pg	03 51 46.9	-1.5
	9.0nm,0.6s						
TNSS				Lg	Lg	03 52 35.4	
	17nm,0.7s						
DGS	Degeres	3.62	5	eP	Pg	03 51 47.9	-0.6
	10.0nm,0.6s						
DGS				eS	Sg	03 52 34.2	-1.2
	34nm,1.0s						
DGS	Degeres	3.62	5	Pg	Pb	03 51 45.3	+2.5
	10.0nm,0.6s						
DGS				Lg	Lg	03 52 32.4	
	34nm,1.0s						
PRZ	Przheval'sk	3.67	38	⇑iP	Pb	03 51 46.7	+3.0
	baz=41						
PRZ				⇑iS	Sb	03 52 30.4	+2.4
	baz=41						
USP	Ospenovka	3.68	350	P	Pb	03 51 44.2	+0.4
	SNR=9.0						
USP	Ospenovka	3.68	350	⇑eP	Pb	03 51 44.6	+0.8
	baz=52						
USP				⇑iS	Sb	03 52 27.5	-0.7
	baz=52						
MDOK	Medeo	3.75	20	eP	Pg	03 51 51.1	-0.1
	5.8nm,0.7s						
MDOK				eS	Sg	03 52 39.0	-0.7
	43nm,0.5s						
MDOK	Medeo	3.75	20	⇑Pg	Pg	03 51 49.9	-1.2
	8.4nm,0.9s						
MDOK				Lg	Lg	03 52 39.0	
	60nm,0.8s						
MDOK	Medeo	3.75	20	Pg	Pg	03 51 48.9	-2.2
	5.8nm,0.7s						
MDOK				Lg	Lg	03 52 39.0	
	43nm,0.5s						
GAR	Garm	3.94	262	⇑eP	Pb	03 51 49.1	+0.7
	baz=60						
GAR				⇑iS	Sb	03 52 35.3	-0.5
	baz=60						
KRBS	Karabastau	4.06	4	eP	Pg	03 51 55.9	-1.2
	5.9nm,0.5s						
KRBS				eS	Sg	03 52 48.1	-1.6
	19nm,0.9s						
KRBS	Karabastau	4.06	4	Pg	Pg	03 51 53.9	-3.2
	5.9nm,0.5s						
KRBS				Lg	Lg	03 52 47.2	
	19nm,0.9s						
SATY	Saty	4.13	33	eP	Pg	03 51 57.4	-0.9
	4.8nm,0.8s						
SATY				eS	Sg	03 52 51.0	-0.8
	19nm,0.9s						
SATY	Saty	4.13	33	Pg	Pg	03 51 56.1	-2.2
	4.8nm,0.8s						
SATY				Lg	Lg	03 52 51.0	
	19nm,0.9s						
KTBS	Karatobe	4.20	14	eP	Pg	03 51 59.0	-0.6
	3.9nm,0.7s						
KTBS				eS	Sg	03 52 52.2	-1.7
	67nm,0.8s						
KTBS	Karatobe	4.20	14	Pg	Pg	03 51 56.9	-2.7
	3.9nm,0.7s						
KTBS				Lg	Lg	03 52 52.2	
	67nm,0.8s						
KUU	Kurty	4.32	10	eP	Pg	03 52 01.4	-0.5
	3.9nm,0.5s						
KUU				eS	Sg	03 52 57.1	-0.8
	61nm,0.8s						
KUU	Kurty	4.32	10	Pg	Pg	03 51 59.7	-2.3
	3.9nm,0.5s						
KUU				Lg	Lg	03 52 57.1	
	61nm,0.8s						
CHKK	Chushkaly	4.39	16	eP	Pg	03 52 02.1	-1.2
	1.7nm,0.4s						
CHKK				eS	Sg	03 52 59.5	-0.7
	134nm,0.6s						
CHKK	Chushkaly	4.39	16	Pg	Pg	03 52 01.0	-2.3
	18nm,0.4s						
CHKK				Lg	Lg	03 52 59.5	
	134nm,0.6s						
KURS	Kuram	4.40	28	eP	Pg	03 52 02.0	-1.4
	10.0nm,0.8s						
KURS				eS	Sg	03 52 57.7	-2.7
	11nm,0.8s						
KURS	Kuram	4.40	28	Pg	Pg	03 52 01.4	-2.0
	10.0nm,0.8s						
KURS				Lg	Lg	03 53 00.0	
	11nm,0.8s						
UZB	Uzynbulak	4.47	37	eP	Pg	03 52 04.3	-0.6
	1.9nm,0.5s						
UZB				eS	Sg	03 53 02.2	-0.6
	6.7nm,1.0s						
UZB	Uzynbulak	4.47	37	Pg	Pg	03 52 02.8	-2.1
	2.9nm,0.2s						
UZB				Lg	Lg	03 53 02.2	
	6.7nm,1.0s						
IUG	Iuzhnay	4.74	304	eP	Pg	03 52 09.7	-0.2
	43nm,0.4s						
IUG				eS	Sg	03 53 11.2	0.0
	41nm,0.6s						
IUG	Iuzhnay	4.74	304	Pg	Pb	03 52 03.2	+1.4
	84nm,0.4s						
IUG				Lg	Lg	03 53 02.9	
	41nm,0.6s						
PDGK	Podgornoye	4.83	39	Pg	Pg	03 52 10.2	-1.6
	1.7nm,1.0s						
PDGK				Lg	Lg	03 53 15.1	
	6.4nm,1.1s						
PDGK	Podgornoye	4.83	39	⇑Pg	Pg	03 52 10.4	-1.3
	4.9nm,0.9s						
PDGK				⇓Lg	Lg	03 53 13.7	
	23nm,1.1s						
CHGR	Chuyangaron	4.90	260	⇑eP	Pb	03 52 02.4	-2.3
	baz=58						
CHGR				⇑iS	Sb	03 52 58.8	-4.5
	baz=58						
ARXS	Arharly	4.94	21	eP	Pg	03 52 12.1	-1.6
	4.6nm,0.9s						
ARXS				eS	Sg	03 53 15.2	-2.4
	9.2nm,0.6s						
ARXS	Arharly	4.94	21	Pg	Pg	03 52 10.9	-2.8
	4.6nm,0.9s						
ARXS				Lg	Lg	03 53 16.4	
	9.2nm,0.6s						
KK31	Karatay Array	5.01	315	⇑Pg	Pb	03 52 10.2	+3.7
	2.4nm,0.8s,baz=139,slow=16,SNR=7.4						
KK31				⇑Lg	Lg	03 53 14.3	
	3.7nm,0.6s,baz=131,slow=29,SNR=6.5						
BLB	Baldybastay	5.04	27	Pg	Pg	03 52 12.7	-2.9
	6.3nm,0.5s						
BLB				Lg	Lg	03 53 19.5	
	18nm,0.9s						
BRLS	Borolday	5.35	311	eP	Pg	03 52 20.2	-1.4
	2.3nm,0.8s						
BRLS				eS	Sg	03 53 28.9	-1.9
	11nm,0.6s						
BRLS	Borolday	5.35	311	Pg	Pb	03 52 15.1	+2.8
	3.8nm,0.7s						
BRLS				Lg	Lg	03 53 23.8	
	11nm,0.6s						
KTMS	Ketmen	5.35	43	eP	Pg	03 52 21.6	-0.2
	3.6nm,0.8s						
KTMS				eS	Sg	03 53 31.4	+0.4
	4.9nm,0.4s						
KTMS	Ketmen	5.35	43	Pg	Pg	03 52 20.5	-1.2
	3.6nm,0.8s						
KTMS				Lg	Lg	03 53 33.0	
	4.9nm,0.4s						
BTLS	Baital	5.48	350	eP	Pg	03 52 22.3	-1.9
	3.0nm,0.7s						
BTLS				eS	Sg	03 53 32.3	-2.9
	8.3nm,1.1s						
BTLS	Baital	5.48	350	Pg	Pg	03 52 20.1	-4.1
	3.0nm,0.7s						
BTLS				Lg	Lg	03 53 32.3	
	8.3nm,1.1s						
DJR	Jarkent	5.75	34	eP	Pg	03 52 29.8	+0.6
	1.3nm,0.8s						
DJR				eS	Sg	03 53 44.7	+1.0
	3.7nm,0.6s						
DJR	Jarkent	5.75	34	Pg	Pg	03 52 27.3	-2.0
	1.5nm,0.3s						
DJR				Lg	Lg	03 53 44.7	
	3.7nm,0.6s						
KAPS	Kapalarasan	6.38	26	eP	Pg	03 52 38.5	-2.8
	3.4nm,0.7s						
KAPS				eS	Sg	03 54 00.2	-3.7
	5.6nm,0.8s						
KAPS	Kapalarasan	6.38	26	Pg	Pg	03 52 39.0	-2.4
	3.4nm,0.7s						
KAPS				Lg	Lg	03 54 04.4	
	5.6nm,0.8s						

IDC ***10*** *04:04:09.6±2.1, 31°.71N×140°.16E, h0^{km}, mb3.6/3, mb1 3.8/4, mb1mx3.5/47, mbtmp3.6/4, ML2.8/1, MS2.7/1, Ms1 2.7/1, ms1mx2.1/46, Error ellipse: s-maj=85.8km s-min=20.9km az=80.0*

JMA ***10*** *04:04:14.0±0.3, 32°.27N×141°.02E, h32^{km}, M3.8*

ISC 10 04:04:13.6±1.5**, 32°.11N**±0°.09×**141°.0E**±0°.1**, h50^{km}, n17,** σ1^{s}.**99**/19**, mb3.5**/3**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAOM	Aogashimamukai	1.08	289	P	Pn	04 04 33.4	+1.0
JHJ2	Mitsune	1.40	316	P	Pn	04 04 36.9	+0.2
JHJ	Hachijo jima 2	1.42	315	Pn	Pn	04 04 37.0	-0.1
	109nm,0.3s,baz=279,slow=11,SNR=170						
JHJ				Sn	Sn	04 04 49.5	-5.1
	117nm,0.3s,baz=93,slow=18,SNR=11						
JMKN	Mikurajimanish	2.12	327	P	Pn	04 04 46.8	+0.2
JMKN				S	Sn	04 05 11.1	-0.7
JKO	Kozu shima	2.58	324	P	Pn	04 04 54.2	+1.3
JOD2	Odawara 2	3.52	334	P	Pn	04 05 06.3	+0.6
TTO1	TONANKAI O.B.S	3.83	294	P	Pn	04 05 12.9	+3.1
JYN	Shimob	3.94	330	P	Pn	04 05 13.8	+2.2
JIE	Ise	4.24	304	P	Pn	04 05 17.4	+1.8
JRY	Ryogami san	4.26	337	P	Pn	04 05 17.3	+1.4
JAG	Ashikaga	4.49	344	P	Pn	04 05 19.9	+0.9
MJAR	Matsushiro Arr	4.98	333	Pn	Pn	04 05 27.0	+1.2
	0.4nm,0.3s,baz=162,slow=13,SNR=4.2						
MAT	Matsushiro	4.98	333	P	Pn	04 05 28.4	+2.6
MAT				eS	Sn	04 06 24.0	+1.9
PETK	Petropavlovsk-	24.21	25	LR	LR	04 18 25.9	
	comp=Z,20nm,21.8s,baz=81,slow=34						
MKAR	Makanchi Array	46.57	306	P	P	04 12 36.4	0.0
	1.3nm,0.4s,baz=86,slow=9.3,SNR=26						
WRA	Warramunga Arr	52.14	188	P	P	04 13 18.4	-0.7
	0.2nm,0.4s,baz=5.3,slow=7.5,SNR=2.0						
ASAR	Alice Springs	55.87	188	P	P	04 13 45.3	-0.9
	0.2nm,0.4s,baz=11,slow=7.5,SNR=1.5						

SJA ***10*** *04:09:05.0, 29°.35S×72°.41W, h10^{km}, ML4.4*

IDC ***10*** *04:09:07.1±0.9, 29°.46S×71°.66W, h0^{km}, mb3.9/4, mb1 4.0/9, mb1mx3.8/27, mbtmp3.9/9, ML3.7/5, Error ellipse: s-maj=33.0km s-min=22.1km az=98.0*

GUC ***10*** *04:09:08.2±0.7, 29°.45S×71°.88W, h38^{km}±7^{km}, ML4.0*

NEIC ***10*** *04:09:09.9±2.6, 29°.45S±0°.03×71°.91W±0°.07, h35^{km}±2^{km}, mb4.3/8, ML4.0(GUC), Error ellipse: s-maj=10.6km s-min=5.3km az=281.0*

ISC 10 04:09:09.8±1.4**, 29°.44S**±0°.04×**72°.02W**±0°.06**, h34**^{km}±4^{km}**, n90,** σ1^{s}.**70**/94**, mb4.2**/6**, 3C-2D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO05	La Serena	0.83	125	⇓iP	Pn	04 09 23.0	-2.0
CO05				iS	Sn	04 09 33.8	-2.3
CO05				IAML		04 09 35.9	
	comp=N,15µm,0.4s						
CO05	La Serena	0.83	125	Pn	Pn	04 09 23.0	-2.0
CO05				Sn	Sn	04 09 33.1	-2.9
LCO	Las Campanas	1.23	70	eP	Pn	04 09 29.7	-1.0
LCO				iS	Sn	04 09 45.9	-0.4
LCO	Las Campanas	1.23	70	Pn	Pn	04 09 29.4	-1.3
LCO				Sn	Sn	04 09 45.6	-0.7
LCO	Las Campanas	1.23	70	iP	Pn	04 09 30.0	-0.8
CO06	Fray Jorge	1.27	165	⇑iP	Pn	04 09 30.3	-0.8
CO06				iS	Sn	04 09 46.0	-1.1
CO06				IAML		04 09 46.8	
	comp=E,3µm,0.3s						
CO06	Fray Jorge	1.27	165		Pn	04 09 30.4	-0.8
CO06				Sn	Sn	04 09 45.9	-1.2
GO04	Tololo Observa	1.28	125	⇓iP	Pn	04 09 30.8	-0.8
GO04				iS	Sn	04 09 47.6	-0.1
GO04	Tololo Observa	1.28	125		Pn	04 09 30.7	-0.8
GO04				Sn	Sn	04 09 47.5	-0.1
GO04	Tololo Observa	1.28	125	iP	Pn	04 09 30.0	-1.6
AC04	Llanos de Chal	1.48	34	⇑iP	Pn	04 09 33.2	-0.9
AC04	Llanos de Chal	1.48	34	Pn	Pn	04 09 33.2	-0.9
AC04	Llanos de Chal	1.48	34	iP	Pn	04 09 33.0	-1.1
CO03	El Pedregal	1.81	141	⇑iP	Pn	04 09 38.7	+0.1
CO03				iS	Sn	04 10 01.4	+1.0
CO03				IAML		04 10 04.5	
	comp=E,2µm,0.3s						
CO03	El Pedregal	1.81	141		Pn	04 09 38.5	-0.1
CO03	El Pedregal	1.81	141	iP	Pn	04 09 38.0	-0.6
AROD	Rodeo	2.33	109	iP	Pn	04 09 48.0	+2.1
GO03	Copiap	2.42	41	iP	Pn	04 09 46.5	-0.5
GO03				IAML		04 10 28.3	
	comp=N,528nm,0.6s						
GO03	Copiap	2.42	41	Pn	Pn	04 09 46.5	-0.5
GO03	Copiap	2.42	41	iP	Pn	04 09 47.0	0.0
ACCO	Cerro Coronel	2.80	115	iP	Pn	04 09 56.0	+3.5
VA06	Catapilco	3.17	169	IAML		04 10 57.8	
	comp=E,722nm,0.4s						
RTLS	Leoncito	3.32	136	iP	Pn	04 10 03.0	+3.4
VCA	Vinchina	3.41	79	iP	Pb	04 10 06.0	-3.6
VA03	San Esteban	3.54	160	IAML		04 11 03.5	
	comp=N,502nm,0.4s						
VA03	San Esteban	3.54	160		Pn	04 10 03.0	+0.5
VA03	San Esteban	3.54	160	iP	Pn	04 10 04.0	+1.5
VA01	Torpederas	3.58	175	Pn	Pn	04 10 02.5	-0.4
AC02	Maricunga	3.64	45	Pn	Pn	04 10 04.9	+0.8
AC02	Maricunga	3.64	45	iP	Pn	04 10 05.0	+0.8
RTCV	Cerro Valdivia	3.85	130	iP	Pn	04 10 10.0	+3.4
PEL	Peldehue	3.86	163	iP	Pn	04 10 08.0	+1.2
MT02	Curacav	3.88	169		Pn	04 10 06.5	-0.5
MT02	Curacav	3.88	169	iP	Pn	04 10 07.0	0.0
MT05	Renca	4.09	165		Pn	04 10 09.9	-0.1
MT05	Renca	4.09	165	iP	Pn	04 10 11.0	+1.1
AVFE	Valle Fertil	4.14	108	iP	Pn	04 10 13.0	+2.4
ASAL	Salagasta	4.16	140	iP	Pn	04 10 15.0	+4.0
VA05	Santo Domingo	4.22	175		Pn	04 10 10.8	-0.8
MT09	Talagante	4.41	169		Pn	04 10 14.8	+0.4
ACLC	CERRO LA CRUZ	4.42	91	iP	Pn	04 10 17.0	+2.4
MT01	Popeta	4.46	172		Pn	04 10 14.1	-0.9
MT01	Popeta	4.46	172	iP	Pn	04 10 14.0	-0.9
APLL	PUNTA DE LOS L	4.86	103	iP	Pn	04 10 23.0	+2.5
BO01	Tunca	5.00	171	Pn	Pn	04 10 21.9	-0.5
BO01	Tunca	5.00	171	iP	Pn	04 10 22.0	-0.4
BO02	Sierra Bellavi	5.44	169		Pn	04 10 28.3	-0.2
BO02	Sierra Bellavi	5.44	169	iP	Pn	04 10 29.0	+0.5
CYA	Choya	5.54	81	iP	Pn	04 10 32.0	+2.2
GO05	Huala	5.55	179	iP	Pn	04 10 28.0	-2.0
RFA	San Rafael	6.11	151	iP	Pn	04 10 39.0	+1.3
MRA	San Martin	6.17	120	iP	Pn	04 10 40.0	+1.4
ML02	Panimavida	6.32	176	Pn	Pn	04 10 40.0	-0.5
PB15	IPOC Station P	6.61	21		Pn	04 10 43.1	-1.7
PB15	IPOC Station P	6.61	21	iP	Pn	04 10 44.0	-0.8
PB05	IPOC Station P	6.76	14	iP	Pn	04 10 44.0	-2.7
H03N1	Juan Fernandez	7.11	234	T	T	04 18 33.5	
	baz=64,slow=71,SNR=1370						
H03N2	Juan Fernandez	7.13	234	T	T	04 18 33.6	
	baz=64,slow=71,SNR=1258						
H03N3	Juan Fernandez	7.13	234	T	T	04 18 37.8	
	baz=64,slow=71,SNR=1221						
PB04	IPOC Station P	7.27	14	iP	Pn	04 10 51.0	-2.8
LVC	Limon Verde	7.35	23	Pn	Pn	04 10 52.9	-2.2
	comp=N,0.6nm,0.3s,baz=185,slow=7.7,SNR=5.9						
LVC	Limon Verde	7.35	23		Pn	04 10 53.2	-1.9
LVC	Limon Verde	7.35	23	iP	Pn	04 10 54.0	-1.1
PB01	IPOC Station P	8.67	16	iP	Pn	04 11 10.0	-2.9
LC01	Cunco	9.43	179	iP	Pn	04 11 24.0	+0.7
PLCA	Paso Flores	11.33	174	Pn	Pn	04 11 48.9	-0.3
	comp=N,0.2nm,0.3s,baz=326,slow=8.1,SNR=3.5						
PLCA	Paso Flores	11.33	174		Pn	04 11 48.8	-0.5
CPUP	Villa Florida	13.35	80	Pn	Pn	04 12 13.6	-3.4
	comp=N,0.0nm,0.3s,baz=38,slow=3.4,SNR=2.0						
CPUP	Villa Florida	13.35	80		Pn	04 12 13.7	-3.2
LPAZ	La Paz	13.57	16	Pn	Pn	04 12 20.8	+0.3
	comp=N,0.1nm,0.3s,baz=194,slow=8.8,SNR=11						
LPAZ	La Paz	13.57	16		Pn	04 12 20.6	+0.2
SIV	San Ignacio	16.75	39	Pn	Pn	04 13 01.3	-0.6
	comp=N,0.2nm,0.3s,baz=222,slow=11,SNR=24						
VILB	Vilhena	19.74	36	P	P	04 13 34.4	-2.3
ETMB	Extrema	20.27	17	P	P	04 13 43.0	+0.6
CZSB	Cruzeiro do Su	21.61	358	P	P	04 13 57.3	+0.4
CZSB				IAmb	IAmb	04 14 00.5	
	comp=Z,12nm,0.9s						
BDFB	Brasilia	26.01	63	P	P	04 14 38.7	-1.1
	comp=Z,1.9nm,0.6s,baz=82,slow=20,SNR=4.3						
BDFB	Brasilia	26.01	63	P	P	04 14 37.1	-2.7
BDFB				IAmb	IAmb	04 14 51.0	
	comp=Z,33nm,2.0s						
BOAV	Boa Vista	33.52	21	P	P	04 15 46.6	+0.4
BOAV				IAmb	IAmb	04 16 47.6	
	comp=Z,7.5nm,1.3s						
SNAA	Sanae	55.81	159	P	P	04 18 44.3	+1.1
	comp=Z,1.0nm,0.6s,baz=270,slow=8.7,SNR=7.7						
SNAA	Sanae	55.81	159	P	P	04 18 43.1	-0.1
QSPA	South Pole Qui	60.78	180	P	P	04 19 19.9	+1.8
TXAR	Lajitas Array	65.79	330	P	P	04 19 54.8	+3.1
	comp=Z,0.3nm,0.7s,baz=155,slow=9.0,SNR=4.7						
TORD	Torodi Ar. Bea	82.66	71	P	P	04 21 31.6	+1.5
	comp=Z,2.2nm,0.8s,baz=257,slow=5.2,SNR=11						
TORD	Torodi Ar. Bea	82.66	71	P	P	04 21 29.2	-1.0
TORD				IAmb	IAmb	04 21 32.8	
	comp=Z,1.5nm,0.8s						
WRA	Warramunga Arr	124.72	211	PKP	PKiKP	04 28 08.5	+1.7
	comp=Z,0.2nm,0.6s,baz=181,slow=6.7,SNR=1.5						
KURBB	Kurchatov Arra	149.41	38	PKPbc	PKiKP	04 28 57.6	+1.6
	comp=Z,1.0nm,0.4s,baz=303,slow=3.4,SNR=10.0						
AAK	Ala-Archa	150.09	55	PKPbc	PKiKP	04 29 00.2	+2.3
	comp=Z,1.8nm,0.6s,baz=247,slow=1.9,SNR=4.9						
AAK	Ala-Archa	150.09	55		PKPdf	04 28 52.5	+0.5
ZALV	Zalesovo Beam	150.28	28	PKPbc	PKiKP	04 28 59.6	+2.0
	comp=Z,6.1nm,0.7s,baz=307,slow=3.1,SNR=24						
MKAR	Makanchi Array	153.56	42	PKPbc	PKiKP	04 29 07.3	+2.5
	comp=Z,0.6nm,0.9s,baz=293,slow=4.6,SNR=3.7						

NEIC ***10*** *04:13:17.9±1.5, 29°.43S±0°.03×71°.96W±0°.05, h9^{km}±5^{km}, mb4.3/8, ML3.6(GUC), Error ellipse: s-maj=7.1km s-min=3.6km az=59.0*

IDC ***10*** *04:13:17.3±0.9, 29°.46S×71°.78W, h0^{km}, mb4.0/5, mb1 4.1/9, mb1mx3.9/25, mbtmp4.0/9, ML3.8/4, MS3.0/1, Ms1 3.0/1, ms1mx2.6/21, Error ellipse: s-maj=37.8km s-min=21.1km az=97.0*

GUC ***10*** *04:13:18.3±0.7, 29°.44S×71°.90W, h35^{km}±11^{km}, ML3.6*

VAO ***10*** *04:13:24.2±0.7, 29°.03S×71°.34W, h10^{km}, mb4.3*

ISC 10 04:13:18.3±1.8**, 29°.46S**±0°.03×**71°.94W**±0°.07**, h11**^{km}±10^{km}**, n85,** σ0^{s}.**90**/90**, mb4.2**/7**, 4C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO05	La Serena	0.77	127	⇓iP	Pg	04 13 33.4	+0.3
CO05				iS	Sg	04 13 44.0	+0.8
CO05				IAML		04 13 46.6	
	comp=N,11µm,0.5s						
CO05	La Serena	0.77	127		Pg	04 13 33.4	+0.3
CO05					Sg	04 13 43.9	+0.8
LCO	Las Campanas	1.17	68	eP	Pb	04 13 40.0	-0.8
LCO				iS	Sb	04 13 56.5	+0.4
LCO	Las Campanas	1.17	68		Pb	04 13 39.9	-0.8
LCO				Sn	Sb	04 13 56.3	+0.3
GO04	Tololo Observa	1.22	126	⇓iP	Pn	04 13 41.1	-0.4
GO04				iS	Sn	04 13 58.0	-0.2
GO04	Tololo Observa	1.22	126	Pn	Pn	04 13 41.2	-0.4
GO04				Sn	Sb	04 13 57.3	-0.2
CO06	Fray Jorge	1.24	168	⇑iP	Pn	04 13 40.7	-0.9
CO06				iS	Sb	04 13 56.3	-1.4
CO06				IAML		04 13 57.0	
	comp=E,1µm,0.5s						
CO06	Fray Jorge	1.24	168		Pn	04 13 40.7	-0.9
AC04	Llanos de Chal	1.46	32	⇑iP	Pn	04 13 43.6	-1.1
AC04				iS	Sn	04 14 02.7	-1.1
AC04				IAML		04 14 04.2	
	comp=E,954nm,0.6s						
AC04	Llanos de Chal	1.46	32		Pn	04 13 43.6	-1.1
CO03	El Pedregal	1.75	142	⇑iP	Pn	04 13 49.0	+0.3
CO03				iS	Sb	04 14 12.2	-0.3
CO03				IAML		04 14 16.0	
	comp=E,1µm,0.4s						
CO03	El Pedregal	1.75	142	Pn	Pn	04 13 49.0	+0.3
GO03	Copiap	2.39	39	⇑iP	Pn	04 13 57.2	-0.2
GO03				IAML		04 14 39.1	
	comp=N,634nm,0.5s						
GO03	Copiap	2.39	39	Pn	Pn	04 13 57.2	-0.2
VA03	San Esteban	3.50	160	Pn	Pn	04 14 12.4	-0.4
VA01	Torpederas	3.56	176	Pn	Pn	04 14 12.8	-0.7
AC02	Maricunga	3.61	44	⇓iP	Pn	04 14 15.7	+1.2
AC02	Maricunga	3.61	44		Pn	04 14 15.3	+0.7
PEL	Peldehue	3.83	164	Pn	Pn	04 14 17.7	+0.5
MT02	Curacav	3.85	170		Pn	04 14 17.6	+0.1
MT05	Renca	4.05	166		Pn	04 14 20.1	-0.2
VA05	Santo Domingo	4.20	176	Pn	Pn	04 14 21.3	-0.9
MT09	Talagante	4.38	170		Pn	04 14 25.1	+0.2
MT01	Popeta	4.43	173		Pn	04 14 24.6	-0.9
BO01	Tunca	4.97	172	Pn	Pn	04 14 32.6	-0.3
BO02	Sierra Bellavi	5.41	170		Pn	04 14 39.4	+0.4
GO05	Huala	5.54	180	Pn	Pn	04 14 38.8	-1.8
H03N1	Juan Fernandez	7.15	235	T	T	04 22 48.2	
	baz=64,slow=71,SNR=91						
H03N2	Juan Fernandez	7.17	235	T	T	04 22 48.1	
	baz=64,slow=71,SNR=121						
H03N3	Juan Fernandez	7.17	234	T	T	04 22 44.7	
	baz=64,slow=71,SNR=103						
LVC	Limon Verde	7.35	22	Pn	Pn	04 15 03.5	-2.3
	comp=N,1.1nm,0.3s,baz=332,slow=13,SNR=1.4						
LVC	Limon Verde	7.35	22	Pn	Pn	04 15 03.9	-1.9
PLCA	Paso Flores	11.31	175	Pn	Pn	04 15 59.0	-0.9
	comp=N,0.2nm,0.3s,baz=334,slow=18,SNR=3.4						
CPUP	Villa Florida	13.29	80	LR	LR	04 21 46.2	
	comp=N,64nm,19.1s,baz=213,slow=39						
LPAZ	La Paz	13.57	16	Pn	Pn	04 16 32.4	+1.0
	comp=N,0.5nm,0.3s,baz=164,slow=7.1,SNR=23						
LPAZ	La Paz	13.57	16	Pn	Pn	04 16 32.9	+1.5
SIV	San Ignacio	16.72	39	Pn	Pn	04 17 11.3	-1.4
	comp=N,0.1nm,0.3s,baz=219,slow=10,SNR=9.4						
PTLB	Pontes e Lacer	18.27	43	eP	Pn	04 17 30.2	-1.6
PTLB	Pontes e Lacer	18.27	43	P	P	04 17 32.4	+0.4
VILB	Vilhena	19.71	36	eP	P	04 17 48.0	+0.1
VILB	Vilhena	19.71	36	P	P	04 17 47.5	-0.4
VILB				IAmb	IAmb	04 17 49.3	
	comp=Z,13nm,0.9s						
TER01	Tubaro-SC	19.98	93	eP	P	04 17 50.8	+0.1
SALV	Santo Antonio	20.14	51	eP	P	04 17 52.1	-0.4
PCMB	Pacaembu	20.22	72	eP	P	04 17 53.5	+0.2
ETMB	Extrema	20.27	17	eP	P	04 17 54.5	+0.6
ETMB	Extrema	20.27	17	P	P	04 17 52.7	-1.2
FRTB	Fartura	20.94	78	eP	P	04 18 01.4	+0.2
CZSB	Cruzeiro do Su	21.63	358	eP	P	04 18 10.5	+1.9
CZSB	Cruzeiro do Su	21.63	358	P	P	04 18 07.4	-1.2

CZSB				IAmb	IAmb	04 18 15.5	
	comp=Z,11nm,0.8s						
ITRB	Iturama	21.87	69	*e*P	P	04 18 09.8	-1.5
PDRB	Porto dos Gac	22.72	42	*e*P	P	04 18 19.5	-0.8
BB19B	Bebedouro	22.74	74	*e*P	P	04 18 19.5	-1.0
ARAG	Araguaiana, MT	23.03	58	*e*P	P	04 18 21.6	-2.0
CLDB	Colider	23.86	42	*e*P	P	04 18 30.8	-1.0
IPMB	Ipameri, GO	24.50	67	*e*P	P	04 18 36.7	-1.1
TBTG	Tabatinga, AM	25.21	5	*e*P	P	04 18 45.0	+0.9
SNDB	Serra Nova Dou	25.92	52	*e*P	P	04 18 50.1	-0.5
BDFB	Brasilia	25.96	63	P	P	04 18 50.4	-0.7
	comp=Z,2.9nm,0.7s,baz=289,slow=18,SNR=4.3						
NPGB	Novo Progresso	27.22	38	*e*P	P	04 19 01.9	-0.5
PEXB	Peixe	27.95	57	*e*P	P	04 19 10.4	+1.4
DIAM	Diamantina, MG	28.07	73	*e*P	P	04 19 10.8	+0.7
MACA	Manacapuru-AM	28.25	24	*e*P	P	04 19 11.5	-0.1
MC01	Montes Claros	28.63	70	*e*P	P	04 19 14.3	-0.8
JANB	Januaria	29.22	67	*e*P	P	04 19 19.8	-0.4
SDBA	SAO DESIDERIO	30.31	62	*e*P	P	04 19 29.9	0.0
SMTB	Santa Maria do	30.68	53	*e*P	P	04 19 32.8	-0.4
BOAV	Boa Vista	33.51	21	*e*P	P	04 19 57.5	-0.4
BOAV	Boa Vista	33.51	21	P	P	04 19 56.7	-1.2
BOAV				IAmb	IAmb	04 20 12.2	
	comp=Z,4.3nm,1.2s						
NBPN	Ponto Novo - B	34.91	65	*e*P	P	04 20 10.0	-0.2
TMAB	Tom-Au,PA,Br	35.21	44	*e*P	P	04 20 13.6	+0.9
NBMA	Muriti-CE	38.16	61	*e*P	P	04 20 38.5	+0.6
NBPV	Pedro Velho	41.44	64	*e*P	P	04 21 05.7	+0.4
SNAA	Sanae	55.77	159	P	P	04 22 55.0	+0.1
	comp=Z,1.4nm,0.8s,baz=340,slow=16,SNR=5.6						
SNAA	Sanae	55.77	159	P	P	04 22 55.1	+0.3
SNAA				IAmb	IAmb	04 23 08.3	
	comp=Z,3.5nm,1.2s						
QSPA	South Pole Qui	60.76	180	P	P	04 23 30.9	+0.9
TXAR	Lajitas Array	65.84	330	P	P	04 24 05.1	+1.2
	comp=Z,0.3nm,0.7s,baz=151,slow=7.8,SNR=3.7						
TXAR	Lajitas Array	65.84	330	P	P	04 24 05.4	+1.4
MAW	Mawson	77.50	164	P	P	04 25 14.7	+1.2
	comp=Z,1.5nm,0.9s,baz=280,slow=10,SNR=2.0						
TORD	Torodi Ar. Bea	82.60	70	P	P	04 25 42.6	+0.7
	comp=Z,2.6nm,0.8s,baz=261,slow=4.8,SNR=15						
TORD	Torodi Ar. Bea	82.60	70	P	P	04 25 42.2	+0.2
WRA	Warramunga Arr	124.73	210	PKP	PKPdf	04 32 18.9	+0.1
	comp=Z,0.3nm,0.7s,baz=177,slow=1.0,SNR=1.8						
KURBB	Kurchatov Arra	149.38	38	PKPbc	PKiKP	04 33 08.0	-0.1
	comp=Z,1.1nm,0.6s,baz=300,slow=3.2,SNR=9.8						
AAK	Ala-Archa	150.05	55	PKPbc	PKPbc	04 33 09.0	-0.2
	comp=Z,2.1nm,0.7s,baz=127,slow=1.2,SNR=5.6						
ZALV	Zalesovo Beam	150.27	28	PKPbc	PKiKP	04 33 09.6	-0.3
	comp=Z,7.4nm,0.7s,baz=303,slow=3.1,SNR=28						
MKAR	Makanchi Array	153.53	42	PKPbc	PKiKP	04 33 17.6	+0.7
	comp=Z,0.7nm,0.8s,baz=352,slow=1.7,SNR=4.9						

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*IDC **10** 04:17:14.1±1.2,35°.63N×23°.58E,h0km,mb4.0/6, mb1 4.0/6,mb1mx3.6/40,mbtmp4.0/6,Error ellipse: s-maj=26.4km s-min=17.4km az=31.0*

*ATH **10** 04:17:16.8,35°.61N×23°.58E,h10km±2km,ML3.2/4,Error ellipse: s-maj=2.8km s-min=0.7km az=223.0*

*THE **10** 04:17:16.2,35°.56N×23°.52E,h2km±2km,ML3.1/8,Error ellipse: s-maj=2.3km s-min=0.5km az=226.0*

ISC 10 04:17:16.2±1.0,**35°.58N**±0°.03×**23°.56E**±0°.03,**h12**km±7km, **n42,**σ**0ˢ.85**/55,**mb3.9**/6,**Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANKY	Antikythira Is	0.35	324	P	Pg	04 17 23.5	+0.2
ANKY				S	Sg	04 17 28.4	+0.4
	4µm,0.3s						
ANKY	Antikythira Is	0.35	324	P	Pg	04 17 23.5	+0.2
ANKY				S	Sg	04 17 28.4	+0.4
ANKY				AML	AML	04 17 29.9	
	comp=N,7552µm,0.2s						
ANKY				AML	AML	04 17 30.2	
	comp=E,7252µm,0.3s						
KNDR	Palaiochora Ch	0.36	163	P	Pg	04 17 22.3	-1.2
KNDR				S	Sg	04 17 27.5	-0.9
	comp=E,2µm,0.1s						
IMMV	Iera Moni Meta	0.37	109	P	Pg	04 17 23.6	+0.1
IMMV				S	Sb	04 17 30.0	-0.4
	comp=E,8µm,0.3s						
IMMV	Iera Moni Meta	0.37	109	P	Pg	04 17 23.7	+0.1
IMMV				S	Sg	04 17 29.0	+0.5
IMMV				AML	AML	04 17 30.3	
	comp=N,20849µm,0.4s						
IMMV				AML	AML	04 17 32.6	
	comp=E,12212µm,0.4s						
VAM	Vamos	0.55	108	P	Pg	04 17 27.0	0.0
VAM				S	Sb	04 17 35.3	-0.4
	comp=E,4µm,0.5s						
VAM	Vamos	0.55	108	P	Pg	04 17 27.0	0.0
VAM				S	Sg	04 17 34.6	+0.3
VAM				AML	AML	04 17 38.0	
	comp=N,6655µm,0.4s						
VAM				AML	AML	04 17 41.3	
	comp=E,7015µm,0.5s						
KTHA	Kythira Island	0.78	329	P	Pg	04 17 31.4	0.0
KTHA	Kythira Island	0.78	329	P	Pg	04 17 31.3	-0.1
KTHA				S	Sg	04 17 41.9	+0.3
KTHA				AML	AML	04 17 45.8	
	comp=N,3559µm,0.2s						
KTHA				AML	AML	04 17 46.2	
	comp=E,6025µm,0.5s						
PRNS	Prines Rethymn	0.80	106	P	Pg	04 17 31.0	-0.7
PRNS				S	Sg	04 17 42.3	+0.1
	comp=E,590nm,0.2s						
KTHR	Kythira	0.81	327	P	Pg	04 17 31.6	-0.3
KTHR				S	Sg	04 17 42.3	-0.2
	comp=E,2µm,0.2s						
GVD	Gavdhos	0.86	150	P	Pg	04 17 33.2	+0.4
GVD				S	Sb	04 17 45.4	+0.8
	comp=E,2µm,0.3s						
GVD	Gavdhos	0.86	150	P	Pg	04 17 33.0	+0.2
GVD				S	Sb	04 17 45.4	+0.8
IDI	Anoyia	1.13	105	Pn	Pg	04 17 37.2	-0.7
	comp=E,25nm,0.3s,baz=241,slow=9.4,SNR=71						
IDI				Sn	Sb	04 17 53.0	+0.7
	comp=E,64nm,0.3s,baz=25,slow=20,SNR=10						
IDI	Anoyia	1.13	105	P	Pg	04 17 37.4	-0.5
IDI	Anoyia	1.13	105	P	Pg	04 17 37.2	-0.7
MNVA	Monemvasia	1.18	339	P	Pg	04 17 38.4	-0.5
VLI	Veliai	1.24	336	P	Pg	04 17 39.8	-0.2
VLI	Veliai	1.24	336	P	Pg	04 17 39.6	-0.4
MHLO	Agia Marina, M	1.30	32	P	Pg	04 17 40.2	-1.0
MHLO				S	Sn	04 17 59.6	+2.1
	comp=E,3µm,0.3s						
THR6	Thira Island,	1.68	62	P	Pn	04 17 46.5	+1.1
THR3	Thira Island,	1.71	61	P	Pn	04 17 46.9	+1.1
NPS	Neapolis	1.71	100	P	Pn	04 17 46.5	+0.7
NPS	Neapolis	1.71	100	P	Pn	04 17 47.4	+1.5
CMBO	Columbo, Santo	1.74	59	P	Pn	04 17 47.1	+0.8
THR2	Thira island,	1.75	60	P	Pn	04 17 47.6	+1.2
THR8	Santorini-Mono	1.76	62	P	Pn	04 17 47.4	+0.9
PYL	PYLOS	1.97	312	P	Pn	04 17 51.3	+1.9
LTK	Loutraki	2.48	349	P	Pn	04 17 57.5	+1.0
STON	Ston	8.58	330	*e*Pn	Pn	04 19 18.4	-1.7
RICI	Ricice	9.33	330	*e*Pn	Pn	04 19 30.4	0.0
HVAR	Hvar	9.37	326	*e*Pn	Pn	04 19 30.2	-0.8
KIJV	Kijevo	10.05	329	*e*Pn	Pn	04 19 35.1	-5.2
ZIRJ	Zirje	10.11	325	*e*Pn	Pn	04 19 41.1	0.0
UDBI	Udbina	10.74	329	*e*Pn	Pn	04 19 50.6	+0.8
NACGM	Naroch	19.45	6	*i* P	P	04 21 40.5	-2.0
HFS	Hagfors	25.38	348	P	P	04 22 42.2	-0.9
	comp=E,3.0nm,0.8s,baz=138,slow=9.1,SNR=6.1						
FINES	FINESS Array B	25.93	3	P	P	04 22 46.9	-1.2
	comp=E,5.3nm,1.1s,baz=168,slow=9.8,SNR=4.6						
EKA	Eskdalemuir Ar	26.94	325	P	P	04 22 57.1	-0.2
	comp=E,0.9nm,0.5s,baz=134,slow=7.0,SNR=1.8						
TORD	Torodi Ar. Bea	29.79	227	P	P	04 23 23.0	0.0
	comp=E,1.2nm,0.9s,baz=31,slow=9.3,SNR=5.9						
ARCES	ARCESS Array B	34.02	1	P	P	04 23 58.7	-1.0
	comp=E,2.0nm,0.8s,baz=187,slow=6.4,SNR=4.0						
MKAR	Makanchi Array	44.63	57	P	P	04 25 28.6	+0.1
	comp=E,0.9nm,0.8s,baz=280,slow=7.3,SNR=4.3						

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*SJA **10** 04:25:55±2.6,24°.10S±0°.09×66°.9W±0°.2,h268km±8km, Error ellipse: s-maj=22.1km s-min=13.0km az=98.0*

*NEIC **10** 04:25:59.5±1.6,24°.17S±0°.08×66°.9W±0°.2,h193km±6km, mb4.0/2,Md3.6(SJA),Error ellipse: s-maj=22.3km s-min=11.3km az=95.0*

*IDC **10** 04:26:01.1±2.2,23°.91S×66°.91W,h197km±24km,mb3.1/1, mb1 3.4/5,mb1mx3.1/25,mbtmp3.8/5,Error ellipse: s-maj=36.9km s-min=26.4km az=151.0*

*GUC **10** 04:26:01.9±0.5,23°.93S×67°.31W,h236km±6km,ML3.6*

ISC 10 04:25:59.8±0.9,**24°.07S**±0°.06×**67°.00W**±0°.07,**h201**km±9km, **n36,**σ**1ˢ.30**/48,**7C-1D,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLA	San Lorenzo	1.51	116	⇓*i*P	Pn	04 26 34.3	+0.4
AF01	San Pedro de A	1.55	316		Pn	04 26 36.0	+1.7
AF01				Sn	Sn	04 26 59.4	-1.7
LVC	Limon Verde	2.27	309	P	Pn	04 26 43.0	+1.3
	10nm,0.3s,baz=114,slow=8.4,SNR=80						
LVC				S	Sn	04 27 14.6	+0.4
	8.5nm,0.3s,baz=266,slow=22,SNR=26						
LVC	Limon Verde	2.27	309	⇑*i*P	Pn	04 26 42.9	+1.3
LVC				*i* S	Sn	04 27 14.4	+0.3
PB15	IPOC Station P	2.42	290	⇑*i*P	Pn	04 26 44.4	+1.3
PB15				*i* S	Sn	04 27 16.9	+0.2
PB15	IPOC Station P	2.42	290		Pn	04 26 44.0	+1.0
PB06	IPOC Station P	2.72	299	⇑*i*P	Pn	04 26 47.6	+1.2
PB06				*i* S	Sn	04 27 22.4	-0.4
PB06				IAML		04 27 23.7	
	comp=N,201nm,0.4s						
PB06	IPOC Station P	2.72	299		Pn	04 26 47.6	+1.2
PB09	IPOC Station P	3.06	317		Pn	04 26 52.0	+1.7
PB14	IPOC Station P	3.15	259		Pn	04 26 52.1	+0.5
PB05	IPOC Station P	3.18	292	⇑*i*P	Pn	04 26 52.5	+0.9
PB05				*i* S	Sn	04 27 29.9	-2.3
PB05				IAML		04 27 34.4	
	comp=E,58nm,0.3s						
PB03	IPOC Station P	3.23	308	⇑*i*P	Pn	04 26 53.2	+0.8
PB03				*i* S	Sn	04 27 32.1	-1.5
PB10	IPOC Station P	3.30	279	⇑*i*P	Pn	04 26 53.9	+0.9
PB10	IPOC Station P	3.30	279		Pn	04 26 53.9	+0.9
PB04	IPOC Station P	3.37	300	*e*P	Pn	04 26 54.7	+0.7
PB04				*i* S	Sn	04 27 34.9	-1.7
PB04	IPOC Station P	3.37	300		Pn	04 26 54.9	+0.8
PB07	IPOC Station P	3.54	311	⇑*i*P	Pn	04 26 56.7	+0.6
PB07				*i* S	Sn	04 27 38.4	-1.7
PB07	IPOC Station P	3.54	311		Pn	04 26 56.5	+0.4
PB01	IPOC Station P	3.79	322	*e*P	Pn	04 26 59.6	+0.5
PB01				*e*S	Sn	04 27 43.6	-1.9
PB01	IPOC Station P	3.79	322		Pn	04 26 59.5	+0.4
PB02	IPOC Station P	3.82	315	*e*P	Pn	04 27 00.1	+0.5
PB02				*e*S	Sn	04 27 44.0	-2.4
PATCX	Punta Patache	4.35	317	Pn	Pn	04 27 06.8	+0.7
PB08	IPOC Station P	4.39	333	Pn	Pn	04 27 07.7	+0.8
GO03	Copiap	4.56	219	Pn	Pn	04 27 07.2	-1.4
PB11	IPOC Station P	4.94	330		Pn	04 27 13.7	+0.1
PSGCX	Pisagua	5.31	326	Pn	Pn	04 27 17.5	-0.8
AC04	Llanos de Chal	5.51	221	Pn	Pn	04 27 18.9	-1.8
PB16	IPOC Station P	6.16	337	Pn	Pn	04 27 32.1	+2.4
LPAZ	La Paz	7.81	352	P	Pn	04 27 52.1	+0.9
	comp=E,0.4nm,0.3s,baz=159,slow=7.2,SNR=11						
LPAZ				S	Sn	04 29 17.8	-2.0
	comp=E,0.1nm,0.3s,baz=120,slow=20,SNR=2.0						
SIV	San Ignacio	9.78	36	P	Pn	04 28 14.9	-1.3
	comp=E,0.8nm,0.3s,baz=226,slow=13,SNR=12						
BDFB	Brasilia	19.71	68	P	P	04 30 14.5	+0.2
	comp=E,0.5nm,0.3s,baz=242,slow=10,SNR=10						
BDFB	Brasilia	19.71	68	P	P	04 30 12.9	-1.4
BDFB				IAmb	IAmb	04 30 15.5	
	comp=Z,6.7nm,0.8s						
SNAA	Sanae	59.29	161	P	P	04 35 40.3	+0.3
SNAA				IAmb	IAmb	04 35 53.0	
	comp=Z,2.1nm,1.3s						
TORD	Torodi Ar. Bea	76.59	69	P	P	04 37 29.3	+0.8
	comp=Z,0.3nm,0.5s,baz=248,slow=4.6,SNR=6.6						
MKAR	Makanchi Array	146.58	40	PKPbc	PKPdf	04 45 18.0	+2.4
	comp=Z,0.4nm,0.6s,baz=314,slow=2.1,SNR=3.8						
MKAR	Makanchi Array	146.58	40		PKPdf	04 45 16.3	+0.7

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*NEIC **10** 04:28:56.4±0.4,32°.7S±0°.1×178°.08W±0°.06,h10km±2km, mb4.1/5,Error ellipse: s-maj=21.0km s-min=8.4km az=5.0*

*IDC **10** 04:28:57.9±6.7,31°.41S×178°.56W,h0km,mb3.8/2, mb1 4.1/2,mb1mx3.7/19,mbtmp3.8/2,Error ellipse: s-maj=280.4km s-min=57.2km az=157.0*

ISC 10 04:28:58.6±1.6,**32°.6S**±0°.2×**178°.1W**±0°.3,**h35**km,**n12,** σ**1ˢ.17**/13,**mb4.0**/5,**South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	6.84	214		Pn	04 30 37.1	+0.7
URZ				Sn	Sn	04 31 52.2	-0.9
BKZ	Black Stump Fm	7.86	212	Pn	Pn	04 30 50.0	-0.4
THZ	Tophouse	11.59	216	Pn	Pn	04 31 40.9	-0.7
ASAR	Alice Springs	42.96	269	P	P	04 36 55.5	+1.1
	0.7nm,0.6s,baz=99,slow=7.1,SNR=8.9						
WR0	Warramunga Arr	43.97	275	P	P	04 37 03.2	+0.6
WR0				IAmb	IAmb	04 37 05.6	
	comp=Z,2.2nm,0.9s						
WB2	Warramunga Arr	44.14	275	P	P	04 37 04.7	+0.7
WRA	Warramunga Arr	44.15	274	P	P	04 37 04.8	+0.7
	comp=Z,1.0nm,0.4s,baz=114,slow=7.5,SNR=11						
WRA	Warramunga Arr	44.15	274	P	P	04 37 04.8	+0.7
WB0	Warramunga Arr	44.18	275	P	P	04 37 04.8	+0.5
WB0				IAmb	IAmb	04 37 13.3	
	comp=Z,4.7nm,1.3s						
QSPA	South Pole Qui	57.48	180	P	P	04 38 45.2	+1.2
QSPA				IAmb	IAmb	04 38 51.3	
	comp=Z,3.3nm,1.4s						
FINES	FINESS Array B	147.20	339	PKPbc	PKiKP	04 48 37.9	-1.8
	comp=Z,2.7nm,0.8s,baz=38,slow=3.4,SNR=6.3						
FINES	FINESS Array B	147.20	339		PKiKP	04 48 37.7	-2.0

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*IDC **10** 04:47:39.5±5.6,36°.09N×70°.46E,h184km±55km,mb3.4/4, mb1 3.3/8,mb1mx3.0/54,mbtmp3.8/8,Error ellipse: s-maj=59.5km s-min=40.7km az=132.0*

*NNC **10** 04:47:49.8±3.7,37°.00N×70°.43E,h224km±54km,mb2.8, mpv3.9,Error ellipse: s-maj=39.8km s-min=24.2km az=20.0*

*SOME **10** 04:47:50.1,37°.20N×70°.60E,h0km*

ISC 10 04:47:48.2±2.1,**36°.9N**±0°.2×**70°.2E**±0°.1,**h200**km,**n17,** σ**1ˢ.53**/23,**mb3.8**/3,**5C-1D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	Iuzhnay	5.21	358	*e*P	Pn	04 49 06.9	+1.5
	211nm,0.2s						
IUG				*e*S	Sn	04 50 08.3	+2.0
	151nm,0.4s						
BRLS	Borolday	6.10	357	*e*P	Pn	04 49 14.5	-2.2
	2.4nm,0.1s						
BRLS				*e*S	Sn	04 50 22.2	-4.7
	14nm,0.3s						
KK31	Karatay Array	6.17	2	⇑P	Pn	04 49 19.5	+1.9
	2.3nm,0.5s,baz=148,slow=10,SNR=18						
KK31				⇑S	Sn	04 50 29.5	+1.0
	2.7nm,0.4s,baz=249,slow=34,SNR=5.0						
MRKS	Merke	6.24	21	*e*P	Pn	04 49 18.8	+0.2
	8.1nm,0.3s						
MRKS				*e*S	Sn	04 50 30.0	-0.3
	25nm,0.3s						
AAK	Ala-Archa	6.57	29	P	Pn	04 49 23.0	+0.1
	1.5nm,0.3s,baz=198,slow=6.7,SNR=11						
AAK				S	Sn	04 50 39.3	+1.2
	1.0nm,0.3s,baz=3.4,slow=19,SNR=12						
AAK	Ala-Archa	6.57	29	⇑P	Pn	04 49 22.8	-0.1
	4.5nm,0.6s						
TKM2	Tokmak 2	7.26	33	⇑P	Pn	04 49 31.2	-0.8
	11nm,0.5s						
TKM2				⇓S	Sn	04 50 54.3	0.0
	4.2nm,0.9s						
KST	Kastek	7.52	34	*e*P	Pn	04 49 35.3	+0.1
	7.4nm,0.4s						
KST				*e*S	Sn	04 50 59.2	-1.1
	7.7nm,0.5s						
MKAR	Makanchi Array	13.32	39	P	Pn	04 50 48.4	-1.2
	0.1nm,0.3s,baz=228,slow=11,SNR=2.0						
AB31	Akbulak array	14.42	332	P	Pn	04 51 03.0	-0.1
	0.7nm,0.5s,baz=145,slow=11,SNR=24						
BVAR	Borovoye Array	16.09	0	P	Pn	04 51 24.9	+1.5
	0.3nm,0.3s,baz=219,slow=21,SNR=3.0						
AKTO	Aktyubinsk	16.11	331	P	P	04 51 24.2	+1.0
	0.5nm,0.3s,baz=140,slow=9.1,SNR=16						
AKTO	Aktyubinsk	16.11	331	⇑P	P	04 51 24.1	+1.0
	6.8nm,0.8s						
ZALV	Zalesovo Beam	19.79	26	P	P	04 52 02.7	-0.3
	1.0nm,0.4s,baz=215,slow=12,SNR=5.2						
FINES	FINESS Array B	36.79	326	P	P	04 54 35.9	-0.5
	2.1nm,0.9s,baz=120,slow=11,SNR=4.7						
ARCES	ARCESS Array B	40.52	338	P	P	04 55 06.8	-0.4
	7.4nm,1.1s,baz=116,slow=2.8,SNR=6.3						
TORD	Torodi Ar. Bea	65.12	268	P	P	04 58 01.9	-6.0
	0.3nm,0.5s,baz=54,slow=5.7,SNR=4.3						

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*NNC **10** 04:53:00.4±1.0,39°.80N×75°.10E,h0km,mb4.0,mpv3.6, Error ellipse: s-maj=7.4km s-min=4.6km az=166.0*

*SOME **10** 04:53:01.6,39°.90N×75°.23E,h0km*

*KRNET **10** 04:53:02.4±0.1,39°.69N×75°.45E,mb3.4*

ISC 10 04:53:01.1±1.2,**39°.77N**±0°.04×**75°.36E**±0°.03,**h10**km,**n71,** σ**2ˢ.25**/108,**39C-12D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	1.45	280	⇓*i*P	Pg	04 53 31.7	+2.8
	baz=83						
SFK				⇓*i*S	Sg	04 53 52.7	+5.0
	baz=83						
SALK	Salom-Alik	1.61	314	⇑*e*P	Pg	04 53 34.7	+2.6
	baz=14						
SALK				⇑*e*S	Sg	04 53 58.0	+4.9
	baz=14						
OHH	Osh	2.11	292	⇑*i*P	Pg	04 53 42.6	+1.0
	baz=93						
OHH				⇑*i*S	Sg	04 54 11.9	+3.0
	baz=93						
UCH	Uchtor	2.54	346	P	Pb	04 53 47.9	+0.9
	SNR=42						
UCH	Uchtor	2.54	346	⇑*i*P	Pg	04 53 48.2	-1.6
	baz=45						
UCH				⇑*i*S	Sg	04 54 21.9	-0.7
	baz=45						
ULHL	Ulahol	2.56	15	P	Pg	04 53 50.2	-0.1
	SNR=8.5						
ULHL	Ulahol	2.56	15	⇑*i*P	Pb	04 53 48.1	+0.8
	baz=13						
ULHL				⇑*i*S	Sg	04 54 21.7	-1.7
	baz=13						
AML	Almayashu	2.67	332	P	Pb	04 53 49.6	+0.3
	SNR=14						
AML	Almayashu	2.67	332	⇑*e*P	Pg	04 53 50.5	-1.9
	baz=32						
AML				⇑*i*S	Sg	04 54 25.5	-1.5
	baz=32						
TARG	Taragay, Kyrgy	2.70	43	⇓*i*P	Pb	04 53 49.6	-0.2
	baz=41						
TARG				⇓*i*S	Sb	04 54 24.2	+1.1
	baz=41						
BOOM	Boomskoye usch	2.75	9	⇓*i*P	Pb	04 53 50.8	+0.3
	baz=7.0						
BOOM				⇓*i*S	Sb	04 54 26.3	+1.9
	baz=7.0						
DRK	Karamyk	2.76	265	⇑*i*P	Pb	04 53 51.0	+0.2
	baz=67						
DRK				⇑*i*S	Sg	04 54 27.1	-2.8
	baz=67						
KBK	Karagaybulak	2.90	354	P	Pb	04 53 53.3	+0.3
	SNR=24						
KBK	Karagaybulak	2.90	354	⇑*i*P	Pb	04 53 53.2	+0.2
	baz=53						
KBK				⇑*i*S	Sb	04 54 30.3	+1.7
	baz=53						
AAK	Ala-Archa	2.94	347	P	Pb	04 53 53.6	-0.1
	SNR=27						
AAK	Ala-Archa	2.94	347	⇑Pg	Pb	04 53 53.3	-0.4
	21nm,0.6s						
AAK				⇓Lg	Lg	04 54 31.3	
	87nm,1.2s						
AAK	Ala-Archa	2.94	347	⇑*i*P	Pb	04 53 53.6	-0.1
	baz=47						
AAK				⇑*i*S	Sb	04 54 31.3	+1.6
	baz=47						
EKS2	Erkin-Say	3.12	338	⇑*e*P	Pb	04 53 56.3	-0.5
	baz=38						
EKS2				⇑*i*S	Sb	04 54 35.7	+0.7
	baz=38						
TKM2	Tokmak 2	3.15	3	P	Pb	04 53 56.7	-0.7
	SNR=8.4						
TKM2	Tokmak 2	3.15	3	⇑Pg	Pb	04 53 56.3	-1.1
	16nm,1.0s						
TKM2				⇑Lg	Lg	04 54 40.0	
	79nm,0.9s						
TKM2	Tokmak 2	3.15	3	⇑*e*P	Pb	04 53 56.5	-0.9
	baz=2.0						
TKM2				⇑*i*S	Sb	04 54 36.1	+0.2
	baz=2.0						
CHMS	Chumysh	3.26	352	P	Pb	04 53 58.2	-0.9
	SNR=10						
CHMS	Chumysh	3.26	352	⇑*i*P	Pb	04 53 58.0	-1.0
	baz=51						
CHMS				⇑*i*S	Sb	04 54 38.6	-0.1
	baz=51						
KST	Kastek	3.30	8	*e*P	Pg	04 54 03.3	-1.1
	17nm,0.4s						
KST				*e*S	Sg	04 54 47.6	+0.5
	129nm,0.7s						
KST	Kastek	3.30	8	Pg	Pb	04 53 58.9	-0.9
	17nm,0.4s						
KST				Lg	Lg	04 54 42.1	
	129nm,0.7s						
MRKS	Merke	3.38	332	*e*P	Pb	04 54 01.8	+0.7
	4.9nm,0.4s						
MRKS				*e*S	Sb	04 54 43.9	+1.6
	18nm,0.6s						
MRKS	Merke	3.38	332	Pg	Pb	04 53 59.7	-1.4
	9.8nm,0.8s						
MRKS				Lg	Lg	04 54 43.9	
	18nm,0.6s						
MTBS	Maitube	3.45	13	*e*P	Pg	04 54 05.5	-1.8
	2.5nm,0.9s						
MTBS				*e*S	Sg	04 54 51.6	-0.3
	25nm,0.5s						
MTBS	Maitube	3.45	13	Pg	Pb	04 54 02.9	+0.5
	5.5nm,0.4s						
MTBS				Lg	Lg	04 54 49.3	
	25nm,0.5s						
MNAS	Manas	3.46	322	⇑*i*P	Pb	04 54 01.1	-1.5
	baz=23						
MNAS				⇑*i*S	Sb	04 54 44.2	-0.6
	baz=23						
TNSS	Tian-Shan	3.47	20	*e*P	Pg	04 54 06.2	-1.5
	5.9nm,0.6s						
TNSS				*e*S	Sg	04 54 52.9	+0.1
	18nm,0.5s						
TNSS	Tian-Shan	3.47	20	Pg	Pb	04 54 05.0	+2.0
	8.7nm,0.4s						
TNSS				Lg	Lg	04 54 52.9	
	18nm,0.5s						
DGS	Degeres	3.48	5	*e*P	Pg	04 54 05.7	-2.1
	6.8nm,0.5s						
DGS				*e*S	Sg	04 54 52.0	-0.9
	30nm,0.8s						
DGS	Degeres	3.48	5	Pg	Pb	04 54 04.5	+1.6
	13nm,0.3s						
DGS				Lg	Lg	04 54 52.1	
	30nm,0.8s						
BTK	Batken	3.50	276	⇑*e*P	Pb	04 54 01.1	-2.2
	baz=77						
BTK				⇑*i*S	Sb	04 54 44.2	-1.7
	baz=77						
USP	Ospenovka	3.55	350	P	Pb	04 54 01.8	-2.3
	SNR=6.6						
USP	Ospenovka	3.55	350	⇑*i*P	Pb	04 54 02.2	-1.9
	baz=49						
USP				⇑*i*S	Sb	04 54 46.0	-1.2
	baz=49						
MDOK	Medeo	3.62	20	*e*P	Pg	04 54 09.0	-1.5
	5.1nm,0.6s						
MDOK				*e*S	Sg	04 54 57.2	-0.2
	22nm,0.9s						
MDOK	Medeo	3.62	20	⇑Pg	Pg	04 54 08.0	-2.5
	8.1nm,0.9s						
MDOK				⇓Lg	Lg	04 54 56.6	
	46nm,0.9s						
MDOK	Medeo	3.62	20	Pg	Pb	04 54 07.4	+2.1
	5.1nm,0.6s						
MDOK				Lg	Lg	04 54 57.2	
	22nm,0.9s						
TRKS	Terek-Say	3.66	300	⇑*i*P	Pb	04 54 03.0	-2.9
	baz=0.0						
TRKS				⇑*i*S	Sb	04 54 47.5	-2.9
	baz=0.0						
KOTS	Kotyrbulak	3.70	20	*e*P	Pg	04 54 11.1	-1.0
	11nm,0.6s						
KOTS				*e*S	Sg	04 55 00.6	+0.6
	92nm,0.6s						
KOTS	Kotyrbulak	3.70	20	Pg	Pb	04 54 09.4	+2.7

	11nm,0.6s						
KOTS				Lg	Lg	04 55 00.6	
	92nm,0.6s						
KRBS	Karabastau	3.93	3	eP	Pg	04 54 13.7	-2.7
	6.3nm,0.5s						
KRBS				eS	Sg	04 55 04.4	-2.8
	15nm,0.3s						
KRBS	Karabastau	3.93	3	Pg	Pb	04 54 11.5	+1.0
	6.3nm,0.5s						
KRBS				Lg	Lg	04 55 04.4	
	15nm,0.3s						
GAR	Garm	3.98	260	⇑iP	Pb	04 54 07.5	-3.9
	baz=62						
GAR				⇑iS	Sb	04 54 55.3	-4.4
	baz=62						
KTBS	Karatobe	4.06	14	eP	Pg	04 54 17.0	-1.9
	2.3nm,0.7s						
KTBS				eS	Sg	04 55 11.1	-0.4
	54nm,0.7s						
KTBS	Karatobe	4.06	14	Pg	Pb	04 54 15.5	+2.7
	4.6nm,0.3s						
KTBS				Lg	Lg	04 55 11.1	
	54nm,0.7s						
KUU	Kurty	4.18	10	eP	Pg	04 54 19.0	-2.3
	1.4nm,0.2s						
KUU				⇓iS	Sg	04 55 15.0	-0.4
	31nm,0.6s						
KUU	Kurty	4.18	10	Pg	Pb	04 54 17.7	+2.9
	3.3nm,0.1s						
KUU				Lg	Lg	04 55 15.0	
	31nm,0.6s						
CHKK	Chushkaly	4.26	16	eP	Pg	04 54 20.2	-2.4
	1.8nm,0.2s						
CHKK				eS	Sg	04 55 17.3	-0.5
	36nm,0.4s						
CHKK	Chushkaly	4.26	16	Pg	Pb	04 54 19.0	+3.0
	2.0nm,0.1s						
CHKK				Lg	Lg	04 55 17.3	
	36nm,0.4s						
KURS	Kuram	4.27	29	eP	Pb	04 54 19.7	+3.3
	4.8nm,0.4s						
KURS				eS	Sg	04 55 15.7	-2.6
	8.8nm,0.7s						
KURS	Kuram	4.27	29	Pg	Pb	04 54 19.1	+2.8
	4.8nm,0.4s						
KURS				Lg	Lg	04 55 17.3	
	8.8nm,0.7s						
UZB	Uzynbulak	4.35	38	eP	Pb	04 54 21.5	+3.7
	2.2nm,0.5s						
UZB				eS	Sg	04 55 18.5	-2.4
	5.7nm,1.0s						
UZB	Uzynbulak	4.35	38	Pg	Pb	04 54 20.2	+2.4
	3.4nm,0.2s						
UZB				Lg	Lg	04 55 19.3	
	5.7nm,1.0s						
IUG	Iuzhnay	4.68	302	eP	Pb	04 54 24.7	+1.4
	59nm,0.3s						
IUG				eS	Sb	04 55 24.2	+4.5
	40nm,0.7s						
IUG	Iuzhnay	4.68	302	Pg	Pb	04 54 22.0	-1.3
	135nm,0.3s						
IUG				Lg	Lg	04 55 22.2	
	40nm,0.7s						
PDGK	Podgornoye	4.72	40	Pg	Pb	04 54 28.0	+4.0
	1.6nm,0.3s						
PDGK				Lg	Lg	04 55 32.3	
	5.8nm,0.6s						
PDGK	Podgornoye	4.72	40	⇓Pg	Pg	04 54 28.1	-3.4
	3.0nm,0.7s						
PDGK				⇑Lg	Lg	04 55 32.0	
	15nm,0.9s						
ARXS	Arharly	4.80	22	eP	Pg	04 54 29.9	-3.3
	1.9nm,0.7s						
ARXS				eS	Sg	04 55 32.8	-2.5
	8.7nm,0.7s						
ARXS	Arharly	4.80	22	Pg	Pg	04 54 29.7	-3.4
	3.7nm,0.4s						
ARXS				Lg	Lg	04 55 35.7	
	8.7nm,0.7s						
BLB	Baldybastay	4.91	27	Pg	Pb	04 54 31.2	+3.9
	6.2nm,0.3s						
BLB				Lg	Lg	04 55 37.9	
	14nm,0.5s						
KK31	Karatay Array	4.93	314	⇓Pg	Pb	04 54 28.1	+0.5
	1.4nm,0.6s,baz=133,slow=15,SNR=6.8						
KK31				⇓Lg	Lg	04 55 32.6	
	3.0nm,0.5s,baz=131,slow=28,SNR=6.7						
CHGR	Chuyangaron	4.94	259	⇑iP	Pn	04 54 20.7	+5.2
	baz=60						
CHGR				⇑iS	Sn	04 55 17.7	+4.9
	baz=60						
BRLS	Borolday	5.27	310	eP	Pg	04 54 38.6	-3.5
	2.7nm,0.4s						
BRLS				eS	Sg	04 55 48.3	-2.1
	10nm,0.3s						
BRLS	Borolday	5.27	310	Pg	Pb	04 54 31.8	-1.7
	2.7nm,0.4s						
BRLS				Lg	Lg	04 55 38.8	
	10nm,0.3s						
BTLS	Baital	5.35	350	eP	Pg	04 54 39.8	-3.8
	4.6nm,1.0s						
BTLS				eS	Sg	04 55 50.4	-2.6
	7.1nm,1.2s						
BTLS	Baital	5.35	350	Pg	Pb	04 54 38.8	+4.1
	4.6nm,1.0s						
BTLS				Lg	Lg	04 55 51.3	
	7.1nm,1.2s						
DJR	Jarkent	5.62	34	eP	Pg	04 54 46.5	-2.4
	1.9nm,0.4s						
DJR				eS	Sg	04 56 02.6	+1.0
	5.4nm,0.6s						
DJR	Jarkent	5.62	34	Pg	Pg	04 54 45.6	-3.3
	1.9nm,0.4s						
DJR				Lg	Lg	04 56 02.6	
	5.4nm,0.6s						

LDG 10 05:06:18.4±0.4**, 44°.02N×12°.78E, h25**^{km}**, Md2.0**/1**, Ml2.5**/5**,**
Error ellipse: s-maj=12.3km s-min=7.2km az=14.0,
Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PGF	Pioggiola	3.12	243	eP	Pb	05 07 11.3	-2.0
PGF				eSn	Sn	05 07 38.2	-4.5
	1.9nm,0.3s						
SBF	Sospel	3.86	270	ePn	Pn	05 07 16.7	+0.5
SBF				eSn	Sn	05 07 57.0	-3.8
	3.3nm,0.3s						
MBDF	Montbardon	4.36	281	eP	Pn	05 07 25.3	+2.1
FRF	La Foret Royal	4.46	266	ePn	Pn	05 07 22.6	-1.8
FRF	La Foret Royal	4.46	266	eP	Pn	05 07 27.4	+3.0
FRF				eSn	Sn	05 08 10.8	-4.7
	1.2nm,0.3s						
LPG	La Plagne	4.54	291	eP	Pn	05 07 27.9	+2.2
LPL	La Plagne	4.56	291	eP	Pn	05 07 28.0	+2.1
LMR	La Mourre	4.60	264	eP	Pn	05 07 28.9	+2.6
LMR				eSn	Sn	05 08 12.2	-6.7
	1.3nm,0.3s						

ROM 10 05:06:36.6±0.1**, 44°.180N**±0°.004×**10°.887E**±0°.005**,**
h8^{km}**, ML2.0**/3**, 3C-4D, Error ellipse: s-maj=0.5km**
s-min=0.4km az=36.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FNVD	Fontana Vidola	0.17	94	⇓iP	Pg	05 06 40.3	+0.1
FNVD				S	Sg	05 06 43.2	+0.5
MTCR	Monte La Croce	0.17	152	⇓iP	Pg	05 06 41.0	+0.8
MTCR				S	Sg	05 06 44.4	+1.6
MTCR				AML	AML		
	comp=E,3115µm,0.3s						
MTCR				AML	AML		
	comp=N,1285µm,0.3s						
ZCCA	Zocca	0.18	21	⇑iP	Pg	05 06 41.3	+0.8
ZCCA				AML	AML		
	comp=E,869µm,1.6s						
ZCCA				AML	AML		
	comp=N,1390µm,0.4s						
ZCCA				AML	AML		
	comp=E,868µm,1.6s						
ZCCA				AML	AML		
	comp=N,1305µm,0.5s						
ZCCA				AML	AML		
	comp=E,827µm,0.2s						
BDI	Bagni Di Lucca	0.24	241	⇑iP	Pg	05 06 42.2	+0.8
BDI				S	Sg	05 06 46.7	+2.0
MPPT	Montemurlo	0.27	147	P	Pg	05 06 42.2	+0.3
MPPT				S	Sb	05 06 47.0	-1.4
CARD	Cardoso	0.33	242	P	Pg	05 06 43.5	+0.4
CARD				S	Sb	05 06 49.1	-1.0
SARO	Sassorosso	0.35	271	P	Pg	05 06 44.1	+0.6
SARO				S	Sb	05 06 49.8	-1.0
VLC	Villacollemand	0.36	267	P	Pg	05 06 44.4	+0.7
VLC				S	Sb	05 06 50.3	-0.8
VLC				AML	AML		
	comp=E,199µm,0.2s						
VLC				AML	AML		
	comp=N,381µm,0.6s						
VLC				AML	AML		
	comp=N,372µm,0.6s						
VLC				AML	AML		
	comp=E,224µm,0.2s						
MAIM	Mastiano	0.39	227	P	Pg	05 06 44.9	+0.7
MAIM				S	Sb	05 06 51.4	-0.5
CRMI	Carmignano	0.39	171	P	Pb	05 06 45.3	-0.5
CRMI				S	Sb	05 06 51.1	-0.9
MTRZ	Monterenzio	0.46	65	⇓iP	Pg	05 06 45.7	+0.2
PII	Pisa	0.53	210	P	Pg	05 06 47.3	+0.5
PII				S	Sb	05 06 55.0	-0.8
PII				AML	AML		
	comp=E,178µm,0.3s						
PII				AML	AML		
	comp=N,225µm,0.3s						
EQUI	Equi	0.53	269	P	Pg	05 06 47.1	+0.3
EQUI				S	Sg	05 06 54.7	+0.9
FIVI	Fivizzano	0.55	276	P	Pg	05 06 47.7	+0.5
FIVI				S	Sb	05 06 55.9	-0.6
RUFI	Rufina	0.56	127	⇓iP	Pb	05 06 48.2	-0.5
RUFI				S	Sb	05 06 56.1	-0.8
LMD	Lutirano	0.60	100	P	Pg	05 06 48.6	+0.4
GRAM	Graiana	0.67	298	⇑iP	Pb	05 06 50.1	-0.4
GRAM				S	Sb	05 06 59.7	-0.3
OSSC	Osservatorio P	0.70	158	P	Pb	05 06 51.0	-0.1
OSSC				S	Sb	05 07 00.8	-0.2
ASQU	Asqua	0.76	120	P	Pg	05 06 51.4	+0.3
CSNT	Castellina Chi	0.77	157	P	Pb	05 06 52.0	-0.2
CSNT				S	Sb	05 07 02.3	-0.4

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*SJA **10** 05:07:56.0, 29°.32S×72°.41W, h10^{km}, ML4.1*
*IDC **10** 05:07:58.6±3.2, 29°.65S×71°.50W, h0^{km}, mb4.1/3,*
mb1 4.1/4, mb1mx3.7/21, mbtmp4.0/4, ML3.6/1, MS3.2/1,
Ms1 3.2/1, ms1mx2.7/17, Error ellipse: s-maj=93.7km
s-min=70.7km az=75.0
*GUC **10** 05:07:59.2±0.7, 29°.44S×71°.97W, h36^{km}±3^{km}, ML3.5*
ISC 10 05:07:57.1±2.4**, 29°.45S**±0°.04×**72°.06W**±0°.09**, h4**^{km}±13^{km}**,**
n43, σ2^{s}**.18**/33**, mb4.1**/3**, 3C-3D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	La Serena	0.86	123	⇓iP	Pg	05 08 13.8	+0.2
CO05				i S	Sg	05 08 24.3	-0.4
CO05				IAML		05 08 26.7	
	comp=N,5µm,0.5s						
LCO	Las Campanas	1.27	70	⇓iP	Pn	05 08 20.4	-1.5
LCO				i S	Sg	05 08 36.2	-1.7
LCO	Las Campanas	1.27	70	i P	Pn	05 08 20.0	-1.9
CO06	Fray Jorge	1.28	163	⇑iP	Pn	05 08 21.2	-0.7
CO06				i S	Sb	05 08 36.8	-1.8
CO06				IAML		05 08 37.6	
	comp=E,1µm,0.4s						
GO04	Tololo Observa	1.31	124	⇓iP	Pn	05 08 21.6	-1.0
GO04				i S	Sb	05 08 38.4	-1.5
GO04	Tololo Observa	1.31	124	i P	Pn	05 08 21.0	-1.6
AC04	Llanos de Chal	1.51	35	⇑iP	Pn	05 08 24.0	-1.1
AC04				eS	Sn	05 08 43.4	-1.8
AC04	Llanos de Chal	1.51	35	i P	Pn	05 08 24.0	-1.1
CO03	El Pedregal	1.83	140	⇑iP	Pn	05 08 29.5	0.0
CO03				eS	Sn	05 08 52.1	-1.1
CO03				IAML		05 08 55.3	
	comp=E,689nm,0.3s						
AROD	Rodeo	2.36	108	i P	Pb	05 08 40.0	-0.5
GO03	Copiap	2.45	41	eP	Pn	05 08 37.7	-0.3
GO03				eS	Sn	05 09 07.6	-0.9
GO03				IAML		05 09 29.8	
	comp=E,242nm,0.5s						
ACCO	Cerro Coronel	2.84	114	i P	Pb	05 08 47.0	-1.6
VA06	Catapilco	3.17	168	eP	Pn	05 08 48.0	+0.1
VA06				eS	Sn	05 09 23.6	-2.6
RTLS	Leoncito	3.34	135	i P	Pn	05 08 54.0	+3.5
VA03	San Esteban	3.55	159	i P	Pn	05 08 55.0	+1.8
AUSP	Uspallata	3.60	141	i P	Pn	05 08 58.0	+4.0
AC02	Maricunga	3.67	46	IAML		05 10 02.7	
	comp=E,129nm,0.2s						
AC02	Maricunga	3.67	46	i P	Pn	05 08 56.0	+0.8
PEL	Peldehue	3.87	163	i P	Pn	05 09 00.0	+2.5
RTCV	Cerro Valdivia	3.87	129	i P	Pn	05 09 02.0	+4.4
MT02	Curacav	3.88	168	i P	Pn	05 08 58.0	+0.3
MT05	Renca	4.09	164	i P	Pn	05 09 02.0	+1.4
AVFE	Valle Fertil	4.17	108	i P	Pn	05 09 04.0	+2.3
ASAL	Salagasta	4.18	139	i P	Pn	05 09 06.0	+4.1
ACLC	CERRO LA CRUZ	4.46	91	i P	Pn	05 09 10.0	+4.2
BO01	Tunca	5.00	171	i P	Pn	05 09 13.0	0.0
BO02	Sierra Bellavi	5.44	169	i P	Pn	05 09 20.0	+0.9
GO05	Huala	5.55	179	i P	Pn	05 09 19.0	-1.6
CYA	Choya	5.58	81	i P	Pn	05 09 23.0	+2.0
PB10	IPOC Station P	6.06	13	i P	Pn	05 09 27.0	-0.7
RFA	San Rafael	6.12	151	i P	Pn	05 09 30.0	+1.5
MRA	San Martin	6.20	120	i P	Pn	05 09 30.0	+0.3
PB05	IPOC Station P	6.78	15	i P	Pn	05 09 35.0	-2.6
H03N1	Juan Fernandez	7.08	234	T	T	05 17 23.9	
	baz=63,slow=71,SNR=410						
H03N2	Juan Fernandez	7.09	234	T	T	05 17 22.3	
	baz=63,slow=71,SNR=401						
H03N3	Juan Fernandez	7.09	234	T	T	05 17 21.7	
	baz=63,slow=71,SNR=434						
PSGCX	Pisagua	9.96	11	i P	Pn	05 10 18.0	-3.3
LPAZ	La Paz	13.59	16	Pn	Pn	05 11 14.1	+2.7
	comp=E,0.1nm,0.3s,baz=163,slow=4.2,SNR=9.4						
ROSC	El Rosal	34.16	356	LR	LR	05 29 45.0	
	comp=E,36nm,18.9s,baz=90,slow=38						
DBIC	Dimbokro	73.79	72	P	P	05 19 32.6	-0.5
	comp=E,2.0nm,0.6s,baz=260,slow=6.1,SNR=3.6						
KOWA	Kowa	78.80	66	P	P	05 20 01.8	+0.1
	comp=E,1.4nm,0.8s,baz=251,slow=6.7,SNR=5.0						
TORD	Torodi Ar. Bea	82.70	71	P	P	05 20 22.6	+0.1
	comp=E,0.7nm,0.8s,baz=240,slow=5.8,SNR=4.1						
ZALV	Zalesovo Beam	150.31	28	PKPbc	PKiKP	05 27 50.7	+0.7
	comp=E,2.4nm,0.7s,baz=286,slow=3.0,SNR=11						

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*IDC **10** 05:11:39.9±1.6, 6°.17N×94°.48E, h0^{km}, mb3.9/8,*
mb1 4.0/10, mb1mx3.8/60, mbtmp3.8/10, ML3.6/2, MS3.3/5,
Ms1 3.3/5, ms1mx2.8/54, Error ellipse: s-maj=63.2km
s-min=17.6km az=59.0
ISC 10 05:11:47.4±1.3**, 6°.3N**±0°.2×**94°.7E**±0°.3**, h50**^{km}**, n17,**
σ1^{s}**.03**/11**, mb3.8**/8**, MS3.4**/3**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	5.45	129	Pn	Pn	05 13 06.3	+0.1
	1.5nm,0.3s,baz=335,slow=15,SNR=5.5						
CMAR	Chiang Mai Arr	12.78	18	Pn	Pn	05 14 46.8	+0.2
	0.1nm,0.3s,baz=217,slow=14,SNR=1.2						
CMAR				LR	LR	05 19 12.1	
	comp=Z,73nm,20.4s,baz=205,slow=35						
PALK	Pallekele	13.94	275	LR	LR	05 19 46.7	
	comp=Z,113nm,22.0s,baz=202,slow=36						
H08S3	Diego Garcia H	26.12	238	T	T	05 44 37.2	
	baz=58,slow=76,SNR=13						
H08S2	Diego Garcia H	26.12	238	T	T	05 44 38.7	
	baz=58,slow=76,SNR=14						
H08S1	Diego Carcia H	26.14	238	T	T	05 44 39.5	
	baz=58,slow=76,SNR=11						
FITZ	Fitzroy Crossi	38.98	129	P	P	05 19 07.7	-1.4
	0.7nm,0.6s,baz=317,slow=12,SNR=1.2						
MKAR	Makanchi Array	41.75	347	P	P	05 19 30.9	-0.9
	0.7nm,0.9s,baz=166,slow=7.9,SNR=2.8						
SONM	Songino Array	42.59	12	P	P	05 19 38.9	+0.2
	2.6nm,0.9s,baz=199,slow=10,SNR=22						
KSRS	Korea Array	43.31	39	LR	LR	05 38 23.8	
	comp=Z,21nm,18.2s,baz=220,slow=37						
GEYT	Alibeck	45.75	319	LR	LR	05 39 47.9	
	comp=Z,44nm,19.5s,baz=300,slow=37						
WRA	Warramunga Arr	46.90	125	P	P	05 20 13.2	-0.1
	0.4nm,0.6s,baz=304,slow=9.1,SNR=6.4						
WRA				LR	LR	05 41 53.9	
	comp=Z,56nm,18.7s,baz=180,slow=39						
ZALV	Zalesovo Beam	48.19	352	P	P	05 20 21.6	-1.1
	0.3nm,0.3s,baz=163,slow=7.1,SNR=1.6						
ASAR	Alice Springs	48.48	129	P	P	05 20 25.9	+0.4
	0.6nm,0.5s,baz=302,slow=7.8,SNR=7.3						
FINES	FINESS Array B	74.37	332	P	P	05 23 19.6	-0.1
	5.6nm,1.0s,baz=104,slow=5.9,SNR=2.7						
ARCES	ARCESS Array B	76.94	340	P	P	05 23 34.9	+0.6
	4.5nm,1.0s,baz=103,slow=7.6,SNR=1.2						
TXAR	Lajitas Array	140.42	26	PKP	PKPdf	05 31 13.9	+2.0
	0.4nm,1.1s,baz=270,slow=0.7,SNR=2.0						

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*IDC **10** 05:53:49.9±0.9, 44°.52N×37°.70E, h0^{km}, mb3.5/1,*
mb1 3.5/7, mb1mx3.3/44, mbtmp3.4/7, ML2.9/5, Error
ellipse: s-maj=19.2km s-min=9.3km az=15.0
*CFUSG **10** 05:53:53.4, 44°.34N×37°.50E, h13^{km}, Black Sea district 5*
ISC 10 05:53:51.2±0.9**, 44°.35N**±0°.06×**37°.53E**±0°.03**, h10**^{km}**, n15,**
σ2^{s}**.71**/26**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GL1R	Gelendzhik	0.43	62	ePg	Pb	05 54 03.4	+2.4
ANN	Anapa	0.46	351	ePg	Pn	05 54 04.9	+1.0
ANN				Pgm		05 54 05.5	
	comp=Z,247nm,0.2s						
ANN				eSg	Sb	05 54 12.7	+4.4
ANN				Sgm		05 54 13.2	
	comp=N,2µm,0.3s						
ANN				Sgm		05 54 13.2	
	comp=E,2µm,0.2s						
SOC	Sochi	1.75	115	eP	Pn	05 54 23.7	+2.1
SUDU	Sudak	1.89	288	eP	Pn	05 54 26.0	+2.5
SUDU				Pm		05 54 30.7	
	comp=Z,10.0nm,0.2s						
SUDU				eS	Sn	05 54 49.7	+2.3
SUDU				S	Sb	05 54 51.7	+2.3
	comp=E,16nm,0.3s						
SUDU				S	Sb	05 54 52.7	+3.3
	comp=N,27nm,0.4s						
ALU	Alushta	2.26	280	eS	Sn	05 54 56.3	-0.3
ALU				S	Sb	05 54 59.7	-0.4
	comp=E,6.0nm,0.3s						
ALU				S	Sb	05 54 59.8	-0.4
	comp=N,21nm,0.3s						
YAL	Yalta	2.42	274	ex	x	05 55 02.4	
SIM	Simferopol'	2.51	285	eS	Sn	05 55 04.0	+1.3
SIM				S	Sn	05 55 04.1	+1.3
	comp=E,15nm,0.3s						
SIM				S	Sg	05 55 06.1	-5.8
	comp=N,20nm,0.3s						
SEV	Sevastopol'	2.77	275	ex	x	05 54 37.5	
SEV				eS	Sn	05 55 09.9	+0.7
SEV				S	Sb	05 55 10.8	-4.1
	comp=E,9.0nm,0.3s						
SEV				S	Sb	05 55 10.9	-4.0
	comp=N,17nm,0.3s						
KVAR	Kislovodsk Arr	3.74	94	Pn	Pn	05 54 48.3	-0.7
	baz=286,slow=17,SNR=1.7						
KVAR				Sn	Sn	05 55 31.0	-2.1
	baz=30,slow=8.7,SNR=4.8						
KBZ	Khabaz	3.92	97	Pn	Pn	05 54 51.8	+0.4
	comp=N,0.4nm,0.3s,baz=308,slow=11,SNR=2.2						
KBZ				Sn	Sn	05 55 35.9	-1.5
	comp=N,0.7nm,0.3s,baz=352,slow=15,SNR=3.0						
BRTR	Keskin Array B	5.45	213	Pn	Pn	05 55 17.0	+4.3
	comp=N,0.5nm,0.3s,baz=20,slow=12,SNR=2.7						
BRTR				Sn	Sn	05 56 17.3	+1.8
	comp=N,0.3nm,0.3s,baz=306,slow=37,SNR=1.7						
MLR	Muntele Rosu	8.30	282	Pn	Pn	05 55 52.7	+1.0
	comp=N,0.2nm,0.3s,baz=155,slow=21,SNR=1.5						
AKASG	Malin Array Be	8.48	321	Pn	Pn	05 55 52.1	-1.9
	comp=N,2.4nm,0.3s,baz=131,slow=14,SNR=7.8						
AKASG				Sn	Sn	05 57 19.9	-10
	comp=N,2.3nm,0.3s,baz=129,slow=24,SNR=7.5						
FINES	FINESS Array B	18.42	342	Pn	P	05 57 58.7	-7.6
	comp=N,0.0nm,0.3s,baz=153,slow=12,SNR=1.4						
MKAR	Makanchi Array	31.11	69	P	P	06 00 07.4	-2.3
	comp=N,0.4nm,0.5s,baz=288,slow=8.8,SNR=3.6						

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*IDC **10** 06:14:58.1±1.1, 51°.77N×172°.96W, h0^{km}, mb4.0/12,*
mb1 4.2/14, mb1mx3.9/53, mbtmp4.0/14, ML3.2/2, MS3.5/2,
Ms1 3.5/2, ms1mx2.7/42, Error ellipse: s-maj=33.7km
s-min=15.3km az=5.0
*AEIC **10** 06:15:03±2.9, 51°.5N±0°.1×173°.11W±0°.08, h25^{km}±5^{km},*
Error ellipse: s-maj=15.7km s-min=7.3km az=172.0
*NEIC **10** 06:15:04.2±2.3, 51°.8N±0°.1×172°.88W±0°.09, h37^{km}±5^{km},*
mb4.1/39, ML3.2(AEIC), Error ellipse: s-maj=18.8km
s-min=7.7km az=168.0
ISC 10 06:15:03.6±0.7**, 51°.7N**±0°.1×**172°.88W**±0°.05**, h37**^{km}**, n155,**
σ0^{s}**.98**/142**, mb4.1**/22**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOFP	Korovin Flat P	0.93	307		Pn	06 15 20.2	0.0
KOSE	Korovin Southe	0.95	311		Pn	06 15 22.3	+1.9
KOKL	Mount Kliuchef	1.01	307		Pn	06 15 22.1	+0.8
GSIG	Igitkin Island	1.91	279		Pn	06 15 33.3	-0.3
GSIG					Sn	06 15 55.4	-0.9
GSTR	Great Sitkin T	2.00	282	Pn	Pn	06 15 35.4	+0.5
GSTD	Great Sitkin T	2.05	281		Pn	06 15 35.4	-0.2
GSTD					Sn	06 16 00.6	+0.6
ADK	Adak	2.37	275	Pn	Pn	06 15 41.2	+1.3
KIWB	Kanaga Island	2.66	274	Pn	Pn	06 15 44.9	+1.1
NIKH	Nikolski High	2.77	62	P	Pn	06 15 48.2	+2.9
	baz=246						
UNV	Unalaska Valle	4.41	59	Pn	Pn	06 16 07.2	-0.7
AMKA	Amchitka	4.89	269	Pn	Pn	06 16 17.5	+3.0
CHGN	Chignik	9.66	56	P	Pn	06 17 21.8	+1.9
	baz=248						
CHGN	Chignik	9.66	56	Pn	Pn	06 17 19.5	-0.3
CHGN					Sn	06 19 07.5	+0.5
CHIR	Chirikof Islan	11.00	61	P	Pn	06 17 39.9	+1.8
	baz=256						
N19K	Bonanza Creek	13.64	41	P	Pn	06 18 15.8	+1.5
	baz=237						
BRLK	Bradley Lake	14.71	48	Pn	Pn	06 18 29.5	+0.7
SEW	Seward	15.51	48	Pn	Pn	06 18 38.8	-0.4
SUA	Susitna One	15.53	43	Pn	Pn	06 18 40.9	+1.3
SUA				IAmb	IAmb	06 18 52.1	
	comp=Z,18nm,0.9s						
O22K	Cooper Landing	15.53	47		P	06 18 42.1	-1.3
PPLA	Purkeypile	15.72	37		P	06 18 45.2	-0.6
PPLA				IAmb	IAmb	06 18 52.1	
	comp=Z,24nm,1.4s						
RC01	Rabbit Creek A	15.79	45	P	Pn	06 18 44.2	+1.3
	baz=244						
J20K	Nowinta River	15.86	31	P	P	06 18 45.7	-1.5
	baz=227						
J20K	Nowinta River	15.86	31	Pn	P	06 18 45.6	-1.5
CAST	Castle Rocks	16.07	35	P	Pn	06 18 48.1	+1.5
	baz=233						
CHUM	Lake Minchumin	16.28	34	P	P	06 18 50.9	-0.8
	baz=232						
KTH	Kantishna Hill	16.57	36		P	06 18 54.6	-0.5
KTH				IAmb	IAmb	06 19 12.4	
	comp=Z,12nm,1.2s						
BPAW	Bear Paw Mtn.	16.88	34	P	P	06 18 59.1	+0.7
	baz=233						
BPAW	Bear Paw Mtn.	16.88	34		P	06 18 59.3	+0.9
I21K	Tanana	17.23	31	P	P	06 19 03.7	+1.5
	baz=229,SNR=6.8						
I21K	Tanana	17.23	31	P	P	06 19 03.5	+1.3
I21K				IAmb	IAmb	06 19 06.3	
	comp=Z,11nm,0.9s						
IMAR	Indian Mountai	17.26	27		P	06 19 04.8	+2.2
H21K	Melozitna Rive	17.30	29	P	P	06 19 04.2	+1.1
	baz=226						
H21K	Melozitna Rive	17.30	29		P	06 19 05.4	+2.3
H21K				IAmb	IAmb	06 19 09.5	
	comp=Z,14nm,1.4s						
MCK	McKinley	17.41	37	P	P	06 19 04.4	+0.1
MLY	Manley	17.54	32	P	P	06 19 06.8	+1.1
	baz=231,SNR=6.2						
MLY	Manley	17.54	32	P	P	06 19 06.8	+1.1
KLU	Klutina	17.63	46	P	P	06 19 06.7	-0.1
	baz=249						
NEA2	Nenana	17.84	35	P	P	06 19 09.2	+0.2
	baz=235						
PETK	Petropavlovsk-	17.95	286	P	Pn	06 19 08.1	-1.9
	comp=Z,0.1nm,0.3s,baz=98,slow=11,SNR=1.5						
I23K	Minto, Yukon-K	18.07	33	P	P	06 19 12.4	+1.0
	baz=233,SNR=7.4						
I23K	Minto, Yukon-K	18.07	33	P	P	06 19 12.6	+1.1
I23K				IAmb	IAmb	06 19 17.1	

	comp=Z,6.5nm,0.7s						
HARP	HAARP	18.31	44	P	Pn	06 19 14.8	+0.4
	baz=247						
CCB	Clear Creek Bu	18.32	35	P	P	06 19 13.2	-1.1
MDM	Murphy Dome	18.35	34	P	P	06 19 14.1	-0.5
PAX	Paxson	18.41	42	P	P	06 19 15.2	-0.2
	baz=245						
H23K	Yukon River	18.43	31	P	Pn	06 19 16.7	+0.9
	baz=232						
H23K	Yukon River	18.43	31	IAmb	IAmb	06 19 24.9	
	comp=Z,8.6nm,1.0s						
CRQM	Cirque	18.68	50	P	Pn	06 19 19.6	+0.6
CRQM				IAmb	IAmb	06 19 22.4	
	comp=Z,22nm,1.1s						
CRQE	Cirque	18.70	50	P	Pn	06 19 19.7	+0.5
	baz=255						
POKR	Poker Plat Res	18.71	35	P	Pn	06 19 19.4	+0.2
	baz=237						
IL31		18.72	36	P	P	06 19 17.3	-1.4
ILAR	Eielson Array	18.72	36	P	P	06 19 16.8	-1.9
	comp=Z,0.5nm,0.3s,baz=233,slow=8.8,SNR=35						
ILAR				LR	LR	06 27 28.3	
	comp=Z,103nm,19.7s,baz=278,slow=40						
TGL	Tana Glacier	18.83	50	P	Pn	06 19 21.1	+0.4
MCARA	McCarthy VSAT	18.91	48	P	P	06 19 21.3	+0.5
	baz=253						
H24K	Noodor Dome	18.98	32	P	Pn	06 19 22.5	+0.1
	baz=234,SNR=8.0						
H24K	Noodor Dome	18.98	32	IAmb	IAmb	06 19 24.1	
	comp=Z,9.8nm,0.7s						
RIDG	Independent Ri	19.00	40	P	P	06 19 22.2	+0.4
	baz=244						
COLD	Coldfoot	19.15	27	P	Pn	06 19 25.2	+0.8
	baz=227,SNR=5.7						
COLD	Coldfoot	19.15	27	P	P	06 19 23.8	+0.4
COLD				IAmb	IAmb	06 19 31.8	
	comp=Z,12nm,1.1s						
J25K	Salcha River,	19.20	37	P	P	06 19 23.1	-0.9
	baz=241,SNR=15						
M26K	Nabesna, AK	19.25	45	P	P	06 19 24.7	+0.1
	baz=250						
DOT	Dot Lake	19.28	41	P	P	06 19 24.6	-0.2
L26K	Log Cabin Wild	19.32	43	P	P	06 19 25.5	+0.2
	baz=248						
GRNC	Granite Creek	19.33	50	P	P	06 19 25.5	-0.1
SCRK	Sand Creek	19.45	40	P	P	06 19 26.5	-0.3
	baz=245						
SCRK	Sand Creek	19.45	40	P	P	06 19 26.2	-0.6
CTG	Chitna Glacier	19.59	50	P	P	06 19 28.6	+0.3
	baz=256						
PRP	Porcupine Dome	19.61	35	P	P	06 19 28.2	-0.3
	baz=239						
PRP	Porcupine Dome	19.61	35	P	Pn	06 19 32.2	+2.2
PRP				IAmb	IAmb	06 19 34.3	
	comp=Z,7.2nm,1.1s						
M27K	Edge Creek, AK	19.73	45	P	P	06 19 29.7	-0.2
	baz=252						
M27K	Edge Creek, AK	19.73	45	P	Pn	06 19 32.1	+0.6
M27K				IAmb	IAmb	06 19 32.3	
	comp=Z,18nm,1.5s						
J26L	Joseph Creek	19.84	39	P	P	06 19 30.0	-1.0
	baz=244,SNR=14						
PINM	Pinnacle	19.93	52	P	P	06 19 32.5	+0.5
	baz=260						
FYU	Fort Yukon	20.28	32	P	P	06 19 36.4	+0.8
FYU				IAmb	IAmb	06 19 53.5	
	comp=Z,14nm,1.1s						
PNL	Peninsula	20.29	54	P	P	06 19 36.4	+0.7
	baz=262						
TOLK	Toolik Lake Re	20.30	25	P	Pn	06 19 37.3	-0.9
	baz=225						
EGAK	Eagle	20.90	39	P	P	06 19 42.0	-0.3
	baz=247,SNR=12						
EGAK	Eagle	20.90	39	P	P	06 19 42.1	-0.3
YUK4	Talbot Arm	20.94	49	P	P	06 19 42.9	-0.2
	baz=258						
BMAR	Burnt Mountain	20.97	31	P	Pn	06 19 44.8	-1.1
YUK6	Outpost Mounta	21.00	51	P	P	06 19 42.9	-0.8
	baz=260						
DAWY	Dawson	21.35	42	P	P	06 19 47.8	+0.5
	baz=251						
HYT	Haines Junctio	21.39	51	P	P	06 19 47.7	-0.1
	baz=261						
HYT	Haines Junctio	21.39	51	P	P	06 19 48.8	+1.0
HYT				IAmb	IAmb	06 20 10.1	
	comp=Z,10nm,1.4s						
I29M	Ogilvie Camp,	22.24	39	P	P	06 19 57.1	+0.3
	baz=249						
SKAG	Skagway	22.32	55	P	P	06 19 57.9	+0.3
	baz=267						
EPYK	Eagle Plains	23.22	37	P	P	06 20 05.9	-1.0
	baz=249						
EPYK	Eagle Plains	23.22	37	IAmb	IAmb	06 20 06.5	
	comp=Z,11nm,1.0s						
MMPY	Sheldon Lake,	24.59	48	P	P	06 20 19.6	-0.3
	baz=263						
DLBC	Dease Lake	25.07	58	P	P	06 20 25.2	+0.9
	comp=Z,6.7nm,0.9s,baz=276,slow=7.8,SNR=9.9						
DLBC	Dease Lake	25.07	58	P	P	06 20 26.1	+1.9
INK	Inuvik	25.08	34	P	P	06 20 24.0	-0.2
	comp=Z,7.9nm,0.6s,baz=233,slow=7.9,SNR=48						
INK	Inuvik	25.08	34	P	P	06 20 24.0	-0.2
	baz=249,SNR=14						
INK	Inuvik	25.08	34	P	P	06 20 23.8	-0.4
A36M	Sachs Harbour	29.00	28	P	P	06 20 58.8	-0.5
	baz=252						
A36M	Sachs Harbour	29.00	28	IAmb	IAmb	06 21 08.0	
	comp=Z,4.1nm,0.9s						
YKA	Yellowknife Ar	32.29	48	LR	LR	06 36 18.2	
	comp=Z,115nm,19.4s,baz=0.0,slow=40						
E04D	Cinebar	32.77	79	P	P	06 21 32.9	+0.1
	baz=298						
LON	Longmire	33.14	78	P	P	06 21 37.4	+1.2
LON				IAmb	IAmb	06 21 39.5	
	comp=Z,2.2nm,1.1s						
J05D	Fort Rock, OR	35.23	83	P	P	06 21 54.8	+0.4
	baz=302						
NEW	Newport	35.27	73	P	P	06 21 54.2	-0.3
	baz=297						
NEW	Newport	35.27	73	P	P	06 21 54.7	+0.2
NEW				IAmb	IAmb	06 21 56.0	
	comp=Z,4.6nm,1.1s						
H11N2	WAKE ISLAND Hy	35.65	214	T	T	07 00 07.8	
	baz=21,slow=76,SNR=13						
H11N3	WAKE ISLAND Hy	35.66	214	T	T	07 00 07.7	
	baz=21,slow=76,SNR=13						
H11N1	WAKE ISLAND Hy	35.67	214	T	T	07 00 08.1	
	baz=21,slow=76,SNR=13						
M04C	Macdoel	35.68	86	P	P	06 21 58.5	+0.3
	baz=304						
K05A	Summer Lake	35.74	84	P	P	06 21 59.5	+0.6
I07A	Izee	35.88	81	P	P	06 22 00.1	+0.2
I07A				IAmb	IAmb	06 22 01.3	
	comp=Z,1.9nm,0.8s						
O02D	Mt. Diablo Mer	36.01	89	P	P	06 22 01.5	+0.6
	baz=306						
O03E	Paynes Creek	36.55	88	P	P	06 22 06.2	+0.5
	baz=306						
H11S1	WAKE ISLAND Hy	36.85	214	T	T	07 01 27.9	
	baz=20,slow=75,SNR=13						
H11S2	WAKE ISLAND Hy	36.87	213	T	T	07 01 32.4	
	baz=20,slow=75,SNR=6.9						
H11S3	WAKE ISLAND Hy	36.87	214	T	T	07 01 28.8	
	baz=20,slow=75,SNR=4.9						
J08A	Circle Bar Ran	36.89	81	P	P	06 22 09.4	+0.8
J08A				IAmb	IAmb	06 22 09.4	
	comp=Z,2.3nm,0.7s						
MSO	Missoula	37.85	73	P	P	06 22 16.5	-0.1
	baz=300						
HLID	Hailey	39.27	78	P	P	06 22 28.5	-0.1
	baz=303						
EGMT	Eagleton	39.72	70	P	P	06 22 32.4	+0.1
	baz=300						
NVAR	Mina Array Bea	39.84	87	P	P	06 22 33.7	+0.2
	comp=Z,0.9nm,0.9s,baz=296,slow=6.9,SNR=4.9						
BOZ	Bozeman (W)	39.86	74	P	P	06 22 33.0	-0.5
	baz=302						
RLMT	Red Lodge	41.52	73	P	P	06 22 47.0	-0.2
	baz=303						
R11A	Troy Canyon, C	41.58	86	P	P	06 22 47.2	-0.6
	baz=308						
PDAR	Pinedale Array	42.66	76	P	P	06 22 56.4	-0.2
	comp=Z,1.8nm,0.7s,baz=302,slow=4.0,SNR=17						
PDAR	Pinedale Array	42.66	76	P	P	06 22 56.6	0.0
BFSC	Mount Baldy Ra	42.91	92	P	P	06 22 58.7	+0.2
	baz=312						
109C	Camp Elliot, M	44.15	93	P	P	06 23 08.6	+0.2
	baz=313						
SRU	San Rafael Swe	44.23	81	P	P	06 23 09.5	+0.2
SRU				IAmb	IAmb	06 23 11.0	
	comp=Z,2.4nm,0.9s						
O20A	White River Ci	45.01	78	P	P	06 23 14.7	-0.7
	baz=308						
WUAZ	Wupatki	45.98	86	P	P	06 23 22.6	-0.6
	baz=311						
SDCO	Great Sand Dun	48.16	79	P	P	06 23 39.3	-1.0
	baz=310						
T25A	Trinidad	49.22	79	P	P	06 23 47.4	-1.0
	baz=310						
ECSD	EROS Data Cent	49.72	67	P	P	06 23 51.6	-0.2
	baz=308						
SONM	Songino Array	49.75	299	P	P	06 23 51.7	-0.4
	comp=Z,0.4nm,0.6s,baz=58,slow=9.4,SNR=2.6						
HHC	Hu-ho-hao-te	51.11	289	*e*P	P	06 24 04.4	+2.0
HHC				pmax	pmax		
	comp=Z,14nm,1.1s						
HHC				pmax	pmax		
	comp=Z,62nm,5.3s						
JFWS	Jewell Farm	53.85	64	P	P	06 24 20.0	-2.6
	baz=310						
TXAR	Lajitas Array	54.94	86	P	P	06 24 30.5	-0.3
	comp=Z,0.6nm,0.7s,baz=286,slow=5.0,SNR=9.9						
JCT	Junction City	56.53	82	P	P	06 24 41.6	-0.6
	baz=315						
U40A	Yellville	56.69	72	P	P	06 24 41.4	-1.8
	baz=313						
W39A	Magazine	56.93	74	P	P	06 24 44.2	-0.6
	baz=313						
XAN	Xi'an	57.19	285	P	P	06 25 00.6	+14
XAN				pP	sP	06 25 04.8	+3.0
XAN				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MIAR	Mount Ida	57.50	74	P	P	06 24 47.9	-1.0
	baz=314						
W41B	Gary Mavity, V	57.86	73	P	P	06 24 49.7	-1.7
	baz=314						
WVT	Waverly	59.79	69	P	P	06 25 03.6	-1.2
	baz=314						
M53A	WI Miller and	60.11	60	P	P	06 25 06.0	-0.9
	baz=314						
KURK	Kurchatov	61.38	317	P	P	06 25 15.5	+0.1
KURK	Kurchatov	61.38	317	IAmb	IAmb	06 25 17.4	
	comp=Z,2.2nm,0.6s						
KURBB	Kurchatov Arra	61.49	317	P	P	06 25 15.5	-0.6
	comp=Z,1.0nm,0.5s,baz=43,slow=7.2,SNR=6.0						
WMQ	Urumqi	62.19	306	*e*P	P	06 25 26.0	+4.9
MKAR	Makanchi Array	62.64	312	P	P	06 25 23.0	-1.0
	comp=Z,0.6nm,0.7s,baz=54,slow=6.2,SNR=4.8						
BVAR	Borovoye Array	62.93	323	P	P	06 25 25.6	-0.2
	comp=Z,1.8nm,0.5s,baz=248,slow=7.6,SNR=9.7						
N59A	State Game Lan	63.09	57	P	P	06 25 26.7	-0.3
	baz=316						
BLA	Blacksburg	63.24	63	P	P	06 25 27.7	-0.4
	baz=316						
HRV	Adam Dziewonsk	64.10	54	P	P	06 25 33.3	-0.3
	baz=318						
AAK	Ala-Archa	69.40	313	P	P	06 26 07.6	0.0
	comp=Z,2.6nm,0.6s,baz=180,slow=4.0,SNR=9.0						
AKTO	Aktyubinsk	69.45	328	P	P	06 26 07.4	-0.2
	comp=Z,2.2nm,0.5s,baz=51,slow=7.0,SNR=7.3						
ASAR	Alice Springs	88.34	227	P	P	06 27 51.7	+0.4
	comp=Z,0.4nm,0.7s,baz=47,slow=5.4,SNR=4.4						

IDC ***10*** *06:30:30.9±2.3, 31°.11S×71°.46W, h0^{km}, mb3.5/2, mb1 3.8/4, mb1mx3.6/19, mbtmp3.6/4, ML3.4/2, MS3.0/1, Ms1 3.0/1, ms1mx2.6/14, Error ellipse: s-maj=60.4km s-min=52.8km az=11.0*

GUC ***10*** *06:30:37.6±0.7, 30°.78S×71°.45W, h52^{km}±2^{km}, ML3.9*

ISC 10 06:30:38.6±0.9**, 30°.77S**±0°.03×**71°.51W**±0°.09**, h45**^{km}±8^{km}**, n36,** σ1^{s}.**07**/47**, 3C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	Fray Jorge	0.15	313	⇓*i*P	Pn	06 30 45.9	-0.2
CO06				*i* S	Sn	06 30 51.3	0.0
CO06				IAML		06 30 52.1	
	comp=N,29µm,0.2s						
GO04	Tololo Observa	0.86	46	*e*P	Pn	06 30 53.7	-0.9
GO04				*i* S	Sn	06 31 05.4	-0.7
CO05	La Serena	0.89	16	*e*P	Pn	06 30 53.9	-0.7
CO05				*i* S	Sn	06 31 06.1	-0.2
CO05				IAML		06 31 08.7	
	comp=E,5µm,0.1s						
VA06	Catapilco	1.79	174	⇓*e*P	Pn	06 31 06.7	-0.3
VA06				*i* S	Sn	06 31 29.0	+0.5
VA06				IAML		06 31 34.7	
	comp=E,1µm,0.5s						
LCO	Las Campanas	1.89	22	*e*P	Pn	06 31 08.8	+0.1
LCO				*i* S	Sn	06 31 31.8	+0.3
VA03	San Esteban	2.15	158	⇑*e*P	Pn	06 31 11.8	-0.2
VA03				*i* S	Sn	06 31 37.7	+0.2
VA03				IAML		06 31 44.4	
	comp=E,1µm,0.4s						
ROCH	El Roble	2.23	169	*e*P	Pn	06 31 13.2	-0.1
ROCH				*i* S	Sn	06 31 40.4	+0.6
ROCH				IAML		06 31 46.1	
	comp=E,906nm,0.4s						
VA01	Torpederas	2.25	183	*e*P	Pn	06 31 12.2	-1.0
VA01				*i* S	Sn	06 31 43.8	+4.1
PEL	Peldehue	2.46	164	⇑*e*P	Pn	06 31 16.4	+0.1
PEL				*i* S	Sn	06 31 45.4	+0.2
PEL				IAML		06 31 55.2	
	comp=E,484nm,0.5s						
MT02	Curacav	2.50	173	⇑*e*P	Pn	06 31 16.3	-0.5
MT02				*i* S	Sn	06 31 45.8	-0.2
MT02				IAML		06 31 58.5	
	comp=E,226nm,0.3s						
AC04	Llanos de Chal	2.59	9	⇓*e*P	Pn	06 31 18.1	+0.1
AC04				*i* S	Sn	06 31 48.8	+0.5
AC04				IAML		06 32 03.3	
	comp=N,600nm,0.2s						
MT05	Renca	2.69	166	*e*P	Pn	06 31 19.7	+0.2
MT05				*i* S	Sn	06 31 51.0	+0.2
MT05				IAML		06 32 04.5	
	comp=E,930nm,0.4s						
FCH	Farellones	2.75	158	*e*P	Pn	06 31 21.4	+0.9
FCH				*i* S	Sn	06 31 53.8	+1.1
FCH				IAML		06 32 01.6	
	comp=E,326nm,0.5s						
VA05	Santo Domingo	2.88	182	*e*P	Pn	06 31 20.7	-1.2
VA05				*i* S	Sn	06 31 54.8	-0.4
VA05				IAML		06 32 05.3	
	comp=E,685nm,0.3s						
MT09	Talagante	3.03	172	*e*P	Pn	06 31 24.1	0.0
MT09				*i* S	Sn	06 31 59.1	0.0
MT09				IAML		06 32 14.4	
	comp=N,420nm,0.4s						
MT01	Popeta	3.09	176	*e*P	Pn	06 31 24.3	-0.6
MT01				*i* S	Sn	06 32 00.3	-0.2
MT01				IAML		06 32 13.3	
	comp=E,251nm,0.2s						
LMEL	Las Melosas	3.26	160	*e*P	Pn	06 31 28.5	+1.2
LMEL				*i* S	Sn	06 32 04.9	0.0
LMEL				IAML		06 32 16.1	
	comp=N,342nm,0.3s						
BO04	La Punta	3.29	167	*e*P	Pn	06 31 27.9	+0.2
BO04				*i* S	Sn	06 32 05.1	-0.6
BO01	Tunca	3.62	174	*e*P	Pn	06 31 31.5	-0.7
BO01				*i* S	Sn	06 32 09.9	-3.8
BO01				IAML		06 32 33.5	
	comp=N,87nm,0.7s						
BO02	Sierra Bellavi	4.05	171	*e*P	Pn	06 31 37.9	-0.3
BO02				*i* S	Sn	06 32 23.4	-1.0
BO02				IAML		06 32 36.2	
	comp=E,211nm,0.5s						
AC02	Maricunga	4.45	29	*e*P	Pn	06 31 45.0	+1.0
AC02				*i* S	Sn	06 32 33.4	-1.3
H03N1	Juan Fernandez	6.82	245	T	T	06 39 11.8	
	baz=72,slow=72,SNR=852						
H03N3	Juan Fernandez	6.83	245	T	T	06 39 11.1	
	baz=72,slow=72,SNR=772						
H03N2	Juan Fernandez	6.83	245	T	T	06 39 12.5	
	baz=72,slow=72,SNR=895						
H03S3	Juan Fernandez	6.96	242	T	T	06 39 27.1	
	baz=75						
H03S1	Juan Fernandez	6.97	242	T	T	06 39 27.8	
	baz=75						
H03S2	Juan Fernandez	6.98	242	T	T	06 39 28.2	
	baz=75						
CPUP	Villa Florida	13.23	74	LR	LR	06 39 13.1	
	comp=E,63nm,21.1s,baz=213,slow=39						
LPAZ	La Paz	14.75	13	Pn	Pn	06 34 05.7	+0.8
	comp=E,0.1nm,0.3s,baz=195,slow=10,SNR=5.5						
SIV	San Ignacio	17.54	35	P	P	06 34 40.1	-0.5
	comp=E,0.1nm,0.3s,baz=234,slow=13,SNR=4.6						
TXAR	Lajitas Array	67.16	330	P	P	06 41 28.9	+1.0
	comp=E,0.3nm,0.7s,baz=144,slow=9.4,SNR=4.9						
TORD	Torodi Ar. Bea	82.69	70	P	P	06 42 57.4	-0.4
	comp=E,0.5nm,0.7s,baz=216,slow=7.1,SNR=2.9						
H11S2	WAKE ISLAND Hy	126.21	271	T	T	09 08 30.5	
	baz=115,slow=75,SNR=23						
H11S1	WAKE ISLAND Hy	126.22	271	T	T	09 08 25.3	
	baz=115,slow=75,SNR=28						
H11S3	WAKE ISLAND Hy	126.22	271	T	T	09 08 23.9	
	baz=115,slow=75,SNR=30						
ZALV	Zalesovo Beam	151.24	30	PKPbc	PKiKP	06 50 25.9	-1.1
	comp=E,0.8nm,0.5s,baz=313,slow=3.5,SNR=4.9						

NNC ***10*** *06:31:16.4±3.3, 54°.32N×86°.38E, h0^{km}, mb3.4, mpv2.6, Error ellipse: s-maj=63.1km s-min=17.5km az=165.0, Suspected Mining explosion.*

IDC ***10*** *06:31:18.6±2.6, 54°.06N×86°.32E, h0^{km}, mb1 3.1/1, mb1mx2.9/44, mbtmp3.1/1, ML3.0/1, Error ellipse: s-maj=20.1km s-min=12.0km az=59.0*

ISC 10 06:31:10.9±2.6**, 53°.26N**±0°.07×**86°.5E**±0°.1**, h0**^{km}**, n7,** σ**0**^{s}.**76**/8**, 6C-2D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.21	305	*i*		06 35 13.4	
	baz=85,slow=345,SNR=2.5						
ZAA0	Zalesovo Array	1.21	305	⇑P	Pn	06 31 35.2	+0.1
	0.2nm,0.3s						
ZAA0				⇓S	Sg	06 31 49.2	-0.6
	1.9nm,0.8s						
ZALV	Zalesovo Beam	1.21	305	Pg	Pb	06 31 34.9	+0.2
	1.7nm,0.3s,baz=78,slow=17,SNR=16						
ZALV				Lg	Lg	06 31 49.1	
	2.1nm,0.3s,baz=82,slow=29,SNR=7.4						
ZALV				Rg	Rg	06 31 54.9	
	22nm,1.1s,baz=83,slow=33,SNR=9.1						
KURK	Kurchatov	5.49	245	⇑Pn	Pb	06 32 47.0	-0.7
	0.8nm,0.7s						
KURK				⇑Lg	Lg	06 34 25.2	
	3.1nm,1.1s						
KURBB	Kurchatov Arra	5.59	245	⇓Pn	Pb	06 32 48.6	-0.7
	0.9nm,0.3s						
KURBB				⇑Sn	Sb	06 33 58.0	+1.2
	2.2nm,0.8s						
KURBB				⇑Lg	Lg	06 34 31.5	
	3.0nm,0.7s						
MK31	Makanchi Array	7.02	204	⇑Pn	Pb	06 33 13.6	0.0
	0.2nm,0.3s,baz=27,slow=14,SNR=24						
MKAR	Makanchi Array	7.02	204	Pn	Pb	06 33 13.4	-0.2
	0.2nm,0.3s,baz=24,slow=14,SNR=14						

IDC ***10*** *06:40:24.9±0.7, 10°.12S×108°.05E, h0^{km}, mb4.2/9, mb1 4.3/11, mb1mx4.0/36, mbtmp4.2/11, ML4.0/2, MS3.3/6, Ms1 3.3/6, ms1mx3.0/38, Error ellipse: s-maj=28.7km s-min=14.5km az=63.0*

DJA ***10*** *06:40:25.2±0.4, 10°S±3°×10°8E±°, h10^{km}, M4.8/18, mb5.0/13, mB5.4/7, MLv4.8/18, Mw(mB)4.8/7, MwMwp5.0/1, Mwp5.3/1*

NEIC ***10*** *06:40:26.0±2.9, 10°.17S±0°.05×107°.94E±0°.06, h10^{km}±1^{km}, mb4.2/14, Error ellipse: s-maj=11.2km s-min=6.7km az=300.0*

ISC 10 06:40:27.2±0.5**, 10°.13S**±0°.05×**108°.03E**±0°.05**, h22**^{km}**, n70,** σ**2**^{s}.**02**/74**, mb4.2**/12**, MS3.3**/6**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
XMI	Christmas Isla	2.33	262	P	Pn	06 41 00.9	-3.3
CMJI	Cimerak	2.37	10	P	Pn	06 41 02.8	-1.9
CMJI				S	Sn	06 41 28.6	-4.5
XMIS	Christmas Isla	2.37	261	Pn	Pn	06 41 01.7	-3.1
XMIS	Christmas Isla	2.37	261	P	Pn	06 41 01.1	-3.7
KPJI	Karang Pucung	2.92	18	P	Pn	06 41 11.9	-0.4
CNJI	Cibinong	2.94	342	P	Pn	06 41 10.9	-1.7
CNJI				S	Sn	06 41 42.0	-5.2
YOGI	Yogyakarta	3.21	44	P	Pn	06 41 16.0	-0.3
YOGI				S	Sn	06 41 48.9	-5.0
UGM	Wanagama	3.30	48	P	Pn	06 41 17.5	-0.2
UGM				S	Sn	06 41 53.6	-2.7
UGM	Wanagama	3.30	48	Pn	Pn	06 41 17.6	-0.2
UGM	Wanagama	3.30	48	P	Pn	06 41 17.4	-0.3
LEM	Lembang	3.31	353	Pn	Pn	06 41 18.1	+0.2
	33nm,0.3s,baz=154,slow=7.7,SNR=12						
LEM				Sn	Sn	06 41 58.9	+2.3
	52nm,0.3s,baz=132,slow=21,SNR=7.5						
LEM	Lembang	3.31	353	P	Pn	06 41 15.2	-2.6
PCJI	Pacitan	3.65	59	P	Pn	06 41 22.6	+0.1
PCJI				S	Sn	06 42 00.6	-4.3
DBJI	Dramaga	3.77	340	P	Pn	06 41 20.8	-3.3
SMRI	Semarang	3.88	38	S	Sn	06 42 11.6	+1.1
SMRI	Semarang	3.88	38	Pn	Pn	06 41 24.9	-0.6
CGJI	Cibinong	4.19	326	P	Pn	06 41 28.0	-1.8
PWJI	Pagerwojo	4.28	61	P	Pn	06 41 31.6	+0.6
NGJI	Ngawi	4.36	51	P	Pn	06 41 32.6	+0.4
GMJI	Gumukmas	5.66	71	P	Pn	06 41 51.2	+1.2
	0.7nm7µm2µm93nm,0.5s						
GMJI				S	Sn	06 42 49.0	-5.3
	0.7nm7µm2µm93nm,0.5s						
KASI	Kota Agung	5.76	322	P	Pn	06 41 49.5	-1.9
	0.3nm49nm,1.2s						
BLJI	Banyuglugur	5.99	67	P	Pn	06 41 55.3	+0.7
	0.7nm2µm96nm,0.7s						
JAGI	Jajag, Banyuwa	6.26	75	P	Pn	06 41 59.4	+1.0
	2.2nm4µm212nm,0.6s						
JAGI	Jajag, Banyuwa	6.26	75	Pn	Pn	06 41 59.5	+1.2
JAGI	Jajag, Banyuwa	6.26	75	P	Pn	06 41 59.5	+1.1
KLSI		6.32	329	P	Pn	06 41 57.4	-1.7
	0.1nm9.7nm,0.7s						
ABJI	Asem Bagus	6.55	70	P	Pn	06 42 03.1	+0.8
	1.2nm3µm118nm,0.9s						
MDSI	Maura Dua	6.78	325	P	Pn	06 42 02.7	-2.8
	0.1nm9.5nm,1.0s						
IGBI	Denpasar	7.14	80	P	Pn	06 42 11.2	+0.8
	1.1nm3µm49nm,0.5s						
SRBI	Singaraja	7.38	75	P	Pn	06 42 14.7	+1.0
	0.6nm110nm,0.7s						
MNAI	Manna	7.62	318	P	Pn	06 42 15.2	-1.9
	0.9nm229nm,1.3s						
MNAI	Manna	7.62	318	Pn	Pn	06 42 15.2	-1.9
TWSI	Taliwang, Sumb	8.84	82	P	Pn	06 42 33.9	+0.1
	768nm36nm,0.5s						
PLAI	Plampang	9.70	83	P	Pn	06 42 46.1	+0.5
	71nm,0.8s						
PLAI	Plampang	9.70	83	P	Pn	06 42 46.1	+0.5
WSI	Waingapu	12.10	89	P	Pn	06 43 18.8	+0.4
EDFI	Ende, Flores	13.55	85	P	P	06 43 45.6	-1.7
GIRL	Giralia	13.79	155	Pn	Pn	06 43 37.4	-4.1
MBWA	Marble Bar	15.71	136	Pn	Pn	06 44 04.3	-3.0
MBWA				IAmb	IAmb	06 44 05.3	
	comp=Z,18nm,1.2s						
PSA00	Pilbara Seismi	16.07	136	Pn	Pn	06 44 09.0	-3.0
FITZ	Fitzroy Crossi	18.82	117	P	Pn	06 44 47.1	+0.9
	comp=Z,0.2nm,0.3s,baz=306,slow=12,SNR=7.0						
KNRA	Kununurra	20.94	107	P	P	06 45 09.8	+1.1
WB0	Warramunga Arr	27.18	114	P	P	06 46 09.5	+0.1
WRA	Warramunga Arr	27.18	114	P	P	06 46 09.7	+0.3
	comp=Z,3.8nm,0.8s,baz=286,slow=11,SNR=28						
WRA				PcP	PcP	06 49 30.4	+0.7
	comp=Z,0.6nm,0.8s,baz=285,slow=2.9,SNR=3.0						
WRA				LR	LR	06 56 10.3	
	comp=Z,56nm,20.9s,baz=200,slow=35						
WRA	Warramunga Arr	27.18	114	P	P	06 46 08.7	-0.8
WRAB	Tennant Creek	27.19	114	P	P	06 46 09.2	-0.3
WRAB				IAmb	IAmb	06 46 10.8	
	comp=Z,5.3nm,0.8s						
WB2	Warramunga Arr	27.19	114	P	P	06 46 09.6	+0.1
WB2				IAmb	IAmb	06 46 10.7	
	comp=Z,5.0nm,0.8s						
WR0	Warramunga Arr	27.37	114	P	P	06 46 11.5	+0.3
WR0				IAmb	IAmb	06 46 12.6	
	comp=Z,7.9nm,1.1s						
ASAR	Alice Springs	28.11	122	P	P	06 46 18.7	+0.9
	comp=Z,3.9nm,0.8s,baz=302,slow=8.8,SNR=26						
ASAR				PcP	PcP	06 49 32.8	+0.8
	comp=Z,0.7nm,0.7s,baz=307,slow=2.3,SNR=4.3						
ASAR				LR	LR	06 57 10.0	
	comp=Z,72nm,19.1s,baz=174,slow=36						
CMAR	Chiang Mai Arr	29.79	342	P	P	06 46 34.0	+1.4
	comp=Z,1.1nm,0.3s,baz=173,slow=9.3,SNR=4.6						

CMAR				LR	LR	07 00 31.5	
	comp=Z,32nm,19.0s,baz=207,slow=40						
COEN	Coen	34.56	100	P	P	06 47 15.6	+0.9
H08S2	Diego Garcia H	35.19	271	T	T	07 24 05.5	
	baz=98,slow=75,SNR=59						
H08S3	Diego Garcia H	35.20	271	T	T	07 24 04.0	
	baz=98,slow=75,SNR=83						
H08S1	Diego Carcia H	35.20	271	T	T	07 24 05.9	
	baz=98,slow=75,SNR=36						
STKA	Stephens Creek	37.83	130	P	P	06 47 43.5	+1.1
	comp=Z,12nm,0.7s,baz=305,slow=7.9,SNR=17						
STKA				LR	LR	07 05 23.0	
	comp=Z,49nm,18.3s,baz=21,slow=40						
STKA	Stephens Creek	37.83	130	P	P	06 47 42.6	+0.2
STKA				IAmb	IAmb	06 47 44.4	
	comp=Z,3.0nm,0.8s						
CAN	Canberra	44.89	131	P	P	06 48 42.3	+2.0
SONM	Songino Array	57.72	359	P	P	06 50 17.0	+0.6
	comp=Z,1.7nm,0.6s,baz=178,slow=9.2,SNR=9.2						
SONM	Songino Array	57.72	359	P	P	06 50 17.3	+0.9
SONM				IAmb	IAmb	06 50 29.7	
	comp=Z,2.6nm,0.8s						
MKAR	Makanchi Array	61.16	340	P	P	06 50 40.4	+0.4
	comp=Z,1.3nm,0.5s,baz=159,slow=7.1,SNR=5.5						
MKAR	Makanchi Array	61.16	340	P	P	06 50 39.0	-1.0
MAW	Mawson	64.70	197	P	P	06 51 04.1	+0.9
	comp=Z,0.8nm,0.6s,baz=75,slow=4.0,SNR=1.7						
ZALV	Zalesovo Beam	66.80	345	P	P	06 51 19.3	+2.4
	comp=Z,0.3nm,0.3s,baz=148,slow=8.5,SNR=3.8						
BOSA	Boshof	78.92	243	LR	LR	07 23 07.0	
	comp=Z,34nm,18.3s,baz=10.0,slow=32						
MMAI	Mount Meron Ar	81.24	306	LR	LR	07 31 18.0	
	comp=Z,14nm,18.1s,baz=285,slow=38						
SNAA	Sanae	86.86	197	P	P	06 53 11.5	+1.6
	comp=Z,0.5nm,0.6s,baz=352,slow=7.1,SNR=2.2						
TXAR	Lajitas Array	144.75	53	PKP	PKPdf	07 00 03.6	+0.4
	comp=Z,1.9nm,0.8s,baz=262,slow=1.2,SNR=23						
BDFB	Brasilia	145.09	223	PKPbc	PKPdf	07 00 04.8	+0.6
	comp=Z,2.6nm,0.8s,baz=151,slow=3.5,SNR=3.6						
SIV	San Ignacio	151.90	203	PKPbc	PKiKP	07 00 22.2	+0.3
	comp=Z,2.0nm,0.8s,baz=118,slow=0.9,SNR=11						
LPAZ	La Paz	153.48	188	PKPab	PKPab	07 00 39.0	+1.3
	comp=Z,0.4nm,0.8s,baz=175,slow=6.0,SNR=4.6						

*SOF **10** 06:53:46.0, 39°.47N×24°.07E, h8^{km}, MD3.5*
*ISK **10** 06:53:47.1, 39°.41N×23°.99E, h12^{km}, ML3.5/18*
*ATH **10** 06:53:47.4, 39°.39N×23°.95E, h32^{km}±3^{km}, ML3.5/6, Error ellipse: s-maj=3.0km s-min=0.9km az=221.0*
*THE **10** 06:53:48.0, 39°.40N×24°.00E, h13^{km}±1^{km}, ML3.4/8, Error ellipse: s-maj=1.1km s-min=0.5km az=241.0*
ISC 10 06:53:47.5±1.0**, 39°.40N**±0°.02×**23°.98E**±0°.02**, h13**^{km}±9^{km}**, n118, σ0s.78**/137**, 7C-4D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALNA	Alonissos	0.27	200	P	Pb	06 53 54.1	-0.1
ALNA				S	Sb	06 53 58.4	-0.2
ALNA				AML	AML	06 53 59.3	
	comp=E,87232μm,0.3s						
ALNA				AML	AML	06 53 59.8	
	comp=N,18824μm,1.0s						
PAIG	Paliouri	0.58	336	P	Pb	06 53 59.3	-0.2
PAIG				S	Sb	06 54 08.4	+0.9
	comp=N,2μm,0.4s						
PAIG	Paliouri	0.58	336	P	Pb	06 53 59.3	-0.2
PAIG				S	Sb	06 54 07.8	+0.3
PAIG				AML	AML	06 54 09.5	
	comp=N,4818μm,0.3s						
PAIG				AML	AML	06 54 09.7	
	comp=E,4981μm,0.4s						
NEO	Neokhori	0.60	261	P	Pb	06 53 59.7	-0.1
NEO				S	Sb	06 54 08.7	+0.5
	comp=E,6μm,0.3s						
NEO	Neokhori	0.60	261	P	Pg	06 53 59.4	+0.2
NEO				S	Sg	06 54 07.3	+0.1
NEO				AML	AML	06 54 09.9	
	comp=N,14218μm,0.3s						
NEO				AML	AML	06 54 11.4	
	comp=E,8767μm,0.3s						
XOR	Xorichti	0.61	267	P	Pb	06 54 00.2	+0.1
XOR				S	Sg	06 54 08.2	+0.5
	comp=E,5μm,0.3s						
XOR	Xorichti	0.61	267	P	Pg	06 53 59.6	0.0
XOR				S	Sg	06 54 07.7	0.0
XOR				AML	AML	06 54 10.0	
	comp=E,11057μm,0.4s						
XOR				AML	AML	06 54 11.1	
	comp=N,10795μm,0.3s						
SKY	Skiros Island	0.68	140	P	Pb	06 54 01.1	-0.2
SKY				S	Sg	06 54 10.0	+0.2
	comp=N,10μm,0.2s						
SKY	Skiros Island	0.68	140	P	Pg	06 54 00.9	+0.1
SKY				S	Sg	06 54 09.5	-0.4
SKY				AML	AML	06 54 10.4	
	comp=N,15287μm,0.2s						
SKY				AML	AML	06 54 13.1	
	comp=E,26112μm,0.2s						
KYMI	Kymi, Euboea I	0.77	173	P	Pg	06 54 02.2	-0.3
KYMI				S	Sn	06 54 14.6	-0.9
	comp=E,2μm,0.5s						
KYMI	Kymi, Euboea I	0.77	173	P	Pg	06 54 02.1	-0.3
KYMI				S	Sg	06 54 12.9	+0.2
KYMI				AML	AML	06 54 15.8	
	comp=E,4022μm,0.4s						
KYMI				AML	AML	06 54 15.9	
	comp=N,5882μm,0.7s						
EFSA	Agios Efstrati	0.79	80	P	Pb	06 54 03.1	0.0
EFSA				S	Sb	06 54 14.1	+0.4
OUR	Ouranopolis	0.93	360	P	Pg	06 54 05.5	0.0
OUR				S	Sn	06 54 19.2	-0.3
	comp=N,4μm,0.5s						
OUR	Ouranopolis	0.93	360	P	Pn	06 54 05.6	-0.7
OUR	Ouranopolis	0.93	360	PG	Pg	06 54 05.3	-0.2
OUR				SG	Sn	06 54 18.7	-0.8
LIA	Limnos Island	1.05	61	P	Pb	06 54 07.3	-0.2
LIA				S	Sn	06 54 21.9	-0.5
	comp=N,2μm,0.2s						
LIA	Limnos Island	1.05	61	P	Pb	06 54 07.3	-0.2
LIA				S	Sn	06 54 21.9	-0.5
PLG	Polygyros	1.06	337	P	Pb	06 54 06.8	-0.9
PLG	Polygyros	1.06	337	P	Pb	06 54 07.1	-0.6
LKR	Lokris	1.07	226	P	Pb	06 54 07.5	-0.4
LKR				S	Sn	06 54 22.9	0.0
	comp=N,1μm,0.3s						
LKR	Lokris	1.07	226	P	Pb	06 54 07.2	-0.6
VIL2	Platees	1.31	205	P	Pn	06 54 11.4	-0.2
DION	Dionisos Attik	1.32	182	P	Pn	06 54 11.5	-0.2
DION	Dionisos Attik	1.32	182	P	Pn	06 54 11.3	-0.3
THAS	Thassos island	1.33	25	P	Pn	06 54 10.5	-1.2
THAS	Thassos island	1.33	25	P	Pn	06 54 11.0	-0.8
AGG	Agios Georgios	1.34	254	P	Pn	06 54 11.4	-0.5
AGG	Agios Georgios	1.34	254	P	Pn	06 54 11.4	-0.5
AGG	Agios Georgios	1.34	254	PN	Pn	06 54 11.6	-0.3
AGG				SN	Sg	06 54 31.0	+0.3
PTL	Penteli	1.35	184	P	Pn	06 54 11.9	-0.2
PTL	Penteli	1.35	184	P	Pn	06 54 11.7	-0.4
HORT	Hortiatis	1.38	331	P	Pb	06 54 12.6	-0.5
HORT	Hortiatis	1.38	331	PN	Pb	06 54 12.7	-0.4
KARY	Karystos	1.41	165	P	Pn	06 54 12.9	0.0
ATH	Athens Observa	1.44	188	P	Pn	06 54 13.2	0.0
ATH	Athens Observa	1.44	188	P	Pn	06 54 13.2	0.0
THE	Thessaloniki	1.46	328	P	Pn	06 54 13.5	0.0
THE	Thessaloniki	1.46	328	P	Pn	06 54 13.2	-0.3
SIGR	SIGRI	1.46	97	P	Pn	06 54 13.8	+0.2
SIGR	SIGRI	1.46	97	P	Pn	06 54 13.5	-0.1
SIGR	SIGRI	1.46	97	PN	Pb	06 54 13.9	-0.7
SIGR				SN	Sg	06 54 33.7	-1.0
SOH	Sokhos	1.50	341	P	Pn	06 54 14.0	-0.1
SOH	Sokhos	1.50	341	P	Pn	06 54 14.0	-0.1
THL	Klokotos Trika	1.53	277	P	Pn	06 54 14.3	-0.2
THL	Klokotos Trika	1.53	277	P	Pn	06 54 14.3	-0.2
VLY	Voula,Athens	1.55	186	P	Pn	06 54 14.7	-0.1
VLY	Voula,Athens	1.55	186	P	Pn	06 54 14.7	-0.1
KVLA	Kavala	1.56	11	P	Pn	06 54 14.7	-0.2
LTK	Loutraki	1.59	210	P	Pn	06 54 15.0	-0.3
LTK	Loutraki	1.59	210	P	Pn	06 54 14.8	-0.5
SMTH	Samothraki Isl	1.60	48	P	Pn	06 54 14.4	-1.1
KAVA	Kavala	1.65	14	P	Pn	06 54 15.2	-0.9
BOZC	Bozcaada	1.66	74	PN	Pb	06 54 16.9	-1.0
GPNR	Gulpinar-Canak	1.67	87	PN	Pb	06 54 17.0	-1.0
GADA	Gvkgeada	1.67	61	P	Pn	06 54 16.0	-0.5
GADA	Gvkgeada	1.67	61	PN	Pn	06 54 16.5	0.0
GOKC	Gokceada-Canak	1.69	61	PN	Pb	06 54 17.3	-1.1
SRS	Serrai	1.74	350	P	Pn	06 54 16.9	-0.5
SRS	Serrai	1.74	350	P	Pn	06 54 17.4	0.0
SERG	Sergoula	1.80	237	P	Pn	06 54 18.1	-0.1
SERG	Sergoula	1.80	237	P	Pn	06 54 18.1	-0.1
EZN	Ezine	1.86	76	PN	Pn	06 54 19.8	+0.8
EFP	Efpalio	1.89	240	P	Pn	06 54 19.7	+0.3
EFP	Efpalio	1.89	240	P	Pn	06 54 19.7	+0.3
CHOS	Chios island	1.91	121	P	Pn	06 54 20.3	+0.5
CHOS	Chios island	1.91	121	P	Pn	06 54 20.2	+0.4
CHOS	Chios island	1.91	121	PN	Pn	06 54 20.3	+0.5
KNT	Kendrikon	1.94	335	P	Pn	06 54 20.8	+0.6
KNT	Kendrikon	1.94	335	P	Pn	06 54 21.0	+0.8
KNT	Kendrikon	1.94	335	PN	Pn	06 54 20.9	+0.7
GUR	Goura	1.95	222	P	Pn	06 54 20.4	+0.1
GUR	Goura	1.95	222	P	Pn	06 54 20.3	-0.1
NVR	Nevrokopi	1.95	357	P	Pn	06 54 20.0	-0.3
GRG	Griva	1.97	323	PN	Pn	06 54 20.9	+0.3
KLV	Kalavryta, Ach	1.97	227	P	Pn	06 54 20.6	-0.1
KLV	Kalavryta, Ach	1.97	227	P	Pn	06 54 20.6	-0.1
KPRO	Kipourio	2.10	286	P	Pn	06 54 23.5	+1.1
CESE	eme	2.10	120	PN	Pn	06 54 23.5	+1.2
RDO	Rodhopi	2.11	34	PN	Pn	06 54 21.9	-0.6
ENEZ	Enez	2.13	51	PN	Pn	06 54 23.5	+0.7
KRBN	Karaburun	2.16	111	PN	Pn	06 54 23.9	+0.8
GELI	Tayfur-Gelibol	2.16	62	PN	Pn	06 54 23.0	-0.1
ALN	Alexandroupoli	2.17	46	P	Pn	06 54 22.6	-0.8
ALN	Alexandroupoli	2.17	46	PN	Pn	06 54 22.6	-0.8
MMB	Musomiste	2.19	355	P	Pn	06 54 22.8	-0.9
MMB	Musomiste	2.19	355	Pg	Pb	06 54 27.8	+0.7
VAY	Valandovo	2.20	331	i Pn	Pg	06 54 29.1	-0.7
URLA	Izmir	2.29	116	PN	Pn	06 54 25.4	+0.4
DKL	Dikili	2.29	97	PN	Pn	06 54 26.1	+1.1
ERIK	Erikli-Kesan	2.32	56	PN	Pn	06 54 26.2	+0.9
LPK	Lapseki	2.35	65	PN	Pn	06 54 25.8	+0.1
RZN	Rozhen	2.35	13	P	Pn	06 54 26.0	0.0
KDZ	Kurdzhali	2.50	25	P	Pn	06 54 26.8	-1.0
KKB	Krupnik	2.56	345	P	Pn	06 54 28.4	-0.2
UKOP	Uzunkopru-Edir	2.66	49	PN	Pn	06 54 30.6	+0.6
STIP	Stip	2.67	330	i Pn	Pn	06 54 30.2	+0.1
KRBG	Karabiga-Canak	2.73	68	PN	Pn	06 54 31.9	+0.9
PLD	Plovdiv	2.76	11	PN	Pn	06 54 32.2	+0.8
RKY	Sarkoy-Tekirda	2.77	61	PN	Pn	06 54 32.4	+0.8
MAR6	Marsite Statio	2.83	62	PN	Pn	06 54 33.2	+0.7
GONE	Gonen-Balikesi	2.93	76	PN	Pn	06 54 34.9	+1.2
BALB	Balikesir	3.02	84	PN	Pn	06 54 36.2	+1.2
MRMT	Marmara Adasi	3.02	65	PN	Pn	06 54 36.2	+1.1
VTS	Vitosha	3.26	350	⇑P	Pn	06 54 38.2	-0.3
VTS	Vitosha	3.26	350	P	Pn	06 54 38.8	+0.3
KCTX	Karacabey (Bur	3.48	74	PN	Pn	06 54 42.5	+1.2
CTKS	Kestanelik-??a	3.91	61	PN	Pn	06 54 48.9	+1.7
PLVB	Pleven	4.01	7	⇑P	Pn	06 54 50.8	+2.2
YLV	Yalova	4.30	73	PN	Pn	06 54 54.5	+1.8
BOVS	Bovan	4.56	339	⇓P	Pn	06 54 55.4	-0.8
PDG	Podgorica	4.69	312	⇑P	Pn	06 55 00.0	+2.1
HERR	Herculane	5.60	348	⇑P	Pn	06 55 09.7	-0.7
MDVR	Moldovita	5.64	343	⇓P	Pn	06 55 10.5	-0.5
VOIR		6.08	7	⇑P	Pn	06 55 17.8	+0.7
MLR	Muntele Rosu	6.26	13	⇓P	Pn	06 55 21.9	+2.3
BZS	Buzias	6.45	345	⇑P	Pn	06 55 20.5	-1.6
PLOR	Plostina	6.74	16	⇑P	Pn	06 55 28.9	+2.8
VRI	Vrincioaia	6.77	16	⇓P	Pn	06 55 29.2	+2.7

NNC 10 07:05:17.5±0.9**, 53°.76N×88°.36E, h0**^{km}**, mb3.8, mpv3.5, 9C-3D, Error ellipse: s-maj=7.2km s-min=4.3km az=59.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAA0	Zalesovo Array	2.11	277	⇓Pn	Pn	07 05 53.6	-0.4
	3.9nm,0.6s						
ZAA0				⇑Sn	Sb	07 06 22.1	-1.2
	12nm,0.6s						
KURK	Kurchatov	6.71	247	⇑Pn	Pn	07 06 57.2	-0.1
	2.4nm,0.6s						
KURK				⇑Sn	Sn	07 08 15.8	+1.5
	2.2nm,0.6s						
KURK				⇑Lg	Lg	07 08 50.5	
	17nm,1.4s						
KURBB	Kurchatov Arra	6.81	246	⇑Pn	Pn	07 06 58.6	0.0
	4.6nm,0.4s						
KURBB				⇓Sn	Sn	07 08 17.6	+0.9
	9.0nm,0.5s						
KURBB				⇑Lg	Lg	07 08 52.7	
	14nm,0.6s						
MK31	Makanchi Array	7.98	212	Pn	Pn	07 07 16.0	+1.3
	0.8nm,0.5s,baz=113,slow=42,SNR=10						
MK31				⇑Sn	Sn	07 08 46.8	+1.1
	0.6nm,0.5s,baz=35,slow=23,SNR=4.6						
MK31				Lg	Lg	07 09 31.3	
	4.5nm,0.9s,baz=26,slow=26,SNR=3.6						
MAKZ	Makanchi	8.07	213	⇑Pn	Pn	07 07 15.7	-0.2
	4.2nm,1.2s						
MAKZ				⇓Sn	Sn	07 08 48.9	+1.1
	2.1nm,0.6s						
MAKZ				⇑Lg	Lg	07 09 32.4	
	4.9nm,0.9s						

*JMA **10** 07:05:44.8±0.4, 21°.76N×121°.22E, h37^{km}, M4.3*
*TAP **10** 07:05:46.8, 21°.97N×121°.25E, h2^{km}, ML3.7, D*
ISC 10 07:05:45.3±1.9**, 21°.84N**±0°.07×**121°.33E**±0°.03**, h3**^{km}±11^{km}**, n47, σ0s.72**/69**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAY	Lan-yu	0.28	46	i P	Pb	07 05 53.8	+0.7
	baz=75						
LAY				i S	Sb	07 05 59.3	+1.0
	baz=75						
TSEB	Hengchuen, Pin	0.40	278	i P	Pb	07 05 55.6	+0.5
	baz=260						
TSEB				eS	Sb	07 06 03.6	+1.9
	baz=260						
TWKBT	Hengchun	0.49	282	P	Pb	07 05 56.0	-0.6
	baz=266						
TWK1	Hengchun	0.50	282	i P	Pb	07 05 55.9	-0.8
	baz=266						
TWK1				i S	Sb	07 06 03.4	-1.0
	baz=266						
HEN	Hengchun	0.57	287	i P	Pb	07 05 57.6	-0.4
	baz=274						
SLIU	Shizi	0.62	307	i P	Pb	07 05 58.2	-0.6
	baz=300						
TAW	Tawu	0.65	322	eP	Pb	07 05 59.4	0.0
	baz=320						
EAST	Anshuo	0.70	320	P	Pb	07 05 59.9	-0.4
	baz=318						
LDUT	Ludao	0.84	9	i P	Pg	07 06 02.0	+0.7
	baz=15						
SSPT	Xinbi	0.95	312	eP	Pn	07 06 06.0	+0.4
	baz=309						
TWGBT	Beinan	1.00	347	P	Pg	07 06 04.0	-0.5
	baz=349						
TWGBT				S	Sg	07 06 17.3	-0.2
	baz=349						
MASBT	Mashibuluo	1.00	320	P	Pb	07 06 04.9	-0.4
	baz=318						
TWG	Pinlang	1.00	346	P	Pg	07 06 04.0	-0.5
	baz=349						
TWG				eS	Sg	07 06 17.0	-0.7
	baz=349						
TSMG	Majia	1.07	324	i P	Pn	07 06 07.0	-0.2
	baz=322						
LONT	Longtian	1.08	350	eP	Pg	07 06 05.2	-0.8
	baz=353						
SSD	Sandimen	1.11	324	eP	Pn	07 06 07.8	0.0
	baz=323						
EDH	Donghe	1.13	359	eP	Pg	07 06 06.2	-0.7
	baz=2.0						
EDH				S	Sg	07 06 22.2	+0.7
	baz=2.0						
CHKT	Chengkung	1.25	1	i P	Pg	07 06 09.0	-0.3
	baz=5.0						
CHKT				S	Sg	07 06 25.7	+0.1
	baz=5.0						
ECS	Chishang	1.25	355	eP	Pn	07 06 10.5	+0.7
	baz=358						
ECS				S	Sg	07 06 25.4	-0.2
	baz=358						
SLGT	Liugui	1.31	331	i P	Pb	07 06 10.8	+0.2
	baz=331						
SGST	Jiashian	1.42	331	P	Pg	07 06 12.4	0.0
	baz=331						
SGST				eS	Sn	07 06 33.4	+2.2
	baz=331						
STYH	Taoyuan	1.42	339	P	Pn	07 06 12.1	+0.1
	baz=339						
STYH				S	Sg	07 06 30.8	-0.1
	baz=339						
ECBN	Changbin	1.47	4	P	Pn	07 06 13.1	+0.3
	baz=7.0						
ECBN				S	Sb	07 06 32.5	0.0
	baz=7.0						
CHN1	Nanshi	1.53	331	i P	Pb	07 06 14.2	-0.1
	baz=331						
CHN1				eS	Sg	07 06 35.8	+1.3
	baz=331						
YULB	Yu-li	1.54	359	P	Pn	07 06 13.9	+0.2
	baz=1.0						
WTP	Ta-pu	1.55	335	i P	Pb	07 06 14.4	-0.3
	baz=335						
TPUB	Ta-pu	1.59	336	P	Pb	07 06 15.3	-0.1
	baz=336						
TPUB				eS	Sg	07 06 37.4	+1.0
	baz=336						
TWK	Hsinying	1.62	331	i P	Pb	07 06 15.4	-0.4
	baz=331						
EHY	Hungye	1.66	360	P	Pn	07 06 16.1	+0.7
	baz=2.0						
ICHU	Yijhu	1.80	327	P	Pn	07 06 17.6	+0.4
	baz=327						
ICHU				S	Sb	07 06 40.9	-0.9
	baz=327						
EGFH	Guangfu	1.82	3	i P	Pn	07 06 18.3	+0.8
	baz=5.0						
CHN5	Tsauling	1.85	341	eP	Pb	07 06 19.2	-0.6
	baz=341						
CHY	Chiayi	1.85	333	i P	Pn	07 06 18.8	+0.8
	baz=333						
SSLB	Suanglung	1.97	350	P	Pn	07 06 20.0	+0.4
	baz=351						
WDLH	Douliu	1.98	338	i P	Pn	07 06 20.4	+0.7
	baz=338						
SMLT	Sun Moon Lake	2.07	349	P	Pn	07 06 21.9	+0.8
	baz=350						
TYC	Yuchr	2.10	348	i P	Pn	07 06 22.5	+1.2
	baz=349						
CHGB	Renai	2.21	356	eP	Pn	07 06 22.8	-0.3
	baz=357						
CHGB				eS	Sn	07 06 50.5	-0.7
	baz=357						
YOJ	Yonaguni jima	3.03	30	P	Pn	07 06 34.5	+0.3
YOJ				eS	Sn	07 07 10.4	-0.7
HATJ	Hateruma jima	3.17	45	P	Pn	07 06 36.1	0.0
HATJ				eS	Sn	07 07 14.5	0.0
IRIF	Iriomote-Funau	3.32	41	P	Pn	07 06 38.4	+0.2
IRIF				eS	Sn	07 07 18.1	-0.1
JKRS	Kuro-shima	3.43	45	P	Pn	07 06 40.1	+0.4
JKRS				eS	Sn	07 07 20.2	-0.7
JIJ	Ishigaki jima	3.61	45	P	Pn	07 06 41.7	-0.4
JIJ				eS	Sn	07 07 23.3	-1.9
JISG	Ishigakijimahi	3.87	45	P	Pn	07 06 45.4	-0.3
JISG				eS	Sn	07 07 30.6	-1.1
JTJ	Tarama	4.17	47	P	Pn	07 06 50.1	+0.3
JTJ				eS	Sn	07 07 38.5	-0.6
JIRB	Irabujima	4.62	49	eS	Sn	07 07 50.5	+0.4
JMJ2	Miyako jima3	4.67	51	eS	Sn	07 07 51.5	0.0

NEIC 10 07:11:48.3±1.0**, 36°.421N**±0°.005×**96°.93W**±0°.02**, h5**^{km}±2^{km}**, mb_Lg2.7**/7**, Error ellipse: s-maj=3.0km s-min=2.5km az=76.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QUOK	Quay	0.31	144	Pg	Pg	07 11 54.7	+0.4
QUOK				Sg	Sg	07 11 58.8	+0.5
BLOK	Blackwell	0.41	326	Pg	Pg	07 11 56.5	+0.2
BLOK				Sg	Sg	07 12 00.4	-1.2
OK031	S. Brethren Rd	0.47	171	Pg	Pg	07 11 57.8	+0.4
OK031				Sg	Sg	07 12 04.1	+0.5
OK030	Cody Creek RV	0.51	167		Pg	07 11 58.4	+0.3
OK030				Sg	Sg	07 12 04.5	-0.1
T35A	Sooner Cattle	0.60	34		Pg	07 11 59.8	0.0
T35A				Sg	Sg	07 12 06.9	-0.7
KAN13	South Haven SW	0.74	323	Pg	Pg	07 12 02.4	-0.1
KAN13				Sg	Sg	07 12 12.5	+0.4
OK029	Liberty Lake	0.76	215		Pg	07 12 03.0	+0.2
OK029				Sg	Sg	07 12 12.1	-0.5
CROK	Carrier	0.85	276		Pg	07 12 04.7	0.0
CROK				Sg	Sg	07 12 15.6	-0.2
GC02	Grant County #	0.86	300		Pg	07 12 04.8	-0.1
GC02				Sg	Sg	07 12 15.8	-0.3
OK025	Westminster Rd	0.90	202	Pg	Pg	07 12 05.8	+0.2
OK025					Sg	07 12 17.2	-0.1
KAN09	Caldwell North	0.90	322	Pg	Pg	07 12 05.5	-0.1
KAN09				Sg	Sb	07 12 18.2	-0.6
KAN17	Caldwell West	0.92	313	Pg	Pg	07 12 05.7	-0.2
KAN17				Sg	Sg	07 12 18.2	+0.4
BCOK	Bluff Creek, N	0.94	216	Pg	Pg	07 12 06.3	-0.1
BCOK				Sg	Sg	07 12 17.8	-0.8
KS20	Mayfield South	0.95	328	Pg	Pg	07 12 06.3	-0.3
KS20				Sg	Sb	07 12 19.6	-0.6
KAN01	Argonia South	0.99	318	Pg	Pg	07 12 07.0	-0.3
KAN01				Sg	Sg	07 12 20.7	+0.5
KAN14	Manchester OK	0.99	303	Pg	Pg	07 12 07.2	-0.1
KAN14				Sg	Sg	07 12 19.7	-0.4
KAN05	Bluff City Nor	1.02	312	Pg	Pg	07 12 07.5	-0.4
KAN05				Sg	Sg	07 12 21.3	+0.1
TUL1	Leonard	1.05	119		Pg	07 12 08.0	-0.5
TUL1				Sg	Sg	07 12 21.1	-1.1
OKCFA	Oklahoma City	1.09	203	Pg	Pg	07 12 08.9	-0.3
OKCFA				Sg	Sg	07 12 23.6	+0.2
OK032	Salt Plains WL	1.10	291	Pg	Pg	07 12 09.1	-0.3
OK032				Sg	Sg	07 12 23.6	-0.1
KAN06	Argonia West S	1.11	318	Pg	Pg	07 12 09.4	-0.3
KAN06				Sg	Sg	07 12 23.7	-0.4
KAN08	Anthony NE Sta	1.16	314	Pg	Pg	07 12 10.1	-0.5
KAN08					Sg	07 12 25.9	+0.2
KAN16	Harper SW Stat	1.22	312	Pg	Pg	07 12 11.1	-0.6
KAN16				Sg	Sg	07 12 27.6	+0.2
FNO	Franklin	1.22	198	Pg	Pg	07 12 11.1	-0.7
FNO				Sg	Sb	07 12 27.9	-0.2
KAN12	Harper NE Stat	1.23	316		Pg	07 12 11.2	-0.6
U32A	Winter Ranch,	1.67	269	Pn	Pn	07 12 18.8	+0.5
X34A	Smith Ranch, M	1.96	202	Pn	Pn	07 12 23.3	+1.1
U38A	Gravette	2.05	89	Pn	Pn	07 12 24.6	+1.2
X37A	Clayton	2.23	145		Pn	07 12 25.9	0.0
WMOK	Wichita Mounta	2.26	223	Pn	Pn	07 12 27.4	+1.0
WMOK	Wichita Mounta	2.26	223	IAmb_Lg		07 13 02.8	
	comp=Z,12nm,1.3s						
HHAR	Hobbs	2.42	92		Pn	07 12 30.1	+1.6
LOOK	Love County	2.43	185	Pn	Pn	07 12 27.7	-1.1
KSU1	Kansas State U	2.69	5	Pn	Pn	07 12 32.3	+0.1
W39A	Magazine	2.83	115	Pn	Pn	07 12 33.4	-0.9
S39A	Bolivar	3.15	65		Pn	07 12 37.5	-1.1
U40A	Yellville	3.29	90		Pn	07 12 40.3	-0.3
U40A				IAmb_Lg		07 13 32.5	
	comp=Z,6.4nm,0.8s						
MIAR	Mount Ida	3.31	123	Pn	Pn	07 12 41.9	+1.1
FCAR	Ozark Folk Cen	3.92	96		Pn	07 12 48.6	-0.6
WHAR	Wooly Hollow	3.93	105	Pn	Pn	07 12 49.8	+0.4
R40A	Maddies Statio	4.16	62	Pn	Pn	07 12 54.5	+2.1
LCAR	Lake Charles	4.68	93	Pn	Pn	07 13 00.2	+0.6
T42A	Van Buren	4.73	81	Pn	Pn	07 13 00.0	-0.3
CCM	Cathedral Cave	4.82	69	Pn	Pn	07 13 01.3	-0.3
HBAR	Harrisburg	5.16	98	Pn	Pn	07 13 06.2	0.0
PBMO	Poplar Bluff	5.24	84	Pn	Pn	07 13 07.5	+0.2
L34A	Svendsen Farm,	5.55	4	IAmb_Lg		07 14 54.6	
	comp=Z,9.7nm,0.8s						
HALT	Halls	6.16	93	IAmb_Lg		07 15 21.1	
	comp=Z,29nm,0.8s						
GLAT	Glass	6.17	89	IAmb_Lg		07 15 03.7	
	comp=Z,54nm,0.8s						

*KRNET **10** 07:51:22.9±0.1, 40°.98N×69°.83E, mb2.7*
*SOME **10** 07:51:22.6, 41°.02N×69°.88E, h5^{km}*
*NNC **10** 07:51:26.8±2.2, 41°.07N×69°.94E, h0^{km}, mb3.7, mpv3.3, Error ellipse: s-maj=14.8km s-min=9.4km az=32.0*
ISC 10 07:51:22.7±1.5**, 41°.02N**±0°.03×**69°.96E**±0°.05**, h10**^{km}±11^{km}**, n17, σ1s.27**/30**, 8C-2D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRKS	Terek-Say	1.03	60	⇑i P	Pn	07 51 43.6	+0.2

	baz=64						
TRKS				⇑iS	Sn	07 51 59.0	+1.1
	baz=64						
IUG	**Iuzhnay**	1.13	3	eP	Pn	07 51 45.3	+0.6
	328nm,0.2s						
IUG				eS	Sn	07 52 01.8	+1.5
	54nm,0.5s						
IUG	**Iuzhnay**	1.13	3	P	Pn	07 51 47.3	+2.6
	328nm,0.2s						
IUG				S	Sn	07 52 01.8	+1.5
	54nm,0.5s						
BTK	**Batken**	1.16	145	⇓iP	Pg	07 51 45.5	+0.5
	baz=40						
BTK				⇓iS	Sn	07 52 01.2	+0.1
	baz=40						
BRLS	**Borolday**	2.01	357	eP	Pn	07 51 56.2	-0.6
	4.2nm,0.4s						
BRLS				eS	Sn	07 52 20.7	-1.3
	22nm,0.3s						
BRLS	**Borolday**	2.01	357	P	Pb	07 51 58.9	-0.6
	4.2nm,0.4s						
BRLS				S	Sn	07 52 21.4	-0.7
	22nm,0.3s						
GAR	**Garm**	2.03	172	⇑iP	Pb	07 51 59.0	-0.8
	baz=69						
GAR				⇑iS	Sb	07 52 25.0	-0.2
	baz=69						
KK31	**Karatay Array**	2.12	11	⇑P	Pg	07 52 02.6	-0.9
	0.8nm,0.3s,baz=198,slow=16,SNR=14						
KK31				⇑S	Sg	07 52 31.7	+0.7
	1.8nm,0.3s,baz=193,slow=28,SNR=9.8						
MNAS	**Manas**	2.41	52	⇑eP	Pb	07 52 06.1	-0.1
	baz=52						
MNAS				⇑iS	Sb	07 52 36.7	+0.7
	baz=52						
MRKS	**Merke**	2.99	54	eP	Pg	07 52 20.0	0.0
	4.0nm,0.3s						
MRKS				eS	Sg	07 53 01.2	+2.5
	4.8nm,0.4s						
MRKS	**Merke**	2.99	54	Pg	Pg	07 52 20.4	+0.4
	4.0nm,0.3s						
MRKS				Lg	Lg	07 52 59.0	
	4.8nm,0.4s						
AML	**Almayashu**	3.02	67	eP	Pb	07 52 14.5	-2.3
	baz=67						
AML				i S	Sb	07 52 52.7	-1.1
	baz=67						
KST	**Kastek**	4.91	64	eP	Pg	07 52 55.0	-1.8
	4.1nm,0.5s						
KST				eS	Sg	07 54 01.1	+0.8
	3.4nm,0.5s						
KST	**Kastek**	4.91	64	Pg	Pg	07 52 56.0	-0.8
	4.1nm,0.5s						
KST				Lg	Lg	07 53 59.6	
	3.4nm,0.5s						
KRBS	**Karabastau**	5.01	56	Pg	Pg	07 52 57.3	-1.4
	0.8nm,0.3s						
KRBS				Lg	Lg	07 54 02.3	
	1.6nm,0.5s						
BTLS	**Baital**	5.01	35	eP	Pg	07 52 57.4	-1.4
	1.9nm,0.4s						
BTLS				eS	Sg	07 54 05.1	+1.4
	1.8nm,0.4s						
BTLS	**Baital**	5.01	35	Pg	Pg	07 52 58.0	-0.8
	1.9nm,0.4s						
BTLS				Lg	Lg	07 54 03.2	
	1.8nm,0.4s						

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*IDC **10** 07:55:57.1±3.1, 5°.85N×125°.54E, h148^{km}±54^{km}, mb3.2/3,*
mb1 3.5/3, mb1mx3.0/45, mbtmp3.7/3, Error ellipse:
s-maj=237.3km s-min=23.2km az=67.0
*MAN **10** 07:56:10.8, 6°.47N×125°.69E, h1^{km}, mb4.5, ML3.4, MS3.2*
ISC 10 07:55:57.3±1.3, **5°.9N**±0°.1×**125°.8E**±0°.3, **h150**^{km}**, n7,**
σ0^{s}.72/9, **mb3.5**/3, **1C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	**General Santos**	0.90	282	⇓iP	Pn	07 56 21.8	+0.4
DAV	**Davao City (W)**	1.19	348	P	Pn	07 56 24.1	+0.3
	57nm,0.3s,baz=238,slow=13,SNR=1.6						
DAV				S	Sn	07 56 44.1	-0.1
	92nm,0.3s,baz=132,slow=23,SNR=12						
DMPH	**Davao City--Mi**	1.22	345	⇓eP	Pn	07 56 24.3	+0.2
DMPH				eS	Sn	07 56 45.7	+1.1
BUKP	**Musuan**	2.11	339	⇑eP	Pn	07 56 34.1	+0.2
WRA	**Warramunga Arr**	27.01	162	P	P	08 01 25.0	-0.4
	0.2nm,0.3s,baz=340,slow=10,SNR=2.5						
ASAR	**Alice Springs**	30.42	165	P	P	08 01 56.3	+0.5
	0.5nm,0.4s,baz=341,slow=7.2,SNR=16						
MKAR	**Makanchi Array**	55.28	325	P	P	08 05 14.1	-1.1
	0.3nm,0.4s,baz=124,slow=8.4,SNR=3.2						

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*DDA **10** 07:59:40.2, 37°.26N×38°.61E, h10^{km}±3^{km}, MW3.8*
*ISK **10** 07:59:40.4, 37°.29N×38°.64E, h8^{km}, ML3.7/22*
ISC 10 07:59:40.6±1.0, **37°.27N**±0°.03×**38°.63E**±0°.02, **h11**^{km}±8^{km},
n43, σ0^{s}.90/61, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URFA	**Urfa**	0.23	41	PG	Pg	07 59 45.1	-0.3
URFA				SG	Sg	07 59 48.4	-0.3
SANL	**SANLIURFA_Merk**	0.30	109	i P	Pg	07 59 46.9	+0.2
SANL				i S	Sg	07 59 51.5	+0.7
GZT	**Gaziantep**	0.86	276	i P	Pg	07 59 56.9	-0.2
GZT				i S	Sn	08 00 10.4	-1.1
MALT	**Malatya**	1.06	351	PG	Pg	08 00 00.4	-0.5
MALT				SG	Sn	08 00 15.4	-0.9
GAZ	**Gaziantep**	1.14	266	PN	Pg	08 00 01.1	-1.4
AKCD	**Akcadag**	1.17	331	i P	Pg	08 00 02.1	-1.0
AKCD				i S	Sn	08 00 18.9	-0.3
KHMN	**Narli-Kahraman**	1.18	276	PN	Pn	08 00 03.4	+0.2
SVRC	**Sivrice-ELAZID**	1.23	25	PN	Pb	08 00 03.8	-0.2
ELZG	**Elazig**	1.26	13	i P	Pb	08 00 04.3	-0.3
ELZG				i S	Sn	08 00 21.6	+0.1
KAHM	**Kahramanmaras,**	1.33	281	i P	Pn	08 00 05.1	-0.2
KAHM				i S	Sg	08 00 24.0	+0.5
KUZU	**Kuzuini**	1.34	249	i P	Pg	08 00 06.2	-0.1
KUZU				i S	Sg	08 00 24.2	+0.4
HCB	**Kahramanmara**	1.38	274	i P	Pg	08 00 06.6	-0.4
HCB				i S	Sg	08 00 25.6	+0.7
DYBB	**Diyarbakir**	1.38	60	PN	Pb	08 00 06.4	-0.1
KMRS	**Kahramanmaras**	1.40	280	PN	Pg	08 00 06.9	-0.6
MAZI	**Mazidag**	1.46	82	PN	Pb	08 00 07.6	-0.3
KAMA	**Osmaniye**	1.57	268	i P	Pn	08 00 07.8	-0.7
KAMA				i S	Sg	08 00 30.7	-0.4
DARE	**Darende-Malaty**	1.59	325	PN	Pb	08 00 09.2	-0.9
ELBS	**KAHRAMANMARAS**	1.59	312	i P	Pb	08 00 09.6	-0.5
ELBS				i S	Sg	08 00 32.0	+0.3
HEKM	**Malatya_Hekimh**	1.69	342	i P	Pn	08 00 10.6	+0.2
HEKM				i S	Sg	08 00 37.1	+1.9
KOVA	**Elazig, Kovanc**	1.71	33	i P	Pn	08 00 09.8	-0.7
KOVA				i S	Sg	08 00 34.7	-1.0
MARD	**Mardin**	1.71	88	i P	Pn	08 00 10.4	-0.2
MARD				i S	Sg	08 00 35.6	-0.1
CUGUR	**Gurin_SVAS**	1.81	324	i P	Pb	08 00 13.3	-0.6
CUGUR				i S	Sg	08 00 40.5	+1.8
ARPR	**Arapgir-MALATY**	1.84	353	PN	Pn	08 00 12.7	+0.4
TAHT	**Tahtakopru-Hat**	2.16	246	PN	Pb	08 00 18.2	-1.5
ILIC	**ilic-Erzincan**	2.18	359	PN	Pn	08 00 17.9	+0.9
BTMN	**Batman**	2.19	73	i P	Pn	08 00 16.9	-0.1
BTMN				i S	Sb	08 00 48.0	+0.6
MIDY	**Mardin/Midyat-**	2.21	86	i P	Pn	08 00 17.3	0.0
MIDY				i S	Sb	08 00 48.5	+0.5
SVAN	**Silvan-Diyarba**	2.22	66	i P	Pn	08 00 16.2	-1.2
SVAN				i S	Sb	08 00 48.4	+0.1
SVAN	**Silvan-Diyarba**	2.22	66	PN	Pn	08 00 17.6	+0.2
KOZT	**Kozan**	2.25	276	PN	Pn	08 00 19.0	+1.2
CEYT	**Ceyhan**	2.32	264	PN	Pn	08 00 20.2	+1.4
BNGB	**Bingl**	2.36	43	PN	Pn	08 00 20.3	+0.9
YAYL	**Yayladag**	2.38	240	PN	Pn	08 00 20.8	+1.1
YEDI	**Yedisu-Bingol**	2.64	34	PN	Pn	08 00 24.3	+1.0
KRTS	**Karatas**	2.70	256	PN	Pn	08 00 25.5	+1.5
BNN	**Bunyan**	2.71	307	PN	Pn	08 00 25.6	+1.3
KARA	**Karaisali**	2.85	271	PN	Pn	08 00 27.7	+1.6
CMRD	**Camardi-Nigde**	2.92	279	PN	Pn	08 00 28.5	+1.3
SVSK	**Karacayir**	2.94	335	PN	Pn	08 00 27.9	+0.6
GURO	**Guroymak-BITLI**	2.98	63	PN	Pn	08 00 29.1	+1.1
SIRT	**Sirnak**	3.04	84	PN	Pn	08 00 29.8	+1.0
MERS	**Mersin**	3.31	264	PN	Pn	08 00 34.2	+1.7
YOZ	**Yozgat**	3.52	313	PN	Pn	08 00 36.9	+1.5

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*DDA **10** 08:05:41.7, 37°.25N×38°.61E, h7^{km}±4^{km}, ML2.3*
*ISK **10** 08:05:41.5, 37°.26N×38°.65E, h5^{km}, ML2.5/6*
ISC 10 08:05:42.0±1.2, **37°.28N**±0°.05×**38°.62E**±0°.03, **h6**^{km}±10^{km},
n12, σ0^{s}.35/21, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URFA	**Urfa**	0.23	44	PG	Pg	08 05 46.4	-0.2
URFA				SG	Sg	08 05 49.8	+0.1
SANL	**SANLIURFA_Merk**	0.31	109	i P	Pg	08 05 48.2	+0.1
SANL				i S	Sg	08 05 52.8	+0.5
SANL				IAML		08 05 53.0	
	comp=N,553nm,0.3s						
GZT	**Gaziantep**	0.85	276	i P	Pg	08 05 58.4	+0.1
GZT				i S	Sb	08 06 11.4	+0.6
GZT				IAML		08 06 16.0	
	comp=N,84nm,0.2s						
MALT	**Malatya**	1.05	352	PG	Pb	08 06 02.5	-0.1
MALT				SG	Sb	08 06 17.4	+0.8
AKCD	**Akcadag**	1.16	332	i P	Pg	08 06 04.2	-0.1
AKCD				i S	Sb	08 06 20.3	+0.4
KHMN	**Narli-Kahraman**	1.17	276	PN	Pn	08 06 04.7	-0.3
KHMN				SN	Sn	08 06 21.6	+0.3
SVRC	**Sivrice-ELAZID**	1.23	26	PN	Pg	08 06 05.4	-0.2
SVRC				SN	Sn	08 06 22.9	0.0
ELZG	**Elazig**	1.25	13	i P	Pn	08 06 06.3	0.0
ELZG				i S	Sn	08 06 23.3	-0.2
ELZG				IAML		08 06 25.0	
	comp=E,75nm,0.3s						
DYBB	**Diyarbakir**	1.38	60	PN	Pb	08 06 08.1	-0.2
KMRS	**Kahramanmaras**	1.39	280	PN	Pg	08 06 08.5	-0.2
MAZI	**Mazidag**	1.47	82	PN	Pn	08 06 08.8	-0.3
KAMA	**Osmaniye**	1.56	267	i P	Pg	08 06 11.6	-0.4
KAMA				i S	Sn	08 06 30.7	-0.3

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*IDC **10** 08:07:45.2±1.2, 41°.79N×133°.09E, h487^{km}±14^{km}, mb3.0/6,*
mb1 3.1/10, mb1mx2.8/44, mbtmp3.9/10, Error ellipse:
s-maj=20.9km s-min=19.8km az=104.0
ISC 10 08:07:45.6±1.0, **41°.8N**±0°.1×**133°.1E**±0°.1, **h500**^{km}**, n10,**
σ0^{s}.92/10, **mb3.5**/6, **Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
USRK	**Ussuriysk Ar.**	2.54	341	P	P	08 08 52.0	-1.5
	baz=212,slow=9.6,SNR=37						
KSRS	**Korea Array**	5.92	225	P	P	08 09 20.7	-0.6
	0.7nm,0.3s,baz=41,slow=9.6,SNR=10						
ASAJ	**Asahikawa**	7.31	68	P	P	08 09 34.0	-0.9
	1.5nm,0.3s,baz=229,slow=11,SNR=4.3						
KLR	**Kul'dur**	7.49	353	P	P	08 09 35.9	-0.6
	2.7nm,0.3s,baz=175,slow=8.4,SNR=56						
MKAR	**Makanchi Array**	36.21	296	P	P	08 14 04.9	-0.5
	0.8nm,0.7s,baz=82,slow=10,SNR=6.1						
KURBB	**Kurchatov Arra**	38.02	303	P	P	08 14 20.3	+0.1
	1.6nm,0.5s,baz=82,slow=8.5,SNR=10						
ILAR	**Eielson Array**	49.02	34	P	P	08 15 46.3	+0.7
	0.2nm,0.6s,baz=290,slow=9.9,SNR=4.0						
ARCES	**ARCESS Array B**	57.18	336	P	P	08 16 44.7	+1.0
	6.9nm,1.0s,baz=62,slow=9.7,SNR=2.0						
FINES	**FINESS Array B**	61.51	328	P	P	08 17 13.5	+0.7
	2.5nm,0.9s,baz=112,slow=6.3,SNR=1.8						
ASAR	**Alice Springs**	65.14	179	P	P	08 17 37.2	+0.5
	0.2nm,0.5s,baz=358,slow=6.8,SNR=4.3						

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*IDC **10** 08:20:23.6±2.2, 6°.11S×129°.95E, h0^{km}, mb3.9/1,*
mb1 4.2/4, mb1mx3.6/33, mbtmp4.0/4, ML4.2/3, MS3.7/2,
Ms1 3.7/2, ms1mx2.5/40, Error ellipse: s-maj=94.8km
s-min=27.5km az=76.0
ISC 10 08:20:25.4±1.0, **6°.31S**±0°.08×**130°.1E**±0°.2, **h10**^{km}**, n11,**
σ4^{s}.70/7, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	4.00	33	P	Pb	08 21 34.8	-1.2
DRS	**Darwin Rock St**	6.14	173	P	Pn	08 22 03.4	+7.2
	18nm,0.5s						
MTN	**Manton Dam**	6.57	171	P	Pn	08 22 09.0	+6.7
KDU	**Kakadu**	6.76	160	P	Pn	08 22 10.8	+6.0
BATI	**Baumata**	7.44	238	LR	LR	08 24 53.2	
	comp=Z,108nm,18.8s,baz=339,slow=36						
KNRA	**Kununurra**	9.40	188	P	Pn	08 22 45.8	+4.7
	26nm,0.6s						
FITZ	**Fitzroy Crossi**	12.49	200	Pn	Pn	08 23 25.9	+2.4
	1.2nm,0.3s,baz=15,slow=12,SNR=8.9						
FITZ				Sn	Sn	08 25 37.2	-5.6
	baz=342,slow=13						
WRA	**Warramunga Arr**	14.17	163	Pn	Pn	08 23 48.2	+1.8
	1.2nm,0.3s,baz=344,slow=13,SNR=30						
WRA				Sn	Sn	08 26 15.6	-8.1
	1.7nm,0.3s,baz=334,slow=23,SNR=11						
ASAR	**Alice Springs**	17.64	168	P	P	08 24 33.4	+0.9
	0.6nm,0.3s,baz=340,slow=8.6,SNR=34						
ASAR				S	Sn	08 27 41.8	-6.5
	0.4nm,0.3s,baz=358,slow=28,SNR=6.5						
MKAR	**Makanchi Array**	67.70	327	P	P	08 31 21.4	-1.7
	0.6nm,0.4s,baz=125,slow=7.6,SNR=8.3						
KMBO	**Kilima Mbogo**	92.70	269	LR	LR	09 10 27.5	
	comp=Z,178nm,21.6s,baz=318,slow=32						

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*TUL **10** 08:23:55.8±1.3, 36°.75N±0°.01×98°.08W±0°.01, h6^{km}±6^{km},*
ML3.5, mb_Lg3.2/79(NEIC), Error ellipse: s-maj=2.1km
s-min=1.3km az=145.0
*NEIC **10** 08:23:56.4±1.4, 36°.74N±0°.01×98°.04W±0°.03, h7^{km}±4^{km},*
Error ellipse: s-maj=3.3km s-min=1.8km az=81.0
*ANF **10** 08:23:57.4±1.3, 36°.79N×98°.01W, h18^{km}±9^{km}, ML4.1/9,*
Error ellipse: s-maj=2.7km s-min=2.2km az=124.0
ISC 10 08:23:56.2±0.9, **36°.75N**±0°.02×**98°.04W**±0°.02, **h7**^{km}±7^{km},
n155, σ0^{s}.89/181, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK032	**Salt Plains WL**	0.15	293		Pg	08 23 58.6	-0.6
OK032				Sg	Sg	08 24 00.6	-0.7
GC02	**Grant County #**	0.18	54	Pg	Pg	08 24 00.2	+0.3
GC02				Sg	Sg	08 24 03.5	+1.1
KAN14	**Manchester OK**	0.22	17		Pg	08 24 00.6	0.0
KAN14				Sg	Sg	08 24 04.0	+0.4
CROK	**Carrier**	0.24	169	Pg	Pg	08 24 01.1	+0.1
CROK				Sg	Sg	08 24 05.0	+0.7
KAN17	**Caldwell West**	0.37	37	Pg	Pg	08 24 03.6	+0.1
KAN17				Sg	Sg	08 24 09.0	+0.6
KAN10	**Anthony SW Sta**	0.38	354	Pg	Pg	08 24 03.3	-0.3
KAN10				Sg	Sg	08 24 08.8	+0.1
KAN05	**Bluff City Nor**	0.39	21		Pg	08 24 03.7	0.0
KAN05				Sg	Sg	08 24 09.1	+0.3
KAN01	**Argonia South**	0.47	29		Pg	08 24 05.2	0.0
KAN01				Sg	Sg	08 24 11.7	+0.4
KAN16	**Harper SW Stat**	0.48	358	Pg	Pg	08 24 05.2	-0.3
KAN16				Sg	Sg	08 24 12.0	+0.2
KAN08	**Anthony NE Sta**	0.48	7		Pg	08 24 05.4	-0.1
KAN08				Sg	Sg	08 24 12.1	+0.2
KAN09	**Caldwell North**	0.52	41	Pg	Pg	08 24 06.2	0.0
KAN09				Sg	Sg	08 24 13.4	+0.4
KAN06	**Argonia West S**	0.52	16		Pg	08 24 06.2	-0.1
KAN06				Sg	Sg	08 24 13.4	+0.2
KAN13	**South Haven SW**	0.53	59		Pg	08 24 06.4	+0.1
KAN13				Sg	Sg	08 24 13.9	+0.7
KAN12	**Harper NE Stat**	0.55	4	Pg	Pg	08 24 06.6	-0.2
KAN12				Sg	Sg	08 24 14.3	+0.2
KS20	**Mayfield South**	0.62	39		Pg	08 24 08.1	-0.1
KS20				Sg	Sg	08 24 16.6	+0.3
BLOK	**Blackwell**	0.67	88	Pg	Pg	08 24 09.1	+0.1
BLOK				Sg	Sg	08 24 18.6	+0.9
U32A	**Winter Ranch,**	0.85	245		Pg	08 24 11.4	-1.1
U32A	**Winter Ranch,**	0.85	245	P	Pg	08 24 11.5	-1.1
	baz=63,SNR=42						
U32A				S	Sg	08 24 23.3	-0.4
	baz=63						
OK029	**Liberty Lake**	1.06	153		Pg	08 24 15.9	-0.6
OK029				Sg	Sg	08 24 29.8	-0.4
BCOK	**Bluff Creek, N**	1.14	162	Pg	Pg	08 24 17.1	-1.0
BCOK				Sg	Sg	08 24 32.8	-0.1
QUOK	**Quay**	1.22	118		Pb	08 24 19.1	-0.6
QUOK				Sg	Sg	08 24 35.2	-0.2
T35A	**Sooner Cattle**	1.24	82	Pn	Pb	08 24 19.5	-0.5
T35A				Sg	Sg	08 24 35.9	-0.2
T35B	**Sooner Cattle**	1.24	82	P	Pb	08 24 19.4	-0.5
	baz=263						
T35B				S	Sg	08 24 35.9	-0.2
	baz=263						
OK031	**S. Brethren Rd**	1.25	129		Pn	08 24 19.4	-0.8
OK031				Sg	Sb	08 24 36.6	0.0
OK009	**Oakdale Elemen**	1.27	156		Pn	08 24 19.8	-0.5
OK025	**Westminster Rd**	1.29	154		Pn	08 24 20.1	-0.6
OK030	**Cody Creek RV**	1.30	128		Pn	08 24 20.4	-0.5
OK001	**Jones High Sch**	1.33	152	Pn	Pn	08 24 21.0	-0.3
OKCFA	**Oklahoma City**	1.41	160		Pn	08 24 21.7	-0.6
OKCFA	**Oklahoma City**	1.41	160	P	Pn	08 24 21.8	-0.6
	baz=339,SNR=20						
OKCFA				S	Sb	08 24 41.4	+0.3
	baz=339						
OKCSW	**OKLAHOMA CITY**	1.42	160		Pn	08 24 22.0	-0.6
FNO	**Franklin**	1.57	160	Pn	Pn	08 24 24.7	0.0
R32A	**Long Quarter,**	1.76	343		Pn	08 24 27.6	+0.4
R32A	**Long Quarter,**	1.76	343	P	Pn	08 24 27.6	+0.4
	baz=163,SNR=118						
R32A				S	Sb	08 24 50.8	-0.3
	baz=163						
TUL1	**Leonard**	2.00	114	P	Pn	08 24 31.7	+1.2
	baz=295						
TUL1				Sb	Sb	08 24 59.3	+1.2
	baz=295						
TUL1	**Leonard**	2.00	114	Pn	Pn	08 24 31.3	+0.8
TUL1	**Leonard**	2.00	114	P	Pn	08 24 30.7	+0.2
	baz=295,SNR=122						
TUL1				S	Sb	08 24 59.2	+1.1
	baz=295						
WMOK	**Wichita Mounta**	2.09	197	P	Pn	08 24 32.3	+0.5
	baz=16						
WMOK				S	Sn	08 24 59.7	+1.6
	baz=16						
WMOK	**Wichita Mounta**	2.09	197		Pn	08 24 32.1	+0.3
WMOK				IAmb_Lg		08 25 05.7	
	comp=Z,78nm,0.9s						
WMOK	**Wichita Mounta**	2.09	197	P	Pn	08 24 31.7	-0.1
	baz=16,SNR=191						
WMOK				S	Sn	08 24 59.7	+1.6
	baz=16						
X34A	**Smith Ranch, M**	2.15	175	Pn	Pn	08 24 33.5	+1.0
X34A				IAmb_Lg		08 25 04.0	
	comp=Z,68nm,1.0s						
CBKS	**Cedar Bluff**	2.46	327	P	Pn	08 24 37.1	+0.2
	baz=147						
CBKS				Sb	Sb	08 25 11.9	+0.4
	baz=147						
CBKS	**Cedar Bluff**	2.46	327		Pn	08 24 37.0	+0.2
CBKS	**Cedar Bluff**	2.46	327	P	Pn	08 24 37.1	+0.2
	baz=147,SNR=27						
KSU1	**Kansas State U**	2.61	25	Sb	Sb	08 25 16.4	+0.7
	baz=207						
KSU1	**Kansas State U**	2.61	25		Pn	08 24 38.9	0.0
LOOK	**Love County**	2.84	165	Pn	Pn	08 24 41.8	-0.1
U38A	**Gravette**	2.96	95	Pn	Pn	08 24 44.7	+1.0
U38A	**Gravette**	2.96	95	P	Pn	08 24 44.3	+0.6
	baz=277,SNR=20						
X37A	**Clayton**	3.06	134		Pn	08 24 46.5	+1.5
X37A				IAmb_Lg		08 25 37.2	
	comp=Z,63nm,0.8s						
X37A	**Clayton**	3.06	134	P	Pn	08 24 45.2	+0.2
	baz=315,SNR=31						
X37A				S	Sn	08 25 23.6	+1.7
	baz=315						
HHAR	**Hobbs**	3.34	97		Pn	08 24 49.2	+0.3
HHAR	**Hobbs**	3.34	97	P	Pn	08 24 49.3	+0.4
	baz=279						
Z35A	**Perchaven, San**	3.47	169		Pn	08 24 50.9	+0.3
Z35A	**Perchaven, San**	3.47	169	P	Pn	08 24 51.0	+0.3
	baz=349,SNR=26						
AMTX	**Amarillo**	3.49	239	Pb	Pb	08 24 58.7	+0.3
	baz=56						
AMTX				Sb	Sb	08 25 44.7	+3.6
	baz=56						
AMTX	**Amarillo**	3.49	239		Pn	08 24 51.5	+0.5
AMTX				IAmb_Lg		08 25 46.8	
	comp=Z,51nm,0.9s						
W39A	**Magazine**	3.79	113		Pn	08 24 55.6	+0.7
W39A				IAmb_Lg		08 26 07.0	
	comp=Z,71nm,0.8s						
W39A	**Magazine**	3.79	113	P	Pn	08 24 55.2	+0.2
	baz=295,SNR=15						
S39A	**Bolivar**	3.88	75		Pn	08 24 57.0	+0.7
S39A	**Bolivar**	3.88	75	P	Pn	08 24 56.8	+0.4
	baz=258,SNR=32						
N33A	**J Bar K, Exete**	4.01	6		Pn	08 24 56.2	-2.0
N33A				IAmb_Lg		08 26 13.9	
	comp=Z,45nm,0.8s						
U40A	**Yellville**	4.20	94	S	Sn	08 25 49.4	-0.6
	baz=277						
U40A	**Yellville**	4.20	94		Pn	08 25 01.1	+0.3
U40A				IAmb_Lg		08 26 07.9	
	comp=Z,46nm,0.7s						
U40A	**Yellville**	4.20	94	P	Pn	08 25 01.0	+0.3
	baz=277,SNR=32						
U40A				P	Pn	08 25 01.0	+0.3
	baz=277,SNR=32						
MIAR	**Mount Ida**	4.25	120		Pn	08 25 02.0	+0.6
MIAR				IAmb_Lg		08 26 21.4	
	comp=Z,46nm,0.8s						
KSCO	**Kaye Shedlock'**	4.27	303		Pn	08 25 03.0	+1.2
Z38A	**Mt. Pleasant**	4.29	143		Pn	08 25 02.6	+0.7
ABTX	**Abilene, Hawle**	4.32	198		Pn	08 25 03.1	+0.7
N35A	**Tabor**	4.52	24		Pn	08 25 06.0	+0.9
P38A	**Dawn**	4.57	50		Pn	08 25 07.2	+1.4
P38A				IAmb_Lg		08 26 33.0	
	comp=Z,39nm,0.7s						
P38A	**Dawn**	4.57	50	P	Pn	08 25 06.4	+0.6
	baz=233,SNR=18						
MGMO	**Mountain Grove**	4.64	83		Pn	08 25 07.8	+0.9
MGMO				IAmb_Lg		08 26 28.4	
	comp=Z,31nm,0.9s						
BGNE	**Belgrade**	4.66	359	P	Pn	08 25 06.6	-0.5
	baz=179						
BGNE	**Belgrade**	4.66	359		Pn	08 25 07.0	-0.1
BGNE				IAmb_Lg		08 26 33.6	
	comp=Z,40nm,0.8s						
MSTX	**Muleshoe**	4.75	236	Sb	Sb	08 26 22.4	+4.9
	baz=53						
MSTX	**Muleshoe**	4.75	236		Pn	08 25 07.6	-0.9
WHTX	**Lake Whitney,**	4.77	174	P	Pn	08 25 09.3	+0.7
	baz=354						
WHTX	**Lake Whitney,**	4.77	174		Pn	08 25 09.0	+0.5
WHTX	**Lake Whitney,**	4.77	174	P	Pn	08 25 08.6	+0.1
	baz=354,SNR=10						
X40A	**Basin Creek Fa**	4.80	116		Pn	08 25 09.4	+0.4
X40A				IAmb_Lg		08 26 31.3	
	comp=Z,50nm,0.8s						
R40A	**Maddies Statio**	4.84	70		Pn	08 25 09.8	+0.2
FCAR	**Ozark Folk Cen**	4.86	98		Pn	08 25 10.9	+1.2
WHAR	**Wooly Hollow**	4.88	106		Pn	08 25 11.7	+1.6
WHAR				IAmb_Lg		08 26 34.6	
	comp=Z,32nm,0.7s						
WLAR	**White Oak Lake**	5.06	126	Pn	Pn	08 25 13.4	+0.9
WLAR				IAmb_Lg		08 26 40.2	
	comp=Z,31nm,0.7s						
237A	**Washetta, Mont**	5.08	158	Pn	Pn	08 25 12.7	-0.1
T25A	**Trinidad**	5.12	276		Pn	08 25 13.2	-0.4
T25A				IAmb_Lg		08 26 42.5	
	comp=Z,51nm,0.8s						
OGNE	**Ogallala**	5.22	325		Pn	08 25 15.8	+1.0
L34A	**Svendsen Farm,**	5.37	13	Pn	Pn	08 25 14.5	-2.3
L34A				IAmb_Lg		08 26 58.7	
	comp=Z,55nm,0.8s						
P40A	**Paris**	5.48	58		Pn	08 25 18.8	+0.5
P40A				IAmb_Lg		08 26 56.1	
	comp=Z,37nm,0.8s						
N38A	**Joes South For**	5.52	41		Pn	08 25 18.7	-0.1
N38A	**Joes South For**	5.52	41	P	Pn	08 25 18.6	-0.2
	baz=225,SNR=9.2						
Z41A	**Richland Creek**	5.53	127	S	Sn	08 26 20.4	-2.4
	baz=310						
CCM	**Cathedral Cave**	5.57	74		Pn	08 25 19.3	-0.2
CCM				IAmb_Lg		08 26 56.0	
	comp=Z,33nm,0.8s						
T42A	**Van Buren**	5.58	85	Pn	Pn	08 25 21.4	+1.7
LCAR	**Lake Charles**	5.60	95		Pn	08 25 20.9	+1.0
NATX	**Nacogdoches**	5.71	150	IAmb_Lg		08 27 13.1	
	comp=Z,24nm,0.8s						
CCAR	**Cane Creek**	5.85	117	Pn	Pn	08 25 23.2	-0.2
CCAR				IAmb_Lg		08 27 13.1	
	comp=Z,38nm,0.8s						
K31A	**O'Neill**	5.90	355		Pn	08 25 23.7	-0.3
K31A				IAmb_Lg		08 27 14.3	
	comp=Z,48nm,0.7s						
435B	**Jarrell**	5.96	176		Pn	08 25 24.1	-0.9
435B				IAmb_Lg		08 27 21.0	

	comp=Z,27nm,0.9s						
SDCO	Great Sand Dun	6.03	282	Pn	Pn	08 25 26.0	-0.2
HBAR	Harrisburg	6.09	99		Pn	08 25 27.0	+0.3
HBAR				IAmb_Lg		08 27 09.9	
	comp=Z,38nm,0.8s						
PBMO	Poplar Bluff	6.11	87		Pn	08 25 26.9	0.0
PBMO				IAmb_Lg		08 27 12.3	
	comp=Z,23nm,0.8s						
FVM	French Village	6.19	76		Pn	08 25 28.7	+0.6
FVM				IAmb_Lg		08 27 10.8	
	comp=Z,30nm,0.8s						
SCIA	State Center	6.37	34		Pn	08 25 30.1	-0.4
JCT	Junction City	6.42	194	Pn	Pn	08 25 30.2	-1.1
JCT				IAmb_Lg		08 27 32.6	
	comp=Z,35nm,0.9s						
SLM	Saint Louis	6.47	71	IAmb_Lg		08 27 25.0	
	comp=Z,26nm,0.8s						
GNAR	Gosnell	6.52	94		Pn	08 25 31.7	-0.9
PEBM	Pemiscott Bayo	6.63	93	IAmb_Lg		08 27 23.9	
	comp=Z,41nm,0.7s						
ISCO	Idaho Springs	6.69	299	Pn	Pn	08 25 36.1	+0.9
143A	Socs Landing,	6.79	124	IAmb_Lg		08 27 45.6	
	comp=Z,22nm,0.8s						
N41A	Harden Midland	6.87	53	Pn	Pn	08 25 37.7	+0.3
LNXT	Lenox	6.92	93		Pn	08 25 37.8	-0.4
ANMO	Albuquerque	7.07	258		Pn	08 25 40.1	-0.2
ECSD	EROS Data Cent	7.07	8		Pn	08 25 39.2	-0.9
S44A	Carbondale	7.08	80	Pn	Pn	08 25 40.6	+0.4
S44A				IAmb_Lg		08 27 38.2	
	comp=Z,24nm,0.8s						
SIUC	Southern Illin	7.11	80	IAmb_Lg		08 27 39.4	
	comp=Z,29nm,0.7s						
K38A	Parkersburg	7.16	33	Pn	Pn	08 25 41.1	-0.2
K38A				IAmb_Lg		08 27 50.4	
	comp=Z,41nm,0.7s						
P43A	Skaggs, Pawnee	7.31	64		Pn	08 25 43.9	+0.5
W45A	Hickory Valley	7.36	100	Pn	Pn	08 25 44.5	+0.5
Q44A	Meyer Farm, Va	7.46	71		Pn	08 25 46.2	+0.7
BNM	Barren Site	7.47	252	Pn	Pn	08 25 46.6	+0.8
L40A	Anamosa	7.49	43	Pn	Pn	08 25 45.2	-0.6
L40A				IAmb_Lg		08 27 58.6	
	comp=Z,35nm,1.0s						
Y45A	Yeager Farm, C	7.52	110		Pn	08 25 46.3	0.0
Y45A				IAmb_Lg		08 28 13.0	
	comp=Z,26nm,0.8s						
T45A	Paducah	7.54	85		Pn	08 25 47.1	+0.6
Y22D	IRIS PASSCAL I	7.72	252	IAmb_Lg		08 28 13.4	
	comp=Z,36nm,0.9s						
HDIL	Hopedale	7.83	58		Pn	08 25 50.6	+0.1
MNTX	Cornudas Mount	7.89	232	Pn	Pn	08 25 51.6	+0.2
OLIL	Olney	8.12	73		Pn	08 25 56.1	+1.5
OLIL				IAmb_Lg		08 28 24.9	
	comp=Z,25nm,0.9s						
O44A	Mansfield	8.25	63	Pn	Pn	08 25 57.0	+0.7
WVT	Waverly	8.26	91	Pn	Pn	08 25 57.5	+1.1
PLAL	Pickwick Lake	8.28	99	Pn	Pn	08 25 57.6	+0.9
L42A	Oliver, Polo	8.34	48	Pn	Pn	08 25 58.1	+0.5
MVCO	Mesa Verde	8.38	276		Pn	08 25 58.9	+0.5
JFWS	Jewell Farm	8.59	42	P	Pn	08 26 00.4	-0.7
	baz=227						
JFWS	Jewell Farm	8.59	42		Pn	08 26 00.6	-0.4
JFWS				IAmb_Lg		08 28 40.1	
	comp=Z,24nm,0.8s						
RWWY	Rawlins	8.66	308	IAmb_Lg		08 28 39.3	
	comp=Z,18nm,1.0s						
RSSD	Black Hills	8.67	330	Pn	Pn	08 26 01.8	-0.4
TX31	Lajitas Ar. Si	8.77	214		Pn	08 26 02.3	-1.2
TX32	Lajitas Array	8.77	214		Pn	08 26 02.5	-1.1
TXAR	Lajitas Array	8.77	214	Pn	Pn	08 26 03.6	0.0
T47A	Sharon Grove	8.77	85	Pn	Pn	08 26 03.0	-0.4
K22A	Casper	8.80	315	Pn	Pn	08 26 01.6	-2.4
K22A				IAmb_Lg		08 28 38.6	
	comp=Z,18nm,0.9s						
M44A	Midewin, Midew	9.05	56	Pn	Pn	08 26 07.0	-0.3
I40A	Norwalk	9.11	36	Pn	Pn	08 26 08.3	+0.2
F33A	5 Mile Ranch,	9.18	8	Pn	Pn	08 26 08.9	-0.2
SPMN	Marine on St.	9.35	23	Pn	Pn	08 26 10.8	-0.5
U49A	Red Boiling Sp	9.86	88	Pn	Pn	08 26 18.0	-0.4
I42A	Draeger Farm,	9.97	41	Pn	Pn	08 26 19.7	-0.2
I42A				IAmb_Lg		08 29 28.2	
	comp=Z,15nm,1.1s						
G40A	Rib Lake	10.37	32	Pn	Pn	08 26 23.6	-1.8
P49A	Miami Univ. Ec	10.86	71	Pn	Pn	08 26 30.3	-1.8
H43A	Windswept, Lux	10.97	42	Pn	Pn	08 26 32.5	-1.0
CPCT	Cooper Cave	11.02	93	Pn	Pn	08 26 34.9	+0.6
S51A	Beattyville	11.56	81	Pn	Pn	08 26 42.3	+0.6
TKL	Tuckaleechee C	11.58	91	Pn	Pn	08 26 43.5	+1.5

NOU 10 08:33:08.7, 22°.58S×178°.94W, h540^{km}, mb4.3/11, South of Fiji Islands, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKBA	Tubou, Lakemba	4.33	2	P	P	08 34 33.6	+1.1
MSVF	Nonsavu	5.59	329	P	P	08 34 42.8	-0.5
TAVE	Taveuni	5.91	351	P	P	08 34 47.2	+1.0
DGTI	Dogotuki	6.37	348	P	P	08 34 50.6	+0.2
URZ	Urewera	15.99	191	P	P	08 36 27.6	-0.6
BKZ	Black Stump Fm	16.99	192	P	P	08 36 37.8	+0.1
QRZ	Quartz Range	19.57	200	P	P	08 37 01.2	+0.1

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*DDA **10** 08:36:03.6, 37°.27N×38°.62E, h7^{km}±2^{km}, ML2.3*
*ISK **10** 08:36:04.2, 37°.30N×38°.70E, h5^{km}, ML2.6/10*
ISC 10 08:36:04.1±1.1**, 37°.28N**±0°.04×**38°.63E**±0°.03**, h5^{km}**±11^{km}**, n16, σ0^s.61**/24**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URFA	Urfa	0.22	44	PG	Pg	08 36 08.2	-0.3
URFA				SG	Sg	08 36 11.5	+0.1
SANL	SANLIURFA_Merk	0.31	111	*i* P	Pg	08 36 10.2	+0.1
SANL				*i* S	Sg	08 36 14.9	+0.6
SANL				IAML		08 36 15.0	
	comp=N,692nm,0.4s						
GZT	Gaziantep	0.85	275	*i* P	Pg	08 36 20.1	-0.4
GZT				*i* S	Sb	08 36 33.5	+0.2
GZT				IAML		08 36 43.0	
	comp=N,90nm,0.3s						
MALT	Malatya	1.04	351	PG	Pb	08 36 24.8	+0.1
MALT				SG	Sn	08 36 39.7	-0.8
AKCD	Akcadag	1.16	331	*i* P	Pb	08 36 26.7	0.0
AKCD				*i* S	Sb	08 36 41.9	-0.2
AKCD				IAML		08 36 44.0	
	comp=N,129nm,0.3s						
KHMN	Narli-Kahraman	1.18	276	PN	Pn	08 36 28.1	+0.8
SVRC	Sivrice-ELAZID	1.22	26	PN	Pb	08 36 27.3	-0.5
SVRC				SN	Sb	08 36 43.8	-0.1
DYBB	Diyarbakir	1.38	60	PN	Pg	08 36 30.2	-0.3
KMRS	Kahramanmaras	1.39	280	PN	Pg	08 36 31.6	+0.8
MAZI	Mazidag	1.46	83	PN	Pb	08 36 31.2	-0.7
KAMA	Osmaniye	1.57	267	*i* P	Pn	08 36 33.2	+0.4
KAMA				*i* S	Sn	08 36 53.8	+0.3
DARE	Darende-Malaty	1.57	325	PN	Pb	08 36 33.4	-0.4
ANDN	Andirin	1.84	280	*i* P	Pb	08 36 38.0	-0.4
ANDN				*i* S	Sg	08 37 03.2	-0.1
ANDN				IAML		08 37 21.0	
	comp=E,31nm,1.0s						
TAHT	Tahtakopru-Hat	2.16	246	PN	Pb	08 36 42.8	-0.9
SVAN	Silvan-Diyarba	2.22	66	PN	Pn	08 36 42.5	+0.9
KOZT	Kozan	2.24	276	PN	Pb	08 36 43.7	-1.4

KMA 10 08:40:50.0±0.4**, 36°.74N×128°.84E, h14^{km}**±6^{km}**, Error ellipse: s-maj=3.3km s-min=1.6km az=42.0, South Korea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJB	Youngju	0.29	297	P	Pg	08 40 56.3	+0.2
YOJB				S	Sg	08 41 00.4	+0.1
KSADO	Andong	0.34	165	P	Pg	08 40 57.1	+0.1
	SNR=98						
KSULJ	Uljin	0.46	95	P	Pg	08 40 59.1	-0.1
	SNR=7.9						
KSGWL	Sabuk	0.47	359	P	Pg	08 40 59.5	+0.2
	SNR=12						
KSYOW	Yeongwol	0.53	325	P	Pg	08 41 00.6	+0.1
KSBON	Boeun	0.87	254	P	Pg	08 41 06.3	-0.6
	SNR=10						
KSWJU	Wonju	0.91	317	P	Pb	08 41 07.5	-0.2
	SNR=6.2						

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*SOME **10** 08:48:24.2, 44°.25N×77°.63E*
NNC 10 08:48:24.3±0.7**, 44°.29N×77°.61E, h0^{km}**±3^{km}**, mb3.4, mpv3.5, 6C-1D, Error ellipse: s-maj=4.9km s-min=2.8km az=168.0, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARXS	Arharly	0.17	118	P	Pg	08 48 27.3	-0.3
	97nm,0.2s						
ARXS				S	Sg	08 48 29.6	-0.3
	193nm,0.2s						
CHKK	Chushkaly	0.63	226	P	Pg	08 48 36.0	-0.3
	8.8nm,0.2s						
CHKK				S	Sg	08 48 44.7	+0.2
	56nm,0.2s						
KURS	Kuram	0.90	153	P	Pg	08 48 41.1	-0.5
	52nm,0.2s						
KURS				S	Sg	08 48 53.2	0.0
	28nm,0.3s						
KUU	Kurty	1.00	247	P	Pg	08 48 43.1	-0.4
	26nm,0.1s						
KUU				S	Sg	08 48 56.8	+0.3
	28nm,0.1s						
MDOK	Medeo	1.20	200	⇑P	Pg	08 48 46.2	-1.1
	2.5nm,0.3s						
MDOK				⇑S	Sn	08 49 05.4	-0.1
	5.4nm,0.5s						
MDOK	Medeo	1.20	200	Pg	Pg	08 48 46.4	-1.0
	6.4nm,0.1s						
MDOK				Lg	Lg	08 49 02.3	
	9.5nm,0.1s						
TNSS	Tian-Shan	1.35	201	P	Pg	08 48 49.1	-1.0
	18nm,0.2s						
TNSS				S	Sg	08 49 07.1	-0.5
	16nm,0.2s						
SATY	Saty	1.36	155	P	Pg	08 48 49.0	-1.4
	14nm,0.1s						
SATY				S	Sg	08 49 06.8	-1.2
	42nm,0.1s						
MTBS	Maitube	1.45	217	P	Pn	08 48 51.0	-0.8
	21nm,0.2s						
MTBS				S	Sg	08 49 10.2	-0.5
	81nm,0.3s						
KRBS	Karabastau	1.52	248	P	Pn	08 48 52.2	-0.6
	13nm,0.2s						
KRBS				S	Sg	08 49 12.2	-0.9
	31nm,0.3s						
UZB	Uzynbulak	1.54	138	P	Pn	08 48 52.2	-0.8
	13nm,0.3s						
UZB				S	Sg	08 49 12.3	-1.3
	14nm,0.3s						
DJR	Jarkent	1.56	88	P	Pn	08 48 53.3	0.0
	25nm,0.1s						
DJR				S	Sn	08 49 14.1	-0.2
	38nm,0.3s						
KAPS	Kapalarasan	1.59	51	P	Pn	08 48 53.9	+0.3
	14nm,0.3s						
KAPS				S	Sb	08 49 15.2	0.0
	13nm,0.1s						
PDGK	Podgornoye	1.67	125	P	Pn	08 48 54.2	-0.6
	5.1nm,0.1s						
PDGK				S	Sn	08 49 15.6	-1.3
	7.5nm,0.3s						
PDGK	Podgornoye	1.67	125	⇓P	Pn	08 48 54.1	-0.7
	3.2nm,0.3s						
PDGK				⇑S	Sg	08 49 18.2	+0.4
	9.1nm,0.5s						
DGS	Degeres	1.70	232	P	Pn	08 48 55.2	-0.1
	31nm,0.3s						
DGS				S	Sn	08 49 17.5	-0.2
	39nm,0.5s						
KST	Kastek	1.73	224	P	Pn	08 48 55.8	+0.1
	28nm,0.2s						
KST				S	Sn	08 49 18.4	-0.2
	31nm,0.4s						
TKM2	Tokmak 2	2.01	228	⇑Pn	Pn	08 49 00.4	+0.8
	1.2nm,0.1s						
TKM2				⇑Sn	Sb	08 49 27.1	-0.3
	2.6nm,0.1s						
BTLS	Baital	2.65	288	Pg	Pg	08 49 14.8	-0.3
	2.1nm,0.2s						
BTLS				Lg	Lg	08 49 51.2	
	2.8nm,0.3s						
AAK	Ala-Archa	2.81	235	Pg	Pb	08 49 14.9	-0.6
	0.9nm,0.5s						
AAK				Lg	Lg	08 49 51.9	
	4.7nm,0.5s						
KK31	Karatay Array	5.29	259	⇑Lg	Lg	08 51 11.6	
	0.6nm,0.3s,baz=72,slow=27,SNR=4.1						

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*DJA **10** 08:58:43.7±0.1, 0°N±2°×12°3E±°, h146^{km}±2^{km}, M4.5/28, mb4.5/28, mB5.0/17, MLv4.7/22, Mw(mB)4.4/17, MwMwp4.2/1, Mwp4.6/1*
*NEIC **10** 08:58:43.4±1.7, 0°.03S±0°.07×123°.27E±0°.06, h140^{km}±5^{km}, mb4.7/60, Error ellipse: s-maj=10.2km s-min=9.2km az=200.0*
*IDC **10** 08:58:44.6±1.3, 0°.05N×123°.30E, h157^{km}±11^{km}, mb4.2/28, mb1 4.2/32, mb1mx4.1/55, mbtmp4.6/32, MS2.8/5, Ms1 2.9/5, ms1mx2.5/44, Error ellipse: s-maj=11.4km s-min=7.6km az=81.0*
ISC 10 08:58:43.5±0.4**, 0°.01S**±0°.04×**123°.28E**±0°.05**, h146^{km}**±3^{km}**, h147^{km}:pP-P, n209, σ1^s.33**/238**, mb4.7**/92**, 2C, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTOI	Gorontalo	0.69	337	P	Pn	08 59 07.2	+1.6
GTOI				S	Sn	08 59 24.5	+2.1
KMSI	Cibinong	0.91	51	P	Pn	08 59 08.4	+1.2
LUWI	Luwuk	1.15	206	P	Pn	08 59 08.5	-0.8
LUWI				S	Sn	08 59 26.5	-2.4
LUWI	Luwuk	1.15	206	Pn	Pn	08 59 08.7	-0.6
LUWI	Luwuk	1.15	206	P	Pn	08 59 08.7	-0.6
MRSI	Marisa	1.42	290	P	Pn	08 59 11.4	-0.5
MRSI				S	Sn	08 59 31.7	-1.9
APSI	Ampana	1.86	241	P	Pn	08 59 16.8	0.0
APSI				S	Sn	08 59 40.5	-1.8
TOLI2	Tolitoli	2.73	294	Pn	Pn	08 59 27.3	0.0
TOLI2	Tolitoli	2.73	294	P	Pn	08 59 27.7	+0.4
SANI	Sanana	3.39	127	P	Pn	08 59 34.2	-1.5
MPSI	Mapaga	3.40	276	P	Pn	08 59 36.9	+1.1
KDI	Kendari	3.98	189	P	Pn	08 59 43.9	+0.5
TNTI	Ternate	4.16	79	P	Pn	08 59 46.7	+0.9
TNTI	Ternate	4.16	79	Pn	Pn	08 59 46.8	+0.9
LBMI	Labuha	4.27	98	P	Pn	08 59 48.3	+1.0
SGSI	Sangihe	4.30	32	P	Pn	08 59 47.6	-0.1
TTSI	Tana Toraja	4.59	229	P	Pn	08 59 52.2	+0.8
SPSI	Sidrap Palu	5.27	222	P	Pn	09 00 01.8	+1.4
	0.0nm32nm0.6nm,0.5s						
SMKI	Samarinda	6.08	266	P	Pn	09 00 11.5	+0.2
	0.9nm5µm139nm,0.5s						
KAPI	Kappang	6.09	215	P	Pn	09 00 13.6	+2.2
	5.7nm,0.3s,baz=40,slow=4.4,SNR=22						
KAPI				S	Sn	09 01 22.9	+2.7
	6.9nm,0.3s,baz=70,slow=24,SNR=5.9						
KAPI				LR	LR	09 03 06.6	
	comp=Z,72nm,18.8s,baz=75,slow=43						
KAPI	Kappang	6.09	215	Pn	Pn	09 00 12.5	+1.0
KAPI	Kappang	6.09	215	P	Pn	09 00 12.8	+1.3
BKSI	Bulukumba	6.15	211	P	Pn	09 00 13.9	+1.7
	0.3nm892nm68nm,0.6s						
MSAI	Masohi	6.55	120	P	Pn	09 00 19.1	+1.5
BSSI	Bau Bau, Buton	6.70	204	P	Pn	09 00 21.0	+1.4
	0.3nm59nm,0.5s						
KBKI	Kotabaru	7.82	245	P	Pn	09 00 35.6	+1.0
	0.2nm29nm,0.6s						
SWI	Sorong	8.03	96	P	Pn	09 00 38.0	+0.6
	1µm41nm,0.6s						
SIJI	Sorong	8.04	96	P	Pn	09 00 37.0	-0.4
	4.7nm,0.3s,baz=272,slow=9.7,SNR=10						
SIJI				S	Sn	09 02 08.7	+1.7
	2.1nm,0.3s,baz=53,slow=18,SNR=3.6						
SIJI				LR	LR	09 05 09.7	
	comp=Z,71nm,18.2s,baz=244,slow=48						
EDFI	Ende, Flores	8.83	190	P	Pn	09 00 50.3	+2.1
	14nm,0.5s						
BBKI	Banjar Baru	9.10	248	P	Pn	09 00 52.1	+0.4
	3µm34nm,0.9s						
FAKI	Fak Fak	9.42	108		Pn	09 00 54.6	-1.5
SOEI	Soe	9.73	174	P	Pn	09 01 01.2	+1.0
	110nm,0.9s						
SOEI	Soe	9.73	174	Pn	Pn	09 00 59.9	-0.4
BATI	Baumata	10.14	178	P	Pn	09 01 08.3	+2.8
	9.5nm,0.3s,baz=299,slow=4.5,SNR=6.4						
BATI				LR	LR	09 06 23.1	
	comp=Z,93nm,18.8s,baz=262,slow=45						
KMMI	Kalianget	11.63	233	P	P	09 01 35.7	+3.1
STKI	Sintang	11.80	270	P	P	09 01 37.5	+3.0
LQP	Lukban	14.13	353	⇑*i*P	P	09 02 05.1	+4.4
DRS	Darwin Rock St	14.48	149	P	P	09 02 03.6	-0.7
	26nm,0.8s						
MTN	Manton Dam	14.95	149		P	09 02 08.9	-0.6
KDU	Kakadu	15.55	144	P	Pn	09 02 14.9	-0.2
	118nm,0.7s						
KPJI	Karang Pucung	16.05	243	P	P	09 02 22.4	+0.7
	44nm,0.8s						
KNRA	Kununurra	16.49	161	P	P	09 02 26.5	0.0
KNRA				IAmb	IAmb	09 02 29.0	
	comp=Z,38nm,0.8s						
KNRA	Kununurra	16.49	161	P	P	09 02 26.7	+0.2
	comp=Z,52nm,0.8s						
FITZ	Fitzroy Crossi	18.13	173	P	P	09 02 45.3	+0.7
	comp=Z,4.3nm,0.3s,baz=7.5,slow=12,SNR=145						
DSRI	Dabo	18.70	269	P	Pn	09 02 52.0	-1.0
	comp=Z,4µmcomp=Z,103nm,0.7s						
KLSI		19.10	256	P	P	09 02 56.4	+1.2
	comp=Z,18nm,1.0s						
MDSI	Maura Dua	19.59	257	P	P	09 03 00.1	-0.4
	comp=Z,855nmcomp=Z,9.5nm,0.9s						
MASI	Maura Aman, Be	21.25	261	P	P	09 03 18.5	+0.1
MBWA	Marble Bar	21.31	189	P	P	09 03 19.8	+1.0
	comp=Z,14nm,2.8s						
PSA00	Pilbara Seismi	21.70	189	P	P	09 03 22.1	-0.8
WB0	Warramunga Arr	22.46	152	P	P	09 03 29.8	-0.9
WB0				IAmb	IAmb	09 03 31.3	
	comp=Z,22nm,0.5s						
WRAB	Tennant Creek	22.58	152	P	P	09 03 31.8	-0.1
WRAB				IAmb	IAmb	09 03 32.6	
	comp=Z,20nm,0.6s						
WRAB	Tennant Creek	22.58	152	P	P	09 03 31.9	+0.1
WRA	Warramunga Arr	22.58	152	P	P	09 03 31.9	0.0
	comp=Z,16nm,0.5s,baz=331,slow=11,SNR=237						
WRA				PcP	PcP	09 07 20.1	0.0
	comp=Z,0.6nm,0.5s,baz=324,slow=2.3,SNR=3.1						
WRA				S	S	09 07 25.1	-3.4
	comp=Z,1.2nm,0.8s,baz=314,slow=21,SNR=4.2						
WRA				ScP	ScP	09 10 41.7	-2.7
	comp=Z,0.8nm,0.5s,baz=333,slow=2.9,SNR=5.1						
WRA	Warramunga Arr	22.58	152	P	P	09 03 30.5	-1.3
WB2	Warramunga Arr	22.59	152	P	P	09 03 31.6	-0.3
WB2				IAmb	IAmb	09 03 33.1	
	comp=Z,22nm,0.6s						
WR0	Warramunga Arr	22.69	152	P	P	09 03 32.5	-0.4
WR0				IAmb	IAmb	09 03 34.2	
	comp=Z,20nm,0.9s						
PDSI	Padang	22.83	268	P	P	09 03 34.5	+0.2
PPI	Padang Panjang	22.88	269	P	P	09 03 35.2	+0.5
	comp=Z,732nmcomp=Z,75nm,0.8s						
QIZ	Qiongzhong	23.06	326	P	P	09 03 38.6	+2.3
QIZ				IAmb	IAmb	09 03 38.9	
	comp=Z,35nm,0.8s						
TPUB	Ta-pu	23.31	354	P	P	09 03 38.8	+0.2
TPUB	Ta-pu	23.31	354	P	P	09 03 40.1	+1.5
	comp=Z,82nm,1.0s						
SSLB	Suanglung	23.76	355	P	P	09 03 44.6	+1.9
	comp=Z,34nm,1.2s						
COEN	Coen	24.09	126	P	P	09 03 45.6	-0.1
COEN	Coen	24.09	126	P	P	09 03 47.0	+1.3
	comp=Z,12nm,0.9s						
SISI	Saibi	24.22	267	P	P	09 03 46.2	-0.7
	comp=Z,45nm,0.6s						
PSI	Prapat	24.50	277	P	P	09 03 50.2	+0.5
	comp=Z,2.9nm,0.4s,baz=92,slow=7.8,SNR=4.7						
WRKA	Warakurna	25.35	169	P	P	09 03 56.8	-0.3
	comp=Z,18nm,0.8s						
AS31	Alice Springs	25.68	157	P	P	09 04 00.5	+0.3
ASAR	Alice Springs	25.68	157	P	P	09 04 00.4	+0.2
	comp=Z,5.8nm,0.8s,baz=348,slow=12,SNR=41						
ASAR				pP	pP	09 04 32.5	+2.0
	comp=Z,2.7nm,0.6s,baz=321,slow=7.7,SNR=6.5						
ASAR				PcP	PcP	09 07 26.9	+0.1
	comp=Z,2.7nm,0.6s,baz=340,slow=1.9,SNR=11						
ASAR				ScP	ScP	09 10 51.5	-1.3
	comp=Z,0.6nm,0.5s,baz=342,slow=2.7,SNR=5.7						
ASAR	Alice Springs	25.68	157	P	P	09 04 00.6	+0.4
QIS	Mount Isa	25.93	143	P	P	09 04 02.7	+0.3
	comp=Z,28nm,0.6s						
MEEK	Meekatharra	26.86	189	P	P	09 04 10.0	-0.6
	comp=Z,9.2nm,1.9s						
JOW	Kunigami	27.11	10	P	P	09 04 12.4	-0.5
	comp=Z,10nm,0.4s,baz=162,slow=16,SNR=1.9						
MORW	Morawa	29.71	193	P	P	09 04 35.7	-0.3
MORW				IAmb	IAmb	09 04 57.3	
	comp=Z,11nm,1.2s						
CTA	Charters Tower	30.07	133	P	P	09 04 39.2	0.0
	comp=Z,1.7nm,0.7s,baz=323,slow=5.1,SNR=1.9						
CTAO	Charters Tower	30.07	133	P	P	09 04 39.3	0.0
OOD	Oodnadatta	30.09	158	P	P	09 04 38.8	-0.4
	comp=Z,13nm,1.2s						
CM31	Chiang Mai Arr	30.14	309	P	P	09 04 40.3	+0.5
CM31				IAmb	IAmb	09 04 43.2	
	comp=Z,21nm,1.4s						
CMAR	Chiang Mai Arr	30.14	309	P	P	09 04 41.4	+1.6
	comp=Z,5.9nm,0.7s,baz=133,slow=6.8,SNR=31						
CMAR				PcP	PcP	09 07 37.9	0.0
	comp=Z,2.4nm,0.7s,baz=157,slow=2.1,SNR=6.9						
CMAR				LR	LR	09 17 26.7	
	comp=Z,18nm,21.1s,baz=188,slow=37						
CMAR	Chiang Mai Arr	30.14	309	P	P	09 04 40.1	+0.3
CHTO	Chiang Mai	30.34	309	P	P	09 04 42.7	+1.1
CHTO				IAmb	IAmb	09 04 45.3	
	comp=Z,17nm,0.8s						
GYA	Guiyang	30.80	330	⇑P	P	09 04 48.3	+2.6
GYA				pmax	pmax		
	comp=Z,24nm,0.6s						
FORT	Forrest	30.94	172	P	P	09 04 46.9	+0.2
FORT				IAmb	IAmb	09 04 48.0	
	comp=Z,22nm,0.8s						
FORT	Forrest	30.94	172	P	P	09 04 46.1	-0.6
	comp=Z,41nm,0.7s						
BLDU	Ballidu	31.07	191	P	P	09 04 47.2	-0.7
	comp=Z,7.4nm,1.3s						
MULG	Mulgathing	31.81	162	P	P	09 04 54.2	-0.2
	comp=Z,15nm,1.8s						
NJ2	Nanjing	32.16	353	*e*P	P	09 04 59.5	+2.1
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
INKA	Innaminka	32.27	150	P	P	09 04 59.4	+1.0
	comp=Z,23nm,0.7s						
JCJ	Chichijima	32.51	33	P	P	09 05 00.2	-0.3
	comp=Z,146nm,0.5s,baz=293,slow=17,SNR=30						
JCJ	Chichijima	32.51	33	P	P	09 05 00.3	-0.2
JCJ	Chichijima	32.51	33	P	P	09 04 59.8	-0.7
	comp=Z,167nm,0.7s						
ENH	Enshi	32.85	338	P	P	09 05 05.1	+1.7
ENH				IAmb	IAmb	09 05 06.8	
	comp=Z,20nm,0.8s						
BBOO	Buckleboo	34.78	161	P	P	09 05 20.2	+0.1
BBOO				IAmb	IAmb	09 05 31.5	
	comp=Z,38nm,1.3s						
BBOO	Buckleboo	34.78	161	P	P	09 05 20.7	+0.6
	comp=Z,28nm,1.9s						
STKA	Stephens Creek	36.13	153	P	P	09 05 32.0	+0.4
	comp=Z,6.4nm,0.7s,baz=347,slow=6.0,SNR=12						
STKA				PcP	PcP	09 07 54.5	+0.1
	comp=Z,2.2nm,0.4s,baz=318,slow=4.1,SNR=4.7						
STKA	Stephens Creek	36.13	153	P	P	09 05 32.1	+0.5
STKA	Stephens Creek	36.13	153	P	P	09 05 33.0	+1.4
	comp=Z,1.7nm,0.8s						
HTT	Hallett	36.36	158	P	P	09 05 34.2	+0.6
	comp=Z,13nm,0.9s						
XAN	Xi'an	36.45	340	P	P	09 05 35.5	+1.1
XAN				pmax	pmax		
	comp=Z,20nm,0.8s						
JWT	Wachi	36.89	17	P	P	09 05 37.2	-0.8
INU	Inuyama	37.44	19	P	P	09 05 42.3	-0.4
INU	Inuyama	37.44	19	P	P	09 05 42.5	-0.2
	comp=Z,30nm,1.0s						
KSRS	Korea Array	37.52	6	P	P	09 05 43.1	-0.1
	comp=Z,3.6nm,0.7s,baz=180,slow=9.2,SNR=5.6						
KSRS				LR	LR	09 23 59.3	
	comp=Z,9.4nm,18.1s,baz=175,slow=40						
CMSA	Cobar Meteorol	37.87	148	P	P	09 05 47.4	+1.0
	comp=Z,19nm,0.8s						
MAJO	Matsushiro	38.92	19	P	P	09 05 54.4	-0.7
MAJO	Matsushiro	38.92	19	P	P	09 05 55.4	+0.3
	comp=Z,29nm,0.9s						
MAT	Matsushiro	38.92	19	P	P	09 05 53.7	-1.4
MJAR	Matsushiro Arr	38.92	19	P	P	09 05 54.0	-1.0

	comp=Z,18nm,0.7s,baz=184,slow=9.6,SNR=42						
MJAR	Matsushiro Arr	38.92	19	P	P	09 05 53.6	-1.5
LZH	Lanzhou	40.20	335	eP	P	09 06 08.3	+2.4
LZH				pP	pP	09 06 37.8	-0.3
LZH				pmax	pmax		
	comp=Z,30nm,1.1s						
ARPS	Mount Arapiles	40.42	157	P	P	09 06 08.0	+0.5
	comp=Z,40nm,0.9s						
ARMA	Armidale	40.51	141	P	P	09 06 08.8	+0.3
ARMA				IAmb	IAmb	09 06 11.4	
	comp=Z,7.7nm,0.8s						
ARMA	Armidale	40.51	141	P	P	09 06 10.1	+1.6
	comp=Z,11nm,0.9s						
JMM	Marumori	41.00	21	P	P	09 06 12.0	-0.2
YNG	Young	41.44	148	P	P	09 06 18.0	+2.1
	comp=Z,19nm,1.9s						
HHC	Hu-ho-hao-te	42.03	347	eP	P	09 06 23.5	+2.8
HHC				pmax	pmax		
	comp=Z,20nm,1.1s						
HHC				pmax	pmax		
	comp=Z,57nm,5.3s						
CAN	Canberra	42.54	148	P	P	09 06 24.9	0.0
CAN				IAmb	IAmb	09 06 27.8	
	comp=Z,17nm,0.6s						
CAN	Canberra	42.54	148	P	P	09 06 26.4	+1.5
	comp=Z,59nm,1.7s						
LSA	Lhasa	42.54	317	P	P	09 06 26.6	+1.2
LSA				IAmb	IAmb	09 06 28.5	
	comp=Z,12nm,0.7s						
TOO	Toolangi	42.64	154	P	P	09 06 25.7	+0.2
TOO				IAmb	IAmb	09 06 31.2	
	comp=Z,16nm,1.2s						
CNB	Canberra Magne	42.73	148	P	P	09 06 28.7	+2.3
	comp=Z,29nm,1.8s						
ODAN	Odare	43.64	311	eP	P	09 06 35.5	+1.5
	comp=Z,57nm,0.7s						
TAPN	Taplejung	43.66	311	eP	P	09 06 35.2	+0.9
	comp=Z,40nm,0.5s						
RAMN	Ramite	44.29	310	eP	P	09 06 41.0	+1.8
	comp=Z,70nm,0.5s						
USA0B	Ussuriysk Arra	44.69	9	P	P	09 06 41.5	-0.3
USA0B				IAmb	IAmb	09 06 42.1	
	comp=Z,13nm,1.1s						
USRK	Ussuriysk Ar.	44.69	9	P	P	09 06 41.8	-0.1
	comp=Z,3.7nm,0.4s,baz=187,slow=5.8,SNR=16						
USRK	Ussuriysk Ar.	44.69	9	P	P	09 06 41.3	-0.5
GTA	Gaotai	44.72	334	eP	P	09 06 44.2	+1.9
GTA				pP	pP	09 07 17.6	+2.5
GTA				sP	sP	09 07 36.7	+5.1
GTA				pmax	pmax		
	comp=Z,17nm,1.1s						
JIRN	Jiri	44.97	311	eP	P	09 06 46.1	+1.4
	comp=Z,66nm,0.6s						
GUN	Gumba	45.33	311	eP	P	09 06 48.4	+0.8
	comp=Z,114nm,0.6s						
PKI	Pulchoki	45.51	310	eP	P	09 06 49.7	+0.7
	comp=Z,77nm,0.8s						
ERM	Erimo	45.52	21	P	P	09 06 49.9	+1.6
	comp=Z,91nm,2.9s						
GKN	Gorkha	46.32	310	eP	P	09 06 56.1	+0.9
	comp=Z,50nm,0.6s						
KOLN	Koldanda	47.00	309	eP	P	09 07 01.3	+0.8
	comp=Z,117nm,0.7s						
DANN	Dangsing	47.16	310	eP	P	09 07 03.0	+1.1
	comp=Z,140nm,0.7s						
KLR	Kul'dur	49.59	7	P	P	09 07 19.0	-0.7
	comp=Z,2.4nm,0.3s,baz=176,slow=13,SNR=7.5						
ULN	Ulaanbaatar	49.73	346	P	P	09 07 22.5	+1.5
ULN				IAmb	IAmb	09 07 22.7	
	comp=Z,10nm,0.6s						
SONM	Songino Array	49.86	345	P	P	09 07 21.7	-0.2
	comp=Z,8.8nm,0.7s,baz=161,slow=8.4,SNR=37						
SONM				PcP	PcP	09 08 39.5	-0.9
	comp=Z,1.4nm,0.5s,baz=164,slow=5.8,SNR=3.7						
SONM	Songino Array	49.86	345	P	P	09 07 22.4	+0.5
SONM				IAmb	IAmb	09 07 23.7	
	comp=Z,7.1nm,0.8s						
WMQ	Urumqi	53.94	329	eP	P	09 07 53.8	+1.6
KSH	Kashi	58.37	318	P	P	09 08 24.1	+0.3
KSH				PcP	sP	09 09 13.9	-0.3
KSH				PP	PP	09 10 35.7	+1.0
KSH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KSH				LR	LR		
	comp=Z,410nm,9.6s						
KSH				LR	LR		
	comp=Z,250nm,9.3s						
MK31	Makanchi Array	58.76	328	P	P	09 08 26.0	-0.2
MKAR	Makanchi Array	58.76	328	P	P	09 08 25.9	-0.3
	comp=Z,1.9nm,0.4s,baz=122,slow=8.6,SNR=49						
MKAR				pP	pP	09 09 01.7	+1.0
	comp=Z,1.6nm,0.7s,baz=126,slow=7.9,SNR=4.6						
MKAR				PcP	PcP	09 09 13.4	-1.0
	comp=Z,1.2nm,0.5s,baz=158,slow=3.1,SNR=4.4						
MKAR	Makanchi Array	58.76	328	P	P	09 08 26.1	-0.2
MAKZ	Makanchi	58.94	328	P	P	09 08 26.8	-0.6
MAKZ				IAmb	IAmb	09 08 28.0	
	comp=Z,9.3nm,1.4s						
PEA0B	Petropavlovsk-	60.18	23	P	P	09 08 36.5	+0.6
PETK	Petropavlovsk-	60.18	23	P	P	09 08 35.6	-0.2
	comp=Z,7.8nm,0.8s,baz=200,slow=4.0,SNR=14						
PETK	Petropavlovsk-	60.18	23	P	P	09 08 36.2	+0.4
AAK	Ala-Archa	60.91	321	P	P	09 08 41.5	+0.3
	comp=Z,2.6nm,0.6s,baz=135,slow=5.6,SNR=9.8						
AAK	Ala-Archa	60.91	321	P	P	09 08 41.4	+0.2
KBL	Kabul	61.16	310	P	P	09 08 43.6	+0.6
GAR	Garm	62.01	315	P	P	09 08 47.7	-0.9
GAR				IAmb	IAmb	09 08 49.9	
	comp=Z,11nm,0.7s						
YAK	Yakutsk	62.07	3	P	P	09 08 47.7	-0.6
	comp=Z,16nm,0.4s,baz=204,slow=3.5,SNR=4.8						
YAK	Yakutsk	62.07	3	P	P	09 08 47.2	-1.0
CHGR	Chuyangaron	62.69	314	P	P	09 08 52.6	-0.4
CHGR				IAmb	IAmb	09 09 07.4	
	comp=Z,13nm,1.2s						
KURBB	Kurchatov Arra	63.11	330	P	P	09 08 54.5	-0.9
	comp=Z,3.6nm,0.8s,baz=131,slow=5.9,SNR=26						
KURK	Kurchatov	63.12	330	P	P	09 08 54.5	-1.0
KURK				IAmb	IAmb	09 08 57.1	
	comp=Z,11nm,1.0s						
MA2	Magadan	63.17	15	P	P	09 08 55.9	+0.3
	baz=259,slow=19						
MA2	Magadan	63.17	15	P	P	09 08 55.8	+0.1
SOCY	Socotra	69.77	283	P	P	09 09 38.8	+0.1
SOCY				IAmb	IAmb	09 09 44.6	
	comp=Z,27nm,1.5s						
TIXI	Tiksi	71.63	2	P	P	09 09 47.5	-1.1
	comp=Z,6.3nm,0.5s,baz=137,slow=3.8,SNR=5.0						
TIXI	Tiksi	71.63	2	P	P	09 09 48.0	-0.6
TIXI				IAmb	IAmb	09 09 48.7	
	comp=Z,10.0nm,0.8s						
ABKAR	Akbulak array	72.90	322	P	P	09 09 55.7	-1.0
ABKAR	Akbulak array	72.90	322	P	P	09 09 55.6	-1.0
NRIK	Noril'sk	73.26	348	P	P	09 09 57.5	-0.8
	comp=Z,5.1nm,0.7s,baz=124,slow=5.2,SNR=9.5						
NRIK	Noril'sk	73.26	348	P	P	09 09 57.6	-0.7
AKTO	Aktyubinsk	74.48	323	P	P	09 10 04.8	-1.1
	comp=Z,2.8nm,0.6s,baz=107,slow=7.2,SNR=10						
ARU	Arti	76.28	329	P	P	09 10 14.2	-1.8
	comp=Z,0.8nm,0.3s,baz=142,slow=4.1,SNR=5.3						
VOI	Vohitsoka	77.46	248	P	P	09 10 22.3	-1.2
VOI				IAmb	IAmb	09 10 26.3	
	comp=Z,8.3nm,1.0s						
MAW	Mawson	79.08	200	P	P	09 10 31.6	+0.4
	comp=Z,1.3nm,0.6s,baz=28,slow=8.1,SNR=3.6						
MAW	Mawson	79.08	200	P	P	09 10 31.0	-0.2
VNDA	Vanda	80.20	172	P	P	09 10 37.4	+0.2
	comp=Z,2.4nm,0.7s,baz=322,slow=6.1,SNR=19						
VNDA	Vanda	80.20	172	P	P	09 10 37.7	+0.6
SDPT	Sand Point	82.20	34	P	P	09 10 48.9	+0.8
OHAK	Old Harbor	86.44	33	P	P	09 11 09.0	-0.4
J20K	Nowinta River	86.76	26	P	P	09 11 11.9	+1.0
J20K				IAmb	IAmb	09 11 33.1	
	comp=Z,7.4nm,1.3s						
KDAK	Kodiak Island	86.87	32	P	P	09 11 12.4	+0.9
KLMR	Klimovskoe	86.95	331	eP	P	09 11 09.6	-2.3
KLMR				AMP		09 11 10.9	
	comp=Z,8.0nm,0.6s						
IMAR	Indian Mountai	87.14	24	P	P	09 11 12.8	+0.2
CAST	Castle Rocks	87.60	27	P	P	09 11 14.8	-0.1
BPAW	Bear Paw Mtn.	88.14	26	P	P	09 11 18.0	+0.5
BPAW				IAmb	IAmb	09 11 38.6	
	comp=Z,8.2nm,1.4s						
QSPA	South Pole Qui	89.93	180	P	P	09 11 26.2	+0.2
M24K	Tolsona, Glenn	90.26	28	P	P	09 11 28.0	+0.4
BMAR	Burnt Mountain	90.83	23	P	P	09 11 30.4	+0.4
AKASG	Malin Array Be	92.58	321	P	P	09 11 36.2	-2.2
	comp=Z,0.3nm,0.3s,baz=70,slow=4.6,SNR=4.3						
ARCES	ARCESS Array B	92.73	340	P	P	09 11 37.9	-0.9
	comp=Z,4.7nm,0.9s,baz=50,slow=6.5,SNR=3.7						
MNK	Minsk	93.15	324	i P	P	09 11 39.5	-1.5
	comp=E,2.0nm,0.8s						
MNK				i P	P	09 11 39.5	-1.5
	comp=N,16nm,0.8s						
MNK				i P	P	09 11 39.5	-1.5
	comp=Z,13nm,0.8s,baz=86						
MNK				i pP	pP	09 12 15.1	-2.7
MNK				i sP	sP	09 12 30.1	-3.0
MNK				i PP	PP	09 15 23.2	-2.9
MNK				i PPP	PPP	09 17 26.9	
MNK				i S	SKSac	09 21 59.6	-1.6
MNK				i SP	SP	09 23 55.8	+7.7
MNK				i PS	PS	09 24 05.0	-1.9
MNK				i SS	SS	09 28 50.4	-3.1
MNK				i SSS	SSS	09 32 33.5	
MNK				i LR	LR	09 48 25.4	
MNK				i LRM	MLR	09 52 47.1	
	comp=E,68nm,21.9s						
MNK				i LRM	MLR	09 52 49.1	
	comp=N,636nm,21.9s						
MNK				i LRM	MLR	09 52 52.1	
	comp=Z,216nm,21.9s						
SPITS	Spitsbergen Ar	93.44	349	P	P	09 11 40.8	-1.1
	comp=Z,13nm,0.8s,baz=63,slow=10.0,SNR=2.3						
FINES	FINESS Array B	93.46	331	P	P	09 11 41.1	-1.1
	comp=Z,1.7nm,0.8s,baz=85,slow=4.6,SNR=4.6						
FINES	FINESS Array B	93.46	331	P	P	09 11 40.3	-1.9
INK	Inuvik	94.88	21	P	P	09 11 47.8	-0.8
	comp=Z,0.8nm,0.5s,baz=308,slow=2.8,SNR=9.0						
INK	Inuvik	94.88	21	P	P	09 11 47.1	-1.4
INK				IAmb	IAmb	09 11 57.4	
	comp=Z,6.6nm,1.4s						
LSZ	Lusaka	94.91	255	P	P	09 11 49.1	-1.0
SNAA	Sanae	100.74	195	Pdiff	Pdif	09 12 15.5	+0.5
VNA2	Neumayer--Watz	102.36	195	Pdiff	Pdif	09 12 23.4	+1.2
VNA3	Neumayer Olymp	102.73	194	Pdiff	Pdif	09 12 24.6	+0.8
VNA1	Neumayer--Stat	102.76	195	Pdiff	Pdif	09 12 24.5	+0.6
PDAR	Pinedale Array	116.42	41	PKP	PKPdf	09 17 10.3	-0.2
	comp=Z,0.4nm,0.5s,baz=40,slow=1.0,SNR=5.6						
PDAR	Pinedale Array	116.42	41		PKPdf	09 17 09.0	-1.5
ULM	Lac du Bonnet	119.86	28	PKP	PKPdf	09 17 15.5	-1.1
	comp=Z,3.7nm,0.7s,baz=322,slow=2.8,SNR=5.2						
TORD	Torodi Ar. Bea	120.68	285	PKP	PKPdf	09 17 18.1	-1.0
	comp=Z,1.8nm,0.6s,baz=48,slow=1.5,SNR=12						
TORD	Torodi Ar. Bea	120.68	285	PKPdf	PKPdf	09 17 17.8	-1.3
ANMO	Albuquerque	122.08	48	PKP	PKiKP	09 17 21.7	-0.1
	comp=Z,2.2nm,0.8s,baz=278,slow=4.3,SNR=3.3						
ANMO	Albuquerque	122.08	48		PKiKP	09 17 22.4	+0.6
TXAR	Lajitas Array	126.60	53	PKP	PKPdf	09 17 30.2	0.0
	comp=Z,0.6nm,0.8s,baz=165,slow=1.9,SNR=9.8						
CPUP	Villa Florida	153.81	179	PKPbc	PKPbc	09 18 26.0	-0.2
	comp=Z,1.4nm,0.5s,baz=174,slow=3.0,SNR=3.9						
CPUP	Villa Florida	153.81	179		PKPdf	09 18 16.0	-2.2
CPUP				PKPbc	PKiKP	09 18 26.4	+0.2
LPAZ	La Paz	160.28	146	PKPab	PKPab	09 19 10.0	+1.6
	comp=Z,1.0nm,0.6s,baz=151,slow=4.2,SNR=4.4						

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*NOU **10** 09:43:17.5, 39°.48S×175°.84E, h46^{km}, MLv3.4/6, North Island, New Zealand*

WEL 10 09:43:17.9±1.2**, 39°S**±9°×**17°6E**±°**, h45**^{km}±9^{km}**, M3.1**/15**, ML3.4**/15**, MLv3.1**/15**, Error ellipse: s-maj=0.0km s-min=0.0km az=26.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
MOVZ	Moawhango	0.09	270	P	Pn	09 43 26.4	+1.1
MOVZ				S	Sn	09 43 32.6	+2.2
BHHZ	Black Hill Sta	0.17	118	P	Pn	09 43 26.7	+1.1
BHHZ				S	Sn	09 43 33.3	+2.2
TUVZ	Tukino	0.22	310	P	Pn	09 43 27.5	+1.4
TUVZ				S	Sn	09 43 34.4	+2.6
WNVZ	Wahianoa	0.22	291	P	Pn	09 43 27.3	+1.2
WNVZ				S	Sn	09 43 34.3	+2.4
WHVZ	Whangaehu Hut	0.25	300	P	Pn	09 43 27.7	+1.2
DRZ	Dome Shelter	0.27	299	P	Pn	09 43 27.9	+1.2
DRZ				S	Sn	09 43 35.2	+2.3
TRVZ	Turoa	0.27	294	P	Pn	09 43 27.8	+1.2
TRVZ				S	Sn	09 43 34.9	+2.1
SNVZ	South Ngauruho	0.28	321	P	Pn	09 43 28.1	+1.4
FWVZ	Far West T-bar	0.29	302	P	Pn	09 43 28.0	+1.2
OTVZ	Oturere	0.29	327	P	Pn	09 43 28.1	+1.4
ETVZ	East Tongariro	0.30	336	P	Pn	09 43 28.1	+1.4
MTVZ	Mangateitei	0.31	274	P	Pn	09 43 27.9	+1.1
MTVZ				S	Sn	09 43 35.2	+2.2
NGZ	Ngauruhoe	0.31	318	P	Pn	09 43 28.3	+1.4
TMVZ	Te Maari	0.32	336	P	Pn	09 43 28.3	+1.4
NNVZ	North Ngauruho	0.34	325	P	Pn	09 43 28.6	+1.4
NTVZ	North Tongarir	0.34	334	P	Pn	09 43 28.6	+1.3
KRVZ	Karewarewa	0.36	331	P	Pn	09 43 28.7	+1.3
WTVZ	West Tongariro	0.36	323	P	Pn	09 43 28.6	+1.1
PKVZ	Pokaka	0.42	286	P	Pn	09 43 28.9	+0.9
RITZ	Rihia Road	0.43	359	P	Pn	09 43 29.5	+1.4
KWHZ	Kaweka Forest	0.43	92	P	Pn	09 43 29.6	+1.5
KATZ	Kakaramea	0.45	343	P	Pn	09 43 30.1	+1.6
KRHZ	Kereru	0.45	121	P	Pn	09 43 29.4	+1.0
TWVZ	Taurewa	0.47	315	P	Pn	09 43 29.4	+0.7
BKZ	Black Stump Fm	0.54	64	P	Pn	09 43 30.4	+0.9
BKZ	Black Stump Fm	0.54	64	P	Pn	09 43 30.3	+0.8
BKZ	Black Stump Fm	0.54	64	P	Pn	09 43 30.7	+1.2
HATZ	Hinemaiaia	0.55	19	P	Pn	09 43 30.3	+0.8
RATZ	Rangitukua	0.55	352	P	Pn	09 43 30.5	+1.0
PNHZ	Pukenui	0.57	153	P	Pn	09 43 30.3	+0.5
MCHZ	McNeill Hill	0.64	94	P	Pn	09 43 32.4	+1.7
TSZ	Takapari Road	0.65	174	P	Pn	09 43 31.3	+0.4
WATZ	Wairara	0.71	351	P	Pn	09 43 32.3	+0.7
MRHZ	Matea Rd	0.71	37	P	Pn	09 43 32.3	+0.5
WHTZ	Whakaora	0.74	5	P	Pn	09 43 33.2	+1.0
WAZ	Wanganui	0.77	243	P	Pn	09 43 33.0	+0.6
WPHZ	Waipukurau	0.79	146	P	Pn	09 43 32.8	0.0
NMHZ	Naumai	0.79	67	P	Pn	09 43 34.7	+1.8
KAHZ	Kahuranaki	0.87	117	P	Pn	09 43 34.7	+0.9
ARHZ	Aropaoanui	0.89	81	P	Pn	09 43 35.0	+1.0
OHWZ	Ohakea	0.90	208	P	Pn	09 43 34.9	+0.6
VRZ	Vera Road	0.91	288	P	Pn	09 43 34.3	0.0
WPRZ	Whakapapatarin	0.92	15	P	Pn	09 43 35.1	+0.6
KUTZ	Kaahu Road	0.92	358	P	Pn	09 43 35.1	+0.6
DVHZ	Dannevirke	0.92	166	P	Pn	09 43 34.0	-0.5
ALRZ	Allen Road	0.92	24	P	Pn	09 43 35.0	+0.4
MTHZ	Maungataniwha	0.94	54	P	Pn	09 43 35.5	+0.8
CKHZ	Cape Kidnapper	0.97	105	P	Pn	09 43 33.7	-1.4
POWZ	Post Office Ro	0.99	184	P	Pn	09 43 35.1	-0.3
PXZ	Pawanui	0.99	129	P	Pn	09 43 35.0	-0.4
PRRZ	Plateau Road	1.00	24	P	Pn	09 43 36.0	+0.5
PRHZ	Porangahau	1.04	146	P	Pn	09 43 35.7	-0.4
PRHZ				P	Pn	09 43 35.8	-0.3
HRRZ	Handcock Road	1.07	18	P	Pn	09 43 37.4	+0.9
RAHZ	Arahi	1.07	63	P	Pn	09 43 37.5	+1.1
GRRZ	Galatos Road	1.07	10	P	Pn	09 43 37.4	+0.8
TLZ	Tolley Road	1.11	346	P	Pn	09 43 37.1	0.0
WHHZ	Waihua	1.11	73	P	Pn	09 43 37.6	+0.5
HSRZ	Hossack Road	1.13	15	P	Pn	09 43 37.9	+0.5
LREZ	Lake Rotokare	1.14	267	P	Pn	09 43 37.7	+0.3
PRWZ	Pori Road	1.15	176	P	Pn	09 43 37.1	-0.5
ANWZ	Angora Road	1.15	156	P	Pn	09 43 37.1	-0.5
MUGZ	Murupara	1.17	37	P	Pn	09 43 37.8	0.0
RTZ	Ruatahuna	1.17	48	P	Pn	09 43 38.5	+0.5
RRRZ	Republican Roa	1.18	26	P	Pn	09 43 38.5	+0.4
HIZ	Hauiti	1.19	318	P	Pn	09 43 38.6	+0.4
HIZ	Hauiti	1.19	318	P	Pn	09 43 38.6	+0.4
HIZ	Hauiti	1.19	318	P	Pn	09 43 38.4	+0.2
MHEZ	Mangahewa	1.24	285	P	Pn	09 43 39.5	+0.7
UTU	Utuhina	1.25	12	P	Pn	09 43 39.7	+0.7
MRZ	Mangatainoka R	1.27	190	P	Pn	09 43 38.3	-0.9
TARZ	Mount Tarawera	1.27	23	P	Pn	09 43 40.2	+0.9
BFZ	Birch Farm	1.30	167	P	Pn	09 43 38.7	-1.0
BFZ	Birch Farm	1.30	167	P	Pn	09 43 38.7	-1.0
BFZ	Birch Farm	1.30	167	P	Pn	09 43 38.9	-0.8
SNGZ	Shannon Statio	1.30	62	P	Pn	09 43 40.4	+0.6
DREZ	Durham Road	1.31	279	P	Pn	09 43 40.5	+0.7
PREZ	Palmer Road	1.33	272	P	Pn	09 43 40.9	+0.8
OMRZ	Omania	1.36	17	P	Pn	09 43 41.0	+0.5
TIWZ	Tintock	1.37	179	P	Pn	09 43 39.7	-0.9
NEZ	North Egmont	1.38	275	P	Pn	09 43 41.4	+0.6
KHEZ	Kahui Hut	1.44	274	P	Pn	09 43 42.5	+0.8
KNZ	Kokohu	1.46	75	P	Pn	09 43 41.5	-0.2
PKE	Pukeiti	1.48	278	P	Pn	09 43 42.8	+0.8
URZ	Urewera	1.50	41	P	Pn	09 43 42.5	+0.1
URZ	Urewera	1.50	41	P	Pn	09 43 42.8	+0.4
URZ	Urewera	1.50	41	P	Pn	09 43 42.9	+0.5
OGWZ	Otaki Gorge	1.51	201	P	Pn	09 43 41.5	-0.9
HOWZ	Holdsworth Sta	1.51	190	P	Pn	09 43 41.1	-1.5
RAGZ	Rawiri	1.51	53	P	Pn	09 43 43.7	+1.1
CPWZ	Castlepoint	1.52	170	P	Pn	09 43 42.1	-0.6
NMEZ	Namu Road	1.54	269	P	Pn	09 43 43.5	+0.6
NBEZ	Newall Road No	1.56	275	P	Pn	09 43 43.9	+0.7
MHGZ	Mahia Peninsul	1.60	82	P	Pn	09 43 43.7	-0.1
KIW	Kapiti Island	1.63	207	P	Pn	09 43 43.0	-1.1
RIGZ	Rimuhau	1.63	65	P	Pn	09 43 44.5	+0.3
PRGZ	Paritu Road	1.64	73	P	Pn	09 43 44.1	-0.2
OPRZ	Ohinepanea	1.65	19	P	Pn	09 43 45.5	+1.1
MWZ	Matawai	1.68	51	P	Pn	09 43 45.0	+0.1
TMWZ	Te Maipa	1.70	179	P	Pn	09 43 43.4	-1.7
TOZ	Tahuroa Road	1.70	350	P	Pn	09 43 45.5	+0.4
TGRZ	Tauranga	1.70	11	P	Pn	09 43 45.8	+0.6
MTW	Mount Morrison	1.77	189	P	Pn	09 43 44.1	-2.0
CAW	Cannon Point	1.81	200	P	Pn	09 43 44.9	-1.7
TKGZ	Te Karaka	1.82	59	P	Pn	09 43 46.9	+0.2
TRWZ	Traveller	1.99	184	P	Pn	09 43 47.1	-2.0
PAWZ	Paruwai Farm	2.00	190	P	Pn	09 43 47.0	-2.3
RUGZ	Raukumara Rang	2.02	45	P	Pn	09 43 49.3	-0.3
DUWZ	D'Urville Isla	2.04	226	P	Pn	09 43 48.9	-0.9
CNGZ	Carnagh Statio	2.04	64	P	Pn	09 43 49.9	+0.1
WEL	Wellington	2.05	204	P	Pn	09 43 48.0	-2.0
TWGZ	Tauwhareparae	2.06	54	P	Pn	09 43 50.6	+0.6
MSWZ	Moikau Station	2.06	193	P	Pn	09 43 47.6	-2.5
SNZO	South Karori	2.10	205	P	Pn	09 43 48.7	-1.9
BHW	Baring Head	2.14	201	P	Pn	09 43 48.7	-2.5
TCW	Tory Channel	2.17	214	P	Pn	09 43 49.8	-1.8
PLWZ	Palliser	2.21	192	P	Pn	09 43 49.4	-2.8
HAZ	Te Kaha	2.23	43	P	Pn	09 43 51.5	-0.9
PUZ	Puketiti	2.30	55	P	Pn	09 43 52.8	-0.5
PKGZ	Pakihiroa	2.30	49	P	Pn	09 43 53.5	+0.1
TUWZ	Tuamarina	2.50	215	P	Pn	09 43 54.8	-1.2
AWAZ	Awhitu Peninsu	2.53	337	P	Pn	09 43 57.1	+0.6
WMGZ	Waiomatatini S	2.55	52	P	Pn	09 43 56.3	-0.5
ETAZ	East Tamaki Re	2.56	343	P	Pn	09 43 57.1	+0.2
NNZ	Nelson	2.62	226	P	Pn	09 43 56.4	-1.4
MXZ	Matakaoa Point	2.66	47	P	Pn	09 43 58.2	0.0
KUZ	Kuaotunu	2.66	357	P	Pn	09 43 58.5	+0.2
WTAZ	Waiatarua	2.67	337	P	Pn	09 43 59.4	+0.9
WIAZ	Waiheke Island	2.67	347	P	Pn	09 43 58.8	+0.3
MBAZ	Motutapu North	2.74	344	P	Pn	09 43 59.8	+0.3
BSWZ	Blackbirch Sta	2.76	213	P	Pn	09 43 57.2	-2.5
ABAZ	Army Bay	2.92	343	P	Pn	09 44 02.2	+0.4
QRZ	Quartz Range	2.92	240	P	Pn	09 44 01.1	-0.9
QRZ	Quartz Range	2.92	240	P	Pn	09 44 01.3	-0.6
QRZ	Quartz Range	2.92	240	P	Pn	09 44 01.0	-0.9
THZ	Tophouse	3.26	223	P	Pn	09 44 04.4	-2.1
KHZ	Kahutara	3.48	210	P	Pn	09 44 06.1	-3.4
KHZ	Kahutara	3.48	210	P	Pn	09 44 07.4	-2.2
KHZ	Kahutara	3.48	210	P	Pn	09 44 07.2	-2.4
WCZ	Waipu Caves	3.67	340	P	Pn	09 44 12.9	+0.7
DSZ	Denniston Nort	3.88	232	P	Pn	09 44 13.1	-1.9
GVZ	Greta Valley S	4.15	210	P	Pn	09 44 14.7	-4.0
LTZ	Lake Taylor	4.33	218	P	Pn	09 44 17.4	-3.9
OUZ	Omahuta	4.55	336	P	Pn	09 44 25.0	+0.7
OUZ	Omahuta	4.55	336	P	Pn	09 44 25.0	+0.7
INZ	Inchbonnie	4.71	224	P	Pn	09 44 24.0	-2.4
WACZ	Wakanui South	5.44	212	P	Pn	09 44 32.3	-4.1
GCSZ	Gaunt Creek Bo	5.71	225	P	Pn	09 44 42.0	+1.9
FOZ	Fox Glacier	6.13	226	P	Pn	09 44 46.2	+0.3
TMZ	Timaru	6.15	215	P	Pn	09 44 42.1	-4.1
JCZ	Jackson Bay	7.05	226	P	Pn	09 45 00.3	+1.6
CTZ	Chatham Island	7.10	130	P	Pn	09 44 58.1	-1.1

NOU 10 09:51:45.9, 14°.74S×167°.16E, h84^{km}**, mb3.8**/9**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	3.13	162	P	Pn	09 52 33.2	+0.1
KOUNC	Koumac, New Ca	6.39	205	P	Pn	09 53 18.0	+0.5
YATNC	Mamie plateau,	7.28	182	P	Pn	09 53 27.8	-1.9
DZM	Mont Dzumac	7.32	185	P	Pn	09 53 30.3	0.0
OUENC	Ouen Island, N	7.64	182	P	Pn	09 53 35.9	+1.3
PINNC	Pines Island,	7.84	178	P	Pn	09 53 37.1	-0.1

IDC 10 10:03:33.2±9.7**, 7°.19N×95°.19E, h0**^{km}**, mb3.5**/3**, mb1 3.7**/3**, mb1mx3.4**/38**, mbtmp3.5**/3**, Error ellipse: s-maj=529.9km s-min=28.7km az=58.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	40.99	346	P	P	10 11 17.8	-0.1
	0.6nm,0.7s,baz=164,slow=9.4,SNR=5.8						
WRA	Warramunga Arr	47.02	126	P	P	10 12 07.1	+0.4
	0.6nm,0.7s,baz=305,slow=9.3,SNR=4.8						
ASAR	Alice Springs	48.68	130	P	P	10 12 19.1	-0.6
	0.6nm,0.8s,baz=313,slow=7.3,SNR=7.1						

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*DNK **10** 10:56:37.6±0.4, 59°.00N×18°.19E, h0^{km}, ML2.2(UPP), Explosion*

*UPP **10** 10:56:37.1±0.2, 58°.99N×18°.21E, h0^{km}, ML2.0, Explosion*

*IDC **10** 10:56:40.4±1.2, 59°.36N×18°.16E, h0^{km}, mb1 3.3/3, mb1mx3.1/31, mbtmp3.2/3, ML2.0/3, Error ellipse: s-maj=14.5km s-min=3.1km az=175.0*

ISC 10 10:56:37.0±1.0**, 59°.01N**±0°.04×**18°.17E**±0°.05**, h0**^{km}**, n26,** $\sigma 0^{s}$**54**/35**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
NRTU	Norrtaelje	0.71	19	P	Pg	10 56 50.7	0.0
NRTU				S	Sg	10 57 00.0	+0.1
NRTU	Norrtaelje	0.71	19	P	Pg	10 56 50.7	0.0
NRTU				S	Sg	10 57 00.0	+0.1
UPP	Uppsala	0.90	342	P	Pg	10 56 54.6	+0.4
VIKU	Vikbolandet	0.92	237	P	Pg	10 56 54.5	-0.1
VIKU				S	Sg	10 57 06.7	+0.3
VIKU	Vikbolandet	0.92	237	P	Pg	10 56 54.5	-0.1
VIKU				S	Sg	10 57 06.7	+0.3
ESKU	Eskilstuna	0.94	285	P	Pg	10 56 54.9	-0.2
ESKU	Eskilstuna	0.94	285	P	Pg	10 56 54.9	-0.2
FIBU	Brunna	0.99	335	P	Pg	10 56 56.0	0.0
FIBU				S	Sg	10 57 09.3	+0.5
FIBU	Brunna	0.99	335	P	Pg	10 56 56.0	0.0
FIBU				S	Sg	10 57 09.3	+0.5
BACU	Backbrunna	1.01	328	P	Pg	10 56 56.3	0.0
BACU	Backbrunna	1.01	328	P	Pg	10 56 56.3	0.0
FLYU	Flymyra	1.14	353	P	Pg	10 56 58.6	-0.1
FLYU	Flymyra	1.14	353	P	Pg	10 56 58.6	-0.1
OSTU	Oestervaala	1.34	337	P	Pg	10 57 02.3	-0.3
OSTU				S	Sg	10 57 20.2	+0.3
OSTU	Oestervaala	1.34	337	P	Pg	10 57 02.3	-0.3
OSTU				S	Sg	10 57 20.2	+0.3
GRAU	Graesoe	1.35	8	P	Pg	10 57 02.3	-0.4
GRAU	Graesoe	1.35	8	P	Pg	10 57 02.3	-0.4
LNKU	Linkoeping	1.60	242	P	Pn	10 57 06.6	+0.1
LNKU	Linkoeping	1.60	242	P	Pn	10 57 06.6	+0.1
VSTU	Vaestervik	1.60	213	P	Pn	10 57 06.5	+0.1
VSTU	Vaestervik	1.60	213	P	Pn	10 57 06.5	+0.1
ASKU	Askersund	1.73	268	P	Pn	10 57 09.0	+0.7
ASKU	Askersund	1.73	268	P	Pn	10 57 09.0	+0.7
NOA	NORSAR Array B	4.04	303	Pn	Pn	10 57 40.6	+0.5
	0.0nm,0.3s,baz=168,slow=13,SNR=7.0						
NOA				Lg	Lg	10 58 43.7	
	0.1nm,0.3s,baz=131,slow=24,SNR=5.2						
FINES	FINESS Array B	4.64	55	Pn	Pn	10 57 49.0	+0.8
	0.2nm,0.3s,baz=244,slow=12,SNR=9.0						
FINES				Sn	Sn	10 58 43.2	+0.5
	0.8nm,0.3s,baz=242,slow=22,SNR=10						
FINES				Lg	Lg	10 59 01.3	
	1.0nm,0.3s,baz=244,slow=26,SNR=9.2						
ARCES	ARCESS Array B	11.03	14	Pn	Pn	10 59 13.4	-2.3
	baz=188,slow=14,SNR=7.8						

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*NEIC **10** 11:43:46.4±1.7, 29°.44S±0°.05×72°.23W±0°.06, h4^{km}±5^{km}, mb4.5/2, Mwr4.2/32, ML4.1(GUC), Error ellipse: s-maj=8.2km s-min=5.6km az=52.0*

*NEIC **10** 11:43:46.4, 29°.44S×72°.23W, h13^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.47; $M_{\theta\theta}$0.67; $M_{\phi\phi}$-2.14; $M_{r\theta}$0.67; $M_{\theta\phi}$-0.47; $M_{\phi r}$-0.61; Fault* *plane solution: M₀2.15000×10^{15} NP1:φ$_s$162.46000°, δ59.74000°,λ54.03000°. NP2:φ$_s$37.69000°,δ45.65000°, λ135.19000°. Principal axes: T 1.9887, Plg58.0000°, Azm20.0000°; N 0.2936, Plg30.0000°, Azm183.0000°; P -2.2824, Plg8.0000°, Azm277.0000°;*

IDC ***10*** *11:43:48.1±1.0,29°.54S×71°.97W,h0^{km},mb3.9/5, mb1 4.1/9,mb1mx3.9/30,mbtmp3.9/9,ML3.7/4,MS3.1/5, Ms1 3.1/5,ms1mx3.0/19 Error ellipse: s-maj=34.0km s-min=20.2km az=98.0*

GUC ***10*** *11:43:49.8±0.8,29°.59S×72°.15W,h25^{km}±14^{km},ML4.1*

SJA ***10*** *11:43:50.0,29°.31S×72°.14W,h10^{km},ML4.3*

ISC 10 11:43:47.3±1.3,**29°.56S**±0°.04×**72°.21W**±0°.06,**h5**^{km}±8^{km}, **n82,**σ**1ˢ.94**/85,**mb4.2**/6,**4C,Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO05	La Serena	0.92	113	⇑iP	Pg	11 44 05.7	+0.7
CO05				iS	Sg	11 44 17.3	+0.3
CO05				IAML		11 44 19.7	
	comp=E,5µm,0.4s						
CO05	La Serena	0.92	113		Pg	11 44 05.6	+0.6
CO05				Sg	Sg	11 44 17.0	+0.1
CO06	Fray Jorge	1.22	156	eP	Pn	11 44 10.6	-0.5
CO06				iS	Sb	11 44 25.3	-1.7
CO06	Fray Jorge	1.22	156		Pn	11 44 10.7	-0.3
GO04	Tololo Observa	1.37	117	⇑iP	Pn	11 44 13.1	-0.3
GO04				iS	Sb	11 44 30.1	-1.5
GO04				IAML		11 44 43.0	
	comp=N,11µm,0.5s						
GO04	Tololo Observa	1.37	117		Pn	11 44 13.1	-0.3
GO04	Tololo Observa	1.37	117	iP	Pn	11 44 13.0	-0.3
LCO	Las Campanas	1.43	68	⇑iP	Pn	11 44 13.5	-0.6
LCO				iS	Sn	11 44 32.6	-0.8
LCO	Las Campanas	1.43	68		Pn	11 44 13.5	-0.6
LCO	Las Campanas	1.43	68	iP	Pn	11 44 13.0	-1.1
AC04	Llanos de Chal	1.68	37	⇑iP	Pn	11 44 16.0	-1.3
AC04				eS	Sn	11 44 36.3	-2.9
AC04	Llanos de Chal	1.68	37		Pn	11 44 15.9	-1.4
AC04	Llanos de Chal	1.68	37	iP	Pn	11 44 16.0	-1.3
CO03	El Pedregal	1.84	135	Pn	Pn	11 44 20.1	+0.4
AROD	Rodeo	2.46	105	iP	Pn	11 44 30.0	+1.7
GO03	Copiap	2.62	42	eP	Pn	11 44 29.8	-0.5
GO03				IAML		11 45 18.6	
	comp=N,682nm,0.7s						
GO03	Copiap	2.62	42	Pn	Pn	11 44 29.6	-0.7
GO03	Copiap	2.62	42	iP	Pn	11 44 30.0	-0.3
ACCO	Cerro Coronel	2.92	111	iP	Pb	11 44 38.0	-2.0
VA06	Catapilco	3.10	166	eP	Pn	11 44 37.5	+0.6
VA06				eS	Sn	11 45 12.3	-2.0
VA06				IAML		11 45 35.3	
	comp=E,1µm,0.9s						
RTLS	Leoncito	3.36	132	iP	Pb	11 44 45.0	-2.6
VA03	San Esteban	3.50	156	eP	Pn	11 44 45.2	+2.8
VA03				eS	Sn	11 45 23.1	-1.3
VA03				IAML		11 45 49.6	
	comp=E,329nm,0.5s						
VA03	San Esteban	3.50	156		Pn	11 44 44.6	+2.1
VA03	San Esteban	3.50	156	iP	Pn	11 44 46.0	+3.5
ROCH	El Roble	3.56	164	eP	Pn	11 44 44.1	+0.7
ROCH				eS	Sn	11 45 25.0	-1.0
ROCH				IAML		11 45 53.4	
	comp=N,262nm,0.4s						
AUSP	Uspallata	3.60	138	iP	Pn	11 44 48.0	+3.9
MT02	Curacav	3.80	166	eP	Pn	11 44 47.0	+0.4
MT02	Curacav	3.80	166		Pn	11 44 47.6	+1.0
PEL	Peldehue	3.81	160		Pn	11 44 47.0	+0.3
PEL	Peldehue	3.81	160	iP	Pb	11 44 53.0	-2.0
ASAL	Salagasta	4.19	137	iP	Pn	11 44 56.0	+4.0
AVFE	Valle Fertil	4.26	106	iP	Pn	11 44 56.0	+3.0
MT09	Talagante	4.33	166	eP	Pn	11 44 55.2	+1.2
MT09	Talagante	4.33	166		Pn	11 44 55.4	+1.4
MT01	Popeta	4.37	169		Pn	11 44 54.4	0.0
MT01	Popeta	4.37	169	iP	Pb	11 45 00.0	-4.6
ACLC	CERRO LA CRUZ	4.59	90	iP	Pn	11 45 00.0	+2.5
LMEL	Las Melosas	4.61	159	eP	Pn	11 44 59.8	+2.0
BO04	La Punta	4.63	163	eP	Pn	11 44 59.4	+1.5
BO01	Tunca	4.92	169	eP	Pn	11 45 03.8	+1.9
BO01	Tunca	4.92	169	iP	Pn	11 45 08.0	+6.1
APLL	PUNTA DE LOS L	5.00	101	iP	Pn	11 45 07.0	+3.9
PB14	IPOC Station P	5.17	19	Pn	Pn	11 45 02.9	-2.7
BO02	Sierra Bellavi	5.36	167		Pn	11 45 09.2	+1.2
GO05	Huala	5.44	178	Pn	Pn	11 45 08.6	-0.5
PB10	IPOC Station P	6.20	14	Pn	Pn	11 45 16.9	-2.6
PB10	IPOC Station P	6.20	14	iP	Pn	11 45 18.0	-1.5
PB15	IPOC Station P	6.78	22		Pn	11 45 25.4	-2.3
PB15	IPOC Station P	6.78	22	iP	Pn	11 45 27.0	-0.7
H03N1	Juan Fernandez	6.91	234	T	T	11 53 24.3	
	baz=64,slow=71,SNR=228						
PB05	IPOC Station P	6.92	16	iP	Pn	11 45 27.0	-2.5
H03N2	Juan Fernandez	6.92	234	T	T	11 53 23.7	
	baz=64,slow=71,SNR=296						
H03N3	Juan Fernandez	6.92	234	T	T	11 53 27.8	
	baz=64,slow=71,SNR=238						
PB06	IPOC Station P	7.22	20	Pn	Pn	11 45 31.0	-2.7
PB04	IPOC Station P	7.43	15	Pn	Pn	11 45 33.5	-3.1
LVC	Limon Verde	7.53	24	Pn	Pn	11 45 36.1	-1.9
	comp=N,0.4nm,0.3s,baz=34,slow=18,SNR=3.1						
LVC				LR	LR	11 47 45.7	
	comp=N,42nm,21.5s,baz=212,slow=32						
LVC				Lg	Lg	11 47 45.9	
	comp=N,3.6nm,0.3s,baz=301,slow=22,SNR=6.5						
LVC	Limon Verde	7.53	24	Pn	Pn	11 45 35.9	-2.2
PB07	IPOC Station P	8.07	16	Pn	Pn	11 45 42.1	-3.3
PB01	IPOC Station P	8.83	17	Pn	Pn	11 45 52.7	-3.0
TA01	Diego Aracena	9.14	12	Pn	Pn	11 45 56.5	-3.4
LC01	Cunco	9.32	178	Pn	Pn	11 46 03.4	+1.0
PB11	IPOC Station P	10.02	14	Pn	Pn	11 46 09.0	-3.2
PSGCX	Pisagua	10.10	11	Pn	Pn	11 46 10.2	-2.9
PLCA	Paso Flores	11.23	174	Pn	Pn	11 46 29.0	+0.4
	comp=N,0.1nm,0.3s,baz=332,slow=14,SNR=3.7						
PLCA				LR	LR	11 50 56.7	
	comp=N,162nm,20.7s,baz=352,slow=38						
PLCA	Paso Flores	11.23	174	Pn	Pn	11 46 30.2	+1.6
CPUP	Villa Florida	13.54	80	LR	LR	11 52 21.2	
	comp=N,114nm,19.7s,baz=224,slow=38						
ITQB	Itaqui	13.56	94	Pn	Pn	11 46 59.4	-1.0
LPAZ	La Paz	13.73	17	Pn	Pn	11 47 03.9	+0.7
	comp=N,0.1nm,0.3s,baz=181,slow=7.9,SNR=9.0						
LPAZ				LR	LR	11 53 17.7	
	comp=N,66nm,21.6s,baz=232,slow=42						
SIV	San Ignacio	16.95	40	Pn	Pn	11 47 44.5	-0.8
	comp=N,0.7nm,0.3s,baz=222,slow=11,SNR=19						
SIV				LR	LR	11 54 52.2	
	comp=N,147nm,18.7s,baz=272,slow=40						
BDFB	Brasilia	26.21	63	P	P	11 49 22.2	-1.1
	comp=N,3.7nm,0.6s,baz=230,slow=8.9,SNR=5.2						
VNA3	Neumayer Olymp	53.53	159	P	P	11 53 03.4	-5.2
VNA1	Neumayer--Stat	53.83	158	P	P	11 53 09.9	-0.8
VNA2	Neumayer--Watz	54.17	158	P	P	11 53 09.2	-4.0
SNAA	Sanae	55.76	159	P	P	11 53 25.7	+1.0
SNAA	Sanae	55.76	159	P	P	11 53 25.5	+0.7
	comp=N,1.2nm,0.8s,baz=282,slow=8.2,SNR=5.2						
SNAA	Sanae	55.76	159	P	P	11 53 25.5	+0.7
SNAA				IAmb	IAmb	11 53 54.2	
	comp=Z,4.3nm,1.2s						
QSPA	South Pole Qui	60.67	180	P	P	11 54 01.9	+2.6
QSPA				IAmb	IAmb	11 54 07.9	
	comp=Z,7.8nm,1.5s						
TXAR	Lajitas Array	65.81	330	P	P	11 54 34.4	+0.7
	comp=Z,0.2nm,0.8s,baz=165,slow=7.4,SNR=1.9						
PDAR	Pinedale Array	79.74	333	P	P	11 55 59.2	+2.8
	comp=Z,0.3nm,0.7s,baz=92,slow=4.5,SNR=2.0						
TORD	Torodi Ar. Bea	82.86	71	P	P	11 56 14.4	+1.1
	comp=Z,4.6nm,0.8s,baz=257,slow=4.7,SNR=21						
ZALV	Zalesovo Beam	150.46	28	PKP	PKPdf	12 03 35.9	+1.6
	comp=Z,0.8nm,0.6s,baz=258,slow=4.4,SNR=4.1						
ZALV				PKPbc	pPKPbc	12 03 41.3	+1.7
	comp=Z,6.3nm,0.8s,baz=302,slow=3.2,SNR=14						
MKAR	Makanchi Array	153.76	42	PKPbc	PKiKP	12 03 48.8	+1.4
	comp=Z,1.0nm,0.8s,baz=336,slow=2.7,SNR=8.7						

IDC ***10*** *12:02:54.8±1.1,8°.17S×125°.45E,h0^{km},mb3.9/5, mb1 4.1/9,mb1mx3.9/36,mbtmp4.0/9,ML3.9/4,MS3.1/5, Ms1 3.1/5,ms1mx2.7/29,Error ellipse: s-maj=44.7km s-min=18.6km az=75.0*

NEIC ***10*** *12:02:56.7±1.2,8°.31S±0°.07×125°.35E±0°.08,h12^{km}±6^{km}, mb4.4/6,Error ellipse: s-maj=12.0km s-min=10.0km az=100.0*

DJA ***10*** *12:02:56.5±0.3,8°S±2°×12°5E±°,h10^{km},M4.2/10,mb4.4/8, mB5.0/3,MLv4.1/10,Mw(mB)4.4/3*

ISC 10 12:02:58.7±0.6,**8°.39S**±0°.05×**125°.18E**±0°.08,**h24**^{km},**n40,** σ**1ˢ.50**/38,**mb4.4**/8,**Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	Soe	1.62	213	Pg	Pb	12 03 28.2	+0.2
SOEI	Soe	1.62	213		Pn	12 03 27.5	+1.6
BATI	Baumata	2.34	220	Pn	Pb	12 03 39.1	-1.1
	16nm,0.3s,baz=137,slow=3.0,SNR=18						
BATI				Sn	Sb	12 04 08.8	+0.1
	15nm,0.3s,baz=120,slow=23,SNR=11						
BATI				LR	LR	12 05 03.7	
	comp=Z,508nm,18.9s,baz=38,slow=48						
BATI	Baumata	2.34	220	P	Pn	12 03 35.5	-0.2
BATI				Pg	Pb	12 03 41.0	+0.8
MMRI	Maumere	2.92	265	P	Pn	12 03 42.8	-0.8
MMRI	Maumere	2.92	265		Pn	12 03 45.1	+1.6
EDFI	Ende, Flores	3.46	264	P	Pn	12 03 49.7	-1.5
BSSI	Bau Bau, Buton	5.16	295	P	Pn	12 04 13.4	-1.0
	0.1nm18nm,0.8s						
SANI	Sanana	6.35	7	P	Pn	12 04 30.8	-0.1
	0.1nm366nm11nm,0.7s						
PLAI	Plampang	7.33	266	P	Pn	12 04 43.0	-1.3
	0.1nm46nm,1.0s						
APSI	Ampana	8.22	335	P	Pn	12 04 55.4	-1.1
	18nm,0.9s						
FAKI	Fak Fak	8.89	53	P	Pn	12 05 06.7	+0.9
	9.8nm,1.6s						
FAKI	Fak Fak	8.89	53	Pn	Pn	12 05 02.2	-3.6
KMSI	Cibinong	8.99	352	P	Pn	12 05 06.2	-0.9
SIJI	Sorong	9.63	39	LR	LR	12 09 45.9	
	comp=Z,36nm,19.6s,baz=40,slow=44						
FITZ	Fitzroy Crossi	9.66	177	Pn	Pn	12 05 16.8	+0.6
	0.8nm,0.3s,baz=5.0,slow=11,SNR=4.7						
FITZ				Sn	Sn	12 07 01.2	-2.8
TOLI2	Tolitoli	10.41	335	Pn	Pn	12 05 26.6	+0.1
WB0	Warramunga Arr	14.40	143		Pn	12 06 20.1	-1.1
WRAB	Tennant Creek	14.51	143		Pn	12 06 20.6	-2.0
WRA	Warramunga Arr	14.51	143	Pn	Pn	12 06 20.0	-2.7
	0.5nm,0.3s,baz=317,slow=13,SNR=38						
WRA				Sn	Sn	12 08 55.6	-7.2
	0.2nm,0.3s,baz=283,slow=16,SNR=3.5						
WRA	Warramunga Arr	14.51	143		Pn	12 06 20.9	-1.8
AS31	Alice Springs	17.34	152	P	Pn	12 07 00.3	+1.1
ASAR	Alice Springs	17.34	152	P	Pn	12 06 59.2	0.0
	0.4nm,0.3s,baz=323,slow=11,SNR=35						
ASAR				S	Sn	12 10 08.6	-3.0
	0.1nm,0.3s,baz=318,slow=21,SNR=6.1						
ASAR				LR	LR	12 14 48.4	
	comp=Z,106nm,21.3s,baz=278,slow=41						
CMAR	Chiang Mai Arr	37.17	316	P	P	12 10 08.3	+0.2
	0.8nm,0.6s,baz=145,slow=6.2,SNR=6.5						
CMAR				LR	LR	12 26 42.4	
	comp=Z,29nm,19.7s,baz=166,slow=38						
H08S2	Diego Garcia H	52.14	267	T	T	13 08 16.2	
	baz=95,slow=76,SNR=44						
H08S3	Diego Garcia H	52.15	267	T	T	13 08 17.0	
	baz=95,slow=76,SNR=62						
H08S1	Diego Carcia H	52.16	267	T	T	13 08 17.6	
	baz=95,slow=76,SNR=19						
KLR	Kul'dur	57.67	5	LR	LR	12 35 03.6	
	comp=Z,15nm,20.7s,baz=120,slow=34						
SONM	Songino Array	58.40	345	P	P	12 12 52.0	-0.3
	0.4nm,0.6s,baz=171,slow=9.8,SNR=2.8						
MK31	Makanchi Array	66.88	329	P	P	12 13 48.1	-0.7
MK31				IAmb	IAmb	12 13 49.5	
	comp=Z,3.7nm,1.0s						
MKAR	Makanchi Array	66.88	329	P	P	12 13 48.5	-0.4
	comp=Z,3.3nm,0.9s,baz=134,slow=8.1,SNR=24						
MKAR	Makanchi Array	66.88	329	P	P	12 13 48.3	-0.5
ZAA0	Zalesovo Array	70.81	336	P	P	12 14 11.8	-1.3
ZAA0				IAmb	IAmb	12 14 13.2	
	comp=Z,3.2nm,0.9s						
ZALV	Zalesovo Beam	70.81	336	P	P	12 14 11.8	-1.3
	comp=Z,2.6nm,0.8s,baz=126,slow=4.6,SNR=11						
ZALV	Zalesovo Beam	70.81	336	P	P	12 14 11.4	-1.7
KURK	Kurchatov	71.30	331	P	P	12 14 15.4	-0.7
VNDA	Vanda	71.69	172	P	P	12 14 20.7	+2.5
	comp=Z,0.2nm,0.6s,baz=340,slow=7.5,SNR=2.0						
VNDA	Vanda	71.69	172	P	P	12 14 20.5	+2.4
VNDA				IAmb	IAmb	12 14 32.2	
	comp=Z,1.4nm,1.3s						
ABKAR	Akbulak array	80.68	323	P	P	12 15 09.1	-0.6
QSPA	South Pole Qui	81.59	180	P	P	12 15 17.5	+3.0
QSPA				IAmb	IAmb	12 15 34.5	
	comp=Z,6.8nm,1.4s						

IDC 10 12:05:18.0±28.0,**21°.07S**×**174°.34W,h0**^{km},**mb4.1**/4, **mb1 4.2**/4,**mb1mx3.8**/24,**mbtmp4.1**/4,**Error ellipse: s-maj=513.7km s-min=159.2km az=74.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	36.84	264	P	P	12 12 28.6	+0.4
	3.1nm,0.5s,baz=86,slow=10,SNR=12						
STKA	Stephens Creek	40.64	245	P	P	12 12 60.0	0.0
	1.0nm,0.4s,baz=84,slow=10,SNR=1.6						
ASAR	Alice Springs	47.72	257	P	P	12 13 56.8	-0.2
	1.2nm,0.7s,baz=90,slow=7.0,SNR=12						
WRA	Warramunga Arr	47.91	262	P	P	12 13 57.8	-0.6
	0.8nm,0.5s,baz=102,slow=8.7,SNR=9.2						

WEL 10 12:11:02.3±0.5,**44°S**±3°×**17°2E**±°,**h4**^{km}±2^{km},**M3.4**/10, **ML3.6**/10,**MLv3.4**/10,**Error ellipse: s-maj=0.0km s-min=0.0km az=171.4,South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RACZ	Rakaia	0.19	242	S	Sg	12 11 09.7	+1.2
MQZ	McQueen's Vall	0.22	108	P	Pg	12 11 06.9	+0.4
MQZ				S	Sg	12 11 10.0	+0.6
OXZ	Oxford	0.40	322	P	Pg	12 11 10.2	+0.3
OXZ				S	Sg	12 11 15.9	+0.9
AKCZ	Akaroa Harbour	0.46	121	P	Pg	12 11 11.6	+0.6
WACZ	Wakanui South	0.49	231	P	Pb	12 11 12.6	-0.8
WACZ				S	Sg	12 11 19.2	+1.1
AMCZ	Amberley	0.51	24	P	Pb	12 11 13.2	-0.6
OKCZ	Okains Bay	0.51	100	P	Pg	12 11 12.7	+0.6
OKCZ				S	Sg	12 11 20.0	+1.3
GVZ	Greta Valley S	0.83	36	P	Pg	12 11 18.4	+0.2
LTZ	Lake Taylor	0.86	355	P	Pg	12 11 19.2	+0.4
LTZ				S	Sb	12 11 31.1	-0.5
ARCZ	Arundel	0.92	250	P	Pg	12 11 20.0	+0.1
ARCZ				S	Sg	12 11 32.5	+0.7
RPZ	Rata Peaks	0.96	265	P	Pg	12 11 20.8	+0.1
INZ	Inchbonnie	1.14	323	P	Pg	12 11 24.2	+0.1
INZ				S	Sg	12 11 39.2	+0.4
TMZ	Timaru	1.23	232	P	Pg	12 11 24.6	-1.3
WVZ	Waitaha Valley	1.32	295	P	Pn	12 11 26.3	-1.1
KHZ	Kahutara	1.49	35	P	Pn	12 11 27.9	-1.9
GCSZ	Gaunt Creek Bo	1.52	282	P	Pn	12 11 29.6	-0.6
LBZ	Lake Benmore	1.74	244	P	Pn	12 11 32.1	-1.2
FOZ	Fox Glacier	1.86	272	P	Pn	12 11 34.5	-0.4
THZ	Tophouse	1.92	12	P	Pn	12 11 34.0	-1.8
DSZ	Denniston Nort	1.94	347	P	Pn	12 11 34.7	-1.3
BSWZ	Blackbirch Sta	2.22	31	P	Pn	12 11 38.4	-1.5
NNZ	Nelson	2.53	18	P	Pn	12 11 43.0	-1.1
JCZ	Jackson Bay	2.63	259	P	Pn	12 11 44.4	-1.1
WKZ	Wanaka	2.69	243	P	Pn	12 11 44.7	-1.6
EAZ	Earnscleugh	2.71	233	P	Pn	12 11 45.0	-1.6
TCW	Tory Channel	2.81	31	P	Pn	12 11 46.6	-1.4
QRZ	Quartz Range	2.81	2	P	Pn	12 11 46.7	-1.3
WEL	Wellington	2.95	38	P	Pn	12 11 47.8	-2.0
PLWZ	Palliser	2.97	47	P	Pn	12 11 47.6	-2.6
TUZ	Tuapeka	3.03	219	P	Pn	12 11 50.2	-0.7
MSWZ	Moikau Station	3.08	45	P	Pn	12 11 48.9	-2.8
CAW	Cannon Point	3.22	39	P	Pn	12 11 51.0	-2.7
MSZ	Milford Sound	3.36	251	P	Pn	12 11 53.7	-1.8
MSZ				P	Pb	12 11 53.8	-8.6
MTW	Mount Morrison	3.40	44	P	Pn	12 11 53.2	-2.9
MLZ	Mavora Lakes	3.50	239	P	Pn	12 11 55.6	-1.8
OGWZ	Otaki Gorge	3.50	37	P	Pn	12 11 55.6	-1.9
SYZ	Scrubby Hill	3.69	217	P	Pn	12 11 59.0	-1.0
MRZ	Mangatainoka R	3.81	40	P	Pn	12 11 59.0	-2.8
WHZ	Wether Hill Ro	3.87	233	P	Pn	12 11 59.9	-2.7
APZ	The Paps	4.45	223	P	Pn	12 12 09.5	-1.0
PREZ	Palmer Road	4.50	18	P	Pn	12 12 11.3	+0.1
KHEZ	Kahui Hut	4.51	16	P	Pn	12 12 11.5	+0.1
PKE	Pukeiti	4.60	16	P	Pn	12 12 12.6	-0.1
BHHZ	Black Hill Sta	4.99	35	P	Pn	12 12 15.9	-2.0
HIZ	Hauiti	5.45	21	P	Pn	12 12 22.8	-1.5
ARHZ	Aropaoanui	5.58	40	P	Pn	12 12 24.5	-1.5
MTHZ	Maungataniwha	5.85	37	P	Pn	12 12 28.9	-0.9

IDC ***10*** *12:12:07.5±0.5,2°.56N×123°.16E,h0^{km},mb3.6/4, mb1 3.8/4,mb1mx3.5/38,mbtmp3.6/4,Error ellipse: s-maj=97.8km s-min=6.3km az=62.0*

DJA ***10*** *12:12:47.9±0.6,3°N±7°×12°4E±°,h365^{km}±6^{km},M4.0/15, mb4.2/9,mB4.6/5,MLv4.1/15,Mw(mB)3.8/5*

ISC 10 12:12:49.4±1.8,**2°.2N**±0°.2×**123°.77E**±0°.10,**h350**^{km},**n24,** σ**2ˢ.21**/23,**mb3.0**/4,**Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GTOI	Gorontalo	1.75	206	P	Pn	12 13 41.5	+2.4
MRSI	Marisa	2.52	227	P	Pn	12 13 46.9	+2.2
TOLI2	Tolitoli	3.19	250	P	Pn	12 13 52.1	+1.6
LUWI	Luwuk	3.39	197	P	Pn	12 13 53.6	+1.1
LUWI	Luwuk	3.39	197	P	Pn	12 13 54.8	+2.3
APSI	Ampana	3.76	214	P	Pn	12 13 58.6	+2.5
TNTI	Ternate	3.87	112	P	Pn	12 13 58.2	+1.1
TNTI				S	S	12 14 54.3	+2.6
TNTI	Ternate	3.87	112	P	Pn	12 13 58.6	+1.5
MPSI	Mapaga	4.30	244	P	Pn	12 14 02.8	+1.2
LBMI	Labuha	4.68	127	P	Pn	12 14 06.9	+1.2
SANI	Sanana	4.78	152	P	Pn	12 14 07.3	+0.6
	0.2nm793nm41nm,0.7s						
SANI	Sanana	4.78	152	P	Pn	12 14 07.4	+0.7
TTSI	Tana Toraja	6.55	217	P	Pn	12 14 28.8	+2.1
	0.2nm638nm40nm,0.5s						
MSAI	Masohi	7.55	137	P	Pn	12 14 41.6	+3.2
SWI	Sorong	8.09	112	P	Pn	12 14 45.3	+0.6
	1µm30nm,0.9s						
BKSI	Bulukumba	8.33	206	P	Pn	12 14 49.0	+1.4
	15nm,0.7s						
KBKI	Kotabaru	9.37	234	P	Pn	12 15 01.4	+1.4
	16nm,1.0s						
FAKI	Fak Fak	9.89	121	P	Pn	12 15 05.9	-0.3
FAKI	Fak Fak	9.89	121	P	Pn	12 15 06.1	-0.1
BBKI	Banjar Baru	10.56	238	P	Pn	12 15 15.2	+1.0
WRA	Warramunga Arr	24.34	155	P	P	12 17 32.4	-4.7
	0.3nm,0.3s,baz=334,slow=10,SNR=9.8						
ASAR	Alice Springs	27.55	160	P	P	12 18 01.6	-4.0
	0.1nm,0.2s,baz=342,slow=7.6,SNR=2.8						
SONM	Songino Array	47.86	344	P	P	12 20 43.7	-10
	0.3nm,0.4s,baz=160,slow=8.7,SNR=2.2						
MKAR	Makanchi Array	57.16	327	P	P	12 21 51.7	-9.1
	0.9nm,0.3s,baz=124,slow=7.7,SNR=23						

IDC 10 12:18:50.8±1.6,**30°.00N**×**99°.52E,h0**^{km},**mb3.6**/5, **mb1 3.7**/5,**mb1mx3.5**/42,**mbtmp3.6**/5,**MS2.9**/1,**Ms1 2.9**/1, **ms1mx2.4**/28,**Error ellipse: s-maj=221.5km s-min=21.3km az=58.0,Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	21.45	326	P	P	12 23 40.0	-0.6
	0.7nm,0.7s,baz=134,slow=10,SNR=7.6						
TLY	Talaya	21.88	7	LR	LR	12 33 08.7	
	comp=Z,28nm,18.3s,baz=52,slow=39						
KURBB	Kurchatov Arra	25.92	329	P	P	12 24 25.8	+1.3
	0.3nm,0.2s,baz=138,slow=9.9,SNR=2.1						
ZALV	Zalesovo Beam	26.20	340	P	P	12 24 26.4	-0.6
	0.7nm,0.4s,baz=144,slow=10.0,SNR=3.9						
WRA	Warramunga Arr	59.91	142	P	P	12 28 58.6	-0.2
	0.4nm,0.7s,baz=330,slow=7.5,SNR=5.4						
ASAR	Alice Springs	62.75	144	P	P	12 29 18.1	+0.1
	0.1nm,0.3s,baz=327,slow=6.6,SNR=1.9						

UPP ***10*** *12:20:36.7±0.3,55°.98N×15°.55E,h0^{km},ML2.2,Explosion*

DNK ***10*** *12:20:37.3±2.0,55°.98N×15°.58E,h0^{km},ML3.6,Explosion*

ISC 10 12:20:36.3±0.9,**55°.97N**±0°.03×**15°.53E**±0°.03,**h0**^{km},**n23,** σ**0ˢ.43**/43,**Baltic Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BLEU	Blekinge	0.37	25	iP	Pg	12 20 43.5	0.0
BLEU				P	Pg	12 20 43.6	+0.1
BLEU				AMP		12 20 44.0	
	comp=Z,1µm,0.1s						
BLEU				S	Sg	12 20 48.2	-0.1
BLEU				iS	Sg	12 20 48.3	-0.1
BLEU	Blekinge	0.37	25	P	Pg	12 20 43.6	+0.1
BLEU				S	Sg	12 20 48.2	-0.1
BSD	Bornholm Skovb	0.92	202	iP	Pg	12 20 54.2	+0.2
BSD				iS	Sb	12 21 08.7	+0.7
VXJU	Vaexsjoe	1.01	341	P	Pg	12 20 55.5	-0.2
VXJU	Vaexsjoe	1.01	341	P	Pg	12 20 55.5	-0.2
DEL	Delary	1.05	299	P	Pg	12 20 56.4	-0.1
DEL				iP	Pg	12 20 56.4	-0.1
DEL				S	Sg	12 21 10.4	+0.2
DEL				iS	Sb	12 21 11.1	-0.6
DEL	Delary	1.05	299	P	Pg	12 20 56.4	-0.1
DEL				S	Sg	12 21 10.4	+0.2
LUNU	Lund	1.22	255	P	Pg	12 20 59.6	-0.1
LUNU				iP	Pb	12 20 59.7	-0.5
LUNU				iS	Sn	12 21 18.1	+0.2
LUNU	Lund	1.22	255	P	Pg	12 20 59.6	-0.1
BJUU	Bjuv	1.41	275	P	Pn	12 21 02.6	-0.6
BJUU				iP	Pg	12 21 02.7	-0.6
BJUU				S	Sb	12 21 22.1	+0.2
BJUU				iS	Sn	12 21 22.9	+0.4
BJUU	Bjuv	1.41	275	P	Pn	12 21 02.6	-0.6
BJUU				S	Sb	12 21 22.1	+0.2
BYXU	Byxelkrok	1.56	31	P	Pn	12 21 04.9	-0.4
BYXU				S	Sn	12 21 25.7	-0.4
BYXU	Byxelkrok	1.56	31	P	Pn	12 21 04.9	-0.4
BYXU				S	Sn	12 21 25.7	-0.4
EKSU	Eksjoe	1.61	356	P	Pn	12 21 06.0	0.0
EKSU	Eksjoe	1.61	356	P	Pn	12 21 06.0	0.0
GNOU	Gnosjoe	1.65	324	P	Pn	12 21 06.8	+0.3
GNOU	Gnosjoe	1.65	324	P	Pn	12 21 06.8	+0.3
VSTU	Vaestervik	1.79	18	P	Pn	12 21 08.9	+0.5
VSTU	Vaestervik	1.79	18	P	Pn	12 21 08.9	+0.5
FABU	Falkenberg	1.87	305	iP	Pb	12 21 10.7	-0.6
FABU				AMP		12 21 10.9	
	comp=Z,1µm,0.1s						
FABU				iS	Sb	12 21 35.5	+0.2
BORU	Boraas	2.26	319	iP	Pb	12 21 17.6	-0.3
BORU				iS	Sb	12 21 47.2	+0.9
ONAU	Onsala	2.45	307	iP	Pn	12 21 18.6	+1.1
ONAU				iS	Sb	12 21 52.2	+0.3
TJOU	Tjoern	2.97	316	iP	Pb	12 21 30.7	+0.6

SOME ***10*** *12:31:37.9,43°.67N×69°.72E*

KRNET ***10*** *12:31:38.5±0.1,43°.65N×69°.67E,mb3.0*

NNC ***10*** *12:31:38.4±0.8,43°.64N×69°.76E,h0^{km},mb3.7,mpv3.1, Error ellipse: s-maj=4.6km s-min=4.3km az=157.0, Suspected Mining explosion.*

ISC 10 12:31:37.3±1.8,**43°.64N**±0°.06×**69°.50E**±0°.09,**h0**^{km},**n13,** σ**1ˢ.37**/19,**10C-5D,Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRLS	Borolday	0.66	158	P	Pn	12 31 54.5	+0.6
	0.7nm,0.1s						
BRLS				S	Sn	12 32 06.4	+1.4
	11nm,0.8s						
KK31	Karatay Array	0.92	126	⇑P	Pg	12 31 53.1	-1.7
	3.2nm,0.6s,baz=324,slow=23,SNR=18						
KK31				⇓S	Sg	12 32 04.0	-2.6
	19nm,0.6s,baz=307,slow=36,SNR=7.6						
IUG	Iuzhnay	1.54	165	P	Pb	12 32 06.9	+0.1
	142nm,0.5s						
IUG				S	Sn	12 32 28.1	+1.1
	30nm,0.6s						
TRKS	Terek-Say	2.44	150	⇑iP	Pb	12 32 21.6	-0.4
	baz=52						
TRKS				⇑iS	Sb	12 32 53.0	+0.4
	baz=52						
MNAS	Manas	2.49	117	⇑iP	Pn	12 32 20.6	+1.4
	baz=18						
MNAS				⇑iS	Sn	12 32 51.4	+1.1
	baz=18						
MRKS	Merke	2.87	107	Pg	Pb	12 32 28.0	-1.5
	4.4nm,0.6s						
MRKS				Lg	Lg	12 33 04.4	
	10nm,0.6s						
EKS2	Erkin-Say	3.28	106	⇓iP	Pn	12 32 31.5	+1.4
	baz=7.0						
EKS2				⇓iS	Sn	12 33 10.1	+0.2

	baz=7.0						
UCH	Uchtor	3.95	109	⇑iP	Pn	12 32 41.0	+1.5
	baz=10.0						
UCH				⇑iS	Sn	12 33 26.6	-0.1
	baz=10.0						
TKM2	Tokmak 2	4.51	97	⇑Pg	Pb	12 32 58.0	+0.6
	2.7nm,0.8s						
TKM2				⇑Lg	Lg	12 33 55.1	
	6.5nm,0.8s						
DGS	Degeres	4.59	93	Pg	Pb	12 33 00.3	+1.7
	2.4nm,0.5s						
DGS				Lg	Lg	12 33 59.6	
	5.0nm,0.6s						
KST	Kastek	4.75	95	Pg	Pb	12 33 03.3	+1.7
	2.8nm,0.5s						
KST				Lg	Lg	12 34 04.5	
	6.2nm,0.8s						
OTUK	Ortayu	5.01	22	⇓Pn	Pn	12 32 53.3	-0.4
	2.5nm,0.8s						
OTUK				⇓Lg	Lg	12 34 15.5	
	3.3nm,0.7s						
PDGK	Podgornoye	7.28	89	⇑Lg	Lg	12 35 22.4	
	3.2nm,0.9s						

*KRNET **10** 12:36:45.2±0.1, 40°.52N×69°.60E, h13^{km}, mb2.8*

ISC 10 12:36:52.9±1.5**, 40°.42N**±0°.05×**69°.84E**±0°.08**, h35**^{km}**, n7, σ2^{s}51**/13**, 10C-2D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTK	Batken	0.83	116	⇑iP	Pn	12 37 04.9	-3.3
	baz=16						
BTK				⇑iS	Sn	12 37 19.5	+0.2
	baz=16						
GAR	Garm	1.47	165	⇑iP	Pn	12 37 15.7	-1.2
	baz=60						
GAR				⇑iS	Sn	12 37 38.2	+3.2
	baz=60						
TRKS	Terek-Say	1.48	41	⇑iP	Pn	12 37 13.8	-3.4
	baz=51						
TRKS				⇑iS	Sn	12 37 35.1	-0.3
	baz=51						
CHGR	Chuyangaron	1.84	197	⇓iP	Pn	12 37 20.1	-1.9
	baz=91						
CHGR				⇓iS	Sn	12 37 46.1	+2.0
	baz=91						
KK31	Karatay Array	2.73	10	Pg	Pn	12 37 33.5	-0.7
	0.3nm,0.2s,baz=194,slow=17,SNR=12						
KK31				Lg	Lg	12 38 08.8	
	1.9nm,0.3s,baz=196,slow=32,SNR=16						
AML	Almayashu	3.37	58	⇑iP	Pn	12 37 43.0	-0.4
	baz=61						
AML				⇑iS	Sn	12 38 25.5	+3.2
	baz=61						
UCH	Uchtor	3.96	61	⇑iP	Pn	12 37 51.5	0.0
	baz=64						
UCH				⇑iS	Sn	12 38 40.0	+3.2
	baz=64						

*VAO **10** 12:58:34.8±0.4, 30°.81S×71°.23W, h10^{km}, mb4.6*
*SJA **10** 12:58:36.2±2.3, 30°.81S×71°.61W, h68^{km}±16^{km}, ML4.7, MW4.6, ML5.0(GUC)*
*IDC **10** 12:58:37.9±0.5, 30°.93S×71°.31W, h48^{km}±4^{km}, mb4.3/11, mb1 4.4/16, mb1mx4.3/24, mbtmp4.4/16, MS3.6/11, Ms1 3.6/11, ms1mx3.5/20, Error ellipse: s-maj=17.9km s-min=14.1km az=85.0*
*GUC **10** 12:58:37.9±0.6, 30°.80S×71°.46W, h57^{km}±5^{km}, ML5.0*
*NEIC **10** 12:58:37.8, 30°.83S×71°.43W, h53^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$6.90; M$_{\theta\theta}$-0.27; M$_{\phi\phi}$-6.62; M$_{r\theta}$0.63; M$_{\theta\phi}$0.17; M$_{\phi r}$-5.78; Fault plane solution: M$_0$8.92000×10^{15} NP1:φ$_s$175.46000°, δ65.36000°, λ87.56000°. NP2:φ$_s$1.28000°, δ24.76000°, λ95.29000°. Principal axes: T 9.0626, Plg70.0000°, Azm81.0000°; N -0.2883, Plg2.0000°, Azm176.0000°; P -8.7743, Plg20.0000°, Azm267.0000°;*
*NEIC **10** 12:58:38.4±1.7, 30°.80S±0°.03×71°.37W±0°.09, h43^{km}±4^{km}, mb4.9/105, Mwr4.6/26, ML5.0(GUC) Error ellipse: s-maj=11.2km s-min=4.0km az=101.0*

ISC 10 12:58:38.0±0.5**, 30°.80S**±0°.03×**71°.48W**±0°.05**, h47**^{km}±4^{km}**, n295, σ1^{s}21**/294**, mb4.9**/61**, MS3.7**/8**, 10C-8D, Fault plane solution: NP1:**φ$_s$17.53375°**,**δ42.67830°**,**λ124.23611°. **NP2:**φ$_s$154.74446°**,**δ55.91500°**,**λ62.58143°. **Principal axes:** T Plg66.3657°**,** Azm10.4318°**;** N Plg22.4191°**,** Azm170.9550°**;** P Plg7.0980°**,** Azm263.8997°**; Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	Fray Jorge	0.19	312	eP	Pn	12 58 46.7	+0.7
CO06				i S	Sn	12 58 52.9	+1.4
CO06				IAML		12 58 53.9	
	comp=N,171µm,0.2s						
CO06	Fray Jorge	0.19	312		Pn	12 58 46.7	+0.7
CO03	El Pedregal	0.68	94		Pn	12 58 50.8	-0.7
GO04	Tololo Observa	0.85	43	eP	Pn	12 58 54.0	+0.1
GO04				i S	Sn	12 59 06.4	+0.9
GO04				IAML		12 59 07.4	
	comp=N,106µm,0.4s						
GO04	Tololo Observa	0.85	43		Pn	12 58 54.0	+0.1
GO04	Tololo Observa	0.85	43	i P	Pn	12 58 54.0	+0.1
CO05	La Serena	0.90	13		Pn	12 58 55.0	+0.6
VA06	Catapilco	1.76	175	eP	Pn	12 59 06.5	+0.4
VA06				i S	Sn	12 59 28.5	+1.2
VA06				IAML		12 59 48.6	
	comp=E,15µm,0.5s						
AROD	Rodeo	1.84	70	i P	Pn	12 59 09.0	+1.6
LCO	Las Campanas	1.91	21	eP	Pn	12 59 09.1	+0.8
LCO	Las Campanas	1.91	21	Pn	Pn	12 59 09.1	+0.8
LCO	Las Campanas	1.91	21	i P	Pn	12 59 09.0	+0.8
LCO				IAML		12 59 51.6	
	comp=Z,13µm,0.5s						
ACCO	Cerro Coronel	2.09	85	i P	Pn	12 59 13.0	+2.2
ACCO				IAML		12 59 47.5	
	comp=Z,1µm,0.7s						
VA03	San Esteban	2.11	158	eP	Pn	12 59 11.7	+0.7
VA03				i S	Sn	12 59 37.4	+1.4
VA03				IAML		12 59 44.5	
	comp=E,14µm,0.3s						
VA03	San Esteban	2.11	158		Pn	12 59 11.2	+0.2
VA03	San Esteban	2.11	158	i P	Pn	12 59 11.0	0.0
VA03				IAML		12 59 46.4	
	comp=Z,6µm,0.4s						
RTLS	Leoncito	2.11	119	i P	Pn	12 59 13.0	+1.8
RTLS				IAML		13 00 02.2	
	comp=Z,952nm,0.5s						
ACDV	Cuesta del Vie	2.13	73	i P	Pn	12 59 14.0	+2.8
ACDV				IAML		12 59 57.5	
	comp=Z,2µm,0.7s						
ROCH	El Roble	2.20	170	eP	Pn	12 59 12.8	+0.5
ROCH				i S	Sn	12 59 39.8	+1.3
ROCH				IAML		12 59 55.8	
	comp=N,10µm,0.5s						
ROC1	El Roble	2.21	170	i P	Pn	12 59 13.0	+0.6
VA01	Torpederas	2.22	184	Pn	Pn	12 59 12.0	-0.4
VA01	Torpederas	2.22	184	i P	Pn	12 59 12.0	-0.4
VA01				IAML		12 59 46.0	
	comp=Z,3µm,0.6s						
AUSP	Uspallata	2.28	129	i P	Pn	12 59 15.0	+1.6
PEL	Peldehue	2.43	164	i S	Sn	12 59 45.5	+1.6
PEL				IAML		12 59 59.0	
	comp=E,8µm,0.3s						
PEL	Peldehue	2.43	164		Pn	12 59 16.2	+0.9
PEL	Peldehue	2.43	164	i P	Pn	12 59 16.0	+0.7
MT02	Curacav	2.47	173		Pn	12 59 16.1	+0.2
MT02	Curacav	2.47	173	i P	Pn	12 59 16.0	+0.2
MT02				IAML		12 59 56.7	
	comp=Z,5µm,0.6s						
ZON	Zonda	2.51	108	i P	Pn	12 59 18.0	+1.6
ZON				IAML		13 00 10.3	
	comp=Z,4µm,0.5s						
AC04	Llanos de Chal	2.61	8	Pn	Pn	12 59 19.1	+1.4
AC04	Llanos de Chal	2.61	8	i P	Pn	12 59 19.0	+1.3
AC04				IAML		13 00 08.7	
	comp=Z,1µm,0.5s						
MT05	Renca	2.66	167		Pn	12 59 19.5	+1.1
MT05	Renca	2.66	167	i P	Pn	12 59 20.0	+1.6
RTCV	Cerro Valdivia	2.73	114	i P	Pn	12 59 22.0	+2.7
RTCV				IAML		13 00 13.7	
	comp=Z,760nm,1.7s						
VA05	Santo Domingo	2.85	182	Pn	Pn	12 59 20.7	-0.3
ASAL	Salagasta	2.87	129	i P	Pn	12 59 24.0	+2.6
ASAL				IAML		13 00 17.1	
	comp=Z,2µm,0.9s						
ARCO	CERRO ARCO	2.97	134	i P	Pn	12 59 26.0	+3.2
ARCO				IAML		13 00 11.4	
	comp=Z,4µm,0.8s						
MT09	Talagante	3.00	172		Pn	12 59 24.0	+0.9
MT01	Popeta	3.06	177		Pn	12 59 24.2	+0.3
MT01	Popeta	3.06	177	i P	Pn	12 59 24.0	+0.1
MT01				IAML		13 00 16.4	
	comp=Z,2µm,0.5s						
AAGR	Agrelo	3.20	136	i P	Pn	12 59 29.0	+3.1
AAGR				IAML		13 00 17.1	
	comp=Z,1µm,0.8s						
LMEL	Las Melosas	3.22	161	eP	Pn	12 59 28.1	+1.8
LMEL				i S	Sn	13 00 06.4	+2.9
GO03	Copiap	3.37	19	Pn	Pn	12 59 29.7	+1.4
GO03	Copiap	3.37	19	i P	Pn	12 59 30.0	+1.7
AVFE	Valle Fertil	3.46	89	i P	Pn	12 59 30.0	+0.5
AVFE				IAML		13 00 41.7	
	comp=Z,1µm,0.5s						
VCA	Vinchina	3.51	55	i P	Pn	12 59 34.0	+3.8
VCA				IAML		13 00 42.4	
	comp=Z,2µm,1.0s						
BO01	Tunca	3.60	175	Pn	Pn	12 59 32.1	+0.8
BO01	Tunca	3.60	175	i P	Pn	12 59 32.0	+0.8
BO01				IAML		13 00 30.1	
	comp=Z,1µm,0.6s						
BO02	Sierra Bellavi	4.02	172		Pn	12 59 37.5	+0.3
BO02	Sierra Bellavi	4.02	172	i P	Pn	12 59 38.0	+0.8
BO02				IAML		13 00 41.8	
	comp=Z,2µm,0.6s						
ACHE	Chepes	4.15	96	i P	Pn	12 59 40.0	+1.0
ACLC	CERRO LA CRUZ	4.15	72	i P	Pn	12 59 40.0	+1.0
ACLC				IAML		13 00 37.8	
	comp=Z,2µm,0.9s						
GO05	Huala	4.22	185		Pn	12 59 38.5	-1.3
GO05	Huala	4.22	185	i P	Pn	12 59 38.0	-1.8
APLL	PUNTA DE LOS L	4.28	86	i P	Pn	12 59 42.0	+1.2
APLL				IAML		13 00 48.4	
	comp=Z,4µm,3.1s						
RFA	San Rafael	4.70	148	i P	Pn	12 59 47.0	+0.5
RFA				IAML		13 01 14.1	
	comp=Z,400nm,1.1s						
MRA	San Martin	5.17	110	i P	Pn	12 59 53.0	+0.1
MRA				IAML		13 00 59.7	
	comp=Z,246nm,2.0s						
CYA	Choya	5.47	66	i P	Pn	12 59 58.0	+1.0
CYA				IAML		13 01 06.7	
	comp=Z,650nm,1.5s						
PB14	IPOC Station P	6.22	9	Pn	Pn	13 00 07.0	-0.6
AHML	Horco Molle	6.71	55	i P	Pn	13 00 14.0	-0.1
AHML				IAML		13 01 57.2	
	comp=Z,152nm,1.6s						
FSA	Cafayete	6.72	47	i P	Pn	13 00 16.0	+1.6
H03N1	Juan Fernandez	6.84	245	T	T	13 07 07.6	
	baz=75,slow=72,SNR=3820						
VA04	Juan Fernndez	6.85	244	Pn	Pn	13 00 15.0	-0.8
H03N3	Juan Fernandez	6.85	245	T	T	13 07 07.6	
	baz=75,slow=72,SNR=3041						
H03N2	Juan Fernandez	6.85	245	T	T	13 07 09.0	
	baz=75,slow=72,SNR=3239						
PB10	IPOC Station P	7.30	7	Pn	Pn	13 00 22.1	-0.1
PB15	IPOC Station P	7.77	14		Pn	13 00 28.0	-0.8
PB15	IPOC Station P	7.77	14	i P	Pn	13 00 29.0	+0.3
PB15				IAML		13 02 28.0	
	comp=Z,350nm,1.8s						
PB05	IPOC Station P	8.00	8	i P	Pn	13 00 31.0	-0.8
PB05				IAML		13 02 47.4	
	comp=Z,149nm,0.8s						
LC01	Cunco	8.09	182	Pn	Pn	13 00 31.6	-1.2
LC01	Cunco	8.09	182	i P	Pn	13 00 32.0	-0.8
LC01				IAML		13 03 11.6	
	comp=Z,97nm,0.8s						
LVC	Limon Verde	8.47	16	P	Pn	13 00 37.7	-0.8
	comp=Z,0.8nm,0.3s,baz=207,slow=6.5,SNR=3.1						
LVC	Limon Verde	8.47	16	eP	Pn	13 00 36.6	-1.9
LVC	Limon Verde	8.47	16	Pn	Pn	13 00 38.2	-0.3
PB04	IPOC Station P	8.52	8	Pn	Pn	13 00 39.5	+0.6
PB07	IPOC Station P	9.15	9	Pn	Pn	13 00 45.7	-1.9
PB01	IPOC Station P	9.88	11	Pn	Pn	13 00 56.0	-1.5
PLCA	Paso Flores	9.94	176	P	Pn	13 00 54.7	-3.6
	comp=Z,0.1nm,0.3s,baz=13,slow=4.5,SNR=3.2						
PLCA				LR	LR	13 05 08.8	
	comp=Z,291nm,21.6s,baz=344,slow=40						
PLCA	Paso Flores	9.94	176	eP	Pn	13 00 57.8	-0.5
PLCA	Paso Flores	9.94	176	Pn	Pn	13 00 58.1	-0.2
PATCX	Punta Patache	10.01	7	Pn	Pn	13 00 58.6	-0.7
PSGCX	Pisagua	11.22	7	Pn	Pn	13 01 14.0	-1.9
PSGCX	Pisagua	11.22	7	i P	Pn	13 01 15.0	-0.9
ITQB	Itaqui	12.89	89	eP	Pn	13 01 35.5	-3.1
ITQB	Itaqui	12.89	89	Pn	Pn	13 01 35.5	-3.1
CPUP	Villa Florida	13.20	74	P	Pn	13 01 40.5	-2.4
	comp=Z,0.3nm,0.3s,baz=263,slow=12,SNR=5.8						
CPUP				LR	LR	13 07 15.8	
	comp=Z,397nm,18.9s,baz=240,slow=40						
CPUP	Villa Florida	13.20	74	eP	Pn	13 01 39.9	-3.0
CPUP	Villa Florida	13.20	74	Pn	Pn	13 01 39.9	-3.0
LPAZ	La Paz	14.77	13	P	Pn	13 02 04.5	0.0
	comp=Z,0.4nm,0.3s,baz=183,slow=6.5,SNR=18						
LPAZ	La Paz	14.77	13	Pn	Pn	13 02 05.7	+1.2
PLTB	Pedras Altas	15.31	98	eP	Pn	13 02 07.8	-3.2
PLTB	Pedras Altas	15.31	98	Pn	Pn	13 02 08.3	-2.8
CPSB	Cacapava Do Su	15.54	93	eP	Pn	13 02 11.2	-2.8
AQDB	Aquidauana	17.53	58	eP	Pn	13 02 37.0	-2.0
AQDB	Aquidauana	17.53	58	Pn	Pn	13 02 36.4	-2.7
SIV	San Ignacio	17.55	35	P	Pn	13 02 38.6	-0.7
	comp=Z,1.2nm,0.3s,baz=215,slow=10,SNR=57						
SIV				LR	LR	13 10 52.5	
	comp=Z,102nm,19.6s,baz=270,slow=42						
PTGB	Pitanga	18.21	75	eP	P	13 02 46.0	-1.2
TRCB	Terra Rica	18.60	69	P	Pn	13 02 51.3	-0.8
PTLB	Pontes e Lacer	19.01	39	eP	P	13 02 55.8	-0.1
PTLB	Pontes e Lacer	19.01	39	P	P	13 02 55.5	-0.4
TER01	Tubaro-SC	19.55	89	eP	P	13 03 01.6	-0.2
PP1B	Ponte de Pedra	20.01	53	eP	P	13 03 06.7	-0.2
PCMB	Pacaembu	20.29	68	eP	P	13 03 09.4	-0.5
VILB	Vilhena	20.59	33	eP	P	13 03 12.8	-0.4
VILB	Vilhena	20.59	33	P	P	13 03 12.0	-1.2
SALV	Santo Antonio	20.69	48	eP	P	13 03 14.2	-0.1
FRTB	Fartura	20.86	74	eP	P	13 03 15.2	-0.9
ETMB	Extrema	21.45	14	eP	P	13 03 23.8	+1.5
ETMB	Extrema	21.45	14	P	P	13 03 22.2	-0.1
ETMB				IAmb	IAmb	13 03 27.5	
	comp=Z,51nm,1.2s						
ITRB	Iturama	22.02	65	eP	P	13 03 27.8	-0.8
PET01	Itanhaem-SP	22.39	79	eP	P	13 03 31.8	-0.7
SPB	Sao Paulo	22.53	77	eP	P	13 03 33.3	-0.7
SPB	Sao Paulo	22.53	77	P	P	13 03 34.2	+0.3
SPB				IAmb	IAmb	13 03 35.8	
	comp=Z,50nm,1.1s						
BB19B	Bebedouro	22.76	70	eP	P	13 03 35.5	-1.0
RCLB	Rio Claro- Sao	22.94	74	eP	P	13 03 37.8	-0.6
CZSB	Cruzeiro do Su	22.98	357	eP	P	13 03 40.8	+2.1
CZSB	Cruzeiro do Su	22.98	357	P	P	13 03 39.6	+0.9
CZSB				IAmb	IAmb	13 03 45.4	
	comp=Z,40nm,1.2s						
SAML	Samuel	23.08	21	P	P	13 03 39.1	-0.5
EFI	East Falkland	23.09	158	P	P	13 03 40.0	+0.5
ARAG	Araguaiana, MT	23.44	55	eP	P	13 03 41.2	-2.0
PDRB	Porto dos Gac	23.48	39	eP	P	13 03 43.7	+0.1
PARB	Paraibuna	24.16	78	eP	P	13 03 49.0	-1.0
CLDB	Colider	24.60	40	eP	P	13 03 52.6	-1.3
IPMB	Ipameri, GO	24.67	64	eP	P	13 03 53.2	-1.5
BSCB	Bom Sucesso	25.87	74	eP	P	13 04 04.6	-0.9
BDFB	Brasilia	26.23	60	P	P	13 04 07.5	-1.4
	comp=Z,23nm,0.8s,baz=224,slow=8.2,SNR=22						
BDFB				LR	LR	13 15 23.9	
	comp=Z,228nm,18.7s,baz=296,slow=38						
BDFB	Brasilia	26.23	60	P	P	13 04 08.0	-0.9
BDFB				IAmb	IAmb	13 04 08.9	
	comp=Z,23nm,0.9s						
VAS01	Vassouras-RJ	26.42	78	eP	P	13 04 09.9	-0.5
SNDB	Serra Nova Dou	26.45	49	eP	P	13 04 11.5	+0.8
TBTG	Tabatinga, AM	26.51	4	eP	P	13 04 12.3	+1.1
NPGB	Novo Progresso	28.05	36	eP	P	13 04 25.2	+0.2
DIAM	Diamantina, MG	28.10	70	eP	P	13 04 25.2	-0.4
PEXB	Peixe	28.38	54	eP	P	13 04 27.8	-0.2
MC01	Montes Claros	28.74	67	eP	P	13 04 30.1	-1.2
MACA	Manacapuru-AM	29.32	22	eP	P	13 04 36.9	+0.6
JANB	Januaria	29.41	64	eP	P	13 04 36.6	-0.5
BSFB	Barra de Sao F	30.15	74	eP	P	13 04 42.9	-0.8
ITTB	Itaituba	30.19	33	eP	P	13 04 44.3	+0.3
RIB01	Linhares ES	30.29	75	eP	P	13 04 45.1	+0.2
SDBA	SAO DESIDERIO	30.61	59	eP	P	13 04 47.1	-0.8
SMTB	Santa Maria do	31.19	51	eP	P	13 04 52.8	-0.1
NAN01	Guarapari, ES	31.23	73	eP	P	13 04 53.4	+0.2
OTAV	Otavalo	31.57	347	eP	P	13 04 59.6	+2.9
PRPB	Parauapebas	31.84	44	eP	P	13 04 58.8	+0.2
PTGA	Pitinga	31.84	22	P	P	13 04 58.3	-0.2
	comp=Z,9.2nm,1.0s,baz=206,slow=10,SNR=12						
PTGA				LR	LR	13 18 40.0	
	comp=Z,130nm,20.0s,baz=183,slow=38						
PTGA	Pitinga	31.84	22	P	P	13 04 58.2	-0.3
PTGA				IAmb	IAmb	13 04 59.9	
	comp=Z,24nm,1.4s						
GUA01	Guaratinga, BA	32.14	71	eP	P	13 04 59.8	-1.4
CMC01	Camacan, BA	33.02	70	eP	P	13 05 08.5	-0.5
NBIT	Itapeh - BA	33.33	69	eP	P	13 05 11.6	-0.1
GDU01	Guandu, BA	33.90	67	eP	P	13 05 15.5	-1.1
PMSA	Palmer Station	34.31	174	eP	P	13 05 21.1	+1.6
BOAV	Boa Vista	34.62	20	eP	P	13 05 22.7	-0.1
BOAV	Boa Vista	34.62	20	P	P	13 05 22.9	+0.1
BOAV				IAmb	IAmb	13 05 23.8	
	comp=Z,12nm,0.9s						
NBPN	Ponto Novo - B	35.14	62	eP	P	13 05 26.3	-1.1
MCPB	Macapa, AP	35.44	35	eP	P	13 05 29.2	-0.7
ZARC	Zaragoza, Cauc	38.21	355	P	P	13 05 53.1	-0.3
NBMA	Muriti-CE	38.46	60	eP	P	13 05 55.4	-0.2
NBAN	Anadia - AL	38.90	65	eP	P	13 05 58.4	-0.8
NBPB	Pedra_Branca-C	39.09	57	eP	P	13 06 00.7	-0.2
SDV	Santo Domingo	39.47	1	eP	P	13 06 05.2	+1.1
SDV	Santo Domingo	39.47	1	P	P	13 06 03.6	-0.5
NBLV	Livramento - P	39.85	61	eP	P	13 06 06.3	-0.9
NBPA	Parau_RN	40.76	59	eP	P	13 06 14.9	+0.2
NBPV	Pedro Velho	41.69	62	eP	P	13 06 22.3	0.0
VNA3	Neumayer Olymp	52.15	159	P	P	13 07 43.1	-0.2
VNA3	Neumayer Olymp	52.15	159	pP	pP	13 07 56.8	+0.3
VNA1	Neumayer--Stat	52.44	158	P	P	13 07 45.6	+0.2
VNA1	Neumayer--Stat	52.44	158	pP	pP	13 07 59.1	+0.5
VNA2	Neumayer--Watz	52.78	158	P	P	13 07 47.8	-0.2
	baz=286,slow=8.4						
VNA2	Neumayer--Watz	52.78	158	pP	pP	13 08 01.3	+0.1
SNAA	Sanae	54.37	159	P	P	13 07 59.4	-0.3
SNAA	Sanae	54.37	159	pP	pP	13 08 13.1	+0.1
SNAA	Sanae	54.37	159	P	P	13 07 59.4	-0.3
SNAA				IAmb	IAmb	13 08 00.4	
	comp=Z,15nm,1.0s						
QSPA	South Pole Qui	59.43	180	P	P	13 08 36.2	+0.5
QSPA				IAmb	IAmb	13 08 50.1	
	comp=Z,13nm,1.1s						
H06E1	SOCORRO T-PHAS	62.20	317	T	T	14 16 26.3	
	SNR=8.3						
143A	Socs Landing,	65.92	342	P	P	13 09 20.7	+1.7
X51A	Calhoun	66.23	348	P	P	13 09 21.7	+0.8
JCT	Junction City	66.62	333	P	P	13 09 24.4	+0.8
JCT				IAmb	IAmb	13 09 26.2	
	comp=Z,13nm,1.1s						
WHTX	Lake Whitney,	67.13	336	P	P	13 09 27.9	+1.2
WHTX				IAmb	IAmb	13 09 29.0	
	comp=Z,14nm,0.9s						
TXAR	Lajitas Array	67.20	330	P	P	13 09 28.9	+1.5
	comp=Z,2.1nm,0.9s,baz=152,slow=8.5,SNR=16						
TXAR				pP	pP	13 09 42.2	+1.3
	comp=Z,1.9nm,0.8s,baz=154,slow=7.6,SNR=11						
TXAR	Lajitas Array	67.20	330	P	P	13 09 29.2	+1.8
TX31	Lajitas Ar. Si	67.20	330	P	P	13 09 27.6	+0.2
TX31				IAmb	IAmb	13 09 42.8	
	comp=Z,15nm,1.1s						
V52A	Sevierville	67.26	349	P	P	13 09 28.0	+0.5
V52A				IAmb	IAmb	13 09 28.2	
	comp=Z,12nm,0.8s						
PLAL	Pickwick Lake	67.27	345	P	P	13 09 27.5	-0.1
PLAL				IAmb	IAmb	13 09 28.9	
	comp=Z,8.9nm,1.0s						
WLAR	White Oak Lake	67.32	341	P	P	13 09 28.3	+0.4
VNDA	Vanda	67.33	191	P	P	13 09 27.1	-0.4
	comp=Z,1.1nm,0.8s,baz=130,slow=5.0,SNR=8.7						
VNDA				LR	LR	13 36 57.5	
	comp=Z,21nm,18.7s,baz=47,slow=34						
VNDA	Vanda	67.33	191	P	P	13 09 29.3	+1.8
V51A	Loudon	67.35	349	P	P	13 09 28.5	+0.4
V48A	Smith Brothers	67.74	347	P	P	13 09 31.2	+0.7
CLTN	Cedars of Leba	67.99	347	P	P	13 09 32.4	+0.3
CLTN				IAmb	IAmb	13 09 33.6	
	comp=Z,12nm,0.7s						
MIAR	Mount Ida	68.25	340	P	P	13 09 34.5	+0.7
MIAR				IAmb	IAmb	13 09 35.9	
	comp=Z,11nm,1.2s						
Z35A	Perchaven, San	68.28	337	P	P	13 09 35.7	+1.7
U49A	Red Boiling Sp	68.29	348	P	P	13 09 34.5	+0.6
U49A				IAmb	IAmb	13 09 35.2	
	comp=Z,19nm,1.4s						
WVT	Waverly	68.33	346	P	P	13 09 34.8	+0.6
ABTX	Abilene, Hawle	68.48	335	P	P	13 09 35.9	+0.6
ABTX				IAmb	IAmb	13 09 37.6	
	comp=Z,14nm,1.1s						
W39A	Magazine	68.92	341	P	P	13 09 39.6	+1.7
T47A	Sharon Grove	69.01	347	P	P	13 09 39.0	+0.6
S51A	Beattyville	69.02	350	P	P	13 09 38.7	+0.2
S51A				IAmb	IAmb	13 09 39.7	
	comp=Z,8.7nm,0.8s						
LCAR	Lake Charles	69.04	343	P	P	13 09 38.9	+0.3
LCAR				IAmb	IAmb	13 09 40.1	
	comp=Z,15nm,0.8s						
FCAR	Ozark Folk Cen	69.12	342	P	P	13 09 39.5	+0.4
PBMO	Poplar Bluff	69.53	344	P	P	13 09 41.7	0.0
U40A	Yellville	69.75	342	P	P	13 09 43.6	+0.5
U40A				IAmb	IAmb	13 09 44.3	
	comp=Z,8.7nm,0.7s						
HHAR	Hobbs	69.98	341	P	P	13 09 45.1	+0.7
HHAR				IAmb	IAmb	13 09 46.1	
	comp=Z,15nm,0.9s						
MNTX	Cornudas Mount	69.98	330	P	P	13 09 45.0	+0.4
S44A	Carbondale	70.14	345	P	P	13 09 45.8	+0.5
SIUC	Southern Illin	70.15	345	P	P	13 09 46.0	+0.6
SIUC				IAmb	IAmb	13 09 46.8	
	comp=Z,15nm,0.9s						
TUL1	Leonard	70.18	339	P	P	13 09 46.6	+1.0
TUL1				IAmb	IAmb	13 09 47.3	
	comp=Z,16nm,1.1s						
MGMO	Mountain Grove	70.35	342	P	P	13 09 47.3	+0.6
MGMO				IAmb	IAmb	13 09 48.5	
	comp=Z,8.1nm,0.9s						
OK030	Cody Creek RV	70.51	338	P	P	13 09 47.8	+0.1
FVM	French Village	70.68	344	P	P	13 09 49.1	+0.4
FVM				IAmb	IAmb	13 09 50.4	
	comp=Z,20nm,1.1s						
MSTX	Muleshoe	70.87	333	P	P	13 09 51.6	+1.5
MSTX				IAmb	IAmb	13 09 52.0	
	comp=Z,19nm,1.1s						
CCM	Cathedral Cave	70.94	344	P	P	13 09 51.2	+0.9
CCM				IAmb	IAmb	13 09 52.0	
	comp=Z,16nm,0.9s						
P48A	Milroy	71.10	349	P	P	13 09 51.3	+0.1
P48A				IAmb	IAmb	13 09 51.9	
	comp=Z,12nm,0.7s						
S39A	Bolivar	71.13	342	P	P	13 09 52.2	+0.8
S39A				IAmb	IAmb	13 09 53.8	
	comp=Z,10nm,0.8s						
AMTX	Amarillo	71.26	334	P	P	13 09 53.8	+1.4
AMTX				IAmb	IAmb	13 09 54.7	
	comp=Z,11nm,1.1s						
R40A	Maddies Statio	71.42	343	P	P	13 09 53.9	+0.8
O49A	Covington	71.63	350	P	P	13 09 54.6	+0.2
O49A				IAmb	IAmb	13 09 55.4	
	comp=Z,14nm,0.8s						
121A	Cookes Peak, D	71.76	328	P	P	13 09 57.0	+1.4
121A				IAmb	IAmb	13 09 58.9	
	comp=Z,8.4nm,0.9s						
N49A	Columbus Grove	72.33	350	P	P	13 09 59.0	+0.4
P40A	Paris	72.54	343	P	P	13 10 00.3	+0.5
L56A	Greenwood	72.79	355	P	P	13 10 03.0	+1.7
L56A				IAmb	IAmb	13 10 03.2	
	comp=Z,21nm,1.1s						
P38A	Dawn	73.00	342	P	P	13 10 02.6	0.0
P38A				IAmb	IAmb	13 10 04.0	
	comp=Z,13nm,0.8s						
LIC	Lamto	73.32	72	eP	P	13 10 04.6	-0.5
	comp=Z,56nm,1.2s						
N41A	Harden Midland	73.38	345	P	P	13 10 04.9	+0.1
TIC	Toumodi	73.57	72	eP	P	13 10 05.9	-0.7
KIC	Kosan Boka	73.64	72	eP	P	13 10 06.5	-0.4
	comp=Z,35nm,0.8s						
DBIC	Dimbokro	73.72	72	P	P	13 10 07.5	+0.1
	comp=Z,21nm,0.7s,baz=237,slow=5.1,SNR=24						
DBIC				LR	LR	13 39 26.3	

	comp=Z,62nm,20.9s,baz=194,slow=33						
DBIC	Dimbokro	73.72	72	P	P	13 10 06.9	-0.5
N38A	Joes South For	74.03	343	P	P	13 10 09.2	+0.6
MVCO	Mesa Verde	76.02	330	P	P	13 10 19.3	-1.1
MVCO				IAmb	IAmb	13 10 23.2	
	comp=Z,9.9nm,1.1s						
MAW	Mawson	76.11	164	P	P	13 10 18.8	-1.5
	comp=Z,6.2nm,0.7s,baz=193,slow=6.1,SNR=23						
MAW				LR	LR	13 45 45.6	
	comp=Z,52nm,18.6s,baz=240,slow=37						
MAW	Mawson	76.11	164	P	P	13 10 20.1	-0.2
U15A	North Rim	77.06	327	P	P	13 10 28.1	+1.7
SMCO	Snowmass	77.06	332	P	P	13 10 28.6	+2.1
SMCO				IAmb	IAmb	13 10 48.0	
	comp=Z,11nm,0.8s						
ISCO	Idaho Springs	77.07	334	P	P	13 10 27.7	+1.3
ECSD	EROS Data Cent	77.66	342	P	P	13 10 30.0	+0.7
E46A	Sault Ste Mari	77.68	351	P	P	13 10 29.8	+0.5
E46A				IAmb	IAmb	13 10 31.0	
	comp=Z,17nm,1.0s						
KNB	Kanab	77.78	327	P	P	13 10 32.3	+2.0
KNB				IAmb	IAmb	13 10 47.3	
	comp=Z,9.7nm,0.9s						
CCUT	Cedar City	78.47	327	P	P	13 10 37.0	+2.8
SRU	San Rafael Swe	78.47	330	P	P	13 10 35.2	+1.0
Q16A	Castle Valley	78.60	329	P	P	13 10 36.8	+2.0
Q16A				IAmb	IAmb	13 10 51.4	
	comp=Z,8.2nm,0.9s						
P18A	Preston Nutter	78.79	330	P	P	13 10 37.7	+1.7
P18A				IAmb	IAmb	13 10 52.6	
	comp=Z,16nm,1.0s						
P17A	Butcher Ranch,	78.87	330	P	P	13 10 36.9	+0.6
KOWA	Kowa	78.89	66	P	P	13 10 36.6	0.0
KOWA				IAmb	IAmb	13 10 37.6	
	comp=Z,17nm,1.1s						
GWY	Greenwater Val	78.98	324	P	P	13 10 38.5	+1.6
D41A	Chassel	79.02	348	P	P	13 10 37.5	+0.8
RWWY	Rawlins	79.31	334	P	P	13 10 39.3	+0.6
RWWY				IAmb	IAmb	13 10 55.1	
	comp=Z,12nm,0.9s						
ISA	Isabella, Lake	79.50	323	P	P	13 10 41.6	+1.9
TSUM	Tsumeb	79.63	106	P	P	13 10 41.4	+0.4
TSUM				IAmb	IAmb	13 10 42.1	
	comp=Z,15nm,1.2s						
SPR3	Spring Creek 3	80.08	327	P	P	13 10 44.6	+1.6
R11A	Troy Canyon, C	80.16	326	P	P	13 10 44.7	+1.4
EYMN	Ely	80.42	347	P	P	13 10 44.5	+0.3
EYMN				IAmb	IAmb	13 10 45.5	
	comp=Z,7.5nm,0.8s						
TPH	Tonopah	80.74	325	P	P	13 10 47.9	+1.4
BOSA	Boshof	81.14	118	P	P	13 10 48.2	-0.7
	comp=Z,4.0nm,0.7s,baz=258,slow=5.7,SNR=9.9						
PDAR	Pinedale Array	81.14	333	P	P	13 10 49.2	+0.7
	comp=Z,0.7nm,0.6s,baz=143,slow=5.2,SNR=7.5						
PDAR				pP	pP	13 11 03.1	+0.7
	comp=Z,1.2nm,0.8s,baz=141,slow=5.1,SNR=5.2						
PDAR				LR	LR	13 43 19.4	
	comp=Z,28nm,20.8s,baz=184,slow=33						
B35A	Bob, Littlefor	81.29	345	P	P	13 10 49.1	+0.3
B35A				IAmb	IAmb	13 10 50.5	
	comp=Z,14nm,1.1s						
NVAR	Mina Array Bea	81.55	325	P	P	13 10 52.5	+1.7
	comp=Z,1.4nm,0.8s,baz=153,slow=4.9,SNR=8.4						
NVAR				pP	pP	13 11 05.4	+0.7
	comp=Z,2.3nm,0.8s,baz=130,slow=6.5,SNR=11						
HVU	Hansel Valley	81.64	330	P	P	13 10 52.3	+1.2
HVU				IAmb	IAmb	13 11 07.1	
	comp=Z,6.3nm,0.7s						
AGMN	Agassiz Nation	81.72	344	P	P	13 10 51.9	+0.8
AGMN				IAmb	IAmb	13 10 52.5	
	comp=Z,9.4nm,1.0s						
RYN	Ryan	81.81	325	P	P	13 10 52.4	+0.4
ELK	Elko	81.90	328	P	P	13 10 53.6	+1.0
MDND	Maddock	82.27	341	P	P	13 10 55.1	+1.1
YERR	Yerington	82.44	324	P	P	13 10 57.1	+1.7
TORD	Torodi Ar. Bea	82.67	70	P	P	13 10 56.4	-0.5
	comp=Z,6.0nm,0.6s,baz=266,slow=4.6,SNR=30						
TORD				pP	pP	13 11 10.9	0.0
	comp=Z,3.2nm,0.7s,baz=274,slow=5.1,SNR=5.1						
TORD				LR	LR	13 45 41.6	
	comp=Z,58nm,19.9s,baz=205,slow=34						
TORD	Torodi Ar. Bea	82.67	70	IAmb	IAmb	13 10 57.6	
	comp=Z,17nm,1.2s						
PAHR	Pah Rah Range	83.06	325	P	P	13 11 00.5	+1.9
LBTB	Lobatse	83.22	115	P	P	13 10 59.4	-0.5
LBTB				IAmb	IAmb	13 11 00.1	
	comp=Z,12nm,1.0s						
ULM	Lac du Bonnet	83.55	345	P	P	13 11 00.5	-0.1
	comp=Z,11nm,0.9s,baz=166,slow=5.7,SNR=8.5						
ULM	Lac du Bonnet	83.55	345	P	P	13 11 00.8	+0.2
ULM				IAmb	IAmb	13 11 02.1	
	comp=Z,14nm,1.0s						
DGMT	Dagmar	84.17	339	P	P	13 11 04.8	+0.9
PLID	Pearl Lake	85.70	330	P	P	13 11 13.2	+1.3
PLID				IAmb	IAmb	13 11 27.8	
	comp=Z,4.0nm,0.8s						
WALA	Waterton Lakes	88.05	334	P	P	13 11 24.0	+0.9
WALA				IAmb	IAmb	13 11 38.3	
	comp=Z,8.1nm,1.1s						
ESDC	Sonseca Array	94.01	46	LR	LR	13 55 15.2	
	comp=Z,24nm,18.1s,baz=235,slow=36						
ASAR	Alice Springs	120.63	207	PKP	PKPdf	13 17 23.7	-1.5
	comp=Z,0.8nm,0.8s,baz=143,slow=2.8,SNR=7.5						
ASAR				pPKP	pPKPdf	13 17 38.3	-1.5
	comp=Z,0.6nm,0.9s,baz=126,slow=1.5,SNR=3.0						
WRA	Warramunga Arr	123.78	210	PKP	PKPdf	13 17 30.0	-1.3
	comp=Z,1.8nm,0.7s,baz=164,slow=1.5,SNR=17						
WRA				pPKP	pPKPdf	13 17 44.3	-1.6
	comp=Z,0.6nm,0.5s,baz=169,slow=1.4,SNR=4.6						
WRA	Warramunga Arr	123.78	210		PKPdf	13 17 30.4	-0.9
H11S2	WAKE ISLAND Hy	126.24	271	T	T	15 36 32.5	
	baz=116,slow=75,SNR=604						
H11S1	WAKE ISLAND Hy	126.25	271	T	T	15 36 27.2	
	baz=116,slow=75,SNR=677						
H11S3	WAKE ISLAND Hy	126.26	271	T	T	15 36 26.2	
	baz=116,slow=75,SNR=642						
H11N3	WAKE ISLAND Hy	126.57	273	T	T	15 36 55.7	
	baz=116,slow=75,SNR=55						
H11N1	WAKE ISLAND Hy	126.59	273	T	T	15 36 50.6	
	baz=116,slow=75,SNR=24						
H11N2	WAKE ISLAND Hy	126.59	273	T	T	15 36 51.4	
	baz=116,slow=75,SNR=117						
BRVK	Borovoye	144.50	40		PKPbc	13 18 07.7	+0.3
YAK	Yakutsk	145.86	342		PKPbc	13 18 11.3	-0.1
KKAR	Karatay Array	147.50	57	PKPdf	PKPdf	13 18 15.0	+0.8
GAR	Garm	147.80	65	PKPdf	PKPdf	13 18 14.4	-0.6
TOLI2	Tolitoli	148.27	204		PKPbc	13 18 18.6	-1.1
GSI	Gunungsitoli	148.88	158		PKPbc	13 18 19.9	-1.4
HYB	Hyderabad	149.68	109	i PKP	PKPbc	13 18 22.0	-1.2
KURK	Kurchatov	150.17	40		PKPbc	13 18 22.5	-0.8
KURK				PKPab	PKPab	13 18 30.3	+0.9
ZAA0	Zalesovo Array	151.24	30		PKPbc	13 18 25.6	-0.1
ZAA0				PKPab	PKPab	13 18 33.1	-0.6
ZALV	Zalesovo Beam	151.24	30	PKPbc	PKPbc	13 18 25.6	-0.2
	comp=Z,8.2nm,0.7s,baz=298,slow=3.1,SNR=37						
ZALV				pPKPbc	pPKPbc	13 18 40.9	+0.7
	comp=Z,4.3nm,0.6s,baz=313,slow=3.1,SNR=7.5						
MKAR	Makanchi Array	154.22	44	PKPbc	PKPbc	13 18 32.0	-0.7
	comp=Z,0.6nm,0.7s,baz=288,slow=1.4,SNR=4.9						
MKAR				pPKPbc	pPKPbc	13 18 47.3	+0.1
	comp=Z,1.8nm,0.8s,baz=283,slow=4.0,SNR=8.5						
SONM	Songino Array	162.91	5	PKPab	PKPab	13 19 24.6	+0.4
	comp=Z,0.9nm,0.8s,baz=340,slow=3.9,SNR=4.6						
CMAR	Chiang Mai Arr	164.95	143	PKPab	PKPab	13 19 33.0	-0.8
	comp=Z,0.5nm,0.3s,baz=197,slow=2.8,SNR=4.4						

TUL ***10*** *13:01:33.5±0.8, 36°.95N±0°.01×97°.82W±0°.01, h4^{km}±6^{km}, ML2.7, mb_Lg2.4/20(NEIC) Error ellipse: s-maj=1.9km s-min=1.3km az=128.0*

NEIC 10 13:01:33.6±0.8**, 36°.924N**±0°.007×**97°.80W**±0°.01**, h8**^{km}±4^{km}**, Error ellipse: s-maj=1.5km s-min=1.0km az=66.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GC02	Grant County #	0.09	213	Pg	Pg	13 01 36.0	+0.2
GC02				Sg	Sg	13 01 37.5	+0.3
KAN17	Caldwell West	0.12	14	Pg	Pg	13 01 36.4	0.0
KAN17				Sg	Sg	13 01 38.2	-0.1
KAN14	Manchester OK	0.13	284		Pg	13 01 36.2	-0.3
KAN14				Sg	Sg	13 01 37.9	-0.6
KAN05	Bluff City Nor	0.19	343		Pg	13 01 37.4	-0.2
KAN01	Argonia South	0.23	9		Pg	13 01 38.2	-0.1
KAN01				Sg	Sg	13 01 41.3	-0.2
KAN09	Caldwell North	0.26	35	Pg	Pg	13 01 38.9	+0.1
KAN09				Sg	Sg	13 01 42.2	-0.1
KAN13	South Haven SW	0.27	71		Pg	13 01 39.5	+0.4
KAN10	Anthony SW Sta	0.31	310	Pg	Pg	13 01 39.4	-0.3
KAN10				Sg	Sg	13 01 43.6	-0.3
KAN06	Argonia West S	0.33	352		Pg	13 01 39.9	-0.2
KAN08	Anthony NE Sta	0.33	336		Pg	13 01 39.9	-0.3
OK032	Salt Plains WL	0.35	250		Pg	13 01 40.2	-0.3
OK032				Sg	Sg	13 01 45.0	-0.1
KS20	Mayfield South	0.36	33		Pg	13 01 40.8	0.0
KAN16	Harper SW Stat	0.37	325	Pg	Pg	13 01 40.6	-0.3
KAN12	Harper NE Stat	0.41	337	Pg	Pg	13 01 41.2	-0.3
KAN12				Sg	Sg	13 01 46.8	-0.1
CROK	Carrier	0.44	199	Pg	Pg	13 01 42.5	+0.3
BLOK	Blackwell	0.50	109	Pg	Pg	13 01 43.8	+0.5
BLOK				Sg	Sg	13 01 49.6	-0.2
T35A	Sooner Cattle	1.03	90		Pg	13 01 53.5	0.0
U32A	Winter Ranch,	1.11	241	Pg	Pg	13 01 54.3	-0.6
U32A				IAmb_Lg		13 02 09.2	
	comp=Z,33nm,0.8s						
QUOK	Quay	1.16	130		Pg	13 01 55.7	-0.1
OK029	Liberty Lake	1.16	166		Pg	13 01 55.7	-0.2
OK031	S. Brethren Rd	1.24	141		Pn	13 01 57.2	-0.1
BCOK	Bluff Creek, N	1.27	173		Pn	13 01 57.8	-0.1
OK030	Cody Creek RV	1.29	140		Pn	13 01 57.9	-0.1
OK025	Westminster Rd	1.39	164		Pb	13 01 59.8	-0.2
OKCFA	Oklahoma City	1.53	169	IAmb_Lg		13 02 25.4	
	comp=Z,35nm,0.8s						
OKCSW	OKLAHOMA CITY	1.54	169	Pn	Pb	13 02 02.3	-0.3
R32A	Long Quarter,	1.66	335		Pn	13 02 03.8	+0.6
FNO	Franklin	1.69	169		Pb	13 02 04.5	-0.6
FNO				IAmb_Lg		13 02 29.1	
	comp=Z,15nm,0.7s						
TUL1	Leonard	1.91	121		Pn	13 02 07.6	+1.0
X34A	Smith Ranch, M	2.32	181	Pn	Pn	13 02 13.2	+1.0
WMOK	Wichita Mounta	2.32	200	Pn	Pn	13 02 13.0	+0.8
KSU1	Kansas State U	2.37	23	Pn	Pn	13 02 13.6	+0.7
CBKS	Cedar Bluff	2.43	322	Pn	Pn	13 02 14.8	+1.1
U38A	Gravette	2.79	99	Pn	Pn	13 02 20.0	+1.3
X37A	Clayton	3.06	139	Pn	Pn	13 02 23.8	+1.5
HHAR	Hobbs	3.17	100	Pn	Pn	13 02 25.1	+1.2
HHAR				IAmb_Lg		13 03 22.0	
	comp=Z,9.9nm,0.7s						
S39A	Bolivar	3.65	77	Pn	Pn	13 02 31.4	+0.9
W39A	Magazine	3.68	117	IAmb_Lg		13 03 37.1	
	comp=Z,16nm,0.9s						
U40A	Yellville	4.02	97	IAmb_Lg		13 03 44.4	
	comp=Z,11nm,0.8s						
P38A	Dawn	4.31	50	IAmb_Lg		13 03 57.2	
	comp=Z,10nm,1.1s						
X40A	Basin Creek Fa	4.72	120	IAmb_Lg		13 04 11.6	
	comp=Z,5.3nm,0.8s						
P40A	Paris	5.22	58	IAmb_Lg		13 04 25.7	
	comp=Z,8.3nm,0.9s						
CCM	Cathedral Cave	5.34	76	IAmb_Lg		13 04 30.0	
	comp=Z,4.9nm,0.7s						

NEIC 10 13:10:39.6±1.0**, 36°.436N**±0°.007×**98°.72W**±0°.04**, h5**^{km}±2^{km}**, mb_Lg2.6**/28**, Error ellipse: s-maj=5.9km s-min=3.0km az=91.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
U32A	Winter Ranch,	0.23	256	Pg	Pg	13 10 44.3	+0.1
OK032	Salt Plains WL	0.55	48		Pg	13 10 50.3	+0.2
OK032				Sg	Sg	13 10 56.7	-0.7
CROK	Carrier	0.60	83	Pg	Pg	13 10 51.7	+0.6
CROK				Sg	Sg	13 10 58.0	-0.8
KAN14	Manchester OK	0.80	49		Pg	13 10 54.9	0.0
KAN14				Sg	Sg	13 11 05.2	-0.1
GC02	Grant County #	0.81	59		Pg	13 10 55.1	0.0
KAN10	Anthony SW Sta	0.85	36	Pg	Pg	13 10 55.7	-0.2
KAN16	Harper SW Stat	0.95	33	Pg	Pg	13 10 57.6	-0.2
KAN05	Bluff City Nor	0.95	45	Pg	Pg	13 10 57.9	-0.1
KAN05				Sg	Sg	13 11 10.1	-0.2
KAN17	Caldwell West	0.98	51	Pg	Pg	13 10 58.0	-0.3
KAN17				Sg	Sg	13 11 10.7	-0.4
KAN08	Anthony NE Sta	0.99	37	Pg	Pg	13 10 58.3	-0.4
KAN12	Harper NE Stat	1.04	34	Pg	Pg	13 10 59.3	-0.2
KAN01	Argonia South	1.05	47		Pg	13 10 59.4	-0.4
KAN06	Argonia West S	1.06	40	Pg	Pg	13 10 59.4	-0.6
KAN09	Caldwell North	1.13	51	Pg	Pg	13 11 00.5	-0.7
KAN13	South Haven SW	1.15	60	Pg	Pg	13 11 01.2	-0.5
BCOK	Bluff Creek, N	1.19	131	Pg	Pg	13 11 02.4	0.0
OK029	Liberty Lake	1.21	122	Pg	Pg	13 11 02.6	-0.1
KS20	Mayfield South	1.22	49	Pg	Pg	13 11 02.5	-0.6
BLOK	Blackwell	1.25	75	Pg	Pg	13 11 03.1	-0.5
OK009	Oakdale Elemen	1.35	129	Pn	Pg	13 11 05.7	+0.2
OK025	Westminster Rd	1.41	127	Pn	Pb	13 11 06.1	-0.2
OKCFA	Oklahoma City	1.45	134	Pn	Pn	13 11 06.6	+0.2
FNO	Franklin	1.59	137		Pb	13 11 09.2	-0.3
OK031	S. Brethren Rd	1.59	107	Pn	Pb	13 11 09.2	-0.4
OK030	Cody Creek RV	1.65	107	Pn	Pn	13 11 09.7	+0.5
QUOK	Quay	1.65	99		Pb	13 11 10.2	-0.2
WMOK	Wichita Mounta	1.69	182		Pn	13 11 10.1	+0.2
T35A	Sooner Cattle	1.84	74	Pn	Pb	13 11 12.9	-0.8
T35A				IAmb_Lg		13 11 40.6	
	comp=Z,26nm,0.8s						
X34A	Smith Ranch, M	1.97	158	Pn	Pb	13 11 15.5	-0.4
R32A	Long Quarter,	1.98	0		Pn	13 11 14.0	+0.2
TUL1	Leonard	2.42	102	Pn	Pn	13 11 21.0	+1.1
LOOK	Love County	2.74	152	Pn	Pn	13 11 26.0	+1.7
AMTX	Amarillo	2.87	238	Pn	Pn	13 11 27.3	+1.3
KSU1	Kansas State U	3.14	31	IAmb_Lg		13 12 27.2	
	comp=Z,23nm,0.9s						
X37A	Clayton	3.29	123	IAmb_Lg		13 12 31.5	
	comp=Z,25nm,1.1s						
U38A	Gravette	3.49	89	Pn	Pn	13 11 35.8	+1.2
ABTX	Abilene, Hawle	3.88	192	IAmb_Lg		13 12 43.5	
	comp=Z,14nm,0.9s						
W39A	Magazine	4.20	106	IAmb_Lg		13 12 56.9	
	comp=Z,14nm,0.8s						
WHTX	Lake Whitney,	4.55	166	IAmb_Lg		13 13 15.9	
	comp=Z,7.9nm,0.8s						
T25A	Trinidad	4.62	280	IAmb_Lg		13 13 03.8	
	comp=Z,12nm,0.8s						
U40A	Yellville	4.73	89	IAmb_Lg		13 13 09.0	
	comp=Z,10nm,0.8s						
X40A	Basin Creek Fa	5.18	110	IAmb_Lg		13 13 33.7	
	comp=Z,9.9nm,0.8s						
P38A	Dawn	5.19	51	IAmb_Lg		13 13 27.3	
	comp=Z,7.0nm,0.8s						
MGMO	Mountain Grove	5.22	80	IAmb_Lg		13 13 30.5	
	comp=Z,9.0nm,0.7s						
WHAR	Wooly Hollow	5.34	100	IAmb_Lg		13 13 37.9	
	comp=Z,10nm,0.9s						
JCT	Junction City	6.01	189	IAmb_Lg		13 14 01.3	
	comp=Z,8.1nm,0.8s						
PBMO	Poplar Bluff	6.68	85	IAmb_Lg		13 14 11.8	
	comp=Z,5.7nm,0.8s						

TUL ***10*** *13:11:29.3±0.7, 36°.47N±0°.02×98°.75W±0°.02, h2^{km}±7^{km}, ML3.2, mb_Lg3.1/61(NEIC), Error ellipse: s-maj=3.5km s-min=0.9km az=145.0*

NEIC 10 13:11:29.3±1.5**, 36°.47N**±0°.02×**98°.74W**±0°.02**, h11**^{km}±4^{km}**, Error ellipse: s-maj=2.7km s-min=2.6km az=186.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
U32A	Winter Ranch,	0.23	248	Pg	Pg	13 11 33.9	-0.2
U32A				Sg	Sg	13 11 36.8	-0.5
OK032	Salt Plains WL	0.54	51	Pg	Pg	13 11 40.0	+0.1
OK032				Sg	Sg	13 11 46.6	-0.4
CROK	Carrier	0.61	86	Pg	Pg	13 11 41.1	-0.1
CROK				Sg	Sg	13 11 49.0	-0.2
KAN14	Manchester OK	0.79	52	Pg	Pg	13 11 44.5	-0.2
GC02	Grant County #	0.81	61	Pg	Pg	13 11 44.6	-0.2
KAN10	Anthony SW Sta	0.84	38	Pg	Pg	13 11 45.1	-0.3
KAN16	Harper SW Stat	0.93	35	Pg	Pg	13 11 47.1	-0.1
KAN05	Bluff City Nor	0.95	47	Pg	Pg	13 11 47.5	0.0
KAN05				Sg	Sg	13 11 59.6	-0.3
KAN17	Caldwell West	0.97	53	Pg	Pg	13 11 47.4	-0.6
KAN17				Sg	Sg	13 12 00.2	-0.5
KAN08	Anthony NE Sta	0.98	39	Pg	Pg	13 11 47.7	-0.4
KAN12	Harper NE Stat	1.02	35	Pg	Pg	13 11 48.6	-0.3
KAN12				Sg	Sg	13 12 01.6	-0.7
KAN01	Argonia South	1.04	49	Pg	Pg	13 11 49.1	-0.3
KAN06	Argonia West S	1.05	42	Pg	Pb	13 11 49.4	-0.1
KAN09	Caldwell North	1.12	53		Pb	13 11 50.1	-0.6
KAN09					Pg	13 11 50.7	-0.1
KAN13	South Haven SW	1.15	61		Pb	13 11 50.9	-0.3
KAN13				Sg	Sb	13 12 06.0	-0.2
KS20	Mayfield South	1.22	51	Pg	Pn	13 11 52.3	0.0
BCOK	Bluff Creek, N	1.22	131	Pg	Pn	13 11 52.1	-0.2
OK029	Liberty Lake	1.23	122		Pn	13 11 52.4	-0.1
BLOK	Blackwell	1.26	76		Pn	13 11 52.9	+0.1
OK025	Westminster Rd	1.44	127		Pb	13 11 55.9	-0.2
OKCFA	Oklahoma City	1.48	135	Pn	Pb	13 11 56.4	-0.4
OKCSW	OKLAHOMA CITY	1.49	135	Pn	Pb	13 11 56.7	-0.3
OK031	S. Brethren Rd	1.62	108		Pb	13 11 58.6	-0.5
FNO	Franklin	1.62	138		Pb	13 11 58.7	-0.5
QUOK	Quay	1.67	100	Pn	Pb	13 11 59.4	-0.6
OK030	Cody Creek RV	1.67	108		Pb	13 11 59.5	-0.5
WMOK	Wichita Mounta	1.72	181	Pn	Pn	13 11 59.8	+0.5
T35A	Sooner Cattle	1.85	75	Pn	Pb	13 12 02.2	-0.9
T35A				IAmb_Lg		13 12 28.6	
	comp=Z,68nm,0.8s						
R32A	Long Quarter,	1.95	1	Pn	Pn	13 12 03.5	+1.1
X34A	Smith Ranch, M	2.00	158	IAmb_Lg		13 12 33.6	
	comp=Z,64nm,0.8s						
TUL1	Leonard	2.45	102	IAmb_Lg		13 12 47.3	
	comp=Z,49nm,0.8s						
LOOK	Love County	2.78	152	Pn	Pn	13 12 14.9	+1.3
LOOK				IAmb_Lg		13 12 59.8	
	comp=Z,45nm,1.0s						
AMTX	Amarillo	2.87	237	IAmb_Lg		13 13 06.5	
	comp=Z,45nm,0.9s						
KSU1	Kansas State U	3.13	32		Pn	13 12 19.5	+1.0
KSU1				IAmb_Lg		13 13 17.0	
	comp=Z,29nm,0.8s						
X37A	Clayton	3.32	123		Pn	13 12 22.2	+1.0
X37A				IAmb_Lg		13 13 23.3	
	comp=Z,74nm,1.0s						
U38A	Gravette	3.51	89		Pn	13 12 24.7	+0.9
U38A				IAmb_Lg		13 13 27.2	
	comp=Z,54nm,1.1s						
HHAR	Hobbs	3.88	91		Pn	13 12 29.4	+0.6
KSCO	Kaye Shedlock’	4.00	311	IAmb_Lg		13 13 45.3	
	comp=Z,38nm,0.7s						
MSTX	Muleshoe	4.13	234	IAmb_Lg		13 13 43.8	
	comp=Z,49nm,1.0s						
W39A	Magazine	4.22	106	IAmb_Lg		13 13 50.1	
	comp=Z,49nm,1.0s						
Z38A	Mt. Pleasant	4.44	135	IAmb_Lg		13 13 52.0	
	comp=Z,32nm,0.9s						
S39A	Bolivar	4.50	73		Pn	13 12 38.2	+0.8
T25A	Trinidad	4.60	280	IAmb_Lg		13 14 00.2	
	comp=Z,37nm,0.8s						
MIAR	Mount Ida	4.63	113		Pn	13 12 39.9	+0.8
U40A	Yellville	4.75	90	IAmb_Lg		13 14 11.7	
	comp=Z,33nm,0.7s						
BGNE	Belgrade	4.96	5		Pn	13 12 45.0	+1.3
BGNE				IAmb_Lg		13 14 16.5	
	comp=Z,34nm,0.7s						
237A	Washetta, Mont	5.07	151	IAmb_Lg		13 14 25.1	
	comp=Z,25nm,0.8s						
OGNE	Ogallala	5.16	331	IAmb_Lg		13 14 26.7	
	comp=Z,29nm,0.8s						
X40A	Basin Creek Fa	5.21	111	IAmb_Lg		13 14 23.5	
	comp=Z,38nm,0.9s						
WHAR	Wooly Hollow	5.37	101	IAmb_Lg		13 14 27.7	
	comp=Z,32nm,0.8s						
FCAR	Ozark Folk Cen	5.38	94	IAmb_Lg		13 14 20.6	
	comp=Z,23nm,0.8s						
435B	Jarrell	5.75	170	IAmb_Lg		13 14 39.0	
	comp=Z,28nm,1.0s						
JCT	Junction City	6.04	189	IAmb_Lg		13 14 51.1	
	comp=Z,29nm,0.8s						
P40A	Paris	6.11	58	IAmb_Lg		13 14 54.6	
	comp=Z,24nm,0.9s						
CCM	Cathedral Cave	6.18	73	IAmb_Lg		13 14 48.7	
	comp=Z,24nm,0.9s						
PBMO	Poplar Bluff	6.69	85	IAmb_Lg		13 15 01.0	
	comp=Z,25nm,0.8s						
SCIA	State Center	6.92	37	IAmb_Lg		13 15 20.0	
	comp=Z,23nm,0.7s						
SLM	Saint Louis	7.09	70	IAmb_Lg		13 15 13.6	
	comp=Z,20nm,0.8s						
143A	Socs Landing,	7.12	120	IAmb_Lg		13 15 27.3	
	comp=Z,17nm,0.8s						
S44A	Carbondale	7.68	78	IAmb_Lg		13 15 45.9	
	comp=Z,21nm,1.1s						
K38A	Parkersburg	7.70	35	IAmb_Lg		13 15 44.8	
	comp=Z,24nm,0.8s						
SIUC	Southern Illin	7.71	78	IAmb_Lg		13 15 49.8	
	comp=Z,14nm,0.7s						
K22A	Casper	8.62	318	IAmb_Lg		13 16 16.2	
	comp=Z,13nm,0.9s						
JFWS	Jewell Farm	9.18	43	IAmb_Lg		13 16 28.6	
	comp=Z,14nm,0.8s						

DNK ***10*** *13:18:57.9±1.6, 55°.95N×15°.63E, h0^{km}, ML3.5, Explosion*
UPP ***10*** *13:18:58.0±0.3, 55°.99N×15°.55E, h0^{km}, ML2.1, Explosion*
ISC 10 13:18:57.4±1.0**, 56°.00N**±0°.03×**15°.46E**±0°.04**, h0**^{km}**, n19, σ0^{s}.27**/32**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BLEU	Blekinge	0.36	33	i P	Pg	13 19 04.7	+0.3
BLEU				P	Pg	13 19 04.7	+0.3
BLEU				AMP		13 19 04.9	
	comp=Z,941nm,0.1s						
BLEU				S	Sg	13 19 09.1	+0.1
BLEU				i S	Sg	13 19 09.2	+0.1
BLEU	Blekinge	0.36	33	P	Pg	13 19 04.7	+0.3
BLEU				S	Sg	13 19 09.1	+0.1
BSD	Bornholm Skovb	0.94	200	i P	Pg	13 19 15.3	-0.1
BSD				AMP		13 19 16.2	
	comp=Z,394nm,0.1s						
BSD				i S	Sg	13 19 27.4	-0.3
VXJU	Vaexsjoe	0.97	343	P	Pb	13 19 16.6	-0.5
VXJU	Vaexsjoe	0.97	343	P	Pb	13 19 16.6	-0.5
DEL	Delary	1.01	299	i P	Pb	13 19 17.7	-0.1
DEL				P	Pb	13 19 17.7	-0.1
DEL				AMP		13 19 18.5	
	comp=Z,2µm,0.1s						
DEL				i S	Sn	13 19 33.5	-0.1
DEL	Delary	1.01	299	P	Pb	13 19 17.7	-0.1
LUNU	Lund	1.20	253	i P	Pb	13 19 21.0	+0.1
LUNU				P	Pb	13 19 21.0	+0.1
LUNU				i S	Sn	13 19 38.8	+0.5
LUNU	Lund	1.20	253	P	Pb	13 19 21.0	+0.1
BJUU	Bjuv	1.37	274	P	Pn	13 19 23.8	0.0
BJUU				i P	Pb	13 19 23.9	0.0
BJUU				i S	Sn	13 19 42.7	0.0
BJUU	Bjuv	1.37	274	P	Pn	13 19 23.8	0.0
BYXU	Byxelkrok	1.55	33	P	Pn	13 19 26.1	-0.1
BYXU	Byxelkrok	1.55	33	P	Pn	13 19 26.1	-0.1
EKSU	Eksjoe	1.58	357	P	Pb	13 19 27.2	-0.3
EKSU	Eksjoe	1.58	357	P	Pb	13 19 27.2	-0.3
GNOU	Gnosjoe	1.60	325	P	Pg	13 19 28.0	-0.1
GNOU	Gnosjoe	1.60	325	P	Pg	13 19 28.0	-0.1
FABU	Falkenberg	1.82	305	i P	Pg	13 19 32.0	-0.4
FABU				i S	Sg	13 19 56.7	+0.7
BORU	Boraas	2.21	319	i P	Pb	13 19 38.5	+0.3
BORU				i S	Sg	13 20 08.3	-0.1

LJU 10 13:31:59.2, 46°.08N×14°.15E, h0^{km}, ML0.4, 1C, Suspected explosion, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRNS	Crni Vrh	0.07	92⇑	i Pg	Pg	13 32 00.5	-0.2
CRNS				i Sg	Sg	13 32 02.0	+0.4
CRNS				IAML		13 32 02.1	
	comp=Z,48nm,0.1s						
JAVS	Javornik	0.20	198	i Pg	Pg	13 32 03.4	+0.4
JAVS				IAML		13 32 10.2	
	comp=Z,6.0nm,0.3s						
GBAS	Gorenja Brezov	0.25	126	i Pg	Pg	13 32 04.1	+0.1
GBAS				i Sg	Sg	13 32 07.5	+0.3
GBAS				IAML		13 32 09.0	
	comp=Z,5.2nm,0.2s						

VIE 10 13:32:43.1±0.2**, 46°.68N×13°.81E, h0^{km}, mb1.1**/3**, ml1.3**/4**, Error ellipse: s-maj=3.3km s-min=1.3km az=177.0 5 km S of Afritz Mining explosion., Austria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MYKA	Terra Mystica	0.13	246	e Pg	Pg	13 32 45.3	-0.3

	1.3nm,0.1s						
MYKA				*e*Sg	Sg	13 32 47.2	0.0
	3.5nm,0.1s						
KBA	Koelnbreinsper	0.51	321	*e*Pg	Pg	13 32 53.1	+0.3
	0.2nm,0.1s						
KBA				*e*Sg	Sg	13 33 00.2	+0.8
	2.6nm,0.2s						
OBKA	Obir	0.54	109	*e*Pg	Pg	13 32 53.6	+0.2
	1.2nm,0.1s						
OBKA				*e*Sg	Sb	13 33 02.1	-1.7
	3.5nm,0.2s						
SOKA	Soboth	0.84	90	*e*Pg	Pg	13 32 59.4	+0.2
	0.6nm,0.2s						
SOKA				*e*Sg	Sg	13 33 10.4	+0.2
	2.5nm,0.3s						

IASPEI ***10*** *13:36:45.4±1.3, 35°.99N±0°.03×96°.81W±0°.03, h7^{km}±8^{km}, Error ellipse: s-maj=4.2km s-min=3.4km az=131.9, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

TUL ***10*** *13:36:45.6±0.6, 35°.98N±0°.02×96°.81W±0°.04, h4^{km}±7^{km}, ML3.6, mb_Lg3.6/111(NEIC), Mwr3.3/5(SLM), Error ellipse: s-maj=5.1km s-min=2.0km az=105.0*

ANF ***10*** *13:36:45.5±0.5, 35°.98N×96°.81W, h0^{km}±3^{km}, ML4.2/15, Error ellipse: s-maj=2.3km s-min=1.6km az=8.0*

NEIC ***10*** *13:36:45.6, 36°.00N×96°.82W, h3^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.00; $M_{\theta\theta}$1.12; $M_{\phi\phi}$-1.12; $M_{r\theta}$0.00; $M_{\theta\phi}$-0.64; $M_{\phi r}$0.00; Fault plane solution: $M_0$1.29000×10^{14} NP1:ϕ_s330.00000°, δ90.00000°, λ0.00000°. NP2:ϕ_s240.00000°, δ90.00000°, λ180.00000°. Principal axes: T 1.2920, Plg0.0000°, Azm15.0000°; N 0.0000, Plg90.0000°, Azm0.0000°; P -1.2920, Plg0.0000°, Azm105.0000°;*

NEIC ***10*** *13:36:45.6±0.6, 35°.99N±0°.02×96°.81W±0°.04, h5^{km}±7^{km} Error ellipse: s-maj=5.3km s-min=2.1km az=102.0*

ISC 10 13:36:45.9±1.0, 36°.00N±0°.02×96°.83W±0°.02, h2^{km}±8^{km}, n139, σ0^{s}98/126, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK031	S. Brethren Rd	0.04	191	Pg	Pg	13 36 46.9	+0.1
OK031				Sg	Sg	13 36 47.8	+0.3
OK030	Cody Creek RV	0.08	152	Pg	Pg	13 36 47.4	-0.1
QUOK	Quay	0.20	29	Pg	Pg	13 36 50.0	+0.2
OK005	Luther M Schoo	0.45	221	Pg	Pg	13 36 54.6	+0.1
OK029	Liberty Lake	0.55	249	Pg	Pg	13 36 56.5	+0.1
OK029				Sg	Sg	13 37 03.8	+0.4
OK001	Jones High Sch	0.57	221	Pg	Pg	13 36 56.6	-0.2
OK025	Westminster Rd	0.59	225		Pg	13 36 57.0	-0.1
OK025				Sg	Sg	13 37 04.3	-0.4
OK025				IAmb_Lg		13 37 05.5	
	comp=Z,483nm,0.8s						
BCOK	Bluff Creek, N	0.72	242	Pg	Pg	13 36 59.4	-0.3
OKCFA	Oklahoma City	0.77	221	Pg	Pg	13 36 60.0	-0.7
OKCFA	Oklahoma City	0.77	221	P	Pg	13 37 00.2	-0.5
	baz=42,SNR=21						
OKCFA				S	Sg	13 37 11.3	+0.7
	baz=42						
OKCSW	OKLAHOMA CITY	0.77	220		Pg	13 36 59.9	-0.8
BLOK	Blackwell	0.82	338	Pg	Pg	13 37 01.6	0.0
BLOK				Sg	Sg	13 37 12.3	-0.1
TUL1	Leonard	0.84	96	P	Pg	13 37 01.3	-0.8
	baz=275,SNR=220						
TUL1				S	Sg	13 37 12.0	-1.0
	baz=275						
TUL1	Leonard	0.84	96	Pg	Pg	13 37 01.2	-0.8
TUL1	Leonard	0.84	96	P	Pg	13 37 01.3	-0.8
	baz=275						
TUL1				S	Sg	13 37 12.3	-0.7
	baz=275						
FNO	Franklin	0.87	212	Pg	Pg	13 37 01.8	-0.8
FNO				IAmb_Lg		13 37 13.8	
	comp=Z,382nm,0.9s						
T35A	Sooner Cattle	0.95	15	Pg	Pg	13 37 03.8	-0.3
T35A				Sg	Sg	13 37 16.2	-0.3
T35B	Sooner Cattle	0.95	15	P	Pg	13 37 03.9	-0.3
	baz=194,SNR=257						
T35B				S	Sg	13 37 17.0	+0.5
	baz=194						
CROK	Carrier	1.06	299	Pg	Pg	13 37 06.1	-0.1
KAN13	South Haven SW	1.14	333		Pg	13 37 07.5	-0.3
KAN13				Sg	Sg	13 37 22.7	+0.1
GC02	Grant County #	1.19	316	Pg	Pg	13 37 08.4	-0.3
KAN17	Caldwell West	1.29	324	Pn	Pn	13 37 10.0	-0.9
KAN09	Caldwell North	1.30	331	Pn	Pn	13 37 10.3	-0.8
KAN14	Manchester OK	1.32	317		Pn	13 37 10.6	-0.8
KS20	Mayfield South	1.36	335		Pn	13 37 11.2	-0.7
OK032	Salt Plains WL	1.38	306		Pn	13 37 11.2	-0.8
KAN01	Argonia South	1.38	327		Pn	13 37 11.4	-0.7
KAN05	Bluff City Nor	1.39	323		Pn	13 37 11.7	-0.6
KAN06	Argonia West S	1.50	327		Pn	13 37 13.4	-0.4
KAN10	Anthony SW Sta	1.52	318		Pn	13 37 13.6	-0.5
KAN08	Anthony NE Sta	1.53	324		Pn	13 37 13.7	-0.5
KAN16	Harper SW Stat	1.58	321		Pn	13 37 14.6	-0.3
KAN12	Harper NE Stat	1.60	324		Pn	13 37 14.8	-0.4
X34A	Smith Ranch, M	1.62	211		Pn	13 37 15.2	-0.2
X34A				IAmb_Lg		13 37 39.8	
	comp=Z,316nm,0.9s						
U32A	Winter Ranch,	1.80	283	Pn	Pn	13 37 17.6	-0.3
U32A	Winter Ranch,	1.80	283	P	Pn	13 37 18.3	+0.4
	baz=102						
U32A				Sb	Sg	13 37 44.0	+0.3
	baz=102						
X37A	Clayton	1.84	139		Pn	13 37 17.9	-0.6
X37A				IAmb_Lg		13 37 44.9	
	comp=Z,269nm,0.8s						
X37A	Clayton	1.84	139	P	Pn	13 37 18.5	0.0
	baz=320,SNR=97						
X37A				Sb	Sg	13 37 44.2	-0.8
	baz=320						
LOOK	Love County	2.02	188	IAmb_Lg		13 37 51.9	
	comp=Z,291nm,1.0s						
U38A	Gravette	2.02	77	Pn	Pn	13 37 20.4	-0.7
U38A				IAmb_Lg		13 37 51.3	
	comp=Z,388nm,0.8s						
U38A	Gravette	2.02	77	P	Pn	13 37 21.4	+0.3
	baz=258,SNR=34						
U38A				S	Sb	13 37 48.5	-0.5
	baz=258						
WMOK	Wichita Mounta	2.03	232	P	Pn	13 37 21.3	+0.2
	baz=52,SNR=124						
WMOK				S	Sb	13 37 47.8	-1.4
	baz=52						
WMOK	Wichita Mounta	2.03	232		Pn	13 37 20.6	-0.6
WMOK				IAmb_Lg		13 37 54.3	
	comp=Z,186nm,1.0s						
WMOK	Wichita Mounta	2.03	232	P	Pn	13 37 21.5	+0.4
	baz=52						
WMOK				S	Sb	13 37 49.2	0.0
	baz=52						
HHAR	Hobbs	2.35	82	P	Pn	13 37 26.4	+0.8
	baz=264						
W39A	Magazine	2.61	107	P	Pn	13 37 28.7	-0.3
	baz=289,SNR=96						
W39A				S	Sn	13 38 01.5	+0.3
	baz=289						
W39A	Magazine	2.61	107	Pn	Pn	13 37 28.0	-1.0
W39A	Magazine	2.61	107	P	Pn	13 37 28.8	-0.2
	baz=289,SNR=85						
Z35A	Perchaven, San	2.68	188		Pn	13 37 29.3	-0.7
MIAR	Mount Ida	3.03	118	P	Pn	13 37 34.5	-0.3
	baz=300,SNR=18						
MIAR				S	Sn	13 38 12.4	+0.8
	baz=300						
MIAR	Mount Ida	3.03	118	P	Pn	13 37 34.7	-0.1
	baz=300,SNR=24						
KSU1	Kansas State U	3.10	3	Pb	Pb	13 37 42.2	+0.4
	baz=183,SNR=28						
KSU1				Sb	Sb	13 38 22.5	+2.4
	baz=183						
KSU1	Kansas State U	3.10	3	Pn	Pn	13 37 35.5	-0.4
KSU1				IAmb_Lg		13 38 33.2	
	comp=Z,160nm,0.8s						
Z38A	Mt. Pleasant	3.12	150	IAmb_Lg		13 38 25.3	
	comp=Z,214nm,0.8s						
Z38A	Mt. Pleasant	3.12	150	S	Sn	13 38 13.7	-0.3
	baz=332						
U40A	Yellville	3.24	82	P	Pn	13 37 37.5	-0.1
	baz=264,SNR=34						
U40A				Sb	Sb	13 38 25.7	+1.8
	baz=264						
U40A	Yellville	3.24	82	Pn	Pn	13 37 36.4	-1.2
U40A				IAmb_Lg		13 38 34.4	
	comp=Z,166nm,0.9s						
U40A	Yellville	3.24	82	P	Pn	13 37 38.1	+0.4
	baz=264,SNR=30						
U40A				P	Pn	13 37 38.1	+0.4
	baz=264,SNR=30						
S39A	Bolivar	3.28	58	IAmb_Lg		13 38 34.1	
	comp=Z,149nm,0.8s						
X40A	Basin Creek Fa	3.60	114	P	Pn	13 37 43.1	+0.4
	baz=296,SNR=24						
X40A				Sb	Sb	13 38 36.7	+2.3
	baz=296						
X40A	Basin Creek Fa	3.60	114	IAmb_Lg		13 38 47.0	
	comp=Z,77nm,0.9s						
X40A	Basin Creek Fa	3.60	114	P	Pn	13 37 43.1	+0.4
	baz=296,SNR=23						
X40A				P	Pn	13 37 43.1	+0.4
	baz=296,SNR=23						
CBKS	Cedar Bluff	3.64	321	P	Pn	13 37 43.7	+0.4
	baz=140,SNR=18						
CBKS				Sb	Sg	13 38 39.6	-3.3
	baz=140						
CBKS	Cedar Bluff	3.64	321	Pn	Pn	13 37 43.2	-0.1
CBKS	Cedar Bluff	3.64	321	S	Sn	13 38 27.5	+0.6
	baz=140						
WHAR	Wooly Hollow	3.76	99	Pn	Pn	13 37 44.0	-1.0
WHAR				IAmb_Lg		13 38 47.0	
	comp=Z,149nm,0.8s						
W41B	Gary Mavity, V	3.82	101	P	Pn	13 37 45.4	-0.3
	baz=284,SNR=13						
W41B				S	Sn	13 38 30.5	-0.7
	baz=284						
W41B	Gary Mavity, V	3.82	101	P	Pn	13 37 45.0	-0.7
	baz=284,SNR=28						
WLAR	White Oak Lake	3.83	126	Pn	Pn	13 37 44.6	-1.2
MGMO	Mountain Grove	3.85	71	IAmb_Lg		13 38 55.0	
	comp=Z,176nm,0.8s						
WHTX	Lake Whitney,	4.03	188	P	Pn	13 37 48.3	-0.3
	baz=7.5						
WHTX				Sb	Sb	13 38 49.8	+3.1
	baz=7.5						
WHTX	Lake Whitney,	4.03	188	Pn	Pn	13 37 48.0	-0.6
WHTX	Lake Whitney,	4.03	188	P	Pn	13 37 48.3	-0.3
	baz=7.5						
237A	Washetta, Mont	4.07	168		Pn	13 37 48.2	-0.9
237A	Washetta, Mont	4.07	168	P	Pn	13 37 48.8	-0.4
	baz=348						
ABTX	Abilene, Hawle	4.09	215	P	Pn	13 37 49.3	-0.1
	baz=34						
ABTX				S	Sn	13 38 37.2	-0.8
	baz=34						
ABTX	Abilene, Hawle	4.09	215	Pn	Pn	13 37 48.9	-0.6
AMTX	Amarillo	4.11	256	Sb	Sb	13 38 52.7	+3.4
	baz=73						
AMTX	Amarillo	4.11	256	IAmb_Lg		13 39 02.8	
	comp=Z,130nm,0.7s						
Z41A	Richland Creek	4.30	128	P	Pn	13 37 51.4	-0.8
	baz=311						
R40A	Maddies Statio	4.30	56		Pn	13 37 51.3	-1.0
P38A	Dawn	4.46	35	IAmb_Lg		13 39 06.7	
	comp=Z,159nm,0.9s						
NATX	Nacogdoches	4.59	156	Sb	Sb	13 39 06.2	+3.2
	baz=338						
NATX	Nacogdoches	4.59	156	IAmb_Lg		13 39 23.5	
	comp=Z,92nm,1.0s						
LCAR	Lake Charles	4.60	87		Pn	13 37 55.5	-0.9
LCAR				IAmb_Lg		13 39 15.3	
	comp=Z,82nm,0.7s						
CCAR	Cane Creek	4.64	115	IAmb_Lg		13 39 24.5	
	comp=Z,68nm,0.8s						
T42A	Van Buren	4.73	76	IAmb_Lg		13 39 21.2	
	comp=Z,116nm,0.7s						
N33A	J Bar K, Exete	4.76	354	IAmb_Lg		13 39 23.7	
	comp=Z,158nm,0.8s						
CCM	Cathedral Cave	4.92	64	Sb	Sb	13 39 16.1	+3.8
	baz=247						
CCM	Cathedral Cave	4.92	64	IAmb_Lg		13 39 26.8	
	comp=Z,148nm,0.7s						
N35A	Tabor	4.95	10	Pn	Pn	13 38 00.6	-0.6
N35A				IAmb_Lg		13 39 30.9	
	comp=Z,108nm,0.7s						
P40A	Paris	5.17	46	IAmb_Lg		13 39 36.7	
	comp=Z,216nm,0.7s						
PBMO	Poplar Bluff	5.22	80	IAmb_Lg		13 39 42.2	
	comp=Z,118nm,0.8s						
435B	Jarrell	5.24	187	IAmb_Lg		13 39 39.3	
	comp=Z,55nm,0.7s						
MSTX	Muleshoe	5.28	249	Pn	Pn	13 38 05.2	-0.7
LPAR	Lepanto	5.32	92	IAmb_Lg		13 39 40.3	
	comp=Z,193nm,0.9s						
FVM	French Village	5.50	67	IAmb_Lg		13 39 42.4	
	comp=Z,154nm,0.8s						
BGNE	Belgrade	5.50	350	P	Pn	13 38 08.8	0.0
	baz=169						
BGNE	Belgrade	5.50	350	IAmb_Lg		13 39 51.8	
	comp=Z,198nm,0.8s						
KSCO	Kaye Shedlock’	5.50	305	IAmb_Lg		13 39 52.2	
	comp=Z,85nm,0.9s						
GNAR	Gosnell	5.52	88	IAmb_Lg		13 39 49.7	
	comp=Z,138nm,0.8s						
N38A	Joes South For	5.56	29	Pn	Pn	13 38 08.9	-0.7
N38A				IAmb_Lg		13 39 47.2	
	comp=Z,125nm,0.7s						
143A	Socs Landing,	5.56	125	IAmb_Lg		13 39 52.0	
	comp=Z,56nm,0.8s						
JCT	Junction City	6.04	205	Pn	Pn	13 38 15.3	-0.9
JCT				IAmb_Lg		13 40 02.0	
	comp=Z,72nm,0.8s						
T25A	Trinidad	6.21	283	Pn	Pn	13 38 18.2	-0.5
T25A				IAmb_Lg		13 40 07.7	
	comp=Z,61nm,0.8s						
W45A	Hickory Valley	6.28	95	IAmb_Lg		13 40 09.2	
	comp=Z,103nm,0.9s						
Y45A	Yeager Farm, C	6.35	107	IAmb_Lg		13 40 15.9	
	comp=Z,59nm,0.7s						
OGNE	Ogallala	6.41	322	Pn	Pn	13 38 21.7	+0.4
OGNE				IAmb_Lg		13 40 14.4	
	comp=Z,98nm,0.8s						
SCIA	State Center	6.54	24	IAmb_Lg		13 40 19.2	
	comp=Z,70nm,0.8s						
K31A	O'Neill	6.78	348	IAmb_Lg		13 40 39.6	
	comp=Z,149nm,0.8s						
P43A	Skaggs, Pawnee	6.83	56	IAmb_Lg		13 40 29.5	
	comp=Z,118nm,0.8s						
SDCO	Great Sand Dun	7.17	287	P	Pn	13 38 32.9	+0.9
	baz=102						
WVT	Waverly	7.29	86	IAmb_Lg		13 40 45.6	
	comp=Z,40nm,0.7s						
K38A	Parkersburg	7.35	24	IAmb_Lg		13 40 52.4	
	comp=Z,66nm,0.8s						
L40A	Anamosa	7.46	34		Pn	13 38 34.7	-1.0
L40A				IAmb_Lg		13 40 41.8	
	comp=Z,88nm,1.0s						
HDIL	Hopedale	7.47	50	Pn	Pn	13 38 35.0	-0.8
ECSD	EROS Data Cent	7.73	1	P	Pn	13 38 39.3	-0.1
	baz=181						
ECSD	EROS Data Cent	7.73	1	Pn	Pn	13 38 38.9	-0.4
O44A	Mansfield	7.79	55	IAmb_Lg		13 41 01.9	
	comp=Z,105nm,0.7s						
ISCO	Idaho Springs	7.91	301	P	Pn	13 38 42.2	0.0
	baz=116						
ISCO	Idaho Springs	7.91	301	Pn	Pn	13 38 41.2	-1.0
V48A	Smith Brothers	8.13	89	IAmb_Lg		13 41 19.9	
	comp=Z,33nm,0.9s						
X48A	Hartselle	8.15	98	IAmb_Lg		13 41 11.2	
	comp=Z,32nm,1.0s						
L42A	Oliver, Polo	8.19	41	Pn	Pn	13 38 44.4	-1.3
L42A				IAmb_Lg		13 41 17.0	
	comp=Z,97nm,0.8s						
BNM	Barren Site	8.24	260	Pn	Pn	13 38 45.6	-1.0
MNTX	Cornudas Mount	8.30	241	Pn	Pn	13 38 46.2	-1.1
I37A	Lemond, Waseca	8.43	17	IAmb_Lg		13 41 17.8	
	comp=Z,32nm,0.7s						
JFWS	Jewell Farm	8.58	34	P	Pn	13 38 50.8	-0.2
	baz=218						
JFWS	Jewell Farm	8.58	34		Pn	13 38 50.3	-0.8
JFWS				IAmb_Lg		13 41 30.4	
	comp=Z,77nm,0.8s						
SUSD	Miller	8.59	350	IAmb_Lg		13 41 19.9	
	comp=Z,65nm,1.0s						
TX31	Lajitas Ar. Si	8.79	223		Pn	13 38 52.9	-1.2
TX32	Lajitas Array	8.79	223		Pn	13 38 53.1	-1.1
Y49A	Blount Mountai	8.82	101	Pn	Pn	13 38 53.2	-1.1
SFIN	Lafayette	8.82	57	IAmb_Lg		13 41 24.5	
	comp=Z,103nm,0.9s						
I40A	Norwalk	9.21	29	IAmb_Lg		13 41 55.4	
	comp=Z,43nm,1.0s						
K43A	Burlington	9.39	42	IAmb_Lg		13 41 50.3	
	comp=Z,68nm,0.8s						
RSSD	Black Hills	9.81	328	IAmb_Lg		13 42 04.0	
	comp=Z,27nm,0.8s						
F33A	5 Mile Ranch,	9.84	2	IAmb_Lg		13 42 08.1	
	comp=Z,26nm,1.0s						
I42A	Draeger Farm,	9.95	35	IAmb_Lg		13 42 01.9	
	comp=Z,42nm,0.8s						

IDC 10 13:42:56.7±2.0, 0°.84N×124°.82E, h0^{km}, mb3.3/3, mb1 3.6/3, mb1mx3.4/44, mbtmp3.4/3, Error ellipse: s-maj=190.9km s-min=27.5km az=64.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.66	156	P	P	13 47 58.9	-0.9
	0.6nm,0.3s,baz=334,slow=11,SNR=12						
ASAR	Alice Springs	25.91	161	P	P	13 48 31.2	+0.6
	0.2nm,0.4s,baz=345,slow=9.3,SNR=13						
MKAR	Makanchi Array	58.88	327	P	P	13 52 57.4	-0.1
	0.2nm,0.5s,baz=131,slow=7.6,SNR=2.4						

IDC 10 13:48:40.1±8.5, 15°.35S×171°.36W, h0^{km}, mb3.2/2, mb1 3.5/2, mb1mx3.3/41, mbtmp3.2/2, Error ellipse: s-maj=451.8km s-min=56.0km az=143.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	51.77	257	P	P	13 57 50.4	+0.5
	0.3nm,0.6s,baz=93,slow=5.2,SNR=1.9						
ASAR	Alice Springs	52.00	252	P	P	13 57 51.0	-0.6
	0.3nm,1.0s,baz=79,slow=9.5,SNR=1.4						
GERES	GERESS Array B	146.34	354	PKPbc	PKPdf	14 08 22.1	+0.3
	1.0nm,0.5s,baz=33,slow=3.8,SNR=4.3						

IDC 10 13:49:24.6±8.1, 19°.68S×168°.97E, h163^{km}±45^{km}, mb3.8/3, mb1 4.0/3, mb1mx3.3/35, mbtmp4.3/3, Error ellipse: s-maj=110.2km s-min=72.2km az=121.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	3.35	224	P	Pn	13 50 17.2	+0.2
	0.1nm,0.3s,baz=116,slow=17,SNR=10						
DZM				S	Sn	13 50 57.9	+0.1
	0.1nm,0.3s,baz=185,slow=23,SNR=1.7						
STKA	Stephens Creek	27.40	238	P	P	13 54 54.9	0.0
	0.7nm,0.3s,baz=88,slow=10,SNR=6.0						
WRA	Warramunga Arr	32.55	264	P	P	13 55 40.2	-0.3
	0.6nm,0.3s,baz=94,slow=7.7,SNR=26						
ASAR	Alice Springs	32.78	257	P	P	13 55 42.5	+0.1
	7.3nm,0.4s,baz=89,slow=7.6,SNR=229						

TUL ***10*** *13:49:25.1±0.7, 36°.95N±0°.02×97°.82W±0°.03, h3^{km}±7^{km}, ML2.8, mb_Lg2.4/14(NEIC), Error ellipse: s-maj=3.0km s-min=2.3km az=111.0*

NEIC 10 13:49:25.4±0.9, 36°.93N±0°.02×97°.80W±0°.03, h6^{km}±6^{km}, Error ellipse: s-maj=3.1km s-min=2.5km az=114.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GC02	Grant County #	0.09	211	Pg	Pg	13 49 27.6	+0.1
KAN17	Caldwell West	0.12	14	Pg	Pg	13 49 28.0	+0.1
KAN17				Sg	Sg	13 49 29.8	+0.3
KAN14	Manchester OK	0.13	281		Pg	13 49 27.9	-0.3
KAN05	Bluff City Nor	0.19	342		Pg	13 49 29.0	-0.2
KAN05				Sg	Sg	13 49 31.5	-0.1
KAN01	Argonia South	0.22	8		Pg	13 49 30.0	+0.1
KAN01				Sg	Sg	13 49 32.9	+0.1
KAN09	Caldwell North	0.25	35	Pg	Pg	13 49 30.5	+0.1
KAN09				Sg	Sg	13 49 33.3	-0.3
KAN13	South Haven SW	0.27	72		Pg	13 49 31.1	+0.4
KAN10	Anthony SW Sta	0.30	309	Pg	Pg	13 49 31.1	-0.3
KAN06	Argonia West S	0.32	351	Pg	Pg	13 49 31.5	-0.2
KAN08	Anthony NE Sta	0.33	335		Pg	13 49 31.5	-0.3
OK032	Salt Plains WL	0.35	249		Pg	13 49 32.1	-0.3
KS20	Mayfield South	0.36	33	Pg	Pg	13 49 32.2	-0.1
KAN16	Harper SW Stat	0.36	324	Pg	Pg	13 49 32.1	-0.3
KAN12	Harper NE Stat	0.40	336	Pg	Pg	13 49 32.8	-0.4
CROK	Carrier	0.45	199	Pg	Pg	13 49 34.2	+0.1
BLOK	Blackwell	0.50	110	Pg	Pg	13 49 35.4	+0.3
T35A	Sooner Cattle	1.03	90	Pg	Pg	13 49 45.1	-0.1
U32A	Winter Ranch,	1.11	241	Pg	Pg	13 49 46.6	-0.2
QUOK	Quay	1.16	131		Pg	13 49 47.4	-0.3
OK029	Liberty Lake	1.17	166		Pg	13 49 47.3	-0.5
OK031	S. Brethren Rd	1.25	141		Pg	13 49 48.8	-0.6
BCOK	Bluff Creek, N	1.28	173	Pn	Pn	13 49 49.2	-0.8
OK030	Cody Creek RV	1.29	140		Pn	13 49 49.5	-0.6
OK025	Westminster Rd	1.40	164	Pn	Pn	13 49 51.4	-0.1
OKCFA	Oklahoma City	1.54	169	Pn	Pn	13 49 53.9	+0.4
OKCFA				IAmb_Lg		13 50 16.3	
	comp=Z,24nm,0.7s						
OKCSW	OKLAHOMA CITY	1.55	169	Pn	Pn	13 49 53.9	+0.2
R32A	Long Quarter,	1.66	334		Pn	13 49 55.3	+0.2
FNO	Franklin	1.70	169	Pn	Pn	13 49 56.2	+0.5
FNO				IAmb_Lg		13 50 21.0	
	comp=Z,17nm,0.7s						
TUL1	Leonard	1.91	122		Pn	13 49 59.4	+0.8
X34A	Smith Ranch, M	2.33	181	Pn	Pn	13 50 05.0	+0.7
X34A				IAmb_Lg		13 50 39.9	
	comp=Z,19nm,0.7s						
WMOK	Wichita Mounta	2.33	200		Pn	13 50 04.9	+0.5
KSU1	Kansas State U	2.36	23	Pn	Pn	13 50 05.0	+0.2
KSU1				IAmb_Lg		13 50 42.7	
	comp=Z,25nm,0.8s						
U38A	Gravette	2.79	99	Pn	Pn	13 50 11.1	+0.5
LOOK	Love County	2.98	170	Pn	Pn	13 50 14.0	+0.8
X37A	Clayton	3.06	139	Pn	Pn	13 50 15.1	+0.7
HHAR	Hobbs	3.17	101	Pn	Pn	13 50 16.5	+0.6
S39A	Bolivar	3.65	77	Pn	Pn	13 50 22.8	+0.3
U40A	Yellville	4.02	97	IAmb_Lg		13 51 42.1	
	comp=Z,8.6nm,0.8s						
P38A	Dawn	4.30	50	IAmb_Lg		13 51 41.1	
	comp=Z,8.0nm,0.7s						
OGNE	Ogallala	5.19	322	IAmb_Lg		13 52 22.8	
	comp=Z,9.4nm,0.7s						
JCT	Junction City	6.65	195	IAmb_Lg		13 53 08.7	
	comp=Z,4.8nm,0.8s						

THE 10 13:57:28.6, 38°.40N×20°.47E, h14^{km}±1^{km}, ML2.3/2, Error ellipse: s-maj=1.3km s-min=0.3km az=141.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FSK	Fiskardo	0.10	49	P	Pg	13 57 31.6	-0.1
FSK				S	Sg	13 57 33.6	-0.2
KEF4	Livadi, Kephal	0.14	194	P	Pg	13 57 32.2	-0.1
KEF4				S	Sg	13 57 35.3	+0.6
DMLN	Damoulianata-K	0.17	206	P	Pg	13 57 32.9	+0.1
DMLN				S	Sg	13 57 36.1	+0.5
	1µm,0.3s						
KEF3	Kipouria, Keph	0.21	206	P	Pg	13 57 33.0	-0.4
KEF3				S	Sg	13 57 36.5	-0.1
VLS	Valsamata	0.24	157	P	Pg	13 57 33.6	-0.2
VLS				S	Sg	13 57 37.6	+0.3
	1µm,0.1s						
EVGI	Lefkada island	0.27	33	P	Pg	13 57 34.2	-0.1
EVGI				S	Sg	13 57 38.7	+0.5
PSDA	Pessada-Kefalo	0.29	162	P	Pg	13 57 34.5	-0.2
PSDA				S	Sg	13 57 39.5	+0.6
DRAG	Dragano-Lefkad	0.30	16	P	Pg	13 57 34.8	-0.1
DRAG				S	Sg	13 57 39.6	+0.5
NYDR	Nydri-Lefkada	0.36	29	P	Pg	13 57 35.8	-0.2
NYDR				S	Sg	13 57 41.5	+0.5
LKD2	Lefkada island	0.42	21	P	Pg	13 57 36.8	-0.2

ATH 10 13:57:31.9, 38°.29N×22°.50E, h16^{km}±3^{km}, ML1.6/6, Error ellipse: s-maj=4.0km s-min=1.3km az=253.0, Greece

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

THAL	**Thalero**	0.29	153	P	Pg	13 57 38.2	+0.2
THAL				S	Sg	13 57 42.3	0.0
THAL				AML	AML	13 57 42.8	
	comp=N,1140µm,0.2s						
THAL				AML	AML	13 57 43.8	
	comp=E,1069µm,0.2s						
SERG	**Sergoula**	0.36	289	P	Pg	13 57 38.8	-0.6
SERG				S	Sb	13 57 45.3	-0.1
SERG				AML	AML	13 57 46.8	
	comp=E,122µm,0.2s						
SERG				AML	AML	13 57 47.5	
	comp=N,201µm,0.2s						
KLV	**Kalavryta, Ach**	0.37	228	P	Pg	13 57 39.2	-0.4
KLV				S	Sg	13 57 44.7	-0.1
KLV				AML	AML	13 57 46.7	
	comp=N,47µm,0.2s						
KLV				AML	AML	13 57 46.8	
	comp=E,51µm,0.2s						
GUR	**Goura**	0.38	199	P	Pg	13 57 39.3	-0.4
GUR				S	Sg	13 57 44.5	-0.5
GUR				AML	AML	13 57 45.4	
	comp=N,288µm,0.3s						
GUR				AML	AML	13 57 46.3	
	comp=E,332µm,0.2s						
LAKA	**Lakka**	0.41	263	P	Pb	13 57 40.7	-0.1
LKR	**Lokris**	0.53	48	P	Pg	13 57 41.1	-1.4
LKR				S	Sb	13 57 50.1	-0.1
LKR				AML	AML	13 57 52.3	
	comp=E,274µm,0.2s						
LKR				AML	AML	13 57 52.4	
	comp=N,310µm,0.2s						
VIL2	**Platees**	0.61	97	P	Pb	13 57 44.8	+0.6
VIL2				S	Sn	13 57 54.6	-0.9
VIL2				AML	AML	13 57 56.5	
	comp=N,138µm,0.3s						
VIL2				AML	AML	13 57 57.0	
	comp=E,138µm,0.3s						

*ISU **10** 14:01:13, 40°.40N×73°.90E, h5^{km}*
*SOME **10** 14:01:15.4, 40°.57N×73°.62E, h5^{km}*
*KRNET **10** 14:01:16.0±0.1, 40°.45N×73°.62E, h17^{km}, mb3.1*
*NNC **10** 14:01:17.1±1.0, 40°.59N×73°.65E, h0^{km}, mb3.7, mpv3.4,*
Error ellipse: s-maj=7.9km s-min=3.2km az=173.0
ISC 10 14:01:15.8±1.2**, 40°.35N**±0°.03×**73°.63E**±0°.03**, h6**^{km}±10^{km}**,**
n50, σ1^{s}.25/80**, 18C-20D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	0.35	196	*e*P	Pg	14 01 23.0	+0.3
SFK				*e*S	Sb	14 01 30.0	-0.5
SFK	**Sufi-Kurgan**	0.35	196	⇑*i*P	Pb	14 01 24.8	+0.2
	baz=91						
SFK				⇑*i*S	Sb	14 01 30.6	+0.1
	baz=91						
SALK	**Salom-Alik**	0.55	15	*e*P	Pg	14 01 25.2	-1.2
	baz=20						
SALK				*e*S	Sg	14 01 32.2	-1.3
	baz=20						
OHH	**Osh**	0.67	285	⇑*i*P	Pg	14 01 28.0	-0.6
	baz=77						
OHH				⇑*i*S	Sg	14 01 36.8	-0.5
	baz=77						
ANR	**Andizhan**	1.05	293	*e*P	Pg	14 01 36.0	+0.1
ANR				*e*S	Sn	14 01 53.0	+0.9
FRG	**Fergana**	1.41	272	*e*P	Pg	14 01 44.0	+1.2
FRG				*e*S	Sg	14 02 03.0	+2.0
DRK	**Karamyk**	1.65	239	⇓*i*P	Pg	14 01 47.3	-0.2
	baz=36						
DRK				⇓*i*S	Sg	14 02 10.3	+1.4
	baz=36						
AML	**Almayashu**	1.78	2	P	Pn	14 01 46.5	-1.1
	SNR=25						
AML	**Almayashu**	1.78	2	⇓*i*P	Pn	14 01 46.4	-1.1
	baz=2.0						
AML				⇓*i*S	Sn	14 02 09.0	-1.7
	baz=2.0						
UCH	**Uchtor**	1.99	19	P	Pn	14 01 50.4	0.0
	SNR=16						
UCH	**Uchtor**	1.99	19	⇓*e*P	Pn	14 01 50.3	-0.2
	baz=21						
UCH				⇓*i*S	Sn	14 02 15.4	-0.6
	baz=21						
BTK	**Batken**	2.17	263	*e*P	Pg	14 01 59.0	+1.6
BTK				*e*S	Sg	14 02 26.0	+0.5
BTK	**Batken**	2.17	263	⇑*i*P	Pb	14 01 54.2	-1.4
	baz=60						
BTK				⇑*i*S	Sb	14 02 21.9	-0.9
	baz=60						
TRKS	**Terek-Say**	2.22	303	⇑*i*P	Pn	14 01 53.3	-0.1
	baz=99						
TRKS				⇑*i*S	Sn	14 02 20.0	-1.3
	baz=99						
MNAS	**Manas**	2.29	339	⇓*i*P	Pn	14 01 54.4	0.0
	baz=38						
MNAS				⇓*i*S	Sn	14 02 22.3	-0.8
	baz=38						
EKS2	**Erkin-Say**	2.31	3	P	Pn	14 01 56.4	+1.8
	SNR=13						
EKS2	**Erkin-Say**	2.31	3	⇓*i*P	Pn	14 01 54.4	-0.2
	baz=3.0						
EKS2				⇓*i*S	Sn	14 02 22.6	-0.8
	baz=3.0						
MRKS	**Merke**	2.41	353	*e*P	Pn	14 01 56.6	+0.7
	33nm,0.4s						
MRKS				*e*S	Sn	14 02 27.1	+1.2
	128nm,0.5s						
MRKS	**Merke**	2.41	353	Pg	Pn	14 01 56.6	+0.7
	33nm,0.4s						
MRKS				Lg	Lg	14 02 27.1	
	128nm,0.5s						
KBK	**Karagaybulak**	2.51	23	P	Pb	14 01 59.5	-1.9
	SNR=15						
KBK	**Karagaybulak**	2.51	23	⇓*i*P	Pn	14 01 57.3	0.0
	baz=24						
KBK				⇓*i*S	Sn	14 02 27.5	-0.8
	baz=24						
ULHL	**Ulahol**	2.73	45	P	Pb	14 02 05.2	0.0
	SNR=8.2						
ULHL	**Ulahol**	2.73	45	⇓*i*P	Pn	14 02 00.8	+0.4
	baz=47						
ULHL				⇓*i*S	Sn	14 02 33.7	-0.2
	baz=47						
BOOM	**Boomskoye usch**	2.75	38	⇓*i*P	Pn	14 02 01.1	+0.4
	baz=40						
BOOM				⇓*i*S	Sn	14 02 34.1	-0.3
	baz=40						
CHMS	**Chumysh**	2.78	17	P	Pb	14 02 04.6	-1.2
	SNR=7.1						
CHMS	**Chumysh**	2.78	17	⇑*e*P	Pn	14 02 01.1	+0.2
	baz=18						
CHMS				⇑*i*S	Sn	14 02 34.0	-0.8
	baz=18						
GAR	**Garm**	2.89	243	⇑*i*P	Pb	14 02 05.0	-2.8
	baz=41						
GAR				⇑*i*S	Sb	14 02 40.3	-3.2
	baz=41						
TKM2	**Tokmak 2**	2.96	29	P	Pb	14 02 08.2	-0.9
	SNR=8.9						
TKM2	**Tokmak 2**	2.96	29	⇓Pg	Pb	14 02 08.4	-0.7
	3.6nm,0.5s						
TKM2				⇑Lg	Lg	14 02 43.7	
	22nm,0.6s						
TKM2	**Tokmak 2**	2.96	29	⇓*i*P	Pn	14 02 03.8	+0.2
	baz=30						
TKM2				⇓*i*S	Sn	14 02 38.8	-0.8
	baz=30						
USP	**Ospenovka**	2.99	12	P	Pb	14 02 08.5	-1.0
	SNR=8.2						
USP	**Ospenovka**	2.99	12	⇑*e*P	Pn	14 02 04.0	+0.2
	baz=13						
USP				⇑*i*S	Sn	14 02 38.8	-1.1
	baz=13						
KST	**Kastek**	3.21	32	*e*P	Pb	14 02 10.9	-2.4
	2.0nm,0.3s						
KST				*e*S	Sb	14 02 51.5	-1.2
	39nm,0.7s						
KST	**Kastek**	3.21	32	Pg	Pb	14 02 10.9	-2.4
	2.0nm,0.3s						
KST				Lg	Lg	14 02 51.5	
	39nm,0.7s						
YBZ	**Yangibazar**	3.21	289	*e*P	Pb	14 02 14.0	+0.7
YBZ				*e*S	Sg	14 02 58.0	-0.9
IUG	**Iuzhnay**	3.25	305	*e*P	Pb	14 02 14.2	+0.3
	177nm,0.2s						
IUG				*e*S	Sb	14 02 57.0	+3.1
	65nm,0.4s						
IUG	**Iuzhnay**	3.25	305	Pg	Pb	14 02 14.2	+0.3
	177nm,0.2s						
IUG				Lg	Lg	14 02 57.0	
	65nm,0.4s						
DGS	**Degeres**	3.30	28	*e*P	Pb	14 02 14.1	-0.8
	5.2nm,0.3s						
DGS				*e*S	Sb	14 02 57.0	+1.6
	61nm,0.9s						
DGS	**Degeres**	3.30	28	Pg	Pb	14 02 14.0	-0.8
	5.2nm,0.3s						
DGS				Lg	Lg	14 02 57.0	
	61nm,0.9s						
KK31	**Karatay Array**	3.61	321	Pg	Pb	14 02 20.4	+0.4
	1.8nm,0.4s,baz=139,slow=16,SNR=27						
KK31				⇑Lg	Lg	14 03 05.9	
	2.8nm,0.3s,baz=132,slow=28,SNR=6.0						
TNSS	**Tian-Shan**	3.66	42	*e*P	Pb	14 02 20.5	-0.6
	1.9nm,0.4s						
TNSS				*e*S	Sb	14 03 08.0	+2.1
	15nm,0.7s						
TNSS	**Tian-Shan**	3.66	42	Pg	Pb	14 02 20.5	-0.6
	1.9nm,0.4s						
TNSS				Lg	Lg	14 03 08.0	
	15nm,0.7s						
MDOK	**Medeo**	3.80	41	*e*P	Pb	14 02 22.8	-0.5
	1.6nm,0.5s						
MDOK				*e*S	Sb	14 03 12.3	+2.6
	16nm,0.7s						
MDOK	**Medeo**	3.80	41	⇑Pg	Pb	14 02 22.3	-1.1
	1.6nm,0.4s						
MDOK				Lg	Lg	14 03 11.8	
	14nm,0.6s						
MDOK	**Medeo**	3.80	41	Pg	Pb	14 02 22.8	-0.5
	1.6nm,0.5s						
MDOK				Lg	Lg	14 03 12.3	
	16nm,0.7s						
BRLS	**Borolday**	3.90	315	*e*P	Pb	14 02 24.3	-0.7
	4.0nm,0.4s						
BRLS				*e*S	Sb	14 03 14.1	+1.6
	8.8nm,0.4s						
BRLS	**Borolday**	3.90	315	Pg	Pb	14 02 24.3	-0.7
	4.0nm,0.4s						
BRLS				Lg	Lg	14 03 14.1	
	8.8nm,0.4s						
KUU	**Kurty**	4.07	29	*e*P	Pb	14 02 27.0	-0.9
	1.5nm,0.1s						
KUU				*e*S	Sb	14 03 19.0	+1.6
	20nm,0.5s						
KUU	**Kurty**	4.07	29	Pg	Pb	14 02 27.0	-0.9
	1.5nm,0.1s						
KUU				Lg	Lg	14 03 19.0	
	20nm,0.5s						
PDGK	**Podgornoye**	5.29	54	⇓Pg	Pb	14 02 51.7	+2.9
	1.3nm,0.6s						
PDGK				⇑Lg	Lg	14 04 00.9	
	3.6nm,0.6s						

*NEIC **10** 14:02:18.9±0.9, 36°.93N±0°.03×97°.85W±0°.05, h5^{km}±6^{km},*
Error ellipse: s-maj=6.4km s-min=4.9km az=104.0
*TUL **10** 14:02:18.4±1.4, 36°.95N±0°.03×97°.83W±0°.06, h0^{km}±6^{km},*
ML3.7, mb_Lg3.6/104(NEIC), ML3.6/26(NEIC), Error
ellipse: s-maj=7.0km s-min=4.3km az=69.0
*IDC **10** 14:02:19.5±1.6, 37°.08N×98°.14W, h0^{km}, mb4.1/1,*
mb1 4.1/4, mb1mx3.7/49, mbtmp3.8/4, ML4.3/2, MS3.1/1,
Ms1 3.1/1, ms1mx2.3/42, Error ellipse: s-maj=27.0km
s-min=11.2km az=102.0
*NEIC **10** 14:02:19.1±0.8, 36°.95N±0°.04×97°.84W±0°.06, h5^{km}±6^{km},*
Error ellipse: s-maj=7.2km s-min=5.0km az=70.0
*ANF **10** 14:02:20.7±0.7, 36°.95N×97°.86W, h19^{km}±5^{km}, ML4.5/17,*
Error ellipse: s-maj=2.4km s-min=1.9km az=33.0
ISC 10 14:02:19.0±0.8**, 36°.96N**±0°.02×**97°.83W**±0°.02**, h8**^{km}±5^{km}**,**
n173, σ0^{s}.77/178**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAN17	**Caldwell West**	0.10	32	Pg	Pg	14 02 21.7	+0.3
KAN17				Sg	Sg	14 02 23.5	+0.4
KAN14	**Manchester OK**	0.10	269		Pg	14 02 21.4	-0.1
KAN14				Sg	Sg	14 02 22.9	-0.3
GC02	**Grant County #**	0.11	192	Pg	Pg	14 02 20.1	-1.4
GC02				Sg	Sg	14 02 22.8	-0.4
KAN05	**Bluff City Nor**	0.15	348		Pg	14 02 22.6	+0.4
KAN05				Sg	Sg	14 02 24.9	+0.4
KAN01	**Argonia South**	0.20	17		Pg	14 02 23.5	+0.4
KAN01				Sg	Sg	14 02 26.4	+0.5
KAN09	**Caldwell North**	0.25	44	Pg	Pg	14 02 24.3	+0.4
KAN09				Sg	Sg	14 02 27.9	+0.6
KAN10	**Anthony SW Sta**	0.27	308	Pg	Pg	14 02 24.6	+0.2
KAN13	**South Haven SW**	0.29	79		Pg	14 02 25.0	+0.3
KAN06	**Argonia West S**	0.29	356		Pb	14 02 25.2	-1.4
KAN08	**Anthony NE Sta**	0.29	337		Pb	14 02 25.1	-1.4
KAN16	**Harper SW Stat**	0.33	325	Pg	Pb	14 02 25.8	-1.4
OK032	**Salt Plains WL**	0.34	243		Pg	14 02 25.6	-0.1
KS20	**Mayfield South**	0.35	39		Pb	14 02 26.3	-1.3
KS21	**Milan North St**	0.35	22		Pb	14 02 26.4	-1.2
KS21					Sb	14 02 31.5	-1.9
KAN12	**Harper NE Stat**	0.36	339	Pg	Pb	14 02 26.5	-1.3
KAN12					Sb	14 02 31.8	-1.9
CROK	**Carrier**	0.47	195	Pg	Pg	14 02 28.0	-0.1
BLOK	**Blackwell**	0.53	112	Pg	Pg	14 02 29.4	+0.1
T35A	**Sooner Cattle**	1.06	92		Pg	14 02 39.0	-0.3
T35B	**Sooner Cattle**	1.06	92	P	Pg	14 02 38.9	-0.4
	baz=272,SNR=209						
T35B				S	Sg	14 02 53.0	-0.1
	baz=272						
U32A	**Winter Ranch,**	1.10	239		Pg	14 02 39.5	-0.7
U32A	**Winter Ranch,**	1.10	239	P	Pg	14 02 39.5	-0.7
	baz=58,SNR=24						
QUOK	**Quay**	1.20	131		Pg	14 02 41.3	-0.6
OK029	**Liberty Lake**	1.20	165		Pg	14 02 41.3	-0.7
OK031	**S. Brethren Rd**	1.28	141		Pn	14 02 42.6	-0.6
BCOK	**Bluff Creek, N**	1.31	172		Pn	14 02 43.0	-0.7
OK030	**Cody Creek RV**	1.33	140		Pn	14 02 43.5	-0.4
OK025	**Westminster Rd**	1.43	164		Pn	14 02 45.2	-0.1
OK001	**Jones High Sch**	1.46	162		Pn	14 02 45.8	0.0
OKCFA	**Oklahoma City**	1.57	169	Pn	Pn	14 02 47.3	+0.1
OKCFA				IAmb_Lg		14 03 10.8	
	comp=Z,377nm,0.8s						
OKCFA	**Oklahoma City**	1.57	169	P	Pn	14 02 47.7	+0.4
	baz=349,SNR=18						
OKCFA				Sb	Sb	14 03 09.3	+0.9
	baz=349						
OKCSW	**OKLAHOMA CITY**	1.58	168		Pn	14 02 46.7	-0.7
R32A	**Long Quarter,**	1.62	335		Pb	14 02 48.8	-0.4
R32A	**Long Quarter,**	1.62	335	P	Pg	14 02 49.1	-1.0
	baz=154,SNR=154						
FNO	**Franklin**	1.73	168		Pn	14 02 49.9	+0.4
TUL1	**Leonard**	1.95	122	P	Pn	14 02 53.1	+0.7
	baz=303,SNR=62						
TUL1				Sb	Sb	14 03 20.1	+0.9
	baz=303						
TUL1	**Leonard**	1.95	122		Pn	14 02 52.9	+0.5
TUL1	**Leonard**	1.95	122	P	Pn	14 02 53.1	+0.7
	baz=303,SNR=45						
TUL1				S	Sb	14 03 20.2	+0.9
	baz=303						
WMOK	**Wichita Mounta**	2.35	199	P	Pn	14 02 58.0	+0.1
	baz=19,SNR=116						
WMOK				Sb	Sb	14 03 31.2	+0.5
	baz=19						
WMOK	**Wichita Mounta**	2.35	199		Pn	14 02 57.8	-0.1
WMOK	**Wichita Mounta**	2.35	199	P	Pn	14 02 58.3	+0.4
	baz=19,SNR=156						
KSU1	**Kansas State U**	2.35	24	P	Pn	14 02 58.9	+1.0
	baz=204,SNR=23						
KSU1				Sb	Sb	14 03 31.5	+0.8
	baz=204						
KSU1	**Kansas State U**	2.35	24	Pn	Pn	14 02 58.9	+1.0
KSU1	**Kansas State U**	2.35	24	P	Pn	14 02 58.9	+1.0
	baz=204,SNR=27						
KSU1				S	Sb	14 03 31.3	+0.6
	baz=204						
X34A	**Smith Ranch, M**	2.35	180		Pn	14 02 58.2	+0.2
X34A				IAmb_Lg		14 03 35.4	
	comp=Z,240nm,0.7s						
CBKS	**Cedar Bluff**	2.39	321	P	Pn	14 02 59.6	+1.1
	baz=140,SNR=68						
CBKS				Sb	Sb	14 03 33.0	+1.0
	baz=140						
CBKS	**Cedar Bluff**	2.39	321		Pn	14 02 59.2	+0.7
CBKS	**Cedar Bluff**	2.39	321	P	Pn	14 02 59.6	+1.1
	baz=140,SNR=43						
LOOK	**Love County**	3.01	170		Pn	14 03 06.8	-0.2
X37A	**Clayton**	3.10	139	Pn	Pn	14 03 08.9	+0.7
X37A	**Clayton**	3.10	139	P	Pn	14 03 09.2	+1.0
	baz=320,SNR=76						
HHAR	**Hobbs**	3.20	101	Pn	Pn	14 03 10.6	+0.9
HHAR				IAmb_Lg		14 04 05.0	
	comp=Z,145nm,0.8s						
HHAR	**Hobbs**	3.20	101	P	Pn	14 03 11.0	+1.3
	baz=283						
Z35A	**Perchaven, San**	3.65	172		Pn	14 03 16.2	+0.4
Z35A	**Perchaven, San**	3.65	172	P	Pn	14 03 16.7	+0.9
	baz=353,SNR=11						
Z35A				S	Sn	14 04 00.5	+1.4
	baz=353						
S39A	**Bolivar**	3.67	77	Pn	Pn	14 03 16.2	+0.2
S39A				IAmb_Lg		14 04 14.9	
	comp=Z,92nm,0.8s						
S39A	**Bolivar**	3.67	77	P	Pn	14 03 16.6	+0.5
	baz=260,SNR=40						
W39A	**Magazine**	3.72	117	P	Pn	14 03 17.2	+0.4
	baz=299						
W39A				S	Sn	14 04 02.3	+1.5
	baz=299						
W39A	**Magazine**	3.72	117	Pn	Pn	14 03 16.9	+0.1
W39A				IAmb_Lg		14 04 24.9	
	comp=Z,238nm,0.8s						
W39A	**Magazine**	3.72	117	P	Pn	14 03 16.6	-0.2
	baz=299,SNR=25						
AMTX	**Amarillo**	3.75	238	P	Pn	14 03 18.1	+0.8
	baz=55						
AMTX				Sb	Sb	14 04 14.8	+3.7
	baz=55						
AMTX	**Amarillo**	3.75	238	IAmb_Lg		14 04 24.6	
	comp=Z,189nm,0.9s						
N33B	**J Bar K, Exete**	3.79	4	P	Pn	14 03 18.0	+0.3
	baz=185						
N33A	**J Bar K, Exete**	3.79	4	Pn	Pn	14 03 17.5	-0.2
N33A				IAmb_Lg		14 04 28.7	
	comp=Z,90nm,0.8s						
U40A	**Yellville**	4.05	97	P	Pn	14 03 22.4	+1.1
	baz=280,SNR=11						
U40A				S	Sn	14 04 08.9	0.0
	baz=280						
U40A	**Yellville**	4.05	97	Pn	Pn	14 03 21.5	+0.2
U40A	**Yellville**	4.05	97	P	Pn	14 03 22.5	+1.1
	baz=280						
U40A				P	Pn	14 03 22.5	+1.1
	baz=280						
MIAR	**Mount Ida**	4.22	124	P	Pn	14 03 24.0	+0.4
	baz=306,SNR=6.9						
MIAR				S	Sn	14 04 14.2	+1.2
	baz=306						
MIAR	**Mount Ida**	4.22	124	IAmb_Lg		14 04 35.9	
	comp=Z,155nm,0.7s						
MIAR	**Mount Ida**	4.22	124	P	Pn	14 03 24.0	+0.4
	baz=306						
N35A	**Tabor**	4.25	23		Pn	14 03 24.6	+0.4
N35A	**Tabor**	4.25	23	P	Pn	14 03 25.4	+1.3
	baz=204,SNR=8.1						
P38A	**Dawn**	4.30	50	Pn	Pn	14 03 25.4	+0.6
P38A				IAmb_Lg		14 04 46.4	
	comp=Z,94nm,0.8s						
KSCO	**Kaye Shedlock'**	4.31	300	P	Pn	14 03 24.2	-0.8
	baz=117						
KSCO				S	Sn	14 04 15.7	+0.2
	baz=117						
KSCO	**Kaye Shedlock'**	4.31	300	IAmb_Lg		14 04 45.2	
	comp=Z,104nm,0.8s						
Z38A	**Mt. Pleasant**	4.37	147	Pn	Pn	14 03 25.9	+0.2
Z38A				IAmb_Lg		14 04 40.3	
	comp=Z,190nm,0.9s						
BGNE	**Belgrade**	4.45	357	P	Pn	14 03 27.6	+0.8
	baz=177,SNR=5.5						
BGNE				S	Sn	14 04 20.0	+1.1
	baz=177						
BGNE	**Belgrade**	4.45	357	Pn	Pn	14 03 27.6	+0.8
BGNE	**Belgrade**	4.45	357	P	Pn	14 03 27.7	+0.8
	baz=177,SNR=20						
MGMO	**Mountain Grove**	4.45	86		Pn	14 03 27.0	+0.1
MGMO				IAmb_Lg		14 04 37.8	
	comp=Z,148nm,1.0s						
ABTX	**Abilene, Hawle**	4.57	200	P	Pn	14 03 28.4	-0.2
	baz=18						
ABTX				S	Sn	14 04 22.3	+0.4
	baz=18						
ABTX	**Abilene, Hawle**	4.57	200	Pn	Pn	14 03 28.5	0.0
ABTX				IAmb_Lg		14 04 42.2	
	comp=Z,73nm,1.1s						
ABTX	**Abilene, Hawle**	4.57	200	P	Pn	14 03 28.7	+0.2
	baz=18						
R40A	**Maddies Statio**	4.61	72		Pn	14 03 29.0	0.0
R40A	**Maddies Statio**	4.61	72	P	Pn	14 03 29.6	+0.6
	baz=255,SNR=56						
FCAR	**Ozark Folk Cen**	4.72	101	Pn	Pn	14 03 30.8	+0.2
FCAR				IAmb_Lg		14 04 54.2	
	comp=Z,103nm,0.7s						
X40A	**Basin Creek Fa**	4.75	120	P	Pn	14 03 31.6	+0.6
	baz=303						
X40A				S	Sn	14 04 27.1	+0.8
	baz=303						
X40A	**Basin Creek Fa**	4.75	120		Pn	14 03 31.4	+0.4
X40A				IAmb_Lg		14 04 51.2	
	comp=Z,97nm,0.7s						
WHAR	**Wooly Hollow**	4.79	109	Pn	Pn	14 03 31.8	+0.4
WHAR				IAmb_Lg		14 04 52.9	
	comp=Z,156nm,0.8s						
W41B	**Gary Mavity, V**	4.86	110	P	Pn	14 03 32.9	+0.4
	baz=293						
W41B				S	Sn	14 04 28.6	-0.4
	baz=293						
WHTX	**Lake Whitney,**	4.96	176	P	Pn	14 03 33.8	0.0
	baz=356,SNR=11						
WHTX				S	Sn	14 04 30.7	-0.8
	baz=356						
WHTX	**Lake Whitney,**	4.96	176		Pn	14 03 33.8	0.0
WHTX	**Lake Whitney,**	4.96	176	P	Pn	14 03 33.9	0.0
	baz=356,SNR=22						
MSTX	**Muleshoe**	5.01	235	Pn	Pn	14 03 34.7	0.0
WLAR	**White Oak Lake**	5.05	129	IAmb_Lg		14 04 57.9	
	comp=Z,79nm,0.8s						
L34A	**Svendsen Farm,**	5.13	12	Pn	Pn	14 03 36.0	-0.1
OGNE	**Ogallala**	5.15	322	P	Pn	14 03 37.2	+0.6
	baz=139						
OGNE	**Ogallala**	5.15	322	Pn	Pn	14 03 36.1	-0.4
237A	**Washetta, Mont**	5.22	161		Pn	14 03 36.9	-0.5
237A	**Washetta, Mont**	5.22	161	P	Pn	14 03 37.2	-0.2
	baz=342,SNR=7.7						
P40A	**Paris**	5.23	59	IAmb_Lg		14 05 07.6	
	comp=Z,108nm,0.8s						
N38A	**Joes South For**	5.25	42		Pn	14 03 37.8	+0.1
N38A				IAmb_Lg		14 05 18.0	
	comp=Z,119nm,0.8s						
N38A	**Joes South For**	5.25	42	P	Pn	14 03 38.3	+0.6
	baz=224,SNR=5.1						
T25A	**Trinidad**	5.27	274	P	Pn	14 03 37.8	-0.5
	baz=90						
T25A	**Trinidad**	5.27	274		Pn	14 03 38.2	-0.1
T25A				IAmb_Lg		14 05 19.8	
	comp=Z,85nm,1.0s						
CCM	**Cathedral Cave**	5.35	76	P	Pn	14 03 39.4	+0.2
	baz=260						
CCM	**Cathedral Cave**	5.35	76	Pn	Pn	14 03 39.2	0.0
CCM				IAmb_Lg		14 05 21.9	
	comp=Z,61nm,0.8s						
T42A	**Van Buren**	5.39	87	IAmb_Lg		14 05 21.1	
	comp=Z,69nm,0.9s						
LCAR	**Lake Charles**	5.45	97	IAmb_Lg		14 05 14.0	
	comp=Z,80nm,1.0s						
Z41A	**Richland Creek**	5.53	130	S	Sn	14 04 45.5	0.0
	baz=313						
K31A	**O'Neill**	5.70	353	Pn	Pn	14 03 44.1	0.0
CCAR	**Cane Creek**	5.80	120	IAmb_Lg		14 05 33.7	
	comp=Z,82nm,1.0s						
NATX	**Nacogdoches**	5.81	152	S	Sn	14 04 50.5	-1.9
	baz=334						
PBMO	**Poplar Bluff**	5.94	90	IAmb_Lg		14 05 31.9	
	comp=Z,95nm,0.8s						
HBAR	**Harrisburg**	5.96	101	IAmb_Lg		14 05 43.3	
	comp=Z,121nm,0.8s						
FVM	**French Village**	5.98	78	Pn	Pn	14 03 47.8	0.0
FVM	**French Village**	5.98	78	P	Pn	14 03 47.9	0.0
	baz=262						
SCIA	**State Center**	6.10	34	P	Pn	14 03 50.1	+0.7
	baz=217						
Q24A	**Divide**	6.12	291	P	Pn	14 03 49.8	-0.2
	baz=107						
Q24A				S	Sn	14 04 59.3	-1.1

	baz=107						
435B	**Jarrell**	**6.16**	**178**	P	**Pn**	**14 03 49.7**	**-0.7**
	baz=358						
435B	**Jarrell**	**6.16**	**178**	Pn	**Pn**	**14 03 49.8**	**-0.6**
435B				IAmb_Lg		14 05 38.7	
	comp=Z,66nm,0.8s						
SLM	**Saint Louis**	**6.24**	**72**	IAmb_Lg		14 05 34.3	
	comp=Z,78nm,0.9s						
N41A	**Harden Midland**	**6.61**	**53**	Pn	**Pn**	**14 03 56.9**	**+0.5**
N41A				IAmb_Lg		14 05 49.6	
	comp=Z,84nm,0.8s						
JCT	**Junction City**	**6.67**	**195**	P	**Pn**	**14 03 57.3**	**0.0**
	baz=14						
JCT	**Junction City**	**6.67**	**195**	Pn	**Pn**	**14 03 57.1**	**-0.2**
JCT				IAmb_Lg		14 05 56.5	
	comp=Z,65nm,0.8s						
ISCO	**Idaho Springs**	**6.74**	**297**	P	**Pn**	**14 03 59.4**	**+0.8**
	baz=113						
143A	**Socs Landing,**	**6.78**	**127**	IAmb_Lg		14 06 07.1	
	comp=Z,75nm,1.1s						
ECSD	**EROS Data Cent**	**6.83**	**7**	P	**Pn**	**14 03 59.0**	**-0.6**
	baz=188,SNR=9.3						
ECSD				S	**Sn**	**14 05 16.6**	**-0.9**
	baz=188						
ECSD	**EROS Data Cent**	**6.83**	**7**	Pn	**Pn**	**14 03 59.0**	**-0.6**
S44A	**Carbondale**	**6.87**	**81**	Pn	**Pn**	**14 03 59.7**	**-0.4**
S44A				IAmb_Lg		14 06 01.9	
	comp=Z,87nm,0.7s						
K38A	**Parkersburg**	**6.89**	**33**		**Pn**	**14 04 00.7**	**+0.4**
SIUC	**Southern Illin**	**6.91**	**81**	IAmb_Lg		14 05 56.8	
	comp=Z,64nm,0.8s						
L40A	**Anamosa**	**7.22**	**43**		**Pn**	**14 04 04.9**	**+0.1**
L40A				IAmb_Lg		14 06 10.9	
	comp=Z,71nm,0.8s						
W45A	**Hickory Valley**	**7.23**	**102**	IAmb_Lg		14 06 10.9	
	comp=Z,80nm,0.8s						
Q44A	**Meyer Farm, Va**	**7.23**	**72**	IAmb_Lg		14 06 21.2	
	comp=Z,100nm,0.9s						
ANMO	**Albuquerque**	**7.28**	**257**	Pn	**Pn**	**14 04 08.0**	**+2.2**
	comp=Z,0.1nm,0.3s,baz=346,slow=10.0,SNR=1.5						
ANMO				Pg	**Pb**	**14 04 26.5**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=74,slow=20,SNR=6.0						
ANMO				Lg	Lg	14 05 59.1	
	comp=Z,0.8nm,0.3s,baz=25,slow=14,SNR=2.1						
Y45A	**Yeager Farm, C**	**7.44**	**112**	IAmb_Lg		14 06 24.2	
	comp=Z,52nm,0.8s						
N23A	**Red Feather La**	**7.44**	**304**	P	**Pn**	**14 04 09.7**	**+1.6**
	baz=119						
SUSD	**Miller**	**7.53**	**354**	P	**Pn**	**14 04 09.0**	**-0.1**
	baz=173						
SUSD	**Miller**	**7.53**	**354**	Pn	**Pn**	**14 04 08.7**	**-0.4**
SUSD				IAmb_Lg		14 06 31.1	
	comp=Z,70nm,0.8s						
I37A	**Lemond, Waseca**	**7.81**	**24**	IAmb_Lg		14 06 41.7	
	comp=Z,64nm,0.8s						
Y22D	**IRIS PASSCAL I**	**7.95**	**251**	IAmb_Lg		14 06 46.7	
	comp=Z,77nm,1.0s						
O44A	**Mansfield**	**8.00**	**64**	IAmb_Lg		14 06 34.0	
	comp=Z,73nm,0.7s						
L42A	**Oliver, Polo**	**8.07**	**49**		**Pn**	**14 04 17.0**	**+0.4**
L42A				IAmb_Lg		14 06 39.8	
	comp=Z,76nm,0.8s						
L42A	**Oliver, Polo**	**8.07**	**49**	P	**Pn**	**14 04 17.2**	**+0.6**
	baz=234,SNR=5.9						
WVT	**Waverly**	**8.09**	**93**	P	**Pn**	**14 04 18.3**	**+1.4**
	baz=279						
PLAL	**Pickwick Lake**	**8.15**	**101**	Pn	**Pn**	**14 04 17.9**	**+0.2**
PLAL				IAmb_Lg		14 06 40.1	
	comp=Z,35nm,1.0s						
MNTX	**Cornudas Mount**	**8.15**	**232**	P	**Pn**	**14 04 18.1**	**+0.3**
	baz=48,SNR=17						
MNTX	**Cornudas Mount**	**8.15**	**232**	Pn	**Pn**	**14 04 18.0**	**+0.3**
MNTX	**Cornudas Mount**	**8.15**	**232**	P	**Pn**	**14 04 18.1**	**+0.3**
	baz=48,SNR=12						
JFWS	**Jewell Farm**	**8.32**	**42**	P	**Pn**	**14 04 19.4**	**-0.6**
	baz=227,SNR=8.9						
JFWS	**Jewell Farm**	**8.32**	**42**	Pn	**Pn**	**14 04 19.9**	**-0.1**
JFWS				IAmb_Lg		14 07 03.0	
	comp=Z,52nm,0.8s						
RSSD	**Black Hills**	**8.57**	**329**	P	**Pn**	**14 04 24.4**	**+0.9**
	baz=145						
RSSD	**Black Hills**	**8.57**	**329**	Pn	**Pn**	**14 04 23.7**	**+0.1**
K22A	**Casper**	**8.78**	**313**		**Pn**	**14 04 26.5**	**+0.1**
K22A				IAmb_Lg		14 07 21.7	
	comp=Z,77nm,1.1s						
M44A	**Midewin, Midew**	**8.79**	**57**	Pn	**Pn**	**14 04 26.4**	**-0.1**
M44A				IAmb_Lg		14 06 54.5	
	comp=Z,57nm,0.9s						
I40A	**Norwalk**	**8.84**	**36**	Pn	**Pn**	**14 04 26.9**	**-0.1**
F33A	**5 Mile Ranch,**	**8.95**	**7**	Pn	**Pn**	**14 04 27.8**	**-0.7**
F33A				IAmb_Lg		14 07 13.5	
	comp=Z,34nm,0.8s						
TX31	**Lajitas Ar. Si**	**9.04**	**214**		**Pn**	**14 04 29.1**	**-0.8**
TX32	**Lajitas Array**	**9.04**	**214**		**Pn**	**14 04 29.1**	**-0.8**
TXAR	**Lajitas Array**	**9.04**	**214**	Pn	**Pn**	**14 04 29.1**	**-0.8**
	comp=Z,1.0nm,0.3s,baz=45,slow=11,SNR=44						
TXAR				Pg		14 05 02.8	
	comp=Z,0.7nm,0.3s,baz=31,slow=13,SNR=5.9						
TXAR				Lg	Lg	14 06 54.9	
	comp=Z,0.5nm,0.3s,baz=32,slow=20,SNR=3.7						
SFIN	**Lafayette**	**9.06**	**65**	P	**Pn**	**14 04 30.7**	**+0.6**
	baz=251						
SPMN	**Marine on St.**	**9.09**	**23**	IAmb_Lg		14 07 21.7	
	comp=Z,35nm,0.7s						
L44A	**Lake County Fo**	**9.26**	**53**	IAmb_Lg		14 07 19.4	
	comp=Z,66nm,0.8s						
K43A	**Burlington**	**9.29**	**49**	IAmb_Lg		14 07 14.9	
	comp=Z,65nm,0.8s						
I42A	**Draeger Farm,**	**9.70**	**42**	Pn	**Pn**	**14 04 37.9**	**-1.0**
E28A	**Huff**	**9.84**	**348**	IAmb_Lg		14 07 41.8	
	comp=Z,35nm,0.8s						
G40A	**Rib Lake**	**10.10**	**32**	Pn	**Pn**	**14 04 44.1**	**-0.2**
PD31	**Pinedale Array**	**10.71**	**306**		**Pn**	**14 04 53.1**	**+0.1**
PDAR	**Pinedale Array**	**10.71**	**306**	Pn	**Pn**	**14 04 52.4**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=116,slow=13,SNR=4.5						
PDAR				Lg	Lg	14 07 43.7	
	comp=Z,0.3nm,0.3s,baz=115,slow=27,SNR=2.1						
TKL	**Tuckaleechee C**	**11.42**	**92**	Sn	Sn	14 07 20.0	+10
	comp=Z,0.1nm,0.3s,baz=58,slow=23,SNR=1.9						
TKL				Lg	Lg	14 08 11.0	
	comp=Z,1.7nm,0.3s,baz=30,slow=8.1,SNR=11						
ULM	**Lac du Bonnet**	**13.36**	**5**	Pn	Pn	14 05 22.8	-6.0
	comp=Z,0.6nm,0.3s,baz=182,slow=12,SNR=4.9						
ULM				Sn	Sn	14 07 43.4	-14
	comp=Z,0.2nm,0.3s,baz=136,slow=20,SNR=1.3						
ULM				Lg	Lg	14 09 09.8	
	comp=Z,0.3nm,0.3s,baz=98,slow=17,SNR=1.2						
JTS	**Las Juntas de**	**28.99**	**153**	LR	LR	14 21 47.2	
	comp=Z,35nm,18.1s,baz=348,slow=40						
ILAR	**Eielson Array**	**40.02**	**330**	P	**P**	**14 09 55.0**	**+0.9**
	comp=Z,2.0nm,0.7s,baz=110,slow=7.2,SNR=17						

*BJI **10** 14:12:39.5±0.0, 39°.62N×143°.28E, h8^{km}, mB4.9/38, mb4.8/63, Ms4.5/51, Ms7 4.3/50*

*NIED **10** 14:12:42.5, 39°.64N×143°.33E, h21^{km}, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}5.59; $M_{\theta\theta}$-0.63; $M_{\phi\phi}$-4.96; $M_{r\theta}$2.56; $M_{\theta\phi}$-2.30; $M_{\phi r}$5.91; Fault plane solution: $M_0$8.65000×10^{15} NP1:ϕ_s23.00000°, δ69.00000°, λ90.00000°. NP2:ϕ_s203.00000°, δ21.00000°, λ90.00000°.*

*JMA **10** 14:12:42.4±0.2, 39°.64N×143°.33E, h21^{km}±3^{km}, M4.7*

JMA Felt I J1.

*MOS **10** 14:12:44.6±0.9, 39°.67N×143°.21E, h37^{km}, mb5.0/38, Error ellipse: s-maj=7.5km s-min=4.4km az=104.5*

*IDC **10** 14:12:45.7±3.4, 39°.60N×143°.22E, h33^{km}±26^{km}, mb4.3/32, mb1 4.4/39, mb1mx4.2/70, mbtmp4.5/39, ML3.4/7, MS4.0/22, Ms1 4.0/22, ms1mx3.7/42, Error ellipse: s-maj=14.0km s-min=11.1km az=93.0*

*NEIC **10** 14:12:46.5±1.7, 39°.68N±0°.05×143°.01E±0°.09, h30^{km}±4^{km}, mb4.8/69, Error ellipse: s-maj=11.1km s-min=7.2km az=111.0*

ISC 10 14:12:45.0±0.6, **39°.59N**±0°.04×**143°.30E**±0°.04, **h30**^{km}±3^{km}, **h30**^{km}**:pP-P, n291,** σ1**^{s}.39**/314, **mb4.8**/103, **MS4.3**/34, **13C-7D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**1.15**	**270**	P	**Pn**	**14 13 03.4**	**-1.5**
MIYJ				*e*S	**Sn**	**14 13 18.9**	**-0.7**
JTH	**Tanohata**	**1.16**	**288**	P	**Pn**	**14 13 03.7**	**-1.4**
JTH				*e*S	**Sn**	**14 13 18.7**	**-1.3**
JKEN	**Kujiedanarisaw**	**1.37**	**297**	P	**Pn**	**14 13 06.0**	**-2.0**
JKEN				*e*S	**Sn**	**14 13 23.8**	**-1.3**
JOM	**Ohasama**	**1.56**	**266**	P	**Pn**	**14 13 10.2**	**-0.4**
JOM				*e*S	**Sn**	**14 13 29.7**	**-0.1**
JANG	**Nango**	**1.58**	**300**	P	**Pn**	**14 13 09.3**	**-1.6**
JMK	**Ichinoseki**	**1.74**	**249**	P	**Pn**	**14 13 12.9**	**-0.2**
JMK				*e*S	**Sn**	**14 13 34.8**	**+0.6**
JIO	**Ouri**	**1.90**	**234**	P	**Pn**	**14 13 14.8**	**-0.5**
JRG	**Rokugo**	**2.07**	**265**	P	**Pn**	**14 13 17.8**	**+0.1**
JTM	**Tenmabayashi**	**2.09**	**306**	P	**Pn**	**14 13 17.1**	**-0.8**
JTM	**Tenmabayashi**	**2.09**	**306**		**Pn**	**14 13 17.0**	**-0.8**
JAH	**Hinai**	**2.14**	**287**	P	**Pn**	**14 13 18.5**	**0.0**
JYK	**Kaneyama**	**2.38**	**254**	P	**Pn**	**14 13 22.3**	**+0.4**
JOU	**Okura**	**2.39**	**240**	P	**Pn**	**14 13 22.3**	**+0.2**
ERM	**Erimo**	**2.42**	**357**	*ce*P	**Pn**	**14 13 22.1**	**-0.4**
ERM				pmax	pmax		
	comp=Z,238nm,1.3s						
ERM	**Erimo**	**2.42**	**357**	Pn	**Pn**	**14 13 21.9**	**-0.6**
JEM	**Erimo**	**2.42**	**357**	P	**Pn**	**14 13 22.0**	**-0.5**
JEM				*e*S	**Sn**	**14 13 51.1**	**0.0**
JOT	**Ohata**	**2.48**	**317**	P	**Pn**	**14 13 22.7**	**-0.6**
JMM	**Marumori**	**2.61**	**229**		**Pn**	**14 13 24.2**	**-0.9**
JNBK	**Urakawa-nobuka**	**2.72**	**351**	P	**Pn**	**14 13 26.5**	**0.0**
JNBK				*e*S	**Sn**	**14 13 57.8**	**-0.6**
JEW	**Eniwo**	**3.53**	**337**		**Pn**	**14 13 36.7**	**-1.0**
JYT	**Yasato**	**4.16**	**217**	Pn	**Pn**	**14 13 46.2**	**-0.2**
NMR	**Nemuro--Hokkai**	**4.19**	**25**	⇓*i*P	**Pn**	**14 13 45.3**	**-1.5**
NMR				*i* S	**Sn**	**14 14 29.6**	**-5.1**
JSD	**Sado**	**4.23**	**250**		**Pn**	**14 13 47.5**	**+0.2**
GLVR	**Golovnino**	**4.46**	**21**	*e*P	**Pn**	**14 13 49.5**	**-1.0**
GLVR				*e*S	**Sn**	**14 14 38.1**	**-3.3**
GLVR				smax	smax		
	comp=E,934nm,0.3s						
GLVR				smax	smax		
	comp=N,188nm,0.2s						
JKA	**Kamikawa-asahi**	**4.55**	**354**		**Pn**	**14 13 51.9**	**+0.2**
ASAJ	**Asahikawa**	**4.55**	**354**	Pn	**Pn**	**14 13 51.7**	**-0.1**
	comp=N,3.1nm,0.3s,baz=206,slow=14,SNR=28						
ASAJ				Sn	**Sn**	**14 14 40.3**	**-3.3**
	comp=N,5.8nm,0.3s,baz=74,slow=26,SNR=3.7						
ASAJ				LR	LR	14 15 36.1	
	comp=N,363nm,21.6s,baz=179,slow=38						
ASAJ	**Asahikawa**	**4.55**	**354**	P	**Pn**	**14 13 51.9**	**+0.2**
RUSJ	**Misakicho**	**4.74**	**17**	P	**Pn**	**14 13 54.1**	**-0.2**
RUSJ				*e*S	**Sn**	**14 14 45.8**	**-2.3**
YUK	**Yuzh-Kuril'sk**	**4.83**	**22**	*e*P	**Pn**	**14 13 56.0**	**+0.4**
YUK				*i* S	**Sn**	**14 14 45.2**	**-5.3**
YUK				pmax	pmax		
	comp=Z,102nm,0.2s						
YUK				pmax	pmax		
	comp=N,65nm,0.3s						
YUK				smax	smax		
	comp=E,390nm,0.6s						
YUK				smax	smax		
	comp=N,842nm,0.5s						
YUK				MLR	MLR		
	comp=Z,809nm,15.0s						
MJAR	**Matsushiro Arr**	**5.04**	**234**	Pn	**Pn**	**14 13 59.2**	**+0.7**
	comp=Z,1.7nm,0.3s,baz=43,slow=12,SNR=94						
MJAR				LR	LR	14 15 49.3	
	comp=Z,388nm,21.4s,baz=45,slow=37						
MJAR	**Matsushiro Arr**	**5.04**	**234**		**Pn**	**14 13 58.6**	**+0.1**
MAJO	**Matsushiro**	**5.04**	**234**	*c i*P	**Pn**	**14 14 00.2**	**+1.7**
MAJO	**Matsushiro**	**5.04**	**234**		**Pn**	**14 13 59.1**	**+0.6**
MAT	**Matsushiro**	**5.04**	**234**	P	**Pn**	**14 14 00.0**	**+1.5**
MAT				*e*S	**Sn**	**14 14 57.7**	**+1.9**
MJB9	**Matsu-Tunnel**	**5.04**	**234**	Pn	**Pn**	**14 13 59.1**	**+0.5**
JGF	**Kuroka**	**6.18**	**232**		**Pn**	**14 14 14.6**	**+0.5**
JSG	**Sagara**	**6.39**	**221**	Pn	**Pn**	**14 14 17.8**	**+0.9**
INU	**Inuyama**	**6.55**	**232**	Pn	**Pn**	**14 14 19.5**	**+0.3**
KUR	**Kuril'sk**	**6.57**	**29**	*e*P	**Pn**	**14 14 18.9**	**-0.5**
KUR				*e*S	**Sn**	**14 15 29.5**	**-3.8**
KUR				pmax	pmax		
	comp=Z,124nm,0.5s						
KUR				pmax	pmax		
	comp=E,71nm,0.4s						
KUR				pmax	pmax		
	comp=N,44nm,0.3s						
KUR				smax	smax		
	comp=E,272nm,0.5s						
KUR				smax	smax		
	comp=N,81nm,0.6s						
JHJ2	**Mitsune**	**7.05**	**205**	Pn	**Pn**	**14 14 25.0**	**-1.1**
JHJ	**Hachijo jima 2**	**7.06**	**205**	Pn	**Pn**	**14 14 24.5**	**-1.6**
	comp=N,16nm,0.3s,baz=334,slow=23,SNR=8.3						
JHJ				Sn	**Sn**	**14 15 38.2**	**-7.2**
	comp=N,21nm,0.3s,baz=276,slow=22,SNR=6.2						
TEY	**Ternei**	**7.36**	**320**	⇓*e*P	**Pn**	**14 14 32.9**	**+2.6**
TEY				pmax	pmax		
	comp=N,30nm,0.8s						
TEY				pmax	pmax		
	comp=E,40nm,0.8s						
TEY				pmax	pmax		
	comp=Z,50nm,0.8s						
TEY				MLR	MLR		
	comp=E,30nm,17.0s						
TEY				MLR	MLR		
	comp=N,30nm,18.0s						
TEY				MLR	MLR		
	comp=Z,60nm,15.0s						
YSS	**Yuzh-Sakhalins**	**7.37**	**357**	*e*P	**Pn**	**14 14 30.5**	**+0.1**
YSS				*e*S	**Sn**	**14 15 51.4**	**-1.5**
YSS				pmax	pmax		
	comp=Z,40nm,1.1s						
YSS				smax	smax		
	comp=N,40nm,0.8s						
YSS				MLR	MLR		
	comp=E,800nm,14.0s						
YSS				MLR	MLR		
	comp=Z,900nm,14.0s						
YSS	**Yuzh-Sakhalins**	**7.37**	**357**	Pn	**Pn**	**14 14 30.4**	**+0.1**
JWT	**Wachi**	**7.62**	**238**	Pn	**Pn**	**14 14 34.4**	**+0.5**
JMN	**Monobe**	**9.56**	**235**	Pn	**Pn**	**14 15 00.6**	**0.0**
USA0B	**Ussuriysk Arra**	**9.61**	**302**	*i* P	**Pn**	**14 15 02.9**	**+1.8**
USA0B	**Ussuriysk Arra**	**9.61**	**302**	Pn	**Pn**	**14 14 59.5**	**-1.6**
USRK	**Ussuriysk Ar.**	**9.61**	**302**	Pn	**Pn**	**14 15 01.4**	**+0.3**
	baz=111,slow=15,SNR=13						
USRK				LR	LR	14 18 33.5	
	comp=Z,1µm,19.9s,baz=108,slow=36						
TYV	**Tymovskoe**	**11.28**	**358**	*e*P	**Pn**	**14 15 24.1**	**+0.1**
TYV				*e*S	**Sn**	**14 17 30.2**	**+1.3**
TYV				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TYV				pmax	pmax		
	comp=Z,200nm,3.9s						
TYV				smax	smax		
	comp=N,6.0nm,1.2s						
TYV				smax	smax		
	comp=E,6.0nm,1.2s						
TYV				smax	smax		
	comp=N,300nm,5.1s						
TYV				smax	smax		
	comp=E,300nm,5.1s						
MDJ	**Mudanjiang**	**11.35**	**301**	P	**Pn**	**14 15 23.4**	**-1.6**
MDJ				pmax	pmax		
	comp=E,11nm,2.2s						
MDJ				pmax	pmax		
	comp=E,190nm,6.3s						
GRNR	**Gornyy**	**12.18**	**339**	⇓*i*P	**Pn**	**14 15 36.3**	**+0.1**
GRNR				*e*S	**Sn**	**14 17 50.8**	**-0.1**
GRNR				pmax	pmax		
	comp=N,6.0nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GRNR				smax	smax		
	comp=N,1.0nm,0.9s						
GRNR				MLR	MLR		
	comp=E,420nm,15.0s						
GRNR				MLR	MLR		
	comp=N,260nm,18.0s						
GRNR				MLR	MLR		
	comp=Z,560nm,15.0s						
KSRS	**Korea Array**	**12.23**	**265**	Pn	**Pn**	**14 15 38.6**	**+1.6**
	comp=Z,0.4nm,0.3s,baz=85,slow=13,SNR=14						
KSRS				LR	LR	14 20 01.7	
	comp=Z,804nm,18.2s,baz=76,slow=36						
JCJ	**Chichijima**	**12.50**	**185**	Pn	**Pn**	**14 15 36.7**	**-4.1**
	comp=Z,2.4nm,0.3s,baz=113,slow=24,SNR=6.1						
JCJ				Sn	Sn	14 17 44.6	-14
	comp=Z,13nm,0.3s,baz=332,slow=23,SNR=7.6						
KLR	**Kul'dur**	**12.68**	**323**	Pn	**Pn**	**14 15 42.5**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=122,slow=15,SNR=6.1						
KLR				LR	LR	14 20 53.5	
	comp=Z,945nm,18.0s,baz=137,slow=39						
KLR	**Kul'dur**	**12.68**	**323**	*ce*P	**Pn**	**14 15 42.8**	**-0.2**
OKH	**Okha**	**13.96**	**359**	*de*P	**Pn**	**14 15 57.7**	**-2.9**
OKH				MLR	MLR		
	comp=N,700nm,15.0s						
OKH				MLR	MLR		
	comp=Z,600nm,15.0s						
OKH				MLR	MLR		
	comp=E,900nm,15.0s						
CN2	**Changchun**	**13.98**	**293**	*e*P	**Pn**	**14 16 03.2**	**+2.3**
CN2				*e*S	**Sn**	**14 18 37.2**	**+2.2**
CN2				pmax	pmax		
	comp=E,10.0nm,1.1s						
CN2				pmax	pmax		
	comp=E,100nm,8.2s						
CN2				LR	LR		
	comp=E,400nm,17.0s						
CN2				LR	LR		
	comp=E,700nm,17.0s						
CN2				LR	LR		
	comp=E,900nm,20.0s						
SKR	**Severo-Kuril's**	**14.29**	**35**	*e*P	Pn	14 15 49.7	-15
SKR				*e*S	**Sn**	**14 18 42.9**	**+0.7**
SKR				MLR	MLR		
	comp=Z,1µm,17.0s						
SKR				MLR	MLR		
	comp=Z,500nm,17.0s						
PETK	**Petropavlovsk-**	**16.73**	**31**	Pn	**P**	**14 16 37.7**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=238,slow=13,SNR=3.8						
PETK				LR	LR	14 22 33.2	
	comp=Z,202nm,21.0s,baz=211,slow=35						
PETK	**Petropavlovsk-**	**16.73**	**31**	P	**P**	**14 16 38.4**	**-0.6**
PETK	**Petropavlovsk-**	**16.73**	**31**	Pn	**P**	**14 16 38.4**	**-0.6**
PET	**Petropavlovsk**	**17.06**	**33**	*e*P	P	14 16 53.0	+10
PET				pmax	pmax		
	comp=Z,47nm,1.0s						
PET				MLR	MLR		
	comp=Z,800nm,20.0s						
PET				MLR	MLR		
	comp=Z,600nm,18.0s						
JMZ	**Minamidaito 2**	**17.06**	**220**	Pn	**Pn**	**14 16 39.8**	**-1.5**
ZEA	**Zeya**	**17.87**	**328**	*e*P	**Pn**	**14 16 48.3**	**-2.8**
ZEA				pmax	pmax		
	comp=N,20nm,0.8s						
ZEA				pmax	pmax		
	comp=E,10.0nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,30nm,0.9s						
ZEA				MLR	MLR		
	comp=E,300nm,16.0s						
ZEA				MLR	MLR		
	comp=N,300nm,14.0s						
ZEA				MLR	MLR		
	comp=Z,400nm,15.0s						
HIA	**Hailar**	**19.34**	**308**	P	**P**	**14 17 04.2**	**-3.5**
HIA				pmax	pmax		
	comp=Z,16nm,0.7s						
HIA	**Hailar**	**19.34**	**308**	P	**P**	**14 17 04.2**	**-3.5**
MA2	**Magadan**	**20.55**	**11**	P	**P**	**14 17 21.3**	**+0.5**
	comp=Z,18nm,0.7s,baz=200,slow=9.5,SNR=7.6						
MA2				LR	LR	14 25 19.2	
	comp=Z,131nm,19.5s,baz=196,slow=37						
MA2	**Magadan**	**20.55**	**11**	P	**P**	**14 17 21.4**	**+0.5**
MA2				pmax	pmax		
	comp=Z,26nm,0.8s						
MA2	**Magadan**	**20.55**	**11**	P	**P**	**14 17 21.4**	**+0.5**
MA2				IAmb	IAmb	14 17 32.2	
	comp=Z,26nm,0.8s						
BJT	**Baijiatuau**	**20.83**	**280**	P	**P**	**14 17 21.2**	**-2.8**
BJT				pmax	pmax		
	comp=Z,12nm,0.8s						
BJT	**Baijiatuau**	**20.83**	**280**	P	**P**	**14 17 21.2**	**-2.8**
TIA	**Tai'an**	**20.91**	**269**	P	**P**	**14 17 23.4**	**-1.5**
TIA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TIA				pmax	pmax		
	comp=Z,39nm,3.7s						
TIA				LR	LR		
	comp=Z,320nm,13.5s						
TIA				LR	LR		
	comp=Z,910nm,13.5s						
TIA				LR	LR		
	comp=Z,1µm,13.5s						
NJ2	**Nanjing**	**21.16**	**257**	⇑P	**P**	**14 17 27.0**	**-0.6**
NJ2				pP	**pP**	**14 17 34.7**	**-0.5**
NJ2				sP	**sP**	**14 17 40.3**	**+1.5**
NJ2				S	**S**	**14 21 23.7**	**+2.3**
NJ2				sS	**sS**	**14 21 32.1**	**-1.2**
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,250nm,4.6s						
NJ2				LR	LR		
	comp=Z,600nm,12.3s						
NJ2				LR	LR		
	comp=Z,400nm,14.2s						
NJ2				LR	LR		
	comp=Z,780nm,15.9s						
YAK	**Yakutsk**	**23.96**	**344**	P	**P**	**14 17 54.8**	**-1.4**
	comp=Z,15nm,0.6s,baz=344,slow=2.8,SNR=19						
YAK	**Yakutsk**	**23.96**	**344**	*e*P	**P**	**14 17 54.1**	**-2.1**
YAK				*e**PP	**pP**	**14 18 02.6**	**-1.7**
YAK				*e*S	**S**	**14 22 09.1**	**-1.6**
YAK				*e**SS	**sS**	**14 22 25.7**	**+1.3**
YAK				*e*SS	**SnSn**	**14 22 56.4**	**+4.5**
YAK				pmax	pmax		
	comp=Z,33nm,0.8s						
YAK				pmax	pmax		
	comp=N,11nm,0.9s						
YAK				smax	smax		
	comp=E,53nm,2.5s						
YAK				smax	smax		
	comp=N,90nm,2.3s						
YAK				MLR	MLR		
	comp=Z,288nm,15.0s						
YAK	**Yakutsk**	**23.96**	**344**	P	**P**	**14 17 54.0**	**-2.3**
SEY	**Seymchan**	**24.00**	**10**	P	**P**	**14 17 56.9**	**+0.2**
	comp=Z,24nm,1.0s,baz=194,slow=6.6,SNR=26						
SEY				LR	LR	14 27 31.3	
	comp=Z,113nm,19.9s,baz=200,slow=37						
HHC	**Hu-ho-hao-te**	**24.20**	**283**	*e*P	**P**	**14 17 58.5**	**-0.4**
HHC				pmax	pmax		
	comp=Z,12nm,1.1s						
HHC				pmax	pmax		
	comp=Z,150nm,5.9s						
SSLB	**Suanglung**	**24.60**	**237**	P	**P**	**14 17 59.7**	**-2.8**
YULB	**Yu-li**	**24.66**	**236**	P	**P**	**14 18 00.6**	**-2.5**
YULB				IAmb	IAmb	14 18 13.8	
	comp=Z,33nm,1.0s						
TPUB	**Ta-pu**	**25.15**	**236**	P	**P**	**14 18 05.9**	**-1.6**
TWG	**Pinlang**	**25.21**	**235**	P	**P**	**14 18 07.2**	**-0.9**
TWG				IAmb	IAmb	14 18 29.8	
	comp=Z,33nm,1.0s						
WHN	**Wuhan**	**25.27**	**258**	⇓P	**P**	**14 18 08.9**	**+0.4**
WHN				pmax	pmax		
	comp=Z,94nm,0.9s						
WHN				LR	LR		
	comp=Z,860nm,11.2s						
WHN				LR	LR		
	comp=Z,2µm,17.3s						
WHN				LR	LR		
	comp=Z,1µm,15.6s						
BTO	**Baotou**	**25.40**	**283**	*e*P	**P**	**14 18 08.9**	**-0.8**
GUMO	**Guam**	**25.94**	**177**	P	**P**	**14 18 15.6**	**+0.9**
	comp=Z,22nm,0.5s,baz=170,slow=21,SNR=1.5						
GUMO				LR	LR	14 27 32.3	
	comp=Z,121nm,20.0s,baz=7.0,slow=34						
BOD	**Bodaibo**	**26.25**	**324**	*e*P	**P**	**14 18 16.9**	**-0.3**
BOD				pmax	pmax		
	comp=Z,38nm,1.0s						
ULN	**Ulaanbaatar**	**27.27**	**300**	*ce*P	**P**	**14 18 26.5**	**-0.1**
ULN				pmax	pmax		
	comp=Z,32nm,1.2s						
ULN	**Ulaanbaatar**	**27.27**	**300**	P	**P**	**14 18 26.1**	**-0.5**
ULN				IAmb	IAmb	14 18 28.0	
	comp=Z,30nm,1.1s						
SONM	**Songino Array**	**27.70**	**300**	P	**P**	**14 18 30.2**	**-0.3**
	comp=Z,10nm,0.8s,baz=98,slow=9.1,SNR=56						
SONM				LR	LR	14 30 07.2	
	comp=Z,872nm,18.4s,baz=132,slow=38						
SONM	**Songino Array**	**27.70**	**300**	P	**P**	**14 18 30.2**	**-0.3**
SONM				IAmb	IAmb	14 18 32.0	
	comp=Z,23nm,1.1s						
XAN	**Xi'an**	**27.96**	**269**	P	**P**	**14 18 32.0**	**-0.9**
XAN				pP	pP	14 18 36.9	-4.1
XAN				pmax	pmax		
	comp=Z,11nm,0.8s						
XAN				pmax	pmax		
	comp=Z,100nm,4.6s						
XAN				LR	LR		

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      comp=Z,240nm,12.7s
XAN                                LR     LR
      comp=Z,760nm,16.2s
XAN                                LR     LR
      comp=Z,710nm,15.6s
H11N2 WAKE ISLAND Hy 28.35 127     T      T      14 48 22.7
      baz=318,slow=75,SNR=502
H11N1 WAKE ISLAND Hy 28.36 127     T      T      14 48 25.3
      baz=318,slow=75,SNR=401
H11N3 WAKE ISLAND Hy 28.37 127     T      T      14 48 22.7
      baz=318,slow=75,SNR=418
ENH   Enshi          29.10 262     P      P      14 18 41.6 -1.3
H11S1 WAKE ISLAND Hy 29.16 129     T      T      14 49 29.2
      baz=321,slow=74
H11S3 WAKE ISLAND Hy 29.17 129     T      T      14 49 33.2
      baz=321,slow=74
H11S2 WAKE ISLAND Hy 29.18 129     T      T      14 49 34.5
      baz=321,slow=74
TLY   Talaya         29.88 307     P      P      14 18 48.9 -0.7
      comp=Z,2.4nm,0.4s,baz=124,slow=3.6,SNR=3.0
TLY   Talaya         29.88 307ceP         P      14 18 50.8 +1.2
TLY                                pmax   pmax
      comp=Z,14nm,1.3s
TLY   Talaya         29.88 307     P      P      14 18 49.0 -0.6
TLY                                IAmb   IAmb   14 18 51.0
      comp=Z,14nm,1.1s
ZAK   Zakamensk      29.95 304    eP      P      14 18 49.9 -0.5
ZAK                                pmax   pmax
      comp=Z,13nm,1.3s
LZH   Lanzhou        31.19 276    eP      P      14 19 01.6 +0.1
LZH                                pP     pP     14 19 09.1 -0.6
LZH                                sP     sP     14 19 12.7 -0.5
LZH                                pmax   pmax
      comp=Z,33nm,1.1s
LZH                                LR     LR
      comp=Z,570nm,11.9s
LZH                                LR     LR
      comp=Z,1µm,14.9s
LZH                                LR     LR
      comp=Z,1µm,14.6s
MOY   Mondy          31.51 307    eP      P      14 19 04.4 +0.2
MOY                                pmax   pmax
      comp=Z,26nm,2.6s
GYA   Guiyang        33.16 258⇓iP         P      14 19 18.8 -0.1
GYA                                pP     pwP    14 19 27.9 -1.8
GYA                                S      S      14 24 33.7 -3.0
GYA                                pmax   pmax
      comp=Z,42nm,0.9s
GYA                                pmax   pmax
      comp=Z,190nm,3.5s
GYA                                LR     LR
      comp=Z,260nm,12.8s
GYA                                LR     LR
      comp=Z,470nm,16.4s
GYA                                LR     LR
      comp=Z,340nm,16.8s
GTA   Gaotai         33.31 284    eP      P      14 19 20.9 +0.8
GTA                                pP     pP     14 19 28.2 -0.1
GTA                                sP     sP     14 19 32.0 +0.2
GTA                                PcP    PcP    14 22 03.5 +1.9
GTA                                sS     sS     14 24 50.7 -2.2
GTA                                PcS    PcS    14 25 48.7 +1.3
GTA                                pmax   pmax
      comp=Z,11nm,1.3s
GTA                                pmax   pmax
      comp=Z,75nm,4.2s
GTA                                LR     LR
      comp=Z,290nm,18.5s
GTA                                LR     LR
      comp=Z,890nm,17.8s
GTA                                LR     LR
      comp=Z,1µm,17.8s
QIZ   Qiongzhong     35.35 244     P      P      14 19 37.8  0.0
QIZ                                S      S      14 25 09.4 -1.0
QIZ                                LR     LR
      comp=Z,260nm,17.0s
QIZ                                LR     LR
      comp=Z,260nm,14.8s
KMI   Kunming        36.86 259   ⇓P       P      14 19 51.4 +0.5
KMI                                pP     pwP    14 20 00.5 -1.2
KMI                                pmax   pmax
      comp=Z,28nm,1.0s
KMI                                LR     LR
      comp=Z,220nm,14.0s
KMI                                LR     LR
      comp=Z,280nm,14.8s
KMI                                LR     LR
      comp=Z,330nm,18.6s
SLVN  Son La         38.16 253     P      P      14 20 01.9 +0.1
SLVN                               IAmb   IAmb   14 20 17.7
      comp=Z,11nm,1.2s
DGZ   Jazzator, Alta 40.16 304⇑eP         P      14 20 19.3 +1.0
DGZ                                pmax   pmax
      comp=Z,22nm,0.9s
WMQ   Urumqi         41.07 295    eP      P      14 20 26.6 +0.8
WMQ                                pP     pwP    14 20 34.8 -1.8
WMQ                                sP     sP     14 20 38.1 +0.6
WMQ                                pmax   pmax
      comp=Z,41nm,0.9s
WMQ                                pmax   pmax
      comp=Z,180nm,5.7s
WMQ                                LR     LR
      comp=Z,400nm,9.1s
WMQ                                LR     LR
      comp=Z,160nm,19.7s
ZAA0  Zalesovo Array 41.34 310     P      P      14 20 27.0 -0.7
ZALV  Zalesovo Beam  41.34 310     P      P      14 20 28.0 +0.2
      comp=Z,8.8nm,0.8s,baz=87,slow=7.7,SNR=23
ZALV                               PcP    PcP    14 22 26.2 +0.5
      comp=Z,3.1nm,0.8s,baz=93,slow=3.0,SNR=3.7
ZALV                               LR     LR     14 38 21.1
      comp=Z,252nm,19.1s,baz=72,slow=37
ZALV  Zalesovo Beam  41.34 310     P      P      14 20 27.1 -0.6
NRIK  Noril'sk       41.60 334     P      P      14 20 30.1 +0.4
      comp=Z,2.9nm,0.7s,baz=102,slow=12,SNR=5.1
NRIK                               LR     LR     14 39 03.1
      comp=Z,426nm,18.1s,baz=94,slow=38
NRIK  Noril'sk       41.60 334ceP         P      14 20 29.8 +0.1
NRIK                               pmax   pmax
      comp=Z,6.0nm,1.2s
NRIK  Noril'sk       41.60 334     P      P      14 20 29.1 -0.6
CHTO  Chiang Mai     43.38 255     P      P      14 20 44.6 -0.2
CHTO                               pmax   pmax
      comp=Z,8.0nm,0.9s
CHTO  Chiang Mai     43.38 255            P      14 20 44.6 -0.2
CMAR  Chiang Mai Arr 43.60 254     P      P      14 20 46.5  0.0
      comp=Z,3.0nm,0.9s,baz=48,slow=6.3,SNR=22
CMAR                               LR     LR     14 40 50.7
      comp=Z,168nm,18.5s,baz=86,slow=39
CMAR  Chiang Mai Arr 43.60 254   i P      P      14 20 47.2 +0.6
CMAR                               pmax   pmax
      comp=Z,3.0nm,0.9s
IMAR  Indian Mountai 43.70  32     P      P      14 20 49.3 +2.5
H21K  Melozitna Rive 44.06  32     P      P      14 20 52.1 +2.4
MK31  Makanchi Array 44.07 300   i P      P      14 20 49.5 -0.6
MK31  Makanchi Array 44.07 300     P      P      14 20 49.4 -0.6
MK31                               IAmb   IAmb   14 20 51.2
      comp=Z,15nm,0.9s
MKAR  Makanchi Array 44.07 300     P      P      14 20 49.9 -0.2
      comp=Z,14nm,0.8s,baz=83,slow=9.2,SNR=79
MKAR                               LR     LR     14 40 05.2
      comp=Z,417nm,18.5s,baz=73,slow=37
MKAR  Makanchi Array 44.07 300   i P      P      14 20 50.0 -0.1
MKAR                               pmax   pmax
      comp=Z,14nm,0.8s
MKAR  Makanchi Array 44.07 300     P      P      14 20 49.8 -0.3
MAKZ  Makanchi       44.27 300     P      P      14 20 51.3 -0.4
MAKZ                               pmax   pmax
      comp=Z,21nm,1.0s
MAKZ  Makanchi       44.27 300     P      P      14 20 51.3 -0.4
MAKZ                               IAmb   IAmb   14 20 52.9
      comp=Z,21nm,1.0s
SANI  Sanana         44.38 205     P      P      14 20 53.6 +0.8
KURK  Kurchatov      45.57 306ceP         P      14 21 01.2 -0.7
KURK                               pmax   pmax
      comp=Z,44nm,1.3s
KURK  Kurchatov      45.57 306     P      P      14 21 01.4 -0.4
KURBB Kurchatov Arra 45.64 306     P      P      14 21 02.4 -0.1
      comp=Z,18nm,0.8s,baz=82,slow=8.2,SNR=90
KURBB Kurchatov Arra 45.64 306     P      P      14 21 00.9 -1.6
RND   Reindeer       45.73  36     P      P      14 21 04.5 +1.4
RND                                pmax   pmax
      comp=Z,10.0nm,1.3s
RND   Reindeer       45.73  36     P      P      14 21 04.5 +1.4
GHO   Glory Hole Cre 45.78  38     P      P      14 21 04.8 +1.3
GHO                                IAmb   IAmb   14 21 16.4
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      comp=Z,8.8nm,0.9s
ILAR  Eielson Array  46.54  34     P      P      14 21 10.2 +0.8
      comp=Z,0.9nm,0.8s,baz=266,slow=5.9,SNR=9.4
PDGK  Podgornoye     46.93 296     P      P      14 21 11.7 -1.2
TAPN  Taplejung      47.28 273    eP      P      14 21 16.5 +0.5
BMAR  Burnt Mountain 47.38  30     P      P      14 21 18.6 +2.6
ODAN  Odare          47.77 272    eP      P      14 21 20.2 +0.5
      comp=Z,39nm,1.0s
SCRK  Sand Creek     47.86  35     P      P      14 21 21.0 +1.2
JIRN  Jiri           48.30 274    eP      P      14 21 24.1 +0.1
      comp=Z,7.7nm,0.2s
RAMN  Ramite         48.33 273    eP      P      14 21 24.4 +0.3
      comp=Z,33nm,0.8s
GUN   Gumba          48.41 274    eP      P      14 21 25.1 +0.3
      comp=Z,94nm,0.9s
MDOK  Medeo          48.67 297     P      P      14 21 26.1 -0.3
KKN   Kakani         48.93 275    eP      P      14 21 28.9 +0.2
      comp=Z,56nm,0.7s
PKIN  Phulchoki      48.95 274    eP      P      14 21 28.6 -0.2
      comp=Z,17nm,0.7s
BCAR  Beaver Creek A 48.95  36     P      P      14 21 30.4 +2.3
GKN   Gorkha         49.32 275    eP      P      14 21 31.5 -0.1
TKM2  Tokmak 2       49.76 297     P      P      14 21 34.8  0.0
DANN  Dangsing       49.83 276    eP      P      14 21 36.2 +0.6
      comp=Z,174nm,0.9s
BRVK  Borovoye       50.03 311     P      P      14 21 36.8 +0.4
BRVK                               pmax   pmax
      comp=Z,15nm,0.9s
BRVK  Borovoye       50.03 311     P      P      14 21 36.8 +0.4
BRVK                               IAmb   IAmb   14 21 37.9
      comp=Z,15nm,0.9s
KOLN  Koldanda       50.24 276    eP      P      14 21 39.1 +0.5
      comp=Z,71nm,1.2s
PYUN  Piuthan        50.54 276    eP      P      14 21 41.3 +0.4
AAK   Ala-Archa      50.62 297     P      P      14 21 40.9 -0.3
      comp=Z,2.7nm,0.5s,baz=120,slow=4.9,SNR=8.2
AAK   Ala-Archa      50.62 297     P      P      14 21 41.0 -0.3
AAK                                pmax   pmax
      comp=Z,7.0nm,1.0s
AAK   Ala-Archa      50.62 297     P      P      14 21 41.0 -0.3
AAK                                IAmb   IAmb   14 21 42.5
      comp=Z,7.0nm,1.0s
KSH   Kashi          50.75 293     P      P      14 21 46.4 +4.2
KSH                                pP     sP     14 21 56.3 +2.1
KSH                                PcP    PcP    14 22 59.1 +0.1
KSH                                pmax   pmax
      comp=Z,12nm,1.0s
KSH                                LR     LR
      comp=Z,490nm,15.8s
KSH                                LR     LR
      comp=Z,380nm,16.2s
KSH                                LR     LR
      comp=Z,580nm,14.8s
HYT   Haines Junctio 51.37  38     P      P      14 21 49.2 +2.7
HYT                                IAmb   IAmb   14 22 00.1
      comp=Z,8.8nm,0.9s
INK   Inuvik         51.43  28     P      P      14 21 47.7 +0.9
      comp=Z,1.0nm,0.8s,baz=281,slow=8.8,SNR=6.1
INK   Inuvik         51.43  28     P      P      14 21 48.5 +1.8
INK                                pmax   pmax
      comp=Z,3.0nm,0.9s
INK   Inuvik         51.43  28     P      P      14 21 48.5 +1.8
EDFI  Ende, Flores   52.11 207     P      P      14 21 59.3 +6.8
      comp=Z,4.6nm,1.1s
KK31  Karatay Array  53.16 299   i P      P      14 21 59.6 -0.4
KK31  Karatay Array  53.16 299     P      P      14 21 59.6 -0.4
KK31                               IAmb   IAmb   14 22 12.6
      comp=Z,11nm,0.9s
KKAR  Karatay Array  53.16 299     P      P      14 21 59.3 -0.7
KKAR                               pmax   pmax
      comp=Z,11nm,1.0s
KKAR  Karatay Array  53.16 299     P      P      14 21 59.3 -0.7
KKAR  Karatay Array  53.16 299     P      P      14 21 59.4 -0.5
KKAR                               IAmb   IAmb   14 22 12.6
      comp=Z,11nm,0.9s
A36M  Sachs Harbour  53.33  23     P      P      14 22 03.1 +2.4
BTK   Batken         54.17 295     P      P      14 22 07.2 -0.3
BTK                                pmax   pmax
      comp=Z,6.0nm,0.9s
BTK   Batken         54.17 295     P      P      14 22 07.2 -0.3
BTK                                IAmb   IAmb   14 22 31.6
      comp=Z,6.0nm,0.9s
SVE   Sverdlovsk     54.23 318⇑eP         P      14 22 08.8 +1.2
SVE                                pmax   pmax
      comp=Z,23nm,1.0s
SVE                                MLR    MLR
      comp=Z,702nm,15.0s
GAR   Garm           54.97 294     P      P      14 22 12.7 -0.7
NIL   Nilore         55.25 287     P      P      14 22 15.8 +0.4
NIL                                pmax   pmax
      comp=Z,24nm,0.9s
NIL   Nilore         55.25 287     P      P      14 22 15.8 +0.4
ARU   Arti           55.45 318     P      P      14 22 16.5 +0.1
      comp=Z,4.6nm,0.7s,baz=355,slow=1.2,SNR=3.7
ARU   Arti           55.45 318c iP        P      14 22 16.4  0.0
ARU                                              14 24 16.2
ARU                                S      S      14 30 01.6 +2.6
ARU                                SS     SS     14 33 43.5 +0.2
ARU                                pmax   pmax
      comp=Z,31nm,1.1s
ARU                                MLR    MLR
      comp=Z,627nm,17.0s
ARU   Arti           55.45 318     P      P      14 22 16.2 -0.2
CHGR  Chuyangaron    55.93 295     P      P      14 22 19.8 -0.5
KLSI                 56.59 228     P      P      14 22 26.6 +1.5
      comp=Z,11nm,1.8s
MDSI  Maura Dua      56.75 229     P      P      14 22 27.2 +1.0
      comp=Z,10nm,1.3s
KSI   Kapahiang      57.02 231     P      P      14 22 31.7 +3.5
      comp=Z,17µmcomp=Z,182nm,0.5s
EUNU  Eureka         57.44   9     P      P      14 22 31.1 +0.8
EUNU                               IAmb   IAmb   14 22 32.2
      comp=Z,6.7nm,1.1s
AB31  Akbulak array  57.45 309   i P      P      14 22 30.2 -0.5
ABKAR Akbulak array  57.45 309     P      P      14 22 30.3 -0.4
ABKAR                              IAmb   IAmb   14 22 31.9
      comp=Z,11nm,0.8s
KBL   Kabul          57.91 290     P      P      14 22 33.6 -0.9
KBL                                pmax   pmax
      comp=Z,16nm,1.0s
KBL   Kabul          57.91 290     P      P      14 22 33.6 -0.9
KBL                                IAmb   IAmb   14 22 35.2
      comp=Z,16nm,0.9s
AKTO  Aktyubinsk     58.09 311     P      P      14 22 34.8 -0.5
      comp=Z,3.7nm,0.8s,baz=54,slow=6.4,SNR=8.6
NOR   Nord           58.59 357   i P      P      14 22 37.7 -0.6
NOR                                AMP           14 22 39.9
      comp=Z,8.0nm,0.9s
KIRV  Kirov          59.12 322     P      P      14 22 42.0 -0.2
      comp=Z,17nm,0.7s,baz=59,slow=4.6,SNR=4.0
KIRV  Kirov          59.12 322ceP         P      14 22 42.4 +0.2
WB0   Warramunga Arr 59.63 190     P      P      14 22 46.1 -0.1
WB0                                IAmb   IAmb   14 22 59.1
      comp=Z,11nm,1.1s
RES   Resolute Bay   59.75  15     P      P      14 22 47.0 +0.6
      comp=Z,4.7nm,0.8s,baz=305,slow=19,SNR=6.0
RES   Resolute Bay   59.75  15     P      P      14 22 47.0 +0.6
RES   Resolute Bay   59.75  15     P      P      14 22 46.6 +0.2
RES                                IAmb   IAmb   14 22 48.0
      comp=Z,8.9nm,1.1s
WR0   Warramunga Arr 59.80 190     P      P      14 22 47.3 -0.1
WR0                                IAmb   IAmb   14 23 00.3
      comp=Z,8.6nm,1.3s
WB2   Warramunga Arr 59.81 190     P      P      14 22 47.3 -0.1
WB2                                IAmb   IAmb   14 23 00.8
      comp=Z,4.8nm,0.8s
WRA   Warramunga Arr 59.81 190     P      P      14 22 47.1 -0.3
      comp=Z,0.9nm,0.4s,baz=6.7,slow=6.9,SNR=31
WRA   Warramunga Arr 59.81 190     P      P      14 22 47.1 -0.3
ARCES ARCESS Array B 62.13 339     LR     LR     14 52 29.5
      comp=Z,120nm,21.6s,baz=50,slow=38
TULEG Thule          62.37   8   i P      P      14 23 03.2 -0.9
TULEG Thule          62.37   8     P      P      14 23 04.1  0.0
TULEG                              IAmb   IAmb   14 23 29.2
      comp=Z,10.0nm,1.2s
KLMR  Klimovskoe     62.39 328    eP      P      14 23 03.7 -0.7
KLMR                              e              14 25 20.5
KLMR                               pmax   pmax
      comp=Z,21nm,1.3s
KLMR  Klimovskoe     62.39 328    eP      P      14 23 03.8 -0.7
KLMR                               AMP           14 23 05.8
      comp=Z,21nm,1.3s
KLMR                              ePP     PP     14 25 20.6 -0.8
NEEM  North Greenlan 62.89   3   i P      P      14 23 07.0 -0.9
BELG  Belogornoye    62.95 317     P      P      14 23 08.7 +0.4
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      comp=Z,31nm,0.8s,baz=79,slow=1.3,SNR=14
DAG   Danmarks Havn  63.35 355   i P      P      14 23 11.0 +0.4
DAG                                AMP           14 23 12.3
      comp=Z,17nm,0.7s
ASAR  Alice Springs  63.54 190     P      P      14 23 12.7 +0.2
      comp=Z,0.4nm,0.4s,baz=1.3,slow=6.0,SNR=18
GEYT  Alibeck        63.91 299     P      P      14 23 14.7 -0.2
      comp=Z,5.1nm,0.8s,baz=205,slow=3.1,SNR=6.6
MSVF  Nonsavu        65.61 143     P      P      14 23 26.4 -0.2
MSVF  Nonsavu        65.61 143     P      P      14 23 26.7 +0.5
      comp=Z,6.8nm,0.8s,baz=215,slow=20,SNR=2.8
VRH   Novokhopyorsk  66.68 318    eP      P      14 23 32.5 -0.1
VRH                                pmax   pmax
      comp=Z,10.0nm,0.4s
OBN   Obninsk        66.94 323     P      P      14 23 34.4 +0.2
      comp=Z,3.3nm,0.4s,baz=41,slow=14,SNR=3.2
OBN   Obninsk        66.94 323ceP         P      14 23 34.8 +0.6
OBN                               e              14 26 00.5
OBN                                pmax   pmax
      comp=Z,37nm,2.5s
OBN                                MLR    MLR
      comp=Z,286nm,16.0s
FIA1  FINESS Array S 67.24 332     P      P      14 23 36.0  0.0
FIA1                               IAmb   IAmb   14 23 37.5
      comp=Z,9.2nm,0.9s
FINES FINESS Array B 67.24 332     P      P      14 23 35.8 -0.3
      comp=Z,6.7nm,0.8s,baz=48,slow=8.5,SNR=11
FINES                              LR     LR     14 55 31.9
      comp=Z,240nm,20.0s,baz=41,slow=38
FINES FINESS Array B 67.24 332   i P      P      14 23 36.4 +0.4
FINES                              pmax   pmax
      comp=Z,7.0nm,0.8s
FINES FINESS Array B 67.24 332     P      P      14 23 36.2 +0.2
LPSR  Galich'ya Gora 67.29 320    eP      P      14 23 36.4 -0.1
LPSR                               pmax   pmax
      comp=Z,10.0nm,1.0s
PINE  Pine Mountain  67.57  51     P      P      14 23 41.5 +2.8
PINE                               IAmb   IAmb   14 23 49.9
      comp=Z,9.7nm,1.0s
KMRM  Mail Ridge     67.82  56     P      P      14 23 43.0 +2.8
VSR   Storozhevoye   67.99 319    eP      P      14 23 40.2 -0.7
VSR                                pmax   pmax
      comp=Z,10.0nm,0.8s
MAK   Makhachkala    68.05 308    eP      P      14 23 40.6 -0.9
MAK                               eS      S      14 32 39.3 +0.5
MAK                                pmax   pmax
      comp=Z,143nm,1.1s
MAK                                MLR    MLR
      comp=Z,104nm,15.0s
VORD  Divnogorie     68.07 319    eP      P      14 23 41.4  0.0
VORD                               pmax   pmax
      comp=Z,9.0nm,0.7s
SUMG  Summit         68.12   1     P      P      14 23 43.2 +1.2
SUMG                               pmax   pmax
      comp=Z,7.0nm,0.9s
SUMG  Summit         68.12   1   i P      P      14 23 42.0 +0.1
SUMG  Summit         68.12   1     P      P      14 23 43.2 +1.2
SUMG                               IAmb   IAmb   14 23 44.0
      comp=Z,6.8nm,0.9s
ZEI   Tsey           70.32 310    eP      P      14 23 54.0 -1.8
ZEI                                pmax   pmax
      comp=Z,3.0nm,1.0s
KIV   Kislovodsk     70.35 311    eP      P      14 23 54.2 -1.6
KIV                                pmax   pmax
      comp=Z,35nm,1.1s
KIV                                MLR    MLR
      comp=Z,147nm,17.0s
KIV   Kislovodsk     70.35 311     P      P      14 23 54.4 -1.4
KBZ   Khabaz         70.36 311     P      P      14 23 56.0 +0.3
      comp=Z,11nm,0.9s,baz=48,slow=3.5,SNR=15
KBZ                                LR     LR     14 57 12.5
      comp=Z,114nm,18.9s,baz=70,slow=38
LRM   Limekiln Ridge 71.29  46     P      P      14 24 03.0 +1.3
NACGM Naroch         71.40 327   i P      P      14 24 02.9 +1.0
ICESG Greenland Ices 71.61   1   i P      P      14 24 04.4 +1.0
ICESG                              AMP           14 24 05.1
      comp=Z,27nm,0.6s
KVN   Kaiserville    72.04  54     P      P      14 24 08.2 +1.9
KVN                                pmax   pmax
      comp=Z,7.0nm,1.1s
KVN   Kaiserville    72.04  54     P      P      14 24 08.2 +1.9
KVN                                IAmb   IAmb   14 24 19.4
      comp=Z,7.1nm,1.1s
NVAR  Mina Array Bea 72.28  55     P      P      14 24 09.0 +1.2
      comp=Z,0.9nm,0.8s,baz=287,slow=6.3,SNR=4.5
NVAR  Mina Array Bea 72.28  55     P      P      14 24 09.7 +2.0
NC204 NORSAR Array S 72.34 338     P      P      14 24 07.9 +0.5
NB201 NORSAR Array S 72.36 338     P      P      14 24 07.5 -0.1
NB2   NORSAR Subarra 72.39 338     P      P      14 24 08.5 +0.7
      comp=Z,3.6nm,0.8s,baz=37,slow=6.2
NOA   NORSAR Array B 72.39 338     P      P      14 24 07.5 -0.3
      comp=Z,6.3nm,0.8s,baz=38,slow=6.0,SNR=16
NOA                                LR     LR     15 01 39.8
      comp=Z,108nm,18.2s,baz=35,slow=40
NBO00 NORSAR Array S 72.53 338     P      P      14 24 07.7 -0.9
AKASG Malin Array Be 73.18 323     P      P      14 24 12.2 -0.3
      comp=Z,3.9nm,0.8s,baz=43,slow=6.3,SNR=12
AKBB  Malin Array Si 73.18 323     P      P      14 24 12.5 -0.1
AKBB                               pmax   pmax
      comp=Z,14nm,1.3s
AKBB  Malin Array Si 73.18 323     P      P      14 24 12.5 -0.1
AKBB                               IAmb   IAmb   14 24 29.3
      comp=Z,14nm,1.2s
QSM   Queen of Sheba 74.68  56     P      P      14 24 24.4 +2.7
QSM                                IAmb   IAmb   14 24 35.1
      comp=Z,12nm,1.1s
PDAR  Pinedale Array 74.83  47     P      P      14 24 23.1 +0.5
      comp=Z,1.3nm,0.3s,baz=264,slow=4.5,SNR=5.4
LCMT  Little Creek M 76.31  53     P      P      14 24 33.8 +2.6
SRU   San Rafael Swe 76.62  50     P      P      14 24 34.2 +1.2
SRU                                pmax   pmax
      comp=Z,5.0nm,0.9s
SRU   San Rafael Swe 76.62  50     P      P      14 24 34.2 +1.2
BURAR Bucovina Array 77.21 322     P      P      14 24 35.0 -1.0
OJC   Ojcow          77.73 327     P      P      14 24 39.3 +0.6
OJC                                pmax   pmax
      comp=Z,10.0nm,0.8s
OJC   Ojcow          77.73 327     P      P      14 24 39.3 +0.6
OJC                                IAmb   IAmb   14 24 40.8
      comp=Z,10nm,0.8s
BRTR  Keskin Array B 78.25 312     P      P      14 24 42.0  0.0
      comp=Z,2.5nm,1.0s,baz=47,slow=17,SNR=5.0
BRTR                               LR     LR     15 02 53.1
      comp=Z,68nm,18.7s,baz=66,slow=38
BRTR  Keskin Array B 78.25 312     P      P      14 24 42.4 +0.4
BRTR  Keskin Array B 78.25 312     P      P      14 24 42.4 +0.4
MORC  Moravsky Berou 79.01 328     P      P      14 24 46.2 +0.3
MORC                               pmax   pmax
      comp=Z,10.0nm,1.1s
MORC  Moravsky Berou 79.01 328     P      P      14 24 46.2 +0.3
MORC                               IAmb   IAmb   14 24 48.0
      comp=Z,10nm,1.1s
DPC   Dobruska-Polom 79.07 329    eP      P      14 24 47.5 +1.3
DPC                               esP     sP     14 25 00.5 +2.2
VYHS  Vyhne          79.45 326    eP      P      14 24 49.9 +1.7
VYHS  Vyhne          79.45 326    eP      P      14 24 49.9 +1.7
CLL   Collm          79.60 331   i P      P      14 24 49.3 +0.3
CLL                                pmax   pmax
      comp=Z,11nm,0.9s
CLL   Collm          79.60 331   i P      P      14 24 49.3 +0.3
      comp=Z,11nm,0.9s
PRU   Pruhonice      80.06 329    eP      P      14 24 52.6 +1.1
PRU   Pruhonice      80.06 329    eP      P      14 24 52.6 +1.1
MODS  Modra-Piesok   80.21 327    eP      P      14 24 53.6 +1.2
MODS  Modra-Piesok   80.21 327    eP      P      14 24 53.5 +1.2
RAYN  Ar Rayn        81.04 293     P      P      14 24 56.7 -0.6
RAYN                               pmax   pmax
      comp=Z,5.0nm,1.1s
RAYN  Ar Rayn        81.04 293     P      P      14 24 56.7 -0.6
KHC   Kasperske Hory 81.12 329    eP      P      14 24 58.3 +1.0
KHC                               e              14 25 10.5
KHC   Kasperske Hory 81.12 329    eP      P      14 24 58.3 +1.0
KHC                               ex      x      14 25 10.5
GERES GERESS Array B 81.30 329     P      P      14 24 58.0 -0.3
      comp=Z,1.8nm,0.5s,baz=36,slow=5.7,SNR=5.4
GERES                              LR     LR     15 04 14.9
      comp=Z,139nm,18.7s,baz=340,slow=38
VTS   Vitosha        81.81 320     P      P      14 25 01.8 +0.7
VTS                                pmax   pmax
      comp=Z,4.0nm,0.9s
VTS   Vitosha        81.81 320     P      P      14 25 01.8 +0.7
LENM  Lemitar        82.03  52     P      P      14 25 05.2 +2.6
GROS  Grobnik        82.45 327   i P      P      14 25 04.6 +0.2
PERS  Pernice        82.48 327    eP      P      14 25 05.3 +0.8
GBAS  Gorenja Brezov 83.32 327    eP      P      14 25 08.9  0.0
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Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMOR	Pomariorio Ree	83.88	115	*e*T	T	15 57 13.7	
	comp=Z,4.8nm,0.2s						
PPT	Papeete	84.48	118	LR	LR	14 54 47.2	
	comp=Z,76nm,21.5s,baz=6.0,slow=30						
PPT2	Papeete2	84.50	118	*e*LR	LR	14 51 47.0	
	comp=Z,131nm,22.5s						
TUE	Stuetta	84.94	330	P	P	14 25 16.9	-0.4
TUE				IAmb	IAmb	14 25 21.1	
	comp=Z,8.8nm,0.9s						
NRCA	Norcia	86.38	326	P	P	14 25 24.3	0.0
NRCA				IAmb	IAmb	14 25 53.1	
	comp=Z,6.7nm,0.7s						
TBI	Tubuai	88.59	122	*e*T	T	16 03 07.5	
	comp=Z,6.1nm,0.3s						
ESDC	Sonseca Array	95.62	335	LR	LR	15 14 35.3	
	comp=Z,107nm,18.9s,baz=330,slow=39						
TORD	Torodi Ar. Bea	116.52	317	PP	PP	14 32 31.2	-1.3
	comp=Z,2.3nm,1.1s,baz=13,slow=8.4,SNR=7.2						

IDC ***10*** *14:19:42.9±0.5, 32°.66S×178°.33W, h0^{km}, mb4.5/11, mb1 4.7/13, mb1mx4.5/24, mbtmp4.5/13, ML4.5/2, MS4.1/20, Ms1 4.1/20, ms1mx3.9/37, Error ellipse: s-maj=21.1km s-min=17.2km az=90.0*

NOU ***10*** *14:19:42.5, 33°.18S×177°.38W, h39^{km}, mb4.9/11, South of Kermadec Islands*

WEL ***10*** *14:19:44.5±0.7, 33°S±5°×17°8W±1°3, h33^{km}, M4.9/23, mB5.3/19, ML5.5/23, MLv5.3/23, Mw(mB)4.8/19, Error ellipse: s-maj=0.0km s-min=0.0km az=108.9*

NEIC ***10*** *14:19:45.1±2.2, 32°.81S±0°.10×178°.4W±0°.2, h10^{km}±1^{km}, mb4.9/22, Error ellipse: s-maj=25.6km s-min=16.5km az=80.0*

GCMT ***10*** *14:19:50.1±0.4, 32°.90S±0°.04×178°.04W±0°.03, h21^{km}±1^{km}, MW4.9/62, Moment Tensor Solution.   s27,c33;   s62,c79; Duration: 0   Moment tensor: Scale 10^{16}Nm; M_{rr}1.98±.15; $M_{\theta\theta}$-0.18±.10; $M_{\phi\phi}$-1.80±.10; $M_{r\theta}$0.12±.19; $M_{\theta\phi}$-0.30±.07; $M_{\phi r}$1.78±.17;   Best double couple: $M_0$2.61800×10^{16} NP1:ϕ_s194.00000°, δ24.00000°, λ97.00000°.   NP2: ϕ_s6.00000°, δ66.00000°, λ87.00000°.   Principal axes: T 2.6860, Plg68.0000°, Azm270.0000°; N -0.1420, Plg3.0000°, Azm7.0000°; P -2.5500, Plg21.0000°, Azm98.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 14:19:47.3±0.4**, 32°.87S**±0°.05×**178°.17W**±0°.07**, h34**^{km}**, n188,** σ1^{s}**98**/193**, mb4.9**/22**, MS4.2**/23**, 1C, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.60	3	P	Pn	14 20 36.7	-4.0
GLKZ				S	Sn	14 21 19.2	-2.8
RAO	Raoul Island	3.61	3	Pn	Pn	14 20 36.2	-4.6
	69nm,0.3s,baz=317,slow=21,SNR=4.3						
RAO				Sn	Sn	14 21 16.8	-5.4
	172nm,0.3s,baz=86,slow=23,SNR=5.0						
RAO	Raoul Island	3.61	3		Pn	14 20 36.7	-4.1
RAO	Raoul Island	3.61	3	P	Pn	14 20 40.5	-0.3
RIZ	Raoul Island	3.62	3	P	Pn	14 20 36.7	-4.2
RIZ				S	Sn	14 21 21.1	-1.3
MXZ	Matakaoa Point	5.50	211	P	Pn	14 21 03.7	-3.1
MXZ				S	Sn	14 22 07.5	-1.4
MXZ	Matakaoa Point	5.50	211	Pn	Pn	14 21 02.9	-3.9
WMGZ	Waiomatatini S	5.68	209	P	Pn	14 21 10.2	+1.0
WMGZ				S	Sn	14 22 11.3	-1.8
PKGZ	Pakihiroa	5.88	210	P	Pn	14 21 09.8	-2.2
PKGZ				S	Sn	14 22 19.0	+0.8
HAZ	Te Kaha	5.90	213	P	Pn	14 21 12.7	+0.5
HAZ				S	Sn	14 22 21.6	+3.0
PUZ	Puketiti	5.96	208	P	Pn	14 21 12.9	-0.2
PUZ				S	Sn	14 22 19.0	-1.2
RUGZ	Raukumara Rang	6.12	213	P	Pn	14 21 13.6	-1.8
RUGZ				S	Sn	14 22 23.4	-0.8
TWGZ	Tauwhareparae	6.16	210	P	Pn	14 21 15.3	-0.6
TWGZ				S	Sn	14 22 22.9	-2.2
GRZ	Great Barrier	6.25	236	P	Pn	14 21 21.5	+4.4
CNGZ	Carnagh Statio	6.33	207	P	Pn	14 21 16.3	-1.9
CNGZ				S	Sn	14 22 29.6	+0.2
KUZ	Kuaotunu	6.34	231	P	Pn	14 21 21.1	+2.7
WHRZ	Whale Island	6.37	217	P	Pn	14 21 19.5	+0.8
WHRZ				S	Sn	14 22 28.7	-1.5
TKGZ	Te Karaka	6.44	209	P	Pn	14 21 19.2	-0.5
TKGZ				S	Sn	14 22 28.7	-3.2
MWZ	Matawai	6.49	212	P	Pn	14 21 18.2	-2.2
OPRZ	Ohinepanea	6.58	219	P	Pn	14 21 20.3	-1.2
OPRZ				S	Sn	14 22 35.8	+0.4
URZ	Urewera	6.62	214	Pn	Pn	14 21 18.7	-3.3
	7.8nm,0.3s,baz=94,slow=7.8,SNR=13						
URZ				Sn	Sn	14 22 33.0	-3.3
	66nm,0.3s,baz=230,slow=16,SNR=11						
URZ	Urewera	6.62	214	P	Pn	14 21 20.5	-1.6
URZ				S	Sn	14 22 33.1	-3.2
URZ	Urewera	6.62	214	Pn	Pn	14 21 18.6	-3.5
MARZ	Manawahe	6.62	218	P	Pn	14 21 22.0	-0.1
MARZ				S	Sn	14 22 35.8	-0.7
TGRZ	Tauranga	6.66	222	P	Pn	14 21 22.8	+0.2
RAGZ	Rawiri	6.67	211	P	Pn	14 21 22.0	-0.9
RAGZ				S	Sn	14 22 36.6	-1.1
EDRZ	Edgecumbe	6.68	217	P	Pn	14 21 23.6	+0.6
EDRZ				S	Sn	14 22 40.2	+2.2
WIAZ	Waiheke Island	6.76	233	P	Pn	14 21 26.1	+2.0
PRGZ	Paritu Road	6.84	207	P	Pn	14 21 22.1	-3.2
PRGZ				S	Sn	14 22 39.3	-2.6
OMRZ	Omania	6.87	219	P	Pn	14 21 22.7	-2.9
KARZ	Kaharoa	6.87	220	P	Pn	14 21 26.0	+0.4
MBAZ	Motutapu North	6.91	234	P	Pn	14 21 29.9	+3.8
SNGZ	Shannon Statio	6.94	210	P	Pn	14 21 26.0	-0.6
SNGZ				S	Sn	14 22 43.7	-0.6
MUGZ	Murupara	6.95	215	P	Pn	14 21 23.7	-3.1
RTZ	Ruatahuna	6.96	213	P	Pn	14 21 25.8	-1.1
RRRZ	Republican Roa	6.97	217	P	Pn	14 21 27.2	+0.2
KNZ	Kokohu	7.01	208	P	Pn	14 21 25.0	-2.5
KNZ				S	Sn	14 22 40.3	-5.6
TOZ	Tahuroa Road	7.09	225	P	Pn	14 21 29.2	+0.5
PRRZ	Plateau Road	7.15	217	P	Pn	14 21 28.8	-0.7
MTHZ	Maungataniwha	7.22	213	P	Pn	14 21 29.6	-0.8
OUZ	Omahuta	7.23	249	P	Pn	14 21 32.3	+1.8
MRHZ	Matea Rd	7.40	215	P	Pn	14 21 30.9	-2.1
TLZ	Tolley Road	7.48	221	P	Pn	14 21 35.4	+1.4
BKZ	Black Stump Fm	7.63	213	P	Pn	14 21 35.0	-1.0
BKZ	Black Stump Fm	7.63	213		Pn	14 21 33.1	-3.0
BKZ	Black Stump Fm	7.63	213	P	Pn	14 21 33.9	-2.2
CKHZ	Cape Kidnapper	7.79	208	P	Pn	14 21 36.2	-2.0
TMVZ	Te Maari	7.97	217	P	Pn	14 21 38.9	-1.9
NTVZ	North Tongarir	7.97	217	P	Pn	14 21 38.9	-2.0
ETVZ	East Tongariro	7.98	217	P	Pn	14 21 40.7	-0.3
HIZ	Hauiti	8.00	223	P	Pn	14 21 40.4	-0.7
BSWZ	Blackbirch Sta	10.87	213	Pn	Pn	14 22 14.4	-5.9
QRZ	Quartz Range	10.89	221	P	Pn	14 22 18.5	-2.2
KHZ	Kahutara	11.57	212	P	Pn	14 22 26.9	-3.1
LTZ	Lake Taylor	12.45	215	Pn	Pn	14 22 36.1	-5.9
NFK	Norfolk Island	12.52	284	P	Pn	14 22 44.7	+1.6
	baz=13						
OXZ	Oxford	12.97	214		Pn	14 22 41.9	-7.3
RPZ	Rata Peaks	13.73	215	P	Pn	14 22 55.4	-4.1
ODZ	Otahua Downs	14.94	212	P	Pn	14 23 12.1	-3.7
MSVF	Nonsavu	15.45	346	LR	LR	14 28 26.0	
	comp=Z,1μm,18.6s,baz=169,slow=34						
MSVF	Nonsavu	15.45	346	IAmb	IAmb	14 23 41.4	
	comp=Z,33nm,1.1s						
OUENC	Ouen Island, N	16.86	304	Pn	Pn	14 23 36.0	-4.7
OUENC				IAmb	IAmb	14 23 47.5	
	comp=Z,156nm,1.3s						
YATNC	Mamie plateau,	17.06	305	P	P	14 23 47.8	+3.1
DZM	Mont Dzumac	17.36	304	*e*P	P	14 23 50.0	+1.8
	comp=Z,122nm,1.1s						
DZM				*e*LR	LR	14 27 46.4	
	comp=Z,2μm,22.4s						
DZM	Mont Dzumac	17.36	304	P	P	14 23 49.3	+1.1
	comp=Z,0.5nm,0.3s,baz=117,slow=14,SNR=17						
DZM				LR	LR	14 29 20.9	
	comp=Z,2μm,18.5s,baz=124,slow=34						
DZM	Mont Dzumac	17.36	304		P	14 23 49.3	+1.1
DZM				IAmb	IAmb	14 23 53.9	
	comp=Z,51nm,1.0s						
DZM	Mont Dzumac	17.36	304	P	P	14 23 50.5	+2.3
AFI	Afiamalu	19.75	19	P	P	14 24 13.5	-0.9
	comp=Z,0.9nm,0.3s,baz=117,slow=14,SNR=2.6						
KOUNC	Koumac, New Ca	19.87	304	P	Pn	14 24 18.2	+0.8
RAR	Rarotonga	20.04	59	LR	LR	14 32 28.6	
	comp=Z,256nm,18.2s,baz=242,slow=38						
MGCD	Mangrove Creek	25.72	261	P	P	14 25 15.8	+1.3
	baz=26						
ARMA	Armidale	25.79	267	P	P	14 25 18.1	+2.8
	baz=27,SNR=3.7						
CNB	Canberra Magne	26.94	256	P	P	14 25 28.1	+2.6
	baz=28,SNR=5.1						
TBI	Tubuai	26.97	77	*e*LQ	LQ	14 30 36.8	
	comp=Z,503nm,24.5s						
TBI				*e*LR	LR	14 31 52.5	
	comp=Z,439nm,30.5s						
TBI	Tubuai	26.97	77	*e*T	T	14 53 29.5	
	comp=Z,4.6nm,0.3s						
CAN	Canberra	27.23	256	P	P	14 25 27.6	-0.7
CAN				IAmb	IAmb	14 25 30.3	
	comp=Z,52nm,1.5s						
EIDS	Eidsvold	27.82	278	P	P	14 25 34.6	+1.1
	baz=29,SNR=4.0						
RMQ	Roma	29.35	274	P	P	14 25 49.4	+2.3
	baz=30,SNR=20						
PAE	Paea	29.83	66	*e*T	T	14 57 09.5	
	comp=Z,1.2nm,0.3s						
PPT2	Papeete2	29.88	66	*e*LQ	LQ	14 31 44.5	
	comp=Z,396nm,23.2s						
PPT2				*e*LR	LR	14 33 10.4	
	comp=Z,428nm,27.8s,baz=233						
PPT	Papeete	29.89	66	LR	LR	14 38 41.2	
	comp=Z,141nm,18.2s,baz=240,slow=38						
CMSA	Cobar Meteorol	30.52	263	P	P	14 25 58.5	+1.1
	baz=31,SNR=37						
ARPS	Mount Arapiles	32.90	252	P	P	14 26 19.3	+1.1
	baz=34,SNR=5.7						
QLP	Quilpie	33.12	271	P	P	14 26 21.0	+0.7
	baz=34,SNR=8.1						
STKA	Stephens Creek	33.86	261	P	P	14 26 25.4	-1.2
	comp=Z,3.4nm,1.0s,baz=168,slow=20,SNR=3.9						
STKA				LR	LR	14 39 46.2	
	comp=Z,821nm,18.1s,baz=79,slow=36						
CTA	Charters Tower	34.13	283	P	P	14 26 29.7	+0.6
	comp=Z,14nm,0.6s,baz=114,slow=10,SNR=33						
CTAO	Charters Tower	34.13	283	P	P	14 26 29.4	+0.2
HTT	Hallett	35.74	257	P	P	14 26 43.4	+0.4
	baz=36,SNR=3.3						
MTSU	Mount Surprise	36.69	284	P	P	14 26 51.9	+0.8
	baz=38,SNR=25						
QIS	Mount Isa	39.42	277	P	P	14 27 14.2	0.0
	baz=40,SNR=14						
AS31	Alice Springs	42.89	270	P	P	14 27 41.8	-1.0
ASAR	Alice Springs	42.89	270	P	P	14 27 41.9	-0.9
	comp=Z,21nm,0.7s,baz=107,slow=7.5,SNR=239						
ASAR				S	S	14 33 58.0	-7.5
	comp=Z,0.6nm,1.1s,baz=114,slow=15,SNR=2.6						
ASAR				LR	LR	14 45 10.1	
	comp=Z,197nm,18.8s,baz=97,slow=36						
ASAR	Alice Springs	42.89	270	P	P	14 27 42.0	-0.7
ASPA	Alice Springs	42.90	270	P	P	14 27 42.1	-0.7
	baz=44						
WR0	Warramunga Arr	43.93	275	P	P	14 27 49.8	-1.3
WR0				IAmb	IAmb	14 27 50.7	
	comp=Z,15nm,0.8s						
WC3	Warramunga Arr	44.07	275	P	P	14 27 51.2	-1.0
	baz=45						
WB2	Warramunga Arr	44.09	275	P	P	14 27 51.0	-1.5
WRAB	Tennant Creek	44.10	275	P	P	14 27 51.0	-1.4
WRAB				IAmb	IAmb	14 27 52.4	
	comp=Z,21nm,0.7s						
WRA	Warramunga Arr	44.10	275	P	P	14 27 51.5	-1.1
	comp=Z,21nm,0.7s,baz=116,slow=7.4,SNR=198						
WRA				S	S	14 34 18.2	-4.9
	comp=Z,1.1nm,0.9s,baz=116,slow=14,SNR=4.0						
WRA	Warramunga Arr	44.10	275	P	P	14 27 50.8	-1.8
WB0	Warramunga Arr	44.14	275	P	P	14 27 51.5	-1.3
FORT	Forrest	45.33	258	P	P	14 28 01.6	-0.5
	baz=46,SNR=11						
SBA	Scott Base	45.58	184	P	P	14 28 04.4	+0.9
SBA				IAmb	IAmb	14 28 29.4	
	comp=Z,17nm,1.2s						
VNDA	Vanda	45.63	186	P	P	14 28 06.4	+2.5
	comp=Z,0.6nm,0.6s,baz=4.9,slow=6.6,SNR=7.3						
VNDA				LR	LR	14 43 53.7	
	comp=Z,192nm,20.3s,baz=18,slow=32						
VNDA	Vanda	45.63	186	P	P	14 28 05.0	+1.1
WRKA	Warakurna	47.08	265	P	P	14 28 14.3	-1.7
	baz=48,SNR=27						
KDU	Kakadu	49.25	282	P	P	14 28 31.7	-1.1
	baz=50,SNR=5.8						
MTN	Manton Dam	50.27	281	P	P	14 28 39.2	-1.3
	baz=51,SNR=3.8						
KNRA	Kununurra	50.79	276	P	P	14 28 43.9	-0.7
	baz=52,SNR=8.0						
CASY	Casey	52.91	209	P	P	14 29 00.1	+0.5
CASY				IAmb	IAmb	14 29 28.7	
	comp=Z,18nm,0.8s						
MEEK	Meekatharra	54.53	259	P	P	14 29 10.6	-1.5
	baz=55,SNR=4.5						
FAKI	Fak Fak	55.09	292	P	P	14 29 13.8	-2.5
FAKI				IAmb	IAmb	14 29 15.5	
	comp=Z,20nm,0.9s						
MBWA	Marble Bar	55.85	265	P	P	14 29 19.7	-2.0
SIJI	Sorong	57.14	293	LR	LR	14 54 37.8	
	comp=Z,183nm,18.0s,baz=92,slow=37						
QSPA	South Pole Qui	57.25	180	P	P	14 29 34.2	+3.1
	comp=Z,3.4nm,1.0s,baz=23,slow=2.2,SNR=19						
QSPA	South Pole Qui	57.25	180	P	P	14 29 32.8	+1.7
SOEI	Soe	57.60	280	P	P	14 29 33.1	-1.2
BATI	Baumata	57.86	279	LR	LR	14 54 42.3	
	comp=Z,293nm,19.1s,baz=158,slow=36						
KAPI	Kappang	63.93	281	LR	LR	14 59 07.2	
	comp=Z,107nm,18.3s,baz=118,slow=37						
TOLI2	Tolitoli	66.62	288	P	P	14 30 32.2	-2.5
TOLI2				IAmb	IAmb	14 30 34.4	
	comp=Z,8.9nm,0.8s						
MAW	Mawson	69.96	201	P	P	14 30 56.1	+1.4
	comp=Z,2.3nm,0.7s,baz=130,slow=7.8,SNR=7.6						
MAW	Mawson	69.96	201	P	P	14 30 55.8	+1.0
LEM	Lembang	73.08	273	LR	LR	15 03 54.8	
	comp=Z,160nm,19.8s,baz=160,slow=36						
SYO	Syowa Base	74.69	193⇑	*e*P	P	14 31 24.2	+1.3
SNAA	Sanae	75.70	178	P	P	14 31 30.1	+1.3
SNAA	Sanae	75.70	178	PcP	PcP	14 31 40.1	-1.4
SNAA	Sanae	75.70	178	P	P	14 31 30.0	+1.1
SNAA				IAmb	IAmb	14 31 41.1	
	comp=Z,16nm,1.1s						
VNA3	Neumayer Olymp	75.86	176	P	P	14 31 31.1	+1.4
VNA3	Neumayer Olymp	75.86	176	PcP	PcP	14 31 41.4	-0.7
VNA2	Neumayer--Watz	76.29	177	P	P	14 31 33.1	+1.0
	baz=170,slow=5.8						
VNA2	Neumayer--Watz	76.29	177	PcP	PcP	14 31 44.4	+0.4
	baz=175,slow=5.7						
VNA1	Neumayer--Stat	76.52	177	P	P	14 31 35.2	+1.8
VNA1	Neumayer--Stat	76.52	177	PcP	PcP	14 31 45.4	+0.5
MJAR	Matsushiro Arr	80.19	326	LR	LR	15 03 17.7	
	comp=Z,46nm,21.2s,baz=130,slow=33						
PLCA	Paso Flores	80.94	133	P	P	14 32 00.1	+1.7
	comp=Z,2.5nm,0.9s,baz=248,slow=13,SNR=3.9						
PLCA				LR	LR	15 01 56.4	
	comp=Z,115nm,18.1s,baz=209,slow=31						
PLCA	Paso Flores	80.94	133	IAmb	IAmb	14 32 12.8	
	comp=Z,8.0nm,1.1s						
QIZ	Qiongzhong	85.92	296	P	P	14 32 24.8	+0.7
QIZ				S	S	14 42 58.8	+3.3
QIZ				LR	LR		
	comp=Z,310nm,11.6s						
QIZ				LR	LR		
	comp=Z,190nm,8.4s						
QIZ				LR	LR		
	comp=Z,210nm,10.1s						
KSRS	Korea Array	86.13	320	P	P	14 32 24.4	-0.3
	comp=Z,2.7nm,0.8s,baz=145,slow=6.2,SNR=7.2						
NJ2	Nanjing	87.74	311	*e*P	P	14 32 34.1	+1.5
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
PETK	Petropavlovsk-	88.16	346	P	P	14 32 34.7	+0.6
	comp=Z,4.6nm,0.9s,baz=189,slow=8.0,SNR=3.3						
PETK				LR	LR	15 07 51.5	
	comp=Z,89nm,19.1s,baz=163,slow=33						
NVAR	Mina Array Bea	90.14	43	P	P	14 32 45.7	+1.6
	comp=Z,1.1nm,0.8s,baz=218,slow=7.2,SNR=6.5						
NVAR				LR	LR	15 09 04.6	
	comp=Z,128nm,18.1s,baz=268,slow=33						
CN2	Changchun	92.02	323	*e*P	P	14 32 52.8	+0.4
CN2				*e*S	S	14 43 52.2	+0.5
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				pmax	pmax		
	comp=Z,100nm,9.6s						
CN2				LR	LR		
	comp=Z,300nm,12.0s						
CN2				LR	LR		
	comp=Z,300nm,12.0s						
CN2				LR	LR		
	comp=Z,300nm,12.0s						
LVC	Limon Verde	92.87	119	LR	LR	15 07 49.4	
	comp=Z,55nm,19.3s,baz=224,slow=31						
TXAR	Lajitas Array	93.83	57	LR	LR	15 08 27.2	
	comp=Z,46nm,18.5s,baz=0.0,slow=31						
CMAR	Chiang Mai Arr	94.08	289	PP	PP	14 36 48.0	-1.3
	comp=Z,0.5nm,0.6s,baz=141,slow=6.7,SNR=6.9						
CMAR				LR	LR	15 19 45.4	
	comp=Z,22nm,18.4s,baz=155,slow=38						
HHC	Hu-ho-hao-te	97.84	314	*e*P	Pdif	14 33 21.0	+1.7
HHC				pmax	pmax		
	comp=Z,12nm,1.1s						
HHC				LR	LR		
	comp=Z,400nm,11.0s						
HHC				LR	LR		
	comp=Z,340nm,13.1s						
HHC				LR	LR		
	comp=Z,520nm,12.2s						
PDAR	Pinedale Array	98.01	44	LR	LR	15 14 10.1	
	comp=Z,75nm,18.2s,baz=258,slow=33						
CPUP	Villa Florida	98.56	129	LR	LR	15 12 45.8	
	comp=Z,106nm,18.2s,baz=224,slow=32						
WMQ	Urumqi	114.62	307	*e*PKP	PKiKP	14 38 25.3	+1.5
MKAR	Makanchi Array	119.23	309	PKP	PKPdf	14 38 32.3	-0.2
	comp=Z,1.5nm,0.9s,baz=223,slow=1.8,SNR=6.9						
ZALV	Zalesovo Beam	119.76	317	PKP	PKPdf	14 38 32.8	-0.5
	comp=Z,1.2nm,0.7s,baz=179,slow=2.0,SNR=4.2						
NRIK	Noril'sk	121.82	335	PKP	PKiKP	14 38 37.1	+0.2
	comp=Z,3.9nm,0.8s,baz=55,slow=5.5,SNR=5.4						
KURK	Kurchatov	122.63	313		PKiKP	14 38 39.4	+0.4
KURBB	Kurchatov Arra	122.66	313	PKP	PKPdf	14 38 38.4	-0.5
	baz=115,slow=1.9						
KKAR	Karatay Array	126.29	302		PKiKP	14 38 47.5	+0.8
BVAR	Borovoye Array	128.05	314	PKP	PKiKP	14 38 49.8	0.0
	comp=Z,1.7nm,0.7s,baz=205,slow=6.6,SNR=8.8						
BRVK	Borovoye	128.11	314		PKiKP	14 38 51.2	+1.3
ARU	Arti	134.88	319	PKP	PKiKP	14 39 02.8	-0.7
	comp=Z,0.7nm,0.3s,baz=246,slow=1.7,SNR=5.9						
ARCES	ARCESS Array B	140.96	347	PKhKP	PKPpre	14 39 08.5	
	comp=Z,9.2nm,1.0s,baz=60,slow=3.6,SNR=3.3						
KLMR	Klimovskoe	142.84	330	*e*PKPdf	PKPdf	14 39 15.9	-0.5
KLMR				AMP		14 39 19.3	
	comp=Z,5.0nm,1.0s						
KLMR				*e*PP	PP	14 42 29.1	+3.3
ONI	Oni	145.98	299		PKPbc	14 39 23.6	+0.2
KBZ	Khabaz	146.31	301	PKPbc	PKPbc	14 39 23.8	-0.3
	comp=Z,7.5nm,0.9s,baz=181,slow=2.3,SNR=11						
OBN	Obninsk	147.08	323	PKPbc	PKPbc	14 39 25.9	0.0
	comp=Z,4.1nm,0.4s,baz=75,slow=3.7,SNR=7.7						
FIA1	FINESS Array S	147.39	339	PKPdf	PKPbc	14 39 26.0	-0.7
FINES	FINESS Array B	147.39	339	PKPbc	PKPbc	14 39 27.2	+0.5
	comp=Z,22nm,0.8s,baz=82,slow=4.0,SNR=34						
FINES	FINESS Array B	147.39	339	PKPdf	PKPbc	14 39 26.4	-0.2
VSU	Vasula	149.40	334	*e*P	PKiKP	14 39 33.0	-0.1
AAL	Aland	150.17	342	*e*P	PKPbc	14 39 34.0	+0.2
NC303	NORSAR Array S	150.96	350		PKiKP	14 39 37.0	+0.7
UPP	Uppsala	151.04	344	*e*P	PKiKP	14 39 36.7	+0.2
NB2	NORSAR Subarra	151.16	351	PKP	PKPbc	14 39 36.0	-0.2
	comp=Z,4.3nm,0.8s,baz=16,slow=2.6						
NOA	NORSAR Array B	151.16	351	PKPbc	PKiKP	14 39 37.0	+0.3
	comp=Z,6.2nm,0.8s,baz=14,slow=4.1,SNR=19						
NC602	NORSAR Array S	151.40	350	PKPdf	PKPdf	14 39 32.2	+1.5
EIL	Elat	151.58	273	PKPbc	PKiKP	14 39 39.2	+0.6
	comp=Z,18nm,0.9s,baz=185,slow=1.0,SNR=14						
NACGM	Naroch	151.84	329	*i* PKP	PKiKP	14 39 38.7	+0.4
PABE	Paberze	152.58	332	*e*P	PKiKP	14 39 40.6	+0.8
AKASG	Malin Array Be	153.13	320	PKP	PKPdf	14 39 33.6	+0.1
	comp=Z,0.3nm,0.3s,baz=44,slow=0.8,SNR=2.1						
AKASG				PKPbc	PKPbc	14 39 40.3	-0.6
	comp=Z,4.0nm,0.7s,baz=56,slow=2.5,SNR=18						
AKASG	Malin Array Be	153.13	320		PKiKP	14 39 41.8	+0.8
AKBB	Malin Array Si	153.13	320		PKiKP	14 39 41.6	+0.5
BR131	Keskin Array S	153.56	294		PKiKP	14 39 42.8	+0.2
BRTR	Keskin Array B	153.56	294	PKPbc	PKiKP	14 39 42.8	+0.2
	comp=Z,5.8nm,0.8s,baz=127,slow=3.7,SNR=11						
BRTR	Keskin Array B	153.56	294		PKiKP	14 39 42.6	+0.1
CLL	Collm	159.84	339	*e*pPKPab	PKPab	14 40 25.0	+3.6
CLL	Collm	159.84	339	*e*PKPab	PKPab	14 40 21.0	-0.4
BRG	Berggiesshubel	159.92	337	Amp		14 40 24.2	
	comp=Z,3.8nm,0.8s						
BRG	Berggiesshubel	159.92	337	*e*PKP	PKPab	14 40 22.3	+0.5
TORD	Torodi Ar. Bea	160.37	180	PKP	PKPdf	14 39 44.3	+0.4
	comp=Z,0.6nm,0.7s,baz=286,slow=2.6,SNR=3.6						
TORD				PKPab	PKPab	14 40 25.1	+0.6
	comp=Z,1.7nm,0.8s,baz=182,slow=3.7,SNR=4.9						
GERES	GERESS Array B	161.72	334	PKPab	PKPab	14 40 29.1	-0.8
	comp=Z,0.6nm,0.5s,baz=29,slow=2.2,SNR=3.5						

TEH 10 14:32:53.1, 27°.13N×53°.30E, h10^{km}, ML3.5, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LMD1	Lamerd	0.24	329	*e*Pg	Pg	14 32 57.9	-0.2
LAR1	LAR	1.09	60	*e*Pg	Pg	14 33 12.8	-1.3
LAR1				*e*		14 33 50.1	
	comp=Z,22μm,0.4s						
JHRM	Jahrom	1.39	10	*e*Pn	Pg	14 33 19.7	-0.1
JHRM				*e*		14 33 51.9	
	comp=Z,14μm,0.4s						
JRN	Qarnain Island	2.22	191	*e*Pn	Pn	14 33 31.4	+1.5
SHI	Shiraz	2.60	345	*e*	Pg	14 34 39.2	+56
	comp=Z,1μm,0.9s						
BANOM	Banah	2.94	113	*e*Pn	Pn	14 33 42.0	+2.1
ASUD	Al Ashush, Dub	3.09	143	*e*Pn	Pn	14 33 43.8	+1.8
MSFE	Esma-Masafi	3.11	124	*e*Pn	Pn	14 33 44.2	+1.9
MDH	Madha	3.25	123	*e*Pn	Pn	14 33 45.7	+1.5
UOSS	Minazif	3.40	129	*e*Pn	Pn	14 33 47.2	+1.0
HATD	Hatta, Dubai	3.43	131	*e*Pn	Pn	14 33 47.3	+0.7
MZR	Muzera	4.11	178	*e*Pn	Pn	14 33 58.6	+2.5
TVBK	TV Kerman	4.16	46	*e*Pn	Pn	14 33 59.8	+2.8
SOHO	SOHO	4.17	135	*e*Pn	Pn	14 33 57.6	+0.8
KHGB	Koh Gabri	4.27	40	*e*Pn	Pn	14 34 00.9	+2.5
KHGB				*e*		14 35 06.9	
	comp=Z,211nm,0.8s						
IMEH	Mehriz	4.40	15	*e*Pn	Pn	14 34 01.5	+1.4
CHMN	Cheshme madani	4.61	53	*e*Pn	Pn	14 34 07.7	+4.5
UMZA	Um Al Zommool	4.71	159	*e*Pn	Pn	14 34 04.6	+0.4
KBAM	BAM	4.96	65	*e*Pn	Pn	14 34 10.6	+2.8
KBAM				*e*		14 34 14.8	
	comp=Z,607nm,0.7s						
ICHK	Chekchek	5.18	10	*e*Pn	Pn	14 34 11.0	0.0

NOU 10 14:40:52.2, 18°.59S×168°.61E, h26^{km}, MLv3.7/13**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTV	Rentapao	0.81	347	P	Pn	14 41 08.1	+0.1
DVP	Devils Point	0.95	335	P	Pn	14 41 09.6	-0.3
MARNC	Mare, Loyalty	2.93	191	P	Pn	14 41 37.3	+0.2
YATNC	Mamie plateau,	3.81	205	P	Pn	14 41 48.1	-1.1
DZM	Mont Dzumac	4.02	210	P	Pn	14 41 52.0	-0.2
NOUC	Port Laguerre	4.11	211	P	Pn	14 41 53.7	+0.4
PINNC	Pines Island,	4.15	195	P	Pn	14 41 53.9	0.0
OUENC	Ouen Island, N	4.15	203	P	Pn	14 41 54.3	+0.3
ONTNC	Ouen Toro	4.21	208	P	Pn	14 41 54.5	-0.3
KOUNC	Koumac, New Ca	4.52	244	P	Pn	14 41 59.2	+0.2

ASIES ***10*** *14:53:11.9, 24°.77N×122°.34E, h21^{km}, MW4.0*

NEIC ***10*** *14:53:12.3±1.1, 24°.76N±0°.06×122°.31E±0°.03, h9^{km}±4^{km}, mb4.5/25, Error ellipse: s-maj=8.7km s-min=3.3km az=169.0*

TAP ***10*** *14:53:12.2, 24°.80N×122°.31E, h14^{km}, ML4.5, C*

JMA ***10*** *14:53:13.0±0.1, 24°.72N×122°.34E, h39^{km}±3^{km}, M3.7*

NIED ***10*** *14:53:13.1, 24°.72N×122°.34E, h39^{km}, MW4.2, Moment Tensor Solution.   s3   Moment tensor: Scale 10^{15}Nm; M_{rr}-2.11; $M_{\theta\theta}$2.25; $M_{\phi\phi}$-0.14; $M_{r\theta}$0.73; $M_{\theta\phi}$0.31; $M_{\phi r}$-0.31;   Fault plane solution: $M_0$2.34000×10^{15} NP1: ϕ_s273.00000°, δ55.00000°, λ-77.00000°.   NP2:ϕ_s72.00000°, δ37.00000°, λ-107.00000°.*

BJI ***10*** *14:53:16.9±0.0, 25°.34N×122°.14E, h12^{km}, mB4.5/9, mb3.8/11, ML4.0/4, Ms4.1/9, Ms7 3.9/9*

IDC ***10*** *14:53:23.5±4.1, 24°.84N×122°.33E, h114^{km}±42^{km}, mb3.7/10, mb1 3.7/12, mb1mx3.5/44, mbtmp4.0/12,* *MS3.6/13, Ms1 3.6/13, ms1mx3.3/52, Error ellipse: s-maj=24.5km s-min=12.9km az=68.0*

ISC 10 14:53:13.0±0.8, **24°.75N**±0°.02×**122°.34E**±0°.02, **h19**^{km}±3^{km}, **n216**, σ**1ˢ.20**/262, **mb4.3**/25, **MS3.6**/12, **17C-2D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.41**	**310**	⇑iP	**Pg**	**14 53 20.1**	**-1.4**
	baz=306						
TWB1				iS	**Sg**	**14 53 25.1**	**-2.2**
	baz=306						
TWC	**Suao**	**0.46**	**253**	⇑iP	**Pg**	**14 53 21.2**	**-1.3**
	baz=251						
TWC				eS	**Sg**	**14 53 26.7**	**-2.2**
	baz=251						
NTC	**Toucheng**	**0.47**	**283**	P	**Pg**	**14 53 21.6**	**-1.0**
	baz=277						
NTC				eS	**Sg**	**14 53 28.0**	**-1.1**
	baz=277						
TIPB	**Shuangxi**	**0.52**	**296**	⇑iP	**Pb**	**14 53 22.5**	**-1.0**
	baz=292						
TIPB				S	**Sg**	**14 53 28.9**	**-1.6**
	baz=292						
ILA	**Ilan**	**0.54**	**272**	eP	**Pb**	**14 53 22.5**	**-1.2**
	baz=266						
ILA				S	**Sg**	**14 53 30.9**	**-0.2**
	baz=266						
NDS	**Dongshan**	**0.57**	**259**	⇑iP	**Pb**	**14 53 23.4**	**-1.0**
	baz=248						
NDS				eS	**Sg**	**14 53 31.3**	**-1.0**
	baz=248						
EWUT	**Wuta**	**0.59**	**240**	⇑P	**Pg**	**14 53 23.8**	**-0.9**
	baz=234						
EWUT				eS	**Sg**	**14 53 31.6**	**-1.1**
	baz=234						
NWF	**Wu-fen Shan**	**0.60**	**303**	⇑iP	**Pb**	**14 53 24.1**	**-0.7**
	baz=299						
NWF				S	**Sg**	**14 53 32.5**	**-0.6**
	baz=299						
WFSB	**Wu-fen Shan**	**0.60**	**303**	⇑iP	**Pg**	**14 53 24.1**	**-0.8**
	baz=299						
WFSB				S	**Sb**	**14 53 31.6**	**-1.2**
	baz=299						
TWE	**Neicheng**	**0.61**	**268**	⇑P	**Pb**	**14 53 23.8**	**-1.1**
	baz=262						
TWE				eS	**Sg**	**14 53 32.7**	**-0.7**
	baz=262						
JYNG	**Yonagunijimaku**	**0.63**	**118**	P	**Pg**	**14 53 25.0**	**-0.5**
JYNG				eS	**Sg**	**14 53 33.9**	**0.0**
ENA	**Nanau**	**0.63**	**240**	P	**Pb**	**14 53 24.4**	**-0.9**
	baz=234						
ENA				eS	**Sb**	**14 53 32.7**	**-0.9**
	baz=234						
YOJ	**Yonaguni jima**	**0.68**	**115**	⇑iP	**Pn**	**14 53 26.1**	**-1.4**
	baz=117						
YOJ				S	**Sn**	**14 53 35.8**	**-1.7**
	baz=117						
YOJ	**Yonaguni jima**	**0.68**	**115**	P	**Pn**	**14 53 26.0**	**-1.5**
YOJ				S	**Sg**	**14 53 35.2**	**-0.2**
YOJ	**Yonaguni jima**	**0.68**	**115**		**Pg**	**14 53 25.8**	**-0.5**
YOJ				Sg	**Sg**	**14 53 34.4**	**-1.0**
EHP	**Heping Village**	**0.69**	**232**	eP	**Pn**	**14 53 26.4**	**-1.4**
	baz=234						
EHP				eS	**Sg**	**14 53 35.9**	**-0.1**
	baz=234						
ENTT	**Nioudou**	**0.71**	**262**	eP	**Pb**	**14 53 25.6**	**-1.1**
	baz=256						
ENTT				S	**Sg**	**14 53 35.9**	**-0.6**
	baz=256						
TWA	**Mucha**	**0.72**	**289**	eP	**Pg**	**14 53 26.4**	**-0.8**
	baz=274						
TWA				iS	**Sg**	**14 53 36.7**	**-0.2**
	baz=274						
NHY	**Taipei**	**0.76**	**293**	eP	**Pb**	**14 53 26.6**	**-0.9**
	baz=290						
NWLT	**Wulai**	**0.76**	**273**	eP	**Pg**	**14 53 26.9**	**-1.0**
	baz=268						
NWLT				eS	**Sb**	**14 53 36.3**	**-1.2**
	baz=268						
NDT	**Datong Townshi**	**0.76**	**259**	eP	**Pg**	**14 53 27.1**	**-0.9**
	baz=263						
NDT				eS	**Sg**	**14 53 37.9**	**-0.3**
	baz=263						
NWRT	**Kuosheng**	**0.77**	**307**	eP	**Pb**	**14 53 26.7**	**-1.0**
	baz=304						
NWRT				S	**Sb**	**14 53 37.2**	**-0.5**
	baz=304						
NHDH	**Xindian Distri**	**0.77**	**287**	eP	**Pn**	**14 53 28.1**	**-0.7**
	baz=273						
NHDH				eS	**Sg**	**14 53 38.1**	**-0.3**
	baz=273						
TAP1	**Taipei**	**0.80**	**292**	eP	**Pg**	**14 53 27.7**	**-0.9**
	baz=288						
TAP1				eS	**Sn**	**14 53 39.3**	**-1.1**
	baz=288						
YM01	**YM01**	**0.80**	**300**	P	**Pg**	**14 53 28.1**	**-0.6**
	baz=297						
YM01				S	**Sb**	**14 53 38.3**	**-0.5**
	baz=297						
TATO	**Taipei**	**0.80**	**287**	⇓iP	**Pn**	**14 53 28.5**	**-0.8**
	baz=283						
TATO				S	**Sg**	**14 53 38.5**	**-0.9**
	baz=283						
TATO	**Taipei**	**0.80**	**287**		**Pn**	**14 53 28.2**	**-1.0**
TAP	**Taipei**	**0.81**	**291**	eP	**Pg**	**14 53 27.9**	**-0.9**
	baz=288						
TAP				eS	**Sg**	**14 53 38.9**	**-0.7**
	baz=288						
YM08	**YM08**	**0.81**	**303**	⇓iP	**Pb**	**14 53 27.8**	**-0.7**
	baz=301						
YM08				S	**Sb**	**14 53 37.4**	**-1.5**
	baz=301						
BACT	**New Taipei Cit**	**0.85**	**287**	eP	**Pn**	**14 53 29.2**	**-0.7**
	baz=284						
ANP	**Anpu**	**0.86**	**301**	eP	**Pb**	**14 53 28.7**	**-0.7**
	baz=299						
NSM	**Shimen**	**0.87**	**309**	eP	**Pb**	**14 53 28.7**	**-0.7**
	baz=307						
NSM				eS	**Sb**	**14 53 40.3**	**-0.4**
	baz=307						
ETL	**Fush Village**	**0.87**	**228**	eP	**Pg**	**14 53 29.2**	**-0.9**
	baz=234						
ETL				eS	**Sn**	**14 53 41.3**	**-1.2**
	baz=234						
NACB	**Ninganchiao**	**0.88**	**230**	⇑iP	**Pg**	**14 53 29.1**	**-1.1**
	baz=236						
NACB				iS	**Sg**	**14 53 41.0**	**-1.0**
	baz=236						
NACB	**Ninganchiao**	**0.88**	**230**		**Pb**	**14 53 28.8**	**-0.9**
NACB				Sg	**Sb**	**14 53 40.1**	**-1.0**
NSK	**Sanguang**	**0.89**	**266**	⇑P	**Pb**	**14 53 29.2**	**-0.6**
	baz=272						
NSK				eS	**Sb**	**14 53 40.8**	**-0.7**
	baz=272						
TWS1	**Kuangyinshan**	**0.91**	**293**	eP	**Pn**	**14 53 29.7**	**-1.0**
	baz=290						
TWS1				eS	**Sg**	**14 53 41.8**	**-0.9**
	baz=290						
NTST	**Danshui**	**0.91**	**298**	eP	**Pg**	**14 53 30.1**	**-0.6**
	baz=295						
PCYT	**Pengchaiyu**	**0.91**	**345**	eP	**Pb**	**14 53 28.9**	**-1.3**
	baz=346						
NNS	**Nan Shan**	**0.93**	**251**	⇑eP	**Pb**	**14 53 29.6**	**-0.9**
	baz=235						
NNS				eS	**Sg**	**14 53 42.8**	**-0.7**
	baz=235						
ETLH	**Xiulin Townshi**	**0.95**	**236**	eP	**Pn**	**14 53 30.3**	**-1.0**
	baz=232						
ETLH				S	**Sg**	**14 53 43.1**	**-0.8**
	baz=232						
TWD	**Chiawan**	**0.95**	**226**	P	**Pn**	**14 53 30.2**	**-1.0**
	baz=229						
TWD				S	**Sn**	**14 53 43.8**	**-0.4**
	baz=229						
NTY	**Taoyuan**	**0.98**	**285**	eP	**Pn**	**14 53 31.0**	**-0.7**
	baz=283						
HWA	**Hwalien**	**1.01**	**221**	eP	**Pg**	**14 53 33.2**	**+0.5**
	baz=217						
NCU	**National Centr**	**1.07**	**282**	eP	**Pg**	**14 53 33.1**	**-0.7**
	baz=280						
NCUH	**Zhongli**	**1.07**	**282**	eP	**Pg**	**14 53 33.3**	**-0.5**
	baz=280						
ETM	**Tongmen**	**1.09**	**225**	eP	**Pg**	**14 53 33.2**	**-1.0**
	baz=228						
ETM				eS	**Sg**	**14 53 49.0**	**+0.4**
	baz=228						
TEYL	**Yanliau Villag**	**1.10**	**218**	eP	**Pg**	**14 53 34.0**	**-0.4**
	baz=196						
TEYL				eS	**Sg**	**14 53 50.6**	**+1.7**
	baz=196						
FUSS	**Fushou**	**1.11**	**244**	P	**Pg**	**14 53 33.7**	**-1.0**
	baz=240						
FUSS				eS	**Sg**	**14 53 49.2**	**-0.1**
	baz=240						
NJD	**Zhudong**	**1.14**	**270**	eP	**Pg**	**14 53 34.5**	**-0.5**
	baz=280						
WHF	**Hehuan Shan**	**1.15**	**239**	⇑P	**Pb**	**14 53 33.9**	**-0.5**
	baz=235						
WHF				S	**Sg**	**14 53 49.1**	**-1.3**
	baz=235						
TWT	**Tachien**	**1.17**	**245**	P	**Pg**	**14 53 34.7**	**-0.9**
	baz=242						
TWT				S	**Sg**	**14 53 50.3**	**-0.6**
	baz=242						
TDCB	**Techi**	**1.18**	**246**	⇑iP	**Pg**	**14 53 34.5**	**-1.4**
	baz=242						
TDCB				S	**Sg**	**14 53 49.9**	**-1.5**
	baz=242						
HSN1	**Hsinchu**	**1.20**	**272**	eP	**Pg**	**14 53 34.9**	**-1.3**
	baz=288						
LIOB	**Emei**	**1.21**	**266**	eP	**Pg**	**14 53 35.4**	**-1.0**
	baz=262						
LIOB				eS	**Sg**	**14 53 52.2**	**0.0**
	baz=262						
NSTT	**Nanjuang**	**1.22**	**265**	eP	**Pg**	**14 53 35.4**	**-1.3**
	baz=261						
NSTT				S	**Sg**	**14 53 52.1**	**-0.5**
	baz=261						
SBCB	**Hsinchu**	**1.23**	**272**	eP	**Pg**	**14 53 35.4**	**-1.4**
	baz=287						
SBCB				eS	**Sg**	**14 53 52.6**	**-0.3**
	baz=287						
ESL	**Shilin**	**1.24**	**222**	P	**Pg**	**14 53 36.0**	**-1.0**
	baz=237						
ESL				S	**Sg**	**14 53 53.6**	**+0.3**
	baz=237						
HSN	**Hsinchu**	**1.24**	**273**	eP	**Pg**	**14 53 36.0**	**-1.0**
	baz=271						
CHGB	**Renai**	**1.26**	**237**	⇑iP	**Pg**	**14 53 36.4**	**-1.1**
	baz=234						
CHGB				iS	**Sg**	**14 53 53.1**	**-0.9**
	baz=234						
TEGC	**Jichi Village**	**1.26**	**215**	eP	**Pg**	**14 53 35.9**	**-1.5**
	baz=195						
OWD	**Renai**	**1.32**	**234**	P	**Pg**	**14 53 37.6**	**-0.9**
	baz=239						
OWD				eS	**Sg**	**14 53 54.2**	**-1.6**
	baz=239						
IRIF	**Iriomote-Funau**	**1.33**	**108**	P	**Pn**	**14 53 35.2**	**-1.3**
NJN	**Zhunan**	**1.33**	**268**	eP	**Pb**	**14 53 36.9**	**-0.5**
	baz=282						
WHP	**Taichung City**	**1.35**	**250**	eP	**Pg**	**14 53 38.1**	**-1.0**
	baz=247						
WHP				S	**Sg**	**14 53 54.9**	**-1.8**
	baz=247						
EGFH	**Guangfu**	**1.36**	**218**	eP	**Pg**	**14 53 38.0**	**-1.2**
	baz=199						
NMLH	**Miaoli**	**1.42**	**262**	eP	**Pg**	**14 53 40.2**	**-0.3**
	baz=276						
WPL	**Puli Township**	**1.45**	**240**	eP	**Pg**	**14 53 39.6**	**-1.5**
	baz=237						
WPL				eS	**Sg**	**14 53 58.5**	**-1.6**
	baz=237						
DPDB	**Guoxing**	**1.47**	**241**	eP	**Pg**	**14 53 39.9**	**-1.4**
	baz=238						
WCS	**Beigang Elemen**	**1.47**	**242**	eP	**Pb**	**14 53 39.5**	**-0.1**
	baz=239						
NSY	**Sanyi**	**1.47**	**257**	eP	**Pg**	**14 53 41.5**	**+0.1**
	baz=273						
TWQ1	**Liyutan**	**1.48**	**255**	eP	**Pg**	**14 53 40.9**	**-0.6**
	baz=252						
TWQ1				eS	**Sg**	**14 54 00.6**	**-0.2**
	baz=252						
HGSD	**Ruisui**	**1.50**	**214**	eP	**Pb**	**14 53 39.6**	**-0.6**
	baz=197						
HATJ	**Hateruma jima**	**1.50**	**117**	P	**Pb**	**14 53 38.7**	**-1.6**
HATJ				eS	**Sn**	**14 53 57.2**	**-0.8**
EHY	**Hungye**	**1.54**	**217**	eP	**Pb**	**14 53 39.7**	**-1.3**
	baz=214						
SMLT	**Sun Moon Lake**	**1.57**	**237**	⇑eP	**Pg**	**14 53 41.8**	**-1.4**
	baz=234						
SSLB	**Suanglung**	**1.58**	**233**	⇑P	**Pg**	**14 53 41.8**	**-1.7**
	baz=238						
SSLB				eS	**Sg**	**14 54 02.2**	**-1.9**
	baz=238						
SSLB	**Suanglung**	**1.58**	**233**		**Pb**	**14 53 41.5**	**-0.1**
TYC	**Yuchr**	**1.59**	**238**	eP	**Pg**	**14 53 42.0**	**-1.6**
	baz=236						
TYC				eS	**Sg**	**14 54 03.6**	**-0.7**
	baz=236						
WDJ	**Dajia District**	**1.59**	**256**	eP	**Pg**	**14 53 43.0**	**-0.8**
	baz=253						
JKRS	**Kuro-shima**	**1.60**	**108**	P	**Pn**	**14 53 39.6**	**-0.7**
JKRS				S	**Sn**	**14 54 00.1**	**-0.4**
TCU	**Taichung**	**1.63**	**249**	eP	**Pg**	**14 53 42.8**	**-1.5**
	baz=232						
ECBN	**Changbin**	**1.64**	**210**	eP	**Pb**	**14 53 41.0**	**-1.6**
	baz=192						
YULB	**Yu-li**	**1.65**	**215**	eP	**Pb**	**14 53 41.4**	**-1.3**
	baz=213						
YULB	**Yu-li**	**1.65**	**215**		**Pb**	**14 53 40.9**	**-1.8**
WWF	**Wufeng**	**1.65**	**245**	eP	**Pg**	**14 53 43.8**	**-1.0**
	baz=242						
EYUL	**Yuli**	**1.67**	**214**	eP	**Pb**	**14 53 42.2**	**-1.0**
	baz=199						
TWF1	**Yuli**	**1.68**	**215**	eP	**Pb**	**14 53 42.0**	**-1.3**
	baz=212						
JIJ	**Ishigaki jima**	**1.69**	**103**	P	**Pn**	**14 53 40.2**	**-1.2**
WNT1	**Nantou City**	**1.73**	**241**	eP	**Pg**	**14 53 45.4**	**-0.8**
	baz=238						
WJS	**Zhushan**	**1.73**	**238**	eP	**Pg**	**14 53 45.1**	**-1.2**
	baz=235						
WNT	**Mingjian**	**1.74**	**241**	eP	**Pg**	**14 53 45.5**	**-0.9**
	baz=237						
WCHH	**Zhanghua**	**1.75**	**248**	eP	**Pb**	**14 53 43.9**	**-0.6**
	baz=245						
WYL	**Yuanlin Townsh**	**1.78**	**244**	eP	**Pb**	**14 53 44.2**	**-0.8**
	baz=241						
JISG	**Ishigakijimahi**	**1.80**	**95**	P	**Pn**	**14 53 42.3**	**-0.7**
FULB	**Fuli**	**1.81**	**212**	eP	**Pb**	**14 53 44.1**	**-1.5**
	baz=194						
ALS	**Alishan**	**1.86**	**229**	eP	**Pb**	**14 53 46.4**	**-0.2**
	baz=210						
ALS				eS	**Sg**	**14 54 12.3**	**-0.8**
	baz=210						
CHKT	**Chengkung**	**1.86**	**209**	eP	**Pn**	**14 53 43.3**	**-0.6**
	baz=191						
CHN5	**Tsauling**	**1.90**	**233**	eP	**Pg**	**14 53 47.7**	**-1.8**
	baz=231						
CHN5				eS	**Sg**	**14 54 13.3**	**-0.9**
	baz=231						
WGK	**Gukeng**	**1.93**	**237**	eP	**Pb**	**14 53 47.6**	**0.0**
	baz=234						
ECS	**Chishang**	**1.94**	**212**	eP	**Pb**	**14 53 46.2**	**-1.4**
	baz=210						
WDLH	**Douliu**	**1.95**	**238**	eP	**Pg**	**14 53 48.3**	**-2.2**
	baz=235						
ELDTW	**Lidau**	**1.96**	**218**	eP	**Pb**	**14 53 45.9**	**-2.3**
	baz=202						
WRL	**Guolierlin Hig**	**1.98**	**245**	eP	**Pb**	**14 53 47.5**	**-0.9**
	baz=242						
EDH	**Donghe**	**2.00**	**208**	eP	**Pn**	**14 53 45.9**	**+0.2**
	baz=192						
WTK	**Tuku**	**2.07**	**240**	eP	**Pb**	**14 53 48.9**	**-1.0**
	baz=237						
WTCT	**Ta-ch'eng**	**2.07**	**245**	eP	**Pb**	**14 53 48.9**	**-1.1**
	baz=242						
CHN2	**Minshiung**	**2.09**	**235**	eP	**Pb**	**14 53 50.3**	**+0.1**
	baz=250						
STYH	**Taoyuan**	**2.12**	**223**	eP	**Pb**	**14 53 49.5**	**-1.3**
	baz=204						
TPUB	**Ta-pu**	**2.12**	**228**	eP	**Pb**	**14 53 50.5**	**-0.4**
	baz=209						
TPUB				eS	**Sg**	**14 54 18.2**	**-3.2**
	baz=209						
TPUB	**Ta-pu**	**2.12**	**228**		**Pb**	**14 53 49.9**	**-0.9**
LONT	**Longtian**	**2.14**	**211**	eP	**Pb**	**14 53 48.7**	**-2.4**
	baz=209						
STYT	**Tauyuan**	**2.14**	**223**	eP	**Pb**	**14 53 49.7**	**-1.4**
	baz=205						
CHY	**Chiayi**	**2.14**	**235**	eP	**Pb**	**14 53 50.4**	**-0.8**
	baz=249						
JTJ	**Tarama**	**2.15**	**92**	P	**Pn**	**14 53 47.8**	**0.0**
WTP	**Ta-pu**	**2.17**	**227**	eP	**Pb**	**14 53 51.2**	**-0.5**
	baz=209						
LDUT	**Ludao**	**2.21**	**201**	eP	**Pn**	**14 53 48.7**	**0.0**
	baz=199						
WSF	**Szhu**	**2.22**	**241**	eP	**Pb**	**14 53 51.3**	**-1.3**
	baz=238						
TWGBT	**Beinan**	**2.24**	**211**	eP	**Pn**	**14 53 49.8**	**+0.8**
	baz=209						
TWG	**Pinlang**	**2.24**	**211**	eP	**Pn**	**14 53 49.6**	**+0.6**
	baz=209						
TWG	**Pinlang**	**2.24**	**211**		**Pn**	**14 53 48.9**	**-0.1**
TWK	**Hsinying**	**2.24**	**229**	eP	**Pb**	**14 53 51.9**	**-1.0**
	baz=226						
SNST	**Tainan City**	**2.27**	**228**	eP	**Pb**	**14 53 52.4**	**-0.9**
	baz=226						
CHN1	**Nanshi**	**2.27**	**227**	eP	**Pb**	**14 53 52.7**	**-0.6**
	baz=224						
SGST	**Jiashian**	**2.31**	**224**	eP	**Pb**	**14 53 51.3**	**-2.7**
	baz=207						
ICHU	**Yijhu**	**2.33**	**234**	eP	**Pb**	**14 53 53.8**	**-0.6**
	baz=231						
CHN8	**Yiju**	**2.39**	**235**	eP	**Pb**	**14 53 54.4**	**-1.0**
	baz=232						
CHN3	**Shinhua**	**2.45**	**228**	eP	**Pb**	**14 53 55.8**	**-0.6**
	baz=225						
ECL	**Taimali**	**2.49**	**211**	eP	**Pn**	**14 53 53.1**	**+0.6**
	baz=208						
SCLT	**Jiali**	**2.51**	**232**	eP	**Pb**	**14 53 54.6**	**-2.8**
	baz=229						
SSD	**Sandimen**	**2.53**	**218**	eP	**Pb**	**14 53 55.4**	**-2.4**
	baz=202						
TSMG	**Majia**	**2.56**	**218**	eP	**Pb**	**14 53 56.4**	**-1.8**
	baz=201						
MATB	**Ma-tsu**	**2.58**	**303**	eP	**Pn**	**14 53 52.4**	**-1.2**
	baz=302						
TWM1	**Shoushan**	**2.59**	**223**	eP	**Pb**	**14 53 58.7**	**-0.3**
	baz=220						
MSUT	**Lienchiang**	**2.60**	**304**	eP	**Pn**	**14 53 53.0**	**-1.0**
	baz=303						
MASBT	**Mashibuluo**	**2.64**	**217**	eP	**Pb**	**14 53 57.2**	**-2.4**
	baz=202						
JMJ	**Miyako jima 2**	**2.69**	**88**	eP	**Pb**	**14 53 57.3**	**-3.2**
	baz=104						
EAST	**Anshuo**	**2.72**	**210**	eP	**Pn**	**14 53 56.4**	**+0.7**
	baz=208						
SSPT	**Xinbi**	**2.77**	**216**	eP	**Pb**	**14 54 00.2**	**-1.7**
	baz=214						
PNG	**Penghu**	**2.80**	**246**	eP	**Pn**	**14 53 58.1**	**+1.4**
	baz=242						
PHUB	**P'eng-hu**	**2.81**	**245**	eP	**Pn**	**14 53 58.5**	**+1.7**
	baz=241						
SCZT	**Fangliau**	**2.84**	**214**	eP	**Pb**	**14 54 00.2**	**-2.9**
	baz=198						
SLIU	**Shizi**	**2.89**	**210**	eP	**Pn**	**14 53 59.2**	**+1.3**
	baz=197						
XPSS	**Dashiqiu**	**2.91**	**319**	eP	**Pn**	**14 53 57.6**	**-0.7**
	baz=318						
PTMZ	**Houxiangcun**	**2.94**	**276**	eP	**Pn**	**14 53 58.6**	**0.0**
	baz=275						
LYJJ	**Jianjiangzhen**	**2.94**	**308**	eP	**Pn**	**14 53 57.6**	**-1.0**
	baz=307						
VCHM	**Qimei**	**3.07**	**241**	eP	**Pn**	**14 54 02.7**	**+2.3**
	baz=238						
HEN	**Hengchun**	**3.10**	**209**	eP	**Pb**	**14 54 03.2**	**-4.3**
	baz=196						
TWKBT	**Hengchun**	**3.12**	**207**	eP	**Pn**	**14 54 01.9**	**+0.7**
	baz=195						
TWK1	**Hengchun**	**3.12**	**207**	eP	**Pn**	**14 54 02.6**	**+1.4**
	baz=195						
MHZQ	**Yeshan**	**3.28**	**295**	eP	**Pn**	**14 54 02.9**	**-0.5**
	baz=295						
KNM	**Kinmen**	**3.57**	**266**	eP	**Pn**	**14 54 08.9**	**+1.6**
	baz=263						
KNMB	**Chin-men Tao**	**3.60**	**266**	eP	**Pn**	**14 54 07.0**	**-0.8**
	baz=263						
KNMB	**Chin-men Tao**	**3.60**	**266**	Pn	**Pn**	**14 54 07.3**	**-0.5**
AXDP	**Jialang**	**3.97**	**273**	eP	**Pn**	**14 54 13.1**	**+0.2**
	baz=268						
AXDP				eS	**Sn**	**14 54 58.5**	**-0.4**
	baz=268						
ZPLA	**Ao Xicun**	**4.26**	**260**	eP	**Pn**	**14 54 18.4**	**+1.6**
	baz=255						
JOW	**Kunigami**	**5.74**	**68**	P	Pb	14 54 45.0	-7.5
	2.0nm,0.3s,baz=153,slow=22,SNR=1.7						
JOW	**Kunigami**	**5.74**	**68**	Pn	**Pn**	**14 54 39.6**	**+2.4**
NJ2	**Nanjing**	**7.90**	**338**	eP	**Pb**	**14 55 32.6**	**+3.4**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2				LR	LR		
	comp=N,880nm,10.0s						
NJ2				LR	LR		
	comp=E,920nm,9.2s						
NJ2				LR	LR		
	comp=Z,830nm,11.4s						
KSRS	**Korea Array**	**13.54**	**19**	P	**P**	**14 56 33.5**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=197,slow=12,SNR=16						
KSRS				LR	LR	15 02 04.6	
	comp=Z,241nm,18.1s,baz=190,slow=39						
DAV	**Davao City (W)**	**17.85**	**169**	LR	LR	15 03 53.3	
	comp=Z,143nm,21.2s,baz=318,slow=35						
MJAR	**Matsushiro Arr**	**17.99**	**45**	P	**P**	**14 57 26.6**	**+4.1**
	comp=Z,0.0nm,0.3s,baz=232,slow=7.6,SNR=1.7						
CN2	**Changchun**	**19.18**	**7**	eP	**Pn**	**14 57 37.9**	**+1.5**
CN2				eS	**Sn**	**15 01 09.5**	**-1.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				pmax	pmax		
	comp=Z,100nm,7.6s						
CN2				LR	LR		
	comp=Z,300nm,10.0s						
CN2				LR	LR		
	comp=Z,200nm,10.0s						
CN2				LR	LR		
	comp=Z,300nm,11.0s						
USRK	**Ussuriysk Ar.**	**20.95**	**20**	P	Pn	14 57 56.6	-0.6
	comp=Z,6.6nm,0.8s,baz=201,slow=9.7,SNR=9.2						
USRK				LR	LR	15 06 19.6	
	comp=Z,84nm,19.0s,baz=163,slow=37						
CHTO	**Chiang Mai**	**22.50**	**259**	P	**P**	**14 58 12.0**	**+0.5**
CMAR	**Chiang Mai Arr**	**22.62**	**259**	P	**P**	**14 58 15.5**	**+2.6**
	comp=Z,0.6nm,0.4s,baz=68,slow=7.6,SNR=6.6						
GTA	**Gaotai**	**23.95**	**313**	eP	**P**	**14 58 27.4**	**+1.2**
GTA				pP	pP	14 58 30.6	-1.1
GTA				sP	sP	14 58 33.6	-0.6
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,150nm,5.5s						
GTA				LR	LR		
	comp=Z,250nm,12.2s						
GTA				LR	LR		
	comp=Z,120nm,12.6s						
GTA				LR	LR		
	comp=Z,120nm,16.0s						
TNTI	**Ternate**	**24.32**	**168**	P	P	14 58 37.0	+7.4
KLR	**Kul'dur**	**25.53**	**14**	P	**P**	**14 58 40.6**	**+0.3**
	comp=Z,2.0nm,0.8s,baz=19,slow=6.7,SNR=5.0						
LBMI	**Labuha**	**25.72**	**168**	P	P	14 58 49.3	+7.0
	comp=Z,406nmcomp=Z,44nm,1.0s						
ULN	**Ulaanbaatar**	**26.06**	**336**	P	**P**	**14 58 45.8**	**+0.5**
ULN				IAmb	IAmb	14 58 47.4	
	comp=Z,12nm,1.2s						
SONM	**Songino Array**	**26.28**	**335**	P	**P**	**14 58 48.3**	**+1.1**
	comp=Z,8.6nm,0.9s,baz=152,slow=9.2,SNR=40						
SONM				LR	LR	15 10 33.0	
	comp=Z,135nm,20.6s,baz=159,slow=39						
SONM	**Songino Array**	**26.28**	**335**	P	**P**	**14 58 47.9**	**+0.6**
SONM				IAmb	IAmb	14 58 49.4	
	comp=Z,10nm,1.0s						
SANI	**Sanana**	**26.87**	**172**	P	**P**	**14 58 53.8**	**+1.1**
	comp=Z,9.3nm,0.9s						
SIJI	**Sorong**	**26.89**	**160**	LR	LR	15 08 59.4	
	comp=Z,35nm,20.4s,baz=82,slow=35						
KAPI	**Kappang**	**29.69**	**185**	LR	LR	15 11 24.9	
	comp=Z,50nm,18.7s,baz=42,slow=36						
TLY	**Talaya**	**30.46**	**337**	P	**P**	**14 59 25.4**	**+1.0**
TLY				IAmb	IAmb	14 59 26.7	
	comp=Z,7.2nm,0.8s						
MK31	**Makanchi Array**	**38.68**	**315**	P	**P**	**15 00 34.5**	**-1.0**
MKAR	**Makanchi Array**	**38.68**	**315**	P	**P**	**15 00 35.8**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=104,slow=10,SNR=6.4						
MKAR	**Makanchi Array**	**38.68**	**315**	P	**P**	**15 00 34.7**	**-0.8**
PETK	**Petropavlovsk-**	**38.82**	**34**	LR	LR	15 19 02.4	
	comp=Z,62nm,18.0s,baz=180,slow=40						
MAKZ	**Makanchi**	**38.88**	**315**	P	**P**	**15 00 37.3**	**+0.1**
ZAA0	**Zalesovo Array**	**40.35**	**326**	P	**P**	**15 00 48.5**	**-0.8**
ZALV	**Zalesovo Beam**	**40.35**	**326**	P	**P**	**15 00 48.4**	**-0.8**
	comp=Z,2.2nm,0.9s,baz=98,slow=11,SNR=7.4						
ZALV				LR	LR	15 18 35.0	

	comp=Z,86nm,21.6s,baz=115,slow=38						
KURK	**Kurchatov**	**42.34**	**319**	P	**P**	**15 01 05.2**	**-0.5**
KURK	**Kurchatov**	**42.34**	**319**	IAmb	IAmb	15 01 16.8	
	comp=Z,5.4nm,1.4s						
KURBB	**Kurchatov Arra**	**42.37**	**319**	P	**P**	**15 01 05.2**	**-0.6**
	comp=Z,0.6nm,0.2s,baz=110,slow=7.6,SNR=4.6						
WB0	**Warramunga Arr**	**45.77**	**164**	P	**P**	**15 01 33.8**	**+0.3**
WB0				IAmb	IAmb	15 01 39.3	
	comp=Z,18nm,0.8s						
WRAB	**Tennant Creek**	**45.92**	**164**	P	**P**	**15 01 35.1**	**+0.4**
WRA	**Warramunga Arr**	**45.93**	**164**	P	**P**	**15 01 35.3**	**+0.6**
	comp=Z,12nm,0.7s,baz=346,slow=8.6,SNR=68						
WRA	**Warramunga Arr**	**45.93**	**164**	P	**P**	**15 01 35.1**	**+0.4**
WB2	**Warramunga Arr**	**45.93**	**164**	P	**P**	**15 01 35.0**	**+0.3**
KKAR	**Karatay Array**	**45.97**	**307**	P	**P**	**15 01 36.4**	**+1.5**
WR0	**Warramunga Arr**	**46.00**	**164**	P	**P**	**15 01 35.5**	**+0.3**
KBL	**Kabul**	**46.88**	**295**	P	**P**	**15 01 41.9**	**-0.5**
KBL				IAmb	IAmb	15 01 45.2	
	comp=Z,4.7nm,0.9s						
BRVK	**Borovoye**	**47.98**	**320**	P	**P**	**15 01 50.4**	**0.0**
BRVK				IAmb	IAmb	15 02 02.4	
	comp=Z,2.4nm,1.0s						
NRIK	**Noril'sk**	**49.14**	**344**	P	**P**	**15 01 57.0**	**-2.0**
	comp=Z,1.1nm,0.4s,baz=134,slow=9.1,SNR=1.5						
NRIK				LR	LR	15 25 00.4	
	comp=Z,143nm,19.5s,baz=98,slow=39						
AS31	**Alice Springs**	**49.41**	**166**		**P**	**15 02 01.9**	**+0.2**
AS31				IAmb	IAmb	15 02 08.4	
	comp=Z,2.6nm,0.9s						
ASAR	**Alice Springs**	**49.41**	**166**	P	**P**	**15 02 02.8**	**+1.1**
	comp=Z,7.7nm,0.8s,baz=343,slow=8.1,SNR=58						
ASAR	**Alice Springs**	**49.41**	**166**		**P**	**15 02 02.1**	**+0.3**
ABKAR	**Akbulak array**	**53.80**	**314**	P	**P**	**15 02 34.5**	**+0.2**
STKA	**Stephens Creek**	**59.24**	**161**	P	**P**	**15 03 13.6**	**+0.5**
	comp=Z,2.5nm,1.1s,baz=0.0,slow=9.1,SNR=1.1						
STKA	**Stephens Creek**	**59.24**	**161**	IAmb	IAmb	15 03 19.3	
	comp=Z,1.0nm,1.0s						
H21K	**Melozitna Rive**	**65.63**	**27**	P	**P**	**15 03 56.3**	**+0.8**
H21K				IAmb	IAmb	15 04 03.0	
	comp=Z,8.0nm,1.4s						
LVZ	**Lovozero**	**66.47**	**336**	P	**P**	**15 04 01.8**	**+0.9**
H23K	**Yukon River**	**66.94**	**27**	P	**P**	**15 04 04.7**	**+0.8**
H23K				IAmb	IAmb	15 04 09.6	
	comp=Z,4.6nm,1.2s						
BMAR	**Burnt Mountain**	**68.58**	**24**	P	**P**	**15 04 14.6**	**+0.3**
MSVF	**Nonsavu**	**68.77**	**122**	LR	LR	15 31 39.7	
	comp=Z,50nm,18.4s,baz=169,slow=33						
RAGM	**Ragged Mountai**	**70.26**	**32**	P	**P**	**15 04 25.6**	**+0.9**
GLB	**Gilahina Butte**	**70.39**	**31**	P	**P**	**15 04 26.0**	**+0.5**
GLB				IAmb	IAmb	15 04 39.5	
	comp=Z,7.0nm,1.2s						
INK	**Inuvik**	**72.31**	**22**	P	**P**	**15 04 36.4**	**-0.5**
INK				IAmb	IAmb	15 05 03.8	
	comp=Z,3.4nm,1.2s						
EUNU	**Eureka**	**74.26**	**5**	P	**P**	**15 04 48.4**	**+0.1**
EUNU				IAmb	IAmb	15 05 14.7	
	comp=Z,4.7nm,1.4s						
MLOA	**Mauna Loa Obse**	**75.14**	**75**	P	**P**	**15 04 54.4**	**-0.5**
NOA	**NORSAR Array B**	**78.22**	**332**	LR	LR	15 42 06.3	
	comp=Z,49nm,18.4s,baz=270,slow=37						
URZ	**Urewera**	**81.02**	**139**	LR	LR	15 39 49.3	
	comp=Z,74nm,19.2s,baz=212,slow=34						
ESDC	**Sonseca Array**	**98.67**	**321**	LR	LR	15 56 39.7	
	comp=Z,74nm,18.5s,baz=305,slow=38						

DJA 10 15:02:48.8±0.8**, 1°N**±4°×**12°3E**±°**, h83**^{km}±7^{km}**, M3.2**/7**,**
MLv3.2/7**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GTOI	**Gorontalo**	**0.50**	**93**	P	Pn	15 03 04.3	+1.5
GTOI				S	Sn	15 03 15.0	+1.8
GTOI	**Gorontalo**	**0.50**	**93**	P	Pn	15 03 04.2	+1.4
GTOI				S	Sn	15 03 15.4	+2.2
MRSI	**Marisa**	**0.60**	**252**	P	Pn	15 03 04.9	+1.2
MRSI				S	Sn	15 03 13.8	-1.0
MRSI	**Marisa**	**0.60**	**252**	P	Pn	15 03 05.1	+1.4
MRSI				S	Sn	15 03 12.9	-1.9
KMSI	**Cibinong**	**1.47**	**93**	P	Pn	15 03 16.5	+2.6
KMSI				S	Sn	15 03 35.2	+2.3
KMSI	**Cibinong**	**1.47**	**93**	P	Pn	15 03 13.6	-0.3
KMSI				S	Sn	15 03 33.9	+1.0
LUWI	**Luwuk**	**1.71**	**171**	P	Pn	15 03 17.9	+0.9
LUWI				S	Sn	15 03 38.1	-0.3
LUWI	**Luwuk**	**1.71**	**171**	P	Pn	15 03 17.3	+0.3
LUWI				S	Sn	15 03 38.9	+0.5
APSI	**Ampana**	**1.78**	**209**	P	Pn	15 03 18.6	+0.7
APSI	**Ampana**	**1.78**	**209**	P	Pn	15 03 18.5	+0.6
APSI				S	Sn	15 03 43.8	+3.8
MPSI	**Mapaga**	**2.63**	**263**	P	Pn	15 03 30.9	+1.7
SANI	**Sanana**	**4.40**	**128**	P	Pn	15 03 50.6	-2.6

NOU 10 15:21:30.5, 17°.96S×**168°.12E, h23**^{km}**, MLv4.2**/4**, Vanuatu**
Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**0.24**	**15**	P	Pn	15 21 38.1	-0.6
RTV	**Rentapao**	**0.34**	**60**	P	Pn	15 21 39.5	-0.5

GUC ***10*** *15:23:14.5±1.1, 30°.74S×71°.52W, h53*^{km}*±5*^{km}*, ML3.5*
SJA ***10*** *15:23:14.0, 30°.75S×71°.51W, h10*^{km}*, ML4.0*
ISC 10 15:23:15.3±1.1**, 30°.75S**±0°.03×**71°.42W**±0°.04**, h31**^{km}±10^{km}**,**
n43, σ**1**^{s}**59**/53**, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	**Fray Jorge**	**0.20**	**293**	*e*P	**Pn**	**15 23 22.4**	**+0.2**
CO06				*i* S	**Sb**	**15 23 28.3**	**+2.4**
CO06				IAML		15 23 28.8	
	comp=N,8μm,0.2s						
CO03	**El Pedregal**	**0.63**	**98**	*e*P	**Pn**	**15 23 27.7**	**-0.7**
CO03				*i* S	**Sb**	**15 23 37.4**	**+0.6**
CO03	**El Pedregal**	**0.63**	**98**	*i* P	**Pn**	**15 23 27.0**	**-1.3**
GO04	**Tololo Observa**	**0.79**	**43**	*e*P	**Pn**	**15 23 30.2**	**-0.4**
GO04				*i* S	**Sb**	**15 23 42.4**	**+1.2**
GO04	**Tololo Observa**	**0.79**	**43**	*i* P	**Pn**	**15 23 30.0**	**-0.6**
CO05	**La Serena**	**0.85**	**11**	*e*P	**Pn**	**15 23 30.2**	**-1.0**
CO05				*i* S	**Sb**	**15 23 43.0**	**+0.4**
CO05				IAML		15 23 47.8	
	comp=E,1μm,0.3s						
AROD	**Rodeo**	**1.78**	**71**	*i* P	**Pb**	**15 23 46.0**	**-1.5**
VA06	**Catapilco**	**1.81**	**177**	*e*P	**Pn**	**15 23 43.8**	**-0.6**
VA06				*i* S	**Sb**	**15 24 07.4**	**-2.5**
VA06				IAML		15 24 24.3	
	comp=E,570nm,0.4s						
LCO	**Las Campanas**	**1.84**	**20**	*e*P	**Pn**	**15 23 45.2**	**+0.1**
LCO				*e*S	**Sb**	**15 24 09.1**	**-2.3**
LCO	**Las Campanas**	**1.84**	**20**	*i* P	**Pn**	**15 23 46.0**	**+0.8**
ACCO	**Cerro Coronel**	**2.04**	**86**	*i* P	**Pb**	**15 23 50.0**	**-1.9**
RTLS	**Leoncito**	**2.10**	**120**	*i* P	**Pb**	**15 23 51.0**	**-1.9**
VA03	**San Esteban**	**2.14**	**160**	*e*P	**Pn**	**15 23 49.3**	**+0.3**
VA03				*i* S	**Sn**	**15 24 16.3**	**+1.7**
VA03				IAML		15 24 33.9	
	comp=E,379nm,0.4s						
VA03	**San Esteban**	**2.14**	**160**	*i* P	**Pn**	**15 23 50.0**	**+1.0**
ROCH	**El Roble**	**2.24**	**171**	*e*P	**Pn**	**15 23 50.2**	**-0.3**
ROCH				*i* S	**Sn**	**15 24 18.5**	**+1.3**
ROCH				IAML		15 24 32.3	
	comp=N,275nm,0.4s						
ROC1	**El Roble**	**2.24**	**171**	*i* P	**Pn**	**15 23 51.0**	**+0.4**
AUSP	**Uspallata**	**2.27**	**131**	*i* P	**Pn**	**15 23 53.0**	**+2.0**
PEL	**Peldehue**	**2.46**	**166**	*e*P	**Pn**	**15 23 53.7**	**+0.3**
PEL				*i* S	**Sn**	**15 24 24.4**	**+1.9**
PEL				IAML		15 24 39.8	
	comp=N,178nm,0.3s						
ZON	**Zonda**	**2.48**	**109**	*i* P	**Pn**	**15 23 56.0**	**+2.3**
MT02	**Curacav**	**2.51**	**175**	*e*P	**Pn**	**15 23 53.3**	**-0.7**
MT02	**Curacav**	**2.51**	**175**	*i* P	**Pn**	**15 23 54.0**	**0.0**
AC04	**Llanos de Chal**	**2.56**	**7**	*e*P	**Pn**	**15 23 54.8**	**+0.1**
AC04				IAML		15 24 40.5	
	comp=N,242nm,0.1s						
AC04	**Llanos de Chal**	**2.56**	**7**	*i* P	**Pn**	**15 23 55.0**	**+0.3**
RTCV	**Cerro Valdivia**	**2.70**	**115**	*i* P	**Pb**	**15 24 00.0**	**-3.0**
ASAL	**Salagasta**	**2.87**	**130**	*i* P	**Pn**	**15 24 01.0**	**+2.0**
VA05	**Santo Domingo**	**2.90**	**183**	*e*P	**Pn**	**15 24 01.7**	**+2.4**
VA05				IAML		15 24 46.8	
	comp=E,200nm,0.2s						
MT09	**Talagante**	**3.04**	**173**	*e*P	**Pn**	**15 24 01.2**	**-0.2**
MT09				IAML		15 24 49.4	
	comp=E,157nm,0.5s						
MT01	**Popeta**	**3.10**	**177**	*e*P	**Pn**	**15 24 01.9**	**-0.3**
MT01				IAML		15 24 58.5	
	comp=E,76nm,0.8s						
MT01	**Popeta**	**3.10**	**177**	*i* P	**Pn**	**15 24 03.0**	**+0.8**
AAGR	**Agrelo**	**3.20**	**137**	*i* P	**Pn**	**15 24 07.0**	**+3.3**
LMEL	**Las Melosas**	**3.25**	**162**	*e*P	**Pn**	**15 24 04.5**	**+0.1**
LMEL				*i* S	**Sn**	**15 24 43.2**	**+1.1**
BO04	**La Punta**	**3.30**	**168**	*e*P	**Pn**	**15 24 04.7**	**-0.2**
BO04				IAML		15 25 01.6	
	comp=N,104nm,0.5s						
GO03	**Copiap**	**3.31**	**19**	*e*P	**Pn**	**15 24 05.1**	**-0.1**
GO03				IAML		15 25 02.5	
	comp=E,156nm,0.5s						
GO03	**Copiap**	**3.31**	**19**	*i* P	**Pn**	**15 24 08.0**	**+2.8**
AVFE	**Valle Fertil**	**3.42**	**89**	*i* P	**Pn**	**15 24 08.0**	**+1.4**
VCA	**Vinchina**	**3.44**	**55**	*i* P	**Pn**	**15 24 11.0**	**+4.0**
BO01	**Tunca**	**3.64**	**176**	*i* P	**Pn**	**15 24 12.0**	**+2.4**
BO02	**Sierra Bellavi**	**4.06**	**173**	*i* P	**Pn**	**15 24 17.0**	**+1.5**
ACLC	**CERRO LA CRUZ**	**4.09**	**72**	*i* P	**Pn**	**15 24 18.0**	**+2.0**
APLL	**PUNTA DE LOS L**	**4.23**	**86**	*i* P	**Pn**	**15 24 18.0**	**+0.2**
RFA	**San Rafael**	**4.71**	**149**	*i* P	**Pn**	**15 24 25.0**	**+0.6**
MRA	**San Martin**	**5.14**	**110**	*i* P	**Pn**	**15 24 30.0**	**-0.3**
CYA	**Choya**	**5.41**	**66**	*i* P	**Pn**	**15 24 35.0**	**+1.1**

NEIC ***10*** *15:34:20.8±1.7, 19°.6S±0°.1×177°.18W±0°.10, h435*^{km}*±11*^{km}*,*
mb4.2/18, Error ellipse: s-maj=19.3km s-min=12.6km
az=165.0
IDC ***10*** *15:34:21.2±1.6, 19°.65S×177°.36W, h423*^{km}*±18*^{km}*, mb3.3/6,*
mb1 3.4/10, mb1mx3.2/36, mbtmp4.1/10, Error ellipse:
s-maj=23.6km s-min=14.8km az=126.0
ISC 10 15:34:21.5±0.7**, 19°.59S**±0°.08×**177°.29W**±0°.09**, h450**^{km}**,**
n35, σ**2**^{s}**03**/36**, mb3.9**/12**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.79**	**292**	P	**P**	**15 35 43.2**	**-0.7**
	1.4nm,0.3s,baz=282,slow=21,SNR=7.4						
AFI	**Afiamalu**	**7.73**	**44**	P	**P**	**15 36 13.6**	**-0.6**
	2.8nm,0.3s,baz=24,slow=13,SNR=2.1						
AFI				S	**S**	**15 37 41.9**	**-4.6**
	2.3nm,0.3s,baz=97,slow=23,SNR=2.7						
RAO	**Raoul Island**	**9.64**	**183**	S	**S**	**15 38 21.1**	**-3.1**
	28nm,0.3s,baz=243,slow=22,SNR=4.0						
FUNA	**Funafuti**	**11.51**	**342**	P	**P**	**15 36 54.1**	**-1.1**
MARNC	**Mare, Loyalty**	**13.88**	**260**	P	**P**	**15 37 20.3**	**-0.4**
PINNC	**Pines Island,**	**14.56**	**255**	P	**P**	**15 37 28.7**	**+0.7**
LIFNC	**LIFOU**	**14.58**	**263**	P	**P**	**15 37 23.7**	**-4.5**
OUENC	**Ouen Island, N**	**15.09**	**256**	P	**P**	**15 37 29.9**	**-3.8**
OUENC				IAmb	IAmb	15 37 56.3	
	comp=Z,12nm,1.2s						
DZM	**Mont Dzumac**	**15.41**	**258**	P	**P**	**15 37 36.7**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=94,slow=18,SNR=5.5						
DZM	**Mont Dzumac**	**15.41**	**258**	P	**P**	**15 37 33.3**	**-3.9**
DZM				IAmb	IAmb	15 37 36.3	
	comp=Z,16nm,1.5s						
URZ	**Urewera**	**19.23**	**193**	P	**P**	**15 38 16.2**	**+0.4**
	comp=Z,1.9nm,0.3s,baz=302,slow=22,SNR=14						
URZ	**Urewera**	**19.23**	**193**	P	**P**	**15 38 14.9**	**-0.9**
URZ				IAmb	IAmb	15 38 16.4	
	comp=Z,19nm,1.0s						
BFZ	**Birch Farm**	**21.74**	**193**	P	**P**	**15 38 37.0**	**-1.5**
OXZ	**Oxford**	**25.32**	**198**	P	**P**	**15 39 09.9**	**-0.7**
OXZ				IAmb	IAmb	15 39 26.5	
	comp=Z,20nm,1.3s						
CTAO	**Charters Tower**	**34.26**	**263**	P	**P**	**15 40 28.9**	**+0.3**
CTAO				IAmb	IAmb	15 40 29.6	
	comp=Z,4.4nm,0.6s						
STKA	**Stephens Creek**	**38.79**	**243**	P	**P**	**15 41 07.5**	**+1.3**
	comp=Z,1.6nm,0.4s,baz=94,slow=11,SNR=10						
STKA	**Stephens Creek**	**38.79**	**243**	P	**P**	**15 41 07.2**	**+1.1**
WR0	**Warramunga Arr**	**45.21**	**261**	P	**P**	**15 41 57.3**	**+0.1**
WB0	**Warramunga Arr**	**45.37**	**261**	P	**P**	**15 41 58.3**	**-0.2**
WB0				IAmb	IAmb	15 42 06.0	
	comp=Z,7.1nm,1.3s						
AS31	**Alice Springs**	**45.38**	**256**	P	**P**	**15 41 59.4**	**+0.8**
ASAR	**Alice Springs**	**45.38**	**256**	P	**P**	**15 41 59.5**	**+1.0**
	comp=Z,2.3nm,0.5s,baz=90,slow=8.9,SNR=139						
ASAR				S	**S**	**15 48 03.8**	**-2.1**
	comp=Z,0.2nm,0.7s,baz=94,slow=14,SNR=4.2						
ASAR	**Alice Springs**	**45.38**	**256**	P	**P**	**15 41 58.9**	**+0.3**
WB2	**Warramunga Arr**	**45.39**	**261**	P	**P**	**15 41 58.4**	**-0.2**
WB2				IAmb	IAmb	15 42 13.5	
	comp=Z,7.0nm,1.4s						
WRA	**Warramunga Arr**	**45.40**	**261**	P	**P**	**15 41 59.0**	**+0.3**
	comp=Z,0.6nm,0.4s,baz=93,slow=5.9,SNR=29						
WRA				S	**S**	**15 48 06.0**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=98,slow=14,SNR=2.3						
SOEI	**Soe**	**57.15**	**271**	P	**P**	**15 43 25.6**	**+0.9**
SOEI				IAmb	IAmb	15 43 26.3	
	comp=Z,20nm,1.5s						
CASY	**Casey**	**65.07**	**205**	P	**P**	**15 44 18.2**	**+2.3**
CASY				IAmb	IAmb	15 44 34.6	
	comp=Z,12nm,1.2s						
MJAR	**Matsushiro Arr**	**69.88**	**323**	P	**P**	**15 44 48.0**	**+2.0**
	comp=Z,1.2nm,0.6s,baz=161,slow=6.0,SNR=5.3						
MJAR	**Matsushiro Arr**	**69.88**	**323**	IAmb	IAmb	15 44 58.8	
	comp=Z,5.1nm,1.4s						
SSLB	**Suanglung**	**74.03**	**303**	P	**P**	**15 45 10.2**	**-0.5**
TPUB	**Ta-pu**	**74.05**	**302**	P	**P**	**15 45 10.0**	**-0.7**
PETK	**Petropavlovsk-**	**75.57**	**345**	P	**P**	**15 45 20.7**	**+2.2**
	comp=Z,1.2nm,0.6s,baz=107,slow=7.2,SNR=6.9						
CHGN	**Chignik**	**77.25**	**11**	P	**P**	**15 45 28.6**	**+0.9**
NVAR	**Mina Array Bea**	**79.90**	**43**	P	**P**	**15 45 46.3**	**+3.5**
	comp=Z,0.3nm,0.5s,baz=223,slow=4.6,SNR=2.2						
AKASG	**Malin Array Be**	**142.53**	**332**	PKhKP	PKPpre	15 53 00.8	
	comp=Z,0.5nm,0.4s,baz=43,slow=4.0,SNR=5.7						
GERES	**GERESS Array B**	**149.50**	**346**	PKPbc	**PKPab**	**15 53 22.5**	**-3.2**
	comp=Z,0.6nm,0.6s,baz=343,slow=3.1,SNR=2.5						

NEIC ***10*** *15:36:40.9±1.0, 55°.9S±0°.1×27°.8W±0°.2, h116*^{km}*±7*^{km}*,*
mb4.6/34, Error ellipse: s-maj=17.0km s-min=12.1km
az=204.0
IDC ***10*** *15:36:41.5±4.1, 55°.86S×27°.80W, h122*^{km}*±37*^{km}*, mb4.2/13,*
mb1 4.2/15, mb1mx4.1/24, mbtmp4.6/15, MS3.5/6,
Ms1 3.5/6, ms1mx3.1/28, Error ellipse: s-maj=14.7km
s-min=13.0km az=42.0
ISC 10 15:36:40.9±0.4**, 56°.00S**±0°.07×**27°.87W**±0°.07**, h121**^{km}**, n76,**
σ**1**^{s}**32**/71**, mb4.6**/27**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**5.23**	**286**		**Pn**	**15 37 57.1**	**+0.2**
HOPE				Sn	**Sn**	**15 38 52.1**	**-4.0**
VNA1	**Neumayer--Stat**	**16.99**	**157**	P	**P**	**15 40 32.0**	**+1.3**
VNA3	**Neumayer Olymp**	**17.17**	**160**	P	**P**	**15 40 33.6**	**+0.9**
VNA3				S	**Sn**	**15 43 38.8**	**-5.3**
VNA2	**Neumayer--Watz**	**17.39**	**157**	P	**P**	**15 40 36.4**	**+1.3**
	baz=316,slow=14						
VNA2				S	**Sn**	**15 43 46.1**	**-3.2**
SNAA	**Sanae**	**18.95**	**156**	P	**P**	**15 40 53.5**	**+1.3**
SNAA				S	**S**	**15 44 20.6**	**-0.1**
SNAA	**Sanae**	**18.95**	**156**	P	**P**	**15 40 53.5**	**+1.3**
	11nm,0.3s,baz=314,slow=11,SNR=775						
SNAA				S	**S**	**15 44 16.6**	**-4.2**
	baz=189,slow=21,SNR=1.7						
SNAA	**Sanae**	**18.95**	**156**	P	**P**	**15 40 52.0**	**-0.2**
PMSA	**Palmer Station**	**19.65**	**229**	P	**P**	**15 41 01.6**	**+1.8**
	0.3nm,0.3s,baz=102,slow=3.7,SNR=4.9						
PMSA				LR	LR	15 47 39.0	
	comp=Z,131nm,19.9s,baz=88,slow=33						
PMSA	**Palmer Station**	**19.65**	**229**	P	**P**	**15 41 00.9**	**+1.2**
PLTB	**Pedras Altas**	**30.18**	**313**	P	**P**	**15 42 39.6**	**0.0**
PLTB				IAmb	IAmb	15 42 40.7	
	comp=Z,7.0nm,0.7s						
PLCA	**Paso Flores**	**31.61**	**281**	P	**P**	**15 42 52.9**	**+0.7**
	comp=Z,1.5nm,0.7s,baz=247,slow=6.9,SNR=3.3						
PLCA	**Paso Flores**	**31.61**	**281**	IAmb	IAmb	15 42 57.1	
	comp=Z,6.2nm,1.4s						
QSPA	**South Pole Qui**	**34.26**	**180**	P	**P**	**15 43 16.9**	**+1.9**
	comp=Z,13nm,0.6s,baz=204,slow=2.2,SNR=104						
QSPA	**South Pole Qui**	**34.26**	**180**	P	**P**	**15 43 16.6**	**+1.6**
CPUP	**Villa Florida**	**36.49**	**312**	P	**P**	**15 43 33.8**	**-0.4**
	comp=Z,1.6nm,0.3s,baz=150,slow=7.2,SNR=7.9						
CPUP	**Villa Florida**	**36.49**	**312**	IAmb	IAmb	15 43 34.9	
	comp=Z,4.3nm,0.8s						
MAW	**Mawson**	**40.42**	**144**	P	**P**	**15 44 07.3**	**+0.7**
	comp=Z,2.3nm,0.5s,baz=228,slow=7.9,SNR=9.6						
MAW	**Mawson**	**40.42**	**144**	IAmb	IAmb	15 44 08.4	
	comp=Z,1.2nm,0.9s						
SUR	**Sutherland**	**40.99**	**76**	P	**P**	**15 44 11.9**	**-0.1**
	comp=Z,5.5nm,1.0s,baz=194,slow=5.3,SNR=1.9						
SUR				LR	LR	15 58 41.7	
	comp=Z,49nm,18.9s,baz=188,slow=32						
AC04	**Llanos de Chal**	**41.38**	**294**	P	**P**	**15 44 15.1**	**+0.1**
AC04				IAmb	IAmb	15 44 36.5	
	comp=Z,17nm,1.2s						
LVC	**Limon Verde**	**44.94**	**301**	P	**P**	**15 44 44.4**	**+0.3**
PB04	**IPOC Station P**	**45.78**	**300**	P	**P**	**15 44 50.7**	**+0.2**
PB09	**IPOC Station P**	**45.80**	**301**	P	**P**	**15 44 51.5**	**+1.0**
PB09				IAmb	IAmb	15 44 53.1	
	comp=Z,19nm,1.3s						
SBA	**Scott Base**	**46.11**	**184**	P	**P**	**15 44 54.2**	**+2.1**
SBA				IAmb	IAmb	15 44 56.4	
	comp=Z,14nm,1.2s						
PB07	**IPOC Station P**	**46.17**	**300**	P	**P**	**15 44 53.2**	**-0.3**
PB07				IAmb	IAmb	15 44 55.3	
	comp=Z,12nm,1.2s						
BOSA	**Boshof**	**46.33**	**77**	P	**P**	**15 44 53.7**	**-1.0**
	comp=Z,5.5nm,0.7s,baz=208,slow=7.1,SNR=9.5						
BOSA				LR	LR	16 02 27.3	
	comp=Z,34nm,18.3s,baz=300,slow=33						
BOSA	**Boshof**	**46.33**	**77**	P	**P**	**15 44 53.5**	**-1.2**
PB01	**IPOC Station P**	**46.55**	**301**	P	**P**	**15 44 56.0**	**-0.5**
PB01				IAmb	IAmb	15 44 58.5	
	comp=Z,8.2nm,0.7s						
VNDA	**Vanda**	**46.61**	**183**	P	**P**	**15 44 58.1**	**+2.0**
	comp=Z,5.5nm,0.9s,baz=184,slow=6.4,SNR=29						
VNDA	**Vanda**	**46.61**	**183**	P	**P**	**15 44 57.7**	**+1.6**
VNDA				IAmb	IAmb	15 44 59.2	
	comp=Z,12nm,1.1s						
PTLB	**Pontes e Lacer**	**46.99**	**317**	P	**P**	**15 44 59.6**	**-0.1**
PTLB				IAmb	IAmb	15 45 00.6	
	comp=Z,8.4nm,0.8s						
PATCX	**Punta Patache**	**47.06**	**301**	P	**P**	**15 45 00.3**	**-0.1**
PB08	**IPOC Station P**	**47.17**	**302**	P	**P**	**15 45 02.0**	**+0.4**
PB08				IAmb	IAmb	15 45 28.1	
	comp=Z,12nm,1.4s						
PB11	**IPOC Station P**	**47.73**	**302**	P	**P**	**15 45 06.2**	**+0.6**
PB11				IAmb	IAmb	15 45 07.6	
	comp=Z,20nm,1.4s						
H10S2	**ASCENSION HYDR**	**48.06**	**18**	T	T	16 38 21.9	
	baz=31,slow=74,SNR=6.5						
H10S3	**ASCENSION HYDR**	**48.06**	**18**	T	T	16 38 21.8	
	baz=189,slow=74,SNR=10						
PSGCX	**Pisagua**	**48.10**	**302**	P	**P**	**15 45 08.1**	**-0.3**
PSGCX				IAmb	IAmb	15 45 18.2	
	comp=Z,17nm,1.3s						
PB16	**IPOC Station P**	**48.89**	**303**	P	**P**	**15 45 15.2**	**+0.2**
PB12	**IPOC Station P**	**49.04**	**302**	P	**P**	**15 45 15.6**	**0.0**
PB12				IAmb	IAmb	15 45 22.0	
	comp=Z,14nm,1.1s						
H10N1	**ASCENSION HYDR**	**49.18**	**18**	T	T	16 39 38.7	
	baz=193						
H10N3	**ASCENSION HYDR**	**49.18**	**18**	T	T	16 39 52.6	
	baz=193						
H10N2	**ASCENSION HYDR**	**49.20**	**18**	T	T	16 39 58.0	
	baz=193						
LBTB	**Lobatse**	**49.36**	**74**	LR	LR	16 03 36.0	
	comp=Z,29nm,18.4s,baz=206,slow=33						
LBTB	**Lobatse**	**49.36**	**74**	P	**P**	**15 45 17.8**	**-0.2**
VILB	**Vilhena**	**49.68**	**317**	P	**P**	**15 45 19.9**	**-0.6**
VILB				IAmb	IAmb	15 45 20.8	
	comp=Z,8.3nm,0.7s						
TSUM	**Tsumeb**	**49.99**	**62**	P	**P**	**15 45 22.7**	**-0.2**
TSUM				IAmb	IAmb	15 45 24.2	
	comp=Z,7.4nm,0.9s						
LPAZ	**La Paz**	**50.03**	**306**	P	**P**	**15 45 23.4**	**-0.3**
	comp=Z,3.2nm,0.6s,baz=155,slow=6.6,SNR=18						
LPAZ	**La Paz**	**50.03**	**306**	P	**P**	**15 45 23.4**	**-0.3**
LPAZ				IAmb	IAmb	15 45 25.3	
	comp=Z,6.4nm,1.0s						
CASY	**Casey**	**54.09**	**161**	P	**P**	**15 45 53.4**	**+1.0**
SAML	**Samuel**	**54.49**	**315**	P	**P**	**15 45 55.1**	**-0.9**
LSZ	**Lusaka**	**58.71**	**70**	P	**P**	**15 46 26.1**	**+0.1**
	comp=Z,11nm,0.7s,baz=215,slow=7.5,SNR=25						
LSZ				LR	LR	16 08 57.6	
	comp=Z,38nm,20.2s,baz=160,slow=33						
LSZ	**Lusaka**	**58.71**	**70**	P	**P**	**15 46 25.4**	**-0.6**
BOAV	**Boa Vista**	**64.00**	**323**	P	**P**	**15 47 00.3**	**-1.1**
BOAV				IAmb	IAmb	15 47 01.0	
	comp=Z,4.9nm,0.7s						
DBIC	**Dimbokro**	**65.28**	**25**	P	**P**	**15 47 09.4**	**-0.2**
	comp=Z,3.8nm,0.8s,baz=211,slow=7.8,SNR=3.0						
DBIC	**Dimbokro**	**65.28**	**25**	P	**P**	**15 47 09.8**	**+0.2**
DBIC				IAmb	IAmb	15 47 33.1	
	comp=Z,12nm,1.2s						
ROSC	**El Rosal**	**71.56**	**310**	P	**P**	**15 47 49.5**	**+0.3**
	comp=Z,9.0nm,0.4s,baz=197,slow=21,SNR=2.3						
BAUV	**El Baul**	**72.76**	**318**	P	**P**	**15 47 55.7**	**-0.1**
BAUV				IAmb	IAmb	15 47 57.1	
	comp=Z,16nm,1.0s						
KOWA	**Kowa**	**73.03**	**24**	LR	LR	16 11 54.6	
	comp=Z,112nm,19.2s,baz=226,slow=29						
TORD	**Torodi Ar. Bea**	**73.20**	**30**	P	**P**	**15 47 59.0**	**+0.6**
	comp=Z,8.7nm,0.7s,baz=200,slow=6.4,SNR=49						
TORD	**Torodi Ar. Bea**	**73.20**	**30**	P	**P**	**15 47 58.8**	**+0.4**
ASAR	**Alice Springs**	**99.15**	**163**	P	**Pdif**	**15 50 08.0**	**-0.6**
	comp=Z,0.9nm,0.9s,baz=186,slow=4.2,SNR=8.8						
ASAR				PP	**PP**	**15 54 09.8**	**-1.6**
	comp=Z,1.4nm,1.1s,baz=196,slow=5.9,SNR=5.5						
ASAR	**Alice Springs**	**99.15**	**163**	P	**Pdif**	**15 50 08.6**	**0.0**
WRA	**Warramunga Arr**	**102.87**	**163**	P	**Pdif**	**15 50 24.4**	**-0.7**
	comp=Z,0.3nm,0.7s,baz=192,slow=4.1,SNR=1.7						
WRA	**Warramunga Arr**	**102.87**	**163**		**Pdif**	**15 50 24.8**	**-0.3**
FINES	**FINESS Array B**	**124.51**	**28**	PKP	**PKPdf**	**15 55 23.8**	**-0.5**
	comp=Z,1.0nm,0.6s,baz=283,slow=1.9,SNR=9.3						
CMAR	**Chiang Mai Arr**	**125.44**	**111**	PKP	**PKPdf**	**15 55 27.3**	**-0.2**
	comp=Z,0.3nm,0.4s,baz=233,slow=4.1,SNR=4.6						
ARCES	**ARCESS Array B**	**131.03**	**22**	PKP	**PKPdf**	**15 55 35.7**	**-0.8**
	comp=Z,2.5nm,0.8s,baz=213,slow=3.5,SNR=10						
ARCES	**ARCESS Array B**	**131.03**	**22**		**PKPdf**	**15 55 36.6**	**0.0**
MKAR	**Makanchi Array**	**137.23**	**72**	PKP	**PKPdf**	**15 55 49.2**	**+0.4**
	comp=Z,0.4nm,0.7s,baz=221,slow=3.1,SNR=2.6						
ZALV	**Zalesovo Beam**	**142.69**	**64**	PKhKP	PKPpre	15 55 53.2	
	comp=Z,0.8nm,0.5s,baz=207,slow=2.7,SNR=4.2						
INK	**Inuvik**	**145.52**	**321**	PKPbc	**PKPdf**	**15 56 02.3**	**-0.6**
	comp=Z,3.0nm,0.7s,baz=86,slow=3.8,SNR=12						
INK	**Inuvik**	**145.52**	**321**	PKPdf	**PKPdf**	**15 56 03.3**	**+0.4**
ILAR	**Eielson Array**	**149.79**	**312**	PKPbc	**PKPbc**	**15 56 15.1**	**0.0**
	comp=Z,4.8nm,1.0s,baz=118,slow=1.5,SNR=31						
JCJ	**Chichijima**	**150.24**	**162**	PKPbc	**PKiKP**	**15 56 19.1**	**+1.0**
	comp=Z,60nm,0.9s,baz=288,slow=15,SNR=4.0						
KDAK	**Kodiak Island**	**150.45**	**297**	PKPbc	**PKPbc**	**15 56 16.7**	**-0.1**
	comp=Z,6.5nm,0.7s,baz=201,slow=2.7,SNR=7.0						
SONM	**Songino Array**	**151.11**	**87**	PKPbc	**PKPbc**	**15 56 18.5**	**-0.4**
	comp=Z,3.6nm,0.6s,baz=96,slow=6.0,SNR=3.7						

DJA 10 15:37:11.7±0.2**, 3°S**±2°×**11°9E**±°**, h10**^{km}**, M3.9**/12**, mb4.0**/1**,**
MLv3.8/12**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TTSI	**Tana Toraja**	**0.74**	**123**	P	Pg	15 37 24.4	-1.6
TTSI				S	Sg	15 37 34.7	-0.9
SPSI	**Sidrap Palu**	**1.43**	**157**	P	Pn	15 37 36.3	-1.5
SPSI				S	Sn	15 37 56.4	-0.3
BKSI	**Bulukumba**	**2.82**	**161**	P	Pn	15 37 57.2	+0.4
APSI	**Ampana**	**2.99**	**55**	P	Pn	15 38 00.1	+0.9
MPSI	**Mapaga**	**3.04**	**13**	P	Pn	15 37 59.0	-0.9
KBKI	**Kotabaru**	**3.10**	**258**	P	Pn	15 38 01.3	+0.6
BSSI	**Bau Bau, Buton**	**3.71**	**160**	P	Pn	15 38 09.4	+0.3
LUWI	**Luwuk**	**3.91**	**66**	P	Pn	15 38 12.6	+0.8
MRSI	**Marisa**	**4.13**	**42**	P	Pn	15 38 14.9	-0.1
GTOI	**Gorontalo**	**5.01**	**50**	P	Pn	15 38 27.7	+0.7

MOS ***10*** *15:50:06.7±0.9, 42°.95N×143°.75E, h125*^{km}*, mb4.3/27,*
Error ellipse: s-maj=8.4km s-min=5.6km az=83.3
SKHL ***10*** *15:50:07.4±0.2, 42°.90N×143°.80E, h122*^{km}*±3*^{km}*, mb5.1/4,*
msha5.9/4
NIED ***10*** *15:50:08.0, 42°.96N×143°.76E, h116*^{km}*, MW4.1, Moment*
Tensor Solution.   s3   Moment tensor: Scale 10^{15}*Nm;*
M_{rr}*-0.13;* $M_{\theta\theta}$*0.17;* $M_{\phi\phi}$*-0.04;* $M_{r\theta}$*1.52;* $M_{\theta\phi}$*-0.39;* $M_{\phi r}$*-0.03;*
Fault plane solution: M_0*1.58000×10*^{15}*   NP1:*
ϕ_s*271.00000°, δ87.00000°, λ-104.00000°.   NP2:*
ϕ_s*170.00000°, δ14.00000°, λ-12.00000°.*
IDC ***10*** *15:50:07.6±1.5, 42°.97N×143°.79E, h121*^{km}*±13*^{km}*,*
mb4.0/23, mb1 4.1/27, mb1mx3.9/55, mbtmp4.3/27 Error
ellipse: s-maj=14.1km s-min=10.7km az=128.0
JMA ***10*** *15:50:07.9±0.1, 42°.96N×143°.76E, h116*^{km}*±1*^{km}*, M3.9*
JMA Felt II J1.
NEIC ***10*** *15:50:08.5±1.8, 42°.93N±0°.04×143°.8E±0°.1, h124*^{km}*±3*^{km}*,*
mb4.5/117, Error ellipse: s-maj=13.2km s-min=5.9km
az=89.0

ISC 10 15:50:07.1±0.5**, 42°.93N**±0°.04×**143°.79E**±0°.03**, h118**^{km}±4^{km}**,**
n283, σ1^s.28/308**, mb4.5**/99**, 12C-13D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOB	Onbets	0.04	124	⇑P	Pn	15 50 24.4	+1.1
JOB				eS	Sn	15 50 36.5	+1.1
JAR	Ashorobuto	0.37	358	⇓P	Pn	15 50 24.9	+0.7
JAR				eS	Sn	15 50 37.2	+0.1
JCH	Churui	0.44	225	⇑P	Pn	15 50 25.1	+0.6
JCH				eS	Sn	15 50 37.3	-0.3
JAK	Akkeshi	0.67	84	P	Pn	15 50 26.6	+0.6
JAK				eS	Sn	15 50 40.5	+0.2
AKK	Akkeshi	0.78	83	eP	Pn	15 50 27.6	+0.7
JFR	Furan	0.91	286	⇓P	Pn	15 50 28.4	+0.3
JFR				eS	Sn	15 50 43.3	-0.7
JNK	Nakash	0.95	46	⇓P	Pn	15 50 28.8	+0.3
JNK				eS	Sn	15 50 44.8	+0.2
JNBK	Urakawa-nobuka	1.00	230	⇑P	Pn	15 50 29.7	+0.7
JNBK				eS	Sn	15 50 45.7	+0.2
JKHN	Kushirohamanak	1.02	81	P	Pn	15 50 29.9	+0.8
JKHN				eS	Sn	15 50 46.1	+0.3
JEM	Erimo	1.02	207	P	Pn	15 50 29.8	+0.6
JEM	Erimo	1.02	207		Pn	15 50 30.2	+1.0
ERM	Erimo	1.02	207	cePN	Pn	15 50 30.1	+0.9
ERM				pmax	pmax		
	comp=Z,3μm,0.7s						
ERM	Erimo	1.02	207	Pn	Pn	15 50 30.1	+0.9
ERM				Sn	Sn	15 50 47.9	+2.0
JTKR	Abashiri--Toko	1.05	5	⇓P	Pn	15 50 30.1	+0.7
JTKR				eS	Sn	15 50 46.5	+0.1
JBT2	Biratori 2	1.06	262	⇑P	Pn	15 50 30.2	+0.7
JBT2				eS	Sn	15 50 47.0	+0.5
JMP	Maruseppu	1.12	344	⇓P	Pn	15 50 30.8	+0.5
JMP				eS	Sn	15 50 47.6	-0.3
JKK2	Kamakawa 2	1.21	322	⇓P	Pn	15 50 31.9	+0.7
JKK2				eS	Sn	15 50 50.0	+0.5
JRA	Rausu	1.40	43	P	Pn	15 50 34.1	+0.9
JRA				eS	Sn	15 50 54.0	+0.9
JKA	Kamikawa-asahi	1.47	324	eP	Pn	15 50 34.0	-0.1
JKA	Kamikawa-asahi	1.47	324	Pn	Pn	15 50 35.0	+0.9
ASAJ	Asahikawa	1.47	324	P	Pn	15 50 35.0	+0.9
	comp=Z,134nm,0.3s,baz=173,slow=8.1,SNR=3476						
ASAJ				S	Sn	15 51 02.8	+8.2
	comp=Z,34nm,0.3s,baz=281,slow=31,SNR=1.9						
NMR	Nemuro--Hokkai	1.49	72	⇓iPN	Pn	15 50 34.4	+0.2
NMR				iS	Sn	15 50 53.8	-1.1
NMR	Nemuro--Hokkai	1.49	72	iP	Pn	15 50 34.5	+0.2
NMR				iS	Sn	15 50 54.8	-0.1
NEM2	Nemuro 2	1.50	72	⇓P	Pn	15 50 34.3	0.0
NEM2				eS	Sn	15 50 53.7	-1.3
GLVR	Golovnino	1.50	57	ePN	Pn	15 50 35.2	+0.8
GLVR				iS	Sn	15 50 55.9	+0.7
GLVR				pmax	pmax		
	comp=Z,294nm,0.1s						
GLVR				smax	smax		
	comp=E,2μm,0.3s						
GLVR				smax	smax		
	comp=N,4μm,0.2s						
GLVR	Golovnino	1.50	57	eP	Pn	15 50 35.2	+0.8
GLVR				AMB	AMB	15 50 36.0	
	comp=N,294nm,0.2s						
GLVR				iS	Sn	15 50 55.9	+0.7
GLVR				A	A	15 50 58.0	
	comp=N,4μm,0.4s						
GLVR				A	A	15 50 58.0	
	comp=N,2μm,0.4s						
RUSJ	Misakicho	1.58	42	⇓iPN	Pn	15 50 36.5	+1.1
RUSJ				iS	Sn	15 50 58.5	+1.6
JHR	Hokuryu	1.71	299	⇓P	Pn	15 50 38.3	+1.4
JEW	Eniwo	1.72	268	P	Pn	15 50 38.3	+1.3
JEW				eS	Sn	15 51 00.5	+0.7
JEW	Eniwo	1.72	268	Pn	Pn	15 50 38.0	+1.0
GRPR	Tuman	1.79	53	d iPN	Pn	15 50 38.9	+1.0
GRPR				iS	Sn	15 51 02.6	+1.1
GRPR				pmax	pmax		
	comp=Z,197nm,0.2s						
GRPR				pmax	pmax		
	comp=E,168nm,0.3s						
GRPR				smax	smax		
	comp=N,1μm,0.3s						
GRPR				smax	smax		
	comp=E,2μm,0.3s						
GRPR	Tuman	1.79	53	iP	Pn	15 50 38.9	+1.0
GRPR				AMB	AMB	15 50 40.0	
	comp=E,197nm,0.2s						
GRPR				iS	Sn	15 51 02.5	+1.1
GRPR				A	A	15 51 03.0	
	comp=E,1μm,0.3s						
GRPR				A	A	15 51 03.0	
	comp=E,2μm,0.3s						
YUK	Yuzh-Kuril'sk	1.87	53	d iPN	Pn	15 50 40.5	+1.7
YUK				iS	Sn	15 51 04.0	+0.9
YUK				pmax	pmax		
	comp=Z,434nm,0.3s						
YUK				pmax	pmax		
	comp=N,48nm,0.2s						
YUK				pmax	pmax		
	comp=E,137nm,0.3s						
YUK				smax	smax		
	comp=N,754nm,0.2s						
YUK				smax	smax		
	comp=E,2μm,0.3s						
YUK	Yuzh-Kuril'sk	1.87	53	iP	Pn	15 50 40.0	+1.2
YUK				AMB	AMB	15 50 40.9	
	comp=E,434nm,0.3s						
YUK				iS	Sn	15 51 04.3	+1.2
YUK				A	A	15 51 09.0	
	comp=E,2μm,0.3s						
YUK				A	A	15 51 09.0	
	comp=E,2μm,0.3s						
JTM	Tenmabayashi	2.95	224	Pn	Pn	15 50 52.4	-0.3
KUR	Kuril'sk	3.73	50	ePN	Pn	15 51 04.1	+1.1
KUR				eS	Sn	15 51 49.0	+2.7
KUR				pmax	pmax		
	comp=Z,72nm,0.3s						
KUR				pmax	pmax		
	comp=E,17nm,0.2s						
KUR				pmax	pmax		
	comp=N,14nm,0.4s						
KUR				smax	smax		
	comp=N,144nm,0.2s						
KUR				smax	smax		
	comp=E,99nm,0.4s						
KUR	Kuril'sk	3.73	50	eP	Pn	15 51 04.8	+1.8
KUR				AMB	AMB	15 51 05.0	
	comp=E,72nm,0.3s						
KUR				eS	Sn	15 51 48.4	+2.1
KUR				A	A	15 51 52.0	
	comp=E,128nm,0.4s						
KUR				A	A	15 51 52.0	
	comp=E,220nm,0.4s						
YSS	Yuzh-Sakhalins	4.09	350	ePN	Pn	15 51 08.8	+1.0
YSS				eS	Sn	15 51 52.9	-1.9
YSS				pmax	pmax		
	comp=Z,60nm,1.0s						
YSS				smax	smax		
	comp=E,80nm,0.9s						
YSS	Yuzh-Sakhalins	4.09	350	eP	Pn	15 51 08.0	+0.2
YSS				AMB	AMB	15 51 11.4	
	comp=E,43nm,0.4s						
YSS				eS	Sn	15 51 54.6	-0.2
YSS				A	A	15 51 57.0	
	comp=E,24nm,0.7s						
YSS				A	A	15 51 57.0	
	comp=E,80nm,0.7s						
YSS	Yuzh-Sakhalins	4.09	350	Pn	Pn	15 51 08.1	+0.4
JMM	Marumori	5.55	205		Pn	15 51 26.8	-0.6
JSD	Sado	6.45	223	Pn	Pn	15 51 39.9	+0.3
JYT	Yasato	7.24	204	Pn	Pn	15 51 46.8	-3.5
MAJO	Matsushiro	7.69	216	iPN	Pn	15 51 56.1	-0.3
MAJO	Matsushiro	7.69	216	Pn	Pn	15 51 55.3	-1.1
MJAR	Matsushiro Arr	7.69	216	P	Pn	15 51 56.7	+0.3
	comp=E,0.2nm,0.3s,baz=37,slow=12,SNR=7.5						
MJAR	Matsushiro Arr	7.69	216	Pn	Pn	15 51 55.4	-0.9
TYV	Tymovskoe	7.98	355	ePN	Pn	15 52 01.5	+1.4
TYV				pmax	pmax		
	comp=Z,11nm,0.9s						
TYV				pmax	pmax		
	comp=Z,200nm,3.1s						
JGF	Kuroka	8.85	216	Pn	Pn	15 52 10.8	-1.3
KLR	Kul'dur	10.47	311	P	Pn	15 52 32.5	-1.2
	comp=Z,0.1nm,0.3s,baz=116,slow=12,SNR=4.2						
KLR	Kul'dur	10.47	311	iPN	Pn	15 52 33.3	-0.4
KLR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KLR	Kul'dur	10.47	311	eP	Pn	15 52 33.3	-0.4
SKR	Severo-Kuril’s	11.46	43	ePN	P	15 52 58.2	+2.4
SKR				pmax	pmax		
	comp=Z,200nm,4.4s						
SKR				pmax	pmax		
	comp=Z,32nm,0.9s						
SKR				pmax	pmax		
	comp=Z,400nm,4.4s						
SKR				MLR	MLR		
	comp=Z,500nm,15.0s						
SKR				MLR	MLR		
	comp=Z,200nm,11.0s						
SKR	Severo-Kuril’s	11.46	43	eP	Pn	15 52 47.4	+0.4
KSRS	Korea Array	13.30	251	P	Pn	15 53 12.2	+1.1
	comp=Z,0.2nm,0.3s,baz=64,slow=14,SNR=2.6						
PEA0B	Petropavlovsk-	13.77	38	P	Pn	15 53 14.6	-2.6
PEA0B	Petropavlovsk-	13.77	38	Pn	Pn	15 53 14.6	-2.6
PETK	Petropavlovsk-	13.77	38	P	Pn	15 53 13.5	-3.7
	comp=Z,0.6nm,0.3s,baz=216,slow=11,SNR=16						
PETK	Petropavlovsk-	13.77	38	P	Pn	15 53 14.1	-3.1
PETK	Petropavlovsk-	13.77	38	Pn	Pn	15 53 14.1	-3.1
ZEA	Zeya	15.38	320	eP	Pn	15 53 38.3	+0.8
ZEA				pmax	pmax		
	comp=N,10.0nm,0.6s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
JSU	Suzuyama	15.56	227	Pn	Pn	15 53 36.7	-3.2
JSU				IAmb	IAmb	15 53 57.6	
	comp=Z,34nm,1.2s						
MA2	Magadan	17.22	12	P	P	15 53 58.7	-1.0
	comp=Z,1.3nm,0.3s,baz=202,slow=10,SNR=7.2						
MA2	Magadan	17.22	12	P	P	15 53 55.5	-4.2
MA2				IAmb	IAmb	15 54 20.3	
	comp=Z,65nm,1.3s						
SEY	Seymchan	20.66	11	P	P	15 54 35.4	-1.7
	comp=Z,25nm,0.8s,baz=192,slow=5.7,SNR=44						
YAK	Yakutsk	20.89	341	P	P	15 54 36.1	-3.4
	comp=Z,11nm,0.3s,baz=142,slow=4.0,SNR=26						
YAK	Yakutsk	20.89	341	eP	P	15 54 35.9	-3.6
YAK				eS	S	15 58 19.5	-6.0
YAK				pmax	pmax		
	comp=N,3.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,20nm,0.9s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.9s						
YAK				smax	smax		
	comp=E,25nm,1.4s						
YAK				smax	smax		
	comp=N,43nm,1.4s						
YAK	Yakutsk	20.89	341	eP	P	15 54 41.0	+1.5
YAK	Yakutsk	20.89	341	P	P	15 54 35.9	-3.6
NJ2	Nanjing	22.49	249	eP	P	15 54 57.9	+1.3
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
HHC	Hu-ho-hao-te	24.00	276	eP	P	15 55 10.1	-0.8
HHC				pmax	pmax		
	comp=Z,12nm,1.0s						
HHC				pmax	pmax		
	comp=Z,180nm,5.4s						
ULN	Ulaanbaatar	26.09	294	ceP	P	15 55 30.5	+0.7
ULN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ULN	Ulaanbaatar	26.09	294	eP	P	15 55 30.5	+0.7
SONM	Songino Array	26.54	294	P	P	15 55 34.5	+0.7
	comp=Z,5.2nm,0.7s,baz=84,slow=8.8,SNR=24						
SONM	Songino Array	26.54	294	P	P	15 55 33.9	+0.2
ZAK	Zakamensk	28.50	299	eP	P	15 55 50.7	-0.4
ZAK				e		15 56 17.0	
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.5s						
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
H11N2	WAKE ISLAND Hy	30.22	133	T	T	16 27 37.1	
	baz=327,slow=75,SNR=165						
H11N1	WAKE ISLAND Hy	30.23	133	T	T	16 27 35.7	
	baz=327,slow=75,SNR=118						
H11N3	WAKE ISLAND Hy	30.23	133	T	T	16 27 41.2	
	baz=327,slow=75,SNR=137						
H11S1	WAKE ISLAND Hy	31.12	134	T	T	16 28 51.1	
	baz=328,slow=76,SNR=192						
H11S3	WAKE ISLAND Hy	31.12	134	T	T	16 28 45.2	
	baz=328,slow=76,SNR=128						
H11S2	WAKE ISLAND Hy	31.14	134	T	T	16 28 50.8	
	baz=328,slow=76,SNR=110						
GTA	Gaotai	33.01	279	eP	P	15 56 24.3	-6.7
GTA				pP	pP	15 56 48.2	-9.0
GTA				sP	sP	15 57 02.3	-8.6
GTA				pmax	pmax		
	comp=Z,2.0nm,1.6s						
QIZ	Qiongzhong	37.22	241	P	P	15 57 06.6	-0.4
QIZ				S	S	16 02 44.6	-0.7
QIZ				LR	LR		
	comp=N,440nm,14.4s						
QIZ				LR	LR		
	comp=E,210nm,15.4s						
QIZ				LR	LR		
	comp=Z,140nm,8.0s						
KMI	Kunming	37.94	256	⇑P	P	15 57 14.9	+1.5
KMI				pmax	pmax		
	comp=Z,15nm,0.8s						
DGZ	Jazzator, Alta	38.71	300	⇓iP	P	15 57 20.6	+1.1
NRIK	Noril'sk	38.80	332	P	P	15 57 19.6	-0.1
	comp=Z,0.8nm,0.3s,baz=113,slow=3.3,SNR=2.4						
ZAA0	Zalesovo Array	39.54	307	P	P	15 57 25.6	-0.5
ZALV	Zalesovo Beam	39.54	307	P	P	15 57 25.6	-0.5
	comp=Z,1.9nm,0.4s,baz=88,slow=7.7,SNR=9.6						
ZALV	Zalesovo Beam	39.54	307	iP	P	15 57 27.0	+0.9
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ZALV	Zalesovo Beam	39.54	307	P	P	15 57 25.2	-1.0
SVW2	Sparrevohn	39.81	41	P	P	15 57 29.6	+1.3
SVW2				IAmb	IAmb	15 57 40.3	
	comp=Z,14nm,1.4s						
WMQ	Urumqi	40.11	291	eP	P	15 57 31.9	+0.8
A21K	Barrow	40.34	25	P	P	15 57 31.6	-0.9
M19K	Big River Lodg	40.36	40	P	P	15 57 34.2	+1.4
M19K				IAmb	IAmb	15 57 50.9	
	comp=Z,14nm,1.4s						
J20K	Nowinta River	40.47	37	P	P	15 57 34.4	+0.8
J20K				IAmb	IAmb	15 57 35.8	
	comp=Z,11nm,0.8s						
IMAR	Indian Mountai	40.70	34	P	P	15 57 35.7	+0.2
P19K	Oil Pt	41.06	44	P	P	15 57 38.0	-0.6
H21K	Melozitna Rive	41.08	34	P	P	15 57 38.3	-0.4
H21K				IAmb	IAmb	15 57 43.3	
	comp=Z,9.0nm,1.4s						
PPLA	Purkeypile	41.36	39	P	P	15 57 42.8	+1.6
PPLA				IAmb	IAmb	15 57 43.4	
	comp=Z,10.0nm,1.0s						
CAST	Castle Rocks	41.39	38	P	P	15 57 42.7	+1.5
CAST				IAmb	IAmb	15 57 43.5	
	comp=Z,5.1nm,0.6s						
I21K	Tanana	41.41	35	P	P	15 57 43.5	+2.1
SPU	Mount Spurr	41.52	41	P	P	15 57 43.8	+1.4
KDAK	Kodiak Island	41.60	46	P	P	15 57 42.4	-0.5
	comp=Z,10.0nm,1.0s,baz=314,slow=4.2,SNR=5.7						
KDAK	Kodiak Island	41.60	46	P	P	15 57 43.5	+0.5
KDAK				pmax	pmax		
	comp=Z,35nm,1.3s						
KDAK	Kodiak Island	41.60	46	P	P	15 57 43.5	+0.5
BPAW	Bear Paw Mtn.	41.85	37	P	P	15 57 45.9	+0.9
KTH	Kantishna Hill	41.91	38	P	P	15 57 46.7	+1.2
KTH				IAmb	IAmb	15 57 48.2	
	comp=Z,15nm,1.0s						
MLY	Manley	41.94	35	P	P	15 57 47.2	+1.4
CNPM	China Poot	42.08	44	P	P	15 57 48.1	+1.2
SUA	Susitna One	42.12	41	P	P	15 57 47.9	+0.5
SUA				IAmb	IAmb	15 58 15.5	
	comp=Z,21nm,1.4s						
TRF	Thorofare Moun	42.19	38	P	P	15 57 48.9	+0.9
BRLK	Bradley Lake	42.23	43	P	P	15 57 49.4	+1.3
BRLK				IAmb	IAmb	15 58 11.6	
	comp=Z,18nm,1.4s						
H23K	Yukon River	42.42	34	P	P	15 57 50.6	+1.0
H23K				IAmb	IAmb	15 57 52.9	
	comp=Z,4.7nm,0.8s						
TOLK	Toolik Lake Re	42.43	30	P	P	15 57 50.0	+0.3
TOLK				IAmb	IAmb	15 57 51.3	
	comp=Z,7.1nm,0.6s						
BWN	Browne	42.52	37	P	P	15 57 52.3	+2.0
I23K	Minto, Yukon-K	42.52	35	P	P	15 57 51.2	+0.9
NEA2	Nenana	42.67	36	P	P	15 57 52.4	+0.8
NEA2				IAmb	IAmb	15 57 53.3	
	comp=Z,10nm,0.7s						
MCK	McKinley	42.78	37	P	P	15 57 53.4	+0.9
MCK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MCK	McKinley	42.78	37	P	P	15 57 53.4	+0.9
MCK				IAmb	IAmb	15 57 56.7	
	comp=Z,4.8nm,0.7s						
MK31	Makanchi Array	42.79	297	P	P	15 57 52.9	+0.1
MK31				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MK31	Makanchi Array	42.79	297	P	P	15 57 52.9	+0.1
MKAR	Makanchi Array	42.79	297	P	P	15 57 52.9	+0.1
	comp=Z,1.3nm,0.5s,baz=82,slow=10,SNR=22						
MKAR				PcP	PcP	15 59 41.8	-0.2
	comp=Z,0.2nm,0.3s,baz=65,slow=3.3,SNR=1.4						
MKAR	Makanchi Array	42.79	297	eP	P	15 57 53.0	+0.2
MKAR	Makanchi Array	42.79	297	P	P	15 57 52.7	-0.1
RND	Reindeer	42.84	38	P	P	15 57 53.4	+0.3
RND				pmax	pmax		
	comp=Z,6.0nm,0.9s						
RND	Reindeer	42.84	38	P	P	15 57 53.4	+0.3
GHO	Glory Hole Cre	42.96	40	P	P	15 57 54.7	+0.6
GHO				IAmb	IAmb	15 58 22.0	
	comp=Z,16nm,1.3s						
MAKZ	Makanchi	42.99	297	P	P	15 57 54.2	-0.2
MAKZ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MAKZ	Makanchi	42.99	297	P	P	15 57 54.1	-0.2
MDM	Murphy Dome	43.01	35	P	P	15 57 55.2	+0.9
MDM				IAmb	IAmb	15 57 56.2	
	comp=Z,5.3nm,0.8s						
WRH	Wood River Hil	43.10	36	P	P	15 57 56.1	+1.1
H24K	Noodor Dome	43.11	34	P	P	15 57 56.3	+1.1
CCB	Clear Creek Bu	43.21	36	P	P	15 57 56.2	+0.3
KNK	Knik Glacier	43.22	41	P	P	15 57 57.0	+0.9
KNK				IAmb	IAmb	15 57 59.6	
	comp=Z,21nm,1.5s						
SML	Sawmill	43.24	40	P	P	15 57 57.0	+0.7
SML				IAmb	IAmb	15 57 59.6	
	comp=Z,16nm,1.3s						
POKR	Poker Plat Res	43.33	35	P	P	15 57 58.4	+1.4
POKR				IAmb	IAmb	15 58 01.2	
	comp=Z,6.4nm,0.8s						
DHY	Denali Highway	43.54	38	P	P	15 57 59.2	+0.5
DHY				IAmb	IAmb	15 57 60.0	
	comp=Z,4.1nm,0.6s						
IL31		43.59	36	P	P	15 57 59.5	+0.6
IL31				IAmb	IAmb	15 58 00.2	
	comp=Z,6.5nm,0.7s						
ILAR	Eielson Array	43.59	36	P	P	15 57 59.4	+0.3
	comp=Z,4.9nm,0.7s,baz=255,slow=5.5,SNR=53						
ILAR	Eielson Array	43.59	36	P	P	15 57 59.5	+0.5
ILAR	Eielson Array	43.59	36	P	P	15 57 59.5	+0.5
HDA	Harding Lake	43.60	36	P	P	15 57 59.1	+0.1
HDA				IAmb	IAmb	15 58 00.1	
	comp=Z,5.3nm,0.5s						
SCM	Sheep Creek Mo	43.70	40	P	P	15 58 00.9	+0.9
SCM				pmax	pmax		
	comp=Z,23nm,1.4s						
SCM	Sheep Creek Mo	43.70	40	P	P	15 58 00.9	+0.9
SCM				IAmb	IAmb	15 58 20.1	
	comp=Z,23nm,1.4s						
KURK	Kurchatov	43.95	304	ceP	P	15 58 01.6	-0.4
KURK				pmax	pmax		
	comp=Z,6.0nm,0.4s						
KURK	Kurchatov	43.95	304	eP	P	15 58 01.6	-0.4
KURK	Kurchatov	43.95	304	P	P	15 58 01.7	-0.3
KURK				IAmb	IAmb	15 58 04.5	
	comp=Z,8.9nm,0.6s						
PRP	Porcupine Dome	44.10	34	P	P	15 58 04.2	+1.0
PRP				IAmb	IAmb	15 58 05.1	
	comp=Z,8.5nm,0.8s						
FYU	Fort Yukon	44.13	33	P	P	15 58 04.7	+1.4
FYU				IAmb	IAmb	15 58 06.8	
	comp=Z,9.7nm,1.0s						
M24K	Tolsona, Glenn	44.21	39	P	P	15 58 05.7	+1.7
BMAR	Burnt Mountain	44.33	32	P	P	15 58 05.9	+1.0
PAX	Paxson	44.41	38	P	P	15 58 07.3	+1.6
PAX				pmax	pmax		
	comp=Z,10.0nm,1.4s						
PAX	Paxson	44.41	38	P	P	15 58 07.2	+1.6
PAX				IAmb	IAmb	15 58 08.2	
	comp=Z,10nm,1.4s						
KLU	Klutina	44.42	40	P	P	15 58 07.0	+1.3
KLU				IAmb	IAmb	15 58 34.9	
	comp=Z,17nm,1.4s						
Q23K	Middleton Isla	44.56	43	P	P	15 58 08.4	+1.7
MID	Middleton Isla	44.57	43	P	P	15 58 08.6	+1.8
MID				pmax	pmax		
	comp=Z,286nm,1.1s						
MID	Middleton Isla	44.57	43	P	P	15 58 08.6	+1.8
RIDG	Independent Ri	44.59	37	P	P	15 58 07.5	+0.4
RIDG				IAmb	IAmb	15 58 26.9	
	comp=Z,16nm,1.4s						
SCRK	Sand Creek	44.93	36	P	P	15 58 09.9	+0.1
SCRK				IAmb	IAmb	15 58 10.8	
	comp=Z,6.6nm,0.6s						
CMAR	Chiang Mai Arr	44.94	251	P	P	15 58 10.9	+0.6
	comp=Z,0.3nm,0.3s,baz=46,slow=6.4,SNR=2.2						
DOT	Dot Lake	44.95	37	P	P	15 58 09.9	+0.1
MENT	Mentasta	45.21	38	P	P	15 58 12.2	+0.3
MENT				IAmb	IAmb	15 58 27.6	
	comp=Z,9.4nm,1.4s						
HMT	Hamilton	45.42	42	P	P	15 58 15.3	+1.7
VRDI	Verde Repeater	45.64	40	P	P	15 58 16.4	+0.9
VRDI				IAmb	IAmb	15 58 17.9	
	comp=Z,17nm,1.3s						
MCARA	McCarthy VSAT	45.81	40	P	P	15 58 18.2	+1.6
MCARA				IAmb	IAmb	15 58 34.9	
	comp=Z,13nm,0.9s						
EGAK	Eagle	46.03	35	P	P	15 58 18.2	-0.1
EGAK				IAmb	IAmb	15 58 21.3	
	comp=Z,7.8nm,1.2s						
L27K	Beaver Creek,	46.04	38	P	P	15 58 19.8	+1.4
L27K				IAmb	IAmb	15 58 20.9	
	comp=Z,5.6nm,0.7s						
BCAR	Beaver Creek A	46.06	38	P	P	15 58 20.1	+1.4
WAX	Waxell Ridge	46.08	41	P	P	15 58 20.6	+1.7
M27K	Edge Creek, AK	46.15	39	P	P	15 58 20.9	+1.4
M27K				IAmb	IAmb	15 58 39.3	
	comp=Z,16nm,1.3s						
ISLE	Juniper Island	46.30	41	P	P	15 58 21.8	+1.2
BARN	Barnard Glacie	46.52	40	P	P	15 58 23.3	+0.8
BARN				IAmb	IAmb	15 58 24.6	
	comp=Z,7.5nm,0.8s						
CTGM	Chitina Glacie	46.70	40	P	P	15 58 25.1	+1.4
CTGM				IAmb	IAmb	15 58 25.8	
	comp=Z,6.7nm,0.8s						
FAKI	Fak Fak	46.81	196	P	P	15 58 25.6	+0.7
FAKI				IAmb	IAmb	15 58 27.2	
	comp=Z,9.7nm,0.7s						
BCPM	Bancas Point	47.76	41	P	P	15 58 33.2	+1.4
BRVK	Borovoye	48.17	309	P	P	15 58 35.5	+0.4
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BRVK	Borovoye	48.17	309	eP	P	15 58 35.5	+0.4
BRVK	Borovoye	48.17	309	P	P	15 58 35.5	+0.4
BRVK				IAmb	IAmb	15 58 38.5	
	comp=Z,5.7nm,0.7s						
INK	Inuvik	48.34	30	P	P	15 58 36.1	0.0
	comp=Z,2.5nm,0.3s,baz=286,slow=6.1,SNR=18						
INK	Inuvik	48.34	30	P	P	15 58 36.4	+0.3
INK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
INK	Inuvik	48.34	30	P	P	15 58 36.4	+0.3
HYT	Haines Junctio	48.55	40	P	P	15 58 39.7	+1.7
AAK	Ala-Archa	49.49	295	ceP	P	15 58 48.1	+2.6
AAK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
WHY	Whitehorse	49.83	40	P	P	15 58 50.1	+2.4
WHY				IAmb	IAmb	15 58 55.0	
	comp=Z,7.7nm,1.3s						
KKAR	Karatay Array	51.91	297	P	P	15 59 03.6	+0.1
KKAR	Karatay Array	51.91	297	P	P	15 59 03.6	+0.1
SVE	Sverdlovsk	52.05	316	eP	P	15 59 04.5	+0.3
SVE				pmax	pmax		
	comp=Z,13nm,0.9s						
ARU	Arti	53.26	316	c iP	P	15 59 12.9	-0.2
ARU						16 00 15.5	
ARU				S	S	16 06 36.0	+1.0
ARU				SS	SS	16 10 15.4	-0.2
ARU				pmax	pmax		
	comp=Z,65nm,4.8s						

ARU	Arti	53.26	316	eP	P	15 59 12.9	-0.2
ARU	Arti	53.26	316	P	P	15 59 13.2	+0.1
EUNU	Eureka	54.09	9	P	P	15 59 18.4	-0.6
EUNU				IAmb	IAmb	15 59 19.8	
	comp=Z,5.4nm,0.7s						
SPB2	Spitsbergen Ar	55.11	348	P	P	15 59 25.5	-0.8
SPITS	Spitsbergen Ar	55.11	348	P	P	15 59 25.3	-1.0
SPITS				pmax	pmax		
	comp=Z,99nm,1.5s						
ABKAR	Akbulak array	55.65	308	P	P	15 59 30.6	0.0
ABKAR	Akbulak array	55.65	308	P	P	15 59 30.7	+0.1
ABKAR				IAmb	IAmb	15 59 31.4	
	comp=Z,5.2nm,0.5s						
PSI	Prapat	56.43	238	P	P	15 59 37.9	+1.3
	comp=Z,2.8nm,0.4s,baz=232,slow=4.5,SNR=4.1						
RES	Resolute Bay	56.44	16	P	P	15 59 35.6	-0.2
	comp=Z,11nm,0.5s,baz=322,slow=4.9,SNR=37						
RES	Resolute Bay	56.44	16	P	P	15 59 35.5	-0.2
YKA	Yellowknife Ar	57.83	32	P	P	15 59 46.1	+0.4
	comp=Z,2.3nm,0.7s,baz=315,slow=5.0,SNR=3.6						
KEV	Kevo	58.60	339	P	P	15 59 50.7	-0.3
KEV				pmax	pmax		
	comp=Z,106nm,1.5s						
KEV	Kevo	58.60	339	P	P	15 59 50.6	-0.3
UGM	Wanagama	58.96	219	P	P	15 59 52.5	-1.7
ARCES	ARCESS Array B	59.15	339	P	P	15 59 54.8	0.0
	comp=Z,5.0nm,0.9s,baz=70,slow=4.0,SNR=7.9						
ARCES	ARCESS Array B	59.15	339	P	P	15 59 54.8	0.0
WB0	Warramunga Arr	62.98	190	P	P	16 00 21.4	+0.3
WB0				IAmb	IAmb	16 00 21.9	
	comp=Z,8.4nm,1.4s						
LON	Longmire	63.00	50	P	P	16 00 22.3	+1.1
LON				pmax	pmax		
	comp=Z,3.0nm,1.1s						
LON	Longmire	63.00	50	P	P	16 00 22.3	+1.1
WR0	Warramunga Arr	63.15	190	P	P	16 00 22.7	+0.4
WB2	Warramunga Arr	63.16	190	P	P	16 00 22.3	0.0
WRA	Warramunga Arr	63.16	190	P	P	16 00 22.7	+0.4
	comp=Z,1.4nm,0.8s,baz=8.3,slow=6.8,SNR=11						
WRA	Warramunga Arr	63.16	190	i P	P	16 00 23.0	+0.6
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WRA	Warramunga Arr	63.16	190	P	P	16 00 22.5	+0.1
LTY	Liberty	63.35	49	P	P	16 00 24.5	+1.0
LTY				IAmb	IAmb	16 00 30.5	
	comp=Z,5.6nm,1.3s						
B08A	Colville Reser	63.45	48	P	P	16 00 24.8	+0.6
B08A				IAmb	IAmb	16 00 52.1	
	comp=Z,6.9nm,1.5s						
DBO	Dodson Butte	64.26	54	P	P	16 00 30.7	+1.1
DBO				IAmb	IAmb	16 00 44.8	
	comp=Z,6.6nm,1.2s						
D08A	Wollman Farm,	64.44	49	P	P	16 00 31.6	+1.0
D08A				IAmb	IAmb	16 00 32.3	
	comp=Z,2.9nm,0.7s						
FIA1	FINESS Array S	64.47	332	P	P	16 00 30.0	-0.5
FINES	FINESS Array B	64.47	332	P	P	16 00 30.3	-0.2
	comp=Z,9.4nm,0.5s,baz=48,slow=7.3,SNR=113						
FINES	FINESS Array B	64.47	332	i P	P	16 00 30.2	-0.3
FINES	FINESS Array B	64.47	332	P	P	16 00 30.0	-0.5
OBN	Obninsk	64.50	323	ceP	P	16 00 30.8	0.0
OBN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
OBN	Obninsk	64.50	323	eP	P	16 00 30.8	0.0
SUMG	Summit	64.79	1	P	P	16 00 33.1	+0.2
SUMG	Summit	64.79	1	P	P	16 00 33.1	+0.2
PINE	Pine Mountain	65.22	53	P	P	16 00 37.0	+1.1
PINE				IAmb	IAmb	16 00 38.8	
	comp=Z,5.2nm,0.8s						
YBH	Yreka Blue Hor	65.39	55	P	P	16 00 36.9	-0.1
	comp=Z,1.2nm,0.7s,baz=245,slow=14,SNR=2.1						
I07A	Izee	65.88	52	P	P	16 00 41.7	+1.6
SCO	Scoresbysund	66.43	355	P	P	16 00 44.3	+1.3
SCO	Scoresbysund	66.43	355	P	P	16 00 44.2	+1.3
JTMT	Jette	66.53	46	P	P	16 00 45.3	+1.1
JTMT				IAmb	IAmb	16 00 47.0	
	comp=Z,4.5nm,0.8s						
BMO	Blue Mountains	66.67	50	P	P	16 00 46.4	+1.4
BMO				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BMO	Blue Mountains	66.67	50	P	P	16 00 46.4	+1.4
ASAR	Alice Springs	66.88	190	P	P	16 00 46.3	-0.1
	comp=Z,0.6nm,0.7s,baz=9.9,slow=7.6,SNR=13						
ASAR	Alice Springs	66.88	190	P	P	16 00 48.1	+1.7
ASAR	Alice Springs	66.88	190	P	P	16 00 48.1	+1.7
PLID	Pearl Lake	67.25	49	P	P	16 00 49.8	+0.8
KIV	Kislovodsk	68.45	310	eP	P	16 00 57.9	+1.6
KIV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KIV	Kislovodsk	68.45	310	eP	P	16 00 57.9	+1.6
KBZ	Khabaz	68.48	310	P	P	16 00 57.2	+1.0
	comp=Z,3.0nm,0.8s,baz=53,slow=1.8,SNR=7.0						
PAHR	Pah Rah Range	68.63	55	P	P	16 00 58.0	+0.5
LRM	Limekiln Ridge	68.72	47	P	P	16 00 59.4	+1.3
DLMT	Dillon	68.94	47	P	P	16 01 00.4	+1.0
DLMT				IAmb	IAmb	16 01 01.1	
	comp=Z,12nm,1.4s						
NC405	NORSAR Array S	69.25	337	P	P	16 00 59.8	-1.1
NC303	NORSAR Array S	69.26	338	P	P	16 01 00.7	-0.2
BOZ	Bozeman (W)	69.31	47	P	P	16 01 02.7	+1.1
BOZ				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BOZ	Bozeman (W)	69.31	47	P	P	16 01 02.7	+1.1
BOZ				IAmb	IAmb	16 01 03.3	
	comp=Z,3.1nm,0.6s						
NC204	NORSAR Array S	69.39	338	P	P	16 01 01.6	-0.1
NC204				IAmb	IAmb	16 01 24.8	
	comp=Z,17nm,1.2s						
NB201	NORSAR Array S	69.42	337	P	P	16 01 01.5	-0.4
NB2	NORSAR Subarra	69.45	337	P	P	16 01 01.8	-0.3
	comp=Z,2.6nm,0.4s,baz=34,slow=6.5						
NOA	NORSAR Array B	69.45	337	P	P	16 01 01.7	-0.4
	comp=Z,2.8nm,0.5s,baz=328,slow=14,SNR=19						
PABE	Paberze	69.50	328	P	P	16 01 02.7	+0.3
NBO00	NORSAR Array S	69.58	338	P	P	16 01 02.2	-0.7
NBO00				IAmb	IAmb	16 01 13.3	
	comp=Z,10nm,1.0s						
NC602	NORSAR Array S	69.61	337	P	P	16 01 02.0	-1.0
NAO01	NORSAR Array S	69.71	338	P	P	16 01 03.1	-0.5
KVN	Kaiserville	69.81	55	P	P	16 01 04.9	0.0
KVN				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KVN	Kaiserville	69.81	55	P	P	16 01 04.9	0.0
NVAR	Mina Array Bea	70.08	56	P	P	16 01 06.6	0.0
	comp=Z,2.0nm,0.7s,baz=305,slow=6.0,SNR=6.1						
AKASG	Malin Array Be	70.76	322	P	P	16 01 09.6	-0.6
	comp=Z,2.2nm,0.5s,baz=42,slow=6.2,SNR=18						
AKASG	Malin Array Be	70.76	322	i P	P	16 01 10.0	-0.2
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AKBB	Malin Array Si	70.76	322	ceP	P	16 01 11.2	+1.0
AKBB	Malin Array Si	70.76	322	P	P	16 01 10.2	0.0
AKBB				IAmb	IAmb	16 01 11.2	
	comp=Z,9.8nm,1.4s						
MOOW	Moose Ponds	71.00	48	P	P	16 01 12.6	+0.6
MOOW				IAmb	IAmb	16 01 25.9	
	comp=Z,5.7nm,1.0s						
AHID	Auburn Hatcher	71.45	49	P	P	16 01 15.8	+1.0
R11A	Troy Canyon, C	71.77	54	P	P	16 01 17.7	+0.9
DUG	Dugway, Tooele	72.19	52	P	P	16 01 20.6	+1.4
DUG				pmax	pmax		
	comp=Z,5.0nm,1.4s						
DUG	Dugway, Tooele	72.19	52	P	P	16 01 20.6	+1.4
GWY	Greenwater Val	72.52	57	P	P	16 01 22.3	+1.1
QSM	Queen of Sheba	72.54	57	P	P	16 01 22.6	+1.4
SNOP	Sinop	73.85	313	P	P	16 01 27.9	-0.8
BURAR	Bucovina Array	74.81	322	P	P	16 01 34.3	0.0
OJC	Ojcow	75.15	327	P	P	16 01 35.7	-0.4
OJC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
OJC	Ojcow	75.15	327	P	P	16 01 35.7	-0.4
OJC				IAmb	IAmb	16 01 37.7	
	comp=Z,6.4nm,0.9s						
CLL	Collm	76.87	331	eP	P	16 01 46.0	+0.2
CLL				pmax	pmax		
	comp=Z,6.0nm,1.1s						
CLL	Collm	76.87	331	eP	P	16 01 46.0	+0.2
	comp=Z,6.0nm,1.1s						
KHC	Kasperske Hory	78.45	329	eP	P	16 01 55.0	+0.3
KHC	Kasperske Hory	78.45	329	eP	P	16 01 55.0	+0.3
GERES	GERESS Array B	78.64	329	P	P	16 01 55.9	+0.1
	comp=Z,0.4nm,0.5s,baz=35,slow=5.3,SNR=2.1						
SCHQ	Schefferville	79.18	17	P	P	16 01 58.8	+0.3
SCHQ				IAmb	IAmb	16 02 14.3	
	comp=Z,12nm,1.3s						
TXAR	Lajitas Array	85.13	54	P	P	16 02 31.3	+1.2
	comp=Z,1.6nm,0.6s,baz=288,slow=3.4,SNR=13						
H03N2	Juan Fernandez	145.43	89	T	T	18 51 43.0	
	baz=302,slow=76,SNR=8.6						
H03N3	Juan Fernandez	145.44	89	T	T	18 51 43.7	
	baz=302,slow=76,SNR=9.1						
H03N1	Juan Fernandez	145.44	89	T	T	18 51 43.8	
	baz=302,slow=76,SNR=10						

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*ANF **10** 15:57:21.3±0.3, 42°.50N×101°.04W, h0^{km}, ML4.2/9, Error ellipse: s-maj=3.7km s-min=3.5km az=18.0*

*NEIC **10** 15:57:21.3±1.9, 42°.51N±0°.05×101°.03W±0°.07, h5^{km}±2^{km}, mb_Lg3.2/77, Error ellipse: s-maj=9.1km s-min=7.6km az=311.0*

*IDC **10** 15:57:23.4±1.3, 42°.93N×101°.42W, h0^{km}, mb1 4.0/3, mb1mx3.5/45, mbtmp3.7/3, ML3.7/3, Error ellipse: s-maj=19.9km s-min=10.0km az=136.0*

ISC 10 15:57:19.4±1.2, **42°.62N**±0°.03×**100°.98W**±0°.03, **h4**^{km}±10^{km}, **n103**, σ**1^s.68**/87, **Nebraska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
K31A	O'Neill	1.64	89	Pn	Pg	15 57 51.7	+0.9
K31A	O'Neill	1.64	89	P	Pg	15 57 51.7	+0.9
	baz=267,SNR=96						
K31A				S	Sg	15 58 14.1	+2.0
	baz=267						
OGNE	Ogallala	1.85	206	P	Pb	15 57 53.2	-0.6
	baz=25						
OGNE				S	Sn	15 58 16.3	+0.5
	baz=25						
OGNE	Ogallala	1.85	206	Pn	Pn	15 57 53.0	+1.1
OGNE				Sn	Sn	15 58 13.4	-2.4
OGNE	Ogallala	1.85	206	P	Pb	15 57 53.2	-0.6
	baz=25,SNR=88						
OGNE				S	Sn	15 58 16.3	+0.5
	baz=25						
SUSD	Miller	2.34	38	P	Pb	15 58 02.6	+0.4
	baz=219						
SUSD				S	Sg	15 58 33.8	-0.8
	baz=219						
SUSD	Miller	2.34	38	Pn	Pb	15 58 02.4	+0.2
SUSD	Miller	2.34	38	P	Pb	15 58 02.7	+0.5
	baz=219,SNR=14						
SUSD				S	Sg	15 58 33.8	-0.8
	baz=219						
BGNE	Belgrade	2.43	119	P	Pb	15 58 03.2	-0.5
	baz=298						
BGNE				Sb	Sg	15 58 36.5	-0.8
	baz=298						
BGNE	Belgrade	2.43	119	Pn	Pb	15 58 02.2	-1.5
BGNE	Belgrade	2.43	119	P	Pb	15 58 02.4	-1.2
	baz=298						
RSSD	Black Hills	2.69	305	P	Pb	15 58 07.3	-0.9
	baz=125						
RSSD				S	Sb	15 58 42.7	+1.0
	baz=125						
RSSD	Black Hills	2.69	305	Pn	Pb	15 58 07.0	-1.2
RSSD	Black Hills	2.69	305	P	Pb	15 58 07.3	-0.9
	baz=125,SNR=89						
ECSD	EROS Data Cent	3.38	69	P	Pn	15 58 16.1	+3.2
	baz=251						
ECSD	EROS Data Cent	3.38	69	Pn	Pn	15 58 15.9	+2.9
ECSD	EROS Data Cent	3.38	69	P	Pn	15 58 16.2	+3.2
	baz=251,SNR=51						
L34A	Svendsen Farm,	3.48	99	Pn	Pn	15 58 15.4	+1.2
KSCO	Kaye Shedlock'	3.81	200	Pn	Pn	15 58 19.1	0.0
KSCO				IAmb_Lg		15 59 28.3	
	comp=Z,78nm,0.8s						
CBKS	Cedar Bluff	3.91	166	Sb	Sb	15 59 19.4	+2.7
	baz=346						
CBKS	Cedar Bluff	3.91	166	Pn	Pn	15 58 21.4	+1.1
E28A	Huff	3.96	3	Pn	Pn	15 58 23.4	+2.5
E28A	Huff	3.96	3	P	Pn	15 58 24.0	+3.0
	baz=183						
K22A	Casper	4.09	272	P	Pn	15 58 23.7	+0.8
	baz=90						
K22A				Sb	Sb	15 59 24.7	+2.8
	baz=90						
K22A	Casper	4.09	272		Pn	15 58 23.4	+0.6
K22A	Casper	4.09	272	P	Pn	15 58 23.7	+0.8
	baz=90						
N23A	Red Feather La	4.09	247	Sb	Sb	15 59 24.5	+2.4
	baz=64						
N35A	Tabor	4.36	112	Pn	Pn	15 58 27.7	+1.3
ISCO	Idaho Springs	4.49	233	P	Pn	15 58 29.1	+0.6
	baz=50						
ISCO	Idaho Springs	4.49	233	Pn	Pn	15 58 28.4	0.0
ISCO				IAmb_Lg		15 59 51.1	
	comp=Z,48nm,0.8s						
ISCO	Idaho Springs	4.49	233	P	Pn	15 58 29.1	+0.6
	baz=50,SNR=16						
R32A	Long Quarter,	4.53	157	IAmb_Lg		15 59 49.7	
	comp=Z,47nm,0.9s						
F33A	5 Mile Ranch,	4.66	45	Pn	Pn	15 58 32.5	+2.0
F33A	5 Mile Ranch,	4.66	45	P	Pn	15 58 32.7	+2.2
	baz=227						
RWWY	Rawlins	4.72	261	Pn	Pn	15 58 32.8	+1.1
RWWY				IAmb_Lg		16 00 00.2	
	comp=Z,42nm,0.7s						
KSU1	Kansas State U	4.83	135	Pn	Pn	15 58 33.8	+1.0
KSU1				IAmb_Lg		16 00 06.3	
	comp=Z,35nm,0.7s						
MDND	Maddock	5.32	10	Pn	Pn	15 58 41.4	+1.8
MDND				IAmb_Lg		16 00 16.1	
	comp=Z,45nm,0.8s						
D32A	Dogwood Acres,	5.32	31	IAmb_Lg		16 00 29.1	
	comp=Z,43nm,0.9s						
SMCO	Snowmass	5.70	235	IAmb_Lg		16 00 33.0	
	comp=Z,33nm,0.8s						
I37A	Lemond, Waseca	5.70	73		Pn	15 58 47.3	+2.4
SCIA	State Center	5.80	94	Pn	Pn	15 58 49.7	+3.5
SCIA	State Center	5.80	94	S	Sn	15 59 56.2	+3.0
	baz=279						
KAN16	Harper SW Stat	5.83	156	IAmb_Lg		16 00 27.0	
	comp=Z,24nm,0.7s						
SDCO	Great Sand Dun	5.97	217		Pn	15 58 48.7	-0.1
O20A	White River Ci	6.00	248	IAmb_Lg		16 00 36.4	
	comp=Z,25nm,0.8s						
T25A	Trinidad	6.07	207		Pn	15 58 50.1	-0.1
OK032	Salt Plains WL	6.18	159	IAmb_Lg		16 00 51.3	
	comp=Z,31nm,1.1s						
F36A	Milaca	6.26	56		Pn	15 58 54.8	+2.3
F36A				IAmb_Lg		16 00 46.5	
	comp=Z,23nm,0.8s						
DGMT	Dagmar	6.28	340	P	Pn	15 58 55.5	+2.8
	baz=158						
DGMT	Dagmar	6.28	340	Pn	Pn	15 58 55.1	+2.3
DGMT	Dagmar	6.28	340	P	Pn	15 58 55.4	+2.7
	baz=158						
BW06	Boulder Array	6.33	274	P	Pn	15 58 54.6	+1.0
	baz=89						
BW06	Boulder Array	6.33	274		Pn	15 58 53.8	+0.2
BW06				IAmb_Lg		16 00 43.8	
	comp=Z,23nm,0.9s						
PD31	Pinedale Array	6.33	274		Pn	15 58 53.5	-0.1
PDAR	Pinedale Array	6.33	274	Pn	Pn	15 58 54.5	+0.9
	comp=Z,1.2nm,0.3s,baz=94,slow=15,SNR=37						
PDAR				Pg	Pb	15 59 13.6	+3.4
	comp=Z,1.7nm,0.3s,baz=94,slow=18,SNR=7.0						
PDAR				Lg	Lg	16 00 30.0	
	comp=Z,2.9nm,0.3s,baz=89,slow=28,SNR=13						
PDAR	Pinedale Array	6.33	274		Pn	15 58 53.7	+0.1
P38A	Dawn	6.37	116	IAmb_Lg		16 00 44.4	
	comp=Z,28nm,0.8s						
SPMN	Marine on St.	6.45	63	IAmb_Lg		16 00 50.4	
	comp=Z,30nm,0.7s						
RLMT	Red Lodge	6.49	296		Pn	15 58 56.4	+0.5
CROK	Carrier	6.53	158	Pn	Pn	15 58 56.8	+0.6
CROK				IAmb_Lg		16 01 00.9	
	comp=Z,26nm,0.9s						
BLOK	Blackwell	6.53	152	IAmb_Lg		16 00 55.4	
	comp=Z,31nm,1.1s						
AGMN	Agassiz Nation	6.72	31		Pn	15 58 59.3	+0.4
RDMU	Red Mountain	6.76	255		Pn	15 58 59.6	+0.1
RDMU				IAmb_Lg		16 00 56.4	
	comp=Z,25nm,1.1s						
YMP	Mirror Lake Pl	6.99	291	IAmb_Lg		16 01 06.9	
	comp=Z,19nm,0.9s						
LOHW	Long Hollow	7.12	281		Pn	15 59 04.7	+0.3
SNOW	Snow King Moun	7.21	280	IAmb_Lg		16 01 11.0	
	comp=Z,19nm,1.0s						
L40A	Anamosa	7.25	91	IAmb_Lg		16 01 19.2	
	comp=Z,33nm,0.9s						
REDW	Red Top Meadow	7.28	279	IAmb_Lg		16 01 23.0	
	comp=Z,24nm,1.1s						
TPAW	Teton Pass	7.36	280	Pn	Pn	15 59 08.4	+0.6
P40A	Paris	7.42	112	IAmb_Lg		16 01 18.4	
	comp=Z,30nm,0.8s						
FXWY	Fox Creek	7.42	281	Pn	Pn	15 59 08.6	-0.1
OK030	Cody Creek RV	7.43	153	Pn	Pn	15 59 07.4	-1.2
P18A	Preston Nutter	7.61	250	IAmb_Lg		16 01 32.8	
	comp=Z,20nm,0.8s						
B35A	Bob, Littlefor	7.68	39	IAmb_Lg		16 01 29.5	
	comp=Z,16nm,0.7s						
AMTX	Amarillo	7.74	184	IAmb_Lg		16 01 35.8	
	comp=Z,28nm,0.7s						
TUL1	Leonard	7.81	147	IAmb_Lg		16 01 36.0	
	comp=Z,30nm,0.8s						
JFWS	Jewell Farm	7.90	84	Pn	Pn	15 59 15.9	+0.9
R40A	Maddies Statio	7.92	120	IAmb_Lg		16 01 31.4	
	comp=Z,27nm,0.7s						
HWUT	Hardware Ranch	7.94	266	Pn	Pn	15 59 15.6	-0.1
U38A	Gravette	8.00	138	IAmb_Lg		16 01 46.5	
	comp=Z,16nm,0.8s						
SRU	San Rafael Swe	8.04	247	IAmb_Lg		16 01 29.5	
	comp=Z,29nm,1.0s						
WMOK	Wichita Mounta	8.05	167	Pn	Pn	15 59 16.2	-0.9
G40A	Rib Lake	8.22	68		Pn	15 59 21.2	+1.9
HHAR	Hobbs	8.34	137	IAmb_Lg		16 01 49.1	
	comp=Z,19nm,1.1s						
ULM	Lac du Bonnet	8.41	23	Pn	Pn	15 59 21.7	-0.2
	comp=Z,3.0nm,0.3s,baz=203,slow=11,SNR=18						
ULM				Sn	Sn	16 00 51.5	-5.7
	comp=Z,2.4nm,0.3s,baz=287,slow=20,SNR=3.9						
ULM				Lg	Lg	16 01 37.9	
	comp=Z,1.3nm,0.3s,baz=119,slow=15,SNR=2.4						
EYMN	Ely	8.55	48	IAmb_Lg		16 01 51.3	
	comp=Z,19nm,0.9s						
MGMO	Mountain Grove	8.63	126	IAmb_Lg		16 01 55.7	
	comp=Z,18nm,0.8s						
CCM	Cathedral Cave	8.71	118	Pn	Pn	15 59 27.0	+0.9
CCM				IAmb_Lg		16 02 04.1	
	comp=Z,26nm,0.8s						
ANMO	Albuquerque	8.77	211	Pg	Pg	16 00 05.1	-2.2
	comp=Z,0.3nm,0.3s,baz=26,slow=8.7,SNR=4.1						
ANMO				Lg	Lg	16 01 50.7	
	comp=Z,0.5nm,0.3s,baz=129,slow=18,SNR=4.5						
U40A	Yellville	8.86	132	IAmb_Lg		16 02 08.4	
	comp=Z,19nm,0.8s						
LOOK	Love County	9.11	160	IAmb_Lg		16 02 20.4	
	comp=Z,22nm,1.0s						
COWI	Conover	9.17	64	Pn	Pn	15 59 34.2	+1.8
W39A	Magazine	9.29	141	Pn	Pn	15 59 34.0	-0.1
K43A	Burlington	9.32	85	Pn	Pn	15 59 35.7	+1.3
T42A	Van Buren	9.43	123	IAmb_Lg		16 02 18.8	
	comp=Z,16nm,0.8s						
FCAR	Ozark Folk Cen	9.60	131	Pn	Pn	15 59 38.8	+0.5
FCAR				IAmb_Lg		16 02 27.0	
	comp=Z,17nm,0.8s						
D41A	Chassel	9.87	59	Pn	Pn	15 59 41.7	-0.3
MIAR	Mount Ida	9.92	142	Pn	Pn	15 59 41.5	-1.2
WHAR	Wooly Hollow	9.96	134	Pn	Pn	15 59 42.9	-0.3
LCAR	Lake Charles	10.03	127	Pn	Pn	15 59 43.1	-1.0
E43A	Lone Tree Farm	10.67	65	Pn	Pn	15 59 53.1	+0.1
WVT	Waverly	12.05	118	Pn	Pn	16 00 13.6	+1.7
TXAR	Lajitas Array	13.43	190	Pn	P	16 00 39.1	-1.3
	comp=Z,0.1nm,0.3s,baz=18,slow=13,SNR=2.6						
TXAR				Pg	Pg	16 01 30.3	
	comp=Z,0.2nm,0.3s,baz=12,slow=14,SNR=5.8						
TXAR				Lg	Lg	16 04 25.3	
	comp=Z,0.2nm,0.3s,baz=15,slow=25,SNR=6.9						

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*IDC **10** 15:59:30.4±1.7, 6°.80N×94°.32E, h0^{km}, mb3.8/6, mb1 3.9/8, mb1mx3.7/47, mbtmp3.8/8, ML3.6/2, MS3.3/10, Ms1 3.3/10, ms1mx3.0/51, Error ellipse: s-maj=65.4km s-min=18.5km az=60.0*

*NEIC **10** 15:59:33.2±1.4, 6°.9N±0°.1×94°.5E±0°.1, h10^{km}±1^{km}, mb4.5/22, Error ellipse: s-maj=25.6km s-min=12.9km az=230.0*

ISC 10 15:59:35.3±0.8, **6°.9N**±0°.1×**94°.6E**±0°.1, **h26**^{km}, **n51**, σ**1^s.61**/39, **mb4.3**/21, **MS3.2**/6, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	Lhok Sumawe	2.88	125	Pn	Pn	16 00 20.2	+0.6
PSI	Prapat	5.94	133	Pn	Pn	16 01 04.3	+2.5
	0.9nm,0.3s,baz=330,slow=15,SNR=4.4						
PSI				Sn	Sn	16 02 09.6	+0.4
	0.8nm,0.3s,baz=283,slow=20,SNR=1.4						
PSI				LR	LR	16 04 02.9	
	comp=Z,196nm,20.4s,baz=295,slow=44						
RPSI	Rantau Prapat	6.02	134		Pn	16 01 04.3	+1.6
RPSI					Sn	16 02 09.6	-1.2
CMAR	Chiang Mai Arr	12.26	20	Pn	Pn	16 02 28.8	+0.4
	0.1nm,0.3s,baz=208,slow=14,SNR=5.2						
CMAR				LR	LR	16 06 59.9	
	comp=Z,73nm,18.9s,baz=244,slow=36						
CHTO	Chiang Mai	12.60	19	Pn	Pn	16 02 34.1	+1.2
PALK	Pallekele	13.77	272	LR	LR	16 08 02.1	
	comp=Z,137nm,18.3s,baz=187,slow=38						
LEM	Lembang	18.84	136	LR	LR	16 10 53.3	
	comp=Z,108nm,20.4s,baz=338,slow=36						
ODAN	Odare	21.00	342	eP	P	16 04 19.9	+2.7
	15nm,0.7s						
TAPN	Taplejung	21.37	343	eP	P	16 04 19.5	-1.7
	25nm,0.9s						
PKI	Pulchoki	22.33	338	eP	P	16 04 36.2	+4.6
	26nm,0.6s						
PKIN	Phulchoki	22.34	338	eP	P	16 04 36.5	+4.9
	27nm,0.6s						
H08S3	Diego Garcia H	26.32	237	T	T	16 31 52.0	
	baz=56,slow=76,SNR=23						
H08S2	Diego Garcia H	26.33	237	T	T	16 31 53.0	
	baz=56,slow=76,SNR=35						
H08S1	Diego Carcia H	26.34	237	T	T	16 31 55.0	
	baz=56,slow=76,SNR=13						
TOLI2	Tolitoli	26.76	101	P	P	16 05 14.9	+1.6
TOLI2				IAmb	IAmb	16 05 18.0	
	comp=Z,4.5nm,0.8s						
YULB	Yu-li	30.48	55	P	P	16 05 44.9	-1.5
DAV	Davao City (W)	30.78	88	P	P	16 05 47.2	-1.8
NIL	Nilore	33.15	326	P	P	16 06 07.9	-1.8
TARG	Taragay, Kyrgy	37.76	339	P	P	16 06 48.5	-1.1
DRK	Karamyk	38.37	331	P	P	16 06 55.1	+0.4
DRK				IAmb	IAmb	16 07 03.5	
	comp=Z,7.1nm,0.6s						
CHGR	Chuyangaron	39.08	328	P	P	16 06 59.6	-0.8
CHGR				IAmb	IAmb	16 07 07.9	
	comp=Z,11nm,0.9s						
MK31	Makanchi Array	41.14	347	P	P	16 07 16.7	-0.6
MKAR	Makanchi Array	41.14	347	P	P	16 07 16.0	-1.3
	comp=Z,2.7nm,0.7s,baz=161,slow=8.6,SNR=21						
MKAR				LR	LR	16 26 16.3	
	comp=Z,16nm,19.9s,baz=141,slow=39						
MKAR	Makanchi Array	41.14	347	P	P	16 07 16.7	-0.6
MAKZ	Makanchi	41.22	347	P	P	16 07 17.4	-0.6
KKAR	Karatay Array	41.83	333	P	P	16 07 22.2	-0.8
SONM	Songino Array	42.03	12	P	P	16 07 25.4	+0.7
	comp=Z,0.8nm,0.8s,baz=196,slow=7.6,SNR=6.3						
SONM				LR	LR	16 26 49.3	
	comp=Z,34nm,19.1s,baz=12,slow=39						
SONM	Songino Array	42.03	12	IAmb	IAmb	16 07 27.1	
	comp=Z,1.1nm,0.9s						
GYA0B	ALIBECK ARRAY	45.21	319	P	P	16 07 48.4	-2.0
GYA0B				IAmb	IAmb	16 07 49.2	
	comp=Z,5.2nm,0.5s						
H01W3	Cape Leeuwin H	45.47	157	T	T	16 56 49.3	
	baz=330						
H01W2	Cape Leeuwin H	45.48	157	T	T	16 56 38.5	
	baz=330						
H01W1	Cape Leeuwin H	45.49	157	T	T	16 56 38.6	
	baz=330						
KURK	Kurchatov	45.66	346	P	P	16 07 53.8	+0.1
KURK				IAmb	IAmb	16 08 03.0	
	comp=Z,5.8nm,1.0s						
WB0	Warramunga Arr	47.30	125	P	P	16 08 06.3	-0.8
WB0				IAmb	IAmb	16 08 13.9	
	comp=Z,6.1nm,1.3s						
WRA	Warramunga Arr	47.35	125	P	P	16 08 07.1	-0.3
	comp=Z,0.3nm,0.6s,baz=305,slow=8.8,SNR=5.8						
WRA	Warramunga Arr	47.35	125	IAmb	IAmb	16 08 11.5	
	comp=Z,0.2nm,1.3s						
WB2	Warramunga Arr	47.36	125	P	P	16 08 07.4	-0.1
WB2				IAmb	IAmb	16 08 33.2	
	comp=Z,3.6nm,1.0s						
WR0	Warramunga Arr	47.52	125	P	P	16 08 08.0	-0.8

WR0				IAmb	IAmb	16 08 12.2	
	comp=Z,4.1nm,1.2s						
ZAA0	Zalesovo Array	47.58	352	P	P	16 08 08.9	+0.2
ZAA0				IAmb	IAmb	16 08 17.9	
	comp=Z,3.1nm,0.9s						
ZALV	Zalesovo Beam	47.58	352	P	P	16 08 07.7	-1.0
	comp=Z,3.9nm,0.9s,baz=167,slow=7.2,SNR=12						
ZALV	Zalesovo Beam	47.58	352	P	P	16 08 08.7	0.0
ASAR	Alice Springs	48.96	130	P	P	16 08 19.6	-0.2
	comp=Z,0.4nm,0.8s,baz=302,slow=7.8,SNR=10.0						
MJAR	Matsushiro Arr	49.51	47	LR	LR	16 29 19.6	
	comp=Z,26nm,21.7s,baz=295,slow=36						
BRVK	Borovoye	50.12	341	P	P	16 08 28.0	-0.2
BRVK				IAmb	IAmb	16 08 28.8	
	comp=Z,3.7nm,0.8s						
ABKAR	Akbulak array	51.29	332	P	P	16 08 37.2	+0.1
ABKAR				IAmb	IAmb	16 08 46.0	
	comp=Z,5.0nm,0.8s						
STKA	Stephens Creek	59.12	134	LR	LR	16 37 43.0	
	comp=Z,36nm,18.9s,baz=19,slow=39						
AKASG	Malin Array Be	69.19	322	LR	LR	16 45 48.9	
	comp=Z,13nm,18.2s,baz=355,slow=40						
FIA1	FINESS Array S	73.77	332	P	P	16 11 06.4	-0.7
FINES	FINESS Array B	73.78	332	P	P	16 11 07.0	-0.1
	comp=Z,1.5nm,0.9s,baz=77,slow=2.5,SNR=4.5						
TIP	Timpagrande	76.24	309	P	P	16 11 21.4	-0.5
KOWA	Kowa	96.54	285	LR	LR	16 56 09.6	
	comp=Z,31nm,19.2s,baz=50,slow=35						

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*NNC **10** 16:18:53.6±2.3, 39°.97N×75°.02E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=18.2km s-min=10.6km az=159.0*
*KRNET **10** 16:18:54.7±0.1, 39°.78N×75°.37E, mb3.3*
*SOME **10** 16:18:54.1, 39°.90N×75°.38E, h10km*
ISC 10 16:18:53.7±1.6**, 39°.88N**±0°.05×**75°.33E**±0°.03**, h10**km±14km**, n49, σ1ˢ85**/75**, 35C-8D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	1.41	276	⇑iP	Pg	16 19 22.1	+1.4
	baz=80						
SFK				⇑iS	Sg	16 19 42.6	+3.6
	baz=80						
SALK	Salom-Alik	1.52	311	⇓eP	Pg	16 19 25.4	+2.5
	baz=13						
SALK				⇓eS	Sg	16 19 47.4	+4.7
	baz=13						
OHH	Osh	2.05	289	⇑iP	Pg	16 19 33.1	+0.1
	baz=91						
OHH				⇑iS	Sg	16 20 01.2	+1.6
	baz=91						
UCH	Uchtor	2.42	346	P	Pb	16 19 38.3	+0.7
	SNR=21						
UCH	Uchtor	2.42	346	⇑eP	Pg	16 19 39.2	-1.0
	baz=45						
UCH				⇑iS	Sg	16 20 11.7	+0.1
	baz=45						
ULHL	Ulahol	2.46	16	P	Pg	16 19 40.4	-0.5
	SNR=9.4						
ULHL	Ulahol	2.46	16	⇑iP	Pb	16 19 39.6	+1.4
	baz=15						
ULHL				⇑iS	Sg	16 20 12.2	-0.6
	baz=15						
AML	Almayashu	2.56	332	P	Pb	16 19 39.8	-0.2
	SNR=12						
AML	Almayashu	2.56	332	⇓eP	Pb	16 19 41.4	+1.4
	baz=32						
AML				⇓iS	Sg	16 20 15.5	-0.7
	baz=32						
TARG	Taragay, Kyrgy	2.64	45	⇑eP	Pb	16 19 41.4	+0.1
	baz=43						
TARG				⇑iS	Sb	16 20 15.5	+1.7
	baz=43						
BOOM	Boomskoye usch	2.65	10	⇑iP	Pb	16 19 42.5	+1.2
	baz=9.0						
BOOM				⇑iS	Sg	16 20 16.8	-2.0
	baz=9.0						
DRK	Karamyk	2.75	263	⇑iP	Pb	16 19 42.6	-0.5
	baz=65						
DRK				⇑iS	Sb	16 20 17.9	+0.9
	baz=65						
KBK	Karagaybulak	2.79	354	P	Pb	16 19 43.5	-0.2
	SNR=22						
KBK	Karagaybulak	2.79	354	⇑iP	Pb	16 19 44.3	+0.6
	baz=54						
KBK				⇑iS	Sb	16 20 20.3	+2.3
	baz=54						
EKS2	Erkin-Say	3.01	338	P	Pb	16 19 46.3	-1.2
	SNR=7.2						
EKS2	Erkin-Say	3.01	338	⇑eP	Pb	16 19 47.3	-0.2
	baz=38						
EKS2				⇑iS	Sb	16 20 25.7	+1.3
	baz=38						
TKM2	Tokmak 2	3.04	4	P	Pb	16 19 46.0	-2.1
	SNR=18						
TKM2	Tokmak 2	3.04	4	⇑Pn	Pn	16 19 44.2	+2.1
	6.3nm,0.5s						
TKM2				⇑Lg	Lg	16 20 29.7	
	58nm,0.8s						
TKM2	Tokmak 2	3.04	4	⇑eP	Pb	16 19 47.8	-0.3
	baz=3.0						
TKM2				⇑iS	Sb	16 20 26.5	+1.1
	baz=3.0						
CHMS	Chumysh	3.15	352	P	Pb	16 19 47.9	-1.8
	SNR=16						
CHMS	Chumysh	3.15	352	⇑iP	Pb	16 19 48.9	-0.8
	baz=52						
CHMS				⇑iS	Sb	16 20 28.9	+0.8
	baz=52						
KST	Kastek	3.20	8	eP	Pg	16 19 53.5	-1.5
	15nm,0.7s						
KST				eS	Sg	16 20 36.5	+0.1
	122nm,0.9s						
KST	Kastek	3.20	8	Pg	Pb	16 19 48.8	-1.9
	15nm,0.7s						
KST				Lg	Lg	16 20 31.7	
	122nm,0.9s						
MRKS	Merke	3.27	332	eP	Pg	16 19 55.5	-0.9
	5.2nm,0.5s						
MRKS				eS	Sg	16 20 39.9	+1.2
	15nm,0.7s						
MRKS	Merke	3.27	332	Pg	Pb	16 19 49.7	-2.2
	6.0nm,0.7s						
MRKS				Lg	Lg	16 20 33.1	
	14nm,0.7s						
MNAS	Manas	3.36	322	⇑iP	Pb	16 19 52.1	-1.4
	baz=22						
MNAS				⇑iS	Sb	16 20 34.3	-0.2
	baz=22						
DGS	Degeres	3.38	6	eP	Pb	16 19 55.9	+2.2
	4.8nm,0.7s						
DGS				eS	Sg	16 20 41.3	-0.8
	26nm,0.8s						
DGS	Degeres	3.38	6	Pg	Pb	16 19 51.2	-2.5
	13nm,0.5s						
DGS				Lg	Lg	16 20 35.4	
	26nm,0.8s						
TNSS	Tian-Shan	3.38	21	eP	Pg	16 19 57.5	-1.0
	5.9nm,0.6s						
TNSS				eS	Sg	16 20 42.9	+0.6
	16nm,0.7s						
TNSS	Tian-Shan	3.38	21	Pg	Pb	16 19 55.4	+1.4
	5.9nm,0.6s						
TNSS				Lg	Lg	16 20 43.2	
	16nm,0.7s						
USP	Ospenovka	3.44	350	P	Pb	16 19 51.7	-3.0
	SNR=10						
USP	Ospenovka	3.44	350	⇑eP	Pb	16 19 53.2	-1.5
	baz=50						
USP				⇑iS	Sb	16 20 35.9	-0.7
	baz=50						
BTK	Batken	3.47	274	⇑iP	Pb	16 19 52.6	-2.6
	baz=76						
BTK				⇑iS	Sb	16 20 35.3	-2.1
	baz=76						
MDOK	Medeo	3.52	21	eP	Pg	16 19 59.5	-1.8
	4.0nm,0.7s						
MDOK				eS	Sg	16 20 46.5	-0.4
	31nm,1.0s						
MDOK	Medeo	3.52	21	⇑Pg	Pg	16 19 59.0	-2.3
	7.3nm,1.0s						
MDOK				⇓Lg	Lg	16 20 46.7	
	43nm,0.9s						
MDOK	Medeo	3.52	21	Pg	Pb	16 19 57.6	+1.4
	4.0nm,0.7s						
MDOK				Lg	Lg	16 20 46.4	
	31nm,1.0s						
KNDC	Almaty	3.55	20	⇓Lg	Lg	16 20 45.6	
	158nm,0.8s						
TRKS	Terek-Say	3.58	299	⇑eP	Pb	16 19 53.9	-3.3
	baz=99						
TRKS				⇑iS	Sb	16 20 37.5	-3.3
	baz=99						
KTBS	Karatobe	3.96	14	eP	Pg	16 20 07.9	-1.6
	2.3nm,0.6s						
KTBS				eS	Sg	16 21 01.2	+0.3
	49nm,0.5s						
KTBS	Karatobe	3.96	14	Pg	Pb	16 20 05.9	+2.3
	2.3nm,0.6s						
KTBS				Lg	Lg	16 21 01.2	
	49nm,0.8s						
KUU	Kurty	4.08	10	eP	Pg	16 20 10.1	-1.8
	1.6nm,0.4s						
KUU				eS	Sg	16 21 05.2	+0.5
	41nm,0.9s						
KUU	Kurty	4.08	10	Pg	Pb	16 20 08.0	+2.4
	1.4nm,0.1s						
KUU				Lg	Lg	16 21 05.0	
	41nm,0.9s						
CHKK	Chushkaly	4.16	17	eP	Pg	16 20 11.5	-1.9
	4.6nm,0.2s						
CHKK				eS	Sg	16 21 07.5	+0.2
	36nm,0.9s						
CHKK	Chushkaly	4.16	17	Pg	Pb	16 20 09.5	+2.5
	3.7nm,0.3s						
CHKK				Lg	Lg	16 21 07.5	
	19nm,0.4s						
IUG	Iuzhnay	4.60	301	eP	Pg	16 20 19.2	-2.6
	27nm,0.2s						
IUG				eS	Sg	16 21 19.9	-1.5
	27nm,0.9s						
IUG	Iuzhnay	4.60	301	Pg	Pb	16 20 10.6	-4.0
	41nm,0.3s						
IUG				Lg	Lg	16 21 09.2	
	26nm,0.6s						
PDGK	Podgornoye	4.65	41	⇑Pg	Pg	16 20 19.3	-3.5
	3.6nm,0.8s						
PDGK				⇓Lg	Lg	16 21 21.3	
	12nm,0.8s						
ARXS	Arharly	4.71	22	eP	Pg	16 20 21.7	-2.2
	3.2nm,0.6s						
ARXS				eS	Sg	16 21 23.4	-1.6
	9.1nm,0.6s						
KK31	Karatay Array	4.84	313	⇓Pg	Pb	16 20 19.3	+0.7
	0.5nm,0.4s,baz=128,slow=16,SNR=4.3						
KK31				⇑Lg	Lg	16 21 23.6	
	1.3nm,0.4s,baz=132,slow=28,SNR=6.7						

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*IDC **10** 16:26:31.3±1.7, 6°.81N×94°.33E, h0km, mb3.6/7, mb1 3.7/9, mb1mx3.6/46, mbtmp3.6/9, ML3.8/2, MS3.0/3, Ms1 3.0/3, ms1mx2.6/39, Error ellipse: s-maj=67.6km s-min=18.7km az=60.0*
*NEIC **10** 16:26:33.7±1.8, 6°.8N±0°.1×94°.4E±0°.1, h10km±1km, mb4.0/6, Error ellipse: s-maj=25.7km s-min=14.8km az=239.0*
ISC 10 16:26:35.3±0.9**, 6°.8N**±0°.1×**94°.4E**±0°.1**, h26**km**, n22, σ0ˢ91**/17**, mb3.8**/10**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	2.97	121	Pn	Pn	16 27 19.9	-0.9
PSI	Prapat	6.00	131	Pn	Pn	16 28 03.8	+1.2
	1.4nm,0.3s,baz=335,slow=16,SNR=2.5						
RPSI	Rantau Prapat	6.07	132		Pn	16 28 03.8	+0.4
PBKT	Sadao Pong	11.65	33	Pn	Pn	16 29 20.5	+0.5
CMAR	Chiang Mai Arr	12.41	20	Pn	Pn	16 29 31.5	+1.0
	0.3nm,0.3s,baz=209,slow=14,SNR=6.0						
CMAR				LR	LR	16 33 40.0	
	comp=Z,25nm,19.6s,baz=204,slow=34						
H08S3	Diego Garcia H	26.14	237	T	T	16 58 46.7	
	baz=56,slow=75,SNR=4.8						
H08S2	Diego Garcia H	26.14	237	T	T	16 58 44.5	
	baz=56,slow=75,SNR=5.4						
H08S1	Diego Carcia H	26.15	237	T	T	16 58 38.1	
	baz=56,slow=75,SNR=5.2						
FITZ	Fitzroy Crossi	39.52	129	P	P	16 34 06.1	+1.8
	1.4nm,1.0s,baz=270,slow=11,SNR=1.4						
MKAR	Makanchi Array	41.20	347	P	P	16 34 17.6	-0.2
	0.5nm,0.6s,baz=169,slow=7.4,SNR=3.9						
MAKZ	Makanchi	41.28	347	P	P	16 34 18.2	-0.3
MAKZ				IAmb	IAmb	16 34 39.3	
	comp=Z,4.2nm,1.4s						
SONM	Songino Array	42.16	12	P	P	16 34 24.5	-1.3
	comp=Z,0.1nm,0.3s,baz=181,slow=9.7,SNR=1.7						
SONM				LR	LR	16 55 26.7	
	comp=Z,30nm,20.2s,baz=357,slow=41						
SONM	Songino Array	42.16	12	IAmb	IAmb	16 34 46.7	
	comp=Z,2.9nm,1.4s						
WRA	Warramunga Arr	47.43	125	P	P	16 35 07.7	-0.4
	comp=Z,0.5nm,0.8s,baz=304,slow=9.0,SNR=2.6						
WRA	Warramunga Arr	47.43	125	P	P	16 35 08.2	+0.1
WB2	Warramunga Arr	47.44	125	P	P	16 35 06.9	-1.3
ZALV	Zalesovo Beam	47.66	352	P	P	16 35 08.9	-0.5
	comp=Z,0.7nm,0.4s,baz=103,slow=4.6,SNR=1.3						
ASAR	Alice Springs	49.03	129	P	P	16 35 20.2	-0.2
	comp=Z,0.2nm,0.7s,baz=303,slow=7.8,SNR=5.7						
ABKAR	Akbulak array	51.30	332	P	P	16 35 38.1	+0.8
ABKAR				IAmb	IAmb	16 35 45.8	
	comp=Z,1.3nm,0.8s						
GNI	Garni	55.38	315	LR	LR	17 02 49.6	
	comp=Z,16nm,18.2s,baz=288,slow=39						
FINES	FINESS Array B	73.79	332	P	P	16 38 07.5	+0.3
	comp=Z,1.7nm,0.8s,baz=116,slow=4.4,SNR=4.2						
TSUM	Tsumeb	79.89	249	P	P	16 38 42.3	-0.3
TSUM				IAmb	IAmb	16 39 00.5	
	comp=Z,8.1nm,1.4s						

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*IDC **10** 16:35:46.5±0.5, 8°.50N×71°.42W, h0km, mb4.1/17, mb1 4.3/22, mb1mx4.2/52, mbtmp4.2/22, ML4.3/4, MS3.7/11, Ms1 3.7/11, ms1mx3.4/28, Error ellipse: s-maj=13.5km s-min=8.7km az=152.0*
*NEIC **10** 16:35:48.5±1.8, 8°.56N±0°.06×71°.39W±0°.04, h5km±4km, mb4.6/27, Mwr4.2(CAR), Error ellipse: s-maj=9.4km s-min=4.9km az=155.0*
*FUNV **10** 16:35:49.1, 8°.48N×71°.53W, h1km, MW4.2*
*VAO **10** 16:35:55.5±0.3, 8°.55N×70°.85W, h10km, mb4.4*
ISC 10 16:35:48.7±0.3**, 8°.55N**±0°.02×**71°.41W**±0°.02**, h10**km**, n170, σ2ˢ00**/219**, mb4.5**/28**, MS3.7**/9**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.60	116	eP	Pg	16 35 59.4	-1.0
SOCV				eS	Sg	16 36 07.8	-0.6
SDV	Santo Domingo	0.83	66	Pg	Pg	16 36 04.1	-0.7
	264nm,0.3s,baz=294,slow=11,SNR=367						
SDV				Lg	Lg	16 36 16.0	
	520nm,0.3s,baz=250,slow=18,SNR=12						
SDV				LR	LR	16 36 40.9	
	comp=Z,3µm,18.4s,baz=342,slow=62						
SDV	Santo Domingo	0.83	66	eP	Pb	16 36 05.0	-0.3
SDV				eS	Sb	16 36 16.9	+0.1
SDV	Santo Domingo	0.83	66	eP	Pb	16 36 04.7	-0.7
SDV	Santo Domingo	0.83	66		Pb	16 36 04.7	-0.7
SDV				Sg	Sg	16 36 14.4	-1.3
CAPV	Capacho	1.13	233	eP	Pb	16 36 07.5	-2.8
CAPV				eS	Sg	16 36 21.4	-3.6
PAMC	Pamplona, Colo	1.76	227	eP	Pn	16 36 19.6	0.0
PAMC				eS	Sn	16 36 42.5	+0.2
PAMC				i		16 36 46.7	
	comp=Z,6µm,0.4s						
MCQV	Machiques	1.86	323	eP	Pn	16 36 21.3	+0.6
MCQV				eS	Sb	16 36 45.8	-0.4
OCAC	Ocana	1.92	261	eP	Pn	16 36 21.7	+0.2
OCAC				eS	Sn	16 36 45.6	-0.2
OCAC	Ocana	1.92	261		Pn	16 36 21.7	+0.2
TAMC	Tame, Arauca	2.13	190	eP	Pn	16 36 25.1	+0.6
TAMC				eS	Sb	16 36 53.6	-0.5
TAMC				i		16 37 00.1	
	comp=Z,2µm,0.6s						
LL1C	La Loma 1 Cana	2.34	295	eP	Pb	16 36 30.1	-0.9
LL1C				eS	Sb	16 36 59.4	-0.5
ELOV	Elorza	2.45	129	eP	Pb	16 36 30.6	-2.2
ELOV				eS	Sb	16 37 01.9	-1.2
ELOV	Elorza	2.45	129	eP	Pb	16 36 30.6	-2.2
ELOV				eS	Sb	16 37 01.0	-2.1
SIQV	Siquisique	2.62	37	eP	Pb	16 36 33.4	-2.3
SIQV				eS	Sb	16 37 06.4	-1.5
BARC	Barichara	2.62	222	eP	Pn	16 36 32.8	+1.4
BARC				eS	Sb	16 37 08.7	+0.4
BARC				i		16 37 12.6	
	comp=Z,2µm,0.4s						
SMLC	San Martn de	2.65	276	eP	Pn	16 36 30.9	-0.5
SMLC				eS	Sb	16 37 07.4	-1.4
CVALL	Valledupar, Ce	2.67	317	eP	Pn	16 36 31.9	+0.1
CVALL				eS	Sn	16 37 03.5	-0.7
BRRC	Barranca, Sant	2.70	238	eP	Pn	16 36 32.9	+0.7
BRRC				eS	Sb	16 37 10.9	+0.7
BRRC				i		16 37 23.0	
	comp=Z,687nm,0.4s						
ARGC	Ariguani, Magd	3.09	295	eP	Pn	16 36 37.3	-0.3
ARGC				eS	Sn	16 37 15.1	+0.5
ARGC				i		16 37 36.1	
	comp=Z,370nm,0.5s						
RUSC	La Rusia	3.12	212	eP	Pn	16 36 39.1	+0.8
RUSC				eS	Sn	16 37 16.3	+0.3
RUSC				i		16 37 28.5	
	comp=Z,638nm,0.7s						
URIC	Uribia, Colomb	3.19	350	eP	Pn	16 36 38.7	-0.1
URIC				eS	Sn	16 37 15.4	-1.5
URIC				i		16 37 31.8	
	comp=Z,471nm,0.6s						
URIC	Uribia, Colomb	3.19	350		Pn	16 36 37.9	-0.9
BAUV	El Baul	3.35	83	eP	Pn	16 36 42.7	+1.6
BAUV				eS	Sn	16 37 23.0	+2.1
ZARC	Zaragoza, Cauc	3.58	253	eP	Pn	16 36 44.0	-0.3
ZARC				eS	Sn	16 37 28.9	+2.3
ZARC	Zaragoza, Cauc	3.58	253		Pn	16 36 43.9	-0.3
JACV	Jacura	3.58	45	eP	Pn	16 36 47.5	+3.2
JACV				eS	Sn	16 37 28.8	+2.1
MONV	Montecano	3.67	23	eP	Pn	16 36 46.8	+1.3
MONV				eS	Sn	16 37 29.8	+1.0
SMRC	Santa Marta, M	3.80	313	eP	Pn	16 36 46.4	-1.0
SMRC				eS	Sn	16 37 28.1	-4.1
SMRC				i		16 37 47.5	
	comp=Z,363nm,0.4s						
SPBC	San Pablo de B	3.91	223	eP	Pn	16 36 49.7	+0.8
SPBC				eS	Sn	16 37 36.6	+1.7
SPBC				i		16 37 57.7	
	comp=Z,423nm,0.7s						
SJCC	San Jacinto, C	3.96	290	eP	Pn	16 36 50.9	+1.3
SJCC				eS	Sn	16 37 36.9	+0.8
SJCC				i		16 38 02.8	
	comp=Z,416nm,0.5s						
SJCC	San Jacinto, C	3.96	290		Pn	16 36 50.2	+0.7
TURV	Turiamo	3.99	61	eP	Pn	16 36 52.6	+2.6
TURV				eS	Sn	16 37 38.7	+1.9
BENV	Beln	4.01	69	eP	Pn	16 36 52.2	+1.9
BENV				eS	Sn	16 37 39.2	+1.7
UREC	San Jos de Ur	4.16	259	eP	Pn	16 36 52.9	+0.6
UREC				i		16 38 02.1	
	comp=Z,172nm,0.3s						
MOTC	Monteria, Cord	4.22	273	eP	Pn	16 36 53.5	+0.5
MOTC				eS	Sn	16 37 43.5	+1.0
MOTC				i		16 38 10.7	
	comp=Z,299nm,0.6s						
MOTC	Monteria, Cord	4.22	273		Pn	16 36 53.5	+0.5
PTGC	Puerto Gaitan,	4.38	190	eP	Pn	16 36 55.7	+0.4
PTGC				eS	Sn	16 37 45.8	-0.7
CHIC	Chingaza	4.53	211	eP	Pn	16 36 58.2	+0.6
CHIC				eS	Sn	16 37 49.8	-0.9
CHIC				i		16 38 14.0	
	comp=Z,145nm,0.5s						
NORC	Norcasia	4.54	229	eP	Pn	16 36 57.7	+0.2
NORC				eS	Sn	16 37 46.5	-3.9
NORC				i		16 38 07.9	
	comp=Z,211nm,0.5s						
TACV	Tcata	4.60	70	eP	Pn	16 37 00.4	+2.0
TACV				eS	Sn	16 37 52.7	+0.7
ROSC	El Rosal	4.69	218	Pn	Pn	16 37 00.0	+0.2
	comp=Z,12nm,0.3s,baz=83,slow=8.1,SNR=17						
ROSC				Sn	Sn	16 37 59.9	+5.4
	comp=Z,60nm,0.3s,baz=28,slow=20,SNR=4.1						
ROSC				Lg	Lg	16 38 15.1	
	comp=Z,24nm,0.3s,baz=352,slow=20,SNR=5.8						
ROSC	El Rosal	4.69	218	eP	Pn	16 37 02.4	+2.6
ROSC				eS	Sn	16 37 51.5	-3.0
ROSC				i		16 38 25.0	
	comp=Z,228nm,0.8s						
ROSC	El Rosal	4.69	218		Pn	16 37 01.2	+1.4
HELC	Santa Helena	4.71	240	eP	Pn	16 37 00.3	+0.1
HELC				eS	Sn	16 37 59.2	+4.1
HELC				i		16 38 18.1	
	comp=Z,147nm,0.5s						
CARV	Caracas	4.82	66	eP	Pn	16 37 03.9	+2.3
CARV				eS	Sn	16 37 58.1	+0.6
PAYV	Puerto Ayacuch	4.85	130	eP	Pn	16 37 01.9	+0.2
PAYV				eS	Sn	16 37 56.8	-1.2
CACV	CAICARA DEL OR	4.92	101	eP	Pb	16 37 11.1	-3.8
CACV				eS	Sb	16 38 12.0	-2.1
LCBC	Los crdobas,	4.92	274	eP	Pn	16 37 02.9	+0.2
LCBC				eS	Sn	16 38 02.1	+2.4
LCBC				i		16 38 05.1	
	comp=Z,190nm,0.6s						
VILC	Villavicencio,	4.96	207	eP	Pn	16 37 03.6	+0.2
VILC				eS	Sn	16 37 59.7	-1.2
DBBC	Dabeiba	5.00	253	eP	Pn	16 37 06.4	+2.5
DBBC				eS	Sn	16 38 05.5	+3.7
MERV	Las Mercedes	5.10	82	eS	Sn	16 38 04.2	+0.1
GUY2C	Guyana, Caldas	5.13	230	eP	Pn	16 37 06.9	+0.8
GUY2C				eS	Sn	16 38 08.5	+2.8
GUY2C				i		16 38 37.2	
	comp=Z,178nm,0.5s						
CBOC	Ciudad Bolivar	5.29	240	eP	Pn	16 37 10.1	+2.1
CBOC				eS	Sn	16 38 14.9	+5.7
CBOC				i		16 38 36.3	
	comp=Z,76nm,0.6s						
BIRV	Birongo	5.42	69	eP	Pn	16 37 11.4	+1.9
BIRV				eS	Sn	16 38 12.0	0.0
ANIL	Santa Ana	5.66	225	eP	Pn	16 37 14.4	+1.2
ANIL				eS	Sn	16 38 17.1	-1.3
ANIL				i		16 38 26.1	
	comp=Z,275nm,0.4s						
CAPC	Capurgana	5.88	271	eP	Pn	16 37 14.6	-1.3
CAPC				eS	Sn	16 38 19.3	-4.1
CAPC				i		16 38 23.6	
	comp=Z,61nm,0.5s						
CAP2	Capurgana	5.89	271	Pn	Pn	16 37 14.6	-1.5
ORTC	Ortega, Tolima	5.98	220	eP	Pn	16 37 17.6	+0.2
ORTC				eS	Sn	16 38 24.2	-1.9
ORTC				i		16 39 05.0	
	comp=Z,100nm,0.6s						
GUVC	San Jose del G	6.09	192	eP	Pn	16 37 18.7	-0.1
GUVC				eS	Sn	16 38 25.4	-3.1
GUVC				i		16 39 06.9	
	comp=Z,268nm,0.6s						
PTAC	Punta Ardita,	6.49	258	eP	Pn	16 37 24.0	-0.4
PTAC				eS	Sn	16 38 35.8	-2.8
YOTC	Yotoco, Valle	6.68	228	eP	Pn	16 37 28.0	+0.9
YOTC				eS	Sn	16 38 47.9	+4.5
MACC	Macarena, Meta	6.81	201	eP	Pn	16 37 26.9	-1.8
MACC				eS	Sn	16 38 39.1	-7.3
PCRV	Puerto La Cruz	6.87	76	Pn	Pn	16 37 30.1	+0.5
	comp=Z,4.5nm,0.3s,baz=316,slow=2.9,SNR=18						
PCRV				Sn	Sn	16 38 50.9	+2.9
	comp=Z,12nm,0.3s,baz=314,slow=21,SNR=9.2						
PCRV				Lg	Lg	16 39 28.9	
	baz=206,slow=20,SNR=1.8						
PLCV	Puerto La Cruz	6.92	76		Sn	16 38 50.9	+1.9
GARC	Garzon, Huila	7.51	213	eP	Pn	16 37 38.6	0.0
GARC				eS	Sn	16 39 01.1	-3.0
GARC				i		16 39 20.2	
	comp=Z,62nm,0.3s						
BCIP	Isla Barro Col	8.36	275	Pn	Pn	16 37 49.2	-0.7
CRPR	Cabo Rojo, PR	10.29	24	Pn	Pn	16 38 15.1	-1.3
DR12	Loma Pena Alta	10.37	11	Pn	Pn	16 38 16.4	-1.2
SDDR	Presa de Saban	10.37	1		Pn	16 38 18.7	+1.0
CELP	Cerrillos	10.57	26	Pn	Pn	16 38 19.3	-1.0
AOPR	Arecibo Observ	10.74	24	Pn	Pn	16 38 22.3	-0.3
PDPR	Patillas Dam,	10.77	29	Pn	Pn	16 38 21.8	-1.2
SJG	San Juan	10.79	28	Pn	Pn	16 38 22.7	-0.7
	comp=Z,5.4nm,0.3s,baz=299,slow=13,SNR=3.0						
SJG				Sn	Sn	16 40 15.3	-9.0
	comp=Z,2.1nm,0.3s,baz=306,slow=19,SNR=1.4						
SJG				LR	LR	16 42 27.7	
	comp=Z,188nm,20.6s,baz=168,slow=37						
OTAV	Otavalo	10.84	221	Pn	Pn	16 38 25.4	+1.1
MTP	Monte Pirata	11.07	30	Pn	Pn	16 38 26.8	-0.3
CBYP	Canovanas	11.07	29	Pn	Pn	16 38 25.7	-1.5
CUPR	Culebra, Puert	11.38	31	Pn	Pn	16 38 31.0	-0.4
STVI	Saint Thomas	11.59	32	Pn	Pn	16 38 34.2	0.0
BOAV	Boa Vista	12.44	119	eP	Pn	16 38 44.9	-1.0
BOAV	Boa Vista	12.44	119		Pn	16 38 45.5	-0.3
TBTG	Tabatinga, AM	12.74	173	eP	Pn	16 38 57.0	+7.0

PTGA	Pitinga	14.66	128	Pn	Pn	16 39 14.5	-1.8
	comp=Z,1.4nm,0.3s,baz=309,slow=14,SNR=12						
PTGA				Sn	Sn	16 41 48.6	-10
	comp=Z,0.9nm,0.3s,baz=329,slow=22,SNR=2.9						
PTGA				Lg	Lg	16 43 27.7	
	comp=Z,1.8nm,0.3s,baz=28,slow=23,SNR=5.8						
MACA	Manacapuru-AM	15.80	137	*e*P	P	16 39 33.2	-2.1
CZSB	Cruzeiro do Su	16.22	185	*e*P	P	16 39 45.1	+5.1
ATAH	Atahualpa	17.07	204	P	P	16 39 49.0	-0.7
	comp=Z,0.3nm,0.3s,baz=83,slow=18,SNR=2.7						
ATAH				LR	LR	16 46 39.9	
	comp=Z,304nm,21.0s,baz=27,slow=38						
MDP	Montagnes des	18.94	99	P	P	16 40 09.2	-0.8
	comp=Z,0.5nm,0.3s,baz=257,slow=14,SNR=1.9						
ETMB	Extrema	18.96	164	*e*P	Pn	16 40 14.2	+3.3
ETMB	Extrema	18.96	164	P	Pn	16 40 11.2	+0.3
SAML	Samuel	19.21	155	P	P	16 40 13.3	+0.3
MALB	Monte Alegre	19.97	120	*e*P	Pn	16 40 24.4	+1.4
ITTB	Itaituba	20.22	129	*e*P	Pn	16 40 27.3	+1.3
MCPB	Macapa, AP	21.21	114	*e*P	P	16 40 37.1	+2.3
NPGB	Novo Progresso	22.27	134	*e*P	P	16 40 47.6	+1.5
VILB	Vilhena	24.09	152	*e*P	P	16 41 09.8	+5.2
LPAZ	La Paz	24.89	173	P	P	16 41 12.2	-0.3
	comp=Z,3.0nm,0.9s,baz=3.9,slow=9.6,SNR=6.4						
LPAZ				Lg	Lg	16 48 51.9	
	comp=Z,4.5nm,1.2s,baz=24,slow=12,SNR=2.3						
LPAZ				LR	LR	16 52 04.9	
	comp=Z,370nm,18.9s,baz=40,slow=39						
LPAZ	La Paz	24.89	173	P	P	16 41 12.3	-0.3
LPAZ				IAmb	IAmb	16 41 25.1	
	comp=Z,7.0nm,0.8s						
PRPB	Parauapebas	26.02	124	*e*P	P	16 41 23.3	+1.1
SIV	San Ignacio	26.44	157	P	P	16 41 26.2	+0.2
	comp=Z,5.5nm,1.1s,baz=334,slow=7.9,SNR=12						
SIV				Lg	Lg	16 49 41.0	
	comp=Z,7.2nm,0.9s,baz=241,slow=23,SNR=3.0						
SIV				LR	LR	16 52 28.7	
	comp=Z,329nm,19.7s,baz=286,slow=38						
PTLB	Pontes e Lacer	26.76	153	*e*P	P	16 41 35.0	+6.2
PB11	IPOC Station P	28.18	177	P	P	16 41 40.6	-1.1
PB11				IAmb	IAmb	16 42 09.5	
	comp=Z,21nm,1.4s						
SNDB	Serra Nova Dou	28.56	135	*e*P	P	16 41 48.3	+3.3
TKL	Tuckaleechee C	29.26	339	P	P	16 41 51.8	+0.8
	comp=Z,4.4nm,0.7s,baz=125,slow=13,SNR=1.7						
SMTB	Santa Maria do	29.36	126	*e*P	P	16 41 54.0	+1.9
ROSB	Rosrio	29.48	112	*e*P	P	16 41 56.5	+3.2
PEXB	Peixe	30.80	131	*e*P	P	16 42 06.3	+1.4
T50A	Nancy	30.86	339	P	P	16 42 06.1	+0.9
T50A				IAmb	IAmb	16 42 09.6	
	comp=Z,7.5nm,0.7s						
ARAG	Araguaiana, MT	30.94	141	*e*P	P	16 42 10.1	+4.0
LVC	Limon Verde	31.06	176	*e*P	P	16 42 13.6	+6.1
SDBA	SAO DESIDERIO	33.57	128	*e*P	P	16 42 32.4	+3.1
NBPB	Pedra_Branca-C	34.68	113	*e*P	P	16 42 42.4	+3.4
JANB	Januaria	35.66	131	*e*P	P	16 42 50.5	+3.2
WMOK	Wichita Mounta	36.19	320	P	P	16 42 52.1	+0.4
WMOK				IAmb	IAmb	16 42 57.5	
	comp=Z,9.0nm,1.4s						
NBPN	Ponto Novo - B	36.54	121	*e*P	P	16 42 56.7	+1.8
TXAR	Lajitas Array	36.65	309	P	P	16 42 57.2	+1.4
	comp=Z,0.4nm,0.5s,baz=131,slow=9.9,SNR=5.6						
TXAR				LR	LR	17 01 31.9	
	comp=Z,37nm,18.4s,baz=0.0,slow=42						
MC01	Montes Claros	36.98	133	*e*P	P	16 43 02.3	+3.6
BB19B	Bebedouro	37.03	143	*e*P	P	16 43 01.8	+2.8
CPUP	Villa Florida	37.27	159	LR	LR	16 59 48.1	
	comp=Z,155nm,19.2s,slow=39						
NBLV	Livramento - P	37.83	114	*e*P	P	16 43 08.2	+2.3
MNTX	Cornudas Mount	39.07	311	P	P	16 43 17.9	+1.7
CMC01	Camacan, BA	39.53	127	*e*P	P	16 43 23.6	+3.5
NBRF	Rio Formoso -	39.99	114	*e*P	P	16 43 25.9	+2.0
GUA01	Guaratinga, BA	40.01	129	*e*P	P	16 43 26.1	+2.0
BSFB	Barra de Sao F	40.60	132	*e*P	P	16 43 31.9	+3.0
SDCO	Great Sand Dun	42.33	319	P	P	16 43 44.3	+1.0
ISCO	Idaho Springs	43.59	321	P	P	16 43 54.5	+1.0
ISCO				IAmb	IAmb	16 44 00.6	
	comp=Z,5.9nm,1.2s						
ULM	Lac du Bonnet	46.28	338	P	P	16 44 13.5	-0.9
	comp=Z,2.4nm,0.5s,baz=140,slow=12,SNR=2.9						
ULM				LR	LR	17 04 22.3	
	comp=Z,95nm,21.3s,baz=128,slow=37						
SCHQ	Schefferville	46.30	4	P	P	16 44 14.8	+0.3
	comp=Z,4.2nm,0.9s,baz=217,slow=5.1,SNR=2.0						
SCHQ				LR	LR	17 03 25.2	
	comp=Z,80nm,19.5s,baz=268,slow=36						
LC01	Cunco	47.20	181	P	P	16 44 21.0	-0.7
PD31	Pinedale Array	47.73	322	P	P	16 44 25.7	-0.4
PD31				IAmb	IAmb	16 44 29.7	
	comp=Z,12nm,1.4s						
PDAR	Pinedale Array	47.73	322	P	P	16 44 25.7	-0.4
	comp=Z,1.3nm,0.5s,baz=116,slow=10,SNR=13						
PDAR	Pinedale Array	47.73	322	P	P	16 44 26.2	0.0
MOOW	Moose Ponds	49.00	323	P	P	16 44 35.9	0.0
PLCA	Paso Flores	49.04	179	P	P	16 44 34.4	-1.6
	comp=Z,8.0nm,0.8s,baz=1.1,slow=8.4,SNR=16						
PLCA	Paso Flores	49.04	179	P	P	16 44 35.2	-0.8
PLCA				IAmb	IAmb	16 44 38.6	
	comp=Z,11nm,0.9s						
FXWY	Fox Creek	49.11	322	P	P	16 44 36.9	+0.2
FXWY				IAmb	IAmb	16 44 45.0	
	comp=Z,7.8nm,1.4s						
LL04	Puerto Octay	49.22	181	P	P	16 44 36.8	-0.5
BOZ	Bozeman (W)	50.55	324	P	P	16 44 50.0	+2.4
MCMT	McKenzie Canyo	50.85	323	P	P	16 44 50.3	+0.3
HRY	Holter Researc	51.30	325	P	P	16 44 53.3	+0.1
NVAR	Mina Array Bea	51.52	313	P	P	16 44 55.6	+0.5
	comp=Z,0.2nm,0.3s,baz=122,slow=6.8,SNR=1.6						
NVAR				LR	LR	17 09 23.8	
	comp=Z,57nm,20.0s,baz=84,slow=39						
PLID	Pearl Lake	52.91	321	P	P	16 45 06.1	+0.8
PLID				IAmb	IAmb	16 45 08.0	
	comp=Z,4.8nm,1.1s						
YKA	Yellowknife Ar	62.26	339	LR	LR	17 13 51.0	
	comp=Z,62nm,21.8s,baz=0.0,slow=37						
DBIC	Dimbokro	65.92	86	P	P	16 46 36.1	+0.6
	comp=Z,2.2nm,0.6s,baz=281,slow=5.2,SNR=1.6						
KOWA	Kowa	66.11	78	P	P	16 46 36.4	-0.3
	comp=Z,2.1nm,0.7s,baz=230,slow=7.6,SNR=5.9						
KOWA	Kowa	66.11	78	P	P	16 46 36.9	+0.2
KOWA				IAmb	IAmb	16 46 41.2	
	comp=Z,7.1nm,1.1s						
ESDC	Sonseca Array	67.25	51	P	P	16 46 43.0	-0.6
	comp=Z,1.1nm,1.0s,baz=252,slow=6.1,SNR=4.9						
TORD	Torodi Ar. Bea	71.73	79	P	P	16 47 10.1	-1.6
	comp=Z,1.3nm,0.8s,baz=280,slow=5.9,SNR=6.7						
TORD	Torodi Ar. Bea	71.73	79	IAmb	IAmb	16 47 16.2	
	comp=Z,1.9nm,1.0s						
INK	Inuvik	72.00	340	P	P	16 47 12.2	-0.1
INK				IAmb	IAmb	16 47 29.6	
	comp=Z,5.5nm,1.2s						
PCA	Pinnacle	72.15	331	P	P	16 47 12.5	-1.0
M27K	Edge Creek, AK	73.45	333	P	P	16 47 23.0	+1.7
M27K				IAmb	IAmb	16 47 25.8	
	comp=Z,7.1nm,1.2s						
BCAR	Beaver Creek A	73.58	333	P	P	16 47 22.6	+0.8
L27K	Beaver Creek,	73.60	333	P	P	16 47 22.6	+0.6
L27K				IAmb	IAmb	16 47 38.5	
	comp=Z,9.3nm,1.5s						
DOT	Dot Lake	74.71	334	P	P	16 47 29.6	+1.1
DOT				IAmb	IAmb	16 47 39.3	
	comp=Z,7.1nm,1.4s						
BMAR	Burnt Mountain	75.72	338	P	P	16 47 34.3	+0.1
ILAR	Eielson Array	76.13	335	P	P	16 47 36.0	-0.6
	comp=Z,0.4nm,0.5s,baz=102,slow=4.5,SNR=7.7						
ILAR				LR	LR	17 22 27.6	
	comp=Z,93nm,20.0s,baz=130,slow=37						
RND	Reindeer	76.78	333	P	P	16 47 41.3	+0.9
RND				IAmb	IAmb	16 47 46.9	
	comp=Z,8.5nm,1.1s						
TRF	Thorofare Moun	77.43	333	P	P	16 47 44.9	+0.7
DAVOX	Davos/Dischmat	77.86	44	P	P	16 47 47.1	+0.2
	comp=Z,3.6nm,0.8s,baz=307,slow=15,SNR=4.3						
PPLA	Purkeypile	78.24	332	P	P	16 47 49.0	+0.4
IMAR	Indian Mountai	79.12	336	P	P	16 47 53.8	+0.5
GERES	GERESS Array B	80.41	42	P	P	16 48 00.4	-0.3
	comp=Z,0.8nm,0.8s,baz=235,slow=4.7,SNR=3.8						
AKASG	Malin Array Be	90.12	39	P	P	16 48 47.0	-2.1
	comp=Z,0.2nm,0.3s,baz=273,slow=2.9,SNR=1.8						
KSH	Kashi	123.42	30	PKP	PKiKP	16 54 49.0	+2.0
ASAR	Alice Springs	151.49	235	PKPbc	PKPbc	16 55 42.2	-1.7
	comp=Z,1.3nm,0.7s,baz=119,slow=2.2,SNR=16						
CMAR	Chiang Mai Arr	151.53	19	PKPbc	PKPbc	16 55 42.3	-1.8
	comp=Z,0.7nm,0.6s,baz=313,slow=3.6,SNR=10						
CMAR	Chiang Mai Arr	151.53	19		PKPbc	16 55 42.8	-1.3
WRA	Warramunga Arr	152.64	243	PKPbc	PKPbc	16 55 45.3	-1.3
	comp=Z,2.4nm,0.7s,baz=111,slow=2.4,SNR=21						
WRA	Warramunga Arr	152.64	243		PKPbc	16 55 45.0	-1.6

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*IDC **10** 16:59:28.3±8.8, 4.°71S×146.°10E, h0^{km}, mb3.9/3, mb1 4.1/6, mb1mx3.7/41, mbtmp4.0/6, ML4.1/2, MS3.0/1, Ms1 3.0/1, ms1mx2.2/36, Error ellipse: s-maj=131.4km s-min=46.3km az=33.0*

ISC 10 16:59:40.6±3.1, **5.°8S**±0.°2×**145.°7E**±0.°2, **h10^{km}, n7,** σ**1.^{s}61**/9, **mb3.8**/3, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.84	158	Pn	Pn	17 00 40.6	+0.8
	14nm,0.3s,baz=8.7,slow=11,SNR=86						
PMG				Sn	Sn	17 01 25.2	+0.1
	9.7nm,0.3s,baz=343,slow=19,SNR=7.8						
CTA	Charters Tower	14.19	178	Pn	P	17 03 07.2	-2.0
	0.2nm,0.3s,baz=4.8,slow=12,SNR=1.5						
WRA	Warramunga Arr	17.84	217	P	Pn	17 03 50.6	+1.4
	0.9nm,0.3s,baz=40,slow=11,SNR=34						
WRA				S	S	17 07 15.6	+0.6
	baz=43,slow=19,SNR=5.7						
ASAR	Alice Springs	21.05	211	P	P	17 04 26.9	+2.0
	2.5nm,0.8s,baz=46,slow=9.0,SNR=23						
ASAR				S	S	17 08 17.7	-1.7
	2.6nm,0.9s,baz=31,slow=22,SNR=12						
FITZ	Fitzroy Crossi	23.05	236	P	P	17 04 45.0	-1.3
	2.0nm,0.4s,baz=50,slow=11,SNR=12						
STKA	Stephens Creek	26.19	188	P	P	17 05 15.7	+0.1
	1.4nm,0.7s,baz=12,slow=8.2,SNR=3.4						
LEM	Lembang	37.84	266	LR	LR	17 27 25.1	
	comp=Z,20nm,18.4s,baz=190,slow=44						

IDC 10 16:59:57.4±2.0, **6.°25S**×**129.°92E, h0^{km}, mb3.3**/1, **mb1 3.5**/5, **mb1mx3.3**/46, **mbtmp3.3**/5, **ML3.1**/4, **Error ellipse: s-maj=55.5km s-min=25.6km az=84.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.51	14	Pn	Pn	17 01 20.2	-0.6
	0.7nm,0.3s,baz=230,slow=22,SNR=21						
SIJI				Sn	Sn	17 02 15.9	-9.1
	1.5nm,0.3s,baz=138,slow=23,SNR=9.5						
FITZ	Fitzroy Crossi	12.49	199	Pn	Pn	17 02 58.1	+1.5
	0.1nm,0.3s,baz=24,slow=11,SNR=8.4						
FITZ				Sn	Sn	17 05 11.3	-5.3
	0.3nm,0.3s,baz=175,slow=17,SNR=7.0						
WRA	Warramunga Arr	14.27	163	Pn	Pn	17 03 19.3	-1.6
	0.1nm,0.3s,baz=340,slow=13,SNR=2.3						
WRA				Sn	Sn	17 05 47.3	-13
	0.2nm,0.3s,baz=334,slow=22,SNR=2.7						
ASAR	Alice Springs	17.73	168	P	Pn	17 04 05.6	-0.3
	0.1nm,0.3s,baz=342,slow=10.0,SNR=8.0						
CMAR	Chiang Mai Arr	39.20	309	P	P	17 07 27.8	+0.2
	0.2nm,0.4s,baz=119,slow=8.4,SNR=1.4						

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*PRU **10** 17:01:15.8±0.0, 51.°47N×16.°13E, h0^{km}*

ISC 10 17:01:15.4±1.9, **51.°47N**±0.°09×**16.°14E**±0.°04, **h0^{km}, n14,** σ**0.^{s}58**/29, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.64	171	*e*Pg	Pg	17 01 28.1	+0.5
KSP				*e*Sg	Sg	17 01 36.5	+0.6
CHVC	Chvalec	0.89	184	*e*PG	Pg	17 01 32.7	+0.3
CHVC				*e*SG	Sg	17 01 44.7	+0.8
	comp=Z,7.1nm,0.5s						
OSTC	Ostas	0.92	177	*e*PG	Pg	17 01 33.4	+0.4
OSTC				*e*SG	Sg	17 01 45.6	+0.7
	comp=Z,9.8nm,0.4s						
UPC	Upice	0.97	185	*e*PG	Pg	17 01 34.3	+0.3
UPC				*e*SG	Sg	17 01 46.5	0.0
	comp=Z,17nm,0.4s						
DPC	Dobruska-Polom	1.13	174	*e*PG	Pg	17 01 36.9	-0.2
DPC				*e*SG	Sg	17 01 51.8	+0.1
	comp=Z,6.2nm,0.6s						
PVCC	Panska Ves	1.37	227	*e*PG	Pg	17 01 41.3	-0.4
PVCC				*e*SG	Sg	17 01 59.2	-0.3
	comp=Z,28nm,0.2s						
BRG	Berggiesshubel	1.51	247	Pg	Pn	17 01 44.0	+0.3
BRG				Sg	Sg	17 02 03.9	0.0
BRG				Amp		17 02 04.4	
	comp=Z,9.0nm,0.3s						
PRU	Pruhonice	1.80	215	*e*PG	Pb	17 01 48.9	-0.4
PRU				*e*SG	Sg	17 02 13.5	+0.3
	comp=Z,5.0nm,0.6s						
MORC	Moravsky Berou	1.92	152	*e*PN	Pn	17 01 48.6	-0.8
MORC				*e*SG	Sn	17 02 15.2	+1.0
OKC	Ostrava-Krasne	2.08	141	*e*PG	Pb	17 01 53.7	-0.2
OKC				*e*SG	Sg	17 02 21.7	-0.4
	comp=Z,14nm,0.8s						
VRAC	Vranov	2.19	172	*e*SG	Sg	17 02 24.4	-1.2
NKC	Novy Kostel	2.65	244	*e*PG	Pb	17 02 04.0	+0.3
NKC				*e*SG	Sg	17 02 40.7	+0.2
	comp=Z,6.5nm,0.3s						
KHC	Kasperske Hory	2.86	216	*e*PN	Pn	17 02 02.2	-0.2
KHC				*e*PG	Pb	17 02 07.8	+0.4
KHC				*e*SN	Sn	17 02 37.0	-0.5
KHC				*e*SG	Sg	17 02 46.7	-0.7
CKRC	Cesky Krumlov	2.91	205	*e*PN	Pn	17 02 03.2	+0.3
CKRC				*e*SG	Sg	17 02 47.4	-1.3

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*HEL **10** 17:03:11.3±0.4, 67.°63N×33.°87E, h0^{km}, ML2.0, Explosion*

*NAO **10** 17:03:11.9±1.5, 67.°65N×33.°73E, ML2.6*

ISC 10 17:03:10.6±2.1, **67.°61N**±0.°04×**33.°8E**±0.°1, **h0^{km}, n22,** σ**1.^{s}48**/40, **Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APZ9	Apatity	0.17	256	Pg	Pg	17 03 14.8	+0.9
APZ9				Lg	Lg	17 03 17.1	
APZ9				Rg	Rg	17 03 18.0	
APZ9	Apatity	0.17	256	Pg	Pg	17 03 14.8	+0.9
APZ9				Sg	Sg	17 03 17.1	+1.1
APA0	Apatity Array	0.32	269	Pg	Pg	17 03 17.4	+0.6
	baz=96,slow=16						
APA0				Lg	Lg	17 03 21.0	
	baz=80,slow=28						
APA0				Rg	Rg	17 03 22.4	
	baz=70,slow=37						
APA0	Apatity Array	0.32	269	Pg	Pg	17 03 17.4	+0.6
	baz=96,slow=16						
APA0				Sg	Sg	17 03 21.0	0.0
	baz=80,slow=28						
VRF	Varrio	1.62	277	PG	Pn	17 03 40.1	-0.3
VRF				MSG		17 04 00.0	
	comp=Z,14nm,0.2s						
VRF				SG	Sn	17 04 00.3	-1.7
KU6	Riekki	2.23	226	PG	Pb	17 03 51.3	-0.4
KU6				MSG		17 04 17.9	
	comp=Z,7.2nm,0.2s						
KU6				SG	Sb	17 04 21.0	+1.1
MSF	Maaselka	2.56	230	PG	Pb	17 03 56.7	-0.6
	baz=48						
MSF				SG	Sb	17 04 29.9	+0.7
SGF	Sodankyl	2.81	270	PN	Pn	17 03 57.8	+1.0
SGF				SB	Sb	17 04 35.6	-1.0
RNF	Rovaniemi	3.22	255	PN	Pn	17 04 03.3	+1.0
RNF				SN	Sn	17 04 41.6	+0.3
KEV	Kevo	3.29	314	PN	Pn	17 04 04.0	+0.6
	baz=124						
KEV				SN	Sn	17 04 42.5	-0.7
ARA0	ARCESS Array S	3.62	306	Pn	Pn	17 04 08.0	+0.1
	baz=122,slow=16						
ARA0				Sn	Sn	17 04 49.2	-1.9
	baz=119,slow=22						
ARA0				Lg	Lg	17 05 00.4	
	baz=124,slow=28						
ARA0	ARCESS Array S	3.62	306	Pn	Pn	17 04 08.0	+0.1
	baz=122,slow=16						
ARA0				Sn	Sn	17 04 49.2	-1.9
	baz=119,slow=22						
ARA0				Sg	Sb	17 05 00.4	+0.7
	baz=124,slow=28						
ARA0	ARCESS Array S	3.62	306	PN	Pn	17 04 08.0	+0.1
	baz=121						
ARA0				SN	Sn	17 04 49.2	-1.9
KLF	Kolari	3.83	269	PG	Pb	17 04 18.6	-0.3
	baz=81						
KLF				SN	Sn	17 04 55.4	-0.9
HEF	Hetta	3.91	286	PN	Pn	17 04 11.9	0.0
HEF				SN	Sn	17 04 57.6	-0.8
TOF	Tornio	4.06	252	PG	Pb	17 04 24.9	+2.0
TOF				SN	Sn	17 05 01.6	-0.4
KTK1	Kautokeino	4.18	295	Pn	Pn	17 04 16.8	+1.2
KTK1				Sn	Sn	17 05 02.1	-2.8
KTK1				Lg	Lg	17 05 15.6	
KTK1	Kautokeino	4.18	295	*e*P	Pn	17 04 15.5	0.0
KTK1				*e*S	Sn	17 05 01.8	-3.2
KTK1				IAML		17 05 24.5	
	comp=Z,11nm,0.6s						
LANU	Lannavaara	4.51	281	PG	Pb	17 04 32.0	+1.4
KALU	Kalix	4.51	252	PG	Pb	17 04 33.0	+2.4
KALU				SG	Sg	17 05 32.1	-3.3
FIA0	FINESS Array S	7.03	212	Sn	Sn	17 06 12.7	-2.5
	baz=28,slow=28						
FIA0				Lg	Lg	17 06 43.6	
	baz=15,slow=22						
FIA0	FINESS Array S	7.03	212	Sn	Sn	17 06 12.7	-2.5
	baz=28,slow=28						

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*NNC **10** 17:18:01.2±2.1, 36.°78N×70.°63E, h220^{km}±42^{km}, mb2.6, mpv3.8, Error ellipse: s-maj=25.4km s-min=13.3km az=24.0*

ISC 10 17:17:59.2±3.6, **36.°6N**±0.°2×**70.°6E**±0.°2, **h200^{km}, n10,** σ**0.^{s}40**/12, **4C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.98	23	P	Pn	17 19 26.9	+0.4
	SNR=76						
UCH	Uchtor	6.35	27	P	Pn	17 19 31.7	+0.4
	SNR=20						
KK31	Karatay Array	6.46	359	⇑P	Pn	17 19 33.0	+0.6
	1.7nm,0.3s,baz=182,slow=13,SNR=23						
KK31				⇑S	Sn	17 20 45.8	-0.4
	3.0nm,0.5s						
EKS2	Erkin-Say	6.49	21	P	Pn	17 19 33.3	+0.4
	SNR=10						
AAK	Ala-Archa	6.70	25	P	Pn	17 19 36.2	+0.5
	SNR=16						
AAK	Ala-Archa	6.70	25	⇓P	Pn	17 19 35.8	+0.2
	3.9nm,0.3s						
AAK				⇑S	Sn	17 20 52.1	0.0
	6.0nm,1.1s						
ULHL	Ulahol	7.09	36	P	Pn	17 19 40.8	0.0
	SNR=5.2						
TKM2	Tokmak 2	7.36	30	P	Pn	17 19 44.2	0.0
	SNR=11						
TKM2	Tokmak 2	7.36	30	⇑P	Pn	17 19 44.3	+0.1
	3.1nm,0.5s						
AB31	Akbulak array	14.82	332	P	Pn	17 21 18.7	-0.3
	0.5nm,0.6s,baz=266,slow=35,SNR=8.1						

IDC 10 17:22:04.4±7.0, **5.°26S**×**151.°47E, h144^{km}**±46^{km}, **mb3.3**/3, **mb1 3.5**/4, **mb1mx3.1**/29, **mbtmp3.8**/4, **Error ellipse: s-maj=99.0km s-min=51.3km az=127.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	5.94	226	P	Pn	17 23 30.6	+0.3
	3.6nm,0.3s,baz=48,slow=7.8,SNR=12						
PMG				S	Sn	17 24 37.6	+0.3
	6.5nm,0.3s,baz=127,slow=11,SNR=14						
WRA	Warramunga Arr	22.15	227	P	P	17 26 48.9	0.0
	0.8nm,0.5s,baz=55,slow=10.0,SNR=7.1						
ASAR	Alice Springs	24.93	221	P	P	17 27 15.0	+0.5
	0.5nm,0.4s,baz=52,slow=9.1,SNR=11						
FITZ	Fitzroy Crossi	28.28	241	P	P	17 27 44.1	-0.4
	2.8nm,0.9s,baz=73,slow=11,SNR=8.4						
TORD	Torodi Ar. Bea	149.18	287	PKPbc	PKPbc	17 41 36.3	-0.8
	0.3nm,0.4s,baz=100,slow=3.5,SNR=2.5						

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*IDC **10** 17:22:41.5±1.1, 6.°01N×94.°26E, h0^{km}, mb3.9/7, mb1 4.0/9, mb1mx3.7/42, mbtmp3.9/9, ML3.7/2, MS3.4/7, Ms1 3.4/7, ms1mx3.1/43, Error ellipse: s-maj=43.9km s-min=17.5km az=62.0*

*NEIC **10** 17:22:44.2±2.2, 6.°32N±0.°10×94.°66E±0.°09, h10^{km}±1^{km}, mb4.5/18, Error ellipse: s-maj=19.1km s-min=11.6km az=218.0*

ISC 10 17:22:43.5±0.8, **6.°3N**±0.°1×**94.°6E**±0.°1, **h10^{km}, n42,** σ**1.^{s}34**/38, **mb4.4**/16, **MS3.5**/6, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	2.58	114		Pn	17 23 23.7	-1.7
LHMI				Sn	Sn	17 23 56.1	-0.8
SRIT	Nakonsritamara	5.50	65	Pn	Pn	17 24 03.2	-2.4
PSI	Prapat	5.54	128	Pn	Pn	17 24 09.4	+3.1
	1.4nm,0.3s,baz=318,slow=13,SNR=14						
PSI				Sn	Sn	17 25 10.8	+0.6
	2.5nm,0.3s,baz=14,slow=20,SNR=4.6						
RPSI	Rantau Prapat	5.61	129		Pn	17 24 09.4	+2.3
DGPR	DIGLIPUR	7.05	347	*e*P	Pn	17 24 29.6	+2.7
PBKT	Sadao Pong	12.00	31	Pn	Pn	17 25 34.4	-0.4
CM31	Chiang Mai Arr	12.84	19	Pn	Pn	17 25 45.7	-0.6
CMAR	Chiang Mai Arr	12.84	19	Pn	Pn	17 25 51.3	+5.0
	0.1nm,0.3s,baz=213,slow=14,SNR=5.0						
CMAR				Lg	Lg	17 29 42.1	
	0.0nm,0.3s,baz=187,slow=32,SNR=5.9						
CMAR				LR	LR	17 30 14.1	
	comp=Z,103nm,21.6s,baz=231,slow=34						
CMAR	Chiang Mai Arr	12.84	19		Pn	17 25 46.3	0.0
PALK	Pallekele	13.81	275	Sn	Sn	17 28 26.6	-6.6
	0.3nm,0.3s,baz=66,slow=21,SNR=1.5						
H08S3	Diego Garcia H	26.00	238	T	T	17 54 56.7	
	baz=60,slow=75						
H08S2	Diego Garcia H	26.00	238	T	T	17 55 02.1	
	baz=60,slow=75						
H08S1	Diego Carcia H	26.02	238	T	T	17 55 02.4	
	baz=60,slow=75						
SOEI	Soe	33.60	118	P	P	17 29 22.9	-1.5
NIL	Nilore	33.66	327	P	P	17 29 25.6	+0.8
NIL				IAmb	IAmb	17 29 30.5	
	comp=Z,12nm,1.2s						
DRK	Karamyk	38.91	332	P	P	17 30 09.8	-0.1
DRK				IAmb	IAmb	17 30 17.7	
	comp=Z,10nm,0.8s						
GAR	Garm	39.27	330	P	P	17 30 11.7	-0.9
CHGR	Chuyangaron	39.60	328	P	P	17 30 12.9	-2.5
CHGR				IAmb	IAmb	17 30 20.7	
	comp=Z,6.9nm,0.9s						
BTK	Batken	39.83	331	P	P	17 30 18.6	+1.3
BTK				IAmb	IAmb	17 30 26.6	
	comp=Z,7.6nm,1.2s						
MKAR	Makanchi Array	41.74	347	P	P	17 30 33.9	+1.1
	comp=Z,1.2nm,0.9s,baz=184,slow=8.7,SNR=2.3						
MKAR				LR	LR	17 51 40.4	
	comp=Z,37nm,18.4s,baz=174,slow=42						
KK31	Karatay Array	42.38	334	P	P	17 30 37.0	-1.2
KK31				IAmb	IAmb	17 30 44.7	
	comp=Z,5.4nm,1.2s						
KKAR	Karatay Array	42.38	334	P	P	17 30 37.0	-1.2
KKAR	Karatay Array	42.38	334	P	P	17 30 37.4	-0.7
KKAR				IAmb	IAmb	17 30 44.8	
	comp=Z,5.4nm,1.2s						
SONM	Songino Array	42.63	12	P	P	17 30 41.2	+0.9
	comp=Z,1.4nm,1.0s,baz=184,slow=8.0,SNR=6.5						
SONM				LR	LR	17 50 52.9	
	comp=Z,55nm,18.1s,baz=198,slow=39						
SONM	Songino Array	42.63	12	P	P	17 30 39.7	-0.5
KSRS	Korea Array	43.41	40	LR	LR	17 49 02.3	
	comp=Z,30nm,20.8s,baz=238,slow=36						
GEYT	Alibeck	45.68	319	LR	LR	17 52 17.0	
	comp=Z,50nm,18.1s,baz=215,slow=39						
WB0	Warramunga Arr	46.95	124	P	P	17 31 14.0	-1.0
WB0				IAmb	IAmb	17 31 52.0	
	comp=Z,5.6nm,1.1s						
WRA	Warramunga Arr	46.99	125	P	P	17 31 15.3	0.0
	comp=Z,1.0nm,0.8s,baz=315,slow=9.5,SNR=7.3						
WRA				PcP	PcP	17 32 48.3	+0.6
	comp=Z,0.5nm,1.0s,baz=297,slow=3.3,SNR=1.7						
WRA				LR	LR	17 53 57.1	
	comp=Z,60nm,18.1s,baz=305,slow=40						
WRA	Warramunga Arr	46.99	125	P	P	17 31 14.1	-1.2
WB2	Warramunga Arr	47.01	125	P	P	17 31 14.5	-0.9
WR0	Warramunga Arr	47.17	125	P	P	17 31 15.5	-1.2
WR0				IAmb	IAmb	17 31 37.6	
	comp=Z,8.8nm,1.5s						
ZALV	Zalesovo Beam	48.19	352	P	P	17 31 25.3	+1.3

	comp=Z,0.2nm,0.2s,baz=134,slow=8.3,SNR=1.4						
ASAR	Alice Springs	48.57	129	P	P	17 31 27.1	-0.5
	comp=Z,0.7nm,0.6s,baz=300,slow=7.5,SNR=8.3						
ASAR				PcP	PcP	17 32 52.8	-0.5
	comp=Z,0.3nm,0.6s,baz=316,slow=2.6,SNR=1.8						
ABKAR	Akbulak array	51.84	332	P	P	17 31 52.9	+1.0
ABKAR				IAmb	IAmb	17 31 59.1	
	comp=Z,5.9nm,1.1s						
ABKAR	Akbulak array	51.84	332	P	P	17 31 52.9	+1.0
STKA	Stephens Creek	58.70	133	LR	LR	18 02 20.0	
	comp=Z,38nm,18.4s,baz=32,slow=40						
KIV	Kislovodsk	58.79	318	P	P	17 32 40.5	-1.7
KIV				IAmb	IAmb	17 33 08.8	
	comp=Z,4.0nm,0.9s						
FIA1	FINESS Array S	74.32	332	P	P	17 34 21.0	-0.1
FINES	FINESS Array B	74.32	332	P	P	17 34 21.4	+0.4
	comp=Z,4.2nm,1.0s,baz=97,slow=6.4,SNR=11						
FINES	FINESS Array B	74.32	332	P	P	17 34 21.0	0.0
ARCES	ARCESS Array B	76.91	340	P	P	17 34 36.6	+0.8
	comp=Z,3.6nm,0.9s,baz=101,slow=8.3,SNR=1.6						

*NIC **10** 17:31:52.5±0.0, 35°.71N×31°.20E, h64^{km}±10^{km}, Ml3.4/5*
*ISK **10** 17:31:52.9, 35°.55N×31°.47E, h9^{km}, ML3.0/17*
*DDA **10** 17:31:55.1, 35°.69N×31°.53E, h18^{km}±2^{km}, ML2.8*
ISC 10 17:31:54.3±1.2**, 35°.62N**±0°.03×**31°.44E**±0°.02**, h12**^{km}±9^{km}**,**
n57, σ1^{s}43/75**, 1C, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAZI	Gazipasa	0.94	49	*i* P	Pg	17 32 12.2	-0.2
GAZI				*i* S	Sg	17 32 22.4	-2.4
GAZI	Gazipasa	0.94	49	PG	Pg	17 32 12.5	0.0
GAZI				SG	Sg	17 32 25.2	+0.4
AKMS	Akamas	0.95	129	P	Pg	17 32 12.6	0.0
AKMS				S	Sn	17 32 29.3	+2.3
AKMS				AML	AML	17 32 31.0	
	2.9nm,0.3s						
AKMS				AML	AML	17 32 31.0	
	2.9nm,0.3s						
AKMS				AML	AML	17 32 33.1	
	2.9nm,0.4s						
AKMS				AML	AML	17 32 33.1	
	2.9nm,0.4s						
ALFC	Alefka	1.06	116	P	Pg	17 32 14.2	-0.4
ALFC				S	Sn	17 32 30.9	+1.3
ALFC				AML	AML	17 32 33.9	
	1.9nm,0.2s						
ALFC				AML	AML	17 32 33.9	
	1.9nm,0.2s						
ALFC				AML	AML	17 32 38.2	
	2.1nm,0.2s						
ALFC				AML	AML	17 32 38.2	
	2.1nm,0.2s						
AKUM	Antalya-Kumluc	1.13	309	*i* P	Pn	17 32 16.5	+0.6
KEMT	Kemer-ANTALYA	1.21	324	PN	Pg	17 32 17.4	-0.2
KEMT				SN	Sn	17 32 35.7	+2.2
NATA	Nata	1.25	132	P	Pn	17 32 17.9	+0.2
NATA				S	Sn	17 32 36.7	+2.3
NATA				AML	AML	17 32 40.5	
	1.6nm,0.2s						
NATA				AML	AML	17 32 40.5	
	1.6nm,0.2s						
NATA				AML	AML	17 32 43.7	
	3.0nm,0.3s						
NATA				AML	AML	17 32 43.7	
	3.0nm,0.3s						
LEF	Lefka	1.29	112	*i* P	Pn	17 32 17.7	-0.4
ANTB	Antalya	1.43	334	PN	Pb	17 32 20.5	-0.3
ERMK	Ermenek	1.57	49	*i* P	Pb	17 32 23.3	-0.2
HDMB	Hadim	1.59	32	PN	Pn	17 32 22.8	+0.3
AKAS	Kas	1.61	293	*i* P	Pg	17 32 25.7	+0.6
AKAS	Kas	1.61	293	PN	Pn	17 32 22.9	+0.3
KORT	Korkueli	1.63	328	*i* P	Pg	17 32 25.4	-0.2
KORT				*i* S	Sg	17 32 49.9	+3.1
KORT				IAML		17 32 56.0	
	comp=N,95nm,0.6s						
KORT				IAML		17 33 00.0	
	comp=E,144nm,0.6s						
KORT	Korkueli	1.63	328	PN	Pb	17 32 24.1	-0.3
ATHAL	Athalassa	1.67	106	S	Sg	17 32 47.7	-0.4
ELL	Elmali	1.67	313	PN	Pn	17 32 24.1	+0.6
CSS	Mathiatis	1.68	112	P	Pn	17 32 23.1	-0.5
CSS				S	Sb	17 32 47.2	+0.8
ASGA	Asgata	1.70	119	S	Sn	17 32 46.8	+1.3
ASGA				AML	AML	17 32 55.5	
	comp=E,1.2nm,0.9s						
ASGA				AML	AML	17 32 59.0	
	comp=E,1.0nm,0.4s						
GULN	MERSIN_Gulnar	1.80	71	*i* P	Pn	17 32 25.6	+0.4
GULN				*i* S	Sn	17 32 44.6	-3.4
SEYD	Seydisehir-KON	1.81	10	PN	Pn	17 32 26.0	+0.5
BUCA	Burdur, Bucak-	1.85	338	*i* P	Pb	17 32 28.2	+0.2
SEDI	Konya, Seydise	1.85	8	*i* P	Pn	17 32 26.9	+1.0
SEDI				*i* S	Sn	17 32 48.5	-0.8
SEDI				IAML		17 32 53.0	
	comp=E,133nm,0.5s						
MVOU	Mavrovouni	1.90	108	⇑ *e*P	Pn	17 32 25.9	-0.6
MVOU				AML	AML	17 33 04.0	
	comp=E,0.6nm,0.7s						
MVOU				AML	AML	17 33 04.7	
	comp=E,0.5nm,0.6s						
KKBE	Karaman, Kazim	2.01	37	*i* P	Pn	17 32 29.7	+1.6
KKBE				*i* S	Sb	17 32 56.0	+0.2
KKBE				IAML		17 33 03.0	
	comp=N,70nm,0.5s						
OSC1	CSNet OBS 1	2.12	184	S	Sn	17 32 54.3	-1.4
FETY	Fethiye	2.16	299	*i* P	Pn	17 32 28.8	-1.3
FETY				*i* S	Sn	17 32 53.4	-3.4
FETY	Fethiye	2.16	299	PN	Pn	17 32 30.6	+0.5
CAME	Cameli-Denizli	2.17	308	PN	Pn	17 32 31.0	+0.6
CAEL	Denizli, Camel	2.27	312	*i* P	Pb	17 32 35.0	-0.3
KMER	Konya-Meram	2.27	19	*i* P	Pb	17 32 34.9	-0.4
KMER				*i* S	Sn	17 33 00.2	+0.4
KMER				IAML		17 33 08.0	
	comp=N,68nm,0.5s						
ISP	Isparta	2.32	342	PN	Pn	17 32 33.4	+1.0
BRDR	BURDUR-Merkez	2.35	332	*i* P	Pb	17 32 37.2	+0.6
KIZK	Mersin	2.36	68	*i* P	Pb	17 32 35.3	-1.4
BAGO	Egridir - ISPA	2.42	348	*i* P	Pn	17 32 34.7	+0.9
KONT	Konya--Tatoy	2.44	17	PN	Pn	17 32 35.1	+1.1
DOGA	KONYA_Doganhis	2.49	4	*i* P	Pb	17 32 37.5	-1.5
DOGA				*i* S	Sn	17 33 04.5	-0.7
DOGA				IAML		17 33 11.0	
	comp=N,62nm,0.7s						
DALY	Dalyan (Mula)	2.55	299	*i* P	Pn	17 32 34.7	-0.7
DALY				*i* S	Sn	17 33 02.1	-4.3
DALY	Dalyan (Mula)	2.55	299	PN	Pn	17 32 35.5	+0.1
BASM	Basmaki-Afyon	2.55	335	PN	Pn	17 32 36.7	+1.1
OSC2	CSNet OBS 4	2.63	165	S	Sn	17 33 08.0	-0.3
YVAC	Isparta, Yalva	2.65	357	*i* P	Pn	17 32 38.1	+1.1
YVAC				*i* S	Sn	17 33 09.8	+0.7
LADK	Ladik-KONYA	2.68	16	PN	Pn	17 32 38.4	+1.0
ARG	Arkhangelos	2.75	283	PN	Pn	17 32 39.1	+0.9
KERG	Konya-Eregli	2.81	50	*i* P	Pb	17 32 42.6	-1.9
KERG				*i* S	Sn	17 33 14.5	+1.3
TURN	Turunc	2.83	295	PN	Pn	17 32 40.3	+1.0
KZIL	AFYON_Kizioren	2.83	339	*i* P	Pn	17 32 40.9	+1.5
ALIN	Konya, Altinte	2.91	23	*i* P	Pn	17 32 38.8	-1.8
KDHN	Kadinhani	2.95	10	*i* P	Pn	17 32 42.8	+1.7
YER	Yerkesik	2.96	302	PN	Pn	17 32 42.4	+1.2
SHUT	Suhut-Afyon	3.01	347	PN	Pn	17 32 43.2	+1.2
PASA	Karahalli, USA	3.14	331	*i* P	Pn	17 32 42.8	-0.9
PASA				*i* S	Sn	17 33 17.6	-3.5
KIZT	Kizilcal	3.27	6	PN	Pn	17 32 46.9	+1.3
DAT	Datca	3.31	291	PN	Pn	17 32 47.1	+1.1
MLSB	Milas	3.39	301	PN	Pn	17 32 48.5	+1.4
YURE	YUREGIR	3.60	69	*i* P	Pn	17 32 52.1	+2.2
YAYL	Yayladag	3.82	82	*i* P	Pn	17 32 54.3	+1.2

*IDC **10** 17:44:57.3±1.3, 35°.61N×141°.04E, h0^{km}, mb3.6/5, mb1 3.7/8, mb1mx3.5/52, mbtmp3.7/8, ML3.4/3, Error ellipse: s-maj=29.2km s-min=22.8km az=59.0*
*NIED **10** 17:44:59.0, 35°.81N×140°.91E, h12^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-2.67; M$_{\theta\theta}$-1.61; M$_{\phi\phi}$4.28; M$_{r\theta}$0.72; M$_{\theta\phi}$-0.26; M$_{\phi r}$-0.00; Fault plane solution: M$_0$3.66000×10^{14} NP1: φ$_s$333.00000°, δ51.00000°, λ-125.00000°. NP2: φ$_s$202.00000°, δ51.00000°, λ-54.00000°.*
*JMA **10** 17:44:59.6±0.1, 35°.81N×140°.91E, h12^{km}±1^{km}, M3.7*
JMA Felt I J1.
ISC 10 17:44:58.7±1.3**, 35°.79N**±0°.04×**141°.00E**±0°.07**, h9**^{km}±7^{km}**,**
n26, σ1^{s}41/23**, mb3.6**/5**, 2C, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.14	234	P	Pg	17 45 02.5	+0.7
CHOJ				S	Sg	17 45 04.7	+0.8
JIHU	Itakohorinouch	0.42	295	⇑P	Pg	17 45 07.2	+0.2
JIHU				S	Sg	17 45 13.1	+0.5
JSMT	Sammumatsuo	0.47	253	⇑P	Pb	17 45 08.2	-0.9
JHYU	Hitachinakayam	0.65	329	P	Pg	17 45 11.5	+0.3
JHYU				S	Sg	17 45 19.4	-0.3
JCN	Nagara	0.74	241	P	Pn	17 45 14.0	-1.4
JYT	Yasato	0.79	304	P	Pg	17 45 13.0	-0.9
JYT				S	Sg	17 45 22.0	-2.2
JHO	Hitachi	0.90	337	P	Pg	17 45 15.2	-0.7
BSO4	Boso 4	0.96	214	P	Pn	17 45 17.9	-0.3
BSO4				*e*X		17 45 31.8	
MJAR	Matsushiro Arr	2.38	289	Pn	Pn	17 45 36.5	-1.5
	1.0nm,0.3s,baz=96,slow=16,SNR=47						
MJAR				Sn	Sn	17 46 08.7	+1.4
	1.0nm,0.3s,baz=282,slow=32,SNR=2.1						
MAT	Matsushiro	2.38	289	P	Pn	17 45 36.8	-1.2
MAT				*e*S	Sn	17 46 06.6	-0.7
ASAJ	Asahikawa	8.41	8	Pn	Pn	17 47 01.6	+0.8
	0.6nm,0.3s,baz=221,slow=7.0,SNR=6.2						
JCJ	Chichijima	8.72	173	Pn	Pn	17 47 02.9	-2.1
	1.6nm,0.3s,baz=236,slow=23,SNR=0.9						
H11N2	WAKE ISLAND Hy	27.82	118	T	T	18 19 52.3	
	baz=311,slow=75,SNR=46						
H11N1	WAKE ISLAND Hy	27.83	118	T	T	18 19 52.8	
	baz=311,slow=75,SNR=52						
H11N3	WAKE ISLAND Hy	27.84	118	T	T	18 19 53.6	
	baz=311,slow=75,SNR=65						
SONM	Songino Array	28.23	306	P	P	17 50 54.2	+2.3
	0.3nm,0.5s,baz=114,slow=7.0,SNR=2.4						
H11S1	WAKE ISLAND Hy	28.49	120	T	T	18 20 42.8	
	baz=312,slow=75,SNR=52						
H11S3	WAKE ISLAND Hy	28.49	120	T	T	18 20 40.7	
	baz=312,slow=75,SNR=44						
H11S2	WAKE ISLAND Hy	28.51	120	T	T	18 20 39.3	
	baz=312,slow=75,SNR=35						
ZALV	Zalesovo Beam	42.52	313	P	P	17 52 56.4	+2.2
	0.6nm,0.5s,baz=79,slow=7.5,SNR=2.9						
MKAR	Makanchi Array	44.51	303	P	P	17 53 11.8	+1.4
	1.2nm,0.9s,baz=95,slow=8.8,SNR=4.5						
ILAR	Eielson Array	50.73	32	P	P	17 53 59.0	+0.6
	0.4nm,0.7s,baz=280,slow=5.4,SNR=4.6						
WRA	Warramunga Arr	55.78	188	P	P	17 54 34.1	-2.0
	0.8nm,0.9s,baz=0.2,slow=7.6,SNR=2.8						
H03N2	Juan Fernandez	147.21	98	T	T	20 49 11.7	
	baz=290,slow=76,SNR=14						
H03N3	Juan Fernandez	147.22	98	T	T	20 49 12.4	
	baz=290,slow=76,SNR=16						
H03N1	Juan Fernandez	147.22	98	T	T	20 49 11.8	
	baz=290,slow=76,SNR=18						

*VAO **10** 17:48:14.6±0.3, 22°.05S×68°.45W, h10^{km}, mb5.3*
*SJA **10** 17:48:20.8±0.7, 22°.26S×68°.86W, h138^{km}±4^{km}, ML5.4, MW5.0*
*MOS **10** 17:48:21.8±1.1, 22°.06S×68°.51W, h101^{km}, mb5.4/4, Error ellipse: s-maj=14.0km s-min=7.8km az=106.8*
*GUC **10** 17:48:22.6±0.7, 22°.25S×68°.81W, h126^{km}±5^{km}, ML5.4*
*IDC **10** 17:48:22.8±0.3, 22°.29S×68°.69W, h104^{km}±2^{km}, mb4.8/26, mb1 4.8/30, mb1mx4.8/35, mbtmp5.1/30, MS4.0/14, Ms1 4.0/14, ms1mx3.9/20, Error ellipse: s-maj=10.5km s-min=7.3km az=97.0*
*NEIC **10** 17:48:23.1, 22°.24S×68°.72W, h113^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$-4.83; M$_{\theta\theta}$-0.65; M$_{\phi\phi}$5.48; M$_{r\theta}$-0.74; M$_{\theta\phi}$-0.25; M$_{\phi r}$-8.36; Fault plane solution: M$_0$9.86000×10^{16} NP1: φ$_s$169.30000°, δ16.21000°, λ-104.31000°. NP2: φ$_s$4.18000°, δ74.31000°, λ-85.89000°. Principal axes: T 10.1461, Plg29.0000°, Azm91.0000°; N -0.5901, Plg4.0000°, Azm183.0000°; P -9.5560, Plg60.0000°, Azm280.0000°;*
*BJI **10** 17:48:23.0±0.0, 22°.30S×68°.80W, h114^{km}, mB5.1/15*
*NEIC **10** 17:48:23.1±1.9, 22°.23S±0°.04×68°.71W±0°.06, h109^{km}±3^{km}, mb5.5/469, Mwr5.3/53, Mww5.3, ML5.5(GUC), Mwc5.3(GCMT), Error ellipse: s-maj=7.6km s-min=5.7km az=86.0*
*NEIC **10** 17:48:25, 22°.33S×68°.70W, h110^{km}, Moment Tensor Solution. Duration: 6^{s}0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.75; M$_{\theta\theta}$-0.09; M$_{\phi\phi}$0.83; M$_{r\theta}$-0.12; M$_{\theta\phi}$0.18; M$_{\phi r}$-1.02; Fault plane solution: M$_0$1.31000×10^{17} NP1: φ$_s$195.00000°, δ19.00000°, λ-82.00000°. NP2: φ$_s$7.00000°, δ71.00000°, λ-92.00000°. Principal axes: T 1.3690, Plg26.0000°, Azm99.0000°; N -0.1194, Plg3.0000°, Azm8.0000°; P -1.2496, Plg64.0000°, Azm273.0000°;*
*NEIC **10** 17:48:26, 22°.39S×68°.99W, h127^{km}, Moment Tensor Solution. Duration: 2^{s}2 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.53; M$_{\theta\theta}$0.19; M$_{\phi\phi}$0.33; M$_{r\theta}$-0.04; M$_{\theta\phi}$0.15; M$_{\phi r}$-1.05; Fault plane solution: M$_0$1.16000×10^{17} NP1: φ$_s$218.00000°, δ13.00000°, λ-59.00000°. NP2: φ$_s$6.00000°, δ79.00000°, λ-97.00000°. Principal axes: T 1.0643, Plg33.0000°, Azm102.0000°; N 0.1672, Plg7.0000°, Azm7.0000°; P -1.2314, Plg56.0000°, Azm267.0000°;*
*GCMT **10** 17:48:27.1±0.1, 22°.23S±0°.01×68°.88W±0°.01, h128^{km}, MW5.3/133, Moment Tensor Solution. s98,c146; s133,c219; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.60±.01; M$_{\theta\theta}$-0.03±.02; M$_{\phi\phi}$0.62±.02; M$_{r\theta}$-0.14±.01; M$_{\theta\phi}$-0.07±.02; M$_{\phi r}$-0.88±.01; Best double couple: M$_0$1.08800×10^{17} NP1: φ$_s$161.00000°, δ19.00000°, λ-114.00000°. NP2: φ$_s$6.00000°, δ73.00000°, λ-82.00000°. Principal axes: T 1.0920, Plg28.0000°, Azm90.0000°; N -0.0080, Plg7.0000°, Azm184.0000°; P -1.0840, Plg61.0000°, Azm288.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 10 17:48:22.6±0.2**, 22°.24S**±0°.03×**68°.69W**±0°.04**, h110**^{km}±1^{km}**, h110**^{km}**:pP-P, n862, σ1^{s}37**/847**, mb5.5**/253**, 130C-153D, Fault plane solution: NP1:**φ$_s$340.19385°**,** δ87.33721°**,** λ-96.13493°. **NP2:**φ$_s$226.81874°**,** δ6.68585°**,** λ-23.51782°. **Principal axes:** T Plg42.0244°**,** Azm76.0325°**;** N Plg6.1283°**,** Azm340.4800°**;** P Plg47.3198°**,** Azm243.7936°**; Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	0.42	209	P	Pn	17 48 39.6	+0.2
	3μm,0.3s,baz=36,slow=6.6,SNR=1892						
LVC				S	Sn	17 48 51.9	-0.1
	16μm,0.3s,baz=226,slow=17,SNR=44						
LVC	Limon Verde	0.42	209	*e*P	Pn	17 48 41.5	+2.1
LVC				*e*P	Pn	17 48 41.8	+2.4
LVC				*e*S	Sn	17 48 52.7	+0.7
PB09	IPOC Station P	0.68	311		Pn	17 48 40.9	0.0
AF01	San Pedro de A	0.85	146		Pn	17 48 43.9	+1.2
AF01				Sn	Sn	17 48 59.6	+1.9
PB06	IPOC Station P	0.94	240	⇑ *i*P	Pn	17 48 43.3	0.0
PB06				*i* S	Sn	17 48 59.4	+0.5
PB06				IAML		17 49 00.4	
	comp=N,102μm,0.6s						
PB06	IPOC Station P	0.94	240		Pn	17 48 43.1	-0.2
PB06				Sn	Sn	17 48 59.0	+0.1
PB06	IPOC Station P	0.94	240	*e*P	Pn	17 48 43.0	-0.3
PB06				*e*P	Pn	17 48 43.6	+0.3
PB06				*e*S	Sn	17 48 59.8	+0.9
PB06				IAML		17 49 00.9	
	comp=Z,64μm,0.7s						
PB03	IPOC Station P	1.00	281	⇑ *i*P	Pn	17 48 43.7	-0.2
PB03				*i* S	Sn	17 49 00.4	+0.3
PB03				IAML		17 49 01.8	
	comp=E,193μm,0.5s						
PB03	IPOC Station P	1.00	281	*e*P	Pn	17 48 44.0	0.0
PB03				*e*S	Sn	17 49 00.7	+0.6
PB03				IAML		17 49 01.0	
	comp=Z,77μm,0.5s						
PB15	IPOC Station P	1.20	217	⇑ *i*P	Pn	17 48 46.5	+0.3
PB15				*i* S	Sn	17 49 05.1	+1.1
PB15	IPOC Station P	1.20	217		Pn	17 48 46.4	+0.3
PB15				Sn	Sn	17 49 04.7	+0.7
PB15	IPOC Station P	1.20	217	*e*P	Pn	17 48 46.0	-0.2
PB15				*e*P	Pn	17 48 46.5	+0.3
PB15				*e*S	Sn	17 49 04.5	+0.6
PB15				IAML		17 49 08.6	
	comp=Z,118μm,0.3s						
PB07	IPOC Station P	1.22	295	⇑ *i*P	Pn	17 48 46.3	0.0
PB07				*i* S	Sn	17 49 04.2	-0.1
PB07				IAML		17 49 04.8	
	comp=N,152μm,0.5s						
PB07	IPOC Station P	1.22	295		Pn	17 48 45.6	-0.8
PB07	IPOC Station P	1.22	295	*e*P	Pn	17 48 46.0	-0.3
PB07				*e*S	Sn	17 49 04.9	+0.6
PB07				IAML		17 49 13.4	
	comp=Z,43μm,0.5s						
PB04	IPOC Station P	1.35	266	⇑ *i*P	Pn	17 48 47.6	-0.2
PB04				*i* S	Sn	17 49 06.5	-0.4
PB04				IAML		17 49 09.2	
	comp=N,62μm,0.5s						
PB04	IPOC Station P	1.35	266		Pn	17 48 47.3	-0.5
PB04				Sn	Sn	17 49 06.5	-0.4
PB04	IPOC Station P	1.35	266	*e*P	Pn	17 48 47.0	-0.8
PB04				*e*S	Sn	17 49 07.6	+0.7
PB04				*e*S	Sn	17 49 07.7	+0.7
PB04				IAML		17 49 08.6	
	comp=Z,48μm,0.4s						
PB01	IPOC Station P	1.40	328	⇑ *i*P	Pn	17 48 48.4	0.0
PB01				*i* S	Sn	17 49 08.0	+0.1
PB01				IAML		17 49 09.8	
	comp=N,49μm,0.5s						
PB01	IPOC Station P	1.40	328		Pn	17 48 48.4	0.0
PB01				Sn	Sn	17 49 07.5	-0.4
PB01	IPOC Station P	1.40	328	*e*P	Pn	17 48 48.5	0.0
PB01				*e*S	Sn	17 49 09.1	+1.3
PB01				*e*S	Sn	17 49 09.2	+1.3
PB01				IAML		17 49 14.6	
	comp=Z,16μm,0.6s						
PB02	IPOC Station P	1.45	309	⇑ *i*P	Pn	17 48 48.8	0.0
PB02				*i* S	Sn	17 49 08.3	-0.5
PB02				IAML		17 49 10.0	
	comp=E,124μm,0.4s						
PB02	IPOC Station P	1.45	309	*e*P	Pn	17 48 48.9	0.0
PB02				*e*P	Pn	17 48 49.0	+0.1
PB02				*e*S	Sn	17 49 09.2	+0.4
PB02				IAML		17 49 13.2	
	comp=Z,69μm,0.6s						
PB05	IPOC Station P	1.52	246	⇑ *i*P	Pn	17 48 49.4	-0.4
PB05				*i* S	Sn	17 49 09.3	-1.1
PB05				IAML		17 49 10.8	
	comp=N,41μm,0.7s						
PB05	IPOC Station P	1.52	246	*e*P	Pn	17 48 49.0	-0.8
PB05				*e*S	Sn	17 49 10.2	-0.3
PB05				IAML		17 49 15.6	
	comp=Z,19μm,0.6s						
PATCX	Punta Patache	1.96	316	⇑ *i*P	Pn	17 48 54.5	-0.7
PATCX				*i* S	Sn	17 49 18.8	-1.2
PATCX				IAML		17 49 23.8	
	comp=E,45μm,0.5s						
PATCX	Punta Patache	1.96	316	Pn	Pn	17 48 54.1	-1.0
PATCX				Sn	Sn	17 49 18.1	-2.0
PATCX	Punta Patache	1.96	316	*e*P	Pn	17 48 54.7	-0.5
PATCX				*e*P	Pn	17 48 54.7	-0.5
PATCX				*e*P	P	17 48 54.8	-0.4
PATCX				*e*P	P	17 48 54.8	-0.4
PATCX				IAML		17 49 24.9	
	comp=Z,17μm,0.8s						
PB10	IPOC Station P	2.13	233	⇑ *i*P	Pn	17 48 56.2	-1.1
PB10				*i* S	Sn	17 49 21.6	-2.3
PB10	IPOC Station P	2.13	233	Pn	Pn	17 48 56.1	-1.1
PB10				Sn	Sn	17 49 20.5	-3.3
PB10	IPOC Station P	2.13	233	*e*P	Pn	17 48 56.0	-1.3
PB10				*e*S	Sn	17 49 22.8	-1.0
PB10				IAML		17 49 31.4	
	comp=Z,11μm,0.6s						
PB08	IPOC Station P	2.13	348	⇑ *i*P	Pn	17 48 58.5	+0.7
PB08				*i* S	Sn	17 49 25.4	+0.9
PB08				IAML		17 49 29.4	
	comp=E,10μm,0.5s						
PB08	IPOC Station P	2.13	348		Pn	17 48 58.1	+0.4
PB08	IPOC Station P	2.13	348	*e*P	Pn	17 48 58.0	+0.3
PB08				*e*S	Sn	17 49 26.5	+2.0
TA01	Diego Aracena	2.17	320	⇑ *i*P	Pn	17 48 56.7	-1.1
TA01				*i* S	Sn	17 49 23.2	-1.5
TA01				IAML		17 49 25.1	
	comp=N,16μm,0.6s						
TA01	Diego Aracena	2.17	320		Pn	17 48 56.6	-1.1
TA01				Sn	Sn	17 49 21.6	-3.1
TA01	Diego Aracena	2.17	320	*e*P	Pn	17 48 57.0	-0.8
TA01				*e*S	Sn	17 49 27.2	+2.6
TA01				IAML		17 49 42.5	
	comp=Z,10μm,0.9s						
TA02	Huaiquique	2.38	325	*i* P	Pn	17 48 59.5	-1.0
TA02				*i* S	Sn	17 49 27.8	-1.6
TA02	Huaiquique	2.38	325		Pn	17 48 59.2	-1.2
TA02	Huaiquique	2.38	325	*e*P	Pn	17 48 59.0	-1.4
TA02				*e*P	Pn	17 48 59.3	-1.2
TA02				*e*S	Sn	17 49 29.9	+0.5
TA02				IAML		17 49 37.3	
	comp=Z,10μm,0.5s						
PB11	IPOC Station P	2.63	340	⇑ *i*P	Pn	17 49 03.0	-0.8
PB11				*i* S	Sn	17 49 34.4	-1.2
PB11				IAML		17 49 39.2	
	comp=N,21μm,0.7s						
PB11	IPOC Station P	2.63	340	Pn	Pn	17 49 03.0	-0.8
PB11	IPOC Station P	2.63	340	*e*P	Pn	17 49 03.5	-0.4
PB11				*e*S	Sn	17 49 35.4	-0.2
PB11				IAML		17 49 40.6	
	comp=Z,14μm,1.3s						
PB14	IPOC Station P	2.85	213	Pn	Pn	17 49 05.4	-1.5
PB14	IPOC Station P	2.85	213	*e*P	Pn	17 49 05.8	-1.1
PB14				*e*S	Sn	17 49 39.3	-1.6
PB14				IAML		17 50 07.1	
	comp=Z,7μm,1.0s						
PSGCX	Pisagua	2.95	333	Pn	Pn	17 49 06.1	-2.0
PSGCX	Pisagua	2.95	333	*e*P	Pn	17 49 06.3	-1.7
PSGCX				*e*P	Pn	17 49 06.3	-1.7
PSGCX				*e*P	Pn	17 49 06.4	-1.7
PSGCX				*e*P	Pn	17 49 06.7	-1.4
SLA	San Lorenzo	3.83	131	*e*P	Pn	17 49 23.0	+3.2
PB12	IPOC Station P	3.92	337		Pn	17 49 19.1	-1.9
PB16	IPOC Station P	3.96	349		Pn	17 49 22.1	+0.1
AP01	Chacalluta	4.15	338		Pn	17 49 22.2	-1.8
FSA	Cafayete	4.58	148	*e*S	Sn	17 50 07.7	-15
GO03	Copiap	5.51	194		Pn	17 49 39.6	-2.7
LPAZ	La Paz	5.95	5	P	Pn	17 49 50.5	+1.7
	comp=Z,4.8nm,0.3s,baz=200,slow=1.5,SNR=53						
LPAZ				S	Sn	17 50 43.2	-13
	comp=Z,10nm,0.3s,baz=218,slow=1.8,SNR=9.5						
AC04	Llanos de Chal	6.32	199	Pn	Pn	17 49 49.1	-4.1
LCO	Las Campanas	6.98	195	P	Pn	17 49 59.3	-3.2
LCO	Las Campanas	6.98	195	Pn	Pn	17 49 59.2	-3.2
CO05	La Serena	7.98	196		Pn	17 50 10.0	-5.8
GO04	Tololo Observa	8.12	193		Pn	17 50 13.6	-4.4
AVFE	Valle Fertil	8.46	173	*e*P	Pn	17 50 20.6	-1.8
AVFE				*e*P	Pn	17 50 20.6	-1.8
CO03	El Pedregal	8.75	191		Pn	17 50 22.0	-4.3
CO06	Fray Jorge	8.80	197		Pn	17 50 20.9	-6.0
ZON	Zonda	9.27	180	P	Pn	17 50 29.6	-3.7
ZON	Zonda	9.27	180		Pn	17 50 29.6	-3.7
SIV	San Ignacio	9.51	51	P	Pn	17 50 34.5	-2.2
	comp=Z,12nm,0.3s,baz=242,slow=11,SNR=94						
SIV				S	Sn	17 52 11.2	-11
	baz=241,slow=16,SNR=1.3						
AUSP	Uspallata	9.96	183	*e*P	Pn	17 50 40.0	-2.9
ASAL	Salagasta	10.31	181	*e*P	Pn	17 50 39.3	-8.2
VA03	San Esteban	10.61	189		Pn	17 50 46.3	-5.2
VA01	Torpederas	11.05	193	Pn	Pn	17 50 51.8	-5.6
CPUP	Villa Florida	11.13	114	P	Pn	17 50 56.8	-1.7
	comp=Z,0.4nm,0.3s,baz=298,slow=12,SNR=33						
CPUP				LR	LR	17 56 05.1	
	comp=Z,1μm,19.8s,baz=315,slow=42						
CPUP	Villa Florida	11.13	114		Pn	17 50 56.6	-1.9
MT02	Curacav	11.19	191		Pn	17 50 52.7	-6.5
VA05	Santo Domingo	11.66	192	Pn	Pn	17 50 59.4	-6.2
MT09	Talagante	11.67	189		Pn	17 51 00.8	-4.9
MT01	Popeta	11.80	190		Pn	17 51 02.6	-4.7
BO01	Tunca	12.29	189		Pn	17 51 10.3	-3.5
BO02	Sierra Bellavi	12.64	188	Pn	Pn	17 51 16.1	-2.4
GO05	Huala	13.03	192		Pn	17 51 23.1	-0.6
ML02	Panimavida	13.68	189		Pn	17 51 30.6	-1.4
SAML	Samuel	14.24	23	P	Pn	17 51 35.6	-3.7
SAML	Samuel	14.24	23		Pn	17 51 35.6	-3.7
H03N1	Juan Fernandez	14.35	217	P	Pn	17 51 39.4	-0.9
	baz=110,slow=14,SNR=36						
H03N2	Juan Fernandez	14.36	217	P	Pn	17 51 39.2	-1.2
	baz=110,slow=14,SNR=31						

H03N3	Juan Fernandez	14.37	217	P	Pn	17 51 39.3	-1.2
	baz=110,slow=14,SNR=43						
VA04	Juan Fernndez	14.45	216	Pn	Pn	17 51 38.7	-3.2
H03S3	Juan Fernandez	14.63	216	P	Pn	17 51 42.5	-1.4
	baz=345,slow=27,SNR=41						
H03S1	Juan Fernandez	14.65	216	P	Pn	17 51 42.4	-1.7
	baz=345,slow=27,SNR=15						
H03S2	Juan Fernandez	14.65	216	P	Pn	17 51 42.9	-1.3
	baz=345,slow=27,SNR=17						
CZSB	Cruzeiro do Su	14.94	344	*e*P	Pn	17 51 46.4	-1.8
PTGB	Pitanga	15.46	102	*e*P	Pn	17 51 51.3	-3.5
PDRB	Porto dos Gac	15.57	49	*e*P	Pn	17 51 51.4	-4.7
CPSB	Cacapava Do Su	15.90	124	*e*P	Pn	17 51 58.0	-2.1
PCMB	Pacaembu	16.19	91	*e*P	Pn	17 52 00.5	-3.4
PLTB	Pedras Altas	16.44	128	*e*P	Pn	17 52 04.0	-2.8
LC01	Cunco	16.82	189		Pn	17 52 07.1	-4.3
ARAG	Araguaiana, MT	17.23	71	*e*P	P	17 52 13.0	-3.5
ITRB	Iturama	17.31	85	*e*P	P	17 52 13.1	-4.2
FRTB	Fartura	17.68	97	*e*P	P	17 52 19.4	-1.9
ATAH	Atahualpa	17.70	327	P	Pn	17 52 24.8	+2.2
	comp=Z,1.1nm,0.3s,baz=181,slow=6.8,SNR=14						
TBTG	Tabatinga, AM	17.99	356	P	P	17 52 23.9	-0.8
TBTG				lAmb	lAmb	17 52 27.5	
	comp=Z,358nm,1.1s						
TIJ01	Guaruva-PR	18.28	104	*e*P	P	17 52 27.8	-0.2
PLCA	Paso Flores	18.50	184	P	P	17 52 30.4	+0.1
	comp=Z,1.3nm,0.3s,baz=1.5,slow=12,SNR=29						
PLCA				PcP	PcP	17 56 57.5	+1.8
	comp=Z,0.3nm,0.3s,baz=343,slow=1.1,SNR=5.8						
PLCA				LR	LR	18 00 02.6	
	comp=Z,533nm,21.8s,baz=7.5,slow=38						
PLCA	Paso Flores	18.50	184	P	P	17 52 30.3	+0.1
TER01	Tubaro-SC	18.74	114	*e*P	P	17 52 31.5	-1.5
BB19B	Bebedouro	18.78	90	*e*P	P	17 52 33.2	-0.3
LL04	Puerto Octay	18.88	189	P	P	17 52 33.4	-0.8
LL03	Petrohue	19.10	189	P	P	17 52 36.4	-0.3
LL03				lAmb	lAmb	17 53 17.6	
	comp=Z,174nm,0.8s						
SNDB	Serra Nova Dou	19.49	61	*e*P	P	17 52 39.8	-1.4
LL05	Los Muermos	19.53	191	P	P	17 52 41.0	-0.4
RCLB	Rio Claro- Sao	19.58	95	*e*P	P	17 52 39.8	-2.3
IPMB	Ipameri, GO	19.69	81	*e*P	P	17 52 41.3	-2.1
PET01	Itanhaem-SP	19.78	100	*e*P	P	17 52 44.1	-0.1
NPGB	Novo Progresso	19.84	42	*e*P	P	17 52 43.3	-1.7
VAO	Valinhos	20.07	96	*e*P	P	17 52 47.0	-0.5
LL01	San Ignacio de	20.32	188	P	P	17 52 48.7	-1.2
MACA	Manacapuru-AM	20.50	23	*e*P	P	17 52 51.3	-0.7
MACA	Manacapuru-AM	20.50	23	P	P	17 52 49.1	-2.9
MACA				lAmb	lAmb	17 52 55.0	
	comp=Z,239nm,0.8s						
BDFB	Brasilia	20.62	75	P	P	17 52 52.5	-1.0
	comp=Z,101nm,0.8s,baz=267,slow=12,SNR=46						
BDFB				LR	LR	18 01 21.2	
	comp=Z,553nm,19.8s,baz=253,slow=38						
BDFB	Brasilia	20.62	75	P	P	17 52 51.5	-1.9
BDFB				lAmb	lAmb	17 52 55.1	
	comp=Z,243nm,1.2s						
LL07	Hotel Espejo d	20.92	190	P	P	17 52 57.5	+1.3
LL07				lAmb	lAmb	17 53 39.5	
	comp=Z,271nm,0.9s						
LL02	Futaleuf	21.06	186	P	P	17 52 57.3	-0.5
GO07	Milladeo Hill,	21.22	190	P	P	17 53 00.5	+0.9
GO07				lAmb	lAmb	17 53 41.6	
	comp=Z,180nm,0.7s						
PARB	Paraibuna	21.30	97	*e*P	P	17 52 60.0	-0.7
ITTB	Itaituba	21.76	37	*e*P	P	17 53 04.3	-1.3
PEXB	Peixe	21.91	66	*e*P	P	17 53 05.7	-1.5
BSCB	Bom Sucesso	22.27	91	*e*P	P	17 53 09.7	-1.2
PTGA	Pitinga	23.01	23	P	P	17 53 17.7	-0.5
	comp=Z,13nm,0.5s,baz=199,slow=9.5,SNR=32						
PTGA				S	S	17 57 18.0	-2.5
	comp=Z,25nm,1.1s,baz=121,slow=22,SNR=7.6						
PTGA	Pitinga	23.01	23	P	P	17 53 17.6	-0.6
PTLC	Puerto Leguiza	23.06	344	*e*P	P	17 53 13.5	-5.2
VAS01	Vassouras-RJ	23.36	95	*e*P	P	17 53 21.5	0.0
COYC	Coyhaique	23.44	186	P	P	17 53 20.7	-1.2
DIAM	Diamantina, MG	23.79	85	*e*P	P	17 53 25.2	-0.3
JANB	Januaria	24.16	77	*e*P	P	17 53 27.4	-1.4
SMTB	Santa Maria do	24.25	60	*e*P	P	17 53 29.1	-0.5
OTAV	Otavalo	24.28	336	P	P	17 53 31.8	+1.4
OTAV				pmax	pmax		
	comp=Z,85nm,1.2s						
OTAV	Otavalo	24.28	336	*e*P	P	17 53 31.7	+1.4
OTAV	Otavalo	24.28	336	*e*P	P	17 53 32.1	+1.8
OTAV	Otavalo	24.28	336	P	P	17 53 31.8	+1.4
CUSE	Cuicocha Este	24.33	336	*e*P	P	17 53 32.0	+1.3
DUB01	Friburgo-RJ	24.37	95	*e*P	P	17 53 31.0	+0.3
PAC1	Pacto, Paraso	24.44	335	*e*P	P	17 53 36.2	+4.8
MALB	Monte Alegre	24.65	37	*e*P	P	17 53 32.4	-0.7
SDBA	SAO DESIDERIO	24.69	71	*e*P	P	17 53 32.4	-1.2
MACC	Macarena, Meta	24.76	348	*e*P	P	17 53 31.6	-2.6
GCUF	Volcan Galeras	24.81	339	*e*P	P	17 53 35.5	+0.3
CAM01	Campos-RJ	25.05	94	*e*P	P	17 53 38.2	+1.3
GARC	Garzon, Huila	25.17	344	*e*P	P	17 53 39.8	+1.6
SOTA	Rioblanco	25.43	341	*e*P	P	17 53 43.0	+2.1
PCON	Cinco Dias	25.55	342	*e*P	P	17 53 41.3	-0.7
BOAV	Boa Vista	25.75	19	*e*P	P	17 53 43.6	+0.4
BOAV	Boa Vista	25.75	19	P	P	17 53 43.9	+0.7
TUMC	Tumaco	25.85	336	P	P	17 53 44.9	+0.9
MARP	Paez Belalcaza	25.92	343	*e*P	P	17 53 44.7	-0.3
SJMB	Sao Joao De Ma	26.00	87	*e*P	P	17 53 46.2	+0.8
BSFB	Barra de Sao F	26.28	88	*e*P	P	17 53 48.2	+0.3
PTGC	Puerto Gaitan,	26.49	352	*e*P	P	17 53 48.9	-1.0
RIB01	Linhares ES	26.60	89	*e*P	P	17 53 52.0	+1.1
VILC	Villavicencio,	26.64	349	*e*P	P	17 53 52.5	+1.2
ORTC	Ortega, Tolima	26.77	345	*e*P	P	17 53 49.7	-2.7
YOTC	Yotoco, Valle	27.12	343	*e*P	P	17 53 53.5	-2.1
MCPB	Macapa, AP	27.12	39	*e*P	P	17 53 54.0	-1.5
CHIC	Chingaza	27.16	349	*e*P	P	17 53 53.5	-2.8
ANIL	Santa Ana	27.37	345	*e*P	P	17 53 57.3	-0.7
ROSC	El Rosal	27.47	348	P	P	17 53 58.9	-0.1
	comp=Z,24nm,0.6s,baz=343,slow=9.8,SNR=6.7						
ROSC				LR	LR	18 06 04.4	
	comp=Z,395nm,18.5s,baz=246,slow=39						
ROSC	El Rosal	27.47	348	lAmb	lAmb	17 54 56.7	
	comp=Z,163nm,1.6s						
PLMC	San Jos del P	27.98	344	*e*P	P	17 53 58.8	-4.5
GUY2C	Guyana, Caldas	28.07	346	*e*P	P	17 54 01.2	-3.2
TMAB	Tom-Au,PA,Br	28.12	48	*e*P	P	17 54 03.5	-0.9
SPBC	San Pablo de B	28.22	349	*e*P	P	17 54 05.0	-0.4
RUSC	La Rusia	28.29	351	*e*P	P	17 54 05.3	-1.1
PIZC	Pizarro, Choco	28.34	342	*e*P	P	17 54 04.5	-1.8
NBIT	Itapeh - BA	28.63	80	*e*P	P	17 54 08.7	-0.4
CBOC	Ciudad Bolivar	28.84	345	*e*P	P	17 54 08.8	-2.1
GDU01	Guandu, BA	28.92	78	*e*P	P	17 54 10.1	-1.5
BARC	Barichara	28.99	351	*e*P	P	17 54 13.6	+1.2
HELC	Santa Helena	29.04	346	*e*P	P	17 54 08.6	-4.3
PAMC	Pamplona, Colo	29.66	352	*e*P	P	17 54 16.9	-1.7
DBBC	Dabeiba	30.00	345	*e*P	P	17 54 20.1	-1.0
PAYG	Puerto Ayora	30.03	313	P	P	17 54 20.8	-0.5
PAYG				lAmb	lAmb	17 54 25.1	
	comp=Z,67nm,0.8s						
ZARC	Zaragoza, Cauc	30.16	348	*e*P	P	17 54 22.2	-0.3
ZARC	Zaragoza, Cauc	30.16	348	P	P	17 54 20.9	-1.5
PTAC	Punta Ardita,	30.54	342	*e*P	P	17 54 25.1	-0.7
OCAC	Ocana	30.63	351	P	P	17 54 23.7	-3.0
SDV	Santo Domingo	30.99	356	*e*P	P	17 54 29.4	-0.6
SDV	Santo Domingo	30.99	356	P	P	17 54 28.3	-1.7
MOTC	Monteria, Cord	31.58	347	P	P	17 54 34.2	-0.7
NBPS	Pedro II - PI	31.80	60	*e*P	P	17 54 35.8	-1.2
NBMA	Muriti-CE	32.40	67	*e*P	P	17 54 41.8	-0.5
USHA	Ushuaia	32.54	180	P	P	17 54 43.7	+0.8
	comp=Z,15nm,1.1s,baz=340,slow=10.0,SNR=2.9						
SJCC	San Jacinto, C	32.57	348	P	P	17 54 42.2	-1.4
SJCC				pP	pP	17 55 08.4	-0.7
NBPB	Pedra_Branca-C	32.66	64	*e*P	P	17 54 43.5	-1.0
BCIP	Isla Barro Col	33.07	340	P	P	17 54 49.1	+1.1
BCIP				pmax	pmax		
	comp=Z,72nm,0.8s						
BCIP	Isla Barro Col	33.07	340	*e*P	P	17 54 48.0	+0.1
BCIP	Isla Barro Col	33.07	340	P	P	17 54 49.1	+1.1
BCIP				lAmb	lAmb	17 54 51.2	
	comp=Z,72nm,0.8s						
NBAN	Anadia - AL	33.50	73	*e*P	P	17 54 50.7	-1.1
NBMO	Morrinhos-CE	33.56	60	*e*P	P	17 54 51.3	-1.0
CDITO	Canoas	33.63	334	lAmb	lAmb	17 55 36.3	
	comp=Z,159nm,1.2s						
BRU2	Volcan	33.76	335	*e*P	P	17 54 56.2	+2.0
BRU2	Volcan	33.76	335	lAmb	lAmb	17 55 36.5	
	comp=Z,102nm,1.0s						
NBLV	Livramento - P	33.99	69	*e*P	P	17 54 55.6	-0.5
RIOS	Rincon, Osa	34.01	333	P	P	17 54 57.8	+1.6
RIOS					pP	17 55 23.8	+2.3
POTG	Potrero Grande	34.17	334	⇓*i*P	P	17 55 00.6	+3.0
SRBA	San Rafael, Bu	34.43	334	P	P	17 55 01.2	+1.4
SRBA				lAmb	lAmb	17 55 03.6	
	comp=Z,84nm,0.9s						
SRBA				pP	pP	17 55 27.4	+2.2
NBCL	Cascavel-CE	34.46	63	*e*P	P	17 54 59.1	-1.1
PEZE	Perez Zeledon,	34.69	333	P	P	17 55 01.9	-0.2
PEZE				lAmb	lAmb	17 55 05.9	
	comp=Z,65nm,0.8s						
RIMA	Rio Macho	35.12	333	*i* P	P	17 55 08.6	+2.6
RIMA	Rio Macho	35.12	333	P	P	17 55 06.5	+0.6
RIMA				lAmb	lAmb	17 55 09.6	
	comp=Z,62nm,0.8s						
LCR2	La Lucha 2	35.15	333	⇓*e*P	P	17 55 08.6	+2.3
CAO2	Cobano, Puntar	35.58	331	P	P	17 55 10.7	+1.1
CAO2				lAmb	lAmb	17 55 13.4	
	comp=Z,69nm,0.9s						
NBPV	Pedro Velho	35.86	69	*e*P	P	17 55 11.9	-0.2
JTS	Las Juntas de	36.05	332	*i* P	P	17 55 15.5	+1.8
JTS				pmax	pmax		
	comp=Z,31nm,0.7s						
JTS	Las Juntas de	36.05	332	*e*P	P	17 55 15.7	+2.0
JTS	Las Juntas de	36.05	332	P	P	17 55 15.3	+1.6
JTS				lAmb	lAmb	17 55 17.7	
	comp=Z,75nm,1.1s						
ARE1	Arenal 1	36.10	333	*e*P	P	17 55 17.3	+3.2
CEDE	Laguna Cedeo	36.12	333	*e*P	P	17 55 17.5	+3.2
SAJU	San Juanillo,	36.19	331	*i* P	P	17 55 16.7	+1.9
COVE	Coope Vega, Sa	36.20	333	P	P	17 55 16.9	+1.9
VMAR	Armenia, Volca	36.59	332	⇓*i*P	P	17 55 21.2	+2.9
BUEV	Buena Vista	36.70	332	*e*P	P	17 55 21.8	+2.5
HZTE	Horizontes, Gu	36.71	331	*e*P	P	17 55 21.5	+2.2
ACON	Acoyapa	37.65	333	P	P	17 55 27.5	+0.3
ACON				lAmb	lAmb	17 56 08.9	
	comp=Z,82nm,1.2s						
CRIN	San Cristobal	39.12	331	lAmb	lAmb	17 56 09.2	
	comp=Z,58nm,0.6s						
OBIP	Obispado Ponce	40.09	3	P	P	17 55 44.4	-3.0
OBIP				pP	pP	17 56 13.9	+0.2
PDPR	Patillas Dam,	40.10	4	P	P	17 55 45.3	-2.2
PDPR					pP	17 56 12.2	-1.6
CELP	Cerrillos	40.12	3	P	P	17 55 46.0	-1.8
CELP				pP	pP	17 56 13.3	-0.7
SJG	San Juan	40.18	4	P	P	17 55 46.1	-2.1
SJG				*PP	pP	17 56 14.0	-0.5
SJG				pmax	pmax		
	comp=Z,46nm,0.8s						
SJG	San Juan	40.18	4	P	P	17 55 46.1	-2.1
SJG					pP	17 56 14.0	-0.5
SJG				lAmb	lAmb	17 56 33.6	
	comp=Z,46nm,0.8s						
MTO3	Montecristo	41.67	329	P	P	17 56 01.9	+1.1
MTO3				lAmb	lAmb	17 56 03.5	
	comp=Z,125nm,0.8s						
MTO3				pP	pP	17 56 27.2	+0.3
MTO3				sP	sP	17 56 41.5	+1.8
PMSA	Palmer Station	42.63	177	P	P	17 56 08.8	+1.1
	comp=Z,7.4nm,0.8s,baz=341,slow=5.4,SNR=6.6						
PMSA				pP	pP	17 56 33.4	-0.4
	comp=Z,13nm,1.1s,baz=7.9,slow=7.5,SNR=4.0						
PMSA	Palmer Station	42.63	177	*e*P	P	17 56 12.6	+4.9
CCIG	Comitan	44.65	327	lAmb	lAmb	17 56 27.1	
	comp=Z,166nm,1.4s						
SOR	Soroa	46.88	342	lAmb	lAmb	17 56 43.7	
	comp=Z,62nm,1.0s						
TLIG	Tlapa	49.19	321	P	P	17 57 01.5	+1.5
TLIG				lAmb	lAmb	17 57 03.2	
	comp=Z,67nm,0.9s						
TLIG					pP	17 57 24.5	-2.2
TLIG					sP	17 57 41.5	+2.3
DWPF	Disney Wildern	51.55	346	P	P	17 57 18.1	+0.7
	baz=165						
DWPF	Disney Wildern	51.55	346	P	P	17 57 18.2	+0.9
TIGA	Tifton	55.25	344	P	P	17 57 44.7	+0.3
	baz=163						
ZAIG	Zacatecas	55.59	321	P	P	17 57 48.7	+1.3
352A	Blakely	55.64	343	P	P	17 57 46.9	-0.3
352A					pP	17 58 14.9	+0.1
BRAL	Brewton	55.95	341	P	P	17 57 49.7	+0.3
	baz=160,SNR=6.1						
BRAL	Brewton	55.95	341	P	P	17 57 49.6	+0.2
BRAL					pP	17 58 17.5	+0.5
BRAL				sP	sP	17 58 29.9	+0.3
NHSC	New Hope	56.12	348	P	P	17 57 50.5	-0.1
	baz=167,SNR=7.8						
GOGA	Godfrey	57.11	345	P	P	17 57 57.1	-0.5
	baz=164,SNR=7.5						
GOGA	Godfrey	57.11	345	P	P	17 57 57.4	-0.2
GOGA					pP	17 58 25.5	+0.2
JSC	Jenkinsville	57.47	348	lAmb	lAmb	17 58 01.7	
	comp=Z,59nm,1.1s						
Y52A	Lilburn	57.68	345	P	P	17 58 01.1	-0.6
Y52A				lAmb	lAmb	17 58 02.6	
	comp=Z,36nm,0.9s						
Y52A					pP	17 58 29.2	-0.1
441A	DeRidder	57.70	335	P	P	17 58 01.5	-0.3
CNNC	Cliffs of the	57.83	351	P	P	17 58 03.0	+0.4
	baz=170						
VBMS	Vicksburg	58.04	338	P	P	17 58 03.9	-0.2
	baz=156						
W57A	Gilead	58.08	349	P	P	17 58 04.4	0.0
W57A				lAmb	lAmb	17 58 06.0	
	comp=Z,70nm,1.0s						
W57A					pP	17 58 32.4	+0.3
HKT	Hockley	58.09	332	*i* P	P	17 58 04.8	+0.4
HKT				pmax	pmax		
	comp=Z,26nm,0.8s						
HKT	Hockley	58.09	332	P	P	17 58 05.0	+0.5
HKT				lAmb	lAmb	17 58 06.8	
	comp=Z,86nm,1.2s						
HKT					pP	17 58 32.7	+0.5
HKT					sP	17 58 45.9	+1.3
PAULI	Pauline	58.10	347	lAmb	lAmb	17 58 06.3	
	comp=Z,61nm,1.0s						
Z47A	Carrollton	58.15	341	lAmb	lAmb	17 58 05.7	
	comp=Z,71nm,0.8s						
Y49A	Blount Mountai	58.28	343	P	P	17 58 05.0	-0.9
Y49A				lAmb	lAmb	17 58 06.5	
	comp=Z,43nm,1.0s						
Y49A					pP	17 58 33.2	-0.5
KMSC	Kings Mountain	58.32	348	P	P	17 58 05.8	-0.2
	baz=166,SNR=12						
KMSC	Kings Mountain	58.32	348	lAmb	lAmb	17 58 07.8	
	comp=Z,80nm,1.1s						
833A	Chaparral WMA,	58.35	328	P	P	17 58 07.1	+0.7
	baz=146,SNR=18						
BG3	Lake Jocassee	58.50	346	P	P	17 58 07.5	+0.1
BG3				lAmb	lAmb	17 58 08.9	
	comp=Z,36nm,0.9s						
BG3					pP	17 58 35.1	-0.1
X51A	Calhoun	58.55	344	P	P	17 58 07.5	-0.1
V58A	Windy Hill, Pi	58.56	350	lAmb	lAmb	17 58 09.2	
	comp=Z,48nm,0.8s						
FPAL	Fort Paine	58.72	344	P	P	17 58 08.3	-0.5
FPAL				lAmb	lAmb	17 58 09.6	
	comp=Z,55nm,1.1s						
FPAL					pP	17 58 36.3	-0.4
W52A	Murphy	58.83	345	lAmb	lAmb	17 58 10.9	
	comp=Z,49nm,0.9s						
U59A	Littleton	58.91	351	P	P	17 58 10.5	+0.4
U59A				lAmb	lAmb	17 58 11.7	
	comp=Z,66nm,1.0s						
U59A					pP	17 58 35.8	-2.2
V53A	Saluda	59.13	347	lAmb	lAmb	17 58 13.1	
	comp=Z,45nm,0.9s						
NATX	Nacogdoches	59.18	334	P	P	17 58 13.0	+0.9
	baz=152,SNR=15						
NATX	Nacogdoches	59.18	334	P	P	17 58 12.4	+0.3
NATX					pP	17 58 40.1	+0.3
NATX					sP	17 58 52.7	+0.4
CPCT	Cooper Cave	59.31	345	lAmb	lAmb	17 58 14.0	
	comp=Z,78nm,1.0s						
VNA3	Neumayer Olymp	59.31	161	P	P	17 58 13.2	+0.7
VNA3	Neumayer Olymp	59.31	161	pP	pP	17 58 41.4	+1.2
SWET	Sewanee	59.44	344	P	P	17 58 13.4	-0.5
SWET					pP	17 58 41.2	-0.5
V52A	Sevierville	59.47	346	P	P	17 58 13.6	-0.4
V52A					pP	17 58 41.4	-0.5
VNA1	Neumayer--Stat	59.52	160	P	P	17 58 15.2	+1.3
VNA1	Neumayer--Stat	59.52	160	pP	pP	17 58 43.2	+1.5
435B	Jarrell	59.57	331	P	P	17 58 15.2	+0.4
	baz=149,SNR=7.7						
V51A	Loudon	59.60	345	lAmb	lAmb	17 58 15.9	
	comp=Z,49nm,0.9s						
U54A	Nelsons Funny	59.75	348	P	P	17 58 16.1	+0.1
U54A					pP	17 58 43.2	-0.7
T57A	Hurt	59.76	350	lAmb	lAmb	17 58 17.7	
	comp=Z,56nm,0.8s						
Z41A	Richland Creek	59.79	337	P	P	17 58 16.7	+0.5
	baz=154,SNR=8.8						
VNA2	Neumayer--Watz	59.89	161	P	P	17 58 17.2	+0.8
	baz=291,slow=7.7						
VNA2	Neumayer--Watz	59.89	161	pP	pP	17 58 45.4	+1.2
TZTN	Tazewell	60.13	346	P	P	17 58 18.4	-0.1
	baz=164,SNR=7.6						
TZTN	Tazewell	60.13	346	P	P	17 58 17.5	-1.0
TZTN				lAmb	lAmb	17 58 19.6	
	comp=Z,44nm,1.1s						
BLA	Blacksburg	60.16	349	P	P	17 58 19.3	+0.6
	baz=168,SNR=7.5						
JCT	Junction City	60.34	329	P	P	17 58 20.0	-0.1
JCT				*PP	pP	17 58 47.4	-0.6
JCT				*SP	sP	17 58 59.4	-1.1
JCT				pmax	pmax		
	comp=Z,129nm,0.8s						
JCT	Junction City	60.34	329	P	P	17 58 20.5	+0.3
	baz=147,SNR=51						
JCT	Junction City	60.34	329	P	P	17 58 20.0	-0.1
JCT				pP	pP	17 58 47.4	-0.6
JCT				sP	sP	17 58 59.4	-1.1
S57A	Dark Hollow, R	60.46	351	lAmb	lAmb	17 58 22.7	
	comp=Z,92nm,1.1s						
R58B	Mineral	60.51	352	lAmb	lAmb	17 58 22.9	
	comp=Z,82nm,0.9s						
WHTX	Lake Whitney,	60.55	332	P	P	17 58 22.0	+0.5
	baz=149,SNR=18						
HPIG		60.58	322	P	P	17 58 22.4	+0.4
HPIG				lAmb	lAmb	17 58 24.5	
	comp=Z,91nm,1.3s						
HPIG					pP	17 58 49.4	-0.3
HPIG					sP	17 59 02.8	+0.6
U49A	Red Boiling Sp	60.63	344	P	P	17 58 20.8	-1.1
U49A				lAmb	lAmb	17 58 22.6	
	comp=Z,38nm,0.8s						
U49A				sP	sP	17 59 02.4	+0.1
CBN	Corbin Frederi	60.68	352	P	P	17 58 22.4	+0.2
	baz=171						
SLBS	Sierra La Lagu	60.78	316	P	P	17 58 24.2	+0.9
SLBS				lAmb	lAmb	17 58 26.7	
	comp=Z,81nm,1.1s						
SLBS				pP	pP	17 58 52.3	+1.2
WVT	Waverly	60.81	342	P	P	17 58 22.7	-0.4
WVT				*PP	pP	17 58 50.9	-0.2
WVT				*SP	sP	17 59 02.6	-1.0
WVT				pmax	pmax		
	comp=Z,120nm,0.8s						
WVT	Waverly	60.81	342	P	P	17 58 22.5	-0.6
	baz=160						
WVT	Waverly	60.81	342	P	P	17 58 22.7	-0.4
WVT				pP	pP	17 58 50.9	-0.2
WVT				sP	sP	17 59 02.6	-1.0
T50A	Nancy	60.88	345	P	P	17 58 23.0	-0.6
T50A				lAmb	lAmb	17 58 24.3	
	comp=Z,50nm,0.8s						
T50A				sP	sP	17 59 04.0	0.0
S54A	Dingess, Beckl	60.89	349	P	P	17 58 23.6	0.0
S54A					pP	17 58 52.0	+0.2
X40A	Basin Creek Fa	60.91	337	P	P	17 58 23.4	-0.4
	baz=154,SNR=7.1						
X40A	Basin Creek Fa	60.91	337	P	P	17 58 23.6	-0.2
Q61A	Milford	61.12	354	P	P	17 58 26.4	+1.3
	baz=173						
S51A	Beattyville	61.19	347	P	P	17 58 25.0	-0.7
S51A				lAmb	lAmb	17 58 26.6	
	comp=Z,44nm,1.1s						
S51A				pP	pP	17 58 53.6	-0.1
MIAR	Mount Ida	61.23	337	P	P	17 58 26.0	0.0
MIAR				*PP	pP	17 58 52.6	-1.5
MIAR				*SP	sP	17 59 06.6	0.0
MIAR				pmax	pmax		
	comp=Z,152nm,1.1s						
MIAR	Mount Ida	61.23	337	P	P	17 58 26.0	0.0
	baz=154,SNR=51						
MIAR	Mount Ida	61.23	337	P	P	17 58 26.0	0.0
MIAR				pP	pP	17 58 52.6	-1.5
MIAR				sP	sP	17 59 06.6	0.0
LPIG	La Paz	61.30	316	P	P	17 58 28.4	+1.7
	comp=Z,26nm,0.3s,baz=108,slow=3.2,SNR=1.8						
GNAR	Gosnell	61.31	340	P	P	17 58 26.3	-0.2
GNAR				pP	pP	17 58 53.9	-0.6
GNAR				sP	sP	17 59 06.8	-0.3
UTMT	University of	61.31	341	P	P	17 58 26.4	-0.1
UTMT				sP	sP	17 59 06.7	-0.3
W41B	Gary Mavity, V	61.32	338	P	P	17 58 26.4	-0.1
	baz=155,SNR=31						
TXAR	Lajitas Array	61.35	325	P	P	17 58 27.9	+0.8
	comp=Z,13nm,0.8s,baz=150,slow=8.4,SNR=98						
TXAR				pP	pP	17 58 54.6	-0.2
	comp=Z,5.4nm,0.9s,baz=32,slow=5.0,SNR=4.5						
TXAR	Lajitas Array	61.35	325	P	P	17 58 27.7	+0.6
TXAR				pP	pP	17 58 54.7	-0.2
TXAR				sP	sP	17 59 07.3	+0.1
GLAT	Glass	61.37	341	P	P	17 58 26.3	-0.6
T47A	Sharon Grove	61.42	343	P	P	17 58 26.5	-0.7
T47A					pP	17 58 54.0	-1.2
T47A				sP	sP	17 59 07.5	-0.2
WHAR	Wooly Hollow	61.44	338	lAmb	lAmb	17 58 28.5	
	comp=Z,79nm,1.0s						
SNAA	Sanae	61.52	161	P	P	17 58 28.0	+0.4
SNAA	Sanae	61.52	161	pP	pP	17 58 56.5	+1.1
SNAA	Sanae	61.52	161	*ce*P	P	17 58 28.3	+0.7
SNAA				pmax	pmax		
	comp=Z,14nm,1.0s						
R53A	Hurricane	61.52	348	P	P	17 58 27.3	-0.6
R53A				lAmb	lAmb	17 58 29.3	
	comp=Z,51nm,1.1s						
R53A				pP	pP	17 58 55.6	-0.3
LCAR	Lake Charles	61.77	339	lAmb	lAmb	17 58 30.4	
	comp=Z,68nm,0.9s						
T45A	Paducah	61.88	342	P	P	17 58 30.3	+0.1
T45A					pP	17 58 58.7	+0.3
W39A	Magazine	61.88	337	P	P	17 58 31.1	+0.7
	baz=154,SNR=59						
FCAR	Ozark Folk Cen	61.92	339	lAmb	lAmb	17 58 31.5	
	comp=Z,88nm,1.1s						
Q54A	Coxs Mills	61.96	349	lAmb	lAmb	17 58 32.2	
	comp=Z,92nm,1.4s						
R50A	Paris	61.97	346	P	P	17 58 30.6	-0.3
R50A				lAmb	lAmb	17 58 31.8	
	comp=Z,44nm,1.1s						
R50A				pP	pP	17 58 57.9	-1.0
R50A				sP	PcP	17 59 10.5	0.0
P57A	Homestead Farm	62.02	352	lAmb	lAmb	17 58 33.6	
	comp=Z,57nm,0.8s						
ABTX	Abilene, Hawle	62.06	331	P	P	17 58 31.8	+0.1
	baz=148,SNR=27						
P60A	Greenville	62.07	354	P	P	17 58 31.7	+0.2
	baz=173						
P60A	Greenville	62.07	354	lAmb	lAmb	17 58 33.4	
	comp=Z,32nm,0.9s						
LOOK	Love County	62.15	333		P	17 58 31.9	-0.3
LOOK				pP	pP	17 58 59.8	-0.4
R49A	Shelbyville	62.17	345	lAmb	lAmb	17 58 32.8	
	comp=Z,42nm,0.9s						
Q52A	Bidwell	62.20	348	lAmb	lAmb	17 59 02.2	
	comp=Z,33nm,0.9s						
WCI	Wyandotte Cave	62.38	344	P	P	17 58 33.1	-0.6
	baz=162						
WCI	Wyandotte Cave	62.38	344	P	P	17 58 32.4	-1.3
WCI				lAmb	lAmb	17 58 34.1	
	comp=Z,79nm,0.8s						
WCI				pP	pP	17 59 00.8	-0.9
MCWV	Mont Chateau	62.45	350	P	P	17 58 34.3	+0.2
	baz=168,SNR=9.1						
MCWV	Mont Chateau	62.45	350	lAmb	lAmb	17 59 05.5	
	comp=Z,70nm,0.8s						
Q51A	Peebles	62.47	347	P	P	17 58 33.4	-0.9
Q51A				lAmb	lAmb	17 58 35.2	
	comp=Z,40nm,1.0s						
Q51A					pP	17 59 02.1	-0.3
P53A	Whipple	62.54	349	lAmb	lAmb	17 58 36.3	
	comp=Z,112nm,1.2s						
U40A	Yellville	62.60	338	P	P	17 58 35.2	0.0
	baz=155,SNR=38						
U40A	Yellville	62.60	338	lAmb	lAmb	17 58 36.3	
	comp=Z,93nm,0.9s						
S44A	Carbondale	62.68	342	P	P	17 58 35.3	-0.3
S44A				lAmb	lAmb	17 58 36.4	

	comp=Z,73nm,0.9s						
P52A	**Corning**	62.82	348	P	**P**	**17 58 36.4**	**-0.2**
	baz=166,SNR=5.1						
P52A	**Corning**	62.82	348	IAmb	IAmb	17 59 06.3	
	comp=Z,35nm,0.8s						
O56A	**Blue Knob Stat**	62.86	352	P	**P**	**17 58 37.8**	**+1.0**
	baz=170,SNR=9.2						
O56A	**Blue Knob Stat**	62.86	352	P	**P**	**17 58 36.7**	**-0.2**
O56A				IAmb	IAmb	17 58 39.0	
	comp=Z,54nm,1.0s						
O56A					**pP**	**17 59 06.3**	**+1.2**
PAL	**Palisades**	63.11	356	P	**P**	**17 58 38.9**	**+0.5**
	baz=175						
MGMO	**Mountain Grove**	63.12	339	IAmb	IAmb	17 58 39.8	
	comp=Z,79nm,0.9s						
SSPA	**Standing Stone**	63.14	352	P	**P**	**17 58 39.3**	**+0.7**
	baz=171						
SSPA	**Standing Stone**	63.14	352	P	**P**	**17 58 38.4**	**-0.2**
N59A	**State Game Lan**	63.18	354	P	**P**	**17 58 39.7**	**+0.8**
	baz=173						
N58A	**Sunbury**	63.20	353	IAmb	IAmb	17 58 41.0	
	comp=Z,60nm,0.9s						
U38A	**Gravette**	63.21	337	IAmb	IAmb	17 58 40.5	
	comp=Z,52nm,0.9s						
P49A	**Miami Univ. Ec**	63.25	346	P	**P**	**17 58 38.5**	**-0.9**
	baz=164,SNR=11						
P49A	**Miami Univ. Ec**	63.25	346	P	**P**	**17 58 38.6**	**-0.9**
P49A				IAmb	IAmb	17 58 39.8	
	comp=Z,59nm,0.9s						
P49A					**pP**	**17 59 06.3**	**-1.3**
O53A	**New Philadelph**	63.25	349	P	**P**	**17 58 39.6**	**+0.2**
	baz=167						
TUL1	**Leonard**	63.27	336	P	**P**	**17 58 39.9**	**+0.3**
	baz=152,SNR=21						
OLIL	**Olney**	63.33	343	IAmb	IAmb	17 58 40.1	
	comp=Z,53nm,0.9s						
BLO	**Bloomington**	63.33	345	IAmb	IAmb	17 58 40.4	
	comp=Z,46nm,0.8s						
FNO	**Franklin**	63.34	334		**P**	**17 58 39.9**	**-0.2**
FNO				IAmb	IAmb	17 58 41.1	
	comp=Z,90nm,0.9s						
YLE	**Yale**	63.35	356	IAmb	IAmb	17 58 42.1	
	comp=Z,61nm,1.0s						
WMOK	**Wichita Mounta**	63.47	333	P	**P**	**17 58 40.6**	**-0.4**
	baz=149,SNR=12						
WMOK	**Wichita Mounta**	63.47	333	IAmb	IAmb	17 58 41.8	
	comp=Z,161nm,1.9s						
ACSO	**Alum Creek Sta**	63.56	348	P	**P**	**17 58 41.1**	**-0.3**
	baz=165,SNR=11						
ACSO	**Alum Creek Sta**	63.56	348	IAmb	IAmb	17 59 11.6	
	comp=Z,62nm,0.9s						
CCM	**Cathedral Cave**	63.61	340	P	**P**	**17 58 40.8**	**-1.0**
CCM				pmax	pmax		
	comp=Z,110nm,0.9s						
CCM	**Cathedral Cave**	63.61	340	P	**P**	**17 58 41.7**	**-0.1**
	baz=157						
CCM	**Cathedral Cave**	63.61	340	P	**P**	**17 58 40.8**	**-1.0**
N53A	**Lisbon**	63.73	350	IAmb	IAmb	17 59 13.0	
	comp=Z,55nm,1.1s						
Q44A	**Meyer Farm, Va**	63.74	342	P	**P**	**17 58 41.0**	**-1.5**
Q44A				IAmb	IAmb	17 58 42.8	
	comp=Z,81nm,1.0s						
M57A	**Sunshine Farm,**	63.74	353	IAmb	IAmb	17 58 44.6	
	comp=Z,36nm,0.8s						
N54A	**Moraine State**	63.75	350	P	**P**	**17 58 42.9**	**+0.2**
	baz=168,SNR=8.0						
N54A	**Moraine State**	63.75	350	IAmb	IAmb	17 59 13.5	
	comp=Z,87nm,1.1s						
BCOK	**Bluff Creek, N**	63.77	334		**P**	**17 58 42.1**	**-0.7**
O49A	**Covington**	63.80	347	IAmb	IAmb	17 58 43.6	
	comp=Z,64nm,1.1s						
P46A	**Rosedale**	63.92	344	IAmb	IAmb	17 58 43.9	
	comp=Z,65nm,1.1s						
S39A	**Bolivar**	63.96	338	P	**P**	**17 58 42.9**	**-1.2**
M55A	**Ridgway**	64.07	352	IAmb	IAmb	17 58 46.4	
	comp=Z,58nm,0.9s						
MNTX	**Cornudas Mount**	64.12	326	P	**P**	**17 58 44.5**	**-0.9**
	baz=142,SNR=52						
MNTX	**Cornudas Mount**	64.12	326	IAmb	IAmb	17 58 46.6	
	comp=Z,52nm,1.0s						
R40A	**Maddies Statio**	64.15	340	IAmb	IAmb	17 58 46.3	
	comp=Z,79nm,0.8s						
M54A	**Oil Creek Stat**	64.24	351	P	**P**	**17 58 46.2**	**+0.3**
	baz=169,SNR=10						
M54A	**Oil Creek Stat**	64.24	351	IAmb	IAmb	17 58 47.4	
	comp=Z,60nm,0.9s						
M53A	**WI Miller and**	64.33	350	P	**P**	**17 58 46.3**	**-0.1**
	baz=168						
M53A	**WI Miller and**	64.33	350	P	**P**	**17 58 45.7**	**-0.7**
M53A					**pP**	**17 59 14.5**	**-0.3**
M53A				IAmb	IAmb	17 59 17.3	
	comp=Z,48nm,0.9s						
L59A	**Walton**	64.38	355	IAmb	IAmb	17 58 48.9	
	comp=Z,105nm,0.9s						
ALLY	**Alegheny Colle**	64.45	351	IAmb	IAmb	17 59 18.2	
	comp=Z,72nm,0.9s						
BINY	**Binghamton**	64.47	354	P	**P**	**17 58 48.4**	**+1.0**
	baz=173,SNR=10.0						
BINY	**Binghamton**	64.47	354	IAmb	IAmb	17 58 49.4	
	comp=Z,71nm,1.0s						
N49A	**Columbus Grove**	64.47	347	P	**P**	**17 58 46.3**	**-1.1**
N49A				IAmb	IAmb	17 58 48.2	
	comp=Z,112nm,1.1s						
N49A					**pP**	**17 59 14.8**	**-0.8**
L61B	**Northampton**	64.47	357	P	**P**	**17 58 47.7**	**+0.4**
	baz=176						
HRV	**Adam Dziewonsk**	64.48	358	P	**P**	**17 58 47.8**	**+0.5**
	baz=177						
P43A	**Skaggs, Pawnee**	64.56	342	IAmb	IAmb	17 58 48.4	
	comp=Z,92nm,0.9s						
BLOK	**Blackwell**	64.57	335		**P**	**17 58 47.6**	**-0.4**
BLOK					**pP**	**17 59 15.8**	**-0.4**
L56A	**Greenwood**	64.58	353	IAmb	IAmb	17 58 49.8	
	comp=Z,41nm,0.8s						
SFIN	**Lafayette**	64.61	345	P	**P**	**17 58 46.7**	**-1.6**
	baz=161,SNR=7.4						
SFIN	**Lafayette**	64.61	345	IAmb	IAmb	17 58 48.2	
	comp=Z,36nm,0.8s						
MSTX	**Muleshoe**	64.63	329	P	**P**	**17 58 48.9**	**+0.2**
	baz=145,SNR=52						
MSTX	**Muleshoe**	64.63	329	P	**P**	**17 58 48.2**	**-0.5**
MSTX				pP	**pP**	**17 59 15.3**	**-1.6**
MSTX					**sP**	**17 59 27.6**	**-1.7**
N47A	**Urbana**	64.76	346	IAmb	IAmb	17 58 49.5	
	comp=Z,62nm,1.1s						
TRY	**Troy**	64.81	356	IAmb	IAmb	17 58 51.8	
	comp=Z,90nm,1.0s						
AMTX	**Amarillo**	64.87	330	P	**P**	**17 58 50.1**	**-0.2**
	baz=146						
AMTX	**Amarillo**	64.87	330	IAmb	IAmb	17 58 51.6	
	comp=Z,107nm,1.2s						
ERPA	**Erie**	64.88	351	P	**P**	**17 58 50.3**	**+0.3**
	baz=169,SNR=6.6						
ERPA	**Erie**	64.88	351	IAmb	IAmb	17 59 21.1	
	comp=Z,80nm,0.8s						
U32A	**Winter Ranch,**	64.96	333	IAmb	IAmb	17 58 52.2	
	comp=Z,82nm,0.9s						
WVNY	**West Valley, N**	64.97	352	P	**P**	**17 58 50.6**	**0.0**
WVNY				IAmb	IAmb	17 58 52.4	
	comp=Z,52nm,0.8s						
WVNY				pP	**pP**	**17 59 18.7**	**-0.3**
KAN14	**Manchester OK**	65.03	334	P	**P**	**17 58 50.3**	**-0.8**
KAN14				IAmb	IAmb	17 58 52.4	
	comp=Z,83nm,0.9s						
K57A	**Scipio Center**	65.05	354	P	**P**	**17 58 51.1**	**+0.1**
K57A				IAmb	IAmb	17 58 52.5	
	comp=Z,50nm,0.9s						
MMNY	**Mt. Morris Dam**	65.20	353	IAmb	IAmb	17 58 53.6	
	comp=Z,94nm,1.4s						
P40A	**Paris**	65.21	340	P	**P**	**17 58 51.2**	**-1.0**
P40A				IAmb	IAmb	17 58 53.2	
	comp=Z,83nm,0.9s						
HSIG		65.23	320	IAmb	IAmb	17 58 55.5	
	comp=Z,167nm,1.5s						
KAN08	**Anthony NE Sta**	65.27	335	P	**P**	**17 58 51.7**	**-1.0**
KAN08				pP	**pP**	**17 59 20.0**	**-0.8**
KAN08				sP	**sP**	**17 59 32.4**	**-0.7**
HDIL	**Hopedale**	65.35	343	P	**P**	**17 58 52.2**	**-0.9**
	baz=159						
HDIL	**Hopedale**	65.35	343	IAmb	IAmb	17 58 53.3	
	comp=Z,55nm,0.8s						
L48A	**N Adams**	65.50	347	P	**P**	**17 58 52.4**	**-1.6**
L48A				IAmb	IAmb	17 58 54.5	
	comp=Z,78nm,1.3s						
J59A	**Piesco**	65.60	355	IAmb	IAmb	17 58 56.8	
	comp=Z,90nm,1.0s						
J56A	**Wolcott**	65.62	353	IAmb	IAmb	17 58 56.0	
	comp=Z,62nm,0.8s						
J57A	**Williamstown**	65.67	354	P	**P**	**17 58 54.5**	**-0.6**
J57A				IAmb	IAmb	17 58 56.6	
	comp=Z,44nm,0.9s						
J57A					**pP**	**17 59 22.6**	**-0.8**
HNH	**Hanover**	65.70	357	IAmb	IAmb	17 58 57.9	
	comp=Z,76nm,1.4s						
P38A	**Dawn**	65.78	339	IAmb	IAmb	17 58 56.9	
	comp=Z,82nm,0.8s						
N41A	**Harden Midland**	65.94	342	IAmb	IAmb	17 58 57.3	
	comp=Z,72nm,1.0s						
K50A	**Casco**	65.96	349	IAmb	IAmb	17 58 57.4	
	comp=Z,122nm,1.2s						
319A	**Douglas**	66.00	322	P	**P**	**17 58 58.0**	**+0.5**
319A				IAmb	IAmb	17 59 00.5	
	comp=Z,83nm,0.9s						
121A	**Cookes Peak, D**	66.05	324	P	**P**	**17 58 59.6**	**+1.6**
	baz=140,SNR=35						
LBNH	**Lisbon**	66.22	357	P	**P**	**17 58 59.6**	**+1.0**
	baz=177,SNR=6.3						
KSU1	**Kansas State U**	66.38	337	P	**P**	**17 58 59.4**	**-0.3**
	baz=152,SNR=14						
KSU1	**Kansas State U**	66.38	337	P	**P**	**17 58 59.4**	**-0.3**
L44A	**Lake County Fo**	66.52	345	P	**P**	**17 58 59.6**	**-0.9**
	baz=161						
L44A	**Lake County Fo**	66.52	345	IAmb	IAmb	17 59 01.4	
	comp=Z,74nm,1.0s						
EMMW	**East Machias**	66.63	1	P	**P**	**17 59 01.1**	**-0.1**
EMMW				IAmb	IAmb	17 59 03.1	
	comp=Z,71nm,1.3s						
N38A	**Joes South For**	66.74	340	P	**P**	**17 59 01.4**	**-0.6**
N38A				IAmb	IAmb	17 59 02.8	
	comp=Z,88nm,0.9s						
LONY	**Lake Ozonia**	66.75	355	P	**P**	**17 59 02.6**	**+0.6**
	baz=174,SNR=15						
LONY	**Lake Ozonia**	66.75	355	IAmb	IAmb	17 59 03.9	
	comp=Z,49nm,0.9s						
Y22D	**IRIS PASSCAL I**	66.78	326	P	**P**	**17 59 04.2**	**+1.7**
	baz=142						
J47A	**Sunmer**	66.83	347	IAmb	IAmb	17 59 03.0	
	comp=Z,102nm,1.1s						
FRNY	**Flat Rock**	66.90	356	IAmb	IAmb	18 01 04.7	
	comp=Z,46nm,0.8s						
DELO	**Deloro Mine**	66.93	353	IAmb	IAmb	17 59 04.5	
	comp=Z,99nm,1.8s						
GGN	**Saint George**	67.06	1	P	**P**	**17 59 04.3**	**+0.5**
K43A	**Burlington**	67.11	344	IAmb	IAmb	17 59 04.9	
	comp=Z,93nm,0.8s						
G62A	**West of Eustis**	67.16	359	P	**P**	**17 59 04.9**	**+0.4**
G62A				IAmb	IAmb	17 59 07.5	
	comp=Z,138nm,1.2s						
PKME	**Peaks-Kenny Pk**	67.18	360	P	**P**	**17 59 05.5**	**+0.9**
	baz=180,SNR=8.2						
PKME	**Peaks-Kenny Pk**	67.18	360	IAmb	IAmb	17 59 06.6	
	comp=Z,49nm,1.1s						
ANMO	**Albuquerque**	67.23	327	P	**P**	**17 59 06.8**	**+1.3**
	comp=Z,58nm,0.8s,baz=140,slow=7.1,SNR=136						
ANMO				pP	**pP**	**17 59 34.0**	**+0.2**
	comp=Z,11nm,0.9s,baz=128,slow=7.4,SNR=2.4						
ANMO	**Albuquerque**	67.23	327	*ce*P	**P**	**17 59 06.7**	**+1.3**
ANMO				pmax	pmax		
	comp=Z,94nm,0.9s						
ANMO	**Albuquerque**	67.23	327	P	**P**	**17 59 06.8**	**+1.3**
	baz=142						
ANMO	**Albuquerque**	67.23	327	P	**P**	**17 59 05.8**	**+0.3**
ANMO				IAmb	IAmb	17 59 08.2	
	comp=Z,77nm,0.8s						
L40A	**Anamosa**	67.29	342	IAmb	IAmb	17 59 06.2	
	comp=Z,88nm,0.9s						
CBKS	**Cedar Bluff**	67.34	334	P	**P**	**17 59 06.8**	**+0.9**
	baz=149,SNR=74						
SADO	**Sadowa**	67.37	352	P	**P**	**17 59 05.8**	**0.0**
	baz=197,slow=2.6						
SADO	**Sadowa**	67.37	352	P	**P**	**17 59 04.8**	**-1.0**
TUC	**Tucson**	67.54	322	P	**P**	**17 59 09.0**	**+1.7**
	baz=138						
TUC	**Tucson**	67.54	322	P	**P**	**17 59 07.9**	**+0.5**
TUC				IAmb	IAmb	17 59 10.3	
	comp=Z,125nm,1.5s						
TUC				pP	**pP**	**17 59 35.0**	**-0.7**
SCIA	**State Center**	67.74	340	P	**P**	**17 59 08.2**	**-0.1**
	baz=156,SNR=10						
SCIA	**State Center**	67.74	340	P	**P**	**17 59 07.4**	**-0.8**
F64A	**Sherman**	67.78	0	IAmb	IAmb	17 59 10.4	
	comp=Z,47nm,0.9s						
JFWS	**Jewell Farm**	67.81	343	P	**P**	**17 59 08.6**	**0.0**
	baz=159,SNR=20						
JFWS	**Jewell Farm**	67.81	343	IAmb	IAmb	17 59 09.6	
	comp=Z,84nm,0.8s						
QSPA	**South Pole Qui**	67.95	180	P	**P**	**17 59 10.7**	**+1.2**
	comp=Z,24nm,0.7s,baz=178,slow=0.4,SNR=82						
QSPA	**South Pole Qui**	67.95	180	P	**P**	**17 59 10.2**	**+0.7**
T25A	**Trinidad**	67.98	330	P	**P**	**17 59 11.3**	**+1.1**
	baz=144,SNR=18						
T25A	**Trinidad**	67.98	330	IAmb	IAmb	17 59 12.9	
	comp=Z,87nm,1.1s						
K38A	**Parkersburg**	68.28	341	P	**P**	**17 59 10.4**	**-1.2**
K38A				IAmb	IAmb	17 59 12.4	
	comp=Z,80nm,0.8s						
TRQ	**Mont Tremblant**	68.34	356	IAmb	IAmb	17 59 13.6	
	comp=Z,86nm,0.9s						
I42A	**Draeger Farm,**	68.37	344	IAmb	IAmb	17 59 13.2	
	comp=Z,61nm,0.8s						
LIC	**Lamto**	68.40	73	*e*P	**P**	**17 59 12.4**	**-0.6**
	comp=Z,82nm,1.4s						
214A	**Organ Pipe Nat**	68.46	320	P	**P**	**17 59 15.0**	**+2.0**
	baz=136,SNR=21						
214A	**Organ Pipe Nat**	68.46	320	IAmb	IAmb	17 59 16.4	
	comp=Z,101nm,1.1s						
E62A	**Clayton Lake**	68.54	359	IAmb	IAmb	17 59 15.4	
	comp=Z,57nm,0.9s						
PQI	**Presque Isle**	68.59	0	P	**P**	**17 59 13.5**	**+0.1**
TIC	**Toumodi**	68.60	73	*e*P	**P**	**17 59 13.9**	**-0.4**
H43A	**Windswept, Lux**	68.64	345	IAmb	IAmb	17 59 14.6	
	comp=Z,59nm,0.8s						
KIC	**Kosan Boka**	68.72	73	*e*P	**P**	**17 59 14.5**	**-0.5**
	comp=Z,37nm,0.7s						
KSCO	**Kaye Shedlock'**	68.72	332	P	**P**	**17 59 15.9**	**+1.3**
	baz=146,SNR=33						
X18A	**Snowflake**	68.73	324	IAmb	IAmb	17 59 18.1	
	comp=Z,157nm,1.8s						
DBIC	**Dimbokro**	68.75	73	P	**P**	**17 59 15.5**	**+0.3**
	comp=Z,24nm,0.9s,baz=231,slow=5.4,SNR=18						
DBIC				pP	**pP**	**17 59 43.5**	**-0.3**
	comp=Z,26nm,1.0s,baz=222,slow=5.5,SNR=5.5						
DBIC				LR	LR	18 30 10.2	
	comp=Z,169nm,18.7s,baz=244,slow=36						
DBIC	**Dimbokro**	68.75	73	P	**P**	**17 59 14.2**	**-0.9**
L34A	**Svendsen Farm,**	68.83	338	P	**P**	**17 59 14.8**	**-0.3**
BGNE	**Belgrade**	68.97	337	P	**P**	**17 59 16.6**	**+0.6**
	baz=151,SNR=42						
SDCO	**Great Sand Dun**	68.98	329	P	**P**	**17 59 17.8**	**+1.4**
	baz=144,SNR=84						
SDCO	**Great Sand Dun**	68.98	329	IAmb	IAmb	17 59 19.2	
	comp=Z,130nm,1.0s						
D62A	**Allapoint, All**	69.00	360	P	**P**	**17 59 15.6**	**-0.3**
D62A				IAmb	IAmb	17 59 17.9	
	comp=Z,82nm,1.0s						
W18A	**Petrified Fore**	69.06	325	P	**P**	**17 59 18.3**	**+1.4**
	baz=140,SNR=27						
W18A	**Petrified Fore**	69.06	325	IAmb	IAmb	17 59 19.9	
	comp=Z,110nm,1.1s						
X16A	**Lo Mia Camp, P**	69.47	323	IAmb	IAmb	17 59 22.7	
	comp=Z,58nm,1.0s						
LMQ	**La Malbaie**	69.48	359	IAmb	IAmb	17 59 20.6	
	comp=Z,71nm,1.2s						
S22A	**4UR Ranch, Cre**	69.62	329	P	**P**	**17 59 21.8**	**+1.4**
	baz=143,SNR=33						
I37A	**Lemond, Waseca**	69.72	341	P	**P**	**17 59 19.8**	**-0.6**
I37A				IAmb	IAmb	17 59 21.5	
	comp=Z,91nm,0.8s						
E46A	**Sault Ste Mari**	69.73	349	IAmb	IAmb	17 59 21.4	
	comp=Z,60nm,1.1s						
Q24A	**Divide**	69.80	330	P	**P**	**17 59 22.6**	**+1.0**
	baz=144,SNR=62						
MVCO	**Mesa Verde**	70.03	327	P	**P**	**17 59 24.2**	**+1.3**
	baz=141,SNR=58						
MVCO	**Mesa Verde**	70.03	327	IAmb	IAmb	17 59 25.6	
	comp=Z,102nm,0.9s						
OGNE	**Ogallala**	70.08	334	P	**P**	**17 59 23.8**	**+0.9**
	baz=147,SNR=14						
OGNE	**Ogallala**	70.08	334	P	**P**	**17 59 23.7**	**+0.7**
WUAZ	**Wupatki**	70.25	324	P	**P**	**17 59 26.2**	**+2.1**
	baz=138,SNR=23						
WUAZ	**Wupatki**	70.25	324	IAmb	IAmb	17 59 27.5	
	comp=Z,101nm,0.9s						
GLA	**Glamis**	70.43	320	P	**P**	**17 59 27.1**	**+1.9**
	baz=135						
ECSD	**EROS Data Cent**	70.48	339	P	**P**	**17 59 25.0**	**-0.1**
	baz=153,SNR=20						
ECSD	**EROS Data Cent**	70.48	339	IAmb	IAmb	17 59 26.4	
	comp=Z,111nm,1.4s						
COWI	**Conover**	70.50	345	P	**P**	**17 59 24.5**	**-0.7**
SPMN	**Marine on St.**	70.65	342	P	**P**	**17 59 25.5**	**-0.6**
	baz=156,SNR=6.5						
SPMN	**Marine on St.**	70.65	342	IAmb	IAmb	17 59 26.9	
	comp=Z,73nm,1.1s						
ISCO	**Idaho Springs**	70.69	331	P	**P**	**17 59 28.2**	**+1.3**
	baz=144,SNR=49						
ISCO	**Idaho Springs**	70.69	331	IAmb	IAmb	17 59 29.6	
	comp=Z,73nm,0.9s						
SMCO	**Snowmass**	70.82	329	IAmb	IAmb	17 59 30.9	
	comp=Z,80nm,0.9s						
PDMCI	**Parker Dam,Lak**	70.92	321	P	**P**	**17 59 29.9**	**+1.9**
	baz=136,SNR=8.4						
IKP	**In-Ko-Pah, Jac**	70.92	319	P	**P**	**17 59 30.3**	**+2.1**
	baz=134,SNR=5.7						
SWSC	**Sam W. Stewart**	70.94	319	P	**P**	**17 59 29.8**	**+1.6**
	baz=134						
BC3	**Big Chuckawall**	71.23	320	P	**P**	**17 59 31.5**	**+1.5**
	baz=135,SNR=22						
D41A	**Chassel**	71.27	346	P	**P**	**17 59 29.3**	**-0.5**
D41A				IAmb	IAmb	17 59 31.4	
	comp=Z,126nm,0.9s						
MONP2	**Monument Peak**	71.28	319	P	**P**	**17 59 32.5**	**+2.0**
	baz=134,SNR=5.4						
IRM	**Iron Mountain**	71.40	321	P	**P**	**17 59 32.9**	**+1.9**
	baz=135,SNR=32						
U15A	**North Rim**	71.42	324	IAmb	IAmb	17 59 34.9	
	comp=Z,66nm,1.0s						
F36A	**Milaca**	71.44	342	IAmb	IAmb	17 59 31.7	
	comp=Z,64nm,0.8s						
NEE2	**Needles Airpor**	71.52	321	P	**P**	**17 59 32.9**	**+1.2**
	baz=136						
E38A	**The Farm, Brul**	71.58	344	IAmb	IAmb	17 59 32.7	
	comp=Z,74nm,1.2s						
109C	**Camp Elliot, M**	71.70	318	P	**P**	**17 59 34.0**	**+1.2**
	baz=133						
N23A	**Red Feather La**	71.72	331	P	**P**	**17 59 34.5**	**+1.4**
	baz=144,SNR=42						
BELC	**Belle Mtn. Jos**	71.79	320	P	**P**	**17 59 35.2**	**+1.8**
	baz=134,SNR=8.2						
TPFO	**Pinon Flats**	71.79	319	P	**P**	**17 59 35.3**	**+1.9**
	baz=134,SNR=5.9						
PFO	**Pinyon Flats O**	71.80	319	P	**P**	**17 59 34.9**	**+1.4**
	comp=Z,24nm,1.1s,baz=110,slow=3.3,SNR=9.4						
PFO	**Pinyon Flats O**	71.80	319	P	**P**	**17 59 35.5**	**+2.0**
	baz=134,SNR=6.5						
PFO	**Pinyon Flats O**	71.80	319	P	**P**	**17 59 33.3**	**-0.2**
SUSD	**Miller**	71.91	338	P	**P**	**17 59 33.8**	**0.0**
	baz=151						
GMRC	**Granite Mounta**	72.14	321	P	**P**	**17 59 37.5**	**+2.0**
	baz=135,SNR=37						
KNB	**Kanab**	72.14	324	IAmb	IAmb	17 59 39.3	
	comp=Z,158nm,1.0s						
O20A	**White River Ci**	72.18	329	P	**P**	**17 59 36.8**	**+1.1**
	baz=142,SNR=26						
MURC	**Murrieta**	72.24	319	P	**P**	**17 59 37.8**	**+1.8**
	baz=133						
F33A	**5 Mile Ranch,**	72.25	340	P	**P**	**17 59 35.1**	**-0.6**
F33A				pP	**pP**	**18 00 03.8**	**-0.7**
BBRC	**Big Bear Solar**	72.53	320	P	**P**	**17 59 40.1**	**+2.1**
	baz=134						
HEC	**Hector,Ludlow**	72.57	320	P	**P**	**17 59 40.0**	**+2.0**
	baz=134,SNR=6.7						
Q16A	**Castle Valley**	72.69	327	IAmb	IAmb	17 59 42.0	
	comp=Z,226nm,1.7s						
SZCU	**Shurtz Canyon**	72.71	324	IAmb	IAmb	17 59 42.4	
	comp=Z,133nm,1.7s						
TUQ	**Turquoise Moun**	72.75	321	P	**P**	**17 59 40.1**	**+1.0**
	baz=135,SNR=13						
P18A	**Preston Nutter**	72.76	328	P	**P**	**17 59 39.6**	**+0.3**
P18A				IAmb	IAmb	17 59 42.4	
	comp=Z,100nm,0.8s						
P18A				pP	**pP**	**18 00 08.0**	**0.0**
P18A				sP	**sP**	**18 00 21.8**	**+1.5**
EYMN	**Ely**	72.81	344	P	**P**	**17 59 38.4**	**-0.6**
	baz=158,SNR=17						
EYMN	**Ely**	72.81	344	IAmb	IAmb	17 59 39.9	
	comp=Z,50nm,0.9s						
CIS	**Catalina Islan**	72.85	318	P	**P**	**17 59 41.3**	**+1.7**
	baz=132						
RWWY	**Rawlins**	72.93	331	IAmb	IAmb	17 59 43.0	
	comp=Z,107nm,0.9s						
BFSC	**Mount Baldy Ra**	72.95	319	P	**P**	**17 59 41.6**	**+1.3**
	baz=133,SNR=7.7						
RRX	**Edison Barstow**	72.99	320	P	**P**	**17 59 42.7**	**+2.2**
	baz=134						
KOWA	**Kowa**	73.13	66	P	**P**	**17 59 40.8**	**-0.8**
RDMU	**Red Mountain**	73.15	329	IAmb	IAmb	17 59 44.0	
	comp=Z,73nm,0.8s						
GSC	**Goldstone, Bar**	73.17	320	P	**P**	**17 59 43.3**	**+1.7**
	baz=134,SNR=8.8						
GSC	**Goldstone, Bar**	73.17	320	IAmb	IAmb	17 59 45.0	
	comp=Z,118nm,1.6s						
MWC	**Mount Wilson**	73.19	319	IAmb	IAmb	17 59 44.9	
	comp=Z,88nm,1.4s						
SHOC	**Shoshone, Teco**	73.28	321	P	**P**	**17 59 44.2**	**+2.1**
	baz=135						
DECC	**Green Verdugo**	73.38	319	P	**P**	**17 59 44.3**	**+1.6**
	baz=133						
K22A	**Casper**	73.39	332	P	**P**	**17 59 44.0**	**+1.2**
	baz=144,SNR=13						
K22A	**Casper**	73.39	332	IAmb	IAmb	17 59 45.5	
	comp=Z,96nm,1.1s						
SNCC	**San Nicolas Is**	73.44	317	P	**P**	**17 59 44.7**	**+1.6**
	baz=132						
TBI	**Tubuai**	73.45	251	*e*S	**SKiKP**	**18 09 03.6**	**0.0**
	comp=Z,103nm,29.5s						
TBI	**Tubuai**	73.45	251	*e*LR	LR	18 22 19.4	
	comp=Z,158nm,39.8s						
RSSD	**Black Hills**	73.55	334	P	**P**	**17 59 43.7**	**0.0**
RSSD				pmax	pmax		
	comp=Z,83nm,0.9s						
RSSD	**Black Hills**	73.55	334	P	**P**	**17 59 44.9**	**+1.1**
	baz=146						
RSSD	**Black Hills**	73.55	334	P	**P**	**17 59 43.7**	**0.0**
RSSD				IAmb	IAmb	17 59 46.2	
	comp=Z,83nm,0.8s						
EDW2	**Edwards Air Fo**	73.59	319	P	**P**	**17 59 45.3**	**+1.3**
	baz=133,SNR=8.8						
D32A	**Dogwood Acres,**	73.63	340	IAmb	IAmb	17 59 45.1	
	comp=Z,90nm,0.8s						
GWY	**Greenwater Val**	73.71	321	P	**P**	**17 59 45.4**	**+0.6**
MPU	**Maple Canyon**	73.75	327	IAmb	IAmb	17 59 47.9	
	comp=Z,67nm,1.1s						
B35A	**Bob, Littlefor**	73.77	343	IAmb	IAmb	17 59 45.6	
	comp=Z,59nm,0.8s						
LRMC	**Laurel Mtn Rad**	73.82	320	P	**P**	**17 59 47.0**	**+1.6**
	baz=134,SNR=6.2						
OSI	**Osito Audit: C**	73.86	319	P	**P**	**17 59 46.5**	**+1.0**
	baz=133						
NLU	**North Lily Min**	73.93	327	P	**P**	**17 59 46.3**	**+0.3**
NLU				IAmb	IAmb	17 59 49.2	
	comp=Z,98nm,1.5s						
SCZ2	**Santa Cruz Isl**	74.00	318	P	**P**	**17 59 48.4**	**+2.0**
	baz=132						
FURC	**Furnace Creek,**	74.02	321	P	**P**	**17 59 48.2**	**+1.9**
	baz=134,SNR=13						
JLU	**Jordanelle**	74.10	327	IAmb	IAmb	17 59 50.0	
	comp=Z,63nm,1.0s						
ARVC	**Arvin**	74.27	319	P	**P**	**17 59 49.5**	**+1.7**
	baz=133						
AGMN	**Agassiz Nation**	74.32	342	P	**P**	**17 59 47.8**	**-0.1**
	baz=154,SNR=8.5						
AGMN	**Agassiz Nation**	74.32	342	IAmb	IAmb	17 59 49.1	
	comp=Z,49nm,0.9s						
SBC	**Santa Barbara**	74.35	318	P	**P**	**17 59 50.1**	**+1.8**
	baz=132						
SPR3	**Spring Creek 3**	74.40	325	P	**P**	**17 59 48.8**	**-0.2**
ISA	**Isabella, Lake**	74.41	320	P	**P**	**17 59 50.5**	**+1.7**
	baz=133,SNR=19						
DUG	**Dugway, Tooele**	74.48	326	P	**P**	**17 59 50.6**	**+1.4**
	baz=138,SNR=31						
R11A	**Troy Canyon, C**	74.62	323	P	**P**	**17 59 51.9**	**+1.8**
	baz=136,SNR=47						
GRAC	**Grapevine Rang**	74.67	321	P	**P**	**17 59 52.1**	**+1.9**
	baz=134,SNR=5.9						
PKM	**Mcpherson Peak**	74.71	318	P	**P**	**17 59 52.5**	**+1.8**
	baz=132,SNR=11						
CWC	**Cottonwood Cre**	74.71	321	P	**P**	**17 59 52.4**	**+1.8**
	baz=133						
PDAR	**Pinedale Array**	74.85	330	P	**P**	**17 59 52.4**	**+1.0**
	comp=Z,7.6nm,0.6s,baz=148,slow=7.0,SNR=56						
PDAR				LR	LR	18 36 06.1	

	comp=Z,39nm,18.4s,baz=141,slow=38						
PDAR	Pinedale Array	74.85	330	P	P	17 59 51.5	+0.2
BW06	Boulder Array	74.85	330	P	P	17 59 52.1	+0.7
	baz=141,SNR=28						
VES	Vestal, Richgr	74.90	320	P	P	17 59 52.8	+1.4
	baz=132,SNR=8.0						
HWUT	Hardware Ranch	74.92	328	IAmb	IAmb	17 59 54.1	
	comp=Z,72nm,1.1s						
MDND	Maddock	75.09	339	P	P	17 59 53.1	+0.7
	baz=151,SNR=22						
MDND	Maddock	75.09	339	P	P	17 59 52.8	+0.5
MDND				pP	pP	18 00 19.8	-1.6
MDND					sP	18 00 33.4	-0.2
SMMC	Simmler	75.10	319	P	P	17 59 54.4	+1.7
	baz=132,SNR=11						
SPUT	South Promonto	75.13	327	IAmb	IAmb	17 59 55.5	
	comp=Z,71nm,0.9s						
SBA	Scott Base	75.14	190	P	P	17 59 53.0	+0.7
SBA				pmax	pmax		
	comp=Z,43nm,1.4s						
SBA	Scott Base	75.14	190	P	P	17 59 53.0	+0.7
TIN	Tinemaha, Big	75.22	321	P	P	17 59 55.4	+2.0
	baz=133						
TPH	Tonopah	75.34	322	IAmb	IAmb	17 59 57.2	
	comp=Z,133nm,1.0s						
PPT2	Papeete2	75.34	257	*e*S	S	18 09 24.1	-1.7
	comp=Z,165nm,26.2s						
PPT2	Papeete2	75.34	257	*e*LR	LR	18 23 13.6	
	comp=Z,693nm,37.2s						
VOG	Valley Oaks Go	75.40	320	P	P	17 59 54.8	+0.5
	baz=132						
PAGB	Antelope Grade	75.53	319	IAmb	IAmb	17 59 58.4	
	comp=Z,82nm,1.3s						
AHID	Auburn Hatcher	75.57	329	P	P	17 59 55.5	+0.1
AHID				IAmb	IAmb	17 59 57.9	
	comp=Z,115nm,0.8s						
SYO	Syowa Base	75.74	159⇑	*e*pP	pP	18 00 22.8	-1.8
SYO	Syowa Base	75.74	159⇑	*e*sP	sP	18 00 33.8	-3.0
REDW	Red Top Meadow	75.91	330	IAmb	IAmb	18 00 00.1	
	comp=Z,63nm,0.8s						
SNOW	Snow King Moun	75.94	330	P	P	17 59 58.3	+0.7
SNOW				IAmb	IAmb	18 00 00.4	
	comp=Z,72nm,0.8s						
MLAC	Mammoth, Mammo	75.96	321	P	P	17 59 59.5	+1.7
	baz=133						
LOHW	Long Hollow	75.99	330	IAmb	IAmb	18 00 00.5	
	comp=Z,52nm,0.9s						
TPAW	Teton Pass	76.06	330	IAmb	IAmb	18 00 01.1	
	comp=Z,68nm,0.8s						
ULM	Lac du Bonnet	76.08	342	P	P	17 59 58.0	+0.1
	comp=Z,28nm,0.7s,baz=152,slow=6.2,SNR=44						
ULM				pP	pP	18 00 26.9	-0.1
	comp=Z,20nm,1.1s,baz=138,slow=6.0,SNR=4.4						
ULM				LR	LR	18 36 09.9	
	comp=Z,62nm,21.8s,baz=131,slow=38						
ULM	Lac du Bonnet	76.08	342	*i* P	P	17 59 58.3	+0.4
NV11	Mina Array Sit	76.12	322	P	P	17 59 59.3	+0.7
ELK	Elko	76.15	325	P	P	18 00 00.3	+1.5
	comp=Z,20nm,0.8s,baz=132,slow=3.6,SNR=66						
VNDA	Vanda	76.16	190	P	P	18 00 00.6	+2.5
	comp=Z,6.3nm,0.9s,baz=143,slow=6.0,SNR=28						
MOOW	Moose Ponds	76.16	330	IAmb	IAmb	18 00 01.3	
	comp=Z,223nm,2.0s						
NVAR	Mina Array Bea	76.20	322	P	P	18 00 01.0	+1.8
	comp=Z,8.6nm,0.8s,baz=154,slow=7.0,SNR=38						
NVAR				pP	pP	18 00 28.2	+0.1
	comp=Z,9.1nm,0.8s,baz=154,slow=7.5,SNR=5.8						
NVAR				LR	LR	18 33 57.2	
	comp=Z,42nm,18.4s,baz=90,slow=36						
NVAR	Mina Array Bea	76.20	322	P	P	18 00 00.1	+1.0
FLWY	Flagg Ranch	76.39	330	IAmb	IAmb	18 00 03.3	
	comp=Z,143nm,0.9s						
KVN	Kaiserville	76.51	323	P	P	18 00 01.1	+0.2
KVN				*PP	pP	18 00 30.9	+1.0
KVN				pmax	pmax		
	comp=Z,43nm,1.0s						
KVN	Kaiserville	76.51	323	P	P	18 00 01.1	+0.2
KVN				pP	pP	18 00 30.9	+1.0
LAO	LASA Array	76.54	334	P	P	18 00 01.6	+1.0
	baz=145,SNR=30						
LAO	LASA Array	76.54	334	P	P	18 00 00.6	0.0
LAO				IAmb	IAmb	18 00 03.1	
	comp=Z,127nm,1.1s						
RLMT	Red Lodge	76.56	332	P	P	18 00 02.4	+1.4
	baz=142,SNR=54						
RLMT	Red Lodge	76.56	332	IAmb	IAmb	18 00 03.8	
	comp=Z,245nm,1.6s						
H17A	Grant Village	76.58	331	P	P	18 00 02.9	+1.7
	baz=141,SNR=14						
LKWY	Lake	76.63	331	IAmb	IAmb	18 00 05.4	
	comp=Z,79nm,1.1s						
SCHQ	Schefferville	76.78	1	P	P	18 00 02.1	+0.4
	comp=Z,14nm,0.8s,baz=159,slow=5.6,SNR=7.5						
SCHQ				LR	LR	18 35 19.4	
	comp=Z,40nm,20.7s,baz=152,slow=37						
YUF	Upper Falls	76.80	331	P	P	18 00 03.1	+0.7
YERR	Yerington	77.11	322	IAmb	IAmb	18 00 07.5	
	comp=Z,109nm,1.6s						
YHL	Hebgen Lake	77.21	330	IAmb	IAmb	18 00 08.2	
	comp=Z,209nm,1.5s						
DGMT	Dagmar	77.23	337	P	P	18 00 06.1	+1.7
	baz=147,SNR=30						
DGMT	Dagmar	77.23	337	P	P	18 00 05.2	+0.7
DGMT				pP	pP	18 00 34.6	+0.9
DGMT					sP	18 00 45.4	-0.5
PNTR	Pine Nut	77.39	322	IAmb	IAmb	18 00 09.1	
	comp=Z,48nm,0.9s						
TORD	Torodi Ar. Bea	77.42	70	P	P	18 00 06.3	+0.1
	comp=Z,18nm,0.6s,baz=255,slow=5.1,SNR=68						
TORD				pP	pP	18 00 35.2	0.0
	comp=Z,20nm,1.0s,baz=251,slow=4.4,SNR=4.4						
TORD				S	S	18 09 46.0	-2.3
	comp=Z,2.4nm,1.2s,baz=232,slow=9.0,SNR=4.6						
TORD				LR	LR	18 33 21.2	
	comp=Z,122nm,20.2s,baz=255,slow=35						
TORD	Torodi Ar. Bea	77.42	70	P	P	18 00 05.6	-0.6
PAHR	Pah Rah Range	77.68	322	IAmb	IAmb	18 00 10.5	
	comp=Z,85nm,0.9s						
HLID	Hailey	77.78	328	P	P	18 00 09.5	+1.7
	baz=138,SNR=119						
HLID	Hailey	77.78	328	IAmb	IAmb	18 00 11.1	
	comp=Z,88nm,0.9s						
BCYI	Bear Canyon	77.84	329	P	P	18 00 08.4	+0.2
BOZ	Bozeman (W)	77.98	331	P	P	18 00 09.8	+1.0
	baz=140,SNR=32						
DLMT	Dillon	78.25	330	IAmb	IAmb	18 00 13.3	
	comp=Z,100nm,1.3s						
MFID	Camas Ranch	78.37	327	P	P	18 00 11.8	+0.7
MFID				IAmb	IAmb	18 00 14.2	
	comp=Z,109nm,1.4s						
ORV	Oroville	78.80	321	IAmb	IAmb	18 00 16.3	
	comp=Z,75nm,1.1s						
EGMT	Eagleton	79.05	333	P	P	18 00 15.3	+0.8
	baz=142,SNR=18						
EGMT	Eagleton	79.05	333	IAmb	IAmb	18 00 16.7	
	comp=Z,76nm,1.1s						
WVOR	Wild Horse Val	79.14	325	P	P	18 00 15.4	+0.1
WVOR				pmax	pmax		
	comp=Z,18nm,1.2s						
WVOR	Wild Horse Val	79.14	325	P	P	18 00 15.4	+0.1
O03E	Paynes Creek	79.46	322	P	P	18 00 17.1	+0.1
	baz=131,SNR=15						
TSUM	Tsumeb	79.64	107	P	P	18 00 18.6	0.0
PLID	Pearl Lake	79.67	328	IAmb	IAmb	18 00 20.8	
	comp=Z,88nm,0.9s						
MOD	Modoc Plateau	79.68	324	IAmb	IAmb	18 00 21.0	
	comp=Z,55nm,1.0s						
J08A	Circle Bar Ran	79.70	326	IAmb	IAmb	18 00 21.3	
	comp=Z,136nm,1.6s						
O02D	Mt. Diablo Mer	79.95	321	P	P	18 00 20.1	+0.4
	baz=131,SNR=6.8						
MSO	Missoula	79.97	330	P	P	18 00 21.2	+1.6
	baz=138						
MSO	Missoula	79.97	330	IAmb	IAmb	18 00 22.6	
	comp=Z,84nm,1.6s						
BMO	Blue Mountains	80.14	327	IAmb	IAmb	18 00 23.2	
	comp=Z,73nm,1.1s						
N02D	Trinity Center	80.42	322	P	P	18 00 22.3	+0.1
	baz=131,SNR=11						
M04C	Macdoel	80.46	323	P	P	18 00 23.2	+0.8
	baz=132,SNR=23						
KMRM	Mail Ridge	80.52	321	IAmb	IAmb	18 00 25.8	
	comp=Z,52nm,0.9s						
K05A	Summer Lake	80.56	324	P	P	18 00 23.6	+0.6
K05A				IAmb	IAmb	18 00 26.1	
	comp=Z,97nm,0.9s						
M02C	Callahan	80.78	322	P	P	18 00 24.7	+0.7
	baz=131,SNR=7.8						
F10A	Beach Ranch, E	80.90	328	IAmb	IAmb	18 00 28.6	
	comp=Z,74nm,1.2s						
YBH	Yreka Blue Hor	80.92	322	P	P	18 00 25.1	+0.3
	comp=Z,15nm,0.7s,baz=87,slow=3.6,SNR=33						
YBH	Yreka Blue Hor	80.92	322	P	P	18 00 24.6	-0.2
K04D	Chiloquin, OR	80.97	323	P	P	18 00 26.2	+1.1
	baz=132,SNR=7.6						
L04D	Klamath Falls	81.01	323	P	P	18 00 26.0	+0.6
	baz=131,SNR=6.7						
J05D	Fort Rock, OR	81.12	324	P	P	18 00 27.3	+1.4
	baz=132,SNR=32						
G08A	Pilot Rock	81.29	327	P	P	18 00 27.5	+0.8
PINE	Pine Mountain	81.30	325	IAmb	IAmb	18 00 30.0	
	comp=Z,98nm,0.8s						
J04D	Umpqua Nationa	81.57	324	P	P	18 00 29.7	+1.4
	baz=131,SNR=15						
WALA	Waterton Lakes	81.61	332	IAmb	IAmb	18 00 30.6	
	comp=Z,53nm,0.9s						
HUMO	Hull Mountain	81.62	323	P	P	18 00 28.6	+0.1
L02E	Cave Junction	81.70	322	P	P	18 00 30.4	+1.6
	baz=130,SNR=6.3						
FFC	Flin Flon	81.80	341	*e*P	P	18 00 29.8	+0.8
FFC	Flin Flon	81.80	341	P	P	18 00 29.1	+0.1
MORF	Marmelete	81.85	44	*e*sP	sP	18 01 14.4	+2.8
I05D	Terrebonne, OR	81.88	325	P	P	18 00 31.1	+1.4
	baz=132,SNR=28						
K02D	Willamette Mer	82.08	322	P	P	18 00 32.4	+1.5
	baz=130,SNR=12						
I04A	Tendick Farm,	82.10	324	P	P	18 00 31.6	+0.7
	baz=131,SNR=6.6						
F07A	Phinny Hill Vi	82.20	327	P	P	18 00 31.7	+0.4
F07A				IAmb	IAmb	18 00 34.6	
	comp=Z,110nm,1.7s						
PBDV	Barranco-do-Ve	82.28	45	*e*sP	sP	18 01 11.3	-2.6
HAWA	Hanford	82.34	327	IAmb	IAmb	18 00 34.7	
	comp=Z,57nm,0.8s						
PNCL	Nicolau / Gran	82.40	44	*e*sP	sP	18 01 20.5	+6.1
PCVE	Castro Verde	82.43	44	*e*pP	pP	18 01 08.7	+6.3
PCVE				*e*sP	sP	18 01 18.2	+3.5
MESJ	Messejana	82.44	44	*e*pP	pP	18 01 08.3	+5.9
MESJ				*e*sP	sP	18 01 19.0	+4.3
G05D	Wamic, OR	82.47	326	P	P	18 00 34.7	+1.9
	baz=132,SNR=11						
NEW	Newport	82.49	330	P	P	18 00 33.3	+0.5
	comp=Z,9.8nm,0.8s,baz=131,slow=4.6,SNR=14						
NEW	Newport	82.49	330	P	P	18 00 33.0	+0.2
	baz=136,SNR=11						
D08A	Wollman Farm,	82.50	328	IAmb	IAmb	18 00 35.4	
	comp=Z,126nm,1.8s						
PVAQ	Vaqueiros	82.51	45	*e*pP	pP	18 01 10.5	+7.7
PVAQ				*e*sP	sP	18 01 21.5	+6.4
J01E	Myrtle Point	82.53	323	P	P	18 00 33.8	+0.7
	baz=130						
I03D	Drain, OR	82.55	323	P	P	18 00 34.5	+1.3
	baz=130,SNR=5.6						
KEBM	Edson Butte	82.57	322	P	P	18 00 34.5	+1.0
KEBM				IAmb	IAmb	18 01 16.3	
	comp=Z,190nm,1.5s						
BUCK	Buck Mountain	82.68	324	IAmb	IAmb	18 00 36.6	
	comp=Z,95nm,0.9s						
HOOD	Mount Hood Mea	82.70	325	IAmb	IAmb	18 00 39.8	
	comp=Z,43nm,0.8s						
H04D	Lebanon	82.75	324	P	P	18 00 35.9	+1.7
	baz=131						
BOSA	Boshof	82.92	118	P	P	18 00 36.5	+0.7
	comp=Z,15nm,1.1s,baz=222,slow=4.6,SNR=12						
BOSA				pP	pP	18 01 04.6	-0.5
	comp=Z,9.5nm,1.1s,baz=246,slow=5.6,SNR=3.2						
BOSA				LR	LR	18 34 59.8	
	comp=Z,67nm,18.6s,baz=198,slow=34						
BOSA	Boshof	82.92	118	P	P	18 00 35.4	-0.4
F05D	White Salmon	82.98	326	P	P	18 00 36.4	+1.0
	baz=132,SNR=5.4						
I02E	Swisshome, OR	83.09	323	P	P	18 00 36.8	+0.8
	baz=130						
COR	Corvallis	83.10	324	P	P	18 00 37.2	+1.2
COR				pmax	pmax		
	comp=Z,82nm,0.9s						
COR	Corvallis	83.10	324	P	P	18 00 37.2	+1.2
COR				IAmb	IAmb	18 00 38.9	
	comp=Z,82nm,0.9s						
PMTG	Montargil	83.15	43	*e*pP	pP	18 01 08.5	+2.7
PMTG				*e*sP	sP	18 01 22.1	+4.2
RAR	Rarotonga	83.16	250	P	P	18 00 38.9	+2.0
	comp=Z,11nm,0.4s,baz=191,slow=9.2,SNR=3.8						
PBAR	Barrancos	83.39	44	*e*pP	pP	18 01 09.1	+1.7
PBAR				*e*sP	sP	18 01 22.4	+2.7
G03D	McMinnville, O	83.49	325	P	P	18 00 38.9	+0.9
	baz=131						
LTY	Liberty	83.50	327	IAmb	IAmb	18 00 40.2	
	comp=Z,37nm,0.8s						
F04A	Amboy	83.51	326	IAmb	IAmb	18 00 40.1	
	comp=Z,59nm,0.9s						
MAW	Mawson	83.56	163	P	P	18 00 39.1	+1.0
	comp=Z,8.4nm,0.7s,baz=207,slow=6.2,SNR=19						
MAW	Mawson	83.56	163	P	P	18 00 38.9	+0.7
F04D	Rainier, OR	83.92	325	P	P	18 00 41.0	+0.9
	baz=131						
E04D	Cinebar	84.00	326	P	P	18 00 41.3	+0.8
	baz=131						
C06D	Leavenworth	84.06	328	P	P	18 00 41.1	+0.2
	baz=133						
D05A	Enumclaw	84.12	327	IAmb	IAmb	18 00 43.1	
	comp=Z,60nm,0.8s						
D04E	Lakebay	84.51	326	P	P	18 00 44.6	+1.5
	baz=131						
EDM	Edmonton	84.52	335	IAmb	IAmb	18 00 44.0	
	comp=Z,67nm,0.9s						
LBTB	Lobatse	84.53	115	P	P	18 00 43.9	-0.2
LBTB				pP	pP	18 01 12.2	-1.1
B06A	Marblemount	84.76	328	IAmb	IAmb	18 00 45.6	
	comp=Z,60nm,0.8s						
PCAB	Cabril	84.81	41	*e*sP	sP	18 01 32.4	+5.9
B05A	Bryant	84.89	327	P	P	18 00 45.2	+0.3
	baz=132,SNR=14						
D03D	Eldon	84.91	326	P	P	18 00 45.9	+0.8
	baz=131,SNR=6.6						
MVO	Moncorvo	85.11	42	*e*P	P	18 00 47.9	+1.5
MVO				*e*pP	pP	18 01 18.4	+2.4
NLWA	Neilton Lookou	85.22	326	IAmb	IAmb	18 00 49.1	
	comp=Z,52nm,1.1s						
B04A	Port Angeles	85.46	327	IAmb	IAmb	18 00 50.4	
	comp=Z,51nm,1.2s						
A04D	Lummi Island	85.50	327	P	P	18 00 48.5	+0.5
	baz=131						
PBRG	Braganca	85.65	41	*e*pP	pP	18 01 20.4	+1.7
PGC	Sidney	85.82	327	IAmb	IAmb	18 00 51.8	
	comp=Z,42nm,0.8s						
PAB	San Pablo	85.90	44	P	P	18 00 51.2	+0.8
PAB				*PP	pP	18 01 17.9	-2.1
PAB				pmax	pmax		
	comp=Z,41nm,1.7s						
PAB	San Pablo	85.90	44	P	P	18 00 51.2	+0.8
PAB					pP	18 01 17.9	-2.1
ESDC	Sonseca Array	86.22	44	P	P	18 00 53.3	+1.4
	comp=Z,0.7nm,0.8s,baz=240,slow=4.9,SNR=8.2						
ESDC				pP	pP	18 01 20.7	-0.8
	comp=Z,2.8nm,1.0s,baz=239,slow=6.3,SNR=5.5						
ESDC				LR	LR	18 37 36.6	
	comp=Z,78nm,19.6s,baz=240,slow=34						
LLLB	Lillooet	86.35	329	IAmb	IAmb	18 00 53.7	
	comp=Z,43nm,1.0s						
OZB	Mount Ozzard	87.06	326	IAmb	IAmb	18 00 57.9	
	comp=Z,58nm,0.8s						
CBB	Campbell River	87.67	327	P	P	18 00 59.0	+0.4
CBB				IAmb	IAmb	18 01 00.1	
	comp=Z,88nm,1.4s						
CBB				pP	pP	18 01 27.7	-0.7
CASY	Casey	91.75	180	P	P	18 01 19.0	+1.4
CASY				IAmb	IAmb	18 01 21.1	
	comp=Z,29nm,1.0s						
YKA	Yellowknife Ar	91.95	341	P	P	18 01 18.9	+0.7
	comp=Z,24nm,0.8s,baz=128,slow=5.6,SNR=28						
YKA				pP	pP	18 01 47.5	-0.7
	comp=Z,9.6nm,0.7s,baz=128,slow=5.4,SNR=7.3						
YKA				LR	LR	18 46 55.2	
	comp=Z,48nm,19.3s,baz=0.0,slow=38						
KEST	Kesra	93.59	53	LR	LR	18 45 50.9	
	comp=Z,150nm,19.1s,baz=223,slow=37						
WRAK	Wrangell Islan	94.84	330	P	P	18 01 32.1	+0.4
	baz=124						
DLBC	Dease Lake	94.95	332	P	P	18 01 33.9	+1.5
	comp=Z,15nm,0.9s,baz=124,slow=5.4,SNR=15						
DLBC				PP	PP	18 05 23.6	+0.4
	comp=Z,10.0nm,1.1s,baz=113,slow=4.7,SNR=6.2						
DLBC	Dease Lake	94.95	332	IAmb	IAmb	18 01 34.4	
	comp=Z,19nm,0.9s						
TGTN	Hyland Airport	96.06	335	P	P	18 01 38.5	+1.2
	baz=127						
P33M	Teslin, Yukon	97.13	333	P	Pdif	18 01 42.8	+0.5
	baz=123						
SKAG	Skagway	97.81	332	P	Pdif	18 01 45.9	+0.7
	baz=121						
MMPY	Sheldon Lake,	97.84	336	P	Pdif	18 01 45.8	+0.4
	baz=124						
FARO	Faro, Yukon	98.44	335	P	Pdif	18 01 48.9	+0.9
	baz=122						
M31M	Drury Creek, Y	98.84	334	P	Pdif	18 01 50.2	+0.4
	baz=121						
N31M	Braeburn, Yuko	99.04	333	P	Pdif	18 01 51.4	+0.8
	baz=120						
M30M	Minto, Yukon	100.00	334	P	Pdif	18 01 55.3	+0.4
	baz=119						
YUK4	Talbot Arm	100.17	333	P	Pdif	18 01 56.2	+0.3
	baz=118						
YUK3	Moose Creek	101.14	333	P	Pdif	18 02 00.4	+0.1
	baz=116						
CTG	Chitna Glacier	101.17	332	P	Pdif	18 01 59.8	-0.5
	baz=116						
A36M	Sachs Harbour	101.47	345	P	Pdif	18 02 01.4	+0.3
	baz=128,SNR=9.8						
INK	Inuvik	101.71	340	P	Pdif	18 02 02.6	+0.3
	baz=121,SNR=5.8						
DAWY	Dawson	101.73	335	P	Pdif	18 02 02.7	+0.1
	baz=117						
CRQE	Cirque	101.86	331	P	Pdif	18 02 03.1	-0.3
	baz=114						
I29M	Ogilvie Camp,	101.91	336	P	Pdif	18 02 03.9	+0.6
	baz=118						
M27K	Edge Creek, AK	102.00	333	P	Pdif	18 02 04.1	+0.2
	baz=115						
CLL	Collm	102.06	39	*e*PS	PS	18 15 27.0	+1.9
CLL				*e*PPS	PPS	18 16 10.0	
MCARA	McCarthy VSAT	102.09	332	P	Pdif	18 02 04.2	0.0
	baz=114						
L27K	Beaver Creek,	102.28	334	P	Pdif	18 02 05.3	+0.2
	baz=115						
KLU	Klutina	103.41	331	P	Pdif	18 02 10.4	+0.2
	baz=112						
SCRK	Sand Creek	103.53	334	P	Pdif	18 02 10.8	+0.1
	baz=113						
J26L	Joseph Creek	103.57	335	P	Pdif	18 02 11.2	+0.3
	baz=113						
SML	Sawmill	104.60	331	P	Pdif	18 02 15.2	-0.2
	baz=110						
WAT6	Susitna Watana	104.60	332	P	Pdif	18 02 15.1	-0.5
	baz=110						
PRP	Porcupine Dome	104.72	335	P	Pdif	18 02 15.7	-0.2
	baz=111						
ILAR	Eielson Array	105.00	334	Pdiff	Pdif	18 02 17.4	+0.4
	comp=Z,0.6nm,0.7s,baz=145,slow=2.8,SNR=6.5						
ILAR				PP	PP	18 06 40.4	+1.3
	comp=Z,3.7nm,1.0s,baz=107,slow=6.1,SNR=9.2						
BRSE	Bradley Lake S	105.05	329	P	PKiKP	18 06 30.7	-0.8
	baz=108						
CAPN	Captain Cook N	105.56	330	P	PKiKP	18 06 31.8	-0.4
	baz=108						
TOLK	Toolik Lake Re	107.24	338	P	PKiKP	18 06 35.2	-0.1
	baz=107						
AKASG	Malin Array Be	111.81	43	PKiKP	PKiKP	18 06 43.9	-0.4
	comp=Z,0.1nm,0.2s,baz=239,slow=2.7,SNR=5.1						
AKASG				PKKPbc	PKKPbc	18 17 38.3	-0.7
	comp=Z,1.0nm,0.6s,baz=74,slow=3.9,SNR=7.4						
APA	Apatity	114.96	24⇑	*i*PKIKP	PKiKP	18 06 46.8	-3.1
APA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GAMB	Gambell	115.46	331	P	PKPdf	18 06 51.0	+0.1
	baz=89						
OBN	Obninsk	116.62	38⇓	*i*PKIKP	PKiKP	18 06 54.3	+0.9
OBN				*e*		18 08 00.7	
OBN				*e*SS	SS	18 24 00.3	+0.3
OBN				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KLMR	Klimovskoe	118.03	32	*e*PKIKP	PKPdf	18 06 54.5	-1.4
KLMR				*e*		18 07 20.9	
KLMR				pmax	pmax		
	comp=Z,17nm,1.3s						
KLMR	Klimovskoe	118.03	32	*e*PKPdf	PKPdf	18 06 54.5	-1.4
KLMR				AMP		18 07 03.8	
	comp=Z,17nm,1.3s						
KLMR				*e*pPKPdf	pPKPdf	18 07 20.9	-6.0
KLMR				*e*PKKPbc	PKKPab	18 17 16.0	-1.7
STKA	Stephens Creek	118.87	209	PKP	PKPdf	18 06 58.7	0.0
	comp=Z,3.6nm,1.1s,baz=240,slow=21,SNR=2.3						
KIV	Kislovodsk	120.28	51	*e*PKIKP	PKiKP	18 07 01.8	+0.7
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KBZ	Khabaz	120.42	51	PKP	PKiKP	18 07 02.2	+1.0
	comp=Z,4.8nm,0.8s,baz=265,slow=2.1,SNR=8.1						
KBZ	Khabaz	120.42	51*c*	*i*PKIKP	PKiKP	18 07 01.6	+0.4
PRGR	Permogore	120.86	30	*e*PKIKP	PKiKP	18 07 02.3	+0.8
PRGR				pmax	pmax		
	comp=Z,48nm,1.1s						
BILL	Bilibino	123.28	338⇑	*e*PKIKP	PKiKP	18 07 06.2	+0.1
BILL				*e*		18 08 46.7	
BILL				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KIRV	Kirov	123.31	34*c*	*i*PKIKP	PKiKP	18 07 07.6	+1.2
MAK	Makhachkala	123.77	52	*i* P	Pdif	18 03 43.2	+2.2
MAK				*i*		18 07 07.2	
MAK				*e*		18 07 34.6	
MAK				*e*		18 08 51.7	
MAK				*e*PPP	PPP	18 11 27.2	
MAK				*e*		18 13 59.9	
MAK				*e*PS	PS	18 18 49.8	-1.2
MAK				*e*SSS	SSS	18 30 09.3	
MAK				pmax	pmax		
	comp=Z,160nm,1.5s						
CTA	Charters Tower	125.82	222	PKP	PKiKP	18 07 13.2	+0.5
	comp=Z,5.2nm,0.8s,baz=121,slow=5.3,SNR=5.8						
ARU	Arti	128.65	34	*i* PKIKP	PKiKP	18 07 16.9	-0.2
ARU						18 09 22.5	
ARU						18 14 18.5	
ARU	Arti	128.65	34	PKPdf	PKPdf	18 07 15.7	-0.8
ASAR	Alice Springs	129.35	207	PKhKP	PKPpre	18 07 06.0	
	comp=Z,0.3nm,0.6s,baz=149,slow=1.6,SNR=5.8						
ASAR				PKP	PKPdf	18 07 19.2	+0.3
	comp=Z,12nm,0.8s,baz=148,slow=2.2,SNR=65						
ASAR				pPKP	pPKPdf	18 07 49.6	-0.1
	comp=Z,2.1nm,0.7s,baz=136,slow=1.8,SNR=2.9						
ASAR	Alice Springs	129.35	207	PKPdf	PKPdf	18 07 17.9	-1.1
ASAR				pPKPdf	pPKPdf	18 07 49.4	-0.3
NRIK	Noril'sk	130.75	11	PKP	PKiKP	18 07 20.9	-0.1
	comp=Z,2.8nm,0.6s,baz=355,slow=3.7,SNR=4.2						
NRIK	Noril'sk	130.75	11*c*	*i*PKIKP	PKiKP	18 07 21.5	+0.5
SEY	Seymchan	130.86	337	PKP	PKiKP	18 07 21.5	+0.2
	comp=Z,19nm,1.0s,baz=103,slow=2.2,SNR=20						
ABKAR	Akbulak array	131.55	43	PKPdf	PKPdf	18 07 22.3	+0.1
WRA	Warramunga Arr	132.42	210	PKhKP	PKPpre	18 07 11.9	
	comp=Z,0.9nm,0.8s,baz=135,slow=2.5,SNR=10						
WRA				PKP	PKiKP	18 07 25.6	-0.4
	comp=Z,7.1nm,0.6s,baz=159,slow=1.7,SNR=42						
WRA				pPKP	pPKPdf	18 07 55.0	-0.6
	comp=Z,1.9nm,0.5s,baz=153,slow=1.7,SNR=2.8						
WRA				SKPbc	SKPab	18 10 43.5	+0.5
	comp=Z,8.7nm,1.1s,baz=148,slow=3.6,SNR=13						
WRA	Warramunga Arr	132.42	210		PKPpre	18 07 11.5	
WRA				PKPdf	PKPdf	18 07 23.4	-1.4
WRAB	Tennant Creek	132.42	210*c*	*i*PKIKP	PKiKP	18 07 25.8	-0.1
WRAB				pmax	pmax		
	comp=Z,35nm,1.7s						
PMG	Port Moresby	132.83	232	PKP	PKPdf	18 07 25.7	0.0
	comp=Z,13nm,1.0s,baz=161,slow=4.9,SNR=5.4						
PMG	Port Moresby	132.83	232	PKIKP	PKiKP	18 07 27.9	+1.0
PMG	Port Moresby	132.83	232	PKPdf	PKiKP	18 07 27.9	+1.0
PETK	Petropavlovsk-	133.28	323	PKhKP	PKPpre	18 07 13.9	
	comp=Z,4.7nm,0.9s,baz=180,slow=0.9,SNR=4.2						
PETK				PKP	PKiKP	18 07 26.7	+0.1
	comp=Z,6.0nm,0.8s,baz=184,slow=2.4,SNR=8.2						
BRVK	Borovoye	136.22	35*c*	*i*PKIKP	PKiKP	18 07 32.2	-0.3
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
BRVK	Borovoye	136.22	35	PKPdf	PKPdf	18 07 31.4	+0.6
YAK	Yakutsk	138.28	347	PKhKP	PKPpre	18 07 26.6	
	comp=Z,2.6nm,0.3s,baz=314,slow=2.5,SNR=6.2						
YAK				PKP	PKPdf	18 07 35.4	+1.0
	comp=Z,2.4nm,0.3s,baz=217,slow=4.4,SNR=6.0						
YAK	Yakutsk	138.28	347*c*	*i*PKIKP	PKPdf	18 07 35.2	+0.8
YAK				pmax	pmax		
	comp=Z,24nm,1.3s						
YAK	Yakutsk	138.28	347	PKPdf	PKPdf	18 07 34.8	+0.4

BRZS	Berezniki	139.00	38	*e*PKP	PKPdf	18 07 35.1	-1.1
	baz=38						
BRZS	Berezniki	139.00	38	*e*PKIKP	PKPdf	18 07 35.0	-1.1
KURK	Kurchatov	141.83	34*c*	*i*PKIKP	PKPdf	18 07 42.4	+1.2
KURK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ZALV	Zalesovo Beam	142.53	26	PKhKP	PKPpre	18 07 39.5	
	comp=Z,9.2nm,0.7s,baz=297,slow=4.6,SNR=22						
ZALV				PKP	PKPdf	18 07 43.1	+0.8
	comp=Z,19nm,0.9s,baz=300,slow=3.2,SNR=27						
ZALV				pPKP	pPKPdf	18 08 13.1	-0.2
	comp=Z,4.1nm,0.9s,baz=298,slow=3.1,SNR=1.8						
ZALV				SKPbc	SKiKP	18 11 11.9	+0.3
	comp=Z,2.4nm,0.7s,baz=305,slow=5.1,SNR=3.5						
SEM	Semipalatinsk	142.85	33	*e*PKP	PKPdf	18 07 39.6	-3.8
	baz=33						
SEM	Semipalatinsk	142.85	33	*e*PKIKP	PKPdf	18 07 39.5	-3.8
SGDS	Sogindy	143.04	46	*e*PKP	PKPdf	18 07 43.1	-0.5
	baz=46						
AAK	Ala-Archa	143.26	48	*i* PKIKP	PKPdf	18 07 43.5	-0.7
AAK	Ala-Archa	143.26	48	PKPdf	PKPbc	18 07 42.3	+0.8
KUU	Kurty	143.99	45	*e*PKP	PKPbc	18 07 44.1	+0.7
	baz=45						
KUU	Kurty	143.99	45	*e*PKIKP	PKPbc	18 07 44.1	+0.7
BOD	Bodaibo	144.41	358	*e*PKIKP	PKPab	18 07 43.9	0.0
BOD				pmax	pmax		
	comp=Z,86nm,1.6s						
CHKK	Chushkaly	144.43	45	*e*PKP	PKPbc	18 07 45.3	+0.5
	baz=44						
YSS	Yuzh-Sakhalins	144.65	322	*e*PKIKP	PKPdf	18 07 46.1	-0.1
YSS				pmax	pmax		
	comp=Z,80nm,0.9s						
YSS	Yuzh-Sakhalins	144.65	322	PKPdf	PKPab	18 07 44.8	-0.4
AAA	Alma-Ata	144.66	46	*e*PKP	PKPdf	18 07 46.5	-0.1
	baz=46						
AAA	Alma-Ata	144.66	46	*e*PKIKP	PKPdf	18 07 46.4	-0.1
NIL	Nilore	144.70	63	PKIKP	PKPab	18 07 45.5	-0.3
NIL	Nilore	144.70	63	PKPdf	PKPab	18 07 45.5	-0.3
TNSS	Tian-Shan	144.75	46	*e*PKP	PKPdf	18 07 47.1	0.0
	baz=46						
MDOK	Medeo	144.77	46	*e*PKP	PKPbc	18 07 46.0	0.0
	baz=46						
MDOK	Medeo	144.77	46	*e*PKIKP	PKPab	18 07 46.0	0.0
TDK	Taldyqorghan	144.80	42	*e*PKP	PKPdf	18 07 46.3	-0.3
	baz=42						
TDK	Taldyqorghan	144.80	42	*e*PKIKP	PKPdf	18 07 46.3	-0.3
KSH	Kashi	145.40	52	PKPbc	PKPab	18 07 49.0	+0.6
GRNR	Gornyy	145.43	332	⇑*i*PKIKP	PKPab	18 07 49.7	+1.7
GRNR				pmax	pmax		
	comp=E,9.0nm,0.8s						
GRNR				pmax	pmax		
	comp=N,8.0nm,1.1s						
GRNR				pmax	pmax		
	comp=Z,100nm,1.0s						
KPKS	Kokpek	145.70	44	*e*PKP	PKPdf	18 07 48.1	-0.3
	baz=44						
KPKS	Kokpek	145.70	44	*e*PKIKP	PKPdf	18 07 48.0	-0.3
SATY	Saty	145.71	45	*e*PKP	PKPdf	18 07 48.3	-0.2
	baz=45						
SATY	Saty	145.71	45	*e*PKIKP	PKPdf	18 07 48.2	-0.2
UZB	Uzynbulak	146.07	44	*e*PKP	PKPdf	18 07 49.5	+0.5
	baz=44						
UZB	Uzynbulak	146.07	44	*e*PKP2	PKPdf	18 07 49.5	+0.5
MKAR	Makanchi Array	146.11	37	PKPbc	PKPbc	18 07 50.2	+0.3
	comp=Z,27nm,0.8s,baz=311,slow=2.5,SNR=88						
MKAR				pPKPbc	pPKPdf	18 08 20.1	+0.3
	comp=Z,8.3nm,0.8s,baz=311,slow=3.1,SNR=1.8						
MKAR	Makanchi Array	146.11	37	PKPdf	PKPdf	18 07 49.4	+0.6
ASAJ	Asahikawa	146.23	318	PKPbc	PKPab	18 07 51.5	+0.3
	comp=Z,69nm,0.8s,baz=256,slow=7.8,SNR=19						
ZEA	Zeya	146.30	343	*e*PKP2	PKPbc	18 07 50.0	-0.2
ZEA				pmax	pmax		
	comp=E,10.0nm,1.1s						
ZEA				pmax	pmax		
	comp=Z,40nm,1.2s						
ERM	Erimo	146.87	314*c*	*i*PKP2	PKiKP	18 07 54.8	+0.1
ERM				pmax	pmax		
	comp=Z,284nm,1.7s						
ZSN	Zaisan	147.08	34	*e*PKP	PKPdf	18 07 49.9	-0.6
	baz=34						
ZSN	Zaisan	147.08	34	*e*PKIKP	PKPdf	18 07 49.8	-0.6
MMRI	Maumere	147.50	200		PKPdf	18 07 52.6	+0.5
KLR	Kul'dur	148.57	334	PKPbc	PKPbc	18 07 57.0	+0.4
	comp=Z,16nm,0.7s,baz=39,slow=3.0,SNR=18						
KLR	Kul'dur	148.57	334	PKP2	PKPbc	18 07 57.0	+0.4
HYB	Hyderabad	148.85	93	*i* PKP	PKPdf	18 07 52.0	-2.2
TEY	Ternei	149.24	324	*e*PKHKP	PKPpre	18 07 54.4	
MOY	Mondy	149.56	13	*e*PKP2	PKiKP	18 08 00.4	+0.3
MOY				pmax	pmax		
	comp=Z,71nm,1.6s						
IRK	Irkutsk	149.56	9	*e*PKHKP	PKPpre	18 07 54.8	
IRK				pmax	pmax		
	comp=Z,80nm,1.7s						
TLY	Talaya	150.02	10	*e*PKP2	PKiKP	18 08 00.9	-0.1
TLY				pmax	pmax		
	comp=Z,41nm,0.9s						
WMQ	Urumqi	150.94	37	*e*PKPbc	PKPdf	18 07 56.3	-0.5
ZAK	Zakamensk	151.22	11	*e*PKIKP	PKPdf	18 07 57.2	+0.1
ZAK				pmax	pmax		
	comp=Z,17nm,1.4s						
ZAK				pmax	pmax		
	comp=Z,13nm,1.5s						
USRK	Ussuriysk Ar.	152.24	327	PKP	PKPdf	18 07 58.2	-0.4
	comp=Z,2.5nm,0.8s,baz=270,slow=1.9,SNR=4.6						
USRK				PKPbc	PKiKP	18 08 06.5	+0.8
	comp=Z,22nm,0.8s,baz=24,slow=1.4,SNR=27						
USRK				PKPab	PKPab	18 08 16.5	+0.9
	comp=Z,6.6nm,0.7s,baz=44,slow=4.1,SNR=7.4						
MJAR	Matsushiro Arr	152.68	307	PKPbc	PKPbc	18 08 06.3	-0.5
	comp=Z,21nm,1.0s,baz=79,slow=1.5,SNR=29						
MJAR				PKPab	PKPab	18 08 18.6	+0.7
	comp=Z,16nm,0.9s,baz=78,slow=1.7,SNR=11						
MJAR	Matsushiro Arr	152.68	307	PKIKP	PKPbc	18 08 06.0	-0.8
MJAR						18 08 18.2	
MJAR	Matsushiro Arr	152.68	307		PKPbc	18 08 06.0	-0.8
MJAR				PKPab	PKPab	18 08 18.2	+0.4
MAT	Matsushiro	152.69	307	PKP	PKiKP	18 08 07.0	+0.1
SONM	Songino Array	154.16	8	PKP	PKPdf	18 08 03.2	+1.7
	comp=Z,5.3nm,0.9s,baz=281,slow=1.3,SNR=30						
SONM				PKPbc	PKiKP	18 08 10.1	+0.3
	comp=Z,5.6nm,0.7s,baz=299,slow=0.8,SNR=19						
SONM				PKPab	PKPab	18 08 24.1	+0.3
	comp=Z,3.2nm,0.8s,baz=315,slow=3.6,SNR=6.5						
SONM	Songino Array	154.16	8	PKPdf	PKPdf	18 08 01.8	+0.3
SONM					PKPbc	18 08 08.7	-1.1
SONM				PKPab	PKPab	18 08 24.8	+1.1
ULN	Ulaanbaatar	154.21	7*c*	*i*PKIKP	PKiKP	18 08 11.7	+1.8
ULN				pmax	pmax		
	comp=Z,5.0nm,1.3s						
KSRS	Korea Array	159.13	320	PKP	PKPdf	18 08 09.7	+1.6
	comp=Z,7.1nm,1.0s,baz=53,slow=1.2,SNR=16						
KSRS				PKPab	PKPab	18 08 46.7	+1.4
	comp=Z,9.3nm,0.8s,baz=53,slow=4.6,SNR=18						
KSAR	Wonju Array Be	159.16	320	PKP2	PKPab	18 08 45.0	-0.5
KSAR						19 08 07.5	
KSAR	Wonju Array Be	159.16	320	PKPdf	PKPdf	18 08 07.5	-0.6
KSAR				PKPab	PKPab	18 08 45.0	-0.5
GTA	Gaotai	160.28	27	⇑PKP	PKPdf	18 08 11.2	+1.7
GTA				pPKP	pPKPdf	18 08 39.6	-0.9
GTA				PKPab	PKPab	18 08 51.1	+0.7
HHC	Hu-ho-hao-te	161.45	359	*e*PKP	PKPdf	18 08 10.9	+0.2
TIA	Tai'an	165.19	341	P	PKPab	18 09 11.7	-0.1
TIA				pmax	pmax		
	comp=Z,18nm,1.2s						
CMAR	Chiang Mai Arr	167.81	106	PKP	PKPdf	18 08 17.9	+1.2
	comp=Z,2.6nm,1.0s,baz=274,slow=2.2,SNR=21						
CMAR				PP	PP	18 13 15.1	+1.9
	comp=Z,0.5nm,0.8s,baz=257,slow=6.2,SNR=4.8						
NJ2	Nanjing	168.15	327	*e*PKP	PKPdf	18 08 15.9	-0.6
GYA	Guiyang	174.04	44	⇑PKP	PKPdf	18 08 18.4	-1.5
GYA				PKPab	PKPab	18 09 54.1	+2.5
GYA				PP	PP	18 13 44.5	+1.2
GYA				AMB	AMB		
	comp=Z,59nm,4.9s						
GYA				LR	LR		
	comp=Z,220nm,4.4s						
GYA				LR	LR		
	comp=Z,190nm,5.4s						

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*NEIC **10** 17:49:09.7±1.9, 31°.79S±0°.09×179°.2E±0°.2, h469^{km}±10^{km}, mb4.2/13 Error ellipse: s-maj=20.9km s-min=9.0km az=62.0*

*IDC **10** 17:49:11.1±0.9, 31°.66S×179°.23E, h485^{km}±15^{km}, mb3.6/5, mb1 3.8/8, mb1mx3.4/41, mbtmp4.6/8, Error ellipse: s-maj=22.9km s-min=22.0km az=137.0*

ISC 10 17:49:10.2±0.7**, 31°.79S**±0°.07×**179°.4E**±0°.1**, h500**^{km}**, n65, σ1**^{s}**73**/68**, mb4.3**/9**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	3.46	44	P	P	17 50 25.5	+1.0
	81nm,0.3s,baz=58,slow=15,SNR=7.6						
RAO				S	S	17 51 23.5	-1.3
	174nm,0.3s,baz=104,slow=23,SNR=12						
RAO	Raoul Island	3.46	44	P	P	17 50 22.4	-2.1
MXZ	Matakaoa Point	5.82	188	P	P	17 50 44.1	-0.5
MXZ					S	17 52 00.1	-1.8
OUZ	Omahuta	5.90	233		P	17 50 42.5	-2.9
URZ	Urewera	6.71	195	P	P	17 50 53.5	+0.2
	23nm,0.3s,baz=346,slow=6.3,SNR=94						
URZ				S	S	17 52 14.4	-3.3
	3.3nm,0.3s,baz=298,slow=23,SNR=1.5						
URZ	Urewera	6.71	195	P	P	17 50 53.4	+0.2
URZ					S	17 52 10.0	-7.8
HIZ	Hauiti	7.65	208	P	P	17 51 01.5	-1.3
RITZ	Rihia Road	7.71	201	P	P	17 51 06.0	+2.5
BKZ	Black Stump Fm	7.71	197	P	P	17 51 00.3	-3.2
TMVZ	Te Maari	7.89	201	P	P	17 51 07.1	+1.8
BHHZ	Black Hill Sta	8.13	198	P	P	17 51 07.5	-0.3
PKE	Pukeiti	8.58	209	P	P	17 51 16.8	+4.3
NEZ	North Egmont	8.60	208	P	P	17 51 16.7	+4.0
LREZ	Lake Rotokare	8.64	206	P	P	17 51 15.7	+2.6
KHEZ	Kahui Hut	8.65	209	P	P	17 51 17.5	+4.2
WAZ	Wanganui	8.70	203	P	P	17 51 15.7	+2.0
PRWZ	Pori Road	9.16	196	P	P	17 51 19.9	+1.4
BFZ	Birch Farm	9.21	195	P	P	17 51 16.5	-2.6
MRZ	Mangatainoka R	9.36	198	P	P	17 51 20.1	-0.5
HOWZ	Holdsworth Sta	9.60	198	P	P	17 51 22.8	-0.3
OGWZ	Otaki Gorge	9.61	199	P	P	17 51 23.0	-0.3
TMWZ	Te Maipa	9.70	196	P	P	17 51 25.6	+1.3
KIW	Kapiti Island	9.73	200	P	P	17 51 24.3	-0.2
MTW	Mount Morrison	9.84	197	P	P	17 51 25.5	-0.2
CAW	Cannon Point	9.91	199	P	P	17 51 26.2	-0.2
TRWZ	Traveller	10.03	196	P	P	17 51 28.3	+0.7
PAWZ	Paruwai Farm	10.07	197	P	P	17 51 28.4	+0.3
SNZO	South Karori	10.20	200	P	P	17 51 27.8	-1.7
TCW	Tory Channel	10.24	202	P	P	17 51 30.0	+0.1
BHW	Baring Head	10.25	199	P	P	17 51 30.3	+0.3
PLWZ	Palliser	10.29	197	P	P	17 51 30.6	+0.1
TUWZ	Tuamarina	10.55	203	P	P	17 51 33.5	+0.4
BSWZ	Blackbirch Sta	10.83	202	P	P	17 51 37.0	+0.8
BSWZ	Blackbirch Sta	10.83	202	P	P	17 51 35.9	-0.3
THZ	Tophouse	11.21	206	P	P	17 51 39.7	-0.5
LTZ	Lake Taylor	12.32	205	P	P	17 51 50.7	-1.4
OXZ	Oxford	12.88	205	P	P	17 51 56.7	-1.2
MQZ	McQueen's Vall	13.01	202	P	P	17 51 58.0	-1.2
FOZ	Fox Glacier	13.93	210	P	P	17 52 08.6	-0.3
PINNC	Pines Island,	13.98	308	P	P	17 52 09.8	0.0
MSVF	Nonsavu	14.05	355	P	P	17 52 10.2	-0.5
OUENC	Ouen Island, N	14.52	307	P	P	17 52 14.2	-1.3
DZM	Mont Dzumac	15.03	307	P	P	17 52 21.5	+0.6
	0.5nm,0.3s,baz=171,slow=18,SNR=9.1						
WKZ	Wanaka	15.31	209	P	P	17 52 22.0	-1.5
CAN	Canberra	25.49	254	P	P	17 54 00.3	+2.2
CTA	Charters Tower	31.84	283	P	P	17 54 54.9	+1.3
	4.9nm,0.3s,baz=102,slow=10,SNR=18						
CTAO	Charters Tower	31.84	283	P	P	17 54 54.7	+1.1
CTAO				IAmb	IAmb	17 54 55.2	
	comp=Z,6.9nm,0.5s						
STKA	Stephens Creek	31.97	260	P	P	17 54 56.4	+1.8
	comp=Z,3.8nm,0.4s,baz=111,slow=11,SNR=13						
STKA	Stephens Creek	31.97	260	IAmb	IAmb	17 54 57.6	
	comp=Z,1.1nm,0.9s						
AS31	Alice Springs	40.80	270	P	P	17 56 08.0	+0.3
ASAR	Alice Springs	40.80	270	P	P	17 56 08.0	+0.3
	comp=Z,5.7nm,0.7s,baz=104,slow=7.4,SNR=61						
ASAR	Alice Springs	40.80	270	P	P	17 56 07.5	-0.1
WR0	Warramunga Arr	41.74	275	P	P	17 56 15.2	0.0
WR0				IAmb	IAmb	17 56 15.9	
	comp=Z,6.8nm,0.9s						
WR0				PcP	PcP	17 57 59.5	-0.5
WB2	Warramunga Arr	41.91	275	P	P	17 56 16.6	+0.1
WRAB	Tennant Creek	41.91	275	P	P	17 56 16.5	0.0
WRAB				IAmb	IAmb	17 56 17.3	
	comp=Z,9.3nm,0.8s						
WRA	Warramunga Arr	41.92	275	P	P	17 56 16.7	+0.1
	comp=Z,7.8nm,0.4s,baz=112,slow=7.8,SNR=85						
WRA	Warramunga Arr	41.92	275	P	P	17 56 15.3	-1.2
WRA				PcP	PcP	17 58 01.1	+0.4
WB0	Warramunga Arr	41.95	275	P	P	17 56 16.7	-0.1
WB0				IAmb	IAmb	17 56 17.6	
	comp=Z,12nm,0.8s						
WB0				PcP	PcP	17 58 01.1	+0.3
QSPA	South Pole Qui	58.32	180	P	P	17 58 19.9	+3.5
	comp=Z,1.1nm,0.7s,baz=21,slow=5.2,SNR=2.5						
QSPA	South Pole Qui	58.32	180	P	P	17 58 20.3	+3.9
QSPA				IAmb	IAmb	17 58 29.5	
	comp=Z,5.3nm,1.5s						
TOLI2	Tolitoli	64.29	289	P	P	17 58 56.0	-0.3
TOLI2				IAmb	IAmb	17 59 17.1	
	comp=Z,10.0nm,1.4s						
JAGI	Jajag, Banyuwa	64.53	276	P	P	17 58 58.2	+0.4
V55A	Taylorsville	114.78	62		PKiKP	18 06 55.5	+1.9
FINES	FINESS Array B	145.62	338	PKPbc	PKPab	18 07 52.6	-0.6
	comp=Z,1.7nm,0.8s,baz=40,slow=3.2,SNR=5.2						
FINES	FINESS Array B	145.62	338		PKPab	18 07 52.3	-0.8

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*FUNV **10** 17:50:08.5, 8°.52N×71°.37W, h2^{km}, MW3.1*

ISC 10 17:50:06.7±1.2**, 8°.54N**±0°.03×**71°.43W**±0°.03**, h9**^{km}±10^{km}**, n21, σ1**^{s}**47**/39**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOCV	Socops	0.62	114	*e*S	Sg	17 50 26.9	0.0
SDV	Santo Domingo	0.86	66	*e*P	Pg	17 50 23.5	+0.1
SDV				*e*S	Sg	17 50 34.8	+0.2
CAPV	Capacho	1.10	233	*e*S	Sn	17 50 45.8	+1.8
PAMC	Pamplona, Colo	1.73	227	*e*P	Pn	17 50 38.5	+1.1
PAMC				*e*S	Sn	17 51 01.2	+1.4
MCQV	Machiques	1.86	324	*e*P	Pg	17 50 41.6	-0.7
MCQV				*e*S	Sg	17 51 06.0	-0.4
OCAC	Ocana	1.89	261	*e*P	Pn	17 50 39.7	+0.4
OCAC				*e*S	Sb	17 51 04.2	-1.2
TAMC	Tame, Arauca	2.12	190	*e*P	Pb	17 50 45.3	0.0
TAMC				*e*S	Sb	17 51 12.8	+1.0
TAMC				*i*		17 51 20.1	
	comp=Z,72nm,0.6s						
ELOV	Elorza	2.46	128	*e*P	Pn	17 50 48.7	+1.6
ELOV				*e*S	Sn	17 51 17.9	+0.6
BARC	Barichara	2.60	222	*e*P	Pb	17 50 53.4	-0.2
BARC				*e*S	Sb	17 51 26.0	+0.3
SMLC	San Martn de	2.62	276	*e*P	Pn	17 50 48.9	-0.4
SMLC				*e*S	Sb	17 51 24.4	-1.8
SMLC				*i*		17 51 26.4	
	comp=Z,104nm,0.3s						
SIQV	Siquisique	2.64	37	*e*P	Pn	17 50 50.9	+1.4
SIQV				*e*S	Sn	17 51 22.3	+0.6
BRRC	Barranca, Sant	2.67	238	*e*S	Sb	17 51 27.5	0.0
RUSC	La Rusia	3.10	212	*e*P	Pn	17 50 57.1	+0.9
RUSC				*e*S	Sn	17 51 34.8	+1.1
BAUV	El Baul	3.38	83	*e*P	Pn	17 51 01.1	+1.5
BAUV				*e*S	Sn	17 51 38.2	-1.7
ZARC	Zaragoza, Cauc	3.55	253	*e*P	Pn	17 51 02.2	+0.2
ZARC				*e*S	Sn	17 51 44.0	-0.1
ZARC				*i*		17 52 09.6	
	comp=Z,31nm,0.9s						
SPBC	San Pablo de B	3.88	223	*e*P	Pn	17 51 07.8	+1.0
SPBC				*e*S	Sn	17 51 50.5	-2.0
SJCC	San Jacinto, C	3.94	290	*e*P	Pn	17 51 08.8	+1.4
SJCC				*e*S	Sn	17 51 55.3	+1.4
BENV	Beln	4.04	69	*e*P	Pn	17 51 10.2	+1.3
BENV				*e*S	Sn	17 51 53.7	-2.6
MOTC	Monteria, Cord	4.19	274	*e*P	Pn	17 51 11.5	+0.7
MOTC				*e*S	Sn	17 52 02.0	+2.0
CHIC	Chingaza	4.50	211	*e*P	Pn	17 51 16.3	+0.8
CHIC				*e*S	Sn	17 52 03.7	-4.6
PAYV	Puerto Ayacuch	4.86	129	*e*P	Pn	17 51 20.3	+0.2
PAYV				*e*S	Sn	17 52 14.0	-2.5

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*ROM **10** 17:50:58.4±0.2, 39°.903N±0°.007×18°.54E±0°.02, h28^{km}±1^{km}, ML3.1/6, Error ellipse: s-maj=2.0km s-min=0.7km az=78.0*

ISC 10 17:51:02.3±1.3**, 39°.91N**±0°.03×**18°.11E**±0°.03**, h19**^{km}±4^{km}**, n48, σ0**^{s}**96**/65**, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MESG	Mesagne	0.70	344	P	Pg	17 51 15.1	-1.2
MESG				S	Sn	17 51 26.8	-0.7
MESG				AML	AML		
	comp=N,3130µm,1.0s						
MESG				AML	AML		
	comp=E,2295µm,0.3s						
LADO	San Nicola del	1.07	235	P	Pb	17 51 22.1	-0.2
PIPA	Pietrapaola	1.08	247	P	Pb	17 51 22.2	-0.2
PIPA				S	Sg	17 51 40.5	+2.8
PIPA				AML	AML		
	comp=E,940µm,0.5s						
PIPA				AML	AML		
	comp=E,954µm,0.5s						
PIPA				AML	AML		
	comp=N,609µm,1.6s						
PIPA				AML	AML		
	comp=N,515µm,1.3s						
PIPA				AML	AML		
	comp=E,954µm,0.5s						
PIPA				AML	AML		
	comp=E,941µm,0.5s						
NOCI	Noci	1.18	318	P	Pn	17 51 23.5	-0.4
NOCI				S	Sg	17 51 41.2	+0.4
TIP	Timpagrande	1.28	235	P	Pn	17 51 24.9	-0.3
TIP				S	Sg	17 51 44.4	+0.6
TIP				AML	AML		
	comp=E,166µm,0.5s						
TIP				AML	AML		
	comp=N,123µm,1.6s						
TIP				AML	AML		
	comp=E,200µm,0.5s						
TIP				AML	AML		
	comp=N,144µm,0.6s						
MATE	Matera	1.30	305	P	Pn	17 51 25.3	-0.1
MATE				S	Sg	17 51 45.3	+0.8
KEK	Kerkira	1.32	98	P	Pb	17 51 26.7	+0.3
KEK				S	Sg	17 51 45.1	+0.1
CELI	Celico	1.34	248	P	Pn	17 51 25.8	-0.2
CELI				S	Sg	17 51 45.9	+0.2
CELI				AML	AML		
	comp=E,514µm,1.2s						
CELI				AML	AML		
	comp=E,514µm,1.2s						
CELI				AML	AML		
	comp=N,634µm,1.2s						
SALB	San Lorenzo Be	1.36	269	P	Pn	17 51 26.2	-0.1
SALB				AML	AML		
	comp=E,406µm,1.3s						
SALB				AML	AML		
	comp=N,360µm,1.1s						
SALB				AML	AML		
	comp=E,406µm,1.3s						
SALB				AML	AML		
	comp=E,378µm,0.3s						
SALB				AML	AML		
	comp=N,394µm,1.1s						
CRAC	Craco	1.36	290	P	Pb	17 51 26.8	-0.4
TDS	Terranova Siba	1.39	260	P	Pn	17 51 27.3	+0.7
TDS				S	Sg	17 51 48.5	+1.2
SERS	Sersale	1.41	232	P	Pn	17 51 26.4	-0.6
SERS				S	Sg	17 51 47.6	-0.2
SERS				AML	AML		
	comp=N,326µm,0.8s						
SERS				AML	AML		
	comp=E,288µm,0.5s						
MIGL	Miglionico	1.45	299	AML	AML		
	comp=N,1325µm,0.5s						
MIGL				AML	AML		
	comp=E,1530µm,1.1s						
SRN	Sarande	1.46	91	P	Pn	17 51 28.0	+0.5
SPS2	Spezzano della	1.50	246	P	Pn	17 51 27.9	-0.3
SPS2				AML	AML		
	comp=N,164µm,0.4s						
SPS2				AML	AML		
	comp=E,128µm,1.0s						
SCHR	S. Chirico Rap	1.59	281	P	Pn	17 51 30.0	+0.6
CET2	Cetraro	1.71	258	P	Pn	17 51 31.9	+0.8
CET2				AML	AML		
	comp=E,429µm,0.8s						
CET2				AML	AML		
	comp=N,750µm,0.6s						
SIRI	Monte Sirino -	1.74	280	P	Pn	17 51 32.3	+0.8
SIRI				AML	AML		
	comp=E,226µm,0.9s						
SIRI				AML	AML		
	comp=N,220µm,1.0s						
IGT	Igoumenitsa	1.76	102	P	Pn	17 51 32.9	+1.2
ACER	Acerenza	1.87	298	AML	AML		
	comp=N,611µm,0.4s						
ACER				AML	AML		
	comp=E,559µm,0.4s						
ACER				AML	AML		
	comp=N,584µm,0.5s						
ACER				AML	AML		
	comp=E,574µm,0.3s						
PLAC	Placanica	1.96	222	P	Pn	17 51 33.9	-0.5
PLAC				S	Sn	17 51 59.5	+1.0
MGR	Morigerati	1.97	277	P	Pn	17 51 35.8	+1.1
MGR				AML	AML		
	comp=E,137µm,0.5s						
MGR				AML	AML		
	comp=N,137µm,0.4s						
JOPP	Joppolo	2.16	234	P	Pn	17 51 36.9	-0.4
JOPP				S	Sn	17 52 05.0	+1.4
JOPP				AML	AML		
	comp=E,64µm,1.3s						
JOPP				AML	AML		
	comp=N,78µm,1.6s						
LKD2	Lefkada island	2.27	119	P	Pn	17 51 39.6	+0.8
EVGI	Lefkada island	2.36	122	P	Pn	17 51 40.5	+0.5
CEL	Celeste	2.39	227	P	Pn	17 51 40.2	-0.2
SOI	Samo	2.44	222	P	Pn	17 51 40.6	-0.4
SOI				S	Sn	17 52 10.7	+0.4
KPRO	Kipourio	2.50	88	P	Pb	17 51 44.9	-1.8
MPAZ	Palizzi	2.55	221	P	Pn	17 51 41.9	-0.8
MSRU	Castanea	2.61	232	P	Pn	17 51 42.6	-0.9
DBRK	Dubrovnik	2.75	1	*e*Pn	Pn	17 51 45.5	+0.1
MPNC	Port Mandanici	2.78	231	P	Pn	17 51 45.2	-0.6
MCSR	Castroreale	2.89	231	P	Pn	17 51 46.8	-0.6
STON	Ston	2.97	354	*e*Pn	Pn	17 51 48.6	+0.2
STON				Sn	Sn	17 52 24.4	+0.9
MAKA	Makarska	3.47	347	*e*Pn	Pn	17 51 57.2	+2.0
MAKA				Sn	Sn	17 52 35.9	+0.2
HVAR	Hvar	3.49	340	*e*Pn	Pn	17 51 55.3	-0.2
RICI	Ricice	3.65	349	*e*Pn	Pn	17 51 58.3	+0.5
MEU	Monte Lauro	3.75	223	P	Pn	17 51 57.2	-2.0
ZIRJ	Zirje	4.17	335	*e*Pn	Pn	17 52 05.0	+0.2
ZIRJ				Sn	Sn	17 52 51.5	-1.4
KIJV	Kijevo	4.28	343	*e*Pn	Pn	17 52 07.6	+1.2
KIJV				Sn	Sn	17 52 55.8	0.0
MORI	Morici	4.34	336	*e*Pn	Pn	17 52 08.7	+1.5
MORI				Sn	Sn	17 52 58.1	+1.0
DUGI	Dugi Otok	4.67	332	*e*Pn	Pn	17 52 13.1	+1.4
NVLJ	Novalja	5.23	334	*e*Pn	Pn	17 52 19.7	+0.3
NVLJ				Sn	Sn	17 53 18.9	-0.3
PLIT	Plitvice	5.29	340	*e*Pn	Pn	17 52 22.4	+2.1
PLIT				Sn	Sn	17 53 20.6	-0.1
SMRN	Sveta Marina	5.89	332	*e*Pn	Pn	17 52 27.0	-1.5
OZLJ	Ozalj	6.02	342	*e*Pn	Pn	17 52 30.3	0.0
SOKA	Soboth	7.12	343	*i* Pn	Pn	17 52 46.7	+1.2
	comp=N,1.3nm,0.3s						
ARSA	Arzberg	7.57	347	*e*Pn	Pn	17 52 52.9	+1.3
	comp=N,1.6nm,0.5s						

IDC 10 18:03:32.0±6.7**, 31°.11S**×**178°.88W, h0**^{km}**, mb3.6**/2**, mb1 3.8**/2**, mb1mx3.5**/33**, mbtmp3.6**/2**, Error ellipse: s-maj=265.6km s-min=62.9km az=156.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	42.32	268	P	P	18 11 27.2	-0.6
	0.4nm,0.6s,baz=111,slow=7.8,SNR=6.6						
WRA	Warramunga Arr	43.37	273	P	P	18 11 36.8	+0.4
	0.4nm,0.4s,baz=113,slow=7.6,SNR=5.6						
FINES	FINESS Array B	145.54	339	PKPbc	PKPdf	18 23 10.7	-0.7
	1.0nm,0.7s,baz=41,slow=2.8,SNR=3.4						

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*VAO **10** 18:06:17.9±0.6, 22°.36S×69°.19W, h140^{km}±4^{km}, mb4.2*

*IDC **10** 18:06:20.2±0.8, 22°.33S×68°.52W, h102^{km}±12^{km}, mb3.8/2, mb1 3.6/4, mb1mx3.3/33, mbtmp4.0/4, Error ellipse: s-maj=44.4km s-min=25.5km az=124.0*

*NEIC **10** 18:06:20.7±1.8, 22°.20S±0°.04×68°.78W±0°.05, h113^{km}±6^{km}, mb4.0/3, ML3.6(GUC), Error ellipse: s-maj=7.0km s-min=5.2km az=221.0*

*GUC **10** 18:06:20.8±0.6, 22°.20S×68°.78W, h106^{km}±3^{km}, ML3.6*

ISC 10 18:06:19.6±0.6**, 22°.20S**±0°.03×**68°.76W**±0°.04**, h118**^{km}±6^{km}**, n80, σ1^{s}.28**/103**, 10C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	0.43	199	P	Pn	18 06 37.7	+0.2
	285nm,0.3s,baz=29,slow=6.4,SNR=1974						
LVC				LR	LR	18 06 47.3	
	comp=Z,72nm,21.4s,baz=211,slow=60						
LVC				S	Sn	18 06 50.0	-0.9
	1μm,0.3s,baz=289,slow=23,SNR=41						
LVC	Limon Verde	0.43	199	eP	Pn	18 06 37.1	-0.4
LVC				iS	Sn	18 06 49.9	-1.1
LVC	Limon Verde	0.43	199	eP	Pn	18 06 37.9	+0.4
PB06	IPOC Station P	0.91	236	⇑iP	Pn	18 06 41.2	+0.4
PB06				iS	Sn	18 06 56.6	-0.2
PB06				IAML		18 06 57.7	
	comp=N,3μm,0.5s						
PB06	IPOC Station P	0.91	236		Pn	18 06 41.4	+0.6
PB06				Sn	Sn	18 06 56.9	+0.1
AF01	San Pedro de A	0.92	145	⇓iP	Pn	18 06 42.0	+0.9
AF01				eS	Sn	18 06 58.2	+0.8
AF01				IAML		18 07 12.6	
	comp=E,7μm,0.5s						
AF01	San Pedro de A	0.92	145		Pn	18 06 42.0	+0.9
AF01				Sn	Sn	18 06 58.6	+1.3
PB03	IPOC Station P	0.94	279	⇑iP	Pn	18 06 41.7	+0.7
PB03				iS	Sn	18 06 57.4	+0.2
PB03				IAML		18 06 58.8	
	comp=E,2μm,0.3s						
PB07	IPOC Station P	1.15	294	⇑iP	Pn	18 06 44.1	+0.9
PB07				iS	Sn	18 07 01.4	+0.3
PB07				IAML		18 07 01.9	
	comp=N,3μm,0.5s						
PB07	IPOC Station P	1.15	294		Pn	18 06 43.8	+0.6
PB07				Sn	Sn	18 07 01.6	+0.5
PB15	IPOC Station P	1.20	213	⇑iP	Pn	18 06 44.5	+0.6
PB15				eS	Sn	18 07 02.8	+0.6
PB15	IPOC Station P	1.20	213		Pn	18 06 44.5	+0.6
PB15				Sn	Sn	18 07 02.9	+0.7
PB04	IPOC Station P	1.30	264	⇑iP	Pn	18 06 45.3	+0.5
PB04				iS	Sn	18 07 04.4	+0.5
PB04				IAML		18 07 06.2	
	comp=N,1μm,0.2s						
PB04	IPOC Station P	1.30	264		Pn	18 06 45.3	+0.5
PB04				Sn	Sn	18 07 04.6	+0.7
PB01	IPOC Station P	1.33	329	⇑iP	Pn	18 06 46.1	+0.9
PB01				eS	Sn	18 07 05.0	+0.4
PB01				IAML		18 07 07.0	
	comp=N,1μm,0.5s						
PB01	IPOC Station P	1.33	329		Pn	18 06 46.0	+0.8
PB01				Sn	Sn	18 07 05.3	+0.7
PB02	IPOC Station P	1.37	309	⇑iP	Pn	18 06 46.5	+0.9
PB02				iS	Sn	18 07 05.5	+0.2
PB02				IAML		18 07 07.4	
	comp=E,2μm,0.4s						
PB05	IPOC Station P	1.49	244	⇑iP	Pn	18 06 47.2	+0.3
PB05				iS	Sn	18 07 07.2	-0.5
PB05				IAML		18 07 10.8	
	comp=N,590nm,0.4s						
PATCX	Punta Patache	1.89	316	⇑iP	Pn	18 06 52.2	+0.5
PATCX				iS	Sn	18 07 16.7	+0.6
PATCX				IAML		18 07 20.7	
	comp=E,766nm,0.5s						
PATCX	Punta Patache	1.89	316	Pn	Pn	18 06 52.3	+0.5
PB08	IPOC Station P	2.08	350	eP	Pn	18 06 56.4	+2.0
PB08				eS	Sn	18 07 23.0	+2.1
PB08				IAML		18 07 26.0	
	comp=N,231nm,0.3s						
PB08	IPOC Station P	2.08	350		Pn	18 06 56.2	+1.8
TA01	Diego Aracena	2.10	320	⇑eP	Pn	18 06 54.4	+0.1
TA01				eS	Sn	18 07 20.9	+0.3
TA01				IAML		18 07 23.2	
	comp=N,316nm,0.6s						
TA01	Diego Aracena	2.10	320		Pn	18 06 54.3	+0.1
PB10	IPOC Station P	2.11	231	eP	Pn	18 06 54.3	-0.1
PB10				eS	Sn	18 07 18.8	-2.3
PB10	IPOC Station P	2.11	231	Pn	Pn	18 06 54.6	+0.2
TA02	Huaiquique	2.31	326		Pn	18 06 57.5	+0.6
PB11	IPOC Station P	2.56	341	eP	Pn	18 07 01.0	+0.6
PB11				eS	Sn	18 07 31.8	+0.2
PB11	IPOC Station P	2.56	341	Pn	Pn	18 07 01.0	+0.6
PB14	IPOC Station P	2.85	212	Pn	Pn	18 07 04.2	-0.1
PSGC	Pisagua	2.88	333	eP	Pn	18 07 04.3	-0.2
PSGCX	Pisagua	2.88	333	Pn	Pn	18 07 04.2	-0.2
PB12	IPOC Station P	3.86	337		Pn	18 07 18.1	+0.7
GO03	Copiap	5.54	194	Pn	Pn	18 07 38.0	-1.9
LPAZ	La Paz	5.91	6	P	Pn	18 07 48.4	+3.0
	comp=N,0.4nm,0.3s,baz=208,slow=3.4,SNR=10.0						
LPAZ	La Paz	5.91	6	Pn	Pn	18 07 44.0	-1.4
SIV	San Ignacio	9.53	51	P	Pn	18 08 32.2	-1.7
	comp=N,0.8nm,0.3s,baz=240,slow=11,SNR=13						
SIV				S	Sn	18 10 11.2	-8.1
	comp=N,0.6nm,0.3s,baz=290,slow=21,SNR=6.6						
AQDB	Aquidauana	12.29	84	Pn	Pn	18 09 09.8	-0.9
TRCB	Terra Rica	14.91	95		P	18 09 47.6	+0.4
PDRB	Porto dos Gac	15.58	49	eP	P	18 09 55.9	+1.2
CPSB	Cacapava Do Su	15.97	124	eP	P	18 09 59.6	+0.8
PCMB	Pacaembu	16.25	91	eP	Pn	18 10 01.3	+0.2
PLTB	Pedras Altas	16.51	128	eP	Pn	18 10 03.6	-0.7
CLDB	Colider	16.75	50	eP	P	18 10 08.7	+1.1
ARAG	Araguaiana, MT	17.27	71	eP	Pn	18 10 14.7	+1.1
ITRB	Iturama	17.36	85	eP	Pn	18 10 15.9	+1.2
TBTG	Tabatinga, AM	17.94	356	eP	P	18 10 18.7	-1.9
TIJ01	Guaruva-PR	18.35	104	eP	P	18 10 26.0	+0.8
TER01	Tubaro-SC	18.82	114	eP	P	18 10 29.2	-1.0
BB19B	Bebedouro	18.84	90	eP	P	18 10 31.5	+0.9
SNDB	Serra Nova Dou	19.52	61	eP	P	18 10 37.8	-0.2
RCLB	Rio Claro- Sao	19.64	95	eP	P	18 10 40.0	+0.8
IPMB	Ipameri, GO	19.74	81	eP	P	18 10 40.2	-0.2
NPGB	Novo Progresso	19.85	43	eP	P	18 10 41.9	+0.4
PET01	Itanhaem-SP	19.85	100	eP	P	18 10 42.1	+0.7
VAO	Valinhos	20.14	96	eP	P	18 10 45.7	+1.2
BDFB	Brasilia	20.67	75	P	P	18 10 51.0	+0.6
	comp=N,3.8nm,0.4s,baz=249,slow=13,SNR=5.8						
BDFB	Brasilia	20.67	75	P	P	18 10 50.2	-0.2
BDFB				IAmb	IAmb	18 10 53.0	
	comp=Z,5.7nm,0.7s						
ITTB	Itaituba	21.76	37	eP	P	18 11 01.8	-0.1
PEXB	Peixe	21.95	66	eP	P	18 11 02.4	-1.5
BSCB	Bom Sucesso	22.33	91	eP	P	18 11 07.4	-0.5
MAN01	Angra dos Reis	22.91	96	eP	P	18 11 13.4	-0.1
VAS01	Vassouras-RJ	23.43	95	eP	P	18 11 18.2	-0.1
DIAM	Diamantina, MG	23.84	85	eP	P	18 11 22.4	+0.1
MC01	Montes Claros	24.01	81	eP	P	18 11 24.2	+0.4
JANB	Januaria	24.21	77	eP	P	18 11 24.9	-0.6
OTAV	Otavalo	24.22	336	eP	P	18 11 22.4	-3.6
PRPB	Parauapebas	24.26	52	eP	P	18 11 26.2	+0.3
SMTB	Santa Maria do	24.28	60	eP	P	18 11 26.6	+0.5
MALB	Monte Alegre	24.65	37	eP	P	18 11 29.2	-0.1
SDBA	SAO DESIDERIO	24.73	71	eP	P	18 11 30.2	-0.1
GDU01	Guandu, BA	28.97	78	eP	P	18 12 08.3	+0.1
NBPN	Ponto Novo - B	29.55	72	eP	P	18 12 13.6	+0.2
NBLA	Lagarto - SE	31.63	74	eP	P	18 12 31.1	-0.6
NBPS	Pedro II - PI	31.82	60	eP	P	18 12 33.4	0.0
NBLV	Livramento - P	34.03	69	eP	P	18 12 52.4	-0.3
QSPA	South Pole Qui	68.00	180	P	P	18 17 08.7	+2.8
QSPA				IAmb	IAmb	18 17 09.0	
	comp=Z,6.5nm,1.4s						
TORD	Torodi Ar. Bea	77.46	70	P	P	18 18 03.7	+1.2
	comp=Z,1.1nm,0.5s,baz=256,slow=5.6,SNR=14						
TORD	Torodi Ar. Bea	77.46	70	P	P	18 18 03.6	+1.1
TORD				IAmb	IAmb	18 18 13.6	
	comp=Z,2.4nm,1.4s						
WRA	Warramunga Arr	132.43	210	PKP	PKiKP	18 25 22.9	+0.9
	comp=Z,0.2nm,0.6s,baz=158,slow=1.7,SNR=1.5						

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*AZER **10** 18:19:24.0±0.1, 38°.60N×44°.76E, h24^{km}, ml3.8/31, Error ellipse: s-maj=2.2km s-min=1.6km az=229.0*

*NSSP **10** 18:19:24.9, 38°.55N×44°.80E, h5^{km}, Ms3.3*

*TEH **10** 18:19:25.4, 38°.62N×44°.74E, h6^{km}, ML3.4*

*DDA **10** 18:19:25.0, 38°.63N×44°.67E, h7^{km}±10^{km}, ML3.3*

*THR **10** 18:19:26.3±0.5, 38°.70N×44°.73E, h14^{km}±9^{km}, ML3.3*

*ISK **10** 18:19:26.0, 38°.66N×44°.63E, h5^{km}, ML3.3/12*

ISC 10 18:19:25.8±1.1**, 38°.65N**±0°.02×**44°.76E**±0°.02**, h6**^{km}±9^{km}**, n104, σ1^{s}.61**/153**, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OZAP	Van, Ozalp-Mer	0.60	272	iP	Pg	18 19 36.6	-0.8
OZAP				iS	Sg	18 19 45.8	+0.6
OZAP				IAML		18 19 53.0	
	comp=E,2μm,0.8s						
MAKU	Maku	0.71	356	ePg	Pg	18 19 39.1	-0.4
MAKU				eSg	Sb	18 19 48.4	-2.4
MAKU	Maku	0.71	356	ePg	Pg	18 19 39.1	-0.4
IMRD	Marand	0.74	84	ePg	Pg	18 19 40.1	-0.1
IMRD				eSg	Sg	18 19 51.4	+1.5
ISHB	Shabestar	0.77	118	ePg	Pg	18 19 39.5	-1.1
NAX	Nakhchivan	0.78	47	P	Pb	18 19 41.3	-0.6
	SNR=102						
NAX				S	Sn	18 19 53.6	-1.9
NAX	Nakhchivan	0.78	47	ePg	Pb	18 19 41.2	-0.6
CLDR	Caldiran	0.82	308	iP	Pg	18 19 40.2	-1.5
CLDR				iS	Sb	18 19 52.3	-1.7
CLDR				IAML		18 20 02.0	
	comp=E,1μm,0.9s						
CLDR	Caldiran	0.82	308	PG	Pg	18 19 40.3	-1.3
CLDR				SG	Sb	18 19 52.6	-1.4
CLDR	Caldiran	0.82	308	ePg	Pg	18 19 39.4	-2.2
SBZ	Shahbuz	0.97	39	P	Pb	18 19 44.5	-0.7
	SNR=179						
SBZ				S	Sn	18 20 00.8	+0.5
SBZ	Shahbuz	0.97	39	ePg	Pb	18 19 44.4	-0.7
ORD	Ordubad	1.01	73	P	Pb	18 19 45.2	-0.6
	SNR=145						
ORD				S	Sn	18 19 59.8	-1.3
ORD	Ordubad	1.01	73	ePg	Pb	18 19 45.1	-0.6
TVAN	Van	1.06	264	iP	Pb	18 19 44.8	-2.0
TVAN				iS	Sn	18 20 02.3	-0.3
VANB	Van	1.07	268	PG	Pb	18 19 44.8	-2.0
VANB				SG	Sg	18 20 00.6	+0.3
VANB	Van	1.07	268	ePg	Pb	18 19 45.6	-1.2
HYR	Heyderabad	1.07	4	P	Pn	18 19 46.3	-1.1
	SNR=27						
HYR				S	Sn	18 20 02.8	+0.1
HYR	Heyderabad	1.07	4	ePg	Pn	18 19 46.3	-1.1
YOVA	Hakkari_Yksek	1.12	199	iP	Pb	18 19 46.4	-1.3
YOVA	Hakkari_Yksek	1.12	199	ePg	Pb	18 19 46.3	-1.3
ITBZ	Tabriz	1.17	110	ePg	Pn	18 19 46.4	-2.4
ITBZ				e		18 19 47.4	
	comp=Z,10μm,0.2s						
IGDI	IGDIR	1.33	337	iP	Pg	18 19 51.0	-0.3
IGDI	IGDIR	1.33	337	ePg	Pg	18 19 51.0	-0.3
NRKZ	NAREK	1.35	357	iP	Pg	18 19 53.1	+1.3
NRKZ				iS	Sg	18 20 13.9	+4.5
IAZR	Azarshahr	1.36	135	ePg	Pn	18 19 51.0	-0.6
IAZR				e		18 19 54.3	
	comp=Z,25μm,0.5s						
TASB	TASBURUN-IGDIR	1.40	343	PN	Pg	18 19 53.1	+0.5
TASB				SN	Sg	18 20 13.1	+2.4
TASB	TASBURUN-IGDIR	1.40	343	ePg	Pg	18 19 52.5	-0.1
GNI	Garni	1.50	360	iP	Pb	18 19 53.3	-0.9
GNI				iS	Sg	18 20 17.2	+3.1
GNI	Garni	1.50	360	PN	Pg	18 19 54.9	+0.3
GNI				SN	Sg	18 20 15.9	+1.8
METS	Metsamor	1.59	341	iP	Pg	18 19 56.2	-0.1
METS				iS	Sg	18 20 19.6	+2.7
VNNZ	Vanand	1.62	334	iP	Pg	18 19 57.2	+0.3
VNNZ				iS	Sg	18 20 21.9	+3.9
AGRB	Hanur-Agry	1.66	305	PN	Pb	18 19 56.0	-0.8
AGRB	Hanur-Agry	1.66	305	ePn	Pb	18 19 56.0	-0.8
CUKT	Cukurca	1.66	213	iP	Pb	18 19 57.1	+0.2
CUKT	Cukurca	1.66	213	PN	Pb	18 19 57.2	+0.3
CUKT	Cukurca	1.66	213	ePn	Pb	18 19 56.8	-0.1
KOTA	Agri, Merkez-K	1.67	314	iP	Pg	18 19 57.5	-0.4
KAPZ	Kaputan	1.68	359	iP	Pg	18 19 58.2	+0.2
KAPZ				iS	Sg	18 20 23.1	+3.4
ARUZ	Aruch	1.71	343	iP	Pb	18 19 57.4	-0.4
ARUZ				iS	Sg	18 20 21.5	+0.6
MLAZ	Malazgirt-MUS	1.79	287	PN	Pb	18 19 57.9	-1.2
AHAR	Ahar	1.81	94	ePn	Pn	18 19 58.5	+0.9
AHAR				e		18 20 05.9	
	comp=Z,6μm,0.6s						
PERV	Siirt/Pervari-	1.88	249	iP	Pb	18 20 00.3	-0.3
PERV				iS	Sg	18 20 27.4	+1.2
PERV				IAML		18 20 30.0	
	comp=E,848nm,0.8s						
PERV				IAML		18 20 33.0	
	comp=N,604nm,0.9s						
IBST	Bostanabad	1.93	119	ePn	Pn	18 19 59.9	+0.5
MAHB	Mahabad	2.02	158	ePn	Pn	18 20 02.2	+1.7
MAHB				e		18 20 47.2	
	comp=Z,2μm,0.6s						
BLIS	Bitlis-Merkez	2.08	264	iP	Pb	18 20 03.5	-0.7
BLIS				iS	Sb	18 20 30.8	+0.6
BLIS				IAML		18 20 40.0	
	comp=N,193nm,0.9s						
BLIS	Bitlis-Merkez	2.08	264	ePn	Pb	18 20 03.4	-0.7
GURO	Guroymak-BITLI	2.14	268	PN	Pb	18 20 03.1	-1.9
EATA	Eleskirt	2.14	305	iP	Pb	18 20 05.0	-0.1
EATA	Eleskirt	2.14	305	ePn	Pb	18 20 05.0	-0.1
SIRT	Sirnak	2.15	239	PN	Pn	18 20 03.7	+1.4
SIRT	Sirnak	2.15	239	ePn	Pb	18 20 04.3	-1.0
QRD	Qoradiz	2.16	67	P	Pn	18 20 02.3	+0.1
	SNR=43						
QRD				S	Sb	18 20 31.4	-0.8
GDB	GEDABAY	2.21	20	P	Pn	18 20 03.5	+0.3
	SNR=38						
GDB				S	Sb	18 20 33.5	-0.5
EAK	Akyaka	2.22	337	iP	Pg	18 20 08.1	-0.3
GANJ	Ganja	2.34	31	P	Pn	18 20 05.2	+0.4
	SNR=18						
GANJ				S	Sb	18 20 36.6	-0.8
AGDM	Agdam	2.34	51	P	Pn	18 20 05.0	+0.2
	SNR=5.5						
AGDM				S	Sb	18 20 36.2	-1.2
KARS	Kars	2.37	327	PN	Pb	18 20 06.3	-2.6
STE	Stepanavan	2.37	353	iP	Pg	18 20 09.4	-1.9
STE				iS	Sg	18 20 44.3	+2.3
BLQ	Beylaqan	2.43	63	P	Pn	18 20 06.1	+0.1
	SNR=41						
BLQ				S	Sb	18 20 38.3	-1.8
ISRB	Sarab	2.44	109	e		18 20 14.3	
	comp=Z,3μm,0.5s						
ISRB				ePn	Pn	18 20 07.9	+1.6
QZX	Qazax, Azerbai	2.46	11	P	Pn	18 20 06.6	+0.2
	SNR=23						
QZX				S	Sb	18 20 39.1	-1.8
GRMI	Germi	2.46	85	ePn	Pb	18 20 08.6	-1.9
GRMI				eSg	Sg	18 20 43.9	-1.0
GRMI				IAML		18 20 48.6	
	comp=N,109nm,0.4s						
GRMI				IAML		18 20 55.7	
	comp=E,125nm,0.7s						
GRMI	Germi	2.46	85	ePn	Pb	18 20 08.6	-1.9
BRDA	Brd	2.48	49	P	Pn	18 20 06.9	+0.3
	SNR=20						
BRDA				S	Sb	18 20 39.8	-1.6
MUSM	Mu-Merkez	2.54	273	iP	Pb	18 20 10.0	-1.8
KOPR	Koprukoy-ERZUR	2.62	302	PN	Pn	18 20 09.8	+1.0
VRTB	Varto-Mus	2.62	282	iP	Pb	18 20 12.8	-0.5
VRTB	Varto-Mus	2.62	282	PN	Pb	18 20 10.6	-2.7
SENK	Senkaya-Erzuru	2.67	317	PN	Pb	18 20 10.8	-3.3
YRD	Yardimli	2.74	83	P	Pn	18 20 10.0	-0.4
	SNR=84						
YRD				S	Sn	18 20 45.3	+1.4
MNGR	Mingechevir, A	2.78	39	P	Pn	18 20 11.2	+0.4
	SNR=4.7						
MNGR				S	Sb	18 20 47.5	-2.7
ZRD	Zardab	2.79	53	P	Pn	18 20 11.2	+0.2
	SNR=8.6						
ZRD				S	Sb	18 20 47.5	-3.0
LRK	Lerik	2.81	89	P	Pn	18 20 10.8	-0.5
	SNR=18						
LRK				S	Sn	18 20 46.8	+1.2
SVAN	Silvan-Diyarba	2.84	261	iP	Pg	18 20 20.5	+0.3
SVAN	Silvan-Diyarba	2.84	261	PN	Pn	18 20 13.1	+1.4
GLBA	Clilabad	2.90	77	P	Pn	18 20 12.3	-0.1
	SNR=13						
GLBA				S	Sn	18 20 49.4	+1.9
ERZM	Erzurum	2.92	297	iP	Pb	18 20 16.4	-2.0
EJDE	Erzurum, Palan	2.93	295	iP	Pb	18 20 16.4	-2.3
DDFL	Dedoflistskaro	2.99	20	iP	Pg	18 20 23.8	+0.8
SAAT	Saatly	3.10	66	P	Pn	18 20 15.0	-0.1
	SNR=5.9						
SAAT				S	Sn	18 20 54.3	+1.9
LKRN	Lenkeran, Azer	3.15	88	P	Pn	18 20 15.6	-0.3
	SNR=6.8						
LKRN				S	Sn	18 20 55.3	+1.5
ASTR	Astara	3.16	90	P	Pn	18 20 15.7	-0.4
	SNR=12						
ASTR				S	Sn	18 20 55.5	+1.4
KDMR	Kurdemir	3.17	56	P	Pn	18 20 16.3	+0.2
	SNR=3.2						
KDMR				S	Sn	18 20 56.5	+2.4
SEKA	Sheki	3.17	35	P	Pn	18 20 17.2	+0.9
	SNR=7.9						
SEKA				S	Sb	18 20 58.3	-3.3
BNGB	Bingl	3.20	277	PN	Pn	18 20 18.1	+1.4
QBL	Gabala	3.30	45	P	Pn	18 20 18.3	+0.2
	SNR=12						
QBL				S	Sb	18 21 00.2	-5.1
ZKTA	Zakatala	3.31	25	P	Pn	18 20 18.6	+0.4
	SNR=14						
ZKTA				S	Sb	18 21 00.8	-4.8
YEDI	Yedisu-Bingol	3.37	285	PN	Pn	18 20 20.5	+1.4
IML	Ismayilli	3.40	50	P	Pn	18 20 19.6	+0.2
	SNR=4.5						
IML				S	Sn	18 21 02.6	+2.4
KRIK	Erzurum-spir	3.41	301	iP	Pb	18 20 26.3	-0.4
ALIB	Äli-Bayra	3.55	67	P	Pn	18 20 21.4	0.0
ALIB				S	Sn	18 21 05.7	+2.1
XNQ	Khinaliq	3.62	45	P	Pn	18 20 22.8	+0.2
	SNR=6.0						
XNQ				S	Sn	18 21 08.3	+2.5
PQL	Pirkuli	3.65	53	P	Pn	18 20 23.0	+0.1
	SNR=7.3						
PQL				S	Sn	18 21 08.6	+2.2
ZNJK	Zanjan	3.69	121	ePn	Pn	18 20 25.5	+1.9
ZNJK	Zanjan	3.69	121	ePn	Pn	18 20 25.5	+1.9
GBS	Qobustan	3.75	58	P	Pn	18 20 24.2	+0.1
	SNR=5.8						
GBS				S	Sn	18 21 10.8	+2.2
KOVA	Elazig, Kovanc	3.87	272	iP	Pg	18 20 37.5	-2.5
ATGJ	Altiaghaj	3.91	54	P	Pn	18 20 26.5	+0.1
	SNR=4.2						
ATGJ				S	Sn	18 21 15.0	+2.4
QSAR	Qusar	3.93	42	P	Pn	18 20 26.9	+0.2
	SNR=5.0						
QSAR				S	Sn	18 21 15.6	+2.5
QUBA	Quba, Azerbaij	3.94	46	P	Pn	18 20 27.1	+0.2
	SNR=2.9						
QSDN	Sirdan	4.11	120	ePn	Pn	18 20 30.9	+1.6
QABG	Abgarm-Qazvin	4.84	126	ePn	Pn	18 20 40.8	+1.4
HSAM	Samen	5.40	144	ePn	Pn	18 20 49.5	+2.4

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*IDC **10** 18:29:56.7±2.0, 3°.10N×129°.44E, h0^{km}, mb3.7/5, mb1 3.9/5, mb1mx3.6/26, mbtmp3.7/5, MS3.1/1, Ms1 3.1/1, ms1mx2.3/38, Error ellipse: s-maj=112.0km s-min=21.6km az=62.0*

*DJA **10** 18:30:15.4±0.5, 3°N±4°×12°9E±°, h208^{km}±5^{km}, M3.8/9, mb3.9/4, mB5.9/1, MLv3.8/9, Mw(mB)5.5/1*

ISC 10 18:30:03.7±1.0**, 3°.1N**±0°.1×**129°.45E**±0°.10**, h50**^{km}**, n13, σ1^{s}.27**/12**, mb3.7**/5**, North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	3.12	222	P	Pn	18 30 57.3	+6.9
TNTI				S	Sn	18 31 28.2	+1.7
LBMI	Labuha	4.21	208	P	Pn	18 31 11.9	+6.6
LBMI				S	Sn	18 31 51.6	-1.7
KMSI	Cibinong	6.02	245	P	Pn	18 31 30.4	+0.2
SANI	Sanana	6.19	214	P	Pn	18 31 33.1	+0.6
	0.1nm8.8nm,0.8s						
GTOI	Gorontalo	6.89	249	P	Pn	18 31 43.0	+0.9
	0.0nm4.6nm,0.6s						
BAKI	Biak	7.91	123	P	Pn	18 31 57.3	+1.1
SRPI	Serui, Papua	8.40	126	P	Pn	18 32 07.5	+4.6
WRA	Warramunga Arr	23.41	168	P	P	18 35 08.1	-0.4
	0.9nm,0.4s,baz=351,slow=11,SNR=20						
ASAR	Alice Springs	26.97	171	P	P	18 35 39.5	-1.4
	0.2nm,0.5s,baz=359,slow=8.5,SNR=1.9						
ASAR				PcP	PcP	18 39 00.0	-1.8
	0.2nm,0.4s,baz=347,slow=2.0,SNR=1.8						
HNR	Honiara	32.85	113	LR	LR	18 50 09.8	
	comp=Z,31nm,19.1s,baz=151,slow=37						
CMAR	Chiang Mai Arr	33.53	299	P	P	18 36 38.0	-0.9
	0.4nm,0.4s,baz=119,slow=7.5,SNR=2.2						
STKA	Stephens Creek	36.67	163	P	P	18 37 05.9	+0.2
	3.3nm,0.9s,baz=333,slow=11,SNR=5.3						
MKAR	Makanchi Array	59.62	324	P	P	18 40 03.4	+0.8
	0.2nm,0.3s,baz=117,slow=7.7,SNR=4.7						

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*IDC **10** 18:31:24.5±3.5, 0°.49S×134°.86E, h0^{km}, mb3.3/2, mb1 3.6/3, mb1mx3.3/26, mbtmp3.4/3, ML3.5/1, Error ellipse: s-maj=166.1km s-min=30.0km az=77.0*

*DJA **10** 18:31:26.2±1.3, 0°S±8°×13°5E±°, h14^{km}±8^{km}, M3.5/4, MLv3.5/4*

ISC 10 18:31:29.9±1.4**, 0°.5S**±0°.1×**134°.53E**±0°.07**, h35**^{km}**, n7, σ1^{s}.13**/8**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BAKI	Biak	1.71	113	P	Pn	18 31 56.1	-1.1
SRPI	Serui, Papua	2.18	128	P	Pn	18 32 03.0	-0.6
SRPI				S	Sn	18 32 30.6	+1.2
SWI	Sorong	3.29	264	P	Pn	18 32 17.9	-1.1
FAKI	Fak Fak	3.31	224	P	Pn	18 32 19.1	-0.1
WRA	Warramunga Arr	19.32	181	P	P	18 35 51.2	-0.9
	0.1nm,0.3s,baz=0.6,slow=12,SNR=7.9						
ASAR	Alice Springs	23.03	181	P	P	18 36 32.0	-0.1
	0.6nm,0.7s,baz=7.3,slow=12,SNR=6.1						
MKAR	Makanchi Array	65.53	323	P	P	18 42 11.0	+1.1
	0.3nm,0.6s,baz=113,slow=8.1,SNR=1.5						

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*TAP **10** 18:34:00.4, 24°.61N×122°.67E, h108^{km}, ML3.7, D*

*JMA **10** 18:34:00.4±0.1, 24°.53N×122°.67E, h102^{km}±1^{km}, M2.7*

ISC 10 18:34:00.8±1.4**, 24°.58N**±0°.04×**122°.70E**±0°.03**, h101**^{km}±7^{km}**, n104, σ0^{s}.85**/197**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.26	119	P	Pn	18 34 15.2	-0.1
JYNG				S	Sn	18 34 26.1	0.0
YOJ	Yonaguni jima	0.31	112	eP	Pn	18 34 16.0	+0.5
	baz=123						
YOJ				eS	Sn	18 34 27.8	+1.4
	baz=123						
YOJ	Yonaguni jima	0.31	112	P	Pn	18 34 15.5	0.0
YOJ				eS	Sn	18 34 26.3	-0.2
TWC	Suao	0.77	272	P	Pn	18 34 18.7	-0.2
	baz=269						
TWC				S	Sn	18 34 31.9	-0.6
	baz=269						
TWB1	Santiao Chiao	0.77	304	P	Pn	18 34 19.1	+0.2
	baz=300						
TWB1				eS	Sn	18 34 32.8	+0.2
	baz=300						
NTC	Toucheng	0.83	289	P	Pn	18 34 19.8	+0.3
	baz=283						
NTC				S	Sn	18 34 33.0	-0.6
	baz=283						
EWUT	Wuta	0.85	261	P	Pn	18 34 19.8	+0.1
	baz=254						
EWUT				S	Sn	18 34 34.0	+0.2
	baz=254						
ILA	Ilan	0.88	282	eP	Pn	18 34 20.3	+0.3
	baz=276						
ILA				eS	Sn	18 34 34.7	+0.2
	baz=276						
TIPB	Shuangxi	0.88	296	P	Pn	18 34 20.3	+0.2
	baz=291						
TIPB				S	Sn	18 34 33.7	-0.9
	baz=291						
ENA	Nanau	0.88	260	P	Pn	18 34 20.2	+0.1
	baz=253						
ENA				S	Sn	18 34 34.7	+0.2
	baz=253						
NDS	Dongshan	0.89	274	P	Pn	18 34 20.7	+0.5
	baz=274						
NDS				S	Sn	18 34 33.1	-1.6
	baz=274						
TWE	Neicheng	0.95	279	P	Pn	18 34 20.9	+0.2
	baz=274						
TWE				S	Sn	18 34 34.8	-0.8
	baz=274						

NWF	Wu-fen Shan	0.96	301	P	Pn	18 34 21.4	+0.5
	baz=293						
NWF				S	Sn	18 34 36.4	+0.3
	baz=293						
IRIF	Iriomote-Funau	0.97	104	P	Pn	18 34 21.0	0.0
IRIF				S	Sn	18 34 36.0	-0.2
ENTT	Nioudou	1.03	274	P	Pn	18 34 22.1	+0.4
	baz=269						
ENTT				S	Sn	18 34 38.1	+0.8
	baz=269						
ETL	Fush Village	1.06	247	*e*P	Pn	18 34 22.0	0.0
	baz=238						
ETL				*e*S	Sn	18 34 37.1	-0.9
	baz=238						
NDT	Datong Townshi	1.08	271	P	Pn	18 34 22.7	+0.6
	baz=269						
NDT				S	Sn	18 34 39.0	+0.8
	baz=269						
NACB	Ninganchiao	1.08	248	P	Pn	18 34 21.9	-0.3
	baz=240						
NACB				S	Sn	18 34 37.8	-0.5
	baz=240						
TWA	Mucha	1.09	292	*e*P	Pn	18 34 22.6	+0.3
	baz=284						
TWA				*e*S	Sn	18 34 37.8	-0.6
	baz=284						
NWLT	Wulai	1.10	281	P	Pn	18 34 22.6	+0.2
	baz=285						
NWLT				S	Sn	18 34 38.1	-0.7
	baz=285						
TWD	Chiawan	1.12	244	*e*P	Pn	18 34 22.2	-0.4
	baz=235						
TWD				*e*S	Sn	18 34 38.3	-0.7
	baz=235						
NHDH	Xindian Distri	1.13	290	*e*P	Pn	18 34 22.9	+0.2
	baz=281						
NHDH				*e*S	Sn	18 34 38.8	-0.4
	baz=281						
HATJ	Hateruma jima	1.14	117	*e*S	Sn	18 34 39.6	+0.2
HWA	Hwalien	1.16	239	*e*P	Pn	18 34 23.6	+0.5
	baz=235						
HWA				S	Sn	18 34 40.5	+0.6
	baz=235						
ETLH	Xiulin Townshi	1.17	252	P	Pn	18 34 23.1	-0.2
	baz=249						
ETLH				S	Sn	18 34 39.5	-0.7
	baz=249						
YM01	YM01	1.17	299	*e*P	Pn	18 34 23.4	+0.2
	baz=289						
YM01				*e*S	Sn	18 34 39.9	-0.2
	baz=289						
TAP	Taipei	1.17	293	*e*P	Pn	18 34 23.3	+0.1
	baz=292						
TAP				*e*S	Sn	18 34 40.2	+0.1
	baz=292						
NNS	Nan Shan	1.21	264	P	Pn	18 34 23.9	+0.1
	baz=255						
NNS				S	Sn	18 34 40.8	-0.4
	baz=255						
NSK	Sanguang	1.22	275	P	Pn	18 34 24.2	+0.3
	baz=267						
NSK				S	Sn	18 34 40.9	-0.3
	baz=267						
ANP	Anpu	1.23	300	*e*P	Pn	18 34 23.4	-0.5
	baz=290						
ANP				*e*S	Sn	18 34 41.0	-0.4
	baz=290						
JKRS	Kuro-shima	1.25	106	P	Pn	18 34 24.5	+0.5
JKRS				S	Sn	18 34 41.9	+0.3
TWS1	Kuangyinshan	1.27	294	*e*P	Pn	18 34 24.4	0.0
	baz=287						
TWS1				*e*S	Sn	18 34 42.1	0.0
	baz=287						
NTST	Danshui	1.27	297	*e*P	Pn	18 34 24.8	+0.4
	baz=289						
NTST				*e*S	Sn	18 34 42.4	+0.3
	baz=289						
JIJ	Ishigaki jima	1.34	99	P	Pn	18 34 25.2	+0.1
JIJ				S	Sn	18 34 42.6	-0.9
FUSS	Fushou	1.36	256	*e*P	Pn	18 34 25.9	+0.2
	baz=250						
FUSS				*e*S	Sn	18 34 44.4	-0.1
	baz=250						
WHF	Hehuan Shan	1.38	252	P	Pn	18 34 26.1	+0.1
	baz=249						
WHF				*e*S	Sn	18 34 44.5	-0.6
	baz=249						
ESL	Shilin	1.38	237	*e*P	Pn	18 34 25.1	-0.6
	baz=233						
ESL				*e*S	Sn	18 34 43.5	-1.0
	baz=233						
TWT	Tachien	1.42	257	*e*P	Pn	18 34 26.7	+0.3
	baz=254						
TWT				*e*S	Sn	18 34 45.8	+0.1
	baz=254						
NCU	National Centr	1.43	286	*e*S	Sn	18 34 45.1	-0.3
	baz=292						
NCUH	Zhongli	1.43	286	*e*P	Pn	18 34 26.5	+0.3
	baz=292						
NCUH				*e*S	Sn	18 34 45.2	-0.2
	baz=292						
TDCB	Techi	1.44	257	*e*P	Pn	18 34 27.2	+0.7
	baz=255						
TDCB				S	Sn	18 34 45.9	-0.1
	baz=255						
JISG	Ishigakijimahi	1.47	89	P	Pn	18 34 26.9	+0.2
JISG				S	Sn	18 34 45.5	-0.9
EGFH	Guangfu	1.47	232	*e*P	Pn	18 34 26.6	-0.2
	baz=229						
EGFH				*e*S	Sn	18 34 45.4	-1.1
	baz=229						
CHGB	Renai	1.48	250	P	Pn	18 34 27.4	+0.3
	baz=241						
CHGB				S	Sn	18 34 46.6	-0.4
	baz=241						
OWD	Renai	1.52	246	P	Pn	18 34 27.7	+0.2
	baz=238						
OWD				*e*S	Sn	18 34 47.8	0.0
	baz=238						
LIOB	Emei	1.53	273	*e*P	Pn	18 34 28.2	+0.7
	baz=271						
LIOB				*e*S	Sn	18 34 48.3	+0.6
	baz=271						
NSTT	Nanjuang	1.54	272	P	Pn	18 34 28.0	+0.4
	baz=270						
NSTT				*e*S	Sn	18 34 47.9	-0.1
	baz=270						
SBCB	Hsinchu	1.57	278	*e*P	Pn	18 34 28.2	+0.2
	baz=276						
SBCB				*e*S	Sn	18 34 49.0	+0.4
	baz=276						
HSN	Hsinchu	1.59	278	*e*S	Sn	18 34 48.4	-0.5
	baz=278						
HGSD	Ruisui	1.59	227	P	Pn	18 34 27.9	-0.4
	baz=223						
HGSD				*e*S	Sn	18 34 48.9	-0.1
	baz=223						
WHP	Taichung City	1.62	260	*e*P	Pn	18 34 29.9	+1.2
	baz=256						
WHP				*e*S	Sn	18 34 50.5	+0.6
	baz=256						
EHY	Hungye	1.65	230	P	Pn	18 34 28.4	-0.6
	baz=226						
EHY				*e*S	Sn	18 34 50.4	0.0
	baz=226						
WCS	Beigang Elemen	1.71	253	*e*P	Pn	18 34 30.2	+0.5
	baz=255						
WCS				*e*S	Sn	18 34 52.2	+0.5
	baz=255						
NMLH	Miaoli	1.73	269	*e*P	Pn	18 34 30.8	+0.8
	baz=274						
NMLH				*e*S	Sn	18 34 52.3	+0.1
	baz=274						
YULB	Yu-li	1.74	228	P	Pn	18 34 29.5	-0.6
	baz=231						
YULB				*e*S	Sn	18 34 52.5	+0.1
	baz=231						
EYUL	Yuli	1.76	226	*e*P	Pn	18 34 30.4	+0.1
	baz=230						
EYUL				*e*S	Sn	18 34 53.3	+0.5
	baz=230						
TWQ1	Liyutan	1.77	263	*e*P	Pn	18 34 30.7	+0.2
	baz=261						
TWQ1				*e*S	Sn	18 34 54.3	+1.3
	baz=261						
NSY	Sanyi	1.77	265	*e*S	Sn	18 34 52.6	-0.5
	baz=263						
SSLB	Suanglung	1.78	244	P	Pn	18 34 30.8	+0.2
	baz=238						
SSLB				*e*S	Sn	18 34 53.1	-0.2
	baz=238						
SMLT	Sun Moon Lake	1.78	247	*e*P	Pn	18 34 31.7	+1.0
	baz=239						
SMLT				*e*S	Sn	18 34 54.5	+1.1
	baz=239						
TYC	Yuchr	1.81	249	*e*P	Pn	18 34 32.4	+1.4
	baz=241						
TYC				*e*S	Sn	18 34 54.1	+0.2
	baz=241						
JTJ	Tarama	1.83	88	P	Pn	18 34 31.6	+0.4
JTJ				S	Sn	18 34 54.9	+0.6
FULB	Fuli	1.88	223	*e*P	Pn	18 34 31.5	-0.4
	baz=215						
FULB				*e*S	Sn	18 34 55.8	+0.2
	baz=215						
WDJ	Dajia District	1.89	263	*e*S	Sn	18 34 55.1	-0.6
	baz=261						
TCU	Taichung	1.89	257	*e*P	Pn	18 34 32.2	+0.2
	baz=264						
TCU				*e*S	Sn	18 34 55.4	-0.4
	baz=264						
CHKT	Chengkung	1.91	220	*e*P	Pn	18 34 31.6	-0.7
	baz=212						
CHKT				*e*S	Sn	18 34 54.3	-2.0
	baz=212						
YUS	Yu-Shan	1.93	236	P	Pn	18 34 33.3	+0.3
	baz=229						
YUS				*e*S	Sn	18 34 56.8	-0.6
	baz=229						
WJS	Zhushan	1.95	248	*e*P	Pn	18 34 34.0	+1.2
	baz=239						
WJS				*e*S	Sn	18 34 59.3	+2.1
	baz=239						
WNT	Mingjian	1.96	250	*e*P	Pn	18 34 34.7	+1.8
	baz=247						
WNT				*e*S	Sn	18 34 58.9	+1.4
	baz=247						
WCHH	Zhanghua	2.01	256	*e*P	Pn	18 34 34.0	+0.4
	baz=261						
WCHH				*e*S	Sn	18 34 58.3	-0.3
	baz=261						
ALS	Alishan	2.03	239	*e*P	Pn	18 34 35.1	+1.0
	baz=236						
ALS				*e*S	Sn	18 35 00.8	+1.3
	baz=236						
EDH	Donghe	2.05	219	*e*P	Pn	18 34 33.2	-0.8
	baz=215						
EDH				*e*S	Sn	18 34 57.3	-2.1
	baz=215						
ELDTW	Lidau	2.07	228	*e*P	Pn	18 34 34.0	-0.5
	baz=221						
ELDTW				*e*S	Sn	18 34 59.1	-1.0
	baz=221						
CHN5	Tsauling	2.09	242	*e*P	Pn	18 34 35.2	+0.6
	baz=233						
CHN5				*e*S	Sn	18 35 02.0	+1.5
	baz=233						
WDLH	Douliu	2.16	246	*e*P	Pn	18 34 37.1	+1.6
	baz=254						
WDLH				*e*S	Sn	18 35 04.8	+2.7
	baz=254						
LONT	Longtian	2.20	221	*e*P	Pn	18 34 35.4	-0.7
	baz=218						
LONT				*e*S	Sn	18 35 02.8	-0.2
	baz=218						
LDUT	Ludao	2.21	211	*e*P	Pn	18 34 35.0	-1.1
	baz=205						
LDUT				*e*S	Sn	18 35 01.7	-1.3
	baz=205						
WRL	Guolierlin Hig	2.22	253	*e*S	Sn	18 35 03.2	-0.2
	baz=250						
STYH	Taoyuan	2.25	232	*e*P	Pn	18 34 37.5	+0.9
	baz=228						
STYH				*e*S	Sn	18 35 04.4	+0.3
	baz=228						
TPUB	Ta-pu	2.28	236	*e*P	Pn	18 34 37.8	+0.7
	baz=233						
TPUB				*e*S	Sn	18 35 05.1	+0.2
	baz=233						
CHN4	Tsaushan	2.28	238	*e*P	Pn	18 34 36.8	-0.3
	baz=235						
CHN4				*e*S	Sn	18 35 04.8	0.0
	baz=235						
WTK	Tuku	2.29	248	*e*S	Sn	18 35 04.9	-0.1
	baz=245						
TWGBT	Beinan	2.30	221	*e*P	Pn	18 34 36.4	-0.9
	baz=217						
TWGBT				*e*S	Sn	18 35 03.9	-1.3
	baz=217						
TWG	Pinlang	2.30	221	*e*P	Pn	18 34 36.3	-1.1
	baz=217						
TWG				*e*S	Sn	18 35 03.9	-1.3
	baz=217						
WTP	Ta-pu	2.32	236	*e*P	Pn	18 34 38.4	+0.7
	baz=232						
WTP				*e*S	Sn	18 35 07.4	+1.5
	baz=232						
CHY	Chiayi	2.34	243	*e*S	Sn	18 35 06.0	-0.2
	baz=251						
TWK	Hsinying	2.41	238	*e*P	Pn	18 34 39.6	+0.8
	baz=234						
TWK				*e*S	Sn	18 35 09.7	+1.8
	baz=234						
CHN1	Nanshi	2.42	235	*e*P	Pn	18 34 40.0	+1.1
	baz=232						
CHN1				*e*S	Sn	18 35 10.2	+2.0
	baz=232						
SNST	Tainan City	2.42	237	*e*P	Pn	18 34 39.5	+0.5
	baz=233						
SNST				*e*S	Sn	18 35 09.9	+1.7
	baz=233						
SGST	Jiashian	2.44	233	*e*P	Pn	18 34 39.6	+0.4
	baz=238						
SGST				*e*S	Sn	18 35 09.8	+1.1
	baz=238						
WSF	Szhu	2.45	248	*e*S	Sn	18 35 10.1	+1.4
	baz=253						
SLGT	Liugui	2.45	230	*e*P	Pn	18 34 40.9	+1.5
	baz=233						
SLGT				*e*S	Sn	18 35 11.2	+2.3
	baz=233						
ECL	Taimali	2.54	219	*e*P	Pn	18 34 41.2	+0.7
	baz=216						
ECL				*e*S	Sn	18 35 10.1	-0.8
	baz=216						
SSD	Sandimen	2.63	226	*e*P	Pn	18 34 43.1	+1.4
	baz=223						
SSD				*e*S	Sn	18 35 13.1	0.0
	baz=223						
TSMG	Majia	2.65	226	*e*P	Pn	18 34 42.7	+0.8
	baz=222						
TSMG				*e*S	Sn	18 35 13.4	-0.1
	baz=222						
TWM1	Shoushan	2.72	230	*e*P	Pn	18 34 45.8	+2.9
	baz=238						
MASBT	Mashibuluo	2.72	224	*e*P	Pn	18 34 43.8	+0.9
	baz=233						
MASBT				*e*S	Sn	18 35 15.4	+0.1
	baz=233						
EAST	Anshuo	2.77	218	*e*P	Pn	18 34 43.5	0.0
	baz=214						
EAST				*e*S	Sn	18 35 15.8	-0.6
	baz=214						
SCZT	Fangliau	2.91	221	*e*P	Pn	18 34 45.9	+0.5
	baz=228						
SCZT				*e*S	Sn	18 35 19.9	+0.2
	baz=228						
SLIU	Shizi	2.93	217	*e*P	Pn	18 34 46.0	+0.4
	baz=216						
SLIU				*e*S	Sn	18 35 19.9	-0.3
	baz=216						
PHUB	P'eng-hu	3.05	250	*e*S	Sn	18 35 21.6	-1.4
	baz=248						
PTMZ	Houxiangcun	3.28	279	*e*P	Pn	18 34 50.4	+0.1
	baz=277						
PTMZ				*e*S	Sn	18 35 26.7	-1.8
	baz=277						
KNMB	Chin-men Tao	3.92	269	*e*P	Pn	18 34 59.2	+0.2
	baz=268						
KNMB				*e*S	Sn	18 35 41.4	-2.7
	baz=268						
AXDP	Jialang	4.31	275	*e*P	Pn	18 35 04.1	-0.1
	baz=274						
AXDP				*e*S	Sn	18 35 50.9	-2.4
	baz=274						

IDC 10 18:42:11.1±2.0,**4°.36N**×**123°.32E**,**h0**^{km},**mb3.3**/4,
mb1 3.5/4,**mb1mx3.3**/33,**mbtmp3.4**/4,**Error ellipse:**
s-maj=160.5km s-min=27.4km az=66.0,Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	22.43	174	P	P	18 47 12.1	+0.5
	2.0nm,1.0s,baz=5.7,slow=10,SNR=2.2						
WRA	Warramunga Arr	26.46	156	P	P	18 47 50.1	+0.1
	0.1nm,0.3s,baz=334,slow=9.7,SNR=7.1						
ASAR	Alice Springs	29.70	160	P	P	18 48 18.7	-0.3
	0.1nm,0.3s,baz=333,slow=8.2,SNR=8.5						
MKAR	Makanchi Array	55.13	327	P	P	18 51 45.2	-0.1
	0.3nm,0.5s,baz=130,slow=7.1,SNR=2.2						

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*NEIC **10** 18:49:54.0±1.9, 9°.30S±0°.07×123°.61E±0°.05, h95^{km}±8^{km}, mb4.5/13, Error ellipse: s-maj=11.5km s-min=6.8km az=204.0*

*IDC **10** 18:49:54.4±0.7, 9°.25S×123°.72E, h93^{km}±10^{km}, mb4.1/8, mb1 4.0/13, mb1mx3.7/45, mbtmp4.4/13, MS2.9/2, Ms1 3.0/2, ms1mx2.4/38, Error ellipse: s-maj=24.2km s-min=16.0km az=83.0*

*DJA **10** 18:49:55.9±0.4, 9°S±3°×12°4E±°, h67^{km}±8^{km}, M4.3/17, mb4.6/13, mB4.8/7, MLv4.5/17, Mw(mB)4.0/7*

ISC 10 18:49:53.9±0.6,**9°.44S**±0°.05×**123°.66E**±0°.06,**h100**^{km}±6^{km},
n92,σ**1**^{s}**.99**/102,**mb4.7**/26,**Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	Soe	0.67	118	P	Pn	18 50 12.5	+1.2
SOEI				S	Sn	18 50 27.9	+3.6
SOEI	Soe	0.67	118	Pn	Pn	18 50 12.0	+0.7
SOEI				Sn	Sn	18 50 24.8	+0.5
SOEI	Soe	0.67	118	P	Pn	18 50 12.5	+1.2
BATI	Baumata	0.76	180	P	Pn	18 50 14.0	+2.0
	296nm,0.3s,baz=38,slow=1.7,SNR=326						
BATI				S	Sn	18 50 28.9	+3.3
	344nm,0.3s,baz=349,slow=21,SNR=12						
BATI	Baumata	0.76	180	P	Pn	18 50 13.6	+1.6
BATI				S	Sn	18 50 29.1	+3.5
MMRI	Maumere	1.62	299	P	Pn	18 50 20.1	-1.5
MMRI				S	Sn	18 50 40.0	-2.7
MMRI	Maumere	1.62	299	Pn	Pn	18 50 20.4	-1.3
MMRI				Sn	Sn	18 50 39.2	-3.5
MMRI	Maumere	1.62	299	P	Pn	18 50 20.7	-0.9
EDFI	Ende, Flores	2.06	289	P	Pn	18 50 26.9	-0.5
EDFI				S	Sn	18 50 50.6	-2.5
BASI	Baing, Sumba	3.14	255	P	Pn	18 50 42.6	+1.1
WSI	Waingapu	3.33	266	P	Pn	18 50 45.0	+1.0
WBSI	Waikabubak, Su	4.22	267	P	Pn	18 50 56.1	0.0
BSSI	Bau Bau, Buton	4.54	316	P	Pn	18 51 00.6	+0.2
BKSI	Bulukumba	5.39	319	P	Pn	18 51 11.1	-0.8
	0.6nm1µm156nm,0.7s						
PLAI	Plampang	5.84	275	P	Pn	18 51 18.7	+0.6
	0.7nm2µm107nm,0.6s						
PLAI	Plampang	5.84	275	P	Pn	18 51 18.8	+0.7
KAPI	Kappang	5.86	318	P	Pn	18 51 18.9	+0.5
	3.6nm,0.3s,baz=184,slow=7.2,SNR=17						
KAPI				LR	LR	18 53 43.0	
	comp=Z,72nm,18.7s,baz=172,slow=40						
KAPI	Kappang	5.86	318		Pn	18 51 16.9	-1.5
KAPI	Kappang	5.86	318	P	Pn	18 51 19.2	+0.8
TWSI	Taliwang, Sumb	6.73	275	P	Pn	18 51 30.1	-0.1
	0.3nm577nm37nm,0.7s						
TTSI	Tana Toraja	7.41	329	P	Pn	18 51 39.8	+0.4
	0.1nm433nm34nm,1.2s						
SANI	Sanana	7.70	18	P	Pn	18 51 43.2	-0.1
	0.2nm501nm42nm,0.6s						
SANI	Sanana	7.70	18	P	Pn	18 51 44.3	+1.0
MSAI	Masohi	8.00	41	P	Pn	18 51 50.0	+2.6
	0.0nm236nm15nm,1.0s						
MSAI				S	Pn	18 51 49.4	+2.0
	0.0nm236nm15nm,1.0s						
LUWI	Luwuk	8.39	354	P	Pn	18 51 53.3	+0.6
	38nm,1.0s						
LUWI	Luwuk	8.39	354	Pn	Pn	18 51 51.4	-1.4
LUWI	Luwuk	8.39	354	P	Pn	18 51 54.2	+1.5
APSI	Ampana	8.71	347	P	Pn	18 51 57.3	+0.3
	22nm,0.8s						
FITZ	Fitzroy Crossi	8.82	168	P	Pn	18 51 59.4	+0.8
	baz=359,slow=11						
FITZ				S	Sn	18 53 32.6	-3.6
	8.3nm,0.3s,baz=149,slow=6.4,SNR=12						
JAGI	Jajag, Banyuwa	9.45	275	Pn	Pn	18 52 03.2	-3.9
JAGI	Jajag, Banyuwa	9.45	275	P	Pn	18 52 08.2	+1.1
LBMI	Labuha	9.54	24	P	Pn	18 52 09.8	+1.4
	31nm,0.9s						
MPSI	Mapaga	10.41	339	P	Pn	18 52 23.5	+3.3
BBKI	Banjar Baru	10.59	304	P	Pn	18 52 29.0	+6.4
FAKI	Fak Fak	10.71	53	Pn	Pn	18 52 22.6	-1.8
TNTI	Ternate	10.79	20	P	Pn	18 52 29.8	+4.4
TNTI	Ternate	10.79	20	Pn	Pn	18 52 24.2	-1.2
TOLI2	Tolitoli	10.87	345		Pn	18 52 24.9	-1.5
SIJI	Sorong	11.39	42	P	Pn	18 52 31.1	-2.4
	0.3nm,0.3s,baz=198,slow=19,SNR=2.4						
SWI	Sorong	11.39	42	P	Pn	18 52 38.7	+5.2
UGM	Wanagama	13.08	276	Pn	Pn	18 52 57.2	+1.3
WB0	Warramunga Arr	14.59	136	Pn	Pn	18 53 12.9	-2.6
WRA	Warramunga Arr	14.68	137	P	Pn	18 53 14.5	-2.1
	1.0nm,0.3s,baz=314,slow=14,SNR=37						
WRA				S	Sn	18 55 51.2	-7.3
	1.9nm,0.3s,baz=311,slow=23,SNR=16						
WRA	Warramunga Arr	14.68	137	P	Pn	18 53 14.7	-1.9
WRAB	Tennant Creek	14.68	136	P	Pn	18 53 14.4	-2.2
WB2	Warramunga Arr	14.69	137	Pn	Pn	18 53 14.6	-2.1
WR0	Warramunga Arr	14.83	136		Pn	18 53 16.3	-2.2
AS31	Alice Springs	17.20	147		Pn	18 53 48.0	-0.1
ASAR	Alice Springs	17.20	147	P	P	18 53 50.1	+2.0
	1.8nm,0.3s,baz=319,slow=12,SNR=153						
ASAR				S	Sn	18 56 52.0	-7.6
	0.8nm,0.3s,baz=320,slow=24,SNR=19						
ASAR	Alice Springs	17.20	147		P	18 53 49.2	+1.1
JAY	Jayapura	18.28	69	P	Pn	18 54 01.4	+0.2
	0.8nm,0.3s,baz=187,slow=8.1,SNR=1.4						
MNAI	Manna	21.16	282	P	P	18 54 28.4	-2.9
NWAO	Narrogin (SRO)	24.12	193	P	P	18 55 02.9	+2.5
	3.9nm,0.6s,baz=24,slow=12,SNR=1.5						
CMAR	Chiang Mai Arr	36.92	319	P	P	18 56 53.6	+0.3
	1.2nm,0.8s,baz=144,slow=6.9,SNR=16						
CMAR				PcP	PcP	18 59 15.1	+2.2
	0.6nm,0.7s,baz=161,slow=1.5,SNR=5.8						
CMAR				ScP	ScP	19 02 53.5	+2.6
	0.4nm,0.5s,baz=185,slow=3.1,SNR=5.5						
CMAR				LR	LR	19 13 50.3	
	comp=Z,24nm,19.0s,baz=255,slow=39						
CMAR	Chiang Mai Arr	36.92	319	P	P	18 56 52.6	-0.7
CMAR					ScP	19 02 51.0	+0.2
NJ2	Nanjing	41.51	354	*e*P	P	18 57 33.3	+2.0
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.7s						
ODAN	Odare	50.40	317	*e*P	P	18 58 40.9	-0.7
	comp=Z,12nm,0.5s						
TAPN	Taplejung	50.51	317	*e*P	P	18 58 41.9	-0.5
	comp=Z,11nm,0.4s						
RAMN	Ramite	51.00	316	*e*P	P	18 58 46.0	0.0
	comp=Z,36nm,0.5s						
HHC	Hu-ho-hao-te	51.27	348	*e*P	P	18 58 50.0	+2.4
HHC				pmax	pmax		
	comp=Z,22nm,1.0s						
HHC				pmax	pmax		
	comp=Z,66nm,5.1s						
JIRN	Jiri	51.73	317	*e*P	P	18 58 51.1	-0.6
	comp=Z,22nm,0.6s						
GUN	Gumba	52.10	317	*e*P	P	18 58 53.9	-0.5
	comp=Z,38nm,0.7s						
PKI	Pulchoki	52.21	316	*e*P	P	18 58 54.5	-0.7
PKIN	Phulchoki	52.22	316	*e*P	P	18 58 53.9	-1.3
	comp=Z,22nm,0.5s						
GKN	Gorkha	53.01	316	*e*P	P	18 59 00.3	-0.6
	comp=Z,21nm,0.5s						
GTA	Gaotai	53.41	337	*e*P	P	18 59 04.1	+0.6
GTA				pP	pwP	18 59 32.5	+1.3
GTA				sP	sP	18 59 45.0	+7.4
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
KOLN	Koldanda	53.59	315	*e*P	P	18 59 04.2	-0.9
DANN	Dangsing	53.83	316	*e*P	P	18 59 06.3	-0.7
	comp=Z,45nm,0.6s						
USRK	Ussuriysk Ar.	53.91	7	P	P	18 59 06.7	-0.2
	comp=Z,1.7nm,0.5s,baz=194,slow=7.7,SNR=10						
PYUN	Piuthan	54.22	315	*e*P	P	18 59 08.7	-1.0
	comp=Z,29nm,0.5s						

SONM	Songino Array	59.04	347	P	P	18 59 42.8	-0.7
	comp=Z,0.4nm,0.4s,baz=165,slow=9.3,SNR=5.3						
SONM	Songino Array	59.04	347	IAmb	IAmb	18 59 44.7	
	comp=Z,1.1nm,1.0s						
WMQ	Urumqi	62.25	331	*e*P	P	19 00 07.5	+2.3
KSH	Kashi	65.76	321	P	P	19 00 28.6	+0.2
KSH				pP	pP	19 00 51.7	-0.8
KSH				pmax	pmax		
	comp=Z,5.0nm,0.4s						
MK31	Makanchi Array	67.03	330	P	P	19 00 35.7	-0.5
MK31				IAmb	IAmb	19 00 37.7	
	comp=Z,6.8nm,0.8s						
MKAR	Makanchi Array	67.03	330	P	P	19 00 36.5	+0.4
	comp=Z,6.8nm,0.5s,baz=132,slow=7.6,SNR=115						
MKAR	Makanchi Array	67.03	330	P	P	19 00 35.9	-0.3
MAKZ	Makanchi	67.19	330	P	P	19 00 35.6	-1.6
MAKZ				IAmb	IAmb	19 00 38.1	
	comp=Z,4.5nm,0.7s						
AAK	Ala-Archa	68.53	323	P	P	19 00 45.2	-0.6
AAK				IAmb	IAmb	19 00 47.4	
	comp=Z,2.4nm,0.7s						
ZAA0	Zalesovo Array	71.17	337	P	P	19 01 00.2	-1.4
ZAA0				IAmb	IAmb	19 01 01.9	
	comp=Z,6.2nm,0.8s						
ZALV	Zalesovo Beam	71.17	337	P	P	19 01 00.9	-0.6
	comp=Z,7.8nm,0.6s,baz=140,slow=4.8,SNR=31						
ZALV	Zalesovo Beam	71.17	337	P	P	19 01 00.1	-1.5
KKAR	Karatay Array	71.19	322	P	P	19 01 01.3	-0.7
YAK	Yakutsk	71.40	3	P	P	19 01 02.5	-0.3
	comp=Z,3.8nm,0.5s,baz=50,slow=1.5,SNR=4.8						
YAK	Yakutsk	71.40	3	IAmb	IAmb	19 01 03.9	
	comp=Z,11nm,0.9s						
KURK	Kurchatov	71.49	332		P	19 01 02.9	-0.7
KURK				IAmb	IAmb	19 01 04.9	
	comp=Z,7.9nm,0.8s						
MA2	Magadan	72.14	14	P	P	19 01 08.6	+1.3
SOCY	Socotra	72.49	286	P	P	19 01 10.0	-0.4
SEY	Seymchan	75.47	13	P	P	19 01 27.3	+0.7
	comp=Z,4.7nm,0.7s,baz=218,slow=5.4,SNR=14						
BRVK	Borovoye	76.98	330	P	P	19 01 35.1	-0.3
ABKAR	Akbulak array	80.61	323	P	P	19 01 54.0	-1.4
TORD	Torodi Ar. Bea	123.07	280	PKP	PKiKP	19 08 41.5	+1.6
	comp=Z,0.5nm,0.7s,baz=88,slow=1.2,SNR=3.1						

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*IDC **10** 18:55:46.7±0.7, 27°.94N×139°.91E, h393km±8km, mb3.3/11, mb1 3.4/16, mb1mx3.2/49, mbtmp4.1/16, Error ellipse: s-maj=23.5km s-min=11.8km az=74.0*
*JMA **10** 18:55:47.9±0.1, 28°.24N×140°.62E, h422km, M3.9*
*NEIC **10** 18:55:47.5±1.9, 27°.94N±0°.09×140°.0E±0°.1, h401km±10km, mb4.3/22, Error ellipse: s-maj=19.2km s-min=12.7km az=73.0*
ISC 10 18:55:47.6±0.6**, 28°.10N**±0°.06×**140°.04E**±0°.09**, h400**km**, n74, σ1s.57**/83**, mb4.1**/19**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.15	117	P	Pn	18 56 44.9	+0.3
CBIJ				*e*S	S	18 57 29.8	-0.8
JCJ	Chichijima	2.15	117	P	Pn	18 56 45.0	+0.4
	22nm,0.3s,baz=117,slow=23,SNR=56						
JCJ				S	S	18 57 28.9	-1.7
	69nm,0.3s,baz=316,slow=21,SNR=22						
JCJ	Chichijima	2.15	117		Pn	18 56 44.6	-0.1
JCJ					S	18 57 28.1	-2.5
JHH2	Haha-jima-NKT2	2.40	127	P	Pn	18 56 46.9	+0.6
JHH2				*e*S	S	18 57 33.0	-0.7
JHCJ	Hachijojimakas	4.96	358	P	Pn	18 57 10.2	+1.1
JHJ2	Mitsune	5.00	358	P	Pn	18 57 10.8	+1.3
JHJ2	Mitsune	5.00	358		Pn	18 57 10.8	+1.3
JHJ	Hachijo jima 2	5.00	358	P	Pn	18 57 11.3	+1.7
	82nm,0.3s,baz=76,slow=9.6,SNR=7.8						
JHJ				S	S	18 58 16.1	-0.2
	18nm,0.3s,baz=200,slow=15,SNR=2.0						
JMKN	Mikurajimanish	5.78	356	P	Pn	18 57 19.3	+1.5
BSO1	Boso 1	6.58	7	P	Pn	18 57 27.2	+1.3
BSO3	Boso 3	6.69	3	P	P	18 57 28.9	+0.9
BSO3				*e*S	S	18 58 47.8	-1.2
JSG	Sagara	6.74	347		P	18 57 28.9	+0.1
BSO4	Boso 4	6.87	2	P	P	18 57 31.5	+1.3
JIE	Ise	6.88	336	P	P	18 57 32.9	+2.4
HMMJ	Hamamatsu 2	7.01	344	P	P	18 57 33.2	+1.3
JOD2	Odawara 2	7.18	354	P	P	18 57 34.3	+0.5
JOD2				*e*S	S	18 58 58.3	-1.3
JNY	Yasuok	7.46	346	P	P	18 57 38.1	+1.1
INU	Inuyama	7.67	341	P	P	18 57 40.6	+1.4
JMN	Monobe	7.71	318	P	Pn	18 57 40.3	+1.0
JHU	Hanno	7.75	355	P	P	18 57 39.6	-0.5
JHU				*e*S	S	18 59 06.2	-5.2
JGF	Kuroka	7.81	344	P	P	18 57 41.8	+0.9
JRY	Ryogami san	7.95	353	P	P	18 57 42.5	+0.2
JRY				*e*S	S	18 59 13.6	-2.0
JYT	Yasato	8.10	1	*e*S	S	18 59 14.7	-4.0
JYT	Yasato	8.10	1	P	P	18 57 44.1	+0.1
JWT	Wachi	8.17	332	P	P	18 57 47.0	+2.2
JMZ	Minamidaito 2	8.19	256	P	Pn	18 57 43.6	-1.2
JAG	Ashikaga	8.31	357	P	Pn	18 57 45.3	-0.7
JAG				*e*S	S	18 59 18.7	-4.4
JHO	Hitachi	8.49	3	P	P	18 57 48.9	+0.5
JHO				*e*S	S	18 59 23.6	-3.4
MJAR	Matsushiro Arr	8.55	350	P	P	18 57 49.1	0.0
	0.2nm,0.3s,baz=291,slow=40,SNR=4.9						
MJAR				S	S	18 59 16.6	-12
	0.1nm,0.3s,baz=212,slow=47,SNR=1.7						
MJAR	Matsushiro Arr	8.55	350	P	Pn	18 57 47.8	-1.1
MAJO	Matsushiro	8.55	350	P	P	18 57 49.1	+0.1
JHS	Saijyo	9.06	321	P	P	18 57 55.3	+0.6
JMM	Marumori	9.76	4	P	Pn	18 58 04.3	+1.6
JSD	Sado	10.02	352	P	Pn	18 58 06.1	+0.4
ASAJ	Asahikawa	16.11	7	P	P	18 59 14.6	+2.7
	0.2nm,0.3s,baz=185,slow=30,SNR=2.0						
USA0B	Ussuriysk Arra	17.31	340	P	P	18 59 27.8	+3.1
USA0B				IAmb	IAmb	18 59 30.0	
	comp=Z,6.9nm,0.7s						
USRK	Ussuriysk Ar.	17.31	340	P	P	18 59 25.1	+0.5
	baz=178,slow=10,SNR=8.0						
SSLB	Suanglung	17.69	260	P	P	18 59 29.1	+0.1
SSLB				IAmb	IAmb	19 00 06.6	
	comp=Z,32nm,1.3s						
TWG	Pinlang	17.91	257	P	P	18 59 30.4	-0.9
TWG				IAmb	IAmb	18 59 39.5	
	comp=Z,34nm,1.1s						
KLR	Kul'dur	22.04	345	P	P	19 00 12.2	+1.8
	comp=Z,4.1nm,0.5s,baz=167,slow=7.4,SNR=16						
SONM	Songino Array	32.67	316	P	P	19 01 44.8	+0.4
	comp=Z,0.5nm,0.4s,baz=126,slow=7.9,SNR=5.1						
SONM	Songino Array	32.67	316	IAmb	IAmb	19 01 47.7	
	comp=Z,2.2nm,1.3s						
WRA	Warramunga Arr	48.08	187	P	P	19 03 46.8	-2.2
	comp=Z,1.1nm,0.4s,baz=1.5,slow=7.5,SNR=2.6						
MK31	Makanchi Array	48.36	309	P	P	19 03 50.2	-0.7
MKAR	Makanchi Array	48.36	309	P	P	19 03 50.5	-0.4
	comp=Z,0.3nm,0.5s,baz=88,slow=11,SNR=5.8						
MKAR	Makanchi Array	48.36	309	P	P	19 03 50.4	-0.5
KURK	Kurchatov	50.92	314	P	P	19 04 09.5	-0.3
ASAR	Alice Springs	51.81	187	P	P	19 04 15.3	-1.3
	comp=Z,1.2nm,0.5s,baz=359,slow=7.4,SNR=1.3						
KDAK	Kodiak Island	54.71	37	P	P	19 04 38.3	+1.3
	comp=Z,8.3nm,0.9s,baz=333,slow=4.5,SNR=5.7						
KDAK	Kodiak Island	54.71	37	P	P	19 04 37.3	+0.3
KKAR	Karatay Array	56.95	305	P	P	19 04 52.8	-0.2
SML	Sawmill	57.00	33	P	P	19 04 52.7	-0.3
SML				IAmb	IAmb	19 04 58.1	
	comp=Z,20nm,1.5s						
ILAR	Eielson Array	57.75	29	P	P	19 04 58.9	+0.8
	comp=Z,0.6nm,0.9s,baz=263,slow=5.9,SNR=5.2						
ILAR	Eielson Array	57.75	29	P	P	19 04 57.8	-0.4
BMAR	Burnt Mountain	58.78	26	P	P	19 05 07.6	+2.4
RAGM	Ragged Mountai	58.79	34	P	P	19 05 07.4	+2.0
BMRM	Bremner River	58.80	33	P	P	19 05 07.4	+2.0
BMRM				IAmb	IAmb	19 05 14.7	
	comp=Z,21nm,1.4s						
SCRK	Sand Creek	59.00	30	P	P	19 05 08.4	+1.6
SCRK				IAmb	IAmb	19 05 40.1	
	comp=Z,5.8nm,1.4s						
GLB	Gilahina Butte	59.17	33	P	P	19 05 09.3	+1.5
GLB				IAmb	IAmb	19 05 30.9	
	comp=Z,19nm,1.6s						
VRDI	Verde Repeater	59.35	33	P	P	19 05 11.2	+1.9
VRDI				IAmb	IAmb	19 05 40.1	
	comp=Z,11nm,1.2s						
TGL	Tana Glacier	59.68	34	P	P	19 05 13.5	+2.0
TGL				IAmb	IAmb	19 05 13.8	
	comp=Z,18nm,1.3s						
WAX	Waxell Ridge	59.69	34	P	P	19 05 13.3	+1.9
WAX				IAmb	IAmb	19 05 29.6	
	comp=Z,39nm,1.4s						
ABKAR	Akbulak array	63.02	314	P	P	19 05 33.1	-0.5
ABKAR	Akbulak array	63.02	314	P	P	19 05 32.7	-0.9
ABKAR				IAmb	IAmb	19 05 41.5	
	comp=Z,3.8nm,1.6s						
EUNU	Eureka	69.17	8	P	P	19 06 12.9	+1.2
KEV	Kevo	71.40	340	P	P	19 06 26.0	+0.8
ARCES	ARCESS Array B	71.96	340	P	P	19 06 29.4	+0.9
	comp=Z,2.5nm,0.5s,baz=71,slow=8.4,SNR=17						
FIA1	FINESS Array S	76.19	333	P	P	19 06 52.9	+0.1
FINES	FINESS Array B	76.20	333	P	P	19 06 52.8	0.0
	comp=Z,2.1nm,0.4s,baz=69,slow=4.9,SNR=31						
AKASG	Malin Array Be	80.67	323	P	P	19 07 16.3	-0.9
	comp=Z,0.2nm,0.3s,baz=65,slow=3.4,SNR=2.3						
NC405	NORSAR Array S	81.74	337	P	P	19 07 21.4	-1.2
NB201	NORSAR Array S	81.93	337	P	P	19 07 23.3	-0.3
NB2	NORSAR Subarra	81.96	337	P	P	19 07 23.3	-0.5
	comp=Z,0.5nm,0.4s,baz=50,slow=4.6						
NOA	NORSAR Array B	81.96	337	P	P	19 07 23.2	-0.6
	comp=Z,0.8nm,0.5s,baz=45,slow=5.0,SNR=4.1						

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*IDC **10** 18:58:17.0±1.4, 3°.68S×139°.87E, h76km±17km, mb3.6/6, mb1 4.0/9, mb1mx3.6/30, mbtmp4.1/9, MS3.4/2, Ms1 3.4/2, ms1mx2.7/26, Error ellipse: s-maj=36.9km s-min=13.4km az=115.0*
ISC 10 18:58:13.0±0.9**, 3°.97S**±0°.08×**139°.8E**±0°.1**, h50**km**, n14, σ2s.35**/14**, mb3.6**/5**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	1.68	31	P	Pn	18 58 41.1	+1.0
	36nm,0.3s,baz=216,slow=13,SNR=134						
JAY				S	Sn	18 58 59.4	-1.1
	248nm,0.3s,baz=135,slow=7.7,SNR=18						
SIJI	Sorong	9.11	290	P	Pn	19 00 21.8	-0.1
	0.6nm,0.3s,baz=206,slow=23,SNR=3.0						
WRA	Warramunga Arr	16.76	198	P	P	19 02 08.6	+2.5
	0.9nm,0.3s,baz=15,slow=12,SNR=20						
WRA				S	Sn	19 05 07.0	-2.8
	0.4nm,0.3s,baz=12,slow=22,SNR=6.8						
BATI	Baumata	17.20	248	P	P	19 02 13.4	+2.4
	2.2nm,0.3s,baz=242,slow=19,SNR=2.0						
FITZ	Fitzroy Crossi	19.76	224	P	Pn	19 02 43.6	+2.7
	1.5nm,0.3s,baz=61,slow=10,SNR=18						
FITZ				S	S	19 06 13.8	-5.4
	0.4nm,0.3s,baz=136,slow=16,SNR=3.0						
ASAR	Alice Springs	20.41	196	P	Pn	19 02 52.1	+3.6
	6.7nm,0.6s,baz=24,slow=9.5,SNR=53						
ASAR				S	S	19 06 32.0	0.0
	0.5nm,0.5s,baz=18,slow=25,SNR=2.8						
STKA	Stephens Creek	27.81	177	LR	LR	19 17 03.7	
	comp=Z,127nm,18.4s,baz=28,slow=40						
KSRS	Korea Array	42.68	346	P	P	19 06 04.2	-0.7
	0.7nm,0.5s,baz=165,slow=8.5,SNR=5.0						
CMAR	Chiang Mai Arr	46.04	300	P	P	19 06 32.5	+0.3
	0.7nm,1.0s,baz=126,slow=5.9,SNR=6.0						
KLR	Kul'dur	53.45	353	P	P	19 07 26.9	-1.1
	1.8nm,0.5s,baz=187,slow=7.2,SNR=9.6						
MKAR	Makanchi Array	71.47	322	P	P	19 09 28.5	0.0
	0.3nm,0.4s,baz=93,slow=9.8,SNR=9.3						
ILAR	Eielson Array	86.50	24	P	P	19 10 49.5	-0.8
	0.8nm,0.6s,baz=260,slow=4.3,SNR=13						
AKTO	Aktyubinsk	87.83	321	LR	LR	19 50 45.3	
	comp=Z,12nm,21.1s,baz=322,slow=36						
DBIC	Dimbokro	144.75	276	PKP	PKPbc	19 17 46.0	+1.5
	6.5nm,0.9s,baz=60,slow=2.9,SNR=5.0						

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*FUNV **10** 19:06:41.7, 8°.54N×71°.33W, h2km, MW3.3*
ISC 10 19:06:40.7±1.3**, 8°.54N**±0°.03×**71°.36W**±0°.03**, h10**km±10km**, n25, σ1s.19**/46**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.56	117	*e*P	Pg	19 06 51.7	0.0
SOCV				*e*S	Sg	19 06 58.0	-1.0
SOCV	Socops	0.56	117	*e*P	Pg	19 06 51.7	0.0
SOCV				*e*S	Sg	19 06 58.9	-0.2
SDV	Santo Domingo	0.80	64	*e*P	Pb	19 06 56.9	+0.1
SDV				*e*S	Sn	19 07 08.5	-1.8
PAMC	Pamplona, Colo	1.78	228	*e*P	Pn	19 07 11.3	-0.7
PAMC				*e*S	Sn	19 07 34.8	-0.1
PAMC				*i*		19 07 40.7	
	comp=Z,145nm,0.3s						
MCQV	Machiques	1.90	322	*e*P	Pn	19 07 14.3	+1.1
MCQV				*e*S	Sb	19 07 39.1	-0.2
OCAC	Ocana	1.96	261	*e*P	Pn	19 07 12.2	-2.0
OCAC				*e*S	Sn	19 07 37.7	-1.2
OCAC				*i*		19 07 41.0	
	comp=Z,981nm,0.3s						
TAMC	Tame, Arauca	2.13	192	*e*P	Pn	19 07 17.7	+1.3
TAMC				*e*S	Sb	19 07 47.1	+1.0
ELOV	Elorza	2.41	129	*e*P	Pb	19 07 22.9	-1.3
ELOV				*e*S	Sb	19 07 53.8	-0.1
ELOV	Elorza	2.41	129	*e*P	Pn	19 07 21.8	+1.6
ELOV				*e*S	Sn	19 07 50.4	+0.7
DABV	Dabajuro	2.47	17	*e*P	Pn	19 07 22.4	+1.2
DABV				*e*S	Sn	19 07 51.7	+0.3
SIQV	Siquisique	2.60	36	*e*P	Pn	19 07 23.4	+0.6
SIQV				*e*S	Sn	19 07 54.7	+0.2
BARC	Barichara	2.65	223	*e*P	Pn	19 07 26.5	+2.8
BARC				*e*S	Sn	19 07 54.1	-1.9
BARC				*i*		19 08 04.1	
	comp=Z,112nm,0.6s						
SMLC	San Martn de	2.69	276	*e*P	Pn	19 07 23.0	-1.1
SMLC				*e*S	Sn	19 07 58.5	+1.7
BRRC	Barranca, Sant	2.73	239	*e*P	Pb	19 07 30.9	+1.3
BRRC				*e*S	Sb	19 08 02.9	-0.3
RUSC	La Rusia	3.13	213	*e*P	Pn	19 07 31.2	+0.5
RUSC				*e*S	Sn	19 08 09.1	+0.7
ARGC	Ariguani, Magd	3.14	295	*e*P	Pn	19 07 31.1	+0.9
ARGC				*e*S	Sn	19 08 06.3	-1.5
ARGC				*i*		19 08 29.7	
	comp=Z,17nm,0.3s						
BAUV	El Baul	3.31	83	*e*P	Pn	19 07 33.4	+0.9
BAUV				*e*S	Sn	19 08 10.1	-1.9
ZARC	Zaragoza, Cauc	3.62	254	*e*P	Pn	19 07 37.0	+0.2
ZARC				*e*S	Sn	19 08 17.8	-1.8
MONV	Montecano	3.66	22	*e*P	Pn	19 07 38.2	+0.8
MONV				*e*S	Sn	19 08 19.9	-0.8
BENV	Beln	3.97	69	*e*P	Pn	19 07 42.8	+1.0
SJCC	San Jacinto, C	4.00	290	*e*P	Pn	19 07 42.5	+0.3
SJCC				*e*S	Sn	19 08 19.8	-9.5
SJCC				*i*		19 08 27.2	
	comp=Z,44nm,0.2s						
UREC	San Jos de Ur	4.20	260	*e*P	Pn	19 07 46.8	+1.9
MOTC	Monteria, Cord	4.26	274	*e*P	Pn	19 07 45.8	+0.1
MOTC				*e*S	Sn	19 08 35.7	+0.1
MOTC				*i*		19 09 02.7	
	comp=Z,15nm,0.8s						
CHIC	Chingaza	4.54	211	*e*P	Pn	19 07 50.4	+0.5
CHIC				*e*S	Sn	19 08 40.9	-2.1
CHIC				*i*		19 09 08.6	
	comp=Z,11nm,0.5s						
TACV	Tcata	4.56	69	*e*P	Pn	19 07 50.4	+0.5

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*FUNV **10** 19:12:54.8, 8°.51N×71°.33W, h2km, MW3.0*
ISC 10 19:12:54.3±1.5**, 8°.49N**±0°.05×**71°.37W**±0°.04**, h9**km±12km**, n7, σ1s.13**/14**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.54	112	*e*P	Pg	19 13 04.5	-0.3
SOCV				*e*S	Sg	19 13 12.5	+0.6
SDV	Santo Domingo	0.82	61	*e*P	Pg	19 13 09.8	-0.4
SDV				*e*S	Sg	19 13 21.1	+0.2
PAMC	Pamplona, Colo	1.75	229	*e*P	Pn	19 13 25.5	+0.2
PAMC				*e*S	Sn	19 13 49.5	+1.6
MCQV	Machiques	1.93	323	*e*P	Pn	19 13 27.9	+0.5
MCQV				*e*S	Sn	19 13 53.1	+1.2
OCAC	Ocana	1.95	263	*e*P	Pn	19 13 26.1	-1.6
OCAC				*e*S	Sn	19 13 51.8	-0.7
ELOV	Elorza	2.38	128	*e*P	Pn	19 13 34.3	+0.7
ELOV				*e*S	Sn	19 14 02.3	-0.6
BAUV	El Baul	3.32	82	*e*P	Pn	19 13 47.1	+0.7
BAUV				*e*S	Sn	19 14 24.2	-1.8

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*IDC **10** 19:13:37.4±0.9, 37°.09N×97°.83W, h0km, mb3.9/3, mb1 3.9/6, mb1mx3.6/48, mbtmp3.6/6, ML3.9/3, Error ellipse: s-maj=15.8km s-min=13.0km az=142.0*
*TUL **10** 19:13:38.2±1.3, 36°.94N±0°.01×97°.82W±0°.02, h3km±7km, ML3.5, mb_Lg3.2/79(NEIC), ML3.2/27(NEIC), Error ellipse: s-maj=2.6km s-min=0.5km az=137.0*
*NEIC **10** 19:13:38.4±0.9, 36°.94N±0°.02×97°.82W±0°.02, h6km±6km, Error ellipse: s-maj=2.6km s-min=2.1km az=132.0*
*IASPEI **10** 19:13:38.1±0.9, 36°.93N±0°.02×97°.83W±0°.02, h10km±6km, mb3.7/3, Error ellipse: s-maj=3.5km s-min=3.3km az=139.1, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*
*NEIC **10** 19:13:38.5±0.8, 36°.94N±0°.02×97°.81W±0°.02, h6km±6km, Error ellipse: s-maj=2.6km s-min=2.1km az=131.0*
*ANF **10** 19:13:38.3±1.4, 36°.99N×97°.84W, h2km±10km, ML4.3/10, Error ellipse: s-maj=4.1km s-min=2.7km az=76.0*
ISC 10 19:13:38.2±0.8**, 36°.93N**±0°.02×**97°.83W**±0°.02**, h10**km±5km**, n132, σ1s.05**/142**, mb3.7**/3**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.08	198	Pg	Pg	19 13 40.6	+0.2
GC02				Sg	Sg	19 13 42.1	0.0
KAN14	Manchester OK	0.11	286		Pg	19 13 41.0	+0.1
KAN14				Sg	Sg	19 13 42.8	-0.1
KAN17	Caldwell West	0.13	24	Pg	Pg	19 13 41.1	-0.1
KAN17				Sg	Sg	19 13 42.9	-0.4
KAN05	Bluff City Nor	0.19	349		Pg	19 13 42.2	0.0
KAN01	Argonia South	0.23	14	Pg	Pg	19 13 43.0	0.0
KAN01				Sg	Sg	19 13 46.1	-0.1
KAN09	Caldwell North	0.27	39	Pg	Pg	19 13 43.6	0.0
KAN09				Sg	Sg	19 13 47.0	-0.3
KAN10	Anthony SW Sta	0.29	313	Pg	Pg	19 13 44.2	+0.2
KAN10				Sg	Sg	19 13 48.1	+0.2
KAN13	South Haven SW	0.29	73	Pg	Pg	19 13 44.2	+0.1
KAN08	Anthony NE Sta	0.32	339		Pg	19 13 44.7	+0.1
KAN08				Sg	Sg	19 13 49.1	+0.2
KAN06	Argonia West S	0.32	356		Pg	19 13 44.7	+0.1
KAN06				Sg	Sg	19 13 49.0	0.0
OK032	Salt Plains WL	0.33	248	Pg	Pg	19 13 45.1	+0.4
OK032				Sg	Sg	19 13 49.2	+0.1
KAN16	Harper SW Stat	0.35	328	Pg	Pg	19 13 45.3	+0.1
KAN16				Sg	Sg	19 13 49.9	0.0
KS20	Mayfield South	0.38	36	Pg	Pg	19 13 45.6	0.0
KS20				Sg	Sg	19 13 50.4	-0.1
KS21	Milan North St	0.38	20		Pg	19 13 45.8	0.0
KAN12	Harper NE Stat	0.40	340	Pg	Pg	19 13 46.0	0.0
KAN12				Sg	Sg	19 13 51.4	+0.2
CROK	Carrier	0.44	196	Pg	Pg	19 13 47.3	+0.6
CROK				Sg	Sg	19 13 53.6	+1.1
BLOK	Blackwell	0.52	108	Pg	Pg	19 13 48.5	+0.2
BLOK				Sg	Sg	19 13 55.8	+0.7
T35A	Sooner Cattle	1.06	90	Pg	Pg	19 13 58.2	-0.3
T35A				Sg	Sg	19 14 12.0	-0.2
T35B	Sooner Cattle	1.06	90	P	Pg	19 13 58.1	-0.4
	baz=272,SNR=195						
U32A	Winter Ranch,	1.09	240		Pg	19 13 58.9	-0.1
U32A	Winter Ranch,	1.09	240	P	Pg	19 13 59.0	-0.1
	baz=59,SNR=21						
OK029	Liberty Lake	1.17	165	Pn	Pg	19 14 00.5	-0.1
QUOK	Quay	1.18	129		Pg	19 14 00.5	-0.3
QUOK				Sg	Sg	19 14 16.0	0.0
OK031	S. Brethren Rd	1.26	140		Pn	19 14 01.9	0.0
OK031				Sg	Sg	19 14 18.8	+0.2
BCOK	Bluff Creek, N	1.28	172	Pn	Pn	19 14 02.3	+0.2
OK030	Cody Creek RV	1.30	139		Pn	19 14 02.6	+0.1
OK025	Westminster Rd	1.40	163		Pn	19 14 04.3	+0.5
OKCFA	Oklahoma City	1.54	168		Pn	19 14 06.7	+1.0
OKCFA	Oklahoma City	1.54	168	P	Pn	19 14 06.9	+1.2
	baz=349,SNR=8.7						
OKCSW	OKLAHOMA CITY	1.55	168		Pn	19 14 06.9	+1.0
R32A	Long Quarter,	1.65	335		Pn	19 14 08.4	+1.1
R32A	Long Quarter,	1.65	335	P	Pb	19 14 08.6	-0.1
	baz=154,SNR=70						
R32A				S	Sb	19 14 30.0	+0.4
	baz=154						
FNO	Franklin	1.70	168		Pn	19 14 09.1	+1.2
FNO				IAmb_Lg		19 14 34.1	
	comp=Z,111nm,0.7s						
TUL1	Leonard	1.93	121	P	Pn	19 14 12.7	+1.7
	baz=303						
TUL1				S	Sb	19 14 39.1	+1.5
	baz=303						
TUL1	Leonard	1.93	121	Pn	Pn	19 14 12.5	+1.4
TUL1	Leonard	1.93	121	P	Pn	19 14 12.8	+1.7
	baz=303,SNR=46						
TUL1				S	Sb	19 14 38.9	+1.3
	baz=303						
WMOK	Wichita Mounta	2.32	200	P	Pn	19 14 17.5	+1.1
	baz=19						
WMOK				S	Sb	19 14 49.9	+1.2
	baz=19						
WMOK	Wichita Mounta	2.32	200		Pn	19 14 17.5	+1.1
WMOK	Wichita Mounta	2.32	200	P	Pn	19 14 17.6	+1.1
	baz=19,SNR=62						
WMOK				S	Sb	19 14 49.9	+1.2
	baz=19						
X34A	Smith Ranch, M	2.32	180		Pn	19 14 18.3	+1.8
X34A				IAmb_Lg		19 14 52.9	
	comp=Z,116nm,0.7s						
KSU1	Kansas State U	2.38	24	P	Pn	19 14 18.3	+1.1
	baz=204						
KSU1				Sb	Sb	19 14 51.2	+0.7
	baz=204						
KSU1	Kansas State U	2.38	24		Pn	19 14 18.1	+0.9
KSU1	Kansas State U	2.38	24	P	Pn	19 14 18.2	+1.1
	baz=204,SNR=16						
KSU1				S	Sn	19 14 48.5	+2.1
	baz=204						
CBKS	Cedar Bluff	2.42	322	P	Pn	19 14 19.0	+1.2
	baz=140						
CBKS				Sb	Sb	19 14 52.9	+1.3
	baz=140						
CBKS	Cedar Bluff	2.42	322		Pn	19 14 19.0	+1.2
CBKS	Cedar Bluff	2.42	322	P	Pn	19 14 19.0	+1.2
	baz=140,SNR=32						
CBKS				S	Sb	19 14 52.5	+0.9
	baz=140						
U38A	Gravette	2.81	99		Pn	19 14 24.1	+0.9
LOOK	Love County	2.97	170		Pn	19 14 27.3	+1.9
LOOK				IAmb_Lg		19 15 21.0	
	comp=Z,77nm,1.1s						
X37A	Clayton	3.07	139		Pn	19 14 27.9	+1.2
X37A				IAmb_Lg		19 15 20.3	
	comp=Z,89nm,0.8s						
X37A	Clayton	3.07	139	P	Pn	19 14 27.9	+1.2
	baz=320,SNR=23						
HHAR	Hobbs	3.19	100		Pn	19 14 29.5	+1.0
HHAR				IAmb_Lg		19 15 28.2	
	comp=Z,65nm,0.8s						
Z35A	Perchaven, San	3.62	172	Pn	Pn	19 14 35.4	+1.1
Z35A	Perchaven, San	3.62	172	P	Pn	19 14 36.0	+1.7
	baz=353						
Z35A				S	Sn	19 15 19.4	+2.3
	baz=353						
S39A	Bolivar	3.67	77		Pn	19 14 35.6	+0.6
S39A	Bolivar	3.67	77	P	Pn	19 14 35.8	+0.7
	baz=260,SNR=11						
W39A	Magazine	3.70	117		Pn	19 14 36.6	+1.2
W39A				IAmb_Lg		19 15 42.2	
	comp=Z,88nm,0.8s						
W39A	Magazine	3.70	117	P	Pn	19 14 36.6	+1.2
	baz=299,SNR=18						
AMTX	Amarillo	3.73	238		Pn	19 14 37.0	+1.1
AMTX				IAmb_Lg		19 15 41.9	
	comp=Z,53nm,0.8s						
U40A	Yellville	4.04	97	P	Pn	19 14 41.0	+0.9
	baz=280						
U40A	Yellville	4.04	97		Pn	19 14 40.3	+0.2
U40A				IAmb_Lg		19 15 49.1	
	comp=Z,80nm,0.8s						
U40A	Yellville	4.04	97	P	Pn	19 14 41.1	+0.9
	baz=280,SNR=21						
U40A				P	Pn	19 14 41.1	+0.9
	baz=280,SNR=21						
MIAR	Mount Ida	4.20	123		Pn	19 14 43.2	+1.0
MIAR	Mount Ida	4.20	123	P	Pn	19 14 44.0	+1.8
	baz=306,SNR=7.3						
N35A	Tabor	4.28	23		Pn	19 14 43.6	+0.1

P38A	Dawn	4.32	50		Pn	19 14 44.1	+0.2
P38A				IAmb_Lg		19 15 54.6	
	comp=Z,50nm,0.8s						
P38A	Dawn	4.32	50	P	Pn	19 14 44.9	+0.9
	baz=233,SNR=6.5						
KSCO	Kaye Shedlock'	4.33	300	S	Sn	19 15 36.7	+2.0
	baz=117						
KSCO	Kaye Shedlock'	4.33	300		Pn	19 14 44.4	+0.2
KSCO				IAmb_Lg		19 16 02.4	
	comp=Z,48nm,0.8s						
KSCO	Kaye Shedlock'	4.33	300	P	Pn	19 14 45.3	+1.2
	baz=117						
Z38A	Mt. Pleasant	4.34	147		Pn	19 14 45.1	+0.9
Z38A				IAmb_Lg		19 15 58.3	
	comp=Z,65nm,0.8s						
MGMO	Mountain Grove	4.46	85	Pn	Pn	19 14 46.4	+0.6
BGNE	Belgrade	4.48	357	P	Pn	19 14 47.1	+0.9
	baz=177						
BGNE				S	Sn	19 15 38.7	+0.3
	baz=177						
BGNE	Belgrade	4.48	357		Pn	19 14 46.9	+0.6
BGNE	Belgrade	4.48	357	P	Pn	19 14 47.1	+0.9
	baz=177						
ABTX	Abilene, Hawle	4.54	200	Sb	Sg	19 15 59.4	-4.7
	baz=19						
ABTX	Abilene, Hawle	4.54	200		Pn	19 14 48.5	+1.5
R40A	Maddies Statio	4.62	71		Pn	19 14 48.4	+0.3
R40A	Maddies Statio	4.62	71	P	Pn	19 14 48.9	+0.8
	baz=255,SNR=8.3						
FCAR	Ozark Folk Cen	4.72	101	Pn	Pn	19 14 50.9	+1.5
FCAR				IAmb_Lg		19 16 08.8	
	comp=Z,40nm,0.7s						
X40A	Basin Creek Fa	4.74	119	P	Pn	19 14 51.9	+2.2
	baz=303						
X40A	Basin Creek Fa	4.74	119		Pn	19 14 51.2	+1.6
WHAR	Wooly Hollow	4.77	108	Pn	Pn	19 14 51.0	+0.8
WHAR				IAmb_Lg		19 16 10.5	
	comp=Z,46nm,0.8s						
W41B	Gary Mavity, V	4.85	109	P	Pn	19 14 52.1	+0.9
	baz=293,SNR=10						
WHTX	Lake Whitney,	4.93	176	P	Pn	19 14 53.3	+1.0
	baz=357						
WHTX	Lake Whitney,	4.93	176	Pn	Pn	19 14 52.5	+0.2
WHTX	Lake Whitney,	4.93	176	P	Pn	19 14 52.9	+0.5
	baz=357,SNR=8.8						
MSTX	Muleshoe	5.00	235		Pn	19 14 54.0	+0.6
OGNE	Ogallala	5.18	322		Pn	19 14 57.3	+1.5
237A	Washetta, Mont	5.19	161	Pn	Pn	19 14 55.3	-0.6
237A				IAmb_Lg		19 16 37.3	
	comp=Z,28nm,0.9s						
P40A	Paris	5.24	59	Pn	Pn	19 14 56.9	+0.3
P40A				IAmb_Lg		19 16 29.9	
	comp=Z,37nm,0.8s						
N38A	Joes South For	5.27	41	Pn	Pn	19 14 57.2	+0.3
N38A				IAmb_Lg		19 16 30.2	
	comp=Z,60nm,0.8s						
T25A	Trinidad	5.27	274		Pn	19 14 57.7	+0.5
T25A				IAmb_Lg		19 16 29.9	
	comp=Z,29nm,0.9s						
CCM	Cathedral Cave	5.36	76		Pn	19 14 55.6	-2.6
CCM				IAmb_Lg		19 16 32.6	
	comp=Z,33nm,0.9s						
LCAR	Lake Charles	5.45	97	Pn	Pn	19 14 58.6	-0.8
K31A	O'Neill	5.74	353		Pn	19 15 01.6	-1.8
CCAR	Cane Creek	5.79	119	IAmb_Lg		19 16 51.3	
	comp=Z,45nm,0.8s						
PBMO	Poplar Bluff	5.94	89	IAmb_Lg		19 16 53.3	
	comp=Z,31nm,0.8s						
HBAR	Harrisburg	5.96	101	Pn	Pn	19 15 05.6	-0.8
SCIA	State Center	6.12	34	Pn	Pn	19 15 08.7	0.0
SCIA				IAmb_Lg		19 16 57.9	
	comp=Z,44nm,0.8s						
435B	Jarrell	6.13	178	IAmb_Lg		19 17 02.1	
	comp=Z,48nm,0.8s						
SLM	Saint Louis	6.25	72	IAmb_Lg		19 16 58.5	
	comp=Z,29nm,0.7s						
N41A	Harden Midland	6.63	53	Pn	Pn	19 15 15.9	+0.3
JCT	Junction City	6.64	195	Pn	Pn	19 15 14.6	-1.2
JCT				IAmb_Lg		19 17 12.4	
	comp=Z,30nm,0.8s						
ISCO	Idaho Springs	6.75	297		Pn	19 15 18.0	+0.3
143A	Socs Landing,	6.76	127	IAmb_Lg		19 17 23.4	
	comp=Z,30nm,0.8s						
ECSD	EROS Data Cent	6.86	7	Pn	Pn	19 15 18.5	-0.4
ECSD				IAmb_Lg		19 17 24.2	
	comp=Z,28nm,1.0s						
S44A	Carbondale	6.88	81	IAmb_Lg		19 17 12.7	
	comp=Z,27nm,0.7s						
SIUC	Southern Illin	6.91	81	IAmb_Lg		19 17 19.1	
	comp=Z,30nm,0.7s						
P43A	Skaggs, Pawnee	7.08	65	IAmb_Lg		19 17 24.7	
	comp=Z,36nm,1.0s						
W45A	Hickory Valley	7.22	102	IAmb_Lg		19 17 36.9	
	comp=Z,32nm,0.7s						
L40A	Anamosa	7.24	43	IAmb_Lg		19 17 43.5	
	comp=Z,25nm,0.8s						
Q44A	Meyer Farm, Va	7.24	72	IAmb_Lg		19 17 34.7	
	comp=Z,27nm,0.8s						
ANMO	Albuquerque	7.27	257	Pn	Pn	19 15 30.6	+5.9
	comp=Z,0.3nm,0.3s,baz=127,slow=11,SNR=2.3						
ANMO				Pg	Pg	19 15 56.7	-0.7
	comp=Z,0.5nm,0.3s,baz=51,slow=9.1,SNR=6.1						
ANMO				Lg	Lg	19 17 26.2	
	comp=Z,1.1nm,0.3s,baz=332,slow=16,SNR=9.4						
ANMO	Albuquerque	7.27	257	Pn	Pn	19 15 23.1	-1.6
BNM	Barren Site	7.69	251	Pn	Pn	19 15 29.9	-0.5
I37A	Lemond, Waseca	7.84	24	IAmb_Lg		19 17 55.4	
	comp=Z,31nm,0.8s						
OLIL	Olney	7.91	74	IAmb_Lg		19 17 54.0	
	comp=Z,16nm,0.9s						
O44A	Mansfield	8.01	63	IAmb_Lg		19 18 12.2	
	comp=Z,27nm,0.8s						
L42A	Oliver, Polo	8.10	49	IAmb_Lg		19 17 56.5	
	comp=Z,33nm,1.0s						
MNTX	Cornudas Mount	8.13	232		Pn	19 15 37.5	+1.1
JFWS	Jewell Farm	8.35	42	Pn	Pn	19 15 38.8	-0.4
JFWS				IAmb_Lg		19 18 15.5	
	comp=Z,20nm,0.9s						
RSSD	Black Hills	8.60	329	Pn	Pn	19 15 41.2	-1.6
RWWY	Rawlins	8.69	306	IAmb_Lg		19 18 20.4	
	comp=Z,25nm,1.1s						
K22A	Casper	8.80	313	IAmb_Lg		19 18 33.4	
	comp=Z,23nm,0.9s						
F33A	5 Mile Ranch,	8.98	7	IAmb_Lg		19 18 22.8	
	comp=Z,16nm,0.8s						
TXAR	Lajitas Array	9.01	215	Pn	Pn	19 15 48.8	+0.3
	comp=Z,0.3nm,0.3s,baz=45,slow=11,SNR=20						
TXAR				Lg	Lg	19 18 20.3	
	comp=Z,0.7nm,0.3s,baz=53,slow=25,SNR=6.9						
E28A	Huff	9.88	348	IAmb_Lg		19 19 05.5	
	comp=Z,20nm,0.8s						
PDAR	Pinedale Array	10.73	307	Pn	Pn	19 16 11.9	-0.3
	comp=Z,0.1nm,0.3s,baz=112,slow=15,SNR=2.4						
PDAR				Lg	Lg	19 19 14.6	
	comp=Z,0.4nm,0.3s,baz=113,slow=32,SNR=7.8						
TKL	Tuckaleechee C	11.42	92	Pn	Pn	19 16 20.6	-0.7
	comp=Z,0.4nm,0.3s,baz=250,slow=2.8,SNR=4.4						
TKL				Lg	Lg	19 19 31.5	
	comp=Z,0.4nm,0.3s,baz=25,slow=9.0,SNR=5.3						
INK	Inuvik	37.13	339	P	P	19 20 46.6	-1.9
	comp=Z,0.6nm,0.4s,baz=117,slow=4.5,SNR=2.3						
ILAR	Eielson Array	40.05	330	P	P	19 21 14.4	+1.3
	comp=Z,0.8nm,0.6s,baz=110,slow=7.5,SNR=9.4						
ARCES	ARCESS Array B	66.10	19	P	P	19 24 24.7	-0.4
	comp=Z,2.2nm,0.9s,baz=325,slow=7.8,SNR=1.1						

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*TUL **10** 19:16:01.5±1.2, 36°.945N±0°.010×97°.83W±0°.02, h5^{km}±5^{km}, ML3.0, mb_Lg2.8/21(NEIC), Error ellipse: s-maj=2.0km s-min=1.4km az=89.0*

NEIC 10 19:16:01.9±0.7**, 36°.933N**±0°.008×**97°.82W**±0°.02**, h8**^{km}±4^{km}**, Error ellipse: s-maj=2.2km s-min=1.2km az=88.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.09	201	Pg	Pg	19 16 04.0	0.0
GC02				Sg	Sg	19 16 05.6	0.0
KAN14	Manchester OK	0.12	282		Pg	19 16 04.3	-0.2
KAN14				Sg	Sg	19 16 06.1	-0.3
KAN17	Caldwell West	0.12	22	Pg	Pg	19 16 04.5	-0.1
KAN17				Sg	Sg	19 16 06.4	-0.1
KAN05	Bluff City Nor	0.18	347		Pg	19 16 05.5	-0.1
KAN01	Argonia South	0.23	13	Pg	Pg	19 16 06.4	-0.1
KAN01				Sg	Sg	19 16 09.6	0.0
KAN09	Caldwell North	0.26	38	Pg	Pg	19 16 07.1	0.0
KAN09				Sg	Sg	19 16 10.7	+0.1
KAN13	South Haven SW	0.29	74	Pg	Pg	19 16 07.7	+0.1
KAN13				Sg	Sg	19 16 11.4	0.0
KAN10	Anthony SW Sta	0.29	311	Pg	Pg	19 16 07.6	-0.1
KAN10				Sg	Sg	19 16 11.6	0.0
KAN06	Argonia West S	0.32	354		Pg	19 16 08.1	-0.1
KAN08	Anthony NE Sta	0.32	338	Pg	Pg	19 16 08.1	-0.1
KAN08				Sg	Sg	19 16 12.7	+0.3
OK032	Salt Plains WL	0.34	248	Pg	Pg	19 16 08.4	-0.1
OK032				Sg	Sg	19 16 13.2	+0.2
KAN16	Harper SW Stat	0.35	326	Pg	Pg	19 16 08.7	-0.1
KAN16				Sg	Sg	19 16 13.7	+0.3
KS20	Mayfield South	0.36	36	Pg	Pg	19 16 09.0	-0.1
KS20				Sg	Sg	19 16 14.0	+0.1
KAN12	Harper NE Stat	0.39	339	Pg	Pg	19 16 09.3	-0.2
CROK	Carrier	0.45	197	Pg	Pg	19 16 10.7	+0.1
CROK				Sg	Sg	19 16 17.1	+0.6
BLOK	Blackwell	0.52	109	Pg	Pg	19 16 11.9	+0.1
BLOK				Sg	Sg	19 16 19.2	+0.6
T35A	Sooner Cattle	1.05	91	Pg	Pg	19 16 21.6	-0.4
T35A				Sg	Sg	19 16 35.7	0.0
U32A	Winter Ranch,	1.10	240	Pg	Pg	19 16 22.0	-0.9
U32A				Sg	Sg	19 16 36.9	-0.3
OK029	Liberty Lake	1.17	165	Pg	Pg	19 16 23.9	-0.5
OK029				Sg	Sg	19 16 39.6	0.0
QUOK	Quay	1.18	130	Pg	Pg	19 16 23.5	-0.9
QUOK				Sg	Sg	19 16 39.5	-0.1
OK031	S. Brethren Rd	1.26	141	Pg	Pn	19 16 25.4	-0.4
OK031				Sg	Sn	19 16 42.8	-0.1
BCOK	Bluff Creek, N	1.28	172	Pn	Pn	19 16 25.9	-0.2
OK030	Cody Creek RV	1.31	140	Pn	Pn	19 16 26.1	-0.3
OK025	Westminster Rd	1.40	164		Pn	19 16 28.0	+0.2
OKCFA	Oklahoma City	1.54	169		Pn	19 16 29.9	+0.2
OKCSW	OKLAHOMA CITY	1.56	168		Pn	19 16 30.3	+0.4
R32A	Long Quarter,	1.65	335	Pn	Pb	19 16 32.1	-0.5
FNO	Franklin	1.71	168		Pn	19 16 32.6	+0.7
TUL1	Leonard	1.93	121	Pn	Pn	19 16 34.8	-0.2
WMOK	Wichita Mounta	2.33	200	Pn	Pn	19 16 39.5	-1.0
WMOK				IAmb_Lg		19 17 17.7	
	comp=Z,28nm,0.8s						
X34A	Smith Ranch, M	2.33	180	Pn	Pn	19 16 40.3	-0.2
X34A				IAmb_Lg		19 17 14.9	
	comp=Z,27nm,1.0s						
KSU1	Kansas State U	2.37	23	Pn	Pn	19 16 41.7	+0.6
KSU1				IAmb_Lg		19 17 21.3	
	comp=Z,68nm,0.7s						
CBKS	Cedar Bluff	2.41	322	Pn	Pn	19 16 41.2	-0.5
U38A	Gravette	2.80	99	Pn	Pn	19 16 47.0	0.0
LOOK	Love County	2.98	170	Pn	Pn	19 16 47.8	-1.6
X37A	Clayton	3.07	139	Pn	Pn	19 16 49.5	-1.2
X37A				IAmb_Lg		19 17 47.1	
	comp=Z,48nm,1.0s						
HHAR	Hobbs	3.19	101	IAmb_Lg		19 17 49.6	
	comp=Z,36nm,0.7s						
Z35A	Perchaven, San	3.62	172	IAmb_Lg		19 17 59.1	
	comp=Z,17nm,0.8s						
S39A	Bolivar	3.67	77	Pn	Pn	19 16 59.5	+0.6
W39A	Magazine	3.70	117	Pn	Pn	19 16 59.6	+0.2
W39A				IAmb_Lg		19 18 01.5	
	comp=Z,34nm,0.8s						
AMTX	Amarillo	3.74	238	Pn	Pn	19 16 59.6	-0.5
AMTX				IAmb_Lg		19 18 05.3	
	comp=Z,22nm,0.7s						
N35A	Tabor	4.28	23	Pn	Pn	19 17 07.0	-0.2
P38A	Dawn	4.31	50	Pn	Pn	19 17 08.1	+0.3
P38A				IAmb_Lg		19 18 18.0	
	comp=Z,21nm,0.7s						
Z38A	Mt. Pleasant	4.34	147	Pn	Pn	19 17 07.7	-0.4
MGMO	Mountain Grove	4.45	85		Pn	19 17 09.1	-0.5
MGMO				IAmb_Lg		19 18 19.6	
	comp=Z,20nm,0.9s						
BGNE	Belgrade	4.48	357	Pn	Pn	19 17 10.6	+0.5
FCAR	Ozark Folk Cen	4.71	101	Pn	Pn	19 17 14.0	+0.8
FCAR				IAmb_Lg		19 18 31.4	
	comp=Z,16nm,0.8s						
X40A	Basin Creek Fa	4.73	120	Pn	Pn	19 17 13.1	-0.4
WHAR	Wooly Hollow	4.77	108	Pn	Pn	19 17 15.1	+1.1
OGNE	Ogallala	5.18	322	Pn	Pn	19 17 19.2	-0.5
P40A	Paris	5.23	59	Pn	Pn	19 17 21.8	+1.4
LCAR	Lake Charles	5.44	97	Pn	Pn	19 17 22.0	-1.2

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*IDC **10** 19:20:03.0±1.2, 6°.55N×94°.69E, h0^{km}, mb4.1/9, mb1 4.2/11, mb1mx3.8/44, mbtmp4.0/11, ML3.6/2, MS3.2/7, Ms1 3.3/7, ms1mx3.0/35, Error ellipse: s-maj=51.7km s-min=15.4km az=57.0*

*NEIC **10** 19:20:06.4±1.8, 6°.6N±0°.1×94°.8E±0°.1, h23^{km}±6^{km}, mb4.4/25, Error ellipse: s-maj=22.4km s-min=6.2km az=46.0*

ISC 10 19:20:07.0±0.8**, 6°.5N**±0°.1×**94°.6E**±0°.1**, h35**^{km}**, n56, σ1^{s}.32**/47**, mb4.3**/21**, MS3.3**/5**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	2.64	118		Pn	19 20 45.0	-2.1
PBA	Port Blair	5.45	340	Pn	Pn	19 21 23.6	-2.2
PSI	Prapat	5.65	130	Pn	Pn	19 21 30.1	+1.5
	1.2nm,0.3s,baz=323,slow=16,SNR=6.6						
RPSI	Rantau Prapat	5.72	131		Pn	19 21 30.1	+0.7
GSI	Gunungsitoli	5.94	150	Pn	Pn	19 21 29.5	-3.0
DGPR	DIGLIPUR	6.85	346	*e*P	Pn	19 21 49.1	+4.2
PBKT	Sadao Pong	11.79	31	Pn	Pn	19 22 54.4	+1.7
CMAR	Chiang Mai Arr	12.62	19	Pn	Pn	19 23 03.8	-0.3
	0.1nm,0.3s,baz=206,slow=14,SNR=2.4						
CMAR				LR	LR	19 28 17.0	
	comp=Z,59nm,18.3s,baz=268,slow=39						
CMAR	Chiang Mai Arr	12.62	19		Pn	19 23 00.4	-3.7
CHTO	Chiang Mai	12.95	19	Pn	Pn	19 23 06.2	-2.5
PALK	Pallekele	13.83	274	LR	LR	19 28 37.4	
	comp=Z,94nm,18.0s,baz=182,slow=37						
H08S3	Diego Garcia H	26.15	238	T	T	19 52 18.3	
	baz=56,slow=75,SNR=28						
H08S2	Diego Garcia H	26.15	238	T	T	19 52 25.6	
	baz=56,slow=75,SNR=30						
H08S1	Diego Carcia H	26.17	238	T	T	19 52 19.9	
	baz=56,slow=75,SNR=26						
KAPI	Kappang	27.57	114	LR	LR	19 37 35.0	
	comp=Z,67nm,18.1s,baz=304,slow=38						
LUWI	Luwuk	29.09	104	P	P	19 26 04.6	0.0
NIL	Nilore	33.50	327	P	P	19 26 43.7	+0.5
DRK	Karamyk	38.74	331	P	P	19 27 29.2	+1.0
GAR	Garm	39.10	329	P	P	19 27 31.3	+0.3
GAR				IAmb	IAmb	19 27 38.2	
	comp=Z,7.4nm,0.6s						
FITZ	Fitzroy Crossi	39.17	129	P	P	19 27 32.6	+0.8
	comp=Z,5.0nm,0.7s,baz=309,slow=5.5,SNR=12						
CHGR	Chuyangaron	39.44	328		P	19 27 34.1	+0.2
CHGR				IAmb	IAmb	19 27 43.5	
	comp=Z,8.9nm,1.0s						
BTK	Batken	39.66	331		P	19 27 36.0	+0.3
BTK				IAmb	IAmb	19 27 50.7	
	comp=Z,6.7nm,0.8s						
AAK	Ala-Archa	40.16	337		P	19 27 37.0	-2.9
MK31	Makanchi Array	41.53	347	P	P	19 27 51.0	0.0
MK31				IAmb	IAmb	19 27 58.8	
	comp=Z,7.2nm,1.6s						
MKAR	Makanchi Array	41.53	347	P	P	19 27 51.5	+0.5
	comp=Z,0.9nm,0.6s,baz=163,slow=9.4,SNR=7.9						
MKAR	Makanchi Array	41.53	347	P	P	19 27 50.7	-0.3
MAKZ	Makanchi	41.61	347	P	P	19 27 51.6	-0.1
MAKZ				IAmb	IAmb	19 28 17.9	
	comp=Z,11nm,1.4s						
KK31	Karatay Array	42.20	334	P	P	19 27 56.8	+0.2
KKAR	Karatay Array	42.20	334	P	P	19 27 55.8	-0.7
KKAR	Karatay Array	42.20	334	P	P	19 27 56.1	-0.4
KKAR				IAmb	IAmb	19 28 01.2	
	comp=Z,2.7nm,0.8s						
SONM	Songino Array	42.41	12	P	P	19 27 58.8	+0.5
	comp=Z,1.7nm,0.8s,baz=197,slow=9.1,SNR=12						
SONM	Songino Array	42.41	12	P	P	19 27 57.2	-1.1
TLY	Talaya	45.66	8	LR	LR	19 48 31.4	
	comp=Z,34nm,18.2s,baz=174,slow=38						
KURK	Kurchatov	46.06	346	P	P	19 28 27.4	+0.1
KURK				IAmb	IAmb	19 28 36.2	
	comp=Z,4.8nm,1.3s						
WB0	Warramunga Arr	47.04	125	P	P	19 28 34.4	-1.1
WB0				IAmb	IAmb	19 28 58.8	
	comp=Z,4.3nm,1.1s						
WRA	Warramunga Arr	47.09	125	P	P	19 28 36.5	+0.6
	comp=Z,1.3nm,0.6s,baz=304,slow=9.3,SNR=9.3						
WRA				LR	LR	19 50 04.8	
	comp=Z,34nm,18.4s,baz=155,slow=38						
WRA	Warramunga Arr	47.09	125	P	P	19 28 35.6	-0.2
WRAB	Tennant Creek	47.09	125	P	P	19 28 35.4	-0.5
WB2	Warramunga Arr	47.10	125	P	P	19 28 35.0	-0.9
WB2				IAmb	IAmb	19 28 53.4	
	comp=Z,10nm,1.4s						
WR0	Warramunga Arr	47.26	125	P	P	19 28 36.3	-0.9
WR0				IAmb	IAmb	19 29 05.2	
	comp=Z,4.9nm,1.1s						
ZAA0	Zalesovo Array	47.98	352	P	P	19 28 41.4	-0.8
ZAA0				IAmb	IAmb	19 28 49.9	
	comp=Z,3.3nm,1.1s						
ZALV	Zalesovo Beam	47.98	352	P	P	19 28 43.1	+0.9
	comp=Z,0.6nm,0.6s,baz=191,slow=6.0,SNR=4.4						
ZALV	Zalesovo Beam	47.98	352	P	P	19 28 41.9	-0.4
ASAR	Alice Springs	48.68	129	P	P	19 28 49.2	+1.1
	comp=Z,2.0nm,0.8s,baz=305,slow=7.6,SNR=14						
ASAR	Alice Springs	48.68	129	P	P	19 28 48.7	+0.6
BRVK	Borovoye	50.50	341	P	P	19 29 02.1	+0.6
BRVK				IAmb	IAmb	19 29 08.6	
	comp=Z,1.8nm,0.7s						
ABKAR	Akbulak array	51.66	332	P	P	19 29 11.6	+1.2
ABKAR	Akbulak array	51.66	332	P	P	19 29 11.2	+0.9
ABKAR				IAmb	IAmb	19 29 15.8	
	comp=Z,4.7nm,1.0s						
GNI	Garni	55.74	315	LR	LR	19 55 46.7	
	comp=Z,16nm,19.0s,baz=62,slow=38						
BRTR	Keskin Array B	63.68	311	LR	LR	19 59 50.3	
	comp=Z,23nm,21.0s,baz=336,slow=38						
FIA1	FINESS Array S	74.14	332	P	P	19 31 40.6	+1.0
FINES	FINESS Array B	74.14	332	P	P	19 31 40.9	+1.3
	comp=Z,2.4nm,0.6s,baz=100,slow=4.1,SNR=12						
FINES	FINESS Array B	74.14	332	P	P	19 31 38.8	-0.8
ARCES	ARCESS Array B	76.72	340	P	P	19 31 55.5	+1.2
	comp=Z,4.8nm,1.0s,baz=46,slow=5.2,SNR=3.6						
ARCES	ARCESS Array B	76.72	340	P	P	19 31 54.2	-0.1
GERES	GERESS Array B	79.16	318	P	P	19 32 10.9	+2.5
	comp=Z,0.6nm,0.7s,baz=78,slow=5.1,SNR=2.8						

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*IDC **10** 19:23:57.8±0.8, 8°.45N×71°.44W, h0^{km}, mb3.9/6, mb1 4.2/8, mb1mx3.9/29, mbtmp4.0/8, ML4.0/2, MS3.3/13, Ms1 3.3/13, ms1mx3.1/36, Error ellipse: s-maj=18.7km s-min=10.1km az=149.0*

*NEIC **10** 19:23:59.1±1.9, 8°.51N±0°.05×71°.41W±0°.05, h3^{km}±4^{km}, mb4.4/3, Mwr3.9(CAR), Error ellipse: s-maj=7.5km s-min=6.3km az=154.0*

*FUNV **10** 19:24:00.3, 8°.49N×71°.41W, h5^{km}, MW3.9*

*CAR **10** 19:24:00.4±1.6, 8°.49N±0°.05×71°.40W±0°.04, h5^{km}±3^{km}, Error ellipse: s-maj=6.9km s-min=6.0km az=157.0*

ISC 10 19:23:59.0±1.3**, 8°.54N**±0°.03×**71°.36W**±0°.03**, h10**^{km}±9^{km}**, n93, σ1^{s}.63**/112**, mb4.0**/6**, MS3.4**/8**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.56	117	*e*P	Pg	19 24 10.4	+0.5
SOCV				*e*S	Sg	19 24 18.1	+0.8
SOCV	Socops	0.56	117	*e*P	Pg	19 24 10.4	+0.5
SOCV				*e*S	Sb	19 24 19.4	+0.4
SDV	Santo Domingo	0.80	65	Pg	Pb	19 24 15.6	+0.6
	116nm,0.3s,baz=238,slow=16,SNR=46						
SDV				Lg	Lg	19 24 27.6	
	322nm,0.3s,baz=271,slow=6.7,SNR=21						
SDV				LR	LR	19 24 51.7	
	comp=Z,732nm,18.8s,baz=8.5,slow=60						
SDV	Santo Domingo	0.80	65	*e*P	Pg	19 24 15.2	+0.9
SDV				*e*S	Sn	19 24 27.6	-0.9
SDV	Santo Domingo	0.80	65		Pb	19 24 15.4	+0.4
CAPV	Capacho	1.16	235	*e*S	Sb	19 24 35.2	-1.3
PAMC	Pamplona, Colo	1.79	228	*e*P	Pn	19 24 30.9	+0.6
PAMC				*e*S	Sn	19 24 55.2	+1.8
MCQV	Machiques	1.89	322	*e*P	Pn	19 24 33.4	+2.0
MCQV				*e*S	Sn	19 24 57.5	+2.0
OCAC	Ocana	1.96	261	*e*P	Pn	19 24 32.9	+0.4
OCAC				*e*S	Sn	19 24 57.5	+0.2
OCAC	Ocana	1.96	261		Pn	19 24 32.6	+0.1
TAMC	Tame, Arauca	2.14	192	*e*P	Pn	19 24 36.6	+1.8
TAMC				*e*S	Sb	19 25 04.8	+0.3
ELOV	Elorza	2.41	129	*e*P	Pb	19 24 42.0	-0.5
ELOV				*e*S	Sb	19 25 13.3	+1.0
ELOV	Elorza	2.41	129	*e*P	Pn	19 24 40.1	+1.6
ELOV				*e*S	Sn	19 25 09.3	+1.2
SIQV	Siquisique	2.59	36	*e*P	Pn	19 24 43.3	+2.2
SIQV				*e*S	Sb	19 25 15.3	-2.3
BARC	Barichara	2.65	223	*e*P	Pn	19 24 44.2	+2.2
BARC				*e*S	Sn	19 25 15.8	+1.4
SMLC	San Martn de	2.69	276	*e*P	Pn	19 24 43.5	+1.1
SMLC				*e*S	Sn	19 25 17.3	+2.1
BRRC	Barranca, Sant	2.73	239	*e*P	Pn	19 24 44.2	+1.3
BRRC				*e*S	Sn	19 25 18.4	+2.3
RUSC	La Rusia	3.14	213	*e*P	Pn	19 24 49.9	+0.9
RUSC				*e*S	Sn	19 25 28.2	+1.3
URIC	Uribia, Colomb	3.20	349	*e*P	Pn	19 24 50.6	+1.3
URIC				*e*S	Sn	19 25 27.5	-0.1
URIC	Uribia, Colomb	3.20	349		Pn	19 24 50.2	+0.8
BAUV	El Baul	3.30	83	*e*P	Pn	19 24 51.8	+1.0
BAUV				*e*S	Sn	19 25 31.3	+1.1
BAUV	El Baul	3.30	83	Pn	Pn	19 24 53.6	+2.8
JACV	Jacura	3.55	44	*e*P	Pn	19 24 55.2	+1.0
ZARC	Zaragoza, Cauc	3.62	253	*e*P	Pn	19 24 55.8	+0.6
ZARC				*e*S	Sn	19 25 37.4	-0.6
ZARC	Zaragoza, Cauc	3.62	253		Pn	19 24 54.7	-0.5
MONV	Montecano	3.66	22	*e*P	Pn	19 24 57.3	+1.6
SMRC	Santa Marta, M	3.84	313	*e*P	Pn	19 24 57.2	-1.0
SMRC				*e*S	Sn	19 25 40.9	-2.6
SPBC	San Pablo de B	3.94	223	*e*P	Pn	19 25 01.1	+1.5
SPBC				*e*S	Sn	19 25 49.0	+3.0
TURV	Turiamo	3.96	61	*e*P	Pn	19 25 01.4	+1.6
BENV	Beln	3.97	69	*e*P	Pn	19 25 02.1	+2.0
SJCC	San Jacinto, C	4.00	290		Pn	19 25 01.3	+0.8
UREC	San Jos de Ur	4.21	260	*e*P	Pn	19 25 05.2	+1.9
MOTC	Monteria, Cord	4.26	273	*e*P	Pn	19 25 04.3	+0.3
MOTC				*e*S	Sn	19 25 55.5	+1.5
MOTC	Monteria, Cord	4.26	273		Pn	19 25 04.3	+0.3
CHIC	Chingaza	4.55	211	*e*S	Sn	19 26 00.0	-1.4
TACV	Tcata	4.56	69	*e*P	Pn	19 25 09.8	+1.7
NORC	Norcasia	4.57	230	*e*P	Pn	19 25 09.8	+1.5
ROSC	El Rosal	4.71	219	Pn	Pn	19 25 12.6	+2.0
	8.7nm,0.3s,baz=264,slow=22,SNR=8.4						
ROSC				Sn	Sn	19 26 10.1	+4.6
	5.7nm,0.3s,baz=2.7,slow=18,SNR=3.9						
ROSC	El Rosal	4.71	219		Pn	19 25 09.9	-0.6
HELC	Santa Helena	4.75	241	*e*S	Sn	19 26 08.8	+2.3
PAYV	Puerto Ayacuch	4.81	130	*e*P	Pn	19 25 12.4	+0.8
CACV	CAICARA DEL OR	4.87	101	*e*P	Pb	19 25 20.0	-4.5
VILC	Villavicencio,	4.98	208	*e*P	Pn	19 25 14.0	0.0
VILC				*e*S	Sn	19 26 12.7	+1.0
DBBC	Dabeiba	5.04	253	*e*P	Pn	19 25 15.2	+0.4
MERV	Las Mercedes	5.05	82	*e*P	Pn	19 25 16.2	+1.3
GUY2C	Guyana, Caldas	5.17	231	*e*P	Pn	19 25 18.3	+1.4
GUY2C				*e*S	Sn	19 26 15.9	-0.9
CBOC	Ciudad Bolivar	5.33	240	*e*P	Pn	19 25 22.2	+3.4
BIRV	Birongo	5.38	69	*e*P	Pn	19 25 19.8	+0.5
BIRV	Birongo	5.38	69	Pn	Pn	19 25 22.2	+2.8
ANIL	Santa Ana	5.69	225	*e*P	Pn	19 25 26.0	+2.1
ANIL				*e*S	Sn	19 26 30.3	+0.8
CAP2	Capurgana	5.94	271	Pn	Pn	19 25 25.5	-1.5
ORTC	Ortega, Tolima	6.01	220	*e*P	Pn	19 25 27.2	-0.9
ORTC				*e*S	Sn	19 26 36.7	-0.4
PLMC	San Jos del P	6.08	234	*e*P	Pn	19 25 30.6	+1.5
PRGV	PARIAGUAN	6.64	88	*e*P	Pn	19 25 36.8	0.0
YOTC	Yotoco, Valle	6.71	228	*e*P	Pn	19 25 39.0	+1.1
YOTC				*e*S	Sn	19 26 57.1	+2.5
MACC	Macarena, Meta	6.82	201	*e*P	Pn	19 25 37.8	-1.5
MACC				*e*S	Sn	19 26 53.7	-3.4
PCRV	Puerto La Cruz	6.83	76	Pn	Pn	19 25 42.7	+3.3
	3.1nm,0.3s,baz=295,slow=2.9,SNR=12						
PCRV				Sn	Sn	19 26 59.2	+1.9
	2.8nm,0.3s,baz=97,slow=9.9,SNR=3.2						
PCRV	Puerto La Cruz	6.83	76	*e*P	Pn	19 25 40.8	+1.4
PLCV	Puerto La Cruz	6.87	76		Pn	19 25 42.7	+2.7
MARP	Paez Belalcaza	7.28	219	*e*P	Pn	19 25 47.2	+1.5
GARC	Garzon, Huila	7.54	213	*e*P	Pn	19 25 47.8	-1.5
GARC				*e*S	Sn	19 27 12.6	-2.4
DR12	Loma Pena Alta	10.36	10	Pn	Pn	19 26 26.9	-1.0
SDDR	Presa de Saban	10.38	0	Pn	Pn	19 26 29.8	+1.7
CELP	Cerrillos	10.55	26	Pn	Pn	19 26 29.5	-0.9
AOPR	Arecibo Observ	10.72	24	Pn	Pn	19 26 33.6	+0.8
SJG	San Juan	10.78	28	LR	LR	19 31 01.8	
	comp=Z,104nm,20.2s,baz=203,slow=39						
SJG	San Juan	10.78	28	Pn	Pn	19 26 32.9	-0.6
BOAV	Boa Vista	12.39	119	Pn	Pn	19 26 57.0	+1.4
JTS	Las Juntas de	13.52	278	LR	LR	19 34 01.4	

	comp=Z,64nm,18.2s,baz=349,slow=45						
PTGA	Pitinga	14.62	129	Pn	Pn	19 27 24.5	-1.6
	0.7nm,0.3s,baz=314,slow=14,SNR=5.0						
PTGA				Sn	Sn	19 30 17.2	+8.8
	0.5nm,0.3s,baz=345,slow=22,SNR=2.0						
PTGA				Lg	Lg	19 31 40.3	
	1.8nm,0.3s,baz=39,slow=21,SNR=7.9						
PTGA				LR	LR	19 33 53.9	
	comp=Z,50nm,20.7s,baz=290,slow=41						
PTGA	Pitinga	14.62	129	Pn	Pn	19 27 24.4	-1.7
ATAH	Atahualpa	17.08	204	LR	LR	19 35 48.4	
	comp=Z,122nm,20.4s,baz=357,slow=42						
MDP	Montagnes des	18.89	99	LR	LR	19 37 12.6	
	comp=Z,44nm,18.3s,baz=251,slow=42						
SAML	Samuel	19.19	155	P	P	19 28 22.7	-0.4
SAML				IAmb	IAmb	19 28 28.4	
	comp=Z,58nm,0.9s						
NNA	Nana	21.11	195	LR	LR	19 37 48.1	
	comp=Z,67nm,18.4s,baz=4.0,slow=40						
LPAZ	La Paz	24.88	173	P	P	19 29 23.4	+0.6
	comp=Z,1.5nm,0.8s,baz=23,slow=13,SNR=4.3						
LPAZ				LR	LR	19 39 31.2	
	comp=Z,79nm,21.8s,baz=344,slow=38						
LPAZ	La Paz	24.88	173	P	P	19 29 22.1	-0.7
SIV	San Ignacio	26.42	157	P	P	19 29 37.2	+1.1
	comp=Z,1.3nm,0.2s,baz=327,slow=9.3,SNR=4.4						
SIV				LR	LR	19 40 41.3	
	comp=Z,110nm,20.1s,baz=3.5,slow=38						
LVC	Limon Verde	31.05	176	LR	LR	19 43 11.3	
	comp=Z,63nm,20.1s,baz=346,slow=37						
CPUP	Villa Florida	37.25	159	LR	LR	19 47 59.2	
	comp=Z,93nm,21.6s,baz=238,slow=39						
ULM	Lac du Bonnet	46.30	338	LR	LR	19 52 43.1	
	comp=Z,41nm,18.1s,baz=58,slow=37						
PD31	Pinedale Array	47.76	322	P	P	19 32 36.5	-0.2
PD31				IAmb	IAmb	19 32 42.5	
	comp=Z,1.8nm,0.8s						
PDAR	Pinedale Array	47.76	322	P	P	19 32 37.2	+0.5
	comp=Z,0.8nm,0.5s,baz=122,slow=10,SNR=14						
PLCA	Paso Flores	49.04	179	P	P	19 32 46.1	-0.2
	comp=Z,2.5nm,0.8s,baz=354,slow=8.3,SNR=8.7						
PLCA	Paso Flores	49.04	179	IAmb	IAmb	19 32 48.2	
	comp=Z,3.2nm,0.8s						
SFJD	Kangerlussuaq	60.05	9	LR	LR	19 57 20.0	
	comp=Z,42nm,19.5s,baz=174,slow=33						
TORD	Torodi Ar. Bea	71.69	79	P	P	19 35 20.9	-0.9
	comp=Z,0.3nm,0.5s,baz=293,slow=5.0,SNR=3.4						
ILAR	Eielson Array	76.16	335	P	P	19 35 49.0	+1.9
	comp=Z,0.6nm,0.7s,baz=101,slow=3.2,SNR=5.6						
ILAR				LR	LR	20 10 04.8	
	comp=Z,31nm,21.1s,baz=142,slow=36						
CMAR	Chiang Mai Arr	151.51	20	PKPbc	PKiKP	19 43 56.4	+1.5
	comp=Z,0.3nm,0.6s,baz=332,slow=4.1,SNR=4.8						
CMAR	Chiang Mai Arr	151.51	20		PKPbc	19 43 54.4	0.0
ASAR	Alice Springs	151.52	235	PKPbc	PKPbc	19 43 52.8	-1.6
	comp=Z,0.7nm,0.7s,baz=116,slow=2.3,SNR=9.3						
WRA	Warramunga Arr	152.68	243	PKPbc	PKPbc	19 43 56.2	-0.9
	comp=Z,1.0nm,0.6s,baz=110,slow=2.4,SNR=14						
WRA	Warramunga Arr	152.68	243		PKPbc	19 43 55.1	-2.0

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*TUL **10** 19:27:32.8±1.6, 36.°95N±0.°01×97.°82W±0.°01, h1^{km}±6^{km}, ML2.8, mb_Lg2.6/14(NEIC), Error ellipse: s-maj=1.8km s-min=1.4km az=127.0*

NEIC 10 19:27:33.0±0.7**, 36.°93N**±0.°01×**97.°81W**±0.°02**, h5**^{km}±6^{km}**, Error ellipse: s-maj=2.5km s-min=1.6km az=112.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.08	206	Pg	Pg	19 27 35.2	+0.3
GC02				Sg	Sg	19 27 36.5	+0.4
KAN14	Manchester OK	0.12	284		Pg	19 27 35.6	0.0
KAN14				Sg	Sg	19 27 37.3	0.0
KAN17	Caldwell West	0.12	19	Pg	Pg	19 27 35.7	+0.1
KAN17				Sg	Sg	19 27 37.6	+0.2
KAN05	Bluff City Nor	0.19	346		Pg	19 27 36.8	0.0
KAN01	Argonia South	0.23	11	Pg	Pg	19 27 37.6	0.0
KAN01				Sg	Sg	19 27 40.8	+0.1
KAN09	Caldwell North	0.26	37	Pg	Pg	19 27 38.2	+0.1
KAN09				Sg	Sg	19 27 41.5	-0.1
KAN13	South Haven SW	0.28	72	Pg	Pg	19 27 38.8	+0.2
KAN13				Sg	Sg	19 27 42.8	+0.5
KAN10	Anthony SW Sta	0.30	311	Pg	Pg	19 27 38.8	-0.1
KAN10				Sg	Sg	19 27 42.6	-0.2
KAN06	Argonia West S	0.32	354		Pg	19 27 39.2	-0.1
KAN06				Sg	Sg	19 27 43.5	-0.1
KAN08	Anthony NE Sta	0.33	337		Pg	19 27 39.3	-0.1
KAN08				Sg	Sg	19 27 43.8	+0.1
OK032	Salt Plains WL	0.34	249	Pg	Pg	19 27 39.4	-0.2
OK032				Sg	Sg	19 27 44.3	+0.2
KAN16	Harper SW Stat	0.36	326	Pg	Pg	19 27 39.9	-0.1
KS20	Mayfield South	0.37	34		Pg	19 27 40.1	0.0
KS20				Sg	Sg	19 27 45.1	0.0
KAN12	Harper NE Stat	0.40	338	Pg	Pg	19 27 40.5	-0.3
KAN12				Sg	Sg	19 27 46.0	0.0
CROK	Carrier	0.44	198	Pg	Pg	19 27 41.9	+0.3
CROK				Sg	Sg	19 27 48.2	+0.9
BLOK	Blackwell	0.51	109	Pg	Pg	19 27 43.0	+0.2
BLOK				Sg	Sg	19 27 50.4	+0.9
T35A	Sooner Cattle	1.04	90		Pg	19 27 52.9	-0.2
T35A				Sg	Sg	19 28 06.2	-0.4
U32A	Winter Ranch,	1.10	241	Pg	Pg	19 27 53.4	-0.8
OK029	Liberty Lake	1.16	165	Pg	Pg	19 27 55.0	-0.3
OK029				Sg	Sg	19 28 10.6	+0.2
QUOK	Quay	1.17	130		Pg	19 27 55.1	-0.3
QUOK				Sg	Sg	19 28 10.5	0.0
OK031	S. Brethren Rd	1.25	141		Pg	19 27 56.5	-0.4
OK031				Sg	Sb	19 28 13.8	+0.4
BCOK	Bluff Creek, N	1.28	172		Pn	19 27 56.6	-1.0
BCOK				Sn	Sn	19 28 14.7	-0.3
OK030	Cody Creek RV	1.30	140	Pn	Pn	19 27 57.4	-0.4
OK025	Westminster Rd	1.40	164		Pn	19 27 59.2	0.0
OKCFA	Oklahoma City	1.54	169	Pn	Pn	19 28 01.1	+0.1
OKCFA				IAmb_Lg		19 28 24.6	
	comp=Z,56nm,0.8s						
R32A	Long Quarter,	1.66	335		Pn	19 28 03.1	+0.4
FNO	Franklin	1.70	169		Pn	19 28 03.9	+0.5
TUL1	Leonard	1.92	121		Pn	19 28 07.3	+1.0
X34A	Smith Ranch, M	2.32	180	Pn	Pn	19 28 12.7	+0.8
WMOK	Wichita Mounta	2.32	200	Pn	Pn	19 28 10.1	-1.8
KSU1	Kansas State U	2.37	23	Pn	Pb	19 28 14.5	-1.7
KSU1				IAmb_Lg		19 28 50.4	
	comp=Z,30nm,0.8s						
CBKS	Cedar Bluff	2.42	322		Pn	19 28 13.1	-0.2
U38A	Gravette	2.80	99	Pn	Pn	19 28 20.1	+1.7
U38A				IAmb_Lg		19 29 05.5	
	comp=Z,10nm,0.8s						
LOOK	Love County	2.97	170	Pn	Pn	19 28 18.6	-2.3
X37A	Clayton	3.06	139		Pn	19 28 22.3	+0.2
X37A				IAmb_Lg		19 29 18.8	
	comp=Z,24nm,1.1s						
HHAR	Hobbs	3.18	101	Pn	Pn	19 28 23.6	-0.1
S39A	Bolivar	3.66	77	Pn	Pn	19 28 28.6	-1.7
W39A	Magazine	3.69	117		Pn	19 28 29.1	-1.6
W39A				IAmb_Lg		19 29 32.7	
	comp=Z,18nm,0.8s						
AMTX	Amarillo	3.74	238		Pn	19 28 30.4	-1.2
U40A	Yellville	4.03	97	Pn	Pn	19 28 35.5	+0.1
U40A				IAmb_Lg		19 29 40.9	
	comp=Z,12nm,0.7s						
MIAR	Mount Ida	4.19	123	Pn	Pn	19 28 36.3	-1.2
MIAR				IAmb_Lg		19 29 45.9	
	comp=Z,8.4nm,0.9s						
N35A	Tabor	4.28	23	Pn	Pn	19 28 39.6	+0.9
P38A	Dawn	4.31	50	Pn	Pn	19 28 38.9	-0.4
MGMO	Mountain Grove	4.44	85	Pn	Pn	19 28 40.9	-0.1
ABTX	Abilene, Hawle	4.55	200	Pn	Pn	19 28 41.2	-1.3
R40A	Maddies Statio	4.61	71	Pn	Pn	19 28 43.0	-0.3
FCAR	Ozark Folk Cen	4.70	101	Pn	Pn	19 28 44.2	-0.5
X40A	Basin Creek Fa	4.73	120	Pn	Pn	19 28 44.2	-0.8
T25A	Trinidad	5.28	274		Pn	19 28 53.0	+0.2
CCM	Cathedral Cave	5.34	76	Pn	Pn	19 28 51.4	-2.0
T42A	Van Buren	5.38	87	Pn	Pn	19 28 52.3	-1.6
LCAR	Lake Charles	5.43	97	Pn	Pn	19 28 53.5	-1.1

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*IDC **10** 19:38:14.1±2.2, 31.°07S×71.°73W, h0^{km}, mb3.6/2, mb1 3.9/6, mb1mx3.7/28, mbtmp3.7/6, ML3.8/4, Error ellipse: s-maj=49.5km s-min=43.8km az=168.0*

*SJA **10** 19:38:21.0, 30.°81S×71.°63W, h10^{km}, ML4.4*

*GUC **10** 19:38:22.8±0.8, 30.°82S×71.°42W, h50^{km}±2^{km}, ML4.3*

*NEIC **10** 19:38:22.5±2.7, 30.°89S±0.°04×71.°50W±0.°07, h44^{km}±4^{km}, mb4.1/3, ML4.3(GUC), Error ellipse: s-maj=9.3km s-min=6.3km az=74.0*

ISC 10 19:38:21.8±0.7**, 30.°80S**±0.°03×**71.°54W**±0.°05**, h47**^{km}±7^{km}**, n115, σ1^{s}89**/119**, mb3.9**/3**, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.15	327	*e*P	Pn	19 38 31.3	+1.7
CO06				*i* S	Sn	19 38 36.6	+1.5
CO06	Fray Jorge	0.15	327		Pn	19 38 31.4	+1.7
CO06				Sn	Sn	19 38 36.4	+1.3
CO03	El Pedregal	0.73	93	*e*P	Pn	19 38 35.8	-0.2
CO03				*i* S	Sn	19 38 45.1	-1.1
CO03	El Pedregal	0.73	93		Pn	19 38 35.7	-0.2
CO03				Sn	Sn	19 38 44.6	-1.6
CO03	El Pedregal	0.73	93	*i* P	Pn	19 38 36.0	0.0
GO04	Tololo Observa	0.90	46	*e*P	Pn	19 38 39.0	+0.7
GO04				*i* S	Sn	19 38 51.2	+0.8
GO04				IAML		19 38 53.4	
	comp=N,24μm,0.5s						
GO04	Tololo Observa	0.90	46		Pn	19 38 39.0	+0.7
GO04				Sn	Sn	19 38 51.1	+0.8
GO04	Tololo Observa	0.90	46	*i* P	Pn	19 38 39.0	+0.7
CO05	La Serena	0.92	16	*e*P	Pn	19 38 40.0	+1.6
CO05				*e*S	Sn	19 38 52.1	+1.5
CO05	La Serena	0.92	16		Pn	19 38 39.7	+1.3
CO05				Sn	Sn	19 38 51.9	+1.4
VA06	Catapilco	1.76	173	*e*P	Pn	19 38 51.4	+1.5
VA06				*i* S	Sn	19 39 13.3	+2.1
VA06				IAML		19 39 19.9	
	comp=E,3μm,0.3s						
LCO	Las Campanas	1.93	22	*e*P	Pn	19 38 54.3	+1.8
LCO				*i* S	Sn	19 39 17.6	+2.0
LCO	Las Campanas	1.93	22	Pn	Pn	19 38 54.2	+1.8
LCO	Las Campanas	1.93	22	*i* P	Pn	19 38 55.0	+2.6
VA03	San Esteban	2.13	157	*e*P	Pn	19 38 56.6	+1.6
VA03				*i* S	Sn	19 39 21.4	+1.2
VA03				IAML		19 39 25.5	
	comp=E,3μm,0.3s						
VA03	San Esteban	2.13	157		Pn	19 38 56.5	+1.6
VA03	San Esteban	2.13	157	*i* P	Pn	19 38 57.0	+2.0
ACCO	Cerro Coronel	2.14	85	*i* P	Pn	19 38 58.0	+2.6
RTLS	Leoncito	2.16	118	*i* P	Pn	19 38 58.0	+2.4
ROCH	El Roble	2.21	168	*e*P	Pn	19 38 57.7	+1.5
ROCH				*i* S	Sn	19 39 25.0	+2.6
ROCH				IAML		19 39 29.7	
	comp=N,2μm,0.3s						
ROC1	El Roble	2.21	169	*i* P	Pn	19 38 57.0	+0.7
VA01	Torpederas	2.21	182		Pn	19 38 56.4	+0.4
VA01	Torpederas	2.21	182	*i* P	Pn	19 38 57.0	+0.9
AUSP	Uspallata	2.32	128	*i* P	Pn	19 39 00.0	+2.2
PEL	Peldehue	2.44	163	*e*P	Pn	19 39 01.1	+1.8
PEL				*i* S	Sn	19 39 30.2	+2.3
PEL				IAML		19 39 35.2	
	comp=E,1μm,0.4s						
PEL	Peldehue	2.44	163		Pn	19 39 01.0	+1.7
PEL	Peldehue	2.44	163	*i* P	Pn	19 39 01.0	+1.7
MT02	Curacav	2.47	172	*e*P	Pn	19 39 00.6	+1.0
MT02				*e*S	Sn	19 39 30.0	+1.4
MT02	Curacav	2.47	172		Pn	19 39 00.3	+0.7
MT02	Curacav	2.47	172	*i* P	Pn	19 39 00.0	+0.4
ZON	Zonda	2.56	108		Pn	19 39 03.6	+2.7
ZON	Zonda	2.56	108	*i* P	Pn	19 39 04.0	+3.1
AC04	Llanos de Chal	2.62	9	*e*P	Pn	19 39 03.8	+2.1
AC04				IAML		19 39 44.5	
	comp=N,570nm,0.2s						
AC04	Llanos de Chal	2.62	9		Pn	19 39 03.3	+1.6
AC04	Llanos de Chal	2.62	9	*i* P	Pn	19 39 04.0	+2.3
MT05	Renca	2.67	165	*e*P	Pn	19 39 06.1	+3.7
MT05				*e*S	Sn	19 39 36.5	+2.9
MT05				IAML		19 39 44.7	
	comp=E,2μm,0.3s						
MT05	Renca	2.67	165		Pn	19 39 03.2	+0.8
MT05	Renca	2.67	165	*i* P	Pn	19 39 07.0	+4.6
RTCV	Cerro Valdivia	2.77	113	*i* P	Pn	19 39 07.0	+3.2
VA05	Santo Domingo	2.85	181	*e*P	Pn	19 39 05.6	+0.8
VA05				IAML		19 39 58.0	
	comp=E,1μm,0.5s						
VA05	Santo Domingo	2.85	181		Pn	19 39 05.0	+0.2
ASAL	Salagasta	2.91	128	*i* P	Pn	19 39 09.0	+3.2
MT09	Talagante	3.00	171	*e*P	Pn	19 39 08.6	+1.6
MT09				IAML		19 39 56.9	
	comp=N,1μm,0.2s						
MT09	Talagante	3.00	171		Pn	19 39 08.6	+1.6
ARCO	CERRO ARCO	3.01	133	*i* P	Pn	19 39 12.0	+4.9
MT01	Popeta	3.06	176	*e*P	Pn	19 39 08.8	+1.1
MT01				IAML		19 39 57.8	
	comp=E,659nm,0.3s						
MT01	Popeta	3.06	176		Pn	19 39 08.8	+1.1
MT01	Popeta	3.06	176	*i* P	Pn	19 39 09.0	+1.3
AAGR	Agrelo	3.24	135	*i* P	Pn	19 39 14.0	+3.8
LMEL	Las Melosas	3.24	160	*e*P	Pn	19 39 12.8	+2.5
LMEL				*i* S	Sn	19 39 48.9	+1.2
LMEL				IAML		19 40 02.1	
	comp=N,874nm,0.1s						
BO04	La Punta	3.27	166	*e*P	Pn	19 39 12.2	+1.6
BO04				*e*S	Sn	19 39 50.4	+2.1
BO04				IAML		19 40 07.0	
	comp=N,544nm,0.5s						
GO03	Copiap	3.40	20	*e*P	Pn	19 39 14.6	+2.2
GO03				IAML		19 40 08.6	
	comp=E,449nm,0.3s						
GO03	Copiap	3.40	20		Pn	19 39 14.5	+2.1
GO03	Copiap	3.40	20	*i* P	Pn	19 39 15.0	+2.6
AVFE	Valle Fertil	3.52	89	*i* P	Pn	19 39 16.0	+1.9
VCA	Vinchina	3.55	55	*i* P	Pn	19 39 19.0	+4.3
BO01	Tunca	3.60	174	*e*P	Pn	19 39 16.1	+1.0
BO01	Tunca	3.60	174		Pn	19 39 16.3	+1.2
BO01	Tunca	3.60	174	*i* P	Pn	19 39 17.0	+1.9
BO02	Sierra Bellavi	4.03	171	*e*P	Pn	19 39 22.6	+1.6
BO02	Sierra Bellavi	4.03	171		Pn	19 39 22.4	+1.3
BO02	Sierra Bellavi	4.03	171	*i* P	Pn	19 39 23.0	+1.9
ACLC	CERRO LA CRUZ	4.20	72	*i* P	Pn	19 39 26.0	+2.4
GO05	Huala	4.21	184	*e*P	Pn	19 39 23.3	-0.1
GO05	Huala	4.21	184		Pn	19 39 23.4	0.0
GO05	Huala	4.21	184	*i* P	Pn	19 39 23.0	-0.5
APLL	PUNTA DE LOS L	4.34	86	*i* P	Pn	19 39 27.0	+1.7
RFA	San Rafael	4.73	148	*i* P	Pn	19 39 32.0	+1.4
ML02	Panimavida	4.95	179	Pn	Pn	19 39 33.8	+0.2
MRA	San Martin	5.22	109	*i* P	Pn	19 39 38.0	+0.6
CYA	Choya	5.52	66	*i* P	Pn	19 39 43.0	+1.5
PB14	IPOC Station P	6.24	10	Pn	Pn	19 39 50.6	-1.0
FSA	Cafayete	6.77	48	*i* P	Pn	19 40 02.0	+3.2
H03N1	Juan Fernandez	6.79	245	T	T	19 46 51.6	
	baz=76,slow=72,SNR=1291						
H03N3	Juan Fernandez	6.80	245	T	T	19 46 51.0	
	baz=76,slow=72,SNR=1313						
H03N2	Juan Fernandez	6.80	245	T	T	19 46 52.4	
	baz=76,slow=72,SNR=1065						
PB10	IPOC Station P	7.31	7	Pn	Pn	19 40 04.8	-1.3
PB15	IPOC Station P	7.79	14	Pn	Pn	19 40 11.8	-1.0
LC01	Cunco	8.08	182	Pn	Pn	19 40 15.8	-0.8
PB06	IPOC Station P	8.25	13	Pn	Pn	19 40 17.5	-1.7
LVC	Limon Verde	8.49	17	Pn	Pn	19 40 22.0	-0.6
	comp=E,0.3nm,0.3s,baz=262,slow=16,SNR=2.4						
LVC				Sn	Sn	19 42 07.9	+11
	comp=E,1.1nm,0.3s,baz=198,slow=18,SNR=2.8						
LVC	Limon Verde	8.49	17	Pn	Pn	19 40 20.3	-2.3
PB04	IPOC Station P	8.53	9	Pn	Pn	19 40 20.1	-2.8
PB07	IPOC Station P	9.16	10	Pn	Pn	19 40 28.9	-2.7
PB01	IPOC Station P	9.89	11	Pn	Pn	19 40 38.5	-3.0
PLCA	Paso Flores	9.94	176	Pn	Pn	19 40 39.0	-3.1
PATCX	Punta Patache	10.02	7	Pn	Pn	19 40 39.6	-3.6
TA01	Diego Aracena	10.27	7	Pn	Pn	19 40 45.3	-1.3
PB08	IPOC Station P	10.83	12	Pn	Pn	19 40 50.8	-3.9
PB11	IPOC Station P	11.13	9	Pn	Pn	19 40 55.3	-3.2
PSGCX	Pisagua	11.23	7	Pn	Pn	19 40 56.3	-3.6
ITQB	Itaqui	12.95	89	Pn	Pn	19 41 20.3	-2.8
CPUP	Villa Florida	13.26	74	Pn	Pn	19 41 27.6	+0.2
	comp=E,0.4nm,0.3s,baz=231,slow=14,SNR=3.5						
CPUP	Villa Florida	13.26	74	Pn	Pn	19 41 27.5	+0.1
LPAZ	La Paz	14.78	13	Pn	Pn	19 41 49.9	+1.3
	comp=E,0.1nm,0.3s,baz=320,slow=3.2,SNR=4.5						
LPAZ	La Paz	14.78	13		Pn	19 41 47.5	-1.0
PLTB	Pedras Altas	15.37	98	Pn	Pn	19 41 53.8	-1.8
PLTB				IAmb	IAmb	19 42 17.2	
	comp=Z,12nm,1.3s						
SIV	San Ignacio	17.58	35	P	P	19 42 24.6	+0.5
	comp=Z,0.5nm,0.3s,baz=216,slow=9.0,SNR=4.5						
MCLT	Moule a Chique	45.41	15	P	P	19 46 36.5	+0.5
VNA3	Neumayer Olymp	52.16	159	P	P	19 47 28.7	+1.4
VNA3	Neumayer Olymp	52.16	159	pP	pP	19 47 41.1	+0.6
VNA1	Neumayer--Stat	52.45	158	P	P	19 47 28.5	-0.8
VNA1	Neumayer--Stat	52.45	158	pP	pP	19 47 43.6	+1.0
VNA2	Neumayer--Watz	52.80	158	P	P	19 47 32.1	+0.2
	baz=298,slow=9.3						
VNA2	Neumayer--Watz	52.80	158	pP	pP	19 47 45.8	+0.6
	baz=285,slow=7.8						
SNAA	Sanae	54.39	159	P	P	19 47 43.2	-0.4
SNAA	Sanae	54.39	159	pP	pP	19 47 57.4	+0.5
SNAA	Sanae	54.39	159	P	P	19 47 43.1	-0.4
SNAA				IAmb	IAmb	19 47 58.0	
	comp=Z,2.7nm,0.8s						
TXAR	Lajitas Array	67.18	330	P	P	19 49 11.3	+0.3
	comp=Z,0.2nm,0.7s,baz=123,slow=4.4,SNR=2.7						
TORD	Torodi Ar. Bea	82.72	70	P	P	19 50 41.5	+0.5
	comp=Z,0.4nm,0.7s,baz=238,slow=8.3,SNR=2.9						
TORD	Torodi Ar. Bea	82.72	70	IAmb	IAmb	19 50 56.8	
	comp=Z,3.2nm,1.5s						
H11S2	WAKE ISLAND Hy	126.19	271	T	T	22 16 14.9	
	baz=115,slow=74,SNR=14						
H11S1	WAKE ISLAND Hy	126.20	271	T	T	22 16 13.5	
	baz=115,slow=74,SNR=17						
H11S3	WAKE ISLAND Hy	126.20	271	T	T	22 16 18.1	
	baz=115,slow=74,SNR=11						
ZALV	Zalesovo Beam	151.27	30	PKPbc	PKPbc	19 58 09.3	-0.3
	comp=Z,0.3nm,0.3s,baz=330,slow=5.1,SNR=3.8						

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*IDC **10** 19:40:01.8±0.8, 49.°48N×84.°66E, h0^{km}, mb3.6/7, mb1 3.7/11, mb1mx3.6/45, mbtmp3.6/11, ML3.3/4, MS1.9/1, Ms1 1.9/1, ms1mx1.8/36, Error ellipse: s-maj=11.4km s-min=9.4km az=57.0*

*NNC **10** 19:40:04.7±0.8, 49.°46N×84.°34E, h0^{km}, mb4.3, mpv4.0, Error ellipse: s-maj=8.2km s-min=4.4km az=85.0*

*SOME **10** 19:40:04.1, 49.°25N×84.°23E, h15^{km}*

ISC 10 19:40:02.5±1.0**, 49.°30N**±0.°02×**84.°28E**±0.°02**, h0**^{km}±8^{km}**, n59, σ1^{s}94**/85**, mb3.6**/7**, 19C-8D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UKR	Ust'-Kan	1.67	11	Pg	Pg	19 40 35.6	+1.0
UKR				Sg	Sg	19 40 56.4	+0.2
ZSN	Zaisan	1.89	168	*e*P	Pg	19 40 39.8	+1.1
	87nm,0.5s						
ZSN				*e*S	Sg	19 41 05.5	+2.4
	1μm,0.6s						
ZSN	Zaisan	1.89	168	P	Pg	19 40 40.0	+1.3
	87nm,0.5s						
ZSN				S	Sg	19 41 05.0	+1.9
	1μm,0.6s						
DGZ	Jazzator, Alta	2.09	78	Pg	Pb	19 40 42.6	+1.1
DGZ				Sg	Sb	19 41 08.3	+0.3
CHBI	Chibit, Altay	2.32	63	Pg	Pb	19 40 46.4	+1.1
CHBI				Sg	Sb	19 41 14.5	-0.1
AKAR	Aktash	2.39	63	Pg	Pb	19 40 46.8	+0.3
AKAR				Sg	Sb	19 41 15.7	-0.9
ULGR	Ulagan, Altay	2.72	59	Pg	Pb	19 40 52.5	+0.4
ULGR				Sg	Sb	19 41 26.2	+0.1
CUR	Chagan-Uzun	2.76	72	Pg	Pb	19 40 51.7	-1.2
CUR				Sg	Sb	19 41 27.6	+0.4
SEM	Semipalatinsk	2.84	295	*e*P	Pg	19 40 57.0	+0.2
	69nm,0.4s						
SEM				*e*S	Sg	19 41 35.1	+1.5
	442nm,0.2s						
SEM	Semipalatinsk	2.84	295	Pg	Pg	19 40 57.9	+1.0
	69nm,0.4s						
SEM				Lg	Lg	19 41 34.6	
	442nm,0.2s						
MK31	Makanchi Array	2.84	209	⇓Pn	Pb	19 40 54.3	+0.2
	23nm,0.6s,baz=29,slow=14,SNR=705						
MK31				⇑Sn	Sg	19 41 31.8	-1.8
	81nm,0.5s,baz=30,slow=28,SNR=6.2						
MKAR	Makanchi Array	2.84	209	Pn	Pb	19 40 54.0	0.0
	9.5nm,0.3s,baz=31,slow=13,SNR=289						
MKAR				Pg	Pg	19 41 00.9	+4.0
	20nm,0.3s,baz=33,slow=15,SNR=40						
MKAR				Sn	Sb	19 41 30.7	+1.4
	64nm,0.3s,baz=42,slow=25,SNR=16						
MKAR				Lg	Lg	19 41 41.0	
	52nm,0.3s,baz=31,slow=30,SNR=11						
MKAR	Makanchi Array	2.84	209	Pg	Pg	19 41 03.0	+6.1
MKAR				Sg	Sb	19 41 31.0	+1.7
MAKZ	Makanchi	2.93	213	Pg	Pg	19 41 04.5	+5.9
MAKZ				Sg	Sg	19 41 34.6	-2.0
MAKZ	Makanchi	2.93	213	⇑Pn	Pb	19 40 55.4	-0.2
	12nm,0.6s						
MAKZ				⇑Sn	Sg	19 41 34.5	-2.1
	245nm,0.9s						
ARTR	Artybash	3.15	36	Pg	Pb	19 41 01.8	+2.4
ARTR				Sg	Sb	19 41 38.8	+0.5
KURK	Kurchatov	3.92	293	Pg	Pb	19 41 14.7	+2.2
KURK				Sg	Sg	19 42 11.2	+2.9
KURBB	Kurchatov Arra	3.94	292	Pn	Pn	19 41 06.8	+2.6
	0.5nm,0.3s,baz=103,slow=15,SNR=16						
KURBB				Pg	Pb	19 41 15.1	+2.2
	3.4nm,0.3s,baz=102,slow=14,SNR=42						
KURBB				Lg	Lg	19 42 09.9	
	10nm,0.3s,baz=104,slow=31,SNR=17						
KURBB	Kurchatov Arra	3.94	292	⇓Pn	Pn	19 41 05.7	+1.5
	19nm,0.2s						
KURBB				⇓Lg	Lg	19 42 09.0	
	500nm,0.6s						
TASR	Tashtagol	4.15	32	Pg	Pg	19 41 21.8	-0.1
TASR				Sg	Sg	19 42 12.0	-3.7
ELT	Eltsovka	4.16	16	Pg	Pn	19 41 09.6	+2.5
ELT				Sg	Sg	19 42 14.6	-1.4
ZAA0	Zalesovo Array	4.67	4	⇑Pn	Pn	19 41 14.7	+0.5
	0.5nm,0.9s						
ZAA0				⇑Pg	Pb	19 41 25.9	+0.6
	4.1nm,0.5s						
ZAA0				⇑Lg	Lg	19 42 27.0	
	19nm,0.5s						
ZALV	Zalesovo Beam	4.67	4	Pn	Pn	19 41 14.8	+0.6
	0.8nm,0.3s,baz=187,slow=14,SNR=15						
ZALV				Pg	Pg	19 41 29.8	-2.3
	12nm,0.3s,baz=188,slow=18,SNR=37						
ZALV				Lg	Lg	19 42 24.6	
	11nm,0.3s,baz=180,slow=22,SNR=6.3						
ZALV				LR	LR	19 42 30.0	
	comp=Z,13nm,18.6s,baz=84,slow=33						
KAPS	Kapalarasan	5.23	222	*e*P	Pb	19 41 38.6	+3.8
	17nm,0.5s						
KAPS				*e*S	Sg	19 42 46.1	-4.2
	46nm,0.9s						
KAPS	Kapalarasan	5.23	222	Pg	Pg	19 41 41.5	-1.1
	12nm,0.6s						
KAPS				Lg	Lg	19 42 49.4	
	46nm,0.9s						
DJR	Jarkent	5.84	213	*e*P	Pg	19 41 52.9	-1.6
	24nm,0.5s						
DJR				*e*S	Sg	19 43 10.4	+0.3
	26nm,0.5s						
DJR	Jarkent	5.84	213	Pg	Pg	19 41 52.7	-1.7
	24nm,0.5s						
DJR				Lg	Lg	19 43 09.0	
	26nm,0.5s						
TDK	Taldyqorghan	5.87	225	*e*P	Pg	19 41 53.6	-1.4
	59nm,0.5s						
TDK				*e*S	Sg	19 43 11.5	+0.4
	35nm,0.7s						
TDK	Taldyqorghan	5.87	225	Pg	Pg	19 41 55.2	+0.2
	59nm,0.5s						
TDK				Lg	Lg	19 43 13.4	
	35nm,0.7s						
ARXS	Arharly	6.74	223	*e*P	Pg	19 42 10.4	-1.3
	3.0nm,0.3s						
ARXS				*e*S	Sg	19 43 40.5	+1.5
	64nm,0.8s						
ARXS	Arharly	6.74	223	Pg	Pg	19 42 10.7	-1.0
	3.0nm,0.3s						
ARXS				Lg	Lg	19 43 40.2	
	64nm,0.8s						
PDGK	Podgornoye	6.83	211	Pg	Pg	19 42 12.5	-0.8
PDGK				Lg	Lg	19 43 42.9	
PDGK	Podgornoye	6.83	211	⇓Pn	Pn	19 41 47.3	+3.3
	17nm,0.6s						
PDGK				⇑Sn	Sn	19 43 10.9	+8.5
	11nm,0.5s						
PDGK				⇑Lg	Lg	19 43 46.2	
	44nm,1.1s						
KURS	Kuram	7.18	218	*e*P	Pg	19 42 18.9	-1.2
	7.2nm,0.5s						
KURS				*e*S	Sg	19 43 54.5	+1.5
	24nm,0.9s						
KURS	Kuram	7.18	218	Pg	Pg	19 42 20.0	0.0
	7.2nm,0.5s						

KURS				Lg	Lg	19 43 56.4	
	24nm,0.9s						
SATY	**Saty**	**7.45**	**215**	*e*P	Pg	19 42 21.0	-4.2
	8.6nm,0.7s						
SATY				*e*S	**Sg**	**19 43 58.6**	**-3.0**
	26nm,0.8s						
SATY	**Saty**	**7.45**	**215**	Pg	**Pg**	**19 42 22.9**	**-2.3**
	8.6nm,0.7s						
SATY				Lg	Lg	19 44 00.7	
	26nm,0.8s						
BRZS	**Berezniki**	**7.57**	**280**	*e*P	**Pg**	**19 42 24.2**	**-3.2**
	1.8nm,0.4s						
BRZS				*e*S	**Sg**	**19 44 03.8**	**-1.6**
	149nm,0.8s						
BRZS	**Berezniki**	**7.57**	**280**	Pg	**Pg**	**19 42 26.1**	**-1.3**
	3.7nm,0.3s						
BRZS				Lg	Lg	19 44 05.8	
	149nm,0.8s						
KUU	**Kurty**	**7.69**	**228**	*e*P	Pg	19 42 25.9	-3.8
	4.1nm,0.5s						
KUU				*e*S	**Sg**	**19 44 08.0**	**-1.3**
	22nm,0.5s						
KUU	**Kurty**	**7.69**	**228**	Pg	**Pg**	**19 42 29.3**	**-0.5**
	4.1nm,0.5s						
KUU				Lg	Lg	19 44 11.0	
	22nm,0.5s						
KNDC	**Almaty**	**7.91**	**223**	⇑Lg	Lg	19 44 20.1	
	45nm,0.7s						
MDOK	**Medeo**	**7.92**	**222**	⇑Pn	Pn	19 42 03.8	+4.8
	8.5nm,0.6s						
MDOK				⇓Lg	Lg	19 44 20.9	
	22nm,0.8s						
MDOK	**Medeo**	**7.92**	**222**	Pg	**Pg**	**19 42 32.6**	**-1.6**
OTUK	**Ortayu**	**7.96**	**267**	⇑Pn	**Pn**	**19 42 01.3**	**+1.9**
	1.9nm,0.5s						
OTUK				⇑Lg	Lg	19 44 17.6	
	27nm,0.7s						
TKM2	**Tokmak 2**	**8.77**	**227**	⇑Pn	**Pn**	**19 42 14.9**	**+4.1**
	3.5nm,0.8s						
TKM2				⇑Lg	Lg	19 44 46.7	
	22nm,1.3s						
BVAR	**Borovoye Array**	**9.49**	**298**	Pn	**Pn**	**19 42 21.0**	**+0.6**
	0.3nm,0.3s,baz=324,slow=50,SNR=5.9						
BVAR				Sn	**Sn**	**19 44 03.9**	**-3.8**
	3.6nm,0.3s,baz=116,slow=19,SNR=11						
AAK	**Ala-Archa**	**9.52**	**229**	Pn	**Pn**	**19 42 24.0**	**+3.1**
	0.3nm,0.3s,baz=115,slow=4.3,SNR=7.7						
AAK				Sn	**Sn**	**19 44 09.5**	**+0.8**
	0.2nm,0.3s,baz=49,slow=21,SNR=1.4						
AAK				Lg	Lg	19 45 08.7	
	0.6nm,0.3s,baz=302,slow=13,SNR=3.7						
AAK	**Ala-Archa**	**9.52**	**229**	⇓Pn	Pn	19 42 25.4	+4.5
	3.9nm,0.7s						
AAK				⇓Lg	Lg	19 45 09.6	
	14nm,0.8s						
BRVK	**Borovoye**	**9.56**	**298**	⇑Pn	**Pn**	**19 42 20.7**	**-0.6**
	3.0nm,0.8s						
BRVK				⇑Sn	**Sn**	**19 44 07.1**	**-2.2**
	7.9nm,0.7s						
BRVK				⇑Lg	Lg	19 45 03.7	
	15nm,0.7s						
KK31	**Karatay Array**	**11.37**	**242**	⇓Pn	**Pn**	**19 42 49.4**	**+3.3**
	0.9nm,0.3s,baz=58,slow=12,SNR=7.2						
KK31				⇑Sn	**Sn**	**19 44 56.9**	**+3.2**
	1.2nm,0.4s						
KK31				⇑Lg	Lg	19 46 06.8	
	4.1nm,0.6s						
SONM	**Songino Array**	**14.71**	**87**	Lg	Lg	19 47 44.5	
	0.0nm,0.3s,baz=280,slow=32,SNR=2.4						
CMAR	**Chiang Mai Arr**	**32.96**	**154**	P	**P**	**19 46 39.5**	**+0.7**
	0.5nm,0.8s,baz=332,slow=8.7,SNR=6.6						
NOA	**NORSAR Array B**	**41.13**	**315**	P	**P**	**19 47 48.0**	**+0.1**
	0.3nm,0.6s,baz=72,slow=8.5,SNR=2.1						
INK	**Inuvik**	**59.38**	**15**	P	**P**	**19 50 02.0**	**-3.8**
	0.5nm,0.5s,baz=0.0,slow=7.1,SNR=2.5						
ILAR	**Eielson Array**	**59.53**	**23**	P	**P**	**19 50 05.3**	**-1.8**
	0.3nm,0.7s,baz=319,slow=33,SNR=2.6						
TORD	**Torodi Ar. Bea**	**75.34**	**273**	P	**P**	**19 51 48.0**	**+0.3**
	0.4nm,1.0s,baz=23,slow=6.7,SNR=2.2						
WRA	**Warramunga Arr**	**82.00**	**133**	P	**P**	**19 52 22.6**	**-1.6**
	0.7nm,0.5s,baz=341,slow=5.6,SNR=13						
ASAR	**Alice Springs**	**85.00**	**135**	P	**P**	**19 52 38.2**	**-1.4**
	0.4nm,0.7s,baz=340,slow=6.5,SNR=4.1						

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*IDC **10** 20:03:43.1±1.4, 21°.26S×68°.54W, h106^{km}±17^{km}, mb3.5/2, mb1 3.5/4, mb1mx3.3/28, mbtmp3.9/4, Error ellipse: s-maj=44.6km s-min=18.7km az=109.0*

*GUC **10** 20:03:43.1±0.7, 21°.27S×68°.79W, h122^{km}±4^{km}, ML3.5*

ISC 10 20:03:42.2±0.9, **21°.22S**±0°.04×**68°.73W**±0°.07, **h116**^{km}±10^{km}, **n22**, σ**1^{s}.30**/39, **14C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.73**	**284**	⇑*i*P	**Pn**	**20 04 02.0**	**+0.5**
PB01				*e*S	**Sn**	**20 04 16.7**	**+0.6**
PB01				IAML		20 04 17.4	
	comp=N,3μm,0.2s						
PB02	**IPOC Station P**	**1.09**	**265**	⇑*i*P	**Pn**	**20 04 05.3**	**+0.3**
PB02				*i* S	**Sn**	**20 04 22.1**	**-0.1**
PB02				IAML		20 04 23.6	
	comp=E,2μm,0.2s						
PB08	**IPOC Station P**	**1.15**	**340**	⇑*i*P	**Pn**	**20 04 07.4**	**+1.5**
PB08				*i* S	**Sn**	**20 04 26.1**	**+2.4**
PB08				IAML		20 04 27.4	
	comp=E,566nm,0.2s						
PB07	**IPOC Station P**	**1.19**	**245**	⇑*i*P	**Pn**	**20 04 06.1**	**+0.1**
PB07				*e*S	**Sn**	**20 04 23.6**	**-0.5**
PB07				IAML		20 04 24.9	
	comp=E,843nm,0.2s						
PB03	**IPOC Station P**	**1.26**	**229**	⇑*i*P	**Pn**	**20 04 06.8**	**0.0**
PB03				*i* S	**Sn**	**20 04 24.9**	**-0.6**
PB03				IAML		20 04 27.8	
	comp=E,556nm,0.2s						
PATCX	**Punta Patache**	**1.39**	**287**	⇑*i*P	**Pn**	**20 04 08.7**	**+0.5**
PATCX				*e*S	**Sn**	**20 04 27.6**	**-0.3**
PATCX				IAML		20 04 30.1	
	comp=N,1μm,0.2s						
LVC	**Limon Verde**	**1.39**	**187**	P	**Pn**	**20 04 08.6**	**+0.1**
	comp=N,50nm,0.3s,baz=18,slow=5.4,SNR=516						
LVC				S	**Sn**	**20 04 27.9**	**-0.4**
	comp=N,23nm,0.3s,baz=258,slow=21,SNR=4.0						
LVC	**Limon Verde**	**1.39**	**187**	*e*P	**Pn**	**20 04 08.1**	**-0.4**
LVC				*e*S	**Sn**	**20 04 28.0**	**-0.4**
HMBC	**Humberstone**	**1.44**	**311**	⇑*i*P	**Pn**	**20 04 09.1**	**+0.3**
HMBC				*e*S	**Sn**	**20 04 29.4**	**+0.4**
HMBC				IAML		20 04 33.1	
	comp=E,742nm,0.2s						
TA01	**Diego Aracena**	**1.51**	**295**	⇑*i*P	**Pn**	**20 04 09.7**	**+0.2**
TA01				*e*S	**Sn**	**20 04 30.1**	**0.0**
TA01				IAML		20 04 31.6	
	comp=E,1μm,0.2s						
TA02	**Huaiquique**	**1.62**	**306**	⇑*e*P	**Pn**	**20 04 10.9**	**+0.1**
TA02				*e*S	**Sn**	**20 04 32.6**	**+0.1**
TA02				IAML		20 04 35.0	
	comp=E,864nm,0.1s						
PB06	**IPOC Station P**	**1.67**	**208**	⇑*i*P	**Pn**	**20 04 11.5**	**-0.1**
PB06				*i* S	**Sn**	**20 04 33.2**	**-0.7**
PB06				IAML		20 04 34.6	
	comp=E,473nm,0.2s						
PB11	**IPOC Station P**	**1.69**	**329**	⇑*i*P	**Pn**	**20 04 12.4**	**+0.5**
PB11				*e*S	**Sn**	**20 04 35.3**	**+0.9**
PB11				IAML		20 04 37.3	
	comp=N,390nm,0.2s						
PB04	**IPOC Station P**	**1.72**	**230**	⇑*i*P	**Pn**	**20 04 11.8**	**-0.4**
PB04				*e*S	**Sn**	**20 04 34.5**	**-0.5**
PB04				IAML		20 04 37.0	
	comp=N,518nm,0.1s						
AF01	**San Pedro de A**	**1.79**	**164**	*e*P	**Pn**	**20 04 14.3**	**+1.1**
AF01				*e*S	**Sn**	**20 04 39.2**	**+2.4**
AF01				IAML		20 04 54.3	
	comp=E,313nm,0.7s						
PSGC	**Pisagua**	**2.08**	**321**	⇑*i*P	**Pn**	**20 04 16.4**	**-0.2**
PSGC				*e*S	**Sn**	**20 04 42.7**	**-0.2**
PB15	**IPOC Station P**	**2.09**	**199**	⇑*i*P	**Pn**	**20 04 16.6**	**-0.3**
PB15				*e*S	**Sn**	**20 04 43.7**	**+0.4**
LPAZ	**La Paz**	**4.94**	**7**	P	**Pn**	**20 04 56.5**	**+1.6**
	comp=E,1.1nm,0.3s,baz=193,slow=3.6,SNR=22						
SIV	**San Ignacio**	**8.93**	**56**	P	**Pn**	**20 05 45.8**	**-2.6**
	comp=E,1.9nm,0.3s,baz=237,slow=11,SNR=19						
SIV				S	**Sn**	**20 07 21.9**	**-5.4**
	baz=118,slow=23,SNR=1.2						
BDFB	**Brasilia**	**20.41**	**78**	P	Pn	20 08 12.2	-1.4
	comp=E,3.0nm,0.5s,baz=261,slow=9.9,SNR=4.8						
TORD	**Torodi Ar. Bea**	**77.10**	**70**	P	**P**	**20 15 23.6**	**+0.2**
	comp=E,0.4nm,0.5s,baz=252,slow=5.0,SNR=4.0						
MKAR	**Makanchi Array**	**145.31**	**36**	PKPbc	**PKPab**	**20 23 07.7**	**+1.1**
	comp=E,0.2nm,0.5s,baz=299,slow=2.5,SNR=3.6						

IDC 10 20:13:54.5±1.6, **16°.39S**×**178°.73W**, **h0**^{km}, **mb4.0**/6, **mb1 4.3**/6, **mb1mx4.0**/24, **mbtmp4.0**/6, **Error ellipse: s-maj=105.0km s-min=22.3km az=148.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.12**	**239**	P	P	20 21 23.8	-0.1
	2.4nm,0.5s,baz=82,slow=11,SNR=8.7						
WRA	**Warramunga Arr**	**44.63**	**258**	P	P	20 22 08.8	-0.4
	0.6nm,0.5s,baz=96,slow=7.1,SNR=13						
ASAR	**Alice Springs**	**44.93**	**253**	P	P	20 22 11.7	+0.1
	5.4nm,0.5s,baz=88,slow=8.1,SNR=116						
ILAR	**Eielson Array**	**84.48**	**13**	P	P	20 26 29.0	+0.2
	0.4nm,0.4s,baz=222,slow=5.4,SNR=7.4						
TXAR	**Lajitas Array**	**85.44**	**58**	P	P	20 26 34.8	+0.2
	0.4nm,0.7s,baz=206,slow=5.4,SNR=5.4						
PDAR	**Pinedale Array**	**86.46**	**44**	P	P	20 26 39.0	-0.6
	0.2nm,0.5s,baz=229,slow=4.2,SNR=3.1						

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*TUL **10** 20:18:46.6±1.3, 36°.943N±0°.010×97°.82W±0°.01, h5^{km}±1^{km}, ML2.7, mb_Lg2.5/10(NEIC), Error ellipse: s-maj=2.7km s-min=1.7km az=282.0*

NEIC 10 20:18:46.9±0.9, **36°.920N**±0°.007×**97°.81W**±0°.02, **h6**^{km}±5^{km}, **Error ellipse: s-maj=2.0km s-min=1.0km az=93.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	**Grant County #**	**0.08**	**213**	Pg	Pg	20 18 49.1	+0.3
GC02					Sg	20 18 50.4	+0.4
KAN17	**Caldwell West**	**0.13**	**15**		Pg	20 18 49.5	-0.1
KAN17				Sg	Sg	20 18 51.4	0.0
KAN14	**Manchester OK**	**0.13**	**286**	Pg	Pg	20 18 49.4	-0.2
KAN14				Sg	Sg	20 18 51.2	-0.2
KAN05	**Bluff City Nor**	**0.20**	**344**		Pg	20 18 50.6	-0.2
KAN01	**Argonia South**	**0.24**	**9**		Pg	20 18 51.4	-0.1
KAN01				Sg	Sg	20 18 54.6	-0.1
KAN09	**Caldwell North**	**0.26**	**35**		Pg	20 18 52.1	0.0
KAN09				Sg	Sg	20 18 55.7	+0.1
KAN13	**South Haven SW**	**0.28**	**70**	Pg	Pg	20 18 51.8	-0.6
KAN10	**Anthony SW Sta**	**0.31**	**311**	Pg	Pg	20 18 52.7	-0.3
KAN10				Sg	Sg	20 18 56.6	-0.4
KAN06	**Argonia West S**	**0.33**	**353**		Pg	20 18 53.1	-0.3
KAN06				Sg	Sg	20 18 57.3	-0.4
KAN08	**Anthony NE Sta**	**0.33**	**337**		Pg	20 18 53.1	-0.3
KAN08				Sg	Sg	20 18 57.8	0.0
OK032	**Salt Plains WL**	**0.34**	**251**	Pg	Pg	20 18 53.6	0.0
OK032				Sg	Sg	20 18 58.3	+0.1
KAN16	**Harper SW Stat**	**0.37**	**326**		Pg	20 18 53.7	-0.4
KS20	**Mayfield South**	**0.37**	**33**	Pg	Pg	20 18 53.9	-0.2
KS20				Sg	Sg	20 18 58.9	0.0
KAN12	**Harper NE Stat**	**0.41**	**338**	Pg	Pg	20 18 54.4	-0.4
KAN12				Sg	Sg	20 19 00.0	-0.1
CROK	**Carrier**	**0.44**	**199**	Pg	Pg	20 18 55.7	+0.4
CROK				Sg	Sg	20 19 02.1	+1.0
BLOK	**Blackwell**	**0.50**	**108**	Pg	Pg	20 18 56.8	+0.3
BLOK				Sg	Sg	20 19 04.1	+1.1
T35A	**Sooner Cattle**	**1.04**	**90**		Pg	20 19 06.5	-0.3
T35A					Sg	20 19 20.3	0.0
U32A	**Winter Ranch,**	**1.10**	**241**		Pg	20 19 07.7	-0.4
OK029	**Liberty Lake**	**1.16**	**166**		Pg	20 19 08.8	-0.2
QUOK	**Quay**	**1.16**	**130**		Pg	20 19 07.3	-1.8
OK031	**S. Brethren Rd**	**1.24**	**141**		Pg	20 19 09.2	-1.5
OK031				Sg	Sb	20 19 27.3	+0.3
BCOK	**Bluff Creek, N**	**1.27**	**173**	Pn	Pn	20 19 10.8	-0.4
OK030	**Cody Creek RV**	**1.29**	**140**		Pn	20 19 10.9	-0.6
OK025	**Westminster Rd**	**1.39**	**164**		Pn	20 19 12.6	-0.3
OK025				IAmb_Lg		20 19 31.3	
	comp=Z,26nm,1.2s						
OKCFA	**Oklahoma City**	**1.53**	**169**	Pn	Pb	20 19 15.6	-0.1
OKCSW	**OKLAHOMA CITY**	**1.54**	**169**	Pn	Pn	20 19 15.2	+0.2
R32A	**Long Quarter,**	**1.66**	**335**	Pn	Pn	20 19 16.7	0.0
FNO	**Franklin**	**1.69**	**169**		Pn	20 19 17.7	+0.7
TUL1	**Leonard**	**1.91**	**121**	Pn	Pn	20 19 21.0	+1.0
X34A	**Smith Ranch, M**	**2.31**	**181**	Pn	Pn	20 19 27.0	+1.4
WMOK	**Wichita Mounta**	**2.32**	**200**		Pn	20 19 26.7	+1.1
KSU1	**Kansas State U**	**2.37**	**23**	Pn	Pn	20 19 26.3	-0.1
KSU1				IAmb_Lg		20 20 04.2	
	comp=Z,21nm,0.8s						
CBKS	**Cedar Bluff**	**2.43**	**322**	Pn	Pn	20 19 28.5	+1.3
X37A	**Clayton**	**3.05**	**139**		Pn	20 19 35.9	+0.2
HHAR	**Hobbs**	**3.17**	**100**	Pn	Pn	20 19 37.2	-0.2
S39A	**Bolivar**	**3.66**	**76**	Pn	Pn	20 19 45.1	+1.1
W39A	**Magazine**	**3.68**	**117**		Pn	20 19 45.7	+1.3
AMTX	**Amarillo**	**3.75**	**238**	Pn	Pn	20 19 46.1	+0.8
AMTX				IAmb_Lg		20 20 50.6	
	comp=Z,18nm,0.9s						
U40A	**Yellville**	**4.02**	**97**	Pn	Pn	20 19 50.5	+1.5
U40A				IAmb_Lg		20 20 54.7	
	comp=Z,8.7nm,0.7s						
MIAR	**Mount Ida**	**4.18**	**123**	Pn	Pn	20 19 53.2	+2.1
P38A	**Dawn**	**4.31**	**50**	IAmb_Lg		20 21 05.2	
	comp=Z,17nm,1.2s						
MGMO	**Mountain Grove**	**4.44**	**85**	Pn	Pn	20 19 54.5	-0.3
R40A	**Maddies Statio**	**4.61**	**71**	Pn	Pn	20 19 55.1	-1.9
FCAR	**Ozark Folk Cen**	**4.70**	**101**	Pn	Pn	20 19 57.8	-0.5
X40A	**Basin Creek Fa**	**4.72**	**119**	Pn	Pn	20 20 00.5	+1.8
WHAR	**Wooly Hollow**	**4.75**	**108**	Pn	Pn	20 20 01.1	+1.9
CCM	**Cathedral Cave**	**5.34**	**76**	Pn	Pn	20 20 08.3	+1.1
LCAR	**Lake Charles**	**5.42**	**97**	Pn	Pn	20 20 08.2	-0.1
PBMO	**Poplar Bluff**	**5.92**	**89**	Pn	Pn	20 20 13.8	-1.3

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*IDC **10** 20:29:41.0±0.9, 34°.95N×32°.07E, h0^{km}, mb3.8/12, mb1 3.9/18, mb1mx3.7/40, mbtmp3.8/18, ML3.8/6, MS2.7/4, Ms1 2.7/4, ms1mx2.3/44, Error ellipse: s-maj=18.6km s-min=14.2km az=28.0*

*HLW **10** 20:29:42.3, 35°.10N×32°.09E, h29^{km}±22^{km}, Md4.2*

*NEIC **10** 20:29:42.7±1.5, 34°.97N±0°.07×32°.12E±0°.06, h12^{km}±5^{km}, Error ellipse: s-maj=10.3km s-min=6.3km az=199.0*

*ISK **10** 20:29:43.1, 35°.04N×32°.09E, h8^{km}, ML3.9/22*

*DDA **10** 20:29:44.2, 35°.04N×32°.17E, h31^{km}±2^{km}, MW3.8*

*NIC **10** 20:29:44.3±0.0, 34°.98N×32°.11E, h14^{km}±2^{km}, Ml4.0/9*

*GII **10** 20:29:46.3±0.0, 34°.78N×32°.02E, h30^{km}, MD3.5/5, Mm3.5/4*

ISC 10 20:29:42.9±0.9, **34°.95N**±0°.02×**32°.06E**±0°.02, **h16**^{km}±6^{km}, **n184**, σ**1^{s}.54**/231, **mb4.1**/19, **Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKMS	**Akamas**	**0.23**	**73**	P	**Pb**	**20 29 49.5**	**+0.7**
AKMS				S	**Sb**	**20 29 52.9**	**+0.1**
AKMS				AML	AML	20 29 53.0	
	227nm,0.4s						
AKMS				AML	AML	20 29 53.0	
	227nm,0.4s						
AKMS				AML	AML	20 29 53.3	
	380nm,0.3s						
AKMS				AML	AML	20 29 53.3	
	380nm,0.3s						
NATA	**Nata**	**0.45**	**112**	P	**Pb**	**20 29 52.8**	**+0.3**
NATA				S	**Sb**	**20 30 00.5**	**+1.5**
NATA				AML	AML	20 30 01.2	
	95nm,0.6s						
NATA				AML	AML	20 30 01.2	
	95nm,0.6s						
NATA				AML	AML	20 30 04.5	
	110nm,0.5s						
NATA				AML	AML	20 30 04.5	
	110nm,0.5s						
ALFC	**Alefka**	**0.49**	**65**	P	**Pb**	**20 29 53.5**	**+0.4**
ALFC				S	**Sb**	**20 29 59.7**	**-0.4**
ALFC				AML	AML	20 30 02.1	
	51nm,0.5s						
ALFC				AML	AML	20 30 02.1	
	51nm,0.5s						
ALFC				AML	AML	20 30 02.8	
	76nm,0.4s						
ALFC				AML	AML	20 30 02.8	
	76nm,0.4s						
LEF	**Lefka**	**0.70**	**76**	*i* P	**Pg**	**20 29 55.8**	**-0.9**
LEF				*i* S	**Sg**	**20 30 04.7**	**-1.3**
LEF				IAML		20 30 07.0	
	comp=N,2μm,0.3s						
LEF				IAML		20 30 12.0	
	comp=E,3μm,0.6s						
LEF	**Lefka**	**0.70**	**76**	PG	**Pg**	**20 29 55.9**	**-0.8**
LEF				SG	**Sg**	**20 30 05.1**	**-0.9**
ASGA	**Asgata**	**0.99**	**99**	P	**Pb**	**20 30 01.7**	**0.0**
ASGA				S	**Sn**	**20 30 16.0**	**+0.2**
ASGA				AML	AML	20 30 16.9	
	comp=E,33nm,0.7s						
ASGA				AML	AML	20 30 16.9	
	comp=E,33nm,0.7s						
ASGA				AML	AML	20 30 17.0	
	comp=E,18nm,0.4s						
ASGA				AML	AML	20 30 17.0	
	comp=E,18nm,0.4s						
CSS	**Mathiatis**	**1.04**	**89**	PG	**Pg**	**20 30 02.7**	**-0.4**
CSS				SG	**Sn**	**20 30 17.6**	**+0.5**
CSS	**Mathiatis**	**1.04**	**89**	P	**Pb**	**20 30 02.5**	**-0.1**
CSS				S	**Sn**	**20 30 17.3**	**+0.2**
CSS				AML	AML	20 30 17.7	
	comp=E,2.7nm,0.6s						
CSS				AML	AML	20 30 17.7	
	comp=E,2.7nm,0.6s						
CSS				AML	AML	20 30 18.1	
	comp=E,3.2nm,0.8s						
CSS				AML	AML	20 30 18.1	
	comp=E,3.2nm,0.8s						
CSS	**Mathiatis**	**1.04**	**89**		**Pb**	**20 30 02.3**	**-0.3**
CSS				Sn	**Sn**	**20 30 16.7**	**-0.4**
ATHAL	**Athalassa**	**1.11**	**80**	P	**Pg**	**20 30 03.9**	**-0.5**
ATHAL				S	**Sn**	**20 30 20.8**	**+2.0**
ATHAL				AML	AML	20 30 21.2	
	comp=E,15nm,0.8s						
ATHAL				AML	AML	20 30 21.2	
	comp=E,15nm,0.8s						
ATHAL				AML	AML	20 30 27.4	
	comp=E,19nm,0.7s						
ATHAL				AML	AML	20 30 27.4	
	comp=E,19nm,0.7s						
LFK	**Lefkose**	**1.25**	**74**	PN	**Pg**	**20 30 06.8**	**-0.3**
MVOU	**Mavrovouni**	**1.29**	**87**	P	**Pb**	**20 30 06.9**	**+0.1**
MVOU				S	**Sg**	**20 30 25.4**	**+0.7**
MVOU				AML	AML	20 30 26.9	
	comp=E,3.9nm,0.5s						
MVOU				AML	AML	20 30 26.9	
	comp=E,3.9nm,0.5s						
MVOU				AML	AML	20 30 35.4	
	comp=E,3.7nm,0.4s						
MVOU				AML	AML	20 30 35.4	
	comp=E,3.7nm,0.4s						
GAZI	**Gazipasa**	**1.30**	**9**	*i* P	**Pn**	**20 30 06.5**	**0.0**
GAZI				*i* S	**Sg**	**20 30 23.9**	**-1.1**
GAZI				IAML		20 30 25.0	
	comp=N,749nm,0.7s						
GAZI				IAML		20 30 30.0	
	comp=E,608nm,0.4s						
GAZI	**Gazipasa**	**1.30**	**9**	PN	**Pb**	**20 30 06.7**	**-0.3**
GAZI				SN	**Sg**	**20 30 23.7**	**-1.3**
BOZY	**Bozyazi-Mersin**	**1.38**	**33**	PN	**Pn**	**20 30 07.4**	**0.0**
TEKE	**Tekeli-Mersin**	**1.47**	**35**	PN	**Pb**	**20 30 09.2**	**-0.7**
OSC1	**CSNet OBS 1**	**1.58**	**204**	P	**Pn**	**20 30 10.3**	**0.0**
OSC1				S	**Sn**	**20 30 30.1**	**-0.3**
OSC1				AML	AML	20 30 31.6	
	comp=E,0.3nm,0.3s						
OSC1				AML	AML	20 30 31.6	
	comp=E,0.3nm,0.3s						
OSC1				AML	AML	20 30 32.0	
	comp=E,0.3nm,0.4s						
OSC1				AML	AML	20 30 32.0	
	comp=E,0.3nm,0.4s						
PARAL	**Paralimni**	**1.63**	**88**	P	**Pg**	**20 30 14.5**	**+0.3**
PARAL				AML	AML	20 30 44.4	
	comp=E,5.3nm,0.8s						
PARAL				AML	AML	20 30 48.3	
	comp=E,3.3nm,0.5s						
BERE	**Bereket-Mersin**	**1.69**	**34**	PN	**Pb**	**20 30 12.9**	**-0.8**
AKK1	**Akkuyu-Mersin**	**1.70**	**45**	PN	**Pb**	**20 30 12.7**	**-1.0**
OREN	**Orenkoy-Mersin**	**1.70**	**42**	PN	**Pb**	**20 30 12.8**	**-0.9**
AKKU	**Akkuyu-Mersin**	**1.71**	**45**	PN	**Pb**	**20 30 12.8**	**-1.2**
GULN	**MERSIN_Gulnar**	**1.73**	**44**	*i* P	**Pn**	**20 30 12.3**	**+0.1**
GULN				*i* S	**Sb**	**20 30 34.4**	**-1.3**
GULN				IAML		20 30 46.0	
	comp=E,158nm,0.6s						
TEPK	**Tepekoy-MERSIN**	**1.76**	**43**	PN	**Pn**	**20 30 13.3**	**+0.6**
TISA	**Tisan-Mersin**	**1.79**	**47**	PN	**Pb**	**20 30 14.2**	**-1.1**
YESI	**Yesilovacik-Me**	**1.79**	**46**	PN	**Pn**	**20 30 13.6**	**+0.4**
EREN	**Erenkoy**	**1.82**	**71**	PN	**Pb**	**20 30 15.8**	**-0.1**
ERMK	**Ermenek**	**1.82**	**22**	*i* P	**Pb**	**20 30 16.3**	**+0.2**
KARG	**Kargicak-Mersi**	**1.84**	**47**	PN	**Pb**	**20 30 14.8**	**-1.3**
IKL	**Isikli**	**1.85**	**45**	PN	**Pn**	**20 30 14.7**	**+0.8**
TEVE	**Tevekalti-Mers**	**1.86**	**37**	PN	**Pn**	**20 30 15.0**	**+0.8**
OSC2	**CSNet OBS 4**	**1.88**	**175**	P	**Pb**	**20 30 17.5**	**+0.7**
OSC2				S	**Sb**	**20 30 40.8**	**+0.8**
AKUM	**Antalya-Kumluc**	**1.96**	**315**	*i* P	**Pg**	**20 30 21.1**	**+0.5**
KEBE	**Keben-Mersin**	**2.01**	**42**	PN	**Pb**	**20 30 17.4**	**-1.7**
SILI	**Silifke-Mersin**	**2.08**	**46**	PN	**Pn**	**20 30 18.3**	**+1.2**
SLFK	**Silifke-Mersin**	**2.10**	**46**	PN	**Pn**	**20 30 18.6**	**+1.1**
KIZK	**Mersin**	**2.28**	**47**	*i* P	**Pb**	**20 30 22.5**	**-1.3**
KIZK				*i* S	**Sn**	**20 30 48.5**	**+0.9**
KIZK				IAML		20 30 58.0	
	comp=E,152nm,0.5s						
KIZK				IAML		20 30 58.0	
	comp=N,210nm,0.7s						
KIZK	**Mersin**	**2.28**	**47**	PN	**Pn**	**20 30 21.1**	**+1.2**
KKBE	**Karaman, Kazim**	**2.38**	**17**	*i* P	**Pb**	**20 30 25.0**	**-0.4**
KKBE				*i* S	**Sb**	**20 30 55.2**	**+0.7**
KKBE				IAML		20 31 00.0	
	comp=N,159nm,0.5s						
KKBE				IAML		20 31 00.0	
	comp=E,127nm,0.7s						
AKAS	**Kas**	**2.38**	**303**	*i* P	**Pb**	**20 30 24.8**	**-0.6**
KRMN	**Karaman**	**2.42**	**23**	PN	**Pn**	**20 30 23.5**	**+1.5**
ELL	**Elmali**	**2.51**	**316**	Pn	**Pn**	**20 30 23.6**	**+0.5**
SEDI	**Konya, Seydise**	**2.51**	**354**	*i* P	**Pb**	**20 30 28.3**	**+0.6**
SEDI				*i* S	**Sg**	**20 31 01.4**	**-2.2**
SEDI				IAML		20 31 09.0	
	comp=E,243nm,0.8s						
SEDI				IAML		20 31 09.0	
	comp=N,264nm,0.6s						
MERS	**Mersin**	**2.77**	**46**	PN	**Pn**	**20 30 28.3**	**+1.6**
KMER	**Konya-Meram**	**2.83**	**5**	*i* P	**Pb**	**20 30 32.1**	**-0.9**
KMER				*i* S	**Sb**	**20 31 09.5**	**+2.0**
KMER				IAML		20 31 18.0	
	comp=E,151nm,0.5s						
FETY	**Fethiye**	**2.95**	**306**	P	**Pn**	**20 30 31.9**	**+2.9**
FETY	**Fethiye**	**2.95**	**306**	*i* P	**Pn**	**20 30 32.0**	**+2.9**
KERG	**Konya-Eregli**	**2.97**	**34**	*i* P	**Pb**	**20 30 33.7**	**-1.9**
KERG				*i* S	**Sb**	**20 31 10.1**	**-1.7**
KERG				IAML		20 31 19.0	
	comp=N,150nm,0.5s						
KERG				IAML		20 31 20.0	
	comp=E,175nm,0.7s						
DED	**Mersin**	**3.00**	**47**	*i* P	**Pn**	**20 30 32.3**	**+2.6**
DED				*i* S	**Sn**	**20 31 06.1**	**+0.8**
DED				IAML		20 31 14.0	
	comp=E,90nm,0.5s						
KONT	**Konya--Tatoy**	**3.00**	**5**	*i* P	**Pb**	**20 30 34.0**	**-1.9**
KONT				*i* S	**Sb**	**20 31 11.8**	**-0.6**
KONT				IAML		20 31 26.0	
	comp=E,90nm,0.6s						
CAEL	**Denizli, Camel**	**3.10**	**315**	*i* P	**Pb**	**20 30 36.2**	**-1.7**
ISP	**Isparta**	**3.12**	**337**	Pn	**Pn**	**20 30 32.9**	**+1.3**
DOGA	**KONYA_Doganhis**	**3.17**	**354**	*i* P	**Pb**	**20 30 38.6**	**-0.3**
DOGA				*i* S	**Sn**	**20 31 12.9**	**+3.2**
BRDR	**BURDUR-Merkez**	**3.18**	**330**	*i* P	**Pb**	**20 30 38.1**	**-1.0**
HNTI	**Hanita**	**3.19**	**125**	Pn	**Pn**	**20 30 33.4**	**+1.0**
HNTI				Sn	**Sn**	**20 31 09.4**	**-0.6**
BAGO	**Egridir - ISPA**	**3.20**	**342**	*i* P	**Pb**	**20 30 38.0**	**-1.5**
BAGO				*i* S	**Sb**	**20 31 21.5**	**+3.2**
BAGO				IAML		20 31 29.0	
	comp=N,35nm,1.3s						
DALY	**Dalyan (Mula)**	**3.34**	**305**	*i* P	**Pn**	**20 30 37.6**	**+3.2**
OFRI	**`Ofer**	**3.37**	**133**	Pn	**Pn**	**20 30 34.9**	**+0.1**
YVAC	**Isparta, Yalva**	**3.38**	**349**	*i* P	**Pb**	**20 30 39.3**	**-3.2**
MMA0B	**Mount Meron ar**	**3.38**	**124**	Pn	**Pn**	**20 30 36.2**	**+1.1**
MMA0B				Sn	**Sn**	**20 31 14.7**	**-0.2**
MMAI	**Mount Meron Ar**	**3.38**	**124**	Pn	**Pn**	**20 30 34.9**	**-0.2**
	comp=N,12nm,0.3s,baz=310,slow=12,SNR=46						
MMAI				Sn	**Sn**	**20 31 15.1**	**+0.1**
	comp=N,27nm,0.3s,baz=332,slow=26,SNR=11						
MMAI				LR	LR	20 32 20.6	
	comp=N,76nm,18.6s,baz=315,slow=47						
ALIN	**Konya, Altinte**	**3.41**	**11**	*i* P	**Pn**	**20 30 35.7**	**+0.2**
BLGI	**Bet Lehem HaGe**	**3.42**	**129**	Pn	**Pn**	**20 30 36.5**	**+1.0**
ARG	**Arkhangelos**	**3.45**	**293**	P	**Pn**	**20 30 38.2**	**+2.2**
ARG	**Arkhangelos**	**3.45**	**293**	P	**Pn**	**20 30 38.1**	**+2.2**

YURE	YUREGIR	3.45	56	*i* P	Pn	20 30 37.9	+1.9
YURE				*i* S	Sn	20 31 17.5	+0.9
YURE				IAML		20 31 35.0	
	comp=N,36nm,0.8s						
GEM	Giv'at Ha'Em	3.46	119	Pn	Pn	20 30 37.3	+1.2
GEM				Sn	Sn	20 31 16.6	-0.1
YAYL	Yayladag	3.48	71	*i* P	Pn	20 30 37.8	+1.4
YAYL				*i* S	Sn	20 31 16.0	-1.3
YAYL				IAML		20 31 19.0	
	comp=N,69nm,0.3s						
YAYL				IAML		20 31 29.0	
	comp=E,129nm,0.6s						
TAVA	DENIZLI_Tavas	3.58	316	*i* P	Pn	20 30 41.6	+3.9
KZIL	AFYON_Kizioren	3.65	335	*i* P	Pn	20 30 41.8	+3.0
SLTI	Sal'it	3.67	137	Pn	Pn	20 30 39.8	+0.8
SLTI				Sn	Sn	20 31 21.8	-0.2
AKO	Adana	3.71	47	*i* P	Pn	20 30 41.9	+2.2
NIDE	Nigde/Merkez-G	3.75	35	*i* P	Pb	20 30 46.1	-2.7
MMLI	Mount Malkishu	3.76	131	Pn	Pn	20 30 40.9	+0.6
YER	Yerkesik	3.76	307	P	Pn	20 30 43.9	+3.6
MULA	Mugla, Merkez-	3.80	308	*i* P	Pn	20 30 44.6	+3.7
HMDT	Nahal Hemdat	3.95	132	Pn	Pn	20 30 44.1	+1.3
HMDT				Sn	Sn	20 31 28.5	-0.3
PASA	Karahalli, USA	3.97	329	*i* P	Pn	20 30 46.7	+3.4
DAT	Datca	4.05	297	P	Pn	20 30 47.1	+2.7
YAHY	KAYSERI_Yahyal	4.11	39	*i* P	Pn	20 30 48.7	+3.4
YAHY				*i* S	Sb	20 31 39.2	-5.3
YAHY				IAML		20 31 48.0	
	comp=E,23nm,0.4s						
AMAZ	Amatzia	4.16	144	Pn	Pn	20 30 46.2	+0.4
AMAZ				Sn	Sn	20 31 32.9	-1.2
NIS1	Nisyros Isl.	4.30	294	P	Pn	20 30 50.5	+2.8
ANDN	Andirin	4.34	52	*i* P	Pn	20 30 52.1	+3.7
ANDN				*i* S	Sn	20 31 40.7	+1.9
ANDN				IAML		20 31 50.0	
	comp=N,32nm,0.4s						
ANDN				IAML		20 32 00.0	
	comp=E,54nm,1.9s						
KAMA	Osmaniye	4.35	58	*i* P	Pn	20 30 49.9	+1.4
KAMA				*i* S	Sn	20 31 38.3	-0.5
KAMA				IAML		20 32 06.0	
	comp=N,11nm,1.3s						
DSI	Dead Sea	4.37	140	Pn	Pn	20 30 49.4	+0.8
BODT	Bodrum	4.39	300	P	Pn	20 30 51.4	+2.5
YTIR	Yattir	4.40	144	Pn	Pn	20 30 49.6	+0.5
YTIR				Sn	Sn	20 31 38.9	-1.2
KULA	Kula-Manisa	4.49	323	P	Pn	20 30 52.7	+2.4
KZIT	Kziot	4.49	153	Pn	Pn	20 30 50.3	+0.1
KZIT				Sn	Sn	20 31 40.1	-2.0
GHAJ	Ghor Haditha	4.68	140	Pn	Pn	20 30 53.8	+1.0
GHAJ	Ghor Haditha	4.68	140		Pn	20 30 53.1	+0.3
GAZ	Gaziantep	4.72	61		Pn	20 30 51.9	-1.7
ZKR	Zakros	4.80	274	P	Pn	20 30 56.1	+1.6
ASF	Jabal al Asfar	4.90	123	Pn	Pn	20 30 56.8	+0.8
	comp=N,2.7nm,0.3s,baz=300,slow=5.4,SNR=20						
ASF				Sn	Sn	20 31 58.3	+6.0
	comp=N,2.8nm,0.3s,baz=312,slow=13,SNR=2.3						
BRTR	Keskin Array B	4.93	14	Pn	Pn	20 31 00.0	+3.6
	comp=N,0.7nm,0.3s,baz=188,slow=16,SNR=9.5						
BRTR				LR	LR	20 33 06.1	
	comp=N,115nm,18.7s,baz=196,slow=42						
BRTR	Keskin Array B	4.93	14	Pn	Pn	20 30 55.8	-0.7
BR131	Keskin Array S	4.93	14	Pn	Pn	20 30 56.5	0.0
BNN	Bunyan	4.94	37	Pn	Pn	20 30 56.9	+0.3
HHAG	Hagoal	4.98	180	P	Pn	20 30 58.3	+1.2
	baz=179						
KOT	Kottamia	5.01	182	P	Pn	20 30 57.8	+0.3
	baz=183						
SMG	Samos	5.04	305	P	Pn	20 30 59.7	+1.9
SUZ	Suez	5.13	172	P	Pn	20 30 59.9	+0.7
	baz=173						
PRNI	Paran	5.21	151	Pn	Pn	20 31 00.4	+0.1
PRNI				Sn	Sn	20 31 58.4	-1.7
HMYD	Mayadein	5.25	192	P	Pn	20 31 02.1	+1.4
	baz=193						
KRMI	Paran Flat	5.32	154	Pn	Pn	20 31 02.0	+0.3
KRMI				Sn	Sn	20 32 00.5	-2.1
HSAF	As Saff	5.33	185	P	Pn	20 31 02.4	+0.5
	baz=185						
GLL	Jalalah	5.37	183	P	Pn	20 31 02.5	+0.1
	baz=184						
MATC	Matruh	5.42	230	P	Pn	20 31 04.0	+1.0
	baz=229						
MATC				S	Sn	20 32 01.1	-3.9
	baz=229						
HNAT	Natroun	5.44	193	P	Pn	20 31 04.3	+1.0
	baz=194						
HNAT				S	Sn	20 32 03.6	-2.0
	baz=194						
HRFI	Mount Harif	5.51	152	Pn	Pn	20 31 04.7	+0.4
HRFI				Sn	Sn	20 32 05.5	-1.8
ZNM	Zenema	5.60	173	P	Pn	20 31 06.0	+0.5
	baz=173						
MBRI	Mt Berech	5.68	154	Pn	Pn	20 31 07.7	+1.0
MBRI				Sn	Sn	20 32 10.1	-1.5
EIL	Elat	5.80	154	Pn	Pn	20 31 08.3	0.0
	comp=N,2.7nm,0.3s,baz=321,slow=1.5,SNR=23						
EIL				Sn	Sn	20 32 11.6	-3.0
	comp=N,3.0nm,0.3s,baz=58,slow=21,SNR=2.5						
EIL	Elat	5.80	154	Pn	Pn	20 31 08.5	+0.1
EIL				Sn	Sn	20 32 12.9	-1.7
IDI	Anoyia	5.89	275	Pn	Pn	20 31 10.8	+1.3
	comp=N,2.3nm,0.3s,baz=86,slow=13,SNR=22						
IDI				Sn	Sn	20 32 16.0	-0.7
	comp=N,5.3nm,0.3s,baz=254,slow=21,SNR=8.6						
IDI				LR	LR	20 34 48.1	
	comp=N,33nm,21.0s,baz=140,slow=52						
CHOS	Chios island	5.92	307	P	Pn	20 31 12.4	+2.4
RYAN	Fayoum	6.04	195	P	Pn	20 31 12.0	+0.4
	baz=195						
RYAN				S	Sn	20 32 18.2	-2.3
	baz=195						
HBST	Basata	6.15	158	P	Pn	20 31 14.4	+1.3
	baz=158						
NUB	Nuweibaa	6.30	159	P	Pn	20 31 15.2	+0.1
	baz=159						
NBNS	Bani Suef	6.34	186	P	Pn	20 31 15.4	-0.4
	baz=187						
NBNS				S	Sn	20 32 23.5	-4.3
	baz=187						
HDHB	Dhahab	6.58	160	P	Pn	20 31 19.4	+0.5
	baz=160						
HKAT	Jabal Katrina	6.62	165	P	Pn	20 31 19.8	+0.1
	baz=165						
IMMV	Iera Moni Meta	6.63	277	P	Pn	20 31 20.9	+1.2
TR2	Tor 2	6.70	167	P	Pn	20 31 19.4	-1.2
	baz=167						
TAMRE	El Minia	7.31	188	P	Pn	20 31 28.6	-0.4
	baz=189						
ALN	Alexandroupoli	7.60	323	Pn	Pn	20 31 33.0	-0.1
HHRG	Al Ghardaqah	7.81	170	P	Pn	20 31 39.0	+3.0
	baz=170						
SWA2		7.98	226	P	Pn	20 31 38.2	0.0
	baz=226						
HFRF	Wahat Farafira	8.41	203	P	Pn	20 31 44.1	-0.1
	baz=204						
ITM	Ithomi	8.50	288	Pn	Pn	20 31 46.6	+1.3
AGG	Agios Georgios	8.78	300	Pn	Pn	20 31 49.5	+0.3
HDK1	Dakhla	9.65	194	P	Pn	20 32 00.9	-0.3
	baz=195						
TIP	Timpagrande	12.93	294	Pn	Pn	20 32 44.0	-2.0
RAFF	Raffo Rosso	14.49	284	Pn	Pn	20 33 04.8	-2.6
PAOL	Paolisi	15.06	299	Pn	Pn	20 33 17.2	+2.1
CORL	Corleone	15.38	286		P	20 33 23.0	-1.0
CORL				IAmb	IAmb	20 33 43.2	
	comp=Z,32nm,1.6s						
AKASG	Malin Array Be	15.88	353	Pn	P	20 33 28.5	-0.7
	comp=Z,0.9nm,0.3s,baz=175,slow=9.7,SNR=8.7						
NRCA	Norcia	16.70	304		P	20 33 38.7	+0.3
OBKA	Obir	17.55	316	*e*P	P	20 33 50.2	+2.4
	comp=Z,0.5nm,0.3s						
KEST	Kesra	18.55	279	P	P	20 33 58.0	-0.9
GEC2	GERESS Array S	19.41	321	P	P	20 34 08.5	+0.1
GERES	GERESS Array B	19.41	321	P	Pn	20 34 09.9	+0.4
	comp=Z,0.4nm,0.3s,baz=131,slow=10.0,SNR=14						
GERES	GERESS Array B	19.41	321	P	Pn	20 34 09.3	-0.2
WTTA	Wattenberg	19.63	315	*e*P	Pn	20 34 14.7	+2.4
	comp=Z,2.0nm,0.3s						
KHC	Kasperske Hory	19.66	322	*e*P	P	20 34 11.6	+0.6
KHC				*e*pP	pwP	20 34 20.0	+2.1
WATA	Walderalm	19.71	315	*e*P	Pn	20 34 14.7	+1.6
	comp=Z,1.8nm,0.5s						
SQTA	Sankt Quirin	19.86	314	*e*P	Pn	20 34 14.9	0.0
	comp=Z,0.3nm,0.2s						
MOTA	Moosalm	19.99	315	*i* P	Pn	20 34 16.9	+0.4
	comp=Z,1.7nm,0.4s						
FETA	Feichten	20.05	313	*i* P	Pn	20 34 16.9	-0.2
	comp=Z,1.3nm,0.4s						
DAVOX	Davos/Dischmat	20.44	312	P	Pn	20 34 21.3	-0.6
	comp=Z,1.0nm,0.5s,baz=146,slow=21,SNR=4.3						
BELG	Belogornoye	20.68	28	P	P	20 34 23.0	+1.1
	comp=Z,19nm,0.4s,baz=347,slow=1.5,SNR=22						
DAVA	Damuels	20.68	313	*e*P	P	20 34 22.7	+0.4
	comp=Z,4.2nm,0.3s						
GEYT	Alibeck	21.15	74	P	P	20 34 27.8	+0.5
	comp=Z,1.1nm,0.4s,baz=286,slow=13,SNR=2.1						
BNI	Bardonecchia	21.82	305	P	P	20 34 34.9	+0.3
BNI				IAmb	IAmb	20 34 46.8	
	comp=Z,18nm,1.8s						
SENIN	Lac Senin/Sane	21.88	309	P	P	20 34 34.7	-0.5
SENIN				IAmb	IAmb	20 34 37.4	
	comp=Z,19nm,1.8s						
BFO	Black Forest	22.10	314	P	P	20 34 37.3	-0.1
BFO				IAmb	IAmb	20 34 44.3	
	comp=Z,14nm,1.8s						
ABKAR	Akbulak array	24.97	47	P	P	20 35 04.5	-1.1
ATD	Arta Tunnel	25.29	155	LR	LR	20 44 21.7	
	comp=Z,28nm,19.1s,baz=32,slow=35						
FIA1	FINESS Array S	26.79	354	P	P	20 35 21.3	-0.5
FIA1				IAmb	IAmb	20 35 37.5	
	comp=Z,43nm,1.6s						
FINES	FINESS Array B	26.79	354	P	P	20 35 21.3	-0.5
	comp=Z,1.3nm,0.6s,baz=156,slow=11,SNR=10						
FINES	FINESS Array B	26.79	354	P	P	20 35 21.5	-0.4
HFS	Hagfors	27.88	340	P	P	20 35 31.9	+0.1
	comp=Z,1.8nm,0.6s,baz=103,slow=6.4,SNR=5.7						
ARU	Arti	28.05	32	P	P	20 35 33.4	+0.2
	comp=Z,0.4nm,0.4s,baz=225,slow=21,SNR=3.2						
ESDC	Sonseca Array	28.91	290	P	P	20 35 41.7	+0.5
	comp=Z,0.3nm,0.4s,baz=83,slow=8.5,SNR=5.4						
NAO01	NORSAR Array S	29.27	339	P	P	20 35 43.5	-0.5
NB201	NORSAR Array S	29.32	339	P	P	20 35 43.2	-1.3
NOA	NORSAR Array B	29.33	339	P	P	20 35 44.5	-0.2
	comp=Z,0.4nm,0.5s,baz=232,slow=6.2,SNR=3.4						
NBO00	NORSAR Array S	29.45	339	P	P	20 35 45.2	-0.5
ARCES	ARCESS Array B	34.83	356	P	P	20 36 32.4	-0.4
	comp=Z,1.1nm,0.4s,baz=173,slow=8.6,SNR=21						
ARCES	ARCESS Array B	34.83	356	P	P	20 36 32.1	-0.6
TORD	Torodi Ar. Bea	34.98	239	P	P	20 36 35.4	+0.8
	comp=Z,0.2nm,0.5s,baz=47,slow=6.6,SNR=2.2						
TORD	Torodi Ar. Bea	34.98	239	IAmb	IAmb	20 37 17.1	
	comp=Z,5.5nm,1.8s						
MAKZ	Makanchi	38.94	57	P	P	20 37 07.6	-0.4
MAKZ				IAmb	IAmb	20 37 12.3	
	comp=Z,5.7nm,1.3s						
MKAR	Makanchi Array	39.16	57	P	P	20 37 10.4	+0.6
	comp=Z,1.0nm,0.7s,baz=289,slow=7.4,SNR=6.9						
MKAR	Makanchi Array	39.16	57	P	P	20 37 10.1	+0.3
SONM	Songino Array	55.19	52	P	P	20 39 15.8	+0.9
	comp=Z,0.5nm,0.5s,baz=289,slow=5.9,SNR=5.1						
SONM	Songino Array	55.19	52	IAmb	IAmb	20 39 23.1	
	comp=Z,2.9nm,1.5s						
SCHQ	Schefferville	66.94	322	P	P	20 40 34.3	-0.1
	comp=Z,5.5nm,0.9s,baz=40,slow=6.1,SNR=5.7						
TOLK	Toolik Lake Re	76.71	1	P	P	20 41 33.4	+0.5
TOLK				IAmb	IAmb	20 41 50.6	
	comp=Z,14nm,1.6s						
BMAR	Burnt Mountain	77.91	359	P	P	20 41 40.7	+1.1
IMAR	Indian Mountai	79.29	2	P	P	20 41 47.9	+0.7
MDM	Murphy Dome	80.42	0	P	P	20 41 54.3	+0.9
MDM				IAmb	IAmb	20 42 37.6	
	comp=Z,9.2nm,1.8s						
SCRK	Sand Creek	81.36	358	P	P	20 41 59.4	+0.9
SCRK				IAmb	IAmb	20 42 36.5	
	comp=Z,8.1nm,1.8s						
BCAR	Beaver Creek A	82.20	357	P	P	20 42 03.1	+0.2

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*IGIL **10** 20:38:25.4, 38°.54N×11°.84W, h14^{km}, ML1.8*
*MDD **10** 20:38:26.9±2.3, 38°.54N×11°.82W, h65^{km}±92^{km}, mb3.7/4, Error ellipse: s-maj=23.4km s-min=16.3km az=93.0, PRXIMO*
*SFS **10** 20:38:27.0, 38°.50N×11°.50W, ML2.3, ATLANTICO PORTUGAL*
*CNRM **10** 20:38:28.7, 38°.10N×11°.83W, h108^{km}*
*INMG **10** 20:38:28.3±1.4, 38°.47N×11°.97W, h10^{km}, ML1.8, Error ellipse: s-maj=8.8km s-min=5.8km az=110.0*
ISC 10 20:38:24.1±2.9**, 38°.58N**±0°.05×**11°.9W**±0°.2**, h35^{km}, n39,** σ1^{s}.**87**/65**, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMAFR	Mafra	2.06	79	*e*Pn	Pn	20 38 58.4	+2.1
PMAFR				*e*Sn	Sn	20 39 21.8	+1.0
PMAFR				A	A	20 39 29.2	
	14nm,0.6s						
PMAFR	Mafra	2.06	79	P	Pn	20 38 58.4	+2.1
	0.8nm,0.0s						
PMAFR				S	Sn	20 39 22.3	+1.5
	4.9nm,0.1s,SNR=7.7						
PNCL	Nicolau / Gran	2.67	99	*e*Pn	Pn	20 39 05.8	+1.1
PNCL				*e*Sn	Sn	20 39 33.9	-1.9
PNCL				A	A	20 39 37.6	
	1.7nm,0.6s						
PTEO	Sao Teotonio	2.69	112	*e*Pn	Pn	20 39 06.1	+1.2
PTEO				*e*Sn	Sn	20 39 34.3	-2.0
PFVI	Vila Bisbo	2.81	120	*e*Pn	Pn	20 39 07.4	+0.8
PFVI				*e*Sn	Sn	20 39 37.9	-1.4
PFVI				A	A	20 39 43.6	
	6.6nm,0.8s						
PFVI	Vila Bisbo	2.81	120	P	Pn	20 39 07.3	+0.8
	4.3nm,0.1s,SNR=27						
PFVI				S	Sn	20 39 38.2	-1.1
	SNR=7.9						
PFVI	Vila Bisbo	2.81	120	P	Pn	20 39 08.0	+1.4
PFVI				S	Sn	20 39 40.7	+1.4
MORF	Marmelete	2.85	116	*e*P	Pn	20 39 08.1	+0.9
MORF				*e*S	Sn	20 39 40.0	-0.3
MORF				IAML		20 39 43.0	
	comp=N,5.0nm,0.1s						
MORF	Marmelete	2.85	116	*e*Pn	Pn	20 39 08.1	+0.9
MORF				*e*Sn	Sn	20 39 40.5	+0.2
MORF				A	A	20 39 41.3	
	comp=N,4.0nm,0.7s						
MORF	Marmelete	2.85	116	P	Pn	20 39 08.1	+0.9
MORF				S	Sn	20 39 40.0	-0.3
PMTG	Montargil	2.89	79	*e*Pn	Pn	20 39 09.3	+1.6
PMTG				*e*Sn	Sn	20 39 40.5	-0.7
PMTG				A	A	20 39 41.5	
	comp=N,2.1nm,0.8s						
MESJ	Messejana	2.97	103	*e*P	Pn	20 39 10.3	+1.5
MESJ				*e*S	Sn	20 39 42.2	-1.1
MESJ				IAML		20 39 46.8	
	comp=N,3.1nm,0.1s						
MESJ	Messejana	2.97	103	*e*Pn	Pn	20 39 10.3	+1.5
MESJ				*e*Sn	Sn	20 39 41.9	-1.3
MESJ				A	A	20 39 43.7	
	comp=N,2.1nm,0.7s						
MESJ	Messejana	2.97	103	P	Pn	20 39 10.3	+1.5
MESJ				S	Sn	20 39 42.2	-1.1
PCAS	Casmilo, Conde	3.00	60	*e*Sn	Sn	20 39 44.4	+0.4
EVO	Evora	3.03	90	P	Pn	20 39 01.2	-8.3
EVO				S	Sn	20 39 41.8	-2.8
EVO	Evora	3.03	90	*e*Sn	Sn	20 39 43.9	-0.7
EVO				A	A	20 39 45.8	
	comp=N,1.9nm,0.3s						
PCVE	Castro Verde	3.17	106	*e*Pn	Pn	20 39 13.1	+1.6
PCVE				*e*Sn	Sn	20 39 47.8	-0.3
PCVE				A	A	20 39 50.8	
	comp=N,1.5nm,0.2s						
PESTR	Estremoz	3.37	84	*e*Sn	Sn	20 39 52.3	-0.6
PBDV	Barranco-do-Ve	3.39	112	*e*Pn	Pn	20 39 16.8	+2.2
PBDV				*e*Sn	Sn	20 39 52.7	-1.0
PBDV				A	A	20 39 56.8	
	comp=N,3.2nm,0.6s						
PVAQ	Vaqueiros	3.49	108	*e*Pn	Pn	20 39 17.7	+1.8
PVAQ				*e*Sn	Sn	20 39 54.8	-1.2
PVAQ				A	A	20 40 00.5	
	comp=N,1.3nm,0.1s						
PVAQ	Vaqueiros	3.49	108	P	Pn	20 39 18.0	+2.1
PVAQ				S	Sn	20 39 58.8	+2.9
PMRV	Marv??o	3.59	75	*e*Pn	Pn	20 39 18.9	+1.5
PMRV				*e*Sn	Sn	20 39 57.9	-0.7
PMRV				A	A	20 39 59.8	
	comp=N,0.7nm,0.3s						
EGRO	El Granado	3.62	105	P	Pn	20 39 19.2	+1.5
	comp=N,0.8nm,0.0s,SNR=20						
EGRO				S	Sn	20 39 57.7	-1.5
	comp=N,0.6nm,0.1s						
PCBR	Castelo Branco	3.64	68	*e*Sn	Sn	20 39 59.4	-0.3
PVIS	Viseu	3.74	54	*e*Sn	Sn	20 40 01.5	-0.7
EBAD	Badajoz	3.81	86	P	Pn	20 39 21.8	+1.5
	comp=N,0.4nm,0.1s,SNR=7.9						
EBAD				S	Sn	20 40 02.5	-1.4
	comp=N,1.1nm,0.1s,SNR=7.9						
EMIN	Mina Concepcio	4.18	100	P	Pn	20 39 27.3	+1.9
	comp=N,0.9nm,0.2s,SNR=7.9						
EMIN				S	Sn	20 40 10.9	-2.1
	comp=N,0.2nm,0.1s,SNR=7.9						
POLO	Lamas de Olo	4.20	47	*e*Sn	Sn	20 40 11.9	-1.7
PGAV	Gavieira, Arco	4.36	38	*e*Sn	Sn	20 40 16.0	-1.7
ELOB	Lobios	4.39	40	S	Sn	20 40 16.3	-2.0
	SNR=7.9						
MVO	Moncorvo	4.54	54	*e*Sn	Sn	20 40 19.8	-2.1
MVO	Moncorvo	4.54	54	S	Sn	20 40 19.7	-2.2
	comp=N,0.7nm,0.1s,SNR=7.9						
EMAZ	Mazaricos	4.89	26	S	Sn	20 40 25.3	-5.2
	comp=N,1.0nm,0.1s,SNR=7.9						
ESPR	Espera	5.07	108	P	Pn	20 39 39.5	+1.9
	comp=N,0.4nm,0.1s,SNR=4.0						
ECAB	El Cabril	5.10	94	P	Pn	20 39 40.0	+1.9
	comp=N,0.4nm,0.1s,SNR=6.7						
ECAB				S	Sn	20 40 32.2	-3.6
	comp=N,0.0nm,0.2s,SNR=7.9						
EADA	Adamuz	5.75	92	P	Pn	20 39 48.6	+1.6
	comp=N,0.6nm,0.2s,SNR=7.9						
EADA				S	Sn	20 40 49.2	-2.6
	comp=N,0.1nm,0.1s,SNR=7.9						
MD31	MD31	8.12	132	P	Pn	20 40 19.9	+0.3
MD31				S	Sn	20 41 45.5	-4.7
MDT	Midelt	8.25	132	P	Pn	20 40 22.0	+0.7
MDT				S	Sn	20 41 49.2	-4.2

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*ISK **10** 20:42:01.6, 35°.98N×31°.68E, h11^{km}, ML3.7/31*
*DDA **10** 20:42:03.5, 35°.96N×31°.77E, h45^{km}, MW3.6*
*HLW **10** 20:42:03.0, 35°.95N×31°.43E, h13^{km}±29^{km}, Md4.1*
*IDC **10** 20:42:04.0±1.2, 36°.11N×31°.62E, h71^{km}±16^{km}, mb3.6/6, mb1 3.7/11, mb1mx3.4/37, mbtmp3.9/11, MS2.3/1, Ms1 2.3/1, ms1mx1.9/40, Error ellipse: s-maj=11.4km s-min=10.5km az=64.0*
*NIC **10** 20:42:04.0±0.0, 36°.11N×31°.87E, h33^{km}±24^{km}, Ml3.9/7*
ISC 10 20:42:03.5±0.8**, 35°.98N**±0°.03×**31°.74E**±0°.03**, h65^{km}**±9^{km}**, n131,** σ1^{s}.**93**/175**, mb3.9**/6**, 2C-1D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAZI	Gazipasa	0.53	61	*i* P	Pn	20 42 16.1	-0.1
GAZI				*i* S	Sn	20 42 23.7	-1.8
GAZI				IAML		20 42 25.0	
	comp=N,2µm,0.4s						
GAZI				IAML		20 42 25.0	
	comp=E,2µm,0.2s						
BOZY	Bozyazi-Mersin	1.01	82	PG	Pn	20 42 22.6	+0.7
BOZY				SG	Sn	20 42 37.1	+1.6
AKMS	Akamas	1.07	153	⇑*i*P	Pn	20 42 23.9	+1.1
AKMS				S	Sn	20 42 38.9	+1.9
AKMS				AML	AML	20 42 46.0	
	comp=E,19nm,0.3s						
AKMS				AML	AML	20 42 46.0	
	comp=E,19nm,0.3s						
AKMS				AML	AML	20 42 46.6	
	comp=E,17nm,0.7s						
AKMS				AML	AML	20 42 46.6	
	comp=E,17nm,0.7s						
ALFC	Alefka	1.08	139	⇑*i*P	Pn	20 42 23.4	+0.6
ALFC				AML	AML	20 42 37.6	
	comp=E,12nm,0.1s						
ALFC				AML	AML	20 42 37.6	
	comp=E,12nm,0.1s						
ALFC				AML	AML	20 42 37.7	
	comp=E,17nm,0.2s						
ALFC				AML	AML	20 42 37.7	
	comp=E,17nm,0.2s						
ALFC				S	Sn	20 42 38.0	+0.8
TEKE	Tekeli-Mersin	1.13	81	PN	Pn	20 42 24.4	+1.0
KEMT	Kemer-ANTALYA	1.14	303	PN	Pn	20 42 22.9	-0.7
HDMB	Hadim	1.15	31	PN	Pn	20 42 24.9	+0.9
HDMB				SN	Sn	20 42 41.2	+2.0
ERMK	Ermenek	1.16	55	*i* P	Pn	20 42 25.0	+1.0
ERMK				*i* S	Sn	20 42 41.0	+1.8
ERMK				IAML		20 42 43.0	
	comp=N,2µm,0.4s						
ERMK				IAML		20 42 44.0	
	comp=E,1µm,0.3s						
AKUM	Antalya-Kumluc	1.18	287	*i* P	Pn	20 42 25.4	+1.3
AKUM				*i* S	Sn	20 42 45.9	+6.5
AKUM				IAML		20 42 48.0	
	comp=E,506nm,0.4s						
BERE	Bereket-Mersin	1.26	73	PN	Pn	20 42 26.3	+1.1
ANTB	Antalya	1.27	317	PN	Pn	20 42 24.7	-0.5
LEF	Lefka	1.27	132	*i* P	Pn	20 42 25.7	+0.5
LEF				*i* S	Sn	20 42 40.2	-1.3
LEF				IAML		20 42 41.0	
	comp=N,948nm,0.1s						
LEF	Lefka	1.27	132	PN	Pn	20 42 25.8	+0.5
YORU	Yoruktepe-Mers	1.36	82	PN	Pn	20 42 27.9	+1.4
NATA	Nata	1.38	150	P	Pn	20 42 28.5	+1.8
NATA				AML	AML	20 42 53.8	
	comp=N,14nm,0.6s						
NATA				AML	AML	20 42 55.8	
	comp=N,13nm,0.7s						
OREN	Orenkoy-Mersin	1.41	80	PN	Pn	20 42 28.8	+1.7
SEYD	Seydisehir-KON	1.43	3	PN	Pn	20 42 28.7	+1.2
TEVE	Tevekalti-Mers	1.45	71	PN	Pn	20 42 28.6	+0.9
AKK1	Akkuyu-Mersin	1.47	83	PN	Pn	20 42 29.2	+1.3
SEDI	Konya, Seydise	1.47	0	*i* P	Pn	20 42 29.4	+1.3
SEDI				*i* S	Sn	20 42 47.5	+1.0
SEDI				IAML		20 42 51.0	
	comp=E,1µm,0.4s						
SEDI				IAML		20 42 52.0	
	comp=N,761nm,0.6s						
GULN	MERSIN_Gulnar	1.48	81	*i* P	Pn	20 42 29.2	+1.2
GULN				*i* S	Sn	20 42 47.9	+1.5
GULN				IAML		20 42 50.0	
	comp=N,433nm,0.7s						
GULN				IAML		20 42 51.0	
	comp=E,321nm,0.6s						
AKKU	Akkuyu-Mersin	1.48	82	PN	Pn	20 42 29.5	+1.5
TEPK	Tepekoy-MERSIN	1.48	80	PN	Pn	20 42 29.7	+1.6
DEMR	Demre-Antalya	1.51	280	PN	Pn	20 42 28.7	+0.3
KORT	Korkueli	1.52	313	PN	Pn	20 42 28.9	+0.3
YESI	Yesilovacik-Me	1.56	81	PN	Pn	20 42 30.3	+1.3
KKBE	Karaman, Kazim	1.57	38	*i* P	Pn	20 42 30.9	+1.5
KKBE				*i* S	Sn	20 42 49.7	+0.8
KKBE				IAML		20 42 54.0	
	comp=N,387nm,0.6s						
KKBE				IAML		20 42 55.0	
	comp=E,343nm,0.6s						
TISA	Tisan-Mersin	1.58	83	PN	Pn	20 42 30.6	+1.2
ATHAL	Athalassa	1.59	121	P	Pn	20 42 29.8	+0.3
ATHAL				S	Sn	20 42 49.6	+0.5
ATHAL				AML	AML	20 42 49.7	
	comp=E,4.2nm,0.5s						
ATHAL				AML	AML	20 42 49.7	
	comp=E,4.2nm,0.5s						
ATHAL				AML	AML	20 42 50.8	
	comp=E,5.1nm,0.5s						
ATHAL				AML	AML	20 42 50.8	
	comp=E,5.1nm,0.5s						
IKL	Isikli	1.60	80	PN	Pn	20 42 30.9	+1.3
KARG	Kargicak-Mersi	1.61	81	PN	Pn	20 42 31.2	+1.4
LFK	Lefkose	1.62	115	PN	Pn	20 42 31.6	+1.6
BUCA	Burdur, Bucak-	1.65	325	*i* P	Pn	20 42 32.5	+2.1
CSS	Mathiatis	1.65	128	PN	Pn	20 42 31.6	+1.3
CSS	Mathiatis	1.65	128	P	Pn	20 42 30.5	+0.1
KEBE	Keben-Mersin	1.66	73	PN	Pn	20 42 32.4	+1.8
ELL	Elmali	1.67	298	PN	Pn	20 42 31.0	+0.3
ELL	Elmali	1.67	298	P	Pn	20 42 31.5	+0.9
ELL				S	Sn	20 42 52.7	+1.5
KRMN	Karaman	1.71	45	PN	Pn	20 42 32.7	+1.4
ASGA	Asgata	1.71	134	P	Pn	20 42 32.3	+1.1
ASGA				AML	AML	20 43 00.6	
	comp=E,2.7nm,0.4s						
ASGA				AML	AML	20 43 04.7	
	comp=E,3.9nm,0.5s						
BCK	Bucak	1.75	328	PN	Pn	20 42 32.3	+0.6
AKAS	Kas	1.75	279	*i* P	Pn	20 42 36.1	+4.4
AKAS	Kas	1.75	279	PN	Pn	20 42 32.3	+0.5
SILI	Silifke-Mersin	1.81	77	PN	Pn	20 42 34.4	+1.9
MVOU	Mavrovouni	1.82	121	⇓*i*P	Pn	20 42 32.7	+0.2

MVOU				AML	AML	20 42 56.4	
	comp=E,3.1nm,0.3s						
MVOU				AML	AML	20 43 04.6	
	comp=E,2.7nm,0.3s						
SLFK	Silifke-Mersin	1.83	76	PN	Pn	20 42 34.4	+1.6
KMER	Konya-Meram	1.86	16	iP	Pn	20 42 34.4	+1.2
KMER				iS	Sn	20 42 56.4	+0.6
KMER				IAML		20 42 58.0	
	comp=N,276nm,0.5s						
KMER				IAML		20 43 01.0	
	comp=E,328nm,0.6s						
KIZK	Mersin	2.01	75	iP	Pn	20 42 36.7	+1.5
KIZK	Mersin	2.01	75	PN	Pn	20 42 36.9	+1.8
KONT	Konya--Tatoy	2.02	14	iP	Pn	20 42 36.3	+0.9
KONT	Konya--Tatoy	2.02	14	PN	Pn	20 42 36.5	+1.1
ISP	Isparta	2.08	332	PN	Pn	20 42 36.7	+0.4
PARAL	Paralimni	2.12	117	P	Pn	20 42 37.8	+1.1
PARAL				AML	AML	20 43 14.2	
	comp=E,1.6nm,0.9s						
PARAL				AML	AML	20 43 18.3	
	comp=E,1.2nm,0.8s						
DOGA	KONYA_Doganhis	2.12	358	iP	Pn	20 42 37.6	+0.8
BAGO	Egridir - ISPA	2.15	340	iP	Pn	20 42 36.8	-0.3
BAGO				iS	Sn	20 43 00.4	-2.4
BAGO				IAML		20 43 09.0	
	comp=E,102nm,0.6s						
BAGO				IAML		20 43 10.0	
	comp=N,74nm,0.4s						
BRDR	BURDUR-Merkez	2.18	322	iP	Pn	20 42 38.9	+1.3
BRDR				iS	Sn	20 43 05.0	+1.4
BRDR				IAML		20 43 06.0	
	comp=E,126nm,1.0s						
BRDR				IAML		20 43 07.0	
	comp=N,102nm,1.0s						
CAEL	Denizli, Camel	2.26	301	iP	Pn	20 42 40.1	+1.4
LADK	Ladik-KONYA	2.27	13	PN	Pn	20 42 39.5	+0.6
YVAC	Isparta, Yalva	2.32	350	iP	Pn	20 42 39.3	-0.3
YVAC				iS	Sn	20 43 06.5	-0.6
YVAC				IAML		20 43 12.0	
	comp=E,114nm,0.5s						
KERG	Konya-Eregli	2.39	53	iP	Pn	20 42 41.6	+1.1
KERG				iS	Sn	20 43 07.4	-1.5
KERG				IAML		20 43 11.0	
	comp=E,179nm,0.3s						
KERG				IAML		20 43 17.0	
	comp=N,186nm,0.3s						
YESY	Yesilyurt	2.41	41	PN	Pn	20 42 41.9	+1.1
MERS	Mersin	2.41	68	PN	Pn	20 42 42.7	+2.0
ALIN	Konya, Altinte	2.49	21	iP	Pn	20 42 38.5	-3.3
OSC1	CSNet OBS 1	2.50	189	P	Pn	20 42 43.2	+1.3
KDHN	Kadinhani	2.56	7	iP	Pn	20 42 42.8	+0.1
KZIL	AFYON_Kizioren	2.61	331	iP	Pn	20 42 43.0	-0.4
KZIL				iS	Sn	20 43 13.2	-0.9
KZIL				IAML		20 43 16.0	
	comp=N,72nm,0.4s						
DALY	Dalyan (Mula)	2.63	289	iP	Pn	20 42 43.5	0.0
DED	Mersin	2.66	67	iP	Pn	20 42 46.0	+2.1
DED				iS	Sn	20 43 15.3	+0.3
DED				IAML		20 43 21.0	
	comp=N,74nm,0.5s						
TAVA	DENIZLI_Tavas	2.71	304	iP	Pn	20 42 45.6	+0.7
TAVA				iS	Sn	20 43 16.5	-0.1
TAVA				IAML		20 43 27.0	
	comp=E,328nm,0.5s						
TAVA				IAML		20 43 28.0	
	comp=N,274nm,0.8s						
OSC2	CSNet OBS 4	2.93	171	P	Pn	20 42 50.4	+2.7
OSC2				S	Sn	20 43 26.3	+4.6
PASA	Karahalli, USA	2.97	323	iP	Pn	20 42 49.6	+1.3
PASA				iS	Sn	20 43 21.7	-1.2
PASA				IAML		20 43 25.0	
	comp=E,65nm,0.9s						
PASA				IAML		20 43 30.0	
	comp=N,62nm,0.4s						
MULA	Mugla, Merkez-	3.03	296	iP	Pn	20 42 49.6	+0.5
AKSY	AKSARAY - Alti	3.12	31	iP	Pn	20 42 51.3	+0.9
NIDE	Nigde/Merkez-G	3.16	49	iP	Pn	20 42 51.1	+0.1
YURE	YUREGIR	3.25	74	iP	Pn	20 42 52.8	+0.7
KKUL	Konya-Kulu	3.32	16	iP	Pn	20 42 51.2	-2.0
AKO	Adana	3.33	62	iP	Pn	20 42 53.6	+0.5
AUKIR	Kırka- Seyitga	3.43	344	iP	Pn	20 42 55.7	+1.1
AUSIV	SIVRIHISAR	3.46	357	iP	Pn	20 42 54.6	-0.4
USAK	Uak-Merkez	3.49	322	iP	Pn	20 42 55.2	-0.2
USAK				IAML		20 43 21.0	
	comp=E,52nm,1.9s						
USAK				iS	Sn	20 43 32.5	-2.9
USAK				IAML		20 43 52.0	
	comp=N,126nm,1.4s						
AYDN	Tasoluk	3.52	300	iP	Pn	20 42 55.6	-0.2
YAYL	Yayladag	3.54	88	iP	Pn	20 42 56.6	+0.4
YAYL				iP	Pn	20 42 57.1	+0.9
YAYL				IAML		20 43 23.0	
	comp=N,116nm,1.4s						
YAYL				iS	Sn	20 43 35.8	-1.1
YAYL				iS	Sn	20 43 35.8	-1.1
YAYL				IAML		20 43 40.0	
	comp=N,100nm,0.4s						
YAYL				IAML		20 43 41.0	
	comp=E,127nm,1.0s						
YAYL				IAML		20 43 45.0	
	comp=E,120nm,0.4s						
YAHY	KAYSERI_Yahyal	3.59	53	iP	Pn	20 42 56.9	+0.1
KIRS	Kırehir-Merke	3.59	28	iP	Pn	20 42 57.6	+0.8
SGAZ	Eskisehir, Sey	3.62	349	iP	Pn	20 42 57.4	+0.2
BDRM	Kayabasi	3.62	289	iP	Pn	20 42 57.4	+0.2
BDRM				iS	Sn	20 43 35.8	-3.0
BDRM				IAML		20 43 44.0	
	comp=E,37nm,0.6s						
BDRM				IAML		20 43 52.0	
	comp=N,58nm,0.4s						
BBAL	Bala	3.72	17	iP	Pn	20 42 56.5	-2.1
DEMI	Demirci	3.89	323	iP	Pn	20 43 01.7	+0.8
DEMI				iS	Sn	20 43 43.8	-1.6
DEMI				IAML		20 43 54.0	
	comp=N,40nm,0.4s						
SAIM	ADANA	4.01	59	iP	Pn	20 43 03.7	+1.2
BORA	Eskisehir	4.03	346	iP	Pn	20 43 00.7	-2.0
ANDN	Andirin	4.03	65	iP	Pn	20 43 03.2	+0.4
ANDN				iS	Sn	20 43 45.0	-3.8
ANDN				IAML		20 43 53.0	
	comp=N,36nm,0.4s						
BRTR	Keskin Array B	4.03	21	P	Pn	20 43 03.2	+0.3
	comp=N,2.4nm,0.3s,baz=187,slow=16,SNR=59						
BRTR				S	Sn	20 43 48.9	0.0
	comp=N,0.7nm,0.3s,baz=16,slow=18,SNR=1.4						
BRTR				LR	LR	20 44 54.9	
	comp=N,35nm,19.8s,baz=258,slow=43						
KAMA	Osmaniye	4.15	72	iP	Pn	20 43 03.8	-0.6
KAMA				iS	Sn	20 43 48.6	-3.1
KAMA				IAML		20 43 53.0	
	comp=N,40nm,0.4s						
KAMA				IAML		20 43 53.0	
	comp=E,31nm,0.2s						
CDAG	Cicekdag	4.19	29	iP	Pn	20 43 05.9	+0.8
MMAI	Mount Meron Ar	4.23	133	P	Pn	20 43 07.1	+1.5
	comp=E,8.1nm,0.3s,baz=337,slow=13,SNR=53						
MMAI				S	Sn	20 43 58.2	+4.5
	comp=E,29nm,0.3s,baz=308,slow=22,SNR=12						
SIRC	Yozgat	4.31	38	iP	Pn	20 43 07.5	+0.8
DELI	KIRIKKALE	4.37	23	iP	Pn	20 43 07.8	+0.4
HCB	Kahramanmara	4.37	70	iP	Pn	20 43 07.4	-0.1
HCB				IAML		20 43 45.0	
	comp=E,49nm,0.8s						
HCB				IAML		20 43 50.0	
	comp=N,30nm,0.9s						
HCB				iS	Sn	20 43 52.5	-4.7
KUZU	Kuzuini	4.38	78	iP	Pn	20 43 08.2	+0.7
KUZU				iS	Sn	20 43 54.8	-2.5
KUZU				IAML		20 44 01.0	
	comp=E,85nm,0.5s						
KUZU				IAML		20 44 03.0	
	comp=N,78nm,0.7s						
KIBS	BOLU	4.43	1	iP	Pn	20 43 07.8	-0.6
DURS	Dursunbey	4.45	325	iP	Pn	20 43 08.6	+0.1
DURS				iS	Sn	20 43 56.9	-2.1
DURS				IAML		20 43 58.0	
	comp=N,27nm,0.3s						
DURS				IAML		20 43 58.0	
	comp=E,24nm,0.5s						
CMDR	Camlidere-ANKA	4.55	7	iP	Pn	20 43 09.8	-0.1
GAZ	Gaziantep	4.56	73	P	Pn	20 43 09.4	-0.7
IDI	Anoyia	5.62	265	P	Pn	20 43 23.8	-0.8
	comp=E,6.3nm,0.3s,baz=55,slow=7.3,SNR=79						
IDI				S	Sn	20 44 25.7	-2.1
	comp=E,2.5nm,0.3s,baz=258,slow=23,SNR=5.3						
ASF	Jabal al Asfar	5.72	130	P	Pn	20 43 30.6	+4.7
	comp=E,1.3nm,0.3s,baz=317,slow=12,SNR=10						
ASF				S	Sn	20 44 36.8	+6.4
	comp=E,0.9nm,0.3s,baz=240,slow=23,SNR=1.6						
MATC	Matruh	5.96	220	P	Pn	20 43 30.7	+1.7
	baz=219						
HHAG	Hagoal	6.02	177	P	Pn	20 43 32.5	+2.5
	baz=174						
HHAG				S	Sn	20 44 38.7	+1.2
	baz=174						
KOT	Kottamia	6.03	179	P	Pn	20 43 31.2	+1.0
	baz=176						
KOT				S	Sn	20 44 35.0	-3.0
	baz=176						
SUZ	Suez	6.19	171	P	Pn	20 43 33.3	+1.0
	baz=168						
HMYD	Mayadein	6.22	188	P	Pn	20 43 34.6	+2.0
	baz=186						
HSAF	As Saff	6.34	181	P	Pn	20 43 35.1	+0.7
	baz=178						
GLL	Jalalah	6.38	180	P	Pn	20 43 35.5	+0.5
	baz=177						
HNAT	Natroun	6.40	189	P	Pn	20 43 37.3	+2.1
	baz=187						
HNAT				S	Sn	20 44 44.8	-2.1
	baz=187						
EIL	Elat	6.85	156	P	Pn	20 43 42.2	+0.9
	comp=E,1.2nm,0.3s,baz=203,slow=6.8,SNR=11						
EIL				S	Sn	20 44 56.8	-1.0
	comp=E,1.3nm,0.3s,baz=222,slow=19,SNR=3.5						
RYAN	Fayoum	6.99	191	P	Pn	20 43 44.9	+1.7
	baz=189						
RYAN				S	Sn	20 44 57.8	-3.4
	baz=189						
SLUM	Salum	7.04	232	P	Pn	20 43 43.9	0.0
	baz=232						
SLUM				S	Sn	20 44 54.8	-7.7
	baz=232						
NBNS	Bani Suef	7.34	183	P	Pn	20 43 50.4	+2.3
	baz=181						
HKAT	Jabal Katrina	7.67	165	P	Pn	20 43 53.7	+0.9
	baz=162						
TR2	Tor 2	7.75	167	P	Pn	20 43 54.5	+0.8
	baz=164						
TAMRE	El Minia	8.30	185	P	Pn	20 44 02.9	+1.7
	baz=184						
SWA2		8.55	220	P	Pn	20 44 04.5	-0.1
	baz=219						
SWA2				S	Sn	20 45 31.2	-8.3
	baz=219						
HFRF	Wahat Farafira	9.28	199	P	Pn	20 44 15.2	+0.6
	baz=198						
HFRF				S	Sn	20 45 51.6	-5.7
	baz=198						
HDK1	Dakhla	10.59	192	P	Pn	20 44 32.9	+0.4
	baz=191						
AKASG	Malin Array Be	14.83	354	P	P	20 45 32.2	-1.5
	comp=E,0.8nm,0.3s,baz=175,slow=10.0,SNR=6.4						
GERES	GERESS Array B	18.45	320	P	Pn	20 46 19.2	+4.6
	comp=E,0.3nm,0.3s,baz=126,slow=8.1,SNR=6.8						
FINES	FINESS Array B	25.74	354	P	P	20 47 25.6	-2.0
	comp=E,2.1nm,0.5s,baz=159,slow=11,SNR=25						
ARCES	ARCESS Array B	33.79	356	P	P	20 48 37.1	-1.8
	comp=E,3.7nm,0.9s,baz=165,slow=5.0,SNR=7.8						
TORD	Torodi Ar. Bea	35.30	238	P	P	20 48 53.6	+1.1
	comp=E,1.0nm,0.8s,baz=25,slow=8.4,SNR=5.4						
MKAR	Makanchi Array	38.82	58	P	P	20 49 21.7	-0.4
	comp=E,0.5nm,0.8s,baz=268,slow=9.4,SNR=2.0						
ZALV	Zalesovo Beam	40.55	47	P	P	20 49 35.0	-1.3
	comp=E,0.6nm,0.6s,baz=280,slow=8.6,SNR=2.3						
DBIC	Dimbokro	44.41	238	P	P	20 50 08.2	+0.2
	comp=E,2.6nm,0.8s,baz=45,slow=7.1,SNR=1.4						

FUNV ***10*** *20:56:41.1, 8°.47N×71°.33W, h2^{km}, MW3.0*

ISC 10 20:56:40.0±1.7**, 8°.47N**±0°.04×**71°.34W**±0°.04**, h7**^{km}±13^{km}**,**
n12, σ**0^{s}.92**/21**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	Socops	0.52	111	eP	Pg	20 56 50.4	+0.4
SOCV				eS	Sb	20 56 58.9	-0.2
SDV	Santo Domingo	0.81	60	eP	Pb	20 56 56.2	-0.3
SDV				eS	Sb	20 57 07.6	-0.2
SDV				i		20 57 08.3	
	comp=Z,29nm,0.3s						
PAMC	Pamplona, Colo	1.76	230	eP	Pn	20 57 12.1	+0.8
PAMC				eS	Sb	20 57 36.4	+1.1
PAMC				i		20 57 37.0	
	comp=Z,32nm,0.4s						
OCAC	Ocana	1.97	263	eP	Pn	20 57 13.8	-0.2
OCAC				eS	Sn	20 57 37.2	-1.9
OCAC				i		20 57 40.3	
	comp=Z,120nm,0.3s						
TAMC	Tame, Arauca	2.07	192	eP	Pb	20 57 18.2	+0.2
TAMC				eS	Sb	20 57 44.2	+0.1
TAMC				i		20 57 48.9	
	comp=Z,26nm,0.2s						
ELOV	Elorza	2.35	128	eP	Pg	20 57 35.3	+10
ELOV				eS	Sg	20 57 54.3	-1.4
ELOV	Elorza	2.35	128	eP	Pn	20 57 19.5	+0.4
ELOV				eS	Sn	20 57 48.7	+0.5
DABV	Dabajuro	2.53	16	eP	Pn	20 57 22.1	+0.5
DABV				eS	Sn	20 57 53.0	+0.4
SIQV	Siquisique	2.64	35	eP	Pn	20 57 23.7	+0.7
SIQV				eS	Sn	20 57 55.7	+0.4
BAUV	El Baul	3.29	82	eP	Pn	20 57 33.1	+1.0
BAUV				eS	Sn	20 58 09.8	-1.7
BENV	Beln	3.98	68	eP	Pn	20 57 42.6	+1.1
BIRV	Birongo	5.38	68	eP	Pn	20 58 00.7	-0.1

BGR ***10*** *20:58:42.2±0.0, 16°.48S×177°.74W, h33^{km}*
NEIC ***10*** *20:59:29.5±2.7, 15°.8S±0°.1×177°.4W±0°.1, h425^{km}±6^{km}, mb4.5/126, Error ellipse: s-maj=18.7km s-min=12.9km az=144.0*
IDC ***10*** *20:59:31.9±1.2, 15°.73S×177°.67W, h451^{km}±12^{km}, mb3.7/13, mb1 4.0/15, mb1mx3.9/23, mbtmp4.5/15, Error ellipse: s-maj=20.2km s-min=11.3km az=143.0*

ISC 10 20:59:30.5±0.3**, 15°.86S**±0°.07×**177°.40W**±0°.07**, h450**^{km}**,**
n320, σ**1^{s}.40**/301**, mb4.5**/77**, 15C-5D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.74	246	P	P	21 00 51.8	-0.7
	39nm,0.3s,baz=100,slow=14,SNR=248						
MSVF				S	S	21 01 58.7	-0.5
	baz=132,slow=21,SNR=13						
MSVF	Nonsavu	4.74	246	P	P	21 00 51.5	-1.0
MSVF				S	S	21 01 58.5	-0.7
AFI	Afiamalu	5.78	71	P	P	21 00 59.2	-3.5
	5.6nm,0.3s,baz=69,slow=3.9,SNR=17						
AFI				S	S	21 02 11.4	-6.5
	4.6nm,0.3s,baz=233,slow=22,SNR=2.2						
FUNA	Funafuti	8.01	335	P	P	21 01 23.0	-3.2
RAO	Raoul Island	13.34	182	S	S	21 04 46.8	0.0
	40nm,0.3s,baz=97,slow=22,SNR=2.9						
MARNC	Mare, Loyalty	14.89	246	P	P	21 02 38.5	-2.1
LIFNC	LIFOU	15.38	249	P	P	21 02 42.4	-3.3
PINNC	Pines Island,	15.80	243	P	P	21 02 47.7	-2.5
OUENC	Ouen Island, N	16.25	244	P	P	21 02 52.2	-2.8
OUENC				IAmb	IAmb	21 02 58.9	
	comp=Z,19nm,0.7s						
DZM	Mont Dzumac	16.47	246	P	P	21 02 55.1	-2.3
	comp=Z,0.2nm,0.3s,baz=87,slow=13,SNR=4.3						
DZM	Mont Dzumac	16.47	246	P	P	21 02 55.5	-2.0
ONTNC	Ouen Toro	16.54	245	P	P	21 02 57.0	-1.0
ONTNC				IAmb	IAmb	21 02 59.0	
	comp=Z,24nm,1.0s						
OUZ	Omahuta	20.90	201	P	P	21 03 41.5	+1.6
MXZ	Matakaoa Point	21.95	189	P	P	21 03 46.8	-2.7
URZ	Urewera	22.83	191	P	P	21 03 54.9	-2.6
	comp=Z,18nm,0.6s,baz=121,slow=23,SNR=12						
URZ	Urewera	22.83	191	P	P	21 03 54.6	-2.9
URZ				IAmb	IAmb	21 03 56.2	
	comp=Z,22nm,0.7s						
BKZ	Black Stump Fm	23.83	192	P	P	21 04 03.8	-2.7
BKZ				IAmb	IAmb	21 04 10.3	
	comp=Z,26nm,1.5s						
BFZ	Birch Farm	25.34	191	P	P	21 04 17.0	-2.8
SNZO	South Karori	26.26	194	P	P	21 04 25.0	-3.0
BHW	Baring Head	26.32	193	P	P	21 04 26.2	-2.3
QRZ	Quartz Range	26.36	197	P	P	21 04 28.5	-0.4
PLWZ	Palliser	26.39	192	P	P	21 04 27.3	-1.9
THZ	Tophouse	27.13	196	P	P	21 04 33.9	-1.9
KHZ	Kahutara	27.58	195	P	P	21 04 37.1	-2.5
LTZ	Lake Taylor	28.25	196	P	P	21 04 43.3	-2.3
LTZ				IAmb	IAmb	21 04 47.1	
	comp=Z,18nm,0.7s						
FOZ	Fox Glacier	29.65	199	P	P	21 04 56.0	-1.8
FOZ				IAmb	IAmb	21 04 57.8	
	comp=Z,43nm,1.2s						
WKZ	Wanaka	31.07	199	P	P	21 05 08.3	-1.8
WHZ	Wether Hill Ro	32.36	199	P	P	21 05 19.8	-1.3
CTAO	Charters Tower	34.78	258	P	P	21 05 40.8	-1.3
STKA	Stephens Creek	40.48	239	P	P	21 06 28.6	-0.3
	comp=Z,5.7nm,0.6s,baz=89,slow=11,SNR=11						
STKA	Stephens Creek	40.48	239	P	P	21 06 28.4	-0.5
WR0	Warramunga Arr	45.79	257	P	P	21 07 09.0	-1.8
WB0	Warramunga Arr	45.94	258	P	P	21 07 10.6	-1.3
WB0				IAmb	IAmb	21 07 11.7	
	comp=Z,16nm,0.8s						
WB2	Warramunga Arr	45.97	257	P	P	21 07 10.2	-1.9
WB2				IAmb	IAmb	21 07 12.1	
	comp=Z,13nm,0.8s						
WRAB	Tennant Creek	45.97	257	P	P	21 07 10.4	-1.8
WRAB				IAmb	IAmb	21 07 12.0	
	comp=Z,12nm,0.8s						
WRA	Warramunga Arr	45.98	257	P	P	21 07 11.2	-1.0
	comp=Z,7.7nm,0.6s,baz=92,slow=6.5,SNR=80						
WRA	Warramunga Arr	45.98	257	P	P	21 07 10.3	-2.0
AS31	Alice Springs	46.30	252	P	P	21 07 14.0	-0.7
AS31				IAmb	IAmb	21 07 14.9	
	comp=Z,16nm,0.6s						
ASAR	Alice Springs	46.30	252	P	P	21 07 14.2	-0.5
	comp=Z,50nm,0.7s,baz=85,slow=7.9,SNR=488						
ASAR				ScP	ScP	21 11 56.2	+5.0
	comp=Z,0.7nm,0.8s,baz=100,slow=4.2,SNR=4.6						
ASAR				S	S	21 13 26.2	-1.7
	comp=Z,1.7nm,1.1s,baz=80,slow=15,SNR=7.1						
SOEI	Soe	57.06	269	P	P	21 08 33.5	+0.3
SOEI				IAmb	IAmb	21 08 44.2	
	comp=Z,16nm,0.6s						
SBA	Scott Base	62.51	184	P	P	21 09 10.6	+2.2
VNDA	Vanda	62.55	185	P	P	21 09 10.6	+1.9
	comp=Z,0.9nm,0.5s,baz=354,slow=6.6,SNR=18						
VNDA	Vanda	62.55	185	P	P	21 09 10.4	+1.7
MJAR	Matsushiro Arr	66.87	322	P	P	21 09 36.1	-0.7
	comp=Z,2.2nm,1.0s,baz=132,slow=3.5,SNR=4.2						
JAGI	Jajag, Banyuwa	67.08	267	P	P	21 09 37.4	-1.1
UGM	Wanagama	70.70	267	P	P	21 10 00.7	+0.1
PETK	Petropavlovsk-	71.97	345	P	P	21 10 07.0	-0.1
	comp=Z,3.7nm,0.9s,baz=145,slow=9.0,SNR=3.9						
QSPA	South Pole Qui	74.18	180	P	P	21 10 21.5	+1.5
SAO	San Andreas Ge	74.29	44	P	P	21 10 21.9	+1.0
SAO				IAmb	IAmb	21 10 58.4	
	comp=Z,22nm,1.2s						
HOPS	Hopland Field	74.51	41	P	P	21 10 24.1	+2.0
KMRM	Mail Ridge	74.83	40	P	P	21 10 25.5	+1.5
JCC	Jacoby Creek,	74.99	39	P	P	21 10 27.1	+2.4
KHMM	Horse Mountain	75.21	39	P	P	21 10 28.4	+2.3
O02D	Mt. Diablo Mer	75.38	40	P	P	21 10 28.8	+1.8
	baz=234,SNR=5.2						
KRMB	Red Mountain	75.49	39	P	P	21 10 29.8	+2.1
MURC	Murrieta	75.55	48	P	P	21 10 29.8	+1.6
	baz=239						
EDW2	Edwards Air Fo	75.64	47	P	P	21 10 30.5	+1.9
	baz=239						
CMB	Columbia Colle	75.70	43	P	P	21 10 30.1	+1.3
CMB				IAmb	IAmb	21 10 31.2	
	comp=Z,11nm,0.9s						
ISA	Isabella, Lake	75.71	46	P	P	21 10 30.7	+1.6
	baz=238						
ISA	Isabella, Lake	75.71	46	P	P	21 10 30.2	+1.2
ISA				IAmb	IAmb	21 10 31.7	
	comp=Z,9.3nm,1.1s						
MONP2	Monument Peak	75.76	49	P	P	21 10 31.4	+1.9
	baz=240						
WDC	Whiskeytown Da	75.77	40	P	P	21 10 30.3	+1.2
ORV	Oroville	75.83	41	P	P	21 10 30.8	+1.3
IKP	In-Ko-Pah, Jac	75.87	50	P	P	21 10 32.0	+2.0
	baz=240						
N02D	Trinity Center	75.89	40	P	P	21 10 31.4	+1.5
	baz=234						
M02C	Callahan	76.05	39	P	P	21 10 32.6	+1.9
	baz=234						
L02E	Cave Junction	76.06	38	P	P	21 10 31.8	+1.1
	baz=233						
O03E	Paynes Creek	76.06	41	P	P	21 10 32.2	+1.4
	baz=235						
YBH	Yreka Blue Hor	76.34	39	P	P	21 10 34.0	+1.6
YBH				IAmb	IAmb	21 10 35.8	
	comp=Z,9.9nm,0.9s						
K02D	Willamette Mer	76.34	38	P	P	21 10 34.0	+1.7
	baz=233						
MDPB	Devils Postpil	76.34	44	P	P	21 10 34.2	+1.4
MDPB				IAmb	IAmb	21 10 35.2	
	comp=Z,9.7nm,0.8s						
CWC	Cottonwood Cre	76.39	46	P	P	21 10 34.4	+1.6
	baz=238						
BELC	Belle Mtn. Jos	76.61	49	P	P	21 10 35.6	+1.5
	baz=240						
GSC	Goldstone, Bar	76.69	47	P	P	21 10 35.9	+1.4
	baz=239						
HUMO	Hull Mountain	76.71	38	P	P	21 10 36.3	+2.0
SLBS	Sierra La Lagu	76.72	60	P	P	21 10 36.6	+1.8
SLBS				IAmb	IAmb	21 11 03.3	
	comp=Z,16nm,1.2s						
HEC	Hector,Ludlow	76.79	48	P	P	21 10 36.4	+1.4
	baz=240						
PNTR	Pine Nut	76.79	43	P	P	21 10 36.7	+1.6
PNTR				IAmb	IAmb	21 10 37.8	
	comp=Z,16nm,0.9s						
L04D	Klamath Falls	76.87	39	P	P	21 10 36.5	+1.2
	baz=234						
VCNR	Virginia City	76.87	42	P	P	21 10 37.1	+1.6
VCNR				IAmb	IAmb	21 10 38.1	
	comp=Z,7.7nm,0.8s						
YERR	Yerington	76.97	43	P	P	21 10 37.3	+1.2
YERR				IAmb	IAmb	21 10 38.5	
	comp=Z,9.7nm,0.9s						
QSM	Queen of Sheba	76.98	46	P	P	21 10 37.1	+1.2
LCH	Last Change Ra	77.10	45	P	P	21 10 38.3	+1.6
FURC	Furnace Creek,	77.24	46	P	P	21 10 38.9	+1.6
	baz=239						
RYN	Ryan	77.25	43	P	P	21 10 39.1	+1.5
RYN				IAmb	IAmb	21 10 40.1	
	comp=Z,8.4nm,1.0s						
PAHR	Pah Rah Range	77.27	42	P	P	21 10 39.2	+1.5
PAHR				IAmb	IAmb	21 10 40.2	
	comp=Z,10nm,1.0s						
NVAR	Mina Array Bea	77.29	44	P	P	21 10 39.4	+1.5
	comp=Z,5.6nm,0.7s,baz=226,slow=9.0,SNR=18						
NVAR	Mina Array Bea	77.29	44	P	P	21 10 39.5	+1.6
SHOC	Shoshone, Teco	77.36	47	P	P	21 10 39.5	+1.4
	baz=240						
TUQ	Turquoise Moun	77.38	47	P	P	21 10 39.8	+1.5
	baz=240						
NV11	Mina Array Sit	77.39	44	P	P	21 10 39.7	+1.4
NV11				IAmb	IAmb	21 10 40.9	
	comp=Z,10nm,1.0s						
NJ2	Nanjing	77.40	309⇑	iP	P	21 10 41.2	+2.9
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
K04D	Chiloquin, OR	77.44	39	P	P	21 10 39.8	+1.3
	baz=234						
O18K	Koktuh Hills	77.57	11	P	P	21 10 39.4	+0.8
	baz=202						
O18K	Koktuh Hills	77.57	11	P	P	21 10 39.6	+1.0
O18K				IAmb	IAmb	21 10 39.9	
	comp=Z,13nm,0.8s						
J04D	Umpqua Nationa	77.58	38	P	P	21 10 40.6	+1.3
	baz=234						
I04A	Tendick Farm,	77.73	37	P	P	21 10 41.0	+1.1
	baz=234						
KVN	Kaiserville	77.75	43	P	P	21 10 41.5	+1.2
KVN				IAmb	IAmb	21 10 42.7	
	comp=Z,8.4nm,0.8s						
MOD	Modoc Plateau	77.91	40	P	P	21 10 42.1	+1.1
H04D	Lebanon	77.97	37	P	P	21 10 42.8	+1.7
	baz=233						
NEE2	Needles Airpor	77.98	48	P	P	21 10 43.4	+1.9
	baz=241						
K05A	Summer Lake	78.01	39	P	P	21 10 43.7	+2.0
K05A				IAmb	IAmb	21 10 44.5	
	comp=Z,14nm,1.1s						
O19K	Port Alsworth	78.05	12	P	P	21 10 41.2	0.0
	baz=203						
O19K	Port Alsworth	78.05	12	P	P	21 10 41.4	+0.2
J05D	Fort Rock, OR	78.13	38	P	P	21 10 43.9	+1.7

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         baz=235,SNR=8.3
BRSE  Bradley Lake S   78.38  13  P       P        21 10 43.9 +0.9
         baz=206
H04A  Detroit Lake     78.39  37  P       P        21 10 44.1 +0.7
H04A                              IAmb    IAmb     21 10 44.9
         comp=Z,10.0nm,1.0s
SHPR  Sheep Range      78.45  47  P       P        21 10 45.7 +1.6
PINE  Pine Mountain    78.59  38  P       P        21 10 46.1 +1.4
PINE                              IAmb    IAmb     21 10 47.7
         comp=Z,14nm,1.0s
I05D  Terrebonne, OR   78.68  37  P       P        21 10 46.3 +1.3
         baz=234
PRN   Pahroc Range     78.97  46  P       P        21 10 48.7 +1.8
PRN                               IAmb    IAmb     21 10 49.9
         comp=Z,13nm,1.1s
BMN   Battle Mountai   79.06  42  P       P        21 10 48.2 +0.9
BMN                               IAmb    IAmb     21 10 49.8
         comp=Z,10nm,0.8s
HOOD  Mount Hood Mea   79.07  36  P       P        21 10 47.6 +0.4
HOOD                              IAmb    IAmb     21 10 48.9
         comp=Z,13nm,1.1s
R11A  Troy Canyon, C   79.07  45  P       P        21 10 48.5 +1.1
         baz=240
R11A  Troy Canyon, C   79.07  45  P       P        21 10 48.0 +0.5
G05D  Wamic, OR        79.21  37  P       P        21 10 49.5 +1.7
         baz=234
WVOR  Wild Horse Val   79.23  40  P       P        21 10 49.0 +0.9
WVOR                              IAmb    IAmb     21 10 50.7
         comp=Z,10nm,1.0s
E04D  Cinebar          79.29  35  P       P        21 10 49.9 +1.7
         baz=233
D03D  Eldon            79.59  34  P       P        21 10 51.2 +1.5
         baz=232
I07A  Izee             79.61  38  P       P        21 10 51.4 +1.3
TUC   Tucson           79.69  52  P       P        21 10 51.4 +0.7
J08A  Circle Bar Ran   79.84  39  P       P        21 10 52.1 +0.8
J08A                              IAmb    IAmb     21 10 53.9
         comp=Z,11nm,1.1s
SUA   Susitna One      79.94  13  P       P        21 10 51.9 +0.5
         baz=206
CCUT  Cedar City       80.21  46  P       P        21 10 55.2 +1.6
SPR3  Spring Creek 3   80.25  45  P       P        21 10 54.8 +1.0
SPR3                              IAmb    IAmb     21 10 56.0
         comp=Z,11nm,1.3s
L20K  Farewell, AK     80.25  11  P       P        21 10 52.8 -0.1
         baz=203
TTA   Tatalina         80.30  10  P       P        21 10 53.8 +0.6
         baz=201
M22K  Willow           80.33  13  P       P        21 10 54.3 +1.1
         baz=206
PMR   Palmer           80.40  13  P       P        21 10 53.6  0.0
         baz=208
ELK   Elko             80.51  43  P       P        21 10 55.8 +0.7
B05A  Bryant           80.56  34  P       P        21 10 56.0 +1.2
         baz=233
G08A  Pilot Rock       80.61  38  P       P        21 10 56.6 +1.3
G08A                              IAmb    IAmb     21 10 58.3
         comp=Z,11nm,1.2s
CUT   Chulitna         80.88  12  P       P        21 10 56.0 -0.2
         baz=206
BMRM  Bremner River    80.94  16  P       P        21 10 56.2 -0.4
         baz=212
SCM   Sheep Creek Mo   81.02  14  P       P        21 10 57.1 +0.1
         baz=209
X18A  Snowflake        81.29  50  IAmb    IAmb     21 11 24.9
         comp=Z,9.5nm,0.6s
PNL   Peninsula        81.33  18  P       P        21 10 59.2 +0.6
         baz=217
BMO   Blue Mountains   81.35  39  P       P        21 10 59.7 +0.6
BMO                               IAmb    IAmb     21 11 01.4
         comp=Z,14nm,1.6s
N25K  Chitina, Valde   81.48  15  P       P        21 10 59.7 +0.2
         baz=212
MFID  Camas Ranch      81.50  40  P       P        21 11 01.0 +1.1
MFID                              IAmb    IAmb     21 11 02.4
         comp=Z,12nm,1.2s
J20K  Nowinta River    81.77  10  P       P        21 11 01.2 +0.4
         baz=202
CTG   Chitna Glacier   81.81  17  P       P        21 11 01.8 +0.6
         baz=215
TRF   Thorofare Moun   81.82  12  P       P        21 11 00.7 -0.5
         baz=206
CHUM  Lake Minchumin   81.83  11  P       P        21 11 00.6 -0.4
         baz=204
F10A  Beach Ranch, E   82.00  38  P       P        21 11 02.9 +0.4
RND   Reindeer         82.07  13  IAmb    IAmb     21 11 04.4
         comp=Z,21nm,1.3s
DHY   Denali Highway   82.10  13  P       P        21 11 02.6  0.0
         baz=209
BPAW  Bear Paw Mtn.    82.27  11  P       P        21 11 03.6 +0.3
         baz=206
MCK   McKinley         82.35  12  P       P        21 11 04.0 +0.3
         baz=208
MCK   McKinley         82.35  12  IAmb    IAmb     21 11 04.8
         comp=Z,12nm,1.0s
HLID  Hailey           82.46  41  P       P        21 11 06.4 +1.4
         baz=240
HLID  Hailey           82.46  41  P       P        21 11 05.7 +0.7
HLID                              IAmb    IAmb     21 11 07.8
         comp=Z,7.2nm,0.8s
HLID                                      pP       21 12 40.2 -4.5
M26K  Nabesna, AK      82.56  15  P       P        21 11 05.5 +0.6
         baz=213,SNR=6.8
M26K  Nabesna, AK      82.56  15  IAmb    IAmb     21 11 07.1
         comp=Z,15nm,1.2s
YUK6  Outpost Mounta   82.66  18  P       P        21 11 06.1 +0.5
         baz=218
YUK3  Moose Creek      82.72  17  P       P        21 11 06.4 +0.5
         baz=216,SNR=5.2
M27K  Edge Creek, AK   82.82  16  P       P        21 11 07.1 +0.8
         baz=214
M27K  Edge Creek, AK   82.82  16  IAmb    IAmb     21 11 08.3
         comp=Z,12nm,1.1s
HYT   Haines Junctio   82.82  18  P       P        21 11 07.5 +1.1
         baz=218
L26K  Log Cabin Wild   83.00  15  P       P        21 11 07.8 +0.8
         baz=213
L26K  Log Cabin Wild   83.00  15  P       P        21 11 07.8 +0.8
L26K                              IAmb    IAmb     21 11 08.8
         comp=Z,6.1nm,0.8s
I21K  Tanana           83.07  11  P       P        21 11 07.7 +0.4
         baz=204
NEA2  Nenana           83.08  12  P       P        21 11 07.2 -0.2
         baz=207
BVCY  Beaver Creek     83.13  16  P       P        21 11 08.5 +0.7
         baz=215,SNR=5.3
MLY   Manley           83.16  11  P       P        21 11 07.3 -0.5
         baz=206
WRH   Wood River Hil   83.17  12  P       P        21 11 07.8  0.0
RIDG  Independent Ri   83.25  14  P       P        21 11 08.8 +0.5
         baz=211
NEW   Newport          83.30  36  P       P        21 11 09.5 +0.6
         baz=237
DOT   Dot Lake         83.35  14  IAmb    IAmb     21 11 10.2
         comp=Z,10nm,0.8s
HDA   Harding Lake     83.36  13  P       P        21 11 08.8  0.0
         baz=209,SNR=11
CCB   Clear Creek Bu   83.39  12  IAmb    IAmb     21 11 09.7
         comp=Z,13nm,0.8s
L27K  Beaver Creek,    83.41  15  P       P        21 11 09.6 +0.4
         baz=214
BCYI  Bear Canyon      83.47  40  P       P        21 11 11.1 +1.0
WHY   Whitehorse       83.52  20  P       P        21 11 10.5 +0.7
         baz=221
I23K  Minto, Yukon-K   83.52  12  P       P        21 11 09.9 +0.3
         baz=207
TCOL  CIGO, UAF Yank   83.58  12  P       P        21 11 10.0 +0.1
         baz=208
MDM   Murphy Dome      83.58  12  IAmb    IAmb     21 11 10.7
         comp=Z,15nm,1.1s
COLA  College          83.58  12  P       P        21 11 09.8  0.0
         baz=208
COLA  College          83.58  12  P       P        21 11 08.8 -1.0
MNTX  Cornudas Mount   83.62  55  P       P        21 11 12.7 +1.9
         baz=247
MNTX  Cornudas Mount   83.62  55  P       P        21 11 12.2 +1.3
SCRK  Sand Creek       83.65  14  P       P        21 11 10.7 +0.3
         baz=212,SNR=8.4
SCRK  Sand Creek       83.65  14  IAmb    IAmb     21 11 11.8
         comp=Z,7.0nm,0.8s
IL31                   83.69  13  IAmb    IAmb     21 11 11.9
         comp=Z,12nm,1.1s
ILAR  Eielson Array    83.69  13  P       P        21 11 10.6 +0.1
         comp=Z,7.3nm,0.9s,baz=225,slow=5.9,SNR=42
J25K  Salcha River,    83.88  13  P       P        21 11 11.8 +0.3
         baz=211,SNR=9.1
POKR  Poker Plat Res   83.88  12  P       P        21 11 11.6 +0.2
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         baz=209
ANMO  Albuquerque      84.08  51  P       P        21 11 14.9 +1.6
         baz=246
ANMO  Albuquerque      84.08  51  P       P        21 11 14.9 +1.6
TX31  Lajitas Ar. Si   84.09  57  P       P        21 11 15.0 +1.6
TX32  Lajitas Array    84.09  57  IAmb    IAmb     21 11 17.1
         comp=Z,14nm,1.1s
TXAR  Lajitas Array    84.09  57  P       P        21 11 16.0 +2.6
         comp=Z,6.6nm,0.8s,baz=223,slow=6.8,SNR=59
J26L  Joseph Creek     84.19  14  P       P        21 11 14.0 +0.9
         baz=212,SNR=12
MSO   Missoula         84.39  38  P       P        21 11 16.1 +1.6
         baz=240
M30M  Minto, Yukon     84.40  18  P       P        21 11 14.6 +0.5
         baz=219,SNR=5.9
DLMT  Dillon           84.48  40  IAmb    IAmb     21 11 17.6
         comp=Z,12nm,1.1s
PRP   Porcupine Dome   84.63  13  P       P        21 11 15.2  0.0
         baz=211,SNR=5.8
PRP   Porcupine Dome   84.63  13  IAmb    IAmb     21 11 16.5
         comp=Z,13nm,1.3s
TPAW  Teton Pass       84.63  42  P       P        21 11 16.5 +0.5
TPAW                              IAmb    IAmb     21 11 18.8
         comp=Z,15nm,1.4s
REDW  Red Top Meadow   84.64  42  IAmb    IAmb     21 11 18.6
         comp=Z,15nm,1.4s
M31M  Drury Creek, Y   84.84  19  P       P        21 11 17.0 +0.8
         baz=221
DAWY  Dawson           84.87  16  P       P        21 11 16.8 +0.5
         baz=216,SNR=5.1
DAWY  Dawson           84.87  16  IAmb    IAmb     21 11 18.1
         comp=Z,7.3nm,0.9s
LOHW  Long Hollow      84.91  42  P       P        21 11 18.8 +1.5
LOHW                              IAmb    IAmb     21 11 20.1
         comp=Z,14nm,1.6s
S22A  4UR Ranch, Cre   84.94  49  P       P        21 11 19.4 +1.7
         baz=246
EGAK  Eagle            85.00  15  P       P        21 11 17.9 +1.0
         baz=215
EGAK  Eagle            85.00  15  P       P        21 11 17.4 +0.6
EGAK                              IAmb    IAmb     21 11 19.1
         comp=Z,12nm,1.1s
FLWY  Flagg Ranch      85.07  42  IAmb    IAmb     21 11 20.9
         comp=Z,16nm,1.5s
BOZ   Bozeman (W)      85.19  40  P       P        21 11 19.9 +1.5
         baz=242
BOZ   Bozeman (W)      85.19  40  P       P        21 11 19.8 +1.3
BOZ                               IAmb    IAmb     21 11 21.2
         comp=Z,14nm,1.3s
BW06  Boulder Array    85.21  43  P       P        21 11 19.5 +0.7
         baz=243
BW06  Boulder Array    85.21  43  IAmb    IAmb     21 11 20.6
         comp=Z,15nm,1.6s
PD31  Pinedale Array   85.21  43  IAmb    IAmb     21 11 20.6
         comp=Z,15nm,1.6s
PDAR  Pinedale Array   85.21  43  P       P        21 11 19.9 +1.1
         comp=Z,1.1nm,0.5s,baz=207,slow=3.0,SNR=7.7
H17A  Grant Village    85.29  41  P       P        21 11 21.4 +2.2
         baz=242
H17A  Grant Village    85.29  41  IAmb    IAmb     21 11 22.9
         comp=Z,6.5nm,0.8s
HRY   Holter Researc   85.60  39  P       P        21 11 20.8 +0.4
SDCO  Great Sand Dun   85.90  49  P       P        21 11 23.9 +1.6
         baz=246
MAW   Mawson           86.10 199  P       P        21 11 24.0 +1.6
         comp=Z,4.2nm,1.1s,baz=111,slow=6.6,SNR=6.4
MMPY  Sheldon Lake,    86.13  20  P       P        21 11 23.8 +1.3
         baz=224
I29M  Ogilvie Camp,    86.19  15  P       P        21 11 23.6 +1.0
         baz=217
TGTN  Hyland Airport   86.37  21  P       P        21 11 24.8 +1.1
         baz=227
RLMT  Red Lodge        86.45  41  P       P        21 11 26.2 +1.6
         baz=243
RLMT  Red Lodge        86.45  41  IAmb    IAmb     21 11 27.4
         comp=Z,5.9nm,0.9s
HHC   Hu-ho-hao-te     86.54 314  eP      P        21 11 27.8 +2.7
HHC                               pmax    pmax
         comp=Z,23nm,1.1s
HHC                               pmax    pmax
         comp=Z,45nm,5.4s
833A  Chaparral WMA,   87.24  60  P       P        21 11 30.3 +1.8
         baz=250
LAO   LASA Array       89.04  41  P       P        21 11 38.6 +2.0
         baz=246
CMAR  Chiang Mai Arr   89.11 289  P       P        21 11 39.2 +1.7
         comp=Z,0.4nm,0.6s,baz=116,slow=3.0,SNR=5.1
RSSD  Black Hills      89.43  44  P       P        21 11 39.4 +0.7
         baz=247
RSSD  Black Hills      89.43  44  P       P        21 11 39.2 +0.6
RSSD                              IAmb    IAmb     21 11 40.5
         comp=Z,9.5nm,1.1s
INK   Inuvik           89.67  15  P       P        21 11 39.6 +0.7
         baz=222
LZH   Lanzhou          90.42 307  eP      P        21 11 45.8 +2.5
LZH                               pP      pP       21 13 23.3 -1.4
LZH                               sP      sP       21 14 00.7  -10
LZH                               pmax    pmax
         comp=Z,16nm,0.9s
DGMT  Dagmar           91.01  40  P       P        21 11 47.0 +1.3
         baz=247
YKA   Yellowknife Ar   92.08  24  P       P        21 11 50.5 +0.4
         comp=Z,1.1nm,0.7s,baz=220,slow=2.8,SNR=4.9
SNAA  Sanae            92.61 178  P       P        21 11 54.1 +1.4
VNA3  Neumayer Olymp   92.71 176  P       P        21 11 54.6 +1.6
VNA2  Neumayer--Watz   93.16 177  P       P        21 11 56.4 +1.2
         baz=194,slow=5.9
A36M  Sachs Harbour    94.27  14  P       P        21 12 00.4 +0.4
         baz=230
A36M  Sachs Harbour    94.27  14  P       P        21 12 00.3 +0.3
ECSD  EROS Data Cent   94.33  46  P       P        21 12 01.5 +0.5
         baz=252
WVT   Waverly          98.84  55          pP       21 13 54.5 -8.9
ARCES ARCESS Array B  124.47 350  PKP     PKiKP    21 17 37.6 +0.2
         comp=Z,3.9nm,0.8s,baz=97,slow=0.6,SNR=5.1
FINES FINESS Array B  131.48 345  PKP     PKiKP    21 17 52.2 +0.6
         comp=Z,2.5nm,1.0s,baz=60,slow=5.5,SNR=1.9
ASSE  Asse, Remlinge  143.25 352  ePKPbc  PKPbc    21 18 10.9 +0.6
         baz=16,slow=3.2
KOLS  Kolonicke sedl  143.30 338  ePKP    PKiKP    21 18 14.7 -1.5
CRVS  Cervenica-Dubn  143.61 339  ePKP    PKPdf    21 18 13.0 -0.2
CLL   Collm           143.67 349  i (PKPdf) PKPbc  21 18 11.6 -0.1
         comp=Z,4.0nm,0.6s
CLL   Collm           143.67 349  ePKPbc  PKPbc    21 18 11.8  0.0
         baz=16,slow=3.2
OSTC  Ostas           143.69 345  ePKP    PKPdf    21 18 12.5 -0.8
CHVC  Chvalec         143.70 345  ePKP    PKPdf    21 18 13.2 -0.2
CFR   Carcaliu        143.73 329  ⇑P      PKPdf    21 18 13.4  0.0
UPC   Upice           143.78 345  ePKP    PKPdf    21 18 13.3 -0.2
TPGR  Topolog         143.81 328  ⇑P      PKPdf    21 18 13.4 -0.3
DPC   Dobruska-Polom  143.85 345  ePKP    PKPdf    21 18 13.0 -0.7
TRPA  Tarpa           143.88 337  ⇑P      PKPdf    21 18 13.8 +0.1
BMR   Baia Mare       143.88 336  ⇑P      PKPdf    21 18 13.0 -0.7
BRG   Berggiesshubel  143.90 348  ePKPbc  PKPbc    21 18 12.8 +0.3
         baz=16,slow=3.2
VRI   Vrincioaia      143.90 331  ⇑P      PKPdf    21 18 13.9 +0.1
FBE   Freiberg        143.97 348  ePKPbc  PKPdf    21 18 13.2 -0.6
         baz=16,slow=3.2
BR131 Keskin Array S  143.98 317          PKPdf    21 18 13.8 -0.5
BRTR  Keskin Array B  143.98 317  PKP     PKPdf    21 18 14.3  0.0
         comp=Z,9.7nm,0.9s,baz=90,slow=2.5,SNR=19
LANS  Liptovska Anna  144.06 341  ePKP    PKPdf    21 18 15.0 +1.0
MORC  Moravsky Berou  144.06 343  ⇑P      PKPab    21 18 13.0 -0.2
MORC  Moravsky Berou  144.06 343  eP      PKPdf    21 18 13.9 -0.1
MORC  Moravsky Berou  144.06 343          PKPab    21 18 13.2  0.0
DOPR  Dopca           144.44 332  ⇑P      PKPdf    21 18 15.7 +0.9
ISR   Istrita         144.54 330  ⇑P      PKPab    21 18 16.3 +1.2
MLR   Muntele Rosu    144.55 331  ⇓P      PKPab    21 18 16.5 +1.3
MOX   Moxa            144.55 350  ePKPbc  PKPab    21 18 15.4 +0.4
         baz=16,slow=3.2
PRU   Pruhonice       144.61 347  ePKP    PKPab    21 18 15.1 -0.1
WERD  Werda           144.62 349  ePKPbc  PKPab    21 18 15.8 +0.6
         baz=16,slow=3.2
TANN  Tannenbergstha  144.62 349  ePKPbc  PKPab    21 18 15.8 +0.5
         baz=16,slow=3.2
UBBA  Unterbreizbach  144.62 352  ePKPbc  PKPab    21 18 14.8 -0.2
         baz=16,slow=3.2
GUNZ  Gunzen          144.70 349  ePKPbc  PKPab    21 18 16.2 +0.7
         baz=16,slow=3.2
VRAC  Vranov          144.74 344  ⇑P      PKPab    21 18 16.3 +0.6
VRAC  Vranov          144.74 344  eP      PKPab    21 18 16.0 +0.3
WERN  Wernitzgruen    144.76 349  ePKPbc  PKPab    21 18 16.6 +0.8
         baz=16,slow=3.2
NKC   Novy Kostel     144.80 349  ePKP    PKPab    21 18 16.6 +0.7
VYHS  Vyhne           144.83 341  ePKP    PKPab    21 18 17.3 +1.2
JAVC  Velka Javorina  144.85 343  eP      PKiKP    21 18 17.7 -1.7
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DRGR                  144.91 336  ⇑P      PKPab    21 18 16.4 -0.1
VOIR                  145.00 332  ⇑P      PKPab    21 18 18.0 +1.1
KRUC  Moravsky        145.02 344  eP      PKPab    21 18 16.8 +0.1
MANZ  Manzenberg      145.10 349  ePKPbc  PKPab    21 18 17.3 +0.2
         baz=16,slow=3.2
ARR   Arges           145.24 332  ⇑P      PKPab    21 18 18.1 +0.2
ROTZ  Rotzenmuhle     145.29 349  ePKPbc  PKPab    21 18 18.2 +0.4
         baz=16,slow=3.2
TNS   Taunus Mts      145.40 353  ePKPbc  PKiKP    21 18 19.5 -1.0
         baz=16,slow=3.2
MODS  Modra-Piesok    145.40 343  ePKP    PKPab    21 18 18.1 -0.2
BGES  Gesves          145.51 357  dPKiKP  PKiKP    21 18 21.2 +0.6
KHC   Kasperske Hory  145.63 347  ePKP    PKPbc    21 18 18.2 +0.2
CKRC  Cesky Krumlov   145.76 346  ePKP    PKPbc    21 18 18.4 +0.1
WET   Wettzell        145.76 348  ePKPbc  PKPab    21 18 19.9 +0.2
         baz=16,slow=3.2
GEC2  GERESS Array S  145.87 347  ePKPbc  PKPab    21 18 19.7 -0.5
         baz=16,slow=3.2
GERES GERESS Array B  145.87 347  PKPbc   PKPab    21 18 19.4 -0.8
         comp=Z,2.2nm,0.7s,baz=33,slow=3.2,SNR=16
GZR   Gura Zlata      146.02 334  ⇓P      PKPbc    21 18 19.3  0.0
WLF   Walferdange     146.16 356  dPKPab  PKPab    21 18 20.9 -0.3
WLF   Walferdange     146.16 356  ePKPbc  PKPab    21 18 21.2  0.0
         baz=16,slow=3.2
CONA  Conrad Observa  146.20 344  eP      PKPab    21 18 20.9 -0.6
         comp=Z,8.3nm,0.8s
BZS   Buzias          146.31 336  ⇓P      PKPbc    21 18 19.3 -0.7
MOA   Molln           146.68 346  eP      PKPbc    21 18 21.7 +0.7
         comp=Z,6.3nm,0.8s
PLVB  Pleven          146.76 330  ⇑P      PKPbc    21 18 21.5 +0.2
MORH  Mrgy, Hungar    146.90 339  ⇑P      PKPdf    21 18 20.0 +1.1
FUR   Furstenfeldbru  147.00 349  ePKPbc  PKiKP    21 18 23.4 -0.4
         baz=16,slow=3.2
RJOB  Jochberg        147.12 347  ePKPbc  PKiKP    21 18 23.2 -0.9
         baz=16,slow=3.2
BFO   Black Forest    147.28 353  ePKPbc  PKiKP    21 18 23.4 -1.0
         baz=16,slow=3.2
SOKA  Soboth          147.57 344  eP      PKPbc    21 18 23.7 +0.2
         comp=Z,4.5nm,0.9s
UBR   Ueberruh        147.67 350  ePKPbc  PKiKP    21 18 24.4 -0.9
         baz=16,slow=3.2
WATA  Walderalm       147.75 349  eP      PKiKP    21 18 24.7 -0.9
         comp=Z,5.3nm,0.9s
RETA  Reutte          147.75 350  eP      PKiKP    21 18 24.5 -0.9
         comp=Z,2.1nm,0.5s
WTTA  Wattenberg      147.80 348  i P     PKPbc    21 18 24.7 +0.5
         comp=Z,8.4nm,0.7s,SNR=5.7
MOTA  Moosalm         147.82 349  eP      PKPbc    21 18 24.5 +0.4
         comp=Z,6.0nm,1.0s
OBKA  Obir            147.86 344  i P     PKPbc    21 18 24.3 +0.1
         comp=Z,4.7nm,1.7s
SQTA  Sankt Quirin    147.93 349  i P     PKPbc    21 18 25.0 +0.6
         comp=Z,5.9nm,0.8s
MYKA  Terra Mystica   147.97 346  i P     PKPbc    21 18 24.3 -0.2
         comp=Z,1.8nm,0.5s
DAVA  Damuels         148.09 351  eP      PKiKP    21 18 25.6 -0.7
         comp=Z,9.4nm,0.9s
ABTA  Abfaltersbach   148.12 347  i P     PKPbc    21 18 24.8 -0.1
         comp=Z,6.4nm,0.7s
FETA  Feichten        148.20 349  eP      PKiKP    21 18 25.9 -0.7
         comp=Z,2.7nm,0.7s
STAL  STALIGIAL       148.53 347          PKPbc    21 18 25.2 -0.7
TUE   Stuetta         148.97 351          PKPbc    21 18 26.9 -0.2
TORD  Torodi Ar. Bea  177.16 162  PKP     PKPdf    21 18 48.7 -0.5
         comp=Z,1.0nm,0.9s,baz=29,slow=1.7,SNR=5.0
TORD                              PKPab   PKPab    21 20 36.8 +0.5
         comp=Z,0.7nm,0.8s,baz=222,slow=4.4,SNR=3.9
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PGC ***10*** *21:00:11.1±0.3, 48°.05N×124°.63W, h44^{km}, ML2.6, ML2.0/22, 102km Wsw of Victoria, Bc Vancouver Island, Canada Region*

PNSN ***10*** *21:00:12.0, 48°.00N×124°.63W, h38^{km}, MD2.9, Fault plane solution: NP1:φ$_s$140.00000°, δ45.00000°, λ-60.00000°.*

SEA ***10*** *21:00:12±1.7, 48°.00N±0°.03×124°.63W±0°.06, h38^{km}±4^{km}, ML2.6/22, ML2.4/27(NEIC), Error ellipse: s-maj=6.2km s-min=3.8km az=69.0*

NEIC ***10*** *21:00:12.2±1.4, 48°.02N±0°.01×124°.65W±0°.08, h34^{km}±8^{km}, Error ellipse: s-maj=7.5km s-min=1.5km az=87.0*

ISC 10 21:00:12.2±1.5**, 48°.01N**±0°.03×**124°.71W**±0°.03**, h35**^{km}±1^{km}**, n112, σ0^{s}.91**/146**, Vancouver Island region**

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Code  Station Name      Δ°   AZ°     Phase ID          Time      Res
                                   Op      ISC       h  m  s    ISC
C03A  Quillayute Air    0.11 123           Pn       21 00 17.7 -0.9
C03A                                       Sn       21 00 21.9 -1.2
OTR   Olympics--Tyee    0.25  73           Pn       21 00 19.0 -0.8
OTR                                        Sn       21 00 24.6 -0.4
OCP   Olym-Cheeka Pk    0.29  11           Pn       21 00 19.9 -0.3
OCP                                        Sn       21 00 25.8 +0.1
OCP   Olym-Cheeka Pk    0.29  11   P       Pn       21 00 19.9 -0.3
OCP                                S       Sn       21 00 25.6  0.0
P403  Sandy Floe Qua    0.38  82           Pn       21 00 20.4 -0.9
P403                                       Sn       21 00 26.2 -1.3
OBC   Olympics--Boni    0.42  86           Pn       21 00 21.1 -0.8
OBC   Olympics--Boni    0.42  86   P       Pn       21 00 21.1 -0.8
OBC                                S       Sn       21 00 27.5 -1.1
PFB   Port Renfrew      0.59  17           Pn       21 00 23.2 -1.0
PFB   Port Renfrew      0.59  17   P       Pn       21 00 23.2 -1.0
PFB                                S       Sn       21 00 31.1 -1.5
OSD   Olympics--Snow    0.70 105           Pn       21 00 24.7 -1.2
OSD   Olympics--Snow    0.70 105   P       Pn       21 00 24.7 -1.2
STW   Striped Peak      0.71  78           Pn       21 00 24.8 -1.0
STW   Striped Peak      0.71  78   P       Pn       21 00 24.8 -1.0
STW                                S       Sn       21 00 34.1 -1.3
OLQ   Olympics--Lake    0.78 129           Pn       21 00 25.7 -1.0
B04A  Port Angeles      0.81  86           Pn       21 00 26.2 -1.0
B04A                               IAML             21 00 37.0
         comp=E,119nm,0.7s
B04A  Port Angeles      0.81  86           Pn       21 00 26.1 -1.0
B04A                                       Sn       21 00 36.8 -1.1
NLWA  Neilton Lookou    0.84 137           Pn       21 00 26.7 -0.9
NLWA                                       Sn       21 00 37.4 -1.3
NLWA  Neilton Lookou    0.84 137   IAML             21 00 37.4
         comp=E,141nm,0.3s
B928  Bamfield          0.87 341           Pn       21 00 27.4 -0.5
B928  Bamfield          0.87 341   P       Pn       21 00 27.5 -0.5
B928                               S       Sn       21 00 38.5 -1.0
BFSB  Bamfield          0.87 341   P       Pn       21 00 27.6 -0.5
BFSB                               S       Sn       21 00 38.5 -1.0
B926  Mesachie Lake     0.90  25           Pn       21 00 27.5 -0.9
B926                                       Sn       21 00 38.5 -1.6
B926  Mesachie Lake     0.90  25   P       Pn       21 00 27.4 -0.9
B926                               S       Sn       21 00 38.5 -1.6
CLRS  Cowichan Lake     0.90  25           Pn       21 00 27.5 -0.8
CLRS                               IAML             21 00 38.8
         comp=E,192nm,0.9s
CLRS                               IAML             21 00 39.1
         comp=N,114nm,0.4s
CLRS  Cowichan Lake     0.90  25   P       Pn       21 00 27.5 -0.8
CLRS                               S       Sn       21 00 38.6 -1.6
MGB   Mount Grey        0.99   1           Pn       21 00 29.3 -0.5
MGB   Mount Grey        0.99   1   P       Pn       21 00 29.1 -0.7
MGB                                S       Sn       21 00 41.6 -1.1
VGZ   Gonzales          1.01  66           Pn       21 00 28.6 -1.3
VGZ   Gonzales          1.01  66   P       Pn       21 00 28.6 -1.3
VGZ                                S       Sn       21 00 40.5 -2.3
B009  North Saanich     1.05  52   P       Pn       21 00 29.6 -0.9
B009                               S       Sn       21 00 42.4 -1.6
B010  North Saanich     1.05  52   P       Pn       21 00 29.5 -1.0
B010                               S       Sn       21 00 42.2 -1.7
PA12  PA12 Sannich      1.05  52   P       Pn       21 00 29.6 -0.9
PA12                               S       Sn       21 00 42.2 -1.7
PGC   Sidney            1.05  52           Pn       21 00 29.5 -1.0
PGC   Sidney            1.05  52   P       Pn       21 00 29.6 -0.9
PGC                                S       Sn       21 00 42.2 -1.7
B011  North Saanich     1.06  52           Pn       21 00 29.5 -1.0
B011  North Saanich     1.06  52   P       Pn       21 00 29.6 -1.0
B011                               S       Sn       21 00 42.4 -1.6
PA02  PA02 Ocean        1.06  52   P       Pn       21 00 29.6 -1.0
PA02                               S       Sn       21 00 42.2 -1.8
PA01  PA01 North        1.06  52   S       Sn       21 00 42.6 -1.4
B012  Ucluelet          1.07 329   S       Sn       21 00 43.1 -1.3
OZB   Mount Ozzard      1.09 332           Pn       21 00 30.7 -0.3
OZB   Mount Ozzard      1.09 332   IAML             21 01 10.4
         comp=N,65nm,1.9s
OZB   Mount Ozzard      1.09 332   P       Pn       21 00 30.6 -0.5
OZB                                S       Sn       21 00 43.7 -1.2
WISH  Wishkah           1.09 144   Pn      Pn       21 00 30.2 -0.9
WISH                               IAML             21 00 44.3
         comp=N,74nm,3.6s
WISH  Wishkah           1.09 144   S       Sn       21 00 44.0 -0.9
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SQM	**Sequim**	**1.11**	**86**		**Pn**	**21 00 31.2**	**-0.1**
HDW	**Hoodsport**	**1.17**	**107**		**Pn**	**21 00 31.5**	**-0.7**
HDW	**Hoodsport**	**1.17**	**107**	P	**Pn**	**21 00 31.5**	**-0.7**
D03D	**Eldon**	**1.19**	**113**		**Pn**	**21 00 31.9**	**-0.5**
B927	**Port Alberni**	**1.21**	**357**		**Pn**	**21 00 32.4**	**-0.2**
B927	**Port Alberni**	**1.21**	**357**	S	**Sn**	**21 00 46.8**	**-1.1**
B013	**Quilcene**	**1.22**	**99**		**Pn**	**21 00 32.4**	**-0.4**
B013	**Quilcene**	**1.22**	**99**		**Pn**	**21 00 32.2**	**-0.6**
GOBB	**Galiano Island**	**1.23**	**40**	P	**Pn**	**21 00 32.7**	**-0.3**
SNB	**Saturna Island**	**1.28**	**53**		**Pn**	**21 00 33.3**	**-0.4**
SNB	**Saturna Island**	**1.28**	**53**	P	**Pn**	**21 00 33.2**	**-0.4**
SNB				S	**Sn**	**21 00 48.4**	**-1.1**
NLLB	**Nanaimo Lost L**	**1.31**	**21**	P	**Pn**	**21 00 33.7**	**-0.3**
NLLB				S	**Sn**	**21 00 49.1**	**-1.2**
GHNB	**Nanoose**	**1.34**	**13**	P	**Pn**	**21 00 34.2**	**-0.1**
GHNB				S	**Sn**	**21 00 50.6**	**-0.3**
GNW	**Green Mountain**	**1.34**	**109**	P	**Pn**	**21 00 33.8**	**-0.7**
GNW				S	**Sn**	**21 00 49.7**	**-1.4**
MCW	**Mount Constitu**	**1.42**	**61**		**Pn**	**21 00 35.2**	**-0.4**
MCW	**Mount Constitu**	**1.42**	**61**	P	**Pn**	**21 00 35.2**	**-0.4**
A04D	**Lummi Island**	**1.51**	**61**		**Pn**	**21 00 36.6**	**-0.2**
BTB	**Buttle Lake**	**1.56**	**340**	S	**Sn**	**21 00 56.0**	**-0.7**
E03A	**Lebam**	**1.66**	**152**		**Pn**	**21 00 37.8**	**-1.0**
E03A				IAML		21 01 15.4	
	comp=E,49nm,2.6s						
E03A				IAML		21 01 28.4	
	comp=N,37nm,2.3s						
E03A	**Lebam**	**1.66**	**152**	P	**Pn**	**21 00 37.9**	**-0.9**
E03A				S	**Sn**	**21 00 56.5**	**-2.3**
SHB	**Sechelt**	**1.68**	**19**		**Pn**	**21 00 39.3**	**+0.1**
SHB	**Sechelt**	**1.68**	**19**	P	**Pn**	**21 00 39.3**	**+0.1**
SHB				S	**Sn**	**21 00 59.1**	**-0.6**
TXB	**Texada**	**1.70**	**6**	P	**Pn**	**21 00 39.4**	**0.0**
TXB				S	**Sn**	**21 00 59.7**	**-0.2**
B05A	**Bryant**	**1.77**	**81**		**Pn**	**21 00 40.2**	**-0.1**
CMW	**Cultus Mountai**	**1.78**	**76**	P	**Pn**	**21 00 40.3**	**-0.3**
JCW	**Jim Creek**	**1.87**	**83**		**Pn**	**21 00 41.7**	**0.0**
JCW	**Jim Creek**	**1.87**	**83**	P	**Pn**	**21 00 41.7**	**0.0**
HNBB	**Haney**	**1.91**	**47**	P	**Pn**	**21 00 42.2**	**-0.1**
HNBB				S	**Sn**	**21 01 04.2**	**-0.9**
HTW	**Haystack Looko**	**1.99**	**95**		**Pn**	**21 00 43.4**	**0.0**
A05A	**Maple Falls**	**2.00**	**59**	P	**Pn**	**21 00 43.8**	**+0.3**
A05A				S	**Sn**	**21 01 07.1**	**-0.3**
VDB	**Vedder Mountai**	**2.01**	**59**		**Pn**	**21 00 43.8**	**+0.1**
VDB	**Vedder Mountai**	**2.01**	**59**	P	**Pn**	**21 00 43.8**	**+0.1**
VDB				S	**Sn**	**21 01 06.6**	**-0.9**
MBW	**Mount Baker**	**2.02**	**66**		**Pn**	**21 00 43.2**	**-0.8**
MBW	**Mount Baker**	**2.02**	**66**	P	**Pn**	**21 00 44.3**	**+0.2**
MBW				S	**Sn**	**21 01 07.1**	**-1.0**
RATT	**Rattlesnake La**	**2.04**	**105**		**Pn**	**21 00 44.1**	**0.0**
C05A	**Tolt Reservoir**	**2.06**	**98**		**Pn**	**21 00 44.5**	**+0.2**
C05A	**Tolt Reservoir**	**2.06**	**98**	S	**Sn**	**21 01 07.9**	**-0.8**
RPW	**Rockport**	**2.18**	**77**		**Pn**	**21 00 46.2**	**+0.1**
RPW	**Rockport**	**2.18**	**77**	P	**Pn**	**21 00 46.2**	**+0.1**
RPW				S	**Sn**	**21 01 10.5**	**-1.3**
SHUK	**Shuksan-Mt. Ba**	**2.19**	**66**		**Pn**	**21 00 47.1**	**+0.8**
B06A	**Marblemount**	**2.21**	**75**		**Pn**	**21 00 46.6**	**+0.2**
B06A	**Marblemount**	**2.21**	**75**	P	**Pn**	**21 00 46.5**	**+0.2**
B06A				S	**Sn**	**21 01 11.8**	**-0.7**
OBSR	**Observation Ro**	**2.25**	**118**		**Pn**	**21 00 47.7**	**+0.4**
REMR	**Mount Rainier-**	**2.28**	**120**		**Pn**	**21 00 47.3**	**-0.2**
LON	**Longmire**	**2.34**	**122**		**Pn**	**21 00 48.1**	**-0.1**
LON	**Longmire**	**2.34**	**122**	IAML		21 01 14.8	
	comp=N,20nm,0.4s						
LON	**Longmire**	**2.34**	**122**	P	**Pn**	**21 00 48.1**	**-0.1**
LON				S	**Sn**	**21 01 14.3**	**-1.4**
ERK	**Elk Rock**	**2.35**	**136**		**Pn**	**21 00 49.5**	**+1.0**
PANH	**Panhandle Gap,**	**2.38**	**118**		**Pn**	**21 00 49.1**	**+0.2**
GPW	**Glacier Peak**	**2.40**	**86**		**Pn**	**21 00 49.7**	**+0.5**
GPW	**Glacier Peak**	**2.40**	**86**	P	**Pn**	**21 00 49.4**	**+0.2**
GPW				S	**Sn**	**21 01 16.9**	**-0.5**
SEPW	**September Lobe**	**2.50**	**136**		**Pn**	**21 00 51.8**	**+1.3**
LVP	**Lakeview Peak**	**2.50**	**140**		**Pn**	**21 00 51.6**	**+1.1**
C06D	**Leavenworth**	**2.56**	**91**		**Pn**	**21 00 51.8**	**+0.5**
WRW	**Wenatchee Ridg**	**2.58**	**92**		**Pn**	**21 00 52.0**	**+0.4**
HOPB	**Hope**	**2.58**	**56**	P	**Pn**	**21 00 51.6**	**+0.1**
F04A	**Amboy**	**2.60**	**142**	Pn	**Pn**	**21 00 50.8**	**-1.0**
F04A				IAML		21 01 32.6	
	comp=E,21nm,2.0s						
F04A				IAML		21 01 49.7	
	comp=N,19nm,4.8s						
LTY	**Liberty**	**2.83**	**104**	S	**Sn**	**21 01 27.2**	**-0.7**
CBSW	**Chelan Butte S**	**3.15**	**92**		**Pn**	**21 00 59.8**	**+0.4**
LLLB	**Lillooet**	**3.19**	**34**	Pn	**Pn**	**21 01 00.5**	**+0.6**
LLLB				IAML		21 01 48.6	
	comp=E,15nm,3.9s						
LLLB				IAML		21 01 50.7	
	comp=N,15nm,2.7s						
LLLB	**Lillooet**	**3.19**	**34**	P	**Pn**	**21 01 00.7**	**+0.7**
B08A	**Colville Reser**	**3.61**	**82**	Pn	**Pn**	**21 01 05.6**	**-0.2**
B08A				IAML		21 02 19.8	
	comp=E,8.9nm,4.3s						
B08A				IAML		21 03 18.1	
	comp=N,9.1nm,4.7s						
B08A	**Colville Reser**	**3.61**	**82**	P	**Pn**	**21 01 06.4**	**+0.6**
PNT	**Penticton**	**3.62**	**67**		**Pn**	**21 01 06.4**	**+0.6**
PNT	**Penticton**	**3.62**	**67**	P	**Pn**	**21 01 06.3**	**+0.6**
H04A	**Detroit Lake**	**3.75**	**151**	Pn	**Pn**	**21 01 08.2**	**+0.5**
YPT	**Yellepit**	**4.39**	**114**		**Pn**	**21 01 18.4**	**+2.0**
KHMM	**Horse Mountain**	**7.17**	**174**	Pn	**Pn**	**21 01 54.4**	**-0.2**

IDC ***10*** *21:13:49.4±1.8, 17°.78S×178°.38W, h618^{km}±17^{km}, mb3.1/8, mb1 3.4/9, mb1mx3.1/31, mbtmp4.1/9, Error ellipse: s-maj=46.2km s-min=15.2km az=148.0*

ISC 10 21:13:47.5±1.1**, 17°.8S**±0°.3×**178°.3W**±0°.2**, h600**^{km}**, n16, σ1^s.30**/19**, mb3.6**/8**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.50**	**270**	P	**P**	**21 15 12.2**	**+2.4**
	13nm,0.3s,baz=126,slow=3.6,SNR=67						
STKA	**Stephens Creek**	**38.80**	**241**	P	**P**	**21 20 22.7**	**+0.3**
	1.0nm,0.3s,baz=78,slow=10.0,SNR=6.1						
WRA	**Warramunga Arr**	**44.77**	**259**	P	**P**	**21 21 09.2**	**-0.3**
	1.4nm,0.3s,baz=94,slow=7.4,SNR=51						
WRA				PcP	**PcP**	**21 22 38.1**	**-0.3**
	0.4nm,0.8s,baz=91,slow=3.7,SNR=4.7						
ASAR	**Alice Springs**	**44.94**	**254**	P	**P**	**21 21 10.8**	**0.0**
	7.1nm,0.6s,baz=87,slow=8.6,SNR=113						
ASAR				PcP	**PcP**	**21 22 38.5**	**-0.4**
	1.2nm,0.6s,baz=103,slow=4.1,SNR=8.6						
ASAR				S	**S**	**21 27 05.0**	**-1.6**
	0.6nm,0.9s,baz=81,slow=15,SNR=5.1						
MJAR	**Matsushiro Arr**	**67.87**	**323**	P	**P**	**21 23 47.7**	**+0.3**
	0.7nm,0.4s,baz=154,slow=6.3,SNR=5.0						
ILAR	**Eielson Array**	**85.73**	**13**	P	**P**	**21 25 23.3**	**-0.4**
	0.4nm,0.4s,baz=221,slow=5.1,SNR=13						
TXAR	**Lajitas Array**	**85.82**	**58**	P	**P**	**21 25 26.3**	**+1.3**
	0.2nm,0.8s,baz=236,slow=6.4,SNR=2.3						
PDAR	**Pinedale Array**	**87.17**	**43**	P	**P**	**21 25 31.8**	**+0.5**
	0.3nm,0.4s,baz=235,slow=4.3,SNR=2.2						
CMAR	**Chiang Mai Arr**	**88.95**	**290**	P	**P**	**21 25 41.0**	**+1.2**
	0.7nm,0.9s,baz=119,slow=3.0,SNR=4.9						
MKAR	**Makanchi Array**	**109.13**	**314**	PKiKP	**PKiKP**	**21 31 08.7**	**-1.5**
	0.3nm,0.5s,baz=71,slow=1.9,SNR=5.4						
ARCES	**ARCESS Array B**	**126.20**	**350**	PKP	**PKiKP**	**21 31 41.8**	**-0.9**
	6.4nm,1.1s,baz=84,slow=2.8,SNR=2.1						
DPC	**Dobruska-Polom**	**145.45**	**343**	*e*PKP	**PKPab**	**21 32 19.8**	**-1.3**
PRU	**Pruhonice**	**146.25**	**345**	*e*PKP	**PKiKP**	**21 32 22.1**	**-1.9**
KHC	**Kasperske Hory**	**147.28**	**346**	*e*PKP	**PKiKP**	**21 32 24.6**	**-1.6**
CKRC	**Cesky Krumlov**	**147.38**	**344**	*e*PKP	**PKiKP**	**21 32 25.0**	**-1.4**
GERES	**GERESS Array B**	**147.51**	**345**	PKPbc	**PKiKP**	**21 32 25.3**	**-1.4**
	1.5nm,0.7s,baz=46,slow=3.9,SNR=8.1						

IDC ***10*** *21:24:52.5±1.0, 28°.07N×130°.24E, h0^{km}, mb3.9/8, mb1 4.1/10, mb1mx3.8/45, mbtmp4.0/10, ML4.1/2, Error ellipse: s-maj=26.9km s-min=19.1km az=71.0*

NIED ***10*** *21:24:55.7, 27°.95N×130°.27E, h46^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.30; $M_{\theta\theta}$-0.80; $M_{\phi\phi}$1.10; $M_{r\theta}$0.44; $M_{\theta\phi}$0.33; $M_{\phi r}$0.16; Fault plane solution: $M_0$1.14000×10^{15} NP1: ϕ_s231.00000°, δ77.00000°, λ-28.00000°. NP2: ϕ_s328.00000°, δ63.00000°, λ-166.00000°.*

NEIC ***10*** *21:24:55.4±1.6, 27°.97N±0°.05×130°.18E±0°.06, h18^{km}±5^{km}, mb4.3/8 Error ellipse: s-maj=7.6km s-min=6.7km az=100.0*

JMA ***10*** *21:24:55.6±0.1, 27°.95N×130°.27E, h46^{km}±1^{km}, M3.9 JMA Felt II J1.*

ISC 10 21:24:56.0±1.4**, 27°.95N**±0°.03×**130°.23E**±0°.03**, h26**^{km}±11^{km}**, n57, σ0^s.85**/81**, mb4.3**/17**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JZK	**Kikaishima**	**0.43**	**328**	P	**Pn**	**21 25 05.9**	**-0.6**
JZK				S	**Sn**	**21 25 13.4**	**-0.1**
JAM	**Amami Oshima**	**0.71**	**310**	P	**Pb**	**21 25 10.0**	**+0.2**
JAM				S	**Sn**	**21 25 20.2**	**-0.4**
JAMN	**Amaminishikomi**	**0.97**	**288**	P	**Pn**	**21 25 13.5**	**-0.5**
JAMN				*e*S	**Sb**	**21 25 26.4**	**-0.3**
JTK	**Tokunoshima**	**1.14**	**262**	P	**Pn**	**21 25 16.3**	**0.0**
JTK				*e*S	**Sn**	**21 25 30.7**	**-0.5**
JTAJ	**Takarajima**	**1.50**	**323**	P	**Pn**	**21 25 20.9**	**-0.3**
JTAJ				*e*S	**Sn**	**21 25 40.0**	**+0.1**
JOKE	**Okinoerabujima**	**1.58**	**249**	P	**Pn**	**21 25 22.3**	**-0.1**
JOKE				*e*S	**Sn**	**21 25 42.2**	**+0.2**
JYRO	**Yoronjima**	**1.83**	**240**	P	**Pn**	**21 25 25.7**	**-0.1**
JYRO				*e*S	**Sn**	**21 25 46.8**	**-1.3**
JNN	**Nakanoshima**	**1.91**	**351**	P	**Pn**	**21 25 26.4**	**-0.5**
JNN				*e*S	**Sn**	**21 25 49.0**	**-1.1**
JOW	**Kunigami**	**2.06**	**238**	Pn	**Pn**	**21 25 29.1**	**0.0**
	43nm,0.3s,baz=107,slow=20,SNR=140						
JOW				Sn	**Sn**	**21 25 53.0**	**-0.9**
	76nm,0.3s,baz=98,slow=28,SNR=16						
JOW	**Kunigami**	**2.06**	**238**	P	**Pn**	**21 25 29.0**	**0.0**
JOW				*e*S	**Sn**	**21 25 52.2**	**-1.7**
JOW	**Kunigami**	**2.06**	**238**		**Pn**	**21 25 28.9**	**-0.1**
JOW				Sn	**Sn**	**21 25 52.9**	**-1.0**
JIH	**Iheya**	**2.21**	**246**	P	**Pn**	**21 25 30.8**	**-0.1**
JIH				S	**Sn**	**21 25 56.4**	**-1.0**
JKDJ	**Kitadaitoujima**	**2.21**	**154**	P	**Pn**	**21 25 31.0**	**0.0**
JKDJ				S	**Sn**	**21 25 55.7**	**-1.8**
JYAK	**Yakushimahirau**	**2.29**	**6**	P	**Pn**	**21 25 32.0**	**-0.1**
JYAK				*e*S	**Sn**	**21 25 58.3**	**-1.2**
JMZ	**Minamidaito 2**	**2.30**	**157**	P	**Pn**	**21 25 31.9**	**-0.4**
JMZ				*e*S	**Sn**	**21 25 58.3**	**-1.5**
JMZ	**Minamidaito 2**	**2.30**	**157**		**Pn**	**21 25 33.0**	**+0.8**
JMZ				Sn	**Sn**	**21 25 58.2**	**-1.5**
JNTH	**Nagotoyohara**	**2.43**	**234**	P	**Pn**	**21 25 34.0**	**0.0**
JNTH				S	**Sn**	**21 26 01.9**	**-1.0**
JKC	**Kuchinoerabu**	**2.50**	**359**	P	**Pn**	**21 25 34.7**	**-0.3**
JKC				*e*S	**Sn**	**21 26 03.4**	**-1.3**
JMTN	**Minamitane**	**2.51**	**13**	P	**Pn**	**21 25 34.6**	**-0.5**
JMTN				*e*S	**Sn**	**21 26 03.4**	**-1.4**
JTN	**Tanegashima 3**	**2.77**	**14**	P	**Pn**	**21 25 38.4**	**-0.3**
JTN				*e*S	**Sn**	**21 26 10.8**	**-0.6**
JJT3	**Tamagusuku3**	**2.83**	**231**	P	**Pn**	**21 25 39.6**	**+0.1**
JJT3				S	**Sn**	**21 26 12.2**	**-0.6**
JAGN	**Aguni-jima**	**2.98**	**244**	P	**Pn**	**21 25 41.7**	**+0.1**
JAGN				*e*S	**Sn**	**21 26 15.8**	**-0.8**
JKE	**Kume jima 2**	**3.47**	**243**	P	**Pn**	**21 25 47.9**	**-0.4**
JKE				*e*S	**Sn**	**21 26 27.7**	**-0.9**
JSU	**Suzuyama**	**3.55**	**3**		**Pn**	**21 25 48.7**	**-0.7**
JSU				Sn	**Sn**	**21 26 28.9**	**-1.7**
JMN	**Monobe**	**6.56**	**28**	Pn	**Pn**	**21 26 30.6**	**-0.2**
JHS	**Saijyo**	**7.45**	**19**	Pn	**Pn**	**21 26 42.5**	**-0.4**
JWT	**Wachi**	**8.53**	**30**	Pn	**Pn**	**21 26 58.4**	**+0.5**
SSLB	**Suanglung**	**9.32**	**246**	Pn	**Pn**	**21 27 06.7**	**-2.1**
TPUB	**Ta-pu**	**9.82**	**244**	Pn	**Pn**	**21 27 14.9**	**-0.7**
JCJ	**Chichijima**	**10.65**	**92**	Pn	**Pn**	**21 27 27.6**	**+0.7**
	8.2nm,0.3s,baz=300,slow=23,SNR=15						
JCJ	**Chichijima**	**10.65**	**92**		**Pn**	**21 27 27.2**	**+0.3**
ENH	**Enshi**	**18.27**	**282**	P	**Pn**	**21 29 07.5**	**-0.3**
XAN	**Xi'an**	**19.23**	**294**	P	**P**	**21 29 18.7**	**+0.4**
CHTO	**Chiang Mai**	**30.05**	**259**	P	**P**	**21 31 03.7**	**+0.5**
CHTO				IAmb	IAmb	21 31 05.8	
	comp=Z,5.5nm,0.8s						
CMAR	**Chiang Mai Arr**	**30.19**	**259**	P	**P**	**21 31 06.5**	**+2.0**
	comp=Z,1.4nm,0.7s,baz=56,slow=7.4,SNR=17						
SHL	**Shillong**	**34.23**	**275**	P	**P**	**21 31 39.1**	**-0.9**
ODAN	**Odare**	**37.91**	**279**	*e*P	**P**	**21 32 11.5**	**0.0**
	comp=Z,6.9nm,0.4s						
PKIN	**Phulchoki**	**39.50**	**280**	*e*P	**P**	**21 32 24.1**	**-0.8**
	comp=Z,4.6nm,0.3s						
KKN	**Kakani**	**39.56**	**281**	*e*P	**P**	**21 32 25.7**	**+0.3**
	comp=Z,3.8nm,0.3s						
GKN	**Gorkha**	**40.08**	**281**	*e*P	**P**	**21 32 29.7**	**+0.1**
	comp=Z,6.8nm,0.4s						
DANN	**Dangsing**	**40.77**	**282**	*e*P	**P**	**21 32 36.0**	**+0.5**
	comp=Z,8.2nm,0.4s						
MKAR	**Makanchi Array**	**41.76**	**310**	P	**P**	**21 32 41.4**	**-1.6**
	comp=Z,0.3nm,0.5s,baz=92,slow=9.7,SNR=5.0						
MKAR	**Makanchi Array**	**41.76**	**310**	P	**P**	**21 32 41.1**	**-2.0**
ZALV	**Zalesovo Beam**	**41.99**	**321**	P	**P**	**21 32 43.9**	**-0.9**
	comp=Z,0.5nm,0.4s,baz=103,slow=10,SNR=2.5						
WB0	**Warramunga Arr**	**47.61**	**175**	P	**P**	**21 33 30.4**	**+0.6**
WB0				IAmb	IAmb	21 33 53.9	
	comp=Z,3.6nm,0.9s						
WRA	**Warramunga Arr**	**47.78**	**175**	P	**P**	**21 33 31.7**	**+0.5**
	comp=Z,0.9nm,0.4s,baz=353,slow=8.5,SNR=8.8						
WRA	**Warramunga Arr**	**47.78**	**175**	P	**P**	**21 33 31.5**	**+0.3**
BRVK	**Borovoye**	**50.27**	**317**	P	**P**	**21 33 49.9**	**-0.1**
BRVK				IAmb	IAmb	21 33 53.7	
	comp=Z,3.7nm,1.2s						
ASAR	**Alice Springs**	**51.44**	**176**	P	**P**	**21 34 00.3**	**+1.2**
	comp=Z,0.7nm,0.5s,baz=7.0,slow=14,SNR=13						
ASAR	**Alice Springs**	**51.44**	**176**	P	**P**	**21 33 59.4**	**+0.3**
ABKAR	**Akbulak array**	**56.78**	**313**	P	**P**	**21 34 38.4**	**+0.6**
ABKAR	**Akbulak array**	**56.78**	**313**	P	**P**	**21 34 38.5**	**+0.7**
ABKAR				IAmb	IAmb	21 34 38.9	
	comp=Z,1.0nm,0.8s						
ARCES	**ARCESS Array B**	**69.06**	**339**	P	**P**	**21 35 59.6**	**+0.5**
	comp=Z,3.3nm,1.0s,baz=74,slow=7.6,SNR=1.3						
FIA1	**FINESS Array S**	**72.24**	**331**	P	**P**	**21 36 18.0**	**-0.6**
FINES	**FINESS Array B**	**72.24**	**331**	P	**P**	**21 36 18.4**	**-0.2**
	comp=Z,1.4nm,0.5s,baz=50,slow=5.8,SNR=12						
FINES	**FINESS Array B**	**72.24**	**331**	P	**P**	**21 36 18.0**	**-0.6**
AKASG	**Malin Array Be**	**75.38**	**320**	P	**P**	**21 36 38.1**	**+0.9**
	comp=Z,1.4nm,0.5s,baz=58,slow=6.7,SNR=4.0						

NNC ***10*** *21:26:47.7±0.2, 43°.18N×78°.33E, h0^{km}, mb2.7, mpv2.6, Error ellipse: s-maj=2.7km s-min=1.2km az=5.0*

KRNET ***10*** *21:26:48.1±0.1, 43°.17N×78°.31E, h16^{km}, mb2.5*

SOME ***10*** *21:26:48.4, 43°.15N×78°.28E, h5^{km}*

ISC 10 21:26:48.1±0.9**, 43°.17N**±0°.02×**78°.31E**±0°.02**, h5**^{km}±9^{km}**, n39, σ0^s.61**/95**, 8C-9D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SATY	**Saty**	**0.14**	**148**	*e*P	**Pg**	**21 26 50.9**	**0.0**
	84nm,0.1s						
SATY				*e*S	**Sg**	**21 26 52.7**	**0.0**
	583nm,0.1s						
SATY	**Saty**	**0.14**	**148**	P	**Pg**	**21 26 50.9**	**0.0**
	84nm,0.1s						
SATY				P	**Pg**	**21 26 50.9**	**0.0**
	84nm,0.1s						
SATY				P	**Pg**	**21 26 50.9**	**0.0**
	111nm,0.1s						
SATY				S	**Sg**	**21 26 52.6**	**0.0**
	583nm,0.1s						
SATY				S	**Sg**	**21 26 52.7**	**0.0**
	583nm,0.1s						
SATY				S	**Sg**	**21 26 52.7**	**0.0**
	583nm,0.1s						
SATY	**Saty**	**0.14**	**148**	*e*P	**Pg**	**21 26 50.9**	**0.0**
	baz=47						
SATY				*e*S	**Sg**	**21 26 52.7**	**0.0**
	baz=47						
UZB	**Uzynbulak**	**0.52**	**93**	*e*P	**Pg**	**21 26 58.1**	**0.0**
	5.7nm,0.1s						
UZB				*e*S	**Sg**	**21 27 04.9**	**0.0**
	16nm,0.1s						
UZB	**Uzynbulak**	**0.52**	**93**	P	**Pg**	**21 26 58.1**	**0.0**
	5.7nm,0.1s						
UZB				P	**Pg**	**21 26 58.1**	**0.0**
	5.7nm,0.1s						
UZB				P	**Pg**	**21 26 58.1**	**0.0**
	5.7nm,0.1s						
UZB				S	**Sg**	**21 27 04.8**	**0.0**
	16nm,0.1s						
UZB				S	**Sg**	**21 27 04.9**	**0.0**
	22nm,0.1s						
UZB				S	**Sg**	**21 27 04.9**	**0.0**
	16nm,0.1s						
UZB	**Uzynbulak**	**0.52**	**93**	*e*P	**Pg**	**21 26 58.1**	**0.0**
	baz=92						
UZB				*e*S	**Sg**	**21 27 04.9**	**0.0**
	baz=92						
ANVS	**Anan'yevo**	**0.61**	**231**	⇑*i*P	**Pg**	**21 26 59.6**	**-0.2**
	baz=32						
ANVS				⇑*i*S	**Sg**	**21 27 07.7**	**-0.1**
	baz=32						
PRZ	**Przheval'sk**	**0.69**	**174**	⇑*i*P	**Pg**	**21 27 01.1**	**-0.3**
	baz=75						
PRZ				⇑*i*S	**Sg**	**21 27 10.9**	**+0.5**
	baz=75						
PDGK	**Podgornoye**	**0.88**	**79**	P	**Pg**	**21 27 04.2**	**-0.7**
	0.4nm,0.2s						
PDGK				P	**Pb**	**21 27 04.5**	**-1.3**
	0.4nm,0.2s						
PDGK				P	**Pb**	**21 27 04.5**	**-1.3**
	0.4nm,0.2s						
PDGK				S	**Sg**	**21 27 15.5**	**-0.8**
	1.5nm,0.1s						
PDGK				S	**Sg**	**21 27 16.1**	**-0.1**
	1.8nm,0.2s						
PDGK				S	**Sg**	**21 27 16.2**	**-0.1**
	1.4nm,0.2s						
PDGK	**Podgornoye**	**0.88**	**79**	⇑P	**Pg**	**21 27 03.9**	**-1.0**
	1.0nm,0.8s						
PDGK				⇑S	**Sg**	**21 27 16.1**	**-0.1**
	2.4nm,0.5s						
MDOK	**Medeo**	**0.92**	**270**	*e*P	**Pg**	**21 27 05.8**	**0.0**
	1.1nm,0.3s						
MDOK				*e*S	**Sg**	**21 27 18.5**	**+0.8**
	2.4nm,0.2s						
MDOK	**Medeo**	**0.92**	**270**	P	**Pg**	**21 27 05.4**	**-0.3**
	0.6nm,0.5s						
MDOK				⇑S	**Sg**	**21 27 17.5**	**-0.2**
	1.2nm,0.5s						
MDOK	**Medeo**	**0.92**	**270**	Pg	**Pg**	**21 27 05.8**	**0.0**
	1.1nm,0.3s						
MDOK				Lg	Lg	21 27 18.5	
	2.4nm,0.2s						
MDOK	**Medeo**	**0.92**	**270**	*e*P	**Pg**	**21 27 05.8**	**0.0**
	baz=70						
MDOK				*e*S	**Sg**	**21 27 18.5**	**+0.8**
	baz=70						
ARXS	**Arharly**	**1.10**	**342**	P	**Pg**	**21 27 09.5**	**+0.4**
	0.5nm,0.2s						
ARXS				S	**Sb**	**21 27 25.0**	**+0.8**
	4.1nm,0.2s						
CHKK	**Chushkaly**	**1.18**	**306**	*e*P	**Pg**	**21 27 09.2**	**-1.4**
	1.1nm,0.1s						
CHKK				*e*S	**Sg**	**21 27 24.3**	**-1.6**
	5.6nm,0.2s						
CHKK	**Chushkaly**	**1.18**	**306**	P	**Pg**	**21 27 09.2**	**-1.4**
	1.1nm,0.1s						
CHKK				S	**Sg**	**21 27 24.3**	**-1.6**
	5.6nm,0.2s						
IZV	**Izvestkoviy**	**1.25**	**264**	*e*P	**Pg**	**21 27 11.9**	**-0.1**
	0.7nm,0.1s						
IZV				*e*S	**Sb**	**21 27 28.9**	**+0.2**
	7.4nm,0.3s						
IZV	**Izvestkoviy**	**1.25**	**264**	P	**Pg**	**21 27 11.9**	**-0.1**
	0.7nm,0.1s						
IZV				P	**Pb**	**21 27 12.2**	**-0.1**
	0.8nm,0.1s						
IZV				S	**Sb**	**21 27 28.9**	**+0.2**
	7.4nm,0.3s						
IZV				S	**Sn**	**21 27 29.2**	**-0.5**
	4.9nm,0.2s						
IZV	**Izvestkoviy**	**1.25**	**264**	*e*P	**Pg**	**21 27 11.9**	**-0.1**
	baz=65						
IZV				*e*S	**Sb**	**21 27 28.9**	**+0.2**
	baz=65						
KTBS	**Karatobe**	**1.30**	**295**	*e*P	**Pn**	**21 27 13.2**	**+0.2**
	2.9nm,0.2s						
KTBS				*e*S	**Sn**	**21 27 31.0**	**+0.2**
	3.7nm,0.4s						
KTBS	**Karatobe**	**1.30**	**295**	P	**Pn**	**21 27 13.1**	**+0.2**
	2.9nm,0.2s						
KTBS				P	**Pn**	**21 27 13.2**	**+0.2**
	2.9nm,0.2s						
KTBS				S	**Sn**	**21 27 31.0**	**+0.2**
	3.7nm,0.4s						
KTBS				S	**Sb**	**21 27 31.3**	**+1.2**
	3.7nm,0.4s						
KTBS	**Karatobe**	**1.30**	**295**	*e*P	**Pn**	**21 27 13.2**	**+0.2**
	baz=95						
KTBS				*e*S	**Sn**	**21 27 31.0**	**+0.2**
	baz=95						
KUU	**Kurty**	**1.60**	**297**	*e*P	**Pb**	**21 27 18.5**	**+0.3**
	1.1nm,0.3s						
KUU				*e*S	**Sg**	**21 27 40.0**	**+0.4**
	1.9nm,0.2s						
KUU	**Kurty**	**1.60**	**297**	P	**Pb**	**21 27 18.3**	**+0.1**
	1.1nm,0.2s						
KUU				P	**Pb**	**21 27 18.5**	**+0.3**
	1.1nm,0.3s						
KUU				S	**Sg**	**21 27 39.7**	**+0.2**
	1.9nm,0.2s						
KUU				S	**Sg**	**21 27 40.0**	**+0.4**
	1.9nm,0.2s						
KUU	**Kurty**	**1.60**	**297**	*e*P	**Pb**	**21 27 18.5**	**+0.3**
	baz=98						
KUU				*e*S	**Sg**	**21 27 40.0**	**+0.4**
	baz=98						
ULHL	**Ulahol**	**1.78**	**239**	⇓*i*P	**Pn**	**21 27 20.6**	**+0.9**
	baz=40						
ULHL				⇓*i*S	**Sb**	**21 27 43.9**	**-0.2**
	baz=40						
DGS	**Degeres**	**1.86**	**273**	*e*P	**Pb**	**21 27 22.1**	**-0.4**
	0.7nm,0.3s						
DGS				*e*S	**Sb**	**21 27 46.5**	**+0.4**
	2.1nm,0.3s						
DGS	**Degeres**	**1.86**	**273**	P	**Pb**	**21 27 22.1**	**-0.4**
	0.7nm,0.3s						
DGS				P	**Pg**	**21 27 22.7**	**-1.0**
	0.8nm,0.2s						
DGS				S	**Sb**	**21 27 46.5**	**+0.4**
	2.1nm,0.3s						
DGS				S	**Sg**	**21 27 47.2**	**-0.5**
	2.2nm,0.2s						
DGS	**Degeres**	**1.86**	**273**	*e*P	**Pb**	**21 27 22.1**	**-0.4**
	baz=73						
DGS				*e*S	**Sb**	**21 27 46.5**	**+0.4**
	baz=73						
BOOM	**Boomskoye usch**	**1.87**	**249**	⇓*i*P	**Pb**	**21 27 22.6**	**-0.2**
	baz=50						
BOOM				⇓*i*S	**Sg**	**21 27 47.8**	**-0.4**
	baz=50						
KRBS	**Karabastau**	**1.99**	**286**	*e*P	**Pb**	**21 27 24.5**	**-0.3**
	1.5nm,0.3s						
KRBS				*e*S	**Sb**	**21 27 50.8**	**+0.9**
	1.9nm,0.2s						
KRBS	**Karabastau**	**1.99**	**286**	Pg	**Pb**	**21 27 24.5**	**-0.3**
	1.5nm,0.3s						
KRBS				Pg	**Pg**	**21 27 24.7**	**-1.5**
	1.5nm,0.2s						
KRBS				Lg	Lg	21 27 50.7	
	1.9nm,0.2s						
KRBS				Lg	Lg	21 27 51.0	
	1.9nm,0.3s						
KRBS	**Karabastau**	**1.99**	**286**	*e*P	**Pb**	**21 27 24.5**	**-0.3**
	baz=86						
KRBS				*e*S	**Sb**	**21 27 50.8**	**+0.9**
	baz=86						
TKM2	**Tokmak 2**	**2.00**	**264**	⇑Pn	**Pn**	**21 27 23.3**	**+0.5**
	1.8nm,1.1s						
TKM2				⇓Lg	Lg	21 27 52.2	
	2.2nm,0.5s						
TKM2	**Tokmak 2**	**2.00**	**264**	⇓*i*P	**Pb**	**21 27 25.5**	**+0.4**
	baz=64						
TKM2				⇓*i*S	**Sg**	**21 27 52.5**	**+0.1**
	baz=64						
KAPS	**Kapalarasan**	**2.24**	**19**	*e*P	**Pb**	**21 27 30.2**	**+1.2**
	1.3nm,0.4s						
KAPS				*e*S	**Sg**	**21 28 00.1**	**+0.1**
	1.5nm,0.3s						
KAPS	**Kapalarasan**	**2.24**	**19**	Pg	**Pb**	**21 27 30.2**	**+1.2**
	1.3nm,0.4s						
KAPS				Lg	Lg	21 28 00.2	
	1.5nm,0.3s						
KBK	**Karagaybulak**	**2.52**	**259**	⇓*e*P	**Pb**	**21 27 32.4**	**-1.5**
	baz=60						
KBK				⇓*i*S	**Sb**	**21 28 04.3**	**-1.0**
	baz=60						

NOU 10 21:32:26.4, 20°.24S×168°.51E, h0^{km}**, MLv3.7**/5**, Loyalty Islands, Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**1.31**	**200**	P	Pg	21 32 50.7	-0.9
YATNC	**Mamie plateau,**	**2.36**	**220**	P	Pn	21 33 06.5	+0.1
RTV	**Rentapao**	**2.44**	**358**	P	Pn	21 33 06.6	-0.9
DZM	**Mont Dzumac**	**2.65**	**226**	P	Pn	21 33 10.0	-0.6

IDC ***10*** *21:52:40.6±1.1, 51°.43N×175°.10W, h0^{km}, mb3.7/5, mb1 3.9/6, mb1mx3.6/44, mbtmp3.6/6, ML3.7/1, MS3.0/4, Ms1 3.1/4, ms1mx2.6/44, Error ellipse: s-maj=40.3km s-min=25.3km az=159.0*

NEIC ***10*** *21:52:44.1±1.0, 51°.34N±0°.10×175°.07W±0°.07, h22^{km}±16^{km}, Error ellipse: s-maj=15.4km s-min=3.9km az=158.0*

AEIC ***10*** *21:52:45±1.0, 51°.37N±0°.10×175°.06W±0°.07, h27^{km}±8^{km}, ML3.2, Error ellipse: s-maj=14.2km s-min=6.5km az=173.0*

ISC 10 21:52:42.0±0.9**, 51°.27N**±0°.09×**175°.02W**±0°.05**, h10**^{km}**, n33, σ1^{s}.20**/28**, mb3.7**/5**, MS2.8**/3**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSMY	Great Sitkin M	1.01	320		Pg	21 53 01.8	+0.3
GSCK	Great Sitkin C	1.03	317		Pg	21 53 02.2	+0.3
GSTR	Great Sitkin T	1.05	322		Pg	21 53 02.9	+0.7
GSTD	Great Sitkin T	1.06	319		Pg	21 53 02.6	+0.3
GSTD					Sg	21 53 15.8	-0.3
KOFP	Korovin Flat P	1.16	29		Pb	21 53 03.9	-0.2
ADK	Adak	1.21	301		Pb	21 53 04.8	-0.2
ADK					Sb	21 53 19.9	-0.7
KOSE	Korovin Southe	1.23	29		Pb	21 53 05.4	0.0
KIWB	Kanaga Island	1.46	295		Pn	21 53 08.1	-0.3
KIMD	Kanaga Island	1.47	290		Pn	21 53 09.1	+0.5
KIMD					Sn	21 53 26.9	-1.0
UNV	Unalaska Valle	5.80	60	Pn	Pn	21 54 08.4	+0.4
AKUT	Akutan	6.31	59	Pn	Pn	21 54 13.8	-1.1
SDPT	Sand Point	9.61	59	Pn	Pn	21 55 01.2	+1.0
KDAK	Kodiak Island	14.52	55	Pn	Pn	21 56 05.5	-1.9
	0.3nm,0.3s,baz=21,slow=2.6,SNR=5.5						
KDAK	Kodiak Island	14.52	55	Pn	Pn	21 56 05.9	-1.5
SVW2	Sparrevohn	14.57	40	Pn	Pn	21 56 09.7	+1.7
N19K	Bonanza Creek	14.87	42	Pn	Pn	21 56 14.3	+2.2
L19K	White Mountain	15.47	37		P	21 56 24.7	+0.1
M19K	Big River Lodg	15.49	39		Pn	21 56 23.8	+3.5
ILAR	Eielson Array	19.88	36	P	P	21 57 12.3	-0.8
	0.2nm,0.3s,baz=228,slow=9.7,SNR=17						
ILAR				LR	LR	22 04 52.4	
	comp=Z,35nm,18.7s,baz=186,slow=37						
MA2	Magadan	20.91	307	LR	LR	22 05 46.5	
	comp=Z,29nm,18.2s,baz=129,slow=38						
SEY	Seymchan	20.94	316	LR	LR	22 04 47.4	
	comp=Z,41nm,18.5s,baz=142,slow=35						
INK	Inuvik	26.20	34	P	P	21 58 16.1	-0.4
	1.8nm,1.1s,baz=258,slow=9.6,SNR=3.0						
YKA	Yellowknife Ar	33.58	47	LR	LR	22 13 58.1	
	comp=Z,43nm,18.3s,baz=0.0,slow=38						
H11N3	WAKE ISLAND Hy	34.56	211	T	T	22 37 17.8	
	baz=21,slow=74,SNR=4.5						
H11N1	WAKE ISLAND Hy	34.57	211	T	T	22 37 04.6	
	baz=132,slow=74,SNR=5.0						
H11S1	WAKE ISLAND Hy	35.76	211	T	T	22 39 01.3	
	baz=20,slow=76,SNR=12						
H11S2	WAKE ISLAND Hy	35.77	211	T	T	22 38 53.4	
	baz=20,slow=76,SNR=7.9						
H11S3	WAKE ISLAND Hy	35.77	211	T	T	22 39 01.7	
	baz=20,slow=76,SNR=4.5						
PDAR	Pinedale Array	44.07	74	P	P	22 00 50.6	+0.5
	1.1nm,0.5s,baz=309,slow=4.2,SNR=11						
TXAR	Lajitas Array	56.31	84	P	P	22 02 22.1	-0.9
	0.8nm,0.9s,baz=287,slow=5.1,SNR=5.5						
MKAR	Makanchi Array	61.94	311	P	P	22 03 00.3	-1.4
	0.2nm,0.4s,baz=62,slow=6.4,SNR=5.0						
ASAR	Alice Springs	87.06	226	P	P	22 05 27.8	+0.1
	0.3nm,0.7s,baz=32,slow=5.5,SNR=2.9						
MAW	Mawson	147.85	218	PKPbc	PKPbc	22 12 26.9	+1.2
	0.8nm,0.7s,baz=75,slow=5.6,SNR=4.1						

IDC ***10*** *21:59:21.6±3.8, 27°.00N×52°.66E, h0^{km}, mb3.8/3, mb1 3.8/3, mb1mx3.3/38, mbtmp3.8/3, Error ellipse: s-maj=96.7km s-min=36.5km az=144.0*

OMAN ***10*** *21:59:27.4±1.1, 26°.78N×52°.85E, h10^{km}, mb4.7/3, ml3.1/9, Error ellipse: s-maj=10.0km s-min=6.5km az=179.0*

ISC 10 21:59:23.3±1.0**, 27°.03N**±0°.07×**52°.75E**±0°.06**, h10**^{km}**, n27, σ1^{s}.21**/43**, mb3.7**/3**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRNA	Turayna	2.67	212	P	Pn	22 00 08.1	+1.7
ASUD	Al Ashush, Dub	3.34	135	P	Pn	22 00 17.9	+2.3
ASUD				S	Sn	22 00 57.1	+1.8
BANOM	Banah	3.37	108	P	Pn	22 00 16.7	+0.6
	SNR=6.5						
BANOM				S	Sn	22 00 56.3	+0.1
MZWR	Madinat Zayed	3.42	162	P	Pn	22 00 18.6	+2.0
FAQ	Al Faqa, Dubai	3.43	131	P	Pn	22 00 18.4	+1.5
FAQ				S	Sn	22 00 58.3	+0.7
MASF	Masafi	3.48	118	P	Pn	22 00 18.4	+0.8
	SNR=8.1						
MASF				S	Sn	22 00 58.6	-0.4
	SNR=7.5						
MDH	Madha	3.63	118	P	Pn	22 00 20.2	+0.6
MDH				S	Sn	22 01 01.4	-1.0
UOSS	Minazif	3.74	123	P	Pn	22 00 21.6	+0.4
UOSS				S	Sn	22 01 04.9	-0.4
HATD	Hatta, Dubai	3.76	125	P	Pn	22 00 22.2	+0.8
HATD				S	Sn	22 01 05.7	0.0
ASHO	Ashiyiah	3.79	127	P	Pn	22 00 23.0	+1.2
	SNR=7.5						
ASHO				S	Sn	22 01 06.2	-0.4
MZR	Muzera	4.07	170	P	Pn	22 00 27.0	+1.4
SOHO	SOHO	4.47	129	P	Pn	22 00 32.2	+1.0
UMZA	Um Al Zommool	4.83	152	P	Pn	22 00 37.4	+1.3
UMZA				S	Sn	22 01 31.5	-0.5
ARQ	Araqi	5.02	136	P	Pn	22 00 40.3	+1.5
	SNR=6.5						
HOQ	Hoqain	5.37	129	P	Pn	22 00 45.0	+1.4
HOQ				S	Sn	22 01 44.3	-1.3
BSY	Bisya	5.88	136	P	Pn	22 00 51.5	+0.9
BSY				S	Sn	22 01 56.5	-1.6
SMDO	Samad	6.22	128	P	Pn	22 00 56.4	+1.0
SMDO				S	Sn	22 02 05.9	-0.8
WSAR	Wadi Sarin	6.53	124	P	Pn	22 00 60.0	+0.4
	SNR=5.7						
JMDO	Jabal Madar	6.73	132	P	Pn	22 01 03.5	+1.3
JMDO				S	Sn	22 02 18.0	-0.9
WBK	Wadi Bani Khal	7.16	127	P	Pn	22 01 09.0	+0.8
	SNR=7.6						
WBK				S	Sn	22 02 29.4	-0.4
MHTO	MHTO	7.68	140	P	Pn	22 01 15.9	+0.6
	SNR=6.8						
MHTO				S	Sn	22 02 40.1	-2.3
DOK	Doka	8.47	171	P	Pn	22 01 25.4	-0.8
WHFO	Wadi Hawf	9.12	174	P	Pn	22 01 35.2	0.0
ABTO	Aybut	9.65	177	P	Pn	22 01 44.5	+2.1
ABTO				S	Sn	22 03 28.7	-2.2
ZALV	Zalesovo Beam	35.76	32	P	P	22 06 22.7	+0.4
	0.8nm,0.5s,baz=247,slow=9.7,SNR=4.6						
FINES	FINESS Array B	38.79	340	P	P	22 06 47.6	-0.2
	0.9nm,0.6s,baz=145,slow=10,SNR=5.5						
TORD	Torodi Ar. Bea	49.58	264	P	P	22 08 14.1	-0.9
	0.4nm,0.6s,baz=54,slow=6.8,SNR=3.7						

IDC ***10*** *22:09:35.0±1.7, 19°.11S×169°.57E, h0^{km}, mb3.6/2, mb1 3.8/4, mb1mx3.6/27, mbtmp3.6/4, ML4.6/1, MS3.1/4, Ms1 3.1/4, ms1mx2.8/24, Error ellipse: s-maj=76.7km s-min=28.8km az=161.0*

NOU ***10*** *22:09:43.1, 19°.82S×169°.26E, h0^{km}, MLv4.0/10, Vanuatu Islands*

ISC 10 22:09:36.9±2.2**, 19°.60S**±0°.09×**169°.8E**±0°.2**, h10**^{km}**, n18, σ1^{s}.14**/16**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTV	Rentapao	2.20	325	P	Pg	22 10 20.9	+1.8
DVP	Devils Point	2.39	321	P	Pg	22 10 22.7	0.0
MARNC	Mare, Loyalty	2.47	221	P	Pn	22 10 16.8	-0.5
LIFNC	LIFOU	2.63	243	P	Pn	22 10 18.0	-1.5
YATNC	Mamie plateau,	3.62	227	P	Pn	22 10 33.6	+0.4
OUENC	Ouen Island, N	3.91	224	P	Pn	22 10 38.9	+1.9
DZM	Mont Dzumac	3.95	231	*e*Pn	Pn	22 10 38.0	+0.2
	47nm,0.5s						
DZM				*e*Sn	Sn	22 11 24.4	+0.2
	96nm,0.6s						
DZM	Mont Dzumac	3.95	231	Pn	Pn	22 10 38.4	+0.6
	1.0nm,0.3s,baz=72,slow=20,SNR=14						
DZM				Sn	Sn	22 11 24.7	+0.5
	7.6nm,0.3s,baz=278,slow=23,SNR=8.2						
DZM	Mont Dzumac	3.95	231	P	Pn	22 10 38.4	+0.6
NOUC	Port Laguerre	4.07	232	P	Pn	22 10 40.8	+1.5
ONTNC	Ouen Toro	4.09	228	P	Pn	22 10 40.6	+1.0
MSVF	Nonsavu	8.08	78	Pn	Pn	22 11 33.8	-0.7
	0.3nm,0.3s,baz=277,slow=8.1,SNR=3.6						
AFI	Afiamalu	18.56	75	LR	LR	22 19 54.7	
	comp=Z,29nm,21.0s,baz=42,slow=33						
URZ	Urewera	19.66	163	LR	LR	22 20 34.6	
	comp=Z,77nm,21.1s,baz=212,slow=33						
STKA	Stephens Creek	28.07	239	LR	LR	22 26 04.5	
	comp=Z,64nm,18.4s,baz=29,slow=35						
WRA	Warramunga Arr	33.29	263	P	P	22 16 13.6	-1.5
	0.9nm,0.8s,baz=88,slow=8.5,SNR=5.9						
ASAR	Alice Springs	33.52	257	P	P	22 16 16.2	-0.8
	0.7nm,0.6s,baz=87,slow=9.0,SNR=9.6						
ASAR				LR	LR	22 29 11.5	
	comp=Z,39nm,20.6s,baz=102,slow=35						
FINES	FINESS Array B	131.11	338	PKP	PKPdf	22 28 48.0	-0.5
	3.6nm,1.1s,baz=69,slow=4.6,SNR=4.4						

KRNET ***10*** *22:30:20.0±0.1, 43°.37N×78°.03E, h20^{km}, mb2.6*

NNC ***10*** *22:30:19.6±0.3, 43°.36N×78°.04E, h2^{km}±2^{km}, mb2.2, mpv2.6, Error ellipse: s-maj=3.6km s-min=1.5km az=173.0*

SOME ***10*** *22:30:21.1, 43°.37N×78°.00E, h15^{km}*

ISC 10 22:30:20.3±0.9**, 43°.36N**±0°.02×**78°.03E**±0°.02**, h12**^{km}±7^{km}**, n44, σ0^{s}.62**/86**, 16C-4D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURS	Kuram	0.16	39	*e*P	Pb	22 30 24.5	-0.8
	34nm,0.1s						
KURS				*e*S	Sg	22 30 26.8	+0.1
	40nm,0.2s						
KURS	Kuram	0.16	39	P	Pb	22 30 24.5	-0.8
	34nm,0.1s						
KURS				S	Sg	22 30 26.9	+0.1
	40nm,0.2s						
KURS	Kuram	0.16	39	*e*P	Pb	22 30 24.5	-0.8
	baz=41						
KURS				*e*S	Sg	22 30 26.7	+0.1
	baz=41						
SATY	Saty	0.41	138	*e*P	Pg	22 30 28.6	+0.2
	25nm,0.1s						
SATY				*e*S	Sg	22 30 34.4	+0.5
	117nm,0.1s						
SATY	Saty	0.41	138	P	Pg	22 30 28.6	+0.2
	25nm,0.1s						
SATY				S	Sg	22 30 34.3	+0.4
	117nm,0.1s						
SATY	Saty	0.41	138	*e*P	Pg	22 30 28.6	+0.2
	baz=38						
SATY				*e*S	Sg	22 30 34.4	+0.5
	baz=38						
ANVS	Anan'yevo	0.64	205	⇑*i*P	Pg	22 30 32.2	-0.6
	baz=4.0						
ANVS				⇑*e*S	Sg	22 30 41.3	+0.1
	baz=4.0						
MDOK	Medeo	0.75	255	*e*P	Pg	22 30 34.4	-0.4
	1.9nm,0.1s						
MDOK				*e*S	Sg	22 30 44.5	-0.1
	4.2nm,0.1s						
MDOK	Medeo	0.75	255	⇑P	Pb	22 30 34.7	-0.7
	1.3nm,0.6s						
MDOK				⇑S	Sg	22 30 44.4	-0.2
	3.2nm,0.4s						
MDOK	Medeo	0.75	255	Pg	Pg	22 30 34.4	-0.4
	1.9nm,0.1s						
MDOK				Lg	Lg	22 30 44.3	
	4.2nm,0.1s						
MDOK	Medeo	0.75	255	*e*P	Pg	22 30 34.4	-0.4
	baz=54						
MDOK				*e*S	Sg	22 30 44.5	-0.1
	baz=54						
UZB	Uzynbulak	0.75	106	*e*P	Pg	22 30 34.7	-0.2
	2.0nm,0.1s						
UZB				*e*S	Sg	22 30 44.6	-0.3
	21nm,0.1s						
UZB	Uzynbulak	0.75	106	P	Pg	22 30 34.7	-0.2
	2.0nm,0.1s						
UZB				S	Sg	22 30 44.6	-0.3
	21nm,0.1s						
UZB	Uzynbulak	0.75	106	*e*P	Pg	22 30 34.7	-0.2
	baz=7.0						
UZB				*e*S	Sg	22 30 44.5	-0.3
	baz=7.0						
ARXS	Arharly	0.86	350	*e*P	Pb	22 30 36.5	-0.8
	2.3nm,0.1s						
ARXS				*e*S	Sg	22 30 47.9	-0.4
	19nm,0.1s						
ARXS	Arharly	0.86	350	P	Pb	22 30 36.5	-0.8
	2.3nm,0.1s						
ARXS				S	Sg	22 30 47.9	-0.4
	19nm,0.1s						
PRZ	Przheval'sk	0.92	163	⇑*i*P	Pb	22 30 37.6	-0.8
	baz=62						
PRZ				⇑*i*S	Sb	22 30 49.6	-1.0
	baz=62						
KTBS	Karatobe	1.04	290	*e*P	Pb	22 30 39.5	-0.9
	1.2nm,0.1s						
KTBS				*e*S	Sb	22 30 53.2	-0.8
	21nm,0.2s						
KTBS	Karatobe	1.04	290	P	Pb	22 30 39.5	-0.9
	1.2nm,0.1s						
KTBS				S	Sb	22 30 53.2	-0.8
	21nm,0.2s						
KTBS	Karatobe	1.04	290	*e*P	Pb	22 30 39.5	-0.9
	baz=90						
KTBS				*e*S	Sb	22 30 53.3	-0.8
	baz=90						
PDGK	Podgornoye	1.06	91	P	Pb	22 30 40.0	-0.7
	0.5nm,0.1s						
PDGK				S	Sb	22 30 53.9	-0.9
	2.8nm,0.2s						
PDGK	Podgornoye	1.06	91	⇑P	Pb	22 30 39.6	-1.1
	0.6nm,0.5s						
PDGK				⇑S	Sb	22 30 53.8	-0.9
	1.9nm,0.3s						
KUU	Kurty	1.34	294	*e*P	Pb	22 30 44.8	-0.6
	0.6nm,0.2s						
KUU				*e*S	Sb	22 31 02.2	-0.3
	13nm,0.1s						
KUU	Kurty	1.34	294	P	Pb	22 30 44.8	-0.6
	0.6nm,0.2s						
KUU				S	Sb	22 31 02.2	-0.3
	13nm,0.1s						
KUU	Kurty	1.34	294	*e*P	Pb	22 30 44.8	-0.6
	baz=94						
KUU				*e*S	Sb	22 31 02.2	-0.3
	baz=94						
KST	Kastek	1.55	259	*e*P	Pb	22 30 48.5	-0.5
	4.2nm,0.2s						
KST				*e*S	Sb	22 31 08.6	0.0
	7.4nm,0.3s						
KST	Kastek	1.55	259	P	Pb	22 30 48.5	-0.5
	4.2nm,0.2s						
KST				S	Sb	22 31 08.6	0.0
	7.4nm,0.3s						
KST	Kastek	1.55	259	*e*P	Pb	22 30 48.5	-0.5
	baz=58						
KST				*e*S	Sb	22 31 08.7	0.0
	baz=58						
DJR	Jarkent	1.60	52	*e*P	Pb	22 30 49.8	-0.1
	2.0nm,0.2s						
DJR				*e*S	Sg	22 31 10.5	-1.2
	7.7nm,0.2s						
DJR	Jarkent	1.60	52	P	Pb	22 30 49.8	-0.1
	2.0nm,0.2s						
DJR				S	Sg	22 31 10.5	-1.2
	7.7nm,0.2s						
TARG	Taragay, Kyrgy	1.64	186	⇑*i*P	Pb	22 30 50.2	-0.6
	baz=86						
TARG				⇑*i*S	Sb	22 31 11.3	-0.3
	baz=86						
DGS	Degeres	1.66	267	*e*P	Pb	22 30 50.5	-0.3
	2.1nm,0.1s						
DGS				*e*S	Sb	22 31 12.0	+0.3
	6.8nm,0.2s						
DGS	Degeres	1.66	267	P	Pb	22 30 50.5	-0.3
	2.1nm,0.1s						
DGS				S	Sb	22 31 12.0	+0.3
	6.8nm,0.2s						
DGS	Degeres	1.66	267	*e*P	Pb	22 30 50.5	-0.3
	baz=66						
DGS				*e*S	Sb	22 31 12.0	+0.3
	baz=66						
ULHL	Ulahol	1.73	230	⇑*i*P	Pb	22 30 51.0	-1.1
	baz=30						
ULHL				⇑*i*S	Sb	22 31 14.3	+0.4
	baz=30						
KRBS	Karabastau	1.75	282	*e*P	Pb	22 30 52.0	-0.4
	1.0nm,0.1s						
KRBS				*e*S	Sb	22 31 14.4	+0.1
	8.9nm,0.2s						
KRBS	Karabastau	1.75	282	P	Pb	22 30 52.0	-0.4
	1.0nm,0.1s						
KRBS				S	Sb	22 31 14.4	+0.1
	8.9nm,0.2s						
KRBS	Karabastau	1.75	282	*e*P	Pb	22 30 52.0	-0.4
	baz=82						
KRBS				*e*S	Sb	22 31 14.4	+0.1
	baz=82						
BOOM	Boomskoye usch	1.77	241	⇑*i*P	Pb	22 30 52.1	-0.7
	baz=41						
BOOM				⇑*i*S	Sb	22 31 15.4	+0.4
	baz=41						
TKM2	Tokmak 2	1.84	257	⇓Pn	Pb	22 30 53.3	-0.8
	0.5nm,0.3s						
TKM2				⇓Sn	Sg	22 31 18.0	-1.4
	1.9nm,0.2s						
TKM2	Tokmak 2	1.84	257	⇓*i*P	Pb	22 30 53.2	-0.8
	baz=57						
TKM2				⇓*i*S	Sb	22 31 17.2	+0.1
	baz=57						
KAPS	Kapalarasan	2.14	26	*e*P	Pb	22 30 59.3	+0.1
	0.5nm,0.2s						
KAPS				*e*S	Sb	22 31 26.8	+1.1
	2.5nm,0.1s						
KAPS	Kapalarasan	2.14	26	Pg	Pb	22 30 59.3	+0.1
	0.5nm,0.2s						
KAPS				Lg	Lg	22 31 26.8	
	2.5nm,0.1s						
USP	Ospenovka	2.58	269	⇑*i*P	Pn	22 31 03.4	+1.4
	baz=69						
USP				⇑*i*S	Sn	22 31 34.5	+1.1
	baz=69						

NEIC ***10*** *22:41:38.2±0.8, 25°.4S±0°.1×179°.8E±0°.2, h516^{km}±10^{km}, mb4.1/18, Error ellipse: s-maj=25.0km s-min=17.0km az=78.0*

IDC ***10*** *22:41:40.9±2.9, 25°.25S×179°.52E, h538^{km}±32^{km}, mb3.4/7, mb1 3.6/9, mb1mx3.3/38, mbtmp4.3/9, Error ellipse: s-maj=33.5km s-min=19.3km az=149.0*

ISC 10 22:41:38.4±0.8**, 25°.46S**±0°.08×**179°.6E**±0°.1**, h507**^{km}**, n37, σ0^{s}.86**/35**, mb4.0**/16**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	7.82	349	P	P	22 43 33.4	0.0
	1.7nm,0.3s,baz=138,slow=16,SNR=7.6						
MSVF	Nonsavu	7.82	349	P	P	22 43 32.9	-0.5
MARNC	Mare, Loyalty	11.34	288	P	P	22 44 11.7	+1.6
DZM	Mont Dzumac	12.52	283	P	P	22 44 24.7	+2.1
	0.4nm,0.3s,baz=92,slow=13,SNR=9.1						
DZM	Mont Dzumac	12.52	283	P	P	22 44 23.7	+1.0
URZ	Urewera	12.94	189	S	S	22 46 45.4	+0.1
	0.6nm,0.3s,baz=124,slow=23,SNR=3.8						
URZ	Urewera	12.94	189	P	P	22 44 26.5	-0.2
BKZ	Black Stump Fm	13.92	190	P	P	22 44 36.5	-0.6
THZ	Tophouse	17.18	197	P	P	22 45 10.0	-0.8
EIDS	Eidsvold	25.75	264	P	P	22 46 29.5	+1.3
EIDS				IAmb	IAmb	22 46 30.4	
	comp=Z,10nm,1.2s						
CTAO	Charters Tower	31.17	273	P	P	22 47 16.2	+0.6
STKA	Stephens Creek	33.84	250	P	P	22 47 38.9	+0.7
	comp=Z,1.5nm,0.5s,baz=105,slow=12,SNR=3.8						
STKA	Stephens Creek	33.84	250	P	P	22 47 38.0	-0.2
COEN	Coen	36.05	281	P	P	22 47 56.7	-0.1
COEN				IAmb	IAmb	22 48 00.7	
	comp=Z,9.0nm,1.2s						
BBOO	Buckleboo	38.53	249	P	P	22 48 16.7	-0.3
BBOO				IAmb	IAmb	22 48 25.5	
	comp=Z,12nm,1.1s						
AS31	Alice Springs	41.46	262	P	P	22 48 40.3	-0.3
AS31				IAmb	IAmb	22 48 41.8	
	comp=Z,1.2nm,0.5s						
ASAR	Alice Springs	41.46	262	P	P	22 48 41.0	+0.3
	comp=Z,2.3nm,0.4s,baz=88,slow=6.9,SNR=41						
ASAR	Alice Springs	41.46	262	P	P	22 48 40.3	-0.4
WR0	Warramunga Arr	41.79	268	P	P	22 48 42.9	-0.4
WR0				IAmb	IAmb	22 48 44.4	
	comp=Z,4.8nm,1.1s						
WRA	Warramunga Arr	41.98	268	P	P	22 48 44.5	-0.2
	comp=Z,3.1nm,0.4s,baz=104,slow=7.9,SNR=39						
WRA	Warramunga Arr	41.98	268	P	P	22 48 44.1	-0.6
FORT	Forrest	45.46	251	P	P	22 49 10.8	-0.9
KNRA	Kununurra	48.35	271	P	P	22 49 33.6	-0.2
KNRA				IAmb	IAmb	22 49 34.6	
	comp=Z,16nm,1.1s						
SIJI	Sorong	52.61	290	P	P	22 50 03.1	-1.9
	comp=Z,10nm,0.6s,baz=107,slow=17,SNR=3.9						
VNDA	Vanda	52.80	185	P	P	22 50 06.5	+1.1
PSA00	Pilbara Seismi	54.55	261	P	P	22 50 17.4	-1.3
PSA00				IAmb	IAmb	22 50 27.5	
	comp=Z,6.0nm,1.5s						
PSA00	Pilbara Seismi	54.55	261	P	P	22 50 17.9	-0.7
PSA00				IAmb	IAmb	22 50 28.3	
	comp=Z,24nm,1.4s						
MORW	Morawa	56.02	251	P	P	22 50 28.5	-0.4
MORW				IAmb	IAmb	22 50 30.1	
	comp=Z,4.4nm,0.9s						
CASY	Casey	58.56	206	P	P	22 50 45.3	-0.3
QSPA	South Pole Qui	64.63	180	P	P	22 51 25.5	+0.1
QSPA				IAmb	IAmb	22 51 31.6	
	comp=Z,4.4nm,1.5s						
MAW	Mawson	76.17	201	P	P	22 52 34.2	+0.6
	comp=Z,1.7nm,0.6s,baz=134,slow=8.2,SNR=9.1						
MAW	Mawson	76.17	201	P	P	22 52 34.1	+0.6
NVAR	Mina Array Bea	86.11	44	P	P	22 53 25.9	+0.4
	comp=Z,0.5nm,0.4s,baz=214,slow=6.3,SNR=2.1						
TXAR	Lajitas Array	91.55	58	P	P	22 53 51.3	+0.4
	comp=Z,0.6nm,0.8s,baz=224,slow=7.0,SNR=5.6						
NOA	NORSAR Array B	143.56	351	PKP	PKPbc	23 00 12.1	-1.1
	comp=Z,0.2nm,0.3s,baz=15,slow=5.0,SNR=3.5						
HFS	Hagfors	144.00	348	PKP	PKPbc	23 00 13.0	-1.5
	comp=Z,2.2nm,0.7s,baz=40,slow=5.6,SNR=5.9						
TORD	Torodi Ar. Bea	167.60	189	PKPab	PKPab	23 01 54.9	-1.2
	comp=Z,0.3nm,0.8s,baz=150,slow=3.1,SNR=1.8						

IDC ***10*** *22:43:27.6±2.6, 41°.61N×143°.89E, h0^{km}, mb3.7/6, mb1 3.7/7, mb1mx3.5/52, mbtmp3.6/7, ML2.6/1, MS3.2/3, Ms1 3.2/3, ms1mx2.5/47, Error ellipse: s-maj=57.9km s-min=32.3km az=146.0*

NIED ***10*** *22:43:30.7, 41°.53N×143°.95E, h47^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}3.84; $M_{\theta\theta}$0.25; $M_{\phi\phi}$-4.09; $M_{r\theta}$-1.54; $M_{\theta\phi}$-3.39; $M_{\phi r}$-1.00; Fault plane solution: $M_0$5.31000×10^{14} NP1: ϕ_s227.00000°, δ57.00000°, λ114.00000°. NP2: ϕ_s7.00000°, δ40.00000°, λ58.00000°.*

JMA ***10*** *22:43:30.7±0.3, 41°.53N×143°.95E, h47^{km}±3^{km}, M3.5*

ISC 10 22:43:31.0±1.1**, 41°.55N**±0°.07×**143°.95E**±0°.08**, h27**^{km}**, n23, σ0^{s}.66**/20**, mb3.4**/6**, 2C, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JEM	Erimo	0.75	309	P	Pn	22 43 45.0	-0.8
JTHR	Tokachihiroo	0.88	327	⇑P	Pn	22 43 47.3	-0.4
JTHR				*e*S	Sn	22 43 59.6	0.0
JCH	Churui	1.15	338	P	Pn	22 43 50.9	-0.4
JNBK	Urakawa-nobuka	1.15	310	P	Pb	22 43 51.6	-0.6
JOB	Onbets	1.35	357	P	Pn	22 43 54.1	0.0
JAK	Akkeshi	1.55	21	P	Pn	22 43 56.2	-0.6
JBT2	Biratori 2	1.70	317	P	Pn	22 43 59.3	+0.4
JAR	Ashorobuto	1.75	356	⇑P	Pn	22 43 58.8	-0.8
JNK	Nakash	2.11	15	P	Pn	22 44 03.8	-0.8
JOT	Ohata	2.18	267	P	Pn	22 44 05.6	+0.1
JOT				*e*S	Sn	22 44 31.6	-0.1
JANG	Nango	2.18	238	P	Pn	22 44 04.5	-1.1
MJAR	Matsushiro Arr	6.70	224	Pn	Pn	22 45 07.6	-0.1
	0.1nm,0.3s,baz=22,slow=11,SNR=2.3						
KSRS	Korea Array	13.03	257	LR	LR	22 51 13.7	
	comp=Z,34nm,18.7s,baz=80,slow=36						
SONM	Songino Array	27.22	296	P	P	22 49 12.7	0.0
	0.3nm,0.4s,baz=97,slow=6.0,SNR=3.5						
SONM				LR	LR	23 01 02.2	
	comp=Z,66nm,18.4s,baz=34,slow=39						
H11S1	WAKE ISLAND Hy	30.08	133	T	T	23 21 20.1	
	baz=325,slow=76,SNR=87						
H11S3	WAKE ISLAND Hy	30.09	133	T	T	23 21 23.1	
	baz=325,slow=76,SNR=85						

H11S2	WAKE ISLAND Hy	30.10	133	T	T	23 21 23.1	
	baz=325,slow=76,SNR=87						
ZALV	Zalesovo Beam	40.48	309	P	P	22 51 08.6	+1.4
	0.9nm,0.5s,baz=81,slow=9.8,SNR=4.9						
MKAR	Makanchi Array	43.53	299	P	P	22 51 31.9	-0.4
	0.4nm,0.6s,baz=84,slow=8.9,SNR=5.3						
ILAR	Eielson Array	44.65	35	P	P	22 51 41.8	+0.9
	0.2nm,0.4s,baz=281,slow=6.2,SNR=2.1						
FINES	FINESS Array B	65.74	332	P	P	22 54 12.6	-0.3
	2.9nm,0.9s,baz=62,slow=6.5,SNR=22						
KVAR	Kislovodsk Arr	69.43	311	LR	LR	23 26 44.4	
	comp=Z,33nm,19.9s,baz=41,slow=37						
AKASG	Malin Array Be	71.92	323	P	P	22 54 51.6	+0.1
	0.1nm,0.2s,baz=50,slow=4.6,SNR=4.3						

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*NEIC **10** 23:07:50.8±2.0, 7°.65S±0°.06×119°.40E±0°.07, h282^{km}±8^{km}, mb4.2/20, Error ellipse: s-maj=10.9km s-min=8.3km az=100.0*

*DJA **10** 23:07:51.6±0.3, 8°S±3°×11°9E±°, h265^{km}±4^{km}, M4.4/19, mb4.6/9, mB5.1/6, MLv4.2/19, Mw(mB)4.5/6*

*IDC **10** 23:07:51.6±1.4, 7°.50S×119°.53E, h286^{km}±12^{km}, mb3.5/11, mb1 3.6/15, mb1mx3.4/60, mbtmp4.2/15, Error ellipse: s-maj=36.1km s-min=9.7km az=56.0*

ISC 10 23:07:51.6±0.4**, 7°.69S**±0°.05×**119°.46E**±0°.05**, h300**^{km}**, n94, σ1^{s}.88**/100**, mb4.0**/29**, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSSI	Bau Bau, Buton	1.84	34	P	Pn	23 08 33.9	-3.3
BSSI				S	S	23 09 07.8	-5.8
WBSI	Waikabubak, Su	1.94	182	P	Pn	23 08 35.0	-3.0
WBSI				S	S	23 09 08.4	-6.6
PLAI	Plampang	2.02	236	P	Pn	23 08 35.9	-2.7
PLAI				S	S	23 09 10.5	-5.4
PLAI	Plampang	2.02	236	P	Pn	23 08 36.1	-2.5
BKSI	Bulukumba	2.44	16	P	Pn	23 08 39.3	-2.9
EDFI	Ende, Flores	2.44	116	P	Pn	23 08 40.6	-1.7
KAPI	Kappang	2.67	6	P	Pn	23 08 41.6	-2.7
	7.5nm,0.3s,baz=177,slow=5.6,SNR=31						
KAPI				S	S	23 09 21.0	-5.3
	1.0nm,0.3s,baz=158,slow=19,SNR=1.4						
KAPI	Kappang	2.67	6	P	Pn	23 08 41.9	-2.4
BASI	Baing, Sumba	2.75	156	P	Pn	23 08 43.4	-1.6
TWSI	Taliwang, Sumb	2.76	248	P	Pn	23 08 42.2	-2.9
MMRI	Maumere	2.90	109	P	Pn	23 08 44.5	-2.0
MMRI	Maumere	2.90	109	Pn	Pn	23 08 44.9	-1.6
MMRI	Maumere	2.90	109	P	Pn	23 08 45.1	-1.4
TTSI	Tana Toraja	4.62	4	P	Pn	23 09 05.0	+0.1
BATI	Baumata	4.85	121	P	Pn	23 09 07.0	-0.5
	56nm,0.3s,baz=297,slow=2.1,SNR=35						
BATI				S	S	23 10 05.2	-3.1
	37nm,0.3s,baz=313,slow=19,SNR=2.5						
BATI	Baumata	4.85	121	P	Pn	23 09 07.1	-0.3
SOEI	Soe	5.17	114	P	Pn	23 09 10.6	-0.8
	2.7nm14µm624nm,0.9s						
SOEI	Soe	5.17	114		Pn	23 09 10.6	-0.8
SOEI	Soe	5.17	114	P	Pn	23 09 10.8	-0.5
JAGI	Jajag, Banyuwa	5.32	261		Pn	23 09 10.6	-2.4
JAGI	Jajag, Banyuwa	5.32	261	P	Pn	23 09 10.8	-2.1
KMMI	Kalianget	5.49	276	P	Pn	23 09 13.7	-1.2
	0.2nm68nm,1.0s						
BLJI	Banyuglugur	5.82	269	P	Pn	23 09 17.8	-1.0
	0.2nm55nm,0.8s						
BBKI	Banjar Baru	6.23	312	P	Pn	23 09 23.4	-0.3
	0.4nm6µm95nm,0.9s						
APSI	Ampana	7.07	18	P	Pn	23 09 31.1	-2.9
	0.1nm18nm,0.6s						
LUWI	Luwuk	7.38	27	P	Pn	23 09 36.9	-0.8
	0.2nm49nm,1.3s						
LUWI	Luwuk	7.38	27	Pn	Pn	23 09 36.5	-1.2
PCJI	Pacitan	8.22	266	P	Pn	23 09 46.2	-1.8
	4µm349nm,0.5s						
SANI	Sanana	8.58	50	P	P	23 09 55.3	-2.3
UGM	Wanagama	8.86	268	Pn	Pn	23 09 53.7	-2.2
UGM	Wanagama	8.86	268	P	Pn	23 09 54.2	-1.7
STKI	Sintang	11.08	314	P	P	23 10 27.9	+2.5
SAUI	Saumlaki	11.73	92	Pn	Pn	23 10 30.7	-0.3
FITZ	Fitzroy Crossi	11.97	150	S	S	23 12 49.3	+2.2
	baz=173,slow=17						
KNRA	Kununurra	12.08	132		Pn	23 10 35.0	-0.1
MTN	Manton Dam	12.57	115		Pn	23 10 41.3	+0.1
SIJI	Sorong	13.57	61	P	Pn	23 10 53.0	-0.3
	0.9nm,0.3s,baz=238,slow=6.5,SNR=4.7						
FAKI	Fak Fak	13.58	70		P	23 10 52.0	-1.2
PSA00	Pilbara Seismi	13.81	179		P	23 10 55.2	-0.4
XMIS	Christmas Isla	13.92	257	P	Pn	23 10 56.9	-0.5
GIRL	Giralia	15.70	198	P	Pn	23 11 17.3	-1.0
MNAI	Manna	16.75	280	P	P	23 11 25.4	-2.6
WB0	Warramunga Arr	18.81	131		P	23 11 50.4	+0.3
WRA	Warramunga Arr	18.88	132	P	P	23 11 52.1	+1.4
	2.1nm,0.3s,baz=304,slow=12,SNR=129						
WRA				S	S	23 15 07.9	-1.3
	baz=306,slow=21,SNR=5.6						
WRA	Warramunga Arr	18.88	132	P	P	23 11 51.8	+1.0
WB2	Warramunga Arr	18.88	132		P	23 11 52.2	+1.4
WB2				IAmb	IAmb	23 11 53.1	
	comp=Z,14nm,0.8s						
WR0	Warramunga Arr	19.04	131		P	23 11 54.0	+1.5
AS31	Alice Springs	21.08	141		P	23 12 15.5	+2.1
AS31				IAmb	IAmb	23 12 21.5	
	comp=Z,2.3nm,0.3s						
ASAR	Alice Springs	21.08	141	P	P	23 12 15.4	+2.1
	comp=Z,4.1nm,0.3s,baz=317,slow=8.9,SNR=88						
MORW	Morawa	21.51	188	P	P	23 12 19.5	+2.3
MORW				IAmb	IAmb	23 12 45.3	
	comp=Z,9.9nm,1.1s						
RPSI	Rantau Prapat	22.94	296	P	P	23 12 32.1	+1.7
PSI	Prapat	22.99	296	P	P	23 12 32.1	+1.2
	comp=Z,2.4nm,0.4s,baz=77,slow=8.7,SNR=3.9						
STKA	Stephens Creek	31.69	142	P	P	23 13 50.3	+2.4
	comp=Z,1.6nm,0.3s,baz=332,slow=8.2,SNR=6.8						
STKA	Stephens Creek	31.69	142	P	P	23 13 50.1	+2.2
CMAR	Chiang Mai Arr	32.94	322	P	P	23 14 00.0	+1.1
	comp=Z,0.7nm,0.3s,baz=141,slow=6.4,SNR=6.3						
CMAR	Chiang Mai Arr	32.94	322	P	P	23 13 59.3	+0.5
ODAN	Odare	46.33	319	*e*P	P	23 15 49.1	+0.4
	comp=Z,5.4nm,0.5s						
TAPN	Taplejung	46.46	320	*e*P	P	23 15 50.1	+0.3
	comp=Z,6.3nm,0.4s						
RAMN	Ramite	46.90	318	*e*P	P	23 15 54.0	+0.8
	comp=Z,9.4nm,0.4s						
JIRN	Jiri	47.65	319	*e*P	P	23 15 59.2	+0.2
	comp=Z,8.4nm,0.5s						
PKIN	Phulchoki	48.12	318	*e*P	P	23 16 01.9	-0.6
	comp=Z,9.7nm,0.4s						
PKIN	Phulchoki	48.12	318	*e*P	P	23 16 02.1	-0.4
	comp=Z,7.6nm,0.4s						
HHC	Hu-ho-hao-te	48.84	352	*e*P	P	23 16 09.8	+2.3
HHC				pmax	pmax		
	comp=Z,14nm,1.1s						
HHC				pmax	pmax		
	comp=Z,130nm,5.6s						
GKN	Gorkha	48.90	318	*e*P	P	23 16 08.1	-0.2
	comp=Z,14nm,0.3s						
GKN	Gorkha	48.90	318	*e*P	P	23 16 08.3	0.0
	comp=Z,14nm,0.3s						
KOLN	Koldanda	49.45	317	*e*P	P	23 16 12.1	-0.3
	comp=Z,6.8nm,0.3s						
KOLN	Koldanda	49.45	317	*e*P	P	23 16 12.2	-0.2
	comp=Z,6.8nm,0.3s						
DANN	Dangsing	49.71	318	*e*P	P	23 16 14.2	-0.3
	comp=Z,26nm,0.5s						
DANN	Dangsing	49.71	318	*e*P	P	23 16 14.3	-0.3
	comp=Z,26nm,0.5s						
PYUN	Piuthan	50.07	317	*e*P	P	23 16 16.7	-0.4
	comp=Z,19nm,0.5s						
PYUN	Piuthan	50.07	317	*e*P	P	23 16 17.0	-0.1
	comp=Z,19nm,0.5s						
SONM	Songino Array	56.48	349	P	P	23 17 04.1	+1.1
	comp=Z,0.8nm,0.5s,baz=169,slow=7.9,SNR=7.2						
SONM	Songino Array	56.48	349	P	P	23 17 03.7	+0.7
WMQ	Urumqi	58.78	334	*e*P	P	23 17 21.4	+2.4
KSH	Kashi	61.84	323	P	P	23 17 39.6	-0.1
KSH				pP	pP	23 18 36.7	-9.1
KSH				pmax	pmax		
	comp=Z,9.0nm,0.6s						
MK31	Makanchi Array	63.51	332	P	P	23 17 50.6	+0.2
MKAR	Makanchi Array	63.51	332	P	P	23 17 50.8	+0.4
	comp=Z,2.6nm,0.6s,baz=140,slow=7.6,SNR=20						
MAKZ	Makanchi	63.66	332	P	P	23 17 51.8	+0.4
MAKZ				IAmb	IAmb	23 18 00.5	
	comp=Z,5.9nm,1.1s						
DRK	Karamyk	64.38	321	P	P	23 17 56.0	-0.5
DRK				IAmb	IAmb	23 17 58.0	
	comp=Z,5.4nm,0.9s						
AAK	Ala-Archa	64.67	325	P	P	23 17 58.7	+0.5
	comp=Z,2.1nm,0.6s,baz=132,slow=3.8,SNR=12						
AAK	Ala-Archa	64.67	325	P	P	23 17 57.8	-0.4
AAK				IAmb	IAmb	23 17 59.5	
	comp=Z,2.1nm,0.8s						
GAR	Garm	65.05	319	P	P	23 18 00.4	-0.3
GAR				IAmb	IAmb	23 18 02.1	
	comp=Z,5.7nm,0.9s						
BTK	Batken	65.33	321	P	P	23 18 01.6	-0.7
CHGR	Chuyangaron	65.61	319	P	P	23 18 03.3	-0.9
CHGR				IAmb	IAmb	23 18 03.9	
	comp=Z,5.5nm,0.6s						
KKAR	Karatay Array	67.28	323	P	P	23 18 13.6	-1.0
ZALV	Zalesovo Beam	67.99	339	P	P	23 18 18.3	-0.3
	comp=Z,0.8nm,0.3s,baz=147,slow=5.3,SNR=4.7						
ZALV	Zalesovo Beam	67.99	339	P	P	23 18 17.9	-0.7
KURBB	Kurchatov Arra	68.01	333	P	P	23 18 18.8	0.0
	comp=Z,0.8nm,0.5s,baz=146,slow=5.4,SNR=6.6						
KURK	Kurchatov	68.03	333	P	P	23 18 19.2	+0.3
KURK				IAmb	IAmb	23 18 20.1	
	comp=Z,3.0nm,0.9s						
PEA0B	Petropavlovsk-	68.69	24	P	P	23 18 24.7	+1.6
BVAR	Borovoye Array	73.36	332	P	P	23 18 51.6	+0.7
	comp=Z,0.8nm,0.7s,baz=164,slow=16,SNR=2.9						
ABKAR	Akbulak array	76.76	325	P	P	23 19 09.5	-0.8
AKTO	Aktyubinsk	78.42	325	P	P	23 19 19.8	+0.4
	comp=Z,0.6nm,0.5s,baz=129,slow=6.5,SNR=2.2						
TORD	Torodi Ar. Bea	118.68	281	PKP	PKiKP	23 26 05.3	+0.1
	comp=Z,0.2nm,0.5s,baz=51,slow=1.4,SNR=2.0						

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*TUL **10** 23:12:45.9±1.2, 36°.67N±0°.01×97°.73W±0°.01, h5^{km}±7^{km}, ML3.1, mb_Lg2.7/40(NEIC), Error ellipse: s-maj=1.8km s-min=1.2km az=195.0*

NEIC 10 23:12:46.1±0.9**, 36°.66N**±0°.01×**97°.73W**±0°.02**, h3**^{km}±7^{km}**, Error ellipse: s-maj=2.0km s-min=1.7km az=65.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GC02	Grant County #	0.22	331	Pg	Pg	23 12 50.4	-0.1
GC02				Sg	Sg	23 12 53.7	+0.3
CROK	Carrier	0.26	234	Pg	Pg	23 12 51.3	+0.2
CROK				Sg	Sg	23 12 55.2	+0.8
KAN14	Manchester OK	0.36	328	Pg	Pg	23 12 52.8	-0.3
KAN17	Caldwell West	0.39	355	Pg	Pg	23 12 53.6	-0.1
KAN17				Sg	Sg	23 12 58.8	0.0
KAN13	South Haven SW	0.41	29	Pg	Pg	23 12 54.0	-0.1
KAN13				Sg	Sg	23 12 59.6	+0.2
OK032	Salt Plains WL	0.42	291	Pg	Pg	23 12 54.0	-0.2
OK032				Sg	Sg	23 12 59.8	+0.2
BLOK	Blackwell	0.42	75	Pg	Pg	23 12 54.4	+0.1
BLOK				Sg	Sg	23 13 00.3	+0.5
KAN05	Bluff City Nor	0.47	345		Pg	23 12 55.0	-0.2
KAN05				Sg	Sg	23 13 01.4	+0.1
KS20	Mayfield South	0.59	13	Pg	Pg	23 12 57.2	-0.3
KAN06	Argonia West S	0.60	350		Pg	23 12 57.4	-0.3
KAN06				Sg	Sg	23 13 05.4	-0.1
KAN08	Anthony NE Sta	0.60	341		Pg	23 12 57.4	-0.3
KAN08				Sg	Sg	23 13 05.7	+0.1
KAN16	Harper SW Stat	0.63	335	Pg	Pg	23 12 57.9	-0.4
KAN16					Sg	23 13 06.4	-0.1
KAN12	Harper NE Stat	0.68	341	Pg	Pg	23 12 58.9	-0.3
KAN12				Sg	Sg	23 13 07.8	-0.2
OK029	Liberty Lake	0.89	166		Pg	23 13 03.0	-0.2
OK029				Sg	Sg	23 13 15.1	+0.5
QUOK	Quay	0.95	120	Pg	Pg	23 13 04.1	-0.3
QUOK				Sg	Sg	23 13 16.8	+0.1
BCOK	Bluff Creek, N	1.00	175		Pg	23 13 05.0	-0.3
BCOK				Sg	Sg	23 13 18.9	+0.6
OK031	S. Brethren Rd	1.00	134		Pg	23 13 05.1	-0.2
OK031				Sg	Sg	23 13 18.4	+0.1
T35A	Sooner Cattle	1.01	75		Pg	23 13 05.0	-0.5
T35A				Sg	Sg	23 13 18.1	-0.4
OK030	Cody Creek RV	1.05	133		Pg	23 13 05.8	-0.5
OK030				Sg	Sg	23 13 20.4	+0.5
U32A	Winter Ranch,	1.06	255		Pg	23 13 05.8	-0.8
U32A				Sg	Sg	23 13 20.2	-0.2
OK025	Westminster Rd	1.12	164		Pg	23 13 07.2	-0.4
OKCFA	Oklahoma City	1.26	170		Pg	23 13 09.5	-0.7
OKCFA				Sg	Sb	23 13 27.2	+0.2
OKCSW	OKLAHOMA CITY	1.27	169	Pn	Pg	23 13 09.8	-0.7
FNO	Franklin	1.42	169		Pn	23 13 12.3	-0.5
TUL1	Leonard	1.73	115		Pn	23 13 17.2	+0.1
TUL1				IAmb_Lg		23 13 45.0	
	comp=Z,33nm,0.8s						
R32A	Long Quarter,	1.93	336		Pn	23 13 20.1	+0.2
X34A	Smith Ranch, M	2.05	182	Pn	Pn	23 13 21.9	+0.4
WMOK	Wichita Mounta	2.10	205		Pn	23 13 22.1	-0.1
KSU1	Kansas State U	2.60	20	Pn	Pn	23 13 28.6	-0.4
CBKS	Cedar Bluff	2.68	324	Pn	Pn	23 13 30.3	+0.1
LOOK	Love County	2.69	170	Pn	Pn	23 13 30.7	+0.4
U38A	Gravette	2.70	94	Pn	Pn	23 13 30.6	+0.2
X37A	Clayton	2.81	136		Pn	23 13 32.8	+0.8
X37A				IAmb_Lg		23 14 17.1	
	comp=Z,34nm,0.7s						
HHAR	Hobbs	3.07	96		Pn	23 13 35.8	+0.2
Z35A	Perchaven, San	3.34	173	Pn	Pn	23 13 39.4	+0.1
W39A	Magazine	3.51	113		Pn	23 13 42.0	+0.4
W39A				IAmb_Lg		23 14 46.1	
	comp=Z,21nm,0.7s						
S39A	Bolivar	3.67	72		Pn	23 13 43.5	-0.1
U40A	Yellville	3.94	93		Pn	23 13 47.7	+0.2
U40A				IAmb_Lg		23 14 51.9	
	comp=Z,27nm,0.7s						
MIAR	Mount Ida	3.98	121		Pn	23 13 48.3	+0.2
Z38A	Mt. Pleasant	4.07	146	IAmb_Lg		23 14 57.0	
	comp=Z,32nm,0.7s						
MGMO	Mountain Grove	4.40	82	Pn	Pn	23 13 54.3	+0.5
MGMO				IAmb_Lg		23 15 03.4	
	comp=Z,15nm,0.8s						
P38A	Dawn	4.44	47	Pn	Pn	23 13 54.9	+0.5
P38A				IAmb_Lg		23 15 08.4	
	comp=Z,23nm,0.8s						
X40A	Basin Creek Fa	4.54	117		Pn	23 13 54.9	-0.7
X40A				IAmb_Lg		23 15 11.9	
	comp=Z,14nm,0.7s						
KSCO	Kaye Shedlock’	4.54	303	Pn	Pn	23 13 53.5	-2.4
KSCO				IAmb_Lg		23 15 10.8	
	comp=Z,17nm,0.8s						
FCAR	Ozark Folk Cen	4.59	98	IAmb_Lg		23 15 08.9	
	comp=Z,11nm,0.9s						
WHAR	Wooly Hollow	4.62	106	IAmb_Lg		23 15 15.1	
	comp=Z,11nm,0.8s						
R40A	Maddies Statio	4.64	68	IAmb_Lg		23 15 22.6	
	comp=Z,14nm,0.7s						
WLAR	White Oak Lake	4.80	127	IAmb_Lg		23 15 28.7	
	comp=Z,19nm,1.0s						
P40A	Paris	5.32	56	IAmb_Lg		23 15 40.4	
	comp=Z,22nm,0.9s						
T42A	Van Buren	5.33	84	Pn	Pn	23 14 06.3	-0.3
T42A				IAmb_Lg		23 15 47.2	
	comp=Z,9.8nm,0.7s						
CCM	Cathedral Cave	5.35	73	IAmb_Lg		23 15 42.3	
	comp=Z,20nm,0.9s						
PBMO	Poplar Bluff	5.86	87	IAmb_Lg		23 15 55.8	
	comp=Z,12nm,0.8s						
FVM	French Village	5.97	75	IAmb_Lg		23 15 53.2	
	comp=Z,8.1nm,0.8s						
JCT	Junction City	6.40	196	IAmb_Lg		23 16 19.0	
	comp=Z,9.8nm,0.9s						
ISCO	Idaho Springs	6.96	299	Pn	Pn	23 14 28.2	-1.0
JFWS	Jewell Farm	8.49	40	IAmb_Lg		23 17 13.1	
	comp=Z,9.0nm,0.8s						

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*IDC **10** 23:17:10.8±1.1, 35°.34N×58°.64E, h0^{km}, mb3.7/10, mb1 4.0/16, mb1mx3.7/52, mbtmp3.9/16, ML3.8/5, MS3.0/5, Ms1 3.1/5, ms1mx2.6/42, Error ellipse: s-maj=22.4km s-min=15.4km az=8.0*

*TEH **10** 23:17:12.1, 35°.49N×58°.69E, h10^{km}, ML4.0*

*THR **10** 23:17:13.4±0.6, 35°.48N×58°.67E, h17^{km}±8^{km}, ML3.9*

*NEIC **10** 23:17:13.5±1.4, 35°.54N±0°.04×58°.75E±0°.05, h10^{km}±1^{km}, mb4.0/13, mb_Lg4.0(TEH), Error ellipse: s-maj=7.3km s-min=6.2km az=109.0*

ISC 10 23:17:12.3±0.5**, 35°.48N**±0°.02×**58°.67E**±0°.03**, h10**^{km}**, n163, σ1^{s}.88**/160**, mb3.9**/8**, MS3.1**/4**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IMOG	Moghan	0.83	41	*e*Pg	Pg	23 17 27.6	-0.9
IMOG	Moghan	0.83	41	Pg	Pg	23 17 27.6	-0.9
IPAY	Payeh	1.01	15	*e*	Sn	23 17 52.1	+5.0
	comp=Z,23µm,0.4s						
IAKL	Akhelmad	1.12	4	*e*Pg	Pg	23 17 32.7	-1.3
IAKL				*e*		23 17 51.4	
	comp=Z,21µm,0.5s						
IAKL	Akhelmad	1.12	4	Pg	Pg	23 17 32.6	-1.4
TBJM	Torbat-e-JAM	1.37	98	*e*Pg	Pg	23 17 38.2	-0.6
TBJM	Torbat-e-JAM	1.37	98		Pg	23 17 38.1	-0.7
JRKH	Jarkhoshk	1.44	72	*e*Pg	Pb	23 17 38.7	-0.6
JRKH	Jarkhoshk	1.44	72		Pb	23 17 38.7	-0.6
IMYA	Miami	1.45	53	*e*Pg	Pn	23 17 38.5	-0.3
IMYA	Miami	1.45	53		Pn	23 17 38.5	-0.3
IKRD	Kardeh	1.47	28	*e*Pg	Pb	23 17 39.0	-0.9
IKRD				*e*Sg	Sg	23 18 02.7	+3.1
IKRD				*e*		23 18 04.9	
	comp=Z,18µm,0.6s						
IKRD	Kardeh	1.47	28		Pb	23 17 39.0	-0.9
ISFR	Sfrayin	1.66	341	*e*Pn	Pb	23 17 42.6	-0.7
ISFR				*e*		23 18 20.3	
	comp=Z,20µm,0.5s						
ISFR	Sfrayin	1.66	341	Pn	Pb	23 17 42.5	-0.7
IEMG	Emamgholi	1.93	360	*e*Pn	Pb	23 17 46.7	-1.2
IEMG				*e*		23 18 19.5	
	comp=Z,9µm,0.6s						
IEMG	Emamgholi	1.93	360	Pn	Pb	23 17 46.6	-1.3
AFRZ	Afriz	2.07	172	*e*Pn	Pb	23 17 49.3	-0.8
AFRZ				*e*		23 18 32.8	
	comp=Z,12µm,0.8s						
AFRZ	Afriz	2.07	172	Pn	Pb	23 17 49.3	-0.8
SHRO	Shahrood	2.22	284	*e*Pn	Pb	23 17 51.6	-1.1
SHRO				*e*Sg	Sg	23 18 23.2	-0.6
SHRO				IAML		23 18 29.0	
	comp=E,318nm,0.6s						
SHRO				IAML		23 18 35.3	
	comp=N,318nm,0.5s						
SHRO	Shahrood	2.22	284	*e*Pn	Pb	23 17 51.6	-1.1
SHRO	Shahrood	2.22	284	Pn	Pb	23 17 51.6	-1.1
TABS	Tabas	2.23	215	*e*Pn	Pb	23 17 51.6	-1.2
TABS				*e*Sg	Sg	23 18 23.6	-0.4
TABS				IAML		23 18 27.9	
	comp=E,586nm,0.6s						
TABS				IAML		23 18 31.8	
	comp=N,1µm,0.7s						
TABS	Tabas	2.23	215	*e*Pn	Pb	23 17 51.6	-1.2
TABS	Tabas	2.23	215	Pn	Pb	23 17 51.6	-1.2
TKDS	Koohdasht(Taba	2.25	215	*e*Pn	Pb	23 17 51.8	-1.5
TKDS				*e*		23 18 35.5	
	comp=Z,20µm,0.8s						
TKDS	Koohdasht(Taba	2.25	215	Pn	Pb	23 17 51.7	-1.5
SHRT	Shahrakht	2.27	143	*e*Pn	Pb	23 17 52.1	-1.4
SHRT				IAML		23 18 29.8	
	comp=E,891nm,0.3s						
SHRT				IAML		23 18 40.0	
	comp=N,634nm,0.4s						
SHRT	Shahrakht	2.27	143	*e*Pn	Pb	23 17 52.1	-1.4
SHRT	Shahrakht	2.27	143	Pn	Pb	23 17 52.0	-1.4
TNSJ	Nastanj	2.27	229	*e*Pn	Pb	23 17 52.2	-1.3
TNSJ	Nastanj	2.27	229	Pn	Pb	23 17 52.2	-1.3
IMON	Monand	2.43	160	*e*Pn	Pn	23 17 53.9	+1.6
IMON				*e*		23 18 35.1	
	comp=Z,9µm,0.2s						
IMON	Monand	2.43	160	Pn	Pn	23 17 53.9	+1.6
GEYT	Alibeck	2.49	350	Pn	Pb	23 17 54.8	-2.3
	comp=Z,12nm,0.3s,baz=123,slow=16,SNR=34						
GEYT				Lg	Lg	23 18 31.6	
	comp=Z,16nm,0.3s,baz=172,slow=33,SNR=8.9						
GEYT	Alibeck	2.49	350	Pn	Pn	23 17 54.0	+1.1
GYA0B	ALIBECK ARRAY	2.49	350	Pn	Pb	23 17 55.0	-2.2
ITEG	Tejag	2.58	178	*e*Pn	Pb	23 17 56.4	-2.4
ITEG				*e*		23 18 43.9	
	comp=Z,6µm,0.6s						
ITEG	Tejag	2.58	178	Pn	Pn	23 17 56.3	+2.0
IDAH	Dahanechah	2.91	160	*e*Pn	Pn	23 18 01.0	+2.0
IDAH				*e*		23 19 02.4	
	comp=Z,4µm,0.5s						
IDAH	Dahanechah	2.91	160	Pn	Pn	23 18 00.9	+2.0
TPRV	Parvadeh(Tabas	2.94	214	*e*Pn	Pn	23 18 01.1	+1.8
TPRV	Parvadeh(Tabas	2.94	214	Pn	Pn	23 18 01.1	+1.8
MRVT	Maraveh tapeh	3.01	317	*e*Pn	Pn	23 18 02.7	+2.6
MRVT	Maraveh tapeh	3.01	317	*e*Pn	Pn	23 18 02.7	+2.6
MRVT	Maraveh tapeh	3.01	317	Pn	Pn	23 18 02.7	+2.6
HRA	Herat	3.13	109		Pn	23 18 02.4	+0.4
IMND	Minoodasht	3.17	305	*e*Pn	Pn	23 18 04.5	+2.2
IMND	Minoodasht	3.17	305	Pn	Pn	23 18 04.5	+2.2
BSRN	Basiran	3.52	174	*e*Pn	Pn	23 18 09.1	+1.8
BSRN	Basiran	3.52	174	*e*Pn	Pn	23 18 09.1	+1.8
BSRN	Basiran	3.52	174	Pn	Pn	23 18 09.1	+1.8
IANJ	Anjilo	3.88	271	*e*Pn	Pn	23 18 14.2	+1.9
IANJ	Anjilo	3.88	271	Pn	Pn	23 18 14.2	+1.9
NHDN	Nehbandan	4.24	164	*e*Pn	Pn	23 18 19.5	+2.4
NHDN	Nehbandan	4.24	164	Pn	Pn	23 18 19.4	+2.4
ISHM	Shahmirzad	4.39	276	*e*Pn	Pn	23 18 21.3	+1.9
ISHM	Shahmirzad	4.39	276	Pn	Pn	23 18 21.2	+1.9
YZKH	Yazd	4.58	229	*e*Pn	Pn	23 18 24.3	+2.6
YZKH				IAML		23 19 53.4	
	comp=N,104nm,0.6s						
YZKH				IAML		23 20 08.3	
	comp=E,134nm,0.5s						
YZKH	Yazd	4.58	229	*e*Pn	Pn	23 18 24.3	+2.6
YZKH	Yazd	4.58	229	Pn	Pn	23 18 24.3	+2.6
ILAS	Lasjerd	4.66	270	*e*Pn	Pn	23 18 25.3	+2.3
ANAR	Anarak	4.68	242	*e*Pn	Pn	23 18 25.0	+1.8
ANAR	Anarak	4.68	242	Pn	Pn	23 18 25.0	+1.8
ICHK	Chekchek	4.79	229	*e*Pn	Pn	23 18 27.4	+2.6
ICHK	Chekchek	4.79	229	Pn	Pn	23 18 27.3	+2.5
IFIR	Firoozkooh	4.82	274	*e*Pn	Pn	23 18 28.0	+2.7
IFIR	Firoozkooh	4.82	274	Pn	Pn	23 18 28.0	+2.7
IMEH	Mehriz	5.30	221	*e*Pn	Pn	23 18 34.7	+2.9
IMEH	Mehriz	5.30	221	Pn	Pn	23 18 34.6	+2.8
ISFB	Sefidab	5.40	260	*e*Pn	Pn	23 18 35.0	+1.9
ISFB				*e*		23 20 28.8	
	comp=Z,765nm,0.7s						
ISFB	Sefidab	5.40	260	Pn	Pn	23 18 34.9	+1.9
KHGB	Koh Gabri	5.41	201	*e*Pn	Pn	23 18 35.7	+2.4
KHGB	Koh Gabri	5.41	201	Pn	Pn	23 18 35.7	+2.4
IDMV	Damavand	5.41	273	*e*Pn	Pn	23 18 36.8	+3.4
IDMV	Damavand	5.41	273	Pn	Pn	23 18 36.7	+3.4
KRSH	Karshahi	5.58	256	*e*Pn	Pn	23 18 37.6	+1.9
KRSH	Karshahi	5.58	256	Pn	Pn	23 18 37.6	+1.9
CHMN	Cheshme madani	5.68	190	*e*Pn	Pn	23 18 39.5	+2.3
CHMN	Cheshme madani	5.68	190	Pn	Pn	23 18 39.4	+2.3
IVRN	Varamin	5.70	267	*e*Pn	Pn	23 18 39.3	+2.1
IVRN	Varamin	5.70	267	Pn	Pn	23 18 39.2	+2.1
IZEF	Zefreh	5.85	246	*e*Pn	Pn	23 18 42.1	+2.7
IZEF	Zefreh	5.85	246	Pn	Pn	23 18 42.0	+2.7
ZHSF	Zahedan	6.12	163	*e*Pn	Pn	23 18 45.5	+2.6
ZHSF	Zahedan	6.12	163	*e*Pn	Pn	23 18 45.5	+2.6
ZHSF	Zahedan	6.12	163	Pn	Pn	23 18 45.5	+2.6
QAMS	Qamsar	6.24	256	*e*Pn	Pn	23 18 46.9	+2.1
QAMS	Qamsar	6.24	256	Pn	Pn	23 18 46.8	+2.0
IKLH	Kolahrood	6.24	252	*e*Pn	Pn	23 18 47.4	+2.6
IKLH	Kolahrood	6.24	252	Pn	Pn	23 18 47.4	+2.6
IQOM	Qom	6.25	266	*e*Pn	Pn	23 18 47.2	+2.3
IQOM	Qom	6.25	266	Pn	Pn	23 18 47.2	+2.3
IGAR	Gharneh	6.30	243	*e*Pn	Pn	23 18 47.4	+1.8
IGAR	Gharneh	6.30	243	Pn	Pn	23 18 47.3	+1.7
KBAM	BAM	6.33	182	*e*Pn	Pn	23 18 47.7	+1.9
IRAM	Ramesheh	6.39	237	*e*Pn	Pn	23 18 48.7	+1.9
IRAM	Ramesheh	6.39	237	Pn	Pn	23 18 48.7	+1.9
IMHD	Mahdasht	6.52	274	*e*Pn	Pn	23 18 50.0	+1.5
IMHD	Mahdasht	6.52	274	Pn	Pn	23 18 50.0	+1.5
QALM	Alamut, Qazvin	6.58	281	*e*Pn	Pn	23 18 52.0	+2.7
QALM	Alamut, Qazvin	6.58	281	Pn	Pn	23 18 52.0	+2.7
IRAZ	Razeghan	7.13	272	*e*Pn	Pn	23 18 58.1	+1.1
IRAZ	Razeghan	7.13	272	Pn	Pn	23 18 58.1	+1.1
ASAO	Ashtian	7.15	265	*e*Pn	Pn	23 18 59.5	+2.2
ASAO	Ashtian	7.15	265	*e*Pn	Pn	23 18 59.5	+2.2
ASAO	Ashtian	7.15	265	Pn	Pn	23 18 59.4	+2.2
QABG	Abgarm-Qazvin	7.41	274	*e*Pn	Pn	23 19 01.4	+0.7
QABG	Abgarm-Qazvin	7.41	274	Pn	Pn	23 19 01.4	+0.7
KLNJ	Kolanjah	7.41	235	*e*Pn	Pn	23 19 03.3	+2.3
KLNJ	Kolanjah	7.41	235	Pn	Pn	23 19 03.3	+2.3
QSDN	Sirdan	7.76	280	*e*Pn	Pn	23 19 07.4	+1.8
CHGR	Chuyangaron	8.96	66	Pn	Pn	23 19 20.3	-1.6
ISRB	Sarab	9.14	288	*e*Pn	Pn	23 19 26.2	+1.7
ISRB	Sarab	9.14	288	Pn	Pn	23 19 26.2	+1.7
AHAR	Ahar	9.77	291	*e*Pn	Pn	23 19 35.0	+2.0
GAR	Garm	9.93	66	Pn	Pn	23 19 32.2	-3.0
BTK	Batken	10.65	61	Pn	Pn	23 19 43.8	-1.2

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IMRD  Marand            10.85 291   ePn    Pn      23 19 51.2 +3.4
IMRD  Marand            10.85 291   Pn     Pn      23 19 51.1 +3.3
DRK   Karamyk           11.17  65   Pn     Pn      23 19 50.5 -1.9
KK31  Karatay Array     11.91  47   Pn     Pn      23 20 01.2 -1.0
KKAR  Karatay Array     11.91  47   Pn     Pn      23 20 01.3 -1.0
GNI   Garni             11.96 297   Pn     Pn      23 20 08.6 +5.6
      comp=Z,0.4nm,0.3s,baz=169,slow=17,SNR=2.9
ABKAR Akbulak array     13.80   4          Pn      23 20 28.2 +0.3
ABKAR Akbulak array     13.80   4   Pn     Pn      23 20 26.6 -1.3
AAK   Ala-Archa         14.21  55   Pn     Pn      23 20 32.7 -1.1
      comp=Z,0.6nm,0.3s,baz=222,slow=7.3,SNR=12
AAK                                 Sn     Sn      23 23 10.0 -1.6
      comp=Z,0.1nm,0.3s,baz=205,slow=19,SNR=2.4
AAK   Ala-Archa         14.21  55   Pn     Pn      23 20 32.3 -1.5
FRU1  Bishkek           14.38  55   Pn     Pn      23 20 34.7 -1.2
KVAR  Kislovodsk Arr    14.91 309   Pn     Pn      23 20 45.6 +2.4
      baz=102,slow=19,SNR=1.9
KVAR                                Sn     Sn      23 23 26.7 -1.7
      baz=16,slow=20,SNR=1.9
AKTO  Aktyubinsk        14.96 358   Sn     Sn      23 23 25.0 -4.4
      comp=Z,0.1nm,0.3s,baz=90,slow=20,SNR=5.7
TARG  Taragay, Kyrgy    16.20  62   Pn     Pn      23 20 58.7 -1.7
TARG                                IAmb   IAmb    23 21 11.1
      comp=Z,8.9nm,0.8s
PRZ   Przheval'sk       16.84  60   P      Pn      23 21 08.7 +0.3
PRZ                                 IAmb   IAmb    23 21 18.4
      comp=Z,8.8nm,0.9s
BELG  Belogornoye       18.65 338   P      Pn      23 21 31.2 +0.9
      comp=Z,0.7nm,0.3s,baz=194,slow=15,SNR=4.9
BELG                                LR     LR      23 30 54.5
      comp=Z,39nm,18.9s,baz=9.9,slow=44
BRVK  Borovoye          19.40  21   P      Pn      23 21 39.7 +0.2
BVAR  Borovoye Array    19.40  22   P      Pn      23 21 39.5  0.0
      comp=Z,0.3nm,0.3s,baz=209,slow=15,SNR=7.5
MAKZ  Makanchi          20.81  50   P      P       23 21 52.8 -1.0
MAKZ                                IAmb   IAmb    23 22 06.6
      comp=Z,5.6nm,1.0s
KURBB Kurchatov Arra    20.87  37   P      Pn      23 21 56.3 -0.6
      comp=Z,2.1nm,0.8s,baz=236,slow=11,SNR=13
ARU   Arti              20.95 360   P      P       23 21 56.0 +0.7
      comp=Z,1.4nm,0.6s,baz=154,slow=6.6,SNR=6.5
ARU   Arti              20.95 360   P      P       23 21 56.2 +0.9
ARU                                 IAmb   IAmb    23 22 02.2
      comp=Z,11nm,1.0s
KURK  Kurchatov         20.98  37   P      P       23 21 56.0 +0.5
KURK                                IAmb   IAmb    23 22 05.2
      comp=Z,11nm,1.2s
MK31  Makanchi Array    21.00  50   P      Pn      23 21 56.9 -1.5
MKAR  Makanchi Array    21.00  50   P      Pn      23 21 57.9 -0.6
      comp=Z,0.7nm,0.8s,baz=244,slow=12,SNR=6.6
MKAR  Makanchi Array    21.00  50   P      Pn      23 21 57.3 -1.1
OBN   Obninsk           24.85 329   P      P       23 22 34.4 -0.3
ZAA0  Zalesovo Array    25.96  37   P      P       23 22 43.3 -1.5
ZAA0                                IAmb   IAmb    23 23 03.4
      comp=Z,2.8nm,0.9s
ZALV  Zalesovo Beam     25.96  37   P      P       23 22 45.5 +0.6
      comp=Z,2.7nm,1.0s,baz=265,slow=8.7,SNR=3.9
ZALV  Zalesovo Beam     25.96  37   P      P       23 22 43.9 -1.0
AKASG Malin Array Be    26.11 315   P      P       23 22 46.3  0.0
      comp=Z,1.2nm,0.6s,baz=113,slow=8.1,SNR=7.2
AKASG Malin Array Be    26.11 315   P      P       23 22 46.9 +0.6
AKBB  Malin Array Si    26.11 315   P      P       23 22 46.9 +0.6
BURAR Bucovina Array    27.60 306   P      P       23 23 00.2 +0.4
ATD   Arta Tunnel       27.83 215   LR     LR      23 35 51.4
      comp=Z,53nm,18.8s,baz=59,slow=40
FINES FINESS Array B    33.16 332   P      P       23 23 49.1 +0.5
      comp=Z,3.1nm,1.0s,baz=146,slow=12,SNR=5.8
SONM  Songino Array     37.17  56   LR     LR      23 40 34.0
      comp=Z,35nm,18.1s,baz=141,slow=38
CMAR  Chiang Mai Arr    39.39 105   P      P       23 24 42.5 +0.2
      comp=Z,1.3nm,0.4s,baz=301,slow=8.6,SNR=6.5
CMAR                                LR     LR      23 46 20.5
      comp=Z,12nm,18.9s,baz=190,slow=44
CART  Cartagena         47.28 291   P      P       23 25 45.0 -0.9
ESDC  Sonseca Array     48.93 295   P      P       23 25 59.0 +0.3
      comp=Z,0.3nm,0.7s,baz=64,slow=8.7,SNR=2.8
KSRS  Korea Array       54.55  66   LR     LR      23 52 51.7
      comp=Z,13nm,19.3s,baz=15,slow=39
TORD  Torodi Ar. Bea    55.67 261   P      P       23 26 48.7 -0.3
      comp=Z,1.5nm,0.9s,baz=40,slow=7.2,SNR=7.3
TORD  Torodi Ar. Bea    55.67 261   P      P       23 26 48.7 -0.3
TORD                                IAmb   IAmb    23 26 51.4
      comp=Z,5.2nm,1.4s
KOWA  Kowa              59.57 266   P      P       23 27 16.7 +0.3
WRA   Warramunga Arr    90.34 114   P      P       23 30 12.8 -1.2
      comp=Z,0.4nm,0.8s,baz=323,slow=4.2,SNR=2.4
```

IDC ***10*** *23:28:15.5±2.0, 30°.39S×71°.91W, h0^{km}, mb4.0/3, mb1 4.0/6, mb1mx3.8/24, mbtmp3.9/6, ML3.6/3, MS3.1/3, Ms1 3.1/3, ms1mx2.8/24, Error ellipse: s-maj=73.9km s-min=26.7km az=107.0*

NEIC ***10*** *23:28:17.9±1.7, 30°.38S±0°.02×71°.95W±0°.05, h18^{km}±5^{km}, mb4.3/4, ML4.2(GUC), Error ellipse: s-maj=6.8km s-min=2.7km az=107.0*

GUC ***10*** *23:28:18.5±0.7, 30°.50S×71°.95W, h31^{km}±3^{km}, ML4.2*

ISC 10 23:28:17.3±1.6**, 30°.40S**±0°.03×**71°.99W**±0°.08**, h16**^{km}±9^{km}**, n64, σ0ˢ.85**/66**, mb4.0**/4**, 4C-3D, Near coast of central Chile**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                    Op     ISC      h  m  s    ISC
CO06  Fray Jorge         0.41 132⇓iP   Pb      23 28 26.2  0.0
CO06                             i S   Sg      23 28 31.1 -0.3
CO06  Fray Jorge         0.41 132      Pg      23 28 26.1 +0.4
CO06                              Sg   Sg      23 28 31.5 +0.1
CO05  La Serena          0.81  54⇓iP   Pn      23 28 33.8 -0.2
CO05                             eS    Sn      23 28 44.5 -1.1
CO05                              IAML         23 28 47.4
      comp=E,7µm,0.4s
CO05  La Serena          0.81  54      Pg      23 28 33.5 +0.5
CO05                              Sn   Sn      23 28 44.3 -1.3
GO04  Tololo Observa     1.05  78⇓iP   Pn      23 28 37.4 -0.2
GO04                             i S   Sn      23 28 51.5 -0.6
GO04                              IAML         23 28 56.0
      comp=N,11µm,0.4s
GO04  Tololo Observa     1.05  78      Pn      23 28 37.4 -0.2
GO04                              Sn   Sg      23 28 51.3 -0.3
CO03  El Pedregal        1.21 112 Pn   Pn      23 28 38.8 -0.8
LCO   Las Campanas       1.78  39⇑eP   Pn      23 28 48.6 +1.1
LCO                              eS    Sb      23 29 12.5 +0.7
VA06  Catapilco          2.24 165 eP   Pn      23 28 53.5 -0.1
VA06                             eS    Sn      23 29 20.4 -0.6
VA06                              IAML         23 29 37.3
      comp=N,2µm,0.5s
AC04  Llanos de Chal     2.33  20⇑eP   Pn      23 28 55.4 +0.5
AC04                             eS    Sn      23 29 23.5 +0.4
AC04  Llanos de Chal     2.33  20 Pn   Pn      23 28 55.0 +0.2
VA03  San Esteban        2.66 153⇑eP   Pn      23 29 00.4 +0.8
VA03                             eS    Sn      23 29 31.5  0.0
VA03                              IAML         23 29 42.4
      comp=E,2µm,0.5s
VA03  San Esteban        2.66 153      Pn      23 29 00.2 +0.6
ROCH  El Roble           2.70 162⇑eP   Pn      23 29 00.2  0.0
ROCH                             i S   Sn      23 29 33.0 +0.4
ROCH                              IAML         23 29 53.9
      comp=N,1µm,0.4s
MT02  Curacav            2.94 166 eP   Pn      23 29 03.6 +0.2
PEL   Peldehue           2.96 158 eP   Pn      23 29 05.0 +1.4
PEL                               eS   Sn      23 29 36.6 -2.1
PEL                               IAML         23 29 51.1
      comp=N,797nm,0.5s
PEL   Peldehue           2.96 158 Pn   Pn      23 29 04.0 +0.4
ZON   Zonda              3.07 113 Pn   Pn      23 29 06.9 +1.8
MT05  Renca              3.17 161 eP   Pn      23 29 08.1 +1.6
MT05                              eS   Sn      23 29 43.8 -0.3
GO03  Copiap             3.19  29 eP   Pn      23 29 07.8 +1.0
GO03                              IAML         23 30 06.5
      comp=E,337nm,0.6s
GO03  Copiap             3.19  29      Pn      23 29 07.4 +0.6
FCH   Farellones         3.26 154 eP   Pn      23 29 09.1 +1.0
FCH                               IAML         23 30 06.7
      comp=E,357nm,0.6s
VA05  Santo Domingo      3.27 174 eP   Pn      23 29 07.6 -0.2
VA05                              IAML         23 30 02.8
      comp=E,530nm,0.5s
VA05  Santo Domingo      3.27 174 Pn   Pn      23 29 07.1 -0.7
MT09  Talagante          3.48 166 eP   Pn      23 29 11.7 +0.9
MT09                              IAML         23 30 11.2
      comp=N,526nm,0.4s
MT09  Talagante          3.48 166      Pn      23 29 11.8 +0.9
MT01  Popeta             3.51 170 eP   Pn      23 29 11.3 +0.1
MT01                              IAML         23 30 12.5
      comp=E,301nm,0.4s
MT01  Popeta             3.51 170 Pn   Pn      23 29 11.4 +0.2
LMEL  Las Melosas        3.76 157 eP   Pn      23 29 15.5 +0.8
BO04  La Punta           3.77 162 eP   Pn      23 29 15.6 +0.9
BO01  Tunca              4.06 169 eP   Pn      23 29 18.6  0.0
BO01  Tunca              4.06 169 Pn   Pn      23 29 18.7  0.0
BO02  Sierra Bellavi     4.50 167 eP   Pn      23 29 24.6 -0.3
BO02  Sierra Bellavi     4.50 167      Pn      23 29 25.4 +0.6
GO05  Huala              4.60 179 i P  Pn      23 29 25.0 -1.2
GO05  Huala              4.60 179 Pn   Pn      23 29 25.0 -1.2
ML02  Panimavida         5.37 175 Pn   Pn      23 29 35.7 -1.1
H03N1 Juan Fernandez     6.62 241 T    T       23 36 54.1
      baz=70,slow=72,SNR=1294
H03N2 Juan Fernandez     6.64 241 T    T       23 36 53.8
      baz=70,slow=72,SNR=1097
H03N3 Juan Fernandez     6.64 241 T    T       23 36 57.5
      baz=70,slow=72,SNR=1108
LVC   Limon Verde        8.23  20 Pn   Pn      23 30 15.3 -1.1
      comp=E,0.2nm,0.3s,baz=180,slow=10,SNR=1.7
LVC                               LR   LR      23 33 14.8
      comp=E,55nm,19.8s,baz=206,slow=36
LVC   Limon Verde        8.23  20 Pn   Pn      23 30 15.1 -1.2
LC01  Cunco              8.48 179 Pn   Pn      23 30 17.6 -1.9
PLCA  Paso Flores       10.38 174 Pn   Pn      23 30 46.5 +0.9
      comp=E,0.2nm,0.3s,baz=5.2,slow=11,SNR=3.9
PLCA  Paso Flores       10.38 174 Pn   Pn      23 30 45.2 -0.4
ITQB  Itaqui            13.33  91 Pn   Pn      23 31 24.1 -1.7
CPUP  Villa Florida     13.53  76 LR   LR      23 37 18.4
      comp=E,137nm,18.4s,baz=218,slow=40
LPAZ  La Paz            14.48  15 P    P       23 31 49.0 +0.1
SIV   San Ignacio       17.48  37 P    P       23 32 21.8 +0.2
      comp=E,0.2nm,0.3s,baz=223,slow=11,SNR=19
BDFB  Brasilia          26.43  62 P    P       23 33 53.4 -0.2
      comp=E,2.6nm,0.6s,baz=221,slow=11,SNR=4.9
BDFB  Brasilia          26.43  62 P    P       23 33 53.0 -0.6
BDFB                              IAmb IAmb    23 34 09.1
      comp=Z,5.9nm,1.0s
SNAA  Sanae             54.91 159 LR   LR      00 01 11.9
      comp=Z,18nm,18.7s,baz=12,slow=36
SNAA  Sanae             54.91 159 P    P       23 37 46.8  0.0
SNAA                              IAmb IAmb    23 37 48.1
      comp=Z,2.9nm,0.8s
QSPA  South Pole Qui    59.83 180 P    P       23 38 23.0 +1.3
MAW   Mawson            76.62 164 P    P       23 40 07.1 +0.5
      comp=Z,1.1nm,0.8s,baz=229,slow=13,SNR=2.5
MAW   Mawson            76.62 164 P    P       23 40 07.4 +0.8
TORD  Torodi Ar. Bea    82.95  70 P    P       23 40 42.5 +0.6
      comp=Z,0.9nm,0.8s,baz=252,slow=4.5,SNR=4.9
H11S2 WAKE ISLAND Hy   125.79 272 T    T       02 05 59.7
      baz=115,slow=75,SNR=25
H11S1 WAKE ISLAND Hy   125.80 272 T    T       02 06 00.2
      baz=115,slow=75,SNR=35
H11S3 WAKE ISLAND Hy   125.80 272 T    T       02 06 00.6
      baz=115,slow=75,SNR=29
H11N3 WAKE ISLAND Hy   126.11 273 T    T       02 06 26.8
      baz=116,slow=74
H11N1 WAKE ISLAND Hy   126.12 273 T    T       02 06 29.5
      baz=116
H11N2 WAKE ISLAND Hy   126.12 273 T    T       02 06 29.3
      baz=116,slow=74
ZALV  Zalesovo Beam    151.11  29 PKPbc PKiKP  23 48 09.9 +0.3
      comp=Z,5.0nm,0.7s,baz=307,slow=3.3,SNR=21
```

IDC ***10*** *23:38:42.0±1.6, 7°.70S×126°.11E, h0^{km}, mb3.8/2, mb1 4.2/6, mb1mx3.8/28, mbtmp4.0/6, ML3.7/4, MS2.7/3, Ms1 2.7/3, ms1mx2.4/38, Error ellipse: s-maj=35.9km s-min=24.9km az=67.0*

ISC 10 23:38:44.8±1.1**, 7°.65S**±0°.09×**126°.17E**±0°.10**, h35**^{km}**, n10, σ3ˢ.39**/11**, Banda Sea**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                    Op     ISC      h  m  s    ISC
SOEI  Soe                2.81 222 P    Pn      23 39 33.3 +5.9
BATI  Baumata            3.55 224 Pn   Pn      23 39 38.6 +1.2
      13nm,0.3s,baz=28,slow=2.4,SNR=9.8
BATI                              Sn   Sn      23 40 20.2 +1.9
      12nm,0.3s,baz=324,slow=24,SNR=9.3
BATI                              LR   LR      23 40 58.1
      comp=Z,115nm,21.2s,baz=242,slow=39
MMRI  Maumere            4.02 256 P    Pn      23 39 42.3 -1.5
DRS   Darwin Rock St     6.65 136 P    Pn      23 40 29.0 +8.9
      52nm,0.6s
KAPI  Kappang            6.90 292 Pn   Pn      23 40 23.1 -0.4
      2.1nm,0.3s,baz=106,slow=7.4,SNR=3.7
KAPI                              Sn   Sn      23 41 35.9 -4.8
      1.5nm,0.3s,baz=65,slow=23,SNR=6.3
WRA   Warramunga Arr    14.56 148 Pn   Pn      23 42 07.6 -0.9
      0.2nm,0.3s,baz=318,slow=13,SNR=17
WRA                               Sn   Sn      23 44 43.2 -5.5
      0.2nm,0.3s,baz=325,slow=22,SNR=5.8
WRA                               LR   LR      23 48 40.0
      comp=Z,20nm,21.4s,baz=190,slow=41
ASAR  Alice Springs     17.57 156 P    P       23 42 49.6 +1.7
      0.4nm,0.3s,baz=336,slow=12,SNR=34
ASAR                              S    Sn      23 45 58.1 -3.8
      0.1nm,0.3s,baz=316,slow=21,SNR=4.9
PMG   Port Moresby      20.83  96 LR   LR      23 53 38.6
      comp=Z,42nm,18.2s,baz=208,slow=43
MKAR  Makanchi Array    66.75 329 P    P       23 49 35.5 +2.9
      0.8nm,0.7s,baz=127,slow=7.4,SNR=5.4
VNDA  Vanda             72.29 172 P    P       23 50 08.3 +2.0
      0.8nm,0.9s,baz=311,slow=6.1,SNR=3.8
```

NEIC ***10*** *23:48:24, 29°.48S×72°.16W, h13^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$5.45; M$_{\theta\theta}$0.04; M$_{\phi\phi}$-5.50; M$_{r\theta}$0.21; M$_{\theta\phi}$-0.94; M$_{\phi r}$-1.02; Fault plane solution: M$_0$5.65000×10^{15} NP1:φ$_s$185.44000°, δ50.10000°, λ84.91000°. NP2:φ$_s$13.36000°, δ40.17000°, λ96.06000°. Principal axes: T 5.5636, Plg84.0000°, Azm61.0000°; N 0.1732, Plg4.0000°, Azm189.0000°; P -5.7368, Plg5.0000°, Azm279.0000°;*

NEIC ***10*** *23:48:25.1±2.6, 29°.50S±0°.04×72°.11W±0°.02, h10^{km}±1^{km}, mb4.8/29, Mwr4.4/27, ML5.0(GUC) Error ellipse: s-maj=6.4km s-min=3.3km az=185.0*

IDC ***10*** *23:48:25.5±0.6, 29°.54S×71°.72W, h0^{km}, mb4.4/10, mb1 4.4/15, mb1mx4.3/29, mbtmp4.3/15, ML4.1/5, MS3.7/9, Ms1 3.7/9, ms1mx3.4/23, Error ellipse: s-maj=25.6km s-min=15.9km az=94.0*

VAO ***10*** *23:48:26.4±0.5, 29°.44S×71°.91W, h10^{km}, mb4.6*

GUC ***10*** *23:48:26.2±0.5, 29°.50S×71°.97W, h53^{km}±4^{km}, ML5.0*

ISC 10 23:48:24.2±1.9**, 29°.49S**±0°.03×**72°.09W**±0°.06**, h3**^{km}±11^{km}**, n179, σ1ˢ.23**/189**, mb4.8**/21**, MS3.8**/4**, 19C-11D, Fault plane solution: NP1:**φ$_s$185.46877°**,** δ65.00402°**,** λ91.02524°. **NP2:**φ$_s$3.04368°**,** δ25.01565°**,** λ87.80217°. **Principal axes:** T Plg69.9788°**,** Azm97.5866°**;** N Plg0.9292°**,** Azm5.0355°**;** P Plg19.9978°**,** Azm274.6973°**; Off coast of central Chile**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                    Op     ISC      h  m  s    ISC
CO05  La Serena          0.85 121⇓iP   Pg      23 48 41.5 +1.0
CO05                             eS    Sb      23 48 53.1 -0.3
CO05                              IAML         23 48 55.4
      comp=E,73µm,0.5s
CO05  La Serena          0.85 121      Pg      23 48 41.6 +1.0
CO05                              Sg   Sb      23 48 53.2 -0.2
CO06  Fray Jorge         1.25 162⇑iP   Pn      23 48 48.0 -0.5
CO06                             i S   Sb      23 49 04.0 -0.8
CO06  Fray Jorge         1.25 162      Pn      23 48 47.9 -0.5
CO06                              Sn   Sb      23 49 02.8 -2.0
LCO   Las Campanas       1.30  69⇓iP   Pn      23 48 49.0 -0.5
LCO                              eS    Sg      23 49 06.5 +0.5
LCO   Las Campanas       1.30  69      Pn      23 48 48.9 -0.5
GO04  Tololo Observa     1.31 122⇓iP   Pn      23 48 49.2 -0.3
GO04                             i S   Sg      23 49 06.7 +0.4
GO04                              IAML         23 49 13.2
      comp=N,109µm,0.7s
GO04  Tololo Observa     1.31 122      Pn      23 48 49.3 -0.3
AC04  Llanos de Chal     1.56  35⇑iP   Pn      23 48 52.2 -0.5
AC04                             eS    Sn      23 49 10.5 -2.9
AC04  Llanos de Chal     1.56  35 Pn   Pn      23 48 52.0 -0.7
CO03  El Pedregal        1.81 138 Pn   Pn      23 48 56.7 +0.3
GO03  Copiap             2.49  41⇑eP   Pn      23 49 05.7 +0.1
GO03                             eS    Sn      23 49 35.9 -0.7
GO03                              IAML         23 49 51.6
      comp=E,4µm,0.6s
GO03  Copiap             2.49  41 Pn   Pn      23 49 05.8 +0.1
VA06  Catapilco          3.14 168⇑eP   Pn      23 49 14.7 +0.2
VA06                             eS    Sn      23 49 50.1 -2.3
VA06                              IAML         23 50 28.3
      comp=N,3µm,0.4s
VA03  San Esteban        3.52 158⇑eP   Pn      23 49 20.9 +1.1
VA03                             eS    Sn      23 50 00.8 -1.3
VA03                              IAML         23 50 21.6
      comp=N,3µm,0.4s
VA03  San Esteban        3.52 158      Pn      23 49 20.6 +0.8
VA01  Torpederas         3.55 174 eS   Sn      23 49 57.9 -4.6
VA01  Torpederas         3.55 174 Pn   Pn      23 49 20.1  0.0
ROCH  El Roble           3.59 165⇑iP   Pn      23 49 21.5 +0.5
ROCH                             eS    Sn      23 50 04.2 +0.2
ROCH                              IAML         23 50 25.4
      comp=N,3µm,0.4s
PEL   Peldehue           3.84 162⇑eP   Pn      23 49 25.2 +1.0
PEL                              eS    Sn      23 50 08.7 -1.2
PEL   Peldehue           3.84 162 Pn   Pn      23 49 24.0 -0.1
MT02  Curacav            3.85 168 eP   Pn      23 49 24.3  0.0
MT02                             i S   Sn      23 50 08.0 -2.0
MT02  Curacav            3.85 168      Pn      23 49 24.4  0.0
MT05  Renca              4.06 164 eP   Pn      23 49 28.1 +0.9
MT05                             eS    Sn      23 50 13.9 -1.4
MT05  Renca              4.06 164      Pn      23 49 27.8 +0.5
VA05  Santo Domingo      4.18 175 Pn   Pn      23 49 28.1 -0.7
MT09  Talagante          4.38 168      Pn      23 49 32.5 +0.8
MT01  Popeta             4.42 171 Pn   Pn      23 49 31.9 -0.3
BO01  Tunca              4.96 170 Pn   Pn      23 49 39.6  0.0
PB14  IPOC Station P     5.07  18 Pn   Pn      23 49 40.3 -1.1
BO02  Sierra Bellavi     5.41 169      Pn      23 49 46.2 +0.4
GO05  Huala              5.51 179      Pn      23 49 46.2 -0.9
PB10  IPOC Station P     6.10  13 Pn   Pn      23 49 54.0 -1.3
PB15  IPOC Station P     6.68  21      Pn      23 50 02.5 -0.9
H03N1 Juan Fernandez     7.04 234 T    T       23 57 55.2
      baz=64,slow=71,SNR=3063
H03N2 Juan Fernandez     7.05 234 T    T       23 57 57.9
      baz=64,slow=71,SNR=1831
H03N3 Juan Fernandez     7.05 234 T    T       23 57 45.1
      baz=64,slow=71,SNR=1751
VA04  Juan Fernndez      7.09 233 Pn   Pn      23 50 05.8 -3.0
PB06  IPOC Station P     7.12  19      Pn      23 50 07.1 -2.3
PB04  IPOC Station P     7.33  14 Pn   Pn      23 50 10.0 -2.3
LVC   Limon Verde        7.42  23 Pn   Pn      23 50 12.4 -1.3
      comp=N,1.3nm,0.3s,baz=172,slow=8.1,SNR=13
LVC                               Sn   Sn      23 51 35.1 -3.4
      comp=N,4.3nm,0.3s,baz=205,slow=19,SNR=2.0
LVC   Limon Verde        7.42  23 eP   Pn      23 50 12.2 -1.4
PB07  IPOC Station P     7.98  15 Pn   Pn      23 50 19.4 -1.8
PB09  IPOC Station P     8.07  19 Pn   Pn      23 50 20.5 -2.0
PB01  IPOC Station P     8.73  16 Pn   Pn      23 50 28.6 -2.8
LC01  Cunco              9.39 179      Pn      23 50 39.4 -1.0
PSGCX Pisagua           10.01  11 Pn   Pn      23 50 46.1 -2.8
PLCA  Paso Flores       11.29 174 Pn   Pn      23 51 06.4  0.0
      comp=N,0.4nm,0.3s,baz=339,slow=12,SNR=6.7
PLCA                              LR   LR      23 55 43.0
      comp=N,337nm,19.3s,baz=351,slow=39
PLCA  Paso Flores       11.29 174 eP   Pn      23 51 06.8 +0.3
CPUP  Villa Florida     13.42  80 Pn   Pn      23 51 33.8 -1.7
      comp=N,0.1nm,0.3s,baz=237,slow=16,SNR=2.0
CPUP                              LR   LR      23 56 31.3
      comp=N,298nm,18.8s,baz=254,slow=37
CPUP  Villa Florida     13.42  80 eP   Pn      23 51 34.0 -1.6
ITQB  Itaqui            13.46  95 eP   Pn      23 51 35.6 -0.4
ITQB  Itaqui            13.46  95 Pn   Pn      23 51 34.9 -1.2
LPAZ  La Paz            13.63  16 Pn   Pn      23 51 41.3 +2.3
      comp=N,0.5nm,0.3s,baz=193,slow=6.8,SNR=14
LPAZ                              LR   LR      23 56 51.8
      comp=N,150nm,19.8s,baz=133,slow=37
LPAZ  La Paz            13.63  16 eP   Pn      23 51 38.1 -0.9
LPAZ  La Paz            13.63  16      Pn      23 51 36.8 -2.2
PLTB  Pedras Altas      16.07 103 eP   Pn      23 52 12.3 +1.1
PLTB  Pedras Altas      16.07 103      Pn      23 52 09.0 -2.1
CPSB  Cacapava Do Su    16.19  98 eP   Pn      23 52 13.1 +0.4
SIV   San Ignacio       16.82  39 Pn   Pn      23 52 19.5 -1.4
      comp=N,0.9nm,0.3s,baz=225,slow=12,SNR=23
SIV                               LR   LR      23 59 55.5
      comp=N,235nm,19.5s,baz=241,slow=41
AQDB  Aquidauana        17.34  63 eP   Pn      23 52 27.3 +0.1
NNA   Nana              17.97 345 LR   LR      23 58 12.1
      comp=N,103nm,21.6s,baz=163,slow=32
PTLB  Pontes e Lacer    18.37  43 eP   Pn      23 52 38.9 -1.2
PTLB  Pontes e Lacer    18.37  43 P    Pn      23 52 38.8 -1.2
PTGB  Pitanga           18.44  80 eP   Pn      23 52 40.7 -0.3
TRCB  Terra Rica        18.68  74 P    P       23 52 43.2 -0.4
TRCB                              IAmb IAmb    23 52 45.8
      comp=Z,56nm,1.3s
PP1B  Ponte de Pedra    19.69  57 eP   P       23 52 52.9 -1.7
VILB  Vilhena           19.81  36 eP   P       23 52 56.1 +0.2
VILB  Vilhena           19.81  36 P    P       23 52 55.7 -0.2
TER01 Tubaro-SC         20.10  93 eP   Pn      23 52 59.7 -1.1
SALV  Santo Antonio     20.25  52 eP   P       23 53 00.3 -0.4
ETMB  Extrema           20.33  17 eP   P       23 53 01.8 +0.3
PCMB  Pacaembu          20.34  72 eP   P       23 53 01.2 -0.5
FRTB  Fartura           21.06  78 eP   P       23 53 08.3 -1.2
CZSB  Cruzeiro do Su    21.65 358 eP   P       23 53 19.0 +3.2
ITRB  Iturama           21.99  69 eP   P       23 53 19.0 -0.5
SAML  Samuel            22.07  24 P    P       23 53 21.6 +1.2
PET01 Itanhaem-SP       22.71  83 eP   P       23 53 26.8 -0.4
PDRB  Porto dos Gac     22.82  42 eP   P       23 53 27.6 -0.8
BB19B Bebedouro         22.86  74 eP   P       23 53 28.5 -0.3
ARAG  Araguaiana, MT    23.15  58 eP   P       23 53 32.7 +0.9
CLDB  Colider           23.96  43 eP   P       23 53 39.2 -0.6
EFI   East Falkland     24.51 159 P    P       23 53 43.9 -0.7
EFI                               IAmb IAmb    23 53 58.4
      comp=Z,20nm,0.8s
IPMB  Ipameri, GO       24.62  68 eP   P       23 53 45.8 -0.2
TBTG  Tabatinga, AM     25.25   5 eP   P       23 53 53.2 +1.7
USHA  Ushuaia           25.47 175 P    P       23 53 54.4 +1.2
      comp=Z,23nm,0.9s,baz=324,slow=7.3,SNR=3.2
USHA                              LR   LR      00 03 47.0
      comp=Z,229nm,18.6s,baz=84,slow=36
SNDB  Serra Nova Dou    26.03  52 eP   P       23 53 58.2 -0.5
BDFB  Brasilia          26.08  63 P    P       23 53 58.9 -0.4
      comp=Z,14nm,0.9s,baz=275,slow=5.1,SNR=14
BDFB                              LR   LR      00 05 15.1
      comp=Z,169nm,18.6s,baz=282,slow=39
BDFB  Brasilia          26.08  63 P    P       23 53 58.8 -0.5
BDFB                              IAmb IAmb    23 54 00.1
      comp=Z,44nm,1.4s
NPGB  Novo Progresso    27.32  38 eP   P       23 54 10.1 -0.2
PEXB  Peixe             28.07  57 eP   P       23 54 17.9 +0.8
MACA  Manacapuru-AM     28.33  25 eP   P       23 54 18.5 -0.9
MACA  Manacapuru-AM     28.33  25 P    P       23 54 19.5 +0.2
MACA                              IAmb IAmb    23 54 23.9
      comp=Z,12nm,0.7s
MC01  Montes Claros     28.76  70 eP   P       23 54 22.2 -1.1
JANB  Januaria          29.34  67 eP   P       23 54 28.1 -0.3
ITTB  Itaituba          29.39  35 eP   P       23 54 28.1 -0.7
ALF01 Guarapari-ES      29.68  80 eP   P       23 54 29.9 -1.4
SJMB  Sao Joao De Ma    30.09  76 eP   P       23 54 34.5 -0.5
BSFB  Barra de Sao F    30.32  77 eP   P       23 54 36.6 -0.5
SDBA  SAO DESIDERIO     30.43  62 eP   P       23 54 37.9 -0.1
SMTB  Santa Maria do    30.80  53 eP   P       23 54 42.2 +1.0
PTGA  Pitinga           30.84  24 P    P       23 54 41.4 -0.2
      comp=Z,1.7nm,0.4s,baz=197,slow=8.7,SNR=7.8
PTGA  Pitinga           30.84  24 P    P       23 54 40.2 -1.4
PRPB  Parauapebas       31.29  47 eP   P       23 54 44.6 -1.0
NAN01 Guarapari, ES     31.38  76 eP   P       23 54 45.2 -1.2
MALB  Monte Alegre      32.29  35 eP   P       23 54 53.1 -1.3
CMC01 Camacan, BA       33.09  72 eP   P       23 55 00.8 -0.6
BOAV  Boa Vista         33.58  21 eP   P       23 55 04.8 -0.8
BOAV  Boa Vista         33.58  21 P    P       23 55 05.5 -0.2
GDU01 Guandu, BA        33.91  69 eP   P       23 55 07.5 -1.0
NBPN  Ponto Novo - B    35.03  65 eP   P       23 55 17.2 -1.1
NBLA  Lagarto - SE      36.87  67 eP   P       23 55 33.2 -0.8
ROSB  Rosrio            37.47  50 eP   P       23 55 38.6 -0.5
NBPS  Pedro II - PI     38.26  55 eP   P       23 55 44.6 -1.2
NBMA  Muriti-CE         38.28  62 eP   P       23 55 44.8 -1.3
NBPB  Pedra_Branca-C    38.84  59 eP   P       23 55 50.9 +0.2
NBAN  Anadia - AL       38.84  67 eP   P       23 55 49.9 -0.9
NBLV  Livramento - P    39.71  63 eP   P       23 55 58.3 +0.2
NBRF  Rio Formoso -     40.34  67 eP   P       23 56 03.1 -0.1
NBPA  Parau_RN          40.57  61 eP   P       23 56 05.2  0.0
MTO3  Montecristo       46.71 337 P    P       23 56 53.0 -1.7
MTO3                              IAmb IAmb    23 56 56.2
      comp=Z,6.6nm,0.5s
PCDR  Punta Cana, DR    47.85   5 P    P       23 57 02.4 -0.9
TLIG  Tlapa             53.30 328 P    P       23 57 44.5 -0.3
TLIG                              IAmb IAmb    23 58 10.4
      comp=Z,8.8nm,1.2s
VNA3  Neumayer Olymp    53.56 159 P    P       23 57 46.8 +0.9
VNA1  Neumayer--Stat    53.85 158 P    P       23 57 48.7 +0.7
VNA2  Neumayer--Watz    54.20 159 P    P       23 57 51.2 +0.6
      baz=287,slow=8.3
SNAA  Sanae             55.78 159 P    P       23 58 02.7 +0.6
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SNAA	Sanae	55.78	159	P	P	23 58 02.7	+0.6
	comp=Z,9.3nm,0.8s,baz=277,slow=7.1,SNR=29						
SNAA	Sanae	55.78	159	P	P	23 58 02.7	+0.6
SNAA				IAmb	IAmb	23 58 03.8	
	comp=Z,16nm,1.1s						
QSPA	South Pole Qui	60.74	180	P	P	23 58 37.2	+0.3
QSPA				IAmb	IAmb	23 58 39.4	
	comp=Z,14nm,1.2s						
W50A	Signal Mountai	65.54	348	P	P	23 59 08.7	-0.3
TXAR	Lajitas Array	65.80	330	P	P	23 59 14.1	+3.2
	comp=Z,0.7nm,0.9s,baz=155,slow=7.2,SNR=6.5						
TXAR				LR	LR	00 24 04.4	
	comp=Z,54nm,18.5s,baz=0.0,slow=32						
TXAR	Lajitas Array	65.80	330	P	P	23 59 11.0	+0.2
TX31	Lajitas Ar. Si	65.80	330	P	P	23 59 10.6	-0.2
TX31				IAmb	IAmb	23 59 35.9	
	comp=Z,11nm,1.4s						
V52A	Sevierville	65.88	350	P	P	23 59 11.2	+0.1
V52A				IAmb	IAmb	23 59 22.5	
	comp=Z,6.4nm,0.9s						
WVT	Waverly	66.93	346	P	P	23 59 18.0	+0.2
WVT				IAmb	IAmb	23 59 33.9	
	comp=Z,5.5nm,0.8s						
MNTX	Cornudas Mount	68.58	330	P	P	23 59 27.3	-1.0
R40A	Maddies Statio	70.02	343	P	P	23 59 37.9	+0.9
R40A				IAmb	IAmb	23 59 49.3	
	comp=Z,16nm,1.3s						
N47A	Urbana	71.14	349	P	P	23 59 44.6	+0.8
N47A				IAmb	IAmb	00 00 01.3	
	comp=Z,8.3nm,0.8s						
DBIC	Dimbokro	73.82	72	P	P	00 00 00.8	+0.4
	comp=Z,8.4nm,0.8s,baz=239,slow=4.6,SNR=10						
DBIC	Dimbokro	73.82	72	P	P	00 00 01.1	+0.6
MAW	Mawson	77.51	164	P	P	00 00 21.9	+1.1
	comp=Z,4.4nm,1.1s,baz=179,slow=5.2,SNR=5.8						
MAW	Mawson	77.51	164	P	P	00 00 21.7	+1.0
KOWA	Kowa	78.84	66	P	P	00 00 29.6	+0.6
KOWA				IAmb	IAmb	00 00 30.3	
	comp=Z,8.4nm,0.7s						
PDAR	Pinedale Array	79.73	333	P	P	00 00 37.1	+3.6
	comp=Z,0.2nm,0.4s,baz=127,slow=7.0,SNR=1.6						
PMPB	Monarch Peak	79.80	322	P	P	00 00 32.5	-1.3
BOSA	Boshof	82.22	118	P	P	00 00 47.3	+0.1
	comp=Z,1.7nm,0.8s,baz=270,slow=7.0,SNR=4.2						
BOSA	Boshof	82.22	118	P	P	00 00 45.9	-1.3
BOSA				IAmb	IAmb	00 00 58.0	
	comp=Z,4.6nm,0.8s						
TORD	Torodi Ar. Bea	82.73	71	P	P	00 00 50.1	+0.3
	comp=Z,12nm,0.9s,baz=259,slow=4.8,SNR=51						
TORD				LR	LR	00 36 05.8	
	comp=Z,60nm,18.6s,baz=240,slow=35						
TORD	Torodi Ar. Bea	82.73	71	P	P	00 00 48.9	-0.9
LBTB	Lobatse	84.25	115	P	P	00 00 57.8	+0.1
AKASG	Malin Array Be	119.12	46	PKP	PKiKP	00 07 14.4	+0.3
	comp=Z,0.7nm,0.6s,baz=260,slow=2.7,SNR=4.9						
WRA	Warramunga Arr	124.65	211	PKP	PKPdf	00 07 25.8	0.0
	comp=Z,0.5nm,0.6s,baz=162,slow=1.6,SNR=6.4						
WRA	Warramunga Arr	124.65	211		PKPdf	00 07 25.7	-0.1
H11S2	WAKE ISLAND Hy	125.67	272	T	T	02 26 31.5	
	baz=115,slow=74,SNR=22						
H11S1	WAKE ISLAND Hy	125.68	272	T	T	02 26 28.5	
	baz=115,slow=74,SNR=17						
H11S3	WAKE ISLAND Hy	125.69	272	T	T	02 26 32.8	
	baz=115,slow=74,SNR=13						
KBZ	Khabaz	127.18	56	PKP	PKiKP	00 07 32.6	+2.3
	comp=Z,2.7nm,1.0s,baz=195,slow=4.1,SNR=2.7						
ARU	Arti	136.28	38	PKP	PKiKP	00 07 49.1	+0.8
	comp=Z,0.6nm,0.5s,baz=336,slow=4.5,SNR=4.2						
BVAR	Borovoye Array	143.90	39	PKP	PKPdf	00 08 00.4	-0.1
	comp=Z,0.4nm,0.4s,baz=258,slow=5.7,SNR=6.3						
KURK	Kurchatov	149.47	38		PKPdf	00 08 11.5	+1.6
KURBB	Kurchatov Arra	149.48	38	PKPbc	PKiKP	00 08 16.1	+0.5
	comp=Z,2.1nm,0.5s,baz=304,slow=3.1,SNR=27						
EKS2	Erkin-Say	149.65	55	P	PKiKP	00 08 17.3	+1.0
	SNR=11						
AML	Almayashu	149.72	56	P	PKiKP	00 08 17.8	+1.0
	SNR=9.2						
USP	Ospenovka	150.00	54	P	PKiKP	00 08 17.7	+0.8
	SNR=7.8						
AAK	Ala-Archa	150.17	55	PKPbc	PKiKP	00 08 18.7	+1.2
	comp=Z,12nm,0.8s,baz=224,slow=2.2,SNR=46						
AAK	Ala-Archa	150.17	55	P	PKiKP	00 08 19.2	+1.8
	SNR=16						
AAK	Ala-Archa	150.17	55		PKiKP	00 08 18.0	+0.5
CHMS	Chumysh	150.25	54	P	PKiKP	00 08 18.6	+1.1
	SNR=5.1						
UCH	Uchtor	150.29	56	P	PKiKP	00 08 19.7	+1.6
	SNR=18						
ZALV	Zalesovo Beam	150.35	28	PKP	PKPdf	00 08 12.4	+1.2
	comp=Z,23nm,0.9s,baz=304,slow=2.7,SNR=38						
ZALV				PKPbc	PKiKP	00 08 17.7	+0.5
	comp=Z,23nm,0.9s,baz=302,slow=3.4,SNR=39						
ZALV	Zalesovo Beam	150.35	28		PKPdf	00 08 12.6	+1.4
ZALV				PKPbc	PKiKP	00 08 17.0	-0.2
KBK	Karagaybulak	150.49	55	P	PKiKP	00 08 19.8	+1.7
	SNR=7.7						
TKM2	Tokmak 2	150.87	54	P	PKiKP	00 08 20.4	+1.4
	SNR=13						
ULHL	Ulahol	151.52	55	P	PKiKP	00 08 22.2	+1.8
	SNR=5.8						
KSH	Kashi	151.97	61	PKPbc	PKPdf	00 08 16.1	+1.7
KSH				pPKP	PKiKP	00 08 22.0	+0.8
MKAR	Makanchi Array	153.63	42	PKP	PKPdf	00 08 17.7	+1.2
	comp=Z,0.6nm,0.8s,baz=318,slow=3.3,SNR=3.7						
MKAR				PKPbc	PKiKP	00 08 25.4	+1.1
	comp=Z,2.0nm,0.8s,baz=300,slow=2.7,SNR=11						
MKAR	Makanchi Array	153.63	42		PKPdf	00 08 16.7	+0.2
SONM	Songino Array	161.64	3	PKPab	PKPab	00 09 13.7	+2.3
	comp=Z,0.6nm,0.8s,baz=335,slow=4.6,SNR=4.0						

BJI **11** 00:26:53.4±0.0,6°.21N×148°.04E,h14^{km},mB5.3/66, mb5.1/79,Ms5.2/89,Ms7 4.9/83

IDC **11** 00:26:54.8±0.3,6°.20N×147°.68E,h0^{km},mb5.1/36, mb1 5.1/39,mb1mx5.1/49,mbtmp5.1/39,ML3.6/2,MS4.8/43, Ms1 4.8/43,ms1mx4.7/52,Error ellipse: s-maj=12.4km s-min=9.2km az=86.0

MOS **11** 00:26:56.4±1.0,6°.24N×147°.59E,h23^{km},mb5.6/59, MS4.8/12,Error ellipse: s-maj=9.0km s-min=4.6km az=112.1

NEIC **11** 00:26:57.8±1.8,6°.24N±0°.07×147°.64E±0°.08,h13^{km}±1^{km}, mb5.5/245,Ms_20 5.3/251,Mwb5.5/45,Mww5.6, Mwc5.6(GCMT),Error ellipse: s-maj=14.2km s-min=10.9km az=255.0

DJA **11** 00:26:57.4±1.2,6°N±3°×14°8E±°,h12^{km}±8^{km},M5.5/80, mB6.0/53,mb5.5/80,Mw(mB)5.6/53,MwMwp5.2/18, Mwp5.5/18

NEIC **11** 00:26:58.3,6°.18N×147°.60E,h10^{km},Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.12; $M_{\theta\theta}$0.90; $M_{\phi\phi}$-0.78; $M_{r\theta}$0.91; $M_{\theta\phi}$1.90; $M_{\phi r}$-0.04; Fault plane solution: $M_0$2.27000×10^{17} NP1:ϕ_s11.40000°, δ66.68000°,λ178.91000°. NP2:ϕ_s101.83000°,δ89.00000°, λ23.33000°. Principal axes: T 2.3604, Plg17.0000°, Azm329.0000°; N -0.1983, Plg67.0000°, Azm104.0000°; P -2.1622, Plg16.0000°, Azm234.0000°;

GCMT **11** 00:26:59.8±0.1,6°.17N±0°.01×147°.61E±0°.01,h24^{km}, MW5.6/152,Moment Tensor Solution. s125,c229; s152,c305; Duration: 1^{s}6 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.66±.04; $M_{\theta\theta}$2.08±.04; $M_{\phi\phi}$-0.41±.04; $M_{r\theta}$1.75±.07; $M_{\theta\phi}$2.49±.03; $M_{\phi r}$-0.35±.06; Best double couple: $M_0$3.54400×10^{17} NP1:ϕ_s20.00000°,δ49.00000°, λ-155.00000°. NP2:ϕ_s273.00000°,δ71.00000°, λ-44.00000°. Principal axes: T 3.9350, Plg14.0000°, Azm331.0000°; N -0.7770, Plg43.0000°, Azm74.0000°; P -3.1530, Plg44.0000°, Azm228.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

NEIC **11** 00:26:59,6°.31N×147°.73E,h18^{km},Moment Tensor Solution. Duration: 2^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.36; $M_{\theta\theta}$1.64; $M_{\phi\phi}$-0.28; $M_{r\theta}$1.10; $M_{\theta\phi}$2.34; $M_{\phi r}$-1.07; Fault plane solution: $M_0$3.19000×10^{17} NP1:ϕ_s19.00000°, δ59.00000°,λ-151.00000°. NP2:ϕ_s273.00000°, δ66.00000°,λ-34.00000°. Principal axes: T 3.2355, Plg4.0000°, Azm327.0000°; N -0.1015, Plg49.0000°, Azm63.0000°; P -3.1340, Plg40.0000°, Azm234.0000°;

NEIC **11** 00:27:01,6°.16N×147°.61E,h23^{km},Moment Tensor Solution. Duration: 3^{s}2 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.68; $M_{\theta\theta}$2.11; $M_{\phi\phi}$-0.42; $M_{r\theta}$1.67; $M_{\theta\phi}$2.67; $M_{\phi r}$-0.55; Fault plane solution: $M_0$3.73000×10^{17} NP1:ϕ_s19.00000°, δ52.00000°,λ-155.00000°. NP2:ϕ_s273.00000°, δ71.00000°,λ-41.00000°. Principal axes: T 4.0270, Plg12.0000°, Azm330.0000°; N -0.6764, Plg46.0000°, Azm72.0000°; P -3.3506, Plg42.0000°, Azm230.0000°;

ISC 11 00:26:57.6±0.4,**6°.25N**±0°.03×**147°.66E**±0°.04,**h17**^{km}±2^{km}, **h17**^{km}**:pP-P,n877,**σ**1**^{s}**45**/771,**mb5.5**/278,**MS5.2**/201, **51C-47D,Fault plane solution: NP1:**ϕ_s83.22325°, δ87.81352°,λ4.89181°. **NP2:**ϕ_s353.03616°,δ85.11176°, λ177.80553°. **Principal axes:** T Plg5.0044°, Azm308.2135°; N Plg84.6429°, Azm107.2493°; P Plg1.9070°, Azm218.0465°; **Eastern Caroline Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	7.79	340	Pn	Pn	00 28 46.7	-3.6
	85nm,0.3s,baz=166,slow=10,SNR=16						
GUMO				Sn	Sn	00 30 09.9	-8.2
	293nm,0.3s,baz=36,slow=20,SNR=9.4						
GUMO				LR	LR	00 31 60.0	
	comp=Z,4µm,18.6s,baz=138,slow=39						
GUMO	Guam	7.79	340	P	Pn	00 28 49.4	-0.9
GUMO				pmax	pmax		
	comp=Z,857nm,1.1s						
GUMO	Guam	7.79	340	Pn	Pn	00 28 47.0	-3.3
GUMO	Guam	7.79	340	P	Pn	00 28 55.9	+5.6
MANU	Manus Island	8.24	182	Pn	Pn	00 28 52.8	-3.7
PATS	Pohnpei	10.60	86	P	Pn	00 29 25.4	-3.4
	baz=10						
PATS				S	Sn	00 31 14.0	-13
	baz=10						
PATS	Pohnpei	10.60	86	Pn	Pn	00 29 25.5	-3.3
JAY	Jayapura	11.13	219	Pn	Pn	00 29 32.5	-3.7
	comp=Z,13nm,0.3s,baz=360,slow=23,SNR=37						
JAY				Sn	Sn	00 31 29.8	-11
	comp=Z,1.4nm,0.3s,baz=252,slow=19,SNR=1.5						
JAY				LR	LR	00 33 00.8	
	comp=Z,17µm,18.3s,baz=16,slow=33						
RABL	Rabaul	11.30	156	Pn	Pn	00 29 36.2	-2.2
RABL	Rabaul	11.30	156	P	Pn	00 29 41.3	+2.8
SMPI	Sarmi	12.12	228	P	Pn	00 29 48.6	-0.9
	comp=Z,4µmcomp=Z,11µmcomp=Z,122nm,1.5s						
BAKI	Biak	13.70	238	P	Pn	00 30 11.3	+0.2
	comp=Z,5µmcomp=Z,253nm,0.9s						
SRPI	Serui, Papua	13.96	235	P	Pn	00 30 14.9	+0.1
	comp=Z,6µmcomp=Z,6µmcomp=Z,336nm,0.7s						
PMG	Port Moresby	15.56	182	Pn	Pn	00 30 34.6	-1.7
	comp=Z,2.8nm,0.3s,baz=342,slow=14,SNR=10						
PMG				LR	LR	00 35 08.5	
	comp=Z,6µm,21.8s,baz=2.5,slow=32						
PMG	Port Moresby	15.56	182	P	Pn	00 30 35.3	-1.0
PMG				pmax	pmax		
	comp=Z,233nm,1.2s						
PMG	Port Moresby	15.56	182	Pn	Pn	00 30 35.3	-1.0
PMG				IAmb	IAmb	00 31 17.1	
	comp=Z,233nm,1.2s						
PMG	Port Moresby	15.56	182	P	Pn	00 30 38.8	+2.5
PMG	Port Moresby	15.56	182	P	Pn	00 30 38.8	+2.5
SIJI	Sorong	17.82	247	P	Pn	00 31 04.3	-0.7
	comp=Z,1.2nm,0.3s,baz=63,slow=12,SNR=55						
SIJI				LR	LR	00 36 32.8	
	comp=Z,9µm,18.2s,baz=72,slow=32						
SWI	Sorong	17.83	247	P	P	00 31 06.3	+0.6
SWI				pmax	pmax		
	comp=Z,249nm,1.2s						
SWI	Sorong	17.83	247	P	Pn	00 31 05.4	+0.4
	comp=Z,6µmcomp=Z,4µmcomp=Z,248nm,1.2s						
FAKI	Fak Fak	17.88	240	P	Pn	00 31 05.8	+0.1
	comp=Z,8µmcomp=Z,7µmcomp=Z,507nm,1.1s						
FAKI	Fak Fak	17.88	240	P	Pn	00 31 06.0	+0.3
FAKI				IAmb	IAmb	00 31 10.0	
	comp=Z,420nm,0.9s						
FAKI	Fak Fak	17.88	240	P	P	00 31 06.6	+0.3
HNR	Honiara	19.82	142	P	P	00 31 27.7	+0.2
	comp=Z,11nm,0.3s,baz=184,slow=5.7,SNR=35						
HNR	Honiara	19.82	142	P	P	00 31 27.9	+0.4
HNR				pmax	pmax		
	comp=Z,10µm,2.0s						
HNR	Honiara	19.82	142	P	P	00 31 27.9	+0.4
HNR	Honiara	19.82	142	P	Pn	00 31 30.9	+1.8
COEN	Coen	20.56	192	P	P	00 31 36.8	+1.2
	baz=21						
COEN	Coen	20.56	192	P	P	00 31 36.4	+0.7
COEN	Coen	20.56	192	P	Pn	00 31 37.8	-0.1
BNDI	Bandanaira	20.70	239	P	Pn	00 31 39.0	-0.6
TNTI	Ternate	20.96	256	P	P	00 31 41.0	+1.0
	comp=Z,2µmcomp=Z,3µmcomp=Z,205nm,1.1s						
TNTI	Ternate	20.96	256	P	P	00 31 40.3	+0.3
TNTI				IAmb	IAmb	00 31 43.1	
	comp=Z,236nm,1.1s						
TNTI	Ternate	20.96	256	P	P	00 31 41.5	+1.5
MSAI	Masohi	20.99	243	P	Pn	00 31 42.6	-0.3
	comp=Z,993nmcomp=Z,67nm,1.0s						
LBMI	Labuha	21.25	252	P	P	00 31 45.1	+2.0
	comp=Z,2µmcomp=Z,5µmcomp=Z,392nm,1.5s						
JCJ	Chichijima	21.38	347	P	P	00 31 43.9	-0.4
	comp=Z,57nm,0.5s,baz=296,slow=10,SNR=8.5						
JCJ	Chichijima	21.38	347	P	P	00 31 44.2	-0.1
JCJ	Chichijima	21.38	347	P	P	00 31 45.1	+0.8
SAUI	Saumlaki	21.59	229	P	P	00 31 48.1	+1.4
SAUI	Saumlaki	21.59	229	P	P	00 31 47.9	+1.2
DAV	Davao City (W)	21.95	273	P	P	00 31 51.4	+0.9
	comp=Z,76nm,0.3s,baz=46,slow=0.6,SNR=7.2						
DAV				LR	LR	00 38 26.3	
	comp=Z,2µm,21.5s,baz=78,slow=32						
DAV	Davao City (W)	21.95	273	P	P	00 31 52.9	+2.3
KCP	Kidapawan	22.43	273	⇑iP	P	00 31 56.7	+0.9
H11N1	WAKE ISLAND Hy	22.99	53	T	T	00 54 05.5	
	baz=240,slow=74,SNR=224						
H11N2	WAKE ISLAND Hy	23.01	53	T	T	00 54 08.5	
	baz=240,slow=74,SNR=854						
H11N3	WAKE ISLAND Hy	23.01	53	T	T	00 54 06.8	
	baz=240,slow=74,SNR=156						
SANI	Sanana	23.15	250	P	P	00 32 01.0	-2.4
SANI	Sanana	23.15	250	P	P	00 32 02.2	-1.2
TBP	Tagbilaran	23.81	280	eP	P	00 32 10.3	+0.4
TBP				i S	S	00 36 22.0	-3.1
KDU	Kakadu	24.12	219	P	P	00 32 11.6	-1.1
	baz=24,SNR=32						
KDU	Kakadu	24.12	219	P	P	00 32 11.4	-1.3
	comp=Z,189nm,0.9s						
PAGZ	Pagadian	24.14	275	⇑iP	P	00 32 14.4	+1.4
KMSI	Cibinong	24.29	257	P	P	00 32 14.9	+0.6
	comp=Z,330nm,1.1s						
MTSU	Mount Surprise	24.45	188	P	P	00 32 16.2	+0.5
	baz=24,SNR=222						
MTSU	Mount Surprise	24.45	188	P	P	00 32 16.6	+0.9
	comp=Z,196nm,0.9s						
DRS	Darwin Rock St	24.94	222	P	P	00 32 19.7	-0.5
	comp=Z,76nm,1.0s						
JMZ	Minamidaito 2	25.01	323	P	P	00 32 20.9	+0.2
MTN	Manton Dam	25.09	221	P	P	00 32 20.6	-0.9
	baz=25,SNR=15						
MTN	Manton Dam	25.09	221	P	P	00 32 20.1	-1.4
MTN	Manton Dam	25.09	221	P	P	00 32 20.7	-0.9
	comp=Z,209nm,0.9s						
RCP	Roxas	25.16	284	⇑eP	P	00 32 24.2	+2.0
GTOI	Gorontalo	25.22	258	P	P	00 32 24.1	+1.4
	comp=Z,1µmcomp=Z,97nm,1.3s						
LUWI	Luwuk	25.88	255	P	P	00 32 29.1	+0.4
	comp=Z,4µmcomp=Z,8µmcomp=Z,564nm,1.2s						
LUWI	Luwuk	25.88	255	P	P	00 32 28.5	-0.2
LUWI	Luwuk	25.88	255	P	P	00 32 29.8	+1.1
CTA	Charters Tower	26.21	183	P	P	00 32 31.6	-0.1
	comp=Z,24nm,0.8s,baz=2.8,slow=9.3,SNR=15						
CTA				LR	LR	00 42 14.7	
	comp=Z,3µm,21.7s,baz=8.5,slow=35						
CTA	Charters Tower	26.21	183	P	P	00 32 32.4	+0.8
	comp=Z,361nm,1.3s						
CTAO	Charters Tower	26.21	183	P	P	00 32 31.8	+0.2
CTAO				pmax	pmax		
	comp=Z,514nm,1.3s						
CTAO				MLR	MLR		
	comp=Z,3µm,20.0s						
CTAO	Charters Tower	26.21	183	P	P	00 32 31.8	+0.2
CTAO	Charters Tower	26.21	183	P	P	00 32 32.8	+1.2
MRSI	Marisa	26.29	258	P	P	00 32 33.1	+0.6
	comp=Z,2µmcomp=Z,198nm,1.4s						
APSI	Ampana	26.92	256	P	P	00 32 39.4	+1.2
	comp=Z,2µmcomp=Z,211nm,1.2s						
TOLI2	Tolitoli	27.29	260	P	P	00 32 41.3	-0.2
TOLI2	Tolitoli	27.29	260	P	P	00 32 42.3	+0.8
JOW	Kunigami	27.56	320	P	P	00 32 44.2	+0.4
	comp=Z,72nm,0.8s,baz=112,slow=22,SNR=2.8						
JOW				LR	LR	00 45 06.3	
	comp=Z,1µm,18.6s,baz=126,slow=40						
JOW	Kunigami	27.56	320	P	P	00 32 44.5	+0.6
JOW				IAmb	IAmb	00 32 48.7	
	comp=Z,65nm,0.8s						
JOW	Kunigami	27.56	320	P	P	00 32 46.3	+2.5
JHJ	Hachijo jima 2	27.72	346	LR	LR	00 43 14.9	
	comp=Z,2µm,18.7s,baz=160,slow=35						
QIS	Mount Isa	27.79	196	P	P	00 32 45.4	-0.5
	baz=28,SNR=17						
QIS	Mount Isa	27.79	196	P	P	00 32 45.1	-0.8
	comp=Z,60nm,1.2s						
SOEI	Soe	28.21	236	P	P	00 32 50.0	+0.1
	comp=Z,3µmcomp=Z,3µmcomp=Z,200nm,1.3s						
SOEI	Soe	28.21	236	P	P	00 32 49.0	-0.9
SOEI	Soe	28.21	236	P	P	00 32 51.0	+1.1
MPSI	Mapaga	28.32	259	P	P	00 32 50.7	0.0
	comp=Z,950nmcomp=Z,69nm,1.0s						
KNRA	Kununurra	28.72	220	P	P	00 32 53.6	-0.6
	baz=29,SNR=10.0						
KNRA	Kununurra	28.72	220	P	P	00 32 53.2	-1.0
KNRA	Kununurra	28.72	220	P	P	00 32 53.6	-0.6
	comp=Z,138nm,1.5s						
BATI	Baumata	28.95	236	P	P	00 32 55.8	-0.6
	comp=Z,72nm,0.6s,baz=136,slow=2.5,SNR=20						
BATI				LR	LR	00 45 38.5	
	comp=Z,1µm,19.5s,baz=67,slow=39						
BATI	Baumata	28.95	236	P	P	00 32 56.8	+0.4
	comp=Z,1µmcomp=Z,135nm,0.9s						
WB0	Warramunga Arr	28.96	207	P	P	00 32 55.8	-0.5
WR0	Warramunga Arr	29.07	206	P	P	00 32 55.5	-1.7
WR0				IAmb	IAmb	00 32 58.9	
	comp=Z,111nm,1.1s						
WRAB	Tennant Creek	29.13	206	ceP	P	00 32 56.3	-1.5
WRAB				pmax	pmax		
	comp=Z,299nm,2.0s						
WRAB	Tennant Creek	29.13	206	P	P	00 32 56.7	-1.1
WRAB				IAmb	IAmb	00 32 59.4	
	comp=Z,108nm,0.9s						
WRAB	Tennant Creek	29.13	206	IAMs_20	IAMs_20	00 44 18.2	
	comp=Z,6µm,19.0s						
WRAB	Tennant Creek	29.13	206	P	P	00 32 57.9	+0.1
WB2	Warramunga Arr	29.13	206	P	P	00 32 56.8	-1.0
	baz=29						
WB2	Warramunga Arr	29.13	206	P	P	00 32 56.5	-1.3
WRA	Warramunga Arr	29.14	206	P	P	00 32 56.8	-1.2
	comp=Z,49nm,0.8s,baz=30,slow=9.9,SNR=207						
WRA				PcP	PcP	00 36 05.7	+0.1
	comp=Z,12nm,1.0s,baz=18,slow=2.5,SNR=4.9						
WRA				PKiKP	PKiKP	00 43 38.0	-1.8
	comp=Z,0.2nm,0.7s,baz=346,slow=0.8,SNR=6.3						
WRA				LR	LR	00 44 20.1	
	comp=Z,5µm,18.4s,baz=35,slow=36						
WRA	Warramunga Arr	29.14	206	i P	P	00 32 56.9	-1.0
WRA				pmax	pmax		
	comp=Z,49nm,0.8s						
WRA	Warramunga Arr	29.14	206	P	P	00 32 56.0	-1.9
TTSI	Tana Toraja	29.29	252	P	P	00 33 00.8	+1.5
	comp=Z,62nm,0.9s						
MMRI	Maumere	29.34	240	P	P	00 32 58.8	-1.0
MMRI				IAmb	IAmb	00 33 02.5	
	comp=Z,55nm,0.9s						
BSSI	Bau Bau, Buton	29.78	246	P	P	00 33 04.2	+0.5
	comp=Z,1µmcomp=Z,68nm,1.5s						
BKSI	Bulukumba	29.79	248	P	P	00 33 03.8	0.0
	comp=Z,1µmcomp=Z,85nm,1.0s						
JSU	Suzuyama	29.84	329	P	P	00 33 04.2	+0.1
JSU				IAmb	IAmb	00 33 05.9	
	comp=Z,122nm,1.3s						
EDFI	Ende, Flores	29.87	240	P	P	00 33 03.1	-1.5
	comp=Z,1µmcomp=Z,513nmcomp=Z,50nm,1.3s						
KAPI	Kappang	30.02	249	P	P	00 33 05.5	-0.3
	comp=Z,19nm,0.9s,baz=96,slow=6.1,SNR=17						
KAPI				LR	LR	00 43 54.1	
	comp=Z,943nm,19.9s,baz=86,slow=34						
KAPI	Kappang	30.02	249	P	P	00 33 05.1	-0.8
KAPI				pmax	pmax		
	comp=Z,47nm,1.1s						
KAPI	Kappang	30.02	249	P	P	00 33 05.1	-0.8
KAPI	Kappang	30.02	249	P	P	00 33 05.5	-0.3
INU	Inuyama	30.57	343	IAmb	IAmb	00 33 11.5	
	comp=Z,57nm,1.1s						
INU	Inuyama	30.57	343	P	P	00 33 11.2	+0.8
	comp=Z,49nm,1.4s						
JGF	Kuroka	30.71	343	IAmb	IAmb	00 33 12.4	
	comp=Z,100nm,1.6s						
SPMM	Sapulut	31.09	269	P	P	00 33 17.0	+1.7
KOUNC	Koumac, New Ca	31.25	149	P	P	00 33 19.1	+2.6
MJAR	Matsushiro Arr	31.37	345	P	P	00 33 16.6	-0.9
	comp=Z,16nm,0.9s,baz=160,slow=10,SNR=30						
MJAR				LR	LR	00 44 43.5	
	comp=Z,2µm,21.5s,baz=185,slow=34						
MJAR	Matsushiro Arr	31.37	345	IAmb	IAmb	00 33 17.5	
	comp=Z,105nm,2.0s						
MAJO	Matsushiro	31.37	345	P	P	00 33 15.7	-1.8
MAJO				pmax	pmax		
	comp=Z,164nm,1.5s						
MAJO	Matsushiro	31.37	345	P	P	00 33 15.7	-1.8
MAJO	Matsushiro	31.37	345	P	P	00 33 18.6	+1.1
MAT	Matsushiro	31.37	345	P	P	00 33 15.8	-1.7
MAT				S	S	00 38 18.6	-5.5
JHS	Saijyo	31.60	337	IAmb	IAmb	00 33 20.9	
	comp=Z,113nm,1.4s						
EIDS	Eidsvold	31.60	174	P	P	00 33 19.3	-0.3
	baz=32,SNR=3.7						
EIDS	Eidsvold	31.60	174	IAmb	IAmb	00 33 29.3	
	comp=Z,52nm,1.2s						
EIDS	Eidsvold	31.60	174	P	P	00 33 19.4	-0.2
	comp=Z,37nm,1.1s						
FITZ	Fitzroy Crossi	32.52	222	P	P	00 33 27.3	-0.4
	baz=33						
FITZ	Fitzroy Crossi	32.52	222	P	P	00 33 27.6	-0.2
RMQ	Roma	32.56	178	P	P	00 33 28.1	0.0
	baz=33,SNR=12						
RMQ	Roma	32.56	178	P	P	00 33 28.0	0.0
	comp=Z,54nm,0.9s						
AS31	Alice Springs	32.62	204	P	P	00 33 28.2	-0.5
ASAR	Alice Springs	32.62	204	P	P	00 33 27.7	-1.0
	comp=Z,14nm,0.7s,baz=35,slow=6.9,SNR=124						
ASAR				PP	PP	00 34 42.0	-0.7
	comp=Z,75nm,1.0s,baz=29,slow=12,SNR=15						
ASAR				PcP	PcP	00 36 14.9	+0.1
	comp=Z,8.8nm,1.0s,baz=30,slow=2.0,SNR=7.4						
ASAR				PKiKP	PKiKP	00 43 40.6	-1.5
	comp=Z,0.3nm,0.9s,baz=92,slow=1.2,SNR=4.1						
ASAR				LR	LR	00 45 51.2	
	comp=Z,2µm,20.6s,baz=28,slow=35						
ASAR				P3KPbc		01 04 54.7	
	comp=Z,0.5nm,0.8s,baz=198,slow=5.0,SNR=4.3						
ASAR	Alice Springs	32.62	204	P	P	00 33 27.9	-0.8
ASAR	Alice Springs	32.62	204	P	P	00 33 27.9	-0.8
QLP	Quilpie	32.80	186	P	P	00 33 29.5	-0.7
	baz=33,SNR=13						
QLP	Quilpie	32.80	186	P	P	00 33 29.1	-1.0
	comp=Z,123nm,1.3s						
PLAI	Plampang	33.34	244	P	P	00 33 33.4	-1.6
	comp=Z,790nmcomp=Z,92nm,1.2s						
PLAI	Plampang	33.34	244	P	P	00 33 33.6	-1.4
QZH	Quanzhou	33.47	307	P	P	00 33 38.1	+2.1
QZH				S	S	00 38 53.6	-3.5
QZH				LR	LR		
	comp=Z,1µm,18.0s						
QZH				LR	LR		
	comp=Z,650nm,11.4s						
QZH				LR	LR		
	comp=Z,1µm,14.2s						
NOUC	Port Laguerre	33.58	148	P	P	00 33 38.4	+1.4
DZM	Mont Dzumac	33.63	147	P	P	00 33 37.6	0.0
	comp=Z,17nm,0.8s,baz=343,slow=8.3,SNR=23						
DZM				LR	LR	00 44 13.2	
	comp=Z,1µm,20.9s,baz=172,slow=31						
DZM	Mont Dzumac	33.63	147	eP	P	00 33 36.7	-0.8
	comp=Z,136nm,1.3s						
DZM				eS	S	00 38 57.7	-2.1
	comp=Z,1µm,31.6s						
DZM				eLR	LR	00 42 27.0	
	comp=Z,4µm,31.4s						
DZM	Mont Dzumac	33.63	147	P	P	00 33 37.2	-0.3
DZM	Mont Dzumac	33.63	147	P	P	00 33 39.0	+1.5
ONTNC	Ouen Toro	33.83	148	P	P	00 33 40.6	+1.5
YATNC	Mamie plateau,	33.86	147	P	P	00 33 39.7	+0.2
TWSI	Taliwang, Sumb	34.10	244	P	P	00 33 41.5	-0.2
	comp=Z,44nm,1.2s						
BBKI	Banjar Baru	34.16	254	P	P	00 33 45.6	+3.4
INKA	Innaminka	34.44	191	P	P	00 33 43.4	-1.0
	comp=Z,210nm,1.1s						

PINNC	**Pines Island,**	34.61	147	P	**P**	00 33 46.7	+0.8
SSE	**Sheshan**	35.02	318	P	**P**	00 33 47.3	-2.1
SSE				S	**S**	00 39 16.4	-4.5
SSE				pmax	pmax		
	comp=Z,4.0nm,0.6s						
SSE				LR	LR		
	comp=Z,750nm,15.6s						
SSE				LR	LR		
	comp=Z,700nm,16.6s						
TJN	**Taejon**	35.28	331	*ce*P	**P**	00 33 51.9	+0.3
TJN	**Taejon**	35.28	331	P	**P**	00 33 53.0	+1.4
	comp=Z,430nm,1.3s						
SBUM	**Sibu**	35.53	265	P	**P**	00 33 56.0	+2.0
OOD	**Oodnadatta**	35.77	198	P	**P**	00 33 54.8	-1.0
	comp=Z,94nm,1.6s						
KSRS	**Korea Array**	35.89	333	P	**P**	00 33 57.1	+0.3
	comp=Z,14nm,0.6s,baz=149,slow=9.5,SNR=38						
KSRS				PcP	**PcP**	00 36 24.9	+1.0
	comp=Z,2.3nm,0.7s,baz=138,slow=5.6,SNR=3.2						
KSRS				LR	LR	00 48 30.4	
	comp=Z,1µm,18.2s,baz=175,slow=36						
KSAR	**Wonju Array Be**	35.90	333	P	**P**	00 33 56.1	-0.7
KSAR	**Wonju Array Be**	35.90	333	P	**P**	00 33 56.1	-0.7
KS19	**Wonju Array Si**	35.95	333	IAmb	IAmb	00 33 59.4	
	comp=Z,64nm,1.3s						
KMMI	**Kalianget**	36.12	249	P	**P**	00 34 00.5	+1.5
	comp=Z,3µmcomp=Z,3µmcomp=Z,205nm,1.3s						
WRKA	**Warakurna**	36.36	210	P	**P**	00 33 59.8	-1.2
	baz=36,SNR=102						
WRKA	**Warakurna**	36.36	210	P	**P**	00 34 00.1	-0.9
	comp=Z,131nm,1.4s						
STKI	**Sintang**	36.62	262	P	**P**	00 34 04.4	+1.0
	comp=Z,9µmcomp=Z,18nm,0.4s						
ARMA	**Armidale**	36.66	174	P	**P**	00 34 03.9	+0.4
	baz=37,SNR=17						
ARMA	**Armidale**	36.66	174	P	**P**	00 34 03.5	-0.1
ARMA				IAmb	IAmb	00 34 05.0	
	comp=Z,76nm,0.9s						
ARMA	**Armidale**	36.66	174	P	**P**	00 34 03.9	+0.4
	comp=Z,101nm,1.1s						
BLJI	**Banyuglugur**	36.71	248	P	**P**	00 34 04.2	+0.1
	comp=Z,70nm,0.8s						
GMJI	**Gumukmas**	37.04	247	P	**P**	00 34 10.4	+3.5
NJ2	**Nanjing**	37.17	317	*e*P	**P**	00 34 09.2	+1.4
NJ2				pP	**sP**	00 34 13.5	-0.3
NJ2				sP	**pwP**	00 34 15.6	-1.0
NJ2				PP	**PP**	00 35 33.3	+0.6
NJ2				S	**S**	00 39 55.6	+1.8
NJ2				sS	**ScP**	00 40 10.9	-3.4
NJ2				pmax	pmax		
	comp=Z,26nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,290nm,4.5s						
NJ2				LR	LR		
	comp=Z,2µm,16.0s						
NJ2				LR	LR		
	comp=Z,2µm,16.9s						
NJ2				LR	LR		
	comp=Z,2µm,18.8s						
LCRK	**Leigh Creek**	37.59	193	P	**P**	00 34 10.3	-1.1
	comp=Z,182nm,1.3s						
CMSA	**Cobar Meteorol**	37.62	183	P	**P**	00 34 11.3	-0.3
	baz=38,SNR=34						
CMSA	**Cobar Meteorol**	37.62	183	P	**P**	00 34 11.1	-0.5
	comp=Z,78nm,1.2s						
MSVF	**Nonsavu**	38.32	129	P	**P**	00 34 17.4	-0.3
	comp=Z,11nm,0.8s,baz=261,slow=8.7,SNR=6.8						
MSVF	**Nonsavu**	38.32	129	P	**P**	00 34 17.9	+0.1
MSVF				pmax	pmax		
	comp=Z,75nm,1.2s						
MSVF	**Nonsavu**	38.32	129	P	**P**	00 34 17.9	+0.1
MSVF				IAmb	IAmb	00 34 29.3	
	comp=Z,75nm,1.1s						
MSVF	**Nonsavu**	38.32	129	P	**P**	00 34 20.4	+2.6
STKA	**Stephens Creek**	38.35	188	P	**P**	00 34 16.5	-1.3
	comp=Z,28nm,0.8s,baz=351,slow=8.9,SNR=31						
STKA				LR	LR	00 51 20.6	
	comp=Z,2µm,18.3s,baz=3.7,slow=38						
STKA	**Stephens Creek**	38.35	188	P	**P**	00 34 16.3	-1.5
	baz=38,SNR=7.6						
STKA	**Stephens Creek**	38.35	188	⇑*e*P	**P**	00 34 15.6	-2.1
STKA	**Stephens Creek**	38.35	188	P	**P**	00 34 16.4	-1.3
STKA	**Stephens Creek**	38.35	188	P	**P**	00 34 16.5	-1.3
	comp=Z,12nm,1.3s						
PWJI	**Pagerwojo**	38.46	249	P	**P**	00 34 18.3	-0.7
	comp=Z,59nm,1.2s						
NGJI	**Ngawi**	38.56	250	P	**P**	00 34 21.9	+2.1
	comp=Z,56nm,1.1s						
MULG	**Mulgathing**	38.59	199	P	**P**	00 34 18.7	-1.1
	comp=Z,124nm,1.2s						
MBWA	**Marble Bar**	38.64	224	P	**P**	00 34 20.5	+0.1
KUR	**Kuril'sk**	38.83	0	P	**P**	00 34 19.3	-2.3
KUR				*e*PPP	PPP	00 36 18.9	
KUR				*e*S	**S**	00 40 24.0	+5.4
KUR				pmax	pmax		
	comp=Z,2µm,4.0s						
KUR				MLR	MLR		
	comp=Z,768nm,12.0s						
PSA00	**Pilbara Seismi**	38.84	224	IAmb	IAmb	00 34 23.1	
	comp=Z,87nm,0.9s						
PSA00	**Pilbara Seismi**	38.84	224	P	**P**	00 34 21.9	-0.1
	comp=Z,292nm,1.2s						
DGTI	**Dogotuki**	38.85	126	P	**P**	00 34 22.8	+0.6
QIZ	**Qiongzhong**	38.92	293	P	**P**	00 34 23.9	+1.1
QIZ				PP	**PP**	00 35 52.8	+0.7
QIZ				S	**S**	00 40 22.4	+1.7
QIZ				pmax	pmax		
	comp=Z,270nm,4.9s						
QIZ				LR	LR		
	comp=Z,850nm,17.5s						
QIZ				LR	LR		
	comp=Z,700nm,15.9s						
LHI	**Lord Howe Isla**	39.10	164	P	**P**	00 34 24.3	+0.2
VLA	**Vladivostok**	39.27	342	*i* P	**P**	00 34 26.1	+0.8
VLA				pmax	pmax		
	comp=Z,33nm,0.8s						
TAVE	**Taveuni**	39.36	126	P	**P**	00 34 28.9	+2.5
SMRI	**Semarang**	39.41	251	P	**P**	00 34 29.1	+2.1
	comp=Z,93nm,1.2s						
SMRI	**Semarang**	39.41	251	P	**P**	00 34 27.1	+0.1
SMRI	**Semarang**	39.41	251	P	**P**	00 34 27.5	+0.5
WHN	**Wuhan**	39.52	312	⇓P	**P**	00 34 29.3	+1.7
WHN				PP	**PP**	00 35 58.5	+0.1
WHN				S	**S**	00 40 29.2	-0.1
WHN				LR	LR		
	comp=Z,2µm,12.8s						
WHN				LR	LR		
	comp=Z,2µm,11.6s						
WHN				LR	LR		
	comp=Z,3µm,22.0s						
DL2	**Dalian**	40.13	328	P	**P**	00 34 34.0	+1.5
DL2				S	**S**	00 40 40.2	+1.9
DL2				pmax	pmax		
	comp=Z,110nm,1.5s						
DL2				pmax	pmax		
	comp=Z,430nm,5.0s						
DL2				LR	LR		
	comp=Z,800nm,14.6s						
DL2				LR	LR		
	comp=Z,880nm,18.8s						
DL2				LR	LR		
	comp=Z,2µm,29.4s						
USA0B	**Ussuriysk Arra**	40.22	342	⇓*i*P	**P**	00 34 34.2	+1.0
USA0B	**Ussuriysk Arra**	40.22	342	P	**P**	00 34 33.9	+0.7
USA0B				IAmb	IAmb	00 34 35.3	
	comp=Z,108nm,1.5s						
USRK	**Ussuriysk Ar.**	40.22	342	P	**P**	00 34 34.0	+0.8
	comp=Z,14nm,0.8s,baz=161,slow=8.1,SNR=24						
USRK				LR	LR	00 50 31.8	
	comp=Z,1µm,19.9s,baz=142,slow=35						
USRK	**Ussuriysk Ar.**	40.22	342	P	**P**	00 34 33.9	+0.7
USRK	**Ussuriysk Ar.**	40.22	342	P	**P**	00 34 33.9	+0.7
WHYH	**Whyalla**	40.22	193	P	**P**	00 34 33.9	+0.6
	comp=Z,25nm,0.8s						
HTT	**Hallett**	40.32	191	P	**P**	00 34 32.9	-1.4
	baz=40,SNR=9.3						
HTT	**Hallett**	40.32	191	P	**P**	00 34 33.6	-0.7
	comp=Z,63nm,1.6s						
YNG	**Young**	40.33	179	P	**P**	00 34 34.4	+0.1
	baz=40,SNR=8.3						
YNG	**Young**	40.33	179	P	**P**	00 34 34.6	+0.3
	comp=Z,73nm,1.6s						
BBOO	**Buckleboo**	40.38	195	P	**P**	00 34 33.6	-1.1
	baz=40,SNR=15						
BBOO	**Buckleboo**	40.38	195	P	**P**	00 34 33.0	-1.6
BBOO				IAmb	IAmb	00 34 34.3	
	comp=Z,70nm,0.9s						
BBOO	**Buckleboo**	40.38	195	P	**P**	00 34 33.5	-1.2
	comp=Z,99nm,1.2s						
YSS	**Yuzh-Sakhalins**	40.77	355	⇓*e*P	**P**	00 34 36.9	-0.8
YSS				*e**SP	**pwP**	00 34 44.7	-1.8
YSS				*e*		00 36 10.9	
YSS				*e*S	**S**	00 40 46.3	-1.4
YSS				*e*		00 40 53.4	
YSS				*e*SSS	SSS	00 44 35.4	
YSS				pmax	pmax		
	comp=Z,400nm,8.9s						
YSS				pmax	pmax		
	comp=Z,50nm,1.3s						
YSS				pmax	pmax		
	comp=Z,900nm,4.8s						
YSS				pmax	pmax		
	comp=N,800nm,4.2s						
YSS				smax	smax		
	comp=N,700nm,10.2s						
YSS				smax	smax		
	comp=E,300nm,6.6s						
YSS	**Yuzh-Sakhalins**	40.77	355	P	**P**	00 34 36.7	-1.0
YSS				IAmb	IAmb	00 34 41.0	
	comp=Z,81nm,1.2s						
YSS	**Yuzh-Sakhalins**	40.77	355	P	**P**	00 34 39.4	+1.7
	comp=Z,45nm,1.4s						
TIA	**Tai'an**	40.88	321	⇑P	**P**	00 34 39.6	+0.8
TIA				S	**S**	00 40 44.1	-5.6
TIA				pmax	pmax		
	comp=Z,30nm,1.4s						
TIA				pmax	pmax		
	comp=Z,420nm,3.5s						
TIA				LR	LR		
	comp=Z,970nm,15.9s						
TIA				LR	LR		
	comp=Z,680nm,22.2s						
TIA				LR	LR		
	comp=Z,1µm,20.1s						
KPJI	**Karang Pucung**	40.92	251	P	**P**	00 34 39.9	+0.4
	comp=Z,211nm,1.8s						
FORT	**Forrest**	41.32	206	P	**P**	00 34 41.8	-0.7
	baz=42,SNR=18						
FORT	**Forrest**	41.32	206	P	**P**	00 34 41.3	-1.2
FORT	**Forrest**	41.32	206	P	**P**	00 34 42.2	-0.3
	comp=Z,149nm,1.3s						
MDJ	**Mudanjiang**	41.35	340	P	**P**	00 34 43.6	+1.0
MDJ				sP	sP	00 34 48.7	+0.1
MDJ				S	**S**	00 41 01.2	+4.8
MDJ				pmax	pmax		
	comp=Z,47nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,510nm,9.3s						
MDJ				LR	LR		
	comp=Z,990nm,24.2s						
MDJ				LR	LR		
	comp=Z,1µm,23.5s						
MDJ				LR	LR		
	comp=Z,3µm,22.1s						
CAN	**Canberra**	41.37	178	P	**P**	00 34 41.5	-1.4
CAN				pmax	pmax		
	comp=Z,57nm,1.1s						
CAN	**Canberra**	41.37	178	P	**P**	00 34 41.5	-1.4
CAN	**Canberra**	41.37	178	P	**P**	00 34 43.8	+1.0
	comp=Z,92nm,1.1s						
CNB	**Canberra Magne**	41.37	178	P	**P**	00 34 43.4	+0.5
	baz=42,SNR=7.0						
CNB	**Canberra Magne**	41.37	178	P	**P**	00 34 43.5	+0.6
	comp=Z,45nm,1.0s						
SNY	**Shenyang**	41.39	333	⇑P	**P**	00 34 43.4	+0.5
SNY				S	**S**	00 40 59.1	+2.0
SNY				pmax	pmax		
	comp=Z,24nm,1.0s						
SNY				pmax	pmax		
	comp=Z,200nm,3.5s						
SNY				LR	LR		
	comp=Z,1µm,17.3s						
SNY				LR	LR		
	comp=Z,1µm,17.4s						
SNY				LR	LR		
	comp=Z,3µm,16.2s						
CMJI	**Cimerak**	41.52	251	P	**P**	00 34 44.8	+0.4
	comp=Z,73nm,1.1s						
LEM	**Lembang**	42.01	253	P	**P**	00 34 49.1	+0.5
	comp=Z,44nm,0.7s,baz=72,slow=4.8,SNR=15						
CN2	**Changchun**	42.18	336	*e*P	**P**	00 34 50.2	+0.8
CN2				*e*S	**S**	00 41 04.9	-3.9
CN2				pmax	pmax		
	comp=Z,30nm,1.1s						
CN2				pmax	pmax		
	comp=Z,300nm,6.2s						
CN2				LR	LR		
	comp=Z,2µm,17.0s						
CN2				LR	LR		
	comp=Z,800nm,17.0s						
CN2				LR	LR		
	comp=Z,2µm,18.0s						
PPBI	**Pangkal Pinang**	42.29	260	P	**P**	00 34 52.1	+1.4
CNJI	**Cibinong**	42.62	252	P	**P**	00 34 52.4	-0.9
	comp=Z,2µmcomp=Z,234nm,1.1s						
CBJI	**Citeko**	42.62	254	P	**P**	00 34 53.6	+0.2
	comp=Z,17µmcomp=Z,113nm,1.2s						
DBJI	**Dramaga**	42.76	253	P	**P**	00 34 55.4	+0.9
UGL	**Uglegorsk**	42.94	355	*e*P	**P**	00 34 55.9	+0.5
UGL				*e*S	**S**	00 41 20.7	+1.0
UGL				pmax	pmax		
	comp=Z,380nm,2.0s						
UGL				pmax	pmax		
	comp=Z,120nm,1.4s						
ENH	**Enshi**	43.08	308	IAmb	IAmb	00 34 59.0	
	comp=Z,105nm,1.2s						
ARPS	**Mount Arapiles**	43.14	187	P	**P**	00 34 56.9	-0.3
	baz=43,SNR=26						
ARPS	**Mount Arapiles**	43.14	187	P	**P**	00 34 57.1	-0.1
	comp=Z,152nm,0.8s						
MEEK	**Meekatharra**	43.14	219	P	**P**	00 34 57.1	-0.3
	baz=43,SNR=9.5						
MEEK	**Meekatharra**	43.14	219	P	**P**	00 34 57.5	+0.1
	comp=Z,130nm,2.1s						
GIRL	**Giralia**	43.52	228	P	**P**	00 35 01.6	+1.1
	baz=44,SNR=12						
GIRL	**Giralia**	43.52	228	P	**P**	00 35 02.5	+2.0
	comp=Z,804nm,1.4s						
TOO	**Toolangi**	43.64	182	P	**P**	00 35 01.5	+0.3
	baz=44,SNR=26						
TOO	**Toolangi**	43.64	182	P	**P**	00 35 01.9	+0.6
	comp=Z,190nm,1.4s						
BRAT	**Ballarat**	43.71	184	P	**P**	00 35 02.7	+0.9
	comp=Z,40nm,1.2s						
CGJI	**Cibinong**	43.78	254	P	**P**	00 35 01.9	-0.9
	comp=Z,86nm,1.2s						
GYA	**Guiyang**	43.90	302	⇓*i*P	**P**	00 35 05.9	+2.2
GYA				PP	**PcP**	00 36 51.6	+1.8
GYA				S	**S**	00 41 37.4	+2.7
GYA				pmax	pmax		
	comp=Z,65nm,1.4s						
GYA				pmax	pmax		
	comp=Z,350nm,3.7s						
GYA				LR	LR		
	comp=Z,500nm,15.2s						
GYA				LR	LR		
	comp=Z,400nm,13.2s						
GYA				LR	LR		
	comp=Z,840nm,16.5s						
BJT	**Baijiatuau**	43.92	325	IAmb	IAmb	00 35 05.7	
	comp=Z,138nm,1.7s						
BJI	**Beijing**	43.93	325	P	**P**	00 35 04.3	+0.7
BJI				pP	**sP**	00 35 08.6	-1.1
BJI				sP	**pP**	00 35 09.6	+1.6
BJI				PcP	**PP**	00 36 47.4	+1.3
BJI				S	**S**	00 41 33.4	-1.1
BJI				sS	sS	00 41 49.0	+7.3
BJI				ScS	**ScS**	00 45 01.1	-1.0
BJI				pmax	pmax		
	comp=Z,46nm,1.2s						
BJI				LR	LR		
	comp=Z,850nm,18.1s						
BJI				LR	LR		
	comp=Z,1µm,16.7s						
BJI				LR	LR		
	comp=Z,2µm,18.2s						
KASI	**Kota Agung**	44.64	256	P	**P**	00 35 09.4	-0.3
	comp=Z,1µmcomp=Z,89nm,1.3s						
TYV	**Tymovskoe**	44.66	355	*e*P	**P**	00 35 10.1	+0.8
TYV				*e*S	**S**	00 41 49.2	+4.4
TYV				pmax	pmax		
	comp=Z,600nm,4.2s						
TYV				pmax	pmax		
	comp=Z,87nm,1.3s						
TYV				smax	smax		
	comp=N,800nm,7.3s						
TYV				smax	smax		
	comp=E,400nm,7.3s						
MDSI	**Maura Dua**	44.70	257	P	**P**	00 35 10.3	+0.1
	comp=E,781nmcomp=E,939nmcomp=E,81nm,1.2s						
TIY	**Taiyuan**	44.77	319	*e*P	**P**	00 35 11.7	+1.2
TIY				PP	**PP**	00 37 01.6	+6.4
TIY				S	**S**	00 41 40.3	-6.7
TIY				sS	**sS**	00 41 55.3	+1.1
TIY				pmax	pmax		
	comp=E,18nm,0.7s						
TIY				pmax	pmax		
	comp=E,290nm,3.7s						
TIY				LR	LR		
	comp=E,1µm,14.6s						
TIY				LR	LR		
	comp=E,580nm,13.2s						
TIY				LR	LR		
	comp=E,1µm,18.2s						
SKR	**Severo-Kuril's**	44.85	8	*e*P	P	00 35 01.9	-8.8
SKR				*e*		00 37 03.3	
SKR				*e*S	**S**	00 41 50.4	+2.9
SKR				*e*SS	**ScS**	00 45 07.1	-0.4
SKR				*e*SSS	SSS	00 46 00.4	
SKR				pmax	pmax		
	comp=Z,200nm,5.3s						
SKR				pmax	pmax		
	comp=Z,400nm,4.5s						
SKR				pmax	pmax		
	comp=Z,46nm,1.1s						
SKR				MLR	MLR		
	comp=Z,300nm,16.0s						
SKR				MLR	MLR		
	comp=Z,500nm,16.0s						
SLVN	**Son La**	44.88	294	P	**P**	00 35 12.5	+0.9
KLR	**Kul'dur**	44.90	345	*ce*P	**P**	00 35 10.9	-0.3
KLR				pmax	pmax		
	comp=Z,71nm,1.4s						
LWLI	**Liwa**	44.94	257	P	**P**	00 35 12.3	+0.1
	comp=Z,124nm,0.9s						
XMIS	**Christmas Isla**	45.01	249	P	**P**	00 35 12.3	-0.3
XMIS	**Christmas Isla**	45.01	249	P	**P**	00 35 13.6	+1.0
	comp=Z,144nm,1.4s						
JRMM	**Jerantut**	45.05	269	P	**P**	00 35 14.0	+1.0
LHSI	**Lahat**	45.19	258	P	**P**	00 35 15.1	+1.1
	comp=Z,3µmcomp=Z,205nm,1.7s						
XAN	**Xi'an**	45.24	313	P	**P**	00 35 14.2	0.0
XAN				pP	pP	00 35 18.1	-0.5
XAN				ScS	ScS	00 45 11.9	+1.1
XAN				pmax	pmax		
	comp=Z,35nm,1.6s						
XAN				pmax	pmax		
	comp=Z,260nm,4.5s						
XAN				LR	LR		
	comp=Z,340nm,24.0s						
XAN				LR	LR		
	comp=Z,840nm,16.5s						
XAN				LR	LR		
	comp=Z,1µm,16.5s						
GRNR	**Gornyy**	45.36	350	⇑*i*P	**P**	00 35 14.8	0.0
GRNR				*e*S	**S**	00 41 59.0	+4.1
GRNR				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GRNR				smax	smax		
	comp=E,5.0nm,0.6s						
KSI	**Kapahiang**	46.06	259	P	**P**	00 35 21.0	0.0
	comp=E,16µmcomp=E,89nm,0.8s						
MASI	**Maura Aman, Be**	46.30	260	P	**P**	00 35 22.9	0.0
	comp=E,4µmcomp=E,401nm,0.8s						
IPM	**Ipoh**	46.45	270	P	**P**	00 35 24.0	-0.1
MORW	**Morawa**	46.46	219	P	**P**	00 35 23.3	-0.5
	baz=47,SNR=13						
MORW	**Morawa**	46.46	219	P	**P**	00 35 23.6	-0.2
MORW	**Morawa**	46.46	219	P	**P**	00 35 23.5	-0.4
	comp=E,166nm,1.1s						
KULM	**Kulim**	46.77	271	P	**P**	00 35 28.0	+1.5
KMI	**Kunming**	46.86	299	⇓P	**P**	00 35 29.8	+2.4
KMI				pP	sP	00 35 33.7	+0.3
KMI				PP	**PP**	00 37 16.9	-0.8
KMI				S	**S**	00 42 20.8	+3.1
KMI				ScS	**ScS**	00 45 23.0	+0.9
KMI				SS	**SS**	00 45 44.6	+0.1
KMI				pmax	pmax		
	comp=E,23nm,1.1s						
KMI				pmax	pmax		
	comp=E,140nm,4.1s						
KMI				LR	LR		
	comp=E,2µm,18.5s						
KMI				LR	LR		
	comp=E,710nm,17.8s						
KMI				LR	LR		
	comp=E,1µm,18.1s						
BKNI	**Bangkinang**	46.89	265	P	**P**	00 35 28.5	+1.0
	comp=E,238nm,1.2s						
BKNI	**Bangkinang**	46.89	265	P	**P**	00 35 27.3	-0.1
BKNI	**Bangkinang**	46.89	265	P	**P**	00 35 27.6	+0.1
NKL	**Nikolayevsk**	47.11	354	*e*P	**P**	00 35 25.6	-2.9
NKL				*e*S	**S**	00 42 20.4	+0.5
NKL				pmax	pmax		
	comp=E,4.0nm,0.9s						
NKL				pmax	pmax		
	comp=Z,102nm,1.4s						
NKL				smax	smax		
	comp=E,3.0nm,2.0s						
NKL				smax	smax		
	comp=N,1µm,1.4s						
NKL				MLR	MLR		
	comp=Z,445nm,14.0s						
BLDU	**Ballidu**	47.14	217	P	**P**	00 35 28.8	-0.4
	baz=47,SNR=15						
BLDU	**Ballidu**	47.14	217	P	**P**	00 35 28.9	-0.2
	comp=Z,103nm,1.4s						
HHC	**Hu-ho-hao-te**	47.17	322	*e*P	**P**	00 35 30.1	+0.7
HHC				pP	sP	00 35 34.9	-0.6
HHC				PP	**PP**	00 37 20.5	+0.1
HHC				S	**S**	00 42 21.7	+0.2
HHC				pmax	pmax		
	comp=Z,63nm,1.2s						
HHC				pmax	pmax		
	comp=Z,110nm,5.7s						
HHC				LR	LR		
	comp=Z,1µm,15.5s						
HHC				LR	LR		
	comp=Z,1µm,17.1s						
HHC				LR	LR		
	comp=Z,2µm,20.4s						
KLBR	**Kellerberrin**	47.23	215	P	**P**	00 35 28.8	-1.0
	baz=47,SNR=37						
PEA0B	**Petropavlovsk-**	47.43	8	*i* P	**P**	00 35 30.7	-0.4
PEA0B	**Petropavlovsk-**	47.43	8	P	**P**	00 35 31.6	+0.5
PETK	**Petropavlovsk-**	47.43	8	P	**P**	00 35 31.9	+0.8
	comp=Z,5.4nm,0.7s,baz=161,slow=4.8,SNR=10						
PETK				LR	LR	00 52 13.1	
	comp=Z,2µm,21.3s,baz=193,slow=32						
PETK	**Petropavlovsk-**	47.43	8	P	**P**	00 35 32.2	+1.1
PETK	**Petropavlovsk-**	47.43	8	P	**P**	00 35 32.1	+1.1
CORO	**Coronation Par**	47.47	181	P	**P**	00 35 33.3	+1.8
	comp=Z,58nm,1.1s						
PET	**Petropavlovsk**	47.49	9	⇓*i*P	**P**	00 35 32.4	+0.9
PET				*e**PP	**pwP**	00 35 42.1	+1.4
PET				*e*S	**S**	00 42 24.7	-0.7
PET				pmax	pmax		
	comp=Z,54nm,1.5s						
PET				pmax	pmax		
	comp=Z,400nm,13.7s						
PET				MLR	MLR		
	comp=Z,2µm,17.0s						
PPI	**Padang Panjang**	47.64	264	P	**P**	00 35 32.9	-0.4
	comp=Z,31nm,0.8s						
PDSI	**Padang**	47.65	263	P	**P**	00 35 32.6	-0.8
CD2	**Chengdu**	47.86	307	P	**P**	00 35 35.5	+0.6
CD2				sP	sP	00 35 41.3	+0.3
CD2				PP	**PP**	00 37 24.1	-2.8
CD2				S	**S**	00 42 28.8	-2.7
CD2				pmax	pmax		
	comp=Z,150nm,0.7s						
CD2				pmax	pmax		
	comp=Z,250nm,3.8s						
CD2				LR	LR		
	comp=Z,1µm,17.2s						
CD2				LR	LR		
	comp=Z,1µm,14.4s						
CD2				LR	LR		

	comp=Z,980nm,20.1s						
OUZ	**Omahuta**	**47.94**	**151**	P	**P**	**00 35 36.8**	**+1.6**
OUZ				IAmb	IAmb	00 35 48.0	
	comp=Z,49nm,1.2s						
BTO	**Baotou**	**47.97**	**321**	*e*P	**P**	**00 35 37.6**	**+2.0**
BTO				S	**S**	**00 42 37.8**	**+4.9**
BTO				LR	LR		
	comp=Z,3µm,15.2s						
BTO				LR	LR		
	comp=Z,5µm,15.2s						
MNSI	**Mandailing Nat**	**48.27**	**266**	P	**P**	**00 35 38.3**	**+0.1**
	comp=Z,43nm,1.1s						
MUN	**Mundaring**	**48.41**	**216**	P	**P**	**00 35 38.4**	**-0.6**
	baz=49,SNR=14						
MUN	**Mundaring**	**48.41**	**216**	P	**P**	**00 35 38.9**	**-0.1**
	comp=Z,101nm,1.1s						
NWAO	**Narrogin (SRO)**	**48.51**	**215**	P	**P**	**00 35 39.2**	**-0.5**
	comp=Z,102nm,1.1s,baz=42,slow=7.4,SNR=25						
NWAO	**Narrogin (SRO)**	**48.51**	**215**	P	**P**	**00 35 39.3**	**-0.5**
	baz=49,SNR=11						
NWAO				P	**P**	**00 35 39.3**	**-0.5**
	baz=49,SNR=11						
NWAO	**Narrogin (SRO)**	**48.51**	**215**	P	**P**	**00 35 39.2**	**-0.5**
NWAO				pmax	pmax		
	comp=Z,130nm,1.2s						
NWAO	**Narrogin (SRO)**	**48.51**	**215**	P	**P**	**00 35 39.2**	**-0.5**
NWAO	**Narrogin (SRO)**	**48.51**	**215**	P	**P**	**00 35 40.1**	**+0.4**
NWAO	**Narrogin (SRO)**	**48.51**	**215**	P	**P**	**00 35 39.7**	**0.0**
PSI	**Prapat**	**48.69**	**268**	P	**P**	**00 35 41.2**	**-0.4**
	comp=Z,19nm,0.8s,baz=56,slow=6.0,SNR=20						
HIA	**Hailar**	**48.92**	**336**	P	**P**	**00 35 42.5**	**-0.2**
HIA				pmax	pmax		
	comp=Z,41nm,1.3s						
HIA	**Hailar**	**48.92**	**336**	P	**P**	**00 35 42.5**	**-0.2**
HIA				IAmb	IAmb	00 35 45.5	
	comp=Z,41nm,1.3s						
TAU	**Tasmania Unive**	**48.93**	**180**	P	**P**	**00 35 42.8**	**+0.1**
TAU				pmax	pmax		
	comp=Z,47nm,0.9s						
TAU	**Tasmania Unive**	**48.93**	**180**	P	**P**	**00 35 42.8**	**+0.1**
TAU				IAmb	IAmb	00 35 44.0	
	comp=Z,46nm,0.9s						
TAU	**Tasmania Unive**	**48.93**	**180**	P	**P**	**00 35 43.9**	**+1.2**
	comp=Z,66nm,0.9s						
CM31	**Chiang Mai Arr**	**48.96**	**289**	P	**P**	**00 35 44.5**	**+1.1**
CM31				IAmb	IAmb	00 35 46.8	
	comp=Z,47nm,1.1s						
CMAR	**Chiang Mai Arr**	**48.96**	**289**	P	**P**	**00 35 44.8**	**+1.3**
	comp=Z,28nm,1.0s,baz=90,slow=5.8,SNR=85						
CMAR				PcP	**PcP**	**00 37 08.6**	**+1.0**
	comp=Z,3.9nm,0.6s,baz=100,slow=3.3,SNR=1.6						
CMAR				LR	LR	00 54 31.3	
	comp=Z,275nm,21.4s,baz=136,slow=34						
CHTO	**Chiang Mai**	**49.01**	**289**	P	**P**	**00 35 44.8**	**+1.0**
CHTO				pmax	pmax		
	comp=Z,20nm,1.1s						
CHTO	**Chiang Mai**	**49.01**	**289**	P	**P**	**00 35 44.8**	**+1.0**
CHTO	**Chiang Mai**	**49.01**	**289**	P	**P**	**00 35 44.4**	**+0.6**
SISI	**Saibi**	**49.07**	**263**	P	**P**	**00 35 44.0**	**-0.3**
	comp=Z,61nm,1.2s						
LZH	**Lanzhou**	**49.87**	**313**	*e*P	**P**	**00 35 52.0**	**+1.6**
LZH				pP	sP	00 35 56.7	+0.2
LZH				*e*S	**S**	**00 42 54.2**	**-5.7**
LZH				sS	sS	00 43 09.4	+2.2
LZH				SS	**SS**	**00 46 30.5**	**-2.3**
LZH				pmax	pmax		
	comp=Z,49nm,1.2s						
LZH				pmax	pmax		
	comp=Z,570nm,4.1s						
LZH				LR	LR		
	comp=Z,870nm,14.4s						
LZH				LR	LR		
	comp=Z,2µm,15.7s						
LZH				LR	LR		
	comp=Z,2µm,16.0s						
ZEA	**Zeya**	**50.17**	**344**	*e*P	**P**	**00 35 52.3**	**+0.2**
ZEA				*e*		00 37 44.9	
ZEA				*e*S	**S**	**00 43 04.3**	**+1.1**
ZEA				*e*SS	**SS**	**00 46 38.7**	**+2.1**
ZEA				pmax	pmax		
	comp=N,20nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.1s						
ZEA				pmax	pmax		
	comp=Z,100nm,5.9s						
ZEA				pmax	pmax		
	comp=E,10.0nm,6.4s						
ZEA				pmax	pmax		
	comp=Z,100nm,8.8s						
ZEA				smax	smax		
	comp=N,400nm,12.2s						
GSI	**Gunungsitoli**	**50.19**	**266**	P	**P**	**00 35 53.5**	**+0.6**
	comp=N,88nm,1.0s						
GSI	**Gunungsitoli**	**50.19**	**266**	P	**P**	**00 35 51.1**	**-1.8**
GSI				IAmb	IAmb	00 35 53.2	
	comp=Z,71nm,0.9s						
GSI	**Gunungsitoli**	**50.19**	**266**	P	**P**	**00 35 53.3**	**+0.3**
MLSI	**Meulaboh, Aceh**	**51.06**	**270**	P	**P**	**00 36 00.3**	**+0.8**
	comp=Z,63nm,0.9s						
URZ	**Urewera**	**52.06**	**151**	P	**P**	**00 36 07.0**	**+0.5**
	comp=Z,12nm,0.8s,baz=299,slow=24,SNR=4.8						
URZ	**Urewera**	**52.06**	**151**	IAmb	IAmb	00 36 17.2	
	comp=Z,101nm,1.5s						
BKZ	**Black Stump Fm**	**52.48**	**152**	P	**P**	**00 36 11.0**	**+1.3**
MA2	**Magadan**	**53.25**	**2**	IAMs_20	IAMs_20	00 54 58.2	
	comp=Z,2µm,21.0s						
LKP	**Lekhapani**	**53.41**	**299**	*e*P	**P**	**00 36 16.4**	**-0.3**
CIT	**Chita**	**53.58**	**334**	*e*P	**P**	**00 36 19.1**	**+1.4**
CIT				*e*		00 36 23.0	
CIT				*e*		00 36 28.5	
CIT				pmax	pmax		
	comp=Z,190nm,1.9s						
ULN	**Ulaanbaatar**	**53.97**	**327***c*	*e*P	**P**	**00 36 21.6**	**+0.8**
ULN				pmax	pmax		
	comp=Z,110nm,1.4s						
ULN	**Ulaanbaatar**	**53.97**	**327**	P	**P**	**00 36 21.8**	**+1.1**
RPZ	**Rata Peaks**	**54.05**	**159**	P	**P**	**00 36 20.2**	**-0.9**
RPZ				IAmb	IAmb	00 36 32.4	
	comp=Z,48nm,0.8s						
OXZ	**Oxford**	**54.07**	**158**	P	**P**	**00 36 19.7**	**-1.6**
OXZ				IAmb	IAmb	00 36 30.5	
	comp=Z,50nm,1.1s						
GTA	**Gaotai**	**54.18**	**315**	⇑P	**P**	**00 36 23.3**	**+0.9**
GTA				pP	pwP	00 36 30.1	-1.2
GTA				sP	sP	00 36 34.1	+5.6
GTA				S	**S**	**00 43 58.5**	**-0.4**
GTA				sS	sS	00 44 14.1	+7.9
GTA				SS	**SKiKP**	**00 47 36.3**	**+2.5**
GTA				pmax	pmax		
	comp=Z,39nm,1.2s						
GTA				pmax	pmax		
	comp=Z,280nm,7.3s						
GTA				LR	LR		
	comp=Z,790nm,15.6s						
GTA				LR	LR		
	comp=Z,660nm,16.7s						
GTA				LR	LR		
	comp=Z,740nm,21.1s						
SONM	**Songino Array**	**54.31**	**327**	P	**P**	**00 36 24.9**	**+1.7**
	comp=Z,49nm,1.1s,baz=138,slow=6.4,SNR=158						
SONM				LR	LR	00 58 32.8	
	comp=Z,1µm,21.3s,baz=122,slow=35						
SONM	**Songino Array**	**54.31**	**327**	P	**P**	**00 36 24.4**	**+1.2**
SONM				pmax	pmax		
	comp=Z,117nm,1.2s						
SONM	**Songino Array**	**54.31**	**327**	P	**P**	**00 36 24.4**	**+1.2**
KOHI	**KOHIMA**	**54.59**	**297**	*e*P	**P**	**00 36 24.6**	**-1.0**
WHZ	**Wether Hill Ro**	**54.98**	**163**	IAmb	IAmb	00 36 37.0	
	comp=Z,60nm,1.1s						
ITAN	**ITANAGAR**	**55.21**	**299**	*e*P	**P**	**00 36 31.6**	**+1.7**
ITAN				IAmb	IAmb	00 36 33.8	
	comp=Z,27nm,0.8s						
SHL	**Shillong**	**56.53**	**296**	P	**P**	**00 36 39.3**	**-0.3**
SHL				pmax	pmax		
	comp=Z,39nm,0.9s						
SHL	**Shillong**	**56.53**	**296**	*e*P	**P**	**00 36 39.4**	**-0.2**
SHL				IAmb	IAmb	00 36 41.0	
	comp=Z,16nm,0.8s						
SHL	**Shillong**	**56.53**	**296**	P	**P**	**00 36 39.3**	**-0.3**
SHL				IAmb	IAmb	00 36 41.2	
	comp=Z,39nm,0.9s						
YAK	**Yakutsk**	**57.24**	**350***c*	*i*P	**P**	**00 36 43.1**	**-0.6**
YAK				*e**PP	**pwP**	**00 36 53.5**	**+0.9**
YAK				*e*		00 37 36.0	
YAK				*e*		00 38 50.6	
YAK				*e*PPP	PPP	00 40 07.4	
YAK				*e*S	**S**	**00 44 37.6**	**-1.0**
YAK				*e**SS	sS	00 44 54.4	+8.4
YAK				*e*		00 46 29.6	
YAK				*e*SS	**SS**	**00 48 25.9**	**-2.0**
YAK				pmax	pmax		
	comp=Z,58nm,1.4s						
YAK				pmax	pmax		
	comp=N,30nm,1.5s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.6s						
YAK				pmax	pmax		
	comp=Z,124nm,3.3s						
YAK				pmax	pmax		
	comp=N,80nm,4.3s						
YAK				pmax	pmax		
	comp=E,100nm,5.6s						
YAK				smax	smax		
	comp=E,174nm,4.2s						
YAK				smax	smax		
	comp=N,42nm,2.8s						
YAK				MLR	MLR		
	comp=Z,1µm,19.0s						
YAK				MLR	MLR		
	comp=N,705nm,19.0s						
YAK				MLR	MLR		
	comp=E,198nm,18.0s						
ZAK	**Zakamensk**	**57.45**	**328**	*e*P	**P**	**00 36 46.1**	**+0.5**
ZAK				pmax	pmax		
	comp=Z,87nm,1.3s						
BOD	**Bodaibo**	**57.71**	**339**	*e*P	**P**	**00 36 47.0**	**-0.1**
BOD				pmax	pmax		
	comp=Z,31nm,1.6s						
TLY	**Talaya**	**58.01**	**329***c*	*i*P	**P**	**00 36 50.0**	**+0.6**
TLY				*e*S	**S**	**00 44 51.6**	**+2.3**
TLY				pmax	pmax		
	comp=Z,209nm,1.5s						
TLY				MLR	MLR		
	comp=Z,2µm,18.0s						
TLY	**Talaya**	**58.01**	**329**	P	**P**	**00 36 50.6**	**+1.2**
TLY				IAmb	IAmb	00 36 52.0	
	comp=Z,83nm,1.3s						
IRK	**Irkutsk**	**58.03**	**330**	*e*P	**P**	**00 36 49.4**	**-0.1**
IRK				pmax	pmax		
	comp=Z,114nm,2.2s						
MOY	**Mondy**	**59.37**	**328**	*e*P	**P**	**00 36 59.7**	**+0.7**
MOY				pmax	pmax		
	comp=Z,76nm,1.6s						
TAPN	**Taplejung**	**60.51**	**298**	*e*P	**P**	**00 37 08.1**	**+0.6**
ODAN	**Odare**	**60.72**	**297**	*e*P	**P**	**00 37 09.5**	**+0.6**
RAMN	**Ramite**	**61.43**	**297**	*e*P	**P**	**00 37 15.0**	**+1.3**
JIRN	**Jiri**	**61.89**	**298**	*e*P	**P**	**00 37 17.7**	**+0.7**
GUN	**Gumba**	**62.20**	**298**	*e*P	**P**	**00 37 19.4**	**+0.4**
	comp=Z,136nm,0.9s						
PKI	**Pulchoki**	**62.57**	**298**	*e*P	**P**	**00 37 21.6**	**+0.1**
PKIN	**Phulchoki**	**62.58**	**298**	*e*P	**P**	**00 37 21.5**	**0.0**
KKN	**Kakani**	**62.71**	**298**	*e*P	**P**	**00 37 22.6**	**+0.3**
BILL	**Bilibino**	**62.96**	**8**	⇓*e*P	**P**	**00 37 24.3**	**+1.4**
BILL				*e*		00 37 30.6	
BILL				*e*		00 37 37.0	
BILL				*e*S	**S**	**00 45 57.3**	**+5.2**
BILL						00 47 06.0	
BILL				SS	**SS**	**00 49 59.0**	**+1.5**
BILL				pmax	pmax		
	comp=Z,43nm,2.6s						
BILL				MLR	MLR		
	comp=Z,417nm,17.0s						
BILL	**Bilibino**	**62.96**	**8**	P	**P**	**00 37 23.1**	**+0.2**
GKN	**Gorkha**	**63.30**	**298**	*e*P	**P**	**00 37 26.1**	**0.0**
DANN	**Dangsing**	**64.11**	**298**	*e*P	**P**	**00 37 31.9**	**+0.3**
	comp=Z,74nm,0.7s						
KOLN	**Koldanda**	**64.18**	**298**	*e*P	**P**	**00 37 32.3**	**+0.3**
	comp=Z,71nm,1.0s						
WMQ	**Urumqi**	**64.23**	**316**	⇓P	**P**	**00 37 33.5**	**+1.7**
WMQ				pP	pwP	00 37 40.4	-0.4
WMQ				ScP		00 42 04.0	
WMQ				S	**S**	**00 46 09.8**	**+1.0**
WMQ				pmax	pmax		
	comp=Z,45nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,210nm,4.5s						
WMQ				LR	LR		
	comp=Z,920nm,19.3s						
WMQ				LR	LR		
	comp=Z,490nm,19.7s						
WMQ				LR	LR		
	comp=Z,570nm,18.3s						
GAMB	**Gambell**	**64.40**	**19**	IAMs_20	IAMs_20	00 59 51.6	
	comp=Z,3µm,22.0s						
PYUN	**Piuthan**	**64.76**	**298**	*e*P	**P**	**00 37 36.0**	**+0.2**
	comp=Z,112nm,1.0s						
DGZ	**Jazzator, Alta**	**66.25**	**322**	⇑*i*P	**P**	**00 37 46.0**	**+1.1**
DGZ				pmax	pmax		
	comp=Z,32nm,0.9s						
PPT	**Papeete**	**66.33**	**112**	LR	LR	01 00 36.7	
	comp=Z,706nm,18.8s,baz=255,slow=30						
PPT2	**Papeete2**	**66.33**	**112**	*e*S	**S**	**00 46 34.2**	**-1.2**
	comp=Z,859nm,25.5s						
PPT2				*e*LQ	LQ	00 54 39.9	
	comp=Z,2µm,27.2s						
PPT2				*e*LR	LR	00 57 39.6	
	comp=Z,910nm,22.8s,baz=292						
TIXI	**Tiksi**	**66.38**	**354**	*i* P	**P**	**00 37 44.7**	**-0.4**
TIXI				pmax	pmax		
	comp=Z,26nm,1.3s						
TIXI	**Tiksi**	**66.38**	**354**	P	**P**	**00 37 44.0**	**-1.2**
TIXI				IAmb	IAmb	00 37 56.9	
	comp=Z,20nm,0.9s						
ZSN	**Zaisan**	**67.18**	**319**	*e*P	**P**	**00 37 50.0**	**-0.8**
	baz=319						
ZSN				*e*S	**S**	**00 46 45.5**	**+0.8**
	baz=319						
ZSN	**Zaisan**	**67.18**	**319**	*e*P	**P**	**00 37 49.9**	**-0.8**
ZSN				*e*S	**S**	**00 46 45.4**	**+0.8**
PMOR	**Pomariorio Ree**	**67.26**	**109**	*e*T	T	01 49 11.4	
	comp=Z,5.2nm,0.2s						
TBI	**Tubuai**	**68.05**	**118**	*e*S	**S**	**00 46 54.5**	**-1.2**
	comp=Z,290nm,31.5s						
TBI				*e*LQ	LQ	00 55 16.7	
	comp=Z,3µm,30.8s						
TBI				*e*LR	LR	00 58 21.6	
	comp=Z,819nm,28.8s,baz=288						
HYB	**Hyderabad**	**68.24**	**286**	*i* P	**P**	**00 37 58.0**	**-0.1**
HYB	**Hyderabad**	**68.24**	**286**	*e*P	**P**	**00 37 57.9**	**-0.1**
HYB				IAmb	IAmb	00 37 59.0	
	comp=Z,18nm,0.4s						
P18K	**Big Mountain,**	**68.34**	**28**	IAMs_20	IAMs_20	01 02 22.1	
	comp=Z,2µm,22.0s						
MK31	**Makanchi Array**	**68.70**	**318**	*e*P	**P**	**00 38 00.8**	**+0.5**
MK31	**Makanchi Array**	**68.70**	**318**	P	**P**	**00 38 00.4**	**+0.1**
MK31				IAmb	IAmb	00 38 02.5	
	comp=Z,26nm,1.1s						
MKAR	**Makanchi Array**	**68.70**	**318**	P	**P**	**00 38 00.9**	**+0.6**
	comp=Z,14nm,0.7s,baz=90,slow=7.3,SNR=72						
MKAR				PKP2ab		01 06 13.3	
	comp=Z,5.7nm,1.1s,baz=289,slow=3.7,SNR=11						
MKAR				LR	LR	01 10 51.9	
	comp=Z,286nm,18.3s,baz=106,slow=38						
MKAR	**Makanchi Array**	**68.70**	**318**	*i* P	**P**	**00 38 01.2**	**+0.8**
MKAR				pmax	pmax		
	comp=Z,14nm,0.7s						
Q19K	**Cape Douglas,**	**68.88**	**28**	IAMs_20	IAMs_20	01 02 28.4	
	comp=Z,2µm,22.0s						
MAKZ	**Makanchi**	**68.91**	**318**	P	**P**	**00 38 02.2**	**+0.6**
MAKZ	**Makanchi**	**68.91**	**318**	P	**P**	**00 38 02.3**	**+0.6**
MAKZ				IAmb	IAmb	00 38 03.9	
	comp=Z,39nm,1.0s						
KDAK	**Kodiak Island**	**68.93**	**30**	P	**P**	**00 38 02.3**	**+0.9**
	comp=Z,21nm,0.9s,baz=234,slow=8.7,SNR=1.8						
KDAK	**Kodiak Island**	**68.93**	**30**	IAMs_20	IAMs_20	01 03 34.8	
	comp=Z,1µm,20.0s						
O19K	**Port Alsworth**	**69.10**	**27**	IAMs_20	IAMs_20	01 02 12.2	
	comp=Z,2µm,22.0s						
ZAA0	**Zalesovo Array**	**69.18**	**326**	P	**P**	**00 38 02.7**	**-0.4**
ZALV	**Zalesovo Beam**	**69.18**	**326**	P	**P**	**00 38 03.1**	**0.0**
	comp=Z,8.2nm,0.7s,baz=108,slow=6.3,SNR=36						
ZALV				PKP2bc		01 06 11.6	
	comp=Z,0.7nm,0.6s,baz=270,slow=4.4,SNR=7.3						
ZALV				LR	LR	01 09 42.4	
	comp=Z,458nm,20.3s,baz=104,slow=37						
DDI	**Dehra Dun**	**69.27**	**300**	*e*P	**P**	**00 38 05.3**	**+1.1**
N19K	**Bonanza Creek**	**69.30**	**26**	P	**P**	**00 38 05.0**	**+1.1**
	baz=244						
N19K	**Bonanza Creek**	**69.30**	**26**	P	**P**	**00 38 04.3**	**+0.4**
N19K				IAmb	IAmb	00 38 16.0	
	comp=Z,32nm,0.9s						
N19K				IAMs_20	IAMs_20	01 04 31.4	
	comp=Z,2µm,20.0s						
P19K	**Oil Pt**	**69.37**	**28**	IAMs_20	IAMs_20	01 02 42.4	
	comp=Z,2µm,21.0s						
BHPL	**Bhopal**	**69.41**	**292**	*e*P	**P**	**00 38 05.3**	**+0.1**
BHPL				IAmb	IAmb	00 38 11.0	
	comp=Z,12nm,1.1s						
L19K	**White Mountain**	**69.75**	**25**	P	**P**	**00 38 08.0**	**+1.4**
	baz=243						
L19K	**White Mountain**	**69.75**	**25**	P	**P**	**00 38 07.5**	**+0.9**
L19K				IAmb	IAmb	00 38 18.7	
	comp=Z,28nm,1.0s						
L19K				IAMs_20	IAMs_20	01 04 45.2	
	comp=Z,2µm,21.0s						
M19K	**Big River Lodg**	**69.82**	**25**	IAMs_20	IAMs_20	01 04 04.1	
	comp=Z,2µm,22.0s						
PDGK	**Podgornoye**	**69.90**	**314**	P	**P**	**00 38 07.5**	**-0.5**
RDOG	**Red Dog Mine**	**69.93**	**18**	IAMs_20	IAMs_20	01 04 26.5	
	comp=Z,2µm,21.0s						
UZB	**Uzynbulak**	**70.20**	**314**	*e*P	**P**	**00 38 08.9**	**-1.0**
	comp=Z,21nm,1.5s,baz=314						
UZB				*e*S	**S**	**00 47 20.8**	**-0.2**
	baz=314						
UZB	**Uzynbulak**	**70.20**	**314**	*e*P	**P**	**00 38 08.9**	**-1.0**
UZB				*e*S	**S**	**00 47 20.8**	**-0.2**
UZB				pmax	pmax		
	comp=Z,21nm,1.5s						
CNPM	**China Poot**	**70.25**	**28**	IAMs_20	IAMs_20	01 03 33.7	
	comp=Z,2µm,22.0s						
KUDL	**Kundal**	**70.48**	**298**	*e*P	**P**	**00 38 10.7**	**-0.9**
KPKS	**Kokpek**	**70.50**	**314**	*e*P	**P**	**00 38 10.7**	**-0.9**
	comp=Z,13nm,1.1s,baz=314						
KPKS				*e*S	**S**	**00 47 25.0**	**+0.6**
	baz=314						
KPKS	**Kokpek**	**70.50**	**314**	*e*P	**P**	**00 38 10.7**	**-0.9**
KPKS				*e*S	**S**	**00 47 24.9**	**+0.6**
KPKS				pmax	pmax		
	comp=Z,13nm,1.1s						
BRLK	**Bradley Lake**	**70.51**	**28**	IAMs_20	IAMs_20	01 03 54.1	
	comp=Z,1µm,22.0s						
SATY	**Saty**	**70.63**	**313**	*e*P	**P**	**00 38 10.2**	**-2.3**
	baz=313						
SATY				*e*S	**S**	**00 47 25.2**	**-0.8**
	baz=313						
SATY	**Saty**	**70.63**	**313**	*e*P	**P**	**00 38 10.2**	**-2.3**
SATY				*e*S	**S**	**00 47 25.1**	**-0.8**
TARG	**Taragay, Kyrgy**	**70.85**	**312**	P	**P**	**00 38 14.8**	**+0.5**
SEM	**Semipalatinsk**	**70.89**	**321**	*e*P	**P**	**00 38 11.6**	**-2.4**
	baz=321						
SEM	**Semipalatinsk**	**70.89**	**321**	*e*P	**P**	**00 38 11.6**	**-2.4**
DHRM	**DHARAMSHALA**	**70.93**	**302**	*e*P	**P**	**00 38 14.7**	**+0.1**
DHRM				IAmb	IAmb	00 38 15.4	
	comp=Z,38nm,1.0s						
J20K	**Nowinta River**	**70.93**	**23**	P	**P**	**00 38 15.2**	**+1.5**
	baz=243						
J20K	**Nowinta River**	**70.93**	**23**	IAmb	IAmb	00 38 26.1	
	comp=Z,32nm,1.0s						
TDK	**Taldyqorghan**	**70.97**	**315**	*e*P	**P**	**00 38 13.1**	**-1.3**
	comp=Z,49nm,1.0s,baz=315						
TDK	**Taldyqorghan**	**70.97**	**315**	*e*P	**P**	**00 38 13.0**	**-1.3**
TDK				pmax	pmax		
	comp=Z,49nm,1.0s						
SKT	**Skwentna**	**71.08**	**26**	IAMs_20	IAMs_20	01 04 55.4	
	comp=Z,2µm,22.0s						
SUA	**Susitna One**	**71.22**	**26**	IAMs_20	IAMs_20	01 04 39.2	
	comp=Z,1µm,22.0s						
ARXS	**Arharly**	**71.24**	**315**	*e*P	**P**	**00 38 16.3**	**+0.2**
SEW	**Seward**	**71.31**	**28**	P	P	00 38 21.2	+5.2
	baz=249						
O22K	**Cooper Landing**	**71.32**	**28**	P	**P**	**00 38 18.4**	**+2.3**
	baz=249						
O22K	**Cooper Landing**	**71.32**	**28**	IAMs_20	IAMs_20	01 07 04.8	
	comp=Z,1µm,20.0s						
CAST	**Castle Rocks**	**71.43**	**24**	P	**P**	**00 38 17.5**	**+0.7**
	baz=246						
CAST	**Castle Rocks**	**71.43**	**24**	IAmb	IAmb	00 38 28.3	
	comp=Z,38nm,1.4s						
CAST				IAMs_20	IAMs_20	01 07 33.6	
	comp=Z,1µm,20.0s						
CHUM	**Lake Minchumin**	**71.53**	**24**	P	**P**	**00 38 19.8**	**+2.5**
	baz=245						
RC01	**Rabbit Creek A**	**71.53**	**27**	P	**P**	**00 38 17.9**	**+0.5**
	baz=248						
RC01	**Rabbit Creek A**	**71.53**	**27**	IAMs_20	IAMs_20	01 06 03.4	
	comp=Z,2µm,20.0s						
MDOK	**Medeo**	**71.63**	**313**	*e*P	**P**	**00 38 16.8**	**-1.8**
	baz=313						
MDOK				*e*S	**S**	**00 47 36.8**	**-0.8**
	baz=313						
MDOK	**Medeo**	**71.63**	**313**	*e*P	**P**	**00 38 16.7**	**-1.8**
MDOK				*e*S	**S**	**00 47 36.7**	**-0.8**
AAA	**Alma-Ata**	**71.73**	**313**	*e*P	**P**	**00 38 18.1**	**-0.9**
	baz=313						
AAA	**Alma-Ata**	**71.73**	**313**	*e*P	**P**	**00 38 18.1**	**-0.9**
CHKK	**Chushkaly**	**71.78**	**314**	*e*P	**P**	**00 38 18.0**	**-1.3**
	baz=314						
CUT	**Chulitna**	**71.79**	**26**	IAMs_20	IAMs_20	01 05 29.3	
	comp=Z,1µm,21.0s						
KSH	**Kashi**	**71.93**	**309**	P	**P**	**00 38 23.0**	**+2.6**
KSH				S	**S**	**00 47 43.2**	**+2.1**
KSH				sS	SKiKP	00 48 01.6	+3.9
KSH				SS	**SS**	**00 52 22.2**	**+4.4**
KSH				pmax	pmax		
	comp=Z,30nm,1.2s						
KSH				pmax	pmax		
	comp=Z,190nm,4.1s						
KSH				LR	LR		
	comp=Z,230nm,7.4s						
KSH				LR	LR		
	comp=Z,670nm,13.6s						
KSH				LR	LR		
	comp=Z,710nm,15.8s						
KTH	**Kantishna Hill**	**71.96**	**24**	IAMs_20	IAMs_20	01 04 27.7	
	comp=Z,1µm,21.0s						
KURK	**Kurchatov**	**71.97**	**321***c*	*e*P	**P**	**00 38 20.0**	**-0.2**
KURK				pmax	pmax		
	comp=Z,98nm,1.3s						
KURK	**Kurchatov**	**71.97**	**321**	P	**P**	**00 38 20.3**	**+0.1**
KURK				IAmb	IAmb	00 38 22.4	
	comp=Z,51nm,0.8s						
PMR	**Palmer**	**71.99**	**27**	P	**P**	**00 38 21.0**	**+1.0**
	baz=249						
KURBB	**Kurchatov Arra**	**72.00**	**321**	P	**P**	**00 38 20.4**	**0.0**
ULHL	**Ulahol**	**72.08**	**312**	P	**P**	**00 38 22.3**	**+1.0**
	SNR=9.7						
PWL	**Port Wells**	**72.09**	**28**	IAMs_20	IAMs_20	01 04 32.2	
	comp=Z,2µm,22.0s						
H21K	**Melozitna Rive**	**72.10**	**22**	P	**P**	**00 38 21.6**	**+0.8**
	baz=244						
H21K	**Melozitna Rive**	**72.10**	**22**	IAMs_20	IAMs_20	01 05 44.3	
	comp=Z,2µm,21.0s						
GHO	**Glory Hole Cre**	**72.14**	**27**	IAMs_20	IAMs_20	01 04 58.6	
	comp=Z,2µm,22.0s						
BPAW	**Bear Paw Mtn.**	**72.16**	**24**	P	**P**	**00 38 21.3**	**+0.2**
	baz=246						
BPAW	**Bear Paw Mtn.**	**72.16**	**24**	P	**P**	**00 38 21.1**	**0.0**
BPAW				IAMs_20	IAMs_20	01 07 22.7	
	comp=Z,2µm,20.0s						
TRF	**Thorofare Moun**	**72.18**	**25**	P	**P**	**00 38 21.6**	**+0.1**
	baz=247						
TRF	**Thorofare Moun**	**72.18**	**25**	IAMs_20	IAMs_20	01 04 36.5	
	comp=Z,2µm,22.0s						
I21K	**Tanana**	**72.21**	**23**	P	**P**	**00 38 22.5**	**+1.1**
	baz=245						
KNK	**Knik Glacier**	**72.22**	**27**	P	**P**	**00 38 21.9**	**+0.3**
	baz=250						
KNK	**Knik Glacier**	**72.22**	**27**	IAmb	IAmb	00 38 33.0	
	comp=Z,27nm,0.8s						
KNK				IAMs_20	IAMs_20	01 08 46.8	
	comp=Z,2µm,20.0s						
KUU	**Kurty**	**72.25**	**314**	*e*P	**P**	**00 38 21.1**	**-1.0**
	comp=Z,76nm,1.5s,baz=314						
KUU	**Kurty**	**72.25**	**314**	*e*P	**P**	**00 38 21.1**	**-1.0**
KUU				pmax	pmax		
	comp=Z,76nm,1.5s						
SML	**Sawmill**	**72.42**	**27**	P	**P**	**00 38 23.4**	**+0.6**
	baz=250						
SML	**Sawmill**	**72.42**	**27**	IAmb	IAmb	00 38 34.2	
	comp=Z,47nm,1.0s						
SML				IAMs_20	IAMs_20	01 05 04.9	
	comp=Z,2µm,22.0s						
TKM2	**Tokmak 2**	**72.64**	**313**	P	**P**	**00 38 25.5**	**+0.8**
	SNR=21						
TKM2	**Tokmak 2**	**72.64**	**313**	P	**P**	**00 38 23.7**	**-1.0**
GLI	**Glacier Island**	**72.67**	**28**	P	**P**	**00 38 25.5**	**+1.3**
	baz=251						
GLI	**Glacier Island**	**72.67**	**28**	IAMs_20	IAMs_20	01 04 50.5	

	comp=Z,2µm,22.0s						
WAT1	**Susitna Watana**	**72.69**	**26**	P	**P**	**00 38 24.5**	**+0.2**
	baz=249						
RND	**Reindeer**	**72.77**	**25**	IAmb	IAmb	00 38 45.9	
	comp=Z,39nm,1.4s						
RND				IAMs_20	IAMs_20	01 05 04.9	
	comp=Z,2µm,22.0s						
HIN	**Hinchinbrook I**	**72.79**	**28**	IAMs_20	IAMs_20	01 09 12.8	
	comp=Z,1µm,20.0s						
BWN	**Browne**	**72.80**	**24**	IAMs_20	IAMs_20	01 07 13.6	
	comp=Z,1µm,20.0s						
MCK	**McKinley**	**72.85**	**25**	P	P	00 38 30.7	+5.4
	baz=248						
MCK	**McKinley**	**72.85**	**25**	IAMs_20	IAMs_20	01 05 51.2	
	comp=Z,2µm,20.0s						
SCM	**Sheep Creek Mo**	**72.88**	**27**	P	**P**	**00 38 30.0**	**+4.5**
	baz=250						
SCM	**Sheep Creek Mo**	**72.88**	**27**	IAMs_20	IAMs_20	01 09 06.0	
	comp=Z,1µm,20.0s						
FID	**Port Fidalgo**	**72.91**	**28**	IAMs_20	IAMs_20	01 05 05.3	
	comp=Z,2µm,21.0s						
WAT6	**Susitna Watana**	**72.95**	**26**	P	**P**	**00 38 26.2**	**+0.2**
	baz=250						
KBK	**Karagaybulak**	**73.08**	**313**	P	**P**	**00 38 27.8**	**+0.5**
	SNR=19						
NEA2	**Nenana**	**73.12**	**24**	P	**P**	**00 38 26.9**	**+0.1**
	baz=248						
NEA2	**Nenana**	**73.12**	**24**	IAMs_20	IAMs_20	01 07 42.1	
	comp=Z,1µm,20.0s						
I23K	**Minto, Yukon-K**	**73.21**	**23**	P	**P**	**00 38 28.2**	**+0.9**
	baz=248						
I23K	**Minto, Yukon-K**	**73.21**	**23**	IAmb	IAmb	00 38 39.1	
	comp=Z,66nm,1.4s						
I23K				IAMs_20	IAMs_20	01 07 13.6	
	comp=Z,1µm,20.0s						
CHMS	**Chumysh**	**73.27**	**313**	P	**P**	**00 38 28.8**	**+0.6**
	SNR=11						
DHY	**Denali Highway**	**73.28**	**26**	P	**P**	**00 38 28.3**	**+0.3**
	baz=250						
UCH	**Uchtor**	**73.35**	**312**	P	**P**	**00 38 30.6**	**+1.4**
	SNR=46						
H23K	**Yukon River**	**73.40**	**22**	P	**P**	**00 38 29.3**	**+0.9**
	baz=247						
H23K	**Yukon River**	**73.40**	**22**	IAMs_20	IAMs_20	01 06 22.6	
	comp=Z,1µm,20.0s						
KLU	**Klutina**	**73.40**	**27**	P	**P**	**00 38 33.0**	**+4.4**
	baz=252						
KLU	**Klutina**	**73.40**	**27**	IAMs_20	IAMs_20	01 05 24.9	
	comp=Z,2µm,22.0s						
AAK	**Ala-Archa**	**73.41**	**313**	P	**P**	**00 38 30.3**	**+1.1**
	SNR=14						
AAK	**Ala-Archa**	**73.41**	**313**	*i* P	**P**	**00 38 29.8**	**+0.6**
AAK				pmax	pmax		
	comp=Z,56nm,1.2s						
AAK	**Ala-Archa**	**73.41**	**313**	P	**P**	**00 38 28.4**	**-0.8**
SGDS	**Sogindy**	**73.42**	**313**	*e*P	**P**	**00 38 27.2**	**-1.9**
	baz=313						
SGDS				*e*S	**S**	**00 47 57.7**	**-0.1**
	baz=313						
WRH	**Wood River Hil**	**73.47**	**24**	IAMs_20	IAMs_20	01 08 04.4	
	comp=Z,1µm,20.0s						
M24K	**Tolsona, Glenn**	**73.48**	**27**	P	**P**	**00 38 32.0**	**+2.9**
	baz=252						
M24K	**Tolsona, Glenn**	**73.48**	**27**	IAMs_20	IAMs_20	01 05 50.9	
	comp=Z,2µm,22.0s						
USP	**Ospenovka**	**73.49**	**313**	P	**P**	**00 38 29.7**	**+0.2**
	SNR=15						
TAOE	**Nuku Hiva Isla**	**73.51**	**101**	*e*P	**P**	**00 38 29.9**	**-0.3**
	comp=Z,504nm,1.5s						
MDM	**Murphy Dome**	**73.59**	**24**	IAMs_20	IAMs_20	01 07 56.5	
	comp=Z,1µm,20.0s						
NIL	**Nilore**	**73.59**	**303**	P	**P**	**00 38 30.6**	**+0.3**
NIL				pmax	pmax		
	comp=Z,46nm,1.0s						
NIL	**Nilore**	**73.59**	**303**	P	**P**	**00 38 30.6**	**+0.3**
NIL				IAmb	IAmb	00 38 32.4	
	comp=Z,46nm,0.9s						
CCB	**Clear Creek Bu**	**73.64**	**24**	IAMs_20	IAMs_20	01 07 59.1	
	comp=Z,1µm,20.0s						
RAGM	**Ragged Mountai**	**73.65**	**29**	IAMs_20	IAMs_20	01 05 42.6	
	comp=Z,2µm,21.0s						
TCOL	**CIGO, UAF Yank**	**73.70**	**24**	IAMs_20	IAMs_20	01 07 59.6	
	comp=Z,1µm,21.0s						
COLA	**College**	**73.71**	**24**	IAMs_20	IAMs_20	01 07 58.6	
	comp=Z,1µm,20.0s						
COLD	**Coldfoot**	**73.71**	**21**	P	**P**	**00 38 31.8**	**+1.5**
	baz=246						
COLD	**Coldfoot**	**73.71**	**21**	P	**P**	**00 38 31.2**	**+0.9**
HMT	**Hamilton**	**73.84**	**29**	IAMs_20	IAMs_20	01 11 15.4	
	comp=Z,1µm,20.0s						
HDA	**Harding Lake**	**73.91**	**24**	P	**P**	**00 38 30.7**	**-0.8**
	baz=250						
HDA	**Harding Lake**	**73.91**	**24**	IAMs_20	IAMs_20	01 07 36.1	
	comp=Z,1µm,20.0s						
NRIK	**Noril'sk**	**73.92**	**341**	P	**P**	**00 38 31.4**	**-0.1**
	comp=Z,8.8nm,0.7s,baz=111,slow=6.7,SNR=18						
NRIK				LR	LR	01 11 18.8	
	comp=Z,370nm,19.5s,baz=119,slow=36						
NRIK	**Noril'sk**	**73.92**	**341**	*e*P	**P**	**00 38 31.2**	**-0.2**
NRIK				pmax	pmax		
	comp=Z,43nm,1.7s						
EKS2	**Erkin-Say**	**73.94**	**312**	P	**P**	**00 38 33.2**	**+0.9**
	SNR=14						
AML	**Almayashu**	**73.95**	**312**	P	**P**	**00 38 33.8**	**+1.2**
	SNR=28						
POKR	**Poker Plat Res**	**73.96**	**23**	IAMs_20	IAMs_20	01 07 35.4	
	comp=Z,2µm,20.0s						
HARP	**HAARP**	**74.03**	**27**	P	**P**	**00 38 33.2**	**+1.0**
	baz=252						
BTLS	**Baital**	**74.03**	**315**	*e*P	**P**	**00 38 31.1**	**-1.5**
	baz=315						
BTLS	**Baital**	**74.03**	**315**	*e*P	**P**	**00 38 31.1**	**-1.5**
N25K	**Chitina, Valde**	**74.04**	**27**	P	**P**	**00 38 33.6**	**+1.2**
	baz=253						
N25K	**Chitina, Valde**	**74.04**	**27**	IAMs_20	IAMs_20	01 05 55.8	
	comp=Z,1µm,22.0s						
H24K	**Noodor Dome**	**74.04**	**23**	P	**P**	**00 38 33.0**	**+0.7**
	baz=249,SNR=8.2						
H24K	**Noodor Dome**	**74.04**	**23**	IAMs_20	IAMs_20	01 06 07.5	
	comp=Z,1µm,22.0s						
ILAR	**Eielson Array**	**74.06**	**24**	P	**P**	**00 38 31.1**	**-1.2**
	comp=Z,3.4nm,0.5s,baz=253,slow=5.4,SNR=35						
ILAR				LR	LR	01 08 02.2	
	comp=Z,1µm,20.9s,baz=245,slow=33						
ILAR	**Eielson Array**	**74.06**	**24**	P	**P**	**00 38 31.3**	**-1.0**
ILAR	**Eielson Array**	**74.06**	**24**	P	**P**	**00 38 31.3**	**-1.0**
PAX	**Paxson**	**74.06**	**26**	P	**P**	**00 38 33.3**	**+0.8**
	baz=252						
PAX	**Paxson**	**74.06**	**26**	IAmb	IAmb	00 38 43.3	
	comp=Z,61nm,1.7s						
BERG	**Berg Lake**	**74.12**	**29**	P	**P**	**00 38 33.3**	**+0.5**
BERG				IAmb	IAmb	00 38 44.9	
	comp=Z,61nm,1.0s						
BERG				IAMs_20	IAMs_20	01 11 16.0	
	comp=Z,1µm,19.0s						
GLB	**Gilahina Butte**	**74.36**	**28**	IAmb	IAmb	00 38 45.9	
	comp=Z,38nm,1.2s						
SNH	**Sunshine Point**	**74.48**	**29**	IAMs_20	IAMs_20	01 08 32.4	
	comp=Z,2µm,20.0s						
CRQM	**Cirque**	**74.48**	**28**	IAmb	IAmb	00 38 48.1	
	comp=Z,48nm,0.9s						
CRQM				IAMs_20	IAMs_20	01 06 10.1	
	comp=Z,1µm,21.0s						
TOLK	**Toolik Lake Re**	**74.50**	**20**	IAMs_20	IAMs_20	01 10 56.5	
	comp=Z,2µm,19.0s						
CRQE	**Cirque**	**74.50**	**28**	P	**P**	**00 38 37.7**	**+2.5**
	baz=255						
WAX	**Waxell Ridge**	**74.54**	**29**	IAmb	IAmb	00 38 47.4	
	comp=Z,42nm,1.0s						
WAX				IAMs_20	IAMs_20	01 10 33.1	
	comp=Z,1µm,20.0s						
RIDG	**Independent Ri**	**74.57**	**25**	P	**P**	**00 38 35.8**	**+0.4**
	baz=252						
RIDG	**Independent Ri**	**74.57**	**25**	P	**P**	**00 38 34.1**	**-1.3**
RIDG				IAMs_20	IAMs_20	01 11 18.6	
	comp=Z,1µm,20.0s						
J25K	**Salcha River,**	**74.62**	**24**	P	**P**	**00 38 35.6**	**-0.1**
	baz=252,SNR=7.2						
TGL	**Tana Glacier**	**74.63**	**28**	IAMs_20	IAMs_20	01 06 15.4	
	comp=Z,1µm,21.0s						
ISLE	**Juniper Island**	**74.83**	**29**	IAMs_20	IAMs_20	01 07 51.6	
	comp=Z,1µm,22.0s						
PRP	**Porcupine Dome**	**74.85**	**23**	P	**P**	**00 38 39.0**	**+1.9**
	baz=251						
MESA	**MESA**	**74.91**	**29**	IAMs_20	IAMs_20	01 08 54.8	
	comp=Z,2µm,20.0s						
SCRK	**Sand Creek**	**75.00**	**25**	P	**P**	**00 38 38.4**	**+0.4**
	baz=253						
SCRK	**Sand Creek**	**75.00**	**25**	P	**P**	**00 38 38.0**	**0.0**
SCRK				IAMs_20	IAMs_20	01 07 19.0	
	comp=Z,1µm,20.0s						
L26K	**Log Cabin Wild**	**75.00**	**26**	P	**P**	**00 38 38.7**	**+0.8**
	baz=254						
YAH	**Yahtse**	**75.05**	**29**	IAMs_20	IAMs_20	01 06 51.5	
	comp=Z,2µm,20.0s						
BARN	**Barnard Glacie**	**75.26**	**28**	P	**P**	**00 38 40.3**	**+0.7**
FYU	**Fort Yukon**	**75.30**	**22**	IAmb	IAmb	00 38 51.6	
	comp=Z,92nm,1.4s						
FYU				IAMs_20	IAMs_20	01 09 35.8	
	comp=Z,2µm,20.0s						
J26L	**Joseph Creek**	**75.33**	**25**	P	**P**	**00 38 40.3**	**+0.5**
	baz=253						
TABL	**Table Mountain**	**75.36**	**29**	IAmb	IAmb	00 38 51.2	
	comp=Z,97nm,1.7s						
TABL				IAMs_20	IAMs_20	01 06 59.7	
	comp=Z,1µm,21.0s						
CTG	**Chitna Glacier**	**75.39**	**28**	P	**P**	**00 38 41.5**	**+1.2**
	baz=256						
CTGM	**Chitina Glacie**	**75.39**	**28**	IAmb	IAmb	00 38 52.5	
	comp=Z,44nm,1.0s						
JASL	**Jaisalmer**	**75.40**	**296⇓**	*e*P	**P**	**00 38 39.5**	**-1.4**
M27K	**Edge Creek, AK**	**75.48**	**27**	P	**P**	**00 38 41.7**	**+0.9**
	baz=255						
M27K	**Edge Creek, AK**	**75.48**	**27**	P	**P**	**00 38 41.5**	**+0.7**
M27K				IAMs_20	IAMs_20	01 07 27.9	
	comp=Z,2µm,22.0s						
BRZS	**Berezniki**	**75.59**	**320**	*e*P	**P**	**00 38 40.4**	**-1.2**
	baz=320						
BRZS	**Berezniki**	**75.59**	**320**	*e*P	**P**	**00 38 40.3**	**-1.2**
OTUK	**Ortayu**	**75.59**	**318**	P	**P**	**00 38 41.9**	**+0.3**
L27K	**Beaver Creek,**	**75.68**	**26**	P	**P**	**00 38 42.8**	**+1.0**
	baz=255						
L27K	**Beaver Creek,**	**75.68**	**26**	IAMs_20	IAMs_20	01 10 06.1	
	comp=Z,1µm,20.0s						
DZA	**Taraz**	**75.76**	**313**	*e*P	**P**	**00 38 41.5**	**-1.2**
	baz=312						
DZA	**Taraz**	**75.76**	**313**	*e*P	**P**	**00 38 41.4**	**-1.2**
BTK	**Batken**	**75.93**	**310**	P	**P**	**00 38 43.3**	**-0.5**
BTK				pmax	pmax		
	comp=Z,21nm,1.2s						
BTK	**Batken**	**75.93**	**310**	P	**P**	**00 38 43.3**	**-0.5**
BVCY	**Beaver Creek**	**75.95**	**27**	P	**P**	**00 38 44.7**	**+1.3**
	baz=256						
BCPM	**Bancas Point**	**75.99**	**30**	IAMs_20	IAMs_20	01 07 54.4	
	comp=Z,1µm,20.0s						
YUK3	**Moose Creek**	**75.99**	**28**	P	**P**	**00 38 45.0**	**+1.2**
	baz=257						
GAR	**Garm**	**76.26**	**308**	IAmb	IAmb	00 38 47.5	
	comp=Z,39nm,1.1s						
KK31	**Karatay Array**	**76.37**	**313**	*i* P	**P**	**00 38 46.4**	**+0.3**
KKAR	**Karatay Array**	**76.37**	**313**	P	**P**	**00 38 46.1**	**0.0**
KKAR	**Karatay Array**	**76.37**	**313**	P	**P**	**00 38 46.1**	**0.0**
KKAR	**Karatay Array**	**76.37**	**313**	IAmb	IAmb	00 38 48.0	
	comp=Z,30nm,1.1s						
EGAK	**Eagle**	**76.40**	**25**	P	**P**	**00 38 47.1**	**+1.3**
	baz=256,SNR=13						
EGAK	**Eagle**	**76.40**	**25**	IAmb	IAmb	00 38 57.9	
	comp=Z,43nm,1.2s						
EGAK				IAMs_20	IAMs_20	01 08 53.1	
	comp=Z,1µm,22.0s						
IUG	**Iuzhnay**	**76.66**	**312**	*e*P	**P**	**00 38 47.4**	**-0.5**
	baz=312						
IUG	**Iuzhnay**	**76.66**	**312**	*e*P	**P**	**00 38 47.4**	**-0.5**
YUK4	**Talbot Arm**	**76.75**	**28**	P	**P**	**00 38 50.2**	**+2.1**
	baz=259						
BRLS	**Borolday**	**76.86**	**313**	*e*P	**P**	**00 38 48.0**	**-1.0**
	baz=312						
BRLS	**Borolday**	**76.86**	**313**	*e*P	**P**	**00 38 47.9**	**-1.0**
DAWY	**Dawson**	**76.98**	**26**	P	**P**	**00 38 50.2**	**+1.0**
	baz=257,SNR=13						
DAWY	**Dawson**	**76.98**	**26**	IAmb	IAmb	00 39 01.5	
	comp=Z,46nm,1.4s						
KBL	**Kabul**	**77.11**	**304**	P	**P**	**00 38 50.3**	**-0.5**
KBL				pmax	pmax		
	comp=Z,11nm,0.9s						
KBL	**Kabul**	**77.11**	**304**	P	**P**	**00 38 50.2**	**-0.5**
CHGR	**Chuyangaron**	**77.15**	**308**	IAmb	IAmb	00 38 52.5	
	comp=Z,48nm,0.9s						
CASY	**Casey**	**77.19**	**194**	P	**P**	**00 38 49.7**	**-0.3**
CASY				IAmb	IAmb	00 38 51.0	
	comp=Z,51nm,1.1s						
HYT	**Haines Junctio**	**77.19**	**29**	P	**P**	**00 38 51.9**	**+1.4**
	baz=260						
HYT	**Haines Junctio**	**77.19**	**29**	IAmb	IAmb	00 39 03.0	
	comp=Z,42nm,1.1s						
BRVK	**Borovoye**	**77.45**	**323**	P	**P**	**00 38 51.6**	**-0.3**
BRVK	**Borovoye**	**77.45**	**323**	P	**P**	**00 38 52.1**	**+0.1**
BRVK				IAmb	IAmb	00 38 53.7	
	comp=Z,36nm,1.1s						
BRVK	**Borovoye**	**77.45**	**323**	IAMs_20	IAMs_20	01 14 59.5	
	comp=Z,1µm,18.0s						
M30M	**Minto, Yukon**	**77.84**	**27**	P	**P**	**00 38 55.1**	**+1.1**
	baz=260						
SKAG	**Skagway**	**78.05**	**31**	P	**P**	**00 38 57.6**	**+2.5**
	baz=262						
SKAG	**Skagway**	**78.05**	**31**	P	**P**	**00 38 56.4**	**+1.3**
SKAG				IAmb	IAmb	00 39 07.6	
	comp=Z,59nm,1.3s						
N31M	**Braeburn, Yuko**	**78.13**	**28**	P	**P**	**00 38 56.9**	**+1.3**
	baz=261						
WHY	**Whitehorse**	**78.44**	**29**	P	**P**	**00 38 59.1**	**+1.7**
	baz=262						
WHY	**Whitehorse**	**78.44**	**29**	IAmb	IAmb	00 39 09.8	
	comp=Z,38nm,1.2s						
P33M	**Teslin, Yukon**	**79.40**	**30**	P	**P**	**00 39 04.0**	**+1.3**
	baz=264						
INK	**Inuvik**	**80.09**	**22**	P	**P**	**00 39 06.6**	**+0.4**
INK				pmax	pmax		
	comp=Z,47nm,1.3s						
INK	**Inuvik**	**80.09**	**22**	P	**P**	**00 39 06.5**	**+0.4**
	baz=262						
INK	**Inuvik**	**80.09**	**22**	P	**P**	**00 39 06.6**	**+0.4**
INK				IAmb	IAmb	00 39 17.5	
	comp=Z,47nm,1.2s						
MMPY	**Sheldon Lake,**	**80.38**	**28**	P	**P**	**00 39 09.9**	**+2.0**
	baz=265						
DLBC	**Dease Lake**	**80.68**	**32**	IAmb	IAmb	00 39 22.0	
	comp=Z,67nm,1.1s						
TGTN	**Hyland Airport**	**81.71**	**29**	P	**P**	**00 39 16.2**	**+1.1**
	baz=268,SNR=15						
SVE	**Sverdlovsk**	**83.18**	**326⇑**	*i*P	**P**	**00 39 23.8**	**+1.1**
SVE				*e*S	**S**	**00 49 44.9**	**+2.9**
SVE				pmax	pmax		
	comp=Z,46nm,1.4s						
A36M	**Sachs Harbour**	**83.20**	**18**	P	**P**	**00 39 23.0**	**+0.5**
	baz=269						
A36M	**Sachs Harbour**	**83.20**	**18**	IAMs_20	IAMs_20	01 13 50.2	
	comp=Z,1µm,21.0s						
AB31	**Akbulak array**	**83.82**	**319**	*i* P	**P**	**00 39 25.6**	**-0.6**
VNDA	**Vanda**	**84.02**	**177**	P	**P**	**00 39 26.5**	**-0.1**
	comp=Z,15nm,1.0s,baz=328,slow=6.1,SNR=60						
VNDA				LR	LR	01 13 07.0	
	comp=Z,338nm,21.7s,baz=345,slow=33						
VNDA	**Vanda**	**84.02**	**177**	P	**P**	**00 39 25.7**	**-0.9**
VNDA				pmax	pmax		
	comp=Z,39nm,1.2s						
VNDA	**Vanda**	**84.02**	**177**	P	**P**	**00 39 25.7**	**-0.9**
VNDA				IAmb	IAmb	00 39 27.9	
	comp=Z,39nm,1.2s						
ARU	**Arti**	**84.34**	**326**	LR	LR	01 18 51.4	
	comp=Z,478nm,19.8s,baz=80,slow=37						
ARU	**Arti**	**84.34**	**326***c*	*i*P	**P**	**00 39 28.7**	**0.0**
ARU						00 42 37.3	
ARU				S	**S**	**00 49 51.7**	**-2.0**
ARU				SS	**SS**	**00 55 17.4**	**-6.0**
ARU				pmax	pmax		
	comp=Z,32nm,1.0s						
ARU				MLR	MLR		
	comp=Z,635nm,17.0s						
ARU	**Arti**	**84.34**	**326**	P	**P**	**00 39 28.9**	**+0.3**
ARU				IAmb	IAmb	00 39 30.3	
	comp=Z,23nm,0.9s						
J01E	**Myrtle Point**	**84.61**	**47**	P	**P**	**00 39 31.7**	**+1.4**
	baz=274						
SBA	**Scott Base**	**84.64**	**176**	P	**P**	**00 39 30.5**	**+0.8**
SBA				pmax	pmax		
	comp=Z,78nm,1.5s						
SBA	**Scott Base**	**84.64**	**176**	P	**P**	**00 39 30.5**	**+0.8**
K02D	**Willamette Mer**	**84.84**	**48**	P	**P**	**00 39 32.9**	**+1.3**
	baz=274						
L02E	**Cave Junction**	**84.92**	**48**	P	**P**	**00 39 31.6**	**-0.3**
	baz=274						
D03D	**Eldon**	**84.93**	**43**	P	**P**	**00 39 34.0**	**+2.1**
	baz=274						
AKTO	**Aktyubinsk**	**85.00**	**320**	LR	LR	01 19 36.2	
	comp=Z,375nm,21.2s,baz=76,slow=37						
AKTO	**Aktyubinsk**	**85.00**	**320**	P	**P**	**00 39 31.3**	**-0.9**
I03D	**Drain, OR**	**85.00**	**47**	P	**P**	**00 39 34.0**	**+1.7**
	baz=274						
E04D	**Cinebar**	**85.36**	**44**	P	**P**	**00 39 36.1**	**+2.1**
	baz=274						
HUMO	**Hull Mountain**	**85.37**	**48**	IAmb	IAmb	00 39 46.9	
	comp=Z,32nm,1.1s						
H04D	**Lebanon**	**85.39**	**46**	P	**P**	**00 39 35.9**	**+1.7**
	baz=274						
F04A	**Amboy**	**85.50**	**44**	P	**P**	**00 39 35.0**	**+0.3**
LLLB	**Lillooet**	**85.51**	**40**	IAmb	IAmb	00 39 46.9	
	comp=Z,26nm,1.1s						
M02C	**Callahan**	**85.53**	**49**	P	**P**	**00 39 36.8**	**+1.6**
	baz=274,SNR=14						
HOPS	**Hopland Field**	**85.55**	**51**	IAMs_20	IAMs_20	01 14 58.9	
	comp=Z,2µm,19.0s						
B05A	**Bryant**	**85.55**	**42**	P	**P**	**00 39 36.6**	**+1.7**
	baz=274						
YBH	**Yreka Blue Hor**	**85.61**	**49**	P	**P**	**00 39 36.9**	**+1.4**
	comp=Z,12nm,0.9s,baz=278,slow=1.3,SNR=23						
YBH	**Yreka Blue Hor**	**85.61**	**49**	P	**P**	**00 39 36.1**	**+0.6**
YBH				pmax	pmax		
	comp=Z,43nm,1.2s						
YBH	**Yreka Blue Hor**	**85.61**	**49**	P	**P**	**00 39 36.1**	**+0.6**
YBH				IAmb	IAmb	00 39 48.1	
	comp=Z,43nm,1.2s						
I04A	**Tendick Farm,**	**85.67**	**47**	P	**P**	**00 39 36.6**	**+0.9**
	baz=274						
O02D	**Mt. Diablo Mer**	**85.67**	**50**	P	**P**	**00 39 37.7**	**+1.9**
	baz=274,SNR=7.1						
N02D	**Trinity Center**	**85.68**	**49**	P	**P**	**00 39 37.2**	**+1.3**
	baz=274,SNR=12						
D05A	**Enumclaw**	**85.70**	**43**	IAmb	IAmb	00 39 43.5	
	comp=Z,57nm,1.1s						
MCCM	**Marconi Confer**	**85.76**	**52**	IAMs_20	IAMs_20	01 13 17.7	
	comp=Z,1µm,20.0s						
H04A	**Detroit Lake**	**85.77**	**46**	P	**P**	**00 39 36.3**	**+0.2**
H04A				IAmb	IAmb	00 39 47.9	
	comp=Z,37nm,0.9s						
GDXM	**Geysers**	**85.78**	**52**	P	**P**	**00 39 36.8**	**+0.4**
GDXM				IAmb	IAmb	00 40 45.0	
	comp=Z,37nm,0.8s						
WDC	**Whiskeytown Da**	**85.83**	**50**	IAMs_20	IAMs_20	01 17 14.3	
	comp=Z,1µm,20.0s						
GEYT	**Alibeck**	**85.84**	**308**	P	**P**	**00 39 38.4**	**+1.7**
	comp=Z,7.9nm,0.9s,baz=216,slow=7.3,SNR=14						
GEYT				LR	LR	01 21 11.6	
	comp=Z,239nm,19.9s,baz=230,slow=38						
GYA0B	**ALIBECK ARRAY**	**85.84**	**308**	P	**P**	**00 39 37.6**	**+0.9**
GYA0B				IAmb	IAmb	00 39 44.3	
	comp=Z,29nm,1.2s						
L04D	**Klamath Falls**	**85.88**	**48**	P	**P**	**00 39 37.5**	**+0.6**
	baz=275						
B06A	**Marblemount**	**85.94**	**42**	IAmb	IAmb	00 39 48.7	
	comp=Z,43nm,1.2s						
J04D	**Umpqua Nationa**	**85.94**	**47**	P	**P**	**00 39 38.5**	**+1.2**
	baz=275						
HOOD	**Mount Hood Mea**	**86.09**	**45**	P	**P**	**00 39 39.0**	**+1.1**
F05D	**White Salmon**	**86.18**	**44**	P	**P**	**00 39 39.7**	**+1.6**
	baz=275						
M04C	**Macdoel**	**86.26**	**49**	P	**P**	**00 39 40.1**	**+1.3**
	baz=275,SNR=7.9						
G05D	**Wamic, OR**	**86.33**	**45**	P	**P**	**00 39 40.5**	**+1.6**
	baz=275						
I05D	**Terrebonne, OR**	**86.40**	**46**	P	**P**	**00 39 40.6**	**+1.2**
	baz=275						
O03E	**Paynes Creek**	**86.42**	**50**	P	**P**	**00 39 40.3**	**+0.7**
	baz=275,SNR=13						
J05D	**Fort Rock, OR**	**86.57**	**47**	P	**P**	**00 39 41.7**	**+1.4**
	baz=275,SNR=16						
WSAR	**Wadi Sarin**	**86.68**	**293**	P	**P**	**00 39 41.1**	**0.0**
	comp=Z,8.6nm,1.1s,baz=197,slow=20,SNR=2.0						
ORV	**Oroville**	**86.72**	**51**	IAmb	IAmb	00 39 52.6	
	comp=Z,47nm,1.2s						
PINE	**Pine Mountain**	**86.73**	**46**	P	**P**	**00 39 41.9**	**+0.8**
PINE				IAmb	IAmb	00 39 53.5	
	comp=Z,43nm,0.9s						
K05A	**Summer Lake**	**86.87**	**48**	IAmb	IAmb	00 39 54.2	
	comp=Z,60nm,1.3s						
F07A	**Phinny Hill Vi**	**87.24**	**44**	P	**P**	**00 39 43.6**	**+0.3**
F07A				IAmb	IAmb	00 39 55.6	
	comp=Z,40nm,1.3s						
MOD	**Modoc Plateau**	**87.39**	**48**	IAmb	IAmb	00 39 56.4	
	comp=Z,38nm,1.2s						
MOD				IAMs_20	IAMs_20	01 13 33.5	
	comp=Z,773nm,18.0s						
CMB	**Columbia Colle**	**87.73**	**52**	IAmb	IAmb	00 39 57.7	
	comp=Z,37nm,1.6s						
CMB				IAMs_20	IAMs_20	01 11 54.9	
	comp=Z,908nm,20.0s						
I07A	**Izee**	**87.74**	**46**	IAmb	IAmb	00 39 58.1	
	comp=Z,36nm,1.4s						
E08A	**Dider Farm, El**	**87.77**	**44**	P	**P**	**00 39 46.1**	**+0.3**
G08A	**Pilot Rock**	**87.98**	**45**	IAmb	IAmb	00 40 55.2	
	comp=Z,20nm,0.7s						
YKA	**Yellowknife Ar**	**88.07**	**27**	P	**P**	**00 39 47.0**	**+0.1**
	comp=Z,8.3nm,0.9s,baz=283,slow=3.8,SNR=14						
YKA				LR	LR	01 15 32.4	
	comp=Z,1µm,21.9s,baz=0.0,slow=33						
YKA	**Yellowknife Ar**	**88.07**	**27**	*i* P	**P**	**00 39 47.0**	**+0.1**
YKA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
C09A	**Chrisman Ranch**	**88.15**	**42**	IAmb	IAmb	00 39 59.4	
	comp=Z,32nm,0.9s						
VCNR	**Virginia City**	**88.17**	**51**	P	**P**	**00 39 48.8**	**+0.7**
PNTR	**Pine Nut**	**88.23**	**51**	IAmb	IAmb	00 40 00.8	
	comp=Z,36nm,1.2s						
PAHR	**Pah Rah Range**	**88.33**	**50**	IAmb	IAmb	00 40 00.8	
	comp=Z,45nm,1.4s						
E09A	**Wood Farm, Sta**	**88.40**	**44**	P	**P**	**00 39 49.2**	**+0.4**
WVOR	**Wild Horse Val**	**88.56**	**48**	IAmb	IAmb	00 40 02.0	
	comp=Z,39nm,1.3s						
WVOR				IAMs_20	IAMs_20	01 12 13.4	
	comp=Z,1µm,19.0s						
J08A	**Circle Bar Ran**	**88.56**	**47**	IAmb	IAmb	00 40 01.9	
	comp=Z,29nm,1.3s						
NEW	**Newport**	**88.85**	**42**	LR	LR	01 16 37.5	
	comp=Z,610nm,18.7s,baz=306,slow=34						
NEW	**Newport**	**88.85**	**42**	P	**P**	**00 39 51.7**	**+0.7**
	baz=278,SNR=20						
NEW	**Newport**	**88.85**	**42**	IAMs_20	IAMs_20	01 16 05.6	
	comp=Z,887nm,19.0s						
KIRV	**Kirov**	**89.00**	**329**	LR	LR	01 21 09.5	
	comp=Z,658nm,20.7s,baz=71,slow=36						
F10A	**Beach Ranch, E**	**89.10**	**44**	IAmb	IAmb	00 40 03.4	
	comp=Z,45nm,1.3s						
LHV	**Little Huntoon**	**89.18**	**52**	IAmb	IAmb	00 40 05.2	
	comp=Z,34nm,1.4s						
BMO	**Blue Mountains**	**89.20**	**45**	P	**P**	**00 39 53.1**	**+0.3**
BMO				pmax	pmax		
	comp=Z,41nm,1.2s						
BMO	**Blue Mountains**	**89.20**	**45**	P	**P**	**00 39 53.1**	**+0.3**
BMO				IAmb	IAmb	00 40 04.8	
	comp=Z,41nm,1.2s						
NVAR	**Mina Array Bea**	**89.32**	**52**	P	**P**	**00 39 54.5**	**+0.8**
	comp=Z,4.9nm,0.7s,baz=264,slow=6.0,SNR=22						
NVAR				LR	LR	01 15 39.3	
	comp=Z,749nm,18.9s,baz=270,slow=33						
NV11	**Mina Array Sit**	**89.43**	**52**	P	**P**	**00 39 53.8**	**-0.3**
CWC	**Cottonwood Cre**	**89.75**	**54**	P	**P**	**00 39 56.2**	**+0.5**
	baz=278						
BMN	**Battle Mountai**	**89.88**	**49**	IAmb	IAmb	00 40 07.6	
	comp=Z,32nm,1.5s						
EDW2	**Edwards Air Fo**	**90.02**	**55**	P	**P**	**00 39 57.8**	**+1.0**
	baz=278						
MWC	**Mount Wilson**	**90.06**	**56**	IAmb	IAmb	00 40 08.5	
	comp=Z,59nm,1.3s						
MFID	**Camas Ranch**	**90.47**	**46**	IAmb	IAmb	00 40 11.0	
	comp=Z,32nm,1.2s						
WALA	**Waterton Lakes**	**90.83**	**41**	P	**P**	**00 40 01.8**	**+1.5**
WALA				IAmb	IAmb	00 40 13.0	
	comp=Z,46nm,1.2s						
GSC	**Goldstone, Bar**	**90.93**	**55**	IAmb	IAmb	00 40 12.7	
	comp=Z,21nm,1.4s						
RES	**Resolute Bay**	**91.00**	**14**	LR	LR	01 20 50.1	
	comp=Z,666nm,20.2s,baz=294,slow=36						
BELG	**Belogornoye**	**91.19**	**323**	LR	LR	01 21 07.6	
	comp=Z,625nm,21.8s,baz=82,slow=36						
BELG	**Belogornoye**	**91.19**	**323**	*i* P	**P**	**00 40 00.3**	**-1.4**
BELG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MSO	**Missoula**	**91.21**	**43**	P	**P**	**00 40 05.8**	**+3.6**
	baz=280						
ELK	**Elko**	**91.32**	**49**	P	**P**	**00 40 03.2**	**+0.2**
ELK				pmax	pmax		

	comp=Z,31nm,1.3s						
ELK				MLR	MLR		
	comp=Z,900nm,19.0s						
ELK	Elko	91.32	49	P	P	00 40 03.2	+0.2
ELK				IAmb	IAmb	00 40 15.2	
	comp=Z,31nm,1.3s						
ELK				IAMs_20	IAMs_20	01 21 45.6	
	comp=Z,927nm,19.0s						
R11A	Troy Canyon, C	91.44	51	P	P	00 40 04.6	+1.1
	baz=279						
R11A	Troy Canyon, C	91.44	51	IAmb	IAmb	00 40 15.6	
	comp=Z,22nm,1.2s						
HLID	Hailey	91.46	46	P	P	00 40 04.6	+1.2
	baz=280						
HLID	Hailey	91.46	46	IAmb	IAmb	00 40 14.8	
	comp=Z,28nm,1.6s						
HLID				IAMs_20	IAMs_20	01 26 48.9	
	comp=Z,807nm,19.0s						
PFO	Pinyon Flats O	91.46	56	P	P	00 40 03.8	+0.2
	comp=Z,5.5nm,0.8s,baz=185,slow=8.4,SNR=4.0						
MONP2	Monument Peak	91.59	57	P	P	00 40 04.9	+0.5
	baz=278						
PRN	Pahroc Range	92.01	52	IAmb	IAmb	00 40 18.3	
	comp=Z,24nm,1.3s						
SHPR	Sheep Range	92.07	53	IAmb	IAmb	00 40 19.4	
	comp=Z,20nm,1.3s						
MCMT	McKenzie Canyo	92.33	45	P	P	00 40 08.2	+0.7
IRM	Iron Mountain	92.46	55	P	P	00 40 09.1	+1.0
	baz=279						
PSUT	Pine Spring	92.75	51	P	P	00 40 09.9	+0.3
BOZ	Bozeman (W)	93.02	44	P	P	00 40 11.6	+1.0
	baz=282						
BOZ	Bozeman (W)	93.02	44	IAmb	IAmb	00 40 22.6	
	comp=Z,18nm,1.1s						
MAK	Makhachkala	93.17	314	eP	P	00 40 03.7	-7.4
MAK				e		00 50 33.6	
MAK				eSS	SS	00 57 30.1	-2.2
MAK				pmax	pmax		
	comp=Z,163nm,1.3s						
DUG	Dugway, Tooele	93.24	49	P	P	00 40 12.6	+0.9
	baz=281						
DUG	Dugway, Tooele	93.24	49	IAmb	IAmb	00 40 23.7	
	comp=Z,29nm,1.3s						
DUG				IAMs_20	IAMs_20	01 22 27.4	
	comp=Z,983nm,18.0s						
APA	Apatity	93.26	339⇓	iP	P	00 40 26.8	+16
APA				pmax	pmax		
	comp=Z,17nm,1.0s						
KLMR	Klimovskoe	93.28	332	eP	P	00 40 09.0	-2.2
KLMR				eS	SKSac	00 50 42.1	-2.5
KLMR				eSS	SS	00 57 31.1	-1.8
KLMR				pmax	pmax		
	comp=Z,32nm,1.4s						
KLMR	Klimovskoe	93.28	332	eP	P	00 40 09.0	-2.2
KLMR				AMP		00 40 21.0	
	comp=Z,32nm,1.4s						
KLMR				ePP	PP	00 43 44.7	-10
KLMR				eS	SKSac	00 50 42.1	-2.5
KLMR				eS	SKSac	00 50 42.1	-2.5
KLMR				eSS	SS	00 57 31.2	-1.7
KLMR				eSS	SS	00 57 31.2	-1.7
KLMR				LQ	LQ	01 15 10.8	
KLMR				LQ	LQ	01 15 10.8	
KLMR				LR	LR	01 21 58.9	
CCUT	Cedar City	93.31	52	IAmb	IAmb	00 40 24.7	
	comp=Z,18nm,1.2s						
YHL	Hebgen Lake	93.49	44	IAmb	IAmb	00 40 25.7	
	comp=Z,30nm,1.2s						
SZCU	Shurtz Canyon	93.52	52	IAmb	IAmb	00 40 25.4	
	comp=Z,27nm,1.2s						
YMR	Madison River	93.68	45	P	P	00 40 14.6	+0.8
YMR				IAmb	IAmb	00 40 26.6	
	comp=Z,14nm,1.0s						
YHH	Holmes Hill	93.73	44	P	P	00 40 14.7	+0.6
MAW	Mawson	93.74	202	P	P	00 40 13.4	+0.4
	comp=Z,19nm,1.0s,baz=74,slow=5.4,SNR=32						
MAW				LR	LR	01 20 04.6	
	comp=Z,813nm,19.7s,baz=76,slow=34						
MAW	Mawson	93.74	202	P	P	00 40 13.4	+0.4
	baz=94,SNR=14						
MAW	Mawson	93.74	202	P	P	00 40 13.5	+0.4
MAW				pmax	pmax		
	comp=Z,10.0nm,1.2s						
MAW	Mawson	93.74	202	P	P	00 40 13.5	+0.4
EGMT	Eagleton	93.74	41	P	P	00 40 14.1	+0.3
	baz=284						
EGMT	Eagleton	93.74	41	IAmb	IAmb	00 40 25.2	
	comp=Z,35nm,1.2s						
EGMT				IAMs_20	IAMs_20	01 16 20.9	
	comp=Z,972nm,21.0s						
NLU	North Lily Min	93.84	49	P	P	00 40 14.9	+0.3
NLU				IAmb	IAmb	00 40 26.5	
	comp=Z,22nm,1.3s						
FXWY	Fox Creek	93.86	46	IAMs_20	IAMs_20	01 27 12.3	
	comp=Z,718nm,18.0s						
YNR	Norris Junctio	93.87	44	P	P	00 40 16.2	+1.5
YNR				IAmb	IAmb	00 40 28.5	
	comp=Z,21nm,1.2s						
AHID	Auburn Hatcher	93.99	46	IAMs_20	IAMs_20	01 15 28.9	
	comp=Z,919nm,21.0s						
FLWY	Flagg Ranch	93.99	45	IAmb	IAmb	00 40 27.6	
	comp=Z,15nm,1.1s						
FLWY				IAMs_20	IAMs_20	01 16 18.9	
	comp=Z,764nm,20.0s						
H17A	Grant Village	94.01	45	P	P	00 40 18.2	+2.9
	baz=283						
LKWY	Lake	94.10	45	IAMs_20	IAMs_20	01 29 16.6	
	comp=Z,1µm,18.0s						
MTPU	Mount Pierson	94.13	51	IAmb	IAmb	00 40 28.9	
	comp=Z,29nm,1.4s						
MPU	Maple Canyon	94.17	49	P	P	00 40 16.3	+0.2
MPU				IAmb	IAmb	00 40 27.9	
	comp=Z,28nm,1.3s						
JLU	Jordanelle	94.18	49	IAmb	IAmb	00 40 28.0	
	comp=Z,24nm,1.2s						
YMP	Mirror Lake Pl	94.23	44	IAmb	IAmb	00 40 36.5	
	comp=Z,18nm,1.1s						
U15A	North Rim	94.36	53	IAmb	IAmb	00 40 29.4	
	comp=Z,25nm,1.6s						
TMUT	Trail Mountain	94.63	50	P	P	00 40 19.1	+0.8
TMUT				IAmb	IAmb	00 40 30.4	
	comp=Z,28nm,1.4s						
Q16A	Castle Valley	94.74	50	IAmb	IAmb	00 40 31.0	
	comp=Z,38nm,1.5s						
RLMT	Red Lodge	94.75	44	P	P	00 40 20.2	+1.5
	baz=284						
ARCES	ARCESS Array B	94.87	343	LR	LR	01 28 06.7	
	comp=Z,523nm,18.8s,baz=60,slow=39						
PDAR	Pinedale Array	95.10	46	P	P	00 40 19.9	-0.4
	comp=Z,0.9nm,0.8s,baz=230,slow=3.1,SNR=6.8						
PDAR				LR	LR	01 16 37.9	
	comp=Z,430nm,21.4s,baz=307,slow=31						
SRU	San Rafael Swe	95.19	50	IAmb	IAmb	00 40 32.3	
	comp=Z,14nm,1.2s						
WUAZ	Wupatki	95.27	54	IAMs_20	IAMs_20	01 21 31.4	
	comp=Z,1µm,19.0s						
GNI	Garni	95.79	311	LR	LR	01 24 41.4	
	comp=Z,139nm,21.9s,baz=86,slow=36						
MOS	Moscow	95.94	328	eP	P	00 40 20.5	-3.0
MOS				e		00 44 15.1	
MOS				pmax	pmax		
	comp=Z,23nm,1.2s						
MOS				MLR	MLR		
	comp=Z,500nm,19.0s						
QSPA	South Pole Qui	96.14	180	P	P	00 40 24.3	0.0
KBZ	Khabaz	96.27	315	LR	LR	01 30 02.7	
	comp=Z,210nm,18.0s,baz=68,slow=39						
KIV	Kislovodsk	96.36	315	eP	P	00 40 22.9	-2.9
KIV				e		00 50 58.8	
KIV				eSS	SS	00 58 18.1	+0.2
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
TUC	Tucson	96.38	57	IAMs_20	IAMs_20	01 24 40.2	
	comp=Z,1µm,18.0s						
LAO	LASA Array	96.41	42	IAMs_20	IAMs_20	01 19 53.4	
	comp=Z,868nm,19.0s						
FFC	Flin Flon	96.47	33	IAMs_20	IAMs_20	01 21 56.1	
	comp=Z,1µm,20.0s						
OBN	Obninsk	96.72	327	LR	LR	01 25 39.5	
	comp=Z,33nm,21.9s,baz=34,slow=36						
OBN	Obninsk	96.72	327⇑	eP	P	00 40 25.5	-1.5
OBN				e*PP	pP	00 40 30.2	-1.5
OBN				*SP	pwP	00 40 35.0	-1.1
OBN						00 44 21.0	
OBN						00 51 02.0	
OBN				e		00 51 49.1	
OBN				iPS	PS	00 53 12.9	+2.6
OBN				eSS	SS	00 58 31.6	+10
OBN				pmax	pmax		
	comp=Z,21nm,1.3s						
DGMT	Dagmar	97.20	40	IAMs_20	IAMs_20	01 16 18.2	
	comp=Z,1µm,21.0s						
SMCO	Snowmass	97.86	49	IAmb	IAmb	00 40 44.8	
	comp=Z,11nm,1.2s						
N23A	Red Feather La	98.18	47	P	P	00 40 35.2	+0.9
	baz=286						
LPIG	La Paz	98.37	65	LR	LR	01 15 18.1	
	comp=Z,788nm,21.5s,baz=308,slow=30						
SOC	Sochi	98.53	316	eP	P	00 40 32.7	-2.8
SOC				ePPP	PPP	00 46 39.2	
SOC				eS	SKSac	00 51 10.2	-2.8
SOC				MLR	MLR		
	comp=Z,282nm,19.0s						
RAYN	Ar Rayn	98.58	295	P	P	00 40 35.4	-0.8
RAYN				pmax	pmax		
	comp=Z,26nm,1.9s						
RAYN	Ar Rayn	98.58	295	P	P	00 40 35.4	-0.8
RAYN				IAmb	IAmb	00 40 36.6	
	comp=Z,26nm,1.9s						
ISCO	Idaho Springs	98.72	48	IAMs_20	IAMs_20	01 24 31.2	
	comp=Z,1µm,20.0s						
FINES	FINESS Array B	98.94	336	P	P	00 40 35.2	-1.7
	comp=Z,1.0nm,0.4s,baz=77,slow=5.2,SNR=11						
FINES				LR	LR	01 29 26.6	
	comp=Z,340nm,18.0s,baz=50,slow=38						
FINES	FINESS Array B	98.94	336	iP	P	00 40 35.0	-1.9
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
Y22D	IRIS PASSCAL I	99.16	54	IAMs_20	IAMs_20	01 33 39.5	
	comp=Z,908nm,18.0s						
ANMO	Albuquerque	99.32	53	LR	LR	01 17 17.9	
	comp=Z,302nm,21.8s,baz=246,slow=30						
ANMO	Albuquerque	99.32	53	ceP	Pdif	00 40 38.2	-1.3
ANMO				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ANMO	Albuquerque	99.32	53	Pdiff	Pdif	00 40 39.9	+0.4
	baz=284						
ANMO	Albuquerque	99.32	53	P	Pdif	00 40 39.5	0.0
SDCO	Great Sand Dun	99.35	50	IAMs_20	IAMs_20	01 19 32.1	
	comp=Z,1µm,20.0s						
EPT	El Paso	100.05	56	IAMs_20	IAMs_20	01 26 32.2	
	comp=Z,862nm,20.0s						
T25A	Trinidad	100.35	51	IAMs_20	IAMs_20	01 18 47.6	
	comp=Z,792nm,20.0s						
MNTX	Cornudas Mount	100.99	56	Pdiff	Pdif	00 40 47.6	+0.8
	baz=284						
MNTX	Cornudas Mount	100.99	56	IAMs_20	IAMs_20	01 27 46.2	
	comp=Z,908nm,18.0s						
MNK	Minsk	101.54	329	iP	Pdif	00 40 45.8	-2.9
MNK				i		00 44 57.2	
MNK				iPPP	PPP	00 47 06.2	
MNK				iS	SKSac	00 51 24.6	-2.8
MNK				iSS	SS	00 59 30.7	+1.2
MNK				iSSS	SSS	01 03 20.3	
MNK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,11nm,1.5s						
MNK				pmax	pmax		
	comp=E,2.0nm,1.1s						
MNK	Minsk	101.54	329	iP	Pdif	00 40 45.8	-2.9
	comp=E,2.0nm,1.1s						
MNK				iP	Pdif	00 40 45.8	-2.9
	comp=N,11nm,1.5s						
MNK				iP	Pdif	00 40 45.8	-2.9
	comp=Z,6.0nm,0.9s,baz=62						
MNK				iPP	PP	00 44 57.2	-1.0
MNK				iPPP	PPP	00 47 06.2	
MNK				iS	SKSac	00 51 24.6	-2.7
MNK				iSS	SS	00 59 30.8	+1.3
MNK				iSS	SS	00 59 30.8	+1.3
MNK				iSSS	SSS	01 03 20.3	
MNK				iLQ	LQ	01 20 45.2	
MNK				iLR	LR	01 27 31.1	
MNK				iLRM	MLR	01 30 29.2	
	comp=N,542nm,25.4s						
MNK				iLRM	MLR	01 30 55.9	
	comp=E,126nm,22.9s						
MNK				iLRM	MLR	01 31 02.3	
	comp=Z,926nm,20.4s						
AKASG	Malin Array Be	102.57	325	P	Pdif	00 40 51.5	-1.8
	comp=Z,0.3nm,0.3s,baz=57,slow=5.3,SNR=5.7						
AKASG	Malin Array Be	102.57	325	P	Pdif	00 40 52.5	-0.8
AKASG	Malin Array Be	102.57	325		Pdif	00 40 52.5	-0.8
CBKS	Cedar Bluff	103.36	48	IAMs_20	IAMs_20	01 29 46.0	
	comp=Z,1µm,19.0s						
ECSD	EROS Data Cent	103.79	42	IAMs_20	IAMs_20	01 19 08.8	
	comp=Z,699nm,21.0s						
U32A	Winter Ranch,	104.72	50	IAMs_20	IAMs_20	01 23 08.2	
	comp=Z,784nm,21.0s						
WMOK	Wichita Mounta	105.42	52	IAMs_20	IAMs_20	01 32 01.1	
	comp=Z,836nm,19.0s						
JCT	Junction City	105.93	56	IAMs_20	IAMs_20	01 24 59.9	
	comp=Z,720nm,21.0s						
OK029	Liberty Lake	106.09	50	IAMs_20	IAMs_20	01 22 08.6	
	comp=Z,880nm,21.0s						
OK030	Cody Creek RV	106.56	50	IAMs_20	IAMs_20	01 24 23.9	
	comp=Z,905nm,19.0s						
MLR	Muntele Rosu	106.90	321	IAMs_20	IAMs_20	01 31 17.4	
	comp=Z,860nm,22.0s						
TUL1	Leonard	107.31	50	IAMs_20	IAMs_20	01 28 27.9	
	comp=Z,662nm,19.0s						
435B	Jarrell	107.65	55	IAMs_20	IAMs_20	01 23 29.5	
	comp=Z,1µm,20.0s						
JFWS	Jewell Farm	108.34	41	IAMs_20	IAMs_20	01 27 49.2	
	comp=Z,930nm,19.0s						
HKT	Hockley	109.35	55	IAMs_20	IAMs_20	01 24 09.4	
	comp=Z,1µm,21.0s						
MIAR	Mount Ida	109.50	50	IAMs_20	IAMs_20	01 31 33.0	
	comp=Z,911nm,20.0s						
X40A	Basin Creek Fa	110.09	50	IAMs_20	IAMs_20	01 35 58.5	
	comp=Z,907nm,19.0s						
CLL	Collm	110.76	331	Lm	MLR	01 35 00.0	
	comp=Z,1µm,19.1s						
CLL	Collm	110.76	331	e(PS)		00 55 27.0	
CLL	Collm	110.76	331	ePPS	PPS	00 56 36.0	
CLL	Collm	110.76	331	eSS	SS	01 01 42.0	+7.2
CLL	Collm	110.76	331	eSSS	SSS	01 05 36.0	
CLL	Collm	110.76	331	e		01 07 03.0	
CLL	Collm	110.76	331	eSSSS		01 09 12.0	
CLL	Collm	110.76	331	Lm	MLR	01 35 00.0	
	comp=E,300nm,18.9s						
CLL	Collm	110.76	331	Lm	MLR	01 35 00.0	
	comp=N,600nm,19.5s						
SNAA	Sanae	112.11	190	PKiKP	PKiKP	00 45 31.0	-0.7
SNAA	Sanae	112.11	190	IAMs_20	IAMs_20	01 29 20.5	
	comp=Z,964nm,21.0s						
PDG	Podgorica	112.61	321	IAMs_20	IAMs_20	01 35 35.5	
	comp=Z,646nm,21.0s						
AAM	Ann Arbor	112.86	39	IAMs_20	IAMs_20	01 29 11.5	
	comp=Z,989nm,20.0s						
PLAL	Pickwick Lake	113.45	48	IAMs_20	IAMs_20	01 30 52.1	
	comp=Z,992nm,20.0s						
VNA2	Neumayer--Watz	113.48	189	PKiKP	PKiKP	00 45 34.0	-0.3
	baz=174,slow=0.9						
VNA3	Neumayer Olymp	113.52	188	PKiKP	PKiKP	00 45 33.8	-0.5
VNA1	Neumayer--Stat	113.86	189	PKiKP	PKiKP	00 45 34.7	-0.2
ACSO	Alum Creek Sta	114.40	41	IAMs_20	IAMs_20	01 40 46.4	
	comp=Z,853nm,19.0s						
TIP	Timpagrande	115.97	319	IAMs_20	IAMs_20	01 38 09.5	
	comp=Z,557nm,21.0s						
AQU	L'Aquila	116.21	324	IAMs_20	IAMs_20	01 37 12.8	
	comp=Z,642nm,20.0s						
LONY	Lake Ozonia	116.74	33	IAMs_20	IAMs_20	01 36 54.3	
	comp=Z,951nm,20.0s						
VLC	Villacollemand	116.78	327	IAMs_20	IAMs_20	01 37 44.7	
	comp=Z,682nm,20.0s						
GOGA	Godfrey	117.56	47	IAMs_20	IAMs_20	01 39 41.9	
	comp=Z,893nm,19.0s						
BLA	Blacksburg	117.72	42	IAMs_20	IAMs_20	01 34 33.5	
	comp=Z,802nm,20.0s						
CBN	Corbin Frederi	119.14	40	IAMs_20	IAMs_20	01 36 14.7	
	comp=Z,925nm,19.0s						
WES	Weston	120.00	33	IAMs_20	IAMs_20	01 32 36.5	
	comp=Z,799nm,20.0s						
LSZ	Lusaka	120.02	256	PKP	PKPdf	00 45 48.9	+0.4
	comp=Z,6.1nm,0.6s,baz=88,slow=1.8,SNR=22						
LSZ	Lusaka	120.02	256	PKIKP	PKPdf	00 45 48.5	0.0
LSZ	Lusaka	120.02	256		PKPdf	00 45 48.5	0.0
NHSC	New Hope	120.09	46	IAMs_20	IAMs_20	01 30 24.7	
	comp=Z,893nm,22.0s						
BOSA	Boshof	121.32	240	PKP	PKPdf	00 45 49.5	-1.2
	comp=Z,3.9nm,0.7s,baz=119,slow=2.6,SNR=9.5						
TGUH	Tegucigalpa,Un	121.89	69	IAMs_20	IAMs_20	01 29 07.8	
	comp=Z,500nm,20.0s						
ESDC	Sonseca Array	127.32	333	PKP	PKPdf	00 46 01.2	-0.7
	comp=Z,0.5nm,0.7s,baz=35,slow=0.8,SNR=4.7						
ESDC				PP	PP	00 47 59.5	-0.9
	comp=Z,2.1nm,1.2s,baz=34,slow=6.2,SNR=7.5						
ESDC	Sonseca Array	127.32	333		PKPdf	00 46 02.1	+0.3
PLCA	Paso Flores	131.60	141	PKP	PKPdf	00 46 10.3	+0.4
	comp=Z,2.6nm,0.7s,baz=241,slow=4.2,SNR=6.7						
PLCA	Paso Flores	131.60	141	eP	PKPdf	00 46 10.9	+1.0
OTAV	Otavalo	133.53	84	IAMs_20	IAMs_20	01 32 04.4	
	comp=Z,512nm,21.0s						
ZARC	Zaragoza, Cauc	135.45	73	PKPdf	PKPdf	00 46 15.2	-2.7
ROSC	El Rosal	136.67	76	PKP	PKPdf	00 46 18.4	-2.2
	comp=Z,11nm,0.6s,baz=288,slow=20,SNR=2.4						
ROSC	El Rosal	136.67	76	PKPdf	PKPdf	00 46 18.5	-2.1
SJG	San Juan	138.78	53	IAMs_20	IAMs_20	01 52 41.9	
	comp=Z,538nm,19.0s						
SDV	Santo Domingo	138.98	69	eP	PKPdf	00 46 25.0	+0.4
CZSB	Cruzeiro do Su	139.92	95	eP	PKPdf	00 46 26.8	+0.7
TORD	Torodi Ar. Bea	141.08	300	PKhKP	PKPpre	00 46 21.9	
	comp=Z,1.4nm,0.5s,baz=57,slow=1.9,SNR=18						
TORD	Torodi Ar. Bea	141.08	300		PKPpre	00 46 21.4	
LVC	Limon Verde	141.18	119	eP	PKPdf	00 46 29.5	+0.9
LPAZ	La Paz	143.57	109	PKP	PKPab	00 46 31.0	+1.3
	comp=Z,7.0nm,0.6s,baz=280,slow=2.6,SNR=28						
LPAZ	La Paz	143.57	109	PKIKP	PKPab	00 46 30.2	+0.5
LPAZ	La Paz	143.57	109	eP	PKPab	00 46 31.0	+1.3
LPAZ	La Paz	143.57	109	PKPdf	PKPab	00 46 30.2	+0.5
KOWA	Kowa	145.16	306		PKPbc	00 46 34.0	-0.7
ETMB	Extrema	146.28	98	eP	PKPdf	00 46 37.3	0.0
ETMB	Extrema	146.28	98	PKPdf	PKPdf	00 46 36.3	-1.0
ITQB	Itaqui	147.34	138	eP	PKPdf	00 46 40.6	+2.0
PLTB	Pedras Altas	147.76	145	PKPdf	PKPdf	00 46 39.2	-0.1
CPSB	Cacapava Do Su	148.84	143	eP	PKPdf	00 46 42.4	+1.3
CPUP	Villa Florida	148.91	133	PKPbc	PKPbc	00 46 44.5	-0.7
	comp=Z,16nm,0.9s,baz=256,slow=2.3,SNR=25						
CPUP	Villa Florida	148.91	133	PKIKP	PKPdf	00 46 41.4	+0.1
CPUP	Villa Florida	148.91	133	eP	PKPdf	00 46 42.7	+1.4
CPUP	Villa Florida	148.91	133	PKPdf	PKPdf	00 46 41.4	+0.1
SAML	Samuel	149.32	97		PKPdf	00 46 41.3	-1.0
SAML				PKPbc	pPKPdf	00 46 46.5	-0.4
DBIC	Dimbokro	149.72	295	PKPbc	PKPbc	00 46 47.5	-0.1
	comp=Z,38nm,0.9s,baz=55,slow=2.2,SNR=24						
KIC	Kosan Boka	149.74	294	ePKIKP	PKPbc	00 46 47.8	+0.1
	comp=Z,108nm,0.8s						
TIC	Toumodi	149.88	295	ePKIKP	PKPbc	00 46 47.1	-0.9
LIC	Lamto	150.06	294	ePKIKP	PKPbc	00 46 47.5	-0.9
	comp=Z,288nm,1.1s						
BOAV	Boa Vista	150.58	74	eP	PKPdf	00 46 45.4	+1.0
VILB	Vilhena	151.75	106	eP	PKPdf	00 46 47.8	+1.7
PTGA	Pitinga	151.90	80		PKPdf	00 46 43.6	-2.7
PTGA					PKPbc	00 46 52.8	0.0
PTLB	Pontes e Lacer	152.17	111	eP	PKPdf	00 46 47.1	+0.6
PTLB	Pontes e Lacer	152.17	111	PKPdf	PKPdf	00 46 44.1	-2.5
PTLB				PKPbc	PKPbc	00 46 53.3	0.0
TER01	Tubaro-SC	152.73	146	eP	PKPdf	00 46 47.8	+0.6
AQDB	Aquidauana	153.29	124	eP	PKPdf	00 46 48.4	+0.2
AQDB	Aquidauana	153.29	124	PKPdf	PKPdf	00 46 47.4	-0.7
AQDB					PKPbc	00 46 55.5	-0.2
SALV	Santo Antonio	155.19	115	eP	PKPdf	00 46 51.0	+0.1
TIJ01	Guaruva-PR	155.22	142	eP	PKPdf	00 46 51.9	+1.0
PP1B	Ponte de Pedra	155.27	119	eP	PKPdf	00 46 50.7	-0.3
PDRB	Porto dos Gac	155.34	104	eP	PKPdf	00 46 51.9	+0.7
PCMB	Pacaembu	156.17	132	eP	PKPdf	00 46 54.9	+2.8
FRTB	Fartura	156.26	137	eP	PKPdf	00 46 52.2	0.0
CLDB	Colider	156.36	103	eP	PKPdf	00 46 53.4	+0.9
ITTB	Itaituba	156.63	87	eP	PKPdf	00 46 53.7	+0.8
NPGB	Novo Progresso	157.13	93	eP	PKPdf	00 46 53.7	+0.1
MALB	Monte Alegre	157.71	80	eP	PKPdf	00 46 56.7	+2.4
ITRB	Iturama	157.96	129	eP	PKPdf	00 46 56.1	+1.7
ARAG	Araguaiana, MT	158.72	118	eP	PKPdf	00 46 57.3	+1.9
MCPB	Macapa, AP	159.48	74	eP	PKPdf	00 46 57.0	+0.6
SNDB	Serra Nova Dou	160.45	108	eP	PKPdf	00 46 58.2	+0.8
VAS01	Vassouras-RJ	160.79	147	eP	PKPdf	00 46 59.7	+2.0
BDFB	Brasilia	162.02	123	PKP	PKPdf	00 46 59.6	+0.3
	comp=Z,4.3nm,0.9s,baz=41,slow=7.5,SNR=5.2						
PRPB	Parauapebas	162.63	91	eP	PKPdf	00 46 59.7	-0.1
TMAB	Tom-Au,PA,Br	163.83	77	eP	PKPdf	00 47 03.0	+2.1
SMTB	Santa Maria do	164.66	101	eP	PKPdf	00 47 02.4	+0.7
BSFB	Barra de Sao F	165.00	147	eP	PKPdf	00 47 03.0	+1.2
SDBA	SAO DESIDERIO	166.18	117	eP	PKPdf	00 47 02.7	-0.3
NBIT	Itapeh - BA	168.91	142	eP	PKPdf	00 47 06.0	+1.2
GDU01	Guandu, BA	169.71	137	eP	PKPdf	00 47 06.3	+1.0
NBMO	Morrinhos-CE	171.79	70	eP	PKPdf	00 47 07.2	+0.7

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*TUL **11** 00:30:00.3±1.3, 36°.70N±0°.01×98°.26W±0°.02, h6^{km}±5^{km}, ML2.6, mb_Lg2.1/13(NEIC) Error ellipse: s-maj=2.5km s-min=1.8km az=87.0*

NEIC 11 00:30:00.5±0.7**, 36°.69N**±0°.02×**98°.26W**±0°.02**, h11**^{km}±4^{km}**, Error ellipse: s-maj=2.8km s-min=2.2km az=147.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK032	Salt Plains WL	0.12	18	Pg	Pg	00 30 03.3	-0.3
OK032				Sg	Sg	00 30 05.3	-0.4
CROK	Carrier	0.28	129	Pg	Pg	00 30 06.3	0.0
CROK				Sg	Sg	00 30 10.4	+0.2
KAN14	Manchester OK	0.36	41		Pg	00 30 07.6	-0.1
KAN14				Sg	Sg	00 30 12.7	+0.2
GC02	Grant County #	0.36	63	Pg	Pg	00 30 07.7	0.0
GC02				Sg	Sg	00 30 12.9	+0.4
KAN10	Anthony SW Sta	0.46	17	Pg	Pg	00 30 09.3	-0.1
KAN10				Sg	Sg	00 30 15.8	+0.2
KAN17	Caldwell West	0.53	48	Pg	Pg	00 30 10.4	-0.5
KAN17				Sg	Sg	00 30 18.1	+0.1
KAN16	Harper SW Stat	0.56	16	Pg	Pg	00 30 11.2	-0.3
KAN16				Sg	Sg	00 30 19.1	+0.2
KAN08	Anthony NE Sta	0.59	23	Pg	Pg	00 30 11.7	-0.2
KAN08				Sg	Sg	00 30 19.7	0.0
KAN01	Argonia South	0.61	40	Pg	Pg	00 30 12.1	-0.4
KAN01				IAmb_Lg		00 30 19.3	
	comp=Z,21nm,0.8s						
KAN01				Sg	Sg	00 30 20.5	-0.1
KAN12	Harper NE Stat	0.64	19	Pg	Pg	00 30 12.7	-0.3
KAN12				Sg	Sg	00 30 21.3	-0.2
U32A	Winter Ranch,	0.67	243	Pg	Pg	00 30 13.1	-0.5
U32A				Sg	Sg	00 30 22.5	+0.1
KAN09	Caldwell North	0.68	49	Pg	Pg	00 30 13.2	-0.5
KAN09				Sg	Sg	00 30 22.5	-0.1
KAN13	South Haven SW	0.70	62	Pg	Pg	00 30 13.2	-1.0
KAN13				Sg	Sg	00 30 23.2	-0.2
BLOK	Blackwell	0.84	85	Pg	Pg	00 30 16.1	-0.7
BLOK				Sg	Sg	00 30 27.8	+0.1
OK029	Liberty Lake	1.10	144	Pg	Pb	00 30 21.6	0.0
OK029				Sg	Sb	00 30 35.8	-0.1
BCOK	Bluff Creek, N	1.15	153	IAmb_Lg		00 30 37.4	
	comp=Z,7.3nm,0.7s						
OK025	Westminster Rd	1.33	146	Pn	Pn	00 30 24.9	-0.2
QUOK	Quay	1.35	112		Pn	00 30 25.2	-0.1
OK031	S. Brethren Rd	1.36	122	Pn	Pn	00 30 25.6	+0.2
OK030	Cody Creek RV	1.41	122	Pn	Pn	00 30 26.2	0.0
T35A	Sooner Cattle	1.42	80		Pn	00 30 26.4	+0.1
FNO	Franklin	1.59	154	Pn	Pn	00 30 29.0	+0.4
R32A	Long Quarter,	1.77	348	Pn	Pn	00 30 31.3	+0.2
WMOK	Wichita Mounta	1.99	193	Pn	Pn	00 30 35.0	+0.8
X34A	Smith Ranch, M	2.11	170	Pn	Pb	00 30 37.5	-1.3
TUL1	Leonard	2.14	111	Pn	Pn	00 30 37.7	+1.5
CBKS	Cedar Bluff	2.43	332	IAmb_Lg		00 31 16.0	
	comp=Z,5.5nm,0.7s						
KSU1	Kansas State U	2.74	28	Pn	Pn	00 30 45.3	+0.9
LOOK	Love County	2.83	162	IAmb_Lg		00 31 35.2	
	comp=Z,9.8nm,0.9s						
U38A	Gravette	3.13	93	Pn	Pn	00 30 50.4	+0.6
U38A				IAmb_Lg		00 31 44.5	
	comp=Z,5.9nm,0.8s						
HHAR	Hobbs	3.50	95	Pn	Pn	00 30 56.0	+1.0
U40A	Yellville	4.36	93	Pn	Pn	00 31 06.4	-0.4
U40A				IAmb_Lg		00 32 16.5	
	comp=Z,4.8nm,0.8s						
MGMO	Mountain Grove	4.82	83	Pn	Pn	00 31 14.3	+1.3
T25A	Trinidad	4.95	277	Pn	Pn	00 31 14.3	-0.8
T25A				IAmb_Lg		00 32 43.7	
	comp=Z,5.5nm,1.0s						
CCM	Cathedral Cave	5.75	74	Pn	Pn	00 31 26.5	+0.7

NOU 11 00:32:53.4, 19°.39S×169°.48E, h228^{km}**, MLv4.2**/12,

Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTV	Rentapao	1.88	328	P	Pn	00 33 34.2	+1.2
DVP	Devils Point	2.06	323	P	Pn	00 33 34.9	+0.2
MARNC	Mare, Loyalty	2.48	213	P	Pn	00 33 39.8	+0.9
MARNC	Mare, Loyalty	2.48	213	P	Pn	00 33 38.9	0.0
LIFNC	LIFOU	2.52	236	P	Pn	00 33 35.0	-4.3
LIFNC	LIFOU	2.52	236	P	Pn	00 33 37.9	-1.4
YATNC	Mamie plateau,	3.59	222	P	Pn	00 33 50.1	-1.3
PINNC	Pines Island,	3.73	210	P	Pn	00 33 47.8	-5.2
OUENC	Ouen Island, N	3.89	219	P	Pn	00 33 55.5	+0.5
DZM	Mont Dzumac	3.90	226	P	Pn	00 33 56.0	+0.9
NOUC	Port Laguerre	4.01	227	P	Pn	00 33 57.1	+0.7
ONTNC	Ouen Toro	4.05	224	P	Pn	00 33 57.5	+0.6
KOUNC	Koumac, New Ca	5.02	256	P	Pn	00 34 09.3	+0.5

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*IDC **11** 00:47:48.5±1.5, 27°.04N×52°.69E, h0^{km}, mb4.1/4, mb1 4.0/6, mb1mx3.6/40, mbtmp4.0/6, ML3.3/2, Error ellipse: s-maj=32.0km s-min=28.5km az=10.0*

*TEH **11** 00:47:49.9, 27°.02N×52°.79E, h8^{km}, ML3.7*

*NEIC **11** 00:47:50.4±2.0, 27°.0N±0°.1×52°.77E±0°.08, h10^{km}±1^{km}, mb4.0/9, Error ellipse: s-maj=20.8km s-min=11.6km az=189.0*

*OMAN **11** 00:47:52.9±0.3, 26°.96N×52°.80E, h14^{km}±6^{km}, mb4.9/4, ml3.4/13, Error ellipse: s-maj=11.9km s-min=4.3km az=344.0*

ISC 11 00:47:50.5±0.5**, 27°.05N**±0°.04×**52°.77E**±0°.04**, h10^{km}, n75, σ1.^{s}37**/92**, mb3.9**/7**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LMD1	Lamerd	0.45	50	ePg	Pg	00 47 59.1	-0.3
LMD1				eSg	Sg	00 48 06.2	+0.9
LMD1				e		00 48 15.0	
	comp=Z,64µm,0.5s						
LAR1	LAR	1.55	66	ePg	Pg	00 48 20.0	-0.3
LAR1				e		00 48 50.5	
	comp=Z,16µm,0.5s						
JHRM	Jahrom	1.61	26	ePg	Pb	00 48 20.8	+0.3
JHRM				e		00 48 55.0	
	comp=Z,15µm,0.5s						
SHMA	Al-Shehemyia	2.01	234	P	Pb	00 48 27.4	+0.2
SHMA				S	Sg	00 48 56.9	+1.7
JRN	Qarnain Island	2.10	178	ePn	Pb	00 48 27.6	-1.1
SHI	Shiraz	2.59	355	ePn	Pb	00 48 35.4	-1.8
SHI				e		00 49 44.6	
	comp=Z,2µm,0.8s						
TRNA	Turayna	2.70	212	P	Pn	00 48 35.3	+1.2
KAZ1	Kazerun	2.75	339	ePn	Pn	00 48 37.2	+2.4
KAZ1				e		00 49 36.7	
	comp=Z,6µm,0.5s						
UMQ	Umm Al-Quwin	3.01	120	P	Pn	00 48 40.0	+1.8
SLWR	Sila	3.13	198	P	Pn	00 48 40.8	+0.9
ASUD	Al Ashush, Dub	3.34	136	P	Pn	00 48 44.9	+2.2
ASUD				S	Sn	00 49 24.0	+1.5
BANOM	Banah	3.35	109	ePn	Pn	00 48 43.5	+0.4
BANOM	Banah	3.35	109	P	Pn	00 48 43.4	+0.4
	SNR=12						
BANOM				S	Sn	00 49 23.5	+0.5
MZWR	Madinat Zayed	3.43	163	P	Pn	00 48 45.6	+1.6
MZWR				S	Sn	00 49 25.6	+1.0
MASF	Masafi	3.47	118	P	Pn	00 48 45.5	+0.8
	SNR=5.8						
MASF				S	Sn	00 49 25.8	0.0
MSFE	Esma-Masafi	3.48	118	ePn	Pn	00 48 44.9	+0.2
MDH	Madha	3.62	118	ePn	Pn	00 48 47.0	+0.4
MDH	Madha	3.62	118	P	Pn	00 48 47.5	+0.8
MDH				S	Sn	00 49 29.2	-0.2
UOSS	Minazif	3.73	123	ePn	Pn	00 48 48.2	0.0
UOSS	Minazif	3.73	123	P	Pn	00 48 48.6	+0.4
UOSS				S	Sn	00 49 31.4	-0.8
UOSS	Minazif	3.73	123	Pn	Pn	00 48 47.3	-0.9
HATD	Hatta, Dubai	3.75	126	ePn	Pn	00 48 48.3	-0.2
HATD	Hatta, Dubai	3.75	126	P	Pn	00 48 50.2	+1.8
HATD				S	Sn	00 49 34.6	+1.9
ASHO	Ashiyiah	3.78	128	ePn	Pn	00 48 50.1	+1.1
ASHO	Ashiyiah	3.78	128	P	Pn	00 48 51.0	+2.0
	SNR=11						
ASHO				S	Sn	00 49 35.7	+2.1
ALNE	Al Ain	4.02	137	ePn	Pn	00 48 54.3	+2.2
MZR	Muzera	4.08	171	ePn	Pn	00 48 53.9	+0.9
MZR	Muzera	4.08	171	P	Pn	00 48 54.1	+1.0
SOHO	SOHO	4.47	130	ePn	Pn	00 48 59.1	+0.8
SOHO	SOHO	4.47	130	P	Pn	00 48 59.6	+1.3
SOHO				S	Sn	00 49 52.4	+2.0
KHNJ	Kahnooj	4.47	77	ePn	Pn	00 49 00.2	+1.8
IMEH	Mehriz	4.61	20	ePn	Pn	00 49 02.7	+2.2
IRAM	Ramesheh	4.75	356	ePn	Pn	00 49 03.7	+1.3
ARQ	Araqi	5.02	137	P	Pn	00 49 08.0	+2.0
	SNR=7.9						
ARQ				S	Sn	00 50 05.8	+1.8
CHMN	Cheshme madani	5.04	55	e		00 49 12.6	
	comp=Z,802nm,0.4s						
CHMN				ePn	Pn	00 49 09.7	+3.1
HOQ	Hoqain	5.37	129	P	Pn	00 49 13.0	+2.3
	SNR=6.6						
HOQ				S	Sn	00 50 12.0	-0.5
ICHK	Chekchek	5.37	15	ePn	Pn	00 49 12.4	+1.5
IGAR	Gharneh	5.37	353	ePn	Pn	00 49 13.6	+2.7
KBAM	BAM	5.43	66	ePn	Pn	00 49 13.8	+2.2
KBAM				e		00 49 16.1	
	comp=Z,560nm,0.4s						
AMIS	Naft Sefid	5.51	327	ePn	Pn	00 49 14.0	+1.3
MIB	Mutribah	5.51	301	eP	Pn	00 49 13.9	+1.2
MIB				eS	Sn	00 50 13.1	-3.1
BSY	Bisya	5.88	136	P	Pn	00 49 18.7	+1.0
BSY				S	Sn	00 50 25.6	+0.4
ANAR	Anarak	6.17	7	ePn	Pn	00 49 23.9	+2.0
SMDO	Samad	6.22	129	P	Pn	00 49 23.6	+1.1
SMDO				S	Sn	00 50 33.1	-0.6
WSAR	Wadi Sarin	6.53	124	Pn	Pn	00 49 26.8	+0.2
	comp=Z,1.1nm,0.3s,baz=310,slow=10,SNR=11						
WSAR				Sn	Sn	00 50 37.4	-3.8
	comp=Z,0.3nm,0.3s,baz=170,slow=21,SNR=1.4						
WSAR	Wadi Sarin	6.53	124	P	Pn	00 49 27.1	+0.4
	SNR=8.9						
JMDO	Jabal Madar	6.72	133	P	Pn	00 49 29.4	+0.1
WBK	Wadi Bani Khal	7.16	127	P	Pn	00 49 36.0	+0.7
	SNR=13						
RAYN	Ar Rayn	7.46	243	P	Pn	00 49 39.7	+0.2
RAYN	Ar Rayn	7.46	243		Pn	00 49 38.4	-1.1
MHTO	MHTO	7.68	141	P	Pn	00 49 43.1	+0.6
	SNR=9.4						
NHDN	Nehbandan	7.69	54	ePn	Pn	00 49 43.9	+1.2
JLN	Jalan Bani Buh	7.76	128	P	Pn	00 49 42.7	-0.9
DOK	Doka	8.49	171	P	Pn	00 49 53.1	-0.4
SRVN	Saravan	8.57	85	ePn	Pn	00 49 56.1	+1.2
WHFO	Wadi Hawf	9.14	174	P	Pn	00 50 01.5	-1.0
	SNR=7.6						
DMTO	DMTO	9.51	167	P	Pn	00 50 06.9	-0.7
ABTO	Aybut	9.66	177	P	Pn	00 50 08.5	-1.2
GURO	Guroymak-BITLI	14.58	325		Pn	00 51 18.0	+0.9
KBL	Kabul	15.84	58	P	P	00 51 36.8	-0.8
KBZ	Khabaz	18.46	337	P	P	00 52 06.5	+0.2
	comp=Z,0.1nm,0.3s,baz=190,slow=12,SNR=1.8						
KK31	Karatay Array	21.54	37	P	P	00 52 41.5	+1.6
KKAR	Karatay Array	21.54	37	P	P	00 52 41.6	+1.7
ABKAR	Akbulak array	22.85	12		P	00 52 54.3	+0.5
ABKAR				IAmb	IAmb	00 53 00.1	
	comp=Z,2.1nm,0.9s						
ZAA0	Zalesovo Array	35.73	32	P	P	00 54 48.8	-0.5
ZAA0				IAmb	IAmb	00 54 51.3	
	comp=Z,2.4nm,0.8s						
ZALV	Zalesovo Beam	35.73	32	P	P	00 54 49.1	-0.1
	comp=Z,1.9nm,0.4s,baz=241,slow=9.4,SNR=13						
ZALV	Zalesovo Beam	35.73	32	P	P	00 54 48.5	-0.7
FIA1	FINESS Array S	38.78	340	P	P	00 55 16.4	+1.4
FIA1				IAmb	IAmb	00 55 45.8	
	comp=Z,6.2nm,1.1s						
FINES	FINESS Array B	38.78	340	P	P	00 55 14.4	-0.6
	comp=Z,1.2nm,0.4s,baz=146,slow=9.6,SNR=15						
FINES	FINESS Array B	38.78	340	P	P	00 55 14.6	-0.3
GRFO	Grafenberg	38.98	317	P	P	00 55 15.8	-1.1
HFS	Hagfors	42.43	332	P	P	00 55 44.1	-1.0
	comp=Z,0.9nm,0.4s,baz=120,slow=8.8,SNR=8.0						
TORD	Torodi Ar. Bea	49.61	264	P	P	00 56 41.3	-1.1
	comp=Z,0.5nm,0.4s,baz=79,slow=7.4,SNR=14						
TORD	Torodi Ar. Bea	49.61	264	P	P	00 56 41.8	-0.6
TORD				IAmb	IAmb	00 56 49.7	
	comp=Z,1.7nm,1.1s						
KOWA	Kowa	54.15	269	P	P	00 57 15.7	-0.6

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*JMA **11** 00:58:05.5±0.1, 23°.92N×122°.50E, h0^{km}, M2.4*

*TAP **11** 00:58:05.8, 24°.83N×122°.32E, h13^{km}, ML2.9, C*

ISC 11 00:58:03.8±1.1**, 24°.82N**±0°.03×**122°.43E**±0°.02**, h12**^{km}±9^{km}**, n50, σ0.^{s}82**/77**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.45	295	iP	Pb	00 58 13.5	-0.1
	baz=301						
TWB1				iS	Sg	00 58 18.5	0.0
	baz=301						
NTC	Toucheng	0.55	274	eP	Pn	00 58 17.5	0.0
	baz=274						
TWC	Suao	0.57	249	eP	Pg	00 58 14.8	-0.1
	baz=242						
TIPB	Shuangxi	0.57	286	eP	Pb	00 58 15.8	0.0
	baz=287						
TIPB				eS	Sb	00 58 24.3	+0.4
	baz=287						
JYNG	Yonagunijimaku	0.59	128	P	Pn	00 58 18.6	+0.5
JYNG				S	Sn	00 58 28.5	+0.8
YOJ	Yonaguni jima	0.64	124	iP	Pn	00 58 19.9	+1.2
	baz=120						
YOJ				eS	Sn	00 58 30.2	+1.4
	baz=120						
YOJ	Yonaguni jima	0.64	124	P	Pn	00 58 19.7	+1.0
YOJ				S	Sn	00 58 29.9	+1.1
NWF	Wu-fen Shan	0.64	293	iP	Pn	00 58 18.2	-0.7
	baz=296						
NWF				eS	Sb	00 58 25.9	-0.2
	baz=296						
WFSB	Wu-fen Shan	0.64	293	P	Pn	00 58 18.3	-0.5
	baz=296						
WFSB				eS	Sb	00 58 25.8	-0.2
	baz=296						
NDS	Dongshan	0.68	254	eP	Pg	00 58 16.7	-0.2
	baz=242						
EWUT	Wuta	0.70	238	eP	Pg	00 58 17.6	+0.1
	baz=231						
EWUT				eS	Sg	00 58 27.1	+0.5
	baz=231						
TWE	Neicheng	0.70	262	iP	Pg	00 58 17.7	+0.3
	baz=259						
ENA	Nanau	0.74	238	iP	Pb	00 58 18.6	0.0
	baz=231						
ENA				iS	Sg	00 58 27.6	-0.2
	baz=231						
TWA	Mucha	0.79	282	eP	Pb	00 58 19.5	0.0
	baz=282						
TWA				iS	Sb	00 58 29.9	-0.2
	baz=282						
ENTT	Nioudou	0.81	258	eP	Pb	00 58 20.0	+0.2
	baz=254						
ENTT				eS	Sg	00 58 30.4	+0.4
	baz=254						
NWLT	Wulai	0.84	267	eP	Pb	00 58 20.6	+0.1
	baz=265						
NWLT				S	Sg	00 58 31.6	+0.3
	baz=265						
YM01	YM01	0.85	293	eP	Pb	00 58 21.0	+0.5
	baz=295						
YM01				eS	Sb	00 58 32.0	0.0
	baz=295						
YM08	YM08	0.85	296	eP	Pn	00 58 21.4	-0.3
	baz=298						
YM08				eS	Sb	00 58 31.9	-0.1
	baz=298						
NDT	Datong Townshi	0.86	256	eP	Pb	00 58 21.2	+0.4
	baz=252						
NDT				eS	Sg	00 58 32.0	+0.3
	baz=252						
PCYT	Pengchaiyu	0.87	338	eP	Pn	00 58 23.1	+1.1
	baz=345						
TATO	Taipei	0.87	281	eP	Pb	00 58 21.5	+0.6
	baz=280						
TATO				eS	Sb	00 58 33.2	+0.7
	baz=280						
ETL	Fush Village	0.99	228	P	Pn	00 58 23.7	+0.1
	baz=223						
NSK	Sanguang	0.99	262	P	Pb	00 58 23.1	+0.1
	baz=254						
NSK				eS	Sg	00 58 35.7	-0.1
	baz=254						
NACB	Ninganchiao	1.00	230	iP	Pg	00 58 22.8	-0.2
	baz=224						
NACB				eS	Sg	00 58 34.3	-1.7
	baz=224						
NNS	Nan Shan	1.03	249	eP	Pn	00 58 24.4	0.0
	baz=233						
NNS				S	Sg	00 58 37.0	-0.2
	baz=233						
ETLH	Xiulin Townshi	1.06	235	eP	Pg	00 58 23.8	-0.4
	baz=230						
ETLH				eS	Sg	00 58 36.6	-1.4
	baz=230						
TWD	Chiawan	1.06	226	eP	Pn	00 58 25.0	+0.5
	baz=220						
ETM	Tongmen	1.21	225	eP	Pg	00 58 27.3	+0.3
	baz=220						
FUSS	Fushou	1.22	243	eP	Pg	00 58 27.5	+0.2
	baz=239						
FUSS				eS	Sb	00 58 42.9	0.0
	baz=239						
WHF	Hehuan Shan	1.26	238	eP	Pn	00 58 27.9	+0.3
	baz=233						
WHF				eS	Sb	00 58 43.0	-1.0
	baz=233						
TWT	Tachien	1.27	244	eP	Pg	00 58 28.5	+0.1
	baz=230						
TWT				eS	Sb	00 58 44.5	+0.1
	baz=230						
IRIF	Iriomote-Funau	1.28	112	P	Pg	00 58 28.8	+0.4
IRIF				eS	Sb	00 58 44.5	+0.3
TDCB	Techi	1.29	244	eP	Pb	00 58 28.4	+0.3
	baz=241						
LIOB	Emei	1.30	263	eP	Pg	00 58 28.7	-0.1
	baz=281						
NSTT	Nanjuang	1.31	262	eP	Pg	00 58 29.3	+0.2
	baz=280						
CHGB	Renai	1.37	237	eP	Pb	00 58 30.1	+0.5
	baz=233						
CHGB				eS	Sb	00 58 47.3	+0.1
	baz=233						
WHP	Taichung City	1.46	249	eP	Pg	00 58 31.7	-0.1
	baz=247						
HATJ	Hateruma jima	1.46	121	P	Pn	00 58 28.9	-1.2
HATJ				eS	Sn	00 58 45.0	-4.2
JKRS	Kuro-shima	1.55	112	P	Pb	00 58 32.1	-0.4
HGSD	Ruisui	1.61	215	eP	Pb	00 58 34.1	+0.6
	baz=197						
JIJ	Ishigaki jima	1.62	106	P	Pg	00 58 34.4	-0.6
JIJ				eS	Sg	00 58 56.3	+0.3
SSLB	Suanglung	1.69	233	eP	Pb	00 58 35.7	+0.7
	baz=230						
TYC	Yuchr	1.70	238	eP	Pg	00 58 36.3	-0.1
	baz=235						
YULB	Yu-li	1.76	216	eP	Pb	00 58 36.1	0.0
	baz=212						
ALS	Alishan	1.98	229	eP	Pb	00 58 40.3	+0.4
	baz=209						
CHN5	Tsauling	2.01	233	eP	Pg	00 58 41.7	-0.7
	baz=230						
CHN4	Tsaushan	2.23	229	eP	Pb	00 58 43.1	-0.9
	baz=226						
TPUB	Ta-pu	2.23	228	eP	Pb	00 58 43.1	-1.1
	baz=208						
TWGBT	Beinan	2.34	212	eP	Pn	00 58 44.1	+1.9
	baz=208						
TWG	Pinlang	2.35	212	eP	Pn	00 58 44.2	+1.9
	baz=208						

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*IDC **11** 01:01:34.0±3.0, 6°.13S×146°.83E, h95^{km}±21^{km}, mb3.6/5, mb1 3.8/9, mb1mx3.5/45, mbtmp4.1/9, Error ellipse: s-maj=43.3km s-min=17.3km az=65.0*

ISC 11 01:01:32.5±1.6**, 6°.0S**±0°.1×**146°.8E**±0°.2**, h78^{km}, n22, σ1.^{s}56**/22**, mb3.9**/8**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.37	174	P	Pn	01 02 24.8	+1.9
	16nm,0.3s,baz=54,slow=6.0,SNR=11						
PMG				S	Sn	01 03 01.2	-0.6
	11nm,0.3s,baz=20,slow=16,SNR=6.8						
PMG	Port Moresby	3.37	174	P	Pn	01 02 25.1	+2.2
PMG	Port Moresby	3.37	174	P	Pn	01 02 25.1	+2.2
JAY	Jayapura	7.00	300	P	Pn	01 03 14.9	+2.4
	1.9nm,0.3s,baz=150,slow=6.1,SNR=5.6						
COEN	Coen	8.64	204	P	Pn	01 03 36.2	+1.3
	20nm,0.9s						
CTA	Charters Tower	13.98	182	P	P	01 04 50.2	-2.4
	1.0nm,0.3s,baz=359,slow=13,SNR=6.8						
CTAO	Charters Tower	13.98	182	P	Pn	01 04 49.0	+1.9
SIJI	Sorong	16.32	288	P	P	01 05 19.3	+0.6
	3.0nm,0.3s,baz=84,slow=11,SNR=11						
WRAB	Tennant Creek	18.36	220	P	P	01 05 40.3	-0.8
WRA	Warramunga Arr	18.38	220	P	P	01 05 40.7	-0.6
	0.8nm,0.3s,baz=37,slow=11,SNR=43						
KNRA	Kununurra	20.12	240	P	P	01 05 59.9	-0.4
	14nm,1.8s						
SANI	Sanana	21.12	280	P	P	01 06 07.9	-3.3
ASAR	Alice Springs	21.48	214	P	P	01 06 14.6	-0.3
	2.6nm,0.5s,baz=55,slow=9.1,SNR=44						
INKA	Innaminka	22.34	194	P	P	01 06 23.4	-0.6
	22nm,1.6s						
FITZ	Fitzroy Crossi	23.87	238	P	P	01 06 38.6	-0.4
	3.9nm,0.5s,baz=55,slow=10,SNR=17						
OOD	Oodnadatta	24.08	205	P	P	01 06 39.7	-1.0
	8.7nm,1.5s						
LCRK	Leigh Creek	25.59	197	P	P	01 06 53.9	-0.6
	29nm,2.7s						
STKA	Stephens Creek	26.17	190	P	P	01 06 59.3	-0.4
	2.3nm,0.8s,baz=32,slow=13,SNR=4.3						
MULG	Mulgathing	26.93	205	P	P	01 07 06.7	+0.1
MKAR	Makanchi Array	77.39	321	P	P	01 13 18.4	-0.7
	0.3nm,0.5s,baz=100,slow=7.1,SNR=1.8						
MAW	Mawson	82.14	203	P	P	01 13 43.5	-0.9
	0.8nm,0.7s,baz=114,slow=11,SNR=2.5						
TORD	Torodi Ar. Bea	144.90	284	PKP	PKPbc	01 21 00.9	-0.1
	0.7nm,0.7s,baz=76,slow=2.9,SNR=5.7						

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*TUL **11** 01:25:08.1±1.4, 36°.88N±0°.01×97°.44W±0°.01, h1^{km}±7^{km}, ML2.5, mb_Lg2.3/8(NEIC), Error ellipse: s-maj=1.8km s-min=1.4km az=220.0*

NEIC 11 01:25:08.5±0.7**, 36°.86N**±0°.01×**97°.44W**±0°.01**, h5**^{km}±6^{km}**, Error ellipse: s-maj=2.1km s-min=1.6km az=212.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN13	South Haven SW	0.16	348	Pg	Pg	01 25 11.7	0.0
KAN13				Sg	Sg	01 25 14.1	+0.1
BLOK	Blackwell	0.20	118	Pg	Pg	01 25 12.8	+0.3
BLOK				Sg	Sg	01 25 15.8	+0.6
KAN09	Caldwell North	0.32	333	Pg	Pg	01 25 14.5	-0.2
KAN09				Sg	Sg	01 25 18.9	0.0
KAN17	Caldwell West	0.32	306	Pg	Pg	01 25 14.8	-0.1
KAN17				Sg	Sg	01 25 19.2	+0.1
GC02	Grant County #	0.34	269	Pg	Pg	01 25 15.2	+0.1
GC02				Sg	Sg	01 25 19.8	+0.2
KS20	Mayfield South	0.39	346	Pg	Pg	01 25 15.7	-0.3
KS20				Sg	Sg	01 25 21.0	-0.1
KAN01	Argonia South	0.39	319	Pg	Pg	01 25 16.0	-0.2
KAN01				Sg	Sg	01 25 21.3	0.0
KAN05	Bluff City Nor	0.43	306	Pg	Pg	01 25 16.7	-0.2
KAN05				Sg	Sg	01 25 22.6	0.0
KAN14	Manchester OK	0.43	284	Pg	Pg	01 25 16.8	-0.1
KAN14				Sg	Sg	01 25 22.6	0.0
KAN06	Argonia West S	0.52	319	Pg	Pg	01 25 18.2	-0.3
KAN06				Sg	Sg	01 25 25.2	0.0
CROK	Carrier	0.56	232	Pg	Pg	01 25 19.3	-0.1
CROK				Sg	Sg	01 25 27.3	+0.6
KAN08	Anthony NE Sta	0.57	311	Pg	Pg	01 25 19.1	-0.3
KAN08				Sg	Sg	01 25 26.8	0.0
KAN10	Anthony SW Sta	0.59	297	Pg	Pg	01 25 19.4	-0.5
KAN10				Sg	Sg	01 25 27.6	0.0
KAN16	Harper SW Stat	0.62	306	Pg	Pg	01 25 20.2	-0.3
KAN16				Sg	Sg	01 25 27.7	-1.0
OK032	Salt Plains WL	0.62	265	Pg	Pg	01 25 20.3	-0.2
OK032				Sg	Sg	01 25 29.0	+0.4
T35A	Sooner Cattle	0.74	85		Pg	01 25 22.3	-0.5
T35A				Sg	Sg	01 25 32.4	0.0
QUOK	Quay	0.90	139	Pg	Pg	01 25 25.8	0.0
QUOK				Sg	Sg	01 25 37.5	+0.1
OK031	S. Brethren Rd	1.02	152	Pg	Pg	01 25 27.7	-0.5
OK031				Sg	Sg	01 25 41.4	+0.1
OK029	Liberty Lake	1.06	181	Pg	Pg	01 25 28.5	-0.3
OK029				Sg	Sg	01 25 42.9	+0.4
OK030	Cody Creek RV	1.06	150	Pg	Pg	01 25 28.6	-0.4
OK030				Sg	Sg	01 25 42.5	-0.2
BCOK	Bluff Creek, N	1.21	187	Pg	Pg	01 25 30.9	-0.7
OK025	Westminster Rd	1.27	176	Pg	Pg	01 25 32.4	-0.6
U32A	Winter Ranch,	1.35	250	Pg	Pn	01 25 33.4	-0.6
OKCFA	Oklahoma City	1.44	181	Pn	Pn	01 25 35.1	-0.1
OKCSW	OKLAHOMA CITY	1.45	180	Pn	Pn	01 25 35.4	0.0
FNO	Franklin	1.59	179	Pn	Pn	01 25 37.5	+0.1
TUL1	Leonard	1.63	125	Pn	Pn	01 25 38.2	+0.3
KSU1	Kansas State U	2.33	16	Pn	Pn	01 25 48.3	+0.7
WMOK	Wichita Mounta	2.38	208	Pn	Pn	01 25 48.6	+0.4
U38A	Gravette	2.49	99	Pn	Pn	01 25 50.4	+0.7
CBKS	Cedar Bluff	2.67	318	Pn	Pn	01 25 52.2	-0.1
X37A	Clayton	2.82	143	IAmb_Lg		01 26 39.4	
	comp=Z,8.4nm,0.7s						
HHAR	Hobbs	2.87	100	Pn	Pn	01 25 55.9	+0.9
W39A	Magazine	3.39	118	Pn	Pn	01 26 02.3	+0.2
U40A	Yellville	3.72	96	Pn	Pn	01 26 08.4	+1.7
AMTX	Amarillo	3.97	242	IAmb_Lg		01 27 25.0	
	comp=Z,7.7nm,1.0s						
P38A	Dawn	4.13	47	IAmb_Lg		01 27 18.5	
	comp=Z,5.7nm,0.9s						
MGMO	Mountain Grove	4.15	84	IAmb_Lg		01 27 22.8	
	comp=Z,6.5nm,0.8s						
WHAR	Wooly Hollow	4.45	109	Pn	Pn	01 26 15.8	-0.8
CCM	Cathedral Cave	5.07	74	Pn	Pn	01 26 24.0	-1.1

TEH 11 01:31:02.3, 27°.04N×52°.80E, h10^{km}, ML3.3, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LMD1	Lamerd	0.44	48	ePg	Pg	01 31 10.8	-0.2
LMD1				eSg	Sb	01 31 18.5	-0.5
LMD1				e		01 31 26.2	
	comp=Z,39µm,0.5s						
LMD1	Lamerd	0.44	48	ePg	Pg	01 31 11.3	+0.3
LMD1				eSg	Sb	01 31 18.5	-0.5
LMD1				e		01 31 26.2	
	comp=Z,39µm,0.5s						
LAR1	LAR	1.54	66	ePn	Pg	01 31 31.6	-0.2
LAR1				eSg	Sg	01 31 53.4	+1.6
LAR1				e		01 32 03.4	
	comp=Z,10µm,0.6s						
LAR1	LAR	1.54	66	ePg	Pg	01 31 31.5	-0.3
JHRM	Jahrom	1.61	25	ePg	Pg	01 31 33.2	-0.1
JHRM				e		01 32 07.2	
	comp=Z,5µm,0.5s						
JHRM	Jahrom	1.61	25	ePg	Pg	01 31 34.4	+1.1
SHI	Shiraz	2.60	355	ePn	Pb	01 31 47.2	-2.0
SHI	Shiraz	2.60	355	ePn	Pb	01 31 50.7	+1.5
SHI				e		01 32 56.4	
	comp=Z,490nm,0.9s						
KLNJ	Kolanjah	4.09	345	ePn	Pn	01 32 06.7	+1.4
KHGB	Koh Gabri	4.63	43	ePn	Pn	01 32 14.6	+2.0
CHMN	Cheshme madani	5.03	55	ePn	Pn	01 32 20.1	+1.9
CHMN				e		01 32 26.3	
	comp=Z,192nm,0.4s						
CHMN	Cheshme madani	5.03	55	ePn	Pn	01 32 20.0	+1.8
CHMN				e		01 32 26.3	
	comp=Z,192nm,0.4s						
KBAM	BAM	5.42	66	ePn	Pn	01 32 25.6	+2.4
AMIS	Naft Sefid	5.53	327	ePn	Pn	01 32 26.8	+2.0
ANAR	Anarak	6.18	7	ePn	Pn	01 32 35.7	+1.9

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*IDC **11** 01:39:02.8±0.7, 37°.05N×97°.85W, h0^{km}, mb4.0/5, mb1 4.2/10, mb1mx3.9/55, mbtmp4.0/10, ML4.1/4, Error ellipse: s-maj=11.7km s-min=9.9km az=142.0*

*NEIC **11** 01:39:03.6, 36°.93N×97°.81W, h4^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-1.40; $M_{\theta\theta}$1.76; $M_{\phi\phi}$-0.36; $M_{r\theta}$-1.07; $M_{\theta\phi}$0.85; $M_{\phi r}$0.74; Fault plane solution: $M_0$2.24000×10^{14} NP1:ϕ_s221.00000°, δ42.00000°, λ-141.00000°. NP2:ϕ_s100.00000°, δ65.00000°, λ-55.00000°. Principal axes: T 2.2385,*

Plg13.0000°, Azm165.0000°; N 0.0000, Plg31.0000°,
Azm264.0000°; P -2.2385, Plg55.0000°, Azm56.0000°;
NEIC ***11*** *01:39:03.9±1.2, 36°.93N±0°.02×97°.82W±0°.02, h6km±6km*
Error ellipse: s-maj=2.7km s-min=1.9km az=142.0
NEIC ***11*** *01:39:03.8±1.1, 36°.94N±0°.02×97°.83W±0°.02, h6km±5km,*
Error ellipse: s-maj=2.6km s-min=1.9km az=137.0
TUL ***11*** *01:39:03.6±1.6, 36°.95N±0°.01×97°.826W±0°.008, h2km±7km,*
ML3.9, mb_Lg3.9/118(NEIC), ML3.6/28(NEIC),
Mwr3.5/20(SLM), Error ellipse: s-maj=2.1km s-min=0.8km
az=163.0
ANF ***11*** *01:39:04.4±0.3, 36°.87N×97°.80W, h5km, ML4.8/17, Error*
ellipse: s-maj=3.5km s-min=3.0km az=29.0
ISC 11 01:39:03.9±0.7**, 36°.94N**±0°.02×**97°.82W**±0°.02**, h10**km±4km,
n232, σ1§21/272**, mb4.1**/5**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.10	197	Pg	Pg	01 39 06.1	-0.4
GC02				Sg	Sg	01 39 07.7	-0.7
KAN14	Manchester OK	0.11	277		Pg	01 39 06.3	-0.4
KAN14				Sg	Sg	01 39 07.8	-1.0
KAN17	Caldwell West	0.11	25	Pg	Pg	01 39 06.5	-0.3
KAN05	Bluff City Nor	0.17	347		Pg	01 39 07.5	-0.2
KAN01	Argonia South	0.22	14	Pg	Pg	01 39 08.3	-0.1
KAN01				Sg	Sg	01 39 11.5	0.0
KAN09	Caldwell North	0.25	40	Pg	Pg	01 39 09.1	0.0
KAN09				Sg	Sg	01 39 12.5	-0.1
KAN10	Anthony SW Sta	0.28	310	Pg	Pg	01 39 09.5	-0.1
KAN10				Sg	Sg	01 39 13.6	+0.1
KAN13	South Haven SW	0.29	76	Pg	Pg	01 39 09.6	-0.1
KAN13				Sg	Sg	01 39 13.4	-0.1
KAN06	Argonia West S	0.31	355		Pg	01 39 10.0	0.0
KAN08	Anthony NE Sta	0.31	338		Pg	01 39 10.0	0.0
KAN08				Sg	Sg	01 39 14.4	+0.2
OK032	Salt Plains WL	0.34	246	Pg	Pg	01 39 10.5	-0.2
OK032				Sg	Sg	01 39 14.8	-0.4
KAN16	Harper SW Stat	0.34	326	Pg	Pg	01 39 10.6	-0.1
KAN16				Sg	Sg	01 39 15.3	0.0
KS20	Mayfield South	0.36	37	Pg	Pg	01 39 11.0	0.0
KS20				Sg	Sg	01 39 15.8	0.0
KS21	Milan North St	0.37	21	Pg	Pg	01 39 11.1	-0.1
KS21				Sg	Sg	01 39 16.4	+0.3
KAN12	Harper NE Stat	0.38	339		Pg	01 39 11.3	-0.1
KAN12				Sg	Sg	01 39 16.6	+0.1
CROK	Carrier	0.46	196	Pg	Pg	01 39 12.7	-0.1
CROK				Sg	Sg	01 39 18.9	+0.1
BLOK	Blackwell	0.52	110		Pg	01 39 13.9	-0.1
BLOK				Sg	Sg	01 39 21.1	+0.1
T35A	Sooner Cattle	1.05	91		Pg	01 39 23.5	-0.6
T35A				Sg	Sg	01 39 37.4	-0.5
T35B	Sooner Cattle	1.05	91	P	Pg	01 39 23.5	-0.6
	baz=272,SNR=302						
T35B				S	Sg	01 39 37.6	-0.2
	baz=272						
U32A	Winter Ranch,	1.10	240		Pg	01 39 24.3	-0.8
U32A				Sg	Sg	01 39 38.9	-0.5
U32A	Winter Ranch,	1.10	240	P	Pg	01 39 24.5	-0.6
	baz=59,SNR=27						
U32A				S	Sg	01 39 39.4	0.0
	baz=59						
OK029	Liberty Lake	1.18	165		Pg	01 39 25.9	-0.7
OK029				Sg	Sg	01 39 41.8	-0.1
QUOK	Quay	1.18	130	Pg	Pg	01 39 25.9	-0.7
QUOK				Sg	Sg	01 39 41.6	-0.4
OK031	S. Brethren Rd	1.27	141		Pg	01 39 27.3	-0.9
OK031				Sg	Sg	01 39 44.4	-0.3
BCOK	Bluff Creek, N	1.29	172		Pn	01 39 27.7	-0.3
BCOK				Sg	Sg	01 39 45.6	0.0
OK030	Cody Creek RV	1.32	140		Pn	01 39 28.1	-0.2
OK005	Luther M Schoo	1.38	158		Pn	01 39 29.4	+0.2
OK009	Oakdale Elemen	1.40	166		Pn	01 39 29.8	+0.4
OK025	Westminster Rd	1.42	164		Pn	01 39 29.9	+0.3
OK001	Jones High Sch	1.45	162	Pn	Pn	01 39 30.2	+0.2
OKCFA	Oklahoma City	1.55	169		Pn	01 39 32.1	+0.6
OKCFA	Oklahoma City	1.55	169	P	Pn	01 39 32.1	+0.6
	baz=349,SNR=21						
OKCFA				S	Sb	01 39 53.5	+1.1
	baz=349						
OKCSW	OKLAHOMA CITY	1.57	168		Pn	01 39 32.3	+0.6
R32A	Long Quarter,	1.64	335		Pn	01 39 33.9	+1.2
R32A	Long Quarter,	1.64	335	P	Pn	01 39 33.9	+1.2
	baz=154,SNR=132						
R32A				S	Sb	01 39 55.3	+0.5
	baz=154						
FNO	Franklin	1.72	168		Pn	01 39 34.6	+0.8
TUL1	Leonard	1.94	122	P	Pn	01 39 37.8	+1.1
	baz=303,SNR=152						
TUL1				Sb	Sb	01 40 04.8	+1.3
	baz=303						
TUL1	Leonard	1.94	122		Pn	01 39 37.9	+1.1
TUL1	Leonard	1.94	122	P	Pn	01 39 37.9	+1.1
	baz=303,SNR=62						
TUL1				S	Sb	01 40 04.4	+1.0
	baz=303						
WMOK	Wichita Mounta	2.33	200	P	Pn	01 39 42.8	+0.5
	baz=19,SNR=117						
WMOK				Sb	Sb	01 40 15.4	+0.5
	baz=19						
WMOK	Wichita Mounta	2.33	200		Pn	01 39 43.0	+0.7
WMOK				IAmb_Lg		01 40 20.6	
	comp=Z,421nm,0.8s						
WMOK	Wichita Mounta	2.33	200	P	Pn	01 39 43.0	+0.7
	baz=19,SNR=215						
WMOK				S	Sn	01 40 12.9	+1.9
	baz=19						
X34A	Smith Ranch, M	2.34	180		Pn	01 39 43.6	+1.3
KSU1	Kansas State U	2.36	24	P	Pn	01 39 43.7	+1.0
	baz=204,SNR=64						
KSU1				S	Sb	01 40 15.9	+0.3
	baz=204						
KSU1	Kansas State U	2.36	24		Pn	01 39 43.6	+1.0
KSU1	Kansas State U	2.36	24	P	Pn	01 39 43.7	+1.0
	baz=204,SNR=40						
KSU1				S	Sb	01 40 16.2	+0.6
	baz=204						
CBKS	Cedar Bluff	2.40	322	P	Pn	01 39 44.3	+1.0
	baz=140,SNR=66						
CBKS				S	Sb	01 40 17.9	+0.9
	baz=140						
CBKS	Cedar Bluff	2.40	322		Pn	01 39 44.4	+1.1
CBKS				IAmb_Lg		01 40 19.4	
	comp=Z,386nm,0.8s						
CBKS	Cedar Bluff	2.40	322	P	Pn	01 39 44.4	+1.1
	baz=140,SNR=45						
CBKS				S	Sb	01 40 17.1	+0.1
	baz=140						
U38A	Gravette	2.81	99		Pn	01 39 49.8	+1.0
U38A	Gravette	2.81	99	P	Pn	01 39 49.7	+0.8
	baz=281,SNR=69						
LOOK	Love County	2.99	170		Pn	01 39 52.6	+1.3
LOOK				IAmb_Lg		01 40 45.2	
	comp=Z,307nm,0.9s						
X37A	Clayton	3.08	139		Pn	01 39 53.6	+1.2
X37A				IAmb_Lg		01 40 46.0	
	comp=Z,538nm,0.8s						
X37A	Clayton	3.08	139	P	Pn	01 39 53.8	+1.2
	baz=320,SNR=70						
HHAR	Hobbs	3.19	101		Pn	01 39 55.4	+1.3
HHAR				IAmb_Lg		01 40 53.9	
	comp=Z,345nm,1.0s						
HHAR	Hobbs	3.19	101	P	Pn	01 39 55.5	+1.3
	baz=283						
Z35A	Perchaven, San	3.63	172		Pn	01 40 01.3	+1.1
Z35A	Perchaven, San	3.63	172	P	Pn	01 40 01.2	+1.1
	baz=353,SNR=15						
Z35A				S	Sn	01 40 45.1	+2.0
	baz=353						
S39A	Bolivar	3.67	77		Pn	01 40 01.2	+0.6
S39A	Bolivar	3.67	77	P	Pn	01 40 01.0	+0.4
	baz=260,SNR=73						
W39A	Magazine	3.71	117	Pn	Pn	01 40 01.9	+0.7
	baz=299						
W39A				Pb	Pb	01 40 10.7	+1.3
	baz=299,SNR=17						
W39A				S	Sn	01 40 46.9	+2.1
	baz=299						
W39A	Magazine	3.71	117		Pn	01 40 02.0	+0.8
W39A	Magazine	3.71	117	P	Pn	01 40 01.9	+0.7
	baz=299,SNR=24						
W39A				S	Sn	01 40 46.4	+1.5
	baz=299						
AMTX	Amarillo	3.74	238	Pn	Pn	01 40 04.1	+2.3
	baz=55						
AMTX				Pb	Pb	01 40 11.8	+1.7
	baz=55						
AMTX				Sb	Sg	01 41 00.5	-3.6
	baz=55						
AMTX	Amarillo	3.74	238		Pn	01 40 03.6	+1.9
AMTX				IAmb_Lg		01 41 06.1	
	comp=Z,262nm,0.7s						
AMTX	Amarillo	3.74	238	S	Sn	01 40 48.4	+2.5
	baz=55						
N33A	J Bar K, Exete	3.80	4	Pn	Pn	01 40 02.8	+0.3
N33A				IAmb_Lg		01 41 10.8	
	comp=Z,366nm,0.8s						
U40A	Yellville	4.04	97	P	Pn	01 40 06.4	+0.7
	baz=280,SNR=18						
U40A				S	Sn	01 40 54.3	+1.3
	baz=280						
U40A	Yellville	4.04	97	Pn	Pn	01 40 06.4	+0.7
U40A				IAmb_Lg		01 41 13.6	
	comp=Z,342nm,0.8s						
U40A	Yellville	4.04	97	P	Pn	01 40 06.4	+0.7
	baz=280,SNR=31						
U40A				P	Pn	01 40 06.4	+0.7
	baz=280,SNR=31						
MIAR	Mount Ida	4.20	123	P	Pn	01 40 10.1	+2.1
	baz=306,SNR=13						
MIAR				S	Sn	01 40 59.0	+1.9
	baz=306						
MIAR	Mount Ida	4.20	123		Pn	01 40 09.2	+1.3
MIAR				IAmb_Lg		01 41 16.5	
	comp=Z,414nm,1.3s						
N35A	Tabor	4.27	23	Pn	Pn	01 40 10.0	+1.1
N35A	Tabor	4.27	23	P	Pn	01 40 09.7	+0.8
	baz=204,SNR=18						
P38A	Dawn	4.31	50	Pn	Pn	01 40 10.0	+0.6
P38A				IAmb_Lg		01 41 22.3	
	comp=Z,269nm,0.9s						
P38A	Dawn	4.31	50	P	Pn	01 40 10.1	+0.6
	baz=233,SNR=33						
KSCO	Kaye Shedlock’	4.32	300	P	Pn	01 40 10.8	+1.1
	baz=117						
KSCO				Sb	Sg	01 41 18.2	-4.4
	baz=117						
KSCO	Kaye Shedlock’	4.32	300	Pn	Pn	01 40 10.8	+1.1
KSCO				IAmb_Lg		01 41 30.3	
	comp=Z,308nm,0.7s						
KSCO	Kaye Shedlock’	4.32	300	P	Pn	01 40 10.8	+1.1
	baz=117						
Z38A	Mt. Pleasant	4.35	147	Pn	Pn	01 40 10.7	+0.7
Z38A				IAmb_Lg		01 41 30.0	
	comp=Z,318nm,0.7s						
MGMO	Mountain Grove	4.45	86	Pn	Pn	01 40 12.2	+0.8
MGMO				IAmb_Lg		01 41 32.9	
	comp=Z,168nm,0.8s						
BGNE	Belgrade	4.47	357	P	Pn	01 40 12.4	+0.8
	baz=177,SNR=6.2						
BGNE				Sb	Sg	01 41 24.8	-2.5
	baz=177						
BGNE	Belgrade	4.47	357	Pn	Pn	01 40 12.2	+0.6
BGNE	Belgrade	4.47	357	P	Pn	01 40 12.5	+0.8
	baz=177,SNR=26						
ABTX	Abilene, Hawle	4.56	200	P	Pn	01 40 14.2	+1.3
	baz=18						
ABTX	Abilene, Hawle	4.56	200		Pn	01 40 12.7	-0.2
ABTX				IAmb_Lg		01 41 26.9	
	comp=Z,162nm,0.9s						
ABTX	Abilene, Hawle	4.56	200	P	Pn	01 40 14.0	+1.0
	baz=18						
R40A	Maddies Statio	4.61	71		Pn	01 40 13.8	+0.3
R40A	Maddies Statio	4.61	71	P	Pn	01 40 14.2	+0.6
	baz=255,SNR=87						
FCAR	Ozark Folk Cen	4.72	101	Pn	Pn	01 40 15.5	+0.5
FCAR				IAmb_Lg		01 41 34.1	
	comp=Z,254nm,0.9s						
X40A	Basin Creek Fa	4.74	120	P	Pn	01 40 17.4	+2.0
	baz=303,SNR=8.3						
X40A				S	Sn	01 41 11.4	+1.0
	baz=303						
X40A	Basin Creek Fa	4.74	120	Pn	Pn	01 40 16.6	+1.2
X40A				IAmb_Lg		01 41 35.8	
	comp=Z,275nm,1.0s						
WHAR	Wooly Hollow	4.78	109		Pn	01 40 16.3	+0.5
WHAR				IAmb_Lg		01 41 33.9	
	comp=Z,225nm,0.9s						
W41B	Gary Mavity, V	4.85	110	P	Pn	01 40 18.7	+1.8
	baz=293						
W41B				Sn	Sn	01 41 12.8	-0.3
	baz=293						
W41B				Sb	Sb	01 41 28.1	+0.8
	baz=293						
W41B	Gary Mavity, V	4.85	110	P	Pn	01 40 17.4	+0.5
	baz=293						
WHTX	Lake Whitney,	4.95	176	P	Pn	01 40 18.6	+0.3
	baz=357,SNR=7.7						
WHTX				S	Sn	01 41 14.6	-0.9
	baz=357						
WHTX	Lake Whitney,	4.95	176	Pn	Pn	01 40 18.4	+0.3
WHTX				IAmb_Lg		01 41 51.4	
	comp=Z,146nm,0.9s						
WHTX	Lake Whitney,	4.95	176	P	Pn	01 40 18.5	+0.3
	baz=357,SNR=23						
MSTX	Muleshoe	5.01	235	Pn	Pn	01 40 21.3	+2.1
	baz=52,SNR=11						
MSTX				Pb	Pb	01 40 31.6	-0.1
	baz=52						
MSTX				Sb	Sb	01 41 38.3	+6.3
	baz=52						
MSTX	Muleshoe	5.01	235		Pn	01 40 19.4	+0.2
WLAR	White Oak Lake	5.04	129	Pn	Pn	01 40 20.6	+1.1
WLAR				IAmb_Lg		01 41 47.3	
	comp=Z,228nm,0.8s						
OGNE	Ogallala	5.17	322	Sb	Sb	01 41 43.4	+6.9
	baz=139						
237A	Washetta, Mont	5.20	161	Pn	Pn	01 40 20.9	-0.8
237A				IAmb_Lg		01 42 00.9	
	comp=Z,248nm,1.1s						
237A	Washetta, Mont	5.20	161	P	Pn	01 40 21.8	+0.1
	baz=342,SNR=9.2						
P40A	Paris	5.23	59	Pn	Pn	01 40 22.5	+0.5
P40A				IAmb_Lg		01 41 48.2	
	comp=Z,147nm,0.7s						
N38A	Joes South For	5.25	42		Pn	01 40 22.8	+0.4
N38A				IAmb_Lg		01 42 04.7	
	comp=Z,224nm,0.8s						
N38A	Joes South For	5.25	42	P	Pn	01 40 22.9	+0.4
	baz=224,SNR=14						
T25A	Trinidad	5.27	274	P	Pn	01 40 23.3	+0.5
	baz=90,SNR=9.8						
T25A	Trinidad	5.27	274	Pn	Pn	01 40 23.5	+0.6
T25A				IAmb_Lg		01 42 04.0	
	comp=Z,229nm,1.1s						
CCM	Cathedral Cave	5.35	76	Pn	Pn	01 40 24.0	+0.3
CCM				IAmb_Lg		01 41 58.2	
	comp=Z,186nm,1.0s						
T42A	Van Buren	5.39	87	Pn	Pn	01 40 25.3	+1.0
T42A	Van Buren	5.39	87	P	Pn	01 40 25.2	+1.0
	baz=271,SNR=8.3						
LCAR	Lake Charles	5.44	97	Pn	Pn	01 40 25.7	+0.7
LCAR	Lake Charles	5.44	97	P	Pn	01 40 25.9	+0.9
	baz=281,SNR=8.7						
Z41A	Richland Creek	5.52	130	S	Sn	01 41 29.2	-0.3
	baz=313						
K31A	O'Neill	5.72	353	Pn	Pn	01 40 30.4	+1.6
K31A	O'Neill	5.72	353	P	Pn	01 40 29.7	+0.8
	baz=172,SNR=15						
CCAR	Cane Creek	5.79	120		Pn	01 40 30.0	+0.2
CCAR				IAmb_Lg		01 42 16.5	
	comp=Z,207nm,0.9s						
NATX	Nacogdoches	5.79	152	S	Sn	01 41 34.2	-2.1
	baz=334						
NATX	Nacogdoches	5.79	152	IAmb_Lg		01 42 23.2	
	comp=Z,136nm,0.8s						
PBMO	Poplar Bluff	5.93	89	Pn	Pn	01 40 32.7	+1.0
PBMO				IAmb_Lg		01 42 17.2	
	comp=Z,144nm,0.7s						
FVM	French Village	5.98	78		Pn	01 40 32.3	0.0
FVM				IAmb_Lg		01 42 15.7	
	comp=Z,116nm,0.9s						
SCIA	State Center	6.11	34	P	Pn	01 40 35.2	+1.1
	baz=217						
SCIA	State Center	6.11	34		Pn	01 40 35.4	+1.3
SCIA				IAmb_Lg		01 42 26.9	
	comp=Z,258nm,0.9s						
Q24A	Divide	6.13	291	P	Pn	01 40 35.2	+0.5
	baz=107						
Q24A				S	Sn	01 41 44.2	-0.8
	baz=107						
435B	Jarrell	6.15	178	P	Pn	01 40 34.6	-0.1
	baz=358						
435B				S	Sn	01 41 43.3	-1.8
	baz=358						
435B	Jarrell	6.15	178		Pn	01 40 34.7	-0.1
SDCO	Great Sand Dun	6.17	280	Pn	Pn	01 40 36.6	+1.3
SDCO				IAmb_Lg		01 42 28.4	
	comp=Z,119nm,1.0s						
SLM	Saint Louis	6.24	72	IAmb_Lg		01 42 24.2	
	comp=Z,153nm,0.9s						
N41A	Harden Midland	6.61	53	Pn	Pn	01 40 41.6	+0.6
JCT	Junction City	6.65	195	P	Pn	01 40 41.5	-0.2
	baz=14						
JCT	Junction City	6.65	195	Pn	Pn	01 40 41.7	0.0
JCT				IAmb_Lg		01 42 49.5	
	comp=Z,142nm,0.8s						
ISCO	Idaho Springs	6.75	297	P	Pn	01 40 43.8	+0.6
	baz=113,SNR=11						
ISCO	Idaho Springs	6.75	297	Pn	Pn	01 40 44.4	+1.2
ISCO				IAmb_Lg		01 42 42.2	
	comp=Z,110nm,1.0s						
143A	Socs Landing,	6.76	127	IAmb_Lg		01 42 55.5	
	comp=Z,126nm,0.8s						
ECSD	EROS Data Cent	6.85	7	P	Pn	01 40 43.7	-0.5
	baz=188,SNR=12						
ECSD				S	Sn	01 42 01.6	-0.6
	baz=188						
ECSD	EROS Data Cent	6.85	7	Pn	Pn	01 40 43.8	-0.5
ECSD				IAmb_Lg		01 42 49.7	
	comp=Z,122nm,0.9s						
S44A	Carbondale	6.87	81	Pn	Pn	01 40 44.7	+0.1
S44A				IAmb_Lg		01 42 44.0	
	comp=Z,127nm,0.8s						
K38A	Parkersburg	6.90	33	Pn	Pn	01 40 45.3	+0.3
SIUC	Southern Illin	6.90	81	Pn	Pn	01 40 45.1	0.0
SIUC				IAmb_Lg		01 42 44.8	
	comp=Z,125nm,0.7s						
P43A	Skaggs, Pawnee	7.06	65	Pn	Pn	01 40 47.5	+0.3
P43A				IAmb_Lg		01 42 51.8	
	comp=Z,141nm,0.8s						
HKT	Hockley	7.17	166		Pn	01 40 48.8	+0.1
W45A	Hickory Valley	7.22	102	IAmb_Lg		01 42 55.5	
	comp=Z,179nm,0.8s						
L40A	Anamosa	7.22	43	Pn	Pn	01 40 49.4	0.0
L40A				IAmb_Lg		01 42 53.3	
	comp=Z,134nm,0.9s						
Q44A	Meyer Farm, Va	7.23	72		Pn	01 40 50.1	+0.5
Q44A				IAmb_Lg		01 43 05.9	
	comp=Z,195nm,1.0s						
ANMO	Albuquerque	7.28	257	Pn	Pn	01 40 51.2	+0.8
	comp=Z,0.1nm,0.3s,baz=340,slow=16,SNR=2.1						
ANMO				Lg	Lg	01 42 48.0	
	comp=Z,1.6nm,0.3s,baz=335,slow=13,SNR=2.5						
ANMO	Albuquerque	7.28	257	Pn	Pn	01 40 51.0	+0.6
T45A	Paducah	7.35	87	IAmb_Lg		01 43 02.8	
	comp=Z,183nm,0.7s						
PHWY	Pilot Hill	7.36	309	IAmb_Lg		01 43 09.0	
	comp=Z,153nm,0.9s						
Y45A	Yeager Farm, C	7.43	112	IAmb_Lg		01 43 19.2	
	comp=Z,97nm,0.8s						
N23A	Red Feather La	7.46	304	P	Pn	01 40 55.2	+2.3
	baz=119						
SUSD	Miller	7.54	354	IAmb_Lg		01 43 16.5	
	comp=Z,193nm,0.9s						
SMCO	Snowmass	7.55	290	Pn	Pn	01 40 54.7	+0.3
HDIL	Hopedale	7.58	59	P	Pn	01 40 55.3	+1.0
	baz=244,SNR=8.5						
HDIL				S	Sn	01 42 18.9	-1.3
	baz=244						
HDIL	Hopedale	7.58	59	Pn	Pn	01 40 54.8	+0.5
BNM	Barren Site	7.70	251	Pn	Pn	01 40 55.6	-0.6
I37A	Lemond, Waseca	7.83	24	Pn	Pn	01 40 58.4	+0.7
I37A				IAmb_Lg		01 43 14.3	
	comp=Z,140nm,0.9s						
Y22D	IRIS PASSCAL I	7.95	252	IAmb_Lg		01 43 31.4	
	comp=Z,144nm,1.0s						
O44A	Mansfield	8.00	64	Pn	Pn	01 41 01.1	+1.0
O44A				IAmb_Lg		01 43 20.7	
	comp=Z,77nm,0.7s						
735A	Kenedy	8.06	180	IAmb_Lg		01 43 41.0	
	comp=Z,150nm,1.0s						
L42A	Oliver, Polo	8.08	49	Pn	Pn	01 41 01.6	+0.4
L42A				IAmb_Lg		01 43 21.6	
	comp=Z,183nm,1.0s						
WVT	Waverly	8.09	93		Pn	01 41 01.1	-0.1
PLAL	Pickwick Lake	8.14	101	Pn	Pn	01 41 01.6	-0.4
MNTX	Cornudas Mount	8.15	232	P	Pn	01 41 03.2	+1.0
	baz=48,SNR=26						
MNTX	Cornudas Mount	8.15	232	Pn	Pn	01 41 02.3	+0.1
MNTX	Cornudas Mount	8.15	232	P	Pn	01 41 02.6	+0.4
	baz=48,SNR=15						
JFWS	Jewell Farm	8.33	42	P	Pn	01 41 04.0	-0.6
	baz=227,SNR=11						
JFWS	Jewell Farm	8.33	42	Pn	Pn	01 41 04.4	-0.2
JFWS				IAmb_Lg		01 43 47.1	
	comp=Z,78nm,0.8s						
RSSD	Black Hills	8.59	329	P	Pn	01 41 10.3	+1.9
	baz=145						
RSSD	Black Hills	8.59	329	Pn	Pn	01 41 09.6	+1.2
RSSD				IAmb_Lg		01 43 57.6	
	comp=Z,92nm,1.0s						
RWWY	Rawlins	8.68	306		Pn	01 41 10.9	+1.2
RWWY				IAmb_Lg		01 44 00.6	
	comp=Z,82nm,0.8s						
P46A	Rosedale	8.77	69	Pn	Pn	01 41 11.3	+0.7
K22A	Casper	8.79	313	Pn	Pn	01 41 11.0	-0.1
M44A	Midewin, Midew	8.80	57	Pn	Pn	01 41 11.5	+0.5
Z47A	Carrollton	8.82	112	Pn	Pn	01 41 12.1	+0.7
Z47A				IAmb_Lg		01 43 53.4	
	comp=Z,79nm,1.1s						
I40A	Norwalk	8.85	36	Pn	Pn	01 41 11.4	-0.3
F33A	5 Mile Ranch,	8.96	7	Pn	Pn	01 41 12.5	-0.8
F33A				IAmb_Lg		01 43 46.8	
	comp=Z,113nm,1.0s						
TX31	Lajitas Ar. Si	9.03	215		Pn	01 41 13.5	-0.8
TX32	Lajitas Array	9.03	215		Pn	01 41 13.4	-1.0
TXAR	Lajitas Array	9.03	214	Pn	Pn	01 41 13.7	-0.7
	comp=Z,0.9nm,0.3s,baz=36,slow=11,SNR=38						
TXAR				Lg	Lg	01 43 43.6	
	comp=Z,2.3nm,0.3s,baz=9.4,slow=29,SNR=4.0						
SFIN	Lafayette	9.06	64	P	Pn	01 41 16.1	+1.4
	baz=251						
SFIN	Lafayette	9.06	64	Pn	Pn	01 41 15.6	+0.9
BLO	Bloomington	9.19	73	Pn	Pn	01 41 16.1	-0.3
WCI	Wyandotte Cave	9.24	79	Pn	Pn	01 41 15.6	-1.6
L44A	Lake County Fo	9.27	53	IAmb_Lg		01 44 02.5	
	comp=Z,131nm,0.9s						
K43A	Burlington	9.29	49		Pn	01 41 16.9	-0.9
121A	Cookes Peak, D	9.30	245	Pn	Pn	01 41 19.0	+0.8
121A				IAmb_Lg		01 44 20.3	
	comp=Z,60nm,1.2s						
F36A	Milaca	9.48	19	Pn	Pn	01 41 18.3	-2.0
U49A	Red Boiling Sp	9.68	89	Pn	Pn	01 41 24.4	+1.2
I42A	Draeger Farm,	9.71	42	Pn	Pn	01 41 22.1	-1.4
E28A	Huff	9.86	348	IAmb_Lg		01 44 31.7	
	comp=Z,102nm,0.9s						
P48A	Milroy	10.08	72	Pn	Pn	01 41 26.6	-2.0
G40A	Rib Lake	10.11	32		Pn	01 41 28.6	-0.4
L46A	Eue Claire	10.25	57	Pn	Pn	01 41 29.4	-1.4
T50A	Nancy	10.39	86	Pn	Pn	01 41 33.7	+0.8
H43A	Windswept, Lux	10.71	42	Pn	Pn	01 41 35.0	-2.1
E38A	The Farm, Brul	10.72	24	Pn	Pn	01 41 37.8	+0.4
BW06	Boulder Array	10.73	306	Pn	Pn	01 41 38.0	+0.2
PD31	Pinedale Array	10.73	306	Pn	Pn	01 41 37.5	-0.2
PDAR	Pinedale Array	10.73	306	Pn	Pn	01 41 36.8	-1.0
	comp=Z,0.2nm,0.3s,baz=109,slow=14,SNR=7.7						
PDAR				Lg	Lg	01 44 32.6	
	comp=Z,0.8nm,0.3s,baz=129,slow=32,SNR=2.3						
PDAR	Pinedale Array	10.73	306	Pn	Pn	01 41 37.0	-0.7
CPCT	Cooper Cave	10.85	94	Pn	Pn	01 41 39.6	+0.4
V51A	Loudon	10.92	92	Pn	Pn	01 41 40.6	+0.4
O49A	Covington	11.05	69	Pn	Pn	01 41 41.0	-0.9
COWI	Conover	11.22	33	Pn	Pn	01 41 43.5	-0.8
S51A	Beattyville	11.36	82	Pn	Pn	01 41 46.1	-0.1
TKL	Tuckaleechee C	11.41	92	Pn	Pn	01 41 46.8	-0.1
	comp=Z,0.8nm,0.3s,baz=244,slow=8.0,SNR=12						
TKL				Lg	Lg	01 44 52.9	
	comp=Z,0.6nm,0.3s,baz=288,slow=20,SNR=4.4						
TKL	Tuckaleechee C	11.41	92	Pn	Pn	01 41 46.1	-0.8
AGMN	Agassiz Nation	11.44	7	P	Pn	01 41 44.8	-2.5
	baz=188						
AGMN	Agassiz Nation	11.44	7	Pn	Pn	01 41 44.7	-2.5
TZTN	Tazewell	11.46	88	Pn	Pn	01 41 48.1	+0.5
L48A	N Adams	11.49	60		Pn	01 41 47.1	-0.9
V52A	Sevierville	11.52	91	Pn	Pn	01 41 47.9	-0.5
LAO	LASA Array	11.57	330	Pn	Pn	01 41 49.2	+0.1

RLMT	Red Lodge	11.88	317	Pn	Pn	01 41 52.4	-1.1
EYMN	Ely	11.94	21	P	Pn	01 41 50.9	-3.1
	baz=205						
Q52A	Bidwell	12.45	76	Pn	Pn	01 41 58.9	-2.1
P52A	Corning	12.62	73	Pn	Pn	01 42 02.1	-1.3
N51A	Ashland	12.67	67	Pn	Pn	01 42 04.0	0.0
U54A	Nelsons Funny	12.85	87	Pn	Pn	01 42 06.9	+0.3
ULM	Lac du Bonnet	13.38	5	Pn	Pn	01 42 07.2	-6.4
	comp=Z,0.4nm,0.3s,baz=192,slow=13,SNR=4.5						
ULM				Sn	Sn	01 44 29.7	-13
	comp=Z,0.5nm,0.3s,baz=136,slow=17,SNR=2.4						
ULM				Lg	Lg	01 45 50.6	
	comp=Z,0.2nm,0.3s,baz=180,slow=20,SNR=1.2						
M53A	WI Miller and	14.03	66	Pn	Pn	01 42 20.7	-2.0
R55A	Marlinton	14.10	79	Pn	Pn	01 42 24.9	+1.2
M54A	Oil Creek Stat	14.79	66	Pn	Pn	01 42 32.1	-0.9
T57A	Hurt	14.85	84	Pn	Pn	01 42 32.1	-1.7
SADO	Sadowa	16.13	55	Pn	Pn	01 42 45.5	-5.1
	comp=Z,0.2nm,0.3s,baz=282,slow=13,SNR=1.8						
SADO				Lg	Lg	01 47 19.8	
	comp=Z,0.3nm,0.3s,baz=289,slow=17,SNR=1.3						
SCHQ	Schefferville	27.69	40	P	P	01 44 51.8	-0.1
	comp=Z,4.2nm,0.9s,baz=247,slow=12,SNR=1.6						
ILAR	Eielson Array	40.03	330	P	P	01 46 40.0	+1.3
	comp=Z,4.9nm,0.7s,baz=107,slow=7.1,SNR=45						
ESDC	Sonseca Array	70.19	55	P	P	01 50 17.4	+0.5
	comp=Z,0.5nm,0.9s,baz=320,slow=6.6,SNR=4.1						
FINES	FINESS Array B	71.93	25	P	P	01 50 27.0	0.0
	comp=Z,1.3nm,0.8s,baz=222,slow=5.1,SNR=3.4						
GERES	GERESS Array B	75.22	39	P	P	01 50 47.0	+0.4
	comp=Z,0.5nm,0.6s,baz=328,slow=4.7,SNR=3.7						
MAW	Mawson	147.41	166	PKPbc	PKPbc	01 58 47.2	+0.5
	comp=Z,1.5nm,0.8s,baz=310,slow=6.7,SNR=4.7						

ANF ***11*** *01:46:50.4±1.0, 36°.94N×97°.79W, h1^{km}±6^{km}, ML3.2/9, Error ellipse: s-maj=4.9km s-min=3.1km az=81.0*

NEIC ***11*** *01:46:50.6±1.2, 36°.94N±0°.03×97°.79W±0°.05, h4^{km}±1^{km}, Error ellipse: s-maj=7.3km s-min=2.5km az=54.0*

TUL ***11*** *01:46:50.1±0.8, 36°.95N±0°.04×97°.81W±0°.05, h1^{km}±7^{km}, ML3.0, mb_Lg2.6/18(NEIC), Error ellipse: s-maj=6.8km s-min=2.3km az=46.0*

ISC 11 01:46:50.6±0.9, **36°.94N**±0°.02×**97°.81W**±0°.02, **h6**^{km}±7^{km}, **n65**, σ**0^s.71**/68, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.10	206	Pg	Pg	01 46 52.6	-0.1
GC02				Sg	Sg	01 46 54.3	+0.1
KAN17	Caldwell West	0.11	18	Pg	Pg	01 46 53.0	0.0
KAN17				Sg	Sg	01 46 54.8	+0.2
KAN14	Manchester OK	0.13	279		Pg	01 46 53.0	-0.3
KAN14				Sg	Sg	01 46 54.8	-0.2
KAN05	Bluff City Nor	0.18	343		Pg	01 46 54.1	-0.1
KAN01	Argonia South	0.22	10	Pg	Pg	01 46 54.9	0.0
KAN01				Sg	Sg	01 46 58.0	+0.1
KAN09	Caldwell North	0.25	37	Pg	Pg	01 46 55.6	+0.1
KAN13	South Haven SW	0.28	74	Pg	Pg	01 46 56.2	+0.2
KAN10	Anthony SW Sta	0.29	309	Pg	Pg	01 46 56.2	-0.2
KAN06	Argonia West S	0.31	353	Pg	Pg	01 46 56.6	-0.1
KAN08	Anthony NE Sta	0.32	336		Pg	01 46 56.6	-0.2
OK032	Salt Plains WL	0.35	248	Pg	Pg	01 46 57.2	-0.2
KAN16	Harper SW Stat	0.35	325	Pg	Pg	01 46 57.2	-0.2
KS20	Mayfield South	0.35	35	Pg	Pg	01 46 57.5	0.0
KAN12	Harper NE Stat	0.39	337		Pg	01 46 57.9	-0.2
CROK	Carrier	0.46	198	Pg	Pg	01 46 59.3	0.0
BLOK	Blackwell	0.51	110	Pg	Pg	01 47 00.4	0.0
T35A	Sooner Cattle	1.04	91		Pg	01 47 10.1	-0.4
T35B	Sooner Cattle	1.04	91	P	Pg	01 47 09.9	-0.6
	baz=272,SNR=76						
T35B				S	Sb	01 47 24.2	-0.7
	baz=272						
U32A	Winter Ranch,	1.11	240	Pg	Pg	01 47 11.5	-0.4
QUOK	Quay	1.17	130		Pg	01 47 12.5	-0.5
OK029	Liberty Lake	1.17	166		Pg	01 47 12.5	-0.6
OK031	S. Brethren Rd	1.25	141		Pg	01 47 14.0	-0.6
BCOK	Bluff Creek, N	1.29	173		Pg	01 47 14.4	-0.9
OK030	Cody Creek RV	1.30	140		Pg	01 47 14.9	-0.7
OK025	Westminster Rd	1.41	164		Pn	01 47 16.6	-0.2
OKCFA	Oklahoma City	1.55	169		Pn	01 47 18.8	+0.2
OKCFA	Oklahoma City	1.55	169	P	Pn	01 47 18.9	+0.2
	baz=350						
OKCFA				S	Sg	01 47 40.9	+0.6
	baz=350						
OKCSW	OKLAHOMA CITY	1.56	169		Pn	01 47 19.2	+0.4
R32A	Long Quarter,	1.65	334		Pn	01 47 20.4	+0.3
R32A	Long Quarter,	1.65	334	P	Pn	01 47 20.4	+0.3
	baz=154,SNR=33						
R32A				S	Sn	01 47 41.9	+0.3
	baz=154						
FNO	Franklin	1.71	169	Pn	Pn	01 47 21.3	+0.4
TUL1	Leonard	1.92	122	Pn	Pn	01 47 24.5	+0.7
TUL1	Leonard	1.92	122	P	Pn	01 47 24.5	+0.7
	baz=303,SNR=21						
X34A	Smith Ranch, M	2.33	181	Pn	Pn	01 47 30.3	+0.9
X34A				IAmb_Lg		01 48 10.1	
	comp=Z,24nm,0.9s						
WMOK	Wichita Mounta	2.33	200	Pn	Pn	01 47 30.3	+0.8
WMOK	Wichita Mounta	2.33	200	P	Pn	01 47 29.9	+0.4
	baz=19,SNR=42						
KSU1	Kansas State U	2.36	23	Pn	Pn	01 47 29.9	+0.1
KSU1	Kansas State U	2.36	23	IAmb_Lg		01 48 06.9	
	comp=Z,26nm,0.8s						
KSU1	Kansas State U	2.36	23	P	Pn	01 47 30.2	+0.4
	baz=204,SNR=9.5						
KSU1				S	Sn	01 48 00.3	+1.2
	baz=204						
CBKS	Cedar Bluff	2.42	321	Pn	Pn	01 47 31.2	+0.5
CBKS	Cedar Bluff	2.42	321	S	Sb	01 48 04.6	+0.1
	baz=140						
U38A	Gravette	2.79	99	Pn	Pn	01 47 36.5	+0.6
U38A	Gravette	2.79	99	P	Pn	01 47 36.6	+0.7
	baz=282,SNR=11						
LOOK	Love County	2.98	170	Pn	Pn	01 47 39.6	+1.1
X37A	Clayton	3.07	139	Pn	Pn	01 47 40.5	+0.9
HHAR	Hobbs	3.18	101	Pn	Pn	01 47 41.6	+0.5
S39A	Bolivar	3.65	77	Pn	Pn	01 47 48.1	+0.4
S39A				IAmb_Lg		01 48 45.7	
	comp=Z,9.9nm,1.0s						
S39A	Bolivar	3.65	77	P	Pn	01 47 47.7	0.0
	baz=260,SNR=16						
W39A	Magazine	3.69	117	IAmb_Lg		01 48 53.2	
	comp=Z,20nm,0.8s						
AMTX	Amarillo	3.75	238	Pn	Pn	01 47 50.4	+1.3
AMTX				IAmb_Lg		01 48 51.8	
	comp=Z,9.1nm,0.8s						
U40A	Yellville	4.03	97	Pn	Pn	01 47 53.1	+0.3
MIAR	Mount Ida	4.19	123	Pn	Pn	01 47 54.7	-0.3
N35A	Tabor	4.27	23	Pn	Pn	01 47 56.5	+0.5
P38A	Dawn	4.30	50	Pn	Pn	01 47 54.0	-2.5
P38A				IAmb_Lg		01 49 06.3	
	comp=Z,10nm,0.7s						
P38A	Dawn	4.30	50	P	Pn	01 47 56.9	+0.3
	baz=233,SNR=6.6						
KSCO	Kaye Shedlock'	4.33	300	IAmb_Lg		01 49 07.0	
	comp=Z,13nm,1.0s						
MGMO	Mountain Grove	4.44	86	Pn	Pn	01 47 58.9	+0.4
BGNE	Belgrade	4.47	357	Pn	Pn	01 47 56.3	-2.6
R40A	Maddies Statio	4.60	71	Pn	Pn	01 47 59.8	-0.8
FCAR	Ozark Folk Cen	4.70	101	IAmb_Lg		01 49 20.4	
	comp=Z,12nm,0.7s						
X40A	Basin Creek Fa	4.73	120	IAmb_Lg		01 49 27.1	
	comp=Z,10nm,0.8s						
P40A	Paris	5.22	59	Pn	Pn	01 48 09.8	+0.7
P40A				IAmb_Lg		01 49 41.4	
	comp=Z,10.0nm,0.8s						
LCAR	Lake Charles	5.43	97	Pn	Pn	01 48 10.6	-1.4
K31A	O'Neill	5.72	353	Pn	Pn	01 48 15.3	-0.8
ECSD	EROS Data Cent	6.85	7	Pn	Pn	01 48 31.7	+0.2

IDC 11 01:53:01.6±1.6, **32°.40N**×**104°.70E**, **h0**^{km}, **mb3.7**/4, **mb1 3.8**/5, **mb1mx3.4**/69, **mbtmp3.6**/5, **ML3.5**/1, **Error ellipse: s-maj=95.7km s-min=27.7km az=60.0, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	15.47	4	Pn	Pn	01 56 42.5	+1.4
	0.2nm,0.3s,baz=178,slow=9.8,SNR=5.8						
MKAR	Makanchi Array	22.36	316	P	P	01 58 01.6	+0.5
	0.6nm,0.6s,baz=105,slow=9.1,SNR=3.5						
ZALV	Zalesovo Beam	25.79	332	P	P	01 58 33.4	-0.7
	0.6nm,0.4s,baz=141,slow=9.6,SNR=3.6						
ARCES	ARCESS Array B	56.29	335	P	P	02 02 43.4	-0.1
	4.9nm,1.0s,baz=90,slow=9.0,SNR=2.1						
WRA	Warramunga Arr	59.28	147	P	P	02 03 05.1	0.0
	0.5nm,0.9s,baz=340,slow=7.3,SNR=2.9						

GUC ***11*** *01:54:36.8±0.6, 29°.46S×72°.12W, h33^{km}±6^{km}, MW6.9*

NEIC ***11*** *01:54:36.4, 29°.43S×72°.16W, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M$_{rr}$1.15; M$_{\theta\theta}$0.10; M$_{\phi\phi}$-1.25; M$_{r\theta}$0.54; M$_{\theta\phi}$-0.24; M$_{\phi r}$-0.46; Fault plane solution: M$_0$1.42000×10^{19} NP1:φ$_s$31.33000°, δ41.14000°, λ126.92000°. NP2:φ$_s$166.40000°, δ58.26000°, λ62.31000°. Principal axes: T 1.4761, Plg65.0000°, Azm26.0000°; N -0.1255, Plg23.0000°, Azm182.0000°; P -1.3506, Plg9.0000°, Azm276.0000°;*

IDC ***11*** *01:54:37.0±0.3, 29°.47S×71°.74W, h0^{km}, mb5.2/28, mb1 5.2/33, mb1mx5.2/42, mbtmp5.2/33, ML4.8/5, MS6.6/32, Ms1 6.6/32, ms1mx6.5/35 Error ellipse: s-maj=15.2km s-min=9.3km az=78.0*

SJA ***11*** *01:54:37.0±0.6, 29°.32S×72°.23W, h23^{km}±9^{km}, MW6.9(GUC)*

NEIC ***11*** *01:54:38.6±2.2, 29°.51S±0°.04×72°.01W±0°.05, h12^{km}±1^{km}, mb6.1/483, Ms_20 6.7/385, Mwb6.7/52, Mwc7.0/77, Mww6.9, Mwc6.8(GCMT), Mwr6.9(GUC), Error ellipse: s-maj=7.5km s-min=5.7km az=228.0*

VAO ***11*** *01:54:38.5±0.2, 29°.42S×71°.79W, h10^{km}, mb5.8*

BJI ***11*** *01:54:38.3±0.0, 29°.35S×71°.80W, h10^{km}, mB6.6/45, Ms6.9/91, Ms7 6.9/84*

MOS ***11*** *01:54:40.8±1.2, 29°.45S×71°.86W, h28^{km}, mb6.1/48, MS6.6/32, Error ellipse: s-maj=9.8km s-min=6.3km az=89.1*

GCMT ***11*** *01:54:47.6±0.1, 29°.47S×72°.18W, h12^{km}, MW6.8/163, Moment Tensor Solution. s163,c431; s162,c785; Duration: 6^s.1 Moment tensor: Scale 10^{19}Nm; M$_{rr}$1.34±.01; M$_{\theta\theta}$0.01±.01; M$_{\phi\phi}$-1.35±.01; M$_{r\theta}$0.04±.01; M$_{\theta\phi}$-0.01±.00; M$_{\phi r}$-1.37±.03; Best double couple: M$_0$1.92000×10^{19} NP1:φ$_s$2.00000°, δ22.00000°, λ93.00000°. NP2:φ$_s$179.00000°, δ68.00000°, λ89.00000°. Principal axes: T 1.9160, Plg67.0000°, Azm87.0000°; N 0.0070, Plg1.0000°, Azm179.0000°; P -1.9250, Plg23.0000°, Azm270.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***11*** *01:54:47, 29°.53S×72°.22W, h12^{km}, Moment Tensor Solution. Duration: 12^s.4 Moment tensor: Scale 10^{19}Nm; M$_{rr}$1.31; M$_{\theta\theta}$0.01; M$_{\phi\phi}$-1.32; M$_{r\theta}$0.08; M$_{\theta\phi}$-0.06; M$_{\phi r}$-1.60; Fault plane solution: M$_0$2.07000×10^{19} NP1:φ$_s$6.00000°, δ20.00000°, λ98.00000°. NP2:φ$_s$178.00000°, δ70.00000°, λ87.00000°. Principal axes: T 2.0703, Plg65.0000°, Azm84.0000°; N 0.0059, Plg3.0000°, Azm179.0000°; P -2.0762, Plg25.0000°, Azm271.0000°;*

NEIC ***11*** *01:54:50, 29°.49S×72°.09W, h12^{km}, Moment Tensor Solution. Duration: 26^s.0 Moment tensor: Scale 10^{19}Nm; M$_{rr}$1.48; M$_{\theta\theta}$0.07; M$_{\phi\phi}$-1.55; M$_{r\theta}$0.23; M$_{\theta\phi}$-0.06; M$_{\phi r}$-2.81; Fault plane solution: M$_0$3.20000×10^{19} NP1:φ$_s$9.00000°, δ14.00000°, λ102.00000°. NP2:φ$_s$176.00000°, δ76.00000°, λ87.00000°. Principal axes: T 3.1728, Plg59.0000°, Azm82.0000°; N 0.0537, Plg3.0000°, Azm177.0000°; P -3.2264, Plg31.0000°, Azm269.0000°;*

NEIC ***11*** *01:55:02.7, 29°.43S×71°.13W, h20^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M$_{rr}$1.66; M$_{\theta\theta}$-0.20; M$_{\phi\phi}$-1.47; M$_{r\theta}$0.43; M$_{\theta\phi}$-0.06; M$_{\phi r}$-3.20; Fault plane solution: M$_0$3.59000×10^{19} NP1:φ$_s$173.51000°, δ77.16000°, λ86.68000°. NP2:φ$_s$8.12000°, δ13.25000°, λ104.24000°. Principal axes: T 3.7012, Plg58.0000°, Azm79.0000°; N -0.2257, Plg3.0000°, Azm174.0000°; P -3.4755, Plg32.0000°, Azm266.0000°;*

ISC 11 01:54:37.3±0.3, **29°.48S**±0°.02×**71°.94W**±0°.03, **h4**^{km}±1^{km}, **h4**^{km}**:pP-P, n1666,** σ**2^s.17**/1598, **mb6.1**/321, **MS6.7**/285, **270C-66D, Fault plane solution: NP1:**φ$_s$153.74945°, δ72.24048°, λ31.40307°. **NP2:**φ$_s$53.20127°, δ60.24947°, λ159.43132°. **Principal axes:** T Plg34.5112°, Azm16.6591°; N Plg54.3752°, Azm180.2983°; P Plg7.7702°, Azm281.2757°; **Fault plane solution: NP1:**φ$_s$165.47740°, δ50.49833°, λ92.60706°. **NP2:** φ$_s$341.38306°, δ39.57356°, λ86.84187°. **Principal axes:** T Plg84.1737°, Azm93.9495°; N Plg2.0113°, Azm343.8184°; P Plg5.4658°, Azm253.6258°; **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	La Serena	0.75	126	⇓*i*P	Pb	01 54 52.9	0.0
CO05				*i* S	Sb	01 55 04.7	+1.2
CO05	La Serena	0.75	126	⇑*e*P	Pb	01 54 52.7	-0.2
CO05				*e*S	Sb	01 55 04.5	+1.0
CO05	La Serena	0.75	126		Pb	01 54 52.8	-0.1
CO05				Sg	Sb	01 55 04.1	+0.6
LCO	Las Campanas	1.18	67	*e*P	Pg	01 55 00.1	+0.2
LCO	Las Campanas	1.18	67	⇓*i*P	Pg	01 55 00.0	+0.2
LCO				*i* S	Sn	01 55 17.5	+0.1
LCO	Las Campanas	1.18	67	*e*P	Pb	01 55 00.2	-0.2
LCO				*e*S	Sn	01 55 17.6	+0.1
LCO	Las Campanas	1.18	67	⇓P	Pg	01 54 59.8	-0.1
LCO	Las Campanas	1.18	67		Pn	01 55 01.2	+0.4
LCO					Sn	01 55 18.9	+1.4
GO04	Tololo Observa	1.21	125	⇓*i*P	Pg	01 55 00.5	0.0
GO04				*i* S	Sn	01 55 18.9	+0.8
GO04	Tololo Observa	1.21	125	⇑*e*P	Pg	01 55 00.4	0.0
GO04				*e*S	Sn	01 55 18.4	+0.3
GO04	Tololo Observa	1.21	125	Pn	Pn	01 55 01.1	-0.1
CO06	Fray Jorge	1.22	168	⇑*i*P	Pg	01 54 59.5	-1.2
CO06				*i* S	Sg	01 55 15.8	-0.7
CO06	Fray Jorge	1.22	168	⇑*e*P	Pg	01 54 59.2	-1.4
CO06				*i* S	Sg	01 55 15.9	-0.5
CO06	Fray Jorge	1.22	168		Pg	01 54 59.5	-1.2
AC04	Llanos de Chal	1.48	31	*e*P	Pn	01 55 03.4	-1.3
AC04	Llanos de Chal	1.48	31	⇑*e*P	Pn	01 55 03.4	-1.3
AC04				*e*S	Sg	01 55 25.9	+1.0
AC04	Llanos de Chal	1.48	31		Pn	01 55 03.3	-1.4
AC04	Llanos de Chal	1.48	31	*e*P	Pn	01 55 03.0	-1.7
CO03	El Pedregal	1.73	142		Pn	01 55 08.4	+0.1
AROD	Rodeo	2.25	108	*e*P	Pb	01 55 18.5	-0.1
GO03	Copiap	2.41	39	⇑*e*P	Pn	01 55 17.1	-0.3
GO03				*e*S	Sb	01 55 50.2	-1.0
GO03	Copiap	2.41	39	⇑P	Pn	01 55 17.1	-0.4
GO03	Copiap	2.41	39	Pn	Pn	01 55 17.2	-0.3
GO03	Copiap	2.41	39	*e*P	Pn	01 55 11.8	-5.7
ACDV	Cuesta del Vie	2.55	106	*e*P	Pb	01 55 22.8	-0.9
ACDV				*e*S	Sb	01 55 55.8	+0.4
ACDV				IAML		01 56 06.2	
	comp=Z,73μm,1.0s						
ACCO	Cerro Coronel	2.73	115	*e*P	Pb	01 55 25.9	-0.9
VA06	Catapilco	3.12	170	*e*P	Pn	01 55 26.1	-1.2
VA06	Catapilco	3.12	170	*e*P	Pn	01 55 26.3	-0.9
VA06				*e*S	Sn	01 56 03.5	-1.5
VCA	Vinchina	3.35	78	*e*P	Pn	01 55 32.9	+2.3
VCA				IAML		01 56 42.0	
	comp=Z,53μm,0.8s						
VA03	San Esteban	3.48	160	*e*P	Pn	01 55 33.3	+1.0
VA03	San Esteban	3.48	160	⇑*e*P	Pn	01 55 33.4	+1.0
VA03				*e*S	Sn	01 56 15.5	+1.4
VA03	San Esteban	3.48	160	Pn	Pn	01 55 33.0	+0.7
ZON	Zonda	3.49	127	P	Pn	01 55 34.7	+2.4
ZON	Zonda	3.49	127	Pn	Pn	01 55 34.7	+2.4
ZON	Zonda	3.49	127	*e*P	Pn	01 55 34.8	+2.5
ZON				IAML		01 56 34.2	
	comp=Z,76μm,2.5s						
VA01	Torpederas	3.54	176	*e*P	Pn	01 55 31.4	-1.7
VA01	Torpederas	3.54	176	⇑*e*P	Pn	01 55 32.3	-0.7
VA01				*e*S	Sn	01 56 12.5	-2.8
VA01	Torpederas	3.54	176	Pn	Pn	01 55 31.7	-1.3
ROCH	El Roble	3.57	167	⇑*i*P	Pn	01 55 32.9	-0.8
ROCH				*i* S	Sn	01 56 16.5	0.0
ROCH	El Roble	3.57	167	⇑*e*P	Pn	01 55 32.9	-0.8
ROCH				*e*S	Sn	01 56 17.5	+1.0
RTCV	Cerro Valdivia	3.77	130	*e*P	Pn	01 55 39.0	+2.7
PEL	Peldehue	3.81	164	P	Pn	01 55 36.5	-0.2
PEL	Peldehue	3.81	164	⇑*i*P	Pn	01 55 36.7	-0.1
PEL				*i* S	Sn	01 56 21.6	-0.4
PEL	Peldehue	3.81	164	⇑*e*P	Pn	01 55 36.7	-0.1
PEL				*e*S	Sn	01 56 22.5	+0.5
PEL	Peldehue	3.81	164	⇑P	Pn	01 55 36.6	-0.1
PEL	Peldehue	3.81	164	Pn	Pn	01 55 36.5	-0.2
MT02	Curacav	3.83	170	*e*P	Pn	01 55 35.6	-1.4
MT02	Curacav	3.83	170	⇑*e*P	Pn	01 55 36.7	-0.3
MT02				*e*S	Sn	01 56 23.6	+1.1
MT02	Curacav	3.83	170		Pn	01 55 35.7	-1.3
MT05	Renca	4.03	166	*e*P	Pn	01 55 39.2	-0.6
MT05	Renca	4.03	166	*e*P	Pn	01 55 40.8	+0.9
MT05	Renca	4.03	166	Pn	Pn	01 55 39.5	-0.4
VA05	Santo Domingo	4.17	176	*e*P	Pn	01 55 40.1	-1.6
VA05	Santo Domingo	4.17	176	Pn	Pn	01 55 40.3	-1.4
ARCO	CERRO ARCO	4.23	143	*e*S	Sg	01 56 51.3	-1.8
ARCO				IAML		01 57 04.3	
	comp=Z,35μm,1.3s						
MT09	Talagante	4.36	170	Pn	Pn	01 55 43.8	-0.6
MT01	Popeta	4.41	173	Pn	Pn	01 55 43.7	-1.3
APLL	PUNTA DE LOS L	4.79	102	*e*P	Pn	01 55 52.6	+2.4
BO01	Tunca	4.95	172	Pn	Pn	01 55 51.1	-1.3
PB14	IPOC Station P	5.03	16	Pn	Pn	01 55 50.7	-3.0
PB14	IPOC Station P	5.03	16	*e*P	Pn	01 55 52.3	-1.5
PB14				*e*S	Sn	01 56 49.8	-2.7
PB14				IAML		01 57 28.5	
	comp=Z,21μm,2.7s						
BO02	Sierra Bellavi	5.39	170	Pn	Pn	01 55 58.0	-0.5
GO05	Huala	5.51	180		Pn	01 55 57.5	-2.7
PB10	IPOC Station P	6.07	12	Pn	Pn	01 56 05.3	-2.6
PB10	IPOC Station P	6.07	12	*e*P	Pn	01 56 05.1	-2.8
PB10				*e*S	Sn	01 57 16.3	-1.5
PB10				IAML		01 58 38.8	
	comp=Z,6μm,1.7s						
FSA	Cafayete	6.26	59	*e*P	Pn	01 56 08.8	-1.7
ML02	Panimavida	6.28	176	Pn	Pn	01 56 08.8	-1.9
PB15	IPOC Station P	6.63	20		Pn	01 56 13.5	-2.2
PB15	IPOC Station P	6.63	20	*e*P	Pn	01 56 14.3	-1.4
PB15				IAML		01 58 29.2	
	comp=Z,14μm,0.8s						
PB05	IPOC Station P	6.78	14	*e*P	Pn	01 56 14.3	-3.4
PB05				*e*P	Pn	01 56 14.8	-2.9
PB05				*e*S	Sn	01 57 32.6	-3.0
PB06	IPOC Station P	7.08	18	*e*P	Pn	01 56 19.3	-2.5
PB06				*e*S	Sn	01 57 39.7	-3.1
H03N1	Juan Fernandez	7.14	235	T	T	02 04 13.5	
	baz=64,slow=71,SNR=784						
H03N2	Juan Fernandez	7.16	235	T	T	02 04 12.6	
	baz=64,slow=71,SNR=644						
H03N3	Juan Fernandez	7.16	235	T	T	02 04 04.0	
	baz=64,slow=71,SNR=600						
VA04	Juan Fernndez	7.19	233	Pn	Pn	01 56 18.6	-4.6
PB04	IPOC Station P	7.30	13		Pn	01 56 21.0	-3.9
PB04	IPOC Station P	7.30	13	*e*S	Sn	01 57 44.1	-4.2
LVC	Limon Verde	7.37	22	Pn	Pn	01 56 23.7	-2.2
	comp=Z,17nm,0.3s,baz=208,slow=8.0,SNR=73						
LVC				Pg	Pb	01 56 44.7	-1.2
	comp=Z,128nm,0.3s,baz=239,slow=10,SNR=12						
LVC				Sn	Sn	01 57 48.6	-1.6
	comp=Z,74nm,0.3s,baz=210,slow=4.5,SNR=3.2						
LVC				Lg	Lg	01 58 21.1	
	comp=Z,154nm,0.3s,baz=269,slow=22,SNR=3.0						
LVC	Limon Verde	7.37	22	⇑P	Pn	01 56 23.7	-2.2
LVC	Limon Verde	7.37	22	*e*P	Pn	01 56 23.6	-2.4
AZAP	Zapla	8.07	51	*e*P	Pn	01 56 30.8	-4.7
PB02	IPOC Station P	8.33	13	*e*P	Pn	01 56 35.0	-4.0
PB02				*e*S	Sn	01 58 10.6	-3.1
PB01	IPOC Station P	8.69	15	*e*P	Pn	01 56 40.0	-3.9
PB01				*e*S	Sn	01 58 19.1	-3.4
PATCX	Punta Patache	8.77	11	*e*P	Pn	01 56 41.3	-3.7
PATCX				*e*P	Pn	01 56 41.3	-3.7
PATCX				*e*P	Pn	01 56 41.6	-3.5
PATCX				*e*S	Sn	01 58 20.5	-4.0
TA01	Diego Aracena	9.02	11		Pn	01 56 43.9	-4.4
YJA	Yavi	9.29	40	*e*P	Pn	01 56 54.0	+1.5
LC01	Cunco	9.39	180	Pn	Pn	01 56 50.7	-2.7
PB08	IPOC Station P	9.64	16	*e*P	Pn	01 56 54.8	-2.3
PB08				*e*S	Sn	01 58 43.8	-2.4
PB11	IPOC Station P	9.90	13	*e*P	Pn	01 56 56.0	-4.5
PB11				*e*S	Sn	01 58 47.8	-4.4
PSGCX	Pisagua	9.98	10	*e*P	Pn	01 56 56.0	-5.6
PSGCX				*e*P	P	01 56 57.1	-4.5
PSGCX				*e*P	P	01 56 57.1	-4.5
PSGCX				*e*P	Pn	01 56 57.3	-4.3
LR03	Panguipulli	10.13	182		Pn	01 57 02.2	-1.4
PB12	IPOC Station P	10.92	8	*e*P	Pn	01 57 10.0	-4.5
PLCA	Paso Flores	11.28	175	Pn	Pn	01 57 18.1	-1.2
	comp=Z,3.7nm,0.3s,baz=341,slow=12,SNR=87						
PLCA				Lg	Lg	02 00 29.9	
	comp=Z,0.5nm,0.3s,baz=95,slow=23,SNR=2.0						
PLCA				LR	LR	02 01 58.0	
	comp=Z,152μm,19.9s,baz=350,slow=39						
PLCA	Paso Flores	11.28	175	⇑P	Pn	01 57 18.0	-1.4
PLCA	Paso Flores	11.28	175	*e*P	Pn	01 57 18.7	-0.6
PLCA	Paso Flores	11.28	175		Pn	01 57 17.7	-1.7
LL04	Puerto Octay	11.41	182	Pn	Pn	01 57 19.1	-1.9
LL03	Petrohue	11.64	182		Pn	01 57 22.1	-2.0
CPUP	Villa Florida	13.30	80	Pn	Pn	01 57 43.4	-3.5
	comp=Z,0.6nm,0.3s,baz=257,slow=12,SNR=30						
CPUP				Lg	Lg	02 01 25.6	
	comp=Z,9.4nm,0.3s,baz=153,slow=18,SNR=1.1						
CPUP				LR	LR	02 03 13.1	
	comp=Z,250μm,19.2s,baz=260,slow=39						
CPUP	Villa Florida	13.30	80	⇑P	Pn	01 57 43.2	-3.6
CPUP	Villa Florida	13.30	80	*e*P	Pn	01 57 45.7	-1.1
CPUP	Villa Florida	13.30	80	Pn	Pn	01 57 43.5	-3.3
ITQB	Itaqui	13.33	95	*e*P	Pn	01 57 46.3	-1.0
ITQB	Itaqui	13.33	95	Pn	Pn	01 57 45.8	-1.6
LPAZ	La Paz	13.59	16	Pn	Pn	01 57 48.9	-2.6
	comp=Z,2.3nm,0.3s,baz=201,slow=7.1,SNR=49						
LPAZ				Lg	Lg	02 01 38.0	
	comp=Z,0.5nm,0.3s,baz=117,slow=24,SNR=1.3						
LPAZ				LR	LR	02 04 20.7	
	comp=Z,365μm,19.2s,baz=193,slow=43						
LPAZ	La Paz	13.59	16	*e*P	Pn	01 57 48.6	-2.9
LPAZ	La Paz	13.59	16		Pn	01 57 48.3	-3.2
GO07	Milladeo Hill,	13.68	185		Pn	01 57 48.7	-3.2
PLTB	Pedras Altas	15.95	103	*e*P	Pn	01 58 20.9	-1.7
PLTB	Pedras Altas	15.95	103	Pn	Pn	01 58 19.3	-3.3
COYC	Coyhaique	16.06	180	⇑P	Pn	01 58 24.3	+0.4
COYC	Coyhaique	16.06	180		Pn	01 58 23.8	-0.2
CPSB	Cacapava Do Su	16.07	98	*e*P	Pn	01 58 22.0	-2.1
SIV	San Ignacio	16.74	39	Pn	Pn	01 58 27.0	-5.8
	comp=Z,2.0nm,0.3s,baz=241,slow=6.8,SNR=26						
SIV				LR	LR	02 05 44.9	
	comp=Z,476μm,19.0s,baz=224,slow=40						
AQDB	Aquidauana	17.22	62	*e*P	Pn	01 58 36.9	-2.0
AQDB	Aquidauana	17.22	62	Pn	Pn	01 58 36.1	-2.7
NNA	Nana	18.00	344	P	P	01 58 49.1	0.0
	comp=Z,1.3nm,0.3s,baz=173,slow=16,SNR=7.2						
NNA				LR	LR	02 04 04.8	
	comp=Z,139μm,21.7s,baz=167,slow=32						
NNA	Nana	18.00	344	*ce*P	P	01 58 52.0	+3.0
NNA				pmax	pmax		
	comp=Z,759nm,2.5s						
NNA	Nana	18.00	344	⇓P	P	01 58 51.3	+2.2
NNA	Nana	18.00	344	P	P	01 58 48.9	-0.1
PTLB	Pontes e Lacer	18.28	43	*e*P	Pn	01 58 49.5	-2.5
PTLB	Pontes e Lacer	18.28	43	Pn	Pn	01 58 48.8	-3.1
PTGB	Pitanga	18.32	80	*e*P	Pn	01 58 51.3	-1.1
TRCB	Terra Rica	18.56	73	P	Pn	01 58 55.3	0.0
TRCB				IAmb	IAmb	01 59 13.4	
	comp=Z,894nm,0.9s						
PP1B	Ponte de Pedra	19.58	57	*e*P	P	01 59 05.7	-0.7
VILB	Vilhena	19.73	36	*e*P	P	01 59 06.3	-1.7
VILB	Vilhena	19.73	36	P	P	01 59 06.9	-1.2
VILB				IAmb	IAmb	01 59 30.7	
	comp=Z,759nm,0.8s						
TER01	Tubaro-SC	19.97	93	*e*P	P	01 59 10.4	-0.3
SALV	Santo Antonio	20.15	51	*e*P	P	01 59 12.1	-0.5
PCMB	Pacaembu	20.22	72	*e*P	P	01 59 12.9	-0.5
ETMB	Extrema	20.29	16	*e*P	P	01 59 14.1	0.0
ETMB	Extrema	20.29	16	P	P	01 59 13.9	-0.2
ETMB				IAmb	IAmb	01 59 33.4	
	comp=Z,2μm,1.4s						
FRTB	Fartura	20.94	78	*e*P	P	01 59 20.0	-1.2
CZSB	Cruzeiro do Su	21.65	358	*e*P	P	01 59 30.0	+1.2
CZSB	Cruzeiro do Su	21.65	358	P	P	01 59 29.4	+0.6
CZSB				IAmb	IAmb	01 59 58.2	
	comp=Z,1μm,1.0s						
ITRB	Iturama	21.87	68	*e*P	P	01 59 30.1	-1.2
SAML	Samuel	22.02	24	P	P	01 59 32.0	-0.8
SAML				pmax	pmax		
	comp=Z,9μm,1.1s						
SAML				MLR	MLR		
	comp=Z,261μm,18.0s						
SAML	Samuel	22.02	24	P	P	01 59 32.0	-0.8
SAML				IAMs_20	IAMs_20	02 08 50.1	

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      comp=Z,261µm,18.0s
PET01 Itanhaem-SP      22.58  83 eP       P         01 59 37.4 -1.5
PDRB  Porto dos Gac    22.73  42 eP       P         01 59 38.8 -1.7
BB19B Bebedouro        22.74  74 eP       P         01 59 38.6 -1.9
RCLB  Rio Claro- Sao   23.02  78 eP       P         01 59 41.7 -1.8
ARAG  Araguaiana, MT   23.04  58 eP       P         01 59 41.0 -2.7
ATAH  Atahualpa        23.05 343  P       P         01 59 45.8 +1.6
      comp=Z,20nm,0.8s,baz=166,slow=7.6,SNR=22
ATAH                              LR      LR        02 07 03.5
      comp=Z,114µm,20.3s,baz=184,slow=32
VAO   Valinhos         23.29  80 eP       P         01 59 45.8 -0.5
MG02  Cerro Sombrero   23.36 176  P       P         01 59 45.9 -0.8
CLDB  Colider          23.87  42 eP       P         01 59 49.8 -2.2
PARB  Paraibuna        24.32  82 eP       P         01 59 54.4 -1.9
EFI   East Falkland    24.46 159 i P      P         01 59 56.4 -0.8
EFI                               pmax    pmax
      comp=Z,628nm,1.6s
EFI                               MLR     MLR
      comp=Z,94µm,15.0s
EFI   East Falkland    24.46 159 ⇑P       P         01 59 57.2  0.0
EFI   East Falkland    24.46 159  P       P         01 59 55.8 -1.4
EFI                               IAmb    IAmb      02 00 23.5
      comp=Z,521nm,1.1s
IPMB  Ipameri, GO      24.50  67 eP       P         01 59 55.6 -2.3
TBTG  Tabatinga, AM    25.23   5⇑eP       P         02 00 02.7 -1.6
TBTG  Tabatinga, AM    25.23   5 eP       P         02 00 04.4  0.0
TBTG  Tabatinga, AM    25.23   5  P       P         02 00 03.6 -0.7
USHA  Ushuaia          25.46 175  P       P         02 00 07.0 +0.9
      comp=Z,166nm,0.9s,baz=2.1,slow=8.5,SNR=23
MG01  Puerto William   25.62 174          P         02 00 06.2 -1.4
MG01                              IAmb    IAmb      02 01 03.7
      comp=Z,535nm,1.1s
MAN01 Angra dos Reis   25.92  82 eP       P         02 00 10.1 -0.6
SNDB  Serra Nova Dou   25.93  52 eP       P         02 00 10.0 -0.8
BSCB  Bom Sucesso      25.94  77 eP       P         02 00 10.6 -0.4
BDFB  Brasilia         25.97  63  P       P         02 00 10.2 -1.0
      comp=Z,821nm,1.1s,baz=233,slow=9.4,SNR=212
BDFB                              LR      LR        02 10 54.3
      comp=Z,123µm,19.9s,baz=240,slow=38
BDFB  Brasilia         25.97  63  P       P         02 00 10.5 -0.8
BDFB                              pmax    pmax
      comp=Z,2µm,1.4s
BDFB  Brasilia         25.97  63  P       P         02 00 10.5 -0.8
VAS01 Vassouras-RJ     26.58  81 eP       P         02 00 15.6 -1.1
NPGB  Novo Progresso   27.24  38 eP       P         02 00 21.3 -1.4
DUB01 Friburgo-RJ      27.57  81 eP       P         02 00 24.1 -1.5
PEXB  Peixe            27.96  57 eP       P         02 00 28.8 -0.4
DIAM  Diamantina, MG   28.07  73 eP       P         02 00 29.8 -0.5
MACA  Manacapuru-AM    28.27  24 eP       P         02 00 30.8 -1.1
MACA  Manacapuru-AM    28.27  24  P       P         02 00 30.9 -0.9
MACA                              IAmb    IAmb      02 01 28.1
      comp=Z,278nm,0.9s
CAM01 Campos-RJ        28.28  81 eP       P         02 00 31.1 -0.8
MC01  Montes Claros    28.64  70 eP       P         02 00 34.4 -0.8
JANB  Januaria         29.22  67 eP       P         02 00 39.5 -0.9
ITTB  Itaituba         29.32  35 eP       P         02 00 39.9 -1.2
ALF01 Guarapari-ES     29.55  80 eP       P         02 00 42.3 -0.8
PTLC  Puerto Leguiza   29.61 354⇑eP       P         02 00 39.6 -4.1
SJMB  Sao Joao De Ma   29.97  76 eP       P         02 00 46.3 -0.6
OTAV  Otavalo          30.20 347  P       P         02 00 52.0 +2.6
OTAV  Otavalo          30.20 347⇑eP       P         02 00 51.2 +1.7
OTAV  Otavalo          30.20 347 ⇑P       P         02 00 51.3 +1.9
BSFB  Barra de Sao F   30.20  77 eP       P         02 00 48.1 -0.8
CUSE  Cuicocha Este    30.25 347⇑eP       P         02 00 50.2 +0.3
PAC1  Pacto, Paraso    30.30 346⇑eP       P         02 00 51.4 +1.4
SDBA  SAO DESIDERIO    30.31  62 eP       P         02 00 49.3 -0.7
RIB01 Linhares ES      30.37  78 eP       P         02 00 50.1 -0.4
TULM  Tulcn-Chalpat    30.54 348 eP       P         02 00 53.2 +0.7
SMTB  Santa Maria do   30.69  53 eP       P         02 00 52.9 -0.4
PTGA  Pitinga          30.79  24  P       P         02 00 53.6 -0.5
      comp=Z,130nm,1.1s,baz=201,slow=9.5,SNR=67
PTGA                              LR      LR        02 15 47.3
      comp=Z,98µm,19.8s,baz=196,slow=41
PTGA  Pitinga          30.79  24⇑eP       P         02 00 49.1 -5.0
PTGA  Pitinga          30.79  24  P       P         02 00 52.6 -1.5
CPAS1 Pasto            30.93 349 eP       P         02 01 07.2 +11
GCUF  Volcan Galeras   30.97 349⇑eP       P         02 00 58.4 +2.2
PRPB  Parauapebas      31.20  46 eP       P         02 00 56.7 -1.1
NAN01 Guarapari, ES    31.26  75 eP       P         02 00 56.9 -1.4
MACC  Macarena, Meta   31.50 356⇑eP       P         02 00 58.5 -1.9
GARC  Garzon, Huila    31.67 353 eP       P         02 01 01.8 -0.4
SOTA  Rioblanco        31.75 351⇑eP       P         02 01 04.0 +0.8
TUMC  Tumaco           31.80 347 eP       P         02 01 03.5 +0.5
PCON  Cinco Dias       31.92 352 eP       P         02 01 05.5 +0.8
GUA01 Guaratinga, BA   32.12  74 eP       P         02 01 05.5 -0.4
BETC  Betania          32.16 353 eP       P         02 01 08.4 +2.2
MALB  Monte Alegre     32.21  35 eP       P         02 01 05.9 -0.8
MARP  Paez Belalcaza   32.37 352 eP       P         02 01 07.2 -1.2
RPN   Rapa Nui         32.92 265 LR       LR        02 11 01.2
      comp=Z,154µm,18.5s,baz=84,slow=30
RPN   Rapa Nui         32.92 265 IAMs_20  IAMs_20   02 10 39.3
      comp=Z,187µm,22.0s
CMC01 Camacan, BA      32.97  72 eP       P         02 01 12.7 -0.7
VA02  Isla de Pascua   33.00 265  P       P         02 01 09.4 -4.1
VA02                              IAmb    IAmb      02 01 36.7
      comp=Z,548nm,1.6s
NBIT  Itapeh - BA      33.26  71 eP       P         02 01 15.7 -0.2
ORTC  Ortega, Tolima   33.35 354⇑eP       P         02 01 17.5 +0.8
VILC  Villavicencio,   33.44 357 eP       P         02 01 19.1 +1.5
PTGC  Puerto Gaitan,   33.49 360⇑eP       P         02 01 14.2 -3.7
BOAV  Boa Vista        33.53  21 eP       P         02 01 18.4 +0.3
BOAV  Boa Vista        33.53  21  P       P         02 01 17.4 -0.8
BOAV                              IAmb    IAmb      02 01 25.5
      comp=Z,249nm,1.3s
YOTC  Yotoco, Valle    33.54 352 eP       P         02 01 17.5 -1.0
GDU01 Guandu, BA       33.78  69 eP       P         02 01 19.1 -1.4
ANIL  Santa Ana        33.94 354 eP       P         02 01 22.2 +0.1
CHIC  Chingaza         33.96 357⇑eP       P         02 01 20.8 -1.6
ROSC  El Rosal         34.20 356  P       P         02 01 26.6 +2.2
      comp=Z,39nm,1.0s,baz=148,slow=3.7,SNR=15
ROSC                              LR      LR        02 15 18.9
      comp=Z,95µm,19.5s,baz=208,slow=36
ROSC  El Rosal         34.20 356  P       P         02 01 25.5 +1.0
ROSC                              pmax    pmax
      comp=Z,378nm,1.3s
ROSC  El Rosal         34.20 356 eP       P         02 01 21.0 -3.4
ROSC  El Rosal         34.20 356  P       P         02 01 25.5 +1.0
ROSC                              IAmb    IAmb      02 01 47.2
      comp=Z,378nm,1.3s
CROSA EL ROSAL, CUND   34.21 356 eP       P         02 01 27.6 +3.1
PLMC  San Jos del P    34.44 352⇑eP       P         02 01 24.1 -2.2
MAPC  Malpelo          34.56 343⇑eP       P         02 01 25.7 -1.5
MCPB  Macapa, AP       34.62  37 eP       P         02 01 26.9 -0.8
PIZC  Pizarro, Choco   34.64 350 eP       P         02 01 29.0 +1.1
GUY2C Guyana, Caldas   34.66 354⇑eP       P         02 01 29.0 +0.4
NBPN  Ponto Novo - B   34.92  65 eP       P         02 01 29.0 -1.3
NORC  Norcasia         34.96 355⇑eP       P         02 01 30.6  0.0
SPBC  San Pablo de B   34.99 356⇑eP       P         02 01 29.8 -1.2
RUSC  La Rusia         35.19 358⇑eP       P         02 01 30.6 -2.5
TMAB  Tom-Au,PA,Br     35.22  44 eP       P         02 01 32.6 -0.2
CBOC  Ciudad Bolivar   35.36 353⇑eP       P         02 01 35.6 +1.3
HOPE  Hope Point       35.60 144  P       P         02 01 36.0 +0.3
HOPE                              pmax    pmax
      comp=Z,405nm,1.6s
HOPE                              MLR     MLR
      comp=Z,57µm,19.0s
HOPE  Hope Point       35.60 144  P       P         02 01 36.0 +0.3
HOPE                              IAmb    IAmb      02 01 46.4
      comp=Z,405nm,1.6s
HELC  Santa Helena     35.63 354⇑eP       P         02 01 33.9 -2.9
PMSA  Palmer Station   35.66 174  P       P         02 01 36.9 +0.8
      comp=Z,150nm,1.2s,baz=0.7,slow=6.8,SNR=30
PMSA                              LR      LR        02 16 00.5
      comp=Z,44µm,18.1s,baz=345,slow=36
PMSA  Palmer Station   35.66 174 ⇑P       P         02 01 36.7 +0.6
PMSA  Palmer Station   35.66 174 eP       P         02 01 37.8 +1.7
PMSA  Palmer Station   35.66 174  P       P         02 01 36.1  0.0
TAMC  Tame, Arauca     35.71   0⇑eP       P         02 01 35.6 -1.5
BARC  Barichara        35.88 358 eP       P         02 01 36.4 -2.4
ELOV  Elorza           36.35   4⇑eP       P         02 01 41.8 -0.8
BRRC  Barranca, Sant   36.42 357⇑eP       P         02 01 38.9 -4.2
DBBC  Dabeiba          36.52 353⇑eP       P         02 01 45.5 +1.4
PAMC  Pamplona, Colo   36.62 359 eP       P         02 01 43.0 -2.4
NBLA  Lagarto - SE     36.75  67 eP       P         02 01 44.4 -1.6
PTAC  Punta Ardita,    36.85 350⇑eP       P         02 01 49.6 +2.8
ZARC  Zaragoza, Cauc   36.87 355 eP       P         02 01 44.6 -2.3
ZARC  Zaragoza, Cauc   36.87 355  P       P         02 01 46.2 -0.7
ZARC                              IAmb    IAmb      02 01 59.1
      comp=Z,397nm,1.4s
UREC  San Jos de Ur    37.18 354⇑eP       P         02 01 47.9 -1.7
ROSB  Rosrio           37.37  50 eP       P         02 01 50.2 -1.0
OCAC  Ocana            37.52 358⇑eP       P         02 01 49.6 -3.1
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SOCV  Socops           37.56   2⇑eP       P         02 01 48.1 -4.7
SMLC  San Martn de     38.12 357⇑eP       P         02 01 57.0 -0.5
NBPS  Pedro II - PI    38.15  55 eP       P         02 01 57.4 -0.6
SDV   Santo Domingo    38.16   2 LR       LR        02 19 05.8
      comp=Z,91µm,19.5s,baz=200,slow=38
SDV   Santo Domingo    38.16   2⇑eP       P         02 01 58.0 -0.1
SDV   Santo Domingo    38.16   2 eP       P         02 01 57.8 -0.3
SDV   Santo Domingo    38.16   2  P       P         02 01 57.2 -1.0
SDV   Santo Domingo    38.16   2 IAMs_20  IAMs_20   02 20 19.3
      comp=Z,98µm,18.0s
NBMA  Muriti-CE        38.17  61 eP       P         02 01 57.6 -0.5
MOTC  Monteria, Cord   38.21 354⇑eP       P         02 01 54.5 -3.8
MOTC  Monteria, Cord   38.21 354  P       P         02 01 57.5 -0.8
CAPC  Capurgana        38.25 351⇑eP       P         02 01 57.0 -1.7
LCBC  Los crdobas,     38.35 353 eP       P         02 01 59.4 -0.1
BAUV  El Baul          38.38   6 eP       P         02 01 57.0 -2.8
NBAN  Anadia - AL      38.73  67 eP       P         02 02 02.2 -0.6
NBPB  Pedra_Branca-C   38.73  58 eP       P         02 02 02.6 -0.2
LL1C  La Loma 1 Cana   38.83 357⇑eP       P         02 01 59.6 -3.9
LL6C  La Loma 6 Bece   39.01 358⇑eP       P         02 02 01.9 -3.1
LL5C  La Loma 5 El P   39.04 357⇑eP       P         02 02 04.4 -0.9
MDP   Montagnes des    39.06  31 LR       LR        02 19 17.9
      comp=Z,178µm,18.5s,baz=201,slow=38
BCIP  Isla Barro Col   39.17 348  P       P         02 02 04.8 -1.6
BCIP                              pmax    pmax
      comp=Z,207nm,1.2s
BCIP  Isla Barro Col   39.17 348 eP       P         02 02 06.1 -0.3
BCIP  Isla Barro Col   39.17 348 ⇓P       P         02 02 08.3 +2.0
BCIP  Isla Barro Col   39.17 348  P       P         02 02 04.8 -1.6
ARGC  Ariguani, Magd   39.17 356⇑eP       P         02 02 01.9 -4.5
SJCC  San Jacinto, C   39.27 355⇑eP       P         02 02 05.2 -2.1
SJCC  San Jacinto, C   39.27 355  P       P         02 02 06.6 -0.7
SJCC                              IAmb    IAmb      02 02 20.8
      comp=Z,572nm,1.5s
BRU2  Volcan           39.44 343 eP       P         02 02 09.6 +0.7
NBLV  Livramento - P   39.60  63 eP       P         02 02 09.4 -0.7
POTG  Potrero Grande   39.80 343 eP       P         02 02 13.5 +1.8
NBMO  Morrinhos-CE     39.90  55 eP       P         02 02 11.2 -1.4
SRBA  San Rafael, Bu   40.03 342  P       P         02 02 15.5 +1.8
PCRV  Puerto La Cruz   40.05  11 LR       LR        02 18 58.7
      comp=Z,155µm,19.9s,slow=36
NBRF  Rio Formoso -    40.22  67 eP       P         02 02 14.2 -1.0
PEZE  Perez Zeledon,   40.26 342 eP       P         02 02 18.9 +3.3
NBPA  Parau_RN         40.45  61 eP       P         02 02 16.6 -0.6
SMRC  Santa Marta, M   40.47 357⇑eP       P         02 02 17.5 +0.4
NBCL  Cascavel-CE      40.56  58 eP       P         02 02 17.6 -0.4
RIMA  Rio Macho        40.68 342 eP       P         02 02 20.6 +1.4
LCR2  La Lucha 2       40.69 342 eP       P         02 02 20.7 +1.4
URIC  Uribia, Colomb   40.94 360⇑eP       P         02 02 15.1 -6.0
URIC  Uribia, Colomb   40.94 360  P       P         02 02 18.6 -2.5
HDC   Heredia          40.97 342 eP       P         02 02 25.3 +3.8
LAFE  Finca La Fe, P   41.01 340 eP       P         02 02 22.2 +0.6
SRA1  San Ramn         41.15 341 eP       P         02 02 25.3 +2.4
TRN   Trinidad (W)     41.17  16 eP       P         02 02 19.6 -3.3
INDI  Punta indio, G   41.25 339 eP       P         02 02 26.4 +2.8
NBPV  Pedro Velho      41.45  64 eP       P         02 02 25.0 -0.4
JTS   Las Juntas de    41.48 340  P       P         02 02 26.6 +1.0
      comp=Z,20nm,0.9s,baz=219,slow=7.1,SNR=11
JTS                               LR      LR        02 16 31.0
      comp=Z,45µm,19.7s,baz=228,slow=32
JTS   Las Juntas de    41.48 340 i P      P         02 02 27.1 +1.5
JTS                               pmax    pmax
      comp=Z,194nm,1.6s
JTS                               MLR     MLR
      comp=Z,46µm,15.0s
JTS   Las Juntas de    41.48 340 eP       P         02 02 26.9 +1.3
JTS   Las Juntas de    41.48 340⇑eP       P         02 02 24.7 -0.9
JTS   Las Juntas de    41.48 340 ⇑P       P         02 02 27.8 +2.2
JTS   Las Juntas de    41.48 340  P       P         02 02 26.9 +1.3
HATO  Hato, Curacao    41.52   4 IAMs_20  IAMs_20   02 22 46.3
      comp=Z,70µm,19.0s
ARE1  Arenal 1         41.58 341⇑eP       P         02 02 30.2 +3.8
CEDE  Laguna Cedeo     41.60 341 eP       P         02 02 29.0 +2.4
COVE  Coope Vega, Sa   41.73 341 eP       P         02 02 29.1 +1.5
VMAR  Armenia, Volca   42.03 340 eP       P         02 02 32.1 +2.0
HZTE  Horizontes, Gu   42.08 340 eP       P         02 02 32.6 +2.2
BUEV  Buena Vista      42.10 340 eP       P         02 02 33.0 +2.3
GRFF  Grenada Fort F   42.45  15 eP       P         02 02 31.2 -2.2
GRGR  Grenville        42.54  15 eP       P         02 02 33.1 -1.1
GRGR  Grenville        42.54  15  P       P         02 02 32.2 -2.0
GRGR                              IAMs_20 IAMs_20   02 22 28.9
      comp=Z,100µm,18.0s
ACON  Acoyapa          43.14 341  P       P         02 02 37.4 -1.6
PRVC  Isla de Provid   43.57 347 eP       P         02 02 41.4 -1.1
BOAB  BOACO BROADBAN43.74 340 ⇑P       P         02 02 44.2 +0.4
BOAB  BOACO BROADBAN43.74 340 IAMs_20  IAMs_20   02 17 41.4
      comp=Z,87µm,20.0s
BBGH  Gun Hill         44.03  17 eP       P         02 02 44.1 -2.1
SLBI  Saint Lucia, B   44.53  15 eP       P         02 02 43.3 -6.9
MPOM  Morne Pois Mar   44.96  15 eP       P         02 02 45.1 -8.5
MPOM  Morne Pois Mar   44.96  15 IAmb     IAmb      02 03 10.6
      comp=Z,388nm,1.1s
BIM   Bigot            44.98  15 eP       P         02 02 50.6 -3.3
BIM   Bigot            44.98  15  P       P         02 02 51.7 -2.2
FDF   Fort de France   45.17  15  P       P         02 02 56.7 +1.3
FDF   Fort de France   45.17  15 eP       P         02 02 50.6 -4.8
FDF   Fort de France   45.17  15 ⇑P       P         02 02 53.1 -2.3
FDF   Fort de France   45.17  15 IAmb     IAmb      02 03 08.0
      comp=Z,294nm,1.2s
ILAM  Ilet Lapin Mar   45.28  15 eP       P         02 02 53.0 -3.1
MDN   Morne-Daniel     45.69  14 eP       P         02 02 55.5 -3.9
TGUH  Tegucigalpa,Un   45.74 339 eP       P         02 02 59.7 -0.3
TGUH  Tegucigalpa,Un   45.74 339 ⇑P       P         02 03 01.0 +0.9
TGUH  Tegucigalpa,Un   45.74 339 IAmb     IAmb      02 03 35.6
      comp=Z,212nm,1.0s
DSLB  Salisbury        45.80  14 eP       P         02 02 52.1 -8.2
TDBA  Terre de Bas,    46.15  14 eP       P         02 02 59.2 -3.9
MAGL  Barre de l'ile   46.32  14 eP       P         02 02 55.2 -9.2
CBE   Ff, Capester     46.37  14 eP       P         02 03 01.5 -3.3
ANBD  Bethesda, Anti   47.29  13 eP       P         02 03 02.9 -9.0
SKI   Saint Kitts      47.38  12 eP       P         02 03 10.4 -2.3
SEUS  St. Eustatius    47.49  12 eP       P         02 03 09.8 -3.7
OBIP  Obispado Ponce   47.53   7  P       P         02 03 12.5 -1.3
PDPR  Patillas Dam,    47.57   8 IAmb     IAmb      02 03 32.0
      comp=Z,198nm,1.1s
SABA  Saba             47.57  11 eP       P         02 03 11.6 -2.6
SABA  Saba             47.57  11 IAMs_20  IAMs_20   02 23 54.0
      comp=Z,105µm,20.0s
SJG   San Juan         47.64   7  P       P         02 03 13.8 -0.9
      comp=Z,47nm,0.7s
SJG                               LR      LR        02 24 10.1
      comp=Z,35µm,21.1s,baz=178,slow=37
SJG   San Juan         47.64   7⇑eP       P         02 03 12.3 -2.4
SJG   San Juan         47.64   7 ⇑P       P         02 03 13.0 -1.7
SJG   San Juan         47.64   7  P       P         02 03 12.4 -2.2
SJG                               IAmb    IAmb      02 03 24.4
      comp=Z,216nm,1.1s
MTDJ  Mount Denham     47.73 353 eP       P         02 03 12.1 -3.4
MTDJ  Mount Denham     47.73 353 ⇑P       P         02 03 16.5 +1.0
ANWB  Willy Bob        47.89  13 eP       P         02 03 09.8 -6.8
ANWB  Willy Bob        47.89  13  P       P         02 03 13.5 -3.1
ANWB                              IAMs_20 IAMs_20   02 26 38.4
      comp=Z,51µm,18.0s
SMRT  St. Maarten      48.02  11 eP       P         02 03 14.2 -3.4
SMRT  St. Maarten      48.02  11 IAmb     IAmb      02 03 26.1
      comp=Z,194nm,1.1s
SMRT                              IAMs_20 IAMs_20   02 23 55.9
      comp=Z,91µm,21.0s
SDDR  Presa de Saban   48.19   1⇑eP       P         02 03 15.1 -3.9
SDDR  Presa de Saban   48.19   1 ⇑P       P         02 03 19.1 +0.1
SDDR  Presa de Saban   48.19   1 IAMs_20  IAMs_20   02 26 09.9
      comp=Z,82µm,19.0s
GTBY  Guantanamo Bay   49.22 356 eP       P         02 03 27.6 +0.8
GTBY  Guantanamo Bay   49.22 356 ⇓P       P         02 03 27.6 +0.8
GTBY  Guantanamo Bay   49.22 356  P       P         02 03 26.0 -0.8
GTBY                              IAmb    IAmb      02 03 44.0
      comp=Z,207nm,1.1s
CCIG  Comitan          49.50 334  P       P         02 03 27.2 -2.1
CCIG                              IAmb    IAmb      02 04 01.1
      comp=Z,290nm,1.3s
GRTK  Grand Turk       50.70   1 IAMs_20  IAMs_20   02 27 56.6
      comp=Z,56µm,19.0s
CMIG  Matias Romero    51.32 331  P       P         02 03 44.0 +1.1
      comp=Z,23nm,0.8s,baz=149,slow=4.4,SNR=20
CMIG                              LR      LR        02 20 34.7
      comp=Z,61µm,21.6s,baz=141,slow=30
SOR   Soroa            53.05 347  P       P         02 03 53.5 -2.1
SOR                               pmax    pmax
      comp=Z,486nm,1.7s
SOR   Soroa            53.05 347  P       P         02 03 53.5 -2.1
SOR                               IAmb    IAmb      02 04 46.0
      comp=Z,486nm,1.7s
TLIG  Tlapa            53.36 328 IAmb     IAmb      02 04 20.9
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      comp=Z,356nm,1.6s
VNA3  Neumayer Olymp   53.52 159  P       P         02 03 58.8 +0.2
VNA3                              S       S         02 11 48.9 +17
VNA1  Neumayer--Stat   53.81 158  P       P         02 04 00.5 -0.1
VNA2  Neumayer--Watz   54.15 159  P       P         02 04 02.5 -0.7
      baz=285,slow=8.1
VNA2                              S       S         02 11 40.0 -0.4
SNAA  Sanae            55.74 159  P       P         02 04 14.0 -0.8
SNAA                              S       S         02 12 02.1 +0.3
SNAA  Sanae            55.74 159  P       P         02 04 14.1 -0.7
      comp=Z,141nm,1.1s,baz=279,slow=5.5,SNR=140
SNAA  Sanae            55.74 159 i P      P         02 04 14.7 -0.1
SNAA                              pmax    pmax
      comp=Z,554nm,1.4s
SNAA                              MLR     MLR
      comp=Z,21µm,16.0s
SNAA  Sanae            55.74 159 ⇑P       P         02 04 14.0 -0.8
SNAA  Sanae            55.74 159  P       P         02 04 13.6 -1.2
SNAA                              IAmb    IAmb      02 04 25.9
      comp=Z,370nm,1.2s
ASCN  Ascension        57.98  80  P       P         02 04 30.6 -0.8
DWPF  Disney Wildern   57.98 350  P       P         02 04 31.0  0.0
      baz=170
DWPF                              S       S         02 12 30.3 -1.7
      baz=170
DWPF  Disney Wildern   57.98 350 IAMs_20  IAMs_20   02 33 35.1
      comp=Z,45µm,19.0s
QSPA  South Pole Qui   60.74 180  P       P         02 04 49.1 -0.8
QSPA                              IAmb    IAmb      02 05 31.9
      comp=Z,210nm,1.1s
H06E1 SOCORRO T-PHAS60.96 317  T       T         03 11 15.0
      SNR=7.4
TIGA  Tifton           61.59 349  P       P         02 04 55.5 -0.3
      baz=169
TIGA                              S       S         02 13 15.9 -2.6
      baz=169
TIGA  Tifton           61.59 349 IAmb     IAmb      02 05 19.2
      comp=Z,305nm,1.4s
SHEL  Horse Pasture    61.81  93  P       P         02 04 57.5 -0.3
SHEL                              pmax    pmax
      comp=Z,920nm,1.7s
SHEL                              MLR     MLR
      comp=Z,30µm,18.0s
SHEL  Horse Pasture    61.81  93 ⇓p       P         02 04 58.9 +1.0
SHEL  Horse Pasture    61.81  93  P       P         02 04 57.5 -0.3
255A  Hazlehurst       61.88 350 IAmb     IAmb      02 05 21.9
      comp=Z,305nm,1.6s
BRAL  Brewton          62.01 345  P       P         02 04 58.8 +0.2
      baz=165
BRAL                              S       S         02 13 21.8 -1.9
      baz=165
RGRS  Roger Stewart    62.54 352  P       P         02 05 00.5 -1.7
250A  Grady            62.62 346  P       P         02 05 01.5 -1.2
154A  Montrose         62.66 349  P       P         02 05 01.9 -1.0
NHSC  New Hope         62.73 352  P       P         02 05 04.0 +0.5
      baz=172,SNR=5.2
NHSC                              S       S         02 13 32.4 -0.4
      baz=172
833A  Chaparral WMA,   63.19 333  P       P         02 05 07.9 +1.3
      baz=153,SNR=24
833A                              S       S         02 13 40.4 +1.7
      baz=153
HKT   Hockley          63.34 337  P       P         02 05 08.1 +0.6
HKT                               pmax    pmax
      comp=Z,334nm,1.6s
HKT   Hockley          63.34 337 ⇑P       P         02 05 08.5 +1.0
HKT   Hockley          63.34 337  P       P         02 05 08.1 +0.6
HKT                               IAmb    IAmb      02 05 32.4
      comp=Z,334nm,1.6s
Y60A  Bolivia          63.42 354 IAmb     IAmb      02 05 31.8
      comp=Z,242nm,1.1s
Y58A  Scranton         63.47 353 IAmb     IAmb      02 05 32.6
      comp=Z,119nm,0.9s
GOGA  Godfrey          63.50 349  P       P         02 05 08.1 -0.4
      baz=169
GOGA                              S       S         02 13 37.4 -4.9
      baz=169
GOGA  Godfrey          63.50 349 IAmb     IAmb      02 05 32.4
      comp=Z,176nm,1.6s
Y57A  Sumter           63.66 352 IAmb     IAmb      02 05 33.9
      comp=Z,235nm,1.6s
VBMS  Vicksburg        63.85 342  P       P         02 05 12.0 +1.1
      baz=162,SNR=8.1
VBMS                              S       S         02 13 48.3 +1.6
      baz=162
Y52A  Lilburn          64.04 349 IAmb     IAmb      02 05 36.1
      comp=Z,180nm,1.4s
HODGE Hodges           64.12 351 IAmb     IAmb      02 05 36.9
      comp=Z,185nm,1.7s
SACV  Santiago Islan   64.24  53  P       P         02 05 13.2 -0.6
SACV                              IAmb    IAmb      02 05 34.4
      comp=Z,175nm,1.1s
SACV                              IAMs_20 IAMs_20   02 30 23.7
      comp=Z,50µm,21.0s
SLBS  Sierra La Lagu   64.26 321 ⇓P       P         02 05 17.1 +3.2
BIRD  Birdtown, Kers   64.29 352 IAmb     IAmb      02 05 35.2
      comp=Z,202nm,1.7s
CNNC  Cliffs of the    64.62 355  P       P         02 05 16.4 +0.5
      baz=174
CNNC                              S       S         02 13 56.1 -0.1
      baz=174
CNNC  Cliffs of the    64.62 355  P       P         02 05 15.0 -0.8
CNNC                              IAMs_20 IAMs_20   02 36 43.0
      comp=Z,33µm,19.0s
NATX  Nacogdoches      64.62 339  P       P         02 05 17.1 +1.2
      baz=158
NATX                              S       S         02 13 55.6 -0.7
      baz=158
PAULI Pauline          64.63 351 IAmb     IAmb      02 05 33.0
      comp=Z,137nm,1.4s
435B  Jarrell          64.71 336  P       P         02 05 17.6 +1.0
      baz=156
435B                              S       S         02 13 57.0 -0.6
      baz=156
435B  Jarrell          64.71 336 IAmb     IAmb      02 05 34.4
      comp=Z,182nm,1.4s
HPIG                   64.73 327 IAmb     IAmb      02 05 35.0
      comp=Z,130nm,1.2s
W57A  Gilead           64.74 353 IAmb     IAmb      02 05 33.5
      comp=Z,193nm,1.6s
LPIG  La Paz           64.79 321  P       P         02 05 17.8 +0.6
      comp=Z,9.0nm,0.3s,baz=230,slow=8.0,SNR=0.9
X51A  Calhoun          64.86 348 IAmb     IAmb      02 05 30.5
      comp=Z,215nm,1.1s
KMSC  Kings Mountain   64.89 352  P       P         02 05 17.4 -0.2
      baz=171
KMSC                              S       S         02 13 57.0 -2.6
      baz=171
FPAL  Fort Paine       64.97 348 IAmb     IAmb      02 05 46.1
      comp=Z,116nm,1.2s
Y45A  Yeager Farm, C   65.17 344  P       P         02 05 19.6 +0.1
JCT   Junction City    65.27 334  P       P         02 05 21.2 +1.0
      baz=154,SNR=16
JCT                               S       S         02 14 04.5 -0.1
      baz=154
JCT   Junction City    65.27 334 ⇑P       P         02 05 21.2 +1.0
Z41A  Richland Creek   65.45 341  P       P         02 05 22.5 +1.2
      baz=160,SNR=7.6
Z41A                              S       S         02 14 07.8 +1.2
      baz=160
V53A  Saluda           65.61 350 IAmb     IAmb      02 05 43.7
      comp=Z,176nm,1.4s
CPCT  Cooper Cave      65.66 349 IAmb     IAmb      02 05 47.0
      comp=Z,272nm,1.4s
U59A  Littleton        65.72 355 IAmb     IAmb      02 06 14.6
      comp=Z,299nm,1.5s
TKL   Tuckaleechee C   65.74 349  P       P         02 05 23.2  0.0
      comp=Z,19nm,0.8s,baz=163,slow=7.2,SNR=30
WHTX  Lake Whitney,    65.77 336  P       P         02 05 24.2 +0.8
      baz=156,SNR=7.0
WHTX                              S       S         02 14 11.0 +0.5
      baz=156
WHTX  Lake Whitney,    65.77 336  P       P         02 05 23.4 +0.1
CCAR  Cane Creek       65.79 342 IAmb     IAmb      02 05 38.9
      comp=Z,234nm,1.2s
TXAR  Lajitas Array    65.86 330  P       P         02 05 24.8 +0.6
      comp=Z,12nm,0.8s,baz=151,slow=8.7,SNR=46
TXAR                              LR      LR        02 30 27.2
      comp=Z,55µm,18.1s,baz=0.0,slow=33
TXAR                              PKP2bc            02 34 00.6
      comp=Z,4.9nm,1.3s,baz=262,slow=1.9,SNR=3.6
TXAR  Lajitas Array    65.86 330  P       P         02 05 24.4 +0.2
TXAR  Lajitas Array    65.86 330  P       P         02 05 24.4 +0.2
TX31  Lajitas Ar. Si   65.86 330 ⇑P       P         02 05 25.0 +0.8
TX31                             ⇑s                 02 05 34.9
TX31                             ⇑s                 02 05 35.1
TX32  Lajitas Array    65.86 330 IAmb     IAmb      02 05 50.5
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	comp=Z,346nm,2.0s						
V52A	Sevierville	65.90	350	IAmb	IAmb	02 05 52.7	
	comp=Z,168nm,1.1s						
PLAL	Pickwick Lake	65.90	346	IAmb	IAmb	02 05 48.1	
	comp=Z,258nm,1.6s						
WLAR	White Oak Lake	65.94	341	P	P	02 05 25.1	+0.6
V51A	Loudon	65.98	349	IAmb	IAmb	02 05 52.8	
	comp=Z,140nm,1.2s						
Z38A	Mt. Pleasant	66.11	339	P	P	02 05 26.6	+1.0
U54A	Nelsons Funny	66.31	351	IAmb	IAmb	02 05 55.5	
	comp=Z,94nm,0.8s						
T57A	Hurt	66.48	354	IAmb	IAmb	02 05 49.6	
	comp=Z,211nm,1.8s						
TZTN	Tazewell	66.58	350	P	P	02 05 28.2	-0.3
	baz=169,SNR=8.0						
TZTN				S	S	02 14 16.6	-3.6
	baz=169						
TZTN	Tazewell	66.58	350	IAmb	IAmb	02 05 52.7	
	comp=Z,195nm,1.4s						
CLTN	Cedars of Leba	66.61	347	P	P	02 05 28.4	-0.3
X40A	Basin Creek Fa	66.62	341	P	P	02 05 29.7	+0.9
	baz=160						
X40A				S	S	02 14 19.6	-1.0
	baz=160						
TAOE	Nuku Hiva Isla	66.75	273	*e*S	S	02 14 23.2	-0.2
	comp=Z,128µm,27.6s						
TAOE	Nuku Hiva Isla	66.75	273	*e*LR	LR	02 25 29.3	
	comp=Z,115µm,27.7s,baz=126						
BLA	Blacksburg	66.82	353	P	P	02 05 30.2	+0.1
	baz=172						
BLA				S	S	02 14 22.2	-0.9
	baz=172						
BLA	Blacksburg	66.82	353	IAmb	IAmb	02 05 46.6	
	comp=Z,142nm,1.5s						
MIAR	Mount Ida	66.88	341	P	P	02 05 30.8	+0.4
	baz=160,SNR=14						
MIAR				S	S	02 14 24.3	+0.4
	baz=160						
MIAR	Mount Ida	66.88	341	⇑P	P	02 05 30.7	+0.2
MIAR	Mount Ida	66.88	341	IAmb	IAmb	02 05 47.8	
	comp=Z,150nm,1.2s						
U49A	Red Boiling Sp	66.92	348	IAmb	IAmb	02 06 03.8	
	comp=Z,333nm,1.8s						
WVT	Waverly	66.95	346	P	P	02 05 29.7	-1.2
WVT				pmax	pmax		
	comp=Z,283nm,1.4s						
WVT				MLR	MLR		
	comp=Z,20µm,22.0s						
WVT	Waverly	66.95	346	P	P	02 05 30.6	-0.2
	baz=165						
WVT				S	S	02 14 21.9	-2.8
	baz=165						
WVT	Waverly	66.95	346	⇑P	P	02 05 30.5	-0.4
WVT	Waverly	66.95	346	P	P	02 05 29.7	-1.2
WVT				IAmb	IAmb	02 05 55.1	
	comp=Z,283nm,1.4s						
W41B	Gary Mavity, V	67.10	342	P	P	02 05 32.3	+0.4
	baz=161,SNR=13						
W41B				S	S	02 14 26.1	-0.4
	baz=161						
ABTX	Abilene, Hawle	67.12	335	P	P	02 05 33.0	+0.9
	baz=154,SNR=15						
ABTX				S	S	02 14 27.4	+0.4
	baz=154						
WHAR	Wooly Hollow	67.22	342	IAmb	IAmb	02 05 55.7	
	comp=Z,246nm,1.4s						
T50A	Nancy	67.25	349	IAmb	IAmb	02 05 49.4	
	comp=Z,250nm,1.8s						
R58B	Mineral	67.32	355	P	P	02 05 34.2	+1.0
S54A	Dingess, Beckl	67.50	352	IAmb	IAmb	02 05 55.5	
	comp=Z,190nm,1.5s						
SBA	Scott Base	67.51	191	P	P	02 05 34.3	+0.3
SBA				pmax	pmax		
	comp=Z,263nm,1.7s						
SBA	Scott Base	67.51	191	P	P	02 05 34.3	+0.3
SBA				IAmb	IAmb	02 05 50.9	
	comp=Z,263nm,1.6s						
CBN	Corbin Frederi	67.53	355	P	P	02 05 35.1	+0.7
	baz=175						
CBN				S	S	02 14 33.5	+2.0
	baz=175						
CBN	Corbin Frederi	67.53	355	IAmb	IAmb	02 06 26.1	
	comp=Z,274nm,1.6s						
CBN				IAMs_20	IAMs_20	02 38 19.9	
	comp=Z,35µm,18.0s						
W39A	Magazine	67.55	341	P	P	02 05 35.6	+0.9
	baz=160,SNR=30						
W39A				S	S	02 14 31.9	0.0
	baz=160						
S51A	Beattyville	67.66	350	P	P	02 05 34.0	-1.3
LCAR	Lake Charles	67.66	343	IAmb	IAmb	02 05 57.0	
	comp=Z,132nm,1.0s						
FCAR	Ozark Folk Cen	67.74	342	IAmb	IAmb	02 05 58.8	
	comp=Z,296nm,1.8s						
T45A	Paducah	67.98	346	P	P	02 05 36.9	-0.5
Q61A	Milford	68.08	357	S	S	02 14 41.4	+3.3
	baz=177						
R53A	Hurricane	68.11	352	IAmb	IAmb	02 05 59.4	
	comp=Z,157nm,1.5s						
PBMO	Poplar Bluff	68.16	344	IAmb	IAmb	02 05 51.8	
	comp=Z,146nm,0.9s						
X34A	Smith Ranch, M	68.27	337	IAmb	IAmb	02 05 53.2	
	comp=Z,196nm,1.1s						
U40A	Yellville	68.38	342	P	P	02 05 40.2	+0.2
	baz=161,SNR=25						
U40A				S	S	02 14 40.9	-0.9
	baz=161						
U40A	Yellville	68.38	342	IAmb	IAmb	02 06 01.8	
	comp=Z,129nm,1.1s						
R50A	Paris	68.40	350	P	P	02 05 39.2	-0.8
Q56A	Snyder Ridge,	68.50	354	IAmb	IAmb	02 06 05.9	
	comp=Z,221nm,1.5s						
TBI	Tubuai	68.52	255	*e*T	T	03 20 02.6	
	comp=Z,21nm,0.2s						
VNDA	Vanda	68.54	191	P	P	02 05 41.8	+1.3
	comp=Z,6.2nm,1.1s,baz=145,slow=5.8,SNR=22						
VNDA					PKP2bc	02 33 54.4	
	comp=Z,3.1nm,1.0s,baz=318,slow=4.6,SNR=9.9						
VNDA	Vanda	68.54	191	P	P	02 05 41.1	+0.6
VNDA				pmax	pmax		
	comp=Z,97nm,1.5s						
VNDA	Vanda	68.54	191	P	P	02 05 41.1	+0.6
R49A	Shelbyville	68.55	349	IAmb	IAmb	02 05 57.5	
	comp=Z,307nm,1.8s						
T42A	Van Buren	68.56	344	IAmb	IAmb	02 05 52.5	
	comp=Z,180nm,1.6s						
HHAR	Hobbs	68.61	341	IAmb	IAmb	02 06 05.2	
	comp=Z,246nm,1.3s						
MNTX	Cornudas Mount	68.64	330	P	P	02 05 41.8	0.0
	baz=149,SNR=32						
MNTX				S	S	02 14 47.9	+2.6
	baz=149						
MNTX	Cornudas Mount	68.64	330	P	P	02 05 41.0	-0.7
MBO	M'Bour	68.66	58	P	P	02 05 42.5	+0.4
WCI	Wyandotte Cave	68.68	348	P	P	02 05 40.5	-1.3
WCI				pmax	pmax		
	comp=Z,474nm,1.8s						
WCI	Wyandotte Cave	68.68	348	P	P	02 05 41.3	-0.5
	baz=167						
WCI				S	S	02 14 43.3	-2.1
	baz=167						
WCI	Wyandotte Cave	68.68	348	⇑P	P	02 05 41.1	-0.6
WCI	Wyandotte Cave	68.68	348	P	P	02 05 40.5	-1.3
SDMD	Soldier's Deli	68.69	356	IAmb	IAmb	02 06 04.3	
	comp=Z,175nm,1.8s						
WMOK	Wichita Mounta	68.72	336	P	P	02 05 42.4	+0.3
	baz=155,SNR=14						
WMOK				S	S	02 14 45.5	-0.5
	baz=155						
WMOK	Wichita Mounta	68.72	336	⇑P	P	02 05 42.0	-0.1
WMOK	Wichita Mounta	68.72	336	IAmb	IAmb	02 06 05.0	
	comp=Z,164nm,1.5s						
FNO	Franklin	68.72	338	IAmb	IAmb	02 06 30.7	
	comp=Z,270nm,1.4s						
Q52A	Bidwell	68.77	351	IAmb	IAmb	02 06 03.4	
	comp=Z,301nm,1.6s						
TUL1	Leonard	68.81	339	P	P	02 05 42.8	+0.2
	baz=158,SNR=23						
TUL1				S	S	02 14 44.9	-2.1
	baz=158						
TUL1	Leonard	68.81	339	IAmb	IAmb	02 05 57.3	
	comp=Z,147nm,0.9s						
P57A	Homestead Farm	68.84	355	P	P	02 05 43.6	+0.9
OKCFA	Oklahoma City	68.88	338	IAmb	IAmb	02 06 06.8	
	comp=Z,250nm,1.4s						
U38A	Gravette	68.88	341	IAmb	IAmb	02 06 05.1	
	comp=Z,331nm,1.8s						
MGMO	Mountain Grove	68.97	343	IAmb	IAmb	02 05 57.1	
	comp=Z,193nm,1.4s						
Q51A	Peebles	68.98	351	IAmb	IAmb	02 06 04.8	
	comp=Z,172nm,1.3s						
P60A	Greenville	69.02	357	P	P	02 05 44.6	+0.8
	baz=177						
P60A				S	S	02 14 52.3	+3.0
	baz=177						
P60A	Greenville	69.02	357	IAmb	IAmb	02 06 06.2	
	comp=Z,283nm,1.9s						
OK030	Cody Creek RV	69.14	339	IAmb	IAmb	02 05 59.9	
	comp=Z,167nm,1.2s						
WUPA	West Chester U	69.14	357	IAmb	IAmb	02 06 07.0	
	comp=Z,196nm,1.7s						
BCOK	Bluff Creek, N	69.16	338	IAmb	IAmb	02 06 08.5	
	comp=Z,329nm,1.5s						
OK031	S. Brethren Rd	69.18	339	IAmb	IAmb	02 06 00.2	
	comp=Z,162nm,1.1s						
P53A	Whipple	69.18	352	IAmb	IAmb	02 06 06.3	
	comp=Z,260nm,1.6s						
MCWV	Mont Chateau	69.18	353	P	P	02 05 45.2	+0.4
	baz=173,SNR=6.0						
MCWV				S	S	02 14 51.9	+0.7
	baz=173						
MCWV	Mont Chateau	69.18	353	IAmb	IAmb	02 06 36.4	
	comp=Z,214nm,1.6s						
MCWV				IAMs_20	IAMs_20	02 39 26.6	
	comp=Z,54µm,20.0s						
OK029	Liberty Lake	69.23	338	IAmb	IAmb	02 06 02.9	
	comp=Z,214nm,1.1s						
QUOK	Quay	69.33	339	IAmb	IAmb	02 06 09.7	
	comp=Z,194nm,1.2s						
P51A	Williamsport	69.39	351	IAmb	IAmb	02 05 59.6	
	comp=Z,176nm,1.2s						
P52A	Corning	69.41	352	P	P	02 05 45.9	-0.4
	baz=171,SNR=9.8						
P52A				S	S	02 14 50.9	-3.0
	baz=171						
P52A	Corning	69.41	352	IAmb	IAmb	02 06 14.8	
	comp=Z,119nm,1.1s						
MSTX	Muleshoe	69.52	333	P	P	02 05 47.6	+0.4
	baz=152,SNR=20						
MSTX				S	S	02 14 56.1	+0.4
	baz=152						
MSTX	Muleshoe	69.52	333	P	P	02 05 46.9	-0.3
MSTX				IAmb	IAmb	02 06 08.8	
	comp=Z,170nm,1.1s						
CCM	Cathedral Cave	69.57	344	P	P	02 05 47.1	-0.2
CCM				pmax	pmax		
	comp=Z,188nm,1.1s						
CCM	Cathedral Cave	69.57	344	P	P	02 05 47.5	+0.2
	baz=162						
CCM				S	S	02 14 54.7	-1.1
	baz=162						
CCM	Cathedral Cave	69.57	344	⇑P	P	02 05 47.5	+0.2
CCM	Cathedral Cave	69.57	344	P	P	02 05 47.1	-0.2
CCM				IAmb	IAmb	02 06 00.8	
	comp=Z,188nm,1.1s						
BLO	Bloomington	69.64	348	IAmb	IAmb	02 06 01.6	
	comp=Z,103nm,0.9s						
O56A	Blue Knob Stat	69.67	355	P	P	02 05 48.6	+0.8
	baz=174,SNR=6.8						
O56A				S	S	02 14 57.3	+0.2
	baz=174						
O56A	Blue Knob Stat	69.67	355	IAmb	IAmb	02 06 39.9	
	comp=Z,314nm,1.7s						
O56A				IAMs_20	IAMs_20	02 39 20.6	
	comp=Z,27µm,18.0s						
P49A	Miami Univ. Ec	69.69	349	P	P	02 05 47.3	-0.7
	baz=168,SNR=10						
P49A				S	S	02 14 53.6	-3.6
	baz=168						
P49A	Miami Univ. Ec	69.69	349	IAmb	IAmb	02 06 11.7	
	comp=Z,164nm,1.3s						
P48A	Milroy	69.73	349	IAmb	IAmb	02 06 09.1	
	comp=Z,132nm,1.0s						
S39A	Bolivar	69.76	342	IAmb	IAmb	02 06 12.3	
	comp=Z,161nm,1.1s						
O52A	Adamsville	69.85	352	IAmb	IAmb	02 06 01.8	
	comp=Z,406nm,1.9s						
Q44A	Meyer Farm, Va	69.87	346	IAmb	IAmb	02 06 06.2	
	comp=Z,236nm,1.3s						
AMTX	Amarillo	69.90	334	P	P	02 05 50.1	+0.6
	baz=153						
AMTX				S	S	02 14 59.5	-0.6
	baz=153						
AMTX	Amarillo	69.90	334	IAmb	IAmb	02 06 05.5	
	comp=Z,202nm,1.2s						
O53A	New Philadelph	69.91	352	P	P	02 05 49.1	-0.2
	baz=172,SNR=5.7						
O53A				S	S	02 14 57.0	-2.7
	baz=172						
O53A	New Philadelph	69.91	352	IAmb	IAmb	02 06 13.6	
	comp=Z,237nm,1.5s						
O53A				IAMs_20	IAMs_20	02 39 37.9	
	comp=Z,29µm,20.0s						
T35A	Sooner Cattle	69.96	339	IAmb	IAmb	02 06 37.9	
	comp=Z,230nm,1.5s						
SSPA	Standing Stone	69.98	355	P	P	02 05 50.5	+0.8
	baz=175						
SSPA				S	S	02 15 01.6	+1.0
	baz=175						
SSPA	Standing Stone	69.98	355	⇑P	P	02 05 50.2	+0.5
SSPA	Standing Stone	69.98	355	P	P	02 05 49.3	-0.5
SSPA				IAmb	IAmb	02 06 33.7	
	comp=Z,152nm,1.3s						
SYO	Syowa Base	70.04	159	⇓*e*P	P	02 05 48.0	-1.8
SYO	Syowa Base	70.04	159	⇑*i*pP	pP	02 05 50.2	+0.2
SYO	Syowa Base	70.04	159	⇓*i*sP	sP	02 05 52.6	+2.5
SYO	Syowa Base	70.04	159	⇓*i*PcP	PcP	02 06 10.0	-2.0
BLOK	Blackwell	70.04	339	IAmb	IAmb	02 06 06.0	
	comp=Z,275nm,1.5s						
CROK	Carrier	70.05	338	IAmb	IAmb	02 06 14.2	
	comp=Z,189nm,1.3s						
N58A	Sunbury	70.11	356	IAmb	IAmb	02 06 04.6	
	comp=Z,184nm,1.2s						
ACSO	Alum Creek Sta	70.11	351	P	P	02 05 50.5	-0.1
	baz=170						
ACSO				S	S	02 14 58.9	-3.2
	baz=170						
ACSO	Alum Creek Sta	70.11	351	IAmb	IAmb	02 06 19.3	
	comp=Z,139nm,1.1s						
N59A	State Game Lan	70.13	357	P	P	02 05 52.0	+1.3
	baz=176,SNR=5.9						
N59A				S	S	02 15 04.6	+2.1
	baz=176						
PAL	Palisades	70.16	358	P	P	02 05 51.4	+0.6
	baz=178						
PAL				S	S	02 15 05.0	+2.5
	baz=178						
P46A	Rosedale	70.20	348	IAmb	IAmb	02 06 12.6	
	comp=Z,135nm,0.8s						
ODNJ	Ogdensburg	70.25	358	IAmb	IAmb	02 06 05.5	
	comp=Z,163nm,1.4s						
O49A	Covington	70.27	350	P	P	02 05 50.5	-1.0
O49A				IAmb	IAmb	02 06 04.2	
	comp=Z,194nm,1.2s						
U32A	Winter Ranch,	70.28	337	IAmb	IAmb	02 06 07.6	
	comp=Z,371nm,1.9s						
TRNY	Table Rock, Ra	70.30	358	IAmb	IAmb	02 06 05.8	
	comp=Z,239nm,1.5s						
WSPT	Westport, CT	70.31	359	IAmb	IAmb	02 06 05.8	
	comp=Z,334nm,1.5s						
VAH	Vaihoa	70.37	263	*e*P	P	02 05 55.5	+2.7
	comp=Z,239nm,1.4s						
OK032	Salt Plains WL	70.40	338	IAmb	IAmb	02 06 16.6	
	comp=Z,246nm,1.4s						
N53A	Lisbon	70.42	353	IAmb	IAmb	02 06 08.0	
	comp=Z,206nm,1.6s						
121A	Cookes Peak, D	70.43	328	P	P	02 05 54.6	+1.7
	baz=147,SNR=20						
121A				S	S	02 15 10.3	+3.7
	baz=147						
121A	Cookes Peak, D	70.43	328	P	P	02 05 53.2	+0.3
121A				IAmb	IAmb	02 06 48.7	
	comp=Z,283nm,1.5s						
YLE	Yale	70.45	359	IAMs_20	IAMs_20	02 40 43.4	
	comp=Z,30µm,20.0s						
N54A	Moraine State	70.48	354	P	P	02 05 53.3	+0.5
	baz=173,SNR=7.5						
N54A				S	S	02 15 05.3	-1.2
	baz=173						
N54A	Moraine State	70.48	354	IAmb	IAmb	02 06 08.6	
	comp=Z,363nm,1.8s						
N54A				IAMs_20	IAMs_20	02 40 14.2	
	comp=Z,43µm,20.0s						
P43A	Skaggs, Pawnee	70.69	346	IAmb	IAmb	02 06 09.2	
	comp=Z,254nm,1.1s						
M65A	Busby, Falmout	70.70	1	P	P	02 05 55.8	+1.8
	baz=181						
M65A				S	S	02 15 11.4	+2.6
	baz=181						
PMOR	Pomariorio Ree	70.70	263	*e*P	P	02 05 57.6	+2.8
	comp=Z,208nm,1.3s						
KAN08	Anthony NE Sta	70.71	338	P	P	02 05 55.1	+0.8
N51A	Ashland	70.71	352	IAmb	IAmb	02 06 19.2	
	comp=Z,443nm,1.9s						
KSPA	Keystone Colle	70.77	357	P	P	02 05 55.3	+0.7
KSPA				IAmb	IAmb	02 06 51.4	
	comp=Z,251nm,1.6s						
KSCT	Kent School, K	70.87	359	IAmb	IAmb	02 06 09.3	
	comp=Z,328nm,1.7s						
M55A	Ridgway	70.88	355	IAmb	IAmb	02 06 42.2	
	comp=Z,247nm,1.4s						
SFIN	Lafayette	70.92	348	P	P	02 05 54.7	-0.8
	baz=166						
SFIN				S	S	02 15 07.1	-4.4
	baz=166						
O44A	Mansfield	70.96	347	IAmb	IAmb	02 06 16.7	
	comp=Z,111nm,0.9s						
M54A	Oil Creek Stat	70.99	354	P	P	02 05 55.8	-0.2
	baz=173						
M54A				S	S	02 15 10.7	-1.7
	baz=173						
M54A	Oil Creek Stat	70.99	354	IAmb	IAmb	02 06 17.6	
	comp=Z,353nm,1.9s						
PAE	Paea	71.00	260	*e*P	P	02 05 59.4	+2.8
	comp=Z,81nm,1.4s						
PPTF	Pamatai, Papee	71.02	260	P	P	02 05 55.3	-1.5
M53A	WI Miller and	71.03	353	P	P	02 05 56.1	0.0
	baz=172						
M53A				S	S	02 15 09.9	-2.9
	baz=172						
M53A	WI Miller and	71.03	353	IAmb	IAmb	02 06 09.2	
	comp=Z,213nm,1.4s						
M53A				IAMs_20	IAMs_20	02 40 34.5	
	comp=Z,50µm,20.0s						
PPT2	Papeete2	71.03	260	*e*P	P	02 05 59.6	+2.7
	comp=Z,264nm,1.4s						
PPT2				*e*S	S	02 15 14.1	0.0
	comp=Z,45µm,25.2s						
PPT2	Papeete2	71.03	260	*e*LR	LR	02 27 35.8	
	comp=Z,181µm,23.2s,baz=111						
PPT	Papeete	71.03	260	P	P	02 05 58.4	+1.6
	comp=Z,80nm,1.0s,baz=266,slow=17,SNR=4.1						
PPT				LR	LR	02 29 05.7	
	comp=Z,89µm,21.1s,baz=98,slow=29						
BRYW	Bryant College	71.04	0	P	P	02 05 56.6	+0.4
L64A	Middleborough	71.07	1	IAmb	IAmb	02 06 17.9	
	comp=Z,192nm,1.4s						
P40A	Paris	71.17	344	IAmb	IAmb	02 06 10.6	
	comp=Z,211nm,1.1s						
ALLY	Alegheny Colle	71.18	354	IAmb	IAmb	02 06 12.4	
	comp=Z,198nm,1.3s						
Y22D	IRIS PASSCAL I	71.34	330	P	P	02 06 00.9	+2.5
	baz=148						
Y22D				S	S	02 15 21.6	+4.5
	baz=148						
L59A	Walton	71.37	358	P	P	02 05 58.5	+0.3
L59A				IAmb	IAmb	02 06 12.5	
	comp=Z,228nm,1.2s						
BINY	Binghamton	71.42	357	P	P	02 05 59.5	+0.9
	baz=176						
BINY				S	S	02 15 18.1	+0.7
	baz=176						
BINY	Binghamton	71.42	357	IAmb	IAmb	02 06 12.5	
	comp=Z,265nm,1.6s						
BINY				IAMs_20	IAMs_20	02 42 00.1	
	comp=Z,30µm,20.0s						
WES	Weston	71.51	0	P	P	02 05 58.9	-0.1
WES				pmax	pmax		
	comp=Z,296nm,1.7s						
WES				MLR	MLR		
	comp=Z,24µm,21.0s						
WES	Weston	71.51	0	P	P	02 05 58.9	-0.1
WES				IAmb	IAmb	02 06 12.1	
	comp=Z,296nm,1.7s						
HDIL	Hopedale	71.52	346	P	P	02 05 58.8	-0.3
	baz=164,SNR=6.7						
HDIL				S	S	02 15 14.8	-3.7
	baz=164						
HDIL	Hopedale	71.52	346	IAmb	IAmb	02 06 20.6	
	comp=Z,157nm,1.0s						
L61B	Northampton	71.58	359	P	P	02 06 00.4	+0.9
	baz=179,SNR=7.2						
L61B				S	S	02 15 21.4	+2.3
	baz=179						
ERPA	Erie	71.63	354	P	P	02 05 59.8	+0.1
	baz=173						
ERPA				S	S	02 15 17.3	-2.5
	baz=173						
ERPA	Erie	71.63	354	IAmb	IAmb	02 06 21.2	
	comp=Z,357nm,1.6s						
HRV	Adam Dziewonsk	71.63	0	P	P	02 06 00.2	+0.4
HRV				pmax	pmax		
	comp=Z,153nm,1.3s						
HRV				MLR	MLR		
	comp=Z,26µm,20.0s						
HRV	Adam Dziewonsk	71.63	0	P	P	02 06 00.8	+1.0
	baz=180						
HRV				S	S	02 15 22.4	+2.7
	baz=180						
HRV	Adam Dziewonsk	71.63	0	⇓P	P	02 06 01.3	+1.5
HRV	Adam Dziewonsk	71.63	0	P	P	02 06 00.1	+0.4
HRV				IAmb	IAmb	02 06 09.5	
	comp=Z,153nm,1.3s						
TUC	Tucson	71.66	326	P	P	02 06 00.7	+0.4
TUC				pmax	pmax		
	comp=Z,100nm,1.5s						
TUC	Tucson	71.66	326	P	P	02 06 01.7	+1.4
	baz=145						
TUC				S	S	02 15 23.1	+2.3
	baz=145						
TUC	Tucson	71.66	326	⇑P	P	02 06 01.8	+1.5
TUC	Tucson	71.66	326	P	P	02 06 00.7	+0.4
TUC	Tucson	71.66	326	IAMs_20	IAMs_20	02 32 52.7	
	comp=Z,46µm,19.0s						
WVNY	West Valley, N	71.79	355	IAmb	IAmb	02 06 09.9	
	comp=Z,262nm,1.3s						
TRY	Troy	71.87	359	IAmb	IAmb	02 06 15.7	
	comp=Z,267nm,1.3s						
ANMO	Albuquerque	71.88	331	P	P	02 06 03.1	+1.5
	comp=Z,4.6nm,0.8s,baz=143,slow=8.4,SNR=24						
ANMO	Albuquerque	71.88	331	c*e*P	P	02 06 02.7	+1.0
ANMO				pmax	pmax		
	comp=Z,221nm,2.8s						
ANMO	Albuquerque	71.88	331	P	P	02 06 03.2	+1.5
	baz=149						
ANMO				S	S	02 15 26.2	+2.9
	baz=149						
ANMO	Albuquerque	71.88	331	⇑P	P	02 06 02.8	+1.1
ANMO	Albuquerque	71.88	331	P	P	02 06 01.7	0.0
K57A	Scipio Center	71.98	356	P	P	02 06 02.1	+0.3
K57A				IAmb	IAmb	02 06 49.6	
	comp=Z,202nm,1.4s						
KSU1	Kansas State U	72.00	340	P	P	02 06 02.1	0.0
	baz=158						
KSU1				S	S	02 15 22.2	-2.0
	baz=158						
KSU1	Kansas State U	72.00	340	⇓P	P	02 06 02.6	+0.5
KSU1				⇓s		02 06 14.8	
N41A	Harden Midland	72.00	345	IAmb	IAmb	02 06 17.1	
	comp=Z,231nm,1.1s						
R32A	Long Quarter,	72.03	338	IAmb	IAmb	02 06 26.8	
	comp=Z,208nm,1.2s						
M44A	Midewin, Midew	72.07	347	IAmb	IAmb	02 06 18.1	
	comp=Z,388nm,1.6s						
AAM	Ann Arbor	72.24	351	P	P	02 06 03.6	+0.2
	baz=169						
AAM				S	S	02 15 22.9	-3.8
	baz=169						
AAM	Ann Arbor	72.24	351	IAmb	IAmb	02 06 24.7	
	comp=Z,299nm,1.6s						
L46A	Eue Claire	72.36	349	IAmb	IAmb	02 06 24.9	
	comp=Z,130nm,1.1s						
214A	Organ Pipe Nat	72.39	324	P	P	02 06 06.2	+1.6
	baz=143,SNR=11						
214A				S	S	02 15 32.0	+3.1
	baz=143						
214A	Organ Pipe Nat	72.39	324	IAmb	IAmb	02 06 23.0	
	comp=Z,250nm,1.4s						
J61A	Chester	72.47	360	IAmb	IAmb	02 06 19.4	
	comp=Z,198nm,1.4s						
ACCN	Adirondack Com	72.53	359	P	P	02 06 05.9	+0.8
ACCN				IAmb	IAmb	02 06 19.3	

	comp=Z,302nm,1.6s						
MEDO	Medina	72.54	355	IAmb	IAmb	02 06 17.6	
	comp=Z,160nm,1.3s						
J56A	Wolcott	72.54	356	IAmb	IAmb	02 06 27.0	
	comp=Z,498nm,1.9s						
J58A	Remsen	72.55	357	IAmb	IAmb	02 06 19.0	
	comp=Z,276nm,1.9s						
FFD	Franklin Falls	72.59	0	IAmb	IAmb	02 06 20.2	
	comp=Z,376nm,1.5s						
J59A	Piesco	72.63	358	P	P	02 06 06.1	+0.3
J59A				IAmb	IAmb	02 06 19.6	
	comp=Z,157nm,1.3s						
J57A	Williamstown	72.63	357	IAmb	IAmb	02 06 40.8	
	comp=Z,145nm,1.2s						
N38A	Joes South For	72.65	343	IAmb	IAmb	02 06 19.3	
	comp=Z,120nm,0.8s						
J54A	Appleton	72.66	355	IAmb	IAmb	02 06 27.7	
	comp=Z,367nm,1.6s						
CBKS	Cedar Bluff	72.73	338	P	P	02 06 07.3	+0.8
	baz=155,SNR=11						
CBKS				S	S	02 15 32.5	-0.1
	baz=155						
CBKS	Cedar Bluff	72.73	338	⇑P	P	02 06 07.2	+0.8
L44A	Lake County Fo	72.81	348	P	P	02 06 06.5	-0.3
	baz=166						
L44A				S	S	02 15 28.9	-4.4
	baz=166						
L44A	Lake County Fo	72.81	348	IAmb	IAmb	02 06 39.2	
	comp=Z,189nm,1.2s						
L44A				IAMs_20	IAMs_20	02 37 00.6	
	comp=Z,35µm,22.0s						
HNH	Hanover	72.83	360	IAmb	IAmb	02 06 21.5	
	comp=Z,286nm,1.6s						
T25A	Trinidad	72.93	333	P	P	02 06 09.5	+1.5
	baz=151,SNR=22						
T25A				S	SKiKP	02 15 39.3	-2.8
	baz=151						
T25A	Trinidad	72.93	333	IAmb	IAmb	02 06 57.1	
	comp=Z,303nm,1.5s						
T25A				IAMs_20	IAMs_20	02 35 07.5	
	comp=Z,38µm,19.0s						
L42A	Oliver, Polo	72.99	346	P	P	02 06 06.9	-1.0
L42A				IAmb	IAmb	02 06 20.9	
	comp=Z,179nm,1.3s						
I62A	Tamworth	73.00	0	IAmb	IAmb	02 06 22.4	
	comp=Z,401nm,1.9s						
PECO	Prince Edward	73.20	356	P	P	02 06 08.5	-0.6
PECO				IAmb	IAmb	02 06 44.2	
	comp=Z,273nm,1.6s						
LIC	Lamto	73.31	73	*e*P	P	02 06 09.4	-1.1
	comp=Z,711nm,1.5s						
J47A	Sunmer	73.32	350	IAmb	IAmb	02 06 25.5	
	comp=Z,123nm,0.9s						
N35A	Tabor	73.36	341	IAmb	IAmb	02 06 27.4	
	comp=Z,138nm,0.8s						
LBNH	Lisbon	73.36	0	P	P	02 06 10.9	+0.8
LBNH				pmax	pmax		
	comp=Z,183nm,1.4s						
LBNH	Lisbon	73.36	0	P	P	02 06 11.3	+1.2
	baz=180						
LBNH				S	SKiKP	02 15 43.2	+0.9
	baz=180						
LBNH	Lisbon	73.36	0	P	P	02 06 10.9	+0.8
LBNH				IAmb	IAmb	02 06 24.4	
	comp=Z,183nm,1.4s						
L40A	Anamosa	73.38	345	IAmb	IAmb	02 06 25.3	
	comp=Z,227nm,1.0s						
W18A	Petrified Fore	73.47	328	P	P	02 06 12.5	+1.4
	baz=146,SNR=8.7						
W18A				S	SKiKP	02 15 44.4	+1.4
	baz=146						
TIC	Toumodi	73.55	72	*e*P	P	02 06 10.9	-1.0
KIC	Kosan Boka	73.62	73	*e*P	P	02 06 11.3	-1.0
	comp=Z,786nm,1.3s						
DBIC	Dimbokro	73.69	72	P	P	02 06 12.4	-0.3
	comp=Z,167nm,1.0s,baz=233,slow=5.5,SNR=76						
DBIC				LR	LR	02 38 07.0	
	comp=Z,57µm,18.7s,baz=250,slow=36						
DBIC	Dimbokro	73.69	72	P	P	02 06 12.3	-0.4
DBIC				pmax	pmax		
	comp=Z,721nm,1.5s						
DBIC	Dimbokro	73.69	72	⇑P	P	02 06 12.4	-0.3
DBIC				⇑P	P	02 06 12.5	-0.3
DBIC	Dimbokro	73.69	72	P	P	02 06 12.3	-0.4
SCIA	State Center	73.70	344	P	P	02 06 12.5	+0.4
	baz=161						
SCIA				S	SKiKP	02 15 42.1	-0.7
	baz=161						
SCIA	State Center	73.70	344	IAmb	IAmb	02 07 03.0	
	comp=Z,371nm,1.6s						
WVL	Waterville	73.72	2	IAMs_20	IAMs_20	02 37 58.0	
	comp=Z,31µm,21.0s						
LONY	Lake Ozonia	73.78	358	P	P	02 06 13.1	+0.6
	baz=178,SNR=7.3						
LONY				S	S	02 15 46.3	+2.0
	baz=178						
DELO	Deloro Mine	73.82	356	IAmb	IAmb	02 06 59.6	
	comp=Z,217nm,1.5s						
SDCO	Great Sand Dun	73.89	333	P	P	02 06 15.3	+1.6
	baz=150,SNR=16						
SDCO				S	S	02 15 48.6	+2.3
	baz=150						
KSCO	Kaye Shedlock'	73.91	336	P	P	02 06 15.0	+1.4
	baz=153						
KSCO				S	S	02 15 46.8	+0.6
	baz=153						
KSCO	Kaye Shedlock'	73.91	336	P	P	02 06 14.5	+0.9
EMMW	East Machias	73.94	3	P	P	02 06 14.0	+0.6
EMMW				IAmb	IAmb	02 06 27.7	
	comp=Z,243nm,1.7s						
JFWS	Jewell Farm	73.98	346	P	P	02 06 13.8	0.0
	baz=164,SNR=21						
JFWS				S	S	02 15 46.8	+0.3
	baz=164						
JFWS	Jewell Farm	73.98	346	IAmb	IAmb	02 06 30.0	
	comp=Z,128nm,0.9s						
JFWS	Jewell Farm	73.98	346	IAMs_20	IAMs_20	02 43 26.5	
	comp=Z,36µm,21.0s						
SADO	Sadowa	74.19	355	P	P	02 06 15.3	+0.4
	comp=Z,41nm,0.9s,baz=189,slow=2.0,SNR=18						
SADO	Sadowa	74.19	355	⇑P	P	02 06 14.8	0.0
SADO				⇓P	sP	02 06 15.1	0.0
SADO				⇓P	pP	02 06 17.3	+2.3
SADO	Sadowa	74.19	355	IAmb	IAmb	02 06 36.3	
	comp=Z,511nm,1.8s						
GLA	Glamis	74.29	324	P	P	02 06 17.8	+2.0
	baz=142						
GLA				S	S	02 15 54.7	+4.2
	baz=142						
K38A	Parkersburg	74.29	344	IAmb	IAmb	02 06 38.4	
	comp=Z,371nm,1.7s						
PLVO	Plevna	74.31	356	IAmb	IAmb	02 06 29.4	
	comp=Z,332nm,1.8s						
G62A	West of Eustis	74.35	1	P	P	02 06 16.7	+0.9
GGN	Saint George	74.39	4	IAmb	IAmb	02 06 30.4	
	comp=Z,290nm,1.8s						
S22A	4UR Ranch, Cre	74.43	332	P	P	02 06 19.0	+2.2
	baz=149,SNR=12						
S22A				S	S	02 15 55.8	+3.4
	baz=149						
PKME	Peaks-Kenny Pk	74.43	2	P	P	02 06 17.2	+1.0
	baz=182,SNR=5.2						
PKME				S	S	02 15 53.8	+2.4
	baz=182						
PKME	Peaks-Kenny Pk	74.43	2	IAmb	IAmb	02 06 30.4	
	comp=Z,234nm,1.6s						
G65A	Princeton	74.43	3	IAmb	IAmb	02 06 30.6	
	comp=Z,220nm,1.6s						
WUAZ	Wupatki	74.56	327	P	P	02 06 19.7	+2.2
	baz=145,SNR=7.0						
WUAZ				S	S	02 15 58.8	+5.0
	baz=145						
WUAZ	Wupatki	74.56	327	⇓P	P	02 06 19.7	+2.2
BGNE	Belgrade	74.58	340	P	P	02 06 18.4	+1.1
	baz=157						
BGNE				S	S	02 15 52.5	-0.9
	baz=157						
BGNE	Belgrade	74.58	340	IAmb	IAmb	02 06 33.0	
	comp=Z,214nm,0.8s						
L34A	Svendsen Farm,	74.58	341	P	P	02 06 17.1	-0.1
L34A				IAmb	IAmb	02 06 32.3	
	comp=Z,157nm,1.0s						
MNTQ	Montreal, Queb	74.64	359	IAmb	IAmb	02 06 32.2	
	comp=Z,203nm,1.5s						
IKP	In-Ko-Pah, Jac	74.65	322	P	P	02 06 21.0	+3.0
	baz=141						
IKP				S	S	02 15 58.4	+3.8
	baz=141						
MVCO	Mesa Verde	74.67	330	P	P	02 06 19.5	+1.3
	baz=148,SNR=11						
MVCO				S	S	02 15 57.5	+2.4
	baz=148						
MVCO	Mesa Verde	74.67	330	IAmb	IAmb	02 07 11.3	
	comp=Z,275nm,1.6s						
MVCO				IAMs_20	IAMs_20	02 34 44.5	
	comp=Z,45µm,21.0s						
SWSC	Sam W. Stewart	74.72	323	P	P	02 06 20.3	+2.1
	baz=141						
SWSC				S	S	02 16 00.8	+5.7
	baz=141						
Q24A	Divide	74.81	334	P	P	02 06 20.5	+1.4
	baz=150						
Q24A				S	S	02 15 59.7	+3.1
	baz=150						
GLMI	Grayling	74.85	351	P	P	02 06 18.4	-0.3
	baz=169						
GLMI				S	S	02 15 53.0	-3.2
	baz=169						
GLMI	Grayling	74.85	351	IAMs_20	IAMs_20	02 42 58.6	
	comp=Z,28µm,21.0s						
F63A	Nahmakanta, Br	74.87	2	P	P	02 06 19.3	+0.5
F63A				IAmb	IAmb	02 06 33.3	
	comp=Z,288nm,1.9s						
PDMCI	Parker Dam,Lak	74.93	325	P	P	02 06 21.5	+2.0
	baz=143						
PDMCI				S	S	02 16 00.1	+2.6
	baz=143						
MONP2	Monument Peak	75.00	322	P	P	02 06 23.0	+2.8
	baz=141						
MONP2				S	S	02 15 59.4	+0.6
	baz=141						
F62A	Pittston Farm,	75.04	1	IAmb	IAmb	02 06 34.2	
	comp=Z,275nm,1.6s						
F64A	Sherman	75.06	3	P	P	02 06 20.6	+0.7
F64A				IAmb	IAmb	02 06 34.1	
	comp=Z,392nm,1.9s						
BC3	Big Chuckawall	75.09	324	P	P	02 06 21.8	+1.3
	baz=142,SNR=11						
BC3				S	S	02 16 04.3	+4.8
	baz=142						
IRM	Iron Mountain	75.32	324	P	P	02 06 23.0	+1.3
	baz=142,SNR=8.7						
IRM				S	S	02 16 04.4	+2.4
	baz=142						
109C	Camp Elliot, M	75.37	322	P	P	02 06 24.8	+2.8
	baz=140						
109C				S	S	02 16 06.6	+4.1
	baz=140						
109C	Camp Elliot, M	75.37	322	IAMs_20	IAMs_20	02 33 49.7	
	comp=Z,29µm,19.0s						
TRQ	Mont Tremblant	75.38	358	IAmb	IAmb	02 06 35.3	
	comp=Z,182nm,1.3s						
OGNE	Ogallala	75.41	337	S	S	02 16 05.3	+2.5
	baz=153						
NEE2	Needles Airpor	75.54	325	P	P	02 06 25.8	+2.8
	baz=143						
NEE2				S	S	02 16 08.0	+3.7
	baz=143						
PFO	Pinyon Flats O	75.58	323	P	P	02 06 24.3	+1.0
	comp=Z,8.2nm,0.9s,baz=154,slow=6.9,SNR=5.9						
PFO	Pinyon Flats O	75.58	323	P	P	02 06 26.3	+2.9
	baz=141						
PFO				S	S	02 16 07.1	+2.1
	baz=141						
PFO	Pinyon Flats O	75.58	323	P	P	02 06 24.5	+1.2
PFO	Pinyon Flats O	75.58	323	IAMs_20	IAMs_20	02 32 40.2	
	comp=Z,35µm,20.0s						
BELC	Belle Mtn. Jos	75.64	323	P	P	02 06 25.8	+2.1
	baz=141						
BELC				S	S	02 16 09.9	+4.1
	baz=141						
SMCO	Snowmass	75.71	333	⇑P	P	02 06 25.7	+1.4
SMCO				⇓P	P	02 06 25.8	+1.4
SMCO	Snowmass	75.71	333	IAmb	IAmb	02 06 46.8	
	comp=Z,204nm,1.1s						
ISCO	Idaho Springs	75.71	334	P	P	02 06 25.3	+1.1
	baz=150,SNR=36						
ISCO				S	S	02 16 08.9	+2.3
	baz=150						
ISCO	Idaho Springs	75.71	334	IAMs_20	IAMs_20	02 36 34.0	
	comp=Z,27µm,19.0s						
I37A	Lemond, Waseca	75.73	344	IAmb	IAmb	02 06 37.2	
	comp=Z,111nm,0.8s						
E62A	Clayton Lake	75.78	2	IAmb	IAmb	02 06 38.4	
	comp=Z,349nm,1.6s						
K31A	O'Neill	75.88	340	P	P	02 06 25.1	+0.4
PQI	Presque Isle	75.88	3	IAmb	IAmb	02 06 38.8	
	comp=Z,318nm,1.7s						
MURC	Murrieta	75.96	322	P	P	02 06 27.4	+2.0
	baz=140						
MURC				S	S	02 16 12.0	+2.9
	baz=140						
GMRC	Granite Mounta	76.08	324	P	P	02 06 27.8	+1.6
	baz=142,SNR=6.4						
GMRC				S	S	02 16 12.7	+2.2
	baz=142						
SCI2	San Clemente I	76.22	321	P	P	02 06 29.2	+2.4
	baz=140						
SCI2				S	S	02 16 17.8	+5.9
	baz=140						
G40A	Rib Lake	76.23	347	IAmb	IAmb	02 07 20.2	
	comp=Z,357nm,2.0s						
D62A	Allapoint, All	76.25	2	IAmb	IAmb	02 06 40.8	
	comp=Z,416nm,1.9s						
ECSD	EROS Data Cent	76.29	342	P	P	02 06 27.2	+0.2
	baz=158,SNR=42						
ECSD				S	S	02 16 10.4	-1.8
	baz=158						
ECSD	EROS Data Cent	76.29	342	P	P	02 06 26.7	-0.4
ECSD				IAmb	IAmb	02 06 51.0	
	comp=Z,151nm,1.0s						
F42A	Maple Grove Fa	76.32	348	IAmb	IAmb	02 06 50.2	
	comp=Z,199nm,1.6s						
E46A	Sault Ste Mari	76.32	351	IAmb	IAmb	02 06 50.5	
	comp=Z,234nm,1.2s						
BBRC	Big Bear Solar	76.33	323	P	P	02 06 30.3	+2.6
	baz=141						
BBRC				S	S	02 16 16.8	+3.3
	baz=141						
HEC	Hector,Ludlow	76.46	324	P	P	02 06 31.6	+3.3
	baz=141,SNR=9.1						
HEC				S	S	02 16 16.2	+1.6
	baz=141						
CIS	Catalina Islan	76.47	321	P	P	02 06 30.7	+2.4
	baz=140						
CIS				S	S	02 16 19.2	+4.6
	baz=140						
BATG	Bathurst New B	76.58	4	IAmb	IAmb	02 06 43.0	
	comp=Z,280nm,1.6s						
FMP	Fort Macarthur	76.64	322	P	P	02 06 32.5	+3.3
	baz=140						
FMP				S	S	02 16 19.8	+3.5
	baz=140						
LMQ	La Malbaie	76.69	1	IAmb	IAmb	02 06 43.0	
	comp=Z,246nm,1.7s						
BFSC	Mount Baldy Ra	76.70	322	P	P	02 06 32.4	+2.7
	baz=140						
BFSC				S	S	02 16 19.9	+2.5
	baz=140						
TUQ	Turquoise Moun	76.72	324	P	P	02 06 31.3	+1.4
	baz=142,SNR=6.7						
TUQ				S	S	02 16 21.1	+3.5
	baz=142						
E43A	Lone Tree Farm	76.72	349	P	P	02 06 28.3	-1.1
SPMN	Marine on St.	76.74	345	P	P	02 06 29.2	-0.3
	baz=162,SNR=10						
SPMN				S	S	02 16 15.4	-1.6
	baz=162						
N23A	Red Feather La	76.78	334	P	P	02 06 31.6	+1.4
	baz=150,SNR=9.2						
N23A				S	S	02 16 20.1	+1.8
	baz=150						
RRX	Edison Barstow	76.84	323	P	P	02 06 32.3	+1.9
	baz=141						
RRX				S	S	02 16 21.4	+2.7
	baz=141						
SNCC	San Nicolas Is	76.96	321	P	P	02 06 33.9	+2.8
	baz=139						
SNCC				S	S	02 16 24.3	+4.3
	baz=139						
SUR	Sutherland	76.97	120	P	P	02 06 33.6	+1.9
SUR	Sutherland	76.97	120	P	P	02 06 31.9	+0.3
O20A	White River Ci	77.03	332	P	P	02 06 33.0	+1.4
	baz=148,SNR=20						
O20A				S	S	02 16 22.1	+1.2
	baz=148						
O20A	White River Ci	77.03	332	IAmb	IAmb	02 06 54.7	
	comp=Z,199nm,1.1s						
DECC	Green Verdugo	77.07	322	P	P	02 06 34.6	+2.9
	baz=140						
DECC				S	S	02 16 24.6	+3.5
	baz=140						
GSC	Goldstone, Bar	77.07	324	P	P	02 06 34.5	+2.8
	baz=141,SNR=7.0						
GSC				S	S	02 16 25.4	+4.1
	baz=141						
SHPR	Sheep Range	77.18	326	P	P	02 06 33.1	+0.7
SHOC	Shoshone, Teco	77.26	324	P	P	02 06 35.2	+2.5
	baz=142						
SHOC				S	S	02 16 26.8	+3.6
	baz=142						
EDW2	Edwards Air Fo	77.36	323	P	P	02 06 35.6	+2.2
	baz=140						
EDW2				S	S	02 16 26.0	+1.5
	baz=140						
P18A	Preston Nutter	77.44	331	P	P	02 06 35.0	+0.9
P18A				IAmb	IAmb	02 07 09.1	
	comp=Z,126nm,1.0s						
MAW	Mawson	77.48	164	P	P	02 06 33.2	-0.4
	comp=Z,67nm,1.1s,baz=216,slow=5.9,SNR=59						
MAW				PKP2bc		02 33 29.7	
	comp=Z,2.9nm,1.1s,baz=92,slow=9.0,SNR=3.7						
MAW				LR	LR	02 39 52.1	
	comp=Z,41µm,20.9s,baz=229,slow=35						
MAW	Mawson	77.48	164	P	P	02 06 33.0	-0.6
	baz=77,SNR=58						
MAW	Mawson	77.48	164	P	P	02 06 32.9	-0.6
MAW				pmax	pmax		
	comp=Z,87nm,1.7s						
MAW	Mawson	77.48	164	P	P	02 06 32.9	-0.6
OSI	Osito Audit: C	77.55	322	P	P	02 06 37.1	+2.7
	baz=140						
OSI				S	S	02 16 28.0	+1.5
	baz=140						
SCZ2	Santa Cruz Isl	77.58	321	S	S	02 16 30.8	+4.1
	baz=139						
SUSD	Miller	77.60	341	P	P	02 06 34.6	+0.2
	baz=156						
SUSD				S	S	02 16 26.2	-0.3
	baz=156						
SUSD	Miller	77.60	341	IAmb	IAmb	02 06 58.2	
	comp=Z,135nm,1.0s						
D41A	Chassel	77.65	348	IAmb	IAmb	02 06 58.8	
	comp=Z,138nm,0.9s						
LRMC	Laurel Mtn Rad	77.66	323	P	P	02 06 36.7	+1.6
	baz=140,SNR=5.7						
LRMC				S	S	02 16 30.0	+2.2
	baz=140						
RWWY	Rawlins	77.95	334	IAMs_20	IAMs_20	02 38 05.3	
	comp=Z,42µm,19.0s						
SBC	Santa Barbara	77.96	321	P	P	02 06 38.4	+1.8
	baz=139						
SBC				S	S	02 16 36.3	+5.6
	baz=139						
ARVC	Arvin	78.00	322	P	P	02 06 39.1	+2.2
	baz=140						
ARVC				S	S	02 16 34.9	+3.7
	baz=140						
FURC	Furnace Creek,	78.00	324	P	P	02 06 39.5	+2.7
	baz=141						
FURC				S	S	02 16 35.6	+4.6
	baz=141						
RAR	Rarotonga	78.06	252	LR	LR	02 33 18.5	
	comp=Z,57µm,19.4s,baz=142,slow=30						
ISA	Isabella, Lake	78.22	323	P	P	02 06 39.7	+1.6
	baz=140,SNR=8.4						
ISA				S	S	02 16 36.1	+2.5
	baz=140						
PKM	Mcpherson Peak	78.35	321	P	P	02 06 40.6	+1.5
	baz=139,SNR=7.1						
PKM				S	S	02 16 37.1	+1.8
	baz=139						
MPU	Maple Canyon	78.36	330	P	P	02 06 39.7	+0.7
WIN	Windhoek	78.44	109	IAmb	IAmb	02 06 43.1	
	comp=Z,441nm,1.5s						
K22A	Casper	78.52	335	P	P	02 06 40.9	+1.2
	baz=150,SNR=31						
K22A				S	S	02 16 39.2	+2.4
	baz=150						
K22A	Casper	78.52	335	IAmb	IAmb	02 06 58.8	
	comp=Z,251nm,1.1s						
CWC	Cottonwood Cre	78.60	324	P	P	02 06 42.5	+2.2
	baz=140						
CWC				S	S	02 16 41.6	+3.7
	baz=140						
GRAC	Grapevine Rang	78.66	324	P	P	02 06 43.5	+3.0
	baz=141						
GRAC				S	S	02 16 42.3	+4.0
	baz=141						
VES	Vestal, Richgr	78.67	323	P	P	02 06 42.8	+2.2
	baz=140,SNR=8.9						
VES				S	S	02 16 40.6	+2.3
	baz=140						
KOWA	Kowa	78.72	66	⇑P	P	02 06 41.1	-0.2
KOWA				⇑P	P	02 06 41.1	-0.2
KOWA	Kowa	78.72	66	P	P	02 06 41.0	-0.2
SMMC	Simmler	78.76	322	P	P	02 06 43.7	+2.6
	baz=139						
SMMC				S	S	02 16 42.8	+3.3
	baz=139						
R11A	Troy Canyon, C	78.84	326	P	P	02 06 43.7	+2.0
	baz=142,SNR=30						
R11A				S	S	02 16 43.4	+2.9
	baz=142						
PICO	Pico	78.90	33	*e*P	P	02 06 45.9	+4.1
	comp=Z,449nm,1.9s						
RSSD	Black Hills	78.91	337	P	P	02 06 41.6	-0.3
RSSD				pmax	pmax		
	comp=Z,106nm,1.3s						
RSSD	Black Hills	78.91	337	P	P	02 06 43.5	+1.5
	baz=152						
RSSD				S	S	02 16 43.7	+2.7
	baz=152						
RSSD	Black Hills	78.91	337	⇑P	P	02 06 42.7	+0.8
RSSD				⇑P	P	02 06 42.8	+0.8
RSSD	Black Hills	78.91	337	P	P	02 06 41.6	-0.3
DUG	Dugway, Tooele	79.03	329	P	P	02 06 44.0	+1.4
	baz=145,SNR=19						
DUG				S	S	02 16 45.5	+3.2
	baz=145						
DUG	Dugway, Tooele	79.03	329	IAmb	IAmb	02 07 25.2	
	comp=Z,443nm,1.9s						
EYMN	Ely	79.05	347	P	P	02 06 42.4	0.0
	baz=163,SNR=8.0						
EYMN				S	S	02 16 37.3	-4.6
	baz=163						
TIN	Tinemaha, Big	79.15	324	P	P	02 06 45.8	+2.5
	baz=140						
TIN				S	S	02 16 47.0	+3.3
	baz=140						
ROSA	Rosais	79.16	33	*e*P	P	02 06 44.9	+1.8
	comp=Z,236nm,0.8s						
VOG	Valley Oaks Go	79.19	323	P	P	02 06 44.7	+1.3
	baz=139						
VOG				S	S	02 16 45.5	+1.6
	baz=139						
PSMA	Santa Maria	79.37	36	*e*P	P	02 06 46.3	+2.0
	comp=Z,219nm,1.6s						
PSMN	Pico do Norte,	79.41	36	*e*P	P	02 06 46.8	+2.2
	comp=Z,298nm,1.8s						
TPH	Tonopah	79.43	325	P	P	02 06 46.2	+1.3
TPH				pmax	pmax		
	comp=Z,336nm,1.2s						
TPH	Tonopah	79.43	325	P	P	02 06 46.2	+1.3
TPH				IAmb	IAmb	02 07 06.5	
	comp=Z,336nm,1.2s						
DRLN	Deer Lake	79.44	10	IAmb	IAmb	02 06 57.2	
	comp=Z,225nm,1.2s						
PGRA	Graciosa	79.53	33	*e*P	P	02 06 46.8	+1.7
	comp=Z,346nm,1.8s						
D32A	Dogwood Acres,	79.55	343	IAmb	IAmb	02 07 02.1	
	comp=Z,524nm,1.7s						
PSET	Sete Cidades	79.70	36	*e*P	P	02 06 48.1	+1.9
	comp=Z,403nm,1.6s						
PAGU	Agualva, Azore	79.71	34	*e*P	P	02 06 48.1	+2.0
	comp=Z,463nm,1.5s						
GRON	Grota Negra	79.76	36	*e*P	P	02 06 50.2	+3.7
	comp=Z,334nm,1.7s						
BW06	Boulder Array	79.79	333	P	P	02 06 48.1	+1.3
	baz=147,SNR=16						
BW06				S	S	02 16 51.7	+1.3
	baz=147						
BW06	Boulder Array	79.79	333	IAMs_20	IAMs_20	02 39 06.8	

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             comp=Z,36µm,19.0s
PDAR   Pinedale Array     79.79 333  P          P          02 06 47.0 +0.2
             comp=Z,3.2nm,0.6s,baz=142,slow=5.1,SNR=29
PDAR                                 PKKPbc     PKKPbc     02 25 37.2 +2.0
             comp=Z,1.0nm,0.8s,baz=11,slow=1.5,SNR=6.4
PDAR                                 LR         LR         02 39 17.1
             comp=Z,28µm,19.4s,baz=156,slow=34
MLAC   Mammoth, Mammo79.90 324  P          P          02 06 49.5 +2.0
             baz=140
MLAC                                 S          S          02 16 52.8 +0.9
             baz=140
NVAR   Mina Array Bea     80.24 325  P          P          02 06 50.2 +0.9
             comp=Z,4.2nm,0.8s,baz=152,slow=5.7,SNR=17
NVAR                                 PKKPbc     PKKPbc     02 25 36.2 +2.3
             comp=Z,0.4nm,0.7s,baz=300,slow=1.8,SNR=1.7
NVAR                                 PKPPKP     P'P'df     02 33 39.6 +8.1
             comp=Z,0.2nm,0.3s,baz=124,slow=0.5,SNR=3.6
NVAR                                 LR         LR         02 36 15.3
             comp=Z,25µm,21.1s,baz=138,slow=31
NVAR   Mina Array Bea     80.24 325  P          P          02 06 49.3  0.0
AGMN   Agassiz Nation     80.34 344  P          P          02 06 49.5 +0.2
             baz=159,SNR=22
AGMN                                 S          S          02 16 53.0 -2.6
             baz=159
TSUM   Tsumeb             80.39 107 ⇑P          P          02 06 50.6  0.0
TSUM                                ⇓p          sP         02 06 51.2 +0.4
TSUM   Tsumeb             80.39 107  P          P          02 06 49.9 -0.7
TSUM                                 IAmb       IAmb       02 07 07.4
             comp=Z,189nm,1.1s
AHID   Auburn Hatcher     80.41 332  IAmb       IAmb       02 07 08.4
             comp=Z,306nm,1.6s
AHID                                 IAMs_20    IAMs_20    02 40 11.3
             comp=Z,39µm,18.0s
ELK    Elko               80.57 328  IAMs_20    IAMs_20    02 38 45.6
             comp=Z,41µm,19.0s
SAO    San Andreas Ge     80.63 322  IAMs_20    IAMs_20    02 35 35.9
             comp=Z,25µm,22.0s
REDW   Red Top Meadow     80.80 332  IAmb       IAmb       02 07 07.5
             comp=Z,428nm,2.0s
REDW                                 IAMs_20    IAMs_20    02 39 25.8
             comp=Z,35µm,21.0s
PMOZ   Porto Moniz, M     80.81  44  eP         P          02 06 53.1 +0.7
             comp=Z,235nm,1.6s
PMOZ   Porto Moniz, M     80.81  44  eS         S          02 17 04.2 +2.8
PMOZ                                 eSS        SS         02 22 06.2 -9.3
PMOZ                                 eLQ        LQ         02 30 20.1
PMOZ                                 eLR        LR         02 33 33.3
             comp=Z,35µm,20.0s
SNOW   Snow King Moun     80.85 332  IAmb       IAmb       02 07 33.5
             comp=Z,357nm,1.9s
SNOW                                 IAMs_20    IAMs_20    02 39 47.9
             comp=Z,37µm,19.0s
FUL    Funchal            80.88  44  eP         P          02 06 54.0 +1.4
             comp=Z,242nm,1.8s
MDND   Maddock            80.89 342  P          P          02 06 53.0 +0.7
             baz=156,SNR=9.6
MDND                                 S          S          02 17 01.2 -0.1
             baz=156
MDND   Maddock            80.89 342  P          P          02 06 52.5 +0.2
PMAR   Madeira            80.92  44  eP         P          02 06 54.7 +1.7
             comp=Z,330nm,1.8s
TPAW   Teton Pass         80.95 332  IAMs_20    IAMs_20    02 40 07.6
             comp=Z,27µm,19.0s
FXWY   Fox Creek          81.10 332  IAMs_20    IAMs_20    02 39 45.7
             comp=Z,23µm,20.0s
FLWY   Flagg Ranch        81.34 333  IAmb       IAmb       02 07 11.5
             comp=Z,271nm,1.5s
PMPS   Porto Santo        81.50  44  eP         P          02 06 57.9 +2.0
             comp=Z,341nm,1.7s
PMPST  Porto Santo, M     81.52  44  eP         P          02 06 57.0 +1.0
             comp=Z,472nm,1.7s
H17A   Grant Village      81.55 333  P          P          02 06 59.0 +2.7
             baz=147
H17A                                 S          S          02 17 12.9 +4.0
             baz=147
LKWY   Lake               81.63 333  IAMs_20    IAMs_20    02 34 23.6
             comp=Z,32µm,21.0s
RLMT   Red Lodge          81.66 334  P          P          02 06 57.6 +0.9
             baz=148,SNR=16
RLMT                                 S          S          02 17 10.5 +0.6
             baz=148
RLMT   Red Lodge          81.66 334  P          P          02 06 56.9 +0.2
PAHR   Pah Rah Range      81.76 325  IAmb       IAmb       02 07 26.9
             comp=Z,190nm,1.4s
LAO    LASA Array         81.91 337  P          P          02 06 58.5 +0.7
             baz=150,SNR=18
LAO                                  S          S          02 17 11.9 -0.2
             baz=150
LAO    LASA Array         81.91 337  P          P          02 06 58.0 +0.2
LAO                                  IAmb       IAmb       02 07 22.3
             comp=Z,197nm,1.4s
YMR    Madison River      81.94 333  IAmb       IAmb       02 07 16.6
             comp=Z,343nm,1.5s
BOSA   Boshof             82.11 118  P          P          02 06 58.6 -1.0
             comp=Z,39nm,0.9s,baz=249,slow=4.2,SNR=34
BOSA   Boshof             82.11 118  eP         P          02 06 58.8 -0.8
BOSA   Boshof             82.11 118  eP         P          02 06 58.8 -0.8
BOSA   Boshof             82.11 118  P          P          02 06 58.8 -0.8
BOSA                                 IAmb       IAmb       02 07 12.9
             comp=Z,450nm,1.9s
ULM    Lac du Bonnet      82.17 345  P          P          02 06 58.5 -0.4
             comp=Z,24nm,0.8s,baz=168,slow=4.1,SNR=20
ULM                                  LR         LR         02 43 09.7
             comp=Z,19µm,21.6s,baz=144,slow=35
ULM    Lac du Bonnet      82.17 345  IAmb       IAmb       02 07 22.5
             comp=Z,228nm,1.3s
YHL    Hebgen Lake        82.17 333  IAmb       IAmb       02 07 42.4
             comp=Z,221nm,1.6s
GCMT   Greycliff          82.37 334  P          P          02 06 59.4 -1.0
HLID   Hailey             82.46 330  P          P          02 07 02.2 +1.3
             baz=144,SNR=31
HLID                                 S          S          02 17 21.6 +3.5
             baz=144
HLID   Hailey             82.46 330  IAMs_20    IAMs_20    02 39 35.5
             comp=Z,40µm,20.0s
TORD   Torodi Ar. Bea     82.61  70  P          P          02 07 01.3 -0.9
             comp=Z,345nm,1.2s,baz=259,slow=2.9,SNR=392
TORD                                 PKKPbc     PKKPbc     02 25 32.0 +5.3
             comp=Z,1.0nm,0.9s,baz=5.3,slow=2.8,SNR=2.8
TORD                                 LR         LR         02 44 12.5
             comp=Z,46µm,18.1s,baz=230,slow=36
ORV    Oroville           82.72 324  IAmb       IAmb       02 07 20.4
             comp=Z,178nm,1.2s
ORV                                  IAMs_20    IAMs_20    02 38 27.4
             comp=Z,30µm,18.0s
DGMT   Dagmar             82.80 339  P          P          02 07 03.3 +0.9
             baz=152,SNR=20
DGMT                                 S          S          02 17 22.3 +1.2
             baz=152
MCMT   McKenzie Canyo     82.83 332  P          P          02 07 03.3 +0.4
BOZ    Bozeman (W)        82.97 333  P          P          02 07 04.0 +0.5
             baz=146,SNR=12
BOZ                                  S          S          02 17 24.3 +1.2
             baz=146
BOZ    Bozeman (W)        82.97 333  IAMs_20    IAMs_20    02 41 10.1
             comp=Z,31µm,19.0s
HOPS   Hopland Field      83.13 322  IAMs_20    IAMs_20    02 36 51.3
             comp=Z,24µm,22.0s
DLMT   Dillon             83.16 332  IAmb       IAmb       02 07 22.4
             comp=Z,181nm,1.8s
DLMT                                 IAMs_20    IAMs_20    02 41 05.1
             comp=Z,30µm,20.0s
O03E   Paynes Creek       83.42 324  P          P          02 07 06.1 +0.2
             baz=138,SNR=11
O03E                                 S          S          02 17 28.1 +0.2
             baz=138
LRM    Limekiln Ridge     83.48 333  P          P          02 07 05.5 -0.7
WVOR   Wild Horse Val     83.48 327  IAMs_20    IAMs_20    02 38 58.5
             comp=Z,37µm,20.0s
O02D   Mt. Diablo Mer     83.85 323  P          P          02 07 09.4 +1.3
             baz=137
O02D                                 S          S          02 17 34.0 +1.8
             baz=137
MOD    Modoc Plateau      83.88 326  IAMs_20    IAMs_20    02 42 31.0
             comp=Z,35µm,18.0s
SCHQ   Schefferville      84.08   3  P          P          02 07 08.6 -0.2
             comp=Z,43nm,1.2s,baz=186,slow=3.9,SNR=12
SCHQ                                 LR         LR         02 44 53.5
             comp=Z,8µm,21.9s,baz=184,slow=36
SCHQ   Schefferville      84.08   3  P          P          02 07 08.2 -0.7
J08A   Circle Bar Ran     84.11 328  IAmb       IAmb       02 07 27.4
             comp=Z,202nm,1.5s
LBTB   Lobatse            84.14 115  eP         P          02 07 13.0 +2.9
LBTB   Lobatse            84.14 115  eP         P          02 07 13.0 +2.9
LBTB   Lobatse            84.14 115  IAmb       IAmb       02 07 20.0
             comp=Z,204nm,1.1s
EGMT   Eagleton           84.29 336  P          P          02 07 11.0 +0.9
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             baz=148,SNR=6.4
EGMT                                 S          S          02 17 35.8 -0.4
             baz=148
EGMT   Eagleton           84.29 336  IAMs_20    IAMs_20    02 42 30.1
             comp=Z,29µm,20.0s
N02D   Trinity Center     84.39 324  P          P          02 07 12.2 +1.4
             baz=137,SNR=5.3
N02D                                 S          S          02 17 37.0 -0.5
             baz=137
CASY   Casey              84.53 181  P          P          02 07 10.9 -0.2
CASY                                 IAmb       IAmb       02 07 29.1
             comp=Z,206nm,1.2s
M04C   Macdoel            84.55 325  P          P          02 07 12.3 +0.6
             baz=138,SNR=11
M04C                                 S          S          02 17 39.5 +0.3
             baz=138
BMO    Blue Mountains     84.75 329  IAmb       IAmb       02 07 30.0
             comp=Z,196nm,1.8s
M02C   Callahan           84.77 324  P          P          02 07 13.3 +0.6
             baz=137,SNR=6.7
M02C                                 S          S          02 17 42.3 +1.0
             baz=137
EAH    EAH                84.87  49  P          P          02 07 17.0 +3.6
MSO    Missoula           84.90 333  P          P          02 07 15.2 +1.9
             baz=144,SNR=6.6
MSO                                  S          S          02 17 44.2 +1.8
             baz=144
YBH    Yreka Blue Hor     84.95 324  P          P          02 07 14.9 +1.2
             comp=Z,2.2nm,0.6s,baz=53,slow=1.3,SNR=6.2
YBH    Yreka Blue Hor     84.95 324  P          P          02 07 13.8 +0.2
YBH                                  pmax       pmax
             comp=Z,72nm,1.6s
YBH    Yreka Blue Hor     84.95 324  P          P          02 07 13.8 +0.2
TTIG   Tnine Tigouga,     84.95  51  P          P          02 07 17.0 +3.0
JCC    Jacoby Creek,      84.96 323  IAMs_20    IAMs_20    02 40 18.7
             comp=Z,23µm,18.0s
L04D   Klamath Falls      85.10 325  P          P          02 07 15.7 +1.3
             baz=138
L04D                                 S          S          02 17 45.0 +0.3
             baz=138
K04D   Chiloquin, OR      85.13 326  P          P          02 07 16.2 +1.6
             baz=138
K04D                                 S          S          02 17 46.9 +1.9
             baz=138
I07A   Izee               85.15 328  IAmb       IAmb       02 07 31.1
             comp=Z,167nm,1.6s
J05D   Fort Rock, OR      85.37 326  P          P          02 07 17.8 +2.0
             baz=139,SNR=11
J05D                                 S          S          02 17 48.4 +1.1
             baz=139
L02E   Cave Junction      85.71 324  P          P          02 07 19.7 +2.3
             baz=137
L02E                                 S          S          02 17 50.7 +0.2
             baz=137
HUMO   Hull Mountain      85.72 325  IAMs_20    IAMs_20    02 39 32.7
             comp=Z,23µm,21.0s
OUK    Oukaimeden         85.75  51  P          P          02 07 20.0 +1.8
J04D   Umpqua Nationa     85.76 326  P          P          02 07 19.5 +1.7
             baz=138,SNR=7.9
J04D                                 S          S          02 17 52.7 +1.4
             baz=138
JTMT   Jette              85.78 333  IAmb       IAmb       02 07 31.5
             comp=Z,156nm,1.6s
BFZ    Birch Farm         85.90 225  IAMs_20    IAMs_20    02 36 21.6
             comp=Z,21µm,19.0s
K02D   Willamette Mer     86.14 325  P          P          02 07 20.8 +1.3
             baz=137,SNR=10
K02D                                 S          S          02 17 56.2 +1.4
             baz=137
I05D   Terrebonne, OR     86.21 327  P          P          02 07 22.2 +2.4
             baz=139,SNR=7.2
I05D                                 S          S          02 17 57.3 +1.9
             baz=139
DBO    Dodson Butte       86.23 325  IAmb       IAmb       02 07 38.2
             comp=Z,176nm,1.3s
OUZM   OUZ                86.31  51  P          P          02 07 22.0 +1.2
I04A   Tendick Farm,      86.32 326  P          P          02 07 21.4 +1.1
             baz=138
I04A                                 S          S          02 17 55.1 -1.3
             baz=138
MXZ    Matakaoa Point     86.39 229  IAMs_20    IAMs_20    02 35 44.7
             comp=Z,37µm,22.0s
SNZO   South Karori       86.47 224  IAMs_20    IAMs_20    02 38 58.7
             comp=Z,24µm,19.0s
SRHM   Skhour des Reh     86.50  50  P          P          02 07 23.0 +1.4
J01E   Myrtle Point       86.61 325  P          P          02 07 24.3 +2.7
             baz=137
J01E                                 S          S          02 18 00.5 +1.4
             baz=137
ZGR    Zagora             86.62  53  P          P          02 07 24.0 +1.8
BKZ    Black Stump Fm     86.63 226  P          P          02 07 20.3 -2.0
BKZ                                  IAmb       IAmb       02 07 37.4
             comp=Z,223nm,1.7s
BKZ                                  IAMs_20    IAMs_20    02 36 48.0
             comp=Z,30µm,22.0s
WALA   Waterton Lakes     86.70 334  IAmb       IAmb       02 07 49.1
             comp=Z,96nm,1.1s
I03D   Drain, OR          86.71 325  P          P          02 07 24.0 +1.9
             baz=137
I03D                                 S          S          02 18 00.0  0.0
             baz=137
URZ    Urewera            86.76 227  LR         LR         02 37 58.2
             comp=Z,33µm,20.1s,baz=211,slow=30
URZ    Urewera            86.76 227  IAMs_20    IAMs_20    02 37 37.6
             comp=Z,33µm,20.0s
OXZ    Oxford             86.81 221  P          P          02 07 22.6 -0.4
OXZ                                  IAmb       IAmb       02 07 37.3
             comp=Z,183nm,1.6s
H04A   Detroit Lake       86.87 327  IAmb       IAmb       02 07 38.1
             comp=Z,106nm,1.1s
G05D   Wamic, OR          86.87 328  P          P          02 07 24.9 +1.9
             baz=139,SNR=7.3
G05D                                 S          S          02 18 02.9 +1.2
             baz=139
HAWA   Hanford            86.93 329  IAmb       IAmb       02 07 41.0
             comp=Z,314nm,1.8s
H04D   Lebanon            87.02 326  P          P          02 07 25.0 +1.3
             baz=138
H04D                                 S          S          02 18 02.5 -0.5
             baz=138
TZRR   Tazzarine          87.05  52  P          P          02 07 27.0 +2.6
RPZ    Rata Peaks         87.13 220  P          P          02 07 24.4 -0.2
RPZ                                  IAmb       IAmb       02 07 41.2
             comp=Z,191nm,1.1s
I02E   Swisshome, OR      87.25 325  P          P          02 07 25.8 +1.0
             baz=137
I02E                                 S          S          02 18 06.3 +1.0
             baz=137
THZ    Tophouse           87.27 223  P          P          02 07 25.1 -0.2
THZ                                  IAmb       IAmb       02 07 48.1
             comp=Z,131nm,1.1s
AVE    Averroes           87.33  49  P          P          02 07 25.4 -0.1
AVE                                  S          S          02 17 59.4 -7.3
AVE    Averroes           87.33  49  P          P          02 07 27.1 +1.6
COR    Corvallis          87.34 326  IAMs_20    IAMs_20    02 40 48.6
             comp=Z,25µm,21.0s
NEW    Newport            87.34 332  P          P          02 07 26.1 +0.9
             baz=142,SNR=5.7
NEW                                  S          S          02 18 04.6 -1.6
             baz=142
F05D   White Salmon       87.42 328  P          P          02 07 27.3 +1.6
             baz=139
F05D                                 S          S          02 18 09.2 +2.3
             baz=139
WHZ    Wether Hill Ro     87.43 217  IAMs_20    IAMs_20    02 37 11.6
             comp=Z,33µm,20.0s
C09A   Chrisman Ranch     87.46 331  IAmb       IAmb       02 07 43.0
             comp=Z,246nm,1.8s
WKZ    Wanaka             87.55 219  IAMs_20    IAMs_20    02 38 15.9
             comp=Z,21µm,20.0s
FFC    Flin Flon          87.76 343  P          P          02 07 26.4 -0.6
FFC                                  pmax       pmax
             comp=Z,56nm,1.4s
FFC                                  MLR        MLR
             comp=Z,26µm,20.0s
FFC    Flin Flon          87.76 343  P          P          02 07 26.4 -0.6
FFC    Flin Flon          87.76 343  IAMs_20    IAMs_20    02 46 11.0
             comp=Z,26µm,20.0s
G03D   McMinnville, O     87.78 326  P          P          02 07 28.6 +1.3
             baz=137
G03D                                 S          S          02 18 11.2 +0.9
             baz=137
ZHG    ZHG                87.93  49  P          P          02 07 30.0 +1.5
GOLM   Goulmima           88.03  52  P          P          02 07 32.0 +2.9
HIZ    Hauiti             88.04 226  IAMs_20    IAMs_20    02 37 53.5
             comp=Z,23µm,20.0s
LTY    Liberty            88.09 329  IAmb       IAmb       02 07 45.3
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             comp=Z,125nm,1.4s
DCZ    Deep Cove          88.13 217  IAMs_20    IAMs_20    02 37 34.1
             comp=Z,27µm,20.0s
LON    Longmire           88.23 328  P          P          02 07 29.4 -0.1
LON                                  pmax       pmax
             comp=Z,41nm,1.0s
LON    Longmire           88.23 328  P          P          02 07 29.4 -0.1
F04D   Rainier, OR        88.29 327  P          P          02 07 30.9 +1.1
             baz=137
F04D                                 S          S          02 18 16.0 +0.8
             baz=137
RAO    Raoul Island       88.38 237  LR         LR         02 37 33.7
             comp=Z,15µm,21.2s,baz=127,slow=29
E04D   Cinebar            88.43 328  P          P          02 07 31.9 +1.5
             baz=138,SNR=8.4
E04D                                 S          S          02 18 15.4 -1.1
             baz=138
D05A   Enumclaw           88.64 328  IAmb       IAmb       02 07 48.7
             comp=Z,176nm,1.2s
C06D   Leavenworth        88.69 330  P          P          02 07 32.8 +1.2
             baz=139
C06D                                 S          S          02 18 16.3 -2.7
             baz=139
CZD    Col de Zad         88.75  51  P          P          02 07 34.3 +1.6
PFVI   Vila Bisbo         88.81  45  eP         P          02 07 33.9 +1.5
             comp=Z,154nm,1.6s
MDT    Midelt             88.92  51  P          P          02 07 33.4 +0.2
             comp=Z,16nm,1.0s,baz=265,slow=5.7,SNR=29
MDT    Midelt             88.92  51  P          P          02 07 34.6 +1.5
MSNA   Messina            88.98 115  eP         P          02 07 22.0  -12
MSNA   Messina            88.98 115  eP         P          02 07 22.0  -12
IFR    Ifrane             88.99  50  P          P          02 07 33.9 +0.3
IFR                                  S          S          02 18 28.1 +5.4
MORF   Marmelete          89.03  45  eP         P          02 07 33.4 -0.2
MORF                                 ePP        PP         02 11 03.0 -0.7
MORF                                 eSKSac     SKSac      02 18 02.7 -1.3
MORF                                 IAMs_20    IAMs_20    02 48 41.9
             comp=Z,62µm,19.0s
MORF   Marmelete          89.03  45  eP         P          02 07 33.3 -0.2
MORF                                 e                     02 11 02.9
MORF                                 e                     02 18 02.6
MORF   Marmelete          89.03  45  eP         P          02 07 35.0 +1.5
             comp=Z,74nm,1.5s
MORF   Marmelete          89.03  45  ePP        PP         02 11 02.0 -1.7
ITZ    Itezhi-Tezhi       89.09 107  e          P          02 07 32.4 -2.1
ITZ    Itezhi-Tezhi       89.09 107  e          P          02 07 32.4 -2.1
PTEO   Sao Teotonio       89.13  45  eP         P          02 07 35.1 +1.2
             comp=Z,95nm,2.0s
PTEO   Sao Teotonio       89.13  45  ePP        PP         02 11 06.0 +1.6
LCRM   LCR                89.27  50  P          P          02 07 37.0 +2.1
RSA    Sarsar             89.34  49  P          P          02 07 37.0 +1.9
D03D   Eldon              89.40 328  P          P          02 07 36.4 +1.5
             baz=137
D03D                                 S          S          02 18 25.6 +0.1
             baz=137
PBDV   Barranco-do-Ve     89.44  46  eP         P          02 07 36.4 +1.0
             comp=Z,104nm,2.0s
PBDV   Barranco-do-Ve     89.44  46  ePP        PP         02 11 07.4 +0.5
B05A   Bryant             89.48 329  P          P          02 07 36.1 +0.8
             baz=138,SNR=6.2
B05A                                 S          S          02 18 22.3 -4.0
             baz=138
LIS    Lisbon             89.61  44  eP         P          02 07 36.0 -0.2
LIS                                  eSKSac     SKSac      02 18 06.0 -1.2
LIS                                  IAMs_20    IAMs_20    02 45 28.9
             comp=Z,59µm,20.0s
LIS    Lisbon             89.61  44  eP         P          02 07 35.9 -0.2
LIS                                  e                     02 18 05.9
LIS    Lisbon             89.61  44  eP         P          02 07 37.5 +1.4
             comp=Z,93nm,1.7s
PNCL   Nicolau / Gran     89.61  45  eP         P          02 07 36.5 +0.4
             comp=Z,69nm,1.4s
PNCL   Nicolau / Gran     89.61  45  ePP        PP         02 11 14.6 +6.4
PCVE   Castro Verde       89.61  45  eP         P          02 07 37.3 +1.1
             comp=Z,66nm,1.5s
PCVE   Castro Verde       89.61  45  ePP        PP         02 11 14.5 +6.2
MESJ   Messejana          89.63  45  eP         P          02 07 36.0 -0.3
MESJ                                 ePP        PP         02 11 07.8 -0.6
MESJ                                 eSKSac     SKSac      02 18 06.1 -1.3
MESJ                                 IAMs_20    IAMs_20    02 48 50.9
             comp=Z,44µm,15.3s
MESJ   Messejana          89.63  45  eP         P          02 07 35.9 -0.3
MESJ                                 e                     02 11 07.7
MESJ                                 e                     02 18 06.1
MESJ   Messejana          89.63  45  eP         P          02 07 37.8 +1.6
             comp=Z,88nm,1.7s
MESJ   Messejana          89.63  45  ePP        PP         02 11 12.3 +3.9
NLWA   Neilton Lookou     89.65 328  IAMs_20    IAMs_20    02 42 01.9
             comp=Z,25µm,22.0s
PVAQ   Vaqueiros          89.67  46  eP         P          02 07 36.2 -0.2
             comp=Z,80nm,1.8s
PVAQ   Vaqueiros          89.67  46  ePP        PP         02 11 13.7 +5.0
PVAQ                                 eS         SKSac      02 18 15.1 +7.4
PVAQ                                 eSS        SS         02 24 29.7 +4.1
PVAQ                                 eLQ        LQ         02 31 15.8
PVAQ                                 eLR        LR         02 37 38.2
             comp=Z,56µm,20.0s
PVAQ   Vaqueiros          89.67  46  P          P          02 07 38.7 +2.3
PMAFR  Mafra              89.67  44  eP         P          02 07 36.5  0.0
             comp=Z,81nm,1.2s
PMAFR  Mafra              89.67  44  ePP        PP         02 11 14.1 +5.3
CHEFC  Chefchaouen        89.79  49  P          P          02 07 39.0 +1.8
FCC    Fort Churchill     89.83 349  IAmb       IAmb       02 07 58.7
             comp=Z,131nm,1.1s
EDM    Edmonton           89.89 337  IAmb       IAmb       02 07 47.3
             comp=Z,159nm,1.4s
PBEJ   Beja               89.96  45  eP         P          02 07 38.6 +0.8
             comp=Z,61nm,1.7s
PBEJ   Beja               89.96  45  ePP        PP         02 11 20.6  +10
SFS    San Fernando       90.05  47  P          P          02 07 38.7 +0.4
SFS                                  S          S          02 18 39.8 +7.7
A04D   Lummi Island       90.09 329  P          P          02 07 39.1 +1.0
             baz=138
A04D                                 S          S          02 18 32.9 +1.0
             baz=138
ARNO   Arenosillo         90.10  47  P          P          02 07 37.0 -1.4
ARNO                                 S          S          02 18 39.4 +6.9
EVO    Evora              90.18  45  P          P          02 07 37.0 -1.8
EVO                                  S          S          02 18 38.2 +5.0
EVO    Evora              90.18  45  eP         P          02 07 38.7 -0.1
             comp=Z,41nm,1.5s
EVO    Evora              90.18  45  ePP        PP         02 11 17.0 +4.2
CEU    Ceuta              90.25  48  P          P          02 07 38.6 -0.5
CEU                                  S          S          02 18 39.1 +5.2
PSBE   So Bento           90.32  44  eP         P          02 07 39.6 +0.1
             comp=Z,93nm,1.9s
PSBE   So Bento           90.32  44  ePP        PP         02 11 12.4 -1.6
PMTG   Montargil          90.39  44  eP         P          02 07 39.7 -0.1
             comp=Z,117nm,1.9s
PMTG   Montargil          90.39  44  ePP        PP         02 11 12.2 -2.2
PVLZ   Peæn de            90.52  49  P          P          02 07 39.0 -1.4
PVLZ                                 S          S          02 18 42.6 +6.2
PBAR   Barrancos          90.57  46  eP         P          02 07 41.1 +0.5
PESTR  Estremoz           90.65  45  eP         P          02 07 41.9 +0.9
             comp=Z,56nm,1.6s
PESTR  Estremoz           90.65  45  ePP        PP         02 11 12.4 -4.2
PESTR  Estremoz           90.65  45  P          P          02 07 42.4 +1.4
TDRA   Tendrara           90.81  52  P          P          02 07 44.0 +1.8
FIGM   Figuig             90.83  53  P          P          02 07 43.5 +1.3
OUZ    Omahuta            90.83 228  P          P          02 07 41.3 -0.8
OUZ                                  IAmb       IAmb       02 08 19.4
             comp=Z,173nm,1.8s
OUZ                                  IAMs_20    IAMs_20    02 38 43.4
             comp=Z,22µm,21.0s
PCAS   Casmilo, Conde     90.84  43  eP         P          02 07 41.7 -0.1
             comp=Z,65nm,1.7s
PCAS   Casmilo, Conde     90.84  43  ePP        PP         02 11 14.4 -3.6
COI    Coimbra            90.98  43  eP         P          02 07 42.7 +0.2
             comp=Z,98nm,1.6s
COI    Coimbra            90.98  43  ePP        PP         02 11 14.3 -4.9
PMRV   Marv??o            91.12  44  eP         P          02 07 43.5 +0.3
             comp=Z,45nm,1.8s
PMRV   Marv??o            91.12  44  ePP        PP         02 11 19.8 -0.5
PMRV                                 eS         SKSac      02 18 22.8 +6.8
PMRV                                 eSS        SS         02 24 53.0 +6.4
PMRV                                 eLQ        LQ         02 31 36.0
PMRV                                 eLR        LR         02 38 14.5
             comp=Z,54µm,20.0s
LSZ    Lusaka             91.13 108  P          P          02 07 44.7 +0.6
LSZ                                  pmax       pmax
             comp=Z,250nm,1.5s
LSZ    Lusaka             91.13 108  P          P          02 07 44.7 +0.6
LLLB   Lillooet           91.14 331  IAmb       IAmb       02 08 01.2
             comp=Z,150nm,1.9s
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JBK	JBK	91.19	51	P	P	02 07 45.0	+1.2
PCBR	Castelo Branco	91.32	44	eP	P	02 07 44.5	+0.4
	comp=Z,61nm,1.5s						
PCBR	Castelo Branco	91.32	44	ePP	PP	02 11 19.3	-2.5
EMAL	Malaga-Limoner	91.37	48	P	P	02 07 44.3	-0.1
EMAL				S	S	02 18 41.9	-2.3
KRI	Karoi	91.51	110	eP	P	02 07 49.9	+4.1
KRI	Karoi	91.51	110	eP	P	02 07 49.9	+4.1
AFI	Afiamalu	91.59	253	LR	LR	02 38 48.4	
	comp=Z,63µm,21.9s,baz=125,slow=29						
PVIS	Viseu	91.61	43	eP	P	02 07 45.4	-0.1
	comp=Z,57nm,1.7s						
PVIS	Viseu	91.61	43	ePP	PP	02 11 29.3	+5.1
MTE	Manteigas	91.62	44	eP	P	02 07 46.3	+0.7
	comp=Z,64nm,1.7s						
MTE	Manteigas	91.62	44	ePP	PP	02 11 15.1	-9.2
MTE				eS	SKSac	02 18 24.1	+5.1
MTE				eSS	SS	02 24 58.7	+4.7
MTE				eLQ	LQ	02 31 56.3	
MTE				eLR	LR	02 38 29.1	
	comp=Z,54µm,20.0s						
PVRL	Vila Real	92.06	43	eP	P	02 07 48.5	+0.9
	comp=Z,79nm,1.7s						
POLO	Lamas de Olo	92.08	43	eP	P	02 07 48.2	+0.5
	comp=Z,36nm,1.7s						
POLO	Lamas de Olo	92.08	43	ePP	PP	02 11 26.9	-1.0
PCAB	Cabril	92.15	42	eP	P	02 07 48.7	+0.8
	comp=Z,56nm,1.6s						
PCAB	Cabril	92.15	42	ePP	PP	02 11 01.9	-26
PGAV	Gavieira, Arco	92.17	42	eP	P	02 07 46.2	-1.9
	comp=Z,84nm,1.8s						
PGAV	Gavieira, Arco	92.17	42	eS	S	02 18 54.6	+3.2
PGAV	Gavieira, Arco	92.17	42	eLQ	LQ	02 31 53.0	
PGAV				eLR	LR	02 38 55.5	
	comp=Z,36µm,18.0s						
MVO	Moncorvo	92.40	43	eP	P	02 07 49.8	+0.6
	comp=Z,87nm,1.8s						
MVO	Moncorvo	92.40	43	ePP	PP	02 11 37.7	+7.2
MVO				eS	SKSac	02 18 30.6	+7.3
MVO				eSS	SS	02 25 13.1	+8.0
MVO				eLQ	LQ	02 34 20.4	
MVO				eLR	LR	02 38 36.3	
	comp=Z,46µm,18.0s						
NRS	Narsarsuaq	92.86	13	IAMs_20	IAMs_20	02 47 16.8	
	comp=Z,22µm,22.0s						
PBRG	Braganca	92.97	43	eP	P	02 07 50.9	-0.8
	comp=Z,52nm,1.8s						
PBRG	Braganca	92.97	43	ePP	PP	02 11 30.9	-3.9
PAB	San Pablo	93.07	46	P	P	02 07 51.9	-0.4
PAB				pmax	pmax		
	comp=Z,70nm,1.4s						
PAB				MLR	MLR		
	comp=Z,56µm,18.0s						
PAB	San Pablo	93.07	46	P	P	02 07 51.9	-0.4
PAB	San Pablo	93.07	46	P	P	02 07 53.1	+0.8
ESDC	Sonseca Array	93.38	46	P	P	02 07 54.0	+0.2
	comp=Z,9.4nm,1.2s,baz=228,slow=5.1,SNR=37						
ESDC				LR	LR	02 46 58.0	
	comp=Z,47µm,21.2s,baz=250,slow=34						
ESDC	Sonseca Array	93.38	46	P	P	02 07 53.6	-0.1
CART	Cartagena	94.08	49	P	P	02 07 55.6	-1.2
CART				S	SKSac	02 18 38.0	+5.4
POHA	Pohakuloa	94.18	290	IAMs_20	IAMs_20	02 39 00.5	
	comp=Z,25µm,21.0s						
UCM	Universidad Co	94.20	46	P	P	02 07 57.0	-0.5
UCM				S	SKSac	02 18 48.4	+15
KIP	Kipapa	97.02	291	i P	P	02 08 10.2	-0.5
KIP				pmax	pmax		
	comp=Z,245nm,2.0s						
KIP	Kipapa	97.02	291	IAMs_20	IAMs_20	02 42 10.6	
	comp=Z,30µm,20.0s						
SJPF	Ste Jean	97.04	44	eP	Pdif	02 08 11.0	+0.6
SJPF				pmax	pmax		
	comp=Z,72nm,1.5s						
ETSF	Etsaut	97.33	45	eP	Pdif	02 08 12.3	+0.5
ETSF				pmax	pmax		
	comp=Z,53nm,1.4s						
DY2G	Dye2	97.64	10	i P	Pdif	02 08 12.9	+0.1
YKA	Yellowknife Ar	97.81	341	P	P	02 08 12.1	-1.2
	comp=Z,2.3nm,0.7s,baz=136,slow=5.5,SNR=6.2						
YKA				LR	LR	02 52 38.4	
	comp=Z,12µm,18.9s,baz=0.0,slow=36						
YKA	Yellowknife Ar	97.81	341	P	P	02 08 12.9	-0.3
MSVF	Nonsavu	97.82	245	i P	P	02 08 13.5	-1.1
MSVF				MLR	MLR		
	comp=Z,21µm,17.0s						
MSVF	Nonsavu	97.82	245	IAMs_20	IAMs_20	02 50 14.6	
	comp=Z,21µm,18.0s						
EPF	Esparros	97.95	45	eP	Pdif	02 08 14.9	+0.4
EPF				pmax	pmax		
	comp=Z,32nm,1.5s						
ANGG	Ammassalik, Gr	98.42	14	IAMs_20	IAMs_20	02 53 45.7	
	comp=Z,17µm,19.0s						
IGLA	Glengowla, Co	98.73	33	eP	P	02 08 15.6	-1.9
IGLA				IAMs_20	IAMs_20	02 57 59.1	
	comp=Z,37µm,17.2s						
MAHO	Mahon	98.79	49	P	Pdif	02 08 18.9	+0.7
MAHO				S	SKSac	02 19 05.9	+8.9
CCA1	Carnmenellis	98.83	37	eP	P	02 08 17.4	-0.7
CCA1				IAMs_20	IAMs_20	02 52 27.8	
	comp=Z,54µm,19.1s						
MTLF	Montolieu	99.28	45	eP	Pdif	02 08 20.3	0.0
MTLF				pmax	pmax		
	comp=Z,63nm,1.5s						
IWEX	Carrickbyrne,	99.34	34	eP	Pdif	02 08 19.3	-1.0
TAU	Tasmania Unive	99.43	208	IAMs_20	IAMs_20	02 45 33.8	
	comp=Z,16µm,19.0s						
ILULI	Ilulissat	99.58	7	IAMs_20	IAMs_20	02 52 32.1	
	comp=Z,24µm,22.0s						
DYA	Yadsworthy	99.65	37	eP	Pdif	02 08 20.1	-1.7
DYA				IAMs_20	IAMs_20	02 53 28.2	
	comp=Z,73µm,18.5s						
WRAK	Wrangell Islan	99.66	331	IAMs_20	IAMs_20	02 49 48.5	
	comp=Z,28µm,19.0s						
HTL	Hartland	99.68	36	eP	Pdif	02 08 21.3	-0.6
HTL				IAMs_20	IAMs_20	02 57 51.7	
	comp=Z,37µm,16.5s						
JSA	Saint Aubin	99.89	39	eP	Pdif	02 08 22.0	-0.8
JSA				IAMs_20	IAMs_20	02 55 06.0	
	comp=Z,40µm,17.5s						
RJF	Les Rejaudoux	99.89	43	eP	Pdif	02 08 23.0	0.0
RJF				pmax	pmax		
	comp=Z,57nm,1.6s						
CAF	Calviac	100.02	44	eP	Pdif	02 08 23.7	+0.1
CAF				pmax	pmax		
	comp=Z,15nm,1.3s						
DSB	Dublin	100.05	34	IAMs_20	IAMs_20	02 52 10.1	
	comp=Z,23µm,20.0s						
GRR	Gorron	100.17	40	eP	Pdif	02 08 24.5	+0.4
GRR				pmax	pmax		
	comp=Z,22nm,1.0s						
KEST	Kesra	100.21	55	P	Pdif	02 08 25.7	+0.9
	comp=Z,2.9nm,0.9s,baz=241,slow=13,SNR=3.0						
FLN	La Foliniere	100.58	40	eP	Pdif	02 08 25.5	-0.5
FLN				pmax	pmax		
	comp=Z,46nm,1.4s						
MBAR	Mbarara	100.73	97	i P	Pdif	02 08 30.4	+2.6
WRGLY	Wrigley	101.00	339	PKiKP	PP	02 12 40.9	+4.7
	baz=136						
MCH1	Michaelchurch	101.02	36	eP	Pdif	02 08 29.1	+1.2
MCH1				IAMs_20	IAMs_20	02 53 17.5	
	comp=Z,32µm,19.2s						
ICESG	Greenland Ices	101.09	11	i P	Pdif	02 08 27.8	-0.4
CLGH	Cloghs, Cushen	101.26	32	eP	Pdif	02 08 27.6	-1.3
CLGH				IAMs_20	IAMs_20	02 59 52.0	
	comp=Z,30µm,16.8s						
HLM1	Long Mynd	101.37	36	eP	Pdif	02 08 28.3	-1.1
HLM1				IAMs_20	IAMs_20	02 59 13.8	
	comp=Z,34µm,17.4s						
FOEL	Foel Wylfa	101.42	35	eP	Pdif	02 08 30.1	+0.5
FOEL				IAMs_20	IAMs_20	02 52 44.4	
	comp=Z,43µm,18.4s						
IOMK	Kirk Michael	101.52	34	eP	Pdif	02 08 28.3	-1.6
IOMK				IAMs_20	IAMs_20	03 02 32.0	
	comp=Z,58µm,16.3s						
VIVF	Saint-Julien-l	101.57	45	eP	Pdif	02 08 31.2	+0.7
VIVF				pmax	pmax		
	comp=Z,37nm,1.5s						
JIS	Juneau Island	101.69	331	IAMs_20	IAMs_20	02 52 15.2	
	comp=Z,29µm,20.0s						
AVF	Avril sur Loir	101.75	43	eP	Pdif	02 08 31.1	-0.1
AVF				pmax	pmax		
	comp=Z,43nm,1.6s						
GAL1	Galloway	101.80	33	eP	Pdif	02 08 30.0	-1.2
GAL1				IAMs_20	IAMs_20	03 00 22.0	
	comp=Z,32µm,16.6s						
BORG	Borgarnes	101.83	20	IAMs_20	IAMs_20	02 55 06.1	
	comp=Z,23µm,19.0s						
LMR	La Mourre	101.97	47	eP	Pdif	02 08 32.9	+0.6
LMR				pmax	pmax		
	comp=Z,50nm,1.5s						
VOI	Vohitsoka	101.98	124	IAMs_20	IAMs_20	02 47 19.9	
	comp=Z,19µm,22.0s						
NEWG	New Galloway	102.17	33	eP	Pdif	02 08 31.1	-1.8
P33M	Teslin, Yukon	102.26	333	PKiKP	PKiKP	02 12 52.5	-2.7
	baz=129						
LAWE	Loch Awe, Argy	102.28	32	eP	Pdif	02 08 31.5	-1.7
LAWE				IAMs_20	IAMs_20	02 51 31.4	
	comp=Z,32µm,19.0s						
LOR	Lormes	102.29	43	eP	Pdif	02 08 33.3	-0.3
LOR				pmax	pmax		
	comp=Z,28nm,1.5s						
CWF	Charnwood Fore	102.29	36	eP	Pdif	02 08 33.5	0.0
CWF				IAMs_20	IAMs_20	02 54 07.9	
	comp=Z,31µm,18.5s						
ORIF	Oris-en-Rattie	102.35	45	eP	Pdif	02 08 35.1	+1.0
ORIF				pmax	pmax		
	comp=Z,82nm,1.5s						
KESW	Keswick, Cumbr	102.41	34	eP	Pdif	02 08 32.0	-2.0
KESW				IAMs_20	IAMs_20	02 55 03.1	
	comp=Z,30µm,18.5s						
LBWR	Ladybower, Pea	102.44	35	eP	Pdif	02 08 33.9	-0.2
LBWR				IAMs_20	IAMs_20	02 59 58.7	
	comp=Z,37µm,17.0s						
ESK	Eskdalemuir	102.77	33	eP	Pdif	02 08 35.7	+0.2
ESK				IAMs_20	IAMs_20	03 01 08.6	
	comp=Z,30µm,16.6s						
ESK	Eskdalemuir	102.77	33	IAMs_20	IAMs_20	02 58 45.8	
	comp=Z,19µm,19.0s						
HPK	Haverah Park	102.79	35	eP	Pdif	02 08 36.3	+0.7
HPK				IAMs_20	IAMs_20	02 52 56.7	
	comp=Z,39µm,19.7s						
EKA	Eskdalemuir Ar	102.80	33	P	Pdif	02 08 35.9	+0.3
	comp=Z,6.4nm,1.1s,baz=238,slow=6.6,SNR=3.6						
SKAG	Skagway	102.80	332	PKiKP	PKiKP	02 12 56.3	+0.3
	baz=127						
BNI	Bardonecchia	102.91	45	P	Pdif	02 08 39.3	+2.7
EDMD	Edmundbyers	103.10	34	eP	Pdif	02 08 35.8	-1.2
EDI	Edinburgh	103.11	33	eP	Pdif	02 08 37.2	+0.2
EDI				IAMs_20	IAMs_20	03 02 28.3	
	comp=Z,33µm,16.7s						
ELMS	Elmsett, Ipswi	103.15	37	eP	Pdif	02 08 37.4	+0.1
ELMS				IAMs_20	IAMs_20	02 56 49.8	
	comp=Z,52µm,17.9s						
LPL	La Plagne	103.17	45	eP	Pdif	02 08 38.9	+1.1
LPL				pmax	pmax		
	comp=Z,36nm,1.4s						
LPG	La Plagne	103.17	45	eP	Pdif	02 08 39.1	+1.2
LPG				pmax	pmax		
	comp=Z,47nm,1.5s						
LMK	Market Rasen	103.18	36	eP	Pdif	02 08 37.5	+0.1
LMK				IAMs_20	IAMs_20	02 54 44.6	
	comp=Z,33µm,18.6s						
MMPY	Sheldon Lake,	103.21	336	PKiKP	PKiKP	02 12 56.7	-0.1
	baz=130						
WHY	Whitehorse	103.34	333	PKiKP	PKiKP	02 12 58.0	+0.8
	baz=127						
GDLE	Glaisdale, N Y	103.44	35	eP	Pdif	02 08 38.8	+0.2
GDLE				IAMs_20	IAMs_20	02 56 57.2	
	comp=Z,31µm,17.8s						
FARO	Faro, Yukon	103.72	335	PKiKP	PKiKP	02 12 59.1	+1.4
	baz=128						
DZM	Mont Dzumac	103.95	234	ePP	PP	02 12 55.9	-2.7
	comp=Z,2µm,27.4s						
DZM				eSKSac	SKSac	02 19 22.4	-0.8
	comp=Z,13µm,26.9s						
DZM	Mont Dzumac	103.95	234	ePS	PS	02 22 10.1	+0.1
	comp=Z,10µm,25.6s						
DZM				eSS	SS	02 27 50.4	+3.6
	comp=Z,45µm,30.6s						
DZM	Mont Dzumac	103.95	234	eLQ	LQ	02 38 28.2	
	comp=Z,32µm,37.7s						
DZM				eLR	LR	02 42 50.5	
	comp=Z,45µm,23.6s						
M31M	Drury Creek, Y	104.09	335	PKiKP	PKiKP	02 13 05.5	+7.2
	baz=127						
DOU	Dourbes	104.11	40	dPdif	Pdif	02 08 42.5	+0.9
N31M	Braeburn, Yuko	104.19	334	PKiKP	PKiKP	02 13 06.5	+8.0
	baz=126						
LIFNC	LIFOU	104.20	236	IAMs_20	IAMs_20	02 44 44.1	
	comp=Z,18µm,22.0s						
BIGH	Upper Bighouse	104.20	30	eP	Pdif	02 08 40.8	-1.0
BIGH				IAMs_20	IAMs_20	03 03 59.3	
	comp=Z,25µm,17.4s						
GIVF	Givet	104.24	40	eP	Pdif	02 08 43.5	+1.3
GIVF				pmax	pmax		
	comp=Z,30nm,1.2s						
BMRD	Maredsous	104.31	40	dPdif	Pdif	02 08 43.4	+0.9
SUMG	Summit	104.35	10	i P	Pdif	02 08 43.3	+0.6
SUMG	Summit	104.35	10	IAMs_20	IAMs_20	02 57 25.1	
	comp=Z,20µm,19.0s						
HYT	Haines Junctio	104.48	333	PKiKP	PP	02 13 18.3	+16
	baz=125						
JOHN	Johnston Islan	104.50	281	IAMs_20	IAMs_20	02 46 40.8	
	comp=Z,30µm,21.0s						
PNL	Peninsula	104.61	331	PKiKP	PP	02 13 12.8	+9.5
	baz=124						
WLF	Walferdange	104.79	41	dPdif	Pdif	02 08 46.2	+1.5
BCPM	Bancas Point	104.87	331	IAMs_20	IAMs_20	02 55 01.3	
	comp=Z,19µm,20.0s						
YUK6	Outpost Mounta	104.90	332	PKiKP	PP	02 13 12.7	+7.0
	baz=124						
RES	Resolute Bay	104.99	354	Pdiff	Pdif	02 08 46.2	+1.3
	comp=Z,2.4nm,1.0s,baz=140,slow=7.9,SNR=2.5						
RES	Resolute Bay	104.99	354	P	Pdif	02 08 46.0	+1.0
RES	Resolute Bay	104.99	354		Pdif	02 08 46.0	+1.0
MEM	Membach	105.15	40	dPP	PP	02 13 05.1	-2.5
PINM	Pinnacle	105.20	331	PKiKP	PP	02 13 14.2	+6.4
	baz=123						
BTNL	Ternell	105.21	40	dPP	PP	02 13 05.6	-2.5
M30M	Minto, Yukon	105.22	334	PKiKP	PP	02 13 11.9	+4.0
	baz=125						
YUK4	Talbot Arm	105.24	333	PKiKP	PP	02 13 13.8	+5.6
	baz=124						
BFO	Black Forest	105.45	43	IAMs_20	IAMs_20	03 00 23.3	
	comp=Z,24µm,18.0s						
MAYO	Mayo, Yukon	105.47	335	PKiKP	PP	02 13 12.3	+2.6
	baz=126						
DAVOX	Davos/Dischmat	105.69	45	Pdiff	Pdif	02 08 48.7	-0.3
	comp=Z,5.1nm,1.1s,baz=220,slow=5.4,SNR=6.4						
DAVOX				PKiKP	PKiKP	02 13 01.1	-0.9
	comp=Z,1.8nm,0.7s,baz=320,slow=12,SNR=1.9						
TABL	Table Mountain	105.77	331	IAMs_20	IAMs_20	02 54 31.0	
	comp=Z,18µm,21.0s						
TULEG	Thule	105.78	1	i P	Pdif	02 08 58.6	+10
SCO	Scoresbysund	105.83	16	IAMs_20	IAMs_20	03 06 12.6	
	comp=Z,14µm,18.0s						
LOGN	Logan Glacier	105.91	332	IAMs_20	IAMs_20	02 52 21.9	
	comp=Z,24µm,22.0s						
DAVA	Damuels	105.91	44	eP	Pdif	02 08 50.4	+0.4
	comp=Z,9.6nm,1.1s						
MESA	MESA	105.97	331	PKiKP	PP	02 13 16.1	+2.5
	baz=122						
YAH	Yahtse	105.98	331	IAMs_20	IAMs_20	02 52 38.6	
	comp=Z,26µm,22.0s						
KMBO	Kilima Mbogo	106.08	101	IAMs_20	IAMs_20	02 53 29.4	
	comp=Z,20µm,20.0s						
CTGM	Chitina Glacie	106.12	332	IAMs_20	IAMs_20	02 52 29.5	
	comp=Z,23µm,22.0s						
CTG	Chitna Glacier	106.13	332	PKiKP	PP	02 13 14.6	-0.2
	baz=122						
GRNC	Granite Creek	106.18	331	IAMs_20	IAMs_20	02 55 41.8	
	comp=Z,20µm,19.0s						
YUK3	Moose Creek	106.20	333	PKiKP	PKiKP	02 13 11.4	+8.9
	baz=122						
LRW	Lerwick	106.27	29	eP	Pdif	02 08 51.8	+0.8
BARN	Barnard Glacie	106.31	332	IAMs_20	IAMs_20	02 52 34.4	
	comp=Z,20µm,22.0s						
FETA	Feichten	106.32	45	eP	Pdif	02 08 53.1	+1.3
	comp=Z,11nm,1.3s,SNR=5.4						
FETA				eP	PKiKP	02 13 02.4	-0.7
	comp=Z,6.2nm,1.2s						
SNH	Sunshine Point	106.35	331	IAMs_20	IAMs_20	02 52 36.4	
	comp=Z,23µm,21.0s						
ISLE	Juniper Island	106.35	331	IAMs_20	IAMs_20	02 53 02.6	
	comp=Z,24µm,21.0s						
WAX	Waxell Ridge	106.49	331	IAMs_20	IAMs_20	02 52 52.2	
	comp=Z,29µm,20.0s						
RETA	Reutte	106.54	45	eP	Pdif	02 08 52.9	+0.3
	comp=Z,13nm,1.4s						
RETA				eP	PKiKP	02 13 04.0	+0.6
	comp=Z,8.3nm,2.0s						
TGL	Tana Glacier	106.64	331	IAMs_20	IAMs_20	02 52 59.1	
	comp=Z,24µm,22.0s						
MOTA	Moosalm	106.69	45	eP	Pdif	02 08 54.2	+0.8
	comp=Z,18nm,1.5s,SNR=8.0						
MOTA				eP	PKiKP	02 13 02.5	-1.2
	comp=Z,11nm,1.4s						
SUCK	Suckling Hills	106.70	330	IAMs_20	IAMs_20	02 52 54.7	
	comp=Z,20µm,21.0s						
BVCY	Beaver Creek	106.70	333	PKiKP	PP	02 13 17.9	-0.9
	baz=122						
SQTA	Sankt Quirin	106.70	45	eP	Pdif	02 08 53.8	+0.4
	comp=Z,7.8nm,1.1s,SNR=6.3						
CRQE	Cirque	106.75	331	PKiKP	PP	02 13 23.6	+4.3
	baz=121						
CRQM	Cirque	106.77	331	IAMs_20	IAMs_20	02 53 02.0	
	comp=Z,25µm,21.0s						
J29M	Klondike Camp	106.80	336	PKiKP	PKiKP	02 13 04.7	+1.4
	baz=124						
BERG	Berg Lake	106.83	330	IAMs_20	IAMs_20	02 51 50.1	
	comp=Z,22µm,22.0s						
WATA	Walderalm	106.98	45	eP	Pdif	02 08 55.2	+0.5
	comp=Z,17nm,1.6s,SNR=6.0						
WATA				eP	PKiKP	02 13 03.6	-0.7
	comp=Z,10nm,1.1s						
WTTA	Wattenberg	106.98	45	eP	Pdif	02 08 55.5	+0.8
	comp=Z,16nm,1.5s,SNR=6.0						
WTTA				eP	PKiKP	02 13 05.4	+1.0
	comp=Z,9.0nm,1.4s						
DAWY	Dawson	107.02	335	PKiKP	PP	02 13 14.6	-6.5
	baz=123						
HMT	Hamilton	107.04	330	IAMs_20	IAMs_20	02 57 21.7	
	comp=Z,21µm,18.0s						
MCARA	McCarthy VSAT	107.04	332	IAMs_20	IAMs_20	02 56 18.7	
	comp=Z,18µm,19.0s						
M27K	Edge Creek, AK	107.07	333	PKiKP	PP	02 13 19.5	-2.2
	baz=121						
M27K	Edge Creek, AK	107.07	333	IAMs_20	IAMs_20	02 54 53.6	
	comp=Z,17µm,20.0s						
VRDI	Verde Repeater	107.14	331	IAMs_20	IAMs_20	02 53 38.4	
	comp=Z,22µm,20.0s						
RAGM	Ragged Mountai	107.25	330	IAMs_20	IAMs_20	02 57 37.1	
	comp=Z,19µm,20.0s						
ABTA	Abfaltersbach	107.31	46	eP	Pdif	02 08 56.3	+0.2
	comp=Z,9.3nm,1.4s						
ABTA				P	PKiKP	02 13 03.7	-1.2
	comp=Z,8.5nm,1.2s						
I29M	Ogilvie Camp,	107.34	336	PKiKP	PP	02 13 20.4	-3.0
	baz=123						
GLB	Gilahina Butte	107.40	331	IAMs_20	IAMs_20	02 53 36.2	
	comp=Z,20µm,20.0s						
L27K	Beaver Creek,	107.42	333	PKiKP	PP	02 13 20.1	-3.9
	baz=121						
NEEM	North Greenlan	107.43	5	i P	Pdif	02 09 00.4	+4.2
INK	Inuvik	107.47	340	Pdiff	Pdif	02 08 57.4	+1.2
	comp=Z,1.3nm,0.9s,baz=126,slow=6.9,SNR=2.3						
INK	Inuvik	107.47	340	P	Pdif	02 08 55.6	-0.5
INK	Inuvik	107.47	340	PKiKP	PP	02 13 17.3	-7.0
	baz=127						
INK	Inuvik	107.47	340	Pdif	Pdif	02 08 55.6	-0.5
BMRM	Bremner River	107.50	331	IAMs_20	IAMs_20	03 00 38.8	
	comp=Z,21µm,18.0s						
Q23K	Middleton Isla	107.52	329	IAMs_20	IAMs_20	03 04 42.3	
	comp=Z,14µm,19.0s						
M26K	Nabesna, AK	107.55	332	PKiKP	PKiKP	02 13 11.1	+6.4
	baz=120						
M26K	Nabesna, AK	107.55	332	IAMs_20	IAMs_20	02 54 58.0	
	comp=Z,25µm,20.0s						
SANVU	Saraoutou	107.56	240	IAMs_20	IAMs_20	02 47 07.4	
	comp=Z,16µm,22.0s						
GRFO	Grafenberg	107.75	43	IAMs_20	IAMs_20	03 00 28.3	
	comp=Z,26µm,19.0s						
GRA1	Grafenberg Arr	107.75	43	IAMs_20	IAMs_20	03 00 27.3	
	comp=Z,25µm,19.0s						
N25K	Chitina, Valde	107.81	331	PKiKP	PP	02 13 19.8	-7.2
	baz=119						
N25K	Chitina, Valde	107.81	331	IAMs_20	IAMs_20	02 53 48.0	
	comp=Z,19µm,21.0s						
DUGI	Dugi Otok	107.81	49	i P	PKiKP	02 13 11.1	+5.4
CADS	Cadrg	107.87	47	i PP	PP	02 13 23.1	-4.7
CADS				e		02 15 48.6	
CADS				eSKSac	SKSac	02 19 41.7	+2.5
CADS				eSdiff	Sdif	02 21 16.0	+12
NVLJ	Novalja	107.92	49	i P	PKiKP	02 13 12.6	+6.7
RABC	Rab	107.94	48	i P	PP	02 13 20.6	-7.6
KBA	Koelnbreinsper	107.97	46	eP	Pdif	02 08 59.7	+0.6
	comp=Z,5.9nm,1.4s						
KBA				eP	PKiKP	02 13 06.1	-0.1
	comp=Z,6.7nm,1.5s						
L26K	Log Cabin Wild	108.00	333	PKiKP	PP	02 13 23.7	-4.6
	baz=120						
HIN	Hinchinbrook I	108.05	330	IAMs_20	IAMs_20	02 51 28.3	
	comp=Z,19µm,22.0s						
EGAK	Eagle	108.05	335	PKiKP	PP	02 13 18.7	-10
	baz=121						
EGAK	Eagle	108.05	335	IAMs_20	IAMs_20	03 05 19.3	
	comp=Z,25µm,20.0s						
FID	Port Fidalgo	108.20	330	IAMs_20	IAMs_20	02 58 21.5	
	comp=Z,23µm,18.0s						
LJU	Ljubljana	108.30	47	ePdiff	Pdif	02 09 02.3	+1.9
LJU				ePP	PP	02 13 26.6	-4.3
LJU				e		02 15 53.8	
LJU				eSKSac	SKSac	02 19 41.9	+1.0
LJU				eSdiff	Sdif	02 21 19.2	+11
LJU				eSP	SP	02 22 57.0	+3.1
LJU				eSS	SS	02 28 59.9	+13
OBKA	Obir	108.49	47	eP	Pdif	02 09 03.1	+1.7
	comp=Z,4.2nm,1.2s						
OBKA				eP	PKiKP	02 13 05.3	-1.8
	comp=Z,11nm,1.9s						
GLI	Glacier Island	108.53	330	IAMs_20	IAMs_20	02 58 38.1	
	comp=Z,20µm,18.0s						
BOJS	Bojanci	108.55	48	ePdiff	Pdif	02 09 02.2	+0.7
NKC	Novy Kostel	108.70	42	eP	Pdif	02 09 03.9	+1.8
NKC				MLR	MLR		
	comp=Z,21µm,18.1s						
NKC	Novy Kostel	108.70	42	ePDIFF	Pdif	02 09 03.9	+1.8
NKC				AMS	AMS	03 00 50.0	
	comp=Z,21µm,18.1s						
M24K	Tolsona, Glenn	108.70	331	IAMs_20	IAMs_20	02 54 46.7	
	comp=Z,17µm,22.0s						
MOA	Molln	108.85	45	eP	Pdif	02 09 02.4	-0.4
	comp=Z,6.3nm,1.5s						
MOA				eP	PKiKP	02 13 07.7	+0.1
	comp=Z,5.5nm,1.2s						
GERES	GERESS Array B	108.89	44	Pdiff	Pdif	02 09 03.8	+0.7
	comp=Z,0.3nm,0.6s,baz=354,slow=26,SNR=4.9						
GERES				PKiKP	PKiKP	02 13 07.2	-0.6
	comp=Z,4.1nm,0.9s,baz=172,slow=0.9,SNR=9.0						
GERES				PKKPbc	PKKPbc	02 24 16.9	+0.3
	comp=Z,0.1nm,0.2s,baz=18,slow=6.7,SNR=1.6						
GERES				PKKP	PKKPdf	02 24 40.8	+8.5
	comp=Z,1.9nm,1.0s,baz=59,slow=5.1,SNR=6.0						
GERES	GERESS Array B	108.89	44	P	Pdif	02 09 03.4	+0.3
GERES	GERESS Array B	108.89	44		Pdif	02 09 03.4	+0.3
GERES				PKiKP	PKiKP	02 13 07.9	+0.1
KHC	Kasperske Hory	108.93	44	eP	Pdif	02 09 03.9	+0.7
KHC				MLR	MLR		
	comp=Z,27µm,17.4s						
KHC	Kasperske Hory	108.93	44	ePDIFF	Pdif	02 09 03.9	+0.7
KHC				ePKP	PKiKP	02 13 08.4	+0.6
KHC				ePP	PP	02 13 31.9	-3.6
KHC				eXSKS		02 19 50.8	
KHC				AMS	AMS	03 02 40.0	
	comp=Z,27µm,17.4s						
RIDG	Independent Ri	108.94	333	IAMs_20	IAMs_20	02 56 32.8	
	comp=Z,25µm,19.0s						
PWL	Port Wells	109.06	330	IAMs_20	IAMs_20	03 01 38.1	
	comp=Z,14µm,18.0s						
CKRC	Cesky Krumlov	109.25	44	ePDIFF	Pdif	02 09 05.6	+1.0
CKRC				ePP	PP	02 13 32.4	-5.4
CKRC				eSKS	SKSac	02 19 46.6	+1.7
CKRC				AMS	AMS	03 03 50.0	
	comp=Z,28µm,17.3s						
KNK	Knik Glacier	109.36	330	IAMs_20	IAMs_20	03 07 55.0	
	comp=Z,16µm,20.0s						
ARSA	Arzberg	109.40	46	eP	Pdif	02 09 06.7	+1.5
	comp=Z,2.5nm,0.9s						
ARSA				eP	PKiKP	02 13 09.3	+0.6
	comp=Z,13nm,1.6s						
CLL	Collm	109.45	42	eP	Pdif	02 09 09.0	+3.7
CLL				e		02 13 36.0	
CLL				e		02 19 45.0	
CLL				MLR	MLR		
	comp=Z,29µm,20.4s						
CLL	Collm	109.45	42	ePdif	Pdif	02 09 09.0	+3.7
CLL				ePKiKP	PKiKP	02 13 09.0	+0.4

CLL				*e*PP	**PP**	**02 13 36.0**	**-3.1**
CLL				*e*PPP	PPP	02 15 54.0	
CLL				*e*SKSac	**SKSac**	**02 19 45.0**	**-0.5**
CLL				*e*SKKSac	**SKKSac**	**02 20 37.0**	**-5.6**
CLL				*e*Sdif	**Sdif**	**02 21 19.0**	**+1.8**
CLL				*e*PS	**PS**	**02 23 05.0**	**-1.3**
CLL				*e*PPS	PPS	02 24 12.0	
CLL				*e*SS	**SS**	**02 28 58.0**	**-3.7**
CLL				*e*SSS	SSS	02 32 59.0	
CLL				*e*SSSS		02 36 24.0	
CLL				Lm	MLR	02 58 00.0	
	comp=N,11µm,21.1s						
CLL				Lm	MLR	02 58 00.0	
	comp=E,20µm,21.4s						
CLL				Lm	MLR	02 58 00.0	
	comp=Z,29µm,20.4s						
SML	**Sawmill**	**109.48**	**331**	IAMs_20	IAMs_20	03 07 39.2	
	comp=Z,17µm,18.0s						
O22K	**Cooper Landing**	**109.51**	**329**	IAMs_20	IAMs_20	03 09 02.1	
	comp=Z,16µm,18.0s						
DHY	**Denali Highway**	**109.64**	**332**	IAMs_20	IAMs_20	02 53 42.4	
	comp=Z,19µm,22.0s						
GHO	**Glory Hole Cre**	**109.72**	**331**	IAMs_20	IAMs_20	03 07 47.5	
	comp=Z,15µm,19.0s						
KDAK	**Kodiak Island**	**109.72**	**326**	IAMs_20	IAMs_20	02 53 23.8	
	comp=Z,18µm,19.0s						
RC01	**Rabbit Creek A**	**109.78**	**330**	IAMs_20	IAMs_20	02 56 53.1	
	comp=Z,16µm,20.0s						
CNPM	**China Poot**	**109.80**	**328**	IAMs_20	IAMs_20	03 07 41.7	
	comp=Z,17µm,19.0s						
PRA	**Prague**	**109.81**	**43**	*e*P	**Pdif**	**02 09 09.6**	**+2.6**
PRA				MLR	MLR		
	comp=Z,28µm,19.1s						
PRA	**Prague**	**109.81**	**43**	*e*PDIFF	**Pdif**	**02 09 09.6**	**+2.6**
PRA				*e*PP	**PP**	**02 13 36.1**	**-5.6**
PRA				AMS	AMS	02 59 00.0	
	comp=Z,28µm,19.1s						
BRG	**Berggiesshubel**	**109.83**	**42**	⇓Pif		02 09 11.0	
BRG	**Berggiesshubel**	**109.83**	**42**	*e*PKP	**PKiKP**	**02 13 10.8**	**+1.5**
BRG				Amp		02 13 21.2	
	comp=Z,13nm,1.2s						
BRG	**Berggiesshubel**	**109.83**	**42**	PP	**PP**	**02 13 40.0**	**-1.9**
BRG	**Berggiesshubel**	**109.83**	**42**	PS	PS	02 23 09.0	-1.1
BRG	**Berggiesshubel**	**109.83**	**42**	SS	SS	02 29 14.0	+7.2
BRG				Amp		03 01 28.0	
	comp=Z,31nm,18.2s						
BRG				Amp		03 01 29.0	
	comp=E,17nm,18.3s						
BRG				Amp		03 01 34.0	
	comp=N,10nm,18.0s						
PRU	**Pruhonice**	**109.84**	**43**	*e*P	**Pdif**	**02 09 08.5**	**+1.4**
PRU				*e*		02 19 50.2	
PRU				MLR	MLR		
	comp=Z,26µm,17.2s						
PRU	**Pruhonice**	**109.84**	**43**	*e*PDIFF	**Pdif**	**02 09 08.5**	**+1.4**
PRU				*e*PP	**PP**	**02 13 37.0**	**-5.0**
PRU				*e*SKS	**SKSac**	**02 19 50.2**	**+2.9**
PRU				AMS	AMS	03 03 20.0	
	comp=Z,26µm,17.2s						
CONA	**Conrad Observa**	**109.87**	**46**	*e*P	**Pdif**	**02 09 08.7**	**+1.3**
	comp=Z,4.7nm,1.2s						
CONA				*e*P	**PKiKP**	**02 13 09.6**	**0.0**
	comp=Z,10nm,1.6s						
BEHE	**Becsehely**	**109.90**	**47**	*e*P	PKiKP	02 13 22.3	+13
PRP	**Porcupine Dome**	**110.02**	**335**	IAMs_20	IAMs_20	02 57 23.5	
	comp=Z,22µm,19.0s						
SII	**Sitkinak Islan**	**110.03**	**324**	IAMs_20	IAMs_20	02 50 44.0	
	comp=Z,20µm,21.0s						
HOM	**Homer**	**110.04**	**328**	IAMs_20	IAMs_20	02 51 01.2	
	comp=Z,15µm,22.0s						
PVCC	**Panska Ves**	**110.06**	**43**	*e*PP	**PP**	**02 13 38.6**	**-5.0**
PVCC				AMS	AMS	03 00 30.0	
	comp=Z,22µm,18.0s						
HDA	**Harding Lake**	**110.06**	**333**	IAMs_20	IAMs_20	02 57 07.6	
	comp=Z,23µm,20.0s						
TREC	**Trest**	**110.15**	**44**	*e*P	**Pdif**	**02 09 12.0**	**+3.4**
TREC				MLR	MLR		
	comp=Z,29µm,18.5s						
TREC	**Trest**	**110.15**	**44**	*e*PDIFF	**Pdif**	**02 09 12.0**	**+3.4**
TREC				*e*XSKS		02 19 53.5	
TREC				AMS	AMS	03 01 40.0	
	comp=Z,29µm,18.5s						
ILAR	**Eielson Array**	**110.20**	**334**	Pdiff	**Pdif**	**02 09 09.9**	**+1.6**
	comp=Z,0.4nm,0.8s,baz=137,slow=2.9,SNR=2.8						
ILAR				PKiKP	**PKiKP**	**02 13 10.4**	**+0.8**
	comp=Z,1.1nm,0.9s,baz=188,slow=2.6,SNR=4.1						
ILAR	**Eielson Array**	**110.20**	**334**	*i* PKIKP	**PKiKP**	**02 13 09.4**	**-0.2**
ILAR	**Eielson Array**	**110.20**	**334**		**PKiKP**	**02 13 09.4**	**-0.2**
CAPN	**Captain Cook N**	**110.27**	**329**	IAMs_20	IAMs_20	03 03 18.2	
	comp=Z,15µm,18.0s						
SUA	**Susitna One**	**110.38**	**330**	IAMs_20	IAMs_20	03 08 46.9	
	comp=Z,18µm,18.0s						
RND	**Reindeer**	**110.39**	**332**	IAMs_20	IAMs_20	02 54 15.2	
	comp=Z,17µm,21.0s						
FYU	**Fort Yukon**	**110.40**	**336**	IAMs_20	IAMs_20	02 57 37.4	
	comp=Z,20µm,22.0s						
CHIR	**Chirikof Islan**	**110.49**	**323**	IAMs_20	IAMs_20	02 53 19.1	
	comp=Z,20µm,18.0s						
WRH	**Wood River Hil**	**110.54**	**333**	IAMs_20	IAMs_20	02 58 22.1	
	comp=Z,22µm,19.0s						
CUT	**Chulitna**	**110.56**	**331**	IAMs_20	IAMs_20	03 08 06.6	
	comp=Z,14µm,19.0s						
MCK	**McKinley**	**110.56**	**332**	IAMs_20	IAMs_20	02 55 09.7	
	comp=Z,24µm,21.0s						
COLA	**College**	**110.62**	**334**	IAMs_20	IAMs_20	02 57 54.3	
	comp=Z,23µm,20.0s						
KRUC	**Moravsky**	**110.62**	**45**	*e*PKIKP	**PKiKP**	**02 13 11.5**	**+0.6**
KRUC				*e*PP	**PP**	**02 13 44.8**	**-2.9**
TCOL	**CIGO, UAF Yank**	**110.62**	**334**	IAMs_20	IAMs_20	02 57 54.3	
	comp=Z,25µm,20.0s						
Q19K	**Cape Douglas,**	**110.69**	**327**	IAMs_20	IAMs_20	03 08 21.4	
	comp=Z,16µm,22.0s						
VRAC	**Vranov**	**110.83**	**44**	⇑P	**PKiKP**	**02 13 11.7**	**+0.4**
VRAC	**Vranov**	**110.83**	**44**	PKiKP	**PKiKP**	**02 13 10.6**	**-0.6**
	comp=Z,1.1nm,0.3s,baz=283,slow=5.8,SNR=4.6						
VRAC	**Vranov**	**110.83**	**44**	*e*PKIKP	**PKiKP**	**02 13 11.9**	**+0.6**
VRAC				*e*PP	**PP**	**02 13 46.3**	**-2.9**
KONO	**Kongsberg**	**110.89**	**33**	IAMs_20	IAMs_20	03 00 58.7	
	comp=Z,19µm,19.0s						
UPC	**Upice**	**110.91**	**43**	*e*P	**Pdif**	**02 09 14.4**	**+2.5**
UPC				*e*		02 13 46.8	
UPC				*e*		02 19 53.2	
UPC				MLR	MLR		
	comp=Z,22µm,17.0s						
UPC	**Upice**	**110.91**	**43**	*e*PDIFF	**Pdif**	**02 09 14.4**	**+2.5**
UPC				*e*PP	**PP**	**02 13 46.8**	**-2.9**
UPC				*e*SKS	**SKSac**	**02 19 53.2**	**+1.5**
UPC				AMS	AMS	03 03 30.0	
	comp=Z,22µm,17.0s						
MODS	**Modra-Piesok**	**110.91**	**46**	⇑*e*PKIKP	PKiKP	02 13 20.7	+9.2
MODS				*e*		02 13 46.1	
MODS				*e*		02 19 47.5	
MODS				*e*		02 23 14.0	
MODS	**Modra-Piesok**	**110.91**	**46**	*e*PKP	PKiKP	02 13 20.7	+9.2
MODS				*e*PP	**PP**	**02 13 46.1**	**-3.7**
BWN	**Browne**	**110.96**	**333**	IAMs_20	IAMs_20	02 57 12.4	
	comp=Z,25µm,21.0s						
CHVC	**Chvalec**	**110.97**	**43**	*e*PKP	**PKiKP**	**02 13 11.4**	**-0.1**
CHVC				AMS	AMS	03 03 30.0	
	comp=Z,24µm,17.2s						
NEA2	**Nenana**	**110.97**	**333**	IAMs_20	IAMs_20	02 57 45.6	
	comp=Z,27µm,20.0s						
TRF	**Thorofare Moun**	**111.00**	**332**	IAMs_20	IAMs_20	03 10 18.2	
	comp=Z,19µm,18.0s						
DPC	**Dobruska-Polom**	**111.04**	**43**	*e*P	**Pdif**	**02 09 15.2**	**+2.7**
DPC				*e*		02 13 13.4	
DPC				MLR	MLR		
	comp=Z,20µm,17.3s						
DPC	**Dobruska-Polom**	**111.04**	**43**	*e*PDIFF	**Pdif**	**02 09 15.2**	**+2.7**
DPC				*e*PKP	**PKiKP**	**02 13 13.4**	**+1.7**
DPC				AMS	AMS	03 05 00.0	
	comp=Z,20µm,17.3s						
OSTC	**Ostas**	**111.05**	**43**	*e*PDIFF	**Pdif**	**02 09 13.6**	**+1.1**
OSTC				*e*PP	**PP**	**02 13 45.0**	**-5.8**
OSTC				AMS	AMS	03 03 50.0	
	comp=Z,21µm,16.9s						
KRLC	**Kraliky**	**111.22**	**44**	*e*PP	**PP**	**02 13 47.0**	**-5.0**
KRLC				*e*SKS	**SKSac**	**02 20 00.6**	**+7.5**
KRLC				AMS	AMS	03 00 00.0	
	comp=Z,21µm,19.0s						
KTH	**Kantishna Hill**	**111.30**	**332**	IAMs_20	IAMs_20	02 57 22.2	
	comp=Z,20µm,21.0s						
I23K	**Minto, Yukon-K**	**111.32**	**334**	IAMs_20	IAMs_20	03 07 38.7	
	comp=Z,22µm,18.0s						
JAVC	**Velka Javorina**	**111.33**	**45**	*e*PKIKP	**PKiKP**	**02 13 13.6**	**+1.3**
O19K	**Port Alsworth**	**111.49**	**328**	IAMs_20	IAMs_20	03 10 04.5	
	comp=Z,20µm,18.0s						
BPAW	**Bear Paw Mtn.**	**111.54**	**332**	IAMs_20	IAMs_20	03 07 52.6	
	comp=Z,20µm,18.0s						
MORC	**Moravsky Berou**	**111.57**	**44**	*e*PKIKP	**PKiKP**	**02 13 14.0**	**+1.3**
MORC				*e*PP	**PP**	**02 13 49.8**	**-4.8**
KOLL	**Kolacno**	**111.69**	**46**	*e*PKP	**PKiKP**	**02 13 14.2**	**+1.3**
CAST	**Castle Rocks**	**111.72**	**332**	IAMs_20	IAMs_20	03 08 32.5	
	comp=Z,17µm,19.0s						
O18K	**Koktuh Hills**	**111.78**	**327**	IAMs_20	IAMs_20	02 54 27.1	
	comp=Z,14µm,19.0s						
N19K	**Bonanza Creek**	**111.80**	**328**	IAMs_20	IAMs_20	03 03 45.5	
	comp=Z,15µm,19.0s						
ALE	**Alert**	**111.87**	**1**	IAMs_20	IAMs_20	03 00 13.5	
	comp=Z,20µm,22.0s						
VYHS	**Vyhne**	**111.93**	**46**	⇑*e*PKIKP	**PKiKP**	**02 13 14.5**	**+1.1**
VYHS				*e*		02 13 53.7	
VYHS				*e*		02 19 55.3	
VYHS				*e*		02 23 29.6	
VYHS				MLR	MLR		
	comp=Z,27µm,23.1s						
VYHS	**Vyhne**	**111.93**	**46**	*e*PKP	**PKiKP**	**02 13 14.5**	**+1.1**
VYHS				*e*PP	**PP**	**02 13 53.7**	**-3.4**
OKC	**Ostrava-Krasne**	**111.96**	**44**	*e*PKIKP	**PKiKP**	**02 13 15.0**	**+1.6**
OKC				MLR	MLR		
	comp=Z,23µm,18.2s						
OKC	**Ostrava-Krasne**	**111.96**	**44**	*e*PKP	**PKiKP**	**02 13 15.0**	**+1.6**
OKC				*e*PP	**PP**	**02 13 52.7**	**-4.6**
OKC				AMS	AMS	03 02 50.0	
	comp=Z,23µm,18.2s						
NOA	**NORSAR Array B**	**112.16**	**31**	PKiKP	**PKiKP**	**02 13 13.8**	**+0.3**
	comp=Z,2.9nm,1.1s,baz=251,slow=1.9,SNR=3.3						
FURI	**Furi**	**112.25**	**92**	IAMs_20	IAMs_20	03 01 22.4	
	comp=Z,18µm,20.0s						
PSZ	**Piszkesteto**	**112.40**	**47**	⇑P	**PKiKP**	**02 13 15.1**	**+0.7**
PSZ	**Piszkesteto**	**112.40**	**47**	*e*P	**PKiKP**	**02 13 16.8**	**+2.5**
TARA	**Tarawa**	**112.44**	**258**	IAMs_20	IAMs_20	02 51 42.3	
	comp=Z,17µm,21.0s						
L19K	**White Mountain**	**112.45**	**330**	IAMs_20	IAMs_20	02 58 40.8	
	comp=Z,17µm,22.0s						
MDVR	**Moldovita**	**112.54**	**50**	⇑P	**PKiKP**	**02 13 16.6**	**+1.9**
LANS	**Liptovska Anna**	**112.54**	**45**	*e*PKIKP	**PKiKP**	**02 13 16.4**	**+1.8**
LANS	**Liptovska Anna**	**112.54**	**45**	*e*PKP	**PKiKP**	**02 13 16.4**	**+1.8**
BZS	**Buzias**	**112.75**	**49**	⇑P	**PKiKP**	**02 13 15.0**	**-0.1**
TOLK	**Toolik Lake Re**	**112.78**	**337**	IAMs_20	IAMs_20	03 04 53.3	
	comp=Z,16µm,22.0s						
H21K	**Melozitna Rive**	**112.84**	**334**	IAMs_20	IAMs_20	02 59 43.0	
	comp=Z,22µm,19.0s						
J20K	**Nowinta River**	**112.85**	**332**	IAMs_20	IAMs_20	03 08 34.4	
	comp=Z,16µm,18.0s						
VTS	**Vitosha**	**112.85**	**53**	⇑P	**PKiKP**	**02 13 16.3**	**+0.8**
SIRR	**Siria**	**112.99**	**49**	⇓P	**PKiKP**	**02 13 16.2**	**+0.7**
HERR	**Herculane**	**113.04**	**50**	⇑P	**PKiKP**	**02 13 16.2**	**+0.6**
GZR	**Gura Zlata**	**113.45**	**50**	⇑P	**PKiKP**	**02 13 16.6**	**+0.1**
CRVS	**Cervenica-Dubn**	**113.71**	**46**	⇑*e*PKIKP	**PKiKP**	**02 13 17.3**	**+0.5**
CRVS				*e*		02 14 07.6	
CRVS				*e*		02 20 02.1	
CRVS				*e*		02 23 50.0	
CRVS				MLR	MLR		
	comp=Z,32µm,20.3s						
CRVS	**Cervenica-Dubn**	**113.71**	**46**	*e*PKP	**PKiKP**	**02 13 17.3**	**+0.5**
CRVS				*e*PP	**PP**	**02 14 07.6**	**-2.2**
DRGR		**113.85**	**48**	⇑P	**PKiKP**	**02 13 18.0**	**+0.8**
PLVB	**Pleven**	**114.06**	**52**	⇓P	**PKiKP**	**02 13 19.2**	**+1.6**
UZH	**Uzhgorod**	**114.15**	**46**	⇓*i*PKIKP	PKPdf	02 13 17.0	-0.6
UZH				*e*		02 13 23.0	
UZH				*i*		02 13 31.5	
UZH				*e*		02 20 05.8	
TRPA	**Tarpa**	**114.15**	**47**	⇑P	**PKiKP**	**02 13 18.2**	**+0.6**
TRPA	**Tarpa**	**114.15**	**47**	*e*P	**PKiKP**	**02 13 18.2**	**+0.6**
BMR	**Baia Mare**	**114.63**	**48**	⇑P	**PKiKP**	**02 13 20.5**	**+1.9**
ARR	**Arges**	**114.69**	**50**	⇑P	**PKiKP**	**02 13 19.2**	**+0.4**
KWP	**Kalwaria Pacla**	**114.70**	**46**	*e*PKiKP	**PKiKP**	**02 13 20.0**	**+1.4**
KWP				*e*PP	**PP**	**02 14 15.4**	**-1.4**
KWP				*e*SP	SP	02 23 52.8	-1.5
KWP				*e*L	L	03 00 38.0	
	comp=Z,43µm,22.2s						
VOIR		**114.99**	**50**	⇑P	**PKiKP**	**02 13 19.5**	**+0.1**
SECR		**115.56**	**51**	⇑P	**PKiKP**	**02 13 20.8**	**+0.3**
LVV	**L'vov**	**115.58**	**46**	*i* PKIKP	**PKPdf**	**02 13 19.0**	**-1.3**
LVV				*e*PS	**PKKPbc**	**02 23 54.0**	**-0.1**
LVV				*e*SS	SS	02 30 15.0	-8.3
LVV				*e*SSS	SSS	02 34 44.0	
MLR	**Muntele Rosu**	**115.61**	**51**	⇓P	**PKiKP**	**02 13 20.8**	**+0.2**
MLR	**Muntele Rosu**	**115.61**	**51**	PKP	**PKPdf**	**02 13 20.0**	**-0.7**
	comp=Z,20nm,1.2s,baz=347,slow=2.6,SNR=8.9						
MLR				PP	**PP**	**02 14 22.0**	**-1.4**
	comp=Z,20nm,1.1s,baz=336,slow=10,SNR=4.4						
MLR	**Muntele Rosu**	**115.61**	**51**		**PKPdf**	**02 13 20.0**	**-0.7**
BUR08	**Bucovina Ar. S**	**115.72**	**48**	PKPdf	**PKiKP**	**02 13 21.3**	**+0.5**
BURAR	**Bucovina Array**	**115.72**	**48**	⇓P	**PKiKP**	**02 13 21.9**	**+1.1**
A21K	**Barrow**	**115.94**	**339**	IAMs_20	IAMs_20	03 08 05.9	
	comp=Z,23µm,20.0s						
SUW	**Suwalki**	**116.18**	**41**	*e*PKiKP	**PKiKP**	**02 13 22.1**	**+0.7**
SUW				*e*PP	**PP**	**02 14 24.7**	**-2.3**
SUW				*e*SP	SP	02 24 07.6	+0.2
SUW				*e*L	L	03 01 46.5	
	comp=Z,24µm,20.2s						
SUW	**Suwalki**	**116.18**	**41**	*e*P	**PKiKP**	**02 13 22.3**	**+1.0**
VRI	**Vrincioaia**	**116.24**	**50**	⇑P	**PKPdf**	**02 13 21.4**	**-0.3**
TESR	**Tescani**	**116.36**	**50**	⇑P	**PKiKP**	**02 13 22.2**	**+0.2**
ISP	**Isparta**	**116.61**	**60**	IAMs_20	IAMs_20	03 08 40.8	
	comp=Z,18µm,20.0s						
HARR	**Harsova**	**116.73**	**52**	⇓P	**PKiKP**	**02 13 23.9**	**+1.2**
PABE	**Paberze**	**116.98**	**39**	*e*P	**PKiKP**	**02 13 24.1**	**+1.3**
PABE	**Paberze**	**116.98**	**39**	IAMs_20	IAMs_20	03 05 51.2	
	comp=Z,23µm,19.0s						
TIRR	**Tirgusor**	**117.00**	**52**	⇑P	**PKiKP**	**02 13 24.0**	**+0.8**
CFR	**Carcaliu**	**117.00**	**51**	⇑P	**PKPdf**	**02 13 23.2**	**0.0**
TPGR	**Topolog**	**117.11**	**52**	⇑P	**PKiKP**	**02 13 24.1**	**+0.6**
IAS	**Iasi**	**117.15**	**49**	⇑P	**PKiKP**	**02 13 23.6**	**+0.2**
KBS	**Kingsbay**	**117.54**	**13**	IAMs_20	IAMs_20	03 12 48.9	
	comp=Z,15µm,18.0s						
ANM	**Nome**	**117.66**	**331**	IAMs_20	IAMs_20	03 12 08.3	
	comp=Z,17µm,20.0s						
MILM	**Milestii Mici**	**117.91**	**50**	⇓P	**PKPdf**	**02 13 24.7**	**-0.1**
MILM	**Milestii Mici**	**117.91**	**50**	*e*P	**Pdif**	**02 09 47.0**	**+4.0**
MILM				*e*		02 13 24.0	
MILM				*i*		02 13 33.0	
MILM				*e*		02 20 15.0	
MILM				*e*		02 24 20.0	
KIS	**Kishinev**	**117.93**	**50**	*e*PKP	**PKiKP**	**02 13 25.0**	**+0.1**
KIS	**Kishinev**	**117.93**	**50**	*e*PP	PP	02 14 36.0	-3.4
KIS				*e*L	L	02 51 56.0	
KIS				LRM	MLR	03 07 11.0	
	comp=Z,10µm,18.0s						
KIS	**Kishinev**	**117.93**	**50**	*e*PKIKP	**PKiKP**	**02 13 25.0**	**+0.1**
KIS				*e*		02 13 34.0	
SPITS	**Spitsbergen Ar**	**118.28**	**14**	PKP	**PKiKP**	**02 13 25.7**	**+0.9**
	comp=Z,24nm,1.0s,baz=240,slow=12,SNR=3.1						
NACGM	**Naroch**	**118.43**	**40**	*i* PKP	**PKPdf**	**02 13 24.4**	**-1.2**
MNK	**Minsk**	**118.98**	**41**	*i* PKIKP	**PKPdf**	**02 13 26.7**	**0.0**
MNK				*i*		02 14 46.2	
MNK				*i* PPP	PPP	02 17 17.3	
MNK				*i*		02 20 32.8	
MNK				*i* SS	SS	02 31 08.2	+1.0
MNK				*i*		02 31 22.4	
MNK				*i* SSS	SSS	02 35 32.9	
MNK				pmax	pmax		
	comp=E,3.0nm,1.2s						
MNK				pmax	pmax		
	comp=N,20nm,1.2s						
MNK				pmax	pmax		
	comp=Z,57nm,1.2s						
MNK	**Minsk**	**118.98**	**41**	*i* PKP	**PKiKP**	**02 13 26.7**	**0.0**
	comp=E,3.0nm,1.2s						
MNK				*i* PKP	**PKiKP**	**02 13 26.7**	**0.0**
	comp=N,20nm,1.2s						
MNK				*i* PKP	**PKiKP**	**02 13 26.7**	**0.0**
	comp=Z,57nm,1.2s,baz=259						
MNK				*i* PP	**PP**	**02 14 46.3**	**-0.2**
MNK				*i* SKP		02 16 59.9	
MNK				*i* PKS	**PKSdf**	**02 17 03.5**	**+0.4**
MNK				*i* PPP	PPP	02 17 17.4	
MNK				*i* SKS	**SKSdf**	**02 20 32.8**	**-6.4**
MNK				*i* PS	**PS**	**02 24 41.4**	**+7.5**
MNK				*i* SS	**SS**	**02 31 08.2**	**+1.0**
MNK				*i* SSS	SSS	02 35 33.0	
MNK				*i* LR	LR	03 04 20.6	
MNK				*i* LRM	MLR	03 07 16.8	
	comp=N,16µm,25.4s						
MNK				*i* LRM	MLR	03 07 33.4	
	comp=E,3µm,14.6s						
MNK				*i* LRM	MLR	03 07 33.4	
	comp=Z,37µm,18.4s						
AKASG	**Malin Array Be**	**119.03**	**46**	PKP	**PKPdf**	**02 13 26.3**	**-0.6**
	comp=Z,7.3nm,0.7s,baz=272,slow=2.6,SNR=22						
AKBB	**Malin Array Si**	**119.03**	**46**	*c* *i*PKIKP	**PKPdf**	**02 13 26.8**	**-0.1**
AKBB	**Malin Array Si**	**119.03**	**46**	PKPdf	**PKPdf**	**02 13 26.3**	**-0.6**
VSU	**Vasula**	**119.06**	**36**	*e*P	**PKiKP**	**02 13 28.1**	**+1.3**
VSU	**Vasula**	**119.06**	**36**	*i* PKIKP	**PKPdf**	**02 13 26.0**	**-0.7**
VSU				pmax	pmax		
	comp=Z,93nm,0.7s						
VSU				MLR	MLR		
	comp=Z,56µm,18.0s						
FINES	**FINESS Array B**	**119.20**	**33**	PKP	**PKiKP**	**02 13 27.4**	**+0.4**
	comp=Z,5.1nm,0.8s,baz=197,slow=2.0,SNR=7.9						
FINES				PP	**PP**	**02 14 46.2**	**-1.5**
	comp=Z,4.3nm,0.9s,baz=207,slow=7.9,SNR=4.8						
FINES				PKKPbc	**PKKPbc**	**02 23 44.4**	**+2.9**
	comp=Z,2.2nm,0.8s,baz=58,slow=7.2,SNR=3.4						
MSEY	**Mahe Island**	**119.24**	**115**	IAMs_20	IAMs_20	03 02 43.8	
	comp=Z,21µm,20.0s						
BR131	**Keskin Array S**	**119.49**	**59**	*i* PKIKP	**PKPdf**	**02 13 27.8**	**-0.6**
BR131	**Keskin Array S**	**119.49**	**59**	P	**PKiKP**	**02 13 29.4**	**+0.9**
BRTR	**Keskin Array B**	**119.49**	**59**	PKP	**PKPdf**	**02 13 28.3**	**-0.1**
	comp=Z,6.4nm,0.8s,baz=199,slow=3.4,SNR=12						
ARCES	**ARCESS Array B**	**119.87**	**24**	PKP	**PKiKP**	**02 13 28.4**	**+0.3**
	comp=Z,3.4nm,0.7s,baz=256,slow=2.7,SNR=6.8						
KEV	**Kevo**	**120.41**	**23**	IAMs_20	IAMs_20	03 07 01.5	
	comp=Z,14µm,20.0s						
KWAJ	**Kwajalein Atol**	**120.74**	**262**	IAMs_20	IAMs_20	02 54 36.4	
	comp=Z,18µm,20.0s						
PUL	**Pulkovo**	**121.07**	**35**	*i* PKIKP	**PKiKP**	**02 13 31.2**	**+0.6**
DIKM	**Dikmen**	**121.16**	**57**	⇑P	PKPdf	02 13 20.4	-11
ASAR	**Alice Springs**	**121.61**	**208**	PKP	**PKPdf**	**02 13 32.4**	**-0.6**
	comp=Z,2.7nm,0.8s,baz=137,slow=1.6,SNR=16						
ASAR				PKKPbc	**PKKPbc**	**02 23 32.3**	**+0.3**
	comp=Z,2.7nm,0.6s,baz=334,slow=3.1,SNR=25						
ASAR				SKKPbc	SKKPbc	02 27 20.1	+1.1
	comp=Z,4.6nm,0.9s,baz=344,slow=4.3,SNR=7.1						
APA	**Apatity**	**122.73**	**26**	⇑*i*PKIKP	**PKPdf**	**02 13 33.0**	**-0.5**
APA				*i*		02 15 12.0	
APA				*i*		02 20 31.0	
APA				*i* PS	**PS**	**02 25 11.0**	**+4.0**
APA				*i* PPS	PPS	02 26 33.0	
APA				*i* SS	SS	02 31 53.0	-1.5
APA				pmax	pmax		
	comp=Z,14nm,1.1s						
LVZ	**Lovozero**	**123.19**	**26**	*i* PKIKP	**PKiKP**	**02 13 34.7**	**0.0**
LVZ				MLR	MLR		
	comp=Z,21µm,20.0s						
ANN	**Anapa**	**123.35**	**54**	*i* PKIKP	**PKPdf**	**02 13 35.0**	**-0.4**
ANN				*e*		02 13 39.4	
ANN				*e*		02 15 15.5	
ANN				*e*PPP	PPP	02 17 52.9	
ANN				*e*		02 20 36.1	
ANN				*e*SSS	SSS	02 36 34.1	
ANN				pmax	pmax		
	comp=Z,261nm,1.4s						
OBN	**Obninsk**	**124.04**	**41**	⇓P	**PKiKP**	**02 13 37.5**	**+0.8**
OBN	**Obninsk**	**124.04**	**41**	PKP	**PKPdf**	**02 13 36.3**	**0.0**
	comp=Z,8.4nm,0.9s,baz=267,slow=2.3						
OBN	**Obninsk**	**124.04**	**41**	*d* *i*PKIKP	**PKiKP**	**02 13 36.7**	**+0.1**
OBN				*e*		02 13 42.0	
OBN				*i*		02 13 46.3	
OBN				*i*		02 15 21.0	
OBN				*i* PPP	PPP	02 17 58.7	
OBN						02 20 31.0	
OBN				*i* PS	**PS**	**02 25 15.1**	**-3.9**
OBN				pmax	pmax		
	comp=Z,158nm,1.5s						
OBN				MLR	MLR		
	comp=Z,32µm,19.0s						
OBN	**Obninsk**	**124.04**	**41**		**PKiKP**	**02 13 36.6**	**-0.1**
RAYN	**Ar Rayn**	**124.28**	**80**	*i* P	**PKiKP**	**02 13 38.5**	**+0.2**
	SNR=6.2						
RAYN	**Ar Rayn**	**124.28**	**80**	P	**PKiKP**	**02 13 39.5**	**+1.3**
WR0	**Warramunga Arr**	**124.61**	**211**		**PKPdf**	**02 13 36.2**	**-2.5**
MOS	**Moscow**	**124.68**	**40**	*i* PKIKP	**PKPdf**	**02 13 37.2**	**-0.4**
MOS				*e*		02 20 38.6	
MOS				*e*PS	**PS**	**02 25 20.3**	**-4.3**
MOS				*e*PPS	PPS	02 26 56.2	
MOS				pmax	pmax		
	comp=Z,171nm,1.5s						
MOS				MLR	MLR		
	comp=Z,19µm,21.0s						
MOS				MLR	MLR		
	comp=N,12µm,19.0s						
MOS				MLR	MLR		
	comp=E,14µm,20.0s						
WRA	**Warramunga Arr**	**124.71**	**210**	PKP	**PKPdf**	**02 13 38.2**	**-0.7**
	comp=E,8.7nm,0.9s,baz=162,slow=1.6,SNR=60						
WRA				PKKPbc	**PKKPbc**	**02 23 20.5**	**+0.7**
	comp=E,2.7nm,0.8s,baz=342,slow=4.3,SNR=15						
WRAB	**Tennant Creek**	**124.72**	**210**	*c* *i*PKIKP	**PKPdf**	**02 13 38.2**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,66nm,2.5s						
WRAB	**Tennant Creek**	**124.72**	**210**	IAMs_20	IAMs_20	03 01 48.4	
	comp=Z,13µm,20.0s						
SOC	**Sochi**	**124.76**	**55**	*i* PKIKP	**PKPdf**	**02 13 37.8**	**-0.4**
SOC				*e*		02 15 24.2	
SOC				*e*PPP	PPP	02 18 06.8	
SOC				*e*PS	**PS**	**02 25 30.3**	**+4.5**
SOC				*e*SS	SS	02 32 13.7	-8.0
SOC				*e*SSS	SSS	02 36 58.6	
SOC				pmax	pmax		
	comp=Z,83nm,1.1s						
LPSR	**Galich'ya Gora**	**125.27**	**44**	*e*PKIKP	**PKPdf**	**02 13 38.9**	**+0.1**
LPSR				pmax	pmax		
	comp=Z,60nm,1.1s						
LPSR				MLR	MLR		
	comp=Z,11µm,18.0s						
VSR	**Storozhevoye**	**125.32**	**46**	*e*PKIKP	**PKPdf**	**02 13 39.0**	**0.0**
VSR				*e*PS	**PS**	**02 25 19.0**	**-11**
VSR				pmax	pmax		
	comp=Z,70nm,1.3s						
VSR				MLR	MLR		
	comp=Z,19µm,18.0s						
VORD	**Divnogorie**	**125.38**	**46**	*e*PKIKP	**PKPdf**	**02 13 39.0**	**-0.1**
VORD				pmax	pmax		
	comp=Z,40nm,1.2s						
VORR	**Voronezh**	**125.38**	**45**	*e*PKIKP	**PKPdf**	**02 13 38.0**	**-1.1**
VORR				pmax	pmax		
	comp=Z,250nm,1.4s						
KLMR	**Klimovskoe**	**125.67**	**34**	*d* *i*PKIKP	**PKiKP**	**02 13 40.0**	**+0.3**
KLMR				*e*		02 15 34.8	
KLMR				*e*PPP	PPP	02 18 17.9	
KLMR				*e*SP	SP	02 25 37.3	+5.7
KLMR				*e*		02 27 00.6	
KLMR				*e*SS	**SS**	**02 32 36.7**	**+4.9**
KLMR				MLR	MLR		
	comp=Z,20µm,19.0s						
KLMR	**Klimovskoe**	**125.67**	**34**	⇓*i*PKPdf	**PKiKP**	**02 13 40.0**	**+0.3**
KLMR				⇑*i*PKPdf	**PKiKP**	**02 13 40.0**	**+0.3**
KLMR				⇑*i*PKPdf	**PKiKP**	**02 13 40.0**	**+0.3**
KLMR				AMP		02 13 51.8	
	comp=Z,335nm,1.3s						
KLMR				*e*PP	**PP**	**02 15 34.8**	**+3.2**
KLMR				*e*PPP	PPP	02 18 17.9	
KLMR				*e*		02 20 05.4	
KLMR				*e*SKKSac	**SKKSac**	**02 22 31.8**	**+1.9**
KLMR				*e*SKKSac	**SKKSac**	**02 22 31.8**	**+1.9**
KLMR				*e*SP	**SP**	**02 25 37.4**	**+5.8**
KLMR				*e*SKKPbc	**SKKPbc**	**02 27 00.7**	**-10**
KLMR				*e*PKKSbc	PKKSbc	02 27 11.1	+2.2
KLMR				*e*PKKSbc	PKKSbc	02 27 11.1	+2.2
KLMR				*e*SKKP		02 27 30.5	
KLMR				*e*SKKS	**SKKSdf**	**02 31 18.6**	**+4.6**
KLMR				*e*SKKS	**SKKSdf**	**02 31 18.6**	**+4.6**
KLMR				*e*SS	**SS**	**02 32 36.8**	**+4.9**
KLMR				*e*SS	**SS**	**02 32 36.8**	**+4.9**
KLMR				LQ	LQ	02 58 53.8	
KLMR				LQ	LQ	02 58 53.8	
KLMR				LR	LR	03 06 58.7	
KLMR				AMP		03 10 13.6	
	comp=Z,20µm,18.6s						
BCA	**Borcka**	**125.80**	**58**	⇓P	**PKiKP**	**02 13 41.6**	**+1.0**
PMG	**Port Moresby**	**126.03**	**230**	IAMs_20	IAMs_20	02 59 56.0	
	comp=Z,19µm,20.0s						
WAKE	**Wake Island**	**126.15**	**273**	IAMs_20	IAMs_20	02 56 40.3	
	comp=Z,21µm,20.0s						
NEY	**Neytrino**	**126.88**	**56**	*i* PKIKP	**PKPdf**	**02 13 42.6**	**+0.1**
VRH	**Novokhopyorsk**	**126.92**	**46**	*e*PKIKP	**PKPdf**	**02 13 41.9**	**-0.1**
VRH				*e*PS	**PS**	**02 25 40.0**	**-4.5**
VRH				pmax	pmax		
	comp=Z,50nm,1.1s						

VRH				MLR	MLR		
	comp=Z,22µm,18.0s						
KIV	Kislovodsk	126.95	55	⇓P	PKiKP	02 13 43.2	+0.3
KIV	Kislovodsk	126.95	55	i P	PKiKP	02 13 43.0	0.0
	SNR=8.2						
KIV	Kislovodsk	126.95	55	i P	Pdif	02 10 23.8	+0.3
KIV				i		02 13 43.8	
KIV				e		02 15 41.2	
KIV				ePPP	PPP	02 18 24.6	
KIV				e		02 20 49.1	
KIV				ePS	PS	02 25 45.9	+0.7
KIV				eSS	SS	02 32 50.8	+1.6
KIV				eSSS	SSS	02 37 32.1	
KIV				pmax	pmax		
	comp=Z,63nm,1.1s						
KIV	Kislovodsk	126.95	55	P	PKiKP	02 13 43.8	+0.8
KVAR	Kislovodsk Arr	126.95	55	PKP	PKPdf	02 13 42.3	-0.2
	comp=Z,10nm,1.1s,baz=270,slow=20,SNR=4.9						
KBZ	Khabaz	127.07	56	PKP	PKiKP	02 13 43.2	+0.1
	comp=Z,23nm,1.1s,baz=243,slow=3.4,SNR=18						
KBZ	Khabaz	127.07	56	c iPKIKP	PKiKP	02 13 43.0	0.0
SOCY	Socotra	127.08	97	P	PKiKP	02 13 44.9	+0.8
SOCY	Socotra	127.08	97	IAMs_20	IAMs_20	03 12 53.3	
	comp=Z,14µm,19.0s						
AKH	Akhalkalaki	127.18	58	⇓P	PKiKP	02 13 44.4	+0.8
GOF	Gofitskoye	127.33	54	⇓iPKIKP	PKiKP	02 13 43.8	+0.2
GOF				pmax	pmax		
	comp=Z,121nm,1.1s						
NCK	Nalchik	127.54	56	i PKIKP	PKiKP	02 13 45.1	+1.0
NCK				MLR	MLR		
	comp=Z,8µm,19.0s						
ZEI	Tsey	127.67	57	i PKIKP	PKPdf	02 13 43.4	-0.7
ZEI				pmax	pmax		
	comp=Z,16nm,1.6s						
GNI	Garni	127.92	60	P	PKiKP	02 13 45.4	+0.2
GNI	Garni	127.92	60	c iPKIKP	PKiKP	02 13 45.1	0.0
GNI				pmax	pmax		
	comp=Z,58nm,1.7s						
GNI	Garni	127.92	60	P	PKiKP	02 13 45.6	+0.5
NAX	Nakhchivan	128.34	62	PKIKP	PKiKP	02 13 46.8	+0.9
MBWA	Marble Bar	128.41	194	P	PKPdf	02 13 45.9	0.0
MBWA	Marble Bar	128.41	194	IAMs_20	IAMs_20	03 09 13.7	
	comp=Z,11µm,20.0s						
PRGR	Permogore	128.53	33	ePKIKP	PKiKP	02 13 46.2	+0.8
PRGR				e		02 13 54.9	
PRGR				pmax	pmax		
	comp=Z,111nm,0.9s						
ABTO	Aybut	128.73	91	P	PKiKP	02 13 47.6	+0.4
	SNR=12						
BILL	Bilibino	128.79	336	⇓iPKIKP	PKiKP	02 13 46.5	+0.7
BILL				e		02 13 55.8	
BILL				i		02 16 01.7	
BILL				i SS	SS	02 33 15.4	+5.1
BILL				pmax	pmax		
	comp=Z,41nm,1.5s						
BILL				MLR	MLR		
	comp=Z,18µm,17.0s						
BILL	Bilibino	128.79	336	IAMs_20	IAMs_20	03 11 28.5	
	comp=Z,18µm,18.0s						
GROC	Groznyy	129.10	57	i PKIKP	PKPdf	02 13 46.7	+0.2
GROC				e		02 15 55.7	
GROC				ePPP	PPP	02 18 50.1	
GROC				ePS	PS	02 26 07.1	+3.2
GROC				pmax	pmax		
	comp=Z,41nm,1.6s						
GANJ	Ganja	129.19	60	PKIKP	PKiKP	02 13 47.4	-0.1
WHFO	Wadi Hawf	129.37	90	P	PKiKP	02 13 48.4	-0.1
ZKTA	Zakatala	129.54	59	PKIKP	PKiKP	02 13 48.2	+0.1
FITZ	Fitzroy Crossi	129.75	202	PKP	PKiKP	02 13 49.0	-0.2
	comp=Z,9.6nm,1.1s,baz=133,slow=0.7,SNR=7.0						
MNGR	Mingechevir, A	129.78	60	PKIKP	PKiKP	02 13 50.0	+1.4
SEKA	Sheki	129.92	59	PKIKP	PKiKP	02 13 49.3	+0.3
DOK	Doka	129.96	90	P	PKiKP	02 13 49.7	+0.1
	SNR=9.2						
DMTO	DMTO	130.31	91	P	PKiKP	02 13 50.2	-0.1
MAK	Makhachkala	130.33	57	eP	Pdif	02 10 39.1	+0.7
MAK				i		02 13 46.8	
MAK				e		02 16 00.9	
MAK				e		02 20 59.9	
MAK				eSS	SS	02 33 25.8	-5.0
MAK				eSSS	SSS	02 38 19.8	
MAK				pmax	pmax		
	comp=Z,107nm,1.0s						
BELG	Belogornoye	130.58	45	PKP	PKiKP	02 13 49.5	-0.3
	comp=Z,82nm,1.2s,baz=71,slow=2.8,SNR=19						
LKRN	Lenkeran, Azer	130.80	63	PKIKP	PKiKP	02 13 50.4	-0.3
KIRV	Kirov	130.90	36	PKP	PKPdf	02 13 49.8	+0.4
	comp=Z,42nm,1.1s,baz=277,slow=3.0,SNR=20						
KIRV	Kirov	130.90	36	c iPKIKP	PKiKP	02 13 50.6	+0.4
MZR	Muzera	130.99	84	P	PKiKP	02 13 51.5	-0.1
MZR	Muzera	130.99	84	P	PKiKP	02 13 52.6	+1.0
SHAO	Shalim	131.03	91	P	PKiKP	02 13 51.4	-0.4
ASUD	Al Ashush, Dub	133.11	83	P	PKiKP	02 13 55.3	-0.5
FAQ	Al Faqa, Dubai	133.38	83	P	PKiKP	02 13 56.2	-0.3
FAQ	Al Faqa, Dubai	133.38	83	P	PKiKP	02 13 56.1	-0.3
HATD	Hatta, Dubai	133.87	83	P	PKPdf	02 13 56.4	+0.3
HATD	Hatta, Dubai	133.87	83	P	PKiKP	02 13 57.3	-0.1
UOSS	Minazif	133.97	83	P	PKPdf	02 13 56.0	-0.3
UOSS	Minazif	133.97	83	P	PKPdf	02 13 56.9	+0.6
SOHO	SOHO	134.00	84	i P	PKPdf	02 13 56.1	-0.2
	SNR=6.8						
SOHO	SOHO	134.00	84	P	PKPdf	02 13 56.8	+0.5
MSFE	Esma-Masafi	134.05	82	P	PKPdf	02 13 56.0	-0.5
BSY	Bisya	134.13	86	P	PKiKP	02 13 58.9	+0.9
	SNR=7.3						
MDH	Madha	134.16	82	P	PKiKP	02 13 58.0	+0.1
MHTO	MHTO	134.19	89	P	PKiKP	02 13 57.5	-0.6
	SNR=12						
SHME	Shamm	134.24	81	P	PKPdf	02 13 56.6	-0.1
SHME	Shamm	134.24	81	P	PKPdf	02 13 57.2	+0.4
BANOM	Banah	134.34	81	P	PKPdf	02 13 56.6	-0.3
HOQ	Hoqain	134.50	85	P	PKiKP	02 13 58.8	+0.1
	SNR=7.6						
SMDO	Samad	134.97	86	P	PKiKP	02 13 59.6	-0.2
	SNR=19						
WSAR	Wadi Sarin	135.54	86	P	PKPdf	02 13 59.6	+0.4
WBK	Wadi Bani Khal	135.63	87	P	PKiKP	02 14 01.4	+0.4
	SNR=5.3						
JLN	Jalan Bani Buh	135.86	88	P	PKiKP	02 14 01.6	+0.1
	SNR=13						
KAAM	Kaadhehdhoo	135.88	124	IAMs_20	IAMs_20	03 10 27.5	
	comp=Z,11µm,20.0s						
SEY	Seymchan	136.12	333	PKP	PKiKP	02 14 00.0	-0.7
	comp=Z,18nm,0.8s,baz=135,slow=2.8,SNR=24						
ARU	Arti	136.20	38	PKP	PKPdf	02 14 00.1	+0.7
	comp=Z,6.6nm,0.7s,baz=287,slow=2.5,SNR=22						
ARU	Arti	136.20	38	i PKIKP	PKiKP	02 14 00.6	-0.5
ARU						02 16 38.2	
ARU				MLR	MLR		
	comp=Z,30µm,21.0s						
TIXI	Tiksi	136.27	351	PKP	PKPdf	02 13 58.9	-0.2
	comp=Z,7.2nm,0.7s,baz=33,slow=3.2,SNR=10.0						
TIXI	Tiksi	136.27	351	i PKIKP	PKPdf	02 13 59.4	+0.3
TIXI	Tiksi	136.27	351	PKPdf	PKPdf	02 13 58.8	-0.3
TIXI				IAMs_20	IAMs_20	03 12 07.3	
	comp=Z,10µm,20.0s						
PET	Petropavlovsk	136.43	317	eP	Pdif	02 11 23.4	+18
PET				e		02 14 00.0	
PET				e		02 16 48.6	
PET				ePS	PS	02 26 56.5	-10
PET				e		02 28 43.8	
PET				eSS	SS	02 34 43.4	-0.5
PET				eSSS	SSS	02 39 48.7	
PET				pmax	pmax		
	comp=Z,3µm,15.8s						
PET				pmax	pmax		
	comp=Z,3µm,14.7s						
PET				MLR	MLR		
	comp=Z,12µm,19.0s						
PET	Petropavlovsk	136.43	317	IAMs_20	IAMs_20	03 03 41.3	
	comp=Z,14µm,20.0s						
PEA0B	Petropavlovsk-	136.98	318	i PKIKP	PKiKP	02 14 03.3	+0.5
PETK	Petropavlovsk-	136.98	318	PKP	PKPdf	02 14 00.9	-0.1
	comp=Z,25nm,1.0s,baz=77,slow=6.7,SNR=16						
PETK	Petropavlovsk-	136.98	318	PKIKP	PKPdf	02 14 01.1	+0.1
PETK	Petropavlovsk-	136.98	318	PKPdf	PKPdf	02 14 01.1	+0.1
SVE	Sverdlovsk	137.16	37	i PKIKP	PKPdf	02 14 02.1	+0.9
SVE				pmax	pmax		
	comp=Z,93nm,1.6s						
AKTO	Aktyubinsk	137.27	46	PKP	PKPdf	02 14 01.5	-0.1
	comp=Z,18nm,1.0s,baz=320,slow=1.7,SNR=23						
AKTO				PP	PP	02 16 42.6	-4.1
	comp=Z,10nm,1.2s,baz=321,slow=4.6,SNR=3.9						
AKTO	Aktyubinsk	137.27	46	PKIKP	PKPdf	02 14 00.1	-1.5
GEYT	Alibeck	138.03	65	PKP	PKPdf	02 14 01.9	-1.5
	comp=Z,6.7nm,0.8s,baz=248,slow=18,SNR=14						
MA2	Magadan	138.38	329	i PKIKP	PKPdf	02 14 03.3	-0.1
MA2	Magadan	138.38	329	IAMs_20	IAMs_20	03 28 45.2	
	comp=Z,12µm,20.0s						
NRIK	Noril'sk	138.38	11	PKP	PKPdf	02 14 02.4	-0.7
	comp=Z,6.1nm,0.9s,baz=349,slow=2.6,SNR=10						
NRIK	Noril'sk	138.38	11	⇑ePKIKP	PKPdf	02 14 02.5	-0.6
NRIK	Noril'sk	138.38	11	PKPdf	PKPdf	02 14 03.0	0.0
SKR	Severo-Kuril’s	138.46	314	ePKIKP	PKPdf	02 14 03.1	-0.6
SKR				e		02 16 52.3	
SKR				ePPS	PPS	02 29 02.1	
SKR				eSS	SS	02 35 09.8	+1.6
SKR				pmax	pmax		
	comp=Z,2µm,9.7s						
SKR				pmax	pmax		
	comp=Z,2µm,8.4s						
SKR				MLR	MLR		
	comp=Z,6µm,17.0s						
AB31	Akbulak array	138.70	48	i PKHKP	PKPpre	02 13 54.5	
ABKAR	Akbulak array	138.70	48		PKPpre	02 13 54.7	
FAKI	Fak Fak	140.32	220	IAMs_20	IAMs_20	03 10 00.7	
	comp=Z,10µm,20.0s						
GUMO	Guam	142.48	253	IAMs_20	IAMs_20	03 07 05.9	
	comp=Z,10µm,20.0s						
SMRI	Semarang	143.61	184		PKPbc	02 14 12.0	+0.5
SMRI				IAMs_20	IAMs_20	03 07 48.4	
	comp=Z,13µm,22.0s						
BRVK	Borovoye	143.74	39	i PKIKP	PKPbc	02 14 11.7	+0.9
BRVK				MLR	MLR		
	comp=Z,20µm,20.0s						
BRVK	Borovoye	143.74	39	P	PKPdf	02 14 12.6	-0.6
BRVK	Borovoye	143.74	39	PKPdf	PKPbc	02 14 11.3	+0.6
BVAR	Borovoye Array	143.81	39	PKP	PKPbc	02 14 12.1	+1.1
	comp=Z,21nm,0.9s,baz=237,slow=10,SNR=32						
LEM	Lembang	143.90	179	PKP	PKPbc	02 14 13.2	+0.7
	comp=Z,86nm,0.5s,baz=146,slow=4.9,SNR=27						
KAPI	Kappang	143.91	200	PKIKP	PKPbc	02 14 12.6	+0.2
KAPI	Kappang	143.91	200	P	PKPdf	02 14 14.0	-0.7
KAPI	Kappang	143.91	200		PKPbc	02 14 12.6	+0.2
KAPI	Kappang	143.91	200	IAMs_20	IAMs_20	03 11 36.6	
	comp=Z,11µm,21.0s						
YAK	Yakutsk	144.48	343	PKP	PKPbc	02 14 13.1	+0.4
	comp=Z,83nm,0.8s,baz=77,slow=0.7,SNR=29						
YAK	Yakutsk	144.48	343	ePKIKP	PKPab	02 14 12.5	0.0
YAK				e		02 17 29.0	
YAK				pmax	pmax		
	comp=Z,333nm,0.9s						
YAK				pmax	pmax		
	comp=N,97nm,1.5s						
YAK				pmax	pmax		
	comp=E,132nm,1.8s						
YAK				pmax	pmax		
	comp=Z,1µm,3.6s						
YAK				pmax	pmax		
	comp=N,1µm,5.4s						
YAK				pmax	pmax		
	comp=E,461nm,4.2s						
YAK	Yakutsk	144.48	343	PKPdf	PKPbc	02 14 12.8	+0.1
YAK				IAMs_20	IAMs_20	03 21 03.1	
	comp=Z,14µm,21.0s						
KUR	Kuril'sk	145.06	308	c iPKIKP	PKPab	02 14 15.3	+0.1
KUR				i		02 14 18.5	
KUR				e		02 17 44.0	
KUR				eSS	SS	02 36 29.3	+4.0
KUR				eSSS	SSS	02 41 58.7	
TAPR	Tapar	145.14	91	eP	PKPbc	02 14 14.2	-1.9
JUMK	Jumkunaria	145.78	91	⇑iP	PKPdf	02 14 17.5	-0.1
JUMK				i x	x	02 30 33.2	
VJP	Vajepar	145.98	91	eP	PKPbc	02 14 18.8	0.0
PALK	Pallekele	146.08	125	PKPbc	PKPdf	02 14 18.4	-0.2
	comp=Z,36nm,1.1s,baz=313,slow=4.2,SNR=10						
PALK	Pallekele	146.08	125	PKIKP	PKPdf	02 14 18.0	-0.5
PALK	Pallekele	146.08	125	P	PKPab	02 14 19.8	-0.2
PALK				P	sPKPbc	02 14 19.9	+0.3
PALK	Pallekele	146.08	125	PKPdf	PKPdf	02 14 18.0	-0.5
PALK	Pallekele	146.08	125	IAMs_20	IAMs_20	03 16 11.9	
	comp=Z,13µm,19.0s						
BRZS	Berezniki	146.39	42	ePKP	PKPdf	02 14 18.5	+0.5
	baz=42						
BRZS	Berezniki	146.39	42	ePKP2	PKPdf	02 14 18.4	+0.5
NKL	Nikolayevsk	146.43	324	i PKP2	PKPab	02 14 20.4	+0.4
LUWI	Luwuk	146.55	207	IAMs_20	IAMs_20	03 18 43.9	
	comp=Z,9µm,21.0s						
BRLS	Borolday	146.64	56	ePKP	PKPbc	02 14 19.7	-0.5
	baz=56						
BRLS	Borolday	146.64	56	ePKP2	PKPbc	02 14 19.6	-0.5
KBL	Kabul	146.68	71	PKP2	PKPbc	02 14 20.3	-0.5
KBL	Kabul	146.68	71	P	PKPbc	02 14 20.9	+0.1
	SNR=159						
KBL	Kabul	146.68	71		PKPbc	02 14 20.2	-0.5
YUK	Yuzh-Kuril'sk	146.73	306	c iPKP2	PKPbc	02 14 20.7	+0.4
YUK				i		02 17 44.1	
YUK				e		02 30 34.6	
YUK				i SS	SS	02 36 41.0	-3.3
YUK				pmax	pmax		
	comp=Z,671nm,1.3s						
OTUK	Ortayu	146.86	46	PKP2	PKPdf	02 14 19.6	+0.8
IUG	Iuzhnay	146.94	57	ePKP	PKPdf	02 14 20.1	+0.9
	baz=57						
IUG	Iuzhnay	146.94	57	ePKP2	PKPdf	02 14 20.1	+0.9
POO	Poona	147.01	102	⇑iP	PKPdf	02 14 20.0	+0.1
	comp=Z,200nm,1.0s						
KK31	Karatay Array	147.11	55	i PKIKP	PKPdf	02 14 19.4	0.0
KKAR	Karatay Array	147.11	55	PKIKP	PKPdf	02 14 19.8	+0.4
KKAR	Karatay Array	147.11	55		PKPdf	02 14 19.8	+0.4
UGL	Uglegorsk	147.58	317	ePKIKP	PKPdf	02 14 20.5	+0.6
UGL				eSS	SS	02 36 48.4	-5.0
UGL				pmax	pmax		
	comp=Z,8µm,6.0s						
UGL				pmax	pmax		
	comp=Z,160nm,1.1s						
PMBI	Palembang	147.62	174	IAMs_20	IAMs_20	03 12 00.6	
	comp=Z,10µm,21.0s						
DZA	Taraz	147.74	55	ePKP	PKPdf	02 14 21.1	+0.6
	baz=56						
DZA	Taraz	147.74	55	ePKIKP	PKPdf	02 14 21.0	+0.6
YSS	Yuzh-Sakhalins	147.97	313	⇓iPKP2	PKPbc	02 14 23.2	-0.5
YSS				pmax	pmax		
	comp=Z,50nm,0.6s						
YSS	Yuzh-Sakhalins	147.97	313		PKPbc	02 14 23.1	-0.6
DRK	Karamyk	148.67	62	PKPbc	PKPdf	02 14 23.9	+1.5
JKA	Kamikawa-asahi	148.98	308		PKPdf	02 14 22.6	+0.2
ASAJ	Asahikawa	148.98	308	PKP	PKPdf	02 14 22.9	+0.5
	comp=Z,19nm,0.9s,baz=99,slow=12,SNR=4.3						
ASAJ				PKPbc	PKPbc	02 14 26.3	-0.1
	comp=Z,35nm,1.0s,baz=231,slow=7.4,SNR=5.5						
BTLS	Baital	149.06	50	ePKP	PKPdf	02 14 22.9	+0.4
	baz=50						
BTLS	Baital	149.06	50	ePKIKP	PKPdf	02 14 22.9	+0.4
TOLI2	Tolitoli	149.29	206		PKPdf	02 14 20.6	-3.2
KURK	Kurchatov	149.39	38	c iPKHKP	PKPpre	02 14 23.9	
KURK				pmax	pmax		
	comp=Z,173nm,1.3s						
KURK				MLR	MLR		
	comp=Z,18µm,20.0s						
KURK	Kurchatov	149.39	38	P	PKPdf	02 14 24.9	+2.1
KURK	Kurchatov	149.39	38		PKPdf	02 14 24.1	+1.4
KURBB	Kurchatov Arra	149.40	38	PKP	PKPdf	02 14 23.4	+0.6
	comp=Z,55nm,0.8s,baz=300,slow=2.8,SNR=72						
KURBB				PKPbc	pPKPbc	02 14 27.4	0.0
	comp=Z,58nm,0.7s,baz=302,slow=3.0,SNR=43						
KURBB	Kurchatov Arra	149.40	38	PKHKP	PKPpre	02 14 23.1	
EKS2	Erkin-Say	149.54	55	P	PKPdf	02 14 25.2	+1.7
	SNR=26						
AML	Almayashu	149.61	56	P	PKPdf	02 14 25.4	+1.4
	SNR=33						
AML	Almayashu	149.61	56	i P	PKPdf	02 14 24.5	+0.5
	SNR=124						
AML	Almayashu	149.61	56	P	PKPbc	02 14 26.5	-2.1
JCJ	Chichijima	149.92	274		PKPdf	02 14 22.9	-1.4
GRNR	Gornyy	149.94	323	⇑iPKP2	PKiKP	02 14 29.2	-0.3
GRNR				pmax	pmax		
	comp=Z,60nm,1.1s						
SGDS	Sogindy	149.94	53	ePKP	PKPdf	02 14 23.8	-0.3
	baz=53						
AAK	Ala-Archa	150.06	55	PKP	PKPdf	02 14 24.5	+0.1
	comp=Z,14nm,1.1s,baz=231,slow=1.8,SNR=33						
AAK				PKPbc	PKiKP	02 14 30.1	-0.1
	comp=Z,175nm,1.1s,baz=218,slow=1.6,SNR=86						
AAK	Ala-Archa	150.06	55	P	PKPdf	02 14 25.5	+1.1
	SNR=18						
AAK	Ala-Archa	150.06	55	i P	PKPdf	02 14 24.9	+0.5
	SNR=179						
AAK	Ala-Archa	150.06	55	P	PKPbc	02 14 27.2	-2.2
AAK	Ala-Archa	150.06	55	PKPdf	PKPdf	02 14 25.0	+0.6
NIL	Nilore	150.14	73	P	PKPdf	02 14 25.8	+1.2
CHMS	Chumysh	150.15	54	P	PKPdf	02 14 25.7	+1.4
	SNR=26						
UCH	Uchtor	150.18	56	P	PKPdf	02 14 26.7	+1.8
	SNR=40						
BKNI	Bangkinang	150.24	166	IAMs_20	IAMs_20	03 11 57.2	
	comp=Z,8µm,20.0s						
GSI	Gunungsitoli	150.25	158	IAMs_20	IAMs_20	03 15 26.1	
	comp=Z,12µm,21.0s						
ZALV	Zalesovo Beam	150.29	28	PKP	PKPdf	02 14 24.8	+0.6
	comp=Z,30nm,0.9s,baz=298,slow=3.2,SNR=103						
ZALV				PKPbc	sPKPbc	02 14 29.6	+0.1
	comp=Z,164nm,0.7s,baz=298,slow=3.1,SNR=85						
KBK	Karagaybulak	150.38	55	P	PKPdf	02 14 26.4	+1.5
	SNR=9.4						
SEM	Semipalatinsk	150.43	37	ePKP	PKPdf	02 14 24.0	-0.7
	baz=37						
SEM	Semipalatinsk	150.43	37	ePKIKP	PKPdf	02 14 24.0	-0.7
HYB	Hyderabad	150.47	107	i PKP	PKPdf	02 14 26.0	+0.4
HYB				ePP	PP	02 18 00.0	-6.8
TKM2	Tokmak 2	150.77	54	P	PKPdf	02 14 26.6	+1.1
	SNR=21						
TKM2	Tokmak 2	150.77	54	PKIKP	PKPdf	02 14 25.9	+0.4
KUU	Kurty	150.98	52	ePKP	PKPdf	02 14 24.8	-0.8
	baz=52						
KUU	Kurty	150.98	52	ePKIKP	PKPdf	02 14 24.8	-0.8
BOD	Bodaibo	151.37	353	ePKIKP	PKPdf	02 14 25.3	-0.4
BOD				pmax	pmax		
	comp=Z,268nm,1.8s						
ULHL	Ulahol	151.41	55	P	PKPdf	02 14 28.1	+1.6
	SNR=12						
CHKK	Chushkaly	151.44	51	ePKP	PKPdf	02 14 26.1	-0.1
	baz=51						
AAA	Alma-Ata	151.60	53	ePKP	PKPdf	02 14 25.6	-1.1
	baz=53						
AAA	Alma-Ata	151.60	53	ePKIKP	PKPdf	02 14 25.5	-1.1
MDOK	Medeo	151.71	53	ePKP	PKPdf	02 14 26.6	-0.3
	baz=53						
MDOK	Medeo	151.71	53	ePKIKP	PKPdf	02 14 26.5	-0.3
KSH	Kashi	151.85	61	PKPbc	PKPdf	02 14 28.4	+1.2
KSH				PP	PP	02 18 13.8	-0.7
KSH				SKKS		02 25 03.6	
KSH				AMB	AMB		
	comp=Z,12µm,8.2s						
KSH				LR	LR		
	comp=Z,9µm,18.7s						
KSH				LR	LR		
	comp=Z,17µm,19.9s						
KSH				LR	LR		
	comp=Z,22µm,21.8s						
ARXS	Arharly	151.88	50	ePKIKP	PKPdf	02 14 26.7	-0.3
TDK	Taldyqorghan	151.96	48	ePKP	PKPdf	02 14 25.6	-1.5
	baz=48						
TDK	Taldyqorghan	151.96	48	ePKIKP	PKPdf	02 14 25.5	-1.5
ZEA	Zeya	152.01	335	i PKIKP	PKPdf	02 14 27.0	+0.2
ZEA				e		02 14 43.3	
ZEA				e		02 37 43.3	
ZEA				e		02 43 26.9	
ZEA				pmax	pmax		
	comp=N,30nm,1.1s						
ZEA				pmax	pmax		
	comp=Z,50nm,1.7s						
ZEA				pmax	pmax		
	comp=E,300nm,5.0s						
ZEA				pmax	pmax		
	comp=N,700nm,5.9s						
ZEA				pmax	pmax		
	comp=Z,2µm,5.9s						
ZEA				pmax	pmax		
	comp=E,1µm,12.4s						
ZEA				pmax	pmax		
	comp=N,2µm,15.6s						
ZEA				pmax	pmax		
	comp=Z,3µm,16.1s						
PSI	Prapat	152.08	160	PKP	PKPdf	02 14 28.5	+0.2
	comp=Z,5.0nm,0.6s,baz=179,slow=4.5,SNR=6.7						
PSI				PKPbc	PKPbc	02 14 33.9	-1.0
	comp=Z,40nm,1.1s,baz=202,slow=8.1,SNR=27						
DAV	Davao City (W)	152.27	220	IAMs_20	IAMs_20	03 11 07.4	
	comp=Z,14µm,21.0s						
TEY	Ternei	152.67	312	⇑ePKIKP	PKPdf	02 14 28.9	+0.9
SATY	Saty	152.68	52	⇑iPKP	PKPdf	02 14 27.4	-1.0
	baz=52						
SATY	Saty	152.68	52	c iPKIKP	PKPdf	02 14 27.3	-1.0
KPKS	Kokpek	152.73	51	⇑iPKP	PKPdf	02 14 27.9	-0.5
	baz=51						
KPKS	Kokpek	152.73	51	c iPKIKP	PKPdf	02 14 27.8	-0.5
UZB	Uzynbulak	153.07	52	ePKP	PKPdf	02 14 27.9	-1.1
	baz=52						
UZB	Uzynbulak	153.07	52	ePKIKP	PKPdf	02 14 27.8	-1.1
KLR	Kul'dur	153.27	324	PKP	PKPdf	02 14 29.6	+0.8
	comp=Z,7.7nm,1.0s,baz=86,slow=4.6,SNR=10						
PDGK	Podgornoye	153.33	51	PKIKP	PKPdf	02 14 28.6	-0.6
MAKZ	Makanchi	153.35	42	PKIKP	PKPdf	02 14 28.3	-0.7
MK31	Makanchi Array	153.54	42	i PKIKP	PKPdf	02 14 28.6	-0.7
MKAR	Makanchi Array	153.54	42	PKP	PKPdf	02 14 29.3	0.0
	comp=Z,9.6nm,0.9s,baz=318,slow=1.6,SNR=22						
MKAR				PKPbc	PKPbc	02 14 36.8	-0.2
	comp=Z,32nm,1.0s,baz=318,slow=1.9,SNR=22						
LHMI	Lhok Sumawe	153.69	154	IAMs_20	IAMs_20	03 31 16.6	
	comp=Z,15µm,21.0s						
MJAR	Matsushiro Arr	153.83	294	PKP	PKPdf	02 14 30.5	+0.5
	comp=Z,1.1nm,0.3s,baz=146,slow=2.4,SNR=7.6						
MJAR				PKPbc	sPKPbc	02 14 38.4	+0.2
	comp=Z,5.5nm,0.9s,baz=125,slow=2.1,SNR=9.9						
MJAR	Matsushiro Arr	153.83	294	PKIKP	PKPdf	02 14 29.8	-0.2
MJAR	Matsushiro Arr	153.83	294	PKPdf	PKPdf	02 14 29.8	-0.2
MAJO	Matsushiro	153.83	294	IAMs_20	IAMs_20	03 26 43.0	
	comp=Z,13µm,19.0s						
MAT	Matsushiro	153.83	294	PKP	PKPdf	02 14 28.1	-1.9
ZSN	Zaisan	154.63	39	ePKP	PKPdf	02 14 29.7	-1.2
	baz=39						
ZSN	Zaisan	154.63	39	ePKIKP	PKPdf	02 14 29.6	-1.2
INU	Inuyama	154.91	291	IAMs_20	IAMs_20	03 24 00.6	
	comp=Z,11µm,19.0s						
PTH	Pithoragarh	155.79	83	eP	PKPdf	02 14 32.0	-1.2
USRK	Ussuriysk Ar.	155.98	314	PKP	PKPdf	02 14 32.0	-0.6
	comp=Z,3.1nm,1.0s,baz=45,slow=3.0,SNR=8.9						
USRK				PKPbc	sPKPbc	02 14 44.5	+2.0
	comp=Z,5.8nm,0.9s,baz=104,slow=3.0,SNR=5.7						
IRK	Irkutsk	157.09	6	ePKIKP	PKPdf	02 14 34.1	+0.2
IRK				e		02 18 38.6	
IRK				pmax	pmax		
	comp=Z,244nm,2.0s						
CIT	Chita	157.12	351	ePKIKP	PKPdf	02 14 35.2	+1.2
CIT				e		02 14 47.9	
CIT				e		02 18 45.2	
MDJ	Mudanjiang	157.22	317	PKP	PKPdf	02 14 34.4	+0.1
MDJ				PP	PP	02 18 43.8	-0.1
MDJ				LR	LR		
	comp=Z,8µm,19.9s						
MDJ				LR	LR		
	comp=Z,14µm,21.4s						
MDJ				LR	LR		
	comp=Z,19µm,19.9s						
MOY	Mondy	157.22	11	ePKIKP	PKPdf	02 14 36.0	+1.8
MOY				pmax	pmax		
	comp=Z,291nm,3.2s						
TLY	Talaya	157.58	7	PKP	PKPdf	02 14 35.7	+1.2
	comp=Z,9.9nm,0.9s,baz=184,slow=2.8,SNR=11						
TLY				PKPab	PKPab	02 15 04.3	-2.2
	comp=Z,12nm,0.8s,baz=285,slow=2.9,SNR=2.3						
TLY	Talaya	157.58	7	c iPKIKP	PKPdf	02 14 33.4	-1.2
TLY				e		02 18 42.2	
TLY				pmax	pmax		
	comp=Z,477nm,1.8s						
TLY	Talaya	157.58	7	P	PKPdf	02 14 36.6	+2.0
TLY	Talaya	157.58	7	PKPdf	PKPdf	02 14 35.2	+0.6
TLY					sPKPab	02 15 06.7	+0.1
PYUN	Piuthan	157.99	87	eP	PKPdf	02 14 36.4	+0.3
	comp=Z,244nm,1.5s						
HIA	Hailar	158.32	339	IAMs_20	IAMs_20	03 27 39.1	
	comp=Z,15µm,21.0s						
WMQ	Urumqi	158.36	43	PKP	PKPdf	02 14 37.4	+1.6
WMQ				PKPab	sPKPab	02 15 12.5	+2.1
WMQ				PP	PP	02 18 56.5	+6.2
WMQ				SKKS		02 25 39.3	
WMQ				SS	SS	02 38 45.8	-5.9
WMQ				AMB	AMB		
	comp=Z,11µm,11.5s						
WMQ				LR	LR		
	comp=Z,15µm,17.1s						
WMQ				LR	LR		
	comp=Z,18µm,20.3s						
WMQ				LR	LR		

	comp=Z,26µm,20.3s						
KOLN	**Koldanda**	**158.47**	**89**	*e*P	**PKPdf**	**02 14 36.7**	**+0.1**
	comp=Z,287nm,1.6s						
DANN	**Dangsing**	**158.71**	**87**	*e*P	**PKPdf**	**02 14 37.5**	**+0.5**
	comp=Z,120nm,1.0s						
ZAK	**Zakamensk**	**158.81**	**8**	*e*PKIKP	**PKPdf**	**02 14 36.7**	**+0.5**
ZAK				pmax	pmax		
	comp=Z,62nm,1.7s						
GKN	**Gorkha**	**159.41**	**88**	*e*P	**PKPdf**	**02 14 37.9**	**+0.2**
DMN	**Daman**	**159.75**	**90**	*e*P	**PKPdf**	**02 14 38.7**	**+0.5**
KKN	**Kakani**	**159.94**	**89**	*e*P	**PKPdf**	**02 14 38.4**	**0.0**
PKIN	**Phulchoki**	**160.00**	**90**	*e*P	**PKPdf**	**02 14 38.5**	**0.0**
	comp=Z,325nm,1.7s						
PKI	**Pulchoki**	**160.01**	**90**	*e*P	**PKPdf**	**02 14 39.2**	**+0.6**
CN2	**Changchun**	**160.09**	**321**	*e*PKP	**PKPdf**	**02 14 38.1**	**+0.4**
CN2				PP	**PP**	**02 19 02.3**	**+2.9**
CN2				SS	SS	02 39 07.9	-1.7
CN2				AMB	AMB		
	comp=Z,1µm,14.0s						
CN2				LR	LR		
	comp=Z,10µm,22.0s						
CN2				LR	LR		
	comp=Z,16µm,22.0s						
CN2				LR	LR		
	comp=Z,16µm,21.0s						
GUN	**Gumba**	**160.48**	**89**	*e*P	**PKPdf**	**02 14 39.6**	**+0.5**
JIRN	**Jiri**	**160.71**	**90**	*e*P	**PKPdf**	**02 14 39.3**	**-0.1**
	comp=Z,236nm,1.7s						
RAMN	**Ramite**	**160.92**	**92**	*e*P	**PKPdf**	**02 14 40.0**	**+0.5**
ODAN	**Odare**	**161.59**	**93**	*e*P	**PKPdf**	**02 14 40.4**	**+0.2**
	comp=Z,194nm,1.3s						
ULN	**Ulaanbaatar**	**161.63**	**2**	PKPdf	**PKPdf**	**02 14 38.0**	**-1.5**
ULN					**sPKPab**	**02 15 25.8**	**+1.2**
SONM	**Songino Array**	**161.63**	**4**	PKP	**PKPdf**	**02 14 39.5**	**0.0**
	comp=Z,10nm,1.2s,baz=270,slow=0.7,SNR=24						
SONM				PKPab	**sPKPab**	**02 15 26.1**	**+1.6**
	comp=Z,7.8nm,0.9s,baz=358,slow=2.5,SNR=4.9						
SONM				PP	**PP**	**02 19 12.4**	**+5.3**
	comp=Z,9.9nm,1.2s,baz=352,slow=7.5,SNR=5.1						
KSRS	**Korea Array**	**161.64**	**301**	PKP	**PKPdf**	**02 14 39.8**	**+0.2**
	comp=Z,3.1nm,0.8s,baz=37,slow=1.6,SNR=11						
KSRS				PKKP		02 22 54.5	
	comp=Z,1.1nm,0.5s,baz=258,slow=5.0,SNR=4.4						
TAPN	**Taplejung**	**161.97**	**92**	*e*P	**PKPdf**	**02 14 41.1**	**+0.4**
	comp=Z,179nm,1.4s						
SNY	**Shenyang**	**162.40**	**319**	⇑PKP	**PKPdf**	**02 14 40.2**	**0.0**
SNY				AMB	AMB		
	comp=Z,6µm,12.0s						
SNY				LR	LR		
	comp=Z,4µm,24.5s						
SNY				LR	LR		
	comp=Z,16µm,24.5s						
SNY				LR	LR		
	comp=Z,36µm,24.9s						
GTK	**Tadong**	**162.74**	**92**	⇑*i*P	**PKPdf**	**02 14 41.3**	**0.0**
SHL	**Shillong**	**165.13**	**101**	P	**PKPdf**	**02 14 44.2**	**+0.7**
	SNR=33						
LSA	**Lhasa**	**165.28**	**85**	PKP	**PKPdf**	**02 14 45.3**	**+1.4**
LSA				SKKS		02 26 13.5	
LSA				SS	**SS**	**02 39 58.6**	**-8.1**
LSA				LR	LR		
	comp=Z,13µm,18.5s						
LSA				LR	LR		
	comp=Z,16µm,19.9s						
LSA				LR	LR		
	comp=Z,40µm,15.7s						
LSA	**Lhasa**	**165.28**	**85**	P	**PKPdf**	**02 14 44.6**	**+0.7**
DL2	**Dalian**	**165.37**	**314**	PKP	**PKPdf**	**02 14 42.4**	**-0.6**
DL2				PP	**PP**	**02 19 25.2**	**-2.5**
DL2				SS	SS	02 40 02.6	-2.2
DL2				AMB	AMB		
	comp=Z,4µm,11.3s						
DL2				LR	LR		
	comp=Z,5µm,18.8s						
DL2				LR	LR		
	comp=Z,9µm,24.2s						
DL2				LR	LR		
	comp=Z,17µm,21.6s						
CM31	**Chiang Mai Arr**	**166.23**	**141**	P	**PKPdf**	**02 14 45.7**	**+1.3**
	SNR=13						
CMAR	**Chiang Mai Arr**	**166.23**	**141**	PKP	**PKPdf**	**02 14 44.9**	**+0.5**
	comp=Z,1.6nm,0.6s,baz=241,slow=1.5,SNR=17						
CMAR				PKPab	**PKPab**	**02 15 44.6**	**-0.5**
	comp=Z,5.6nm,0.8s,baz=232,slow=4.4,SNR=6.3						
CMAR				PP	**PP**	**02 19 36.8**	**+4.8**
	comp=Z,2.7nm,0.3s,baz=228,slow=5.5,SNR=6.2						
CMAR	**Chiang Mai Arr**	**166.23**	**141**	PKIKP	**PKPdf**	**02 14 43.9**	**-0.5**
CMAR	**Chiang Mai Arr**	**166.23**	**141**		**PKPdf**	**02 14 43.9**	**-0.5**
KOHI	**KOHIMA**	**167.07**	**104**	*e*P	**PKPdf**	**02 14 44.7**	**-0.3**
ITAN	**ITANAGAR**	**167.16**	**97**	*e*P	**PKPdf**	**02 14 43.1**	**-1.8**
ITAN				*i* x	x	02 19 33.6	
JORH	**JORHAT**	**167.51**	**99**	*e*P	**PKPdf**	**02 14 45.0**	**-0.1**
JORH				*i* x	x	02 19 40.2	
BJI	**Beijing**	**167.54**	**330**	PKP	**PKPdf**	**02 14 44.4**	**-0.3**
BJI				PKS	**PKSdf**	**02 18 16.3**	**-0.9**
BJI				SKS	**SKSdf**	**02 21 48.0**	**-1.3**
MOKO	**MOKOCHONG**	**167.62**	**101**	*e*P	**PKPdf**	**02 14 45.5**	**+0.1**
MOKO				IAmb	IAmb	02 14 48.8	
	comp=Z,185nm,1.6s						
MOKO				*i* x	x	02 19 39.7	
GTA	**Gaotai**	**167.99**	**32**	⇑PKP	**PKPdf**	**02 14 45.7**	**+0.5**
GTA				PKPab	**sPKPab**	**02 15 54.1**	**+1.3**
GTA				PP	**PP**	**02 19 40.9**	**0.0**
GTA				SKKS		02 26 30.7	
GTA				SS	**SS**	**02 40 31.0**	**+0.2**
GTA				AMB	AMB		
	comp=Z,6µm,10.9s						
GTA				LR	LR		
	comp=Z,8µm,21.5s						
GTA				LR	LR		
	comp=Z,7µm,21.8s						
GTA				LR	LR		
	comp=Z,32µm,22.2s						
HHC	**Hu-ho-hao-te**	**168.30**	**347**	*e*PKP	**PKPdf**	**02 14 46.5**	**+1.1**
HHC				PP	**PP**	**02 19 41.3**	**-0.7**
HHC				AMB	AMB		
	comp=Z,7µm,12.0s						
HHC				LR	LR		
	comp=Z,14µm,18.9s						
HHC				LR	LR		
	comp=Z,14µm,21.0s						
HHC				LR	LR		
	comp=Z,23µm,19.9s						
SSE	**Sheshan**	**168.54**	**281**	PKP	**PKPdf**	**02 14 45.9**	**+0.2**
SSE				PP	**PP**	**02 19 47.6**	**+2.7**
SSE				SS	SS	02 40 35.7	-2.8
SSE				LR	LR		
	comp=Z,2µm,21.8s						
SSE				LR	LR		
	comp=Z,4µm,22.4s						
BTO	**Baotou**	**168.79**	**352**	*e*PKP	**PKPdf**	**02 14 46.6**	**+0.9**
BTO				LR	LR		
	comp=Z,40µm,18.6s						
BTO				LR	LR		
	comp=Z,48µm,21.1s						
LKP	**Lekhapani**	**169.04**	**98**	*e*P	**PKPdf**	**02 14 45.6**	**-0.5**
LKP				*i* x	x	02 19 46.5	
QIZ	**Qiongzhong**	**169.47**	**189**	PKP	**PKPdf**	**02 14 44.0**	**-2.6**
QIZ				PP	**PP**	**02 19 47.2**	**-0.5**
QIZ				SS	SS	02 40 44.8	+0.5
QIZ				LR	LR		
	comp=Z,7µm,20.2s						
QIZ				LR	LR		
	comp=Z,6µm,21.4s						
QIZ				LR	LR		
	comp=Z,14µm,27.7s						
QZH	**Quanzhou**	**169.59**	**247**	*i* PKP	**PKPdf**	**02 14 45.7**	**-0.8**
QZH				PP	**PP**	**02 19 50.8**	**+0.8**
QZH				SS	SS	02 40 50.1	+1.5
QZH				AMB	AMB		
	comp=Z,4µm,8.5s						
QZH				LR	LR		
	comp=Z,7µm,18.5s						
QZH				LR	LR		
	comp=Z,4µm,16.6s						
QZH				LR	LR		
	comp=Z,21µm,29.8s						
TIA	**Tai'an**	**169.85**	**314**	PKP	**PKPdf**	**02 14 47.0**	**+0.6**
TIA				PP	**PP**	**02 19 53.9**	**+3.3**
TIA				SS	SS	02 40 51.7	+1.7
TIA				AMB	AMB		
	comp=Z,3µm,7.1s						
TIA				LR	LR		
	comp=Z,12µm,23.1s						
TIA				LR	LR		
	comp=Z,4µm,15.5s						
TIA				LR	LR		
	comp=Z,19µm,22.6s						
NJ2	**Nanjing**	**170.37**	**288**	*e*PKP	**PKPdf**	**02 14 45.6**	**-1.1**
NJ2				PKPab	**sPKPab**	**02 16 08.0**	**+4.4**
NJ2				PP	**PP**	**02 19 53.1**	**-0.9**
NJ2				AMB	AMB		
	comp=Z,4µm,7.7s						
NJ2				LR	LR		
	comp=Z,15µm,18.6s						
NJ2				LR	LR		
	comp=Z,13µm,19.4s						
NJ2				LR	LR		
	comp=Z,24µm,21.2s						
TIY	**Taiyuan**	**171.02**	**337**	⇑PKP	**PKPdf**	**02 14 48.1**	**+1.1**
TIY				PP	**PP**	**02 19 57.1**	**+1.3**
TIY				SS	SS	02 40 59.8	-0.5
TIY				AMB	AMB		
	comp=Z,4µm,12.2s						
TIY				LR	LR		
	comp=Z,16µm,20.3s						
TIY				LR	LR		
	comp=Z,5µm,15.7s						
TIY				LR	LR		
	comp=Z,23µm,23.8s						
GZH	**Guangzhou**	**172.06**	**218**	PKP	**PKPdf**	**02 14 49.7**	**+1.8**
GZH				PP	**PP**	**02 20 08.7**	**+7.4**
GZH				LR	LR		
	comp=Z,8µm,17.3s						
GZH				LR	LR		
	comp=Z,7µm,20.0s						
LZH	**Lanzhou**	**172.52**	**27**	*e*PKP	**PKPdf**	**02 14 49.5**	**+1.6**
LZH				pPKP	sPKPdf	02 14 54.8	+6.6
LZH				PP	**PP**	**02 20 03.0**	**-0.5**
LZH				AMB	AMB		
	comp=Z,3µm,5.4s						
LZH				LR	LR		
	comp=Z,15µm,17.9s						
LZH				LR	LR		
	comp=Z,12µm,16.3s						
LZH				LR	LR		
	comp=Z,20µm,20.1s						
KMI	**Kunming**	**173.58**	**131**	⇑PKP	**PKPdf**	**02 14 47.7**	**-1.1**
WHN	**Wuhan**	**174.44**	**283**	⇓PKP	**PKPdf**	**02 14 49.2**	**+0.6**
WHN				PP	**PP**	**02 20 16.9**	**+2.7**
WHN				SKKS		02 27 02.2	
WHN				AMB	AMB		
	comp=Z,5µm,5.7s						
WHN				LR	LR		
	comp=Z,28µm,17.5s						
WHN				LR	LR		
	comp=Z,19µm,15.9s						
WHN				LR	LR		
	comp=Z,60µm,23.9s						
XAN	**Xi'an**	**175.40**	**351**	PKP	**PKPdf**	**02 14 49.5**	**+0.7**
XAN				PP	**PP**	**02 20 17.5**	**+0.6**
XAN				SKS	**SKSdf**	**02 21 45.4**	**-7.4**
XAN				SKKS	**SKKSac**	**02 27 08.6**	**+3.6**
XAN				SS	**SS**	**02 41 35.8**	**-6.5**
XAN				LR	LR		
	comp=Z,12µm,22.6s						
XAN				LR	LR		
	comp=Z,16µm,20.6s						
XAN				LR	LR		
	comp=Z,27µm,24.7s						
CD2	**Chengdu**	**176.01**	**68**	PKP	**PKPdf**	**02 14 46.9**	**-2.2**
CD2				SKKS		02 27 07.4	
CD2				SS	**SS**	**02 41 43.1**	**-8.3**
CD2				LR	LR		
	comp=Z,24µm,19.1s						
CD2				LR	LR		
	comp=Z,15µm,22.5s						
CD2				LR	LR		
	comp=Z,23µm,19.6s						
GYA	**Guiyang**	**176.75**	**157**	⇓PKP	**PKPdf**	**02 14 49.7**	**+0.2**
GYA				PKPab	**sPKPab**	**02 16 34.9**	**+3.0**
GYA				PP	**PP**	**02 20 26.4**	**+2.7**
GYA				SKKS		02 27 09.7	
GYA				AMB	AMB		
	comp=Z,6µm,12.8s						
GYA				LR	LR		
	comp=Z,5µm,18.2s						
GYA				LR	LR		
	comp=Z,3µm,22.2s						
GYA				LR	LR		
	comp=Z,9µm,18.6s						

IDC 11 02:00:16.2±1.8**,29°.53S**×**70°.79W,h0^{km},mb4.1**/2**, mb1 4.6**/3**,mb1mx4.1**/42**,mbtmp4.5**/3**,ML4.3**/1 **Error ellipse: s-maj=60.3km s-min=44.0km az=87.0,Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**7.09**	**14**	Pn	Pn	02 02 01.1	-0.5
	4.9nm,0.3s,baz=339,slow=17,SNR=2.0						
LVC				Sn	Sn	02 03 23.5	+0.3
	6.2nm,0.3s,baz=16,slow=13,SNR=0.8						
H03N1	**Juan Fernandez**	**7.96**	**239**	T	T	02 10 58.5	
	baz=64						
H03N2	**Juan Fernandez**	**7.97**	**239**	T	T	02 11 12.3	
	baz=64						
H03N3	**Juan Fernandez**	**7.97**	**239**	T	T	02 10 41.8	
	baz=64						
TXAR	**Lajitas Array**	**66.41**	**329**	P	P	02 11 08.2	+0.9
	1.6nm,1.0s,baz=139,slow=8.4,SNR=2.1						
TORD	**Torodi Ar. Bea**	**81.68**	**70**	P	P	02 12 38.3	+1.4
	1.6nm,0.7s,baz=252,slow=4.1,SNR=1.1						
KURBB	**Kurchatov Arra**	**148.81**	**39**	PKPbc	PKPbc	02 20 04.2	-1.1
	1.3nm,0.5s,baz=300,slow=3.7,SNR=1.5						
ZALV	**Zalesovo Beam**	**149.84**	**29**	PKPbc	PKPbc	02 20 06.0	-1.8
	4.5nm,0.6s,baz=300,slow=3.0,SNR=6.4						

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*IDC **11** 02:01:05.0±0.7,29°.51S×71°.87W,h0^{km},mb4.6/8, mb1 4.6/9,mb1mx4.3/41,mbtmp4.6/9,Error ellipse: s-maj=32.9km s-min=18.5km az=92.0*

*NEIC **11** 02:01:05.9±1.8,29°.56S±0°.03×72°.11W±0°.06,h10^{km}±1^{km}, mb5.1/21,Error ellipse: s-maj=9.6km s-min=5.1km az=283.0*

ISC 11 02:01:08.3±0.5**,29°.54S**±0°.05×**71°.92W**±0°.10**,h25^{km},n56,** σ**1^{s}30**/53**,mb4.9**/16**,1C,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO05	**La Serena**	**0.70**	**123**		**Pb**	**02 01 22.1**	**+0.2**
CO06	**Fray Jorge**	**1.16**	**168**	Pn	**Pn**	**02 01 27.9**	**-1.1**
GO04	**Tololo Observa**	**1.16**	**123**	Pn	**Pb**	**02 01 30.8**	**+0.9**
LCO	**Las Campanas**	**1.19**	**64**	Pn	**Pn**	**02 01 29.6**	**+0.1**
AC04	**Llanos de Chal**	**1.52**	**29**	Pn	**Pn**	**02 01 32.6**	**-1.2**
AC02	**Maricunga**	**3.65**	**43**	Pn	**Pn**	**02 02 02.2**	**-1.4**
PEL	**Peldehue**	**3.75**	**164**	Pn	**Pn**	**02 02 01.0**	**-3.6**
MT09	**Talagante**	**4.30**	**170**	Pn	Pn	02 02 07.9	-4.3
BO02	**Sierra Bellavi**	**5.33**	**170**	Pn	**Pn**	**02 02 24.0**	**-2.3**
LVC	**Limon Verde**	**7.41**	**22**	Pn	**Pn**	**02 02 52.9**	**-2.3**
	baz=333,slow=20,SNR=0.8						
LVC				Sn	**Sn**	**02 04 15.5**	**-3.1**
	5.9nm,0.3s,baz=282,slow=20,SNR=3.6						
LVC				Lg	Lg	02 04 57.4	
	7.3nm,0.3s,baz=100,slow=21,SNR=4.5						
USHA	**Ushuaia**	**25.40**	**175**	P	**P**	**02 06 34.4**	**+0.9**
	28nm,0.8s,baz=4.2,slow=4.4,SNR=5.3						
OTAV	**Otavalo**	**30.26**	**347**		**P**	**02 07 17.1**	**-0.7**
ZARC	**Zaragoza, Cauc**	**36.92**	**355**	P	**P**	**02 08 15.2**	**-0.1**
GRGR	**Grenville**	**42.59**	**15**	*e*	P	02 08 52.8	-10
BBGH	**Gun Hill**	**44.08**	**17**	*e*	**P**	**02 09 16.5**	**+2.1**
MPOM	**Morne Pois Mar**	**45.01**	**15**	*e*	**P**	**02 09 24.1**	**+2.3**
MAGL	**Barre de l'ile**	**46.37**	**14**	*e*	P	02 09 40.5	+7.9
SEUS	**St. Eustatius**	**47.54**	**12**	*e*	P	02 09 48.3	+6.6
VNA3	**Neumayer Olymp**	**53.46**	**159**	P	**P**	**02 10 26.8**	**+0.8**
VNA2	**Neumayer--Watz**	**54.09**	**159**	P	**P**	**02 10 31.2**	**+0.7**
	baz=287,slow=8.3						
SNAA	**Sanae**	**55.69**	**159**	P	**P**	**02 10 42.8**	**+0.6**
SNAA	**Sanae**	**55.69**	**159**	P	**P**	**02 10 42.3**	**+0.2**
	9.5nm,0.8s,baz=270,slow=8.9,SNR=8.4						
SNAA	**Sanae**	**55.69**	**159**	P	**P**	**02 10 42.2**	**+0.1**
SNAA				IAmb	IAmb	02 10 43.2	
	comp=Z,13nm,0.9s						
QSPA	**South Pole Qui**	**60.69**	**180**	P	**P**	**02 11 17.3**	**0.0**
QSPA				IAmb	IAmb	02 11 19.7	
	comp=Z,26nm,1.4s						
W50A	**Signal Mountai**	**65.62**	**348**	P	**P**	**02 11 49.8**	**-0.3**
W50A				IAmb	IAmb	02 11 50.9	
	comp=Z,9.8nm,0.8s						
SWET	**Sewanee**	**65.75**	**347**	P	**P**	**02 11 50.3**	**-0.6**
SWET				IAmb	IAmb	02 11 51.6	
	comp=Z,7.3nm,0.7s						
TXAR	**Lajitas Array**	**65.92**	**330**	P	**P**	**02 11 53.2**	**+1.0**
	comp=Z,1.5nm,0.8s,baz=151,slow=9.8,SNR=5.3						
TXAR	**Lajitas Array**	**65.92**	**330**	P	**P**	**02 11 51.4**	**-0.8**
V52A	**Sevierville**	**65.95**	**350**	P	**P**	**02 11 50.7**	**-1.5**
WVT	**Waverly**	**67.01**	**346**	P	**P**	**02 11 58.8**	**-0.1**
WVT				IAmb	IAmb	02 12 17.3	
	comp=Z,9.1nm,1.1s						
S57A	**Dark Hollow, R**	**67.27**	**354**	P	**P**	**02 12 01.3**	**+0.7**
S57A				IAmb	IAmb	02 12 19.2	
	comp=Z,22nm,1.4s						
X37A	**Clayton**	**67.52**	**339**	P	**P**	**02 12 02.0**	**-0.2**
LCAR	**Lake Charles**	**67.72**	**343**	P	**P**	**02 12 02.5**	**-1.0**
MNTX	**Cornudas Mount**	**68.70**	**330**	P	**P**	**02 12 08.2**	**-1.5**
MNTX				IAmb	IAmb	02 12 33.3	
	comp=Z,22nm,1.6s						
S44A	**Carbondale**	**68.82**	**345**	P	**P**	**02 12 10.1**	**-0.2**
SYO	**Syowa Base**	**69.98**	**159**	⇑*e*P	**P**	**02 12 13.2**	**-3.9**
R40A	**Maddies Statio**	**70.11**	**343**	P	**P**	**02 12 17.6**	**-0.7**
N49A	**Columbus Grove**	**71.02**	**350**	P	**P**	**02 12 22.5**	**-1.2**
N49A				IAmb	IAmb	02 12 24.6	
	comp=Z,14nm,0.7s						
DBIC	**Dimbokro**	**73.69**	**72**	P	**P**	**02 12 40.9**	**+0.6**
	comp=Z,6.7nm,0.8s,baz=284,slow=4.2,SNR=4.1						
DBIC	**Dimbokro**	**73.69**	**72**	P	**P**	**02 12 41.4**	**+1.0**
DBIC				IAmb	IAmb	02 12 51.6	
	comp=Z,40nm,1.5s						
SMCO	**Snowmass**	**75.77**	**333**	P	**P**	**02 12 53.1**	**+0.8**
SMCO				IAmb	IAmb	02 13 03.6	
	comp=Z,21nm,1.5s						
ECSD	**EROS Data Cent**	**76.35**	**342**	P	**P**	**02 12 55.9**	**+0.9**
MAW	**Mawson**	**77.42**	**164**	P	**P**	**02 13 01.3**	**+0.4**
	comp=Z,3.4nm,0.9s,baz=154,slow=7.0,SNR=2.5						
MAW	**Mawson**	**77.42**	**164**	P	**P**	**02 13 00.4**	**-0.4**
KOWA	**Kowa**	**78.72**	**66**	P	**P**	**02 13 09.2**	**+0.3**
	comp=Z,6.4nm,0.7s,baz=274,slow=4.0,SNR=4.1						
KOWA	**Kowa**	**78.72**	**66**	P	**P**	**02 13 08.7**	**-0.2**
KOWA				IAmb	IAmb	02 13 20.0	
	comp=Z,38nm,1.4s						
PDAR	**Pinedale Array**	**79.84**	**333**	P	**P**	**02 13 15.3**	**+0.6**
	comp=Z,0.8nm,0.7s,baz=134,slow=6.4,SNR=2.2						
RLMT	**Red Lodge**	**81.72**	**334**	P	**P**	**02 13 25.4**	**+0.8**
TORD	**Torodi Ar. Bea**	**82.61**	**70**	P	**P**	**02 13 30.5**	**+0.8**
	comp=Z,7.5nm,0.8s,baz=271,slow=2.7,SNR=5.8						
AKASG	**Malin Array Be**	**119.05**	**46**	PKP	**PKPdf**	**02 19 54.5**	**0.0**
	comp=Z,1.6nm,0.6s,baz=264,slow=2.8,SNR=4.2						
WRA	**Warramunga Arr**	**124.68**	**210**	PKP	**PKPdf**	**02 20 05.9**	**-0.4**
	comp=Z,0.9nm,0.8s,baz=171,slow=1.8,SNR=2.7						
KURBB	**Kurchatov Arra**	**149.43**	**38**	PKPbc	**PKPbc**	**02 20 55.5**	**+0.7**
	comp=Z,3.2nm,0.7s,baz=299,slow=2.9,SNR=4.7						
AAK	**Ala-Archa**	**150.08**	**55**	PKPbc	**PKiKP**	**02 20 58.6**	**+0.9**
	comp=Z,10nm,0.8s,baz=220,slow=1.0,SNR=5.1						
ZALV	**Zalesovo Beam**	**150.33**	**28**	PKPbc	**PKiKP**	**02 20 58.2**	**+0.6**
	comp=Z,16nm,0.6s,baz=310,slow=4.0,SNR=11						
KLR	**Kul'dur**	**153.33**	**324**	PKPbc	**PKPbc**	**02 21 04.2**	**+0.3**
	comp=Z,2.3nm,0.6s,baz=76,slow=3.0,SNR=5.7						
MKAR	**Makanchi Array**	**153.57**	**42**	PKPbc	**PKPbc**	**02 21 05.2**	**+0.6**
	comp=Z,2.2nm,1.0s,baz=296,slow=4.6,SNR=0.9						

IDC 11 02:01:45.7±1.2**,29°.86S**×**71°.53W,h0^{km},mb4.3**/4**, mb1 4.4**/4**,mb1mx4.0**/40**,mbtmp4.3**/4**,Error ellipse: s-maj=51.1km s-min=38.1km az=63.0,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNAA	**Sanae**	**55.26**	**159**	P	P	02 11 22.0	+1.5
	3.4nm,0.7s,baz=303,slow=6.7,SNR=1.7						
TXAR	**Lajitas Array**	**66.37**	**330**	P	P	02 12 38.3	+1.7
	1.1nm,0.8s,baz=140,slow=5.8,SNR=2.2						
DBIC	**Dimbokro**	**73.47**	**72**	P	P	02 13 20.9	+0.4
	1.7nm,0.4s,baz=202,slow=7.1,SNR=1.1						
TORD	**Torodi Ar. Bea**	**82.40**	**70**	P	P	02 14 10.3	+0.2
	4.7nm,0.9s,baz=250,slow=4.6,SNR=7.0						
WRA	**Warramunga Arr**	**124.57**	**210**	PKP	PKPdf	02 20 45.2	-2.5
	0.6nm,0.8s,baz=162,slow=1.7,SNR=1.1						
KURBB	**Kurchatov Arra**	**149.47**	**39**	PKPbc	PKPbc	02 21 35.0	-1.5
	1.4nm,0.5s,baz=290,slow=3.5,SNR=1.3						
ZALV	**Zalesovo Beam**	**150.45**	**29**	PKPbc	PKPbc	02 21 37.6	-1.2
	2.0nm,0.4s,baz=306,slow=2.3,SNR=4.2						

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*IDC **11** 02:06:35.8±0.7,29°.47S×71°.76W,h0^{km},mb4.9/7, mb1 4.8/12,mb1mx4.4/38,mbtmp4.8/12,ML4.1/5,Error ellipse: s-maj=25.5km s-min=17.6km az=88.0*

*NEIC **11** 02:06:36.7±1.7,29°.47S±0°.03×71°.93W±0°.05,h10^{km}±1^{km}, mb4.9/22,Error ellipse: s-maj=8.4km s-min=4.9km az=250.0*

ISC 11 02:06:38.7±0.4**,29°.45S**±0°.05×**71°.85W**±0°.06**,h25^{km},n84,** σ**1^{s}26**/84**,mb4.8**/19**,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO05	**La Serena**	**0.70**	**131**	Pg	**Pb**	**02 06 51.4**	**-1.0**
CO05				Sg	**Sb**	**02 07 01.1**	**-0.6**
LCO	**Las Campanas**	**1.09**	**67**		**Pn**	**02 06 58.1**	**-0.6**
LCO				Sg	**Sn**	**02 07 14.5**	**+1.3**
GO04	**Tololo Observa**	**1.16**	**128**	Pn	**Pn**	**02 06 59.1**	**-0.5**
CO06	**Fray Jorge**	**1.23**	**171**		**Pn**	**02 06 58.8**	**-1.6**
AC04	**Llanos de Chal**	**1.42**	**29**	Pn	**Pn**	**02 07 01.9**	**-1.1**
CO03	**El Pedregal**	**1.71**	**144**	Pn	**Pn**	**02 07 06.3**	**-0.7**
GO03	**Copiap**	**2.33**	**38**	Pn	**Pn**	**02 07 16.3**	**+0.7**
VA03	**San Esteban**	**3.48**	**162**	Pn	**Pn**	**02 07 30.8**	**-0.7**
VA01	**Torpederas**	**3.56**	**177**	Pn	**Pn**	**02 07 31.1**	**-1.3**
PEL	**Peldehue**	**3.81**	**165**	Pn	**Pn**	**02 07 35.5**	**-0.5**
MT02	**Curacav**	**3.84**	**171**	Pn	**Pn**	**02 07 36.4**	**+0.1**
MT05	**Renca**	**4.04**	**167**	Pn	**Pn**	**02 07 39.3**	**+0.2**
VA05	**Santo Domingo**	**4.20**	**177**	Pn	**Pn**	**02 07 39.9**	**-1.3**
MT09	**Talagante**	**4.37**	**171**	Pn	**Pn**	**02 07 43.2**	**-0.5**
MT01	**Popeta**	**4.43**	**174**	Pn	**Pn**	**02 07 43.6**	**-0.7**
BO01	**Tunca**	**4.97**	**173**	Pn	**Pn**	**02 07 50.8**	**-0.9**
PB14	**IPOC Station P**	**4.98**	**15**	Pn	**Pn**	**02 07 52.4**	**+0.2**
BO02	**Sierra Bellavi**	**5.40**	**171**	Pn	**Pn**	**02 07 57.8**	**+0.1**
GO05	**Huala**	**5.54**	**181**	Pn	**Pn**	**02 07 58.0**	**-1.7**
ML02	**Panimavida**	**6.30**	**177**	Pn	**Pn**	**02 08 08.6**	**-1.5**
H03N1	**Juan Fernandez**	**7.23**	**235**	T	T	02 16 06.3	
	baz=64,slow=71,SNR=36						
H03N2	**Juan Fernandez**	**7.24**	**235**	T	T	02 16 05.8	
	baz=64,slow=71,SNR=43						
H03N3	**Juan Fernandez**	**7.24**	**235**	T	T	02 16 01.9	
	baz=64,slow=71,SNR=37						
LVC	**Limon Verde**	**7.31**	**22**	Pn	**Pn**	**02 08 22.5**	**-1.7**
	1.2nm,0.3s,baz=220,slow=9.9,SNR=0.9						
LVC				Sn	**Sn**	**02 09 43.7**	**-2.9**
	5.3nm,0.3s,baz=236,slow=18,SNR=2.0						
LVC	**Limon Verde**	**7.31**	**22**	Pn	**Pn**	**02 08 23.4**	**-0.9**
LC01	**Cunco**	**9.42**	**180**	Pn	**Pn**	**02 08 50.4**	**-2.4**
PLCA	**Paso Flores**	**11.30**	**175**	Pn	**Pn**	**02 09 17.6**	**-1.2**
	0.5nm,0.3s,baz=2.2,slow=11,SNR=2.1						
LL04	**Puerto Octay**	**11.44**	**182**	Pn	**Pn**	**02 09 18.3**	**-2.2**
CPUP	**Villa Florida**	**13.21**	**80**	Pn	**Pn**	**02 09 44.4**	**-0.4**
	0.3nm,0.3s,baz=37,slow=13,SNR=2.4						
LPAZ	**La Paz**	**13.54**	**15**	Pn	**Pn**	**02 09 49.6**	**-0.3**
	0.3nm,0.3s,baz=273,slow=23,SNR=2.2						
LPAZ	**La Paz**	**13.54**	**15**	Pn	**Pn**	**02 09 48.2**	**-1.6**
SIV	**San Ignacio**	**16.67**	**39**	Pn	**P**	**02 10 31.5**	**-1.4**
	0.6nm,0.3s,baz=332,slow=17,SNR=2.6						
PTLB	**Pontes e Lacer**	**18.20**	**43**	P	**P**	**02 10 49.5**	**-0.4**
VILB	**Vilhena**	**19.66**	**36**	P	**P**	**02 11 05.4**	**-0.6**
ETMB	**Extrema**	**20.23**	**16**	P	**P**	**02 11 11.1**	**-1.0**
SAML	**Samuel**	**21.96**	**23**	P	**P**	**02 11 30.4**	**-0.3**
EFI	**East Falkland**	**24.46**	**159**	P	**P**	**02 11 55.2**	**-0.4**
EFI				IAmb	IAmb	02 11 56.7	
	comp=Z,12nm,0.9s						
USHA	**Ushuaia**	**25.48**	**175**	P	**P**	**02 12 05.4**	**+0.7**
	comp=Z,22nm,0.8s,baz=356,slow=2.1,SNR=5.5						
BDFB	**Brasilia**	**25.88**	**63**	P	**P**	**02 12 08.8**	**-0.1**
	comp=Z,86nm,1.1s,baz=90,slow=18,SNR=1.9						
BDFB	**Brasilia**	**25.88**	**63**	P	**P**	**02 12 07.0**	**-1.9**
BOAV	**Boa Vista**	**33.47**	**21**	P	**P**	**02 13 15.9**	**-0.2**
PAYG	**Puerto Ayora**	**33.59**	**325**	P	**P**	**02 13 16.1**	**-0.9**
SDV	**Santo Domingo**	**38.13**	**2**	P	**P**	**02 13 56.1**	**-0.1**
	comp=Z,4.5nm,0.4s,baz=289,slow=15,SNR=3.8						
VNA3	**Neumayer Olymp**	**53.52**	**159**	P	**P**	**02 15 57.3**	**+0.6**
VNA1	**Neumayer--Stat**	**53.80**	**158**	P	**P**	**02 15 59.8**	**+1.0**
VNA2	**Neumayer--Watz**	**54.15**	**159**	P	**P**	**02 16 02.0**	**+0.6**
	baz=285,slow=8.5						
SNAA	**Sanae**	**55.74**	**159**	P	**P**	**02 16 13.4**	**+0.4**
SNAA	**Sanae**	**55.74**	**159**	P	**P**	**02 16 13.3**	**+0.3**
SNAA				IAmb	IAmb	02 16 14.5	
	comp=Z,22nm,1.1s						

QSPA	South Pole Qui	60.77	180	P	P	02 16 49.0	+0.7
QSPA				IAmb	IAmb	02 16 49.7	
	comp=Z,15nm,1.1s						
JSC	Jenkinsville	64.01	351	P	P	02 17 11.1	+1.1
TXAR	Lajitas Array	65.88	330	P	P	02 17 23.7	+1.3
	comp=Z,0.4nm,0.8s,baz=151,slow=8.4,SNR=3.1						
TXAR	Lajitas Array	65.88	330	P	P	02 17 22.9	+0.5
LCAR	Lake Charles	67.66	343	P	P	02 17 33.9	+0.3
LCAR				IAmb	IAmb	02 17 44.6	
	comp=Z,11nm,1.1s						
VNDA	Vanda	68.58	191	P	P	02 17 39.8	+0.9
MNTX	Cornudas Mount	68.66	330	P	P	02 17 40.4	+0.5
MNTX				IAmb	IAmb	02 17 50.5	
	comp=Z,3.8nm,0.9s						
R40A	Maddies Statio	70.04	343	P	P	02 17 46.9	-1.4
R40A				IAmb	IAmb	02 17 59.1	
	comp=Z,8.6nm,0.9s						
DBIC	Dimbokro	73.61	72	P	P	02 18 10.9	+0.6
	comp=Z,11nm,0.9s,baz=225,slow=6.4,SNR=6.0						
DBIC	Dimbokro	73.61	72	P	P	02 18 10.9	+0.6
DBIC				IAmb	IAmb	02 18 11.9	
	comp=Z,22nm,1.1s						
ECSD	EROS Data Cent	76.29	342	P	P	02 18 25.4	+0.3
ECSD				IAmb	IAmb	02 18 36.0	
	comp=Z,6.7nm,0.8s						
MAW	Mawson	77.48	164	P	P	02 18 32.5	+0.9
	comp=Z,6.9nm,1.0s,baz=246,slow=6.7,SNR=8.8						
MAW	Mawson	77.48	164	P	P	02 18 32.3	+0.6
KOWA	Kowa	78.63	66	P	P	02 18 39.3	+0.4
KOWA				IAmb	IAmb	02 18 40.7	
	comp=Z,14nm,0.8s						
PDAR	Pinedale Array	79.80	333	P	P	02 18 45.7	+0.7
	comp=Z,0.2nm,0.4s,baz=124,slow=4.5,SNR=1.6						
PDAR	Pinedale Array	79.80	333	P	P	02 18 44.8	-0.1
NVAR	Mina Array Bea	80.26	325	P	P	02 18 50.7	+3.1
	comp=Z,0.1nm,0.3s,baz=82,slow=13,SNR=1.2						
BOSA	Boshof	82.05	118	P	P	02 18 57.9	+0.5
	comp=Z,2.7nm,0.8s,baz=261,slow=6.9,SNR=5.5						
BOSA	Boshof	82.05	118	P	P	02 18 57.0	-0.3
BOSA				IAmb	IAmb	02 19 09.2	
	comp=Z,5.3nm,1.1s						
TORD	Torodi Ar. Bea	82.52	70	P	P	02 19 00.3	+0.6
	comp=Z,13nm,0.9s,baz=258,slow=5.3,SNR=15						
TORD	Torodi Ar. Bea	82.52	70	P	P	02 19 00.3	+0.6
TORD				IAmb	IAmb	02 19 01.4	
	comp=Z,18nm,1.0s						
LBTB	Lobatse	84.08	115	P	P	02 19 08.4	+0.5
LBTB				IAmb	IAmb	02 19 27.1	
	comp=Z,12nm,1.2s						
CLL	Collm	109.37	42	*e*PKiKP	PKiKP	02 25 11.0	+4.6
WRA	Warramunga Arr	124.78	210	PKP	PKiKP	02 25 36.8	-0.5
	comp=Z,1.3nm,0.8s,baz=150,slow=1.6,SNR=4.6						
WRA	Warramunga Arr	124.78	210		PKPdf	02 25 35.5	-1.5
SEY	Seymchan	136.13	333	PKP	PKiKP	02 25 58.3	-0.4
	comp=Z,1.5nm,0.2s,baz=356,slow=23,SNR=2.0						
KURK	Kurchatov	149.32	38		PKPdf	02 26 21.9	+1.3
KURBB	Kurchatov Arra	149.32	38	PKPbc	PKiKP	02 26 26.4	+0.3
	comp=Z,2.8nm,0.6s,baz=304,slow=3.3,SNR=12						
AAK	Ala-Archa	149.98	55	PKPbc	PKiKP	02 26 29.0	+1.0
	comp=Z,13nm,0.9s,baz=222,slow=4.0,SNR=19						
ZALV	Zalesovo Beam	150.22	28	PKPbc	PKiKP	02 26 28.5	+0.6
	comp=Z,16nm,0.7s,baz=303,slow=3.0,SNR=28						
KSH	Kashi	151.77	61	PKPbc	PKiKP	02 26 32.6	+0.8
KLR	Kul'dur	153.30	324	PKPbc	PKiKP	02 26 34.3	-0.1
	comp=Z,1.3nm,0.6s,baz=24,slow=8.5,SNR=2.8						
MKAR	Makanchi Array	153.47	42	PKPbc	PKiKP	02 26 35.3	+0.4
	comp=Z,2.9nm,0.8s,baz=321,slow=1.6,SNR=6.8						
WMQ	Urumqi	158.28	43	*e*P	PKPdf	02 26 34.4	+0.7
HHC	Hu-ho-hao-te	168.29	347	*e*P	PKPdf	02 26 38.7	-4.6
NJ2	Nanjing	170.43	288	*e*P	PKPdf	02 26 44.4	-0.3
NJ2				pmax	pmax		
	comp=Z,15nm,0.6s						

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*SJA **11** 02:14:36.6±0.8, 29°.40S×72°.50W, h38^{km}±6^{km}, ML4.7, MW4.6*

*IDC **11** 02:14:38.7±0.8, 29°.52S×71°.89W, h0^{km}, mb4.3/6, mb1 4.5/11, mb1mx4.2/35, mbtmp4.3/11, ML4.0/5, Error ellipse: s-maj=27.3km s-min=18.7km az=104.0*

*NEIC **11** 02:14:39.6±2.8, 29°.50S±0°.04×72°.06W±0°.06, h10^{km}±1^{km}, mb4.8/21, Error ellipse: s-maj=8.4km s-min=5.9km az=255.0*

ISC 11 02:14:37.8±1.0**, 29°.45S**±0°.02×**72°.13W**±0°.05**, h4**^{km}±6^{km}**, n117,** σ**1^{s}69**/161**, mb4.7**/14**, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
				Op	ISC	h m s	ISC
CO05	La Serena	0.91	121		Pb	02 14 55.9	-0.2
CO05				Sn	Sg	02 15 07.5	+0.5
CO06	Fray Jorge	1.29	161		Pn	02 15 01.5	-1.2
LCO	Las Campanas	1.33	71		Pg	02 15 03.9	+0.6
LCO				Sn	Sb	02 15 20.5	-0.4
LCO	Las Campanas	1.33	71	*e*P	Pg	02 15 04.0	+0.7
LCO				IAML		02 15 26.7	
	comp=Z,27μm,0.6s						
GO04	Tololo Observa	1.36	122		Pb	02 15 03.5	-0.5
GO04				Sn	Sb	02 15 21.2	-0.7
GO04	Tololo Observa	1.36	122	*e*P	Pg	02 15 04.0	0.0
GO04				*e*P	Pb	02 15 05.2	+1.2
GO04				*e*S	Sb	02 15 21.3	-0.7
AC04	Llanos de Chal	1.55	37		Pb	02 15 06.7	-0.4
AC04	Llanos de Chal	1.55	37	*e*P	Pn	02 15 05.2	-1.0
AC04				*e*P	Pg	02 15 07.2	-0.4
AC04				*e*S	Sb	02 15 27.2	+0.1
AC04				IAML		02 15 39.5	
	comp=Z,3μm,0.7s						
CO03	El Pedregal	1.86	138		Pn	02 15 10.5	-0.1
GO03	Copiap	2.50	43		Pn	02 15 20.2	+0.9
GO03	Copiap	2.50	43	*e*P	Pb	02 15 21.0	-2.2
GO03				*e*S	Sg	02 15 58.2	+0.2
ACDV	Cuesta del Vie	2.72	106	*e*P	Pb	02 15 26.9	-0.1
ACDV				*e*S	Sb	02 15 58.2	-2.6
ACDV				*e*S	Sn	02 15 58.7	+2.9
ACDV				IAML		02 16 07.5	
	comp=Z,2μm,1.1s						
ACCO	Cerro Coronel	2.89	114	*e*P	Pb	02 15 29.5	-0.6
ACCO				*e*S	Sg	02 16 11.2	+0.4
ACCO				IAML		02 16 18.3	
	comp=Z,1μm,1.0s						
RTLS	Leoncito	3.38	134	*e*P	Pb	02 15 36.0	-2.5
RTLS				*e*S	Sb	02 16 17.2	-2.9
RTLS				IAML		02 16 26.7	
	comp=Z,479nm,1.2s						
VCA	Vinchina	3.51	79	*e*P	Pb	02 15 39.0	-1.6
VCA				*e*P	Pb	02 15 39.2	-1.4
VCA				*e*P	Pb	02 15 42.5	+1.9
VCA				*e*S	Sb	02 16 24.7	+1.0
VCA				IAML		02 16 46.8	
	comp=Z,2μm,1.0s						
VA03	San Esteban	3.57	158		Pn	02 15 35.7	+1.7
VA03	San Esteban	3.57	158	*e*P	Pn	02 15 36.0	+2.0
VA03				*e*S	Sn	02 16 03.2	-14
VA03				IAML		02 16 41.2	
	comp=Z,655nm,1.1s						
VA01	Torpederas	3.58	173	Pn	Pn	02 15 33.5	-0.6
ZON	Zonda	3.64	126	Pn	Pn	02 15 34.9	-0.1
ROC1	El Roble	3.64	165	*e*P	Pn	02 15 35.7	+0.5
ROC1				*e*S	Sn	02 16 21.0	+2.3
PEL	Peldehue	3.88	162		Pn	02 15 39.0	+0.7
PEL	Peldehue	3.88	162	*e*P	Pn	02 15 39.0	+0.7
PEL				*e*P	Pn	02 15 39.4	+1.1
PEL				*e*S	Sg	02 16 39.2	-3.3
MT02	Curacav	3.89	168		Pn	02 15 38.4	0.0
MT02	Curacav	3.89	168	*e*P	Pn	02 15 39.0	+0.6
MT02				IAML		02 16 51.3	
	comp=Z,263nm,0.9s						
RTCV	Cerro Valdivia	3.92	129	*e*P	Pb	02 15 42.5	-5.0
RTCV				*e*P	Pn	02 15 43.0	+4.2
RTCV				*e*S	Sb	02 16 34.7	-0.6
MT05	Renca	4.10	163		Pn	02 15 41.6	+0.2
MT05	Renca	4.10	163	*e*P	Pn	02 15 43.0	+1.6
VA05	Santo Domingo	4.21	174		Pn	02 15 42.4	-0.5
ASAL	Salagasta	4.22	139	*e*P	Pb	02 15 47.0	-5.6
ASAL				*e*S	Sb	02 16 37.7	-6.3
ASAL				IAML		02 17 08.4	
	comp=Z,407nm,1.8s						
ARCO	CERRO ARCO	4.35	142	*e*P	Pn	02 15 46.7	+1.8
ARCO				*e*S	Sb	02 16 50.7	+2.8
ARCO				IAML		02 17 13.2	
	comp=Z,430nm,1.0s						
MT09	Talagante	4.42	168		Pn	02 15 46.4	+0.6
MT01	Popeta	4.46	171		Pn	02 15 46.0	-0.2
MT01	Popeta	4.46	171	*e*P	Pn	02 15 46.5	+0.3
MT01				*e*S	Sn	02 16 38.4	-0.2
MT01				IAML		02 17 14.5	
	comp=Z,191nm,1.4s						
ACLC	CERRO LA CRUZ	4.52	91	*e*P	Pn	02 15 50.3	+3.1
ACLC				*e*S	Sb	02 16 50.7	-2.0
ACLC				IAML		02 17 06.6	
	comp=Z,1μm,1.7s						
AAGR	Agrelo	4.60	143	*e*P	Pn	02 15 52.7	+4.5
AAGR				*e*S	Sg	02 17 03.7	-1.7
BO01	Tunca	5.00	170		Pn	02 15 53.1	-0.6
BO01	Tunca	5.00	170	*e*P	Pn	02 15 54.0	+0.3
BO01				*e*S	Sn	02 16 52.2	+0.2
BO01				IAML		02 17 40.7	
	comp=Z,216nm,1.3s						
PB14	IPOC Station P	5.05	18	Pn	Pn	02 15 53.7	-0.9
BO02	Sierra Bellavi	5.45	168		Pn	02 15 59.7	-0.1
BO02	Sierra Bellavi	5.45	168	*e*P	Pn	02 16 00.5	+0.6
BO02				*e*S	Sn	02 17 02.0	-1.0
BO02				IAML		02 17 47.5	
	comp=Z,216nm,4.8s						
GO05	Huala	5.54	178	Pn	Pn	02 15 59.3	-1.8
PB10	IPOC Station P	6.08	14	Pn	Pn	02 16 06.6	-1.9
PB10	IPOC Station P	6.08	14	*e*P	Pn	02 16 08.4	-0.1
PB10				*e*P	Pn	02 16 10.4	+1.9
PB10				*e*S	Sn	02 17 15.7	-2.9
PB10				IAML		02 17 18.2	
	comp=Z,434nm,3.4s						
ML02	Panimavida	6.32	175	Pn	Pn	02 16 10.6	-1.2
PB15	IPOC Station P	6.66	22		Pn	02 16 16.6	-0.1
PB15	IPOC Station P	6.66	22	*e*P	Pn	02 16 17.4	+0.7
PB15				*e*S	Sn	02 17 32.5	-0.7
PB05	IPOC Station P	6.80	15	*e*P	Pn	02 16 17.4	-1.1
PB05				*e*P	Pn	02 16 18.1	-0.3
PB05				*e*S	Sn	02 17 32.5	-3.9
PB05				*e*S	Sn	02 17 34.5	-1.9
PB05				IAML		02 17 35.8	
	comp=Z,310nm,3.8s						
PB06	IPOC Station P	7.10	20	Pn	Pn	02 16 21.4	-1.2
PB06	IPOC Station P	7.10	20	*e*P	Pn	02 16 22.6	-0.1
PB06				*e*S	Sn	02 17 42.5	-1.5
PB06				IAML		02 18 33.5	
	comp=Z,268nm,1.4s						
PB04	IPOC Station P	7.31	15		Pn	02 16 23.7	-1.9
PB04	IPOC Station P	7.31	15	*e*P	Pn	02 16 25.2	-0.3
PB04				*e*S	Sn	02 17 46.4	-2.6
PB04				*e*S	Sn	02 17 46.5	-2.6
PB04				IAML		02 18 50.2	
	comp=Z,343nm,3.7s						
LVC	Limon Verde	7.41	24	Pn	Pn	02 16 26.9	-0.1
	comp=Z,1.3nm,0.3s,baz=180,slow=5.7,SNR=11						
LVC				Sn	Sn	02 17 48.4	-3.3
	comp=Z,2.3nm,0.3s,baz=117,slow=9.8,SNR=1.5						
LVC				Lg	Lg	02 18 33.7	
	comp=Z,8.3nm,0.3s,baz=110,slow=23,SNR=5.8						
LVC	Limon Verde	7.41	24	Pn	Pn	02 16 26.6	-0.4
LVC	Limon Verde	7.41	24	*e*P	Pn	02 16 27.6	+0.6
PB03	IPOC Station P	7.68	17	*e*P	Pn	02 16 30.4	-0.2
PB03				*e*S	Sn	02 17 54.7	-3.4
PB03				IAML		02 18 47.7	
	comp=Z,220nm,0.8s						
PB07	IPOC Station P	7.96	15	Pn	Pn	02 16 33.1	-1.4
PB07	IPOC Station P	7.96	15	*e*P	Pn	02 16 34.0	-0.4
PB07				*e*S	Sn	02 18 00.7	-4.3
PB07				*e*S	Sn	02 18 01.0	-4.0
PB07				IAML		02 18 03.6	
	comp=Z,246nm,3.8s						
PB09	IPOC Station P	8.06	20	Pn	Pn	02 16 35.6	-0.2
PB02	IPOC Station P	8.35	15	*e*P	Pn	02 16 39.0	-0.7
PB02				*e*P	Pn	02 16 39.2	-0.5
PB02				*e*S	Sn	02 18 10.4	-4.1
PB02				*e*S	Sn	02 18 11.2	-3.3
PB01	IPOC Station P	8.71	17	Pn	Pn	02 16 42.9	-1.8
PB01	IPOC Station P	8.71	17	*e*P	Pn	02 16 43.0	-1.7
PB01				*e*P	Pn	02 16 44.5	-0.1
PB01				*e*P	Pn	02 16 44.5	-0.1
LC01	Cunco	9.42	179	Pn	Pn	02 16 52.8	-1.6
PSGCX	Pisagua	9.98	11	Pn	Pn	02 16 59.9	-2.2
PSGCX	Pisagua	9.98	11	*e*P	Pn	02 17 00.7	-1.4
PSGCX				*e*P	Pn	02 17 00.8	-1.4
PB12	IPOC Station P	10.91	9	Pn	Pn	02 17 13.2	-1.7
PB12	IPOC Station P	10.91	9	*e*P	Pn	02 17 14.0	-0.9
PB12				*e*P	Pn	02 17 14.0	-0.9
PLCA	Paso Flores	11.33	174	Pn	Pn	02 17 21.1	+0.6
	comp=Z,0.5nm,0.3s,baz=328,slow=12,SNR=9.4						
PLCA	Paso Flores	11.33	174	Pn	Pn	02 17 20.4	-0.1
LL04	Puerto Octay	11.43	181	Pn	Pn	02 17 19.4	-2.4
CPUP	Villa Florida	13.46	80	Pn	Pn	02 17 47.2	-2.4
	comp=Z,0.1nm,0.3s,baz=56,slow=20,SNR=1.0						
CPUP	Villa Florida	13.46	80	Pn	Pn	02 17 47.6	-1.9
LPAZ	La Paz	13.61	17	Pn	Pn	02 17 54.2	+1.9
	comp=Z,0.4nm,0.3s,baz=240,slow=20,SNR=20						
LPAZ	La Paz	13.61	17	Pn	Pn	02 17 52.1	-0.1
PLTB	Pedras Altas	16.12	103	Pn	Pn	02 18 23.7	-1.6
SIV	San Ignacio	16.82	40	Pn	P	02 18 35.6	-1.0
	comp=Z,0.6nm,0.3s,baz=222,slow=9.7,SNR=17						
AQDB	Aquidauana	17.36	63		P	02 18 42.5	0.0
PTLB	Pontes e Lacer	18.38	43		Pn	02 18 55.3	+1.7
VILB	Vilhena	19.81	37	P	Pn	02 19 10.2	-0.8
VILB				IAmb	IAmb	02 19 26.9	
	comp=Z,55nm,1.1s						
ETMB	Extrema	20.31	17	P	Pn	02 19 18.0	+1.2
SAML	Samuel	22.06	24	P	P	02 19 35.1	+1.4
USHA	Ushuaia	25.50	175	P	P	02 20 07.7	+0.7
	comp=Z,17nm,1.0s,baz=55,slow=6.5,SNR=3.9						
BDFB	Brasilia	26.10	63	P	P	02 20 13.0	0.0
	comp=Z,4.8nm,0.8s,baz=231,slow=11,SNR=4.0						
BDFB	Brasilia	26.10	63	P	P	02 20 13.0	0.0
MACA	Manacapuru-AM	28.32	25	P	P	02 20 34.5	+1.7
MACA				IAmb	IAmb	02 20 53.9	
	comp=Z,20nm,1.2s						
BOAV	Boa Vista	33.56	21	P	P	02 21 20.1	+1.1
BOAV				IAmb	IAmb	02 21 46.9	
	comp=Z,13nm,1.4s						
ZARC	Zaragoza, Cauc	36.82	355	P	P	02 21 47.9	+0.8
CELP	Cerrillos	47.55	7	P	P	02 23 13.4	-1.1
VNA3	Neumayer Olymp	53.61	159	P	P	02 24 01.0	+1.3
VNA1	Neumayer--Stat	53.90	158	P	P	02 24 03.2	+1.4
VNA2	Neumayer--Watz	54.24	159	P	P	02 24 05.5	+1.1
	baz=285,slow=8.0						
SNAA	Sanae	55.83	159	P	P	02 24 16.9	+1.0
SNAA	Sanae	55.83	159	P	P	02 24 16.5	+0.5
SNAA				IAmb	IAmb	02 24 17.9	
	comp=Z,8.2nm,1.0s						
QSPA	South Pole Qui	60.77	180	P	P	02 24 51.2	+0.5
QSPA				IAmb	IAmb	02 24 53.4	
	comp=Z,9.7nm,1.1s						
JCT	Junction City	65.17	334	P	P	02 25 20.6	+0.5
JCT				IAmb	IAmb	02 25 24.5	
	comp=Z,17nm,1.4s						
WHTX	Lake Whitney,	65.67	336	P	P	02 25 24.4	+1.1
TX32	Lajitas Array	65.75	330	P	P	02 25 26.6	+2.6
TXAR	Lajitas Array	65.75	330	P	P	02 25 26.0	+2.0
	comp=Z,1.4nm,0.9s,baz=147,slow=7.0,SNR=9.5						
TXAR	Lajitas Array	65.75	330	P	P	02 25 26.5	+2.5
Z35A	Perchaven, San	66.82	337	P	P	02 25 32.0	+1.4
WVT	Waverly	66.89	346	P	P	02 25 32.6	+1.7
WVT				IAmb	IAmb	02 25 33.4	
	comp=Z,5.0nm,0.9s						
LCAR	Lake Charles	67.59	343	P	P	02 25 37.5	+2.0
LCAR				IAmb	IAmb	02 25 38.1	
	comp=Z,5.7nm,0.9s						
MNTX	Cornudas Mount	68.53	330	P	P	02 25 43.5	+2.0
S44A	Carbondale	68.69	345		P	02 25 44.4	+2.1
DBIC	Dimbokro	73.85	73	P	P	02 26 13.5	-0.6
	comp=Z,3.1nm,0.7s,baz=193,slow=14,SNR=2.0						
DBIC	Dimbokro	73.85	73	P	P	02 26 12.8	-1.4
DBIC				IAmb	IAmb	02 26 17.1	
	comp=Z,13nm,1.2s						
KOWA	Kowa	78.86	66	P	P	02 26 42.6	+0.1
NVAR	Mina Array Bea	80.12	325	P	P	02 26 52.2	+3.0
	comp=Z,1.1nm,0.8s,baz=131,slow=4.9,SNR=2.2						
NVAR	Mina Array Bea	80.12	325	P	P	02 26 50.0	+0.8
TORD	Torodi Ar. Bea	82.76	71	P	P	02 27 04.7	+1.3
	comp=Z,3.5nm,0.8s,baz=256,slow=4.5,SNR=16						
TORD	Torodi Ar. Bea	82.76	71	P	P	02 27 04.5	+1.1
TORD				IAmb	IAmb	02 27 21.5	
	comp=Z,6.6nm,1.1s						
LBTB	Lobatse	84.30	115	P	P	02 27 12.5	+1.0
LBTB				IAmb	IAmb	02 27 31.3	
	comp=Z,18nm,1.4s						
WRA	Warramunga Arr	124.65	211	PKP	PKiKP	02 33 39.9	+0.3
	comp=Z,0.5nm,0.8s,baz=166,slow=1.4,SNR=5.4						
WRA	Warramunga Arr	124.65	211		PKiKP	02 33 39.6	0.0
ZALV	Zalesovo Beam	150.34	28	PKPbc	PKPab	02 34 32.1	-4.1
	comp=Z,9.5nm,0.7s,baz=305,slow=5.1,SNR=20						
ZALV	Zalesovo Beam	150.34	28	PKPdf	PKPdf	02 34 24.6	-0.1
ZALV				PKPbc	sPKPbc	02 34 31.7	+1.8
MKAR	Makanchi Array	153.63	42	PKPbc	PKiKP	02 34 39.7	+1.9
	comp=Z,2.0nm,0.8s,baz=318,slow=1.6,SNR=6.6						
MKAR	Makanchi Array	153.63	42	PKPbc	PKiKP	02 34 38.4	+0.6
MKAR				PKPab	PKPab	02 34 48.6	-1.7

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*IDC **11** 02:18:02.6±0.5, 29°.36S×71°.84W, h0^{km}, mb4.4/13, mb1 4.6/17, mb1mx4.4/36, mbtmp4.5/17, ML4.4/3, Error ellipse: s-maj=22.7km s-min=14.4km az=93.0*

*NEIC **11** 02:18:04.7±1.3, 29°.41S±0°.03×71°.90W±0°.06, h15^{km}±4^{km}, mb4.8/80, ML4.7(GUC), Error ellipse: s-maj=8.0km s-min=4.7km az=83.0*

*GUC **11** 02:18:04.2±0.6, 29°.39S×72°.01W, h30^{km}±4^{km}, ML4.7*

ISC 11 02:18:02.8±1.7**, 29°.37S**±0°.03×**72°.03W**±0°.05**, h5**^{km}±10^{km}**, n151,** σ**1^{s}07**/165**, mb4.8**/47**, 5C-2D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
				Op	ISC	h m s	ISC
CO05	La Serena	0.88	129	⇓*e*P	Pg	02 18 19.9	+0.3
CO05				*i* S	Sg	02 18 31.5	+0.4
CO05				IAML		02 18 33.9	
	comp=E,37μm,0.4s						
CO05	La Serena	0.88	129		Pg	02 18 19.8	+0.1
CO05				Sn	Sg	02 18 31.2	+0.1
LCO	Las Campanas	1.22	73	⇑*e*P	Pn	02 18 25.5	-1.2
LCO				*i* S	Sb	02 18 41.9	-0.7
LCO	Las Campanas	1.22	73	Pn	Pn	02 18 25.3	-1.4
LCO				Sn	Sb	02 18 41.9	-0.7
GO04	Tololo Observa	1.34	127	⇑*e*P	Pn	02 18 27.4	-1.0
GO04				*i* S	Sb	02 18 44.8	-1.2
GO04	Tololo Observa	1.34	127		Pn	02 18 27.3	-1.0
CO06	Fray Jorge	1.34	165	⇓*e*P	Pn	02 18 27.6	-0.6
CO06				*i* S	Sn	02 18 44.2	-2.2
CO06				IAML		02 18 52.1	
	comp=E,9μm,0.6s						
CO06	Fray Jorge	1.34	165		Pn	02 18 27.3	-0.9
AC04	Llanos de Chal	1.43	36	*e*P	Pn	02 18 27.9	-1.5
AC04				*i* S	Sn	02 18 47.1	-1.5
AC04	Llanos de Chal	1.43	36	Pn	Pn	02 18 27.8	-1.6
GO03	Copiap	2.37	42	⇑*i*P	Pb	02 18 45.2	-0.8
GO03				*i* S	Sn	02 19 13.1	+1.2
GO03				IAML		02 19 25.0	
	comp=E,3μm,0.4s						
GO03	Copiap	2.37	42	Pn	Pn	02 18 41.5	-0.9
VA06	Catapilco	3.24	169	*e*P	Pn	02 18 54.8	+0.5
VA06				*i* S	Sn	02 19 32.5	-0.7
VA06				IAML		02 19 54.3	
	comp=E,3μm,0.4s						
VA01	Torpederas	3.66	175	Pn	Pn	02 18 59.6	-0.3
ROCH	El Roble	3.69	167	*e*P	Pn	02 19 01.2	+0.5
ROCH				*i* S	Sn	02 19 42.9	-1.9
ROCH				IAML		02 20 02.9	
	comp=E,2μm,0.1s						
PEL	Peldehue	3.93	163	Pn	Pn	02 19 04.3	+0.5
FCH	Farellones	4.22	160	⇑*e*P	Pn	02 19 08.6	+0.6
FCH				*i* S	Sn	02 19 57.7	-0.1
VA05	Santo Domingo	4.29	175		Pn	02 19 08.1	-0.5
MT09	Talagante	4.48	169	⇑*e*P	Pn	02 19 12.3	+0.9
MT09				*i* S	Sn	02 20 02.8	-1.3
MT09	Talagante	4.48	169	Pn	Pn	02 19 11.5	+0.1
MT01	Popeta	4.53	172	*i* S	Sn	02 20 04.1	-0.9
MT01	Popeta	4.53	172	Pn	Pn	02 19 11.7	-0.3
BO01	Tunca	5.07	171	Pn	Pn	02 19 19.4	0.0
BO02	Sierra Bellavi	5.51	169	Pn	Pn	02 19 25.8	+0.3
GO05	Huala	5.62	179	Pn	Pn	02 19 25.8	-1.2
ML02	Panimavida	6.39	176	Pn	Pn	02 19 36.7	-0.9
H03N1	Juan Fernandez	7.14	234	Pn	Pn	02 19 46.8	-0.9
H03N1				T	T	02 27 33.8	
	baz=64,slow=71,SNR=192						
H03N2	Juan Fernandez	7.16	234	Pn	Pn	02 19 46.8	-1.1
H03N2				T	T	02 27 32.2	
	baz=64,slow=71,SNR=169						
H03N3	Juan Fernandez	7.16	234	Pn	Pn	02 19 46.5	-1.4
H03N3				T	T	02 27 30.6	
	baz=64,slow=71,SNR=215						
LVC	Limon Verde	7.29	23	Pn	Pn	02 19 48.5	-1.8
	baz=160,slow=5.7,SNR=8.7						
LVC				Sn	Sn	02 21 08.9	-4.8
	baz=262,slow=14,SNR=1.8						
LVC				Lg	Lg	02 21 45.3	
	comp=E,18nm,0.3s,baz=37,slow=17,SNR=4.6						
H03S3	Juan Fernandez	7.36	231	Pn	Pn	02 19 48.7	-1.9
	baz=106,slow=79,SNR=11						
H03S1	Juan Fernandez	7.36	231	Pn	Pn	02 19 48.1	-2.6
	baz=106,slow=79,SNR=5.3						
H03S2	Juan Fernandez	7.37	231	Pn	Pn	02 19 48.3	-2.5
	baz=106,slow=79,SNR=7.2						
LC01	Cunco	9.50	179		Pn	02 20 18.2	-2.1
PLCA	Paso Flores	11.40	174	Pn	Pn	02 20 45.8	-0.6
	comp=E,0.9nm,0.3s,baz=334,slow=10,SNR=20						
PLCA	Paso Flores	11.40	174		Pn	02 20 46.1	-0.2
CPUP	Villa Florida	13.36	80	Pn	Pn	02 21 16.6	+3.5
	comp=E,0.6nm,0.3s,baz=228,slow=13,SNR=4.5						
CPUP	Villa Florida	13.36	80	Pn	Pn	02 21 14.1	+1.1
LPAZ	La Paz	13.51	16	Pn	Pn	02 21 17.2	+1.5
	comp=E,1.0nm,0.3s,baz=215,slow=8.4,SNR=14						
LPAZ	La Paz	13.51	16	Pn	Pn	02 21 12.8	-2.9
SIV	San Ignacio	16.70	40	Pn	Pn	02 21 57.9	+0.2
	comp=E,0.6nm,0.3s,baz=225,slow=11,SNR=16						
TRCB	Terra Rica	18.60	74	P	P	02 22 20.4	-0.6
TRCB				IAmb	IAmb	02 22 33.3	
	comp=Z,41nm,0.7s						
VILB	Vilhena	19.69	36	P	P	02 22 31.8	-1.1
ETMB	Extrema	20.20	17	P	P	02 22 39.0	+0.5
SAML	Samuel	21.95	24	P	P	02 22 57.1	-0.3
EFI	East Falkland	24.60	159	P	P	02 23 22.8	-0.9
EFI				IAmb	IAmb	02 23 36.3	
	comp=Z,38nm,1.1s						
TBTG	Tabatinga, AM	25.13	5	P	P	02 23 28.0	-0.8
USHA	Ushuaia	25.58	175	P	P	02 23 33.3	+0.8
	comp=Z,8.8nm,0.8s,baz=11,slow=11,SNR=5.2						
BDFB	Brasilia	25.99	63	P	P	02 23 36.1	-0.7
	comp=Z,11nm,0.6s,baz=236,slow=8.0,SNR=13						
BDFB	Brasilia	25.99	63	P	P	02 23 35.6	-1.2
BDFB				IAmb	IAmb	02 23 36.3	
	comp=Z,14nm,0.7s						
PTGA	Pitinga	30.72	24	P	P	02 24 18.3	-0.5
	comp=Z,4.2nm,0.5s,baz=326,slow=23,SNR=5.1						
BOAV	Boa Vista	33.45	21	P	P	02 24 42.4	-0.5
ZARC	Zaragoza, Cauc	36.75	355	P	P	02 25 11.1	-0.2
ZARC				IAmb	IAmb	02 25 22.6	
	comp=Z,22nm,1.2s						
MOTC	Monteria, Cord	38.09	354	P	P	02 25 22.2	-0.4
SJCC	San Jacinto, C	39.16	355	P	P	02 25 32.4	+0.7
SJCC				IAmb	IAmb	02 25 44.9	
	comp=Z,18nm,1.1s						
CRPR	Cabo Rojo, PR	47.34	6	P	P	02 26 37.2	-0.4
OBIP	Obispado Ponce	47.43	7	P	P	02 26 38.3	0.0
CELP	Cerrillos	47.46	7	P	P	02 26 38.1	-0.5
VNA3	Neumayer Olymp	53.65	159	P	P	02 27 25.5	+0.7
VNA1	Neumayer--Stat	53.94	158	P	P	02 27 27.9	+1.0
VNA2	Neumayer--Watz	54.28	159	P	P	02 27 30.1	+0.6
	baz=290,slow=8.6						
SNAA	Sanae	55.88	159	P	P	02 27 41.4	+0.4
SNAA	Sanae	55.88	159	P	P	02 27 41.0	-0.1
SNAA				IAmb	IAmb	02 27 51.1	
	comp=Z,11nm,0.8s						
QSPA	South Pole Qui	60.85	180	P	P	02 28 17.2	+1.2
	comp=Z,6.3nm,0.6s,baz=176,slow=2.8,SNR=7.1						
QSPA	South Pole Qui	60.85	180	P	P	02 28 16.9	+0.9
QSPA				IAmb	IAmb	02 28 19.0	
	comp=Z,6.4nm,0.7s						
X48A	Hartselle	65.05	346	P	P	02 28 44.0	0.0
X48A				IAmb	IAmb	02 28 45.2	
	comp=Z,7.0nm,0.8s						
JCT	Junction City	65.14	334	P	P	02 28 45.1	+0.4
W50A	Signal Mountai	65.44	348	P	P	02 28 46.6	+0.1
W50A				IAmb	IAmb	02 28 48.9	
	comp=Z,5.3nm,0.7s						
V53A	Saluda	65.49	350	P	P	02 28 46.6	-0.2
V53A				IAmb	IAmb	02 29 01.8	
	comp=Z,6.0nm,1.0s						
SWET	Sewanee	65.57	348	P	P	02 28 47.6	+0.2
SWET				IAmb	IAmb	02 28 48.4	
	comp=Z,9.8nm,0.8s						
TKL	Tuckaleechee C	65.62	350	P	P	02 28 46.7	-1.0
TXAR	Lajitas Array	65.73	330	P	P	02 28 50.5	+1.9
	comp=Z,1.7nm,0.6s,baz=151,slow=8.2,SNR=16						

TXAR	Lajitas Array	65.73	330	P	P	02 28 49.8	+1.2
TX31	Lajitas Ar. Si	65.73	330	P	P	02 28 50.0	+1.3
TX32	Lajitas Array	65.73	330	P	P	02 28 48.0	-0.6
V52A	Sevierville	65.77	350	P	P	02 28 47.5	-1.1
V52A				IAmb	IAmb	02 28 49.2	
	comp=Z,6.2nm,0.7s						
PLAL	Pickwick Lake	65.78	346	P	P	02 28 48.7	0.0
PLAL				IAmb	IAmb	02 28 49.4	
	comp=Z,3.4nm,0.7s						
U54A	Nelsons Funny	66.19	351	P	P	02 28 52.3	+0.9
MIAR	Mount Ida	66.75	341	P	P	02 28 56.1	+1.2
MIAR				IAmb	IAmb	02 28 57.5	
	comp=Z,4.0nm,0.8s						
WVT	Waverly	66.83	346	P	P	02 28 54.2	-1.2
WVT				IAmb	IAmb	02 28 56.0	
	comp=Z,5.5nm,0.8s						
ABTX	Abilene, Hawle	66.99	335	P	P	02 28 56.9	+0.3
WHAR	Wooly Hollow	67.09	342	P	P	02 28 57.9	+0.8
W39A	Magazine	67.42	341	P	P	02 29 00.4	+1.2
W39A				IAmb	IAmb	02 29 02.1	
	comp=Z,11nm,1.1s						
LCAR	Lake Charles	67.53	343	P	P	02 29 00.2	+0.3
U40A	Yellville	68.25	342	P	P	02 29 04.9	+0.5
U40A				IAmb	IAmb	02 29 05.6	
	comp=Z,4.7nm,0.8s						
HHAR	Hobbs	68.48	341	P	P	02 29 06.5	+0.6
HHAR				IAmb	IAmb	02 29 07.4	
	comp=Z,6.1nm,0.7s						
Q54A	Coxs Mills	68.50	353	P	P	02 29 05.9	+0.1
MNTX	Cornudas Mount	68.51	330	P	P	02 29 06.5	+0.3
MNTX				IAmb	IAmb	02 29 16.7	
	comp=Z,8.6nm,1.2s						
VNDA	Vanda	68.63	191	P	P	02 29 08.1	+1.7
	comp=Z,0.4nm,0.8s,baz=286,slow=12,SNR=2.1						
VNDA	Vanda	68.63	191	P	P	02 29 07.6	+1.2
S44A	Carbondale	68.64	345	P	P	02 29 07.1	+0.3
SIUC	Southern Illin	68.65	345	P	P	02 29 07.3	+0.5
TUL1	Leonard	68.68	339	P	P	02 29 07.5	+0.4
CCM	Cathedral Cave	69.44	344	P	P	02 29 12.3	+0.5
CCM				IAmb	IAmb	02 29 13.4	
	comp=Z,7.6nm,0.7s						
R40A	Maddies Statio	69.92	343	P	P	02 29 14.8	+0.1
R40A				IAmb	IAmb	02 29 15.9	
	comp=Z,7.1nm,0.7s						
M55A	Ridgway	70.76	355	P	P	02 29 20.4	+0.6
N49A	Columbus Grove	70.84	350	P	P	02 29 20.2	-0.1
N47A	Urbana	71.03	349	P	P	02 29 21.2	-0.3
N47A				IAmb	IAmb	02 29 30.8	
	comp=Z,14nm,1.1s						
CBKS	Cedar Bluff	72.59	338	P	P	02 29 31.6	+0.6
CBKS				IAmb	IAmb	02 29 32.9	
	comp=Z,6.8nm,0.7s						
DBIC	Dimbokro	73.74	72	P	P	02 29 38.2	0.0
	comp=Z,9.0nm,0.7s,baz=230,slow=6.7,SNR=9.1						
DBIC	Dimbokro	73.74	72	P	P	02 29 37.8	-0.5
DBIC				IAmb	IAmb	02 29 49.3	
	comp=Z,15nm,1.1s						
JFWS	Jewell Farm	73.86	346	P	P	02 29 38.3	0.0
JFWS				IAmb	IAmb	02 29 39.4	
	comp=Z,7.7nm,0.7s						
I42A	Draeger Farm,	74.53	347	P	P	02 29 41.8	-0.4
I42A				IAmb	IAmb	02 29 55.0	
	comp=Z,9.9nm,1.2s						
SMCO	Snowmass	75.57	333	P	P	02 29 50.3	+1.4
SMCO				IAmb	IAmb	02 29 52.8	
	comp=Z,14nm,1.5s						
E62A	Clayton Lake	75.67	2	P	P	02 29 50.3	+1.6
E62A				IAmb	IAmb	02 30 09.2	
	comp=Z,15nm,1.4s						
ECSD	EROS Data Cent	76.16	342	P	P	02 29 51.6	0.0
ECSD				IAmb	IAmb	02 29 52.9	
	comp=Z,6.7nm,0.7s						
E46A	Sault Ste Mari	76.20	351	P	P	02 29 51.8	0.0
E46A				IAmb	IAmb	02 30 01.5	
	comp=Z,13nm,1.1s						
E43A	Lone Tree Farm	76.60	349	P	P	02 29 54.8	+0.8
E43A				IAmb	IAmb	02 30 11.4	
	comp=Z,20nm,1.4s						
MTPU	Mount Pierson	76.86	328	P	P	02 29 56.5	+0.4
SRU	San Rafael Swe	77.00	330	P	P	02 29 56.6	-0.1
SHPR	Sheep Range	77.04	326	P	P	02 29 57.6	+0.6
MAW	Mawson	77.61	164	P	P	02 30 00.3	+0.7
	comp=Z,4.1nm,0.7s,baz=205,slow=7.1,SNR=12						
MAW	Mawson	77.61	164	P	P	02 29 58.4	-1.1
KOWA	Kowa	78.75	66	P	P	02 30 05.7	-1.1
KOWA				IAmb	IAmb	02 30 07.8	
	comp=Z,12nm,0.7s						
DUG	Dugway, Tooele	78.90	329	P	P	02 30 08.0	+0.8
HWUT	Hardware Ranch	79.51	331	P	P	02 30 11.6	+1.1
HWUT				IAmb	IAmb	02 30 12.8	
	comp=Z,5.8nm,0.7s						
PD31	Pinedale Array	79.65	333	P	P	02 30 11.9	+0.6
PDAR	Pinedale Array	79.65	333	P	P	02 30 12.6	+1.2
	comp=Z,1.1nm,0.6s,baz=137,slow=7.2,SNR=12						
PDAR	Pinedale Array	79.65	333	P	P	02 30 11.7	+0.3
BW06	Boulder Array	79.65	333	P	P	02 30 12.7	+1.3
NVAR	Mina Array Bea	80.11	325	P	P	02 30 14.9	+1.0
	comp=Z,0.6nm,0.6s,baz=157,slow=4.9,SNR=4.2						
HVU	Hansel Valley	80.17	330	P	P	02 30 14.2	+0.1
MDND	Maddock	80.76	342	P	P	02 30 17.4	+0.5
LOHW	Long Hollow	80.78	333	P	P	02 30 17.9	+0.5
FLWY	Flagg Ranch	81.21	333	P	P	02 30 21.0	+1.3
RLMT	Red Lodge	81.53	334	P	P	02 30 21.7	+0.4
RLMT				IAmb	IAmb	02 30 26.1	
	comp=Z,9.1nm,1.5s						
YHH	Holmes Hill	81.86	333	P	P	02 30 24.0	+0.8
ULM	Lac du Bonnet	82.04	345	P	P	02 30 24.3	+0.6
	comp=Z,2.0nm,0.4s,baz=233,slow=4.0,SNR=3.5						
BOSA	Boshof	82.23	118	P	P	02 30 25.3	-0.3
	comp=Z,1.4nm,0.5s,baz=255,slow=7.5,SNR=5.4						
BOSA	Boshof	82.23	118	P	P	02 30 23.9	-1.7
BOSA				IAmb	IAmb	02 30 35.7	
	comp=Z,17nm,1.4s						
HLID	Hailey	82.32	330	P	P	02 30 26.9	+1.4
TORD	Torodi Ar. Bea	82.65	71	P	P	02 30 27.4	-0.2
	comp=Z,9.7nm,0.7s,baz=264,slow=4.8,SNR=32						
TORD	Torodi Ar. Bea	82.65	71	P	P	02 30 27.1	-0.5
TORD				IAmb	IAmb	02 30 28.6	
	comp=Z,11nm,0.8s						
DGMT	Dagmar	82.67	339	P	P	02 30 27.7	+0.6
MOD	Modoc Plateau	83.74	326	P	P	02 30 33.9	+1.0
MOD				IAmb	IAmb	02 31 01.0	
	comp=Z,4.8nm,1.1s						
J08A	Circle Bar Ran	83.98	328	P	P	02 30 35.5	+1.5
J08A				IAmb	IAmb	02 30 46.3	
	comp=Z,6.1nm,1.1s						
PLID	Pearl Lake	84.22	330	P	P	02 30 35.5	+0.1
LBTB	Lobatse	84.26	115	P	P	02 30 35.0	-1.0
LBTB				IAmb	IAmb	02 30 57.7	
	comp=Z,6.8nm,1.0s						
K05A	Summer Lake	84.65	326	P	P	02 30 39.0	+1.5
K05A				IAmb	IAmb	02 31 01.4	
	comp=Z,12nm,1.5s						
CLL	Collm	109.42	42	ePKiKP	PKiKP	02 36 35.0	+1.2
CLL				ePP	PP	02 37 05.0	+0.8
AKASG	Malin Array Be	119.01	45	PKP	PKPdf	02 36 50.9	-1.3
	comp=Z,0.5nm,0.4s,baz=264,slow=3.1,SNR=5.0						
ASAR	Alice Springs	121.66	208	PKP	PKPdf	02 36 57.9	-0.4
	comp=Z,0.3nm,0.6s,baz=136,slow=2.2,SNR=2.3						
WRA	Warramunga Arr	124.77	211	PKP	PKPdf	02 37 04.2	-0.1
	comp=Z,1.8nm,0.6s,baz=159,slow=1.7,SNR=24						
ZALV	Zalesovo Beam	150.23	28	PKPbc	PKiKP	02 37 55.5	+0.2
	comp=Z,23nm,0.6s,baz=293,slow=1.8,SNR=26						
KSH	Kashi	151.87	60	PKPbc	PKPdf	02 37 54.1	+1.6
KLR	Kul'dur	153.14	324	PKPbc	PKiKP	02 38 01.4	0.0
	comp=Z,1.8nm,0.5s,baz=61,slow=5.1,SNR=6.5						
MKAR	Makanchi Array	153.51	42	PKPbc	PKiKP	02 38 02.9	+0.6
	comp=Z,3.2nm,0.7s,baz=329,slow=2.1,SNR=16						
WMQ	Urumqi	158.33	43	eP	PKPdf	02 38 01.2	+0.1
SONM	Songino Array	161.52	3	PKP	PKPdf	02 38 05.2	+0.6
	comp=Z,1.2nm,1.1s,baz=340,slow=8.3,SNR=3.9						
HHC	Hu-ho-hao-te	168.18	347	eP	PKPdf	02 38 10.7	+0.1
NJ2	Nanjing	170.26	289	eP	PKPdf	02 38 12.1	+0.1
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						

SJA ***11*** *02:23:35.8±0.5, 29.°37S×72.°41W, h29^{km}±3^{km}, ML5.5, MW5.5*

IDC ***11*** *02:23:38.3±0.5, 29.°47S×71.°68W, h0^{km}, mb4.7/18, mb1 4.7/23, mb1mx4.6/37, mbtmp4.6/23, ML4.3/5, Error ellipse: s-maj=19.9km s-min=11.9km az=90.0*

NEIC ***11*** *02:23:39.3±2.1, 29.°47S±0.°04×71.°93W±0.°03, h10^{km}±1^{km}, mb5.1/48, ML5.1(GUC), Error ellipse: s-maj=7.1km s-min=2.7km az=36.0*

VAO ***11*** *02:23:40.8±0.3, 29.°52S×71.°63W, h10^{km}, mb5.0*

GUC ***11*** *02:23:41.2±0.4, 29.°46S×71.°76W, h15^{km}±8^{km}, ML5.1*

ISC 11 02:23:37.8±0.8**, 29.°43S**±0.°02×**71.°94W**±0.°04**, h4**^{km}±4^{km}**, n279, σ1.^{s}51**/314**, mb5.0**/40**, 3C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	La Serena	0.78	129	eP	Pb	02 23 53.4	-0.6
CO05				i S	Sg	02 24 03.0	+0.1
CO05				IAML		02 24 07.4	
	comp=N,315µm,0.9s						
CO05	La Serena	0.78	129		Pb	02 23 53.6	-0.3
CO05				Sg	Sg	02 24 03.1	+0.1
LCO	Las Campanas	1.16	69		Pn	02 24 00.4	-0.7
LCO				Sg	Sn	02 24 16.6	-0.9
GO04	Tololo Observa	1.24	127	⇑eP	Pb	02 24 01.5	-0.3
GO04				i S	Sb	02 24 16.4	-1.9
GO04	Tololo Observa	1.24	127		Pb	02 24 01.6	-0.3
CO06	Fray Jorge	1.27	168	⇑eP	Pn	02 24 01.4	-0.9
CO06				i S	Sn	02 24 19.5	-0.3
CO06				IAML		02 24 22.1	
	comp=N,41µm,0.3s						
CO06	Fray Jorge	1.27	168		Pn	02 24 01.5	-0.7
CO06				Sn	Sn	02 24 19.6	-0.1
AC04	Llanos de Chal	1.44	32	Pn	Pb	02 24 04.7	-0.5
AC04	Llanos de Chal	1.44	32	eP	Pb	02 24 04.8	-0.5
CO03	El Pedregal	1.77	143		Pn	02 24 09.2	-0.2
AROD	Rodeo	2.27	109	eP	Pg	02 24 20.3	-1.0
AROD				eS	Sg	02 24 53.3	+2.6
GO03	Copiap	2.37	40	Pn	Pn	02 24 18.5	+1.0
GO03	Copiap	2.37	40	eP	Pb	02 24 18.7	-2.3
GO03				eS	Sb	02 24 48.9	-1.7
ACDV	Cuesta del Vie	2.56	107	eP	Pb	02 24 24.0	-0.4
ACCO	Cerro Coronel	2.75	116	eP	Pb	02 24 27.0	-0.7
ACCO				eS	Sg	02 25 04.8	-1.4
VA06	Catapilco	3.17	170	eP	Pn	02 24 29.5	+1.1
VA06				i S	Sb	02 25 09.9	-3.7
RTLS	Leoncito	3.28	137	eP	Pb	02 24 33.8	-3.0
RTLS				eS	Sb	02 25 14.9	-2.3
RTLS				IAML		02 25 24.2	
	comp=Z,14µm,0.8s						
VCA	Vinchina	3.34	79	eP	Pb	02 24 34.9	-2.9
VCA				eS	Sb	02 25 19.4	+0.6
VCA				eS	Sg	02 25 23.9	-1.3
VCA				eS	Sg	02 25 24.4	-0.8
VCA				eS	Sg	02 25 24.9	-0.3
VCA				IAML		02 25 33.9	
	comp=Z,9µm,2.2s						
ZON	Zonda	3.52	128	eP	Pb	02 24 36.9	-3.8
ZON				eS	Sb	02 25 24.9	+1.2
ZON				IAML		02 25 38.0	
	comp=Z,4µm,1.4s						
VA03	San Esteban	3.53	161	⇑eP	Pn	02 24 36.0	+2.5
VA03				i S	Sn	02 25 18.0	+2.2
VA03	San Esteban	3.53	161	Pn	Pn	02 24 34.3	+0.9
VA03	San Esteban	3.53	161	eP	Pn	02 24 35.1	+1.6
VA03				eS	Sn	02 25 18.4	+2.7
VA03				IAML		02 25 37.1	
	comp=Z,13µm,0.7s						
AUSP	Uspallata	3.55	142	eP	Pb	02 24 37.1	-4.2
AUSP				eS	Sb	02 25 27.1	+2.3
VA01	Torpederas	3.59	176		Pn	02 24 33.6	-0.6
ROC1	El Roble	3.62	168	eP	Pn	02 24 35.9	+1.0
RTCV	Cerro Valdivia	3.80	130	eP	Pb	02 24 41.0	-4.5
RTCV				eS	Sg	02 25 45.8	+5.8
PEL	Peldehue	3.85	164	Pn	Pn	02 24 38.4	+0.5
PEL	Peldehue	3.85	164	eP	Pn	02 24 39.0	+1.1
PEL				eS	Sg	02 25 40.0	-1.6
MT02	Curacav	3.88	170		Pn	02 24 38.0	-0.2
MT02	Curacav	3.88	170	eP	Pn	02 24 38.8	+0.6
MT02				eP	Pb	02 24 39.0	-7.8
MT02				eS	Sn	02 25 24.4	+0.2
MT02				IAML		02 25 44.5	
	comp=Z,5µm,1.6s						
MT05	Renca	4.08	166		Pn	02 24 41.2	+0.2
MT05	Renca	4.08	166	eP	Pn	02 24 42.0	+1.0
ASAL	Salagasta	4.13	141	eP	Pn	02 24 44.8	+3.1
ASAL				eS	Sg	02 25 51.0	+0.6
VA05	Santo Domingo	4.22	176		Pn	02 24 41.4	-1.4
MT09	Talagante	4.41	170		Pn	02 24 45.9	+0.3
MT01	Popeta	4.46	173		Pn	02 24 45.5	-0.7
PB14	IPOC Station P	4.98	16	Pn	Pn	02 24 51.6	-2.0
BO01	Tunca	5.00	172	Pn	Pn	02 24 53.3	-0.3
BO01	Tunca	5.00	172	eP	Pn	02 24 54.0	+0.4
BO01				eS	Sn	02 25 52.3	+0.4
BO01				IAML		02 26 21.3	
	comp=Z,2µm,0.7s						
BO02	Sierra Bellavi	5.44	170		Pn	02 24 59.3	-0.3
BO02	Sierra Bellavi	5.44	170	eP	Pn	02 25 00.3	+0.7
BO02				eS	Sb	02 26 18.4	-0.5
GO05	Huala	5.56	180		Pn	02 24 59.9	-1.4
GO05	Huala	5.56	180	eP	Pn	02 25 00.0	-1.3
GO05				eS	Sb	02 26 24.9	+2.4
GO05				eS	Sb	02 26 25.4	+2.9
PB10	IPOC Station P	6.02	12		Pn	02 25 07.2	-0.5
PB10	IPOC Station P	6.02	12	eP	Pn	02 25 07.0	-0.7
PB10				eS	Sn	02 26 16.3	-0.8
ML02	Panimavida	6.33	176		Pn	02 25 10.7	-1.1
AHML	Horco Molle	6.40	67	eP	Pn	02 25 14.9	+2.0
AHML				eP	Pn	02 25 15.6	+2.6
AHML				eP	Pn	02 25 17.1	+4.2
AHML				eS	Sn	02 26 31.9	+5.4
PB15	IPOC Station P	6.58	20		Pn	02 25 14.2	-1.4
PB15	IPOC Station P	6.58	20	eP	Pn	02 25 15.6	0.0
PB15				eS	Sn	02 26 31.6	+0.4
PB05	IPOC Station P	6.74	14	eP	Pn	02 25 16.3	-1.3
PB05				eP	Pn	02 25 16.9	-0.6
PB05				eS	Sn	02 26 32.8	-2.0
PB06	IPOC Station P	7.03	18		Pn	02 25 20.8	-0.8
PB06	IPOC Station P	7.03	18	eP	Pn	02 25 21.2	-0.4
PB06				eS	Sn	02 26 40.7	-1.4
H03N1	Juan Fernandez	7.17	234	T	T	02 32 56.5	
	baz=65,slow=71,SNR=357						
H03N2	Juan Fernandez	7.18	234	T	T	02 32 57.1	
	baz=65,slow=71,SNR=476						
H03N3	Juan Fernandez	7.19	234	T	T	02 33 10.1	
	baz=65,slow=71,SNR=500						
VA04	Juan Fernndez	7.22	233	Pn	Pn	02 25 22.9	-1.2
PB04	IPOC Station P	7.25	13	eP	Pn	02 25 23.9	-0.8
PB04				eS	Sn	02 26 45.0	-2.5
AF01	San Pedro de A	7.28	29	Pn	Pn	02 25 24.9	-0.4
LVC	Limon Verde	7.32	23	Pn	Pn	02 25 24.8	-1.1
	comp=Z,4.5nm,0.3s,baz=168,slow=8.4,SNR=15						
LVC				Sn	Sn	02 26 47.1	-2.5
	comp=Z,10.0nm,0.3s,baz=121,slow=2.6,SNR=3.1						
LVC				Lg	Lg	02 27 16.3	
	comp=Z,24nm,0.3s,baz=67,slow=12,SNR=5.5						
LVC	Limon Verde	7.32	23	eP	Pn	02 25 27.5	+1.7
LVC	Limon Verde	7.32	23	Pn	Pn	02 25 26.2	+0.4
LVC	Limon Verde	7.32	23	eP	Pn	02 25 25.4	-0.4
PB03	IPOC Station P	7.61	16	eP	Pn	02 25 29.0	-0.6
PB03				eS	Sn	02 26 52.8	-3.6
PB03				eS	Sn	02 26 53.2	-3.3
PB07	IPOC Station P	7.89	14	Pn	Pn	02 25 32.0	-1.5
PB07	IPOC Station P	7.89	14	eP	Pn	02 25 32.8	-0.7
PB07				eS	Sn	02 27 00.8	-2.6
PB09	IPOC Station P	7.98	18	Pn	Pn	02 25 33.5	-1.2
PB02	IPOC Station P	8.29	13	eP	Pn	02 25 37.6	-1.2
PB02				eP	Pn	02 25 39.0	+0.2
PB02				eS	Sn	02 27 10.4	-2.5
PB01	IPOC Station P	8.64	15	eP	Pn	02 25 41.0	-2.7
PB01				eP	Pn	02 25 42.6	-1.2
PB01				eS	Sn	02 27 18.2	-3.5
PATCX	Punta Patache	8.72	11	eP	Pn	02 25 43.6	-1.3
PATCX				eP	Pn	02 25 44.5	-0.3
LC01	Cunco	9.44	180		Pn	02 25 52.2	-2.4
PB08	IPOC Station P	9.59	16	Pn	Pn	02 25 56.7	-0.3
PB08	IPOC Station P	9.59	16	eP	Pn	02 25 56.0	-1.0
PSGCX	Pisagua	9.93	10	Pn	Pn	02 25 58.6	-2.8
LR03	Panguipulli	10.18	182	Pn	Pn	02 26 02.6	-2.1
PB12	IPOC Station P	10.87	8	Pn	Pn	02 26 13.1	-1.2
PB12	IPOC Station P	10.87	8	eP	Pn	02 26 13.0	-1.2
PLCA	Paso Flores	11.33	175	Pn	Pn	02 26 20.4	-0.1
	comp=Z,1.2nm,0.3s,baz=342,slow=11,SNR=16						
PLCA	Paso Flores	11.33	175	Pn	Pn	02 26 20.0	-0.6
LL04	Puerto Octay	11.46	182		Pn	02 26 20.6	-1.6
CPUP	Villa Florida	13.29	80	Pn	Pn	02 26 46.6	-0.7
	comp=Z,0.2nm,0.3s,baz=235,slow=18,SNR=1.1						
CPUP				Lg	Lg	02 30 27.8	
	comp=Z,0.7nm,0.3s,baz=216,slow=9.7,SNR=3.3						
CPUP	Villa Florida	13.29	80	Pn	Pn	02 26 47.5	+0.2
ITQB	Itaqui	13.34	95	Pn	Pn	02 26 46.9	-1.0
LPAZ	La Paz	13.54	16	Pn	Pn	02 26 49.9	-1.4
	comp=Z,0.3nm,0.3s,baz=109,slow=8.5,SNR=1.8						
LPAZ	La Paz	13.54	16		Pn	02 26 49.7	-1.6
PLTB	Pedras Altas	15.96	103	eP	Pn	02 27 22.7	-0.6
PLTB	Pedras Altas	15.96	103		P	02 27 25.4	-1.6
CPSB	Cacapava Do Su	16.08	98	eP	Pn	02 27 23.7	-1.0
COYC	Coyhaique	16.11	180		Pn	02 27 25.0	-0.1
SIV	San Ignacio	16.70	39	Pn	Pn	02 27 31.4	-1.4
	comp=Z,0.9nm,0.3s,baz=222,slow=11,SNR=18						
PTLB	Pontes e Lacer	18.25	43	eP	P	02 27 53.2	+1.0
PTLB	Pontes e Lacer	18.25	43	P	Pn	02 27 50.8	-1.1
PTGB	Pitanga	18.31	80	eP	P	02 27 52.4	-0.6
TRCB	Terra Rica	18.55	74	P	Pn	02 27 55.5	-0.1
TRCB				IAmb	IAmb	02 27 59.6	
	comp=Z,110nm,1.1s						
PP1B	Ponte de Pedra	19.55	57	eP	Pn	02 28 07.6	-0.3
VILB	Vilhena	19.69	36	eP	Pn	02 28 08.9	-0.6
VILB	Vilhena	19.69	36	P	Pn	02 28 08.6	-0.9
TER01	Tubaro-SC	19.98	93	eP	P	02 28 11.1	0.0
SALV	Santo Antonio	20.12	52	eP	Pn	02 28 13.2	-1.3
PCMB	Pacaembu	20.21	72	eP	Pn	02 28 14.1	-1.5
ETMB	Extrema	20.24	17	eP	Pn	02 28 16.7	+0.7
ETMB	Extrema	20.24	17	P	Pn	02 28 14.3	-1.7
TIJ01	Guaruva-PR	20.77	84	eP	P	02 28 17.2	-2.7
FRTB	Fartura	20.93	78	eP	P	02 28 21.6	0.0
CZSB	Cruzeiro do Su	21.60	358	eP	P	02 28 32.0	+3.2
CZSB	Cruzeiro do Su	21.60	358	P	P	02 28 30.1	+1.3
CZSB				IAmb	IAmb	02 28 32.7	
	comp=Z,104nm,1.1s						
ITRB	Iturama	21.86	69	eP	P	02 28 31.1	-0.5
SAML	Samuel	21.97	24	P	P	02 28 32.8	+0.1
MG05	Puerto Natales	22.23	181	P	P	02 28 33.9	-1.3
MG05				IAmb	IAmb	02 28 44.1	
	comp=Z,67nm,1.1s						
PET01	Itanhaem-SP	22.58	83	eP	P	02 28 39.0	-0.2
PDRB	Porto dos Gac	22.70	42	eP	P	02 28 42.1	+1.6
BB19B	Bebedouro	22.73	74	eP	P	02 28 41.0	0.0
RCLB	Rio Claro- Sao	23.01	78	eP	P	02 28 44.4	+0.5
ARAG	Araguaiana, MT	23.02	58	eP	P	02 28 42.7	-1.2
VAO	Valinhos	23.28	80	eP	P	02 28 45.9	-0.8
CLDB	Colider	23.83	43	eP	P	02 28 52.3	+0.2
PARB	Paraibuna	24.32	82	eP	P	02 28 56.8	+0.1
IPMB	Ipameri, GO	24.48	68	eP	P	02 28 58.7	+0.5
EFI	East Falkland	24.51	159	P	P	02 28 56.0	-2.1
EFI				IAmb	IAmb	02 29 09.6	
	comp=Z,52nm,0.9s						
TBTG	Tabatinga, AM	25.18	5	eP	P	02 29 06.6	+2.2
TBTG	Tabatinga, AM	25.18	5	P	P	02 29 05.4	+1.0
USHA	Ushuaia	25.51	175	P	P	02 29 08.0	+1.0
	comp=Z,30nm,0.8s,baz=358,slow=5.7,SNR=9.1						
SNDB	Serra Nova Dou	25.90	52	eP	P	02 29 11.8	+0.8
MAN01	Angra dos Reis	25.91	82	eP	P	02 29 09.0	-2.2
BSCB	Bom Sucesso	25.93	77	eP	P	02 29 11.4	0.0
BDFB	Brasilia	25.95	63	P	P	02 29 11.2	-0.3
	comp=Z,87nm,1.2s,baz=244,slow=5.4,SNR=21						
BDFB	Brasilia	25.95	63	P	P	02 29 11.4	-0.2
BDFB				IAmb	IAmb	02 29 13.5	
	comp=Z,65nm,1.1s						
VAS01	Vassouras-RJ	26.57	81	eP	P	02 29 17.2	+0.1
NPGB	Novo Progresso	27.20	38	eP	P	02 29 24.5	+1.7
DUB01	Friburgo-RJ	27.57	82	eP	P	02 29 25.8	-0.2
PEXB	Peixe	27.94	57	eP	P	02 29 30.1	+0.8
DIAM	Diamantina, MG	28.06	73	eP	P	02 29 31.3	+0.8
MACA	Manacapuru-AM	28.23	24	eP	P	02 29 33.3	+1.4
MACA	Manacapuru-AM	28.23	24	P	P	02 29 31.9	0.0
CAM01	Campos-RJ	28.28	82	eP	P	02 29 32.8	+0.5
JANB	Januaria	29.21	67	eP	P	02 29 41.3	+0.6
ITTB	Itaituba	29.28	35	eP	P	02 29 43.0	+1.7
OTAV	Otavalo	30.15	347	eP	P	02 29 53.1	+3.6
OTAV	Otavalo	30.15	347	P	P	02 29 47.6	-1.9
SDBA	SAO DESIDERIO	30.29	62	eP	P	02 29 51.0	+0.7
SMTB	Santa Maria do	30.66	53	eP	P	02 29 54.9	+1.3
PTGA	Pitinga	30.74	24	P	P	02 29 54.3	+0.1
	comp=Z,6.5nm,0.6s,baz=205,slow=8.9,SNR=9.2						
PRPB	Parauapebas	31.16	46	eP	P	02 29 59.1	+1.1
NAN01	Guarapari, ES	31.25	75	eP	P	02 29 58.2	-0.5
GUA01	Guaratinga, BA	32.11	74	eP	P	02 30 01.6	-4.7
MALB	Monte Alegre	32.17	35	eP	P	02 30 07.0	+0.2
CMC01	Camacan, BA	32.96	72	eP	P	02 30 11.4	-2.3
NBIT	Itapeh - BA	33.25	71	eP	P	02 30 16.2	0.0
BOAV	Boa Vista	33.48	21	eP	P	02 30 20.7	+2.4
BOAV	Boa Vista	33.48	21	P	P	02 30 18.2	-0.1
GDU01	Guandu, BA	33.77	69	eP	P	02 30 20.4	-0.4
NBPN	Ponto Novo - B	34.90	65	eP	P	02 30 30.5	-0.1
TMAB	Tom-Au,PA,Br	35.19	45	eP	P	02 30 34.4	+1.3
PMSA	Palmer Station	35.71	174	P	P	02 30 37.7	+0.7
	comp=Z,8.4nm,1.1s,baz=242,slow=4.3,SNR=2.1						
PMSA	Palmer Station	35.71	174	eP	P	02 30 36.5	-0.5
PMSA	Palmer Station	35.71	174	P	P	02 30 35.3	-1.7
PMSA				IAmb	IAmb	02 30 54.8	
	comp=Z,32nm,1.1s						
NBLA	Lagarto - SE	36.73	67	eP	P	02 30 45.9	-0.5
SDV	Santo Domingo	38.12	2	P	P	02 30 59.0	+0.8
	comp=Z,4.1nm,0.3s,baz=272,slow=9.3,SNR=3.7						
SDV	Santo Domingo	38.12	2	eP	P	02 30 59.0	+0.8
SDV	Santo Domingo	38.12	2	P	P	02 30 59.0	+0.8
NBPS	Pedro II - PI	38.12	55	eP	P	02 30 58.9	+0.6
NBMA	Muriti-CE	38.15	61	eP	P	02 30 59.1	+0.8
NBPB	Pedra_Branca-C	38.70	58	eP	P	02 31 03.8	+0.7
NBAN	Anadia - AL	38.71	67	eP	P	02 31 02.9	-0.2
MDP	Montagnes des	39.02	32	P	P	02 31 05.5	-0.1
	comp=Z,13nm,0.8s,baz=206,slow=12,SNR=4.9						
NBLV	Livramento - P	39.58	63	eP	P	02 31 10.8	+0.4
NBRF	Rio Formoso -	40.20	67	eP	P	02 31 15.8	+0.3
NBPA	Parau_RN	40.43	61	eP	P	02 31 18.2	+0.8
NBPV	Pedro Velho	41.42	64	eP	P	02 31 26.6	+0.9
CELP	Cerrillos	47.51	7	P	P	02 32 14.7	+0.6
CMIG	Matias Romero	51.28	331	P	P	02 32 45.8	+2.8
	comp=Z,3.2nm,0.8s,baz=111,slow=5.8,SNR=3.7						
VNA3	Neumayer Olymp	53.57	159	P	P	02 33 00.2	+0.8
VNA1	Neumayer--Stat	53.85	158	P	P	02 33 02.4	+0.9
VNA2	Neumayer--Watz	54.20	159	P	P	02 33 04.6	+0.5
	baz=284,slow=8.5						
SNAA	Sanae	55.79	159	P	P	02 33 16.0	+0.4
SNAA	Sanae	55.79	159	P	P	02 33 15.7	+0.1
	comp=Z,21nm,1.0s,baz=277,slow=7.0,SNR=41						
SNAA	Sanae	55.79	159	P	P	02 33 16.0	+0.4
QSPA	South Pole Qui	60.79	180	P	P	02 33 51.6	+0.9
	comp=Z,12nm,1.0s,baz=156,slow=3.1,SNR=9.5						
QSPA	South Pole Qui	60.79	180	P	P	02 33 51.8	+1.0
TX32	Lajitas Array	65.82	330	P	P	02 34 25.2	+0.8
TX32				IAmb	IAmb	02 34 28.0	
	comp=Z,12nm,1.2s						
TXAR	Lajitas Array	65.82	330	P	P	02 34 25.8	+1.5
	comp=Z,4.5nm,1.1s,baz=290,slow=3.7,SNR=8.5						
TXAR	Lajitas Array	65.82	330	P	P	02 34 23.8	-0.6
WVT	Waverly	66.90	346	P	P	02 34 31.4	+0.3
WVT				IAmb	IAmb	02 34 33.4	
	comp=Z,27nm,1.4s						
T47A	Sharon Grove	67.58	347	P	P	02 34 36.3	+0.9
T47A				IAmb	IAmb	02 34 46.7	
	comp=Z,24nm,1.2s						
LCAR	Lake Charles	67.61	343	P	P	02 34 36.4	+0.9
LCAR				IAmb	IAmb	02 34 38.2	
	comp=Z,21nm,1.3s						
MNTX	Cornudas Mount	68.60	330	P	P	02 34 43.3	+1.4
S44A	Carbondale	68.72	345	P	P	02 34 43.3	+0.9
SIUC	Southern Illin	68.73	345	P	P	02 34 43.2	+0.7
R40A	Maddies Statio	70.00	343	P	P	02 34 51.1	+0.7
R40A				IAmb	IAmb	02 35 02.0	
	comp=Z,20nm,1.0s						
SYO	Syowa Base	70.08	159	⇓ipP	pP	02 34 51.1	+0.2
P43A	Skaggs, Pawnee	70.64	346	P	P	02 34 54.5	+0.2
N49A	Columbus Grove	70.91	350	P	P	02 34 56.4	+0.5
P40A	Paris	71.12	344	P	P	02 34 58.4	+1.2
P40A				IAmb	IAmb	02 35 09.0	
	comp=Z,17nm,0.9s						
LIC	Lamto	73.30	73	eP	P	02 35 11.2	+0.3
	comp=Z,34nm,1.0s						
L40A	Anamosa	73.33	345	P	P	02 35 11.3	+1.0
L40A				IAmb	IAmb	02 35 21.7	
	comp=Z,20nm,1.0s						
TIC	Toumodi	73.53	72	eP	P	02 35 12.6	+0.3
KIC	Kosan Boka	73.61	73	eP	P	02 35 13.1	+0.4
	comp=Z,52nm,1.2s						
DBIC	Dimbokro	73.68	72	P	P	02 35 13.4	+0.3
	comp=Z,16nm,0.8s,baz=220,slow=6.1,SNR=11						
DBIC	Dimbokro	73.68	72	P	P	02 35 13.6	+0.5

DBIC				IAmb	IAmb	02 35 14.8	
	comp=Z,34nm,1.1s						
SMCO	Snowmass	75.66	333	P	P	02 35 25.9	+1.4
K31A	O'Neill	75.83	340	P	P	02 35 25.7	+0.8
ECSD	EROS Data Cent	76.24	342	P	P	02 35 27.8	+0.6
ECSD				IAmb	IAmb	02 35 39.0	
	comp=Z,10.0nm,0.8s						
E46A	Sault Ste Mari	76.27	351	P	P	02 35 28.0	+0.7
E46A				IAmb	IAmb	02 35 29.1	
	comp=Z,13nm,1.0s						
SUR	Sutherland	76.99	120	P	P	02 35 32.0	-0.3
SUR				IAmb	IAmb	02 35 40.6	
	comp=Z,28nm,1.1s						
MAW	Mawson	77.53	164	P	P	02 35 34.9	+0.6
	comp=Z,9.8nm,1.0s,baz=227,slow=6.6,SNR=12						
RWWY	Rawlins	77.91	334	P	P	02 35 37.5	+0.5
RWWY				IAmb	IAmb	02 36 05.2	
	comp=Z,14nm,1.0s						
KOWA	Kowa	78.70	66	P	P	02 35 41.7	+0.1
HWUT	Hardware Ranch	79.60	331	P	P	02 35 47.2	+1.0
PDAR	Pinedale Array	79.74	333	P	P	02 35 49.1	+2.1
	comp=Z,0.9nm,0.9s,baz=145,slow=5.4,SNR=5.1						
PDAR	Pinedale Array	79.74	333	P	P	02 35 46.9	-0.1
NVAR	Mina Array Bea	80.20	325	P	P	02 35 52.6	+3.0
	comp=Z,0.2nm,0.3s,baz=297,slow=18,SNR=2.4						
MDND	Maddock	80.84	342	P	P	02 35 53.9	+1.3
MDND				IAmb	IAmb	02 36 07.1	
	comp=Z,28nm,1.1s						
ULM	Lac du Bonnet	82.12	345	P	P	02 36 00.4	+1.2
	comp=Z,6.8nm,0.9s,baz=30,slow=0.6,SNR=5.0						
BOSA	Boshof	82.14	118	P	P	02 36 00.0	-0.2
	comp=Z,6.2nm,0.8s,baz=270,slow=3.4,SNR=9.3						
BOSA	Boshof	82.14	118	P	P	02 35 59.8	-0.4
GCMT	Greycliff	82.33	334	P	P	02 36 00.7	+0.1
HLID	Hailey	82.41	330	P	P	02 36 01.9	+0.8
HLID				IAmb	IAmb	02 36 14.1	
	comp=Z,14nm,1.5s						
TORD	Torodi Ar. Bea	82.59	70	P	P	02 36 02.6	+0.1
	comp=Z,25nm,0.9s,baz=257,slow=5.0,SNR=71						
TORD	Torodi Ar. Bea	82.59	70	P	P	02 36 02.7	+0.1
DGMT	Dagmar	82.76	339	P	P	02 36 03.5	+0.8
DGMT				IAmb	IAmb	02 36 06.1	
	comp=Z,24nm,1.1s						
J08A	Circle Bar Ran	84.07	328	P	P	02 36 09.5	-0.1
LBTB	Lobatse	84.16	115	P	P	02 36 10.5	-0.2
LBTB				IAmb	IAmb	02 36 25.6	
	comp=Z,13nm,0.8s						
CASY	Casey	84.58	181	P	P	02 36 11.7	-0.2
CASY				IAmb	IAmb	02 36 14.5	
	comp=Z,19nm,1.1s						
LSZ	Lusaka	91.15	108		P	02 36 44.8	+0.2
LSZ				IAmb	IAmb	02 36 57.2	
	comp=Z,6.4nm,0.9s						
ESDC	Sonseca Array	93.35	46	P	P	02 36 54.9	+0.9
	comp=Z,0.9nm,1.0s,baz=250,slow=3.7,SNR=4.9						
AKASG	Malin Array Be	119.00	46	PKP	PKiKP	02 42 27.3	0.0
	comp=Z,1.1nm,0.7s,baz=273,slow=2.3,SNR=4.0						
AKASG	Malin Array Be	119.00	46		PKPdf	02 42 26.1	-1.2
ASAR	Alice Springs	121.65	208	PKP	PKiKP	02 42 32.7	-0.9
	comp=Z,0.6nm,0.9s,baz=158,slow=2.5,SNR=3.8						
ASAR	Alice Springs	121.65	208	PKPdf	PKiKP	02 42 33.2	-0.4
WRA	Warramunga Arr	124.76	210	PKP	PKiKP	02 42 39.9	+0.1
	comp=Z,1.8nm,1.0s,baz=162,slow=1.6,SNR=9.1						
WRA	Warramunga Arr	124.76	210	PKPdf	PKiKP	02 42 39.0	-0.8
KLMR	Klimovskoe	125.63	34	*e*PKPdf	PKiKP	02 42 39.8	-0.3
KLMR				AMP		02 42 42.7	
	comp=Z,24nm,1.2s						
KLMR				*e*		02 49 10.8	
H11S2	WAKE ISLAND Hy	125.79	272	T	T	05 01 44.9	
	baz=115,slow=75,SNR=31						
H11S1	WAKE ISLAND Hy	125.80	272	T	T	05 01 38.7	
	baz=115,slow=75,SNR=32						
H11S3	WAKE ISLAND Hy	125.81	272	T	T	05 01 35.3	
	baz=115,slow=75,SNR=26						
H11N3	WAKE ISLAND Hy	126.09	274	T	T	05 02 00.5	
	baz=112,slow=75,SNR=8.3						
H11N1	WAKE ISLAND Hy	126.10	274	T	T	05 01 56.0	
	baz=112,slow=75,SNR=5.4						
H11N2	WAKE ISLAND Hy	126.11	274	T	T	05 02 17.5	
	baz=112,slow=75,SNR=8.9						
KBZ	Khabaz	127.04	56	PKP	PKiKP	02 42 44.3	+0.9
	comp=Z,4.9nm,1.0s,baz=117,slow=1.3,SNR=5.5						
SEY	Seymchan	136.07	333	PKP	PKiKP	02 43 01.4	+0.3
	comp=Z,1.5nm,0.3s,baz=108,slow=6.4,SNR=5.5						
BRVK	Borovoye	143.70	39	PKPdf	PKPdf	02 43 12.2	-1.5
BVAR	Borovoye Array	143.78	39	PKP	PKPdf	02 43 13.1	-0.6
	comp=Z,1.2nm,0.7s,baz=207,slow=12,SNR=8.3						
YAK	Yakutsk	144.44	343	PKP	PKPdf	02 43 14.7	+0.1
	comp=Z,10nm,0.5s,baz=166,slow=2.1,SNR=6.8						
YAK	Yakutsk	144.44	343	PKPdf	PKPdf	02 43 13.8	-0.7
KKAR	Karatay Array	147.08	55		PKPbc	02 43 21.0	-0.9
BTK	Batken	147.82	61	PKPbc	PKPbc	02 43 23.1	-1.1
DRK	Karamyk	148.65	62	PKPbc	PKPbc	02 43 25.0	-1.6
KURK	Kurchatov	149.35	38	PKPdf	PKPbc	02 43 24.9	-2.7
KURBB	Kurchatov Arra	149.36	38	PKPbc	PKiKP	02 43 29.1	+0.3
	comp=Z,7.0nm,0.9s,baz=301,slow=3.1,SNR=10						
EKS2	Erkin-Say	149.52	55	P	PKPab	02 43 31.0	-2.4
	SNR=6.8						
AML	Almayashu	149.59	56	P	PKiKP	02 43 31.0	+0.9
	SNR=10						
USP	Ospenovka	149.87	54	P	PKiKP	02 43 30.6	+0.5
	SNR=14						
AAK	Ala-Archa	150.04	55	PKPbc	PKiKP	02 43 31.4	+0.7
	comp=Z,35nm,1.1s,baz=220,slow=2.8,SNR=41						
AAK	Ala-Archa	150.04	55	P	PKiKP	02 43 32.0	+1.3
	SNR=28						
FRU1	Bishkek	150.09	54		PKiKP	02 43 31.9	+1.3
CHMS	Chumysh	150.12	54	P	PKiKP	02 43 32.1	+1.5
	SNR=8.9						
UCH	Uchtor	150.15	56	P	PKiKP	02 43 32.8	+1.5
	SNR=26						
ZALV	Zalesovo Beam	150.24	28	PKPbc	PKiKP	02 43 31.0	+0.5
	comp=Z,24nm,0.8s,baz=294,slow=3.1,SNR=18						
ZALV	Zalesovo Beam	150.24	28	PKPdf	PKPdf	02 43 25.0	+0.5
KBK	Karagaybulak	150.35	55	P	PKPab	02 43 33.1	-3.8
	SNR=13						
TKM2	Tokmak 2	150.74	54	P	PKiKP	02 43 32.2	+0.1
	SNR=17						
ULHL	Ulahol	151.39	55	P	PKiKP	02 43 35.2	+1.7
	SNR=10						
KSH	Kashi	151.83	60	PKPbc	PKiKP	02 43 35.1	+0.7
RPSI	Rantau Prapat	152.03	160		PKiKP	02 43 34.3	-1.1
PSI	Prapat	152.13	160	PKPbc	PKPbc	02 43 34.3	-1.2
	comp=Z,2.2nm,0.4s,baz=335,slow=20,SNR=1.8						
KLR	Kul'dur	153.23	324	PKPbc	PKiKP	02 43 37.8	+1.0
	comp=Z,1.8nm,0.6s,baz=11,slow=6.9,SNR=5.4						
MKAR	Makanchi Array	153.51	42	PKPbc	PKiKP	02 43 38.3	+0.8
	comp=Z,6.7nm,1.0s,baz=321,slow=1.6,SNR=13						
MKAR	Makanchi Array	153.51	42		PKPdf	02 43 29.9	+0.2
MKAR					pPKPbc	02 43 38.1	+0.4
MJAR	Matsushiro Arr	153.81	294	PKPbc	PKiKP	02 43 42.2	+3.7
	comp=Z,3.2nm,0.5s,baz=217,slow=15,SNR=6.5						
MJAR	Matsushiro Arr	153.81	294		PKiKP	02 43 39.1	+0.7
WMQ	Urumqi	158.32	43	*e*P	PKPdf	02 43 36.4	+0.1
WMQ				pmax	pmax		
	comp=Z,610nm,8.9s						
SONM	Songino Array	161.58	4	PKP	PKPdf	02 43 40.0	+0.1
	comp=Z,0.5nm,0.4s,baz=311,slow=21,SNR=4.0						
SONM				PKPab	sPKPab	02 44 26.1	+1.2
	comp=Z,2.1nm,1.0s,baz=343,slow=2.3,SNR=5.2						
SONM	Songino Array	161.58	4		PKPdf	02 43 40.5	+0.6
CMAR	Chiang Mai Arr	166.27	141	PKPab	PKPab	02 44 45.1	-0.7
	comp=Z,0.7nm,0.3s,baz=228,slow=3.5,SNR=4.3						
CMAR	Chiang Mai Arr	166.27	141	PKPdf	PKPdf	02 43 45.1	+0.2
CMAR					PKPab	02 44 42.8	-3.0
GTA	Gaotai	167.95	32	*e*PKPbc	PKPdf	02 43 48.0	+2.3
GTA				pPKP	sPKPdf	02 43 52.3	+6.2
GTA				sPKP		02 43 55.0	
GTA				PKPab	pPKPab	02 44 54.3	+1.2
GTA				LR	LR		
	comp=N,3µm,19.3s						
GTA				LR	LR		
	comp=E,6µm,18.2s						
GTA				LR	LR		
	comp=Z,11µm,18.2s						
HHC	Hu-ho-hao-te	168.25	347	*e*P	PKPdf	02 43 40.7	-5.1
NJ2	Nanjing	170.35	288	*e*P	PKPdf	02 43 46.4	-0.8
NJ2				pmax	pmax		
	comp=Z,18nm,0.5s						
CD2	Chengdu	176.00	67	PKP	PKPdf	02 43 47.9	-1.7
GYA	Guiyang	176.79	157	⇓P	PKPdf	02 43 48.6	-1.3
GYA				pmax	pmax		
	comp=Z,11nm,0.6s						

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*IDC **11** 02:26:29.7±1.7,29°.50S×71°.81W,h0^{km},mb4.2/1, mb1 4.7/3,mb1mx4.0/31,mbtmp4.7/3,ML4.3/1,Error ellipse: s-maj=97.2km s-min=30.2km az=104.0*

*NEIC **11** 02:26:30.1±1.5,29°.48S±0°.04×72°.12W±0°.08,h12^{km}±2^{km}, mb4.6/2,Error ellipse: s-maj=10.5km s-min=6.1km az=79.0*

ISC 11 02:26:31.7±0.9**,29°.48S**±0°.05×**72°.0W**±0°.1**,h25**^{km}**,n21,** σ**1^s.10**/22**,mb4.5**/3**,Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO05	La Serena	0.81	123		Pn	02 26 47.2	-0.4
CO06	Fray Jorge	1.24	164		Pn	02 26 52.4	-1.1
LCO	Las Campanas	1.25	68		Pb	02 26 54.6	-0.2
GO04	Tololo Observa	1.27	123		Pb	02 26 54.6	-0.5
AC04	Llanos de Chal	1.52	34	Pn	Pn	02 26 57.1	-0.2
CO03	El Pedregal	1.78	140	Pn	Pn	02 27 01.7	+0.7
MT09	Talagante	4.37	169	Pn	Pn	02 27 36.0	-0.7
MT01	Popeta	4.42	172	Pn	Pn	02 27 37.0	-0.2
LVC	Limon Verde	7.39	23	Pn	Pn	02 28 17.9	-0.5
	baz=336,slow=12,SNR=1.3						
LVC				Sn	Sn	02 29 41.0	-0.7
	1.5nm,0.3s,baz=298,slow=19,SNR=0.8						
PB12	IPOC Station P	10.93	9	Pn	Pn	02 29 07.6	+0.9
PLCA	Paso Flores	11.29	174	Pn	Pn	02 29 11.3	-0.2
	0.5nm,0.3s,baz=328,slow=15,SNR=1.2						
PLCA	Paso Flores	11.29	174	Pn	Pn	02 29 10.1	-1.4
PB16	IPOC Station P	11.33	12	Pn	Pn	02 29 09.8	-2.8
PMSA	Palmer Station	35.67	174	P	P	02 33 26.7	-0.7
PMSA				IAmb	IAmb	02 33 29.1	
	comp=Z,16nm,1.2s						
SNAA	Sanae	55.77	159	P	P	02 36 07.7	+1.6
SNAA				IAmb	IAmb	02 36 19.5	
	comp=Z,6.2nm,1.2s						
TORD	Torodi Ar. Bea	82.68	71	P	P	02 38 54.7	+1.1
	comp=Z,2.0nm,1.0s,baz=239,slow=5.1,SNR=1.8						
WRA	Warramunga Arr	124.68	211	PKP	PKiKP	02 45 30.7	+0.6
	comp=Z,0.3nm,0.7s,baz=158,slow=1.5,SNR=1.3						
KURK	Kurchatov	149.44	38		PKPbc	02 46 17.6	-0.6
KURBB	Kurchatov Arra	149.44	38	PKPbc	PKiKP	02 46 20.3	+0.9
	comp=Z,1.1nm,0.4s,baz=296,slow=3.1,SNR=4.8						
ZALV	Zalesovo Beam	150.32	28	PKPbc	PKiKP	02 46 22.6	+1.6
	comp=Z,3.5nm,0.6s,baz=304,slow=3.4,SNR=4.1						
ZALV	Zalesovo Beam	150.32	28	PKPbc	PKPbc	02 46 19.6	-0.7

IDC 11 02:27:50.2±1.9**,16°.35S**×**178°.35E,h0**^{km}**,mb3.7**/3**, mb1 4.0**/3**,mb1mx3.7**/38**,mbtmp3.7**/3**,Error ellipse: s-maj=47.6km s-min=23.7km az=99.0,Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	1.41	192	Pn	Pn	02 28 16.7	-0.5
	79nm,0.3s,baz=185,slow=6.0,SNR=195						
MSVF				Sn	Sn	02 28 39.7	+3.2
	406nm,0.3s,baz=81,slow=23,SNR=6.5						
WRA	Warramunga Arr	41.89	258	P	P	02 35 43.7	+1.0
	1.1nm,0.9s,baz=92,slow=8.7,SNR=5.1						
ASAR	Alice Springs	42.26	253	P	P	02 35 44.8	-1.0
	1.2nm,0.8s,baz=82,slow=9.1,SNR=15						
ILAR	Eielson Array	85.11	14	P	P	02 40 27.8	+0.1
	0.4nm,0.8s,baz=233,slow=6.2,SNR=4.3						

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*NEIC **11** 02:29:60.0±2.4,29°.49S±0°.04×72°.08W±0°.06,h10^{km}±1^{km}, mb4.5/6,Error ellipse: s-maj=9.5km s-min=6.9km az=260.0*

*IDC **11** 02:30:01.8±0.9,29°.16S×71°.73W,h0^{km},mb4.3/6, mb1 4.3/8,mb1mx4.0/30,mbtmp4.2/8,ML3.8/1,Error ellipse: s-maj=34.9km s-min=19.9km az=104.0*

ISC 11 02:30:02.6±0.7**,29°.43S**±0°.06×**72°.05W**±0°.09**,h25**^{km}**,n52,** σ**1^s.93**/49**,mb4.4**/8**,Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO05	La Serena	0.86	125		Pb	02 30 16.3	-2.6
CO06	Fray Jorge	1.29	164	Pn	Pn	02 30 22.4	-2.7
GO04	Tololo Observa	1.32	125	Pn	Pn	02 30 24.3	-1.4
AC04	Llanos de Chal	1.49	35		Pn	02 30 27.3	-0.5
CO03	El Pedregal	1.84	140	Pn	Pn	02 30 31.7	-1.0
VA03	San Esteban	3.57	159	Pn	Pn	02 30 55.1	-1.3
VA01	Torpederas	3.60	175	Pn	Pn	02 30 54.8	-2.0
PEL	Peldehue	3.88	163	Pn	Pn	02 30 59.8	-0.9
MT02	Curacav	3.90	169	Pn	Pn	02 30 59.9	-1.1
MT05	Renca	4.11	164	Pn	Pn	02 31 00.9	-2.9
VA05	Santo Domingo	4.23	175	Pn	Pn	02 31 03.5	-2.0
MT09	Talagante	4.43	168	Pn	Pn	02 31 07.5	-0.8
MT01	Popeta	4.47	171	Pn	Pn	02 31 06.7	-2.2
BO01	Tunca	5.02	171	Pn	Pn	02 31 14.5	-1.8
BO02	Sierra Bellavi	5.46	169	Pn	Pn	02 31 21.8	-0.6
GO05	Huala	5.57	179	Pn	Pn	02 31 21.0	-2.8
PB10	IPOC Station P	6.04	13	Pn	Pn	02 31 28.9	-1.6
ML02	Panimavida	6.34	175	Pn	Pn	02 31 32.5	-1.9
PB15	IPOC Station P	6.61	21	Pn	Pn	02 31 36.2	-2.3
PB06	IPOC Station P	7.06	19	Pn	Pn	02 31 42.5	-2.0
H03N1	Juan Fernandez	7.09	234	T	T	02 39 31.9	
	baz=64,slow=71,SNR=29						
H03N2	Juan Fernandez	7.11	234	T	T	02 39 31.5	
	baz=64,slow=71,SNR=21						
H03N3	Juan Fernandez	7.11	234	T	T	02 39 32.2	
	baz=64,slow=71,SNR=35						
VA04	Juan Fernndez	7.15	232	Pn	Pn	02 31 42.9	-2.6
LVC	Limon Verde	7.35	23	Pn	Pn	02 31 47.8	-1.0
	baz=162,slow=8.8,SNR=6.8						
LVC				Sn	Sn	02 33 08.7	-2.9
	3.4nm,0.3s,baz=294,slow=15,SNR=1.8						
LVC				Lg	Lg	02 33 43.3	
	5.5nm,0.3s,baz=31,slow=22,SNR=5.6						
PB01	IPOC Station P	8.67	16	Pn	Pn	02 32 03.7	-2.8
LC01	Cunco	9.45	179	Pn	Pn	02 32 14.0	-3.1
PSGCX	Pisagua	9.94	11	Pn	Pn	02 32 20.4	-3.7
LR03	Panguipulli	10.18	181	Pn	Pn	02 32 24.9	-2.3
LPAZ	La Paz	13.57	16	Pn	Pn	02 33 12.0	-2.1
	0.2nm,0.3s,baz=187,slow=4.8,SNR=1.3						
LPAZ	La Paz	13.57	16		Pn	02 33 11.8	-2.3
PTLB	Pontes e Lacer	18.31	43		Pn	02 34 15.4	+0.4
VILB	Vilhena	19.75	36		P	02 34 30.8	+0.1
VILB				IAmb	IAmb	02 34 32.4	
	comp=Z,26nm,1.1s						
USHA	Ushuaia	25.52	175	P	P	02 35 34.4	+5.5
	comp=Z,8.7nm,1.0s,baz=262,slow=14,SNR=1.9						
BDFB	Brasilia	26.03	63	P	P	02 35 33.9	-0.2
	comp=Z,4.9nm,0.6s,baz=263,slow=6.9,SNR=6.1						
BDFB	Brasilia	26.03	63	P	P	02 35 33.9	-0.2
BDFB				IAmb	IAmb	02 35 42.3	
	comp=Z,14nm,1.2s						
MACA	Manacapuru-AM	28.27	25	P	P	02 35 53.9	-0.1
MACA				IAmb	IAmb	02 35 55.7	
	comp=Z,3.0nm,0.3s						
VNA3	Neumayer Olymp	53.60	159	P	P	02 39 22.0	+0.7
VNA2	Neumayer--Watz	54.24	159	P	P	02 39 26.3	+0.4
	baz=290,slow=8.2						
SNAA	Sanae	55.83	159	P	P	02 39 37.7	+0.2
SNAA	Sanae	55.83	159	P	P	02 39 37.5	0.0
SNAA				IAmb	IAmb	02 39 47.8	
	comp=Z,5.7nm,1.2s						
TXAR	Lajitas Array	65.77	330	P	P	02 40 48.0	+2.4
	comp=Z,0.6nm,1.0s,baz=145,slow=7.9,SNR=3.4						
DBIC	Dimbokro	73.77	72	P	P	02 41 35.6	+0.5
	comp=Z,1.9nm,0.5s,baz=232,slow=7.1,SNR=4.7						
BOSA	Boshof	82.22	118	P	P	02 42 25.4	+3.3
	comp=Z,2.6nm,0.9s,baz=328,slow=2.9,SNR=3.7						
TORD	Torodi Ar. Bea	82.68	71	P	P	02 42 25.3	+0.8
	comp=Z,4.8nm,0.9s,baz=272,slow=4.3,SNR=16						
TORD	Torodi Ar. Bea	82.68	71	P	P	02 42 25.2	+0.7
WRA	Warramunga Arr	124.71	211	PKP	PKiKP	02 49 04.5	+3.4
	comp=Z,0.4nm,0.6s,baz=150,slow=1.8,SNR=2.8						
KURBB	Kurchatov Arra	149.41	38	PKPbc	PKiKP	02 49 51.0	+0.9
	comp=Z,1.2nm,0.6s,baz=299,slow=3.4,SNR=5.9						
AAK	Ala-Archa	150.11	55	PKPbc	PKiKP	02 49 54.1	+1.9
	comp=Z,4.2nm,0.9s,baz=184,slow=0.2,SNR=8.2						
ZALV	Zalesovo Beam	150.29	28	PKPbc	PKiKP	02 49 53.0	+1.1
	comp=Z,4.0nm,0.5s,baz=298,slow=3.2,SNR=13						
ZALV	Zalesovo Beam	150.29	28		PKiKP	02 49 52.8	+0.9
MKAR	Makanchi Array	153.57	42	PKPbc	PKiKP	02 50 00.6	+1.6
	comp=Z,0.7nm,0.8s,baz=336,slow=1.7,SNR=3.9						

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*SJA **11** 02:46:12.3±0.4,29°.37S×72°.64W,h12^{km},ML6.5,MW6.3*

*GUC **11** 02:46:16.8±0.8,29°.55S×72°.26W,h12^{km}±6^{km},MW6.9*

*NEIC **11** 02:46:19.8±2.4,29°.51S±0°.04×72°.06W±0°.06,h10^{km}±1^{km}, mb6.3/343,Ms_20 6.5/139,Mwc7.0/81,Mww6.9, Mwc6.8(GCMT),Mwr6.9(GUC),Error ellipse: s-maj=9.1km s-min=6.6km az=253.0*

*IDC **11** 02:46:19.4±0.3,29°.47S×71°.85W,h0^{km},mb5.5/19, mb1 5.5/23,mb1mx5.5/23,mbtmp5.4/23,ML4.8/4,MS6.3/19, Ms1 6.3/19,ms1mx6.0/30,Error ellipse: s-maj=14.5km s-min=11.4km az=92.0*

*BJI **11** 02:46:19.2±0.0,29°.47S×71°.96W,h10^{km},mB6.5/48, Ms6.6/71,Ms7 6.6/68*

*MOS **11** 02:46:20.7±1.1,29°.72S×72°.01W,h23^{km},mb6.3/37, MS6.3/15,Error ellipse: s-maj=11.3km s-min=7.5km az=89.2*

*VAO **11** 02:46:21.7±0.2,29°.38S×71°.75W,h10^{km},mb5.9*

*GCMT **11** 02:46:32.8±0.1,29°.70S×72°.29W,h12^{km},MW6.8/164, Moment Tensor Solution. s164,c416; s161,c780; Duration: 6^s.1 Moment tensor: Scale 10^{19}Nm; M$_{rr}$1.34±.01; M$_{\theta\theta}$-0.02±.00; M$_{\phi\phi}$-1.31±.01; M$_{r\theta}$0.05±.02; M$_{\theta\phi}$0.04±.00; M$_{\phi r}$-1.43±.02; Best double couple: M$_0$1.95100×10^{19} NP1:ϕ_s358.00000°,δ21.00000°, λ90.00000°. NP2:ϕ_s178.00000°,δ69.00000°,λ90.00000°. Principal axes: T 1.9650, Plg66.0000°, Azm88.0000°; N -0.0210, Plg0.0000°, Azm358.0000°; P -1.9360, Plg24.0000°, Azm268.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=125s. Triangular moment-rate function*

*NEIC **11** 02:46:32,29°.75S×72°.34W,h12^{km},Moment Tensor Solution. Duration: 12^s.2 Moment tensor: Scale 10^{19}Nm; M$_{rr}$1.31; M$_{\theta\theta}$-0.02; M$_{\phi\phi}$-1.28; M$_{r\theta}$0.09; M$_{\theta\phi}$-0.01; M$_{\phi r}$-1.50; Fault plane solution: M$_0$1.98000×10^{19} NP1:ϕ_s3.00000°, δ20.00000°,λ96.00000°. NP2:ϕ_s177.00000°,δ70.00000°, λ88.00000°. Principal axes: T 1.9979, Plg65.0000°, Azm84.0000°; N -0.0281, Plg2.0000°, Azm178.0000°; P -1.9698, Plg25.0000°, Azm269.0000°;*

*NEIC **11** 02:46:34,29°.79S×71°.73W,h16^{km},Moment Tensor Solution. Duration: 30^s.0 Moment tensor: Scale 10^{19}Nm; M$_{rr}$1.26; M$_{\theta\theta}$0.03; M$_{\phi\phi}$-1.28; M$_{r\theta}$0.03; M$_{\theta\phi}$-0.06; M$_{\phi r}$-2.10; Fault plane solution: M$_0$2.45000×10^{19} NP1:ϕ_s6.00000°, δ16.00000°,λ96.00000°. NP2:ϕ_s180.00000°,δ74.00000°, λ88.00000°. Principal axes: T 2.4395, Plg61.0000°, Azm87.0000°; N 0.0251, Plg2.0000°, Azm180.0000°; P -2.4646, Plg29.0000°, Azm271.0000°;*

*NEIC **11** 02:46:52.6,29°.68S×71°.13W,h21^{km},Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M$_{rr}$1.74; M$_{\theta\theta}$-0.23; M$_{\phi\phi}$-1.50; M$_{r\theta}$0.80; M$_{\theta\phi}$0.04; M$_{\phi r}$-3.07; Fault plane solution: M$_0$3.56000×10^{19} NP1:ϕ_s167.02000°, δ76.63000°,λ85.91000°. NP2:ϕ_s4.19000°,δ13.97000°, λ106.69000°. Principal axes: T 3.6988, Plg58.0000°, Azm72.0000°; N -0.2791, Plg4.0000°, Azm168.0000°; P -3.4197, Plg32.0000°, Azm260.0000°;*

ISC 11 02:46:19.8±0.4**,29°.52S**±0°.03×**72°.05W**±0°.03**,h8**^{km}±2^{km}**, h7**^{km}**:pP-P,n1303,** σ**2^s.03**/1173**,mb6.2**/235**,MS6.4**/109**, 45C-32D,Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO05	La Serena	0.81	120	⇓*i*P	Pg	02 46 34.9	-0.4
CO05				*i* S	Sb	02 46 47.8	+0.6
CO05	La Serena	0.81	120		Pg	02 46 35.2	-0.1
CO06	Fray Jorge	1.20	163	*e*P	Pb	02 46 40.9	-2.0
CO06	Fray Jorge	1.20	163	Pn	Pb	02 46 40.7	-2.2
GO04	Tololo Observa	1.26	121	⇓*i*P	Pn	02 46 42.7	-1.4
GO04				*e*		02 47 06.3	
GO04	Tololo Observa	1.26	121	Pn	Pn	02 46 42.8	-1.4
LCO	Las Campanas	1.28	67	P	Pn	02 46 43.3	-1.0
LCO	Las Campanas	1.28	67	⇓*i*P	Pn	02 46 43.0	-1.3
LCO				*i* S	Sn	02 47 03.5	+1.7
LCO	Las Campanas	1.28	67	Pn	Pn	02 46 43.3	-1.0
LCO	Las Campanas	1.28	67	*e*P	Pg	02 46 45.0	+0.5
AC04	Llanos de Chal	1.57	33	⇑*i*P	Pn	02 46 46.0	-2.1
AC04				*i* S	Sb	02 47 09.3	+0.2
AC04	Llanos de Chal	1.57	33		Pn	02 46 45.9	-2.1
AC04	Llanos de Chal	1.57	33	*e*P	Pn	02 46 45.3	-2.7
CO03	El Pedregal	1.76	138		Pn	02 46 49.5	-1.3
AROD	Rodeo	2.33	107	*e*P	Pb	02 47 01.2	-1.1
GO03	Copiap	2.50	40	*e*P	Pn	02 46 59.8	-1.1
GO03	Copiap	2.50	40		Pn	02 46 59.4	-1.4
GO03	Copiap	2.50	40	*e*P	Pn	02 46 59.0	-1.9
ACDV	Cuesta del Vie	2.62	105	*e*P	Pb	02 47 05.0	-2.2
ACDV				*e*S	Sg	02 47 47.1	+3.0
ACDV				IAML		02 47 54.8	
	comp=Z,110µm,1.6s						
ACCO	Cerro Coronel	2.79	113	*e*P	Pb	02 47 08.0	-2.2
VA06	Catapilco	3.10	168	*e*P	Pn	02 47 07.6	-1.5
VA06				*i* S	Sn	02 47 45.9	-0.4
VCA	Vinchina	3.45	78	*e*P	Pn	02 47 15.9	+1.8
VCA				IAML		02 48 19.8	
	comp=Z,80µm,1.4s						
VA03	San Esteban	3.48	159	*e*P	Pn	02 47 13.5	-0.9
VA03	San Esteban	3.48	159		Pn	02 47 14.3	-0.1
VA03	San Esteban	3.48	159	*e*P	Pn	02 47 14.3	-0.1
VA03				IAML		02 48 22.4	
	comp=Z,73µm,0.8s						
VA01	Torpederas	3.51	174	*e*P	Pn	02 47 12.4	-2.3
VA01	Torpederas	3.51	174	Pn	Pn	02 47 12.8	-1.9
VA01	Torpederas	3.51	174	*e*P	Pn	02 47 13.4	-1.2
AUSP	Uspallata	3.53	140	*e*P	Pn	02 47 17.6	+2.3
ZON	Zonda	3.54	126	P	Pn	02 47 16.5	+1.3
ZON	Zonda	3.54	126	Pn	Pn	02 47 16.5	+1.3
ROCH	El Roble	3.55	166	⇑*i*P	Pn	02 47 14.3	-1.2
ROCH				*i* S	Sn	02 47 57.8	-0.1
ROC1	El Roble	3.55	166	*e*P	Pn	02 47 15.0	-0.6
ROC1				*e*S	Sb	02 48 02.6	-4.0
PEL	Peldehue	3.79	162	P	Pn	02 47 17.6	-1.1
PEL	Peldehue	3.79	162	*e*P	Pn	02 47 18.0	-0.7
PEL				*i* S	Sn	02 48 04.0	+0.4
PEL	Peldehue	3.79	162	Pn	Pn	02 47 17.6	-1.1
PEL	Peldehue	3.79	162	*e*P	Pn	02 47 18.0	-0.7
MT02	Curacav	3.81	168		Pn	02 47 17.2	-1.6
MT02	Curacav	3.81	168	*e*P	Pn	02 47 18.0	-0.8
MT02				IAML		02 48 32.2	
	comp=Z,44µm,1.4s						
RTCV	Cerro Valdivia	3.82	129	*e*P	Pn	02 47 21.0	+2.0
MT05	Renca	4.02	164	*e*P	Pn	02 47 20.2	-1.5
MT05	Renca	4.02	164		Pn	02 47 20.4	-1.4
MT05	Renca	4.02	164	*e*P	Pn	02 47 21.0	-0.8
VA05	Santo Domingo	4.14	175	*e*P	Pn	02 47 20.7	-2.7
VA05	Santo Domingo	4.14	175		Pn	02 47 20.9	-2.5
MT09	Talagante	4.34	168		Pn	02 47 24.9	-1.3
MT01	Popeta	4.38	171		Pn	02 47 24.8	-1.9
BO01	Tunca	4.92	171	Pn	Pn	02 47 32.1	-2.1
PB14	IPOC Station P	5.09	17	Pn	Pn	02 47 32.6	-4.2
BO02	Sierra Bellavi	5.36	169		Pn	02 47 38.5	-1.8
GO05	Huala	5.47	179		Pn	02 47 39.1	-2.6
GO05	Huala	5.47	179	*e*P	Pn	02 47 39.4	-2.4
ML02	Panimavida	6.25	175	Pn	Pn	02 47 50.1	-2.2
FSA	Cafayete	6.36	59	*e*P	Pn	02 47 57.0	+2.9
AHML	Horco Molle	6.52	67	*e*P	Pn	02 47 57.0	+0.8
AHML				*e*P	Pb	02 47 57.1	-17
AHML				*e*S	Sb	02 49 26.1	-5.7
PB15	IPOC Station P	6.70	21		Pn	02 47 56.2	-2.5
PB15	IPOC Station P	6.70	21	*e*P	Pn	02 47 56.0	-2.8
PB05	IPOC Station P	6.85	14	*e*P	Pn	02 47 56.0	-4.7
H03N1	Juan Fernandez	7.04	235	Pn	Pn	02 47 59.5	-3.5
	baz=112,slow=18,SNR=979						
H03N1				T	T	02 55 55.6	
	baz=65,slow=71,SNR=538						
H03N2	Juan Fernandez	7.06	235	Pn	Pn	02 47 59.8	-3.5
	baz=112,slow=18,SNR=681						
H03N2				T	T	02 55 34.1	
	baz=65,slow=71,SNR=615						
H03N3	Juan Fernandez	7.06	235	Pn	Pn	02 47 59.5	-3.8
	baz=112,slow=18,SNR=1021						
H03N3				T	T	02 55 39.0	
	baz=65,slow=71,SNR=498						
VA04	Juan Fernndez	7.09	233	*e*P	Pn	02 47 59.4	-4.6
PB06	IPOC Station P	7.14	19	*e*P	Pn	02 48 01.0	-3.9
H03S3	Juan Fernandez	7.25	232	Pn	Pn	02 48 01.5	-4.4
H03S1	Juan Fernandez	7.26	232	Pn	Pn	02 48 01.3	-4.7
	SNR=1076						
H03S2	Juan Fernandez	7.27	232	Pn	Pn	02 48 01.5	-4.6
PB04	IPOC Station P	7.36	14	*e*P	Pn	02 48 03.0	-4.8
AF01	San Pedro de A	7.41	29		Pn	02 48 05.8	-2.8
LVC	Limon Verde	7.44	23	Pn	Pn	02 48 06.0	-3.1
	comp=Z,8.6nm,0.3s,baz=178,slow=9.3,SNR=72						
LVC				Sn	Sn	02 49 30.3	-3.6
	comp=Z,48nm,0.3s,baz=185,slow=16,SNR=4.0						
LVC				Lg	Lg	02 50 15.3	
	comp=Z,189nm,0.3s,baz=102,slow=17,SNR=7.0						

LVC	Limon Verde	7.44	23	P	Pn	02 48 06.0	-3.1
LVC	Limon Verde	7.44	23	eP	Pn	02 48 05.9	-3.1
LVC	Limon Verde	7.44	23	Pn	Pn	02 48 05.5	-3.5
PB03	IPOC Station P	7.72	16	eP	Pn	02 48 08.0	-4.8
PB07	IPOC Station P	8.00	15	eP	Pn	02 48 12.0	-4.7
PB09	IPOC Station P	8.10	19		Pn	02 48 15.0	-3.0
AZAP	Zapla	8.16	51	eP	Pn	02 48 20.0	+1.0
PB02	IPOC Station P	8.40	14	eP	Pn	02 48 17.0	-5.0
HJA	Humahuaca	8.66	45	eP	Pn	02 48 26.0	+0.2
PB01	IPOC Station P	8.75	16	eP	Pn	02 48 22.0	-4.9
ASTB	Santa Barbara	8.77	52	eP	Pn	02 48 27.0	-0.1
PATCX	Punta Patache	8.83	12	Pn	Pn	02 48 23.6	-4.4
PATCX	Punta Patache	8.83	12	eP	Pn	02 48 24.0	-4.0
TA01	Diego Aracena	9.08	11		Pn	02 48 27.5	-3.7
LC01	Cunco	9.35	179	Pn	Pn	02 48 33.4	-1.6
YJA	Yavi	9.39	40	eP	Pn	02 48 36.0	+0.1
PB08	IPOC Station P	9.70	16		Pn	02 48 36.3	-3.8
PB08	IPOC Station P	9.70	16	eP	Pn	02 48 36.0	-4.2
PB11	IPOC Station P	9.96	13	Pn	Pn	02 48 39.7	-3.8
PB11	IPOC Station P	9.96	13	eP	Pn	02 48 38.0	-5.5
PSGCX	Pisagua	10.04	10	Pn	Pn	02 48 40.0	-4.5
PSGCX	Pisagua	10.04	10	eP	Pn	02 48 39.0	-5.5
LR03	Panguipulli	10.09	181		Pn	02 48 42.4	-2.7
PB12	IPOC Station P	10.97	9	eP	Pn	02 48 52.0	-5.3
PLCA	Paso Flores	11.25	174	Pn	Pn	02 49 00.1	-0.9
	comp=Z,6.4nm,0.3s,baz=334,slow=12,SNR=68						
PLCA				Lg	Lg	02 52 10.1	
	comp=Z,1.0nm,0.3s,baz=60,slow=22,SNR=1.8						
PLCA				LR	LR	02 53 51.4	
	comp=Z,282µm,18.2s,baz=350,slow=40						
PLCA	Paso Flores	11.25	174	Pn	Pn	02 48 59.3	-1.7
LL04	Puerto Octay	11.37	181	Pn	Pn	02 49 00.2	-2.3
LL03	Petrohue	11.59	181		Pn	02 49 03.7	-1.9
LL05	Los Muermos	11.91	185		Pn	02 49 07.5	-2.5
LL01	San Ignacio de	12.83	181	Pn	Pn	02 49 19.9	-2.7
LPA	La Plata	13.10	118	SN	Sn	02 51 54.4	+2.2
LPA				SS	SnSn	02 52 00.5	-3.9
LPA				SSS	SSS	02 52 14.9	
LPA				PCP	PcP	02 54 59.5	+1.0
LPA				SCS	ScS	03 02 01.4	-7.3
LPA				PKIKP	PKiKP	03 02 53.2	-2.2
LPA				SKIKP		03 06 24.7	
LPA				PKIKS		03 06 29.1	
LPA				SKIKS		03 09 52.7	
LL07	Hotel Espejo d	13.33	185	Pn	Pn	02 49 28.4	-1.0
CPUP	Villa Florida	13.39	80	Pn	Pn	02 49 27.5	-2.8
	comp=Z,0.4nm,0.3s,baz=259,slow=12,SNR=13						
CPUP				Lg	Lg	02 53 20.8	
	comp=Z,6.4nm,0.3s,baz=353,slow=20,SNR=0.8						
CPUP	Villa Florida	13.39	80	eP	Pn	02 49 28.1	-2.2
CPUP	Villa Florida	13.39	80	Pn	Pn	02 49 27.4	-2.9
ITQB	Itaqui	13.42	94	eP	Pn	02 49 29.8	-0.9
ITQB	Itaqui	13.42	94	Pn	Pn	02 49 29.1	-1.6
GO07	Milladeo Hill,	13.63	185		Pn	02 49 30.1	-3.3
LL02	Futaleuf	13.64	179		Pn	02 49 31.2	-2.4
LPAZ	La Paz	13.66	16	Pn	Pn	02 49 30.6	-3.9
	comp=Z,1.8nm,0.3s,baz=185,slow=6.7,SNR=21						
LPAZ				LR	LR	02 55 44.2	
	comp=Z,111µm,19.1s,baz=190,slow=42						
LPAZ	La Paz	13.66	16	eP	Pn	02 49 29.9	-4.6
LPAZ	La Paz	13.66	16	Pn	Pn	02 49 30.4	-4.1
COYC	Coyhaique	16.02	180	Pn	Pn	02 50 04.9	-0.6
PLTB	Pedras Altas	16.03	103	eP	Pn	02 50 02.9	-2.8
SIV	San Ignacio	16.83	39	Pn	Pn	02 50 09.0	-7.1
	comp=Z,2.4nm,0.3s,baz=238,slow=8.7,SNR=21						
SIV				LR	LR	02 57 46.6	
	comp=Z,105µm,18.3s,baz=224,slow=41						
AQDB	Aquidauana	17.32	62		Pn	02 50 22.1	-0.1
NNA	Nana	18.01	345	P	Pn	02 50 30.5	-0.3
	comp=Z,0.9nm,0.3s,baz=191,slow=9.9,SNR=4.2						
NNA				Lg	Lg	02 56 08.9	
	comp=Z,0.6nm,0.3s,baz=257,slow=19,SNR=2.9						
NNA	Nana	18.01	345	ceP	P	02 50 34.3	+3.1
NNA				pmax	pmax		
	comp=Z,385nm,2.5s						
NNA	Nana	18.01	345		Pn	02 50 28.0	-2.7
PTLB	Pontes e Lacer	18.37	43	eP	Pn	02 50 32.9	-2.3
PTLB	Pontes e Lacer	18.37	43	P	Pn	02 50 32.9	-2.3
PTGB	Pitanga	18.41	80	eP	Pn	02 50 35.0	-0.7
TRCB	Terra Rica	18.66	73	P	P	02 50 37.8	-0.5
TRCB				IAmb	IAmb	02 50 55.4	
	comp=Z,1µm,0.8s						
PP1B	Ponte de Pedra	19.68	57	eP	P	02 50 48.7	-0.8
VILB	Vilhena	19.82	36	eP	P	02 50 50.1	-1.0
VILB	Vilhena	19.82	36	P	P	02 50 49.6	-1.5
VILB				IAmb	IAmb	02 51 09.0	
	comp=Z,2µm,1.0s						
TER01	Tubaro-SC	20.06	93	eP	P	02 50 52.7	-1.0
SALV	Santo Antonio	20.25	52	eP	P	02 50 54.6	-1.1
PCMB	Pacaembu	20.32	72	eP	P	02 50 55.4	-1.2
ETMB	Extrema	20.35	17	eP	P	02 50 56.7	-0.1
ETMB	Extrema	20.35	17		P	02 50 56.3	-0.5
ETMB				IAmb	IAmb	02 51 14.9	
	comp=Z,1µm,1.1s						
FRTB	Fartura	21.04	78	eP	P	02 51 02.7	-1.6
CZSB	Cruzeiro do Su	21.69	358	eP	P	02 51 11.8	+0.6
CZSB	Cruzeiro do Su	21.69	358	P	P	02 51 10.5	-0.8
CZSB				IAmb	IAmb	02 51 30.8	
	comp=Z,2µm,1.0s						
GO09	Cerro Castillo	21.73	180	P	P	02 51 10.8	-0.6
GO09				IAmb	IAmb	02 51 27.9	
	comp=Z,1µm,1.2s						
ITRB	Iturama	21.98	69	eP	P	02 51 12.4	-2.0
SAML	Samuel	22.09	24	P	P	02 51 13.7	-2.0
MG05	Puerto Natales	22.14	181	P	P	02 51 15.9	+0.1
MG05				IAmb	IAmb	02 52 15.5	
	comp=Z,1µm,1.3s						
PET01	Itanhaem-SP	22.68	83	eP	P	02 51 20.2	-1.6
PDRB	Porto dos Gac	22.83	42	eP	P	02 51 21.1	-2.4
BB19B	Bebedouro	22.84	74	eP	P	02 51 20.9	-2.7
ATAH	Atahualpa	23.06	344	P	P	02 51 28.6	+2.3
	comp=Z,66nm,0.9s,baz=186,slow=5.9,SNR=12						
RCLB	Rio Claro- Sao	23.12	78	eP	P	02 51 24.9	-1.6
ARAG	Araguaiana, MT	23.14	58	eP	P	02 51 23.6	-3.2
MG04	Isla Riesco	23.32	179	P	P	02 51 27.4	-0.8
MG02	Cerro Sombrero	23.33	176	P	P	02 51 26.4	-2.0
VAO	Valinhos	23.39	80	eP	P	02 51 28.2	-1.1
GO10	Punta Arenas	23.62	179	P	P	02 51 32.8	+1.4
GO10				IAmb	IAmb	02 51 57.8	
	comp=Z,1µm,1.2s						
CLDB	Colider	23.96	43	eP	P	02 51 32.7	-2.2
PARB	Paraibuna	24.42	82	eP	P	02 51 36.8	-2.4
EFI	East Falkland	24.46	159	ceP	P	02 51 38.3	-0.8
EFI				pmax	pmax		
	comp=Z,757nm,2.1s						
EFI				MLR	MLR		
	comp=Z,183µm,17.0s						
EFI	East Falkland	24.46	159	P	P	02 51 38.1	-1.0
EFI				IAmb	IAmb	02 52 09.8	
	comp=Z,675nm,0.8s						
IPMB	Ipameri, GO	24.60	67	eP	P	02 51 38.8	-2.0
TBTG	Tabatinga, AM	25.28	5	eP	P	02 51 45.7	-1.1
TBTG	Tabatinga, AM	25.28	5	eP	P	02 51 46.6	-0.2
TBTG	Tabatinga, AM	25.28	5	P	P	02 51 45.6	-1.2
USHA	Ushuaia	25.43	175	P	P	02 51 48.5	+0.7
	comp=Z,203nm,1.1s,baz=348,slow=7.3,SNR=20						
MG01	Puerto William	25.59	174	P	P	02 51 47.5	-1.8
MG01				IAmb	IAmb	02 52 35.3	
	comp=Z,573nm,0.8s						
MAN01	Angra dos Reis	26.02	82	eP	P	02 51 52.8	-0.8
SNDB	Serra Nova Dou	26.03	52	eP	P	02 51 52.3	-1.3
BSCB	Bom Sucesso	26.04	77	eP	P	02 51 53.3	-0.5
BDFB	Brasilia	26.07	63	P	P	02 51 52.7	-1.4
	comp=Z,419nm,1.1s,baz=235,slow=8.1,SNR=56						
BDFB				LR	LR	03 04 34.0	
	comp=Z,47µm,18.2s,baz=222,slow=42						
BDFB	Brasilia	26.07	63	P	P	02 51 52.4	-1.8
BDFB				pmax	pmax		
	comp=Z,850nm,1.0s						
BDFB	Brasilia	26.07	63	P	P	02 51 52.4	-1.8
BDFB				IAmb	IAmb	02 52 09.5	
	comp=Z,850nm,1.0s						
VAS01	Vassouras-RJ	26.68	81	eP	P	02 51 59.3	-0.2
NPGB	Novo Progresso	27.33	38	eP	P	02 52 03.6	-1.8
DUB01	Friburgo-RJ	27.67	81	eP	P	02 52 06.6	-1.9
PEXB	Peixe	28.06	57	eP	P	02 52 11.1	-1.0
DIAM	Diamantina, MG	28.17	73	eP	P	02 52 12.1	-1.1
MACA	Manacapuru-AM	28.35	24	eP	P	02 52 13.4	-1.1
MACA	Manacapuru-AM	28.35	24	P	P	02 52 12.2	-2.3
MACA				IAmb	IAmb	02 52 43.5	
	comp=Z,394nm,1.0s						
CAM01	Campos-RJ	28.38	81	eP	P	02 52 14.2	-0.6
MC01	Montes Claros	28.74	70	eP	P	02 52 16.6	-1.4
JANB	Januaria	29.32	67	eP	P	02 52 21.9	-1.4
ITTB	Itaituba	29.40	35	eP	P	02 52 22.3	-1.6
PTLC	Puerto Leguiza	29.64	354	eP	P	02 52 22.5	-3.5
ALF01	Guarapari-ES	29.65	80	eP	P	02 52 24.9	-1.2
SJMB	Sao Joao De Ma	30.07	76	eP	P	02 52 28.3	-1.6
OTAV	Otavalo	30.22	347	eP	P	02 52 32.8	+1.2
OTAV	Otavalo	30.22	347	eP	P	02 52 33.7	+2.1
OTAV	Otavalo	30.22	347	P	P	02 52 29.8	-1.9
OTAV				IAmb	IAmb	02 52 50.2	
	comp=Z,423nm,1.4s						
CUSE	Cuicocha Este	30.27	347	eP	P	02 52 34.8	+2.7
BSFB	Barra de Sao F	30.30	77	eP	P	02 52 30.7	-1.2
PAC1	Pacto, Paraso	30.31	347	eP	P	02 52 31.1	-1.0
SDBA	SAO DESIDERIO	30.42	62	eP	P	02 52 31.7	-1.3
RIB01	Linhares ES	30.47	78	eP	P	02 52 33.1	-0.3
TULM	Tulcn-Chalpat	30.57	349	eP	P	02 52 36.2	+1.5
SMTB	Santa Maria do	30.79	53	eP	P	02 52 36.5	+0.3
PTGA	Pitinga	30.86	24	P	P	02 52 35.1	-1.7
	comp=Z,170nm,1.0s,baz=203,slow=9.3,SNR=35						
PTGA	Pitinga	30.86	24	eP	P	02 52 35.3	-1.5
PTGA	Pitinga	30.86	24	P	P	02 52 35.0	-1.8
GCUF	Volcan Galeras	30.99	350	eP	P	02 52 41.9	+3.4
PRPB	Parauapebas	31.29	46	eP	P	02 52 38.7	-2.0
NAN01	Guarapari, ES	31.36	75	eP	P	02 52 40.3	-0.9
MACC	Macarena, Meta	31.54	357	eP	P	02 52 41.4	-1.3
GARC	Garzon, Huila	31.70	353	eP	P	02 52 47.2	+2.7
SOTA	Rioblanco	31.78	351	eP	P	02 52 43.4	-2.0
PCON	Cinco Dias	31.94	352	eP	P	02 52 50.5	+3.6
BETC	Betania	32.19	354	eP	P	02 52 53.7	+5.2
GUA01	Guaratinga, BA	32.22	74	eP	P	02 52 48.1	-0.7
MALB	Monte Alegre	32.30	35	eP	P	02 52 48.7	-0.8
MARP	Paez Belalcaza	32.40	353	eP	P	02 52 54.0	+3.4
RPN	Rapa Nui	32.82	265	P	P	02 52 55.6	+1.7
	comp=Z,83nm,1.0s,baz=40,slow=3.7,SNR=2.9						
RPN	Rapa Nui	32.82	265	P	P	02 52 51.1	-2.9
VA02	Isla de Pascua	32.90	265	P	P	02 52 51.5	-3.1
VA02				IAmb	IAmb	02 53 20.3	
	comp=Z,965nm,1.8s						
CMC01	Camacan, BA	33.07	72	eP	P	02 52 54.9	-1.4
NBIT	Itapeh - BA	33.36	71	eP	P	02 52 58.1	-0.7
ORTC	Ortega, Tolima	33.38	354	eP	P	02 53 01.1	+2.2
VILC	Villavicencio,	33.48	357	eP	P	02 53 01.1	+1.3
PTGC	Puerto Gaitan,	33.53	360	eP	P	02 52 58.7	-1.5
PAYG	Puerto Ayora	33.54	326	P	P	02 52 58.1	-2.3
YOTC	Yotoco, Valle	33.57	352	eP	P	02 53 02.0	+1.3
BOAV	Boa Vista	33.60	21	eP	P	02 53 01.1	+0.3
BOAV	Boa Vista	33.60	21	P	P	02 52 58.9	-1.9
GDU01	Guandu, BA	33.89	69	eP	P	02 53 01.7	-1.7
ANIL	Santa Ana	33.97	354	eP	P	02 53 02.9	-1.5
CHIC	Chingaza	33.99	357	eP	P	02 53 05.3	+0.6
ROSC	El Rosal	34.23	356	P	P	02 53 09.9	+3.2
	comp=Z,25nm,0.8s,baz=224,slow=3.7,SNR=15						
ROSC				LR	LR	03 06 52.2	
	comp=Z,26µm,19.6s,baz=197,slow=36						
ROSC	El Rosal	34.23	356	eP	P	02 53 09.6	+2.9
PLMC	San Jos del P	34.47	353	eP	P	02 53 08.6	+0.1
GUY2C	Guyana, Caldas	34.69	354	eP	P	02 53 11.8	+1.0
MCPB	Macapa, AP	34.70	37	eP	P	02 53 09.1	-1.3
NORC	Norcasia	34.99	355	eP	P	02 53 11.8	-1.1
NBPN	Ponto Novo - B	35.02	65	eP	P	02 53 11.7	-1.5
SPBC	San Pablo de B	35.03	356	eP	P	02 53 11.8	-1.4
RUSC	La Rusia	35.23	358	eP	P	02 53 14.3	-1.1
TMAB	Tom-Au,PA,Br	35.31	45	eP	P	02 53 15.1	-0.6
CBOC	Ciudad Bolivar	35.39	353	eP	P	02 53 18.4	+2.0
HOPE	Hope Point	35.62	144	P	P	02 53 17.6	-0.3
HOPE				pmax	pmax		
	comp=Z,648nm,1.9s						
HOPE				MLR	MLR		
	comp=Z,110µm,20.0s						
HOPE	Hope Point	35.62	144	P	P	02 53 17.6	-0.3
HOPE				IAmb	IAmb	02 53 29.6	
	comp=Z,648nm,1.9s						
HOPE	Hope Point	35.62	144	IAMs_20	IAMs_20	03 07 15.4	
	comp=Z,110µm,20.0s						
PMSA	Palmer Station	35.63	174	P	P	02 53 19.0	+1.2
	comp=Z,116nm,1.2s,baz=353,slow=8.6,SNR=25						
PMSA	Palmer Station	35.63	174	eP	P	02 53 20.1	+2.3
PMSA	Palmer Station	35.63	174	P	P	02 53 16.6	-1.2
PMSA				IAmb	IAmb	02 53 29.5	
	comp=Z,371nm,1.1s						
HELC	Santa Helena	35.66	354	eP	P	02 53 20.1	+1.0
TAMC	Tame, Arauca	35.75	0	eP	P	02 53 19.2	-0.2
BARC	Barichara	35.92	358	eP	P	02 53 22.5	+1.4
ELOV	Elorza	36.40	4	eP	P	02 53 23.6	-1.4
BRRC	Barranca, Sant	36.45	357	eP	P	02 53 25.0	-0.4
DBBC	Dabeiba	36.55	353	eP	P	02 53 26.7	+0.3
PAMC	Pamplona, Colo	36.65	359	eP	P	02 53 25.8	-1.8
NBLA	Lagarto - SE	36.85	67	eP	P	02 53 26.7	-2.2
PTAC	Punta Ardita,	36.88	350	eP	P	02 53 26.7	-2.4
ZARC	Zaragoza, Cauc	36.90	355	eP	P	02 53 26.7	-2.6
ZARC	Zaragoza, Cauc	36.90	355	P	P	02 53 26.9	-2.4
ZARC				IAmb	IAmb	02 53 44.3	
	comp=Z,729nm,1.6s						
UREC	San Jos de Ur	37.21	354	eP	P	02 53 29.9	-1.9
ROSB	Rosrio	37.46	50	eP	P	02 53 33.9	-0.1
OCAC	Ocana	37.56	358	eP	P	02 53 31.6	-3.4
OCAC	Ocana	37.56	358	P	P	02 53 32.9	-2.2
SMLC	San Martn de	38.15	357	eP	P	02 53 38.2	-1.6
SDV	Santo Domingo	38.21	2	eP	P	02 53 37.8	-2.7
SDV	Santo Domingo	38.21	2	eP	P	02 53 39.5	-1.0
SDV	Santo Domingo	38.21	2	P	P	02 53 38.4	-2.1
MOTC	Monteria, Cord	38.24	354	eP	P	02 53 40.6	+0.1
MOTC	Monteria, Cord	38.24	354	P	P	02 53 38.3	-2.2
NBPS	Pedro II - PI	38.25	55	eP	P	02 53 39.5	-1.3
NBMA	Muriti-CE	38.27	62	eP	P	02 53 40.1	-0.8
CAPC	Capurgana	38.28	352	eP	P	02 53 41.5	+0.6
CAP2	Capurgana	38.29	352	P	P	02 53 39.5	-1.6
NBAN	Anadia - AL	38.83	67	eP	P	02 53 43.9	-1.7
NBPB	Pedra_Branca-C	38.83	58	eP	P	02 53 45.1	-0.5
LL6C	La Loma 6 Bece	39.05	358	eP	P	02 53 45.5	-1.8
MDP	Montagnes des	39.15	32	P	P	02 53 47.0	-1.2
	comp=Z,201nm,1.0s,baz=199,slow=9.6,SNR=28						
BCIP	Isla Barro Col	39.19	348	eP	P	02 53 48.3	-0.2
ARGC	Ariguani, Magd	39.21	357	eP	P	02 53 48.0	-0.6
CDITO	Canoas	39.28	343	P	P	02 53 48.9	-0.5
CDITO				IAmb	IAmb	02 54 07.8	
	comp=Z,948nm,1.3s						
SJCC	San Jacinto, C	39.31	355	eP	P	02 53 52.2	+2.6
BRU2	Volcan	39.45	343	eP	P	02 53 53.1	+2.2
EDSV	San Vito	39.55	343	eP	P	02 53 55.5	+3.9
NBLV	Livramento - P	39.70	63	eP	P	02 53 53.3	+0.4
POTG	Potrero Grande	39.81	343	eP	P	02 53 55.8	+2.0
NBMO	Morrinhos-CE	40.00	55	eP	P	02 53 55.1	-0.3
PEZE	Perez Zeledon,	40.27	342	eP	P	02 53 58.4	+0.7
NBRF	Rio Formoso -	40.32	67	eP	P	02 53 58.0	-0.1
SMRC	Santa Marta, M	40.50	357	eP	P	02 53 57.9	-1.5
NBPA	Parau_RN	40.56	61	eP	P	02 53 59.4	-0.7
NBCL	Cascavel-CE	40.66	58	eP	P	02 53 59.5	-1.3
RIMA	Rio Macho	40.69	342	eP	P	02 54 02.9	+1.7
LCR2	La Lucha 2	40.70	342	eP	P	02 54 03.4	+2.0
HDC	Heredia	40.98	342	eP	P	02 54 04.2	+0.7
URIC	Uribia, Colomb	40.98	0	eP	P	02 53 58.8	-4.6
URIC	Uribia, Colomb	40.98	0	P	P	02 54 02.1	-1.3
SRA1	San Ramn	41.16	341	eP	P	02 54 05.1	0.0
JTS	Las Juntas de	41.49	341	i P	P	02 54 09.0	+1.4
JTS				MLR	MLR		
	comp=Z,15µm,15.0s						
JTS	Las Juntas de	41.49	341	eP	P	02 54 08.4	+0.8
NBPV	Pedro Velho	41.55	64	eP	P	02 54 07.0	-1.2
COVE	Coope Vega, Sa	41.74	342	eP	P	02 54 09.2	-0.4
VMAR	Armenia, Volca	42.03	341	eP	P	02 54 13.9	+1.8
ACON	Acoyapa	43.15	341	P	P	02 54 20.3	-0.8
PRVC	Isla de Provid	43.59	347	eP	P	02 54 25.9	+1.3
BOAB	BOACO BROADBAN	43.75	341	P	P	02 54 24.6	-1.3
BOAB				IAmb	IAmb	02 54 47.4	
	comp=Z,1µm,1.7s						
BBGH	Gun Hill	44.10	18	IAMs_20	IAMs_20	03 14 53.8	
	comp=Z,36µm,19.0s						
MPOM	Morne Pois Mar	45.02	15	P	P	02 54 34.4	-1.7
FDF	Fort de France	45.24	15	P	P	02 54 36.4	-1.5
FDF				pmax	pmax		
	comp=Z,573nm,1.3s						
FDF				MLR	MLR		
	comp=Z,31µm,18.0s						
FDF	Fort de France	45.24	15	P	P	02 54 36.4	-1.5
FDF				IAmb	IAmb	02 54 52.1	
	comp=Z,573nm,1.3s						
FDF				IAMs_20	IAMs_20	03 14 57.4	
	comp=Z,31µm,18.0s						
SVN	Savane Anatole	45.34	15	IAMs_20	IAMs_20	03 14 59.0	
	comp=Z,34µm,19.0s						
TGUH	Tegucigalpa,Un	45.75	339	eP	P	02 54 42.3	+0.3
TGUH	Tegucigalpa,Un	45.75	339	P	P	02 54 40.9	-1.1
TGUH				IAmb	IAmb	02 55 05.2	
	comp=Z,472nm,1.1s						
CELP	Cerrillos	47.61	7	P	P	02 54 55.1	-1.4
CELP				IAmb	IAmb	02 55 15.2	
	comp=Z,400nm,0.9s						
SJG	San Juan	47.70	8	P	P	02 54 55.6	-1.5
SJG				pmax	pmax		
	comp=Z,298nm,1.1s						
SJG	San Juan	47.70	8	eP	P	02 54 54.4	-2.7
SJG	San Juan	47.70	8	P	P	02 54 55.6	-1.5
SJG				IAmb	IAmb	02 55 17.2	
	comp=Z,298nm,1.1s						
MTDJ	Mount Denham	47.76	353	eP	P	02 54 57.2	-0.5
AOPR	Arecibo Observ	47.86	7	IAmb	IAmb	02 55 13.4	
	comp=Z,393nm,1.1s						
ANWB	Willy Bob	47.95	13	P	P	02 54 57.6	-1.5
SMRT	St. Maarten	48.08	12	IAmb	IAmb	02 55 10.8	
	comp=Z,344nm,1.2s						
SDDR	Presa de Saban	48.23	1	eP	P	02 55 01.8	+0.5
GTBY	Guantanamo Bay	49.25	356	eP	P	02 55 04.7	-4.4
GTBY	Guantanamo Bay	49.25	356	P	P	02 55 07.9	-1.2
CCIG	Comitan	49.49	334	P	P	02 55 09.8	-1.4
SOR	Soroa	53.07	347	P	P	02 55 36.1	-1.6
SOR				IAmb	IAmb	02 56 00.8	
	comp=Z,457nm,1.5s						
VNA3	Neumayer Olymp	53.52	159	P	P	02 55 40.1	-0.5
VNA1	Neumayer--Stat	53.80	158	P	P	02 55 42.3	-0.3
VNA2	Neumayer--Watz	54.15	158	P	P	02 55 44.4	-0.7
	baz=286,slow=8.3						
VNA2				S	S	03 03 25.2	+3.3
UNM	Universidad Na	55.17	328	IAMs_20	IAMs_20	03 15 46.8	
	comp=Z,24µm,19.0s						
SNAA	Sanae	55.74	159	P	P	02 55 55.8	-0.9
SNAA				S	S	03 03 44.9	+1.6
SNAA	Sanae	55.74	159	LR	LR	03 18 04.9	
	comp=Z,59µm,20.6s,baz=295,slow=34						
SNAA	Sanae	55.74	159	ceP	P	02 55 56.4	-0.3
SNAA				pmax	pmax		
	comp=Z,332nm,1.4s						
SNAA				MLR	MLR		
	comp=Z,41µm,17.0s						
SNAA	Sanae	55.74	159	P	P	02 55 55.5	-1.2
SNAA				IAmb	IAmb	02 56 12.5	
	comp=Z,511nm,1.3s						
H10N3	ASCENSION HYDR	58.01	80	P	P	02 56 16.1	+2.9
	baz=222,slow=8.0,SNR=12						
DWPF	Disney Wildern	58.01	350	P	P	02 56 16.8	+3.7
	baz=170						
DWPF				S	S	03 04 12.2	-1.7
	baz=170						
H10N1	ASCENSION HYDR	58.02	80	P	P	02 56 15.1	+1.8
	baz=222,slow=8.0,SNR=11						
H10N2	ASCENSION HYDR	58.02	80	P	P	02 56 16.6	+3.3
	baz=222,slow=8.0,SNR=14						
ASCN	Ascension	58.08	80	P	P	02 56 14.0	-0.1
ASCN				IAMs_20	IAMs_20	03 19 15.2	
	comp=Z,28µm,20.0s						
656A	Willston	59.41	349	IAmb	IAmb	02 56 45.3	
	comp=Z,342nm,1.2s						
553A	Crawfordville	60.54	348	P	P	02 56 30.4	-0.2
QSPA	South Pole Qui	60.70	180	P	P	02 56 31.0	-0.7
QSPA				IAmb	IAmb	02 56 49.5	
	comp=Z,359nm,1.1s						
QSPA	South Pole Qui	60.70	180	IAMs_20	IAMs_20	03 22 37.4	
	comp=Z,31µm,20.0s						
TIGA	Tifton	61.61	349	P	P	02 56 40.3	+2.4
	baz=169						
SHEL	Horse Pasture	61.91	93	IAMs_20	IAMs_20	03 18 34.0	
	comp=Z,23µm,22.0s						
BRAL	Brewton	62.02	345	P	P	02 56 42.5	+1.8
	baz=165,SNR=14						
BRAL				S	S	03 05 02.5	-2.9
	baz=165						
BRAL	Brewton	62.02	345	P	P	02 56 40.0	-0.7
250A	Grady	62.64	346	IAmb	IAmb	02 57 08.6	
	comp=Z,385nm,1.4s						
NHSC	New Hope	62.76	352	P	P	02 56 49.3	+3.8
	baz=172,SNR=6.5						
NHSC				S	S	03 05 13.2	-1.5
	baz=172						
NHSC	New Hope	62.76	352	P	P	02 56 44.5	-1.1
833A	Chaparral WMA,	63.18	333	P	P	02 56 51.0	+2.5
	baz=154,SNR=64						
833A				S	S	03 05 21.7	+1.4
	baz=154						
344A	Westbrook Farm	63.19	342	P	P	02 56 48.3	-0.2
344A				IAmb	IAmb	02 57 12.1	
	comp=Z,368nm,1.1s						
HKT	Hockley	63.34	337	i P	P	02 56 51.7	+2.3
HKT				MLR	MLR		
	comp=Z,6µm,14.0s						
Y60A	Bolivia	63.45	354	IAmb	IAmb	02 57 14.5	
	comp=Z,213nm,1.0s						
GOGA	Godfrey	63.52	349	P	P	02 56 50.0	-0.6
GOGA				pmax	pmax		
	comp=Z,387nm,1.7s						
GOGA	Godfrey	63.52	349	P	P	02 56 52.6	+2.0
	baz=169,SNR=20						
GOGA				S	S	03 05 21.3	-2.9
	baz=169						
GOGA	Godfrey	63.52	349	P	P	02 56 50.0	-0.6
GOGA				IAmb	IAmb	02 57 13.5	
	comp=Z,387nm,1.6s						
Y57A	Sumter	63.69	352	IAmb	IAmb	02 57 15.0	
	comp=Z,464nm,1.6s						
VBMS	Vicksburg	63.86	343	P	P	02 56 55.6	+2.7
	baz=162,SNR=12						
JSC	Jenkinsville	64.06	352	IAmb	IAmb	02 57 17.4	
	comp=Z,370nm,1.8s						
Y52A	Lilburn	64.06	349	IAmb	IAmb	02 57 16.4	
	comp=Z,367nm,1.4s						
HODGE	Hodges	64.14	351	IAmb	IAmb	02 57 17.0	
	comp=Z,381nm,1.8s						
Z47A	Carrollton	64.20	345	IAmb	IAmb	02 57 17.5	
	comp=Z,308nm,1.4s						
SLBS	Sierra La Lagu	64.23	321	P	P	02 56 53.7	-2.0
BIRD	Birdtown, Kers	64.32	352	IAmb	IAmb	02 57 19.1	
	comp=Z,551nm,1.7s						
SACV	Santiago Islan	64.34	53	P	P	02 56 56.6	+0.1
SACV				IAmb	IAmb	02 57 17.4	
	comp=Z,178nm,0.9s						
NATX	Nacogdoches	64.62	339	P	P	02 57 00.8	+2.9
	baz=158,SNR=12						
CNNC	Cliffs of the	64.65	355	P	P	02 57 01.1	+3.1
	baz=174						
PAULI	Pauline	64.66	351	IAmb	IAmb	02 57 21.4	
	comp=Z,466nm,1.6s						
435B	Jarrell	64.71	336	P	P	02 57 00.4	+1.8
	baz=156						
HPIG		64.72	327	IAmb	IAmb	02 57 11.5	
	comp=Z,221nm,1.5s						
W57A	Gilead	64.77	353	IAmb	IAmb	02 57 21.9	
	comp=Z,233nm,1.3s						
KMSC	Kings Mountain	64.91	352	P	P	02 57 01.9	+2.2
	baz=171,SNR=14						
KMSC				S	S	03 05 39.7	-1.8
	baz=171						
KMSC	Kings Mountain	64.91	352	IAmb	IAmb	02 57 23.0	
	comp=Z,328nm,1.6s						
BG3	Lake Jocassee	64.99	350	IAmb	IAmb	02 57 23.8	
	comp=Z,343nm,1.4s						
FPAL	Fort Paine	64.99	348	IAmb	IAmb	02 57 22.3	
	comp=Z,331nm,1.5s						
W52A	Murphy	65.24	349	IAmb	IAmb	02 57 25.3	
	comp=Z,497nm,1.5s						
JCT	Junction City	65.27	334	P	P	02 57 04.0	+1.8
	baz=154,SNR=37						
JCT				S	S	03 05 47.9	+1.9
	baz=154						
Z41A	Richland Creek	65.46	341	P	P	02 57 05.6	+2.3
	baz=160,SNR=11						
Z41A				S	S	03 05 50.2	+2.0
	baz=160						
W50A	Signal Mountai	65.58	348	IAmb	IAmb	02 57 28.2	
	comp=Z,199nm,1.0s						
V55A	Taylorsville	65.60	352	IAmb	IAmb	02 57 27.6	
	comp=Z,474nm,1.6s						
V53A	Saluda	65.63	350	IAmb	IAmb	02 57 27.6	
	comp=Z,288nm,1.3s						
CPCT	Cooper Cave	65.69	349	P	P	02 57 03.6	-1.2
SWET	Sewanee	65.71	348	P	P	02 57 03.6	-1.4
SWET				IAmb	IAmb	02 57 29.0	
	comp=Z,252nm,1.1s						
WHTX	Lake Whitney,	65.77	336	P	P	02 57 07.5	+2.2
	baz=156,SNR=19						

CCAR	Cane Creek	65.80	342	IAmb	IAmb	02 57 28.8		comp=Z,235nm,1.1s
TXAR	Lajitas Array	65.85	330	P	P	02 57 06.5	+0.4	comp=Z,14nm,0.9s,baz=154,slow=5.5,SNR=82
TXAR				LR	LR	03 23 00.3		comp=Z,11µm,18.2s,baz=0.0,slow=33
TXAR				PKP2bc		03 25 51.2		comp=Z,4.4nm,1.0s,baz=265,slow=0.8,SNR=14
TXAR	Lajitas Array	65.85	330	P	P	02 57 05.8	-0.3	
TXAR	Lajitas Array	65.85	330	P	P	02 57 05.8	-0.3	
TX31	Lajitas Ar. Si	65.85	330	IAmb	IAmb	02 57 43.5		comp=Z,216nm,0.9s
PLAL	Pickwick Lake	65.92	346	P	P	02 57 05.2	-1.0	
PLAL				IAmb	IAmb	02 57 28.2		comp=Z,315nm,1.4s
V51A	Loudon	66.00	349	IAmb	IAmb	02 57 29.0		comp=Z,312nm,1.3s
T57A	Hurt	66.52	354	IAmb	IAmb	02 57 33.5		comp=Z,346nm,1.6s
TZTN	Tazewell	66.60	350	P	P	02 57 11.7	+1.1	baz=169,SNR=16
TZTN				S	S	03 06 00.1	-2.0	baz=169
X40A	Basin Creek Fa	66.62	341	P	P	02 57 14.2	+3.4	baz=160,SNR=6.9
X40A				S	S	03 06 02.3	-0.1	baz=160
CLTN	Cedars of Leba	66.64	347	P	P	02 57 10.4	-0.4	
TAOE	Nuku Hiva Isla	66.66	273	*e*S	S	03 06 04.8	+0.9	comp=Z,80µm,32.7s
TAOE	Nuku Hiva Isla	66.66	273	*e*LR	LR	03 17 12.6		comp=Z,65µm,31.9s
BLA	Blacksburg	66.85	353	P	P	02 57 15.9	+3.6	baz=172
BLA				S	S	03 06 04.7	-0.3	baz=172
BLA	Blacksburg	66.85	353	IAmb	IAmb	02 57 35.9		comp=Z,518nm,1.7s
MIAR	Mount Ida	66.89	341	P	P	02 57 13.8	+1.3	baz=160,SNR=23
MIAR				S	S	03 06 04.3	-1.2	baz=160
WVT	Waverly	66.97	346	P	P	02 57 11.9	-1.1	
WVT				pmax	pmax			comp=Z,1µm,2.0s
WVT	Waverly	66.97	346	P	P	02 57 13.9	+1.0	baz=165
WVT				S	S	03 06 03.5	-3.0	baz=165
WVT	Waverly	66.97	346	P	P	02 57 11.9	-1.1	
W41B	Gary Mavity, V	67.11	342	P	P	02 57 15.4	+1.5	baz=161,SNR=20
ABTX	Abilene, Hawle	67.12	335	P	P	02 57 15.6	+1.6	baz=154,SNR=43
ABTX				S	S	03 06 09.8	+1.3	baz=154
WHAR	Wooly Hollow	67.23	342	IAmb	IAmb	02 57 38.4		comp=Z,555nm,1.7s
S57A	Dark Hollow, R	67.24	354	IAmb	IAmb	02 57 38.4		comp=Z,588nm,1.8s
T50A	Nancy	67.27	349	IAmb	IAmb	02 57 37.9		comp=Z,532nm,1.8s
SBA	Scott Base	67.45	191	P	P	02 57 15.2	-0.4	
SBA				pmax	pmax			comp=Z,506nm,2.0s
SBA				MLR	MLR			comp=Z,17µm,18.0s
SBA	Scott Base	67.45	191	P	P	02 57 15.2	-0.4	
SBA				IAmb	IAmb	02 58 41.7		comp=Z,506nm,1.9s
SBA	Scott Base	67.45	191	IAMs_20	IAMs_20	03 26 25.3		comp=Z,17µm,18.0s
S54A	Dingess, Beckl	67.53	352	IAmb	IAmb	02 57 39.5		comp=Z,537nm,1.6s
W39A	Magazine	67.56	341	P	P	02 57 18.0	+1.3	baz=160,SNR=62
W39A				S	S	03 06 13.5	-0.1	baz=160
CBN	Corbin Frederi	67.56	355	P	P	02 57 19.1	+2.5	baz=175
CBN				S	S	03 06 13.9	+0.4	baz=175
LCAR	Lake Charles	67.68	343	IAmb	IAmb	02 57 39.8		comp=Z,277nm,1.3s
FCAR	Ozark Folk Cen	67.75	342	IAmb	IAmb	02 57 40.4		comp=Z,270nm,1.5s
R55A	Marlinton	67.87	353	P	P	02 57 18.6	-0.1	
R53A	Hurricane	68.13	352	IAmb	IAmb	02 57 43.4		comp=Z,280nm,1.5s
PBMO	Poplar Bluff	68.17	344	IAmb	IAmb	02 57 43.0		comp=Z,374nm,1.2s
U40A	Yellville	68.39	342	P	P	02 57 21.7	-0.3	baz=161,SNR=54
U40A	Yellville	68.39	342	IAmb	IAmb	02 57 44.5		comp=Z,172nm,1.1s
R50A	Paris	68.42	350	IAmb	IAmb	02 57 45.1		comp=Z,418nm,1.7s
TBI	Tubuai	68.42	255	*e*P	P	02 57 25.0	+2.4	comp=Z,634nm,1.2s
TBI				*e*S	S	03 06 26.1	+1.4	comp=Z,40µm,32.2s
TBI				*e*LQ	LQ	03 15 11.6		comp=Z,20µm,34.8s
TBI				*e*LR	LR	03 17 59.6		comp=Z,87µm,30.2s,baz=103
TBI	Tubuai	68.42	255	*e*T	T	04 12 17.6		comp=Z,28nm,0.2s
VNDA	Vanda	68.48	191	P	P	02 57 24.4	+2.3	comp=Z,3.6nm,0.9s,baz=143,slow=5.1,SNR=22
VNDA				LR	LR	03 21 56.0		comp=Z,14µm,21.8s,baz=139,slow=31
VNDA				PKPPKP	P'P'df	03 25 35.9	-9.0	comp=Z,5.1nm,1.0s,baz=284,slow=2.8,SNR=9.5
VNDA	Vanda	68.48	191	P	P	02 57 22.7	+0.6	
VNDA				pmax	pmax			comp=Z,163nm,1.6s
VNDA	Vanda	68.48	191	P	P	02 57 22.7	+0.6	
R49A	Shelbyville	68.57	349	IAmb	IAmb	02 57 45.9		comp=Z,387nm,1.4s
MNTX	Cornudas Mount	68.63	330	P	P	02 57 23.0	-0.6	baz=149,SNR=61
Q54A	Coxs Mills	68.64	353	IAmb	IAmb	02 57 48.9		comp=Z,334nm,1.8s
WCI	Wyandotte Cave	68.70	348	P	P	02 57 22.8	-1.1	
WCI				pmax	pmax			comp=Z,857nm,2.0s
WCI	Wyandotte Cave	68.70	348	P	P	02 57 24.6	+0.8	baz=167
WCI	Wyandotte Cave	68.70	348	P	P	02 57 22.8	-1.1	
WMOK	Wichita Mounta	68.72	337	P	P	02 57 24.7	+0.6	baz=155,SNR=38
WMOK				S	S	03 06 28.3	+0.8	baz=155
MBO	M'Bour	68.76	58	P	P	02 57 25.0	+0.3	
MBO				IAMs_20	IAMs_20	03 26 21.0		comp=Z,17µm,20.0s
S44A	Carbondale	68.78	345	IAmb	IAmb	02 57 48.6		comp=Z,373nm,1.2s
SIUC	Southern Illin	68.79	345	P	P	02 57 22.9	-1.6	
TUL1	Leonard	68.81	339	P	P	02 57 24.7	+0.1	baz=158,SNR=39
MGMO	Mountain Grove	68.99	343	IAmb	IAmb	02 57 48.3		comp=Z,241nm,1.3s
P60A	Greenville	69.06	357	P	P	02 57 28.5	+2.5	baz=177
P60A				S	S	03 06 31.7	+0.4	baz=177
MCWV	Mont Chateau	69.21	354	P	P	02 57 28.8	+1.8	baz=173
MCWV	Mont Chateau	69.21	354	IAmb	IAmb	02 57 50.6		comp=Z,374nm,1.5s
P52A	Corning	69.44	352	P	P	02 57 29.5	+1.1	baz=171,SNR=19
MSTX	Muleshoe	69.51	333	P	P	02 57 29.5	+0.4	baz=152,SNR=41
MSTX	Muleshoe	69.51	333	P	P	02 57 29.1	-0.1	
MSTX				IAmb	IAmb	02 58 05.2		comp=Z,243nm,1.1s
OLIL	Olney	69.54	347	IAmb	IAmb	02 57 52.7		comp=Z,548nm,1.4s
CCM	Cathedral Cave	69.58	344	P	P	02 57 28.5	-0.8	
CCM				pmax	pmax			comp=Z,297nm,1.1s
CCM	Cathedral Cave	69.58	344	P	P	02 57 30.3	+0.9	baz=162
CCM				S	S	03 06 36.6	-1.0	baz=162
CCM	Cathedral Cave	69.58	344	P	P	02 57 28.5	-0.8	
CCM				IAmb	IAmb	02 57 53.8		comp=Z,297nm,1.1s
BLO	Bloomington	69.66	348	IAmb	IAmb	02 57 52.7		comp=Z,575nm,1.6s
O56A	Blue Knob Stat	69.70	355	P	P	02 57 32.2	+2.1	baz=174,SNR=11
O56A				S	S	03 06 38.3	-0.7	baz=174
P49A	Miami Univ. Ec	69.71	350	P	P	02 57 30.9	+0.8	baz=168,SNR=12
S39A	Bolivar	69.77	342	IAmb	IAmb	02 57 53.1		comp=Z,277nm,1.2s
O54A	Avella	69.78	353	P	P	02 57 30.0	-0.5	
O52A	Adamsville	69.88	352	IAmb	IAmb	02 57 54.1		comp=Z,328nm,1.4s
Q44A	Meyer Farm, Va	69.89	346	IAmb	IAmb	02 57 54.8		comp=Z,373nm,1.2s
AMTX	Amarillo	69.90	334	P	P	02 57 32.9	+1.5	baz=153
SLM	Saint Louis	69.90	345	IAmb	IAmb	02 57 55.6		comp=Z,440nm,1.2s
O53A	New Philadelph	69.94	353	P	P	02 57 32.5	+1.0	baz=172,SNR=11
O53A	New Philadelph	69.94	353	IAmb	IAmb	02 57 54.6		comp=Z,622nm,1.6s
SSPA	Standing Stone	70.01	355	P	P	02 57 34.0	+2.1	baz=175
SSPA				S	S	03 06 43.3	+0.7	baz=175
SSPA	Standing Stone	70.01	355	P	P	02 57 32.5	+0.6	
SYO	Syowa Base	70.03	159⇓	*e*P	P	02 57 28.0	-3.8	
SYO	Syowa Base	70.03	159⇑	*i*pP	P	02 57 31.4	-0.4	
SYO	Syowa Base	70.03	159⇑	*i*sP	sP	02 57 34.0	+0.5	
R40A	Maddies Statio	70.06	343	IAmb	IAmb	02 57 56.7		comp=Z,378nm,1.1s
ACSO	Alum Creek Sta	70.14	351	P	P	02 57 33.9	+1.2	baz=170,SNR=27
ACSO				S	S	03 06 40.6	-3.5	baz=170
N59A	State Game Lan	70.17	357	P	P	02 57 35.3	+2.4	baz=177,SNR=18
N59A				S	S	03 06 47.3	+2.9	baz=177
PAL	Palisades	70.19	359	S	S	03 06 46.0	+1.4	baz=178
P46A	Rosedale	70.22	348	IAmb	IAmb	02 57 53.2		comp=Z,253nm,1.0s
VAH	Vaihoa	70.27	263	*e*P	P	02 57 36.2	+2.1	comp=Z,321nm,1.4s
O49A	Covington	70.29	350	IAmb	IAmb	02 57 55.6		comp=Z,541nm,1.4s
121A	Cookes Peak, D	70.42	328	P	P	02 57 37.0	+2.2	baz=148,SNR=28
121A	Cookes Peak, D	70.42	328	P	P	02 57 35.1	+0.3	
121A				IAmb	IAmb	02 58 24.0		comp=Z,214nm,1.2s
N54A	Moraine State	70.51	354	P	P	02 57 36.7	+1.7	baz=173
N54A				S	S	03 06 45.9	-2.5	baz=173
PMOR	Pomariorio Ree	70.61	263	*e*P	P	02 57 38.5	+2.3	comp=Z,218nm,1.2s
P43A	Skaggs, Pawnee	70.71	346	IAmb	IAmb	02 58 00.1		comp=Z,512nm,1.3s
PAE	Paea	70.90	260	*e*P	P	02 57 40.4	+2.5	comp=Z,83nm,1.1s
PPTF	Pamatai, Papee	70.92	260	IAMs_20	IAMs_20	03 20 13.8		comp=Z,36µm,22.0s
PPT2	Papeete2	70.93	260	*e*P	P	02 57 40.6	+2.4	comp=Z,312nm,1.1s
PPT2				*e*S	S	03 06 54.8	+0.3	comp=Z,35µm,29.0s
PPT2	Papeete2	70.93	260	*e*LR	LR	03 19 18.9		comp=Z,85µm,24.0s,baz=115
PPT2	Papeete2	70.93	260	*e*T	T	04 15 30.5		comp=Z,3.6nm,0.3s
PPT	Papeete	70.94	260	P	P	02 57 41.3	+3.1	comp=Z,204nm,1.2s,baz=84,slow=6.5,SNR=7.2
PPT				LR	LR	03 20 46.1		comp=Z,24µm,19.5s,baz=110,slow=29
SFIN	Lafayette	70.94	348	P	P	02 57 37.8	+0.2	baz=166
SFIN				S	S	03 06 47.6	-5.7	baz=166
SFIN	Lafayette	70.94	348	IAmb	IAmb	02 57 59.0		comp=Z,279nm,1.3s
M54A	Oil Creek Stat	71.03	354	P	P	02 57 39.5	+1.4	baz=173
M53A	WI Miller and	71.06	353	P	P	02 57 39.9	+1.7	baz=172,SNR=6.5
M53A				S	S	03 06 48.8	-5.9	baz=172
P40A	Paris	71.18	344	IAmb	IAmb	02 58 01.6		comp=Z,536nm,1.3s
ALLY	Alegheny Colle	71.21	354	P	P	02 57 39.9	+0.6	
M50A	Fremont	71.30	351	IAmb	IAmb	02 58 03.6		comp=Z,429nm,1.3s
Y22D	IRIS PASSCAL I	71.33	330	IAMs_20	IAMs_20	03 26 15.8		comp=Z,16µm,18.0s
BINY	Binghamton	71.46	357	P	P	02 57 43.2	+2.5	baz=176,SNR=6.8
BINY				S	S	03 07 00.1	+0.8	baz=176
HDIL	Hopedale	71.54	346	P	P	02 57 42.5	+1.3	baz=164,SNR=12
L61B	Northampton	71.62	360	P	P	02 57 43.9	+2.2	baz=180,SNR=14
L61B				S	S	03 07 02.7	+1.5	baz=180
P38A	Dawn	71.64	343	IAmb	IAmb	02 58 04.1		comp=Z,222nm,1.3s
TUC	Tucson	71.64	326	P	P	02 57 44.4	+2.2	baz=145
ERPA	Erie	71.66	354	P	P	02 57 43.3	+1.4	baz=173
ERPA	Erie	71.66	354	IAmb	IAmb	02 58 06.0		comp=Z,298nm,1.2s
HRV	Adam Dziewonsk	71.67	0	P	P	02 57 44.8	+2.8	baz=180
HRV				S	S	03 07 04.6	+2.9	baz=180
ANMO	Albuquerque	71.87	331	*ce*P	P	02 57 45.5	+1.9	
ANMO				pmax	pmax			comp=Z,108nm,1.6s
ANMO	Albuquerque	71.87	331	P	P	02 57 45.7	+2.1	baz=149
ANMO	Albuquerque	71.87	331	P	P	02 57 43.6	0.0	
KSU1	Kansas State U	72.01	340	P	P	02 57 45.5	+1.4	baz=158
KSU1				S	S	03 07 04.6	-1.3	baz=158
N41A	Harden Midland	72.02	345	IAmb	IAmb	02 58 06.1		comp=Z,467nm,1.3s
L48A	N Adams	72.02	350	IAmb	IAmb	02 58 07.7		comp=Z,448nm,1.2s
AAM	Ann Arbor	72.27	351	P	P	02 57 47.5	+2.0	baz=170
214A	Organ Pipe Nat	72.37	324	P	P	02 57 48.5	+2.1	baz=144,SNR=28
ACCN	Adirondack Com	72.56	359	P	P	02 57 47.5	+0.2	
ACCN				IAmb	IAmb	02 58 11.6		comp=Z,608nm,1.8s
J56A	Wolcott	72.58	356	IAmb	IAmb	02 58 10.8		comp=Z,453nm,1.5s
K50A	Casco	72.60	352	IAmb	IAmb	02 58 11.0		comp=Z,378nm,1.1s
J59A	Piesco	72.67	358	P	P	02 57 48.4	+0.5	
J59A				IAmb	IAmb	02 58 11.8		comp=Z,544nm,1.7s
J57A	Williamstown	72.67	357	IAmb	IAmb	02 58 11.6		comp=Z,646nm,1.7s
N38A	Joes South For	72.67	343	IAmb	IAmb	02 58 10.3		comp=Z,307nm,1.2s
J54A	Appleton	72.69	355	IAmb	IAmb	02 58 11.6		comp=Z,828nm,1.9s
CBKS	Cedar Bluff	72.73	338	P	P	02 57 50.0	+1.5	baz=155,SNR=18
CBKS	Cedar Bluff	72.73	338	IAmb	IAmb	02 58 08.8		comp=Z,515nm,1.8s
L44A	Lake County Fo	72.83	348	P	P	02 57 50.2	+1.3	baz=166
L44A				S	S	03 07 10.5	-4.6	baz=166
L44A	Lake County Fo	72.83	348	IAmb	IAmb	02 58 12.7		comp=Z,383nm,1.2s
T25A	Trinidad	72.93	333	P	P	02 57 52.5	+2.6	baz=151,SNR=24
T25A	Trinidad	72.93	333	IAmb	IAmb	02 58 11.1		comp=Z,294nm,1.4s
L42A	Oliver, Polo	73.00	346	IAmb	IAmb	02 58 12.1		comp=Z,275nm,1.4s
N35A	Tabor	73.36	342	P	P	02 57 51.1	-1.0	
N35A				IAmb	IAmb	02 58 11.0		comp=Z,190nm,0.9s
L40A	Anamosa	73.39	345	IAmb	IAmb	02 58 16.2		comp=Z,467nm,1.1s
LBNH	Lisbon	73.41	0	P	P	02 57 54.9	+2.6	baz=180,SNR=5.7
LBNH				S	SKiKP	03 07 25.8	+2.0	baz=180
LIC	Lamto	73.41	73	*e*P	P	02 57 52.2	-0.8	comp=Z,1µm,2.5s
K43A	Burlington	73.42	348	IAmb	IAmb	02 58 15.7		comp=Z,290nm,1.2s
W18A	Petrified Fore	73.46	328	P	P	02 57 55.4	+2.3	baz=146,SNR=30
TIC	Toumodi	73.65	72	*e*P	P	02 57 53.4	-1.0	
SCIA	State Center	73.71	344	P	P	02 57 55.6	+1.5	baz=161
SCIA				S	SKiKP	03 07 24.0	-0.4	baz=161
SCIA	State Center	73.71	344	IAmb	IAmb	02 58 16.7		comp=Z,407nm,1.4s
KIC	Kosan Boka	73.72	73	*e*P	P	02 57 54.2	-0.7	comp=Z,334nm,0.9s
I49A	Point Hope	73.77	352	IAmb	IAmb	02 58 17.9		comp=Z,354nm,1.2s
DBIC	Dimbokro	73.80	72	P	P	02 57 54.6	-0.6	comp=Z,81nm,0.9s,baz=242,slow=5.1,SNR=34
DBIC				LR	LR	03 28 33.9		comp=Z,14µm,19.8s,baz=240,slow=34
DBIC	Dimbokro	73.80	72	P	P	02 57 54.0	-1.2	
DBIC				pmax	pmax			comp=Z,604nm,1.4s
DBIC	Dimbokro	73.80	72	P	P	02 57 54.0	-1.2	
DBIC				IAmb	IAmb	02 58 06.5		comp=Z,604nm,1.4s
LONY	Lake Ozonia	73.82	358	P	P	02 57 55.7	+1.0	baz=178
LONY				S	S	03 07 26.8	+0.5	baz=178
LONY	Lake Ozonia	73.82	358	IAmb	IAmb	02 58 18.6		comp=Z,398nm,1.6s
SDCO	Great Sand Dun	73.88	333	P	P	02 57 58.0	+2.4	baz=150
SDCO				S	S	03 07 30.3	+2.4	baz=150
KSCO	Kaye Shedlock'	73.90	336	P	P	02 57 58.1	+2.6	baz=153
EMMW	East Machias	73.99	3	P	P	02 57 55.5	-0.2	
JFWS	Jewell Farm	74.00	346	P	P	02 57 54.8	-1.0	
JFWS				pmax	pmax			comp=Z,852nm,1.8s
JFWS	Jewell Farm	74.00	346	P	P	02 57 57.0	+1.2	baz=164,SNR=26
JFWS				S	SKiKP	03 07 26.0	+1.3	baz=164
JFWS	Jewell Farm	74.00	346	P	P	02 57 54.8	-1.0	
JFWS				IAmb	IAmb	02 58 19.2		comp=Z,852nm,1.8s
FRNY	Flat Rock	74.01	359	IAmb	IAmb	02 58 19.7		comp=Z,407nm,1.6s
SADO	Sadowa	74.22	355	IAmb	IAmb	02 58 21.1		comp=Z,363nm,1.2s
GLA	Glamis	74.27	324	P	P	02 57 59.6	+1.9	baz=142
K38A	Parkersburg	74.31	344	IAmb	IAmb	02 58 19.7		comp=Z,523nm,1.7s
G62A	West of Eustis	74.40	1	P	P	02 57 57.9	-0.2	
S22A	4UR Ranch, Cre	74.42	332	P	P	02 58 01.2	+2.5	baz=149,SNR=19
GGN	Saint George	74.44	4	P	P	02 57 58.3	+0.1	
GGN				IAmb	IAmb	02 58 22.8		comp=Z,437nm,1.9s
PKME	Peaks-Kenny Pk	74.47	2	P	P	02 58 00.3	+1.9	baz=183
WUAZ	Wupatki	74.55	328	P	P	02 58 01.8	+2.4	baz=145,SNR=15
BGNE	Belgrade	74.59	340	P	P	02 58 00.8	+1.5	baz=157
BGNE	Belgrade	74.59	340	IAmb	IAmb	02 58 24.7		comp=Z,271nm,1.1s
IKP	In-Ko-Pah, Jac	74.63	323	P	P	02 58 01.4	+1.6	baz=141
MVCO	Mesa Verde	74.66	331	P	P	02 58 01.9	+1.8	baz=148,SNR=36
I42A	Draeger Farm,	74.67	347	IAmb	IAmb	02 58 22.0		comp=Z,378nm,1.6s
SWSC	Sam W. Stewart	74.69	323	P	P	02 58 02.5	+2.4	baz=142
Q24A	Divide	74.80	334	P	P	02 58 02.7	+1.8	baz=151
GLMI	Grayling	74.87	351	P	P	02 58 02.1	+1.3	baz=169
GLMI	Grayling	74.87	351	IAmb	IAmb	02 58 23.7		comp=Z,317nm,1.3s
PDMCI	Parker Dam,Lak	74.91	325	P	P	02 58 02.9	+1.6	baz=143
MONP2	Monument Peak	74.98	322	P	P	02 58 04.1	+2.1	baz=141
H43A	Windswept, Lux	75.02	348	IAmb	IAmb	02 58 25.7		comp=Z,206nm,1.1s
BC3	Big Chuckawall	75.06	324	P	P	02 58 05.0	+2.6	baz=142,SNR=16
G45A	Suttons Bay	75.24	350	IAmb	IAmb	02 58 25.9		comp=Z,520nm,1.8s
IRM	Iron Mountain	75.30	324	P	P	02 58 06.1	+2.5	baz=142,SNR=11
TRQ	Mont Tremblant	75.42	358	IAmb	IAmb	02 58 27.5		comp=Z,532nm,1.8s
TPFO	Pinon Flats	75.55	323	P	P	02 58 07.3	+2.1	baz=141
PFO	Pinyon Flats O	75.56	323	P	P	02 58 07.3	+2.1	baz=141,SNR=7.5
BELC	Belle Mtn. Jos	75.62	323	P	P	02 58 07.8	+2.2	baz=142
SMCO	Snowmass	75.70	333	IAmb	IAmb	02 58 45.5		comp=Z,229nm,1.1s
ISCO	Idaho Springs	75.70	334	P	P	02 58 04.6	-1.5	
ISCO				pmax	pmax			comp=Z,211nm,1.7s
ISCO	Idaho Springs	75.70	334	P	P	02 58 07.8	+1.6	baz=150,SNR=31
ISCO	Idaho Springs	75.70	334	P	P	02 58 04.6	-1.5	
I37A	Lemond, Waseca	75.75	344	IAmb	IAmb	02 58 28.3		comp=Z,587nm,1.6s
K31A	O'Neill	75.88	340	P	P	02 58 05.9	-0.8	
PQI	Presque Isle	75.92	3	P	P	02 58 06.2	-0.6	
MURC	Murrieta	75.94	322	P	P	02 58 09.9	+2.7	baz=141,SNR=9.9
GMRC	Granite Mounta	76.06	324	P	P	02 58 10.1	+2.0	baz=142,SNR=37
G40A	Rib Lake	76.25	347	IAmb	IAmb	02 58 32.1		comp=Z,708nm,1.9s
D62A	Allapoint, All	76.30	2	P	P	02 58 09.0	+0.1	
D62A				IAmb	IAmb	02 58 33.1		comp=Z,786nm,1.9s
ECSD	EROS Data Cent	76.30	342	P	P	02 58 09.0	0.0	baz=158,SNR=58
ECSD				S	S	03 07 52.9	-1.0	baz=158
ECSD	EROS Data Cent	76.30	342	IAmb	IAmb	02 58 31.7		comp=Z,357nm,1.2s
F42A	Maple Grove Fa	76.34	348	IAmb	IAmb	02 58 32.8		comp=Z,258nm,1.4s
E46A	Sault Ste Mari	76.34	351	IAmb	IAmb	02 58 33.1		comp=Z,562nm,1.3s
HEC	Hector,Ludlow	76.44	324	P	P	02 58 12.8	+2.6	baz=141,SNR=9.0
BFSC	Mount Baldy Ra	76.67	323	P	P	02 58 14.1	+2.5	baz=140
SPMN	Marine on St.	76.75	345	P	P	02 58 12.5	+1.0	baz=162,SNR=12
SPMN	Marine on St.	76.75	345	IAmb	IAmb	02 58 33.6		comp=Z,228nm,1.3s
N23A	Red Feather La	76.78	334	P	P	02 58 14.5	+2.4	baz=150,SNR=29
COWI	Conover	76.85	348	IAmb	IAmb	02 58 35.6		comp=Z,543nm,2.0s
MTPU	Mount Pierson	76.98	329	P	P	02 58 12.4	-1.1	
SUR	Sutherland	77.03	120	P	P	02 58 14.5	+0.6	
SUR				IAmb	IAmb	02 58 37.6		comp=Z,287nm,1.1s
SUR	Sutherland	77.03	120	IAMs_20	IAMs_20	03 27 16.2		comp=Z,25µm,20.0s

O20A	**White River Ci**	**77.03**	**332**	P	**P**	**02 58 15.8**	**+2.3**
	baz=148,SNR=40						
O20A	**White River Ci**	**77.03**	**332**	IAmb	IAmb	02 58 49.4	
	comp=Z,254nm,1.2s						
GSC	**Goldstone, Bar**	**77.05**	**324**	P	**P**	**02 58 16.4**	**+2.8**
	baz=141,SNR=11						
CCUT	**Cedar City**	**77.13**	**327**	IAmb	IAmb	02 58 35.7	
	comp=Z,243nm,1.4s						
SHOC	**Shoshone, Teco**	**77.24**	**325**	P	**P**	**02 58 17.5**	**+3.0**
	baz=142						
EDW2	**Edwards Air Fo**	**77.34**	**323**	P	**P**	**02 58 16.8**	**+1.6**
	baz=140,SNR=8.8						
P18A	**Preston Nutter**	**77.44**	**331**	IAmb	IAmb	02 58 55.1	
	comp=Z,288nm,1.2s						
MAW	**Mawson**	**77.47**	**164**	P	**P**	**02 58 14.5**	**-0.9**
	comp=Z,32nm,1.0s,baz=212,slow=7.5,SNR=32						
MAW				PKP2bc		03 25 07.8	
	comp=Z,1.7nm,0.8s,baz=301,slow=8.8,SNR=4.2						
MAW				LR	LR	03 33 57.7	
	comp=Z,69µm,18.9s,baz=228,slow=37						
MAW	**Mawson**	**77.47**	**164**	P	**P**	**02 58 14.8**	**-0.6**
	baz=77,SNR=48						
MAW	**Mawson**	**77.47**	**164**	P	**P**	**02 58 14.7**	**-0.8**
OSI	**Osito Audit: C**	**77.53**	**322**	P	**P**	**02 58 19.0**	**+2.7**
	baz=140						
SUSD	**Miller**	**77.61**	**341**	P	**P**	**02 58 17.9**	**+1.5**
	baz=156,SNR=7.7						
SUSD	**Miller**	**77.61**	**341**	IAmb	IAmb	02 58 38.8	
	comp=Z,211nm,1.1s						
LRMC	**Laurel Mtn Rad**	**77.64**	**323**	P	**P**	**02 58 19.4**	**+2.4**
	baz=140,SNR=9.7						
D41A	**Chassel**	**77.67**	**349**	P	**P**	**02 58 16.4**	**-0.2**
D41A				IAmb	IAmb	02 58 41.3	
	comp=Z,438nm,1.2s						
E38A	**The Farm, Brul**	**77.80**	**346**	P	**P**	**02 58 16.9**	**-0.5**
RWWY	**Rawlins**	**77.95**	**334**	IAmb	IAmb	02 58 44.9	
	comp=Z,256nm,1.1s						
RAR	**Rarotonga**	**77.96**	**252**	LR	LR	03 24 10.5	
	comp=Z,21µm,18.3s,baz=122,slow=29						
RAR	**Rarotonga**	**77.96**	**252**	IAMs_20	IAMs_20	03 24 22.2	
	comp=Z,21µm,19.0s						
FURC	**Furnace Creek,**	**77.98**	**324**	P	**P**	**02 58 21.4**	**+2.8**
	baz=141,SNR=16						
F33A	**5 Mile Ranch,**	**78.17**	**343**	IAmb	IAmb	02 58 41.5	
	comp=Z,309nm,1.7s						
ISA	**Isabella, Lake**	**78.19**	**323**	P	**P**	**02 58 21.7**	**+1.7**
	baz=140,SNR=22						
PKM	**Mcpherson Peak**	**78.32**	**322**	P	**P**	**02 58 23.3**	**+2.5**
	baz=139,SNR=11						
H07S1	**FLORES T-PHASE**	**78.39**	**31**	*e*P	**P**	**02 58 20.8**	**-0.1**
K22A	**Casper**	**78.52**	**335**	P	**P**	**02 58 22.7**	**+1.0**
	baz=150,SNR=36						
K22A	**Casper**	**78.52**	**335**	IAmb	IAmb	02 58 49.8	
	comp=Z,215nm,1.1s						
WIN	**Windhoek**	**78.52**	**109**	IAmb	IAmb	02 58 42.3	
	comp=Z,367nm,1.2s						
CWC	**Cottonwood Cre**	**78.58**	**324**	P	**P**	**02 58 24.2**	**+2.0**
	baz=140						
GRAC	**Grapevine Rang**	**78.64**	**325**	P	**P**	**02 58 24.9**	**+2.5**
	baz=141,SNR=12						
VES	**Vestal, Richgr**	**78.65**	**323**	P	**P**	**02 58 24.8**	**+2.4**
	baz=140,SNR=9.4						
SMMC	**Simmler**	**78.74**	**322**	P	**P**	**02 58 25.7**	**+2.8**
	baz=139,SNR=8.6						
KOWA	**Kowa**	**78.82**	**66**	P	**P**	**02 58 23.0**	**-0.8**
KOWA				IAMs_20	IAMs_20	03 32 47.8	
	comp=Z,23µm,19.0s						
KOWA	**Kowa**	**78.82**	**66**	P	**P**	**02 58 23.3**	**-0.4**
R11A	**Troy Canyon, C**	**78.82**	**326**	P	**P**	**02 58 25.0**	**+1.5**
	baz=142,SNR=33						
RSSD	**Black Hills**	**78.92**	**337**	P	**P**	**02 58 23.9**	**0.0**
RSSD				pmax	pmax		
	comp=Z,78nm,1.0s						
RSSD	**Black Hills**	**78.92**	**337**	P	**P**	**02 58 25.2**	**+1.3**
	baz=152						
RSSD	**Black Hills**	**78.92**	**337**	P	**P**	**02 58 23.9**	**0.0**
PICO	**Pico**	**78.98**	**33**	*e*P	**P**	**02 58 24.5**	**+0.3**
	comp=Z,468nm,1.6s						
DUG	**Dugway, Tooele**	**79.02**	**329**	P	**P**	**02 58 26.3**	**+1.8**
	baz=145,SNR=34						
DUG	**Dugway, Tooele**	**79.02**	**329**	IAMs_20	IAMs_20	03 30 27.4	
	comp=Z,14µm,18.0s						
EYMN	**Ely**	**79.07**	**347**	P	**P**	**02 58 25.0**	**+0.6**
	baz=163,SNR=16						
TIN	**Tinemaha, Big**	**79.13**	**324**	P	**P**	**02 58 27.7**	**+2.6**
	baz=140						
ROSA	**Rosais**	**79.24**	**33**	*e*P	**P**	**02 58 26.0**	**+0.4**
	comp=Z,715nm,1.4s						
ROSA	**Rosais**	**79.24**	**33**	P	**P**	**02 58 25.7**	**+0.2**
ROSA				IAmb	IAmb	02 58 56.5	
	comp=Z,445nm,1.2s						
PMAN	**Manadas**	**79.25**	**34**	*e*P	**P**	**02 58 25.6**	**0.0**
	comp=Z,610nm,1.6s						
DRLN	**Deer Lake**	**79.49**	**10**	P	**P**	**02 58 26.3**	**-0.4**
DRLN				IAmb	IAmb	02 58 50.5	
	comp=Z,323nm,1.4s						
PSMN	**Pico do Norte,**	**79.50**	**37**	*e*P	**P**	**02 58 23.4**	**-3.6**
	comp=Z,321nm,1.6s						
PSCM	**Serra do Cume**	**79.77**	**34**	*e*P	**P**	**02 58 28.6**	**+0.1**
	comp=Z,450nm,1.5s						
BW06	**Boulder Array**	**79.78**	**333**	P	**P**	**02 58 30.0**	**+1.2**
	baz=148,SNR=44						
PDAR	**Pinedale Array**	**79.78**	**333**	P	**P**	**02 58 28.4**	**-0.3**
	comp=Z,3.8nm,0.6s,baz=132,slow=8.2,SNR=33						
PDAR				PKKPbc	**PKKPbc**	**03 17 21.9**	**+4.7**
	comp=Z,1.8nm,1.0s,baz=64,slow=3.4,SNR=3.8						
PDAR				LR	LR	03 30 47.7	
	comp=Z,5µm,18.7s,baz=148,slow=33						
PDAR	**Pinedale Array**	**79.78**	**333**	P	**P**	**02 58 28.1**	**-0.6**
GRON	**Grota Negra**	**79.84**	**36**	*e*P	**P**	**02 58 29.3**	**+0.4**
	comp=Z,426nm,2.3s						
MLAC	**Mammoth, Mammo**	**79.88**	**324**	P	**P**	**02 58 32.4**	**+3.0**
	baz=140						
B35A	**Bob, Littlefor**	**79.93**	**346**	IAmb	IAmb	02 58 52.3	
	comp=Z,856nm,1.9s						
BART	**Pico Bartolome**	**80.04**	**36**	*e*P	**P**	**02 58 27.1**	**-2.9**
	comp=Z,394nm,1.3s						
NVAR	**Mina Array Bea**	**80.22**	**325**	P	**P**	**02 58 32.5**	**+1.4**
	comp=Z,9.3nm,1.0s,baz=148,slow=5.8,SNR=26						
NVAR				PKKPbc	**PKKPbc**	**03 17 18.3**	**+2.4**
	comp=Z,1.9nm,0.7s,baz=336,slow=2.0,SNR=4.6						
NVAR	**Mina Array Bea**	**80.22**	**325**	P	**P**	**02 58 30.4**	**-0.7**
AGMN	**Agassiz Nation**	**80.36**	**344**	P	**P**	**02 58 31.1**	**-0.3**
	baz=159,SNR=26						
AGMN	**Agassiz Nation**	**80.36**	**344**	IAmb	IAmb	02 58 53.8	
	comp=Z,380nm,1.6s						
TSUM	**Tsumeb**	**80.47**	**107**	P	**P**	**02 58 32.8**	**-0.2**
MDND	**Maddock**	**80.90**	**342**	P	**P**	**02 58 34.8**	**+0.5**
	baz=156,SNR=42						
PMOZ	**Porto Moniz, M**	**80.91**	**44**	*e*P	**P**	**02 58 38.0**	**+3.2**
	comp=Z,281nm,1.6s						
PMOZ	**Porto Moniz, M**	**80.91**	**44**	*e*LR	LR	03 25 05.5	
	comp=Z,8µm,20.0s						
PMOZ	**Porto Moniz, M**	**80.91**	**44**		**P**	**02 58 35.9**	**+1.1**
FUL	**Funchal**	**80.97**	**45**	*e*P	**P**	**02 58 37.0**	**+2.0**
	comp=Z,286nm,1.6s						
PMAR	**Madeira**	**81.01**	**44**	*e*P	**P**	**02 58 36.4**	**+0.9**
	comp=Z,410nm,1.6s						
PMPS	**Porto Santo**	**81.60**	**45**	*e*P	**P**	**02 58 40.8**	**+2.5**
	comp=Z,298nm,2.2s						
PMPST	**Porto Santo, M**	**81.61**	**45**	*e*P	**P**	**02 58 39.7**	**+1.3**
	comp=Z,444nm,1.6s						
LKWY	**Lake**	**81.62**	**333**	IAMs_20	IAMs_20	03 26 55.2	
	comp=Z,11µm,18.0s						
RLMT	**Red Lodge**	**81.66**	**334**	P	**P**	**02 58 39.0**	**+0.3**
	baz=148,SNR=25						
LAO	**LASA Array**	**81.91**	**337**	P	**P**	**02 58 40.8**	**+1.1**
	baz=150,SNR=30						
BOSA	**Boshof**	**82.17**	**118**	P	**P**	**02 58 41.6**	**-0.3**
	comp=Z,52nm,0.9s,baz=235,slow=5.6,SNR=25						
BOSA				LR	LR	03 32 40.1	
	comp=Z,14µm,19.0s,baz=240,slow=34						
BOSA	**Boshof**	**82.17**	**118**	*e*P	**P**	**02 58 41.4**	**-0.5**
BOSA	**Boshof**	**82.17**	**118**	*e*P	**P**	**02 58 41.4**	**-0.5**
BOSA	**Boshof**	**82.17**	**118**	P	**P**	**02 58 41.8**	**-0.1**
BOSA				IAmb	IAmb	02 58 60.0	
	comp=Z,188nm,0.9s						
ULM	**Lac du Bonnet**	**82.19**	**345**	P	**P**	**02 58 41.0**	**0.0**
	comp=Z,43nm,0.9s,baz=157,slow=4.4,SNR=22						
ULM	**Lac du Bonnet**	**82.19**	**345**	*i* P	**P**	**02 58 41.2**	**+0.2**
ULM	**Lac du Bonnet**	**82.19**	**345**	IAmb	IAmb	02 59 04.9	
	comp=Z,362nm,1.2s						
HLID	**Hailey**	**82.45**	**330**	P	**P**	**02 58 43.7**	**+0.8**
	baz=144,SNR=38						
TORD	**Torodi Ar. Bea**	**82.71**	**71**	P	**P**	**02 58 44.0**	**-0.7**
	comp=Z,176nm,0.9s,baz=271,slow=3.8,SNR=107						
TORD				PKKPbc	**PKKPbc**	**03 17 09.9**	**+1.4**
	comp=Z,1.6nm,1.0s,baz=54,slow=2.5,SNR=4.5						
TORD				LR	LR	03 34 08.0	
	comp=Z,26µm,19.8s,baz=235,slow=35						
TORD	**Torodi Ar. Bea**	**82.71**	**71**	P	**P**	**02 58 43.7**	**-0.9**
TORD				IAmb	IAmb	02 58 57.8	
	comp=Z,294nm,1.0s						
DGMT	**Dagmar**	**82.81**	**339**	P	**P**	**02 58 45.7**	**+1.4**
	baz=152,SNR=26						
DGMT	**Dagmar**	**82.81**	**339**	IAmb	IAmb	02 59 15.1	
	comp=Z,344nm,0.9s						
BOZ	**Bozeman (W)**	**82.96**	**333**	P	**P**	**02 58 46.6**	**+1.2**
	baz=146,SNR=8.5						
O03E	**Paynes Creek**	**83.40**	**324**	P	**P**	**02 58 48.3**	**+0.6**
	baz=138,SNR=18						
O02D	**Mt. Diablo Mer**	**83.83**	**323**	P	**P**	**02 58 51.2**	**+1.3**
	baz=137,SNR=8.6						
MOD	**Modoc Plateau**	**83.86**	**326**	IAmb	IAmb	02 59 10.6	
	comp=Z,182nm,1.4s						
J08A	**Circle Bar Ran**	**84.10**	**328**	IAmb	IAmb	02 59 11.8	
	comp=Z,217nm,1.3s						
SCHQ	**Schefferville**	**84.13**	**3**	P	**P**	**02 58 52.8**	**+1.8**
	comp=Z,71nm,1.1s,baz=184,slow=3.6,SNR=13						
SCHQ	**Schefferville**	**84.13**	**3**	P	**P**	**02 58 50.5**	**-0.5**
SCHQ				IAmb	IAmb	02 59 14.3	
	comp=Z,353nm,1.4s						
LBTB	**Lobatse**	**84.20**	**115**	P	**P**	**02 58 52.0**	**-0.4**
LBTB				pmax	pmax		
	comp=Z,198nm,0.9s						
LBTB	**Lobatse**	**84.20**	**115**	P	**P**	**02 58 52.0**	**-0.4**
LBTB				IAmb	IAmb	02 59 06.0	
	comp=Z,198nm,0.8s						
EGMT	**Eagleton**	**84.29**	**336**	P	**P**	**02 58 53.3**	**+1.2**
	baz=148,SNR=8.2						
PLID	**Pearl Lake**	**84.35**	**330**	IAmb	IAmb	02 59 23.2	
	comp=Z,226nm,1.6s						
N02D	**Trinity Center**	**84.37**	**324**	P	**P**	**02 58 52.4**	**-0.2**
	baz=138,SNR=10						
CASY	**Casey**	**84.48**	**181**	P	**P**	**02 58 52.3**	**-0.6**
CASY				IAmb	IAmb	02 59 14.4	
	comp=Z,360nm,1.4s						
M04C	**Macdoel**	**84.53**	**325**	P	**P**	**02 58 54.9**	**+1.4**
	baz=138,SNR=15						
M02C	**Callahan**	**84.75**	**324**	P	**P**	**02 58 55.8**	**+1.3**
	baz=137,SNR=8.3						
MSO	**Missoula**	**84.89**	**333**	P	**P**	**02 58 56.8**	**+1.6**
	baz=144,SNR=15						
EAH	**EAH**	**84.97**	**49**	P	P	02 59 01.1	+5.3
TTIG	**Tnine Tigouga,**	**85.05**	**51**	P	**P**	**02 58 60.0**	**+3.6**
L04D	**Klamath Falls**	**85.08**	**325**	P	**P**	**02 58 57.4**	**+1.1**
	baz=138,SNR=7.9						
K04D	**Chiloquin, OR**	**85.11**	**326**	P	**P**	**02 58 58.0**	**+1.6**
	baz=138						
J05D	**Fort Rock, OR**	**85.35**	**326**	P	**P**	**02 58 59.0**	**+1.4**
	baz=139,SNR=21						
PINE	**Pine Mountain**	**85.59**	**327**	IAmb	IAmb	02 59 30.1	
	comp=Z,190nm,1.1s						
L02E	**Cave Junction**	**85.69**	**324**	P	**P**	**02 59 01.1**	**+1.9**
	baz=137						
J04D	**Umpqua Nationa**	**85.74**	**326**	P	**P**	**02 59 01.5**	**+1.8**
	baz=138,SNR=9.0						
JTMT	**Jette**	**85.77**	**333**	IAmb	IAmb	02 59 22.6	
	comp=Z,362nm,1.9s						
BFZ	**Birch Farm**	**85.80**	**225**	IAMs_20	IAMs_20	03 28 48.8	
	comp=Z,19µm,20.0s						
OUK	**Oukaimeden**	**85.84**	**51**	P	**P**	**02 59 04.0**	**+3.4**
K02D	**Willamette Mer**	**86.12**	**325**	P	**P**	**02 59 03.0**	**+1.6**
	baz=137,SNR=26						
MQZ	**McQueen's Vall**	**86.13**	**221**	IAMs_20	IAMs_20	03 29 41.2	
	comp=Z,22µm,20.0s						
I05D	**Terrebonne, OR**	**86.19**	**327**	P	**P**	**02 59 02.8**	**+1.2**
	baz=139,SNR=18						
I04A	**Tendick Farm,**	**86.30**	**326**	P	**P**	**02 59 03.1**	**+0.9**
	baz=138						
KHZ	**Kahutara**	**86.41**	**223**	IAMs_20	IAMs_20	03 28 10.7	
	comp=Z,19µm,22.0s						
OUZM	**OUZ**	**86.41**	**51**	P	**P**	**02 59 06.0**	**+2.9**
ODZ	**Otahua Downs**	**86.43**	**219**	P	**P**	**02 59 02.0**	**-1.0**
ODZ				IAmb	IAmb	02 59 22.9	
	comp=Z,364nm,1.9s						
BKZ	**Black Stump Fm**	**86.53**	**226**	IAMs_20	IAMs_20	03 28 46.1	
	comp=Z,24µm,19.0s						
J01E	**Myrtle Point**	**86.59**	**325**	P	**P**	**02 59 05.3**	**+1.8**
	baz=137						
SRHM	**Skhour des Reh**	**86.60**	**50**	P	**P**	**02 59 07.0**	**+3.0**
I03D	**Drain, OR**	**86.69**	**325**	P	**P**	**02 59 05.3**	**+1.3**
	baz=137						
WALA	**Waterton Lakes**	**86.69**	**334**	IAmb	IAmb	02 59 37.9	
	comp=Z,186nm,1.2s						
ZGR	**Zagora**	**86.72**	**53**	P	**P**	**02 59 08.0**	**+3.3**
OXZ	**Oxford**	**86.72**	**221**	IAMs_20	IAMs_20	03 30 30.0	
	comp=Z,18µm,21.0s						
H04A	**Detroit Lake**	**86.85**	**327**	IAmb	IAmb	02 59 24.5	
	comp=Z,181nm,1.4s						
G05D	**Wamic, OR**	**86.86**	**328**	P	**P**	**02 59 07.7**	**+2.8**
	baz=139,SNR=13						
HAWA	**Hanford**	**86.92**	**329**	IAmb	IAmb	02 59 40.2	
	comp=Z,249nm,1.5s						
LTZ	**Lake Taylor**	**86.92**	**222**	P	**P**	**02 59 05.5**	**0.0**
LTZ				IAmb	IAmb	02 59 35.7	
	comp=Z,335nm,1.2s						
H04D	**Lebanon**	**87.00**	**326**	P	**P**	**02 59 08.6**	**+3.1**
	baz=138,SNR=6.0						
RPZ	**Rata Peaks**	**87.04**	**220**	P	**P**	**02 59 06.3**	**+0.2**
RPZ				IAmb	IAmb	02 59 36.0	
	comp=Z,262nm,1.0s						
RPZ				IAMs_20	IAMs_20	03 30 59.4	
	comp=Z,23µm,19.0s						
TZRR	**Tazzarine**	**87.15**	**52**	P	**P**	**02 59 10.0**	**+3.2**
D08A	**Wollman Farm,**	**87.16**	**330**	IAmb	IAmb	02 59 36.7	
	comp=Z,302nm,1.9s						
THZ	**Tophouse**	**87.18**	**223**	IAMs_20	IAMs_20	03 28 50.1	
	comp=Z,21µm,22.0s						
NNZ	**Nelson**	**87.23**	**223**	IAMs_20	IAMs_20	03 28 41.5	
	comp=Z,19µm,22.0s						
NEW	**Newport**	**87.33**	**332**	LR	LR	03 35 50.9	
	comp=Z,8µm,18.6s,baz=131,slow=34						
NEW	**Newport**	**87.33**	**332**	P	**P**	**02 59 07.6**	**+0.5**
	baz=142,SNR=7.3						
WHZ	**Wether Hill Ro**	**87.34**	**217**	P	**P**	**02 59 06.2**	**-1.2**
WHZ				IAmb	IAmb	02 59 29.4	
	comp=Z,510nm,2.0s						
F05D	**White Salmon**	**87.41**	**328**	P	**P**	**02 59 08.8**	**+1.3**
	baz=139						
AVE	**Averroes**	**87.43**	**49**	P	**P**	**02 59 08.5**	**+0.6**
AVE				S	**S**	**03 09 54.4**	**+5.3**
AVE	**Averroes**	**87.43**	**49**	P	**P**	**02 59 11.8**	**+3.8**
WKZ	**Wanaka**	**87.46**	**219**	P	**P**	**02 59 08.9**	**+0.8**
WKZ				IAmb	IAmb	02 59 47.3	
	comp=Z,280nm,1.4s						
G03D	**McMinnville, O**	**87.76**	**327**	P	**P**	**02 59 11.1**	**+1.9**
	baz=137						
FFC	**Flin Flon**	**87.78**	**343**	P	**P**	**02 59 09.6**	**+0.6**
FFC				pmax	pmax		
	comp=Z,155nm,1.5s						
FFC	**Flin Flon**	**87.78**	**343**	P	**P**	**02 59 09.6**	**+0.6**
PYZ	**Puysegur Point**	**87.82**	**216**	IAMs_20	IAMs_20	03 30 01.9	
	comp=Z,23µm,19.0s						
HIZ	**Hauiti**	**87.95**	**226**	IAMs_20	IAMs_20	03 29 42.6	
	comp=Z,25µm,22.0s						
ZHG	**ZHG**	**88.03**	**50**	P	**P**	**02 59 14.1**	**+3.2**
GOLM	**Goulmima**	**88.12**	**52**	P	**P**	**02 59 15.0**	**+3.5**
LON	**Longmire**	**88.21**	**328**	IAmb	IAmb	02 59 42.0	
	comp=Z,202nm,1.7s						
RAO	**Raoul Island**	**88.28**	**237**	IAMs_20	IAMs_20	03 29 21.9	
	comp=Z,13µm,20.0s						
E04D	**Cinebar**	**88.42**	**328**	P	**P**	**02 59 14.8**	**+2.5**
	baz=138						
D05A	**Enumclaw**	**88.62**	**329**	IAmb	IAmb	02 59 51.6	
	comp=Z,149nm,1.2s						
MATP	**Matopo**	**88.83**	**113**	*e*P	P	02 59 24.6	+9.5
MATP	**Matopo**	**88.83**	**113**	*e*P	P	02 59 24.6	+9.5
CZD	**Col de Zad**	**88.85**	**51**	P	**P**	**02 59 18.4**	**+3.3**
PFVI	**Vila Bisbo**	**88.90**	**46**	*e*P	**P**	**02 59 17.3**	**+2.5**
	comp=Z,151nm,1.6s						
PFVI	**Vila Bisbo**	**88.90**	**46**	P	**P**	**02 59 14.8**	**0.0**
MDT	**Midelt**	**89.02**	**51**	P	**P**	**02 59 18.5**	**+2.9**
MSNA	**Messina**	**89.05**	**115**	*e*P	P	02 59 25.1	+9.1
MSNA	**Messina**	**89.05**	**115**	*e*P	P	02 59 25.1	+9.1
BLWY	**Bulawayo**	**89.06**	**113**	*e*P	**P**	**02 59 17.5**	**+1.2**
BLWY	**Bulawayo**	**89.06**	**113**	*e*P	**P**	**02 59 17.5**	**+1.2**
IFR	**Ifrane**	**89.08**	**50**	P	**P**	**02 59 14.0**	**-2.0**
IFR				S	**S**	**03 10 09.3**	**+4.1**
MORF	**Marmelete**	**89.12**	**45**	*e*P	**P**	**02 59 16.5**	**+0.6**
MORF				IAMs_20	IAMs_20	03 38 09.1	
	comp=Z,10µm,18.8s						
MORF	**Marmelete**	**89.12**	**45**	*e*P	**P**	**02 59 16.5**	**+0.6**
MORF	**Marmelete**	**89.12**	**45**	*e*P	**P**	**02 59 18.5**	**+2.6**
	comp=Z,95nm,2.1s						
PTEO	**Sao Teotonio**	**89.22**	**45**	*e*P	**P**	**02 59 19.0**	**+2.7**
	comp=Z,150nm,1.9s						
LCRM	**LCR**	**89.36**	**50**	P	**P**	**02 59 21.0**	**+3.7**
D03D	**Eldon**	**89.38**	**328**	P	**P**	**02 59 18.5**	**+1.7**
	baz=137						
RSA	**Sarsar**	**89.44**	**49**	P	**P**	**02 59 22.0**	**+4.6**
B05A	**Bryant**	**89.47**	**329**	P	**P**	**02 59 18.5**	**+1.3**
	baz=138						
MOPA	**Mopani**	**89.51**	**117**	*e*P	P	02 59 24.1	+5.9
MOPA	**Mopani**	**89.51**	**117**	*e*P	P	02 59 24.1	+5.9
PBDV	**Barranco-do-Ve**	**89.53**	**46**	*e*P	**P**	**02 59 18.7**	**+0.9**
	comp=Z,145nm,1.8s						
LIS	**Lisbon**	**89.70**	**44**	*e*P	**P**	**02 59 19.3**	**+0.8**
LIS				IAMs_20	IAMs_20	03 37 40.9	
	comp=Z,18µm,28.2s						
LIS	**Lisbon**	**89.70**	**44**	*e*P	**P**	**02 59 19.2**	**+0.8**
PNCL	**Nicolau / Gran**	**89.70**	**45**	*e*P	**P**	**02 59 20.8**	**+2.3**
	comp=Z,100nm,1.9s						
PCVE	**Castro Verde**	**89.70**	**46**	*e*P	**P**	**02 59 20.7**	**+2.1**
	comp=Z,97nm,1.7s						
MESJ	**Messejana**	**89.72**	**45**	*e*P	**P**	**02 59 19.2**	**+0.5**
MESJ				*e*SKSac	**SKSac**	**03 09 49.4**	**0.0**
MESJ				IAMs_20	IAMs_20	03 37 57.3	
	comp=Z,8µm,18.8s						
MESJ	**Messejana**	**89.72**	**45**	*e*P	**P**	**02 59 19.1**	**+0.5**
MESJ				*e*		03 09 49.4	
MESJ	**Messejana**	**89.72**	**45**	*e*P	**P**	**02 59 21.4**	**+2.8**
	comp=Z,98nm,1.4s						
PVAQ	**Vaqueiros**	**89.76**	**46**	*e*P	**P**	**02 59 21.3**	**+2.5**
	comp=Z,128nm,1.7s						
PVAQ	**Vaqueiros**	**89.76**	**46**	*e*LQ	LQ	03 22 57.1	
PVAQ				*e*LR	LR	03 29 07.6	
	comp=Z,9µm,20.0s						
PVAQ	**Vaqueiros**	**89.76**	**46**	P	**P**	**02 59 19.7**	**+0.8**
PMAFR	**Mafra**	**89.77**	**44**	*e*P	**P**	**02 59 22.6**	**+3.8**
	comp=Z,157nm,1.5s						
EDM	**Edmonton**	**89.89**	**337**	IAmb	IAmb	02 59 47.8	
	comp=Z,189nm,1.3s						
CHEFC	**Chefchaouen**	**89.89**	**49**	P	**P**	**02 59 24.0**	**+4.4**
PBEJ	**Beja**	**90.06**	**45**	*e*P	**P**	**02 59 22.6**	**+2.4**
	comp=Z,85nm,1.8s						
SFS	**San Fernando**	**90.15**	**47**	P	**P**	**02 59 23.0**	**+2.3**
SFS	**San Fernando**	**90.15**	**47**	IAMs_20	IAMs_20	03 44 11.2	
	comp=Z,12µm,18.0s						
ARNO	**Arenosillo**	**90.20**	**47**	P	**P**	**02 59 19.5**	**-1.4**
ARNO				S	S	03 10 34.7	+20
EVO	**Evora**	**90.28**	**45**	P	**P**	**02 59 22.9**	**+1.7**
EVO				S	S	03 10 37.6	+22
EVO	**Evora**	**90.28**	**45**	*e*P	**P**	**02 59 23.4**	**+2.2**
	comp=Z,68nm,2.0s						
CEU	**Ceuta**	**90.34**	**48**	P	P	02 59 16.6	-4.9
CEU				S	**S**	**03 10 21.4**	**+5.1**
PSBE	**So Bento**	**90.42**	**44**	*e*P	**P**	**02 59 23.5**	**+1.6**
	comp=Z,145nm,1.8s						
PMTG	**Montargil**	**90.48**	**44**	*e*P	**P**	**02 59 24.3**	**+2.2**
	comp=Z,101nm,1.6s						
AKLM	**AKL**	**90.52**	**50**	P	**P**	**02 59 27.0**	**+4.4**
PVLZ	**Peæn de**	**90.61**	**49**	P	**P**	**02 59 22.8**	**0.0**
PVLZ				S	S	03 10 34.4	+16
PBAR	**Barrancos**	**90.66**	**46**	*e*P	**P**	**02 59 25.1**	**+2.1**
	comp=Z,62nm,1.5s						
OUZ	**Omahuta**	**90.73**	**228**	IAMs_20	IAMs_20	03 29 48.4	
	comp=Z,24µm,22.0s						
PESTR	**Estremoz**	**90.75**	**45**	*e*P	**P**	**02 59 26.4**	**+3.0**
	comp=Z,88nm,1.7s						
TDRA	**Tendrara**	**90.91**	**52**	P	**P**	**02 59 27.4**	**+2.8**
FIGM	**Figuig**	**90.92**	**53**	P	**P**	**02 59 27.0**	**+2.4**
PCAS	**Casmilo, Conde**	**90.93**	**43**	*e*P	**P**	**02 59 28.7**	**+4.5**
	comp=Z,77nm,1.5s						
COI	**Coimbra**	**91.08**	**43**	*e*P	**P**	**02 59 26.6**	**+1.7**
	comp=Z,117nm,1.6s						
LSZ	**Lusaka**	**91.21**	**108**	P	**P**	**02 59 26.5**	**+0.1**
LSZ				pmax	pmax		
	comp=Z,308nm,1.6s						
LSZ	**Lusaka**	**91.21**	**108**	*e*P	P	02 59 36.2	+10
LSZ	**Lusaka**	**91.21**	**108**	*e*P	P	02 59 36.2	+10
LSZ	**Lusaka**	**91.21**	**108**	P	**P**	**02 59 26.5**	**+0.1**
LSZ				IAmb	IAmb	02 59 58.4	
	comp=Z,308nm,1.6s						
LSZ	**Lusaka**	**91.21**	**108**	IAMs_20	IAMs_20	03 36 22.5	
	comp=Z,22µm,20.0s						
PMRV	**Marv??o**	**91.21**	**44**	*e*P	**P**	**02 59 27.1**	**+1.5**
	comp=Z,52nm,1.4s						
PMRV	**Marv??o**	**91.21**	**44**	*e*LQ	LQ	03 25 27.1	
PMRV				*e*LR	LR	03 29 54.2	
	comp=Z,13µm,18.0s						
PCBR	**Castelo Branco**	**91.41**	**44**	*e*P	**P**	**02 59 28.9**	**+2.4**
	comp=Z,57nm,1.6s						
PCBR	**Castelo Branco**	**91.41**	**44**	*e*PP	PP	03 03 02.4	-2.2
EMAL	**Malaga-Limoner**	**91.47**	**48**	P	**P**	**02 59 24.6**	**-2.2**
EMAL				S	S	03 10 40.0	+13
AFI	**Afiamalu**	**91.49**	**253**	LR	LR	03 31 28.7	
	comp=Z,19µm,19.6s,baz=120,slow=30						
TAF	**Taforalt**	**91.66**	**51**	P	**P**	**02 59 32.0**	**+4.1**
PVIS	**Viseu**	**91.70**	**43**	*e*P	**P**	**02 59 32.3**	**+4.4**
	comp=Z,41nm,1.6s						
PVIS	**Viseu**	**91.70**	**43**	*e*PP	PP	03 03 05.8	-1.1
MTE	**Manteigas**	**91.72**	**44**	*e*P	**P**	**02 59 29.5**	**+1.5**
	comp=Z,53nm,1.4s						
MTE	**Manteigas**	**91.72**	**44**	*e*LQ	LQ	03 25 25.9	
MTE				*e*LR	LR	03 30 01.4	
	comp=Z,10µm,18.0s						
MTE	**Manteigas**	**91.72**	**44**	P	**P**	**02 59 27.7**	**-0.3**
POLO	**Lamas de Olo**	**92.17**	**43**	*e*P	**P**	**02 59 32.7**	**+2.6**
	comp=Z,43nm,2.0s						
PCAB	**Cabril**	**92.24**	**42**	*e*P	**P**	**02 59 34.0**	**+3.7**
	comp=Z,57nm,1.6s						
PGAV	**Gavieira, Arco**	**92.26**	**42**	*e*LQ	LQ	03 25 35.1	
PGAV				*e*LR	LR	03 30 51.7	
	comp=Z,9µm,20.0s						
MVO	**Moncorvo**	**92.50**	**43**	*e*P	**P**	**02 59 33.5**	**+2.0**
	comp=Z,69nm,1.7s						
MVO	**Moncorvo**	**92.50**	**43**	*e*LQ	LQ	03 25 52.9	
MVO				*e*LR	LR	03 30 29.8	
	comp=Z,10µm,18.0s						
PBRG	**Braganca**	**93.06**	**43**	*e*P	**P**	**02 59 36.2**	**+2.1**
	comp=Z,53nm,1.5s						
PAB	**San Pablo**	**93.16**	**46**	P	**P**	**02 59 35.7**	**+1.0**
PAB				pmax	pmax		
	comp=Z,45nm,1.2s						
PAB				MLR	MLR		
	comp=Z,14µm,20.0s						
PAB	**San Pablo**	**93.16**	**46**	P	**P**	**02 59 35.6**	**+1.0**
PAB	**San Pablo**	**93.16**	**46**	IAMs_20	IAMs_20	03 39 48.8	
	comp=Z,14µm,20.0s						
ESDC	**Sonseca Array**	**93.48**	**46**	P	**P**	**02 59 37.4**	**+1.3**
	comp=Z,6.4nm,1.0s,baz=258,slow=4.3,SNR=30						
ESDC				LR	LR	03 40 11.1	
	comp=Z,10µm,20.2s,baz=245,slow=35						
ESDC	**Sonseca Array**	**93.48**	**46**	P	**P**	**02 59 36.4**	**+0.3**
ESBB	**Sonseca Array**	**93.48**	**46**	P	**P**	**02 59 36.3**	**+0.2**
CART	**Cartagena**	**94.18**	**49**	P	**P**	**02 59 39.5**	**+0.2**
UCM	**Universidad Co**	**94.30**	**46**	P	**P**	**02 59 43.6**	**+3.8**
UCM				S	**S**	**03 10 45.0**	**-6.8**
PAF	**Port-aux-Franc**	**94.58**	**156**	IAMs_20	IAMs_20	03 44 51.6	
	comp=Z,19µm,19.0s						
KNTN	**Kanton**	**97.05**	**263**	IAMs_20	IAMs_20	03 34 18.4	
	comp=Z,17µm,19.0s						
SJPF	**Ste Jean**	**97.14**	**44**	*e*P	Pdif	02 59 55.6	+2.8
SJPF				pmax	pmax		
	comp=Z,71nm,1.5s						
ETSF	**Etsaut**	**97.42**	**45**	*e*P	Pdif	02 59 56.0	+1.9
ETSF				pmax	pmax		
	comp=Z,45nm,1.4s						
DY2G	**Dye2**	**97.70**	**10**	*i* P	Pdif	02 59 56.4	+1.5
MSVF	**Nonsavu**	**97.72**	**245**	IAMs_20	IAMs_20	03 34 09.8	
	comp=Z,13µm,20.0s						
SET	**Setif**	**97.76**	**53**	P	Pdif	03 00 02.0	+6.2
YKA	**Yellowknife Ar**	**97.82**	**342**	P	Pdif	02 59 57.1	+1.8
	comp=Z,7.4nm,1.1s,baz=130,slow=5.7,SNR=5.4						
YKA				LR	LR	03 44 19.1	
	comp=Z,3µm,18.7s,baz=0.0,slow=36						
YKA	**Yellowknife Ar**	**97.82**	**342**	P	Pdif	02 59 55.6	+0.3
YKA	**Yellowknife Ar**	**97.82**	**342**	P	Pdif	02 59 55.5	+0.3
EPF	**Esparros**	**98.05**	**45**	*e*P	Pdif	02 59 58.4	+1.5
EPF				pmax	pmax		
	comp=Z,99nm,2.1s						
MAHO	**Mahon**	**98.89**	**49**	P	Pdif	03 00 03.8	+3.2
MAHO				S	S	03 10 56.5	-35
ROSF	**Rostrenen**	**98.89**	**39**	*e*P	Pdif	03 00 02.2	+1.8
ROSF				pmax	pmax		
	comp=Z,67nm,1.3s						
TAU	**Tasmania Unive**	**99.35**	**208**	IAMs_20	IAMs_20	03 37 21.7	

	comp=Z,19µm,19.0s						
MTLF	**Montolieu**	**99.37**	**45**	*e*P	**Pdif**	**03 00 04.8**	**+2.1**
MTLF				pmax	pmax		
	comp=Z,42nm,1.3s						
RJF	**Les Rejaudoux**	**99.98**	**43**	*e*P	**Pdif**	**03 00 09.7**	**+4.3**
RJF				pmax	pmax		
	comp=Z,105nm,2.0s						
CAF	**Calviac**	**100.11**	**44**	*e*P	**Pdif**	**03 00 07.4**	**+1.4**
CAF				pmax	pmax		
	comp=Z,68nm,1.9s						
GRR	**Gorron**	**100.26**	**40**	*e*P	**Pdif**	**03 00 07.2**	**+0.7**
GRR				pmax	pmax		
	comp=Z,23nm,0.9s						
KEST	**Kesra**	**100.31**	**55**	P	**Pdif**	**03 00 11.2**	**+4.1**
	comp=Z,3.2nm,0.9s,baz=282,slow=11,SNR=2.4						
LDF	**La Druitiere**	**100.78**	**40**	*e*P	**Pdif**	**03 00 11.5**	**+2.7**
LDF				pmax	pmax		
	comp=Z,21nm,1.0s						
MBAR	**Mbarara**	**100.82**	**97**	*i* P	**Pdif**	**03 00 09.3**	**-0.8**
MBAR	**Mbarara**	**100.82**	**97**	IAMs_20	IAMs_20	03 46 10.2	
	comp=Z,15µm,18.0s						
ICESG	**Greenland Ices**	**101.15**	**11**	*i* P	**Pdif**	**03 00 12.1**	**+1.6**
ICESG				IAmb	IAmb	03 00 14.5	
	comp=Z,9.7nm,0.9s						
SSB	**Saint Sauveur**	**101.80**	**45**	IAMs_20	IAMs_20	03 44 41.2	
	comp=Z,11µm,21.0s						
CLF	**Chambon-Foret**	**101.84**	**41**	IAMs_20	IAMs_20	03 44 00.9	
	comp=Z,11µm,20.0s						
LMR	**La Mourre**	**102.07**	**47**	*e*P	**Pdif**	**03 00 16.5**	**+1.8**
LMR				pmax	pmax		
	comp=Z,27nm,1.3s						
VSL	**Villasalto**	**102.12**	**51**	IAMs_20	IAMs_20	03 48 36.5	
	comp=Z,9µm,18.0s						
FRF	**La Foret Royal**	**102.27**	**47**	*e*P	**Pdif**	**03 00 20.1**	**+4.5**
FRF				pmax	pmax		
	comp=Z,42nm,1.4s						
LOR	**Lormes**	**102.38**	**43**	*e*P	**Pdif**	**03 00 17.9**	**+1.9**
LOR				pmax	pmax		
	comp=Z,147nm,2.8s						
LPL	**La Plagne**	**103.26**	**45**	*e*P	**Pdif**	**03 00 22.5**	**+2.3**
LPL				pmax	pmax		
	comp=Z,23nm,1.2s						
FARO	**Faro, Yukon**	**103.72**	**335**	Pdiff	**Pdif**	**03 00 23.7**	**+2.1**
	baz=128						
DZM	**Mont Dzumac**	**103.85**	**235**	*e*SP	SP	03 13 50.2	+0.3
	comp=Z,7µm,26.3s						
DZM				*e*SS	**SS**	**03 19 30.4**	**+3.4**
	comp=Z,42µm,31.6s						
DZM	**Mont Dzumac**	**103.85**	**235**	*e*LQ	LQ	03 30 08.7	
	comp=Z,31µm,35.5s						
DZM				*e*LR	LR	03 34 27.9	
	comp=Z,60µm,30.1s						
SENIN	**Lac Senin/Sane**	**104.01**	**45**	IAMs_20	IAMs_20	03 46 08.8	
	comp=Z,15µm,20.0s						
LIFNC	**LIFOU**	**104.10**	**236**	IAMs_20	IAMs_20	03 36 22.6	
	comp=Z,14µm,20.0s						
DOU	**Dourbes**	**104.20**	**40**	*d*x	x	03 04 44.3	
HAU	**Haudompre**	**104.21**	**43**	*e*P	**Pdif**	**03 00 26.9**	**+2.8**
HAU				pmax	pmax		
	comp=Z,49nm,1.9s						
GIVF	**Givet**	**104.33**	**40**	*e*P	**Pdif**	**03 00 27.0**	**+2.4**
GIVF				pmax	pmax		
	comp=Z,58nm,1.6s						
BMRD	**Maredsous**	**104.40**	**40**	*d*Pdif	**Pdif**	**03 00 26.8**	**+1.9**
SUMG	**Summit**	**104.40**	**10**	*i* P	**Pdif**	**03 00 26.0**	**+1.1**
SUMG				IAmb	IAmb	03 00 51.9	
	comp=Z,5.6nm,0.8s						
JOHN	**Johnston Islan**	**104.42**	**281**	IAMs_20	IAMs_20	03 39 18.2	
	comp=Z,10µm,19.0s						
BGES	**Gesves**	**104.62**	**40**	*d*Pdif	**Pdif**	**03 00 25.4**	**-0.4**
BCLA	**Clavier**	**104.76**	**40**	*d*Pdif	**Pdif**	**03 00 28.4**	**+2.0**
BCLA				*d*PKiKP	**PKiKP**	**03 04 40.4**	**-1.5**
CAN	**Canberra**	**104.79**	**214**	IAMs_20	IAMs_20	03 38 25.1	
	comp=Z,17µm,19.0s						
WLF	**Walferdange**	**104.88**	**41**	*d*Pdif	**Pdif**	**03 00 30.5**	**+3.5**
WLF				*d*PKiKP	**PKiKP**	**03 04 43.1**	**+1.0**
WLF	**Walferdange**	**104.88**	**41**	IAMs_20	IAMs_20	03 47 49.4	
	comp=Z,18µm,20.0s						
MEM	**Membach**	**105.24**	**40**	*d*x	x	03 04 48.7	
BTNL	**Ternell**	**105.30**	**40**	*d*Pdif	**Pdif**	**03 00 28.6**	**-0.3**
DAVOX	**Davos/Dischmat**	**105.78**	**45**	PP	PKiKP	03 04 53.2	+9.1
	comp=Z,8.4nm,0.9s,baz=251,slow=3.4,SNR=5.4						
DAVA	**Damuels**	**106.01**	**45**	*e*P	**Pdif**	**03 00 34.2**	**+1.9**
	comp=Z,10.0nm,1.1s						
DAVA				P	**PKiKP**	**03 04 48.8**	**+4.3**
	comp=Z,16nm,1.2s						
CEL	**Celeste**	**106.12**	**55**	IAMs_20	IAMs_20	03 54 35.3	
	comp=Z,10µm,18.0s						
AQU	**L'Aquila**	**106.13**	**50**	IAMs_20	IAMs_20	03 50 16.4	
	comp=Z,10µm,19.0s						
KMBO	**Kilima Mbogo**	**106.17**	**101**	IAMs_20	IAMs_20	03 52 40.6	
	comp=Z,12µm,19.0s						
FETA	**Feichten**	**106.41**	**45**	*e*P	**Pdif**	**03 00 36.4**	**+2.3**
	comp=Z,8.1nm,1.3s						
FETA				*e*P	**PKiKP**	**03 04 46.9**	**+1.7**
	comp=Z,15nm,1.3s						
RETA	**Reutte**	**106.64**	**45**	*e*P	**Pdif**	**03 00 37.7**	**+2.7**
	comp=Z,6.7nm,1.3s						
RETA				*e*P	**PKiKP**	**03 04 47.9**	**+2.4**
	comp=Z,17nm,2.1s						
MOTA	**Moosalm**	**106.78**	**45**	*e*P	**Pdif**	**03 00 36.3**	**+0.5**
	comp=Z,14nm,1.4s						
MOTA				*e*P	**PKiKP**	**03 04 48.3**	**+2.4**
	comp=Z,21nm,2.0s						
SQTA	**Sankt Quirin**	**106.80**	**45**	*e*P	**Pdif**	**03 00 38.6**	**+2.9**
	comp=Z,10nm,1.1s						
SQTA				*e*P	**PKiKP**	**03 04 50.2**	**+4.3**
	comp=Z,24nm,1.9s						
LODK	**Lodwar**	**106.82**	**96**	IAMs_20	IAMs_20	03 51 29.3	
	comp=Z,15µm,19.0s						
WATA	**Walderalm**	**107.07**	**45**	P	**Pdif**	**03 00 39.9**	**+2.8**
	comp=Z,8.1nm,1.1s						
WTTA	**Wattenberg**	**107.08**	**45**	*e*P	**Pdif**	**03 00 39.2**	**+2.1**
	comp=Z,24nm,1.8s						
WTTA				*e*P	**PKiKP**	**03 04 48.4**	**+1.9**
	comp=Z,14nm,1.1s						
ABTA	**Abfaltersbach**	**107.41**	**46**	*e*P	**Pdif**	**03 00 40.1**	**+1.7**
	comp=Z,4.9nm,1.2s						
ABTA				*e*P	**PKiKP**	**03 04 48.2**	**+1.3**
	comp=Z,19nm,1.5s						
SANVU	**Saraoutou**	**107.45**	**240**	IAMs_20	IAMs_20	03 38 45.5	
	comp=Z,14µm,20.0s						
NEEM	**North Greenlan**	**107.48**	**5**	*i* P	**Pdif**	**03 00 43.2**	**+4.8**
A36M	**Sachs Harbour**	**107.67**	**345**	IAMs_20	IAMs_20	03 55 54.8	
	comp=Z,8µm,18.0s						
EGAK	**Eagle**	**108.05**	**335**	IAMs_20	IAMs_20	03 51 50.1	
	comp=Z,7µm,18.0s						
KBA	**Koelnbreinsper**	**108.06**	**46**	*e*P	**Pdif**	**03 00 44.1**	**+2.7**
	comp=Z,3.6nm,1.0s						
KBA				*e*P	**PKiKP**	**03 04 51.6**	**+3.3**
	comp=Z,15nm,1.2s						
OBKA	**Obir**	**108.59**	**47**	*e*P	**Pdif**	**03 00 46.6**	**+2.9**
	comp=Z,9.0nm,1.7s						
OBKA				*e*P	**PKiKP**	**03 04 53.7**	**+4.5**
	comp=Z,12nm,1.3s						
MOA	**Molln**	**108.94**	**45**	*e*P	**Pdif**	**03 00 50.4**	**+5.2**
	comp=Z,4.0nm,1.1s						
MOA				*e*P	**PKiKP**	**03 04 53.6**	**+3.9**
	comp=Z,13nm,1.4s						
GERES	**GERESS Array B**	**108.99**	**44**	Pdiff	**Pdif**	**03 00 50.8**	**+5.3**
	comp=Z,0.2nm,0.3s,baz=268,slow=8.0,SNR=4.8						
GERES				PKiKP	**PKiKP**	**03 04 51.2**	**+1.3**
	comp=Z,2.4nm,0.8s,baz=219,slow=0.9,SNR=7.4						
GERES	**GERESS Array B**	**108.99**	**44**		**PKiKP**	**03 04 49.9**	**0.0**
KHC	**Kasperske Hory**	**109.03**	**44**	*e*P	**Pdif**	**03 00 50.0**	**+4.5**
KHC				*e*		03 05 17.7	
KHC				MLR	MLR		
	comp=Z,7µm,16.8s						
KHC	**Kasperske Hory**	**109.03**	**44**	*e*PDIFF	**Pdif**	**03 00 50.0**	**+4.5**
KHC				*e*x	x	03 00 58.0	
KHC				*e*x	x	03 04 41.0	
KHC				*e*PP	**PP**	**03 05 17.7**	**-0.4**
KHC				*e*PKKP	**PKKPab**	**03 16 07.0**	**-0.6**
KHC				AMS	AMS	04 00 00.0	
	comp=Z,7µm,16.8s						
CKRC	**Cesky Krumlov**	**109.35**	**44**	*e*PP	**PP**	**03 05 19.9**	**-0.6**
CKRC				AMS	AMS	03 58 50.0	
	comp=Z,5µm,18.1s						
ARSA	**Arzberg**	**109.50**	**46**	*e*P	**PKiKP**	**03 04 54.6**	**+3.9**
	comp=Z,6.9nm,1.1s						
O22K	**Cooper Landing**	**109.50**	**329**	IAMs_20	IAMs_20	03 43 47.6	
	comp=Z,10µm,21.0s						
CLL	**Collm**	**109.54**	**42**	*e*	PKiKP	03 04 59.0	+8.3
CLL				*e*PP	**PP**	**03 05 18.0**	**-3.7**
CLL				*e*		03 05 39.0	
CLL				Lm	MLR	03 50 00.0	
	comp=Z,9µm,20.3s						
CLL	**Collm**	**109.54**	**42**	IAMs_20	IAMs_20	03 50 26.6	
	comp=Z,9µm,20.0s						
KDAK	**Kodiak Island**	**109.71**	**326**	IAMs_20	IAMs_20	03 39 14.2	
	comp=Z,14µm,19.0s						
BRG	**Berggiesshubel**	**109.92**	**42**	*e*PKP	**PKiKP**	**03 04 54.2**	**+2.8**
BRG				Amp		03 04 57.2	
	comp=Z,5.4nm,1.1s						
PRU	**Pruhonice**	**109.94**	**43**	*e*PP	**PP**	**03 05 22.3**	**-2.4**
PRU				AMS	AMS	04 08 50.0	
	comp=Z,6µm,17.5s						
CONA	**Conrad Observa**	**109.96**	**46**	*e*P	**Pdif**	**03 00 51.2**	**+1.4**
	comp=Z,3.7nm,1.2s						
CONA				*e*P	**PKiKP**	**03 04 53.9**	**+2.2**
	comp=Z,12nm,1.5s						
TIR	**Tirane**	**110.15**	**53**	IAMs_20	IAMs_20	03 58 49.2	
	comp=Z,14µm,19.0s						
ILAR	**Eielson Array**	**110.20**	**334**	Pdiff	**Pdif**	**03 00 54.6**	**+4.3**
	comp=Z,1.1nm,1.1s,baz=338,slow=0.7,SNR=4.4						
ILAR				PKiKP	**PKiKP**	**03 04 55.0**	**+3.5**
	comp=Z,2.3nm,0.9s,baz=169,slow=1.7,SNR=6.1						
ILAR				PKKPbc	**PKKPbc**	**03 15 53.2**	**-1.5**
	comp=Z,1.1nm,0.7s,baz=316,slow=4.3,SNR=6.9						
POKR	**Poker Plat Res**	**110.56**	**334**	IAMs_20	IAMs_20	03 51 12.5	
	comp=Z,9µm,18.0s						
KRUC	**Moravsky**	**110.71**	**45**	*e*PKIKP	**PKiKP**	**03 04 53.4**	**+0.4**
KRUC				*e*PP	**PP**	**03 05 26.5**	**-3.8**
OHR	**Ohrid**	**110.72**	**54**	*e*P	PKiKP	03 05 04.8	+11
MPLH	**Magyarpolny**	**110.74**	**47**	*e*P	PKiKP	03 05 02.2	+9.1
VRAC	**Vranov**	**110.92**	**44**	PKiKP	**PKiKP**	**03 04 52.9**	**-0.5**
	comp=Z,1.8nm,0.6s,baz=247,slow=2.6,SNR=4.4						
VRAC	**Vranov**	**110.92**	**44**	*e*PKIKP	**PKiKP**	**03 04 55.8**	**+2.4**
VRAC				*e*PP	**PP**	**03 05 27.3**	**-4.5**
MODS	**Modra-Piesok**	**111.01**	**46**	*e*L	L	03 04 38.6	
STKA	**Stephens Creek**	**111.08**	**210**	PKKPbc	PKKPbc	03 15 50.4	-0.5
	comp=Z,3.1nm,0.9s,baz=258,slow=4.7,SNR=3.9						
DIVS	**Divibare**	**111.24**	**51**	IAMs_20	IAMs_20	03 54 52.7	
	comp=Z,8µm,19.0s						
JAVC	**Velka Javorina**	**111.43**	**45**	*e*PKIKP	**PKiKP**	**03 04 57.8**	**+3.4**
SRO	**Srobarova**	**111.46**	**46**	*e*PP	**PP**	**03 05 33.1**	**-2.6**
SKO	**Skopje**	**111.48**	**53**	*e*P	**PKiKP**	**03 04 49.3**	**-5.4**
MORC	**Moravsky Berou**	**111.67**	**44**	⇓P	**PKiKP**	**03 04 54.7**	**-0.1**
MORC	**Moravsky Berou**	**111.67**	**44**	*e*PKIKP	**PKiKP**	**03 04 54.5**	**-0.3**
MORC				*e*PP	**PP**	**03 05 33.6**	**-3.6**
STIP	**Stip**	**111.91**	**54**	*e*P	**PKiKP**	**03 04 58.6**	**+3.1**
VYHS	**Vyhne**	**112.02**	**46**	*e*PKIKP	**PKiKP**	**03 04 57.9**	**+2.4**
VYHS	**Vyhne**	**112.02**	**46**	*e*PKP	**PKiKP**	**03 04 57.9**	**+2.4**
VAY	**Valandovo**	**112.05**	**54**	*e*P	PKiKP	03 05 05.3	+10
NB2	**NORSAR Subarra**	**112.24**	**31**	PKPdf	**PKiKP**	**03 04 52.3**	**-3.3**
	comp=Z,36nm,2.5s,baz=248,slow=1.9						
NB2	**NORSAR Subarra**	**112.24**	**31**	PKPdf	**PKiKP**	**03 04 52.3**	**-3.3**
	baz=248,slow=1.9						
NOA	**NORSAR Array B**	**112.24**	**31**	PKiKP	**PKiKP**	**03 05 00.5**	**+4.9**
	comp=Z,2.1nm,0.9s,baz=248,slow=2.2,SNR=4.7						
TARA	**Tarawa**	**112.34**	**258**	IAMs_20	IAMs_20	03 39 54.7	
	comp=Z,13µm,21.0s						
BANR	**Banloc**	**112.45**	**50**	⇓P	**PKiKP**	**03 05 00.0**	**+3.7**
LANS	**Liptovska Anna**	**112.64**	**45**	*e*PKIKP	**PKiKP**	**03 05 01.6**	**+4.9**
LANS				*e*		03 05 43.3	
LANS	**Liptovska Anna**	**112.64**	**45**	*e*PKP	**PKiKP**	**03 05 01.6**	**+4.9**
LANS				*e*PP	**PP**	**03 05 43.3**	**-0.9**
BZS	**Buzias**	**112.85**	**49**	⇓P	**PKiKP**	**03 04 59.1**	**+1.9**
GZR	**Gura Zlata**	**113.55**	**50**	⇓P	**PKiKP**	**03 04 57.6**	**-1.0**
CRVS	**Cervenica-Dubn**	**113.80**	**46**	*e*PKIKP	**PKiKP**	**03 05 04.4**	**+5.5**
CRVS	**Cervenica-Dubn**	**113.80**	**46**	*e*PKP	**PKiKP**	**03 05 04.4**	**+5.5**
DRGR		**113.95**	**49**	⇓P	**PKiKP**	**03 04 59.2**	**-0.1**
UZH	**Uzhgorod**	**114.24**	**47**	*e*PKIKP	**PKiKP**	**03 05 00.7**	**+1.0**
UZH				*e*		03 05 09.2	
TRPA	**Tarpa**	**114.25**	**47**	⇑P	**PKiKP**	**03 04 60.0**	**+0.3**
TRPA	**Tarpa**	**114.25**	**47**	*e*P	**PKiKP**	**03 05 01.8**	**+2.1**
ARR	**Arges**	**114.78**	**50**	⇑P	**PKiKP**	**03 05 01.1**	**+0.1**
KWP	**Kalwaria Pacla**	**114.80**	**46**	*e*PKiKP	**PKiKP**	**03 05 03.6**	**+2.8**
DOPR	**Dopca**	**115.47**	**50**	⇓P	**PKiKP**	**03 05 02.7**	**+0.5**
LVV	**L'vov**	**115.68**	**46**	*e*PKIKP	**PKiKP**	**03 05 04.8**	**+2.4**
MLR	**Muntele Rosu**	**115.70**	**51**	⇓P	**PKiKP**	**03 05 05.1**	**+2.3**
MLR	**Muntele Rosu**	**115.70**	**51**	PKP	**PKiKP**	**03 05 04.9**	**+2.1**
	comp=Z,18nm,1.0s,baz=256,slow=3.1,SNR=5.7						
MLR	**Muntele Rosu**	**115.70**	**51**	IAMs_20	IAMs_20	04 00 22.7	
	comp=Z,9µm,20.0s						
BURAR	**Bucovina Array**	**115.82**	**48**	⇑P	**PKPdf**	**03 05 00.1**	**-2.8**
SUW	**Suwalki**	**116.27**	**41**	*e*PKiKP	**PKiKP**	**03 05 09.0**	**+5.6**
SUW	**Suwalki**	**116.27**	**41**	*e*P	**PKiKP**	**03 05 08.9**	**+5.6**
VRI	**Vrincioaia**	**116.33**	**50**	⇓P	**PKiKP**	**03 05 05.1**	**+1.2**
TESR	**Tescani**	**116.46**	**50**	⇓P	**PKiKP**	**03 05 05.6**	**+1.5**
HARR	**Harsova**	**116.83**	**52**	⇑P	**PKiKP**	**03 05 06.8**	**+2.0**
PABE	**Paberze**	**117.08**	**39**	*e*P	**PKiKP**	**03 05 09.3**	**+4.4**
PABE	**Paberze**	**117.08**	**39**	IAMs_20	IAMs_20	03 55 30.7	
	comp=Z,9µm,20.0s						
TIRR	**Tirgusor**	**117.10**	**52**	⇑P	**PKPdf**	**03 05 04.7**	**-0.6**
CFR	**Carcaliu**	**117.10**	**51**	⇓P	**PKPdf**	**03 05 05.0**	**-0.3**
NWAO	**Narrogin (SRO)**	**117.27**	**189**	IAMs_20	IAMs_20	03 49 43.1	
	comp=Z,15µm,20.0s						
RDOG	**Red Dog Mine**	**117.34**	**335**	IAMs_20	IAMs_20	04 03 09.6	
	comp=Z,9µm,20.0s						
SORM	**Soroca**	**118.00**	**48**	⇑P	**PKiKP**	**03 05 08.2**	**+1.2**
MILM	**Milestii Mici**	**118.00**	**50**	⇑P	**PKPdf**	**03 05 06.9**	**-0.1**
ISAL	**Salakas**	**118.29**	**40**	*e*P	**PKiKP**	**03 05 10.1**	**+2.8**
NACGM	**Naroch**	**118.52**	**41**	*i* PKP	**PKiKP**	**03 05 10.0**	**+2.3**
GHAJ	**Ghor Haditha**	**118.64**	**68**	IAMs_20	IAMs_20	03 55 29.4	
	comp=Z,11µm,19.0s						
MNK	**Minsk**	**119.07**	**41**	*i* PKIKP	**PKPdf**	**03 05 08.8**	**0.0**
MNK				*i*		03 06 28.7	
MNK				*i* PPP	PPP	03 09 00.6	
MNK				*i*		03 12 20.9	
MNK				*i* PS	PKKPdf	03 16 19.4	+25
MNK				*i* SS	SS	03 22 54.2	+4.2
MNK				*i* SSS	SSS	03 27 12.5	
MNK				pmax	pmax		
	comp=Z,71nm,1.2s						
MNK				pmax	pmax		
	comp=E,6.0nm,1.3s						
MNK				pmax	pmax		
	comp=N,20nm,1.2s						
MNK	**Minsk**	**119.07**	**41**	*i* PKP	**PKiKP**	**03 05 08.9**	**0.0**
	comp=E,6.0nm,1.3s						
MNK				*i* PKP	**PKiKP**	**03 05 08.9**	**0.0**
	comp=N,20nm,1.2s						
MNK				*i* PKP	**PKiKP**	**03 05 08.9**	**0.0**
	comp=Z,71nm,1.2s,baz=259						
MNK				*i* PP	**PP**	**03 06 28.8**	**-0.3**
MNK				*i* SKP		03 08 43.8	
MNK				*i* PKS		03 08 45.4	
MNK				*i* PPP	PPP	03 09 00.6	
MNK				*i* SKS	**SKSdf**	**03 12 21.0**	**0.0**
MNK				*i* PS	PKKPdf	03 16 19.4	+25
MNK				*i* SS	**SS**	**03 22 54.3**	**+4.3**
MNK				*i* SSS	SSS	03 27 12.5	
MNK				*i* LR	LR	03 56 53.4	
MNK				*i* LRM	MLR	03 58 55.5	
	comp=E,518nm,15.2s						
MNK				*i* LRM	MLR	03 59 04.4	
	comp=N,2µm,12.1s						
MNK				*i* LRM	MLR	03 59 51.5	
	comp=Z,7µm,19.1s						
AKASG	**Malin Array Be**	**119.12**	**46**	PKP	**PKPdf**	**03 05 08.3**	**-0.7**
	comp=Z,6.4nm,0.6s,baz=267,slow=2.6,SNR=14						
AKBB	**Malin Array Si**	**119.12**	**46**	*c i*PKIKP	**PKiKP**	**03 05 09.6**	**+0.5**
VSU	**Vasula**	**119.14**	**36**	*e*P	**PKiKP**	**03 05 11.3**	**+2.4**
VSU	**Vasula**	**119.14**	**36**	*i* PKIKP	**PKiKP**	**03 05 10.5**	**+1.7**
FINES	**FINESS Array B**	**119.28**	**33**	PKP	**PKiKP**	**03 05 10.7**	**+1.7**
	comp=Z,5.4nm,0.8s,baz=137,slow=2.1,SNR=11						
MSEY	**Mahe Island**	**119.31**	**115**	IAMs_20	IAMs_20	03 54 06.7	
	comp=Z,16µm,21.0s						
BRTR	**Keskin Array B**	**119.59**	**59**	PKP	**PKiKP**	**03 05 12.0**	**+1.4**
	comp=Z,5.7nm,0.9s,baz=199,slow=2.6,SNR=8.8						
BRTR	**Keskin Array B**	**119.59**	**59**	PKIKP	**PKiKP**	**03 05 11.1**	**+0.5**
BRTR	**Keskin Array B**	**119.59**	**59**	PKPdf	**PKiKP**	**03 05 11.1**	**+0.5**
ARCES	**ARCESS Array B**	**119.95**	**24**	PKP	**PKiKP**	**03 05 10.3**	**+0.1**
	comp=Z,2.7nm,0.8s,baz=274,slow=2.1,SNR=12						
PUL	**Pulkovo**	**121.15**	**35**	*i* PKIKP	**PKiKP**	**03 05 15.0**	**+2.3**
PUL				MLR	MLR		
	comp=Z,8µm,18.0s						
ASAR	**Alice Springs**	**121.53**	**208**	PKP	**PKPdf**	**03 05 13.2**	**-1.5**
	comp=Z,1.8nm,0.6s,baz=125,slow=1.4,SNR=13						
ASAR				PKKPbc	**PKKPbc**	**03 15 14.0**	**-0.3**
	comp=Z,4.4nm,0.9s,baz=344,slow=4.0,SNR=16						
APA	**Apatity**	**122.81**	**26**	⇑*i*PKIKP	**PKPdf**	**03 05 14.1**	**-1.5**
APA				*i*		03 12 16.0	
APA				pmax	pmax		
	comp=Z,18nm,0.9s						
LVZ	**Lovozero**	**123.27**	**26**	*c i*PKIKP	**PKiKP**	**03 05 16.7**	**-0.1**
LVZ				*i*		03 05 19.8	
LVZ				pmax	pmax		
	comp=Z,97nm,1.7s						
OBN	**Obninsk**	**124.13**	**41**	PKP	**PKiKP**	**03 05 19.9**	**+1.1**
	comp=Z,5.0nm,0.5s,baz=39,slow=0.3,SNR=9.4						
OBN	**Obninsk**	**124.13**	**41**	*d i*PKIKP	**PKiKP**	**03 05 19.2**	**+0.4**
OBN				*e*		03 05 22.5	
OBN				*e*		03 05 26.3	
OBN						03 07 07.0	
OBN				pmax	pmax		
	comp=Z,124nm,1.5s						
OBN				MLR	MLR		
	comp=Z,12µm,20.0s						
OBN	**Obninsk**	**124.13**	**41**		**PKiKP**	**03 05 20.1**	**+1.3**
WRA	**Warramunga Arr**	**124.63**	**211**	PKP	**PKPdf**	**03 05 19.4**	**-1.3**
	comp=Z,5.2nm,0.8s,baz=155,slow=1.6,SNR=24						
WRA				PKKPbc	**PKKPab**	**03 15 04.1**	**-0.2**
	comp=Z,2.4nm,0.7s,baz=344,slow=4.0,SNR=8.6						
WRAB	**Tennant Creek**	**124.64**	**211**	*c i*PKIKP	**PKPdf**	**03 05 20.2**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,35nm,1.7s						
WRAB	**Tennant Creek**	**124.64**	**211**		**PKPdf**	**03 05 19.1**	**-1.6**
MOS	**Moscow**	**124.77**	**40**	*i* PKIKP	**PKiKP**	**03 05 21.0**	**+1.0**
MOS				pmax	pmax		
	comp=Z,135nm,1.5s						
MOS				MLR	MLR		
	comp=Z,7µm,19.0s						
MOS				MLR	MLR		
	comp=E,5µm,20.0s						
SOC	**Sochi**	**124.86**	**55**	*i* PKIKP	**PKiKP**	**03 05 20.5**	**-0.1**
SOC				*e*		03 07 08.0	
SOC				*e*PPP	PPP	03 09 46.6	
SOC				*e*PS	PS	03 17 00.8	-7.9
SOC				*e*SSS	SSS	03 28 44.3	
SOC				MLR	MLR		
	comp=Z,5µm,20.0s						
LPSR	**Galich'ya Gora**	**125.37**	**44**	*e*PKIKP	**PKiKP**	**03 05 21.8**	**+0.5**
LPSR				pmax	pmax		
	comp=Z,130nm,1.8s						
VSR	**Storozhevoye**	**125.42**	**46**	*e*PKIKP	**PKiKP**	**03 05 21.6**	**+0.1**
VSR				pmax	pmax		
	comp=Z,70nm,1.1s						
VORD	**Divnogorie**	**125.48**	**46**	*e*PKIKP	**PKiKP**	**03 05 22.5**	**+0.9**
VORD				pmax	pmax		
	comp=Z,40nm,1.0s						
VORR	**Voronezh**	**125.48**	**45**	*e*PKIKP	**PKPdf**	**03 05 21.0**	**-0.2**
VORR				pmax	pmax		
	comp=Z,300nm,1.4s						
H11S2	**WAKE ISLAND Hy**	**125.70**	**272**	T	T	05 24 26.6	
	baz=115,slow=75,SNR=265						
H11S1	**WAKE ISLAND Hy**	**125.72**	**272**	T	T	05 24 27.4	
	baz=115,slow=75,SNR=164						
H11S3	**WAKE ISLAND Hy**	**125.72**	**272**	T	T	05 24 27.8	
	baz=115,slow=75,SNR=206						
KLMR	**Klimovskoe**	**125.76**	**34**	*e*PKIKP	**PKPdf**	**03 05 20.8**	**-0.6**
KLMR				pmax	pmax		
	comp=Z,273nm,1.2s						
KLMR	**Klimovskoe**	**125.76**	**34**	*e*PKPdf	**PKPdf**	**03 05 20.8**	**-0.6**
KLMR				AMP		03 05 35.3	
	comp=Z,273nm,1.2s						
KLMR				*e*PP	**PP**	**03 07 10.3**	**-3.8**
H11N3	**WAKE ISLAND Hy**	**126.00**	**274**	T	T	05 24 59.7	
	baz=115,slow=75,SNR=28						
H11N1	**WAKE ISLAND Hy**	**126.02**	**274**	T	T	05 24 47.7	
	baz=115,slow=75,SNR=19						
H11N2	**WAKE ISLAND Hy**	**126.02**	**274**	T	T	05 24 59.1	
	baz=115,slow=75,SNR=61						
NEY	**Neytrino**	**126.98**	**56**	*i* PKIKP	**PKiKP**	**03 05 27.0**	**+1.9**
VRH	**Novokhopyorsk**	**127.02**	**46**	*e*PKIKP	**PKiKP**	**03 05 24.7**	**+0.1**
VRH				pmax	pmax		
	comp=Z,40nm,0.9s						
KIV	**Kislovodsk**	**127.05**	**55**	⇓P	**PKiKP**	**03 05 25.5**	**+0.4**
KIV	**Kislovodsk**	**127.05**	**55**	*i* PKIKP	**PKiKP**	**03 05 25.3**	**+0.2**
KIV				*e*		03 07 23.6	
KIV				*e*SS	SS	03 24 32.3	+0.2
KIV				pmax	pmax		
	comp=Z,47nm,1.1s						
KIV				MLR	MLR		
	comp=Z,4µm,23.0s						
KIV	**Kislovodsk**	**127.05**	**55**	pPKPdf	pPKPdf	03 05 27.3	+1.3
KIV	**Kislovodsk**	**127.05**	**55**	PKPdf	**PKPdf**	**03 05 24.6**	**0.0**
KVAR	**Kislovodsk Arr**	**127.05**	**55**	PKP	**PKiKP**	**03 05 26.2**	**+1.0**
	comp=Z,6.0nm,0.8s,baz=254,slow=21,SNR=2.1						
KBZ	**Khabaz**	**127.17**	**56**	PKP	**PKiKP**	**03 05 26.5**	**+1.3**
	comp=Z,13nm,0.9s,baz=210,slow=1.7,SNR=15						
AKH	**Akhalkalaki**	**127.28**	**59**	⇑P	**PKiKP**	**03 05 28.1**	**+2.4**
GOF	**Gofitskoye**	**127.43**	**54**	⇑*e*PKIKP	**PKiKP**	**03 05 27.1**	**+1.4**
GOF				pmax	pmax		
	comp=Z,98nm,0.9s						
NCK	**Nalchik**	**127.64**	**56**	*i* PKIKP	**PKiKP**	**03 05 28.1**	**+1.9**
ZEI	**Tsey**	**127.78**	**57**	*i* PKIKP	**PKiKP**	**03 05 28.1**	**+1.4**
ZEI				pmax	pmax		
	comp=Z,12nm,1.5s						
PSA00	**Pilbara Seismi**	**127.92**	**194**		**PKPdf**	**03 05 25.3**	**-1.7**
GNI	**Garni**	**128.02**	**60**	*i* PKIKP	**PKiKP**	**03 05 29.6**	**+2.3**
GNI	**Garni**	**128.02**	**60**	pPKiKP	**PKiKP**	**03 05 30.0**	**+2.7**
NAX	**Nakhchivan**	**128.44**	**62**	PKIKP	**PKPdf**	**03 05 27.5**	**+0.1**
PRGR	**Permogore**	**128.61**	**33**	*e*PKIKP	**PKiKP**	**03 05 30.4**	**+2.9**
PRGR				*e*		03 07 37.5	
PRGR				pmax	pmax		
	comp=Z,263nm,1.3s						
BILL	**Bilibino**	**128.79**	**336**	*c i*PKIKP	**PKiKP**	**03 05 28.4**	**+0.7**
BILL				*i*		03 05 32.1	
BILL						03 05 35.2	
BILL						03 07 41.0	
BILL				SS	SS	03 24 51.0	-0.8
BILL				pmax	pmax		
	comp=Z,73nm,1.7s						
BILL				MLR	MLR		
	comp=Z,6µm,17.0s						
GROC	**Groznyy**	**129.20**	**57**	*i* PKIKP	**PKPdf**	**03 05 28.9**	**+0.3**
GROC				*e*		03 07 39.6	
GROC				pmax	pmax		
	comp=Z,16nm,0.6s						
GANJ	**Ganja**	**129.29**	**60**	PKIKP	**PKPdf**	**03 05 28.2**	**-0.7**
WHFO	**Wadi Hawf**	**129.46**	**90**	P	**PKiKP**	**03 05 31.9**	**+1.2**
ZKTA	**Zakatala**	**129.64**	**59**	PKIKP	**PKPdf**	**03 05 28.4**	**-1.1**
FITZ	**Fitzroy Crossi**	**129.68**	**202**	PKP	**PKiKP**	**03 05 32.2**	**+1.1**
	comp=Z,10nm,1.1s,baz=350,slow=1.7,SNR=5.3						
MNGR	**Mingechevir, A**	**129.88**	**60**	PKIKP	**PKPdf**	**03 05 29.8**	**-0.1**
DOK	**Doka**	**130.05**	**90**	P	**PKiKP**	**03 05 32.9**	**+1.1**
	SNR=7.1						
MAK	**Makhachkala**	**130.43**	**57**	*e*P	**Pdif**	**03 02 16.5**	**-4.3**
MAK				*e*		03 07 43.1	
MAK				*e*SSS	SSS	03 30 01.2	
MAK				pmax	pmax		
	comp=Z,242nm,1.8s						
BELG	**Belogornoye**	**130.68**	**45**	PKP	**PKiKP**	**03 05 33.3**	**+1.4**
	comp=Z,28nm,0.8s,baz=261,slow=1.4,SNR=12						
BELG	**Belogornoye**	**130.68**	**45**	*i* PKIKP	**PKiKP**	**03 05 33.1**	**+1.2**
LKRN	**Lenkeran, Azer**	**130.90**	**63**	PKIKP	**PKPdf**	**03 05 31.2**	**-0.7**
KIRV	**Kirov**	**130.99**	**36**	PKP	**PKiKP**	**03 05 33.9**	**+1.5**
	comp=Z,16nm,0.8s,baz=224,slow=1.5,SNR=16						
KIRV	**Kirov**	**130.99**	**36**	*c i*PKIKP	**PKiKP**	**03 05 33.1**	**+0.7**
MZR	**Muzera**	**131.08**	**84**	P	**PKiKP**	**03 05 34.8**	**+1.1**
UOSS	**Minazif**	**134.06**	**83**	IAMs_20	IAMs_20	04 08 36.7	
	comp=Z,11µm,19.0s						
BSY	**Bisya**	**134.23**	**86**	pPKiKP	**PKiKP**	**03 05 43.0**	**+2.9**
	SNR=7.1						
BSY	**Bisya**	**134.23**	**86**	P	**PKiKP**	**03 05 43.0**	**+2.9**
	SNR=7.1						
MHTO	**MHTO**	**134.29**	**89**	P	**PKiKP**	**03 05 42.0**	**+1.7**
	SNR=12						
SMDO	**Samad**	**135.07**	**86**	pPKiKP	**PKiKP**	**03 05 44.0**	**+2.1**
	SNR=8.9						
SMDO	**Samad**	**135.07**	**86**	P	**PKiKP**	**03 05 44.0**	**+2.1**
	SNR=8.9						
WSAR	**Wadi Sarin**	**135.63**	**86**	PKP	**PKiKP**	**03 05 45.2**	**+2.3**
	comp=Z,4.7nm,0.8s,baz=176,slow=3.1,SNR=5.1						
WSAR	**Wadi Sarin**	**135.63**	**86**	PKiKP	**PKiKP**	**03 05 42.9**	**-0.1**
WSAR	**Wadi Sarin**	**135.63**	**86**	P	**PKiKP**	**03 05 42.9**	**-0.1**
WBK	**Wadi Bani Khal**	**135.72**	**87**	PKiKP	**PKiKP**	**03 05 43.1**	**-0.1**
WBK	**Wadi Bani Khal**	**135.72**	**87**	P	**PKiKP**	**03 05 43.1**	**-0.1**
JLN	**Jalan Bani Buh**	**135.95**	**88**	pPKPdf	**PKiKP**	**03 05 45.2**	**+1.6**
	SNR=11						
JLN	**Jalan Bani Buh**	**135.95**	**88**	P	**PKiKP**	**03 05 45.2**	**+1.6**
	SNR=11						
SEY	**Seymchan**	**136.11**	**332**	PKP	**PKiKP**	**03 05 42.0**	**-0.7**
	comp=Z,10nm,0.6s,baz=105,slow=3.6,SNR=19						
SEY	**Seymchan**	**136.11**	**332**	PKIKP	**PKiKP**	**03 05 42.0**	**-0.7**
ARU	**Arti**	**136.29**	**38**	PKP	**PKPdf**	**03 05 42.1**	**+0.6**
	comp=Z,6.6nm,0.6s,baz=300,slow=0.8,SNR=15						
ARU	**Arti**	**136.29**	**38**	*c i*PKIKP	**PKPdf**	**03 05 41.7**	**+0.2**
ARU				pmax	pmax		
	comp=Z,198nm,2.5s						
ARU				MLR	MLR		
	comp=Z,7µm,19.0s						
ARU	**Arti**	**136.29**	**38**	PKPdf	**PKPdf**	**03 05 41.6**	**+0.2**

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TIXI   Tiksi              136.29 351  PKP      PKPdf    03 05 41.6 +0.5
       comp=Z,5.2nm,0.7s,baz=24,slow=2.6,SNR=12
TIXI   Tiksi              136.29 351ciPKIKP    PKiKP    03 05 43.2 +0.4
TIXI                                 i                  03 05 44.0
PEA0B  Petropavlovsk-     136.94 318ciPKIKP    PKiKP    03 05 43.9 -0.8
PEA0B                                i                  03 05 47.1
PETK   Petropavlovsk-     136.94 318  PKP      PKiKP    03 05 44.0 -0.6
       comp=Z,30nm,1.1s,baz=88,slow=7.6,SNR=11
PETK   Petropavlovsk-     136.94 318  PKPdf    PKPdf    03 05 42.9  0.0
SVE    Sverdlovsk         137.25  37 iPKIKP    PKiKP    03 05 45.1 -0.1
SVE                                   pmax     pmax
       comp=Z,121nm,1.6s
AKTO   Aktyubinsk         137.36  46  PKP      PKPdf    03 05 43.3 -0.4
       comp=Z,6.8nm,0.8s,baz=170,slow=1.3,SNR=15
BATI   Baumata            137.70 203  PKP      PKiKP    03 05 48.6 +1.1
SOEI   Soe                137.90 204  PKP      PKiKP    03 05 47.9 -0.1
GEYT   Alibeck            138.13  65  PKP      PKPdf    03 05 45.1 -0.4
       comp=Z,6.4nm,0.8s,baz=236,slow=6.8,SNR=5.2
MA2    Magadan            138.37 329  PKP      PKiKP    03 05 47.5 +0.1
       comp=Z,7.7nm,0.5s,baz=149,slow=19,SNR=3.0
MA2    Magadan            138.37 329 iPKIKP    PKiKP    03 05 48.0 +0.6
MA2    Magadan            138.37 329  PKPdf    PKPdf    03 05 43.1 -2.2
NRIK   Noril'sk           138.44  11  PKP      PKiKP    03 05 47.3  0.0
       comp=Z,19nm,1.0s,baz=16,slow=0.9,SNR=16
NRIK   Noril'sk           138.44  11ciPKIKP    PKiKP    03 05 47.5 +0.3
AB31   Akbulak array      138.80  48 iPKHKP    PKPpre   03 05 38.0
ABKAR  Akbulak array      138.80  48  PKPpre   PKPpre   03 05 39.7
MMRI   Maumere            139.65 202  PKP      PKiKP    03 05 50.6 -0.8
EDFI   Ende, Flores       139.71 201  PKP      PKPdf    03 05 49.5 +0.2
FAKI   Fak Fak            140.22 220  PKP      PKiKP    03 05 52.7 +0.1
TWSI   Taliwang, Sumb     141.00 194  PKP      PKiKP    03 05 53.7 -0.5
TWSI                                  PKP      sPKPdf   03 05 53.9 +0.6
MSAI   Masohi             141.63 215  PKP      PKPdf    03 05 51.8 -0.9
JAGI   Jajag, Banyuwa     141.76 190  IAMs_20  IAMs_20  04 05 25.6
       comp=Z,10µm,20.0s
SRBI   Singaraja          141.96 192  PKP      PKPdf    03 05 50.8 -2.4
GUMO   Guam               142.38 253  IAMs_20  IAMs_20  03 58 23.4
       comp=Z,7µm,20.0s
SWI    Sorong             142.47 220  PKP      PKPdf    03 05 52.4 -1.7
BSSI   Bau Bau, Buton     142.55 201  PKP      PKPdf    03 05 51.7 -2.6
BLJI   Banyuglugur        142.55 189  PKP      PKPdf    03 05 52.6 -1.7
CMJI   Cimerak            142.91 181  PKP      PKPdf    03 05 53.1 -1.8
KMMI   Kalianget          143.18 190  PKP      PKPdf    03 05 55.0 -0.4
KPJI   Karang Pucung      143.35 182  PKP      PKPdf    03 05 55.8 +0.1
CNJI   Cibinong           143.37 179  PKP      PKPdf    03 05 54.3 -1.4
BKSI   Bulukumba          143.44 201  PKP      PKPbc    03 05 53.7 +0.8
BKSI                                  PKP      pPKPdf   03 05 57.4 +0.2
SMRI   Semarang           143.56 184  PKP      PKPdf    03 05 55.3 -0.8
BRVK   Borovoye           143.83  39 iPKIKP    PKPdf    03 05 56.0 +0.7
BRVK   Borovoye           143.83  39  P        PKPdf    03 05 56.2 +0.9
BRVK   Borovoye           143.83  39  PKPdf    PKPbc    03 05 54.1 +1.1
KAPI   Kappang            143.84 200  PKP      PKPbc    03 05 55.1 +1.0
       comp=Z,12nm,0.9s,baz=214,slow=4.1,SNR=22
KAPI   Kappang            143.84 200  PKIKP    PKPbc    03 05 54.6 +0.5
KAPI   Kappang            143.84 200  PKPdf    PKPbc    03 05 54.6 +0.5
LEM    Lembang            143.86 179  PKP      PKPbc    03 05 55.5 +1.1
       comp=Z,117nm,0.7s,baz=180,slow=3.3,SNR=21
LEM    Lembang            143.86 179  PKP      PKPdf    03 05 56.4 -0.4
KDI    Kendari            143.86 205  PKP      PKPdf    03 05 55.8 -0.8
BVAR   Borovoye Array     143.90  39  PKP      PKPbc    03 05 53.9 +0.7
       comp=Z,11nm,0.7s,baz=250,slow=8.7,SNR=37
CGJI   Cibinong           144.01 176  PKP      PKPbc    03 05 54.9 +0.3
DBJI   Dramaga            144.11 178  PKP      PKPbc    03 05 56.0 +1.0
SANI   Sanana             144.18 212  PKP      PKPbc    03 05 55.6 +0.4
TNG    Tangerang          144.49 178  PKP      pPKPdf   03 05 59.1  0.0
TNG                                   PKP      PKPdf    03 05 57.4 -0.3
YAK    Yakutsk            144.50 343  PKP      PKPbc    03 05 54.8 +0.1
       comp=Z,68nm,0.8s,baz=192,slow=0.6,SNR=19
YAK    Yakutsk            144.50 343 ePKIKP    PKPdf    03 05 55.6 -0.5
YAK                                  e                  03 09 12.2
YAK                                   pmax     pmax
       comp=Z,1µm,1.5s
YAK                                   pmax     pmax
       comp=N,66nm,0.7s
YAK                                   pmax     pmax
       comp=E,155nm,1.3s
YAK                                   pmax     pmax
       comp=Z,2µm,3.5s
YAK                                   pmax     pmax
       comp=N,415nm,2.1s
YAK                                   pmax     pmax
       comp=E,4µm,14.1s
YAK    Yakutsk            144.50 343  PKPdf    PKPab    03 05 54.2 -0.3
SBJI   Serang             144.52 177  PKP      PKPdf    03 05 57.5 -0.2
BWJI   Bawean             144.54 188  PKP      PKPbc    03 05 56.9 +0.6
LBMI   Labuha             144.67 215  PKP      PKPab    03 05 54.7 -1.9
KASI   Kota Agung         145.00 174  PKP      PKPab    03 05 57.5 -0.3
KUR    Kuril'sk           145.01 308  PKIKP    PKPdf    03 05 58.6 +1.0
KUR                                   SS       SS       03 28 11.2 +4.9
KUR                                   pmax     pmax
       comp=N,330nm,1.3s
KUR                                   pmax     pmax
       comp=E,303nm,1.3s
KUR                                   pmax     pmax
       comp=Z,1µm,1.3s
BLSI   Bandar Lampung     145.21 175  PKP      PKPbc    03 05 58.5  0.0
TAPR   Tapar              145.24  91⇑iP        PKPbc    03 05 56.7 -1.6
LWLI   Liwa               145.46 173  PKP      PKPbc    03 05 59.4  0.0
TTSI   Tana Toraja        145.68 201  PKP      PKPab    03 06 00.9 +0.6
KLI    Kotabumi           145.68 175  PKP      PKPab    03 06 00.3  0.0
JUMK   Jumkunaria         145.87  91⇑iP        PKPdf    03 05 58.0 -1.7
TNTI   Ternate            145.95 216  PKP      PKPbc    03 06 00.6 -0.2
MNAI   Manna              145.97 171  IAMs_20  IAMs_20  04 02 25.7
       comp=Z,10µm,22.0s
MDSI   Maura Dua          145.99 173  PKP      PKPdf    03 05 58.5 -1.8
VJP    Vajepar            146.07  91⇑iP        PKPdf    03 05 57.8 -2.3
PALK   Pallekele          146.13 125  P        PKPdf    03 06 00.5 -0.1
KBKI   Kotabaru           146.43 195  PKP      PKPab    03 06 03.2 +0.1
LUWI   Luwuk              146.47 208  PKP      PKPab    03 06 03.1 -0.2
LUWI   Luwuk              146.47 208  IAMs_20  IAMs_20  04 05 29.8
       comp=Z,9µm,21.0s
BRZS   Berezniki          146.49  42⇑iPKP      PKPdf    03 06 00.1  0.0
       baz=43
BRZS   Berezniki          146.49  42ciPKIKP    PKPdf    03 06 00.0  0.0
BBKI   Banjar Baru        146.54 193  PKP      PKPdf    03 06 01.9 +0.7
LHSI   Lahat              146.57 172  PKP      PKPab    03 06 03.3 -0.3
KSI    Kapahiang          146.62 170  PKP      PKPbc    03 06 03.0 +0.1
BRLS   Borolday           146.74  56⇑ePKP      PKPdf    03 06 00.4 -0.3
       baz=56
BRLS   Borolday           146.74  56cePKIKP    PKPdf    03 06 00.3 -0.3
KBL    Kabul              146.78  71  PKIKP    PKPdf    03 06 01.0 -0.3
KBL    Kabul              146.78  71  P        PKPdf    03 06 01.7 +0.5
       SNR=67
KBL    Kabul              146.78  71           PKPdf    03 06 01.0 -0.3
CHGR   Chuyangaron        146.81  64           PKPdf    03 06 01.8 +0.8
OTUK   Ortayu             146.96  46  PKIKP    PKPdf    03 06 01.7 +0.8
APSI   Ampana             147.03 206  PKP      PKPab    03 06 05.2 -0.2
IUG    Iuzhnay            147.04  57 ePKP      PKPdf    03 06 02.3 +1.0
       baz=57
IUG    Iuzhnay            147.04  57 ePKIKP    PKPdf    03 06 02.3 +1.0
MASI   Maura Aman, Be     147.06 169  PKP      PKiKP    03 06 06.4 -0.3
MASI                                  PKP      PKiKP    03 06 06.4 -0.3
POO    Poona              147.10 102⇓iP        PKPbc    03 06 04.0 -0.1
       comp=Z,250nm,1.0s
KK31   Karatay Array      147.21  55  PKIKP    PKPdf    03 06 01.3 -0.2
KK31   Karatay Array      147.21  55           PKPdf    03 06 01.3 -0.2
KKAR   Karatay Array      147.21  55  PKIKP    PKPdf    03 06 01.0 -0.5
KKAR   Karatay Array      147.21  55  PKPdf    PKPdf    03 06 00.9 -0.5
JASL   Jaisalmer          147.34  85 eP        PKPdf    03 06 02.0 -0.2
KMSI   Cibinong           147.41 211  PKP      PKPdf    03 06 03.3 +0.6
UGL    Uglegorsk          147.55 317 ePKP2     PKiKP    03 06 05.7 -0.8
UGL                                   pmax     pmax
       comp=Z,180nm,1.2s
PMBI   Palembang          147.59 174  PKP      PKPbc    03 06 06.1 +0.5
GAR    Garm               147.68  63           PKPdf    03 06 03.0 +0.5
PBKI   Pangkalan Bun      147.76 187  PKP      PKPbc    03 06 05.5 -0.5
GTOI   Gorontalo          147.89 209  PKP      PKPdf    03 06 04.5 +1.0
YSS    Yuzh-Sakhalins     147.93 313 ePKIKP    PKPbc    03 06 04.2 -1.3
YSS                                  e                  03 06 11.8
YSS                                   pmax     pmax
       comp=Z,1.0nm,1.4s
YSS    Yuzh-Sakhalins     147.93 313           PKPdf    03 06 03.9 +1.5
BTK    Batken             147.95  61  PKIKP    PKPdf    03 06 03.1 +0.2
BTK    Batken             147.95  61           PKPdf    03 06 03.1 +0.2
SISI   Saibi              148.18 163  PKP      PKPdf    03 06 03.1 -0.8
MRSI   Marisa             148.19 207  PKP      PKPdf    03 06 04.3 +0.3
PPBI   Pangkal Pinang     148.45 177  PKP      PKPdf    03 06 05.9 +1.5
JMBI   JAMBI              148.75 172  PKP      PKPbc    03 06 06.9 -1.7
DRK    Karamyk            148.77  62           PKPdf    03 06 05.5 +0.9
MPSI   Mapaga             148.82 204  PKP      PKPbc    03 06 07.1 -1.7
PDSI   Padang             148.90 165  PKP      PKPdf    03 06 06.9 +1.7
SMKI   Samarinda          148.92 198  PKP      PKPbc    03 06 08.5 -0.6
ASAJ   Asahikawa          148.93 307  PKPbc    PKiKP    03 06 09.8 +0.3
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       comp=Z,95nm,1.1s,baz=260,slow=6.6,SNR=11
MTKI   Muara Teweh, K     148.99 194  PKP      PKPbc    03 06 08.2 -1.1
ERM    Erimo              149.05 303ciPKP2     PKPab    03 06 12.5 -0.3
ERM                                   pmax     pmax
       comp=Z,473nm,1.7s
BTLS   Baital             149.16  50⇑iPKP      PKPdf    03 06 04.5  0.0
       baz=51
BTLS   Baital             149.16  50ciPKHKP    PKPpre   03 06 04.5
TOLI2  Tolitoli           149.22 206           PKPdf    03 06 05.2 -0.4
TOLI2                                 IAMs_20  IAMs_20  04 05 14.4
       comp=Z,10µm,22.0s
PPI    Padang Panjang     149.33 165  PKP      PKPbc    03 06 08.2 -1.9
KURK   Kurchatov          149.48  38  PKHKP    PKPpre   03 06 05.5
KURK   Kurchatov          149.48  38  P        PKPdf    03 06 04.6 -0.3
KURK   Kurchatov          149.48  38  PKPdf    PKPdf    03 06 05.5 +0.6
KURBB  Kurchatov Arra     149.49  38  PKP      PKPdf    03 06 05.0 +0.1
       comp=Z,12nm,0.6s,baz=298,slow=2.9,SNR=8.9
KURBB                                 PKPbc    PKPbc    03 06 09.1 -0.2
       comp=Z,55nm,0.8s,baz=304,slow=3.0,SNR=43
KURBB  Kurchatov Arra     149.49  38  PKHKP    PKPpre   03 06 06.3
EKS2   Erkin-Say          149.65  55  P        PKPdf    03 06 07.9 +2.3
       SNR=28
AML    Almayashu          149.71  56  P        PKPdf    03 06 08.2 +2.2
       SNR=27
AML    Almayashu          149.71  56  P        PKPdf    03 06 06.4 +0.3
RGRI   Rengat             149.81 169  PKP      PKPdf    03 06 06.6  0.0
JCJ    Chichijima         149.83 274  PKPbc    PKPbc    03 06 10.4 -0.5
       comp=Z,81nm,0.7s,baz=57,slow=5.3,SNR=8.1
JCJ    Chichijima         149.83 274           PKPbc    03 06 10.7 -0.2
GRNR   Gornyy             149.91 323⇑iPKIKP    PKiKP    03 06 11.3 -0.1
GRNR                                  pmax     pmax
       comp=Z,20nm,1.1s
DSRI   Dabo               149.99 173  PKP      PKPdf    03 06 06.5 -0.4
USP    Ospenovka          150.00  54  P        PKPbc    03 06 09.4 -1.6
       SNR=17
SGDS   Sogindy            150.04  53⇑iPKP      PKPdf    03 06 05.6 -0.5
       baz=53
AAK    Ala-Archa          150.16  55  PKPbc    PKiKP    03 06 12.3  0.0
       comp=Z,19nm,0.7s,baz=226,slow=2.4,SNR=26
AAK    Ala-Archa          150.16  55  P        PKPdf    03 06 07.1 +0.7
       SNR=21
AAK    Ala-Archa          150.16  55  PKIKP    PKPdf    03 06 06.6 +0.1
AAK    Ala-Archa          150.16  55  P        PKPbc    03 06 09.3 -2.3
AAK    Ala-Archa          150.16  55  PKPdf    PKPdf    03 06 06.6 +0.1
BKNI   Bangkinang         150.23 166  PKP      PKPdf    03 06 08.0 +0.8
BKNI   Bangkinang         150.23 166           PKPdf    03 06 06.8 -0.4
NIL    Nilore             150.24  73  PKIKP    PKPdf    03 06 08.2 +1.5
NIL    Nilore             150.24  73           PKPdf    03 06 08.2 +1.5
GSI    Gunungsitoli       150.25 159  PKP      PKPdf    03 06 09.1 +1.8
CHMS   Chumysh            150.25  54  P        PKPdf    03 06 06.5 +0.1
       SNR=23
UCH    Uchtor             150.28  56  P        PKPbc    03 06 10.7 -1.5
       SNR=44
MNSI   Mandailing Nat     150.34 163  PKP      PKPdf    03 06 09.0 +1.6
ZALV   Zalesovo Beam      150.37  28  PKP      PKPdf    03 06 05.8 -0.4
       comp=Z,31nm,0.9s,baz=298,slow=3.2,SNR=45
ZALV                                  PKPbc    PKPbc    03 06 11.1 -0.3
       comp=Z,229nm,0.8s,baz=303,slow=2.6,SNR=62
KBK    Karagaybulak       150.48  55  P        PKiKP    03 06 15.9 +2.9
       SNR=11
AJM    Ajmer              150.49  88 eP        PKPdf    03 06 08.3 +1.0
STKI   Sintang            150.51 187  PKP      PKPdf    03 06 09.5 +1.8
SEM    Semipalatinsk      150.52  37 ePKP      PKPdf    03 06 05.9 -0.9
       baz=37
SEM    Semipalatinsk      150.52  37 ePKIKP    PKPdf    03 06 05.9 -0.9
HYB    Hyderabad          150.55 108 iPKP      PKPdf    03 06 07.5 -0.1
HYB                                  ePP       PP       03 09 52.0 +2.8
HYB                                  eSKKS              03 16 37.0
TKM2   Tokmak 2           150.87  54  P        PKPdf    03 06 07.6  0.0
       SNR=19
TKM2   Tokmak 2           150.87  54  PKIKP    PKPdf    03 06 07.8 +0.2
SBSI   Sibolga            150.88 161  PKP      PKPdf    03 06 10.0 +1.7
KUU    Kurty              151.08  52 ePKP      PKPdf    03 06 07.0 -0.7
       baz=52
KUU    Kurty              151.08  52 ePKIKP    PKPdf    03 06 07.0 -0.7
BOD    Bodaibo            151.40 353 ePKIKP    PKPdf    03 06 07.9 +0.3
BOD                                   pmax     pmax
       comp=Z,499nm,1.8s
ULHL   Ulahol             151.51  55  P        PKiKP    03 06 17.9 +2.6
       SNR=14
JMM    Marumori           151.55 296           PKPbc    03 06 12.8 -1.9
AAA    Alma-Ata           151.70  53 ePKP      PKPdf    03 06 08.5 -0.2
       baz=53
AAA    Alma-Ata           151.70  53 ePKIKP    PKPdf    03 06 08.5 -0.2
MDOK   Medeo              151.81  53 ePKP      PKPdf    03 06 08.7 -0.3
       baz=53
MDOK   Medeo              151.81  53 ePKIKP    PKPdf    03 06 08.6 -0.3
TPTI                      151.95 157  PKP      PKPdf    03 06 09.3 -0.6
KSH    Kashi              151.96  61  PKPbc    PKPdf    03 06 09.3  0.0
KSH                                   PP       PP       03 09 59.1 +2.0
KSH                                   SKKS              03 16 43.6
KSH                                   AMB      AMB
       comp=Z,3µm,4.3s
KSH                                   LR       LR
       comp=Z,5µm,16.5s
KSH                                   LR       LR
       comp=Z,5µm,21.0s
KSH                                   LR       LR
       comp=Z,6µm,17.9s
ZEA    Zeya               152.01 335 ePKIKP    PKPdf    03 06 09.9 +1.2
ZEA                                   pmax     pmax
       comp=N,20nm,1.8s
ZEA                                   pmax     pmax
       comp=Z,40nm,1.3s
ZEA                                   pmax     pmax
       comp=N,700nm,9.4s
ZEA                                   pmax     pmax
       comp=Z,1µm,4.7s
KSM    Kuching            152.02 185  P        PKPdf    03 06 12.0 +2.0
TDK    Taldyqorghan       152.06  48 ePKP      PKPdf    03 06 09.2 +0.1
       baz=48
TDK    Taldyqorghan       152.06  48 ePKIKP    PKPdf    03 06 09.2 +0.1
KUDL   Kundal             152.44  85 eP        PKPdf    03 06 11.0 +0.8
TEY    Ternei             152.63 312⇓ePKIKP    PKPdf    03 06 05.9 -4.0
TEY                                   pmax     pmax
       comp=E,10.0nm,1.3s
TEY                                   pmax     pmax
       comp=N,10.0nm,1.6s
TEY                                   pmax     pmax
       comp=Z,10.0nm,1.6s
TSI    Tuntungan          152.63 159  PKP      PKPdf    03 06 12.5 +1.6
SBUM   Sibu               152.77 189  P        PKPdf    03 06 14.0 +2.9
SATY   Saty               152.78  52 ePKP      PKPdf    03 06 10.3 -0.1
       baz=52
SATY   Saty               152.78  52 ePKIKP    PKPdf    03 06 10.3 -0.1
KPKS   Kokpek             152.83  51⇑ePKP      PKPdf    03 06 10.3 -0.1
       baz=51
KPKS   Kokpek             152.83  51cePKIKP    PKPdf    03 06 10.3 -0.1
SONA   Sohna              152.98  85 eP        PKPdf    03 06 09.6 -1.3
UZB    Uzynbulak          153.17  52⇑ePKP      PKPdf    03 06 11.2 +0.2
       baz=52
UZB    Uzynbulak          153.17  52cePKIKP    PKPdf    03 06 11.1 +0.2
KLR    Kul'dur            153.25 324  PKP      PKPdf    03 06 10.1 -0.6
       comp=Z,17nm,1.0s,baz=70,slow=2.7,SNR=17
KLR                                   PKPbc    pPKPbc   03 06 19.0 -0.6
       comp=Z,14nm,0.6s,baz=24,slow=3.0,SNR=12
BISR   Bishrakh           153.34  84 eP        PKPdf    03 06 10.8 -0.7
PDGK   Podgornoye         153.42  51  PKIKP    PKPdf    03 06 11.4 +0.1
MAKZ   Makanchi           153.44  42  PKIKP    PKPdf    03 06 11.3 +0.2
MAKZ   Makanchi           153.44  42           PKPdf    03 06 11.4 +0.2
MK31   Makanchi Array     153.63  42  PKIKP    PKPdf    03 06 11.1 -0.3
MKAR   Makanchi Array     153.63  42  PKP      PKPdf    03 06 10.8 -0.6
       comp=Z,6.0nm,0.9s,baz=321,slow=1.6,SNR=19
MKAR                                  PKPbc    PKiKP    03 06 19.8 +0.5
       comp=Z,30nm,0.8s,baz=313,slow=0.9,SNR=40
MKAR   Makanchi Array     153.63  42  PKIKP    PKPdf    03 06 10.2 -1.2
MKAR   Makanchi Array     153.63  42  PKPdf    PKPdf    03 06 10.2 -1.2
LHMI   Lhok Sumawe        153.69 155  PKP      PKPdf    03 06 12.4  0.0
MJAR   Matsushiro Arr     153.76 293  PKP      PKPdf    03 06 12.1 +0.3
       comp=Z,3.9nm,0.8s,baz=80,slow=2.4,SNR=7.4
MJAR                                  PKPbc    pPKPbc   03 06 20.6 -0.5
       comp=Z,28nm,1.2s,baz=126,slow=3.0,SNR=13
MAJO   Matsushiro         153.76 293  PKIKP    PKPdf    03 06 11.2 -0.7
MAJO   Matsushiro         153.76 293           PKPdf    03 06 11.2 -0.7
MAT    Matsushiro         153.76 293  PKP      PKPdf    03 06 10.5 -1.4
SPMM   Sapulut            154.04 200  P        PKPdf    03 06 15.0 +2.0
ZSN    Zaisan             154.72  39⇑ePKP      PKPdf    03 06 12.6 -0.3
       baz=39
ZSN    Zaisan             154.72  39cePKIKP    PKPdf    03 06 12.5 -0.3
KULM   Kulim              154.93 163  P        PKPdf    03 06 16.0 +1.9
PTH    Pithoragarh        155.89  83 eP        PKPdf    03 06 14.8 -0.4
USRK   Ussuriysk Ar.      155.94 314  PKP      PKPdf    03 06 16.9 +2.4
       comp=Z,2.8nm,0.9s,baz=135,slow=0.4,SNR=12
USRK                                  PKPab    PKPab    03 06 40.8 -0.9
       comp=Z,17nm,0.9s,baz=70,slow=1.8,SNR=9.4
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IRK    Irkutsk            157.14   6 ePKIKP    PKPdf    03 06 16.2 +0.3
IRK                                   pmax     pmax
       comp=Z,332nm,2.4s
CIT    Chita              157.14 351 ePKIKP    PKPdf    03 06 19.1 +3.1
CIT                                  e                  03 06 25.7
CIT                                  e                  03 06 46.6
CIT                                  e                  03 10 34.2
CIT                                   pmax     pmax
       comp=Z,209nm,3.1s
MDJ    Mudanjiang         157.18 317  PKP      PKPdf    03 06 16.5 +0.3
MDJ                                   PP       PP       03 10 23.0 -2.6
MDJ                                   AMB      AMB
       comp=Z,3µm,9.9s
MDJ                                   LR       LR
       comp=Z,10µm,18.5s
MDJ                                   LR       LR
       comp=Z,9µm,17.8s
MDJ                                   LR       LR
       comp=Z,17µm,22.8s
MOY    Mondy              157.28  11 ePKIKP    PKPdf    03 06 18.4 +2.2
MOY                                   pmax     pmax
       comp=Z,352nm,1.9s
TLY    Talaya             157.63   7  PKP      PKPdf    03 06 17.1 +0.6
       comp=Z,4.1nm,0.6s,baz=210,slow=2.3,SNR=11
TLY                                   PKPab    sPKPab   03 06 50.9 +0.4
       comp=Z,21nm,0.8s,baz=170,slow=4.4,SNR=5.9
TLY    Talaya             157.63   7  P        PKPdf    03 06 19.1 +2.5
TLY    Talaya             157.63   7  PKPdf    PKPdf    03 06 16.5  0.0
PYUN   Piuthan            158.09  88 eP        PKPdf    03 06 17.5 -0.6
WMQ    Urumqi             158.45  43 ePKP      PKPdf    03 06 19.8 +1.9
WMQ                                   PKPab    sPKPab   03 06 56.4 +2.0
WMQ                                   PP       PP       03 10 36.8 +4.1
WMQ                                   AMB      AMB
       comp=Z,6µm,9.1s
WMQ                                   LR       LR
       comp=Z,4µm,21.1s
WMQ                                   LR       LR
       comp=Z,4µm,19.3s
WMQ                                   LR       LR
       comp=Z,6µm,18.3s
KOLN   Koldanda           158.56  89 eP        PKPdf    03 06 17.3 -1.4
DANN   Dangsing           158.80  87 eP        PKPdf    03 06 18.3 -0.8
       comp=Z,733nm,1.7s
ZAK    Zakamensk          158.87   8 ePKIKP    PKPdf    03 06 19.3 +1.1
ZAK                                  e                  03 10 31.8
ZAK                                   pmax     pmax
       comp=Z,89nm,1.6s
ZAK                                   pmax     pmax
       comp=Z,55nm,1.9s
GKN    Gorkha             159.51  89 eP        PKPdf    03 06 19.4 -0.3
DMN    Daman              159.85  90 eP        PKPdf    03 06 21.5 +1.2
KKN    Kakani             160.03  89 eP        PKPdf    03 06 18.8 -1.6
CN2    Changchun          160.06 320 ePKP      PKPdf    03 06 19.2 -0.4
CN2                                   PP       PP       03 10 44.1 +2.9
PKIN   Phulchoki          160.09  90 eP        PKPdf    03 06 21.2 +0.7
PKI    Pulchoki           160.10  90 eP        PKPdf    03 06 21.4 +0.8
GUN    Gumba              160.57  89 eP        PKPdf    03 06 22.4 +1.2
KSULJ  Uljin              160.68 297  P        PKPdf    03 06 26.2 +5.7
       SNR=11
OKEB   Okgye-meyeon       160.73 300  P        PKPdf    03 06 10.3  -10
       SNR=19
JIRN   Jiri               160.80  90 eP        PKPdf    03 06 21.3 -0.2
KSJMJ  Jumunjin           160.82 301  P        PKPdf    03 06 16.1 -4.5
       SNR=13
KSTBA  Taebaek            160.91 299  P        PKPdf    03 06 17.0 -3.9
KSDGY  Daegwallycong      160.94 301  P        PKPdf    03 06 14.0 -6.9
       SNR=14
RAMN   Ramite             161.01  93 eP        PKPdf    03 06 23.0 +1.5
       comp=Z,85nm,1.2s
SEHB   SEOHWA             161.05 303  P        PKPdf    03 06 26.9 +6.0
       SNR=5.9
KSADO  Andong             161.11 297  P        PKPdf    03 06 30.0 +9.0
       SNR=8.8
KSCHC  Chuncheon          161.55 302  P        PKPdf    03 06 26.8 +5.3
       SNR=9.7
KSRS   Korea Array        161.58 301  PKP      PKPdf    03 06 22.1 +0.6
       comp=Z,5.7nm,1.1s,baz=45,slow=0.4,SNR=7.8
SONM   Songino Array      161.68   3  PKP      PKPdf    03 06 22.7 +1.2
       comp=Z,7.8nm,1.2s,baz=185,slow=1.6,SNR=16
SONM                                  PKPab    PKPab    03 07 04.9 -1.5
       comp=Z,5.2nm,0.8s,baz=345,slow=2.4,SNR=3.7
SONM   Songino Array      161.68   3  PKIKP    PKPdf    03 06 21.6 +0.1
SONM                                                    03 07 05.6
SONM   Songino Array      161.68   3  PKPdf    PKPdf    03 06 21.6 +0.1
SONM                                           PKPab    03 07 05.6 -0.8
ODAN   Odare              161.68  93 eP        PKPdf    03 06 22.1 -0.1
TAPN   Taplejung          162.06  92 eP        PKPdf    03 06 23.2 +0.5
       comp=Z,331nm,1.5s
SNY    Shenyang           162.37 318⇓ PKP      PKPdf    03 06 22.8 +0.7
SHL    Shillong           165.21 102  P        PKPdf    03 06 28.3 +2.8
DL2    Dalian             165.33 313  PKP      PKPdf    03 06 25.7 +0.8
DL2                                   PP       PP       03 11 11.3 +1.9
DL2                                   AMB      AMB
       comp=Z,2µm,9.8s
DL2                                   LR       LR
       comp=Z,10µm,19.0s
DL2                                   LR       LR
       comp=Z,8µm,18.3s
DL2                                   LR       LR
       comp=Z,13µm,18.0s
LSA    Lhasa              165.38  85  PKP      PKPdf    03 06 27.5 +1.6
LSA                                   LR       LR
       comp=Z,6µm,14.2s
LSA                                   LR       LR
       comp=Z,10µm,12.8s
LSA                                   LR       LR
       comp=Z,14µm,17.1s
SILR   SILCHAR            165.71 106 eP        PKPdf    03 06 27.5 +1.8
CMAR   Chiang Mai Arr     166.26 141  PKP      PKPdf    03 06 27.5 +1.2
       comp=Z,0.9nm,0.3s,baz=260,slow=1.6,SNR=8.2
CMAR                                  PKPab    sPKPab   03 07 29.1 +0.1
       comp=Z,13nm,1.0s,baz=231,slow=5.9,SNR=7.5
CMAR   Chiang Mai Arr     166.26 141  PKIKP    PKPdf    03 06 26.3  0.0
CMAR   Chiang Mai Arr     166.26 141           PKPdf    03 06 26.3  0.0
KOHI   KOHIMA             167.16 104 eP        PKPdf    03 06 27.9 +0.8
KOHI                                 ix        x        03 11 21.2
ITAN   ITANAGAR           167.24  97 eP        PKPdf    03 06 25.4 -1.4
BJI    Beijing            167.53 329  PKP      PKPdf    03 06 26.1 -0.5
BJI                                   SKS      SKSdf    03 13 28.6 -2.2
JORH   JORHAT             167.59 100 eP        PKPdf    03 06 26.6 -0.5
MOKO   MOKOCHONG          167.70 102 eP        PKPdf    03 06 27.3 -0.1
GTA    Gaotai             168.07  32⇓ PKP      PKPdf    03 06 29.0 +1.8
GTA                                   PKPab    sPKPab   03 07 38.7 +2.0
GTA                                   PP       PP       03 11 22.4 -0.9
GTA                                   AMB      AMB
       comp=Z,4µm,8.7s
GTA                                   LR       LR
       comp=Z,3µm,21.8s
GTA                                   LR       LR
       comp=Z,7µm,22.9s
GTA                                   LR       LR
       comp=Z,12µm,21.8s
HHC    Hu-ho-hao-te       168.32 346 ePKP      PKPdf    03 06 27.8 +0.5
HHC                                   PP       PP       03 11 30.2 +6.2
HHC                                   AMB      AMB
       comp=Z,2µm,7.6s
HHC                                   LR       LR
       comp=Z,7µm,18.6s
HHC                                   LR       LR
       comp=Z,4µm,18.2s
HHC                                   LR       LR
       comp=Z,13µm,19.6s
SSE    Sheshan            168.46 281  PKP      PKPdf    03 06 26.6 -0.9
SSE                                   PP       PP       03 11 26.9 +0.5
SSE                                   SS       SS       03 32 18.9 -0.3
SSE                                   AMB      AMB
       comp=Z,550nm,13.9s
SSE                                   LR       LR
       comp=Z,2µm,17.5s
SSE                                   LR       LR
       comp=Z,5µm,18.4s
QIZ    Qiongzhong         169.41 190  PKP      PKPdf    03 06 26.8 -1.7
QIZ                                   PP       PP       03 11 29.2 -0.2
QIZ                                   SS       SS       03 32 26.7 +1.4
NJ2    Nanjing            170.29 288 ePKP      PKPdf    03 06 26.6 -2.0
NJ2                                   PP       PP       03 11 32.1 -3.5
NJ2                                   SS       SS       03 32 35.3 -2.0
NJ2                                   AMB      AMB
       comp=Z,870nm,5.9s
NJ2                                   LR       LR
       comp=Z,3µm,23.7s
NJ2                                   LR       LR
       comp=Z,5µm,19.8s
NJ2                                   LR       LR
       comp=Z,9µm,20.6s
```

TIY	**Taiyuan**	**171.02**	**337**	*e*PKP	**PKPdf**	**03 06 30.7**	**+1.7**
TIY				PP	**PP**	**03 11 43.8**	**+6.0**
TIY				LR	LR		
	comp=Z,5µm,18.8s						
TIY				LR	LR		
	comp=Z,2µm,17.2s						
TIY				LR	LR		
	comp=Z,8µm,22.7s						
LZH	**Lanzhou**	**172.60**	**27**	*e*PKP	**PKPdf**	**03 06 32.1**	**+2.2**
LZH				PKPab	**sPKPab**	**03 07 56.7**	**-0.1**
LZH				PP	**PP**	**03 11 43.0**	**-2.8**
LZH				SKKS		03 18 36.5	
LZH				AMB	AMB		
	comp=Z,4µm,7.3s						
LZH				LR	LR		
	comp=Z,6µm,19.2s						
LZH				LR	LR		
	comp=Z,3µm,17.6s						
LZH				LR	LR		
	comp=Z,5µm,20.1s						
KMI	**Kunming**	**173.62**	**132**	⇓PKP	**PKPdf**	**03 06 32.7**	**+2.0**
WHN	**Wuhan**	**174.36**	**282**	⇓PKP	**PKPdf**	**03 06 31.4**	**+0.9**
WHN				LR	LR		
	comp=Z,18µm,28.9s						
WHN				LR	LR		
	comp=Z,11µm,18.3s						
WHN				LR	LR		
	comp=Z,38µm,24.6s						
XAN	**Xi'an**	**175.42**	**350**	PKP	**PKPdf**	**03 06 31.9**	**+1.1**
XAN				PKPab	**pPKPab**	**03 08 08.8**	**+0.1**
XAN				PP	**PP**	**03 12 04.2**	**+5.2**
XAN				SS	SS	03 33 20.8	-3.3
XAN				AMB	AMB		
	comp=Z,5µm,9.8s						
XAN				LR	LR		
	comp=Z,5µm,21.1s						
XAN				LR	LR		
	comp=Z,6µm,22.1s						
XAN				LR	LR		
	comp=Z,14µm,22.4s						
CD2	**Chengdu**	**176.12**	**68**	PKP	**PKPdf**	**03 06 32.2**	**+1.2**
CD2				PP	**PP**	**03 12 05.3**	**+1.2**
CD2				SKKS		03 18 48.7	
CD2				SS	**SS**	**03 33 27.2**	**-6.7**
CD2				AMB	AMB		
	comp=Z,8µm,14.4s						
CD2				LR	LR		
	comp=Z,7µm,31.6s						
CD2				LR	LR		
	comp=Z,9µm,31.6s						
CD2				LR	LR		
	comp=Z,14µm,34.5s						
GYA	**Guiyang**	**176.74**	**159**	⇓PKP	**PKPdf**	**03 06 32.2**	**+0.8**
GYA				PKPab	**sPKPab**	**03 08 18.1**	**+2.7**
GYA				PP	**PP**	**03 12 11.8**	**+6.2**
GYA				AMB	AMB		
	comp=Z,5µm,11.1s						
GYA				LR	LR		
	comp=Z,2µm,19.1s						
GYA				LR	LR		
	comp=Z,2µm,16.5s						
GYA				LR	LR		
	comp=Z,2µm,16.9s						

IDC ***11*** *02:49:26.6±1.6,5°.97N×93°.40E,h0*^{km}*,mb3.8/8,*
mb1 3.9/10,mb1mx3.7/42,mbtmp3.8/10,ML3.2/1,MS4.4/1,
Ms1 4.4/1,ms1mx4.0/63,Error ellipse: s-maj=60.5km
s-min=20.6km az=56.0
ISC 11 02:49:30.3±1.4,**6°.0N**±0°.2×**93°.4E**±0°.2,**h24**^{km}**,n13,**
σ**1**^{s}**.15**/10,**mb3.7**/8,**Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**6.32**	**120**	Pn	**Pn**	**02 51 02.0**	**-0.2**
	0.5nm,0.3s,baz=321,slow=14,SNR=1.4						
PSI				LR	LR	02 53 32.8	
	comp=Z,3µm,18.1s,baz=32,slow=38						
CMAR	**Chiang Mai Arr**	**13.54**	**23**	Pn	**Pn**	**02 52 41.5**	**+0.4**
	baz=235,slow=14,SNR=6.2						
H08S3	**Diego Garcia H**	**24.87**	**237**	T	T	03 21 43.6	
	baz=56,slow=75,SNR=7.4						
H08S2	**Diego Garcia H**	**24.87**	**237**	T	T	03 21 52.1	
	baz=56,slow=75,SNR=8.0						
H08S1	**Diego Carcia H**	**24.89**	**237**	T	T	03 21 53.3	
	baz=56,slow=75,SNR=5.4						
MKAR	**Makanchi Array**	**41.80**	**349**	P	**P**	**02 57 16.1**	**-2.0**
	0.7nm,0.8s,baz=148,slow=8.5,SNR=3.0						
SONM	**Songino Array**	**43.18**	**13**	P	**P**	**02 57 29.8**	**+0.4**
	0.4nm,0.3s,baz=192,slow=8.6,SNR=6.0						
KURBB	**Kurchatov Arra**	**46.23**	**347**	P	**P**	**02 57 54.0**	**+0.6**
	3.2nm,0.8s,baz=165,slow=6.0,SNR=3.8						
WRA	**Warramunga Arr**	**47.77**	**124**	P	**P**	**02 58 05.6**	**-0.4**
	0.2nm,0.7s,baz=304,slow=9.2,SNR=1.3						
ZALV	**Zalesovo Beam**	**48.35**	**353**	P	**P**	**02 58 08.2**	**-1.8**
	0.4nm,0.5s,baz=182,slow=8.7,SNR=1.9						
ASAR	**Alice Springs**	**49.27**	**128**	P	**P**	**02 58 18.1**	**+0.5**
	0.4nm,0.8s,baz=230,slow=38,SNR=2.4						
FINES	**FINESS Array B**	**74.07**	**333**	P	**P**	**03 01 05.0**	**+0.8**
	2.4nm,1.0s,baz=95,slow=7.0,SNR=4.8						
ARCES	**ARCESS Array B**	**76.82**	**340**	P	**P**	**03 01 20.3**	**+0.4**
	3.6nm,1.0s,baz=80,slow=7.4,SNR=1.4						

IDC ***11*** *03:00:04.7±1.1,29°.45S×71°.96W,h0*^{km}*,mb3.8/3,*
mb1 4.4/7,mb1mx4.1/27,mbtmp4.2/7,ML3.9/4,Error
ellipse: s-maj=43.8km s-min=30.3km az=89.0
ISC 11 03:00:08.0±0.9,**29°.5S**±0°.1×**71°.9W**±0°.2,**h25**^{km}**,n11,**
σ**1**^{s}**.31**/11,**mb3.4**/3,**Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**7.33**	**22**	Pn	**Pn**	**03 01 51.4**	**-2.4**
	2.6nm,0.3s,baz=254,slow=7.6,SNR=0.8						
PLCA	**Paso Flores**	**11.29**	**175**	Pn	**Pn**	**03 02 47.2**	**-0.5**
	0.1nm,0.3s,baz=21,slow=18,SNR=1.5						
LPAZ	**La Paz**	**13.56**	**15**	Pn	**Pn**	**03 03 20.7**	**+1.3**
	0.5nm,0.3s,baz=203,slow=7.1,SNR=5.1						
SIV	**San Ignacio**	**16.69**	**39**	Pn	**Pn**	**03 04 02.1**	**+1.8**
	0.4nm,0.3s,baz=205,slow=17,SNR=1.4						
TXAR	**Lajitas Array**	**65.89**	**330**	P	**P**	**03 10 52.6**	**+0.8**
	0.1nm,0.3s,baz=159,slow=11,SNR=2.7						
PDAR	**Pinedale Array**	**79.81**	**333**	P	**P**	**03 12 13.6**	**-0.7**
	0.2nm,0.6s,baz=145,slow=13,SNR=1.8						
TORD	**Torodi Ar. Bea**	**82.54**	**70**	P	**P**	**03 12 29.5**	**+0.4**
	3.2nm,0.8s,baz=259,slow=5.5,SNR=9.8						
KURBB	**Kurchatov Arra**	**149.34**	**38**	PKPbc	**PKiKP**	**03 19 55.6**	**+0.2**
	1.7nm,1.0s,baz=301,slow=3.6,SNR=4.8						
AAK	**Ala-Archa**	**150.00**	**55**	PKPbc	**PKiKP**	**03 19 58.5**	**+1.2**
	2.0nm,0.5s,baz=243,slow=2.3,SNR=5.9						
ZALV	**Zalesovo Beam**	**150.24**	**28**	PKPbc	**PKiKP**	**03 19 57.2**	**0.0**
	4.9nm,0.7s,baz=294,slow=3.3,SNR=12						
MKAR	**Makanchi Array**	**153.49**	**42**	PKPbc	**PKiKP**	**03 20 04.0**	**-0.2**
	0.8nm,0.9s,baz=332,slow=2.1,SNR=2.5						

SJA ***11*** *03:00:13.0,29°.13S×71°.61W,h10*^{km}*,ML4.5*
IDC ***11*** *03:00:14.2±1.0,29°.61S×72°.13W,h0*^{km}*,mb4.0/4,*
mb1 4.4/6,mb1mx4.0/25,mbtmp4.2/6,ML4.2/2,Error
ellipse: s-maj=43.6km s-min=29.4km az=63.0
ISC 11 03:00:14.0±0.8,**29°.16S**±0°.07×**71°.41W**±0°.09,**h10**^{km}**,n21,**
σ**1**^{s}**.95**/18,**mb4.0**/4,**1D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**0.64**	**76**	*i* P	**Pg**	**03 00 28.0**	**+1.6**
LCO				IAML		03 00 56.1	
	comp=Z,55µm,0.5s						
AC04	**Llanos de Chal**	**1.00**	**17**	*i* P	**Pg**	**03 00 31.6**	**-1.6**
AC04				IAML		03 01 08.7	
	comp=Z,3µm,1.3s						
GO03	**Copiap**	**1.87**	**34**	*i* P	**Pb**	**03 00 48.0**	**-0.4**
AROD	**Rodeo**	**1.96**	**121**	⇓*i*P	Pn	03 00 39.1	-8.5
ACDV	**Cuesta del Vie**	**2.23**	**117**	*i* P	**Pn**	**03 00 50.3**	**-1.0**
ACDV				IAML		03 01 40.4	
	comp=Z,1µm,0.8s						
ACCO	**Cerro Coronel**	**2.48**	**126**	*i* P	**Pn**	**03 00 54.5**	**-0.3**
RTLS	**Leoncito**	**3.20**	**146**	*i* P	**Pn**	**03 01 00.8**	**-3.8**
RTLS				IAML		03 02 03.9	
	comp=Z,291nm,0.8s						
RTLL	**Cerro Villicun**	**3.33**	**131**	*i* P	**Pn**	**03 01 04.0**	**-2.2**
MT05	**Renca**	**4.25**	**172**	*i* P	**Pn**	**03 01 20.0**	**+1.0**
GO05	**Huala**	**5.85**	**184**	*i* P	**Pn**	**03 01 38.0**	**-2.8**
PLCA	**Paso Flores**	**11.56**	**177**	Pn	**Pn**	**03 02 57.4**	**-1.9**
	comp=Z,0.2nm,0.3s,baz=323,slow=12,SNR=1.5						
PLCA	**Paso Flores**	**11.56**	**177**	*i* P	**Pn**	**03 02 59.0**	**-0.3**
CPUP	**Villa Florida**	**12.78**	**81**	Pn	Pn	03 03 26.6	+11
	comp=Z,0.7nm,0.3s,baz=259,slow=16,SNR=1.4						
TXAR	**Lajitas Array**	**65.83**	**329**	P	**P**	**03 11 01.5**	**+1.8**
	comp=Z,0.5nm,0.7s,baz=143,slow=7.7,SNR=4.7						
MAW	**Mawson**	**77.66**	**164**	P	**P**	**03 12 09.0**	**-1.2**
	comp=Z,1.1nm,0.5s,baz=279,slow=13,SNR=2.2						
PDAR	**Pinedale Array**	**79.72**	**332**	P	**P**	**03 12 24.0**	**+1.8**
	comp=Z,0.4nm,0.6s,baz=141,slow=9.6,SNR=2.5						
TORD	**Torodi Ar. Bea**	**82.06**	**70**	P	P	03 12 39.7	+4.6
	comp=Z,3.8nm,0.8s,baz=277,slow=6.5,SNR=8.3						
KURBB	**Kurchatov Arra**	**148.86**	**38**	PKPbc	**PKPab**	**03 20 05.8**	**+0.2**
	comp=Z,1.8nm,0.7s,baz=301,slow=3.2,SNR=7.7						
AAK	**Ala-Archa**	**149.50**	**55**	PKPbc	**PKPab**	**03 20 08.7**	**+0.1**
	comp=Z,3.7nm,0.7s,baz=321,slow=4.1,SNR=4.2						
ZALV	**Zalesovo Beam**	**149.79**	**28**	PKPbc	**PKPab**	**03 20 07.8**	**-1.4**
	comp=Z,8.9nm,0.7s,baz=303,slow=3.2,SNR=17						
MKAR	**Makanchi Array**	**152.99**	**42**	PKPbc	**PKiKP**	**03 20 14.7**	**+3.0**
	comp=Z,1.3nm,0.8s,baz=339,slow=3.1,SNR=4.7						

IDC ***11*** *03:07:47.2±0.4,29°.51S×71°.98W,h0*^{km}*,mb4.6/18,*
mb1 4.7/22,mb1mx4.6/33,mbtmp4.6/22,ML4.5/4,Error
ellipse: s-maj=18.0km s-min=12.4km az=90.0
GUC ***11*** *03:07:48.1±0.7,29°.51S×72°.19W,h30*^{km}*,ML5.0*
NEIC ***11*** *03:07:49±1.8,29°.53S±0°.04×72°.10W±0°.04,h10*^{km}*±1*^{km}*,*
mb5.1/96,ML5.0(GUC),Error ellipse: s-maj=6.9km
s-min=6.0km az=36.0
ISC 11 03:07:47.1±2.0,**29°.53S**±0°.04×**72°.15W**±0°.06,**h2**^{km}±11^{km},
n272,σ**1**^{s}**.17**/285,**mb5.1**/61,**6C-1D,Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO05	**La Serena**	**0.89**	**116**	⇑*e*P	**Pg**	**03 08 05.0**	**+1.0**
CO05				*i* S	**Sb**	**03 08 17.4**	**-0.1**
CO05				IAML		03 08 22.8	
	comp=N,36µm,0.4s						
CO05	**La Serena**	**0.89**	**116**	Pg	**Pg**	**03 08 05.1**	**+1.1**
CO05				Sg	**Sb**	**03 08 17.4**	**-0.1**
CO06	**Fray Jorge**	**1.23**	**159**	⇑*e*P	**Pn**	**03 08 10.3**	**-1.1**
CO06				*i* S	**Sb**	**03 08 26.1**	**-1.2**
CO06				IAML		03 08 26.8	
	comp=E,12µm,0.5s						
CO06	**Fray Jorge**	**1.23**	**159**		**Pn**	**03 08 10.3**	**-1.1**
CO06				Sg	**Sb**	**03 08 25.6**	**-1.8**
GO04	**Tololo Observa**	**1.34**	**119**	⇑*e*P	**Pn**	**03 08 12.4**	**-0.7**
GO04				*i* S	**Sb**	**03 08 30.4**	**-0.4**
GO04	**Tololo Observa**	**1.34**	**119**	Pn	**Pn**	**03 08 12.7**	**-0.4**
LCO	**Las Campanas**	**1.37**	**68**	⇑*e*P	**Pn**	**03 08 12.5**	**-1.1**
LCO				*i* S	**Sb**	**03 08 30.4**	**-1.3**
LCO	**Las Campanas**	**1.37**	**68**	Pn	**Pn**	**03 08 12.5**	**-1.1**
AC04	**Llanos de Chal**	**1.62**	**36**	Pn	**Pn**	**03 08 14.8**	**-2.0**
CO03	**El Pedregal**	**1.82**	**136**		**Pn**	**03 08 19.4**	**-0.2**
GO03	**Copiap**	**2.56**	**42**	Pn	**Pn**	**03 08 28.6**	**-1.2**
VA06	**Catapilco**	**3.11**	**167**	⇑*e*P	**Pn**	**03 08 36.9**	**-0.3**
VA06				*i* S	**Sn**	**03 09 12.6**	**-2.5**
VA06				IAML		03 09 38.7	
	comp=N,9µm,0.7s						
VA03	**San Esteban**	**3.51**	**157**	*e*P	**Pn**	**03 08 43.8**	**+1.0**
VA03				*i* S	**Sn**	**03 09 24.7**	**-0.2**
VA03				IAML		03 09 47.4	
	comp=E,9µm,0.7s						
VA03	**San Esteban**	**3.51**	**157**		**Pn**	**03 08 44.0**	**+1.3**
VA01	**Torpederas**	**3.51**	**173**	Pn	**Pn**	**03 08 42.0**	**-0.8**
ROCH	**El Roble**	**3.57**	**164**	⇑*e*P	**Pn**	**03 08 43.5**	**-0.3**
ROCH				*i* S	**Sn**	**03 09 26.4**	**-0.2**
ROCH				IAML		03 09 59.9	
	comp=N,2µm,0.5s						
PEL	**Peldehue**	**3.82**	**161**	Pn	**Pn**	**03 08 47.4**	**+0.4**
MT02	**Curacav**	**3.82**	**167**		**Pn**	**03 08 46.5**	**-0.5**
MT05	**Renca**	**4.04**	**163**		**Pn**	**03 08 50.3**	**+0.2**
VA05	**Santo Domingo**	**4.14**	**174**		**Pn**	**03 08 50.2**	**-1.2**
MT09	**Talagante**	**4.35**	**167**	Pn	**Pn**	**03 08 54.6**	**+0.2**
MT01	**Popeta**	**4.39**	**170**		**Pn**	**03 08 54.3**	**-0.5**
BO01	**Tunca**	**4.93**	**170**	Pn	**Pn**	**03 09 01.6**	**-0.7**
BO02	**Sierra Bellavi**	**5.38**	**168**		**Pn**	**03 09 08.1**	**-0.4**
GO05	**Huala**	**5.47**	**178**	Pn	**Pn**	**03 09 08.0**	**-1.7**
ML02	**Panimavida**	**6.25**	**175**	Pn	**Pn**	**03 09 19.5**	**-0.9**
H03N1	**Juan Fernandez**	**6.97**	**234**	T	T	03 17 28.8	
	baz=64,slow=71,SNR=128						
H03N2	**Juan Fernandez**	**6.98**	**234**	T	T	03 17 18.3	
	baz=64,slow=71,SNR=135						
H03N3	**Juan Fernandez**	**6.98**	**234**	T	T	03 17 17.1	
	baz=64,slow=71,SNR=130						
H03S3	**Juan Fernandez**	**7.18**	**232**	Pn	**Pn**	**03 09 30.3**	**-2.6**
	baz=56,slow=19,SNR=10						
H03S1	**Juan Fernandez**	**7.18**	**231**	Pn	**Pn**	**03 09 30.1**	**-2.9**
	baz=56,slow=19,SNR=14						
H03S1				Sn	Sn	03 10 43.8	-11
H03S2	**Juan Fernandez**	**7.20**	**232**	Pn	**Pn**	**03 09 30.4**	**-2.7**
	baz=56,slow=19,SNR=8.4						
LVC	**Limon Verde**	**7.48**	**24**	Sn	**Sn**	**03 11 02.8**	**-0.4**
	comp=N,5.5nm,0.3s,baz=230,slow=18,SNR=3.6						
LVC				Lg	Lg	03 11 39.2	
	comp=N,11nm,0.3s,baz=294,slow=20,SNR=5.7						
LC01	**Cunco**	**9.35**	**179**	Pn	**Pn**	**03 10 01.5**	**-1.4**
LR03	**Panguipulli**	**10.08**	**181**		**Pn**	**03 10 12.1**	**-0.8**
PLCA	**Paso Flores**	**11.26**	**174**	Pn	**Pn**	**03 10 27.4**	**-1.7**
	comp=N,1.6nm,0.3s,baz=338,slow=11,SNR=32						
PLCA	**Paso Flores**	**11.26**	**174**	Pn	**Pn**	**03 10 28.6**	**-0.5**
LL04	**Puerto Octay**	**11.36**	**181**		**Pn**	**03 10 28.8**	**-1.6**
CPUP	**Villa Florida**	**13.49**	**80**	Pn	**Pn**	**03 10 59.0**	**-0.5**
	comp=N,0.2nm,0.3s,baz=255,slow=18,SNR=1.9						
CPUP				Lg	Lg	03 14 50.1	
	comp=N,0.7nm,0.3s,baz=172,slow=13,SNR=3.4						
CPUP	**Villa Florida**	**13.49**	**80**		**Pn**	**03 10 59.2**	**-0.3**
LPAZ	**La Paz**	**13.69**	**17**	Pn	**Pn**	**03 11 02.9**	**0.0**
	comp=N,1.1nm,0.3s,baz=187,slow=7.0,SNR=15						
LPAZ	**La Paz**	**13.69**	**17**		**Pn**	**03 11 00.2**	**-2.7**
COYC	**Coyhaique**	**16.02**	**180**	Pn	**Pn**	**03 11 34.4**	**+0.9**
SIV	**San Ignacio**	**16.89**	**40**	Pn	**Pn**	**03 11 42.8**	**-2.1**
	comp=N,1.2nm,0.3s,baz=220,slow=11,SNR=22						
ETMB	**Extrema**	**20.38**	**17**		**P**	**03 12 24.2**	**-1.1**
CZSB	**Cruzeiro do Su**	**21.69**	**359**	P	**P**	**03 12 39.0**	**-0.4**
CZSB				IAmb	IAmb	03 12 42.0	
	comp=Z,96nm,1.1s						
ATAH	**Atahualpa**	**23.04**	**344**	P	**P**	**03 12 55.7**	**+1.5**
	comp=Z,8.2nm,0.9s,baz=140,slow=17,SNR=3.9						
TBTG	**Tabatinga, AM**	**25.29**	**5**	P	**P**	**03 13 15.2**	**+0.1**
USHA	**Ushuaia**	**25.43**	**175**	P	**P**	**03 13 16.7**	**+0.7**
	comp=Z,26nm,0.8s,baz=7.0,slow=5.0,SNR=8.9						
BDFB	**Brasilia**	**26.15**	**63**	P	**P**	**03 13 22.0**	**-1.1**
	comp=Z,31nm,1.0s,baz=245,slow=8.9,SNR=16						
PTGA	**Pitinga**	**30.90**	**24**	P	**P**	**03 14 04.0**	**-1.3**
	comp=Z,9.9nm,1.0s,baz=191,slow=5.2,SNR=3.3						
PMSA	**Palmer Station**	**35.63**	**174**	P	**P**	**03 14 46.8**	**+0.8**
	comp=Z,11nm,0.8s,baz=344,slow=5.4,SNR=4.6						
PMSA	**Palmer Station**	**35.63**	**174**	P	**P**	**03 14 47.2**	**+1.2**
PMSA				IAmb	IAmb	03 14 48.8	
	comp=Z,30nm,1.1s						
ZARC	**Zaragoza, Cauc**	**36.90**	**356**	P	**P**	**03 14 57.4**	**0.0**
ZARC				IAmb	IAmb	03 14 59.7	
	comp=Z,31nm,1.2s						
MDP	**Montagnes des**	**39.20**	**32**	P	**P**	**03 15 16.1**	**-0.7**
	comp=Z,15nm,0.9s,baz=186,slow=8.9,SNR=3.5						
SRBA	**San Rafael, Bu**	**40.02**	**343**	P	**P**	**03 15 23.4**	**-0.4**
MTO3	**Montecristo**	**46.72**	**337**	P	**P**	**03 16 19.0**	**+0.9**
MTO3				IAmb	IAmb	03 16 20.9	
	comp=Z,17nm,1.2s						
CELP	**Cerrillos**	**47.63**	**7**	P	**P**	**03 16 24.5**	**-0.3**
CBYP	**Canovanas**	**47.91**	**8**	P	**P**	**03 16 25.6**	**-1.4**
VNA3	**Neumayer Olymp**	**53.54**	**159**	P	**P**	**03 17 09.4**	**+0.5**
VNA1	**Neumayer--Stat**	**53.83**	**158**	P	**P**	**03 17 11.8**	**+0.7**
VNA2	**Neumayer--Watz**	**54.18**	**158**	P	**P**	**03 17 13.9**	**+0.3**
	baz=284,slow=8.2						
SNAA	**Sanae**	**55.77**	**159**	P	**P**	**03 17 24.9**	**-0.2**
SNAA	**Sanae**	**55.77**	**159**	P	**P**	**03 17 25.1**	**-0.1**
	comp=Z,14nm,0.8s,baz=278,slow=7.3,SNR=41						
SNAA	**Sanae**	**55.77**	**159**	P	**P**	**03 17 25.1**	**-0.1**
SNAA				IAmb	IAmb	03 17 26.5	
	comp=Z,23nm,1.0s						
QSPA	**South Pole Qui**	**60.70**	**180**	P	**P**	**03 17 60.0**	**+0.1**
QSPA				IAmb	IAmb	03 18 02.5	
	comp=Z,16nm,0.9s						
TIGA	**Tifton**	**61.60**	**349**	P	**P**	**03 18 05.9**	**-0.1**
	baz=169						
352A	**Blakely**	**61.88**	**348**	P	**P**	**03 18 08.5**	**+0.6**
833A	**Chaparral WMA,**	**63.15**	**333**	P	**P**	**03 18 18.8**	**+2.3**
	baz=153						
344A	**Westbrook Farm**	**63.17**	**342**	P	**P**	**03 18 17.8**	**+1.2**
VBMS	**Vicksburg**	**63.84**	**343**	P	**P**	**03 18 23.0**	**+2.1**
	baz=162						
143A	**Socs Landing,**	**64.53**	**342**	P	**P**	**03 18 26.2**	**+0.7**
HPIG		**64.67**	**327**	P	**P**	**03 18 27.5**	**+0.6**
HPIG				IAmb	IAmb	03 18 29.8	
	comp=Z,16nm,1.3s						
X51A	**Calhoun**	**64.87**	**348**	P	**P**	**03 18 27.5**	**-0.2**
Y45A	**Yeager Farm, C**	**65.16**	**344**	P	**P**	**03 18 30.2**	**+0.6**
JCT	**Junction City**	**65.23**	**334**	P	**P**	**03 18 32.2**	**+2.0**
	baz=154						
JCT	**Junction City**	**65.23**	**334**	P	**P**	**03 18 31.2**	**+1.0**
JCT				IAmb	IAmb	03 18 32.8	
	comp=Z,22nm,1.0s						
Z41A	**Richland Creek**	**65.44**	**341**	P	**P**	**03 18 33.6**	**+2.2**
	baz=160						
CPCT	**Cooper Cave**	**65.67**	**349**	P	**P**	**03 18 32.7**	**-0.2**
CPCT				IAmb	IAmb	03 18 34.3	
	comp=Z,16nm,1.0s						
WHTX	**Lake Whitney,**	**65.73**	**337**	P	**P**	**03 18 35.1**	**+1.7**
	baz=156						
TXAR	**Lajitas Array**	**65.81**	**330**	P	**P**	**03 18 35.2**	**+1.2**
	comp=Z,3.5nm,0.8s,baz=148,slow=7.2,SNR=16						
PLAL	**Pickwick Lake**	**65.90**	**346**	P	**P**	**03 18 34.1**	**-0.3**
PLAL				IAmb	IAmb	03 18 35.9	
	comp=Z,16nm,1.2s						
V52A	**Sevierville**	**65.91**	**350**	P	**P**	**03 18 34.5**	**0.0**
V52A				IAmb	IAmb	03 18 35.4	
	comp=Z,21nm,1.0s						
WLAR	**White Oak Lake**	**65.93**	**341**	P	**P**	**03 18 35.9**	**+1.4**
CLTN	**Cedars of Leba**	**66.62**	**348**	P	**P**	**03 18 39.3**	**+0.3**
CLTN				IAmb	IAmb	03 18 40.4	
	comp=Z,14nm,0.9s						
MIAR	**Mount Ida**	**66.86**	**341**	P	**P**	**03 18 41.5**	**+0.9**
	baz=160						
MIAR	**Mount Ida**	**66.86**	**341**	P	**P**	**03 18 41.1**	**+0.5**
MIAR				IAmb	IAmb	03 18 43.1	
	comp=Z,13nm,1.1s						
Z35A	**Perchaven, San**	**66.89**	**337**	P	**P**	**03 18 41.5**	**+0.7**
U49A	**Red Boiling Sp**	**66.93**	**348**	P	**P**	**03 18 40.7**	**-0.3**
U49A				IAmb	IAmb	03 18 42.1	
	comp=Z,13nm,1.1s						
WVT	**Waverly**	**66.95**	**346**	P	**P**	**03 18 41.5**	**+0.4**
	baz=165						
ABTX	**Abilene, Hawle**	**67.09**	**335**	P	**P**	**03 18 43.8**	**+1.7**
	baz=154						
ABTX	**Abilene, Hawle**	**67.09**	**335**	P	**P**	**03 18 43.3**	**+1.2**
W41B	**Gary Mavity, V**	**67.09**	**342**	P	**P**	**03 18 43.1**	**+1.1**
	baz=161						
W39A	**Magazine**	**67.53**	**341**	P	**P**	**03 18 46.6**	**+1.8**
	baz=160						
W39A	**Magazine**	**67.53**	**341**	P	**P**	**03 18 46.0**	**+1.2**
T47A	**Sharon Grove**	**67.64**	**347**	P	**P**	**03 18 45.1**	**-0.3**
LCAR	**Lake Charles**	**67.65**	**343**	P	**P**	**03 18 45.8**	**+0.2**
LCAR				IAmb	IAmb	03 18 47.0	
	comp=Z,13nm,0.9s						
PBMO	**Poplar Bluff**	**68.15**	**344**	P	**P**	**03 18 49.2**	**+0.5**
PBMO				IAmb	IAmb	03 18 50.7	
	comp=Z,25nm,1.1s						
X34A	**Smith Ranch, M**	**68.24**	**337**	P	**P**	**03 18 48.6**	**-0.7**
X34A				IAmb	IAmb	03 18 51.5	
	comp=Z,24nm,1.1s						
U40A	**Yellville**	**68.36**	**342**	P	**P**	**03 18 51.1**	**+1.0**
	baz=161						
VNDA	**Vanda**	**68.46**	**191**	P	**P**	**03 18 52.0**	**+1.8**
	comp=Z,0.8nm,1.0s,baz=91,slow=4.7,SNR=2.3						
HHAR	**Hobbs**	**68.59**	**341**	P	**P**	**03 18 51.4**	**-0.1**
HHAR				IAmb	IAmb	03 18 53.1	
	comp=Z,17nm,0.9s						
MNTX	**Cornudas Mount**	**68.59**	**330**	P	**P**	**03 18 52.4**	**+0.8**
	baz=149						
MNTX	**Cornudas Mount**	**68.59**	**330**	P	**P**	**03 18 52.5**	**+1.0**
MNTX				IAmb	IAmb	03 19 01.9	
	comp=Z,7.9nm,0.8s						
WCI	**Wyandotte Cave**	**68.69**	**348**	P	**P**	**03 18 52.6**	**+0.6**
	baz=167						
S44A	**Carbondale**	**68.76**	**346**	P	**P**	**03 18 53.4**	**+0.9**
SIUC	**Southern Illin**	**68.78**	**346**	P	**P**	**03 18 53.4**	**+0.9**
TUL1	**Leonard**	**68.79**	**340**	P	**P**	**03 18 53.7**	**+1.1**
	baz=158						
TUL1	**Leonard**	**68.79**	**340**	P	**P**	**03 18 53.4**	**+0.7**
TUL1				IAmb	IAmb	03 18 54.8	
	comp=Z,23nm,1.0s						
MGMO	**Mountain Grove**	**68.96**	**343**	P	**P**	**03 18 54.0**	**+0.2**
MGMO				IAmb	IAmb	03 18 55.5	
	comp=Z,11nm,1.1s						
FVM	**French Village**	**69.30**	**345**	P	**P**	**03 18 56.7**	**+0.9**
FVM				IAmb	IAmb	03 18 58.1	
	comp=Z,24nm,1.0s						
QUOK	**Quay**	**69.31**	**339**	P	**P**	**03 18 56.8**	**+0.8**
QUOK				IAmb	IAmb	03 18 57.6	
	comp=Z,20nm,1.0s						
P51A	**Williamsport**	**69.40**	**351**	P	**P**	**03 18 55.7**	**-0.7**
P51A				IAmb	IAmb	03 18 57.4	
	comp=Z,16nm,0.9s						
P52A	**Corning**	**69.43**	**352**	P	**P**	**03 18 57.8**	**+1.2**
	baz=171						
P52A	**Corning**	**69.43**	**352**	P	**P**	**03 18 57.5**	**+0.9**
MSTX	**Muleshoe**	**69.48**	**333**	P	**P**	**03 18 58.7**	**+1.5**
	baz=152						
MSTX	**Muleshoe**	**69.48**	**333**	P	**P**	**03 18 58.2**	**+1.1**
MSTX				IAmb	IAmb	03 18 59.1	
	comp=Z,19nm,0.9s						
OLIL	**Olney**	**69.52**	**347**	P	**P**	**03 18 57.2**	**0.0**
OLIL				IAmb	IAmb	03 18 58.1	
	comp=Z,24nm,1.1s						
CCM	**Cathedral Cave**	**69.56**	**344**	P	**P**	**03 18 58.6**	**+1.2**
	baz=162						
CCM	**Cathedral Cave**	**69.56**	**344**	P	**P**	**03 18 57.9**	**+0.5**
CCM				IAmb	IAmb	03 18 59.1	
	comp=Z,25nm,1.1s						
P49A	**Miami Univ. Ec**	**69.70**	**350**	P	**P**	**03 18 58.6**	**+0.4**
	baz=168						
S39A	**Bolivar**	**69.75**	**342**	P	**P**	**03 18 59.6**	**+1.0**
S39A				IAmb	IAmb	03 19 00.3	
	comp=Z,12nm,1.0s						
R40A	**Maddies Statio**	**70.04**	**343**	P	**P**	**03 19 01.4**	**+1.1**
R40A				IAmb	IAmb	03 19 02.6	
	comp=Z,26nm,1.1s						
SYO	**Syowa Base**	**70.06**	**159**	⇓*e*X	P	03 19 14.0	+14
ACSO	**Alum Creek Sta**	**70.13**	**351**	P	**P**	**03 19 01.1**	**+0.2**
	baz=170						
ACSO	**Alum Creek Sta**	**70.13**	**351**	P	**P**	**03 19 01.4**	**+0.5**
ACSO				IAmb	IAmb	03 19 01.9	
	comp=Z,29nm,1.1s						
121A	**Cookes Peak, D**	**70.37**	**328**	P	**P**	**03 19 05.3**	**+2.6**
	baz=147						
P43A	**Skaggs, Pawnee**	**70.69**	**346**	P	**P**	**03 19 04.9**	**+0.6**
SFIN	**Lafayette**	**70.92**	**348**	P	**P**	**03 19 05.8**	**+0.1**
	baz=166						
N49A	**Columbus Grove**	**70.98**	**350**	P	**P**	**03 19 06.6**	**+0.6**
P40A	**Paris**	**71.16**	**344**	P	**P**	**03 19 07.5**	**+0.3**
P40A				IAmb	IAmb	03 19 09.5	
	comp=Z,30nm,1.1s						
N47A	**Urbana**	**71.17**	**349**	P	**P**	**03 19 07.1**	**-0.1**
L56A	**Greenwood**	**71.48**	**356**	P	**P**	**03 19 10.1**	**+0.9**
L61B	**Northampton**	**71.62**	**360**	P	**P**	**03 19 13.4**	**+3.5**
	baz=179						
WVNY	**West Valley, N**	**71.82**	**355**	P	**P**	**03 19 12.2**	**+1.1**
ANMO	**Albuquerque**	**71.83**	**331**	P	**P**	**03 19 13.4**	**+1.8**
	baz=149						
ANMO	**Albuquerque**	**71.83**	**331**	P	**P**	**03 19 12.3**	**+0.7**
N41A	**Harden Midland**	**72.00**	**345**	P	**P**	**03 19 12.7**	**+0.5**
N41A				IAmb	IAmb	03 19 13.4	
	comp=Z,21nm,1.0s						
214A	**Organ Pipe Nat**	**72.32**	**324**	P	**P**	**03 19 16.8**	**+2.4**
	baz=143						
CBKS	**Cedar Bluff**	**72.70**	**338**	P	**P**	**03 19 18.1**	**+1.6**
	baz=155						
T25A	**Trinidad**	**72.89**	**333**	P	**P**	**03 19 20.2**	**+2.3**
	baz=151						
T25A	**Trinidad**	**72.89**	**333**	P	**P**	**03 19 17.9**	**-0.1**
X18A	**Snowflake**	**73.03**	**328**	P	**P**	**03 19 18.1**	**-0.7**
N35A	**Tabor**	**73.34**	**342**	P	**P**	**03 19 20.6**	**+0.4**
N35A				IAmb	IAmb	03 19 21.4	
	comp=Z,17nm,0.7s						
L40A	**Anamosa**	**73.38**	**345**	P	**P**	**03 19 21.1**	**+0.7**
L40A				IAmb	IAmb	03 19 21.7	
	comp=Z,31nm,1.0s						
X16A	**Lo Mia Camp, P**	**73.64**	**327**	P	**P**	**03 19 22.9**	**+0.5**
SDCO	**Great Sand Dun**	**73.85**	**333**	P	**P**	**03 19 25.8**	**+2.2**
	baz=150						
DBIC	**Dimbokro**	**73.89**	**73**	P	**P**	**03 19 23.7**	**-0.4**
	comp=Z,17nm,0.9s,baz=232,slow=5.9,SNR=14						
DBIC	**Dimbokro**	**73.89**	**73**	P	**P**	**03 19 23.2**	**-0.8**
DBIC				IAmb	IAmb	03 19 24.7	
	comp=Z,16nm,0.8s						
JFWS	**Jewell Farm**	**73.98**	**346**	P	**P**	**03 19 24.7**	**+0.8**
	baz=164						
JFWS	**Jewell Farm**	**73.98**	**346**	P	**P**	**03 19 24.1**	**+0.2**

JFWS				IAmb	IAmb	03 19 25.5	
	comp=Z,15nm,0.9s						
SADO	Sadowa	74.22	355	P	P	03 19 25.4	+0.2
WUAZ	Wupatki	74.50	328	P	P	03 19 29.5	+2.2
	baz=145						
BGNE	Belgrade	74.56	340	P	P	03 19 28.4	+1.0
	baz=157						
MVCO	Mesa Verde	74.62	331	P	P	03 19 30.4	+2.3
	baz=148						
MVCO	Mesa Verde	74.62	331	P	P	03 19 27.6	-0.5
MVCO				IAmb	IAmb	03 19 31.0	
	comp=Z,15nm,1.1s						
Q24A	Divide	74.77	334	P	P	03 19 31.1	+2.1
	baz=150						
BC3	Big Chuckawall	75.02	324	P	P	03 19 32.7	+2.4
	baz=142						
K31A	O'Neill	75.86	340	P	P	03 19 35.9	+1.1
ECSD	EROS Data Cent	76.28	342	P	P	03 19 38.0	+0.8
	baz=158						
ECSD	EROS Data Cent	76.28	342	P	P	03 19 37.2	0.0
ECSD				IAmb	IAmb	03 19 38.9	
	comp=Z,16nm,0.9s						
HEC	Hector,Ludlow	76.39	324	P	P	03 19 41.1	+3.0
	baz=141						
KNB	Kanab	76.40	328	P	P	03 19 38.2	0.0
KNB				IAmb	IAmb	03 19 41.6	
	comp=Z,22nm,1.3s						
LCMT	Little Creek M	76.59	327	P	P	03 19 39.6	+0.4
SPMN	Marine on St.	76.74	345	P	P	03 19 40.2	+0.5
	baz=162						
O20A	White River Ci	76.99	332	P	P	03 19 43.8	+2.3
	baz=148						
CCUT	Cedar City	77.08	328	P	P	03 19 40.7	-1.5
SRU	San Rafael Swe	77.08	330	P	P	03 19 41.8	-0.3
SHPR	Sheep Range	77.11	326	P	P	03 19 40.3	-1.9
Q16A	Castle Valley	77.21	330	P	P	03 19 43.1	+0.3
Q16A				IAmb	IAmb	03 19 45.7	
	comp=Z,12nm,1.1s						
P18A	Preston Nutter	77.39	331	P	P	03 19 44.1	+0.2
P18A				IAmb	IAmb	03 19 46.9	
	comp=Z,14nm,1.1s						
MAW	Mawson	77.49	164	P	P	03 19 43.7	-0.1
	comp=Z,4.6nm,1.1s,baz=226,slow=9.0,SNR=5.7						
MAW	Mawson	77.49	164	P	P	03 19 44.5	+0.8
LRMC	Laurel Mtn Rad	77.59	323	P	P	03 19 47.9	+2.9
	baz=140						
PSUT	Pine Spring	78.11	328	P	P	03 19 47.7	-0.2
ISA	Isabella, Lake	78.14	323	P	P	03 19 49.8	+1.9
	baz=140						
ISA	Isabella, Lake	78.14	323	P	P	03 19 48.5	+0.6
ISA				IAmb	IAmb	03 19 51.7	
	comp=Z,12nm,1.1s						
MPU	Maple Canyon	78.31	330	P	P	03 19 49.5	+0.6
K22A	Casper	78.48	335	P	P	03 19 51.6	+1.8
	baz=150						
CWC	Cottonwood Cre	78.53	324	P	P	03 19 52.9	+2.7
	baz=140						
VES	Vestal, Richgr	78.60	323	P	P	03 19 53.0	+2.6
	baz=140						
SPR3	Spring Creek 3	78.70	328	P	P	03 19 51.6	+0.4
R11A	Troy Canyon, C	78.78	327	P	P	03 19 53.9	+2.4
	baz=142						
RSSD	Black Hills	78.88	337	P	P	03 19 53.9	+1.9
	baz=152						
KOWA	Kowa	78.91	66	P	P	03 19 50.6	-1.9
KOWA				IAmb	IAmb	03 19 53.8	
	comp=Z,15nm,0.8s						
DUG	Dugway, Tooele	78.98	329	P	P	03 19 55.0	+2.5
	baz=145						
DUG	Dugway, Tooele	78.98	329	P	P	03 19 53.4	+0.9
TPH	Tonopah	79.36	325	P	P	03 19 53.6	-1.1
TPH				IAmb	IAmb	03 19 57.6	
	comp=Z,34nm,1.0s						
HWUT	Hardware Ranch	79.60	331	P	P	03 19 56.4	+0.5
BW06	Boulder Array	79.74	333	P	P	03 19 57.9	+1.1
	baz=147						
PDAR	Pinedale Array	79.74	333	P	P	03 19 57.6	+0.8
	comp=Z,2.1nm,0.9s,baz=143,slow=5.2,SNR=6.4						
NVAR	Mina Array Bea	80.17	325	P	P	03 20 00.5	+1.3
	comp=Z,1.9nm,0.9s,baz=157,slow=6.3,SNR=5.9						
HVU	Hansel Valley	80.25	330	P	P	03 19 59.0	-0.5
AGMN	Agassiz Nation	80.34	344	P	P	03 20 00.5	+1.0
	baz=159						
AGMN	Agassiz Nation	80.34	344	P	P	03 20 00.3	+0.8
ELK	Elko	80.52	328	P	P	03 20 00.7	-0.2
PAHR	Pah Rah Range	81.69	325	P	P	03 20 07.5	+0.3
LAO	LASA Array	81.88	337	P	P	03 20 09.3	+1.5
	baz=150						
ULM	Lac du Bonnet	82.17	345	P	P	03 20 08.8	-0.3
	comp=Z,8.6nm,1.0s,baz=144,slow=4.9,SNR=4.8						
ULM	Lac du Bonnet	82.17	345	P	P	03 20 09.3	+0.1
BOSA	Boshof	82.25	118	P	P	03 20 10.1	-0.5
	comp=Z,6.2nm,0.9s,baz=221,slow=6.5,SNR=6.8						
BOSA	Boshof	82.25	118	P	P	03 20 09.3	-1.2
HLID	Hailey	82.41	330	P	P	03 20 12.6	+1.8
	baz=144						
HLID	Hailey	82.41	330	P	P	03 20 10.9	+0.1
DGMT	Dagmar	82.78	339	P	P	03 20 14.3	+1.8
	baz=152						
DGMT	Dagmar	82.78	339	P	P	03 20 13.7	+1.2
DGMT				IAmb	IAmb	03 20 14.8	
	comp=Z,25nm,0.9s						
TORD	Torodi Ar. Bea	82.80	71	P	P	03 20 13.0	-0.3
	comp=Z,19nm,0.9s,baz=261,slow=4.6,SNR=52						
TORD	Torodi Ar. Bea	82.80	71	P	P	03 20 12.9	-0.4
TORD				IAmb	IAmb	03 20 14.5	
	comp=Z,24nm,1.0s						
O03E	Paynes Creek	83.36	324	P	P	03 20 16.9	+1.1
	baz=138						
J08A	Circle Bar Ran	84.06	328	P	P	03 20 19.1	-0.2
J08A				IAmb	IAmb	03 20 22.0	
	comp=Z,14nm,1.2s						
EGMT	Eagleton	84.26	336	P	P	03 20 20.9	+0.7
	baz=148						
I05D	Terrebonne, OR	86.15	327	P	P	03 20 32.0	+2.3
	baz=139						
MDT	Midelt	89.09	51	P	P	03 20 44.6	+0.5
	comp=Z,1.2nm,0.7s,baz=248,slow=4.3,SNR=4.7						
ESDC	Sonseca Array	93.55	46	P	P	03 21 04.2	-0.5
	comp=Z,1.1nm,1.0s,baz=250,slow=3.6,SNR=4.6						
AKASG	Malin Array Be	119.19	46	PKP	PKPdf	03 26 37.3	-0.2
	comp=Z,0.4nm,0.2s,baz=272,slow=2.2,SNR=4.0						
FINES	FINESS Array B	119.34	33	PKP	PKPdf	03 26 37.5	+0.2
	comp=Z,0.6nm,0.8s,baz=254,slow=2.5,SNR=3.8						
BRTR	Keskin Array B	119.67	59	PKP	PKPdf	03 26 39.2	+0.3
	comp=Z,0.9nm,0.4s,baz=309,slow=37,SNR=2.7						
BRTR	Keskin Array B	119.67	59		PKPdf	03 26 38.6	-0.3
ARCES	ARCESS Array B	119.99	24	PKP	PKPdf	03 26 37.8	-0.7
	comp=Z,6.6nm,1.1s,baz=324,slow=9.0,SNR=7.0						
ARCES	ARCESS Array B	119.99	24		PKPdf	03 26 38.6	+0.1
ASAR	Alice Springs	121.48	208	PKP	PKPdf	03 26 42.4	-0.5
	comp=Z,1.1nm,0.9s,baz=118,slow=1.6,SNR=5.8						
ASAR				PKKPbc	PKKPbc	03 36 43.4	+0.7
	comp=Z,0.5nm,0.6s,baz=343,slow=3.6,SNR=7.6						
WRA	Warramunga Arr	124.58	211	PKP	PKPdf	03 26 48.8	-0.1
	comp=Z,2.2nm,0.7s,baz=158,slow=1.7,SNR=13						
WRA	Warramunga Arr	124.58	211		PKPdf	03 26 48.3	-0.6
FITZ	Fitzroy Crossi	129.64	202	PKP	PKPdf	03 26 58.9	+0.3
	comp=Z,2.5nm,1.0s,baz=171,slow=9.8,SNR=3.5						
SEY	Seymchan	136.07	332	PKP	PKPdf	03 27 10.1	+0.9
	comp=Z,4.2nm,0.7s,baz=139,slow=2.5,SNR=11						
TIXI	Tiksi	136.28	351	PKP	PKPdf	03 27 10.4	+1.1
	comp=Z,2.1nm,0.3s,baz=352,slow=5.2,SNR=1.8						
ARU	Arti	136.35	38	PKP	PKPdf	03 27 10.6	+0.7
	comp=Z,1.2nm,0.3s,baz=225,slow=1.4,SNR=6.9						
ARU	Arti	136.35	38	PKPdf	PKPdf	03 27 09.8	-0.1
PETK	Petropavlovsk-	136.89	318	PKP	PKPdf	03 27 11.7	+0.6
	comp=Z,7.4nm,1.0s,baz=65,slow=12,SNR=5.0						
PETK	Petropavlovsk-	136.89	318		PKPdf	03 27 11.2	+0.1
AKTO	Aktyubinsk	137.43	46	PKP	PKPdf	03 27 12.3	+0.2
	comp=Z,4.0nm,1.1s,baz=255,slow=2.5,SNR=7.3						
ABKAR	Akbulak array	138.87	48	PKPdf	PKPdf	03 27 14.8	0.0
BRVK	Borovoye	143.89	39	PKPdf	PKPbc	03 27 22.8	+1.4
BVAR	Borovoye Array	143.97	39	PKP	PKPbc	03 27 22.4	+0.8
	comp=Z,6.3nm,1.0s,baz=0.8,slow=4.4,SNR=13						
YAK	Yakutsk	144.47	342	PKP	PKPab	03 27 23.3	+0.6
	comp=Z,6.8nm,0.4s,baz=30,slow=1.5,SNR=7.0						
CHGR	Chuyangaron	146.89	64		PKPdf	03 27 30.7	+1.2
KK31	Karatay Array	147.28	55		PKPdf	03 27 31.4	+1.5
KKAR	Karatay Array	147.28	55		PKPbc	03 27 31.5	-0.8
KKAR	Karatay Array	147.28	55		PKPbc	03 27 31.4	-0.8
GAR	Garm	147.76	63		PKPbc	03 27 33.1	-0.7
BTK	Batken	148.03	61		PKPbc	03 27 33.6	-0.8
DRK	Karamyk	148.86	62	PKPbc	PKPdf	03 27 34.8	+1.9
KURK	Kurchatov	149.54	38	PKPdf	PKPdf	03 27 33.0	-0.3
KURBB	Kurchatov Arra	149.54	38	PKPbc	PKPbc	03 27 36.2	-1.6
	comp=Z,12nm,0.7s,baz=302,slow=3.2,SNR=29						
EKS2	Erkin-Say	149.72	55	P	PKiKP	03 27 40.6	+0.9
	SNR=11						
AML	Almayashu	149.79	56	P	PKiKP	03 27 41.0	+0.7
	SNR=9.5						
USP	Ospenovka	150.07	54	P	PKiKP	03 27 41.0	+0.7
	SNR=11						
AAK	Ala-Archa	150.24	55	PKPbc	PKiKP	03 27 41.3	+0.5
	comp=Z,22nm,0.8s,baz=323,slow=5.1,SNR=49						
AAK				PKPab	PKPab	03 27 45.7	-0.5
	comp=Z,27nm,0.7s,baz=258,slow=5.8,SNR=13						
AAK	Ala-Archa	150.24	55	P	PKiKP	03 27 41.9	+1.1
	SNR=24						
CHMS	Chumysh	150.33	54	P	PKiKP	03 27 41.7	+0.9
	SNR=8.3						
UCH	Uchtor	150.36	56	P	PKiKP	03 27 42.8	+1.4
	SNR=26						
ZALV	Zalesovo Beam	150.41	28	PKP	PKPdf	03 27 34.8	+0.2
	comp=Z,14nm,1.0s,baz=298,slow=3.2,SNR=36						
ZALV				PKPbc	PKiKP	03 27 40.6	+0.1
	comp=Z,73nm,0.9s,baz=298,slow=3.4,SNR=68						
ZALV				PKPab	PKPab	03 27 46.3	+0.1
	comp=Z,35nm,0.8s,baz=308,slow=3.7,SNR=6.5						
ZALV	Zalesovo Beam	150.41	28	PKPdf	PKPdf	03 27 35.0	+0.5
KBK	Karagaybulak	150.56	55	P	PKiKP	03 27 42.5	+1.0
	SNR=7.9						
HYB	Hyderabad	150.64	108	*i* PKP	PKPbc	03 27 41.0	-0.5
TKM2	Tokmak 2	150.94	54	P	PKiKP	03 27 43.1	+0.8
	SNR=13						
ULHL	Ulahol	151.59	55	P	PKiKP	03 27 45.3	+1.6
	SNR=8.0						
RPSI	Rantau Prapat	152.00	161		PKPab	03 27 54.0	+0.2
KSH	Kashi	152.04	61	PKPbc	PKiKP	03 27 45.1	+0.5
PSI	Prapat	152.10	161	PKPbc	PKPbc	03 27 44.1	-1.0
	comp=Z,2.6nm,0.4s,baz=299,slow=10,SNR=1.8						
PSI				PKPab	PKPab	03 27 54.0	-0.4
	comp=Z,2.6nm,0.4s,baz=219,slow=0.9,SNR=7.2						
KLR	Kul'dur	153.20	324	PKP	PKPdf	03 27 39.1	+0.2
	comp=Z,1.9nm,0.8s,baz=18,slow=3.2,SNR=2.6						
KLR				PKPbc	PKPbc	03 27 45.6	-0.8
	comp=Z,2.4nm,0.5s,baz=64,slow=7.5,SNR=3.6						
MJAR	Matsushiro Arr	153.68	293	PKPbc	PKPbc	03 27 47.6	-0.3
	comp=Z,1.4nm,0.5s,baz=111,slow=1.2,SNR=5.3						
MKAR	Makanchi Array	153.70	42	PKP	PKPdf	03 27 40.2	+0.5
	comp=Z,2.5nm,0.9s,baz=291,slow=3.4,SNR=8.2						
MKAR				PKPbc	PKPbc	03 27 47.9	+0.4
	comp=Z,8.0nm,0.8s,baz=318,slow=1.8,SNR=23						
MKAR				PKPab	PKPab	03 28 00.8	+0.6
	comp=Z,2.8nm,0.9s,baz=304,slow=2.8,SNR=3.6						
MKAR	Makanchi Array	153.70	42	PKPdf	PKPdf	03 27 39.2	-0.5
MKAR					PKPbc	03 27 46.7	-0.8
WMQ	Urumqi	158.52	43	*e*P	PKPdf	03 27 46.5	+0.3
WMQ				LR	LR		
	comp=N,3µm,18.3s						
WMQ				LR	LR		
	comp=E,4µm,15.1s						
WMQ				LR	LR		
	comp=Z,3µm,20.9s						
SONM	Songino Array	161.69	3	PKP	PKPdf	03 27 50.3	+0.6
	comp=Z,1.3nm,1.0s,baz=338,slow=0.8,SNR=5.2						
SONM				PKPab	PKPab	03 28 32.4	-2.3
	comp=Z,1.5nm,1.0s,baz=342,slow=3.8,SNR=4.1						
SONM	Songino Array	161.69	3		PKPdf	03 27 49.5	-0.3
CMAR	Chiang Mai Arr	166.31	142	PKPab	PKPab	03 28 55.0	-0.7
	comp=Z,1.4nm,0.3s,baz=232,slow=5.0,SNR=4.2						
GTA	Gaotai	168.13	32	*e*PKPbc	PKPdf	03 27 57.3	+1.7
HHC	Hu-ho-hao-te	168.30	346	*e*P	PKPdf	03 27 51.8	-3.8
NJ2	Nanjing	170.21	288	*e*P	PKPdf	03 27 57.0	+0.1
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
CD2	Chengdu	176.20	68	PKP	PKPdf	03 27 58.1	-1.3

NOU 11 03:11:04.3, 21°.99S×169°.66E, h0^{km}, mb3.9/10, Southeast of Loyalty Islands, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	1.60	288	P	Pn	03 11 32.8	-1.0
PINNC	Pines Island,	2.14	253	P	Pn	03 11 40.3	-1.0
LIFNC	LIFOU	2.56	298	P	Pn	03 11 46.6	-0.4
YATNC	Mamie plateau,	2.57	268	P	Pn	03 11 47.0	-0.2
OUENC	Ouen Island, N	2.65	260	P	Pn	03 11 48.1	-0.2
DZM	Mont Dzumac	2.98	268	P	Pn	03 11 53.4	+0.4
ONTNC	Ouen Toro	2.99	263	P	Pn	03 11 52.9	-0.1
NOUC	Port Laguerre	3.12	267	P	Pn	03 11 55.0	+0.3
RTV	Rentapao	4.33	344	P	Pn	03 12 11.4	-0.1
KOUNC	Koumac, New Ca	5.21	285	P	Pn	03 12 23.4	-0.2

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*IDC **11** 03:13:11.4±1.0, 29°.57S×71°.79W, h0^{km}, mb4.0/5, mb1 4.3/9, mb1mx4.1/31, mbtmp4.1/9, ML3.8/4, Error ellipse: s-maj=34.4km s-min=29.0km az=66.0*

*NEIC **11** 03:13:13.6±2.0, 29°.67S±0°.04×71°.97W±0°.05, h13^{km}±5^{km}, mb4.8/4, Error ellipse: s-maj=6.7km s-min=5.1km az=48.0*

ISC 11 03:13:14.4±0.6, **29°.60S**±0°.05×**71°.94W**±0°.08, **h25**^{km}, **n45, σ1s.70**/45, **mb4.6**/7, **1C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	La Serena	0.69	118	Pg	Pb	03 13 26.7	-1.0
CO05					Sn	03 13 37.1	-1.3
CO06	Fray Jorge	1.10	166	Pn	Pn	03 13 33.1	-1.1
CO06				Sn	Sb	03 13 46.9	-1.8
GO03	Copiap	2.50	37	Pn	Pn	03 13 54.1	+0.6
VA03	San Esteban	3.37	160		Pn	03 14 05.6	+0.1
PEL	Peldehue	3.69	163	Pn	Pn	03 14 08.5	-1.4
MT09	Talagante	4.24	169	Pn	Pn	03 14 17.5	0.0
MT01	Popeta	4.29	172	Pn	Pn	03 14 18.0	-0.1
MT01					Sn	03 15 07.6	+0.2
BO01	Tunca	4.83	172	Pn	Pn	03 14 25.2	-0.3
H03N1	Juan Fernandez	7.08	235	T	T	03 22 44.6	
	baz=63,slow=72,SNR=17						
H03N2	Juan Fernandez	7.09	236	T	T	03 22 50.8	
	baz=63,slow=72,SNR=27						
H03N3	Juan Fernandez	7.09	235	T	T	03 22 42.2	
	baz=63,slow=72,SNR=18						
H03S3	Juan Fernandez	7.28	233	Pn	Pn	03 14 54.7	-4.1
H03S1	Juan Fernandez	7.29	233	Pn	Pn	03 14 54.1	-4.9
H03S2	Juan Fernandez	7.30	233	Pn	Pn	03 14 54.7	-4.4
LVC	Limon Verde	7.47	22	Pn	Pn	03 14 59.3	-2.9
	0.8nm,0.3s,baz=169,slow=22,SNR=0.8						
LVC				Sn	Sn	03 16 20.6	-5.8
	1.1nm,0.3s,baz=305,slow=18,SNR=1.4						
LVC				Lg	Lg	03 16 53.2	
	3.7nm,0.3s,baz=229,slow=20,SNR=3.6						
LVC	Limon Verde	7.47	22	Pn	Pn	03 15 03.3	+1.1
LC01	Cunco	9.27	180	Pn	Pn	03 15 24.2	-2.3
PLCA	Paso Flores	11.16	175	Pn	Pn	03 15 51.2	-1.2
	0.3nm,0.3s,baz=350,slow=13,SNR=1.6						
LPAZ	La Paz	13.71	16	Pn	Pn	03 16 26.9	-0.8
	0.1nm,0.3s,baz=214,slow=11,SNR=0.8						
LPAZ	La Paz	13.71	16	Pn	Pn	03 16 29.4	+1.6
SIV	San Ignacio	16.83	39	Pn	Pn	03 17 08.0	-0.4
	0.2nm,0.3s,baz=217,slow=11,SNR=5.3						
ETMB	Extrema	20.40	16	P	P	03 17 49.8	+0.3
SAML	Samuel	22.12	24	P	P	03 18 09.6	+1.4
BDFB	Brasilia	26.02	63	P	P	03 18 45.3	-0.4
BOAV	Boa Vista	33.64	21	P	P	03 19 53.1	-0.1
VNA3	Neumayer Olymp	53.41	159	P	P	03 22 32.4	+0.8
VNA1	Neumayer--Stat	53.70	158	P	P	03 22 34.6	+1.0
VNA2	Neumayer--Watz	54.04	158	P	P	03 22 36.9	+0.7
	baz=289,slow=8.6						
SNAA	Sanae	55.63	159	P	P	03 22 48.2	+0.4
SNAA	Sanae	55.63	159	P	P	03 22 48.3	+0.4
SNAA				IAmb	IAmb	03 22 49.3	
	comp=Z,8.9nm,1.0s						
QSPA	South Pole Qui	60.62	180	P	P	03 23 24.1	+1.2
QSPA				IAmb	IAmb	03 23 33.2	
	comp=Z,8.9nm,1.1s						
TXAR	Lajitas Array	65.97	330	P	P	03 23 59.3	+0.6
	comp=Z,0.5nm,0.9s,baz=146,slow=6.9,SNR=3.7						
TXAR	Lajitas Array	65.97	330	P	P	03 23 57.8	-0.8
SYO	Syowa Base	69.92	159	⇑*e*pP	P	03 24 25.4	+2.5
DBIC	Dimbokro	73.73	72	P	P	03 24 46.8	+0.2
	comp=Z,6.9nm,1.1s,baz=206,slow=3.9,SNR=4.5						
PDAR	Pinedale Array	79.89	333	P	P	03 25 22.5	+1.4
	comp=Z,0.1nm,0.3s,baz=134,slow=2.6,SNR=1.9						
PDAR	Pinedale Array	79.89	333	P	P	03 25 22.1	+1.0
NVAR	Mina Array Bea	80.34	325	P	P	03 25 25.1	+1.5
	comp=Z,2.6nm,1.1s,baz=90,slow=2.9,SNR=5.1						
NVAR	Mina Array Bea	80.34	325	P	P	03 25 24.9	+1.3
TORD	Torodi Ar. Bea	82.65	70	P	P	03 25 36.2	+0.2
	comp=Z,4.5nm,0.8s,baz=258,slow=5.0,SNR=16						
KURK	Kurchatov	149.49	38		PKiKP	03 33 01.6	-0.5
KURBB	Kurchatov Arra	149.49	38	PKPbc	PKiKP	03 33 01.6	-0.5
	comp=Z,1.0nm,0.5s,baz=303,slow=3.3,SNR=4.7						
AAK	Ala-Archa	150.13	55	PKPbc	PKiKP	03 33 04.2	+0.3
	comp=Z,4.0nm,0.8s,baz=190,slow=3.0,SNR=9.2						
ZALV	Zalesovo Beam	150.39	28	PKPbc	PKiKP	03 33 04.5	+0.6
	comp=Z,7.8nm,0.8s,baz=298,slow=3.2,SNR=23						
MKAR	Makanchi Array	153.63	42	PKPbc	PKiKP	03 33 11.2	+0.4
	comp=Z,0.2nm,0.4s,baz=336,slow=3.2,SNR=2.8						

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*TUL **11** 03:13:36.7±0.8, 36°.95N±0°.03×97°.83W±0°.06, h5^{km}±6^{km}, ML2.8, mb_Lg2.6/6(NEIC), Error ellipse: s-maj=7.1km s-min=2.6km az=66.0*

NEIC 11 03:13:37.0±0.8, **36°.92N**±0°.03×**97°.81W**±0°.06, **h5**^{km}±6^{km}, **Error ellipse: s-maj=7.4km s-min=1.2km az=61.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.08	211	Pg	Pg	03 13 39.1	+0.4
GC02				Sg	Sg	03 13 40.7	+0.8
KAN14	Manchester OK	0.13	288		Pg	03 13 39.5	-0.1
KAN14				Sg	Sg	03 13 41.3	-0.1
KAN17	Caldwell West	0.13	16	Pg	Pg	03 13 39.6	-0.1
KAN17				Sg	Sg	03 13 41.5	0.0
KAN05	Bluff City Nor	0.20	345		Pg	03 13 40.7	-0.2
KAN05				Sg	Sg	03 13 42.6	-0.9
KAN01	Argonia South	0.24	10	Pg	Pg	03 13 41.5	-0.2
KAN01				Sg	Sg	03 13 44.7	-0.2
KAN09	Caldwell North	0.27	35	Pg	Pg	03 13 42.2	0.0
KAN13	South Haven SW	0.28	70	Pg	Pg	03 13 42.8	+0.3
KAN10	Anthony SW Sta	0.31	312	Pg	Pg	03 13 42.7	-0.3
KAN06	Argonia West S	0.33	353		Pg	03 13 43.1	-0.3
KAN08	Anthony NE Sta	0.34	337		Pg	03 13 43.2	-0.3
KAN16	Harper SW Stat	0.37	327	Pg	Pg	03 13 43.8	-0.3
KS20	Mayfield South	0.37	33	Pg	Pg	03 13 44.1	-0.1
KAN12	Harper NE Stat	0.41	338		Pg	03 13 44.5	-0.4
BLOK	Blackwell	0.50	108	Pg	Pg	03 13 47.0	+0.3
T35A	Sooner Cattle	1.04	90	Pg	Pg	03 13 56.7	-0.2
OK029	Liberty Lake	1.15	166	Pn	Pg	03 13 58.9	-0.2
QUOK	Quay	1.16	130	Pg	Pg	03 13 58.9	-0.2
OK031	S. Brethren Rd	1.24	141	Pg	Pg	03 14 00.3	-0.5
BCOK	Bluff Creek, N	1.27	173	Pn	Pg	03 14 00.8	-0.5
OK030	Cody Creek RV	1.29	140		Pn	03 14 01.1	-0.5
OKCFA	Oklahoma City	1.53	169		Pn	03 14 04.9	0.0
OKCSW	OKLAHOMA CITY	1.54	169		Pn	03 14 05.2	+0.1
R32A	Long Quarter,	1.66	335		Pn	03 14 06.8	0.0
FNO	Franklin	1.69	169		Pn	03 14 07.6	+0.5
TUL1	Leonard	1.91	121		Pn	03 14 10.6	+0.4
TUL1				IAmb_Lg		03 14 40.9	
	comp=Z,56nm,0.8s						
X34A	Smith Ranch, M	2.31	180		Pn	03 14 16.5	+0.8
WMOK	Wichita Mounta	2.31	200		Pn	03 14 15.9	+0.2
KSU1	Kansas State U	2.38	23	Pn	Pn	03 14 16.8	+0.2
CBKS	Cedar Bluff	2.43	322	Pn	Pn	03 14 16.7	-0.7
U38A	Gravette	2.79	99	Pn	Pn	03 14 22.9	+0.5
X37A	Clayton	3.05	139		Pn	03 14 26.3	+0.4
HHAR	Hobbs	3.18	100	Pn	Pn	03 14 27.5	-0.1
S39A	Bolivar	3.66	76	Pn	Pn	03 14 34.7	+0.4
W39A	Magazine	3.69	117	Pn	Pn	03 14 34.4	-0.2
AMTX	Amarillo	3.74	238	Pn	Pn	03 14 36.2	+0.8
U40A	Yellville	4.03	97	Pn	Pn	03 14 38.9	-0.3
U40A				IAmb_Lg		03 15 41.7	
	comp=Z,5.5nm,1.2s						
BGNE	Belgrade	4.49	357	IAmb_Lg		03 16 07.5	
	comp=Z,17nm,0.8s						

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*IDC **11** 03:24:01.3±2.4, 29°.35S×72°.10W, h0^{km}, mb3.5/2, mb1 3.7/3, mb1mx3.5/26, mbtmp3.5/3, ML3.2/1, Error ellipse: s-maj=67.7km s-min=55.7km az=28.0*

*GUC **11** 03:24:05.4±0.8, 29°.49S×71°.80W, h22^{km}±9^{km}, ML3.9*

ISC 11 03:24:02.9±4.2, **29°.44S**±0°.04×**71°.89W**±0°.09, **h13**^{km}±29^{km}, **n17, σ0s.87**/19, **4D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	La Serena	0.74	130	⇓*i*P	Pb	03 24 17.7	0.0
CO05				*i* S	Sb	03 24 27.0	-0.7
LCO	Las Campanas	1.12	68	⇓*i*P	Pn	03 24 24.6	0.0
LCO				*i* S	Sb	03 24 38.7	-0.3
GO04	Tololo Observa	1.20	128	⇓*i*P	Pn	03 24 25.3	-0.3
GO04				*i* S	Sb	03 24 40.3	-0.8
GO04				IAML		03 24 47.0	
	comp=N,11µm,0.4s						
CO06	Fray Jorge	1.25	170	*e*P	Pn	03 24 25.9	-0.1
CO06				*i* S	Sb	03 24 42.1	-0.3
CO06				IAML		03 24 45.2	
	comp=N,1µm,0.2s						
AC04	Llanos de Chal	1.42	30	*e*P	Pn	03 24 28.6	+0.1
GO03	Copiap	2.35	39	*e*P	Pb	03 24 44.9	-0.2
GO03				*e*P	Sb	03 25 14.4	+0.4
GO03				IAML		03 25 22.1	
	comp=E,475nm,0.5s						
VA03	San Esteban	3.51	161	*e*P	Pn	03 24 59.7	+2.5
VA03				IAML		03 25 53.8	
	comp=E,569nm,0.8s						
ROCH	El Roble	3.60	168	*e*P	Pn	03 24 59.2	+0.6
ROCH				IAML		03 25 58.6	
	comp=N,216nm,0.8s						
PEL	Peldehue	3.83	165	*e*P	Pn	03 25 02.4	+0.7
MT09	Talagante	4.39	170	⇓*i*P	Pn	03 25 10.2	+0.8
H03N1	Juan Fernandez	7.20	235	T	T	03 33 26.1	
	baz=59						
H03N2	Juan Fernandez	7.22	235	T	T	03 33 27.0	
	baz=59						
H03N3	Juan Fernandez	7.22	235	T	T	03 33 26.2	
	baz=59						
LVC	Limon Verde	7.31	22	Pn	Pn	03 25 50.0	+0.3
	comp=N,0.4nm,0.3s,baz=176,slow=9.0,SNR=1.4						
TXAR	Lajitas Array	65.85	330	P	P	03 34 47.1	-1.1
	comp=N,0.2nm,0.8s,baz=146,slow=6.6,SNR=2.1						
TORD	Torodi Ar. Bea	82.56	70	P	P	03 36 26.5	+0.5
	comp=N,0.8nm,0.8s,baz=252,slow=4.3,SNR=4.7						
ZALV	Zalesovo Beam	150.23	28	PKPbc	PKiKP	03 43 54.7	+0.7
	comp=N,1.0nm,0.6s,baz=302,slow=3.2,SNR=5.3						

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*IDC **11** 03:25:38.5±0.8, 29°.62S×71°.69W, h0^{km}, mb4.1/7, mb1 4.1/12, mb1mx3.9/28, mbtmp4.0/12, ML3.9/5, MS5.0/1, Ms1 5.0/1, ms1mx4.4/34, Error ellipse: s-maj=24.7km s-min=22.4km az=95.0*

*NEIC **11** 03:25:40.7±1.4, 29°.70S±0°.04×72°.03W±0°.05, h20^{km}±1^{km}, mb4.3/10, ML3.8(GUC), Error ellipse: s-maj=6.5km s-min=5.4km az=97.0*

*GUC **11** 03:25:41.4±0.7, 29°.69S×71°.98W, h27^{km}±14^{km}, ML3.9*

*VAO **11** 03:25:42.5±0.5, 29°.58S×71°.72W, h10^{km}, mb4.8*

ISC 11 03:25:38.0±1.7, **29°.64S**±0°.04×**72°.06W**±0°.05, **h3**^{km}±11^{km}, **n74, σ1s.19**/82, **mb4.2**/10, **1C-3D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	La Serena	0.76	111	⇓*i*P	Pb	03 25 54.3	+0.3
CO05				*i* S	Sb	03 26 04.0	-0.8
CO05				IAML		03 26 07.6	
	comp=E,7µm,0.5s						
CO05	La Serena	0.76	111		Pb	03 25 54.3	+0.3
CO05					Sb	03 26 04.0	-0.8
CO06	Fray Jorge	1.09	161	*e*P	Pg	03 25 59.5	+0.6
CO06				*e*S	Sg	03 26 13.3	+0.2
CO06				IAML		03 26 16.6	
	comp=E,3µm,0.1s						
CO06	Fray Jorge	1.09	161	Pn	Pb	03 25 60.0	+0.4
CO06				Sn	Sg	03 26 13.3	+0.2
GO04	Tololo Observa	1.21	116	⇓*i*P	Pn	03 26 01.9	-0.3
GO04				*e*P	Pn	03 26 01.9	-0.3
GO04				*e*S	Sb	03 26 16.5	-1.4
GO04				*i* S	Sn	03 26 18.2	-1.0
GO04	Tololo Observa	1.21	116	Pn	Pn	03 26 02.0	-0.1
GO04				Sn	Sb	03 26 17.1	-0.9
LCO	Las Campanas	1.34	62	⇓*i*P	Pn	03 26 04.0	+0.1
LCO				*i* S	Sn	03 26 22.0	-0.4
LCO	Las Campanas	1.34	62	Pn	Pn	03 26 04.6	+0.7
AC04	Llanos de Chal	1.67	31	⇑*i*P	Pn	03 26 08.1	-0.1
AC04				*i* S	Sn	03 26 29.0	-1.2
AC04				IAML		03 26 42.6	
	comp=N,2µm,0.5s						
AC04	Llanos de Chal	1.67	31	Pn	Pn	03 26 08.2	0.0
CO03	El Pedregal	1.68	136	Pn	Pb	03 26 09.4	-0.3

GO03	Copiap	2.59	39	*e*P	Pn	03 26 21.3	+0.3
GO03				IAML		03 27 12.9	
	comp=N,1µm,0.6s						
GO03	Copiap	2.59	39	Pn	Pn	03 26 22.0	+1.0
VA06	Catapilco	2.98	168	*e*P	Pn	03 26 26.7	+0.4
VA06				IAML		03 27 14.6	
	comp=E,870nm,0.5s						
VA03	San Esteban	3.37	158	*e*P	Pn	03 26 33.4	+1.7
VA01	Torpederas	3.39	174	Pn	Pn	03 26 31.7	-0.1
GO05	Huala	5.35	179		Pn	03 26 58.0	-0.9
H03N1	Juan Fernandez	6.97	235	T	T	03 34 44.5	
	baz=64,slow=71,SNR=111						
H03N2	Juan Fernandez	6.98	235	T	T	03 34 45.2	
	baz=64,slow=71,SNR=52						
H03N3	Juan Fernandez	6.99	235	T	T	03 34 45.9	
	baz=64,slow=71,SNR=58						
VA04	Juan Fernndez	7.02	234		Pn	03 27 20.6	-1.1
H03S3	Juan Fernandez	7.17	233	Pn	Pn	03 27 22.4	-1.2
	baz=37,slow=19,SNR=16						
H03S1	Juan Fernandez	7.18	233	Pn	Pn	03 27 21.4	-2.2
	baz=37,slow=19,SNR=13						
H03S1				Sn	Sn	03 28 34.6	-11
H03S2	Juan Fernandez	7.19	233	Pn	Pn	03 27 22.5	-1.3
	baz=37,slow=19,SNR=16						
LVC	Limon Verde	7.55	23	Pn	Pn	03 27 27.8	-1.6
	comp=E,1.9nm,0.3s,baz=189,slow=8.9,SNR=2.9						
LVC				Lg	Lg	03 29 27.4	
	comp=E,4.4nm,0.3s,baz=269,slow=21,SNR=3.1						
LVC	Limon Verde	7.55	23		Pn	03 27 30.8	+1.4
PLCA	Paso Flores	11.13	174	Pn	Pn	03 28 17.1	-1.1
	comp=E,0.3nm,0.3s,baz=326,slow=12,SNR=10						
ITQB	Itaqui	13.42	94	*e*P	Pn	03 28 50.1	+0.7
ITQB	Itaqui	13.42	94		Pn	03 28 49.8	+0.4
CPUP	Villa Florida	13.42	79	Pn	Pn	03 28 47.0	-2.5
	comp=E,0.2nm,0.3s,baz=250,slow=9.1,SNR=1.5						
CPUP				Lg	Lg	03 32 34.9	
	comp=E,0.1nm,0.3s,baz=252,slow=20,SNR=1.7						
LPAZ	La Paz	13.77	16	Pn	Pn	03 28 52.6	-2.2
	comp=E,0.1nm,0.3s,baz=214,slow=16,SNR=2.2						
LPAZ	La Paz	13.77	16		Pn	03 28 53.0	-1.8
SIV	San Ignacio	16.93	39	Pn	Pn	03 29 33.4	-2.6
	comp=E,0.2nm,0.3s,baz=243,slow=5.7,SNR=2.3						
PTLB	Pontes e Lacer	18.47	43	*e*P	P	03 29 56.2	+1.1
PTLB	Pontes e Lacer	18.47	43		Pn	03 29 54.9	-0.2
PTLB				IAmb	IAmb	03 30 12.4	
	comp=Z,9.7nm,1.4s						
VILB	Vilhena	19.92	36	*e*P	P	03 30 11.7	+0.7
VILB	Vilhena	19.92	36	P	P	03 30 11.4	+0.4
VILB				IAmb	IAmb	03 30 20.4	
	comp=Z,17nm,1.0s						
SALV	Santo Antonio	20.33	51	*e*P	P	03 30 15.9	+0.5
PCMB	Pacaembu	20.36	72	*e*P	P	03 30 15.3	-0.6
ETMB	Extrema	20.47	17	P	P	03 30 16.2	-0.8
CZSB	Cruzeiro do Su	21.81	358	*e*P	P	03 30 34.5	+3.1
ITRB	Iturama	22.02	68	*e*P	P	03 30 33.3	-0.5
SAML	Samuel	22.20	24	P	P	03 30 36.3	+0.7
PET01	Itanhaem-SP	22.70	82	*e*P	P	03 30 41.2	+0.2
PDRB	Porto dos Gac	22.92	42	*e*P	P	03 30 44.9	+1.6
ARAG	Araguaiana, MT	23.21	58	*e*P	P	03 30 47.8	+1.4
PARB	Paraibuna	24.45	81	*e*P	P	03 30 59.8	+1.5
MAN01	Angra dos Reis	26.04	82	*e*P	P	03 31 13.6	+0.8
SNDB	Serra Nova Dou	26.11	52	*e*P	P	03 31 13.9	+0.6
BDFB	Brasilia	26.13	63	P	P	03 31 09.9	-3.7
	comp=Z,3.0nm,0.7s,baz=266,slow=10,SNR=3.1						
BDFB	Brasilia	26.13	63	P	P	03 31 13.1	-0.6
MACA	Manacapuru-AM	28.46	24	P	P	03 31 32.8	-1.6
MACA				IAmb	IAmb	03 31 52.3	
	comp=Z,2.0nm,0.3s						
PAYG	Puerto Ayora	33.64	326	P	P	03 32 19.2	-0.8
NBMA	Muriti-CE	38.33	61	*e*P	P	03 33 00.9	+0.5
BAUV	El Baul	38.55	6	P	P	03 33 01.6	-0.5
BAUV				IAmb	IAmb	03 33 18.8	
	comp=Z,2.1nm,0.6s						
JTS	Las Juntas de	41.60	341	LR	LR	03 48 21.8	
	comp=Z,2µm,18.2s,baz=178,slow=33						
VNA3	Neumayer Olymp	53.41	159	P	P	03 35 00.1	+1.4
VNA1	Neumayer--Stat	53.70	158	P	P	03 35 02.0	+1.3
VNA2	Neumayer--Watz	54.04	158	P	P	03 35 04.1	+0.8
	baz=292,slow=9.1						
SNAA	Sanae	55.63	159	P	P	03 35 15.6	+0.7
SNAA	Sanae	55.63	159	P	P	03 35 15.4	+0.5
SNAA				IAmb	IAmb	03 35 16.8	
	comp=Z,4.2nm,1.0s						
TXAR	Lajitas Array	65.95	330	P	P	03 36 28.0	+2.3
	comp=Z,0.3nm,0.5s,baz=154,slow=7.7,SNR=5.7						
TXAR	Lajitas Array	65.95	330	P	P	03 36 25.7	+0.1
DBIC	Dimbokro	73.84	72	P	P	03 37 15.2	+0.7
	comp=Z,1.6nm,0.6s,baz=230,slow=5.2,SNR=5.5						
DBIC	Dimbokro	73.84	72	P	P	03 37 13.3	-1.2
MAW	Mawson	77.36	164	P	P	03 37 34.4	+0.7
	comp=Z,0.8nm,0.6s,baz=254,slow=15,SNR=2.2						
PDAR	Pinedale Array	79.88	333	P	P	03 37 49.0	+0.8
	comp=Z,0.3nm,0.6s,baz=161,slow=5.7,SNR=2.2						
BOSA	Boshof	82.12	118	P	P	03 37 59.8	-0.8
	comp=Z,3.1nm,0.7s,baz=229,slow=5.7,SNR=6.1						
TORD	Torodi Ar. Bea	82.76	71	P	P	03 38 03.9	+0.1
	comp=Z,4.0nm,0.8s,baz=273,slow=5.2,SNR=19						
TORD	Torodi Ar. Bea	82.76	71	P	P	03 38 03.4	-0.4
TORD				IAmb	IAmb	03 38 05.4	
	comp=Z,4.2nm,0.8s						
WRA	Warramunga Arr	124.53	211	PKP	PKPdf	03 44 40.3	+0.8
	comp=Z,0.2nm,0.5s,baz=168,slow=1.6,SNR=2.0						
ZALV	Zalesovo Beam	150.47	28	PKPbc	PKiKP	03 45 32.2	+0.8
	comp=Z,13nm,0.7s,baz=298,slow=3.1,SNR=44						
ZALV				PKPab	PKPab	03 45 37.4	+0.2
	comp=Z,3.4nm,0.6s,baz=288,slow=2.0,SNR=5.6						
ZALV	Zalesovo Beam	150.47	28	PKPbc	PKPbc	03 45 30.8	+0.2
MKAR	Makanchi Array	153.73	42	PKPbc	PKPbc	03 45 38.5	+0.1
	comp=Z,1.3nm,0.9s,baz=279,slow=2.3,SNR=4.0						
MKAR				PKPab	PKPab	03 45 48.7	-2.4
	comp=Z,0.7nm,0.7s,baz=289,slow=3.7,SNR=2.9						

NOU 11 03:27:24.5, 15°.19S×173°.16W, h20^{km}, MLv3.9/4, Tonga Islands, Tonga Islands

*IDC **11** 03:40:23.4±0.7, 29°.53S×71°.97W, h0^{km}, mb4.0/8, mb1 4.1/13, mb1mx4.0/36, mbtmp4.0/13, ML3.9/5, Error ellipse: s-maj=24.7km s-min=18.0km az=116.0*
*NEIC **11** 03:40:24.1±1.6, 29°.45S±0°.02×72°.05W±0°.06, h10^{km}±1^{km}, mb4.5/9, ML4.2(GUC), Error ellipse: s-maj=8.7km s-min=3.4km az=266.0*
*GUC **11** 03:40:26.0±0.8, 29°.42S×71°.93W, h23^{km}±6^{km}, ML4.2*
*VAO **11** 03:40:27.3±0.5, 29°.45S×71°.79W, h10^{km}, mb4.3*
ISC 11 03:40:24.2±0.5, **29°.46S**±0°.04×**72°.09W**±0°.05, **h10**^{km}, **n125**, σ**1^{s}.55**/127, **mb4.4**/12, **1C-4D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	La Serena	0.87	122	⇓*i*P	Pg	03 40 40.6	-0.4
CO05				*i* S	Sg	03 40 51.0	-1.4
CO05				IAML		03 40 53.6	
	comp=N,25µm,0.4s						
CO05	La Serena	0.87	122		Pg	03 40 40.5	-0.6
CO05				Sg	Sg	03 40 51.1	-1.3
CO06	Fray Jorge	1.27	162	⇓*i*P	Pn	03 40 47.5	-0.5
CO06				*e*S	Sb	03 41 03.0	-1.7
CO06	Fray Jorge	1.27	162		Pn	03 40 47.6	-0.5
LCO	Las Campanas	1.30	70	⇓*i*P	Pn	03 40 46.8	-1.9
LCO				*i* S	Sb	03 41 04.0	-1.8
LCO	Las Campanas	1.30	70	Pn	Pn	03 40 47.1	-1.6
LCO				Sg	Sb	03 41 04.0	-1.8
LCO	Las Campanas	1.30	70	*i* P	Pn	03 40 47.0	-1.6
GO04	Tololo Observa	1.33	122	⇓*i*P	Pn	03 40 48.3	-0.8
GO04				*i* S	Sb	03 41 04.7	-1.9
GO04	Tololo Observa	1.33	122		Pn	03 40 48.1	-0.9
AC04	Llanos de Chal	1.54	36	⇑*i*P	Pn	03 40 50.5	-1.3
AC04				*i* S	Sn	03 41 08.9	-3.0
AC04				IAML		03 41 20.0	
	comp=N,4µm,0.6s						
AC04	Llanos de Chal	1.54	36	Pn	Pn	03 40 50.5	-1.3
AC04	Llanos de Chal	1.54	36	*i* P	Pn	03 40 50.0	-1.8
CO03	El Pedregal	1.83	139		Pn	03 40 55.8	-0.1
AROD	Rodeo	2.38	108	*i* P	Pb	03 41 06.0	-1.4
GO03	Copiap	2.48	42	*e*P	Pn	03 41 03.8	-0.9
GO03				*i* S	Sn	03 41 34.1	-1.1
GO03				IAML		03 41 46.0	
	comp=E,2µm,0.3s						
GO03	Copiap	2.48	42	Pn	Pn	03 41 04.1	-0.7
GO03	Copiap	2.48	42	*i* P	Pn	03 41 05.0	+0.2
ACDV	Cuesta del Vie	2.68	106	*i* P	Pb	03 41 11.0	-1.4
ACCO	Cerro Coronel	2.85	114	*i* P	Pb	03 41 14.0	-1.5
VA06	Catapilco	3.16	168	*i* P	Pn	03 41 14.3	+0.3
VA06				IAML		03 42 27.4	
	comp=E,980nm,0.5s						
RTLS	Leoncito	3.35	135	*i* P	Pb	03 41 21.0	-2.9
VCA	Vinchina	3.48	79	*i* P	Pb	03 41 23.0	-3.0
VA03	San Esteban	3.55	158	*e*P	Pn	03 41 21.7	+2.2
VA03	San Esteban	3.55	158		Pn	03 41 20.1	+0.7
VA03	San Esteban	3.55	158	*i* P	Pn	03 41 22.0	+2.5
VA01	Torpederas	3.57	174		Pn	03 41 19.7	0.0
AUSP	Uspallata	3.60	140	*i* P	Pb	03 41 25.0	-3.2
ROCH	El Roble	3.62	165	*e*P	Pn	03 41 21.1	+0.5
AC02	Maricunga	3.70	46		Pn	03 41 21.7	-0.3
PEL	Peldehue	3.86	162	Pn	Pn	03 41 23.2	-0.5
MT02	Curacav	3.87	168		Pn	03 41 23.5	-0.4
MT02	Curacav	3.87	168	*i* P	Pn	03 41 25.0	+1.2
RTCV	Cerro Valdivia	3.88	129	*i* P	Pn	03 41 28.0	+3.9
MT05	Renca	4.08	164		Pn	03 41 27.6	+0.8
ASAL	Salagasta	4.19	139	*i* P	Pb	03 41 33.0	-5.1
AVFE	Valle Fertil	4.19	108	*i* P	Pn	03 41 31.0	+2.7
VA05	Santo Domingo	4.20	175		Pn	03 41 27.4	-0.9
MT09	Talagante	4.40	168	*i* P	Pn	03 41 32.1	+0.8
MT09	Talagante	4.40	168		Pn	03 41 31.6	+0.3
MT01	Popeta	4.45	171		Pn	03 41 31.6	-0.2
MT01	Popeta	4.45	171	*i* P	Pn	03 41 32.0	+0.3
ACLC	CERRO LA CRUZ	4.48	91	*i* P	Pn	03 41 34.0	+1.6
AAGR	Agrelo	4.56	143	*i* P	Pn	03 41 38.0	+4.5
BO04	La Punta	4.69	165	*e*P	Pn	03 41 36.0	+0.9
BO01	Tunca	4.99	170	Pn	Pn	03 41 39.3	+0.1
BO01	Tunca	4.99	170	*i* P	Pn	03 41 40.0	+0.8
ACHE	Chepes	4.99	111	*i* P	Pn	03 41 43.0	+3.6
BO02	Sierra Bellavi	5.43	169		Pn	03 41 45.6	+0.3
BO02	Sierra Bellavi	5.43	169	*i* P	Pn	03 41 47.0	+1.7
GO05	Huala	5.53	179		Pn	03 41 45.6	-1.1
GO05	Huala	5.53	179	*i* P	Pn	03 41 46.0	-0.7
PB10	IPOC Station P	6.08	13	*i* P	Pn	03 41 53.0	-1.3
RFA	San Rafael	6.12	151	*i* P	Pn	03 41 57.0	+2.2
ML02	Panimavida	6.31	175	Pn	Pn	03 41 56.4	-0.9
PB15	IPOC Station P	6.66	21		Pn	03 42 01.5	-0.9
PB15	IPOC Station P	6.66	21	*i* P	Pn	03 42 02.0	-0.4
PB05	IPOC Station P	6.80	15	*i* P	Pn	03 42 01.0	-3.2
H03N1	Juan Fernandez	7.05	234	T	T	03 49 56.0	
	baz=64,slow=72,SNR=128						
H03N2	Juan Fernandez	7.06	234	T	T	03 49 56.8	
	baz=64,slow=72,SNR=113						
H03N3	Juan Fernandez	7.06	234	T	T	03 49 54.5	
	baz=64,slow=72,SNR=133						
AF01	San Pedro de A	7.38	29	Pn	Pn	03 42 12.7	+0.4
LVC	Limon Verde	7.40	23	Pn	Pn	03 42 11.3	-1.4
	comp=E,1.0nm,0.3s,baz=168,slow=6.9,SNR=7.5						
LVC				Sn	Sn	03 43 37.3	+0.4
	comp=E,3.7nm,0.3s,baz=164,slow=8.1,SNR=2.1						
LVC	Limon Verde	7.40	23	*e*P	Pn	03 42 13.5	+0.8
LVC	Limon Verde	7.40	23		Pn	03 42 10.9	-1.8
LVC	Limon Verde	7.40	23	*i* P	Pn	03 42 13.0	+0.3
PB07	IPOC Station P	7.96	15	Pn	Pn	03 42 17.9	-2.3
PB02	IPOC Station P	8.35	14	*i* P	Pn	03 42 24.0	-1.5
PB01	IPOC Station P	8.71	16	*i* P	Pn	03 42 27.0	-3.4
LC01	Cunco	9.41	179	Pn	Pn	03 42 39.0	-0.9
LC01	Cunco	9.41	179	*i* P	Pn	03 42 40.0	+0.1
PSGCX	Pisagua	9.98	11	*i* P	Pn	03 42 44.0	-3.9
PLCA	Paso Flores	11.31	174	Pn	Pn	03 43 05.5	-0.5
	comp=E,0.3nm,0.3s,baz=337,slow=12,SNR=10						
PLCA	Paso Flores	11.31	174	*e*P	Pn	03 43 08.5	+2.5
PLCA	Paso Flores	11.31	174		Pn	03 43 05.3	-0.7
PLCA	Paso Flores	11.31	174	*i* P	Pn	03 43 06.0	0.0
CPUP	Villa Florida	13.42	80	Pn	Pn	03 43 35.6	+0.8
	comp=E,0.2nm,0.3s,baz=216,slow=15,SNR=1.3						
CPUP	Villa Florida	13.42	80	*e*P	Pn	03 43 34.1	-0.8
CPUP	Villa Florida	13.42	80		Pn	03 43 35.0	+0.2
LPAZ	La Paz	13.61	16	Pn	Pn	03 43 39.8	+1.8
	comp=E,0.2nm,0.3s,baz=178,slow=7.5,SNR=17						
LPAZ	La Paz	13.61	16	*e*P	Pn	03 43 39.8	+1.8
LPAZ	La Paz	13.61	16		Pn	03 43 35.8	-2.2
PLTB	Pedras Altas	16.08	103	*e*P	Pn	03 44 11.6	+1.1
SIV	San Ignacio	16.81	39	Pn	Pn	03 44 19.2	-0.7
	comp=E,0.4nm,0.3s,baz=225,slow=11,SNR=16						
PTLB	Pontes e Lacer	18.36	43	*e*P	P	03 44 39.1	+0.1
VILB	Vilhena	19.79	36	*e*P	Pn	03 44 55.5	-0.9
VILB	Vilhena	19.79	36	P	P	03 44 54.2	-0.7
SALV	Santo Antonio	20.24	52	*e*P	P	03 44 59.6	-0.1
ETMB	Extrema	20.31	17	*e*P	Pn	03 45 05.0	+2.5
ETMB	Extrema	20.31	17	P	P	03 44 59.1	-1.4
ETMB				IAmb	IAmb	03 45 14.9	
	comp=Z,15nm,0.8s						
PCMB	Pacaembu	20.34	72	*e*P	P	03 45 00.4	-0.4
CZSB	Cruzeiro do Su	21.63	358	*e*P	P	03 45 17.4	+2.6
CZSB	Cruzeiro do Su	21.63	358	P	P	03 45 14.2	-0.5
CZSB				IAmb	IAmb	03 45 31.2	
	comp=Z,16nm,0.8s						
ITRB	Iturama	21.99	69	*e*P	P	03 45 17.9	-0.7
SAML	Samuel	22.05	24	P	P	03 45 17.1	-2.2
PDRB	Porto dos Gac	22.81	42	*e*P	P	03 45 28.9	+1.5
BB19B	Bebedouro	22.86	74	*e*P	P	03 45 29.6	+1.6
CLDB	Colider	23.95	43	*e*P	P	03 45 38.2	-0.6
SNDB	Serra Nova Dou	26.02	52	*e*P	P	03 45 58.0	+0.3
BDFB	Brasilia	26.08	63	P	P	03 45 57.5	-0.8
	comp=Z,2.4nm,0.4s,baz=227,slow=8.3,SNR=6.2						
BDFB	Brasilia	26.08	63	P	P	03 45 58.0	-0.3
BDFB				IAmb	IAmb	03 46 07.1	
	comp=Z,11nm,1.2s						
NPGB	Novo Progresso	27.31	39	*e*P	P	03 46 11.3	+2.0
PEXB	Peixe	28.07	57	*e*P	P	03 46 18.1	+2.0
PTGA	Pitinga	30.82	24	P	P	03 46 40.1	-0.4
	comp=Z,1.6nm,0.3s,baz=148,slow=14,SNR=1.9						
BOAV	Boa Vista	33.56	21	*e*P	P	03 47 05.7	+1.1
BOAV	Boa Vista	33.56	21	P	P	03 47 04.4	-0.1
BOAV				IAmb	IAmb	03 47 13.8	
	comp=Z,6.7nm,0.9s						
NBPN	Ponto Novo - B	35.03	65	*e*P	P	03 47 17.6	+0.3
VNA3	Neumayer Olymp	53.58	159	P	P	03 49 54.5	+9.4
VNA1	Neumayer--Stat	53.87	158	P	P	03 49 49.7	+2.6
VNA2	Neumayer--Watz	54.22	159	P	P	03 49 58.7	+9.0
	baz=286,slow=8.9						
SNAA	Sanae	55.81	159	P	P	03 50 01.9	+0.6
SNAA	Sanae	55.81	159	P	P	03 50 01.5	+0.2
SNAA				IAmb	IAmb	03 50 18.7	
	comp=Z,6.4nm,1.3s						
QSPA	South Pole Qui	60.76	180	P	P	03 50 35.5	-0.6
	comp=Z,4.1nm,0.7s,baz=172,slow=3.2,SNR=5.2						
QSPA	South Pole Qui	60.76	180	P	P	03 50 35.3	-0.8
TXAR	Lajitas Array	65.78	330	P	P	03 51 11.5	+1.8
	comp=Z,0.7nm,0.7s,baz=149,slow=9.0,SNR=6.7						
TXAR	Lajitas Array	65.78	330	P	P	03 51 10.5	+0.8
DBIC	Dimbokro	73.82	73	P	P	03 52 00.2	+0.8
	comp=Z,3.5nm,1.0s,baz=283,slow=2.7,SNR=1.5						
DBIC	Dimbokro	73.82	73	P	P	03 51 59.9	+0.5
RAR	Rarotonga	77.94	252	P	P	03 52 23.2	+0.3
	comp=Z,13nm,0.4s,baz=81,slow=1.4,SNR=2.4						
PDAR	Pinedale Array	79.71	333	P	P	03 52 33.7	+1.4
	comp=Z,0.2nm,0.5s,baz=128,slow=5.8,SNR=2.3						
NVAR	Mina Array Bea	80.15	325	P	P	03 52 37.1	+2.3
	comp=Z,0.2nm,0.5s,baz=93,slow=6.4,SNR=1.8						
TORD	Torodi Ar. Bea	82.73	71	P	P	03 52 49.4	+0.7
	comp=Z,2.1nm,0.7s,baz=266,slow=5.2,SNR=10						
ASAR	Alice Springs	121.56	208	PKP	PKiKP	03 59 18.9	0.0
	comp=Z,0.1nm,0.3s,baz=172,slow=1.6,SNR=1.3						
WRA	Warramunga Arr	124.66	211	PKP	PKiKP	03 59 25.3	+0.3
	comp=Z,0.4nm,0.6s,baz=175,slow=1.7,SNR=2.3						
ZALV	Zalesovo Beam	150.33	28	PKPbc	PKiKP	04 00 17.0	+0.9
	comp=Z,5.0nm,0.7s,baz=303,slow=2.9,SNR=20						
MKAR	Makanchi Array	153.62	42	PKPbc	PKiKP	04 00 25.2	+2.0
	comp=Z,0.5nm,0.7s,baz=316,slow=3.3,SNR=2.2						

*IDC **11** 03:42:20.8±1.0, 29°.52S×71°.94W, h0^{km}, mb4.1/5, mb1 4.3/9, mb1mx4.0/36, mbtmp4.2/9, ML4.0/4, Error ellipse: s-maj=35.0km s-min=22.2km az=96.0*
ISC 11 03:42:26.8±0.9, **29°.50S**±0°.09×**71°.6W**±0°.2, **h50**^{km}, **n12**, σ**1^{s}.98**/12, **mb4.2**/5, **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	7.28	20	Pn	Pn	03 44 08.7	-2.3
	8.9nm,0.3s,baz=148,slow=19,SNR=6.2						
PLCA	Paso Flores	11.24	176	Pn	Pn	03 45 03.1	-1.8
	0.2nm,0.3s,baz=258,slow=19,SNR=1.7						
CPUP	Villa Florida	13.03	79	Pn	P	03 45 36.5	-1.7
	0.3nm,0.3s,baz=258,slow=13,SNR=1.9						
LPAZ	La Paz	13.54	14	Pn	Pn	03 45 35.7	-1.1
	0.3nm,0.3s,baz=214,slow=7.0,SNR=3.9						
SIV	San Ignacio	16.58	38	Pn	Pn	03 46 16.4	+0.4
	0.3nm,0.3s,baz=233,slow=14,SNR=4.8						
BDFB	Brasilia	25.73	63	P	P	03 47 55.2	+2.4
	5.4nm,0.8s,baz=228,slow=7.2,SNR=5.0						
PMSA	Palmer Station	35.61	174	P	P	03 49 18.9	-0.4
	16nm,0.9s,baz=303,slow=10,SNR=4.8						
TXAR	Lajitas Array	66.02	330	P	P	03 53 08.7	+0.3
	0.4nm,0.7s,baz=153,slow=8.5,SNR=4.2						
PDAR	Pinedale Array	79.93	333	P	P	03 54 30.4	-0.1
	0.2nm,0.6s,baz=128,slow=5.9,SNR=2.4						
TORD	Torodi Ar. Bea	82.36	70	P	P	03 54 47.0	+3.2
	2.6nm,0.8s,baz=259,slow=4.8,SNR=6.4						
ZALV	Zalesovo Beam	150.17	28	PKPbc	PKiKP	04 02 14.5	+2.0
	10.0nm,0.7s,baz=298,slow=3.4,SNR=12						
MKAR	Makanchi Array	153.37	42	PKPbc	PKiKP	04 02 21.1	+1.7
	1.3nm,0.7s,baz=23,slow=2.2,SNR=4.9						

*IDC **11** 03:46:00.7±1.0, 29°.53S×71°.67W, h0^{km}, mb4.0/4, mb1 4.1/8, mb1mx3.8/32, mbtmp3.9/8, ML3.4/4, Error ellipse: s-maj=48.7km s-min=22.0km az=96.0*
*GUC **11** 03:46:03.6±0.7, 29°.41S×71°.82W, h20^{km}±7^{km}, ML4.0*
ISC 11 03:46:00.5±3.2, **29°.44S**±0°.03×**71°.75W**±0°.09, **h1**^{km}±21^{km}, **n22**, σ**1^{s}.38**/27, **mb4.2**/4, **4C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	La Serena	0.65	137	⇓*i*P	Pn	03 46 16.8	-0.1
CO05				*i* S	Sn	03 46 26.9	-0.9
LCO	Las Campanas	1.01	65	⇓*e*P	Pn	03 46 23.3	+1.3
LCO				*i* S	Sn	03 46 37.0	0.0
GO04	Tololo Observa	1.10	132	⇑*e*P	Pn	03 46 24.5	+1.2
GO04				*i* S	Sn	03 46 40.4	+1.1
CO06	Fray Jorge	1.23	175	⇑*e*P	Pb	03 46 24.4	-0.1
CO06				*i* S	Sn	03 46 42.5	+0.4
AC04	Llanos de Chal	1.37	26	⇑*e*P	Pn	03 46 27.3	+0.6
AC04				*i* S	Sb	03 46 45.0	+0.2
AC04				IAML		03 46 46.2	
	comp=E,1µm,0.3s						
GO03	Copiap	2.27	36	*e*P	Pn	03 46 40.2	+1.0
GO03				IAML		03 47 23.2	
	comp=E,2µm,0.7s						
VA06	Catapilco	3.13	173	*e*P	Pn	03 46 51.5	+0.5
VA06				IAML		03 47 55.3	
	comp=N,866nm,0.5s						
VA03	San Esteban	3.47	163	⇑*e*P	Pn	03 46 57.4	+1.7
VA03				*i* S	Sb	03 47 45.3	-0.2
ROCH	El Roble	3.58	170	*e*P	Pn	03 47 01.0	+3.7
ROCH				*i* S	Sb	03 47 47.1	-1.6
LVC	Limon Verde	7.26	21	Pn	Pn	03 47 47.9	-0.2
	comp=N,0.7nm,0.3s,baz=156,slow=12,SNR=0.7						
LVC				Sn	Sn	03 49 08.8	-2.7
	comp=N,2.9nm,0.3s,baz=155,slow=17,SNR=1.8						
H03N1	Juan Fernandez	7.30	235	T	T	03 55 27.7	
	baz=63,slow=71,SNR=40						
H03N2	Juan Fernandez	7.32	235	T	T	03 55 31.8	
	baz=63,slow=71,SNR=97						
H03N3	Juan Fernandez	7.32	235	T	T	03 55 31.3	
	baz=63,slow=71,SNR=73						
PLCA	Paso Flores	11.31	175	Pn	Pn	03 48 41.1	-2.1
	comp=N,0.1nm,0.3s,baz=345,slow=15,SNR=1.7						
LPAZ	La Paz	13.51	15	Pn	Pn	03 49 15.2	+1.4
	comp=N,0.1nm,0.3s,baz=155,slow=5.9,SNR=1.8						
SIV	San Ignacio	16.60	39	Pn	Pn	03 49 53.3	-1.3
	comp=N,0.1nm,0.3s,baz=172,slow=12,SNR=2.1						
QSPA	South Pole Qui	60.78	180	P	P	03 56 13.4	-0.4
	comp=N,0.9nm,0.4s,baz=196,slow=1.0,SNR=3.9						
TXAR	Lajitas Array	65.91	330	P	P	03 56 49.2	+1.0
	comp=N,0.3nm,0.7s,baz=148,slow=5.3,SNR=3.8						
MAW	Mawson	77.47	164	P	P	03 57 57.2	0.0
	comp=N,1.5nm,1.0s,baz=270,slow=1.0,SNR=2.5						
TORD	Torodi Ar. Bea	82.44	70	P	P	03 58 25.7	+0.8
	comp=N,3.1nm,1.0s,baz=257,slow=4.4,SNR=11						
ZALV	Zalesovo Beam	150.17	28	PKPbc	PKiKP	04 05 53.5	0.0
	comp=N,4.7nm,0.8s,baz=297,slow=3.1,SNR=15						
MKAR	Makanchi Array	153.40	42	PKPbc	PKPbc	04 06 00.3	-0.1
	comp=N,0.3nm,0.4s,baz=323,slow=2.0,SNR=3.5						

*IDC **11** 03:52:20.9±0.6, 15°.05S×173°.48W, h0^{km}, mb4.1/12, mb1 4.4/12, mb1mx4.3/25, mbtmp4.2/12, Error ellipse: s-maj=27.2km s-min=15.9km az=134.0*
*NEIC **11** 03:52:21.2±1.6, 15°.16S±0°.08×173°.4W±0°.1, h7^{km}±4^{km}, mb4.6/20, Error ellipse: s-maj=20.8km s-min=11.1km az=90.0*
ISC 11 03:52:23.8±0.6, **15°.05S**±0°.07×**173°.11W**±0°.09, **h35**^{km}, **n69**, σ**1^{s}.99**/48, **mb4.5**/19, **7C-4D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	1.71	49	Pn	Pn	03 52 49.8	-1.4
	504nm,0.3s,baz=196,slow=1.2,SNR=259						
AFI				Sn	Sn	03 53 08.7	-3.3
	2µm,0.3s,baz=117,slow=11,SNR=13						
NIUE	Niue	5.03	143		Pn	03 53 36.0	-0.8
MSVF	Nonsavu	8.90	251	Pn	Pn	03 54 34.6	+4.6
	1.2nm,0.3s,baz=91,slow=11,SNR=20						
KNTN	Kanton	12.27	7	Pn	Pn	03 55 12.5	-3.7
RAR	Rarotonga	14.07	118	Pn	Pn	03 55 40.1	-0.7
	3.7nm,0.3s,baz=256,slow=9.2,SNR=7.8						
DZM	Mont Dzumac	20.59	247	P	Pn	03 56 59.4	-3.1
	5.8nm,0.9s,baz=68,slow=23,SNR=2.1						
DZM	Mont Dzumac	20.59	247	P	Pn	03 56 58.0	-4.5
DZM				IAmb	IAmb	03 57 07.0	
	comp=Z,36nm,1.3s						
URZ	Urewera	24.69	199	P	P	03 57 42.9	+1.4
	comp=Z,8.9nm,0.7s,baz=120,slow=23,SNR=6.3						
URZ	Urewera	24.69	199	P	P	03 57 39.7	-1.8
URZ				IAmb	IAmb	03 57 45.5	
	comp=Z,20nm,1.1s						
BKZ	Black Stump Fm	25.71	199	P	P	03 57 47.2	-3.7
BKZ				IAmb	IAmb	03 57 57.0	
	comp=Z,16nm,1.2s						
HNR	Honiara	26.91	279	P	P	03 58 01.7	-0.1
	comp=Z,88nm,0.4s,baz=139,slow=11,SNR=4.7						
LTZ	Lake Taylor	30.36	202	P	P	03 58 30.1	-2.3
H11S2	WAKE ISLAND Hy	38.81	328	T	T	04 41 02.8	
	baz=149,slow=76,SNR=14						
H11S3	WAKE ISLAND Hy	38.82	328	T	T	04 41 07.2	
	baz=149,slow=76,SNR=18						
H11S1	WAKE ISLAND Hy	38.83	329	T	T	04 41 14.1	
	baz=149,slow=76,SNR=16						
H11N3	WAKE ISLAND Hy	39.75	330	T	T	04 42 21.7	
	baz=149,slow=76,SNR=14						
H11N1	WAKE ISLAND Hy	39.75	330	T	T	04 42 24.6	
	baz=149,slow=76,SNR=21						
H11N2	WAKE ISLAND Hy	39.77	330	T	T	04 42 28.4	
	baz=149,slow=76,SNR=15						
STKA	Stephens Creek	44.46	240	P	P	04 00 30.9	-0.8
	comp=Z,1.7nm,0.6s,baz=153,slow=15,SNR=1.9						
WR0	Warramunga Arr	50.01	256	P	P	04 01 15.0	-0.2
WR0				IAmb	IAmb	04 01 16.1	
	comp=Z,5.9nm,1.4s						
WB0	Warramunga Arr	50.16	257	P	P	04 01 15.4	-1.0
WB2	Warramunga Arr	50.19	256	P	P	04 01 15.3	-1.3
WRA	Warramunga Arr	50.20	256	P	P	04 01 15.2	-1.4
	comp=Z,1.0nm,0.6s,baz=91,slow=7.2,SNR=12						
WRA	Warramunga Arr	50.20	256	P	P	04 01 15.5	-1.1
AS31	Alice Springs	50.49	252	P	P	04 01 17.0	-1.9
ASAR	Alice Springs	50.49	252	P	P	04 01 17.0	-1.8
	comp=Z,5.7nm,0.6s,baz=87,slow=8.2,SNR=72						
ASAR	Alice Springs	50.49	252	P	P	04 01 17.6	-1.2
VNDA	Vanda	63.75	186	P	P	04 02 54.5	+2.8
	comp=Z,1.2nm,0.8s,baz=4.9,slow=6.6,SNR=11						
VNDA	Vanda	63.75	186	P	P	04 02 53.1	+1.5
VNDA				IAmb	IAmb	04 02 59.2	
	comp=Z,2.8nm,1.1s						
PETK	Petropavlovsk-	72.38	342	P	P	04 03 48.7	+2.6
	comp=Z,2.0nm,0.8s,baz=126,slow=9.8,SNR=2.3						
NVAR	Mina Array Bea	73.88	42	P	P	04 03 59.5	+4.0
	comp=Z,0.9nm,0.7s,baz=224,slow=9.8,SNR=8.4						
NVAR	Mina Array Bea	73.88	42	P	P	04 03 58.1	+2.5
QSPA	South Pole Qui	75.00	180	P	P	04 04 01.1	-0.4
QSPA				IAmb	IAmb	04 04 05.0	
	comp=Z,7.5nm,0.9s						
HLID	Hailey	79.18	39	P	P	04 04 27.8	+2.4
TCUT	Toone Canyon	79.80	43	P	P	04 04 31.0	+2.1
TCUT				IAmb	IAmb	04 04 37.0	
	comp=Z,7.5nm,0.7s						
TX31	Lajitas Ar. Si	80.18	56	P	P	04 04 32.5	+1.5
TXAR	Lajitas Array	80.18	56	P	P	04 04 34.7	+3.6
	comp=Z,2.9nm,1.1s,baz=215,slow=4.1,SNR=9.6						
TXAR	Lajitas Array	80.18	56	P	P	04 04 33.2	+2.2
MCK	McKinley	80.72	11	P	P	04 04 35.6	+2.5
WRH	Wood River Hil	81.55	11	P	P	04 04 40.4	+2.9
CCB	Clear Creek Bu	81.77	11	P	P	04 04 41.6	+3.1
CCB				IAmb	IAmb	04 04 52.0	

	comp=Z,5.0nm,0.8s						
PDAR	Pinedale Array	81.81	42	P	P	04 04 43.1	+3.5
	comp=Z,0.7nm,0.6s,baz=199,slow=4.1,SNR=5.5						
YHL	Hebgen Lake	81.83	39	P	P	04 04 42.2	+2.5
YHL				IAmb	IAmb	04 04 52.9	
	comp=Z,8.1nm,1.0s						
ILAR	Eielson Array	82.05	11	P	P	04 04 43.1	+3.1
	comp=Z,1.8nm,0.9s,baz=224,slow=5.6,SNR=18						
ILAR	Eielson Array	82.05	11	P	P	04 04 42.7	+2.7
POKR	Poker Plat Res	82.26	11	P	P	04 04 44.8	+3.7
POKR				IAmb	IAmb	04 04 46.8	
	comp=Z,5.5nm,0.8s						
HRY	Holter Researc	82.40	38	P	P	04 04 45.5	+3.1
PRP	Porcupine Dome	82.97	11	P	P	04 04 48.3	+3.3
H03S2	Juan Fernandez	85.16	124	T	T	05 39 19.6	
	baz=252,slow=75,SNR=7.8						
H03S1	Juan Fernandez	85.17	124	T	T	05 38 56.3	
	baz=252,slow=75,SNR=6.6						
H03S3	Juan Fernandez	85.18	124	T	T	05 39 19.8	
	baz=252,slow=75,SNR=5.5						
MAW	Mawson	88.22	199	P	P	04 05 12.9	+1.9
	comp=Z,2.6nm,0.9s,baz=135,slow=9.4,SNR=12						
ARCES	ARCESS Array B	124.30	352	PKP	PKiKP	04 11 21.9	+3.2
	comp=Z,5.1nm,0.9s,baz=20,slow=2.9,SNR=3.6						
DPC	Dobruska-Polom	143.97	350	*e*PKP	PKiKP	04 11 58.0	-1.1
TRPA	Tarpa	144.57	342	⇑P	PKiKP	04 11 59.4	-0.9
DOPR	Dopca	145.48	337	⇑P	PKiKP	04 12 03.4	+1.1
KHC	Kasperske Hory	145.57	352	*e*PKP	PKiKP	04 12 03.3	+0.8
MLR	Muntele Rosu	145.66	336	⇑P	PKiKP	04 12 02.7	-0.2
DRGR		145.71	341	⇓P	PKiKP	04 12 02.4	-0.4
ISR	Istrita	145.73	335	⇑P	PKiKP	04 12 02.3	-0.7
CKRC	Cesky Krumlov	145.77	351	*e*PKP	PKiKP	04 12 03.6	+0.7
GERES	GERESS Array B	145.83	352	PKPbc	PKiKP	04 12 00.4	-2.7
	comp=Z,0.2nm,0.4s,baz=39,slow=6.3,SNR=5.5						
VOIR		146.06	337	⇑P	PKiKP	04 12 04.3	+0.7
BRTR	Keskin Array B	146.06	322	PKPbc	PKiKP	04 12 03.1	-0.8
	comp=Z,1.1nm,0.5s,baz=127,slow=3.8,SNR=2.5						
ARR	Arges	146.27	337	⇓P	PKiKP	04 12 04.9	+0.9
SIRR	Siria	146.50	341	⇑P	PKiKP	04 12 06.3	+1.9
GZR	Gura Zlata	146.91	339	⇓P	PKiKP	04 12 06.5	+1.1
BZS	Buzias	147.10	341	⇑P	PKiKP	04 12 07.0	+1.3
HERR	Herculane	147.49	339	⇓P	PKiKP	04 12 08.6	+2.1

KRSC 11 03:52:54.2±1.5**,48°.26N×156°.06E,h40^{km}**±24^{km}**,ML3.7,**
East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAU	Pauzhetka	3.25	8	S	Sn	03 54 25.9	+5.9
MIPR	Malaya Ipel'ka	4.05	6	P	Pn	03 53 57.2	+3.6
RUS	Russkaya	4.46	20	*e*P	Pn	03 54 02.9	+3.6
RUS				*e*S	Sn	03 54 54.8	+4.9
AVH	Avacha	5.29	18	P	Pn	03 54 16.2	+5.5
SDLR	Sedlovina	5.33	19	P	Pn	03 54 16.3	+4.9

IDC ***11*** *03:55:45.7±1.6,29°.41S×72°.11W,h0^{km},mb3.6/2,*
mb1 3.9/5,mb1mx3.6/22,mbtmp3.7/5,ML3.5/3,Error
ellipse: s-maj=50.7km s-min=30.5km az=96.0
SJA ***11*** *03:55:46.0,29°.38S×72°.37W,h10^{km},ML4.2*
GUC ***11*** *03:55:49.1±0.7,29°.50S×71°.85W,h25^{km}±5^{km},ML3.8*
ISC 11 03:55:45.9±3.4**,29°.46S**±0°.04×**72°.06W**±0°.06**,h8^{km}**±23^{km}**,**
n47,σ**1^s.99**/50**,3C-2D,Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO05	La Serena	0.85	123	⇓*i*P	Pb	03 56 02.3	-0.5
CO05				*i* S	Sb	03 56 10.8	-3.6
CO05				IAML		03 56 14.3	
	comp=N,10µm,0.5s						
LCO	Las Campanas	1.26	70	*i* P	Pn	03 56 09.3	-0.8
LCO				*e*S	Sn	03 56 24.8	-2.7
CO06	Fray Jorge	1.27	163	⇓*i*P	Pn	03 56 10.0	+0.1
CO06				*i* S	Sb	03 56 25.0	-1.5
CO06				IAML		03 56 29.0	
	comp=E,5µm,0.2s						
GO04	Tololo Observa	1.30	123	⇑*i*P	Pn	03 56 09.5	-1.2
GO04				*i* S	Sn	03 56 24.8	-3.6
AC04	Llanos de Chal	1.52	35	⇑*e*P	Pn	03 56 13.2	-0.1
AC04				*i* S	Sn	03 56 33.2	-0.1
AC04	Llanos de Chal	1.52	35	*i* P	Pn	03 56 13.0	-0.3
AROD	Rodeo	2.35	108	*i* P	Pn	03 56 28.0	+2.8
GO03	Copiap	2.45	41	⇑*e*P	Pn	03 56 26.9	+0.6
GO03				*i* S	Sn	03 56 58.2	+1.7
GO03				IAML		03 57 08.7	
	comp=E,608nm,0.5s						
GO03	Copiap	2.45	41	*i* P	Pn	03 56 29.0	+2.7
ACDV	Cuesta del Vie	2.65	106	*i* P	Pn	03 56 33.0	+3.9
ACCO	Cerro Coronel	2.83	114	*i* P	Pn	03 56 35.0	+3.3
VA06	Catapilco	3.16	168	*e*P	Pn	03 56 36.9	+0.9
VCA	Vinchina	3.44	79	*i* P	Pn	03 56 45.0	+5.0
VA03	San Esteban	3.54	159	*e*P	Pn	03 56 43.4	+2.1
VA03				*e*S	Sn	03 57 24.0	+0.6
AUSP	Uspallata	3.59	141	*i* P	Pn	03 56 47.0	+4.9
PEL	Peldehue	3.86	163	*e*P	Pn	03 56 47.4	+1.8
PEL	Peldehue	3.86	163	*i* P	Pn	03 56 48.0	+2.4
RTCV	Cerro Valdivia	3.86	129	*i* P	Pn	03 56 51.0	+5.3
MT02	Curacav	3.87	169	*e*P	Pn	03 56 46.5	+0.8
MT05	Renca	4.08	164	*e*P	Pn	03 56 50.2	+1.5
MT05	Renca	4.08	164	*i* P	Pn	03 56 53.0	+4.3
FCH	Farellones	4.14	159	*e*P	Pn	03 56 52.7	+2.9
FCH				*e*S	Sn	03 57 39.0	+0.5
AVFE	Valle Fertil	4.16	108	*i* P	Pn	03 56 53.0	+3.2
VA05	Santo Domingo	4.20	175	*e*P	Pn	03 56 50.6	+0.3
MT09	Talagante	4.40	168	*e*P	Pn	03 56 54.5	+1.4
MT01	Popeta	4.45	171	*e*P	Pn	03 56 54.4	+0.7
MT01	Popeta	4.45	171	*i* P	Pn	03 56 55.0	+1.3
ACLC	CERRO LA CRUZ	4.45	91	*i* P	Pn	03 56 56.0	+2.1
BO04	La Punta	4.68	165	*i* P	Pn	03 56 58.3	+1.4
APLL	PUNTA DE LOS L	4.89	102	*i* P	Pn	03 57 02.0	+2.2
ACHE	Chepes	4.96	111	*i* P	Pn	03 57 05.0	+4.1
BO01	Tunca	4.99	171	*i* P	Pn	03 57 03.0	+1.9
BO02	Sierra Bellavi	5.43	169	*i* P	Pn	03 57 09.0	+1.8
GO05	Huala	5.54	179	*i* P	Pn	03 57 08.0	-0.7
RFA	San Rafael	6.11	151	*i* P	Pn	03 57 20.0	+3.4
PB05	IPOC Station P	6.78	15	*i* P	Pn	03 57 25.0	-0.9
H03N1	Juan Fernandez	7.08	234	Pn	Pn	03 57 30.7	+1.2
H03N1				T	T	04 05 10.6	
	baz=64,slow=72,SNR=176						
H03N2	Juan Fernandez	7.09	234	Pn	Pn	03 57 30.7	+1.0
H03N2				T	T	04 04 59.4	
	baz=64,slow=72,SNR=156						
H03N3	Juan Fernandez	7.09	234	Pn	Pn	03 57 30.5	+0.7
H03N3				T	T	04 05 10.2	
	baz=64,slow=72,SNR=196						
LVC	Limon Verde	7.38	23	Pn	Pn	03 57 34.0	-0.4
	baz=198,slow=13						
LVC	Limon Verde	7.38	23	*i* P	Pn	03 57 36.0	+1.7
PLCA	Paso Flores	11.32	174	Pn	Pn	03 58 28.5	+0.6
	comp=E,0.2nm,0.3s,baz=346,slow=11,SNR=6.5						
LPAZ	La Paz	13.60	16	Pn	Pn	03 59 00.6	+0.9
	comp=E,0.1nm,0.3s,baz=197,slow=11,SNR=1.5						
SIV	San Ignacio	16.78	39	Pn	Pn	03 59 41.6	+0.1
	comp=E,0.1nm,0.3s,baz=212,slow=11,SNR=8.0						
TXAR	Lajitas Array	65.79	330	P	P	04 06 31.8	+0.1
	comp=E,0.3nm,1.0s,baz=168,slow=10.0,SNR=1.7						
TORD	Torodi Ar. Bea	82.69	71	P	P	04 08 11.5	+1.0
	comp=E,1.3nm,0.8s,baz=254,slow=4.7,SNR=6.8						
ZALV	Zalesovo Beam	150.31	28	PKPbc	PKiKP	04 15 39.5	+1.4
	comp=E,0.8nm,0.5s,baz=327,slow=2.4,SNR=5.0						

IDC ***11*** *04:06:51.4±0.8,26°.85N×53°.01E,h0^{km},mb4.0/4,*
mb1 4.0/4,mb1mx3.5/44,mbtmp4.0/4,Error ellipse:
s-maj=18.1km s-min=9.0km az=142.0
TEH ***11*** *04:06:58.0,27°.14N×52°.93E,h20^{km},ML3.6*
THR ***11*** *04:06:58.2±0.3,27°.29N×52°.92E,h12^{km}±9^{km},ML3.2*
ISC 11 04:06:54.8±1.2**,27°.02N**±0°.09×**52°.80E**±0°.05**,h10^{km},n33,**
σ**1^s.96**/35**,mb4.0**/4**,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LMD1	Lamerd	0.45	45	*e*Pg	Pb	04 07 04.5	-0.4
LMD1				*e*Sg	Sg	04 07 09.3	-0.4
QIR1	Qir	1.46	8	*e*Pg	Pg	04 07 23.1	+0.1
QIR1				*e*		04 07 57.5	
	comp=Z,22µm,0.4s						
LAR1	LAR	1.54	65	*e*Pn	Pg	04 07 24.4	0.0
LAR1				*e*		04 07 56.4	
	comp=Z,18µm,0.7s						
JHRM	Jahrom	1.63	25	*e*Pg	Pg	04 07 26.3	+0.2
AHBU	AHRAM	2.27	324	*e*Pn	Pb	04 07 35.5	-0.4
KLNJ	Kolanjah	4.11	345	*e*Pn	Pn	04 08 00.8	+2.7
KRBR	Kerman	4.56	49	*e*Pn	Pn	04 08 06.0	+1.8
KRBR				Sn	Sn	04 08 55.5	-2.0
KRBR				IAML		04 09 15.5	
	comp=E,17nm,0.5s						
KRBR				IAML		04 09 45.0	
	comp=N,26nm,0.8s						
KRBR	Kerman	4.56	49	*e*Pn	Pn	04 08 06.0	+1.8
TVBK	TV Kerman	4.57	49	*e*		04 08 32.8	
	comp=Z,551nm,0.4s						
TVBK				*e*Pn	Pn	04 08 07.0	+2.7
IMEH	Mehriz	4.63	20	*e*Pn	Pn	04 08 08.6	+3.5
KHGB	Koh Gabri	4.64	43	*e*Pn	Pn	04 08 06.3	+1.0
KHGB				*e*		04 09 13.4	
	comp=Z,264nm,0.8s						
IRAM	Ramesheh	4.78	356	*e*Pn	Pn	04 08 09.1	+1.9
CHMN	Cheshme madani	5.04	55	*e*Pn	Pn	04 08 13.7	+2.9
ICHK	Chekchek	5.39	15	*e*Pn	Pn	04 08 17.2	+1.7
KBAM	BAM	5.42	66	*e*Pn	Pn	04 08 17.6	+1.8
KBAM				*e*		04 08 20.9	
	comp=Z,477nm,0.6s						
AMIS	Naft Sefid	5.55	327	*e*Pn	Pn	04 08 19.9	+2.3
YZKH	Yazd	5.57	16	*e*Pn	Pn	04 08 19.5	+1.6
YZKH				IAML		04 09 25.9	
	comp=N,6.7nm,0.5s						
YZKH				IAML		04 09 26.0	
	comp=E,8.1nm,0.7s						
YZKH	Yazd	5.57	16	*e*Pn	Pn	04 08 19.5	+1.6
IZEF	Zefreh	5.87	356	*e*Pn	Pn	04 08 24.4	+2.3
ANAR	Anarak	6.20	7	*e*Pn	Pn	04 08 29.0	+2.4
KRSH	Karshahi	6.95	355	*e*Pn	Pn	04 08 39.7	+2.8
ZHSF	Zahedan	7.48	68	*e*Pn	Pn	04 08 47.0	+2.7
ZHSF	Zahedan	7.48	68	*e*Pn	Pn	04 08 47.0	+2.7
TABS	Tabas	7.58	28	*e*Pn	Pn	04 08 46.8	+1.3
TABS	Tabas	7.58	28	*e*Pn	Pn	04 08 46.8	+1.3
TNSJ	Nastanj	7.66	24	*e*Pn	Pn	04 08 47.1	+0.6
SRVN	Saravan	8.55	85	*e*Pn	Pn	04 09 01.0	+2.1
SHRT	Shahrakht	9.24	43	*e*Pn	Pn	04 09 10.5	+2.3
SHRT	Shahrakht	9.24	43	*e*Pn	Pn	04 09 10.5	+2.3
ZALV	Zalesovo Beam	35.75	32	P	P	04 13 52.1	-1.6
	comp=E,2.4nm,0.5s,baz=241,slow=9.6,SNR=11						
FINES	FINESS Array B	38.81	340	P	P	04 14 19.5	-0.1
	comp=E,1.1nm,0.5s,baz=146,slow=8.4,SNR=15						
NOA	NORSAR Array B	43.99	332	P	P	04 15 02.0	-0.1
	comp=E,0.4nm,0.5s,baz=119,slow=7.9,SNR=1.7						
TORD	Torodi Ar. Bea	49.63	264	P	P	04 15 46.1	-0.7
	comp=E,1.3nm,0.7s,baz=57,slow=7.2,SNR=11						

IDC 11 04:36:41.8±2.7**,6°.26N×94°.17E,h0^{km},mb3.5**/4**,mb1 3.7**/5**,**
mb1mx3.4/58**,mbtmp3.5**/5**,ML4.4**/1**,Error ellipse:**
s-maj=104.6km s-min=25.6km az=63.0,Nicobar Islands
region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	12.99	21	Pn	Pn	04 39 48.0	+0.2
	0.6nm,0.3s,baz=228,slow=13,SNR=2.0						
H08S3	Diego Garcia H	25.65	238	T	T	05 08 56.2	
	baz=56,slow=74,SNR=2.9						
H08S2	Diego Garcia H	25.65	238	T	T	05 08 59.3	
	baz=56,slow=74,SNR=5.0						
H08S1	Diego Carcia H	25.67	238	T	T	05 09 01.3	
	baz=56,slow=74,SNR=5.9						
MKAR	Makanchi Array	41.66	348	P	P	04 44 31.9	-0.2
	1.0nm,0.9s,baz=177,slow=8.4,SNR=4.0						
WRA	Warramunga Arr	47.32	124	P	P	04 45 18.3	+0.6
	0.3nm,0.8s,baz=304,slow=9.2,SNR=1.7						
ZALV	Zalesovo Beam	48.15	353	P	P	04 45 23.6	-0.1
	0.5nm,0.4s,baz=165,slow=6.0,SNR=2.5						
ASAR	Alice Springs	48.87	129	P	P	04 45 29.1	-0.7
	0.3nm,0.8s,baz=316,slow=6.5,SNR=4.2						

IDC 11 04:42:12.8±2.5**,26°.93N×52°.78E,h0^{km},mb3.8**/4**,**
mb1 3.8/4**,mb1mx3.4**/49**,mbtmp3.8**/4**,Error ellipse:**
s-maj=63.2km s-min=35.3km az=141.0,Persian Gulf

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZALV	Zalesovo Beam	35.84	32	P	P	04 49 13.2	-0.7
	1.2nm,0.7s,baz=244,slow=8.4,SNR=4.4						
FINES	FINESS Array B	38.89	340	P	P	04 49 39.4	-0.4
	0.6nm,0.4s,baz=142,slow=9.6,SNR=7.3						
HFS	Hagfors	42.54	332	P	P	04 50 10.3	+0.5
	1.5nm,0.7s,baz=130,slow=14,SNR=5.0						
TORD	Torodi Ar. Bea	49.60	264	P	P	04 51 05.5	-0.7
	0.6nm,0.6s,baz=47,slow=7.2,SNR=5.3						
TXAR	Lajitas Array	119.67	336	PKP	PKiKP	05 01 06.0	+0.6
	0.3nm,0.7s,baz=55,slow=3.4,SNR=4.8						

IDC ***11*** *04:46:28.6±2.0,29°.73S×71°.82W,h0^{km},mb3.8/2,*
mb1 3.7/5,mb1mx3.6/24,mbtmp3.7/5,ML3.7/3,Error
ellipse: s-maj=94.0km s-min=25.0km az=103.0
NEIC ***11*** *04:46:30.3±1.1,29°.72S±0°.04×72°.05W±0°.05,h15^{km}±4^{km},*
mb4.2/5,Error ellipse: s-maj=6.6km s-min=5.9km
az=128.0
ISC 11 04:46:31.7±0.8**,29°.70S**±0°.05×**71°.96W**±0°.10**,h25^{km},n26,**
σ**0^s.79**/25**,mb4.2**/3**,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO05	La Serena	0.67	110		Pn	04 46 44.2	-1.3
CO06	Fray Jorge	1.01	164		Pn	04 46 49.4	-0.9
CO06				Sn	Sn	04 47 03.5	-0.3
GO04	Tololo Observa	1.11	116	Pn	Pb	04 46 51.8	-0.6
GO04				Sn	Sn	04 47 08.2	+1.6
CO03	El Pedregal	1.58	136		Pn	04 46 58.1	-0.1
GO03	Copiap	2.59	36		Pn	04 47 10.8	-1.3
VA03	San Esteban	3.29	159	Pn	Pn	04 47 20.4	-1.3
PEL	Peldehue	3.60	163	Pn	Pn	04 47 26.4	+0.4
MT02	Curacav	3.62	169	Pn	Pn	04 47 26.0	-0.2
MT05	Renca	3.83	165	Pn	Pn	04 47 28.9	-0.2
MT09	Talagante	4.15	169	Pn	Pn	04 47 33.8	+0.2
H03N1	Juan Fernandez	7.01	236	T	T	04 56 04.4	
	baz=65,slow=71,SNR=3.3						
H03N2	Juan Fernandez	7.02	236	T	T	04 55 40.1	
	baz=65,slow=71,SNR=3.5						
H03N3	Juan Fernandez	7.02	236	T	T	04 55 43.1	
	baz=65,slow=71,SNR=2.7						
PLCA	Paso Flores	11.07	174	Pn	Pn	04 49 07.9	-0.5
	0.2nm,0.3s,baz=338,slow=13,SNR=1.9						
PLCA	Paso Flores	11.07	174		Pn	04 49 07.7	-0.8
LPAZ	La Paz	13.80	16	Pn	Pn	04 49 47.3	+0.9
	0.1nm,0.3s,baz=191,slow=5.2,SNR=4.0						
SIV	San Ignacio	16.92	39	Pn	Pn	04 50 26.4	-0.5
	0.1nm,0.3s,baz=218,slow=11,SNR=4.3						
SAML	Samuel	22.22	23	P	P	04 51 27.8	+1.3
OTAV	Otavalo	30.40	347	P	P	04 52 42.0	-0.6
SNAA	Sanae	55.55	159	P	P	04 56 04.8	+0.3
	0.8nm,0.6s,baz=322,slow=5.0,SNR=2.9						
SNAA	Sanae	55.55	159	P	P	04 56 04.7	+0.1
SNAA				IAmb	IAmb	04 56 05.5	
	comp=Z,5.9nm,1.5s						
QSPA	South Pole Qui	60.53	180	P	P	04 56 40.2	+0.7
	baz=103,slow=4.6						
QSPA	South Pole Qui	60.53	180	P	P	04 56 39.5	-0.1
QSPA				IAmb	IAmb	04 56 40.9	
	comp=Z,1.7nm,0.9s						
TORD	Torodi Ar. Bea	82.70	70	P	P	04 58 53.8	+0.2
	comp=Z,0.7nm,0.8s,baz=257,slow=6.1,SNR=5.4						
TORD	Torodi Ar. Bea	82.70	70	P	P	04 58 53.5	-0.1
TORD				IAmb	IAmb	04 58 54.9	
	comp=Z,2.0nm,1.1s						
ZALV	Zalesovo Beam	150.48	28	PKPbc	PKiKP	05 06 21.0	-0.4
	comp=Z,1.4nm,0.6s,baz=292,slow=2.4,SNR=6.9						

IDC ***11*** *04:56:18.2±1.0,21°.17S×68°.17W,h120^{km}±12^{km},mb3.7/3,*
mb1 3.8/6,mb1mx3.4/27,mbtmp4.2/6,Error ellipse:
s-maj=36.2km s-min=13.5km az=115.0
NEIC ***11*** *04:56:19.0±1.6,21°.13S±0°.05×68°.60W±0°.09,h139^{km}±5^{km},*
mb4.1/8,ML3.9(GUC),Error ellipse: s-maj=11.9km
s-min=6.6km az=87.0
GUC ***11*** *04:56:19.3±0.7,21°.18S×68°.51W,h135^{km}±5^{km},ML3.9*
VAO ***11*** *04:56:20.2±0.7,21°.15S×68°.28W,h145^{km},mb4.2*
ISC 11 04:56:17.9±0.6**,21°.16S**±0°.03×**68°.45W**±0°.06**,h132^{km}**±7^{km}**,**
n90,σ**1^s.11**/110**,mb4.0**/4**,13C-3D,Chile-Bolivia border**
region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	IPOC Station P	0.97	229		Pn	04 56 41.7	+0.7
PB09				Sn	Sn	04 56 59.3	+0.8
PB01	IPOC Station P	0.98	276	⇓*i*P	Pn	04 56 41.3	+0.4
PB01				*i* S	Sn	04 56 58.6	+0.3
PB01				IAML		04 57 00.3	
	comp=E,3µm,0.2s						
PB01	IPOC Station P	0.98	276		Pn	04 56 41.4	+0.4
PB01				Sn	Sn	04 56 57.9	-0.4
PB08	IPOC Station P	1.21	327	⇓*i*P	Pn	04 56 44.9	+1.4
PB08				⇑*e*S	Sn	04 57 04.1	+1.2
PB08	IPOC Station P	1.21	327		Pn	04 56 44.9	+1.4
PB08				Sn	Sn	04 57 03.9	+1.1
PB02	IPOC Station P	1.36	263	⇑*i*P	Pn	04 56 45.3	+0.6
PB02				*i* S	Sn	04 57 04.9	-0.2
PB07	IPOC Station P	1.45	247	⇑*i*P	Pn	04 56 46.3	+0.5
PB07				*i* S	Sn	04 57 06.8	-0.3
PB07				IAML		04 57 08.0	
	comp=N,4µm,0.3s						
PB07	IPOC Station P	1.45	247		Pn	04 56 46.1	+0.3
PB03	IPOC Station P	1.50	234	⇑*i*P	Pn	04 56 46.9	+0.5
PB03				*i* S	Sn	04 57 07.7	-0.3
PB03				IAML		04 57 08.6	
	comp=E,2µm,0.6s						
LVC	Limon Verde	1.51	196	P	Pn	04 56 47.4	+0.8
	comp=E,197nm,0.3s,baz=25,slow=9.9,SNR=1422						
LVC				S	Sn	04 57 09.0	+0.4
	comp=E,69nm,0.3s,baz=266,slow=21,SNR=32						
LVC	Limon Verde	1.51	196	Pn	Pn	04 56 47.2	+0.6
HMBC	Humberstone	1.61	303	⇑*i*P	Pn	04 56 47.9	+0.4
HMBC				*i* S	Sn	04 57 09.8	-0.3
HMBC				IAML		04 57 12.1	
	comp=N,1µm,0.4s						
PATCX	Punta Patache	1.63	282	⇑*i*P	Pn	04 56 48.2	+0.6
PATCX				*i* S	Sn	04 57 09.8	-0.6
PATCX				IAML		04 57 12.6	
	comp=E,2µm,0.1s						
PATCX	Punta Patache	1.63	282		Pn	04 56 48.2	+0.6
TA01	Diego Aracena	1.72	290	⇓*e*P	Pn	04 56 48.9	+0.2
TA01				*i* S	Sn	04 57 11.8	-0.4
TA01				IAML		04 57 13.5	
	comp=E,1µm,0.6s						
TA01	Diego Aracena	1.72	290		Pn	04 56 48.9	+0.2
PB11	IPOC Station P	1.79	321	⇑*i*P	Pn	04 56 50.2	+0.5
PB11				*i* S	Sn	04 57 13.8	-0.2
PB11				IAML		04 57 15.8	
	comp=N,1µm,0.5s						
PB11	IPOC Station P	1.79	321		Pn	04 56 50.2	+0.5
AF01	San Pedro de A	1.80	172	⇑*i*P	Pn	04 56 51.9	+1.9
AF01	San Pedro de A	1.80	172		Pn	04 56 51.9	+1.9
TA02	Huaiquique	1.81	299	*i* P	Pn	04 56 50.0	+0.3
TA02				*e*S	Sn	04 57 13.4	-0.5
TA02				IAML		04 57 16.6	
	comp=N,1µm,0.2s						
TA02	Huaiquique	1.81	299		Pn	04 56 50.0	+0.3
PB06	IPOC Station P	1.86	214	⇑*i*P	Pn	04 56 51.1	+0.6
PB06				*i* S	Sn	04 57 15.4	0.0
PB06				IAML		04 57 16.1	
	comp=N,945nm,0.2s						
PB06	IPOC Station P	1.86	214		Pn	04 56 50.8	+0.3
PB04	IPOC Station P	1.97	233	⇑*i*P	Pn	04 56 51.9	+0.1
PB04				*i* S	Sn	04 57 16.3	-1.4
PB04				IAML		04 57 22.9	
	comp=N,952nm,0.2s						
PB04	IPOC Station P	1.97	233		Pn	04 56 51.9	+0.1
PSGC	Pisagua	2.21	314	⇑*i*P	Pn	04 56 54.4	-0.3
PSGC				*e*S	Sn	04 57 21.8	-1.1
PSGC				IAML		04 57 29.7	
	comp=E,312nm,0.3s						
PSGCX	Pisagua	2.21	314		Pn	04 56 54.5	-0.1
PB15	IPOC Station P	2.25	205	⇑*i*P	Pn	04 56 55.8	+0.5
PB15				*i* S	Sn	04 57 24.5	+0.5
PB15	IPOC Station P	2.25	205		Pn	04 56 55.7	+0.4
PB05	IPOC Station P	2.34	224	⇑*i*P	Pn	04 56 56.3	0.0
PB05				*i* S	Sn	04 57 24.2	-1.7
PB05				IAML		04 57 36.8	
	comp=E,355nm,0.3s						
PB16	IPOC Station P	2.98	340		Pn	04 57 05.2	+0.2
PB10	IPOC Station P	3.05	219	*e*P	Pn	04 57 05.0	-0.2
PB10	IPOC Station P	3.05	219		Pn	04 57 04.9	-0.3
PB12	IPOC Station P	3.09	325	*i* P	Pn	04 57 05.0	-0.8
PB12				*i* S	Sn	04 57 41.5	-1.3
PB12				IAML		04 57 48.9	
	comp=E,316nm,0.4s						
PB12	IPOC Station P	3.09	325		Pn	04 57 05.1	-0.8
PB14	IPOC Station P	3.90	207		Pn	04 57 16.5	-0.1
LPAZ	La Paz	4.85	4	P	Pn	04 57 31.0	+1.3
	comp=E,6.6nm,0.3s,baz=182,slow=3.8,SNR=147						
LPAZ	La Paz	4.85	4	*e*P	Pn	04 57 31.8	+2.2
LPAZ	La Paz	4.85	4	Pn	Pn	04 57 30.7	+1.0
AC02	Maricunga	5.69	186		Pn	04 57 40.2	-0.4
GO03	Copiap	6.61	194	Pn	Pn	04 57 50.4	-2.3
AC04	Llanos de Chal	7.41	198	Pn	Pn	04 57 59.0	-4.4
SIV	San Ignacio	8.68	55	P	Pn	04 58 18.3	-2.2
	comp=E,7.8nm,0.3s,baz=237,slow=12,SNR=111						
PTLB	Pontes e Lacer	10.51	59	Pn	Pn	04 58 42.7	-2.4
VILB	Vilhena	11.34	45	*e*P	Pn	04 58 55.3	-0.9
VILB	Vilhena	11.34	45	Pn	Pn	04 58 55.3	-0.9
PDRB	Porto dos Gac	14.70	52	*e*P	P	04 59 40.0	-2.2
CLDB	Colider	15.88	52	*e*P	P	04 59 54.6	-0.5
CPSB	Cacapava Do Su	16.34	127	*e*P	P	04 59 59.7	-0.5
TBTG	Tabatinga, AM	16.93	355	*e*P	Pn	05 00 08.4	+1.4
TBTG	Tabatinga, AM	16.93	355	P	Pn	05 00 06.8	-0.2
BB19B	Bebedouro	18.59	93	*e*P	Pn	05 00 25.8	-1.0
SNDB	Serra Nova Dou	18.79	64	*e*P	Pn	05 00 27.3	-1.9
NPGB	Novo Progresso	18.90	44	*e*P	P	05 00 27.3	-1.1
TER01	Tubaro-SC	19.00	117	*e*P	P	05 00 27.8	-1.5
IPMB	Ipameri, GO	19.33	84	*e*P	Pn	05 00 33.5	-2.0
MACA	Manacapuru-AM	19.42	24	*e*P	P	05 00 33.8	-0.2
MACA	Manacapuru-AM	19.42	24	P	P	05 00 33.8	-0.2
BDFB	Brasilia	20.14	78	P	P	05 00 41.5	-0.5
	comp=E,0.9nm,0.3s,baz=240,slow=11,SNR=9.4						
BDFB	Brasilia	20.14	78	P	P	05 00 41.3	-0.7
ITTB	Itaituba	20.76	38	*e*P	P	05 00 47.8	-0.6
PEXB	Peixe	21.28	68	*e*P	P	05 00 54.2	+0.1
PTGA	Pitinga	21.93	23	P	P	05 01 00.0	-0.8
	comp=E,4.1nm,0.5s,baz=198,slow=18,SNR=6.9						
PTGA	Pitinga	21.93	23	P	P	05 00 59.9	-1.0
PTGA				IAmb	IAmb	05 01 05.8	
	comp=Z,4.2nm,0.7s						
BSCB	Bom Sucesso	22.09	94	*e*P	P	05 01 02.1	-0.6
PRPB	Parauapebas	23.40	53	*e*P	P	05 01 14.9	-0.2
OTAV	Otavalo	23.40	334	*e*P	P	05 01 16.9	+1.2
DIAM	Diamantina, MG	23.49	87	*e*P	P	05 01 14.1	-2.0
SMTB	Santa Maria do	23.53	62	*e*P	P	05 01 16.8	+0.5
MALB	Monte Alegre	23.65	38	*e*P	P	05 01 17.2	-0.2
JANB	Januaria	23.71	79	*e*P	P	05 01 17.7	-0.4
SDBA	SAO DESIDERIO	24.14	73	*e*P	P	05 01 22.6	+0.7
DUB01	Friburgo-RJ	24.25	97	*e*P	P	05 01 22.0	-0.8
BOAV	Boa Vista	24.66	19	*e*P	P	05 01 27.8	+1.3
BOAV	Boa Vista	24.66	19	P	P	05 01 26.8	+0.3
MCPB	Macapa, AP	26.14	40	*e*P	P	05 01 40.8	+0.9
NAN01	Guarapari, ES	26.89	88	*e*P	P	05 01 47.0	+0.4
TMAB	Tom-Au,PA,Br	27.23	49	*e*P	P	05 01 50.2	+0.5
GUA01	Guaratinga, BA	27.46	85	*e*P	P	05 01 51.2	-0.6
NBMO	Morrinhos-CE	32.83	61	*e*P	P	05 02 39.6	+0.4
NBAN	Anadia - AL	32.98	75	*e*P	P	05 02 40.3	-0.1
SNAA	Sanae	62.46	161	P	P	05 06 28.6	+1.8
SNAA				IAmb	IAmb	05 06 39.0	
	comp=Z,6.8nm,1.5s						
QSPA	South Pole Qui	69.03	180	P	P	05 07 11.4	+2.4
	comp=Z,1.1nm,0.5s,baz=193,slow=2.2,SNR=3.4						
QSPA	South Pole Qui	69.03	180	P	P	05 07 11.1	+2.0
QSPA				IAmb	IAmb	05 07 12.1	
	comp=Z,1.3nm,0.6s						
TORD	Torodi Ar. Bea	76.84	70	P	P	05 07 55.3	-0.4
	comp=Z,0.6nm,0.5s,baz=261,slow=5.2,SNR=8.9						
TORD	Torodi Ar. Bea	76.84	70	P	P	05 07 56.2	+0.5
TORD				IAmb	IAmb	05 08 01.1	
	comp=Z,3.7nm,1.4s						
ZALV	Zalesovo Beam	141.46	25	PKP	PKiKP	05 15 34.4	-1.4
	comp=Z,0.8nm,0.5s,baz=349,slow=1.5,SNR=2.1						
MKAR	Makanchi Array	145.10	36	PKP	PKPdf	05 15 41.3	+1.6
	comp=Z,1.0nm,0.5s,baz=329,slow=3.0,SNR=7.4						
SONM	Songino Array	153.06	8	PKPbc	PKiKP	05 16 01.7	+1.6
	comp=Z,0.4nm,0.6s,baz=270,slow=1.3,SNR=2.1						

IDC 11 04:59:54.8±1.6**,29°.15S×71°.50W,h0^{km},mb3.9**/1**,**
mb1 3.8/3**,mb1mx3.5**/25**,mbtmp3.7**/3**,ML3.3**/2**,MS4.5**/2**,**
Ms1 4.5/2**,ms1mx3.9**/31**,Error ellipse: s-maj=47.3km**
s-min=21.7km az=104.0,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**13.17**	**14**	Pn	Pn	05 03 03.6	-0.1
	0.0nm,0.3s,baz=181,slow=5.8,SNR=3.9						
SIV	**San Ignacio**	**16.24**	**39**	Pn	Pn	05 03 44.6	+0.1
	0.2nm,0.3s,baz=236,slow=15,SNR=4.4						
ATAH	**Atahualpa**	**22.84**	**342**	LR	LR	05 11 21.0	
	comp=Z,2µm,21.9s,baz=128,slow=30						
TORD	**Torodi Ar. Bea**	**82.14**	**70**	P	P	05 12 17.6	-0.2
	1.1nm,1.0s,baz=252,slow=6.3,SNR=3.9						
URZ	**Urewera**	**87.27**	**227**	LR	LR	05 41 33.2	
	comp=Z,203nm,21.0s,baz=31,slow=29						
ZALV	**Zalesovo Beam**	**149.81**	**28**	PKPbc	PKPbc	05 19 46.0	-0.3
	0.9nm,0.4s,baz=336,slow=3.2,SNR=4.1						

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*DDA **11** 05:03:18.9, 37°.09N×27°.29E, h7^{km}±4^{km}, ML1.4*

ISK 11 05:03:23.8, 37°.91N×26°.92E, h22^{km}±1^{km}, ML1.6/5, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GCAM	**G?zelcaml?**	**0.32**	**130**	*i* P	Pb	05 03 30.7	-0.1
GCAM				*i* S	Sb	05 03 36.6	+0.9
GCAM	**G?zelcaml?**	**0.32**	**130**	PG	Pb	05 03 31.4	+0.5
GCAM				SG	Sb	05 03 36.7	+1.0
ZEYE	**Izmir, Urla-Ze**	**0.47**	**315**	*i* P	Pb	05 03 33.2	-0.1
ZEYE				*i* S	Sb	05 03 40.3	+0.4
BLCB	**Balcova**	**0.48**	**11**	PG	Pb	05 03 34.1	+0.4
BLCB				SG	Sn	05 03 41.9	-1.3
URLA	**Izmir**	**0.52**	**330**	*i* P	Pb	05 03 35.0	+0.7
URLA				*i* S	Sb	05 03 41.8	+0.4
URLA	**Izmir**	**0.52**	**330**	PG	Pb	05 03 34.7	+0.4
URLA				SG	Sb	05 03 42.8	+1.4
AYDB	**Zeytinkoy-Aydi**	**0.77**	**87**	PG	Pn	05 03 39.2	-0.2
AYDN	**Tasoluk**	**0.80**	**108**	*i* P	Pb	05 03 33.4	-5.6
AYDN				*i* S	Sb	05 03 43.0	-6.3
CHOS	**Chios island**	**0.83**	**305**	PG	Pn	05 03 40.7	+0.4

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*IDC **11** 05:06:15.8±1.7, 5°.01S×142°.61E, h137^{km}±17^{km}, mb3.2/3, mb1 3.3/6, mb1mx3.1/37, mbtmp3.7/6, Error ellipse: s-maj=31.2km s-min=15.3km az=67.0*

ISC 11 05:06:14.3±1.0, **5°.1S**±0°.1×**142°.6E**±0°.2, **h100^{km}, n6, σ2ˢ.68**/8, **New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**3.15**	**324**	P	**Pn**	**05 07 02.5**	**+0.4**
	5.0nm,0.3s,baz=186,slow=10,SNR=17						
JAY				S	**Sn**	**05 07 42.1**	**+3.2**
	15nm,0.3s,baz=251,slow=20,SNR=11						
PMG	**Port Moresby**	**6.27**	**133**	P	**Pn**	**05 07 46.3**	**+2.1**
	3.5nm,0.3s,baz=323,slow=7.0,SNR=6.1						
WRA	**Warramunga Arr**	**16.80**	**208**	P	**Pn**	**05 10 02.0**	**-1.5**
	0.2nm,0.3s,baz=33,slow=10,SNR=6.3						
ASAR	**Alice Springs**	**20.27**	**203**	P	**P**	**05 10 40.8**	**-1.2**
	0.6nm,0.6s,baz=31,slow=11,SNR=8.2						
ASAR				pP	**pP**	**05 11 04.1**	**+3.0**
	0.8nm,0.5s,baz=32,slow=10,SNR=8.2						
MKAR	**Makanchi Array**	**74.01**	**322**	P	**P**	**05 17 36.7**	**-2.4**
	0.9nm,0.7s,baz=110,slow=5.3,SNR=3.9						
ILAR	**Eielson Array**	**86.41**	**24**	P	**P**	**05 18 43.5**	**-1.7**
	0.5nm,0.7s,baz=250,slow=5.4,SNR=5.5						

JMA 11 05:07:16.2, 34°.02N×136°.82E, h24^{km}±1^{km}, M3.6, 2C-3D, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TTO2	**TONANKAI O.B.S**	**0.33**	**149**	⇓P	Pb	05 07 23.3	-0.1
JIE	**Ise**	**0.38**	**346**	⇑P	Pb	05 07 24.5	+0.1
JIE				*e*S	Sb	05 07 29.9	-0.2
TTO1	**TONANKAI O.B.S**	**0.40**	**184**	P	Pb	05 07 24.7	+0.2
JKN2	**Miekihoku**	**0.50**	**296**	⇓P	Pb	05 07 26.3	-0.1
JKN2				S	Sb	05 07 33.2	-0.2
TTO3	**TONANKAI O.B.S**	**0.51**	**108**	P	Pb	05 07 26.7	+0.3
TTO4	**TONANKAI O.B.S**	**0.60**	**91**	P	Pb	05 07 27.7	-0.2
JAA	**Atsumi**	**0.67**	**24**	⇑P	Pb	05 07 29.1	-0.1
JAA				*e*S	Sb	05 07 37.9	-0.1
TK01	**Tokai 1**	**0.69**	**111**	P	Pb	05 07 28.6	-0.8
TK01				*e*X		05 07 38.1	
TSUJ	**Tsu 2**	**0.76**	**334**	⇓P	Pb	05 07 30.9	+0.1
TSUJ				S	Sb	05 07 41.2	+0.4
TTO5	**TONANKAI O.B.S**	**0.78**	**72**	P	Pb	05 07 30.4	-0.6
TK02	**Tokai 2**	**0.78**	**95**	P	Pb	05 07 29.9	-1.1
TK04	**Tokai 4**	**0.95**	**67**	P	Pb	05 07 33.1	-0.8
TK03	**Tokai 3**	**0.96**	**81**	*e*S	Sb	05 07 46.4	+0.1
MAT	**Matsushiro**	**2.76**	**24**	P	Pn	05 07 59.4	+0.4
MAT				S	Sn	05 08 33.8	+2.2

IDC 11 05:14:12.0±1.8, **51°.73N×179°.05E, h0^{km}, mb3.5**/6, **mb1 3.8**/6, **mb1mx3.4**/71, **mbtmp3.5**/6, **Error ellipse: s-maj=35.8km s-min=20.7km az=37.0, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ILAR	**Eielson Array**	**21.83**	**40**	P	P	05 19 05.8	+0.2
	0.2nm,0.4s,baz=235,slow=8.6,SNR=4.6						
INK	**Inuvik**	**27.95**	**36**	P	P	05 20 03.4	-0.3
	1.2nm,0.8s,baz=257,slow=11,SNR=3.7						
TIXI	**Tiksi**	**29.67**	**331**	P	P	05 20 19.0	+0.1
	1.1nm,0.3s,baz=124,slow=11,SNR=1.8						
NVAR	**Mina Array Bea**	**44.83**	**82**	P	P	05 22 29.2	+1.3
	0.4nm,0.7s,baz=284,slow=12,SNR=3.5						
PDAR	**Pinedale Array**	**47.47**	**71**	P	P	05 22 47.6	-1.1
	0.3nm,0.7s,baz=328,slow=3.2,SNR=2.8						
TXAR	**Lajitas Array**	**59.92**	**80**	P	P	05 24 19.5	-0.4
	0.2nm,0.5s,baz=302,slow=6.2,SNR=6.4						

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*IDC **11** 05:19:02.8±1.4, 37°.52N×20°.36E, h0^{km}, mb3.5/7, mb1 3.5/8, mb1mx3.4/60, mbtmp3.5/8, ML2.4/1, Error ellipse: s-maj=29.1km s-min=26.7km az=92.0*

*THE **11** 05:19:04.4, 37°.37N×20°.14E, h3^{km}±1^{km}, ML3.3/9, Error ellipse: s-maj=2.1km s-min=0.9km az=47.0*

*ATH **11** 05:19:04.1, 37°.32N×20°.10E, h12^{km}±3^{km}, ML3.3/11, Error ellipse: s-maj=4.2km s-min=1.5km az=68.0*

ISC 11 05:19:05.5±1.7, **37°.41N**±0°.05×**20°.13E**±0°.06, **h24^{km}**±12^{km}, **n64, σ1ˢ.55**/85, **mb3.5**/7, **Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LTHK	**Lithakia**	**0.64**	**62**	P	**Pb**	**05 19 16.5**	**-1.4**
LTHK				S	**Sb**	**05 19 26.6**	**+0.2**
LTHK	**Lithakia**	**0.64**	**62**	P	**Pb**	**05 19 16.8**	**-1.2**
LTHK				S	**Sn**	**05 19 27.4**	**-0.9**
LTHK				AML	AML	05 19 28.5	
	comp=N,11404µm,0.5s						
LTHK				AML	AML	05 19 32.6	
	comp=E,11268µm,0.5s						
ZAK2	**Zakynthos**	**0.72**	**58**	P	**Pb**	**05 19 19.0**	**-0.3**
ZAK2				S	**Sb**	**05 19 29.1**	**+0.4**
	comp=E,24µm,0.6s						
PSDA	**Pessada-Kefalo**	**0.79**	**27**	P	**Pb**	**05 19 19.2**	**-1.3**
PSDA				S	**Sn**	**05 19 31.8**	**-0.3**
PSDA	**Pessada-Kefalo**	**0.79**	**27**	P	**Pn**	**05 19 20.9**	**-0.2**
KEF3	**Kipouria, Keph**	**0.81**	**12**	P	**Pb**	**05 19 20.6**	**-0.2**
KEF3				S	**Sn**	**05 19 32.4**	**-0.2**
	comp=E,9µm,0.5s						
KEF3	**Kipouria, Keph**	**0.81**	**12**	P	**Pn**	**05 19 21.8**	**+0.5**
KEF3				S	**Sn**	**05 19 34.4**	**+1.8**
LXRA	**Lixouri, Kepha**	**0.82**	**17**	P	**Pn**	**05 19 21.7**	**+0.1**
LXRA				S	**Sn**	**05 19 33.9**	**+0.9**
DMLN	**Damoulianata-K**	**0.85**	**13**	P	**Pb**	**05 19 21.0**	**-0.5**
DMLN	**Damoulianata-K**	**0.85**	**13**	P	**Pn**	**05 19 22.0**	**+0.1**
VLS	**Valsamata**	**0.85**	**26**	P	**Pb**	**05 19 20.2**	**-1.3**
VLS				S	**Sn**	**05 19 33.9**	**+0.3**
	comp=E,2µm,0.5s						
KEF4	**Livadi, Kephal**	**0.88**	**15**	P	**Pb**	**05 19 21.2**	**-0.8**
KEF4				S	**Sn**	**05 19 34.5**	**+0.2**
KEF4	**Livadi, Kephal**	**0.88**	**15**	P	**Pn**	**05 19 22.6**	**+0.3**
KEF4				S	**Sn**	**05 19 35.4**	**+1.2**
VTN	**Vitineika**	**0.98**	**59**	P	**Pn**	**05 19 23.7**	**0.0**
FSK	**Fiskardo**	**1.10**	**18**	P	**Pn**	**05 19 24.9**	**-0.5**
FSK				S	**Sn**	**05 19 41.7**	**+1.9**
	comp=E,2µm,0.6s						
FSK	**Fiskardo**	**1.10**	**18**	P	**Pb**	**05 19 25.8**	**0.0**
FSK				AML	AML	05 19 48.4	
	comp=N,3118µm,0.4s						
FSK				AML	AML	05 19 51.1	
	comp=E,4013µm,0.7s						
RLS	**Riolos of Patr**	**1.24**	**58**	P	**Pn**	**05 19 27.5**	**+0.2**
EVGI	**Lefkada island**	**1.28**	**19**	P	**Pb**	**05 19 28.1**	**-0.7**
EVGI	**Lefkada island**	**1.28**	**19**	P	**Pb**	**05 19 28.2**	**-0.6**
DRAG	**Dragano-Lefkad**	**1.32**	**15**	P	**Pb**	**05 19 29.7**	**+0.2**
DRAG	**Dragano-Lefkad**	**1.32**	**15**	P	**Pb**	**05 19 29.7**	**+0.2**
DRO	**Drossia**	**1.37**	**66**	P	**Pb**	**05 19 30.1**	**-0.2**
DRO	**Drossia**	**1.37**	**66**	P	**Pb**	**05 19 30.1**	**-0.2**
DRO				AML	AML	05 19 59.8	
	comp=E,1288µm,0.6s						
DRO				AML	AML	05 20 08.0	
	comp=N,2627µm,0.5s						
NYDR	**Nydri-Lefkada**	**1.37**	**19**	P	**Pb**	**05 19 29.8**	**-0.7**
NYDR	**Nydri-Lefkada**	**1.37**	**19**	P	**Pb**	**05 19 30.8**	**+0.3**
PYL	**PYLOS**	**1.39**	**111**	P	**Pn**	**05 19 29.4**	**0.0**
PYL				S	**Sn**	**05 19 47.8**	**+0.8**
	comp=N,338nm,0.7s						
PYL	**PYLOS**	**1.39**	**111**	P	**Pn**	**05 19 29.4**	**0.0**
PYL				AML	AML	05 19 58.9	
	comp=E,770µm,0.6s						
PYL				AML	AML	05 20 00.5	
	comp=N,559µm,0.6s						
LKD2	**Lefkada island**	**1.44**	**17**	P	**Pb**	**05 19 31.0**	**-0.5**
LKD2				S	**Sb**	**05 19 52.5**	**+3.1**
	comp=N,1µm,0.5s						
LKD2	**Lefkada island**	**1.44**	**17**	P	**Pb**	**05 19 31.9**	**+0.3**
LKD2				AML	AML	05 19 59.5	
	comp=E,1951µm,0.4s						
LKD2				AML	AML	05 20 05.9	
	comp=N,2189µm,0.8s						
ITM	**Ithomi**	**1.45**	**99**	P	**Pn**	**05 19 30.7**	**+0.5**
ITM				S	**Sb**	**05 19 50.5**	**+0.6**
	comp=N,378nm,0.5s						
ITM	**Ithomi**	**1.45**	**99**	P	**Pn**	**05 19 30.8**	**+0.5**
ITM				AML	AML	05 19 60.0	
	comp=E,770µm,0.5s						
ITM				AML	AML	05 20 10.8	
	comp=N,726µm,0.6s						
TSLK	**Tsoukalades, L**	**1.47**	**16**	P	**Pb**	**05 19 32.2**	**+0.1**
TSLK				S	**Sb**	**05 19 51.4**	**+1.1**
	comp=N,2µm,0.6s						
TSLK	**Tsoukalades, L**	**1.47**	**16**	P	**Pb**	**05 19 32.1**	**0.0**
PVO	**Paravola**	**1.63**	**42**	P	**Pb**	**05 19 34.7**	**-0.2**
PVO	**Paravola**	**1.63**	**42**	P	**Pb**	**05 19 35.0**	**+0.1**
PVO				AML	AML	05 20 10.7	
	comp=N,1633µm,0.6s						
PVO				AML	AML	05 20 11.2	
	comp=E,1425µm,0.6s						
LAKA	**Lakka**	**1.68**	**60**	P	**Pb**	**05 19 35.6**	**-0.1**
LAKA				AML	AML	05 20 14.3	
	comp=E,4760µm,1.1s						
LAKA				AML	AML	05 20 17.2	
	comp=N,3283µm,1.2s						
EFP	**Efpalio**	**1.73**	**54**	P	**Pb**	**05 19 36.3**	**-0.2**
GUR	**Goura**	**1.83**	**73**	P	**Pn**	**05 19 36.8**	**+1.2**
GUR				AML	AML	05 20 17.7	
	comp=N,1034µm,0.5s						
GUR				AML	AML	05 20 20.4	
	comp=E,1220µm,0.6s						
IGT	**Igoumenitsa**	**2.12**	**4**	P	**Pb**	**05 19 42.1**	**-1.1**
IGT	**Igoumenitsa**	**2.12**	**4**	P	**Pb**	**05 19 42.1**	**-1.1**
IGT				AML	AML	05 20 25.7	
	comp=E,741µm,0.5s						
IGT				AML	AML	05 20 28.6	
	comp=N,600µm,0.8s						
MAKR	**Makrakomi, Fth**	**2.25**	**44**	P	**Pb**	**05 19 44.1**	**-1.2**
MAKR				AML	AML	05 20 31.7	
	comp=E,648µm,1.3s						
MAKR				AML	AML	05 20 32.9	
	comp=N,513µm,1.3s						
KEK	**Kerkira**	**2.31**	**354**	P	**Pn**	**05 19 42.9**	**+0.9**
KEK				S	**Sb**	**05 20 14.0**	**-0.5**
	comp=N,285nm,0.8s						
VLI	**Veliai**	**2.35**	**106**	P	**Pb**	**05 19 45.2**	**-1.9**
SRN	**Sarande**	**2.46**	**358**	P	**Pn**	**05 19 45.1**	**+1.0**
OHR	**Ohrid**	**3.73**	**8**	*i* P	**Pn**	**05 20 04.1**	**+2.5**
VAY	**Valandovo**	**4.34**	**25**	*i* P	**Pn**	**05 20 11.0**	**+1.1**
IDI	**Anoyia**	**4.39**	**117**	Pn	**Pn**	**05 20 10.4**	**-0.3**
	comp=N,0.2nm,0.3s,baz=30,slow=21,SNR=1.5						
IDI				Sn	**Sn**	**05 20 59.1**	**-2.0**
	comp=N,0.7nm,0.3s,baz=10,slow=12,SNR=3.2						
STIP	**Stip**	**4.56**	**20**	*i* P	**Pn**	**05 20 15.4**	**+2.4**
DBRK	**Dubrovnik**	**5.46**	**344**	*e*Pn	**Pn**	**05 20 25.4**	**0.0**
DBRK				Sn	**Sn**	**05 21 21.7**	**-5.7**
STON	**Ston**	**5.76**	**342**	*e*Pn	**Pn**	**05 20 27.9**	**-1.5**
MAKA	**Makarska**	**6.33**	**339**	*e*Pn	**Pn**	**05 20 37.3**	**+0.1**
MAKA				Sn	**Sn**	**05 21 43.7**	**-5.0**
HVAR	**Hvar**	**6.41**	**335**	*e*Pn	**Pn**	**05 20 37.8**	**-0.5**
HVAR				Sn	**Sn**	**05 21 44.9**	**-5.8**
RICI	**Ricice**	**6.49**	**340**	*e*Pn	**Pn**	**05 20 38.9**	**-0.6**
RICI				Sn	**Sn**	**05 21 47.4**	**-5.3**
ZIRJ	**Zirje**	**7.11**	**333**	*e*Pn	**Pn**	**05 20 48.3**	**+0.4**
KIJV	**Kijevo**	**7.17**	**338**	*e*Pn	**Pn**	**05 20 48.7**	**0.0**
MORI	**Morici**	**7.27**	**334**	*e*Pn	**Pn**	**05 20 50.0**	**-0.1**
DUGI	**Dugi Otok**	**7.62**	**331**	*e*Pn	**Pn**	**05 20 55.7**	**+0.8**
NOA	**NORSAR Array B**	**24.31**	**349**	P	**P**	**05 24 21.6**	**+0.7**
	comp=N,0.4nm,0.6s,baz=161,slow=8.8,SNR=1.6						
FINES	**FINESS Array B**	**24.34**	**7**	P	**P**	**05 24 20.5**	**-0.6**
	comp=N,1.8nm,0.8s,baz=176,slow=9.4,SNR=5.0						
TORD	**Torodi Ar. Bea**	**29.24**	**219**	P	**P**	**05 25 08.1**	**+2.4**
	comp=N,0.3nm,0.6s,baz=31,slow=8.6,SNR=2.4						
KURBB	**Kurchatov Arra**	**42.94**	**53**	P	**P**	**05 27 01.2**	**-1.0**
	comp=N,0.2nm,0.3s,baz=280,slow=8.4,SNR=2.4						
MKAR	**Makanchi Array**	**45.97**	**58**	P	**P**	**05 27 26.0**	**-0.6**
	comp=N,0.2nm,0.4s,baz=268,slow=7.7,SNR=1.6						
ZALV	**Zalesovo Beam**	**46.43**	**48**	P	**P**	**05 27 28.7**	**-1.3**
	comp=N,0.8nm,0.4s,baz=297,slow=6.5,SNR=4.4						
SONM	**Songino Array**	**61.19**	**50**	P	**P**	**05 29 18.2**	**0.0**
	comp=N,0.2nm,0.5s,baz=286,slow=7.3,SNR=1.4						

IDC 11 05:41:55.9±54.0, **17°.99S×179°.91W, h0^{km}, mb3.9**/3, **mb1 4.1**/3, **mb1mx3.7**/25, **mbtmp3.9**/3, **MS3.9**/4, **Ms1 3.9**/4, **ms1mx3.5**/32, **Error ellipse: s-maj=972.5km s-min=162.1km az=78.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**13.45**	**250**	LR	LR	05 49 44.7	
	comp=Z,329nm,20.9s,baz=40,slow=35						
STKA	**Stephens Creek**	**37.34**	**241**	P	P	05 49 10.4	+0.1
	0.7nm,0.3s,baz=63,slow=11,SNR=2.9						
WRA	**Warramunga Arr**	**43.22**	**260**	P	P	05 49 59.0	-0.2
	0.3nm,0.3s,baz=96,slow=7.5,SNR=8.8						
ASAR	**Alice Springs**	**43.40**	**254**	P	P	05 50 00.4	-0.2
	1.7nm,0.5s,baz=86,slow=8.8,SNR=32						
ASAJ	**Asahikawa**	**70.68**	**332**	LR	LR	06 18 02.7	
	comp=Z,54nm,22.0s,baz=34,slow=31						
SEY	**Seymchan**	**83.54**	**348**	LR	LR	06 26 02.4	
	comp=Z,84nm,21.2s,baz=29,slow=32						
TIXI	**Tiksi**	**95.88**	**346**	LR	LR	06 35 26.8	
	comp=Z,74nm,20.2s,baz=352,slow=34						

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*FUNV **11** 05:54:31.0, 8°.47N×71°.37W, h2^{km}, MW3.0*

ISC 11 05:54:31.4±1.2, **8°.47N**±0°.03×**71°.35W**±0°.03, **h13^{km}**±9^{km}, **n34, σ1ˢ.15**/51, **1C-1D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	**Socops**	**0.52**	**111**	*e*P	**Pg**	**05 54 41.0**	**-0.7**
SOCV				*e*S	**Sg**	**05 54 48.5**	**-0.1**
SOCV	**Socops**	**0.52**	**111**	⇑*i*P	**Pg**	**05 54 41.4**	**-0.3**
SOCV				*e*S	**Sb**	**05 54 49.4**	**-0.5**
SDV	**Santo Domingo**	**0.81**	**60**	*e*P	**Pg**	**05 54 47.2**	**-0.1**
SDV				*e*S	**Sg**	**05 54 57.8**	**-0.3**
PAMC	**Pamplona, Colo**	**1.75**	**230**	*e*P	**Pn**	**05 55 01.6**	**-0.4**
PAMC				*e*S	**Sn**	**05 55 23.9**	**-0.6**
MCQV	**Machiques**	**1.96**	**323**	*e*P	**Pn**	**05 55 03.7**	**-0.7**
MCQV				*e*S	**Sn**	**05 55 28.9**	**0.0**
OCAC	**Ocana**	**1.97**	**263**	*e*P	**Pn**	**05 55 03.4**	**-1.2**
OCAC				*e*S	**Sn**	**05 55 28.0**	**-1.3**
TAMC	**Tame, Arauca**	**2.07**	**192**	*e*P	**Pn**	**05 55 07.3**	**+1.3**
TAMC				*e*S	**Sb**	**05 55 34.7**	**0.0**
ELOV	**Elorza**	**2.35**	**128**	*e*P	**Pb**	**05 55 13.2**	**-0.5**
ELOV				*e*S	**Sb**	**05 55 43.4**	**+0.6**
ELOV	**Elorza**	**2.35**	**128**	*e*P	**Pn**	**05 55 09.3**	**-0.6**
ELOV				*e*S	**Sn**	**05 55 39.2**	**+0.6**
DABV	**Dabajuro**	**2.53**	**16**	*e*P	**Pn**	**05 55 12.7**	**+0.4**
DABV				*e*S	**Sn**	**05 55 43.5**	**+0.5**
BARC	**Barichara**	**2.61**	**224**	*e*P	**Pn**	**05 55 13.5**	**-0.1**
SIQV	**Siquisique**	**2.64**	**35**	*e*P	**Pn**	**05 55 14.8**	**+0.9**
SIQV				*e*S	**Sn**	**05 55 46.5**	**+0.8**
BRRC	**Barranca, Sant**	**2.71**	**240**	*e*P	**Pb**	**05 55 18.2**	**-1.6**
SMLC	**San Martn de**	**2.71**	**277**	*e*P	**Pn**	**05 55 14.4**	**-0.4**
SMLC				*e*S	**Sn**	**05 55 49.6**	**+2.0**
RUSC	**La Rusia**	**3.09**	**214**	*e*P	**Pn**	**05 55 20.6**	**+0.2**
RUSC				*e*S	**Sn**	**05 55 55.6**	**-1.9**
MAPV	**Macapo**	**3.15**	**64**	*e*P	**Pn**	**05 55 21.4**	**+0.5**
MAPV				*e*S	**Sn**	**05 55 57.2**	**-1.3**
ARGC	**Ariguani, Magd**	**3.18**	**296**	*e*P	**Pb**	**05 55 28.9**	**+1.1**
ARGC				*e*S	**Sn**	**05 55 56.8**	**-2.2**
URIC	**Uribia, Colomb**	**3.27**	**349**	*e*P	**Pb**	**05 55 29.9**	**+0.5**
BAUV	**El Baul**	**3.30**	**82**	*e*P	**Pn**	**05 55 22.6**	**-0.3**
BAUV				*e*S	**Sn**	**05 56 01.6**	**-0.3**
ZARC	**Zaragoza, Cauc**	**3.61**	**255**	*e*P	**Pn**	**05 55 27.2**	**0.0**
MONV	**Montecano**	**3.71**	**21**	*e*P	**Pn**	**05 55 28.2**	**-0.4**
SPBC	**San Pablo de B**	**3.90**	**224**	*e*P	Pn	05 55 25.7	-5.4
SPBC				*e*S	**Sn**	**05 56 16.6**	**-0.2**
BENV	**Beln**	**3.98**	**68**	*e*P	**Pn**	**05 55 32.6**	**+0.2**
SJCC	**San Jacinto, C**	**4.04**	**291**	*e*P	**Pn**	**05 55 31.9**	**-1.2**
UREC	**San Jos de Ur**	**4.21**	**260**	*e*P	**Pn**	**05 55 39.2**	**+3.9**
MOTC	**Monteria, Cord**	**4.28**	**274**	*e*P	**Pn**	**05 55 34.3**	**-2.1**
PTGC	**Puerto Gaitan,**	**4.32**	**191**	*e*P	**Pg**	**05 55 56.6**	**+2.3**
CHIC	**Chingaza**	**4.50**	**212**	*e*P	**Pn**	**05 55 39.9**	**+0.2**
CHIC				*e*P	**Sn**	**05 56 31.3**	**-0.8**
TACV	**Tcata**	**4.57**	**68**	*e*P	**Pn**	**05 55 40.5**	**+0.1**
CACV	**CAICARA DEL OR**	**4.84**	**100**	*e*P	Pb	05 55 51.3	-4.9
MERV	**Las Mercedes**	**5.05**	**81**	*e*P	**Pn**	**05 55 46.7**	**-0.2**
GUY2C	**Guyana, Caldas**	**5.13**	**231**	*e*P	**Pn**	**05 55 49.8**	**+1.3**
GUY2C				*e*S	**Sn**	**05 56 47.5**	**-0.4**
CBOC	**Ciudad Bolivar**	**5.31**	**241**	*e*P	**Pn**	**05 55 52.7**	**+2.0**
BIRV	**Birongo**	**5.39**	**68**	⇓*e*P	**Pn**	**05 55 51.0**	**-0.6**

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*IDC **11** 05:58:15.4±4.9, 35°.94N×71°.50E, h75^{km}±33^{km}, mb3.4/6, mb1 3.6/12, mb1mx3.3/44, mbtmp3.8/12, MS3.4/1, Ms1 3.6/1, ms1mx3.0/36, Error ellipse: s-maj=58.9km s-min=25.2km az=146.0*

ISC 11 05:58:18.5±0.8, **36°.14N**±0°.08×**71°.65E**±0°.10, **h100^{km}, n26, σ1ˢ.34**/26, **mb3.7**/5, **Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**6.86**	**18**	P	**Pn**	**05 59 57.3**	**+0.8**
	3.0nm,0.3s,baz=191,slow=4.7,SNR=15						
AAK				S	**Sn**	**06 01 10.9**	**-2.1**
	0.7nm,0.3s,baz=330,slow=22,SNR=5.7						
GEYT	**Alibeck**	**10.97**	**283**	P	Pn	06 00 48.1	-4.2
	1.0nm,0.3s,baz=118,slow=12,SNR=8.1						
GEYT				S	Sn	06 02 42.6	-10
	3.1nm,0.3s,baz=291,slow=26,SNR=8.9						
PYUN	**Piuthan**	**12.51**	**127**	*e*P	**Pn**	**06 01 14.9**	**+1.9**
	129nm,0.3s						
DANN	**Dangsing**	**12.85**	**124**	*e*P	**Pn**	**06 01 18.7**	**+1.0**
	34nm,0.3s						
DANN				*e*S	**Sn**	**06 03 35.4**	**-3.7**
KOLN	**Koldanda**	**13.12**	**126**	*e*P	**Pn**	**06 01 22.6**	**+1.4**
	12nm,0.3s						
MKAR	**Makanchi Array**	**13.29**	**33**	P	**Pn**	**06 01 24.3**	**+1.2**
	0.1nm,0.3s,baz=228,slow=7.6,SNR=1.8						
GKN	**Gorkha**	**13.67**	**123**	*e*P	**Pn**	**06 01 29.9**	**+1.7**
	31nm,0.3s						
DMN	**Daman**	**14.24**	**123**	*e*P	**Pn**	**06 01 37.0**	**+1.3**
	18nm,0.3s						
KKN	**Kakani**	**14.24**	**122**	*e*P	**Pn**	**06 01 36.6**	**+0.9**
	12nm,0.3s						
PKIN	**Phulchoki**	**14.45**	**122**	*e*P	**Pn**	**06 01 39.7**	**+1.2**
	14nm,0.3s						
PKI	**Pulchoki**	**14.47**	**122**	*e*P	**Pn**	**06 01 39.7**	**+1.0**
JIRN	**Jiri**	**14.95**	**120**	*e*P	**Pn**	**06 01 45.6**	**+0.7**
	34nm,0.3s						
KURBB	**Kurchatov Arra**	**15.31**	**17**	P	**Pn**	**06 01 49.6**	**+0.8**
	0.1nm,0.3s,baz=209,slow=10,SNR=2.4						
RAMN	**Ramite**	**15.68**	**122**	*e*P	**Pn**	**06 01 54.5**	**+0.5**
	28nm,0.4s						
TAPN	**Taplejung**	**16.21**	**118**	*e*P	**Pn**	**06 02 01.9**	**+1.2**
	20nm,0.3s						
ODAN	**Odare**	**16.28**	**120**	*e*P	**P**	**06 02 03.5**	**+0.8**
BVAR	**Borovoye Array**	**16.91**	**357**	P	**Pn**	**06 02 08.5**	**-0.3**
	0.1nm,0.3s,baz=198,slow=18,SNR=3.4						
AKTO	**Aktyubinsk**	**17.36**	**330**	P	**P**	**06 02 13.9**	**-0.1**
	0.8nm,0.3s,baz=132,slow=12,SNR=11						
ZALV	**Zalesovo Beam**	**20.03**	**23**	P	**P**	**06 02 43.9**	**+0.6**
	2.3nm,0.4s,baz=207,slow=10,SNR=12						
CMAR	**Chiang Mai Arr**	**29.82**	**119**	LR	LR	06 18 08.3	
	comp=Z,72nm,19.6s,baz=50,slow=40						
AKASG	**Malin Array Be**	**33.58**	**309**	P	**P**	**06 04 47.8**	**-0.9**
	0.2nm,0.3s,baz=84,slow=6.9,SNR=1.8						
FINES	**FINESS Array B**	**38.08**	**326**	P	**P**	**06 05 27.2**	**+0.2**
	0.5nm,0.5s,baz=123,slow=7.0,SNR=4.6						
ARCES	**ARCESS Array B**	**41.68**	**338**	P	**P**	**06 05 57.5**	**+0.7**
	1.8nm,0.7s,baz=121,slow=8.7,SNR=5.6						
NB2	**NORSAR Subarra**	**44.98**	**323**	P	**P**	**06 06 23.6**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=98,slow=7.9						
NOA	**NORSAR Array B**	**44.98**	**323**	P	**P**	**06 06 23.7**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=106,slow=7.2,SNR=4.3						
TORD	**Torodi Ar. Bea**	**66.24**	**269**	P	**P**	**06 08 55.0**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=51,slow=5.5,SNR=7.6						

NOU 11 06:02:56.2, 16°.24S×167°.07E, h24^{km}, MLv4.6/5, **Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**1.82**	**144**	P	Pn	06 03 26.1	0.0

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*MOS **11** 06:04:49.8±0.0, 42°.96N×47°.08E, h10^{km}, MPVA3.9*

*NORS **11** 06:04:49.9±0.0, 42°.90N×47°.01E, h2^{km}, MPVA4.0*

*DRS **11** 06:04:49.5±0.0, 43°.01N×47°.14E, h10^{km}, ML3.0/7*

ISC 11 06:04:51.7±1.1, **43°.01N**±0°.02×**47°.07E**±0°.02, **h3^{km}**±9^{km}, **n39, σ1ˢ.46**/77, **Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DBC	**Dubki**	**0.18**	**272**	*i* Pg	**Pg**	**06 04 54.5**	**-0.6**
DBC				*i* Sg	**Sg**	**06 04 58.1**	**+0.7**
	2µm,0.3s						
BUJR	**Buynaksk**	**0.19**	**171**	*e*Pg	**Pg**	**06 04 55.0**	**-0.4**
BUJR				*i* Sg	**Sg**	**06 04 57.7**	**-0.2**
	5µm,0.3s						
KRNR	**Karanay**	**0.22**	**213**	*e*Pg	**Pg**	**06 04 55.0**	**-1.0**
KRNR				*i* Sg	**Sg**	**06 04 59.0**	**0.0**
	2µm,0.2s						
MAK	**Makhachkala**	**0.32**	**99**	*e*Pg	**Pg**	**06 04 56.7**	**-1.2**
MAK				*e*Sg	**Sg**	**06 05 02.3**	**+0.2**
DLMR	**Dylym**	**0.33**	**280**	*e*Pg	**Pg**	**06 04 57.0**	**-1.0**
DLMR				*e*Sg	**Sb**	**06 05 04.4**	**-1.4**
	7µm,0.4s						
KANR	**Karaman**	**0.36**	**59**	*e*Pg	**Pg**	**06 04 58.9**	**+0.3**
KANR				*e*Sg	**Sg**	**06 05 04.0**	**+0.8**
UNCR	**Uncukul**	**0.36**	**214**	*e*Pg	**Pg**	**06 04 57.5**	**-1.1**
UNCR				*i* Sg	**Sg**	**06 05 03.6**	**+0.3**
	1µm,0.2s						
ARKR	**Arakani**	**0.41**	**188**	*e*Pg	**Pg**	**06 04 58.5**	**-1.1**
ARKR				*i* Sg	**Sg**	**06 05 04.3**	**-0.7**
	640nm,0.5s						
XNZR	**Khunzakh**	**0.54**	**210**	*e*Pg	**Pg**	**06 05 01.3**	**-0.8**
XNZR				*e*Sg	**Sg**	**06 05 09.5**	**+0.3**
GNBR	**Gunib**	**0.63**	**187**	*e*Pg	**Pg**	**06 05 03.0**	**-0.8**
GNBR				*i* Sg	**Sg**	**06 05 11.9**	**0.0**
	296nm,0.7s						
DVE	**Vedeno**	**0.69**	**266**	*e*Pg	**Pg**	**06 05 04.8**	**-0.2**
DVE				*e*Sg	**Sb**	**06 05 15.4**	**-1.0**
SGKR	**Sergokala**	**0.70**	**142**	*e*Pg	**Pg**	**06 05 04.7**	**-0.5**
SGKR				*e*Sg	**Sg**	**06 05 16.4**	**+2.1**
BTLR	**Botlikh**	**0.71**	**241**	*e*Pg	**Pg**	**06 05 05.3**	**-0.1**
BTLR				*i* Sg	**Sb**	**06 05 16.2**	**-0.8**
KMKR	**Kumukh**	**0.88**	**179**	*e*Pg	**Pg**	**06 05 08.3**	**-0.3**
KMKR				*e*Sg	**Sg**	**06 05 20.8**	**+0.8**
URKR	**Urkarakh**	**0.94**	**154**	*e*Pg	**Pg**	**06 05 08.7**	**-1.1**
URKR				*e*Sg	**Sg**	**06 05 22.1**	**+0.1**
GROC	**Groznyy**	**0.95**	**282**	*e*Pg	**Pb**	**06 05 11.2**	**+0.4**
GROC				*e*Sg	**Sn**	**06 05 25.4**	**-0.5**
LGD	**Lagodekhi**	**1.33**	**208**	P	**Pg**	**06 05 15.7**	**-1.4**
LGD				S	**Sg**	**06 05 34.2**	**-0.1**
AKT	**Akhty**	**1.61**	**162**	*e*Pg	**Pn**	**06 05 20.9**	**-0.2**
AKT				*e*Sg	**Sn**	**06 05 42.8**	**+0.5**
KMGR	**Komgaron**	**1.62**	**272**	*e*Pg	**Pb**	**06 05 21.9**	**-0.2**
KMGR				*e*Sg	**Sg**	**06 05 44.5**	**+0.9**
DDFL	**Dedoflistskaro**	**1.72**	**205**	P	**Pg**	**06 05 26.5**	**+1.8**
DDFL				S	**Sg**	**06 05 54.4**	**+7.5**
PNSH	**Pansheti**	**1.84**	**259**	P	Pn	06 05 16.9	-7.4
PNSH				S	**Sn**	**06 05 42.0**	**-6.3**
TRKR	**Terskaya**	**1.85**	**293**	*e*Pg	**Pg**	**06 05 28.2**	**+1.2**
TRKR				*e*Sg	**Sg**	**06 05 51.7**	**+0.7**
BTKR	**Batakoyurt**	**1.88**	**282**	*e*Pg	**Pn**	**06 05 25.1**	**+0.4**

BTKR				*e*Sg	**Sg**	**06 05 52.5**	**+0.3**
MTEO	**Meteo**	**1.90**	**261**	P	**Pn**	**06 05 25.4**	**+0.1**
MTEO				S	**Sn**	**06 05 50.2**	**+0.3**
DGRG	**David-gareji**	**2.01**	**219**	P	**Pb**	**06 05 28.3**	**-0.5**
DGRG				S	**Sg**	**06 05 58.3**	**+2.1**
LACR	**Lac**	**2.04**	**266**	*e*Pg	**Pn**	**06 05 27.3**	**+0.3**
LACR				*e*Sg	**Sg**	**06 05 56.5**	**-0.9**
PRTR	**Priterechnaya**	**2.16**	**291**	*e*Pg	**Pb**	**06 05 31.3**	**-0.1**
PRTR				*e*Sg	**Sg**	**06 06 00.8**	**-0.3**
KORR	**Kora**	**2.20**	**273**	*e*Pg	**Pb**	**06 05 32.6**	**+0.4**
KORR				*e*Sg	**Sb**	**06 05 59.6**	**-0.2**
STDR	**Stavd-Durt**	**2.23**	**280**	*e*Pg	**Pb**	**06 05 33.2**	**+0.7**
STDR				*e*Sg	**Sb**	**06 06 00.6**	**+0.1**
ZEI	**Tsey**	**2.34**	**266**	*e*Pn	**Pn**	**06 05 32.7**	**+1.5**
ZEI				*e*Sn	**Sb**	**06 06 03.4**	**-0.5**
LSNR	**Lesken**	**2.39**	**277**	*e*Pn	**Pb**	**06 05 35.4**	**+0.1**
LSNR				*e*Sn	**Sb**	**06 06 04.8**	**-0.4**
DIGR	**Digorskoe uzhe**	**2.56**	**269**	*e*Pn	**Pn**	**06 05 32.4**	**-1.8**
DIGR				*e*Sn	**Sn**	**06 06 07.0**	**+0.9**
ONI	**Oni**	**2.69**	**262**	*e*Pn	**Pn**	**06 05 36.7**	**+0.7**
ONI				*e*Sn	**Sb**	**06 06 13.9**	**-0.1**
DMNI	**Dmanisi**	**2.72**	**233**	P	**Pn**	**06 05 37.1**	**+0.7**
DMNI				S	**Sn**	**06 06 11.7**	**+1.9**
NEY	**Neytrino**	**3.19**	**276**	*e*Pn	**Pn**	**06 05 43.1**	**+0.2**
NEY				*e*Sn	**Sn**	**06 06 22.4**	**+1.0**
SHA1	**Shidzhatmaz**	**3.30**	**284**	*e*Pn	**Pn**	**06 05 43.8**	**-0.6**
SHA1				*e*Sn	**Sn**	**06 06 24.3**	**+0.1**
KIV0	**Kislovodsk Arr**	**3.32**	**288**	*e*Pn	**Pn**	**06 05 46.0**	**+1.5**
KIV0				*e*Sn	**Sn**	**06 06 22.8**	**-1.7**
KIV	**Kislovodsk**	**3.33**	**288**	*e*Pn	**Pn**	**06 05 45.5**	**+0.9**
KIV				*e*Sn	**Sn**	**06 06 22.5**	**-2.1**
ALER	**Alexandrovskoy**	**3.48**	**302**	*e*Pn	**Pn**	**06 05 46.8**	**+0.1**
ALER				*e*Sn	**Sn**	**06 06 28.2**	**-0.1**

*JMA **11** 06:11:35.8±0.2, 24°.49N×122°.90E, h103^{km}±2^{km}, M2.3*
*TAP **11** 06:11:36.3, 24°.52N×122°.89E, h94^{km}, ML3.3, C*
ISC 11 06:11:36.3±1.5**, 24°.53N**±0°.04×**122°.91E**±0°.03**, h97**^{km}±9^{km},
n87, σ0^{s}.60/161**, 1C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.08**	**156**	P	**Pn**	**06 11 50.2**	**+0.3**
JYNG				*e*S	**Sn**	**06 12 00.7**	**+0.7**
YOJ	**Yonaguni jima**	**0.11**	**125**	*e*P	**Pn**	**06 11 50.5**	**+0.6**
	baz=114						
YOJ				S	**Sn**	**06 11 59.7**	**-0.4**
	baz=114						
YOJ	**Yonaguni jima**	**0.11**	**125**	P	**Pn**	**06 11 50.2**	**+0.3**
YOJ				S	**Sn**	**06 12 00.4**	**+0.3**
IRIF	**Iriomote-Funau**	**0.77**	**104**	P	**Pn**	**06 11 54.2**	**+0.1**
IRIF				S	**Sn**	**06 12 07.6**	**+0.1**
HATJ	**Hateruma jima**	**0.94**	**120**	P	**Pn**	**06 11 56.0**	**+0.2**
HATJ				*e*S	**Sn**	**06 12 10.8**	**+0.3**
TWB1	**Santiao Chiao**	**0.97**	**300**	*e*P	**Pn**	**06 11 55.7**	**-0.4**
	baz=301						
TWB1				*e*S	**Sn**	**06 12 10.0**	**-1.0**
	baz=301						
TWC	**Suao**	**0.97**	**275**	*i* P	**Pn**	**06 11 55.9**	**-0.2**
	baz=275						
TWC				*i* S	**Sn**	**06 12 10.0**	**-1.1**
	baz=275						
EWUT	**Wuta**	**1.03**	**266**	P	**Pn**	**06 11 57.2**	**+0.3**
	baz=265						
EWUT				S	**Sn**	**06 12 11.7**	**-0.6**
	baz=265						
NTC	**Toucheng**	**1.04**	**289**	*e*P	**Pn**	**06 11 57.1**	**+0.2**
	baz=289						
NTC				*e*S	**Sn**	**06 12 12.1**	**-0.3**
	baz=289						
JKRS	**Kuro-shima**	**1.04**	**106**	P	**Pn**	**06 11 57.4**	**+0.5**
JKRS				S	**Sn**	**06 12 12.8**	**+0.3**
ENA	**Nanau**	**1.07**	**265**	P	**Pn**	**06 11 57.4**	**+0.1**
	baz=265						
ENA				S	**Sn**	**06 12 12.9**	**-0.2**
	baz=265						
TIPB	**Shuangxi**	**1.08**	**294**	*i* P	**Pn**	**06 11 57.5**	**0.0**
	baz=295						
TIPB				S	**Sn**	**06 12 13.2**	**-0.1**
	baz=295						
ILA	**Ilan**	**1.08**	**283**	*e*P	**Pn**	**06 11 57.4**	**-0.1**
	baz=283						
ILA				S	**Sn**	**06 12 12.8**	**-0.5**
	baz=283						
NDS	**Dongshan**	**1.09**	**276**	P	**Pn**	**06 11 57.6**	**+0.1**
	baz=276						
NDS				S	**Sn**	**06 12 12.7**	**-0.8**
	baz=276						
JIJ	**Ishigaki jima**	**1.14**	**98**	P	**Pn**	**06 11 57.9**	**-0.1**
JIJ				S	**Sn**	**06 12 13.4**	**-1.0**
TWE	**Neicheng**	**1.15**	**280**	P	**Pn**	**06 11 58.1**	**0.0**
	baz=280						
TWE				S	**Sn**	**06 12 14.8**	**+0.1**
	baz=280						
NWF	**Wu-fen Shan**	**1.16**	**298**	*i* P	**Pn**	**06 11 58.2**	**-0.1**
	baz=298						
NWF				*i* S	**Sn**	**06 12 15.5**	**+0.5**
	baz=298						
WFSB	**Wu-fen Shan**	**1.16**	**298**	P	**Pn**	**06 11 58.4**	**+0.1**
	baz=298						
WFSB				S	**Sn**	**06 12 15.2**	**+0.2**
	baz=298						
ENTT	**Nioudou**	**1.23**	**276**	P	**Pn**	**06 11 59.4**	**+0.3**
	baz=275						
ENTT				S	**Sn**	**06 12 17.0**	**+0.6**
	baz=275						
ETL	**Fush Village**	**1.23**	**253**	P	**Pn**	**06 11 58.8**	**-0.3**
	baz=252						
ETL				S	**Sn**	**06 12 16.2**	**-0.2**
	baz=252						
NACB	**Ninganchiao**	**1.25**	**254**	⇑P	**Pn**	**06 11 58.8**	**-0.6**
	baz=253						
NACB				S	**Sn**	**06 12 16.0**	**-0.8**
	baz=253						
NDT	**Datong Townshi**	**1.27**	**274**	*i* P	**Pn**	**06 12 00.3**	**+0.6**
	baz=273						
NDT				*i* S	**Sn**	**06 12 17.6**	**+0.3**
	baz=273						
JISG	**Ishigakijimahi**	**1.28**	**87**	P	**Pn**	**06 11 59.4**	**-0.3**
JISG				S	**Sn**	**06 12 16.5**	**-0.8**
TWA	**Mucha**	**1.29**	**291**	*e*P	**Pn**	**06 11 59.8**	**0.0**
	baz=291						
TWA				*e*S	**Sn**	**06 12 17.5**	**-0.1**
	baz=291						
NWLT	**Wulai**	**1.30**	**281**	*e*P	**Pn**	**06 12 00.1**	**0.0**
	baz=281						
NWLT				*e*S	**Sn**	**06 12 18.1**	**+0.1**
	baz=281						
HWA	**Hwalien**	**1.31**	**246**	*e*P	**Pn**	**06 11 59.5**	**-0.5**
	baz=245						
HWA				*e*S	**Sn**	**06 12 18.1**	**+0.1**
	baz=245						
NHDH	**Xindian Distri**	**1.33**	**289**	*e*P	**Pn**	**06 12 00.7**	**+0.4**
	baz=289						
NHDH				*e*S	**Sn**	**06 12 18.8**	**+0.3**
	baz=289						
ETLH	**Xiulin Townshi**	**1.34**	**257**	P	**Pn**	**06 12 00.3**	**-0.2**
	baz=256						
ETLH				S	**Sn**	**06 12 18.5**	**-0.4**
	baz=256						
YM01	**YM01**	**1.36**	**297**	P	**Pn**	**06 12 01.2**	**+0.4**
	baz=297						
YM01				S	**Sn**	**06 12 19.0**	**-0.3**
	baz=297						
TAP	**Taipei**	**1.38**	**292**	*e*P	**Pn**	**06 12 01.0**	**+0.1**
	baz=292						
TAP				*e*S	**Sn**	**06 12 18.2**	**-1.2**
	baz=292						
TWY	**Chenhua**	**1.41**	**302**	*e*S	**Sn**	**06 12 19.2**	**-0.9**
	baz=302						
NSK	**Sanguang**	**1.42**	**276**	P	**Pn**	**06 12 01.6**	**+0.1**
	baz=276						
NSK				S	**Sn**	**06 12 20.2**	**-0.4**
	baz=276						
TWS1	**Kuangyinshan**	**1.47**	**293**	*e*P	**Pn**	**06 12 02.3**	**+0.2**
	baz=293						
TWS1				S	**Sn**	**06 12 21.4**	**-0.2**
	baz=293						
ESL	**Shilin**	**1.52**	**243**	*i* P	**Pn**	**06 12 02.1**	**-0.6**
	baz=241						
ESL				S	**Sn**	**06 12 21.6**	**-1.1**
	baz=241						
FUSS	**Fushou**	**1.54**	**260**	*i* P	**Pn**	**06 12 03.7**	**+0.5**
	baz=259						
FUSS				S	**Sn**	**06 12 23.8**	**+0.2**
	baz=259						
WHF	**Hehuan Shan**	**1.55**	**256**	*i* P	**Pn**	**06 12 03.2**	**-0.2**
	baz=255						
WHF				*i* S	**Sn**	**06 12 22.9**	**-1.0**
	baz=255						
EGFH	**Guangfu**	**1.60**	**238**	*i* P	**Pn**	**06 12 03.5**	**-0.1**
	baz=237						
EGFH				S	**Sn**	**06 12 24.3**	**-0.1**
	baz=237						
TWT	**Tachien**	**1.60**	**261**	P	**Pn**	**06 12 04.8**	**+1.0**
	baz=260						
TWT				S	**Sn**	**06 12 24.3**	**-0.5**
	baz=260						
TDCB	**Techi**	**1.62**	**261**	P	**Pn**	**06 12 04.7**	**+0.7**
	baz=260						
TDCB				S	**Sn**	**06 12 24.2**	**-0.9**
	baz=260						
NCUH	**Zhongli**	**1.63**	**286**	*e*P	**Pn**	**06 12 04.2**	**+0.2**
	baz=286						
NCUH				*e*S	**Sn**	**06 12 25.1**	**0.0**
	baz=286						
JTJ	**Tarama**	**1.64**	**86**	P	**Pn**	**06 12 04.3**	**+0.2**
CHGB	**Renai**	**1.65**	**254**	P	**Pn**	**06 12 05.0**	**+0.5**
	baz=253						
CHGB				S	**Sn**	**06 12 25.2**	**-0.7**
	baz=253						
OWD	**Renai**	**1.68**	**251**	P	**Pn**	**06 12 05.2**	**+0.4**
	baz=250						
HGSD	**Ruisui**	**1.70**	**233**	P	**Pn**	**06 12 04.4**	**-0.5**
	baz=232						
HGSD				*e*S	**Sn**	**06 12 26.6**	**-0.1**
	baz=232						
LIOB	**Emei**	**1.73**	**274**	*i* P	**Pn**	**06 12 05.6**	**+0.3**
	baz=274						
LIOB				S	**Sn**	**06 12 26.9**	**-0.5**
	baz=274						
NSTT	**Nanjuang**	**1.74**	**274**	*i* P	**Pn**	**06 12 05.7**	**+0.3**
	baz=273						
NSTT				*i* S	**Sn**	**06 12 26.9**	**-0.7**
	baz=273						
SBCB	**Hsinchu**	**1.77**	**279**	*e*S	**Sn**	**06 12 28.6**	**+0.3**
	baz=278						
VWDT	**VWDT**	**1.79**	**245**	*e*P	**Pn**	**06 12 07.0**	**+1.0**
	baz=244						
VWDT				*e*S	**Sn**	**06 12 28.3**	**-0.3**
	baz=244						
WHP	**Taichung City**	**1.81**	**263**	*i* P	**Pn**	**06 12 07.5**	**+1.2**
	baz=262						
WHP				*e*S	**Sn**	**06 12 29.5**	**+0.2**
	baz=262						
YULB	**Yu-li**	**1.86**	**233**	P	**Pn**	**06 12 06.5**	**-0.4**
	baz=232						
YULB				*e*S	**Sn**	**06 12 31.0**	**+0.8**
	baz=232						
EYUL	**Yuli**	**1.87**	**231**	*e*P	**Pn**	**06 12 07.0**	**0.0**
	baz=230						
EYUL				*e*S	**Sn**	**06 12 31.0**	**+0.5**
	baz=230						
WCS	**Beigang Elemen**	**1.88**	**256**	*e*P	**Pn**	**06 12 07.9**	**+0.7**
	baz=255						
WCS				*e*S	**Sn**	**06 12 30.6**	**-0.2**
	baz=255						
SSLB	**Suanglung**	**1.93**	**248**	P	**Pn**	**06 12 07.9**	**0.0**
	baz=247						
SSLB				*e*S	**Sn**	**06 12 32.2**	**+0.2**
	baz=247						
SMLT	**Sun Moon Lake**	**1.94**	**251**	P	**Pn**	**06 12 08.8**	**+0.7**
	baz=250						
SMLT				S	**Sn**	**06 12 32.5**	**0.0**
	baz=250						
NSY	**Sanyi**	**1.96**	**267**	*e*P	**Pn**	**06 12 08.8**	**+0.6**
	baz=266						
NSY				*e*S	**Sn**	**06 12 32.6**	**-0.1**
	baz=266						
TYC	**Yuchr**	**1.97**	**252**	P	**Pn**	**06 12 09.0**	**+0.6**
	baz=251						
TYC				*e*S	**Sn**	**06 12 32.8**	**-0.1**
	baz=251						
FULB	**Fuli**	**1.98**	**229**	*e*P	**Pn**	**06 12 07.9**	**-0.6**
	baz=228						
FULB				*e*S	**Sn**	**06 12 33.6**	**+0.4**
	baz=228						
CHKT	**Chengkung**	**2.00**	**225**	*e*S	**Sn**	**06 12 33.1**	**-0.5**
	baz=224						
WHYT	**Xinyi Township**	**2.05**	**247**	*i* P	**Pn**	**06 12 10.6**	**+1.2**
	baz=246						
WJS	**Zhushan**	**2.11**	**251**	P	**Pn**	**06 12 11.8**	**+1.6**
	baz=250						
WJS				*e*S	**Sn**	**06 12 36.3**	**+0.2**
	baz=250						
WNT	**Mingjian**	**2.13**	**253**	*e*P	**Pn**	**06 12 11.2**	**+0.7**
	baz=252						
WNT				*e*S	**Sn**	**06 12 36.6**	**0.0**
	baz=252						
EDH	**Donghe**	**2.13**	**224**	P	**Pn**	**06 12 09.7**	**-0.8**
	baz=223						
EDH				S	**Sn**	**06 12 35.7**	**-1.0**
	baz=223						
ALS	**Alishan**	**2.17**	**243**	*i* P	**Pn**	**06 12 11.9**	**+0.6**
	baz=242						
ALS				*e*S	**Sn**	**06 12 37.1**	**-1.0**
	baz=242						
ELDTW	**Lidau**	**2.19**	**233**	P	**Pn**	**06 12 10.9**	**-0.4**
	baz=232						
ELDTW				S	**Sn**	**06 12 37.4**	**-0.7**
	baz=232						
WCHH	**Zhanghua**	**2.19**	**259**	*e*P	**Pn**	**06 12 10.9**	**-0.3**
	baz=258						
WCHH				*e*S	**Sn**	**06 12 37.5**	**-0.5**
	baz=258						
CHN5	**Tsauling**	**2.24**	**246**	P	**Pn**	**06 12 13.1**	**+1.1**
	baz=245						
CHN5				*e*S	**Sn**	**06 12 38.9**	**-0.4**
	baz=245						
LDUT	**Ludao**	**2.27**	**216**	*e*P	**Pn**	**06 12 11.8**	**-0.5**
	baz=215						
LDUT				*e*S	**Sn**	**06 12 38.5**	**-1.3**
	baz=215						
LONT	**Longtian**	**2.29**	**226**	*e*P	**Pn**	**06 12 14.1**	**+1.5**
	baz=225						
LONT				*e*S	**Sn**	**06 12 39.9**	**-0.5**
	baz=225						
WDLH	**Douliu**	**2.32**	**249**	*e*P	**Pn**	**06 12 14.0**	**+1.0**
	baz=248						
WDLH				*e*S	**Sn**	**06 12 40.8**	**-0.2**
	baz=248						
STYH	**Taoyuan**	**2.37**	**236**	*e*P	**Pn**	**06 12 14.5**	**+0.9**
	baz=235						
STYH				*e*S	**Sn**	**06 12 42.8**	**+0.5**
	baz=235						
TWGBT	**Beinan**	**2.39**	**225**	*e*P	**Pn**	**06 12 14.0**	**+0.1**
	baz=224						
TWGBT				*e*S	**Sn**	**06 12 42.2**	**-0.4**
	baz=224						
TWG	**Pinlang**	**2.39**	**225**	*e*P	**Pn**	**06 12 14.0**	**+0.1**
	baz=224						
WRL	**Guolierlin Hig**	**2.39**	**255**	*e*P	**Pn**	**06 12 14.1**	**+0.2**
	baz=255						
WRL				*e*S	**Sn**	**06 12 42.5**	**-0.2**
	baz=255						
TPUB	**Ta-pu**	**2.42**	**240**	P	**Pn**	**06 12 15.2**	**+0.9**
	baz=239						
TPUB				*e*S	**Sn**	**06 12 42.9**	**-0.4**
	baz=239						
CHN4	**Tsaushan**	**2.42**	**242**	P	**Pn**	**06 12 14.1**	**-0.1**
	baz=241						
CHN4				*e*S	**Sn**	**06 12 43.3**	**-0.1**
	baz=241						
WTK	**Tuku**	**2.45**	**251**	*e*P	**Pn**	**06 12 14.8**	**+0.1**
	baz=250						
WTK				*e*S	**Sn**	**06 12 43.4**	**-0.6**
	baz=250						
WTP	**Ta-pu**	**2.46**	**239**	*e*P	**Pn**	**06 12 14.9**	**+0.1**
	baz=238						
WTP				*e*S	**Sn**	**06 12 43.9**	**-0.4**
	baz=238						
TWK	**Hsinying**	**2.55**	**241**	P	**Pn**	**06 12 17.5**	**+1.5**
	baz=240						
TWK				*e*S	**Sn**	**06 12 45.9**	**-0.6**
	baz=240						
CHN1	**Nanshi**	**2.56**	**239**	*e*P	**Pn**	**06 12 17.2**	**+1.1**
	baz=238						
CHN1				*e*S	**Sn**	**06 12 46.1**	**-0.5**
	baz=238						
SGST	**Jiashian**	**2.57**	**236**	*e*P	**Pn**	**06 12 16.8**	**+0.6**
	baz=235						
SGST				*e*S	**Sn**	**06 12 46.5**	**-0.5**
	baz=235						
SLGT	**Liugui**	**2.57**	**234**	*e*P	**Pn**	**06 12 17.9**	**+1.6**
	baz=233						
SLGT				*e*S	**Sn**	**06 12 46.8**	**-0.3**
	baz=233						
SSD	**Sandimen**	**2.74**	**230**	*e*P	**Pn**	**06 12 19.2**	**+0.7**
	baz=229						
TSMG	**Majia**	**2.76**	**229**	*e*P	**Pn**	**06 12 19.7**	**+0.9**
	baz=228						
MASBT	**Mashibuluo**	**2.83**	**228**	*e*P	**Pn**	**06 12 20.6**	**+0.9**
	baz=227						
EAST	**Anshuo**	**2.85**	**222**	*e*P	**Pn**	**06 12 20.1**	**0.0**
	baz=221						
SCZT	**Fangliau**	**3.00**	**225**	*e*P	**Pn**	**06 12 23.2**	**+1.2**
	baz=224						
PTMZ	**Houxiangcun**	**3.48**	**279**	*e*P	**Pn**	**06 12 28.4**	**0.0**
	baz=278						

*UPA **11** 06:14:18.6±1.1, 8°.47N×82°.92W, h6^{km}±4^{km}, MW4.0*
*UCR **11** 06:14:18.6±1.6, 8°.46N×82°.98W, h15^{km}±5^{km}, MW3.9*
ISC 11 06:14:17.3±1.0**, 8°.46N**±0°.04×**82°.94W**±0°.03**, h29**^{km}±8^{km},
n26, σ0^{s}.63/44**, 3C-7D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CDITO	**Canoas**	**0.13**	**28**	⇑*e*P	**Pn**	**06 14 23.1**	**-0.5**
CDITO				*e*S	**Sb**	**06 14 26.2**	**-0.3**
PTPM	**Petroterminale**	**0.26**	**167**	⇑*i*P	**Pn**	**06 14 25.0**	**-0.2**
PTPM				*e*S	**Sn**	**06 14 29.6**	**-0.6**
MLIR3	**Monte Lirio, C**	**0.35**	**18**	⇓*i*P	**Pn**	**06 14 26.6**	**-0.1**
MLIR3				*e*S	**Sn**	**06 14 31.8**	**-1.1**
EDSV	**San Vito**	**0.36**	**354**	*e*P	**Pn**	**06 14 26.4**	**-0.4**
EDSV				*e*S	**Sn**	**06 14 33.1**	**-0.1**
PTJ1	**Puerto Jimnez**	**0.37**	**283**	*e*P	**Pb**	**06 14 25.7**	**+0.1**
PTJ1	**Puerto Jimnez**	**0.37**	**283**	*e*P	**Pb**	**06 14 25.8**	**+0.1**
PTJ1				*e*S	**Sn**	**06 14 32.8**	**-0.3**
BAGA3	**Bagala, Chiriq**	**0.41**	**88**	⇓*i*P	**Pn**	**06 14 27.4**	**+0.2**
BAGA3				*e*S	**Sn**	**06 14 33.5**	**-0.4**
BRU2	**Volcan**	**0.41**	**36**	*e*P	**Pn**	**06 14 27.4**	**-0.2**
BRU2				*e*S	**Sn**	**06 14 34.5**	**0.0**
BRU2	**Volcan**	**0.41**	**36**	⇓*i*P	**Pn**	**06 14 27.4**	**-0.2**
BRU2				*e*S	**Sn**	**06 14 33.8**	**-0.6**
BCO2	**Palmira**	**0.48**	**57**	⇓*i*P	**Pn**	**06 14 28.6**	**+0.1**
BCO2				*e*S	**Sn**	**06 14 36.4**	**+0.4**
DVD	**David**	**0.48**	**92**	⇑*e*P	**Pn**	**06 14 28.5**	**+0.2**
DVD				*e*S	**Sn**	**06 14 35.8**	**0.0**
LOCO3	**Loma Colorada,**	**0.52**	**95**	⇓*e*P	**Pn**	**06 14 28.8**	**0.0**
LOCO3				*e*S	**Sn**	**06 14 36.9**	**+0.3**
LNBQ3	**Los Naranjos,**	**0.59**	**56**	⇓*i*P	**Pn**	**06 14 29.8**	**-0.2**
LNBQ3				*e*S	**Sn**	**06 14 38.9**	**+0.1**
POTG	**Potrero Grande**	**0.62**	**343**	*e*P	**Pn**	**06 14 30.0**	**-0.3**
POTG				*e*S	**Sn**	**06 14 39.5**	**+0.1**
RIOS	**Rincon, Osa**	**0.62**	**293**	*e*P	**Pb**	**06 14 29.2**	**-0.5**
PSOM3	**Paja de Sombre**	**0.65**	**69**	⇓*e*P	**Pn**	**06 14 30.6**	**-0.1**
PSOM3				*e*S	**Sn**	**06 14 40.9**	**+0.9**
EDPN	**Palmar Norte**	**0.72**	**314**	*e*P	**Pn**	**06 14 31.3**	**-0.4**
EDPN				*e*S	**Sn**	**06 14 41.0**	**-0.7**
EDBA	**Buenos Aires**	**0.78**	**335**	*e*P	**Pn**	**06 14 32.9**	**+0.4**
EDBA				*e*S	**Sn**	**06 14 44.3**	**+1.0**
SRBA	**San Rafael, Bu**	**0.88**	**332**	*e*P	**Pn**	**06 14 33.7**	**-0.2**
EDDO	**Dominical**	**1.21**	**311**	*e*P	**Pb**	**06 14 41.1**	**+1.4**
CDM	**Cerro de Muert**	**1.36**	**323**	*e*P	**Pb**	**06 14 41.5**	**-1.1**
LCR2	**La Lucha 2**	**1.66**	**321**	*e*P	**Pb**	**06 14 46.0**	**-1.4**
BATAN	**Batan**	**1.69**	**345**	*e*P	**Pb**	**06 14 47.2**	**-0.6**
BATAN				*e*S	**Sb**	**06 15 09.8**	**+1.2**
RAFA	**San Farael, Vo**	**1.73**	**330**	*e*P	**Pb**	**06 14 48.0**	**-0.6**
HDC	**Heredia**	**1.93**	**323**	*e*P	**Pb**	**06 14 52.2**	**+0.3**
HDC				*e*S	**Sb**	**06 15 17.1**	**+1.5**
ARE1	**Arenal 1**	**2.66**	**319**	*e*P	**Pb**	**06 15 03.6**	**-0.7**

*IDC **11** 06:26:31.9±0.8, 9°.08S×108°.58W, h0^{km}, mb4.5/18, mb1 4.7/19, mb1mx4.5/33, mbtmp4.6/19, ML4.5/1, MS5.0/25, Ms1 5.0/25, ms1mx5.0/26, Error ellipse: s-maj=23.7km s-min=13.0km az=57.0*

*NEIC **11** 06:26:33.7±1.2, 9°.1S±0°.1×108°.6W±0°.1, h10^{km}±1^{km}, mb5.2/279, Ms_20 5.3/295, Mwb5.6/24, Mwc5.6(GCMT), Error ellipse: s-maj=24.0km s-min=17.3km az=266.0*

*NEIC **11** 06:26:34.1, 9°.16S×108°.65W, h23^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.80; $M_{\theta\theta}$0.36; $M_{\phi\phi}$-1.16; $M_{r\theta}$-0.18; $M_{\theta\phi}$3.06; $M_{\phi r}$0.91; Fault plane solution: $M_0$3.36000×10^{17} NP1:ϕ_s6.31000°, δ88.77000°, λ163.78000°. NP2:ϕ_s96.66000°, δ73.78000°, λ1.28000°. Principal axes: T 2.8449, Plg12.0000°, Azm320.0000°; N 0.8624, Plg74.0000°, Azm182.0000°; P -3.7073, Plg11.0000°, Azm53.0000°;*

*BJI **11** 06:26:34.3±0.0, 9°.20S×108°.70W, h10^{km}, mB5.5/6, Ms5.7/17, Ms7 5.4/17*

*GCMT **11** 06:26:37.7±0.2, 9°.07S±0°.01×108°.61W±0°.01, h17^{km}±1^{km}, MW5.6/145, Moment Tensor Solution. s52, c69; s145, c258; Duration: 1^{s}.5 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.39±.07; $M_{\theta\theta}$1.08±.06; $M_{\phi\phi}$-0.69±.07; $M_{r\theta}$0.05±.16; $M_{\theta\phi}$2.85±.05; $M_{\phi r}$-0.81±.18; Best double couple: $M_0$3.10200×10^{17} NP1:ϕ_s278.00000°, δ74.00000°, λ-6.00000°. NP2:ϕ_s10.00000°, δ84.00000°, λ-164.00000°. Principal axes: T 3.2320, Plg7.0000°, Azm143.0000°; N -0.2640, Plg73.0000°, Azm29.0000°; P -2.9710, Plg15.0000°, Azm235.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **11** 06:26:38, 9°.08S×108°.62W, h20^{km}, Moment Tensor Solution. Duration: 3^{s}.2 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.41; $M_{\theta\theta}$1.21; $M_{\phi\phi}$-0.80; $M_{r\theta}$0.31; $M_{\theta\phi}$3.14; $M_{\phi r}$-0.85; Fault plane solution: $M_0$3.44000×10^{17} NP1: ϕ_s278.00000°, δ76.00000°, λ-9.00000°. NP2:ϕ_s10.00000°, δ81.00000°, λ-165.00000°. Principal axes: T 3.5166, Plg4.0000°, Azm143.0000°; N -0.1629, Plg73.0000°, Azm41.0000°; P -3.3537, Plg17.0000°, Azm234.0000°;*

ISC 11 06:26:34.2±0.4**, 9°.10S**±0°.06×**108°.54W**±0°.08**, h15**^{km}**, n554,**
σ1^{s}.02/328**, mb5.1**/149**, MS5.3**/179**, 1C-1D, Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**17.95**	**182**	P	**Pn**	**06 30 42.7**	**-0.6**
	1.4nm,0.3s,baz=20,slow=4.0,SNR=4.0						
RPN				LR	LR	06 35 36.5	
	comp=Z,7µm,19.4s,baz=2.0,slow=30						
RPN	**Rapa Nui**	**17.95**	**182**		**Pn**	**06 30 42.1**	**-1.3**
PAYG	**Puerto Ayora**	**20.00**	**66**	P	Pn	06 31 08.3	0.0
PAYG				IAmb	IAmb	06 31 17.1	
	comp=Z,215nm,1.6s						
PAYG	**Puerto Ayora**	**20.00**	**66**	IAMs_20	IAMs_20	06 36 21.9	
	comp=Z,15µm,21.0s						
H06S1	**SOCORRO T**	**27.76**	**355**	T	T	07 01 18.3	
	SNR=37						
H06E1	**SOCORRO T-PHAS**	**27.80**	**355**	T	T	07 01 27.1	
	SNR=16						
TLIG	**Tlapa**	**28.26**	**20**	P	**P**	**06 32 26.4**	**-0.8**
CMIG	**Matias Romero**	**29.32**	**27**	P	**P**	**06 32 36.4**	**-0.1**
	comp=Z,6.7nm,1.0s,baz=156,slow=2.0,SNR=4.3						
CMIG				LR	LR	06 41 45.6	
	comp=Z,4µm,21.7s,baz=212,slow=31						
MOIG	**Morelia**	**29.50**	**14**	P	**P**	**06 32 39.1**	**+0.8**
MOIG				IAmb	IAmb	06 32 41.8	
	comp=Z,53nm,1.2s						
DUNO	**Dulce Nombre,**	**29.82**	**51**	P	**P**	**06 32 42.2**	**+1.2**
ATAH	**Atahualpa**	**29.90**	**89**	LR	LR	06 42 00.1	
	comp=Z,3µm,18.5s,baz=264,slow=31						
CCIG	**Comitan**	**29.99**	**33**	P	**P**	**06 32 41.3**	**-1.4**
CCIG				IAmb	IAmb	06 33 13.7	
	comp=Z,82nm,1.6s						
ORTG	**Ortega, Santa**	**30.02**	**50**	P	**P**	**06 32 43.1**	**+0.2**
MTO3	**Montecristo**	**30.11**	**39**	P	**P**	**06 32 43.9**	**+0.1**
JTS	**Las Juntas de**	**30.36**	**51**	P	**P**	**06 32 46.1**	**+0.3**
	comp=Z,6.5nm,0.9s,baz=247,slow=12,SNR=8.3						
JTS				LR	LR	06 41 48.4	
	comp=Z,8µm,21.1s,baz=295,slow=30						
JTS	**Las Juntas de**	**30.36**	**51**	P	**P**	**06 32 46.8**	**+0.9**
JTS	**Las Juntas de**	**30.36**	**51**	IAMs_20	IAMs_20	06 41 25.4	
	comp=Z,8µm,21.0s						
CRIN	**San Cristobal**	**30.41**	**45**	P	**P**	**06 32 47.5**	**+1.2**
RIOS	**Rincon, Osa**	**30.56**	**55**	P	**P**	**06 32 49.0**	**+1.5**
HDC	**Heredia**	**30.84**	**53**	P	**P**	**06 32 50.7**	**+0.5**
HDC				IAMs_20	IAMs_20	06 41 54.0	
	comp=Z,7µm,20.0s						
SRBA	**San Rafael, Bu**	**30.99**	**55**	P	**P**	**06 32 52.0**	**+0.5**
SRBA				IAmb	IAmb	06 32 54.8	
	comp=Z,42nm,1.4s						

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CDITO Canoas           31.01  56 P        P        06 32 51.4 -0.2
COVE  Coope Vega, Sa   31.05  51 P        P        06 32 52.9 +1.0
TGUH  Tegucigalpa,Un   31.22  43 eP       P        06 32 53.7 +0.3
TAOE  Nuku Hiva Isla   31.22 268 eLQ      LQ       06 39 39.8
      comp=Z,3µm,26.7s
TAOE                             eLR      LR       06 40 49.4
      comp=Z,4µm,26.0s,baz=90
TAOE  Nuku Hiva Isla   31.22 268 eT       T        07 05 14.1
      comp=Z,24nm,0.2s
BOAB  BOACO BROADBAN   31.22  47 P        P        06 32 54.0 +0.6
ACON  Acoyapa          31.26  48 P        P        06 32 53.6 -0.1
BRU2  Volcan           31.28  56 P        P        06 32 54.6 +0.5
NNA   Nana             31.28  98 LR       LR       06 41 34.5
      comp=Z,1µm,20.4s,baz=266,slow=29
OTAV  Otavalo          31.37  74 P        P        06 32 55.5 +0.3
OTAV                             IAmb     IAmb     06 33 18.7
      comp=Z,73nm,1.9s
OTAV  Otavalo          31.37  74 IAMs_20  IAMs_20  06 42 05.0
      comp=Z,6µm,20.0s
ZAIG  Zacatecas        32.20  10 P        P        06 33 02.4 +0.2
ZAIG                             IAmb     IAmb     06 33 06.0
      comp=Z,44nm,1.6s
SLBS  Sierra La Lagu   32.61 358 IAMs_20  IAMs_20  06 42 32.7
      comp=Z,5µm,20.0s
SOTA  Rioblanco        33.72  72 eP       P        06 33 14.1 -1.9
BCIP  Isla Barro Col   33.85  58 P        P        06 33 17.0 +0.5
BCIP                             IAMs_20  IAMs_20  06 43 30.9
      comp=Z,7µm,21.0s
YOTC  Yotoco, Valle    34.62  69 eP       P        06 33 22.8 -0.6
PTLC  Puerto Leguiza   34.84  76 eP       P        06 33 26.6 +1.5
PLMC  San Jos del P    35.03  68 eP       P        06 33 24.7 -2.1
CZSB  Cruzeiro do Su   35.47  91 eP       P        06 33 29.0 -1.5
CZSB  Cruzeiro do Su   35.47  91 P        P        06 33 31.2 +0.7
CZSB                             IAmb     IAmb     06 33 39.0
      comp=Z,36nm,1.3s
ORTC  Ortega, Tolima   35.61  70 eP       P        06 33 31.5 -0.3
CBOC  Ciudad Bolivar   35.67  67 eP       P        06 33 31.5 -0.9
ANIL  Santa Ana        35.68  69 eP       P        06 33 35.3 +2.7
CAPC  Capurgana        35.71  61 eP       P        06 33 32.4 -0.1
DBBC  Dabeiba          35.98  65 eP       P        06 33 38.2 +3.3
GUY2C Guyana, Caldas   36.00  68 eP       P        06 33 36.3 +0.7
HELC  Santa Helena     36.24  66 eP       P        06 33 35.3 -2.2
H03N2 Juan Fernandez   36.48 136 T        T        07 12 24.8
      baz=308,slow=77,SNR=331
H03N1 Juan Fernandez   36.49 136 T        T        07 12 18.5
      baz=308,slow=77,SNR=486
H03N3 Juan Fernandez   36.49 136 T        T        07 12 24.3
      baz=308,slow=77,SNR=72
NORC  Norcasia         36.59  68 eP       P        06 33 41.1 +1.0
ROSC  El Rosal         36.81  69 P        P        06 33 42.7 +0.3
      comp=Z,3.8nm,0.6s,baz=205,slow=6.6,SNR=8.3
ROSC                             LR       LR       06 45 58.6
      comp=Z,3µm,21.7s,baz=257,slow=32
ROSC  El Rosal         36.81  69 P        P        06 33 42.5 +0.1
ROSC                             IAmb     IAmb     06 34 24.3
      comp=Z,114nm,2.0s
UREC  San Jos de Ur    36.90  64 eP       P        06 33 40.2 -2.6
VILC  Villavicencio,   37.13  71 eP       P        06 33 46.0 +1.1
MOTC  Monteria, Cord   37.25  62 eP       P        06 33 47.0 +1.3
MOTC  Monteria, Cord   37.25  62 P        P        06 33 45.8 +0.1
CHIC  Chingaza         37.28  70 eP       P        06 33 49.9 +3.4
SPBC  San Pablo de B   37.35  68 eP       P        06 33 47.9 +1.2
ZARC  Zaragoza, Cauc   37.39  65 eP       P        06 33 44.0 -2.8
ZARC  Zaragoza, Cauc   37.39  65 P        P        06 33 46.9  0.0
ZARC                             IAmb     IAmb     06 33 50.5
      comp=Z,34nm,1.2s
HSIG                   37.97 357 P        P        06 33 51.1 -0.4
HSIG                             IAmb     IAmb     06 34 01.6
      comp=Z,26nm,1.0s
833A  Chaparral WMA,   38.24  13 P        P        06 33 55.0 +1.2
      baz=195
BRRC  Barranca, Sant   38.26  66 eP       P        06 33 53.7 -0.5
RUSC  La Rusia         38.35  68 eP       P        06 33 57.6 +2.0
TXAR  Lajitas Array    38.49   7 P        P        06 33 56.2 +0.1
      comp=Z,3.0nm,1.1s,baz=186,slow=10,SNR=10
TXAR                             LR       LR       06 47 06.6
      comp=Z,1µm,18.7s,baz=0.0,slow=32
TXAR  Lajitas Array    38.49   7 P        P        06 33 55.9 -0.1
TX31  Lajitas Ar. Si   38.49   7 P        P        06 33 55.9 -0.1
TX31                             IAmb     IAmb     06 34 31.2
      comp=Z,70nm,1.8s
TX32  Lajitas Array    38.49   7 P        P        06 33 55.8 -0.3
BARC  Barichara        38.53  67 eP       P        06 33 56.6 -0.2
SMLC  San Martn de     38.66  64 eP       P        06 33 53.7 -3.9
TBTG  Tabatinga, AM    38.66  85 eP       P        06 33 56.8 -0.9
TBTG  Tabatinga, AM    38.66  85 P        P        06 33 58.2 +0.6
PATCX Punta Patache    38.77 112 P        P        06 33 59.0 +0.4
PATCX                            IAmb     IAmb     06 34 01.8
      comp=Z,89nm,1.1s
PATCX                            IAMs_20  IAMs_20  06 45 30.1
      comp=Z,4µm,19.0s
PB16  IPOC Station P   38.94 108 P        P        06 34 00.7 +0.1
PB10  IPOC Station P   39.03 116 IAMs_20  IAMs_20  06 45 36.8
      comp=Z,5µm,19.0s
OCAC  Ocana            39.08  65 P        P        06 34 01.6 +0.2
PB04  IPOC Station P   39.10 114 P        P        06 34 00.7 -0.7
PB04                             IAMs_20  IAMs_20  06 45 37.8
      comp=Z,4µm,20.0s
PB07  IPOC Station P   39.20 113 P        P        06 34 02.1 -0.2
PB07                             IAmb     IAmb     06 34 05.2
      comp=Z,38nm,1.1s
PB07                             IAMs_20  IAMs_20  06 45 41.5
      comp=Z,5µm,20.0s
PB01  IPOC Station P   39.42 112 P        P        06 34 04.3 +0.2
PB01                             IAmb     IAmb     06 34 07.9
      comp=Z,82nm,1.1s
PB01                             IAMs_20  IAMs_20  06 45 40.5
      comp=Z,5µm,21.0s
PB14  IPOC Station P   39.46 118 IAMs_20  IAMs_20  06 45 58.1
      comp=Z,5µm,18.0s
PB08  IPOC Station P   39.56 111 P        P        06 34 05.0 -0.5
PB08                             IAMs_20  IAMs_20  06 45 47.2
      comp=Z,3µm,20.0s
PB06  IPOC Station P   39.71 115 P        P        06 34 06.9 +0.4
PB06                             IAmb     IAmb     06 34 09.8
      comp=Z,132nm,1.7s
PB06                             IAMs_20  IAMs_20  06 45 35.8
      comp=Z,5µm,22.0s
TAMC  Tame, Arauca     39.74  68 eP       P        06 34 05.3 -1.4
PB09  IPOC Station P   39.80 113 P        P        06 34 08.2 +0.9
PB09                             IAmb     IAmb     06 34 11.4
      comp=Z,66nm,1.2s
PB09                             IAMs_20  IAMs_20  06 46 00.4
      comp=Z,3µm,20.0s
PB15  IPOC Station P   39.92 115 IAMs_20  IAMs_20  06 45 54.3
      comp=Z,4µm,20.0s
LPAZ  La Paz           40.01 104 P        P        06 34 10.3 +0.8
      comp=Z,19nm,0.8s,baz=277,slow=5.8,SNR=51
LPAZ                             LR       LR       06 47 01.4
      comp=Z,2µm,19.8s,baz=260,slow=31
LPAZ  La Paz           40.01 104 eP       P        06 34 09.2 -0.4
LPAZ  La Paz           40.01 104 P        P        06 34 10.5 +0.9
JCT   Junction City    40.23  12 P        P        06 34 11.4 +0.8
      baz=194
JCT   Junction City    40.23  12 P        P        06 34 10.5  0.0
JCT                              IAmb     IAmb     06 34 13.4
      comp=Z,78nm,1.9s
319A  Douglas          40.25 359 P        P        06 34 09.9 -0.8
LVC   Limon Verde      40.28 114 P        P        06 34 12.6 +1.1
      comp=Z,21nm,1.0s,baz=264,slow=6.8,SNR=14
LVC                              LR       LR       06 46 26.8
      comp=Z,4µm,20.3s,baz=281,slow=30
LVC   Limon Verde      40.28 114 P        P        06 34 11.1 -0.4
LVC                              IAmb     IAmb     06 34 15.7
      comp=Z,71nm,1.3s
LVC   Limon Verde      40.28 114 IAMs_20  IAMs_20  06 46 26.0
      comp=Z,4µm,20.0s
SOR   Soroa            40.37  38 P        P        06 34 11.8  0.0
SOR                              IAmb     IAmb     06 34 13.8
      comp=Z,67nm,1.4s
LCO   Las Campanas     40.63 124 IAMs_20  IAMs_20  06 46 02.6
      comp=Z,5µm,21.0s
MNTX  Cornudas Mount   40.68   4 P        P        06 34 14.7 +0.5
      baz=185
MNTX  Cornudas Mount   40.68   4 P        P        06 34 13.3 -0.9
HKT   Hockley          40.70  17 P        P        06 34 13.9 -0.3
PPT   Papeete          40.73 254 LR       LR       06 46 44.2
      comp=Z,3µm,18.9s,baz=80,slow=30
PPT2  Papeete2         40.74 254 eS       S        06 40 27.5 +2.2
      comp=Z,609nm,26.2s
PPT2                             eLQ      LQ       06 43 37.0
      comp=Z,9µm,29.8s
PPT2                             eLR      LR       06 45 21.6
      comp=Z,9µm,26.0s,baz=78
AF01  San Pedro de A   41.01 115 P        P        06 34 16.3 -1.2
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435B  Jarrell          41.02  14 P        P        06 34 18.0 +1.0
435B                             IAmb     IAmb     06 34 20.0
      comp=Z,73nm,1.6s
214A  Organ Pipe Nat   41.02 354 P        P        06 34 16.6 -0.5
      baz=174
TBI   Tubuai           41.60 245 eS       S        06 40 39.4 +1.4
      comp=Z,974nm,24.9s
TBI                              eLQ      LQ       06 44 02.8
      comp=Z,4µm,31.2s
TBI                              eLR      LR       06 45 50.4
      comp=Z,8µm,27.8s,baz=73
TBI   Tubuai           41.60 245 eT       T        07 18 23.2
      comp=Z,5.4nm,0.2s
ETMB  Extrema          41.74  95 eP       P        06 34 22.0 -1.2
ETMB  Extrema          41.74  95 P        P        06 34 22.8 -0.4
SDV   Santo Domingo    41.77  66 LR       LR       06 49 06.6
      comp=Z,2µm,21.0s,baz=238,slow=32
SDV   Santo Domingo    41.77  66 eP       P        06 34 22.8 -0.8
SDV   Santo Domingo    41.77  66 eP       P        06 34 24.6 +1.0
SDV   Santo Domingo    41.77  66 P        P        06 34 23.4 -0.2
113A  Mohawk Valley,   41.93 353 P        P        06 34 24.4  0.0
WHTX  Lake Whitney,    42.21  14 P        P        06 34 27.5 +0.8
      baz=196
WHTX  Lake Whitney,    42.21  14 P        P        06 34 26.7  0.0
WHTX                             IAmb     IAmb     06 34 29.1
      comp=Z,64nm,1.5s
GO05  Huala            42.23 133 P        P        06 34 25.9 -1.1
GO05                             IAmb     IAmb     06 34 29.0
      comp=Z,39nm,1.1s
441A  DeRidder         42.27  20 P        P        06 34 27.3 +0.1
PEL   Peldehue         42.30 130 IAMs_20  IAMs_20  06 46 51.5
      comp=Z,5µm,21.0s
ABTX  Abilene, Hawle   42.35  11 P        P        06 34 29.1 +1.3
      baz=193
MT05  Renca            42.36 130 P        P        06 34 28.0 -0.2
MONP2 Monument Peak    42.42 350 P        P        06 34 30.2 +1.5
      baz=169
109C  Camp Elliot, M   42.54 349 IAMs_20  IAMs_20  06 47 37.8
      comp=Z,4µm,18.0s
BO01  Tunca            42.55 132 P        P        06 34 28.3 -1.3
BO01                             IAmb     IAmb     06 34 31.8
      comp=Z,30nm,0.9s
237A  Washetta, Mont   42.64  16 P        P        06 34 31.5 +1.3
237A                             IAmb     IAmb     06 34 33.1
      comp=Z,99nm,1.4s
NATX  Nacogdoches      42.74  18 P        P        06 34 32.9 +1.9
      baz=200
NATX  Nacogdoches      42.74  18 P        P        06 34 31.1 +0.1
NATX                             IAmb     IAmb     06 34 33.9
      comp=Z,76nm,1.7s
Y22D  IRIS PASSCAL I   42.96   2 IAMs_20  IAMs_20  06 49 06.9
      comp=Z,3µm,19.0s
BO02  Sierra Bellavi   42.96 132 P        P        06 34 32.5 -0.5
BO02                             IAmb     IAmb     06 34 35.5
      comp=Z,34nm,0.9s
Y14A  Wickenburg       43.01 355 P        P        06 34 32.6 -0.6
PFO   Pinyon Flats O   43.13 350 IAMs_20  IAMs_20  06 47 53.5
      comp=Z,4µm,20.0s
342A  Flagon Creek P   43.14  20 P        P        06 34 34.4 +0.2
MSTX  Muleshoe         43.18   7 P        P        06 34 35.0 +0.3
      baz=188
MSTX  Muleshoe         43.18   7 P        P        06 34 34.5 -0.1
MURC  Murrieta         43.25 349 P        P        06 34 35.4 +0.2
      baz=168
X16A  Lo Mia Camp, P   43.36 357 P        P        06 34 35.5 -0.7
X18A  Snowflake        43.41 358 P        P        06 34 36.0 -0.6
IRM   Iron Mountain    43.47 352 P        P        06 34 37.8 +0.8
      baz=171
Z35A  Perchaven, San   43.54  14 P        P        06 34 37.2 -0.2
Z35A                             IAmb     IAmb     06 34 39.7
      comp=Z,86nm,1.5s
344A  Westbrook Farm   43.78  22 P        P        06 34 40.0 +0.6
ANMO  Albuquerque      43.85   2 P        P        06 34 41.0 +0.8
      comp=Z,1.4nm,0.9s,baz=137,slow=3.3,SNR=3.9
ANMO  Albuquerque      43.85   2 P        P        06 34 40.9 +0.7
ANMO  Albuquerque      43.85   2 IAMs_20  IAMs_20  06 49 47.4
      comp=Z,2µm,18.0s
W18A  Petrified Fore   43.99 359 P        P        06 34 39.9 -1.4
PASC  Pasadena Art C   43.99 348 IAMs_20  IAMs_20  06 48 20.1
      comp=Z,4µm,20.0s
BAUV  El Baul          44.13  67 P        P        06 34 41.8 -0.8
LOOK  Love County      44.19  14          P        06 34 43.0 +0.3
LOOK                             IAmb     IAmb     06 34 59.8
      comp=Z,22nm,0.9s
LC01  Cunco            44.24 138 P        P        06 34 42.3 -0.8
LC01                             IAmb     IAmb     06 34 51.5
      comp=Z,23nm,1.1s
W13A  Hualapai Mount   44.24 354 P        P        06 34 42.7 -0.7
WUAZ  Wupatki          44.45 357 IAMs_20  IAMs_20  06 49 49.3
      comp=Z,4µm,18.0s
WMOK  Wichita Mounta   44.56  11 P        P        06 34 45.8 +0.1
HATO  Hato, Curacao    44.66  62 IAMs_20  IAMs_20  06 50 43.3
      comp=Z,3µm,22.0s
Z41A  Richland Creek   44.70  19 P        P        06 34 47.8 +1.0
      baz=202
SAML  Samuel           44.77  94 P        P        06 34 46.2 -1.5
GSC   Goldstone, Bar   44.84 350 P        P        06 34 47.9 -0.2
WLAR  White Oak Lake   45.00  18 P        P        06 34 48.7 -0.5
X37A  Clayton          45.20  15          P        06 34 50.1 -0.6
X37A                             IAmb     IAmb     06 34 53.2
      comp=Z,72nm,1.6s
DWPF  Disney Wildern   45.34  34 IAMs_20  IAMs_20  06 52 05.8
      comp=Z,3µm,18.0s
U15A  North Rim        45.42 356 P        P        06 34 52.5 -0.3
U15A                             IAmb     IAmb     06 35 07.6
      comp=Z,29nm,1.7s
OKCFA Oklahoma City    45.49  13          P        06 34 53.5 +0.4
QSM   Queen of Sheba   45.50 351 P        P        06 34 51.7 -1.4
CCAR  Cane Creek       45.65  20 P        P        06 34 54.1 -0.2
MIAR  Mount Ida        45.66  17 P        P        06 34 53.6 -0.9
      baz=201
MIAR  Mount Ida        45.66  17 P        P        06 34 53.5 -0.9
GWY   Greenwater Val   45.69 351 P        P        06 34 54.0 -0.7
BCOK  Bluff Creek, N   45.69  12          P        06 34 54.3 -0.4
SHPR  Sheep Range      45.78 353 P        P        06 34 55.3 -0.2
X40A  Basin Creek Fa   45.83  18 P        P        06 34 56.4 +0.6
      baz=202
X40A  Basin Creek Fa   45.83  18 P        P        06 34 56.0 +0.2
X40A                             IAmb     IAmb     06 34 58.2
      comp=Z,41nm,1.5s
OK029 Liberty Lake     45.86  13          P        06 34 55.2 -0.8
KNB   Kanab            46.05 355 P        P        06 34 57.7 +0.1
KNB                              IAmb     IAmb     06 35 13.2
      comp=Z,26nm,1.4s
250A  Grady            46.06  27 P        P        06 34 58.2 +0.6
MVCO  Mesa Verde       46.06   0 P        P        06 34 57.7 -0.1
      baz=180
MVCO  Mesa Verde       46.06   0 P        P        06 34 57.3 -0.6
MVCO                             IAmb     IAmb     06 35 23.2
      comp=Z,22nm,1.2s
PLCA  Paso Flores      46.09 140 P        P        06 34 58.4 +0.5
      comp=Z,20nm,1.2s,baz=301,slow=10.0,SNR=14
PLCA                             LR       LR       06 49 14.6
      comp=Z,5µm,21.3s,baz=314,slow=30
PLCA  Paso Flores      46.09 140 eP       P        06 34 58.1 +0.3
PLCA  Paso Flores      46.09 140 P        P        06 34 57.2 -0.6
W39A  Magazine         46.21  17 P        P        06 34 59.1 +0.4
      baz=200
W39A  Magazine         46.21  17 P        P        06 34 58.4 -0.3
352A  Blakely          46.25  28 P        P        06 34 59.4 +0.3
352A                             IAmb     IAmb     06 35 00.8
      comp=Z,30nm,1.1s
TUL1  Leonard          46.35  14 P        P        06 34 59.8 -0.1
      baz=198
TUL1  Leonard          46.35  14 P        P        06 34 59.3 -0.5
Z47A  Carrollton       46.36  24 P        P        06 34 59.9 -0.1
Y45A  Yeager Farm, C   46.38  22 P        P        06 35 00.2 +0.1
QUOK  Quay             46.38  13          P        06 34 58.7 -1.4
QUOK                             IAmb     IAmb     06 35 15.1
      comp=Z,48nm,1.4s
GRAC  Grapevine Rang   46.59 350 P        P        06 35 03.0 +1.2
      baz=168
CCUT  Cedar City       46.62 355 P        P        06 35 02.0 -0.3
S22A  4UR Ranch, Cre   46.62   2 P        P        06 35 02.4 +0.1
      baz=182
W41B  Gary Mavity, V   46.65  18 P        P        06 35 01.6 -0.6
      baz=202
PRN   Pahroc Range     46.66 353 P        P        06 35 02.6 +0.2
PRN                              IAmb     IAmb     06 35 22.5
      comp=Z,16nm,1.2s
SDCO  Great Sand Dun   46.68   3 P        P        06 35 04.3 +1.5
      baz=184
WHAR  Wooly Hollow     46.74  18 P        P        06 35 02.7 -0.2
SIV   San Ignacio      46.76 103 P        P        06 35 03.2 -0.3
      comp=Z,13nm,0.8s,baz=279,slow=8.7,SNR=45
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SIV                              LR       LR       06 51 44.1
      comp=Z,1µm,19.9s,baz=279,slow=32
LCH   Last Change Ra   46.87 350 P        P        06 35 03.9 -0.2
T35A  Sooner Cattle    47.14  13 IAmb     IAmb     06 35 19.6
      comp=Z,18nm,0.9s
HHAR  Hobbs            47.18  16 IAmb     IAmb     06 35 08.0
      comp=Z,38nm,1.5s
U38A  Gravette         47.21  16 IAmb     IAmb     06 35 08.3
      comp=Z,34nm,1.6s
FCAR  Ozark Folk Cen   47.35  18 IAmb     IAmb     06 35 08.9
      comp=Z,40nm,1.5s
VILB  Vilhena          47.55  99 eP       P        06 35 09.4 -0.2
U40A  Yellville        47.56  17 P        P        06 35 08.6 -0.7
      baz=201
Y49A  Blount Mountai   47.61  25 IAmb     IAmb     06 35 15.6
      comp=Z,16nm,1.0s
R11A  Troy Canyon, C   47.66 353 P        P        06 35 11.0 +0.7
      baz=171
GRTK  Grand Turk       47.68  50 IAMs_20  IAMs_20  06 51 40.2
      comp=Z,3µm,22.0s
X48A  Hartselle        47.86  24 IAmb     IAmb     06 35 13.5
      comp=Z,56nm,1.9s
MACA  Manacapuru-AM    47.91  86 eP       P        06 35 12.0 -0.4
MACA  Manacapuru-AM    47.91  86 IAmb     IAmb     06 35 20.2
      comp=Z,33nm,1.2s
PLAL  Pickwick Lake    47.92  23 IAmb     IAmb     06 35 13.2
      comp=Z,37nm,1.2s
LHV   Little Huntoon   48.01 349 IAmb     IAmb     06 35 21.1
      comp=Z,16nm,1.0s
NV11  Mina Array Sit   48.13 350 IAmb     IAmb     06 35 49.4
      comp=Z,34nm,1.9s
NVAR  Mina Array Bea   48.15 350 P        P        06 35 14.3 +0.3
      comp=Z,3.4nm,1.0s,baz=178,slow=9.0,SNR=16
NVAR                             LR       LR       06 51 11.9
      comp=Z,4µm,19.5s,baz=172,slow=31
R32A  Long Quarter,    48.15  10 IAmb     IAmb     06 35 30.5
      comp=Z,25nm,1.1s
KSCO  Kaye Shedlock’   48.17   6 P        P        06 35 15.5 +1.3
      baz=188
RYN   Ryan             48.38 350 IAmb     IAmb     06 35 23.8
      comp=Z,18nm,1.1s
GOGA  Godfrey          48.54  28 P        P        06 35 17.2 +0.3
      baz=214
GOGA  Godfrey          48.54  28 IAmb     IAmb     06 35 18.1
      comp=Z,34nm,1.3s
PTLB  Pontes e Lacer   48.60 103 eP       P        06 35 16.9 -0.8
PTLB  Pontes e Lacer   48.60 103 IAmb     IAmb     06 35 19.9
      comp=Z,27nm,1.1s
S39A  Bolivar          48.67  16 IAmb     IAmb     06 35 19.5
      comp=Z,33nm,1.5s
PBMO  Poplar Bluff     48.70  19 IAmb     IAmb     06 35 19.4
      comp=Z,38nm,1.4s
T42A  Van Buren        48.72  19 IAmb     IAmb     06 35 20.2
      comp=Z,52nm,1.6s
ISCO  Idaho Springs    48.72   3 P        P        06 35 19.9 +1.3
      baz=184
ISCO  Idaho Springs    48.72   3 IAMs_20  IAMs_20  06 53 08.5
      comp=Z,3µm,18.0s
YERR  Yerington        48.86 349 IAmb     IAmb     06 35 37.7
      comp=Z,24nm,1.3s
MCCM  Marconi Confer   48.87 345 IAMs_20  IAMs_20  06 50 33.0
      comp=Z,3µm,19.0s
O20A  White River Ci   48.98   0 P        P        06 35 21.3 +0.9
      baz=180
O20A  White River Ci   48.98   0 IAmb     IAmb     06 35 47.0
      comp=Z,30nm,1.4s
PNTR  Pine Nut         49.03 349 IAmb     IAmb     06 35 32.5
      comp=Z,26nm,1.1s
WVT   Waverly          49.03  22 P        P        06 35 20.6  0.0
      baz=208
WVT   Waverly          49.03  22 P        P        06 35 20.6  0.0
PTGA  Pitinga          49.05  83 P        P        06 35 21.1 -0.2
      comp=Z,7.3nm,0.8s,baz=256,slow=7.3,SNR=15
PTGA                             LR       LR       06 53 34.4
      comp=Z,2µm,20.6s,baz=267,slow=33
PTGA  Pitinga          49.05  83 P        P        06 35 22.0 +0.8
PTGA                             IAmb     IAmb     06 35 25.3
      comp=Z,45nm,1.6s
V48A  Smith Brothers   49.08  23 IAmb     IAmb     06 35 21.9
      comp=Z,44nm,1.5s
BOAV  Boa Vista        49.19  79 eP       P        06 35 21.3 -1.1
BOAV  Boa Vista        49.19  79 P        P        06 35 21.2 -1.1
BOAV                             IAmb     IAmb     06 35 24.2
      comp=Z,49nm,1.8s
DUG   Dugway, Tooele   49.20 356 IAMs_20  IAMs_20  06 52 19.0
      comp=Z,3µm,20.0s
KSU1  Kansas State U   49.22  12 P        P        06 35 22.7 +0.6
      baz=196
KSU1  Kansas State U   49.22  12 IAmb     IAmb     06 35 24.0
      comp=Z,43nm,1.4s
R40A  Maddies Statio   49.53  17 IAmb     IAmb     06 35 26.2
      comp=Z,68nm,1.9s
CCM   Cathedral Cave   49.61  18 P        P        06 35 23.5 -1.5
      baz=203
CCM   Cathedral Cave   49.61  18 P        P        06 35 23.7 -1.4
CPCT  Cooper Cave      49.77  26 IAmb     IAmb     06 35 37.8
      comp=Z,25nm,1.2s
HODGE Hodges           49.78  29 IAmb     IAmb     06 35 28.6
      comp=Z,42nm,1.6s
NHSC  New Hope         49.91  31 IAMs_20  IAMs_20  06 54 23.7
      comp=Z,3µm,20.0s
BMN   Battle Mountai   49.93 351 IAmb     IAmb     06 35 41.8
      comp=Z,29nm,1.8s
ELK   Elko             49.98 353 IAMs_20  IAMs_20  06 53 16.4
      comp=Z,3µm,18.0s
TCUT  Toone Canyon     50.03 357 IAmb     IAmb     06 35 48.2
      comp=Z,15nm,1.0s
T47A  Sharon Grove     50.06  22 IAmb     IAmb     06 35 33.8
      comp=Z,15nm,0.8s
V51A  Loudon           50.15  26 IAmb     IAmb     06 35 30.3
      comp=Z,47nm,1.4s
U49A  Red Boiling Sp   50.16  24 IAmb     IAmb     06 35 30.1
      comp=Z,35nm,1.4s
TKL   Tuckaleechee C   50.27  26 IAmb     IAmb     06 35 31.1
      comp=Z,34nm,1.4s
JSC   Jenkinsville     50.30  30 IAmb     IAmb     06 35 32.5
      comp=Z,67nm,1.7s
P38A  Dawn             50.43  15 IAmb     IAmb     06 35 32.5
      comp=Z,75nm,1.9s
PAULI Pauline          50.47  29 IAmb     IAmb     06 35 33.0
      comp=Z,40nm,1.4s
RAR   Rarotonga        50.69 250 LR       LR       06 50 00.5
      comp=Z,501nm,19.8s,baz=83,slow=28
P40A  Paris            50.74  16 IAmb     IAmb     06 35 34.9
      comp=Z,49nm,1.6s
PDRB  Porto dos Gac    50.97  98 eP       P        06 35 34.9 -1.0
T50A  Nancy            50.98  24 IAmb     IAmb     06 35 37.1
      comp=Z,73nm,1.6s
BIRD  Birdtown, Kers   50.98  30 IAmb     IAmb     06 35 36.7
      comp=Z,29nm,1.3s
WDC   Whiskeytown Da   51.09 346 IAMs_20  IAMs_20  06 51 45.0
      comp=Z,3µm,22.0s
N35A  Tabor            51.11  13 IAmb     IAmb     06 35 53.2
      comp=Z,27nm,1.1s
TZTN  Tazewell         51.12  26 P        P        06 35 36.0 -0.5
      baz=212
TZTN  Tazewell         51.12  26 IAmb     IAmb     06 35 57.4
      comp=Z,52nm,1.4s
OLIL  Olney            51.25  21 IAmb     IAmb     06 35 39.2
      comp=Z,68nm,1.6s
CPUP  Villa Florida    51.35 116 P        P        06 35 38.1 -0.4
      comp=Z,20nm,0.9s,baz=282,slow=8.4,SNR=29
CPUP                             LR       LR       06 53 23.7
      comp=Z,3µm,21.5s,baz=280,slow=31
CPUP  Villa Florida    51.35 116 eP       P        06 35 38.8 +0.3
CPUP  Villa Florida    51.35 116 IAmb     IAmb     06 35 40.4
      comp=Z,36nm,1.1s
K22A  Casper           51.53   2 P        P        06 35 40.7 +1.0
      baz=183
V55A  Taylorsville     51.60  28 IAmb     IAmb     06 35 41.9
      comp=Z,33nm,1.1s
BW06  Boulder Array    51.62 359 P        P        06 35 39.7 -0.7
      baz=179
BW06  Boulder Array    51.62 359 IAMs_20  IAMs_20  06 54 07.1
      comp=Z,2µm,20.0s
PDAR  Pinedale Array   51.62 359 P        P        06 35 38.5 -1.9
      comp=Z,0.8nm,0.6s,baz=175,slow=7.0,SNR=8.3
PDAR                             LR       LR       06 54 36.9
      comp=Z,2µm,19.3s,baz=190,slow=33
JCC   Jacoby Creek,    51.68 345 IAMs_20  IAMs_20  06 52 06.5
      comp=Z,3µm,20.0s
U54A  Nelsons Funny    51.86  27 IAmb     IAmb     06 35 48.0
      comp=Z,26nm,1.1s
CLDB  Colider          51.92  97 eP       P        06 35 41.0 -2.0
SALV  Santo Antonio    51.92 103 eP       P        06 35 42.6 -0.3
M04C  Macdoel          52.08 347 P        P        06 35 44.3 +0.5
      baz=164
AQDB  Aquidauana       52.12 109 eP       P        06 35 44.2 -0.2
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AQDB	Aquidauana	52.12	109	IAmb	IAmb	06 35 51.8	
	comp=Z,31nm,1.3s						
YBH	Yreka Blue Hor	52.23	347	IAMs_20	IAMs_20	06 52 33.0	
	comp=Z,3µm,20.0s						
REDW	Red Top Meadow	52.25	358	IAmb	IAmb	06 35 58.2	
	comp=Z,33nm,1.6s						
R50A	Paris	52.27	24	IAmb	IAmb	06 35 46.0	
	comp=Z,52nm,1.6s						
SNOW	Snow King Moun	52.35	358	IAMs_20	IAMs_20	06 54 39.3	
	comp=Z,3µm,20.0s						
P46A	Rosedale	52.35	21	IAmb	IAmb	06 35 46.5	
	comp=Z,33nm,1.1s						
LOHW	Long Hollow	52.49	358	IAMs_20	IAMs_20	06 54 46.1	
	comp=Z,3µm,19.0s						
HDIL	Hopedale	52.51	18	IAmb	IAmb	06 35 49.2	
	comp=Z,70nm,1.6s						
ITQB	Itaqui	52.59	120	*e*P	P	06 35 46.3	-1.3
ITTB	Itaituba	52.61	89	*e*P	P	06 35 47.6	-0.5
MOOW	Moose Ponds	52.63	358	IAmb	IAmb	06 36 01.0	
	comp=Z,32nm,1.8s						
MOOW				IAMs_20	IAMs_20	06 54 48.8	
	comp=Z,4µm,20.0s						
HLID	Hailey	52.68	355	P	P	06 35 48.3	+0.1
	baz=173						
MFID	Camas Ranch	52.68	353	IAmb	IAmb	06 36 04.1	
	comp=Z,20nm,1.1s						
MFID				IAMs_20	IAMs_20	06 54 51.0	
	comp=Z,2µm,18.0s						
PP1B	Ponte de Pedra	52.74	105	*e*P	P	06 35 48.4	-0.6
CNNC	Cliffs of the	52.75	32	IAMs_20	IAMs_20	06 56 18.1	
	comp=Z,3µm,20.0s						
K05A	Summer Lake	52.79	349	IAmb	IAmb	06 36 06.6	
	comp=Z,32nm,1.2s						
P48A	Milroy	52.86	22	IAmb	IAmb	06 35 50.0	
	comp=Z,44nm,1.6s						
FLWY	Flagg Ranch	52.96	358	IAmb	IAmb	06 36 03.2	
	comp=Z,23nm,1.1s						
FLWY				IAMs_20	IAMs_20	06 55 00.1	
	comp=Z,3µm,20.0s						
SFIN	Lafayette	53.07	20	P	P	06 35 51.6	+0.7
	baz=207						
RSSD	Black Hills	53.12	4	P	P	06 35 51.9	+0.3
	baz=186						
RSSD	Black Hills	53.12	4	P	P	06 35 49.1	-2.4
P49A	Miami Univ. Ec	53.20	23	IAmb	IAmb	06 35 51.8	
	comp=Z,49nm,1.6s						
J05D	Fort Rock, OR	53.40	348	P	P	06 35 55.4	+1.9
	baz=164						
T57A	Hurt	53.45	29	IAmb	IAmb	06 35 54.8	
	comp=Z,24nm,1.2s						
PINE	Pine Mountain	53.83	349	P	P	06 35 57.5	+0.8
RLMT	Red Lodge	53.97	359	P	P	06 35 57.8	0.0
	baz=179						
BMO	Blue Mountains	54.28	352	IAMs_20	IAMs_20	06 55 22.6	
	comp=Z,2µm,19.0s						
P52A	Corning	54.32	25	P	P	06 35 60.0	-0.2
	baz=213						
Q54A	Coxs Mills	54.34	26	IAmb	IAmb	06 36 01.3	
	comp=Z,32nm,1.2s						
PLID	Pearl Lake	54.35	354	IAMs_20	IAMs_20	06 56 05.2	
	comp=Z,2µm,21.0s						
JFWS	Jewell Farm	54.39	16	P	P	06 35 59.8	-0.8
	baz=202						
JFWS	Jewell Farm	54.39	16	IAmb	IAmb	06 36 01.0	
	comp=Z,28nm,1.4s						
MALB	Monte Alegre	54.45	86	*e*P	P	06 36 01.5	-0.1
P53A	Whipple	54.51	26	IAmb	IAmb	06 36 02.5	
	comp=Z,28nm,0.9s						
BOZ	Bozeman (W)	54.51	357	P	P	06 36 01.6	0.0
	baz=176						
I37A	Lemond, Waseca	54.62	13	IAmb	IAmb	06 36 04.3	
	comp=Z,37nm,1.2s						
G08A	Pilot Rock	54.94	351	IAmb	IAmb	06 36 12.1	
	comp=Z,19nm,1.3s						
COR	Corvallis	55.08	347	IAMs_20	IAMs_20	06 54 26.4	
	comp=Z,3µm,21.0s						
O53A	New Philadelph	55.22	25	P	P	06 36 06.3	-0.4
	baz=214						
CBN	Corbin Frederi	55.32	30	IAMs_20	IAMs_20	06 57 51.9	
	comp=Z,3µm,20.0s						
L48A	N Adams	55.40	22	IAmb	IAmb	06 36 07.9	
	comp=Z,31nm,1.2s						
CPSB	Cacapava Do Su	55.44	121	*e*P	P	06 36 07.4	-1.1
PLTB	Pedras Altas	55.56	122	*e*P	P	06 36 08.6	-0.8
LAO	LASA Array	55.57	2	P	P	06 36 09.2	+0.1
	baz=183						
LAO	LASA Array	55.57	2	IAmb	IAmb	06 36 21.2	
	comp=Z,27nm,1.3s						
LAO				IAMs_20	IAMs_20	06 57 17.8	
	comp=Z,2µm,18.0s						
USHA	Ushuaia	55.59	153	P	P	06 36 09.8	+0.7
	comp=Z,13nm,0.9s,baz=344,slow=7.4,SNR=3.0						
ARAG	Araguaiana, MT	55.66	103	*e*P	P	06 36 09.4	-0.9
N53A	Lisbon	55.84	25	IAmb	IAmb	06 36 11.8	
	comp=Z,48nm,1.4s						
PTGB	Pitanga	55.85	114	*e*P	P	06 36 11.1	-0.5
MSO	Missoula	55.88	356	IAMs_20	IAMs_20	06 56 28.8	
	comp=Z,2µm,20.0s						
SPMN	Marine on St.	55.90	13	IAmb	IAmb	06 37 44.9	
	comp=Z,51nm,1.9s						
SNDB	Serra Nova Dou	56.27	98	*e*P	P	06 36 14.1	-0.6
PCMB	Pacaembu	56.34	110	*e*P	P	06 36 14.5	-0.6
O56A	Blue Knob Stat	56.39	27	P	P	06 36 16.1	+0.9
	baz=216						
G40A	Rib Lake	56.58	15	IAmb	IAmb	06 36 18.1	
	comp=Z,57nm,1.8s						
EGMT	Eagleton	56.88	359	P	P	06 36 18.7	+0.2
	baz=179						
EGMT	Eagleton	56.88	359	IAmb	IAmb	06 36 31.6	
	comp=Z,46nm,1.5s						
EGMT				IAMs_20	IAMs_20	06 57 40.3	
	comp=Z,2µm,19.0s						
MCPB	Macapa, AP	56.89	84	*e*P	P	06 36 20.2	+1.1
M54A	Oil Creek Stat	56.92	26	P	P	06 36 19.5	+0.7
	baz=215						
ITRB	Iturama	57.10	108	*e*P	P	06 36 20.4	-0.1
C09A	Chrisman Ranch	57.30	352	IAmb	IAmb	06 36 32.6	
	comp=Z,34nm,1.6s						
P60A	Greenville	57.42	30	IAMs_20	IAMs_20	06 58 44.5	
	comp=Z,2µm,20.0s						
DGMT	Dagmar	57.44	3	P	P	06 36 23.3	+0.9
	baz=185						
DGMT	Dagmar	57.44	3	IAmb	IAmb	06 36 28.2	
	comp=Z,18nm,0.9s						
DGMT	Dagmar	57.44	3	IAMs_20	IAMs_20	06 58 00.3	
	comp=Z,2µm,20.0s						
NEW	Newport	57.61	353	P	P	06 36 22.5	-1.1
NEW				IAmb	IAmb	06 36 29.4	
	comp=Z,30nm,1.8s						
NLWA	Neilton Lookou	57.87	348	IAMs_20	IAMs_20	06 56 29.3	
	comp=Z,2µm,19.0s						
FRTB	Fartura	58.01	112	*e*P	P	06 36 28.3	+1.3
N59A	State Game Lan	58.21	29	IAMs_20	IAMs_20	06 59 44.4	
	comp=Z,2µm,20.0s						
PRPB	Parauapebas	58.23	92	*e*P	P	06 36 28.8	+0.2
AGMN	Agassiz Nation	58.23	10	IAmb	IAmb	06 36 29.4	
	comp=Z,19nm,1.5s						
EYMN	Ely	58.77	13	IAMs_20	IAMs_20	06 59 59.6	
	comp=Z,2µm,18.0s						
BB19B	Bebedouro	58.86	109	*e*P	P	06 36 33.6	+0.6
TER01	Tubaro-SC	58.88	118	*e*P	P	06 36 34.0	+1.1
IPMB	Ipameri, GO	59.10	105	*e*P	P	06 36 34.3	-0.4
PAL	Palisades	59.18	30	IAMs_20	IAMs_20	07 00 17.2	
	comp=Z,3µm,21.0s						
PEXB	Peixe	59.19	99	*e*P	P	06 36 35.0	-0.2
BDFB	Brasilia	59.32	103	P	P	06 36 35.8	-0.5
	comp=Z,9.7nm,0.9s,baz=252,slow=7.0,SNR=13						
BDFB				LR	LR	07 00 10.5	
	comp=Z,603nm,18.5s,baz=282,slow=34						
BDFB	Brasilia	59.32	103	IAmb	IAmb	06 36 37.7	
	comp=Z,12nm,1.0s						
RCLB	Rio Claro- Sao	59.84	111	*e*P	P	06 36 39.6	-0.1
ULM	Lac du Bonnet	60.12	9	P	P	06 36 41.0	0.0
	comp=Z,6.5nm,0.9s,baz=208,slow=5.3,SNR=5.1						
ULM				LR	LR	06 59 59.0	
	comp=Z,596nm,21.2s,baz=196,slow=33						
ULM	Lac du Bonnet	60.12	9	P	P	06 36 40.3	-0.6
ULM				IAmb	IAmb	06 36 41.3	
	comp=Z,24nm,1.4s						
SMTB	Santa Maria do	60.14	95	*e*P	P	06 36 42.5	+0.7
PET01	Itanhaem-SP	60.16	113	*e*P	P	06 36 42.1	+0.3
TRY	Troy	60.61	29	IAMs_20	IAMs_20	07 00 55.9	
	comp=Z,2µm,20.0s						
J59A	Piesco	60.78	28	P	P	06 36 46.0	+0.4
HRV	Adam Dziewonsk	61.47	30	IAMs_20	IAMs_20	07 01 14.7	
	comp=Z,2µm,21.0s						
WES	Weston	61.50	31	IAMs_20	IAMs_20	07 01 14.5	
	comp=Z,3µm,21.0s						
PARB	Paraibuna	61.63	112	*e*P	P	06 36 52.0	+0.1
LONY	Lake Ozonia	61.64	27	IAMs_20	IAMs_20	07 01 37.1	
	comp=Z,2µm,20.0s						
HNH	Hanover	62.00	29	IAMs_20	IAMs_20	07 01 55.8	
	comp=Z,2µm,20.0s						
EDM	Edmonton	62.21	357	P	P	06 36 54.2	-0.9
VT1	Waterbury	62.25	28	IAMs_20	IAMs_20	07 01 59.2	
	comp=Z,2µm,20.0s						
BSCB	Bom Sucesso	62.36	109	*e*P	P	06 36 57.0	+0.1
SDBA	SAO DESIDERIO	62.48	99	*e*P	P	06 36 57.2	-0.6
LBNH	Lisbon	62.58	29	IAMs_20	IAMs_20	07 02 14.0	
	comp=Z,2µm,21.0s						
JANB	Januaria	62.91	102	*e*P	P	06 36 58.8	-1.8
MC01	Montes Claros	63.20	104	*e*P	P	06 36 58.5	-4.0
DIAM	Diamantina, MG	63.42	106	*e*P	P	06 37 04.2	+0.2
VAS01	Vassouras-RJ	63.62	110	*e*P	P	06 37 06.1	+0.9
PMSA	Palmer Station	63.65	160	*e*P	P	06 37 06.9	+2.4
FFC	Flin Flon	63.82	4	IAMs_20	IAMs_20	07 02 13.0	
	comp=Z,2µm,19.0s						
WVL	Waterville	63.92	30	IAMs_20	IAMs_20	07 02 28.4	
	comp=Z,2µm,20.0s						
ROSB	Rosrio	64.29	89	*e*P	P	06 37 10.9	+1.3
PKME	Peaks-Kenny Pk	64.60	30	IAMs_20	IAMs_20	07 02 59.6	
	comp=Z,2µm,21.0s						
DUB01	Friburgo-RJ	64.60	110	*e*P	P	06 37 12.4	+0.7
CAM01	Campos-RJ	65.27	110	*e*P	P	06 37 15.9	0.0
E62A	Clayton Lake	65.47	28	P	P	06 37 18.0	+1.2
SJMB	Sao Joao De Ma	65.77	106	*e*P	P	06 37 20.9	+1.7
BSFB	Barra de Sao F	66.08	107	*e*P	P	06 37 21.6	+0.4
ALF01	Guarapari-ES	66.15	108	*e*P	P	06 37 23.0	+1.4
PQI	Presque Isle	66.23	29	IAMs_20	IAMs_20	07 04 14.7	
	comp=Z,2µm,21.0s						
NBPS	Pedro II - PI	66.72	91	*e*P	P	06 37 27.8	+2.3
NAN01	Guarapari, ES	66.80	106	*e*P	P	06 37 27.6	+1.7
GUA01	Guaratinga, BA	67.17	104	*e*P	P	06 37 28.6	+0.4
NBPN	Ponto Novo - B	67.20	98	*e*P	P	06 37 29.3	+0.8
CMC01	Camacan, BA	67.51	103	*e*P	P	06 37 30.7	+0.3
GDU01	Guandu, BA	67.57	101	*e*P	P	06 37 30.9	+0.2
NBIT	Itapeh - BA	67.62	102	*e*P	P	06 37 31.6	+0.5
NBLA	Lagarto - SE	69.55	98	*e*P	P	06 37 43.0	-0.2
NBAN	Anadia - AL	71.17	97	*e*P	P	06 37 54.8	+1.7
YKA	Yellowknife Ar	71.53	357	P	P	06 37 54.3	+0.1
	comp=Z,2.8nm,0.7s,baz=158,slow=6.7,SNR=2.2						
YKA				LR	LR	07 06 10.2	
	comp=Z,766nm,19.0s,baz=0.0,slow=33						
TGTN	Hyland Airport	72.08	350	P	P	06 37 58.3	+0.6
	baz=160						
URZ	Urewera	72.15	233	IAMs_20	IAMs_20	07 04 04.6	
	comp=Z,2µm,18.0s						
SCHQ	Schefferville	72.64	24	LR	LR	07 08 18.9	
	comp=Z,1µm,21.5s,baz=226,slow=34						
BKZ	Black Stump Fm	72.67	232	IAMs_20	IAMs_20	07 04 46.4	
	comp=Z,2µm,20.0s						
BCPM	Bancas Point	73.15	344	IAMs_20	IAMs_20	07 02 53.4	
	comp=Z,2µm,20.0s						
HIZ	Hauiti	73.92	233	IAMs_20	IAMs_20	07 02 39.7	
	comp=Z,2µm,22.0s						
TABL	Table Mountain	73.97	344	IAMs_20	IAMs_20	07 03 16.1	
	comp=Z,2µm,20.0s						
YAH	Yahtse	74.07	344	IAMs_20	IAMs_20	07 02 46.7	
	comp=Z,2µm,20.0s						
SUCK	Suckling Hills	74.42	343	IAMs_20	IAMs_20	07 03 07.9	
	comp=Z,2µm,20.0s						
TGL	Tana Glacier	74.70	343	IAMs_20	IAMs_20	07 04 17.4	
	comp=Z,2µm,18.0s						
CRQM	Cirque	74.79	343	IAMs_20	IAMs_20	07 04 19.3	
	comp=Z,2µm,18.0s						
VRDI	Verde Repeater	75.27	343	IAMs_20	IAMs_20	07 03 23.3	
	comp=Z,1µm,21.0s						
MCARA	McCarthy VSAT	75.27	344	IAMs_20	IAMs_20	07 03 05.4	
	comp=Z,1µm,20.0s						
BMRM	Bremner River	75.39	343	IAMs_20	IAMs_20	07 03 39.4	
	comp=Z,2µm,20.0s						
HIN	Hinchinbrook I	75.51	342	IAMs_20	IAMs_20	07 04 02.6	
	comp=Z,2µm,18.0s						
GLB	Gilahina Butte	75.54	343	IAMs_20	IAMs_20	07 04 52.5	
	comp=Z,1µm,18.0s						
M27K	Edge Creek, AK	75.77	345	IAmb	IAmb	06 38 38.0	
	comp=Z,24nm,1.4s						
FID	Port Fidalgo	75.78	342	IAMs_20	IAMs_20	07 04 40.2	
	comp=Z,2µm,19.0s						
N25K	Chitina, Valde	75.90	343	IAMs_20	IAMs_20	07 03 58.0	
	comp=Z,1µm,20.0s						
GLI	Glacier Island	76.07	342	IAMs_20	IAMs_20	07 03 23.4	
	comp=Z,1µm,20.0s						
M26K	Nabesna, AK	76.10	344	IAmb	IAmb	06 38 31.4	
	comp=Z,18nm,1.4s						
M26K				IAMs_20	IAMs_20	07 04 26.3	
	comp=Z,1µm,19.0s						
KLU	Klutina	76.19	343	IAMs_20	IAMs_20	07 04 14.7	
	comp=Z,2µm,21.0s						
L27K	Beaver Creek,	76.34	345	IAMs_20	IAMs_20	07 04 21.7	
	comp=Z,2µm,20.0s						
PWL	Port Wells	76.44	341	IAMs_20	IAMs_20	07 03 32.3	
	comp=Z,1µm,21.0s						
DAWY	Dawson	76.60	347	IAmb	IAmb	06 38 34.4	
	comp=Z,18nm,1.2s						
L26K	Log Cabin Wild	76.70	344	IAMs_20	IAMs_20	07 04 30.3	
	comp=Z,2µm,20.0s						
SCM	Sheep Creek Mo	76.88	342	IAMs_20	IAMs_20	07 04 23.9	
	comp=Z,1µm,20.0s						
KNK	Knik Glacier	76.90	342	IAMs_20	IAMs_20	07 06 05.5	
	comp=Z,1µm,18.0s						
RC01	Rabbit Creek A	77.07	341	IAMs_20	IAMs_20	07 05 31.8	
	comp=Z,1µm,18.0s						
SML	Sawmill	77.17	342	IAMs_20	IAMs_20	07 06 18.4	
	comp=Z,1µm,19.0s						
PAX	Paxson	77.23	344	P	P	06 38 27.9	+0.3
	baz=143						
PMR	Palmer	77.25	341	P	P	06 38 28.0	+0.5
	baz=139						
PMR	Palmer	77.25	341	IAmb	IAmb	06 38 39.5	
	comp=Z,20nm,1.1s						
GHO	Glory Hole Cre	77.32	342	IAMs_20	IAMs_20	07 04 04.6	
	comp=Z,1µm,19.0s						
DOT	Dot Lake	77.40	345	IAmb	IAmb	06 38 37.1	
	comp=Z,29nm,1.6s						
I29M	Ogilvie Camp,	77.48	348	P	P	06 38 29.5	+0.7
	baz=150						
WAT6	Susitna Watana	77.58	343	P	P	06 38 30.6	+1.0
	baz=140						
EGAK	Eagle	77.61	346	P	P	06 38 30.5	+1.0
	baz=147						
EGAK	Eagle	77.61	346	IAmb	IAmb	06 38 39.1	
	comp=Z,24nm,1.4s						
EGAK				IAMs_20	IAMs_20	07 05 08.4	
	comp=Z,2µm,22.0s						
SCRK	Sand Creek	77.65	345	P	P	06 38 30.8	+1.0
	baz=144						
SCRK	Sand Creek	77.65	345	P	P	06 38 30.9	+1.0
SCRK				IAmb	IAmb	06 38 40.7	
	comp=Z,39nm,1.8s						
SCRK				IAMs_20	IAMs_20	07 05 00.3	
	comp=Z,2µm,21.0s						
SUA	Susitna One	77.67	341	IAMs_20	IAMs_20	07 04 18.8	
	comp=Z,2µm,22.0s						
RIDG	Independent Ri	77.68	344	P	P	06 38 29.6	-0.4
	baz=143						
RIDG	Independent Ri	77.68	344	IAmb	IAmb	06 38 40.0	
	comp=Z,42nm,1.4s						
DHY	Denali Highway	77.86	343	IAmb	IAmb	06 38 45.2	
	comp=Z,16nm,1.3s						
DHY				IAMs_20	IAMs_20	07 05 07.8	
	comp=Z,2µm,21.0s						
J26L	Joseph Creek	77.97	345	P	P	06 38 31.0	-0.6
	baz=145						
EPYK	Eagle Plains	78.04	349	P	P	06 38 31.8	-0.2
	baz=152						
EPYK	Eagle Plains	78.04	349	IAmb	IAmb	06 38 42.3	
	comp=Z,31nm,1.1s						
EPYK				IAMs_20	IAMs_20	07 10 00.9	
	comp=Z,1µm,20.0s						
CUT	Chulitna	78.22	342	IAMs_20	IAMs_20	07 04 20.2	
	comp=Z,2µm,22.0s						
SKT	Skwentna	78.31	341	IAMs_20	IAMs_20	07 04 28.6	
	comp=Z,2µm,21.0s						
RND	Reindeer	78.54	343	IAmb	IAmb	06 38 46.9	
	comp=Z,24nm,1.1s						
RND				IAMs_20	IAMs_20	07 05 27.9	
	comp=Z,2µm,21.0s						
HDA	Harding Lake	78.78	344	IAMs_20	IAMs_20	07 05 59.1	
	comp=Z,1µm,19.0s						
MCK	McKinley	78.81	343	P	P	06 38 37.2	+1.0
	baz=139						
MCK	McKinley	78.81	343	IAmb	IAmb	06 38 48.3	
	comp=Z,20nm,1.2s						
MCK				IAMs_20	IAMs_20	07 06 06.0	
	comp=Z,2µm,19.0s						
TRF	Thorofare Moun	79.00	342	P	P	06 38 38.1	+0.7
	baz=138						
TRF	Thorofare Moun	79.00	342	IAmb	IAmb	06 38 56.3	
	comp=Z,71nm,2.0s						
TRF				IAMs_20	IAMs_20	07 05 31.0	
	comp=Z,1µm,21.0s						
ILAR	Eielson Array	79.05	344	P	P	06 38 36.4	-1.1
	comp=Z,1.5nm,0.8s,baz=165,slow=4.5,SNR=12						
ILAR				LR	LR	07 06 28.7	
	comp=Z,955nm,19.9s,baz=147,slow=30						
WRH	Wood River Hil	79.14	344	IAmb	IAmb	06 38 50.0	
	comp=Z,24nm,1.1s						
WRH				IAMs_20	IAMs_20	07 06 04.7	
	comp=Z,1µm,21.0s						
CCB	Clear Creek Bu	79.20	344	IAMs_20	IAMs_20	07 06 09.2	
	comp=Z,1µm,20.0s						
M19K	Big River Lodg	79.20	340	P	P	06 38 39.3	+0.9
	baz=134						
INK	Inuvik	79.22	351	IAmb	IAmb	06 38 49.2	
	comp=Z,30nm,1.4s						
KTH	Kantishna Hill	79.27	342	IAMs_20	IAMs_20	07 07 35.1	
	comp=Z,1µm,18.0s						
PRP	Porcupine Dome	79.28	345	P	P	06 38 40.1	+1.1
	baz=143						
PRP	Porcupine Dome	79.28	345	IAmb	IAmb	06 38 49.8	
	comp=Z,39nm,1.5s						
PRP				IAMs_20	IAMs_20	07 06 41.5	
	comp=Z,2µm,19.0s						
COLA	College	79.39	344	IAMs_20	IAMs_20	07 06 05.3	
	comp=Z,1µm,20.0s						
TCOL	CIGO, UAF Yank	79.39	344	IAMs_20	IAMs_20	07 06 16.3	
	comp=Z,1µm,21.0s						
POKR	Poker Plat Res	79.46	344	IAMs_20	IAMs_20	07 05 40.2	
	comp=Z,1µm,22.0s						
NEA2	Nenana	79.51	343	P	P	06 38 39.5	-0.5
	baz=139						
NEA2	Nenana	79.51	343	IAmb	IAmb	06 38 50.5	
	comp=Z,56nm,2.0s						
NEA2				IAMs_20	IAMs_20	07 06 59.4	
	comp=Z,1µm,20.0s						
CAST	Castle Rocks	79.53	342	IAMs_20	IAMs_20	07 05 21.9	
	comp=Z,2µm,22.0s						
MDM	Murphy Dome	79.55	344	IAMs_20	IAMs_20	07 06 19.7	
	comp=Z,1µm,21.0s						
L19K	White Mountain	79.56	340	P	P	06 38 39.4	-1.0
	baz=134						
L19K	White Mountain	79.56	340	P	P	06 38 39.2	-1.2
L19K				IAmb	IAmb	06 38 50.7	
	comp=Z,63nm,1.8s						
BPAW	Bear Paw Mtn.	79.69	342	IAMs_20	IAMs_20	07 06 03.3	
	comp=Z,1µm,21.0s						
I23K	Minto, Yukon-K	80.01	344	P	P	06 38 43.5	+0.8
	baz=139						
I23K	Minto, Yukon-K	80.01	344	IAmb	IAmb	06 38 54.5	
	comp=Z,25nm,1.2s						
I23K				IAMs_20	IAMs_20	07 07 35.7	
	comp=Z,1µm,19.0s						
SBA	Scott Base	80.05	192	P	P	06 38 44.7	+1.9
SBA				IAmb	IAmb	06 38 58.4	
	comp=Z,31nm,1.6s						
H24K	Noodor Dome	80.14	345	IAmb	IAmb	06 38 54.3	
	comp=Z,30nm,1.8s						
H24K				IAMs_20	IAMs_20	07 06 44.1	
	comp=Z,2µm,21.0s						
MLY	Manley	80.31	343	P	P	06 38 44.0	-0.4
	baz=138						
MLY	Manley	80.31	343	IAmb	IAmb	06 38 56.3	
	comp=Z,26nm,1.3s						
MLY				IAMs_20	IAMs_20	07 07 32.6	
	comp=Z,1µm,20.0s						
H23K	Yukon River	80.57	344	P	P	06 38 46.1	+0.4
	baz=139						
H23K	Yukon River	80.57	344	IAMs_20	IAMs_20	07 08 05.6	
	comp=Z,1µm,19.0s						
J20K	Nowinta River	80.71	342	P	P	06 38 46.7	+0.2
	baz=134						
J20K	Nowinta River	80.71	342	IAMs_20	IAMs_20	07 07 45.2	
	comp=Z,1µm,20.0s						
I21K	Tanana	80.78	343	P	P	06 38 46.5	-0.3
	baz=137						
I21K	Tanana	80.78	343	IAmb	IAmb	06 38 58.3	
	comp=Z,50nm,1.6s						
I21K				IAMs_20	IAMs_20	07 07 36.9	
	comp=Z,1µm,18.0s						
QSPA	South Pole Qui	80.98	180	P	P	06 38 48.3	+0.1
QSPA				IAmb	IAmb	06 39 06.6	
	comp=Z,22nm,1.0s						
QSPA	South Pole Qui	80.98	180	IAMs_20	IAMs_20	07 07 23.9	
	comp=Z,1µm,21.0s						
VNDA	Vanda	81.10	193	LR	LR	07 07 20.7	
	comp=Z,208nm,20.8s,baz=100,slow=30						
H21K	Melozitna Rive	81.36	343	P	P	06 38 50.6	+0.7
	baz=136						
H21K	Melozitna Rive	81.36	343	IAmb	IAmb	06 39 01.8	
	comp=Z,23nm,1.2s						
H21K				IAMs_20	IAMs_20	07 07 55.4	
	comp=Z,1µm,19.0s						
A36M	Sachs Harbour	81.66	355	P	P	06 38 52.3	+1.0
	baz=163						
A36M	Sachs Harbour	81.66	355	P	P	06 38 50.7	-0.7
A36M				IAmb	IAmb	06 38 57.4	
	comp=Z,19nm,0.9s						
A36M				IAMs_20	IAMs_20	07 13 02.4	
	comp=Z,1µm,18.0s						
COLD	Coldfoot	81.81	345	P	P	06 38 52.6	+0.3
	baz=139						
DZM	Mont Dzumac	82.05	249	*e*LR	LR	07 04 37.8	
	comp=Z,1µm,27.1s						
TOLK	Toolik Lake Re	82.72	346	IAMs_20	IAMs_20	07 08 35.3	
	comp=Z,2µm,20.0s						
VNA3	Neumayer Olymp	84.30	161	P	P	06 39 04.5	-0.7
VNA1	Neumayer--Stat	84.87	161	P	P	06 39 07.6	-0.5
VNA2	Neumayer--Watz	85.09	161	P	P	06 39 08.2	-1.0
	baz=267,slow=4.2						
RDOG	Red Dog Mine	85.94	342	IAMs_20	IAMs_20	07 09 34.5	
	comp=Z,1µm,22.0s						
SNAA	Sanae	86.31	162	P	P	06 39 14.3	-1.0
SNAA	Sanae	86.31	162	P	P	06 39 13.7	-1.6
SNAA				IAmb	IAmb	06 39 17.4	
	comp=Z,21nm,1.5s						
A21K	Barrow	86.34	346	IAMs_20	IAMs_20	07 11 11.0	
	comp=Z,1µm,21.0s						
H11S2	WAKE ISLAND Hy	87.93	289	T	T	08 16 27.6	
	baz=100,slow=75,SNR=3410						
H11S1	WAKE ISLAND Hy	87.94	289	T	T	08 16 34.8	
	baz=100,slow=75,SNR=1304						
H11S3	WAKE ISLAND Hy	87.94	289	T	T	08 16 28.9	
	baz=100,slow=75,SNR=2597						
H11N3	WAKE ISLAND Hy	87.95	290	T	T	08 16 28.6	
	baz=100,slow=74,SNR=261						
H11N2	WAKE ISLAND Hy	87.97	290	T	T	08 16 31.3	
	baz=100,slow=74,SNR=353						
H11N1	WAKE ISLAND Hy	87.97	290	T	T	08 16 32.7	
	baz=100,slow=74,SNR=188						
HNR	Honiara	90.01	261	IAMs_20	IAMs_20	07 11 43.4	
	comp=Z,890nm,19.0s						
PETK	Petropavlovsk-	99.46	322	LR	LR	07 15 51.6	
	comp=Z,1µm,22.0s,baz=100,slow=30						
PMG	Port Moresby	102.43	258	IAMs_20	IAMs_20	07 17 10.1	
	comp=Z,1µm,21.0s						
MA2	Magadan	103.21	329	IAMs_20	IAMs_20	07 17 56.7	
	comp=Z,784nm,22.0s						
KOWA	Kowa	106.20	78	IAMs_20	IAMs_20	07 25 39.3	
	comp=Z,698nm,20.0s						
YSS	Yuzh-Sakhalins	109.35	317	IAMs_20	IAMs_20	07 20 28.4	
	comp=Z,924nm,20.0s						
YAK	Yakutsk	112.56	334	IAMs_20	IAMs_20	07 30 23.0	
	comp=Z,685nm,19.0s						
GRFO	Grafenberg	115.96	39	IAMs_20	IAMs_20	07 27 26.7	
	comp=Z,653nm,20.0s						
GRA1	Grafenberg Arr	115.96	39	IAMs_20	IAMs_20	07 30 39.8	
	comp=Z,658nm,20.0s						
CLL	Collm	116.52	37	*e*PS	PS	06 56 02.0	-5.3
CLL				*e*PPS	PPS	06 57 12.0	
CLL				*e*SS	SS	07 02 34.0	+4.9
CLL				*e*		07 04 12.0	
CLL				*e*SSS	SSS	07 06 54.0	
CLL				*e*SSSS		07 10 30.0	
CLL				LmV		07 33 00.0	
	comp=Z,400nm,19.0s						
TIP	Timpagrande	122.84	49	IAMs_20	IAMs_20	07 32 26.0	
	comp=Z,597nm,22.0s						
MNK	Minsk	123.02	29	*i* PKP	PKiKP	06 45 30.5	+0.3
	comp=E,4.0nm,1.2s						
MNK				*i* PKP	PKiKP	06 45 30.5	+0.3
	comp=N,21nm,0.8s						

MNK				*i* PKP	PKiKP	06 45 30.5	+0.3
	comp=Z,13nm,0.8s,baz=305						
MNK				*i* PP	PP	06 47 09.4	+0.6
MNK				*i* SKP		06 49 03.3	
MNK				*i* PKS	PKSdf	06 49 06.2	-0.2
MNK				*i* PPP	PPP	06 49 45.6	
MNK				*i* SKS	SKSdf	06 52 42.6	+1.1
MNK				*i* PS	PS	06 57 04.0	-1.3
MNK				*i* SKKS	SKKSdf	07 03 09.7	-3.9
MNK				*i* SS	SS	07 03 52.6	+0.6
MNK				*i* SSS	SSS	07 08 28.8	
MNK				*i* LR	LR	07 38 30.9	
MNK				*i* LRM	MLR	07 40 41.6	
	comp=N,273nm,15.9s						
MNK				*i* LRM	MLR	07 41 18.8	
	comp=E,69nm,21.0s						
MNK				*i* LRM	MLR	07 41 52.9	
	comp=Z,435nm,19.1s						
HIA	Hailar	123.31	324	IAMs_20	IAMs_20	07 28 52.5	
	comp=Z,695nm,22.0s						
AKASG	Malin Array Be	125.89	32	PKP	PKPdf	06 45 35.1	-0.5
	comp=Z,0.7nm,0.5s,baz=290,slow=2.7,SNR=2.2						
BJT	Baijiatuau	129.76	315	IAMs_20	IAMs_20	07 38 33.7	
	comp=Z,641nm,20.0s						
NJ2	Nanjing	130.59	305	*e*PKP	PKPdf	06 45 45.3	+0.1
SONM	Songino Array	131.42	329	PKP	PKPdf	06 45 46.7	+0.2
	comp=Z,0.3nm,0.5s,baz=354,slow=2.9,SNR=1.4						
HHC	Hu-ho-hao-te	132.48	318	*e*PKP	PKPdf	06 45 45.2	-3.5
ZALV	Zalesovo Beam	134.00	349		PKPdf	06 45 49.4	-1.5
BVAR	Borovoye Array	136.19	1	PKP	PKiKP	06 45 56.0	-0.7
	comp=Z,0.9nm,0.7s,baz=243,slow=6.3,SNR=1.9						
KURK	Kurchatov	138.09	353	IAMs_20	IAMs_20	07 52 44.5	
	comp=Z,629nm,18.0s						
LZH	Lanzhou	140.14	317	*e*PKP	PKPdf	06 45 54.4	-8.7
LZH				LR	LR		
	comp=N,480nm,17.3s						
LZH				LR	LR		
	comp=E,810nm,16.0s						
LZH				LR	LR		
	comp=Z,600nm,21.1s						
VOI	Vohitsoka	140.82	142	IAMs_20	IAMs_20	07 47 14.8	
	comp=Z,479nm,19.0s						
MKAR	Makanchi Array	141.31	348	PKP	PKPdf	06 46 04.2	-0.5
	comp=Z,0.5nm,0.7s,baz=125,slow=3.4,SNR=3.5						
MAKZ	Makanchi	141.36	348	IAMs_20	IAMs_20	07 45 50.4	
	comp=Z,647nm,21.0s						
GYA	Guiyang	142.47	302	⇑PKP	PKPdf	06 46 06.4	-1.1
WMQ	Urumqi	142.63	341	*e*PKP	PKPdf	06 46 07.6	+0.4
WMQ				LR	LR		
	comp=Z,670nm,18.5s						
WMQ				LR	LR		
	comp=Z,590nm,22.9s						
WMQ				LR	LR		
	comp=Z,1μm,22.9s						
CD2	Chengdu	142.92	310	PKP	PKPdf	06 46 07.1	-1.0
LODK	Lodwar	143.70	97	PKPdf	PKPdf	06 46 09.3	-0.6
LODK				IAMs_20	IAMs_20	07 48 17.8	
	comp=Z,599nm,19.0s						
KMBO	Kilima Mbogo	144.44	105	PKP	PKPdf	06 46 11.7	+0.2
	comp=Z,7.7nm,1.0s,baz=243,slow=7.2,SNR=5.8						
KMBO	Kilima Mbogo	144.44	105	PKPdf	PKPab	06 46 09.2	-0.4
KMBO	Kilima Mbogo	144.44	105	IAMs_20	IAMs_20	07 50 33.8	
	comp=Z,597nm,19.0s						
PMBI	Palembang	144.72	252	IAMs_20	IAMs_20	07 49 17.4	
	comp=Z,602nm,19.0s						
KIBK	Kibwezi	144.81	107	IAMs_20	IAMs_20	07 45 58.2	
	comp=Z,592nm,21.0s						
KKAR	Karatay Array	146.12	1		PKPdf	06 46 11.5	-1.8
KMI	Kunming	146.25	302	⇓PKPbc	PKPdf	06 46 14.1	-0.1
KMI				LR	LR		
	comp=Z,240nm,29.4s						
KMI				LR	LR		
	comp=Z,460nm,25.5s						
KMI				LR	LR		
	comp=Z,720nm,22.6s						
AAK	Ala-Archa	146.49	356	PKPbc	PKPab	06 46 16.7	+0.5
	comp=Z,3.4nm,0.8s,baz=171,slow=6.5,SNR=6.1						
AAK	Ala-Archa	146.49	356		PKPdf	06 46 13.3	-0.7
SLVN	Son La	146.49	295	IAMs_20	IAMs_20	07 40 16.9	
	comp=Z,456nm,22.0s						
GEYT	Alibeck	148.87	21	PKPbc	PKiKP	06 46 23.6	+0.3
	comp=Z,8.7nm,0.9s,baz=250,slow=4.3,SNR=8.6						
BKNI	Bangkinang	149.29	255	IAMs_20	IAMs_20	07 45 24.9	
	comp=Z,439nm,22.0s						
KSH	Kashi	149.44	353	*e*PKPbc	PKiKP	06 46 25.9	+1.4
RAYN	Ar Rayn	151.33	57	IAMs_20	IAMs_20	08 09 08.2	
	comp=Z,492nm,19.0s						
CMAR	Chiang Mai Arr	151.77	292	PKPbc	PKPbc	06 46 28.5	-0.8
	comp=Z,4.7nm,0.6s,baz=42,slow=0.7,SNR=26						
CMAR	Chiang Mai Arr	151.77	292		PKPbc	06 46 27.2	-2.1

NEIC ***11*** *06:35:14.8±1.3, 29°.66S±0°.05×72°.15W±0°.06, h10^{km}±1^{km}, mb4.5/4, ML4.0(GUC), Error ellipse: s-maj=8.7km s-min=7.5km az=231.0*

IDC ***11*** *06:35:15.2±1.3, 29°.72S×71°.92W, h0^{km}, mb4.0/4, mb1 4.1/8, mb1mx3.9/31, mbtmp4.0/8, ML4.0/4, Error ellipse: s-maj=42.9km s-min=27.1km az=86.0*

GUC ***11*** *06:35:17.4±0.6, 29°.72S×72°.03W, h27^{km}±4^{km}, ML4.1*

ISC 11 06:35:14.4±0.7**, 29°.70S**±0°.03×**72°.14W**±0°.05**, h10^{km}, n99,** σ1^{s}**71**/104**, mb4.3**/5**, 4C-1D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	La Serena	0.81	106	⇓*i*P	Pn	06 35 30.6	-1.4
CO05				*i* S	Sb	06 35 40.4	-1.4
CO05				IAML		06 35 43.4	
	comp=N,20μm,0.8s						
CO05	La Serena	0.81	106		Pn	06 35 30.9	-1.1
CO06	Fray Jorge	1.06	156	⇑*i*P	Pn	06 35 35.3	-0.1
CO06				*i* S	Sn	06 35 48.8	-1.6
CO06				IAML		06 35 54.9	
	comp=N,4μm,0.3s						
CO06	Fray Jorge	1.06	156		Pn	06 35 35.4	-0.1
GO04	Tololo Observa	1.26	112	⇑*i*P	Pg	06 35 38.4	-0.3
GO04				*i* S	Sg	06 35 53.9	-1.1
GO04	Tololo Observa	1.26	112		Pg	06 35 38.3	-0.3
GO04	Tololo Observa	1.26	112	*i* P	Pg	06 35 38.0	-0.6
LCO	Las Campanas	1.43	62	⇑*i*P	Pg	06 35 41.4	-0.6
LCO				*i* S	Sn	06 35 59.0	-0.8
LCO	Las Campanas	1.43	62	Pn	Pg	06 35 41.2	-0.8
LCO	Las Campanas	1.43	62	*i* P	Pg	06 35 41.0	-1.0
CO03	El Pedregal	1.69	132	⇑*e*P	Pb	06 35 45.2	-0.6
CO03				*i* S	Sb	06 36 06.0	-1.2
CO03				IAML		06 36 11.9	
	comp=E,5μm,0.2s						
CO03	El Pedregal	1.69	132		Pb	06 35 45.2	-0.6
CO03	El Pedregal	1.69	132	*i* P	Pg	06 35 46.0	-0.9
AC04	Llanos de Chal	1.76	32	*e*P	Pn	06 35 45.0	0.0
AC04				*i* S	Sg	06 36 10.5	-0.6
AC04	Llanos de Chal	1.76	32	Pn	Pb	06 35 45.3	-1.6
AC04	Llanos de Chal	1.76	32	*i* P	Pn	06 35 45.0	0.0
AROD	Rodeo	2.36	102	*i* P	Pb	06 35 57.0	-0.3
ACDV	Cuesta del Vie	2.67	101	*i* P	Pb	06 36 02.0	-0.4
GO03	Copiap	2.69	39	*e*P	Pb	06 35 59.8	-2.9
GO03				*i* S	Sb	06 36 32.7	-3.0
GO03				IAML		06 36 49.5	
	comp=N,720nm,0.5s						
GO03	Copiap	2.69	39		Pn	06 35 58.8	+0.9
GO03	Copiap	2.69	39	*i* P	Pb	06 36 00.0	-2.7
ACCO	Cerro Coronel	2.81	109	*i* P	Pb	06 36 04.0	-0.9
VA06	Catapilco	2.94	166	*e*P	Pn	06 36 02.1	+0.9
VA06				IAML		06 37 03.4	
	comp=N,1μm,0.4s						
RTLS	Leoncito	3.22	131	*i* P	Pb	06 36 10.0	-1.9
VA01	Torpederas	3.34	173	*e*P	Pn	06 36 06.8	+0.1
VA01	Torpederas	3.34	173	Pn	Pn	06 36 07.2	+0.5
VA03	San Esteban	3.34	156	*e*P	Pb	06 36 09.4	-4.5
VA03				*e*S	Sn	06 36 48.9	+2.1
VA03	San Esteban	3.34	156		Pn	06 36 09.1	+2.2
VA03	San Esteban	3.34	156	*i* P	Pb	06 36 10.0	-3.9
ROC1	El Roble	3.40	164	*i* P	Pn	06 36 09.0	+1.2
AUSP	Uspallata	3.45	137	*i* P	Pb	06 36 13.0	-2.9
ZON	Zonda	3.51	122	Pn	Pn	06 36 10.1	+1.0
VCA	Vinchina	3.57	75	*i* P	Pb	06 36 15.0	-2.9
MT02	Curacav	3.65	167	*e*P	Pn	06 36 11.5	+0.5
MT02	Curacav	3.65	167		Pn	06 36 11.4	+0.5
MT02	Curacav	3.65	167	*i* P	Pn	06 36 12.0	+1.0
PEL	Peldehue	3.65	160	*e*P	Pn	06 36 12.7	+1.7
PEL				*e*S	Sn	06 36 54.7	+0.4
PEL	Peldehue	3.65	160	Pn	Pn	06 36 12.8	+1.7
PEL	Peldehue	3.65	160	*i* P	Pn	06 36 13.0	+1.9
RTCV	Cerro Valdivia	3.77	126	*i* P	Pb	06 36 17.0	-4.2
MT05	Renca	3.87	162	*e*P	Pn	06 36 15.8	+1.7
MT05	Renca	3.87	162		Pn	06 36 15.8	+1.7
MT05	Renca	3.87	162	*i* P	Pn	06 36 16.0	+1.9
FCH	Farellones	3.94	157	*e*P	Pn	06 36 17.4	+2.0
VA05	Santo Domingo	3.97	174	*e*P	Pn	06 36 15.6	+0.1
VA05	Santo Domingo	3.97	174		Pn	06 36 15.5	+0.1
ASAL	Salagasta	4.04	136	*i* P	Pb	06 36 21.0	-4.8
ARCO	CERRO ARCO	4.17	140	*i* P	Pb	06 36 24.0	-3.9
AVFE	Valle Fertil	4.17	104	*i* P	Pn	06 36 22.0	+3.8
MT09	Talagante	4.18	167	*e*P	Pn	06 36 19.9	+1.5
MT09				*i* S	Sn	06 37 08.6	+1.2
MT09	Talagante	4.18	167		Pn	06 36 19.6	+1.2
MT01	Popeta	4.22	170	*e*P	Pn	06 36 19.6	+0.8
MT01	Popeta	4.22	170		Pn	06 36 19.5	+0.7
MT01	Popeta	4.22	170	*i* P	Pn	06 36 20.0	+1.2
AAGR	Agrelo	4.41	141	*i* P	Pb	06 36 27.0	-5.0
BO04	La Punta	4.47	163	*e*P	Pn	06 36 23.9	+1.6
ACLC	CERRO LA CRUZ	4.53	88	*i* P	Pn	06 36 26.0	+2.7
BO01	Tunca	4.76	169	*e*P	Pn	06 36 26.7	+0.4
BO01	Tunca	4.76	169		Pn	06 36 26.7	+0.4
BO01	Tunca	4.76	169	*i* P	Pn	06 36 27.0	+0.7
APLL	PUNTA DE LOS L	4.92	99	*i* P	Pn	06 36 31.0	+2.5
ACHE	Chepes	4.95	108	*i* P	Pn	06 36 33.0	+4.0
BO02	Sierra Bellavi	5.21	168		Pn	06 36 33.4	+0.9
BO02	Sierra Bellavi	5.21	168	*i* P	Pn	06 36 34.0	+1.5
GO05	Huala	5.30	178		Pn	06 36 33.5	-0.2
GO05	Huala	5.30	178	*i* P	Pn	06 36 33.0	-0.7
RFA	San Rafael	5.94	149	*i* P	Pn	06 36 45.0	+2.5
ML02	Panimavida	6.08	174	Pn	Pn	06 36 44.7	+0.4
MRA	San Martin	6.14	118	*i* P	Pn	06 36 47.0	+1.6
PB10	IPOC Station P	6.33	13	Pn	Pn	06 36 47.6	-0.2
AHML	Horco Molle	6.67	66	*i* P	Pn	06 36 58.0	+5.4
PB15	IPOC Station P	6.90	21		Pn	06 36 55.5	-0.3
PB15	IPOC Station P	6.90	21	*i* P	Pn	06 36 56.0	+0.2
VA04	Juan Fernndez	6.92	234		Pn	06 36 56.1	+0.1
PB05	IPOC Station P	7.04	15	*i* P	Pn	06 36 56.0	-1.7
PB06	IPOC Station P	7.34	19	Pn	Pn	06 37 00.3	-1.6
PB06	IPOC Station P	7.34	19	*i* P	Pn	06 37 01.0	-0.9
PB04	IPOC Station P	7.55	14	Pn	Pn	06 37 04.0	-0.8
PB04	IPOC Station P	7.55	14	*i* P	Pn	06 37 03.0	-1.8
LVC	Limon Verde	7.64	23	Pn	Pn	06 37 05.0	-1.1
	comp=N,0.7nm,0.3s,baz=176,slow=9.8,SNR=14						
LVC				Sn	Sb	06 38 47.5	-11
	comp=N,2.0nm,0.3s,baz=136,slow=17,SNR=3.0						
LVC	Limon Verde	7.64	23	Pn	Pn	06 37 05.3	-0.8
LVC	Limon Verde	7.64	23	*i* P	Pn	06 37 07.0	+0.9
PB07	IPOC Station P	8.20	15	Pn	Pn	06 37 12.8	-0.8
PB09	IPOC Station P	8.29	19	Pn	Pn	06 37 14.3	-0.7
PB01	IPOC Station P	8.95	16	Pn	Pn	06 37 22.8	-1.1
PSGCX	Pisagua	10.23	11	*i* P	Pn	06 37 39.0	-2.4
PLCA	Paso Flores	11.08	174	Pn	Pn	06 37 53.7	+0.6
	comp=N,1.0nm,0.3s,baz=336,slow=11,SNR=40						
PB16	IPOC Station P	11.57	13	Pn	Pn	06 37 59.2	-1.1
ITQB	Itaqui	13.49	94	Pn	Pn	06 38 24.9	-1.0
LPAZ	La Paz	13.85	16	Pn	Pn	06 38 33.4	+1.9
	comp=N,0.1nm,0.3s,baz=221,slow=11,SNR=3.0						
SIV	San Ignacio	17.02	39	Pn	P	06 39 14.3	-0.3
	comp=N,0.2nm,0.3s,baz=245,slow=19,SNR=12						
QSPA	South Pole Qui	60.52	180	P	P	06 45 26.3	+1.6
QSPA				IAmb	IAmb	06 45 29.3	
	comp=Z,4.3nm,1.1s						
TXAR	Lajitas Array	65.96	330	P	P	06 46 03.9	+2.9
	comp=Z,0.4nm,0.7s,baz=147,slow=8.3,SNR=4.7						
KOWA	Kowa	78.97	66	P	P	06 47 20.3	+1.5
	comp=Z,2.6nm,0.8s,baz=220,slow=5.7,SNR=6.1						
KOWA	Kowa	78.97	66	IAmb	IAmb	06 47 21.2	
	comp=Z,3.5nm,0.8s						
BOSA	Boshof	82.16	118	P	P	06 47 37.3	+1.3
	comp=Z,2.0nm,0.8s,baz=263,slow=5.4,SNR=3.2						
TORD	Torodi Ar. Bea	82.85	71	P	P	06 47 41.2	+1.7
	comp=Z,1.2nm,0.8s,baz=263,slow=5.2,SNR=6.2						
TORD	Torodi Ar. Bea	82.85	71	IAmb	IAmb	06 47 41.9	
	comp=Z,1.3nm,0.9s						
ZALV	Zalesovo Beam	150.56	28	PKPbc	PKiKP	06 55 08.6	+1.8
	comp=Z,5.6nm,0.6s,baz=300,slow=3.2,SNR=27						

IDC ***11*** *06:43:48.0±2.1, 29°.14S×72°.07W, h0^{km}, mb3.8/3, mb1 3.8/6, mb1mx3.7/27, mbtmp3.7/6, ML3.4/3, Error ellipse: s-maj=49.3km s-min=40.0km az=176.0*

GUC ***11*** *06:43:47.1±0.8, 29°.26S×72°.13W, h25^{km}±9^{km}, ML3.6*

ISC 11 06:43:46.7±2.3**, 29°.31S**±0°.04×**72°.02W**±0°.08**, h2^{km}**±14^{km}**, n25,** σ1^{s}**24**/32**, mb3.9**/3**, 5C, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	La Serena	0.91	132	⇑*i*P	Pn	06 44 05.6	-0.9
CO05				*i* S	Sn	06 44 18.8	-1.5
CO05				IAML		06 44 19.9	
	comp=N,5μm,0.3s						
LCO	Las Campanas	1.19	76	⇑*e*P	Pb	06 44 10.2	0.0
LCO				*i* S	Sb	06 44 26.6	+0.5
GO04	Tololo Observa	1.37	129	⇑*e*P	Pg	06 44 13.2	+0.3
GO04				*i* S	Sn	06 44 31.9	+0.1
AC04	Llanos de Chal	1.38	37	⇑*e*P	Pn	06 44 11.5	-1.4
AC04				*i* S	Sb	06 44 29.1	-2.2
AC04				IAML		06 44 30.2	
	comp=N,1μm,0.4s						
CO06	Fray Jorge	1.40	166	*e*P	Pn	06 44 12.1	-1.2
CO06				*i* S	Sb	06 44 29.3	-2.6
CO06				IAML		06 44 39.4	
	comp=E,862nm,0.4s						
CO03	El Pedregal	1.91	143	*e*P	Pn	06 44 20.8	+0.4
CO03				*i* S	Sb	06 44 45.3	-1.4
CO03				IAML		06 44 53.4	
	comp=N,1μm,0.3s						
GO03	Copiap	2.32	43	⇑*e*P	Pn	06 44 25.8	-0.2
GO03				*i* S	Sn	06 44 53.4	-1.8
GO03				IAML		06 45 10.0	
	comp=N,442nm,0.4s						
VA06	Catapilco	3.30	169	*e*P	Pn	06 44 38.7	-0.6
VA03	San Esteban	3.67	160	*e*P	Pn	06 44 45.8	+1.2
PEL	Peldehue	3.99	164	*e*P	Pn	06 44 48.9	0.0
MT02	Curacav	4.01	169	*e*P	Pn	06 44 48.4	-0.7
MT05	Renca	4.21	165	*e*P	Pn	06 44 51.3	-0.7
FCH	Farellones	4.27	160	*e*P	Pn	06 44 54.4	+1.4
MT09	Talagante	4.54	169	*e*P	Pn	06 44 56.7	+0.2
MT01	Popeta	4.59	172	*e*P	Pn	06 44 56.1	-1.0
BO04	La Punta	4.82	166	*e*P	Pn	06 45 00.4	+0.1
BO01	Tunca	5.13	171	*e*P	Pn	06 45 03.8	-0.7
BO02	Sierra Bellavi	5.56	169	*e*P	Pn	06 45 10.2	-0.4
LVC	Limon Verde	7.24	23	Pn	Pn	06 45 32.7	-1.1
	comp=N,0.3nm,0.3s,baz=166,slow=8.3,SNR=2.3						
LPAZ	La Paz	13.45	16	Pn	Pn	06 47 00.1	+0.9
	comp=N,0.1nm,0.3s,baz=179,slow=6.8,SNR=4.1						
SIV	San Ignacio	16.65	40	Pn	P	06 47 43.3	-0.6
	comp=N,0.2nm,0.3s,baz=237,slow=15,SNR=4.6						
BDFB	Brasilia	25.95	64	P	P	06 49 20.1	-0.7
	comp=N,1.1nm,0.5s,baz=223,slow=11,SNR=2.1						
TXAR	Lajitas Array	65.68	330	P	P	06 54 33.1	+0.3
	comp=N,0.3nm,0.8s,baz=159,slow=8.0,SNR=4.6						
TORD	Torodi Ar. Bea	82.62	71	P	P	06 56 15.1	+3.2
	comp=N,0.9nm,0.8s,baz=239,slow=5.2,SNR=4.7						
ZALV	Zalesovo Beam	150.17	28	PKPbc	PKiKP	07 03 39.1	-0.5
	comp=N,1.0nm,0.6s,baz=299,slow=1.5,SNR=4.5						

NEIC ***11*** *07:08:55.6, 29°.49S×72°.13W, h13^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.84; $M_{\theta\theta}$0.07; $M_{\phi\phi}$-0.91; $M_{r\theta}$0.10; $M_{\theta\phi}$-0.29; $M_{\phi r}$-0.38; Fault plane solution: $M_0$1.01000×10^{16} NP1:ϕ_s182.17000°, δ56.70000°, λ74.05000°. NP2:ϕ_s29.67000°, δ36.52000°, λ112.70000°. Principal axes: T 0.9527, Plg73.0000°, Azm50.0000°; N 0.0990, Plg13.0000°, Azm191.0000°; P -1.0517, Plg10.0000°, Azm284.0000°;*

VAO ***11*** *07:08:55.6±0.5, 29°.66S×72°.06W, h10^{km}, mb4.8*

NEIC ***11*** *07:08:56.1±1.9, 29°.49S±0°.04×72°.10W±0°.06, h13^{km}±1^{km}, mb4.9/24, Mwr4.6/58, ML4.7(GUC), Error ellipse: s-maj=8.9km s-min=6.4km az=90.0*

GUC ***11*** *07:08:57.4±0.6, 29°.53S×72°.05W, h47^{km}±3^{km}, ML4.7*

IDC ***11*** *07:08:57.1±0.6, 29°.49S×71°.47W, h0^{km}, mb4.5/15, mb1 4.5/20, mb1mx4.4/32, mbtmp4.4/20, ML3.9/5, MS4.0/5, Ms1 4.0/5, ms1mx3.7/24, Error ellipse: s-maj=21.1km s-min=17.1km az=84.0*

ISC 11 07:08:55.3±1.0**, 29°.51S**±0°.03×**72°.04W**±0°.05**, h3^{km}**±6^{km}**, n189,** σ1^{s}**29**/193**, mb4.8**/20**, 10C-3D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	La Serena	0.81	120	⇓*i*P	Pb	07 09 12.2	+0.2
CO05				*i* S	Sb	07 09 23.9	+0.6
CO05				IAML		07 09 25.9	
	comp=N,59μm,0.8s						
CO05	La Serena	0.81	120		Pb	07 09 12.2	+0.2
CO06	Fray Jorge	1.21	163	⇑*i*P	Pg	07 09 18.2	-0.3
CO06				*i* S	Sg	07 09 32.8	-1.5
CO06	Fray Jorge	1.21	163		Pg	07 09 18.3	-0.3
GO04	Tololo Observa	1.27	122	⇓*i*P	Pn	07 09 19.9	-0.2
GO04				*i* S	Sg	07 09 36.5	+0.4
GO04	Tololo Observa	1.27	122		Pn	07 09 20.2	+0.1
LCO	Las Campanas	1.27	67	⇓*i*P	Pn	07 09 20.4	+0.1
LCO				*i* S	Sb	07 09 37.7	+0.8
LCO	Las Campanas	1.27	67		Pn	07 09 20.3	+0.1
LCO	Las Campanas	1.27	67	*i* P	Pn	07 09 20.0	-0.2
AC04	Llanos de Chal	1.55	33	⇑*e*P	Pn	07 09 23.3	-0.5
AC04				*i* S	Sn	07 09 42.6	-1.8
AC04				IAML		07 09 57.7	
	comp=E,5μm,0.7s						
AC04	Llanos de Chal	1.55	33		Pn	07 09 23.3	-0.5
CO03	El Pedregal	1.77	139	⇑*i*P	Pn	07 09 26.9	0.0
CO03				*i* S	Sn	07 09 48.7	-1.3
CO03				IAML		07 09 58.0	
	comp=N,8μm,0.7s						
CO03	El Pedregal	1.77	139		Pn	07 09 27.2	+0.3
AROD	Rodeo	2.33	107	*i* P	Pb	07 09 37.0	-1.1
GO03	Copiap	2.48	40	⇑*i*P	Pn	07 09 36.8	+0.1
GO03				*i* S	Sn	07 10 06.6	-0.9
GO03				IAML		07 10 23.8	
	comp=E,4μm,0.7s						
GO03	Copiap	2.48	40		Pn	07 09 36.8	+0.1
ACDV	Cuesta del Vie	2.62	105	*i* P	Pb	07 09 42.0	-1.0
ACCO	Cerro Coronel	2.80	113	*i* P	Pb	07 09 45.0	-1.1
VA06	Catapilco	3.11	168	⇑*e*P	Pn	07 09 44.9	-0.3
VA06				*i* S	Sn	07 10 19.8	-3.0
VA06				IAML		07 10 49.7	
	comp=E,3μm,0.5s						
VA03	San Esteban	3.49	159	⇑*e*P	Pn	07 09 50.4	-0.1
VA03				*i* S	Sn	07 10 29.7	-2.6
VA03				IAML		07 10 52.0	
	comp=N,3μm,0.6s						
VA03	San Esteban	3.49	159		Pn	07 09 51.2	+0.8
VA01	Torpederas	3.52	175	*e*P	Pn	07 09 50.7	-0.1
VA01				*i* S	Sn	07 10 29.7	-3.2
VA01				IAML		07 10 56.5	
	comp=E,466nm,0.4s						
VA01	Torpederas	3.52	175	Pn	Pn	07 09 50.3	-0.5
ZON	Zonda	3.54	126	Pn	Pn	07 09 54.9	+3.7
PEL	Peldehue	3.81	163	⇑*e*P	Pn	07 09 54.6	-0.3
PEL				*i* S	Sn	07 10 37.5	-2.7
PEL				IAML		07 11 04.9	
	comp=E,1μm,0.5s						
PEL	Peldehue	3.81	163	Pn	Pn	07 09 55.3	+0.5
MT02	Curacav	3.82	169		Pn	07 09 54.5	-0.5
MT05	Renca	4.03	164	⇑*e*P	Pn	07 09 58.1	+0.2
MT05				*i* S	Sn	07 10 42.8	-2.8
MT05	Renca	4.03	164		Pn	07 09 57.7	-0.2
VA05	Santo Domingo	4.15	175	⇑*e*P	Pn	07 09 58.5	-1.0
VA05				*i* S	Sn	07 10 43.7	-4.8
VA05	Santo Domingo	4.15	175		Pn	07 09 58.8	-0.7
MT09	Talagante	4.35	168	⇑*i*P	Pn	07 10 02.2	-0.2
MT09				*i* S	Sn	07 10 50.6	-3.0
MT09	Talagante	4.35	168		Pn	07 10 02.6	+0.2
MT01	Popeta	4.39	171		Pn	07 10 02.7	-0.2
BO01	Tunca	4.94	171	Pn	Pn	07 10 10.0	-0.3
PB14	IPOC Station P	5.08	17		Pn	07 10 10.4	-2.2
BO02	Sierra Bellavi	5.38	169		Pn	07 10 16.7	+0.3
GO05	Huala	5.49	179		Pn	07 10 16.8	-1.1
PB10	IPOC Station P	6.12	13		Pn	07 10 25.1	-1.5
ML02	Panimavida	6.26	175	Pn	Pn	07 10 28.1	-0.3
PB15	IPOC Station P	6.69	21		Pn	07 10 33.8	-0.7
H03N1	Juan Fernandez	7.05	235	T	T	07 18 27.7	
	baz=64,slow=71,SNR=439						
H03N2	Juan Fernandez	7.07	235	T	T	07 18 28.8	
	baz=64,slow=71,SNR=345						
H03N3	Juan Fernandez	7.07	234	T	T	07 18 30.8	
	baz=64,slow=71,SNR=273						
VA04	Juan Fernndez	7.11	233	Pn	Pn	07 10 37.8	-2.3
PB06	IPOC Station P	7.13	19		Pn	07 10 38.5	-2.2
PB04	IPOC Station P	7.35	14		Pn	07 10 40.6	-3.0
AF01	San Pedro de A	7.39	29		Pn	07 10 44.5	+0.1
LVC	Limon Verde	7.42	23	Pn	Pn	07 10 43.5	-1.3
	comp=E,1.5nm,0.3s,baz=216,slow=7.0,SNR=13						
LVC				Sn	Sn	07 12 06.3	-3.5
	comp=E,4.5nm,0.3s,baz=213,slow=11,SNR=3.8						
LVC	Limon Verde	7.42	23		Pn	07 10 43.7	-1.1
TA01	Diego Aracena	9.06	11	Pn	Pn	07 11 06.5	-0.5
LC01	Cunco	9.37	179		Pn	07 11 10.0	-1.1
PSGCX	Pisagua	10.02	10	Pn	Pn	07 11 17.4	-2.8
LR03	Panguipulli	10.10	181	Pn	Pn	07 11 19.7	-1.5
PLCA	Paso Flores	11.27	174	Pn	Pn	07 11 37.4	+0.2
	comp=E,0.5nm,0.3s,baz=344,slow=12,SNR=16						
PLCA	Paso Flores	11.27	174	*e*P	Pn	07 11 34.5	-2.6
PLCA	Paso Flores	11.27	174		Pn	07 11 36.8	-0.4
LL04	Puerto Octay	11.38	181		Pn	07 11 37.6	-1.1
CPUP	Villa Florida	13.39	80	Pn	Pn	07 11 59.9	-6.3
	comp=E,0.1nm,0.3s,baz=280,slow=14,SNR=2.2						
CPUP				LR	LR	07 17 37.9	
	comp=E,1μm,18.5s,baz=270,slow=40						
CPUP	Villa Florida	13.39	80	*e*P	Pn	07 12 06.1	-0.1
ITQB	Itaqui	13.42	94		Pn	07 12 06.8	+0.2
LPAZ	La Paz	13.64	16	Pn	Pn	07 12 09.2	-1.1
	comp=E,0.3nm,0.3s,baz=210,slow=4.5,SNR=6.3						
LPAZ	La Paz	13.64	16	*e*P	Pn	07 12 12.0	+1.8
LPAZ	La Paz	13.64	16		Pn	07 12 08.7	-1.6
PLTB	Pedras Altas	16.03	103	*e*P	Pn	07 12 41.8	+0.1
PLTB	Pedras Altas	16.03	103	Pn	Pn	07 12 41.7	-0.1
CPSB	Cacapava Do Su	16.15	98	*e*P	Pn	07 12 42.6	-0.7
SIV	San Ignacio	16.82	39	Pn	Pn	07 12 48.5	-3.4
	comp=E,0.2nm,0.3s,baz=222,slow=10,SNR=5.8						
SIV				LR	LR	07 19 51.5	
	comp=E,504nm,20.2s,baz=232,slow=40						
AQDB	Aquidauana	17.32	62	*e*P	Pn	07 12 58.6	+0.5
NNA	Nana	18.00	345	LR	LR	07 18 20.9	
	comp=E,329nm,19.0s,baz=210,slow=31						
PTLB	Pontes e Lacer	18.36	43	*e*P	P	07 13 11.3	+0.2
PTLB	Pontes e Lacer	18.36	43	P	Pn	07 13 10.3	-0.7
PTGB	Pitanga	18.41	80	*e*P	Pn	07 13 12.5	+0.8
TRCB	Terra Rica	18.65	74	P	P	07 13 13.7	-0.6
TRCB				IAmb	IAmb	07 13 17.3	
	comp=Z,51nm,0.9s						
PP1B	Ponte de Pedra	19.67	57	*e*P	P	07 13 26.0	+0.5
VILB	Vilhena	19.80	36	*e*P	P	07 13 27.2	+0.2
VILB	Vilhena	19.80	36	P	P	07 13 25.9	-1.0
VILB				IAmb	IAmb	07 13 44.4	
	comp=Z,51nm,1.0s						
TER01	Tubaro-SC	20.06	93	*e*P	P	07 13 30.0	+0.3
SALV	Santo Antonio	20.24	52	*e*P	P	07 13 31.7	+0.1
PCMB	Pacaembu	20.31	72	*e*P	P	07 13 32.0	-0.5
ETMB	Extrema	20.34	17	*e*P	Pn	07 13 33.7	-1.0
FRTB	Fartura	21.03	78	*e*P	P	07 13 40.4	0.0
CZSB	Cruzeiro do Su	21.67	358	P	P	07 13 49.2	+2.1
CZSB				IAmb	IAmb	07 14 17.5	
	comp=Z,52nm,1.1s						
ITRB	Iturama	21.97	69	*e*P	P	07 13 49.5	-0.8
SAML	Samuel	22.08	24	P	P	07 13 51.6	+0.1
PET01	Itanhaem-SP	22.67	83	*e*P	P	07 13 56.9	-1.0
BB19B	Bebedouro	22.83	74	*e*P	P	07 13 58.7	-0.9
RCLB	Rio Claro- Sao	23.11	78	*e*P	P	07 14 02.3	-0.3
ARAG	Araguaiana, MT	23.13	58	*e*P	P	07 14 03.3	+0.6
CLDB	Colider	23.95	43	*e*P	P	07 14 10.4	-0.4
PARB	Paraibuna	24.42	82	*e*P	P	07 14 14.1	-1.1
IPMB	Ipameri, GO	24.59	68	*e*P	P	07 14 16.5	-0.3
TBTG	Tabatinga, AM	25.27	5	*e*P	P	07 14 24.1	+1.3
TBTG	Tabatinga, AM	25.27	5	P	P	07 14 21.6	-1.1
USHA	Ushuaia	25.44	175	P	P	07 14 26.2	+2.2
	comp=Z,17nm,0.8s,baz=32,slow=5.5,SNR=4.2						
USHA				LR	LR	07 24 02.9	
	comp=Z,476nm,19.6s,baz=96,slow=36						
SNDB	Serra Nova Dou	26.02	52	*e*P	P	07 14 29.6	-0.1
BDFB	Brasilia	26.06	63	P	P	07 14 28.6	-1.5
	comp=Z,28nm,1.0s,baz=229,slow=8.3,SNR=24						
BDFB				LR	LR	07 24 18.4	
	comp=Z,219nm,19.4s,baz=133,slow=36						
BDFB	Brasilia	26.06	63	P	P	07 14 28.9	-1.2
BDFB				IAmb	IAmb	07 14 31.1	
	comp=Z,62nm,1.2s						
NPGB	Novo Progresso	27.32	38	*e*P	P	07 14 42.2	+0.8
PEXB	Peixe	28.05	57	*e*P	P	07 14 47.9	-0.1
DIAM	Diamantina, MG	28.16	73	*e*P	P	07 14 49.5	+0.4
MACA	Manacapuru-AM	28.34	24	*e*P	P	07 14 51.3	+0.8
CAM01	Campos-RJ	28.38	81	*e*P	P	07 14 50.5	-0.3
MC01	Montes Claros	28.73	70	*e*P	P	07 14 53.1	-1.1

JANB	Januaria	29.32	67	eP	P	07 14 59.4	+0.1
ITTB	Itaituba	29.39	35	eP	P	07 15 00.3	+0.4
SJMB	Sao Joao De Ma	30.07	76	eP	P	07 15 05.5	-0.4
BSFB	Barra de Sao F	30.29	77	eP	P	07 15 08.2	+0.4
SDBA	SAO DESIDERIO	30.41	62	eP	P	07 15 08.8	-0.1
RIB01	Linhares ES	30.47	78	eP	P	07 15 08.2	-1.3
SMTB	Santa Maria do	30.78	53	eP	P	07 15 13.4	+1.2
PTGA	Pitinga	30.85	24	P	P	07 15 12.6	-0.2
PRPB	Parauapebas	31.28	46	eP	P	07 15 15.9	-0.7
NAN01	Guarapari, ES	31.35	75	eP	P	07 15 15.8	-1.5
GUA01	Guaratinga, BA	32.22	74	eP	P	07 15 25.0	+0.1
MALB	Monte Alegre	32.29	35	eP	P	07 15 26.4	+1.0
CMC01	Camacan, BA	33.06	72	eP	P	07 15 32.9	+0.6
NBIT	Itapeh - BA	33.35	71	eP	P	07 15 35.7	+0.9
BOAV	Boa Vista	33.59	21	eP	P	07 15 36.9	+0.1
GDU01	Guandu, BA	33.88	69	eP	P	07 15 39.0	-0.4
MCPB	Macapa, AP	34.69	37	eP	P	07 15 45.7	-0.7
NBPN	Ponto Novo - B	35.01	65	eP	P	07 15 48.7	-0.5
TMAB	Tom-Au,PA,Br	35.30	45	eP	P	07 15 52.5	+0.8
NBLA	Lagarto - SE	36.84	67	eP	P	07 16 03.7	-1.2
ZARC	Zaragoza, Cauc	36.89	355	P	P	07 16 03.2	-2.0
NBPS	Pedro II - PI	38.24	55	eP	P	07 16 15.9	-0.9
NBMA	Muriti-CE	38.26	62	eP	P	07 16 17.3	+0.3
NBAN	Anadia - AL	38.82	67	eP	P	07 16 21.4	-0.2
NBPB	Pedra_Branca-C	38.82	58	eP	P	07 16 21.8	+0.2
MDP	Montagnes des	39.13	32	P	P	07 16 24.2	0.0
	comp=Z,12nm,0.9s,baz=208,slow=7.6,SNR=2.7						
NBLV	Livramento - P	39.69	63	eP	P	07 16 29.4	+0.5
NBMO	Morrinhos-CE	39.99	55	eP	P	07 16 31.0	-0.4
VNA3	Neumayer Olymp	53.53	159	P	P	07 18 17.4	+0.6
VNA1	Neumayer--Stat	53.81	158	P	P	07 18 19.8	+1.0
VNA2	Neumayer--Watz	54.16	158	P	P	07 18 21.9	+0.5
	baz=288,slow=8.3						
SNAA	Sanae	55.75	159	P	P	07 18 33.4	+0.4
SNAA	Sanae	55.75	159	P	P	07 18 33.0	+0.1
SNAA				IAmb	IAmb	07 18 42.3	
	comp=Z,15nm,0.8s						
QSPA	South Pole Qui	60.71	180	P	P	07 19 09.2	+1.3
BBSR	BB Station	61.94	7	P	P	07 19 14.6	-1.6
TX31	Lajitas Ar. Si	65.84	330	P	P	07 19 39.9	-2.2
TX31				IAmb	IAmb	07 19 50.6	
	comp=Z,21nm,1.4s						
TX32	Lajitas Array	65.84	330	P	P	07 19 40.8	-1.4
TXAR	Lajitas Array	65.84	330	P	P	07 19 44.1	+2.0
	comp=Z,1.3nm,0.9s,baz=151,slow=7.6,SNR=9.5						
TXAR	Lajitas Array	65.84	330	P	P	07 19 41.9	-0.3
MNTX	Cornudas Mount	68.62	330	P	P	07 19 58.4	-1.3
MNTX				IAmb	IAmb	07 20 10.3	
	comp=Z,4.3nm,0.8s						
DBIC	Dimbokro	73.79	72	P	P	07 20 30.3	-1.1
	comp=Z,11nm,0.8s,baz=232,slow=5.3,SNR=9.5						
DBIC	Dimbokro	73.79	72	P	P	07 20 31.9	+0.5
DBIC				IAmb	IAmb	07 20 32.9	
	comp=Z,16nm,1.0s						
JFWS	Jewell Farm	73.99	346	P	P	07 20 30.5	-1.3
JFWS				IAmb	IAmb	07 20 49.3	
	comp=Z,6.5nm,0.8s						
MAW	Mawson	77.48	164	P	P	07 20 53.0	+1.4
	comp=Z,2.6nm,0.8s,baz=347,slow=14,SNR=4.1						
KOWA	Kowa	78.81	66	P	P	07 20 59.6	-0.3
	comp=Z,16nm,0.8s,baz=236,slow=5.3,SNR=30						
KOWA	Kowa	78.81	66	P	P	07 21 00.3	+0.4
KOWA				IAmb	IAmb	07 21 01.7	
	comp=Z,22nm,0.9s						
PDAR	Pinedale Array	79.77	333	P	P	07 21 08.7	+3.9
	comp=Z,0.6nm,0.7s,baz=132,slow=4.4,SNR=6.1						
NVAR	Mina Array Bea	80.21	325	P	P	07 21 11.9	+4.7
	comp=Z,0.6nm,0.8s,baz=176,slow=6.1,SNR=3.3						
ULM	Lac du Bonnet	82.17	345	P	P	07 21 21.7	+4.6
	comp=Z,3.5nm,0.8s,baz=145,slow=8.8,SNR=5.2						
ULM	Lac du Bonnet	82.17	345	IAmb	IAmb	07 21 50.5	
	comp=Z,10.0nm,1.1s						
BOSA	Boshof	82.18	118	P	P	07 21 18.3	+0.2
	comp=Z,4.4nm,0.8s,baz=236,slow=4.4,SNR=6.1						
BOSA	Boshof	82.18	118		P	07 21 17.7	-0.3
BOSA				IAmb	IAmb	07 21 27.9	
	comp=Z,10nm,1.0s						
TORD	Torodi Ar. Bea	82.70	71	P	P	07 21 21.2	+0.5
	comp=Z,19nm,0.8s,baz=258,slow=4.9,SNR=66						
TORD	Torodi Ar. Bea	82.70	71		P	07 21 20.3	-0.5
LBTB	Lobatse	84.21	115	P	P	07 21 28.9	+0.3
	comp=Z,5.8nm,0.9s,baz=285,slow=6.3,SNR=7.8						
LBTB	Lobatse	84.21	115	P	P	07 21 28.1	-0.4
MDT	Midelt	89.01	51	P	P	07 21 53.0	+1.3
	comp=Z,1.2nm,0.8s,baz=286,slow=5.4,SNR=2.3						
ESDC	Sonseca Array	93.47	46	P	P	07 22 12.8	+0.6
	comp=Z,0.3nm,0.5s,baz=204,slow=2.8,SNR=2.3						
AKASG	Malin Array Be	119.11	46	PKP	PKiKP	07 27 45.6	+0.4
	comp=Z,0.4nm,0.4s,baz=267,slow=2.5,SNR=4.5						
WRA	Warramunga Arr	124.64	211	PKP	PKiKP	07 27 59.6	+2.4
	comp=Z,0.6nm,0.5s,baz=146,slow=1.4,SNR=2.6						
H11S2	WAKE ISLAND Hy	125.71	272	T	T	09 46 54.4	
	baz=115,slow=74,SNR=10						
H11S1	WAKE ISLAND Hy	125.72	272	T	T	09 46 55.9	
	baz=115,slow=74,SNR=5.9						
H11S3	WAKE ISLAND Hy	125.72	272	T	T	09 46 55.9	
	baz=115,slow=74,SNR=7.8						
KLMR	Klimovskoe	125.74	34	ePKPdf	PKiKP	07 27 57.7	-0.3
KLMR				AMP		07 28 08.6	
	comp=Z,23nm,1.3s						
KLMR				ePP	PP	07 29 47.4	-2.8
SEY	Seymchan	136.10	332	PKP	PKiKP	07 28 19.7	+0.9
	comp=Z,1.1nm,0.3s,baz=151,slow=7.5,SNR=3.7						
ARU	Arti	136.27	38	PKP	PKiKP	07 28 18.7	-0.7
	comp=Z,0.9nm,0.3s,baz=31,slow=2.0,SNR=4.7						
AKTO	Aktyubinsk	137.35	46	PKP	PKiKP	07 28 21.5	-0.3
	comp=Z,0.8nm,0.4s,baz=297,slow=4.5,SNR=2.2						
BVAR	Borovoye Array	143.89	39	PKP	PKPdf	07 28 31.5	-0.1
	comp=Z,1.0nm,0.7s,baz=210,slow=12,SNR=4.6						
KURK	Kurchatov	149.47	38	PKPbc	PKiKP	07 28 46.4	-0.2
KURBB	Kurchatov Arra	149.47	38	PKPbc	PKiKP	07 28 46.7	+0.1
	comp=Z,5.2nm,0.8s,baz=298,slow=3.2,SNR=26						
EKS2	Erkin-Say	149.63	55	P	PKiKP	07 28 48.6	+1.2
	SNR=7.7						
AML	Almayashu	149.70	56	P	PKiKP	07 28 48.7	+0.8
	SNR=7.5						
USP	Ospenovka	149.99	54	P	PKiKP	07 28 48.4	+0.4
	SNR=7.0						
AAK	Ala-Archa	150.15	55	PKPbc	PKiKP	07 28 49.7	+1.1
	comp=Z,14nm,0.8s,baz=213,slow=2.5,SNR=29						
UCH	Uchtor	150.27	56	P	PKiKP	07 28 50.5	+1.3
	SNR=17						
ZALV	Zalesovo Beam	150.35	28	PKP	PKPdf	07 28 43.5	+1.2
	comp=Z,17nm,0.8s,baz=318,slow=2.0,SNR=21						
ZALV				PKPbc	sPKPbc	07 28 49.2	+1.8
	comp=Z,17nm,0.8s,baz=298,slow=3.2,SNR=34						
ZALV	Zalesovo Beam	150.35	28	PKPdf	PKPdf	07 28 43.1	+0.8
KBK	Karagaybulak	150.47	55	P	PKiKP	07 28 50.4	+1.2
	SNR=5.7						
HYB	Hyderabad	150.55	108	i PKP	PKiKP	07 28 50.0	+0.1
TKM2	Tokmak 2	150.86	54	P	PKiKP	07 28 50.6	+0.6
	SNR=10.0						
ULHL	Ulahol	151.50	55	P	PKiKP	07 28 53.0	+1.6
	SNR=12						
KSH	Kashi	151.95	61	PKPbc	PKiKP	07 28 53.1	+0.8
KLR	Kul'dur	153.24	324	PKPbc	PKiKP	07 28 58.1	+3.6
	comp=Z,1.6nm,0.5s,baz=69,slow=3.1,SNR=5.4						
MKAR	Makanchi Array	153.62	42	PKPbc	PKiKP	07 28 56.4	+1.0
	comp=Z,2.8nm,0.8s,baz=323,slow=2.2,SNR=13						
LZH	Lanzhou	172.58	27	ePKP	PKPdf	07 28 56.3	-10
LZH				pPKP	pPKPdf	07 29 04.3	-1.7

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*IDC **11** 07:13:49.2±0.8, 12°.76S×14°.27W, h0^{km}, mb4.2/10, mb1 4.3/10, mb1mx4.0/44, mbtmp4.2/10, Error ellipse: s-maj=36.3km s-min=19.4km az=122.0*

ISC 11 07:13:51.9±0.7**, 12°.8S**±0°.2×**14°.3W**±0°.2**, h16**^{km}**, n20,** σ**0^{s}.59**/15**, mb4.3**/10**, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10S2	ASCENSION HYDR	3.80	355	T	T	07 18 27.1	
	baz=192,slow=74,SNR=155						
H10S3	ASCENSION HYDR	3.81	354	T	T	07 18 40.7	
	baz=28,slow=74,SNR=164						
H10N1	ASCENSION HYDR	4.90	358	T	T	07 20 15.8	
	baz=182,slow=72,SNR=42						
H10N3	ASCENSION HYDR	4.90	358	T	T	07 20 10.8	
	baz=182,slow=72,SNR=104						
H10N2	ASCENSION HYDR	4.91	358	T	T	07 20 14.5	
	baz=182,slow=72,SNR=41						
TORD	Torodi Ar. Bea	30.24	32	P	P	07 20 01.8	-0.3
	0.9nm,0.8s,baz=217,slow=8.1,SNR=4.4						
BDFB	Brasilia	32.80	261	P	P	07 20 24.2	-0.7
	4.7nm,0.8s,baz=68,slow=5.8,SNR=4.7						
LPAZ	La Paz	52.12	259	P	P	07 23 03.2	+0.7
	1.8nm,0.9s,baz=101,slow=12,SNR=4.0						
KEST	Kesra	53.17	24	P	P	07 23 09.8	+0.6
	14nm,1.3s,baz=109,slow=3.1,SNR=4.2						
VNA1	Neumayer--Stat	57.97	178	P	P	07 23 43.7	+0.5
VNA2	Neumayer--Watz	58.28	177	P	P	07 23 45.2	-0.3
	baz=349,slow=9.5						
VNA3	Neumayer Olymp	58.51	178	P	P	07 23 46.6	-0.5
SNAA	Sanae	59.28	176	P	P	07 23 52.3	-0.2
SNAA	Sanae	59.28	176	P	P	07 23 52.3	-0.2
	2.9nm,0.8s,baz=17,slow=11,SNR=7.4						
GERES	GERESS Array B	66.16	20	P	P	07 24 38.4	-0.2
	0.2nm,0.4s,baz=208,slow=5.5,SNR=2.3						
AKASG	Malin Array Be	73.72	27	P	P	07 25 23.8	-1.1
	2.6nm,0.8s,baz=227,slow=6.1,SNR=12						
NB2	NORSAR Subarra	76.31	12	P	P	07 25 40.0	+0.3
	comp=Z,9.6nm,1.1s,baz=204,slow=5.9						
NOA	NORSAR Array B	76.31	12	P	P	07 25 40.3	+0.6
	comp=Z,2.7nm,0.9s,baz=206,slow=6.0,SNR=2.0						
AKTO	Aktyubinsk	88.81	38	P	P	07 26 45.6	+0.6
	comp=Z,0.7nm,0.5s,baz=252,slow=6.8,SNR=3.9						
VNDA	Vanda	89.85	179	P	P	07 26 49.6	+0.1
	comp=Z,1.6nm,0.8s,baz=153,slow=4.5,SNR=11						

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*IDC **11** 07:19:42.9±0.6, 37°.34N×24°.21E, h0^{km}, mb3.8/5, mb1 3.8/5, mb1mx3.5/49, mbtmp3.8/5, Error ellipse: s-maj=20.2km s-min=9.2km az=161.0*

*ATH **11** 07:19:57.4, 37°.24N×24°.03E, h132^{km}±4^{km}, ML3.2/23, Error ellipse: s-maj=4.0km s-min=1.6km az=23.0*

*THE **11** 07:19:59.7, 37°.24N×23°.97E, h118^{km}±2^{km}, ML3.2/17, Error ellipse: s-maj=2.1km s-min=0.9km az=356.0*

ISC 11 07:19:57.3±0.9**, 37°.35N**±0°.05×**23°.95E**±0°.04**, h140**^{km}±6^{km}**, n78,** σ**1^{s}.81**/99**, mb3.6**/5**, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLY	Voula,Athens	0.52	346	P	Pn	07 20 18.1	+0.4
VLY				S	Sn	07 20 32.2	-1.0
	978nm,0.7s						
VLY	Voula,Athens	0.52	346	P	Pn	07 20 18.1	+0.4
VLY				S	Sn	07 20 32.2	-1.0
VLY				AML	AML	07 20 32.8	
	comp=N,2239μm,0.6s						
VLY				AML	AML	07 20 32.8	
	comp=E,1629μm,0.8s						
ATHU	Athens Univers	0.63	348	P	Pn	07 20 19.1	+0.7
ATHU				S	Sn	07 20 33.0	-1.4
	comp=E,192nm,0.5s						
ATHU	Athens Univers	0.63	348	P	Pn	07 20 19.0	+0.7
KRND	KRANIDI	0.64	274	P	Pn	07 20 18.6	+0.3
KRND				S	Sn	07 20 33.0	-1.3
	comp=E,342nm,0.3s						
KRND	KRANIDI	0.64	274	P	Pn	07 20 18.6	+0.3
ATH	Athens Observa	0.65	344	P	Pn	07 20 19.3	+0.9
ATH				AML	AML	07 20 34.8	
	comp=N,939μm,0.5s						
ATH				AML	AML	07 20 35.0	
	comp=E,512μm,0.5s						
PTL	Penteli	0.70	354	P	Pn	07 20 19.6	+0.7
EPID	Epidavros	0.71	292	P	Pn	07 20 19.6	+0.7
EPID	Epidavros	0.71	292	P	Pn	07 20 19.6	+0.7
DION	Dionisos Attik	0.73	359	P	Pn	07 20 19.9	+0.9
DION				S	Sn	07 20 35.0	-0.6
	comp=E,2μm,0.8s						
DION	Dionisos Attik	0.73	359	P	Pn	07 20 19.9	+0.9
MHLO	Agia Marina, M	0.75	151	P	Pn	07 20 18.8	-0.3
MHLO				S	Sn	07 20 33.0	-2.6
	comp=E,490nm,0.6s						
KARY	Karystos	0.79	29	P	Pn	07 20 20.0	+0.6
KARY	Karystos	0.79	29	P	Pn	07 20 20.0	+0.6
VILL	Villia	0.96	328	P	Pn	07 20 22.1	+1.2
VILL				S	Sn	07 20 39.5	+0.7
	comp=E,315nm,0.8s						
VIL2	Platees	1.02	328	P	Pn	07 20 22.1	+0.8
VIL2				AML	AML	07 20 40.3	
	comp=N,723μm,0.8s						
VIL2				AML	AML	07 20 45.3	
	comp=E,427μm,0.8s						
VLI	Veliai	1.02	233	P	Pn	07 20 21.0	-0.4
VLI				S	Sn	07 20 37.2	-2.5
	comp=E,595nm,0.4s						
VLI	Veliai	1.02	233	P	Pn	07 20 21.1	-0.2
VLI				AML	AML	07 20 38.1	
	comp=E,1003μm,0.3s						
VLI				AML	AML	07 20 39.8	
	comp=N,1152μm,0.4s						
LTK	Loutraki	1.03	311	P	Pn	07 20 22.7	+1.2
LTK				S	Sn	07 20 40.9	+1.0
	comp=N,450nm,0.6s						
LTK	Loutraki	1.03	311	P	Pn	07 20 22.7	+1.2
LTK				AML	AML	07 20 41.2	
	comp=N,944μm,0.7s						
LTK				AML	AML	07 20 41.4	
	comp=E,825μm,0.5s						
THAL	Thalero	1.23	304	P	Pn	07 20 24.4	+1.0
KYMI	Kymi, Euboea I	1.29	5	P	Pn	07 20 25.1	+1.2
KYMI				AML	AML	07 20 45.4	
	comp=E,345μm,0.6s						
KYMI				AML	AML	07 20 45.5	
	comp=N,275μm,0.7s						
KTHA	Kythira Island	1.30	214	P	Pn	07 20 23.8	-0.3
KTHA	Kythira Island	1.30	214	P	Pn	07 20 23.8	-0.3
KTHA				AML	AML	07 20 42.6	
	comp=N,2374μm,0.4s						
KTHA				AML	AML	07 20 44.0	
	comp=E,2987μm,0.4s						
KTHR	Kythira	1.32	215	P	Pn	07 20 24.2	-0.1
KTHR				S	Sn	07 20 42.3	-2.5
	comp=E,838nm,0.3s						
GUR	Goura	1.41	295	P	Pn	07 20 26.3	+1.1
GUR				S	Sn	07 20 47.3	+0.8
	comp=E,788nm,0.3s						
GUR	Goura	1.41	295	P	Pn	07 20 26.2	+1.0
GUR				AML	AML	07 20 52.0	
	comp=E,1730μm,0.3s						
GUR				AML	AML	07 20 52.6	
	comp=N,1278μm,0.3s						
THR3	Thira Island,	1.49	128	P	Pn	07 20 25.5	-0.5
LKR	Lokris	1.50	330	P	Pn	07 20 27.8	+1.6
LKR	Lokris	1.50	330	P	Pn	07 20 27.7	+1.6
THR6	Thira Island,	1.52	130	P	Pn	07 20 26.1	-0.3
ANKY	Antikythira Is	1.57	200	P	Pn	07 20 26.1	-0.8
ANKY				S	Sn	07 20 46.8	-2.6
	comp=N,530nm,0.4s						
ANKY	Antikythira Is	1.57	200	P	Pn	07 20 26.3	-0.6
ANKY				AML	AML	07 20 47.4	
	comp=E,1271μm,0.5s						
ANKY				AML	AML	07 20 47.7	
	comp=N,811μm,0.4s						
KLV	Kalavryta, Ach	1.59	297	P	Pn	07 20 28.2	+1.0
KLV				S	Sn	07 20 50.8	+0.8
	comp=N,425nm,0.5s						
KLV	Kalavryta, Ach	1.59	297	P	Pn	07 20 28.2	+1.0
KLV				AML	AML	07 20 53.3	
	comp=E,1006μm,0.5s						
KLV				AML	AML	07 20 53.7	
	comp=N,701μm,0.4s						
SKY	Skiros Island	1.60	17	P	Pn	07 20 28.2	+0.9
ITM	Ithomi	1.62	265	P	Pn	07 20 29.2	+1.7
ITM				S	Sn	07 20 50.7	+0.1
	comp=N,810nm,0.4s						
ITM	Ithomi	1.62	265	P	Pn	07 20 29.1	+1.6
ITM				AML	AML	07 20 52.3	
	comp=N,1866μm,0.4s						
ITM				AML	AML	07 20 54.5	
	comp=E,1392μm,0.4s						
ALIK	Aliki, Aigiali	1.72	303	P	Pn	07 20 30.1	+1.6
ALIK				S	Sn	07 20 54.6	+2.1
LAKA	Lakka	1.80	300	P	Pn	07 20 31.0	+1.4
LAKA				S	Sn	07 20 54.8	+0.6
	comp=E,750nm,0.5s						
LAKA	Lakka	1.80	300	P	Pn	07 20 30.9	+1.4
LAKA				AML	AML	07 20 57.3	
	comp=N,1872μm,0.4s						
LAKA				AML	AML	07 20 57.6	
	comp=E,1358μm,0.5s						
PYL	PYLOS	1.82	256	P	Pn	07 20 30.2	+0.4
PYL	PYLOS	1.82	256	P	Pn	07 20 30.2	+0.4
PYL				AML	AML	07 20 55.5	
	comp=N,1310μm,0.4s						
PYL				AML	AML	07 20 56.5	
	comp=E,783μm,0.3s						
DRO	Drossia	1.88	289	P	Pn	07 20 32.9	+2.5
DRO				S	Sn	07 20 57.2	+1.4
	comp=E,498nm,0.4s						
DRO	Drossia	1.88	289	P	Pn	07 20 32.1	+1.7
DRO				AML	AML	07 21 01.3	
	comp=E,852μm,0.5s						
DRO				AML	AML	07 21 05.8	
	comp=N,1110μm,0.4s						
IMMV	Iera Moni Meta	1.88	179	P	Pn	07 20 29.5	-1.0
IMMV				AML	AML	07 20 55.8	
	comp=N,741μm,0.4s						
IMMV				AML	AML	07 20 57.3	
	comp=E,401μm,0.2s						
EFP	Efpalio	1.94	304	P	Pn	07 20 33.0	+1.8
EFP				S	Sn	07 20 58.1	+1.0
	comp=E,248nm,0.3s						
EFP	Efpalio	1.94	304	P	Pn	07 20 32.7	+1.6
EFP				AML	AML	07 21 01.6	
	comp=N,573μm,0.4s						
EFP				AML	AML	07 21 02.8	
	comp=E,388μm,0.3s						
CHOS	Chios island	1.96	57	P	Pn	07 20 32.2	+0.7
CHOS	Chios island	1.96	57	P	Pn	07 20 32.1	+0.7
CHOS				AML	AML	07 20 58.9	
	comp=E,209μm,1.2s						
CHOS				AML	AML	07 21 00.7	
	comp=N,126μm,0.8s						
RLS	Riolos of Patr	2.09	291	P	Pn	07 20 35.2	+2.2
RLS				AML	AML	07 21 06.5	
	comp=E,460μm,0.5s						
RLS				AML	AML	07 21 09.3	
	comp=N,534μm,0.4s						
XOR	Xorichti	2.10	344	P	Pn	07 20 34.9	+1.8
AGG	Agios Georgios	2.10	323	P	Pn	07 20 35.0	+1.9
AGG				S	Sn	07 21 03.8	+3.1
	comp=N,95nm,0.4s						
AGG	Agios Georgios	2.10	323	P	Pn	07 20 35.2	+2.0
AGG				AML	AML	07 21 04.2	
	comp=E,170μm,0.3s						
AGG				AML	AML	07 21 04.5	
	comp=N,208μm,0.4s						
IDI	Anoyia	2.19	159	P	Pn	07 20 32.8	-1.4
IDI				AML	AML	07 20 59.1	
	comp=N,360μm,0.6s						
IDI				AML	AML	07 20 59.3	
	comp=E,185μm,0.3s						
PVO	Paravola	2.30	304	P	Pn	07 20 38.7	+3.2
PVO				AML	AML	07 21 12.9	
	comp=E,252μm,0.3s						
PVO				AML	AML	07 21 15.3	
	comp=N,365μm,0.5s						
EVR	Evrytania	2.31	314	P	Pn	07 20 38.5	+2.8
SMG	Samos	2.32	80	P	Pn	07 20 36.2	+0.4
SMG	Samos	2.32	80	P	Pn	07 20 36.0	+0.2
SIGR	SIGRI	2.39	38	P	Pn	07 20 37.6	+1.0
SIGR	SIGRI	2.39	38	P	Pn	07 20 37.5	+0.9
LTHK	Lithakia	2.50	279	P	Pn	07 20 38.5	+0.5
LTHK				AML	AML	07 21 17.0	
	comp=N,642μm,0.2s						
LTHK				AML	AML	07 21 18.4	
	comp=E,752μm,0.2s						
GVD	Gavdhos	2.50	177	P	Pn	07 20 37.3	-0.8
VLS	Valsamata	2.79	288	P	Pn	07 20 42.9	+1.2
VLS				AML	AML	07 21 16.4	
	comp=E,564μm,0.3s						
VLS				AML	AML	07 21 16.7	
	comp=N,1185μm,0.3s						
DBRK	Dubrovnik	6.94	322	ePn	Pn	07 21 34.0	-2.4
DBRK				Sn	Sn	07 22 46.9	-7.1
STON	Ston	7.31	321	ePn	Pn	07 21 39.4	-1.9
STON				Sn	Sn	07 22 52.9	-10
MAKA	Makarska	7.95	320	ePn	Pn	07 21 50.1	+0.2
MAKA				Sn	Sn	07 23 11.0	-7.4
RICI	Ricice	8.04	322	ePn	Pn	07 21 46.7	-4.6
HVAR	Hvar	8.17	318	ePn	Pn	07 21 51.5	-1.5
HVAR				Sn	Sn	07 23 15.4	-8.4
ZIRJ	Zirje	8.93	317	ePn	Pn	07 22 00.5	-2.6
ZIRJ				Sn	Sn	07 23 33.9	-8.0
MORI	Morici	9.04	319	ePn	Pn	07 22 02.4	-2.1
MORI				Sn	Sn	07 23 37.8	-6.7
DUGI	Dugi Otok	9.47	317	ePn	Pn	07 22 09.3	-1.0
DUGI				Sn	Sn	07 23 48.8	-6.2
ESDC	Sonseca Array	21.93	285	P	P	07 24 40.1	+0.5
	comp=N,1.1nm,0.8s,baz=84,slow=9.9,SNR=8.4						
TORD	Torodi Ar. Bea	31.24	225	P	P	07 26 05.5	+1.7
	comp=N,1.0nm,0.5s,baz=34,slow=9.5,SNR=6.6						
KURBB	Kurchatov Arra	40.55	53	P	P	07 27 22.0	-0.7
	comp=N,0.5nm,0.5s,baz=283,slow=8.5,SNR=3.5						
MKAR	Makanchi Array	43.42	58	P	P	07 27 46.1	0.0
	comp=N,0.6nm,0.4s,baz=268,slow=8.4,SNR=5.8						
ZALV	Zalesovo Beam	44.23	48	P	P	07 27 52.1	-0.2
	comp=N,1.0nm,0.3s,baz=274,slow=8.2,SNR=4.4						

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*TUL **11** 07:20:21.6±0.9, 36°.53N±0°.02×98°.71W±0°.02, h5^{km}±2^{km}, ML2.9, mb_Lg2.9/49(NEIC), Error ellipse: s-maj=3.9km s-min=3.0km az=140.0*

NEIC 11 07:20:22.0±1.1**, 36°.50N**±0°.01×**98°.67W**±0°.02**, h5**^{km}±7^{km}**, Error ellipse: s-maj=2.0km s-min=1.9km az=84.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	Winter Ranch,	0.29	246	Pg	Pg	07 20 27.4	-0.3
U32A				Sg	Sg	07 20 32.1	+0.6
OK032	Salt Plains WL	0.48	50	Pg	Pg	07 20 31.3	+0.1
OK032				Sg	Sg	07 20 38.2	+0.8
CROK	Carrier	0.55	89	Pg	Pg	07 20 32.8	+0.2
CROK				Sg	Sg	07 20 40.9	+1.1
KAN14	Manchester OK	0.73	51	Pg	Pg	07 20 35.8	-0.2
GC02	Grant County #	0.74	61	Pg	Pg	07 20 36.1	0.0
KAN10	Anthony SW Sta	0.78	36	Pg	Pg	07 20 36.6	-0.3
KAN16	Harper SW Stat	0.87	34	Pg	Pg	07 20 38.2	-0.5
KAN17	Caldwell West	0.91	53		Pg	07 20 39.3	-0.1
KAN01	Argonia South	0.98	48	Pg	Pg	07 20 40.3	-0.5
KAN09	Caldwell North	1.06	53		Pg	07 20 41.7	-0.5
KAN13	South Haven SW	1.09	61		Pg	07 20 42.4	-0.4
BLOK	Blackwell	1.20	77		Pg	07 20 44.5	-0.4
BCOK	Bluff Creek, N	1.20	134	Pg	Pg	07 20 44.6	-0.4
OK029	Liberty Lake	1.21	125		Pg	07 20 44.8	-0.3
OKCFA	Oklahoma City	1.46	137	Pn	Pn	07 20 48.9	-0.2
OK031	S. Brethren Rd	1.58	110		Pn	07 20 50.9	+0.2
FNO	Franklin	1.61	140		Pn	07 20 51.6	+0.5
QUOK	Quay	1.62	101		Pb	07 20 51.8	-0.5
OK030	Cody Creek RV	1.63	110	IAmb_Lg		07 21 18.6	
	comp=Z,64nm,1.0s						
WMOK	Wichita Mounta	1.76	183		Pn	07 20 53.1	0.0
T35A	Sooner Cattle	1.78	76		Pn	07 20 53.3	-0.2
T35A				IAmb_Lg		07 21 22.6	
	comp=Z,42nm,0.7s						
R32A	Long Quarter,	1.92	359	Pn	Pn	07 20 55.6	+0.2
X34A	Smith Ranch, M	2.01	160	IAmb_Lg		07 21 29.5	
	comp=Z,67nm,0.8s						
TUL1	Leonard	2.40	103		Pn	07 21 01.4	-0.6
TUL1				IAmb_Lg		07 21 39.8	
	comp=Z,43nm,1.1s						
LOOK	Love County	2.78	154	IAmb_Lg		07 21 53.9	
	comp=Z,31nm,0.8s						
AMTX	Amarillo	2.93	238	IAmb_Lg		07 21 58.8	
	comp=Z,53nm,0.8s						
X37A	Clayton	3.29	124	Pn	Pn	07 21 15.0	+0.7
X37A				IAmb_Lg		07 22 11.8	
	comp=Z,38nm,0.7s						
KSCO	Kaye Shedlock’	4.02	310	IAmb_Lg		07 22 33.1	
	comp=Z,38nm,0.8s						
W39A	Magazine	4.18	107	Pn	Pn	07 21 27.0	+0.6
W39A				IAmb_Lg		07 22 37.1	
	comp=Z,31nm,0.7s						
MSTX	Muleshoe	4.20	234	IAmb_Lg		07 22 41.0	
	comp=Z,24nm,0.8s						
S39A	Bolivar	4.44	73	Pn	Pn	07 21 30.0	0.0
S39A				IAmb_Lg		07 22 41.7	
	comp=Z,16nm,0.9s						
U40A	Yellville	4.69	90	IAmb_Lg		07 22 52.8	
	comp=Z,15nm,0.8s						
BGNE	Belgrade	4.92	5	IAmb_Lg		07 23 09.4	
	comp=Z,31nm,0.8s						
JCT	Junction City	6.08	189	IAmb_Lg		07 23 41.0	
	comp=Z,15nm,1.0s						
T42A	Van Buren	6.11	83	IAmb_Lg		07 23 39.2	
	comp=Z,16nm,1.1s						
K31A	O'Neill	6.12	359	IAmb_Lg		07 23 47.9	
	comp=Z,19nm,0.8s						
CCAR	Cane Creek	6.21	112	IAmb_Lg		07 23 56.3	
	comp=Z,14nm,0.9s						

ISCO	Idaho Springs	6.39	303	IAmb_Lg		07 23 49.9	
	comp=Z,11nm,0.7s						
PBMO	Poplar Bluff	6.63	85	IAmb_Lg		07 23 55.9	
	comp=Z,13nm,0.7s						
FVM	French Village	6.74	75	IAmb_Lg		07 23 55.4	
	comp=Z,16nm,0.9s						
SCIA	State Center	6.86	36	IAmb_Lg		07 24 07.5	
	comp=Z,18nm,0.8s						
MNTX	Cornudas Mount	7.34	231	IAmb_Lg		07 24 26.9	
	comp=Z,8.6nm,0.8s						
S44A	Carbondale	7.62	78	IAmb_Lg		07 24 30.7	
	comp=Z,11nm,0.7s						
P43A	Skaggs, Pawnee	7.87	64	IAmb_Lg		07 24 36.7	
	comp=Z,16nm,0.8s						
K22A	Casper	8.63	318	IAmb_Lg		07 25 10.0	
	comp=Z,7.5nm,0.8s						

*ISK **11** 07:40:08.6, 36°.03N×31°.11E, h11^{km}, ML2.9/24*
*NIC **11** 07:40:10.9±0.0, 35°.97N×31°.24E, h14^{km}±2^{km}, Ml2.7/3*
*DDA **11** 07:40:11.1, 36°.10N×31°.21E, h35^{km}±1^{km}, ML2.5*
ISC 11 07:40:11.8±1.2, **36°.01N**±0°.03×**31°.15E**±0°.03, **h27**^{km}±13^{km}, **n49**, σ1^{s}.**09**/64, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKUM	Antalya-Kumluc	0.72	296	*i* P	Pb	07 40 25.4	-0.4
AKUM				*i* S	Sn	07 40 36.7	+0.2
AKUM				IAML		07 40 39.0	
	comp=N,200nm,0.4s						
AKUM				IAML		07 40 39.0	
	comp=E,261nm,0.9s						
KEPZ	Antalya-Kepez	0.96	22	*i* P	Pn	07 40 28.4	-1.3
KEPZ				*i* S	Sb	07 40 40.5	-1.7
KEPZ				IAML		07 40 41.0	
	comp=E,130nm,0.6s						
GAZI	Gazipasa	0.97	76	*i* P	Pn	07 40 28.6	-1.1
GAZI				*i* S	Sb	07 40 41.5	-0.9
GAZI				IAML		07 40 42.0	
	comp=N,195nm,0.5s						
GAZI				IAML		07 40 43.0	
	comp=E,208nm,0.5s						
GAZI	Gazipasa	0.97	76	PG	Pn	07 40 28.6	-1.1
GAZI				SG	Sb	07 40 41.8	-0.6
KORT	Korkueli	1.18	327	*i* P	Pb	07 40 33.4	-0.2
KORT				*i* S	Sb	07 40 49.1	+0.5
KORT	Korkueli	1.18	327	PN	Pn	07 40 30.9	-1.8
ELL	Elmali	1.24	307	PN	Pn	07 40 31.5	-2.1
ELL	Elmali	1.24	307	S	Sb	07 40 53.5	+3.1
AKAS	Kas	1.27	280	*i* S	Sb	07 40 53.9	+2.7
AKAS	Kas	1.27	280	PN	Pn	07 40 32.0	-2.0
KSL	Kastellorizon	1.28	277	S	Sb	07 40 52.8	+1.6
KSL				AML	AML	07 40 59.4	
	comp=E,0.1nm,0.8s						
KSL				AML	AML	07 41 01.8	
	comp=E,0.2nm,0.5s						
AKMS	Akamas	1.39	135	P	Pn	07 40 34.6	-0.9
AKMS				S	Sn	07 40 52.9	0.0
AKMS				AML	AML	07 41 02.2	
	comp=E,0.5nm,0.4s						
AKMS				AML	AML	07 41 02.2	
	comp=E,0.5nm,0.4s						
AKMS				AML	AML	07 41 04.2	
	comp=E,0.4nm,0.5s						
AKMS				AML	AML	07 41 04.2	
	comp=E,0.4nm,0.5s						
HDMB	Hadim	1.44	48	PN	Pn	07 40 35.3	-1.0
HDMB				SN	Sn	07 40 54.8	+0.4
ALFC	Alefka	1.46	125	P	Pn	07 40 35.1	-1.3
ALFC				S	Sn	07 40 54.3	-0.4
ALFC				AML	AML	07 41 00.2	
	comp=E,0.5nm,0.2s						
ALFC				AML	AML	07 41 00.2	
	comp=E,0.5nm,0.2s						
ALFC				AML	AML	07 41 04.2	
	comp=E,0.6nm,0.3s						
ALFC				AML	AML	07 41 04.2	
	comp=E,0.6nm,0.3s						
SEYD	Seydisehir-KON	1.50	21	PN	Pn	07 40 35.7	-1.4
SEYD				SN	Sn	07 40 55.8	0.0
SEDI	Konya, Seydise	1.52	18	*i* P	Pn	07 40 37.2	-0.1
SEDI				*i* S	Sn	07 40 56.0	-0.3
SEDI				IAML		07 40 58.0	
	comp=N,53nm,0.5s						
SEDI				IAML		07 40 58.0	
	comp=E,60nm,0.5s						
ERMK	Ermenek	1.56	66	*i* P	Pn	07 40 38.5	+0.5
ERMK				IAML		07 41 04.0	
	comp=N,102nm,0.5s						
ERMK				IAML		07 41 06.0	
	comp=E,92nm,0.3s						
TEKE	Tekeli-Mersin	1.60	85	PN	Pn	07 40 37.9	-0.4
TEKE				SN	Sn	07 40 58.8	+0.8
LEF	Lefka	1.68	122	PN	Pn	07 40 38.6	-0.8
BERE	Bereket-Mersin	1.71	78	PN	Pn	07 40 39.5	-0.5
CAME	Cameli-Denizli	1.76	302	PN	Pn	07 40 39.5	-1.2
FETY	Fethiye	1.78	291	PN	Pn	07 40 39.7	-1.2
KKBE	Karaman, Kazim	1.88	50	*i* P	Pn	07 40 43.7	+1.4
KKBE				*i* S	Sn	07 41 06.8	+1.7
TEVE	Tevekalti-Mers	1.90	76	PN	Pn	07 40 42.1	-0.5
GULN	MERSIN_Gulnar	1.95	84	*i* P	Pn	07 40 43.7	+0.6
GULN				*i* S	Sn	07 41 07.7	+1.1
AKKU	Akkuyu-Mersin	1.95	85	PN	Pn	07 40 43.2	0.0
KMER	Konya-Meram	2.01	29	*i* P	Pn	07 40 43.7	-0.4
KMER				*i* S	Sn	07 41 08.5	+0.1
KMER				IAML		07 41 10.0	
	comp=E,34nm,0.8s						
TISA	Tisan-Mersin	2.05	85	PN	Pn	07 40 44.7	+0.1
KRMN	Karaman	2.06	55	PN	Pn	07 40 44.5	-0.3
IKL	Isikli	2.06	83	PN	Pn	07 40 44.5	-0.2
CSS	Mathiatis	2.06	120	PN	Pn	07 40 44.8	0.0
CSS	Mathiatis	2.06	120	S	Sn	07 41 09.4	-0.2
LFK	Lefkose	2.07	110	PN	Pn	07 40 44.2	-0.7
KEBE	Keben-Mersin	2.12	77	PN	Pn	07 40 45.1	-0.4
KONT	Konya--Tatoy	2.16	26	PN	Pn	07 40 45.6	-0.5
DALY	Dalyan (Mula)	2.17	292	PN	Pn	07 40 45.1	-1.1
MVOU	Mavrovouni	2.25	115	S	Sn	07 41 13.1	-1.2
YVAC	Isparta, Yalva	2.26	2	*i* P	Pn	07 40 47.5	0.0
ARG	Arkhangelos	2.46	276	PN	Pn	07 40 48.9	-1.2
KIZK	Mersin	2.46	78	*i* P	Pn	07 40 51.5	+1.2
KIZK				*i* S	Sn	07 41 20.9	+1.5
KIZK				IAML		07 41 34.0	
	comp=N,20nm,1.3s						
KIZK				IAML		07 41 35.0	
	comp=E,26nm,1.1s						
KIZK	Mersin	2.46	78	PN	Pn	07 40 50.4	+0.2
TURN	Turunc	2.46	289	PN	Pn	07 40 49.4	-0.8
EREN	Erenkoy	2.50	100	PN	Pn	07 40 50.7	-0.1
OSC1	CSNet OBS 1	2.51	178	S	Sn	07 41 21.3	+0.8
KERG	Konya-Eregli	2.77	59	*i* P	Pn	07 40 55.7	+1.1
KERG				IAML		07 41 32.0	
	comp=E,19nm,0.4s						
KERG				IAML		07 41 38.0	
	comp=N,18nm,0.4s						
CHBY	Cihanbeyli	2.92	28	PN	Pn	07 40 55.9	-0.7
DAT	Datca	2.97	285	PN	Pn	07 40 56.8	-0.5
OSC2	CSNet OBS 4	3.07	162	S	Sn	07 41 35.3	+0.9
BODT	Bodrum	3.27	290	PN	Pn	07 40 59.9	-1.4

*IDC **11** 07:42:20.0±1.5, 29°.55S×71°.85W, h0^{km}, mb4.0/3, mb1 4.0/7, mb1mx3.8/37, mbtmp3.8/7, ML3.7/4, MS3.6/1, Ms1 3.6/1, ms1mx2.9/28, Error ellipse: s-maj=46.0km s-min=30.0km az=92.0*
*SJA **11** 07:42:19.0, 29°.29S×72°.46W, h10^{km}, ML4.4*
*GUC **11** 07:42:21.7±0.6, 29°.44S×72°.04W, h34^{km}±3^{km}, ML3.9*
*NEIC **11** 07:42:21.5±2.2, 29°.48S±0°.04×72°.05W±0°.03, h12^{km}±5^{km}, mb4.5/5, ML4.1(GUC), Error ellipse: s-maj=6.6km s-min=4.0km az=190.0*
ISC 11 07:42:20.7±3.1, **29°.46S**±0°.04×**72°.22W**±0°.07, **h17**^{km}±20^{km}, **n87**, σ1^{s}.**59**/82, **mb4.2**/4, **6C-2D**, **Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	La Serena	0.97	119	⇓*i*P	Pb	07 42 37.4	-1.5
CO05				*i* S	Sb	07 42 48.7	-2.7
CO05				IAML		07 42 51.5	
	comp=N,18µm,0.8s						
CO05	La Serena	0.97	119		Pb	07 42 37.5	-1.5
CO06	Fray Jorge	1.31	158	⇑*i*P	Pn	07 42 43.6	-0.6
CO06				*i* S	Sn	07 42 58.3	-3.0
CO06				IAML		07 43 07.2	
	comp=E,2µm,0.2s						
CO06	Fray Jorge	1.31	158		Pn	07 42 43.7	-0.6
LCO	Las Campanas	1.40	72	⇑*i*P	Pn	07 42 44.1	-1.6
LCO				*i* S	Sn	07 43 01.4	-2.5
LCO	Las Campanas	1.40	72		Pn	07 42 44.7	-0.9
LCO	Las Campanas	1.40	72	*i* P	Pn	07 42 44.0	-1.6
GO04	Tololo Observa	1.42	120	⇑*i*P	Pn	07 42 45.2	-0.7
GO04				*i* S	Sn	07 43 02.7	-1.7
GO04	Tololo Observa	1.42	120		Pn	07 42 45.5	-0.5
GO04	Tololo Observa	1.42	120	*i* P	Pn	07 42 45.0	-1.0
AC04	Llanos de Chal	1.60	39	⇓*i*P	Pn	07 42 47.1	-1.1
AC04	Llanos de Chal	1.60	39		Pn	07 42 47.1	-1.1
AC04	Llanos de Chal	1.60	39	*i* P	Pn	07 42 47.0	-1.2
CO03	El Pedregal	1.91	136	⇑*i*P	Pn	07 42 52.3	-0.2
CO03				*i* S	Sn	07 43 15.4	-0.8
CO03				IAML		07 43 25.3	
	comp=E,2µm,0.3s						
CO03	El Pedregal	1.91	136		Pn	07 42 52.5	-0.1
CO03	El Pedregal	1.91	136	*i* P	Pn	07 42 53.0	+0.5
AROD	Rodeo	2.49	107	*i* P	Pn	07 43 02.0	+1.3
GO03	Copiap	2.55	44	IAML		07 43 46.7	
	comp=E,653nm,0.6s						
GO03	Copiap	2.55	44		Pn	07 43 01.1	-0.2
GO03	Copiap	2.55	44	*i* P	Pn	07 43 01.0	-0.3
ACDV	Cuesta del Vie	2.78	106	*i* P	Pn	07 43 08.0	+3.4
ACCO	Cerro Coronel	2.96	113	*i* P	Pn	07 43 10.0	+2.8
VA06	Catapilco	3.19	166	⇑*i*P	Pn	07 43 10.4	+0.3
VA06				*i* S	Sn	07 43 45.8	-1.9
VA01	Torpederas	3.59	172	Pn	Pn	07 43 16.0	+0.5
VA03	San Esteban	3.59	157	*i* S	Sn	07 43 57.0	-0.7
VA03	San Esteban	3.59	157		Pn	07 43 17.9	+2.3
VA03	San Esteban	3.59	157	*i* P	Pn	07 43 18.0	+2.3
ROCH	El Roble	3.65	164	*e*P	Pn	07 43 17.0	+0.4
ROCH				*i* S	Sn	07 43 57.7	-1.7
ROC1	El Roble	3.65	164	*i* P	Pn	07 43 17.0	+0.3
AUSP	Uspallata	3.68	139	*i* P	Pn	07 43 21.0	+4.0
ZON	Zonda	3.69	125		Pn	07 43 19.8	+2.7
MT02	Curacav	3.90	167	*e*P	Pn	07 43 20.3	+0.5
MT02	Curacav	3.90	167		Pn	07 43 21.0	+1.2
MT02	Curacav	3.90	167	*i* P	Pn	07 43 21.0	+1.2
PEL	Peldehue	3.90	161		Pn	07 43 20.3	+0.4
PEL	Peldehue	3.90	161	*i* P	Pn	07 43 22.0	+2.1
RTCV	Cerro Valdivia	3.97	128	*i* P	Pn	07 43 24.0	+3.1
MT05	Renca	4.12	163	*e*P	Pn	07 43 23.6	+0.7
MT05	Renca	4.12	163		Pn	07 43 23.4	+0.5
MT05	Renca	4.12	163	*i* P	Pn	07 43 25.0	+2.1
VA05	Santo Domingo	4.22	173		Pn	07 43 24.1	-0.1
ASAL	Salagasta	4.26	138	*i* P	Pn	07 43 29.0	+4.1
AVFE	Valle Fertil	4.30	107	*i* P	Pn	07 43 27.0	+1.6
ARCO	CERRO ARCO	4.39	141	*i* P	Pn	07 43 32.0	+5.2
MT09	Talagante	4.43	167	⇑*i*P	Pn	07 43 28.2	+0.9
MT09	Talagante	4.43	167		Pn	07 43 28.1	+0.9
MT01	Popeta	4.47	170	*e*P	Pn	07 43 27.8	+0.2
MT01	Popeta	4.47	170		Pn	07 43 27.3	-0.3
MT01	Popeta	4.47	170	*i* P	Pn	07 43 28.0	+0.3
ACLC	CERRO LA CRUZ	4.59	91	*i* P	Pn	07 43 31.0	+1.5
AAGR	Agrelo	4.63	142	*i* P	Pn	07 43 35.0	+5.0
BO04	La Punta	4.72	164	*e*P	Pn	07 43 31.9	+0.7
BO01	Tunca	5.01	169	*e*P	Pn	07 43 35.2	+0.1
BO01	Tunca	5.01	169	Pn	Pn	07 43 35.7	+0.6
BO01	Tunca	5.01	169	*i* P	Pn	07 43 36.0	+0.9
ACHE	Chepes	5.09	111	*i* P	Pn	07 43 39.0	+2.6
BO02	Sierra Bellavi	5.46	167		Pn	07 43 42.2	+1.0
BO02	Sierra Bellavi	5.46	167	*i* P	Pn	07 43 42.0	+0.7
GO05	Huala	5.54	178	Pn	Pn	07 43 42.2	-0.2
GO05	Huala	5.54	178	*i* P	Pn	07 43 43.0	+0.6
RFA	San Rafael	6.18	150	*i* P	Pn	07 43 53.0	+1.8
MRA	San Martin	6.31	119	*i* P	Pn	07 43 54.0	+0.9
PB05	IPOC Station P	6.82	16	*i* P	Pn	07 43 58.0	-2.2
H03N1	Juan Fernandez	6.96	234	T	T	07 51 51.5	
	baz=64,slow=71,SNR=553						
H03N2	Juan Fernandez	6.98	234	T	T	07 51 52.0	
	baz=64,slow=71,SNR=446						
H03N3	Juan Fernandez	6.98	233	T	T	07 51 41.0	
	baz=64,slow=71,SNR=446						
LVC	Limon Verde	7.44	24	Pn	Pn	07 44 07.5	-1.4
	comp=E,0.4nm,0.3s,baz=197,slow=8.2,SNR=2.2						
LVC				Sn	Sn	07 45 29.9	-3.2
	comp=E,0.8nm,0.3s,baz=159,slow=9.4,SNR=3.6						
PB07	IPOC Station P	7.98	16	Pn	Pn	07 44 16.7	+0.6
PB09	IPOC Station P	8.09	20	Pn	Pn	07 44 18.6	+1.0
LC01	Cunco	9.42	178	Pn	Pn	07 44 35.4	-0.2
PSGCX	Pisagua	10.00	11	Pn	Pn	07 44 41.2	-2.5
PSGCX	Pisagua	10.00	11	*i* P	Pn	07 44 41.0	-2.7
PLCA	Paso Flores	11.33	174	Pn	Pn	07 45 00.5	-1.4
	comp=E,0.2nm,0.3s,baz=327,slow=11,SNR=9.5						
CPUP	Villa Florida	13.53	80	LR	LR	07 50 42.1	
	comp=E,230nm,18.4s,baz=237,slow=38						
LPAZ	La Paz	13.64	17	Pn	Pn	07 45 35.7	+1.8
	comp=E,0.1nm,0.3s,baz=189,slow=4.9,SNR=11						
LPAZ	La Paz	13.64	17		Pn	07 45 37.2	+3.3
SIV	San Ignacio	16.88	40	Pn	Pn	07 46 16.3	+0.1
	comp=E,0.2nm,0.3s,baz=209,slow=12,SNR=9.2						
ETMB	Extrema	20.33	17	P	Pn	07 46 59.1	+0.8
CZSB	Cruzeiro do Su	21.62	359	P	P	07 47 12.1	+2.0
CZSB				IAmb	IAmb	07 47 22.9	
	comp=Z,14nm,1.0s						
SAML	Samuel	22.09	24	P	P	07 47 17.5	+2.3
TXAR	Lajitas Array	65.72	330	P	P	07 53 07.8	+3.3
	comp=Z,0.3nm,0.9s,baz=147,slow=7.5,SNR=3.7						
DBIC	Dimbokro	73.92	73	P	P	07 53 56.5	+1.3
	comp=Z,6.1nm,1.0s,baz=206,slow=7.6,SNR=2.0						
DBIC	Dimbokro	73.92	73	IAmb	IAmb	07 54 02.2	
	comp=Z,10nm,1.1s						
TORD	Torodi Ar. Bea	82.83	71	P	P	07 54 44.2	-0.4
	comp=Z,0.8nm,1.0s,baz=213,slow=5.0,SNR=2.7						
TORD	Torodi Ar. Bea	82.83	71	IAmb	IAmb	07 54 55.3	
	comp=Z,3.2nm,1.1s						
ZALV	Zalesovo Beam	150.38	28	PKPbc	PKiKP	08 02 13.4	+1.9
	comp=Z,0.8nm,0.5s,baz=297,slow=4.3,SNR=6.5						
ZALV	Zalesovo Beam	150.38	28		PKPbc	08 02 10.4	-0.3

*INET **11** 07:53:59.4, 14°.05N×90°.08W, h226^{km}, MW3.0*
*GCG **11** 07:54:08.2±0.3, 13°.65N×89°.63W, h186^{km}±11^{km}, MD3.8*
*SNET **11** 07:54:12.2±0.7, 13°.99N×89°.89W, h158^{km}±4^{km}, ML3.3*
ISC 11 07:54:14.9±3.1, **13°.9N**±0°.1×**89°.75W**±0°.09, **h154**^{km}±19^{km}, **n19**, σ1^{s}.**31**/24, **11C**, **El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTR	El Retiro	0.10	73	⇑*e*P	Pn	07 54 34.6	-1.2
CEVE	Cerro Verde	0.12	109	⇑*e*P	Pn	07 54 34.8	-1.1
CEVE				*e*S	Sn	07 54 52.2	+0.4
CEDA	San Andres	0.35	101	*e*P	Pn	07 54 35.0	-1.2
JAYA	Jayaque - finc	0.36	126	⇑*e*P	Pn	07 54 34.9	-1.4
JAYA				*e*S	Sn	07 54 52.9	+0.2
JAYA				IAML		07 54 57.6	
	comp=Z,446nm,0.2s						
TACO	Tacachico	0.39	75	⇑*i*P	Pn	07 54 35.0	-1.3
BOQS	Boqueron	0.47	106	*e*P	Pn	07 54 36.0	-0.9
SNET	Serv Nac Est T	0.53	110	*e*P	Pn	07 54 36.2	-0.8
LALI	Alcalda de L	0.56	132	*e*P	Pn	07 54 36.3	-0.7
LALI				*e*S	Sn	07 54 53.9	0.0
MTO3	Montecristo	0.65	35	⇑*i*P	Pn	07 54 36.2	-1.6
LFRS	El Faro	0.71	110	⇑*e*P	Pn	07 54 37.5	-0.6
SJTE	Alcalda de S	0.76	109	⇑*e*P	Pn	07 54 37.8	-0.6
SJTE				*e*S	Sn	07 54 58.2	+2.0
PAVA	Las Pavas	0.80	101	⇑*i*P	Pn	07 54 38.2	-0.5
COEG	Centro de Oper	0.88	106	⇑*e*P	Pn	07 54 38.6	-0.6
COEG				IAML		07 54 39.9	
	comp=Z,327nm,0.3s						
NBG	Las Nubes	0.92	321	*e*P	Pn	07 54 39.0	-0.7
SCLA	Alcaldia de Sa	1.00	99	⇑*i*P	Pn	07 54 40.0	-0.2
MRL	Marmol	1.21	3	*i* P	Pn	07 54 41.3	-0.9
FUG	Fuego 3	1.21	299	*i* P	Pn	07 54 41.1	-1.1
FUG				⇑*e*S	Sn	07 55 06.5	+3.6
COEB	Comit de Eme	1.24	107	*e*P	Pn	07 54 42.1	-0.2
COEB				IAML		07 55 12.1	
	comp=Z,227nm,0.2s						
STG3	Santiaguito 3,	1.96	296	*e*P	Pn	07 54 48.7	-1.3

*NEIC **11** 07:57:24.1±2.1, 23°.76S±0°.08×177°.07W±0°.10, h161^{km}±7^{km}, mb4.4/12, Error ellipse: s-maj=13.5km s-min=11.9km az=63.0*
*IDC **11** 07:57:27.2±1.1, 23°.74S×177°.39W, h185^{km}±8^{km}, mb3.7/11, mb1 4.0/13, mb1mx3.8/36, mbtmp4.3/13, Error ellipse: s-maj=20.8km s-min=14.6km az=153.0*
ISC 11 07:57:23.1±0.5, **23°.77S**±0°.07×**177°.04W**±0°.07, **h150**^{km}, **n46**, σ1^{s}.**67**/48, **mb4.1**/16, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	5.52	188	S	Sn	07 59 47.7	+1.5
	96nm,0.3s,baz=46,slow=16,SNR=7.3						
RAO	Raoul Island	5.52	188	Pn	Pn	07 58 44.6	+1.2
MSVF	Nonsavu	7.56	322	P	Pn	07 59 13.0	+2.2
	9.8nm,0.3s,baz=102,slow=22,SNR=50						
MSVF	Nonsavu	7.56	322	Pn	Pn	07 59 12.4	+1.6
NIUE	Niue	8.10	56	Pn	Pn	07 59 17.7	-0.1
AFI	Afiamalu	10.99	28	P	Pn	07 59 51.6	-4.8
	5.7nm,0.3s,baz=316,slow=3.4,SNR=8.1						
AFI				S	Sn	08 01 45.3	-13
	6.1nm,0.3s,baz=106,slow=21,SNR=4.1						
MARNC	Mare, Loyalty	13.98	276		Pn	08 00 36.9	+2.1
PINNC	Pines Island,	14.32	272		P	08 00 42.7	+0.9
OUENC	Ouen Island, N	14.90	272	Pn	Pn	08 00 46.1	-0.3
URZ	Urewera	15.29	198	P	Pn	08 00 48.8	-2.2
	0.9nm,0.3s,baz=118,slow=23,SNR=6.3						
URZ				S	Sn	08 03 24.8	-16
	0.6nm,0.3s,baz=121,slow=23,SNR=2.2						
URZ	Urewera	15.29	198	IAmb	IAmb	08 00 51.8	
	comp=Z,39nm,1.3s						
DZM	Mont Dzumac	15.32	273	P	Pn	08 00 52.0	+0.4
	comp=Z,1.6nm,0.3s,baz=54,slow=20,SNR=20						
DZM	Mont Dzumac	15.32	273	P	Pn	08 00 51.9	+0.3
DZM				IAmb	IAmb	08 00 56.6	
	comp=Z,25nm,0.9s						
RAR	Rarotonga	16.16	84	P	Pn	08 01 02.3	+0.5
SANVU	Saraoutou	16.99	296	P	Pn	08 01 12.4	+0.5
CTA	Charters Tower	34.19	269	P	P	08 03 52.7	-1.8
	comp=Z,13nm,0.5s,baz=97,slow=10,SNR=37						
CTA				pP	pwP	08 04 32.4	+3.3
	comp=Z,9.0nm,0.8s,baz=99,slow=12,SNR=4.4						
CTAO	Charters Tower	34.19	269	P	P	08 03 53.0	-1.4
ASAR	Alice Springs	44.73	260	P	P	08 05 19.2	-2.5
	comp=Z,0.9nm,0.5s,baz=96,slow=8.2,SNR=22						
ASAR				pP	pwP	08 05 59.5	+1.8
	comp=Z,6.1nm,0.9s,baz=94,slow=8.4,SNR=14						
ASAR				PcP	PcP	08 07 00.5	-1.0
	comp=Z,1.0nm,0.7s,baz=114,slow=3.3,SNR=5.1						
ASAR				ScP	ScP	08 10 39.0	-0.9
	comp=Z,0.5nm,0.8s,baz=100,slow=4.4,SNR=4.2						
WB2	Warramunga Arr	45.11	265	P	P	08 05 21.5	-3.2
WB2				IAmb	IAmb	08 05 22.6	
	comp=Z,6.2nm,1.0s						
WB0	Warramunga Arr	45.12	265	P	P	08 05 21.4	-3.4
WB0				IAmb	IAmb	08 05 22.5	
	comp=Z,4.1nm,0.8s						
WRA	Warramunga Arr	45.12	265	P	P	08 05 21.6	-3.3
	comp=Z,2.2nm,0.4s,baz=103,slow=8.3,SNR=23						
WRA				pP	pwP	08 06 02.3	+1.3
	comp=Z,6.5nm,0.9s,baz=101,slow=8.2,SNR=7.5						
WRA	Warramunga Arr	45.12	265	P	P	08 05 21.2	-3.6
FITZ	Fitzroy Crossi	53.55	264	P	P	08 06 27.1	-1.6
	comp=Z,1.6nm,0.6s,baz=93,slow=6.0,SNR=7.2						
VNDA	Vanda	54.76	186	P	P	08 06 37.8	+1.2
	comp=Z,0.6nm,1.0s,baz=357,slow=8.9,SNR=4.2						
QSPA	South Pole Qui	66.32	180	P	P	08 07 55.9	+0.6
QSPA				IAmb	IAmb	08 07 56.9	
	comp=Z,11nm,0.9s						
MAW	Mawson	78.81	200	P	P	08 09 08.5	-0.4
	comp=Z,2.2nm,0.8s,baz=128,slow=8.6,SNR=4.1						
NVAR	Mina Array Bea	82.79	43	P	P	08 09 32.0	+1.2
	comp=Z,1.5nm,0.7s,baz=223,slow=7.9,SNR=12						
KVN	Kaiserville	83.30	42	P	P	08 09 34.0	+0.7
KVN				IAmb	IAmb	08 09 35.3	
	comp=Z,4.9nm,1.1s						
H03S2	Juan Fernandez	83.42	124	T	T	09 41 55.0	
	baz=245,slow=75,SNR=7.1						
H03S1	Juan Fernandez	83.44	124	T	T	09 41 54.8	
	baz=245,slow=75,SNR=7.3						
H03S3	Juan Fernandez	83.44	124	T	T	09 41 55.2	
	baz=245,slow=75,SNR=3.0						
SNAA	Sanae	84.73	178	P	P	08 09 39.5	-0.5
VNA3	Neumayer Olymp	84.84	176	P	P	08 09 39.9	-0.5
VNA2	Neumayer--Watz	85.29	177	P	P	08 09 42.6	-0.1
	baz=212,slow=3.3						
VNA1	Neumayer--Stat	85.51	176	P	P	08 09 43.3	-0.4
TXAR	Lajitas Array	88.07	57	P	P	08 09 58.5	+1.5
	comp=Z,1.1nm,0.8s,baz=212,slow=6.2,SNR=13						
TRF	Thorofare Moun	89.44	12	P	P	08 10 02.1	-0.5
TRF				IAmb	IAmb	08 10 02.9	
	comp=Z,7.3nm,0.8s						
PDAR	Pinedale Array	90.73	43	P	P	08 10 09.0	-0.2
	comp=Z,0.7nm,0.5s,baz=236,slow=2.6,SNR=9.3						
ILAR	Eielson Array	91.29	12	P	P	08 10 10.9	-0.1
	comp=Z,0.6nm,0.8s,baz=229,slow=5.9,SNR=10						
CMAR	Chiang Mai Arr	92.04	289	P	P	08 10 15.4	-0.1
	comp=Z,0.9nm,0.3s,baz=163,slow=2.8,SNR=4.8						
ARCES	ARCESS Array B	132.28	350	PKP	PKPdf	08 16 17.3	-1.3
	comp=Z,6.0nm,1.1s,baz=7.8,slow=2.7,SNR=4.7						
FINES	FINESS Array B	139.14	343	PKP	PKPdf	08 16 32.2	+0.8
	comp=Z,2.1nm,0.8s,baz=134,slow=6.0,SNR=2.4						
AKASG	Malin Array Be	146.28	330	PKPbc	PKPdf	08 16 44.4	-0.1
	comp=Z,3.1nm,0.5s,baz=42,slow=4.2,SNR=15						
CLL	Collm	151.43	347	*i* PKPbc	PKPbc	08 16 58.6	-0.4
	comp=Z,7.0nm,1.0s						
CLL				*i* PKPab	PKPab	08 17 04.5	-3.2
	comp=Z,9.0nm,0.6s						
GERES	GERESS Array B	153.57	344	PKPbc	PKPbc	08 17 04.8	+0.8
	comp=Z,1.1nm,0.7s,baz=44,slow=4.1,SNR=4.8						
TORD	Torodi Ar. Bea	169.37	173	PKP	PKPdf	08 17 11.4	-1.9
	comp=Z,0.9nm,0.8s,baz=299,slow=0.9,SNR=4.8						
TORD				PKPab	PKPab	08 18 26.6	+0.2
	comp=Z,2.0nm,0.8s,baz=180,slow=4.2,SNR=8.7						

*SJA **11** 07:59:29.0, 31°.74S×71°.98W, h10^{km}, ML4.4*
*GUC **11** 07:59:31.9±1.1, 31°.77S×71°.53W, h36^{km}±3^{km}, ML4.4*
*NEIC **11** 07:59:32.5±1.9, 31°.76S±0°.04×71°.6W±0°.1, h34^{km}±4^{km}, Error ellipse: s-maj=13.4km s-min=5.6km az=91.0*
*IDC **11** 07:59:32.3±0.7, 31°.73S×71°.33W, h34^{km}±4^{km}, mb4.3/12, mb1 4.3/17, mb1mx4.1/35, mbtmp4.4/17, ML4.1/5, MS3.6/4, Ms1 3.6/4, ms1mx3.2/26, Error ellipse: s-maj=21.3km s-min=15.8km az=94.0*
*NEIC **11** 07:59:32.9, 31°.76S×71°.58W, h36^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.10; M$_{θθ}$0.48; M$_{φφ}$-1.58; M$_{rθ}$0.60; M$_{θφ}$0.11; M$_{φr}$-1.90; Fault plane solution: M$_0$2.44000×10^{15} NP1:φ$_s$18.15000°, δ19.65000°, λ123.49000°. NP2:φ$_s$163.06000°, δ73.72000°, λ78.86000°. Principal axes: T 2.2200, Plg60.0000°, Azm57.0000°; N 0.3871, Plg11.0000°, Azm166.0000°; P -2.6071, Plg28.0000°, Azm262.0000°;*
*VAO **11** 07:59:33.6±0.4, 31°.75S×71°.36W, h42^{km}, mb4.6*
ISC 11 07:59:31.4±0.6, **31°.77S**±0°.02×**71°.57W**±0°.04, **h33**^{km}±4^{km}, **n195**, σ1^{s}.**24**/197, **mb4.7**/18, **4C-5D**, **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA06	Catapilco	0.82	163	⇓*i*P	Pn	07 59 47.1	+0.4
VA06				*i* S	Sn	07 59 57.9	+0.2
VA06				IAML		08 00 01.8	
	comp=N,23µm,0.3s						
CO06	Fray Jorge	1.09	357	⇓*i*P	Pb	07 59 51.4	-0.4
CO06				*i* S	Sb	08 00 06.1	+0.3
CO06				IAML		08 00 10.6	
	comp=E,18µm,0.4s						
CO06	Fray Jorge	1.09	357		Pb	07 59 51.5	-0.3
CO03	El Pedregal	1.20	39	⇓*i*P	Pb	07 59 53.0	-0.6
CO03				*i* S	Sb	08 00 08.0	-0.8
CO03				IAML		08 00 09.8	
	comp=E,23µm,0.2s						
CO03	El Pedregal	1.20	39		Pb	07 59 53.3	-0.3
CO03	El Pedregal	1.20	39	*i* P	Pb	07 59 53.0	-0.6
VA01	Torpederas	1.25	183	⇑*e*P	Pn	07 59 53.9	+1.3
VA01				*i* S	Sb	08 00 10.5	+0.3
VA01	Torpederas	1.25	183	Pn	Pn	07 59 53.6	+1.0
VA01	Torpederas	1.25	183	*i* P	Pb	07 59 54.0	-0.4
ROC1	El Roble	1.29	159	*i* P	Pn	07 59 54.0	+0.6
VA03	San Esteban	1.32	139	⇑*e*P	Pb	07 59 55.0	-0.6
VA03				*i* S	Sb	08 00 11.8	-0.4
VA03				IAML		08 00 14.2	
	comp=E,17µm,0.3s						
VA03	San Esteban	1.32	139		Pb	07 59 55.0	-0.6
MT02	Curacav	1.53	166		Pb	07 59 58.2	-1.0
MT02	Curacav	1.53	166	*i* P	Pn	07 59 57.0	+0.6
PEL	Peldehue	1.56	151	⇓*i*P	Pb	07 59 58.6	-1.1
PEL				*i* S	Sb	08 00 18.3	-0.8
PEL				IAML		08 00 22.1	
	comp=E,4µm,0.2s						
PEL	Peldehue	1.56	151	Pn	Pn	07 59 58.3	+1.4
PEL	Peldehue	1.56	151	*i* P	Pn	07 59 58.0	+1.1

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GO04  Tololo Observa   1.73  23 eP     Pb      08 00 00.9 -1.6
GO04                            eS     Sb      08 00 23.9 -0.1
GO04  Tololo Observa   1.73  23        Pb      08 00 01.2 -1.4
GO04  Tololo Observa   1.73  23 i P    Pb      08 00 01.0 -1.6
MT05  Renca            1.76 157⇑iP     Pb      08 00 01.7 -1.4
MT05                            i S    Sb      08 00 24.8 -0.2
MT05                             IAML          08 00 28.2
      comp=E,10µm,0.3s
MT05  Renca            1.76 157        Pn      08 00 01.4 +1.7
MT05  Renca            1.76 157 i P    Pn      08 00 01.0 +1.3
CO05  La Serena        1.87   9 eP     Pn      08 00 02.4 +1.3
CO05                            eS     Sb      08 00 27.6 -0.2
CO05                             IAML          08 00 35.1
      comp=E,10µm,0.3s
CO05  La Serena        1.87   9        Pn      08 00 02.8 +1.7
VA05  Santo Domingo    1.88 181⇑eP     Pn      08 00 02.1 +0.8
VA05                            i S    Sb      08 00 27.1 -1.1
VA05  Santo Domingo    1.88 181        Pn      08 00 02.2 +1.0
AUSP  Uspallata        1.91 104 i P    Pb      08 00 05.0 -0.8
RTLS  Leoncito         1.94  91 i P    Pb      08 00 05.0 -1.3
MT09  Talagante        2.06 166⇓eP     Pn      08 00 06.0 +2.1
MT09                            i S    Sb      08 00 31.6 -1.9
MT09                             IAML          08 00 41.2
      comp=E,3µm,0.3s
MT09  Talagante        2.06 166        Pn      08 00 06.0 +2.1
MT01  Popeta           2.11 173 eP     Pn      08 00 05.8 +1.4
MT01                             IAML          08 00 40.5
      comp=E,2µm,0.4s
MT01  Popeta           2.11 173        Pn      08 00 05.7 +1.4
MT01  Popeta           2.11 173 i P    Pn      08 00 05.0 +0.6
BO04  La Punta         2.36 160 eP     Pn      08 00 09.9 +2.0
BO04                            eS     Sn      08 00 38.5 +2.8
BO04                             IAML          08 00 48.5
      comp=E,4µm,0.6s
LMEL  Las Melosas      2.37 151 eP     Pn      08 00 10.4 +2.3
LMEL                            eS     Sb      08 00 40.2 -2.2
LMEL                             IAML          08 00 49.3
      comp=N,4µm,0.2s
AROD  Rodeo            2.41  49 i P    Pb      08 00 13.0 -1.3
ACCO  Cerro Coronel    2.45  62 i P    Pb      08 00 14.0 -1.0
ASAL  Salagasta        2.46 110 i P    Pb      08 00 15.0  0.0
ARCO  CERRO ARCO       2.48 116 i P    Pb      08 00 15.0 -0.4
ZON   Zonda            2.48  86 i P    Pb      08 00 14.0 -1.3
RTCV  Cerro Valdivia   2.58  93 i P    Pb      08 00 15.0 -2.1
ACDV  Cuesta del Vie   2.64  54 i P    Pb      08 00 16.0 -2.1
BO01  Tunca            2.65 171 eP     Pn      08 00 13.2 +1.4
BO01  Tunca            2.65 171  Pn    Pn      08 00 13.2 +1.4
BO01  Tunca            2.65 171 i P    Pn      08 00 13.0 +1.2
AAGR  Agrelo           2.67 120 i P    Pb      08 00 17.0 -1.5
LCO   Las Campanas     2.85  16  Pn    Pn      08 00 16.6 +1.7
LCO   Las Campanas     2.85  16 i P    Pn      08 00 16.0 +1.1
BO02  Sierra Bellavi   3.09 168 eP     Pn      08 00 19.6 +1.7
BO02  Sierra Bellavi   3.09 168        Pn      08 00 19.9 +2.1
BO02  Sierra Bellavi   3.09 168 i P    Pn      08 00 20.0 +2.1
GO05  Huala            3.25 185 eP     Pn      08 00 20.1 +0.1
GO05                             IAML          08 01 37.8
      comp=E,405nm,0.6s
GO05  Huala            3.25 185        Pn      08 00 20.1 +0.1
GO05  Huala            3.25 185 i P    Pn      08 00 20.0  0.0
AC04  Llanos de Chal   3.58   7 eP     Pn      08 00 25.4 +0.7
AC04  Llanos de Chal   3.58   7  Pn    Pn      08 00 25.6 +0.9
AC04  Llanos de Chal   3.58   7 i P    Pn      08 00 25.0 +0.4
AVFE  Valle Fertil     3.70  74 i P    Pn      08 00 30.0 +3.7
RFA   San Rafael       3.97 140 i P    Pn      08 00 33.0 +3.0
ML02  Panimavida       3.98 178 eP     Pn      08 00 31.2 +1.0
ML02  Panimavida       3.98 178  Pn    Pn      08 00 30.7 +0.6
VCA   Vinchina         4.20  45 i P    Pn      08 00 38.0 +4.7
ACHE  Chepes           4.24  83 i P    Pn      08 00 37.0 +3.2
GO03  Copiap           4.32  16 eP     Pn      08 00 36.1 +1.1
GO03  Copiap           4.32  16  Pn    Pn      08 00 36.2 +1.3
GO03  Copiap           4.32  16 i P    Pn      08 00 36.0 +1.1
APLL  PUNTA DE LOS L   4.54  74 i P    Pn      08 00 41.0 +3.1
ACLC  CERRO LA CRUZ    4.62  61 i P    Pn      08 00 42.0 +2.9
MRA   San Martin       5.01  99 i P    Pn      08 00 46.0 +1.6
H03N1 Juan Fernandez   6.41 253  T     T       08 07 44.5
      baz=80,slow=73,SNR=5300
H03N3 Juan Fernandez   6.42 253  T     T       08 07 41.1
      baz=80,slow=73,SNR=4626
H03N2 Juan Fernandez   6.43 253  T     T       08 07 45.2
      baz=80,slow=73,SNR=3919
H03S3 Juan Fernandez   6.51 250  T     T       08 07 50.8
      baz=84,slow=74,SNR=33
H03S1 Juan Fernandez   6.51 250  T     T       08 07 54.1
      baz=84,slow=74,SNR=36
H03S2 Juan Fernandez   6.52 250  T     T       08 07 46.7
      baz=84,slow=74,SNR=44
LC01  Cunco            7.12 182  Pn    Pn      08 01 12.3 -0.9
LC01  Cunco            7.12 182 i P    Pn      08 01 13.0 -0.2
FSA   Cafayete         7.47  42 i P    Pn      08 01 20.0 +1.7
LR03  Panguipulli      7.87 184        Pn      08 01 22.4 -1.1
PLCA  Paso Flores      8.98 175  Pn    Pn      08 01 40.8 +1.9
      comp=E,0.5nm,0.3s,baz=334,slow=14,SNR=21
PLCA  Paso Flores      8.98 175 eP     Pn      08 01 40.7 +1.9
PLCA  Paso Flores      8.98 175  Pn    Pn      08 01 39.9 +1.0
LL04  Puerto Octay     9.15 184        Pn      08 01 40.5 -0.5
PB06  IPOC Station P   9.20  12 i P    Pn      08 01 41.0 -1.0
AF01  San Pedro de A   9.29  20        Pn      08 01 43.6 +0.3
LVC   Limon Verde      9.43  15  Pn    Pn      08 01 43.3 -2.0
      comp=E,1.9nm,0.3s,baz=198,slow=5.1,SNR=12
LVC                              LR    LR      08 05 35.5
      comp=E,305nm,21.5s,baz=217,slow=39
LVC   Limon Verde      9.43  15 eP     Pn      08 01 45.4 +0.1
LVC   Limon Verde      9.43  15        Pn      08 01 45.3 +0.1
PB04  IPOC Station P   9.48   8 i P    Pn      08 01 44.0 -1.9
PB02  IPOC Station P  10.52   9 i P    Pn      08 01 59.0 -1.0
ITQB  Itaqui          13.03  85 eP     Pn      08 02 33.8 -0.5
ITQB  Itaqui          13.03  85        Pn      08 02 33.6 -0.6
PB16  IPOC Station P  13.51   8        Pn      08 02 39.7 -1.6
CPUP  Villa Florida   13.58  70  Pn    Pn      08 02 38.6 -3.2
      comp=E,0.3nm,0.3s,baz=251,slow=12,SNR=8.4
CPUP                             LR    LR      08 08 24.8
      comp=E,343nm,18.8s,baz=250,slow=40
CPUP  Villa Florida   13.58  70 eP     Pn      08 02 41.0 -0.8
CPUP  Villa Florida   13.58  70        Pn      08 02 40.8 -1.0
PLTB  Pedras Altas    15.29  95 eP     Pn      08 03 03.4 -1.4
PLTB  Pedras Altas    15.29  95        Pn      08 03 03.5 -1.4
CPSB  Cacapava Do Su  15.60  90 eP     Pn      08 03 06.9 -2.0
LPAZ  La Paz          15.73  12  Pn    Pn      08 03 10.9 -0.2
      comp=E,0.3nm,0.3s,baz=180,slow=8.1,SNR=16
LPAZ  La Paz          15.73  12 eP     Pn      08 03 11.8 +0.6
LPAZ  La Paz          15.73  12  Pn    Pn      08 03 12.4 +1.2
AQDB  Aquidauana      18.13  55 eP     Pn      08 03 40.6 -0.1
SIV   San Ignacio     18.39  34  P     P       08 03 43.2 -0.6
      comp=E,0.7nm,0.3s,baz=209,slow=9.1,SNR=31
SIV                              LR    LR      08 12 03.3
      comp=E,130nm,21.3s,baz=258,slow=41
PTGB  Pitanga         18.56  73 eP     Pn      08 03 45.8 -0.2
TER01 Tubaro-SC       19.67  86 eP     P       08 03 57.0 -0.7
PTLB  Pontes e Lacer  19.82  38 eP     P       08 03 59.1 -0.2
PTLB  Pontes e Lacer  19.82  38  P     P       08 03 59.2 -0.2
PCMB  Pacaembu        20.75  66 eP     P       08 04 08.8 -0.6
TIJ01 Guaruva-PR      20.82  78 eP     P       08 04 09.6 -0.7
FRTB  Fartura         21.21  72 eP     P       08 04 14.0 -0.5
SALV  Santo Antonio   21.42  46 eP     P       08 04 16.0 -0.7
VILB  Vilhena         21.45  32 eP     P       08 04 16.5 -0.6
VILB  Vilhena         21.45  32  P     P       08 04 16.2 -0.8
ETMB  Extrema         22.40  14 eP     P       08 04 27.6 +0.3
ETMB  Extrema         22.40  14  P     P       08 04 27.8 +0.5
ETMB                             IAmb  IAmb    08 04 29.9
      comp=Z,22nm,1.1s
ITRB  Iturama         22.53  63 eP     P       08 04 29.0 +0.4
PET01 Itanhaem-SP     22.68  77 eP     P       08 04 30.9 +0.8
BB19B Bebedouro       23.18  68 eP     P       08 04 35.2 -0.2
RCLB  Rio Claro- Sao  23.30  72 eP     P       08 04 36.8 +0.2
CZSB  Cruzeiro do Su  23.94 357 eP     P       08 04 44.8 +2.1
SAML  Samuel          24.01  21  P     P       08 04 43.0 -0.3
ARAG  Araguaiana, MT  24.08  53 eP     P       08 04 43.9  0.0
PDRB  Porto dos Gac   24.29  38 eP     P       08 04 45.7 -0.2
IPMB  Ipameri, GO     25.18  63 eP     P       08 04 53.1 -1.0
CLDB  Colider         25.40  39 eP     P       08 04 55.6 -0.4
BSCB  Bom Sucesso     26.23  72 eP     P       08 05 03.2 -0.4
BDFB  Brasilia        26.80  59  P     P       08 05 08.1 -0.7
      comp=Z,21nm,0.9s,baz=229,slow=8.2,SNR=19
BDFB                             LR    LR      08 17 21.6
      comp=Z,144nm,18.8s,baz=199,slow=40
BDFB  Brasilia        26.80  59  P     P       08 05 07.5 -1.3
BDFB                             IAmb  IAmb    08 05 09.9
      comp=Z,27nm,1.0s
SNDB  Serra Nova Dou  27.15  48 eP     P       08 05 12.6 +0.8
TBTG  Tabatinga, AM   27.48   4 eP     P       08 05 15.8 +1.0
DIAM  Diamantina, MG  28.52  69 eP     P       08 05 23.9 -0.3
PEXB  Peixe           29.02  53 eP     P       08 05 28.9 +0.3
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MC01  Montes Claros   29.21  66 eP     P       08 05 29.8 -0.5
JANB  Januaria        29.92  63 eP     P       08 05 36.0 -0.5
MACA  Manacapuru-AM   30.25  22 eP     P       08 05 38.9 -0.5
MACA  Manacapuru-AM   30.25  22  P     P       08 05 38.4 -0.9
BSFB  Barra de Sao F  30.51  72 eP     P       08 05 41.3 -0.4
ITTB  Itaituba        31.05  32 eP     P       08 05 47.0 +0.6
SDBA  SAO DESIDERIO   31.19  58 eP     P       08 05 48.1 +0.4
SMTB  Santa Maria do  31.87  50 eP     P       08 05 53.3 -0.4
PRPB  Parauapebas     32.59  43 eP     P       08 05 59.9 -0.1
PTGA  Pitinga         32.77  22  P     P       08 06 01.1 -0.4
      comp=Z,8.8nm,0.8s,baz=204,slow=8.5,SNR=15
PTGA  Pitinga         32.77  22  P     P       08 06 00.9 -0.6
PTGA                             IAmb  IAmb    08 06 02.8
      comp=Z,10.0nm,0.8s
GDU01 Guandu, BA      34.36  66 eP     P       08 06 16.0 +0.5
BOAV  Boa Vista       35.56  19 eP     P       08 06 25.6 -0.1
BOAV  Boa Vista       35.56  19  P     P       08 06 24.7 -1.1
BOAV                             IAmb  IAmb    08 06 26.1
      comp=Z,6.9nm,0.7s
NBPN  Ponto Novo - B  35.67  61 eP     P       08 06 25.8 -1.0
MCPB  Macapa, AP      36.29  34 eP     P       08 06 31.6 -0.4
NBLA  Lagarto - SE    37.41  64 eP     P       08 06 40.2 -1.3
ROSB  Rosrio          38.63  48 eP     P       08 06 51.5 -0.3
NBMA  Muriti-CE       39.03  59 eP     P       08 06 54.8 -0.5
NBPS  Pedro II - PI   39.25  52 eP     P       08 06 55.9 -1.2
NBAN  Anadia - AL     39.39  64 eP     P       08 06 57.0 -1.3
NBPB  Pedra_Branca-C  39.70  56 eP     P       08 07 00.2 -0.6
SDV   Santo Domingo   40.44   1 eP     P       08 07 08.2 +1.1
MDP   Montagnes des   40.87  30  P     P       08 07 09.9 -0.5
      comp=Z,8.5nm,0.7s,baz=202,slow=10.0,SNR=6.9
VNA3  Neumayer Olymp  51.28 159  P     P       08 08 32.3 +0.5
VNA1  Neumayer--Stat  51.57 158  P     P       08 08 34.6 +0.7
VNA2  Neumayer--Watz  51.92 158  P     P       08 08 37.3 +0.8
      baz=284,slow=8.2
SNAA  Sanae           53.50 158  P     P       08 08 49.1 +0.8
SNAA  Sanae           53.50 158  P     P       08 08 49.1 +0.8
      comp=Z,2.6nm,0.9s,baz=296,slow=3.2,SNR=3.3
SNAA  Sanae           53.50 158  P     P       08 08 48.3  0.0
QSPA  South Pole Qui  58.46 180  P     P       08 09 25.5 +1.5
      comp=Z,2.2nm,0.8s,baz=152,slow=7.2,SNR=2.7
QSPA  South Pole Qui  58.46 180  IAmb  IAmb    08 09 36.1
      comp=Z,6.9nm,1.1s
Y49A  Blount Mountai  66.76 347  P     P       08 10 19.8 +0.4
W50A  Signal Mountai  67.86 348  P     P       08 10 26.4  0.0
W50A                             IAmb  IAmb    08 10 28.5
      comp=Z,8.4nm,0.9s
V53A  Saluda          67.91 350  P     P       08 10 26.0 -0.7
TXAR  Lajitas Array   67.99 330  P     P       08 10 29.1 +1.7
      comp=Z,0.8nm,0.9s,baz=160,slow=7.8,SNR=4.8
TKL   Tuckaleechee C  68.05 349  P     P       08 10 28.0 +0.5
TKL                              IAmb  IAmb    08 10 29.2
      comp=Z,6.1nm,0.9s
WVT   Waverly         69.24 346  P     P       08 10 34.6 -0.3
CCM   Cathedral Cave  71.85 344  P     P       08 10 51.9 +1.1
CCM                              IAmb  IAmb    08 10 53.0
      comp=Z,13nm,1.2s
R40A  Maddies Statio  72.32 343  P     P       08 10 54.0 +0.4
R40A                             IAmb  IAmb    08 10 55.3
      comp=Z,6.2nm,0.8s
DBIC  Dimbokro        74.10  72  P     P       08 11 04.3 -0.4
      comp=Z,6.3nm,0.6s,baz=242,slow=3.9,SNR=9.1
DBIC  Dimbokro        74.10  72  P     P       08 11 04.6 -0.1
DBIC                             IAmb  IAmb    08 11 06.7
      comp=Z,13nm,1.1s
TSUM  Tsumeb          79.45 106  P     P       08 11 34.7 -0.3
      comp=Z,3.5nm,0.3s,baz=247,slow=3.7,SNR=5.7
TSUM  Tsumeb          79.45 106  IAmb  IAmb    08 11 36.1
      comp=Z,4.3nm,0.8s
BOSA  Boshof          80.76 118  P     P       08 11 41.7 -0.3
      comp=Z,3.0nm,0.8s,baz=223,slow=2.5,SNR=4.2
NVAR  Mina Array Bea  82.29 325  P     P       08 11 51.8 +2.1
      comp=Z,1.1nm,0.8s,baz=170,slow=7.0,SNR=7.1
NVAR                             pP    pP      08 12 01.4 +1.4
      comp=Z,1.5nm,0.9s,baz=177,slow=6.3,SNR=6.0
TORD  Torodi Ar. Bea  83.08  70  P     P       08 11 53.9 -0.2
      comp=Z,5.1nm,0.8s,baz=261,slow=4.7,SNR=24
TORD                             pP    pP      08 12 04.9 +0.3
      comp=Z,3.7nm,1.0s,baz=281,slow=5.9,SNR=5.3
ULM   Lac du Bonnet   84.45 345  P     P       08 12 01.2 +0.9
      comp=Z,3.5nm,0.8s,baz=288,slow=1.8,SNR=4.2
ASAR  Alice Springs  119.73 207  PKP   PKPdf   08 18 18.1 -0.6
      comp=Z,0.3nm,0.5s,baz=128,slow=1.6,SNR=4.8
ASAR                             pPKP  pPKPdf  08 18 28.8 -0.5
      comp=Z,0.5nm,0.9s,baz=145,slow=3.1,SNR=3.1
WRA   Warramunga Arr 122.89 209  PKP   PKPdf   08 18 25.0 +0.2
      comp=Z,0.9nm,0.9s,baz=160,slow=1.7,SNR=4.8
H11S2 WAKE ISLAND Hy126.17 271   T     T       10 37 28.3
      baz=117,slow=74,SNR=108
H11S1 WAKE ISLAND Hy126.18 271   T     T       10 37 26.3
      baz=117,slow=74,SNR=155
H11S3 WAKE ISLAND Hy126.19 270   T     T       10 37 29.6
      baz=117,slow=74,SNR=106
H11N3 WAKE ISLAND Hy126.53 272   T     T       10 37 53.1
      baz=116,slow=75,SNR=156
H11N1 WAKE ISLAND Hy126.54 272   T     T       10 37 55.2
      baz=116,slow=75,SNR=60
H11N2 WAKE ISLAND Hy126.54 272   T     T       10 37 58.1
      baz=116,slow=75,SNR=359
HYB   Hyderabad      149.43 111 i PKP  PKPdf   08 19 08.0 -5.3
ZALV  Zalesovo Beam  152.12  30  PKPbc PKPbc   08 19 23.1 +0.1
      comp=Z,8.7nm,0.8s,baz=298,slow=3.5,SNR=20
ZALV                             pPKPbc pPKPbc 08 19 34.9 +1.2
      comp=Z,4.7nm,0.5s,baz=317,slow=3.2,SNR=8.7
ZALV  Zalesovo Beam  152.12  30        PKPbc   08 19 22.9  0.0
KSH   Kashi          152.63  65  PKPbc PKPbc   08 19 24.6 -0.1
SONM  Songino Array  163.88   5  PKPab PKPab   08 20 23.4 -0.2
      comp=Z,0.7nm,0.9s,baz=27,slow=3.9,SNR=3.7
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*NNC **11** 08:05:18.6±0.3, 43°.22N×78°.24E, h0^{km}, mb3.4, mpv3.4,*
Error ellipse: s-maj=3.0km s-min=1.5km az=4.0
*KRNET **11** 08:05:19.0±0.1, 43°.21N×78°.21E, h18^{km}, mb3.0*
*SOME **11** 08:05:19.4, 43°.22N×78°.17E, h10^{km}*
ISC 11 08:05:19.3±0.8**, 43°.21N**±0°.02×**78°.21E**±0°.02**, h11**^{km}±7^{km}**,**
n58, $\sigma 0^{s}.88$/124**, 16C-9D, Lake Issyk-Kul region**

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Code  Station Name       Δ°   AZ°   Phase ID       Time      Res
                                 Op    ISC       h  m  s    ISC
SATY  Saty             0.21 136 eP     Pg      08 05 23.6 -0.2
      205nm,0.1s
SATY                            eS     Sg      08 05 26.6 -0.3
      2µm,0.1s
SATY  Saty             0.21 136  P     Pg      08 05 23.6 -0.2
      205nm,0.1s
SATY                             S     Sg      08 05 26.6 -0.3
      2µm,0.1s
SATY  Saty             0.21 136 eP     Pg      08 05 23.6 -0.2
      baz=35
SATY                            eS     Sg      08 05 26.6 -0.3
      baz=35
KURS  Kuram            0.28 354 eP     Pg      08 05 25.1 +0.1
      83nm,0.1s
KURS                            eS     Sg      08 05 29.2 +0.3
      79nm,0.2s
KURS  Kuram            0.28 354  P     Pg      08 05 25.1 +0.1
      83nm,0.1s
KURS                             S     Sg      08 05 29.2 +0.3
      79nm,0.2s
KURS  Kuram            0.28 354 eP     Pg      08 05 25.1 +0.1
      baz=54
KURS                            eS     Sg      08 05 29.2 +0.3
      baz=54
ANVS  Anan'yevo        0.58 223⇑eP     Pg      08 05 29.9 -0.8
      baz=24
ANVS                           ⇑iS     Sg      08 05 38.1 -0.3
      baz=24
UZB   Uzynbulak        0.60  96 eP     Pg      08 05 30.4 -0.6
      30nm,0.1s
UZB                             eS     Sg      08 05 38.2 -0.7
      132nm,0.1s
UZB   Uzynbulak        0.60  96  P     Pg      08 05 30.3 -0.6
      30nm,0.1s
UZB                              P     Pg      08 05 30.3 -0.6
      30nm,0.1s
UZB                              S     Sg      08 05 38.0 -0.9
      135nm,0.1s
UZB                              S     Sg      08 05 38.2 -0.7
      132nm,0.1s
UZB   Uzynbulak        0.60  96 eP     Pg      08 05 30.4 -0.6
      baz=95
UZB                             eS     Sg      08 05 38.2 -0.7
      baz=95
PRZ   Przheval'sk      0.74 169⇑iP     Pg      08 05 33.2 -0.4
      baz=69
PRZ                            ⇑iS     Sg      08 05 42.7 -0.6
      baz=69
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MDOK  Medeo            0.85 267 eP     Pg      08 05 35.1 -0.6
      7.6nm,0.2s
MDOK                            eS     Sb      08 05 47.0 -0.6
      22nm,0.2s
MDOK  Medeo            0.85 267  Pg    Pg      08 05 35.1 -0.6
      7.6nm,0.2s
MDOK                             Lg    Lg      08 05 47.0
      22nm,0.2s
MDOK  Medeo            0.85 267 eP     Pg      08 05 35.1 -0.6
      baz=67
MDOK                            eS     Sb      08 05 47.0 -0.6
      baz=67
TNSS  Tian-Shan        0.94 260  P     Pg      08 05 37.3 -0.2
      5.0nm,0.1s
TNSS                             P     Pg      08 05 37.3 -0.2
      6.8nm,0.1s
TNSS                             S     Sb      08 05 49.9 -0.4
      68nm,0.2s
TNSS                             S     Sb      08 05 50.0 -0.4
      31nm,0.3s
PDGK  Podgornoye       0.94  82  P     Pg      08 05 36.4 -1.1
      3.9nm,0.1s
PDGK                             S     Sg      08 05 48.6 -1.3
      16nm,0.2s
PDGK  Podgornoye       0.94  82 ⇑P     Pg      08 05 36.3 -1.2
      1.8nm,0.3s
PDGK                            ⇑S     Sg      08 05 48.5 -1.3
      7.9nm,0.2s
ARXS  Arharly          1.04 345 eP     Pg      08 05 38.7 -0.6
      6.4nm,0.1s
ARXS                            eS     Sg      08 05 52.5 -0.4
      22nm,0.1s
ARXS  Arharly          1.04 345  P     Pg      08 05 38.7 -0.6
      6.4nm,0.1s
ARXS                             P     Pb      08 05 38.9 -0.5
      6.4nm,0.1s
ARXS                             S     Sg      08 05 52.4 -0.4
      22nm,0.1s
ARXS                             S     Sb      08 05 52.6 -0.4
      25nm,0.2s
CHKK  Chushkaly        1.10 306 eP     Pg      08 05 39.6 -0.7
      4.5nm,0.1s
CHKK                            eS     Sg      08 05 54.1 -0.6
      36nm,0.2s
CHKK  Chushkaly        1.10 306  P     Pg      08 05 39.6 -0.7
      4.5nm,0.1s
CHKK                             S     Sg      08 05 54.1 -0.6
      36nm,0.2s
CHKK  Chushkaly        1.10 306 eP     Pg      08 05 39.6 -0.7
      baz=7.0
CHKK                            eS     Sg      08 05 54.0 -0.6
      baz=7.0
IZV   Izvestkoviy      1.18 262 eP     Pb      08 05 41.4 -0.4
      14nm,0.2s
IZV                             eS     Sg      08 05 57.1 -0.3
      24nm,0.3s
IZV   Izvestkoviy      1.18 262  P     Pb      08 05 41.5 -0.4
      14nm,0.1s
IZV                              S     Sg      08 05 57.2 -0.2
      24nm,0.2s
IZV   Izvestkoviy      1.18 262 eP     Pb      08 05 41.4 -0.4
      baz=62
IZV                             eS     Sg      08 05 57.1 -0.3
      baz=62
KTBS  Karatobe         1.22 295 eP     Pn      08 05 42.1 -0.2
      16nm,0.2s
KTBS                            eS     Sn      08 05 58.5 -0.3
      22nm,0.2s
KTBS  Karatobe         1.22 295  P     Pn      08 05 42.1 -0.2
      16nm,0.2s
KTBS                             P     Pb      08 05 42.3 -0.1
KTBS                             S     Sg      08 05 58.3 -0.3
KTBS                             S     Sn      08 05 58.5 -0.3
      22nm,0.2s
KTBS  Karatobe         1.22 295 eP     Pn      08 05 42.1 -0.2
      baz=95
KTBS                            eS     Sn      08 05 58.5 -0.3
      baz=95
MTBS  Maitube          1.30 267 eP     Pn      08 05 43.4 -0.1
      9.0nm,0.2s
MTBS                            eS     Sb      08 06 00.4 -0.2
      14nm,0.2s
MTBS  Maitube          1.30 267  P     Pn      08 05 43.4 -0.1
      9.0nm,0.2s
MTBS                             S     Sb      08 06 00.4 -0.2
      14nm,0.2s
MTBS  Maitube          1.30 267 eP     Pn      08 05 43.4 -0.1
      baz=67
MTBS                            eS     Sb      08 06 00.5 -0.2
      baz=67
KUU   Kurty            1.52 297 eP     Pb      08 05 47.3 -0.2
      14nm,0.2s
KUU                             eS     Sg      08 06 07.3 -0.9
      28nm,0.2s
KUU   Kurty            1.52 297  P     Pb      08 05 47.3 -0.2
      14nm,0.2s
KUU                              S     Sg      08 06 07.3 -0.9
      28nm,0.2s
KUU   Kurty            1.52 297 eP     Pb      08 05 47.3 -0.2
      baz=97
KUU                             eS     Sg      08 06 07.3 -0.9
      baz=97
DJR   Jarkent          1.60  45 eP     Pb      08 05 48.7 -0.3
      1.2nm,0.2s
DJR                             eS     Sb      08 06 09.7 +0.4
      12nm,0.3s
KST   Kastek           1.65 265 eP     Pb      08 05 49.5 -0.3
      11nm,0.2s
KST                             eS     Sb      08 06 11.0 +0.3
      7.2nm,0.2s
KST   Kastek           1.65 265  P     Pb      08 05 49.5 -0.3
      11nm,0.2s
KST                              S     Sb      08 06 11.0 +0.3
      7.2nm,0.2s
KST   Kastek           1.65 265 eP     Pb      08 05 49.5 -0.3
      baz=65
KST                             eS     Sb      08 06 11.0 +0.3
      baz=65
ULHL  Ulahol           1.74 237⇓iP     Pb      08 05 51.2 -0.2
      baz=37
ULHL                           ⇓iS     Sb      08 06 14.1 +0.8
      baz=37
DGS   Degeres          1.78 272 eP     Pb      08 05 51.7 -0.3
      8.1nm,0.3s
DGS                             eS     Sb      08 06 15.2 +0.8
      25nm,0.3s
DGS   Degeres          1.78 272  P     Pb      08 05 51.7 -0.3
      8.1nm,0.3s
DGS                              P     Pg      08 05 52.3 -1.1
      8.3nm,0.3s
DGS                              S     Sb      08 06 15.2 +0.8
      25nm,0.3s
DGS                              S     Sg      08 06 15.5 -1.0
      25nm,0.2s
DGS   Degeres          1.78 272 eP     Pb      08 05 51.7 -0.3
      baz=72
DGS                             eS     Sb      08 06 15.1 +0.8
      baz=72
BOOM  Boomskoye usch   1.82 247⇑eP     Pb      08 05 52.7 +0.1
      baz=48
BOOM                           ⇑iS     Sb      08 06 16.4 +1.0
      baz=48
KRBS  Karabastau       1.91 286 eP     Pb      08 05 53.6 -0.5
      13nm,0.2s
KRBS                            eS     Sb      08 06 18.1 +0.1
      21nm,0.1s
KRBS  Karabastau       1.91 286  P     Pb      08 05 53.6 -0.5
      13nm,0.2s
KRBS                             P     Pg      08 05 54.4 -1.4
      6.6nm,0.1s
KRBS                             S     Sb      08 06 18.1 +0.1
      21nm,0.1s
KRBS                             S     Sg      08 06 19.2 -1.4
      30nm,0.2s
KRBS  Karabastau       1.91 286 eP     Pb      08 05 53.6 -0.5
      baz=86
KRBS                            eS     Sb      08 06 18.1 +0.1
      baz=86
TKM2  Tokmak 2         1.94 262 ⇓Pn    Pb      08 05 54.2 -0.5
      1.8nm,0.3s
TKM2                            ⇑Sn    Sg      08 06 20.3 -1.2
      3.4nm,0.3s
TKM2  Tokmak 2         1.94 262⇑iP     Pb      08 05 54.5 -0.2
      baz=62
TKM2                           ⇑iS     Sb      08 06 19.6 +0.7
      baz=62
KAPS  Kapalarasan      2.23  21 eP     Pb      08 06 00.2 +0.5
      3.8nm,0.2s
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KAPS				*e*S	**Sg**	**08 06 29.3**	**-1.8**
	15nm,0.2s						
KAPS	**Kapalarasan**	**2.23**	**21**	Pg	**Pb**	**08 06 00.2**	**+0.5**
	3.8nm,0.2s						
KAPS				Lg	Lg	08 06 29.3	
	15nm,0.2s						
KBK	**Karagaybulak**	**2.46**	**258**	⇓*i*P	**Pb**	**08 06 01.5**	**-2.1**
	baz=58						
KBK				⇓*i*S	**Sb**	**08 06 32.5**	**-1.4**
	baz=58						
CHMS	**Chumysh**	**2.54**	**266**	⇓*i*P	**Pn**	**08 06 02.4**	**+1.9**
	baz=66						
CHMS				⇓*i*S	**Sb**	**08 06 34.3**	**-1.8**
	baz=66						
USP	**Ospenovka**	**2.71**	**272**	⇑*i*P	**Pn**	**08 06 05.0**	**+2.2**
	baz=73						
USP				⇑*i*S	**Sb**	**08 06 38.6**	**-2.5**
	baz=73						
AAK	**Ala-Archa**	**2.79**	**259**	⇑Pn	**Pb**	**08 06 08.3**	**-0.9**
	1.1nm,0.5s						
AAK				Lg	Lg	08 06 45.4	
	2.8nm,0.5s						
AAK	**Ala-Archa**	**2.79**	**259**	⇑*i*P	**Pn**	**08 06 06.1**	**+2.1**
	baz=59						
AAK				⇑*i*S	**Sn**	**08 06 40.4**	**+2.7**
	baz=59						
UCH	**Uchtor**	**2.89**	**251**	⇓*i*P	**Pn**	**08 06 07.4**	**+1.7**
	baz=51						
UCH				⇓*i*S	**Sn**	**08 06 43.4**	**+2.7**
	baz=51						
BTLS	**Baital**	**3.51**	**303**	*e*P	**Pb**	**08 06 21.8**	**+0.4**
	0.9nm,0.2s						
BTLS				*e*S	**Sb**	**08 07 06.4**	**+2.3**
	2.1nm,0.2s						
BTLS	**Baital**	**3.51**	**303**	Pg	**Pb**	**08 06 21.8**	**+0.4**
	0.9nm,0.2s						
BTLS				Lg	Lg	08 07 06.4	
	2.1nm,0.2s						

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*IDC **11** 08:14:13.4±2.2, 6°.80N×73°.08W, h154^{km}±27^{km}, mb1 3.4/2, mb1mx2.9/29, mbtmp3.9/2, Error ellipse: s-maj=193.6km s-min=7.8km az=132.0*

*RSNC **11** 08:14:15.0±1.2, 6°.81N×73°.17W, h142^{km}±4^{km}, ML3.3, Mw3.7, Fault plane solution: NP1:φ$_s$0.00000°, δ42.00000°, λ58.00000°.*

ISC 11 08:14:12.8±1.1, 6°.81N±0°.03×73°.12W±0°.03, h156^{km}±6^{km}, n35, σ1^s.31/68, 5C-4D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.23**	**196**	⇑*i*P	**Pn**	**08 14 34.4**	**+0.1**
BARC				*e*S	**Sn**	**08 14 49.0**	**-1.6**
BARC				*i*		08 14 49.9	
	comp=Z,843nm,0.3s						
BRRC	**Barranca, Sant**	**0.66**	**296**	⇑*i*P	**Pn**	**08 14 36.3**	**+0.6**
BRRC				*e*S	**Sn**	**08 14 52.5**	**-0.8**
BRRC				*i*		08 14 54.7	
	comp=Z,234nm,0.2s						
BRRC				*i*		08 14 58.2	
	comp=Z,278nm,0.2s						
PAMC	**Pamplona, Colo**	**0.67**	**39**	⇑*e*P	**Pn**	**08 14 37.3**	**+0.9**
PAMC				*e*S	**Sn**	**08 14 54.1**	**-0.3**
PAMC				*i*		08 14 56.4	
	comp=Z,495nm,0.6s						
RUSC	**La Rusia**	**0.92**	**178**	⇑*e*P	**Pn**	**08 14 38.3**	**+0.2**
RUSC				*e*S	**Sn**	**08 14 56.5**	**-1.0**
RUSC				*i*		08 14 57.5	
	comp=Z,364nm,0.2s						
RUSC				*i*		08 14 57.7	
	comp=Z,411nm,0.7s						
TAMC	**Tame, Arauca**	**1.37**	**106**	⇓*i*P	**Pn**	**08 14 42.8**	**+1.2**
TAMC				*e*S	**Sn**	**08 15 03.9**	**+0.2**
TAMC				*i*		08 15 04.7	
	comp=Z,174nm,0.2s						
TAMC				*i*		08 15 04.8	
	comp=Z,159nm,0.3s						
OCAC	**Ocana**	**1.43**	**352**	*e*P	**Pn**	**08 14 42.8**	**+0.4**
OCAC				*e*S	**Sn**	**08 15 04.3**	**-0.8**
OCAC				*i*		08 15 06.5	
	comp=Z,481nm,0.2s						
OCAC				*i*		08 15 09.4	
	comp=Z,499nm,0.3s						
SPBC	**San Pablo de B**	**1.49**	**219**	⇑*e*P	**Pn**	**08 14 43.3**	**+0.4**
SPBC				*e*S	**Sn**	**08 15 04.8**	**-1.2**
SPBC				*i*		08 15 06.3	
	comp=Z,351nm,0.3s						
SPBC				*i*		08 15 07.2	
	comp=Z,348nm,0.2s						
ZARC	**Zaragoza, Cauc**	**1.85**	**291**	*e*P	**Pn**	**08 14 47.6**	**+0.9**
ZARC				*e*S	**Sn**	**08 15 12.4**	**-0.4**
ZARC				*i*		08 15 14.6	
	comp=Z,220nm,0.4s						
ZARC				*i*		08 15 15.6	
	comp=Z,192nm,0.2s						
NORC	**Norcasia**	**2.14**	**235**	⇓*e*P	**Pn**	**08 14 50.4**	**+0.4**
NORC				*e*S	**Sn**	**08 15 18.0**	**-0.6**
NORC				*i*		08 15 22.1	
	comp=Z,186nm,0.2s						
NORC				*i*		08 15 24.0	
	comp=Z,186nm,0.2s						
SMLC	**San Martn de**	**2.19**	**335**	*e*P	**Pn**	**08 14 51.0**	**+0.4**
SMLC				*e*S	**Sn**	**08 15 19.1**	**-0.6**
SMLC				*i*		08 15 21.7	
	comp=Z,188nm,0.3s						
SMLC				*i*		08 15 28.9	
	comp=Z,170nm,0.4s						
CHIC	**Chingaza**	**2.25**	**196**	*e*P	**Pn**	**08 14 52.7**	**+0.9**
CHIC				*e*S	**Sn**	**08 15 21.4**	**-0.4**
CHIC				*i*		08 15 27.1	
	comp=Z,63nm,0.4s						
ROSC	**El Rosal**	**2.29**	**211**	P	**Pn**	**08 14 54.4**	**+2.2**
	comp=Z,23nm,0.3s,baz=86,slow=13,SNR=59						
ROSC				S	**Sn**	**08 15 23.2**	**+0.7**
	comp=Z,23nm,0.3s,baz=346,slow=22,SNR=10.0						
ROSC	**El Rosal**	**2.29**	**211**	*e*P	**Pn**	**08 14 53.9**	**+1.7**
ROSC				*e*S	**Sn**	**08 15 23.5**	**+0.9**
ROSC				*i*		08 15 30.4	
	comp=Z,222nm,0.5s						
ROSC				*i*		08 15 30.5	
	comp=Z,231nm,0.5s						
HELC	**Santa Helena**	**2.47**	**256**	*e*P	**Pn**	**08 14 55.0**	**+0.7**
HELC				*e*S	**Sn**	**08 15 25.2**	**-1.0**
HELC				*i*		08 15 33.4	
	comp=Z,152nm,0.3s						
HELC				*i*		08 15 34.1	
	comp=Z,127nm,0.3s						
UREC	**San Jos de Ur**	**2.57**	**291**	*e*P	**Pn**	**08 14 56.1**	**+1.0**
UREC				*e*S	**Sn**	**08 15 26.4**	**-1.4**
UREC				*i*		08 15 28.4	
	comp=Z,164nm,0.3s						
UREC				*i*		08 15 37.0	
	comp=Z,148nm,0.3s						
GUY2C	**Guyana, Caldas**	**2.73**	**235**	*e*P	**Pn**	**08 14 59.2**	**+1.6**
GUY2C				*e*S	**Sn**	**08 15 32.0**	**-0.2**
GUY2C				*i*		08 15 39.2	
	comp=Z,152nm,0.7s						
GUY2C				*i*		08 15 39.8	
	comp=Z,142nm,0.3s						
VILC	**Villavicencio,**	**2.74**	**192**	*e*P	**Pn**	**08 14 58.3**	**+0.8**
VILC				*e*S	**Sn**	**08 15 31.4**	**-0.5**
PTGC	**Puerto Gaitan,**	**2.78**	**159**	⇓*e*P	**Pn**	**08 14 57.6**	**-0.1**
PTGC				*e*S	**Sn**	**08 15 29.6**	**-2.9**
PTGC				*i*		08 15 32.4	
	comp=Z,93nm,0.4s						
PTGC				*i*		08 15 32.7	
	comp=Z,87nm,0.6s						
CBOC	**Ciudad Bolivar**	**3.03**	**252**	*e*P	**Pn**	**08 15 02.6**	**+1.6**
CBOC				*e*S	**Sn**	**08 15 37.3**	**-0.9**
CBOC				*i*		08 15 47.7	
	comp=Z,51nm,0.5s						
CBOC				*i*		08 15 50.4	
	comp=Z,49nm,0.5s						
DBBC	**Dabeiba**	**3.08**	**274**	*e*P	**Pn**	**08 15 02.8**	**+1.3**
DBBC				*e*S	**Sn**	**08 15 38.6**	**-0.6**
MOTC	**Monteria, Cord**	**3.19**	**308**	*e*P	**Pn**	**08 15 02.3**	**-0.5**
MOTC				*e*S	**Sn**	**08 15 40.9**	**-0.8**
MOTC				*i*		08 15 55.8	
	comp=Z,59nm,0.4s						
MOTC				*i*		08 15 55.9	
	comp=Z,52nm,0.4s						
SDV	**Santo Domingo**	**3.21**	**50**	P	**Pn**	**08 15 04.1**	**+0.8**
	comp=Z,5.6nm,0.3s,baz=235,slow=10,SNR=10						
SDV				S	**Sn**	**08 15 42.4**	**0.0**
	comp=Z,11nm,0.3s,baz=259,slow=20,SNR=30						
SDV	**Santo Domingo**	**3.21**	**50**	*e*P	**Pn**	**08 15 04.3**	**+1.0**
SDV				*e*S	**Sn**	**08 15 41.9**	**-0.5**
SDV				*i*		08 15 46.2	
	comp=Z,44nm,0.6s						
SDV				*i*		08 15 46.2	
	comp=Z,41nm,0.6s						
ARGC	**Ariguani, Magd**	**3.22**	**340**	*e*P	**Pn**	**08 15 05.4**	**+2.1**
ARGC				*e*S	**Sn**	**08 15 41.9**	**-0.6**
ANIL	**Santa Ana**	**3.24**	**225**	*e*P	**Pn**	**08 15 06.0**	**+2.2**
ANIL				*e*S	**Sn**	**08 15 43.4**	**+0.2**
ANIL				*i*		08 15 50.0	
	comp=Z,173nm,0.6s						
ANIL				*i*		08 15 51.6	
	comp=Z,170nm,0.3s						
ORTC	**Ortega, Tolima**	**3.58**	**216**	*e*P	**Pn**	**08 15 09.0**	**+1.1**
ORTC				*e*S	**Sn**	**08 15 50.5**	**-0.1**
ORTC				*i*		08 15 55.9	
	comp=Z,48nm,0.5s						
ORTC				*i*		08 15 56.0	
	comp=Z,59nm,0.6s						
PLMC	**San Jos del P**	**3.67**	**239**	⇓*e*P	**Pn**	**08 15 10.5**	**+1.4**
PLMC				*e*S	**Sn**	**08 15 50.7**	**-2.1**
PLMC				*i*		08 15 54.3	
	comp=Z,41nm,0.7s						
PLMC				*i*		08 15 55.4	
	comp=Z,46nm,0.6s						
SJCC	**San Jacinto, C**	**3.68**	**327**	*e*P	**Pn**	**08 15 08.8**	**-0.4**
SJCC				*e*S	**Sn**	**08 15 50.1**	**-2.9**
SJCC				*i*		08 15 54.0	
	comp=Z,62nm,0.6s						
SJCC				*i*		08 15 54.7	
	comp=Z,67nm,0.5s						
YOTC	**Yotoco, Valle**	**4.27**	**229**	*e*P	**Pn**	**08 15 17.8**	**+0.9**
YOTC				*e*S	**Sn**	**08 16 07.3**	**+0.6**
GUVC	**San Jose del G**	**4.27**	**173**	*e*P	**Pn**	**08 15 16.9**	**+0.1**
GUVC				*e*S	**Sn**	**08 16 06.1**	**-0.6**
GUVC				*i*		08 16 10.0	
	comp=Z,59nm,0.3s						
GUVC				*i*		08 16 10.1	
	comp=Z,58nm,0.3s						
CAPC	**Capurgana**	**4.57**	**294**	*e*P	**Pn**	**08 15 22.3**	**+1.6**
CAPC				*e*S	**Sn**	**08 16 09.4**	**-4.3**
CAPC				*i*		08 16 12.7	
	comp=Z,36nm,0.4s						
CAPC				*i*		08 16 13.1	
	comp=Z,32nm,0.6s						
MACC	**Macarena, Meta**	**4.69**	**189**	*e*P	**Pn**	**08 15 21.7**	**-0.7**
MACC				*e*S	**Sn**	**08 16 13.4**	**-3.3**
MACC				*i*		08 16 16.1	
	comp=Z,21nm,0.7s						
MACC				*i*		08 16 34.8	
	comp=Z,14nm,0.3s						
GARC	**Garzon, Huila**	**5.17**	**207**	*e*P	**Pn**	**08 15 28.9**	**+0.1**
GARC				*e*S	**Sn**	**08 16 26.3**	**-2.0**
GARC				*i*		08 16 32.0	
	comp=Z,19nm,0.3s						
GARC				*i*		08 16 55.2	
	comp=Z,19nm,0.2s						
ASAR	**Alice Springs**	**149.11**	**234**	PKPbc	**PKPbc**	**08 33 44.0**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=119,slow=3.4,SNR=6.8						
WRA	**Warramunga Arr**	**150.33**	**241**	PKPbc	**PKPbc**	**08 33 47.2**	**+0.6**
	comp=Z,0.4nm,0.4s,baz=110,slow=2.7,SNR=5.0						

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*GUC **11** 08:16:37.6±0.8, 21°.38S×70°.32W, h36^{km}±2^{km}, ML3.9*

*IDC **11** 08:17:04.0±6.6, 19°.83S×69°.00W, h198^{km}±54^{km}, mb3.7/1, mb1 3.5/3, mb1mx3.1/30, mbtmp3.9/3, Error ellipse: s-maj=108.9km s-min=43.6km az=177.0*

ISC 11 08:16:37.8±2.0, 21°.37S±0°.03×70°.31W±0°.08, h37^{km}±2^{km}, n24, σ1^s.07/25, 6C-5D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB02	**IPOC Station P**	**0.39**	**83**	⇓*i*P	**Pn**	**08 16 46.2**	**-0.5**
PB02				*i* S	**Sn**	**08 16 52.6**	**-1.0**
PB02				IAML		08 16 53.1	
	comp=N,40μm,0.2s						
PB07	**IPOC Station P**	**0.53**	**133**	⇓*i*P	**Pn**	**08 16 48.1**	**-1.0**
PB07				*i* S	**Sn**	**08 16 55.6**	**-1.2**
PB07				IAML		08 16 56.5	
	comp=N,8μm,0.6s						
TA01	**Diego Aracena**	**0.81**	**8**	⇓*i*P	**Pn**	**08 16 51.6**	**-1.0**
TA01				*i* S	**Sn**	**08 17 02.5**	**-0.9**
TA01				IAML		08 17 04.3	
	comp=E,7μm,0.2s						
PB01	**IPOC Station P**	**0.83**	**67**	⇓*i*P	**Pn**	**08 16 52.8**	**-0.2**
PB01				*i* S	**Sn**	**08 17 03.5**	**-0.6**
PB01				IAML		08 17 05.1	
	comp=E,11μm,0.4s						
PB03	**IPOC Station P**	**0.85**	**143**	⇓*i*P	**Pn**	**08 16 52.5**	**-0.9**
PB03				*i* S	**Sn**	**08 17 04.2**	**-0.6**
PB04	**IPOC Station P**	**0.97**	**171**	⇑*i*P	**Pn**	**08 16 54.5**	**-0.6**
PB04				IAML		08 17 11.2	
	comp=N,6μm,0.1s						
TA02	**Huaiquique**	**1.10**	**9**	*e*P	**Pn**	**08 16 56.3**	**-0.4**
TA02				*i* S	**Sn**	**08 17 10.8**	**+0.1**
TA02				IAML		08 17 11.4	
	comp=E,4μm,0.1s						
PB08	**IPOC Station P**	**1.63**	**42**	⇑*i*P	**Pn**	**08 17 05.5**	**+1.2**
PB08				*i* S	**Sn**	**08 17 26.3**	**+2.1**
PB08				IAML		08 17 29.5	
	comp=N,3μm,0.3s						
PB11	**IPOC Station P**	**1.71**	**21**	⇑*i*P	**Pn**	**08 17 05.2**	**0.0**
PB11				*i* S	**Sn**	**08 17 27.5**	**+1.6**
PB11				IAML		08 17 32.1	
	comp=N,4μm,0.3s						
PSGC	**Pisagua**	**1.77**	**6**	⇑*i*P	**Pn**	**08 17 05.6**	**-0.4**
PSGC				*i* S	**Sn**	**08 17 27.3**	**0.0**
PSGC				IAML		08 17 33.2	
	comp=N,2μm,0.5s						
PSGC				IAML		08 17 33.4	
	comp=E,2μm,0.3s						
PB15	**IPOC Station P**	**1.99**	**157**	⇑*i*P	**Pn**	**08 17 09.4**	**+0.3**
PB15				*i* S	**Sn**	**08 17 34.0**	**+1.1**
PB10	**IPOC Station P**	**2.15**	**186**	*i* S	**Sn**	**08 17 38.5**	**+2.1**
PB12	**IPOC Station P**	**2.74**	**360**	⇑*i*P	**Pn**	**08 17 18.5**	**-0.8**
PB12				IAML		08 18 00.1	
	comp=N,608nm,0.6s						
LPAZ	**La Paz**	**5.46**	**23**	P	Pn	08 18 01.8	+4.6
	comp=N,1.0nm,0.3s,baz=199,slow=7.5,SNR=23						
SIV	**San Ignacio**	**10.25**	**60**	P	**Pn**	**08 19 03.2**	**+0.8**
	comp=N,1.7nm,0.3s,baz=250,slow=9.2,SNR=12						
TORD	**Torodi Ar. Bea**	**78.54**	**71**	P	**P**	**08 28 34.9**	**-0.9**
	comp=N,1.6nm,0.7s,baz=251,slow=5.6,SNR=9.4						
H11S2	**WAKE ISLAND Hy**	**126.57**	**278**	T	T	10 54 53.0	
	baz=103,slow=75,SNR=212						
H11S1	**WAKE ISLAND Hy**	**126.58**	**278**	T	T	10 54 48.6	
	baz=103,slow=75,SNR=215						
H11S3	**WAKE ISLAND Hy**	**126.59**	**278**	T	T	10 54 49.4	
	baz=103,slow=75,SNR=210						
H11N3	**WAKE ISLAND Hy**	**126.65**	**279**	T	T	10 54 59.2	
	baz=103,slow=75,SNR=105						
H11N2	**WAKE ISLAND Hy**	**126.67**	**279**	T	T	10 55 00.2	
	baz=103,slow=75,SNR=121						
H11N1	**WAKE ISLAND Hy**	**126.67**	**279**	T	T	10 54 57.4	
	baz=103,slow=75,SNR=55						
ASAR	**Alice Springs**	**129.41**	**209**	PKP	PKiKP	08 35 52.9	+9.0
	comp=N,0.3nm,0.7s,baz=122,slow=2.4,SNR=3.5						
WRA	**Warramunga Arr**	**132.39**	**212**	PKP	PKiKP	08 35 59.1	+9.1
	comp=N,0.6nm,0.8s,baz=146,slow=1.9,SNR=3.1						

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*IDC **11** 08:21:25.1±0.9, 18°.11S×176°.53W, h0^{km}, mb4.0/7, mb1 4.3/8, mb1mx4.1/24, mbtmp4.0/8, ML4.3/1, MS4.2/22, Ms1 4.2/22, ms1mx4.1/31, Error ellipse: s-maj=41.0km s-min=20.7km az=149.0*

*NEIC **11** 08:21:27.9±0.9, 18°.3S±0°.2×176°.5W±0°.1, h10^{km}±2^{km}, mb4.3/12, Error ellipse: s-maj=33.1km s-min=20.2km az=346.0*

*GCMT **11** 08:21:30.9±0.4, 18°.09S±0°.02×176°.38W±0°.02, h17^{km}±2^{km}, MW5.0/69, Moment Tensor Solution. s15,c17; s69,c94; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.55±.26; M$_{\theta\theta}$-4.55±.27; M$_{\phi\phi}$4.00±.23; M$_{r\theta}$0.60±.67; M$_{\theta\phi}$-0.89±.21; M$_{\phi r}$1.83±.64; Best double couple: M$_0$4.79600×10^{16} NP1:φ$_s$307.00000°, δ67.00000°, λ170.00000°. NP2: φ$_s$41.00000°, δ81.00000°, λ23.00000°. Principal axes: T 4.8260, Plg23.0000°, Azm266.0000°; N -0.0590, Plg65.0000°, Azm62.0000°; P -4.7660, Plg9.0000°, Azm172.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 11 08:21:31.7±0.6, 18°.1S±0°.2×176°.71W±0°.08, h35^{km}, n51, σ1^s.74/35, mb4.2/11, MS4.2/19, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.00**	**273**	Pn	**Pn**	**08 22 44.7**	**+0.4**
	0.4nm,0.3s,baz=112,slow=18,SNR=3.4						
MSVF				LR	LR	08 24 40.9	
	comp=Z,8μm,18.5s,baz=70,slow=38						
MSVF	**Nonsavu**	**5.00**	**273**	Pn	**Pn**	**08 22 46.1**	**+1.7**
AFI	**Afiamalu**	**6.29**	**50**	LR	LR	08 24 23.3	
	comp=Z,595nm,18.1s,baz=222,slow=29						
RAO	**Raoul Island**	**11.19**	**185**	LR	LR	08 27 49.9	
	comp=Z,3μm,20.2s,baz=5.0,slow=34						
OUENC	**Ouen Island, N**	**16.03**	**252**	Pn	**Pn**	**08 25 15.0**	**+0.5**
OUENC				IAmb	IAmb	08 25 27.0	
	comp=Z,18nm,1.0s						
RAR	**Rarotonga**	**16.26**	**104**	LR	LR	08 29 51.0	
	comp=Z,518nm,19.6s,baz=272,slow=32						
DZM	**Mont Dzumac**	**16.32**	**253**	Pn	**P**	**08 25 21.5**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=115,slow=14,SNR=2.1						
DZM				LR	LR	08 30 39.9	
	comp=Z,2μm,20.0s,baz=82,slow=34						
DZM	**Mont Dzumac**	**16.32**	**253**	*e*Pn	**P**	**08 25 25.0**	**+4.0**
	comp=Z,38nm,1.4s						
DZM				*e*LQ	LQ	08 28 30.6	
	comp=Z,2μm,26.8s						
DZM				*e*LR	LR	08 29 16.0	
	comp=Z,4μm,24.6s						
DZM	**Mont Dzumac**	**16.32**	**253**		**P**	**08 25 20.1**	**-0.9**
URZ	**Urewera**	**20.83**	**194**	LR	LR	08 33 43.7	
	comp=Z,2μm,18.2s,baz=31,slow=36						
PPT2	**Papeete2**	**25.83**	**93**	*e*S	**S**	**08 31 31.5**	**+4.0**
	comp=Z,325nm,24.8s						
PPT2				*e*LR	LR	08 33 09.3	
	comp=Z,2μm,27.0s						
PPT	**Papeete**	**25.83**	**93**	LR	LR	08 34 15.7	
	comp=Z,507nm,20.7s,baz=265,slow=30						
TBI	**Tubuai**	**26.00**	**106**	*e*S	**S**	**08 31 35.7**	**+5.7**
	comp=Z,562nm,26.0s						
CTAO	**Charters Tower**	**35.02**	**261**	P	**P**	**08 28 22.6**	**+1.4**
TAOE	**Nuku Hiva Isla**	**36.65**	**80**	*e*LR	LR	08 38 00.9	
	comp=Z,840nm,29.3s						
STKA	**Stephens Creek**	**39.98**	**242**	P	**P**	**08 29 02.5**	**-0.5**
	comp=Z,2.2nm,0.8s,baz=101,slow=13,SNR=2.9						
WB0	**Warramunga Arr**	**46.16**	**260**	P	**P**	**08 29 53.2**	**-0.1**
WB0				IAmb	IAmb	08 30 04.4	
	comp=Z,2.6nm,0.8s						
WB2	**Warramunga Arr**	**46.18**	**259**	P	**P**	**08 29 53.2**	**-0.3**
WRAB	**Tennant Creek**	**46.19**	**259**	P	**P**	**08 29 52.4**	**-1.0**
WRAB				IAmb	IAmb	08 29 52.6	
	comp=Z,10nm,1.4s						
WRA	**Warramunga Arr**	**46.19**	**259**	P	**P**	**08 29 53.1**	**-0.5**
	comp=Z,2.3nm,0.8s,baz=94,slow=7.3,SNR=15						
WRA				LR	LR	08 49 02.1	
	comp=Z,524nm,18.3s,baz=100,slow=36						
WRA	**Warramunga Arr**	**46.19**	**259**	P	**P**	**08 29 53.5**	**-0.1**
AS31	**Alice Springs**	**46.30**	**254**	P	**P**	**08 29 54.2**	**-0.2**
AS31				IAmb	IAmb	08 30 01.3	
	comp=Z,1.9nm,0.7s						
ASAR	**Alice Springs**	**46.30**	**254**	P	**P**	**08 29 54.1**	**-0.3**
	comp=Z,4.6nm,0.6s,baz=90,slow=8.4,SNR=25						
ASAR				LR	LR	08 47 44.5	
	comp=Z,216nm,21.2s,baz=99,slow=34						
ASAR	**Alice Springs**	**46.30**	**254**	P	**P**	**08 29 53.9**	**-0.5**
VNDA	**Vanda**	**60.43**	**185**	P	**P**	**08 31 35.9**	**-1.4**
	comp=Z,1.2nm,1.0s,baz=28,slow=7.9,SNR=4.8						
VNDA				LR	LR	08 53 36.7	
	comp=Z,85nm,21.5s,baz=341,slow=32						
VNDA	**Vanda**	**60.43**	**185**	IAmb	IAmb	08 31 45.2	
	comp=Z,5.5nm,1.4s						
QSPA	**South Pole Qui**	**71.99**	**180**	P	**P**	**08 32 50.6**	**-1.1**
PETK	**Petropavlovsk-**	**74.26**	**344**	LR	LR	09 03 38.9	
	comp=Z,110nm,18.7s,baz=160,slow=34						
KSRS	**Korea Array**	**75.90**	**318**	LR	LR	09 00 40.0	
	comp=Z,48nm,21.8s,baz=130,slow=31						
USRK	**Ussuriysk Ar.**	**77.67**	**325**	LR	LR	09 03 09.3	
	comp=Z,59nm,19.8s,baz=91,slow=32						
NVAR	**Mina Array Bea**	**78.43**	**43**	P	**P**	**08 33 27.8**	**-1.4**
	comp=Z,2.9nm,1.1s,baz=227,slow=6.0,SNR=6.7						
NVAR				LR	LR	09 01 20.4	
	comp=Z,139nm,18.1s,baz=265,slow=30						
MOD	**Modoc Plateau**	**79.17**	**39**	P	**P**	**08 33 33.4**	**+0.2**
MOD				IAmb	IAmb	08 33 37.4	
	comp=Z,2.1nm,0.9s						
MAW	**Mawson**	**84.25**	**199**	LR	LR	09 09 35.6	
	comp=Z,184nm,19.9s,baz=82,slow=34						
TXAR	**Lajitas Array**	**84.72**	**57**	P	**P**	**08 34 01.0**	**-1.6**
	comp=Z,1.0nm,1.1s,baz=232,slow=7.8,SNR=3.7						
TXAR				LR	LR	09 04 10.1	
	comp=Z,97nm,20.1s,baz=0.0,slow=30						
PSI	**Prapat**	**85.51**	**274**	LR	LR	09 15 41.0	
	comp=Z,56nm,18.2s,baz=122,slow=38						
ILAR	**Eielson Array**	**85.69**	**12**	P	**P**	**08 34 04.9**	**-1.5**
	comp=Z,2.0nm,1.1s,baz=222,slow=5.4,SNR=5.3						
ILAR				LR	LR	09 05 57.2	
	comp=Z,109nm,19.1s,baz=241,slow=31						
PDAR	**Pinedale Array**	**86.36**	**43**	LR	LR	09 06 51.1	
	comp=Z,105nm,18.1s,baz=310,slow=32						
SNAA	**Sanae**	**90.39**	**178**	P	**P**	**08 34 28.6**	**-0.5**
VNA3	**Neumayer Olymp**	**90.47**	**176**	P	**P**	**08 34 27.6**	**-1.8**
VNA2	**Neumayer--Watz**	**90.93**	**177**	P	**P**	**08 34 30.3**	**-1.3**
	baz=170,slow=3.9						
VNA1	**Neumayer--Stat**	**91.15**	**176**	P	**P**	**08 34 31.7**	**-0.9**
YKA	**Yellowknife Ar**	**93.81**	**24**	LR	LR	09 13 56.7	
	comp=Z,86nm,18.0s,baz=0.0,slow=34						
NNA	**Nana**	**95.50**	**104**	LR	LR	09 07 57.8	
	comp=Z,63nm,19.6s,baz=168,slow=29						
ULM	**Lac du Bonnet**	**97.99**	**40**	LR	LR	09 14 09.8	
	comp=Z,130nm,18.2s,baz=300,slow=32						
CLL	**Collm**	**145.95**	**349**	*e*PKPbc	**PKiKP**	**08 41 11.0**	**+0.1**
	comp=Z,19nm,1.3s						
DPC	**Dobruska-Polom**	**146.14**	**345**	*e*PKP	**PKiKP**	**08 41 12.6**	**+1.2**
MORC	**Moravsky Berou**	**146.35**	**343**	*e*PKP	**PKiKP**	**08 41 12.1**	**+0.2**
VRAC	**Vranov**	**147.03**	**344**	*e*PKP	**PKiKP**	**08 41 14.3**	**+1.1**
KRUC	**Moravsky**	**147.31**	**344**	*e*PKP	**PKiKP**	**08 41 15.3**	**+1.5**
KHC	**Kasperske Hory**	**147.91**	**347**	*e*PKP	**PKPab**	**08 41 17.4**	**+1.6**
GERES	**GERESS Array B**	**148.16**	**347**	PKPbc	**PKPbc**	**08 41 13.2**	**-0.8**
	comp=Z,0.4nm,0.5s,baz=45,slow=4.3,SNR=1.9						

IDC 11 08:41:04.9±5.9, 47°.74N×108°.56E, h0^{km}, Error ellipse: s-maj=38.7km s-min=24.3km az=93.0, Mongolia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I34MN	**SONGINO INFRAS**	**1.45**	**273**	*i*		08 51 00.0	
	baz=90,slow=317,SNR=0.7						
SONM	**Songino Array**	**1.46**	**274**	Pg	Pn	08 41 32.1	-0.6
	7.8nm,0.3s,baz=98,slow=18,SNR=80						
SONM				Lg	Lg	08 41 51.3	
	2.5nm,0.3s,baz=93,slow=29,SNR=8.2						
I45RU	**USSURIYSK INFR**	**16.64**	**94**	*i*		10 20 40.0	
	baz=292,slow=334,SNR=2.3						

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*IDC **11** 08:45:12.4±6.7, 13°.15S×166°.96E, h201^{km}±70^{km}, mb3.3/5, mb1 3.5/6, mb1mx3.2/28, mbtmp3.9/6, Error ellipse: s-maj=56.2km s-min=28.3km az=157.0*

ISC 11 08:45:10.6±1.6, 13°.1S±0°.1×166°.9E±0°.2, h180^{km}, n6, σ0^s.95/7, mb3.8/4, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**8.98**	**183**	P	**Pn**	**08 47 18.0**	**+1.2**
	0.4nm,0.3s,baz=133,slow=23,SNR=11						
DZM				S	**Sn**	**08 48 55.9**	**-1.3**
	0.2nm,0.3s,baz=285,slow=20,SNR=1.3						
CTA	**Charters Tower**	**20.99**	**248**	P	**P**	**08 49 40.5**	**+0.3**
	1.8nm,0.6s,baz=82,slow=15,SNR=2.0						
STKA	**Stephens Creek**	**29.85**	**227**	P	**P**	**08 51 01.2**	**+0.1**
	1.4nm,0.4s,baz=43,slow=10,SNR=8.1						
WRA	**Warramunga Arr**	**31.94**	**253**	P	**P**	**08 51 19.4**	**-0.2**
	0.9nm,0.6s,baz=86,slow=9.3,SNR=12						
ASAR	**Alice Springs**	**32.99**	**247**	P	**P**	**08 51 28.4**	**-0.4**
	1.1nm,0.4s,baz=74,slow=9.3,SNR=40						
ILAR	**Eielson Array**	**85.05**	**18**	P	**P**	**08 57 25.2**	**-0.4**
	0.4nm,0.7s,baz=234,slow=5.5,SNR=6.5						

IDC 11 09:00:03.5±3.7, 52°.18N×35°.96E, h0^{km}, mb1 3.8/2, mb1mx3.1/53, mbtmp3.7/2, ML2.9/3, Error ellipse: s-maj=41.2km s-min=14.9km az=117.0, Baltic States-Belarus-Northwestern Russia

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

OBN	Obninsk	2.97	7	Lg	Lg	09 01 33.8	
	baz=146,slow=23,SNR=5.5						
AKASG	Malin Array Be	4.47	253	Pn	Pn	09 01 10.8	-1.6
	1.1nm,0.3s,baz=61,slow=16,SNR=6.1						
AKASG				Pg	Pb	09 01 22.1	-0.7
	1.7nm,0.3s,baz=58,slow=15,SNR=10						
AKASG				Sn	Sn	09 02 01.9	-3.1
	1.5nm,0.3s,baz=63,slow=21,SNR=1.9						
AKASG				Lg	Lg	09 02 15.9	
	1.2nm,0.3s,baz=66,slow=29,SNR=3.8						
I43RU	DUBNA INFRASON	4.61	9	i		09 27 10.0	
	baz=184,slow=320,SNR=3.6						
FINES	FINESS Array B	10.74	334	Pn	Pn	09 02 34.3	-4.1
	0.1nm,0.3s,baz=150,slow=14,SNR=1.3						
FINES				Sn	Sn	09 04 29.0	-10
	0.1nm,0.3s,baz=149,slow=27,SNR=3.1						
ARCES	ARCESS Array B	18.09	348	P	Pn	09 04 15.3	-0.7
	baz=166,slow=11,SNR=8.0						

SOF ***11*** *09:01:33.3, 41°.27N×24°.47E, h5^{km}, MD2.5*

ATH ***11*** *09:01:34.7, 41°.29N×24°.48E, h11^{km}±3^{km}, ML2.1/8, Error ellipse: s-maj=3.6km s-min=1.3km az=209.0*

THE ***11*** *09:01:34.6, 41°.30N×24°.46E, h9^{km}±1^{km}, ML2.0/12, Error ellipse: s-maj=1.7km s-min=0.8km az=191.0*

BEO ***11*** *09:01:40.9±1.0, 41°.47N×24°.25E, h14^{km}±7^{km}, ML2.0/6*

ISC 11 09:01:33.6±1.0**, 41°.34N**±0°.02×**24°.49E**±0°.02**, h13**^{km}±8^{km}**, n38, σ0^{s}.70**/60**, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAVA	Kavala	0.35	177	P	Pg	09 01 40.6	0.0
KAVA				S	Sg	09 01 45.4	+0.1
	258nm,0.2s						
KAVA	Kavala	0.35	177	P	Pg	09 01 40.6	0.0
KAVA				S	Sg	09 01 45.2	-0.1
KAVA				AML	AML	09 01 45.9	
	comp=N,542µm,0.2s						
KAVA				AML	AML	09 01 48.5	
	comp=E,722µm,0.2s						
RZN	Rozhen	0.38	26	i P	Pb	09 01 43.0	+0.6
KVLA	Kavala	0.41	191	P	Pg	09 01 41.0	-0.8
KVLA				S	Sg	09 01 47.1	-0.3
NVR	Nevrokopi	0.47	271	P	Pg	09 01 42.7	-0.3
NVR				S	Sg	09 01 49.3	0.0
	comp=E,135nm,0.1s						
NVR	Nevrokopi	0.47	271	P	Pg	09 01 43.3	+0.3
NVR				S	Sg	09 01 49.9	+0.5
NVR				AML	AML	09 01 52.3	
	comp=E,314µm,0.1s						
NVR				AML	AML	09 01 52.7	
	comp=N,216µm,0.1s						
MMB	Musomiste	0.62	293	i P	Pg	09 01 45.7	-0.1
SRS	Serrai	0.72	252	P	Pg	09 01 47.6	+0.1
SRS				S	Sg	09 01 57.0	+0.1
	comp=N,125nm,0.2s						
SRS	Serrai	0.72	252	P	Pb	09 01 48.4	+0.5
THAS	Thassos island	0.76	167	P	Pg	09 01 48.2	0.0
THAS				S	Sb	09 01 58.5	-0.2
	comp=N,462nm,0.4s						
THAS	Thassos island	0.76	167	P	Pg	09 01 48.2	0.0
THAS				AML	AML	09 02 01.3	
	comp=E,671µm,0.4s						
THAS				AML	AML	09 02 02.1	
	comp=N,1163µm,0.5s						
KDZ	Kurdzhali	0.76	66	i P	Pg	09 01 48.2	-0.1
RDO	Rodhopi	0.81	104	P	Pg	09 01 49.7	+0.4
RDO				S	Sn	09 02 01.5	-1.1
	comp=N,250nm,0.2s						
RDO	Rodhopi	0.81	104	P	Pg	09 01 49.8	+0.5
RDO				AML	AML	09 02 05.4	
	comp=E,528µm,0.2s						
RDO				AML	AML	09 02 05.9	
	comp=N,463µm,0.2s						
SOH	Sokhos	1.01	239	P	Pn	09 01 53.9	+0.5
SOH				S	Sg	09 02 06.6	+0.5
	comp=N,128nm,0.3s						
SOH	Sokhos	1.01	239	P	Pb	09 01 53.1	+0.2
SOH				AML	AML	09 02 08.6	
	comp=E,398µm,0.3s						
SOH				AML	AML	09 02 09.0	
	comp=N,272µm,0.2s						
OUR	Ouranopolis	1.08	201	P	Pb	09 01 54.0	-0.1
OUR				S	Sb	09 02 08.2	+0.1
	comp=N,155nm,0.3s						
OUR	Ouranopolis	1.08	201	P	Pb	09 01 54.0	-0.1
OUR				AML	AML	09 02 10.6	
	comp=N,297µm,0.4s						
OUR				AML	AML	09 02 11.3	
	comp=E,344µm,0.3s						
SMTH	Samothraki Isl	1.17	138	P	Pg	09 01 57.2	+1.0
SMTH				S	Sg	09 02 12.3	+0.8
	comp=E,35nm,0.2s						
SMTH	Samothraki Isl	1.17	138	P	Pg	09 01 56.1	-0.1
SMTH				AML	AML	09 02 14.5	
	comp=N,74µm,0.3s						
SMTH				AML	AML	09 02 17.1	
	comp=E,70µm,0.2s						
KKB	Krupnik	1.18	297	i P	Pn	09 01 54.1	-1.7
KNT	Kendrikon	1.22	262	P	Pg	09 01 57.5	+0.5
KNT				S	Sn	09 02 12.8	+0.2
	comp=E,95nm,0.2s						
KNT	Kendrikon	1.22	262	P	Pg	09 01 57.2	+0.2
PLG	Polygyros	1.25	220	P	Pb	09 01 57.5	+0.4
PLG				S	Sg	09 02 13.9	-0.1
	comp=E,105nm,0.3s						
ALN	Alexandroupoli	1.25	110	P	Pg	09 01 58.1	+0.4
ALN				S	Sg	09 02 15.0	+0.9
	comp=E,30nm,0.6s						
ALN	Alexandroupoli	1.25	110	P	Pg	09 01 57.8	+0.1
ALN				AML	AML	09 02 19.9	
	comp=E,79µm,0.4s						
ALN				AML	AML	09 02 20.2	
	comp=N,37µm,0.4s						
HORT	Hortiatis	1.29	235	P	Pb	09 01 58.1	+0.3
HORT				S	Sb	09 02 14.0	-0.3
	comp=N,65nm,0.3s						
VAY	Valandovo	1.45	270	ePg	Pg	09 02 03.9	+2.5
VAY				eSg	Sg	09 02 21.4	+1.2
VAY	Valandovo	1.45	270	i Pn	Pg	09 02 01.7	+0.3
VAY				i Sn	Sg	09 02 20.6	+0.4
PAIG	Paliouri	1.54	204	P	Pn	09 02 00.6	-0.2
VTS	Vitosha	1.58	324	ePg	Pg	09 02 04.5	+0.5
VTS				eSg	Sb	09 02 23.6	+0.9
VTS	Vitosha	1.58	324	i P	Pg	09 02 03.9	-0.1
STIP	Stip	1.77	282	i Pn	Pn	09 02 03.6	-0.3
BOSS	Bosilegrad	1.89	308	ePg	Pg	09 02 10.6	+0.7
BOSS				eSg	Sg	09 02 33.9	-0.6
PRVS	Prvonek	2.15	304	ePg	Pg	09 02 15.4	+0.6
PRVS				eSg	Sg	09 02 41.6	-1.0
ZAPS	Zavoj	2.37	325	ePg	Pg	09 02 20.6	+1.5
ZAPS				eSg	Sg	09 02 50.2	+0.4
BARS	Barje	2.48	307	ePn	Pb	09 02 16.3	-1.7
BARS				eSg	Sg	09 02 53.1	-0.1
SELS	Selova	3.13	308	ePn	Pb	09 02 28.3	-0.7

SJA ***11*** *09:03:39.0, 29°.19S×72°.38W, h10^{km}, ML4.4*

NEIC ***11*** *09:03:43.0±1.9, 29°.45S±0°.04×71°.96W±0°.06, h14^{km}±4^{km}, mb4.2/3, Mwr3.9/25, ML4.1(GUC), Error ellipse: s-maj=7.8km s-min=5.3km az=61.0*

IDC ***11*** *09:03:43.1±2.4, 29°.61S×71°.52W, h0^{km}, mb4.1/1, mb1 3.9/3, mb1mx3.6/23, mbtmp3.8/3, ML3.5/2, Error ellipse: s-maj=115.0km s-min=38.8km az=95.0*

GUC ***11*** *09:03:44.8±0.6, 29°.49S×71°.89W, h20^{km}±7^{km}, ML4.1*

NEIC ***11*** *09:03:44.2, 29°.46S×71°.89W, h19^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M$_{rr}$4.89; M$_{\theta\theta}$0.01; M$_{\phi\phi}$-4.90; M$_{r\theta}$0.97; M$_{\theta\phi}$-0.04; M$_{\phi r}$-5.97; Fault plane solution: M$_0$7.79000×10^{14} NP1:φ$_s$173.01000°, δ70.61000°, λ85.05000°. NP2:φ$_s$7.63000°, δ19.99000°, λ103.78000°. Principal axes: T 7.8217, Plg64.0000°, Azm75.0000°; N -0.0737, Plg5.0000°, Azm175.0000°; P -7.7481, Plg25.0000°, Azm267.0000°;*

ISC 11 09:03:41.6±1.9**, 29°.46S**±0°.04×**71°.96W**±0°.07**, h6**^{km}±12^{km}**, n69, σ1^{s}.58**/70**, mb4.2**/3**, 2C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO05	La Serena	0.77	126	⇓iP	Pn	09 03 58.2	-0.8
CO05				i S	Sb	09 04 07.5	-0.6
CO05				IAML		09 04 10.0	
	comp=N,8µm,0.3s						
CO05	La Serena	0.77	126		Pn	09 03 58.2	-0.8
LCO	Las Campanas	1.18	68	⇓iP	Pn	09 04 04.9	+0.1
LCO				i S	Sn	09 04 20.7	-0.7
LCO	Las Campanas	1.18	68		Pb	09 04 04.7	+0.1
LCO	Las Campanas	1.18	68	i P	Pn	09 04 05.0	+0.1
GO04	Tololo Observa	1.23	125	⇓iP	Pn	09 04 05.8	+0.4
GO04				i S	Sn	09 04 21.7	-0.8
GO04				IAML		09 04 28.0	
	comp=N,16µm,0.7s						
GO04	Tololo Observa	1.23	125		Pb	09 04 05.3	0.0
GO04	Tololo Observa	1.23	125	i P	Pn	09 04 06.0	+0.5
CO06	Fray Jorge	1.24	167	⇑iP	Pg	09 04 05.8	+0.5
CO06				i S	Sb	09 04 20.3	-1.3
CO06	Fray Jorge	1.24	167		Pn	09 04 05.3	-0.1
AC04	Llanos de Chal	1.47	32		Pn	09 04 08.9	+0.4
AC04	Llanos de Chal	1.47	32	i P	Pn	09 04 08.0	-0.6
CO03	El Pedregal	1.76	142	⇑iP	Pb	09 04 13.8	-0.4
CO03				i S	Sb	09 04 36.1	-0.5
CO03				IAML		09 04 39.3	
	comp=E,1µm,0.4s						
CO03	El Pedregal	1.76	142		Pb	09 04 14.1	-0.2
CO03				Sn	Sn	09 04 35.7	+0.4
CO03	El Pedregal	1.76	142	i P	Pb	09 04 14.0	-0.2
AROD	Rodeo	2.27	109	i P	Pb	09 04 23.0	-0.1
GO03	Copiap	2.40	40		Pn	09 04 22.3	+0.9
ACDV	Cuesta del Vie	2.56	107	i P	Pb	09 04 28.0	0.0
ACCO	Cerro Coronel	2.75	115	i P	Pb	09 04 31.0	-0.2
VA06	Catapilco	3.14	170	eP	Pn	09 04 32.7	+1.2
VA06				IAML		09 05 30.2	
	comp=N,828nm,0.3s						
RTLS	Leoncito	3.27	136	i P	Pb	09 04 38.0	-2.1
VA03	San Esteban	3.50	160	eP	Pn	09 04 39.6	+2.9
VA03				i S	Sn	09 05 21.0	+2.5
VA03				IAML		09 05 38.1	
	comp=E,537nm,0.2s						
VA03				IAML		09 05 40.4	
	comp=N,430nm,0.5s						
VA03	San Esteban	3.50	160		Pn	09 04 39.7	+3.0
VA03	San Esteban	3.50	160	i P	Pn	09 04 40.0	+3.4
ROCH	El Roble	3.59	167	IAML		09 05 41.6	
	comp=N,460nm,0.6s						
PEL	Peldehue	3.83	164	eP	Pn	09 04 40.6	-0.4
PEL	Peldehue	3.83	164		Pn	09 04 41.2	+0.1
MT02	Curacav	3.85	170	eP	Pn	09 04 43.7	+2.4
MT02	Curacav	3.85	170		Pn	09 04 41.5	+0.2
MT02	Curacav	3.85	170	i P	Pn	09 04 43.0	+1.7
MT05	Renca	4.05	165	eP	Pn	09 04 48.0	+3.9
VA05	Santo Domingo	4.19	176		Pn	09 04 46.6	+0.6
MT09	Talagante	4.38	169	eP	Pn	09 04 50.6	+1.9
MT09	Talagante	4.38	169		Pn	09 04 50.6	+1.9
MT01	Popeta	4.43	172	eP	Pn	09 04 50.1	+0.9
MT01	Popeta	4.43	172		Pn	09 04 50.2	+0.9
MT01	Popeta	4.43	172	i P	Pn	09 04 50.0	+0.7
LMEL	Las Melosas	4.62	162	eP	Pn	09 04 56.5	+4.5
BO04	La Punta	4.66	166	eP	Pn	09 04 54.4	+1.9
BO01	Tunca	4.97	172		Pn	09 04 57.6	+0.9
BO01	Tunca	4.97	172	i P	Pn	09 05 00.0	+3.3
BO02	Sierra Bellavi	5.41	170	eP	Pn	09 05 04.5	+1.7
BO02	Sierra Bellavi	5.41	170		Pn	09 05 04.3	+1.5
BO02	Sierra Bellavi	5.41	170	i P	Pn	09 05 05.0	+2.2
GO05	Huala	5.53	180	Pn	Pn	09 05 03.8	-0.6
GO05	Huala	5.53	180	i P	Pn	09 05 05.0	+0.6
PB10	IPOC Station P	6.06	12	Pn	Pn	09 05 11.6	0.0
RFA	San Rafael	6.06	152	i P	Pn	09 05 14.0	+2.2
PB15	IPOC Station P	6.61	20		Pn	09 05 19.7	+0.2
PB15	IPOC Station P	6.61	20	i P	Pn	09 05 13.0	-6.5
PB06	IPOC Station P	7.06	18	Pn	Pn	09 05 24.9	-0.7
H03N1	Juan Fernandez	7.14	235	T	T	09 13 11.8	
	baz=64,slow=72,SNR=329						
H03N2	Juan Fernandez	7.16	235	T	T	09 13 12.7	
	baz=64,slow=72,SNR=98						
H03N3	Juan Fernandez	7.16	234	T	T	09 13 01.7	
	baz=64,slow=72,SNR=114						
PB04	IPOC Station P	7.28	13	Pn	Pn	09 05 27.7	-0.9
TA01	Diego Aracena	9.00	11	i P	Pn	09 05 47.0	-5.1
LC01	Cunco	9.41	180	Pn	Pn	09 05 57.6	-0.1
PLCA	Paso Flores	11.30	175	Pn	Pn	09 06 24.4	+0.7
	comp=N,0.1nm,0.3s,baz=312,slow=15,SNR=2.4						
PLCA	Paso Flores	11.30	175	Pn	Pn	09 06 21.6	-2.0
CPUP	Villa Florida	13.30	80	Pn	Pn	09 06 48.9	-2.1
LPAZ	La Paz	13.58	16	Pn	Pn	09 06 59.4	+4.2
	comp=N,0.1nm,0.3s,baz=187,slow=6.9,SNR=6.7						
LPAZ	La Paz	13.58	16		Pn	09 06 55.1	-0.2
BDFB	Brasilia	25.97	63	P	P	09 09 14.2	-1.0
BDFB				IAmb	IAmb	09 09 18.2	
	comp=Z,7.9nm,1.3s						
QSPA	South Pole Qui	60.76	180	P	P	09 13 53.4	-0.6
QSPA				IAmb	IAmb	09 14 15.2	
	comp=Z,2.9nm,1.5s						
TORD	Torodi Ar. Bea	82.61	70	P	P	09 16 07.0	+1.0
	comp=Z,1.3nm,0.8s,baz=256,slow=4.8,SNR=5.9						
TORD	Torodi Ar. Bea	82.61	70	P	P	09 16 06.2	+0.2
TORD				IAmb	IAmb	09 16 08.5	
	comp=Z,1.6nm,1.0s						
KURK	Kurchatov	149.39	38		PKPdf	09 23 26.0	-0.6
KURBB	Kurchatov Arra	149.39	38	PKPbc	PKiKP	09 23 33.0	+0.8
	comp=Z,0.5nm,0.7s,baz=323,slow=2.7,SNR=2.3						
ZALV	Zalesovo Beam	150.28	28	PKPbc	PKiKP	09 23 34.9	+1.0
	comp=Z,1.8nm,0.7s,baz=298,slow=3.2,SNR=8.0						

SJA ***11*** *09:07:38.4±2.6, 29°.60S×72°.69W, h10^{km}, ML4.9, MW5.0*

NEIC ***11*** *09:07:44.5, 29°.66S×72°.14W, h14^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$7.73; M$_{\theta\theta}$1.52; M$_{\phi\phi}$-9.25; M$_{r\theta}$1.00; M$_{\theta\phi}$-0.33; M$_{\phi r}$-4.54; Fault plane solution: M$_0$9.77000×10^{15} NP1:φ$_s$173.76000°, δ59.49000°, λ80.90000°. NP2:φ$_s$11.26000°, δ31.71000°, λ105.02000°. Principal axes: T 9.0134, Plg74.0000°, Azm60.0000°; N 1.3716, Plg8.0000°, Azm178.0000°; P -10.3850, Plg14.0000°, Azm270.0000°;*

IDC ***11*** *09:07:44.4±0.5, 29°.59S×71°.94W, h0^{km}, mb4.5/13, mb1 4.5/18, mb1mx4.4/28, mbtmp4.4/18, ML4.5/5, MS4.0/9, Ms1 4.0/9, ms1mx3.7/24 Error ellipse: s-maj=20.8km s-min=14.0km az=96.0*

GUC ***11*** *09:07:45.5±0.7, 29°.64S×72°.07W, h39^{km}±3^{km}, ML5.1*

VAO ***11*** *09:07:45.5±0.3, 29°.60S×72°.03W, h10^{km}, mb4.7*

NEIC ***11*** *09:07:45.2±1.9, 29°.65S±0°.04×72°.10W±0°.04, h10^{km}±1^{km}, mb5.0/46, Mwr4.6/54, ML5.1(GUC), Error ellipse: s-maj=6.1km s-min=5.9km az=266.0*

ISC 11 09:07:47.7±0.8**, 29°.63S**±0°.03×**72°.12W**±0°.05**, h29**^{km}±5^{km}**, h29**^{km}**:pP-P, n218, σ1^{s}.49**/235**, mb4.9**/30**, MS4.2**/5**, 2C-4D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO05	La Serena	0.82	111	i P	Pn	09 08 00.3	-3.0
CO05				i S	Sn	09 08 10.7	-3.8
CO05	La Serena	0.82	111		Pn	09 08 00.3	-3.0
CO05				Sg	Sn	09 08 11.3	-3.2
CO06	Fray Jorge	1.13	158	⇓iP	Pn	09 08 05.5	-2.1
CO06				i S	Sn	09 08 19.7	-2.4
CO06	Fray Jorge	1.13	158		Pn	09 08 05.8	-1.8
CO06				Sg	Sn	09 08 19.4	-2.7
GO04	Tololo Observa	1.27	116	⇓iP	Pn	09 08 08.0	-1.8
GO04				i S	Sn	09 08 23.9	-2.2
GO04				IAML		09 08 28.8	
	comp=N,114µm,0.6s						
GO04	Tololo Observa	1.27	116	Pn	Pn	09 08 08.3	-1.5
GO04				Sn	Sn	09 08 25.2	-0.9
GO04	Tololo Observa	1.27	116	i P	Pn	09 08 08.1	-1.7
GO04				i S	Sn	09 08 25.3	-0.8
LCO	Las Campanas	1.39	64	⇓iP	Pn	09 08 09.7	-1.7
LCO				i S	Sn	09 08 27.7	-1.1
LCO	Las Campanas	1.39	64	Pn	Pn	09 08 10.0	-1.4
AC04	Llanos de Chal	1.69	33	⇑iP	Pn	09 08 13.3	-2.0
AC04				eS	Sn	09 08 33.8	-2.1
AC04	Llanos de Chal	1.69	33	Pn	Pn	09 08 13.4	-2.0
CO03	El Pedregal	1.73	135	⇑iP	Pn	09 08 15.0	-1.0
CO03				i S	Sn	09 08 36.0	-1.2
CO03				IAML		09 08 41.1	
	comp=E,14µm,0.4s						
AROD	Rodeo	2.36	104	i P	Pn	09 08 26.2	+1.3
AROD				⇓eS	Sn	09 08 56.6	+3.5
GO03	Copiap	2.62	40	i P	Pn	09 08 26.7	-1.4
GO03				eS	Sn	09 08 58.7	-0.3
GO03	Copiap	2.62	40	Pn	Pn	09 08 26.9	-1.3
GO03	Copiap	2.62	40	i P	Pn	09 08 27.4	-0.8
GO03				eS	Sb	09 09 05.6	-0.2
ACDV	Cuesta del Vie	2.67	103	i P	Pn	09 08 31.2	+2.4
ACDV				IAML		09 09 10.7	
	comp=Z,3µm,1.1s						
ACDV				IAML		09 09 10.7	
	comp=Z,3µm,1.1s						
ACCO	Cerro Coronel	2.82	111	i P	Pn	09 08 33.4	+2.3
ACCO				IAML		09 09 17.0	
	comp=Z,2µm,1.0s						
VA06	Catapilco	3.01	167	eP	Pn	09 08 32.1	-1.3
VA06				i S	Sn	09 09 06.3	-2.2
VA06				IAML		09 09 27.8	
	comp=E,5µm,0.7s						
RTLS	Leoncito	3.26	132	i P	Pn	09 08 39.7	+2.5
RTLS				eS	Sb	09 09 25.1	+0.7
RTLS				IAML		09 09 28.7	
	comp=Z,1µm,1.3s						
RTLS				IAML		09 09 34.1	
	comp=Z,3µm,0.6s						
VA03	San Esteban	3.41	157	eP	Pn	09 08 38.9	-0.1
VA03				eS	Sn	09 09 16.7	-1.8
VA03				IAML		09 09 36.5	
	comp=N,5µm,0.5s						
VA03	San Esteban	3.41	157		Pn	09 08 39.2	+0.2
ROCH	El Roble	3.47	164	eP	Pn	09 08 38.8	-1.1
ROCH				eS	Sn	09 09 18.5	-1.7
ROCH				IAML		09 09 40.8	
	comp=N,3µm,0.4s						
ROC1	El Roble	3.47	164	i P	Pn	09 08 39.5	-0.5
VCA	Vinchina	3.54	76	i P	Pn	09 08 44.1	+3.2
VCA				eS	Sb	09 09 36.1	+3.8
VCA				IAML		09 09 46.7	
	comp=Z,4µm,1.1s						
VCA				IAML		09 09 46.7	
	comp=Z,4µm,1.1s						
SJA	San Juan	3.61	123	i P	Pn	09 08 42.8	+1.0
SJA				eS	Sb	09 09 31.2	-3.1
SJA				IAML		09 09 52.0	
	comp=Z,1µm,1.2s						
SJA				IAML		09 09 52.0	
	comp=Z,1µm,1.2s						
PEL	Peldehue	3.72	161	Pn	Pn	09 08 42.8	-0.4
MT02	Curacav	3.72	167		Pn	09 08 42.4	-0.8
RTCV	Cerro Valdivia	3.81	127	i P	Pn	09 08 46.5	+2.0
RTCV				IAML		09 09 48.0	
	comp=Z,689nm,3.3s						
MT05	Renca	3.94	163		Pn	09 08 46.2	-0.1
MT09	Talagante	4.25	167		Pn	09 08 50.6	-0.1
MT01	Popeta	4.29	170		Pn	09 08 50.2	-0.9
BO01	Tunca	4.83	170	Pn	Pn	09 08 57.6	-0.9
PB14	IPOC Station P	5.21	18	Pn	Pn	09 09 00.5	-3.5
BO02	Sierra Bellavi	5.28	168		Pn	09 09 04.2	-0.4
GO05	Huala	5.37	178		Pn	09 09 04.0	-2.0
ML02	Panimavida	6.15	175	Pn	Pn	09 09 15.6	-1.0
PB15	IPOC Station P	6.82	21		Pn	09 09 23.9	-2.1
H03N1	Juan Fernandez	6.93	235	T	T	09 17 16.1	
	baz=64,slow=72,SNR=188						
H03N2	Juan Fernandez	6.95	235	T	T	09 17 16.6	
	baz=64,slow=72,SNR=187						
H03N3	Juan Fernandez	6.95	235	T	T	09 17 05.7	
	baz=64,slow=72,SNR=241						
PB06	IPOC Station P	7.26	19	Pn	Pn	09 09 28.4	-3.7
LVC	Limon Verde	7.56	23	Pn	Pn	09 09 33.7	-2.6
	comp=Z,3.1nm,0.3s,baz=150,slow=6.4,SNR=17						
LVC				Lg	Lg	09 11 30.9	
	comp=Z,12nm,0.3s,baz=344,slow=17,SNR=5.9						
LVC	Limon Verde	7.56	23	eP	Pn	09 09 33.6	-2.6
PB07	IPOC Station P	8.12	15	Pn	Pn	09 09 40.3	-3.5
LC01	Cunco	9.25	179	Pn	Pn	09 09 57.0	-2.1
PSGCX	Pisagua	10.15	11	Pn	Pn	09 10 07.1	-4.5
PB12	IPOC Station P	11.08	9	Pn	Pn	09 10 20.2	-4.2
PLCA	Paso Flores	11.16	174	Pn	Pn	09 10 24.6	-0.7
	comp=Z,1.1nm,0.3s,baz=339,slow=11,SNR=30						
PLCA				LR	LR	09 15 08.2	
	comp=Z,472nm,19.5s,baz=352,slow=40						
PLCA	Paso Flores	11.16	174	eP	Pn	09 10 24.1	-1.3
PLCA	Paso Flores	11.16	174		Pn	09 10 24.0	-1.3
LL04	Puerto Octay	11.26	181		Pn	09 10 25.0	-1.7
LL05	Los Muermos	11.81	185	Pn	Pn	09 10 31.2	-2.8
CPUP	Villa Florida	13.48	79	Pn	Pn	09 10 54.5	-2.6
	comp=Z,1.0nm,0.3s,baz=253,slow=9.8,SNR=10						
CPUP				LR	LR	09 16 27.3	
	comp=Z,1µm,19.4s,baz=248,slow=39						
CPUP	Villa Florida	13.48	79	eP	Pn	09 10 55.6	-1.4
CPUP	Villa Florida	13.48	79		Pn	09 10 53.5	-3.6
ITQB	Itaqui	13.48	94	eP	Pn	09 10 55.2	-1.8
ITQB	Itaqui	13.48	94		Pn	09 10 54.9	-2.1
LPAZ	La Paz	13.77	16	Pn	Pn	09 10 58.4	-3.3
	comp=Z,0.4nm,0.3s,baz=214,slow=6.5,SNR=9.2						
LPAZ				LR	LR	09 17 07.0	
	comp=Z,358nm,19.3s,baz=172,slow=41						
LPAZ	La Paz	13.77	16	eP	Pn	09 11 00.6	-1.1
PLTB	Pedras Altas	16.07	102	eP	Pn	09 11 31.1	-0.6
PLTB	Pedras Altas	16.07	102	Pn	Pn	09 11 30.0	-1.7
CPSB	Cacapava Do Su	16.21	97	eP	Pn	09 11 32.3	-1.1
SIV	San Ignacio	16.95	39	Pn	Pn	09 11 41.0	-1.9
	comp=Z,1.7nm,0.3s,baz=223,slow=11,SNR=33						
SIV				LR	LR	09 19 19.7	
	comp=Z,504nm,18.6s,baz=223,slow=41						
AQDB	Aquidauana	17.43	62	eP	Pn	09 11 47.8	-1.1
AQDB	Aquidauana	17.43	62	P	Pn	09 11 48.6	-0.3
PTLB	Pontes e Lacer	18.50	43	eP	P	09 12 01.5	-0.1
PTLB	Pontes e Lacer	18.50	43	P	P	09 12 00.9	-0.7
PTGB	Pitanga	18.50	79	eP	Pn	09 12 02.3	+0.3
TRCB	Terra Rica	18.75	73	P	P	09 12 03.1	-1.4
TRCB				IAmb	IAmb	09 12 10.0	
	comp=Z,54nm,0.6s						
PP1B	Ponte de Pedra	19.79	57	eP	P	09 12 15.0	-0.9
VILB	Vilhena	19.94	36	eP	P	09 12 17.1	-0.3
VILB	Vilhena	19.94	36		P	09 12 15.3	-2.1
VILB				IAmb	IAmb	09 12 25.9	
	comp=Z,35nm,0.9s						
TER01	Tubaro-SC	20.12	93	eP	P	09 12 18.9	-0.5
SALV	Santo Antonio	20.36	51	eP	P	09 12 21.3	-0.8
PCMB	Pacaembu	20.42	72	eP	P	09 12 22.1	-0.5
ETMB	Extrema	20.47	17	eP	P	09 12 23.8	+0.6
ETMB	Extrema	20.47	17		P	09 12 23.2	0.0
TIJ01	Guaruva-PR	20.95	84	eP	P	09 12 28.3	-0.1
FRTB	Fartura	21.12	78	eP	P	09 12 29.5	-0.8
CZSB	Cruzeiro do Su	21.79	358	eP	P	09 12 37.7	+0.3
CZSB	Cruzeiro do Su	21.79	358	P	P	09 12 36.6	-0.8
CZSB				IAmb	IAmb	09 12 44.0	
	comp=Z,37nm,1.0s						
ITRB	Iturama	22.07	68	eP	P	09 12 39.2	-1.3
SAML	Samuel	22.21	24	P	P	09 12 40.9	-1.1
PET01	Itanhaem-SP	22.76	82	eP	P	09 12 47.4	-0.3
BB19B	Bebedouro	22.93	74	eP	P	09 12 47.3	-2.3
PDRB	Porto dos Gac	22.95	42	eP	P	09 12 48.0	-1.8
RCLB	Rio Claro- Sao	23.21	78	eP	P	09 12 51.4	-1.1
MG02	Cerro Sombrero	23.23	176	P	P	09 12 52.2	-0.1
VAO	Valinhos	23.47	80	eP	P	09 12 55.1	+0.1
CLDB	Colider	24.08	43	eP	P	09 12 59.4	-1.5
PARB	Paraibuna	24.50	81	eP	P	09 13 03.0	-1.7
IPMB	Ipameri, GO	24.70	67	eP	P	09 13 05.8	-0.7
USHA	Ushuaia	25.33	175	P	P	09 13 12.8	+1.0
	comp=Z,11nm,0.6s,baz=347,slow=7.8,SNR=9.2						
TBTG	Tabatinga, AM	25.39	5	eP	P	09 13 13.7	+1.1
TBTG	Tabatinga, AM	25.39	5	P	P	09 13 12.7	0.0
TBTG				IAmb	IAmb	09 13 14.5	
	comp=Z,48nm,1.0s						
MAN01	Angra dos Reis	26.10	82	eP	P	09 13 19.1	-0.1
BSCB	Bom Sucesso	26.12	77	eP	P	09 13 19.2	-0.3
SNDB	Serra Nova Dou	26.14	52	eP	P	09 13 18.8	-0.8
BDFB	Brasilia	26.17	63	P	P	09 13 19.3	-0.7
	comp=Z,14nm,0.8s,baz=243,slow=7.1,SNR=15						
BDFB	Brasilia	26.17	63	P	P	09 13 19.2	-0.7
BDFB				IAmb	IAmb	09 13 20.3	
	comp=Z,91nm,1.6s						
NPGB	Novo Progresso	27.45	38	eP	P	09 13 30.6	-0.8
PEXB	Peixe	28.18	57	eP	P	09 13 37.4	-0.5
DIAM	Diamantina, MG	28.26	73	eP	P	09 13 38.8	0.0
CAM01	Campos-RJ	28.46	81	eP	P	09 13 40.4	0.0
MACA	Manacapuru-AM	28.47	25	eP	P	09 13 40.4	-0.1
MACA	Manacapuru-AM	28.47	25	P	P	09 13 40.2	-0.2
MACA				IAmb	IAmb	09 14 15.8	
	comp=Z,10nm,0.7s						
MC01	Montes Claros	28.84	70	eP	P	09 13 43.1	-0.7
JANB	Januaria	29.43	67	eP	P	09 13 48.3	-0.8
ITTB	Itaituba	29.53	35	eP	P	09 13 48.6	-1.2
ALF01	Guarapari-ES	29.73	80	eP	P	09 13 51.7	+0.1
SJMB	Sao Joao De Ma	30.16	76	eP	P	09 13 54.4	-1.0
OTAV	Otavalo	30.30	347	eP	P	09 13 57.2	0.0
SDBA	SAO DESIDERIO	30.52	62	eP	P	09 13 58.1	-0.6
SMTB	Santa Maria do	30.91	53	eP	P	09 14 02.0	0.0
PTGA	Pitinga	30.98	24	P	P	09 14 02.6	-0.1

	comp=Z,6.8nm,0.9s,baz=213,slow=9.3,SNR=10						
PTGA	Pitinga	30.98	24	P	P	09 14 01.6	-1.1
PRPB	Parauapebas	31.41	46	*e*P	P	09 14 06.0	-0.5
GUA01	Guaratinga, BA	32.32	74	*e*P	P	09 14 15.6	+1.1
CMC01	Camacan, BA	33.17	72	*e*P	P	09 14 22.2	+0.3
NBIT	Itapeh - BA	33.46	71	*e*P	P	09 14 24.6	+0.1
BOAV	Boa Vista	33.72	21	*e*P	P	09 14 26.9	+0.3
BOAV	Boa Vista	33.72	21	P	P	09 14 25.8	-0.9
GDU01	Guandu, BA	33.98	69	*e*P	P	09 14 28.3	-0.7
NBPN	Ponto Novo - B	35.12	65	*e*P	P	09 14 38.1	-0.8
TMAB	Tom-Au,PA,Br	35.43	45	*e*P	P	09 14 42.1	+0.6
PMSA	Palmer Station	35.53	174	*e*P	P	09 14 42.4	+0.6
NBLA	Lagarto - SE	36.95	67	*e*P	P	09 14 53.5	-1.0
ZARC	Zaragoza, Cauc	37.00	355	P	P	09 14 55.1	+0.3
SDV	Santo Domingo	38.31	2	P	P	09 15 04.9	-1.3
NBPS	Pedro II - PI	38.36	55	*e*P	P	09 15 06.4	-0.1
NBMA	Muriti-CE	38.38	61	*e*P	P	09 15 06.5	-0.1
NBPB	Pedra_Branca-C	38.94	58	*e*P	P	09 15 09.6	-1.8
NBLV	Livramento - P	39.80	63	*e*P	P	09 15 18.9	+0.3
NBPA	Parau_RN	40.66	61	*e*P	P	09 15 25.6	-0.1
JTS	Las Juntas de	41.57	341	P	P	09 15 31.4	-1.6
ACON	Acoyapa	43.22	341	P	P	09 15 46.3	-0.2
ACON				IAmb	IAmb	09 15 51.9	
	comp=Z,32nm,1.4s						
CELP	Cerrillos	47.72	7	P	P	09 16 21.9	-0.1
CELP				IAmb	IAmb	09 16 23.6	
	comp=Z,25nm,0.9s						
VNA3	Neumayer Olymp	53.44	159	P	P	09 17 05.4	+0.7
VNA1	Neumayer--Stat	53.73	158	P	P	09 17 08.1	+1.4
VNA2	Neumayer--Watz	54.08	158	P	P	09 17 10.1	+0.8
	baz=287,slow=8.7						
SNAA	Sanae	55.67	159	P	P	09 17 21.5	+0.7
SNAA	Sanae	55.67	159	P	P	09 17 21.1	+0.2
SNAA				IAmb	IAmb	09 17 22.4	
	comp=Z,14nm,0.8s						
QSPA	South Pole Qui	60.60	180	P	P	09 17 57.0	+1.4
	comp=Z,11nm,0.7s,baz=162,slow=1.7,SNR=80						
QSPA	South Pole Qui	60.60	180	P	P	09 17 57.0	+1.4
QSPA				IAmb	IAmb	09 17 57.9	
	comp=Z,13nm,0.8s						
SLBS	Sierra La Lagu	64.27	321	P	P	09 18 20.6	+0.1
JCT	Junction City	65.33	334	P	P	09 18 27.6	+0.4
JCT				IAmb	IAmb	09 18 57.5	
	comp=Z,6.3nm,1.1s						
W50A	Signal Mountai	65.67	348	P	P	09 18 28.8	-0.5
TXAR	Lajitas Array	65.91	330	P	P	09 18 32.1	+1.1
	comp=Z,1.0nm,0.8s,baz=157,slow=8.0,SNR=12						
V51A	Loudon	66.09	349	P	P	09 18 32.9	+0.9
X40A	Basin Creek Fa	66.70	341	P	P	09 18 36.4	+0.6
X40A				IAmb	IAmb	09 19 09.0	
	comp=Z,20nm,1.7s						
PBMO	Poplar Bluff	68.25	344	P	P	09 18 45.7	+0.1
PBMO				IAmb	IAmb	09 19 48.8	
	comp=Z,36nm,1.9s						
VNDA	Vanda	68.37	191	P	P	09 18 48.8	+2.8
	comp=Z,0.5nm,0.8s,baz=156,slow=4.1,SNR=2.9						
S44A	Carbondale	68.86	345	P	P	09 18 50.3	+0.9
PAL	Palisades	70.29	359	P	P	09 18 58.5	+0.4
PPT	Papeete	70.85	260	LR	LR	09 41 44.8	
	comp=Z,111nm,18.1s,baz=117,slow=29						
N49A	Columbus Grove	71.08	350	P	P	09 19 03.5	+0.5
N49A				IAmb	IAmb	09 19 04.9	
	comp=Z,17nm,0.8s						
LIC	Lamto	73.50	73	*e*P	P	09 19 18.2	+0.1
	comp=Z,18nm,0.6s						
TIC	Toumodi	73.74	72	*e*P	P	09 19 19.3	-0.2
KIC	Kosan Boka	73.82	73	*e*P	P	09 19 20.2	+0.2
	comp=Z,17nm,0.8s						
DBIC	Dimbokro	73.89	72	P	P	09 19 20.8	+0.4
	comp=Z,8.0nm,0.5s,baz=230,slow=5.4,SNR=17						
DBIC				LR	LR	09 49 42.5	
	comp=Z,121nm,20.1s,baz=220,slow=34						
DBIC	Dimbokro	73.89	72	P	P	09 19 20.6	+0.2
DBIC				IAmb	IAmb	09 19 21.3	
	comp=Z,13nm,0.7s						
TRQ	Mont Tremblant	75.52	358	P	P	09 19 29.1	0.0
PASC	Pasadena Art C	76.94	322	P	P	09 19 38.6	+1.2
SUR	Sutherland	77.03	120	P	P	09 19 38.3	-0.2
Q16A	Castle Valley	77.30	330	P	P	09 19 38.9	-0.7
MAW	Mawson	77.39	164	P	P	09 19 40.6	+1.1
	comp=Z,1.9nm,0.6s,baz=200,slow=10,SNR=2.2						
KOWA	Kowa	78.92	66	P	P	09 19 48.3	-0.5
KOWA				IAmb	IAmb	09 19 50.6	
	comp=Z,16nm,0.8s						
DUG	Dugway, Tooele	79.07	329	P	P	09 19 49.0	-0.4
DUG				IAmb	IAmb	09 20 06.3	
	comp=Z,16nm,1.9s						
PDAR	Pinedale Array	79.84	333	P	P	09 19 54.0	+0.5
	comp=Z,0.3nm,0.5s,baz=116,slow=3.4,SNR=4.0						
NVAR	Mina Array Bea	80.27	325	P	P	09 19 58.3	+2.4
	comp=Z,0.5nm,0.7s,baz=162,slow=6.3,SNR=4.7						
BOSA	Boshof	82.18	118	P	P	09 20 07.0	+0.5
	comp=Z,7.2nm,0.7s,baz=239,slow=5.5,SNR=12						
BOSA				LR	LR	09 54 41.9	
	comp=Z,77nm,18.0s,baz=203,slow=34						
BOSA	Boshof	82.18	118	P	P	09 20 05.7	-0.8
BOSA				IAmb	IAmb	09 20 07.6	
	comp=Z,7.6nm,0.8s						
ULM	Lac du Bonnet	82.27	345	P	P	09 20 07.1	+1.2
	comp=Z,4.5nm,0.8s,baz=152,slow=4.7,SNR=4.7						
ULM	Lac du Bonnet	82.27	345	P	P	09 20 06.5	+0.5
ULM				IAmb	IAmb	09 21 39.6	
	comp=Z,48nm,2.0s						
HLID	Hailey	82.50	330	P	P	09 20 08.9	+1.2
TORD	Torodi Ar. Bea	82.81	71	P	P	09 20 10.1	+0.4
	comp=Z,17nm,0.8s,baz=258,slow=4.8,SNR=73						
TORD				LR	LR	09 55 27.2	
	comp=Z,132nm,19.9s,baz=220,slow=35						
TORD	Torodi Ar. Bea	82.81	71	P	P	09 20 10.0	+0.4
TORD				IAmb	IAmb	09 20 11.2	
	comp=Z,19nm,0.9s						
DGMT	Dagmar	82.88	339	P	P	09 20 10.4	+1.1
DGMT				IAmb	IAmb	09 20 12.7	
	comp=Z,14nm,1.1s						
MFID	Camas Ranch	83.00	330	P	P	09 20 09.5	-0.6
MFID				IAmb	IAmb	09 20 47.8	
	comp=Z,11nm,1.9s						
LBTB	Lobatse	84.22	115	P	P	09 20 16.3	-0.7
LBTB				IAmb	IAmb	09 20 26.0	
	comp=Z,12nm,0.8s						
RAO	Raoul Island	88.17	237	LR	LR	09 51 18.7	
	comp=Z,45nm,21.1s,baz=13,slow=30						
ASAR	Alice Springs	121.40	208	PKP	PKiKP	09 26 39.3	+0.3
	comp=Z,0.6nm,1.0s,baz=100,slow=2.0,SNR=3.3						
WRA	Warramunga Arr	124.51	211	PKP	PKiKP	09 26 45.4	+0.2
	comp=Z,0.8nm,0.5s,baz=160,slow=1.7,SNR=10						
H11S2	WAKE ISLAND Hy	125.64	272	T	T	11 45 46.6	
	baz=115						
H11S1	WAKE ISLAND Hy	125.65	272	T	T	11 45 46.0	
	baz=115						
H11S3	WAKE ISLAND Hy	125.66	272	T	T	11 45 47.2	
	baz=115						
KLMR	Klimovskoe	125.88	34	*e*PKPdf	PKPdf	09 26 46.1	+0.1
KLMR				AMP		09 26 59.3	
	comp=Z,25nm,1.5s						
SEY	Seymchan	136.17	332	PKP	PKiKP	09 27 07.8	+0.7
	comp=Z,1.7nm,0.3s,baz=116,slow=1.9,SNR=8.7						
TIXI	Tiksi	136.38	351	PKP	PKiKP	09 27 06.5	-0.8
	comp=Z,0.8nm,0.4s,baz=32,slow=3.3,SNR=3.7						
ARU	Arti	136.41	38	PKP	PKPdf	09 27 06.8	+0.6
	comp=Z,2.0nm,0.2s,baz=122,slow=1.6,SNR=4.6						
BVAR	Borovoye Array	144.03	39	PKP	PKPdf	09 27 20.0	-0.1
	comp=Z,1.1nm,0.5s,baz=114,slow=3.5,SNR=8.9						
YAK	Yakutsk	144.57	342	PKP	PKPdf	09 27 21.1	+0.4
	comp=Z,23nm,0.8s,baz=107,slow=0.3,SNR=10.0						
YAK	Yakutsk	144.57	342		PKPdf	09 27 21.0	+0.4
ASAJ	Asahikawa	148.94	307	PKPbc	PKiKP	09 27 34.0	0.0
	comp=Z,6.2nm,0.8s,baz=135,slow=7.1,SNR=2.2						
KURK	Kurchatov	149.60	38		PKPdf	09 27 29.3	-0.1
KURK				PKPbc	PKiKP	09 27 35.9	+0.8
KURBB	Kurchatov Arra	149.61	38	PKPbc	PKiKP	09 27 35.5	+0.4
	comp=Z,9.3nm,0.7s,baz=301,slow=3.2,SNR=24						
EKS2	Erkin-Say	149.76	55	P	PKiKP	09 27 37.0	+1.2
	SNR=8.9						
AML	Almayashu	149.82	56	P	PKiKP	09 27 37.5	+1.1
	SNR=8.4						
USP	Ospenovka	150.11	54	P	PKiKP	09 27 37.4	+0.9
	SNR=6.6						
AAK	Ala-Archa	150.28	55	P	PKiKP	09 27 38.4	+1.4
	SNR=11						
UCH	Uchtor	150.39	56	P	PKiKP	09 27 39.1	+1.4
	SNR=19						
ZALV	Zalesovo Beam	150.49	28	PKPbc	PKiKP	09 27 37.8	+1.0
	comp=Z,49nm,0.8s,baz=306,slow=3.9,SNR=52						
ZALV				PKPab	pPKPbc	09 27 45.1	+0.8
	comp=Z,28nm,0.7s,baz=303,slow=3.2,SNR=18						
ZALV	Zalesovo Beam	150.49	28		PKPdf	09 27 32.4	+1.7
ZALV					PKiKP	09 27 38.0	+1.2
ZALV				PKPab	pPKPbc	09 27 46.5	+2.1
KBK	Karagaybulak	150.59	55	P	PKiKP	09 27 39.1	+1.5
	SNR=5.9						
TKM2	Tokmak 2	150.98	54	P	PKiKP	09 27 39.7	+1.1
	SNR=7.5						
ULHL	Ulahol	151.63	55	P	PKiKP	09 27 41.8	+1.9
	SNR=10.0						
KSH	Kashi	152.06	61	PKPbc	PKiKP	09 27 41.6	+0.9
KLR	Kul'dur	153.30	324	PKPbc	PKiKP	09 27 44.0	+1.2
	comp=Z,2.0nm,0.6s,baz=88,slow=2.4,SNR=5.8						
MKAR	Makanchi Array	153.76	42	PKP	PKPdf	09 27 37.0	+1.1
	comp=Z,0.6nm,0.7s,baz=158,slow=1.3,SNR=3.6						
MKAR				PKPbc	pPKPdf	09 27 44.9	+0.7
	comp=Z,3.1nm,0.8s,baz=304,slow=2.3,SNR=15						
MKAR	Makanchi Array	153.76	42		PKPdf	09 27 35.2	-0.8
MKAR					pPKPdf	09 27 45.4	+1.2
MKAR				PKPab	pPKPbc	09 27 53.9	+1.9
WMQ	Urumqi	158.57	43	*e*P	PKPdf	09 27 41.6	-0.8
WMQ				pmax	pmax		
	comp=Z,140nm,6.1s						
SONM	Songino Array	161.78	3	PKPab	PKPab	09 28 33.4	+2.0
	comp=Z,0.5nm,0.5s,baz=331,slow=4.6,SNR=4.4						
SONM	Songino Array	161.78	3		PKPab	09 28 33.0	+1.6
HHC	Hu-ho-hao-te	168.40	346	*e*P	PKPdf	09 27 47.8	-3.9
NJ2	Nanjing	170.26	287	*e*P	PKPdf	09 27 52.6	-0.4
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
LZH	Lanzhou	172.72	27	*e*PKP	PKPdf	09 27 45.9	-8.4
CD2	Chengdu	176.21	69	PKP	PKPdf	09 27 53.9	-1.5

SJA ***11*** *09:14:08.4±0.7, 29.˚21S×72.˚39W, h9^{km}, ML4.1, MW3.8*
IDC ***11*** *09:14:13.8±1.1, 29.˚49S×71.˚87W, h0^{km}, mb3.6/3, mb1 4.0/6, mb1mx3.8/25, mbtmp3.8/6, ML4.0/3, Error ellipse: s-maj=49.5km s-min=26.5km az=93.0*
NEIC ***11*** *09:14:14.7±1.9, 29.˚42S±0.˚04×71.˚94W±0.˚05, h14^{km}±5^{km}, mb4.5/28, ML4.0(GUC), Error ellipse: s-maj=7.5km s-min=3.5km az=46.0*
GUC ***11*** *09:14:17.1±1.0, 29.˚51S×71.˚89W, h30^{km}±9^{km}, ML4.1*
ISC 11 09:14:13.5±0.5**, 29.˚43S**±0.˚02×**72.˚07W**±0.˚04**, h10^{km}, n106,** σ1^{s}.**71**/137**, mb4.5**/17**, 4C-3D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO05	La Serena	0.87	124	⇓*i*P	Pb	09 14 30.2	-0.6
CO05				*i* S	Sg	09 14 40.4	-1.4
CO05				IAML		09 14 43.9	
	comp=E,9μm,0.4s						
CO05	La Serena	0.87	124		Pb	09 14 30.1	-0.6
LCO	Las Campanas	1.27	71	⇓*e*P	Pn	09 14 36.3	-1.2
LCO				*i* S	Sb	09 14 53.2	-0.9
LCO	Las Campanas	1.27	71		Pb	09 14 36.6	-1.0
LCO	Las Campanas	1.27	71	*e*P	Pn	09 14 36.0	-1.5
CO06	Fray Jorge	1.30	163	⇑*i*P	Pb	09 14 37.5	-0.6
CO06				*i* S	Sb	09 14 53.3	-1.5
CO06	Fray Jorge	1.30	163		Pb	09 14 37.4	-0.6
GO04	Tololo Observa	1.33	124	⇓*i*P	Pb	09 14 37.8	-1.0
GO04				*i* S	Sb	09 14 53.1	-2.9
GO04	Tololo Observa	1.33	124		Pb	09 14 37.8	-1.0
GO04	Tololo Observa	1.33	124	*e*P	Pn	09 14 37.3	-1.1
GO04				*e*P	Pb	09 14 38.0	-0.7
GO04				*e*S	Sg	09 14 56.1	-0.3
AC04	Llanos de Chal	1.50	36	⇑*i*P	Pn	09 14 39.4	-1.0
AC04				*i* S	Sn	09 14 57.6	-2.5
AC04	Llanos de Chal	1.50	36		Pn	09 14 39.4	-1.0
AC04	Llanos de Chal	1.50	36	*e*P	Pn	09 14 37.3	-3.2
AC04				*e*S	Sn	09 14 58.3	-1.8
CO03	El Pedregal	1.85	140	⇑*e*P	Pb	09 14 45.7	-1.8
CO03				*i* S	Sn	09 15 07.5	-1.4
CO03				IAML		09 15 17.3	
	comp=N,2μm,0.8s						
CO03	El Pedregal	1.85	140		Pb	09 14 45.6	-1.8
AROD	Rodeo	2.37	109	*e*P	Pb	09 14 55.2	-1.3
AROD				*e*S	Sn	09 15 21.3	-0.9
GO03	Copiap	2.44	42	*e*P	Pb	09 14 56.8	-0.7
GO03				*i* S	Sb	09 15 26.3	-1.3
GO03				IAML		09 15 36.4	
	comp=E,664nm,0.6s						
GO03	Copiap	2.44	42		Pn	09 14 53.0	-0.5
ACDV	Cuesta del Vie	2.67	107	*e*P	Pb	09 14 59.6	-1.9
ACDV				*e*S	Sg	09 15 36.8	-2.5
ACDV				IAML		09 15 38.9	
	comp=Z,467nm,0.9s						
ACCO	Cerro Coronel	2.85	115	*e*P	Pb	09 15 02.8	-1.9
ACCO				*e*S	Sg	09 15 44.8	-0.4
VA06	Catapilco	3.19	168	*e*P	Pn	09 15 04.3	+0.5
VA06				IAML		09 16 05.8	
	comp=N,788nm,0.6s						
RTLS	Leoncito	3.36	135	*e*P	Pb	09 15 09.9	-3.5
RTLS				*e*S	Sb	09 15 56.8	+2.3
RTLS				IAML		09 16 14.2	
	comp=Z,362nm,0.9s						
VA03	San Esteban	3.57	159	*e*P	Pn	09 15 11.4	+2.3
VA03				IAML		09 16 09.1	
	comp=E,566nm,0.6s						
VA03	San Esteban	3.57	159		Pn	09 15 11.3	+2.2
VA03	San Esteban	3.57	159	*e*P	Pn	09 15 11.0	+1.9
VA03				*e*S	Sb	09 15 57.3	-3.1
VA03				IAML		09 16 10.0	
	comp=Z,387nm,1.1s						
VA01	Torpederas	3.60	174		Pn	09 15 09.1	-0.3
AUSP	Uspallata	3.62	141	*e*P	Pb	09 15 13.7	-4.1
AUSP				*e*S	Sb	09 16 00.8	-1.1
ROCH	El Roble	3.65	166	*e*P	Pn	09 15 11.7	+1.4
ROCH				*i* S	Sg	09 16 06.6	-4.2
ROCH				IAML		09 16 14.9	
	comp=N,331nm,0.5s						
ROC1	El Roble	3.65	166	*e*P	Pn	09 15 12.0	+1.7
ROC1				*e*S	Sb	09 15 58.3	-4.5
PEL	Peldehue	3.89	163	*e*P	Pn	09 15 14.6	+1.2
PEL	Peldehue	3.89	163		Pn	09 15 14.9	+1.5
PEL	Peldehue	3.89	163	*e*P	Pn	09 15 15.1	+1.7
PEL				*e*S	Sg	09 16 17.9	-0.6
MT02	Curacav	3.90	168	*e*P	Pn	09 15 14.6	+1.0
MT02	Curacav	3.90	168		Pn	09 15 15.7	+2.1
MT02	Curacav	3.90	168	*e*P	Pn	09 15 15.0	+1.4
MT02				*e*S	Sb	09 16 05.8	-4.0
MT02				IAML		09 16 34.2	
	comp=Z,150nm,0.6s						
MT05	Renca	4.11	164		Pn	09 15 16.8	+0.2
MT05	Renca	4.11	164	*e*P	Pn	09 15 20.0	+3.5
FCH	Farellones	4.18	159	⇑*e*P	Pn	09 15 19.7	+2.1
FCH				*i* S	Sn	09 16 07.3	+0.7
AVFE	Valle Fertil	4.18	108	*e*P	Pn	09 15 20.0	+2.5
AVFE				*e*P	Pb	09 15 20.0	-7.3
AVFE				*e*S	Sb	09 16 17.3	-0.7
AVFE				IAML		09 16 28.4	
	comp=Z,199nm,0.8s						
ASAL	Salagasta	4.20	139	*e*P	Pb	09 15 22.0	-5.6
ASAL				*e*S	Sn	09 16 06.3	-0.7
VA05	Santo Domingo	4.24	175	*e*P	Pn	09 15 18.4	+0.3
VA05	Santo Domingo	4.24	175		Pn	09 15 18.3	+0.2
ARCO	CERRO ARCO	4.34	142	*e*P	Pn	09 15 24.0	+4.3
ARCO				*e*S	Sg	09 16 29.3	-3.6
ARCO				IAML		09 16 44.2	
	comp=Z,184nm,0.8s						
MT09	Talagante	4.43	168	*e*P	Pn	09 15 22.0	+1.0
MT09	Talagante	4.43	168		Pn	09 15 22.3	+1.3
ACLC	CERRO LA CRUZ	4.46	91	*e*P	Pn	09 15 23.0	+1.6
ACLC				*e*S	Sb	09 16 28.8	+2.7
ACLC				IAML		09 16 36.9	
	comp=Z,211nm,1.0s						
MT01	Popeta	4.48	171	*e*P	Pn	09 15 21.7	+0.3
MT01	Popeta	4.48	171		Pn	09 15 22.0	+0.5
MT01	Popeta	4.48	171	*e*P	Pn	09 15 22.0	+0.5
MT01				*e*S	Sb	09 16 28.3	+2.0
MT01				IAML		09 16 35.1	
	comp=Z,112nm,0.7s						
AAGR	Agrelo	4.58	144	*e*P	Pn	09 15 26.8	+3.8
AAGR				*e*S	Sg	09 16 41.3	+0.6
BO04	La Punta	4.72	165	*e*P	Pn	09 15 25.9	+1.2
BO04				*i* S	Sb	09 16 35.7	+2.5
ACHE	Chepes	4.98	112	*e*P	Pn	09 15 30.7	+2.1
ACHE				*e*S	Sb	09 16 42.8	+1.8
PB14	IPOC Station P	5.01	18	*e*P	Pn	09 15 16.9	-12
PB14				IAML		09 17 05.0	
	comp=Z,81nm,0.4s						
BO01	Tunca	5.02	171		Pn	09 15 29.3	+0.4
BO01	Tunca	5.02	171	*e*P	Pn	09 15 29.8	+0.9
BO01				*e*S	Sb	09 16 44.8	+2.9
BO01				IAML		09 16 55.3	
	comp=Z,74nm,1.1s						
BO02	Sierra Bellavi	5.46	169		Pn	09 15 36.1	+1.1
BO02	Sierra Bellavi	5.46	169	*e*P	Pn	09 15 36.0	+1.0
BO02				*e*P	Pn	09 15 36.2	+1.1
BO02				*e*S	Sb	09 16 55.8	+1.1
BO02				IAML		09 17 12.2	
	comp=Z,91nm,1.0s						
GO05	Huala	5.57	179	Pn	Pn	09 15 35.8	-0.7
GO05	Huala	5.57	179	*e*P	Pn	09 15 36.0	-0.5
GO05				*e*P	Pn	09 15 36.2	-0.3
GO05				*e*S	Sb	09 17 00.8	+3.1
RFA	San Rafael	6.14	151	*e*P	Pn	09 15 44.8	+0.4
RFA				*e*P	Pn	09 15 46.3	+1.9
RFA				*e*P	Pn	09 15 47.3	+2.9
MRA	San Martin	6.22	120	*e*P	Pn	09 15 42.8	-2.7
MRA				*e*P	Pn	09 15 47.3	+1.8
MRA				*e*S	Sn	09 16 57.3	+0.6
MRA				*e*S	Sn	09 17 01.3	+4.6
MRA				IAML		09 17 40.7	
	comp=Z,82nm,0.6s						
ML02	Panimavida	6.34	175		Pn	09 15 47.0	-0.1
H03N1	Juan Fernandez	7.08	234	T	T	09 23 46.8	
	baz=64,slow=72,SNR=33						
H03N2	Juan Fernandez	7.10	234	T	T	09 23 41.1	
	baz=64,slow=72,SNR=48						
H03N3	Juan Fernandez	7.10	234	T	T	09 23 43.2	
	baz=64,slow=72,SNR=65						
LC01	Cunco	9.45	179	Pn	Pn	09 16 29.7	0.0
PB08	IPOC Station P	9.62	17	Pn	Pn	09 16 33.6	+1.2
PLCA	Paso Flores	11.35	174	Pn	Pn	09 16 56.4	+0.6
	comp=Z,0.3nm,0.3s,baz=348,slow=11,SNR=1.6						
LPAZ	La Paz	13.57	16	Pn	P	09 17 29.9	-6.0
	comp=Z,0.3nm,0.3s,baz=196,slow=8.1,SNR=6.7						
LPAZ	La Paz	13.57	16	Pn	Pn	09 17 26.1	-0.6
SIV	San Ignacio	16.77	39	Pn	P	09 18 09.3	-1.5
	comp=Z,0.3nm,0.3s,baz=239,slow=12,SNR=5.6						
ETMB	Extrema	20.27	17	P	Pn	09 18 50.4	-0.8
SAML	Samuel	22.01	24	P	P	09 19 09.4	+1.3
BDFB	Brasilia	26.04	63	P	P	09 19 45.5	-1.8
MACA	Manacapuru-AM	28.27	25	P	P	09 20 07.3	+0.2
MACA				IAmb	IAmb	09 20 10.7	
	comp=Z,8.0nm,0.8s						
OTAV	Otavalo	30.12	347	P	P	09 20 24.6	+0.5
PTGA	Pitinga	30.78	24	P	P	09 20 29.6	+0.2
SDV	Santo Domingo	38.12	2	P	P	09 21 33.4	+0.3
SDV				IAmb	IAmb	09 21 42.0	
	comp=Z,4.1nm,0.6s						
URIC	Uribia, Colomb	40.89	0	P	P	09 21 55.5	-0.4
ACON	Acoyapa	43.05	341	P	P	09 22 13.2	-0.4
ACON				IAmb	IAmb	09 22 30.9	
	comp=Z,18nm,1.2s						
CCIG	Comitan	49.40	334	P	P	09 23 04.1	+0.3
CCIG				IAmb	IAmb	09 23 12.7	
	comp=Z,6.4nm,1.4s						
SNAA	Sanae	55.84	159	P	P	09 23 51.1	+0.3
SNAA				IAmb	IAmb	09 23 52.6	
	comp=Z,5.1nm,1.2s						
QSPA	South Pole Qui	60.80	180	P	P	09 24 27.3	+1.7
	comp=Z,0.3nm,0.7s,baz=121,slow=3.2,SNR=1.4						
HKT	Hockley	63.25	337	P	P	09 24 42.5	+0.4
HKT				IAmb	IAmb	09 25 09.2	
	comp=Z,3.9nm,1.0s						
JSC	Jenkinsville	63.96	352	P	P	09 24 47.9	+1.1
JSC				IAmb	IAmb	09 25 03.1	
	comp=Z,7.2nm,1.1s						
TXAR	Lajitas Array	65.76	330	P	P	09 25 01.4	+2.6
	comp=Z,0.2nm,0.5s,baz=157,slow=10,SNR=4.5						
TXAR	Lajitas Array	65.76	330	P	P	09 24 58.5	-0.3
TX31	Lajitas Ar. Si	65.76	330	P	P	09 24 58.5	-0.3
TX31				IAmb	IAmb	09 25 20.4	
	comp=Z,8.3nm,1.3s						
PLAL	Pickwick Lake	65.82	346	P	P	09 24 59.9	+1.0
PLAL				IAmb	IAmb	09 25 19.1	
	comp=Z,5.1nm,1.2s						
MIAR	Mount Ida	66.79	341	P	P	09 25 04.6	-0.6
MIAR				IAmb	IAmb	09 25 20.3	
	comp=Z,6.1nm,1.4s						
LCAR	Lake Charles	67.58	343	P	P	09 25 09.9	-0.2
LCAR				IAmb	IAmb	09 25 26.5	
	comp=Z,7.7nm,1.3s						
OK030	Cody Creek RV	69.04	339	P	P	09 25 17.1	-2.3
BRNJ	Basking Ridge	69.79	358	P	P	09 25 25.0	+1.2
Q44A	Meyer Farm, Va	69.79	346	P	P	09 25 24.2	+0.3
KAN13	South Haven SW	70.26	339	P	P	09 25 27.5	+0.7
K57A	Scipio Center	71.92	357	P	P	09 25 36.4	-0.4
SDCO	Great Sand Dun	73.79	333	P	P	09 25 49.3	+1.0
SDCO				IAmb	IAmb	09 26 15.6	
	comp=Z,5.7nm,1.4s						
W13A	Hualapai Mount	75.33	326	P	P	09 25 57.9	+0.7
REDW	Red Top Meadow	80.70	332	P	P	09 26 26.0	-0.9
SNOW	Snow King Moun	80.75	333	P	P	09 26 27.2	0.0
PAHR	Pah Rah Range	81.65	325	P	P	09 26 33.4	+1.4
PAHR				IAmb	IAmb	09 26 41.9	
	comp=Z,5.5nm,1.5s						
GCMT	Greycliff	82.28	334	P	P	09 26 35.2	+0.1
TORD	Torodi Ar. Bea	82.70	71	P	P	09 26 38.7	+0.9
	comp=Z,1.4nm,0.9s,baz=226,slow=3.6,SNR=6.3						
MOD	Modoc Plateau	83.77	326	P	P	09 26 42.8	-0.1
MOD				IAmb	IAmb	09 26 45.9	
	comp=Z,4.7nm,1.4s						
KURBB	Kurchatov Arra	149.42	38	PKPbc	PKiKP	09 34 04.1	+0.5
	comp=Z,0.2nm,0.3s,baz=306,slow=3.5,SNR=5.8						
ZALV	Zalesovo Beam	150.29	28	PKPbc	PKiKP	09 34 06.3	+1.0
	comp=Z,2.6nm,0.6s,baz=300,slow=4.0,SNR=11						

NNC ***11*** *09:44:18.8±6.1, 39.˚69N×77.˚06E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=47.0km s-min=22.7km az=3.0*
SOME ***11*** *09:44:22.4, 40.˚33N×77.˚15E, h5^{km}*
KRNET ***11*** *09:44:27.3±0.1, 40.˚52N×77.˚07E, mb3.2*
ISC 11 09:44:22.5±1.9**, 40.˚35N**±0.˚08×**77.˚11E**±0.˚03**, h16^{km}**±15^{km}**, n40,** σ1^{s}.**63**/72**, 28C-9D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TARG	Taragay, Kyrgy	1.48	21	⇑*i*P	Pg	09 44 52.6	+1.6
	baz=24						
TARG				⇑*i*S	Sg	09 45 11.5	+1.3
	baz=24						
ULHL	Ulahol	2.00	341	P	Pg	09 45 01.7	+0.8
	SNR=12						
ULHL	Ulahol	2.00	341	⇑*i*P	Pg	09 45 01.8	+0.8
	baz=40						
ULHL				⇑*i*S	Sg	09 45 26.9	-0.1
	baz=40						
BOOM	Boomskoye usch	2.31	338	⇓*i*P	Pg	09 45 06.7	-0.2
	baz=37						
BOOM				⇓*i*S	Sb	09 45 35.2	+2.9
	baz=37						
PRZ	Przheval'sk	2.34	24	⇓*i*P	Pg	09 45 07.8	+0.3
	baz=26						
PRZ				⇓*i*S	Sg	09 45 37.1	-0.8
	baz=26						
ANVS	Anan'yevo	2.47	10	⇑*e*P	Pg	09 45 08.9	-0.9
	baz=11						
ANVS				⇑*i*S	Sb	09 45 39.2	+2.4
	baz=11						
SALK	Salom-Alik	2.56	283	⇑*e*P	Pg	09 45 11.4	-0.2
	baz=80						
SALK				⇑*e*S	Sg	09 45 43.8	-0.9
	baz=80						
UCH	Uchtor	2.71	315	P	Pg	09 45 15.3	+0.9
	SNR=24						
UCH	Uchtor	2.71	315	⇑*e*P	Pb	09 45 12.6	+1.7
	baz=12						
UCH				⇑*i*S	Sb	09 45 46.0	+2.0
	baz=12						
TKM2	Tokmak 2	2.81	337	P	Pg	09 45 15.2	-1.1
	SNR=10						
TKM2	Tokmak 2	2.81	337	⇑Pn	Pb	09 45 14.6	+2.2
	2.9nm,0.4s						
TKM2				⇑Sn	Sg	09 45 54.0	+1.2
	9.0nm,0.4s						
TKM2	Tokmak 2	2.81	337	⇓*e*P	Pb	09 45 13.4	+1.0
	baz=36						
TKM2				⇓*i*S	Sb	09 45 46.9	+0.3
	baz=36						
MDOK	Medeo	2.81	359	*e*P	Pg	09 45 14.9	-1.5
	11nm,0.4s						
MDOK				*e*S	Sg	09 45 53.0	+0.1
	44nm,0.5s						
KBK	Karagaybulak	2.82	326	P	Pb	09 45 12.4	-0.2

	SNR=7.3						
KBK	Karagaybulak	2.82	326	⇑eP	Pb	09 45 13.8	+1.2
	baz=24						
KBK				⇑iS	Sb	09 45 47.7	+0.8
	baz=24						
MTBS	Maitube	2.82	350	eP	Pg	09 45 15.4	-1.2
	8.4nm,0.3s						
MTBS				eS	Sg	09 45 53.4	+0.2
	24nm,0.2s						
SATY	Saty	2.88	19	eP	Pg	09 45 15.8	-1.8
	12nm,0.4s						
SATY				eS	Sg	09 45 54.3	-0.6
	28nm,0.3s						
AAK	Ala-Archa	3.01	320	P	Pg	09 45 20.5	+0.2
	SNR=11						
AAK	Ala-Archa	3.01	320	⇑Pg	Pg	09 45 20.3	+0.1
	5.7nm,0.4s						
AAK				⇓Sn	Sg	09 46 00.3	+0.9
	31nm,0.9s						
AAK	Ala-Archa	3.01	320	⇑eP	Pb	09 45 16.7	+0.8
	baz=18						
AAK				⇑iS	Sb	09 45 52.7	+0.2
	baz=18						
DGS	Degeres	3.06	341	eP	Pg	09 45 20.2	-0.9
	6.5nm,0.6s						
DGS				eS	Sg	09 46 01.3	+0.6
	17nm,0.5s						
AML	Almayashu	3.13	306	P	Pg	09 45 23.8	+1.4
	SNR=6.5						
AML	Almayashu	3.13	306	⇑eP	Pb	09 45 18.8	+0.8
	baz=4.0						
AML				⇑iS	Sb	09 45 56.4	+0.3
	baz=4.0						
UZB	Uzynbulak	3.14	27	eP	Pg	09 45 21.2	-1.5
	8.4nm,0.3s						
UZB				eS	Sg	09 46 03.5	+0.1
	21nm,0.7s						
CHMS	Chumysh	3.18	327	⇑iP	Pb	09 45 18.5	-0.2
	baz=26						
CHMS				⇑iS	Sb	09 45 56.3	-0.9
	baz=26						
KURS	Kuram	3.23	14	eP	Pg	09 45 22.9	-1.6
	20nm,0.5s						
KURS				eS	Sg	09 46 06.1	-0.3
	20nm,0.5s						
KTBS	Karatobe	3.38	355	eP	Pg	09 45 25.1	-2.1
	12nm,0.4s						
KTBS				eS	Sg	09 46 09.8	-1.0
	34nm,0.4s						
EKS2	Erkin-Say	3.41	314	⇑iP	Pb	09 45 21.9	-0.6
	baz=12						
EKS2				⇑iS	Sb	09 46 02.3	-1.4
	baz=12						
PDGK	Podgornoye	3.47	30	⇓Pn	Pb	09 45 21.5	-2.1
	0.9nm,0.4s						
PDGK				⇑Pg	Pg	09 45 32.0	+3.1
	8.3nm,0.7s						
PDGK				⇑Sn	Sg	09 46 12.9	-0.9
	33nm,0.7s						
CHKK	Chushkaly	3.50	359	eP	Pg	09 45 27.8	-1.8
	5.5nm,0.2s						
CHKK				eS	Sg	09 46 14.4	-0.6
	34nm,0.3s						
USP	Ospenovka	3.51	327	P	Pg	09 45 29.2	-0.4
	SNR=5.4						
USP	Ospenovka	3.51	327	⇑eP	Pb	09 45 23.0	-1.2
	baz=26						
USP				⇑iS	Sb	09 46 04.0	-2.6
	baz=26						
KRBS	Karabastau	3.51	343	eP	Pg	09 45 28.5	-1.2
	4.3nm,0.3s						
KRBS				eS	Sg	09 46 15.7	+0.5
	5.7nm,0.3s						
KUU	Kurty	3.59	351	eP	Pb	09 45 28.9	+3.3
	1.4nm,0.1s						
KUU				eS	Sg	09 46 16.4	-1.3
	29nm,0.6s						
MRKS	Merke	3.77	311	eP	Pg	09 45 32.7	-2.0
	5.6nm,0.3s						
MRKS				eS	Sg	09 46 23.0	-0.6
	9.9nm,0.6s						
ARXS	Arharly	3.90	8	eP	Pg	09 45 34.6	-2.5
	6.1nm,0.5s						
ARXS				eS	Sg	09 46 26.1	-1.5
	18nm,0.3s						
DJR	Jarkent	4.45	26	eP	Pg	09 45 44.5	-3.2
	3.4nm,0.5s						
DJR				eS	Sg	09 46 43.0	-2.3
	6.3nm,0.3s						
BTLS	Baital	5.20	335	eP	Pb	09 45 58.1	+5.0
	1.8nm,0.7s						
BTLS				eS	Sg	09 47 06.3	-3.1
	5.1nm,0.5s						
KAPS	Kapalarasan	5.20	18	eP	Pb	09 45 57.6	+4.5
	1.2nm,0.4s						
KAPS				eS	Sg	09 47 06.1	-3.3
	5.3nm,0.5s						
KK31	Karatay Array	5.65	301	⇑Pg	Pg	09 46 08.8	-1.8
	1.2nm,0.6s,baz=128,slow=16,SNR=4.7						
KK31				⇓Lg	Lg	09 47 28.1	
	0.5nm,0.3s,baz=103,slow=31,SNR=4.7						

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*IDC **11** 09:57:23.7±0.9, 54°.39N×162°.08W, h0km, mb4.0/11, mb1 4.2/14, mb1mx3.9/51, mbtmp4.0/14, ML4.0/3, MS3.1/5, Ms1 3.1/5, ms1mx2.7/68, Error ellipse: s-maj=21.2km s-min=15.2km az=171.0*

*NEIC **11** 09:57:30.2±1.8, 54°.39N±0°.04×161°.66W±0°.04, h45km±8km, mb4.6/25, ML4.3/12, ML4.1/64(AEIC), Error ellipse: s-maj=5.9km s-min=1.9km az=209.0*

*AEIC **11** 09:57:30.6±2.5, 54°.39N±0°.04×161°.69W±0°.03, h20km±5km, Error ellipse: s-maj=5.8km s-min=2.5km az=192.0*

ISC 11 09:57:30.5±1.0**, 54°.46N**±0°.07×**161°.68W**±0°.03**, h49**km±10km**, n174,** σ1s.**31**/177**, mb4.3**/21**, MS2.9**/3**, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRIA	Deer Island	0.61	327		Pn	09 57 42.4	-0.7
DRIA					Sn	09 57 52.0	-0.2
DT1	Dutton Round H	0.74	332		Pn	09 57 44.1	-0.6
HAG	Hague Volcano	0.87	352		Pn	09 57 46.8	+0.3
PS4A	Pavlof South-4	0.90	354		Pn	09 57 47.0	+0.2
PVV	Pavlof Volcano	0.92	356		Pn	09 57 47.3	+0.2
PVV					Sn	09 58 00.3	+1.0
PS1A	Pavlof South-1	0.97	358		Pn	09 57 48.2	+0.5
PS1A					Sn	09 58 01.5	+1.1
PN7A	Pavlof North-7	0.99	349		Pn	09 57 48.9	+0.7
PN6	Pavlof North-6	1.01	352		Pn	09 57 49.4	+1.1
FALS	False Pass	1.09	292	P	Pn	09 57 49.0	-0.4
	baz=114						
FALS				S	Sn	09 58 03.8	+0.5
	baz=114						
FALS	False Pass	1.09	292	Pn	Pn	09 57 48.6	-0.7
FALS	False Pass	1.09	292		Sn	09 58 03.8	+0.5
FALS	False Pass	1.09	292	P	Pn	09 57 48.3	-1.0
SDPT	Sand Point	1.13	37	P	Pn	09 57 50.5	+0.6
	baz=216						
SDPT				S	Sn	09 58 06.5	+2.2
	baz=216						
SDPT	Sand Point	1.13	37		Pn	09 57 50.6	+0.6
SDPT				Sn	Sn	09 58 05.4	+1.1
ISLZ	Isanotski Laza	1.21	284		Pn	09 57 50.5	-0.6
ISLZ					Sn	09 58 06.7	+0.3
BRPK	Brown Peak	1.22	280		Pn	09 57 50.5	-0.6
BLHA	Black Hill	1.27	350	P	Pn	09 57 52.9	+1.0
	baz=171						
BLHA	Black Hill	1.27	350		Pn	09 57 52.9	+1.0
CNBA	Chernabura Isl	1.27	72	Pn	Pn	09 57 51.4	-0.4
CNBA				Sn	Sn	09 58 06.1	-1.6
CNBA				IAML		09 58 08.8	
	comp=E,4µm,0.4s						
CHNA	Chernabura Isl	1.27	72	P	Pn	09 57 51.5	-0.3
	baz=251						
CHNA				S	Sn	09 58 08.5	+0.7
	baz=251						
ISNN	Isanotski Nort	1.28	288		Pn	09 57 52.3	+0.3
SSLS	Shishaldin Sou	1.37	282		Pn	09 57 53.4	0.0
SSLN	Shishaldin Nor	1.39	286		Pn	09 57 54.2	+0.6
SSLN					Sn	09 58 11.5	+0.7
SSBA	Shishaldin	1.46	284		Pn	09 57 54.5	+0.1
WESP	Westdahl Peak	1.78	272		Pn	09 57 59.0	+0.2
WECS	Westdahl Cape	1.81	274		Pn	09 57 59.5	+0.3
WECS					Sn	09 58 21.9	+0.9
VNFG	Fog Glacier, M	2.20	33	P	Pn	09 58 05.9	+1.3
	baz=214						
VNFG	Fog Glacier, M	2.20	33		Pn	09 58 05.9	+1.3
VNSG	Veniaminof 6	2.24	41		Pn	09 58 06.4	+1.3
VNHG	Veniaminof 1	2.28	38		Pn	09 58 07.2	+1.5
AKSA	Akutan Strait	2.38	264		Pn	09 58 06.8	-0.2
AKUT	Akutan	2.42	264		Pn	09 58 07.2	-0.3
AKBBA	Akutan Broad B	2.52	264		Pn	09 58 08.6	-0.3
AKLV	Akutan Long Va	2.52	265		Pn	09 58 08.8	-0.2
CHGN	Chignik	2.62	44	P	Pn	09 58 11.6	+1.3
	baz=226						
CHGN	Chignik	2.62	44		Pn	09 58 11.8	+1.4
CHGN				IAML		09 58 50.0	
	comp=N,1µm,0.5s						
UNV	Unalaska Valle	2.90	260	P	Pn	09 58 13.4	-0.8
	baz=77						
UNV	Unalaska Valle	2.90	260	Pn	Pn	09 58 13.7	-0.5
MTBL	Makushin Table	2.98	263		Pn	09 58 14.7	-0.5
ANPB	Aniakchak Plen	3.04	38		Pn	09 58 17.3	+1.2
MSW	Makushin Switc	3.05	262		Pn	09 58 15.4	-0.8
ANPK	Aniakchak Peak	3.12	39		Pn	09 58 18.7	+1.4
ANNE	Aniakchak Nort	3.20	38		Pn	09 58 19.7	+1.4
CHIR	Chirikof Islan	3.74	66	P	Pn	09 58 25.7	+0.2
	baz=250						
CHIR	Chirikof Islan	3.74	66		Pn	09 58 25.2	-0.3
CHIR				IAML		09 59 12.5	
	comp=N,364nm,0.5s						
CHIR				IAML		09 59 35.0	
	comp=E,405nm,1.1s						
PLK1	Peulik 1	4.39	38		Pn	09 58 36.0	+1.5
SII	Sitkinak Islan	4.75	61	P	Pn	09 58 39.5	0.0
	baz=246						
SII	Sitkinak Islan	4.75	61		Pn	09 58 39.7	+0.1
SII				IAML		10 00 04.0	
	comp=E,328nm,0.6s						
SII				IAML		10 00 12.4	
	comp=N,382nm,0.9s						
SII	Sitkinak Islan	4.75	61	P	Pn	09 58 38.9	-0.6
KABU	Katmai Buttres	5.22	40		Pn	09 58 47.3	+1.3
KAKN	Katmai Knife C	5.32	41		Pn	09 58 48.5	+1.1
OHAK	Old Harbor	5.48	56	P	Pn	09 58 48.8	-0.7
	baz=242						
OHAK	Old Harbor	5.48	56	Pn	Pn	09 58 48.8	-0.7
P18K	Big Mountain,	6.08	33	P	Pn	09 58 59.8	+2.0
	baz=218						
P18K	Big Mountain,	6.08	33	Pn	Pn	09 58 59.7	+2.0
KDAK	Kodiak Island	6.08	53	Pn	Pn	09 58 57.0	-0.6
	comp=N,5.4nm,0.3s,baz=200,slow=4.6,SNR=215						
KDAK				Sn	Sn	10 00 04.3	-1.6
	comp=N,6.1nm,0.3s,baz=163,slow=20,SNR=1.7						
KDAK	Kodiak Island	6.08	53	P	Pn	09 58 56.9	-0.8
	baz=240						
KDAK	Kodiak Island	6.08	53	Pn	Pn	09 58 57.4	-0.3
Q19K	Cape Douglas,	6.30	41	P	Pn	09 59 01.6	+0.9
	baz=228						
Q19K	Cape Douglas,	6.30	41		Pn	09 59 01.4	+0.7
O18K	Koktuh Hills	6.45	30	P	Pn	09 59 05.0	+2.2
	baz=216						
O18K	Koktuh Hills	6.45	30	Pn	Pn	09 59 05.0	+2.2
O19K	Port Alsworth	6.99	32	P	Pn	09 59 12.6	+2.4
	baz=218						
O19K	Port Alsworth	6.99	32	Pn	Pn	09 59 12.3	+2.1
ILSW	Iliamna Southw	7.22	36		Pn	09 59 15.6	+2.2
ILS	Iliamna Low So	7.23	37		Pn	09 59 15.8	+2.3
IVE	Iliamna Volcan	7.29	37		Pn	09 59 16.3	+2.0
SVW2	Sparrevohn	7.41	24		Pn	09 59 18.0	+2.0
N19K	Bonanza Creek	7.45	28	P	Pn	09 59 18.4	+1.9
	baz=214						
N19K	Bonanza Creek	7.45	28	Pn	Pn	09 59 18.6	+2.0
CNPM	China Poot	7.63	44		Pn	09 59 19.1	+0.1
RED	Redoubt Volcan	7.66	35		Pn	09 59 21.9	+2.4
RDWB	Redoubt West	7.69	35		Pn	09 59 22.1	+2.1
NCT	North Crescent	7.72	34		Pn	09 59 22.1	+1.9
DFR	Drift River	7.82	35		Pn	09 59 23.7	+2.1
M19K	Big River Lodg	8.40	24	P	Pn	09 59 30.3	+0.9
	baz=210						
M19K	Big River Lodg	8.40	24		Pn	09 59 30.6	+1.2
SPU	Mount Spurr	8.47	33		Pn	09 59 32.3	+1.9
L19K	White Mountain	8.53	22	Pn	Pn	09 59 31.5	+0.2
TTA	Tatalina	8.99	17	Pn	Pn	09 59 38.1	+0.5
SUA	Susitna One	9.11	35	Pn	Pn	09 59 39.8	+0.6
RC01	Rabbit Creek A	9.20	39		Pn	09 59 40.1	-0.4
PPLA	Purkeypile	9.79	26		Pn	09 59 50.7	+2.1
GLI	Glacier Island	10.11	45	Pn	Pn	09 59 53.6	+0.8
HIN	Hinchinbrook I	10.11	48		Pn	09 59 52.4	-0.4
FID	Port Fidalgo	10.29	46	Pn	Pn	09 59 53.9	-1.4
J20K	Nowinta River	10.47	18		Pn	09 59 57.9	+0.2
EYAK	Cordova Ski Ar	10.50	48	Pn	Pn	09 59 56.2	-2.0
SCM	Sheep Creek Mo	10.57	40		Pn	09 59 58.2	-1.0
TRF	Thorofare Moun	10.75	28		Pn	10 00 02.3	+0.6
DIV	Divide	10.79	45		Pn	10 00 02.0	-0.1
KAIM	Kayak Island	10.83	53	Pn	Pn	10 00 03.0	+0.2
KLU	Klutina	10.92	43		Pn	10 00 03.2	-0.8
RND	Reindeer	11.13	31	Pn	Pn	10 00 06.5	-0.4
M24K	Tolsona, Glenn	11.17	40		Pn	10 00 07.0	-0.3
BERG	Berg Lake	11.35	51	Pn	Pn	10 00 08.7	-1.0
MCK	McKinley	11.35	30		Pn	10 00 08.7	-1.1
DHY	Denali Highway	11.36	35		Pn	10 00 07.6	-2.5
N25K	Chitina, Valde	11.52	45		Pn	10 00 11.6	-0.5
TNA	Tin City	11.56	347	Pn	Pn	10 00 14.3	+1.8
WAX	Waxell Ridge	11.76	52	Pn	Pn	10 00 14.9	-0.6
GLB	Gilahina Butte	11.76	46		Pn	10 00 14.4	-1.1
I21K	Tanana	11.79	20		Pn	10 00 16.4	+0.6
VRDI	Verde Repeater	11.82	48	Pn	Pn	10 00 15.3	-1.0
AMKA	Amchitka	11.88	263	Pn	Pn	10 00 16.8	-0.3
PAX	Paxson	11.96	38	Pn	Pn	10 00 16.0	-2.1
ISLE	Juniper Island	12.05	52	Pn	Pn	10 00 19.2	-0.2
H21K	Melozitna Rive	12.06	18	Pn	Pn	10 00 20.1	+0.7
WRH	Wood River Hil	12.15	29	Pn	Pn	10 00 18.3	-2.4
IMAR	Indian Mountai	12.20	15	Pn	Pn	10 00 22.1	+0.7
YAH	Yahtse	12.24	53	Pn	Pn	10 00 22.3	+0.2
GRNC	Granite Creek	12.37	51	Pn	Pn	10 00 23.7	-0.2
HDA	Harding Lake	12.44	31		Pn	10 00 22.4	-2.3
TABL	Table Mountain	12.55	53	Pn	Pn	10 00 26.6	+0.3
M26K	Nabesna, AK	12.57	43		Pn	10 00 26.4	-0.1
MENT	Mentasta	12.58	40		Pn	10 00 26.1	-0.5
RIDG	Independent Ri	12.66	36		Pn	10 00 27.3	-0.4
ILAR	Eielson Array	12.72	30	Pn	Pn	10 00 25.6	-2.9
	comp=N,0.3nm,0.3s,baz=217,slow=13,SNR=11						
ILAR				Sn	Sn	10 02 41.8	-6.6
	comp=N,0.0nm,0.3s,baz=212,slow=23,SNR=2.2						
ILAR				LR	LR	10 05 49.0	
	comp=N,94nm,20.4s,baz=230,slow=39						
ILAR	Eielson Array	12.72	30		Pn	10 00 24.9	-3.6
L26K	Log Cabin Wild	12.77	40	Pn	Pn	10 00 28.9	-0.3
H23K	Yukon River	12.87	23		Pn	10 00 29.4	-1.1
DOT	Dot Lake	12.88	37		Pn	10 00 28.8	-1.8
SCRK	Sand Creek	13.11	36		Pn	10 00 31.2	-2.6
BCPM	Bancas Point	13.12	56	Pn	Pn	10 00 33.8	-0.1
L27K	Beaver Creek,	13.38	42		Pn	10 00 34.9	-2.5
COLD	Coldfoot	13.94	19		Pn	10 00 45.7	+0.7
TOLK	Toolik Lake Re	15.30	17		Pn	10 01 04.4	+1.3
BMAR	Burnt Mountain	15.35	25	Pn	Pn	10 01 04.4	+0.8
JIS	Juneau Island	15.55	65	Pn	Pn	10 01 07.5	+1.4
WHY	Whitehorse	15.59	56	Pn	Pn	10 01 07.0	+0.2
EPYK	Eagle Plains	17.00	36	P	P	10 01 26.2	+0.5
HG4B	Hotspring	18.25	84	P	P	10 01 38.4	-1.2
HG4B				IAmb	IAmb	10 01 41.2	
	comp=Z,36nm,0.9s						
INK	Inuvik	19.09	32	P	P	10 01 48.0	-0.6
	comp=Z,0.5nm,0.3s,baz=226,slow=19,SNR=16						
INK				LR	LR	10 09 59.2	
	comp=Z,107nm,18.5s,baz=236,slow=39						
INK	Inuvik	19.09	32	P	P	10 01 48.6	0.0
BBB	Bella Bella	20.07	83	LR	LR	10 07 51.2	
	comp=Z,53nm,20.9s,baz=236,slow=31						
PET	Petropavlovsk	23.30	283	P	P	10 02 32.8	-0.9
PET				IAmb	IAmb	10 02 51.6	
	comp=Z,13nm,1.1s						
A36M	Sachs Harbour	23.41	28	P	P	10 02 32.9	-1.7
CLRS	Cowichan Lake	23.77	88	P	P	10 02 39.0	+0.8
CLRS				IAmb	IAmb	10 02 39.2	
	comp=Z,36nm,1.4s						
PETK	Petropavlovsk-	23.81	284	P	P	10 02 36.7	-1.9
	comp=Z,2.1nm,0.6s,baz=86,slow=12,SNR=15						
YKA	Yellowknife Ar	25.36	53	P	P	10 02 54.7	+2.1
	comp=Z,1.7nm,0.7s,baz=271,slow=9.2,SNR=7.9						
NEW	Newport	28.11	84	LR	LR	10 12 27.0	
	comp=Z,48nm,18.4s,baz=242,slow=32						
NVAR	Mina Array Bea	33.30	101	P	P	10 04 05.6	+2.1
	comp=Z,0.7nm,0.7s,baz=306,slow=8.6,SNR=7.1						
YHH	Holmes Hill	33.63	85	P	P	10 04 08.0	+1.5
YHH				IAmb	IAmb	10 04 08.9	
	comp=Z,2.7nm,0.8s						
PDAR	Pinedale Array	35.59	87	P	P	10 04 24.9	+1.6
	comp=Z,0.3nm,0.6s,baz=295,slow=4.1,SNR=4.8						
ULM	Lac du Bonnet	39.10	68	P	P	10 04 53.8	+1.1
	comp=Z,4.0nm,0.4s,baz=309,slow=7.1,SNR=8.1						
ULM	Lac du Bonnet	39.10	68	IAmb	IAmb	10 04 54.3	
	comp=Z,5.7nm,0.9s						
SUSD	Miller	40.70	78	P	P	10 05 06.4	+0.4
H11N2	WAKE ISLAND Hy	42.11	227	T	T	10 50 06.2	
	baz=27,slow=76,SNR=104						
H11N3	WAKE ISLAND Hy	42.12	227	T	T	10 50 09.9	
	baz=27,slow=76,SNR=83						
H11N1	WAKE ISLAND Hy	42.13	227	T	T	10 50 06.4	
	baz=27,slow=76,SNR=68						
ECSD	EROS Data Cent	42.47	77	P	P	10 05 20.6	+0.1
ECSD				IAmb	IAmb	10 05 21.4	
	comp=Z,3.9nm,0.8s						
EYMN	Ely	42.77	69	P	P	10 05 23.7	+0.8
EYMN				IAmb	IAmb	10 05 24.7	
	comp=Z,26nm,1.4s						
H11S1	WAKE ISLAND Hy	43.28	227	T	T	10 51 26.7	
	baz=26,slow=76,SNR=63						
H11S2	WAKE ISLAND Hy	43.30	227	T	T	10 51 27.9	
	baz=26,slow=76,SNR=40						
H11S3	WAKE ISLAND Hy	43.30	227	T	T	10 51 28.1	
	baz=26,slow=76,SNR=41						
E38A	The Farm, Brul	43.54	70	P	P	10 05 29.4	+0.4
E38A				IAmb	IAmb	10 05 30.7	
	comp=Z,29nm,1.2s						
G40A	Rib Lake	45.11	71	P	P	10 05 41.8	+0.2
G40A				IAmb	IAmb	10 05 42.9	
	comp=Z,5.1nm,0.7s						
COWI	Conover	45.17	69	P	P	10 05 42.2	+0.1
COWI				IAmb	IAmb	10 05 42.8	
	comp=Z,5.1nm,0.5s						
P38A	Dawn	46.88	79	P	P	10 05 55.6	-0.1
P40A	Paris	47.79	78	P	P	10 06 02.7	-0.1
TXAR	Lajitas Array	48.26	97	P	P	10 06 07.8	+1.3
	comp=Z,0.7nm,0.8s,baz=302,slow=5.7,SNR=9.4						
TXAR				PcP	PcP	10 07 33.4	+0.4
	comp=Z,0.2nm,0.5s,baz=270,slow=1.5,SNR=5.0						
TXAR	Lajitas Array	48.26	97	P	P	10 06 06.0	-0.6
R40A	Maddies Statio	48.51	80	P	P	10 06 07.3	-0.9
R40A				IAmb	IAmb	10 06 07.9	
	comp=Z,6.7nm,0.6s						
KSRS	Korea Array	49.65	280	LR	LR	10 29 27.0	
	comp=Z,7.6nm,19.0s,baz=75,slow=39						
N47A	Urbana	50.47	73	P	P	10 06 22.7	-0.5
WVT	Waverly	52.55	78	P	P	10 06 39.1	+0.4
SONM	Songino Array	54.08	304	P	P	10 06 49.1	-0.9
	comp=Z,0.3nm,0.5s,baz=53,slow=6.8,SNR=5.0						
TZTN	Tazewell	54.69	75	P	P	10 06 54.4	0.0
TZTN				IAmb	IAmb	10 06 54.7	
	comp=Z,4.5nm,0.8s						
SSPA	Standing Stone	54.92	68	P	P	10 06 55.9	-0.2
ARCES	ARCESS Array B	56.21	357	P	P	10 07 05.4	+0.6
	comp=Z,6.4nm,1.0s,baz=24,slow=8.9,SNR=2.4						
ARCES	ARCESS Array B	56.21	357	IAmb	IAmb	10 07 33.1	
	comp=Z,15nm,1.2s						
FINES	FINESS Array B	64.28	356	P	P	10 07 59.3	-0.8
	comp=Z,3.2nm,0.9s,baz=354,slow=5.7,SNR=6.4						
AKASG	Malin Array Be	74.81	353	P	P	10 09 04.4	-0.8
	comp=Z,1.2nm,0.5s,baz=8.1,slow=5.7,SNR=1.9						
CMAR	Chiang Mai Arr	80.49	288	P	P	10 09 36.8	-0.5
	comp=Z,0.8nm,0.3s,baz=57,slow=5.3,SNR=5.9						

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*IDC **11** 10:04:15.1±0.9, 58°.47S×25°.91W, h0km, mb4.1/7, mb1 4.2/7, mb1mx3.9/24, mbtmp4.1/7, Error ellipse: s-maj=29.5km s-min=26.9km az=57.0*

*NEIC **11** 10:04:24.9±1.9, 58°.5S±0°.1×26°.1W±0°.2, h77km±7km, mb4.6/22, Error ellipse: s-maj=16.5km s-min=12.4km az=225.0*

ISC 11 10:04:27.8±0.5**, 58°.45S**±0°.08×**26°.17W**±0°.08**, h107**km**, n42,** σ1s.**17**/42**, mb4.2**/12**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	7.09	302	Pn	Pn	10 06 05.1	-3.6
VNA1	Neumayer--Stat	14.37	156	P	Pn	10 07 44.4	-1.2
VNA1				S	Sn	10 10 11.3	-12
VNA3	Neumayer Olymp	14.54	159	P	Pn	10 07 47.0	-1.0
VNA3				S	Sn	10 10 10.1	-18
VNA2	Neumayer--Watz	14.76	155	P	Pn	10 07 50.4	-0.4
	baz=310,slow=15						
VNA2				S	Sn	10 10 16.5	-17
SNAA	Sanae	16.33	154	P	Pn	10 08 10.2	-0.2
SNAA				S	Sn	10 10 54.9	-16
SNAA	Sanae	16.33	154	Pn	Pn	10 08 09.4	-1.0
	0.5nm,0.3s,baz=314,slow=15,SNR=19						
SNAA				Sn	Sn	10 10 54.5	-17
	0.3nm,0.3s,baz=317,slow=19,SNR=3.1						
SNAA	Sanae	16.33	154		Pn	10 08 08.7	-1.6
PMSA	Palmer Station	18.84	235	P	P	10 08 37.4	-1.5
PMSA				IAmb	IAmb	10 08 46.0	
	comp=Z,36nm,1.2s						
EFI	East Falkland	19.34	277	P	P	10 08 44.8	+0.4
EFI				IAmb	IAmb	10 09 05.4	
	comp=Z,53nm,1.1s						
QSPA	South Pole Qui	31.79	180	P	P	10 10 42.6	+0.9
PLCA	Paso Flores	33.02	283	P	P	10 10 54.1	+1.6
	comp=Z,2.4nm,1.0s,baz=142,slow=9.2,SNR=4.6						
PLCA	Paso Flores	33.02	283	P	P	10 10 52.3	-0.2
PLCA				IAmb	IAmb	10 10 56.1	
	comp=Z,5.2nm,1.1s						
LL04	Puerto Octay	33.84	281	P	P	10 10 59.5	-0.1
LL04				IAmb	IAmb	10 11 12.3	
	comp=Z,14nm,1.2s						
ITQB	Itaqui	35.57	311	P	P	10 11 15.4	+0.9
ITQB				IAmb	IAmb	10 11 41.7	
	comp=Z,24nm,1.4s						
MT02	Curacav	39.10	290	P	P	10 11 45.3	+1.0
VA03	San Esteban	39.22	291		S	10 17 36.4	-1.3
ZON	Zonda	39.30	294		S	10 17 42.1	+3.1
VNDA	Vanda	44.19	182	P	P	10 12 26.3	+1.1
	comp=Z,0.5nm,0.7s,baz=201,slow=6.5,SNR=2.1						
VNDA	Vanda	44.19	182	P	P	10 12 24.4	-0.8
SHEL	Horse Pasture	45.06	28	P	P	10 12 31.3	-1.5
BOSA	Boshof	46.09	73	P	P	10 12 40.8	-0.2
BOSA				IAmb	IAmb	10 12 58.3	
	comp=Z,6.9nm,1.2s						
CRZF	Crozet Islands	46.39	111	P	P	10 12 43.4	+0.4
PTLB	Pontes e Lacer	49.41	316	P	P	10 13 06.9	+0.3
SIV	San Ignacio	49.64	314	P	P	10 13 08.5	+0.2
	comp=Z,1.1nm,0.5s,baz=164,slow=7.4,SNR=6.2						
TSUM	Tsumeb	50.43	58	P	P	10 13 12.6	-1.8
TSUM				IAmb	IAmb	10 13 31.3	
	comp=Z,10nm,1.4s						
CASY	Casey	51.46	159	P	P	10 13 21.7	+0.4
LPAZ	La Paz	52.22	306	P	P	10 13 29.0	+0.7
	comp=Z,1.0nm,0.5s,baz=193,slow=9.6,SNR=5.1						
LPAZ	La Paz	52.22	306	P	P	10 13 27.9	-0.4
ETMB	Extrema	57.26	311	P	P	10 14 04.0	+0.1
ETMB				IAmb	IAmb	10 14 04.4	
	comp=Z,1.4nm,0.9s						
DBIC	Dimbokro	67.15	23	P	P	10 15 11.0	+1.2
	comp=Z,4.4nm,0.7s,baz=179,slow=6.6,SNR=4.8						
DBIC	Dimbokro	67.15	23	P	P	10 15 10.2	+0.3
DBIC				IAmb	IAmb	10 15 18.2	
	comp=Z,26nm,1.5s						
MCQ	Macquarie Isla	67.33	183	P	P	10 15 10.1	-0.4
TORD	Torodi Ar. Bea	74.90	28	P	P	10 15 58.0	+1.3
	comp=Z,4.8nm,0.5s,baz=200,slow=6.2,SNR=31						
PAYG	Puerto Ayora	76.14	292	P	P	10 16 04.5	+0.6
BIM	Bigot	78.13	326	P	P	10 16 14.0	-0.8
OBIP	Obispado Ponce	83.17	322	P	P	10 16 41.8	+0.2
COVE	Coope Vega, Sa	83.40	303	P	P	10 16 44.1	+1.2
ASAR	Alice Springs	96.53	162	P	P	10 17 45.2	+0.1
	comp=Z,0.3nm,0.7s,baz=188,slow=3.7,SNR=4.3						
FINES	FINESS Array B	126.25	28	PKP	PKiKP	10 23 16.8	+0.3
	comp=Z,1.2nm,0.7s,baz=169,slow=1.0,SNR=3.3						
SONM	Songino Array	150.25	90	PKPbc	PKPbc	10 24 05.3	0.0
	comp=Z,0.7nm,0.6s,baz=228,slow=4.3,SNR=4.0						
ILAR	Eielson Array	152.08	308	PKPbc	PKiKP	10 24 09.7	+0.6
	comp=Z,0.4nm,0.4s,baz=145,slow=2.9,SNR=4.6						
ILAR	Eielson Array	152.08	308	PKPdf	PKPdf	10 24 03.1	+0.9

IDC 11 10:04:40.1±4.6**, 58°.88S**×**24°.34W, h0**km**, mb4.1**/3**, mb1 4.1**/3**, mb1mx3.8**/26**, mbtmp4.0**/3**, Error ellipse: s-maj=335.5km s-min=34.7km az=102.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	Vanda	43.80	182	P	P	10 12 46.8	-0.1

	1.0nm,0.7s,baz=153,slow=6.8,SNR=6.7						
TORD	Torodi Ar. Bea	74.84	26	P	P	10 16 22.2	0.0
	1.0nm,0.7s,baz=193,slow=5.1,SNR=3.5						
ASAR	Alice Springs	95.81	160	P	P	10 18 08.0	-0.3
	0.6nm,0.6s,baz=190,slow=4.7,SNR=13						
SONM	Songino Array	149.30	89	PKPbc	PKPbc	10 24 29.5	-0.3
	0.6nm,0.7s,baz=222,slow=1.9,SNR=1.7						

ISC 11 10:08:22.3±1.4, **45°.01N**±0°.06×**16°.21E**±0°.03, **h3**^{km}±13^{km}, **n9**, σ**0^{s}.75**/18, **Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLIT	Plitvice	0.43	253	*e*Pg	Pg	10 08 30.7	+0.1
PLIT				Sg	Sg	10 08 37.5	+1.2
MRAK	Mrakovica	0.49	89	*e*Pg	Pg	10 08 31.6	-0.1
MRAK				*e*Sg	Sg	10 08 38.0	-0.1
UDBI	Udbina	0.57	213	*e*Pg	Pg	10 08 33.3	0.0
UDBI				Sg	Sg	10 08 41.4	+0.7
KIJV	Kijevo	1.01	172	*e*Pg	Pg	10 08 41.4	-0.3
KIJV				Sg	Sg	10 08 55.5	+0.7
RABC	Rab	1.05	256	*e*Pg	Pg	10 08 41.7	-0.6
RABC				Sg	Sg	10 08 55.2	-0.6
MORI	Morici	1.20	198	*e*Pg	Pg	10 08 43.4	-1.8
MORI				Sg	Sg	10 09 00.7	0.0
DUGI	Dugi Otok	1.31	219	*e*Pn	Pg	10 08 47.0	-0.4
DUGI				Sn	Sn	10 09 05.6	+0.2
ZIRJ	Zirje	1.41	197	*e*Pn	Pn	10 08 48.7	-0.1
ZIRJ				Sn	Sb	10 09 08.1	+0.4
RICI	Ricice	1.65	156	*e*Pn	Pb	10 08 53.3	-0.1
RICI				Sn	Sg	10 09 16.4	+1.0

NOU 11 10:18:17.0, 42°.71S×175°.52E, h0^{km}, MLv3.8/8, Off E. Coast of S. Island, N.Z.

WEL 11 10:18:21.5±0.7, **43°S**±5°×**17°5E**±°, **h33**^{km}, **M2.6**/10, **ML3.0**/15, **MLv2.6**/10, **Error ellipse: s-maj=0.0km s-min=0.0km az=136.6, Off east coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSWZ	Moikau Station	1.16	357	P	Pn	10 18 41.8	+0.3
MSWZ				S	Sn	10 18 55.7	-0.4
TRWZ	Traveller	1.20	13	P	Pn	10 18 42.4	+0.3
KHZ	Kahutara	1.33	276	P	Pn	10 18 43.1	-0.7
KHZ				S	Sn	10 19 01.4	+1.1
KHZ	Kahutara	1.33	276	P	Pn	10 18 43.4	-0.4
SNZO	South Karori	1.34	340	P	Pn	10 18 44.8	+0.8
BSWZ	Blackbirch Sta	1.38	308	P	Pn	10 18 45.0	+0.5
BSWZ				S	Sn	10 19 02.3	+0.8
MTW	Mount Morrison	1.42	5	P	Pn	10 18 45.3	+0.2
CAW	Cannon Point	1.48	352	P	Pn	10 18 46.8	+0.9
TUWZ	Tuamarina	1.54	317	P	Pn	10 18 47.3	+0.6
TUWZ				S	Sn	10 19 06.2	+0.7
TCW	Tory Channel	1.57	330	P	Pn	10 18 48.2	+1.1
TCW				S	Sn	10 19 05.9	-0.4
HOWZ	Holdsworth Sta	1.68	5	P	Pn	10 18 48.8	+0.2
GVZ	Greta Valley S	1.73	256	P	Pn	10 18 49.2	-0.1
KIW	Kapiti Island	1.74	349	P	Pn	10 18 50.0	+0.6
CPWZ	Castlepoint	1.79	22	P	Pn	10 18 50.7	+0.6
MRZ	Mangatainoka R	1.92	6	P	Pn	10 18 52.2	+0.3
THZ	Tophouse	1.98	293	P	Pn	10 18 53.0	+0.3
THZ				S	Sn	10 19 18.2	+1.8
NNZ	Nelson	1.99	312	P	Pn	10 18 53.0	+0.2
NNZ				S	Sn	10 19 16.3	-0.3
BFZ	Birch Farm	2.01	20	P	Pn	10 18 51.9	-1.3
BFZ	Birch Farm	2.01	20	P	Pn	10 18 53.1	-0.1
OKCZ	Okains Bay	2.02	235	P	Pn	10 18 52.5	-0.8
AMCZ	Amberley	2.06	252	P	Pn	10 18 53.5	-0.2
AKCZ	Akaroa Harbour	2.19	233	P	Pn	10 18 55.5	-0.2
MQZ	McQueen's Vall	2.26	239	P	Pn	10 18 55.3	-1.2
MQZ				S	Sn	10 19 20.4	-2.9
LTZ	Lake Taylor	2.27	264	P	Pn	10 18 56.6	-0.1
OXZ	Oxford	2.53	252	P	Pn	10 18 59.5	-0.8
OXZ				S	Sn	10 19 27.3	-2.6
TSZ	Takapari Road	2.56	11	P	Pn	10 19 01.2	+0.5
TSZ				S	Sn	10 19 30.1	-0.6
RACZ	Rakaia	2.60	243	P	Pn	10 19 01.2	-0.1
WPHZ	Waipukurau	2.64	19	P	Pn	10 19 02.0	+0.1
PNHZ	Pukenui	2.74	14	P	Pn	10 19 02.8	-0.4
DSZ	Denniston Nort	2.75	286	P	Pn	10 19 04.2	+0.8
WAZ	Wanganui	2.83	355	P	Pn	10 19 07.5	+3.1
INZ	Inchbonnie	2.87	266	P	Pn	10 19 05.7	+0.8
MHCZ	Mount Hutt	2.92	250	P	Pn	10 19 05.8	+0.2
BHHZ	Black Hill Sta	3.13	10	P	Pn	10 19 09.7	+1.1
MOVZ	Moawhango	3.18	6	P	Pn	10 19 11.3	+2.0
WNVZ	Wahianoa	3.25	4	P	Pn	10 19 12.8	+2.5
KWHZ	Kaweka Forest	3.25	15	P	Pn	10 19 11.2	+0.9
PKVZ	Pokaka	3.28	0	P	Pn	10 19 13.7	+3.0
MCHZ	McNeill Hill	3.29	19	P	Pn	10 19 12.0	+1.3
WHVZ	Whangaehu Hut	3.29	4	P	Pn	10 19 13.2	+2.2
TUVZ	Tukino	3.31	4	P	Pn	10 19 13.6	+2.5
FWVZ	Far West T-bar	3.32	3	P	Pn	10 19 14.1	+2.7
ARCZ	Arundel	3.33	244	P	Pn	10 19 11.2	-0.1
RPZ	Rata Peaks	3.33	249	P	Pn	10 19 11.2	-0.1
RPZ	Rata Peaks	3.33	249	P	Pn	10 19 11.3	0.0
SNVZ	South Ngauruho	3.39	4	P	Pn	10 19 14.6	+2.3
NGZ	Ngauruhoe	3.40	4	P	Pn	10 19 14.8	+2.4
OTVZ	Oturere	3.42	4	P	Pn	10 19 14.6	+2.0
WVZ	Waitaha Valley	3.42	260	P	Pn	10 19 13.4	+1.0
KHEZ	Kahui Hut	3.42	343	P	Pn	10 19 16.4	+3.7
NEZ	North Egmont	3.43	344	P	Pn	10 19 16.2	+3.5
NNVZ	North Ngauruho	3.44	4	P	Pn	10 19 15.2	+2.2
ETVZ	East Tongariro	3.45	5	P	Pn	10 19 15.2	+2.2
WTVZ	West Tongariro	3.46	3	P	Pn	10 19 15.3	+2.2
TMVZ	Te Maari	3.47	5	P	Pn	10 19 15.2	+1.9
VRZ	Vera Road	3.47	353	P	Pn	10 19 16.4	+3.2
NTVZ	North Tongarir	3.48	4	P	Pn	10 19 15.6	+2.1
NBEZ	Newall Road No	3.48	341	P	Pn	10 19 16.8	+3.4
BKZ	Black Stump Fm	3.52	15	P	Pn	10 19 14.0	+0.1
BKZ	Black Stump Fm	3.52	15	P	Pn	10 19 14.0	+0.1
PKE	Pukeiti	3.53	343	P	Pn	10 19 17.4	+3.4
TMZ	Timaru	3.63	239	P	Pn	10 19 15.3	-0.1
GCSZ	Gaunt Creek Bo	3.75	257	P	Pn	10 19 18.1	+1.1
RAHZ	Arahi	3.89	21	P	Pn	10 19 19.1	+0.1
MTHZ	Maungataniwha	3.89	18	P	Pn	10 19 19.0	0.0
HIZ	Hauiti	4.07	355	P	Pn	10 19 24.2	+2.7
HIZ	Hauiti	4.07	355	P	Pn	10 19 23.4	+1.9
FOZ	Fox Glacier	4.15	255	P	Pn	10 19 23.7	+1.2
LBZ	Lake Benmore	4.16	242	P	Pn	10 19 23.2	+0.5
ODZ	Otahua Downs	4.20	232	P	Pn	10 19 23.1	-0.1
ODZ	Otahua Downs	4.20	232	P	Pn	10 19 22.9	-0.2
TARZ	Mount Tarawera	4.42	12	P	Pn	10 19 26.6	+0.2
URZ	Urewera	4.52	18	P	Pn	10 19 26.9	-0.7
URZ	Urewera	4.52	18	P	Pn	10 19 26.9	-0.7
MWZ	Matawai	4.55	22	P	Pn	10 19 26.9	-1.2
RUGZ	Raukumara Rang	4.94	22	P	Pn	10 19 32.9	-0.6
EAZ	Earnscleugh	5.10	237	P	Pn	10 19 35.6	0.0
AWAZ	Awhitu Peninsu	5.53	354	P	Pn	10 19 43.8	+2.3
KUZ	Kuaotunu	5.83	3	P	Pn	10 19 46.5	+0.9

IDC 11 10:23:20.9±1.2, 8°.42N×71°.41W, h0^{km}, mb3.5/2, mb1 3.8/4, mb1mx3.5/45, mbtmp3.7/4, ML3.5/2, Error ellipse: s-maj=37.4km s-min=11.3km az=154.0

FUNV 11 10:23:24.3, 8°.52N×71°.33W, h6^{km}, MW3.2

ISC 11 10:23:22.6±1.2, **8°.52N**±0°.03×**71°.37W**±0°.03, **h7**^{km}±9^{km}, **n41**, σ**1^{s}.61**/63, **3C, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	Socops	0.56	114	⇑*i*P	Pg	10 23 33.6	+0.2
SOCV				*e*S	Sb	10 23 42.0	-0.9
SOCV	Socops	0.56	114	⇑*e*P	Pg	10 23 33.5	+0.2
SOCV				*e*S	Sb	10 23 42.3	-0.7
SDV	Santo Domingo	0.82	63	Pg	Pg	10 23 38.7	+0.5
	18nm,0.3s,baz=281,slow=17,SNR=17						
SDV				Lg	Lg	10 23 50.0	
	54nm,0.3s,baz=311,slow=18,SNR=16						
SDV	Santo Domingo	0.82	63	*e*P	Pg	10 23 38.8	+0.5
SDV				*e*S	Sg	10 23 50.2	+1.3
PAMC	Pamplona, Colo	1.76	229	*e*P	Pg	10 23 55.8	-0.6
PAMC				*e*S	Sg	10 24 19.3	+0.1
MCQV	Machiques	1.91	323	*e*P	Pn	10 23 56.6	+1.0
MCQV				*e*S	Sn	10 24 21.7	+1.7
OCAC	Ocana	1.95	262	*e*P	Pn	10 23 57.0	+0.7
OCAC				*e*S	Sb	10 24 23.2	0.0
TAMC	Tame, Arauca	2.11	191	*e*P	Pb	10 24 01.4	+0.2
TAMC				*e*S	Sg	10 24 31.4	+1.1
DABV	Dabajuro	2.50	17	*e*P	Pn	10 24 04.5	+0.7
DABV				*e*S	Sn	10 24 34.7	+0.2
SIQV	Siquisique	2.62	36	*e*P	Pn	10 24 06.3	+0.9
SIQV				*e*S	Sn	10 24 37.0	-0.6
BARC	Barichara	2.62	223	*e*P	Pb	10 24 10.8	+0.7
BARC				*e*S	Sn	10 24 37.4	-0.5
SMLC	San Martn de	2.69	276	*e*P	Pn	10 24 06.3	0.0
SMLC				*e*S	Sn	10 24 39.2	+0.1
BRRC	Barranca, Sant	2.71	239	*e*S	Sg	10 24 47.9	-1.8
RUSC	La Rusia	3.11	213	*e*P	Pn	10 24 14.5	+2.0
RUSC				*e*S	Sn	10 24 51.2	+0.9
URIC	Uribia, Colomb	3.23	349	*e*S	Sn	10 24 50.6	-1.9
BAUV	El Baul	3.32	82	*e*P	Pn	10 24 15.8	+0.8
BAUV				*e*S	Sn	10 24 52.4	-2.4
ZARC	Zaragoza, Cauc	3.60	254	*e*P	Pn	10 24 19.7	+0.8
ZARC				*e*S	Sn	10 25 01.6	-0.2
MONV	Montecano	3.69	22	*e*P	Pn	10 24 20.8	+0.7
MONV				*e*S	Sn	10 25 02.2	-1.7
SMRC	Santa Marta, M	3.85	313	*e*P	Pn	10 24 22.1	-0.3
SMRC				*e*S	Sn	10 25 04.8	-3.1
SPBC	San Pablo de B	3.91	223	*e*P	Pn	10 24 24.9	+1.7
SPBC				*e*S	Sn	10 25 10.1	+0.6
BENV	Beln	3.99	69	*e*P	Pn	10 24 25.4	+1.0
SJCC	San Jacinto, C	4.00	290	*e*P	Pn	10 24 26.0	+1.5
SJCC				*e*S	Sn	10 25 14.0	+2.3
UREC	San Jos de Ur	4.19	260	*e*P	Pn	10 24 28.9	+1.9
MOTC	Monteria, Cord	4.25	274	*e*P	Pn	10 24 28.9	+1.0
MOTC				*e*S	Sn	10 25 20.4	+2.5
PTGC	Puerto Gaitan,	4.35	190	*e*S	Sg	10 25 36.8	-5.7
CHIC	Chingaza	4.52	211	⇑*e*P	Pn	10 24 33.7	+1.8
CHIC				*e*S	Sn	10 25 23.9	-1.0
NORC	Norcasia	4.54	230	*e*P	Pn	10 24 35.1	+3.1
TACV	Tcata	4.58	69	*e*P	Pn	10 24 32.7	+0.3
CACV	CAICARA DEL OR	4.88	101	*e*P	Pb	10 24 42.9	-5.4
VILC	Villavicencio,	4.95	208	*e*S	Sn	10 25 37.3	+2.2
MERV	Las Mercedes	5.07	81	*e*P	Pn	10 24 39.2	+0.1
GUY2C	Guyana, Caldas	5.14	231	*e*P	Pn	10 24 42.1	+1.6
GUY2C				*e*S	Sn	10 25 43.2	+2.8
ORTC	Ortega, Tolima	5.98	220	*e*P	Pn	10 24 53.8	+2.1
ORTC				*e*S	Sn	10 26 02.0	+1.4
PLMC	San Jos del P	6.05	234	*e*P	Pn	10 24 54.8	+2.0
PCRV	Puerto La Cruz	6.85	76	Pn	Pn	10 25 05.5	+1.9
	0.7nm,0.3s,baz=236,slow=10,SNR=2.0						
PCRV				Sn	Sn	10 26 24.9	+3.0
	1.3nm,0.3s,baz=97,slow=17,SNR=1.8						
PCRV	Puerto La Cruz	6.85	76	*e*P	Pn	10 25 03.7	+0.1
PTGA	Pitinga	14.61	128	Pn	Pn	10 26 49.4	-0.5
	0.3nm,0.3s,baz=308,slow=19,SNR=2.7						
PDAR	Pinedale Array	47.78	322	P	P	10 32 00.8	-0.1
	0.4nm,0.5s,baz=128,slow=12,SNR=5.3						
TORD	Torodi Ar. Bea	71.70	79	P	P	10 34 45.4	-0.6
	0.3nm,0.6s,baz=260,slow=7.2,SNR=1.7						
ASAR	Alice Springs	151.50	235	PKPbc	PKPbc	10 43 17.2	-1.3
	0.4nm,0.6s,baz=110,slow=3.1,SNR=6.2						
WRA	Warramunga Arr	152.66	243	PKPbc	PKPbc	10 43 20.1	-1.1
	0.5nm,0.6s,baz=110,slow=2.7,SNR=6.8						

IDC 11 10:27:29.8±1.2, 9°.12S×108°.85W, h0^{km}, mb4.1/9, mb1 4.4/9, mb1mx4.2/32, mbtmp4.1/9, MS4.2/18, Ms1 4.2/18, ms1mx4.1/24, Error ellipse: s-maj=39.6km s-min=18.8km az=51.0

NEIC 11 10:27:32.4±1.5, 9°.1S±0°.1×108°.7W±0°.1, h10^{km}±1^{km}, mb4.7/71, Error ellipse: s-maj=24.4km s-min=17.1km az=259.0

GCMT 11 10:27:34.4±0.3, 9°.13S±0°.02×108°.68W±0°.02, h16^{km}±1^{km}, MW5.0/102, Moment Tensor Solution. s20,c23; s102,c139; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.31±.13; $M_{\theta\theta}$1.51±.12; $M_{\phi\phi}$-1.20±.13; $M_{r\theta}$-0.15±.34; $M_{\theta\phi}$3.20±.12; $M_{\phi r}$-1.42±.45; Best double couple: $M_0$3.76400×10^{16} NP1:ϕ_s281.00000°, δ67.00000°, λ-4.00000°. NP2:ϕ_s12.00000°, δ86.00000°, λ-157.00000°. Principal axes: T 3.8370, Plg13.0000°, Azm144.0000°; N -0.1470, Plg67.0000°, Azm22.0000°; P -3.6920, Plg19.0000°, Azm239.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 11 10:27:32.3±0.6, **9°.04S**±0°.09×**108°.72W**±0°.10, **h15**^{km}, **n110**, σ**0^{s}.87**/88, **mb4.6**/42, **MS4.3**/21, **Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	Rapa Nui	18.00	182	LR	LR	10 36 33.9	
	comp=Z,909nm,18.3s,baz=4.0,slow=30						
CMIG	Matias Romero	29.35	28	LR	LR	10 42 43.3	
	comp=Z,485nm,21.2s,baz=210,slow=31						
CAO2	Cobano, Puntar	29.98	52	P	P	10 33 39.4	-1.2
ATAH	Atahualpa	30.08	89	LR	LR	10 42 49.3	
	comp=Z,320nm,19.6s,baz=263,slow=30						
ORTG	Ortega, Santa	30.13	51	P	P	10 33 42.0	+0.1
ORTG				IAmb	IAmb	10 33 42.7	
	comp=Z,32nm,1.6s						
MTO3	Montecristo	30.19	40	P	P	10 33 42.1	-0.5
MTO3				IAmb	IAmb	10 33 49.0	
	comp=Z,10nm,0.8s						
HZTE	Horizontes, Gu	30.25	50	P	P	10 33 43.6	+0.7
JTS	Las Juntas de	30.47	51	LR	LR	10 42 46.8	
	comp=Z,1µm,20.8s,baz=295,slow=30						
JTS	Las Juntas de	30.47	51	P	P	10 33 46.0	+1.1
JTS				IAmb	IAmb	10 34 05.2	
	comp=Z,11nm,1.1s						
TAOE	Nuku Hiva Isla	31.04	268	*e*LR	LR	10 41 45.3	
	comp=Z,504nm,25.9s						
ZAIG	Zacatecas	32.19	11	P	P	10 34 01.0	+0.8
BCIP	Isla Barro Col	33.98	59	P	P	10 34 16.0	+0.3
H03N2	Juan Fernandez	36.64	136	T	T	11 13 18.0	
	baz=308,slow=77,SNR=100						
H03N1	Juan Fernandez	36.65	136	T	T	11 13 18.6	
	baz=308,slow=77,SNR=136						
H03N3	Juan Fernandez	36.65	136	T	T	11 13 19.0	
	baz=308,slow=77,SNR=119						
VA04	Juan Fernndez	36.83	136	P	P	10 34 41.4	+1.4
ROSC	El Rosal	36.96	69	LR	LR	10 46 46.1	
	comp=Z,350nm,20.9s,baz=252,slow=31						
MOTC	Monteria, Cord	37.38	63	P	P	10 34 42.7	-2.2
MOTC				IAmb	IAmb	10 34 49.1	
	comp=Z,24nm,1.1s						
ZARC	Zaragoza, Cauc	37.53	65	P	P	10 34 45.6	-0.6
SJCC	San Jacinto, C	38.33	61	P	P	10 34 52.1	-0.9
SJCC				IAmb	IAmb	10 34 56.7	
	comp=Z,9.6nm,0.8s						
TX31	Lajitas Ar. Si	38.46	7	P	P	10 34 54.2	+0.3
TX32	Lajitas Array	38.46	7	P	P	10 34 54.4	+0.4
TXAR	Lajitas Array	38.46	7	P	P	10 34 54.4	+0.4
	comp=Z,1.8nm,1.1s,baz=184,slow=8.8,SNR=7.3						
TXAR				LR	LR	10 48 03.4	
	comp=Z,135nm,18.4s,baz=0.0,slow=32						
TXAR	Lajitas Array	38.46	7	P	P	10 34 54.2	+0.3
PB16	IPOC Station P	39.13	108	P	P	10 34 59.1	-1.2
PB11	IPOC Station P	39.22	110	P	P	10 35 00.3	-0.3
PB11				IAmb	IAmb	10 35 21.5	
	comp=Z,18nm,1.3s						
PB01	IPOC Station P	39.61	112	P	P	10 35 03.9	+0.1
PB01				IAmb	IAmb	10 35 06.2	
	comp=Z,20nm,1.3s						
PB08	IPOC Station P	39.75	111	P	P	10 35 05.6	+0.3
PB08				IAmb	IAmb	10 35 30.7	
	comp=Z,20nm,1.5s						
LPAZ	La Paz	40.20	104	P	P	10 35 09.7	+0.4
	comp=Z,3.3nm,0.7s,baz=269,slow=6.8,SNR=11						
LPAZ				LR	LR	10 48 00.5	
	comp=Z,178nm,20.2s,baz=221,slow=30						
LPAZ	La Paz	40.20	104	P	P	10 35 09.1	-0.2
LPAZ	La Paz	40.20	104		P	10 35 09.4	+0.1
JCT	Junction City	40.22	12	P	P	10 35 08.5	0.0
LVC	Limon Verde	40.47	114	P	P	10 35 11.4	+0.2
PPT	Papeete	40.58	254	LR	LR	10 47 21.9	
	comp=Z,397nm,18.3s,baz=80,slow=30						
PPT2	Papeete2	40.58	254	*e*S	S	10 41 19.3	-1.8
	comp=Z,74nm,27.0s						
PPT2				*e*LQ	LQ	10 44 32.8	
	comp=Z,847nm,28.0s						
PPT2				*e*LR	LR	10 46 15.1	
	comp=Z,1µm,26.0s						
MNTX	Cornudas Mount	40.64	4	P	P	10 35 12.6	+0.6
GO04	Tololo Observa	41.16	126	P	P	10 35 17.3	+0.6
TUC	Tucson	41.17	357	P	P	10 35 17.3	+0.9
121A	Cookes Peak, D	41.35	1	P	P	10 35 18.3	+0.3
TBI	Tubuai	41.46	245	*e*S	S	10 41 34.8	+0.8
	comp=Z,101nm,24.7s						
TBI				*e*LQ	LQ	10 44 59.0	
	comp=Z,221nm,27.8s						
TBI				*e*LR	LR	10 46 44.5	
	comp=Z,960nm,27.5s						
SDV	Santo Domingo	41.91	66	P	P	10 35 23.9	+1.0
	comp=Z,3.6nm,0.3s,baz=286,slow=7.9,SNR=6.1						
SDV	Santo Domingo	41.91	66	P	P	10 35 23.1	+0.2
SDV				IAmb	IAmb	10 35 25.5	
	comp=Z,12nm,0.9s						
SAML	Samuel	44.96	94	P	P	10 35 47.2	-0.2
GWY	Greenwater Val	45.60	351	P	P	10 35 53.7	+1.4
MIAR	Mount Ida	45.66	18	P	P	10 35 52.9	+0.3
MIAR				IAmb	IAmb	10 36 04.2	
	comp=Z,8.9nm,1.0s						
OK029	Liberty Lake	45.85	13	P	P	10 35 54.5	+0.5
PLCA	Paso Flores	46.24	139	P	P	10 35 57.6	+0.4
	comp=Z,5.0nm,1.0s,baz=291,slow=8.1,SNR=5.5						
PLCA				LR	LR	10 50 41.9	
	comp=Z,429nm,18.4s,baz=308,slow=30						
PLCA	Paso Flores	46.24	139	P	P	10 35 57.6	+0.4
PLCA				IAmb	IAmb	10 35 59.5	
	comp=Z,7.4nm,1.1s						
PKCU	Pink Cliffs	46.36	356	P	P	10 35 54.0	-4.5
PRN	Pahroc Range	46.58	353	P	P	10 36 01.2	+1.3
PRN				IAmb	IAmb	10 36 18.1	
	comp=Z,12nm,1.4s						
WHAR	Wooly Hollow	46.75	19	P	P	10 36 01.1	+0.1
WHAR				IAmb	IAmb	10 36 12.9	
	comp=Z,11nm,1.0s						
T35A	Sooner Cattle	47.13	13	P	P	10 36 04.2	+0.1
T35A				IAmb	IAmb	10 36 04.8	
	comp=Z,6.3nm,0.8s						
FCAR	Ozark Folk Cen	47.35	18	P	P	10 36 06.1	+0.4
FCAR				IAmb	IAmb	10 36 24.8	
	comp=Z,9.5nm,1.4s						
TPH	Tonopah	47.54	351	P	P	10 36 08.5	+1.0
U40A	Yellville	47.56	17	P	P	10 36 07.4	-0.1
U40A				IAmb	IAmb	10 36 08.4	
	comp=Z,7.5nm,0.9s						
VILB	Vilhena	47.74	99	P	P	10 36 08.2	-1.0
LCAR	Lake Charles	47.83	19	P	P	10 36 09.6	+0.1
LCAR				IAmb	IAmb	10 36 20.8	
	comp=Z,9.7nm,1.0s						
PLAL	Pickwick Lake	47.95	23	P	P	10 36 10.2	-0.2
PLAL				IAmb	IAmb	10 36 11.1	
	comp=Z,7.3nm,0.8s						
NVAR	Mina Array Bea	48.06	350	P	P	10 36 12.3	+0.8
	comp=Z,2.1nm,0.8s,baz=180,slow=11,SNR=14						
NVAR				LR	LR	10 52 08.6	
	comp=Z,392nm,19.3s,baz=169,slow=31						
NVAR	Mina Array Bea	48.06	350	P	P	10 36 12.9	+1.3
CMB	Columbia Colle	48.08	348	P	P	10 36 12.3	+0.8
154A	Montrose	48.09	29	P	P	10 36 11.3	-0.3
GOGA	Godfrey	48.58	28	P	P	10 36 15.4	+0.1
GOGA				IAmb	IAmb	10 36 16.1	
	comp=Z,6.4nm,0.7s						
KVN	Kaiserville	48.64	350	P	P	10 36 16.9	+1.0
KVN				IAmb	IAmb	10 36 35.5	
	comp=Z,8.6nm,1.6s						
ISCO	Idaho Springs	48.68	3	P	P	10 36 17.2	+0.8
ISCO				IAmb	IAmb	10 36 25.3	
	comp=Z,6.2nm,1.2s						
PBMO	Poplar Bluff	48.71	20	P	P	10 36 16.5	+0.2
PBMO				IAmb	IAmb	10 36 16.9	
	comp=Z,5.3nm,0.9s						
PTLB	Pontes e Lacer	48.79	103	P	P	10 36 16.2	-1.0
PTLB				IAmb	IAmb	10 36 29.5	
	comp=Z,8.7nm,1.3s						
WVT	Waverly	49.05	22	P	P	10 36 18.6	-0.3
WVT				IAmb	IAmb	10 36 19.7	
	comp=Z,5.0nm,0.8s						
V48A	Smith Brothers	49.10	24	P	P	10 36 18.6	-0.7
V48A				IAmb	IAmb	10 36 19.8	
	comp=Z,5.3nm,0.8s						
PTGA	Pitinga	49.22	83	P	P	10 36 21.1	+0.4
	comp=Z,2.1nm,0.8s,baz=280,slow=12,SNR=4.2						
PTGA	Pitinga	49.22	83	P	P	10 36 19.6	-1.1
CCM	Cathedral Cave	49.62	18	P	P	10 36 23.5	+0.3
CCM				IAmb	IAmb	10 36 34.0	
	comp=Z,8.5nm,0.9s						
W52A	Murphy	49.77	27	P	P	10 36 25.0	+0.6
T47A	Sharon Grove	50.08	23	P	P	10 36 26.4	-0.4
T47A				IAmb	IAmb	10 36 27.2	
	comp=Z,7.9nm,0.8s						
BG3	Lake Jocassee	50.13	28	P	P	10 36 27.2	0.0
BG3				IAmb	IAmb	10 36 28.8	
	comp=Z,5.9nm,0.7s						
T50A	Nancy	51.01	25	P	P	10 36 33.0	-0.8
OLIL	Olney	51.27	21	P	P	10 36 35.5	-0.1
CPUP	Villa Florida	51.54	116	P	P	10 36 38.3	+0.2
	comp=Z,5.2nm,0.9s,baz=265,slow=10,SNR=7.6						
CPUP				LR	LR	10 54 43.4	
	comp=Z,282nm,20.2s,baz=280,slow=32						
CPUP	Villa Florida	51.54	116	P	P	10 36 37.6	-0.4
CPUP				IAmb	IAmb	10 36 38.7	
	comp=Z,6.3nm,0.9s						
PDAR	Pinedale Array	51.56	359	P	P	10 36 38.3	+0.2
	comp=Z,0.6nm,0.6s,baz=181,slow=7.1,SNR=6.8						
PDAR				LR	LR	10 56 01.3	
	comp=Z,248nm,18.0s,baz=186,slow=33						
PDAR	Pinedale Array	51.56	359	P	P	10 36 38.6	+0.4
YBH	Yreka Blue Hor	52.13	347	LR	LR	10 53 51.7	
	comp=Z,367nm,20.4s,baz=171,slow=30						
AQDB	Aquidauana	52.31	109	P	P	10 36 44.0	+0.1
AQDB				IAmb	IAmb	10 36 45.8	
	comp=Z,22nm,1.6s						
P46A	Rosedale	52.37	21	P	P	10 36 43.3	-0.6
P46A				IAmb	IAmb	10 36 44.5	
	comp=Z,12nm,0.8s						
MFID	Camas Ranch	52.61	353	P	P	10 36 46.4	+0.6
MFID				IAmb	IAmb	10 36 47.5	
	comp=Z,7.7nm,0.9s						
HLID	Hailey	52.61	355	P	P	10 36 47.1	+1.3
FLWY	Flagg Ranch	52.91	358	P	P	10 36 48.1	+0.1
FLWY				IAmb	IAmb	10 36 49.8	
	comp=Z,11nm,1.4s						
MCMT	McKenzie Canyo	53.75	356	P	P	10 36 55.0	+0.7
P53A	Whipple	54.54	26	P	P	10 36 58.8	-1.0
PLTB	Pedras Altas	55.74	122	P	P	10 37 08.1	-0.7
ULM	Lac du Bonnet	60.10	9	LR	LR	11 00 56.0	
	comp=Z,71nm,20.2s,baz=346,slow=33						
YKA	Yellowknife Ar	71.47	357	LR	LR	11 07 07.0	
	comp=Z,73nm,19.2s,baz=0.0,slow=33						
SCHQ	Schefferville	72.66	24	LR	LR	11 09 17.3	
	comp=Z,138nm,21.2s,baz=236,slow=34						
ILAR	Eielson Array	78.94	344	P	P	10 39 34.7	-0.3
	comp=Z,0.9nm,1.0s,baz=162,slow=6.2,SNR=4.7						
ILAR				LR	LR	11 07 25.1	
	comp=Z,119nm,19.6s,baz=150,slow=30						
INK	Inuvik	79.14	351	P	P	10 39 36.1	+0.2
INK				IAmb	IAmb	10 39 38.1	
	comp=Z,5.6nm,1.0s						
BWN	Browne	79.20	343	P	P	10 39 36.1	-0.3
I23K	Minto, Yukon-K	79.91	344	P	P	10 39 40.9	+0.7
QSPA	South Pole Qui	81.04	180	P	P	10 39 47.0	+0.4
QSPA				IAmb	IAmb	10 39 49.3	
	comp=Z,8.9nm,1.1s						
VNDA	Vanda	81.11	193	P	P	10 39 46.2	-0.4
DZM	Mont Dzumac	81.90	249	*e*LR	LR	11 05 25.0	
	comp=Z,173nm,25.9s						
SNAA	Sanae	86.41	162	P	P	10 40 13.8	-0.1
SNAA				IAmb	IAmb	10 40 15.2	
	comp=Z,6.4nm,1.3s						
H11S2	WAKE ISLAND Hy	87.74	289	T	T	12 17 29.9	
	baz=101,slow=74,SNR=367						
H11S1	WAKE ISLAND Hy	87.75	289	T	T	12 17 25.5	
	baz=101,slow=74,SNR=232						
H11S3	WAKE ISLAND Hy	87.76	289	T	T	12 17 31.3	
	baz=101,slow=74,SNR=266						
H11N3	WAKE ISLAND Hy	87.77	290	T	T	12 17 23.5	
	baz=101,slow=75,SNR=72						
H11N2	WAKE ISLAND Hy	87.78	290	T	T	12 17 24.1	
	baz=101,slow=75,SNR=62						
H11N1	WAKE ISLAND Hy	87.78	290	T	T	12 17 28.8	
	baz=101,slow=75,SNR=34						
PETK	Petropavlovsk-	99.31	322	LR	LR	11 16 47.6	
	comp=Z,152nm,21.5s,baz=121,slow=30						
CMAR	Chiang Mai Arr	151.58	292	PKPbc	PKiKP	10 47 26.5	-1.0
	comp=Z,1.8nm,0.7s,baz=33,slow=0.6,SNR=9.8						
CMAR	Chiang Mai Arr	151.58	292		PKiKP	10 47 27.1	-0.3

IDC 11 10:29:37.0±1.4, 26°.89N×52°.72E, h0^{km}, mb4.0/7, mb1 4.0/8, mb1mx3.6/53, mbtmp4.0/8, ML3.3/1, Error ellipse: s-maj=30.3km s-min=24.3km az=18.0

NEIC 11 10:29:38.8±1.2, 26°.97N±0°.09×52°.70E±0°.07, h10^{km}±1^{km}, *mb4.4/18, Error ellipse: s-maj=15.3km s-min=10.0km az=13.0*

*TEH **11** 10:29:40.8, 27°.07N×52°.89E, h19^{km}, ML3.6*

ISC 11 10:29:38.0±0.5, **26°.93N**±0°.05×**52°.73E**±0°.05, **h10**^{km}, **n40**, σ**1^s.00**/43, **mb4.3**/15, **Persian Gulf**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMD1	Lamerd	0.56	44	*e*Pg	Pg	10 29 48.0	-1.0
LMD1				*e*Sg	Sg	10 29 54.6	-1.8
LMD1				*e*		10 30 04.5	
	comp=Z,81µm,0.8s						
QIR1	Qir	1.56	10	*e*		10 30 45.5	
	comp=Z,16µm,0.5s						
QIR1				*e*Pg	Pb	10 30 06.8	-0.3
LAR1	LAR	1.64	63	*e*Sg	Sn	10 30 28.5	+0.3
LAR1				*e*Pg	Pb	10 30 08.6	+0.2
LAR1				*e*		10 30 40.1	
	comp=Z,19µm,0.5s						
JHRM	Jahrom	1.74	26	*e*Pg	Pb	10 30 10.7	+0.6
JHRM				*e*		10 30 43.7	
	comp=Z,19µm,0.4s						
UOSS	Minazif	3.71	122	Pn	Pn	10 30 36.7	+1.4
TVBK	TV Kerman	4.68	48	*e*Pn	Pn	10 30 50.9	+1.9
TVBK				*e*		10 30 54.0	
	comp=Z,567nm,0.4s						
KHGB	Koh Gabri	4.76	43	*e*Pn	Pn	10 30 51.3	+1.3
KHGB				*e*		10 32 09.6	
	comp=Z,237nm,0.8s						
CHMN	Cheshme madani	5.15	54	*e*Pn	Pn	10 30 58.0	+2.5
CHMN				*e*		10 31 01.0	
	comp=Z,840nm,0.7s						
KBAM	BAM	5.52	65	*e*		10 31 04.6	
	comp=Z,472nm,0.6s						
KBAM				*e*Pn	Pn	10 31 01.1	+0.8
WSAR	Wadi Sarin	6.50	123	Pn	Pn	10 31 15.0	+1.3
	comp=Z,0.7nm,0.3s,baz=352,slow=7.1,SNR=2.2						
WSAR				Sn	Sn	10 32 27.2	-0.7
	comp=Z,1.0nm,0.3s,baz=273,slow=9.6,SNR=3.5						
KRSH	Karshahi	7.03	356	*e*Pn	Pn	10 31 23.3	+2.1
RAYN	Ar Rayn	7.37	244		Pn	10 31 25.0	-0.7
RAYN				Sn	Sn	10 32 49.5	0.0
KBL	Kabul	15.94	58	Pn	Pn	10 33 22.2	-0.4
CHGR	Chuyangaron	18.07	46	P	Pn	10 33 48.3	-0.9
KIV	Kislovodsk	18.83	337	P	P	10 33 57.2	-0.7
KIV				IAmb	IAmb	10 34 14.5	
	comp=Z,24nm,1.3s						
KK31	Karatay Array	21.66	37	P	P	10 34 28.5	-0.3
KKAR	Karatay Array	21.66	37	P	P	10 34 28.2	-0.5
ABKAR	Akbulak array	22.98	12	P	P	10 34 43.1	+0.4
BELG	Belogornoye	25.72	353	P	P	10 35 10.0	+1.7
	comp=Z,5.4nm,0.7s,baz=72,slow=3.2,SNR=4.2						
AKBB	Malin Array Si	29.73	329	P	P	10 35 44.3	0.0
AKBB				IAmb	IAmb	10 36 04.3	
	comp=Z,6.8nm,1.2s						
ARU	Arti	29.77	7	P	P	10 35 44.6	0.0
ARU				IAmb	IAmb	10 35 55.5	
	comp=Z,11nm,1.4s						
BUR08	Bucovina Ar. S	29.86	321	P	P	10 35 45.4	-0.2
BUR08				IAmb	IAmb	10 36 10.2	
	comp=Z,6.8nm,1.3s						
MAKZ	Makanchi	30.41	42	P	P	10 35 50.2	-0.1
MAKZ				IAmb	IAmb	10 36 08.5	
	comp=Z,3.2nm,1.0s						
KURBB	Kurchatov Arra	30.77	33	P	P	10 35 54.4	+0.9
	comp=Z,0.4nm,0.5s,baz=230,slow=8.7,SNR=5.0						
KURK	Kurchatov	30.87	33	P	P	10 35 54.4	0.0
KURK	Kurchatov	30.87	33	IAmb	IAmb	10 35 57.2	
	comp=Z,0.9nm,0.7s						
PALK	Pallekele	32.98	121	P	P	10 36 13.0	-0.3
RAFF	Raffo Rosso	33.89	297	P	P	10 36 19.4	-1.6
OJC	Ojcow	34.24	322	P	P	10 36 22.5	-1.4
OJC				IAmb	IAmb	10 36 26.5	
	comp=Z,8.6nm,1.4s						
CORL	Corleone	34.80	298	P	P	10 36 29.5	+0.5
CORL				IAmb	IAmb	10 36 57.0	
	comp=Z,8.0nm,0.7s						
ZALV	Zalesovo Beam	35.86	32	P	P	10 36 38.2	+0.4
	comp=Z,2.4nm,0.6s,baz=245,slow=9.1,SNR=6.9						
FIA1	FINESS Array S	38.88	340	P	P	10 37 03.3	0.0
FINES	FINESS Array B	38.88	340	P	P	10 37 03.7	+0.4
	comp=Z,1.4nm,0.5s,baz=151,slow=8.3,SNR=10						
FINES	FINESS Array B	38.88	340	P	P	10 37 03.4	+0.2
DGAR	Diego Garcia	39.13	148	P	P	10 37 06.4	+0.5
ECH	Echery	41.15	313	P	P	10 37 22.4	-0.1
ECH				IAmb	IAmb	10 37 46.8	
	comp=Z,13nm,1.5s						
HFS	Hagfors	42.51	332	P	P	10 37 33.8	+0.5
	comp=Z,1.6nm,0.4s,baz=107,slow=9.8,SNR=5.8						
NOA	NORSAR Array B	44.03	332	P	P	10 37 46.8	+1.2
	comp=Z,0.7nm,0.7s,baz=122,slow=8.4,SNR=2.2						
VOI	Vohitsoka	48.89	187	P	P	10 38 24.4	+0.1
VOI				IAmb	IAmb	10 38 28.1	
	comp=Z,14nm,1.5s						
TORD	Torodi Ar. Bea	49.55	264	P	P	10 38 29.8	+0.4
	comp=Z,1.4nm,0.7s,baz=58,slow=7.5,SNR=8.4						

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*ANF **11** 10:38:16.6±0.3, 36°.74N×98°.33W, h0^{km}, ML3.9/10, Error ellipse: s-maj=3.2km s-min=2.6km az=75.0*

*TUL **11** 10:38:16.9±1.3, 36°.70N±0°.02×98°.26W±0°.03, h6^{km}±7^{km}, ML3.4, mb_Lg3.1/72(NEIC), Error ellipse: s-maj=3.9km s-min=2.3km az=88.0*

*NEIC **11** 10:38:18.1±1.4, 36°.69N±0°.03×98°.20W±0°.05, h12^{km}±5^{km}, Error ellipse: s-maj=5.8km s-min=3.7km az=86.0*

ISC 11 10:38:17.4±1.1, **36°.67N**±0°.02×**98°.22W**±0°.02, **h3**^{km}±10^{km}, **n97**, σ**0^s.92**/97, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK032	Salt Plains WL	0.14	3	Pg	Pg	10 38 19.9	-0.2
OK032				Sg	Sg	10 38 22.0	+0.1
CROK	Carrier	0.25	131	Pg	Pg	10 38 23.0	+0.7
CROK				Sg	Sg	10 38 27.3	+1.8
GC02	Grant County #	0.34	58		Pg	10 38 24.3	+0.3
GC02				Sg	Sg	10 38 29.5	+1.1
KAN14	Manchester OK	0.35	35		Pg	10 38 24.3	0.0
KAN14				Sg	Sg	10 38 29.4	+0.6
KAN10	Anthony SW Sta	0.46	12	Pg	Pg	10 38 26.0	-0.3
KAN10				Sg	Sg	10 38 32.5	+0.1
KAN05	Bluff City Nor	0.52	32		Pg	10 38 27.2	-0.1
KAN05				Sg	Sg	10 38 34.4	+0.2
KAN17	Caldwell West	0.52	44	Pg	Pg	10 38 27.4	0.0
KAN17				Sg	Sg	10 38 34.8	+0.6
KAN16	Harper SW Stat	0.57	12	Pg	Pg	10 38 27.9	-0.5
KAN16				Sg	Sg	10 38 35.9	+0.1
KAN08	Anthony NE Sta	0.59	20		Pg	10 38 28.4	-0.3
KAN08				Sg	Sg	10 38 36.6	+0.2
KAN01	Argonia South	0.61	37	Pg	Pg	10 38 28.9	-0.2
KAN01				Sg	Sg	10 38 37.2	+0.2
KAN06	Argonia West S	0.65	26		Pg	10 38 29.5	-0.3
KAN06				Sg	Sg	10 38 38.3	+0.1
KAN12	Harper NE Stat	0.65	16		Pg	10 38 29.4	-0.5
KAN12				Sg	Sg	10 38 38.5	+0.1
KAN09	Caldwell North	0.67	46	Pg	Pg	10 38 30.1	-0.1
KAN09				Sg	Sg	10 38 39.4	+0.4
KAN13	South Haven SW	0.69	60	Pg	Pg	10 38 30.5	-0.1
U32A	Winter Ranch,	0.69	246	Pg	Pg	10 38 29.9	-0.8
U32A	Winter Ranch,	0.69	246	P	Pg	10 38 29.9	-0.8
	baz=63,SNR=31						
U32A				S	Sg	10 38 39.4	-0.3
	baz=63						
KS20	Mayfield South	0.77	43	Pg	Pg	10 38 32.0	-0.3
BLOK	Blackwell	0.81	83	Pg	Pg	10 38 33.0	0.0
OK029	Liberty Lake	1.07	144	Pg	Pb	10 38 37.8	-0.7
BCOK	Bluff Creek, N	1.12	154	Pg	Pb	10 38 38.5	-1.0
QUOK	Quay	1.32	112		Pn	10 38 42.2	-0.5
OK031	S. Brethren Rd	1.32	122		Pn	10 38 42.3	-0.4
OK030	Cody Creek RV	1.38	122		Pb	10 38 43.4	-0.4
T35A	Sooner Cattle	1.39	79		Pb	10 38 43.4	-0.6
T35B	Sooner Cattle	1.39	79	P	Pn	10 38 43.2	-0.5
	baz=261						
T35B				S	Sg	10 39 02.2	0.0
	baz=261						
OKCFA	Oklahoma City	1.40	153		Pn	10 38 43.2	-0.6
OKCFA	Oklahoma City	1.40	153	P	Pn	10 38 43.0	-0.7
	baz=334,SNR=5.2						
OKCFA				S	Sg	10 39 02.7	+0.4
	baz=334						
OKCSW	OKLAHOMA CITY	1.41	153		Pn	10 38 43.4	-0.5
FNO	Franklin	1.56	155	Pn	Pn	10 38 45.9	-0.1
R32A	Long Quarter,	1.79	348	P	Pn	10 38 49.2	-0.1
	baz=168,SNR=39						
R32A				S	Sb	10 39 12.7	-1.0
	baz=168						
WMOK	Wichita Mounta	1.98	194	P	Pn	10 38 51.6	-0.2
	baz=12						
WMOK				S	Sb	10 39 19.4	+0.2
	baz=12						
WMOK	Wichita Mounta	1.98	194		Pn	10 38 51.8	0.0
WMOK	Wichita Mounta	1.98	194	P	Pn	10 38 51.6	-0.2
	baz=12						
WMOK				S	Sb	10 39 19.4	+0.2
	baz=12						
TUL1	Leonard	2.10	110	P	Pb	10 38 54.6	-1.6
	baz=292						
TUL1				S	Sb	10 39 23.0	+0.4
	baz=292						
TUL1	Leonard	2.10	110	Pn	Pb	10 38 54.5	-1.6
TUL1				IAmb_Lg		10 39 25.8	
	comp=Z,91nm,1.0s						
TUL1	Leonard	2.10	110	P	Pb	10 38 54.6	-1.6
	baz=292,SNR=15						
TUL1				S	Sg	10 39 23.7	-1.2
	baz=292						
CBKS	Cedar Bluff	2.46	331	Sb	Sb	10 39 31.8	-1.0
	baz=150						
CBKS	Cedar Bluff	2.46	331		Pn	10 38 59.3	+0.9
CBKS	Cedar Bluff	2.46	331	S	Sn	10 39 28.9	0.0
	baz=150						
KSU1	Kansas State U	2.74	27	Sb	Sb	10 39 42.0	+0.9
	baz=209						
KSU1	Kansas State U	2.74	27	IAmb_Lg		10 39 45.4	
	comp=Z,59nm,0.8s						
LOOK	Love County	2.80	162		Pn	10 39 02.4	-0.7
U38A	Gravette	3.10	93	IAmb_Lg		10 40 01.1	
	comp=Z,49nm,0.8s						
X37A	Clayton	3.11	131	Pn	Pn	10 39 08.0	+0.7
X37A	Clayton	3.11	131	P	Pn	10 39 07.6	+0.3
	baz=313,SNR=25						
X37A				S	Sn	10 39 46.1	+1.1
	baz=313						
AMTX	Amarillo	3.33	239	IAmb_Lg		10 40 02.0	
	comp=Z,59nm,0.9s						
W39A	Magazine	3.89	111	Pb	Pb	10 39 27.7	+1.1
	baz=294						
W39A				Sb	Sg	10 40 20.7	-1.6
	baz=294						
W39A	Magazine	3.89	111	P	Pn	10 39 18.5	+0.5
	baz=294,SNR=9.9						
S39A	Bolivar	4.04	74		Pn	10 39 20.0	-0.2
S39A				IAmb_Lg		10 40 31.4	
	comp=Z,41nm,0.7s						
S39A	Bolivar	4.04	74	P	Pn	10 39 19.9	-0.2
	baz=257,SNR=9.4						
N33A	J Bar K, Exete	4.11	8	Pn	Pn	10 39 20.9	-0.2
N33A				IAmb_Lg		10 40 27.6	
	comp=Z,28nm,0.8s						
KSCO	Kaye Shedlock'	4.20	305	IAmb_Lg		10 40 38.0	
	comp=Z,46nm,0.9s						
ABTX	Abilene, Hawle	4.20	197	Pn	Pn	10 39 23.6	+1.2
Z38A	Mt. Pleasant	4.32	141	IAmb_Lg		10 40 46.4	
	comp=Z,37nm,0.8s						
U40A	Yellville	4.33	93	P	Pn	10 39 24.5	+0.4
	baz=276						
U40A	Yellville	4.33	93		Pn	10 39 24.1	0.0
U40A				IAmb_Lg		10 40 42.6	
	comp=Z,33nm,0.8s						
U40A	Yellville	4.33	93	P	Pn	10 39 24.4	+0.2
	baz=276,SNR=12						
U40A				P	Pn	10 39 24.4	+0.2
	baz=276,SNR=12						
MIAR	Mount Ida	4.33	118	Sb	Sg	10 40 33.7	-3.0
	baz=301						
MIAR	Mount Ida	4.33	118	Pn	Pn	10 39 25.0	+0.8
MSTX	Muleshoe	4.59	235	Sb	Sb	10 40 38.6	+4.2
	baz=52						
MSTX	Muleshoe	4.59	235	Pn	Pn	10 39 28.4	+0.6
N35A	Tabor	4.64	25	Pn	Pn	10 39 29.4	+1.0
WHTX	Lake Whitney,	4.71	172	P	Pn	10 39 29.0	-0.2
	baz=352						
WHTX	Lake Whitney,	4.71	172	Pn	Pn	10 39 29.1	-0.2
P38A	Dawn	4.73	50	Pn	Pn	10 39 31.0	+1.5
P38A				IAmb_Lg		10 40 60.0	
	comp=Z,36nm,0.7s						
BGNE	Belgrade	4.73	1	P	Pn	10 39 28.9	-0.7
	baz=181						
BGNE	Belgrade	4.73	1		Pn	10 39 29.3	-0.3
BGNE				IAmb_Lg		10 40 50.3	
	comp=Z,48nm,0.8s						
BGNE	Belgrade	4.73	1	P	Pn	10 39 29.1	-0.5
	baz=181,SNR=5.7						
MGMO	Mountain Grove	4.79	82		Pn	10 39 30.9	+0.5
MGMO				IAmb_Lg		10 40 49.0	
	comp=Z,29nm,0.8s						
X40A	Basin Creek Fa	4.90	115	Pn	Pn	10 39 29.3	-2.6
FCAR	Ozark Folk Cen	4.99	97	Pn	Pn	10 39 34.1	+1.0
T25A	Trinidad	4.99	277	Pn	Pn	10 39 33.6	+0.3
T25A				IAmb_Lg		10 41 05.0	
	comp=Z,27nm,0.7s						
R40A	Maddies Statio	5.00	69	Pn	Pn	10 39 33.0	-0.3
R40A				IAmb_Lg		10 41 02.4	
	comp=Z,36nm,0.7s						
R40A	Maddies Statio	5.00	69	P	Pn	10 39 33.1	-0.2
	baz=253,SNR=6.6						
WHAR	Wooly Hollow	5.00	104	Pn	Pn	10 39 32.9	-0.4
237A	Washetta, Mont	5.07	156	Pn	Pn	10 39 33.7	-0.5
237A				IAmb_Lg		10 41 07.5	
	comp=Z,28nm,0.9s						
WLAR	White Oak Lake	5.13	124	IAmb_Lg		10 41 10.6	
	comp=Z,36nm,0.9s						
OGNE	Ogallala	5.21	326	Pn	Pn	10 39 38.3	+2.1
L34A	Svendsen Farm,	5.48	15	Pn	Pn	10 39 38.8	-1.0
L34A				IAmb_Lg		10 41 14.4	
	comp=Z,37nm,0.7s						
CCM	Cathedral Cave	5.72	74	IAmb_Lg		10 41 27.5	
	comp=Z,33nm,0.8s						
LCAR	Lake Charles	5.73	94	IAmb_Lg		10 41 20.3	
	comp=Z,28nm,1.2s						
435B	Jarrell	5.89	175	IAmb_Lg		10 41 35.7	
	comp=Z,19nm,0.8s						
K31A	O'Neill	5.96	356	IAmb_Lg		10 41 36.0	
	comp=Z,30nm,0.8s						
HBAR	Harrisburg	6.22	98	IAmb_Lg		10 41 48.5	
	comp=Z,39nm,0.8s						
PBMO	Poplar Bluff	6.26	87	IAmb_Lg		10 41 43.3	
	comp=Z,22nm,0.7s						
JCT	Junction City	6.31	193	IAmb_Lg		10 41 48.4	
	comp=Z,20nm,0.8s						
SCIA	State Center	6.51	35	IAmb_Lg		10 41 53.5	
	comp=Z,40nm,0.7s						
SLM	Saint Louis	6.63	70	IAmb_Lg		10 41 49.7	
	comp=Z,37nm,0.8s						
342A	Flagon Creek P	7.20	135	IAmb_Lg		10 42 26.1	
	comp=Z,14nm,1.1s						
S44A	Carbondale	7.23	79	IAmb_Lg		10 42 12.0	
	comp=Z,29nm,0.7s						
SIUC	Southern Illin	7.26	79	IAmb_Lg		10 42 06.0	
	comp=Z,31nm,0.8s						
W45A	Hickory Valley	7.48	99	IAmb_Lg		10 42 21.7	
	comp=Z,16nm,0.8s						
Y22D	IRIS PASSCAL I	7.56	253	IAmb_Lg		10 42 30.0	
	comp=Z,24nm,0.8s						
L40A	Anamosa	7.64	43	IAmb_Lg		10 42 24.0	
	comp=Z,24nm,0.7s						
L42A	Oliver, Polo	8.50	49	IAmb_Lg		10 42 55.7	
	comp=Z,25nm,0.8s						
RSSD	Black Hills	8.66	331	IAmb_Lg		10 42 59.2	
	comp=Z,11nm,0.8s						
JFWS	Jewell Farm	8.75	42	IAmb_Lg		10 43 00.2	
	comp=Z,19nm,0.7s						

KMA 11 10:38:18.4±3.1, **35°.78N**×**124°.87E**, **h12**^{km}±9^{km}, **Error ellipse: s-maj=25.3km s-min=7.6km az=97.0, Yellow Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECDB	Euchungdo	0.96	69	P	Pb	10 38 37.1	+0.1
	SNR=10						
ANMD	Anmado	1.04	114	P	Pb	10 38 38.1	-0.2
	SNR=15						
OYDB	Oeyeondo	1.08	65	P	Pb	10 38 38.2	-0.7
	SNR=8.0						
HUK2	Heuksan-myeon	1.19	156	P	Pn	10 38 40.5	-0.4
MNYD	Munyeodo	1.27	88	P	Pn	10 38 41.9	+0.1
	SNR=11						
SMKB	Mukjeong-gil	1.38	93	P	Pn	10 38 43.5	+0.1
	SNR=5.7						

IDC 11 10:40:49.2±1.5, **6°.00S**×**146°.94E**, **h0**^{km}, **mb3.4**/2, **mb1 3.7**/4, **mb1mx3.4**/37, **mbtmp3.4**/4, **ML2.5**/2, **Error ellipse: s-maj=70.3km s-min=27.9km az=110.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.39	176	Pn	Pn	10 41 43.5	+0.1
	7.6nm,0.3s,baz=247,slow=13,SNR=10						
PMG				Sn	Sn	10 42 19.0	-5.3
	13nm,0.3s,baz=326,slow=14,SNR=3.5						
WRA	Warramunga Arr	18.49	220	P	P	10 45 06.9	-0.2
	0.1nm,0.3s,baz=43,slow=12,SNR=4.8						
ASAR	Alice Springs	21.58	214	P	P	10 45 40.7	-0.1
	0.6nm,0.8s,baz=50,slow=8.6,SNR=2.1						
ILAR	Eielson Array	85.51	23	P	P	10 53 28.8	-0.1
	0.4nm,0.7s,baz=240,slow=4.6,SNR=6.8						
TORD	Torodi Ar. Bea	145.04	284	PKPbc	PKPbc	11 00 28.3	-0.7
	0.5nm,0.7s,baz=64,slow=6.6,SNR=3.1						

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*IDC **11** 11:11:42.5±2.1, 4°.87S×68°.25E, h0^{km}, mb3.6/6, mb1 3.8/6, mb1mx3.5/62, mbtmp3.6/6, Error ellipse: s-maj=62.2km s-min=32.1km az=64.0*

ISC 11 11:11:44.1±2.1, **5°.0S**±0°.3×**68°.3E**±0°.3, **h13**^{km}, **n11**, σ**1^s.03**/11, **mb3.7**/6, **Chagos Archipelago region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S3	Diego Garcia H	4.90	123	Pn	Pn	11 12 56.5	-0.8
H08S3				T	T	11 18 19.9	
	baz=307						
H08S1	Diego Carcia H	4.90	123	Pn	Pn	11 12 56.5	-0.8
H08S1				T	T	11 18 00.2	
	baz=307						
H08S2	Diego Garcia H	4.92	123	Pn	Pn	11 12 56.7	-0.8
H08S2				T	T	11 17 54.2	
	baz=307						
CMAR	Chiang Mai Arr	38.14	52	P	P	11 19 04.5	+1.1
	0.3nm,0.3s,baz=246,slow=12,SNR=4.3						
MKAR	Makanchi Array	53.03	12	P	P	11 20 59.8	-1.0
	0.3nm,0.6s,baz=184,slow=4.3,SNR=2.0						
ZALV	Zalesovo Beam	60.34	11	P	P	11 21 52.9	+0.3
	0.4nm,0.4s,baz=220,slow=8.8,SNR=1.8						
SONM	Songino Array	62.32	28	P	P	11 22 05.1	-1.2
	1.2nm,0.9s,baz=219,slow=6.3,SNR=3.8						
ASAR	Alice Springs	65.67	114	P	P	11 22 29.4	+0.6
	0.1nm,0.4s,baz=292,slow=6.6,SNR=3.7						
WRA	Warramunga Arr	65.78	110	P	P	11 22 31.1	+1.5
	0.9nm,0.9s,baz=281,slow=6.1,SNR=4.8						
NVAR	Mina Array Bea	146.18	9	PKPbc	PKPab	11 31 26.0	+0.4
	0.7nm,0.8s,baz=358,slow=1.7,SNR=5.1						
TXAR	Lajitas Array	154.63	343	PKPbc	PKiKP	11 31 45.6	-0.2
	0.1nm,0.3s,baz=98,slow=6.5,SNR=1.9						

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*IDC **11** 11:18:00.4±3.1, 5°.24S×68°.31E, h0^{km}, mb3.7/5, mb1 3.9/5, mb1mx3.5/66, mbtmp3.7/5, Error ellipse: s-maj=86.1km s-min=41.5km az=63.0*

ISC 11 11:18:02.1±2.9, **5°.2S**±0°.3×**68°.3E**±0°.5, **h13**^{km}, **n6**, σ**0^s.57**/6, **mb3.8**/5, **Chagos Archipelago region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	38.33	51	P	P	11 25 22.8	-0.2
	0.6nm,0.3s,baz=218,slow=12,SNR=2.3						
MKAR	Makanchi Array	53.28	12	P	P	11 27 20.1	-0.6
	0.3nm,0.6s,baz=186,slow=10,SNR=1.5						
ZALV	Zalesovo Beam	60.59	11	P	P	11 28 12.7	+0.4
	0.6nm,0.5s,baz=204,slow=3.2,SNR=2.1						
SONM	Songino Array	62.56	28	P	P	11 28 26.6	+0.5
	1.0nm,0.9s,baz=206,slow=8.0,SNR=5.5						
WRA	Warramunga Arr	65.75	109	P	P	11 28 47.4	0.0
	0.5nm,0.8s,baz=270,slow=6.8,SNR=3.9						
NVAR	Mina Array Bea	146.43	9	PKPbc	PKPbc	11 37 43.4	-0.3
	0.1nm,0.5s,baz=319,slow=3.6,SNR=2.0						

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*IDC **11** 11:18:28.2±1.8, 5°.27S×68°.41E, h0^{km}, mb3.8/9, mb1 4.0/9, mb1mx3.7/67, mbtmp3.8/9, MS4.2/1, Ms1 4.2/1, ms1mx3.1/39, Error ellipse: s-maj=56.2km s-min=27.4km az=57.0*

*NEIC **11** 11:18:32.1±1.9, 4°.88S±0°.06×68°.76E±0°.08, h10^{km}±1^{km}, mb4.5/15, Error ellipse: s-maj=14.0km s-min=11.0km az=281.0*

ISC 11 11:18:31.8±0.6, **4°.9S**±0°.1×**68°.72E**±0°.08, **h13**^{km}, **n33**, σ**1^s.17**/32, **mb4.2**/17, **Chagos Archipelago region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGAR	Diego Garcia	4.46	124	Pn	Pn	11 19 38.5	-0.6
H08S3	Diego Garcia H	4.61	126	Pn	Pn	11 19 41.8	+0.8
	baz=352,slow=74,SNR=29						
H08S3				T	T	11 24 33.5	
	baz=351,slow=74,SNR=36						
H08S1	Diego Carcia H	4.61	126	Pn	Pn	11 19 41.7	+0.8
	SNR=1.8						
H08S1				T	T	11 24 34.2	
	SNR=23						
H08S2	Diego Garcia H	4.63	126	Pn	Pn	11 19 42.0	+0.8
	baz=313,slow=74,SNR=5.8						
H08S2				T	T	11 24 34.9	
	baz=313,slow=74,SNR=32						
MSEY	Mahe Island	13.20	271	Pn	Pn	11 21 39.1	+0.1
PALK	Pallekele	17.02	45	LR	LR	11 27 38.6	
	comp=Z,727nm,20.5s,baz=339,slow=32						
COCO	West Island	28.71	106	P	P	11 24 29.1	+0.2
GSI	Gunungsitoli	29.48	79	P	P	11 24 34.4	-1.5
GSI				IAmb	IAmb	11 24 46.3	
	comp=Z,17nm,1.0s						
LHMI	Lhok Sumawe	29.94	71	P	P	11 24 37.7	-2.3
LODK	Lodwar	34.34	283	P	P	11 25 18.6	-0.1
RAYN	Ar Rayn	36.23	322	P	P	11 25 34.6	-0.2
RAYN				IAmb	IAmb	11 25 35.4	
	comp=Z,5.3nm,1.3s						
CMAR	Chiang Mai Arr	37.78	51	P	P	11 25 50.3	+2.3
	comp=Z,0.8nm,0.3s,baz=243,slow=10.0,SNR=1.2						
MBAR	Mbarara	38.17	275	P	P	11 25 51.5	-0.1
MBAR				IAmb	IAmb	11 26 02.9	
	comp=Z,9.5nm,1.4s						
KKAR	Karatay Array	47.83	2	P	P	11 27 10.5	+1.3
TSUM	Tsumeb	51.78	249	P	P	11 27 40.8	+1.0
TSUM				IAmb	IAmb	11 27 59.5	
	comp=Z,4.5nm,1.0s						
PSA00	Pilbara Seismi	52.18	113	P	P	11 27 42.7	+0.1
PSA00				IAmb	IAmb	11 27 45.5	
	comp=Z,11nm,1.6s						
MAKZ	Makanchi	52.83	11	P	P	11 27 45.9	-1.0
MAKZ				IAmb	IAmb	11 28 03.2	
	comp=Z,8.3nm,1.4s						
MKAR	Makanchi Array	52.88	12	P	P	11 27 47.6	+0.3
	comp=Z,0.6nm,0.8s,baz=191,slow=11,SNR=3.9						
MKAR	Makanchi Array	52.88	12	P	P	11 27 47.2	-0.1
ABKAR	Akbulak array	54.49	353	P	P	11 27 57.8	-1.2
KURBB	Kurchatov Arra	55.97	8	P	P	11 28 09.0	-0.7
	comp=Z,0.2nm,0.3s,baz=209,slow=7.4,SNR=2.2						
BVAR	Borovoye Array	57.74	1	P	P	11 28 24.4	+2.1
	comp=Z,0.3nm,0.3s,baz=221,slow=15,SNR=2.1						
ZALV	Zalesovo Beam	60.19	11	P	P	11 28 40.4	+1.2
	comp=Z,0.4nm,0.3s,baz=235,slow=5.1,SNR=3.7						
TIRR	Tirgusor	61.01	328	P	P	11 28 43.7	-1.3
SONM	Songino Array	62.07	28	P	P	11 28 54.7	+2.4
	comp=Z,1.2nm,0.9s,baz=211,slow=7.0,SNR=7.1						
SONM	Songino Array	62.07	28	P	P	11 28 52.6	+0.3
SONM				IAmb	IAmb	11 28 55.8	
	comp=Z,8.1nm,1.5s						
ULN	Ulaanbaatar	62.40	28	P	P	11 28 55.9	+1.3
ULN				IAmb	IAmb	11 29 12.6	
	comp=Z,9.2nm,1.6s						
ASAR	Alice Springs	65.33	114	P	P	11 29 13.5	-0.7
	comp=Z,0.2nm,0.7s,baz=283,slow=6.3,SNR=2.5						
WRA	Warramunga Arr	65.43	110	P	P	11 29 14.3	-0.6
	comp=Z,1.2nm,0.9s,baz=275,slow=6.6,SNR=5.0						
WR0	Warramunga Arr	65.62	110	P	P	11 29 15.4	-0.7
WR0				IAmb	IAmb	11 29 18.9	
	comp=Z,7.6nm,1.3s						
FINES	FINESS Array B	73.89	340	P	P	11 30 06.0	-0.2
	comp=Z,2.1nm,0.8s,baz=203,slow=6.0,SNR=1.7						
NVAR	Mina Array Bea	146.04	10	PKPbc	PKPab	11 38 12.4	-0.3
	comp=Z,0.3nm,0.6s,baz=15,slow=3.7,SNR=4.2						
TXAR	Lajitas Array	154.67	344	PKPbc	PKPbc	11 38 32.0	-1.5
	comp=Z,0.1nm,0.4s,baz=5.4,slow=1.9,SNR=1.8						

*THR **11** 11:20:00.4±0.3,27°.08N×52°.84E,h15^{km},ML3.2*
*TEH **11** 11:20:01.9,27°.13N×52°.88E,h17^{km},ML3.6*
ISC 11 11:20:01.7±2.5**,27°.1N**±0°.1×**52°.84E**±0°.08**,h10**^{km}**,n16,**
σ**0^{s}92**/18**,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LMD1	Lamerd	0.36	53	eSg	Sg	11 20 13.3	-0.3
LMD1				ePg	Pb	11 20 08.9	-1.3
LMD1				e		11 20 23.4	
	comp=Z,11μm,0.3s						
QIR1	Qir	1.36	8	ePn	Pg	11 20 27.7	-0.1
QIR1				e		11 20 28.8	
	comp=Z,9μm,0.3s						
LAR1	LAR	1.47	68	ePg	Pg	11 20 29.6	-0.3
LAR1				eSg	Sg	11 20 49.5	+0.6
LAR1				e		11 21 00.6	
	comp=Z,20μm,0.5s						
JHRM	Jahrom	1.52	25	ePg	Pg	11 20 30.7	-0.2
JHRM				e		11 20 56.5	
	comp=Z,13μm,0.2s						
AHBU	AHRAM	2.21	322	ePn	Pn	11 20 38.9	+0.5
KRBR	Kerman	4.47	50	ePn	Pn	11 21 10.6	+0.8
KRBR				IAML		11 22 20.1	
	comp=E,17nm,0.6s						
KRBR				IAML		11 22 38.5	
	comp=N,18nm,0.7s						
KRBR	Kerman	4.47	50	ePn	Pn	11 21 10.6	+0.8
CHMN	Cheshme madani	4.95	56	ePn	Pn	11 21 18.5	+2.0
CHMN				e		11 21 21.7	
	comp=Z,759nm,0.4s						
YZKH	Yazd	5.46	16	ePn	Pn	11 21 24.2	+0.9
YZKH	Yazd	5.46	16	ePn	Pn	11 21 24.2	+0.9
BSRN	Basiran	7.29	47	eP	Pn	11 21 49.2	+0.7
BSRN	Basiran	7.29	47	ePn	Pn	11 21 49.2	+0.7
ZHSF	Zahedan	7.42	69	eP	Pn	11 21 50.7	+0.5
ZHSF	Zahedan	7.42	69	ePn	Pn	11 21 50.7	+0.5
TABS	Tabas	7.48	29	eP	Pn	11 21 51.9	+0.9
TABS	Tabas	7.48	29	ePn	Pn	11 21 51.9	+0.9

NNC 11 11:41:42.2±1.4**,51°.30N**×**75°.49E,h0**^{km}**,mb3.6,mpv3.1,**
7C-3D,Error ellipse: s-maj=40.1km s-min=8.1km
az=25.0,Suspected Mining explosion.,Eastern
Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURBB	Kurchatov Arra	2.04	108	⇑Pn	Pn	11 42 17.8	+0.1
	8.2nm,0.4s						
KURBB				⇑Sn	Sb	11 42 46.1	+0.1
	39nm,0.3s						
KURK	Kurchatov	2.06	105	⇑Pn	Pn	11 42 18.6	+0.5
	7.8nm,0.6s						
KURK				⇓Sn	Sn	11 42 44.1	-0.4
	6.4nm,0.3s						
BRVK	Borovoye	3.66	301	⇑Sn	Sn	11 43 24.7	+1.0
	1.9nm,0.4s						
BRVK				⇓Lg	Lg	11 43 37.5	
	3.7nm,0.5s						
MAKZ	Makanchi	6.19	134	⇑Sn	Sn	11 44 27.5	+1.1
	4.0nm,1.3s						
MAKZ				⇑Lg	Lg	11 44 58.9	
	7.7nm,1.1s						
MK31	Makanchi Array	6.35	133	⇓Sn	Sn	11 44 30.1	-0.1
	0.6nm,0.5s						
MK31				⇑Lg	Lg	11 45 02.0	
	3.9nm,0.8s,baz=328,slow=26,SNR=4.1						

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*BJI **11** 11:45:20.5±0.0,8°.80S×110°.20E,h69^{km},mB5.9/56,*
mb6.2/78,Ms4.9/84,Ms7 4.7/79
*GCMT **11** 11:45:23.9±0.1,8°.99S±0°.01×110°.33E±0°.01,h108^{km},*
MW5.5/136,Moment Tensor Solution. s124,c229;
s136,c268; Duration: 1^{s}4 Moment tensor: Scale 10^{17}
Nm; M_{rr}-0.97±.03; $M_{\theta\theta}$1.31±.03; $M_{\phi\phi}$-0.34±.03;
$M_{r\theta}$1.89±.02; $M_{\theta\phi}$-0.54±.03; $M_{\phi r}$0.04±.02; Best double
couple: $M_0$2.27000×10^{17} NP1:ϕ_s133.00000°,δ20.00000°,
λ-49.00000°. NP2:ϕ_s270.00000°,δ75.00000°,
λ-104.00000°. Principal axes: T 2.4530, Plg28.0000°,
Azm11.0000°; N -0.3650, Plg13.0000°, Azm273.0000°; P
-2.0870, Plg58.0000°, Azm161.0000°; nsta1 refers to
body waves, cutoff=40s. nsta2 refers to surface waves,
cutoff=50s. Triangular moment-rate function
*NEIC **11** 11:45:23.9±3.0,8°.94S±0°.06×110°.22E±0°.06,h83^{km}±4^{km},*
mb5.9/164,Mwb5.5/26,Mww5.5,Mwc5.5(GCMT) Error
ellipse: s-maj=8.7km s-min=8.2km az=104.0
*NEIC **11** 11:45:23.8,8°.86S×110°.22E,h90^{km},Moment Tensor*
Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.94;
$M_{\theta\theta}$0.99; $M_{\phi\phi}$-0.05; $M_{r\theta}$1.94; $M_{\theta\phi}$-0.09; $M_{\phi r}$0.28; Fault
plane solution: $M_0$2.18000×10^{17} NP1:ϕ_s107.10000°,
δ14.04000°,λ-66.74000°. NP2:ϕ_s263.19000°,δ77.12000°,
λ-95.64000°. Principal axes: T 2.1921, Plg32.0000°,
Azm358.0000°; N -0.0170, Plg5.0000°, Azm264.0000°; P
-2.1751, Plg58.0000°, Azm166.0000°;
*DJA **11** 11:45:25.2±0.1,9°S±2°×11°0E±°,h97^{km}±2^{km},M5.4/108,*
mB5.9/92,mb5.7/108,MLv6.1/30,Mw5.4/33,Mw(mB)5.5/92,
MwMwp5.0/25,Mwp5.3/25
*IDC **11** 11:45:25.1±0.3,8°.68S×110°.38E,h95^{km}±2^{km},mb5.4/52,*
mb1 5.4/56,mb1mx5.4/58,mbtmp5.7/56,MS4.4/23,
Ms1 4.4/23,ms1mx4.2/32,Error ellipse: s-maj=8.2km
s-min=6.7km az=54.0
*MOS **11** 11:45:26.1±1.0,8°.66S×110°.38E,h79^{km},mb6.0/66,Error*
ellipse: s-maj=7.1km s-min=3.8km az=115.7
*NEIC **11** 11:45:26,8°.91S×110°.39E,h90^{km},Moment Tensor*
Solution. Duration: 2^{s}0 Moment tensor: Scale 10^{17}Nm;
M_{rr}-1.07; $M_{\theta\theta}$1.01; $M_{\phi\phi}$0.07; $M_{r\theta}$1.98; $M_{\theta\phi}$-0.24; $M_{\phi r}$0.05;
Fault plane solution: $M_0$2.25000×10^{17} NP1:
ϕ_s114.00000°,δ15.00000°,λ-66.00000°. NP2:
ϕ_s271.00000°,δ76.00000°,λ-96.00000°. Principal axes:
T 2.2191, Plg31.0000°, Azm6.0000°; N 0.0623,
Plg6.0000°, Azm272.0000°; P -2.2815, Plg58.0000°,
Azm172.0000°;
*NEIC **11** 11:45:26,8°.97S×110°.35E,h109^{km},Moment Tensor*
Solution. Duration: 2^{s}8 Moment tensor: Scale 10^{17}Nm;
M_{rr}-1.09; $M_{\theta\theta}$1.42; $M_{\phi\phi}$-0.33; $M_{r\theta}$1.94; $M_{\theta\phi}$-0.56; $M_{\phi r}$0.02;
Fault plane solution: $M_0$2.39000×10^{17} NP1:
ϕ_s130.00000°,δ21.00000°,λ-53.00000°. NP2:
ϕ_s270.00000°,δ74.00000°,λ-103.00000°. Principal axes:
T 2.5560, Plg28.0000°, Azm11.0000°; N -0.3669,
Plg12.0000°, Azm274.0000°; P -2.1891, Plg59.0000°,
Azm162.0000°;
*KLM **11** 11:45:29,8°.72S×110°.18E,h128^{km},mb5.8*
ISC 11 11:45:25.0±0.2**,8°.69S**±0°.03×**110°.27E**±0°.03**,h99**^{km}±1^{km}**,**
h99^{km}**:pP-P,n1147,**σ**1^{s}76**/1282**,mb5.9**/258**,166C-56D,**
Fault plane solution: NP1:ϕ_s72.64426°**,**δ86.04858°**,**
λ106.66357°. **NP2:**ϕ_s175.60918°**,**δ17.11272°**,**λ13.54383°.
Principal axes: T Plg46.4297°**,** Azm359.7528°**;** N
Plg16.6228°**,** Azm251.4626°**;** P Plg38.8346°**,**
Azm147.5563°**; Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UGM	Wanagama	0.81	18	P	Pn	11 45 45.6	+2.1
UGM				S	Sn	11 46 00.5	+3.3
UGM	Wanagama	0.81	18	Pn	Pn	11 45 45.3	+1.8
UGM	Wanagama	0.81	18	P	Pn	11 45 45.3	+1.8
YOGI	Yogyakarta	0.87	2	P	Pn	11 45 45.5	+1.5
YOGI				S	Sn	11 46 00.4	+2.2
PCJI	Pacitan	1.02	61	P	Pn	11 45 46.5	+0.9
PCJI				S	Sn	11 46 02.3	+1.2
SMRI	Semarang	1.64	6	P	Pn	11 45 56.9	+3.9
SMRI	Semarang	1.64	6	Pn	Pn	11 45 57.0	+3.9
SMRI	Semarang	1.64	6	P	Pn	11 45 56.7	+3.7
PWJI	Pagerwojo	1.66	67	P	Pn	11 45 54.6	+1.4
NGJI	Ngawi	1.77	42	P	Pn	11 45 59.3	+4.7
KPJI	Karang Pucung	1.89	315	P	Pn	11 45 58.6	+2.5
CMJI	Cimerak	2.01	296	P	Pn	11 45 58.3	+0.6
GRJI	Gresik	2.81	51	P	Pn	11 46 10.9	+2.6
GMJI	Gumukmas	3.17	83	P	Pn	11 46 13.7	+0.7
LEM	Lembang	3.21	305	P	Pn	11 46 16.1	+2.3
	362nm,0.3s,baz=129,slow=10.0,SNR=360						
LEM				S	Sn	11 46 54.3	+2.9
	1μm,0.3s,baz=280,slow=23,SNR=5.6						
LEM	Lembang	3.21	305	P	Pn	11 46 16.7	+2.9
CNJI	Cibinong	3.40	294	P	Pn	11 46 16.5	+0.4
BLJI	Banyuglugur	3.42	74	P	Pn	11 46 18.2	+1.8
BWJI	Bawean	3.68	40	P	Pn	11 46 23.3	+3.3
JAGI	Jajag, Banyuwa	3.85	87	P	Pn	11 46 22.9	+0.7
JAGI	Jajag, Banyuwa	3.85	87		Pn	11 46 22.3	+0.1
JAGI	Jajag, Banyuwa	3.85	87	P	Pn	11 46 23.2	+1.0
KMMI	Kalianget	4.01	66	P	Pn	11 46 24.6	+0.3
ABJI	Asem Bagus	4.02	78	P	Pn	11 46 26.3	+1.8
DBJI	Dramaga	4.08	301	P	Pn	11 46 28.0	+2.6
TNG	Tangerang	4.38	305	P	Pn	11 46 30.2	+0.9
IGBI	Denpasar	4.82	92	P	Pn	11 46 36.1	+0.7
SBJI	Serang	4.83	302	P	Pn	11 46 37.3	+1.8
XMI	Christmas Isla	4.84	248	P	Pn	11 46 32.3	-3.4
DNP	Denpasar	4.88	90	P	Pn	11 46 38.2	+2.0
XMIS	Christmas Isla	4.89	248	Pn	Pn	11 46 33.0	-3.3
XMIS	Christmas Isla	4.89	248	P	Pn	11 46 32.6	-3.7
SRBI	Singaraja	4.93	83	P	Pn	11 46 37.1	+0.3
CGJI	Cibinong	4.98	294	P	Pn	11 46 38.1	+0.6
	47nm48μm117μm3μm,0.7s						
BLSI	Bandar Lampung	5.98	303	P	Pn	11 46 53.2	+2.1
	7.2nm18μm2μm,0.8s						
PBKI	Pangkalan Bun	6.11	13	P	Pn	11 46 56.4	+3.6
	33nm64μm7μm,1.0s						
KASI	Kota Agung	6.53	298	P	Pn	11 46 59.7	+1.1
	25nm15μm1μm,0.9s						
TWSI	Taliwang, Sumb	6.54	91	P	Pn	11 46 58.9	+0.2
	3.4nm3μm9μm488nm,0.6s						
KLI	Kotabumi	6.58	305	P	Pn	11 47 01.5	+2.2
	11nm5μm16μm2μm,0.7s						
KLSI		6.79	305	P	Pn	11 47 03.7	+1.6
	1.8nm4μm361nm,1.0s						
BBKI	Banjar Baru	6.90	41	P	Pn	11 47 07.7	+4.1
	3.7nm9μm12μm631nm,0.9s						
LWLI	Liwa	7.16	300	P	Pn	11 47 08.7	+1.4
	45nm28μm1μm,0.9s						
MDSI	Maura Dua	7.35	304	P	Pn	11 47 11.1	+1.4
	1.6nm2μm5μm499nm,0.7s						
PLAI	Plampang	7.42	92	P	Pn	11 47 10.4	-0.3
	4.8nm7μm13μm1μm,0.7s						
PLAI	Plampang	7.42	92	P	Pn	11 47 11.3	+0.6
PPBI	Pangkal Pinang	7.68	327	P	Pn	11 47 16.1	+1.9
	4.7nm5μm15μm1μm,0.9s						
PMBI	Palembang	7.92	316	P	Pn	11 47 21.0	+3.5
	27μm3μm,1.0s						
PMBI	Palembang	7.92	316		Pn	11 47 20.9	+3.5
PMBI	Palembang	7.92	316	P	Pn	11 47 21.3	+3.9
KBKI	Kotabaru	7.94	48	P	Pn	11 47 21.1	+3.3
	7μm755nm,0.9s						
LHSI	Lahat	8.26	305	P	Pn	11 47 23.6	+1.4
	10μm810nm,1.0s						
MNAI	Manna	8.44	300	P	Pn	11 47 25.1	+0.5
	36μm3μm,0.7s						
MNAI	Manna	8.44	300	Pn	Pn	11 47 24.9	+0.3
MNAI	Manna	8.44	300	P	Pn	11 47 26.0	+1.4
STKI	Sintang	8.78	8	P	Pn	11 47 33.9	+4.7
	6μm14μm732nm,1.0s						
MTKI	Muara Teweh, K	8.97	31	P	Pn	11 47 34.8	+3.0
	3μm9μm372nm,1.5s						
WBSI	Waikabubak, Su	9.06	97	P	Pn	11 47 30.0	-3.0
	5μm315nm,0.6s						
KSI	Kapahiang	9.12	303	P	Pn	11 47 34.4	+0.4
KSI				pmax	pmax		
	comp=Z,5μm,0.8s						
KSI	Kapahiang	9.12	303	P	Pn	11 47 34.4	+0.4
	comp=Z,37μmcomp=Z,5μm,0.8s						
JMBI	JAMBI	9.62	316	P	Pn	11 47 43.4	+2.7
	comp=Z,7μmcomp=Z,583nm,1.4s						
MASI	Maura Aman, Be	9.70	304	P	Pn	11 47 41.9	+0.1
	comp=Z,39μmcomp=Z,6μm,0.8s						
DSRI	Dabo	9.93	325	P	Pn	11 47 46.7	+1.8
	comp=Z,3μmcomp=Z,4μmcomp=Z,379nm,1.2s						
KSM	Kuching	10.10	0	P	Pn	11 47 50.0	+2.9
KAPI	Kappang	10.10	69	P	Pn	11 47 47.5	+0.3
	comp=Z,4.0nm,0.3s,baz=265,slow=10,SNR=64						
KAPI				S	Sn	11 49 34.9	-3.7
	comp=Z,0.7nm,0.3s,baz=262,slow=4.8,SNR=1.7						
KAPI				LR	LR	11 52 14.6	
	comp=Z,2μm,21.6s,baz=274,slow=41						
KAPI	Kappang	10.10	69	P	Pn	11 47 49.1	+1.9
KAPI	Kappang	10.10	69	P	Pn	11 47 49.5	+2.3
KAPI	Kappang	10.10	69	Pn	Pn	11 47 49.1	+1.9
KAPI	Kappang	10.10	69	P	Pn	11 47 49.8	+2.6
BASI	Baing, Sumba	10.28	99	P	Pn	11 47 48.2	-1.5
	comp=Z,3μmcomp=Z,6μmcomp=Z,387nm,1.3s						
BKSI	Bulukumba	10.34	72	P	Pn	11 47 51.9	+1.5
	comp=Z,4μmcomp=Z,3μmcomp=Z,219nm,1.2s						
BSSI	Bau Bau, Buton	10.45	77	P	Pn	11 47 53.4	+1.5
	comp=Z,2μmcomp=Z,4μmcomp=Z,297nm,0.9s						
SPSI	Sidrap Palu	10.54	64	P	Pn	11 47 55.5	+2.3
	comp=Z,5μmcomp=Z,387nm,1.3s						
TTSI	Tana Toraja	11.03	60	P	Pn	11 48 03.5	+3.7
	comp=Z,6μmcomp=Z,9μmcomp=Z,572nm,1.5s						
SBUM	Sibu	11.23	10	P	Pn	11 48 07.0	+4.4
RGRI	Rengat	11.45	316	P	Pn	11 48 06.7	+1.2
	comp=Z,234nm,0.5s						
PPSI	Pulau Pagai	11.78	299	P	Pn	11 48 07.8	-2.1
	comp=Z,17μmcomp=Z,2μm,0.7s						
MMRI	Maumere	11.83	91	P	Pn	11 48 09.5	-1.1
	comp=Z,3μmcomp=Z,271nm,1.4s						
MMRI	Maumere	11.83	91	Pn	Pn	11 48 08.1	-2.6
MMRI	Maumere	11.83	91	P	Pn	11 48 12.0	+1.4
	comp=Z,271nm,1.4s						
BKNI	Bangkinang	12.84	314	P	Pn	11 48 23.7	-0.2
	comp=Z,4μmcomp=Z,6μmcomp=Z,711nm,0.8s						
BKNI	Bangkinang	12.84	314		Pn	11 48 22.5	-1.4
BKNI	Bangkinang	12.84	314	P	Pn	11 48 24.3	+0.4
MPSI	Mapaga	13.13	47	P	Pn	11 48 29.9	+2.1
	comp=Z,4μmcomp=Z,7μmcomp=Z,672nm,1.2s						
KDI	Kendari	13.14	70	P	Pn	11 48 29.9	+1.9
BATI	Baumata	13.30	98	P	Pn	11 48 27.3	-2.8
	comp=Z,14nm,0.3s,baz=28,slow=1.4,SNR=8.8						
BATI				S	Sn	11 50 44.1	-12
	comp=Z,24nm,0.3s,baz=20,slow=19,SNR=1.9						
BATI	Baumata	13.30	98	P	Pn	11 48 27.0	-3.1
	comp=Z,2μmcomp=Z,140nm,1.0s						
COCO	West Island	13.66	254	P	Pn	11 48 31.7	-3.0
COCO	West Island	13.66	254	Pn	Pn	11 48 31.7	-3.0
APSI	Ampana	13.71	56	P	Pn	11 48 37.2	+1.8
	comp=Z,6μmcomp=Z,464nm,0.8s						
SOEI	Soe	13.86	95	P	Pn	11 48 34.5	-2.9
	comp=Z,5μmcomp=Z,595nm,0.8s						
SOEI	Soe	13.86	95	Pn	Pn	11 48 35.9	-1.5
SOEI	Soe	13.86	95	P	Pn	11 48 38.0	+0.6
TOLI2	Tolitoli	14.30	48		P	11 48 45.3	-1.9
TOLI2	Tolitoli	14.30	48	P	P	11 48 45.8	-1.4
GIRL	Giralia	14.39	165	Pn	Pn	11 48 39.0	-5.0
GIRL	Giralia	14.39	165	P	Pn	11 48 40.3	-3.8
	comp=Z,1μm,0.5s						
LUWI	Luwuk	14.58	59	P	Pn	11 48 48.2	+1.5
	comp=Z,4μmcomp=Z,14μmcomp=Z,946nm,1.4s						
LUWI	Luwuk	14.58	59		Pn	11 48 47.7	+1.0
LUWI	Luwuk	14.58	59	P	P	11 48 49.0	-1.4
JRMM	Jerantut	14.71	328	P	Pn	11 48 50.0	+1.7
MRSI	Marisa	14.77	53	P	Pn	11 48 50.3	+1.3
	comp=Z,4μmcomp=Z,10μmcomp=Z,1μm,0.9s						
MBWA	Marble Bar	15.39	145	P	Pn	11 48 54.2	-2.7
GTOI	Gorontalo	15.72	55	P	P	11 49 02.3	-0.7
	comp=Z,4μmcomp=Z,313nm,0.8s						
PSA00	Pilbara Seismi	15.79	145	Pn	Pn	11 48 58.2	-3.6
PSI	Prapat	16.07	315	P	Pn	11 49 00.7	-4.8
	comp=Z,6.4nm,0.3s,baz=141,slow=11,SNR=38						
PSI				S	Sn	11 51 56.3	-7.3
	comp=Z,1.1nm,0.3s,baz=181,slow=16,SNR=2.6						
PSI				LR	LR	11 56 06.1	
	comp=Z,2μm,20.5s,baz=137,slow=40						
GSI	Gunungsitoli	16.08	308	Pn	Pn	11 49 00.4	-5.1
GSI				IAmb	IAmb	11 49 03.0	
	comp=Z,517nm,0.6s						
KMSI	Cibinong	16.47	57	P	P	11 49 12.2	+0.9
	comp=Z,5μmcomp=Z,431nm,1.0s						
KULM	Kulim	16.88	325	P	P	11 49 16.0	+0.2
SANI	Sanana	16.98	68	P	P	11 49 17.2	+0.3
	comp=Z,3μmcomp=Z,164nm,1.0s						
SANI	Sanana	16.98	68	P	P	11 49 17.8	+0.9
FITZ	Fitzroy Crossi	17.62	124	P	P	11 49 23.6	-0.4
	comp=Z,9.1nm,0.3s,baz=291,slow=6.5,SNR=114						
FITZ				S	Sn	11 52 19.3	-22
	baz=30,slow=20						
FITZ	Fitzroy Crossi	17.62	124	P	P	11 49 23.3	-0.8
TPTI		17.64	312	P	P	11 49 21.3	-2.9
	comp=Z,802nmcomp=Z,79nm,0.7s						
LBMI	Labuha	18.93	66	P	Pn	11 49 40.4	+0.3
	comp=Z,5μmcomp=Z,402nm,1.0s						
LHMI	Lhok Sumawe	19.17	316	P	P	11 49 41.9	+0.9
	comp=Z,3μmcomp=Z,226nm,0.7s						
LHMI	Lhok Sumawe	19.17	316	P	Pn	11 49 42.6	-0.3
LHMI	Lhok Sumawe	19.17	316	P	P	11 49 42.0	+0.9
MSAI	Masohi	19.30	75	P	P	11 49 41.9	-0.5
	comp=Z,26nm,0.9s						
KNRA	Kununurra	19.36	113	P	P	11 49 43.3	+0.3
	baz=19,SNR=81						
KNRA	Kununurra	19.36	113		P	11 49 43.2	+0.2
KNRA				IAmb	IAmb	11 49 46.2	
	comp=Z,1μm,1.8s						
KNRA	Kununurra	19.36	113	P	P	11 49 42.9	-0.1
	comp=Z,296nm,1.5s						
TNTI	Ternate	19.46	62	P	Pn	11 49 45.3	-1.0
	comp=Z,2μmcomp=Z,5μmcomp=Z,367nm,1.1s						
TNTI	Ternate	19.46	62	P	Pn	11 49 45.4	-0.9
TNTI				IAmb	IAmb	11 49 51.8	
	comp=Z,638nm,1.3s						
TNTI	Ternate	19.46	62	P	Pn	11 49 47.5	+1.2
MEEK	Meekatharra	19.53	157	P	P	11 49 44.5	-0.3
	baz=20,SNR=83						
MEEK	Meekatharra	19.53	157	P	P	11 49 44.5	-0.3
	comp=Z,360nm,0.5s						
SGSI	Sangihe	19.56	52	P	P	11 49 46.2	+0.9
	comp=Z,278nm,0.7s						
BNDI	Bandanaira	19.94	79	P	Pn	11 49 51.2	-0.7
DRS	Darwin Rock St	20.62	102	P	P	11 49 57.4	+0.8
	comp=Z,245nm,0.9s						
MTN	Manton Dam	20.90	103	P	P	11 49 59.8	+0.1
	baz=21,SNR=71						
MTN	Manton Dam	20.90	103	P	P	11 49 59.0	-0.8
MTN				IAmb	IAmb	11 50 26.5	
	comp=Z,685nm,1.6s						
MTN	Manton Dam	20.90	103	P	P	11 50 00.3	+0.5
	comp=Z,266nm,1.5s						
MORW	Morawa	20.99	166	P	P	11 49 59.8	-0.6
	baz=21,SNR=25						
MORW	Morawa	20.99	166	P	P	11 49 58.2	-2.3
MORW				IAmb	IAmb	11 50 03.7	
	comp=Z,751nm,1.9s						
MORW	Morawa	20.99	166	P	P	11 49 59.9	-0.6
	comp=Z,117nm,0.8s						
KCP	Kidapawan	21.48	44	⇑iP	P	11 50 06.7	+0.7
DMPH	Davao City--Mi	21.82	45	⇓eP	P	11 50 11.9	+2.4
DAV	Davao City (W)	21.86	45	P	P	11 50 11.0	+1.0
	comp=Z,262nm,0.6s,baz=221,slow=19,SNR=16						
DAV				S	S	11 54 01.3	-4.6
	comp=Z,167nm,0.5s,baz=62,slow=24,SNR=1.8						
DAV				LR	LR	11 59 32.9	
	comp=Z,1μm,21.2s,baz=202,slow=39						
DAV	Davao City (W)	21.86	45	P	P	11 50 12.7	+2.7
SNPH	Sibulan	22.08	36	⇓eP	P	11 50 16.3	+4.0
BUKP	Musuan	22.09	42	⇑iP	P	11 50 13.7	+1.3
CNOP	Candoni, Negro	22.14	34	⇑iP	P	11 50 33.0	+20
KDU	Kakadu	22.17	102	P	P	11 50 13.4	+0.1
	baz=22,SNR=22						
KDU	Kakadu	22.17	102	P	P	11 50 13.7	+0.4
	comp=Z,251nm,1.1s						
SWI	Sorong	22.30	71	P	P	11 50 12.9	-1.7
	comp=Z,2μmcomp=Z,152nm,1.0s						
SIJI	Sorong	22.30	71	P	P	11 50 12.1	-2.6
	comp=Z,51nm,0.8s,baz=287,slow=5.6,SNR=17						
SIJI				S	S	11 54 08.5	-5.2
	comp=Z,21nm,1.0s,baz=233,slow=20,SNR=14						
FAKI	Fak Fak	22.60	77	P	P	11 50 17.1	-0.6
	comp=Z,1μmcomp=Z,85nm,0.8s						
FAKI	Fak Fak	22.60	77	P	P	11 50 18.4	+0.7
FAKI	Fak Fak	22.60	77	P	P	11 50 19.9	+2.2
BLDU	Ballidu	22.63	165	P	P	11 50 16.5	-1.3
	baz=23,SNR=35						
BLDU	Ballidu	22.63	165	P	P	11 50 16.7	-1.2
	comp=Z,88nm,0.9s						
TBP	Tagbilaran	22.73	37	⇑iP	P	11 50 20.5	+1.5
TBP				iS	S	11 54 27.2	+6.8
LLP	Lapu-Lapu	23.29	36	⇑eP	P	11 50 25.3	+0.9
RCP	Roxas	23.64	32	⇑eP	P	11 50 29.4	+1.9
WRKA	Warakurna	23.66	136	P	P	11 50 26.7	-1.0
	baz=24,SNR=115						
WRKA	Warakurna	23.66	136	P	P	11 50 26.7	-1.0
	comp=Z,179nm,1.3s						
MSLP	Maasin	23.68	38	⇑iP	P	11 50 28.6	+0.7
MUN	Mundaring	23.82	167	P	P	11 50 27.8	-1.2
	baz=24,SNR=17						
MUN	Mundaring	23.82	167	P	P	11 50 28.4	-0.7
	comp=Z,90nm,0.5s						
KLBR	Kellerberrin	23.83	164	P	P	11 50 27.9	-1.3
	baz=24,SNR=12						
KLBR	Kellerberrin	23.83	164	P	P	11 50 28.6	-0.5
	comp=Z,230nm,1.2s						
UBPT	Khong Chiam	24.28	349	P	P	11 50 34.0	+0.6
PGP	Puerto Galera	24.47	26	⇑eP	P	11 50 37.0	+1.9
NWAO	Narrogin (SRO)	24.97	166	P	P	11 50 37.9	-1.5
	comp=Z,89nm,1.0s,baz=341,slow=8.0,SNR=28						
NWAO				pP	pP	11 51 00.9	+0.2
	comp=Z,25nm,0.4s,baz=358,slow=10,SNR=4.8						
NWAO				S	S	11 54 59.8	+3.7
	comp=Z,13nm,0.5s,baz=83,slow=15,SNR=1.4						
NWAO				LR	LR	12 00 24.8	
	comp=Z,680nm,18.3s,baz=342,slow=36						
NWAO	Narrogin (SRO)	24.97	166	P	P	11 50 39.4	0.0
LQP	Lukban	25.26	26	⇑eP	P	11 50 43.3	+0.8
WB0	Warramunga Arr	25.81	118	P	P	11 50 46.6	-0.6
WRA	Warramunga Arr	25.83	118	P	P	11 50 47.0	-0.5
	comp=Z,83nm,0.6s,baz=288,slow=12,SNR=865						
WRA				pP	pP	11 51 08.3	0.0
	comp=Z,124nm,1.0s,baz=291,slow=12,SNR=7.3						
WRA				S	S	11 55 04.2	-5.8
	comp=Z,3.5nm,0.7s,baz=274,slow=20,SNR=1.7						
WRA				LR	LR	12 01 21.9	
	comp=Z,710nm,21.8s,baz=275,slow=37						
WRA				P3KPbc		12 23 43.8	
	comp=Z,2.3nm,1.0s,baz=124,slow=4.6,SNR=9.2						
WRAB	Tennant Creek	25.83	118	d iP	P	11 50 47.3	-0.1
WRAB				pmax	pmax		
	comp=Z,370nm,1.7s						
WRAB	Tennant Creek	25.83	118	P	P	11 50 47.4	-0.1
WRAB				IAmb	IAmb	11 50 48.6	
	comp=Z,302nm,1.1s						
WRAB	Tennant Creek	25.83	118	P	P	11 50 47.6	+0.1
WB2	Warramunga Arr	25.84	118	P	P	11 50 46.9	-0.6
WB2				IAmb	IAmb	11 50 48.6	
	comp=Z,275nm,1.1s						
WR0	Warramunga Arr	26.01	118	P	P	11 50 48.6	-0.4
WR0				IAmb	IAmb	11 50 52.0	
	comp=Z,357nm,1.2s						
PBA	Port Blair	26.69	319	P	P	11 50 53.7	-1.4
PBA	Port Blair	26.69	319	P	P	11 50 53.2	-1.9
PBA				IAmb	IAmb	11 51 00.3	
	comp=Z,291nm,1.1s						
SRPI	Serui, Papua	26.72	77	P	P	11 50 56.4	+0.9
	comp=Z,121nm,0.8s						
PBKT	Sadao Pong	26.73	340	P	P	11 50 56.3	+0.8
ASAR	Alice Springs	27.08	126	P	P	11 50 58.1	-0.6
	comp=Z,38nm,0.8s,baz=303,slow=8.9,SNR=310						
ASAR				PcP	PcP	11 54 17.7	+0.1
	comp=Z,14nm,0.6s,baz=305,slow=2.3,SNR=7.1						
ASAR				S	S	11 55 46.9	+17
	comp=Z,3.7nm,0.7s,baz=300,slow=14,SNR=1.7						
ASAR				LR	LR	12 02 35.2	
	comp=Z,667nm,21.4s,baz=304,slow=38						
ASAR				P3KPbc		12 23 34.9	
	comp=Z,0.5nm,0.9s,baz=122,slow=4.3,SNR=5.3						
ASAR				P3KP		12 24 42.6	
	comp=Z,0.9nm,0.9s,baz=72,slow=2.4,SNR=4.4						
ASAR	Alice Springs	27.08	126	P	P	11 50 58.0	-0.7
AS31	Alice Springs	27.08	126	P	P	11 50 58.0	-0.7
QIZ	Qiongzhong	27.55	359	P	P	11 51 06.3	+3.5
QIZ				sP	sP	11 51 31.2	-5.0
QIZ				S	S	11 55 44.8	+7.9
QIZ				pmax	pmax		
	comp=Z,410nm,10.7s						
QIZ				LR	LR		
	comp=Z,400nm,15.5s						
QIZ				LR	LR		
	comp=Z,780nm,18.2s						
QIZ				LR	LR		
	comp=Z,710nm,13.8s						
QIZ	Qiongzhong	27.55	359	P	P	11 51 02.8	0.0
QIZ	Qiongzhong	27.55	359	P	P	11 51 05.0	+2.2
FORT	Forrest	27.55	145	P	P	11 51 02.0	-0.7
	baz=28,SNR=52						
FORT	Forrest	27.55	145	P	P	11 51 01.2	-1.5
FORT				IAmb	IAmb	11 51 37.3	
	comp=Z,187nm,0.7s						
FORT	Forrest	27.55	145	P	P	11 51 02.0	-0.7
	comp=Z,211nm,0.9s						
CM31	Chiang Mai Arr	29.20	338	P	P	11 51 18.4	+0.9
	SNR=57						
CM31	Chiang Mai Arr	29.20	338	P	P	11 51 18.1	+0.7
CM31				IAmb	IAmb	11 51 19.2	

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      comp=Z,143nm,0.8s
CMAR  Chiang Mai Arr    29.20 338  P      P       11 51 18.1 +0.7
      comp=Z,109nm,0.7s,baz=174,slow=8.1,SNR=537
CMAR                               S      S       11 56 01.4 -1.6
      comp=Z,0.7nm,0.5s,baz=286,slow=36,SNR=1.1
CMAR                               LR     LR      12 04 24.8
      comp=Z,2µm,18.2s,baz=210,slow=39
CMAR                               P3KPbc         12 23 25.9
      comp=Z,0.4nm,0.3s,baz=321,slow=4.7,SNR=7.3
CMAR                               PKP2ab         12 27 21.9
      comp=Z,0.3nm,0.3s,baz=316,slow=2.5,SNR=4.7
CHTO  Chiang Mai        29.52 338  P      P       11 51 20.9 +0.5
CHTO                               pmax   pmax
      comp=Z,74nm,0.8s
CHTO  Chiang Mai        29.52 338  P      P       11 51 20.8 +0.4
CHTO  Chiang Mai        29.52 338  P      P       11 51 20.9 +0.5
CHTO  Chiang Mai        29.52 338  P      P       11 51 20.7 +0.4
SLVN  Son La            30.48 348  P      P       11 51 30.4 +1.5
OOD   Oodnadatta        30.61 132  P      P       11 51 29.1 -0.8
      comp=Z,66nm,0.8s
QIS   Mount Isa         30.68 116  P      P       11 51 31.0 +0.4
      baz=31,SNR=52
QIS   Mount Isa         30.68 116  P      P       11 51 30.5 -0.1
MULG  Mulgathing        30.92 137  P      P       11 51 32.0 -0.6
      comp=Z,155nm,1.4s
COEN  Coen              32.67 102  P      P       11 51 47.0 -1.1
COEN                               IAmb   IAmb    11 51 49.8
      comp=Z,167nm,1.4s
COEN  Coen              32.67 102  P      P       11 51 48.5 +0.4
      comp=Z,110nm,1.3s
TWG   Pinlang           33.05  18  P      P       11 51 51.7 +0.4
TPUB  Ta-pu             33.37  17  IAmb   IAmb    11 51 57.6
      comp=Z,143nm,0.8s
TPUB  Ta-pu             33.37  17  P      P       11 51 55.9 +1.8
PALK  Pallekele         33.46 297  P      P       11 51 56.9 +1.8
      comp=Z,187nm,1.0s,baz=172,slow=14,SNR=56
PALK                               S      S       11 57 08.1 -1.7
      comp=Z,3.2nm,0.7s,baz=3.5,slow=7.4,SNR=1.4
PALK                               LR     LR      12 03 59.6
      comp=Z,214nm,20.4s,baz=225,slow=33
PALK  Pallekele         33.46 297  P      P       11 51 57.5 +2.4
PALK                               P      P       11 51 57.5 +2.4
PALK  Pallekele         33.46 297  P      P       11 51 54.6 -0.5
PALK                               IAmb   IAmb    11 51 59.5
      comp=Z,253nm,1.1s
BBOO  Buckleboo         33.84 139  P      P       11 51 57.2 -1.0
      baz=34,SNR=66
BBOO  Buckleboo         33.84 139  P      P       11 51 57.1 -1.0
BBOO                               IAmb   IAmb    11 51 58.6
      comp=Z,242nm,1.2s
BBOO  Buckleboo         33.84 139  P      P       11 51 57.3 -0.8
      comp=Z,152nm,1.4s
KNMB  Chin-men Tao      33.89  13  P      P       11 51 59.2 +0.6
KNMB                               IAmb   IAmb    11 52 01.0
      comp=Z,107nm,0.9s
LCRK  Leigh Creek       33.91 133  P      P       11 51 58.3 -0.5
      comp=Z,158nm,1.4s
SSLB  Suanglung         33.92  18  IAmb   IAmb    11 52 02.4
      comp=Z,224nm,0.8s
SSLB  Suanglung         33.92  18  P      P       11 52 00.7 +1.8
MTSU  Mount Surprise    34.37 109  P      P       11 52 04.3 +1.4
      baz=34,SNR=62
MTSU  Mount Surprise    34.37 109  P      P       11 52 03.9 +1.0
      comp=Z,68nm,0.7s
QZH   Quanzhou          34.40  13⇑iP      P       11 51 59.6 -3.3
QZH                                S      S       11 57 22.0 -1.8
QZH                                LR     LR
      comp=Z,730nm,15.3s
KMI   Kunming           34.40 348 ⇑P      P       11 52 05.5 +2.3
KMI                                pP     pP      11 52 26.8 +1.2
KMI                                PP     PP      11 53 26.4 +3.3
KMI                                S      S       11 57 30.4 +6.1
KMI                                pmax   pmax
      comp=Z,80nm,1.1s
KMI                                pmax   pmax
      comp=Z,610nm,5.2s
KMI                                LR     LR
      comp=Z,2µm,17.2s
KMI                                LR     LR
      comp=Z,810nm,21.3s
KMI                                LR     LR
      comp=Z,2µm,15.2s
NACB  Ninganchiao       34.48  18  IAmb   IAmb    11 52 10.3
      comp=Z,81nm,0.8s
WHYH  Whyalla           34.98 138  P      P       11 52 07.6 -0.3
      comp=Z,53nm,1.2s
GYA   Guiyang           35.11 354⇓iP      P       11 52 11.1 +1.9
GYA                                pP     pP      11 52 27.9 -3.8
GYA                                S      S       11 57 38.8 +3.8
GYA                                pmax   pmax
      comp=Z,150nm,1.0s
GYA                                pmax   pmax
      comp=Z,670nm,3.5s
GYA                                LR     LR
      comp=Z,1µm,20.2s
GYA                                LR     LR
      comp=Z,580nm,15.2s
GYA                                LR     LR
      comp=Z,2µm,21.0s
TATO  Taipei            35.20  18  P      P       11 52 10.9 +1.1
TATO  Taipei            35.20  18  P      P       11 52 10.5 +0.6
YOJ   Yonaguni jima     35.22  20  P      P       11 52 10.9 +0.9
YOJ                                pmax   pmax
      comp=Z,1µm,1.5s
YOJ   Yonaguni jima     35.22  20  P      P       11 52 10.9 +0.9
YOJ   Yonaguni jima     35.22  20  P      P       11 52 12.0 +2.0
      comp=Z,595nm,1.1s
PTPS  Port Pirie        35.34 138  P      P       11 52 11.5 +0.5
      comp=Z,323nm,0.5s
HTT   Hallett           36.12 137  P      P       11 52 17.6 -0.1
      baz=36,SNR=50
HTT   Hallett           36.12 137  P      P       11 52 17.5 -0.3
      comp=Z,142nm,2.0s
JMJ   Miyako jima 2     36.38  23  P      P       11 52 23.6 +3.7
      comp=Z,3µm,1.0s
PMG   Port Moresby      36.43  94  P      P       11 52 20.4 -0.2
      comp=Z,2.9nm,0.3s,baz=302,slow=10,SNR=4.1
PMG                                S      S       11 57 52.2 -3.1
      comp=Z,2.8nm,0.2s,baz=337,slow=20,SNR=1.0
PMG                                ScP    ScP     11 58 19.2 -1.5
      comp=Z,4.9nm,0.3s,baz=309,slow=4.4,SNR=5.8
PMG   Port Moresby      36.43  94  P      P       11 52 19.8 -0.8
PMG   Port Moresby      36.43  94  P      P       11 52 22.2 +1.6
PMG   Port Moresby      36.43  94  P      P       11 52 22.4 +1.8
CTA   Charters Tower    36.57 112  P      P       11 52 22.3 +0.6
      comp=Z,50nm,0.9s,baz=282,slow=12,SNR=35
CTA                                S      S       11 57 53.5 -3.9
      comp=Z,7.0nm,1.0s,baz=0.3,slow=11,SNR=2.4
CTA                                LR     LR      12 09 23.4
      comp=Z,291nm,19.0s,baz=280,slow=39
CTA   Charters Tower    36.57 112  P      P       11 52 22.7 +1.0
      comp=Z,97nm,1.3s
CTAO  Charters Tower    36.57 112  P      P       11 52 22.4 +0.7
CTAO                               pmax   pmax
      comp=Z,67nm,1.0s
CTAO  Charters Tower    36.57 112  P      P       11 52 22.4 +0.7
CTAO  Charters Tower    36.57 112  P      P       11 52 22.9 +1.2
QLP   Quilpie           36.77 123  P      P       11 52 24.5 +1.2
      baz=37,SNR=56
QLP   Quilpie           36.77 123  P      P       11 52 24.1 +0.8
      comp=Z,268nm,1.1s
GHSS  Government Hou    36.81 139  P      P       11 52 24.7 +1.2
      comp=Z,127nm,0.5s
MDRS  Chennai           36.83 306 eP      P       11 52 25.1 +1.2
STKA  Stephens Creek    37.12 133  P      P       11 52 26.4 +0.2
      comp=Z,243nm,0.6s,baz=307,slow=8.6,SNR=440
STKA                               PcP    PcP     11 54 45.0 +0.2
      comp=Z,54nm,0.7s,baz=14,slow=4.6,SNR=5.1
STKA                               S      S       11 58 01.9 -3.5
      comp=Z,2.3nm,0.5s,baz=228,slow=22,SNR=1.2
STKA                               LR     LR      12 10 22.8
      comp=Z,619nm,18.2s,baz=298,slow=40
STKA  Stephens Creek    37.12 133  P      P       11 52 26.4 +0.2
      baz=37,SNR=254
STKA  Stephens Creek    37.12 133  P      P       11 52 26.4 +0.2
STKA                               pmax   pmax
      comp=Z,55nm,0.8s
STKA  Stephens Creek    37.12 133  P      P       11 52 26.4 +0.2
STKA  Stephens Creek    37.12 133  P      P       11 52 26.0 -0.2
      comp=Z,98nm,1.0s
TRD   Trivandrum        37.33 296 eP      P       11 52 29.8 +1.6
SILR  SILCHAR           37.37 333 eP      P       11 52 29.2 +0.8
H08S2 Diego Garcia H    37.40 269  P      P       11 52 30.6 +2.1
H08S2                              T      T       12 31 17.8
      baz=93,slow=75,SNR=27
H08S3 Diego Garcia H    37.41 269  P      P       11 52 30.7 +2.1
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H08S3                              T      T       12 31 17.0
      baz=93,slow=75,SNR=18
H08S1 Diego Carcia H    37.42 269  P      P       11 52 30.7 +2.1
H08S1                              T      T       12 31 25.7
      baz=93,slow=75,SNR=29
DGAR  Diego Garcia      37.45 269  P      P       11 52 32.0 +2.8
KOHI  KOHIMA            37.64 336 eP      P       11 52 30.3 -0.5
KOHI                              eS      S       11 58 09.7 -3.9
MOKO  MOKOCHONG         38.02 337 eP      P       11 52 34.1 +0.1
LKP   Lekhapani         38.44 339 eP      P       11 52 37.7 +0.4
LKP                                IAmb   IAmb    11 52 40.5
SHL   Shillong          38.47 333  P      P       11 52 37.8  0.0
SHL                                pmax   pmax
      comp=Z,947nm,1.1s
SHL   Shillong          38.47 333 i P     P       11 52 37.7 -0.1
SHL                                IAmb   IAmb    11 52 40.1
      comp=Z,482nm,1.9s
SHL   Shillong          38.47 333  P      P       11 52 38.0 +0.3
      SNR=205
SHL   Shillong          38.47 333  P      P       11 52 37.8  0.0
JORH  JORHAT            38.50 337  IAmb   IAmb    11 52 40.5
      comp=Z,573nm,1.2s
ENH   Enshi             38.74 359  IAmb   IAmb    11 52 41.7
      comp=Z,141nm,0.7s
DIBR  DIBRUGARH         38.90 338 i P     P       11 52 40.9 -0.3
ITAN  ITANAGAR          39.07 336 eP      P       11 52 42.7 +0.2
ITAN                               IAmb   IAmb    11 52 44.9
      comp=Z,1µm,1.2s
WHN   Wuhan             39.20   6 ⇑P      P       11 52 45.2 +1.6
WHN                                S      S       11 58 39.4 +2.7
WHN                                pmax   pmax
      comp=Z,340nm,0.9s
WHN                                LR     LR
      comp=Z,1µm,11.1s
WHN                                LR     LR
      comp=Z,2µm,15.1s
WHN                                LR     LR
      comp=Z,5µm,35.9s
JOW   Kunigami          39.40  26  P      P       11 52 47.0 +1.7
JOW   Kunigami          39.40  26  P      P       11 52 47.6 +2.3
DHUB  DHUBRI            39.73 331 i P     P       11 52 47.8 -0.3
CD2   Chengdu           39.86 351  P      P       11 52 52.4 +3.2
CD2                                pP     pP      11 53 09.0 -3.0
CD2                                sP     sP      11 53 14.7 -8.5
CD2                                S      S       11 58 47.1 +0.3
CD2                                pmax   pmax
      comp=Z,500nm,1.0s
CD2                                pmax   pmax
      comp=Z,810nm,4.5s
CD2                                LR     LR
      comp=Z,940nm,20.1s
CD2                                LR     LR
      comp=Z,1µm,18.7s
CD2                                LR     LR
      comp=Z,1µm,18.7s
JMZ   Minamidaito 2     39.90  30  P      P       11 52 49.8 +0.3
CMSA  Cobar Meteorol    40.00 130  P      P       11 52 51.0 +0.6
      baz=40,SNR=48
CMSA  Cobar Meteorol    40.00 130  P      P       11 52 50.9 +0.6
      comp=Z,242nm,1.2s
ARPS  Mount Arapiles    40.02 139  P      P       11 52 50.7 +0.3
      baz=40,SNR=55
ARPS  Mount Arapiles    40.02 139  P      P       11 52 50.5 +0.1
      comp=Z,341nm,0.8s
RMQ   Roma              40.52 121  P      P       11 52 54.6 -0.2
      baz=40,SNR=29
RMQ   Roma              40.52 121  P      P       11 52 56.1 +1.3
      comp=Z,54nm,1.0s
HYB   Hyderabad         40.69 310 i P     P       11 52 56.0 -0.2
      comp=Z,320nm,1.0s
HYB                               eS      S       11 59 03.0 +3.7
HYB   Hyderabad         40.69 310 eP      P       11 52 56.1  0.0
MNCY  Minicoy           40.74 293  IAmb   IAmb    11 53 19.8
      comp=Z,574nm,0.8s
GUMO  Guam              40.86  58  P      P       11 52 56.3 -1.3
      comp=Z,36nm,0.3s,baz=211,slow=5.9,SNR=7.7
SSE   Sheshan           40.92  14  P      P       11 52 59.8 +2.0
SSE                                S      S       11 59 07.1 +4.8
SSE                                pmax   pmax
      comp=Z,170nm,1.3s
SSE                                pmax   pmax
      comp=Z,740nm,3.9s
NJ2   Nanjing           41.33  11⇑iP      P       11 53 03.9 +2.7
NJ2                                S      S       11 59 13.9 +5.5
NJ2                                ScS    ScS     12 02 58.0 +2.7
NJ2                                pmax   pmax
      comp=Z,330nm,0.8s
NJ2                                pmax   pmax
      comp=Z,2µm,3.5s
NJ2                                LR     LR
      comp=Z,730nm,18.2s
NJ2                                LR     LR
      comp=Z,400nm,15.3s
NJ2                                LR     LR
      comp=Z,760nm,18.2s
GTK   Tadong            41.50 330 eP      P       11 53 03.3 +0.5
ODAN  Odare             41.73 329 eP      P       11 53 04.8  0.0
      comp=Z,2µm,0.9s
BRAT  Ballarat          41.83 139  P      P       11 53 06.3 +1.0
      comp=Z,53nm,0.8s
TAPN  Taplejung         41.97 329 eP      P       11 53 07.4 +0.6
      comp=Z,1µm,0.7s
EIDS  Eidsvold          42.19 118  P      P       11 53 08.4 -0.1
      baz=42,SNR=11
EIDS  Eidsvold          42.19 118  P      P       11 53 09.0 +0.6
EIDS  Eidsvold          42.19 118  P      P       11 53 09.6 +1.2
      comp=Z,58nm,1.6s
RAMN  Ramite            42.22 328 eP      P       11 53 09.0 +0.2
      comp=Z,233nm,0.5s
LSA   Lhasa             42.37 335  P      P       11 53 11.8 +1.5
LSA                                pmax   pmax
      comp=Z,682nm,0.7s
LSA   Lhasa             42.37 335  P      P       11 53 11.8 +1.5
GEXS  Deakin Univers    42.44 139  P      P       11 53 13.1 +2.9
      comp=Z,136nm,0.9s
XAN   Xi'an             42.51 358  P      P       11 53 11.4 +0.6
XAN                                pP     pP      11 53 30.1 -3.7
XAN                                PP     PP      11 54 54.2 +2.8
XAN                                S      S       11 59 25.5 -0.4
XAN                                sS     sS      12 00 02.2 -2.5
XAN                                SS     SS      12 02 37.5 -1.8
XAN                                ScS    ScS     12 02 59.6 -3.0
XAN                                pmax   pmax
      comp=Z,670nm,0.9s
XAN                                pmax   pmax
      comp=Z,1µm,3.8s
XAN                                LR     LR
      comp=Z,630nm,19.8s
XAN                                LR     LR
      comp=Z,680nm,16.3s
XAN                                LR     LR
      comp=Z,1µm,20.6s
TOO   Toolangi          42.87 138  P      P       11 53 14.2 +0.4
      baz=43,SNR=16
TOO   Toolangi          42.87 138  P      P       11 53 14.3 +0.5
TOO                                pmax   pmax
      comp=Z,85nm,1.1s
TOO   Toolangi          42.87 138  P      P       11 53 14.2 +0.5
TOO   Toolangi          42.87 138  P      P       11 53 15.2 +1.4
      comp=Z,86nm,1.2s
JIRN  Jiri              43.00 328 eP      P       11 53 15.6 +0.3
      comp=Z,2µm,0.8s
YNG   Young             43.28 132  P      P       11 53 17.5 +0.4
      baz=43,SNR=28
YNG   Young             43.28 132  P      P       11 53 17.7 +0.6
      comp=Z,212nm,1.2s
PKI   Pulchoki          43.34 327 eP      P       11 53 17.7 -0.3
      comp=Z,413nm,0.8s
PKIN  Phulchoki         43.36 327 eP      P       11 53 17.5 -0.5
      comp=Z,450nm,0.8s
GUN   Gumba             43.37 328 eP      P       11 53 18.5 +0.3
      comp=Z,1µm,0.6s
GOA   Goa               43.37 303⇑iP      P       11 53 18.9 +0.9
GOA                                IAmb   IAmb    11 53 20.4
      comp=Z,184nm,0.4s
DMN   Daman             43.54 327 eP      P       11 53 19.4 -0.1
      comp=Z,2µm,0.9s
KKN   Kakani            43.59 327 eP      P       11 53 19.7 -0.1
      comp=Z,871nm,0.8s
GKN   Gorkha            44.10 327 eP      P       11 53 23.8 -0.1
      comp=Z,1µm,0.7s
CAN   Canberra          44.19 133  P      P       11 53 25.2 +0.8
CAN                                pmax   pmax
      comp=Z,120nm,1.3s
CAN   Canberra          44.19 133  P      P       11 53 25.2 +0.8
CAN   Canberra          44.19 133  P      P       11 53 25.9 +1.5
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      comp=Z,126nm,2.0s
ARMA  Armidale          44.22 125  P      P       11 53 26.7 +1.9
      comp=Z,96nm,1.7s
GOS2  Gosang-Q330s      44.42  19  P      P       11 53 29.0 +2.8
      SNR=9.6
GOS1  Gosan-ri          44.43  19  P      P       11 53 28.3 +2.1
      SNR=9.8
CNB   Canberra Magne    44.45 133  P      P       11 53 27.0 +0.5
      baz=44,SNR=24
CNB   Canberra Magne    44.45 133  P      P       11 53 29.1 +2.6
      comp=Z,81nm,1.5s
KOLN  Koldanda          44.49 325 eP      P       11 53 26.9 -0.2
      comp=Z,2µm,0.8s
HALB  Hallimjungang-    44.54  19  P      P       11 53 28.6 +1.5
      SNR=10
KSJJU Jeju              44.66  19  P      P       11 53 29.5 +1.5
GGDB  Gageodo           44.78  18  P      pP      11 54 03.6  +11
      SNR=85
SYDH  Sydney Hard Ro    44.80 130  P      P       11 53 30.9 +1.7
      comp=Z,74nm,1.1s
DANN  Dangsing          44.85 326 eP      P       11 53 29.8 -0.2
      comp=Z,2µm,0.7s
MGCD  Mangrove Creek    44.86 129  P      P       11 53 31.2 +1.5
      baz=45,SNR=29
MGCD  Mangrove Creek    44.86 129  P      P       11 53 31.2 +1.5
      comp=Z,127nm,0.7s
LZH   Lanzhou           44.94 353 ⇑P      P       11 53 32.2 +1.7
LZH                                sP     sP      11 54 02.8 -2.0
LZH                                PP     PP      11 55 19.8 +2.4
LZH                                S      S       12 00 01.6 +0.1
LZH                                sS     sS      12 00 36.9 -3.7
LZH                                SS     ScS     12 03 16.7 -1.4
LZH                                pmax   pmax
      comp=Z,810nm,0.9s
LZH                                pmax   pmax
      comp=Z,2µm,5.7s
LZH                                LR     LR
      comp=Z,2µm,17.9s
LZH                                LR     LR
      comp=Z,2µm,15.2s
LZH                                LR     LR
      comp=Z,2µm,16.0s
POO   Poona             44.97 307 i P     P       11 53 31.3 +0.5
CJD   Chujado           45.06  19  P      P       11 53 32.6 +1.4
      SNR=31
PYUN  Piuthan           45.09 325 eP      P       11 53 31.6 -0.2
      comp=Z,1µm,0.8s
TIA   Tai'an            45.12   8 ⇑P      P       11 53 31.9 +0.2
TIA                                sP     pP      11 53 57.8 +2.9
TIA                                PP     PP      11 55 23.4 +4.2
TIA                                S      S       12 00 03.3 -0.4
TIA                                SS     ScS     12 03 20.5 +1.6
TIA                                pmax   pmax
      comp=Z,540nm,0.9s
TIA                                pmax   pmax
      comp=Z,960nm,4.3s
TIA                                LR     LR
      comp=Z,260nm,22.6s
TIA                                LR     LR
      comp=Z,710nm,16.0s
TIA                                LR     LR
      comp=Z,890nm,20.4s
RIV   Riverview         45.14 130  P      P       11 53 33.4 +1.5
      baz=45,SNR=7.3
BHPL  Bhopal            45.16 315 eP      P       11 53 31.7 -0.5
WOLH  Wollongong Har    45.17 131  P      P       11 53 34.7 +2.6
      comp=Z,58nm,1.2s
NTLH  Newcastle Hard    45.19 128  P      P       11 53 33.8 +1.4
      comp=Z,175nm,0.8s
KSJDO Jindo             45.54  19  P      P       11 53 37.2 +2.2
      SNR=12
HANB  Haenam            45.69  19  P      P       11 53 37.4 +1.2
      SNR=47
KOHB  KOHEUNG           45.98  20  P      P       11 53 39.5 +1.1
      SNR=9.7
YNDB  Yeoundo           45.99  20  P      P       11 53 38.8 +0.3
BOM   Bombay            45.99 307 eP      P       11 53 39.1 +0.3
BOSB  Boseong-gun       46.09  19  P      P       11 53 40.3 +1.0
      SNR=10
TIY   Taiyuan           46.20   2 eP      P       11 53 40.9 +0.7
TIY                                pP     pP      11 54 04.1 +0.6
TIY                                PP     PP      11 55 36.1 +5.6
TIY                                S      S       12 00 20.3 +1.0
TIY                                pmax   pmax
      comp=Z,580nm,0.8s
TIY                                LR     LR
      comp=Z,400nm,14.9s
ANMD  Anmado            46.26  18  P      P       11 53 42.1 +1.6
      SNR=6.4
YKDB  Yokjido           46.33  21  P      P       11 53 41.6 +0.5
GLAD  Gladstone         46.37 140  P      P       11 53 44.0 +2.5
      comp=Z,89nm,0.8s
KSKWJ Gwangju           46.39  19  P      P       11 53 42.6 +1.0
      SNR=20
KSKWJ Gwangju           46.39  19  P      P       11 53 43.0 +1.4
      SNR=20
KSKWJ Gwangju           46.39  19  P      P       11 53 43.0 +1.4
      SNR=20
GOCB  Gochang-gun       46.44  18  P      P       11 53 43.2 +1.3
      SNR=25
SUCA  Sunchang          46.63  19  P      P       11 53 45.0 +1.5
      SNR=17
JTU   Tsushima          46.64  22  IAmb   IAmb    11 53 45.5
      comp=Z,332nm,1.0s
MOO   Moorlands         46.69 142  P      P       11 53 45.2 +1.2
      baz=47,SNR=5.5
MOO   Moorlands         46.69 142  P      P       11 53 46.1 +2.1
      comp=Z,71nm,1.1s
NAWB  Namwon            46.76  19  P      P       11 53 45.3 +0.8
      SNR=16
HAMB  Hamyang           46.95  20  P      P       11 53 47.0 +0.9
      SNR=28
ECDB  Euchungdo         46.96  17  P      P       11 53 48.0 +1.9
      SNR=11
TAU   Tasmania Unive    47.04 143  P      P       11 53 47.3 +0.6
TAU                                pmax   pmax
      comp=Z,87nm,0.8s
TAU   Tasmania Unive    47.04 143  P      P       11 53 47.3 +0.6
TAU                                IAmb   IAmb    11 53 48.5
      comp=Z,87nm,0.8s
TAU   Tasmania Unive    47.04 143  P      P       11 53 47.8 +1.2
      comp=Z,145nm,1.0s
KSKCH Geochang          47.10  20  P      P       11 53 47.9 +0.6
      SNR=44
JCJ   Chichijima        47.14  40  S      S       12 00 25.8 -7.2
      comp=Z,38nm,0.9s,baz=254,slow=20,SNR=1.9
JCJ   Chichijima        47.14  40  P      P       11 53 48.1 +0.4
JCJ                                IAmb   IAmb    11 54 13.5
      comp=Z,139nm,0.9s
JCJ   Chichijima        47.14  40  P      P       11 53 50.2 +2.5
KSDAG Daegu             47.58  21  P      P       11 53 52.0 +1.1
      SNR=13
TJN   Taejon            47.62  19c iP     P       11 53 51.7 +0.5
TJN   Taejon            47.62  19  P      P       11 53 52.2 +1.0
JMN   Monobe            47.77  27  P      P       11 53 53.2 +0.7
JMN                                IAmb   IAmb    11 53 54.5
      comp=Z,272nm,0.9s
YOCB  Yeongcheon        47.79  21  P      P       11 53 54.0 +1.5
      SNR=22
DACB  Daecheong-do R    48.21  15  P      P       11 53 56.1 +0.5
      SNR=32
YPDB  Yeonpyeongdo      48.27  16  P      P       11 53 57.0 +0.8
      SNR=17
KSBAR Backryungdo       48.34  15  P      P       11 53 57.2 +0.5
      SNR=31
INCN  Inchon            48.42  17  P      P       11 53 58.2 +0.8
INCN                               pmax   pmax
      comp=Z,386nm,1.0s
INCN  Inchon            48.42  17  P      P       11 53 58.1 +0.8
INCN  Inchon            48.42  17  P      P       11 53 58.2 +0.8
INCN  Inchon            48.42  17  P      P       11 53 58.4 +1.0
DL2   Dalian            48.52  12  P      P       11 53 58.1 +0.1
DL2                                S      S       12 00 49.7 -2.2
DL2                                pmax   pmax
      comp=Z,450nm,0.8s
DL2                                pmax   pmax
      comp=Z,1µm,3.6s
JHS   Saijyo            48.52  25  P      P       11 53 59.0 +0.7
CHYB  Chungyang         48.65  20  P      P       11 54 00.3 +1.2
      SNR=6.8
SONA  Sohna             48.75 320 eP      P       11 53 59.0 -1.1
KSAR  Wonju Array Be    48.76  19  P      P       11 54 01.2 +1.3
KSAR  Wonju Array Be    48.76  19  P      P       11 54 01.2 +1.3
KSRS  Korea Array       48.79  19  P      P       11 54 01.2 +1.1
      comp=Z,289nm,0.8s,baz=201,slow=8.3,SNR=327
KSRS                               ScP    ScP     11 59 10.6 +0.9
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	comp=Z,0.5nm,0.4s,baz=287,slow=2.2,SNR=3.3						
KSRS				S	S	12 00 58.3	+2.5
	comp=Z,0.4nm,0.3s,baz=166,slow=39,SNR=1.1						
KSRS				LR	LR	12 16 31.0	
	comp=Z,170nm,18.8s,baz=209,slow=38						
BJI	Beijing	48.79	6	P	P	11 54 01.1	+1.0
BJI				pP	pP	11 54 22.1	-1.5
BJI				sP	sP	11 54 28.5	-6.2
BJI				S	S	12 00 55.4	-0.3
BJI				pmax	pmax		
	comp=Z,830nm,0.8s						
BJI				LR	LR		
	comp=Z,280nm,15.5s						
BJI				LR	LR		
	comp=Z,460nm,16.1s						
KS19	Wonju Array Si	48.81	19	P	P	11 54 01.0	+0.7
KS19				IAmb	IAmb	11 54 02.5	
	comp=Z,313nm,1.1s						
GTA	Gaotai	48.83	349	⇑P	P	11 54 02.4	+1.8
GTA				ScP	ScP	11 59 11.9	+1.8
GTA				S	S	12 00 57.6	+1.0
GTA				ScS	ScS	12 03 43.0	-0.4
GTA				pmax	pmax		
	comp=Z,210nm,1.3s						
GTA				pmax	pmax		
	comp=Z,1µm,6.5s						
GTA				LR	LR		
	comp=Z,610nm,21.1s						
GTA				LR	LR		
	comp=Z,480nm,20.7s						
GTA				LR	LR		
	comp=Z,850nm,21.8s						
AYAN	Aya Nagar	48.89	320	eP	P	11 53 59.6	-1.4
NDI	New Delhi	48.97	321	eP	P	11 54 00.4	-1.3
HNR	Honiara	49.03	95	P	P	11 54 02.8	+0.3
HNR				pmax	pmax		
	comp=Z,163nm,0.8s						
HNR	Honiara	49.03	95	P	P	11 54 02.8	+0.3
HNR				IAmb	IAmb	11 54 28.4	
	comp=Z,163nm,0.8s						
HNR	Honiara	49.03	95	P	P	11 54 03.8	+1.3
	comp=Z,266nm,1.0s						
BTO	Baotou	49.05	360	eP	P	11 54 04.3	+2.1
BTO				S	S	12 01 04.0	+4.4
BTO				LR	LR		
	comp=Z,1µm,7.3s						
BTO				LR	LR		
	comp=Z,500nm,5.3s						
KUDL	Kundal	49.06	319	eP	P	11 54 01.4	-1.0
KUDL				i x	x	11 55 49.0	
AJM	Ajmer	49.18	316	⇑iP	P	11 54 02.9	-0.5
HHC	Hu-ho-hao-te	49.30	1	eP	P	11 54 05.4	+1.2
HHC				sP	pP	11 54 30.7	+2.9
HHC				S	S	12 01 02.1	-1.1
HHC				pmax	pmax		
	comp=Z,490nm,1.1s						
HHC				pmax	pmax		
	comp=Z,270nm,6.6s						
HHC				LR	LR		
	comp=Z,480nm,17.9s						
HHC				LR	LR		
	comp=Z,280nm,14.0s						
HHC				LR	LR		
	comp=Z,610nm,15.8s						
DDI	Dehra Dun	49.62	323	eP	P	11 54 05.6	-1.1
JWT	Wachi	49.76	27	P	P	11 54 08.0	+0.4
INU	Inuyama	50.56	28	IAmb	IAmb	11 54 15.1	
	comp=Z,255nm,1.0s						
INU	Inuyama	50.56	28	P	P	11 54 13.8	+0.2
SMLA	Simla	50.73	323	eP	P	11 54 14.3	-0.6
SMLA				eS	S	12 01 17.5	-5.6
JGF	Kuroka	50.92	29	IAmb	IAmb	11 54 17.3	
	comp=Z,66nm,1.0s						
SNY	Shenyang	51.73	13	⇑P	P	11 54 22.0	-0.3
SNY				sP	sP	11 54 54.1	-2.8
SNY				pmax	pmax		
	comp=Z,350nm,0.8s						
SNY				pmax	pmax		
	comp=Z,1µm,2.6s						
SNY				LR	LR		
	comp=Z,410nm,15.2s						
SNY				LR	LR		
	comp=Z,380nm,17.6s						
SNY				LR	LR		
	comp=Z,870nm,19.3s						
DHRM	DHARAMSHALA	52.04	323	i P	P	11 54 24.3	-0.7
JASL	Jaisalmer	52.06	314	eP	P	11 54 25.2	+0.2
MAJO	Matsushiro	52.09	29c	iP	P	11 54 24.3	-0.8
MAJO				pmax	pmax		
	comp=Z,315nm,1.2s						
MAJO	Matsushiro	52.09	29	P	P	11 54 24.4	-0.6
MAJO				IAmb	IAmb	11 54 25.7	
	comp=Z,271nm,1.1s						
MAJO	Matsushiro	52.09	29	P	P	11 54 24.3	-0.8
MAT	Matsushiro	52.09	29	P	P	11 54 24.1	-1.0
MAT				S	S	12 01 38.8	-2.9
MJAR	Matsushiro Arr	52.09	29	P	P	11 54 24.0	-1.1
	comp=Z,172nm,0.9s,baz=200,slow=7.5,SNR=221						
MJAR				ScP	ScP	11 59 22.9	-1.1
	comp=Z,1.2nm,0.6s,baz=202,slow=6.2,SNR=3.7						
MJAR				LR	LR	12 16 15.3	
	comp=Z,336nm,21.1s,baz=230,slow=36						
JSD	Sado	53.33	28	P	P	11 54 34.0	-0.1
KOUNC	Koumac, New Ca	53.36	109	P	P	11 54 36.5	+1.7
CN2	Changchun	54.03	14	eP	P	11 54 38.7	-0.5
CN2				eS	S	12 02 04.8	-2.9
CN2				pmax	pmax		
	comp=Z,200nm,1.0s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,400nm,18.0s						
CN2				LR	LR		
	comp=Z,400nm,18.0s						
CN2				LR	LR		
	comp=Z,500nm,21.3s						
JMM	Marumori	54.39	30	P	P	11 54 41.5	-0.3
JMM				IAmb	IAmb	11 54 43.6	
	comp=Z,318nm,1.1s						
MSHR	Mys Shultsa	54.48	19c	iP	P	11 54 42.6	+0.2
MSHR				pmax	pmax		
	comp=Z,322nm,1.2s						
VLA	Vladivostok	55.19	19c	iP	P	11 54 47.8	+0.2
VLA				pmax	pmax		
	comp=Z,446nm,1.1s						
DZM	Mont Dzumac	55.49	111	eP	P	11 54 51.4	+1.1
	comp=Z,115nm,1.2s						
DZM	Mont Dzumac	55.49	111	P	P	11 54 50.0	-0.3
DZM	Mont Dzumac	55.49	111	P	P	11 54 52.6	+2.3
ONTNC	Ouen Toro	55.52	111	P	P	11 54 51.3	+0.9
ONTNC				IAmb	IAmb	11 54 52.4	
	comp=Z,53nm,0.8s						
ONTNC	Ouen Toro	55.52	111	P	P	11 54 52.6	+2.2
MDJ	Mudanjiang	55.86	17	P	P	11 54 52.6	+0.3
MDJ				pmax	pmax		
	comp=Z,280nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,1µm,3.5s						
OUENC	Ouen Island, N	55.88	111	P	P	11 54 54.7	+1.7
OUENC	Ouen Island, N	55.88	111	P	P	11 54 55.9	+2.9
YATNC	Mamie plateau,	55.90	111	P	P	11 54 56.1	+3.0
WMQ	Urumqi	56.13	340	⇑P	P	11 54 55.7	+1.3
WMQ				pP	pP	11 55 14.3	-4.1
WMQ				pmax	pmax		
	comp=Z,580nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,720nm,4.9s						
WMQ				LR	LR		
	comp=Z,630nm,20.1s						
WMQ				LR	LR		
	comp=Z,500nm,16.3s						
WMQ				LR	LR		
	comp=Z,550nm,22.5s						
LIFNC	LIFOU	56.14	109	P	P	11 54 55.1	+0.2
LIFNC				IAmb	IAmb	11 54 56.6	
	comp=Z,212nm,1.1s						
LIFNC	LIFOU	56.14	109	P	P	11 54 55.9	+1.1
	comp=Z,212nm,1.2s						
USRK	Ussuriysk Ar.	56.20	19	P	P	11 54 55.1	+0.4
	comp=Z,349nm,0.9s,baz=207,slow=5.3,SNR=315						
USRK				LR	LR	12 19 14.7	
	comp=Z,112nm,21.9s,baz=194,slow=36						
ULN	Ulaanbaatar	56.38	357c	iP	P	11 54 57.1	+0.9
ULN				pmax	pmax		
	comp=Z,589nm,0.8s						
ULN	Ulaanbaatar	56.38	357	P	P	11 54 57.5	+1.3
ULN	Ulaanbaatar	56.38	357	P	P	11 54 57.2	+1.1
SONM	Songino Array	56.38	357	P	P	11 54 57.2	+1.1
	comp=Z,326nm,0.7s,baz=178,slow=8.1,SNR=1978						
SONM				ScP	ScP	11 59 43.3	+0.7
	comp=Z,6.6nm,1.1s,baz=191,slow=3.0,SNR=2.7						
SONM				S	S	12 02 39.1	-0.1
	comp=Z,0.4nm,0.5s,baz=358,slow=40,SNR=1.4						
SONM				LR	LR	12 21 36.8	
	comp=Z,530nm,19.2s,baz=171,slow=38						
SONM				PKPPKP	P'P'df	12 24 50.3	+0.1
	comp=Z,1.1nm,0.9s,baz=329,slow=1.7,SNR=5.0						
SONM	Songino Array	56.38	357	P	P	11 54 57.1	+1.0
PINNC	Pines Island,	56.46	111	P	P	11 54 58.6	+1.6
PINNC				IAmb	IAmb	11 55 13.7	
	comp=Z,105nm,1.1s						
PINNC	Pines Island,	56.46	111	P	P	11 54 59.4	+2.3
MARNC	Mare, Loyalty	56.92	110	P	P	11 55 03.5	+3.2
CASY	Casey	57.51	180	P	P	11 55 02.6	-1.1
CASY				IAmb	IAmb	11 55 04.3	
	comp=Z,63nm,1.1s						
KSH	Kashi	57.54	329	⇑iP	P	11 55 03.4	-1.1
KSH				S	S	12 02 49.4	-5.4
KSH				SS	SS	12 06 43.1	-3.5
KSH				pmax	pmax		
	comp=Z,500nm,0.8s						
KSH				LR	LR		
	comp=Z,440nm,13.2s						
KSH				LR	LR		
	comp=Z,220nm,4.5s						
KSH				LR	LR		
	comp=Z,260nm,6.4s						
KBL	Kabul	58.05	320	P	P	11 55 07.9	-0.4
KBL				pmax	pmax		
	comp=Z,409nm,0.9s						
KBL	Kabul	58.05	320	P	P	11 55 08.0	-0.4
	SNR=248						
KBL	Kabul	58.05	320	P	P	11 55 07.9	-0.4
HIA	Hailar	58.30	7	IAmb	IAmb	11 55 10.8	
	comp=Z,235nm,1.1s						
TEY	Ternei	58.51	22	⇑eP	P	11 55 10.4	-0.5
TEY				eS	S	12 03 04.9	-1.9
TEY				pmax	pmax		
	comp=E,200nm,2.4s						
TEY				pmax	pmax		
	comp=Z,500nm,2.3s						
TEY				pmax	pmax		
	comp=N,200nm,2.9s						
TEY				smax	smax		
	comp=E,300nm,5.5s						
TEY				smax	smax		
	comp=N,300nm,4.4s						
JLN	Jalan Bani Buh	58.51	303	P	P	11 55 12.2	+0.8
	SNR=34						
SHLS	Shalkode	58.73	334	eP	P	11 55 14.8	+2.1
SHLS				pmax	pmax		
	comp=Z,293nm,0.7s						
UZB	Uzynbulak	58.91	334	⇑iP	P	11 55 14.9	+0.9
	comp=Z,243nm,0.6s,baz=334						
UZB				eS	S	12 03 11.6	-1.1
	baz=334						
UZB	Uzynbulak	58.91	334c	iP	P	11 55 14.8	+0.8
UZB				eS	S	12 03 11.5	-1.1
UZB				pmax	pmax		
	comp=Z,243nm,0.6s						
WBK	Wadi Bani Khal	59.08	303	P	P	11 55 16.9	+1.5
	SNR=23						
SATY	Saty	59.11	333	⇑iP	P	11 55 16.2	+0.8
	comp=Z,220nm,0.8s,baz=334						
SATY				eS	S	12 03 15.2	0.0
	comp=Z,196nm,2.8s,baz=334						
SATY	Saty	59.11	333c	iP	P	11 55 16.2	+0.8
SATY				eS	S	12 03 15.1	0.0
SATY				pmax	pmax		
	comp=Z,220nm,0.8s						
SATY				smax	smax		
	comp=E,196nm,2.8s						
ZAK	Zakamensk	59.14	355	eP	P	11 55 15.8	+0.4
ZAK				pmax	pmax		
	comp=Z,212nm,1.4s						
DQM	DQM	59.17	299	P	P	11 55 17.3	+1.3
	SNR=35						
KPKS	Kokpek	59.31	334	⇑iP	P	11 55 17.4	+0.7
	comp=Z,304nm,0.8s,baz=334						
KPKS				eS	S	12 03 17.5	-0.1
	baz=334						
KPKS	Kokpek	59.31	334c	iP	P	11 55 17.4	+0.7
KPKS				eS	S	12 03 17.5	-0.1
KPKS				pmax	pmax		
	comp=Z,304nm,0.8s						
ULHL	Ulahol	59.48	331	P	P	11 55 18.7	+0.7
	SNR=7.3						
WSAR	Wadi Sarin	59.63	303	P	P	11 55 20.1	+0.8
	comp=Z,208nm,0.8s,baz=139,slow=6.5,SNR=80						
WSAR				S	S	12 03 17.4	-4.9
	comp=Z,2.4nm,0.7s,baz=45,slow=15,SNR=1.2						
WSAR	Wadi Sarin	59.63	303	P	P	11 55 20.0	+0.8
	SNR=35						
SOCY	Socotra	59.66	290	P	P	11 55 20.3	+0.7
	SNR=8.0						
SOCY	Socotra	59.66	290	P	P	11 55 20.5	+0.9
SOCY				IAmb	IAmb	11 55 48.0	
	comp=Z,91nm,1.0s						
JMDO	Jabal Madar	59.70	302	P	P	11 55 20.0	+0.3
	SNR=43						
MDOK	Medeo	59.81	332	i P	P	11 55 20.6	+0.3
	baz=333						
MDOK				i S	S	12 03 23.3	-0.9
	baz=333						
MDOK	Medeo	59.81	332	i P	P	11 55 20.5	+0.3
MDOK				i S	S	12 03 23.2	-0.9
MCQ	Macquarie Isla	59.83	150	IAmb	IAmb	11 55 22.0	
	comp=Z,159nm,1.0s						
AAA	Alma-Ata	59.91	332	⇑eP	P	11 55 20.8	0.0
	baz=333						
AAA				eS	S	12 03 23.4	-1.8
	baz=333						
AAA	Alma-Ata	59.91	332c	eP	P	11 55 20.8	0.0
AAA				eS	S	12 03 23.4	-1.8
SMDO	Samad	60.04	303	P	P	11 55 22.3	+0.2
	SNR=38						
SHAO	Shalim	60.12	296	i P	P	11 55 23.7	+1.1
	SNR=6.5						
SHAO	Shalim	60.12	296	P	P	11 55 23.0	+0.4
	SNR=5.3						
ASAJ	Asahikawa	60.16	26	P	P	11 55 22.4	0.0
	comp=Z,26nm,0.6s,baz=221,slow=9.4,SNR=31						
JKA	Kamikawa-asahi	60.16	26	P	P	11 55 21.8	-0.6
JKA				IAmb	IAmb	11 55 23.1	
	comp=Z,303nm,1.9s						
JKA	Kamikawa-asahi	60.16	26	P	P	11 55 08.4	-14
BIDO	Bidbid	60.17	303	P	P	11 55 23.8	+0.9
	SNR=54						
ZSN	Zaisan	60.27	340	⇑iP	P	11 55 24.2	+1.1
	comp=Z,314nm,0.9s,baz=341						
ZSN				i S	S	12 03 30.4	+0.8
	baz=341						
ZSN	Zaisan	60.27	340c	iP	P	11 55 24.2	+1.1
ZSN				i S	S	12 03 30.4	+0.8
ZSN				pmax	pmax		
	comp=Z,314nm,0.9s						
ARXS	Arharly	60.28	334	eP	P	11 55 23.3	0.0
TKM2	Tokmak 2	60.30	331	P	P	11 55 24.2	+0.6
	SNR=40						
UCH	Uchtor	60.30	330	P	P	11 55 24.4	+0.4
	SNR=204						
CHKK	Chushkaly	60.38	333	⇑iP	P	11 55 23.8	-0.1
	baz=334						
TLY	Talaya	60.40	355	P	P	11 55 24.9	+1.0
	comp=Z,46nm,0.7s,baz=191,slow=5.6,SNR=127						
TLY	Talaya	60.40	355	i P	P	11 55 24.9	+1.0
TLY				eS	S	12 03 32.4	+1.3
TLY				e		12 05 05.5	
TLY				pmax	pmax		
	comp=Z,399nm,1.2s						
TLY				MLR	MLR		
	comp=Z,586nm,15.0s						
TLY	Talaya	60.40	355	P	P	11 55 25.2	+1.3
TLY	Talaya	60.40	355	P	P	11 55 25.2	+1.3
KBK	Karagaybulak	60.41	331	P	P	11 55 25.4	+1.0
	SNR=198						
CIT	Chita	60.53	2	eP	P	11 55 25.9	+1.1
CIT				e		11 55 59.5	
CIT				pmax	pmax		
	comp=Z,744nm,1.8s						
MK31	Makanchi Array	60.60	338	P	P	11 55 26.1	+0.7
MK31				pmax	pmax		
	comp=Z,441nm,0.7s						
MK31	Makanchi Array	60.60	338	P	P	11 55 26.1	+0.7
MKAR	Makanchi Array	60.60	338	P	P	11 55 26.1	+0.7
	comp=Z,528nm,0.6s,baz=146,slow=7.5,SNR=3290						
MKAR				S	S	12 03 33.1	-0.9
	comp=Z,3.1nm,1.0s,baz=143,slow=14,SNR=4.0						
MKAR				LR	LR	12 24 17.4	
	comp=Z,680nm,21.1s,baz=144,slow=38						
MKAR				PKPPKP	P'P'df	12 24 44.9	+0.9
	comp=Z,0.1nm,0.4s,baz=59,slow=0.8,SNR=2.8						
MKAR				PKP2bc		12 24 52.2	
	comp=Z,2.0nm,0.9s,baz=354,slow=2.4,SNR=5.7						
DMTO	DMTO	60.61	296	P	P	11 55 26.3	+0.4
	SNR=5.1						
BSY	Bisya	60.61	302	P	P	11 55 26.6	+0.6
	SNR=27						
AAK	Ala-Archa	60.62	330	P	P	11 55 26.5	+0.7
	comp=Z,291nm,1.1s,baz=152,slow=5.6,SNR=306						
AAK				S	S	12 03 29.9	-4.6
	comp=Z,2.2nm,0.7s,baz=184,slow=19,SNR=2.3						
AAK	Ala-Archa	60.62	330	P	P	11 55 26.6	+0.7
	SNR=261						
AAK	Ala-Archa	60.62	330	i P	P	11 55 26.6	+0.7
	SNR=328						
AAK	Ala-Archa	60.62	330c	iP	P	11 55 26.4	+0.7
AAK				pmax	pmax		
	comp=Z,1µm,1.3s						
AAK				MLR	MLR		
	comp=Z,1µm,23.0s						
AAK	Ala-Archa	60.62	330	P	P	11 55 26.5	+0.7
AML	Almayashu	60.64	329	P	P	11 55 26.7	+0.5
	SNR=258						
AML	Almayashu	60.64	329	i P	P	11 55 26.7	+0.5
	SNR=280						
MOY	Mondy	60.64	353	eP	P	11 55 26.9	+1.2
MOY				pmax	pmax		
	comp=Z,497nm,1.8s						
TDK	Taldyqorghan	60.66	335	i P	P	11 55 26.4	+0.5
	baz=335						
TDK				eS	S	12 03 32.5	-2.3
	baz=335						
TDK	Taldyqorghan	60.66	335	i P	P	11 55 26.3	+0.5
TDK				eS	S	12 03 32.4	-2.3
CHGR	Chuyangaron	60.67	324	P	P	11 55 25.1	-0.9
KLR	Kul'dur	60.67	16	P	P	11 55 25.7	-0.1
	comp=Z,140nm,0.9s,baz=214,slow=4.9,SNR=234						
KLR				S	S	12 03 31.2	-3.4
	comp=Z,0.6nm,0.7s,baz=122,slow=24,SNR=1.0						
KLR	Kul'dur	60.67	16c	iP	P	11 55 25.6	-0.2
KLR				pmax	pmax		
	comp=Z,344nm,1.3s						
FRU1	Bishkek	60.68	331	P	P	11 55 26.8	+0.7
FRU1				pmax	pmax		
	comp=Z,703nm,0.9s						
FRU1	Bishkek	60.68	331	P	P	11 55 26.8	+0.7
KUU	Kurty	60.70	332	⇑iP	P	11 55 26.3	+0.1
	baz=333						
KUU				eS	S	12 03 32.6	-2.7
	baz=333						
KUU	Kurty	60.70	332c	iP	P	11 55 26.2	+0.1
KUU				eS	S	12 03 32.6	-2.7
MAKZ	Makanchi	60.73	338	P	P	11 55 26.7	+0.4
MAKZ				pmax	pmax		
	comp=Z,273nm,0.8s						
MAKZ	Makanchi	60.73	338	P	P	11 55 26.7	+0.4
CHMS	Chumysh	60.76	331	P	P	11 55 26.9	+0.3
	SNR=59						
DCZ	Deep Cove	60.87	138	P	P	11 55 28.4	+1.2
DCZ				IAmb	IAmb	11 55 29.8	
	comp=Z,176nm,1.4s						
HOQ	Hoqain	60.88	303	P	P	11 55 28.5	+0.9
	SNR=38						
IRK	Irkutsk	60.91	356	eP	P	11 55 27.3	0.0
IRK				e		11 55 52.7	
IRK				pmax	pmax		
	comp=Z,381nm,1.9s						
EKS2	Erkin-Say	60.99	330	P	P	11 55 29.1	+0.9
	SNR=366						
USP	Ospenovka	61.09	331	P	P	11 55 29.2	+0.4
	SNR=238						
SGDS	Sogindy	61.16	331	⇑iP	P	11 55 29.4	+0.1
	comp=Z,247nm,1.0s,baz=332						
SGDS				eS	S	12 03 39.9	-1.3
	baz=332						
RBK	Rabkut	61.20	295	P	P	11 55 30.8	+0.8
RBK				P	P	11 55 30.9	+0.9
	SNR=17						
ARQ	Araqi	61.43	302	P	P	11 55 33.6	+2.1
	SNR=12						
DGZ	Jazzator, Alta	61.48	343c	iP	P	11 55 32.6	+1.2
DGZ				pmax	pmax		
	comp=Z,1µm,0.7s						
MLZ	Mavora Lakes	61.49	137	P	P	11 55 32.2	+0.7
MLZ				IAmb	IAmb	11 55 32.9	
	comp=Z,96nm,1.1s						
WHZ	Wether Hill Ro	61.54	138	IAmb	IAmb	11 55 33.1	
	comp=Z,74nm,1.1s						
DOK	Doka	61.66	297	P	P	11 55 33.0	0.0
	SNR=25						
WHFO	Wadi Hawf	61.73	296	P	P	11 55 33.8	+0.3
	SNR=21						
SOHO	SOHO	61.75	303	i P	P	11 55 33.5	0.0
	SNR=67						
OPO	Ambohidratompo	61.83	254	P	P	11 55 35.2	+0.7
	comp=Z,19nm,0.8s,baz=75,slow=5.0,SNR=31						
OPO				pP	pP	11 55 59.2	+1.2
	comp=Z,31nm,1.0s,baz=107,slow=6.1,SNR=7.5						
WKZ	Wanaka	61.94	136	IAmb	IAmb	11 55 37.5	
	comp=Z,146nm,1.2s						
ABTO	Aybut	61.95	295	P	P	11 55 36.0	+0.9
	SNR=28						
VOI	Vohitsoka	62.24	250	P	P	11 55 38.7	+1.6
	SNR=8.3						
VOI	Vohitsoka	62.24	250	P	P	11 55 38.3	+1.1
VOI				IAmb	IAmb	11 56 07.6	
	comp=Z,65nm,0.9s						
VOI	Vohitsoka	62.24	250	P	P	11 55 38.2	+1.1
UMZA	Um Al Zommool	62.32	301	P	P	11 55 37.5	+0.2
UOSS	Minazif	62.37	304	i P	P	11 55 37.9	+0.2
	SNR=27						
UOSS	Minazif	62.37	304	P	P	11 55 39.0	+1.3
UOSS	Minazif	62.37	304	P	P	11 55 37.1	-0.6
UOSS				IAmb	IAmb	11 55 40.8	
	comp=Z,205nm,0.8s						
HATD	Hatta, Dubai	62.38	304	i P	P	11 55 38.5	+0.7
	SNR=44						
HATD	Hatta, Dubai	62.38	304	P	P	11 55 38.5	+0.7
	SNR=9.3						
ASHO	Ashiyiah	62.38	304	i P	P	11 55 38.2	+0.4
	SNR=34						
ASHO	Ashiyiah	62.38	304	P	P	11 55 40.3	+2.5
	SNR=9.2						
TAS	Tashkent	62.39	326	P	P	11 55 38.2	+0.7
TAS				pmax	pmax		
	comp=Z,477nm,0.8s						
TAS	Tashkent	62.39	326	P	P	11 55 38.1	+0.7
DZA	Taraz	62.39	329	eP	P	11 55 36.2	-1.3
	baz=329						
DZA				eS	S	12 03 54.1	-2.7
	baz=329						
DZA	Taraz	62.39	329	eP	P	11 55 36.2	-1.3
DZA				eS	S	12 03 54.0	-2.7
MDH	Madha	62.44	304	i P	P	11 55 38.0	-0.2
	SNR=22						
MDH	Madha	62.44	304	P	P	11 55 39.4	+1.3
HRA	Herat	62.45	316	P	P	11 55 37.1	-1.2
YSS	Yuzh-Sakhalins	62.49	25α	iP	P	11 55 38.2	+0.2
YSS				e*SP	pP	11 56 05.9	+3.5
YSS				eS	S	12 03 56.3	-1.3
YSS				pmax	pmax		
	comp=Z,120nm,1.7s						
YSS				pmax	pmax		
	comp=Z,800nm,2.4s						
YSS				pmax	pmax		
	comp=N,300nm,4.1s						
YSS				pmax	pmax		
	comp=E,300nm,2.2s						
YSS				MLR	MLR		
	comp=Z,400nm,15.0s						
YSS	Yuzh-Sakhalins	62.49	25	P	P	11 55 38.2	+0.2
YSS				IAmb	IAmb	11 55 39.6	
	comp=Z,459nm,1.7s						
YSS	Yuzh-Sakhalins	62.49	25	P	P	11 55 39.0	+1.0
IUG	Iuzhnay	62.55	327	⇑iP	P	11 55 38.8	0.0
	baz=328						

IUG	**Iuzhnay**	**62.55**	**327**	*c i*P	**P**	**11 55 38.7**	**0.0**
MSFE	**Esma-Masafi**	**62.58**	**304**	*i* P	**P**	**11 55 40.0**	**+0.9**
	SNR=17						
MASF	**Masafi**	**62.59**	**304**	P	**P**	**11 55 41.1**	**+1.9**
	SNR=5.7						
LBZ	**Lake Benmore**	**62.62**	**136**	IAmb	IAmb	11 55 40.6	
	comp=Z,152nm,1.4s						
BTLS	**Baital**	**62.64**	**332**	⇑*i*P	**P**	**11 55 39.0**	**-0.1**
	comp=Z,91nm,0.9s,baz=333						
BTLS				*e*S	**S**	**12 03 55.2**	**-4.4**
	baz=333						
BTLS	**Baital**	**62.64**	**332**	*c i*P	**P**	**11 55 38.9**	**-0.1**
BTLS				*e*S	**S**	**12 03 55.2**	**-4.4**
BTLS				pmax	pmax		
	comp=Z,91nm,0.9s						
BANOM	**Banah**	**62.71**	**305**	P	**P**	**11 55 40.5**	**+0.5**
BANOM	**Banah**	**62.71**	**305**	P	**P**	**11 55 41.2**	**+1.1**
FAQ	**Al Faqa, Dubai**	**62.79**	**303**	*i* P	**P**	**11 55 40.6**	**+0.1**
	SNR=90						
FAQ	**Al Faqa, Dubai**	**62.79**	**303**	P	**P**	**11 55 41.3**	**+0.8**
	SNR=14						
ASUD	**Al Ashush, Dub**	**62.95**	**303**	*i* P	**P**	**11 55 42.0**	**+0.4**
	SNR=29						
ASUD	**Al Ashush, Dub**	**62.95**	**303**	P	**P**	**11 55 44.4**	**+2.9**
	SNR=9.3						
KK31	**Karatay Array**	**62.97**	**328**	P	**P**	**11 55 41.0**	**-0.4**
KK31				pmax	pmax		
	comp=Z,170nm,1.2s						
KK31	**Karatay Array**	**62.97**	**328**	P	**P**	**11 55 41.0**	**-0.4**
KK31				IAmb	IAmb	11 55 43.9	
	comp=Z,170nm,1.2s						
KKAR	**Karatay Array**	**62.97**	**328**	P	**P**	**11 55 41.0**	**-0.4**
KKAR	**Karatay Array**	**62.97**	**328**	P	**P**	**11 55 41.0**	**-0.4**
RPZ	**Rata Peaks**	**63.05**	**135**	P	**P**	**11 55 42.2**	**+0.3**
RPZ				IAmb	IAmb	11 55 43.6	
	comp=Z,154nm,1.0s						
UMQ	**Umm Al-Quwin**	**63.06**	**304**	P	**P**	**11 55 44.3**	**+2.1**
BRLS	**Borolday**	**63.27**	**328**	*e*P	**P**	**11 55 42.2**	**-1.1**
	baz=328						
BRLS	**Borolday**	**63.27**	**328**	*e*P	**P**	**11 55 42.2**	**-1.1**
OUZ	**Omahuta**	**63.29**	**125**	P	**P**	**11 55 42.2**	**-1.4**
GRNR	**Gornyy**	**63.41**	**18**	⇑*i*P	**P**	**11 55 44.7**	**+0.6**
GRNR				*e*S	**S**	**12 04 14.0**	**+4.9**
GRNR				pmax	pmax		
	comp=N,20nm,1.1s						
GRNR				pmax	pmax		
	comp=Z,40nm,1.1s						
GRNR				smax	smax		
	comp=N,2.0nm,0.6s						
GRNR				MLR	MLR		
	comp=E,110nm,15.0s						
GRNR				MLR	MLR		
	comp=N,100nm,12.0s						
KUR	**Kuril'sk**	**63.43**	**29**	⇑*e*P	**P**	**11 55 44.5**	**+0.2**
OXZ	**Oxford**	**63.65**	**134**	P	**P**	**11 55 45.1**	**-0.8**
LTZ	**Lake Taylor**	**63.69**	**134**	P	**P**	**11 55 45.4**	**-0.8**
MZWR	**Madinat Zayed**	**63.81**	**302**	P	**P**	**11 55 50.2**	**+3.0**
ZEA	**Zeya**	**63.83**	**11**	*ce*P	**P**	**11 55 47.8**	**+1.0**
ZEA				*e*		11 58 10.1	
ZEA				*e*S	**S**	**12 04 15.1**	**+1.0**
ZEA				*e*		12 04 40.9	
ZEA				*e*		12 05 32.2	
ZEA				*e*SS	**SS**	**12 08 24.1**	**-0.3**
ZEA				pmax	pmax		
	comp=N,300nm,1.6s						
ZEA				pmax	pmax		
	comp=E,100nm,1.6s						
ZEA				pmax	pmax		
	comp=Z,400nm,1.6s						
ZEA				pmax	pmax		
	comp=E,60nm,1.4s						
ZEA				pmax	pmax		
	comp=N,150nm,1.3s						
ZEA				pmax	pmax		
	comp=Z,260nm,1.3s						
ZEA				pmax	pmax		
	comp=Z,100nm,13.0s						
ZEA				smax	smax		
	comp=Z,200nm,5.2s						
ZEA				smax	smax		
	comp=E,100nm,8.0s						
ZEA				smax	smax		
	comp=N,300nm,10.7s						
ZEA				MLR	MLR		
	comp=N,200nm,14.0s						
ZEA				MLR	MLR		
	comp=Z,200nm,14.0s						
UGL	**Uglegorsk**	**63.93**	**23**	*e*P	**P**	**11 55 48.2**	**+0.7**
UGL				*e*S	**S**	**12 04 18.0**	**+2.5**
UGL				pmax	pmax		
	comp=Z,100nm,1.8s						
UGL				MLR	MLR		
	comp=Z,2µm,15.0s						
UGL				MLR	MLR		
	comp=E,700nm,14.0s						
MQZ	**McQueen's Vall**	**64.17**	**134**	IAmb	IAmb	11 56 36.8	
	comp=Z,133nm,1.5s						
SEM	**Semipalatinsk**	**64.38**	**339**	⇑*i*P	**P**	**11 55 50.7**	**-0.1**
	comp=Z,294nm,0.8s,baz=340						
SEM	**Semipalatinsk**	**64.38**	**339**	*c i*P	**P**	**11 55 50.6**	**-0.1**
SEM				pmax	pmax		
	comp=Z,294nm,0.8s						
KHZ	**Kahutara**	**64.52**	**133**	IAmb	IAmb	11 55 53.0	
	comp=Z,115nm,1.2s						
GHWR	**Ruwais**	**64.74**	**302**	P	**P**	**11 55 53.8**	**+0.5**
KURBB	**Kurchatov Arra**	**65.17**	**338**	P	**P**	**11 55 56.0**	**+0.5**
	comp=Z,255nm,1.0s,baz=153,slow=5.0,SNR=691						
KURBB				S	**S**	**12 04 26.9**	**-3.8**
	comp=Z,0.7nm,0.3s,baz=108,slow=9.1,SNR=5.1						
KURK	**Kurchatov**	**65.22**	**338**	*c i*P	**P**	**11 55 56.2**	**+0.4**
KURK				pmax	pmax		
	comp=Z,647nm,1.3s						
KURK	**Kurchatov**	**65.22**	**338**	P	**P**	**11 55 56.4**	**+0.6**
TYV	**Tymovskoe**	**65.61**	**22**	*e*P	**P**	**11 55 59.3**	**+1.0**
TYV				pmax	pmax		
	comp=Z,33nm,1.6s						
TYV				pmax	pmax		
	comp=Z,600nm,4.3s						
SLWR	**Sila**	**65.78**	**301**	P	**P**	**11 56 02.5**	**+2.5**
ZALV	**Zalesovo Beam**	**66.01**	**344**	P	**P**	**11 56 01.0**	**+0.1**
	comp=Z,314nm,0.8s,baz=128,slow=4.5,SNR=1052						
ZALV				S	**S**	**12 04 35.0**	**-5.8**
	comp=Z,3.6nm,0.9s,baz=147,slow=8.5,SNR=7.3						
ZALV				PKP2bc		12 24 37.2	
	comp=Z,5.0nm,1.0s,baz=316,slow=4.1,SNR=9.2						
ZALV				LR	LR	12 27 00.7	
	comp=Z,415nm,19.9s,baz=145,slow=38						
ZALV	**Zalesovo Beam**	**66.01**	**344**	P	**P**	**11 56 01.0**	**+0.1**
KRAR	**Krasnoyarsk**	**66.07**	**349**	*ce*P	**P**	**11 56 02.5**	**+1.3**
BKZ	**Black Stump Fm**	**66.16**	**129**	P	**P**	**11 56 02.3**	**0.0**
BKZ				IAmb	IAmb	11 56 03.9	
	comp=Z,114nm,1.1s						
BKZ	**Black Stump Fm**	**66.16**	**129**	P	**P**	**11 56 03.2**	**+0.9**
BFZ	**Birch Farm**	**66.20**	**131**	IAmb	IAmb	11 56 04.3	
	comp=Z,176nm,1.3s						
MSVF	**Nonsavu**	**66.31**	**106**	P	**P**	**11 56 04.6**	**+0.9**
MSVF				pmax	pmax		
	comp=Z,52nm,1.0s						
MSVF	**Nonsavu**	**66.31**	**106**	P	**P**	**11 56 04.6**	**+0.9**
MSVF	**Nonsavu**	**66.31**	**106**	P	**P**	**11 56 06.3**	**+2.6**
BOD	**Bodaibo**	**66.35**	**2**	*e*P	**P**	**11 56 03.2**	**+0.3**
BOD				pmax	pmax		
	comp=Z,467nm,1.5s						
TRNA	**Turayna**	**66.43**	**302**	P	**P**	**11 56 04.3**	**+0.1**
MAW	**Mawson**	**66.73**	**198**	P	**P**	**11 56 05.8**	**+0.5**
	comp=Z,52nm,0.7s,baz=60,slow=6.1,SNR=88						
MAW				LR	LR	12 17 52.0	
	comp=Z,217nm,22.0s,baz=54,slow=29						
MAW	**Mawson**	**66.73**	**198**	P	**P**	**11 56 05.8**	**+0.5**
	baz=67,SNR=83						
MAW	**Mawson**	**66.73**	**198**	P	**P**	**11 56 05.8**	**+0.5**
MAW				pmax	pmax		
	comp=Z,37nm,1.3s						
MAW	**Mawson**	**66.73**	**198**	P	**P**	**11 56 05.8**	**+0.5**
BRZS	**Berezniki**	**66.97**	**335**	⇑*i*P	**P**	**11 56 07.8**	**+0.7**
	comp=Z,249nm,1.3s,baz=335						
BRZS	**Berezniki**	**66.97**	**335**	*c i*P	**P**	**11 56 07.8**	**+0.7**
BRZS				pmax	pmax		
	comp=Z,249nm,1.3s						
SHMA	**Al-Shehemyia**	**67.07**	**303**	P	**P**	**11 56 09.9**	**+1.7**
GEYT	**Alibeck**	**67.18**	**317**	P	**P**	**11 56 09.5**	**+0.8**
	comp=Z,211nm,0.9s,baz=171,slow=10,SNR=135						
GEYT				S	**S**	**12 04 50.2**	**-5.5**
	comp=Z,1.5nm,0.4s,baz=92,slow=25,SNR=1.5						
GEYT				LR	LR	12 29 43.7	
	comp=Z,80nm,18.8s,baz=65,slow=40						
DGTI	**Dogotuki**	**67.98**	**104**	P	**P**	**11 56 15.9**	**+1.7**
LKBA	**Tubou, Lakemba**	**69.28**	**106**	P	**P**	**11 56 23.7**	**+1.5**
ATD	**Arta Tunnel**	**69.99**	**286**	P	**P**	**11 56 27.7**	**+1.0**
	comp=Z,10nm,0.8s,baz=108,slow=20,SNR=2.2						
ATD				S	**S**	**12 05 31.0**	**+1.2**
	comp=Z,3.5nm,0.3s,baz=244,slow=22,SNR=1.6						
BVAR	**Borovoye Array**	**70.20**	**336**	P	**P**	**11 56 27.4**	**+0.3**
	comp=Z,51nm,0.6s,baz=186,slow=13,SNR=282						
BRVK	**Borovoye**	**70.27**	**336**	*c i*P	**P**	**11 56 27.8**	**+0.3**
BRVK				pmax	pmax		
	comp=Z,149nm,1.3s						
BRVK	**Borovoye**	**70.27**	**336**	P	**P**	**11 56 27.9**	**+0.4**
BRVK				IAmb	IAmb	11 56 29.3	
	comp=Z,321nm,1.6s						
QRN	**Al-Qurain**	**70.67**	**304**	*e*P	**P**	**11 56 30.3**	**-0.1**
RAYN	**Ar Rayn**	**70.89**	**299**	*i* P	**P**	**11 56 32.2**	**+0.1**
	SNR=10						
RAYN	**Ar Rayn**	**70.89**	**299**	P	**P**	**11 56 32.4**	**+0.4**
RAYN				pmax	pmax		
	comp=Z,63nm,0.7s						
RAYN	**Ar Rayn**	**70.89**	**299**	P	**P**	**11 56 32.4**	**+0.4**
RAYN				IAmb	IAmb	11 56 37.3	
	comp=Z,63nm,0.7s						
KBD	**Kabd**	**71.01**	**305**	*e*P	**P**	**11 56 32.8**	**+0.2**
RDF	**Al-Radifah**	**71.03**	**305**	*e*P	**P**	**11 56 32.1**	**-0.6**
UMR	**Umm Al-Rimmam**	**71.13**	**305**	*e*P	**P**	**11 56 33.2**	**0.0**
SKR	**Severo-Kuril's**	**71.20**	**29**	*e*P	**P**	**11 56 29.0**	**-4.2**
SKR				*e**PP	**PcP**	**11 56 54.3**	**+1.7**
SKR				*e*S	**S**	**12 05 42.8**	**+0.5**
SKR				pmax	pmax		
	comp=Z,300nm,3.6s						
SKR				pmax	pmax		
	comp=Z,59nm,1.5s						
SKR				pmax	pmax		
	comp=Z,100nm,4.0s						
SKR				MLR	MLR		
	comp=Z,100nm,19.0s						
MIB	**Mutribah**	**71.53**	**305**	*e*P	**P**	**11 56 35.5**	**-0.2**
KIBK	**Kibwezi**	**72.08**	**270**	P	**P**	**11 56 41.0**	**+1.5**
	SNR=12						
KIBK	**Kibwezi**	**72.08**	**270**	P	**P**	**11 56 40.7**	**+1.3**
YAK	**Yakutsk**	**72.11**	**9**	P	**P**	**11 56 38.2**	**-0.1**
	comp=Z,142nm,0.8s,baz=160,slow=18,SNR=116						
YAK				S	**S**	**12 05 49.9**	**-2.5**
	comp=Z,2.7nm,0.4s,baz=102,slow=22,SNR=9.1						
YAK	**Yakutsk**	**72.11**	**9**	*c i*P	**P**	**11 56 38.3**	**-0.1**
YAK				*e*		11 56 55.9	
YAK				*e*		11 59 19.8	
YAK				*e*PPP	PPP	12 01 04.2	
YAK				*e*S	**S**	**12 05 53.6**	**+1.2**
YAK				*e*		12 06 26.7	
YAK				*e**SS	**sS**	**12 06 37.5**	**+1.5**
YAK				*e*SS	**SS**	**12 10 26.9**	**-4.9**
YAK				pmax	pmax		
	comp=Z,278nm,0.8s						
YAK				pmax	pmax		
	comp=N,90nm,1.2s						
YAK				pmax	pmax		
	comp=E,39nm,1.4s						
YAK				pmax	pmax		
	comp=Z,162nm,3.7s						
YAK				pmax	pmax		
	comp=N,59nm,2.3s						
YAK				pmax	pmax		
	comp=E,77nm,2.8s						
YAK				smax	smax		
	comp=E,142nm,2.1s						
YAK				smax	smax		
	comp=N,121nm,2.5s						
YAK	**Yakutsk**	**72.11**	**9**	P	**P**	**11 56 38.5**	**+0.1**
YAK				IAmb	IAmb	11 56 39.5	
	comp=Z,357nm,0.9s						
ABKAR	**Akbulak array**	**72.53**	**328**	P	**P**	**11 56 42.0**	**+0.7**
ABKAR	**Akbulak array**	**72.53**	**328**	IAmb	IAmb	11 56 44.2	
	comp=Z,469nm,0.9s						
KMBO	**Kilima Mbogo**	**73.04**	**271**	P	**P**	**11 56 46.7**	**+1.4**
	comp=Z,18nm,0.9s,baz=70,slow=7.3,SNR=27						
KMBO				pP	**pwP**	**11 57 11.8**	**-1.6**
	comp=Z,33nm,1.1s,baz=79,slow=5.6,SNR=7.3						
KMBO	**Kilima Mbogo**	**73.04**	**271**	*i* P	**P**	**11 56 47.2**	**+1.8**
	SNR=14						
KMBO	**Kilima Mbogo**	**73.04**	**271**	P	**P**	**11 56 46.0**	**+0.7**
PEA0B	**Petropavlovsk-**	**73.53**	**28**	*c i*P	**P**	**11 56 47.1**	**0.0**
PETK	**Petropavlovsk-**	**73.53**	**28**	P	**P**	**11 56 46.5**	**-0.5**
	comp=Z,53nm,0.9s,baz=206,slow=2.2,SNR=59						
PETK				LR	LR	12 32 14.7	
	comp=Z,103nm,19.1s,baz=224,slow=38						
VNDA	**Vanda**	**73.73**	**170**	P	**P**	**11 56 47.9**	**0.0**
	comp=Z,46nm,0.9s,baz=309,slow=5.9,SNR=207						
VNDA				LR	LR	12 27 27.3	
	comp=Z,175nm,20.4s,baz=334,slow=34						
PET	**Petropavlovsk**	**73.92**	**28**	⇑*i*P	**P**	**11 56 49.5**	**+0.2**
PET				*e*		11 57 00.9	
PET				*e*S	**S**	**12 06 14.4**	**+1.2**
PET				*e*SS	**SS**	**12 10 55.4**	**-4.4**
PET				pmax	pmax		
	comp=Z,94nm,0.7s						
PET				pmax	pmax		
	comp=Z,300nm,13.7s						
PET				pmax	pmax		
	comp=Z,500nm,12.2s						
PET	**Petropavlovsk**	**73.92**	**28**	P	**P**	**11 56 49.5**	**+0.2**
PET	**Petropavlovsk**	**73.92**	**28**	P	**P**	**11 56 49.7**	**+0.4**
	comp=Z,330nm,0.7s						
LKRN	**Lenkeran, Azer**	**73.99**	**314**	P	**P**	**11 56 50.1**	**0.0**
AKTO	**Aktyubinsk**	**74.24**	**328**	P	**P**	**11 56 51.7**	**+0.5**
	comp=Z,103nm,0.7s,baz=102,slow=3.6,SNR=248						
AKTO				S	**SKiKP**	**12 06 12.7**	**+3.6**
	comp=Z,5.4nm,0.8s,baz=314,slow=19,SNR=13						
SBA	**Scott Base**	**74.79**	**169**	P	**P**	**11 56 54.6**	**+0.6**
SBA				pmax	pmax		
	comp=Z,58nm,1.0s						
SBA	**Scott Base**	**74.79**	**169**	P	**P**	**11 56 54.6**	**+0.6**
SYO	**Syowa Base**	**75.06**	**201**	⇓*i*P	**P**	**11 56 55.9**	**+0.2**
SYO	**Syowa Base**	**75.06**	**201**	⇓*e*PcP	**PcP**	**11 57 08.2**	**-0.7**
SYO	**Syowa Base**	**75.06**	**201**	⇑*e*pP	pP	11 57 18.6	-1.3
MA2	**Magadan**	**75.32**	**20**	P	**P**	**11 56 57.8**	**+0.6**
	comp=Z,56nm,0.9s,baz=206,slow=8.1,SNR=19						
MA2	**Magadan**	**75.32**	**20**	*c i*P	**P**	**11 56 57.7**	**+0.4**
MA2				pmax	pmax		
	comp=Z,160nm,1.7s						
MA2	**Magadan**	**75.32**	**20**	P	**P**	**11 56 57.6**	**+0.4**
MA2				IAmb	IAmb	11 56 59.4	
	comp=Z,205nm,1.4s						
MA2	**Magadan**	**75.32**	**20**	P	**P**	**11 56 58.4**	**+1.1**
MNGR	**Mingechevir, A**	**76.05**	**316**	P	**P**	**11 57 02.3**	**+0.5**
SEKA	**Sheki**	**76.15**	**316**	P	**P**	**11 57 02.9**	**+0.4**
MOPA	**Mopani**	**76.42**	**248**	*e*P	**P**	**11 57 05.3**	**+0.9**
MOPA	**Mopani**	**76.42**	**248**	*e*P	**P**	**11 57 05.4**	**+1.0**
MOPA	**Mopani**	**76.42**	**248**	*e*P	**P**	**11 57 05.4**	**+1.0**
NAX	**Nakhchivan**	**76.52**	**314**	P	**P**	**11 57 05.1**	**+0.4**
GANJ	**Ganja**	**76.52**	**315**	P	**P**	**11 57 04.9**	**+0.3**
MAK	**Makhachkala**	**76.69**	**318**	*e*P	**P**	**11 57 03.6**	**-1.8**
MAK				*e*		11 57 17.3	
MAK				*e**SP	**pP**	**11 57 31.6**	**+1.0**
MAK				*e*		11 59 54.9	
MAK				*e*PPP	PPP	12 01 45.1	
MAK				*e*S	**S**	**12 06 44.9**	**+0.6**
MAK				*e**SS	**pS**	**12 07 16.7**	**+1.3**
MAK				*e*SS	**SS**	**12 11 36.9**	**-5.4**
MAK				pmax	pmax		
	comp=Z,236nm,0.9s						
ZKTA	**Zakatala**	**76.72**	**316**	P	**P**	**11 57 06.6**	**+0.9**
SVE	**Sverdlovsk**	**76.90**	**335**	*d i*P	**P**	**11 57 07.1**	**+0.8**
SVE				*e*S	**S**	**12 06 43.5**	**-2.6**
SVE				pmax	pmax		
	comp=Z,154nm,0.9s						
KSLA	**Kassala**	**76.94**	**288**	*i* P	**P**	**11 57 09.3**	**+1.8**
KSLA				*i*		11 57 21.5	
	baz=60,slow=5.1						
DDFL	**Dedoflistskaro**	**76.99**	**316**	P	**P**	**11 57 10.8**	**+3.5**
LGD	**Lagodekhi**	**77.06**	**316**	P	**P**	**11 57 08.9**	**+1.3**
GNI	**Garni**	**77.44**	**314**	P	**P**	**11 57 10.4**	**+0.6**
	comp=Z,51nm,0.9s,baz=126,slow=14,SNR=9.6						
GNI				S	**S**	**12 06 49.7**	**-3.2**
	comp=Z,7.2nm,0.4s,baz=36,slow=22,SNR=1.2						
GNI	**Garni**	**77.44**	**314**	P	**P**	**11 57 09.4**	**-0.5**
GNI	**Garni**	**77.44**	**314**	*ce*P	**P**	**11 57 10.9**	**+1.0**
GNI				pmax	pmax		
	comp=Z,90nm,1.0s						
GNI	**Garni**	**77.44**	**314**	P	**P**	**11 57 10.9**	**+1.0**
GNI	**Garni**	**77.44**	**314**	P	**P**	**11 57 10.2**	**+0.3**
GNI				IAmb	IAmb	11 57 14.4	
	comp=Z,122nm,1.2s						
ARU	**Arti**	**77.55**	**333**	P	**P**	**11 57 09.9**	**0.0**
	comp=Z,34nm,0.9s,baz=126,slow=3.5,SNR=87						
ARU				S	**S**	**12 06 46.2**	**-7.0**
	comp=Z,0.8nm,0.2s,baz=281,slow=22,SNR=1.6						
ARU	**Arti**	**77.55**	**333**	*c i*P	**P**	**11 57 10.2**	**+0.3**
ARU						12 00 03.0	
ARU				S	**S**	**12 06 57.5**	**+4.4**
ARU				SS	**SS**	**12 11 56.7**	**+2.0**
ARU				pmax	pmax		
	comp=Z,166nm,1.1s						
ARU				MLR	MLR		
	comp=Z,465nm,21.0s						
ARU	**Arti**	**77.55**	**333**	P	**P**	**11 57 10.0**	**0.0**
ARU				IAmb	IAmb	11 57 11.5	
	comp=Z,168nm,1.1s						
MSNA	**Messina**	**77.77**	**249**	*e*P	**P**	**11 57 13.4**	**+1.3**
MSNA	**Messina**	**77.77**	**249**	*e*P	**P**	**11 57 13.3**	**+1.3**
MSNA	**Messina**	**77.77**	**249**	*e*P	**P**	**11 57 13.3**	**+1.3**
GROC	**Groznyy**	**77.93**	**318**	*e*P	**P**	**11 57 12.6**	**+0.3**
GROC				*e*		11 57 22.7	
GROC				*e**SP	**sP**	**11 57 43.5**	**-4.3**
GROC				*e*		12 00 10.8	
GROC				*e*S	**S**	**12 07 02.8**	**+5.1**
GROC				*e**SS	**pS**	**12 07 35.0**	**+6.1**
GROC				pmax	pmax		
	comp=Z,209nm,1.0s						
SIRT	**Sirnak**	**78.13**	**311**	P	**P**	**11 57 13.0**	**-0.7**
SIRT				IAmb	IAmb	11 57 25.1	
	comp=Z,202nm,0.8s						
KZRT	**Kazreti**	**78.15**	**315**	P	**P**	**11 57 14.6**	**+0.9**
SEY	**Seymchan**	**78.34**	**18**	P	**P**	**11 57 14.5**	**+0.3**
	comp=Z,35nm,0.6s,baz=211,slow=3.6,SNR=176						
GUDG	**Gudauri**	**78.52**	**316**	P	**P**	**11 57 18.4**	**+2.5**
BGD	**Bogdanovka**	**78.66**	**315**	P	**P**	**11 57 20.9**	**+4.2**
AKH	**Akhalkalaki**	**78.79**	**315**	⇑P	**P**	**11 57 18.7**	**+1.3**
AKH	**Akhalkalaki**	**78.79**	**315**	P	**P**	**11 57 19.1**	**+1.7**
GURO	**Guroymak-BITLI**	**78.80**	**312**	P	**P**	**11 57 18.4**	**+0.9**
GURO				IAmb	IAmb	11 57 21.8	
	comp=Z,86nm,0.7s						
ZEI	**Tsey**	**79.04**	**317**	*e*P	**P**	**11 57 19.3**	**+0.6**
ZEI				pmax	pmax		
	comp=Z,50nm,1.5s						
ONI	**Oni**	**79.27**	**316**	P	**P**	**11 57 23.9**	**+4.1**
ONI	**Oni**	**79.27**	**316**	IAmb	IAmb	11 58 07.3	
	comp=Z,197nm,1.9s						
MATP	**Matopo**	**79.35**	**251**	*e*P	**P**	**11 57 21.9**	**+1.0**
MATP	**Matopo**	**79.35**	**251**	*e*P	**P**	**11 57 22.0**	**+1.1**
MATP	**Matopo**	**79.35**	**251**	*e*P	**P**	**11 57 22.0**	**+1.1**
NRIK	**Noril'sk**	**79.43**	**352**	P	**P**	**11 57 20.1**	**+0.1**
	comp=Z,50nm,0.8s,baz=145,slow=5.2,SNR=65						
NRIK				PP	**PP**	**12 00 21.3**	**-0.3**
	comp=Z,13nm,0.9s,baz=142,slow=5.5,SNR=4.2						
NRIK				S	**S**	**12 07 07.5**	**-5.3**
	comp=Z,0.6nm,0.3s,baz=6.3,slow=16,SNR=1.3						
NRIK				LR	LR	12 36 26.7	
	comp=Z,396nm,18.4s,baz=170,slow=38						
NRIK	**Noril'sk**	**79.43**	**352**	*ce*P	**P**	**11 57 19.7**	**-0.3**
NRIK				pmax	pmax		
	comp=Z,109nm,1.0s						
NRIK	**Noril'sk**	**79.43**	**352**	IAmb	IAmb	11 57 21.4	
	comp=Z,86nm,0.9s						
NCK	**Nalchik**	**79.52**	**317**	⇓*e*P	**P**	**11 57 21.0**	**-0.1**
NCK				pmax	pmax		
	comp=Z,137nm,0.8s						
MBAR	**Mbarara**	**79.56**	**271**	S	**S**	**12 07 16.3**	**-0.3**
	comp=Z,3.8nm,0.2s,baz=329,slow=8.0,SNR=1.2						
MBAR	**Mbarara**	**79.56**	**271**	*ce*P	**P**	**11 57 24.1**	**+1.9**
MBAR	**Mbarara**	**79.56**	**271**	P	**P**	**11 57 24.1**	**+1.9**
MBAR	**Mbarara**	**79.56**	**271**	P	**P**	**11 57 23.6**	**+1.4**
MBAR				IAmb	IAmb	11 57 51.3	
	comp=Z,88nm,0.9s						
NEY	**Neytrino**	**80.01**	**317**	⇑*e*P	**P**	**11 57 25.5**	**+1.5**
NEY				pmax	pmax		
	comp=Z,32nm,1.0s						
KBZ	**Khabaz**	**80.07**	**317**	P	**P**	**11 57 25.0**	**+0.9**
	comp=Z,76nm,0.9s,baz=192,slow=24,SNR=26						
KBZ	**Khabaz**	**80.07**	**317**	*c i*P	**P**	**11 57 24.9**	**+0.9**
KBZ				pmax	pmax		
	comp=Z,124nm,1.0s						
BCA	**Borcka**	**80.11**	**315**	⇑P	**P**	**11 57 24.7**	**+0.3**
LSZ	**Lusaka**	**80.17**	**256**	P	**P**	**11 57 25.8**	**+0.5**
LSZ				pmax	pmax		
	comp=Z,57nm,0.9s						
LSZ	**Lusaka**	**80.17**	**256**	*e*P	**P**	**11 57 26.8**	**+1.4**
LSZ	**Lusaka**	**80.17**	**256**	*e*P	**P**	**11 57 26.8**	**+1.4**
LSZ	**Lusaka**	**80.17**	**256**	P	**P**	**11 57 25.8**	**+0.5**
KVAR	**Kislovodsk Arr**	**80.29**	**317**	P	**P**	**11 57 27.5**	**+2.1**
	comp=Z,16nm,0.7s,baz=128,slow=16,SNR=5.1						
KIV	**Kislovodsk**	**80.30**	**317**	⇑P	**P**	**11 57 26.3**	**+0.9**
KIV	**Kislovodsk**	**80.30**	**317**	*i* P	**P**	**11 57 25.5**	**+0.1**
	SNR=9.6						
KIV	**Kislovodsk**	**80.30**	**317**	*e*P	**P**	**11 57 26.1**	**+0.7**
KIV				*e*S	**S**	**12 07 25.6**	**+2.5**
KIV				pmax	pmax		
	comp=Z,74nm,3.0s						
KIV				pmax	pmax		
	comp=Z,80nm,1.0s						
KIV	**Kislovodsk**	**80.30**	**317**	P	**P**	**11 57 26.1**	**+0.7**
KIV	**Kislovodsk**	**80.30**	**317**	P	**P**	**11 57 25.0**	**-0.3**
GOF	**Gofitskoye**	**80.48**	**318**	⇑*e*P	**P**	**11 57 27.3**	**+1.1**
GOF				pmax	pmax		
	comp=Z,177nm,1.0s						
JAWL	**J.Aulia**	**80.62**	**287**	*i* P	**P**	**11 57 28.9**	**+1.3**
ASF	**Jabal al Asfar**	**80.77**	**305**	P	**P**	**11 57 29.7**	**+1.5**
	comp=Z,138nm,0.8s,baz=104,slow=3.1,SNR=37						
ASF				pP	**pP**	**11 57 54.6**	**+1.2**
	comp=Z,60nm,0.9s,baz=102,slow=0.6,SNR=4.4						
BELG	**Belogornoye**	**80.80**	**327**	P	**P**	**11 57 28.2**	**+0.5**
	comp=Z,335nm,0.8s,baz=168,slow=12,SNR=100						
BELG				S	**S**	**12 07 22.7**	**-5.1**
	comp=Z,14nm,1.0s,baz=153,slow=20,SNR=1.9						
BELG	**Belogornoye**	**80.80**	**327**	*c i*P	**P**	**11 57 27.9**	**+0.2**
BELG				pmax	pmax		
	comp=Z,90nm,1.0s						
TIXI	**Tiksi**	**81.11**	**6**	P	**P**	**11 57 28.7**	**-0.2**
	comp=Z,121nm,0.9s,baz=163,slow=0.3,SNR=171						
TIXI				PP	**PP**	**12 00 34.4**	**-1.1**
	comp=Z,21nm,1.1s,baz=189,slow=3.3,SNR=5.2						
TIXI				S	S	12 07 20.5	-10
	comp=Z,0.5nm,0.2s,baz=256,slow=2.2,SNR=1.0						
TIXI	**Tiksi**	**81.11**	**6**	*c i*P	**P**	**11 57 28.6**	**-0.4**
TIXI				pmax	pmax		
	comp=Z,133nm,0.9s						
TIXI	**Tiksi**	**81.11**	**6**	P	**P**	**11 57 28.8**	**-0.2**
TIXI				IAmb	IAmb	11 57 29.9	
	comp=Z,124nm,0.9s						
QSPA	**South Pole Qui**	**81.31**	**180**	P	**P**	**11 57 30.9**	**+0.4**
QSPA				IAmb	IAmb	11 57 32.2	
	comp=Z,388nm,1.4s						
MALT	**Malatya**	**81.39**	**311**	P	**P**	**11 57 32.7**	**+1.4**
BOSA	**Boshof**	**81.54**	**242**	P	**P**	**11 57 33.5**	**+1.0**
	comp=Z,53nm,0.8s,baz=113,slow=4.1,SNR=104						
BOSA				pP	**pP**	**11 57 58.8**	**+1.8**
	comp=Z,29nm,0.9s,baz=86,slow=4.2,SNR=5.5						
BOSA				LR	LR	12 27 06.4	
	comp=Z,279nm,20.9s,baz=142,slow=31						
BOSA	**Boshof**	**81.54**	**242**	*e*P	**P**	**11 57 33.5**	**+1.0**
BOSA	**Boshof**	**81.54**	**242**	*e*P	**P**	**11 57 33.5**	**+1.0**
BOSA	**Boshof**	**81.54**	**242**	P	**P**	**11 57 32.6**	**+0.2**
LBTB	**Lobatse**	**81.58**	**246**	P	**P**	**11 57 33.7**	**+1.0**
LBTB				pmax	pmax		
	comp=Z,87nm,1.2s						
LBTB	**Lobatse**	**81.58**	**246**	*e*P	**P**	**11 57 33.9**	**+1.3**
LBTB	**Lobatse**	**81.58**	**246**	*e*P	**P**	**11 57 34.0**	**+1.3**
LBTB	**Lobatse**	**81.58**	**246**	*e*P	**P**	**11 57 34.0**	**+1.3**
LBTB	**Lobatse**	**81.58**	**246**	P	**P**	**11 57 33.7**	**+1.0**
EIL	**Elat**	**81.71**	**302**	P	**P**	**11 57 34.2**	**+1.1**
	comp=Z,128nm,0.9s,baz=143,slow=3.3,SNR=55						
EIL				pP	**pP**	**11 57 59.3**	**+1.2**
	comp=Z,59nm,0.8s,baz=195,slow=1.6,SNR=5.1						
GAZ	**Gaziantep**	**81.96**	**309**	P	**P**	**11 57 34.1**	**-0.2**
GAZ				IAmb	IAmb	11 57 38.3	
	comp=Z,124nm,0.8s						
RCY	**Rachaya**	**81.99**	**306**	*e*P	**P**	**11 57 37.0**	**+2.3**
HWQ	**Hawqa**	**82.12**	**306**	*e*P	**P**	**11 57 36.7**	**+1.4**
SOC	**Sochi**	**82.18**	**316**	*e*P	**P**	**11 57 34.0**	**-1.2**
SOC				*e*PPP	PPP	12 02 41.2	
SOC				*e*S	**S**	**12 07 43.3**	**+1.0**
SOC				*e*SS	**SS**	**12 13 03.4**	**-1.1**
MMAI	**Mount Meron Ar**	**82.21**	**305**	P	**P**	**11 57 38.0**	**+2.2**
	comp=Z,89nm,0.7s,baz=102,slow=7.9,SNR=38						
MMAI				pP	**pP**	**11 58 01.3**	**+0.3**
	comp=Z,28nm,0.6s,baz=90,slow=9.3,SNR=4.3						
MMAI				S	**S**	**12 07 42.8**	**-0.6**
	comp=Z,2.1nm,0.4s,baz=168,slow=41,SNR=1.9						
BHL	**Bhannes**	**82.25**	**306**	*e*P	**P**	**11 57 37.5**	**+1.6**

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KIRV  Kirov          82.86 333   P        P        11 57 39.2 +0.8
      comp=Z,244nm,0.7s,baz=124,slow=2.2,SNR=74
KIRV                             S        S        12 07 47.1 -1.5
      comp=Z,6.4nm,0.6s,baz=282,slow=22,SNR=8.0
KIRV  Kirov          82.86 333c iP        P        11 57 39.0 +0.7
BNN   Bunyan         83.48 311   IAmb     IAmb     11 57 47.6
      comp=Z,227nm,1.0s
VRH   Novokhopyorsk  83.64 324  eP        P        11 57 42.6 +0.1
VRH                              pmax     pmax
      comp=Z,290nm,1.2s
KVT   Kavak          83.97 313   P        P        11 57 48.1 +3.5
ANN   Anapa          84.13 317  eP        P        11 57 43.7 -1.5
ANN                             e                  12 00 59.6
ANN                             ePPP     PPP       12 02 54.0
ANN                             eS       S         12 07 58.8 -3.2
ANN                             eSS      SS        12 13 33.9 +0.7
ANN                              pmax     pmax
      comp=Z,159nm,1.3s
DIKM  Dikmen         84.71 313  ⇑P        P        11 57 49.4 +1.2
LEF   Lefka          84.77 307  ⇑P        P        11 57 50.1 +1.4
VSR   Storozhevoye   85.14 323  eP        P        11 57 50.2 +0.1
VSR                              pmax     pmax
      comp=Z,110nm,0.6s
VORR  Voronezh       85.27 324  eP        P        11 57 51.0 +0.2
VORR                             pmax     pmax
      comp=Z,350nm,2.0s
BR131 Keskin Array S 85.37 311c iP        P        11 57 52.2 +0.5
BR131 Keskin Array S 85.37 311   P        P        11 57 52.5 +0.8
      SNR=47
BR131 Keskin Array S 85.37 311   P        P        11 57 52.5 +0.7
BR131                            IAmb     IAmb     11 57 56.9
      comp=Z,195nm,0.8s
BRTR  Keskin Array B 85.37 311   P        P        11 57 52.4 +0.7
      comp=Z,107nm,0.8s,baz=135,slow=6.0,SNR=73
BRTR                             pP       pP       11 58 16.9 -0.4
      comp=Z,48nm,0.8s,baz=132,slow=7.0,SNR=3.9
BRTR  Keskin Array B 85.37 311   P        P        11 57 52.2 +0.4
BZK   Bozkurt        85.69 313  ⇑P        P        11 57 55.4 +2.3
LPSR  Galich'ya Gora 85.76 325  eP        P        11 57 53.2  0.0
LPSR                             pmax     pmax
      comp=Z,200nm,1.3s
PRGR  Permogore      85.97 334  eP        P        11 57 54.2 +0.2
PRGR                            e*SP      sP       11 58 25.1 -5.1
PRGR                            e                  12 01 10.2
PRGR                            eS        SKSac    12 08 07.5 -3.1
PRGR                             pmax     pmax
      comp=Z,250nm,0.8s
ANTO  Ankara         86.03 311   P        P        11 57 56.0 +1.0
ANTO                             pmax     pmax
      comp=Z,202nm,1.5s
ANTO  Ankara         86.03 311   P        P        11 57 56.0 +1.0
ANTO                             IAmb     IAmb     11 58 22.3
      comp=Z,202nm,1.4s
BR231 Keskin MP Arra 86.04 311   P        P        11 57 55.0 -0.1
BR231                            IAmb     IAmb     11 58 22.9
      comp=Z,59nm,0.8s
BILL  Bilibino       86.05  18d iP        P        11 57 54.2 -0.1
BILL                            e                  12 01 16.7
BILL                            eS        S        12 08 15.3 -4.8
BILL                             pmax     pmax
      comp=Z,16nm,0.7s
BILL  Bilibino       86.05  18   P        P        11 57 54.2 -0.1
SIM   Simferopol'    86.42 316  eP        P        11 57 56.8 +0.1
SIM                              pmax     pmax
      comp=Z,188nm,0.9s
ELL   Elmali         87.50 308   P        P        11 58 02.8 +0.6
ELL                              pmax     pmax
      comp=Z,373nm,1.2s
ELL   Elmali         87.50 308   P        P        11 58 02.8 +0.6
MOS   Moscow         87.53 327  eP        P        11 58 01.2 -0.5
MOS                             e                  12 01 24.1
MOS                             e                  12 08 16.4
MOS                             eS        S        12 08 32.2 -2.6
MOS                              pmax     pmax
      comp=Z,600nm,1.6s
MOS                              pmax     pmax
      comp=Z,214nm,1.2s
OBN   Obninsk        87.90 327  ⇑P        P        11 58 04.2 +0.8
OBN   Obninsk        87.90 327   P        P        11 58 03.9 +0.4
      comp=Z,24nm,0.8s,baz=82,slow=1.4,SNR=5.0
OBN   Obninsk        87.90 327c iP        P        11 58 04.3 +0.8
OBN                             e                  11 58 35.2
OBN                                                12 01 32.0
OBN                             eS        SKSac    12 08 21.6 -1.1
OBN                             i                  12 08 36.9
OBN                              pmax     pmax
      comp=Z,337nm,1.7s
OBN                              MLR      MLR
      comp=Z,268nm,26.0s
OBN   Obninsk        87.90 327   P        P        11 58 04.4 +0.9
FETY  Fethiye        88.13 307   P        P        11 58 05.7 +0.6
KLMR  Klimovskoe     88.36 332d iP        P        11 58 05.9 +0.5
KLMR                            e                  12 01 36.8
KLMR                            ePPP      PPP      12 03 33.0
KLMR                            eS        SKSac    12 08 27.4 +2.3
KLMR                             pmax     pmax
      comp=Z,335nm,1.1s
KLMR  Klimovskoe     88.36 332 ⇓iP        P        11 58 06.0 +0.5
KLMR                           ⇓iP        P        11 58 06.0 +0.5
KLMR                           ⇑iP        P        11 58 06.0 +0.5
KLMR                             AMP               11 58 07.9
      comp=Z,335nm,1.1s
KLMR                            ePP       PP       12 01 36.8 +2.3
KLMR                            ePPP      PPP      12 03 33.0
KLMR                            eS        SKSac    12 08 27.5 +2.3
KLMR                            eS        SKSac    12 08 27.5 +2.3
KLMR                             LQ       LQ       12 33 30.1
KLMR                             LQ       LQ       12 33 30.1
KLMR                             LR       LR       12 38 59.0
KULA  Kula-Manisa    88.85 309   P        P        11 58 09.8 +1.3
YER   Yerkesik       88.86 308   P        P        11 58 09.4 +0.8
YER   Yerkesik       88.86 308   P        P        11 58 11.1 +2.5
SNAA  Sanae          88.88 197   P        P        11 58 09.1 +1.1
SNAA  Sanae          88.88 197   sP       sP       11 58 37.2 -6.1
SNAA  Sanae          88.88 197d iP        P        11 58 08.8 +0.8
SNAA                             pmax     pmax
      comp=Z,176nm,1.3s
SNAA  Sanae          88.88 197   P        P        11 58 08.6 +0.6
SNAA                             IAmb     IAmb     11 58 10.3
      comp=Z,149nm,1.1s
ISK   Istanbul-Kandi 89.08 312   P        P        11 58 12.8 +3.4
DAT   Datca          89.33 307   P        P        11 58 15.7 +4.8
BODT  Bodrum         89.61 307   P        P        11 58 15.4 +3.4
WIN   Windhoek       89.61 247   IAmb     IAmb     11 58 15.9
      comp=Z,121nm,1.1s
BALB  Balikesir      89.67 310   P        P        11 58 12.9 +0.7
BALB                             IAmb     IAmb     11 58 39.0
      comp=Z,117nm,1.0s
TSUM  Tsumeb         89.70 251   P        P        11 58 13.0  0.0
BLCB  Balcova        90.07 309   P        P        11 58 15.5 +1.4
SMG   Samos          90.10 308   P        P        11 58 17.3 +3.0
TIRR  Tirgusor       90.25 315  ⇑P        P        11 58 15.4 +0.6
TIRR  Tirgusor       90.25 315  ⇑P        P        11 58 15.4 +0.6
TIRR  Tirgusor       90.25 315   P        P        11 58 15.3 +0.5
TIRR                             IAmb     IAmb     11 58 41.1
      comp=Z,104nm,1.0s
TPGR  Topolog        90.33 315  ⇑P        P        11 58 20.3 +5.0
VNA2  Neumayer--Watz 90.53 197   P        P        11 58 16.8 +1.2
      baz=102,slow=5.2
VNA2  Neumayer--Watz 90.53 197   sP       sP       11 58 45.1 -5.9
CFR   Carcaliu       90.59 316  ⇑P        P        11 58 17.0 +0.7
CFR   Carcaliu       90.59 316  ⇑P        P        11 58 17.0 +0.7
HARR  Harsova        90.64 315  ⇑P        P        11 58 18.1 +1.5
HARR  Harsova        90.64 315  ⇑P        P        11 58 18.1 +1.5
PRK   Paraskevi      90.82 309   P        P        11 58 19.2 +1.6
CHOS  Chios island   90.83 309   P        P        11 58 17.8  0.0
EZN   Ezine          90.88 310   P        P        11 58 20.3 +2.5
VNA1  Neumayer--Stat 90.91 197   P        P        11 58 18.7 +1.3
VNA1  Neumayer--Stat 90.91 197   sP       sP       11 58 46.9 -5.8
STAX  Taxiarchis Har 90.99 307   P        P        11 58 21.8 +3.4
SNT5  Nea Kammeni, S 91.00 307   P        P        11 58 19.8 +1.3
VNA3  Neumayer Olymp 91.01 196   P        P        11 58 18.7 +0.8
VNA3  Neumayer Olymp 91.01 196   sP       sP       11 58 41.0  -12
AKASG Malin Array Be 91.03 321   P        P        11 58 17.8 -0.5
      comp=Z,50nm,1.0s,baz=84,slow=4.4,SNR=37
AKASG                            pP       pP       11 58 42.8 -1.1
      comp=Z,18nm,0.7s,baz=84,slow=4.5,SNR=6.2
AKASG                            PP       PP       12 01 47.1 -9.0
      comp=Z,15nm,0.9s,baz=91,slow=6.9,SNR=8.3
AKASG Malin Array Be 91.03 321  iP        P        11 58 17.7 -0.5
AKASG                            pmax     pmax
      comp=Z,35nm,0.8s
AKBB  Malin Array Si 91.03 321d eP        P        11 58 18.2 -0.1
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AKBB                             pmax     pmax
      comp=Z,45nm,0.9s
SIGR  SIGRI          91.13 309   P        P        11 58 22.5 +3.5
IDI   Anoyia         91.21 305   P        P        11 58 21.7 +2.1
      comp=Z,42nm,0.9s,baz=84,slow=3.8,SNR=7.0
IDI                              pP       pwP      11 58 46.4 -1.0
      comp=Z,45nm,0.9s,baz=14,slow=8.2,SNR=4.9
IDI                              PP       PP       12 01 56.9 -1.1
      comp=Z,7.7nm,0.8s,baz=48,slow=10,SNR=2.1
IDI                              S        SKSac    12 08 37.4 -5.8
      comp=Z,2.6nm,0.7s,baz=32,slow=12,SNR=1.1
IDI   Anoyia         91.21 305   P        P        11 58 21.3 +1.7
ALN   Alexandroupoli 91.29 311   P        P        11 58 20.3 +0.6
ALN   Alexandroupoli 91.29 311   P        P        11 58 19.9 +0.2
ALN                              pmax     pmax
      comp=Z,35nm,1.0s
ALN   Alexandroupoli 91.29 311   P        P        11 58 19.9 +0.2
ALN                              IAmb     IAmb     11 58 46.0
      comp=Z,35nm,1.0s
SMTH  Samothraki Isl 91.60 311   P        P        11 58 21.3 +0.1
VRI   Vrincioaia     91.70 316  ⇓P        P        11 58 20.2 -1.3
VRI   Vrincioaia     91.70 316  ⇓P        P        11 58 20.2 -1.3
PLOR  Plostina       91.75 316  ⇑P        P        11 58 26.4 +4.6
PLOR  Plostina       91.75 316  ⇑P        P        11 58 26.4 +4.6
VAM   Vamos          91.79 305   P        P        11 58 28.6 +6.4
TESR  Tescani        91.87 317  ⇑P        P        11 58 22.8 +0.5
IMMV  Iera Moni Meta 91.97 305   P        P        11 58 28.0 +5.0
KARY  Karystos       92.03 308   P        P        11 58 23.7 +0.5
MLR   Muntele Rosu   92.17 316  ⇑P        P        11 58 24.7 +0.8
MLR   Muntele Rosu   92.17 316   P        P        11 58 24.6 +0.7
      comp=Z,13nm,0.8s,baz=23,slow=6.0,SNR=7.4
MLR                              PP       PP       12 02 03.0 -2.4
      comp=Z,42nm,0.9s,baz=52,slow=4.5,SNR=12
MLR                              S        SKSac    12 08 46.3 -2.0
      comp=Z,2.2nm,0.5s,baz=212,slow=18,SNR=1.7
MLR   Muntele Rosu   92.17 316  ⇑P        P        11 58 24.7 +0.8
MLR   Muntele Rosu   92.17 316   P        P        11 58 23.3 -0.6
MLR                              IAmb     IAmb     11 58 50.9
      comp=Z,97nm,1.5s
PRAR  RASCA          92.31 317  ⇑P        P        11 58 25.2 +0.9
KYMI  Kymi, Euboea I 92.38 309   P        P        11 58 25.8 +0.9
KAVA  Kavala         92.45 311   P        P        11 58 24.9 -0.2
ANKY  Antikythira Is 92.58 306   P        P        11 58 26.7 +0.9
MNK   Minsk          92.61 325  i P       P        11 58 23.9 -1.6
MNK                             i                  12 02 05.1
MNK                             i S       SKSac    12 08 49.8 -0.2
MNK                             i PS      PS       12 10 44.8 -1.2
MNK                             i SS      SS       12 15 37.6 +1.5
MNK                             i SSS     SSS      12 19 20.9
MNK                              pmax     pmax
      comp=E,5.0nm,1.0s
MNK                              pmax     pmax
      comp=Z,28nm,1.0s
MNK                              pmax     pmax
      comp=N,25nm,0.8s
MNK                              MLR      MLR
      comp=Z,146nm,18.0s
MNK                              MLR      MLR
      comp=N,657nm,24.0s
MNK                              MLR      MLR
      comp=E,80nm,18.0s
PLVB  Pleven         92.75 313  ⇑P        P        11 58 27.2 +0.8
KTHR  Kythira        92.88 306   P        P        11 58 28.9 +1.7
PAIG  Paliouri       92.91 310   P        P        11 58 32.0 +4.8
APA   Apatity        93.00 338 ⇓iP        P        11 58 24.8 -2.2
APA                              pmax     pmax
      comp=Z,15nm,1.1s
BURAR Bucovina Array 93.03 318  ⇑P        P        11 58 28.9 +1.1
BURAR Bucovina Array 93.03 318  ⇑P        P        11 58 28.9 +1.1
BURAR Bucovina Array 93.03 318   P        P        11 58 27.9 +0.2
BUR08 Bucovina Ar. S 93.04 318   P        P        11 58 28.4 +0.6
ARR   Arges          93.06 315  ⇑P        P        11 58 28.7 +0.8
LTK   Loutraki       93.17 308   P        P        11 58 28.7 +0.2
NACGM Naroch         93.31 325  i P       P        11 58 28.0 -0.7
VTS   Vitosha        93.64 312  ⇑P        P        11 58 31.0 +0.3
VTS   Vitosha        93.64 312  ⇑P        P        11 58 31.0 +0.3
VTS   Vitosha        93.64 312   P        P        11 58 30.4 -0.4
VTS                              IAmb     IAmb     11 58 56.8
      comp=Z,31nm,1.1s
GUR   Goura          93.65 308   P        P        11 58 35.7 +4.9
AGG   Agios Georgios 93.81 309   P        P        11 58 46.7  +15
AGG   Agios Georgios 93.81 309   P        P        11 58 31.7 +0.3
AGG                              pmax     pmax
      comp=Z,39nm,1.3s
AGG   Agios Georgios 93.81 309   P        P        11 58 31.7 +0.3
AGG                              IAmb     IAmb     11 58 56.9
      comp=Z,39nm,1.3s
KLV   Kalavryta, Ach 93.81 308   P        P        11 58 31.9 +0.4
ITM   Ithomi         93.87 307   P        P        11 58 31.6 -0.1
ITM                              IAmb     IAmb     11 58 57.8
      comp=Z,25nm,1.0s
MAKR  Makrakomi, Fth 93.96 309   P        P        11 58 34.7 +2.5
VSU   Vasula         93.97 328⇓eP        P        11 58 32.4 +0.8
VSU                              pmax     pmax
      comp=Z,146nm,1.3s
LAKA  Lakka          93.97 308   P        P        11 58 34.4 +2.2
LVV   L'vov          94.15 320  eP        P        11 58 36.2 +3.5
EVR   Evrytania      94.20 309   P        P        11 58 36.4 +3.1
RLS   Riolos of Patr 94.35 308   P        P        11 58 37.8 +3.9
GZR   Gura Zlata     94.36 315  ⇑P        P        11 58 38.0 +4.1
GZR   Gura Zlata     94.36 315  ⇑P        P        11 58 38.0 +4.1
HERR  Herculane      94.54 315  ⇑P        P        11 58 35.8 +1.2
DRGR                 94.59 316  ⇑P        P        11 58 35.9 +1.0
DRGR                 94.59 316  ⇑P        P        11 58 35.9 +1.0
FINES FINESS Array B 94.79 331   P        P        11 58 35.8 +0.4
      comp=Z,5.6nm,0.6s,baz=144,slow=6.8,SNR=22
FINES                            pP       pP       11 59 00.9 -0.1
      comp=Z,13nm,0.8s,baz=100,slow=5.8,SNR=5.3
FINES                            PP       PP       12 02 22.0 -3.2
      comp=Z,13nm,0.8s,baz=75,slow=10,SNR=5.5
FINES                            PKKPbc   PKKPdf   12 15 32.8 -1.1
      comp=Z,1.1nm,0.3s,baz=228,slow=1.7,SNR=9.5
UZH   Uzhgorod       95.11 318 ⇓iP        P        11 58 42.6 +5.5
KOLS  Kolonicke sedl 95.17 319  eP        P        11 58 38.7 +1.3
KOLS  Kolonicke sedl 95.17 319  ePDIFF    P        11 58 38.7 +1.3
CRVS  Cervenica-Dubn 95.69 318  eP        P        11 58 40.6 +0.8
CRVS                            e                  12 02 31.9
CRVS  Cervenica-Dubn 95.69 318  ePDIFF    P        11 58 40.6 +0.8
CRVS                            ePP       PP       12 02 31.9 -0.7
DIVS  Divibare       96.17 314   P        P        11 58 41.1 -1.1
DIVS                             IAmb     IAmb     11 59 08.9
      comp=Z,27nm,1.0s
ARCES ARCESS Array B 96.24 339   P        P        11 58 41.0 -0.9
      comp=Z,3.3nm,0.5s,baz=91,slow=5.7,SNR=37
ARCES                            LR       LR       12 48 41.5
      comp=Z,335nm,18.9s,baz=45,slow=39
ARCES ARCESS Array B 96.24 339   P        P        11 58 41.0 -0.9
PDG   Podgorica      96.54 312   P        P        11 58 43.1 -0.6
PDG                              IAmb     IAmb     11 59 09.5
      comp=Z,41nm,1.1s
OJC   Ojcow          96.91 320   P        P        11 58 44.7 -0.6
OJC                              pmax     pmax
      comp=Z,86nm,2.0s
OJC   Ojcow          96.91 320   P        P        11 58 44.7 -0.6
OJC                              IAmb     IAmb     12 02 41.3
      comp=Z,86nm,2.0s
MORH  Mrgy, Hungar   97.32 316  ⇑P        Pdif     11 58 47.4 +0.1
MORH  Mrgy, Hungar   97.32 316  eP        Pdif     11 58 49.3 +2.1
MPLH  Magyarpolny    98.15 316  eP        Pdif     11 58 55.9 +4.9
MORC  Moravsky Berou 98.32 319  ⇑P        P        11 58 50.7 -1.1
MORC  Moravsky Berou 98.32 319   P        P        11 58 51.5 -0.3
MORC                             pmax     pmax
      comp=Z,76nm,1.6s
MORC  Moravsky Berou 98.32 319   P        P        11 58 51.5 -0.3
MORC                             IAmb     IAmb     12 02 52.0
      comp=Z,76nm,1.6s
MODS  Modra-Piesok   98.41 318  ePP       PP       12 02 50.6 -2.9
KRLC  Kraliky        98.83 319  ePP       PP       12 02 55.9 -0.8
KRLC                             AMS      AMS      12 56 30.0
      comp=Z,600nm,20.8s
KOGS  Kog            98.99 316  i PP      PP       12 02 56.5 -1.5
GCSA  Galena City Sc 99.01  26   Pdiff    Pdif     11 58 56.1 +1.7
      baz=269
DPC   Dobruska-Polom 99.14 320  ePP       PP       12 02 46.0  -13
DPC                              AMS      AMS      12 56 50.0
      comp=Z,700nm,20.2s
OSTC  Ostas          99.22 320  ePP       PP       12 02 57.5 -2.1
UPC   Upice          99.34 320  ePP       PP       12 02 58.8 -1.7
UPC                              AMS      AMS      12 56 20.0
      comp=Z,600nm,18.6s
TTA   Tatalina       99.37  28   Pdiff    Pdif     11 58 57.5 +1.4
      baz=269
BOJS  Bojanci        99.64 315  ePdiff    Pdif     11 58 57.3 -0.4
BOJS                            ePP       PP       12 03 00.9 -2.0
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L19K  White Mountain  99.90  28  Pdiff    Pdif     11 58 59.7 +1.2
      baz=270
N19K  Bonanza Creek  100.09  30  Pdiff    Pdif     11 59 00.8 +1.4
      baz=270
M19K  Big River Lodg 100.12  29  Pdiff    Pdif     11 59 01.2 +1.8
      baz=270
LJU   Ljubljana      100.17 315 ePP       PP       12 03 04.2 -2.7
J20K  Nowinta River  100.20  26  Pdiff    Pdif     11 59 01.1 +1.5
      baz=271
K20K  Telida         100.25  27  Pdiff    Pdif     11 59 01.4 +1.4
      baz=271
PRU   Pruhonice      100.27 319 ePP       PP       12 03 03.1 -4.5
PRU                              AMS      AMS      12 59 10.0
      comp=Z,600nm,16.2s
L20K  Farewell, AK   100.35  28  Pdiff    Pdif     11 59 01.8 +1.3
      baz=271
CKRC  Cesky Krumlov  100.40 318 ePP       PP       12 03 06.6 -2.0
CKRC                             AMS      AMS      12 54 40.0
      comp=Z,600nm,18.4s
BRG   Berggiesshubel 100.67 320 eP        Pdif     11 59 06.4 +4.3
BRG                              Amp               11 59 08.7
      comp=Z,4.9nm,1.0s
H21K  Melozitna Rive 100.72  25  Pdiff    Pdif     11 59 03.8 +1.8
      baz=273
GERES GERESS Array B 100.80 318  P        Pdif     11 59 02.8 -0.1
      comp=Z,1.0nm,0.7s,baz=97,slow=5.4,SNR=6.2
GERES                            PP       PP       12 03 07.8 -3.9
      comp=Z,4.7nm,0.9s,baz=95,slow=6.7,SNR=5.6
KHC   Kasperske Hory 100.88 318 ePP       PP       12 03 13.0 +0.7
KHC                              AMS      AMS      12 58 40.0
      comp=Z,500nm,19.0s
I21K  Tanana         101.09  25  Pdiff    Pdif     11 59 04.8 +1.2
      baz=273
CLL   Collm          101.26 321 eP        Pdif     11 59 03.0 -1.7
CLL                             e                  12 03 13.0
CLL                             e                  12 09 26.0
CLL   Collm          101.26 321 e(SS)              12 17 12.0
CLL   Collm          101.26 321 e(Pdif)            11 59 03.0
CLL   Collm          101.26 321 ePP       PP       12 03 13.0 -2.0
CLL   Collm          101.26 321 eSKSac    SKSac    12 09 30.0 -4.9
CLL   Collm          101.26 321 eSKKSac   SKKSac   12 10 30.0 +0.5
CLL   Collm          101.26 321 eSdif     Sdif     12 10 30.0 -5.9
CLL   Collm          101.26 321 ePS       PS       12 12 16.0 -4.1
MLY   Manley         101.62  25  Pdiff    Pdif     11 59 07.8 +1.7
      baz=274
COLD  Coldfoot       101.65  23  Pdiff    Pdif     11 59 07.9 +1.8
      baz=275
TOLK  Toolik Lake Re 101.74  22  Pdiff    Pdif     11 59 08.0 +1.5
      baz=276
NB2   NORSAR Subarra101.94 331  P        Pdif     11 59 07.5  0.0
      comp=Z,3.6nm,0.8s,baz=88,slow=4.6
NB2   NORSAR Subarra101.94 331  P        Pdif     11 59 07.5  0.0
      baz=88,slow=4.6
NOA   NORSAR Array B 101.94 331  P        Pdif     11 59 06.3 -1.3
      comp=Z,0.3nm,0.5s,baz=92,slow=4.8,SNR=4.7
NOA                              PP       PP       12 03 17.9 -1.9
      comp=Z,8.4nm,0.8s,baz=98,slow=7.6,SNR=9.8
TRF   Thorofare Moun 101.94  27  Pdiff    Pdif     11 59 08.4 +0.8
      baz=274
H23K  Yukon River    102.05  24  Pdiff    Pdif     11 59 09.2 +1.2
      baz=276
WTTA  Wattenberg     102.18 316 i P       PP       12 03 19.7 -2.5
      comp=Z,45nm,1.1s,SNR=7.0
I23K  Minto, Yukon-K 102.19  25  Pdiff    Pdif     11 59 10.1 +1.5
      baz=276
WATA  Walderalm      102.22 317 eP        PKiKP    12 03 21.1  -10
      comp=Z,45nm,1.5s
NEA2  Nenana         102.38  26  Pdiff    Pdif     11 59 10.5 +1.1
      baz=276
SQTA  Sankt Quirin   102.47 316 eP        PKiKP    12 03 22.7 -8.6
      comp=Z,25nm,0.9s
MCK   McKinley       102.52  27  Pdiff    Pdif     11 59 10.7 +0.7
      baz=276
MOTA  Moosalm        102.54 317 eP        PKiKP    12 03 23.1 -8.4
      comp=Z,19nm,0.9s
H24K  Noodor Dome    102.73  24  Pdiff    Pdif     11 59 12.3 +1.3
      baz=277
RETA  Reutte         102.77 317 eP        PKiKP    12 03 21.9  -10
      comp=Z,28nm,1.2s
WAT1  Susitna Watana 102.79  28  Pdiff    Pdif     11 59 13.4 +2.1
      baz=276
SML   Sawmill        103.00  29  Pdiff    Pdif     11 59 13.1 +0.9
      baz=276
WAT6  Susitna Watana 103.19  28  Pdiff    Pdif     11 59 14.2 +1.0
      baz=277
ILAR  Eielson Array  103.28  25  Pdiff    Pdif     11 59 12.5 -0.9
      comp=Z,1.0nm,0.8s,baz=290,slow=5.0,SNR=10
ILAR                             PP       PP       12 03 26.9 -2.9
      comp=Z,2.1nm,1.1s,baz=297,slow=6.3,SNR=4.1
ILAR                             PKiKP    PKiKP    12 03 32.6 +0.5
      comp=Z,6.4nm,0.9s,baz=288,slow=9.7,SNR=6.5
ILAR                             PKKPbc   PKKPbc   12 15 08.8 -1.9
      comp=Z,1.4nm,0.9s,baz=109,slow=1.5,SNR=7.1
HDA   Harding Lake   103.31  26  Pdiff    Pdif     11 59 13.4 -0.2
      baz=278
DAVA  Damuels        103.37 317 i P       PKiKP    12 03 29.0 -4.0
      comp=Z,55nm,1.7s
NOR   Nord           103.64 353 i P       PKiKP    12 03 20.9  -11
KEST  Kesra          103.87 305  PKiKP    PKiKP    12 03 35.1 +0.9
      comp=Z,15nm,0.9s,baz=34,slow=2.4,SNR=7.2
J25K  Salcha River,  103.95  25  Pdiff    Pdif     11 59 16.6 +0.1
      baz=279
PAX   Paxson         104.17  27  Pdiff    Pdif     11 59 19.1 +1.6
      baz=279
RIDG  Independent Ri 104.32  26  Pdiff    Pdif     11 59 19.3 +1.2
      baz=280
SCRK  Sand Creek     104.66  26  Pdiff    Pdif     11 59 21.0 +1.4
      baz=280
SCRK  Sand Creek     104.66  26  Pdif     Pdif     11 59 21.1 +1.4
J26L  Joseph Creek   104.74  25  Pdiff    Pdif     11 59 21.2 +1.2
      baz=281
WLF   Walferdange    105.71 319 dPKiKP    PKiKP    12 03 39.5 +2.5
WLF                             dx        x        12 03 43.9
WLF                             dpPKiKP   PP       12 03 59.9  +12
MEM   Membach        105.72 320 dPKiKP    PKiKP    12 03 37.1 +0.1
BCLA  Clavier        106.18 320 dPP       PP       12 03 48.5 -3.1
BGES  Gesves         106.32 320 dPP       PP       12 03 50.6 -2.0
BMRD  Maredsous      106.53 320 dPP       PP       12 03 52.6 -1.6
BMRD                            dx        x        12 04 01.9
DOU   Dourbes        106.67 320 dPP       PP       12 03 53.5 -1.7
DAG   Danmarks Havn  106.80 349 eP        PKiKP    12 03 34.2 -4.1
DAG   Danmarks Havn  106.80 349 i P       PKiKP    12 03 47.3 +9.0
DAG                              IAmb     IAmb     12 03 47.7
      comp=Z,9.8nm,1.0s
SNF   Seneffe        106.82 320 dx        x        12 03 47.4
SNF                             dPP       PP       12 03 55.5 -0.8
INK   Inuvik         107.56  20  Pdiff    Pdif     11 59 33.9 +1.6
      comp=Z,1.5nm,1.0s,baz=0.0,slow=0.0,SNR=1.7
INK                              PP       PP       12 03 54.8 -6.3
      comp=Z,8.4nm,1.1s,baz=290,slow=5.8,SNR=5.9
DBG   Daneborg       108.61 347 i P       PKiKP    12 03 56.5  +15
TORD  Torodi Ar. Bea 109.92 281  Pdiff    Pdif     11 59 46.1 +2.1
      comp=Z,0.1nm,0.3s,baz=86,slow=3.5,SNR=2.0
TORD                             PKiKP    PKiKP    12 03 45.8 -0.1
      comp=Z,1.2nm,0.7s,baz=102,slow=1.5,SNR=4.6
TORD                             PP       PP       12 04 11.8 -8.1
      comp=Z,3.4nm,1.0s,baz=31,slow=2.2,SNR=6.9
TORD                             PKKPbc   PKKPbc   12 14 47.9 -0.6
      comp=Z,0.7nm,0.5s,baz=311,slow=4.0,SNR=6.8
NEEM  North Greenlan 110.57 356 i P       PKiKP    12 03 57.0  +11
ESDC  Sonseca Array  114.12 310  PKiKP    PKiKP    12 03 54.6 +1.3
      comp=Z,0.4nm,0.4s,baz=114,slow=1.6,SNR=2.1
ESDC                             PKKPbc   PKKPbc   12 14 35.4  0.0
      comp=Z,1.2nm,0.8s,baz=288,slow=3.1,SNR=4.7
DBIC  Dimbokro       115.74 273  PKP      PKPdf    12 03 56.2 -0.8
      comp=Z,3.6nm,0.9s,baz=62,slow=2.4,SNR=2.0
YKA   Yellowknife Ar 117.27  22  PKP      PKPdf    12 03 57.6 -0.9
      comp=Z,1.0nm,0.6s,baz=36,slow=1.1,SNR=2.4
YKA                              pPKP     pPKPdf   12 04 24.7 -0.6
      comp=Z,16nm,0.8s,baz=329,slow=1.0,SNR=13
YBH   Yreka Blue Hor 123.03  45  PKKPbc   PKKPbc   12 14 02.0 -1.3
      comp=Z,2.0nm,0.8s,baz=173,slow=2.4,SNR=5.1
M02C  Callahan       123.04  46  P        PKiKP    12 04 12.0 +1.3
      baz=289
L04D  Klamath Falls  123.15  45  P        PKiKP    12 04 11.7 +0.8
      baz=290
N02D  Trinity Center 123.29  46  P        PKiKP    12 04 12.5 +1.4
      baz=289
EDM   Edmonton       123.39  30  PKIKP    PKiKP    12 04 12.0 +1.1
EDM   Edmonton       123.39  30  PKPdf    PKiKP    12 04 12.0 +1.1
J05D  Fort Rock, OR  123.50  43  P        PKiKP    12 04 12.8 +1.2
      baz=292
O03E  Paynes Creek   124.16  47  P        PKiKP    12 04 13.4 +0.5
      baz=290
MSO   Missoula       126.56  37  P        PKiKP    12 04 18.2 +0.6
      baz=301
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MSO	Missoula	126.56	37		PKiKP	12 04 18.3	+0.8
NVAR	Mina Array Bea	127.35	48	PKP	PKiKP	12 04 20.3	+0.8
	comp=Z,2.6nm,0.8s,baz=237,slow=2.8,SNR=14						
NVAR				pPKP	pPKPdf	12 04 46.5	+0.8
	comp=Z,6.1nm,0.8s,baz=236,slow=3.8,SNR=11						
HLID	Hailey	127.88	40	P	PKiKP	12 04 22.3	+2.0
	baz=298						
EGMT	Eagleton	128.28	33	P	PKiKP	12 04 22.2	+1.3
	baz=306,SNR=6.8						
BOZ	Bozeman (W)	128.57	37	PKIKP	PKPdf	12 04 19.9	-1.1
BOZ	Bozeman (W)	128.57	37	P	PKPdf	12 04 19.7	-1.3
	baz=302						
BOZ	Bozeman (W)	128.57	37		PKPdf	12 04 19.9	-1.1
R11A	Troy Canyon, C	129.36	47	P	PKiKP	12 04 25.1	+1.6
	baz=293						
DUG	Dugway, Tooele	130.51	43	P	PKiKP	12 04 27.5	+1.9
	baz=297						
GMRC	Granite Mounta	130.64	51	P	PKiKP	12 04 28.0	+1.9
	baz=290						
PLCA	Paso Flores	130.82	179	PKP	PKiKP	12 04 26.3	0.0
	comp=Z,4.3nm,0.8s,baz=248,slow=1.9,SNR=12						
PLCA				SKPbc	SKPab	12 07 42.3	+1.4
	comp=Z,25nm,1.1s,baz=184,slow=6.6,SNR=13						
PLCA	Paso Flores	130.82	179	eP	PKiKP	12 04 26.7	+0.4
PDAR	Pinedale Array	131.35	39	PKP	PKPdf	12 04 26.5	0.0
	comp=Z,0.6nm,0.8s,baz=270,slow=0.6,SNR=3.9						
PDAR				SKPbc	SKPab	12 07 43.5	+0.3
	comp=Z,6.0nm,1.1s,baz=270,slow=0.4,SNR=5.6						
MSU	Marysvale	131.71	45	PKIKP	PKPdf	12 04 26.0	-1.3
MSU	Marysvale	131.71	45		PKPdf	12 04 26.0	-1.3
ULM	Lac du Bonnet	133.22	23	PKP	PKPdf	12 04 29.9	+0.5
	comp=Z,3.2nm,0.9s,baz=21,slow=6.8,SNR=3.6						
ULM				pPKP	pPKPdf	12 04 55.5	-0.6
	comp=Z,31nm,1.1s,baz=313,slow=3.6,SNR=12						
ULM				SKPbc	SKPbc	12 07 48.8	0.0
	comp=Z,12nm,1.0s,baz=286,slow=2.7,SNR=6.0						
O20A	White River Ci	133.59	41	P	PKiKP	12 04 33.6	+1.6
	baz=302						
SCHQ	Schefferville	133.92	358	PKP	PKiKP	12 04 32.3	+0.3
	comp=Z,3.6nm,0.8s,baz=45,slow=2.9,SNR=2.0						
SCHQ				pPKP	pPKPdf	12 04 56.0	-1.5
	comp=Z,24nm,0.9s,baz=13,slow=3.0,SNR=10.0						
SCHQ				PP	PP	12 06 58.4	-2.2
	comp=Z,43nm,1.0s,baz=9.5,slow=7.7,SNR=10						
SCHQ				SKPbc	SKPbc	12 07 52.1	+1.1
	comp=Z,5.5nm,0.7s,baz=21,slow=8.8,SNR=1.9						
SDCO	Great Sand Dun	136.67	42	P	PKiKP	12 04 42.5	+4.1
	baz=303						
PLTB	Pedras Altas	136.92	200	eP	PKiKP	12 04 38.6	-0.2
ANMO	Albuquerque	137.44	47	P	PKiKP	12 04 44.6	+4.7
	baz=299						
TER01	Tubaro-SC	137.99	208	eP	PKiKP	12 04 42.9	+1.9
CPSB	Cacapava Do Su	138.10	201	eP	PKiKP	12 04 40.4	-0.9
ALF01	Guarapari-ES	139.24	224	eP	PKPdf	12 04 42.4	+0.9
MAN01	Angra dos Reis	139.75	218	eP	PKiKP	12 04 43.8	-1.1
ITQB	Itaqui	139.83	198	eP	PKiKP	12 04 43.8	-1.0
RIB01	Linhares ES	139.87	226	eP	PKiKP	12 04 44.6	-0.5
BSFB	Barra de Sao F	140.51	226	eP	PKiKP	12 04 45.8	-0.6
GUA01	Guaratinga, BA	141.18	230	eP	PKiKP	12 04 46.6	-1.2
BSCB	Bom Sucesso	141.64	219	eP	PKiKP	12 04 47.5	-1.3
CMC01	Camacan, BA	141.70	232	eP	PKiKP	12 04 47.5	-1.4
TXAR	Lajitas Array	142.13	53	PKhKP	PKPpre	12 04 42.4	
	comp=Z,3.0nm,0.8s,baz=218,slow=3.1,SNR=17						
TXAR				SKPbc	SKPbc	12 08 14.9	-0.5
	comp=Z,6.8nm,1.1s,baz=305,slow=4.4,SNR=6.2						
TXAR	Lajitas Array	142.13	53	PKIKP	PKPdf	12 04 44.3	-2.3
TXAR	Lajitas Array	142.13	53	PKPdf	PKPdf	12 04 44.3	-2.3
FRTB	Fartura	142.55	211	eP	PKPdf	12 04 48.6	+1.2
NBLA	Lagarto - SE	142.69	239	eP	PKiKP	12 04 49.5	-1.5
GDU01	Guandu, BA	142.69	234	eP	PKPdf	12 04 47.5	-0.3
WMOK	Wichita Mounta	142.84	41	PKIKP	PKPdf	12 04 44.8	-2.8
WMOK	Wichita Mounta	142.84	41	P	PKPdf	12 04 45.7	-1.9
	baz=307,SNR=7.2						
WMOK	Wichita Mounta	142.84	41		PKPdf	12 04 44.8	-2.8
T35A	Sooner Cattle	142.86	37	PKPdf	PKPdf	12 04 46.2	-1.4
J47A	Sunmer	143.13	18		PKPdf	12 04 46.7	-1.2
SADO	Sadowa	143.14	11		PKPdf	12 04 48.6	+0.8
CPUP	Villa Florida	143.16	199	PKP	PKPbc	12 04 46.0	+0.4
	comp=Z,8.7nm,0.5s,baz=180,slow=1.6,SNR=22						
CPUP				pPKP	pPKPdf	12 05 13.9	-0.7
	comp=Z,24nm,0.9s,baz=148,slow=1.8,SNR=8.1						
CPUP				SKPbc	SKPbc	12 08 16.5	-1.5
	comp=Z,10nm,1.1s,baz=93,slow=2.8,SNR=3.4						
CPUP	Villa Florida	143.16	199	PKIKP	PKPbc	12 04 46.0	+0.5
CPUP						12 05 14.0	
CPUP	Villa Florida	143.16	199	eP	PKPbc	12 04 46.9	+1.4
P40A	Paris	143.37	29		PKPbc	12 04 46.1	+0.4
ABTX	Abilene, Hawle	143.49	45	P	PKPdf	12 04 49.5	+0.7
	baz=304						
PKME	Peaks-Kenny Pk	143.56	359	P	PKPbc	12 04 46.8	+0.8
	baz=0.8						
NBLV	Livramento - P	143.62	245	eP	PKPbc	12 04 48.1	+0.8
HDIL	Hopedale	143.81	26	P	PKPbc	12 04 47.6	+0.6
	baz=326						
BB19B	Bebedouro	143.83	215	eP	PKPdf	12 04 49.2	-0.6
LONY	Lake Ozonia	143.96	6	P	PKPbc	12 04 48.1	+0.8
	baz=352,SNR=12						
TUL1	Leonard	143.96	37	P	PKPdf	12 04 48.9	-0.6
	baz=312,SNR=5.8						
TUL1	Leonard	143.96	37	PKPdf	PKPbc	12 04 47.9	+0.4
S39A	Bolivar	144.11	33	PKPdf	PKPbc	12 04 48.1	+0.2
MC01	Montes Claros	144.12	225	eP	PKPdf	12 04 49.8	-0.6
K50A	Casco	144.21	16		PKPbc	12 04 48.4	+0.3
R40A	Maddies Statio	144.21	31		PKPbc	12 04 48.7	+0.4
WVL	Waterville	144.26	360		PKPbc	12 04 48.5	+0.3
PECO	Prince Edward	144.32	9	PKPdf	PKPbc	12 04 48.6	+0.2
AAM	Ann Arbor	144.34	18	P	PKPdf	12 04 49.6	-0.4
	baz=336						
U38A	Gravette	144.42	35		PKPab	12 04 48.8	+0.1
L48A	N Adams	144.43	19		PKPdf	12 04 49.5	-0.7
NBPA	Parau_RN	144.46	247	eP	PKPdf	12 04 50.9	-0.1
P43A	Skaggs, Pawnee	144.46	27	PKPdf	PKPdf	12 04 49.7	-0.6
TRCB	Terra Rica	144.51	208		PKPab	12 04 49.4	0.0
JCT	Junction City	144.53	48	PKIKP	PKPdf	12 04 50.5	-0.2
JCT	Junction City	144.53	48	P	PKPdf	12 04 51.1	+0.4
	baz=301						
JCT	Junction City	144.53	48	PKPdf	PKPdf	12 04 50.5	-0.2
LBNH	Lisbon	144.53	3	P	PKPdf	12 04 50.3	0.0
	baz=356,SNR=7.0						
NCB	Newcomb	144.63	6		PKPdf	12 04 50.3	-0.2
NBPN	Ponto Novo - B	144.78	237	eP	PKPab	12 04 50.1	-0.6
SFIN	Lafayette	144.85	23	P	PKPdf	12 04 51.4	+0.5
	baz=329,SNR=29						
PCMB	Pacaembu	144.85	211	eP	PKPab	12 04 50.3	-0.3
CCM	Cathedral Cave	144.91	30	PKIKP	PKPdf	12 04 51.2	+0.1
CCM	Cathedral Cave	144.91	30	P	PKPdf	12 04 51.4	+0.3
	baz=321						
CCM	Cathedral Cave	144.91	30		PKPdf	12 04 51.2	+0.1
N47A	Urbana	144.94	21		PKPdf	12 04 51.1	0.0
J57A	Williamstown	144.98	8		PKPdf	12 04 51.0	0.0
MGMO	Mountain Grove	145.07	32		PKPdf	12 04 51.5	+0.1
J59A	Piesco	145.11	6		PKPdf	12 04 51.8	+0.5
NBMA	Muriti-CE	145.26	244	eP	PKPab	12 04 52.6	+0.2
U40A	Yellville	145.34	34	P	PKPab	12 04 52.8	+0.7
	baz=317,SNR=85						
WHTX	Lake Whitney,	145.36	44	P	PKPab	12 04 54.1	+1.8
	baz=306						
JANB	Januaria	145.48	227	eP	PKPbc	12 04 52.9	0.0
ERPA	Erie	145.50	14	P	PKPab	12 04 53.9	+1.5
	baz=342,SNR=13						
W39A	Magazine	145.64	36	P	PKPab	12 04 53.8	+0.6
	baz=314,SNR=20						
833A	Chaparral WMA,	145.92	51	P	PKPab	12 04 55.3	+0.8
	baz=299,SNR=21						
ITRB	Iturama	145.94	214	eP	PKPab	12 04 54.6	-0.2
435B	Jarrell	145.97	46	P	PKiKP	12 04 57.2	-0.1
	baz=304						
M53A	WI Miller and	145.97	15	P	PKPab	12 04 54.5	+0.2
	baz=340,SNR=25						
IPMB	Ipameri, GO	146.03	219	eP	PKPbc	12 04 54.3	-0.2
FCAR	Ozark Folk Cen	146.09	34	PKPbc	PKPab	12 04 55.0	+0.1
NBCL	Cascavel-CE	146.13	249	eP	PKPab	12 04 56.0	+0.3
M54A	Oil Creek Stat	146.15	13	P	PKPab	12 04 55.1	+0.2
	baz=342,SNR=22						
BINY	Binghamton	146.17	8	P	PKPab	12 04 55.4	+0.3
	baz=349,SNR=8.3						
MIAR	Mount Ida	146.22	37	P	PKPab	12 04 56.0	+0.6
	baz=314,SNR=54						
L61B	Northampton	146.27	4	P	PKPab	12 04 55.5	+0.1
	baz=355						
HRV	Adam Dziewonsk	146.28	2	P	PKPab	12 04 55.2	-0.1
	baz=357						
P48A	Milroy	146.29	22	PKPbc	PKPbc	12 04 55.0	+0.3
WHAR	Wooly Hollow	146.43	35	PKPbc	PKPab	12 04 55.8	-0.5
ACSO	Alum Creek Sta	146.44	19	P	PKPab	12 04 56.0	0.0
	baz=336,SNR=38						
P49A	Miami Univ. Ec	146.48	21	P	PKPab	12 04 56.4	+0.1
	baz=332,SNR=36						
W41B	Gary Mavity, V	146.54	35	P	PKPab	12 04 57.0	+0.4
	baz=317,SNR=20						
N54A	Moraine State	146.59	14	P	PKPab	12 04 56.9	+0.2
	baz=341,SNR=18						
X40A	Basin Creek Fa	146.69	36	P	PKiKP	12 04 58.1	-0.6
	baz=315,SNR=18						
NBPB	Pedra_Branca-C	146.78	246	eP	PKPbc	12 04 56.3	-0.5
O53A	New Philadelph	146.94	16	P	PKPab	12 04 58.1	+0.1
	baz=339,SNR=15						
WCI	Wyandotte Cave	147.01	24	PKP2	PKPbc	12 04 57.0	+0.2
WCI	Wyandotte Cave	147.01	24	P	PKPab	12 04 58.0	-0.4
	baz=329						
WCI	Wyandotte Cave	147.01	24	PKPbc	PKPbc	12 04 57.0	+0.2
P52A	Corning	147.25	18	P	PKPbc	12 04 58.2	+0.8
	baz=337,SNR=16						
SSPA	Standing Stone	147.37	12	P	PKPab	12 04 58.7	-1.0
	baz=345						
SSPA	Standing Stone	147.37	12	PKPbc	PKPbc	12 04 58.0	+0.3
NATX	Nacogdoches	147.39	42	P	PKiKP	12 05 01.7	+1.5
	baz=309						
ODNJ	Ogdensburg	147.45	7	PKPbc	PKPab	12 04 59.2	-0.8
N59A	State Game Lan	147.46	9	P	PKPab	12 04 59.1	-1.0
	baz=349,SNR=8.0						
Z41A	Richland Creek	147.57	38	P	PKPab	12 05 00.9	+0.1
	baz=314,SNR=5.3						
O56A	Blue Knob Stat	147.58	13	P	PKiKP	12 04 59.4	-1.0
	baz=344,SNR=8.5						
PAL	Palisades	147.60	6	PKP2	PKiKP	12 04 59.3	-1.0
PAL	Palisades	147.60	6	P	PKiKP	12 04 59.2	-1.0
	baz=352,SNR=6.3						
PAL	Palisades	147.60	6	PKPbc	PKiKP	12 04 59.3	-1.0
SDBA	SAO DESIDERIO	147.62	230	eP	PKPbc	12 04 58.0	-1.1
BDFB	Brasilia	147.64	222	PKPbc	PKPbc	12 04 59.1	-0.2
	comp=Z,36nm,0.8s,baz=155,slow=2.2,SNR=36						
BDFB				pPKPbc	pPKPbc	12 05 24.7	-0.5
	comp=Z,36nm,0.8s,baz=175,slow=6.3,SNR=6.0						
CCAR	Cane Creek	147.72	36	PKPbc	PKiKP	12 05 00.3	-0.5
R50A	Paris	147.73	22		PKPbc	12 04 58.9	+0.1
Q52A	Bidwell	147.82	19		PKPbc	12 04 58.9	-0.1
MCWV	Mont Chateau	147.86	15	P	PKPab	12 05 03.1	+1.4
	baz=341						
MCWV	Mont Chateau	147.86	15	PKPbc	PKPbc	12 04 59.9	+0.9
AQDB	Aquidauana	147.90	205	eP	PKPdf	12 04 57.5	+0.8
NBMO	Morrinhos-CE	148.09	249	eP	PKPbc	12 04 59.5	-0.9
WVT	Waverly	148.09	28	PKP2	PKiKP	12 05 00.8	-0.7
WVT	Waverly	148.09	28	P	PKiKP	12 05 00.8	-0.7
	baz=324						
WVT	Waverly	148.09	28		PKiKP	12 05 00.8	-0.7
PB15	IPOC Station P	148.30	180		PKPdf	12 04 59.2	+1.7
P60A	Greenville	148.56	9	P	PKiKP	12 05 02.1	-0.2
	baz=349,SNR=5.5						
LVC	Limon Verde	148.88	181	PKPbc	PKPbc	12 05 00.8	-1.9
	comp=Z,50nm,1.0s,baz=236,slow=5.1,SNR=8.8						
LVC				pPKPbc	pPKPbc	12 05 29.6	+0.6
	comp=Z,47nm,0.9s,baz=305,slow=5.9,SNR=4.6						
LVC	Limon Verde	148.88	181	eP	PKPdf	12 05 00.1	+1.4
LVC	Limon Verde	148.88	181		PKPbc	12 05 00.8	-1.9
LVC				PKPab	PKiKP	12 05 04.9	+0.8
NBPS	Pedro II - PI	148.95	246	eP	PKPdf	12 05 00.3	+1.7
TZTN	Tazewell	149.56	22	P	PKiKP	12 05 04.1	-0.4
	baz=332,SNR=5.2						
ARAG	Araguaiana, MT	149.96	216	eP	PKPdf	12 05 01.8	+1.7
BLA	Blacksburg	150.00	17	P	PKPab	12 05 10.1	-0.4
	baz=339						
PP1B	Ponte de Pedra	150.04	209	eP	PKPdf	12 05 01.8	+1.6
V52A	Sevierville	150.16	23		PKPbc	12 05 04.3	-0.7
PEXB	Peixe	150.32	226	eP	PKPdf	12 05 02.9	+2.2
PB01	IPOC Station P	150.45	180		PKPdf	12 05 02.9	+2.1
PB01				PKPab	PKiKP	12 05 08.2	+1.2
KMSC	Kings Mountain	151.61	20	P	PKiKP	12 05 09.5	+0.7
	baz=335						
SMTB	Santa Maria do	151.88	232	eP	PKPdf	12 05 04.9	+1.8
SALV	Santo Antonio	151.89	210	eP	PKPdf	12 05 05.5	+2.5
ROSB	Rosrio	152.00	247	eP	PKPdf	12 05 03.8	+0.5
GOGA	Godfrey	152.32	25	P	PKiKP	12 05 11.7	+1.4
	baz=330						
BRAL	Brewton	152.42	33	P	PKiKP	12 05 11.9	+1.4
	baz=320						
SNDB	Serra Nova Dou	152.48	222	eP	PKPdf	12 05 04.9	+0.9
PTLB	Pontes e Lacer	153.82	204	eP	PKPdf	12 05 06.9	+1.1
SIV	San Ignacio	154.02	199	PKP	PKPdf	12 05 06.9	+0.7
	comp=Z,12nm,1.0s,baz=158,slow=1.5,SNR=32						
SIV				PKPbc	PKiKP	12 05 15.0	+0.6
	comp=Z,6.9nm,0.7s,baz=167,slow=3.0,SNR=6.8						
SIV				PKPab	PKPab	12 05 28.4	+0.6
	comp=Z,39nm,1.0s,baz=150,slow=4.0,SNR=15						
SIV				PP	PP	12 09 00.4	-0.8
	comp=Z,8.3nm,1.0s,baz=165,slow=6.0,SNR=4.0						
LPAZ	La Paz	155.13	184	PKP	PKPdf	12 05 09.4	+1.0
	comp=Z,7.6nm,1.1s,baz=270,slow=0.5,SNR=16						
LPAZ				PKPab	pPKPdf	12 05 34.1	-0.8
	comp=Z,43nm,0.6s,baz=126,slow=2.2,SNR=46						
LPAZ	La Paz	155.13	184	eP	PKPdf	12 05 09.8	+1.3
PRPB	Parauapebas	155.26	234	eP	PKPdf	12 05 09.2	+1.2
TMAB	Tom-Au,PA,Br	155.79	244	eP	PKPdf	12 05 10.0	+1.4
PDRB	Porto dos Gac	156.04	213	eP	PKPdf	12 05 10.9	+1.9
CLDB	Colider	156.13	216	eP	PKPdf	12 05 10.0	+1.0
656A	Willston	156.17	29		PKPab	12 05 36.5	-0.2
VILB	Vilhena	156.51	204	eP	PKPdf	12 05 11.5	+1.9
NNA	Nana	158.28	161	PKPab	PKPab	12 05 46.5	+0.5
	comp=Z,11nm,0.5s,baz=225,slow=11,SNR=4.0						
NPGB	Novo Progresso	158.80	223	eP	PKPdf	12 05 13.5	+1.0
MCPB	Macapa, AP	160.23	244	eP	PKPdf	12 05 16.6	+2.5
ITTB	Itaituba	160.95	228	eP	PKPdf	12 05 16.3	+1.5
SOR	Soroa	161.05	41	PKP2	PKPab	12 05 59.4	+1.3
SOR	Soroa	161.05	41	PKPab	PKPab	12 05 59.4	+1.3
ETMB	Extrema	161.29	191	eP	PKPdf	12 05 15.7	+0.6
MALB	Monte Alegre	161.36	237	eP	PKPdf	12 05 16.9	+1.6
ATAH	Atahualpa	162.06	151	PKP	PKPdf	12 05 17.2	+0.7
	comp=Z,4.7nm,0.8s,baz=135,slow=4.3,SNR=3.9						
MDP	Montagnes des	162.67	259	PKPab	PKPab	12 06 06.4	+0.9
	comp=Z,10nm,1.0s,baz=39,slow=6.6,SNR=2.9						
CZSB	Cruzeiro do Su	163.42	170	eP	PKPdf	12 05 17.7	+0.4
MACA	Manacapuru-AM	165.17	218	eP	PKPdf	12 05 21.7	+2.8
PTGA	Pitinga	166.50	227	PKP	PKPdf	12 05 20.3	+0.3
	comp=Z,2.1nm,0.8s,baz=63,slow=2.3,SNR=2.8						
PTGA				pPKP	pPKPdf	12 05 46.3	-0.2
	comp=Z,10nm,1.2s,baz=174,slow=0.5,SNR=6.0						
PTGA				PKPab	PKPab	12 06 22.7	+0.4
	comp=Z,18nm,0.9s,baz=130,slow=4.4,SNR=14						
PTGA				PP	PP	12 10 11.1	+1.7
	comp=Z,1.4nm,0.6s,baz=124,slow=11,SNR=2.0						
TBTG	Tabatinga, AM	167.21	179	eP	PKPdf	12 05 22.0	+1.5
OTAV	Otavalo	167.92	134	eP	PKPdf	12 05 23.2	+1.5
BOAV	Boa Vista	168.91	236	eP	PKPdf	12 05 24.9	+3.2
MTP	Monte Pirata	169.80	337		PKPab	12 06 34.3	-2.2
ROSC	El Rosal	174.05	130	PKP	PKPdf	12 05 25.4	+0.7
	comp=Z,7.1nm,0.3s,baz=231,slow=6.5,SNR=1.3						
ROSC				pPKP	pPKPdf	12 05 50.0	-1.5
	comp=Z,10nm,0.4s,baz=19,slow=2.2,SNR=2.2						
ROSC				PKPab	PKPab	12 06 57.1	+0.9
	comp=Z,7.4nm,0.5s,baz=232,slow=2.0,SNR=5.2						
ROSC				PP	PP	12 10 48.5	+0.6
	comp=Z,7.6nm,0.3s,baz=194,slow=4.2,SNR=5.3						
SDV	Santo Domingo	179.09	78	PP	PP	12 11 11.3	-1.2
	comp=Z,2.7nm,0.2s,baz=313,slow=7.1,SNR=1.8						
SDV	Santo Domingo	179.09	78	eP	PKPdf	12 05 28.9	+3.5

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*RHSSO **11** 11:56:58.9±0.2, 43.°88N×18.°19E, h3^{km}±3^{km}, ML1.8/9*

*BEO **11** 11:57:00.3±0.5, 43.°89N×18.°21E, h0^{km}, ML1.5/4*

ISC 11 11:56:58.1±1.1**, 43.°87N**±0.°03×**18.°19E**±0.°02**, h5**^{km}±10^{km}**,**
n24, σ**0.^{s}83**/45**, 4C, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UPM	Unac-Piva	0.85	142	⇑iPg	Pg	11 57 13.9	-0.4
UPM				eSg	Sb	11 57 26.8	-0.3
RICI	Ricice	0.85	244	ePg	Pg	11 57 13.9	-0.4
RICI				Sg	Sb	11 57 26.6	-0.5
BBLS	Lazići	0.88	90	ePg	Pg	11 57 14.8	-0.2
BBLS				eSg	Sb	11 57 27.9	-0.1
BBLS	Lazići	0.88	90	⇑iPg	Pg	11 57 14.5	-0.5
BBLS				eSg	Sg	11 57 27.3	+0.9
RUDO	Rudo	0.89	106	ePg	Pg	11 57 14.8	-0.4
RUDO				eSg	Sg	11 57 27.6	+0.8
BRY	Bratogost	1.00	165	⇑iPg	Pg	11 57 16.5	-0.7
BRY				eSg	Sb	11 57 31.5	0.0
MAKA	Makarska	1.03	236	ePn	Pg	11 57 17.4	-0.3
MAKA				Sg	Sb	11 57 31.8	-0.4
STON	Ston	1.06	200	ePg	Pg	11 57 18.5	+0.2
STON				eSg	Sn	11 57 34.5	-0.2
STON	Ston	1.06	200	ePg	Pg	11 57 17.9	-0.4
STON				eSg	Sb	11 57 33.1	+0.1
STON	Ston	1.06	200	ePn	Pg	11 57 18.1	-0.2
STON				Sg	Sg	11 57 32.5	+0.4
BLY	Banja Luka	1.14	321	ePg	Pn	11 57 22.1	+1.4
BLY	Banja Luka	1.14	321	⇑iPg	Pg	11 57 19.1	-0.8
BLY				eSg	Sb	11 57 35.2	-0.1
TREB	Trebinje	1.16	174	ePg	Pg	11 57 20.6	+0.4
TREB				eSg	Sn	11 57 39.4	+2.2
TREB	Trebinje	1.16	174	ePg	Pg	11 57 20.2	0.0
TREB				eSg	Sn	11 57 36.9	-0.3
KIJV	Kijevo	1.29	277	ePn	Pn	11 57 20.8	-2.1
DIVS	Divibare	1.32	79	ePg	Pn	11 57 23.1	-0.2
DIVS				eSg	Sn	11 57 42.5	+1.1
DIVS	Divibare	1.32	79	ePg	Pn	11 57 22.6	-0.7
DIVS				eSg	Sn	11 57 41.3	-0.1
HVAR	Hvar	1.44	242	ePn	Pb	11 57 25.2	-0.2
HVAR				Sn	Sg	11 57 45.1	+0.8
MRAK	Mrakovica	1.47	322	ePg	Pn	11 57 24.7	-0.6
MRAK				eSg	Sg	11 57 45.4	+0.1
PDG	Podgorica	1.64	151	eSn	Sg	11 57 50.7	+0.1
FRGS	Fruska Gora	1.73	41	ePn	Pn	11 57 29.4	+0.5
FRGS				eSn	Sb	11 57 52.5	0.0
MORI	Morici	1.79	271	ePn	Pb	11 57 30.5	-0.9
MORI				Sn	Sg	11 57 58.0	+2.4
DRME	Dracevica, Mon	1.83	156	ePn	Pb	11 57 31.4	-0.7
DRME				eSn	Sb	11 57 55.2	-0.1
ZIRJ	Zirje	1.85	264	ePn	Pn	11 57 30.9	+0.4
ZIRJ				Sn	Sg	11 57 59.1	+1.4

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*INET **11** 12:08:39.5, 9.°41N×85.°98W, h15^{km}, MW5.0*

*UCR **11** 12:08:46.8±1.7, 9.°55N×85.°84W, h12^{km}±5^{km}, ML4.6, MW5.4, mb5.1(NEIC), Fault plane solution: NP1: ϕ_s129.64000°, δ22.27000°, λ-25.51000°.*

*MOS **11** 12:08:49.7±1.2, 9.°82N×85.°62W, h38^{km}, mb5.2/47, Error ellipse: s-maj=7.9km s-min=6.6km az=92.5*

*GCMT **11** 12:08:51.1±0.1, 9.°56N±0.°01×85.°95W±0.°01, h12^{km}, MW5.3/139, Moment Tensor Solution. s79,c128; s139,c254; Duration: 1.^{s}1 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.98±.01; $M_{\theta\theta}$0.82±.01; $M_{\phi\phi}$0.16±.01; $M_{r\theta}$-0.03±.04; $M_{\theta\phi}$-0.42±.01; $M_{\phi r}$0.31±.05; Best double couple: $M_0$1.05000×10^{17} NP1:ϕ_s282.00000°, δ42.00000°, λ-112.00000°. NP2:ϕ_s130.00000°, δ51.00000°, λ-71.00000°. Principal axes: T 1.0380, Plg5.0000°, Azm207.0000°; N 0.0260, Plg14.0000°, Azm299.0000°; P -1.0620, Plg75.0000°, Azm100.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **11** 12:08:51.1±2.5, 9.°69N±0.°04×85.°68W±0.°05, h36^{km}±5^{km}, mb5.1/458, ML5.7(UCR) Error ellipse: s-maj=7.7km s-min=5.9km az=69.0*

*IDC **11** 12:08:51.5±1.3, 9.°75N×85.°65W, h45^{km}±11^{km}, mb4.6/32, mb1 4.8/36, mb1mx4.7/40, mbtmp4.9/36, ML3.7/4, MS4.5/27, Ms1 4.5/27, ms1mx4.4/37, Error ellipse: s-maj=13.2km s-min=7.7km az=53.0*

ISC 11 12:08:49.9±0.3**, 9.°64N**±0.°03×**85.°74W**±0.°04**, h36**^{km}±1^{km}**, n933,** σ**1.^{s}33**/769**, mb5.1**/303**, MS4.6**/33**, 81C-70D, Fault plane solution: NP1:**ϕ_s142.66649°, δ30.91366°, λ-3.46761°. **NP2:**ϕ_s235.64246°, δ88.21933°, λ-120.86740°. **Principal axes:** T Plg35.7807°, Azm352.2057°**;** N Plg30.8509°**,** Azm236.7065°**;** P Plg38.9491°**,** Azm117.8365°**; Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GRZA	Playa Garza	0.29	21	⇑eP	Pn	12 08 55.9	-2.1
GRZA				eS	Sn	12 09 02.9	-1.7
INDI	Punta indio, G	0.33	46	⇑eP	Pn	12 08 56.8	-1.4
INDI				eS	Sn	12 09 04.6	-0.1
SAJU	San Juanillo,	0.43	4	⇑eP	Pn	12 08 57.3	-2.1
SAJU				eS	Sn	12 09 05.4	-0.8
DUNO	Dulce Nombre,	0.50	29	⇑eP	Pn	12 08 59.0	-1.6
DUNO				eS	Sn	12 09 08.9	+0.9
DUNO	Dulce Nombre,	0.50	29		Pn	12 08 58.8	-1.8
DUNO					Sn	12 09 04.3	-3.8
NICO	Nicoya	0.57	30	⇑eP	Pn	12 09 00.1	-1.6
NICO				eS	Sn	12 09 10.3	+0.5
CAO2	Cobano, Puntar	0.63	85		Pn	12 09 01.0	-1.5
CAO2					Sn	12 09 11.0	-0.2
GUAI	GUAI	0.67	20	⇑iP	Pn	12 09 01.3	-1.7
GUAI				iS	Sn	12 09 12.6	+0.4
ORTG	Ortega, Santa	0.77	21	⇑eP	Pn	12 09 02.9	-1.5
ORTG	Ortega, Santa	0.77	21		Pn	12 09 02.9	-1.5
ORTG					Sn	12 09 14.7	-0.1
PLVR	Palo Verde	0.80	29	⇑eP	Pn	12 09 03.4	-1.5
LAFE	Finca La Fe, P	0.84	78	⇓eP	Pn	12 09 03.8	-1.4
JTS	Las Juntas de	1.01	50	P	Pn	12 09 06.9	-0.7
	691nm,0.3s,baz=342,slow=5.8,SNR=1011						
JTS				S	Sn	12 09 20.0	-0.6
	3μm,0.3s,baz=54,slow=8.7,SNR=16						
JTS	Las Juntas de	1.01	50	c iP	Pn	12 09 06.5	-1.1
JTS	Las Juntas de	1.01	50	⇑eP	Pn	12 09 07.0	-0.6
HZTE	Horizontes, Gu	1.08	8	⇑eP	Pn	12 09 07.7	-0.9
HZTE	Horizontes, Gu	1.08	8		Pn	12 09 07.6	-0.9
COLC	Colonia	1.15	27	⇑iP	Pn	12 09 08.9	-0.6
GPS3	Bodega del ICE	1.17	18	⇑iP	Pn	12 09 09.1	-0.8
GBS3	Finca Las Img	1.17	14	⇑iP	Pn	12 09 08.9	-0.9
GBS3				iS	Sn	12 09 25.4	+0.9
GUAB	Guayabo de Bag	1.18	25	⇑iP	Pn	12 09 09.2	-0.7
BUEV	Buena Vista	1.20	16	eP	Pn	12 09 09.4	-0.9
BUEV				⇑iP	Pn	12 09 09.4	-0.9
VRLE	La Escondida,	1.20	18	⇑eP	Pn	12 09 09.5	-0.8
ACAL	Aguas Claras	1.21	35	⇑iP	Pn	12 09 10.1	-0.3
GB1A	Borinquen Arri	1.22	16	⇑iP	Pn	12 09 09.8	-0.8
CASO	Castillo	1.27	51	⇑iP	Pn	12 09 11.4	+0.2
BUAI	Buenos Aires	1.30	18	⇑iP	Pn	12 09 11.0	-0.5
ARE1	Arenal 1	1.30	51	⇑eP	Pn	12 09 12.1	+0.6
SRA1	San Ramn	1.32	70	⇓eP	Pn	12 09 12.0	+0.1
CEDE	Laguna Cedeo	1.32	50	iP	Pn	12 09 11.8	-0.2
FORC	Fortuna	1.34	52	⇑iP	Pn	12 09 12.4	+0.3
CRPO	Crater poas	1.59	70	⇓eP	Pn	12 09 16.7	+0.8
HDC	Heredia	1.64	77		Pn	12 09 17.1	+0.7
HDC3	Heredia 3	1.65	77	⇓eP	Pn	12 09 17.5	+1.0
SJS	Escuela Geolog	1.69	80	⇓eP	Pn	12 09 17.7	+0.6
COVE	Coope Vega, Sa	1.70	51	⇑eP	Pn	12 09 17.5	+0.4
COVE	Coope Vega, Sa	1.70	51		Pn	12 09 17.8	+0.8
LCR2	La Lucha 2	1.71	86	⇓eP	Pn	12 09 17.0	-0.5
RIMA	Rio Macho	1.86	86	⇓eP	Pn	12 09 19.1	-0.3
RIMA	Rio Macho	1.86	86		Pn	12 09 19.4	0.0
EDDO	Dominical	1.89	102	eP	Pn	12 09 19.1	-0.5
RIFO	Rio Frio, Sara	1.92	69	⇓eP	Pn	12 09 21.6	+1.6
RAFA	San Farael, Vo	1.93	80	⇓eP	Pn	12 09 21.3	+0.8
CDM	Cerro de Muert	1.95	92	⇓eP	Pn	12 09 20.8	-0.1
VTRT	Volcan Turrial	1.95	79	⇓eP	Pn	12 09 22.2	+1.3
VTUC	Crater, Volcan	1.99	79	⇓eP	Pn	12 09 22.7	+1.3
VTCV	VTCV, Calle Va	2.02	80	⇓eP	Pn	12 09 22.6	+1.1
PEZE	Perez Zeledon,	2.05	97	eP	Pn	12 09 21.5	-0.5
PEZE	Perez Zeledon,	2.05	97		Pn	12 09 22.0	0.0
EDPN	Palmar Norte	2.35	106	⇓eP	Pn	12 09 25.7	-0.3
BATAN	Batan	2.38	79	⇓eP	Pn	12 09 28.1	+1.8
BATAN	Batan	2.38	79		Pn	12 09 27.8	+1.4
ACON	Acoyapa	2.38	13	⇑eP	Pn	12 09 26.2	-0.2
ACON	Acoyapa	2.38	13		Pn	12 09 26.4	0.0
SRBA	San Rafael, Bu	2.38	100	⇓eP	Pn	12 09 26.6	0.0
SRBA	San Rafael, Bu	2.38	100	Pn	Pn	12 09 26.4	-0.1
RIOS	Rincon, Osa	2.39	113	⇓eP	Pn	12 09 25.9	-0.7
RIOS	Rincon, Osa	2.39	113		Pn	12 09 26.0	-0.5
EDBA	Buenos Aires	2.48	101	⇓iP	Pn	12 09 27.4	-0.4
PTJ1	Puerto Jimnez	2.65	114	eP	Pn	12 09 29.8	-0.3
POTG	Potrero Grande	2.65	102	⇓eP	Pn	12 09 30.2	0.0
PIRO	Carate, Puerto	2.67	117	⇓eP	Pn	12 09 29.9	-0.5
BOAB	BOACO BROADBAN	2.79	2		Pn	12 09 31.9	-0.3
EDSV	San Vito	2.85	106	eP	Pn	12 09 33.9	+0.9
CCOL	Caracol de Cor	3.00	114	⇓eP	Pn	12 09 34.8	-0.1
CNGN	Cerro Negro	3.00	342	⇑eP	Pn	12 09 35.4	+0.4
CNGN	Cerro Negro	3.00	342		Pn	12 09 35.2	+0.3
CDITO	Canoas	3.02	110	⇓eP	Pn	12 09 35.3	0.0
CDITO	Canoas	3.02	110		Pn	12 09 35.2	-0.1
BRU2	Volcan	3.13	105	⇓eP	Pn	12 09 36.8	0.0
BRU2	Volcan	3.13	105		Pn	12 09 36.9	+0.1
CRIN	San Cristobal	3.30	337		Pn	12 09 39.3	+0.1
CNCH	Conchagua	4.16	331	eP	Pn	12 09 50.9	-0.1
CNCH	Conchagua	4.16	331	eP	Pn	12 09 50.9	-0.1
CNCH				eS	Sn	12 10 40.0	+1.5
LCND	La Caada	4.21	330	eP	Pn	12 09 51.4	-0.2

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LCND                                IAML            12 09 52.7
      comp=Z,3µm,0.4s
LCND                                eS      Sn      12 10 39.5  -0.1
LCND  La Caada           4.21 330   eP      Pn      12 09 51.4  -0.2
LCND                                IAML            12 09 52.7
      comp=Z,3µm,0.4s
LCND                                eS      Sn      12 10 39.5  -0.1
LCY   Lacayo             4.52 327   eP      Pn      12 09 55.9   0.0
PACA  Pacayal            4.57 327   eP      Pn      12 09 57.6  +0.9
TGUH  Tegucigalpa,Un     4.64 341⇑  eP      Pn      12 09 58.2  +0.6
TGUH  Tegucigalpa,Un     4.64 341   Pn      Pn      12 09 58.3  +0.6
TECA  Tecapa             4.69 325   eP      Pn      12 09 58.2  -0.2
TECA  Tecapa             4.69 325   eP      Pn      12 09 58.2  -0.2
COEB  Comit de Eme       4.71 325   eP      Pn      12 09 58.2  -0.4
COEB  Comit de Eme       4.71 325   eP      Pn      12 09 58.2  -0.4
GMAL  Guarumal, Vera     4.83 112⇓  eP      Pn      12 09 59.8  -0.3
SCLA  Alcaldia de Sa     4.99 324⇑  eP      Pn      12 10 02.5  +0.2
SCLA  Alcaldia de Sa     4.99 324⇑  eP      Pn      12 10 02.5  +0.2
COEG  Centro de Oper     5.01 322   eP      Pn      12 10 02.8  +0.1
COEG                                IAML            12 11 01.7
      comp=Z,1µm,0.5s
COEG  Centro de Oper     5.01 322   eP      Pn      12 10 02.8  +0.1
COEG                                IAML            12 11 01.7
      comp=Z,1µm,0.5s
SJTE  Alcalda de S       5.08 321   eP      Pn      12 10 03.6  -0.1
SJTE  Alcalda de S       5.08 321   eP      Pn      12 10 03.6  -0.1
PAVA  Las Pavas          5.12 323   eP      Pn      12 10 04.7  +0.5
PAVA  Las Pavas          5.12 323   eP      Pn      12 10 04.7  +0.5
LFRS  El Faro            5.12 321   eP      Pn      12 10 04.3   0.0
LFRS  El Faro            5.12 321   eP      Pn      12 10 04.3   0.0
LFU   La Fuente          5.25 321   eP      Pn      12 10 06.7  +0.7
LFU   La Fuente          5.25 321   eP      Pn      12 10 06.7  +0.7
SNET  Serv Nac Est T     5.28 320           Pn      12 10 06.1  -0.3
BOQS  Boqueron           5.35 320   eP      Pn      12 10 08.6  +1.2
BOQS  Boqueron           5.35 320   eP      Pn      12 10 08.6  +1.2
JAYA  Jayaque - finc     5.40 318   eP      Pn      12 10 08.7  +0.7
JAYA  Jayaque - finc     5.40 318   eP      Pn      12 10 08.7  +0.7
TACO  Tacachico          5.57 321   eP      Pn      12 10 10.9  +0.5
TACO  Tacachico          5.57 321   eP      Pn      12 10 10.9  +0.5
CEVE  Cerro Verde        5.64 318   eP      Pn      12 10 13.3  +1.8
PRVC  Isla de Provid     5.67  49   eP      Pn      12 10 12.9  +1.2
PRVC  Isla de Provid     5.67  49   Pn      Pn      12 10 13.2  +1.5
AZU   Azuero             5.71 108⇓  eP      Pn      12 10 12.5  +0.3
ZANG  Zanguenga, Cho     5.84  96   eP      Pn      12 10 14.4  +0.5
BCIP  Isla Barro Col     5.84  94   P       Pn      12 10 14.6  +0.5
BCIP  Isla Barro Col     5.84  94⇓  eP      Pn      12 10 14.1   0.0
BCIP  Isla Barro Col     5.84  94   eP      Pn      12 10 12.9  -1.1
BCIP  Isla Barro Col     5.84  94           Pn      12 10 14.6  +0.5
MTO3  Montecristo        5.91 324   eP      Pn      12 10 15.9  +0.7
MTO3  Montecristo        5.91 324   eP      Pn      12 10 15.9  +0.7
MTO3  Montecristo        5.91 324           Pn      12 10 15.4  +0.2
RTAL  Retalhuleu         7.58 310           Pn      12 10 39.7  +1.7
HUEH  Huehuetenango      7.97 316   Pn      Pn      12 10 43.7  +0.2
PTAC  Punta Ardita,      8.23 107   eP      Pn      12 10 47.3  +0.4
CCIG  Comitan            9.08 317           Pn      12 11 00.9  +2.2
PIZC  Pizarro, Choco     9.52 119   eP      Pn      12 11 06.3  +1.8
DBBC  Dabeiba            9.78 105   eP      Pn      12 11 11.1  +2.8
MOTC  Monteria, Cord     9.98  94   eP      Pn      12 11 13.9  +3.0
MOTC  Monteria, Cord     9.98  94           Pn      12 11 12.0  +1.0
UREC  San Jos de Ur     10.27 100   eP      Pn      12 11 13.9  -0.8
CBOC  Ciudad Bolivar    10.34 111   eP      Pn      12 11 17.8  +1.8
SJCC  San Jacinto, C    10.41  88   eP      Pn      12 11 19.7  +2.8
SJCC  San Jacinto, C    10.41  88   Pn      Pn      12 11 17.1  +0.2
PLMC  San Jos del P     10.49 116   eP      Pn      12 11 18.7  +0.7
HELC  Santa Helena      10.68 108   eP      Pn      12 11 23.5  +2.7
YOTC  Yotoco, Valle     10.89 120   eP      Pn      12 11 25.4  +2.0
ZARC  Zaragoza, Cauc    10.97 100   eP      Pn      12 11 25.4  +0.9
ZARC  Zaragoza, Cauc    10.97 100           Pn      12 11 25.1  +0.7
GUY2C Guyana, Caldas    11.18 112   eP      Pn      12 11 31.1  +3.3
PAYG  Puerto Ayora      11.20 204   Pn      Pn      12 11 28.4  +0.9
ANIL  Santa Ana         11.46 116   eP      Pn      12 11 33.0  +1.6
NORC  Norcasia          11.51 110   eP      Pn      12 11 34.9  +3.0
SMLC  San Martn de      11.55  93   eP      Pn      12 11 37.8  +5.4
CMIG  Matias Romero     11.57 311   P       Pn      12 11 33.0  +0.3
      comp=Z,2.5nm,0.3s,baz=137,slow=10.0,SNR=17
CMIG                                S       Sn      12 13 40.7  -0.1
      comp=Z,1.1nm,0.3s,baz=66,slow=8.1,SNR=1.3
PAC1  Pacto, Paraso     11.60 143   eP      Pn      12 11 34.0  +0.8
SOTA  Rioblanco         11.75 129   eP      Pn      12 11 38.7  +3.2
PCON  Cinco Dias        11.79 127   eP      Pn      12 11 39.7  +3.5
GCUF  Volcan Galeras    11.81 135   eP      Pn      12 11 39.7  +3.2
OTAV  Otavalo           11.83 142   P       Pn      12 11 38.2  +1.7
OTAV  Otavalo           11.83 142   eP      Pn      12 11 39.7  +3.1
OTAV  Otavalo           11.83 142   eP      Pn      12 11 38.4  +1.8
OTAV  Otavalo           11.83 142           Pn      12 11 38.2  +1.7
MARP  Paez Belalcaza    11.84 124   eP      Pn      12 11 41.6  +5.0
ORTC  Ortega, Tolima    11.87 118   eP      Pn      12 11 39.7  +2.9
TULM  Tulcn-Chalpat     11.88 138   eP      Pn      12 11 42.5  +5.2
SPBC  San Pablo de B    12.22 108   eP      Pn      12 11 42.5  +0.9
ROSC  El Rosal          12.29 112   P       Pn      12 11 44.9  +2.0
      comp=Z,2.1nm,0.3s,baz=341,slow=3.8,SNR=13
ROSC  El Rosal          12.29 112   P       Pn      12 11 44.2  +1.4
ROSC  El Rosal          12.29 112   eP      Pn      12 11 45.4  +2.6
ROSC  El Rosal          12.29 112           Pn      12 11 44.2  +1.4
BETC  Betania           12.35 123   eP      Pn      12 11 47.3  +3.9
OCAC  Ocana             12.35  95   Pn      Pn      12 11 43.2  -0.3
BARC  Barichara         12.80 103   eP      Pn      12 11 49.2  -0.4
CHIC  Chingaza          12.91 112   eP      Pn      12 11 53.0  +1.7
RUSC  La Rusia          13.08 106   eP      Pn      12 11 54.9  +1.2
PAMC  Pamplona, Colo    13.10  99   eP      Pn      12 11 57.8  +3.8
VILC  Villavicencio,    13.16 114   eP      Pn      12 11 57.8  +3.3
SOR   Soroa             13.34  11   P       Pn      12 11 56.5  -0.3
SOR   Soroa             13.34  11   Pn      Pn      12 11 56.5  -0.3
MACC  Macarena, Meta    13.97 121   eP      Pn      12 12 08.3  +2.8
TAMC  Tame, Arauca      14.17 102   eP      P       12 12 16.9  +1.6
PTLC  Puerto Leguiza    14.39 130   eP      P       12 12 15.9  -1.8
GTBY  Guantanamo Bay    14.49  44   Pn      Pn      12 12 13.2  +0.7
TLIG  Tlapa             14.74 304   Pn      Pn      12 12 16.3  +0.3
SDV   Santo Domingo     14.93  92   P       Pn      12 12 20.0  +1.3
      comp=Z,1.8nm,0.3s,baz=253,slow=6.7,SNR=12
SDV                                 PcP     PcP     12 17 28.0  +0.7
      baz=291,slow=3.1,SNR=4.2
SDV                                 LR      LR      12 19 48.2
      comp=Z,2µm,19.2s,baz=238,slow=44
SDV   Santo Domingo     14.93  92   eP      Pn      12 12 19.7  +1.1
SDV   Santo Domingo     14.93  92   eP      Pn      12 12 21.2  +2.5
SDV   Santo Domingo     14.93  92   Pn      Pn      12 12 19.5  +0.8
JAKH  Jacmel            15.41  55           Pn      12 12 25.1  +0.3
JAKH                                IAmb    IAmb    12 12 34.7
      comp=Z,124nm,1.0s
SDDR  Presa de Saban    16.79  55           Pn      12 12 40.6  -1.9
BAUV  El Baul           17.48  91   P       Pn      12 12 49.5  -1.6
BAUV                                IAmb    IAmb    12 12 55.0
      comp=Z,102nm,0.9s
MOIG  Morelia           17.95 305   P       P       12 12 58.6  +1.2
MOIG                                IAmb    IAmb    12 13 06.3
      comp=Z,154nm,1.2s
ATAH  Atahualpa         18.20 156   P       P       12 13 01.6  +1.3
      comp=Z,0.7nm,0.3s,baz=349,slow=7.5,SNR=12
ATAH                                PcP     PcP     12 17 32.1  -0.4
      comp=Z,0.2nm,0.3s,baz=1.3,slow=5.2,SNR=2.2
ATAH                                LR      LR      12 19 04.0
      comp=Z,3µm,21.4s,baz=329,slow=34
DWPF  Disney Wildern    18.82  12   P       Pn      12 13 10.1  +2.8
      baz=193
656A  Willston          19.86   8   P       Pn      12 13 19.0  -0.7
CRPR  Cabo Rojo, PR     19.90  63   P       P       12 13 17.6  -0.9
AOPR  Arecibo Observ    20.34  63   P       P       12 13 21.7  -1.7
OBIP  Obispado Ponce    20.36  64   P       P       12 13 24.6  +1.1
CELP  Cerrillos         20.39  64   P       P       12 13 24.9  +1.0
553A  Crawfordville     20.48   3   P       P       12 13 25.7  +1.0
ZAIG  Zacatecas         20.74 311   P       P       12 13 28.7  +0.8
SJG   San Juan          20.79  64   P       P       12 13 28.4  +0.3
      comp=Z,13nm,0.3s,baz=284,slow=18,SNR=2.3
SJG                                 PcP     PcP     12 17 37.4  +0.8
      comp=Z,6.4nm,0.3s,baz=37,slow=0.8,SNR=4.9
SJG                                 LR      LR      12 22 17.3
      comp=Z,860nm,18.9s,baz=255,slow=39
SJG   San Juan          20.79  64   P       P       12 13 27.9  -0.2
SJG                                 pmax    pmax
      comp=Z,45nm,0.8s
SJG   San Juan          20.79  64   P       P       12 13 27.9  -0.2
PCRV  Puerto La Cruz    20.80  87   P       P       12 13 29.6  +1.3
      comp=Z,361nm,0.7s,baz=296,slow=4.9,SNR=105
PCRV                                LR      LR      12 23 39.4
      comp=Z,3µm,19.6s,slow=43
TBTG  Tabatinga, AM     20.92 130   eP      Pn      12 13 31.0  -1.2
TBTG  Tabatinga, AM     20.92 130   P       P       12 13 30.3  +0.7
HUMP  Col San Antoni    21.06  64   P       P       12 13 31.1   0.0
456A  Hilliard          21.27   9   P       P       12 13 34.2  +1.1
MTP   Monte Pirata      21.31  65   P       P       12 13 31.9  -1.8
MTP                                 IAmb    IAmb    12 14 00.8

      comp=Z,81nm,1.2s
BRAL  Brewton           21.46 357   P       P       12 13 37.6  +2.4
      baz=176
BRAL  Brewton           21.46 357   P       P       12 13 37.2  +2.0
CZSB  Cruzeiro do Su    21.59 143   eP      P       12 13 39.0  +2.2
CZSB  Cruzeiro do Su    21.59 143   P       P       12 13 38.4  +1.6
352A  Blakely           21.75   2   P       P       12 13 39.2  +0.9
TIGA  Tifton            21.79   5   P       P       12 13 40.8  +2.1
      baz=186
TIGA  Tifton            21.79   5   P       P       12 13 40.1  +1.3
346A  Big Creek Wild    21.92 351   P       P       12 13 40.1   0.0
STVI  Saint Thomas      21.93  64   P       P       12 13 39.0  -1.4
344A  Westbrook Farm    22.20 349   P       P       12 13 44.8  +1.6
344A                                IAmb    IAmb    12 13 47.0
      comp=Z,140nm,1.1s
250A  Grady             22.24 359   P       P       12 13 43.7  +0.2
HKT   Hockley           22.30 336⇓  eP      P       12 13 45.6  +1.4
HKT                                 pmax    pmax
      comp=Z,138nm,1.7s
HKT   Hockley           22.30 336   P       P       12 13 44.5  +0.3
HKT                                 IAmb    IAmb    12 14 02.8
      comp=Z,83nm,1.4s
255A  Hazlehurst        22.39   7   P       P       12 13 45.8  +0.6
342A  Flagon Creek P    22.48 345   P       P       12 13 44.3  -1.8
342A                                IAmb    IAmb    12 14 11.4
      comp=Z,85nm,1.1s
833A  Chaparral WMA,    22.59 327   P       P       12 13 49.0  +1.6
      baz=143,SNR=9.1
VBMS  Vicksburg         22.90 350   P       P       12 13 51.7  +1.1
      baz=168,SNR=6.6
VBMS  Vicksburg         22.90 350   P       P       12 13 50.7  +0.1
VBMS                                IAmb    IAmb    12 14 07.4
      comp=Z,105nm,1.1s
154A  Montrose          22.99   6   P       P       12 13 52.1  +0.5
146A  Union             23.09 353   P       P       12 13 52.8  +0.2
NNA   Nana              23.23 157   P       P       12 13 54.8  +0.7
      comp=Z,44nm,1.2s,baz=296,slow=5.1,SNR=5.0
NNA                                 LR      LR      12 21 00.5
      comp=Z,711nm,21.4s,baz=316,slow=31
NNA   Nana              23.23 157  ceP      P       12 13 56.6  +2.4
NNA                                 pmax    pmax
      comp=Z,147nm,1.7s
NNA   Nana              23.23 157   P       P       12 13 54.9  +0.7
NNA                                 IAmb    IAmb    12 13 56.5
      comp=Z,84nm,1.3s
NATX  Nacogdoches       23.52 341   P       P       12 13 57.1  +0.3
      baz=157
NATX  Nacogdoches       23.52 341   P       P       12 13 56.9  +0.2
NATX                                IAmb    IAmb    12 14 05.7
      comp=Z,132nm,1.4s
143A  Socs Landing,     23.54 348   P       P       12 13 57.3  +0.3
143A                                IAmb    IAmb    12 14 24.3
      comp=Z,68nm,1.4s
Z47A  Carrollton        23.55 355   P       P       12 13 56.9  -0.2
Z47A                                IAmb    IAmb    12 14 00.7
      comp=Z,69nm,0.8s
GOGA  Godfrey           23.75   5   P       P       12 13 59.1  +0.1
GOGA                                pmax    pmax
      comp=Z,64nm,0.8s
GOGA  Godfrey           23.75   5   P       P       12 13 59.5  +0.5
      baz=186,SNR=27
GOGA  Godfrey           23.75   5   P       P       12 13 59.1  +0.1
GOGA                                IAmb    IAmb    12 14 02.9
      comp=Z,64nm,0.8s
435B  Jarrell           23.76 334   P       P       12 14 00.1  +1.0
      baz=150
435B  Jarrell           23.76 334   P       P       12 13 59.6  +0.5
435B                                IAmb    IAmb    12 14 06.7
      comp=Z,42nm,0.7s
NHSC  New Hope          23.91  12   P       P       12 14 02.2  +1.7
      baz=194,SNR=7.1
NHSC  New Hope          23.91  12   P       P       12 14 01.6  +1.1
Y49A  Blount Mountai    24.11 359   P       P       12 14 02.0  -0.4
237A  Washetta, Mont    24.13 339   P       P       12 14 03.0  +0.5
237A                                IAmb    IAmb    12 14 30.5
      comp=Z,71nm,1.1s
Y52A  Lilburn           24.16   3   P       P       12 14 02.9  +0.1
Z41A  Richland Creek    24.39 346   P       P       12 14 05.2  +0.3
      baz=163
JCT   Junction City     24.54 330   P       P       12 14 06.9  +0.6
      baz=145,SNR=14
JCT   Junction City     24.54 330   IAmb    IAmb    12 14 16.4
      comp=Z,35nm,0.9s
FDF   Fort de France    24.55  76   P       P       12 14 06.8  +0.2
FDF                                 pmax    pmax
      comp=Z,144nm,0.9s
FDF   Fort de France    24.55  76   P       P       12 14 06.8  +0.2
BIM   Bigot             24.60  76   P       P       12 14 07.7  +0.7
X48A  Hartselle         24.73 357   IAmb    IAmb    12 14 10.5
      comp=Z,38nm,0.8s
WHTX  Lake Whitney,     24.75 336   P       P       12 14 08.9  +0.7
      baz=151
WHTX  Lake Whitney,     24.75 336   IAmb    IAmb    12 14 36.3
      comp=Z,94nm,0.9s
Y57A  Sumter            24.76  11   P       P       12 14 08.3  +0.1
Y57A                                IAmb    IAmb    12 14 13.6
      comp=Z,88nm,1.1s
FPAL  Fort Paine        24.79   0   IAmb    IAmb    12 14 12.0
      comp=Z,68nm,1.0s
Y58A  Scranton          24.79  12   IAmb    IAmb    12 14 13.8
      comp=Z,89nm,0.9s
CCAR  Cane Creek        24.79 348   IAmb    IAmb    12 14 12.9
      comp=Z,46nm,0.7s
X51A  Calhoun           24.82   2   IAmb    IAmb    12 14 12.6
      comp=Z,84nm,0.9s
TOSP  Speyside          24.84  84   P       P       12 14 08.5  -0.7
TOSP                                IAmb    IAmb    12 14 10.1
      comp=Z,70nm,0.8s
WLAR  White Oak Lake    24.88 345   IAmb    IAmb    12 14 25.4
      comp=Z,42nm,0.9s
Z38A  Mt. Pleasant      25.01 341   P       P       12 14 10.0  -0.5
Z38A                                IAmb    IAmb    12 14 15.8
      comp=Z,31nm,0.6s
Y59A  Loris             25.05  14   P       P       12 14 10.9  +0.1
W52A  Murphy            25.39   3   IAmb    IAmb    12 14 17.8
      comp=Z,58nm,0.9s
X40A  Basin Creek Fa    25.57 346   P       P       12 14 15.9  +0.2
      baz=164,SNR=7.7
W45A  Hickory Valley    25.60 353   IAmb    IAmb    12 14 26.1
      comp=Z,51nm,0.8s
KMSC  Kings Mountain    25.70   8   P       P       12 14 17.3  +0.5
      baz=190,SNR=15
CPCT  Cooper Cave       25.72   2   IAmb    IAmb    12 14 23.5
      comp=Z,116nm,1.3s
TXAR  Lajitas Array     25.80 322   P       P       12 14 18.1  +0.1
      comp=Z,30nm,0.9s,baz=140,slow=8.3,SNR=101
TXAR                                PcP     PcP     12 17 48.0  +0.9
      comp=Z,2.3nm,0.7s,baz=132,slow=3.7,SNR=3.8
MIAR  Mount Ida         25.81 345   P       P       12 14 18.0  +0.2
      baz=162,SNR=17
MIAR  Mount Ida         25.81 345   IAmb    IAmb    12 14 31.7
      comp=Z,30nm,0.8s
Z35A  Perchaven, San    25.86 337   P       P       12 14 17.4  -0.8
Z35A                                IAmb    IAmb    12 14 30.2
      comp=Z,29nm,0.8s
W57A  Gilead            25.93  11   IAmb    IAmb    12 14 22.1
      comp=Z,110nm,1.4s
TKL   Tuckaleechee C    25.96   4   P       P       12 14 18.0  -1.1
      comp=Z,3.4nm,0.4s,baz=181,slow=12,SNR=31
TKL                                 PcP     PcP     12 17 48.9  +1.7
      comp=Z,4.8nm,0.8s,baz=172,slow=3.9,SNR=2.1
TKL                                 LR      LR      12 24 27.7
      comp=Z,1µm,19.7s,baz=193,slow=36
V48A  Smith Brothers    26.00 358   P       P       12 14 18.1  -1.4
V48A                                IAmb    IAmb    12 14 21.6
      comp=Z,49nm,0.8s
H06E1 SOCORRO T-PHAS26.02 293       T       T       12 41 29.0
      SNR=14
BOAV  Boa Vista         26.07 104   eP      P       12 14 21.9  +1.4
BOAV  Boa Vista         26.07 104   P       P       12 14 20.1  -0.3
V51A  Loudon            26.08   3   IAmb    IAmb    12 14 27.5
      comp=Z,67nm,0.8s
W41B  Gary Mavity, V    26.10 348   P       P       12 14 20.2  -0.2
      baz=165
V52A  Sevierville       26.16   4   IAmb    IAmb    12 14 27.1
      comp=Z,50nm,0.8s
LPAR  Lepanto           26.18 352   IAmb    IAmb    12 14 27.1
      comp=Z,56nm,0.6s
HBAR  Harrisburg        26.18 351   IAmb    IAmb    12 14 24.3
      comp=Z,39nm,0.5s
ABTX  Abilene, Hawle    26.24 333   P       P       12 14 24.0  +2.3
      baz=148,SNR=10
ABTX  Abilene, Hawle    26.24 333   IAmb    IAmb    12 14 27.5
      comp=Z,25nm,0.6s
CLTN  Cedars of Leba    26.34 359   IAmb    IAmb    12 14 35.1
      comp=Z,36nm,0.8s

V55A  Taylorsville      26.42   8   IAmb    IAmb    12 14 27.7
      comp=Z,51nm,1.1s
WVT   Waverly           26.44 356   P       P       12 14 21.9  -1.6
WVT                                 pmax    pmax
      comp=Z,15nm,0.7s
WVT   Waverly           26.44 356   P       P       12 14 22.6  -0.9
      baz=175
WVT   Waverly           26.44 356   P       P       12 14 21.9  -1.6
W39A  Magazine          26.48 345   P       P       12 14 24.0  +0.1
      baz=162,SNR=10
U49A  Red Boiling Sp    26.75 360   IAmb    IAmb    12 14 28.3
      comp=Z,30nm,0.7s
TZTN  Tazewell          26.86   4   P       P       12 14 29.0  +1.8
      baz=185,SNR=16
U54A  Nelsons Funny     27.00   7   IAmb    IAmb    12 14 36.2
      comp=Z,59nm,0.8s
U56A  King              27.03  10   IAmb    IAmb    12 14 32.7
      comp=Z,45nm,0.9s
PARMO Parma             27.15 353   IAmb    IAmb    12 14 33.9
      comp=Z,61nm,0.7s
X34A  Smith Ranch, M    27.20 338   IAmb    IAmb    12 14 44.0
      comp=Z,43nm,1.2s
T47A  Sharon Grove      27.26 358   IAmb    IAmb    12 14 32.5
      comp=Z,37nm,0.8s
U40A  Yellville         27.37 347   P       P       12 14 32.8  +0.9
      baz=165
ETMB  Extrema           27.41 134   eP      P       12 14 33.1  +0.7
FNO   Franklin          27.64 339   IAmb    IAmb    12 14 38.5
      comp=Z,26nm,0.6s
PTGA  Pitinga           27.65 110   P       P       12 14 34.2  -0.4
      comp=Z,72nm,0.9s,baz=295,slow=11,SNR=95
PTGA                                LR      LR      12 25 38.6
      comp=Z,746nm,20.8s,baz=294,slow=36
PTGA  Pitinga           27.65 110   P       P       12 14 33.9  -0.7
WMOK  Wichita Mounta    27.69 336   P       P       12 14 38.5  +3.8
      baz=151,SNR=8.2
T42A  Van Buren         27.70 351   P       P       12 14 33.2  -1.5
TUL1  Leonard           27.71 342   P       P       12 14 33.8  -1.0
      baz=158
TUL1  Leonard           27.71 342           P       12 14 33.9  -1.0
T57A  Hurt              27.86  11   IAmb    IAmb    12 14 39.7
      comp=Z,32nm,0.8s
BLA   Blacksburg        27.87   9   P       P       12 14 38.6  +2.2
      baz=191
BLA   Blacksburg        27.87   9   IAmb    IAmb    12 14 40.2
      comp=Z,95nm,1.4s
S51A  Beattyville       27.95   4   IAmb    IAmb    12 14 45.0
      comp=Z,43nm,0.8s
MACA  Manacapuru-AM     28.02 116   eP      P       12 14 39.1  +1.2
MACA  Manacapuru-AM     28.02 116   P       P       12 14 38.7  +0.8
S44A  Carbondale        28.11 354   IAmb    IAmb    12 14 44.7
      comp=Z,34nm,1.1s
SIUC  Southern Illin    28.13 354   IAmb    IAmb    12 14 39.7
      comp=Z,22nm,0.8s
T59A  Double "B" Far    28.20  14   IAmb    IAmb    12 14 42.8
      comp=Z,97nm,1.4s
S54A  Dingess, Beckl    28.32   7   IAmb    IAmb    12 14 56.1
      comp=Z,27nm,0.9s
WCI   Wyandotte Cave    28.47 359   P       P       12 14 40.9  -0.7
WCI                                 pmax    pmax
      comp=Z,66nm,0.9s
WCI   Wyandotte Cave    28.47 359   P       P       12 14 41.8  +0.2
      baz=179
WCI   Wyandotte Cave    28.47 359   P       P       12 14 40.9  -0.7
MNTX  Cornudas Mount    28.53 323   P       P       12 14 42.6  +0.4
      baz=136,SNR=11
R49A  Shelbyville       28.54   1   IAmb    IAmb    12 14 43.9
      comp=Z,46nm,0.7s
R50A  Paris             28.55   2   IAmb    IAmb    12 14 44.3
      comp=Z,21nm,0.7s
CCM   Cathedral Cave    28.73 351   P       P       12 14 42.4  -1.5
CCM                                 pmax    pmax
      comp=Z,19nm,0.8s
CCM   Cathedral Cave    28.73 351   P       P       12 14 43.6  -0.3
      baz=169
CCM   Cathedral Cave    28.73 351   P       P       12 14 42.4  -1.5
R53A  Hurricane         28.77   6   IAmb    IAmb    12 14 47.3
      comp=Z,31nm,0.7s
MSTX  Muleshoe          28.83 330   P       P       12 14 46.5  +1.5
      baz=143
R55A  Marlinton         28.97   9   IAmb    IAmb    12 14 50.0
      comp=Z,43nm,0.9s
AMTX  Amarillo          29.05 332   IAmb    IAmb    12 14 50.6
      comp=Z,17nm,0.6s
SAML  Samuel            29.07 129   P       P       12 14 46.9  -0.4
SAML  Samuel            29.07 129   P       P       12 14 46.9  -0.4
Q44A  Meyer Farm, Va    29.29 355   IAmb    IAmb    12 14 54.2
      comp=Z,34nm,0.8s
Q52A  Bidwell           29.36   6   IAmb    IAmb    12 15 02.1
      comp=Z,60nm,1.1s
BLO   Bloomington       29.42 359   IAmb    IAmb    12 14 51.5
      comp=Z,42nm,0.8s
CBN   Corbin Frederi    29.42  13   P       P       12 14 52.0  +1.9
      baz=197
Q54A  Coxs Mills        29.55   8   IAmb    IAmb    12 15 02.3
      comp=Z,36nm,0.8s
P48A  Milroy            29.70   0   IAmb    IAmb    12 14 53.7
      comp=Z,43nm,0.7s
P49A  Miami Univ. Ec    29.79   2   P       P       12 14 51.9  -1.4
      baz=182,SNR=7.0
P49A  Miami Univ. Ec    29.79   2   IAmb    IAmb    12 14 54.4
      comp=Z,24nm,0.8s
P51A  Williamsport      29.82   4   IAmb    IAmb    12 14 55.3
      comp=Z,22nm,0.8s
Q56A  Snyder Ridge,     29.86  10   IAmb    IAmb    12 14 58.2
      comp=Z,58nm,1.1s
P52A  Corning           30.04   6   P       P       12 14 55.2  -0.3
      baz=187
P52A  Corning           30.04   6   IAmb    IAmb    12 15 03.7
      comp=Z,34nm,0.8s
P43A  Skaggs, Pawnee    30.07 354   IAmb    IAmb    12 15 00.9
      comp=Z,48nm,1.4s
MCWV  Mont Chateau      30.35   9   P       P       12 14 59.4  +1.0
      baz=191
MCWV  Mont Chateau      30.35   9   IAmb    IAmb    12 15 02.4
      comp=Z,51nm,1.1s
O52A  Adamsville        30.55   6   IAmb    IAmb    12 15 05.7
      comp=Z,68nm,1.2s
121A  Cookes Peak, D    30.56 321   P       P       12 15 02.6  +2.1
      baz=133,SNR=9.9
121A  Cookes Peak, D    30.56 321   IAmb    IAmb    12 15 08.0
      comp=Z,51nm,1.4s
ACSO  Alum Creek Sta    30.57   4   P       P       12 14 59.6  -0.6
      baz=185,SNR=6.5
ACSO  Alum Creek Sta    30.57   4   IAmb    IAmb    12 15 10.2
      comp=Z,36nm,0.9s
SFIN  Lafayette         30.64 358   P       P       12 14 59.1  -1.7
      baz=177,SNR=15
SDMD  Soldier's Deli    30.70  14   IAmb    IAmb    12 15 05.0
      comp=Z,27nm,0.9s
O53A  New Philadelph    30.75   7   P       P       12 15 01.6  -0.2
      baz=189,SNR=11
O54A  Avella            30.79   8   IAmb    IAmb    12 15 05.1
      comp=Z,41nm,1.2s
KSU1  Kansas State U    30.91 343   P       P       12 15 02.3  -0.9
      baz=159
KSU1  Kansas State U    30.91 343   IAmb    IAmb    12 15 32.4
      comp=Z,22nm,0.6s
R32A  Long Quarter,     30.94 340   IAmb    IAmb    12 15 06.8
      comp=Z,16nm,0.7s
HDIL  Hopedale          30.95 355   P       P       12 15 02.3  -1.3
      baz=173
HDIL  Hopedale          30.95 355   IAmb    IAmb    12 15 07.0
      comp=Z,36nm,0.7s
LPAZ  La Paz            31.10 146   P       P       12 15 06.6  +0.7
      comp=Z,7.8nm,0.9s,baz=342,slow=8.9,SNR=10
LPAZ                                PcP     PcP     12 18 01.9  +0.9
      comp=Z,1.9nm,0.6s,baz=350,slow=2.0,SNR=1.9
LPAZ  La Paz            31.10 146   P       P       12 15 07.6  +1.8
LPAZ                                pmax    pmax
      comp=Z,17nm,1.3s
LPAZ  La Paz            31.10 146   eP      P       12 15 06.8  +1.0
O56A  Blue Knob Stat    31.16  11   P       P       12 15 05.3  -0.2
      baz=194
O56A  Blue Knob Stat    31.16  11   IAmb    IAmb    12 15 09.4
      comp=Z,46nm,1.1s
N49A  Columbus Grove    31.19   2   IAmb    IAmb    12 15 07.2
      comp=Z,36nm,1.1s
N53A  Lisbon            31.34   7   IAmb    IAmb    12 15 12.7
      comp=Z,75nm,1.4s
P60A  Greenville        31.37  15   IAmb    IAmb    12 15 10.7
      comp=Z,25nm,0.8s
MVL   Millersville      31.37  14   IAmb    IAmb    12 15 11.8
      comp=Z,50nm,1.1s
ANMO  Albuquerque       31.51 326   P       P       12 15 10.0  +1.2
      comp=Z,3.3nm,0.6s,baz=146,slow=7.4,SNR=13
ANMO                                PcP     PcP     12 18 02.2  +0.9
      comp=Z,3.5nm,0.9s,baz=34,slow=3.6,SNR=3.3
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ANMO	Albuquerque	31.51	326⇑	*e*P	P	12 15 10.4	+1.5
ANMO				pmax	pmax		
	comp=Z,13nm,1.3s						
ANMO	Albuquerque	31.51	326	P	P	12 15 10.9	+2.0
	baz=138						
ANMO	Albuquerque	31.51	326	P	P	12 15 09.8	+0.9
SSPA	Standing Stone	31.65	11	P	P	12 15 09.5	-0.2
	baz=195						
SSPA	Standing Stone	31.65	11	P	P	12 15 08.0	-1.7
N38A	Joes South For	31.73	349	IAmb	IAmb	12 15 19.2	
	comp=Z,16nm,0.7s						
M53A	WI Miller and	31.99	7	P	P	12 15 12.3	-0.4
	baz=189,SNR=9.6						
PB16	IPOC Station P	32.08	150	IAmb	IAmb	12 15 17.3	
	comp=Z,29nm,1.1s						
M54A	Oil Creek Stat	32.19	9	P	P	12 15 15.9	+1.4
	baz=191						
M54A	Oil Creek Stat	32.19	9	IAmb	IAmb	12 15 19.8	
	comp=Z,13nm,0.7s						
L48A	N Adams	32.20	2	IAmb	IAmb	12 15 15.4	
	comp=Z,25nm,0.9s						
M55A	Ridgway	32.30	10	IAmb	IAmb	12 15 19.1	
	comp=Z,37nm,0.8s						
TUC	Tucson	32.33	318	P	P	12 15 16.3	+0.3
TUC				pmax	pmax		
	comp=Z,27nm,1.5s						
TUC	Tucson	32.33	318	P	P	12 15 18.6	+2.6
	baz=129						
TUC	Tucson	32.33	318	P	P	12 15 16.3	+0.3
TUC				IAmb	IAmb	12 15 21.9	
	comp=Z,27nm,1.4s						
N59A	State Game Lan	32.38	14	P	P	12 15 17.0	+0.8
	baz=198,SNR=9.2						
L44A	Lake County Fo	32.47	357	P	P	12 15 15.5	-1.4
	baz=176						
L40A	Anamosa	32.66	352	IAmb	IAmb	12 15 25.9	
	comp=Z,19nm,0.8s						
SCIA	State Center	32.81	350	P	P	12 15 20.0	+0.1
	baz=166						
ITTB	Itaituba	32.98	114	*e*P	P	12 15 22.2	+0.4
MDP	Montagnes des	33.12	95	P	P	12 15 24.3	+1.4
	comp=Z,53nm,0.9s,baz=278,slow=9.7,SNR=21						
MDP				LR	LR	12 31 09.7	
	comp=Z,540nm,18.5s,baz=282,slow=40						
SDCO	Great Sand Dun	33.17	331	P	P	12 15 25.8	+2.3
	baz=142,SNR=7.0						
PB11	IPOC Station P	33.23	152	IAmb	IAmb	12 15 26.2	
	comp=Z,38nm,0.9s						
WVNY	West Valley, N	33.24	10	IAmb	IAmb	12 15 25.6	
	comp=Z,33nm,0.9s						
X18A	Snowflake	33.24	322	IAmb	IAmb	12 15 27.6	
	comp=Z,45nm,1.3s						
MALB	Monte Alegre	33.36	108	*e*P	P	12 15 26.7	+1.6
JFWS	Jewell Farm	33.38	354	P	P	12 15 23.1	-1.8
	baz=172						
BGNE	Belgrade	33.49	343	P	P	12 15 25.8	-0.1
	baz=157						
214A	Organ Pipe Nat	33.49	315	P	P	12 15 28.2	+2.1
	baz=126						
W18A	Petrified Fore	33.51	323	P	P	12 15 28.7	+2.3
	baz=133						
BINY	Binghamton	33.55	13	P	P	12 15 26.6	+0.2
	baz=198,SNR=11						
S22A	4UR Ranch, Cre	33.83	329	P	P	12 15 31.2	+2.0
	baz=140,SNR=9.0						
VILB	Vilhena	33.87	131	*e*P	P	12 15 29.9	+0.4
X16A	Lo Mia Camp, P	34.09	320	IAmb	IAmb	12 15 43.9	
	comp=Z,22nm,0.8s						
J55A	Hilton	34.21	10	IAmb	IAmb	12 15 33.5	
	comp=Z,21nm,0.8s						
MVCO	Mesa Verde	34.30	327	P	P	12 15 35.3	+2.1
	baz=137,SNR=7.5						
MVCO	Mesa Verde	34.30	327	IAmb	IAmb	12 15 51.8	
	comp=Z,33nm,1.3s						
OGNE	Ogallala	34.36	338	P	P	12 15 35.2	+1.7
	baz=151						
PB01	IPOC Station P	34.42	152	IAmb	IAmb	12 15 36.6	
	comp=Z,18nm,0.9s						
NPGB	Novo Progresso	34.51	118	*e*P	P	12 15 35.3	+0.2
113A	Mohawk Valley,	34.62	316	IAmb	IAmb	12 15 47.2	
	comp=Z,31nm,1.4s						
L61B	Northampton	34.64	17	P	P	12 15 35.1	-0.7
	baz=203						
WUAZ	Wupatki	34.77	322	P	P	12 15 39.4	+2.2
	baz=132,SNR=12						
Y14A	Wickenburg	34.80	318	IAmb	IAmb	12 15 43.3	
	comp=Z,30nm,1.4s						
ISCO	Idaho Springs	34.87	333	P	P	12 15 40.3	+2.1
	baz=144						
MCPB	Macapa, AP	34.97	105	*e*P	P	12 15 39.3	+0.2
PECO	Prince Edward	35.00	11	IAmb	IAmb	12 15 48.5	
	comp=Z,29nm,1.0s						
J59A	Piesco	35.09	14	IAmb	IAmb	12 15 42.6	
	comp=Z,33nm,0.9s						
ECSD	EROS Data Cent	35.26	346	P	P	12 15 38.9	-2.3
	baz=161,SNR=9.4						
SIV	San Ignacio	35.28	136	P	P	12 15 41.8	+0.1
	comp=Z,13nm,0.8s,baz=316,slow=8.3,SNR=20						
SIV				PcP	PcP	12 18 12.6	+0.6
	comp=Z,8.6nm,0.7s,baz=256,slow=2.0,SNR=6.2						
DELO	Deloro Mine	35.46	10	IAmb	IAmb	12 15 45.0	
	comp=Z,43nm,1.4s						
SADO	Sadowa	35.47	8	P	P	12 15 41.4	-1.4
	comp=Z,33nm,0.8s,baz=238,slow=4.5,SNR=22						
SADO				PcP	PcP	12 18 12.3	+0.3
	comp=Z,7.1nm,0.8s,baz=188,slow=1.6,SNR=4.3						
SADO				LR	LR	12 30 04.6	
	comp=Z,2µm,21.6s,baz=186,slow=36						
SADO	Sadowa	35.47	8	IAmb	IAmb	12 15 45.6	
	comp=Z,36nm,0.8s						
GLA	Glamis	35.51	315	P	P	12 15 45.5	+2.0
	baz=124						
NCB	Newcomb	35.64	14	IAmb	IAmb	12 15 52.2	
	comp=Z,18nm,0.8s						
PDRB	Porto dos Gac	35.74	126	*e*P	P	12 15 45.3	-0.3
PDMCI	Parker Dam,Lak	35.77	318	P	P	12 15 47.7	+2.0
	baz=127,SNR=9.5						
PB06	IPOC Station P	35.84	154	IAmb	IAmb	12 15 48.8	
	comp=Z,34nm,0.9s						
N23A	Red Feather La	35.90	333	P	P	12 15 48.9	+1.8
	baz=144						
U15A	North Rim	35.93	322	IAmb	IAmb	12 15 58.0	
	comp=Z,44nm,1.2s						
SPMN	Marine on St.	35.98	351	P	P	12 15 44.2	-3.1
	baz=168,SNR=6.0						
LVC	Limon Verde	36.04	153	P	P	12 15 49.6	+1.1
	comp=Z,24nm,0.8s,baz=343,slow=8.2,SNR=15						
LVC	Limon Verde	36.04	153	P	P	12 15 49.6	+1.1
LVC				pmax	pmax		
	comp=Z,38nm,1.0s						
LVC	Limon Verde	36.04	153	*e*P	P	12 15 49.7	+1.1
LVC	Limon Verde	36.04	153	P	P	12 15 49.6	+1.1
LVC				IAmb	IAmb	12 15 51.5	
	comp=Z,38nm,0.9s						
PLVO	Plevna	36.06	10	IAmb	IAmb	12 15 51.8	
	comp=Z,30nm,1.1s						
W13A	Hualapai Mount	36.08	319	P	P	12 15 50.2	+1.6
W13A				IAmb	IAmb	12 15 54.9	
	comp=Z,41nm,1.4s						
CLDB	Colider	36.09	124	*e*P	P	12 15 48.0	-0.6
SWSC	Sam W. Stewart	36.13	314	P	P	12 15 50.9	+2.1
	baz=123						
LONY	Lake Ozonia	36.17	14	P	P	12 15 48.5	-0.4
	baz=199,SNR=14						
LONY	Lake Ozonia	36.17	14	P	P	12 15 48.0	-1.0
IKP	In-Ko-Pah, Jac	36.19	314	P	P	12 15 51.5	+2.1
	baz=122						
PTLB	Pontes e Lacer	36.28	133	*e*P	P	12 15 50.6	+0.5
PTLB	Pontes e Lacer	36.28	133	P	P	12 15 49.8	-0.3
PTLB				IAmb	IAmb	12 15 51.1	
	comp=Z,29nm,0.8s						
BC3	Big Chuckawall	36.28	316	P	P	12 15 52.8	+2.6
	baz=124,SNR=7.1						
VT1	Waterbury	36.35	16	IAmb	IAmb	12 15 54.8	
	comp=Z,31nm,0.8s						
IRM	Iron Mountain	36.36	317	P	P	12 15 53.2	+2.5
	baz=125						
NEE2	Needles Airpor	36.36	318	P	P	12 15 53.3	+2.6
	baz=127						
O20A	White River Ci	36.37	330	P	P	12 15 53.3	+2.3
	baz=140,SNR=7.6						
O20A	White River Ci	36.37	330	IAmb	IAmb	12 16 08.8	
	comp=Z,24nm,1.1s						
SUSD	Miller	36.52	344	P	P	12 15 51.1	-0.8
	baz=158						
SUSD	Miller	36.52	344	IAmb	IAmb	12 15 53.5	
	comp=Z,32nm,0.9s						
FRNY	Flat Rock	36.61	15	IAmb	IAmb	12 15 55.3	
	comp=Z,28nm,0.9s						
KNB	Kanab	36.64	322	IAmb	IAmb	12 15 57.7	
	comp=Z,49nm,1.1s						
SRU	San Rafael Swe	36.77	327	IAmb	IAmb	12 16 08.5	
	comp=Z,22nm,1.1s						
BELC	Belle Mtn. Jos	36.85	316	P	P	12 15 57.5	+2.4
	baz=124,SNR=6.2						
LCMT	Little Creek M	36.89	322	IAmb	IAmb	12 15 59.0	
	comp=Z,22nm,1.2s						
PFO	Pinyon Flats O	36.96	315	P	P	12 15 57.2	+1.2
	comp=Z,9.5nm,1.0s,baz=94,slow=6.8,SNR=5.8						
PFO	Pinyon Flats O	36.96	315	P	P	12 15 54.3	-1.7
PFO				pmax	pmax		
	comp=Z,22nm,1.1s						
PFO	Pinyon Flats O	36.96	315	P	P	12 15 58.5	+2.5
	baz=123						
PFO	Pinyon Flats O	36.96	315	P	P	12 15 54.3	-1.7
PFO				IAmb	IAmb	12 16 08.5	
	comp=Z,22nm,1.1s						
Q16A	Castle Valley	36.99	326	P	P	12 15 55.3	-0.9
P18A	Preston Nutter	37.00	328	P	P	12 15 55.0	-1.5
GMRC	Granite Mounta	37.07	317	P	P	12 15 59.3	+2.4
	baz=125						
SZCU	Shurtz Canyon	37.18	323	IAmb	IAmb	12 16 01.4	
	comp=Z,33nm,1.3s						
PB14	IPOC Station P	37.20	157	IAmb	IAmb	12 16 00.6	
	comp=Z,43nm,1.0s						
CCUT	Cedar City	37.31	323	IAmb	IAmb	12 16 03.0	
	comp=Z,21nm,1.1s						
MURC	Murrieta	37.47	314	P	P	12 16 02.8	+2.6
	baz=122						
HEC	Hector,Ludlow	37.55	317	P	P	12 16 03.5	+2.6
	baz=125						
TUQ	Turquoise Moun	37.62	318	P	P	12 16 03.9	+2.3
	baz=126						
BBRC	Big Bear Solar	37.63	315	P	P	12 16 04.9	+3.0
	baz=123						
TRQ	Mont Tremblant	37.69	13	IAmb	IAmb	12 16 04.9	
	comp=Z,34nm,0.8s						
SHPR	Sheep Range	37.76	320	P	P	12 16 03.3	+0.5
RSSD	Black Hills	37.85	338	P	P	12 16 02.5	-1.0
RSSD				pmax	pmax		
	comp=Z,8.0nm,0.7s						
RSSD	Black Hills	37.85	338	P	P	12 16 04.6	+1.1
	baz=150						
RSSD	Black Hills	37.85	338	P	P	12 16 02.5	-1.0
SHOC	Shoshone, Teco	38.12	318	P	P	12 16 08.6	+2.9
	baz=126						
GSC	Goldstone, Bar	38.13	317	P	P	12 16 09.0	+3.1
	baz=124						
BFSC	Mount Baldy Ra	38.13	315	P	P	12 16 08.1	+2.1
	baz=122						
NLU	North Lily Min	38.22	327	P	P	12 16 07.3	+0.7
PKME	Peaks-Kenny Pk	38.22	19	P	P	12 16 06.8	+0.5
	baz=207						
PRN	Pahroc Range	38.25	321	IAmb	IAmb	12 16 22.5	
	comp=Z,26nm,1.2s						
PSUT	Pine Spring	38.25	323	IAmb	IAmb	12 16 12.1	
	comp=Z,17nm,0.8s						
PASC	Pasadena Art C	38.47	314	IAmb	IAmb	12 16 21.2	
	comp=Z,60nm,1.4s						
GWY	Greenwater Val	38.55	318	P	P	12 16 10.3	+0.9
GWY				IAmb	IAmb	12 16 15.6	
	comp=Z,39nm,1.4s						
QSM	Queen of Sheba	38.55	318	IAmb	IAmb	12 16 24.8	
	comp=Z,37nm,1.4s						
DECC	Green Verdugo	38.62	314	P	P	12 16 12.5	+2.6
	baz=122						
F63A	Nahmakanta, Br	38.67	19	IAmb	IAmb	12 16 12.3	
	comp=Z,33nm,0.9s						
TCUT	Toone Canyon	38.70	328	IAmb	IAmb	12 16 29.4	
	comp=Z,35nm,1.2s						
EDW2	Edwards Air Fo	38.71	315	P	P	12 16 13.2	+2.4
	baz=123						
DUG	Dugway, Tooele	38.79	326	P	P	12 16 13.1	+1.7
	baz=134,SNR=6.6						
LRMC	Laurel Mtn Rad	38.83	316	P	P	12 16 14.0	+2.2
	baz=124						
SPR3	Spring Creek 3	38.84	324	IAmb	IAmb	12 16 14.9	
	comp=Z,29nm,1.1s						
FURC	Furnace Creek,	38.84	318	P	P	12 16 14.5	+2.9
	baz=126,SNR=10.0						
BW06	Boulder Array	39.03	332	P	P	12 16 15.0	+1.6
	baz=141						
PDAR	Pinedale Array	39.03	332	P	P	12 16 13.3	-0.2
	comp=Z,2.0nm,0.5s,baz=132,slow=9.8,SNR=20						
PDAR				PcP	PcP	12 18 23.9	+0.7
	comp=Z,3.0nm,0.9s,baz=116,slow=3.4,SNR=6.0						
PDAR				LR	LR	12 35 08.2	
	comp=Z,578nm,21.4s,baz=136,slow=40						
F64A	Sherman	39.06	19	IAmb	IAmb	12 16 16.9	
	comp=Z,57nm,0.9s						
PRPB	Parauapebas	39.09	112	*e*P	P	12 16 14.3	+0.2
SALV	Santo Antonio	39.10	130	*e*P	P	12 16 14.3	+0.3
HWUT	Hardware Ranch	39.13	329	IAmb	IAmb	12 16 23.9	
	comp=Z,23nm,0.8s						
R11A	Troy Canyon, C	39.17	322	P	P	12 16 16.8	+2.2
	baz=129,SNR=20						
TMAB	Tom-Au,PA,Br	39.35	106	*e*P	P	12 16 16.4	+0.2
E62A	Clayton Lake	39.37	18	P	P	12 16 14.9	-1.0
E62A				IAmb	IAmb	12 16 19.2	
	comp=Z,37nm,0.9s						
ARVC	Arvin	39.42	315	P	P	12 16 18.5	+1.9
	baz=122						
AGMN	Agassiz Nation	39.47	349	P	P	12 16 15.5	-1.2
	baz=164						
AGMN	Agassiz Nation	39.47	349	P	P	12 16 14.6	-2.1
ISA	Isabella, Lake	39.47	316	P	P	12 16 18.8	+1.8
	baz=123						
GRAC	Grapevine Rang	39.48	319	P	P	12 16 20.8	+3.8
	baz=126						
CWC	Cottonwood Cre	39.63	317	P	P	12 16 20.8	+2.3
	baz=124						
AC02	Maricunga	39.68	156	IAmb	IAmb	12 16 21.8	
	comp=Z,29nm,0.9s						
MDND	Maddock	39.84	345	P	P	12 16 19.8	-0.1
	baz=158,SNR=7.6						
MDND	Maddock	39.84	345	IAmb	IAmb	12 16 22.1	
	comp=Z,40nm,0.7s						
PQI	Presque Isle	39.88	19	IAmb	IAmb	12 16 22.4	
	comp=Z,24nm,0.7s						
D62A	Allapoint, All	39.92	18	IAmb	IAmb	12 16 24.2	
	comp=Z,48nm,0.8s						
LMQ	La Malbaie	39.98	16	IAmb	IAmb	12 16 33.0	
	comp=Z,87nm,1.4s						
VES	Vestal, Richgr	39.98	316	P	P	12 16 23.8	+2.6
	baz=122,SNR=9.0						
PKM	Mcpherson Peak	39.99	314	P	P	12 16 23.7	+2.1
	baz=121						
TIN	Tinemaha, Big	40.08	318	P	P	12 16 24.6	+2.5
	baz=125						
REDW	Red Top Meadow	40.09	331	IAmb	IAmb	12 16 26.1	
	comp=Z,46nm,1.2s						
SNOW	Snow King Moun	40.12	331	IAmb	IAmb	12 16 26.4	
	comp=Z,29nm,1.1s						
LMN	Caledonia Moun	40.30	23	P	P	12 16 22.3	-1.4
SMMC	Simmler	40.34	315	P	P	12 16 27.7	+3.5
	baz=121						
SNDB	Serra Nova Dou	40.41	121	*e*P	P	12 16 25.6	+0.6
ELK	Elko	40.52	325	P	P	12 16 27.5	+1.6
	comp=Z,9.5nm,0.9s,baz=136,slow=5.5,SNR=29						
ELK				PcP	PcP	12 18 28.9	+0.9
	comp=Z,4.2nm,0.9s,baz=29,slow=4.7,SNR=4.0						
ELK	Elko	40.52	325	IAmb	IAmb	12 16 28.9	
	comp=Z,30nm,1.2s						
PAGB	Antelope Grade	40.73	315	IAmb	IAmb	12 16 47.0	
	comp=Z,53nm,1.1s						
RLMT	Red Lodge	40.75	334	P	P	12 16 27.6	-0.1
	baz=143,SNR=6.3						
H17A	Grant Village	40.76	333	P	P	12 16 30.7	+2.9
	baz=141						
PP1B	Ponte de Pedra	40.77	131	*e*P	P	12 16 26.5	-1.5
MLAC	Mammoth, Mammo	40.80	318	P	P	12 16 30.0	+1.7
	baz=124						
NV11	Mina Array Sit	40.82	320	IAmb	IAmb	12 16 34.8	
	comp=Z,58nm,1.1s						
LAO	LASA Array	40.84	338	P	P	12 16 29.6	+1.4
	baz=148						
NVAR	Mina Array Bea	40.91	320	P	P	12 16 31.1	+1.9
	comp=Z,14nm,0.7s,baz=128,slow=7.2,SNR=45						
NVAR				PcP	PcP	12 18 30.4	+1.1
	comp=Z,4.6nm,0.7s,baz=144,slow=3.6,SNR=3.8						
LHV	Little Huntoon	40.94	319	IAmb	IAmb	12 16 36.1	
	comp=Z,59nm,1.2s						
BATG	Bathurst New B	41.06	20	P	P	12 16 28.6	-1.4
BATG				IAmb	IAmb	12 16 33.4	
	comp=Z,59nm,0.9s						
KVN	Kaiserville	41.15	321	IAmb	IAmb	12 16 36.9	
	comp=Z,41nm,1.0s						
RYN	Ryan	41.17	320	IAmb	IAmb	12 16 37.4	
	comp=Z,36nm,1.1s						
ULM	Lac du Bonnet	41.35	350	P	P	12 16 29.4	-2.9
	comp=Z,5.2nm,0.6s,baz=163,slow=10,SNR=8.6						
ULM				PcP	PcP	12 18 31.2	+1.1
	comp=Z,10nm,0.6s,baz=182,slow=2.8,SNR=6.3						
ULM				LR	LR	12 35 06.4	
	comp=Z,491nm,18.8s,baz=162,slow=38						
BMN	Battle Mountai	41.47	323	IAmb	IAmb	12 16 37.5	
	comp=Z,74nm,1.2s						
DGMT	Dagmar	41.70	342	P	P	12 16 35.5	+0.2
	baz=152						
DGMT	Dagmar	41.70	342	IAmb	IAmb	12 16 45.4	
	comp=Z,49nm,1.4s						
YERR	Yerington	41.84	320	IAmb	IAmb	12 16 42.8	
	comp=Z,45nm,1.2s						
ARAG	Araguaiana, MT	41.99	127	*e*P	P	12 16 37.8	-0.2
HLID	Hailey	42.00	329	P	P	12 16 39.6	+1.7
	baz=135,SNR=14						
CMB	Columbia Colle	42.04	318	P	P	12 16 39.3	+1.1
CMB				pmax	pmax		
	comp=Z,20nm,1.3s						
CMB	Columbia Colle	42.04	318	P	P	12 16 39.2	+1.1
AQDB	Aquidauana	42.06	136	*e*P	P	12 16 38.6	+0.2
AQDB	Aquidauana	42.06	136	P	P	12 16 38.4	0.0
PNTR	Pine Nut	42.12	320	P	P	12 16 39.9	+0.8
PNTR				IAmb	IAmb	12 16 45.2	
	comp=Z,33nm,1.0s						
MCMT	McKenzie Canyo	42.14	331	P	P	12 16 39.6	+0.4
BOZ	Bozeman (W)	42.16	333	P	P	12 16 39.9	+0.7
	baz=140,SNR=5.8						
SMTB	Santa Maria do	42.20	115	*e*P	P	12 16 40.6	+0.8
MPK	Martis Peak	42.52	320	P	P	12 16 43.3	+1.0
MFID	Camas Ranch	42.64	327	P	P	12 16 43.5	+0.4
PEXB	Peixe	43.02	119	*e*P	P	12 16 47.1	+0.7
EGMT	Eagleton	43.29	337	P	P	12 16 47.8	-0.4
	baz=144						
ROSB	Rosrio	43.29	105	*e*P	P	12 16 48.4	-0.2
H03N2	Juan Fernandez	43.33	172	T	T	13 03 05.1	
	baz=350,slow=76,SNR=7.7						
H03N1	Juan Fernandez	43.33	172	T	T	13 03 07.4	
	baz=350,slow=76,SNR=7.9						
H03N3	Juan Fernandez	43.34	172	T	T	13 03 04.8	
	baz=350,slow=76,SNR=7.3						
ORV	Oroville	43.60	319	IAmb	IAmb	12 16 57.8	
	comp=Z,32nm,1.1s						
J08A	Circle Bar Ran	44.05	325	IAmb	IAmb	12 16 56.7	
	comp=Z,40nm,1.5s						
MSO	Missoula	44.14	332	P	P	12 16 56.0	+0.9
	baz=138,SNR=8.7						
O03E	Paynes Creek	44.20	320	P	P	12 16 56.6	+0.9
	baz=124,SNR=5.0						
O02D	Mt. Diablo Mer	44.77	319	P	P	12 17 02.6	+2.3
	baz=122						
BDFB	Brasilia	45.02	124	P	P	12 17 03.2	+0.7
	comp=Z,20nm,0.7s,baz=289,slow=8.9,SNR=26						
BDFB				PcP	PcP	12 18 44.8	+1.5
	comp=Z,9.1nm,0.8s,baz=253,slow=2.7,SNR=3.6						
BDFB				LR	LR	12 38 13.9	
	comp=Z,868nm,18.2s,baz=306,slow=39						
BDFB	Brasilia	45.02	124	IAmb	IAmb	12 17 03.8	
	comp=Z,29nm,0.8s						
M04C	Macdoel	45.06	322	P	P	12 17 04.2	+1.6
	baz=125,SNR=9.9						
F10A	Beach Ranch, E	45.12	329	IAmb	IAmb	12 17 13.8	
	comp=Z,50nm,1.5s						
N02D	Trinity Center	45.15	320	P	P	12 17 05.7	+2.5
	baz=123						
CPUP	Villa Florida	45.17	143	P	P	12 17 03.1	-0.2
	comp=Z,13nm,0.9s,baz=336,slow=8.3,SNR=18						
CPUP				LR	LR	12 36 43.4	
	comp=Z,366nm,20.4s,baz=317,slow=37						
CPUP	Villa Florida	45.17	143	*e*P	P	12 17 03.2	-0.2
CPUP	Villa Florida	45.17	143	IAmb	IAmb	12 17 03.8	
	comp=Z,19nm,0.9s						
KMRM	Mail Ridge	45.40	319	P	P	12 17 05.5	+0.3
KMRM				IAmb	IAmb	12 17 19.7	
	comp=Z,38nm,1.0s						
MT09	Talagante	45.40	163	P	P	12 17 03.9	-1.4
MT09				IAmb	IAmb	12 17 06.0	
	comp=Z,21nm,0.7s						
MT01	Popeta	45.40	163	IAmb	IAmb	12 17 05.4	
	comp=Z,13nm,0.7s						
ITRB	Iturama	45.44	130	*e*P	P	12 17 05.9	+0.2
K04D	Chiloquin, OR	45.50	323	P	P	12 17 07.6	+1.6
	baz=126						
YBH	Yreka Blue Hor	45.58	321	P	P	12 17 06.0	-0.6
	comp=Z,5.6nm,0.5s,baz=146,slow=4.4,SNR=24						
YBH				PcP	PcP	12 18 45.3	+0.5
	comp=Z,2.4nm,0.9s,baz=27,slow=4.5,SNR=2.5						
YBH	Yreka Blue Hor	45.58	321	P	P	12 17 05.9	-0.7
YBH				pmax	pmax		
	comp=Z,19nm,1.4s						
YBH	Yreka Blue Hor	45.58	321	P	P	12 17 05.9	-0.7
L04D	Klamath Falls	45.60	322	P	P	12 17 08.0	+1.2
	baz=125						
PINE	Pine Mountain	45.72	324	IAmb	IAmb	12 17 12.2	
	comp=Z,22nm,0.8s						
TRCB	Terra Rica	45.72	135	*e*P	P	12 17 10.2	+2.3
KHMM	Horse Mountain	45.75	319	IAmb	IAmb	12 17 13.7	
	comp=Z,26nm,0.9s						
WALA	Waterton Lakes	45.81	334	P	P	12 17 08.8	+0.4
PCMB	Pacaembu	45.93	133	*e*P	P	12 17 09.6	0.0
BO01	Tunca	45.94	163	P	P	12 17 09.3	-0.1
BO01				IAmb	IAmb	12 17 21.3	
	comp=Z,23nm,0.9s						
DRLN	Deer Lake	45.99	26	P	P	12 17 09.2	-0.4
J04D	Umpqua Nationa	46.07	323	P	P	12 17 12.0	+1.4
	baz=126,SNR=6.3						
SDBA	SAO DESIDERIO	46.11	118	*e*P	P	12 17 11.1	0.0
IPMB	Ipameri, GO	46.11	126	*e*P	P	12 17 10.9	-0.2
I05D	Terrebonne, OR	46.28	325	P	P	12 17 13.9	+1.8
	baz=127						
NBPS	Pedro II - PI	46.28	106	*e*P	P	12 17 12.7	+0.1
GO05	Huala	46.29	164	IAmb	IAmb	12 17 13.2	
	comp=Z,35nm,0.9s						
BO02	Sierra Bellavi	46.40	163	IAmb	IAmb	12 17 16.6	
	comp=Z,20nm,0.8s						
E08A	Dider Farm, El	46.41	328	IAmb	IAmb	12 17 22.2	
	comp=Z,12nm,0.7s						
F07A	Phinny Hill Vi	46.47	327	IAmb	IAmb	12 17 29.0	
	comp=Z,36nm,1.4s						
I04A	Tendick Farm,	46.57	323	P	P	12 17 14.9	+0.5
	baz=126						
HAWA	Hanford	46.59	328	IAmb	IAmb	12 17 24.0	
	comp=Z,15nm,0.7s						
K02D	Willamette Mer	46.70	321	P	P	12 17 20.5	+5.0
	baz=124						
D08A	Wollman Farm,	46.71	329	IAmb	IAmb	12 17 26.5	
	comp=Z,18nm,1.0s						
FFC	Flin Flon	46.79	347	P	P	12 17 15.0	-0.8
FFC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
FFC	Flin Flon	46.79	347	P	P	12 17 15.0	-0.8
G05D	Wamic, OR	46.82	326	P	P	12 17 18.5	+2.3
	baz=128,SNR=5.8						
E07A	Sunnyside	46.86	328	IAmb	IAmb	12 17 26.6	
	comp=Z,26nm,0.8s						
H04A	Detroit Lake	46.97	325	P	P	12 17 17.4	-0.1
H04D	Lebanon	47.19	324	P	P	12 17 22.1	+3.0
	baz=126						
F05D	White Salmon	47.29	326	P	P	12 17 21.9	+2.0
	baz=128,SNR=7.8						
NBMO	Morrinhos-CE	47.31	104	*e*P	P	12 17 19.7	-0.8
SCHQ	Schefferville	47.52	15	P	P	12 17 19.2	-2.3
	comp=Z,23nm,0.6s,baz=222,slow=6.7,SNR=27						
SCHQ				PcP	PcP	12 18 51.9	+0.7
	comp=Z,20nm,0.7s,baz=215,slow=3.6,SNR=6.8						
SCHQ				LR	LR	12 38 02.1	
	comp=Z,2µm,18.8s,baz=222,slow=37						
BB19B	Bebedouro	47.62	130	*e*P	P	12 17 23.1	+0.3
LTY	Liberty	47.74	328	IAmb	IAmb	12 17 25.5	
	comp=Z,41nm,1.4s						
B08A	Colville Reser	47.80	330	IAmb	IAmb	12 17 33.1	
	comp=Z,17nm,1.2s						
JANB	Januaria	47.83	120	*e*P	P	12 17 24.5	-0.1
ITQB	Itaqui	48.10	145	*e*P	P	12 17 26.4	+0.1
ITQB	Itaqui	48.10	145	P	P	12 17 25.6	-0.7
FRTB	Fartura	48.24	133	*e*P	P	12 17 27.6	0.0
C06D	Leavenworth	48.29	329	P	P	12 17 28.6	+1.0
	baz=130						
NBPB	Pedra_Branca-C	48.40	106	*e*P	P	12 17 29.3	+0.4
EDM	Edmonton	48.83	338	P	P	12 17 30.8	-0.9

EDM				pmax	pmax		
	comp=Z,14nm,0.8s						
EDM	Edmonton	48.83	338	P	P	12 17 30.8	-0.9
EDM				IAmb	IAmb	12 17 40.6	
	comp=Z,14nm,0.8s						
MC01	Montes Claros	48.93	122	*e*P	P	12 17 33.5	+0.4
B06A	Marblemount	48.98	329	IAmb	IAmb	12 17 45.4	
	comp=Z,18nm,0.7s						
RCLB	Rio Claro- Sao	49.17	131	*e*P	P	12 17 35.0	+0.2
NBCL	Cascavel-CE	49.24	104	*e*P	P	12 17 35.2	-0.2
NBPN	Ponto Novo - B	49.66	113	*e*P	P	12 17 38.5	-0.1
NBMA	Muriti-CE	49.75	108	*e*P	P	12 17 39.4	0.0
TIJ01	Guaruva-PR	49.88	135	*e*P	P	12 17 40.9	+0.7
VAO	Valinhos	49.93	131	*e*P	P	12 17 41.0	+0.4
DIAM	Diamantina, MG	49.94	124	*e*P	P	12 17 41.0	+0.2
PET01	Itanhaem-SP	50.47	133	*e*P	P	12 17 44.3	-0.2
BSCB	Bom Sucesso	50.47	127	*e*P	P	12 17 44.7	0.0
CPSB	Cacapava Do Su	50.48	143	*e*P	P	12 17 44.6	+0.1
LLLB	Lillooet	50.54	331	IAmb	IAmb	12 17 52.2	
	comp=Z,12nm,0.8s						
NBPA	Parau_RN	50.81	106	*e*P	P	12 17 47.9	+0.6
PARB	Paraibuna	51.13	130	*e*P	P	12 17 50.0	+0.4
GDU01	Guandu, BA	51.36	116	*e*P	P	12 17 51.5	+0.1
PLTB	Pedras Altas	51.38	145	*e*P	P	12 17 51.1	-0.2
PLTB	Pedras Altas	51.38	145	P	P	12 17 50.6	-0.7
NBLV	Livramento - P	51.48	107	*e*P	P	12 17 52.7	+0.3
LL04	Puerto Octay	51.78	167	P	P	12 17 53.6	-0.4
LL04				IAmb	IAmb	12 17 57.4	
	comp=Z,16nm,0.9s						
TER01	Tubaro-SC	51.87	138	*e*P	P	12 17 55.2	+0.2
NBLA	Lagarto - SE	51.91	112	*e*P	P	12 17 55.3	-0.2
NBIT	Itapeh - BA	51.98	117	*e*P	P	12 17 56.4	+0.3
PLCA	Paso Flores	52.05	165	P	P	12 17 56.3	+0.2
	comp=Z,20nm,1.0s,baz=341,slow=8.4,SNR=25						
PLCA	Paso Flores	52.05	165	P	P	12 17 55.8	-0.4
PLCA				pmax	pmax		
	comp=Z,31nm,1.1s						
PLCA	Paso Flores	52.05	165	*e*P	P	12 17 56.5	+0.4
PLCA	Paso Flores	52.05	165	P	P	12 17 55.8	-0.4
PLCA				IAmb	IAmb	12 18 07.6	
	comp=Z,31nm,1.1s						
CMC01	Camacan, BA	52.09	118	*e*P	P	12 17 57.0	+0.2
MAN01	Angra dos Reis	52.12	129	*e*P	P	12 17 57.3	+0.3
SJMB	Sao Joao De Ma	52.20	123	*e*P	P	12 17 57.8	+0.2
VAS01	Vassouras-RJ	52.20	128	*e*P	P	12 17 57.6	0.0
GUA01	Guaratinga, BA	52.38	120	*e*P	P	12 17 59.5	+0.5
BSFB	Barra de Sao F	52.54	123	*e*P	P	12 18 00.3	+0.2
NBPV	Pedro Velho	52.73	106	*e*P	P	12 18 01.8	+0.1
NBAN	Anadia - AL	52.84	110	*e*P	P	12 18 02.7	+0.2
DUB01	Friburgo-RJ	52.94	127	*e*P	P	12 18 03.4	+0.3
RIB01	Linhares ES	53.14	123	*e*P	P	12 18 04.4	-0.2
CAM01	Campos-RJ	53.37	126	*e*P	P	12 18 06.5	+0.3
ALF01	Guarapari-ES	53.51	124	*e*P	P	12 18 07.5	+0.3
NBRF	Rio Formoso -	53.58	108	*e*P	P	12 18 08.5	+0.6
COYC	Coyhaique	56.31	169	IAmb	IAmb	12 18 28.5	
	comp=Z,24nm,0.9s						
YKA	Yellowknife Ar	56.75	344	P	P	12 18 28.5	-1.5
	comp=Z,4.2nm,0.5s,baz=151,slow=4.2,SNR=22						
YKA				PcP	PcP	12 19 26.4	+0.8
	comp=Z,3.8nm,0.8s,baz=137,slow=5.7,SNR=4.1						
YKA				LR	LR	12 44 33.0	
	comp=Z,413nm,20.1s,baz=0.0,slow=38						
TAOE	Nuku Hiva Isla	57.20	253	*e*S	S	12 26 22.9	-4.9
	comp=Z,326nm,26.4s						
TAOE				*e*LR	LR	12 35 08.0	
	comp=Z,811nm,26.0s						
TAOE	Nuku Hiva Isla	57.20	253	*e*T	T	13 20 28.1	
	comp=Z,29nm,0.3s						
DLBC	Dease Lake	59.15	335	IAmb	IAmb	12 18 57.6	
	comp=Z,11nm,0.8s						
TGTN	Hyland Airport	60.38	338	P	P	12 18 56.5	+1.1
	baz=130						
SFJD	Kangerlussuaq	61.97	15	P	P	12 19 04.3	-1.6
	comp=Z,12nm,0.9s,baz=160,slow=12,SNR=3.0						
MMPY	Sheldon Lake,	62.17	338	P	P	12 19 08.3	+0.8
	baz=127,SNR=9.7						
M31M	Drury Creek, Y	63.11	337	P	P	12 19 16.5	+2.9
	baz=124						
N31M	Braeburn, Yuko	63.27	336	P	P	12 19 17.9	+3.2
	baz=122						
M30M	Minto, Yukon	64.25	336	P	P	12 19 21.8	+0.5
	baz=122						
CTG	Chitna Glacier	65.36	334	P	P	12 19 32.4	+3.8
	baz=116						
BVCY	Beaver Creek	65.81	335	P	P	12 19 32.5	+1.1
	baz=118						
DAWY	Dawson	66.02	337	P	P	12 19 32.5	-0.3
	baz=120						
M27K	Edge Creek, AK	66.21	335	P	P	12 19 36.2	+2.1
	baz=116						
EPYK	Eagle Plains	66.27	340	P	P	12 19 34.8	+0.6
	baz=123,SNR=7.1						
EPYK	Eagle Plains	66.27	340	IAmb	IAmb	12 19 37.6	
	comp=Z,14nm,0.8s						
I29M	Ogilvie Camp,	66.28	339	P	P	12 19 34.6	+0.3
	baz=121						
INK	Inuvik	66.38	343	LR	LR	12 50 29.2	
	comp=Z,496nm,21.7s,baz=137,slow=38						
INK	Inuvik	66.38	343	P	P	12 19 35.2	+0.4
	baz=127,SNR=14						
INK	Inuvik	66.38	343	IAmb	IAmb	12 19 38.5	
	comp=Z,15nm,0.9s						
VRDI	Verde Repeater	66.40	333	IAmb	IAmb	12 19 38.0	
	comp=Z,26nm,1.4s						
L27K	Beaver Creek,	66.51	336	P	P	12 19 37.1	+1.2
	baz=117,SNR=8.3						
L27K	Beaver Creek,	66.51	336	IAmb	IAmb	12 19 39.8	
	comp=Z,11nm,0.7s						
A36M	Sachs Harbour	66.75	348	P	P	12 19 36.1	-1.1
	baz=137,SNR=5.7						
BMRM	Bremner River	66.80	333	P	P	12 19 40.9	+3.1
	baz=113						
EGAK	Eagle	67.04	337	P	P	12 19 40.0	+0.9
	baz=118						
EGAK	Eagle	67.04	337	IAmb	IAmb	12 19 51.9	
	comp=Z,11nm,0.9s						
N25K	Chitina, Valde	67.05	334	P	P	12 19 40.9	+1.5
	baz=114						
N25K	Chitina, Valde	67.05	334	IAmb	IAmb	12 19 44.8	
	comp=Z,12nm,0.8s						
L26K	Log Cabin Wild	67.11	335	P	P	12 19 41.1	+1.4
	baz=115						
L26K	Log Cabin Wild	67.11	335	IAmb	IAmb	12 19 46.4	
	comp=Z,19nm,1.2s						
MENT	Mentasta	67.23	335	IAmb	IAmb	12 19 44.3	
	comp=Z,10nm,0.7s						
KLU	Klutina	67.59	333	P	P	12 19 45.0	+2.1
	baz=112						
KLU	Klutina	67.59	333	IAmb	IAmb	12 20 02.6	
	comp=Z,14nm,0.9s						
HARP	HAARP	67.61	334	P	P	12 19 44.6	+1.8
	baz=113						
SCRK	Sand Creek	67.78	336	P	P	12 19 45.2	+1.2
	baz=115,SNR=6.7						
SCRK	Sand Creek	67.78	336	P	P	12 19 45.2	+1.2
J26L	Joseph Creek	67.84	337	P	P	12 19 46.2	+1.9
	baz=116,SNR=16						
PAX	Paxson	67.97	335	P	P	12 19 46.1	+0.9
	baz=113,SNR=12						
PAX	Paxson	67.97	335	IAmb	IAmb	12 19 48.8	
	comp=Z,13nm,0.6s						
RIDG	Independent Ri	68.03	336	P	P	12 19 46.9	+1.4
	baz=114,SNR=7.5						
RIDG	Independent Ri	68.03	336	IAmb	IAmb	12 19 48.0	
	comp=Z,37nm,1.3s						
J25K	Salcha River,	68.59	336	P	P	12 19 50.1	+1.1
	baz=114,SNR=20						
PPT	Papeete	68.60	247	LR	LR	12 41 26.9	
	comp=Z,352nm,19.4s,baz=347,slow=28						
PPT2	Papeete2	68.61	247	*e*S	S	12 28 46.0	-4.5
	comp=Z,622nm,29.0s						
PPT2	Papeete2	68.61	247	*e*LR	LR	12 40 33.6	
	comp=Z,843nm,26.2s						
KNK	Knik Glacier	68.70	333	P	P	12 19 51.0	+1.3
	baz=110,SNR=6.7						
SML	Sawmill	68.78	333	P	P	12 19 51.2	+1.0
	baz=110						
SML	Sawmill	68.78	333	IAmb	IAmb	12 19 55.5	
	comp=Z,33nm,1.2s						
WAT6	Susitna Watana	68.79	334	P	P	12 19 51.5	+1.1
	baz=111,SNR=14						
DHY	Denali Highway	68.82	335	P	P	12 19 51.7	+1.2
	baz=111						
SUMG	Summit	68.89	14	P	P	12 19 50.2	-1.0
SUMG				pmax	pmax		
	comp=Z,17nm,1.1s						
SUMG	Summit	68.89	14	P	P	12 19 50.2	-1.0
SUMG				IAmb	IAmb	12 19 54.7	
	comp=Z,17nm,1.1s						
GHO	Glory Hole Cre	69.03	333	P	P	12 19 51.6	-0.2
PMR	Palmer	69.07	333	P	P	12 19 52.3	+0.4
	baz=109						
PMR	Palmer	69.07	333	IAmb	IAmb	12 19 58.8	
	comp=Z,30nm,1.5s						
HDA	Harding Lake	69.14	336	P	P	12 19 53.1	+0.8
	baz=112,SNR=16						
HDA	Harding Lake	69.14	336	IAmb	IAmb	12 19 56.9	
	comp=Z,22nm,0.7s						
RC01	Rabbit Creek A	69.18	332	P	P	12 19 53.8	+1.2
	baz=108						
WAT1	Susitna Watana	69.23	334	P	P	12 19 54.4	+1.4
	baz=110						
IL31		69.25	336	IAmb	IAmb	12 19 56.5	
	comp=Z,21nm,0.8s						
ILAR	Eielson Array	69.25	336	P	P	12 19 53.4	+0.3
	comp=Z,14nm,0.6s,baz=118,slow=4.5,SNR=86						
ILAR				PP	PP	12 22 24.6	-1.6
	comp=Z,1.1nm,0.9s,baz=96,slow=5.5,SNR=3.5						
ILAR				LR	LR	12 53 21.0	
	comp=Z,280nm,21.4s,baz=120,slow=39						
FYU	Fort Yukon	69.35	338	IAmb	IAmb	12 19 58.6	
	comp=Z,20nm,0.9s						
POKR	Poker Plat Res	69.60	337	P	P	12 19 55.9	+0.7
	baz=112,SNR=11						
POKR	Poker Plat Res	69.60	337	IAmb	IAmb	12 20 00.6	
	comp=Z,12nm,0.6s						
KDAK	Kodiak Island	69.62	328	P	P	12 19 56.6	+1.2
	baz=105						
COLA	College	69.67	336⇓	*e*P	P	12 19 57.1	+1.5
COLA				pmax	pmax		
	comp=Z,49nm,1.9s						
COLA	College	69.67	336	P	P	12 19 56.1	+0.5
COLA				IAmb	IAmb	12 19 59.9	
	comp=Z,20nm,0.8s						
TCOL	CIGO, UAF Yank	69.68	336	P	P	12 19 57.1	+1.5
	baz=112,SNR=9.1						
TCOL	CIGO, UAF Yank	69.68	336	IAmb	IAmb	12 19 59.9	
	comp=Z,20nm,0.8s						
MCK	McKinley	69.71	335	P	P	12 19 57.0	+1.1
	baz=110						
SUA	Susitna One	69.76	332	P	P	12 19 57.2	+0.9
	baz=108						
MDM	Murphy Dome	69.86	336	IAmb	IAmb	12 20 21.1	
	comp=Z,34nm,1.5s						
H24K	Noodor Dome	70.05	337	P	P	12 19 59.0	+1.0
	baz=112,SNR=7.0						
H24K	Noodor Dome	70.05	337	IAmb	IAmb	12 20 02.8	
	comp=Z,18nm,1.1s						
NEA2	Nenana	70.06	336	P	P	12 19 58.7	+0.7
	baz=110,SNR=15						
NEA2	Nenana	70.06	336	IAmb	IAmb	12 20 01.5	
	comp=Z,13nm,0.7s						
TRF	Thorofare Moun	70.18	334	P	P	12 19 59.9	+0.9
	baz=109,SNR=7.6						
SPCR	Spurr Chakacha	70.36	332	P	P	12 20 01.0	+1.1
	baz=106						
I23K	Minto, Yukon-K	70.37	336	P	P	12 20 01.1	+1.2
	baz=110,SNR=17						
I23K	Minto, Yukon-K	70.37	336	IAmb	IAmb	12 20 04.7	
	comp=Z,22nm,0.9s						
TBI	Tubuai	70.38	241	*e*S	S	12 29 08.2	-2.9
	comp=Z,341nm,26.8s						
TBI	Tubuai	70.38	241	*e*LR	LR	12 41 24.7	
	comp=Z,534nm,28.8s						
P19K	Oil Pt	70.43	330	P	P	12 20 01.1	+0.7
	baz=105						
Q19K	Cape Douglas,	70.45	329	P	P	12 20 02.2	+1.7
	baz=104						
KTH	Kantishna Hill	70.48	334	IAmb	IAmb	12 20 28.6	
	comp=Z,24nm,1.0s						
H23K	Yukon River	70.68	337	P	P	12 20 02.7	+0.9
	baz=110						
H23K	Yukon River	70.68	337	IAmb	IAmb	12 20 04.0	
	comp=Z,22nm,1.5s						
BPAW	Bear Paw Mtn.	70.69	335	P	P	12 20 02.7	+0.9
	baz=108,SNR=9.8						
BPAW	Bear Paw Mtn.	70.69	335	IAmb	IAmb	12 20 04.5	
	comp=Z,33nm,1.0s						
PPLA	Purkeypile	70.83	334	P	P	12 20 03.7	+0.8
	baz=107,SNR=7.3						
PPLA	Purkeypile	70.83	334	IAmb	IAmb	12 20 06.4	
	comp=Z,24nm,0.8s						
MLY	Manley	70.88	336	P	P	12 20 04.0	+1.0
	baz=109,SNR=14						
MLY	Manley	70.88	336	IAmb	IAmb	12 20 06.7	
	comp=Z,19nm,0.6s						
CAST	Castle Rocks	70.94	334	P	P	12 20 03.6	+0.1
	baz=107						
CAST	Castle Rocks	70.94	334	IAmb	IAmb	12 20 05.7	
	comp=Z,19nm,1.0s						
O19K	Port Alsworth	71.09	331	P	P	12 20 05.2	+0.8
	baz=104						
CHUM	Lake Minchumin	71.18	335	P	P	12 20 05.9	+1.1
	baz=107						
N19K	Bonanza Creek	71.32	331	P	P	12 20 06.5	+0.6
	baz=104						
N19K	Bonanza Creek	71.32	331	P	P	12 20 05.7	-0.2
N19K				IAmb	IAmb	12 20 09.8	
	comp=Z,20nm,0.8s						
COLD	Coldfoot	71.42	338	P	P	12 20 08.0	+1.7
	baz=110,SNR=8.7						
COLD	Coldfoot	71.42	338	P	P	12 20 07.1	+0.9
COLD				IAmb	IAmb	12 20 19.9	
	comp=Z,16nm,1.0s						
I21K	Tanana	71.43	336	P	P	12 20 06.9	+0.6
	baz=108,SNR=6.7						
I21K	Tanana	71.43	336	IAmb	IAmb	12 20 23.2	
	comp=Z,26nm,1.3s						
O18K	Koktuh Hills	71.45	330	P	P	12 20 07.7	+1.2
	baz=103						
L20K	Farewell, AK	71.47	333	P	P	12 20 06.9	+0.3
	baz=105,SNR=10						
M19K	Big River Lodg	71.55	332	P	P	12 20 08.1	+1.0
	baz=104						
M19K	Big River Lodg	71.55	332	IAmb	IAmb	12 20 18.5	
	comp=Z,10nm,0.8s						
TOLK	Toolik Lake Re	71.69	340	P	P	12 20 08.7	+0.7
	baz=111						
K20K	Telida	71.78	334	P	P	12 20 09.2	+0.7
	baz=105						
L19K	White Mountain	71.83	333	P	P	12 20 09.6	+0.8
	baz=104						
L19K	White Mountain	71.83	333	IAmb	IAmb	12 20 12.8	
	comp=Z,17nm,1.1s						
H21K	Melozitna Rive	71.90	336	P	P	12 20 09.2	0.0
	baz=107						
SVW2	Sparrevohn	71.91	331	IAmb	IAmb	12 20 13.1	
	comp=Z,36nm,1.2s						
J20K	Nowinta River	72.03	335	P	P	12 20 10.7	+0.7
	baz=105,SNR=9.5						
CHGN	Chignik	72.44	326	P	P	12 20 13.8	+1.3
	baz=99						
TTA	Tatalina	72.53	333	P	P	12 20 13.3	+0.3
	baz=103,SNR=5.9						
TTA	Tatalina	72.53	333	IAmb	IAmb	12 20 15.3	
	comp=Z,22nm,1.2s						
MORF	Marmelete	73.98	54	*e*P	P	12 20 23.3	+1.1
MORF				IAmb	IAmb	12 20 24.2	
	comp=Z,23nm,1.0s						
MORF	Marmelete	73.98	54	*e*P	P	12 20 23.2	+1.1
MORF	Marmelete	73.98	54	*e*P	P	12 20 23.1	+1.0
	comp=Z,49nm,1.4s						
PNCL	Nicolau / Gran	74.07	53	*e*P	P	12 20 23.2	+0.6
PCAS	Casmilo, Conde	74.11	51	*e*P	P	12 20 23.6	+0.8
	comp=Z,38nm,1.3s						
COI	Coimbra	74.18	51	IAmb	IAmb	12 20 25.2	
	comp=Z,22nm,0.8s						
PGAV	Gavieira, Arco	74.32	49	*e*P	P	12 20 25.7	+1.7
PGAV	Gavieira, Arco	74.32	49	*e*LR	LR	12 43 45.6	
	comp=Z,406nm,22.0s						
PMTG	Montargil	74.32	52	*e*P	P	12 20 24.4	+0.4
	comp=Z,14nm,1.1s						
MESJ	Messejana	74.32	53	*e*P	P	12 20 25.3	+1.2
MESJ				IAmb	IAmb	12 20 25.3	
	comp=Z,7.4nm,0.8s						
MESJ	Messejana	74.32	53	*e*P	P	12 20 25.2	+1.2
MESJ	Messejana	74.32	53	*e*P	P	12 20 24.8	+0.8
PCVE	Castro Verde	74.46	54	*e*P	P	12 20 25.6	+0.8
EVO	Evora	74.48	53	*e*P	P	12 20 25.5	+0.6
PBDV	Barranco-do-Ve	74.55	54	*e*P	P	12 20 26.9	+1.5
	comp=Z,40nm,1.7s						
POLO	Lamas de Olo	74.66	50	*e*P	P	12 20 26.3	+0.2
	comp=Z,9.8nm,1.1s						
PVAQ	Vaqueiros	74.72	54	*e*P	P	12 20 27.0	+0.7
	comp=Z,26nm,1.6s						
PVAQ	Vaqueiros	74.72	54	*e*LR	LR	12 43 55.8	
	comp=Z,535nm,22.0s						
PESTR	Estremoz	74.81	52	*e*P	P	12 20 27.3	+0.4
	comp=Z,18nm,1.1s						
MTE	Manteigas	74.85	51	*e*P	P	12 20 27.5	+0.4
MTE	Manteigas	74.85	51	*e*LR	LR	12 44 15.8	
	comp=Z,703nm,22.0s						
MTE	Manteigas	74.85	51	P	P	12 20 26.6	-0.5
PCBR	Castelo Branco	74.90	51	*e*P	P	12 20 27.8	+0.5
	comp=Z,19nm,1.1s						
PMRV	Marv??o	74.96	52	*e*P	P	12 20 27.8	+0.1
	comp=Z,12nm,1.1s						
PMRV	Marv??o	74.96	52	*e*LR	LR	12 44 02.4	
	comp=Z,774nm,22.0s						
MVO	Moncorvo	75.24	50	*e*P	P	12 20 30.0	+0.6
	comp=Z,24nm,1.0s						
PBRG	Braganca	75.46	49	*e*P	P	12 20 31.1	+0.5
PMSA	Palmer Station	75.97	171	*e*P	P	12 20 33.8	+1.0
PAB	San Pablo	77.32	52	P	P	12 20 41.0	-0.2
PAB				pmax	pmax		
	comp=Z,11nm,1.1s						
PAB	San Pablo	77.32	52	P	P	12 20 41.0	-0.2
ESDC	Sonseca Array	77.61	51	P	P	12 20 42.7	-0.1
	comp=Z,12nm,0.8s,baz=281,slow=5.8,SNR=48						
ESDC				LR	LR	12 49 19.4	
	comp=Z,846nm,21.6s,baz=265,slow=31						
ESBB	Sonseca Array	77.61	51	P	P	12 20 41.8	-1.0
ESBB				IAmb	IAmb	12 20 44.3	
	comp=Z,13nm,0.8s						
ROSF	Rostrenen	77.87	43	*e*P	P	12 20 43.5	-0.5
ROSF				pmax	pmax		
	comp=Z,31nm,1.2s						
EKA	Eskdalemuir Ar	77.92	35	P	P	12 20 42.4	-1.7
GRR	Gorron	79.48	42	*e*P	P	12 20 52.4	-0.4
GRR				pmax	pmax		
	comp=Z,25nm,0.8s						
SJPF	Ste Jean	79.50	48	*e*P	P	12 20 53.2	+0.1
SJPF				pmax	pmax		
	comp=Z,18nm,0.9s						
KOWA	Kowa	79.70	77	P	P	12 20 53.9	-0.8
FLN	La Foliniere	79.71	42	*e*P	P	12 20 53.7	-0.4
FLN				pmax	pmax		
	comp=Z,61nm,1.3s						
LDF	La Druitiere	79.96	42	*e*P	P	12 20 55.0	-0.4
LDF				pmax	pmax		
	comp=Z,26nm,1.1s						
DBIC	Dimbokro	79.96	85	P	P	12 20 56.4	+0.3
	comp=Z,15nm,0.8s,baz=294,slow=5.7,SNR=8.2						
DBIC				LR	LR	12 55 03.8	
	comp=Z,89nm,21.3s,baz=268,slow=35						
DBIC	Dimbokro	79.96	85	P	P	12 20 54.6	-1.5
DBIC				pmax	pmax		
	comp=Z,19nm,0.9s						
DBIC	Dimbokro	79.96	85	P	P	12 20 54.6	-1.5
DBIC				IAmb	IAmb	12 21 01.5	
	comp=Z,18nm,0.9s						
ETSF	Etsaut	80.00	48	*e*P	P	12 20 55.9	0.0
ETSF				pmax	pmax		
	comp=Z,8.0nm,1.0s						
EPF	Esparros	80.65	48	*e*P	P	12 20 59.3	-0.1
EPF				pmax	pmax		
	comp=Z,11nm,0.9s						
RJF	Les Rejaudoux	81.31	45	*e*P	P	12 21 02.2	-0.6
RJF				pmax	pmax		
	comp=Z,76nm,2.2s						
TCF	Toulx Ste Croi	81.70	44	*e*P	P	12 21 03.9	-1.0
TCF				pmax	pmax		
	comp=Z,9.0nm,1.1s						
CAF	Calviac	81.73	46	*e*P	P	12 21 04.5	-0.5
CAF				pmax	pmax		
	comp=Z,15nm,1.2s						
MTLF	Montolieu	81.99	47	*e*P	P	12 21 06.0	-0.4
MTLF				pmax	pmax		
	comp=Z,12nm,0.9s						
BGF	Bois d'Agland	82.12	44	*e*P	P	12 21 05.4	-1.6
BGF				pmax	pmax		
	comp=Z,14nm,1.1s						
AVF	Avril sur Loir	82.44	44	*e*P	P	12 21 09.1	+0.4
AVF				pmax	pmax		
	comp=Z,4.0nm,0.8s						
LOR	Lormes	82.73	43	*e*P	P	12 21 10.8	+0.6
LOR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
DOU	Dourbes	82.91	40	*d*P	P	12 21 09.9	-1.1
	comp=Z,7.5nm,1.0s						
BMRD	Maredsous	82.99	40	*d*P	P	12 21 12.4	+0.9
	comp=Z,6.5nm,0.9s						
BGES	Gesves	83.19	40	*d*P	P	12 21 12.1	-0.4
	comp=Z,7.2nm,0.7s						
RCHB	Rochefort	83.30	40	*d*P	P	12 21 13.9	+0.8
	comp=Z,12nm,1.0s						
BCLA	Clavier	83.32	40	*d*P	P	12 21 13.8	+0.6
	comp=Z,7.9nm,0.9s						
VIVF	Saint-Julien-l	83.58	46	*e*P	P	12 21 14.8	+0.1
VIVF				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MEM	Membach	83.74	40	*d*P	P	12 21 15.9	+0.6
	comp=Z,6.2nm,0.8s						
WLF	Walferdange	83.96	41	*d*P	P	12 21 17.6	+1.2
WLF				*d*PcP	PcP	12 21 20.0	-0.4
HAU	Haudompre	84.31	42	*e*P	P	12 21 17.6	-0.7
HAU				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ORIF	Oris-en-Rattie	84.42	46	*e*P	P	12 21 20.5	+1.5
ORIF				pmax	pmax		
	comp=Z,10.0nm,1.3s						
HINF	Hinteralfeld	84.68	43	*e*P	P	12 21 18.5	-1.7
HINF				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ECH	Echery	84.82	42	P	P	12 21 23.8	+2.9
ECH				pmax	pmax		
	comp=Z,73nm,1.2s						
ECH	Echery	84.82	42	IAmb	IAmb	12 21 23.3	
	comp=Z,11nm,1.0s						
LPL	La Plagne	84.93	45	*e*P	P	12 21 22.4	+0.6
LPL				pmax	pmax		
	comp=Z,2.0nm,0.5s						
NB2	NORSAR Subarra	85.00	29	P	P	12 21 21.0	-0.5
	comp=Z,26nm,1.1s,baz=282,slow=5.6						
NB2	NORSAR Subarra	85.00	29	P	P	12 21 21.0	-0.5
	baz=282,slow=5.6						
NOA	NORSAR Array B	85.00	29	P	P	12 21 20.6	-1.0
	comp=Z,5.1nm,0.8s,baz=286,slow=5.1,SNR=13						
NOA				LR	LR	12 54 21.3	
	comp=Z,165nm,21.2s,baz=270,slow=32						
LMR	La Mourre	85.10	47	*e*P	P	12 21 23.5	+1.2
LMR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
FRF	La Foret Royal	85.16	47	*e*P	P	12 21 22.2	-0.5
FRF				pmax	pmax		
	comp=Z,6.0nm,0.8s						
NORES	NORESS Array B	85.21	29	P	P	12 21 22.9	+0.4
TORD	Torodi Ar. Bea	85.38	78	P	P	12 21 23.9	-0.4
	comp=Z,4.3nm,0.8s,baz=294,slow=4.9,SNR=23						
TORD				PP	PP	12 24 43.0	+0.3
	comp=Z,2.3nm,1.1s,baz=278,slow=7.2,SNR=4.3						
TORD				LR	LR	12 56 42.4	
	comp=Z,164nm,21.8s,baz=90,slow=34						
BFO	Black Forest	85.58	42	P	P	12 21 23.5	-1.2
BFO				pmax	pmax		
	comp=Z,14nm,1.3s						
BFO	Black Forest	85.58	42	P	P	12 21 23.4	-1.2
BFO				IAmb	IAmb	12 21 27.4	
	comp=Z,14nm,1.3s						
TUE	Stuetta	86.57	44	IAmb	IAmb	12 21 31.4	
	comp=Z,11nm,0.7s						
DAVA	Damuels	86.79	43	*e*P	P	12 21 31.1	+0.2
	comp=Z,15nm,0.9s						
RETA	Reutte	87.34	42	*e*P	P	12 21 34.7	+1.3
	comp=Z,9.3nm,1.0s						
FETA	Feichten	87.41	43	*e*P	P	12 21 33.7	-0.2
	comp=Z,17nm,2.0s						
BILL	Bilibino	87.73	339*c*	*i*P	P	12 21 35.8	+1.0
BILL				*e**PP	pP	12 21 43.6	-2.0
BILL				*e**SP	sP	12 21 49.8	-0.1
BILL				*e*SSS	SSS	12 41 37.5	
BILL				pmax	pmax		
	comp=Z,69nm,1.7s						
BILL				MLR	MLR		
	comp=Z,154nm,20.0s						
BILL	Bilibino	87.73	339	P	P	12 21 34.0	-0.8
VSL	Villasalto	87.86	50	IAmb	IAmb	12 21 37.6	
	comp=Z,18nm,1.1s						
CLL	Collm	87.97	38	*e*P	P	12 21 35.0	-1.2
CLL	Collm	87.97	38	*e*P	P	12 21 35.0	-1.2

CLL				*i* Pmax		12 21 38.7	
	comp=Z,12nm,1.0s						
CLL				*e*PP	**PP**	**12 25 00.0**	**-2.6**
CLL	**Collm**	**87.97**	**38**	IAmb	IAmb	12 21 39.6	
	comp=Z,12nm,1.0s						
ZCCA	**Zocca**	**88.10**	**45**	IAmb	IAmb	12 21 42.2	
	comp=Z,18nm,1.0s						
ARCES	**ARCESS Array B**	**88.28**	**19**	P	**P**	**12 21 36.2**	**-1.1**
	comp=Z,1.6nm,0.5s,baz=297,slow=3.6,SNR=7.4						
KEST	**Kesra**	**88.53**	**54**	P	**P**	**12 21 39.0**	**-0.3**
	comp=Z,13nm,0.8s,baz=289,slow=3.4,SNR=12						
KEST				LR	LR	12 58 10.1	
	comp=Z,134nm,18.9s,baz=250,slow=34						
ABTA	**Abfaltersbach**	**88.66**	**43**	*e*P	**P**	**12 21 40.7**	**+1.0**
	comp=Z,8.1nm,0.8s						
KEV	**Kevo**	**88.67**	**19**	P	**P**	**12 21 40.7**	**+1.6**
KHC	**Kasperske Hory**	**88.82**	**40**	*e*P	**P**	**12 21 40.4**	**0.0**
KHC	**Kasperske Hory**	**88.82**	**40**	*e*P	**P**	**12 21 40.4**	**0.0**
GERES	**GERESS Array B**	**88.97**	**41**	P	**P**	**12 21 39.6**	**-1.5**
	comp=Z,0.8nm,0.5s,baz=305,slow=2.8,SNR=8.4						
GERES				LR	LR	12 58 45.2	
	comp=Z,380nm,19.1s,baz=262,slow=34						
KBA	**Koelnbreinsper**	**89.14**	**42**	*e*P	**P**	**12 21 42.4**	**+0.3**
	comp=Z,16nm,1.5s						
MYKA	**Terra Mystica**	**89.44**	**43**	*e*P	**P**	**12 21 45.1**	**+1.7**
	comp=Z,6.8nm,0.8s						
TRI	**Trieste**	**89.74**	**44**	IAmb	IAmb	12 21 47.7	
	comp=Z,6.0nm,0.7s						
OSTC	**Ostas**	**90.13**	**39**	*e*P	**P**	**12 21 47.1**	**+0.7**
DPC	**Dobruska-Polom**	**90.25**	**39**	*e*P	**P**	**12 21 47.5**	**+0.5**
DPC	**Dobruska-Polom**	**90.25**	**39**	*e*P	**P**	**12 21 47.5**	**+0.5**
SOKA	**Soboth**	**90.36**	**43**	*e*P	**P**	**12 21 47.9**	**+0.2**
	comp=Z,2.3nm,0.6s						
CONA	**Conrad Observa**	**90.59**	**41**	*e*P	**P**	**12 21 49.0**	**+0.3**
	comp=Z,11nm,1.3s						
FINES	**FINESS Array B**	**91.73**	**27**	P	**P**	**12 21 52.7**	**-0.9**
	comp=Z,4.5nm,0.8s,baz=255,slow=1.9,SNR=11						
FINES				LR	LR	12 58 37.6	
	comp=Z,445nm,21.9s,baz=305,slow=33						
LANS	**Liptovska Anna**	**92.55**	**39**	*e*P	**P**	**12 22 01.0**	**+3.3**
LANS	**Liptovska Anna**	**92.55**	**39**	*e*P	**P**	**12 22 01.0**	**+3.3**
VSU	**Vasula**	**93.25**	**29**	⇓*e*P	**P**	**12 22 02.1**	**+1.5**
VSU				pmax	pmax		
	comp=Z,75nm,1.3s						
VNA3	**Neumayer Olymp**	**94.62**	**162**	P	**P**	**12 22 06.5**	**-0.2**
VNA1	**Neumayer--Stat**	**94.91**	**161**	P	**P**	**12 22 07.6**	**-0.3**
VNA2	**Neumayer--Watz**	**95.26**	**161**	P	**P**	**12 22 08.9**	**-0.6**
TIXI	**Tiksi**	**95.70**	**350**	⇓*e*P	**P**	**12 22 11.8**	**+0.2**
TIXI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
TIXI	**Tiksi**	**95.70**	**350**	P	**P**	**12 22 11.6**	**0.0**
TIXI				IAmb	IAmb	12 22 16.1	
	comp=Z,7.2nm,0.8s						
SNAA	**Sanae**	**96.85**	**162**	P	**P**	**12 22 16.9**	**+0.1**
SNAA	**Sanae**	**96.85**	**162**	⇑*e*P	**P**	**12 22 18.7**	**+1.8**
SNAA				pmax	pmax		
	comp=Z,7.0nm,1.5s						
PEA0B	**Petropavlovsk-**	**97.65**	**327**	⇓*e*P	**P**	**12 22 20.5**	**-0.4**
PETK	**Petropavlovsk-**	**97.65**	**327**	LR	LR	13 10 43.9	
	comp=Z,51nm,18.0s,baz=40,slow=38						
KLMR	**Klimovskoe**	**97.68**	**24**	*e*P	**P**	**12 22 19.5**	**-1.3**
KLMR				*e*		12 26 17.2	
KLMR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KLMR	**Klimovskoe**	**97.68**	**24**	*e*P	**P**	**12 22 19.6**	**-1.3**
KLMR				AMP		12 22 20.6	
	comp=Z,6.0nm,0.8s						
KLMR				*e*PP	**PP**	**12 26 17.3**	**-1.0**
AKASG	**Malin Array Be**	**97.83**	**36**	P	**P**	**12 22 19.4**	**-2.3**
	comp=Z,1.0nm,0.6s,baz=291,slow=3.6,SNR=2.8						
AKASG				LR	LR	13 03 07.6	
	comp=Z,389nm,21.6s,baz=300,slow=33						
DZM	**Mont Dzumac**	**110.00**	**250**	*e*LR	LR	12 59 47.9	
	comp=Z,219nm,27.0s						
BRVK	**Borovoye**	**114.28**	**16**	⇓*i*PKIKP	PKPdf	12 27 27.2	+1.4
ZALV	**Zalesovo Beam**	**116.16**	**6**	PKP	**PKiKP**	**12 27 29.2**	**-0.1**
	comp=Z,1.4nm,0.5s,baz=284,slow=2.5,SNR=5.9						
KURK	**Kurchatov**	**118.38**	**11**	⇑*i*PKIKP	**PKiKP**	**12 27 34.0**	**+0.3**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
DGZ	**Jazzator, Alta**	**120.61**	**5**	⇑*i*PKIKP	**PKiKP**	**12 27 38.8**	**+0.4**
SONM	**Songino Array**	**121.78**	**350**	PKP	**PKPdf**	**12 27 39.9**	**-0.6**
	comp=Z,1.7nm,0.6s,baz=326,slow=1.2,SNR=11						
KMBO	**Kilima Mbogo**	**122.69**	**85**	*i* PKIKP	**PKPdf**	**12 27 41.0**	**-2.3**
KMBO				pmax	pmax		
	comp=Z,14nm,0.6s						
MKAR	**Makanchi Array**	**122.81**	**10**	PKP	**PKPdf**	**12 27 41.9**	**-0.6**
	comp=Z,2.1nm,0.9s,baz=338,slow=2.0,SNR=6.9						
MKAR	**Makanchi Array**	**122.81**	**10**	PKIKP	**PKPdf**	**12 27 42.2**	**-0.2**
MKAR	**Makanchi Array**	**122.81**	**10**	PKPdf	**PKPdf**	**12 27 42.2**	**-0.2**
KSRS	**Korea Array**	**123.53**	**328**	PKP	**PKPdf**	**12 27 43.5**	**-0.5**
	comp=Z,4.1nm,0.7s,baz=0.6,slow=2.0,SNR=16						
KSAR	**Wonju Array Be**	**123.56**	**328**	PKIKP	**PKiKP**	**12 27 44.4**	**+0.1**
KSAR	**Wonju Array Be**	**123.56**	**328**	PKPdf	**PKiKP**	**12 27 44.4**	**+0.1**
CAN	**Canberra**	**124.14**	**234**	PKIKP	**PKiKP**	**12 27 46.7**	**+1.1**
AAK	**Ala-Archa**	**124.93**	**18**	⇓*i*PKIKP	**PKiKP**	**12 27 47.8**	**+0.7**
AAK	**Ala-Archa**	**124.93**	**18**	PKPdf	**PKiKP**	**12 27 47.6**	**+0.5**
WMQ	**Urumqi**	**126.46**	**6**	*e*PKP	**PKiKP**	**12 27 50.0**	**0.0**
WMQ				LR	LR		
	comp=Z,580nm,19.7s						
WMQ				LR	LR		
	comp=Z,560nm,23.1s						
CHGR	**Chuyangaron**	**126.56**	**24**		**PKiKP**	**12 27 51.2**	**+0.8**
HHC	**Hu-ho-hao-te**	**127.29**	**344**	*e*PKP	**PKPdf**	**12 27 50.9**	**-0.4**
KSH	**Kashi**	**128.23**	**18**	PKP	**PKiKP**	**12 27 55.0**	**+1.3**
GTA	**Gaotai**	**130.93**	**354**	*e*PKP	**PKiKP**	**12 27 59.3**	**+0.1**
GTA				sPKP		12 28 13.5	
GTA				LR	LR		
	comp=Z,220nm,19.3s						
GTA				LR	LR		
	comp=Z,160nm,19.3s						
GTA				LR	LR		
	comp=Z,320nm,20.7s						
STKA	**Stephens Creek**	**130.99**	**236**	PKP	**PKPdf**	**12 27 58.4**	**0.0**
	comp=Z,2.2nm,0.7s,baz=98,slow=4.1,SNR=4.8						
NJ2	**Nanjing**	**132.34**	**331**	*e*PKP	**PKiKP**	**12 28 01.6**	**-0.4**
XAN	**Xi'an**	**134.38**	**343**	PKP	**PKPdf**	**12 28 04.0**	**-0.8**
XAN				LR	LR		
	comp=Z,390nm,16.5s						
XAN				LR	LR		
	comp=Z,240nm,17.9s						
XAN				LR	LR		
	comp=Z,320nm,20.6s						
WHN	**Wuhan**	**135.63**	**335**	⇑PKP	**PKiKP**	**12 28 09.5**	**+0.8**
CD2	**Chengdu**	**138.67**	**348**	PKP	**PKPdf**	**12 28 12.6**	**-0.3**
ASAR	**Alice Springs**	**139.69**	**245**	PKhKP	PKPpre	12 28 05.8	
	comp=Z,1.0nm,0.6s,baz=114,slow=3.6,SNR=16						
ASAR				PKP	**PKPdf**	**12 28 15.4**	**+0.5**
	comp=Z,3.9nm,0.7s,baz=97,slow=2.1,SNR=16						
WRAB	**Tennant Creek**	**140.00**	**251**	⇓*e*PKIKP	**PKPdf**	**12 28 16.1**	**+0.6**
WRA	**Warramunga Arr**	**140.01**	**250**	PKhKP	PKPpre	12 28 07.0	
	comp=Z,1.1nm,0.6s,baz=108,slow=3.2,SNR=15						
WRA				PKP	**PKPdf**	**12 28 15.7**	**+0.2**
	comp=Z,6.1nm,0.9s,baz=123,slow=1.9,SNR=18						
KOLN	**Koldanda**	**141.41**	**15**	*e*P	**PKPdf**	**12 28 15.0**	**-3.1**
KKN	**Kakani**	**141.79**	**13**	*e*P	**PKPdf**	**12 28 14.4**	**-4.4**
	comp=Z,12nm,0.6s						
GUN	**Gumba**	**141.80**	**12**	*e*P	**PKPdf**	**12 28 14.9**	**-4.1**
	comp=Z,21nm,0.4s						
JIRN	**Jiri**	**142.11**	**12**	*e*P	**PKPdf**	**12 28 15.2**	**-4.4**
	comp=Z,15nm,0.7s						
TAPN	**Taplejung**	**142.69**	**10**	*e*P	**PKPdf**	**12 28 16.4**	**-4.1**
RAMN	**Ramite**	**142.88**	**11**	*e*P	**PKPdf**	**12 28 17.6**	**-3.2**
	comp=Z,16nm,0.5s						
ODAN	**Odare**	**143.11**	**10**	*e*P	PKPbc	12 28 17.9	-0.1
SHL	**Shillong**	**144.93**	**4**	PKIKP	PKPbc	12 28 23.6	+0.1
SHL	**Shillong**	**144.93**	**4**	PKPdf	PKPbc	12 28 23.6	+0.1
POO	**Poona**	**145.52**	**36**	*e*P	**PKPdf**	**12 28 24.0**	**-1.3**
SLVN	**Son La**	**147.80**	**343**		**PKiKP**	**12 28 33.5**	**-0.5**
HYB	**Hyderabad**	**148.96**	**30**	*i* PKP	**PKPbc**	**12 28 35.0**	**-0.1**
CHTO	**Chiang Mai**	**151.35**	**351**	PKIKP	**PKPdf**	**12 28 36.6**	**+1.8**
CHTO	**Chiang Mai**	**151.35**	**351**	PKPdf	**PKPdf**	**12 28 33.2**	**-1.6**
CHTO					**PKPbc**	**12 28 40.9**	**+0.1**
CMAR	**Chiang Mai Arr**	**151.70**	**351**	PKP	**PKPdf**	**12 28 36.2**	**+0.9**
	comp=Z,2.0nm,0.7s,baz=327,slow=2.1,SNR=15						
CMAR				PKPbc	**PKiKP**	**12 28 42.0**	**0.0**
	comp=Z,10nm,0.7s,baz=325,slow=3.6,SNR=24						
CMAR	**Chiang Mai Arr**	**151.70**	**351**	PKIKP	**PKPdf**	**12 28 35.8**	**+0.5**
CMAR						12 28 42.6	
CMAR	**Chiang Mai Arr**	**151.70**	**351**	PKPdf	**PKPdf**	**12 28 35.8**	**+0.5**
CMAR					**PKiKP**	**12 28 42.6**	**+0.6**
PSA00	**Pilbara Seismi**	**152.70**	**241**		**PKPdf**	**12 28 35.8**	**-0.9**
PALK	**Pallekele**	**158.45**	**39**	PKIKP	**PKPdf**	**12 28 47.0**	**+2.3**

IDC ***11*** *12:18:38.0±1.2, 12°.90N×60°.18W, h0^{km}, mb3.3/4, mb1 3.9/8, mb1mx3.7/38, mbtmp3.8/8, ML3.9/4, MS4.2/1, Ms1 4.2/1, ms1mx3.3/19 Error ellipse: s-maj=30.6km s-min=20.8km az=56.0*

TRN ***11*** *12:18:41.9, 13°.01N×60°.31W, h27^{km}, MD3.8*

ISC 11 12:18:39.6±1.6**, 12°.97N**±0°.02×**60°.24W**±0°.04**, h14**^{km}±11^{km}**, n52, σ1^{s}45**/77**, mb3.4**/4**, Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BCHC	**Barbados, Cave**	**0.62**	**75**	*e*P	**Pn**	**12 18 56.0**	**+2.0**
BBGH	**Gun Hill**	**0.69**	**75**	*e*P	**Pn**	**12 18 57.3**	**+2.3**
BBSP	**Saint Philip**	**0.77**	**80**	*e*P	**Pn**	**12 18 59.6**	**+3.5**
SVOC	**Richmond Hill,**	**0.97**	**281**	*e*P	**Pn**	**12 18 59.2**	**+0.3**
SVOC				*e*S	**Sg**	**12 19 12.2**	**+0.9**
MCLT	**Moule a Chique**	**1.00**	**317**	*e*P	**Pn**	**12 19 00.3**	**+0.9**
MCLT				*e*S	**Sg**	**12 19 13.3**	**+1.1**
SVV	**Soufriere Volc**	**1.01**	**290**	*e*P	**Pn**	**12 19 00.1**	**+0.6**
SVV				*e*S	**Sn**	**12 19 13.7**	**+0.1**
SVB	**Belmont**	**1.03**	**287**	*e*P	**Pn**	**12 19 00.1**	**+0.3**
SVB				*e*S	**Sg**	**12 19 13.9**	**+0.8**
GCMP	**Grenada, Carri**	**1.25**	**248**	*e*P	**Pb**	**12 19 03.3**	**+0.2**
GCMP				*e*S	**Sg**	**12 19 20.1**	**0.0**
SLBI	**Saint Lucia, B**	**1.27**	**326**	*e*P	**Pn**	**12 19 03.3**	**+0.4**
SLBI				*e*S	**Sb**	**12 19 19.1**	**-0.4**
GRSS	**Sisters**	**1.50**	**244**	*e*P	**Pb**	**12 19 07.5**	**+0.3**
GRSS				*e*S	**Sb**	**12 19 26.8**	**+0.7**
GRHS	**Sauteurs**	**1.56**	**242**	*e*P	**Pb**	**12 19 08.7**	**+0.4**
GRHS				*e*S	**Sg**	**12 19 29.2**	**-0.6**
H05S1	**Guadeloupe/Mar**	**1.56**	**338**	Pn	**Pn**	**12 19 07.3**	**+0.3**
H05S1				Sn	**Sn**	**12 19 25.3**	**-1.7**
	SNR=2080						
MPOM	**Morne Pois Mar**	**1.58**	**338**	*e*P	**Pn**	**12 19 07.9**	**+0.5**
MPOM				*e*S	**Sn**	**12 19 26.5**	**-1.2**
GRGR	**Grenville**	**1.61**	**239**	*e*P	**Pn**	**12 19 08.1**	**+0.4**
GRGR				*e*S	**Sb**	**12 19 29.1**	**-0.4**
TOSP	**Speyside**	**1.69**	**190**	*e*P	**Pb**	**12 19 10.8**	**+0.3**
MVM	**Montagne Vaucl**	**1.70**	**338**	*e*P	**Pn**	**12 19 09.5**	**+0.5**
GRFF	**Grenada Fort F**	**1.73**	**238**	*e*P	**Pb**	**12 19 10.5**	**-0.6**
GRFF				*e*S	**Sb**	**12 19 32.9**	**+0.1**
BIM	**Bigot**	**1.74**	**332**	*e*P	**Pn**	**12 19 10.4**	**+0.9**
BIM				*e*S	**Sn**	**12 19 31.2**	**-0.3**
LPMF	**Morne Lapointe**	**1.74**	**336**	*e*P	**Pn**	**12 19 10.4**	**+0.9**
TRMF	**Trois Ilets**	**1.75**	**333**	*e*P	**Pn**	**12 19 10.5**	**+0.9**
ZAM	**Aeronautique**	**1.77**	**334**	*e*P	**Pn**	**12 19 10.8**	**+0.9**
ILAM	**Ilet Lapin Mar**	**1.90**	**341**	*e*P	**Pn**	**12 19 13.2**	**+1.5**
ILAM				*e*S	**Sn**	**12 19 34.7**	**-0.7**
FDF	**Fort de France**	**1.96**	**333**	*e*P	**Pn**	**12 19 13.7**	**+1.0**
FDF				*e*S	**Sn**	**12 19 37.7**	**+0.6**
PML	**Morne Lenard**	**2.02**	**333**	*e*P	**Pb**	**12 19 15.4**	**-0.8**
GBMF	**Grand Be**	**2.03**	**334**	*e*P	**Pb**	**12 19 15.5**	**-0.8**
BAMF	**Morne Balai**	**2.04**	**334**	*e*P	**Pb**	**12 19 15.8**	**-0.7**
CXM	**Morne La Croix**	**2.04**	**334**	*e*P	**Pb**	**12 19 16.0**	**-0.7**
PCM	**Pelee Case Pet**	**2.06**	**333**	*e*P	**Pb**	**12 19 16.2**	**-0.7**
DLPL	**La Plaine**	**2.54**	**338**	*e*P	**Pn**	**12 19 21.0**	**+0.4**
DLPL				*e*S	**Sn**	**12 19 50.8**	**-0.6**
TRN	**Trinidad (W)**	**2.57**	**206**	*e*P	**Pb**	**12 19 25.0**	**-0.7**
TRN				*e*S	**Sn**	**12 19 53.2**	**+1.1**
MDN	**Morne-Daniel**	**2.59**	**335**	*e*P	**Pn**	**12 19 23.5**	**+2.3**
MDN				*e*S	**Sn**	**12 19 52.8**	**+0.3**
DSLB	**Salisbury**	**2.71**	**335**	*e*P	**Pn**	**12 19 25.1**	**+2.3**
DSLB				*e*S	**Sn**	**12 19 55.2**	**-0.2**
MDVC	**Dominica, Viel**	**2.86**	**337**	*e*P	**Pn**	**12 19 24.8**	**-0.1**
MDVC				*e*S	**Sn**	**12 19 59.1**	**-0.1**
MDCT	**Cottage Hill,**	**2.89**	**336**	*e*P	**Pb**	**12 19 32.5**	**+1.5**
MDCT				*e*S	**Sb**	**12 20 03.8**	**-2.3**
MAGL	**Barre de l'ile**	**3.13**	**341**	*e*P	**Pn**	**12 19 29.8**	**+1.2**
MAGL				*e*S	**Sn**	**12 20 06.0**	**+0.2**
TDBA	**Terre de Bas,**	**3.17**	**335**	*e*P	**Pn**	**12 19 32.2**	**+3.1**
TDBA				*e*S	**Sn**	**12 20 07.4**	**+0.7**
CBE	**Ff, Capester**	**3.35**	**337**	*e*P	**Pn**	**12 19 35.2**	**+3.4**
CBE				*e*S	**Sn**	**12 20 11.3**	**-0.1**
H05N1	**Guadeloupe/Mar**	**3.42**	**347**	Pn	**Pn**	**12 19 34.4**	**+1.8**
H05N1				Sn	**Sn**	**12 20 09.8**	**-3.2**
	SNR=55						
ANBD	**Bethesda, Anti**	**4.31**	**340**	*e*P	**Pn**	**12 19 46.9**	**+2.0**
ANBD	**Bethesda, Anti**	**4.31**	**340**	*e*S	**Sn**	**12 20 33.6**	**-1.5**
ANWB	**Willy Bob**	**4.90**	**342**	*e*P	**Pn**	**12 19 54.9**	**+1.9**
ANWB	**Willy Bob**	**4.90**	**342**	*e*S	**Sn**	**12 20 47.8**	**-1.8**
PCRV	**Puerto La Cruz**	**5.12**	**238**	Pn	**Pn**	**12 19 57.7**	**+1.6**
	9.3nm,0.3s,baz=26,slow=2.0,SNR=58						
PCRV				Sn	**Sn**	**12 20 52.7**	**-2.5**
	baz=350,slow=21,SNR=1.0						
SJG	**San Juan**	**7.65**	**313**	Pn	**Pn**	**12 20 32.1**	**+1.3**
	1.7nm,0.3s,baz=318,slow=20,SNR=1.4						
BAUV	**El Baul**	**8.64**	**243**	*e*P	**Pn**	**12 20 47.2**	**+2.8**
MDP	**Montagnes des**	**10.83**	**136**	Pn	**Pn**	**12 21 11.3**	**-3.2**
	0.5nm,0.3s,baz=314,slow=6.9,SNR=1.1						
MDP				Sn	Sn	12 22 59.5	-16
	0.2nm,0.3s,baz=50,slow=15,SNR=2.1						
PTGA	**Pitinga**	**13.61**	**179**	Pn	**Pn**	**12 21 50.1**	**-2.4**
	0.6nm,0.3s,baz=358,slow=16,SNR=12						
PTGA				Sn	Sn	12 24 09.1	-15
	0.1nm,0.3s,baz=14,slow=23,SNR=1.8						
TXAR	**Lajitas Array**	**43.38**	**299**	P	**P**	**12 26 42.5**	**+0.4**
	0.2nm,0.7s,baz=118,slow=5.2,SNR=2.6						
PDAR	**Pinedale Array**	**51.77**	**315**	P	**P**	**12 27 48.6**	**+1.3**
	0.2nm,0.4s,baz=108,slow=8.6,SNR=2.4						
PLCA	**Paso Flores**	**54.28**	**190**	LR	LR	12 54 26.3	
	comp=Z,228nm,20.1s,baz=170,slow=40						
TORD	**Torodi Ar. Bea**	**60.19**	**82**	P	**P**	**12 28 48.9**	**+1.2**
	0.3nm,0.4s,baz=283,slow=7.3,SNR=2.6						
ILAR	**Eielson Array**	**76.94**	**334**	P	**P**	**12 30 32.8**	**+1.3**
	0.2nm,0.5s,baz=82,slow=5.1,SNR=6.4						

BEO 11 12:19:45.3±1.2**, 42°.95N**×**24°.22E, h0**^{km}**, ML1.6**/3**, Mining explosion., Bulgaria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VTS	**Vitosha**	**0.80**	**245**	*e*Sg	Sg	12 19 59.7	-11
VTS	**Vitosha**	**0.80**	**245**	*e*Pg	Pn	12 20 10.8	+6.9
ZAPS	**Zavoj**	**1.20**	**286**	*e*Pg	Pg	12 20 07.9	-0.4
ZAPS				*e*Sg	Sg	12 20 22.8	-1.1
BOSS	**Bosilegrad**	**1.36**	**251**	*e*Pg	Pg	12 20 10.3	-1.0
BOSS				*e*Sg	Sb	12 20 29.7	+0.2
PRVS	**Prvonek**	**1.64**	**255**	*e*Pg	Pn	12 20 14.4	-1.0
PRVS				*e*Sg	Sg	12 20 38.0	+0.1
BARS	**Barje**	**1.77**	**266**	*e*Pg	Pn	12 20 16.5	-0.7

NOU 11 12:22:31.7, 18°.18S×**168°.23E, h0**^{km}**, MLv3.8**/13**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTV	**Rentapao**	**0.43**	**26**	P	Pg	12 22 40.1	+0.2
DVP	**Devils Point**	**0.45**	**355**	P	Pg	12 22 40.1	-0.3
LIFNC	**LIFOU**	**2.75**	**200**	P	Pn	12 23 14.8	-2.2
MARNC	**Mare, Loyalty**	**3.29**	**183**	P	Pn	12 23 24.4	-0.1
YATNC	**Mamie plateau,**	**4.06**	**198**	P	Pn	12 23 34.5	-0.6
DZM	**Mont Dzumac**	**4.22**	**203**	P	Pn	12 23 37.8	+0.4
KOUNC	**Koumac, New Ca**	**4.41**	**237**	P	Pn	12 23 38.9	-1.0
OUENC	**Ouen Island, N**	**4.41**	**197**	P	Pn	12 23 40.7	+0.7
ONTNC	**Ouen Toro**	**4.43**	**202**	P	Pn	12 23 41.5	+1.3
PINNC	**Pines Island,**	**4.47**	**189**	P	Pn	12 23 41.1	+0.3

TUL ***11*** *12:41:06.2±0.9, 36°.323N±0°.010×96°.96W±0°.02, h3^{km}±7^{km}, ML2.6, mb_Lg2.1/5(NEIC), Error ellipse: s-maj=2.1km s-min=1.3km az=73.0*

NEIC 11 12:41:06.3±0.7**, 36°.33N**±0°.01×**96°.95W**±0°.02**, h14**^{km}±4^{km}**, Error ellipse: s-maj=2.8km s-min=1.6km az=94.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QUOK	**Quay**	**0.25**	**128**	Pg	Pg	12 41 11.6	-0.2
QUOK				Sg	Sg	12 41 15.2	-0.3
OK031	**S. Brethren Rd**	**0.39**	**166**	Pg	Pg	12 41 14.1	0.0
OK031				Sg	Sg	12 41 19.4	-0.1
OK030	**Cody Creek RV**	**0.42**	**161**		Pg	12 41 14.8	-0.1
OK030				Sg	Sg	12 41 20.6	0.0
BLOK	**Blackwell**	**0.48**	**334**	Pg	Pg	12 41 16.0	+0.2
BLOK				Sg	Sg	12 41 22.6	+0.3
OK029	**Liberty Lake**	**0.67**	**217**	Pg	Pg	12 41 19.2	-0.2
T35A	**Sooner Cattle**	**0.69**	**31**	Pg	Pg	12 41 19.7	0.0
T35A				Sg	Sg	12 41 28.6	-0.2
CROK	**Carrier**	**0.85**	**282**	Pg	Pg	12 41 22.6	-0.1
BCOK	**Bluff Creek, N**	**0.86**	**219**	Pg	Pg	12 41 22.7	-0.2
GC02	**Grant County #**	**0.90**	**306**	Pg	Pb	12 41 23.5	-0.1
GC02				Sg	Sb	12 41 35.4	0.0
KAN09	**Caldwell North**	**0.97**	**327**	Pg	Pg	12 41 25.2	+0.2
KAN09				Sg	Sg	12 41 37.7	0.0
OKCFA	**Oklahoma City**	**1.00**	**204**	Pg	Pb	12 41 24.9	-0.5
TUL1	**Leonard**	**1.03**	**114**		Pb	12 41 25.7	-0.2
OK032	**Salt Plains WL**	**1.12**	**295**	Pg	Pn	12 41 27.5	0.0
FNO	**Franklin**	**1.13**	**199**	Pg	Pb	12 41 27.1	-0.5
KAN06	**Argonia West S**	**1.17**	**322**	Pg	Pg	12 41 28.7	-0.2
KAN16	**Harper SW Stat**	**1.26**	**315**	Pn	Pb	12 41 30.3	+0.3
KAN12	**Harper NE Stat**	**1.28**	**319**	Pn	Pb	12 41 30.5	+0.3
X34A	**Smith Ranch, M**	**1.87**	**203**		Pn	12 41 38.7	+0.9
X37A	**Clayton**	**2.16**	**143**	IAmb_Lg		12 42 17.6	
	comp=Z,14nm,0.7s						
WMOK	**Wichita Mounta**	**2.18**	**224**		Pb	12 41 44.0	-1.5
S39A	**Bolivar**	**3.21**	**64**	IAmb_Lg		12 42 52.6	
	comp=Z,4.2nm,0.8s						
U40A	**Yellville**	**3.31**	**88**	Pn	Pn	12 41 59.5	+1.8
CBKS	**Cedar Bluff**	**3.32**	**319**	IAmb_Lg		12 42 53.6	
	comp=Z,5.9nm,0.7s						
AMTX	**Amarillo**	**4.11**	**251**	Pn	Pn	12 42 09.7	+0.9
N35A	**Tabor**	**4.64**	**12**	Pn	Pn	12 42 17.4	+1.4

NIED ***11*** *12:43:09.9, 29°.27N×130°.52E, h29^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.67; $M_{\theta\theta}$-0.77; $M_{\phi\phi}$0.10; $M_{r\theta}$1.23; $M_{\theta\phi}$-0.53; $M_{\phi r}$1.84; Fault plane solution: $M_0$2.39000×10^{15} NP1:ϕ_s36.00000°, δ81.00000°, λ76.00000°. NP2:ϕ_s275.00000°, δ17.00000°, λ148.00000°.*

JMA ***11*** *12:43:09.8±0.2, 29°.27N×130°.52E, h29^{km}±4^{km}, M3.9*

IDC ***11*** *12:43:10.8±1.7, 29°.25N×130°.49E, h52^{km}±18^{km}, mb3.6/12, mb1 3.7/18, mb1mx3.6/45, mbtmp3.9/18, ML3.2/5, MS3.2/5, Ms1 3.2/5, ms1mx2.9/55, Error ellipse: s-maj=18.9km s-min=11.8km az=115.0*

NEIC ***11*** *12:43:10.5±0.6, 29°.19N±0°.06×130°.68E±0°.09, h48^{km}±9^{km}, mb4.6/18, Error ellipse: s-maj=11.7km s-min=8.1km az=107.0*

ISC 11 12:43:10.5±0.9**, 29°.24N**±0°.04×**130°.57E**±0°.05**, h50**^{km}±9^{km}**, n61, σ0^{s}84**/69**, mb4.2**/22**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNN	**Nakanoshima**	**0.85**	**315**	P	**Pn**	**12 43 24.7**	**-1.5**
JNN				*e*S	**Sn**	**12 43 36.1**	**-1.7**
JYAK	**Yakushimahirau**	**0.99**	**357**	P	**Pn**	**12 43 27.5**	**-0.6**
JYAK				*e*S	**Sn**	**12 43 41.0**	**-0.1**
JZK	**Kikaishima**	**1.06**	**210**	P	**Pn**	**12 43 29.2**	**+0.1**
JAM	**Amami Oshima**	**1.19**	**226**	P	**Pn**	**12 43 30.7**	**0.0**
JAM				*e*S	**Sn**	**12 43 46.0**	**+0.3**
JMTN	**Minamitane**	**1.19**	**14**	P	**Pn**	**12 43 30.6**	**-0.1**
JMTN				*e*S	**Sn**	**12 43 46.3**	**+0.5**
JTAJ	**Takarajima**	**1.20**	**266**	P	**Pn**	**12 43 30.4**	**-0.5**
JTAJ				*e*S	**Sn**	**12 43 45.8**	**-0.3**
JKC	**Kuchinoerabu**	**1.26**	**345**	P	**Pn**	**12 43 31.1**	**-0.6**
JKC				*e*S	**Sn**	**12 43 47.5**	**0.0**
JTN	**Tanegashima 3**	**1.45**	**14**	P	**Pn**	**12 43 34.4**	**+0.1**
JTN				*e*S	**Sn**	**12 43 52.9**	**+0.7**
JAMN	**Amaminishikomi**	**1.58**	**231**	P	**Pn**	**12 43 36.2**	**+0.1**
JAMN				*e*S	**Sn**	**12 43 55.6**	**+0.2**
JTSR	**Tashiro 2**	**1.94**	**9**	P	**Pn**	**12 43 41.7**	**+0.6**
JTSR				*e*S	**Sn**	**12 44 04.6**	**+0.3**
JTK	**Tokunoshima**	**2.04**	**225**	P	**Pn**	**12 43 42.7**	**+0.4**
JSU	**Suzuyama**	**2.26**	**357**		**Pn**	**12 43 44.8**	**-0.6**
JOW	**Kunigami**	**3.15**	**221**	P	**Pn**	**12 43 57.6**	**+0.1**
	2.1nm,0.3s,baz=143,slow=23,SNR=11						
JOW				S	**Sn**	**12 44 33.6**	**-0.2**
	9.6nm,0.3s,baz=25,slow=23,SNR=4.7						
JOW	**Kunigami**	**3.15**	**221**		**Pn**	**12 43 57.4**	**-0.2**
JMZ	**Minamidaito 2**	**3.46**	**170**	Pn	**Pn**	**12 44 00.2**	**-1.7**
JMN	**Monobe**	**5.29**	**31**	Pn	**Pn**	**12 44 27.0**	**0.0**
JHS	**Saijyo**	**6.13**	**20**	Pn	**Pn**	**12 44 38.2**	**-0.3**
JWT	**Wachi**	**7.28**	**33**		**Pn**	**12 44 54.1**	**-0.1**
INU	**Inuyama**	**8.17**	**40**		**Pn**	**12 45 06.1**	**-0.4**
YOJ	**Yonaguni jima**	**8.26**	**237**	Pn	**Pn**	**12 45 08.1**	**+0.3**
KSRS	**Korea Array**	**8.48**	**346**	P	**Pn**	**12 45 11.2**	**+0.6**
	0.2nm,0.3s,baz=165,slow=14,SNR=6.9						
KSRS				LR	LR	12 48 42.4	
	comp=Z,198nm,18.1s,baz=170,slow=39						
MJAR	**Matsushiro Arr**	**9.70**	**39**	P	**Pn**	**12 45 29.3**	**+1.9**
	0.1nm,0.3s,baz=230,slow=14,SNR=4.1						
JCJ	**Chichijima**	**10.47**	**99**	P	**Pn**	**12 45 37.8**	**-0.1**
	3.2nm,0.3s,baz=97,slow=23,SNR=1.1						
JCJ				LR	LR	12 49 08.2	
	comp=Z,114nm,21.0s,baz=122,slow=34						
ASAJ	**Asahikawa**	**17.67**	**30**	P	**Pn**	**12 47 12.6**	**-0.3**
	0.2nm,0.3s,baz=245,slow=13,SNR=4.2						
ASAJ				LR	LR	12 54 26.2	
	comp=Z,82nm,18.7s,baz=200,slow=38						
ENH	**Enshi**	**18.34**	**278**	P	**Pn**	**12 47 21.2**	**-0.1**
XAN	**Xi'an**	**19.04**	**290**		**Pn**	**12 47 32.5**	**+2.8**
KLR	**Kul'dur**	**19.98**	**2**	P	**P**	**12 47 37.7**	**-0.9**
	0.3nm,0.3s,baz=187,slow=6.7,SNR=12						
GUMO	**Guam**	**20.45**	**137**	LR	LR	12 54 36.4	
	comp=Z,38nm,21.3s,baz=321,slow=33						
QIZ	**Qiongzhong**	**21.45**	**246**	P	**P**	**12 47 54.9**	**+0.2**
QIZ				IAmb	IAmb	12 48 10.9	
	comp=Z,79nm,1.4s						
SONM	**Songino Array**	**26.32**	**322**	P	**P**	**12 48 41.0**	**-0.7**
	comp=Z,1.8nm,0.6s,baz=131,slow=7.5,SNR=7.3						
SONM	**Songino Array**	**26.32**	**322**	P	**P**	**12 48 41.3**	**-0.3**
UBPT	**Khong Chiam**	**26.99**	**244**	P	**P**	**12 48 48.8**	**+1.0**
UBPT				IAmb	IAmb	12 48 49.9	
	comp=Z,24nm,1.5s						
CMAR	**Chiang Mai Arr**	**30.77**	**257**	LR	LR	13 02 29.1	
	comp=Z,54nm,19.3s,baz=170,slow=38						
SHL	**Shillong**	**34.44**	**273**	P	**P**	**12 49 53.2**	**-0.4**
SRIT	**Nakonsritamara**	**35.59**	**241**	P	**P**	**12 50 03.0**	**-0.4**
SMY	**Shemya**	**39.54**	**41**	P	**P**	**12 50 36.0**	**-0.4**
MK31	**Makanchi Array**	**41.17**	**309**	P	**P**	**12 50 50.6**	**+0.6**
MKAR	**Makanchi Array**	**41.17**	**309**	P	**P**	**12 50 50.3**	**+0.3**
	comp=Z,0.5nm,0.4s,baz=90,slow=11,SNR=13						
MKAR	**Makanchi Array**	**41.17**	**309**	P	**P**	**12 50 50.5**	**+0.5**
ZAA0	**Zalesovo Array**	**41.20**	**320**	P	**P**	**12 50 50.5**	**+0.5**
ZALV	**Zalesovo Beam**	**41.20**	**320**	P	**P**	**12 50 49.8**	**-0.3**
	comp=Z,1.4nm,0.6s,baz=109,slow=7.7,SNR=5.1						
MAKZ	**Makanchi**	**41.39**	**309**	P	**P**	**12 50 52.5**	**+0.7**
MAKZ				IAmb	IAmb	12 51 15.4	
	comp=Z,5.8nm,1.1s						
KURK	**Kurchatov**	**44.15**	**314**	P	**P**	**12 51 14.7**	**+0.7**
KURK				IAmb	IAmb	12 51 15.3	
	comp=Z,7.7nm,0.6s						
NRIK	**Noril'sk**	**47.07**	**341**	P	**P**	**12 51 36.3**	**-0.5**
	comp=Z,2.1nm,0.5s,baz=107,slow=7.1,SNR=5.5						
WRA	**Warramunga Arr**	**49.03**	**175**	P	**P**	**12 51 50.8**	**-1.7**
	comp=Z,0.8nm,0.8s,baz=354,slow=9.0,SNR=5.1						
KK31	**Karatay Array**	**49.43**	**303**	P	**P**	**12 51 56.0**	**+0.5**
KK31				IAmb	IAmb	12 51 57.8	
	comp=Z,2.8nm,0.8s						
KKAR	**Karatay Array**	**49.43**	**303**	P	**P**	**12 51 56.3**	**+0.8**
KKAR	**Karatay Array**	**49.43**	**303**	P	**P**	**12 51 56.2**	**+0.7**
KKAR				IAmb	IAmb	12 51 57.8	
	comp=Z,2.8nm,0.8s						
BRVK	**Borovoye**	**49.54**	**316**	P	**P**	**12 51 56.5**	**+0.4**
BRVK				IAmb	IAmb	12 51 57.2	
	comp=Z,6.2nm,0.6s						
COCO	**West Island**	**52.51**	**223**	P	**P**	**12 52 18.4**	**-0.3**
ASAR	**Alice Springs**	**52.70**	**176**	P	**P**	**12 52 21.7**	**+1.6**
	comp=Z,0.2nm,0.6s,baz=9.9,slow=13,SNR=4.3						
ABKAR	**Akbulak array**	**56.15**	**312**	P	**P**	**12 52 45.4**	**+0.5**
ABKAR				IAmb	IAmb	12 52 46.4	
	comp=Z,6.9nm,0.7s						
ARU	**Arti**	**56.35**	**321**	P	**P**	**12 52 46.6**	**+0.3**
ARU				IAmb	IAmb	12 52 48.6	
	comp=Z,5.6nm,1.1s						
EIDS	**Eidsvold**	**57.76**	**158**	P	**P**	**12 52 55.3**	**-1.2**
EIDS				IAmb	IAmb	12 52 55.3	
	comp=Z,19nm,1.4s						
ILAR	**Eielson Array**	**60.81**	**29**	P	**P**	**12 53 18.0**	**+0.9**
	comp=Z,0.4nm,0.7s,baz=288,slow=7.6,SNR=6.0						
INK	**Inuvik**	**65.31**	**24**	P	**P**	**12 53 48.5**	**+1.7**
	comp=Z,0.7nm,0.5s,baz=322,slow=9.2,SNR=3.8						
FINES	**FINESS Array B**	**71.27**	**331**	P	**P**	**12 54 24.1**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=76,slow=8.0,SNR=9.1						
FINES	**FINESS Array B**	**71.27**	**331**	P	**P**	**12 54 24.8**	**+0.5**
AKASG	**Malin Array Be**	**74.59**	**320**	P	**P**	**12 54 43.5**	**-0.6**
	comp=Z,1.4nm,0.4s,baz=57,slow=6.5,SNR=5.9						
BRTR	**Keskin Array B**	**76.82**	**308**	P	**P**	**12 54 57.3**	**0.0**
	comp=Z,1.6nm,0.7s,baz=113,slow=5.6,SNR=3.6						
NOA	**NORSAR Array B**	**77.52**	**334**	P	**P**	**12 54 58.8**	**-1.9**
	comp=Z,0.2nm,0.5s,baz=54,slow=5.2,SNR=1.2						

*IDC **11** 12:47:21.0±3.7, 49.°71N×176.°21W, h0^{km}, mb3.6/4, mb1 3.9/4, mb1mx3.4/51, mbtmp3.7/4, Error ellipse: s-maj=84.2km s-min=35.6km az=23.0*
*NEIC **11** 12:47:26.1±1.0, 50.°05N±0.°10×176.°3W±0.°1, h29^{km}±10^{km}, Error ellipse: s-maj=14.5km s-min=9.4km az=174.0*
*AEIC **11** 12:47:26±0.6, 50.°12N±0.°05×176.°4W±0.°1, h12^{km}±7^{km}, ML2.9, Error ellipse: s-maj=10.4km s-min=7.6km az=73.0*
ISC 11 12:47:24.2±1.5**, 50.°1N**±0.°1×**176.°32W**±0.°07**, h10^{km}, n17, σ1.^{s}14**/21**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIMD	**Kanaga Island**	**1.77**	**341**		**Pn**	**12 47 55.2**	**+0.3**
ADK	**Adak**	**1.81**	**353**		**Pb**	**12 47 57.0**	**-0.4**
ADK					**Sn**	**12 48 18.1**	**-0.3**
KIWB	**Kanaga Island**	**1.84**	**344**	Pn	**Pn**	**12 47 56.4**	**+0.5**
KIRH	**Kanaga Island**	**1.88**	**345**		**Pn**	**12 47 56.8**	**+0.4**
TAFL	**Tanaga Flats**	**1.94**	**330**		**Pn**	**12 47 57.4**	**+0.1**
GSMY	**Great Sitkin M**	**1.96**	**5**		**Pn**	**12 47 57.9**	**+0.3**
TAPA	**Tanaga Point A**	**1.97**	**332**		**Pn**	**12 47 57.8**	**+0.1**
TAPA					**Sn**	**12 48 22.9**	**+0.5**
GSSP	**Great Sitkin S**	**2.01**	**3**		**Pn**	**12 47 58.8**	**+0.6**
TASE	**Tanaga Southea**	**2.06**	**329**		**Pn**	**12 47 59.2**	**+0.3**
TAFP	**Tanaga Falls P**	**2.09**	**331**		**Pn**	**12 47 59.6**	**+0.2**
TAFP					**Sn**	**12 48 24.9**	**-0.6**
AMKA	**Amchitka**	**3.06**	**297**	Pn	**Pn**	**12 48 13.8**	**+1.1**
UNV	**Unalaska Valle**	**7.13**	**54**	Pn	**Pn**	**12 49 09.4**	**+0.9**
KDAK	**Kodiak Island**	**15.89**	**52**	Pn	**Pn**	**12 51 05.1**	**-2.6**
	0.1nm,0.3s,baz=340,slow=9.9,SNR=1.0						
KDAK				Sn	**Sn**	**12 54 05.7**	**+1.9**
	0.1nm,0.3s,baz=130,slow=14,SNR=1.9						
SEY	**Seymchan**	**21.25**	**319**	P	**P**	**12 52 12.2**	**+2.0**
	1.9nm,0.6s,baz=107,slow=12,SNR=5.9						
ILAR	**Eielson Array**	**21.32**	**35**	P	**P**	**12 52 12.2**	**+1.2**
	0.4nm,0.6s,baz=247,slow=10,SNR=6.0						
TXAR	**Lajitas Array**	**57.28**	**82**	P	**P**	**12 57 10.3**	**-1.8**
	0.2nm,0.6s,baz=305,slow=6.5,SNR=2.6						
ARCES	**ARCESS Array B**	**59.62**	**351**	P	**P**	**12 57 28.3**	**+0.6**
	5.8nm,1.0s,baz=1.3,slow=8.1,SNR=1.9						

*NORS **11** 12:50:08.5±0.0, 42.°89N×44.°61E, h6^{km}, MPVA3.1*
*TIF **11** 12:50:08.9, 42.°88N×44.°65E, h0^{km}±1^{km}*
ISC 11 12:50:10.5±1.0**, 42.°88N**±0.°02×**44.°60E**±0.°02**, h7^{km}**±8^{km}**, n18, σ1.^{s}63**/35**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLKR	**Vladikavkaz**	**0.17**	**19**	*e*Pg	**Pg**	**12 50 12.9**	**-1.2**
	171nm,0.3s						
VLKR				*e*Sg	**Sg**	**12 50 16.6**	**+0.1**
MTEO	**Meteo**	**0.21**	**194**	P	**Pg**	**12 50 14.3**	**-0.5**
MTEO				S	**Sg**	**12 50 18.3**	**+0.5**
LACR	**Lac**	**0.23**	**256**	*e*Pg	**Pg**	**12 50 15.2**	**0.0**
LACR				*e*Sg	**Sg**	**12 50 20.1**	**+1.8**
KMGR	**Komgaron**	**0.26**	**48**	*e*Pg	**Pg**	**12 50 16.1**	**+0.4**
KMGR				*e*Sg	**Sg**	**12 50 21.3**	**+2.1**
ARNR	**Ardon**	**0.38**	**322**	*e*Pg	**Pb**	**12 50 17.6**	**-1.9**
ARNR				*e*Sg	**Sb**	**12 50 23.0**	**-2.6**
GUDG	**Gudauri**	**0.43**	**192**	P	**Pb**	**12 50 18.8**	**-1.7**
GUDG				S	**Sb**	**12 50 26.9**	**-0.4**
KORR	**Kora**	**0.44**	**298**	*e*Pg	**Pn**	**12 50 21.9**	**-1.4**
KORR				*e*Sg	**Sb**	**12 50 30.6**	**+3.1**
BTKR	**Batakoyurt**	**0.49**	**355**	*e*Pg	**Pb**	**12 50 21.2**	**-0.3**
BTKR				*e*Sg	**Sb**	**12 50 28.1**	**-0.8**
LSNR	**Lesken**	**0.69**	**305**	*e*Pg	**Pn**	**12 50 25.7**	**-1.0**
LSNR				*e*Sg	**Sn**	**12 50 37.0**	**-0.8**
DIGR	**Digorskoe uzhe**	**0.75**	**272**	*e*Pg	**Pb**	**12 50 24.7**	**-1.3**
DIGR				*e*Sg	**Sb**	**12 50 36.2**	**-0.3**
DVE	**Vedeno**	**1.12**	**86**	*e*Pg	**Pn**	**12 50 33.2**	**+0.5**
DVE				*e*Sg	**Sn**	**12 50 49.7**	**+1.3**
BTLR	**Botlikh**	**1.21**	**100**	*e*Pg	**Pn**	**12 50 32.8**	**-1.2**
BTLR				*e*Sg	**Sn**	**12 50 51.3**	**+0.6**
NEY	**Neytrino**	**1.42**	**285**	*e*Pg	**Pg**	**12 50 38.1**	**+0.2**
NEY				*e*Sg	**Sn**	**12 50 59.5**	**+3.5**
DGRG	**David-gareji**	**1.54**	**158**	P	**Pg**	**12 50 40.1**	**0.0**
DGRG				S	**Sg**	**12 51 02.4**	**+2.3**
LGD	**Lagodekhi**	**1.61**	**130**	P	**Pg**	**12 50 39.9**	**-1.3**
DBC	**Dubki**	**1.64**	**84**	*e*Pg	**Pg**	**12 50 40.7**	**-1.3**
DBC				*e*Sg	**Sg**	**12 51 05.8**	**+2.5**
SHA1	**Shidzhatmaz**	**1.66**	**302**	*e*Pg	**Pg**	**12 50 42.2**	**-0.1**
SHA1				*e*Sg	**Sg**	**12 51 06.2**	**+2.5**
GNBR	**Gunib**	**1.81**	**105**	*e*Pg	**Pg**	**12 50 45.4**	**+0.1**
GNBR				*e*Sg	**Sg**	**12 51 11.2**	**+2.5**

ISK 11 13:00:03.1, 36.°15N×33.°54E, h0^{km}, ML1.7/11**, Suspected Mining explosion., Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKK1	**Akkuyu-Mersin**	**0.00**	**148**	PG	Pg	13 00 03.9	+0.8
AKK2	**Akkuyu-Mersin**	**0.01**	**136**	PG	Pg	13 00 04.2	+0.9
AKKU	**Akkuyu-Mersin**	**0.02**	**35**	PG	Pg	13 00 04.2	+0.8
TEPK	**Tepekoy-MERSIN**	**0.08**	**3**	PG	Pg	13 00 05.2	+0.6
OREN	**Orenkoy-Mersin**	**0.09**	**314**	PG	Pg	13 00 05.5	+0.7
YESI	**Yesilovacik-Me**	**0.10**	**59**	PG	Pg	13 00 05.8	+0.8
YORU	**Yoruktepe-Mers**	**0.11**	**275**	PG	Pg	13 00 06.0	+0.8
TISA	**Tisan-Mersin**	**0.11**	**82**	PG	Pg	13 00 05.9	+0.6
KARG	**Kargicak-Mersi**	**0.15**	**67**	PG	Pg	13 00 07.7	+1.7
IKL	**Isikli**	**0.15**	**52**	PG	Pg	13 00 06.8	+0.8
TEVE	**Tevekalti-Mers**	**0.30**	**345**	PG	Pg	13 00 09.3	+0.4
BERE	**Bereket-Mersin**	**0.33**	**308**	PG	Pg	13 00 10.5	+1.1
KEBE	**Keben-Mersin**	**0.33**	**25**	PG	Pg	13 00 10.5	+1.0
TEKE	**Tekeli-Mersin**	**0.34**	**270**	PG	Pg	13 00 10.3	+0.6
KIZK	**Mersin**	**0.59**	**55**	PG	Pg	13 00 13.8	-0.7

NIC 11 13:00:40.7±0.0**, 34.°96N×32.°12E, h16^{km}**±2^{km}**, Ml2.1**/3**, 2C, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKMS	**Akamas**	**0.18**	**71**	⇑*i*P	Pg	13 00 45.4	+0.2
AKMS				AML	AML	13 00 48.3	
	3.5nm,0.3s						
AKMS				AML	AML	13 00 48.3	
	3.5nm,0.3s						
AKMS				AML	AML	13 00 48.5	
	4.9nm,0.3s						
AKMS				AML	AML	13 00 48.5	
	4.9nm,0.3s						
AKMS				S	Sb	13 00 48.8	-0.2
NATA	**Nata**	**0.41**	**116**	P	Pg	13 00 49.0	0.0
NATA				S	Sb	13 00 55.9	+0.5
NATA				AML	AML	13 00 56.6	
	1.0nm,0.5s						
NATA				AML	AML	13 00 56.6	
	1.0nm,0.5s						
NATA				AML	AML	13 00 57.4	
	1.5nm,0.4s						
NATA				AML	AML	13 00 57.4	
	1.5nm,0.4s						
ALFC	**Alefka**	**0.44**	**63**	⇑*i*P	Pg	13 00 49.6	+0.1
ALFC				S	Sb	13 00 56.8	+0.5
ALFC				AML	AML	13 00 57.5	
	0.8nm,0.6s						
ALFC				AML	AML	13 00 57.5	
	0.8nm,0.6s						
ALFC				AML	AML	13 00 57.5	
	0.5nm,0.2s						
ALFC				AML	AML	13 00 57.5	
	0.5nm,0.2s						
ASGA	**Asgata**	**0.94**	**100**	S	Sn	13 01 12.4	+0.1
CSS	**Mathiatis**	**0.99**	**89**	S	Sn	13 01 13.9	+0.3

*IDC **11** 13:20:58.2±0.9, 21.°67N×143.°03E, h299^{km}±8^{km}, mb3.9/37, mb1 4.0/41, mb1mx3.9/70, mbtmp4.6/41, Error ellipse: s-maj=11.0km s-min=6.0km az=88.0*
*NEIC **11** 13:20:58.2±1.5, 21.°62N±0.°07×143.°1E±0.°1, h296^{km}±3^{km}, mb4.6/65, Error ellipse: s-maj=17.1km s-min=10.3km az=81.0*
*JMA **11** 13:20:59.3±0.2, 22.°00N×143.°56E, h325^{km}±2^{km}, M5.1*
ISC 11 13:20:59.1±0.3**, 21.°68N**±0.°04×**143.°03E**±0.°07**, h311^{km}, n202, σ1.^{s}13**/222**, mb4.5**/102**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHH2	**Haha-jima-NKT2**	**4.99**	**351**	P	**Pn**	**13 22 16.0**	**-0.8**
JHH2				*e*S	**S**	**13 23 15.8**	**-3.6**
CBIJ	**Chichi jima**	**5.44**	**352**	P	**Pn**	**13 22 20.7**	**-1.4**
CBIJ				S	**S**	**13 23 24.9**	**-4.1**
JCJ	**Chichijima**	**5.44**	**352**	P	**Pn**	**13 22 20.9**	**-1.2**
	179nm,0.3s,baz=228,slow=5.3,SNR=135						
JCJ				S	**S**	**13 23 24.8**	**-4.2**
	126nm,0.3s,baz=295,slow=22,SNR=9.0						
JCJ	**Chichijima**	**5.44**	**352**		**Pn**	**13 22 20.8**	**-1.3**
GUMO	**Guam**	**8.24**	**167**	P	**Pn**	**13 22 55.3**	**-0.5**
	44nm,0.3s,baz=149,slow=2.4,SNR=31						
GUMO	**Guam**	**8.24**	**167**	Pn	**Pn**	**13 22 55.4**	**-0.3**
JMZ	**Minamidaito 2**	**11.57**	**293**		**Pn**	**13 23 36.3**	**0.0**
JHCJ	**Hachijojimakas**	**11.70**	**346**	P	**Pn**	**13 23 36.5**	**-1.2**
JHJ2	**Mitsune**	**11.74**	**347**	P	**Pn**	**13 23 37.2**	**-0.9**
JHJ2	**Mitsune**	**11.74**	**347**	Pn	**Pn**	**13 23 36.9**	**-1.2**
JHJ	**Hachijo jima 2**	**11.75**	**346**	P	**Pn**	**13 23 36.6**	**-1.7**
	68nm,0.3s,baz=85,slow=23,SNR=7.5						
JHJ				S	**S**	**13 25 45.9**	**-3.5**
	27nm,0.3s,baz=262,slow=23,SNR=1.2						
JMKN	**Mikurajimanish**	**12.54**	**347**	P	**Pn**	**13 23 46.7**	**-1.1**
BSO1	**Boso 1**	**13.05**	**352**	P	**Pn**	**13 23 53.1**	**-0.2**
TTO1	**TONANKAI O.B.S**	**13.11**	**336**	P	**Pn**	**13 23 55.7**	**+1.3**
BSO3	**Boso 3**	**13.26**	**351**	P	**Pn**	**13 23 56.2**	**+0.1**
BSO4	**Boso 4**	**13.47**	**350**	P	**P**	**13 23 58.6**	**+0.1**
JSG	**Sagara**	**13.63**	**343**		**Pn**	**13 24 01.4**	**+0.6**
JTNC	**Tanabenakahech**	**13.75**	**333**	P	**Pn**	**13 24 02.9**	**+0.6**
JIE	**Ise**	**13.83**	**338**	P	**Pn**	**13 24 03.2**	**-0.1**
JKN2	**Miekihoku**	**13.86**	**336**	P	**Pn**	**13 24 03.2**	**-0.3**
HMMJ	**Hamamatsu 2**	**13.93**	**342**	P	**P**	**13 24 02.8**	**-0.9**
JOD2	**Odawara 2**	**13.97**	**347**	P	**P**	**13 24 04.1**	**0.0**
JNY	**Yasuok**	**14.36**	**343**	P	**P**	**13 24 08.1**	**-0.4**
JTO	**Tosashimizu**	**14.37**	**323**	P	**Pn**	**13 24 12.0**	**+2.4**
JOW	**Kunigami**	**14.40**	**294**	P	**P**	**13 24 08.3**	**-0.7**
	1.1nm,0.3s,baz=143,slow=28,SNR=2.4						
JOW	**Kunigami**	**14.40**	**294**		**Pn**	**13 24 09.7**	**-0.4**
JAO	**Obara**	**14.45**	**341**	P	**Pn**	**13 24 10.1**	**-0.5**
JMN	**Monobe**	**14.47**	**328**	Pn	**Pn**	**13 24 12.7**	**+1.8**
JHU	**Hanno**	**14.49**	**348**	P	**P**	**13 24 08.6**	**-1.3**
INU	**Inuyama**	**14.60**	**340**		**P**	**13 24 11.2**	**+0.1**
JYT	**Yasato**	**14.70**	**351**		**P**	**13 24 12.5**	**+0.3**
JGF	**Kuroka**	**14.73**	**342**	P	**P**	**13 24 13.2**	**+0.6**
JRY	**Ryogami san**	**14.73**	**347**	P	**P**	**13 24 12.2**	**-0.4**
JSU	**Suzuyama**	**14.90**	**314**	P	**Pn**	**13 24 16.8**	**+0.8**
JAG	**Ashikaga**	**15.02**	**349**	P	**P**	**13 24 14.9**	**-0.8**
JHO	**Hitachi**	**15.03**	**352**	P	**P**	**13 24 16.0**	**+0.2**
JWT	**Wachi**	**15.11**	**335**	P	**Pn**	**13 24 18.0**	**-0.3**
MJAR	**Matsushiro Arr**	**15.39**	**345**	P	**P**	**13 24 17.7**	**-2.1**
	2.2nm,0.3s,baz=5.8,slow=14,SNR=66						
MJAR				ScP	**ScP**	**13 32 07.5**	**+0.2**
	0.1nm,0.3s,baz=170,slow=3.4,SNR=10						
MJAR	**Matsushiro Arr**	**15.39**	**345**	P	**P**	**13 24 19.7**	**-0.1**
MJAR				IAmb	IAmb	13 24 21.5	
	comp=Z,58nm,1.2s						
MAJO	**Matsushiro**	**15.39**	**345**	P	**P**	**13 24 19.6**	**-0.2**
MAT	**Matsushiro**	**15.39**	**345**	P	**P**	**13 24 18.9**	**-0.9**
MAT				S	**S**	**13 27 00.2**	**-6.2**
JSJ	**Shimokoshiki**	**15.50**	**313**	P	**Pn**	**13 24 22.3**	**-0.7**
JHS	**Saijyo**	**15.87**	**329**	P	**Pn**	**13 24 26.9**	**-0.3**
JHS	**Saijyo**	**15.87**	**329**	P	**Pn**	**13 24 27.2**	**0.0**
JMM	**Marumori**	**16.24**	**354**	P	**P**	**13 24 29.6**	**+0.6**
JSD	**Sado**	**16.81**	**347**		**P**	**13 24 35.3**	**+0.1**
JTM	**Tenmabayashi**	**19.12**	**355**	P	**P**	**13 25 01.1**	**+1.3**
YHNB	**Yeheng**	**20.13**	**283**	P	**P**	**13 25 10.6**	**-0.2**
YULB	**Yu-li**	**20.15**	**279**	P	**P**	**13 25 10.7**	**-0.3**
ERM	**Erimo**	**20.27**	**0**	P	**P**	**13 25 14.2**	**+2.2**
TWG	**Pinlang**	**20.36**	**277**	P	**P**	**13 25 12.3**	**-0.7**
KSRS	**Korea Array**	**20.44**	**324**	P	**P**	**13 25 13.2**	**-0.4**
	comp=Z,7.8nm,0.4s,baz=143,slow=8.7,SNR=48						
KSRS				ScP	**ScP**	**13 32 18.9**	**+0.9**
	comp=Z,7.6nm,0.9s,baz=147,slow=2.2,SNR=14						
KSAR	**Wonju Array Be**	**20.46**	**323**	P	**P**	**13 25 15.1**	**+1.3**
SSLB	**Suanglung**	**20.47**	**280**	P	**P**	**13 25 15.0**	**+0.8**
KS19	**Wonju Array Si**	**20.51**	**324**	P	**P**	**13 25 15.0**	**+0.7**
KS19				IAmb	IAmb	13 25 18.9	
	comp=Z,44nm,1.3s						
TPUB	**Ta-pu**	**20.76**	**279**	P	**P**	**13 25 16.1**	**-0.9**
JEW	**Eniwo**	**21.14**	**357**	P	**P**	**13 25 21.1**	**+0.9**
JKA	**Kamikawa-asahi**	**22.38**	**359**	P	**P**	**13 25 32.8**	**+1.4**
JKA				IAmb	IAmb	13 25 36.3	
	comp=Z,68nm,1.4s						
ASAJ	**Asahikawa**	**22.38**	**359**	P	**P**	**13 25 32.3**	**+0.9**
	comp=Z,12nm,0.5s,baz=232,slow=8.3,SNR=24						
JAY	**Jayapura**	**24.16**	**186**	P	**P**	**13 25 48.2**	**+0.2**
	comp=Z,1.5nm,0.4s,baz=329,slow=1.6,SNR=5.0						
USA0B	**Ussuriysk Arra**	**24.25**	**340**	P	**P**	**13 25 48.6**	**+0.2**
USA0B				IAmb	IAmb	13 25 54.7	
	comp=Z,27nm,1.4s						
USRK	**Ussuriysk Ar.**	**24.25**	**340**	P	**P**	**13 25 49.2**	**+0.8**
	comp=Z,5.8nm,0.6s,baz=155,slow=6.5,SNR=30						
USRK	**Ussuriysk Ar.**	**24.25**	**340**	P	**P**	**13 25 48.5**	**0.0**
SIJI	**Sorong**	**25.19**	**209**	P	**P**	**13 25 55.0**	**-2.3**
	comp=Z,11nm,0.6s,baz=106,slow=22,SNR=4.4						
YSS	**Yuzh-Sakhalins**	**25.21**	**360**	P	**P**	**13 25 56.7**	**-0.3**
YSS				IAmb	IAmb	13 26 38.7	
	comp=Z,31nm,1.2s						
GTOI	**Gorontalo**	**28.61**	**226**	P	**P**	**13 26 27.6**	**0.0**
	comp=Z,162nmcomp=Z,18nm,1.2s						
SANI	**Sanana**	**28.88**	**217**	P	**P**	**13 26 28.0**	**-2.0**
	comp=Z,6.8nm,0.5s						
KLR	**Kul'dur**	**28.92**	**345**	P	**P**	**13 26 30.6**	**+0.7**
	comp=Z,58nm,0.5s,baz=161,slow=8.7,SNR=207						
KLR				ScP	**ScP**	**13 32 41.9**	**+0.1**
	comp=Z,4.1nm,0.7s,baz=252,slow=2.3,SNR=7.6						
MRSI	**Marisa**	**29.45**	**227**	P	**P**	**13 26 35.0**	**0.0**
	comp=Z,753nmcomp=Z,75nm,1.2s						
TOLI2	**Tolitoli**	**29.80**	**230**	P	**P**	**13 26 38.1**	**0.0**
TOLI2				IAmb	IAmb	13 26 40.3	
	comp=Z,38nm,1.2s						
APSI	**Ampana**	**30.67**	**226**	P	**P**	**13 26 45.3**	**-0.4**
	comp=Z,364nmcomp=Z,37nm,1.1s						
MPSI	**Mapaga**	**30.97**	**230**	P	**P**	**13 26 48.1**	**-0.2**
	comp=Z,12nm,1.5s						
PETK	**Petropavlovsk-**	**33.33**	**16**	P	**P**	**13 27 08.6**	**+0.3**
	comp=Z,7.1nm,1.0s,baz=147,slow=6.7,SNR=16						
PETK	**Petropavlovsk-**	**33.33**	**16**	P	**P**	**13 27 09.0**	**+0.7**
TTSI	**Tana Toraja**	**33.47**	**226**	P	**P**	**13 27 10.0**	**+0.1**
	comp=Z,32nm,0.9s						
PET	**Petropavlovsk**	**33.51**	**17**	P	**P**	**13 27 09.9**	**+0.2**
PET				IAmb	IAmb	13 27 11.6	
	comp=Z,26nm,1.2s						
SPSI	**Sidrap Palu**	**34.19**	**225**	P	**P**	**13 27 16.3**	**+0.2**
	comp=Z,858nmcomp=Z,44nm,1.0s						
BKSI	**Bulukumba**	**34.99**	**223**	P	**P**	**13 27 23.6**	**+0.7**
	comp=Z,16nm,1.2s						
BSSI	**Bau Bau, Buton**	**35.40**	**221**	P	**P**	**13 27 26.2**	**-0.2**
	comp=Z,280nmcomp=Z,24nm,1.1s						
MTKI	**Muara Teweh, K**	**35.51**	**234**	P	**P**	**13 27 27.8**	**+0.5**
	comp=Z,3µmcomp=Z,54nm,1.1s						
KBKI	**Kotabaru**	**36.16**	**230**	P	**P**	**13 27 32.9**	**0.0**
	comp=Z,713nmcomp=Z,49nm,1.1s						
SLVN	**Son La**	**36.34**	**277**	P	**P**	**13 27 35.6**	**+1.2**
SLVN				IAmb	IAmb	13 27 36.9	
	comp=Z,24nm,1.5s						
EDFI	**Ende, Flores**	**36.79**	**217**	P	**P**	**13 27 37.2**	**-1.0**
	comp=Z,273nmcomp=Z,19nm,1.1s						
BBKI	**Banjar Baru**	**37.23**	**231**	P	**P**	**13 27 42.0**	**+0.2**
STKI	**Sintang**	**37.54**	**239**	P	**P**	**13 27 44.6**	**+0.2**
	comp=Z,56nm,0.9s						
MA2	**Magadan**	**38.26**	**6**	P	**P**	**13 27 49.7**	**0.0**
	comp=Z,6.2nm,0.7s,baz=193,slow=11,SNR=5.2						
PLAI	**Plampang**	**39.16**	**222**	P	**P**	**13 27 57.0**	**-0.8**
	comp=Z,912nmcomp=Z,86nm,1.2s						
SONM	**Songino Array**	**39.26**	**321**	P	**P**	**13 27 59.0**	**+0.7**
	comp=Z,2.8nm,0.4s,baz=130,slow=7.4,SNR=31						
SONM				ScP	**ScP**	**13 33 19.4**	**+0.6**
	comp=Z,1.6nm,1.0s,baz=108,slow=3.3,SNR=4.9						
SONM	**Songino Array**	**39.26**	**321**	P	**P**	**13 27 59.1**	**+0.8**
KNRA	**Kununurra**	**39.68**	**202**	P	**P**	**13 28 00.7**	**-1.2**
KNRA				IAmb	IAmb	13 28 02.1	
	comp=Z,37nm,1.1s						
KMMI	**Kalianget**	**40.35**	**228**	P	**P**	**13 28 08.5**	**+1.0**
	comp=Z,2µmcomp=Z,202nm,1.0s						
ABJI	**Asem Bagus**	**40.70**	**227**	P	**P**	**13 28 11.6**	**+1.2**
	comp=Z,83nm,1.1s						
GTA	**Gaotai**	**40.77**	**306**	*e*P	**P**	**13 28 12.7**	**+1.9**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
JAGI	**Jajag, Banyuwa**	**41.25**	**226**	P	**P**	**13 28 13.6**	**-1.2**
	comp=Z,56nm,1.1s						
JAGI	**Jajag, Banyuwa**	**41.25**	**226**	P	**P**	**13 28 13.1**	**-1.6**
JAGI				IAmb	IAmb	13 28 15.3	
	comp=Z,42nm,0.9s						
YAK	**Yakutsk**	**41.36**	**351**	P	**P**	**13 28 15.1**	**0.0**
	comp=Z,18nm,0.4s,baz=171,slow=2.4,SNR=17						
YAK	**Yakutsk**	**41.36**	**351**	P	**P**	**13 28 14.9**	**-0.1**
CHTO	**Chiang Mai**	**41.36**	**274**	P	**P**	**13 28 16.3**	**+0.5**
CM31	**Chiang Mai Arr**	**41.44**	**274**	P	**P**	**13 28 17.6**	**+1.2**
CMAR	**Chiang Mai Arr**	**41.44**	**274**	P	**P**	**13 28 17.5**	**+1.1**
	comp=Z,3.2nm,0.5s,baz=81,slow=6.5,SNR=30						
CMAR				PcP	**PcP**	**13 30 08.9**	**+1.1**
	comp=Z,0.9nm,0.7s,baz=113,slow=1.6,SNR=5.8						
CMAR	**Chiang Mai Arr**	**41.44**	**274**	P	**P**	**13 28 17.1**	**+0.7**
CTA	**Charters Tower**	**41.63**	**175**	P	**P**	**13 28 17.9**	**+0.1**
	comp=Z,2.7nm,0.4s,baz=346,slow=8.4,SNR=16						
CTAO	**Charters Tower**	**41.63**	**175**	P	**P**	**13 28 17.9**	**+0.1**
SEY	**Seymchan**	**41.71**	**6**	P	**P**	**13 28 19.0**	**+1.1**
	comp=Z,3.9nm,0.4s,baz=179,slow=4.2,SNR=15						
WR0	**Warramunga Arr**	**42.21**	**192**	P	**P**	**13 28 21.8**	**-0.7**
WR0				IAmb	IAmb	13 28 22.8	
	comp=Z,37nm,1.2s						
WRAB	**Tennant Creek**	**42.22**	**192**	P	**P**	**13 28 21.9**	**-0.6**
WRAB				IAmb	IAmb	13 28 23.1	
	comp=Z,66nm,1.3s						
WB2	**Warramunga Arr**	**42.23**	**192**	P	**P**	**13 28 22.0**	**-0.6**
WB2				IAmb	IAmb	13 28 23.1	
	comp=Z,30nm,0.6s						
WRA	**Warramunga Arr**	**42.23**	**192**	P	**P**	**13 28 22.2**	**-0.5**
	comp=Z,12nm,0.3s,baz=17,slow=8.8,SNR=504						
WRA				PcP	**PcP**	**13 30 10.2**	**-0.1**
	comp=Z,1.0nm,0.5s,baz=352,slow=3.6,SNR=2.6						
WRA				ScP	**ScP**	**13 33 33.3**	**+2.6**
	comp=Z,3.9nm,0.9s,baz=15,slow=3.1,SNR=10						
WRA				S	**S**	**13 34 15.7**	**-3.6**
	comp=Z,6.3nm,1.1s,baz=13,slow=14,SNR=9.2						
WRA	**Warramunga Arr**	**42.23**	**192**	P	**P**	**13 28 21.7**	**-1.0**
TLY	**Talaya**	**42.69**	**324**	P	**P**	**13 28 27.3**	**+1.4**
FITZ	**Fitzroy Crossi**	**43.05**	**205**	P	**P**	**13 28 28.8**	**-0.4**
	comp=Z,8.8nm,0.4s,baz=30,slow=9.9,SNR=48						
PCJI	**Pacitan**	**43.11**	**230**	P	**P**	**13 28 29.6**	**-0.1**
	comp=Z,107nm,1.0s						
DSRI	**Dabo**	**43.51**	**245**	P	**P**	**13 28 34.0**	**+1.1**
	comp=Z,1µmcomp=Z,27nm,1.3s						
CBJI	**Citeko**	**45.15**	**236**	P	**P**	**13 28 46.5**	**+0.7**
	comp=Z,106nm,0.9s						
DBJI	**Dramaga**	**45.31**	**236**	P	**P**	**13 28 47.9**	**+0.8**
SBJI	**Serang**	**45.52**	**237**	P	**P**	**13 28 49.6**	**+0.9**
	comp=Z,5µmcomp=Z,210nm,1.0s						
KLSI		**45.76**	**240**	P	**P**	**13 28 50.2**	**-0.4**
	comp=Z,23nm,1.1s						
AS31	**Alice Springs**	**45.94**	**192**	P	**P**	**13 28 50.9**	**-1.0**
ASAR	**Alice Springs**	**45.94**	**192**	P	**P**	**13 28 51.0**	**-0.9**
	comp=Z,2.9nm,0.4s,baz=13,slow=9.0,SNR=82						
ASAR				PcP	**PcP**	**13 30 23.9**	**+0.9**
	comp=Z,1.2nm,0.8s,baz=0.9,slow=5.7,SNR=2.8						
ASAR				ScP	**ScP**	**13 33 48.3**	**+2.4**
	comp=Z,0.7nm,0.8s,baz=14,slow=4.6,SNR=4.2						
ASAR				S	**S**	**13 35 09.7**	**-2.9**
	comp=Z,2.3nm,0.8s,baz=19,slow=19,SNR=13						
ASAR	**Alice Springs**	**45.94**	**192**	P	**P**	**13 28 50.7**	**-1.1**
MDSI	**Maura Dua**	**46.09**	**240**	P	**P**	**13 28 52.5**	**-0.6**
	comp=Z,354nmcomp=Z,14nm,1.1s						
CGJI	**Cibinong**	**46.16**	**237**	P	**P**	**13 28 51.7**	**-2.0**
	comp=Z,2µmcomp=Z,120nm,0.6s						
LHSI	**Lahat**	**46.24**	**242**	P	**P**	**13 28 54.8**	**+0.5**
	comp=Z,74nm,0.9s						
SHL	**Shillong**	**46.79**	**285**	P	**P**	**13 28 58.7**	**0.0**
KSI	**Kapahiang**	**46.91**	**242**	P	**P**	**13 28 58.7**	**-0.8**
MASI	**Maura Aman, Be**	**46.91**	**243**	P	**P**	**13 29 00.2**	**+0.7**
	comp=Z,260nm,0.9s						
LSA	**Lhasa**	**47.11**	**291**	P	**P**	**13 29 02.8**	**+1.4**
BILL	**Bilibino**	**48.56**	**11**	P	**P**	**13 29 11.7**	**+0.4**
BILL				IAmb	IAmb	13 29 13.2	
	comp=Z,33nm,1.2s						
PSA00	**Pilbara Seismi**	**48.59**	**209**	P	**P**	**13 29 10.4**	**-1.7**
GSI	**Gunungsitoli**	**48.66**	**252**	P	**P**	**13 29 13.2**	**+0.4**
DZM	**Mont Dzumac**	**49.12**	**151**	P	**P**	**13 29 15.9**	**-0.3**
	comp=Z,4.4nm,0.9s,baz=44,slow=9.2,SNR=2.9						
DZM	**Mont Dzumac**	**49.12**	**151**	IAmb	IAmb	13 31 03.8	
	comp=Z,28nm,1.7s						
TAPN	**Taplejung**	**50.32**	**288**	*e*P	**P**	**13 29 26.3**	**+0.8**
	comp=Z,20nm,0.4s						
TIXI	**Tiksi**	**50.65**	**354**	P	**P**	**13 29 26.7**	**-0.1**
	comp=Z,3.5nm,0.3s,baz=132,slow=6.7,SNR=13						
TIXI	**Tiksi**	**50.65**	**354**	P	**P**	**13 29 26.2**	**-0.6**
ODAN	**Odare**	**50.66**	**288**	*e*P	**P**	**13 29 28.4**	**+0.5**
	comp=Z,18nm,0.4s						
RAMN	**Ramite**	**51.34**	**288**	*e*P	**P**	**13 29 34.1**	**+1.1**
	comp=Z,13nm,0.5s						
JIRN	**Jiri**	**51.62**	**289**	*e*P	**P**	**13 29 36.1**	**+0.9**
	comp=Z,31nm,0.6s						
GUN	**Gumba**	**51.87**	**289**	*e*P	**P**	**13 29 38.0**	**+1.0**
	comp=Z,25nm,0.4s						
PKIN	**Phulchoki**	**52.33**	**289**	*e*P	**P**	**13 29 40.5**	**+0.2**
	comp=Z,10nm,0.4s						
KKN	**Kakani**	**52.41**	**289**	*e*P	**P**	**13 29 41.2**	**+0.4**
GKN	**Gorkha**	**52.95**	**289**	*e*P	**P**	**13 29 45.2**	**+0.6**
	comp=Z,15nm,0.4s						
STKA	**Stephens Creek**	**53.27**	**182**	P	**P**	**13 29 45.9**	**-0.7**
	comp=Z,3.7nm,0.3s,baz=12,slow=6.5,SNR=17						
STKA	**Stephens Creek**	**53.27**	**182**	P	**P**	**13 29 45.4**	**-1.1**
DANN	**Dangsing**	**53.67**	**290**	*e*P	**P**	**13 29 51.1**	**+1.1**
	comp=Z,88nm,0.3s						
KOLN	**Koldanda**	**53.89**	**289**	*e*P	**P**	**13 29 52.0**	**+0.5**
FORT	**Forrest**	**54.11**	**196**	P	**P**	**13 29 52.1**	**-0.5**
FORT				IAmb	IAmb	13 29 53.1	
	comp=Z,43nm,1.1s						
ZAA0	**Zalesovo Array**	**54.13**	**322**	P	**P**	**13 29 53.2**	**+0.6**
ZALV	**Zalesovo Beam**	**54.13**	**322**	P	**P**	**13 29 53.0**	**+0.4**
	comp=Z,2.1nm,0.4s,baz=112,slow=7.9,SNR=12						
ZALV				PcP	**PcP**	**13 30 52.6**	**-0.2**
	comp=Z,3.2nm,0.3s,baz=118,slow=4.4,SNR=10						
ZALV	**Zalesovo Beam**	**54.13**	**322**	P	**P**	**13 29 53.2**	**+0.6**
PYUN	**Piuthan**	**54.38**	**290**	*e*P	**P**	**13 29 55.4**	**+0.4**
	comp=Z,10nm,0.4s						
MKAR	**Makanchi Array**	**54.60**	**313**	P	**P**	**13 29 57.0**	**+0.9**
	comp=Z,1.6nm,0.4s,baz=86,slow=9.0,SNR=32						
MKAR				PcP	**PcP**	**13 30 55.1**	**+0.3**
	comp=Z,1.0nm,0.4s,baz=74,slow=4.9,SNR=6.3						
MKAR				ScP	**ScP**	**13 34 23.3**	**+0.4**
	comp=Z,1.7nm,0.9s,baz=64,slow=4.2,SNR=5.5						
CHGN	**Chignik**	**54.87**	**36**	P	**P**	**13 29 57.9**	**+0.2**
KURK	**Kurchatov**	**57.39**	**317**	P	**P**	**13 30 15.9**	**+0.4**
NRIK	**Noril'sk**	**57.96**	**340**	P	**P**	**13 30 18.6**	**-0.6**
	comp=Z,3.7nm,0.5s,baz=110,slow=6.6,SNR=8.5						
NRIK				ScP	**ScP**	**13 34 37.5**	**+0.4**
	comp=Z,3.1nm,0.8s,baz=132,slow=5.0,SNR=4.0						
L19K	**White Mountain**	**58.10**	**29**	P	**P**	**13 30 21.4**	**+1.1**
L19K				IAmb	IAmb	13 30 23.4	
	comp=Z,20nm,1.2s						
KDAK	**Kodiak Island**	**58.29**	**35**	P	**P**	**13 30 22.1**	**+0.4**
	comp=Z,5.8nm,0.7s,baz=165,slow=1.5,SNR=13						
J20K	**Nowinta River**	**58.91**	**27**	P	**P**	**13 30 27.6**	**+1.8**
J20K				IAmb	IAmb	13 30 29.4	
	comp=Z,15nm,1.0s						
CAST	**Castle Rocks**	**59.62**	**28**	P	**P**	**13 30 31.7**	**+1.0**
CAST				IAmb	IAmb	13 30 33.0	
	comp=Z,12nm,0.8s						
H21K	**Melozitna Rive**	**59.85**	**26**	P	**P**	**13 30 33.5**	**+1.4**
H21K				IAmb	IAmb	13 30 35.0	
	comp=Z,15nm,0.9s						
I21K	**Tanana**	**60.06**	**26**	P	**P**	**13 30 35.1**	**+1.5**
I21K				IAmb	IAmb	13 30 37.0	
	comp=Z,14nm,1.0s						
TRF	**Thorofare Moun**	**60.42**	**28**	P	**P**	**13 30 36.5**	**+0.3**
TRF				IAmb	IAmb	13 30 38.2	
	comp=Z,14nm,1.0s						
PMR	**Palmer**	**60.63**	**31**	P	**P**	**13 30 37.8**	**+0.4**
PMR				IAmb	IAmb	13 30 38.6	
	comp=Z,13nm,0.9s						
GHO	**Glory Hole Cre**	**60.76**	**30**	P	**P**	**13 30 39.0**	**+0.6**
GHO				IAmb	IAmb	13 30 43.5	
	comp=Z,61nm,1.9s						
I23K	**Minto, Yukon-K**	**61.14**	**26**	P	**P**	**13 30 41.8**	**+1.0**
I23K				IAmb	IAmb	13 30 44.0	
	comp=Z,12nm,1.1s						
H23K	**Yukon River**	**61.20**	**26**	P	**P**	**13 30 42.6**	**+1.4**
H23K				IAmb	IAmb	13 30 47.0	
	comp=Z,13nm,1.2s						
COLD	**Coldfoot**	**61.24**	**24**	P	**P**	**13 30 42.9**	**+1.4**
ILAR	**Eielson Array**	**62.12**	**27**	P	**P**	**13 30 46.9**	**-0.4**
	comp=Z,5.7nm,0.9s,baz=258,slow=5.3,SNR=40						
RIDG	**Independent Ri**	**62.87**	**28**	P	**P**	**13 30 52.6**	**+0.3**
RIDG				IAmb	IAmb	13 30 53.8	
	comp=Z,14nm,1.0s						
DOT	**Dot Lake**	**63.21**	**29**	P	**P**	**13 30 55.2**	**+0.7**
DOT				IAmb	IAmb	13 30 56.2	
	comp=Z,8.3nm,1.0s						
SCRK	**Sand Creek**	**63.27**	**28**	P	**P**	**13 30 55.5**	**+0.5**
SCRK				IAmb	IAmb	13 30 56.6	
	comp=Z,16nm,1.1s						
DAWY	**Dawson**	**65.30**	**28**	P	**P**	**13 31 09.2**	**+1.2**
DAWY				IAmb	IAmb	13 32 57.3	
	comp=Z,22nm,1.8s						

EPYK	Eagle Plains	66.44	26	P	P	13 31 16.0	+0.8
EPYK				IAmb	IAmb	13 31 17.4	
	comp=Z,8.9nm,0.7s						
INK	Inuvik	67.64	24	P	P	13 31 23.0	+0.4
	comp=Z,5.5nm,0.9s,baz=185,slow=4.0,SNR=13						
INK	Inuvik	67.64	24	P	P	13 31 22.8	+0.3
ARU	Arti	69.19	324	P	P	13 31 32.7	+0.4
	comp=Z,1.5nm,0.3s,baz=62,slow=9.7,SNR=6.3						
ABKAR	Akbulak array	69.46	316	P	P	13 31 34.6	+0.4
ABKAR	Akbulak array	69.46	316	P	P	13 31 34.4	+0.3
A36M	Sachs Harbour	70.10	19	P	P	13 31 38.2	+0.7
A36M				IAmb	IAmb	13 31 39.3	
	comp=Z,11nm,0.8s						
DLBC	Dease Lake	70.21	34	P	P	13 31 39.6	+1.0
	comp=Z,3.6nm,0.9s,baz=240,slow=5.9,SNR=3.4						
AKTO	Aktyubinsk	70.48	317	P	P	13 31 40.5	+0.2
	comp=Z,1.2nm,0.4s,baz=86,slow=8.1,SNR=4.9						
BELG	Belogornoye	76.32	321	P	P	13 32 14.7	+0.6
	comp=Z,6.8nm,0.4s,baz=101,slow=2.2,SNR=5.8						
YKA	Yellowknife Ar	76.53	28	P	P	13 32 15.5	+0.4
	comp=Z,1.3nm,0.3s,baz=294,slow=5.4,SNR=15						
WSAR	Wadi Sarin	76.85	290	P	P	13 32 18.6	+1.0
	comp=Z,4.6nm,0.8s,baz=155,slow=6.2,SNR=2.0						
RES	Resolute Bay	77.12	13	P	P	13 32 18.1	0.0
	comp=Z,3.1nm,0.8s,baz=316,slow=7.6,SNR=5.3						
KLMR	Klimovskoe	77.65	331	*e*P	P	13 32 20.7	-0.6
KLMR				AMP		13 32 30.1	
	comp=Z,11nm,1.2s						
ARCES	ARCESS Array B	78.89	341	P	P	13 32 28.6	+0.7
	comp=Z,4.1nm,0.5s,baz=71,slow=8.0,SNR=64						
KBZ	Khabaz	82.28	314	P	P	13 32 47.3	+1.1
	comp=Z,6.0nm,0.9s,baz=63,slow=2.7,SNR=4.5						
FINES	FINESS Array B	83.13	334	P	P	13 32 49.9	-0.4
	comp=Z,3.0nm,0.3s,baz=63,slow=4.6,SNR=61						
NVAR	Mina Array Bea	83.26	51	P	P	13 32 53.4	+1.7
	comp=Z,1.4nm,0.7s,baz=271,slow=5.7,SNR=4.8						
AKASG	Malin Array Be	87.44	324	P	P	13 33 10.6	-1.1
	comp=Z,0.9nm,0.4s,baz=48,slow=5.5,SNR=6.9						
AKASG	Malin Array Be	87.44	324	IAmb	IAmb	13 33 18.4	
	comp=Z,13nm,1.9s						
HFS	Hagfors	88.69	337	P	P	13 33 16.2	-1.1
	comp=Z,1.3nm,0.3s,baz=86,slow=3.7,SNR=15						
NOA	NORSAR Array B	88.91	339	P	P	13 33 18.3	-0.1
	comp=Z,0.6nm,0.5s,baz=45,slow=4.9,SNR=2.4						
SNAA	Sanae	126.30	193	PKPdf	PKPdf	13 39 24.2	0.0
SNAA	Sanae	126.30	193	PKP	PKPdf	13 39 24.2	0.0
	comp=Z,2.5nm,0.8s,baz=61,slow=1.6,SNR=9.5						
VNA2	Neumayer--Watz	127.80	192	PKPdf	PKiKP	13 39 27.3	-0.3
	baz=131,slow=1.8						
VNA3	Neumayer Olymp	127.95	191	PKPdf	PKPdf	13 39 27.4	+0.1
VNA1	Neumayer--Stat	128.19	192	PKPdf	PKiKP	13 39 28.7	+0.3
TORD	Torodi Ar. Bea	128.64	309	PKP	PKPdf	13 39 30.5	+0.3
	comp=Z,0.6nm,0.4s,baz=44,slow=1.1,SNR=8.2						
PLCA	Paso Flores	145.85	132	PKPbc	PKPab	13 40 03.1	-0.2
	comp=Z,15nm,0.7s,baz=248,slow=3.6,SNR=90						
LPAZ	La Paz	150.08	85	PKP	PKPdf	13 40 09.1	-0.3
	comp=Z,1.8nm,0.8s,baz=313,slow=6.6,SNR=4.3						
LPAZ				PKPbc	PKiKP	13 40 15.8	+0.4
	comp=Z,5.4nm,0.5s,baz=305,slow=2.8,SNR=22						
LPAZ				PKPab	PKPab	13 40 21.8	0.0
	comp=Z,3.8nm,0.6s,baz=213,slow=6.0,SNR=8.7						

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*IDC **11** 13:36:29.2±0.9, 20°.19N×122°.25E, h0km, mb3.6/7, mb1 3.8/9, mb1mx3.6/39, mbtmp3.7/9, ML3.6/2, Error ellipse: s-maj=29.1km s-min=18.1km az=74.0*

*MAN **11** 13:36:29.1, 20°.54N×121°.51E, h1km, mb4.6, ML3.4, MS3.3*

*JMA **11** 13:36:31.7±0.5, 20°.55N×122°.10E, h0km*

ISC 11 13:36:33.4±2.0**, 20°.4N**±0°.1×**122°.1E**±0°.1**, h19**km±6km**, n26, σ1s.10**/26**, mb3.5**/7**, 1C, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBP	Basco	0.13	297	⇑*i*P	Pg	13 36 37.2	-0.4
BBP				*i* S	Sg	13 36 40.6	+0.2
HATJ	Hateruma jima	3.99	23	*e*S	Sn	13 38 19.0	-0.8
YOJ	Yonaguni jima	4.15	12	P	Pn	13 37 35.1	-0.7
YOJ				*e*S	Sn	13 38 24.6	+0.9
IRIF	Iriomote-Funau	4.22	21	P	Pn	13 37 37.5	+0.8
IRIF				*e*S	Sn	13 38 25.0	-0.4
JKRS	Kuro-shima	4.23	25	P	Pn	13 37 37.8	+0.9
JKRS				S	Sn	13 38 26.4	+0.7
JIJ	Ishigaki jima	4.39	25	P	Pn	13 37 38.0	-1.2
JIJ				*e*S	Sn	13 38 28.5	-1.3
JISG	Ishigakijimahi	4.66	26	P	Pn	13 37 43.1	+0.3
JISG				S	Sn	13 38 35.4	-1.0
JTJ	Tarama	4.88	29	P	Pn	13 37 47.7	+1.9
JTJ				S	Sn	13 38 41.2	-0.6
JIRB	Irabujima	5.26	32	P	Pn	13 37 52.2	+1.1
JIRB				*e*S	Sn	13 38 51.0	-0.2
JKE	Kume jima 2	7.32	35	P	Pn	13 38 20.3	+0.9
JOW	Kunigami	8.57	40	Pn	Pn	13 38 37.0	+0.6
	1.7nm,0.3s,baz=149,slow=21,SNR=7.7						
JOW	Kunigami	8.57	40	P	Pn	13 38 37.3	+0.8
KSRS	Korea Array	17.75	15	P	P	13 40 41.0	+0.8
	0.2nm,0.3s,baz=198,slow=14,SNR=2.3						
CMAR	Chiang Mai Arr	21.91	269	P	P	13 41 26.1	+0.3
	1.0nm,0.6s,baz=68,slow=8.1,SNR=9.3						
SONM	Songino Array	30.19	339	P	P	13 42 42.5	-0.1
	0.3nm,0.4s,baz=144,slow=9.6,SNR=2.3						
MKAR	Makanchi Array	41.68	319	P	P	13 44 20.7	-0.2
	0.5nm,0.6s,baz=108,slow=10,SNR=4.4						
WRA	Warramunga Arr	41.84	163	P	P	13 44 18.6	-3.7
	2.7nm,0.7s,baz=344,slow=9.5,SNR=24						
H11N1	WAKE ISLAND Hy	42.00	83	T	T	14 29 21.9	
	baz=279,slow=74,SNR=62						
H11N2	WAKE ISLAND Hy	42.00	83	T	T	14 29 23.1	
	baz=279,slow=74,SNR=27						
H11S3	WAKE ISLAND Hy	42.01	85	T	T	14 29 23.4	
	baz=280,slow=75,SNR=349						
H11N3	WAKE ISLAND Hy	42.01	83	T	T	14 29 25.0	
	baz=279,slow=74,SNR=40						
H11S1	WAKE ISLAND Hy	42.02	85	T	T	14 29 24.1	
	baz=280,slow=75,SNR=458						
H11S2	WAKE ISLAND Hy	42.02	85	T	T	14 29 24.7	
	baz=280,slow=75,SNR=348						
ZALV	Zalesovo Beam	43.90	329	P	P	13 44 40.9	+2.3
	0.5nm,0.4s,baz=91,slow=5.8,SNR=4.4						
ASAR	Alice Springs	45.27	165	P	P	13 44 47.6	-2.4
	0.7nm,0.5s,baz=351,slow=7.0,SNR=16						
ILAR	Eielson Array	72.20	27	P	P	13 47 54.5	-2.4
	0.2nm,0.6s,baz=290,slow=6.1,SNR=1.8						

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*IDC **11** 13:54:00.7±1.9, 2°.55N×96°.09E, h0km, mb3.7/5, mb1 3.7/7, mb1mx3.6/32, mbtmp3.6/7, ML3.2/2, MS3.4/2, Ms1 3.4/2, ms1mx2.7/34, Error ellipse: s-maj=59.3km s-min=20.5km az=55.0*

ISC 11 13:54:04.7±1.9**, 2°.6N**±0°.2×**96°.2E**±0°.2**, h25**km**, n15, σ0s.06**/7**, mb3.8**/5**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	2.76	86	Pn	Pn	13 54 47.5	0.0
	2.3nm,0.3s,baz=283,slow=5.1,SNR=9.8						
LEM	Lembang	14.77	129	LR	LR	14 03 58.6	
	comp=Z,130nm,20.4s,baz=218,slow=40						
CMAR	Chiang Mai Arr	15.99	10	Pn	Pn	13 57 48.2	0.0
	0.1nm,0.3s,baz=199,slow=12,SNR=7.0						
H08S2	Diego Garcia H	25.72	247	T	T	14 25 51.0	
	baz=67,slow=76,SNR=55						
H08S3	Diego Garcia H	25.72	247	T	T	14 25 51.6	
	baz=67,slow=76,SNR=69						
H08S1	Diego Carcia H	25.74	247	T	T	14 25 53.3	
	baz=67,slow=76,SNR=17						
H01W3	Cape Leeuwin H	40.92	157	T	T	14 45 05.3	
	baz=332,slow=76,SNR=49						
H01W2	Cape Leeuwin H	40.94	157	T	T	14 45 03.8	
	baz=332,slow=76,SNR=60						
H01W1	Cape Leeuwin H	40.94	157	T	T	14 45 06.5	
	baz=332,slow=76,SNR=51						
WRA	Warramunga Arr	43.65	123	P	P	14 02 07.7	0.0
	0.2nm,0.5s,baz=305,slow=9.3,SNR=4.6						
ASAR	Alice Springs	45.06	128	P	P	14 02 18.9	0.0
	0.3nm,0.6s,baz=300,slow=8.2,SNR=8.5						
MKAR	Makanchi Array	45.65	347	P	P	14 02 23.3	0.0
	1.3nm,0.5s,baz=156,slow=9.0,SNR=16						
SONM	Songino Array	45.92	10	P	P	14 02 25.6	0.0
	0.8nm,0.7s,baz=198,slow=9.9,SNR=5.1						
ZALV	Zalesovo Beam	52.03	352	P	P	14 03 11.9	-0.1
	1.7nm,0.5s,baz=177,slow=7.7,SNR=9.4						
USRK	Ussuriysk Ar.	52.13	32	LR	LR	14 27 33.2	
	comp=Z,38nm,18.4s,baz=334,slow=38						

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*NEIC **11** 13:57:52.4±1.2, 53°.7N±0°.1×167°.6W±0°.1, h163km±6km, Error ellipse: s-maj=16.3km s-min=7.9km az=154.0*

AEIC 11 13:57:53.2±1.2**, 53°.73N**±0°.08×**167°.6W**±0°.1**, h149**km±5km**, ML3.9**/12**, Error ellipse: s-maj=12.0km s-min=7.2km az=151.0, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MGOD	Makushin Gods	0.42	81		Pn	13 58 15.2	+1.2
MGOD					Sn	13 58 31.1	+1.2
OKTU	Okmok Mt. Tuli	0.44	219		Pn	13 58 15.2	+1.0
MCIR	Makushin Cirqu	0.46	61		Pn	13 58 15.0	+0.8
MCIR					Sn	13 58 32.5	+2.2
OKWE	Okmok W’ng Wal	0.47	237		Pn	13 58 15.1	+0.8
OKWE					Sn	13 58 32.5	+2.2
OKWR	Okmok West Rim	0.48	232		Pn	13 58 14.8	+0.4
MREP	Makushin Rep’t	0.50	80		Pn	13 58 15.4	+1.0
MTBL	Makushin Table	0.58	65		Pn	13 58 15.1	+0.3
UNV	Unalaska Valle	0.65	79		Pn	13 58 15.8	+0.6
AKUT	Akutan	1.14	68	Pn	Pn	13 58 18.3	-0.7
SPIA	Saint Paul Isl	3.77	337	Pn	Pn	13 58 49.4	-0.9
Q19K	Cape Douglas,	9.32	50	Pn	Pn	14 00 05.3	+1.3

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*IDC **11** 14:05:39.0±2.3, 2°.37N×95°.89E, h0km, mb3.5/4, mb1 3.5/6, mb1mx3.4/46, mbtmp3.4/6, ML2.8/1, Error ellipse: s-maj=62.1km s-min=26.5km az=51.0*

ISC 11 14:05:42.1±1.9**, 2°.6N**±0°.2×**96°.3E**±0°.2**, h10**km**, n12, σ0s.18**/6**, mb3.6**/4**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	2.61	86	Pn	Pb	14 06 28.9	0.0
	1.3nm,0.3s,baz=334,slow=6.2,SNR=5.9						
CMAR	Chiang Mai Arr	15.95	9	Pn	P	14 09 30.5	+0.1
	baz=197,slow=12,SNR=4.4						
H08S2	Diego Garcia H	25.87	247	T	T	14 37 31.8	
	baz=68,slow=76,SNR=16						
H08S3	Diego Garcia H	25.87	247	T	T	14 37 34.4	
	baz=68,slow=76,SNR=18						
H08S1	Diego Carcia H	25.89	247	T	T	14 37 36.8	
	baz=68,slow=76,SNR=7.9						
H01W3	Cape Leeuwin H	40.88	157	T	T	14 56 47.7	
	baz=332,slow=76,SNR=14						
H01W2	Cape Leeuwin H	40.90	157	T	T	14 56 48.8	
	baz=332,slow=76,SNR=11						
H01W1	Cape Leeuwin H	40.90	157	T	T	14 56 48.8	
	baz=332,slow=76,SNR=15						
ASAR	Alice Springs	44.95	128	P	P	14 13 57.8	+0.1
	0.1nm,0.6s,baz=302,slow=8.2,SNR=4.4						
MKAR	Makanchi Array	45.66	347	P	P	14 14 03.0	0.0
	0.6nm,0.5s,baz=159,slow=9.2,SNR=7.5						
SONM	Songino Array	45.87	9	P	P	14 14 04.8	+0.1
	0.2nm,0.4s,baz=188,slow=8.7,SNR=2.6						
ZALV	Zalesovo Beam	52.03	351	P	P	14 14 51.4	-0.3
	0.8nm,0.5s,baz=147,slow=8.5,SNR=4.0						

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*IDC **11** 14:08:51.9±5.4, 5°.41S×151°.54E, h83km±46km, mb3.6/6, mb1 3.9/7, mb1mx3.6/33, mbtmp4.0/7, ML1.9/1, Error ellipse: s-maj=48.7km s-min=27.4km az=112.0*

ISC 11 14:08:49.0±1.0**, 5°.4S**±0°.2×**151°.7E**±0°.2**, h57**km**, n8, σ0s.98**/9**, mb3.9**/6**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	6.04	228	P	Pn	14 10 16.6	+0.9
	2.1nm,0.3s,baz=37,slow=9.4,SNR=5.8						
PMG				S	Sn	14 11 23.9	+0.4
	2.6nm,0.3s,baz=151,slow=19,SNR=6.4						
WRA	Warramunga Arr	22.26	228	P	P	14 13 40.0	-1.4
	8.3nm,0.7s,baz=52,slow=9.9,SNR=76						
ASAR	Alice Springs	25.00	221	P	P	14 14 06.8	-1.0
	7.4nm,0.7s,baz=57,slow=8.6,SNR=97						
SONM	Songino Array	66.20	328	P	P	14 19 31.2	+0.2
	0.3nm,0.3s,baz=140,slow=6.1,SNR=2.5						
VNDA	Vanda	72.33	178	P	P	14 20 08.2	0.0
	0.5nm,0.7s,baz=318,slow=4.9,SNR=2.6						
ILAR	Eielson Array	83.08	22	P	P	14 21 08.1	-0.1
	0.3nm,0.7s,baz=253,slow=5.7,SNR=4.4						
NVAR	Mina Array Bea	93.29	52	P	P	14 21 59.0	+0.8
	0.6nm,0.8s,baz=284,slow=7.5,SNR=4.0						
TORD	Torodi Ar. Bea	149.41	287	PKPbc	PKPbc	14 28 31.8	-1.0
	0.9nm,0.6s,baz=77,slow=2.4,SNR=7.6						

IDC 11 14:28:14.1±2.8**, 6°.37N×93°.99E, h0**km**, mb3.4**/4**, mb1 3.5**/5**, mb1mx3.4**/35**, mbtmp3.4**/5**, ML4.2**/1**, MS3.1**/6**, Ms1 3.2**/6**, ms1mx2.9**/28**, Error ellipse: s-maj=95.2km s-min=31.7km az=66.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	6.06	126	LR	LR	14 32 23.4	
	comp=Z,97nm,18.8s,baz=289,slow=41						
CMAR	Chiang Mai Arr	12.95	21	Pn	Pn	14 31 21.4	+1.9
	0.4nm,0.3s,baz=211,slow=16,SNR=2.6						
CMAR				LR	LR	14 35 57.0	
	comp=Z,54nm,18.9s,baz=242,slow=36						
PALK	Pallekele	13.22	275	LR	LR	14 34 57.9	
	comp=Z,27nm,19.3s,baz=188,slow=30						
MKAR	Makanchi Array	41.51	348	P	P	14 36 02.2	-0.9
	0.4nm,0.5s,baz=167,slow=7.1,SNR=3.2						
SONM	Songino Array	42.65	12	P	P	14 36 12.1	-0.5
	0.5nm,0.8s,baz=194,slow=5.5,SNR=1.8						
TLY	Talaya	45.87	8	LR	LR	14 57 32.0	
	comp=Z,38nm,18.1s,baz=178,slow=38						
WRA	Warramunga Arr	47.53	124	LR	LR	14 58 13.8	
	comp=Z,39nm,19.2s,baz=70,slow=38						
ZALV	Zalesovo Beam	48.02	353	P	P	14 36 55.5	+0.6
	0.9nm,0.7s,baz=191,slow=5.9,SNR=2.4						
ASAR	Alice Springs	49.08	129	P	P	14 37 03.5	-0.2
	0.3nm,0.9s,baz=316,slow=7.0,SNR=3.0						
ESDC	Sonseca Array	92.06	310	LR	LR	15 26 20.8	
	comp=Z,19nm,19.6s,baz=275,slow=38						

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*IDC **11** 14:40:58.5±3.9, 36°.92N×72°.67E, h94km±35km, mb3.6/16, mb1 3.7/20, mb1mx3.5/49, mbtmp3.9/20, MS3.2/15, Ms1 3.2/15, ms1mx3.0/49, Error ellipse: s-maj=24.9km s-min=14.0km az=18.0*

ISC 11 14:40:58.2±0.6**, 36°.86N**±0°.06×**72°.62E**±0°.08**, h100**km**, n43, σ1s.78**/32**, mb3.8**/16**, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	Cherat	3.08	191	P	Pn	14 41 41.7	-3.5
CEP				S	Sn	14 42 23.0	+1.6
CHCP	Chirah Chowk	3.24	170	P	Pn	14 41 45.2	-2.0
THW	Thamme Wali	4.12	190	P	Pn	14 41 54.6	-4.4
AML	Almayashu	5.33	9	P	Pn	14 42 15.6	-0.2
	SNR=16						
UCH	Uchtor	5.56	15	P	Pn	14 42 19.0	+0.1
	SNR=18						
EKS2	Erkin-Say	5.87	8	P	Pn	14 42 23.9	+1.1
	SNR=9.7						
AAK	Ala-Archa	5.95	13	P	Pn	14 42 23.4	-0.5
	1.1nm,0.3s,baz=162,slow=7.3,SNR=14						
AAK				S	Sn	14 43 31.3	+0.5
	0.2nm,0.3s,baz=286,slow=11,SNR=1.4						
AAK				LR	LR	14 45 04.8	
	comp=Z,49nm,21.5s,baz=206,slow=42						
ULHL	Ulahol	6.07	26	P	Pn	14 42 24.6	-0.9
	SNR=13						
TKM2	Tokmak 2	6.47	20	P	Pn	14 42 30.6	-0.5
	SNR=9.1						
GEYT	Alibeck	11.58	280	P	Pn	14 43 36.4	-4.0
	0.6nm,0.3s,baz=104,slow=11,SNR=5.1						
GEYT				LR	LR	14 49 20.4	
	comp=Z,124nm,18.5s,baz=235,slow=43						
MKAR	Makanchi Array	12.26	33	P	Pn	14 43 45.8	-3.5
	0.1nm,0.3s,baz=215,slow=15,SNR=11						
PYUN	Piuthan	12.36	132	*e*P	Pn	14 43 42.6	-8.3
	17nm,0.4s						
PYUN				*e*S	Sn	14 45 53.9	-13
DANN	Dangsing	12.65	129	*e*P	Pn	14 43 46.2	-8.6
	14nm,0.4s						
KOLN	Koldanda	12.97	131	*e*P	Pn	14 43 50.2	-8.7
GKN	Gorkha	13.45	128	*e*P	Pn	14 43 55.5	-10
	11nm,0.4s						
KKN	Kakani	14.00	127	*e*P	Pn	14 44 02.7	-10
	15nm,0.6s						
PKIN	Phulchoki	14.22	127	*e*P	Pn	14 44 05.7	-10
KURBB	Kurchatov Arra	14.40	15	P	Pn	14 44 13.8	-3.4
	0.0nm,0.3s,baz=205,slow=12,SNR=4.1						
JIRN	Jiri	14.68	125	*e*P	Pn	14 44 11.8	-9.5
	19nm,0.6s						
RAMN	Ramite	15.43	126	*e*P	Pn	14 44 20.9	-10
	5.5nm,0.3s						
BVAR	Borovoye Array	16.24	355	P	Pn	14 44 38.3	-2.0
	0.1nm,0.3s,baz=190,slow=23,SNR=3.1						
AKTO	Aktyubinsk	17.15	327	P	Pn	14 44 50.8	-0.7
	0.6nm,0.3s,baz=126,slow=15,SNR=10						
AKTO				LR	LR	14 52 03.0	
	comp=Z,91nm,18.0s,baz=140,slow=39						
ZALV	Zalesovo Beam	19.07	22	P	P	14 45 11.8	-0.7
	0.3nm,0.3s,baz=224,slow=10,SNR=20						
ARU	Arti	21.74	339	P	P	14 45 41.0	-0.3
	0.6nm,0.4s,baz=224,slow=21,SNR=1.9						
GNI	Garni	22.02	287	P	P	14 45 46.0	+1.4
	9.2nm,0.8s,baz=47,slow=16,SNR=1.3						
GNI				LR	LR	14 57 18.7	
	comp=Z,17nm,19.7s,baz=58,slow=44						
BELG	Belogornoye	23.44	319	P	P	14 46 00.3	+1.9
	6.7nm,0.8s,baz=287,slow=22,SNR=2.4						
BELG				LR	LR	14 57 21.4	
	comp=Z,32nm,18.2s,baz=158,slow=42						
KBZ	Khabaz	23.60	296	P	P	14 46 02.1	+2.2
	4.1nm,1.0s,baz=96,slow=17,SNR=2.3						
KBZ				LR	LR	14 57 14.4	
	comp=Z,53nm,20.5s,baz=88,slow=41						
KIRV	Kirov	26.50	332	LR	LR	14 56 58.8	
	comp=Z,80nm,19.8s,baz=143,slow=36						
SONM	Songino Array	27.06	55	P	P	14 46 31.0	-0.3
	0.2nm,0.4s,baz=323,slow=49,SNR=2.8						
CMAR	Chiang Mai Arr	29.51	121	P	P	14 46 54.1	+0.9
	0.7nm,0.3s,baz=310,slow=12,SNR=0.9						
CMAR				LR	LR	15 00 46.6	
	comp=Z,21nm,20.9s,baz=210,slow=40						
PALK	Pallekele	30.36	164	LR	LR	14 59 28.8	
	comp=Z,44nm,20.1s,baz=99,slow=36						
BRTR	Keskin Array B	30.56	287	P	P	14 47 03.4	+0.9
	1.5nm,0.8s,baz=82,slow=10,SNR=2.5						
BRTR				LR	LR	15 04 07.6	
	comp=Z,38nm,18.0s,baz=45,slow=45						
AKASG	Malin Array Be	33.74	308	P	P	14 47 30.3	+0.4
	0.7nm,0.5s,baz=97,slow=23,SNR=1.9						
AKASG				LR	LR	15 02 36.5	
	comp=Z,32nm,18.3s,baz=335,slow=38						
FINES	FINESS Array B	37.92	325	P	P	14 48 04.3	-1.1
	2.0nm,0.9s,baz=111,slow=11,SNR=2.2						
ARCES	ARCESS Array B	41.32	337	P	P	14 48 35.4	+1.9
	5.1nm,1.1s,baz=106,slow=6.7,SNR=1.5						
ARCES				LR	LR	15 06 18.4	
	comp=Z,81nm,19.0s,baz=300,slow=37						
KSRS	Korea Array	43.53	72	LR	LR	15 09 14.8	
	comp=Z,28nm,21.5s,baz=30,slow=39						
NOA	NORSAR Array B	44.88	323	P	P	14 49 03.3	+1.0
	0.2nm,0.4s,baz=91,slow=7.1,SNR=1.7						
NOA				LR	LR	15 09 05.8	
	comp=Z,31nm,18.3s,baz=285,slow=38						
ESDC	Sonseca Array	58.44	298	P	P	14 50 45.8	+2.2
	0.4nm,0.3s,baz=59,slow=7.7,SNR=5.1						
TORD	Torodi Ar. Bea	67.02	269	P	P	14 51 40.8	0.0
	0.7nm,0.5s,baz=34,slow=5.5,SNR=6.0						
ILAR	Eielson Array	74.08	16	P	P	14 52 23.2	+0.3
	0.5nm,0.8s,baz=319,slow=4.0,SNR=4.6						
WRA	Warramunga Arr	81.09	123	P	P	14 53 03.8	+1.2
	1.7nm,0.8s,baz=321,slow=4.8,SNR=14						
ASAR	Alice Springs	83.40	126	P	P	14 53 15.8	+1.2
	0.7nm,0.8s,baz=308,slow=5.1,SNR=8.2						
PMG	Port Moresby	83.46	107	LR	LR	15 33 52.3	
	comp=Z,67nm,20.1s,baz=25,slow=38						

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*TUL **11** 14:44:22.8±0.7, 36°.70N±0°.01×98°.26W±0°.02, h6km±4km, ML2.7, ML2.5/17(NEIC), Error ellipse: s-maj=2.0km s-min=1.8km az=94.0*

NEIC 11 14:44:23.1±0.8**, 36°.685N**±0°.008×**98°.26W**±0°.02**, h5**km±1km**, Error ellipse: s-maj=2.9km s-min=2.4km az=70.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK032	Salt Plains WL	0.12	19		Pg	14 44 25.8	+0.1
OK032				Sg	Sg	14 44 28.0	+0.6
OK032				IAML		14 44 28.1	
	3µm,0.2s						
OK032				IAML		14 44 28.3	
	2µm,0.1s						
CROK	Carrier	0.29	129	Pg	Pg	14 44 28.8	0.0
CROK				Sg	Sg	14 44 33.0	+0.5
CROK				IAML		14 44 36.0	
	comp=E,1µm,0.3s						
KAN14	Manchester OK	0.36	41	Pg	Pg	14 44 30.1	-0.1
KAN14				Sg	Sg	14 44 35.2	+0.3
GC02	Grant County #	0.36	63		Pg	14 44 30.0	-0.1
GC02				Sg	Sg	14 44 35.4	+0.5
KAN10	Anthony SW Sta	0.46	17	Pg	Pg	14 44 31.9	-0.1
KAN10				Sg	Sg	14 44 38.2	+0.3
KAN10				IAML		14 44 38.5	
	comp=E,225nm,0.6s						
KAN16	Harper SW Stat	0.56	16	Pg	Pg	14 44 33.8	-0.1
KAN01	Argonia South	0.62	41	Pg	Pg	14 44 34.8	-0.2
KAN01				IAML		14 44 43.4	
	comp=N,224nm,0.4s						
KAN01				IAML		14 44 43.9	
	comp=E,188nm,0.2s						
U32A	Winter Ranch,	0.67	243	Pg	Pg	14 44 35.9	-0.1
U32A				IAML		14 44 55.8	
	comp=N,156nm,0.4s						
BLOK	Blackwell	0.84	85	Pg	Pg	14 44 38.8	-0.5
BLOK				IAML		14 44 51.5	
	comp=N,221nm,0.2s						
BLOK				IAML		14 44 56.9	
	comp=E,222nm,0.2s						
QUOK	Quay	1.35	112	Pn	Pn	14 44 47.8	-0.9
T35A	Sooner Cattle	1.42	80	Pn	Pn	14 44 48.2	-1.4

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*TUL **11** 14:54:55.9±0.5, 35°.67N±0°.02×97°.40W±0°.03, h6km±6km, ML3.4, mb_Lg3.2/79(NEIC), Error ellipse: s-maj=3.7km s-min=1.4km az=131.0*

*NEIC **11** 14:54:56.3±0.6, 35°.672N±0°.010×97°.39W±0°.02, h5km±2km, Error ellipse: s-maj=3.2km s-min=2.3km az=124.0*

*ANF **11** 14:54:58.4±1.0, 35°.65N×97°.38W, h24km±11km, ML3.7/8, Error ellipse: s-maj=6.5km s-min=4.9km az=157.0*

ISC 11 14:54:55.7±0.8**, 35°.71N**±0°.02×**97°.44W**±0°.02**, h12**km±5km**, n92, σ1s.11**/74**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK029	Liberty Lake	0.08	353		Pg	14 54 58.8	+0.4
OK009	Oakdale Elemen	0.13	173		Pg	14 54 58.2	-0.8
BCOK	Bluff Creek, N	0.15	247	Pg	Pg	14 54 59.4	+0.2
BCOK				Sg	Sg	14 55 02.0	+0.4
OK001	Jones High Sch	0.20	141	Pg	Pg	14 54 59.1	-0.9
OK001				Sg	Sg	14 55 01.8	-1.1
OK005	Luther M Schoo	0.21	106		Pg	14 54 59.6	-0.7
OKCFA	Oklahoma City	0.30	181	Pg	Pg	14 55 01.3	-0.5
OKCFA				Sg	Sg	14 55 05.4	-0.4
OKCFA	Oklahoma City	0.30	181	P	Pg	14 55 01.4	-0.5
	baz=9.2,SNR=34						
OKCFA				S	Sg	14 55 05.5	-0.4
	baz=9.2						
OKCSW	OKLAHOMA CITY	0.31	179		Pg	14 55 01.0	-1.0
FNO	Franklin	0.46	176	Pg	Pg	14 55 04.1	-0.6
OK031	S. Brethren Rd	0.55	64	Pg	Pg	14 55 06.2	-0.2
OK030	Cody Creek RV	0.58	68		Pg	14 55 06.8	-0.2
OK030				Sg	Sg	14 55 13.8	-0.8
QUOK	Quay	0.75	52	Pg	Pg	14 55 10.0	-0.2
CROK	Carrier	0.90	331	Pg	Pn	14 55 13.8	-0.6
BLOK	Blackwell	1.06	10		Pb	14 55 16.1	+0.1
BLOK				Sg	Sb	14 55 30.9	+1.0
X34A	Smith Ranch, M	1.16	196	Pg	Pb	14 55 17.2	-0.5
GC02	Grant County #	1.18	344		Pn	14 55 18.5	+0.3
OK032	Salt Plains WL	1.25	331		Pn	14 55 19.8	+0.6
KAN13	South Haven SW	1.30	359		Pb	14 55 20.5	+0.4
KAN14	Manchester OK	1.31	341		Pb	14 55 20.8	+0.5
KAN17	Caldwell West	1.35	349		Pb	14 55 21.4	+0.4
TUL1	Leonard	1.36	81	P	Pn	14 55 19.6	-0.9
	baz=260						
TUL1				S	Sg	14 55 38.0	-1.4
	baz=260						
TUL1	Leonard	1.36	81		Pn	14 55 19.6	-0.9
TUL1	Leonard	1.36	81	P	Pn	14 55 19.7	-0.8
	baz=260						
TUL1				S	Sg	14 55 38.0	-1.4
	baz=260						

T35A	**Sooner Cattle**	**1.42**	**32**	Pg	**Pn**	**14 55 21.7**	**+0.3**
T35B	**Sooner Cattle**	**1.42**	**32**	P	**Pn**	**14 55 21.9**	**+0.5**
	baz=210,SNR=62						
T35B				S	**Sn**	**14 55 41.4**	**+1.4**
	baz=210						
KAN09	**Caldwell North**	**1.43**	**354**		**Pg**	**14 55 22.6**	**-0.5**
KAN09				IAmb_Lg		14 55 43.6	
	comp=Z,168nm,1.0s						
U32A	**Winter Ranch,**	**1.43**	**298**		**Pg**	**14 55 22.5**	**-0.6**
U32A	**Winter Ranch,**	**1.43**	**298**	P	**Pg**	**14 55 22.7**	**-0.4**
	baz=118,SNR=11						
U32A				S	**Sn**	**14 55 42.8**	**+2.5**
	baz=118						
KAN05	**Bluff City Nor**	**1.43**	**346**		**Pg**	**14 55 22.7**	**-0.6**
KAN05				IAmb_Lg		14 55 43.4	
	comp=Z,163nm,0.8s						
KAN01	**Argonia South**	**1.46**	**350**		**Pg**	**14 55 22.9**	**-0.9**
WMOK	**Wichita Mounta**	**1.47**	**229**	P	**Pg**	**14 55 22.4**	**-1.5**
	baz=50						
WMOK				S	**Sn**	**14 55 41.9**	**+0.7**
	baz=50						
WMOK	**Wichita Mounta**	**1.47**	**229**		**Pb**	**14 55 22.1**	**-0.9**
WMOK	**Wichita Mounta**	**1.47**	**229**	P	**Pg**	**14 55 22.4**	**-1.5**
	baz=50,SNR=134						
WMOK				S	**Sn**	**14 55 41.8**	**+0.6**
	baz=50						
KAN10	**Anthony SW Sta**	**1.50**	**340**		**Pg**	**14 55 23.6**	**-1.0**
KS20	**Mayfield South**	**1.52**	**357**		**Pg**	**14 55 24.0**	**-0.9**
KAN06	**Argonia West S**	**1.57**	**348**		**Pb**	**14 55 24.4**	**-0.3**
KAN08	**Anthony NE Sta**	**1.57**	**344**		**Pg**	**14 55 24.9**	**-1.0**
KAN08				IAmb_Lg		14 55 51.4	
	comp=Z,197nm,0.7s						
KAN16	**Harper SW Stat**	**1.59**	**342**		**Pb**	**14 55 25.0**	**-0.1**
KAN12	**Harper NE Stat**	**1.64**	**344**		**Pb**	**14 55 25.6**	**-0.4**
LOOK	**Love County**	**1.73**	**173**	Pn	**Pn**	**14 55 25.4**	**-0.4**
LOOK				IAmb_Lg		14 55 52.8	
	comp=Z,98nm,0.9s						
X37A	**Clayton**	**2.04**	**123**		**Pn**	**14 55 29.9**	**0.0**
X37A	**Clayton**	**2.04**	**123**	P	**Pn**	**14 55 30.6**	**+0.7**
	baz=304,SNR=55						
X37A				S	**Sb**	**14 55 57.3**	**-0.7**
	baz=304						
Z35A	**Perchaven, San**	**2.38**	**176**	P	**Pn**	**14 55 35.8**	**+1.2**
	baz=357,SNR=19						
W39A	**Magazine**	**3.03**	**99**	P	**Pn**	**14 55 44.2**	**+0.6**
	baz=280						
W39A	**Magazine**	**3.03**	**99**	IAmb_Lg		14 56 37.5	
	comp=Z,51nm,0.7s						
W39A	**Magazine**	**3.03**	**99**	P	**Pn**	**14 55 44.0**	**+0.4**
	baz=280						
Z38A	**Mt. Pleasant**	**3.18**	**140**	IAmb_Lg		14 56 38.4	
	comp=Z,52nm,0.8s						
MIAR	**Mount Ida**	**3.38**	**109**	P	**Pn**	**14 55 50.0**	**+1.6**
	baz=291						
MIAR				S	**Sn**	**14 56 29.8**	**+1.4**
	baz=291						
MIAR	**Mount Ida**	**3.38**	**109**	IAmb_Lg		14 56 47.3	
	comp=Z,55nm,1.0s						
MIAR	**Mount Ida**	**3.38**	**109**	P	**Pn**	**14 55 49.6**	**+1.2**
	baz=291,SNR=24						
MIAR				S	**Sn**	**14 56 29.8**	**+1.4**
	baz=291						
KSU1	**Kansas State U**	**3.44**	**11**	Pb	**Pg**	**14 55 59.3**	**-2.5**
	baz=191						
KSU1	**Kansas State U**	**3.44**	**11**	IAmb_Lg		14 56 48.2	
	comp=Z,47nm,0.7s						
AMTX	**Amarillo**	**3.56**	**258**	IAmb_Lg		14 56 53.9	
	comp=Z,52nm,1.1s						
CBKS	**Cedar Bluff**	**3.59**	**330**	Pb	**Pg**	**14 56 02.2**	**-2.4**
	baz=149						
CBKS				Sb	**Sg**	**14 56 50.6**	**-0.6**
	baz=149						
CBKS	**Cedar Bluff**	**3.59**	**330**	IAmb_Lg		14 56 52.9	
	comp=Z,61nm,0.9s						
WHTX	**Lake Whitney,**	**3.71**	**180**	P	**Pn**	**14 55 54.0**	**+1.0**
	baz=0.7						
WHTX				Sb	**Sb**	**14 56 48.5**	**+2.2**
	baz=0.7						
U40A	**Yellville**	**3.77**	**79**	IAmb_Lg		14 56 55.0	
	comp=Z,55nm,0.8s						
U40A	**Yellville**	**3.77**	**79**	P	**Pn**	**14 55 54.5**	**+0.7**
	baz=261,SNR=7.7						
U40A				P	**Pn**	**14 55 54.5**	**+0.7**
	baz=261,SNR=7.7						
S39A	**Bolivar**	**3.85**	**58**	IAmb_Lg		14 56 58.7	
	comp=Z,54nm,0.8s						
S39A	**Bolivar**	**3.85**	**58**	P	**Pn**	**14 55 55.4**	**+0.5**
	baz=240						
WHAR	**Wooly Hollow**	**4.23**	**94**	IAmb_Lg		14 57 09.3	
	comp=Z,35nm,0.8s						
W41B	**Gary Mavity, V**	**4.28**	**96**	P	**Pn**	**14 56 01.5**	**+0.9**
	baz=278						
W41B	**Gary Mavity, V**	**4.28**	**96**	P	**Pn**	**14 56 01.3**	**+0.6**
	baz=278,SNR=23						
FCAR	**Ozark Folk Cen**	**4.33**	**86**	IAmb_Lg		14 57 15.6	
	comp=Z,45nm,0.8s						
MGMO	**Mountain Grove**	**4.41**	**69**	IAmb_Lg		14 57 21.1	
	comp=Z,48nm,0.7s						
435B	**Jarrell**	**4.92**	**181**	IAmb_Lg		14 57 40.7	
	comp=Z,40nm,0.7s						
P38A	**Dawn**	**4.99**	**37**	IAmb_Lg		14 57 42.3	
	comp=Z,39nm,0.7s						
LCAR	**Lake Charles**	**5.12**	**84**	IAmb_Lg		14 57 45.7	
	comp=Z,32nm,0.8s						
KSCO	**Kaye Shedlock’**	**5.28**	**310**	IAmb_Lg		14 57 59.1	
	comp=Z,46nm,0.8s						
T42A	**Van Buren**	**5.29**	**74**	IAmb_Lg		14 57 50.6	
	comp=Z,44nm,0.8s						
CCM	**Cathedral Cave**	**5.49**	**63**	IAmb_Lg		14 57 49.2	
	comp=Z,44nm,0.7s						
HBAR	**Harrisburg**	**5.53**	**90**	IAmb_Lg		14 57 52.8	
	comp=Z,70nm,0.8s						
BGNE	**Belgrade**	**5.71**	**355**	IAmb_Lg		14 58 03.7	
	comp=Z,33nm,0.7s						
PBMO	**Poplar Bluff**	**5.77**	**77**	IAmb_Lg		14 57 59.2	
	comp=Z,66nm,0.8s						
T25A	**Trinidad**	**5.79**	**286**	Sb	**Sg**	**14 57 58.5**	**-3.3**
	baz=102						
T25A	**Trinidad**	**5.79**	**286**	IAmb_Lg		14 58 03.7	
	comp=Z,38nm,0.7s						
143A	**Socs Landing,**	**5.83**	**119**	IAmb_Lg		14 58 04.3	
	comp=Z,31nm,1.0s						
FVM	**French Village**	**6.07**	**66**	IAmb_Lg		14 58 07.6	
	comp=Z,53nm,0.9s						
PARMO	**Parma**	**6.29**	**79**	IAmb_Lg		14 58 18.6	
	comp=Z,61nm,0.8s						
OGNE	**Ogallala**	**6.35**	**327**	IAmb_Lg		14 58 25.2	
	comp=Z,56nm,0.8s						
SLM	**Saint Louis**	**6.45**	**61**	IAmb_Lg		14 58 20.5	
	comp=Z,42nm,0.8s						
SDCO	**Great Sand Dun**	**6.78**	**290**	P	**Pn**	**14 56 38.3**	**+2.9**
	baz=105						
S44A	**Carbondale**	**6.87**	**71**	IAmb_Lg		14 58 32.5	
	comp=Z,36nm,0.7s						
K31A	**O'Neill**	**6.97**	**352**	IAmb_Lg		14 58 56.0	
	comp=Z,43nm,0.9s						
SCIA	**State Center**	**7.01**	**27**	IAmb_Lg		14 58 46.4	
	comp=Z,40nm,0.9s						
T45A	**Paducah**	**7.22**	**77**	IAmb_Lg		14 59 04.6	
	comp=Z,45nm,0.7s						
ISCO	**Idaho Springs**	**7.65**	**305**	IAmb_Lg		14 59 08.2	
	comp=Z,25nm,1.2s						
WVT	**Waverly**	**7.81**	**84**	IAmb_Lg		14 59 14.9	
	comp=Z,16nm,1.1s						
K38A	**Parkersburg**	**7.81**	**26**	IAmb_Lg		14 59 14.2	
	comp=Z,35nm,0.9s						
L40A	**Anamosa**	**7.98**	**36**	IAmb_Lg		14 59 15.4	
	comp=Z,36nm,0.8s						
JFWS	**Jewell Farm**	**9.10**	**36**	IAmb_Lg		14 59 56.2	
	comp=Z,37nm,0.9s						
K22A	**Casper**	**9.88**	**317**	IAmb_Lg		15 00 37.7	
	comp=Z,21nm,1.1s						

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*NEIC **11** 15:06:15.8±2.0, 18.°87N±0.°08×145.°6E±0.°1, h214^{km}±8^{km}, mb4.4/39, Error ellipse: s-maj=19.3km s-min=11.3km az=81.0*

*IDC **11** 15:06:16.8±1.9, 18.°79N×145.°63E, h229^{km}±18^{km}, mb3.7/17, mb1 3.8/20, mb1mx3.6/47, mbtmp4.3/20, Error ellipse: s-maj=17.1km s-min=9.0km az=87.0*

ISC 11 15:06:15.3±0.5**, 18.°87N**±0.°05×**145.°53E**±0.°09**, h214**^{km}**, n93,** σ1.^{s}16/91**, mb4.3**/35**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.29**	**187**	P	**Pn**	**15 07 34.1**	**+0.3**
	27nm,0.3s,baz=338,slow=4.3,SNR=28						
GUMO				S	**S**	**15 08 34.0**	**-1.6**
	20nm,0.3s,baz=18,slow=19,SNR=2.0						
GUMO	**Guam**	**5.29**	**187**		**Pn**	**15 07 33.7**	**-0.1**
GUMO	**Guam**	**5.29**	**187**	P	**Pn**	**15 07 34.7**	**+0.9**
JCJ	**Chichijima**	**8.75**	**340**	P	**Pn**	**15 08 17.2**	**-1.0**
	9.3nm,0.3s,baz=347,slow=18,SNR=15						
JCJ				S	**S**	**15 09 53.1**	**-3.7**
	5.8nm,0.3s,baz=270,slow=20,SNR=1.7						
PATS	**Pohnpei**	**17.25**	**132**	P	**Pn**	**15 10 04.2**	**+0.2**
JOW	**Kunigami**	**17.76**	**300**	P	**Pn**	**15 10 09.7**	**-0.2**
	4.6nm,0.3s,baz=132,slow=10,SNR=13						
JOW	**Kunigami**	**17.76**	**300**	P	**Pn**	**15 10 09.8**	**-0.1**
JGF	**Kuroka**	**18.17**	**338**	P	**Pn**	**15 10 13.5**	**-1.1**
JGF				IAmb	IAmb	15 10 15.8	
	comp=Z,7.9nm,0.7s						
MJAR	**Matsushiro Arr**	**18.75**	**341**	P	**P**	**15 10 19.3**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=102,slow=12,SNR=6.7						
MJAR	**Matsushiro Arr**	**18.75**	**341**	P	**P**	**15 10 18.7**	**+0.4**
MAJO	**Matsushiro**	**18.75**	**341**	P	**P**	**15 10 19.3**	**+1.0**
MAJO				IAmb	IAmb	15 10 25.4	
	comp=Z,7.2nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**20.04**	**88**	T	T	15 31 56.4	
	baz=275,slow=74						
H11S1	**WAKE ISLAND Hy**	**20.05**	**88**	T	T	15 31 43.5	
	baz=275,slow=74						
H11S2	**WAKE ISLAND Hy**	**20.06**	**88**	T	T	15 31 44.6	
	baz=275,slow=74						
H11N1	**WAKE ISLAND Hy**	**20.18**	**84**	T	T	15 32 13.7	
	baz=269						
H11N2	**WAKE ISLAND Hy**	**20.18**	**84**	T	T	15 32 19.0	
	baz=269						
H11N3	**WAKE ISLAND Hy**	**20.20**	**84**	T	T	15 32 21.3	
	baz=269						
MANU	**Manus Island**	**20.86**	**175**	P	**P**	**15 10 40.2**	**-0.8**
JAY	**Jayapura**	**21.77**	**193**	P	**P**	**15 10 49.9**	**-0.5**
	comp=Z,9.0nm,0.7s,baz=325,slow=2.0,SNR=6.1						
RABL	**Rabaul**	**23.82**	**163**	P	**P**	**15 11 08.4**	**-0.8**
KSRS	**Korea Array**	**24.09**	**324**	P	**P**	**15 11 12.2**	**+0.9**
	comp=Z,1.5nm,0.8s,baz=147,slow=8.5,SNR=4.0						
SIJI	**Sorong**	**24.11**	**217**	P	**P**	**15 11 10.4**	**-1.3**
	comp=Z,7.1nm,0.8s,baz=5.7,slow=17,SNR=7.4						
FAKI	**Fak Fak**	**25.29**	**212**	P	**P**	**15 11 22.3**	**-0.1**
FAKI				IAmb	IAmb	15 11 29.1	
	comp=Z,15nm,1.1s						
FAKI	**Fak Fak**	**25.29**	**212**	P	**P**	**15 11 22.9**	**+0.5**
ASAJ	**Asahikawa**	**25.30**	**355**	P	**P**	**15 11 24.2**	**+2.1**
	comp=Z,4.8nm,0.8s,baz=163,slow=17,SNR=1.8						
TOLI2	**Tolitoli**	**30.01**	**237**	P	**P**	**15 12 04.6**	**+0.3**
TOLI2				IAmb	IAmb	15 12 05.1	
	comp=Z,4.4nm,0.6s						
TOLI2	**Tolitoli**	**30.01**	**237**	P	**P**	**15 12 05.1**	**+0.8**
COEN	**Coen**	**32.70**	**184**	P	**P**	**15 12 27.4**	**-0.5**
COEN				IAmb	IAmb	15 12 27.8	
	comp=Z,6.5nm,0.6s						
MTN	**Manton Dam**	**34.56**	**205**	P	**P**	**15 12 43.4**	**-0.5**
MTN				IAmb	IAmb	15 12 45.8	
	comp=Z,17nm,0.9s						
KAPI	**Kappang**	**34.76**	**229**	P	**P**	**15 12 46.0**	**+0.4**
	comp=Z,5.3nm,0.5s,baz=79,slow=19,SNR=5.0						
KAPI	**Kappang**	**34.76**	**229**	P	**P**	**15 12 44.9**	**-0.8**
KAPI				IAmb	IAmb	15 12 46.9	
	comp=Z,7.5nm,0.7s						
SOEI	**Soe**	**35.34**	**218**	P	**P**	**15 12 50.9**	**+0.2**
BATI	**Baumata**	**36.05**	**219**	P	**P**	**15 12 56.0**	**-0.7**
	comp=Z,21nm,0.4s,baz=36,slow=2.7,SNR=5.9						
KNRA	**Kununurra**	**38.09**	**207**	P	**P**	**15 13 14.1**	**+0.4**
KNRA				IAmb	IAmb	15 13 15.8	
	comp=Z,18nm,1.0s						
CTA	**Charters Tower**	**38.72**	**179**	P	**P**	**15 13 18.6**	**-0.3**
	comp=Z,2.7nm,0.4s,baz=360,slow=8.3,SNR=8.4						
CTAO	**Charters Tower**	**38.72**	**179**	P	**P**	**15 13 18.9**	**0.0**
CTAO				IAmb	IAmb	15 13 42.1	
	comp=Z,6.4nm,1.1s						
CTAO	**Charters Tower**	**38.72**	**179**	P	**P**	**15 13 19.8**	**+0.9**
PLAI	**Plampang**	**38.82**	**227**	P	**P**	**15 13 20.3**	**+0.5**
WB0	**Warramunga Arr**	**39.92**	**196**	P	**P**	**15 13 28.9**	**+0.1**
WR0	**Warramunga Arr**	**40.06**	**196**		**P**	**15 13 30.0**	**0.0**
WR0				IAmb	IAmb	15 13 31.1	
	comp=Z,18nm,1.0s						
WRAB	**Tennant Creek**	**40.09**	**196**	P	**P**	**15 13 30.6**	**+0.4**
WRAB	**Tennant Creek**	**40.09**	**196**	P	**P**	**15 13 30.5**	**+0.3**
WB2	**Warramunga Arr**	**40.10**	**196**		**P**	**15 13 30.6**	**+0.3**
WRA	**Warramunga Arr**	**40.10**	**196**	P	**P**	**15 13 30.5**	**+0.2**
	comp=Z,15nm,0.5s,baz=23,slow=10.0,SNR=168						
WRA				PcP	**PcP**	**15 15 30.3**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=24,slow=4.0,SNR=1.7						
WRA				ScP	**ScP**	**15 18 55.7**	**-3.6**
	comp=Z,0.5nm,0.8s,baz=2.7,slow=3.3,SNR=3.3						
WRA	**Warramunga Arr**	**40.10**	**196**	P	**P**	**15 13 29.5**	**-0.8**
SANVU	**Saraoutou**	**40.22**	**147**	P	**P**	**15 13 31.1**	**-0.3**
FITZ	**Fitzroy Crossi**	**41.61**	**209**	P	**P**	**15 13 42.9**	**+0.2**
	comp=Z,6.2nm,0.3s,baz=27,slow=10,SNR=30						
FITZ	**Fitzroy Crossi**	**41.61**	**209**	P	**P**	**15 13 43.0**	**+0.3**
UGM	**Wanagama**	**43.59**	**236**	P	**P**	**15 13 59.2**	**+0.5**
	comp=Z,82nm,2.0s						
AS31	**Alice Springs**	**43.77**	**195**	P	**P**	**15 13 59.3**	**-0.7**
ASAR	**Alice Springs**	**43.77**	**195**	P	**P**	**15 13 59.8**	**-0.2**
	comp=Z,3.1nm,0.6s,baz=13,slow=6.2,SNR=88						
CMAR	**Chiang Mai Arr**	**44.04**	**277**	P	**P**	**15 14 04.1**	**+1.8**
	comp=Z,0.5nm,0.4s,baz=74,slow=6.6,SNR=5.4						
EIDS	**Eidsvold**	**44.30**	**173**	P	**P**	**15 14 02.8**	**-1.3**
EIDS				IAmb	IAmb	15 14 31.0	
	comp=Z,8.0nm,1.1s						
NOUC	**Port Laguerre**	**45.50**	**153**	P	**P**	**15 14 14.6**	**+1.0**
DZM	**Mont Dzumac**	**45.54**	**152**	P	**P**	**15 14 13.4**	**-0.6**
	comp=Z,9.0nm,0.8s,baz=280,slow=21,SNR=14						
DZM	**Mont Dzumac**	**45.54**	**152**	P	**P**	**15 14 14.0**	**0.0**
DZM				IAmb	IAmb	15 14 15.4	
	comp=Z,10nm,0.9s						
DZM	**Mont Dzumac**	**45.54**	**152**	P	**P**	**15 14 14.8**	**+0.8**
SRIT	**Nakonsritamara**	**45.65**	**264**	P	**P**	**15 14 17.6**	**+2.6**
YATNC	**Mamie plateau,**	**45.73**	**152**	P	**P**	**15 14 17.1**	**+1.7**
OUENC	**Ouen Island, N**	**46.02**	**152**	P	**P**	**15 14 18.3**	**+0.7**
OUENC				IAmb	IAmb	15 14 18.7	
	comp=Z,9.5nm,0.7s						
OUENC	**Ouen Island, N**	**46.02**	**152**	P	**P**	**15 14 18.9**	**+1.3**
PINNC	**Pines Island,**	**46.46**	**152**	P	**P**	**15 14 21.1**	**+0.1**
PINNC				IAmb	IAmb	15 14 31.5	
	comp=Z,11nm,0.9s						
MBWA	**Marble Bar**	**47.13**	**214**	P	**P**	**15 14 26.9**	**+0.6**
PSA00	**Pilbara Seismi**	**47.41**	**213**	P	**P**	**15 14 28.1**	**-0.3**
PSA00				IAmb	IAmb	15 14 28.9	
	comp=Z,6.8nm,0.7s						
MSVF	**Nonsavu**	**48.42**	**137**	P	**P**	**15 14 38.0**	**+1.7**
MSVF	**Nonsavu**	**48.42**	**137**	P	**P**	**15 14 38.4**	**+2.1**
GSI	**Gunungsitoli**	**50.12**	**255**	P	**P**	**15 14 50.1**	**+0.9**
STKA	**Stephens Creek**	**50.59**	**184**	P	**P**	**15 14 51.4**	**-1.0**
	comp=Z,1.2nm,0.3s,baz=2.3,slow=9.1,SNR=10						
STKA	**Stephens Creek**	**50.59**	**184**	P	**P**	**15 14 51.2**	**-1.2**
FORT	**Forrest**	**52.14**	**199**	P	**P**	**15 15 03.7**	**-0.2**
FORT				IAmb	IAmb	15 15 05.5	
	comp=Z,16nm,0.8s						
BBOO	**Buckleboo**	**52.18**	**190**	P	**P**	**15 15 03.2**	**-0.9**
BBOO				IAmb	IAmb	15 15 11.8	
	comp=Z,5.1nm,0.9s						
MORW	**Morawa**	**55.52**	**212**	P	**P**	**15 15 27.9**	**-0.5**
MORW				IAmb	IAmb	15 15 28.6	
	comp=Z,10nm,0.8s						
NWAO	**Narrogin (SRO)**	**58.18**	**208**	P	**P**	**15 15 46.7**	**-0.2**
	comp=Z,3.7nm,0.5s,baz=31,slow=8.1,SNR=2.1						
NWAO	**Narrogin (SRO)**	**58.18**	**208**	P	**P**	**15 15 46.8**	**-0.2**
NWAO				IAmb	IAmb	15 16 05.0	
	comp=Z,8.6nm,1.1s						
NWAO	**Narrogin (SRO)**	**58.18**	**208**	P	**P**	**15 15 47.3**	**+0.3**
	comp=Z,12nm,1.0s						
MK31	**Makanchi Array**	**58.23**	**314**	P	**P**	**15 15 49.2**	**+1.8**
MKAR	**Makanchi Array**	**58.23**	**314**	P	**P**	**15 15 48.8**	**+1.4**
	comp=Z,0.2nm,0.5s,baz=100,slow=8.4,SNR=4.8						
MKAR	**Makanchi Array**	**58.23**	**314**	P	**P**	**15 15 49.4**	**+2.0**
MAKZ	**Makanchi**	**58.45**	**314**	P	**P**	**15 15 51.1**	**+2.2**
I23K	**Minto, Yukon-K**	**62.63**	**26**	P	**P**	**15 16 18.3**	**+1.6**
TOLK	**Toolik Lake Re**	**63.49**	**22**	P	**P**	**15 16 23.5**	**+1.1**
ILAR	**Eielson Array**	**63.56**	**26**	P	**P**	**15 16 21.9**	**-1.0**
	comp=Z,0.4nm,0.7s,baz=272,slow=4.3,SNR=4.3						
URZ	**Urewera**	**64.09**	**153**	P	**P**	**15 16 25.2**	**-1.4**
URZ				IAmb	IAmb	15 16 47.0	
	comp=Z,9.3nm,0.9s						
BKZ	**Black Stump Fm**	**64.59**	**154**	P	**P**	**15 16 28.7**	**-1.2**
BKZ				IAmb	IAmb	15 16 35.3	
	comp=Z,12nm,1.1s						
BMAR	**Burnt Mountain**	**65.03**	**24**	P	**P**	**15 16 33.9**	**+1.6**
SNZO	**South Karori**	**65.70**	**156**	P	**P**	**15 16 35.7**	**-1.1**
SNZO	**South Karori**	**65.70**	**156**	P	**P**	**15 16 39.3**	**+2.5**
INK	**Inuvik**	**69.28**	**23**	P	**P**	**15 16 58.7**	**-0.2**
	comp=Z,4.2nm,1.3s,baz=258,slow=5.5,SNR=2.1						
INK	**Inuvik**	**69.28**	**23**	P	**P**	**15 16 58.1**	**-0.8**
ABKAR	**Akbulak array**	**73.11**	**317**	P	**P**	**15 17 20.8**	**-1.5**
NVAR	**Mina Array Bea**	**83.16**	**52**	P	**P**	**15 18 18.7**	**+0.8**
	comp=Z,0.2nm,0.4s,baz=267,slow=6.2,SNR=4.4						
FINES	**FINESS Array B**	**86.67**	**335**	P	**P**	**15 18 33.4**	**-1.2**
	comp=Z,2.5nm,0.9s,baz=44,slow=4.2,SNR=6.5						
FINES	**FINESS Array B**	**86.67**	**335**	P	**P**	**15 18 33.5**	**-1.1**

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*TUL **11** 15:28:16.6±0.8, 36.°945N±0.°009×97.°84W±0.°01, h5^{km}±4^{km}, ML2.9, mb_Lg2.5/14(NEIC), Error ellipse: s-maj=1.5km s-min=1.2km az=107.0*

NEIC 11 15:28:17.1±0.6**, 36.°936N**±0.°006×**97.°83W**±0.°01**, h5**^{km}±5^{km}**, Error ellipse: s-maj=1.4km s-min=0.8km az=78.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GC02	**Grant County #**	**0.09**	**196**	Pg	Pg	15 28 19.1	+0.1
GC02				Sg	Sg	15 28 20.6	+0.3
KAN14	**Manchester OK**	**0.11**	**281**	Pg	Pg	15 28 19.2	-0.2
KAN14				Sg	Sg	15 28 20.8	-0.1
KAN17	**Caldwell West**	**0.12**	**25**	Pg	Pg	15 28 19.6	0.0
KAN17				Sg	Sg	15 28 21.5	+0.2
KAN05	**Bluff City Nor**	**0.18**	**349**	Pg	Pg	15 28 20.5	0.0
KAN05				Sg	Sg	15 28 23.0	0.0
KAN01	**Argonia South**	**0.22**	**14**	Pg	Pg	15 28 21.3	-0.2
KAN01				Sg	Sg	15 28 24.6	+0.1
KAN09	**Caldwell North**	**0.26**	**40**	Pg	Pg	15 28 22.2	0.0
KAN09				Sg	Sg	15 28 25.8	+0.1
KAN10	**Anthony SW Sta**	**0.28**	**311**	Pg	Pg	15 28 22.4	-0.2
KAN10				Sg	Sg	15 28 26.2	-0.1
KAN13	**South Haven SW**	**0.29**	**75**	Pg	Pg	15 28 22.8	+0.1
KAN13				Sg	Sg	15 28 26.7	+0.1
KAN06	**Argonia West S**	**0.31**	**356**	Pg	Pg	15 28 23.0	-0.2
KAN06				Sg	Sg	15 28 27.4	+0.1
KAN08	**Anthony NE Sta**	**0.31**	**339**	Pg	Pg	15 28 22.9	-0.2
KAN08				Sg	Sg	15 28 27.4	+0.2
OK032	**Salt Plains WL**	**0.33**	**247**	Pg	Pg	15 28 23.3	-0.2
OK032				Sg	Sg	15 28 27.9	0.0
KAN16	**Harper SW Stat**	**0.34**	**327**	Pg	Pg	15 28 23.5	-0.2
KAN16				Sg	Sg	15 28 28.4	+0.1
KS20	**Mayfield South**	**0.37**	**37**	Pg	Pg	15 28 23.6	-0.5
KS20				Sg	Sg	15 28 29.0	0.0
KAN12	**Harper NE Stat**	**0.39**	**340**	Pg	Pg	15 28 23.9	-0.6
KAN12				Sg	Sg	15 28 29.4	-0.2
CROK	**Carrier**	**0.45**	**196**	Pg	Pg	15 28 25.7	0.0
CROK				Sg	Sg	15 28 31.9	+0.4
BLOK	**Blackwell**	**0.52**	**109**	Pg	Pg	15 28 27.1	0.0
BLOK				Sg	Sg	15 28 34.5	+0.6
T35A	**Sooner Cattle**	**1.05**	**91**	Pg	Pg	15 28 36.7	-0.6
T35A				Sg	Sg	15 28 51.0	0.0
U32A	**Winter Ranch,**	**1.09**	**240**	Pg	Pg	15 28 37.1	-0.9
U32A				Sg	Sg	15 28 51.9	-0.3
OK029	**Liberty Lake**	**1.18**	**165**		Pg	15 28 38.9	-0.7
OK029				Sg	Sg	15 28 54.8	-0.1
QUOK	**Quay**	**1.18**	**130**	Pg	Pg	15 28 39.0	-0.7
QUOK				Sg	Sg	15 28 55.1	+0.1
OK031	**S. Brethren Rd**	**1.27**	**141**	Pn	Pg	15 28 40.5	-0.8
BCOK	**Bluff Creek, N**	**1.29**	**172**	Pn	Pn	15 28 40.7	-1.0
OK030	**Cody Creek RV**	**1.31**	**140**	Pn	Pn	15 28 41.3	-0.7
OKCFA	**Oklahoma City**	**1.55**	**169**	Pn	Pn	15 28 44.9	-0.4
OKCFA				IAmb_Lg		15 29 08.6	
	comp=Z,44nm,0.8s						
R32A	**Long Quarter,**	**1.64**	**335**	Pn	Pn	15 28 46.2	-0.4
FNO	**Franklin**	**1.71**	**168**	Pn	Pn	15 28 47.6	+0.1
FNO				IAmb_Lg		15 29 12.4	
	comp=Z,24nm,1.0s						
WMOK	**Wichita Mounta**	**2.33**	**200**	Pn	Pn	15 28 55.6	-0.3
X34A	**Smith Ranch, M**	**2.33**	**180**	Pn	Pn	15 28 56.2	+0.2
CBKS	**Cedar Bluff**	**2.41**	**322**	IAmb_Lg		15 29 30.7	
	comp=Z,18nm,1.0s						
X37A	**Clayton**	**3.08**	**139**	Pn	Pn	15 29 05.7	-0.6
HHAR	**Hobbs**	**3.20**	**101**	Pn	Pn	15 29 07.5	-0.4
S39A	**Bolivar**	**3.67**	**77**	Pn	Pn	15 29 14.6	+0.1
W39A	**Magazine**	**3.71**	**117**	IAmb_Lg		15 30 19.2	
	comp=Z,12nm,0.8s						
U40A	**Yellville**	**4.04**	**97**	Pn	Pn	15 29 20.1	+0.6
U40A				IAmb_Lg		15 30 28.9	
	comp=Z,9.7nm,0.7s						
MIAR	**Mount Ida**	**4.20**	**123**	Pn	Pn	15 29 23.6	+1.9
N35A	**Tabor**	**4.27**	**23**	Pn	Pn	15 29 23.3	+0.5
P38A	**Dawn**	**4.32**	**50**	IAmb_Lg		15 30 41.2	
	comp=Z,9.0nm,0.9s						
P40A	**Paris**	**5.24**	**59**	IAmb_Lg		15 31 05.2	
	comp=Z,7.2nm,0.7s						
T42A	**Van Buren**	**5.39**	**87**	Pn	Pn	15 29 39.3	+1.1

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*TUL **11** 15:29:52.4±0.8, 36.°948N±0.°004×97.°85W±0.°01, h5^{km}±5^{km}, ML2.5, mb_Lg2.3/4(NEIC), Error ellipse: s-maj=1.6km s-min=0.4km az=104.0*

NEIC 11 15:29:52.7±0.8**, 36.°934N**±0.°010×**97.°848W**±0.°006**, h4**^{km}±5^{km}**, Error ellipse: s-maj=1.4km s-min=0.6km az=175.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GC02	**Grant County #**	**0.08**	**187**		Pg	15 29 54.8	+0.3
GC02				Sg	Sg	15 29 56.2	+0.6
KAN14	**Manchester OK**	**0.10**	**284**		Pg	15 29 54.9	+0.2
KAN14				Sg	Sg	15 29 56.4	+0.4
KAN17	**Caldwell West**	**0.13**	**31**	Pg	Pg	15 29 55.2	-0.1
KAN17				Sg	Sg	15 29 57.1	+0.1
KAN05	**Bluff City Nor**	**0.18**	**354**	Pg	Pg	15 29 55.9	-0.2
KAN05				Sg	Sg	15 29 58.6	+0.2
KAN01	**Argonia South**	**0.23**	**18**	Pg	Pg	15 29 56.5	-0.7
KAN01				Sg	Sg	15 30 00.3	+0.1
KAN10	**Anthony SW Sta**	**0.27**	**314**	Pg	Pg	15 29 57.9	-0.2
KAN10				Sg	Sg	15 30 01.7	+0.1
KAN13	**South Haven SW**	**0.31**	**75**	Pg	Pg	15 29 58.5	-0.2
KAN13				Sg	Sg	15 30 02.8	+0.1
KAN08	**Anthony NE Sta**	**0.31**	**341**	Pg	Pg	15 29 58.3	-0.4
KAN08				Sg	Sg	15 30 03.4	+0.7
KAN06	**Argonia West S**	**0.31**	**358**	Pg	Pg	15 29 58.5	-0.3
KAN06				Sg	Sg	15 30 03.1	+0.2
OK032	**Salt Plains WL**	**0.32**	**246**	Pg	Pg	15 29 58.9	+0.1
OK032				Sg	Sg	15 30 03.7	+0.7
KAN16	**Harper SW Stat**	**0.34**	**329**	Pg	Pg	15 29 59.1	-0.1
KAN16				Sg	Sg	15 30 03.2	-0.5
CROK	**Carrier**	**0.44**	**194**	Pg	Pg	15 30 01.3	+0.1
CROK				Sg	Sg	15 30 07.8	+0.9
BLOK	**Blackwell**	**0.54**	**109**	Pg	Pg	15 30 02.8	-0.2
T35A	**Sooner Cattle**	**1.07**	**91**	Pg	Pg	15 30 13.1	-0.1
OK029	**Liberty Lake**	**1.18**	**164**	Pg	Pg	15 30 14.8	-0.5
QUOK	**Quay**	**1.19**	**129**	Pg	Pg	15 30 15.1	-0.5
QUOK				Sg	Sg	15 30 31.2	+0.3
BCOK	**Bluff Creek, N**	**1.29**	**171**	Pn	Pg	15 30 16.4	-1.0
OK030	**Cody Creek RV**	**1.32**	**139**	Pn	Pn	15 30 17.3	-0.5
OKCSW	**OKLAHOMA CITY**	**1.56**	**168**	Pn	Pn	15 30 20.6	-0.5
R32A	**Long Quarter,**	**1.64**	**336**	Pn	Pn	15 30 21.7	-0.6
FNO	**Franklin**	**1.71**	**168**	IAmb_Lg		15 30 46.4	
	comp=Z,13nm,0.8s						
KSU1	**Kansas State U**	**2.37**	**24**	IAmb_Lg		15 31 07.6	
	comp=Z,18nm,0.7s						

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*IDC **11** 15:33:17.6±2.1, 24.°60N×122.°75E, h84^{km}±19^{km}, mb4.3/27, mb1 4.4/29, mb1mx4.4/39, mbtmp4.6/29, MS3.4/20, Ms1 3.5/20, ms1mx3.4/33, Error ellipse: s-maj=13.3km s-min=9.2km az=75.0*

*NIED **11** 15:33:19.4, 24.°45N×122.°70E, h97^{km}, MW4.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.62; M$_{\theta\theta}$-0.37; M$_{\phi\phi}$0.99; M$_{r\theta}$0.89; M$_{\theta\phi}$0.86; M$_{\phi r}$0.10; Fault plane solution: M$_0$1.51000×10^{16} NP1: φ$_s$242.00000°, δ72.00000°, λ-43.00000°. NP2: φ$_s$349.00000°, δ49.00000°, λ-156.00000°.*

*JMA **11** 15:33:19.4±0.1, 24.°45N×122.°70E, h97^{km}±2^{km}, M5.0*

JMA Felt III J1.

*NEIC **11** 15:33:19.6±2.1, 24.°58N±0.°05×122.°79E±0.°07, h96^{km}±3^{km}, mb4.9/139, ML5.4(TAP), Error ellipse: s-maj=8.8km s-min=6.6km az=70.0*

*BJI **11** 15:33:19.3±0.0, 24.°55N×122.°70E, h90^{km}, mB4.7/55, mb4.8/83, Ms4.4/57, Ms7 4.0/43*

*TAP **11** 15:33:19.9, 24.°47N×122.°75E, h96^{km}, ML5.5, B*

*GCMT **11** 15:33:20.5±0.3, 24.°44N±0.°02×122.°65E±0.°02, h116^{km}±4^{km}, MW4.9/95, Moment Tensor Solution. s18, c22; s95, c137; Duration: 0 Moment tensor: Scale*

10^{16}Nm; M_{rr}-0.51±.10; $M_{\theta\theta}$-0.54±.13; $M_{\phi\phi}$1.04±.12; $M_{r\theta}$2.07±.07; $M_{\theta\phi}$1.08±.12; $M_{\phi r}$-0.11±.07; Best double couple: $M_0$2.43000×10^{16} NP1:ϕ_s354.00000°,δ36.00000°, λ-167.00000°. NP2:ϕ_s254.00000°,δ83.00000°, λ-55.00000°. Principal axes: T 2.0780, Plg29.0000°, Azm316.0000°; N 0.7000, Plg35.0000°, Azm69.0000°; P -2.7830, Plg41.0000°, Azm197.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

*BGR **11** 15:33:28.9±0.0,25°.14N×121°.38E,h121^{km}±2^{km},mb4.6*

ISC 11 15:33:18.8±0.4,**24°.52N**±0°.02×**122°.75E**±0°.02,**h95**^{km}±3^{km}, **h96**^{km}**:pP-P,n523,**σ**1^s.50**/682,**mb4.8**/161,**78C-35D,Fault plane solution: NP1:**ϕ_s237.10020°**,**δ60.94047°**,** λ-33.94072°. **NP2:**ϕ_s345.20227°**,**δ60.78756°**,** λ-146.18623°. **Principal axes:** T Plg0.0944°, Azm291.1821°**;** N Plg46.4838°**,** Azm21.2816°**;** P Plg43.5160°**,** Azm201.0925°**; Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	Yonagunijimaku	0.19	111	P	Pn	15 33 33.5	+1.1
JYNG				S	Sn	15 33 43.4	+0.9
YOJ	Yonaguni jima baz=91	0.24	103	⇓iP	Pn	15 33 33.8	+1.2
YOJ	baz=91			iS	Sn	15 33 43.7	+0.8
YOJ	Yonaguni jima	0.24	103	P	Pn	15 33 33.8	+1.2
YOJ				S	Sn	15 33 43.6	+0.7
YOJ	Yonaguni jima	0.24	103	Pn	Pn	15 33 33.8	+1.2
YOJ				Sn	Sn	15 33 43.4	+0.5
YOJ	Yonaguni jima	0.24	103	P	Pn	15 33 33.9	+1.3
TWC	Suao baz=284	0.83	277	⇑iP	Pn	15 33 38.0	+1.0
TWC	baz=284			iS	Sn	15 33 51.0	+0.3
TWB1	Santiao Chiao baz=305	0.85	305	P	Pn	15 33 38.7	+1.4
TWB1	baz=305			S	Sn	15 33 51.4	+0.3
EWUT	Wuta baz=262	0.89	266	⇑iP	Pn	15 33 38.7	+1.0
EWUT	baz=262			iS	Sn	15 33 52.4	+0.5
NTC	Toucheng baz=294	0.90	292	P	Pn	15 33 39.4	+1.6
NTC	baz=294			eS	Sn	15 33 52.7	+0.6
IRIF	Iriomote-Funau	0.91	101	P	Pn	15 33 39.3	+1.4
IRIF				S	Sn	15 33 53.0	+0.7
ENA	Nanau baz=262	0.93	265	⇑iP	Pn	15 33 39.2	+1.1
ENA	baz=262			iS	Sn	15 33 53.2	+0.7
EHP	Heping Village baz=260	0.94	258	P	Pn	15 33 39.4	+1.1
EHP	baz=260			S	Sn	15 33 53.9	+0.9
ILA	Ilan baz=288	0.95	285	⇑iP	Pn	15 33 39.8	+1.6
ILA	baz=288			iS	Sn	15 33 54.2	+1.3
NDS	Dongshan baz=285	0.95	277	P	Pn	15 33 39.6	+1.3
NDS	baz=285			S	Sn	15 33 53.3	+0.3
TIPB	Shuangxi baz=296	0.95	298	P	Pn	15 33 40.0	+1.5
TIPB	baz=296			eS	Sn	15 33 53.8	+0.6
TWE	Neicheng baz=284	1.01	282	⇑iP	Pn	15 33 40.4	+1.4
TWE	baz=284			iS	Sn	15 33 54.7	+0.6
NWF	Wu-fen Shan baz=298	1.04	302	⇑iP	Pn	15 33 41.4	+1.9
NWF	baz=298			iS	Sn	15 33 56.3	+1.4
WFSB	Wu-fen Shan baz=298	1.04	302	eP	Pn	15 33 41.4	+2.0
WFSB	baz=298			eS	Sn	15 33 56.0	+1.2
HATJ	Hateruma jima	1.07	115	P	Pn	15 33 41.1	+1.5
HATJ				eS	Sn	15 33 56.3	+1.0
ENTT	Nioudou baz=283	1.09	277	⇑iP	Pn	15 33 41.5	+1.6
ENTT	baz=283			S	Sn	15 33 56.5	+0.8
ETL	Fush Village baz=253	1.09	251	⇑iP	Pn	15 33 40.6	+0.6
ETL	baz=253			S	Sn	15 33 55.7	-0.2
NACB	Ninganchiao baz=248	1.11	252	⇑iP	Pn	15 33 40.7	+0.5
NACB	baz=248			S	Sn	15 33 55.9	-0.3
NACB	Ninganchiao	1.11	252		Pn	15 33 40.6	+0.5
NDT	Datong Townshi baz=280	1.13	275	⇑iP	Pn	15 33 42.2	+1.8
NDT	baz=280			S	Sn	15 33 57.8	+1.2
TWD	Chiawan baz=249	1.14	248	⇑iP	Pn	15 33 41.1	+0.6
TWD	baz=249			iS	Sn	15 33 56.7	-0.1
TWA	Mucha baz=288	1.16	294	⇑iP	Pn	15 33 42.3	+1.6
TWA	baz=288			iS	Sn	15 33 57.7	+0.5
NWLT	Wulai baz=290	1.17	283	⇑iP	Pn	15 33 42.4	+1.6
NWLT	baz=290			S	Sn	15 33 58.2	+0.8
HWA	Hwalien baz=250	1.18	243	⇑iP	Pn	15 33 41.9	+1.0
HWA	baz=250			S	Sn	15 33 58.0	+0.5
JKRS	Kuro-shima	1.18	103	P	Pn	15 33 42.6	+1.6
JKRS				S	Sn	15 33 58.8	+1.2
NHY	Taipei baz=292	1.19	296	eP	Pn	15 33 42.9	+1.8
NHY	baz=292			eS	Sn	15 33 59.4	+1.4
ETLH	Xiulin Townshi baz=252	1.20	255	⇑iP	Pn	15 33 42.1	+0.8
ETLH	baz=252			iS	Sn	15 33 58.3	+0.1
NHDH	Xindian Distri baz=288	1.20	292	⇑iP	Pn	15 33 42.8	+1.6
NHDH	baz=288			S	Sn	15 33 58.4	+0.4
NWRT	Kuosheng baz=297	1.20	305	eP	Pn	15 33 42.8	+1.6
TATO	Taipei baz=294	1.24	292	eP	Pn	15 33 43.0	+1.4
TATO	baz=294			eS	Sn	15 33 58.8	-0.1
TATO	Taipei	1.24	292		Pn	15 33 43.0	+1.4
TEYL	Yanliau Villag baz=237	1.24	239	P	Pn	15 33 42.3	+0.6
TEYL	baz=237			eS	Sn	15 33 58.9	+0.1
YM01	YM01 baz=295	1.24	300	⇑iP	Pn	15 33 43.5	+1.7
YM01	baz=295			iS	Sn	15 33 59.9	+0.9
TAP	Taipei baz=288	1.25	295	⇑iP	Pn	15 33 43.3	+1.6
TAP	baz=288			iS	Sn	15 33 59.8	+0.8
NNS	Nan Shan baz=263	1.26	267	⇑iP	Pn	15 33 43.1	+1.1
NNS	baz=263			S	Sn	15 33 59.7	+0.2
PCYT	Pengchaiyu baz=332	1.27	331	eP	Pn	15 33 44.0	+2.0
PCYT	baz=332			eS	Sn	15 34 02.2	+2.8
ETM	Tongmen baz=245	1.27	245	eP	Pn	15 33 42.5	+0.4
ETM	baz=245			eS	Sn	15 33 58.7	-0.9
JIJ	Ishigaki jima	1.28	97	P	Pn	15 33 43.3	+1.2
JIJ				S	Sn	15 34 00.0	+0.3
NSK	Sanguang baz=279	1.28	277	⇑iP	Pn	15 33 43.8	+1.6
NSK	baz=279			iS	Sn	15 34 00.7	+0.8
TWY	Chenhua baz=300	1.29	306	⇑iP	Pn	15 33 44.4	+2.1
TWY	baz=300			iS	Sn	15 34 01.3	+1.3
ANP	Anpu baz=294	1.30	301	P	Pn	15 33 43.9	+1.4
ANP	baz=294			S	Sn	15 34 00.6	+0.2
TWS1	Kuangyinshan baz=291	1.34	296	⇑iP	Pn	15 33 44.5	+1.6
TWS1	baz=291			iS	Sn	15 34 02.0	+0.9
NTST	Danshui baz=293	1.35	299	eP	Pn	15 33 44.8	+1.9
NTST	baz=293			S	Sn	15 34 02.4	+1.2
ESL	Shilin baz=246	1.39	240	⇑iP	Pn	15 33 43.8	+0.3
ESL	baz=246			S	Sn	15 34 01.8	-0.4
FUSS	Fushou baz=266	1.40	259	P	Pn	15 33 45.4	+1.5
FUSS	baz=266			eS	Sn	15 34 02.9	+0.1
WHF	Hehuan Shan baz=262	1.41	255	⇑iP	Pn	15 33 45.1	+1.0
WHF	baz=262			iS	Sn	15 34 03.4	+0.2
JISG	Ishigakijimahi	1.42	87	P	Pn	15 33 45.2	+1.4
JISG				S	Sn	15 34 03.4	+0.6
TWT	Tachien baz=264	1.46	260	⇑iP	Pn	15 33 46.4	+1.9
TWT	baz=264			iS	Sn	15 34 04.8	+0.9
EGFH	Guangfu baz=233	1.48	235	P	Pn	15 33 45.2	+0.7
EGFH	baz=233			S	Sn	15 34 03.2	-0.8
TDCB	Techi baz=261	1.48	260	⇑iP	Pn	15 33 46.4	+1.7
TDCB	baz=261			iS	Sn	15 34 04.6	+0.4
NCU	National Centr baz=289	1.49	288	P	Pn	15 33 46.4	+1.7
NCU	baz=289			S	Sn	15 34 06.4	+2.0
NCUH	Zhongli baz=289	1.49	288	P	Pn	15 33 46.3	+1.6
NCUH	baz=289			S	Sn	15 34 05.6	+1.2
CHGB	Renai baz=248	1.51	253	⇑iP	Pn	15 33 46.5	+1.3
CHGB	baz=248			iS	Sn	15 34 05.7	+0.6
OWD	Renai baz=250	1.54	249	P	Pn	15 33 46.6	+1.0
OWD	baz=250			eS	Sn	15 34 05.5	-0.2
LIOB	Emei baz=276	1.58	275	⇑iP	Pn	15 33 47.7	+1.8
LIOB	baz=276			S	Sn	15 34 07.6	+1.1
HGSD	Ruisui baz=228	1.59	230	⇑iP	Pn	15 33 46.4	+0.4
HGSD	baz=228			S	Sn	15 34 06.5	0.0
NSTT	Nanjuang baz=276	1.60	274	⇑iP	Pn	15 33 47.7	+1.6
NSTT	baz=276			iS	Sn	15 34 08.2	+1.4
SBCB	Hsinchu baz=281	1.63	280	⇑iP	Pn	15 33 48.2	+1.8
SBCB	baz=281			S	Sn	15 34 08.4	+1.0
HSN	Hsinchu baz=283	1.65	280	⇑iP	Pn	15 33 48.0	+1.4
HSN	baz=283			iS	Sn	15 34 08.4	+0.6
EHY	Hungye baz=233	1.65	233	⇓iP	Pn	15 33 47.0	+0.2
EHY	baz=233			S	Sn	15 34 06.1	-1.9
VWDT	VWDT baz=238	1.66	243	⇑iP	Pn	15 33 48.1	+1.4
VWDT	baz=238			iS	Sn	15 34 08.4	+0.3
WHP	Taichung City baz=263	1.66	262	P	Pn	15 33 49.4	+2.4
WHP	baz=263			S	Sn	15 34 09.8	+1.4
YULB	Yu-li baz=239	1.74	230	P	Pn	15 33 48.3	+0.4
YULB	baz=239			S	Sn	15 34 08.1	-1.9
YULB	Yu-li	1.74	230		Pn	15 33 48.3	+0.4
WCS	Beigang Elemen baz=254	1.74	255	eP	Pn	15 33 50.0	+2.1
WCS	baz=254			eS	Sn	15 34 11.7	+1.8
EYUL	Yuli baz=226	1.75	229	P	Pn	15 33 48.9	+0.8
EYUL	baz=226			eS	Sn	15 34 09.9	-0.4
JTJ	Tarama	1.78	86	P	Pn	15 33 49.9	+1.5
JTJ				S	Sn	15 34 12.2	+1.3
NMLH	Miaoli baz=272	1.79	271	P	Pn	15 33 50.3	+1.8
NMLH	baz=272			S	Sn	15 34 12.2	+1.1
SSLB	Suanglung baz=247	1.79	246	⇑iP	Pn	15 33 49.8	+1.2
SSLB	baz=247			S	Sn	15 34 10.8	-0.5
SSLB	Suanglung	1.79	246	Pn	Pn	15 33 49.6	+1.0
SSLB	Suanglung	1.79	246	P	Pn	15 33 49.9	+1.3
SMLT	Sun Moon Lake baz=248	1.81	250	⇑iP	Pn	15 33 50.4	+1.6
SMLT	baz=248			S	Sn	15 34 13.7	+2.0
TWQ1	Liyutan baz=274	1.81	265	⇑iP	Pn	15 33 50.5	+1.7
TWQ1	baz=274			S	Sn	15 34 12.2	+0.5
NSY	Sanyi baz=268	1.82	267	⇑iP	Pn	15 33 50.9	+2.0
NSY	baz=268			iS	Sn	15 34 13.3	+1.6
TYC	Yuchr baz=247	1.83	251	⇑iP	Pn	15 33 50.7	+1.6
TYC	baz=247			S	Sn	15 34 13.9	+1.8
FULB	Fuli baz=220	1.87	226	P	Pn	15 33 49.9	+0.2
FULB	baz=220			S	Sn	15 34 11.9	-1.2
CHKT	Chengkung baz=220	1.90	222	⇓iP	Pn	15 33 49.8	-0.1
CHKT	baz=220			iS	Sn	15 34 11.6	-2.0
WHYT	Xinyi Township baz=247	1.92	245	P	Pn	15 33 52.2	+2.0
WHYT	baz=247			S	Sn	15 34 15.3	+1.2
TCU	Taichung baz=270	1.93	259	eP	Pn	15 33 52.2	+1.9
TCU	baz=270			eS	Sn	15 34 15.4	+1.2
WDJ	Dajia District baz=266	1.93	265	eP	Pn	15 33 52.1	+1.8
WDJ	baz=266			eS	Sn	15 34 15.6	+1.2
YUS	Yu-Shan baz=233	1.94	238	⇑iP	Pn	15 33 52.2	+1.3
YUS	baz=233			S	Sn	15 34 14.7	-0.6
WJS	Zhushan baz=250	1.97	250	P	Pn	15 33 53.5	+2.6
WJS	baz=250			S	Sn	15 34 17.6	+2.3
WNT	Mingjian baz=252	1.99	252	P	Pn	15 33 53.5	+2.3
WNT	baz=252			S	Sn	15 34 18.4	+2.6
EDH	Donghe baz=218	2.03	221	P	Pn	15 33 51.7	0.0
EDH	baz=218			S	Sn	15 34 14.9	-1.8
ALS	Alishan baz=235	2.04	241	⇑iP	Pn	15 33 53.9	+1.8
ALS	baz=235			iS	Sn	15 34 19.4	+2.0
WCHH	Zhanghua baz=267	2.05	258	P	Pn	15 33 53.5	+1.7
WCHH	baz=267			S	Sn	15 34 18.6	+1.5
ELDTW	Lidau baz=227	2.07	231	⇓iP	Pn	15 33 52.7	+0.5
ELDTW	baz=227			iS	Sn	15 34 16.5	-1.2
CHN5	Tsauling baz=239	2.10	245	⇑iP	Pn	15 33 54.7	+2.0
CHN5	baz=239			iS	Sn	15 34 20.9	+2.4
LDUT	Ludao baz=210	2.18	213	P	Pn	15 33 53.5	-0.1
LDUT	baz=210			S	Sn	15 34 17.4	-2.8
WDLH	Douliu baz=261	2.18	248	eP	Pn	15 33 56.0	+2.4
WDLH	baz=261			eS	Sn	15 34 23.1	+2.8
LONT	Longtian baz=230	2.19	223	eP	Pn	15 33 53.6	-0.1
LONT	baz=230			eS	Sn	15 34 19.3	-1.1
JIRB	Irabujima	2.23	82	P	Pn	15 33 55.5	+1.4
JIRB				S	Sn	15 34 21.7	+0.5
STYH	Taoyuan baz=231	2.25	234	eP	Pn	15 33 56.2	+1.7
STYH	baz=231			eS	Sn	15 34 22.1	+0.3
WRL	Guolierlin Hig baz=255	2.25	255	eP	Pn	15 33 56.0	+1.4
WRL	baz=255			eS	Sn	15 34 22.8	+0.9
TWGBT	Beinan baz=229	2.28	222	⇓iP	Pn	15 33 55.0	+0.1
TWGBT	baz=229			S	Sn	15 34 20.9	-1.7
TWG	Pinlang baz=229	2.29	223	⇓iP	Pn	15 33 55.0	0.0
TWG	baz=229			S	Sn	15 34 21.2	-1.4
TWG	Pinlang	2.29	223		Pn	15 33 54.8	-0.2
TPUB	Ta-pu baz=232	2.29	238	P	Pn	15 33 56.4	+1.3
TPUB	baz=232			S	Sn	15 34 23.5	+0.7
TPUB	Ta-pu	2.29	238	Pn	Pn	15 33 56.9	+1.8
TPUB	Ta-pu	2.29	238	P	Pn	15 33 56.9	+1.8
CHN4	Tsaushan baz=234	2.29	240	P	Pn	15 33 55.4	+0.3
CHN4	baz=234			S	Sn	15 34 23.1	+0.3
TTN	Taitung baz=216	2.29	220	eP	Pn	15 33 55.6	+0.5
TTN	baz=216			eS	Sn	15 34 22.4	-0.4
JIKM	Ikemajima	2.31	79	P	Pn	15 33 56.8	+1.6
JIKM				S	Sn	15 34 23.8	+0.7
WTK	Tuku baz=260	2.31	250	eP	Pn	15 33 57.2	+1.9
WTK	baz=260			eS	Sn	15 34 24.5	+1.3
WTP	Ta-pu baz=238	2.33	238	P	Pn	15 33 57.6	+1.9
WTP	baz=238			S	Sn	15 34 25.4	+1.6
JMJ	Miyako jima 2	2.33	82	P	Pn	15 33 57.7	+2.1
WTCT	Ta-ch'eng baz=255	2.35	254	eP	Pn	15 33 57.1	+1.3
WTCT	baz=255			eS	Sn	15 34 24.7	+0.6
JMJ2	Miyako jima3	2.35	84	P	Pn	15 33 57.6	+1.7
JMJ2				S	Sn	15 34 25.0	+0.7
CHY	Chiayi baz=257	2.36	245	eP	Pn	15 33 58.1	+2.2
CHY	baz=257			eS	Sn	15 34 26.7	+2.3
TWK	Hsinying baz=239	2.42	239	P	Pn	15 33 58.4	+1.6
TWK	baz=239			S	Sn	15 34 27.5	+1.6
JOGS	Gusukube	2.43	84	P	Pn	15 33 58.6	+1.8
JOGS				S	Sn	15 34 26.9	+0.9
CHN1	Nanshi baz=237	2.43	237	⇓iP	Pn	15 33 58.6	+1.7
CHN1	baz=237			S	Sn	15 34 28.2	+2.1
SNST	Tainan City baz=239	2.44	238	eP	Pn	15 33 59.1	+2.2
SNST	baz=239			eS	Sn	15 34 29.0	+2.8
SGST	Jiashian baz=235	2.45	235	P	Pn	15 33 58.2	+1.1
SGST	baz=235			S	Sn	15 34 28.0	+1.5
WSF	Szhu baz=260	2.47	250	⇑iP	Pn	15 33 58.9	+1.5
WSF	baz=260			iS	Sn	15 34 28.5	+1.5
ECL	Taimali baz=221	2.52	221	eP	Pn	15 33 57.7	-0.5
ECL	baz=221			eS	Sn	15 34 25.4	-2.9
ICHU	Yijhu baz=235	2.54	244	eP	Pn	15 34 00.1	+1.8
ICHU	baz=235			eS	Sn	15 34 30.2	+1.6
CHN8	Yiju baz=235	2.60	244	eP	Pn	15 34 01.1	+2.0
CHN8	baz=235			eS	Sn	15 34 31.9	+1.8
CHN3	Shinhua baz=247	2.62	237	eP	Pn	15 34 02.0	+2.7
CHN3	baz=247			eS	Sn	15 34 33.4	+2.9
SSD	Sandimen baz=228	2.62	228	P	Pn	15 34 01.0	+1.6
SSD	baz=228			S	Sn	15 34 32.5	+1.8
SCST	Cishan baz=241	2.63	232	eP	Pn	15 34 02.3	+2.8
SSHA	Shanhua baz=248	2.64	239	eP	Pn	15 34 01.5	+1.8
TSMG	Majia baz=227	2.64	227	eP	Pn	15 34 01.6	+1.9
TSMG	baz=227			eS	Sn	15 34 32.2	+1.1
SCLT	Jiali baz=241	2.70	241	eP	Pn	15 34 02.0	+1.6
SCLT	baz=241			eS	Sn	15 34 34.3	+1.9
LAY	Lan-yu baz=199	2.70	204	⇑iP	Pn	15 34 00.1	-0.5
LAY	baz=199			S	Sn	15 34 29.0	-3.6
MASBT	Mashibuluo baz=223	2.72	226	P	Pn	15 34 02.1	+1.4
TWM1	Shoushan baz=232	2.72	232	eP	Pn	15 34 03.8	+3.0
SGLT	Jiouru baz=229	2.73	230	eP	Pn	15 34 03.8	+2.8
TAI1	Yung-k'ang baz=246	2.74	238	eP	Pn	15 34 02.2	+1.2
TAI1	baz=246			eS	Sn	15 34 35.6	+2.2
TAW	Tawu baz=223	2.74	219	eP	Pn	15 34 01.1	0.0
EAST	Anshuo baz=223	2.75	220	eP	Pn	15 34 01.1	-0.1
EAST	baz=223			eS	Sn	15 34 33.0	-0.8
SSPT	Xinbi baz=236	2.85	225	eP	Pn	15 34 04.9	+2.4
SCZT	Fangliau baz=222	2.90	223	eP	Pn	15 34 04.8	+1.6
SCZT	baz=222			eS	Sn	15 34 38.4	+1.2
SLIU	Shizi baz=222	2.91	218	eP	Pn	15 34 03.8	+0.5
SLIU	baz=222			eS	Sn	15 34 36.0	-1.5
MATB	Ma-tsu	3.02	303	eP	Pn	15 34 05.5	+0.8

	baz=302						
WLCH	**Liuqiu**	**3.07**	**226**	*e*P	**Pn**	**15 34 08.0**	**+2.6**
	baz=225						
PNG	**Penghu**	**3.07**	**253**	*e*P	**Pn**	**15 34 05.8**	**+0.4**
	baz=253						
PNG				*e*S	**Sn**	**15 34 39.7**	**-1.6**
	baz=253						
PHUB	**P'eng-hu**	**3.07**	**252**	*e*P	**Pn**	**15 34 05.7**	**+0.3**
	baz=252						
PHUB				*e*S	**Sn**	**15 34 40.0**	**-1.5**
	baz=252						
HEN	**Hengchun**	**3.11**	**217**	*e*P	**Pn**	**15 34 07.4**	**+1.5**
	baz=208						
HEN				*e*S	**Sn**	**15 34 42.1**	**-0.2**
	baz=208						
TSEB	**Hengchuen, Pin**	**3.11**	**214**	*e*P	**Pn**	**15 34 07.0**	**+1.0**
	baz=220						
TSEB				*e*S	**Sn**	**15 34 42.9**	**+0.5**
	baz=220						
TWKBT	**Hengchun**	**3.12**	**215**	*e*P	**Pn**	**15 34 06.9**	**+0.7**
	baz=214						
TWKBT				*e*S	**Sn**	**15 34 42.2**	**-0.4**
	baz=214						
TWK1	**Hengchun**	**3.13**	**215**	*e*P	**Pn**	**15 34 07.0**	**+0.8**
	baz=214						
TWK1				*e*S	**Sn**	**15 34 42.1**	**-0.6**
	baz=214						
VCHM	**Qimei**	**3.31**	**247**	*e*P	**Pn**	**15 34 09.2**	**+0.6**
	baz=248						
VCHM				*e*S	**Sn**	**15 34 46.4**	**-0.7**
	baz=248						
XPSS	**Dashiqiu**	**3.33**	**317**	*e*P	**Pn**	**15 34 09.8**	**+0.9**
	baz=308						
PTMZ	**Houxiangcun**	**3.34**	**280**	*e*P	**Pn**	**15 34 09.8**	**+0.8**
	baz=271						
LYJJ	**Jianjiangzhen**	**3.38**	**307**	*e*P	**Pn**	**15 34 10.1**	**+0.6**
	baz=307						
MHZQ	**Yeshan**	**3.72**	**296**	*e*P	**Pn**	**15 34 14.5**	**+0.4**
	baz=295						
QZH	**Quanzhou**	**3.81**	**277**	⇑*i*P	**Pn**	**15 34 12.9**	**-2.4**
QZH				S	**Sn**	**15 34 53.2**	**-5.9**
QZH				smax	smax		
	comp=N,700nm,0.4s						
QZH				smax	smax		
	comp=E,390nm,0.5s						
QZH				LR	LR		
	comp=Z,650nm,6.9s						
KNM	**Kinmen**	**3.94**	**269**	*e*P	**Pn**	**15 34 19.2**	**+2.2**
	baz=268						
KNMB	**Chin-men Tao**	**3.98**	**270**	*e*P	**Pn**	**15 34 17.7**	**+0.1**
	baz=269						
KNMB	**Chin-men Tao**	**3.98**	**270**	Pn	**Pn**	**15 34 17.7**	**+0.1**
JKE	**Kume jima 2**	**4.07**	**63**	P	**Pn**	**15 34 20.0**	**+1.1**
AXDP	**Jialang**	**4.37**	**276**	*e*P	**Pn**	**15 34 23.4**	**+0.5**
	baz=274						
JAGN	**Aguni-jima**	**4.55**	**62**	P	**Pn**	**15 34 26.5**	**+1.1**
ZPLA	**Ao Xicun**	**4.60**	**264**	*e*P	**Pn**	**15 34 26.1**	**0.0**
	baz=262						
JJT3	**Tamagusuku3**	**4.83**	**69**	P	**Pn**	**15 34 29.8**	**+0.6**
JNTH	**Nagotoyohara**	**5.16**	**66**	P	**Pn**	**15 34 34.1**	**+0.4**
JIH	**Iheya**	**5.33**	**61**	P	**Pn**	**15 34 36.1**	**+0.2**
JOW	**Kunigami**	**5.49**	**64**	P	**Pn**	**15 34 38.0**	**-0.2**
	80nm,0.3s,baz=179,slow=8.8,SNR=572						
JOW				S	**Sn**	**15 35 36.9**	**-3.1**
	50nm,0.3s,baz=344,slow=28,SNR=10						
JOW				LR	LR	15 37 02.1	
	comp=Z,364nm,18.1s,baz=356,slow=41						
JOW	**Kunigami**	**5.49**	**64**	P	**Pn**	**15 34 37.7**	**-0.5**
JOW	**Kunigami**	**5.49**	**64**	Pn	**Pn**	**15 34 37.6**	**-0.5**
JYRO	**Yoronjima**	**5.71**	**63**	P	**Pn**	**15 34 40.5**	**-0.7**
JOKE	**Okinoerabujima**	**5.96**	**60**	P	**Pn**	**15 34 43.7**	**-0.8**
JTK	**Tokunoshima**	**6.45**	**58**	P	**Pn**	**15 34 50.0**	**-1.2**
SSE	**Sheshan**	**6.70**	**348**	P	**Pn**	**15 34 56.7**	**+2.2**
SSE				S	**Sn**	**15 36 10.9**	**+1.6**
SSE				pmax	pmax		
	comp=Z,33nm,0.5s						
SSE				smax	smax		
	comp=N,130nm,1.2s						
SSE				smax	smax		
	comp=E,130nm,1.2s						
SSE				LR	LR		
	comp=N,320nm,5.2s						
JAMN	**Amaminishikomi**	**6.85**	**56**	P	**Pn**	**15 34 55.4**	**-1.3**
SIPP	**Brgy, Tapao**	**6.90**	**198**	⇓*i*P	**Pn**	**15 35 01.1**	**+3.7**
JAM	**Amami Oshima**	**7.26**	**56**	P	**Pn**	**15 35 00.8**	**-1.5**
JTAJ	**Takarajima**	**7.38**	**50**	P	**Pn**	**15 35 04.0**	**+0.1**
JZK	**Kikaishima**	**7.50**	**58**	P	**Pn**	**15 35 04.5**	**-0.9**
JMZ	**Minamidaito 2**	**7.78**	**79**	P	**Pn**	**15 35 06.5**	**-2.9**
JMZ	**Minamidaito 2**	**7.78**	**79**	Pn	**Pn**	**15 35 06.4**	**-2.9**
JKDJ	**Kitadaitoujima**	**7.87**	**78**	P	**Pn**	**15 35 07.9**	**-2.6**
NJ2	**Nanjing**	**8.25**	**336**	*e*P	**Pn**	**15 35 17.4**	**+1.7**
NJ2				S	**Sn**	**15 36 46.8**	**-0.5**
NJ2				pmax	pmax		
	comp=Z,45nm,0.7s						
NJ2				smax	smax		
	comp=N,300nm,1.1s						
NJ2				smax	smax		
	comp=E,260nm,1.7s						
NJ2				LR	LR		
	comp=N,1µm,5.0s						
NJ2				LR	LR		
	comp=E,1µm,6.5s						
NJ2				LR	LR		
	comp=Z,550nm,6.3s						
GZH	**Guangzhou**	**8.73**	**263**	P	**Pn**	**15 35 18.0**	**-4.3**
GZH				S	**Sn**	**15 36 50.6**	**-8.4**
GZH				smax	smax		
	comp=N,210nm,1.3s						
GZH				smax	smax		
	comp=E,170nm,0.9s						
WHN	**Wuhan**	**9.57**	**311**	⇑P	**Pn**	**15 35 34.5**	**+0.8**
WHN				S	Sn	15 37 29.6	+10
WHN				LR	LR		
	comp=N,2µm,4.0s						
WHN				LR	LR		
	comp=E,2µm,4.5s						
WHN				LR	LR		
	comp=Z,1µm,9.2s						
LQP	**Lukban**	**10.41**	**187**	⇑*e*P	**Pn**	**15 35 47.1**	**+1.7**
TIA	**Tai'an**	**12.62**	**339**	⇑P	**Pn**	**15 36 18.2**	**+3.4**
TIA				pmax	pmax		
	comp=Z,24nm,1.4s						
TIA				pmax	pmax		
	comp=Z,250nm,3.6s						
TIA				LR	LR		
	comp=N,210nm,3.0s						
TIA				LR	LR		
	comp=E,470nm,3.3s						
TIA				LR	LR		
	comp=Z,180nm,3.5s						
ENH	**Enshi**	**13.10**	**299**	Pn	**Pn**	**15 36 22.1**	**+0.8**
INCN	**Inchon**	**13.34**	**13**		**Pn**	**15 36 25.9**	**+1.5**
JMN	**Monobe**	**13.36**	**44**	Pn	**Pn**	**15 36 20.6**	**-4.1**
KSAR	**Wonju Array Be**	**13.61**	**18**	P	**P**	**15 36 31.1**	**-2.3**
KSRS	**Korea Array**	**13.63**	**18**	P	**Pn**	**15 36 30.6**	**+2.5**
	1.7nm,0.3s,baz=195,slow=12,SNR=71						
KSRS				LR	LR	15 42 51.4	
	comp=Z,148nm,18.8s,baz=196,slow=42						
KS19	**Wonju Array Si**	**13.66**	**17**	P	**P**	**15 36 32.0**	**-2.0**
JHS	**Saijyo**	**13.78**	**38**	Pn	**Pn**	**15 36 27.5**	**-2.5**
DL2	**Dalian**	**14.38**	**356**	P	**P**	**15 36 43.6**	**+1.7**
DL2				pmax	pmax		
	comp=Z,64nm,0.9s						
DL2				pmax	pmax		
	comp=Z,150nm,5.6s						
DL2				LR	LR		
	comp=N,410nm,10.9s						
DL2				LR	LR		
	comp=E,280nm,7.8s						
DL2				LR	LR		
	comp=Z,430nm,13.2s						
GYA	**Guiyang**	**14.66**	**281**	⇓P	**P**	**15 36 45.5**	**+0.2**
GYA				sP	Pn	15 37 10.5	+29
GYA				S	**Sn**	**15 39 24.5**	**+1.3**
GYA				pmax	pmax		
	comp=Z,16nm,0.9s						
GYA				pmax	pmax		
	comp=Z,61nm,3.5s						
GYA				LR	LR		
	comp=N,320nm,3.8s						
GYA				LR	LR		
	comp=E,260nm,3.8s						
JWT	**Wachi**	**15.33**	**43**	Pn	**Pn**	**15 36 47.4**	**-2.5**
XAN	**Xi'an**	**15.34**	**311**	P	**P**	**15 36 55.0**	**+2.3**
XAN				pP	pP	15 37 08.1	-2.4
XAN				S	**S**	**15 39 47.3**	**-2.2**
XAN				pmax	pmax		
	comp=Z,79nm,1.4s						
XAN				pmax	pmax		
	comp=Z,320nm,3.5s						
XAN				LR	LR		
	comp=N,570nm,7.7s						
XAN				LR	LR		
	comp=E,300nm,7.1s						
XAN				LR	LR		
	comp=Z,380nm,8.2s						
TIY	**Taiyuan**	**15.83**	**329**	*e*P	**P**	**15 37 01.2**	**+3.1**
TIY				pmax	pmax		
	comp=Z,92nm,0.6s						
BJT	**Baijiatuau**	**16.42**	**342**	P	**P**	**15 37 05.5**	**+1.0**
BJI	**Beijing**	**16.44**	**342**	P	**P**	**15 37 06.2**	**+1.5**
BJI				pP	**pP**	**15 37 25.0**	**+2.5**
BJI				S	**S**	**15 40 10.5**	**-1.3**
BJI				pmax	pmax		
	comp=Z,33nm,0.8s						
BJI				LR	LR		
	comp=E,440nm,6.4s						
SNY	**Shenyang**	**17.28**	**2**	⇑P	**P**	**15 37 15.2**	**+1.2**
SNY				sP	**sP**	**15 37 46.4**	**+2.7**
SNY				S	**S**	**15 40 29.2**	**+0.5**
SNY				pmax	pmax		
	comp=Z,18nm,0.7s						
SNY				pmax	pmax		
	comp=Z,270nm,4.9s						
SNY				LR	LR		
	comp=N,210nm,7.0s						
SNY				LR	LR		
	comp=E,130nm,4.6s						
SNY				LR	LR		
	comp=Z,210nm,8.2s						
SLVN	**Son La**	**17.65**	**263**	P	**Pn**	**15 37 19.8**	**+1.1**
JCJ	**Chichijima**	**17.69**	**78**	P	**Pn**	**15 37 20.3**	**+1.3**
JCJ				IAmb	IAmb	15 37 24.7	
	comp=Z,99nm,0.8s						
MAT	**Matsushiro**	**17.89**	**44**	P	**P**	**15 37 20.3**	**-0.5**
MJAR	**Matsushiro Arr**	**17.89**	**44**	P	**P**	**15 37 19.6**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=239,slow=10,SNR=8.2						
MJAR				LR	LR	15 44 40.5	
	comp=Z,126nm,19.4s,baz=230,slow=38						
MJAR	**Matsushiro Arr**	**17.89**	**44**	P	**P**	**15 37 20.1**	**-0.7**
CD2	**Chengdu**	**17.97**	**295**	P	**P**	**15 37 21.4**	**-0.4**
CD2				S	**S**	**15 40 38.2**	**-4.7**
CD2				SS	**SnSn**	**15 41 02.4**	**+4.0**
CD2				pmax	pmax		
	comp=Z,160nm,0.9s						
CD2				pmax	pmax		
	comp=Z,300nm,6.7s						
CD2				LR	LR		
	comp=Z,640nm,5.4s						
CD2				LR	LR		
	comp=Z,570nm,5.3s						
CD2				LR	LR		
	comp=Z,390nm,5.9s						
KMI	**Kunming**	**18.18**	**276**	⇑P	**Pn**	**15 37 27.9**	**+2.7**
KMI				pP	pP	15 37 40.4	-2.2
KMI				S	**S**	**15 40 41.6**	**-5.9**
KMI				pmax	pmax		
	comp=Z,15nm,1.0s						
KMI				pmax	pmax		
	comp=Z,120nm,4.0s						
KMI				LR	LR		
	comp=Z,150nm,8.1s						
KMI				LR	LR		
	comp=Z,190nm,9.3s						
KMI				LR	LR		
	comp=Z,110nm,7.5s						
HHC	**Hu-ho-hao-te**	**18.78**	**333**	*e*P	**Pn**	**15 37 33.4**	**+1.2**
HHC				pmax	pmax		
	comp=Z,63nm,1.4s						
HHC				pmax	pmax		
	comp=Z,180nm,6.6s						
HHC				LR	LR		
	comp=Z,270nm,14.2s						
HHC				LR	LR		
	comp=Z,330nm,13.5s						
BTO	**Baotou**	**19.26**	**329**	*e*P	**Pn**	**15 37 39.6**	**+1.7**
BTO				S	**Sn**	**15 41 14.5**	**+0.6**
BTO				LR	LR		
	comp=Z,1µm,8.7s						
BTO				LR	LR		
	comp=Z,1µm,4.9s						
CN2	**Changchun**	**19.36**	**6**	*e*P	**P**	**15 37 37.3**	**+0.5**
CN2				*e*S	**S**	**15 41 03.6**	**-7.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,200nm,10.0s						
CN2				LR	LR		
	comp=Z,200nm,10.0s						
CN2				LR	LR		
	comp=Z,200nm,10.3s						
LZH	**Lanzhou**	**19.95**	**310**	⇑P	**Pn**	**15 37 45.8**	**-0.2**
LZH				pP	pP	15 37 58.4	-3.3
LZH				PP	**sP**	**15 38 09.2**	**-4.5**
LZH				*e*S	**S**	**15 41 16.2**	**-6.6**
LZH				pmax	pmax		
	comp=Z,90nm,1.1s						
LZH				pmax	pmax		
	comp=Z,340nm,4.9s						
LZH				LR	LR		
	comp=Z,1µm,11.1s						
LZH				LR	LR		
	comp=Z,1µm,11.9s						
LZH				LR	LR		
	comp=Z,1µm,13.3s						
JMM	**Marumori**	**20.33**	**45**	P	**P**	**15 37 44.6**	**-2.7**
JMM				IAmb	IAmb	15 37 59.8	
	comp=Z,48nm,1.4s						
MDJ	**Mudanjiang**	**20.81**	**14**	P	**P**	**15 37 53.0**	**+0.5**
MDJ				pP	pP	15 38 11.7	+1.0
MDJ				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,180nm,4.7s						
MDJ				LR	LR		
	comp=Z,380nm,12.8s						
MDJ				LR	LR		
	comp=Z,220nm,12.8s						
MDJ				LR	LR		
	comp=Z,470nm,14.2s						
USA0B	**Ussuriysk Arra**	**21.04**	**19**	P	**P**	**15 37 53.1**	**-1.8**
USRK	**Ussuriysk Ar.**	**21.04**	**19**	P	**P**	**15 37 54.3**	**-0.6**
	comp=Z,16nm,0.7s,baz=206,slow=11,SNR=27						
USRK				LR	LR	15 47 13.2	
	comp=Z,81nm,18.6s,baz=182,slow=40						
JTM	**Tenmabayashi**	**22.31**	**39**	P	**P**	**15 38 04.6**	**-3.8**
JTM				IAmb	IAmb	15 38 27.5	
	comp=Z,92nm,1.3s						
CHTO	**Chiang Mai**	**22.83**	**260**	P	**P**	**15 38 13.1**	**-0.9**
CM31	**Chiang Mai Arr**	**22.94**	**259**	P	**P**	**15 38 15.6**	**+0.5**
CMAR	**Chiang Mai Arr**	**22.94**	**259**	P	**P**	**15 38 15.0**	**-0.2**
	comp=Z,3.3nm,0.9s,baz=61,slow=7.8,SNR=31						
CMAR				LR	LR	15 47 48.7	
	comp=Z,97nm,19.6s,baz=126,slow=38						
CMAR	**Chiang Mai Arr**	**22.94**	**259**	P	**P**	**15 38 16.2**	**+1.1**
TOLI2	**Tolitoli**	**23.35**	**185**	P	**P**	**15 38 18.8**	**-0.2**
TOLI2				IAmb	IAmb	15 38 25.9	
	comp=Z,27nm,0.9s						
TOLI2	**Tolitoli**	**23.35**	**185**	P	**P**	**15 38 19.2**	**+0.3**
GUMO	**Guam**	**23.53**	**113**	LR	LR	15 45 36.4	
	comp=Z,44nm,21.9s,baz=344,slow=31						
GTOI	**Gorontalo**	**23.74**	**179**	P	**P**	**15 38 22.2**	**-0.3**
	comp=Z,2µmcomp=Z,170nm,1.1s						
KMSI	**Cibinong**	**23.83**	**177**	P	**P**	**15 38 25.8**	**+2.5**
	comp=Z,998nmcomp=Z,114nm,0.9s						
MRSI	**Marisa**	**23.91**	**182**	P	**P**	**15 38 26.1**	**+2.1**
	comp=Z,2µmcomp=Z,150nm,0.6s						
TNTI	**Ternate**	**24.02**	**169**	P	**P**	**15 38 26.0**	**+1.0**
	comp=Z,2µmcomp=Z,149nm,1.7s						
TNTI	**Ternate**	**24.02**	**169**	P	**P**	**15 38 25.8**	**+0.7**
SBUM	**Sibu**	**24.18**	**206**	P	**P**	**15 38 27.0**	**+0.6**
MPSI	**Mapaga**	**24.20**	**187**	P	**P**	**15 38 27.7**	**+1.1**
	comp=Z,382nmcomp=Z,20nm,1.1s						
GTA	**Gaotai**	**24.38**	**313**	⇑P	**P**	**15 38 28.3**	**0.0**
GTA				pP	sP	15 38 55.5	-4.9
GTA				PP	**PnPn**	**15 39 09.6**	**+5.1**
GTA				S	**S**	**15 42 35.8**	**-5.3**
GTA				pmax	pmax		
	comp=Z,18nm,1.2s						
GTA				pmax	pmax		
	comp=Z,81nm,7.6s						
GTA				LR	LR		
	comp=Z,220nm,14.5s						
GTA				LR	LR		
	comp=Z,150nm,13.8s						
HIA	**Hailar**	**24.82**	**355**	P	**P**	**15 38 30.0**	**-2.0**
APSI	**Ampana**	**25.30**	**183**	P	**P**	**15 38 37.4**	**+0.8**
	comp=Z,1µmcomp=Z,118nm,1.2s						
ASAJ	**Asahikawa**	**25.39**	**35**	P	**P**	**15 38 36.4**	**-0.9**
	comp=Z,5.5nm,0.4s,baz=234,slow=10,SNR=17						
LUWI	**Luwuk**	**25.41**	**180**	P	**P**	**15 38 39.7**	**+2.1**
	comp=Z,1µmcomp=Z,126nm,1.1s						
LBMI	**Labuha**	**25.43**	**169**	P	**P**	**15 38 38.9**	**+1.1**
	comp=Z,1µmcomp=Z,82nm,0.9s						
KLR	**Kul'dur**	**25.66**	**14**	P	**P**	**15 38 39.0**	**-0.6**
	comp=Z,3.4nm,0.7s,baz=229,slow=6.2,SNR=14						
KSM	**Kuching**	**25.88**	**210**	P	**P**	**15 38 43.0**	**+1.1**
ULN	**Ulaanbaatar**	**26.42**	**336**	P	**P**	**15 38 45.2**	**-1.5**
ULN				IAmb	IAmb	15 38 47.8	
	comp=Z,20nm,0.8s						
MTKI	**Muara Teweh, K**	**26.43**	**198**	P	**P**	**15 38 47.9**	**+1.1**
	comp=Z,63nm,1.0s						
SWI	**Sorong**	**26.55**	**161**	P	**P**	**15 38 48.4**	**+0.5**
	comp=Z,38nm,0.9s						
SIJI	**Sorong**	**26.55**	**161**	P	**P**	**15 38 47.3**	**-0.7**
	comp=Z,26nm,0.9s,baz=352,slow=9.3,SNR=12						
SANI	**Sanana**	**26.59**	**173**	P	**P**	**15 38 48.0**	**-0.3**
	comp=Z,888nmcomp=Z,95nm,0.8s						
SANI	**Sanana**	**26.59**	**173**	P	**P**	**15 38 48.0**	**-0.3**
SONM	**Songino Array**	**26.64**	**335**	P	**P**	**15 38 48.4**	**-0.2**
	comp=Z,32nm,0.8s,baz=148,slow=9.4,SNR=122						
SONM				ScP	**ScP**	**15 45 41.0**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=131,slow=4.0,SNR=4.5						
SONM				LR	LR	15 49 58.1	
	comp=Z,151nm,18.5s,baz=158,slow=38						
SONM	**Songino Array**	**26.64**	**335**	P	**P**	**15 38 48.1**	**-0.5**
SONM				IAmb	IAmb	15 38 49.8	
	comp=Z,37nm,0.8s						
STKI	**Sintang**	**26.65**	**206**	P	**P**	**15 38 50.4**	**+1.6**
	comp=Z,3µmcomp=Z,40nm,1.1s						
YSS	**Yuzh-Sakhalins**	**27.50**	**30**	P	**P**	**15 38 55.9**	**-0.3**
TTSI	**Tana Toraja**	**27.55**	**186**	P	**P**	**15 38 57.7**	**+0.9**
	comp=Z,653nmcomp=Z,16nm,1.0s						
SHL	**Shillong**	**27.96**	**279**	P	**P**	**15 39 00.6**	**-0.1**
SHL				IAmb	IAmb	15 39 07.1	
	comp=Z,28nm,1.0s						
LSA	**Lhasa**	**28.55**	**287**	P	**P**	**15 39 08.3**	**+2.1**
LSA				S	**S**	**15 43 52.0**	**+4.2**
LSA				sS	**sS**	**15 44 26.6**	**+1.9**
LSA				pmax	pmax		
	comp=Z,120nm,2.1s						
LSA	**Lhasa**	**28.55**	**287**	P	**P**	**15 39 06.2**	**0.0**
LSA				IAmb	IAmb	15 39 09.2	
	comp=Z,20nm,0.8s						
FAKI	**Fak Fak**	**28.79**	**160**	P	**P**	**15 39 08.5**	**+0.6**
	comp=Z,51nm,1.2s						
FAKI	**Fak Fak**	**28.79**	**160**	P	**P**	**15 39 07.9**	**0.0**
FAKI				IAmb	IAmb	15 39 09.4	
	comp=Z,54nm,1.1s						
FAKI	**Fak Fak**	**28.79**	**160**	P	**P**	**15 39 08.5**	**+0.6**
BBKI	**Banjar Baru**	**28.86**	**197**	P	**P**	**15 39 09.3**	**+0.8**
	comp=Z,1µmcomp=Z,20nm,1.4s						
IPM	**Ipoh**	**28.88**	**230**	P	**P**	**15 39 10.0**	**+1.3**
KAPI	**Kappang**	**29.50**	**186**	P	**P**	**15 39 13.4**	**-0.8**
	comp=Z,2.2nm,0.3s,baz=49,slow=4.4,SNR=4.6						
KAPI	**Kappang**	**29.50**	**186**	P	**P**	**15 39 13.8**	**-0.3**
KAPI				IAmb	IAmb	15 39 40.3	
	comp=Z,16nm,1.2s						
BKSI	**Bulukumba**	**29.77**	**185**	P	**P**	**15 39 17.9**	**+1.4**
	comp=Z,8.1nm,1.0s						
TLY	**Talaya**	**30.82**	**337**	P	**P**	**15 39 25.4**	**-0.1**
TLY				IAmb	IAmb	15 39 26.6	
	comp=Z,25nm,0.7s						
TAPN	**Taplejung**	**31.58**	**283**	*e*P	**P**	**15 39 34.5**	**+1.7**
ODAN	**Odare**	**31.89**	**282**	*e*P	**P**	**15 39 37.0**	**+1.5**
JMBI	**JAMBI**	**31.93**	**218**	P	**P**	**15 39 36.8**	**+1.2**
	comp=Z,122nm,0.9s						
JAY	**Jayapura**	**32.04**	**145**	LR	LR	15 49 33.9	
	comp=Z,52nm,20.6s,baz=325,slow=30						
MNSI	**Mandailing Nat**	**32.54**	**227**	P	**P**	**15 39 41.9**	**+0.9**
	comp=Z,53nm,1.1s						
RAMN	**Ramite**	**32.59**	**282**	*e*P	**P**	**15 39 43.3**	**+1.7**
	comp=Z,14nm,0.4s						
JIRN	**Jiri**	**32.91**	**283**	*e*P	**P**	**15 39 46.0**	**+1.4**
PPI	**Padang Panjang**	**32.95**	**224**	P	**P**	**15 39 45.7**	**+1.1**
	comp=Z,25nm,1.2s						
MMRI	**Maumere**	**32.95**	**181**	P	**P**	**15 39 45.7**	**+1.2**
	comp=Z,133nm,1.2s						
MMRI	**Maumere**	**32.95**	**181**	P	**P**	**15 39 44.7**	**+0.1**
EDFI	**Ende, Flores**	**33.08**	**182**	P	**P**	**15 39 45.6**	**-0.2**
	comp=Z,528nmcomp=Z,54nm,1.2s						
GUN	**Gumba**	**33.17**	**284**	*e*P	**P**	**15 39 47.2**	**+0.4**
BLJI	**Banyuglugur**	**33.29**	**197**	P	**P**	**15 39 48.2**	**+0.8**
	comp=Z,20nm,0.9s						
NGJI	**Ngawi**	**33.55**	**201**	P	**P**	**15 39 51.8**	**+2.1**
	comp=Z,21nm,0.4s						
PKIN	**Phulchoki**	**33.62**	**283**	*e*P	**P**	**15 39 51.3**	**+0.7**
KKN	**Kakani**	**33.71**	**284**	*e*P	**P**	**15 39 52.3**	**+0.9**
LHSI	**Lahat**	**33.82**	**216**	P	**P**	**15 39 54.0**	**+1.9**
	comp=Z,62nm,0.9s						
DMN	**Daman**	**33.87**	**283**	*e*P	**P**	**15 39 53.9**	**+1.1**
KLSI		**33.92**	**214**	P	**P**	**15 39 54.8**	**+1.8**
MASI	**Maura Aman, Be**	**33.96**	**219**	P	**P**	**15 39 55.5**	**+2.1**
	comp=Z,239nm,1.1s						
KLI	**Kotabumi**	**34.01**	**213**	P	**P**	**15 39 54.3**	**+0.6**
	comp=Z,241nm,0.9s						
MDSI	**Maura Dua**	**34.03**	**215**	P	**P**	**15 39 54.7**	**+0.8**
	comp=Z,461nmcomp=Z,48nm,1.1s						
SOEI	**Soe**	**34.10**	**177**	P	**P**	**15 39 53.5**	**-1.1**
	comp=Z,52nm,0.9s						
SOEI	**Soe**	**34.10**	**177**	P	**P**	**15 39 53.1**	**-1.5**
KSI	**Kapahiang**	**34.18**	**218**	P	**P**	**15 39 56.6**	**+1.3**
	comp=Z,2µmcomp=Z,84nm,0.9s						
BLSI	**Bandar Lampung**	**34.25**	**212**	P	**P**	**15 39 57.2**	**+1.4**
	comp=Z,120nm,0.8s						
GKN	**Gorkha**	**34.27**	**284**	*e*P	**P**	**15 39 56.8**	**+0.7**
	comp=Z,20nm,0.5s						
SISI	**Saibi**	**34.45**	**225**	P	**P**	**15 39 57.7**	**+0.1**
	comp=Z,46nm,1.5s						
WMQ	**Urumqi**	**34.47**	**313**	*e*P	**P**	**15 39 58.9**	**+1.4**
WMQ				pP	pP	15 40 18.8	-0.3
WMQ				pmax	pmax		
	comp=Z,19nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,130nm,4.1s						
LEM	**Lembang**	**34.47**	**207**	P	**P**	**15 39 59.8**	**+1.9**
	comp=Z,30nm,1.0s						
SBJI	**Serang**	**34.49**	**210**	P	**P**	**15 39 59.5**	**+1.6**
	comp=Z,186nm,0.5s						
BATI	**Baumata**	**34.52**	**178**	P	**P**	**15 39 56.8**	**-1.4**
	comp=Z,47nm,1.0s						
LWLI	**Liwa**	**34.54**	**214**	P	**P**	**15 39 59.4**	**+0.9**
	comp=Z,101nm,0.8s						
DBJI	**Dramaga**	**34.60**	**209**	P	**P**	**15 40 01.5**	**+2.7**
	comp=Z,18µmcomp=Z,115nm,1.0s						
KASI	**Kota Agung**	**34.75**	**213**	P	**P**	**15 40 00.3**	**+0.2**
	comp=Z,57nm,0.9s						
DANN	**Dangsing**	**35.02**	**285**	*e*P	**P**	**15 40 03.9**	**+1.1**
KOLN	**Koldanda**	**35.20**	**284**	*e*P	**P**	**15 40 05.2**	**+1.0**
MANU	**Manus Island**	**35.61**	**134**	P	**P**	**15 40 07.7**	**+0.1**
PYUN	**Piuthan**	**35.71**	**285**	*e*P	**P**	**15 40 10.0**	**+1.4**
YAK	**Yakutsk**	**37.79**	**5**	P	**P**	**15 40 24.4**	**-1.1**
MTN	**Manton Dam**	**38.02**	**167**	P	**P**	**15 40 27.2**	**-0.7**
KDU	**Kakadu**	**38.18**	**165**	P	**P**	**15 40 30.7**	**+1.5**
PETK	**Petropavlovsk-**	**38.80**	**33**	P	**P**	**15 40 33.1**	**-1.0**
	comp=Z,2.5nm,0.8s,baz=265,slow=13,SNR=4.0						
PETK				LR	LR	15 57 30.5	
	comp=Z,35nm,19.0s,baz=247,slow=38						
PETK	**Petropavlovsk-**	**38.80**	**33**	P	**P**	**15 40 33.9**	**-0.2**
MK31	**Makanchi Array**	**39.10**	**315**	P	**P**	**15 40 36.3**	**-0.5**
MK31				IAmb	IAmb	15 40 37.9	
	comp=Z,12nm,0.9s						
MKAR	**Makanchi Array**	**39.10**	**315**	P	**P**	**15 40 36.1**	**-0.6**
	comp=Z,10.0nm,0.8s,baz=101,slow=7.9,SNR=71						
MKAR				PcP	**PcP**	**15 42 44.5**	**-0.2**
	comp=Z,1.9nm,0.6s,baz=88,slow=6.1,SNR=4.4						
MKAR	**Makanchi Array**	**39.10**	**315**	P	**P**	**15 40 36.3**	**-0.5**
MKAR				PcP	**PcP**	**15 42 44.9**	**+0.2**
MAKZ	**Makanchi**	**39.31**	**315**	P	**P**	**15 40 38.4**	**-0.1**
MAKZ				IAmb	IAmb	15 40 39.7	
	comp=Z,18nm,0.8s						
MAKZ				PcP	**PcP**	**15 42 45.2**	**-0.1**
KNRA	**Kununurra**	**40.38**	**171**	P	**P**	**15 40 47.0**	**-0.5**
KNRA	**Kununurra**	**40.38**	**171**	P	**P**	**15 40 47.0**	**-0.5**
RABL	**Rabaul**	**40.41**	**131**	P	**P**	**15 40 48.6**	**+0.7**
RABL				IAmb	IAmb	15 41 17.8	

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                comp=Z,20nm,1.0s
ZAA0  Zalesovo Array     40.75 326  P      P       15 40 48.8 -1.4
ZAA0                                IAmb   IAmb    15 40 50.2
                comp=Z,15nm,0.7s
ZALV  Zalesovo Beam      40.75 326  P      P       15 40 48.9 -1.3
                comp=Z,18nm,0.7s,baz=110,slow=8.1,SNR=66
ZALV                                PcP    PcP     15 42 49.1 -0.7
                comp=Z,1.1nm,0.5s,baz=96,slow=5.0,SNR=1.8
ZALV                                LR     LR      15 59 02.7
                comp=Z,70nm,18.1s,baz=122,slow=38
KSH   Kashi              41.92 302  P      P       15 41 04.0 +3.8
KSH                                 pP     pP      15 41 25.8 +3.3
KSH                                 S      S       15 47 16.8 +5.2
KSH                                 SS     SS      15 50 22.0 +0.4
KSH                                 pmax   pmax
                comp=Z,22nm,1.0s
KSH                                 pmax   pmax
                comp=Z,160nm,5.2s
KSH                                 LR     LR
                comp=Z,180nm,5.7s
KSH                                 LR     LR
                comp=Z,170nm,6.4s
KSH                                 LR     LR
                comp=Z,150nm,6.2s
FITZ  Fitzroy Crossi     42.45 176  P      P       15 41 04.0 -0.5
KURK  Kurchatov          42.76 319  P      P       15 41 05.8 -0.8
KURK                                IAmb   IAmb    15 41 07.4
                comp=Z,14nm,0.8s
COEN  Coen               43.13 150  P      P       15 41 11.1 +1.1
COEN  Coen               43.13 150  P      P       15 41 10.9 +0.9
FRU1  Bishkek            43.37 307  P      P       15 41 11.9 +0.1
FRU1                                IAmb   IAmb    15 41 14.5
                comp=Z,24nm,1.1s
AAK   Ala-Archa          43.45 307  P      P       15 41 12.2 -0.3
AAK                                 PcP    PcP     15 42 59.4 +0.2
NIL   Nilore             43.86 294  P      P       15 41 16.5 +0.7
NIL                                 IAmb   IAmb    15 41 17.6
                comp=Z,28nm,1.0s
DRK   Karamyk            45.13 302  P      P       15 41 26.7 +0.5
DRK                                 IAmb   IAmb    15 41 28.8
                comp=Z,27nm,1.3s
WB0   Warramunga Arr     45.45 165  P      P       15 41 28.2 -0.3
MBWA  Marble Bar         45.50 184  P      P       15 41 28.6 -0.2
WRAB  Tennant Creek      45.60 165  P      P       15 41 29.8 +0.1
WRAB  Tennant Creek      45.60 165  P      P       15 41 30.4 +0.7
WRA   Warramunga Arr     45.61 165  P      P       15 41 30.5 +0.8
                comp=Z,53nm,0.9s,baz=347,slow=8.5,SNR=165
WRA                                 LR     LR      16 04 15.0
                comp=Z,11nm,19.2s,baz=115,slow=41
WRA   Warramunga Arr     45.61 165  P      P       15 41 29.1 -0.6
WB2   Warramunga Arr     45.61 165  P      P       15 41 29.7  0.0
WR0   Warramunga Arr     45.67 164  P      P       15 41 30.5 +0.3
PSA00 Pilbara Seismi     45.90 184  P      P       15 41 31.5 -0.5
PSA00 Pilbara Seismi     45.90 184  P      P       15 41 31.7 -0.3
BTK   Batken             45.92 303  P      P       15 41 32.1 -0.1
GAR   Garm               46.26 301  P      P       15 41 35.0 +0.1
GAR                                 PcP    PcP     15 43 09.4 +0.5
KKAR  Karatay Array      46.41 307  P      P       15 41 36.0 +0.1
KKAR                                PcP    PcP     15 43 09.5 +0.3
CHGR  Chuyangaron        47.16 301  P      P       15 41 42.1 +0.3
CHGR                                IAmb   IAmb    15 41 43.5
                comp=Z,32nm,1.3s
CHGR                                PcP    PcP     15 43 12.8 +0.7
TIXI  Tiksi              47.29   3  P      P       15 41 40.1 -2.1
TIXI                                IAmb   IAmb    15 41 42.2
                comp=Z,19nm,1.1s
KBL   Kabul              47.31 295  P      P       15 41 44.1 +0.8
KBL                                 IAmb   IAmb    15 41 45.6
                comp=Z,27nm,0.9s
MTSU  Mount Surprise     47.32 152  P      P       15 41 44.5 +1.4
QIS   Mount Isa          47.71 158  P      P       15 41 47.0 +0.9
BRVK  Borovoye           48.40 320  P      P       15 41 50.5 -0.6
BRVK                                IAmb   IAmb    15 41 51.9
                comp=Z,12nm,0.9s
AS31  Alice Springs      49.10 166  P      P       15 41 56.6 -0.2
ASAR  Alice Springs      49.10 166  P      P       15 41 57.9 +1.1
                comp=Z,11nm,0.8s,baz=352,slow=8.0,SNR=124
ASAR                                LR     LR      16 04 32.9
                comp=Z,36nm,20.0s,baz=298,slow=38
ASAR  Alice Springs      49.10 166  P      P       15 41 57.3 +0.5
NRIK  Noril'sk           49.46 344  P      P       15 41 58.2 -0.7
                comp=Z,14nm,0.8s,baz=128,slow=6.1,SNR=11
NRIK                                LR     LR      16 05 40.3
                comp=Z,94nm,18.1s,baz=126,slow=39
NRIK  Noril'sk           49.46 344  P      P       15 41 57.7 -1.2
NRIK                                IAmb   IAmb    15 41 58.9
                comp=Z,17nm,0.9s
WRKA  Warakurna          49.55 173  P      P       15 42 00.5 +0.3
CTA   Charters Tower     49.89 151  P      P       15 42 03.7 +0.9
                comp=Z,15nm,1.0s,baz=325,slow=9.3,SNR=9.9
CTAO  Charters Tower     49.89 151  P      P       15 42 04.3 +1.5
CTAO  Charters Tower     49.89 151  P      P       15 42 04.2 +1.4
MEEK  Meekatharra        51.01 185  P      P       15 42 11.4 +0.2
HRA   Herat              52.92 296  P      P       15 42 26.2 +0.5
HRA                                 IAmb   IAmb    15 42 27.6
                comp=Z,12nm,1.4s
OOD   Oodnadatta         53.48 166  P      P       15 42 29.6 +0.2
ABKAR Akbulak array      54.23 314  P      P       15 42 34.1 -0.6
ABKAR Akbulak array      54.23 314  P      P       15 42 34.2 -0.5
ABKAR                               IAmb   IAmb    15 42 35.8
                comp=Z,13nm,0.9s
INKA  Innaminka          54.77 160  P      P       15 42 40.0 +1.2
QLP   Quilpie            54.88 156  P      P       15 42 40.1 +0.6
FORT  Forrest            55.22 174  P      P       15 42 42.6 +0.7
FORT  Forrest            55.22 174  P      P       15 42 42.5 +0.6
MULG  Mulgathing         55.56 168  P      P       15 42 45.0 +0.7
ARU   Arti               55.70 323  P      P       15 42 44.2 -1.0
ARU                                 IAmb   IAmb    15 42 45.5
                comp=Z,20nm,1.1s
GEYT  Alibeck            55.86 300  P      P       15 42 47.3 +0.6
                comp=Z,6.3nm,0.8s,baz=66,slow=4.9,SNR=7.6
GEYT                                LR     LR      16 11 17.4
                comp=Z,29nm,18.6s,baz=215,slow=41
GYA0B ALIBECK ARRAY      55.86 300  P      P       15 42 47.4 +0.7
LCRK  Leigh Creek        56.63 164  P      P       15 42 52.7 +0.7
NWAO  Narrogin (SRO)     57.37 186  LR     LR      16 08 15.3
                comp=Z,25nm,18.2s,baz=61,slow=36
BBOO  Buckleboo          58.40 167  P      P       15 43 05.7 +1.3
STKA  Stephens Creek     58.90 161  P      P       15 43 08.3 +0.5
                comp=Z,4.3nm,0.7s,baz=340,slow=7.0,SNR=8.5
STKA  Stephens Creek     58.90 161  P      P       15 43 08.2 +0.3
CMSA  Cobar Meteorol     59.90 157  P      P       15 43 15.9 +1.1
DZM   Mont Dzumac        62.82 134  P      P       15 43 35.9 +1.2
                comp=Z,2.7nm,0.8s,baz=221,slow=20,SNR=1.6
DZM   Mont Dzumac        62.82 134  P      P       15 43 33.9 -0.9
DZM                                 IAmb   IAmb    15 44 01.9
                comp=Z,16nm,1.4s
TTA   Tatalina           64.50  30  P      P       15 43 46.5 +1.2
J20K  Nowinta River      65.23  29  P      P       15 43 50.4 +0.5
IMAR  Indian Mountai     65.25  27  P      P       15 43 51.7 +1.8
K20K  Telida             65.35  30  P      P       15 43 52.5 +1.8
K20K                                IAmb   IAmb    15 44 01.8
                comp=Z,15nm,1.5s
KLMR  Klimovskoe         65.64 328 eP      P       15 43 49.4 -3.2
KLMR                                AMP            15 43 54.3
                comp=Z,27nm,1.2s
KLMR                               epP     pP      15 44 15.3 -0.8
H21K  Melozitna Rive     65.66  27  P      P       15 43 54.0 +1.3
SOCY  Socotra            65.85 273  P      P       15 43 54.5 -0.3
SOCY                                IAmb   IAmb    15 44 11.3
                comp=Z,14nm,1.1s
KBZ   Khabaz             66.39 309  P      P       15 43 57.9 +0.3
                comp=Z,5.4nm,0.9s,baz=196,slow=5.3,SNR=3.6
SPU   Mount Spurr        66.55  32  P      P       15 43 58.7 +0.2
KDAK  Kodiak Island      66.81  35  LR     LR      16 15 37.0
                comp=Z,50nm,18.4s,baz=251,slow=38
KDAK  Kodiak Island      66.81  35  P      P       15 43 59.8 -0.3
H23K  Yukon River        66.98  27  P      P       15 44 02.5 +1.5
H23K                                IAmb   IAmb    15 44 04.3
                comp=Z,17nm,1.4s
I23K  Minto, Yukon-K     67.16  27  P      P       15 44 04.3 +2.2
I23K                                IAmb   IAmb    15 44 31.8
                comp=Z,9.0nm,1.1s
NEA2  Nenana             67.37  28  P      P       15 44 03.1 -0.4
NEA2                                IAmb   IAmb    15 44 05.4
                comp=Z,15nm,1.3s
MDM   Murphy Dome        67.66  27  P      P       15 44 05.0 -0.4
MDM                                 IAmb   IAmb    15 44 08.1
                comp=Z,24nm,1.4s
RND   Reindeer           67.67  29  P      P       15 44 05.7 +0.2
RND                                 IAmb   IAmb    15 44 07.1
                comp=Z,14nm,1.2s
ILAR  Eielson Array      68.26  27  P      P       15 44 09.2 +0.1
                comp=Z,0.3nm,0.6s,baz=283,slow=5.9,SNR=6.9
DHY   Denali Highway     68.39  29  P      P       15 44 10.1  0.0
BMAR  Burnt Mountain     68.64  24  P      P       15 44 12.9 +1.5
SCM   Sheep Creek Mo     68.66  31  P      P       15 44 12.4 +0.6
SCM                                 IAmb   IAmb    15 44 28.0
                comp=Z,25nm,1.2s
M24K  Tolsona, Glenn     69.14  30  P      P       15 44 15.5 +0.8
KEV   Kevo               69.20 338  P      P       15 44 14.6 -0.2
KEV                                 IAmb   IAmb    15 44 16.0
                comp=Z,17nm,0.8s
RIDG  Independent Ri     69.35  28  P      P       15 44 16.8 +0.8
RIDG                                IAmb   IAmb    15 44 40.5
                comp=Z,14nm,1.1s
KLU   Klutina            69.39  31  P      P       15 44 16.8 +0.5
KLU                                 IAmb   IAmb    15 44 42.3
                comp=Z,14nm,1.3s
RAYN  Ar Rayn            69.61 287  P      P       15 44 17.4 -0.9
SCRK  Sand Creek         69.67  28  P      P       15 44 19.0 +1.0
DOT   Dot Lake           69.71  28  P      P       15 44 18.5 +0.3
ARCES ARCESS Array B     69.76 338  P      P       15 44 17.8 -0.5
                comp=Z,9.8nm,1.0s,baz=51,slow=5.3,SNR=11
ARCES                               LR     LR      16 18 34.5
                comp=Z,12nm,21.7s,baz=250,slow=39
ARCES ARCESS Array B     69.76 338  P      P       15 44 18.3  0.0
ARCES                               IAmb   IAmb    15 44 19.2
                comp=Z,18nm,1.1s
N25K  Chitina, Valde     69.98  31  P      P       15 44 19.0 -0.9
N25K                                IAmb   IAmb    15 44 46.9
                comp=Z,18nm,1.4s
MENT  Mentasta           70.04  29  P      P       15 44 20.8 +0.6
GLB   Gilahina Butte     70.39  31  P      P       15 44 22.3  0.0
M26K  Nabesna, AK        70.50  30  P      P       15 44 24.1 +1.1
M26K                                IAmb   IAmb    15 44 24.9
                comp=Z,9.7nm,0.9s
VRDI  Verde Repeater     70.61  31  P      P       15 44 24.1 +0.2
VRDI                                IAmb   IAmb    15 44 29.3
                comp=Z,17nm,1.3s
EGAK  Eagle              70.64  27  P      P       15 44 23.9 +0.1
L27K  Beaver Creek,      70.84  29  P      P       15 44 25.4 +0.3
L27K                                IAmb   IAmb    15 44 27.4
                comp=Z,19nm,1.5s
BCAR  Beaver Creek A     70.86  29  P      P       15 44 26.4 +1.3
M27K  Edge Creek, AK     71.02  29  P      P       15 44 26.4 +0.2
DAWY  Dawson             71.59  27  P      P       15 44 28.9 -0.6
CTGM  Chitina Glacie     71.67  31  P      P       15 44 31.2 +0.9
CTGM                                IAmb   IAmb    15 44 32.3
                comp=Z,16nm,0.9s
FIA1  FINESS Array S     71.88 330  P      P       15 44 30.8 -0.5
FIA1                                IAmb   IAmb    15 44 31.4
                comp=Z,18nm,0.8s
FINES FINESS Array B     71.88 330  P      P       15 44 30.7 -0.5
                comp=Z,11nm,0.7s,baz=61,slow=5.7,SNR=56
FINES                               LR     LR      16 20 28.7
                comp=Z,107nm,18.9s,baz=76,slow=39
FINES FINESS Array B     71.88 330  P      P       15 44 30.9 -0.3
EPYK  Eagle Plains       71.91  25  P      P       15 44 32.0 +0.6
EPYK                                IAmb   IAmb    15 44 33.1
                comp=Z,8.2nm,0.8s
INK   Inuvik             72.38  22  P      P       15 44 34.7 +0.6
INK                                 IAmb   IAmb    15 44 36.0
                comp=Z,8.9nm,0.9s
AKASG Malin Array Be     73.57 319  P      P       15 44 40.7 -0.8
                comp=Z,1.6nm,0.5s,baz=62,slow=6.4,SNR=6.7
AKASG Malin Array Be     73.57 319  P      P       15 44 40.0 -1.5
AKBB  Malin Array Si     73.57 319  P      P       15 44 40.9 -0.6
BRTR  Keskin Array B     74.12 307  P      P       15 44 45.0 -0.1
                comp=Z,5.8nm,0.9s,baz=130,slow=3.7,SNR=10.0
BRTR  Keskin Array B     74.12 307  P      P       15 44 45.0 -0.1
EUNU  Eureka             74.45   5  P      P       15 44 45.1 -1.1
WHY   Whitehorse         74.75  30  P      P       15 44 48.9 +0.6
WHY                                 IAmb   IAmb    15 44 50.8
                comp=Z,14nm,1.2s
BUR08 Bucovina Ar. S     77.11 317  P      P       15 45 00.6 -1.4
BURAR Bucovina Array     77.11 317  P      P       15 45 00.8 -1.1
NEEM  North Greenlan     78.20 359 i P     P       15 45 08.1 +0.4
NEEM                                IAmb   IAmb    15 45 08.6
                comp=Z,10nm,0.8s
NC405 NORSAR Array S     78.35 332  P      P       15 45 06.8 -1.7
KOLS  Kolonicke sedl     78.41 319 eP      P       15 45 09.6 +0.6
NC303 NORSAR Array S     78.44 333  P      P       15 45 08.3 -0.6
NC303                               IAmb   IAmb    15 45 09.4
                comp=Z,20nm,1.1s
NB201 NORSAR Array S     78.56 332  P      P       15 45 08.2 -1.4
NB2   NORSAR Subarra     78.59 332  P      P       15 45 08.4 -1.4
                comp=Z,2.6nm,0.6s,baz=58,slow=5.3
NOA   NORSAR Array B     78.59 332  P      P       15 45 08.9 -0.9
                comp=Z,8.9nm,0.9s,baz=57,slow=5.4,SNR=16
NOA                                 LR     LR      16 22 50.4
                comp=Z,41nm,18.9s,baz=250,slow=38
NC204 NORSAR Array S     78.66 333  P      P       15 45 09.4 -0.9
LANS  Liptovska Anna     79.99 320 eP      P       15 45 19.2 +1.5
HG4B  Hotspring          80.16  37  P      P       15 45 18.6 +0.2
VTS   Vitosha            80.37 312  P      P       15 45 20.0  0.0
VTS                                 IAmb   IAmb    15 45 21.6
                comp=Z,10nm,0.8s
VYHS  Vyhne              80.65 319 eP      P       15 45 22.5 +1.3
MORC  Moravsky Berou     80.83 321 eP      P       15 45 22.2  0.0
RPZ   Rata Peaks         81.07 147  P      P       15 45 23.4 +0.1
RPZ                                 IAmb   IAmb    15 45 25.2
                comp=Z,26nm,1.0s
JAVC  Velka Javorina     81.18 320 eP      P       15 45 25.6 +1.5
DPC   Dobruska-Polom     81.27 322 eP      P       15 45 25.0 +0.5
VRAC  Vranov             81.60 321 eP      P       15 45 26.7 +0.5
MODS  Modra-Piesok       81.63 319 eP      P       15 45 27.0 +0.6
KRUC  Moravsky           81.83 320 eP      P       15 45 27.6 +0.2
DIVS  Divibare           81.88 315  P      P       15 45 26.7 -1.2
YKA   Yellowknife Ar     82.10  23  P      P       15 45 28.1 -0.4
                comp=Z,5.1nm,0.8s,baz=319,slow=4.1,SNR=7.6
SUMG  Summit             82.32 354 i P     P       15 45 29.8 -0.2
SUMG                                IAmb   IAmb    15 45 31.5
                comp=Z,21nm,1.1s
SUMG  Summit             82.32 354  P      P       15 45 29.3 -0.7
SUMG                                IAmb   IAmb    15 45 31.2
                comp=Z,22nm,1.1s
BRG   Berggiesshubel     82.34 323 eP      P       15 45 29.7 -0.3
                comp=Z,5.0nm,1.0s,baz=59,slow=5.1
BRG   Berggiesshubel     82.34 323 eP      P       15 45 30.4 +0.3
BRG                                 Amp            15 45 33.1
                comp=Z,5.9nm,1.0s
PRU   Pruhonice          82.45 322 eP      P       15 45 31.7 +1.1
CLL   Collm              82.64 323 i P     P       15 45 31.4 -0.2
                comp=Z,9.0nm,0.9s
CLL                                i pPcP          15 46 02.3
CLL   Collm              82.64 323 eP      P       15 45 30.8 -0.9
                comp=Z,5.4nm,0.8s,baz=59,slow=5.1
CLL                                epP     sP      15 46 01.9 -4.4
CLL   Collm              82.64 323  P      P       15 45 30.7 -0.9
CLL                                 IAmb   IAmb    15 45 34.0
                comp=Z,7.8nm,0.9s
FBE   Freiberg           82.64 323 eP      P       15 45 32.7 +1.1
                comp=Z,7.3nm,0.8s,baz=59,slow=5.1
FBE                                epP     sP      15 46 02.9 -3.4
CONA  Conrad Observa     82.68 320 eP      P       15 45 33.1 +1.1
                comp=Z,8.3nm,1.4s
PDG   Podgorica          83.11 314  P      P       15 45 34.8 +0.6
PDG                                 IAmb   IAmb    15 45 35.9
                comp=Z,9.3nm,0.7s
CKRC  Cesky Krumlov      83.15 321 eP      P       15 45 34.8 +0.5
ARSA  Arzberg            83.20 319 eP      P       15 45 35.5 +0.9
                comp=Z,7.4nm,1.2s
KHC   Kasperske Hory     83.42 321 eP      P       15 45 36.1 +0.4
GEC2  GERESS Array S     83.49 321 eP      P       15 45 36.4 +0.3
                comp=Z,5.8nm,0.9s,baz=59,slow=5.1
GEC2  GERESS Array S     83.49 321  P      P       15 45 35.7 -0.4
GEC2                                IAmb   IAmb    15 45 37.3
                comp=Z,10nm,1.0s
GERES GERESS Array B     83.49 321  P      P       15 45 36.2 +0.1
                comp=Z,5.1nm,0.8s,baz=66,slow=4.5,SNR=31
GERES                               LR     LR      16 27 55.8
                comp=Z,53nm,19.4s,baz=352,slow=39
GERES GERESS Array B     83.49 321  P      P       15 45 35.9 -0.3
GUNZ  Gunzen             83.49 323 eP      P       15 45 36.3 +0.2
                comp=Z,2.9nm,0.8s,baz=59,slow=5.1
GUNZ                               epP     sP      15 46 07.1 -3.6
WERN  Wernitzgruen       83.50 323 eP      P       15 45 36.6 +0.5
                comp=Z,4.0nm,0.8s,baz=59,slow=5.1
NRDL  Niedersach Rie     83.56 325 eP      P       15 45 37.1 +0.9
                comp=Z,3.2nm,0.8s,baz=59,slow=5.1
MOX   Moxa               83.74 323 eP      P       15 45 38.0 +0.7
                comp=Z,1.9nm,0.8s,baz=59,slow=5.1
SOKA  Soboth             83.78 319 eP      P       15 45 37.9 +0.3
                comp=Z,8.7nm,1.0s
MANZ  Manzenberg         83.81 323 eP      P       15 45 37.2 -0.5
                comp=Z,0.4nm,0.7s,baz=59,slow=5.1
WET   Wettzell           83.81 322 eP      P       15 45 36.8 -0.9
                comp=Z,2.3nm,0.9s,baz=59,slow=5.1
ROTZ  Rotzenmuhle        83.86 322 eP      P       15 45 38.5 +0.6
                comp=Z,0.8nm,0.9s,baz=59,slow=5.1
OBKA  Obir               84.15 319 eP      P       15 45 39.9 +0.3
                comp=Z,9.6nm,0.9s
RJOB  Jochberg           84.57 320 eP      P       15 45 42.6 +0.9
                comp=Z,8.0nm,0.9s,baz=59,slow=5.1
KBA   Koelnbreinsper     84.58 320 eP      P       15 45 42.0 +0.2
                comp=Z,8.6nm,1.1s
IBBN  Ibbenburen         84.87 326 epP     pP      15 46 16.8 +9.2
ZOU   Zoufplan           85.07 319  P      P       15 45 42.5 -1.8
ZOU                                 IAmb   IAmb    15 45 44.2
                comp=Z,7.9nm,1.0s
ABTA  Abfaltersbach      85.24 320 eP      P       15 45 44.5 -0.5
                comp=Z,13nm,1.1s
STAL  STALIGIAL          85.38 319  P      P       15 45 44.3 -1.3
STAL                                IAmb   IAmb    15 45 45.6
                comp=Z,17nm,1.2s
WATA  Walderalm          85.48 320 eP      P       15 45 46.9 +0.6
                comp=Z,3.7nm,0.6s
WTTA  Wattenberg         85.49 320 eP      P       15 45 46.4 +0.1
                comp=Z,14nm,1.0s
BUG   Bochum--Univer     85.61 325 eP      P       15 45 47.2 +0.6
                comp=Z,32nm,1.3s,baz=59,slow=5.1
MOTA  Moosalm            85.75 321 eP      P       15 45 47.5 -0.1
                comp=Z,7.9nm,1.1s
SQTA  Sankt Quirin       85.76 321 eP      P       15 45 47.9 +0.3
                comp=Z,7.9nm,0.8s
ICESG Greenland Ices     85.79 354 i P     P       15 45 47.7 +0.1
ICESG                               IAmb   IAmb    15 45 48.7
                comp=Z,10nm,0.8s
LLLB  Lillooet           86.02  35  P      P       15 45 49.3 +0.5
LLLB                                IAmb   IAmb    15 45 50.5
                comp=Z,24nm,1.3s
FETA  Feichten           86.14 321 eP      P       15 45 49.7 +0.2
                comp=Z,7.4nm,0.9s
KIBK  Kibwezi            86.14 266  P      P       15 45 51.1 +1.0
UBR   Ueberruh           86.14 321 eP      P       15 45 49.6 +0.2
                comp=Z,6.4nm,0.8s,baz=59,slow=5.1
AHRW  Bad Neuenahr-A     86.22 325 eP      P       15 45 50.5 +0.9
                comp=Z,7.7nm,0.9s,baz=59,slow=5.1
TIP   Timpagrande        86.30 312  P      P       15 45 50.5 +0.2
TIP                                 IAmb   IAmb    15 45 51.6
                comp=Z,11nm,1.1s
DAVA  Damuels            86.49 321 eP      P       15 45 51.4 +0.2
                comp=Z,8.8nm,1.1s
BFO   Black Forest       86.79 323 eP      P       15 45 52.6  0.0
                comp=Z,2.8nm,0.8s,baz=59,slow=5.1
MURB  Monte Urbino       87.03 317  P      P       15 45 54.0 +0.1
WLF   Walferdange        87.21 324 dPcP    P       15 45 55.2 +0.7
WLF   Walferdange        87.21 324 eP      P       15 45 55.4 +0.9
                comp=Z,17nm,0.8s,baz=59,slow=5.1
WLF   Walferdange        87.21 324  P      P       15 45 54.2 -0.3
CEL   Celeste            87.33 311  P      P       15 45 55.5  0.0
B06A  Marblemount        87.42  37  P      P       15 45 56.0 +0.5
BMRD  Maredsous          87.56 325 dPcP    P       15 45 56.8 +0.7
EDM   Edmonton           88.61  30  P      P       15 46 02.3 +1.1
B08A  Colville Reser     88.68  36  P      P       15 46 02.2 +0.6
DY2G  Dye2               88.91 356 i P     P       15 46 01.7 -0.9
DY2G                                IAmb   IAmb    15 46 03.6
                comp=Z,20nm,0.9s
E07A  Sunnyside          89.46  38  P      P       15 46 06.4 +1.2
BNI   Bardonecchia       89.58 320  P      P       15 46 05.5 -0.5
BNI                                 IAmb   IAmb    15 46 06.8
                comp=Z,7.9nm,0.8s
D08A  Wollman Farm,      89.68  37  P      P       15 46 07.0 +0.8
HAWA  Hanford            89.73  38  P      P       15 46 07.5 +1.0
NEW   Newport            89.91  35  P      P       15 46 08.0 +0.6
E08A  Dider Farm, El     89.94  38  P      P       15 46 08.7 +1.2
E08A                                IAmb   IAmb    15 46 10.1
                comp=Z,12nm,0.9s
E09A  Wood Farm, Sta     90.43  37  P      P       15 46 10.9 +1.2
PINE  Pine Mountain      90.44  40  P      P       15 46 10.9 +0.8
SSB   Saint Sauveur      90.67 322  P      P       15 46 10.4 -0.6
SSB                                 IAmb   IAmb    15 46 11.8
                comp=Z,12nm,0.9s
VSL   Villasalto         91.04 315  P      P       15 46 12.2 -0.5
BMO   Blue Mountains     91.91  38  P      P       15 46 17.4 +0.6
BMO                                 IAmb   IAmb    15 46 19.1
                comp=Z,11nm,1.1s
MOD   Modoc Plateau      91.92  42  P      P       15 46 18.1 +1.2
MOD                                 IAmb   IAmb    15 46 19.4
                comp=Z,5.7nm,0.8s
FFC   Flin Flon          92.25  24  P      P       15 46 17.0 -0.9
MSO   Missoula           92.49  35  P      P       15 46 19.5 +0.1
MSO                                 IAmb   IAmb    15 46 21.3
                comp=Z,11nm,1.1s
KEST  Kesra              93.12 312  P      P       15 46 22.6 +0.1
                comp=Z,11nm,0.9s,baz=328,slow=2.0,SNR=12
MFID  Camas Ranch        93.64  39  P      P       15 46 24.8  0.0
MFID                                IAmb   IAmb    15 46 27.5
                comp=Z,9.3nm,1.1s
HRY   Holter Researc     93.66  34  P      P       15 46 24.5 -0.3
DLMT  Dillon             94.16  36  P      P       15 46 27.8 +0.6
DLMT                                IAmb   IAmb    15 46 29.6
                comp=Z,9.2nm,1.1s
NVAR  Mina Array Bea     95.21  44  P      P       15 46 33.2 +0.9
                comp=Z,0.5nm,0.6s,baz=302,slow=5.2,SNR=6.3
YHL   Hebgen Lake        95.24  35  P      P       15 46 32.9 +0.5
YHL                                 IAmb   IAmb    15 46 35.5
                comp=Z,8.4nm,1.4s
PDAR  Pinedale Array     97.52  36  P      P       15 46 42.5 -0.1
                comp=Z,0.2nm,0.4s,baz=289,slow=5.6,SNR=1.9
OTAV  Otavalo           147.94  43         PKPdf   15 52 52.7 +1.3
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KRNET ***11*** *15:40:02.6±0.1, 41.°83N×76.°27E, h21^{km}, mb3.0*
SOME ***11*** *15:40:03.1, 41.°85N×76.°25E, h15^{km}*
NNC ***11*** *15:40:03.1±1.2, 41.°85N×76.°28E, h0^{km}, mb3.6, mpv3.5, Error ellipse: s-maj=8.0km s-min=4.9km az=18.0*
KNET ***11*** *15:40:04.9±0.6, 41.°92N×76.°15E, h9^{km}±4^{km}, ml2.1, Error ellipse: s-maj=4.7km s-min=3.3km az=101.0*
ISC 11 15:40:02.3±1.3**, 41.°82N**±0.°04×**76.°29E**±0.°02**, h11**^{km}±10^{km}**, n56, σ0.ˢ83**/101**, 35C-14D, Kyrgyzstan-Xinjiang border region**

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Code  Station Name        Δ°    AZ°    Phase ID          Time     Res
                                     Op      ISC       h  m  s    ISC
ULHL  Ulahol              0.43 356 ⇑P       Pg      15 40 11.1 +0.3
                60nm,0.2s
ULHL                               ⇑S       Sg      15 40 16.8 +0.2
                401nm,0.1s
ULHL  Ulahol              0.43 356 ⇓iP      Pg      15 40 10.9 +0.1
                baz=57
ULHL                               ⇓iS      Sg      15 40 17.0 +0.5
                baz=57
BOOM  Boomskoye usch      0.72 339 ⇑iP      Pg      15 40 15.9 -0.4
                baz=40
BOOM                               ⇑iS      Sg      15 40 25.5 -0.2
                baz=40
TARG  Taragay, Kyrgy      1.14  94 ⇓iP      Pb      15 40 23.8 -0.5
                baz=94
TARG                               ⇓iS      Sb      15 40 39.3 +0.1
                baz=94
TKM2  Tokmak 2            1.21 335 ⇑P       Pb      15 40 25.4 -0.1
                12nm,0.1s,SNR=61
TKM2                               ⇓S       Sg      15 40 42.2 +0.7
                24nm,0.1s
TKM2  Tokmak 2            1.21 335 ⇑P       Pb      15 40 25.3 -0.1
                4.3nm,0.2s
TKM2                               ⇓S       Sg      15 40 41.6 +0.1
                3.6nm,0.3s
TKM2  Tokmak 2            1.21 335 ⇓eP      Pn      15 40 24.7 -0.7
                baz=36
TKM2                               ⇓iS      Sb      15 40 40.6 -0.6
                baz=36
IZV   Izvestkoviy         1.24  11 eP       Pb      15 40 26.1 +0.3
IZV                                eS       Sg      15 40 42.2 -0.1
IZV   Izvestkoviy         1.24  11  P       Pb      15 40 26.1 +0.3
IZV                                 S       Sg      15 40 42.2 -0.1
KST   Kastek              1.25 349 eP       Pg      15 40 26.2 -0.1
                9.1nm,0.1s
KST                                eS       Sg      15 40 42.4 -0.1
                22nm,0.2s
KST   Kastek              1.25 349  P       Pg      15 40 26.2 -0.1
                9.1nm,0.1s
KST                                 S       Sg      15 40 42.4 -0.1
                22nm,0.2s
KST   Kastek              1.25 349 eP       Pg      15 40 26.2 -0.1
                baz=50
KST                                eS       Sg      15 40 42.4 -0.1
                baz=50
KBK   Karagaybulak        1.30 311 ⇓P       Pb      15 40 27.3 +0.3
                17nm,0.1s,SNR=15
KBK                                ⇑S       Sg      15 40 44.8 +0.6
                40nm,0.2s
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KBK	Karagaybulak	1.30	311	⇑*i*P	Pn	15 40 26.0	-0.6
	baz=11						
KBK				⇑*i*S	Sn	15 40 43.4	-0.6
	baz=11						
TNSS	Tian-Shan	1.31	22	P	Pg	15 40 28.0	+0.5
	15nm,0.2s						
TNSS				S	Sg	15 40 45.4	+0.8
	39nm,0.2s						
UCH	Uchtor	1.38	288	⇑P	Pn	15 40 28.2	+0.3
	3.5nm,0.1s,SNR=6.4						
UCH				⇑S	Sg	15 40 47.6	+0.7
	11nm,0.2s						
UCH	Uchtor	1.38	288	⇑*e*P	Pn	15 40 27.9	-0.1
	baz=88						
UCH				⇑*i*S	Sn	15 40 46.3	-0.2
	baz=88						
ANVS	Anan'yevo	1.41	46	⇑*i*P	Pn	15 40 28.2	+0.2
	baz=47						
ANVS				⇑*i*S	Sb	15 40 46.9	+0.2
	baz=47						
MDOK	Medeo	1.46	23	*e*P	Pg	15 40 30.2	-0.1
	14nm,0.3s						
MDOK				*e*S	Sg	15 40 49.0	-0.1
	28nm,0.4s						
MDOK	Medeo	1.46	23	Pg	Pg	15 40 30.2	-0.1
	14nm,0.3s						
MDOK				Lg	Lg	15 40 49.0	
	28nm,0.4s						
MDOK	Medeo	1.46	23	*e*P	Pg	15 40 30.2	-0.1
	baz=23						
MDOK				*e*S	Sg	15 40 49.1	-0.1
	baz=23						
DGS	Degeres	1.47	345	*e*P	Pg	15 40 30.4	-0.2
	5.1nm,0.2s						
DGS				*e*S	Sg	15 40 49.6	-0.1
	27nm,0.1s						
DGS	Degeres	1.47	345	P	Pg	15 40 30.4	-0.2
	5.1nm,0.2s						
DGS				S	Sg	15 40 49.6	-0.1
	27nm,0.1s						
DGS	Degeres	1.47	345	*e*P	Pg	15 40 30.4	-0.2
	baz=46						
DGS				*e*S	Sg	15 40 49.6	-0.1
	baz=46						
FRU1	Bishkek	1.58	309	⇑*e*P	Pb	15 40 31.5	0.0
	baz=10.0						
FRU1				⇑*i*S	Sg	15 40 52.7	-0.4
	baz=10.0						
CHMS	Chumysh	1.64	317	⇑P	Pb	15 40 33.0	+0.4
	8.8nm,0.2s,SNR=9.1						
CHMS				⇑S	Sg	15 40 54.2	-0.8
	15nm,0.1s						
CHMS	Chumysh	1.64	317	⇓*i*P	Pb	15 40 32.1	-0.4
	baz=17						
CHMS				⇓*i*S	Sb	15 40 53.6	+0.4
	baz=17						
PRZ	Przheval'sk	1.71	66	⇑*i*P	Pb	15 40 33.7	-0.1
	baz=66						
PRZ				⇑*i*S	Sb	15 40 56.2	+0.9
	baz=66						
KTBS	Karatobe	1.91	9	*e*P	Pb	15 40 38.2	+0.9
	8.2nm,0.2s						
KTBS				*e*S	Sg	15 41 03.2	-0.7
	36nm,0.3s						
KTBS	Karatobe	1.91	9	P	Pb	15 40 38.2	+0.9
	8.2nm,0.2s						
KTBS				S	Sg	15 41 03.2	-0.7
	36nm,0.3s						
KRBS	Karabastau	1.93	347	*e*P	Pg	15 40 38.5	-0.8
	12nm,0.1s						
KRBS				*e*S	Sg	15 41 03.2	-1.1
	18nm,0.2s						
KRBS	Karabastau	1.93	347	P	Pg	15 40 38.5	-0.8
	12nm,0.1s						
KRBS				S	Sg	15 41 03.2	-1.1
	18nm,0.2s						
AML	Almayashu	1.96	280	⇓P	Pb	15 40 38.8	+0.6
	5.9nm,0.2s,SNR=8.6						
AML				⇓S	Sg	15 41 05.3	0.0
	21nm,0.3s						
AML	Almayashu	1.96	280	⇑*i*P	Pb	15 40 37.3	-0.9
	baz=80						
AML				⇑*i*S	Sb	15 41 02.8	0.0
	baz=80						
USP	Ospenovka	1.96	318	⇑P	Pb	15 40 38.8	+0.8
	5.8nm,0.1s,SNR=20						
USP				⇑S	Sg	15 41 04.4	-0.8
	11nm,0.1s						
USP	Ospenovka	1.96	318	⇑*i*P	Pb	15 40 37.2	-0.8
	baz=18						
USP				⇑*i*S	Sb	15 41 02.1	-0.3
	baz=18						
SATY	Saty	2.00	51	*e*P	Pb	15 40 39.8	+1.0
	13nm,0.1s						
SATY				*e*S	Sg	15 41 06.1	-0.4
	31nm,0.1s						
SATY	Saty	2.00	51	Pg	Pb	15 40 39.8	+1.0
	13nm,0.1s						
SATY				Lg	Lg	15 41 06.1	
	31nm,0.1s						
EKS2	Erkin-Say	2.04	295	⇑P	Pg	15 40 41.0	-0.5
	9.4nm,0.4s,SNR=18						
EKS2	Erkin-Say	2.04	295	⇑*i*P	Pb	15 40 38.3	-1.2
	baz=95						
EKS2				⇑*i*S	Sb	15 41 04.6	-0.4
	baz=95						
KUU	Kurty	2.07	1	*e*P	Pb	15 40 41.0	+1.1
	5.7nm,0.2s						
KUU				*e*S	Sg	15 41 08.0	-0.9
	78nm,0.5s						
KUU	Kurty	2.07	1	Pg	Pb	15 40 41.0	+1.1
	5.7nm,0.2s						
KUU				Lg	Lg	15 41 08.0	
	78nm,0.5s						
CHKK	Chushkaly	2.10	14	*e*P	Pg	15 40 41.6	-0.9
	7.3nm,0.1s						
CHKK				*e*S	Sg	15 41 08.7	-1.0
	87nm,0.1s						
CHKK	Chushkaly	2.10	14	Pg	Pg	15 40 41.6	-0.9
	7.3nm,0.1s						
CHKK				Lg	Lg	15 41 08.7	
	87nm,0.1s						
KURS	Kuram	2.17	39	*e*P	Pb	15 40 42.5	+0.9
	7.4nm,0.3s						
KURS				*e*S	Sg	15 41 11.0	-1.0
	8.4nm,0.2s						
KURS	Kuram	2.17	39	Pg	Pb	15 40 42.5	+0.9
	7.4nm,0.3s						
KURS				Lg	Lg	15 41 11.0	
	8.4nm,0.2s						
UZB	Uzynbulak	2.42	56	*e*P	Pb	15 40 47.1	+1.2
	24nm,0.2s						
UZB				*e*S	Sg	15 41 18.4	-1.7
	14nm,0.4s						
UZB	Uzynbulak	2.42	56	Pg	Pb	15 40 47.1	+1.2
	24nm,0.2s						
UZB				Lg	Lg	15 41 18.4	
	14nm,0.4s						
MRKS	Merke	2.45	293	*e*P	Pg	15 40 48.3	-1.0
	8.3nm,0.3s						
MRKS				*e*S	Sg	15 41 20.6	-0.4
	21nm,0.2s						
MRKS	Merke	2.45	293	Pg	Pg	15 40 48.3	-1.0
	8.3nm,0.3s						
MRKS				Lg	Lg	15 41 20.6	
	21nm,0.2s						
ARXS	Arharly	2.65	25	*e*P	Pb	15 40 51.4	+1.7
	8.2nm,0.3s						
ARXS				*e*S	Sg	15 41 25.8	-1.5
	25nm,0.1s						
ARXS	Arharly	2.65	25	Pg	Pb	15 40 51.4	+1.7
	8.2nm,0.3s						
ARXS				Lg	Lg	15 41 25.8	
	25nm,0.1s						
PDGK	Podgornoye	2.81	56	Pg	Pb	15 40 54.7	+2.2
	2.8nm,0.3s						
PDGK				Lg	Lg	15 41 31.2	
	6.3nm,0.5s						
PDGK	Podgornoye	2.81	56	⇑Pn	Pn	15 40 44.7	-2.6
	37nm,0.8s						
PDGK				⇓Lg	Lg	15 41 30.4	
	8.1nm,0.5s						
MNAS	Manas	2.89	285	⇑*e*P	Pn	15 40 50.2	+1.8
	baz=85						
MNAS				⇑*e*S	Sn	15 41 24.9	+1.7
	baz=85						
TRKS	Terek-Say	3.87	267	⇑*e*P	Pn	15 41 03.5	+1.7
	baz=66						
TRKS				⇑*i*S	Sn	15 41 47.9	+0.6
	baz=66						

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*NEIC **11** 15:43:14.9±2.4, 29°.86S±0°.05×72°.28W±0°.06, h10^{km}±1^{km}, mb4.3/6, ML4.4(GUC), Error ellipse: s-maj=9.0km s-min=8.1km az=275.0*

*IDC **11** 15:43:15.1±1.0, 29°.90S×71°.99W, h0^{km}, mb3.9/5, mb1 4.2/9, mb1mx4.0/24, mbtmp3.9/9, ML4.1/4, MS3.3/4, Ms1 3.3/4, ms1mx2.9/21, Error ellipse: s-maj=32.4km s-min=28.6km az=82.0*

*GUC **11** 15:43:16.4±0.6, 29°.87S×72°.12W, h20^{km}, ML4.4*

ISC 11 15:43:14.6±1.1, **29°.86S**±0°.04×**72°.13W**±0°.05, **h5**^{km}±6^{km}, **n75,** σ**1**^{s}**17**/80, **mb4.1**/8, **5C-4D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	La Serena	0.78	94	⇓*i*P	Pb	15 43 30.7	0.0
CO05				*i* S	Sb	15 43 41.1	-0.4
CO05				IAML		15 43 42.0	
	comp=E,22µm,0.3s						
CO05	La Serena	0.78	94		Pb	15 43 30.5	-0.1
CO06	Fray Jorge	0.92	152	⇓*i*P	Pb	15 43 32.8	-0.3
CO06				*i* S	Sb	15 43 45.4	-0.1
CO06				IAML		15 43 50.7	
	comp=N,11µm,0.2s						
CO06	Fray Jorge	0.92	152		Pb	15 43 32.9	-0.1
GO04	Tololo Observa	1.20	105	⇓*i*P	Pb	15 43 37.5	-0.5
GO04				*i* S	Sg	15 43 53.1	-0.1
GO04				IAML		15 43 57.4	
	comp=N,43µm,0.4s						
GO04	Tololo Observa	1.20	105		Pb	15 43 37.7	-0.2
LCO	Las Campanas	1.51	56	⇑*i*P	Pn	15 43 42.6	+0.1
LCO				*i* S	Sb	15 44 02.8	0.0
LCO	Las Campanas	1.51	56		Pn	15 43 42.7	+0.1
AC04	Llanos de Chal	1.89	30	⇑*e*P	Pn	15 43 46.9	-0.7
AC04				*e*S	Sn	15 44 09.8	-2.0
AC04	Llanos de Chal	1.89	30	Pn	Pn	15 43 46.9	-0.7
VA06	Catapilco	2.79	165	⇑*i*P	Pn	15 43 59.9	0.0
VA06				*e*S	Sn	15 44 31.4	-2.5
VA06				IAML		15 44 49.7	
	comp=N,1µm,0.4s						
GO03	Copiap	2.81	37	*e*P	Pn	15 44 00.1	-0.1
GO03				IAML		15 44 52.7	
	comp=N,938nm,0.7s						
GO03	Copiap	2.81	37	Pn	Pn	15 44 00.3	0.0
VA01	Torpederas	3.18	173	Pn	Pn	15 44 04.8	-0.4
VA03	San Esteban	3.19	155	⇓*e*P	Pn	15 44 06.8	+1.2
VA03				*e*S	Sn	15 44 44.5	+0.4
VA03				IAML		15 45 03.7	
	comp=N,2µm,0.5s						
VA03	San Esteban	3.19	155	Pn	Pn	15 44 06.7	+1.1
ROCH	El Roble	3.25	163	⇑*e*P	Pn	15 44 06.7	+0.3
ROCH				*e*S	Sn	15 44 43.9	-1.7
ROCH				IAML		15 45 08.2	
	comp=N,808nm,0.4s						
ZON	Zonda	3.42	120	Pn	Pb	15 44 12.4	-3.3
MT02	Curacav	3.49	166	*e*P	Pn	15 44 09.5	-0.1
MT02	Curacav	3.49	166		Pn	15 44 09.6	-0.1
PEL	Peldehue	3.50	160	⇑*e*P	Pn	15 44 10.6	+0.8
PEL				*i* S	Sn	15 44 49.5	-2.0
PEL				IAML		15 45 10.2	
	comp=N,747nm,0.7s						
PEL	Peldehue	3.50	160	Pn	Pn	15 44 10.7	+0.9
MT05	Renca	3.71	162	*e*P	Pn	15 44 13.6	+0.8
MT05				*e*S	Sn	15 44 56.8	-0.1
MT05	Renca	3.71	162	Pn	Pn	15 44 13.6	+0.8
VA05	Santo Domingo	3.81	173	Pn	Pn	15 44 13.8	-0.2
AC02	Maricunga	4.01	42		Pn	15 44 18.2	+1.0
MT09	Talagante	4.02	166	*e*P	Pn	15 44 17.7	+0.7
MT09	Talagante	4.02	166		Pn	15 44 17.4	+0.4
MT01	Popeta	4.06	170	Pn	Pn	15 44 17.2	-0.2
BO01	Tunca	4.60	169	Pn	Pn	15 44 24.8	-0.1
BO02	Sierra Bellavi	5.05	167		Pn	15 44 31.3	+0.2
GO05	Huala	5.14	178	Pn	Pn	15 44 31.1	-1.2
PB14	IPOC Station P	5.44	17	Pn	Pn	15 44 34.3	-2.3
ML02	Panimavida	5.92	174	Pn	Pn	15 44 41.4	-1.6
PB10	IPOC Station P	6.48	13	Pn	Pn	15 44 49.5	-1.2
H03N1	Juan Fernandez	6.79	237	T	T	15 52 14.8	
	baz=70,slow=72						
H03N2	Juan Fernandez	6.81	237	T	T	15 52 00.9	
	baz=70,slow=72						
H03N3	Juan Fernandez	6.81	237	T	T	15 51 59.7	
	baz=70,slow=72						
VA04	Juan Fernndez	6.84	235	Pn	Pn	15 44 52.6	-3.0
PB15	IPOC Station P	7.04	20	Pn	Pn	15 44 57.9	-0.7
PB06	IPOC Station P	7.49	18	Pn	Pn	15 45 01.4	-3.3
LVC	Limon Verde	7.78	23	Pn	Pn	15 45 07.4	-1.4
	comp=N,0.6nm,0.3s,baz=125,slow=5.1,SNR=9.9						
LVC	Limon Verde	7.78	23	Pn	Pn	15 45 06.8	-2.0
PB09	IPOC Station P	8.44	19	Pn	Pn	15 45 16.6	-1.2
LC01	Cunco	9.02	179	Pn	Pn	15 45 24.0	-1.4
PLCA	Paso Flores	10.92	174	Pn	Pn	15 45 51.9	+0.2
	comp=N,1.0nm,0.3s,baz=338,slow=12,SNR=36						
PLCA				LR	LR	15 50 39.1	
	comp=N,136nm,19.9s,baz=4.0,slow=41						
PLCA	Paso Flores	10.92	174	Pn	Pn	15 45 51.3	-0.4
ITQB	Itaqui	13.47	93	Pn	Pn	15 46 27.8	+1.3
CPUP	Villa Florida	13.53	79	Pn	Pn	15 46 27.0	-0.3
	comp=N,0.2nm,0.3s,baz=249,slow=14,SNR=2.3						
CPUP				LR	LR	15 52 09.6	
	comp=N,211nm,18.0s,baz=226,slow=40						
CPUP	Villa Florida	13.53	79		Pn	15 46 27.4	+0.1
LPAZ	La Paz	14.00	16	Pn	Pn	15 46 33.3	-1.0
SIV	San Ignacio	17.14	39	P	P	15 47 16.1	-0.7
	comp=N,0.3nm,0.3s,baz=226,slow=12,SNR=9.6						
NNA	Nana	18.32	345	LR	LR	15 52 46.6	
	comp=N,55nm,19.8s,baz=174,slow=31						
PTLB	Pontes e Lacer	18.67	43	P	Pn	15 47 33.7	-0.2
ZARC	Zaragoza, Cauc	37.23	356	P	P	15 50 27.0	-0.2
ZARC				IAmb	IAmb	15 50 30.2	
	comp=Z,2.3nm,0.7s						
PCDR	Punta Cana, DR	48.23	5	P	P	15 51 55.3	-1.1
SNAA	Sanae	55.45	159	P	P	15 52 50.6	+0.8
SNAA				IAmb	IAmb	15 53 14.1	
	comp=Z,4.3nm,1.1s						
QSPA	South Pole Qui	60.36	180	P	P	15 53 25.6	+1.1
QSPA				IAmb	IAmb	15 53 48.5	
	comp=Z,6.2nm,1.2s						
TXAR	Lajitas Array	66.11	330	P	P	15 54 05.2	+2.2
	comp=Z,0.3nm,0.5s,baz=148,slow=7.4,SNR=4.3						
MAW	Mawson	77.16	164	LR	LR	16 28 32.8	
	comp=Z,23nm,20.2s,baz=250,slow=35						
PDAR	Pinedale Array	80.05	333	P	P	15 55 26.9	+1.5
	comp=Z,0.5nm,0.6s,baz=120,slow=8.9,SNR=3.7						
PDAR	Pinedale Array	80.05	333	P	P	15 55 24.5	-0.8
NVAR	Mina Array Bea	80.45	325	P	P	15 55 30.2	+2.5
	comp=Z,0.3nm,0.6s,baz=168,slow=4.6,SNR=2.9						
ULM	Lac du Bonnet	82.49	345	P	P	15 55 38.9	+1.1
	comp=Z,4.5nm,1.0s,baz=166,slow=3.9,SNR=4.9						
ULM	Lac du Bonnet	82.49	345	P	P	15 55 37.7	-0.2
TORD	Torodi Ar. Bea	82.89	71	P	P	15 55 41.2	+0.5
	comp=Z,0.9nm,0.7s,baz=266,slow=4.7,SNR=4.8						
TORD	Torodi Ar. Bea	82.89	71	P	P	15 55 41.3	+0.5
TORD				IAmb	IAmb	15 55 50.7	
	comp=Z,1.7nm,0.8s						
WRA	Warramunga Arr	124.30	211	PKP	PKiKP	16 02 15.2	-0.4
	comp=Z,0.5nm,0.6s,baz=180,slow=1.6,SNR=2.9						
H11S2	WAKE ISLAND Hy	125.64	272	T	T	18 21 11.2	
	baz=114,slow=74						
H11S1	WAKE ISLAND Hy	125.66	272	T	T	18 21 12.5	
	baz=114,slow=74						
H11S3	WAKE ISLAND Hy	125.66	272	T	T	18 21 10.7	
	baz=114,slow=74						
ZALV	Zalesovo Beam	150.70	28	PKPbc	PKiKP	16 03 08.8	+0.7
	comp=Z,5.3nm,0.6s,baz=303,slow=3.0,SNR=26						
ZALV				PKPab	pPKPab	16 03 16.0	+1.1
	comp=Z,4.4nm,0.7s,baz=305,slow=3.1,SNR=11						
ZALV	Zalesovo Beam	150.70	28		PKiKP	16 03 08.7	+0.6
MKAR	Makanchi Array	153.93	42	PKPbc	PKiKP	16 03 15.8	+0.7
	comp=Z,0.4nm,0.7s,baz=321,slow=1.8,SNR=3.5						
MKAR				PKPab	pPKPab	16 03 29.4	+0.6
	comp=Z,0.5nm,0.7s,baz=312,slow=4.0,SNR=3.1						
MKAR	Makanchi Array	153.93	42		PKiKP	16 03 15.3	+0.2
MKAR					pPKPab	16 03 29.7	+0.9

NOU 11 16:00:44.2, 18°.11S×168°.11E, h0^{km}**, MLv4.2**/7**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	0.39	11	P	Pg	16 00 52.0	+0.3
RTV	Rentapao	0.43	44	P	Pg	16 00 52.8	+0.2
MARNC	Mare, Loyalty	3.35	181	P	Pn	16 01 36.1	-1.8
DZM	Mont Dzumac	4.24	201	P	Pn	16 01 50.4	+0.2
PINNC	Pines Island,	4.52	188	P	Pn	16 01 54.6	+0.6

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*IDC **11** 16:10:29.3±3.0, 31°.38S×71°.58W, h0^{km}, mb3.7/1, mb1 3.4/2, mb1mx3.3/16, mbtmp3.3/2, ML3.2/1, Error ellipse: s-maj=127.2km s-min=47.4km az=98.0*

*GUC **11** 16:10:32.8±0.7, 31°.50S×71°.75W, h23^{km}±4^{km}, ML3.7*

ISC 11 16:10:30.9±1.9, **31°.46S**±0°.04×**71°.6W**±0°.1, **h13**^{km}±12^{km}, **n19,** σ**0**^{s}**96**/27**, 7C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.78	357	⇑*e*P	Pn	16 10 47.3	-0.3
CO06				*e*S	Sn	16 10 59.5	+0.3
VA06	Catapilco	1.13	168	*e*P	Pg	16 10 53.1	+0.5
VA06				*e*S	Sn	16 11 07.6	-0.2
VA06				IAML		16 11 11.3	
	comp=E,3µm,0.5s						
CO05	La Serena	1.56	11	IAML		16 10 42.2	
	comp=E,2µm,0.3s						
VA01	Torpederas	1.56	182	⇑*e*P	Pn	16 10 58.9	+0.5
VA01				*e*S	Sn	16 11 18.9	+0.4
VA03	San Esteban	1.57	146	⇑*e*P	Pg	16 11 01.2	+0.2
VA03				*e*S	Sg	16 11 21.8	+0.4
VA03				IAML		16 11 24.2	
	comp=E,1µm,0.2s						
ROCH	El Roble	1.59	162	*e*P	Pb	16 11 00.5	+0.2
ROCH				*e*S	Sb	16 11 21.3	+1.0
MT02	Curacav	1.84	168	⇑*e*P	Pb	16 11 03.5	-0.8
MT02				*e*S	Sb	16 11 27.4	+0.1
PEL	Peldehue	1.85	156	*e*P	Pb	16 11 04.4	-0.1
PEL				*e*S	Sb	16 11 28.6	+1.0
PEL				IAML		16 11 31.8	
	comp=E,466nm,0.5s						
MT05	Renca	2.06	160	⇑*e*P	Pb	16 11 08.0	-0.1
MT05				*e*S	Sb	16 11 34.5	+0.8
MT05				IAML		16 11 38.0	
	comp=E,853nm,0.3s						
VA05	Santo Domingo	2.19	181	⇑*e*P	Pn	16 11 07.4	+0.3
VA05				*e*S	Sb	16 11 36.8	-0.8
MT09	Talagante	2.37	168	*e*P	Pb	16 11 12.2	-1.3
MT09				*e*S	Sb	16 11 41.9	-0.8
LMEL	Las Melosas	2.65	154	*e*P	Pb	16 11 16.1	-2.2
LMEL				*e*S	Sb	16 11 49.7	-1.2
LMEL				IAML		16 11 59.3	
	comp=N,376nm,0.2s						
BO04	La Punta	2.66	162	⇑*e*P	Pb	16 11 16.3	-2.0
BO04				*i* S	Sb	16 11 49.5	-1.4
H03N1	Juan Fernandez	6.50	250	T	T	16 18 45.5	
	baz=78,slow=72,SNR=1258						
H03N3	Juan Fernandez	6.52	250	T	T	16 18 45.0	
	baz=78,slow=72,SNR=1431						
H03N2	Juan Fernandez	6.52	250	T	T	16 18 46.3	
	baz=78,slow=72,SNR=1342						
PLCA	Paso Flores	9.29	175	Pn	Pn	16 12 45.6	+0.9
	comp=N,0.1nm,0.3s,baz=351,slow=18,SNR=0.8						
TORD	Torodi Ar. Bea	82.98	70	P	P	16 22 56.6	+0.4
	comp=N,0.4nm,0.8s,baz=231,slow=6.9,SNR=3.1						
ZALV	Zalesovo Beam	151.86	30	PKPbc	PKiKP	16 30 25.2	-0.1
	comp=N,0.9nm,0.4s,baz=301,slow=2.7,SNR=4.9						

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*BJI **11** 16:11:43.7±0.0, 21°.58N×145°.17E, h72^{km}, mB4.9/49, mb4.8/70, Ms4.3/49, Ms7 4.0/52*

*NEIC **11** 16:11:47.3±1.6, 21°.97N±0°.07×144°.9E±0°.1, h59^{km}±5^{km}, mb5.3/305, Error ellipse: s-maj=14.1km s-min=9.4km az=72.0*

*GCMT **11** 16:11:49.3±0.2, 22°.00N±0°.01×145°.14E±0°.01, h59^{km}±2^{km}, MW5.0/109, Moment Tensor Solution. s36,c47; s109,c157; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.91±.17; $M_{\theta\theta}$3.29±.12; $M_{\phi\phi}$-2.38±.13; $M_{r\theta}$-1.67±.09; $M_{\theta\phi}$-1.16±.09; $M_{\phi r}$2.54±.10; Best double couple: $M_0$4.38400×10^{16} NP1:ϕ_s240.00000°, δ44.00000°, λ-169.00000°. NP2:ϕ_s141.00000°, δ82.00000°, λ-46.00000°. Principal axes: T 4.4770, Plg24.0000°, Azm199.0000°; N -0.1880, Plg43.0000°, Azm314.0000°; P -4.2900, Plg37.0000°, Azm89.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MOS **11** 16:11:49.3±1.0, 21°.84N×144°.86E, h57^{km}, mb5.0/40 Error ellipse: s-maj=8.3km s-min=4.5km az=111.6*

*IDC **11** 16:11:49.7±1.2, 21°.85N×144°.95E, h88^{km}±10^{km}, mb4.6/39, mb1 4.7/42, mb1mx4.7/47, mbtmp4.9/42, MS3.8/40, Ms1 3.8/40, ms1mx3.8/50, Error ellipse: s-maj=11.9km s-min=6.5km az=96.0*

ISC 11 16:11:49.2±0.4, **21°.92N**±0°.03×**144°.95E**±0°.05, **h81**^{km}±2^{km}, **h81**^{km}**:pP-P, n680,** σ**1**^{s}**27**/597, **mb5.2**/290, **76C-98D, Fault plane solution: NP1:**ϕ_s334.56632°, δ86.61137°, λ48.60895°. **NP2:**ϕ_s240.72943°, δ41.50459°, λ174.88265°. **Principal axes:** T Plg34.8444°, Azm209.8388°; N Plg41.3028°, Azm337.5484°; P Plg29.1933°, Azm96.9484°; **Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	5.73	334	P	Pn	16 13 09.6	-2.1
	124nm,0.3s,baz=281,slow=22,SNR=168						
JCJ				S	Sn	16 14 10.4	-5.7
	166nm,0.3s,baz=109,slow=23,SNR=18						
JCJ	Chichijima	5.73	334	Pn	Pn	16 13 09.4	-2.4
JCJ	Chichijima	5.73	334	P	Pn	16 13 10.1	-1.6
GUMO	Guam	8.29	181	P	Pn	16 13 48.0	+1.3
	53nm,0.3s,baz=62,slow=0.4,SNR=45						
GUMO				S	Sn	16 15 22.9	+4.2
	128nm,0.3s,baz=29,slow=22,SNR=6.5						
GUMO	Guam	8.29	181	Pn	Pn	16 13 47.9	+1.2
JHJ2	Mitsune	12.04	339	Pn	Pn	16 14 35.5	-2.2
JYT	Yasato	14.84	345		Pn	16 15 12.9	-1.8
INU	Inuyama	15.07	334	Pn	Pn	16 15 15.6	-2.0
INU	Inuyama	15.07	334	P	P	16 15 19.7	-1.4
JGF	Kuroka	15.16	336	Pn	Pn	16 15 16.5	-2.3
JMN	Monobe	15.29	323	Pn	Pn	16 15 19.5	-1.0
MJAR	Matsushiro Arr	15.70	340	P	Pn	16 15 24.6	-1.0
	1.2nm,0.3s,baz=146,slow=11,SNR=30						
MJAR				S	Sn	16 18 12.2	-6.8
	0.1nm,0.3s,baz=159,slow=18,SNR=4.2						
MJAR				LR	LR	16 21 22.7	
	comp=Z,180nm,20.8s,baz=85,slow=36						
MJAR	Matsushiro Arr	15.70	340	Pn	Pn	16 15 23.3	-2.4
MAJO	Matsushiro	15.70	340	*c i*P	Pn	16 15 26.0	+0.3
MAJO				pmax	pmax		
	comp=Z,35nm,0.6s						
MAJO	Matsushiro	15.70	340	Pn	Pn	16 15 23.4	-2.3
MAJO	Matsushiro	15.70	340	P	Pn	16 15 26.4	+0.7
MAT	Matsushiro	15.70	340	P	Pn	16 15 23.1	-2.6
MAT				S	Sn	16 18 06.6	-12
JWT	Wachi	15.72	330	Pn	Pn	16 15 23.9	-2.0
JOW	Kunigami	15.96	291	P	Pn	16 15 29.4	+0.5
	comp=Z,2.8nm,0.3s,baz=124,slow=9.0,SNR=11						
JOW				LR	LR	16 21 01.9	
	comp=Z,520nm,20.4s,baz=97,slow=34						
JOW	Kunigami	15.96	291	P	Pn	16 15 29.8	+0.9
JMM	Marumori	16.29	348		Pn	16 15 30.8	-2.2
JHS	Saijyo	16.65	324		Pn	16 15 37.7	+0.1
JHS				IAmb	IAmb	16 15 43.5	
	comp=Z,112nm,0.7s						
JSD	Sado	17.06	342	Pn	Pn	16 15 40.3	-2.2
PATS	Pohnpei	19.78	137	P	P	16 16 12.9	-0.2
PATS				IAmb	IAmb	16 16 18.4	
	comp=Z,194nm,1.0s						
H11N1	WAKE ISLAND Hy	20.62	92	T	T	16 38 26.6	
	baz=279						
H11N2	WAKE ISLAND Hy	20.63	92	T	T	16 38 30.4	
	baz=279						
H11N3	WAKE ISLAND Hy	20.64	92	T	T	16 38 25.5	
	baz=279						
H11S3	WAKE ISLAND Hy	20.68	96	T	T	16 38 06.0	
	baz=282						
H11S1	WAKE ISLAND Hy	20.69	96	T	T	16 38 06.3	
	baz=282						
H11S2	WAKE ISLAND Hy	20.70	96	T	T	16 38 11.0	
	baz=282						
TJN	Taejon	21.01	317	P	P	16 16 29.3	+3.2
KSRS	Korea Array	21.36	320	P	P	16 16 31.9	+2.1
	comp=Z,29nm,0.9s,baz=150,slow=8.6,SNR=52						
KSRS				LR	LR	16 24 43.6	
	comp=Z,354nm,18.4s,baz=128,slow=36						

KSAR	**Wonju Array Be**	**21.37**	**320**	P	**P**	**16 16 30.0**	**0.0**
KSAR	**Wonju Array Be**	**21.37**	**320**	P	**P**	**16 16 29.9**	**0.0**
NACB	**Ninganchiao**	**21.61**	**280**	P	**P**	**16 16 31.8**	**-0.8**
YULB	**Yu-li**	**21.87**	**278**	P	**P**	**16 16 35.7**	**+0.1**
YULB				IAmb	IAmb	16 16 54.8	
	comp=Z,74nm,0.9s						
TWG	**Pinlang**	**22.10**	**277**	P	**P**	**16 16 38.0**	**+0.1**
TWG				IAmb	IAmb	16 17 06.0	
	comp=Z,98nm,1.3s						
SSLB	**Suanglung**	**22.19**	**279**	*i* P	**P**	**16 16 39.7**	**+0.8**
	baz=270						
SSLB	**Suanglung**	**22.19**	**279**	P	**P**	**16 16 39.5**	**+0.5**
SSLB	**Suanglung**	**22.19**	**279**	P	**P**	**16 16 39.9**	**+1.0**
JKA	**Kamikawa-asahi**	**22.22**	**356**	P	**P**	**16 16 38.3**	**-0.7**
ASAJ	**Asahikawa**	**22.22**	**356**	P	**P**	**16 16 41.6**	**+2.6**
	comp=Z,9.6nm,1.0s,baz=202,slow=19,SNR=2.4						
ASAJ				S	**S**	**16 20 38.8**	**+0.2**
	comp=Z,6.5nm,0.8s,baz=340,slow=22,SNR=1.9						
ASAJ				LR	LR	16 24 25.1	
	comp=Z,213nm,21.3s,baz=188,slow=34						
TPUB	**Ta-pu**	**22.49**	**278**	P	**P**	**16 16 41.6**	**-0.5**
TPUB				IAmb	IAmb	16 17 01.8	
	comp=Z,160nm,1.2s						
TPUB	**Ta-pu**	**22.49**	**278**	P	**P**	**16 16 43.7**	**+1.5**
SSE	**Sheshan**	**23.11**	**298**	P	**P**	**16 16 49.9**	**+1.6**
SSE				S	**S**	**16 20 56.0**	**+2.8**
SSE				pmax	pmax		
	comp=Z,13nm,0.6s						
SSE				pmax	pmax		
	comp=Z,140nm,3.7s						
SSE				LR	LR		
	comp=Z,140nm,22.5s						
SSE				LR	LR		
	comp=Z,130nm,22.9s						
KUR	**Kuril'sk**	**23.37**	**5**	P	**P**	**16 16 52.7**	**+2.1**
KUR				pmax	pmax		
	comp=Z,225nm,1.3s						
LQP	**Lukban**	**23.56**	**255**	*e*P	**P**	**16 16 52.1**	**-0.7**
VLA	**Vladivostok**	**23.78**	**336**	*ce*P	**P**	**16 16 56.7**	**+2.4**
VLA				pmax	pmax		
	comp=Z,79nm,1.2s						
DAV	**Davao City (W)**	**23.82**	**235**	P	**P**	**16 16 56.2**	**+1.2**
DMPH	**Davao City--Mi**	**23.87**	**235**	⇑*e*P	**P**	**16 16 54.1**	**-1.3**
TEY	**Ternei**	**24.05**	**345**	⇑*e*P	P	16 17 11.1	+14
TEY				*e*		16 21 01.0	
TEY				pmax	pmax		
	comp=N,30nm,0.8s						
TEY				pmax	pmax		
	comp=Z,30nm,0.8s						
KNMB	**Chin-men Tao**	**24.53**	**281**	P	**P**	**16 17 01.1**	**-0.2**
KNMB				IAmb	IAmb	16 17 21.4	
	comp=Z,143nm,1.0s						
SMPI	**Sarmi**	**24.54**	**195**	P	**P**	**16 17 02.0**	**+0.6**
	comp=Z,827nmcomp=Z,49nm,1.2s						
BAKI	**Biak**	**24.54**	**202**	P	**P**	**16 17 03.0**	**+1.6**
	comp=Z,113nm,0.9s						
JAY	**Jayapura**	**24.64**	**190**	P	**P**	**16 17 01.4**	**-1.0**
	comp=Z,43nm,0.9s,baz=350,slow=1.3,SNR=19						
JAY				LR	LR	16 25 32.7	
	comp=Z,305nm,21.5s,baz=13,slow=34						
USA0B	**Ussuriysk Arra**	**24.67**	**337**	P	**P**	**16 17 00.8**	**-1.5**
USA0B				pmax	pmax		
	comp=Z,41nm,0.8s						
USA0B	**Ussuriysk Arra**	**24.67**	**337**	P	**P**	**16 17 00.8**	**-1.5**
USRK	**Ussuriysk Ar.**	**24.67**	**337**	P	**P**	**16 17 02.9**	**+0.6**
	comp=Z,10nm,0.8s,baz=162,slow=9.0,SNR=24						
USRK				LR	LR	16 27 52.2	
	comp=Z,193nm,18.1s,baz=140,slow=39						
USRK	**Ussuriysk Ar.**	**24.67**	**337**	P	**P**	**16 17 01.4**	**-0.9**
YSS	**Yuzh-Sakhalins**	**25.04**	**356**	*e*P	P	16 17 17.3	+12
YSS	**Yuzh-Sakhalins**	**25.04**	**356**	P	**P**	**16 17 09.2**	**+3.6**
SRPI	**Serui, Papua**	**25.13**	**201**	P	**P**	**16 17 07.2**	**+0.4**
	comp=Z,57nm,0.8s						
NJ2	**Nanjing**	**25.29**	**299**	*e*P	**P**	**16 17 08.3**	**+0.2**
NJ2				pP	**pP**	**16 17 26.0**	**+0.4**
NJ2				sP	**sP**	**16 17 36.7**	**+2.1**
NJ2				S	**S**	**16 21 29.5**	**+1.2**
NJ2				sS	**sS**	**16 21 57.4**	**-1.0**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,170nm,3.8s						
NJ2				LR	LR		
	comp=Z,340nm,18.5s						
NJ2				LR	LR		
	comp=Z,330nm,19.9s						
NJ2				LR	LR		
	comp=Z,380nm,21.6s						
KWAJ	**Kwajalein Atol**	**25.40**	**117**	P	**P**	**16 17 09.3**	**0.0**
KWAJ				pmax	pmax		
	comp=Z,169nm,0.7s						
KWAJ	**Kwajalein Atol**	**25.40**	**117**	P	**P**	**16 17 09.2**	**0.0**
MDJ	**Mudanjiang**	**25.93**	**334**	P	**P**	**16 17 14.8**	**+1.0**
MDJ				S	**S**	**16 21 39.5**	**+1.3**
MDJ				sS	sS	16 22 09.4	+1.0
MDJ				pmax	pmax		
	comp=Z,11nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,42nm,4.6s						
MDJ				LR	LR		
	comp=Z,260nm,20.6s						
MDJ				LR	LR		
	comp=Z,340nm,19.2s						
MDJ				LR	LR		
	comp=Z,450nm,22.8s						
SWI	**Sorong**	**26.30**	**212**	P	**P**	**16 17 17.3**	**-0.1**
SWI				pmax	pmax		
	comp=Z,37nm,1.4s						
SWI	**Sorong**	**26.30**	**212**	P	**P**	**16 17 16.8**	**-0.6**
	comp=Z,552nmcomp=Z,28nm,0.5s						
SIJI	**Sorong**	**26.30**	**212**	P	**P**	**16 17 16.2**	**-1.2**
	comp=Z,22nm,0.6s,baz=16,slow=9.2,SNR=15						
SNY	**Shenyang**	**26.76**	**323**	⇑P	**P**	**16 17 23.2**	**+1.9**
SNY				S	**S**	**16 22 00.5**	**+9.2**
SNY				pmax	pmax		
	comp=Z,21nm,0.8s						
SNY				pmax	pmax		
	comp=Z,200nm,4.4s						
SNY				LR	LR		
	comp=Z,240nm,13.3s						
SNY				LR	LR		
	comp=Z,120nm,6.4s						
SNY				LR	LR		
	comp=Z,170nm,13.3s						
TNTI	**Ternate**	**27.12**	**222**	P	**P**	**16 17 24.6**	**-0.2**
	comp=Z,36nm,0.8s						
TNTI	**Ternate**	**27.12**	**222**	P	**P**	**16 17 23.9**	**-0.9**
TNTI	**Ternate**	**27.12**	**222**	P	**P**	**16 17 25.2**	**+0.4**
CN2	**Changchun**	**27.15**	**328**	*e*P	**P**	**16 17 27.8**	**+3.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,200nm,17.0s						
CN2				LR	LR		
	comp=Z,300nm,17.0s						
CN2				LR	LR		
	comp=Z,200nm,17.0s						
FAKI	**Fak Fak**	**27.64**	**208**	P	**P**	**16 17 32.2**	**+2.8**
	comp=Z,46nm,0.9s						
FAKI	**Fak Fak**	**27.64**	**208**	P	**P**	**16 17 28.9**	**-0.5**
FAKI	**Fak Fak**	**27.64**	**208**	P	**P**	**16 17 30.1**	**+0.7**
TIA	**Tai'an**	**28.06**	**307**	⇓P	**P**	**16 17 33.2**	**+0.2**
TIA				pmax	pmax		
	comp=Z,13nm,0.8s						
TIA				pmax	pmax		
	comp=Z,94nm,4.6s						
TIA				LR	LR		
	comp=Z,230nm,13.5s						
TIA				LR	LR		
	comp=Z,140nm,5.7s						
TIA				LR	LR		
	comp=Z,200nm,21.2s						
LBMI	**Labuha**	**28.16**	**219**	P	**P**	**16 17 34.5**	**+0.5**
	comp=Z,764nmcomp=Z,80nm,0.7s						
WHN	**Wuhan**	**28.69**	**294**	⇑P	**P**	**16 17 40.0**	**+1.3**
KLR	**Kul'dur**	**29.20**	**342**	P	**P**	**16 17 44.1**	**+1.1**
	comp=Z,12nm,0.7s,baz=145,slow=7.2,SNR=42						
KLR				ScP	**ScP**	**16 24 22.1**	**-0.8**
	comp=Z,3.7nm,0.9s,baz=306,slow=2.0,SNR=6.4						
KLR				LR	LR	16 29 06.5	
	comp=Z,146nm,21.4s,baz=152,slow=35						
KMSI	**Cibinong**	**29.46**	**227**	P	**P**	**16 17 45.8**	**+0.2**
	comp=Z,2µmcomp=Z,217nm,0.8s						
GRNR	**Gornyy**	**29.56**	**349**	⇓*i*P	**P**	**16 17 47.7**	**+1.6**
GRNR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GTOI	**Gorontalo**	**30.08**	**228**	P	**P**	**16 17 51.5**	**+0.4**
	comp=Z,296nmcomp=Z,27nm,1.0s						
BNDI	**Bandanaira**	**30.13**	**211**	P	**P**	**16 17 52.6**	**+1.1**
SANI	**Sanana**	**30.18**	**220**	P	**P**	**16 17 49.7**	**-2.3**
	comp=Z,33nm,0.6s						
SANI	**Sanana**	**30.18**	**220**	P	**P**	**16 17 50.4**	**-1.6**
MRSI	**Marisa**	**30.94**	**229**	P	**P**	**16 17 59.1**	**+0.4**
	comp=Z,51nm,0.4s						
PMG	**Port Moresby**	**31.21**	**176**	P	**P**	**16 17 59.8**	**-1.1**
	comp=Z,13nm,0.5s,baz=144,slow=12,SNR=9.1						
PMG				ScP	**ScP**	**16 24 28.8**	**-1.2**
	comp=Z,16nm,0.9s,baz=326,slow=12,SNR=3.2						
PMG	**Port Moresby**	**31.21**	**176**	P	**P**	**16 18 00.2**	**-0.8**
PMG				pmax	pmax		
	comp=Z,15nm,0.6s						
PMG	**Port Moresby**	**31.21**	**176**	P	**P**	**16 18 00.2**	**-0.8**
TOLI2	**Tolitoli**	**31.33**	**232**	P	**P**	**16 18 01.7**	**-0.4**
TOLI2				IAmb	IAmb	16 18 13.1	
	comp=Z,35nm,1.0s						
TOLI2	**Tolitoli**	**31.33**	**232**	P	**P**	**16 18 03.5**	**+1.3**
LUWI	**Luwuk**	**31.46**	**226**	P	**P**	**16 18 02.8**	**-0.5**
	comp=Z,1µmcomp=Z,106nm,0.7s						
LUWI	**Luwuk**	**31.46**	**226**	P	**P**	**16 18 03.3**	**0.0**
APSI	**Ampana**	**32.13**	**228**	P	**P**	**16 18 08.6**	**-0.5**
	comp=Z,529nmcomp=Z,70nm,0.9s						
SPMM	**Sapulut**	**32.47**	**242**	P	**P**	**16 18 12.0**	**-0.2**
MPSI	**Mapaga**	**32.50**	**232**	P	**P**	**16 18 13.4**	**+1.0**
	comp=Z,20nm,0.7s						
PETK	**Petropavlovsk-**	**32.63**	**14**	P	**P**	**16 18 13.9**	**+0.8**
	comp=Z,9.9nm,1.0s,baz=245,slow=6.4,SNR=5.8						
PETK				LR	LR	16 29 43.2	
	comp=Z,215nm,20.4s,baz=194,slow=33						
PETK	**Petropavlovsk-**	**32.63**	**14**	P	**P**	**16 18 14.0**	**+0.8**
PETK	**Petropavlovsk-**	**32.63**	**14**	P	**P**	**16 18 13.5**	**+0.4**
PET	**Petropavlovsk**	**32.78**	**15**	*e*P	**P**	**16 18 12.8**	**-1.6**
PET				*e*S	**S**	**16 23 22.1**	**-3.2**
PET				*e**SS	**sS**	**16 23 57.5**	**+1.7**
PET				MLR	MLR		
	comp=Z,200nm,18.0s						
ENH	**Enshi**	**32.81**	**292**	P	**P**	**16 18 12.6**	**-2.5**
ENH				IAmb	IAmb	16 18 33.2	
	comp=Z,43nm,0.8s						
XAN	**Xi'an**	**33.86**	**299**	P	**P**	**16 18 23.6**	**-0.6**
XAN				pP	pP	16 18 41.0	-1.0
XAN				S	**S**	**16 23 45.0**	**+2.3**
XAN				pmax	pmax		
	comp=Z,10.0nm,0.7s						
XAN				LR	LR		
	comp=Z,250nm,17.2s						
XAN				LR	LR		
	comp=Z,240nm,17.9s						
XAN				LR	LR		
	comp=Z,430nm,20.8s						
HHC	**Hu-ho-hao-te**	**33.90**	**312**	*e*P	**P**	**16 18 24.8**	**+0.3**
HHC				pP	pP	16 18 42.7	+0.5
HHC				pmax	pmax		
	comp=Z,16nm,0.8s						
HHC				pmax	pmax		
	comp=Z,79nm,6.6s						
HHC				LR	LR		
	comp=Z,170nm,18.8s						
HHC				LR	LR		
	comp=Z,190nm,16.1s						
HHC				LR	LR		
	comp=Z,220nm,14.7s						
HNR	**Honiara**	**34.46**	**153**	P	**P**	**16 18 29.0**	**-0.4**
	comp=Z,49nm,0.8s,baz=195,slow=8.4,SNR=7.0						
HNR	**Honiara**	**34.46**	**153**	P	**P**	**16 18 29.0**	**-0.4**
HNR	**Honiara**	**34.46**	**153**	P	**P**	**16 18 28.1**	**-1.3**
HNR	**Honiara**	**34.46**	**153**	P	**P**	**16 18 30.7**	**+1.3**
ZEA	**Zeya**	**34.50**	**341**	*e*P	**P**	**16 18 30.4**	**+1.0**
ZEA				pmax	pmax		
	comp=N,10.0nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,20nm,0.8s						
ZEA				MLR	MLR		
	comp=Z,100nm,15.0s						
TTSI	**Tana Toraja**	**34.93**	**228**	P	**P**	**16 18 34.0**	**+0.6**
	comp=Z,681nmcomp=Z,47nm,0.7s						
GYA	**Guiyang**	**35.13**	**285**	⇓P	**P**	**16 18 36.8**	**+1.5**
GYA				pP	pP	16 18 53.6	+0.3
GYA				S	**S**	**16 24 02.7**	**+0.2**
GYA				sS	sS	16 24 30.5	-2.7
GYA				pmax	pmax		
	comp=Z,12nm,0.8s						
SPSI	**Sidrap Palu**	**35.63**	**227**	P	**P**	**16 18 39.3**	**-0.2**
	comp=Z,991nmcomp=Z,142nm,0.8s						
BKSI	**Bulukumba**	**36.40**	**225**	P	**P**	**16 18 46.5**	**+0.5**
	comp=Z,296nmcomp=Z,25nm,0.8s						
KAPI	**Kappang**	**36.41**	**226**	P	**P**	**16 18 45.6**	**-0.6**
	comp=Z,24nm,0.6s,baz=98,slow=2.6,SNR=14						
KAPI				LR	LR	16 32 35.8	
	comp=Z,57nm,20.0s,baz=84,slow=34						
KAPI	**Kappang**	**36.41**	**226**	P	**P**	**16 18 45.8**	**-0.3**
KAPI				pmax	pmax		
	comp=Z,31nm,0.7s						
KAPI	**Kappang**	**36.41**	**226**	P	**P**	**16 18 45.8**	**-0.3**
KAPI				IAmb	IAmb	16 18 49.6	
	comp=Z,31nm,0.7s						
KAPI	**Kappang**	**36.41**	**226**	P	**P**	**16 18 46.4**	**+0.3**
BSSI	**Bau Bau, Buton**	**36.78**	**223**	P	**P**	**16 18 50.3**	**+1.0**
	comp=Z,349nmcomp=Z,31nm,0.7s						
MTKI	**Muara Teweh, K**	**37.10**	**236**	P	**P**	**16 18 52.5**	**+0.4**
	comp=Z,2µmcomp=Z,60nm,1.1s						
SBUM	**Sibu**	**37.23**	**243**	P	**P**	**16 18 54.0**	**+0.8**
SOEI	**Soe**	**37.46**	**215**	P	**P**	**16 18 53.6**	**-1.5**
	comp=Z,753nmcomp=Z,44nm,0.7s						
SOEI	**Soe**	**37.46**	**215**	P	**P**	**16 18 53.7**	**-1.5**
SOEI				IAmb	IAmb	16 19 22.1	
	comp=Z,37nm,0.9s						
SOEI	**Soe**	**37.46**	**215**	P	**P**	**16 18 55.2**	**+0.1**
MMRI	**Maumere**	**37.67**	**219**	P	**P**	**16 18 58.7**	**+1.9**
	comp=Z,55nm,1.0s						
KBKI	**Kotabaru**	**37.70**	**232**	P	**P**	**16 18 56.6**	**-0.5**
	comp=Z,2µmcomp=Z,26nm,0.7s						
CD2	**Chengdu**	**37.79**	**293**	P	**P**	**16 18 57.6**	**-0.2**
CD2				pP	pP	16 19 15.8	-0.1
CD2				S	**S**	**16 24 35.1**	**-7.8**
CD2				pmax	pmax		
	comp=Z,60nm,0.8s						
CD2				LR	LR		
	comp=Z,320nm,13.7s						
CD2				LR	LR		
	comp=Z,420nm,18.0s						
MA2	**Magadan**	**37.84**	**5**	LR	LR	16 31 53.2	
	comp=Z,78nm,20.1s,baz=174,slow=32						
EDFI	**Ende, Flores**	**38.08**	**219**	P	**P**	**16 18 59.5**	**-0.9**
	comp=Z,279nmcomp=Z,16nm,1.1s						
SLVN	**Son La**	**38.08**	**277**	P	**P**	**16 18 59.2**	**-1.2**
BATI	**Baumata**	**38.16**	**215**	P	**P**	**16 19 00.1**	**-0.7**
	comp=Z,70nm,0.5s,baz=97,slow=0.9,SNR=32						
BATI				LR	LR	16 33 28.5	
	comp=Z,120nm,21.1s,baz=44,slow=34						
BATI	**Baumata**	**38.16**	**215**	P	**P**	**16 19 00.2**	**-0.7**
	comp=Z,50nm,0.6s						
LZH	**Lanzhou**	**38.33**	**301**	*e*P	**P**	**16 19 03.0**	**+0.5**
LZH				pP	pP	16 19 21.6	+1.1
LZH				sP	sP	16 19 27.8	-1.6
LZH				*e*S	**S**	**16 24 51.3**	**+0.1**
LZH				pmax	pmax		
	comp=Z,39nm,1.2s						
LZH				pmax	pmax		
	comp=Z,140nm,4.3s						
LZH				LR	LR		
	comp=Z,1µm,12.7s						
LZH				LR	LR		
	comp=Z,1µm,16.0s						
LZH				LR	LR		
	comp=Z,1µm,16.8s						
CIT	**Chita**	**38.59**	**329**	*e*P	**P**	**16 19 06.0**	**+1.8**
CIT				*e*		16 19 30.2	
KMI	**Kunming**	**38.72**	**283**	⇓P	**P**	**16 19 07.9**	**+2.0**
KMI				pP	pP	16 19 25.5	+1.4
KMI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KMI				LR	LR		
	comp=Z,140nm,7.2s						
KMI				LR	LR		
	comp=Z,130nm,15.6s						
KMI				LR	LR		
	comp=Z,280nm,27.0s						
BBKI	**Banjar Baru**	**38.78**	**233**	P	**P**	**16 19 06.0**	**-0.2**
	comp=Z,5µmcomp=Z,17nm,0.8s						
STKI	**Sintang**	**39.20**	**241**	P	**P**	**16 19 09.6**	**-0.1**
	comp=Z,2µmcomp=Z,35nm,0.9s						
ULN	**Ulaanbaatar**	**39.84**	**320**	⇑*e*P	**P**	**16 19 15.9**	**+1.0**
ULN				pmax	pmax		
	comp=Z,4.0nm,1.3s						
WBSI	**Waikabubak, Su**	**40.16**	**221**	P	**P**	**16 19 17.2**	**-0.5**
	comp=Z,83nm,0.6s						
SONM	**Songino Array**	**40.22**	**319**	P	**P**	**16 19 18.6**	**+0.6**
	comp=Z,3.4nm,0.6s,baz=130,slow=6.7,SNR=9.6						
SONM				ScP	**ScP**	**16 25 02.9**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=101,slow=2.9,SNR=1.9						
SONM				LR	LR	16 36 34.0	
	comp=Z,178nm,19.2s,baz=96,slow=37						
PLAI	**Plampang**	**40.55**	**224**	P	**P**	**16 19 19.9**	**-1.0**
	comp=Z,1µmcomp=Z,122nm,0.7s						
PLAI	**Plampang**	**40.55**	**224**	P	**P**	**16 19 21.2**	**+0.3**
PBKI	**Pangkalan Bun**	**40.71**	**237**	P	**P**	**16 19 22.3**	**+0.1**
	comp=Z,1µmcomp=Z,168nm,0.9s						
TWSI	**Taliwang, Sumb**	**41.07**	**225**	P	**P**	**16 19 25.3**	**+0.2**
	comp=Z,37nm,0.7s						
SEY	**Seymchan**	**41.30**	**5**	LR	LR	16 33 45.0	
	comp=Z,103nm,21.8s,baz=182,slow=32						
YAK	**Yakutsk**	**41.44**	**349**	LR	LR	16 36 08.9	
	comp=Z,119nm,21.9s,baz=90,slow=35						
YAK	**Yakutsk**	**41.44**	**349**	*e*P	**P**	**16 19 27.9**	**+0.4**
YAK				*e*		16 21 04.1	
YAK				*e*		16 21 20.5	
YAK				*e*S	**S**	**16 25 39.8**	**+3.3**
YAK				*e*SS	**SS**	**16 28 43.2**	**-0.2**
YAK				*e*SSS	SSS	16 29 12.1	
YAK				*e*		16 29 27.3	
YAK				pmax	pmax		
	comp=Z,43nm,0.9s						
YAK				pmax	pmax		
	comp=N,11nm,1.1s						
YAK				pmax	pmax		
	comp=E,4.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,118nm,5.7s						
YAK				pmax	pmax		
	comp=N,37nm,1.9s						
YAK				pmax	pmax		
	comp=E,112nm,5.1s						
YAK				smax	smax		
	comp=E,108nm,5.2s						
YAK				smax	smax		
	comp=N,34nm,2.0s						
YAK	**Yakutsk**	**41.44**	**349**	P	**P**	**16 19 27.7**	**+0.2**
YAK				IAmb	IAmb	16 19 28.9	
	comp=Z,42nm,0.7s						
SRBI	**Singaraja**	**41.71**	**228**	P	**P**	**16 19 31.6**	**+1.2**
	comp=Z,44nm,0.7s						
CTA	**Charters Tower**	**41.77**	**178**	P	**P**	**16 19 28.5**	**-2.3**
	comp=Z,3.0nm,0.5s,baz=59,slow=6.6,SNR=2.9						
KMMI	**Kalianget**	**41.85**	**230**	P	**P**	**16 19 31.7**	**+0.2**
	comp=Z,2µmcomp=Z,174nm,1.2s						
GTA	**Gaotai**	**42.08**	**305**	*e*P	**P**	**16 19 33.8**	**+0.4**
GTA				pP	pP	16 19 52.2	+0.6
GTA				sP	sP	16 20 03.0	+2.6
GTA				ScP	**ScP**	**16 25 12.0**	**+1.9**
GTA				S	**S**	**16 25 47.4**	**+0.4**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,98nm,4.7s						
GTA				LR	LR		
	comp=Z,120nm,17.1s						
GTA				LR	LR		
	comp=Z,91nm,16.7s						
GTA				LR	LR		
	comp=Z,190nm,17.1s						
ABJI	**Asem Bagus**	**42.19**	**229**	P	**P**	**16 19 35.5**	**+1.3**
	comp=Z,93nm,1.0s						
BOD	**Bodaibo**	**42.29**	**336**	*e*P	**P**	**16 19 35.1**	**+0.5**
BOD				pmax	pmax		
	comp=Z,15nm,1.6s						
BLJI	**Banyuglugur**	**42.60**	**230**	P	**P**	**16 19 38.7**	**+1.1**
	comp=Z,66nm,0.8s						
WB0	**Warramunga Arr**	**42.70**	**195**	P	**P**	**16 19 37.7**	**-0.7**
WB0				IAmb	IAmb	16 19 39.1	
	comp=Z,39nm,0.7s						
JAGI	**Jajag, Banyuwa**	**42.72**	**228**	P	**P**	**16 19 37.6**	**-1.0**
	comp=Z,94nm,0.9s						
JAGI	**Jajag, Banyuwa**	**42.72**	**228**	P	**P**	**16 19 37.1**	**-1.4**
JAGI	**Jajag, Banyuwa**	**42.72**	**228**	P	**P**	**16 19 38.9**	**+0.3**
WR0	**Warramunga Arr**	**42.85**	**194**	P	**P**	**16 19 38.9**	**-0.7**
WR0				IAmb	IAmb	16 19 40.4	
	comp=Z,44nm,1.0s						
WRAB	**Tennant Creek**	**42.87**	**195**	P	**P**	**16 19 39.3**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,85nm,0.5s						
WRAB	**Tennant Creek**	**42.87**	**195**	P	**P**	**16 19 39.2**	**-0.4**
WRAB	**Tennant Creek**	**42.87**	**195**	P	**P**	**16 19 39.9**	**+0.2**
WB2	**Warramunga Arr**	**42.88**	**195**	P	**P**	**16 19 39.4**	**-0.4**
WRA	**Warramunga Arr**	**42.88**	**195**	P	**P**	**16 19 39.2**	**-0.6**
	comp=Z,35nm,0.4s,baz=18,slow=8.7,SNR=262						
WRA				ScP	**ScP**	**16 25 12.3**	**-1.1**
	comp=Z,3.6nm,1.0s,baz=16,slow=4.2,SNR=7.7						
WRA				S	**S**	**16 25 56.7**	**-2.0**
	comp=Z,2.4nm,1.0s,baz=13,slow=14,SNR=3.8						
WRA				LR	LR	16 37 56.0	
	comp=Z,88nm,20.2s,baz=15,slow=37						
WRA	**Warramunga Arr**	**42.88**	**195**	P	**P**	**16 19 39.1**	**-0.6**
SANVU	**Saraoutou**	**43.07**	**148**	P	**P**	**16 19 40.4**	**-0.9**
SANVU				IAmb	IAmb	16 19 42.3	
	comp=Z,42nm,0.7s						
GMJI	**Gumukmas**	**43.07**	**229**	P	**P**	**16 19 41.3**	**-0.1**
	comp=Z,68nm,1.0s						
CHTO	**Chiang Mai**	**43.12**	**274**	P	**P**	**16 19 41.2**	**-0.7**
CHTO				pmax	pmax		
	comp=Z,12nm,1.0s						
CHTO	**Chiang Mai**	**43.12**	**274**	P	**P**	**16 19 41.2**	**-0.7**
CHTO	**Chiang Mai**	**43.12**	**274**	P	**P**	**16 19 41.4**	**-0.5**
ZAK	**Zakamensk**	**43.18**	**322**	*e*P	**P**	**16 19 42.6**	**+0.6**
ZAK				pmax	pmax		
	comp=Z,13nm,1.1s						
CM31	**Chiang Mai Arr**	**43.20**	**274**	P	**P**	**16 19 41.9**	**-0.6**
CMAR	**Chiang Mai Arr**	**43.20**	**274**	P	**P**	**16 19 42.1**	**-0.5**
	comp=Z,3.0nm,0.6s,baz=57,slow=8.3,SNR=32						
CMAR				ScP	**ScP**	**16 25 13.9**	**-0.9**
	comp=Z,0.7nm,0.3s,baz=72,slow=2.9,SNR=6.0						
CMAR				LR	LR	16 36 01.8	
	comp=Z,66nm,21.5s,baz=138,slow=34						
CMAR	**Chiang Mai Arr**	**43.20**	**274**	*ce*P	**P**	**16 19 42.9**	**+0.4**
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**43.20**	**274**	P	**P**	**16 19 41.7**	**-0.8**
IRK	**Irkutsk**	**43.47**	**324**	*e*P	P	16 19 52.1	+7.9
IRK				pmax	pmax		
	comp=Z,27nm,3.8s						
TLY	**Talaya**	**43.55**	**323**	*e*P	P	16 19 52.0	+7.1
TLY				pmax	pmax		
	comp=Z,41nm,1.9s						
TLY				MLR	MLR		
	comp=Z,315nm,15.0s						
NGJI	**Ngawi**	**43.88**	**232**	P	**P**	**16 19 49.5**	**+1.6**
	comp=Z,29nm,0.5s						
FITZ	**Fitzroy Crossi**	**44.04**	**207**	P	**P**	**16 19 49.0**	**-0.1**
	comp=Z,59nm,0.7s,baz=28,slow=12						
PWJI	**Pagerwojo**	**44.07**	**231**	P	**P**	**16 19 48.7**	**-0.7**
	comp=Z,135nm,1.0s						
PCJI	**Pacitan**	**44.64**	**232**	P	**P**	**16 19 52.7**	**-1.3**
	comp=Z,97nm,0.9s						
JRMM	**Jerantut**	**44.90**	**253**	P	**P**	**16 19 57.0**	**+0.9**
UGM	**Wanagama**	**44.93**	**232**	P	**P**	**16 19 56.1**	**-0.3**
	comp=Z,181nm,1.4s						
UGM	**Wanagama**	**44.93**	**232**	P	**P**	**16 19 55.7**	**-0.7**
UGM	**Wanagama**	**44.93**	**232**	P	**P**	**16 19 55.8**	**-0.6**
DSRI	**Dabo**	**45.23**	**246**	P	**P**	**16 19 59.7**	**+1.0**
KULM	**Kulim**	**45.91**	**256**	P	**P**	**16 20 05.0**	**+0.9**
IPM	**Ipoh**	**45.93**	**254**	P	**P**	**16 20 05.0**	**+0.7**
LEM	**Lembang**	**46.42**	**236**	P	**P**	**16 20 07.6**	**-0.7**
	comp=Z,47nm,0.8s,baz=44,slow=6.6,SNR=12						
LEM				LR	LR	16 37 59.4	
	comp=Z,133nm,21.3s,baz=34,slow=34						
LEM	**Lembang**	**46.42**	**236**	P	**P**	**16 20 08.3**	**0.0**
	comp=Z,29nm,0.8s						
AS31	**Alice Springs**	**46.57**	**194**	P	**P**	**16 20 08.3**	**-0.8**
AS31				IAmb	IAmb	16 20 10.7	
	comp=Z,16nm,0.6s						
ASAR	**Alice Springs**	**46.57**	**194**	P	**P**	**16 20 08.7**	**-0.5**
	comp=Z,24nm,0.6s,baz=16,slow=8.9,SNR=311						
ASAR				ScP	**ScP**	**16 25 28.8**	**+0.4**
	comp=Z,1.5nm,0.6s,baz=16,slow=4.0,SNR=6.2						
ASAR				S	**S**	**16 26 50.4**	**-1.7**
	comp=Z,4.8nm,0.9s,baz=15,slow=14,SNR=15						
ASAR				LR	LR	16 41 21.1	

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       comp=Z,89nm,19.2s,baz=48,slow=38
ASAR   Alice Springs     46.57 194   P      P      16 20 08.3 -0.8
CBJI   Citeko            46.77 237   P      P      16 20 11.2 +0.4
       comp=Z,38nm,0.5s
MDSI   Maura Dua         47.76 242   P      P      16 20 16.5 -2.0
       comp=Z,4.3nm,1.1s
BKNI   Bangkinang        47.85 249   P      P      16 20 20.1 +0.8
       comp=Z,123nm,0.5s
BKNI   Bangkinang        47.85 249   P      P      16 20 18.7 -0.6
LHSI   Lahat             47.93 243   P      P      16 20 18.8 -1.0
       comp=Z,31nm,1.0s
BILL   Bilibino          47.99  11d iP      P      16 20 20.6 +1.1
BILL                                e*PP    pwP    16 20 42.7 -1.6
BILL                                e*SP    sP     16 20 55.1 +8.6
BILL                                 S      S      16 27 01.0  -10
BILL                                 SSS    SSS    16 32 03.0
BILL                                 pmax   pmax
       comp=Z,19nm,1.0s
BILL                                 MLR    MLR
       comp=Z,55nm,14.0s
BILL   Bilibino          47.99  11   P      P      16 20 19.6 +0.1
SHL    Shillong          48.45 285   P      P      16 20 23.1 -0.9
SHL                                  pmax   pmax
       comp=Z,30nm,0.6s
SHL    Shillong          48.45 285   P      P      16 20 23.1 -0.9
SHL                                  IAmb   IAmb   16 20 43.8
       comp=Z,30nm,0.6s
DZM    Mont Dzumac       48.49 153  eP      P      16 20 23.9 -0.1
       comp=Z,176nm,1.0s
DZM    Mont Dzumac       48.49 153  eLR     LR     16 34 17.9
       comp=Z,449nm,24.2s
DZM    Mont Dzumac       48.49 153   P      P      16 20 23.9 -0.1
PSI    Prapat            48.55 254   P      P      16 20 25.1 +0.3
       comp=Z,9.7nm,0.4s,baz=56,slow=1.9,SNR=15
PSI                                  LR     LR     16 40 32.4
       comp=Z,50nm,21.6s,baz=78,slow=36
KSI    Kapahiang         48.60 244   P      P      16 20 23.8 -1.3
       comp=Z,39nm,0.9s
LSA    Lhasa             48.69 291   P      P      16 20 27.1 +1.0
LSA                                  pmax   pmax
       comp=Z,47nm,1.2s
LSA    Lhasa             48.69 291   P      P      16 20 27.1 +1.0
LSA                                  IAmb   IAmb   16 20 47.5
       comp=Z,47nm,1.2s
ONTNC  Ouen Toro         48.70 153   P      P      16 20 25.3 -0.3
PPI    Padang Panjang    48.80 249   P      P      16 20 26.4 -0.1
MNSI   Mandailing Nat    48.90 251   P      P      16 20 27.3  0.0
       comp=Z,49nm,0.4s
OUENC  Ouen Island, N    48.97 153   P      P      16 20 27.2 -0.3
PINNC  Pines Island,     49.40 152   P      P      16 20 30.9 +0.1
GSI    Gunungsitoli      50.43 253   P      P      16 20 38.5 -0.4
       comp=Z,70nm,0.9s
GSI    Gunungsitoli      50.43 253   P      P      16 20 38.0 -1.0
TIXI   Tiksi             50.60 353⇓eP      P      16 20 39.7 +0.3
TIXI   Tiksi             50.60 353   P      P      16 20 39.0 -0.3
MSVF   Nonsavu           51.02 138   LR     LR     16 37 52.7
       comp=Z,122nm,20.7s,baz=252,slow=31
MSVF   Nonsavu           51.02 138d iP      P      16 20 45.1 +1.7
MSVF   Nonsavu           51.02 138   P      P      16 20 44.0 +0.6
MSVF                                 IAmb   IAmb   16 20 46.0
       comp=Z,31nm,0.7s
WMQ    Urumqi            51.71 309  eP      P      16 20 49.9 +1.7
WMQ                                  pP     pP     16 21 08.7 +1.7
WMQ                                  pmax   pmax
       comp=Z,67nm,1.3s
WMQ                                  pmax   pmax
       comp=Z,260nm,4.9s
WMQ                                  LR     LR
       comp=Z,160nm,20.7s
TAPN   Taplejung         51.94 288  eP      P      16 20 50.6 +0.1
ODAN   Odare             52.28 288  eP      P      16 20 53.3 +0.3
DGZ    Jazzator, Alta    52.69 316⇑iP      P      16 20 56.1 +0.6
DGZ                                  pmax   pmax
       comp=Z,3.0nm,0.6s
RAMN   Ramite            52.97 288  eP      P      16 20 58.2 +0.2
JIRN   Jiri              53.23 289  eP      P      16 21 00.5 +0.4
       comp=Z,73nm,0.7s
GUN    Gumba             53.47 289  eP      P      16 21 02.4 +0.5
STKA   Stephens Creek    53.59 184   P      P      16 21 00.5 -1.5
       comp=Z,9.0nm,0.9s,baz=346,slow=7.5,SNR=16
STKA                                 LR     LR     16 43 03.7
       comp=Z,65nm,21.5s,baz=22,slow=35
STKA   Stephens Creek    53.59 184   P      P      16 21 00.6 -1.5
STKA                                 pmax   pmax
       comp=Z,3.0nm,1.0s
STKA   Stephens Creek    53.59 184   P      P      16 21 00.6 -1.5
PKIN   Phulchoki         53.94 289  eP      P      16 21 04.7 -0.5
       comp=Z,26nm,0.5s
KKN    Kakani            54.02 289  eP      P      16 21 05.9 +0.2
DMN    Daman             54.19 289  eP      P      16 21 07.2 +0.2
GKN    Gorkha            54.55 289  eP      P      16 21 09.4 -0.1
ZAA0   Zalesovo Array    55.06 321   P      P      16 21 11.2 -1.3
ZALV   Zalesovo Beam     55.06 321   P      P      16 21 11.8 -0.7
       comp=Z,4.8nm,0.6s,baz=108,slow=7.8,SNR=14
ZALV                                 PcP    PcP    16 22 12.8 -0.3
       comp=Z,7.4nm,0.6s,baz=108,slow=5.3,SNR=2.0
ZALV                                 LR     LR     16 46 15.5
       comp=Z,40nm,18.4s,baz=88,slow=38
ZALV   Zalesovo Beam     55.06 321  i P     P      16 21 12.1 -0.4
ZALV                                 pmax   pmax
       comp=Z,5.0nm,0.6s
ZALV   Zalesovo Beam     55.06 321   P      P      16 21 11.6 -0.9
DANN   Dangsing          55.27 290  eP      P      16 21 15.3 +0.5
       comp=Z,139nm,0.5s
KOLN   Koldanda          55.49 289  eP      P      16 21 16.3  0.0
MK31   Makanchi Array    55.76 312   P      P      16 21 17.9 +0.2
MK31   Makanchi Array    55.76 312   IAmb   IAmb   16 21 40.2
       comp=Z,41nm,1.4s
MKAR   Makanchi Array    55.76 312   P      P      16 21 17.9 +0.3
       comp=Z,6.0nm,0.9s,baz=85,slow=9.4,SNR=30
MKAR                                 PcP    PcP    16 22 16.1 +0.1
       comp=Z,6.6nm,0.6s,baz=101,slow=2.9,SNR=6.7
MKAR                                 LR     LR     16 45 03.2
       comp=Z,72nm,21.7s,baz=88,slow=36
MAKZ   Makanchi          55.97 312   P      P      16 21 19.7 +0.5
MAKZ   Makanchi          55.97 312   P      P      16 21 18.6 -0.6
MAKZ                                 IAmb   IAmb   16 21 40.1
       comp=Z,28nm,0.8s
PYUN   Piuthan           55.98 290  eP      P      16 21 19.8  0.0
       comp=Z,49nm,0.6s
RDOG   Red Dog Mine      56.07  21   P      P      16 21 26.3 +6.8
       baz=242,SNR=6.1
O18K   Koktuh Hills      56.23  32   P      P      16 21 22.0 +1.2
       baz=255
OHAK   Old Harbor        56.60  35   P      P      16 21 24.0 +0.5
       baz=258
TTA    Tatalina          56.73  28   P      P      16 21 25.4 +1.0
       baz=252,SNR=6.7
TTA    Tatalina          56.73  28   IAmb   IAmb   16 21 27.1
       comp=Z,32nm,1.2s
O19K   Port Alsworth     56.74  31   P      P      16 21 25.7 +1.3
       baz=256,SNR=14
Q19K   Cape Douglas,     56.78  33   P      P      16 21 24.2 -0.5
       baz=257
N19K   Bonanza Creek     56.82  31   P      P      16 21 26.5 +1.4
       baz=255,SNR=9.3
N19K   Bonanza Creek     56.82  31   P      P      16 21 25.9 +0.8
L19K   White Mountain    57.02  29   P      P      16 21 27.4 +1.0
       baz=254,SNR=6.4
L19K   White Mountain    57.02  29   P      P      16 21 25.9 -0.5
L19K                                 IAmb   IAmb   16 21 28.6
       comp=Z,36nm,1.1s
KDAK   Kodiak Island     57.09  34   P      P      16 21 27.3 +0.4
       comp=Z,16nm,0.5s,baz=278,slow=4.2,SNR=23
KDAK   Kodiak Island     57.09  34   P      P      16 21 27.4 +0.5
       baz=259
KDAK   Kodiak Island     57.09  34   P      P      16 21 27.1 +0.2
P19K   Oil Pt            57.15  32   P      P      16 21 27.8 +0.4
       baz=257,SNR=5.6
M19K   Big River Lodg    57.15  29   P      P      16 21 28.6 +1.3
       baz=254
L20K   Farewell, AK      57.54  29   P      P      16 21 31.2 +1.1
       baz=255
PDGK   Podgornoye        57.64 308   P      P      16 21 31.6 +0.4
K20K   Telida            57.70  28   P      P      16 21 32.6 +1.5
       baz=254,SNR=12
J20K   Nowinta River     57.90  27   P      P      16 21 34.1 +1.6
       baz=253,SNR=25
UZB    Uzynbulak         57.98 308  eP      P      16 21 33.0 -0.7
       baz=308
UZB    Uzynbulak         57.98 308  eP      P      16 21 32.9 -0.7
SPCR   Spurr Chakacha    57.99  31   P      P      16 21 34.8 +1.5
       baz=257
KPKS   Kokpek            58.23 308  eP      P      16 21 34.8 -0.6
       baz=308
KPKS   Kokpek            58.23 308  eP      P      16 21 34.7 -0.6
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NRIK   Noril'sk          58.36 339   P      P      16 21 36.3 +0.7
       comp=Z,5.4nm,0.7s,baz=111,slow=8.5,SNR=13
NRIK                                 LR     LR     16 46 29.2
       comp=Z,106nm,21.8s,baz=114,slow=36
NRIK   Noril'sk          58.36 339d iP      P      16 21 36.0 +0.4
NRIK                                 pmax   pmax
       comp=Z,14nm,0.9s
NRIK   Noril'sk          58.36 339   IAmb   IAmb   16 21 57.6
       comp=Z,25nm,0.9s
PPLA   Purkeypile        58.40  29   P      P      16 21 37.3 +1.1
       baz=256
BRSE   Bradley Lake S    58.40  32   P      P      16 21 36.0 -0.1
       baz=259
KURK   Kurchatov         58.43 317c iP      P      16 21 36.0 -0.4
KURK                                 pmax   pmax
       comp=Z,8.0nm,0.8s
KURK   Kurchatov         58.43 317   P      P      16 21 35.8 -0.6
SATY   Saty              58.44 308  eP      P      16 21 36.3 -0.6
       baz=308
SATY   Saty              58.44 308  eP      P      16 21 36.2 -0.6
KURBB  Kurchatov Arra    58.48 317   P      P      16 21 36.4 -0.4
SKT    Skwentna          58.48  30   P      P      16 21 36.7 +0.1
       baz=257
SKT    Skwentna          58.48  30   IAmb   IAmb   16 21 37.7
       comp=Z,28nm,0.9s
CAST   Castle Rocks      58.57  28   P      P      16 21 38.4 +1.1
       baz=256,SNR=21
IMAR   Indian Mountai    58.59  25   P      P      16 21 37.8 +0.5
CHUM   Lake Minchumin    58.59  27   P      P      16 21 38.7 +1.4
       baz=255
H21K   Melozitna Rive    58.87  25   P      P      16 21 40.7 +1.4
       baz=254,SNR=20
TARG   Taragay, Kyrgy    58.93 306   IAmb   IAmb   16 22 02.4
       comp=Z,27nm,1.2s
O22K   Cooper Landing    59.04  32   P      P      16 21 40.5 +0.1
       baz=260
I21K   Tanana            59.07  26   P      P      16 21 42.1 +1.5
       baz=255,SNR=12
I21K   Tanana            59.07  26   IAmb   IAmb   16 22 06.9
       comp=Z,34nm,1.0s
M22K   Willow            59.09  30   P      P      16 21 40.5 -0.3
       baz=259,SNR=6.4
SEW    Seward            59.11  32   P      P      16 21 40.7 -0.2
       baz=260,SNR=9.9
RC01   Rabbit Creek A    59.14  31   P      P      16 21 41.9 +0.7
       baz=259
RC01   Rabbit Creek A    59.14  31   P      P      16 21 41.0 -0.2
RC01                                 IAmb   IAmb   16 21 42.2
       comp=Z,32nm,0.9s
CUT    Chulitna          59.15  29   P      P      16 21 41.6 +0.4
       baz=258
BPAW   Bear Paw Mtn.     59.21  27   P      P      16 21 42.6 +0.9
       baz=256,SNR=20
TRF    Thorofare Moun    59.37  28   P      P      16 21 43.1 +0.1
       baz=258,SNR=14
MDOK   Medeo             59.43 308  eP      P      16 21 43.7 -0.1
       baz=308
MDOK   Medeo             59.43 308  eP      P      16 21 43.6 -0.1
PMR    Palmer            59.52  30   P      P      16 21 43.9 +0.1
       baz=260,SNR=9.4
MLY    Manley            59.54  26   P      P      16 21 45.0 +1.1
       baz=256,SNR=9.6
MLY    Manley            59.54  26   P      P      16 21 44.6 +0.7
MLY                                  IAmb   IAmb   16 21 46.1
       comp=Z,50nm,1.5s
GHO    Glory Hole Cre    59.65  30   IAmb   IAmb   16 22 13.4
       comp=Z,26nm,1.0s
PWL    Port Wells        59.78  31   P      P      16 21 45.9 +0.3
       baz=261,SNR=8.0
KNK    Knik Glacier      59.81  31   P      P      16 21 46.2 +0.4
       baz=260,SNR=8.6
KUU    Kurty             59.91 309  eP      P      16 21 46.3 -0.6
       baz=309
KUU    Kurty             59.91 309  eP      P      16 21 46.3 -0.6
SML    Sawmill           59.94  30   P      P      16 21 47.1 +0.4
       baz=260,SNR=24
RND    Reindeer          59.99  28   P      P      16 21 46.8 -0.3
RND                                  pmax   pmax
       comp=Z,31nm,1.1s
RND    Reindeer          59.99  28   P      P      16 21 46.8 -0.3
RND                                  IAmb   IAmb   16 22 11.6
       comp=Z,31nm,1.1s
WAT1   Susitna Watana    60.02  29   P      P      16 21 47.1 -0.1
       baz=260
MCK    McKinley          60.02  28   P      P      16 21 47.1 -0.1
       baz=259,SNR=14
MCK    McKinley          60.02  28   IAmb   IAmb   16 21 48.8
       comp=Z,34nm,1.0s
ULHL   Ulahol            60.07 307   P      P      16 21 49.3 +1.1
       SNR=6.3
I23K   Minto, Yukon-K    60.13  26   P      P      16 21 48.9 +1.0
       baz=257,SNR=17
I23K   Minto, Yukon-K    60.13  26   IAmb   IAmb   16 21 50.2
       comp=Z,18nm,0.7s
NEA2   Nenana            60.14  27   P      P      16 21 48.2 +0.2
       baz=258,SNR=14
NEA2   Nenana            60.14  27   IAmb   IAmb   16 21 49.6
       comp=Z,17nm,0.7s
H23K   Yukon River       60.21  26   P      P      16 21 49.7 +1.2
       baz=257,SNR=8.9
H23K   Yukon River       60.21  26   IAmb   IAmb   16 21 50.8
       comp=Z,19nm,1.0s
COLD   Coldfoot          60.29  24   P      P      16 21 50.5 +1.5
       baz=255,SNR=6.7
COLD   Coldfoot          60.29  24   IAmb   IAmb   16 22 15.4
       comp=Z,30nm,1.1s
WAT6   Susitna Watana    60.34  29   P      P      16 21 49.9 +0.3
       baz=260,SNR=20
GLI    Glacier Island    60.38  31   P      P      16 21 50.1 +0.4
       baz=262
SCM    Sheep Creek Mo    60.41  30   P      P      16 21 50.7 +0.7
       baz=261,SNR=17
KSH    Kashi             60.47 304   P      P      16 21 54.3 +3.5
KSH                                  pP     pwP    16 22 13.3 -2.1
KSH                                  S      S      16 30 08.9 +8.7
KSH                                  pmax   pmax
       comp=Z,22nm,0.7s
KSH                                  pmax   pmax
       comp=Z,110nm,3.9s
KSH                                  LR     LR
       comp=Z,150nm,7.6s
KSH                                  LR     LR
       comp=Z,150nm,6.0s
KSH                                  LR     LR
       comp=Z,210nm,6.9s
TKM2   Tokmak 2          60.50 308   P      P      16 21 52.2 +1.1
       SNR=16
TKM2   Tokmak 2          60.50 308   P      P      16 21 51.8 +0.7
WRH    Wood River Hil    60.53  27   IAmb   IAmb   16 21 51.5
       comp=Z,38nm,1.4s
DHY    Denali Highway    60.59  29   P      P      16 21 51.5 +0.2
       baz=260
DHY    Denali Highway    60.59  29   IAmb   IAmb   16 22 17.0
       comp=Z,13nm,0.8s
TCOL   CIGO, UAF Yank    60.70  27   P      P      16 21 52.1 +0.3
       baz=259
COLA   College           60.70  27⇓eP      P      16 21 53.0 +1.2
COLA                                 pmax   pmax
       comp=Z,29nm,2.3s
COLA   College           60.70  27   P      P      16 21 51.5 -0.3
COLA                                 IAmb   IAmb   16 21 53.9
       comp=Z,11nm,0.8s
H24K   Noodor Dome       60.88  26   P      P      16 21 54.0 +0.9
       baz=258
TOLK   Toolik Lake Re    60.88  22   P      P      16 21 54.6 +1.5
       baz=255,SNR=15
POKR   Poker Plat Res    60.92  27   P      P      16 21 53.4  0.0
       baz=259
M24K   Tolsona, Glenn    60.99  30   P      P      16 21 55.1 +1.2
       baz=262
EYAK   Cordova Ski Ar    60.99  32   P      P      16 21 54.8 +1.0
       baz=263
KBK    Karagaybulak      61.00 308   P      P      16 21 55.5 +1.1
       SNR=8.9
HDA    Harding Lake      61.00  27   P      P      16 21 53.3 -0.6
       baz=260,SNR=9.7
HDA    Harding Lake      61.00  27   IAmb   IAmb   16 21 55.1
       comp=Z,13nm,0.8s
KLU    Klutina           61.03  31   P      P      16 21 55.0 +0.8
       baz=263,SNR=9.9
DIV    Divide            61.05  31   IAmb   IAmb   16 21 56.2
       comp=Z,44nm,1.4s
IL31                     61.09  27   IAmb   IAmb   16 21 54.7
       comp=Z,16nm,0.8s
ILAR   Eielson Array     61.09  27   P      P      16 21 53.6 -0.8
       comp=Z,11nm,0.7s,baz=258,slow=5.2,SNR=142
ILAR                                 LR     LR     16 44 45.9
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       comp=Z,108nm,21.6s,baz=266,slow=32
SGDS   Sogindy           61.18 308  eP      P      16 21 54.4 -1.1
       baz=308
FRU1   Bishkek           61.22 308   P      P      16 21 56.4 +0.6
FRU1                                 pmax   pmax
       comp=Z,23nm,0.8s
FRU1   Bishkek           61.22 308   P      P      16 21 56.4 +0.6
FRU1                                 IAmb   IAmb   16 22 17.2
       comp=Z,23nm,0.8s
USP    Ospenovka         61.28 308   P      P      16 21 56.9 +0.7
       SNR=6.5
AAK    Ala-Archa         61.33 308ceP      P      16 21 57.3 +0.6
AAK                                  pmax   pmax
       comp=Z,27nm,1.7s
AAK    Ala-Archa         61.33 308   P      P      16 21 57.1 +0.4
UCH    Uchtor            61.35 307   P      P      16 21 57.0 -0.2
       SNR=14
PAX    Paxson            61.43  29   P      P      16 21 57.4 +0.5
       baz=262,SNR=8.5
PAX    Paxson            61.43  29   IAmb   IAmb   16 21 58.5
       comp=Z,38nm,1.3s
HARP   HAARP             61.50  30   P      P      16 21 58.2 +0.9
       baz=263,SNR=7.8
BTLS   Baital            61.50 310  eP      P      16 21 56.9 -0.7
       baz=310
BTLS   Baital            61.50 310  eP      P      16 21 56.9 -0.7
BMRM   Bremner River     61.60  32   P      P      16 21 58.9 +0.9
       baz=264,SNR=8.3
N25K   Chitina, Valde    61.67  31   P      P      16 21 59.5 +1.0
       baz=264,SNR=5.2
N25K   Chitina, Valde    61.67  31   IAmb   IAmb   16 22 00.5
       comp=Z,37nm,1.4s
J25K   Salcha River,     61.71  27   P      P      16 21 58.1 -0.6
       baz=262,SNR=6.3
RIDG   Independent Ri    61.81  28   P      P      16 21 59.6 +0.2
       baz=262,SNR=13
RIDG   Independent Ri    61.81  28   IAmb   IAmb   16 22 00.6
       comp=Z,29nm,1.0s
FYU    Fort Yukon        62.07  25   IAmb   IAmb   16 22 04.3
       comp=Z,30nm,1.1s
DOT    Dot Lake          62.15  29   IAmb   IAmb   16 22 02.9
       comp=Z,36nm,1.3s
VRDI   Verde Repeater    62.18  31   P      P      16 22 02.1  0.0
VRDI                                 IAmb   IAmb   16 22 03.7
       comp=Z,31nm,1.1s
SCRK   Sand Creek        62.22  28   P      P      16 22 02.5 +0.2
       baz=263,SNR=25
SCRK   Sand Creek        62.22  28   P      P      16 22 01.6 -0.6
SCRK                                 IAmb   IAmb   16 22 03.4
       comp=Z,22nm,0.8s
BRZS   Berezniki         62.22 316  eP      P      16 22 01.1 -1.3
       baz=316
BRZS   Berezniki         62.22 316  eP      P      16 22 01.0 -1.3
HYB    Hyderabad         62.27 279  i P     P      16 22 03.0 -0.2
CRQE   Cirque            62.32  32   P      P      16 22 03.6 +0.7
       baz=266,SNR=8.5
L26K   Log Cabin Wild    62.40  29   P      P      16 22 04.1 +0.8
       baz=264,SNR=6.5
MCARA  McCarthy VSAT     62.40  31   P      P      16 22 04.0 +0.7
       baz=265,SNR=8.3
TGL    Tana Glacier      62.45  32   IAmb   IAmb   16 22 05.5
       comp=Z,32nm,1.0s
BMAR   Burnt Mountain    62.47  24   P      P      16 22 04.9 +1.2
J26L   Joseph Creek      62.47  28   P      P      16 22 03.9 +0.1
       baz=263,SNR=21
M26K   Nabesna, AK       62.50  30   P      P      16 22 04.4 +0.4
       baz=265
GRNC   Granite Creek     62.97  32   IAmb   IAmb   16 22 09.1
       comp=Z,27nm,1.0s
M27K   Edge Creek, AK    63.02  30   P      P      16 22 08.2 +0.7
       baz=266,SNR=6.4
M27K   Edge Creek, AK    63.02  30   IAmb   IAmb   16 22 09.3
       comp=Z,23nm,1.2s
L27K   Beaver Creek,     63.09  29   P      P      16 22 08.7 +0.7
       baz=266,SNR=5.2
CTG    Chitna Glacier    63.19  32   P      P      16 22 09.3 +0.6
       baz=267
CTGM   Chitina Glacie    63.19  32   IAmb   IAmb   16 22 10.6
       comp=Z,29nm,1.0s
LOGN   Logan Glacier     63.34  32   IAmb   IAmb   16 22 32.4
       comp=Z,51nm,1.4s
PALK   Pallekele         63.45 267   P      P      16 22 10.6 -0.5
       comp=Z,5.1nm,0.7s,baz=151,slow=11,SNR=2.4
EGAK   Eagle             63.53  27   P      P      16 22 10.7  0.0
       baz=265
BRVK   Borovoye          63.63 319ceP      P      16 22 11.8 +0.2
BRVK                                 pmax   pmax
       comp=Z,21nm,1.3s
BRVK   Borovoye          63.63 319   P      P      16 22 11.2 -0.4
BRVK                                 IAmb   IAmb   16 22 39.6
       comp=Z,18nm,0.7s
YUK3   Moose Creek       63.65  31   P      P      16 22 12.7 +0.9
       baz=268,SNR=7.2
DRK    Karamyk           63.68 304   P      P      16 22 13.2 +0.6
DRK                                  IAmb   IAmb   16 22 33.9
       comp=Z,18nm,0.7s
KK31   Karatay Array     64.20 308   IAmb   IAmb   16 22 36.8
       comp=Z,38nm,0.9s
KKAR   Karatay Array     64.20 308   P      P      16 22 15.7 +0.1
KKAR   Karatay Array     64.20 308   P      P      16 22 15.7 +0.1
DAWY   Dawson            64.25  28   P      P      16 22 16.3 +0.8
       baz=267,SNR=10
YUK4   Talbot Arm        64.50  31   P      P      16 22 19.1 +1.7
       baz=269,SNR=11
YUK6   Outpost Mounta    64.64  32   P      P      16 22 19.5 +1.1
       baz=270
IUG    Iuzhnay           64.67 307  eP      P      16 22 19.2 +0.4
       baz=307
IUG    Iuzhnay           64.67 307  eP      P      16 22 19.1 +0.4
I29M   Ogilvie Camp,     64.77  27   P      P      16 22 19.4 +0.6
       baz=268,SNR=7.2
GAR    Garm              64.89 304   P      P      16 22 20.4 +0.2
GAR                                  IAmb   IAmb   16 22 41.2
       comp=Z,31nm,0.6s
HYT    Haines Junctio    65.06  32   P      P      16 22 22.5 +1.5
       baz=270,SNR=9.8
HYT    Haines Junctio    65.06  32   IAmb   IAmb   16 22 23.5
       comp=Z,34nm,1.0s
M30M   Minto, Yukon      65.39  30   P      P      16 22 24.1 +1.1
       baz=270,SNR=6.7
EPYK   Eagle Plains      65.45  26   P      P      16 22 24.1 +0.8
       baz=269,SNR=12
EPYK   Eagle Plains      65.45  26   IAmb   IAmb   16 22 25.1
       comp=Z,37nm,1.1s
MAYO   Mayo, Yukon       65.79  29   P      P      16 22 26.9 +1.4
       baz=271
CHGR   Chuyangaron       65.84 304   P      P      16 22 26.1 -0.2
N31M   Braeburn, Yuko    65.88  31   P      P      16 22 27.2 +1.1
       baz=272
POO    Poona             66.26 281  eP      P      16 22 29.0 -0.3
WHY    Whitehorse        66.35  32   P      P      16 22 30.5 +1.3
       baz=273,SNR=5.2
M31M   Drury Creek, Y    66.51  30   P      P      16 22 30.8 +0.7
       baz=273,SNR=8.3
KBL    Kabul             66.66 299   P      P      16 22 31.4 -0.4
KBL                                  pmax   pmax
       comp=Z,83nm,0.8s
KBL    Kabul             66.66 299   P      P      16 22 31.4 -0.4
INK    Inuvik            66.70  24   P      P      16 22 31.4 +0.3
       baz=271,SNR=19
INK    Inuvik            66.70  24   IAmb   IAmb   16 22 32.5
       comp=Z,23nm,0.9s
FARO   Faro, Yukon       67.00  30   P      P      16 22 34.0 +0.7
       baz=274,SNR=5.2
P33M   Teslin, Yukon     67.40  32   P      P      16 22 36.8 +0.9
       baz=275,SNR=8.1
BKZ    Black Stump Fm    67.56 154   P      P      16 22 36.2 -0.8
BKZ                                  IAmb   IAmb   16 22 37.8
       comp=Z,25nm,0.7s
MMPY   Sheldon Lake,     67.94  30   P      P      16 22 40.4 +1.2
       baz=275,SNR=5.1
BSWZ   Blackbirch Sta    68.75 157   P      P      16 22 42.1 -2.3
SVE    Sverdlovsk        68.86 324  eP      P      16 22 45.6 +0.7
SVE                                  pmax   pmax
       comp=Z,30nm,1.1s
DLBC   Dease Lake        69.02  34   IAmb   IAmb   16 22 48.5
       comp=Z,30nm,0.9s
PLWZ   Palliser          69.14 156   P      P      16 22 45.9 -0.9
A36M   Sachs Harbour     69.28  19   P      P      16 22 48.0 +0.7
       baz=277
TGTN   Hyland Airport    69.46  31   P      P      16 22 49.9 +1.3
       baz=278,SNR=10
ARU    Arti              70.05 324c iP      P      16 22 52.2 -0.1
ARU                                  *PP    PcP    16 23 13.0 -1.0
ARU                                  S      S      16 31 57.5 +0.9
ARU                                  SS     SS     16 36 24.0 -3.0
ARU                                  pmax   pmax
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            comp=Z,10.0nm,0.6s
ARU   Arti              70.05 324    P       P       16 22 51.5  -0.9
ARU                                  IAmb    IAmb    16 23 17.4
            comp=Z,52nm,1.4s
AB31  Akbulak array     70.53 316  i P       P       16 22 54.8  -0.5
ABKAR Akbulak array     70.53 316    IAmb    IAmb    16 23 16.8
            comp=Z,28nm,0.9s
HRA   Herat             72.17 300    P       P       16 23 05.7  -0.1
HRA                                  IAmb    IAmb    16 23 27.2
            comp=Z,32nm,0.8s
KIRV  Kirov             74.38 327c iP        P       16 23 18.6  +0.6
GEYT  Alibeck           74.47 305    P       P       16 23 19.5  +0.4
            comp=Z,3.7nm,0.7s,baz=40,slow=18,SNR=4.1
GEYT                                 LR      LR      16 58 28.7
            comp=Z,70nm,21.0s,baz=230,slow=38
PPT   Papeete           75.15 116    LR      LR      16 50 05.3
            comp=Z,92nm,22.0s,baz=344,slow=31
PPT2  Papeete2          75.16 116   eLR      LR      16 46 24.8
            comp=Z,535nm,32.0s
PRGR  Permogore         75.27 331   eP       P       16 23 23.3  +0.2
PRGR                                e                16 23 37.1
PRGR                                 pmax    pmax
            comp=Z,20nm,0.6s
LLLB  Lillooet          75.32  41    P       P       16 23 24.4  +0.7
LLLB                                 IAmb    IAmb    16 23 26.0
            comp=Z,33nm,1.0s
D03D  Eldon             75.44  44    P       P       16 23 26.4  +2.0
            baz=287,SNR=5.2
YKA   Yellowknife Ar    75.49  28    P       P       16 23 24.4  +0.1
            comp=Z,13nm,0.8s,baz=298,slow=4.1,SNR=15
B05A  Bryant            75.86  43    P       P       16 23 28.2  +1.5
            baz=287
E04D  Cinebar           76.06  45    P       P       16 23 29.7  +1.8
            baz=287
D05A  Enumclaw          76.25  45    IAmb    IAmb    16 23 31.7
            comp=Z,46nm,0.9s
NOR   Nord              76.26 357    P       P       16 23 29.1  +0.6
NOR   Nord              76.26 357  i P       P       16 23 28.7  +0.2
I03D  Drain, OR         76.38  48    P       P       16 23 30.6  +0.8
            baz=287
L02E  Cave Junction     76.66  50    P       P       16 23 33.1  +1.7
            baz=288
C06D  Leavenworth       76.74  44    P       P       16 23 33.2  +1.4
            baz=288
KHMM  Horse Mountain    76.95  51    IAmb    IAmb    16 23 35.9
            comp=Z,30nm,0.9s
I04A  Tendick Farm,     76.99  48    P       P       16 23 34.4  +1.0
            baz=288
F05D  White Salmon      77.00  46    P       P       16 23 34.6  +1.3
            baz=288
HOOD  Mount Hood Mea    77.04  46    IAmb    IAmb    16 23 35.9
            comp=Z,45nm,1.0s
LTY   Liberty           77.09  44    P       P       16 23 33.8  -0.1
LTY                                  IAmb    IAmb    16 23 35.5
            comp=Z,24nm,0.9s
BELG  Belogornoye       77.25 321⇑eP        P       16 23 34.7  +0.2
BELG                                 pmax    pmax
            comp=Z,5.0nm,0.9s
G05D  Wamic, OR         77.29  46    P       P       16 23 36.1  +1.2
            baz=288
J04D  Umpqua Nationa    77.37  48    P       P       16 23 36.9  +1.2
            baz=288
M02C  Callahan          77.42  50    P       P       16 23 37.3  +1.4
            baz=288
L04D  Klamath Falls     77.56  49    P       P       16 23 37.6  +0.9
            baz=288
B08A  Colville Reser    77.59  43    IAmb    IAmb    16 23 38.3
            comp=Z,27nm,0.9s
N02D  Trinity Center    77.66  51    P       P       16 23 38.1  +0.9
            baz=288,SNR=8.6
K04D  Chiloquin, OR     77.82  49    P       P       16 23 39.3  +1.2
            baz=289
E07A  Sunnyside         77.84  45    IAmb    IAmb    16 23 40.2
            comp=Z,31nm,0.9s
O02D  Mt. Diablo Mer    77.85  52    P       P       16 23 39.6  +1.4
            baz=288,SNR=6.2
J05D  Fort Rock, OR     77.97  48    P       P       16 23 40.3  +1.3
            baz=289,SNR=13
M04C  Macdoel           78.02  50    P       P       16 23 40.1  +0.9
            baz=289,SNR=9.7
TBI   Tubuai            78.09 121   eLR      LR      16 47 37.5
            comp=Z,200nm,32.0s
HAWA  Hanford           78.10  45    P       P       16 23 40.3  +0.9
HAWA                                 IAmb    IAmb    16 23 41.5
            comp=Z,22nm,1.0s
D08A  Wollman Farm,     78.28  44    IAmb    IAmb    16 23 42.3
            comp=Z,21nm,1.0s
KLMR  Klimovskoe        78.30 331   eP       P       16 23 39.4  -0.7
KLMR                                e*PP     pP      16 24 00.4  +0.3
KLMR                                 pmax    pmax
            comp=Z,8.0nm,0.7s
KLMR  Klimovskoe        78.30 331   eP       P       16 23 39.5  -0.7
KLMR                                 AMP             16 23 40.9
            comp=Z,8.0nm,0.7s
KLMR                                epP      pP      16 24 00.5  +0.3
K05A  Summer Lake       78.38  49    IAmb    IAmb    16 23 43.6
            comp=Z,49nm,1.0s
O03E  Paynes Creek      78.53  51    P       P       16 23 42.4  +0.4
            baz=289,SNR=14
E09A  Wood Farm, Sta    78.97  44    IAmb    IAmb    16 23 46.2
            comp=Z,28nm,1.0s
ORV   Oroville          78.99  52    P       P       16 23 44.1  -0.3
ORV                                  pmax    pmax
            comp=Z,18nm,1.0s
ORV   Oroville          78.99  52    P       P       16 23 44.1  -0.3
NEW   Newport           79.01  42    P       P       16 23 45.1  +0.6
            baz=291,SNR=16
NEW   Newport           79.01  42    IAmb    IAmb    16 23 46.2
            comp=Z,32nm,0.9s
MOD   Modoc Plateau     79.07  49    IAmb    IAmb    16 23 46.8
            comp=Z,39nm,1.4s
ARCES ARCESS Array B    79.22 342    P       P       16 23 45.0  -0.2
            comp=Z,14nm,0.8s,baz=61,slow=7.4,SNR=19
ARCES                                LR      LR      17 04 47.1
            comp=Z,58nm,19.1s,baz=55,slow=40
ARCES ARCESS Array B    79.22 342    P       P       16 23 45.0  -0.2
EDM   Edmonton          79.43  37    IAmb    IAmb    16 23 48.2
            comp=Z,39nm,1.1s
TULEG Thule             79.63   8  i P       P       16 23 47.8  +0.6
TULEG                                IAmb    IAmb    16 23 48.7
            comp=Z,23nm,0.9s
J08A  Circle Bar Ran    79.84  47    IAmb    IAmb    16 23 51.2
            comp=Z,36nm,0.9s
WVOR  Wild Horse Val    80.05  48    IAmb    IAmb    16 23 52.2
            comp=Z,26nm,1.0s
BMO   Blue Mountains    80.10  46    IAmb    IAmb    16 23 52.3
            comp=Z,38nm,0.9s
MPK   Martis Peak       80.15  52    IAmb    IAmb    16 23 53.0
            comp=Z,50nm,1.1s
CMB   Columbia Colle    80.32  53    IAmb    IAmb    16 23 53.5
            comp=Z,30nm,1.1s
NEEM  North Greenlan    80.39   4  i P       P       16 23 52.8  +1.1
NEEM                                 IAmb    IAmb    16 23 53.5
            comp=Z,46nm,1.1s
PNTR  Pine Nut          80.53  52    IAmb    IAmb    16 23 55.0
            comp=Z,35nm,0.8s
WALA  Waterton Lakes    80.70  41    IAmb    IAmb    16 23 56.0
            comp=Z,35nm,0.9s
YERR  Yerington         80.83  52    IAmb    IAmb    16 23 56.4
            comp=Z,23nm,0.8s
JTMT  Jette             80.98  42    IAmb    IAmb    16 23 57.0
            comp=Z,42nm,1.1s
DAG   Danmarks Havn     81.02 356  i P       P       16 23 54.6  -0.1
DAG                                  IAmb    IAmb    16 23 55.7
            comp=Z,6.6nm,0.8s
VRH   Novokhopyorsk     81.09 322   eP       P       16 23 55.1  -0.4
VRH                                  pmax    pmax
            comp=Z,10.0nm,0.6s
LKRN  Lenkeran, Azer    81.19 308    P       P       16 23 58.7  +2.4
PAGB  Antelope Grade    81.22  55    IAmb    IAmb    16 23 58.6
            comp=Z,32nm,1.1s
SEKA  Sheki             81.42 311    P       P       16 23 58.9  +1.3
RYN   Ryan              81.48  52    IAmb    IAmb    16 23 59.9
            comp=Z,23nm,1.0s
MSO   Missoula          81.55  43    P       P       16 23 58.2  +0.1
            baz=293
MLAC  Mammoth, Mammo81.61  53        P       P       16 24 00.3  +1.4
            baz=291
MFID  Camas Ranch       81.62  47    IAmb    IAmb    16 24 00.6
            comp=Z,42nm,0.9s
LHV   Little Huntoon    81.63  52    IAmb    IAmb    16 24 01.0
            comp=Z,28nm,1.0s
KVN   Kaiserville       81.64  51    IAmb    IAmb    16 24 00.6
            comp=Z,34nm,1.2s
GROC  Groznyy           81.65 313   eP       P       16 23 59.4  +0.8
GROC                                e*SP     sP      16 24 26.5  -0.6
GROC                                 pmax    pmax
            comp=Z,13nm,0.4s
MNGR  Mingechevir, A    81.66 311    P       P       16 24 00.9  +2.2
ZKTA  Zakatala          81.67 311    P       P       16 24 01.2  +2.4
NVAR  Mina Array Bea    81.71  52    P       P       16 24 00.2  +0.8
            comp=Z,21nm,0.7s,baz=270,slow=5.8,SNR=128
NVAR                                 LR      LR      16 52 40.5
            comp=Z,156nm,21.5s,baz=273,slow=30
PKM   Mcpherson Peak    81.85  56    P       P       16 24 01.2  +1.1
            baz=291,SNR=7.2
VES   Vestal, Richgr    82.07  55    P       P       16 24 01.1  +0.1
            baz=291,SNR=6.9
LPSR  Galich'ya Gora    82.08 324   eP       P       16 24 01.0  +0.4
LPSR                                 pmax    pmax
            comp=Z,10.0nm,0.7s
OBN   Obninsk           82.21 327⇓eP        P       16 24 03.8  +2.5
OBN                                  *SP     sP      16 24 32.0  +2.2
OBN                                 e                16 35 01.7
OBN                                  pmax    pmax
            comp=Z,10.0nm,0.5s
OBN                                  MLR     MLR
            comp=Z,78nm,15.0s
GANJ  Ganja             82.25 311    P       P       16 24 03.1  +1.2
TIN   Tinemaha, Big     82.27  53    P       P       16 24 03.4  +1.3
            baz=292
HLID  Hailey            82.51  46    P       P       16 24 04.2  +0.8
            baz=293,SNR=19
VSR   Storozhevoye      82.55 322   eP       P       16 24 03.1   0.0
VSR                                  pmax    pmax
            comp=Z,30nm,0.6s
VORD  Divnogorie        82.58 322   eP       P       16 24 03.2  -0.1
VORD                                 pmax    pmax
            comp=Z,50nm,0.8s
ISA   Isabella, Lake    82.60  55    P       P       16 24 04.0  +0.2
            baz=292,SNR=6.3
CWC   Cottonwood Cre    82.61  54    P       P       16 24 04.4  +0.4
            baz=292
LCH   Last Change Ra    82.64  53    IAmb    IAmb    16 24 05.8
            comp=Z,23nm,1.0s
NCK   Nalchik           83.02 314⇑eP        P       16 24 06.9  +1.1
NCK                                  pmax    pmax
            comp=Z,44nm,1.2s
MCMT  McKenzie Canyo    83.04  44    P       P       16 24 06.4  +0.2
ELK   Elko              83.04  49    IAmb    IAmb    16 24 08.1
            comp=Z,24nm,0.9s
ZEI   Tsey              83.09 313   eP       P       16 24 05.9  -0.5
ZEI                                  pmax    pmax
            comp=Z,16nm,0.9s
EDW2  Edwards Air Fo    83.25  55    P       P       16 24 07.7  +0.5
            baz=292,SNR=12
LRMC  Laurel Mtn Rad    83.26  55    P       P       16 24 07.9  +0.6
            baz=292,SNR=17
KBZ   Khabaz            83.39 314    P       P       16 24 08.2  +0.6
            comp=Z,13nm,0.9s,baz=128,slow=3.7,SNR=13
KBZ                                  LR      LR      17 04 45.9
            comp=Z,80nm,19.5s,baz=60,slow=38
NAX   Nakhchivan        83.40 309    P       P       16 24 09.8  +1.9
KIV   Kislovodsk        83.44 315   eP       P       16 24 09.3  +1.3
KIV                                  pmax    pmax
            comp=Z,20nm,1.0s
MWC   Mount Wilson      83.44  56    IAmb    IAmb    16 24 09.7
            comp=Z,36nm,1.4s
CIS   Catalina Islan    83.47  57    P       P       16 24 08.6  +0.3
            baz=292
FURC  Furnace Creek,    83.51  53    P       P       16 24 09.3  +0.9
            baz=292,SNR=9.9
BOZ   Bozeman (W)       83.51  43    P       P       16 24 09.0  +0.6
            baz=295,SNR=10.0
GNI   Garni             83.56 311⇑eP        P       16 24 08.1  -0.7
GNI                                  pmax    pmax
            comp=Z,37nm,1.3s
EGMT  Eagleton          83.64  41    P       P       16 24 09.5  +0.5
            baz=296
FIA1  FINESS Array S    83.68 335    P       P       16 24 08.1  -0.7
FIA1                                 IAmb    IAmb    16 24 09.7
            comp=Z,25nm,0.8s
FINES FINESS Array B    83.68 335    P       P       16 24 08.4  -0.3
            comp=Z,17nm,0.7s,baz=67,slow=4.9,SNR=61
FINES                                LR      LR      17 03 01.7
            comp=Z,70nm,21.6s,baz=45,slow=37
FINES FINESS Array B    83.68 335    P       P       16 24 07.0  -1.7
QSM   Queen of Sheba    83.69  54    IAmb    IAmb    16 24 11.0
            comp=Z,35nm,0.9s
R11A  Troy Canyon, C    83.72  51    P       P       16 24 10.4  +0.7
            baz=293,SNR=17
GWY   Greenwater Val    83.76  54    IAmb    IAmb    16 24 11.4
            comp=Z,35nm,0.8s
QLMT  Earthquake Lak    83.96  44    P       P       16 24 11.8  +1.0
GSC   Goldstone, Bar    83.99  54    P       P       16 24 11.7  +0.6
            baz=293,SNR=11
GSC   Goldstone, Bar    83.99  54    IAmb    IAmb    16 24 12.7
            comp=Z,26nm,1.1s
YHL   Hebgen Lake       84.11  44    IAmb    IAmb    16 24 14.2
            comp=Z,39nm,1.0s
SHOC  Shoshone, Teco    84.16  54    P       P       16 24 12.4  +0.5
            baz=293
HVU   Hansel Valley     84.33  47    IAmb    IAmb    16 24 14.9
            comp=Z,23nm,1.0s
MURC  Murrieta          84.34  56    P       P       16 24 12.6  -0.2
            baz=293
YHH   Holmes Hill       84.35  44    IAmb    IAmb    16 24 15.4
            comp=Z,24nm,1.1s
SPR3  Spring Creek 3    84.37  50    IAmb    IAmb    16 24 15.3
            comp=Z,22nm,1.1s
PRN   Pahroc Range      84.48  52    P       P       16 24 13.0  -0.5
HEC   Hector,Ludlow     84.53  55    P       P       16 24 14.5  +0.7
            baz=293,SNR=6.0
YUF   Upper Falls       84.60  44    IAmb    IAmb    16 24 17.2
            comp=Z,28nm,1.2s
TUQ   Turquoise Moun    84.61  54    P       P       16 24 14.9  +0.7
            baz=293,SNR=18
H17A  Grant Village     84.70  44    P       P       16 24 17.3  +2.7
            baz=296,SNR=13
H17A  Grant Village     84.70  44    IAmb    IAmb    16 24 18.6
            comp=Z,42nm,1.3s
FLWY  Flagg Ranch       84.75  45    IAmb    IAmb    16 24 17.6
            comp=Z,31nm,0.9s
SHPR  Sheep Range       84.76  53    IAmb    IAmb    16 24 17.1
            comp=Z,34nm,1.4s
FFC   Flin Flon         84.76  32    P       P       16 24 14.5  +0.1
FFC                                  pmax    pmax
            comp=Z,43nm,1.0s
FFC   Flin Flon         84.76  32    P       P       16 24 14.4  +0.1
YMP   Mirror Lake Pl    84.82  44    IAmb    IAmb    16 24 18.3
            comp=Z,39nm,1.0s
TPAW  Teton Pass        84.84  45    IAmb    IAmb    16 24 17.6
            comp=Z,32nm,1.4s
PSUT  Pine Spring       84.90  51    IAmb    IAmb    16 24 17.3
            comp=Z,25nm,0.8s
PFO   Pinyon Flats O    84.91  56    P       P       16 24 15.9  +0.1
PFO                                  pmax    pmax
            comp=Z,28nm,1.1s
PFO   Pinyon Flats O    84.91  56    P       P       16 24 16.1  +0.4
            baz=293,SNR=6.5
PFO   Pinyon Flats O    84.91  56    P       P       16 24 15.9  +0.1
PFO                                  IAmb    IAmb    16 24 17.1
            comp=Z,28nm,1.1s
TPFO  Pinon Flats       84.91  56    P       P       16 24 16.0  +0.2
            baz=293,SNR=5.5
DUG   Dugway, Tooele    84.96  49    P       P       16 24 16.6  +0.7
            baz=294,SNR=27
DUG   Dugway, Tooele    84.96  49    IAmb    IAmb    16 24 17.6
            comp=Z,22nm,0.9s
REDW  Red Top Meadow    84.96  45    IAmb    IAmb    16 24 18.9
            comp=Z,19nm,1.2s
LOHW  Long Hollow       85.02  45    IAmb    IAmb    16 24 18.4
            comp=Z,22nm,1.4s
AHID  Auburn Hatcher    85.05  46    IAmb    IAmb    16 24 18.2
            comp=Z,25nm,1.1s
GMRC  Granite Mounta    85.06  55    P       P       16 24 17.0  +0.5
            baz=293,SNR=11
BELC  Belle Mtn. Jos    85.11  55    P       P       16 24 16.6  -0.2
            baz=293,SNR=6.3
VSU   Vasula            85.12 332⇓eP        P       16 24 15.6  -0.5
VSU                                  pmax    pmax
            comp=Z,51nm,0.8s
MONP2 Monument Peak     85.21  57    P       P       16 24 17.9  +0.5
            baz=293,SNR=5.8
RLMT  Red Lodge         85.22  43    P       P       16 24 18.6  +1.4
            baz=296,SNR=18
RLMT  Red Lodge         85.22  43    IAmb    IAmb    16 24 19.1
            comp=Z,18nm,0.7s
HWUT  Hardware Ranch    85.23  47    IAmb    IAmb    16 24 19.0
            comp=Z,29nm,0.9s
CTU   Camp Tracy        85.49  48    IAmb    IAmb    16 24 20.1
            comp=Z,20nm,1.0s
TCUT  Toone Canyon      85.54  47    IAmb    IAmb    16 24 20.4
            comp=Z,26nm,0.8s
NLU   North Lily Min    85.57  49    IAmb    IAmb    16 24 20.7
            comp=Z,20nm,1.0s
CCUT  Cedar City        85.65  51    IAmb    IAmb    16 24 21.6
            comp=Z,26nm,1.2s
BC3   Big Chuckawall    85.66  56    P       P       16 24 20.1  +0.6
            baz=294,SNR=11
IRM   Iron Mountain     85.70  55    P       P       16 24 20.1  +0.5
            baz=294,SNR=7.8
SUMG  Summit            85.72   1  i P       P       16 24 20.8  +1.4
SUMG                                 IAmb    IAmb    16 24 21.6
            comp=Z,15nm,0.8s
SUMG  Summit            85.72   1    IAmb    IAmb    16 24 45.0
            comp=Z,29nm,0.9s
SZCU  Shurtz Canyon     85.83  51    IAmb    IAmb    16 24 22.2
            comp=Z,15nm,1.1s
TCRU  Three Creeks R    85.87  50    IAmb    IAmb    16 24 22.6
            comp=Z,13nm,0.8s
LCMT  Little Creek M    85.96  52    IAmb    IAmb    16 24 23.0
            comp=Z,22nm,1.0s
BW06  Boulder Array     86.07  45    P       P       16 24 21.7  +0.2
            baz=296,SNR=6.0
PD31  Pinedale Array    86.07  45    P       P       16 24 20.9  -0.6
PDAR  Pinedale Array    86.07  45    P       P       16 24 21.5   0.0
            comp=Z,4.7nm,0.7s,baz=226,slow=1.8,SNR=30
PDAR                                 LR      LR      16 55 30.1
            comp=Z,142nm,20.3s,baz=300,slow=30
MTPU  Mount Pierson     86.30  50    IAmb    IAmb    16 24 25.0
            comp=Z,15nm,1.1s
GLA   Glamis            86.38  56    P       P       16 24 23.6  +0.6
            baz=294,SNR=7.7
GLA   Glamis            86.38  56    IAmb    IAmb    16 24 24.7
            comp=Z,26nm,0.9s
LAO   LASA Array        86.39  41    P       P       16 24 23.8  +1.0
            baz=298,SNR=7.8
PDMCI Parker Dam,Lak    86.40  55    P       P       16 24 23.7  +0.7
            baz=294,SNR=8.2
TMUT  Trail Mountain    86.46  49    IAmb    IAmb    16 24 25.2
            comp=Z,16nm,0.8s
ANN   Anapa             86.46 317   eP       P       16 24 21.0  -2.0
ANN                                 e*PP     pP      16 24 43.5  +0.1
ANN                                 e                16 27 43.6
ANN                                 ePPP     PPP     16 29 41.9
ANN                                 eS       SKSac   16 34 39.0  -3.4
ANN                                 eSS      SS      16 40 33.9  +0.2
ANN                                 eSSS     SSS     16 44 10.6
ANN                                  pmax    pmax
            comp=Z,129nm,1.0s
P17A  Butcher Ranch,    86.71  49    P       P       16 24 24.6   0.0
P17A                                 IAmb    IAmb    16 24 26.4
            comp=Z,25nm,0.8s
DGMT  Dagmar            86.73  39    P       P       16 24 24.4  +0.1
            baz=300
U15A  North Rim         86.90  52    IAmb    IAmb    16 24 27.7
            comp=Z,21nm,0.9s
P18A  Preston Nutter    86.99  48    IAmb    IAmb    16 24 27.7
            comp=Z,14nm,0.7s
WUAZ  Wupatki           87.96  52    P       P       16 24 31.8  +1.1
            baz=296,SNR=19
WUAZ  Wupatki           87.96  52    IAmb    IAmb    16 24 32.8
            comp=Z,30nm,0.9s
K22A  Casper            88.11  44    P       P       16 24 30.5  -0.8
O20A  White River Ci    88.14  47    P       P       16 24 32.1  +0.6
            baz=297
O20A  White River Ci    88.14  47    IAmb    IAmb    16 24 32.9
            comp=Z,22nm,1.0s
AKASG Malin Array Be    88.27 325    P       P       16 24 30.4  -1.2
            comp=Z,4.4nm,0.5s,baz=52,slow=5.1,SNR=35
AKASG                                LR      LR      17 06 21.9
            comp=Z,60nm,19.7s,baz=350,slow=37
AKASG Malin Array Be    88.27 325    P       P       16 24 30.2  -1.4
AKBB  Malin Array Si    88.27 325⇑eP        P       16 24 30.4  -1.2
AKBB                                 pmax    pmax
            comp=Z,6.0nm,0.6s
AKBB  Malin Array Si    88.27 325    IAmb    IAmb    16 24 52.1
            comp=Z,8.1nm,0.7s
X16A  Lo Mia Camp, P    88.38  53    IAmb    IAmb    16 24 35.0
            comp=Z,14nm,1.2s
214A  Organ Pipe Nat    88.38  56    P       P       16 24 33.6  +1.0
            baz=295,SNR=6.8
214A  Organ Pipe Nat    88.38  56    IAmb    IAmb    16 24 34.6
            comp=Z,28nm,1.1s
RSSD  Black Hills       88.98  42    P       P       16 24 34.7  -0.7
RSSD                                 pmax    pmax
            comp=Z,8.0nm,1.3s
RSSD  Black Hills       88.98  42    P       P       16 24 34.7  -0.7
ICESG Greenland Ices    89.19   2  i P       P       16 24 36.8  +0.8
ICESG                                IAmb    IAmb    16 24 37.9
            comp=Z,21nm,1.0s
MVCO  Mesa Verde        89.29  50    P       P       16 24 37.7  +0.7
            baz=297
MVCO  Mesa Verde        89.29  50    P       P       16 24 36.0  -1.1
MVCO                                 IAmb    IAmb    16 24 39.5
            comp=Z,35nm,1.4s
NB2   NORSAR Subarra    89.32 339    P       P       16 24 35.6  -0.8
            comp=Z,3.2nm,0.7s,baz=43,slow=5.1
NOA   NORSAR Array B    89.32 339    P       P       16 24 35.8  -0.7
            comp=Z,3.4nm,0.7s,baz=48,slow=4.6,SNR=12
NOA                                  LR      LR      17 09 22.3
            comp=Z,22nm,18.6s,baz=40,slow=39
N23A  Red Feather La    89.33  46    P       P       16 24 38.4  +1.2
            baz=299,SNR=9.8
W18A  Petrified Fore    89.34  52    P       P       16 24 38.5  +1.3
            baz=297
SUW   Suwalki           89.36 330    P       P       16 24 36.1  -0.5
SUW                                  pmax    pmax
            comp=Z,39nm,0.8s
SUW   Suwalki           89.36 330    P       P       16 24 36.1  -0.5
SMCO  Snowmass          89.45  48    IAmb    IAmb    16 24 39.8
            comp=Z,13nm,0.9s
RAYN  Ar Rayn           89.58 295    P       P       16 24 36.8  -1.6
RAYN                                 pmax    pmax
            comp=Z,22nm,1.0s
RAYN  Ar Rayn           89.58 295    P       P       16 24 36.8  -1.6
RAYN                                 IAmb    IAmb    16 25 01.6
            comp=Z,22nm,0.9s
TUC   Tucson            89.79  55    P       P       16 24 40.5  +1.2
            baz=296
ISCO  Idaho Springs     90.08  47    P       P       16 24 41.8  +1.0
            baz=299,SNR=8.1
S22A  4UR Ranch, Cre    90.22  49    P       P       16 24 42.5  +1.1
            baz=298,SNR=8.0
ULM   Lac du Bonnet     90.34  34    P       P       16 24 40.9  -0.4
            comp=Z,3.2nm,0.6s,baz=297,slow=4.3,SNR=4.4
ULM                                  LR      LR      17 03 03.1
            comp=Z,116nm,21.9s,baz=308,slow=34
Q24A  Divide            90.80  47    P       P       16 24 44.9  +0.8
            baz=299,SNR=10.0
HSIG                    91.09  58    IAmb    IAmb    16 24 47.2
            comp=Z,16nm,0.8s
SDCO  Great Sand Dun    91.15  48    P       P       16 24 46.6  +0.8
            baz=299,SNR=11
319A  Douglas           91.35  55    P       P       16 24 47.2  +0.6
319A                                 IAmb    IAmb    16 24 48.9
            comp=Z,16nm,0.9s
BRTR  Keskin Array B    91.37 314    P       P       16 24 45.7  -0.8
            comp=Z,1.4nm,0.5s,baz=92,slow=3.5,SNR=2.7
BRTR                                 LR      LR      17 11 06.0
            comp=Z,45nm,18.3s,baz=42,slow=39
AGMN  Agassiz Nation    91.49  36    P       P       16 24 47.1  +0.3
            baz=306,SNR=7.1
ANMO  Albuquerque       91.81  51⇓eP        P       16 24 49.4  +0.7
ANMO                                 pmax    pmax
            comp=Z,18nm,1.0s
ANMO  Albuquerque       91.81  51    P       P       16 24 49.9  +1.2
            baz=298
ANMO  Albuquerque       91.81  51    P       P       16 24 48.9  +0.2
ANMO                                 IAmb    IAmb    16 24 50.7
            comp=Z,14nm,0.9s
121A  Cookes Peak, D    91.95  54    P       P       16 24 51.2  +1.8
            baz=298,SNR=11
BUR08 Bucovina Ar. S    92.18 324    IAmb    IAmb    16 25 13.4
            comp=Z,10nm,1.4s
T25A  Trinidad          92.20  48    P       P       16 24 51.5  +0.9
            baz=300,SNR=5.7
T25A  Trinidad          92.20  48    IAmb    IAmb    16 24 52.5
            comp=Z,17nm,1.1s
ECSD  EROS Data Cent    93.71  40    P       P       16 24 57.1   0.0
            baz=305
ECSD  EROS Data Cent    93.71  40    IAmb    IAmb    16 24 58.0
            comp=Z,18nm,1.3s
MNTX  Cornudas Mount    94.14  54    P       P       16 25 00.3  +1.0
            baz=299,SNR=15
MNTX  Cornudas Mount    94.14  54    P       P       16 24 59.6  +0.3
MNTX                                 IAmb    IAmb    16 25 01.3
            comp=Z,15nm,1.1s
F36A  Milaca            94.23  37    IAmb    IAmb    16 25 00.3
            comp=Z,14nm,0.9s
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CLL	**Collm**	**95.78**	**332**	*e*P	**P**	**16 25 06.0**	**-0.3**
CLL	**Collm**	**95.78**	**332**	*e*P	**P**	**16 25 06.0**	**-0.3**
CLL				*i* pP	**pP**	**16 25 26.3**	**-0.7**
CLL				*e*SS	SS	16 43 06.0	+19
KAN16	**Harper SW Stat**	**96.47**	**46**	P	**P**	**16 25 09.0**	**-0.8**
TXAR	**Lajitas Array**	**96.58**	**55**	P	**P**	**16 25 09.8**	**-0.8**
	comp=Z,2.3nm,0.9s,baz=300,slow=2.7,SNR=15						
TXAR				LR	LR	17 02 01.1	
	comp=Z,51nm,22.0s,baz=0.0,slow=31						
GERES	**GERESS Array B**	**97.22**	**330**	P	**P**	**16 25 11.7**	**-1.4**
	comp=Z,1.1nm,0.8s,baz=49,slow=4.1,SNR=9.0						
GERES				LR	LR	17 12 01.4	
	comp=Z,42nm,19.4s,baz=48,slow=37						
SCHQ	**Schefferville**	**98.85**	**18**	LR	LR	17 09 34.9	
	comp=Z,53nm,22.0s,baz=323,slow=35						
VNDA	**Vanda**	**99.73**	**176**	LR	LR	17 05 14.6	
	comp=Z,25nm,21.1s,baz=337,slow=32						
SNAA	**Sanae**	**126.92**	**192**	PKPdf	**PKiKP**	**16 30 43.2**	**-0.3**
VNA2	**Neumayer--Watz**	**128.39**	**191**	PKPdf	**PKiKP**	**16 30 46.6**	**+0.2**
	baz=119,slow=1.6						
VNA3	**Neumayer Olymp**	**128.51**	**190**	PKPdf	**PKiKP**	**16 30 46.6**	**0.0**
TORD	**Torodi Ar. Bea**	**129.86**	**311**	PKP	**PKPdf**	**16 30 50.1**	**-0.1**
	comp=Z,1.9nm,0.7s,baz=21,slow=3.0,SNR=10.0						
TORD				PP	**PP**	**16 33 02.7**	**+1.0**
	comp=Z,1.7nm,1.1s,baz=32,slow=7.2,SNR=4.7						
DBIC	**Dimbokro**	**138.97**	**310**	PKP	**PKPdf**	**16 31 06.3**	**-1.0**
	comp=Z,3.4nm,0.7s,baz=62,slow=5.2,SNR=3.2						
DBIC	**Dimbokro**	**138.97**	**310**		**PKPdf**	**16 31 06.1**	**-1.2**
LC01	**Cunco**	**144.30**	**127**		PKPbc	16 31 15.2	+0.6
PLCA	**Paso Flores**	**144.66**	**130**	PKP	**PKPdf**	**16 31 16.7**	**0.0**
	comp=Z,16nm,0.9s,baz=227,slow=3.6,SNR=21						
PLCA	**Paso Flores**	**144.66**	**130**	PKIKP	PKPbc	16 31 16.0	+0.2
PLCA	**Paso Flores**	**144.66**	**130**		PKPbc	16 31 16.0	+0.2
ETMB	**Extrema**	**147.77**	**73**		**PKPbc**	**16 31 24.5**	**-1.2**
PTGA	**Pitinga**	**147.86**	**52**		**PKPdf**	**16 31 24.1**	**+1.2**
LPAZ	**La Paz**	**148.28**	**86**	PKIKP	**PKPdf**	**16 31 25.1**	**+0.9**
LPAZ	**La Paz**	**148.28**	**86**		**PKPdf**	**16 31 25.1**	**+0.9**
SAML	**Samuel**	**150.04**	**69**	PKIKP	**PKPdf**	**16 31 26.4**	**0.0**
SAML	**Samuel**	**150.04**	**69**		**PKPdf**	**16 31 26.4**	**0.0**
SAML				PKPbc	**PKPbc**	**16 31 31.7**	**+0.3**
SIV	**San Ignacio**	**154.71**	**81**	PKPbc	**PKPbc**	**16 31 41.5**	**-0.3**
	comp=Z,2.3nm,0.7s,baz=212,slow=1.1,SNR=6.1						
CPUP	**Villa Florida**	**159.21**	**107**	PKPab	**PKPab**	**16 32 16.3**	**+0.2**
	comp=Z,5.5nm,0.8s,baz=226,slow=7.4,SNR=3.8						
BDFB	**Brasilia**	**166.23**	**65**	PKPab	**PKPab**	**16 32 46.6**	**-0.7**
	comp=Z,4.9nm,0.7s,baz=263,slow=4.3,SNR=5.0						

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*IDC **11** 16:12:05.8±3.1, 29°.57S×71°.69W, h0^{km}, mb3.8/1, mb1 3.7/2, mb1mx3.6/16, mbtmp3.6/2, ML3.6/1 Error ellipse: s-maj=137.9km s-min=49.0km az=97.0*

ISC 11 16:12:10.3±1.5**, 29°.7S**±0°.2×**72°.4W**±0°.2**, h50**^{km}**, n15, σ0^{s}98**/9**, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H03N1	**Juan Fernandez**	**6.68**	**234**	Pn	**Pn**	**16 13 46.5**	**+0.9**
	baz=111,slow=18,SNR=9.6						
H03N1				T	T	16 21 13.4	
	baz=66,slow=71,SNR=24						
H03N2	**Juan Fernandez**	**6.69**	**235**	Pn	**Pn**	**16 13 46.1**	**+0.4**
	baz=111,slow=18,SNR=7.2						
H03N2				T	T	16 21 14.8	
	baz=66,slow=71,SNR=43						
H03N3	**Juan Fernandez**	**6.70**	**234**	Pn	**Pn**	**16 13 46.1**	**+0.2**
	baz=111,slow=18,SNR=11						
H03N3				T	T	16 21 17.8	
	baz=66,slow=71,SNR=42						
H03S3	**Juan Fernandez**	**6.89**	**232**	Pn	**Pn**	**16 13 47.5**	**-1.0**
	baz=16						
H03S1	**Juan Fernandez**	**6.90**	**232**	Pn	**Pn**	**16 13 47.1**	**-1.5**
	baz=16						
H03S2	**Juan Fernandez**	**6.91**	**232**	Pn	**Pn**	**16 13 48.4**	**-0.3**
	baz=16						
PLCA	**Paso Flores**	**11.11**	**173**	Pn	**Pn**	**16 14 46.9**	**+0.3**
	0.1nm,0.3s,baz=346,slow=13,SNR=1.6						
TORD	**Torodi Ar. Bea**	**83.07**	**71**	P	**P**	**16 24 30.4**	**-0.6**
	0.6nm,0.9s,baz=226,slow=6.1,SNR=3.3						
H11S2	**WAKE ISLAND Hy**	**125.39**	**272**	T	T	18 48 24.7	
	baz=117,slow=74,SNR=14						
H11S1	**WAKE ISLAND Hy**	**125.41**	**272**	T	T	18 48 24.5	
	baz=117,slow=74,SNR=16						
H11S3	**WAKE ISLAND Hy**	**125.41**	**272**	T	T	18 48 25.5	
	baz=117,slow=74,SNR=17						
H11N3	**WAKE ISLAND Hy**	**125.70**	**274**	T	T	18 48 47.0	
	baz=117,slow=74						
H11N1	**WAKE ISLAND Hy**	**125.71**	**274**	T	T	18 48 50.2	
	baz=117						
H11N2	**WAKE ISLAND Hy**	**125.71**	**274**	T	T	18 48 49.7	
	baz=117,slow=74						
ZALV	**Zalesovo Beam**	**150.68**	**28**	PKPbc	**PKiKP**	**16 31 58.0**	**+1.0**
	1.3nm,0.7s,baz=316,slow=4.1,SNR=4.6						

TAP 11 16:16:14.8, 23°.89N×122°.51E, h86^{km}±1^{km}**, ML2.9, C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.73**	**39**	*i* P	Pn	16 16 31.4	+0.2
	baz=40						
EHP	**Heping Village**	**0.81**	**301**	*e*P	Pn	16 16 32.2	+0.1
	baz=301						
HWA	**Hwalien**	**0.83**	**276**	P	Pn	16 16 31.9	-0.3
	baz=272						
HWA				*e*S	Sn	16 16 42.4	-2.9
	baz=272						
TEYL	**Yanliau Villag**	**0.83**	**268**	*e*P	Pn	16 16 31.2	-1.1
	baz=269						
TEYL				*e*S	Sn	16 16 42.1	-3.2
	baz=269						
TWD	**Chiawan**	**0.85**	**283**	P	Pn	16 16 32.6	+0.1
	baz=288						
TWD				*e*S	Sn	16 16 43.9	-1.8
	baz=288						
EWUT	**Wuta**	**0.86**	**310**	S	Sn	16 16 45.4	-0.5
	baz=309						
ENA	**Nanau**	**0.88**	**307**	*e*P	Pn	16 16 34.1	+1.4
	baz=307						
ENA				S	Sn	16 16 46.0	-0.2
	baz=307						
NACB	**Ninganchiao**	**0.88**	**289**	P	Pn	16 16 32.5	-0.3
	baz=293						
ESL	**Shilin**	**0.99**	**266**	*i* P	Pn	16 16 34.6	+0.7
	baz=263						
ESL				S	Sn	16 16 48.1	-0.3
	baz=263						
ETLH	**Xiulin Townshi**	**0.99**	**289**	P	Pn	16 16 33.7	-0.3
	baz=288						
ETLH				*e*S	Sn	16 16 48.7	+0.1
	baz=288						
EGFH	**Guangfu**	**1.01**	**257**	P	Pn	16 16 34.6	+0.3
	baz=254						
EGFH				S	Sn	16 16 48.3	-0.6
	baz=254						
NDS	**Dongshan**	**1.03**	**316**	P	Pn	16 16 35.3	+0.8
	baz=314						
NDS				S	Sn	16 16 49.7	+0.4
	baz=314						
HGSD	**Ruisui**	**1.07**	**248**	*e*P	Pn	16 16 34.8	-0.2
	baz=248						
ENTT	**Nioudou**	**1.14**	**311**	*e*P	Pn	16 16 33.5	-2.3
	baz=306						
ENTT				S	Sn	16 16 52.5	+0.9
	baz=306						
WHF	**Hehuan Shan**	**1.16**	**283**	P	Pn	16 16 36.6	+0.1
	baz=289						
WHF				*e*S	Sn	16 16 53.2	+0.4
	baz=289						
NNS	**Nan Shan**	**1.17**	**298**	*e*P	Pn	16 16 35.1	-1.1
	baz=298						
NNS				*e*S	Sn	16 16 53.9	+1.4
	baz=298						
FUSS	**Fushou**	**1.21**	**287**	*e*P	Pn	16 16 38.5	+1.6
	baz=287						
FUSS				*e*S	Sn	16 16 51.9	-1.5
	baz=287						
CHGB	**Renai**	**1.23**	**278**	*e*P	Pn	16 16 39.8	+2.7
	baz=278						
TWF1	**Yuli**	**1.23**	**244**	P	Pn	16 16 36.8	-0.1
	baz=241						
TWF1				*e*S	Sn	16 16 55.1	+1.5
	baz=241						
TIPB	**Shuangxi**	**1.24**	**330**	*e*S	Sn	16 16 54.5	+0.7
	baz=337						
TWT	**Tachien**	**1.27**	**287**	*e*P	Pn	16 16 37.9	+0.3
	baz=290						
NWLT	**Wulai**	**1.27**	**314**	*e*S	Sn	16 16 52.6	-1.9
	baz=307						
TDCB	**Techi**	**1.28**	**286**	*e*P	Pn	16 16 40.7	+3.0
	baz=286						
TDCB				*e*S	Sn	16 16 54.5	-0.5
	baz=286						
DPDB	**Guoxing**	**1.45**	**276**	P	Pn	16 16 39.8	+0.1
	baz=272						
WCS	**Beigang Elemen**	**1.47**	**277**	*e*P	Pn	16 16 39.5	-0.3
	baz=273						
WCS				S	Sn	16 16 58.8	-0.1
	baz=273						
SMLT	**Sun Moon Lake**	**1.47**	**270**	P	Pn	16 16 40.7	+0.7
	baz=269						
SMLT				S	Sn	16 16 58.8	-0.4
	baz=269						
WHP	**Taichung City**	**1.48**	**285**	*e*P	Pn	16 16 39.0	-1.1
	baz=288						
WHP				S	Sn	16 16 59.4	+0.2
	baz=288						
YUS	**Yu-Shan**	**1.48**	**255**	P	Pn	16 16 40.7	+0.2
	baz=259						
YUS				*e*S	Sn	16 16 58.2	-1.7
	baz=259						
TYC	**Yuchr**	**1.51**	**271**	P	Pn	16 16 41.5	+1.1
	baz=273						
TYC				*e*S	Sn	16 16 58.2	-1.6
	baz=273						
WHYT	**Xinyi Township**	**1.53**	**263**	P	Pn	16 16 40.9	+0.2
	baz=265						
ELDTW	**Lidau**	**1.54**	**243**	*i* P	Pn	16 16 40.7	-0.2
	baz=243						
ELDTW				S	Sn	16 16 58.6	-2.0
	baz=243						
ALS	**Alishan**	**1.60**	**257**	*e*P	Pn	16 16 41.0	-1.0
	baz=256						
WJS	**Zhushan**	**1.63**	**268**	*e*P	Pn	16 16 41.4	-0.6
	baz=267						
PCYT	**Pengchaiyu**	**1.77**	**347**	S	Sn	16 17 07.4	+1.5
	baz=340						
LAY	**Lan-yu**	**2.05**	**206**	*e*P	Pn	16 16 48.8	+1.4
	baz=205						
JMJ	**Miyako jima 2**	**2.70**	**70**	*e*P	Pn	16 16 54.9	-1.3
	baz=78						
JOW	**Kunigami**	**5.98**	**60**	P	Pn	16 17 40.1	-0.7
	baz=62						

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*NEIC **11** 16:20:38.8±1.9, 23°.76S±0°.06×67°.92W±0°.09, h111^{km}±6^{km}, mb4.3/7, ML4.2(GUC), Error ellipse: s-maj=12.1km s-min=7.8km az=112.0*

*IDC **11** 16:20:39.9±1.6, 23°.60S×67°.87W, h125^{km}±14^{km}, mb3.9/5, mb1 3.9/7, mb1mx3.7/26, mbtmp4.3/7, Error ellipse: s-maj=25.2km s-min=19.1km az=151.0*

*GUC **11** 16:20:40.3±0.8, 23°.67S×68°.20W, h143^{km}±7^{km}, ML4.2*

*VAO **11** 16:20:41.1±0.5, 23°.45S×68°.06W, h147^{km}, mb4.3*

ISC 11 16:20:39.2±0.7**, 23°.66S**±0°.05×**68°.03W**±0°.06**, h127**^{km}±7^{km}**, n93, σ1^{s}46**/108**, mb4.2**/7**, 2C, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.32**	**322**	P	**Pn**	**16 21 06.8**	**+1.3**
	207nm,0.3s,baz=139,slow=10,SNR=1301						
LVC				S	**Sn**	**16 21 26.5**	**+1.1**
	623nm,0.3s,baz=1.2,slow=18,SNR=186						
LVC	**Limon Verde**	**1.32**	**322**	*e*P	**Pn**	**16 21 06.4**	**+0.9**
LVC				*e*S	**Sn**	**16 21 26.2**	**+0.8**
LVC	**Limon Verde**	**1.32**	**322**	*e*P	**Pn**	**16 21 07.3**	**+1.8**
LVC				*e*S	**Sn**	**16 21 27.1**	**+1.7**
PB15	**IPOC Station P**	**1.40**	**288**	⇑*e*P	**Pn**	**16 21 06.8**	**+0.6**
PB15				*e*S	**Sn**	**16 21 26.4**	**-0.3**
PB15	**IPOC Station P**	**1.40**	**288**		**Pn**	**16 21 06.7**	**+0.5**
PB15				Sn	**Sn**	**16 21 26.2**	**-0.5**
PB06	**IPOC Station P**	**1.71**	**303**	*e*P	**Pn**	**16 21 10.6**	**+0.9**
PB06				*e*S	**Sn**	**16 21 33.4**	**+0.5**
PB06				IAML		16 21 37.0	
	comp=N,3μm,0.3s						
PB06	**IPOC Station P**	**1.71**	**303**		**Pn**	**16 21 10.1**	**+0.4**
PB09	**IPOC Station P**	**2.17**	**328**	*e*P	**Pn**	**16 21 17.1**	**+1.9**
PB09				*e*S	**Sn**	**16 21 43.4**	**+0.5**
PB09	**IPOC Station P**	**2.17**	**328**		**Pn**	**16 21 17.1**	**+1.9**
PB10	**IPOC Station P**	**2.33**	**273**	*e*P	**Pn**	**16 21 16.7**	**-0.3**
PB10				*e*S	**Sn**	**16 21 44.8**	**-1.3**
PB10				IAML		16 21 56.0	
	comp=N,775nm,0.3s						
PB10	**IPOC Station P**	**2.33**	**273**	Pn	**Pn**	**16 21 16.7**	**-0.3**
PB04	**IPOC Station P**	**2.36**	**303**	*e*P	**Pn**	**16 21 18.0**	**+0.3**
PB04				*e*S	**Sn**	**16 21 46.4**	**-0.8**
PB04				IAML		16 21 55.5	
	comp=N,1μm,0.5s						
PB04	**IPOC Station P**	**2.36**	**303**		**Pn**	**16 21 17.7**	**0.0**
PB14	**IPOC Station P**	**2.38**	**246**	Pn	**Pn**	**16 21 16.8**	**-1.2**
PB07	**IPOC Station P**	**2.58**	**318**	*e*P	**Pn**	**16 21 21.3**	**+0.8**
PB07				*e*S	**Sn**	**16 21 52.0**	**-0.1**
PB07				IAML		16 21 58.5	
	comp=E,974nm,0.3s						
PB07	**IPOC Station P**	**2.58**	**318**		**Pn**	**16 21 21.1**	**+0.7**
PB02	**IPOC Station P**	**2.90**	**323**	*e*P	**Pn**	**16 21 25.2**	**+0.7**
PB02				*e*S	**Sn**	**16 21 58.0**	**-1.5**
PB01	**IPOC Station P**	**2.93**	**332**	*e*P	**Pn**	**16 21 25.9**	**+0.9**
PB01				*e*S	**Sn**	**16 21 59.8**	**-0.4**
PB01				IAML		16 22 05.9	
	comp=E,689nm,0.2s						
PB01	**IPOC Station P**	**2.93**	**332**		**Pn**	**16 21 25.7**	**+0.7**
AC02	**Maricunga**	**3.32**	**197**		**Pn**	**16 21 30.1**	**-0.2**
PATCX	**Punta Patache**	**3.44**	**325**	*e*P	**Pn**	**16 21 31.8**	**+0.2**
PATCX				*e*S	**Sn**	**16 22 04.6**	**-7.5**
PATCX				IAML		16 22 37.8	
	comp=N,524nm,0.4s						
PATCX	**Punta Patache**	**3.44**	**325**	Pn	**Pn**	**16 21 32.2**	**+0.6**
PB08	**IPOC Station P**	**3.65**	**343**	*e*P	**Pn**	**16 21 36.0**	**+1.4**
PB08				*e*S	**Sn**	**16 22 12.1**	**-5.5**
PB08	**IPOC Station P**	**3.65**	**343**	Pn	**Pn**	**16 21 35.7**	**+1.0**
TA01	**Diego Aracena**	**3.67**	**327**	Pn	**Pn**	**16 21 34.8**	**+0.3**
HMBC	**Humberstone**	**3.78**	**332**	⇑*e*P	**Pn**	**16 21 36.3**	**+0.2**
HMBC				*i* S	Sn	16 22 10.4	-10
TA02	**Huaiquique**	**3.90**	**329**	Pn	**Pn**	**16 21 39.4**	**+1.8**
PB11	**IPOC Station P**	**4.16**	**338**	Pn	**Pn**	**16 21 41.1**	**-0.1**
GO03	**Copiap**	**4.40**	**207**	Pn	**Pn**	**16 21 41.5**	**-2.8**
PB16	**IPOC Station P**	**5.47**	**345**	Pn	**Pn**	**16 22 00.0**	**+0.8**
LPAZ	**La Paz**	**7.33**	**359**	Pn	**Pn**	**16 22 25.6**	**+1.4**
SIV	**San Ignacio**	**10.04**	**42**	P	**Pn**	**16 22 58.3**	**-2.0**
	comp=N,7.9nm,0.3s,baz=218,slow=14,SNR=81						
SIV				S	**Sn**	**16 24 45.6**	**-5.7**
	comp=N,0.2nm,0.3s,baz=176,slow=19,SNR=1.0						
PTLB	**Pontes e Lacer**	**11.69**	**47**	*e*P	**Pn**	**16 23 21.6**	**-0.6**
PTLB	**Pontes e Lacer**	**11.69**	**47**	Pn	**Pn**	**16 23 21.3**	**-1.0**
AQDB	**Aquidauana**	**11.86**	**77**	*e*P	**Pn**	**16 23 24.2**	**-0.2**
AQDB	**Aquidauana**	**11.86**	**77**	Pn	**Pn**	**16 23 23.8**	**-0.6**
VILB	**Vilhena**	**12.98**	**36**	*e*P	**Pn**	**16 23 38.5**	**-0.6**
VILB	**Vilhena**	**12.98**	**36**	Pn	**Pn**	**16 23 38.5**	**-0.6**
ETMB	**Extrema**	**13.87**	**7**	*e*P	**Pn**	**16 23 48.3**	**-2.2**
SALV	**Santo Antonio**	**13.93**	**59**	*e*P	**Pn**	**16 23 51.6**	**+0.3**
CPSB	**Cacapava Do Su**	**14.63**	**121**	*e*P	**P**	**16 24 02.7**	**-0.2**
PCMB	**Pacaembu**	**15.61**	**86**	*e*P	**P**	**16 24 13.8**	**-0.1**
PDRB	**Porto dos Gac**	**16.09**	**44**	*e*P	**Pn**	**16 24 17.7**	**-0.7**
CNLB	**Canela**	**16.37**	**114**	*e*P	**P**	**16 24 23.7**	**+1.4**
ITRB	**Iturama**	**16.88**	**80**	*e*P	**Pn**	**16 24 29.4**	**+1.4**
PLCA	**Paso Flores**	**17.16**	**187**	P	**Pn**	**16 24 32.1**	**+0.8**
	comp=N,0.1nm,0.3s,baz=19,slow=14,SNR=4.2						
ARAG	**Araguaiana, MT**	**17.18**	**66**	*e*P	**Pn**	**16 24 32.4**	**+0.7**
CLDB	**Colider**	**17.24**	**45**	*e*P	**P**	**16 24 31.5**	**-0.5**
TIJ01	**Guaruva-PR**	**17.39**	**99**	*e*P	**Pn**	**16 24 35.8**	**+1.5**
BB19B	**Bebedouro**	**18.22**	**86**	*e*P	**P**	**16 24 43.1**	**+0.4**
IPMB	**Ipameri, GO**	**19.35**	**77**	*e*P	**P**	**16 24 56.2**	**+1.1**
SNDB	**Serra Nova Dou**	**19.69**	**57**	*e*P	**P**	**16 24 58.3**	**-0.4**
BDFB	**Brasilia**	**20.45**	**71**	P	**P**	**16 25 06.1**	**-0.9**
	comp=N,13nm,0.5s,baz=248,slow=10,SNR=16						
BDFB	**Brasilia**	**20.45**	**71**	P	**P**	**16 25 06.5**	**-0.5**
NPGB	**Novo Progresso**	**20.51**	**38**	*e*P	**P**	**16 25 06.7**	**-0.9**
PARB	**Paraibuna**	**20.55**	**94**	*e*P	**P**	**16 25 08.0**	**+0.1**
BSCB	**Bom Sucesso**	**21.67**	**88**	*e*P	**P**	**16 25 19.5**	**-0.5**
PEXB	**Peixe**	**21.98**	**62**	*e*P	**P**	**16 25 22.1**	**-1.1**
ITTB	**Itaituba**	**22.55**	**34**	*e*P	**P**	**16 25 27.5**	**-1.4**
VAS01	**Vassouras-RJ**	**22.67**	**91**	*e*P	**P**	**16 25 29.7**	**-0.4**
DIAM	**Diamantina, MG**	**23.34**	**81**	*e*P	**P**	**16 25 36.6**	**0.0**
MC01	**Montes Claros**	**23.62**	**77**	*e*P	**P**	**16 25 38.1**	**-0.9**
DUB01	**Friburgo-RJ**	**23.68**	**91**	*e*P	**P**	**16 25 39.4**	**-0.1**
JANB	**Januaria**	**23.92**	**73**	*e*P	**P**	**16 25 40.2**	**-1.6**
PTGA	**Pitinga**	**24.09**	**20**	P	**P**	**16 25 42.7**	**-0.5**
	comp=N,3.4nm,0.3s,baz=180,slow=8.6,SNR=10						
PTGA	**Pitinga**	**24.09**	**20**	P	**P**	**16 25 43.1**	**-0.1**
PTGA				IAmb	IAmb	16 25 45.1	
	comp=Z,4.9nm,0.8s						
CAM01	**Campos-RJ**	**24.38**	**91**	*e*P	**P**	**16 25 48.7**	**+3.0**
SMTB	**Santa Maria do**	**24.47**	**56**	*e*P	**P**	**16 25 45.6**	**-1.0**
SDBA	**SAO DESIDERIO**	**24.63**	**67**	*e*P	**P**	**16 25 47.6**	**-0.5**
PRPB	**Parauapebas**	**24.68**	**48**	*e*P	**P**	**16 25 48.7**	**+0.2**
MALB	**Monte Alegre**	**25.45**	**34**	*e*P	**P**	**16 25 54.3**	**-1.1**
SJMB	**Sao Joao De Ma**	**25.49**	**84**	*e*P	**P**	**16 25 55.2**	**-0.6**
BSFB	**Barra de Sao F**	**25.76**	**84**	*e*P	**P**	**16 25 57.9**	**-0.5**
RIB01	**Linhares ES**	**26.05**	**86**	*e*P	**P**	**16 26 00.8**	**-0.2**
BOAV	**Boa Vista**	**26.91**	**17**	P	**P**	**16 26 10.0**	**+1.4**
GUA01	**Guaratinga, BA**	**27.38**	**80**	*e*P	**P**	**16 26 12.4**	**-0.5**
CMC01	**Camacan, BA**	**28.07**	**78**	*e*P	**P**	**16 26 18.9**	**-0.1**
NBIT	**Itapeh - BA**	**28.30**	**77**	*e*P	**P**	**16 26 21.5**	**+0.4**
GDU01	**Guandu, BA**	**28.65**	**75**	*e*P	**P**	**16 26 24.0**	**-0.2**
SNAA	**Sanae**	**59.98**	**161**	P	**P**	**16 30 32.4**	**+0.4**
SNAA				IAmb	IAmb	16 30 57.5	
	comp=Z,3.5nm,0.9s						
TXAR	**Lajitas Array**	**62.86**	**325**	P	**P**	**16 30 53.6**	**+1.7**
	comp=Z,0.2nm,0.5s,baz=162,slow=6.6,SNR=2.0						
QSPA	**South Pole Qui**	**66.55**	**180**	P	**P**	**16 31 16.8**	**+1.4**
QSPA				IAmb	IAmb	16 31 17.8	
	comp=Z,3.0nm,0.6s						
TORD	**Torodi Ar. Bea**	**77.32**	**69**	P	**P**	**16 32 21.1**	**+0.7**
	comp=Z,2.2nm,0.4s,baz=257,slow=5.4,SNR=33						
TORD	**Torodi Ar. Bea**	**77.32**	**69**	P	**P**	**16 32 20.8**	**+0.5**
TORD				IAmb	IAmb	16 32 22.0	
	comp=Z,4.2nm,0.9s						
TSUM	**Tsumeb**	**78.65**	**106**	P	**P**	**16 32 27.3**	**-0.6**
TSUM				IAmb	IAmb	16 32 30.3	
	comp=Z,4.2nm,0.8s						
MAW	**Mawson**	**82.04**	**163**	P	**P**	**16 32 46.1**	**+1.2**
	comp=Z,2.3nm,0.7s,baz=128,slow=11,SNR=2.5						
ASAR	**Alice Springs**	**128.36**	**206**	PKP	**PKiKP**	**16 39 32.2**	**0.0**
	comp=Z,0.7nm,0.6s,baz=132,slow=1.6,SNR=17						
WRA	**Warramunga Arr**	**131.49**	**209**	PKP	**PKPdf**	**16 39 37.9**	**+0.3**
	comp=Z,0.6nm,0.4s,baz=158,slow=1.7,SNR=9.5						
WRA	**Warramunga Arr**	**131.49**	**209**		**PKPdf**	**16 39 36.8**	**-0.8**
ZALV	**Zalesovo Beam**	**143.52**	**27**	PKP	**PKPdf**	**16 39 58.5**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=328,slow=5.1,SNR=2.2						
MKAR	**Makanchi Array**	**146.85**	**38**	PKPbc	**PKPbc**	**16 40 06.0**	**-0.6**
	comp=Z,0.7nm,0.6s,baz=316,slow=3.3,SNR=5.3						
MKAR	**Makanchi Array**	**146.85**	**38**		**PKPdf**	**16 40 03.4**	**-1.2**
SIJI	**Sorong**	**149.25**	**220**	PKPbc	**PKPbc**	**16 40 14.3**	**+0.4**
	comp=Z,1.6nm,0.5s,baz=172,slow=24,SNR=5.0						

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*JMA **11** 16:22:51.5, 34°.20N×135°.13E, h7^{km}±1^{km}, M3.3 Broadband fault plane solution: P waves. NP1: ϕ_s219.00000°, δ43.00000°, λ133.00000°. NP2: ϕ_s346.00000°, δ60.00000°, λ57.00000°. Principal axes: T Plg60.0000°, Azm206.0000°; N Plg28.0000°, Azm4.0000°; P Plg9.0000°, Azm99.0000°;*

JMA Felt II J1.

*IDC **11** 16:23:03.2±1.6, 35°.93N×135°.19E, h223^{km}±50^{km}, mb2.8/2, mb1 2.8/4, mb1mx2.6/52, mbtmp3.1/4 Error ellipse: s-maj=94.6km s-min=28.4km az=13.0*

ISC 11 16:22:51.5±0.9**, 34°.20N**±0°.03×**135°.13E**±0°.03**, h10**^{km}**, n13, σ1^{s}66**/17**, 7D, Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAWN	**Awajishima-nag**	**0.34**	**326**	⇓P	**Pg**	**16 22 58.5**	**+0.2**
JWY	**Kouya**	**0.38**	**88**	⇓P	**Pg**	**16 22 58.7**	**-0.4**
JWM	**Minabe**	**0.40**	**152**	⇓P	**Pg**	**16 22 59.4**	**0.0**
JWM				S	**Sg**	**16 23 04.6**	**-0.1**
JTNC	**Tanabenakahech**	**0.55**	**134**	⇓P	**Pg**	**16 23 02.4**	**+0.1**
JHE	**Heguri**	**0.64**	**45**	⇓P	**Pg**	**16 23 04.1**	**+0.2**
JHE				S	**Sg**	**16 23 12.9**	**+0.6**
JAI	**Aioi**	**0.70**	**234**	⇓P	**Pg**	**16 23 04.4**	**-0.6**
JKS	**Kasai**	**0.81**	**343**	⇓P	**Pg**	**16 23 07.2**	**0.0**
JKS				S	**Sg**	**16 23 18.2**	**+0.4**
JJS	**Sakaide**	**1.01**	**280**	P	**Pg**	**16 23 10.0**	**-0.9**
MAT	**Matsushiro**	**3.43**	**46**	P	**Pn**	**16 23 48.6**	**+3.6**
MAT				S	**Sb**	**16 24 31.6**	**-2.5**
MJAR	**Matsushiro Arr**	**3.43**	**46**	P	**Pb**	**16 23 49.0**	**-3.4**
	0.1nm,0.3s,baz=264,slow=17,SNR=6.5						
KSRS	**Korea Array**	**6.69**	**301**	P	**Pn**	**16 24 31.8**	**+2.0**
	0.3nm,0.3s,baz=116,slow=14,SNR=4.2						
WRA	**Warramunga Arr**	**53.85**	**181**	P	**P**	**16 32 14.5**	**-0.2**
	0.3nm,0.6s,baz=353,slow=7.6,SNR=4.9						
ASAR	**Alice Springs**	**57.56**	**181**	P	**P**	**16 32 42.9**	**+1.5**
	0.2nm,0.7s,baz=6.6,slow=10,SNR=2.3						

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*SJA **11** 16:27:24±5.1, 29°.41S±0°.03×69°.76W±0°.07, h115^{km}±4^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=201.0*

*NEIC **11** 16:27:24.5±2.3, 29°.47S±0°.05×69°.57W±0°.08, h92^{km}±1^{km}, mb4.3/15, Md4.1(SJA), Error ellipse: s-maj=9.6km s-min=6.6km az=83.0*

*IDC **11** 16:27:26.8±0.6, 29°.32S×69°.69W, h120^{km}±5^{km}, mb3.9/7, mb1 3.9/10, mb1mx3.7/28, mbtmp4.1/10, MS3.2/2, Ms1 3.3/2, ms1mx2.9/22, Error ellipse: s-maj=22.3km s-min=15.2km az=82.0*

ISC 11 16:27:25.3±0.5**, 29°.41S**±0°.04×**69°.77W**±0°.04**, h109**^{km}±4^{km}**, n90, σ1^{s}46**/106**, mb4.2**/13**, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**0.91**	**295**	Pn	**Pn**	**16 27 46.4**	**+0.7**
LCO				Sn	**Sn**	**16 28 02.0**	**+0.9**
LCO	**Las Campanas**	**0.91**	**295**	*e*P	**Pn**	**16 27 46.3**	**+0.5**
LCO				*e*S	**Sn**	**16 28 02.0**	**+0.9**
ACDV	**Cuesta del Vie**	**0.95**	**144**	*e*P	**Pn**	**16 27 47.1**	**+1.0**
ACDV				IAML		16 28 05.8	
	comp=Z,1μm,0.3s						
GO04	**Tololo Observa**	**1.18**	**229**	Pn	**Pn**	**16 27 49.1**	**+0.5**
GO04				Sn	**Sn**	**16 28 06.1**	**-0.1**
ACCO	**Cerro Coronel**	**1.33**	**153**	*e*P	**Pn**	**16 27 51.5**	**+1.1**
CO05	**La Serena**	**1.38**	**248**		**Pn**	**16 27 50.6**	**0.0**
CO05				Sn	**Sn**	**16 28 09.1**	**-0.7**
AC04	**Llanos de Chal**	**1.66**	**316**		**Pn**	**16 27 54.5**	**+0.5**
AC04	**Llanos de Chal**	**1.66**	**316**	*e*P	**Pn**	**16 27 54.5**	**+0.5**
AC04				*e*S	**Sn**	**16 28 15.9**	**+0.1**
GO03	**Copiap**	**1.85**	**347**	Pn	**Pn**	**16 27 57.1**	**+0.6**
GO03	**Copiap**	**1.85**	**347**	*e*P	**Pn**	**16 27 56.9**	**+0.4**
GO03				*e*S	**Sn**	**16 28 21.2**	**+1.1**
CO06	**Fray Jorge**	**2.05**	**232**		**Pn**	**16 27 58.3**	**-0.6**
ZON	**Zonda**	**2.33**	**156**	Pn	**Pn**	**16 28 03.2**	**+0.6**
ZON	**Zonda**	**2.33**	**156**	*e*P	**Pn**	**16 28 02.7**	**+0.1**
ZON				*e*S	**Sn**	**16 28 30.9**	**-0.2**
ZON				IAML		16 28 39.7	
	comp=Z,661nm,0.5s						
RTLS	**Leoncito**	**2.42**	**170**	*e*P	**Pn**	**16 28 05.1**	**+1.2**
RTLS				*e*S	**Sn**	**16 28 34.0**	**+0.4**
ACLC	**CERRO LA CRUZ**	**2.46**	**91**	*e*P	**Pn**	**16 28 04.7**	**+0.3**
ACLC				*e*S	**Sn**	**16 28 33.8**	**-0.4**
AC02	**Maricunga**	**2.62**	**13**	Pn	**Pn**	**16 28 08.5**	**+1.7**
RTCV	**Cerro Valdivia**	**2.67**	**157**	*e*P	**Pn**	**16 28 07.7**	**+0.7**
RTCV				*e*S	**Sn**	**16 28 39.4**	**+0.4**
AUSP	**Uspallata**	**2.83**	**173**	*e*P	**Pn**	**16 28 10.6**	**+1.3**
APLL	**PUNTA DE LOS L**	**2.98**	**110**	*e*P	**Pn**	**16 28 11.2**	**+0.1**
VA03	**San Esteban**	**3.42**	**191**	Pn	**Pn**	**16 28 17.4**	**+0.5**
AAGR	**Agrelo**	**3.76**	**168**	*e*P	**Pn**	**16 28 21.9**	**+0.4**
AAGR				IAML		16 29 18.7	
	comp=Z,281nm,0.5s						
PEL	**Peldehue**	**3.81**	**192**		**Pn**	**16 28 21.3**	**-0.8**
VA01	**Torpederas**	**3.95**	**204**	Pn	**Pn**	**16 28 21.9**	**-2.0**
MT02	**Curacav**	**4.02**	**197**		**Pn**	**16 28 23.1**	**-1.8**
MT05	**Renca**	**4.06**	**192**	Pn	**Pn**	**16 28 24.7**	**-0.8**
MT05	**Renca**	**4.06**	**192**	*i* P	**Pn**	**16 28 25.0**	**-0.5**
MT09	**Talagante**	**4.48**	**193**		**Pn**	**16 28 29.2**	**-2.1**
VA05	**Santo Domingo**	**4.52**	**200**		**Pn**	**16 28 29.0**	**-2.6**
MT01	**Popeta**	**4.62**	**196**		**Pn**	**16 28 30.9**	**-2.2**
PB14	**IPOC Station P**	**4.79**	**353**	Pn	**Pn**	**16 28 34.4**	**-1.3**
BO01	**Tunca**	**5.10**	**192**	Pn	**Pn**	**16 28 37.0**	**-2.4**
BO02	**Sierra Bellavi**	**5.44**	**189**	Pn	**Pn**	**16 28 42.4**	**-1.7**
GO05	**Huala**	**5.88**	**198**	Pn	**Pn**	**16 28 46.2**	**-3.9**
PB10	**IPOC Station P**	**5.91**	**353**	Pn	**Pn**	**16 28 48.0**	**-2.5**
PB15	**IPOC Station P**	**6.18**	**3**		**Pn**	**16 28 52.8**	**-1.5**
ML02	**Panimavida**	**6.49**	**192**	Pn	**Pn**	**16 28 55.1**	**-3.2**
PB06	**IPOC Station P**	**6.67**	**2**	Pn	**Pn**	**16 28 58.4**	**-2.6**
LVC	**Limon Verde**	**6.81**	**7**	P	**Pn**	**16 29 01.3**	**-1.7**
	comp=Z,2.7nm,0.3s,baz=174,slow=10.0,SNR=17						
LVC				S	**Sn**	**16 30 17.7**	**-1.6**
	comp=Z,3.2nm,0.3s,baz=211,slow=19,SNR=2.2						
LVC	**Limon Verde**	**6.81**	**7**	Pn	**Pn**	**16 29 00.9**	**-2.1**
PB04	**IPOC Station P**	**7.05**	**357**	Pn	**Pn**	**16 29 02.4**	**-3.7**
PB09	**IPOC Station P**	**7.59**	**4**	Pn	**Pn**	**16 29 12.3**	**-1.2**
PB07	**IPOC Station P**	**7.65**	**359**	Pn	**Pn**	**16 29 10.7**	**-3.5**
PB01	**IPOC Station P**	**8.33**	**2**	Pn	**Pn**	**16 29 19.4**	**-4.0**
PLCA	**Paso Flores**	**11.32**	**183**	P	**Pn**	**16 30 04.4**	**+0.6**

	comp=Z,0.1nm,0.3s,baz=12,slow=15,SNR=3.7						
PLCA	Paso Flores	11.32	183	Pn	Pn	16 30 01.8	-2.0
CPUP	Villa Florida	11.42	77	P	Pn	16 30 03.8	-1.4
	comp=Z,0.2nm,0.3s,baz=240,slow=9.3,SNR=3.3						
CPUP				LR	LR	16 35 31.3	
	comp=Z,37nm,18.3s,baz=224,slow=43						
CPUP	Villa Florida	11.42	77	Pn	Pn	16 30 02.7	-2.5
ITQB	Itaqui	11.45	95	Pn	Pn	16 30 01.6	-3.9
LPAZ	La Paz	13.14	7	Pn	Pn	16 30 27.1	-1.3
PLTB	Pedras Altas	14.12	104	P	Pn	16 30 41.3	+0.8
ZARC	Zaragoza, Cauc	37.01	352	P	P	16 34 25.0	+0.5
ZARC				IAmb	IAmb	16 34 30.6	
	comp=Z,3.0nm,0.6s						
VNA3	Neumayer Olymp	52.92	159	P	P	16 36 30.4	+0.5
VNA1	Neumayer--Stat	53.18	159	P	P	16 36 32.2	+0.5
SOR	Soroa	53.44	345	P	P	16 36 34.6	+0.4
VNA2	Neumayer--Watz	53.53	159	P	P	16 36 34.8	+0.5
	baz=287,slow=9.3						
SNAA	Sanae	55.14	159	P	P	16 36 46.3	+0.3
SNAA	Sanae	55.14	159	P	P	16 36 46.4	+0.3
QSPA	South Pole Qui	60.82	180	P	P	16 37 26.5	+0.7
TXAR	Lajitas Array	66.78	328	P	P	16 38 05.3	0.0
	comp=Z,0.6nm,0.5s,baz=147,slow=8.3,SNR=6.4						
TXAR	Lajitas Array	66.78	328	P	P	16 38 07.0	+1.7
WVT	Waverly	67.37	344	P	P	16 38 09.4	+0.7
WVT				IAmb	IAmb	16 38 09.7	
	comp=Z,3.9nm,0.6s						
LCAR	Lake Charles	68.17	341	P	P	16 38 14.5	+0.8
DBIC	Dimbokro	71.87	71	P	P	16 38 36.6	-0.3
	comp=Z,3.0nm,0.5s,baz=212,slow=6.0,SNR=5.9						
DBIC	Dimbokro	71.87	71	P	P	16 38 36.6	-0.3
DBIC				IAmb	IAmb	16 38 44.7	
	comp=Z,7.7nm,1.1s						
SDCO	Great Sand Dun	74.71	331	P	P	16 38 54.5	+1.1
U15A	North Rim	76.71	326	P	P	16 39 07.6	+2.8
U15A				IAmb	IAmb	16 39 08.3	
	comp=Z,2.8nm,0.8s						
MAW	Mawson	77.02	163	P	P	16 39 06.5	+0.8
	comp=Z,2.0nm,0.4s,baz=212,slow=7.4,SNR=10						
MAW	Mawson	77.02	163	P	P	16 39 06.6	+0.8
MTPU	Mount Pierson	77.94	327	P	P	16 39 13.7	+1.9
MTPU				IAmb	IAmb	16 39 14.4	
	comp=Z,2.6nm,0.7s						
MSU	Marysvale	78.32	327	P	P	16 39 15.9	+2.3
BOSA	Boshof	80.47	117	P	P	16 39 25.4	-0.3
	comp=Z,2.7nm,0.7s,baz=264,slow=3.4,SNR=9.0						
BOSA	Boshof	80.47	117	P	P	16 39 25.6	0.0
BOSA				IAmb	IAmb	16 39 48.5	
	comp=Z,6.3nm,1.1s						
PDAR	Pinedale Array	80.60	331	P	P	16 39 26.1	+0.2
	comp=Z,0.4nm,0.3s,baz=129,slow=7.1,SNR=2.7						
TORD	Torodi Ar. Bea	80.80	69	P	P	16 39 27.7	+0.4
	comp=Z,2.7nm,0.6s,baz=277,slow=5.9,SNR=17						
TORD				pP	pP	16 39 57.8	+1.4
	comp=Z,1.8nm,0.7s,baz=256,slow=4.9,SNR=6.8						
TORD	Torodi Ar. Bea	80.80	69	P	P	16 39 27.8	+0.5
TORD				IAmb	IAmb	16 39 28.3	
	comp=Z,3.1nm,0.6s						
LHV	Little Huntoon	81.26	323	P	P	16 39 32.0	+2.8
LHV				IAmb	IAmb	16 39 38.0	
	comp=Z,3.7nm,1.2s						
NVAR	Mina Array Bea	81.29	323	P	P	16 39 30.1	+0.5
	comp=Z,0.8nm,0.8s,baz=144,slow=5.3,SNR=5.8						
NVAR	Mina Array Bea	81.29	323	P	P	16 39 31.2	+1.5
LBTB	Lobatse	82.45	114	P	P	16 39 35.8	-0.3
LBTB				IAmb	IAmb	16 39 37.5	
	comp=Z,2.3nm,0.7s						
ESDC	Sonseca Array	91.98	45	LR	LR	17 19 49.8	
	comp=Z,40nm,21.6s,baz=320,slow=34						
ASAR	Alice Springs	122.53	206	PKP	PKPdf	16 46 08.1	-0.6
	comp=Z,0.2nm,0.8s,baz=139,slow=1.7,SNR=1.8						
ASAR				pPKP	pPKPdf	16 46 40.1	+0.3
	comp=Z,0.3nm,0.7s,baz=132,slow=1.5,SNR=2.6						
ASAR	Alice Springs	122.53	206	PKPdf	PKPdf	16 46 07.5	-1.1
WRA	Warramunga Arr	125.71	208	PKP	PKPdf	16 46 14.5	-0.3
	comp=Z,0.5nm,0.8s,baz=166,slow=1.7,SNR=5.5						
WRA				pPKP	pPKPdf	16 46 46.2	+0.3
	comp=Z,0.5nm,0.6s,baz=169,slow=1.5,SNR=3.0						
WRA	Warramunga Arr	125.71	208	PKPdf	PKiKP	16 46 15.0	-0.2
YAK	Yakutsk	144.95	344	PKP	PKPab	16 46 48.3	-0.2
	comp=Z,1.8nm,0.5s,baz=68,slow=3.1,SNR=4.0						
YAK				pPKP	pPKPdf	16 47 20.7	+0.6
	comp=Z,1.8nm,0.4s,baz=250,slow=0.3,SNR=2.3						
YAK	Yakutsk	144.95	344		PKPdf	16 46 48.7	-0.2
ZALV	Zalesovo Beam	149.30	30	PKPbc	PKiKP	16 47 01.6	-0.4
	comp=Z,2.0nm,0.4s,baz=311,slow=3.3,SNR=11						
ZALV				pPKPbc	pPKPbc	16 47 33.2	+1.4
	comp=Z,2.2nm,0.7s,baz=316,slow=3.7,SNR=4.7						
ZALV	Zalesovo Beam	149.30	30		PKiKP	16 47 01.4	-0.6
MKAR	Makanchi Array	152.20	44	PKPbc	PKPbc	16 47 07.7	-0.2
	comp=Z,0.5nm,0.7s,baz=301,slow=0.9,SNR=4.2						
MKAR				pPKPbc	pPKPbc	16 47 40.3	+1.5
	comp=Z,1.5nm,0.7s,baz=304,slow=2.6,SNR=9.0						
MKAR	Makanchi Array	152.20	44		PKiKP	16 47 07.9	-0.3

IDC 11 16:32:16.4±3.2**,32°.41S**×**178°.32W,h0**^{km}**,mb3.6**/2**,mb1 3.9**/3**,mb1mx3.6**/32**,mbtmp3.6**/3**,ML3.4**/1**,Error ellipse: s-maj=75.5km s-min=48.3km az=122.0,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	6.93	211	Pn	Pn	16 33 58.2	-1.0
	0.7nm,0.3s,baz=302,slow=24,SNR=1.3						
URZ				Sn	Sn	16 35 15.0	-3.7
	0.8nm,0.3s,baz=305,slow=23,SNR=2.2						
ASAR	Alice Springs	42.77	269	P	P	16 40 16.1	+0.2
	0.2nm,0.3s,baz=108,slow=7.9,SNR=13						
WRA	Warramunga Arr	43.94	274	P	P	16 40 25.1	-0.2
	0.5nm,0.4s,baz=112,slow=7.9,SNR=5.1						
FINES	FINESS Array B	146.92	339	PKPbc	PKPbc	16 51 59.2	-0.8
	0.8nm,0.7s,baz=42,slow=4.3,SNR=4.5						

IDC ***11*** *16:42:30.5±1.5, 17°.37S×167°.97E, h0*^{km}*, mb3.8/6, mb1 4.0/7, mb1mx3.7/34, mbtmp3.8/7, ML3.9/1, MS3.4/5, Ms1 3.3/5, ms1mx2.9/38, Error ellipse: s-maj=50.7km s-min=29.7km az=125.0*

NOU ***11*** *16:42:35.1, 17°.32S×168°.01E, h6*^{km}*, MLv4.9/6, Vanuatu Islands*

NEIC ***11*** *16:42:37.5±2.4, 17°.53S±0°.07×167°.9E±0°.2, h35*^{km}*±2*^{km}*, mb4.4/5, Error ellipse: s-maj=29.4km s-min=10.3km az=81.0*

ISC 11 16:42:34.8±0.7**,17°.42S**±0°.06×**167°.97E**±0°.08**,h27**^{km}**,n43,**σ**1**^{s}**.01**/41**,mb3.9**/7**,MS3.5**/4**,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	0.37	145	P	Pn	16 42 43.8	-0.6
DVP	Devils Point	0.37	145	P	Pn	16 42 44.2	-0.2
RTV	Rentapao	0.57	130	P	Pn	16 42 46.9	-0.3
RTV	Rentapao	0.57	130	P	Pn	16 42 47.3	+0.1
SANVU	Saraoutou	2.10	339	Pn	Pn	16 43 07.5	-0.7
LIFNC	LIFOU	3.41	192	Pn	Pn	16 43 24.4	-1.9
LIFNC	LIFOU	3.41	192	P	Pn	16 43 25.5	-0.7
MARNC	Mare, Loyalty	4.04	179	Pn	Pn	16 43 33.0	-1.9
MARNC	Mare, Loyalty	4.04	179	P	Pn	16 43 34.0	-0.9
KOUNC	Koumac, New Ca	4.67	228	P	Pn	16 43 43.6	0.0
YATNC	Mamie plateau,	4.72	192	P	Pn	16 43 44.6	+0.3
DZM	Mont Dzumac	4.84	197	Pn	Pn	16 43 46.2	+0.1
	4.4nm,0.3s,baz=62,slow=6.5,SNR=78						
DZM				Sn	Sn	16 44 39.1	-2.3
	5.1nm,0.3s,baz=136,slow=23,SNR=9.5						
DZM	Mont Dzumac	4.84	197	P	Pn	16 43 46.8	+0.7
NOUC	Port Laguerre	4.91	198	P	Pn	16 43 47.7	+0.8
ONTNC	Ouen Toro	5.07	196	Pn	Pn	16 43 49.9	+0.9
ONTNC	Ouen Toro	5.07	196	P	Pn	16 43 49.9	+0.9
OUENC	Ouen Island, N	5.08	192	Pn	Pn	16 43 50.5	+1.2
OUENC	Ouen Island, N	5.08	192	P	Pn	16 43 49.8	+0.5
PINNC	Pines Island,	5.19	185	Pn	Pn	16 43 52.5	+1.7
PINNC	Pines Island,	5.19	185	P	Pn	16 43 52.4	+1.7
MSVF	Nonsavu	9.62	93	LR	LR	16 47 44.9	
	comp=Z,184nm,18.8s,baz=245,slow=33						
AFI	Afiamalu	19.81	83	LR	LR	16 53 56.2	
	comp=Z,70nm,20.4s,baz=281,slow=35						
BKZ	Black Stump Fm	22.90	163	P	P	16 47 37.3	+0.7
STKA	Stephens Creek	27.86	234	LR	LR	16 57 30.3	
	comp=Z,51nm,19.2s,baz=38,slow=32						
WB0	Warramunga Arr	31.88	260	P	P	16 48 57.6	-0.5
WB0				IAmb	IAmb	16 49 24.3	
	comp=Z,5.2nm,1.3s						
WRA	Warramunga Arr	31.93	260	P	P	16 48 57.9	-0.6
	comp=Z,0.5nm,0.7s,baz=88,slow=9.1,SNR=2.8						
WRA				PcP	PcP	16 51 48.9	+0.2
	comp=Z,0.6nm,0.3s,baz=98,slow=3.1,SNR=16						
AS31	Alice Springs	32.44	253	P	P	16 49 02.3	-0.7
ASAR	Alice Springs	32.44	253	P	P	16 49 02.4	-0.6
	comp=Z,1.0nm,0.7s,baz=80,slow=8.2,SNR=27						
ASAR				PcP	PcP	16 51 49.6	-0.4
	comp=Z,0.4nm,0.8s,baz=77,slow=2.6,SNR=2.9						
ASAR				LR	LR	17 01 18.8	
	comp=Z,76nm,20.3s,baz=92,slow=35						
ASAR	Alice Springs	32.44	253	P	P	16 49 03.9	+0.8
NWAO	Narrogin (SRO)	48.00	241	LR	LR	17 11 18.4	
	comp=Z,60nm,18.0s,baz=270,slow=36						
QSPA	South Pole Qui	72.62	180	P	P	16 54 00.7	+0.9
QSPA				IAmb	IAmb	16 54 01.6	
	comp=Z,8.4nm,1.1s						
RPN	Rapa Nui	75.93	114	LR	LR	17 23 10.9	
	comp=Z,383nm,20.0s,baz=243,slow=32						
CMAR	Chiang Mai Arr	76.66	294	P	P	16 54 24.8	+1.0
	comp=Z,0.4nm,0.4s,baz=145,slow=3.3,SNR=4.5						
CMAR	Chiang Mai Arr	76.66	294	P	P	16 54 25.5	+1.7
SONM	Songino Array	85.05	324	P	P	16 55 07.9	-0.2
	comp=Z,1.6nm,0.8s,baz=140,slow=5.7,SNR=5.9						
SONM	Songino Array	85.05	324	P	P	16 55 09.0	+0.9
SONM				IAmb	IAmb	16 55 09.5	
	comp=Z,2.0nm,0.9s						
ILAR	Eielson Array	88.87	18	P	P	16 55 25.9	-0.2
	comp=Z,0.2nm,0.5s,baz=236,slow=4.2,SNR=2.0						
SNAA	Sanae	90.91	183	PKPdf	P	16 55 36.1	+0.2
VNA3	Neumayer Olymp	91.55	181	PKPdf	P	16 55 39.0	+0.2
VNA2	Neumayer--Watz	91.82	182	PKPdf	P	16 55 38.8	-1.2
	baz=138,slow=2.5						
VNA1	Neumayer--Stat	92.12	181	PKPdf	P	16 55 39.6	-1.7
MKAR	Makanchi Array	99.60	316	P	Pdif	16 56 15.5	-0.3
	comp=Z,0.2nm,0.6s,baz=96,slow=6.9,SNR=2.0						
ARCES	ARCESS Array B	123.01	345	PKP	PKPdf	17 01 27.4	-0.7
	comp=Z,1.4nm,0.7s,baz=338,slow=2.6,SNR=8.4						

DJA ***11*** *16:52:35.4±0.9, 7°S±3°×10°3E±°, h10*^{km}*±8*^{km}*, M4.0/16, mb3.8/3, MLv4.2/16*

IDC ***11*** *16:52:38.8±2.2, 6°.57S×103°.22E, h0*^{km}*, mb3.8/6, mb1 4.0/7, mb1mx3.7/41, mbtmp3.8/7, ML3.9/1, MS2.7/2, Ms1 2.8/2, ms1mx2.5/43, Error ellipse: s-maj=78.5km s-min=20.4km az=51.0*

NEIC ***11*** *16:52:48.0±1.3, 6°.3S±0°.1×103°.7E±0°.1, h46*^{km}*±7*^{km}*, mb4.2/10, Error ellipse: s-maj=22.1km s-min=10.3km az=217.0*

ISC 11 16:52:44.3±0.9**,6°.7S**±0°.1×**103°.38E**±0°.09**,h35**^{km}**,n48,**σ**1**^{s}**.68**/38**,mb4.1**/12**,Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KASI	Kota Agung	1.62	44	P	Pn	16 53 11.3	+0.9
LWLI	Liwa	1.81	22	P	Pn	16 53 14.7	+1.6
BLSI	Bandar Lampung	2.29	55	P	Pn	16 53 20.7	+1.1
CGJI	Cibinong	2.30	88	P	Pn	16 53 16.8	-3.0
MDSI	Maura Dua	2.34	20	P	Pn	16 53 21.9	+1.5
KLI	Kotabumi	2.35	39	P	Pn	16 53 23.4	+2.9
MNAI	Manna	2.37	350	P	Pn	16 53 20.8	+0.1
MNAI	Manna	2.37	350	Pn	Pn	16 53 19.8	-0.9
KLSI		2.41	34	P	Pn	16 53 23.3	+1.9
LHSI	Lahat	2.86	3	P	Pn	16 53 28.6	+1.0
DBJI	Dramaga	3.35	88	P	Pn	16 53 32.3	-2.0
CBJI	Citeko	3.46	85	P	Pn	16 53 35.4	-0.4
MASI	Maura Aman, Be	3.72	342	P	Pn	16 53 38.3	-1.0
CNJI	Cibinong	3.77	99	P	Pn	16 53 36.1	-4.0
LEM	Lembang	4.21	92	Pn	Pn	16 53 45.9	-0.4
	5.7nm,0.3s,baz=1.1,slow=16,SNR=5.2						
LEM				Sn	Sn	16 54 35.9	+1.5
	4.6nm,0.3s,baz=126,slow=21,SNR=1.6						
LEM	Lembang	4.21	92	P	Pn	16 53 45.4	-0.9
CMJI	Cimerak	5.14	102	P	Pn	16 53 56.3	-2.6
	0.2nm48nm,0.8s						
PDSI	Padang	6.45	333	P	Pn	16 54 15.4	-1.5
SMRI	Semarang	7.02	93	Pn	Pn	16 54 24.0	-0.7
UGM	Wanagama	7.19	100	Pn	Pn	16 54 22.4	-4.7
PCJI	Pacitan	7.88	101	P	Pn	16 54 32.1	-4.4
GSI	Gunungsitoli	9.84	324	Pn	Pn	16 55 04.9	+1.5
JAGI	Jajag, Banyuwa	10.82	100	Pn	Pn	16 55 14.7	-2.2
KAPI	Kappang	16.38	85	LR	LR	17 03 26.8	
	comp=Z,26nm,20.2s,baz=306,slow=39						
CM31	Chiang Mai Arr	25.38	350	P	P	16 58 07.4	-1.2
CM31				IAmb	IAmb	16 58 19.6	
	comp=Z,9.6nm,1.0s						
CMAR	Chiang Mai Arr	25.38	350	P	P	16 58 07.6	-1.0
	comp=Z,3.7nm,1.1s,baz=183,slow=8.4,SNR=21						
CMAR				LR	LR	17 09 07.7	
	comp=Z,16nm,18.0s,baz=185,slow=39						
CHTO	Chiang Mai	25.73	350	P	P	16 58 10.3	-1.4
CHTO				IAmb	IAmb	16 58 21.7	
	comp=Z,10.0nm,1.4s						
H01W3	Cape Leeuwin H	29.74	162	T	T	17 29 43.9	
	baz=340,slow=75,SNR=6.4						
H01W2	Cape Leeuwin H	29.76	162	T	T	17 29 23.5	
	baz=340,slow=75,SNR=8.2						
H01W1	Cape Leeuwin H	29.76	162	T	T	17 29 29.2	
	baz=340,slow=75,SNR=7.7						
H08S2	Diego Garcia H	30.65	266	T	T	17 31 44.6	
	baz=90						
H08S3	Diego Garcia H	30.66	266	T	T	17 31 29.8	
	baz=90						
H08S1	Diego Carcia H	30.67	266	T	T	17 31 42.1	
	baz=90						
WB0	Warramunga Arr	32.79	116	P	P	16 59 15.4	+0.9
WB0				IAmb	IAmb	16 59 30.1	
	comp=Z,4.7nm,1.4s						
WRA	Warramunga Arr	32.80	117	P	P	16 59 16.0	+1.4
	comp=Z,1.4nm,0.9s,baz=288,slow=10,SNR=4.6						
WRA	Warramunga Arr	32.80	117	P	P	16 59 15.9	+1.3
WRAB	Tennant Creek	32.80	117	P	P	16 59 14.9	+0.2
WB2	Warramunga Arr	32.81	117	P	P	16 59 16.9	+2.2
WB2				IAmb	IAmb	16 59 22.5	
	comp=Z,3.0nm,1.1s						
STKA	Stephens Creek	43.54	130	P	P	17 00 46.4	+1.4
	comp=Z,1.3nm,0.5s,baz=297,slow=11,SNR=5.1						
STKA	Stephens Creek	43.54	130	P	P	17 00 47.2	+2.3
CTAO	Charters Tower	43.64	112	P	P	17 00 45.7	-0.2
CTAO				IAmb	IAmb	17 00 46.2	
	comp=Z,13nm,1.4s						
SONM	Songino Array	54.37	3	P	P	17 02 06.7	-1.1
	comp=Z,0.9nm,0.9s,baz=188,slow=9.2,SNR=4.2						
MK31	Makanchi Array	56.47	343	P	P	17 02 22.9	+0.1
MK31				IAmb	IAmb	17 02 35.9	
	comp=Z,2.9nm,1.1s						
MKAR	Makanchi Array	56.47	343	P	P	17 02 20.5	-2.2
	comp=Z,0.3nm,0.5s,baz=145,slow=8.8,SNR=5.2						
MKAR	Makanchi Array	56.47	343	P	P	17 02 21.9	-0.9
ZALV	Zalesovo Beam	62.42	348	P	P	17 03 01.7	-1.9
	comp=Z,0.5nm,0.4s,baz=205,slow=3.1,SNR=3.8						
ZALV	Zalesovo Beam	62.42	348	P	P	17 03 01.9	-1.8
MBAR	Mbarara	72.69	271	P	P	17 04 12.0	+2.4

IDC 11 17:07:55.5±6.7**,18°.27S**×**178°.13W,h395**^{km}±44^{km}**,mb3.0**/3**,mb1 3.3**/5**,mb1mx3.0**/34**,mbtmp3.8**/5**,Error ellipse: s-maj=219.0km s-min=27.9km az=151.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	3.68	278	P	Pn	17 09 04.0	-0.4
	0.4nm,0.3s,baz=145,slow=11,SNR=4.4						
DZM	Mont Dzumac	14.97	253	P	Pn	17 11 09.7	-1.1
	0.6nm,0.3s,baz=193,slow=23,SNR=8.6						
WRA	Warramunga Arr	44.83	260	P	P	17 15 32.6	0.0
	1.0nm,0.6s,baz=95,slow=8.1,SNR=11						
ASAR	Alice Springs	44.95	255	P	P	17 15 33.2	-0.3
	2.0nm,0.9s,baz=87,slow=8.3,SNR=20						
ASAR				PcP	PcP	17 17 06.5	-0.6
	0.2nm,0.6s,baz=102,slow=3.6,SNR=1.6						
NVAR	Mina Array Bea	79.50	44	P	P	17 19 20.1	+0.2
	0.2nm,0.5s,baz=203,slow=8.8,SNR=2.6						

IDC ***11*** *17:17:21.6±1.1, 54°.27N×161°.34E, h0*^{km}*, mb3.5/7, mb1 3.7/8, mb1mx3.5/42, mbtmp3.5/8, ML2.5/1, MS2.8/2, Ms1 2.8/2, ms1mx2.4/36, Error ellipse: s-maj=41.1km s-min=18.9km az=148.0*

KRSC ***11*** *17:17:23.3±1.1, 53°.77N×161°.82E, h45*^{km}*±21*^{km}*, ML4.0*

ISC 11 17:17:21.9±2.1**,53°.93N**±0°.06×**161°.68E**±0°.05**,h8**^{km}±13^{km}**,n49,**σ**1**^{s}**.38**/56**,mb3.6**/7**,Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKZ	Mys Kozlova	0.63	3	*e*P	Pn	17 17 37.7	+0.6
SPN	Mys Shipunski	1.29	231	*e*P	Pn	17 17 45.4	-0.8
SPN				*e*S	Sb	17 18 01.0	-2.2
KII	Karymskiy	1.32	276	*e*P	Pb	17 17 47.1	+0.1
TUMD	Tumrok D	1.48	330	*e*P	Pg	17 17 50.3	+0.1
TUMD				*e*S	Sg	17 18 11.4	+2.0
NLC	Nalytchevo	1.59	242	*e*P	Pn	17 17 50.7	+0.4
NLC				*e*S	Sn	17 18 11.3	+0.4
TUMR	Tumrok	1.62	327	*e*P	Pg	17 17 53.2	+0.2
TUMR				*e*S	Sg	17 18 16.3	+2.2
SDLR	Sedlovina	1.79	250	*e*P	Pn	17 17 53.6	+0.4
SMAR	Somma	1.84	250	*e*P	Pn	17 17 54.7	+0.7
SMAR				*e*S	Sn	17 18 18.0	+0.4
UGLR	Uglovaya	1.85	248	*e*P	Pn	17 17 54.8	+0.8
KRER	Koryakskii	1.85	251	*e*P	Pn	17 17 55.1	+0.9
AVH	Avacha	1.88	250	*e*P	Pn	17 17 55.4	+1.1
KOK	Koryaka	1.92	252	*e*P	Pn	17 17 55.8	+0.8
DALK	Dalny	1.97	244	*e*P	Pn	17 17 55.8	+0.3
DALK				*e*S	Sn	17 18 19.2	-1.1
KMNR	Kamenistaya	2.01	336	*e*P	Pg	17 18 01.0	+0.6
KMNR				*e*S	Sg	17 18 28.6	+2.1
PET	Petropavlovsk	2.02	245	*e*P	Pn	17 17 56.8	+0.5
BZGR	Bezymyannyi-Gr	2.09	345	*e*P	Pg	17 18 01.6	-0.4
BZWR	Bezymyannyi-We	2.15	342	*e*P	Pg	17 18 02.3	-0.8
ZLN	Zelenaya	2.15	347	*e*P	Pg	17 18 02.5	-0.6
KIRR	Kirishev	2.17	340	*e*P	Pg	17 18 02.4	-1.1
KPT	Kopyto	2.21	338	*e*P	Pb	17 18 01.7	-0.4
GNL	Ganaly	2.23	265	*e*P	Pb	17 18 01.1	-1.4
LGNR	Loginova	2.23	346	*e*P	Pg	17 18 04.3	-0.4
CIRR	Tsirk	2.26	347	*e*P	Pb	17 18 02.6	-0.4
KBTR	Krutoberegovo	2.38	16	*e*P	Pb	17 18 04.1	-0.8
KRSR	Krestovskiy	2.38	345	*e*P	Pb	17 18 04.7	-0.4
KBG	Krutoberegovo	2.41	14	*e*P	Pb	17 18 04.8	-0.6
RUS	Russkaya	2.42	233	*e*P	Pn	17 18 03.3	+1.5
KLY	Klyuchi	2.46	347	*e*P	Pb	17 18 06.0	-0.4
KLY				*e*S	Sg	17 18 37.1	-3.8
PETK	Petropavlovsk-	2.51	253	Pn	Pn	17 18 04.5	+1.4
	4.8nm,0.3s,baz=69,slow=17,SNR=57						
PETK				Sn	Sn	17 18 34.5	+0.7
	9.4nm,0.3s,baz=92,slow=24,SNR=17						
PETK				LR	LR	17 19 12.8	
	comp=Z,84nm,19.9s,baz=4.1,slow=45						
MTVR	Mutnovka	2.55	237	*e*P	Pn	17 18 06.2	+2.5
GRL	Gorelyy	2.57	239	*e*P	Pn	17 18 05.9	+2.0
BDR	Baidarnaya	2.66	354	*e*P	Pb	17 18 09.1	-0.7
SMKR	Semkarok	2.66	357	*e*P	Pb	17 18 09.6	-0.2
SRKR	Sorokina	2.75	354	*e*P	Pb	17 18 11.4	+0.1
ASAK	Asacha	2.75	237	*e*P	Pn	17 18 08.4	+2.0
BKI	Bering	2.81	61	*e*P	Pn	17 18 08.9	+1.9
BKI				*e*S	Sn	17 18 39.9	-1.1
APC	Apacha	2.89	251	*e*P	Pb	17 18 11.9	-1.7
APC				*e*S	Sn	17 18 44.9	+1.9
KDTR	Khodutka, Kamc	3.04	227	*e*P	Pn	17 18 12.3	+2.0
TIXI	Tiksi	22.73	334	LR	LR	17 31 11.2	
	comp=Z,60nm,21.2s,baz=217,slow=37						
MJAR	Matsushiro Arr	23.81	233	P	P	17 22 36.2	+1.1
	1.5nm,0.8s,baz=34,slow=9.0,SNR=2.5						
ILAR	Eielson Array	27.55	46	P	P	17 23 09.2	+0.4
	0.2nm,0.8s,baz=269,slow=7.2,SNR=2.2						
H11N2	WAKE ISLAND Hy	34.37	171	T	T	18 01 30.0	
	baz=354						
H11N3	WAKE ISLAND Hy	34.39	171	T	T	18 01 31.5	
	baz=354,slow=74						
H11N1	WAKE ISLAND Hy	34.39	171	T	T	18 01 31.8	
	baz=354,slow=74						
MKAR	Makanchi Array	48.64	296	P	P	17 26 02.7	-3.3
	0.2nm,0.5s,baz=68,slow=9.4,SNR=1.9						
CMAR	Chiang Mai Arr	59.28	259	P	P	17 27 24.5	+0.5
	0.4nm,0.7s,baz=25,slow=7.5,SNR=5.6						
FINES	FINESS Array B	59.72	337	P	P	17 27 25.2	-1.3
	1.2nm,0.9s,baz=33,slow=8.3,SNR=1.2						
TXAR	Lajitas Array	69.44	68	P	P	17 28 31.9	+1.3
	0.4nm,0.4s,baz=291,slow=4.8,SNR=4.5						
ASAR	Alice Springs	80.92	206	P	P	17 29 38.0	+1.5
	0.2nm,0.9s,baz=17,slow=5.2,SNR=1.9						

IDC 11 17:23:16.5±2.0**,56°.18S**×**29°.80W,h0**^{km}**,mb4.0**/1**,mb1 4.0**/1**,mb1mx3.6**/21**,mbtmp4.0**/1**,MS3.5**/4**,Ms1 3.5**/4**,ms1mx3.2**/17**,Error ellipse: s-maj=112.8km s-min=73.4km az=144.0,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
USHA	Ushuaia	21.73	257	LR	LR	17 34 07.3	
	comp=Z,173nm,19.8s,baz=194,slow=30						
H09N1	TRISTAN DA CUN	22.45	39	T	T	17 52 12.3	
	SNR=9.5						
PLCA	Paso Flores	30.59	283	LR	LR	17 41 05.8	
	comp=Z,98nm,18.4s,baz=146,slow=35						
CPUP	Villa Florida	35.83	315	LR	LR	17 46 50.7	
	comp=Z,39nm,18.0s,baz=20,slow=40						
BOSA	Boshof	47.42	78	LR	LR	17 49 01.5	
	comp=Z,45nm,18.0s,baz=197,slow=33						
H10N1	ASCENSION HYDR	49.70	20	T	T	18 25 39.1	
	baz=191						
H10N3	ASCENSION HYDR	49.70	20	T	T	18 25 32.8	
	baz=191						
H10N2	ASCENSION HYDR	49.72	20	T	T	18 25 38.0	
	baz=191						
TORD	Torodi Ar. Bea	73.91	32	P	P	17 34 53.2	+0.1
	1.0nm,0.7s,baz=201,slow=6.9,SNR=5.9						
ZALV	Zalesovo Beam	143.74	65	PKP	PKPbc	17 42 50.2	+0.4
	0.4nm,0.4s,baz=264,slow=2.8,SNR=2.0						
ILAR	Eielson Array	149.11	312	PKPbc	PKPbc	17 43 04.6	-0.5
	1.8nm,0.9s,baz=121,slow=1.8,SNR=13						
SONM	Songino Array	152.19	89	PKPbc	PKiKP	17 43 13.3	-0.1
	0.6nm,0.7s,baz=263,slow=2.7,SNR=2.8						

FUNV ***11*** *17:30:14.4, 8°.44N×71°.43W, h2*^{km}*, MW3.1*

ISC 11 17:30:14.0±1.2**,8°.51N**±0°.04×**71°.42W**±0°.02**,h5**^{km}±10^{km}**,n22,**σ**1**^{s}**.05**/39**,1D,Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	Socops	0.60	112	*e*P	Pg	17 30 25.4	-0.1
SOCV				*e*S	Sg	17 30 34.2	+0.9
SOCV	Socops	0.60	112⇓	*e*P	Pg	17 30 25.4	-0.1
SOCV				*e*S	Sg	17 30 34.2	+0.9
SDV	Santo Domingo	0.86	64	*e*P	Pg	17 30 30.7	+0.2
SDV				*e*S	Sb	17 30 42.9	-0.6
CAPV	Capacho	1.10	234	*e*P	Pg	17 30 33.7	-1.4
CAPV				*e*S	Sg	17 30 49.4	+0.1
PAMC	Pamplona, Colo	1.72	228	*e*P	Pn	17 30 45.2	+0.1
PAMC				*e*S	Sg	17 31 10.2	+0.7
MCQV	Machiques	1.89	324	*e*S	Sb	17 31 12.5	-0.3
OCAC	Ocana	1.90	262	*e*P	Pn	17 30 47.5	+0.2
OCAC				*e*S	Sb	17 31 13.2	-0.3
TAMC	Tame, Arauca	2.10	190	*e*P	Pb	17 30 52.1	-0.5
TAMC				*e*S	Sg	17 31 21.2	-0.2
LL1C	La Loma 1 Cana	2.35	296	*e*S	Sn	17 31 12.2	-10
ELOV	Elorza	2.44	128	*e*P	Pn	17 30 54.8	+0.4
ELOV				*e*S	Sn	17 31 23.9	-0.7
BARC	Barichara	2.59	223	*e*P	Pb	17 31 01.4	+0.3
BARC				*e*S	Sg	17 31 36.1	-1.2
SMLC	San Martn de	2.64	276	*e*P	Pn	17 30 56.8	-0.5
SMLC				*e*S	Sn	17 31 29.6	-0.2
BRRC	Barranca, Sant	2.67	239	*e*S	Sn	17 31 30.6	+0.1
RUSC	La Rusia	3.08	213	*e*P	Pn	17 31 04.8	+1.0
RUSC				*e*S	Sn	17 31 43.3	+1.9
BAUV	El Baul	3.36	82	*e*P	Pn	17 31 07.5	+0.3
BAUV				*e*S	Sn	17 31 46.5	-1.1
ZARC	Zaragoza, Cauc	3.56	254	*e*P	Pn	17 31 09.7	-0.2
ZARC				*e*S	Sn	17 31 52.2	-0.2
MONV	Montecano	3.71	22	*e*P	Pn	17 31 12.9	+0.9
MONV				*e*S	Sn	17 31 55.1	-1.0
SPBC	San Pablo de B	3.88	223	*e*P	Pn	17 31 14.4	0.0
SJCC	San Jacinto, C	3.96	291	*e*P	Pn	17 31 16.1	+0.6
SJCC				*e*S	Sn	17 32 05.3	+2.8
BENV	Beln	4.04	69	*e*P	Pn	17 31 17.1	+0.5
BENV				*e*S	Sn	17 32 01.8	-2.5
CHIC	Chingaza	4.49	211	*e*P	Pn	17 31 24.2	+1.0
CHIC				*e*S	Sn	17 32 16.0	0.0
GUY2C	Guyana, Caldas	5.10	230	*e*P	Pn	17 31 34.3	+2.7
GUY2C				*e*S	Sn	17 32 30.5	-0.7

NOU ***11*** *17:33:11.7, 20°.16S×176°.83W, h322*^{km}*, mb5.0/33, Fiji*

Islands Region

IDC **11** *17:33:15.5±1.5, 20°.05S×177°.31W, h348km±14km, mb3.9/15, mb1 4.1/18, mb1mx4.0/29, mbtmp4.7/18, Error ellipse: s-maj=14.9km s-min=9.8km az=157.0*

NEIC **11** *17:33:16.6±1.6, 20°.0S±0°.1×177°.4W±0°.1, h348km±5km, mb4.6/113, Error ellipse: s-maj=15.3km s-min=14.5km az=176.0*

ISC 11 17:33:15.1±0.3**, 20°.21S**±0°.05×**177°.21W**±0°.06**, h350km, n310, σ1^{s}32**/332**, mb4.5**/72**, 9C-1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKBA	Tubou, Lakemba	2.48	322	P	Pn	17 34 06.5	-3.7
TAVE	Taveuni	4.32	323	P	Pn	17 34 24.5	-3.1
DGTI	Dogotuki	4.85	323	P	Pn	17 34 29.9	-3.4
MSVF	Nonsavu	5.12	298	P	Pn	17 34 34.2	-2.0
	19nm,0.3s,baz=121,slow=9.3,SNR=106						
MSVF	Nonsavu	5.12	298	Pn	Pn	17 34 34.0	-2.2
MSVF	Nonsavu	5.12	298	P	Pn	17 34 34.4	-1.8
AFI	Afiamalu	8.14	40	P	Pn	17 35 01.8	-9.3
	55nm,0.3s,baz=184,slow=3.5,SNR=24						
AFI				S	S	17 36 26.8	-19
	34nm,0.3s,baz=19,slow=22,SNR=8.4						
RAO	Raoul Island	9.03	184	Pn	Pn	17 35 21.1	-0.3
RAO					S	17 37 00.6	-4.1
GLKZ	Green Lake	9.04	184	P	Pn	17 35 17.7	-3.9
GLKZ				S	S	17 36 54.1	-11
FUNA	Funafuti	12.12	343	P	P	17 35 55.4	-2.9
MARNC	Mare, Loyalty	13.86	262	P	P	17 36 17.8	+0.4
MARNC	Mare, Loyalty	13.86	262	P	Pn	17 36 18.4	-0.4
DVP	Devils Point	14.04	278	P	Pn	17 36 23.3	+2.4
	427μm,0.5s						
PINNC	Pines Island,	14.49	258	P	Pn	17 36 25.6	-0.6
PINNC	Pines Island,	14.49	258	P	Pn	17 36 26.9	+0.7
LIFNC	LIFOU	14.59	265	P	P	17 36 24.3	-1.0
LIFNC	LIFOU	14.59	265	P	P	17 36 24.9	-0.4
YATNC	Mamie plateau,	14.95	260	P	Pn	17 36 31.5	0.0
OUENC	Ouen Island, N	15.03	259	P	P	17 36 31.0	+0.9
OUENC	Ouen Island, N	15.03	259	P	Pn	17 36 32.4	0.0
DZM	Mont Dzumac	15.37	260	P	Pn	17 36 35.3	-1.1
	22nm,0.3s,baz=86,slow=14,SNR=170						
DZM	Mont Dzumac	15.37	260	P	P	17 36 34.8	+0.9
DZM	Mont Dzumac	15.37	260	P	Pn	17 36 35.9	-0.5
ONTNC	Ouen Toro	15.38	259	P	P	17 36 34.8	+0.8
ONTNC	Ouen Toro	15.38	259	P	Pn	17 36 35.8	-0.6
NOUC	Port Laguerre	15.50	260	P	Pn	17 36 37.0	-0.8
RAR	Rarotonga	16.34	97	P	P	17 36 44.6	+0.2
	2.5nm,0.3s,baz=245,slow=7.4,SNR=6.8						
RAR	Rarotonga	16.34	97	P	P	17 36 44.5	0.0
RAR	Rarotonga	16.34	97	P	P	17 36 39.3	-5.1
OUZ	Omahuta	17.01	207	P	P	17 36 52.0	+0.6
OUZ				IAmb	IAmb	17 37 00.7	
	comp=Z,17nm,0.8s						
WCZ	Waipu Caves	17.34	204	P	P	17 36 55.7	+0.8
KOUNC	Koumac, New Ca	17.36	266	P	P	17 36 59.5	+4.2
	comp=Z,104nm,1.2s						
MXZ	Matakaoa Point	17.73	192	P	P	17 36 57.4	-1.7
MXZ	Matakaoa Point	17.73	192	P	P	17 36 58.2	-0.9
HAZ	Te Kaha	18.02	193	P	P	17 37 01.7	-0.5
HAZ				S	S	17 40 10.1	-0.3
KNTN	Kanton	18.14	18	P	P	17 36 59.9	-3.8
KNTN	Kanton	18.14	18	P	P	17 37 00.3	-3.4
PUZ	Puketiti	18.23	192	P	P	17 37 03.9	-0.6
PUZ				S	S	17 40 11.5	-3.2
RUGZ	Raukumara Rang	18.24	193	P	P	17 37 04.0	-0.7
RUGZ				S	S	17 40 13.6	-1.4
TWGZ	Tauwhareparae	18.39	192	P	P	17 37 06.7	+0.6
TWGZ				S	S	17 40 15.6	-2.2
TOZ	Tahuroa Road	18.57	198	P	P	17 37 10.0	+1.9
MWZ	Matawai	18.63	193	P	P	17 37 07.7	-1.1
MWZ				S	S	17 40 21.4	-1.0
CNGZ	Carnagh Statio	18.64	191	P	P	17 37 08.8	0.0
URZ	Urewera	18.65	194	P	P	17 37 06.7	-2.1
	comp=Z,5.6nm,0.3s,baz=251,slow=3.1,SNR=18						
URZ				S	S	17 40 20.2	-2.5
	comp=Z,4.8nm,0.3s,baz=137,slow=22,SNR=5.9						
URZ	Urewera	18.65	194	P	P	17 37 06.7	-2.1
URZ	Urewera	18.65	194	P	P	17 37 06.4	-2.5
URZ				IAmb	IAmb	17 37 17.1	
	comp=Z,28nm,0.6s						
URZ	Urewera	18.65	194	P	P	17 37 06.9	-2.0
TKGZ	Te Karaka	18.66	192	P	P	17 37 08.1	-0.9
TKGZ				S	S	17 40 24.0	+0.9
RIGZ	Rimuhau	18.94	192	P	P	17 37 10.6	-1.4
RIGZ				S	S	17 40 26.0	-2.3
RTZ	Ruatahuna	19.02	194	P	P	17 37 12.7	-0.2
RTZ				S	S	17 40 28.9	-0.9
BKZ	Black Stump Fm	19.66	195	P	P	17 37 17.5	-2.1
BKZ				S	S	17 40 40.8	+0.2
BKZ	Black Stump Fm	19.66	195	P	P	17 37 17.1	-2.5
BKZ				IAmb	IAmb	17 37 25.3	
	comp=Z,18nm,0.5s						
BHHZ	Black Hill Sta	20.07	195	P	P	17 37 20.0	-3.7
BHHZ				S	S	17 40 45.7	-1.5
BFZ	Birch Farm	21.16	194	P	P	17 37 34.1	+0.5
MSWZ	Moikau Station	22.09	195	P	P	17 37 41.6	-0.5
BHW	Baring Head	22.18	196	P	P	17 37 42.3	-0.6
PLWZ	Palliser	22.23	195	P	P	17 37 43.1	-0.4
NNZ	Nelson	22.42	199	P	P	17 37 44.9	-0.2
TUWZ	Tuamarina	22.45	198	P	P	17 37 44.9	-0.5
BSWZ	Blackbirch Sta	22.73	197	P	P	17 37 48.4	+0.4
THZ	Tophouse	23.06	199		P	17 37 51.9	+0.9
THZ				IAmb	IAmb	17 38 08.8	
	comp=Z,27nm,1.0s						
KHZ	Kahutara	23.48	197	P	P	17 37 54.6	0.0
KHZ				IAmb	IAmb	17 38 00.5	
	comp=Z,24nm,0.9s						
KHZ	Kahutara	23.48	197	P	P	17 37 55.2	+0.6
TARA	Tarawa	23.51	335	P	P	17 37 52.9	-2.3
LTZ	Lake Taylor	24.19	199	P	P	17 38 00.8	-0.3
LTZ				IAmb	IAmb	17 38 20.5	
	comp=Z,26nm,1.1s						
OXZ	Oxford	24.75	199	P	P	17 38 04.8	-1.3
OXZ				IAmb	IAmb	17 38 12.9	
	comp=Z,63nm,1.3s						
RPZ	Rata Peaks	25.41	200	P	P	17 38 11.5	-0.5
RPZ				IAmb	IAmb	17 38 34.1	
	comp=Z,20nm,0.9s						
PPT	Papeete	26.26	89	P	P	17 38 20.4	+0.5
	comp=Z,12nm,0.6s,baz=225,slow=23,SNR=4.0						
WKZ	Wanaka	27.08	202	P	P	17 38 26.7	-0.1
WKZ				IAmb	IAmb	17 38 32.3	
	comp=Z,33nm,0.9s						
MLZ	Mavora Lakes	27.86	202	P	P	17 38 34.3	+0.5
MLZ				IAmb	IAmb	17 38 37.5	
	comp=Z,43nm,1.3s						
DCZ	Deep Cove	28.30	204	P	P	17 38 38.0	+0.5
WHZ	Wether Hill Ro	28.38	202	P	P	17 38 39.0	+0.7
WHZ				IAmb	IAmb	17 38 43.6	
	comp=Z,33nm,0.9s						
CAN	Canberra	33.29	236	P	P	17 39 21.9	+0.7
CAN				IAmb	IAmb	17 39 48.3	
	comp=Z,36nm,1.2s						
CTAO	Charters Tower	34.26	264	P	P	17 39 30.1	+0.5
CTAO				IAmb	IAmb	17 39 31.1	
	comp=Z,29nm,1.0s						
CTAO	Charters Tower	34.26	264	P	P	17 39 30.2	+0.5
TAU	Tasmania Unive	37.35	225	P	P	17 39 55.9	+0.6
TAU				IAmb	IAmb	17 40 25.0	
	comp=Z,48nm,1.4s						
STKA	Stephens Creek	38.58	244	P	P	17 40 05.8	+0.1
	comp=Z,17nm,0.8s,baz=89,slow=9.0,SNR=27						
STKA	Stephens Creek	38.58	244	P	P	17 40 05.6	-0.1
WR0	Warramunga Arr	45.19	262	P	P	17 40 58.0	-0.8
AS31	Alice Springs	45.31	256	P	P	17 40 59.8	0.0
ASAR	Alice Springs	45.31	256	P	P	17 40 59.8	+0.1
	comp=Z,18nm,0.5s,baz=92,slow=8.5,SNR=904						
ASAR				S	S	17 47 13.6	+0.1
	comp=Z,3.9nm,0.7s,baz=94,slow=16,SNR=23						
WB0	Warramunga Arr	45.35	262	P	P	17 40 59.5	-0.6
WB2	Warramunga Arr	45.37	262	P	P	17 40 59.5	-0.7
WRAB	Tennant Creek	45.37	262	P	P	17 40 59.8	-0.4
WRA	Warramunga Arr	45.38	262	P	P	17 40 59.6	-0.6
	comp=Z,6.1nm,0.6s,baz=98,slow=8.9,SNR=93						
WRA				S	S	17 47 14.2	-0.4
	comp=Z,2.6nm,0.9s,baz=97,slow=14,SNR=5.5						
WRA	Warramunga Arr	45.38	262	P	P	17 40 59.3	-1.0
SOEI	Soe	57.24	271	P	P	17 42 28.3	+0.6
SOEI	Soe	57.24	271	P	P	17 42 29.6	+1.9
SBA	Scott Base	58.21	184	P	P	17 42 36.8	+3.6
SANI	Sanana	58.26	280	P	P	17 42 36.2	+1.6
	comp=Z,7.0nm,1.0s						
VNDA	Vanda	58.27	185	P	P	17 42 35.5	+1.9
	comp=Z,3.0nm,0.8s,baz=334,slow=9.2,SNR=25						
VNDA	Vanda	58.27	185	P	P	17 42 36.6	+3.1
MBWA	Marble Bar	58.64	257	P	P	17 42 37.4	+0.3
QSPA	South Pole Qui	69.86	180	P	P	17 43 50.2	+1.5
MJAR	Matsushiro Arr	70.42	323	P	P	17 43 51.5	-0.8
	comp=Z,8.9nm,0.8s,baz=162,slow=5.6,SNR=23						
MJAR	Matsushiro Arr	70.42	323	P	P	17 43 51.8	-0.5
MJAR				IAmb	IAmb	17 43 52.9	
	comp=Z,6.3nm,0.8s						
MAJO	Matsushiro	70.42	323	P	P	17 43 52.2	-0.1
MAJO				IAmb	IAmb	17 43 53.2	
	comp=Z,15nm,0.8s						
MAJO	Matsushiro	70.42	323	P	P	17 43 52.5	+0.2
MAT	Matsushiro	70.42	323	P	P	17 43 52.0	-0.3
UGM	Wanagama	70.71	268	P	P	17 43 54.5	0.0
SSLB	Suanglung	74.44	303	P	P	17 44 15.3	-0.8
TPUB	Ta-pu	74.45	302	P	P	17 44 15.3	-0.8
YSS	Yuzh-Sakhalins	75.97	333	P	P	17 44 24.2	0.0
YSS				IAmb	IAmb	17 44 26.4	
	comp=Z,16nm,1.1s						
YSS	Yuzh-Sakhalins	75.97	333	P	P	17 44 25.2	+1.0
PETK	Petropavlovsk-	76.18	345	P	P	17 44 24.2	-1.1
	comp=Z,7.5nm,0.7s,baz=124,slow=8.0,SNR=14						
PETK	Petropavlovsk-	76.18	345	P	P	17 44 24.4	-0.9
KSRS	Korea Array	77.17	318	P	P	17 44 32.0	+1.0
	comp=Z,1.3nm,0.7s,baz=121,slow=6.7,SNR=5.6						
KMRM	Mail Ridge	78.06	39	P	P	17 44 38.3	+2.3
VES	Vestal, Richgr	78.30	45	P	P	17 44 38.7	+1.4
	baz=235						
EDW2	Edwards Air Fo	78.48	46	P	P	17 44 40.4	+2.0
	baz=236,SNR=6.2						
IKP	In-Ko-Pah, Jac	78.55	49	P	P	17 44 40.8	+1.9
	baz=237						
O02D	Mt. Diablo Mer	78.58	39	P	P	17 44 40.9	+2.0
	baz=231						
ISA	Isabella, Lake	78.60	45	P	P	17 44 41.1	+2.0
	baz=235,SNR=5.3						
ISA	Isabella, Lake	78.60	45	P	P	17 44 40.4	+1.3
ISA				IAmb	IAmb	17 44 41.7	
	comp=Z,7.4nm,0.8s						
CMB	Columbia Colle	78.75	42	P	P	17 44 41.2	+1.5
CMB				IAmb	IAmb	17 44 41.5	
	comp=Z,3.9nm,0.6s						
ORV	Oroville	78.97	41	P	P	17 44 42.3	+1.4
ORV				IAmb	IAmb	17 44 44.5	
	comp=Z,7.8nm,1.3s						
WDC	Whiskeytown Da	78.98	39	P	P	17 44 42.4	+1.6
N02D	Trinity Center	79.13	39	P	P	17 44 43.9	+2.1
	baz=231						
USRK	Ussuriysk Ar.	79.14	325	P	P	17 44 41.7	0.0
	comp=Z,6.0nm,0.9s,baz=90,slow=3.8,SNR=5.4						
USRK	Ussuriysk Ar.	79.14	325	P	P	17 44 43.0	+1.4
O03E	Paynes Creek	79.24	40	P	P	17 44 43.9	+1.5
	baz=232						
M02C	Callahan	79.30	38	P	P	17 44 45.0	+2.3
	baz=231						
CWC	Cottonwood Cre	79.31	45	P	P	17 44 44.4	+1.5
	baz=235						
MDPB	Devils Postpil	79.34	43	P	P	17 44 44.9	+1.7
MDPB				IAmb	IAmb	17 44 45.6	
	comp=Z,4.4nm,0.8s						
GSC	Goldstone, Bar	79.52	46	P	P	17 44 45.9	+1.9
	baz=236						
GSC	Goldstone, Bar	79.52	46	P	P	17 44 45.5	+1.5
GSC				IAmb	IAmb	17 45 08.0	
	comp=Z,10nm,1.5s						
YBH	Yreka Blue Hor	79.60	38	P	P	17 44 45.8	+1.5
YBH				IAmb	IAmb	17 44 47.0	
	comp=Z,8.9nm,1.0s						
MPK	Martis Peak	79.72	42	P	P	17 44 47.0	+1.7
QSM	Queen of Sheba	79.85	46	P	P	17 44 47.5	+1.8
PNTR	Pine Nut	79.87	42	P	P	17 44 47.4	+1.4
PNTR				IAmb	IAmb	17 44 48.5	
	comp=Z,14nm,0.8s						
YERR	Yerington	80.03	42	P	P	17 44 48.5	+1.7
YERR				IAmb	IAmb	17 44 48.7	
	comp=Z,8.6nm,0.6s						
LCH	Last Change Ra	80.05	44	P	P	17 44 48.4	+1.5
LHV	Little Huntoon	80.07	43	P	P	17 44 48.3	+1.5
NJ2	Nanjing	80.27	309	*e*P	P	17 44 49.3	+1.4
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
NVAR	Mina Array Bea	80.31	43	P	P	17 44 49.5	+1.2
	comp=Z,3.1nm,0.6s,baz=222,slow=8.8,SNR=32						
NVAR	Mina Array Bea	80.31	43	P	P	17 44 49.8	+1.5
MDJ	Mudanjiang	80.71	325	P	P	17 44 51.4	+1.4
MDJ				pmax	pmax		
	comp=Z,19nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,97nm,4.7s						
KVN	Kaiserville	80.79	43	P	P	17 44 52.3	+1.5
MOD	Modoc Plateau	81.12	39	P	P	17 44 53.6	+1.2
MOD				IAmb	IAmb	17 44 54.3	
	comp=Z,5.0nm,0.8s						
J05D	Fort Rock, OR	81.42	38	P	P	17 44 55.7	+1.8
	baz=232						
PRN	Pahroc Range	81.86	45	P	P	17 44 57.0	+0.6
PINE	Pine Mountain	81.90	37	P	P	17 44 57.5	+1.0
I05D	Terrebonne, OR	82.01	37	P	P	17 44 59.1	+2.3
	baz=232						
R11A	Troy Canyon, C	82.02	44	P	P	17 44 58.5	+1.3
	baz=237						
R11A	Troy Canyon, C	82.02	44	P	P	17 44 58.0	+0.8
MAW	Mawson	82.09	200	P	P	17 44 57.6	+0.8
	comp=Z,3.6nm,0.9s,baz=69,slow=1.3,SNR=4.4						
BMN	Battle Mountai	82.14	42	P	P	17 44 58.9	+1.2
BMN				IAmb	IAmb	17 45 00.3	
	comp=Z,13nm,1.3s						
TUC	Tucson	82.22	52	P	P	17 45 00.9	+2.7
	baz=240						
TUC	Tucson	82.22	52	P	P	17 44 59.6	+1.4
TUC				IAmb	IAmb	17 45 01.7	
	comp=Z,5.9nm,0.8s						
X16A	Lo Mia Camp, P	82.79	49	P	P	17 45 02.5	+1.2
X16A				IAmb	IAmb	17 45 04.6	
	comp=Z,7.2nm,1.0s						
RSO	Redoubt South	82.80	12	P	P	17 45 01.4	+0.8
LCMT	Little Creek M	82.87	46	P	P	17 45 03.3	+1.7
319A	Douglas	82.88	53	P	P	17 45 03.2	+1.6
319A				IAmb	IAmb	17 45 05.1	
	comp=Z,7.9nm,0.6s						
I07A	Izee	82.90	38	P	P	17 45 03.2	+1.7
I07A				IAmb	IAmb	17 45 03.6	
	comp=Z,5.2nm,0.7s						
CCUT	Cedar City	83.07	46	P	P	17 45 04.2	+1.5
J08A	Circle Bar Ran	83.07	39	P	P	17 45 03.8	+1.4
J08A				IAmb	IAmb	17 45 04.9	
	comp=Z,22nm,1.5s						
D03D	Eldon	83.08	34	P	P	17 45 04.2	+2.1
	baz=230						
KNB	Kanab	83.16	47	P	P	17 45 05.2	+2.1
U15A	North Rim	83.22	47	P	P	17 45 05.3	+1.8
U15A				IAmb	IAmb	17 45 06.2	
	comp=Z,4.9nm,0.6s						
SZCU	Shurtz Canyon	83.28	46	P	P	17 45 05.2	+1.5
ELK	Elko	83.56	42	P	P	17 45 06.1	+1.0
PKCU	Pink Cliffs	83.73	46	P	P	17 45 07.0	+0.9
PKCU				IAmb	IAmb	17 45 09.7	
	comp=Z,7.4nm,0.7s						
G08A	Pilot Rock	83.94	37	P	P	17 45 08.1	+1.4
G08A				IAmb	IAmb	17 45 09.1	
	comp=Z,18nm,1.2s						
SUA	Susitna One	84.11	12	P	P	17 45 06.7	-0.5
	baz=205						
MTPU	Mount Pierson	84.12	46	P	P	17 45 09.3	+1.2
MTPU				IAmb	IAmb	17 45 11.0	
	comp=Z,3.9nm,0.7s						
E07A	Sunnyside	84.20	36	P	P	17 45 09.5	+1.6
MVU	Marysvale	84.34	46	P	P	17 45 10.4	+1.4
L20K	Farewell, AK	84.46	11	P	P	17 45 08.6	-0.2
	baz=202						
M22K	Willow	84.51	13	P	P	17 45 08.7	-0.3
	baz=206						
TTA	Tatalina	84.53	10	P	P	17 45 09.0	-0.2
	baz=200						
KNK	Knik Glacier	84.55	13	P	P	17 45 09.0	-0.3
	baz=207						
PMR	Palmer	84.57	13	P	P	17 45 08.8	-0.5
	baz=206						
BMO	Blue Mountains	84.63	38	P	P	17 45 11.1	+0.9
MFID	Camas Ranch	84.68	40	P	P	17 45 11.6	+1.2
MFID				IAmb	IAmb	17 45 12.8	
	comp=Z,8.2nm,1.2s						
DIV	Divide	84.91	15	P	P	17 45 11.1	0.0
D08A	Wollman Farm,	85.01	36	P	P	17 45 12.8	+1.0
D08A				IAmb	IAmb	17 45 14.3	
	comp=Z,8.6nm,1.0s						
BMRM	Bremner River	85.06	15	P	P	17 45 11.8	0.0
	baz=211						
CUT	Chulitna	85.07	12	P	P	17 45 11.5	-0.2
	baz=205						
SCM	Sheep Creek Mo	85.17	14	P	P	17 45 12.3	-0.1
	baz=208,SNR=5.7						
SCM	Sheep Creek Mo	85.17	14	P	P	17 45 12.4	+0.1
K20K	Telida	85.25	10	P	P	17 45 12.3	-0.3
	baz=202						
F10A	Beach Ranch, E	85.32	37	P	P	17 45 14.5	+1.0
TMUT	Trail Mountain	85.42	45	P	P	17 45 15.5	+1.0
TMUT				IAmb	IAmb	17 45 16.8	
	comp=Z,4.4nm,0.7s						
PLID	Pearl Lake	85.52	39	P	P	17 45 15.7	+1.0
PLID				IAmb	IAmb	17 45 16.8	
	comp=Z,8.3nm,1.3s						
B08A	Colville Reser	85.57	35	P	P	17 45 15.1	+0.6
B08A				IAmb	IAmb	17 45 16.2	
	comp=Z,8.2nm,0.9s						
VRDI	Verde Repeater	85.57	16	P	P	17 45 14.6	+0.1
N25K	Chitina, Valde	85.61	15	P	P	17 45 14.9	+0.3
	baz=211,SNR=8.4						
N25K	Chitina, Valde	85.61	15	P	P	17 45 14.7	+0.2
CAST	Castle Rocks	85.65	11	P	P	17 45 13.3	-1.3
	baz=204,SNR=6.2						
CAST	Castle Rocks	85.65	11	P	P	17 45 13.2	-1.4
LLLB	Lillooet	85.66	32	P	P	17 45 16.0	+1.1
LLLB				IAmb	IAmb	17 45 16.3	
	comp=Z,6.0nm,0.7s						
M24K	Tolsona, Glenn	85.67	14	P	P	17 45 15.4	+0.6
	baz=209						
WAT6	Susitna Watana	85.75	13	P	P	17 45 15.0	-0.3
	baz=208,SNR=7.2						
SRU	San Rafael Swe	85.79	46	P	P	17 45 17.4	+1.3
SRU				IAmb	IAmb	17 45 18.2	
	comp=Z,3.9nm,0.6s						
WAT1	Susitna Watana	85.80	13	P	P	17 45 14.8	-0.5
	baz=207						
CTG	Chitna Glacier	85.90	17	P	P	17 45 16.4	+0.4
	baz=214						
MNTX	Cornudas Mount	85.98	54	P	P	17 45 19.1	+2.1
	baz=244						
MNTX	Cornudas Mount	85.98	54	P	P	17 45 19.1	+2.1
KTH	Kantishna Hill	85.99	11	P	P	17 45 15.2	-1.1
KTH				IAmb	IAmb	17 45 15.8	
	comp=Z,10.0nm,1.0s						
J20K	Nowinta River	86.00	10	P	P	17 45 16.8	+0.5
	baz=202						
J20K	Nowinta River	86.00	10	P	P	17 45 16.6	+0.3
J20K				IAmb	IAmb	17 45 40.0	
	comp=Z,9.8nm,1.4s						
TRF	Thorofare Moun	86.01	12	P	P	17 45 15.9	-0.7
	baz=205,SNR=5.1						
TRF	Thorofare Moun	86.01	12	P	P	17 45 15.7	-0.8
CHUM	Lake Minchumin	86.04	11	P	P	17 45 15.3	-1.1
	baz=204						
TX31	Lajitas Ar. Si	86.27	57	P	P	17 45 20.3	+1.8
TX31				IAmb	IAmb	17 45 21.7	
	comp=Z,7.5nm,0.8s						
TX32	Lajitas Array	86.27	57	P	P	17 45 20.4	+1.9
TXAR	Lajitas Array	86.27	57	P	P	17 45 19.6	+1.1
	comp=Z,2.2nm,0.7s,baz=214,slow=6.5,SNR=13						
MCK	McKinley	86.53	12	P	P	17 45 18.6	-0.3
	baz=207,SNR=8.3						
MCK	McKinley	86.53	12	P	P	17 45 18.5	-0.3
PAX	Paxson	86.59	14	P	P	17 45 18.8	-0.4
	baz=210						
ANMO	Albuquerque	86.64	51	P	P	17 45 22.1	+1.7
	baz=243						
ANMO	Albuquerque	86.64	51	P	P	17 45 22.0	+1.7
M26K	Nabesna, AK	86.69	15	P	P	17 45 20.3	+0.6
	baz=212						
YUK3	Moose Creek	86.81	17	P	P	17 45 20.9	+0.4
	baz=214,SNR=7.3						
HYT	Haines Junctio	86.86	18	P	P	17 45 21.0	+0.3
	baz=217						
M27K	Edge Creek, AK	86.93	16	P	P	17 45 21.6	+0.6
	baz=213,SNR=5.2						
BVCY	Beaver Creek	87.24	16	P	P	17 45 23.0	+0.7
	baz=214						
MCMT	McKenzie Canyo	87.25	40	P	P	17 45 24.0	+1.0
I21K	Tanana	87.29	10	P	P	17 45 22.2	-0.1
	baz=204						
WRH	Wood River Hil	87.36	12	P	P	17 45 22.0	-0.7
MLY	Manley	87.37	11	P	P	17 45 21.9	-0.9
	baz=205						
RIDG	Independent Ri	87.40	14	P	P	17 45 23.1	0.0
	baz=210						
WHY	Whitehorse	87.53	19	P	P	17 45 24.3	+0.5
	baz=219						
L27K	Beaver Creek,	87.53	15	P	P	17 45 23.9	+0.3
	baz=213						
HDA	Harding Lake	87.54	13	P	P	17 45 23.2	-0.3
	baz=208,SNR=5.3						
HDA	Harding Lake	87.54	13	P	P	17 45 23.3	-0.3
HDA				IAmb	IAmb	17 45 23.4	
	comp=Z,6.0nm,0.6s						
H21K	Melozitna Rive	87.59	10	P	P	17 45 23.8	0.0
	baz=203						
S22A	4UR Ranch, Cre	87.67	48	P	P	17 45 27.0	+1.7
	baz=242						
DLMT	Dillon	87.69	40	P	P	17 45 26.4	+1.4
DLMT				IAmb	IAmb	17 45 27.6	
	comp=Z,14nm,1.3s						
I23K	Minto, Yukon-K	87.72	11	P	P	17 45 23.6	-0.8
	baz=206						
MDM	Murphy Dome	87.77	12	P	P	17 45 23.8	-0.9
MDM				IAmb	IAmb	17 45 24.3	
	comp=Z,7.5nm,0.9s						
SCRK	Sand Creek	87.80	14	P	P	17 45 25.6	+0.7
	baz=211						
IL31		87.87	13	P	P	17 45 23.8	-1.3
IL31				IAmb	IAmb	17 45 25.4	
	comp=Z,7.8nm,1.1s						
ILAR	Eielson Array	87.87	13	P	P	17 45 24.3	-0.8
	comp=Z,1.5nm,0.4s,baz=224,slow=4.7,SNR=42						
ILAR				PP	PP	17 48 57.0	-0.3
	comp=Z,2.3nm,1.0s,baz=223,slow=7.4,SNR=6.3						
ILAR	Eielson Array	87.87	13	P	P	17 45 24.2	-1.0
J25K	Salcha River,	88.05	13	P	P	17 45 25.9	-0.2
	baz=210						
POKR	Poker Plat Res	88.07	12	P	P	17 45 25.5	-0.6
	baz=208						
POKR	Poker Plat Res	88.07	12	P	P	17 45 25.2	-0.8
POKR				IAmb	IAmb	17 45 26.0	
	comp=Z,6.9nm,0.8s						
QLMT	Earthquake Lak	88.11	40	P	P	17 45 28.6	+1.6
PDAR	Pinedale Array	88.24	43	P	P	17 45 27.5	-0.2
	comp=Z,0.6nm,0.6s,baz=213,slow=4.6,SNR=3.8						
YHL	Hebgen Lake	88.28	41	P	P	17 45 29.8	+1.9
YHL				IAmb	IAmb	17 45 31.8	
	comp=Z,11nm,1.1s						
SNAA	Sanae	88.28	178	P	P	17 45 27.9	+0.6
YMR	Madison River	88.32	41	P	P	17 45 30.0	+2.0
YMR				IAmb	IAmb	17 45 31.9	
	comp=Z,11nm,1.2s						
J26L	Joseph Creek	88.35	14	P	P	17 45 28.3	+0.8
	baz=212,SNR=7.7						
VNA3	Neumayer Olymp	88.38	176	P	P	17 45 28.8	+1.1
BOZ	Bozeman (W)	88.39	40	P	P	17 45 29.7	+1.5
	baz=239,SNR=5.8						
BOZ	Bozeman (W)	88.39	40	P	P	17 45 29.1	+0.9
BOZ				IAmb	IAmb	17 45 31.5	
	comp=Z,18nm,1.5s						
YHH	Holmes Hill	88.45	41	P	P	17 45 30.5	+1.8
M30M	Minto, Yukon	88.47	17	P	P	17 45 28.6	+0.6
	baz=218,SNR=6.4						
VNA2	Neumayer--Watz	88.83	177	P	P	17 45 30.9	+1.1
	baz=208,slow=3.3						
DAWY	Dawson	88.98	16	P	P	17 45 30.9	+0.5
	baz=215						
VNA1	Neumayer--Stat	89.05	176	P	P	17 45 31.6	+0.8
EGAK	Eagle	89.14	15	P	P	17 45 31.5	+0.4
	baz=214,SNR=6.3						
EGAK	Eagle	89.14	15	P	P	17 45 31.2	+0.2
EGAK				IAmb	IAmb	17 45 32.1	
	comp=Z,12nm,1.0s						
FARO	Faro, Yukon	89.21	19	P	P	17 45 31.7	+0.2
	baz=221						
COLD	Coldfoot	89.46	10	P	P	17 45 32.9	+0.4
	baz=205						
HHC	Hu-ho-hao-te	89.68	314	*e*P	P	17 45 35.5	+1.2
HHC				pmax	pmax		

	comp=Z,12nm,0.8s						
HHC				pmax	pmax		
	comp=Z,100nm,6.6s						
MMPY	**Sheldon Lake,**	**90.15**	**19**	P	**P**	**17 45 36.9**	**+1.1**
	baz=223						
I29M	**Ogilvie Camp,**	**90.31**	**15**	P	**P**	**17 45 36.6**	**+0.1**
	baz=216						
TGTN	**Hyland Airport**	**90.33**	**21**	P	**P**	**17 45 38.1**	**+1.3**
	baz=225						
CMAR	**Chiang Mai Arr**	**90.72**	**289**	P	**P**	**17 45 39.0**	**-0.5**
	comp=Z,1.3nm,0.8s,baz=124,slow=2.7,SNR=9.3						
CMAR	**Chiang Mai Arr**	**90.72**	**289**	P	**P**	**17 45 39.7**	**+0.2**
EGMT	**Eagleton**	**90.73**	**38**	P	**P**	**17 45 39.8**	**+0.9**
	baz=240						
CHTO	**Chiang Mai**	**90.85**	**290**	P	**P**	**17 45 41.5**	**+1.4**
EPYK	**Eagle Plains**	**91.51**	**15**	P	**P**	**17 45 42.5**	**+0.4**
	baz=218						
EPYK	**Eagle Plains**	**91.51**	**15**	P	**P**	**17 45 42.2**	**+0.1**
EPYK				IAmb	IAmb	17 45 43.0	
	comp=Z,7.6nm,0.8s						
RSSD	**Black Hills**	**92.43**	**44**	P	**P**	**17 45 48.2**	**+1.1**
	baz=244						
RSSD	**Black Hills**	**92.43**	**44**	P	**P**	**17 45 47.2**	**+0.1**
RSSD				IAmb	IAmb	17 45 48.9	
	comp=Z,7.5nm,1.1s						
INK	**Inuvik**	**93.80**	**15**	P	**P**	**17 45 52.4**	**-0.1**
	baz=221						
INK	**Inuvik**	**93.80**	**15**	P	**P**	**17 45 52.1**	**-0.4**
MKAR	**Makanchi Array**	**111.54**	**313**	PKiKP	**PKiKP**	**17 51 06.6**	**-1.7**
	comp=Z,0.4nm,0.6s,baz=84,slow=0.7,SNR=4.4						
ARCES	**ARCESS Array B**	**128.77**	**350**	PKP	**PKPdf**	**17 51 40.0**	**-0.6**
	comp=Z,2.7nm,0.7s,baz=26,slow=1.8,SNR=14						
FINES	**FINESS Array B**	**135.70**	**344**	PKP	**PKPdf**	**17 51 54.5**	**+0.7**
	comp=Z,1.4nm,0.8s,baz=72,slow=6.2,SNR=5.6						
BUR08	**Bucovina Ar. S**	**147.15**	**332**		**PKPbc**	**17 52 18.2**	**+0.7**
KSP	**Ksiaz**	**147.62**	**344**	*e*PKPbc	**PKPab**	**17 52 22.2**	**+0.4**
CRVS	**Cervenica-Dubn**	**147.69**	**337**	*e*PKP	**PKPab**	**17 52 23.1**	**+0.9**
OSTC	**Ostas**	**147.91**	**344**	⇑*e*PKP	**PKPbc**	**17 52 19.7**	**+0.4**
OSTC				*e*PKPAB	**PKPab**	**17 52 24.4**	**+1.4**
CHVC	**Chvalec**	**147.92**	**344**	⇑*e*PKP	**PKiKP**	**17 52 20.5**	**-0.5**
CLL	**Collm**	**147.94**	**348**	⇓*i*PKPbc	**PKPbc**	**17 52 19.3**	**-0.1**
	comp=Z,9.0nm,0.7s						
CLL				*i* PKPab	**PKPab**	**17 52 22.6**	**-0.5**
	comp=Z,11nm,1.0s						
CLL				*e*		17 53 57.0	
CLL	**Collm**	**147.94**	**348**		**PKPbc**	**17 52 19.7**	**+0.3**
UPC	**Upice**	**148.00**	**344**	⇑*e*PKP	**PKPbc**	**17 52 20.1**	**+0.5**
DPC	**Dobruska-Polom**	**148.07**	**344**	⇑*e*PKP	**PKPbc**	**17 52 20.2**	**+0.4**
DPC				*e*PKPAB	**PKPab**	**17 52 24.4**	**+0.7**
BRG	**Berggiesshubel**	**148.16**	**347**	*e*PKP	**PKPbc**	**17 52 20.6**	**+0.7**
BRG				Amp		17 52 21.7	
	comp=Z,5.0nm,1.0s						
BRG	**Berggiesshubel**	**148.16**	**347**	P	**PKPab**	**17 52 24.1**	**+0.2**
BRG				Amp		17 52 24.9	
	comp=Z,5.3nm,0.8s						
LANS	**Liptovska Anna**	**148.18**	**339**	*e*PKP	**PKPbc**	**17 52 20.5**	**+0.4**
KRLC	**Kraliky**	**148.19**	**343**	⇑*e*PKP	**PKPbc**	**17 52 20.6**	**+0.5**
MORC	**Moravsky Berou**	**148.24**	**342**	*e*PKP	**PKPbc**	**17 52 20.8**	**+0.5**
MORC				*e*		17 52 24.9	
PVCC	**Panska Ves**	**148.34**	**346**	⇑*e*PKP	**PKiKP**	**17 52 21.1**	**-0.7**
GHAJ	**Ghor Haditha**	**148.59**	**297**		**PKPdf**	**17 52 19.6**	**+2.1**
PRU	**Pruhonice**	**148.85**	**345**	⇑*e*PKP	**PKPbc**	**17 52 22.0**	**+0.3**
PRU				*e*PKPAB	**PKPab**	**17 52 27.2**	**+0.4**
VRAC	**Vranov**	**148.94**	**342**	*e*PKP	**PKiKP**	**17 52 22.6**	**-0.5**
VRAC				*e*		17 52 27.5	
VYHS	**Vyhne**	**148.96**	**339**	*e*PKP	**PKiKP**	**17 52 22.7**	**-0.5**
JAVC	**Velka Javorina**	**149.02**	**341**	*e*PKP	**PKiKP**	**17 52 23.7**	**+0.4**
KRUC	**Moravsky**	**149.22**	**342**	*e*PKP	**PKPbc**	**17 52 23.0**	**+0.4**
KRUC				*e*		17 52 28.3	
MODS	**Modra-Piesok**	**149.57**	**341**	*e*PKP	**PKPbc**	**17 52 23.6**	**0.0**
KHC	**Kasperske Hory**	**149.88**	**346**	⇑*e*PKP	**PKiKP**	**17 52 24.7**	**-0.4**
KHC				*e*PKPAB	**PKPab**	**17 52 31.4**	**+0.3**
CKRC	**Cesky Krumlov**	**149.99**	**345**	⇑*e*PKP	**PKiKP**	**17 52 25.0**	**-0.3**
CKRC				*e*PKPAB	**PKPab**	**17 52 31.9**	**+0.3**
GEC2	**GERESS Array S**	**150.12**	**345**		**PKPbc**	**17 52 25.1**	**+0.1**
GERES	**GERESS Array B**	**150.12**	**345**	PKP	**PKPdf**	**17 52 19.3**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=14,slow=5.2,SNR=2.1						
GERES				PKPbc	**PKPbc**	**17 52 24.9**	**-0.1**
	comp=Z,2.4nm,0.6s,baz=62,slow=3.2,SNR=18						
CONA	**Conrad Observa**	**150.39**	**342**	*i* P	**PKiKP**	**17 52 26.3**	**+0.1**
	comp=Z,5.0nm,0.6s,SNR=5.7						
SOKA	**Soboth**	**151.76**	**342**	*e*P	**PKPbc**	**17 52 28.4**	**-0.4**
	comp=Z,3.0nm,0.9s						
KBA	**Koelnbreinsper**	**151.85**	**345**	*e*P	**PKPbc**	**17 52 29.0**	**-0.1**
	comp=Z,2.2nm,0.5s						
OBKA	**Obir**	**152.06**	**343**	*e*P	**PKPbc**	**17 52 28.9**	**-0.5**
	comp=Z,1.9nm,1.0s						
WTTA	**Wattenberg**	**152.07**	**347**	*e*P	**PKPbc**	**17 52 29.5**	**0.0**
	comp=Z,5.0nm,0.8s						
MOTA	**Moosalm**	**152.10**	**348**	*i* P	**PKPbc**	**17 52 29.7**	**+0.1**
	comp=Z,3.2nm,0.7s						
DIVS	**Divibare**	**152.20**	**333**		**PKPbc**	**17 52 28.8**	**-1.1**
ABTA	**Abfaltersbach**	**152.36**	**346**	*i* P	**PKPbc**	**17 52 29.6**	**-0.6**
	comp=Z,4.2nm,0.6s,SNR=5.7						
ABTA				*e*P	**PKPab**	**17 52 41.8**	**+0.1**
	comp=Z,2.1nm,0.6s						
ZOU	**Zoufplan**	**152.43**	**345**		**PKPab**	**17 52 40.9**	**-1.2**
FETA	**Feichten**	**152.48**	**348**	*e*P	**PKiKP**	**17 52 30.9**	**+0.2**
	comp=Z,3.0nm,1.0s						
STAL	**STALIGIAL**	**152.77**	**345**		**PKPbc**	**17 52 29.9**	**-1.1**

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*NEIC **11** 17:33:49.1±1.9, 29°.64S±0°.04×72°.13W±0°.05, h10^{km}±2^{km}, mb4.3/1, ML4.1(GUC), Error ellipse: s-maj=8.2km s-min=5.6km az=223.0*

*IDC **11** 17:33:49.5±1.6, 29°.70S×72°.05W, h0^{km}, mb4.1/1, mb1 3.8/5, mb1mx3.7/30, mbtmp3.8/5, ML3.7/4, Error ellipse: s-maj=59.2km s-min=31.3km az=112.0*

*GUC **11** 17:33:51.2±0.8, 29°.63S×72°.06W, h24^{km}±17^{km}, ML3.7*

ISC 11 17:33:47.3±1.7**, 29°.62S**±0°.04×**72°.20W**±0°.06**, h3**^{km}±11^{km}**, n51, σ**$1^{s}.46$/61**, 5C-4D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO05	**La Serena**	**0.89**	**110**	⇓*i*P	**Pn**	**17 34 05.7**	**-1.1**
CO05				*i* S	**Sb**	**17 34 15.8**	**-1.9**
CO05				IAML		17 34 18.1	
	comp=E,5µm,0.6s						
CO05	**La Serena**	**0.89**	**110**		**Pb**	**17 34 04.9**	**-0.5**
CO06	**Fray Jorge**	**1.16**	**155**	⇑*i*P	**Pn**	**17 34 10.8**	**+0.3**
CO06				*i* S	**Sg**	**17 34 25.0**	**+0.3**
CO06				IAML		17 34 29.7	
	comp=N,2µm,0.3s						
CO06	**Fray Jorge**	**1.16**	**155**	Pn	**Pb**	**17 34 10.2**	**+0.1**
GO04	**Tololo Observa**	**1.34**	**115**	⇓*i*P	**Pg**	**17 34 13.3**	**+0.3**
GO04				*i* S	**Sn**	**17 34 29.6**	**-2.0**
GO04	**Tololo Observa**	**1.34**	**115**	Pn	**Pg**	**17 34 13.2**	**+0.2**
LCO	**Las Campanas**	**1.45**	**66**	⇓*e*P	**Pg**	**17 34 15.2**	**+0.1**
LCO				*e*S	**Sg**	**17 34 32.8**	**-1.0**
LCO	**Las Campanas**	**1.45**	**66**		**Pb**	**17 34 15.0**	**-0.1**
AC04	**Llanos de Chal**	**1.72**	**35**	⇑*e*P	**Pn**	**17 34 18.9**	**+0.6**
AC04				*i* S	**Sn**	**17 34 39.4**	**-1.4**
AC04				IAML		17 34 58.2	
	comp=N,696nm,0.4s						
AC04	**Llanos de Chal**	**1.72**	**35**		**Pn**	**17 34 18.7**	**+0.5**
VA06	**Catapilco**	**3.03**	**165**	⇑*i*P	**Pn**	**17 34 37.6**	**+1.4**
VA06				*e*S	**Sn**	**17 35 09.9**	**-3.2**
VA06				IAML		17 35 37.2	
	comp=N,432nm,0.3s						
VA01	**Torpederas**	**3.43**	**172**		**Pn**	**17 34 41.7**	**0.0**
VA03	**San Esteban**	**3.44**	**156**	*e*P	**Pn**	**17 34 45.0**	**+3.0**
VA03				*i* S	**Sn**	**17 35 23.5**	**+0.2**
VA03	**San Esteban**	**3.44**	**156**	Pn	**Pn**	**17 34 44.0**	**+2.1**
ROCH	**El Roble**	**3.50**	**163**	⇑*i*P	**Pn**	**17 34 44.4**	**+1.6**
ROCH				*i* S	**Sn**	**17 35 23.8**	**-1.0**
ROCH				IAML		17 35 52.4	
	comp=N,309nm,0.4s						
ZON	**Zonda**	**3.59**	**123**	Pn	**Pn**	**17 34 46.1**	**+2.1**
MT02	**Curacav**	**3.74**	**166**	Pn	**Pn**	**17 34 47.3**	**+1.3**
PEL	**Peldehue**	**3.75**	**160**	⇑*e*P	**Pn**	**17 34 48.1**	**+2.0**
PEL				*e*S	**Sn**	**17 35 30.4**	**-0.4**
PEL	**Peldehue**	**3.75**	**160**	Pn	**Pn**	**17 34 46.6**	**+0.5**
AC02	**Maricunga**	**3.88**	**45**		**Pn**	**17 34 49.0**	**+0.6**
MT05	**Renca**	**3.96**	**162**		**Pn**	**17 34 49.1**	**0.0**
VA05	**Santo Domingo**	**4.06**	**173**	Pn	**Pn**	**17 34 51.8**	**+1.5**
MT09	**Talagante**	**4.27**	**166**	⇓*i*P	**Pn**	**17 34 55.6**	**+2.1**
MT09				*e*S	**Sn**	**17 35 42.2**	**-1.6**
MT09	**Talagante**	**4.27**	**166**	Pn	**Pn**	**17 34 54.8**	**+1.4**
MT01	**Popeta**	**4.31**	**169**	Pn	**Pn**	**17 34 54.9**	**+1.1**
BO04	**La Punta**	**4.56**	**163**	*e*P	**Pn**	**17 34 59.4**	**+2.1**
BO01	**Tunca**	**4.85**	**169**	*e*P	**Pn**	**17 35 02.8**	**+1.5**
BO01	**Tunca**	**4.85**	**169**	Pn	**Pn**	**17 35 01.9**	**+0.6**
PB14	**IPOC Station P**	**5.22**	**18**		**Pn**	**17 35 05.3**	**-1.4**
BO02	**Sierra Bellavi**	**5.30**	**167**	Pn	**Pn**	**17 35 08.2**	**+0.8**
GO05	**Huala**	**5.38**	**178**	Pn	**Pn**	**17 35 08.4**	**-0.2**
H03N1	**Juan Fernandez**	**6.88**	**235**	Pn	**Pn**	**17 35 30.6**	**+1.8**
	baz=110,slow=17,SNR=46						
H03N1				T	T	17 43 20.9	
	baz=65,slow=71,SNR=193						
H03N2	**Juan Fernandez**	**6.89**	**235**	Pn	**Pn**	**17 35 31.0**	**+2.0**
	baz=110,slow=17,SNR=38						
H03N2				T	T	17 43 10.9	
	baz=65,slow=71,SNR=229						
H03N3	**Juan Fernandez**	**6.89**	**235**	Pn	**Pn**	**17 35 29.7**	**+0.5**
	baz=110,slow=17,SNR=41						
H03N3				T	T	17 43 12.6	
	baz=65,slow=71,SNR=263						
VA04	**Juan Fernndez**	**6.93**	**233**	Pn	**Pn**	**17 35 30.9**	**+1.1**
H03S3	**Juan Fernandez**	**7.09**	**232**	Pn	**Pn**	**17 35 31.3**	**-0.4**
	baz=242,slow=74,SNR=10						
H03S1	**Juan Fernandez**	**7.09**	**232**	Pn	**Pn**	**17 35 31.1**	**-0.7**
	baz=242,slow=74,SNR=8.0						
H03S2	**Juan Fernandez**	**7.10**	**232**	Pn	**Pn**	**17 35 32.0**	**+0.1**
	baz=242,slow=74,SNR=12						
LVC	**Limon Verde**	**7.58**	**24**	Pn	**Pn**	**17 35 40.6**	**+1.5**
	comp=N,0.8nm,0.3s,baz=169,slow=10,SNR=1.7						
LVC				Sn	**Sn**	**17 37 04.3**	**-1.4**
	comp=N,0.5nm,0.3s,baz=108,slow=19,SNR=1.8						
PB07	**IPOC Station P**	**8.13**	**15**	Pn	**Pn**	**17 35 43.6**	**-2.9**
PB09	**IPOC Station P**	**8.23**	**20**	Pn	Pn	17 35 43.9	-4.1
PB01	**IPOC Station P**	**8.88**	**17**	Pn	**Pn**	**17 35 54.7**	**-2.0**
LC01	**Cunco**	**9.26**	**178**	Pn	**Pn**	**17 36 01.5**	**-0.3**
PLCA	**Paso Flores**	**11.17**	**174**	Pn	**Pn**	**17 36 29.0**	**+1.0**
	comp=N,0.2nm,0.3s,baz=17,slow=14,SNR=4.7						
PLCA	**Paso Flores**	**11.17**	**174**	Pn	**Pn**	**17 36 26.6**	**-1.5**
CPUP	**Villa Florida**	**13.55**	**80**	Pn	**Pn**	**17 37 01.9**	**+1.4**
	comp=N,0.0nm,0.3s,baz=113,slow=6.2,SNR=1.2						
SIV	**San Ignacio**	**16.99**	**39**	Pn	**P**	**17 37 48.3**	**+0.2**
	comp=N,0.4nm,0.3s,baz=216,slow=13,SNR=5.7						
SNAA	**Sanae**	**55.70**	**159**	P	**P**	**17 43 22.9**	**-1.8**
SNAA				IAmb	IAmb	17 43 28.9	
	comp=Z,3.5nm,1.1s						
TORD	**Torodi Ar. Bea**	**82.87**	**71**	P	**P**	**17 46 15.7**	**+2.0**
	comp=Z,1.4nm,0.8s,baz=256,slow=4.8,SNR=6.6						
WRA	**Warramunga Arr**	**124.48**	**211**	PKP	**PKiKP**	**17 52 50.4**	**+1.3**
	comp=Z,0.4nm,0.8s,baz=169,slow=1.4,SNR=1.8						
ZALV	**Zalesovo Beam**	**150.51**	**28**	PKPbc	**PKiKP**	**17 53 43.2**	**+2.4**
	comp=Z,3.7nm,0.6s,baz=304,slow=3.5,SNR=16						

DJA 11 17:46:12.4±1.6**, 10°S**±5°×**11°4E**±°**, h10**^{km}±12^{km}**, M3.8**/16**, mb4.2**/6**, mB4.7**/1**, MLv3.6**/16**, Mw(mB)3.9**/1**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAGI	**Jajag, Banyuwa**	**1.18**	**24**	P	Pb	17 46 34.3	-0.7
GMJI	**Gumukmas**	**1.30**	**350**	P	Pn	17 46 36.0	-0.6
GMJI				S	Sb	17 46 52.2	-1.4
IGBI	**Denpasar**	**1.63**	**63**	P	Pn	17 46 40.9	-0.3
DNP	**Denpasar**	**1.76**	**60**	P	Pn	17 46 43.0	+0.1
BLJI	**Banyuglugur**	**1.81**	**358**	P	Pn	17 46 43.9	+0.3
ABJI	**Asem Bagus**	**1.84**	**18**	P	Pn	17 46 44.3	+0.2
SRBI	**Singaraja**	**2.12**	**46**	P	Pn	17 46 48.3	+0.5
PWJI	**Pagerwojo**	**2.40**	**309**	P	Pn	17 46 51.7	0.0
KMMI	**Kalianget**	**2.51**	**7**	P	Pn	17 46 53.9	+0.6
PCJI	**Pacitan**	**2.81**	**299**	P	Pn	17 46 57.6	+0.2
TWSI	**Taliwang, Sumb**	**3.27**	**76**	P	Pn	17 47 03.9	+0.1
UGM	**Wanagama**	**3.52**	**298**	P	Pn	17 47 07.3	+0.1
PLAI	**Plampang**	**4.12**	**80**	P	Pn	17 47 15.4	-0.1
CMJI	**Cimerak**	**5.46**	**288**	P	Pn	17 47 33.8	0.0
	0.1nm33nm,1.1s						
WBSI	**Waikabubak, Su**	**5.64**	**91**	P	Pn	17 47 36.1	-0.3
	0.1nm20nm,0.9s						
CNJI	**Cibinong**	**6.85**	**289**	P	Pn	17 47 52.7	-0.2
	0.2nm50nm,1.3s						
BSSI	**Bau Bau, Buton**	**7.56**	**64**	P	Pn	17 48 03.0	+0.2
	0.0nm8.5nm,1.2s						
CGJI	**Cibinong**	**8.42**	**290**	P	Pn	17 48 14.3	-0.3
	21nm,1.6s						
BATI	**Baumata**	**9.87**	**95**	P	Pn	17 48 34.0	-0.5
	8.2nm,1.0s						
SOEI	**Soe**	**10.45**	**92**	P	Pn	17 48 42.1	-0.4

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*IDC **11** 17:47:28.2±0.8, 18°.06S×176°.44W, h0^{km}, mb4.3/16, mb1 4.4/18, mb1mx4.3/36, mbtmp4.2/18, ML4.1/2, MS4.2/30, Ms1 4.2/30, ms1mx4.0/49, Error ellipse: s-maj=29.3km s-min=17.2km az=150.0*

*NEIC **11** 17:47:30.9±1.1, 18°.3S±0°.1×176°.6W±0°.1, h10^{km}±1^{km}, mb4.7/32, Error ellipse: s-maj=23.8km s-min=18.3km az=174.0*

*GCMT **11** 17:47:33.9±0.3, 18°.11S±0°.02×176°.24W±0°.01, h19^{km}±1^{km}, MW5.0/95, Moment Tensor Solution. s36,c43; s95,c139; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.14±.13; M$_{\theta\theta}$-1.93±.13; M$_{\phi\phi}$2.07±.11; M$_{r\theta}$-0.85±.28; M$_{\theta\phi}$3.13±.10; M$_{\phi r}$1.21±.26; Best double couple: M$_0$3.99700×10^{16} NP1:φ$_s$72.00000°,δ70.00000°,λ-7.00000°. NP2: φ$_s$165.00000°,δ84.00000°,λ-160.00000°. Principal axes: T 3.8960, Plg10.0000°, Azm297.0000°; N 0.1970, Plg69.0000°, Azm181.0000°; P -4.0970, Plg19.0000°, Azm30.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 11 17:47:33.3±0.4**, 18°.23S**±0°.09×**176°.46W**±0°.07**, h35**^{km}**, n143, σ**$1^{s}.46$/122**, mb4.7**/31**, MS4.2**/29**, 1C-5D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.25**	**275**	Pn	**Pn**	**17 48 49.2**	**-0.2**
	0.7nm,0.3s,baz=111,slow=13,SNR=10						
MSVF				LR	LR	17 50 34.9	
	comp=Z,5µm,21.1s,baz=112,slow=36						
MSVF	**Nonsavu**	**5.25**	**275**	Pn	**Pn**	**17 48 46.8**	**-2.6**
AFI	**Afiamalu**	**6.22**	**47**	Pn	Pn	17 48 56.2	-6.7
	4.9nm,0.3s,baz=58,slow=12,SNR=5.0						
RAO	**Raoul Island**	**11.05**	**187**	LR	LR	17 53 54.0	
	comp=Z,2µm,19.8s,baz=17,slow=34						
LIFNC	**LIFOU**	**15.57**	**258**	Pn	**Pn**	**17 51 08.6**	**-1.8**
PINNC	**Pines Island,**	**15.70**	**251**	Pn	**Pn**	**17 51 07.2**	**-4.8**
PINNC				IAmb	IAmb	17 51 32.5	
	comp=Z,46nm,1.2s						
SANVU	**Saraoutou**	**15.88**	**278**	Pn	**Pn**	**17 51 11.3**	**-3.0**
SANVU				IAmb	IAmb	17 51 21.7	
	comp=Z,102nm,1.3s						
RAR	**Rarotonga**	**15.99**	**103**	LR	LR	17 55 55.9	
	comp=Z,540nm,20.7s,baz=298,slow=32						
RAR	**Rarotonga**	**15.99**	**103**	Pn	**Pn**	**17 51 12.2**	**-3.5**
KNTN	**Kanton**	**16.05**	**17**	Pn	**Pn**	**17 51 12.3**	**-4.2**
KNTN				IAmb	IAmb	17 51 39.0	
	comp=Z,74nm,1.2s						
OUENC	**Ouen Island, N**	**16.20**	**252**		**Pn**	**17 51 13.6**	**-4.8**
DZM	**Mont Dzumac**	**16.50**	**254**	Pn	**Pn**	**17 51 23.1**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=108,slow=16,SNR=2.0						
DZM				LR	LR	17 56 24.6	
	comp=Z,834nm,18.1s,baz=86,slow=32						
DZM	**Mont Dzumac**	**16.50**	**254**	*e*P	**P**	**17 51 28.0**	**+3.4**
	comp=Z,78nm,1.6s						
DZM				*e*LR	LR	17 55 26.6	
	comp=Z,551nm,23.6s						
DZM	**Mont Dzumac**	**16.50**	**254**	P	**Pn**	**17 51 19.4**	**-2.9**
ONTNC	**Ouen Toro**	**16.53**	**253**	Pn	**Pn**	**17 51 20.0**	**-2.6**
ONTNC				IAmb	IAmb	17 51 35.9	
	comp=Z,39nm,1.1s						
URZ	**Urewera**	**20.73**	**194**	LR	LR	17 59 46.7	
	comp=Z,1µm,19.0s,baz=31,slow=35						
HNR	**Honiara**	**24.50**	**288**	P	**P**	**17 52 49.2**	**-0.3**
	comp=Z,5.4nm,0.3s,baz=204,slow=6.0,SNR=1.1						
HNR				LR	LR	18 00 56.9	
	comp=Z,590nm,18.8s,baz=108,slow=33						
HNR	**Honiara**	**24.50**	**288**	P	**P**	**17 52 48.1**	**-1.5**
HNR				IAmb	IAmb	17 52 54.9	
	comp=Z,47nm,1.2s						
PAE	**Paea**	**25.57**	**93**	*e*T	T	18 18 54.8	
	comp=Z,4.6nm,0.2s						
PPT2	**Papeete2**	**25.58**	**93**	*e*LQ	LQ	17 58 00.8	
	comp=Z,2µm,26.2s						
PPT2				*e*LR	LR	17 59 04.4	
	comp=Z,1µm,27.5s						
PPT2	**Papeete2**	**25.58**	**93**	*e*T	T	18 18 56.3	
	comp=Z,5.9nm,0.3s						
PPT	**Papeete**	**25.59**	**93**	LR	LR	18 00 20.1	
	comp=Z,334nm,21.2s,baz=258,slow=30						
TBI	**Tubuai**	**25.73**	**106**	*e*LQ	LQ	17 58 12.4	
	comp=Z,737nm,27.0s						
TBI				*e*LR	LR	17 59 22.4	
	comp=Z,2µm,29.0s						
CTA	**Charters Tower**	**35.22**	**261**	LR	LR	18 07 22.8	
	comp=Z,473nm,21.6s,baz=78,slow=34						
CTAO	**Charters Tower**	**35.22**	**261**	P	**P**	**17 54 24.1**	**-0.5**
CTAO				IAmb	IAmb	17 54 40.4	
	comp=Z,22nm,1.1s						
PMG	**Port Moresby**	**36.34**	**279**	LR	LR	18 08 07.8	
	comp=Z,679nm,18.2s,baz=98,slow=34						
TAOE	**Nuku Hiva Isla**	**36.45**	**80**	*e*T	T	18 32 01.0	
	comp=Z,25nm,0.3s						
STKA	**Stephens Creek**	**40.11**	**242**	P	**P**	**17 55 07.5**	**+1.6**
	comp=Z,4.2nm,1.1s,baz=299,slow=6.7,SNR=3.9						
STKA				LR	LR	18 10 11.2	
	comp=Z,238nm,18.5s,baz=60,slow=34						
STKA	**Stephens Creek**	**40.11**	**242**	P	**P**	**17 55 07.2**	**+1.3**
JAY	**Jayapura**	**44.78**	**285**	LR	LR	18 14 28.0	
	comp=Z,180nm,18.7s,baz=84,slow=36						
WB0	**Warramunga Arr**	**46.37**	**260**	P	**P**	**17 55 55.8**	**-0.8**
WB0				IAmb	IAmb	17 55 56.7	
	comp=Z,12nm,1.2s						
WB2	**Warramunga Arr**	**46.38**	**260**	P	**P**	**17 55 55.2**	**-1.5**
WB2				IAmb	IAmb	17 55 57.0	
	comp=Z,10nm,1.2s						
WRA	**Warramunga Arr**	**46.40**	**260**	P	**P**	**17 55 56.3**	**-0.5**
	comp=Z,3.4nm,1.0s,baz=94,slow=6.9,SNR=13						
WRA				LR	LR	18 15 12.3	
	comp=Z,230nm,18.6s,baz=90,slow=36						
WRA	**Warramunga Arr**	**46.40**	**260**	P	**P**	**17 55 55.6**	**-1.2**
AS31	**Alice Springs**	**46.49**	**254**	P	**P**	**17 55 57.0**	**-0.5**
ASAR	**Alice Springs**	**46.49**	**254**	P	**P**	**17 55 57.4**	**-0.2**
	comp=Z,3.3nm,0.6s,baz=92,slow=8.2,SNR=68						
ASAR				PcP	**PcP**	**17 57 31.3**	**-0.5**
	comp=Z,1.3nm,0.9s,baz=96,slow=5.0,SNR=1.2						
ASAR				LR	LR	18 14 21.0	
	comp=Z,213nm,21.4s,baz=99,slow=35						
ASAR	**Alice Springs**	**46.49**	**254**	P	**P**	**17 55 56.1**	**-1.5**
GUMO	**Guam**	**49.54**	**307**	LR	LR	18 15 23.1	
	comp=Z,119nm,20.7s,baz=134,slow=34						
SIJI	**Sorong**	**54.11**	**283**	P	**P**	**17 56 54.6**	**-0.7**
	comp=Z,14nm,1.0s,baz=85,slow=6.8,SNR=9.7						
SWI	**Sorong**	**54.12**	**283**	P	**P**	**17 56 55.9**	**+0.6**
LBMI	**Labuha**	**57.70**	**281**	P	**P**	**17 57 20.9**	**-0.1**
TNTI	**Ternate**	**58.34**	**283**	P	**P**	**17 57 26.3**	**+0.8**
TNTI	**Ternate**	**58.34**	**283**	P	**P**	**17 57 26.1**	**+0.6**
VNDA	**Vanda**	**60.29**	**185**	P	**P**	**17 57 39.1**	**+1.1**
	comp=Z,1.3nm,0.9s,baz=28,slow=7.0,SNR=4.5						
VNDA				LR	LR	18 21 12.9	
	comp=Z,48nm,18.8s,baz=36,slow=34						
VNDA	**Vanda**	**60.29**	**185**	P	**P**	**17 57 38.7**	**+0.7**
VNDA				IAmb	IAmb	17 58 01.1	
	comp=Z,4.7nm,1.1s						
MJAR	**Matsushiro Arr**	**69.28**	**322**	P	**P**	**17 58 36.9**	**-0.2**
	comp=Z,5.6nm,1.0s,baz=157,slow=6.3,SNR=5.8						
MJAR	**Matsushiro Arr**	**69.28**	**322**	P	**P**	**17 58 38.3**	**+1.2**
MJAR				IAmb	IAmb	17 58 45.2	
	comp=Z,6.8nm,1.2s						
MAJO	**Matsushiro**	**69.28**	**322**	P	**P**	**17 58 37.9**	**+0.8**
MAT	**Matsushiro**	**69.28**	**322**	P	**P**	**17 58 37.2**	**+0.1**
QSPA	**South Pole Qui**	**71.83**	**180**	P	**P**	**17 58 53.6**	**+1.2**
PETK	**Petropavlovsk-**	**74.47**	**344**	P	**P**	**17 59 06.9**	**-1.0**
	comp=Z,1.2nm,0.7s,baz=171,slow=10,SNR=1.3						
YSS	**Yuzh-Sakhalins**	**74.55**	**332**	P	**P**	**17 59 09.1**	**+0.7**
YSS				IAmb	IAmb	17 59 13.7	
	comp=Z,16nm,1.2s						
LEM	**Lembang**	**74.56**	**268**	P	**P**	**17 59 10.3**	**+0.9**
	comp=Z,9.8nm,0.4s,baz=319,slow=24,SNR=2.4						
YBH	**Yreka Blue Hor**	**77.62**	**38**	LR	LR	18 24 52.4	
	comp=Z,301nm,21.6s,baz=268,slow=29						
USRK	**Ussuriysk Ar.**	**77.93**	**325**	LR	LR	18 28 09.4	
	comp=Z,96nm,20.6s,baz=335,slow=31						
NVAR	**Mina Array Bea**	**78.38**	**43**	P	**P**	**17 59 30.0**	**-0.7**
	comp=Z,0.9nm,1.0s,baz=236,slow=9.9,SNR=5.1						
NVAR				LR	LR	18 26 46.7	
	comp=Z,263nm,19.9s,baz=253,slow=30						
NVAR	**Mina Array Bea**	**78.38**	**43**	P	**P**	**17 59 30.9**	**+0.2**
NV11	**Mina Array Sit**	**78.48**	**43**	P	**P**	**17 59 32.8**	**+1.7**
SHPR	**Sheep Range**	**79.42**	**46**	P	**P**	**17 59 37.7**	**+1.3**
NJ2	**Nanjing**	**79.58**	**309**	*e*P	**P**	**17 59 39.1**	**+2.1**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
WVOR	**Wild Horse Val**	**80.46**	**39**	P	**P**	**17 59 42.7**	**+0.9**
WVOR				IAmb	IAmb	17 59 55.4	
	comp=Z,4.5nm,0.6s						
HLID	**Hailey**	**83.67**	**40**	P	**P**	**17 59 59.6**	**+1.0**
HLID				IAmb	IAmb	18 00 05.9	
	comp=Z,4.3nm,1.2s						
MAW	**Mawson**	**84.18**	**199**	LR	LR	18 35 48.3	
	comp=Z,215nm,18.4s,baz=80,slow=34						
SEY	**Seymchan**	**84.51**	**346**	P	**P**	**18 00 01.9**	**-0.3**
	comp=Z,8.3nm,1.1s,baz=35,slow=23,SNR=4.5						
TXAR	**Lajitas Array**	**84.61**	**57**	P	**P**	**18 00 04.2**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=260,slow=5.4,SNR=2.4						
TXAR				LR	LR	18 30 30.4	
	comp=Z,93nm,21.0s,baz=0.0,slow=31						
WRH	**Wood River Hil**	**85.29**	**12**	P	**P**	**18 00 07.0**	**+0.9**
DLBC	**Dease Lake**	**85.41**	**22**	LR	LR	18 30 16.1	
	comp=Z,208nm,19.5s,baz=258,slow=30						
MDM	**Murphy Dome**	**85.70**	**12**	P	**P**	**18 00 09.6**	**+1.4**
MDM				IAmb	IAmb	18 00 18.6	
	comp=Z,14nm,1.3s						
IL31		**85.79**	**12**	P	**P**	**18 00 09.6**	**+1.0**
IL31				IAmb	IAmb	18 00 12.3	
	comp=Z,14nm,1.4s						
ILAR	**Eielson Array**	**85.79**	**12**	P	**P**	**18 00 07.4**	**-1.2**
	comp=Z,5.5nm,1.2s,baz=218,slow=6.0,SNR=12						
ILAR				LR	LR	18 29 57.6	
	comp=Z,129nm,21.5s,baz=232,slow=30						
ILAR	**Eielson Array**	**85.79**	**12**	P	**P**	**18 00 10.0**	**+1.4**
ENH	**Enshi**	**85.99**	**304**	P	**P**	**18 00 11.7**	**+1.2**
PDAR	**Pinedale Array**	**86.32**	**43**	P	**P**	**18 00 12.1**	**0.0**
	comp=Z,0.2nm,0.3s,baz=299,slow=4.0,SNR=1.7						
PDAR				LR	LR	18 33 44.7	
	comp=Z,143nm,18.0s,baz=240,slow=32						
YHL	**Hebgen Lake**	**86.32**	**40**	P	**P**	**18 00 13.7**	**+1.6**
XAN	**Xi'an**	**87.93**	**307**	P	**P**	**18 00 21.1**	**+1.3**
XAN				pP	PcP	18 00 23.8	+2.2
XAN				pmax	pmax		
	comp=Z,14nm,1.0s						
EGMT	**Eagleton**	**88.75**	**38**	P	**P**	**18 00 25.0**	**+1.6**
HHC	**Hu-ho-hao-te**	**88.82**	**314**	*e*P	**P**	**18 00 25.6**	**+1.6**
HHC				pmax	pmax		
	comp=Z,15nm,0.8s						
HHC				pmax	pmax		
	comp=Z,83nm,6.6s						
SYO	**Syowa Base**	**89.25**	**192**	⇓*e*X	**P**	**18 00 22.6**	**-2.8**
KMI	**Kunming**	**89.63**	**297**	⇑P	**P**	**18 00 31.1**	**+2.8**
KMI				pmax	pmax		
	comp=Z,3.0nm,1.3s						
SNAA	**Sanae**	**90.22**	**178**	P	**P**	**18 00 30.5**	**+0.5**
SNAA	**Sanae**	**90.22**	**178**	P	**P**	**18 00 30.2**	**+0.2**
SNAA				IAmb	IAmb	18 00 36.0	
	comp=Z,4.6nm,1.1s						
VNA3	**Neumayer Olymp**	**90.29**	**176**	P	**P**	**18 00 30.8**	**+0.5**
CMAR	**Chiang Mai Arr**	**90.74**	**289**	P	**P**	**18 00 33.7**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=123,slow=3.3,SNR=1.7						
CMAR				LR	LR	18 40 47.0	
	comp=Z,44nm,18.8s,baz=154,slow=35						
VNA2	**Neumayer--Watz**	**90.75**	**176**	P	**P**	**18 00 31.3**	**-1.2**
	baz=193,slow=3.2						
VNA1	**Neumayer--Stat**	**90.97**	**176**	P	**P**	**18 00 34.2**	**+0.9**
LZH	**Lanzhou**	**92.56**	**307**	*e*P	**P**	**18 00 44.9**	**+3.4**
LZH				sP	pP	18 00 48.9	-3.0
LZH				pmax	pmax		
	comp=Z,16nm,1.0s						
LZH				LR	LR		
	comp=N,340nm,12.7s						
LZH				LR	LR		
	comp=E,430nm,15.5s						
LZH				LR	LR		
	comp=Z,360nm,17.6s						
YKA	**Yellowknife Ar**	**93.86**	**24**	LR	LR	18 38 49.2	
	comp=Z,78nm,18.1s,baz=0.0,slow=33						
JTS	**Las Juntas de**	**94.58**	**81**	LR	LR	18 33 28.7	
	comp=Z,66nm,20.4s,baz=295,slow=29						
SONM	**Songino Array**	**95.01**	**319**	P	**P**	**18 00 52.1**	**-0.4**
	comp=Z,0.2nm,0.6s,baz=131,slow=5.9,SNR=1.3						
NNA	**Nana**	**95.23**	**104**	LR	LR	18 34 34.3	
	comp=Z,73nm,19.9s,baz=201,slow=30						
ATAH	**Atahualpa**	**95.39**	**99**	LR	LR	18 36 42.1	
	comp=Z,105nm,19.6s,baz=268,slow=31						
GTA	**Gaotai**	**96.67**	**309**	*e*P	**P**	**18 01 00.1**	**-0.2**
GTA				pP	PcP	18 01 04.2	+3.8
GTA				sP	pP	18 01 07.6	-3.0
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						

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ULM    Lac du Bonnet      97.97  40  LR        LR       18 39 34.7
              comp=Z,220nm,19.6s,baz=284,slow=32
LVC    Limon Verde        98.39 117  LR        LR       18 38 16.1
              comp=Z,387nm,18.3s,baz=210,slow=31
FINES  FINESS Array B    133.99 345  PKP       PKPdf    18 06 46.8 +0.3
              comp=Z,1.8nm,0.8s,baz=5.7,slow=1.4,SNR=3.7
AKASG  Malin Array Be    141.69 334  PKhKP     PKPpre   18 06 57.7
              comp=Z,0.1nm,0.3s,baz=37,slow=2.3,SNR=1.9
BNN    Bunyan            145.23 313            PKPbc    18 07 06.3 -1.2
OJC    Ojcow             145.53 341  ePKP      PKiKP    18 07 11.6 -0.1
OJC    Ojcow             145.53 341            PKPab    18 07 08.1 -0.1
LODK   Lodwar            145.55 248            PKPab    18 07 10.4 +1.0
BUR08  Bucovina Ar. S    145.73 334            PKPdf    18 07 08.0 -0.3
BURAR  Bucovina Array    145.74 334            PKPdf    18 07 06.9 -1.4
KSP    Ksiaz             145.91 346  ePKP      PKPab    18 07 10.8 +1.3
NIE    Niedzica          146.08 340  ePKP      PKPab    18 07 11.2 +0.9
CRVS   Cervenica-Dubn    146.13 339  ePKP      PKiKP    18 07 13.4 +0.3
CLL    Collm             146.15 349  ePKPbc    PKPab    18 07 10.0 -0.4
              comp=Z,14nm,1.5s
CLL                                  i pPKPdf  PKiKP    18 07 13.0  0.0
              comp=Z,18nm,1.1s
CLL                                  ePP       PP       18 10 34.0 +2.9
CLL                                  ePPPP              18 15 48.0
CHVC   Chvalec           146.20 346  ePKP      PKPdf    18 07 08.3 -0.6
CHVC                                 ePKP      PKPbc    18 07 09.0 -1.0
BRTR   Keskin Array B    146.31 316  PKPbc     PKPab    18 07 11.1 -0.6
              comp=Z,9.6nm,1.0s,baz=133,slow=2.2,SNR=7.7
BRTR   Keskin Array B    146.31 316            PKPdf    18 07 09.5 -0.1
DPC    Dobruska-Polom    146.36 345  ePKP      PKPab    18 07 11.5 +0.2
BRG    Berggiesshubel    146.39 348  ePKP      PKPab    18 07 11.4  0.0
BRG                                   Amp               18 07 16.3
              comp=Z,16nm,1.2s
BRG    Berggiesshubel    146.39 348   P        PKiKP    18 07 26.3  +13
BRG                                   Amp               18 07 28.4
              comp=Z,13nm,1.3s
BRG                                  er                 18 15 17.2
MORC   Moravsky Berou    146.57 343  ePKP      PKPbc    18 07 11.3 +0.2
MLR    Muntele Rosu      147.04 330            PKPbc    18 07 12.0 -0.7
PRU    Pruhonice         147.11 347  ePKP      PKiKP    18 07 17.2 +2.2
PRU                                  ex        x        18 07 21.6
VRAC   Vranov            147.25 344  ePKP      PKiKP    18 07 16.9 +1.5
JAVC   Velka Javorina    147.37 343  ePKP      PKiKP    18 07 17.7 +2.0
MDUB   Mudurnu           147.48 319            PKPbc    18 07 13.9 -0.2
KRUC   Moravsky          147.53 344  ePKP      PKiKP    18 07 17.3 +1.4
BCLA   Clavier           147.85 358  dPKP      PKPbc    18 07 14.1 -0.5
MODS   Modra-Piesok      147.92 343  ePKP      PKiKP    18 07 16.7 -0.1
BMRD   Maredsous         147.99 359  dPKP      PKPbc    18 07 15.2 +0.3
RCHB   Rochefort         148.12 358  dPKP      PKPbc    18 07 15.3  0.0
KHC    Kasperske Hory    148.12 347  ePKP      PKiKP    18 07 16.1 -1.1
KHC                                  epPKP     PKPab    18 07 19.7 +1.4
CKRC   Cesky Krumlov     148.26 346  ePKP      PKiKP    18 07 16.6 -0.9
GERES  GERESS Array B    148.37 347   PKPbc    PKPbc    18 07 15.8 -0.3
              comp=Z,5.2nm,1.0s,baz=29,slow=3.0,SNR=12
GERES  GERESS Array B    148.37 347            PKPbc    18 07 15.5 -0.7
WLF    Walferdange       148.57 357  dPKP      PKPbc    18 07 16.3 -0.2
WLF    Walferdange       148.57 357            PKPdf    18 07 12.8  0.0
CONA   Conrad Observa    148.71 344  eP        PKiKP    18 07 17.7 -0.8
              comp=Z,10nm,1.1s
ARSA   Arzberg           149.43 344  eP        PKPbc    18 07 16.5 -2.3
              comp=Z,0.7nm,0.6s
SOKA   Soboth            150.09 344  eP        PKiKP    18 07 21.0 -0.4
              comp=Z,5.8nm,1.1s
KBA    Koelnbreinsper    150.12 346  eP        PKPdf    18 07 16.3 +0.6
              comp=Z,1.9nm,1.0s
RETA   Reutte            150.22 350  eP        PKiKP    18 07 21.6  0.0
              comp=Z,5.9nm,1.2s
WATA   Walderalm         150.23 349  eP        PKiKP    18 07 21.4 -0.3
              comp=Z,6.9nm,0.8s
ALN    Alexandroupoli    150.27 324            PKPbc    18 07 20.0 -1.0
MOTA   Moosalm           150.30 350  eP        PKiKP    18 07 21.8 -0.1
              comp=Z,10nm,1.1s
SQTA   Sankt Quirin      150.41 349  eP        PKPbc    18 07 21.2 -0.1
              comp=Z,7.1nm,1.1s
VTS    Vitosha           150.49 330            PKPdf    18 07 15.0 -1.3
DAVA   Damuels           150.56 351  eP        PKiKP    18 07 22.7 +0.3
              comp=Z,11nm,1.1s
ABTA   Abfaltersbach     150.61 347  eP        PKPdf    18 07 16.5 +0.2
              comp=Z,1.5nm,0.8s
FETA   Feichten          150.68 350  eP        PKiKP    18 07 22.3 -0.4
              comp=Z,16nm,1.1s
TUE    Stuetta           151.43 352            PKPbc    18 07 22.7 -1.2
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*IDC **11** 17:58:35.0±1.5, 8°.17S×125°.46E, h0^{km}, mb3.6/3, mb1 3.7/7, mb1mx3.5/32, mbtmp3.5/7, ML3.6/4, MS3.7/3, Ms1 3.7/3, ms1mx2.9/36, Error ellipse: s-maj=46.4km s-min=21.9km az=75.0*

ISC 11 17:58:39.7±1.1**, 8°.40S**±0°.09×**125°.5E**±0°.1**, h35^{km}, n9, σ2^{s}.34**/11**, mb3.7**/3**, Timor region**

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Code   Station Name        Δ°   AZ°     Phase ID               Time    Res
                                     Op        ISC        h  m  s    ISC
BATI   Baumata             2.56 226  Pn        Pn       17 59 20.1 +1.2
              7.6nm,0.3s,baz=19,slow=3.3,SNR=10
BATI                                 Sn        Sn       17 59 49.6 +0.8
              6.9nm,0.3s,baz=87,slow=20,SNR=2.0
FITZ   Fitzroy Crossi      9.64 179  Pn        Pn       18 00 57.6 +1.6
              0.4nm,0.3s,baz=7.6,slow=9.0,SNR=12
FITZ                                 Sn        Sn       18 02 37.7 -5.5
              0.2nm,0.3s,baz=248,slow=14,SNR=1.7
WRA    Warramunga Arr     14.30 144  Pn        Pn       18 02 01.9 +2.0
              0.4nm,0.3s,baz=319,slow=13,SNR=19
WRA                                  Sn        Sn       18 04 36.4 -0.9
              0.1nm,0.3s,baz=321,slow=26,SNR=2.0
DAV    Davao City (W)     15.37   0  LR        LR       18 08 42.6
              comp=Z,41nm,18.2s,baz=309,slow=40
ASAR   Alice Springs      17.17 153  P         P        18 02 39.8 +1.4
              0.2nm,0.3s,baz=318,slow=10,SNR=18
ASAR                                 S         Sn       18 05 46.8 -0.3
              0.0nm,0.3s,baz=314,slow=20,SNR=3.4
CMAR   Chiang Mai Arr     37.42 316  P         P        18 05 48.7 -1.1
              0.1nm,0.3s,baz=144,slow=7.0,SNR=4.1
SONM   Songino Array      58.50 345  LR        LR       18 34 46.6
              comp=Z,150nm,20.5s,baz=224,slow=37
MKAR   Makanchi Array     67.06 329  P         P        18 09 28.5 -1.0
              0.5nm,0.7s,baz=146,slow=7.6,SNR=5.3
ZALV   Zalesovo Beam      70.96 336  P         P        18 09 52.8 -0.7
              0.3nm,0.4s,baz=134,slow=8.3,SNR=2.1
ZALV                                 LR        LR       18 43 15.6
              comp=Z,181nm,19.5s,baz=76,slow=38
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*STR **11** 18:13:35.4±1.0, 44°N±23°×1°2E±°, h0^{km}, mb3.7/2, MLv3.4/9, preliminary*
*PRU **11** 18:13:35.9±0.0, 44°.07N×12°.84E, h0^{km}*
*IDC **11** 18:13:35.1±1.4, 44°.05N×13°.02E, h0^{km}, mb3.6/4, mb1 3.6/8, mb1mx3.4/66, mbtmp3.5/8, ML3.2/4, Error ellipse: s-maj=27.1km s-min=13.9km az=96.0*
*BGR **11** 18:13:37.4±0.5, 43°.83N×12°.53E, h20^{km}, ML3.7/25, Error ellipse: s-maj=7.8km s-min=5.6km az=170.0*
*ROM **11** 18:13:37.6±0.1, 43°.911N±0°.005×12°.534E±0°.006, h43^{km}, ML3.5/143, Error ellipse: s-maj=0.6km s-min=0.1km az=36.0*
*LDG **11** 18:13:38.4, 43°.90N×12°.54E, h38^{km}*
*BEO **11** 18:13:38.8±2.3, 44°.05N×12°.50E, h41^{km}±5^{km}, ML3.6/9*

ISC 11 18:13:36.7±0.8**, 43°.94N**±0°.02×**12°.51E**±0°.02**, h45^{km}**±5^{km}**, n362, σ1^{s}.98**/476**, mb3.4**/4**, 18C-33D, Central Italy**

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Code   Station Name        Δ°   AZ°     Phase ID               Time    Res
                                     Op        ISC        h  m  s    ISC
RSM    Repubblica di       0.04 254 ⇓P         Pn       18 13 44.5 +0.7
RSM                                  S         Sn       18 13 49.9 +1.0
RSM                                  AML       AML
              comp=N,20400µm,0.8s
RSM                                  AML       AML
              comp=E,9270µm,0.7s
RSM                                  AML       AML
              comp=N,20350µm,0.8s
CPGN   Carpegna, Ital      0.20 224 ⇓P         Pn       18 13 45.3 +0.6
CPGN                                 S         Sn       18 13 52.0 +1.7
CPGN                                 AML       AML
              comp=E,12400µm,0.7s
CPGN                                 AML       AML
              comp=E,14250µm,0.3s
CPGN                                 AML       AML
              comp=N,14600µm,1.1s
CPGN                                 AML       AML
              comp=N,16450µm,0.4s
CPGN                                 AML       AML
              comp=E,12400µm,0.7s
CPGN                                 AML       AML
              comp=N,14550µm,1.1s
BLLA   Bellaria            0.20 353 ⇑P         Pn       18 13 46.4 +1.8
BLLA                                 S         Sn       18 13 53.4 +3.3
BLLA                                 AML       AML
              comp=E,18350µm,1.5s
BLLA                                 AML       AML
              comp=N,18400µm,1.5s
BLLA                                 AML       AML
              comp=E,18400µm,1.5s
BLLA                                 AML       AML
              comp=N,18350µm,1.5s
PESA   Pesaro              0.24  90 ⇑P         Pn       18 13 45.7 +0.9
PESA                                 S         Sn       18 13 52.5 +1.9
PESA                                 AML       AML
PESA                                 AML       AML
              comp=N,80550µm,1.4s
PE3    Peglio              0.25 182 ⇓P         Pn       18 13 45.2 +0.2
PE3                                  S         Sn       18 13 51.4 +0.7
PE3                                  AML       AML
              comp=N,55750µm,0.4s
PE3                                  AML       AML
              comp=E,26750µm,0.6s
FSSB   Fossombrone         0.32 142 ⇓P         Pn       18 13 45.9 +0.3
FSSB                                 S         Sn       18 13 52.3 +0.5
FSSB                                 AML       AML
              comp=E,40350µm,0.6s
FSSB                                 AML       AML
              comp=N,31500µm,0.3s
NARO   Abbazia di Nar      0.34 171 ⇓P         Pn       18 13 45.8 +0.1
NARO                                 S         Sn       18 13 52.3 +0.2
NARO                                 AML       AML
              comp=E,10830µm,0.2s
NARO                                 AML       AML
              comp=N,13955µm,0.4s
PARC   Parchiule           0.35 214 ⇓P         Pn       18 13 46.2 +0.2
PARC                                 S         Sn       18 13 52.9 +0.4
PARC                                 AML       AML
              comp=E,7960µm,0.7s
PARC                                 AML       AML
              comp=N,6590µm,1.1s
MPAG   Monte Paganucc      0.36 150 ⇓P         Pn       18 13 46.4 +0.2
MPAG                                 S         Sn       18 13 53.1 +0.3
MPAG                                 AML       AML
              comp=E,13500µm,0.2s
MPAG                                 AML       AML
              comp=N,13750µm,0.7s
MPAG                                 AML       AML
              comp=E,13500µm,0.7s
MPAG                                 AML       AML
              comp=E,13500µm,0.2s
MPAG                                 AML       AML
              comp=N,13950µm,0.7s
MPAG                                 AML       AML
              comp=E,13550µm,0.7s
MPAG                                 AML       AML
              comp=N,13750µm,0.7s
APEC   Apecchio            0.39 189  P         Pn       18 13 46.7 +0.3
APEC                                 S         Sn       18 13 53.8 +0.7
APEC                                 AML       AML
              comp=N,15600µm,0.9s
APEC                                 AML       AML
              comp=E,27750µm,1.0s
PIEI   Pieia               0.41 177 ⇓P         Pn       18 13 46.7 +0.1
PIEI                                 S         Sn       18 13 53.7 +0.1
PIEI                                 AML       AML
              comp=N,7710µm,0.3s
PIEI                                 AML       AML
              comp=N,7705µm,0.3s
PIEI                                 AML       AML
              comp=E,12900µm,0.4s
FRON   Frontone            0.45 159 ⇓P         Pn       18 13 47.5 +0.3
FRON                                 S         Sn       18 13 55.3 +0.8
FRON                                 AML       AML
              comp=E,4665µm,0.7s
FRON                                 AML       AML
              comp=N,10400µm,0.3s
FRON                                 AML       AML
              comp=E,4660µm,0.7s
FRON                                 AML       AML
              comp=N,10350µm,0.3s
SSP9   Sansepolcro         0.46 217 ⇓P         Pn       18 13 47.9 +0.7
SSP9                                 S         Sn       18 13 56.5 +1.9
SSP9                                 AML       AML
              comp=N,8245µm,0.5s
SSP9                                 AML       AML
              comp=E,5870µm,0.4s
ATPC   Poggio Castell      0.46 184 ⇓P         Pn       18 13 47.6 +0.4
ATPC                                 S         Sn       18 13 55.5 +0.8
ATBU   Serra di Buran      0.47 176 ⇓P         Pn       18 13 47.9 +0.5
ATBU                                 S         Sn       18 13 56.2 +1.3
BADI   Badiali             0.47 204 ⇓P         Pn       18 13 47.9 +0.5
BADI                                 S         Sn       18 13 56.2 +1.3
BADI                                 AML       AML
              comp=N,19850µm,0.3s
BADI                                 AML       AML
              comp=E,15450µm,0.3s
BADI                                 AML       AML
              comp=N,19900µm,0.3s
COR1   Corinaldo           0.47 131 ⇑P         Pn       18 13 48.7 +1.3
COR1                                 S         Sn       18 13 57.5 +2.7
COR1                                 AML       AML
              comp=E,19400µm,0.8s
COR1                                 AML       AML
              comp=N,17750µm,0.9s
COR1                                 AML       AML
              comp=E,10865µm,0.4s
COR1                                 AML       AML
              comp=N,17050µm,0.9s
COR1                                 AML       AML
              comp=E,10835µm,0.4s
COR1                                 AML       AML
              comp=N,17800µm,0.9s
COR1                                 AML       AML
              comp=E,19450µm,0.8s
SFI    Santa Sofia         0.48 266 ⇓P         Pn       18 13 48.5 +1.1
SFI                                  S         Sn       18 13 57.1 +2.0
SFI                                  AML       AML
              comp=N,7400µm,0.6s
SFI                                  AML       AML
              comp=N,7225µm,0.8s
SFI                                  AML       AML
              comp=N,7405µm,0.6s
SFI                                  AML       AML
              comp=E,8725µm,0.3s
SFI                                  AML       AML
              comp=E,8690µm,0.3s
ATPI   Pietralunga -       0.50 189 ⇓P         Pn       18 13 48.1 +0.4
ATPI                                 S         Sn       18 13 56.1 +0.6
ATPI                                 AML       AML
              comp=E,6745µm,1.4s
ATPI                                 AML       AML
              comp=N,9675µm,0.4s
CRE    Caprese Michel      0.52 232 ⇓P         Pn       18 13 48.9 +0.9
CRE                                  S         Sn       18 13 58.2 +2.2
CRE                                  AML       AML
              comp=E,11900µm,0.4s
CRE                                  AML       AML
              comp=N,11900µm,0.3s
CDCA   Citt‘ di Caste      0.52 202  P         Pn       18 13 48.6 +0.7
CDCA                                 AML       AML
              comp=E,18750µm,0.5s
CDCA                                 AML       AML
              comp=N,27400µm,0.5s
CDCA                                 AML       AML
              comp=E,18750µm,0.5s
ATSC   Scheggia e Pas      0.53 166  P         Pn       18 13 48.5 +0.3
ATSC                                 S         Sn       18 13 57.5 +1.1
ASQU   Asqua               0.54 255 ⇓P         Pn       18 13 49.5 +1.3
ASQU                                 S         Sn       18 13 59.2 +2.7
ASQU                                 AML       AML
              comp=E,14450µm,0.8s
ASQU                                 AML       AML
              comp=N,14300µm,1.1s
ARVD   Arcevia             0.54 144  P         Pn       18 13 48.7 +0.4
ARVD                                 S         Sn       18 13 57.5 +1.0
ARVD                                 AML       AML
              comp=E,4995µm,0.2s
ARVD                                 AML       AML
              comp=N,3645µm,0.1s
SSFR   Montelago di S      0.54 158  P         Pn       18 13 48.7 +0.4
SSFR                                 S         Sn       18 13 57.5 +1.0
SSFR                                 AML       AML
              comp=E,21300µm,0.2s
SSFR                                 AML       AML
              comp=N,22450µm,0.2s
SSFR                                 AML       AML
              comp=E,21750µm,0.2s
SSFR                                 AML       AML
              comp=N,21650µm,0.2s
ATMC   Monte Cedrone       0.55 205 ⇓P         Pn       18 13 49.0 +0.7
ATMC                                 S         Sn       18 13 58.4 +1.9
TB03   Pietralunga         0.55 187  P         Pn       18 13 48.7 +0.4
TB03                                 S         Sn       18 13 57.6 +1.1
TB01   Gubbio              0.56 185  P         Pn       18 13 49.1 +0.5
TB01                                 S         Sn       18 13 57.8 +0.9
ATVO   AVT- Monte Val      0.56 187 ⇓P         Pn       18 13 49.2 +0.6
ATVO                                 S         Sn       18 13 58.5 +1.5
ATVO                                 AML       AML
              comp=E,9235µm,0.4s
ATVO                                 AML       AML
              comp=N,10025µm,0.5s
ATFO   Monte Foce - G      0.58 175 ⇓P         Pn       18 13 49.1 +0.4
ATFO                                 S         Sn       18 13 58.4 +1.1
ATFO                                 AML       AML
              comp=E,7695µm,0.5s
ATFO                                 AML       AML
              comp=N,5945µm,0.4s
SENI   Senigallia          0.58 114  AML       AML
              comp=N,31750µm,0.9s
SENI                                 AML       AML
              comp=E,36900µm,0.5s
LMD    Lutirano            0.59 283  P         Pn       18 13 50.2 +1.4
LMD                                  S         Sn       18 14 00.8 +3.2
LMD                                  AML       AML
              comp=E,7495µm,0.4s
LMD                                  AML       AML
              comp=N,7830µm,0.3s
ATMI   Monte Miggiano      0.63 196  P         Pn       18 13 50.4 +1.0
ATMI                                 AML       AML
              comp=E,11950µm,0.4s
ATMI                                 AML       AML
              comp=N,12665µm,0.6s
FOSV   Fossato di Vic      0.67 164 ⇓P         Pn       18 13 50.6 +0.7
FOSV                                 S         Sn       18 14 00.4 +1.0
FOSV                                 AML       AML
              comp=E,4130µm,0.9s
FOSV                                 AML       AML
              comp=N,3080µm,0.9s
MURB   Monte Urbino        0.68 179 ⇓P         Pn       18 13 51.0 +0.9
MURB                                 S         Sn       18 14 02.3 +2.6
MURB                                 AML       AML
              comp=E,28750µm,0.3s
MURB                                 AML       AML
              comp=N,15850µm,1.1s
MURB                                 AML       AML
              comp=E,32000µm,0.3s
MURB                                 AML       AML
              comp=N,15850µm,1.1s
IMOL   Imola, Italy        0.69 307  P         Pn       18 13 53.5 +3.4
IMOL                                 AML       AML
              comp=E,4830µm,0.3s
IMOL                                 AML       AML
              comp=N,4200µm,0.8s
IMOL                                 AML       AML
              comp=N,4205µm,0.8s
IMOL                                 AML       AML
              comp=E,4825µm,0.3s
CAFI   Castiglion Fio      0.73 213 ⇑P         Pn       18 13 51.8 +1.2
CAFI                                 S         Sn       18 14 02.6 +1.8
CAFI                                 AML       AML
              comp=N,4940µm,0.8s
CAFI                                 AML       AML
              comp=E,4380µm,0.8s
CAFI                                 AML       AML
              comp=E,4640µm,0.8s
CAFI                                 AML       AML
              comp=N,5220µm,0.8s
RUFI   Rufina              0.73 262 ⇓P         Pn       18 13 52.6 +1.9
RUFI                                 S         Sn       18 14 03.9 +3.2
RUFI                                 AML       AML
              comp=E,4755µm,1.4s
RUFI                                 AML       AML
              comp=N,3720µm,0.4s
RUFI                                 AML       AML
              comp=E,4745µm,1.4s
RUFI                                 AML       AML
              comp=N,3730µm,0.4s
BRIS   BRISIGHELLA         0.75 286  P         Pn       18 13 51.6 +0.7
BRIS                                 AML       AML
              comp=N,5205µm,1.4s
BRIS                                 AML       AML
              comp=E,3505µm,0.7s
EL6    Elcito              0.75 145 ⇓P         Pn       18 13 52.2 +1.1
EL6                                  AML       AML
              comp=E,10135µm,0.5s
EL6                                  AML       AML
              comp=N,7120µm,0.4s
EL6                                  AML       AML
              comp=N,7115µm,0.4s
EL6                                  AML       AML
              comp=E,10150µm,0.5s
ATTE   AVT- Monte Tez      0.75 189  P         Pn       18 13 52.2 +1.2
ATTE                                 AML       AML
              comp=E,6450µm,0.5s
ATTE                                 AML       AML
              comp=N,5500µm,0.4s
CING   Cingoli             0.76 138 ⇓P         Pn       18 13 52.2 +1.1
CING                                 S         Sn       18 14 03.6 +2.2
CING                                 AML       AML
              comp=E,2715µm,1.6s
CING                                 AML       AML
              comp=N,3075µm,0.6s
SNTG   Esanatoglia         0.76 155 ⇓P         Pn       18 13 51.9 +0.8
SNTG                                 S         Sn       18 14 03.4 +2.0
SNTG                                 AML       AML
              comp=E,420µm,0.3s
SNTG                                 AML       AML
              comp=N,610µm,0.9s
SNTG                                 AML       AML
              comp=E,3580µm,0.3s
SNTG                                 AML       AML
              comp=N,4390µm,0.9s
ATCC   AVT- Casa Cast      0.76 173 ⇓P         Pn       18 13 52.3 +1.2
ATCC                                 AML       AML
              comp=N,13150µm,0.4s
ATCC                                 AML       AML
              comp=E,11250µm,0.3s
PCRO   Pietralacroce       0.81 114  P         Pn       18 13 53.2 +1.5
PCRO                                 AML       AML
              comp=E,8105µm,1.3s
PCRO                                 AML       AML
              comp=N,9475µm,0.4s
PCRO                                 AML       AML
              comp=E,8100µm,1.3s
PCRO                                 AML       AML
              comp=N,9450µm,0.4s
SEI    Scarperia           0.84 278  P         Pn       18 13 54.3 +2.1
SEI                                  AML       AML
              comp=E,8425µm,0.5s
SEI                                  AML       AML
              comp=N,12050µm,0.5s
MTRZ   Monterenzio         0.87 300  P         Pn       18 13 55.7 +3.1
MTRZ                                 AML       AML
              comp=E,3720µm,0.6s
MTRZ                                 AML       AML
              comp=N,4760µm,0.4s
MTRZ                                 AML       AML
              comp=E,3610µm,0.6s
MTRZ                                 AML       AML
              comp=N,4690µm,1.3s
AOI    Ancona              0.89 116 ⇓P         Pn       18 13 54.0 +1.2
AOI                                  AML       AML
              comp=E,3205µm,1.1s
AOI                                  AML       AML
              comp=N,4130µm,0.5s
ASSB   Assisi San Ben      0.91 173  P         Pn       18 13 54.3 +1.2
ASSB                                 AML       AML
              comp=E,3515µm,0.5s
ASSB                                 AML       AML
              comp=N,3275µm,0.3s
PP3    Marolino            0.98 125  AML       AML
              comp=E,4490µm,0.6s
PP3                                  AML       AML
              comp=E,4420µm,0.6s
PP3                                  AML       AML
              comp=N,4290µm,0.5s
PP3                                  AML       AML
              comp=N,4400µm,0.5s
CSP1   Cessapalombo        0.99 149 ⇓P         Pn       18 13 55.4 +1.1
CSNT   Castellina Chi      1.00 242 ⇑P         Pn       18 13 55.6 +1.3
CSNT                                 AML       AML
              comp=E,1275µm,0.5s
CSNT                                 AML       AML
              comp=N,1645µm,0.6s
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FDMO  Fiordimonte       1.00 155 ⇓P     Pn     18 13 55.4 +1.0
FDMO                              AML   AML
      comp=E,2280µm,0.5s
FDMO                              AML   AML
      comp=N,1885µm,0.3s
OSSC  Osservatorio P    1.00 246  P     Pn     18 13 55.8 +1.3
OSSC                              AML   AML
      comp=E,1555µm,0.6s
OSSC                              AML   AML
      comp=N,2235µm,0.5s
OSSC                              AML   AML
      comp=N,1565µm,0.6s
OSSC                              AML   AML
      comp=E,2185µm,0.5s
FNVD  Fontana Vidola    1.02 283 ⇑P     Pn     18 13 57.7 +3.0
FNVD                              AML   AML
      comp=E,2365µm,1.2s
FNVD                              AML   AML
      comp=N,3585µm,0.6s
MGAB  Montegabbione     1.07 196 ⇑P     Pn     18 13 56.3 +1.0
MGAB                              AML   AML
      comp=E,3150µm,0.8s
MGAB                              AML   AML
      comp=N,4980µm,0.3s
MGAB                              AML   AML
      comp=E,3695µm,0.8s
MGAB                              AML   AML
      comp=N,4910µm,0.3s
MTCR  Monte La Croce    1.09 275  P     Pn     18 13 57.4 +1.7
MTCR                              AML   AML
      comp=E,1363µm,0.5s
MTCR                              AML   AML
      comp=N,1715µm,0.4s
CRMI  Carmignano        1.12 263  P     Pn     18 13 57.5 +1.5
CRMI                              AML   AML
      comp=N,1159µm,0.9s
CRMI                              AML   AML
      comp=E,906µm,1.0s
CRMI                              AML   AML
      comp=N,1124µm,0.9s
CRMI                              AML   AML
      comp=E,874µm,1.0s
MOMA  Monte Martano     1.14 178  P     Pn     18 13 57.3 +1.0
MOMA                              AML   AML
      comp=N,1555µm,0.6s
MOMA                              AML   AML
      comp=E,2030µm,0.3s
MOMA                              AML   AML
      comp=E,1935µm,0.3s
MOMA                              AML   AML
      comp=N,1665µm,1.4s
SACS  San Casciano d    1.18 202 ⇑P     Pn     18 13 57.6 +0.8
SACS                              AML   AML
      comp=N,1930µm,0.3s
SACS                              AML   AML
      comp=E,1665µm,0.3s
SACS                              AML   AML
      comp=E,1765µm,0.3s
SACS                              AML   AML
      comp=N,1945µm,0.3s
NRCA  Norcia            1.19 158  P     Pn     18 13 58.3 +1.3
NRCA                              AML   AML
      comp=N,1865µm,0.5s
NRCA                              AML   AML
      comp=E,1685µm,0.2s
FROS  Frosini           1.22 234 ⇑P     Pn     18 13 58.3 +0.9
FROS                              AML   AML
      comp=E,1335µm,0.5s
FROS                              AML   AML
      comp=N,1385µm,0.7s
MCIV  Monte Civitell    1.31 208  P     Pn     18 13 59.0 +0.4
MCIV                              AML   AML
      comp=E,378µm,0.7s
MCIV                              AML   AML
      comp=N,275µm,0.6s
OFFI  Offida            1.32 139  P     Pn     18 13 59.9 +1.2
OFFI                              AML   AML
      comp=E,3915µm,0.5s
OFFI                              AML   AML
      comp=N,5345µm,0.6s
ARCI  Arcidosso         1.32 215 ⇑P     Pn     18 13 59.4 +0.6
ARCI                              AML   AML
      comp=E,508µm,0.9s
ARCI                              AML   AML
      comp=N,753µm,1.2s
CESX  Cesi              1.33 178  P     Pn     18 13 59.9 +1.0
CESX                              AML   AML
      comp=N,1295µm,0.9s
CESX                              AML   AML
      comp=E,1205µm,0.4s
GUMA  Gualdo di Mace    1.36 130  P     Pn     18 13 56.1  -3.1
GUMA                              AML   AML
      comp=E,11900µm,0.5s
GUMA                              AML   AML
      comp=N,7260µm,0.5s
GUMA                              AML   AML
      comp=E,11155µm,0.5s
GUMA                              AML   AML
      comp=N,7535µm,0.5s
ARRO  Arrone            1.38 172  P     Pn     18 14 00.7 +1.3
ARRO                              AML   AML
      comp=N,748µm,0.4s
ARRO                              AML   AML
      comp=E,770µm,0.4s
LNSS  Leonessa          1.39 164  P     Pn     18 14 00.6 +0.8
LNSS                              AML   AML
      comp=N,1575µm,0.6s
LNSS                              AML   AML
      comp=E,1430µm,0.5s
TRIF  Trifonti          1.43 235 ⇑P     Pn     18 14 01.2 +1.0
TRIF                              AML   AML
      comp=N,1145µm,0.2s
TRIF                              AML   AML
      comp=E,905µm,0.8s
PII   Pisa              1.45 262  P     Pn     18 14 01.7 +1.2
PII                               AML   AML
      comp=E,1680µm,0.3s
PII                               AML   AML
      comp=N,1545µm,0.3s
MAIM  Mastiano          1.46 270  P     Pn     18 14 01.9 +1.4
MAIM  Mastiano          1.46 270 ⇑P     Pn     18 14 01.9 +1.4
CARD  Cardoso           1.46 274  P     Pn     18 14 01.8 +1.2
SARO  Sassorosso        1.54 280  P     Pn     18 14 03.3 +1.6
TEOL  Teolo             1.54 337  P     Pn     18 14 02.9 +1.2
TEOL                              AML   AML
      comp=E,2380µm,0.3s
TEOL                              AML   AML
      comp=N,1695µm,1.1s
TERO  Teramo            1.54 148  P     Pn     18 14 02.5 +0.7
TERO                              AML   AML
      comp=N,531µm,0.5s
TERO                              AML   AML
      comp=E,518µm,0.3s
VLC   Villacollemand    1.54 279  P     Pn     18 14 03.1 +1.3
VLC                               AML   AML
      comp=E,256µm,0.7s
VLC                               AML   AML
      comp=E,272µm,0.7s
VLC                               AML   AML
      comp=N,307µm,0.9s
VLC                               AML   AML
      comp=N,304µm,0.9s
CAMP  Campotosto        1.55 155  P     Pn     18 14 02.9 +0.9
CAMP                              AML   AML
      comp=N,800µm,0.7s
CAMP                              AML   AML
      comp=E,852µm,0.3s
SMRN  Sveta Marina      1.61  47 ePn    Pn     18 14 03.3 +0.7
SMRN                              Sn    Sn     18 14 22.2 +0.1
OPPE  Oppeano           1.67 326  AML   AML
      comp=N,1490µm,1.4s
OPPE                              AML   AML
      comp=E,1440µm,1.1s
GIGS  Gran Sasso        1.68 152  P     Pn     18 14 04.7 +1.0
GIGS                              AML   AML
      comp=E,306µm,0.5s
GIGS                              AML   AML
      comp=N,284µm,0.5s
SRES  S.Oreste - Sor    1.70 180  P     Pn     18 14 05.6 +1.6
SRES                              AML   AML
      comp=E,288µm,0.4s
SRES                              AML   AML
      comp=N,272µm,1.0s
EQUI  Equi              1.71 278 ⇑P     Pn     18 14 05.5 +1.5
AQU   L'Aquila          1.72 157 ePn    Pn     18 14 07.0 +2.8
FIAM  Fiamignano        1.73 165  AML   AML
      comp=N,468µm,0.4s
FIAM                              AML   AML
      comp=E,678µm,0.9s
NVLJ  Novalja           1.81  69 ePn    Pn     18 14 06.5 +1.2
MAON  Monte Argentar    1.82 214  P     Pn     18 14 05.7 +0.2
MAON                              AML   AML
      comp=N,154µm,0.6s
MAON                              AML   AML
      comp=E,328µm,0.4s
RABC  Rab               1.82  63 ePn    Pn     18 14 06.8 +1.3
VCEL  Villa Celiera     1.83 147  P     Pn     18 14 06.7 +1.0
VCEL                              AML   AML
      comp=N,1130µm,0.5s
VCEL                              AML   AML
      comp=E,939µm,0.5s
GRAM  Graiana           1.84 288 ⇑P     Pn     18 14 08.8 +3.0
DUGI  Dugi Otok         1.84  88 ePn    Pn     18 14 06.4 +0.6
PLMA  Palmaria, Port    1.92 274  P     Pn     18 14 08.3 +1.4
PLMA                              AML   AML
      comp=N,354µm,0.3s
PLMA                              AML   AML
      comp=E,211µm,0.4s
SKDS  Skadanscina       1.93  33 i Pn   Pn     18 14 07.5 +0.4
SKDS                             i Sn   Sn     18 14 29.9  -0.3
SKDS                              IAML         18 14 31.7
      comp=Z,257nm,0.1s
T0110 Collepietro       1.95 151  P     Pn     18 14 08.2 +0.8
T0110                             AML   AML
      comp=E,794µm,0.4s
T0110                             AML   AML
      comp=N,806µm,1.1s
GROG  Isola di Gorgo    1.97 256  P     Pn     18 14 08.4 +0.9
GROG                              AML   AML
      comp=N,357µm,0.9s
GROG                              AML   AML
      comp=E,416µm,1.0s
RIY   Rijeka            1.98  45 ePn    Pn     18 14 08.8 +1.1
RIY   Rijeka            1.98  45 i Pn   Pn     18 14 08.9 +1.2
RIY                               Sn    Sn     18 14 32.8 +1.6
TRI   Trieste           1.98  26  P     Pn     18 14 08.2 +0.5
TRI                               P     Pg     18 14 16.3
TRI                               S     Sn     18 14 33.0 +1.7
TRI                               AML   AML
      comp=N,688µm,0.3s
TRI                               AML   AML
      comp=E,882µm,0.2s
ROVR  Rover Verones     1.99 330  P     Pn     18 14 08.9 +1.0
ROVR                              AML   AML
      comp=E,254µm,0.2s
ROVR                              AML   AML
      comp=N,803µm,0.2s
CGRP  Cima Grappa       2.00 346  P     Pn     18 14 09.1 +0.9
CGRP                              AML   AML
      comp=E,1063µm,0.4s
CGRP                              AML   AML
      comp=N,712µm,1.1s
CERT  Cerreto           2.02 170  P     Pn     18 14 08.9 +0.5
CERT                              AML   AML
      comp=E,455µm,0.6s
CERT                              AML   AML
      comp=N,242µm,0.3s
PTQR  Pietraquaria      2.03 161  AML   AML
      comp=N,158µm,0.5s
PTQR                              AML   AML
      comp=E,164µm,1.0s
CELB  S.Piero in Cam    2.06 235  P     Pn     18 14 09.3 +0.5
CELB                              AML   AML
      comp=E,156µm,0.5s
CELB                              AML   AML
      comp=N,108µm,0.4s
VARN  Col Varnada, M    2.07 352  P     Pn     18 14 10.0 +1.0
VARN                              AML   AML
      comp=E,904µm,0.6s
VARN                              AML   AML
      comp=N,974µm,1.3s
POLC  Polcenigo         2.08 360 ⇑P     Pn     18 14 10.6 +1.5
POLC                              AML   AML
      comp=E,1790µm,0.9s
POLC                              AML   AML
      comp=N,2515µm,0.5s
DOSS  Dosso del Somm    2.15 335  P     Pn     18 14 11.5 +1.2
DOSS                              AML   AML
      comp=E,488µm,1.0s
DOSS                              AML   AML
      comp=N,724µm,1.2s
DOSS                              AML   AML
      comp=E,756µm,1.2s
DOSS                              AML   AML
      comp=N,536µm,1.0s
SABO  M.te Sabotino     2.18  20  P     Pn     18 14 11.4 +0.9
SABO                              AML   AML
      comp=E,1515µm,0.2s
SABO                              AML   AML
      comp=N,2335µm,0.2s
MSSA  Maissana          2.19 281  P     Pn     18 14 12.4 +1.8
MSSA                              AML   AML
      comp=E,222µm,1.1s
MSSA                              AML   AML
      comp=N,293µm,0.4s
SALO  Salr              2.19 321  AML   AML
      comp=E,562µm,0.6s
SALO                              AML   AML
      comp=N,588µm,1.4s
CTI   Castel Tesino     2.19 344  P     Pn     18 14 11.8 +1.1
CTI                               AML   AML
      comp=E,1022µm,1.4s
CTI                               AML   AML
      comp=N,878µm,1.6s
CEY   Cerknica          2.26  37 ePn    Pn     18 14 12.1 +0.5
LPEL  Lama dei Pelig    2.26 146  AML   AML
      comp=E,246µm,0.7s
LPEL                              AML   AML
      comp=N,228µm,1.1s
MAGA  Magasa            2.27 325  P     Pn     18 14 12.7 +0.9
MAGA                              AML   AML
      comp=N,1670µm,0.4s
MAGA                              AML   AML
      comp=E,2250µm,1.5s
ZIRJ  Zirje             2.29  96 i Pn   Pn     18 14 12.6 +0.6
ZIRJ                              Sn    Sn     18 14 37.4  -1.5
MORI  Morici            2.31  91 ePn    Pn     18 14 13.8 +1.5
STAL  STALIGIAL         2.32   3  P     Pn     18 14 13.6 +1.2
STAL                              AML   AML
      comp=E,1135µm,0.3s
STAL                              AML   AML
      comp=E,1155µm,0.2s
STAL                              AML   AML
      comp=N,986µm,0.3s
STAL                              AML   AML
      comp=N,1180µm,0.4s
MPRI  Monte Prat        2.33   8  P     Pn     18 14 13.9 +1.4
MPRI                              AML   AML
      comp=N,1645µm,0.4s
MPRI                              AML   AML
      comp=E,990µm,0.3s
BOB   Bobbio (Coli)     2.34 292  AML   AML
      comp=N,372µm,1.0s
BOB                               AML   AML
      comp=E,478µm,0.7s
AGOR  Agordo            2.36 352  P     Pn     18 14 13.9 +0.9
AGOR                              AML   AML
      comp=E,261µm,0.3s
AGOR                              AML   AML
      comp=N,276µm,0.4s
CIMO  Cimolais          2.37 359  P     Pn     18 14 14.1 +1.0
CIMO                              AML   AML
      comp=E,228µm,1.5s
CIMO                              AML   AML
      comp=N,202µm,0.4s
CTL8  Castelleone       2.37 305  AML   AML
      comp=E,236µm,0.4s
CTL8                              AML   AML
      comp=N,164µm,0.4s
GEPF  Gemona            2.38  11  P     Pn     18 14 14.2 +1.1
GEPF                              AML   AML
      comp=N,442µm,0.9s
GEPF                              AML   AML
      comp=E,447µm,0.5s
VINO  Villanova         2.38  13  P     Pn     18 14 14.2 +1.0
VINO                              AML   AML
      comp=E,970µm,0.3s
VINO                              AML   AML
      comp=N,1595µm,0.3s
GAGG  Gaggia            2.41 333  P     Pn     18 14 15.0 +1.3
GAGG                              AML   AML
      comp=N,407µm,0.3s
GAGG                              AML   AML
      comp=E,434µm,0.4s
UDBI  Udbina            2.41  75 ePn    Pn     18 14 15.6 +1.8
PLIT  Plitvice          2.42  66 ePn    Pn     18 14 15.1 +1.3
BOJS  Bojanci           2.50  50 ⇑P     Pn     18 14 16.4 +1.5
BOJS                              P     Pg     18 14 24.8
BOJS                              S     Sn     18 14 46.0 +1.8
BOJS                              AML   AML
      comp=N,928µm,1.2s
BOJS                              AML   AML
      comp=E,1042µm,0.4s
FRES  Fresagrandinar    2.53 140  AML   AML
      comp=N,86µm,0.9s
FRES                              AML   AML
      comp=E,156µm,0.7s
CLUD  Cludinico         2.53   6  P     Pn     18 14 16.7 +1.4
CLUD                              AML   AML
      comp=E,263µm,0.8s
CLUD                              AML   AML
      comp=N,276µm,0.7s
PTCC  Patocco-Chiusa    2.54  13  P     Pn     18 14 16.3 +0.9
PTCC                              AML   AML
      comp=N,500µm,0.7s
PTCC                              AML   AML
      comp=E,448µm,1.0s
MABI  Malga Bissina     2.54 327  P     Pn     18 14 16.9 +1.3
MABI                              AML   AML
      comp=N,252µm,0.9s
MABI                              AML   AML
      comp=E,360µm,1.2s
LJU   Ljubljana         2.54  34 ePn    Pn     18 14 15.3  -0.2
LJU   Ljubljana         2.54  34  P     Pn     18 14 16.0 +0.5
LJU                               P     Pg     18 14 26.4
LJU                               S     Sn     18 14 48.0 +2.8
LJU                               AML   AML
      comp=E,4595µm,0.2s
LJU                               AML   AML
      comp=N,6630µm,0.5s
CERA  Filignano         2.59 154  P     Pn     18 14 17.2 +0.9
CERA                              AML   AML
      comp=E,186µm,0.6s
CERA                              AML   AML
      comp=N,188µm,0.8s
ZOU   Zoufplan          2.64   7  P     Pn     18 14 18.2 +1.3
ZOU                               AML   AML
      comp=N,290µm,1.4s
ZOU                               AML   AML
      comp=E,381µm,1.3s
KOSI  Kohlern           2.64 343  AML   AML
      comp=N,284µm,1.4s
KOSI                              AML   AML
      comp=E,390µm,1.4s
FVI   Forni Avoltri     2.66   4  P     Pn     18 14 18.7 +1.5
FVI                               AML   AML
      comp=E,184µm,0.5s
FVI                               AML   AML
      comp=N,170µm,0.5s
OZLJ  Ozalj             2.69  51 i Pn   Pn     18 14 19.2 +1.8
APPI  Appiano           2.69 341  P     Pn     18 14 18.9 +1.3
APPI                              AML   AML
      comp=E,566µm,0.3s
APPI                              AML   AML
      comp=N,420µm,0.3s
ACOM  Acomizza, Ital    2.70  15  P     Pn     18 14 19.0 +1.2
ACOM                              AML   AML
      comp=E,818µm,0.3s
ACOM                              AML   AML
      comp=N,668µm,0.4s
MDI   Monti di Nese     2.71 314  P     Pn     18 14 19.2 +1.4
MDI                               AML   AML
      comp=N,216µm,0.3s
MDI                               AML   AML
      comp=E,274µm,1.4s
EUCT  Pavia             2.72 299  AML   AML
      comp=N,1695µm,0.1s
EUCT                              AML   AML
      comp=E,1530µm,0.5s
MYKA  Terra Mystica     2.81  16 i Pn   Pn     18 14 20.9 +1.7
      comp=E,4.3nm,0.1s
MYKA                             eSn    Sn     18 14 52.4 +0.7
      comp=E,44nm,0.3s
ABTA  Abfaltersbach     2.81   0 i Pn   Pn     18 14 21.3 +2.2
      comp=E,4.1nm,0.2s,SNR=9.7
ABTA                             eSn    Sn     18 14 54.7 +2.9
      comp=E,57nm,0.4s
KIJV  Kijevo            2.81  87 i Pn   Pn     18 14 20.5 +1.3
CRES  Cresnjev          2.82  47 ePn    Pn     18 14 20.4 +1.2
TREM  Isole Tremiti     2.85 128  P     Pn     18 14 20.2 +0.5
TREM                              AML   AML
      comp=N,272µm,0.6s
TREM                              AML   AML
      comp=E,351µm,0.7s
ABSI  Aberstueckl       2.91 344  P     Pn     18 14 22.2 +1.6
ABSI                              AML   AML
      comp=E,479µm,0.6s
ABSI                              AML   AML
      comp=N,574µm,0.3s
PGF   Pioggiola         2.92 243 ePn    Pn     18 14 21.8 +1.1
PGF                              eSn    Sn     18 14 53.5  -1.0
      comp=N,22nm,0.3s
PGF   Pioggiola         2.92 243  P     Pn     18 14 22.1 +1.5
PGF                               AML   AML
      comp=N,58µm,1.3s
PGF                               AML   AML
      comp=E,52µm,1.0s
OBKA  Obir              2.94  29 i Pn   Pn     18 14 22.2 +1.2
      comp=E,3.9nm,0.1s
OBKA                             eSn    Sn     18 14 56.3 +1.1
      comp=E,61nm,0.2s
OBKA  Obir              2.94  29 ePn    Pn     18 14 22.2 +1.2
OBKA                             ePg    Pg     18 14 34.1
OBKA                             eSn    Sn     18 14 55.7 +0.5
OBKA                             eSg    Sg     18 15 13.0
BRMO  Bormio            2.95 330  P     Pn     18 14 23.5 +2.4
BRMO                              AML   AML
      comp=E,108µm,0.5s
BRMO                              AML   AML
      comp=N,123µm,0.6s
MELA  Melanico ??? S    2.95 138  P     Pn     18 14 21.3 +0.3
MELA                              AML   AML
      comp=E,294µm,0.5s
MELA                              AML   AML
      comp=E,280µm,0.5s
MELA                              AML   AML
      comp=N,339µm,1.3s
MELA                              AML   AML
      comp=N,308µm,1.5s
HVAR  Hvar              2.97 104 ePn    Pn     18 14 21.7 +0.5
SMPL  Sampolo           3.00 233  AML   AML
      comp=N,58µm,0.6s
SMPL                              AML   AML
      comp=E,73µm,0.6s
GATE  Gambatesa         3.00 143  AML   AML
      comp=N,94µm,0.7s
GATE                              AML   AML
      comp=E,65µm,0.7s
MOSI  Grossmontoni      3.01 333  P     Pn     18 14 25.0 +2.9
MOSI                              AML   AML
      comp=N,580µm,0.4s
MOSI                              AML   AML
      comp=E,363µm,0.8s
SACR  S. Croce Del S    3.02 147  AML   AML
      comp=E,68µm,0.7s
SACR                              AML   AML
      comp=N,65µm,1.4s
RISI  Rein              3.02 354  P     Pn     18 14 24.3 +2.2
RISI                              AML   AML
      comp=N,679µm,0.4s
RISI                              AML   AML
      comp=E,717µm,0.5s
ROSI  Rosskopf          3.08 346  P     Pn     18 14 24.8 +1.8
ROSI                              AML   AML
      comp=E,390µm,0.2s
ROSI                              AML   AML
      comp=N,434µm,0.4s
PTJ   Puntijarka        3.15  50 ePn    Pn     18 14 24.6 +0.8
MUGIO Muggio            3.16 310  P     Pn     18 14 24.8 +0.8
MUGIO                             AML   AML
      comp=E,183µm,1.1s
MUGIO                             AML   AML
      comp=N,186µm,0.5s
KBA   Koelnbreinsper    3.19  10 i Pn   Pn     18 14 26.8 +2.3
      comp=N,5.4nm,0.1s,SNR=48
KBA                              eSn    Sn     18 15 02.3 +0.9
      comp=N,20nm,0.2s
KBA   Koelnbreinsper    3.19  10 ePn    Pn     18 14 26.8 +2.3
KBA                              eSn    Sn     18 15 01.8 +0.5
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RORO  Rocca Rossa      3.21 275 ⇓P    Pn   18 14 27.3 +2.7
SGRT  San Giovanni R   3.23 131 ⇓P    Pn   18 14 24.9 -0.1
SGRT                             AML  AML
      comp=E,188µm,1.0s
SGRT                             AML  AML
      comp=N,160µm,0.4s
SOKA  Soboth           3.27  32 i Pn  Pn   18 14 26.8 +1.3
      comp=N,1.3nm,0.2s
SOKA                            eSn   Sn   18 15 04.1 +1.0
      comp=N,20nm,0.3s
VARE  Varese           3.28 307  P    Pn   18 14 26.9 +1.2
VARE                             AML  AML
      comp=E,322µm,0.2s
VARE                             AML  AML
      comp=N,309µm,1.4s
MRAK  Mrakovica        3.32  70 ePn   Pn   18 14 27.4 +1.2
FETA  Feichten         3.32 339 i Pn  Pn   18 14 29.3 +3.0
      comp=N,5.2nm,0.4s,SNR=22
MAKA  Makarska         3.34 100 ePn   Pn   18 14 27.7 +1.3
MSAG  Monte S. Angel   3.35 131  P    Pn   18 14 26.3 -0.3
MSAG                             AML  AML
      comp=E,152µm,0.9s
MSAG                             AML  AML
      comp=N,294µm,1.4s
LOBO  Lobor            3.36  48 ePn   Pn   18 14 27.2 +0.6
WTTA  Wattenberg       3.38 350 i Pn  Pn   18 14 30.0 +2.9
      comp=N,3.7nm,0.1s,SNR=29
WTTA                            eSn   Sn   18 15 09.1 +3.1
      comp=N,26nm,0.3s
WTTA  Wattenberg       3.38 350 ⇑P    Pn   18 14 30.1 +3.0
WTTA                             AML  AML
      comp=N,230µm,0.5s
WTTA                             AML  AML
      comp=E,243µm,0.5s
WTTA  Wattenberg       3.38 350 ePn   Pn   18 14 29.9 +2.9
WTTA                            eSn   Sn   18 15 07.7 +1.7
WTTA                            eSg   Sg   18 15 30.3
RICI  Ricice           3.38  96 ePn   Pn   18 14 28.3 +1.3
DAVOX Davos/Dischmat   3.39 328  Pn   Pn   18 14 29.8 +2.5
      comp=E,4.3nm,0.3s,baz=154,slow=21,SNR=40
DAVOX                            Sn   Sn   18 15 08.1 +1.8
      comp=E,7.7nm,0.3s,baz=115,slow=23,SNR=6.1
SQTA  Sankt Quirin     3.40 345 i Pn  Pn   18 14 30.4 +3.0
      comp=E,12nm,0.1s,SNR=62
SQTA                            eSn   Sn   18 15 10.4 +3.9
      comp=E,38nm,0.2s
AJAC  Base Areonaval   3.41 235  AML  AML
      comp=N,152µm,0.6s
AJAC                             AML  AML
      comp=E,124µm,0.6s
BLY   Banja Luka       3.45  75 ePn   Pn   18 14 30.3 +2.4
BLY                             eSn   Sn   18 15 07.6 +0.1
BLY   Banja Luka       3.45  75 ePn   Pn   18 14 39.3  +11
MOSL  Moslavina        3.46  60 ePn   Pn   18 14 28.5 +0.5
WATA  Walderalm        3.46 349 i Pn  Pn   18 14 31.6 +3.4
      comp=E,17nm,0.2s,SNR=41
WATA                            eSn   Sn   18 15 11.1 +3.2
      comp=E,24nm,0.2s
MOTA  Moosalm          3.54 344 i Pn  Pn   18 14 32.3 +3.0
      comp=E,2.8nm,0.1s,SNR=20
MOTA                            eSn   Sn   18 15 14.0 +4.0
      comp=E,14nm,0.3s
KALN  Kalnik           3.55  51 ePn   Pn   18 14 29.7 +0.3
SNAL  S. Angelo Dei    3.62 146  AML  AML
      comp=N,100µm,0.8s
SNAL                             AML  AML
      comp=E,90µm,0.9s
ZUGS  Zugspitze, Sch   3.64 343 ePn   Pn   18 14 34.3 +3.6
ZUGS                            eSn   Sn   18 15 15.9 +3.5
KOGS  Kog              3.64  45  P    Pn   18 14 31.0 +0.4
KOGS                             S    Sn   18 15 12.0 -0.3
KOGS                             AML  AML
      comp=E,1880µm,0.4s
KOGS                             AML  AML
      comp=N,1495µm,0.3s
SBF   Sospel           3.67 271 ePn   Pn   18 14 32.2 +1.3
SBF                             eSn   Sn   18 15 12.0 -0.9
      comp=N,40nm,0.3s
PART  Garmisch-Parte   3.69 345 ePn   Pn   18 14 34.3 +3.1
PART                            eSn   Sn   18 15 15.9 +2.5
TURF  col de Turini    3.69 272  Pg   Pn   18 14 33.0 +1.6
TURF                             S    Sn   18 15 14.5 +0.8
FUSIO Fusio            3.70 314  AML  AML
      comp=N,107µm,0.6s
FUSIO                            AML  AML
      comp=E,218µm,1.5s
ESCA  l'Escarene       3.71 270  Pg   Pn   18 14 33.1 +1.6
ESCA                             S    Sn   18 15 15.4 +1.4
RETA  Reutte           3.75 342 i Pn  Pn   18 14 35.2 +3.1
      comp=E,4.4nm,0.1s,SNR=25
RETA                            eSn   Sn   18 15 16.4 +1.4
      comp=E,7.3nm,0.3s
VULT  Monte Vulture    3.77 141  AML  AML
      comp=E,131µm,0.8s
VULT                             AML  AML
      comp=N,148µm,0.2s
SPIF  crte de Spivo    3.80 274  Pg   Pn   18 14 34.9 +2.0
SPIF                             S    Sn   18 15 16.6 +0.2
PLONS Plons/SG         3.81 326  AML  AML
      comp=E,105µm,0.8s
PLONS                            AML  AML
      comp=N,92µm,1.5s
PLONS Plons/SG         3.81 326 ePn   Pn   18 14 36.4 +3.6
PLONS                           eSn   Sn   18 15 18.4 +2.0
DAVA  Damuels          3.82 332 i Pn  Pn   18 14 36.4 +3.4
      comp=N,12nm,0.3s,SNR=31
DAVA                            i Sn  Sn   18 15 19.0 +2.2
      comp=N,53nm,0.6s
DAVA  Damuels          3.82 332 ePn   Pn   18 14 36.5 +3.4
DAVA                            eSn   Sn   18 15 18.9 +2.2
MMK   Mattmark         3.85 305  AML  AML
      comp=N,90µm,0.3s
MMK                              AML  AML
      comp=E,70µm,0.2s
MVIF  Mont Vial        3.87 271  Pg   Pn   18 14 36.8 +3.0
ARSA  Arzberg          3.93  32 i Pn  Pn   18 14 35.4 +0.9
      comp=E,1.4nm,0.1s,SNR=5.4
ARSA  Arzberg          3.93  32  S    Sn   18 15 18.0 -1.3
ARSA  Arzberg          3.93  32 ePn   Pn   18 14 35.4 +0.9
ARSA                            eSn   Sn   18 15 17.6 -1.7
STON  Ston             3.93 104 ePn   Pn   18 14 35.8 +1.3
STON                            eSn   Sn   18 15 20.6 +1.3
STON  Ston             3.93 104 ePn   Pn   18 14 34.5  0.0
STON  Ston             3.93 104 ePn   Pn   18 14 34.9 +0.4
STON  Ston             3.93 104  S    Sn   18 15 20.0 +0.7
BEHE  Becsehely        3.94  49 ePn   Pn   18 14 35.7 +1.1
PALZ  Palazzo San Ge   3.94 138  AML  AML
      comp=E,117µm,1.5s
PALZ                             AML  AML
      comp=N,134µm,1.1s
ISO   Isola            3.94 275  Pg   Pn   18 14 36.4 +1.8
EMBD  Embd, Matterta   4.02 306  P    Pn   18 14 36.9 +1.1
CDRU  Civita di Ruta   4.03 148  AML  AML
      comp=E,18µm,0.5s
CDRU                             AML  AML
      comp=N,15µm,0.6s
CALF  Calern           4.04 269  Pn   Pn   18 14 37.8 +1.7
CALF                             S    Sn   18 15 22.5 +0.1
MOA   Molln            4.10  17 i Pn  Pn   18 14 38.9 +2.1
      comp=N,5.8nm,0.1s,SNR=10
MOA   Molln            4.10  17 ePn   Pn   18 14 38.9 +2.1
MOA                             eSn   Sn   18 15 23.7 +0.3
UBR   Ueberruh         4.10 337 ePn   Pn   18 14 39.8 +3.0
UBR                             eSn   Sn   18 15 23.9 +0.4
BNALP Bannalp          4.10 317  AML  AML
      comp=N,98µm,0.5s
BNALP                            AML  AML
      comp=E,104µm,1.2s
MBDF  Montbardon       4.19 283 ePn   Pn   18 14 39.0 +0.8
MBDF                            eSn   Sn   18 15 24.5 -1.4
      comp=E,9.7nm,0.3s
FRF   La Foret Royal   4.26 267 ePn   Pn   18 14 40.3 +1.3
FRF                             eSn   Sn   18 15 25.8 -1.7
      comp=E,18nm,0.3s
AMUR  Altamura         4.29 134  AML  AML
      comp=N,104µm,0.3s
AMUR                             AML  AML
      comp=E,105µm,0.7s
WILA  Wila             4.29 325 ePn   Pn   18 14 41.8 +2.3
WILA                            eSn   Sn   18 15 28.2 -0.1
DBRK  Dubrovnik        4.31 105 ePn   Pn   18 14 40.2 +0.5
FUR   Furstenfeldbru   4.31 349 eSn   Sn   18 15 29.1 +0.4
BNI   Bardonecchia     4.32 287  AML  AML
      comp=N,17µm,0.9s
BNI                              AML  AML
      comp=E,25µm,1.6s
OGMO  Fort Saint-Gob   4.35 289  P    Pn   18 14 40.8 +0.5
OGMO  Fort Saint-Gob   4.35 289  P    Pn   18 14 40.8 +0.5
OGMO  Fort Saint-Gob   4.35 289  P    Pn   18 14 40.8 +0.5
LPG   La Plagne        4.39 293 ePn   Pn   18 14 40.9 -0.1
LPG                             eSn   Sn   18 15 29.7 -1.3
      comp=E,26nm,0.3s
LMR   La Mourre        4.39 264 ePn   Pn   18 14 41.8 +0.9
LMR                             eSn   Sn   18 15 28.8 -2.0
      comp=E,13nm,0.3s
LPL   La Plagne        4.41 293 ePn   Pn   18 14 40.9 -0.3
LPL                             eSn   Sn   18 15 29.3 -2.0
      comp=E,23nm,0.3s
MIGL  Miglionico       4.43 137  AML  AML
      comp=N,173µm,1.5s
MIGL                             AML  AML
      comp=E,178µm,1.2s
TREB  Trebinje         4.43 104 ePn   Pn   18 14 42.1 +0.7
WALHA Wallhausen, DE   4.49 329 ePn   Pn   18 14 44.3 +2.3
BRY   Bratogost        4.51 101 ePn   Pn   18 14 44.1 +1.4
MATE  Matera           4.53 135  AML  AML
      comp=E,62µm,0.8s
MATE                             AML  AML
      comp=N,73µm,1.2s
RSL   Roselend         4.53 295  P    Pn   18 14 44.4 +1.5
NOCI  Noci             4.62 131  AML  AML
      comp=N,142µm,0.2s
NOCI                             AML  AML
      comp=E,94µm,1.0s
CONA  Conrad Observa   4.62  29 i Pn  Pn   18 14 45.0 +1.0
      comp=E,1.5nm,0.1s,SNR=8.6
CONA                            i Sn  Sn   18 15 35.6 -0.9
      comp=E,25nm,0.2s
HCY   Herceg Novi      4.62 107 ePn   Pn   18 14 44.5 +0.5
BLAF  les Blancs       4.67 272  Pn   Pn   18 14 48.7 +4.1
EMING Emmingen-Lipti   4.71 328 ePn   Pn   18 14 46.0 +0.9
EMING                           eSn   Sn   18 15 36.2 -2.3
UPM   Unac-Piva        4.71  97 ePn   Pn   18 14 47.3 +2.0
SULZ  Cheisacher       4.72 321  P    Pn   18 14 47.1 +1.7
SULZ  Cheisacher       4.72 321  S    Sn   18 15 36.5 -2.4
SULZ  Cheisacher       4.72 321 ePn   Pn   18 14 47.4 +2.0
SULZ                            eSn   Sn   18 15 36.4 -2.5
GDM   Grand'Maison     4.74 288  Pn   Pn   18 14 48.6 +2.9
SLE   Schleitheim      4.74 325 ePn   Pn   18 14 47.1 +1.4
SLE                             eSn   Sn   18 15 36.3 -3.1
BALST Balsthal         4.79 317  P    Pn   18 14 47.7 +1.4
BALST Balsthal         4.79 317  S    Sn   18 15 37.9 -2.5
BALST Balsthal         4.79 317 ePn   Pn   18 14 47.7 +1.4
BALST                           eSn   Sn   18 15 36.9 -3.6
METMA Mettma DE        4.80 323 ePn   Pn   18 14 47.9 +1.5
METMA                           eSn   Sn   18 15 37.4 -3.4
ORIF  Oris-en-Rattie   4.84 284 ePn   Pn   18 14 49.1 +2.0
ORIF                            eSn   Sn   18 15 39.9 -2.1
      comp=E,9.1nm,0.2s
MLYF  Mely             4.87 273  Pn   Pn   18 14 50.1 +2.7
ARTF  Artigues         4.87 268  Pn   Pn   18 14 49.4 +2.1
MORH  Mrgy, Hungar     4.90  60 ePn   Pn   18 14 48.2 +0.4
NORI  Noerdlinger Ri   4.95 345 ePn   Pn   18 14 50.5 +2.0
NORI                            eSn   Sn   18 15 43.0 -1.5
BERGE Lenzkirch (DE)   4.96 324 ePn   Pn   18 14 50.1 +1.4
BERGE                           eSn   Sn   18 15 41.1 -3.6
BSTF  la Bastide-des   4.96 272  Pn   Pn   18 14 51.0 +2.4
GEC2  GERESS Array S   4.97   9 ePn   Pn   18 14 49.8 +0.8
GEC2                            eSn   Sn   18 15 43.4 -1.8
GERES GERESS Array B   4.97   9  Pn   Pn   18 14 49.7 +0.8
      comp=E,1.3nm,0.3s,baz=176,slow=14,SNR=35
GERES                            Sn   Sn   18 15 44.8 -0.3
      comp=E,8.2nm,0.3s,baz=180,slow=20,SNR=18
RUDO  Rudo             4.98  91 ePn   Pn   18 14 49.4 +0.5
BBLS  Lazi&#263;i      4.99  88 ePn   Pn   18 14 50.5 +1.5
BBLS                            eSn   Sn   18 15 45.0 -0.4
BBLS  Lazi&#263;i      4.99  88 ePn   Pn   18 14 50.1 +1.1
GRN   Grenoble         5.00 287  P    Pn   18 14 51.5 +2.3
SMRF  Simiane la Rot   5.00 273 ePn   Pn   18 14 51.3 +2.0
SMRF                            eSn   Sn   18 15 43.5 -2.3
      comp=E,6.7nm,0.3s
VSL   Villasalto       5.02 209 ⇓P    Pn   18 14 52.2 +2.7
VSL                              S    Sn   18 15 46.0 -0.2
FELD  Feldberg im Sc   5.04 323  P    Pn   18 14 51.0 +1.2
FELD  Feldberg im Sc   5.04 323  S    Sn   18 15 42.9 -3.8
CKRC  Cesky Krumlov    5.04  14 ePN   Pn   18 14 50.8 +1.1
CKRC                            eSN   Sn   18 15 44.5 -2.0
RUSF  Rustrel          5.07 272  Pn   Pn   18 14 52.7 +2.5
OGSM  Saint Maurice    5.13 291  P    Pn   18 14 52.2 +1.2
KIZ   Kirchzarten      5.13 323  P    Pn   18 14 52.1 +1.1
KIZ   Kirchzarten      5.13 323  S    Sn   18 15 44.6 -4.3
PDG   Podgorica        5.16 105 ePn   Pn   18 14 53.7 +2.4
PDG                             eSn   Sn   18 15 50.0 +0.4
PDG   Podgorica        5.16 105 ePn   Pn   18 14 51.4 +0.1
DRME  Dracevica, Mon   5.20 107 ePn   Pn   18 14 52.6 +0.7
WET   Wettzell         5.21   3 ePn   Pn   18 14 52.7 +0.7
WET                             eSn   Sn   18 15 48.2 -2.6
KHC   Kasperske Hory   5.24   8 ePN   Pn   18 14 53.1 +0.6
KHC                             eSN   Sn   18 15 48.5 -3.2
CABF  La Chapelle      5.26 303 ePn   Pn   18 14 53.8 +1.0
CABF                            eSn   Sn   18 15 50.2 -1.9
      comp=E,9.9nm,0.3s
BFO   Black Forest     5.26 328 ePn   Pn   18 14 54.4 +1.7
BFO                             eSn   Sn   18 15 48.3 -3.8
ZST   Bratislava       5.32  35 ePN   Pn   18 14 54.5 +0.9
ZST                             eSN   Sn   18 15 50.7 -2.8
OG35  Corcelles        5.35 296  P    Pn   18 14 55.0 +1.0
OG35                             S    Sn   18 15 51.5 -2.8
FRGS  Fruska Gora      5.36  74 ePn   Pn   18 14 54.9 +0.8
FRGS                            eSn   Sn   18 15 53.1 -1.4
FRGS  Fruska Gora      5.36  74 ePn   Pn   18 14 54.8 +0.7
DIVS  Divibare         5.40  86 ePn   Pn   18 14 57.1 +2.4
DIVS                            eSn   Sn   18 15 54.2 -1.4
DIVS  Divibare         5.40  86 ePn   Pn   18 14 54.9 +0.2
MOF   Molkenrain       5.42 318  P    Pn   18 14 56.1 +1.1
CAR1  CAROLEI          5.45 148 ⇑P    Pn   18 15 11.8  +17
SJES  Sjenica          5.46  95 ePn   Pn   18 14 57.5 +1.8
SJES                            eSn   Sn   18 15 56.9 -0.4
HINF  Hinteralfeld     5.53 316 ePn   Pn   18 14 57.2 +0.7
HINF                            eSn   Sn   18 15 56.2 -2.5
      comp=E,22nm,0.2s
MODS  Modra-Piesok     5.53  35 ePN   Pn   18 14 56.1 -0.4
MODS                            eSN   Sn   18 15 54.7 -4.1
ECH   Echery           5.67 321  P    Pn   18 14 59.2 +0.9
ECH   Echery           5.67 321 ePn   Pn   18 14 59.7 +1.3
ECH                             eSn   Sn   18 15 57.1 -4.9
VIVF  Saint-Julien-l   5.69 282 ePn   Pn   18 14 59.2 +0.6
VIVF                            eSn   Sn   18 16 00.2 -2.4
      comp=E,3.5nm,0.2s
TRUS  Trudelj          5.70  84 ePn   Pn   18 15 01.2 +2.5
TRUS                            eSn   Sn   18 16 00.8 -2.0
SMOL  Smolenice        5.71  35 eSN   Sn   18 16 01.0 -2.0
TREC  Trest            5.73  20 ePN   Pn   18 15 00.0 +0.8
CDF   Champ du Feu     5.76 323 ePn   Pn   18 15 00.9 +1.2
CDF                             eSn   Sn   18 16 02.3 -2.1
      comp=E,19nm,0.3s
KRUC  Moravsky         5.78  26 ePN   Pn   18 15 00.2 +0.3
KRUC                            eSN   Sn   18 16 02.1 -2.7
GRF   Grafenberg Arr   5.82 352 eSn   Sn   18 16 02.0 -3.8
HAU   Haudompre        5.91 316 ePn   Pn   18 15 02.5 +0.8
HAU                             eSn   Sn   18 16 05.0 -3.0
      comp=E,28nm,0.2s
GRUS  Gruza            5.93  88 ePn   Pn   18 15 03.8 +1.9
TIR   Tirane           6.01 113 eSn   Sn   18 16 10.3 -0.3
VRAC  Vranov           6.06  26  Pn   Pn   18 15 04.5 +0.8
      comp=E,0.4nm,0.3s,baz=3.5,slow=12,SNR=1.6
VRAC                             Sn   Sn   18 16 10.1 -1.6
      comp=E,2.6nm,0.3s,baz=333,slow=15,SNR=7.0
VRAC  Vranov           6.06  26 ePN   Pn   18 15 04.4 +0.7
VRAC                            eSN   Sn   18 16 08.9 -2.8
PRU   Pruhonice        6.21  12 ePN   Pn   18 15 05.9 +0.2
PRU                             eSN   Sn   18 16 11.6 -3.7
LASF  Ste Croix        6.24 274 ePn   Pn   18 15 07.1 +0.9
LASF                            eSn   Sn   18 16 12.9 -3.3
      comp=E,2.0nm,0.3s
MILB  Miltenberg       6.29 341 ePn   Pn   18 15 07.7 +0.9
MILB                            eSn   Sn   18 16 14.5 -2.8
SELS  Selova           6.30  94 ePn   Pn   18 15 07.9 +0.9
VYHS  Vyhne            6.32  42 ePN   Pn   18 15 07.8 +0.5
VYHS                            eSN   Sn   18 16 14.1 -4.1
PAGF  Fort de Pagny    6.59 317 ePn   Pn   18 15 12.6 +1.7
      baz=137
PAGF                            eSn   Sn   18 16 20.4 -4.2
      comp=E,11nm,0.3s,baz=135
SMF   Signal de Mont   6.68 297 ePn   Pn   18 15 12.8 +0.6
SMF                             eSn   Sn   18 16 23.8 -3.2
      comp=E,11nm,0.3s
SFTF  Sexfontaines     6.72 312 ePn   Pn   18 15 13.5 +0.8
SFTF  Sexfontaines     6.72 312 eP    Pn   18 15 18.2 +5.5
SFTF                            eSn   Sn   18 16 24.8 -3.1
      comp=E,8.0nm,0.2s
MOX   Moxa             6.73 355 ePn   Pn   18 15 13.0 +0.1
MOX                             eSn   Sn   18 16 23.8 -4.4
MORC  Moravsky Berou   6.78  29 ePN   Pn   18 15 14.3 +0.7
MORC                            eSN   Sn   18 16 25.9 -3.6
KRLC  Kraliky          6.79  24 ePN   Pn   18 15 14.3 +0.5
KRLC                            eSN   Sn   18 16 26.5 -3.3
ABH   Alteburg         6.84 332 ePn   Pn   18 15 16.4 +2.0
ABH                             eSn   Sn   18 16 28.8 -2.2
TNS   Taunus Mts       6.87 338 ePn   Pn   18 15 16.8 +2.0
MEZF  Maizieres J'vi   6.89 314 ePn   Pn   18 15 15.8 +0.7
      baz=134
MEZF                            eSn   Sn   18 16 29.1 -3.0
      comp=E,8.5nm,0.3s,baz=132
LOR   Lormes           6.92 302 ePn   Pn   18 15 16.1 +0.6
      baz=122
LOR                             eSn   Sn   18 16 29.4 -3.4
      comp=E,21nm,0.3s
DPC   Dobruska-Polom   6.92  21 ePN   Pn   18 15 15.4 -0.1
DPC                             eSN   Sn   18 16 29.0 -3.8
SAVF  Savonnieres en   6.93 315 ePn   Pn   18 15 17.3 +1.7
      baz=135
SAVF                            eSn   Sn   18 16 29.7 -3.3
      comp=E,4.0nm,0.2s,baz=134
RIVT  Riveris          6.98 328 ePn   Pn   18 15 19.2 +2.9
RIVT                            eSn   Sn   18 16 31.2 -3.2
BRG   Berggiesshubel   7.00   7  Sn   Sn   18 16 28.0 -6.8
BRG                              Amp       18 16 47.5
      comp=Z,5.4nm,0.5s
ZAGS  Zajecar          7.03  88 ePn   Pn   18 15 16.7 -0.3
AVF   Avril sur Loir   7.05 297 ePn   Pn   18 15 17.8 +0.6
AVF                             eSn   Sn   18 16 32.5 -3.5
      comp=Z,3.8nm,0.3s
SSF   Saint Saulge     7.05 299 ePn   Pn   18 15 17.9 +0.6
SSF                             eSn   Sn   18 16 32.7 -3.4
      comp=Z,7.7nm,0.4s
CHVC  Chvalec          7.07  19 ePN   Pn   18 15 17.6  0.0
CHVC                            eSN   Sn   18 16 32.6 -4.0
OSTC  Ostas            7.08  20 ePN   Pn   18 15 17.9 +0.2
LANS  Liptovska Anna   7.08  40 eSN   Sn   18 16 33.8 -3.1
PRVS  Prvonek          7.14  98 ePn   Pn   18 15 19.1 +0.6
PRVS                            eSn   Sn   18 16 35.8 -2.4
BGF   Bois d'Agland    7.30 294 ePn   Pn   18 15 21.2 +0.5
BGF                             eSn   Sn   18 16 38.6 -3.6
      comp=Z,14nm,0.3s
CLL   Collm            7.38   2 i Pn  Pn   18 15 22.5 +0.8
CLL                             eSn   Sn   18 16 42.0 -2.0
CLL                             e          18 17 13.0
CLL                             e          18 17 21.0
CLL                             eSg   Sg   18 17 31.0
ZAPS  Zavoj            7.38  92 ePn   Pn   18 15 23.2 +1.3
BOSS  Bosilegrad       7.43  98 ePn   Pn   18 15 21.7 -0.8
MTLF  Montolieu        7.49 269 ePn   Pn   18 15 24.8 +1.5
MTLF                            eSn   Sn   18 16 42.6 -4.3
      comp=Z,1.7nm,0.4s
MTLF  Montolieu        7.49 269  Pn   Pn   18 15 26.4 +3.1
CAF   Calviac          7.54 281 ePn   Pn   18 15 25.1 +1.1
CAF                             eSn   Sn   18 16 44.0 -4.2
      comp=Z,0.7nm,0.3s
TCF   Toulx Ste Croi   7.65 291 ePn   Pn   18 15 26.1 +0.5
TCF   Toulx Ste Croi   7.65 291 eP    Pn   18 15 31.4 +5.8
TCF                             eSn   Sn   18 16 46.7 -4.2
      comp=Z,6.7nm,0.3s
HYF   Humbligny        7.68 299 ePn   Pn   18 15 26.3 +0.4
HYF                             eSn   Sn   18 16 47.7 -3.7
RJF   Les Rejaudoux    7.96 284 ePn   Pn   18 15 30.6 +0.9
GIVF  Givet            8.09 322 ePn   Pn   18 15 34.0 +2.5
BAIF  Baives           8.34 320 ePn   Pn   18 15 35.8 +0.9
BAIF                            eSn   Sn   18 17 04.4 -3.3
      comp=Z,1.0nm,0.2s
VLS   Valsamata        8.39 131  P    Pn   18 15 39.4 +3.7
MFF   Saint Martin d   9.31 291 ePn   Pn   18 15 48.8 +0.6
MFF                             eSn   Sn   18 17 26.0 -5.5
      comp=Z,0.6nm,0.2s
LDF   La Druitiere     9.90 302 ePn   Pn   18 15 56.8 +0.5
LDF                             eSn   Sn   18 17 39.7 -6.3
      comp=Z,0.7nm,0.3s
FLN   La Foliniere    10.19 303 ePn   Pn   18 16 01.1 +0.9
FLN                             eSn   Sn   18 17 47.8 -5.2
      comp=Z,1.5nm,0.3s
GRR   Gorron          10.28 300 ePn   Pn   18 16 02.5 +1.0
GRR                             eSn   Sn   18 17 49.9 -5.3
      comp=Z,1.1nm,0.3s
SGMF  Saint Gilles    11.31 298 ePn   Pn   18 16 15.4 -0.2
SGMF                            eSn   Sn   18 18 14.5 -5.9
      comp=Z,0.2nm,0.2s
QUIF  Quistinic       11.61 295 ePn   Pn   18 16 20.5 +0.8
QUIF                            eSn   Sn   18 18 21.7 -6.1
      comp=Z,1.2nm,0.4s
FINES FINESS Array B  19.29  20  P    Pn   18 17 58.4 -0.3
      comp=Z,0.1nm,0.3s,baz=200,slow=12,SNR=1.0
BELG  Belogornoye     24.70  58  P    P    18 18 55.5 +2.3
      comp=Z,7.2nm,0.8s,baz=164,slow=11,SNR=4.6
TORD  Torodi Ar. Bea  32.06 200  P    P    18 20 05.6 +6.4
      comp=Z,0.3nm,0.5s,baz=16,slow=9.8,SNR=2.0
MKAR  Makanchi Array  47.63  61  P    P    18 22 10.4 +2.3
      comp=Z,0.3nm,0.7s,baz=297,slow=6.3,SNR=2.1
CMAR  Chiang Mai Arr  74.92  79  P    P    18 25 14.7 +1.7
      comp=Z,0.2nm,0.6s,baz=310,slow=7.3,SNR=4.1
```

BJI ***11*** *18:18:50.5±0.0, 48°.43N×149°.06E, h360^{km}, mB4.9/53, mb5.1/80*

MOS ***11*** *18:18:52.5±0.9, 48°.23N×149°.14E, h396^{km}, mb5.0/78, Error ellipse: s-maj=5.7km s-min=3.4km az=65.6*

SKHL ***11*** *18:18:53.2±0.5, 48°.25N×149°.27E, h380^{km}±5^{km}, mb5.7/6, msh5.7/8*

JMA ***11*** *18:18:53.2±0.6, 47°.59N×149°.94E, h399^{km}, M4.9*

NIED ***11*** *18:18:53.3, 47°.59N×149°.94E, h399^{km}, MW5.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}3.21; $M_{\theta\theta}$-0.16; $M_{\phi\phi}$-3.05; $M_{r\theta}$-2.42; $M_{\theta\phi}$0.25; $M_{\phi r}$-3.78; Fault plane solution: $M_0$5.42000×10^{16} NP1: ϕ_s204.00000°, δ74.00000°, λ105.00000°. NP2: ϕ_s341.00000°, δ22.00000°, λ49.00000°.*

NEIC ***11*** *18:18:54.7±1.5, 48°.43N±0°.08×149°.1E±0°.1, h388^{km}±5^{km}, mb5.0/504 Error ellipse: s-maj=12.6km s-min=9.9km az=150.0*

IDC ***11*** *18:18:55.3±0.4, 48°.44N×149°.03E, h392^{km}±3^{km}, mb4.4/46, mb1 4.5/54, mb1mx4.4/69, mbtmp5.2/54, Error ellipse: s-maj=6.2km s-min=5.3km az=144.0*

GCMT ***11*** *18:18:55.7±0.3, 48°.33N±0°.03×149°.11E±0°.05, h391^{km}±2^{km}, MW5.3/74, Moment Tensor Solution. s74,c107; Duration: 1s.1 Moment tensor: Scale 10^{17}Nm; M_{rr}0.39±.02; $M_{\theta\theta}$-0.04±.04; $M_{\phi\phi}$-0.35±.04; $M_{r\theta}$-0.32±.04; $M_{\theta\phi}$0.25±.04; $M_{\phi r}$-0.85±.03; Best double couple: $M_0$1.00000×10^{17} NP1: ϕ_s311.00000°, δ20.00000°, λ30.00000°. NP2: ϕ_s192.00000°, δ80.00000°, λ108.00000°. Principal axes: T 1.0920, Plg52.0000°, Azm123.0000°; N -0.1840, Plg18.0000°, Azm9.0000°; P -0.9090, Plg33.0000°, Azm267.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

BGR ***11*** *18:19:07.1±0.0, 49°.50N×145°.50E, h391^{km}±9^{km}, mb4.7*

ISC 11 18:18:53.8±0.3**, 48°.29N**±0°.03×**149°.16E**±0°.03**, h386**^{km}±2^{km}**, h385**^{km}**:pP-P, n1554, σ1s.36**/1784**, mb4.9**/464**, 141C-150D, Fault plane solution: NP1:**ϕ_s317.54410°**,** δ30.73660°**,** λ24.67067°. **NP2:**ϕ_s205.99976°**,** δ77.68238°**,** λ118.38435°. **Principal axes:** T Plg49.3431°**,** Azm147.0598°**;** N Plg27.6740°**,** Azm19.4242°**;** P Plg27.1891°**,** Azm273.7958°**; Northwest of Kuril Islands**

```
Code  Station Name     Δ°   AZ°    Phase ID        Time      Res
                                 Op    ISC        h  m  s   ISC
KUR   Kuril'sk         3.18 197c iPN   Pn     18 19 57.2   -0.3
KUR                             i S    S      18 20 47.8   -1.1
KUR                              pmax  pmax
      comp=E,254nm,0.5s
KUR                              pmax  pmax
      comp=Z,2µm,0.5s
KUR                              pmax  pmax
      comp=N,405nm,0.3s
KUR                              smax  smax
      comp=N,894nm,1.2s
KUR                              smax  smax
      comp=E,395nm,0.7s
KUR   Kuril'sk         3.18 197 i P    Pn     18 19 57.5    0.0
KUR                              AMB   AMB    18 19 58.0
```

	comp=E,2µm,0.5s						
KUR				iS	S	18 20 48.0	-0.9
KUR				A	A	18 20 49.8	
	comp=E,8µm,2.0s						
KUR				A	A	18 20 49.8	
	comp=E,15µm,2.0s						
KUR				A	A	18 20 49.9	
	comp=E,650nm,0.6s						
KUR				A	A	18 20 49.9	
	comp=E,1µm,0.6s						
YSS	Yuzh-Sakhalins	4.53	255	ePN	Pn	18 20 11.8	+1.6
YSS				eS	S	18 21 13.3	+1.1
YSS				pmax	pmax		
	comp=Z,700nm,0.5s						
YSS				pmax	pmax		
	comp=Z,200nm,3.1s						
YSS				pmax	pmax		
	comp=N,600nm,2.1s						
YSS				smax	smax		
	comp=E,16µm,2.5s						
YSS				smax	smax		
	comp=E,2µm,1.5s						
YSS				MLR	MLR		
	comp=Z,3µm,11.0s						
YSS				MLR	MLR		
	comp=N,2µm,12.0s						
YSS	Yuzh-Sakhalins	4.53	255	eP	Pn	18 20 11.8	+1.6
YSS				AMB	AMB	18 20 12.5	
	comp=N,70nm,0.5s						
YSS				AMB	AMB	18 20 12.5	
	comp=N,200nm,3.1s						
YSS				eS	S	18 21 13.7	+1.5
YSS				A	A	18 21 16.8	
	comp=N,16µm,2.3s						
YSS				A	A	18 21 16.8	
	comp=N,8µm,2.3s						
YSS				A	A	18 21 16.9	
	comp=N,1µm,1.4s						
YSS				A	A	18 21 16.9	
	comp=N,2µm,1.4s						
YSS	Yuzh-Sakhalins	4.53	255		Pn	18 20 11.0	+0.8
YSS	Yuzh-Sakhalins	4.53	255	P	Pn	18 20 11.1	+0.8
UGL	Uglegorsk	4.77	282	ePN	Pn	18 20 13.2	+0.7
UGL				eS	S	18 21 16.2	-0.3
UGL				pmax	pmax		
	comp=Z,2µm,1.1s						
UGL				pmax	pmax		
	comp=Z,1µm,0.6s						
UGL				smax	smax		
	comp=N,240nm,1.1s						
UGL				smax	smax		
	comp=E,1µm,1.1s						
UGL				smax	smax		
	comp=E,19µm,8.1s						
UGL				smax	smax		
	comp=N,6µm,3.8s						
UGL	Uglegorsk	4.77	282	eP	Pn	18 20 13.1	+0.6
UGL				AMB	AMB	18 20 14.4	
	comp=N,2µm,1.1s						
UGL				AMB	AMB	18 20 14.6	
	comp=N,1µm,0.6s						
UGL				eS	S	18 21 16.6	+0.1
UGL				A	A	18 21 18.8	
	comp=N,19µm,3.8s						
UGL				A	A	18 21 18.8	
	comp=N,6µm,3.8s						
UGL				A	A	18 21 19.1	
	comp=N,242nm,1.1s						
UGL				A	A	18 21 19.1	
	comp=N,1µm,1.1s						
YUK	Yuzh-Kuril'sk	4.83	210	ePN	Pn	18 20 13.0	-0.3
YUK				eS	S	18 21 17.8	-0.1
YUK				pmax	pmax		
	comp=E,437nm,0.3s						
YUK				pmax	pmax		
	comp=Z,4µm,0.3s						
YUK				pmax	pmax		
	comp=N,291nm,0.4s						
YUK				smax	smax		
	comp=E,882nm,0.2s						
YUK	Yuzh-Kuril'sk	4.83	210	eP	Pn	18 20 13.1	-0.3
YUK				AMB	AMB	18 20 14.0	
	comp=E,4µm,0.3s						
YUK				eS	S	18 21 14.8	-3.1
YUK				A	A	18 21 24.0	
	comp=E,2µm,0.7s						
YUK				A	A	18 21 24.0	
	comp=E,882nm,0.7s						
GRPR	Tuman	4.90	210	ePN	Pn	18 20 13.0	-1.1
GRPR				eS	S	18 21 18.4	-0.8
GRPR				pmax	pmax		
	comp=Z,1µm,0.4s						
GRPR				pmax	pmax		
	comp=N,891nm,0.3s						
GRPR				pmax	pmax		
	comp=E,965nm,0.3s						
GRPR				smax	smax		
	comp=N,3µm,0.4s						
GRPR				smax	smax		
	comp=E,2µm,0.3s						
GRPR	Tuman	4.90	210	eP	Pn	18 20 13.0	-1.1
GRPR				AMB	AMB	18 20 16.0	
	comp=E,1µm,0.4s						
GRPR				eS	S	18 21 17.0	-2.2
GRPR				A	A	18 21 25.0	
	comp=E,3µm,0.4s						
GRPR				A	A	18 21 25.0	
	comp=E,2µm,0.4s						
TYV	Tymovskoe	4.95	304	ePN	Pn	18 20 15.7	+1.2
TYV				eS	S	18 21 21.1	+1.1
TYV				pmax	pmax		
	comp=Z,802nm,1.3s						
TYV				pmax	pmax		
	comp=Z,4µm,2.1s						
TYV				smax	smax		
	comp=N,11µm,3.4s						
TYV				smax	smax		
	comp=E,16µm,3.4s						
TYV				smax	smax		
	comp=N,530nm,1.4s						
TYV				smax	smax		
	comp=E,956nm,1.4s						
TYV	Tymovskoe	4.95	304	eP	Pn	18 20 14.7	+0.2
TYV				AMB	AMB	18 20 15.9	
	comp=E,801nm,1.3s						
TYV				AMB	AMB	18 20 16.4	
	comp=E,4µm,2.1s						
TYV				eS	S	18 21 20.1	+0.1
TYV				A	A	18 21 21.9	
	comp=E,11µm,3.3s						
TYV				A	A	18 21 21.9	
	comp=E,16µm,3.3s						
TYV				A	A	18 21 23.7	
	comp=E,530nm,1.3s						
TYV				A	A	18 21 23.7	
	comp=E,956nm,1.3s						
RUSJ	Misakicho	4.99	214	ePN	Pn	18 20 15.3	+0.3
SKR	Severo-Kuril's	5.13	60	ePN	Pn	18 20 15.5	-0.8
SKR				eS	S	18 21 19.9	-3.5
SKR				pmax	pmax		
	comp=Z,1µm,0.7s						
SKR				smax	smax		
	comp=N,786nm,1.0s						
SKR				smax	smax		
	comp=E,159nm,0.6s						
SKR				MLR	MLR		
	comp=E,500nm,13.0s						
SKR				MLR	MLR		
	comp=Z,300nm,13.0s						
SKR				MLR	MLR		
	comp=Z,200nm,12.0s						
SKR				MLR	MLR		
	comp=N,300nm,14.0s						
SKR				MLR	MLR		
	comp=E,400nm,12.0s						
SKR	Severo-Kuril's	5.13	60	eP	Pn	18 20 15.1	-1.2
SKR				AMB	AMB	18 20 16.0	
	comp=E,1µm,0.7s						
SKR				A	A	18 21 21.0	
	comp=E,790nm,1.0s						
SKR				A	A	18 21 21.0	
	comp=E,160nm,1.0s						
SKR				eS	S	18 21 21.1	-2.3
SKR				A	A	18 21 21.5	
	comp=E,3µm,2.0s						
SKR				A	A	18 21 21.5	
	comp=E,3µm,2.0s						
JRA	Rausu	5.18	214	P	Pn	18 20 16.0	-1.0
GLVR	Golovnino	5.21	210	ePN	Pn	18 20 17.1	-0.2
GLVR				eS	S	18 21 23.2	-1.9
GLVR				pmax	pmax		
	comp=N,267nm,0.5s						
GLVR				pmax	pmax		
	comp=Z,1µm,0.5s						
GLVR				pmax	pmax		
	comp=E,325nm,0.4s						
GLVR				smax	smax		
	comp=E,4µm,0.4s						
GLVR				smax	smax		
	comp=N,4µm,0.2s						
GLVR	Golovnino	5.21	210	eP	Pn	18 20 16.6	-0.7
GLVR				AMB	AMB	18 20 18.0	
	comp=N,1µm,0.5s						
GLVR				eS	S	18 21 23.2	-1.9
GLVR				A	A	18 21 33.0	
	comp=N,4µm,0.4s						
GLVR				A	A	18 21 33.0	
	comp=N,4µm,0.4s						
NEM2	Nemuro 2	5.47	207	P	Pn	18 20 16.5	-3.6
NEM2				eS	S	18 21 22.6	-7.7
NMR	Nemuro--Hokkai	5.47	207	⇓iPN	Pn	18 20 16.9	-3.3
NMR				iS	S	18 21 22.7	-7.6
NMR	Nemuro--Hokkai	5.47	207	iP	Pn	18 20 16.9	-3.3
JSE	Soyaes	5.62	236	P	Pn	18 20 22.6	+0.9
JSE				eS	S	18 21 33.5	+0.3
JNK	Nakash	5.63	215	P	Pn	18 20 20.0	-1.9
JTKR	Abashiri--Toko	5.65	222	P	Pn	18 20 21.5	-0.6
JTKR				eS	S	18 21 31.9	-2.0
JWK2	Keihoku	5.80	242	P	Pn	18 20 25.3	+1.6
JWK2				eS	S	18 21 39.1	+2.2
JMP	Maruseppu	5.88	225	P	Pn	18 20 25.3	+0.7
PAU	Pauzhetka	5.88	54	PN	Pn	18 20 23.3	-1.1
PAU				S	S	18 21 33.4	-4.8
PAU	Pauzhetka	5.88	54	eP	Pn	18 20 23.6	-0.8
PAU				AMB	AMB	18 20 25.2	
	comp=N,2µm,0.5s						
PAU				eS	S	18 21 37.1	-1.1
PAU				A	A	18 21 41.4	
	comp=N,1µm,0.8s						
PAU				A	A	18 21 41.4	
	comp=N,709nm,0.8s						
AKK	Akkeshi	6.08	211	eP	Pn	18 20 23.7	-3.1
JAK	Akkeshi	6.15	212	P	Pn	18 20 24.6	-2.9
JAK				eS	S	18 21 36.8	-7.0
JKA	Kamikawa-asahi	6.17	230	eP	Pn	18 20 28.0	+0.2
JKA	Kamikawa-asahi	6.17	230		Pn	18 20 28.0	+0.2
ASAJ	Asahikawa	6.18	230	P	Pn	18 20 28.5	+0.7
	comp=N,120nm,0.3s,baz=64,slow=6.2,SNR=1200						
ASAJ				S	S	18 21 43.4	-1.1
	baz=181,slow=34,SNR=0.8						
ASAJ	Asahikawa	6.18	230	P	Pn	18 20 29.0	+1.2
ASAJ				eS	S	18 21 44.0	-0.4
ASAJ	Asahikawa	6.18	230	PN	Pn	18 20 28.0	+0.2
JRBN	Rebuntou	6.25	246	P	Pn	18 20 28.9	+0.3
JRBN				eS	S	18 21 45.0	-0.8
JAR	Ashorobuto	6.25	219	P	Pn	18 20 27.3	-1.4
JKK2	Kamakawa 2	6.27	228	P	Pn	18 20 29.8	+0.8
MIPR	Malaya Ipel'ka	6.29	48	PN	Pn	18 20 29.0	0.0
MIPR				S	S	18 21 43.8	-2.8
JSS	Shosan	6.38	235	P	Pn	18 20 31.8	+1.7
JSS				eS	S	18 21 50.2	+1.7
JOB	Onbets	6.55	217	P	Pn	18 20 29.6	-2.4
JOB				eS	S	18 21 46.2	-5.9
OKH	Okha	6.58	326	c iPN	P	18 20 34.9	+2.0
OKH				iS	S	18 21 53.2	+0.9
OKH				pmax	pmax		
	comp=Z,400nm,12.3s						
OKH				smax	smax		
	comp=N,2µm,9.7s						
OKH				smax	smax		
	comp=E,2µm,9.1s						
OKH	Okha	6.58	326	iP	P	18 20 34.3	+1.4
OKH				AMB	AMB	18 20 35.4	
	comp=E,2µm,0.5s						
OKH				AMB	AMB	18 20 42.8	
	comp=E,400nm,4.0s						
OKH				iS	S	18 21 55.3	+3.0
OKH				A	A	18 21 57.5	
	comp=E,150nm,0.9s						
OKH				A	A	18 21 57.5	
	comp=E,410nm,0.9s						
OKH				A	A	18 22 00.3	
	comp=E,2µm,9.0s						
OKH				A	A	18 22 00.3	
	comp=E,2µm,9.0s						
KDTR	Khodutka, Kamc	6.74	55	PN	Pn	18 20 31.8	-2.1
JAB	Ashibetsu	6.80	228	P	P	18 20 35.5	-0.2
JAB				eS	S	18 21 56.9	-0.4
JFR	Furan	6.88	224	P	Pn	18 20 35.2	-0.6
JFR				eS	S	18 21 56.0	-3.0
APC	Apacha	6.89	45	PN	Pn	18 20 35.1	-0.5
APC				S	S	18 21 54.0	-4.7
JHR	Hokuryu	6.89	231	P	P	18 20 36.8	+0.1
ASAK	Asacha	6.93	50	PN	Pn	18 20 35.8	-0.4
ASAK				S	S	18 21 56.5	-3.4
JCH	Churui	6.99	218	P	Pn	18 20 34.0	-2.9
JCH				eS	S	18 21 53.1	-8.0
GRL	Gorelyy	7.12	50	PN	Pn	18 20 38.4	+0.1
GRL				S	S	18 22 01.5	-2.2
MTVR	Mutnovka	7.13	51	PN	Pn	18 20 37.9	-0.7
MTVR				S	S	18 21 58.8	-5.4
NKL	Nikolayevsk	7.25	315	ePN	Pn	18 20 37.1	-2.7
NKL				eS	S	18 22 05.0	-1.4
NKL				pmax	pmax		
	comp=E,5.0nm,0.8s						
NKL				pmax	pmax		
	comp=N,417nm,1.3s						
NKL				pmax	pmax		
	comp=Z,337nm,1.5s						
NKL				smax	smax		
	comp=N,1µm,1.5s						
NKL				smax	smax		
	comp=E,2.0nm,1.5s						
NKL				MLR	MLR		
	comp=E,19nm,13.0s						
NKL				MLR	MLR		
	comp=N,3µm,10.0s						
NKL				MLR	MLR		
	comp=Z,446nm,10.0s						
NKL	Nikolayevsk	7.25	315	eP	P	18 20 40.7	+0.1
NKL				AMB	AMB	18 20 41.9	
	comp=Z,190nm,0.7s						
NKL				eS	S	18 22 07.0	+0.6
NKL				A	A	18 22 08.5	
	comp=Z,1µm,2.0s						
NKL				A	A	18 22 08.5	
	comp=Z,2.0nm,2.0s						
NKL				A	A	18 22 09.8	
	comp=Z,160nm,1.0s						
NKL				A	A	18 22 09.8	
	comp=Z,90nm,1.0s						
PEA0B	Petropavlovsk-	7.26	45	d iPN	Pn	18 20 38.9	-0.9
PEA0B	Petropavlovsk-	7.26	45		Pn	18 20 39.5	-0.3
PETK	Petropavlovsk-	7.26	45	P	Pn	18 20 38.5	-1.4
	comp=Z,23nm,0.3s,baz=286,slow=24,SNR=202						
PETK	Petropavlovsk-	7.26	45	PN	Pn	18 20 38.6	-1.2
RUS	Russkaya	7.28	52	PN	Pn	18 20 39.3	-0.7
JBT2	Biratori 2	7.29	223	P	Pn	18 20 38.6	-1.8
JBT2				eS	S	18 22 02.2	-5.2
JNBK	Urakawa-nobuka	7.51	219	P	Pn	18 20 39.6	-3.4
JNBK				eS	S	18 22 03.5	-8.7
JEM	Erimo	7.57	216	P	Pn	18 20 41.4	-2.2
ERM	Erimo	7.57	216	PN	Pn	18 20 41.9	-1.7
ERM	Erimo	7.57	216		Pn	18 20 41.9	-1.7
ERM	Erimo	7.57	216	P	Pn	18 20 42.2	-1.4
PET	Petropavlovsk	7.67	48	⇑iPN	Pn	18 20 44.3	-0.2
PET				pmax	pmax		
	comp=Z,2µm,2.9s						
PET				pmax	pmax		
	comp=Z,508nm,1.1s						
PET				pmax	pmax		
	comp=Z,500nm,6.8s						
PET				MLR	MLR		
	comp=Z,600nm,14.0s						
PET				MLR	MLR		
	comp=Z,800nm,13.0s						
PET	Petropavlovsk	7.67	48	eP	Pn	18 20 43.5	-1.0
PET				AMB	AMB	18 20 44.8	
	comp=Z,500nm,1.0s						
PET				AMB	AMB	18 20 45.0	
	comp=Z,2µm,3.0s						
PET				eS	S	18 22 11.2	-3.9
PET	Petropavlovsk	7.67	48		Pn	18 20 43.3	-1.2
PET	Petropavlovsk	7.67	48	P	Pn	18 20 44.5	0.0
JEW	Eniwo	7.67	228	P	Pn	18 20 44.2	-0.6
JEW				eS	S	18 22 09.8	-5.8
JEW	Eniwo	7.67	228		Pn	18 20 43.5	-1.3
DALK	Dalny	7.72	48	PN	Pn	18 20 44.7	-0.4
GNL	Ganaly	7.74	42	PN	Pn	18 20 45.3	-0.2
KOK	Koryaka	7.82	47	PN	P	18 20 47.0	0.0
KOK				S	S	18 22 14.9	-3.5
KOK	Koryaka	7.82	47	eP	P	18 20 47.0	0.0
JSK	Shakotan	7.82	234	P	Pn	18 20 46.6	+0.2
AVH	Avacha	7.85	47	PN	P	18 20 47.1	-0.3
AVH				S	S	18 22 15.1	-4.0
UGLR	Uglovaya	7.86	48	PN	Pn	18 20 47.1	+0.3
KRER	Koryakskii	7.88	47	PN	Pn	18 20 46.7	-0.5
KRER				S	S	18 22 14.2	-5.7
SMAR	Somma	7.88	47	PN	Pn	18 20 47.4	+0.2
SMAR				S	S	18 22 16.2	-3.8
SDLR	Sedlovina	7.93	47	PN	Pn	18 20 47.6	-0.1
SDLR				S	S	18 22 15.6	-5.3
NLC	Nalytchevo	8.10	49	PN	Pn	18 20 47.9	-1.5
JNB	Noboribetsu	8.15	227	P	Pn	18 20 48.5	-1.8
SPN	Mys Shipunski	8.41	51	PN	Pn	18 20 51.0	-2.0
JSH	Shimam	8.53	232	P	Pn	18 20 53.9	-0.8
JSH				eS	S	18 22 27.8	-6.0
JKB	Kayabe	8.60	225	P	Pn	18 20 52.2	-3.3
JKB				eS	S	18 22 26.1	-9.1
GRNR	Gornyy	8.65	291	⇓iPN	P	18 20 56.4	-0.3
GRNR				eS	S	18 22 34.5	-1.7
GRNR				pmax	pmax		
	comp=E,70nm,0.4s						
GRNR				pmax	pmax		
	comp=Z,70nm,0.4s						
GRNR				smax	smax		
	comp=E,5.0nm,0.4s						
GRNR				MLR	MLR		
	comp=N,390nm,11.0s						
GRNR				MLR	MLR		
	comp=E,970nm,11.0s						
GRNR				MLR	MLR		
	comp=Z,1µm,10.0s						
GRNR	Gornyy	8.65	291	eP	P	18 20 56.4	-0.3
GRNR				AMB	AMB	18 20 57.3	
	comp=Z,70nm,0.4s						
KII	Karymskiy	8.65	44	PN	P	18 20 56.5	-0.2
JYM2	Yakumo 2	8.75	228	P	Pn	18 20 55.2	-2.0
JSR	Shiriuchi	9.17	226	P	Pn	18 20 59.4	-2.7
JSR				eS	S	18 22 38.2	-9.2
TEY	Ternei	9.23	254	⇑iPN	P	18 21 04.3	+1.2
TEY				eS	S	18 22 44.3	-4.2
TEY				pmax	pmax		
	comp=N,50nm,1.0s						
TEY				pmax	pmax		
	comp=E,140nm,1.0s						
TEY				pmax	pmax		
	comp=Z,210nm,1.4s						
TEY				pmax	pmax		
	comp=E,2µm,2.4s						
TEY				pmax	pmax		
	comp=Z,2µm,2.4s						
TEY				pmax	pmax		
	comp=N,200nm,2.5s						
TEY				smax	smax		
	comp=N,3µm,3.8s						
TEY	Ternei	9.23	254	iP	P	18 21 03.5	+0.4
TEY				AMB	AMB	18 21 05.0	
	comp=N,210nm,1.4s						
TEY				AMB	AMB	18 21 06.1	
	comp=N,2µm,2.4s						
TEY				eS	S	18 22 47.0	-1.5
TEY				A	A	18 22 48.8	
	comp=N,3µm,7.0s						
TEY				A	A	18 22 48.8	
	comp=N,2µm,7.0s						
JOSM	Okushiri--Mats	9.23	231	P	Pn	18 21 00.6	-2.2
JTM	Tenmabayashi	9.46	221	P	Pn	18 21 01.6	-3.9
JTM				eS	S	18 22 43.3	-10
JTM	Tenmabayashi	9.46	221		Pn	18 21 01.7	-3.9
JANG	Nango	9.62	217	P	Pn	18 21 03.8	-3.6
JANG				eS	S	18 22 46.4	-11
ESO	Esso	9.63	34	PN	P	18 21 10.0	+2.5
ESO				S	S	18 22 52.6	-4.2
ESO	Esso	9.63	34	eP	P	18 21 10.0	+2.5
TUMR	Tumrok	9.76	40	PN	P	18 21 09.5	+0.5
TUMR				S	S	18 22 54.7	-5.0
JTH	Tanohata	9.85	215	P	Pn	18 21 06.5	-3.6
MKZ	Mys Kozlova	10.04	47	PN	P	18 21 09.2	-2.8
KMNR	Kamenistaya	10.12	38	PN	Pn	18 21 15.5	+2.5
KOZ	Kozyrevsk	10.18	36	PN	Pn	18 21 15.5	+1.8
KPT	Kopyto	10.25	37	PN	Pn	18 21 16.3	+1.7
KPT				S	S	18 23 07.7	-2.2
KIRR	Kirishev	10.29	38	PN	Pn	18 21 16.4	+1.3
KIRR				S	S	18 23 07.0	-3.8
BZWR	Bezymyannyi-We	10.36	38	PN	Pn	18 21 18.0	+2.0
BZWR				S	S	18 23 09.5	-2.8
BZGR	Bezymyannyi-Gr	10.43	38	PN	Pn	18 21 18.2	+1.5
LGNR	Loginova	10.53	38	PN	Pn	18 21 19.6	+1.6
LGNR				S	S	18 23 13.3	-2.6
ZLN	Zelenaya	10.53	38	PN	Pn	18 21 19.6	+1.8
KRSR	Krestovskiy	10.57	37	PN	Pn	18 21 19.7	+1.4
KRSR				S	S	18 23 14.2	-2.2
CIRR	Tsirk	10.57	38	PN	Pn	18 21 20.3	+1.9
KLY	Klyuchi	10.67	37	PN	Pn	18 21 21.3	+2.0
KLY				S	S	18 23 17.3	-1.0
JRG	Rokugo	10.80	218	P	P	18 21 19.1	-1.7
BDR	Baidarnaya	11.07	37	PN	Pn	18 21 25.0	+0.9
SRKR	Sorokina	11.11	37	PN	Pn	18 21 25.6	+1.0
SMKR	Semkarok	11.18	37	PN	Pn	18 21 26.1	+0.7
JIO	Ouri	11.35	213	P	P	18 21 26.3	-0.4
JIO				eS	S	18 23 27.7	-5.2
MA2	Magadan	11.35	4	P	Pn	18 21 27.9	+0.7
	comp=N,5.7nm,0.3s,baz=183,slow=11,SNR=46						
MA2	Magadan	11.35	4	d iPN	Pn	18 21 27.5	+0.3
MA2	Magadan	11.35	4	eP	Pn	18 21 27.5	+0.3
MA2	Magadan	11.35	4	P	Pn	18 21 27.6	+0.3
KBG	Krutoberegovo	11.49	41	PN	P	18 21 27.5	-0.6
KBG	Krutoberegovo	11.49	41	eP	P	18 21 28.3	+0.2
KBTR	Krutoberegovo	11.51	41	PN	P	18 21 26.3	-2.0
KBTR				S	S	18 23 29.4	-6.5
KLR	Kul'dur	11.53	281	P	Pn	18 21 30.6	+1.1
	comp=N,33nm,0.3s,baz=78,slow=11,SNR=458						
KLR				S	S	18 23 40.0	+3.4
	baz=39,slow=22,SNR=8.9						
KLR	Kul'dur	11.53	281	d iPN	Pn	18 21 30.1	+0.5
KLR	Kul'dur	11.53	281	eP	Pn	18 21 30.1	+0.5
JYA	Atsumi	11.87	219	P	P	18 21 32.3	-0.2
JYA				eS	S	18 23 42.1	-1.6
JMM	Marumori	12.07	213	P	P	18 21 35.1	+0.3
JFK	Kawauchi	12.48	212	P	Pn	18 21 40.7	-0.2
BKI	Bering	12.49	50	PN	P	18 21 39.6	+0.5
PALN	Palana	12.55	26	PN	P	18 21 40.4	+0.7
USA0B	Ussuriysk Arra	12.57	257	PN	P	18 21 39.8	-0.3
USA0B	Ussuriysk Arra	12.57	257		P	18 21 39.8	-0.3
USRK	Ussuriysk Ar.	12.57	257	P	P	18 21 40.0	-0.2
	baz=65,slow=11,SNR=129						
USRK				S	S	18 23 59.1	+1.3
	baz=66,slow=23,SNR=5.4						
USRK	Ussuriysk Ar.	12.57	257		P	18 21 39.5	-0.6
JFY	Yanaizu	12.89	216	P	Pn	18 21 45.3	-0.2
JSD	Sado	12.96	222		P	18 21 45.3	+0.8
VLA	Vladivostok	13.13	253	c iPN	P	18 21 46.0	-0.3
VLA	Vladivostok	13.13	253	eP	P	18 21 46.0	-0.3
OSSR	Ossora	13.68	31	P	Pn	18 21 54.2	-0.1
JYT	Yasato	13.75	212		P	18 21 52.9	-0.2
MSHR	Mys Shultsa	13.86	252	c iP	P	18 21 55.1	+0.8
MDJ	Mudanjiang	13.98	262	P	P	18 21 55.1	-0.5
MDJ				S	S	18 24 25.3	-0.7
MDJ				ScS	ScS	18 33 21.0	+0.6
MDJ				pmax	pmax		
	comp=N,250nm,0.6s						
MDJ				pmax	pmax		
	comp=N,310nm,3.7s						
MAJO	Matsushiro	14.24	218	P	P	18 21 58.6	+0.1
MAJO	Matsushiro	14.24	218		P	18 21 58.6	+0.1
MAT	Matsushiro	14.24	218	P	P	18 21 59.0	+0.5
MAT				S	S	18 24 30.0	-1.5
MJAR	Matsushiro Arr	14.24	218	P	P	18 21 59.0	+0.5
	comp=N,2.5nm,0.3s,baz=21,slow=11,SNR=44						
MJAR				S	S	18 24 36.0	+4.5
	baz=22,slow=21,SNR=6.5						
MJAR	Matsushiro Arr	14.24	218	P	P	18 21 58.1	-0.5

MJAR	Matsushiro Arr	14.24	218		P	18 21 58.1	-0.5
SEY	Seymchan	14.79	6	P	P	18 22 05.3	+1.2
	comp=N,3.7nm,0.3s,baz=192,slow=8.6,SNR=129						
SEY				S	S	18 24 42.6	+0.8
	baz=4.2,slow=23,SNR=5.9						
ZEA	Zeya	14.80	300	deP	P	18 22 04.1	-0.3
ZEA				eS	S	18 24 38.1	-4.2
ZEA				pmax	pmax		
	comp=N,30nm,0.6s						
ZEA				pmax	pmax		
	comp=E,20nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,50nm,1.2s						
ZEA				smax	smax		
	comp=E,700nm,5.4s						
ZEA	Zeya	14.80	300	eP	P	18 22 04.5	+0.1
ZEA				AMB	AMB	18 22 06.4	
	comp=E,210nm,0.9s						
JGF	Kuroka	15.40	219	P	P	18 22 11.6	+0.4
JGF				IAmb	IAmb	18 22 20.0	
	comp=Z,32nm,0.6s						
TILK	Tilichiki	15.63	33	P	Pn	18 22 15.8	-0.6
INU	Inuyama	15.76	219	P	P	18 22 15.2	+0.2
INU				IAmb	IAmb	18 22 18.4	
	comp=Z,50nm,0.7s						
JSG	Sagara	15.87	215	P	P	18 22 16.8	+0.6
SMY	Shemya	16.44	65	P	P	18 22 22.6	+0.5
SMY				pmax	pmax		
	comp=Z,235nm,1.2s						
SMY	Shemya	16.44	65	P	P	18 22 22.6	+0.5
JWT	Wachi	16.52	223		P	18 22 23.1	-0.1
CN2	Changchun	17.04	264	eP	P	18 22 25.5	-3.1
CN2				eS	S	18 25 17.4	-9.1
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,900nm,12.0s						
CN2				LR	LR		
	comp=Z,900nm,12.0s						
CN2				LR	LR		
	comp=Z,1μm,14.0s						
KMSK	Kamenskaya	17.11	28	P	P	18 22 30.6	+1.5
YAK	Yakutsk	17.59	329	P	P	18 22 32.7	-1.5
	comp=Z,5.7nm,0.3s,baz=233,slow=0.8,SNR=160						
YAK				S	S	18 25 34.3	-2.6
	comp=Z,0.2nm,0.3s,baz=262,slow=21,SNR=14						
YAK	Yakutsk	17.59	329	eP	P	18 22 33.3	-1.0
YAK				eS	S	18 25 36.4	-0.5
YAK				pmax	pmax		
	comp=Z,197nm,0.5s						
YAK				pmax	pmax		
	comp=N,54nm,0.6s						
YAK				pmax	pmax		
	comp=E,33nm,0.6s						
YAK				smax	smax		
	comp=N,2μm,2.5s						
YAK				smax	smax		
	comp=E,800nm,1.9s						
YAK	Yakutsk	17.59	329	eP	P	18 22 33.3	-1.0
YAK	Yakutsk	17.59	329		P	18 22 32.8	-1.5
JHS	Saijyo	17.84	228	P	P	18 22 38.2	+0.9
JHS				IAmb	IAmb	18 22 42.6	
	comp=Z,68nm,1.1s						
KSSKC	Sokcho	17.99	244	P	P	18 22 39.9	+1.1
	SNR=6.1						
KSJMJ	Jumunjin	18.12	243	P	P	18 22 41.0	+0.8
	SNR=11						
SEHB	SEOHWA	18.17	244	P	P	18 22 41.4	+0.7
	SNR=9.0						
SEHB	SEOHWA	18.17	244	P	P	18 22 41.4	+0.7
	SNR=48						
KSDGY	Daegwallycong	18.30	242	P	P	18 22 43.0	+0.9
	SNR=10						
KSIJA	INJE	18.43	244	P	P	18 22 45.0	+1.5
	SNR=11						
JMN	Monobe	18.51	224	P	P	18 22 45.3	+0.8
JMN				IAmb	IAmb	18 22 49.2	
	comp=Z,63nm,1.0s						
KSULJ	Uljin	18.55	239	P	P	18 22 48.0	+3.3
	SNR=5.1						
HWCB	Hwacheon	18.55	245	P	P	18 22 47.0	+2.2
	SNR=19						
CHYB	Chungyang	18.66	240	P	P	18 22 47.0	+1.0
	SNR=18						
YODB	Yeongdeok	18.66	238	P	P	18 22 48.4	+2.4
	SNR=6.6						
KSCHC	Chuncheon	18.75	244	P	P	18 22 49.0	+2.1
	SNR=7.4						
KSCHC	Chuncheon	18.75	244	P	P	18 22 47.5	+0.6
	SNR=16						
KSWJU	Wonju	18.85	243	P	P	18 22 50.0	+2.0
	SNR=9.8						
KSRS	Korea Array	18.90	243	P	P	18 22 49.3	+0.9
	comp=Z,9.5nm,0.3s,baz=48,slow=9.7,SNR=109						
KSRS				S	S	18 26 04.8	+3.3
	baz=40,slow=18,SNR=1.6						
GAPB	Gapyeong	18.90	244	P	P	18 22 49.0	+0.6
	SNR=7.0						
KS19	Wonju Array Si	18.90	243	P	P	18 22 49.2	+0.8
KS19				IAmb	IAmb	18 22 54.5	
	comp=Z,114nm,1.4s						
KSAR	Wonju Array Be	18.93	243	P	P	18 22 49.2	+0.5
KSAR	Wonju Array Be	18.93	243	P	P	18 22 49.2	+0.5
JECH	Jecheon	18.93	242	P	P	18 22 52.0	+3.2
	SNR=13						
EUSB	Uiseong	19.20	239	P	P	18 22 53.0	+1.5
	SNR=8.2						
KSEUS	ULSEONG	19.20	239	P	P	18 22 52.9	+1.4
	SNR=8.0						
KSCHJ	Chungju	19.26	241	P	P	18 22 55.0	+3.0
	SNR=8.9						
HIA	Hailar	19.36	284	P	P	18 22 50.5	-2.5
HIA				pmax	pmax		
	comp=Z,48nm,0.5s						
HIA	Hailar	19.36	284	P	P	18 22 50.5	-2.5
HIA				IAmb	IAmb	18 22 54.0	
	comp=Z,48nm,0.5s						
AMKA	Amchitka	19.62	70	P	P	18 22 55.5	+0.1
KSGAH	Ganghwa	19.62	246	P	P	18 22 57.6	+2.0
	SNR=12						
OKCB	Cheongsan-myeo	19.72	241	P	P	18 22 58.0	+1.4
	SNR=8.8						
TJN	Taejon	19.95	241	deP	P	18 22 59.7	+1.0
KSDEI	Deokjeokdo	20.12	245	P	P	18 23 01.5	+1.2
	SNR=21						
YPDB	Yeonpyeongdo	20.13	247	P	P	18 23 01.3	+0.9
	SNR=45						
KSSES	Seosan	20.22	244	P	P	18 23 03.0	+1.8
	SNR=9.7						
KSJEO	Jeonju	20.30	241	P	P	18 23 04.0	+2.0
	SNR=31						
KSBAR	Backryungdo	20.52	249	P	P	18 23 05.3	+1.4
	SNR=55						
NAWB	Namwon	20.60	239	P	P	18 23 06.0	+1.3
	SNR=20						
DACB	Daecheong-do R	20.61	249	P	P	18 23 06.0	+1.3
	SNR=32						
OYDB	Oeyeondo	20.82	243	P	P	18 23 09.0	+2.4
	SNR=10						
KSJEU	Jeongeup	20.82	240	P	P	18 23 08.2	+1.6
	SNR=15						
MNYD	Munyeodo	20.90	242	P	P	18 23 09.0	+1.6
	SNR=12						
SMKB	Mukjeong-gil	20.90	241	P	P	18 23 09.0	+1.6
	SNR=7.5						
ECDB	Euchungdo	20.95	243	P	P	18 23 09.5	+1.7
	SNR=21						
KSKWJ	Gwangju	21.02	240	P	P	18 23 09.7	+1.2
	SNR=15						
KSKWJ	Gwangju	21.02	240	P	P	18 23 10.0	+1.5
	SNR=16						
GOCB	Gochang-gun	21.11	241	P	P	18 23 11.0	+1.7
	SNR=25						
BOSB	Boseong-gun	21.18	238	P	P	18 23 11.2	+1.3
	SNR=22						
KOHB	KOHEUNG	21.25	238	P	P	18 23 11.9	+1.4
	SNR=27						
ANMD	Anmado	21.45	241	P	P	18 23 15.0	+2.6
	SNR=9.2						
BILL	Bilibino	21.61	17	d iP	P	18 23 13.8	+0.4
BILL				i S	S	18 26 43.4	-1.6
BILL				pmax	pmax		
	comp=Z,29nm,0.7s						
BILL	Bilibino	21.61	17	eP	P	18 23 13.8	+0.4
BILL	Bilibino	21.61	17	P	P	18 23 13.6	+0.2
BILL				IAmb	IAmb	18 23 16.3	
	comp=Z,30nm,0.7s						
KIWB	Kanaga Island	21.80	68	P	P	18 23 14.9	-0.5
DL2	Dalian	21.93	255	P	P	18 23 17.0	+0.3
DL2				S	S	18 26 50.9	+0.1
DL2				pmax	pmax		
	comp=Z,210nm,1.2s						
DL2				pmax	pmax		
	comp=Z,220nm,3.5s						
JSU	Suzuyama	21.97	227	P	P	18 23 17.9	+0.7
JSU				IAmb	IAmb	18 23 20.4	
	comp=Z,122nm,1.4s						
ADK	Adak	22.09	68	P	P	18 23 17.5	-0.4
ADK				pmax	pmax		
	comp=Z,149nm,1.0s						
ADK	Adak	22.09	68	P	P	18 23 17.5	-0.4
HUK2	Heuksan-myeon	22.25	241	P	P	18 23 23.0	+3.3
	SNR=5.9						
BOD	Bodaibo	22.93	308	eP	P	18 23 24.5	-1.1
BOD				pmax	pmax		
	comp=Z,225nm,1.7s						
BOD	Bodaibo	22.93	308	eP	P	18 23 24.5	-1.1
CIT	Chita	22.97	293	eP	P	18 23 25.0	-1.0
CIT				pmax	pmax		
	comp=Z,83nm,2.6s						
BJI	Beijing	24.90	263	P	P	18 23 43.8	+0.4
BJI				S	S	18 27 36.3	-1.4
BJI				pmax	pmax		
	comp=Z,56nm,0.5s						
BJI				LR	LR		
	comp=Z,890nm,13.5s						
BJI				LR	LR		
	comp=Z,300nm,6.3s						
BJI				LR	LR		
	comp=Z,890nm,14.5s						
BJT	Baijiatuau	24.92	263	P	P	18 23 43.5	-0.1
BJT				pmax	pmax		
	comp=Z,107nm,1.3s						
BJT	Baijiatuau	24.92	263	P	P	18 23 43.5	-0.1
BJT				IAmb	IAmb	18 23 46.4	
	comp=Z,107nm,1.3s						
TIK	Tiksi	25.25	345	eP	P	18 23 45.4	-0.7
TIXI	Tiksi	25.26	345	P	P	18 23 44.6	-1.6
	comp=Z,13nm,0.4s,baz=143,slow=8.6,SNR=77						
TIXI				pP	pwP	18 24 51.9	-0.7
	comp=Z,5.7nm,0.6s,baz=145,slow=12,SNR=1.3						
TIXI				S	S	18 27 41.2	-1.4
	comp=Z,3.8nm,0.5s,baz=310,slow=22,SNR=9.8						
TIXI				ScP	ScP	18 30 08.8	0.0
	comp=Z,4.2nm,0.8s,baz=98,slow=8.4,SNR=4.6						
TIXI	Tiksi	25.26	345	d iP	P	18 23 45.4	-0.8
TIXI				pmax	pmax		
	comp=Z,45nm,1.6s						
TIXI	Tiksi	25.26	345	P	P	18 23 44.9	-1.3
TIXI				IAmb	IAmb	18 23 47.9	
	comp=Z,20nm,0.5s						
TIA	Tai'an	26.41	255	⇓P	P	18 23 57.5	+0.6
TIA				S	S	18 28 00.4	-1.1
TIA				sS	sS	18 30 08.6	+1.2
TIA				pmax	pmax		
	comp=Z,27nm,0.7s						
TIA				pmax	pmax		
	comp=Z,230nm,4.3s						
TIA				LR	LR		
	comp=Z,110nm,3.9s						
TIA				LR	LR		
	comp=Z,130nm,6.7s						
JOW	Kunigami	26.91	225	P	P	18 24 02.4	+1.0
	comp=Z,24nm,0.5s,baz=95,slow=15,SNR=29						
JOW	Kunigami	26.91	225	P	P	18 24 02.0	+0.6
SSE	Sheshan	27.32	241	P	P	18 24 05.0	+0.1
SSE				S	S	18 28 17.1	+1.3
SSE				pmax	pmax		
	comp=Z,12nm,0.6s						
SSE				pmax	pmax		
	comp=Z,140nm,3.3s						
SSE				LR	LR		
	comp=Z,160nm,17.4s						
SSE				LR	LR		
	comp=Z,210nm,17.5s						
HHC	Hu-ho-hao-te	27.58	268	eP	P	18 24 07.9	+0.6
HHC				S	S	18 28 16.3	-3.7
HHC				pmax	pmax		
	comp=Z,180nm,1.2s						
HHC				pmax	pmax		
	comp=Z,180nm,5.7s						
HHC				LR	LR		
	comp=Z,550nm,13.2s						
HHC				LR	LR		
	comp=Z,700nm,13.2s						
HHC				LR	LR		
	comp=Z,1μm,12.7s						
ULN	Ulaanbaatar	27.88	285	d iP	P	18 24 09.7	-0.3
ULN				pmax	pmax		
	comp=Z,60nm,1.7s						
ULN	Ulaanbaatar	27.88	285	P	P	18 24 09.9	-0.1
ULN	Ulaanbaatar	27.88	285	eP	P	18 24 09.7	-0.3
ULN	Ulaanbaatar	27.88	285	P	P	18 24 09.6	-0.3
ULN				IAmb	IAmb	18 24 11.1	
	comp=Z,26nm,0.5s						
NJ2	Nanjing	28.03	246	eP	P	18 24 13.0	+1.8
NJ2				S	S	18 28 26.3	-0.6
NJ2				PcS	PcS	18 30 53.0	-4.1
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
NJ2				LR	LR		
	comp=Z,490nm,12.3s						
NJ2				LR	LR		
	comp=Z,290nm,12.3s						
NJ2				LR	LR		
	comp=Z,470nm,13.3s						
SONM	Songino Array	28.32	285	P	P	18 24 13.3	-0.4
	comp=Z,20nm,0.5s,baz=63,slow=8.9,SNR=127						
SONM				pP	pP	18 25 25.4	+1.2
	comp=Z,0.9nm,0.4s,baz=28,slow=6.7,SNR=1.0						
SONM				ScP	ScP	18 30 19.0	+0.3
	comp=Z,8.9nm,1.0s,baz=115,slow=2.1,SNR=22						
SONM	Songino Array	28.32	285	P	P	18 24 13.4	-0.4
IRK	Irkutsk	28.61	295	eP	P	18 24 14.9	-1.2
IRK				e		18 25 26.3	
IRK				pmax	pmax		
	comp=Z,77nm,1.9s						
TIY	Taiyuan	28.61	262	eP	P	18 24 17.9	+1.5
TIY				pP	pP	18 25 27.7	+1.0
TIY				S	S	18 28 37.7	+1.6
TIY				ScS	ScS	18 34 14.4	+0.5
TIY				pmax	pmax		
	comp=Z,90nm,0.8s						
BTO	Baotou	28.73	269	eP	P	18 24 17.1	-0.3
BTO				S	S	18 28 43.3	+5.4
BTO				LR	LR		
	comp=Z,2μm,11.0s						
BTO				LR	LR		
	comp=Z,3μm,12.0s						
TLY	Talaya	29.10	294	P	P	18 24 20.3	-0.1
	comp=Z,30nm,0.4s,baz=102,slow=6.2,SNR=61						
TLY				pP	pP	18 25 33.2	+2.4
	comp=Z,10.0nm,0.9s,baz=97,slow=12,SNR=2.5						
TLY				ScP	ScP	18 30 21.7	+0.7
	comp=Z,6.3nm,0.7s,baz=127,slow=2.7,SNR=5.5						
TLY	Talaya	29.10	294	ceP	P	18 24 20.3	-0.1
TLY				e		18 25 34.0	
TLY				pmax	pmax		
	comp=Z,72nm,0.6s						
TLY	Talaya	29.10	294	P	P	18 24 20.3	-0.1
TLY	Talaya	29.10	294	P	P	18 24 20.1	-0.4
TLY				IAmb	IAmb	18 24 21.2	
	comp=Z,43nm,0.4s						
TLY				pP	pP	18 25 31.2	+0.4
TLY					ScP	18 30 21.5	+0.6
ANM	Nome	29.12	39	P	P	18 24 21.1	+0.7
ANM				pmax	pmax		
	comp=Z,66nm,1.5s						
ANM	Nome	29.12	39	P	P	18 24 21.1	+0.7
ZAK	Zakamensk	29.61	292	eP	P	18 24 24.6	-0.4
ZAK				e		18 25 39.6	
ZAK				pmax	pmax		
	comp=Z,61nm,1.6s						
MOY	Mondy	30.71	295	eP	P	18 24 34.6	-0.1
MOY				pmax	pmax		
	comp=Z,59nm,2.2s						
WHN	Wuhan	31.85	249	⇓P	P	18 24 45.0	+0.4
WHN				S	S	18 29 26.4	+0.1
WHN				pmax	pmax		
	comp=Z,140nm,0.5s						
WHN				LR	LR		
	comp=Z,710nm,7.8s						
WHN				LR	LR		
	comp=Z,290nm,4.0s						
WHN				LR	LR		
	comp=Z,630nm,12.1s						
CHGN	Chignik	32.34	56	P	P	18 24 47.5	-0.9
CHGN				IAmb	IAmb	18 24 50.7	
	comp=Z,160nm,1.4s						
XAN	Xi'an	33.06	259	P	P	18 24 54.4	-0.7
XAN				pP	pP	18 26 04.5	-1.9
XAN				PP	PP	18 26 21.1	+1.4
XAN				S	S	18 29 42.7	-2.3
XAN				SS	SS	18 32 17.3	-10
XAN				ScS	ScS	18 34 36.1	-0.1
XAN				pmax	pmax		
	comp=Z,80nm,1.3s						
XAN				pmax	pmax		
	comp=Z,390nm,3.5s						
XAN				LR	LR		
	comp=Z,390nm,11.8s						
XAN				LR	LR		
	comp=Z,310nm,14.4s						
XAN				LR	LR		
	comp=Z,440nm,13.3s						
TTA	Tatalina	33.09	43	P	P	18 24 55.5	+0.6
TTA				pmax	pmax		
	comp=Z,57nm,1.1s						
TTA	Tatalina	33.09	43	P	P	18 24 55.9	+1.0
	baz=270,SNR=18						
TTA	Tatalina	33.09	43	P	P	18 24 55.5	+0.6
TTA				IAmb	IAmb	18 24 57.4	
	comp=Z,57nm,1.1s						
SSLB	Suanglung	33.10	232	P	P	18 24 54.5	-0.9
YULB	Yu-li	33.25	232	P	P	18 24 56.0	-0.7
SVW2	Sparrevohn	33.34	47	P	P	18 24 56.1	-0.9
SVW2				IAmb	IAmb	18 25 00.1	
	comp=Z,41nm,0.7s						
O18K	Koktuh Hills	33.61	49	P	P	18 25 00.7	+1.3
	baz=276						
L19K	White Mountain	33.64	45	P	P	18 25 00.6	+1.0
	baz=272,SNR=6.2						
L19K	White Mountain	33.64	45	P	P	18 25 00.2	+0.7
P18K	Big Mountain,	33.65	50	P	P	18 25 01.0	+1.3
	baz=276,SNR=5.8						
P18K	Big Mountain,	33.65	50	P	P	18 25 00.8	+1.1
P18K				IAmb	IAmb	18 25 02.9	
	comp=Z,114nm,1.1s						
TPUB	Ta-pu	33.67	232	P	P	18 24 59.7	-0.6
TPUB				IAmb	IAmb	18 25 06.0	
	comp=Z,92nm,1.5s						
TWG	Pinlang	33.83	231	P	P	18 25 01.1	-0.6
TWG				IAmb	IAmb	18 25 06.8	
	comp=Z,43nm,0.7s						
A21K	Barrow	33.86	28	P	P	18 25 02.4	+1.1
	baz=257						
A21K	Barrow	33.86	28	P	P	18 25 01.2	-0.1
M19K	Big River Lodg	33.87	45	P	P	18 25 02.7	+1.2
	baz=273						
N19K	Bonanza Creek	33.89	47	P	P	18 25 03.3	+1.4
	baz=275,SNR=11						
N19K	Bonanza Creek	33.89	47	P	P	18 25 03.2	+1.4
N19K				IAmb	IAmb	18 25 04.8	
	comp=Z,50nm,0.9s						
J20K	Nowinta River	33.93	41	P	P	18 25 03.2	+1.2
	baz=270,SNR=16						
J20K	Nowinta River	33.93	41	P	P	18 25 02.5	+0.5
J20K				IAmb	IAmb	18 25 04.5	
	comp=Z,60nm,1.1s						
K20K	Telida	33.97	42	P	P	18 25 03.7	+1.3
	baz=271,SNR=9.5						
K20K	Telida	33.97	42	P	P	18 25 03.4	+1.0
K20K				IAmb	IAmb	18 25 05.7	
	comp=Z,67nm,1.4s						
O19K	Port Alsworth	34.02	48	P	P	18 25 04.9	+2.1
	baz=276						
L20K	Farewell, AK	34.08	44	P	P	18 25 04.7	+1.3
	baz=273,SNR=5.5						
IMAR	Indian Mountai	34.15	38	P	P	18 25 04.2	+0.4
Q19K	Cape Douglas,	34.51	50	P	P	18 25 07.7	+0.7
	baz=278,SNR=11						
Q19K	Cape Douglas,	34.51	50	P	P	18 25 07.4	+0.3
KRAR	Krasnoyarsk	34.51	304	⇑iP	P	18 25 07.4	+0.4
H21K	Melozitna Rive	34.52	38	P	P	18 25 07.5	+0.5
	baz=269,SNR=16						
H21K	Melozitna Rive	34.52	38	P	P	18 25 06.4	-0.6
SII	Sitkinak Islan	34.61	55	P	P	18 25 08.1	+0.2
P19K	Oil Pt	34.63	49	P	P	18 25 09.4	+1.4
	baz=277						
CHUM	Lake Minchumin	34.74	41	P	P	18 25 10.5	+1.7
	baz=272,SNR=7.9						
RSO	Redoubt South	34.77	48	P	P	18 25 10.5	+1.1
PPLA	Purkeypile	34.84	43	P	P	18 25 11.4	+1.5
	baz=274,SNR=10						
PPLA	Purkeypile	34.84	43	P	P	18 25 11.2	+1.4
CAST	Castle Rocks	34.86	42	P	P	18 25 10.8	+0.9
	baz=273,SNR=25						
CAST	Castle Rocks	34.86	42	P	P	18 25 10.8	+0.9
CAST				IAmb	IAmb	18 25 12.7	
	comp=Z,49nm,1.0s						
I21K	Tanana	34.86	39	P	P	18 25 10.5	+0.6
	baz=270,SNR=9.9						
I21K	Tanana	34.86	39	P	P	18 25 10.5	+0.6
O20K	Slope Mountain	34.88	48	P	P	18 25 11.4	+1.3
	baz=277						
SPCR	Spurr Chakacha	34.96	46	P	P	18 25 12.8	+1.9
	baz=276,SNR=19						
OHAK	Old Harbor	34.97	53	P	P	18 25 11.1	+0.3
	baz=281,SNR=7.6						
OHAK	Old Harbor	34.97	53	P	P	18 25 10.9	+0.1
SPU	Mount Spurr	35.04	46	P	P	18 25 12.8	+1.4
ENH	Enshi	35.11	254	P	P	18 25 10.7	-1.8
ENH				IAmb	IAmb	18 25 14.5	
	comp=Z,48nm,0.5s						
SKT	Skwentna	35.21	45	P	P	18 25 13.5	+0.7
	baz=275						
LZH	Lanzhou	35.23	267	eP	P	18 25 14.9	+1.4
LZH				sP	sP	18 27 07.6	-2.6
LZH				eS	S	18 30 16.1	-2.0
LZH				ScP	ScP	18 30 43.3	+0.8
LZH				pmax	pmax		
	comp=Z,240nm,1.1s						
LZH				pmax	pmax		
	comp=Z,720nm,4.1s						
KDAK	Kodiak Island	35.24	52	P	P	18 25 13.2	+0.1
	comp=Z,42nm,0.4s,baz=264,slow=4.9,SNR=97						
KDAK	Kodiak Island	35.24	52	P	P	18 25 13.7	+0.6
	baz=280						
KDAK	Kodiak Island	35.24	52	P	P	18 25 13.5	+0.4
KDAK				IAmb	IAmb	18 25 15.2	
	comp=Z,112nm,1.1s						
BPAW	Bear Paw Mtn.	35.32	41	P	P	18 25 14.6	+0.9
	baz=273,SNR=9.5						
BPAW	Bear Paw Mtn.	35.32	41	P	P	18 25 14.2	+0.5
KTH	Kantishna Hill	35.37	42	P	P	18 25 15.4	+1.1
KTH				IAmb	IAmb	18 25 17.1	
	comp=Z,101nm,1.1s						
MLY	Manley	35.39	39	P	P	18 25 15.7	+1.3
	baz=272,SNR=18						
MLY	Manley	35.39	39	P	P	18 25 14.8	+0.4
MLY					PcP	18 27 35.0	+0.8
HOM	Homer	35.43	49	P	P	18 25 16.3	+1.6
	baz=278						
HOM	Homer	35.43	49	P	P	18 25 15.7	+1.1
COLD	Coldfoot	35.61	36	P	P	18 25 16.4	+0.3
	baz=269,SNR=16						
COLD	Coldfoot	35.61	36	P	P	18 25 16.2	+0.1
SUA	Susitna One	35.63	46	P	P	18 25 17.0	+0.5
	baz=277						
SUA	Susitna One	35.63	46	P	P	18 25 16.8	+0.3
CNPM	China Poot	35.65	49	P	P	18 25 16.2	-0.4
TRF	Thorofare Moun	35.66	42	P	P	18 25 17.6	+0.7
	baz=274,SNR=9.0						
TRF	Thorofare Moun	35.66	42	P	P	18 25 17.4	+0.6
CUT	Chulitna	35.76	44	P	P	18 25 18.1	+0.7
	baz=276,SNR=12						
CUT	Chulitna	35.76	44	P	P	18 25 18.0	+0.6
BRLK	Bradley Lake	35.79	49	P	P	18 25 17.5	-0.3
BRSE	Bradley Lake S	35.87	49	P	P	18 25 18.6	+0.2
	baz=279						
H23K	Yukon River	35.87	38	P	P	18 25 19.3	+0.9
	baz=272,SNR=18						
H23K	Yukon River	35.87	38	P	P	18 25 18.3	-0.1
TOLK	Toolik Lake Re	35.89	33	P	P	18 25 19.3	+0.7
	baz=268,SNR=21						
TOLK	Toolik Lake Re	35.89	33	P	P	18 25 18.9	+0.3

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M22K  Willow            35.90  45    P      P      18 25 18.4 -0.2
      baz=277
I23K  Minto, Yukon-K    35.97  39    P      P      18 25 19.9 +0.7
      baz=273,SNR=15
I23K  Minto, Yukon-K    35.97  39    P      P      18 25 19.7 +0.6
BWN   Browne            35.98  41    P      P      18 25 21.0 +1.7
NRIK  Noril'sk          36.05 328    P      P      18 25 19.5 -0.3
      comp=Z,19nm,0.4s,baz=110,slow=6.3,SNR=32
NRIK                                 ScP    ScP    18 30 45.3 +0.6
      comp=Z,3.8nm,0.5s,baz=115,slow=3.2,SNR=7.6
NRIK  Noril'sk          36.05 328d iP    P      18 25 19.2 -0.6
NRIK                                 pmax   pmax
      comp=Z,64nm,1.2s
NRIK  Noril'sk          36.05 328    P      P      18 25 19.6 -0.1
NRIK                                 IAmb   IAmb   18 25 21.8
      comp=Z,71nm,1.2s
NEA2  Nenana            36.12  40    P      P      18 25 21.0 +0.5
      baz=274,SNR=35
NEA2  Nenana            36.12  40    P      P      18 25 21.2 +0.7
NEA2                                 IAmb   IAmb   18 25 23.1
      comp=Z,50nm,1.0s
GTA   Gaotai            36.13 275  ⇓P      P      18 25 22.1 +1.1
GTA                                  pP     pP     18 26 32.3 -1.3
GTA                                  PP     PP     18 26 55.4 +2.4
GTA                                  sP     sP     18 27 10.9 -7.0
GTA                                  PcP    PcP    18 27 39.0 +2.0
GTA                                  S      S      18 30 33.0 +1.4
GTA                                  ScP    ScP    18 30 46.3 +0.6
GTA                                  ScS    ScS    18 34 53.5 +0.7
GTA                                  pmax   pmax
      comp=Z,62nm,1.0s
GTA                                  pmax   pmax
      comp=Z,260nm,4.3s
RC01  Rabbit Creek A    36.16  46    P      P      18 25 20.8 -0.1
      baz=278
RC01  Rabbit Creek A    36.16  46    P      P      18 25 20.8 -0.1
RC01                                 IAmb   IAmb   18 25 23.3
      comp=Z,79nm,1.2s
MCK   McKinley          36.25  42    P      P      18 25 22.2 +0.6
MCK                                  pmax   pmax
      comp=Z,44nm,1.1s
MCK   McKinley          36.25  42    P      P      18 25 22.4 +0.8
      baz=275,SNR=15
MCK   McKinley          36.25  42    P      P      18 25 22.2 +0.6
O22K  Cooper Landing    36.26  47    P      P      18 25 21.8 +0.1
      baz=279,SNR=12
O22K  Cooper Landing    36.26  47    P      P      18 25 21.7 +0.1
RND   Reindeer          36.31  42    P      P      18 25 22.1 -0.1
RND                                  pmax   pmax
      comp=Z,46nm,1.0s
RND   Reindeer          36.31  42    P      P      18 25 22.1 -0.1
PMR   Palmer            36.39  45    P      P      18 25 23.6 +0.9
PMR                                  pmax   pmax
      comp=Z,44nm,1.1s
PMR   Palmer            36.39  45    P      P      18 25 23.7 +1.0
      baz=278,SNR=12
PMR   Palmer            36.39  45    P      P      18 25 23.6 +0.9
SEW   Seward            36.45  48    P      P      18 25 23.5 +0.3
      baz=280,SNR=11
SEW   Seward            36.45  48    P      P      18 25 23.5 +0.3
SEW                                  IAmb   IAmb   18 25 25.3
      comp=Z,80nm,0.9s
MDM   Murphy Dome       36.46  39    P      P      18 25 23.9 +0.5
GHO   Glory Hole Cre    36.46  45    P      P      18 25 24.0 +0.6
GHO                                  IAmb   IAmb   18 25 26.1
      comp=Z,83nm,1.0s
WAT1  Susitna Watana    36.51  43    P      P      18 25 23.7 -0.1
      baz=277
WRH   Wood River Hil    36.56  40    P      P      18 25 24.5 +0.4
H24K  Noodor Dome       36.56  38    P      P      18 25 25.2 +1.0
      baz=273
H24K  Noodor Dome       36.56  38    P      P      18 25 24.7 +0.5
TCOL  CIGO, UAF Yank    36.62  40    P      P      18 25 25.5 +0.9
      baz=274,SNR=12
TCOL  CIGO, UAF Yank    36.62  40    P      P      18 25 25.4 +0.9
TCOL                                 IAmb   IAmb   18 25 26.9
      comp=Z,62nm,0.8s
COLA  College           36.63  40c iP    P      18 25 25.6 +1.0
COLA                                 pmax   pmax
      comp=Z,51nm,0.7s
COLA  College           36.63  40    P      P      18 25 25.3 +0.7
COLA                                 IAmb   IAmb   18 25 26.9
      comp=Z,62nm,0.8s
KNK   Knik Glacier      36.73  45    P      P      18 25 26.3 +0.7
      baz=279,SNR=41
KNK   Knik Glacier      36.73  45    P      P      18 25 26.0 +0.4
SML   Sawmill           36.74  45    P      P      18 25 26.5 +0.8
      baz=278,SNR=35
SML   Sawmill           36.74  45    P      P      18 25 26.2 +0.5
POKR  Poker Plat Res    36.79  39    P      P      18 25 27.3 +1.2
      baz=274,SNR=14
POKR  Poker Plat Res    36.79  39    P      P      18 25 27.2 +1.2
POKR                                 IAmb   IAmb   18 25 31.1
      comp=Z,32nm,0.5s
PWL   Port Wells        36.88  46    P      P      18 25 27.0 +0.2
      baz=279,SNR=10
PWL   Port Wells        36.88  46    P      P      18 25 26.7 -0.1
PWL                                  IAmb   IAmb   18 25 29.2
      comp=Z,37nm,0.5s
WAT6  Susitna Watana    36.91  43    P      P      18 25 27.2  0.0
      baz=278,SNR=14
DHY   Denali Highway    37.01  43    P      P      18 25 28.4 +0.3
      baz=277
DHY   Denali Highway    37.01  43    P      P      18 25 28.3 +0.2
DHY                                  IAmb   IAmb   18 25 29.9
      comp=Z,89nm,1.3s
IL31                    37.05  40    P      P      18 25 28.2 +0.1
IL31                                 IAmb   IAmb   18 25 29.9
      comp=Z,50nm,1.1s
ILAR  Eielson Array     37.05  40    P      P      18 25 28.1 -0.1
      comp=Z,26nm,0.8s,baz=258,slow=5.6,SNR=266
ILAR                                 S      S      18 30 44.1 -0.4
      comp=Z,1.5nm,1.0s,baz=258,slow=8.9,SNR=5.6
ILAR  Eielson Array     37.05  40    P      P      18 25 28.2  0.0
HDA   Harding Lake      37.05  40    P      P      18 25 28.2 -0.1
      baz=276,SNR=20
HDA   Harding Lake      37.05  40    P      P      18 25 27.9 -0.4
HDA                                  IAmb   IAmb   18 25 29.6
      comp=Z,30nm,0.4s
SCM   Sheep Creek Mo    37.20  45    P      P      18 25 30.2 +0.6
SCM                                  pmax   pmax
      comp=Z,73nm,0.8s
SCM   Sheep Creek Mo    37.20  45    P      P      18 25 30.9 +1.3
      baz=279,SNR=18
SCM   Sheep Creek Mo    37.20  45    P      P      18 25 30.2 +0.6
SCM                                  IAmb   IAmb   18 25 32.5
      comp=Z,73nm,0.8s
GLI   Glacier Island    37.47  46    P      P      18 25 32.1 +0.4
      baz=280
GLI   Glacier Island    37.47  46    P      P      18 25 31.6 -0.1
GLI                                  IAmb   IAmb   18 25 33.4
      comp=Z,69nm,1.2s
PRP   Porcupine Dome    37.55  38    P      P      18 25 33.3 +0.8
      baz=276,SNR=9.6
PRP   Porcupine Dome    37.55  38    P      P      18 25 32.8 +0.3
PRP                                  IAmb   IAmb   18 25 34.8
      comp=Z,79nm,1.2s
FYU   Fort Yukon        37.58  37    P      P      18 25 33.5 +0.9
FYU                                  IAmb   IAmb   18 25 34.6
      comp=Z,39nm,0.6s
M24K  Tolsona, Glenn    37.70  44    P      P      18 25 35.2 +1.5
      baz=280,SNR=8.1
M24K  Tolsona, Glenn    37.70  44    P      P      18 25 34.9 +1.2
M24K                                 IAmb   IAmb   18 25 36.6
      comp=Z,66nm,1.0s
J25K  Salcha River,     37.71  40    P      P      18 25 33.2 -0.6
      baz=277,SNR=12
BMAR  Burnt Mountain    37.78  35    P      P      18 25 33.6 -0.6
FID   Port Fidalgo      37.79  46    P      P      18 25 33.9 -0.5
FID                                  IAmb   IAmb   18 25 36.1
      comp=Z,76nm,1.2s
PAX   Paxson            37.89  43    P      P      18 25 34.4 -0.9
PAX                                  pmax   pmax
      comp=Z,15nm,1.1s
PAX   Paxson            37.89  43    P      P      18 25 35.5 +0.2
      baz=279,SNR=6.2
PAX   Paxson            37.89  43    P      P      18 25 34.4 -0.9
KLU   Klutina           37.92  45    P      P      18 25 36.5 +0.9
      baz=280,SNR=22
KLU   Klutina           37.92  45    P      P      18 25 36.3 +0.7
RIDG  Independent Ri    38.05  41    P      P      18 25 36.5 -0.1
      baz=278,SNR=16
RIDG  Independent Ri    38.05  41    P      P      18 25 36.2 -0.3
RIDG                                 IAmb   IAmb   18 25 37.8
      comp=Z,63nm,1.2s
DIV   Divide            38.06  46    P      P      18 25 37.0 +0.3
HARP  HAARP             38.12  43    P      P      18 25 38.2 +1.1
      baz=280,SNR=24
EYAK  Cordova Ski Ar    38.18  46    P      P      18 25 38.4 +0.8
      baz=282,SNR=6.3
EYAK  Cordova Ski Ar    38.18  46    P      P      18 25 38.6 +1.1
EYAK                                 IAmb   IAmb   18 25 40.7
      comp=Z,64nm,1.0s
SCRK  Sand Creek        38.40  41    P      P      18 25 39.0 -0.5
      baz=279,SNR=27
SCRK  Sand Creek        38.40  41    P      P      18 25 38.5 -1.0
SCRK                                 IAmb   IAmb   18 25 40.7
      comp=Z,67nm,1.3s
DOT   Dot Lake          38.41  41    P      P      18 25 37.0 -2.5
CD2   Chengdu           38.42 260    P      P      18 25 40.2 +0.2
CD2                                  S      S      18 31 03.5 -2.4
CD2                                  pmax   pmax
      comp=Z,170nm,0.7s
CD2                                  pmax   pmax
      comp=Z,410nm,6.4s
CD2                                  LR     LR
      comp=Z,350nm,10.8s
CD2                                  LR     LR
      comp=Z,280nm,8.6s
J26L  Joseph Creek      38.50  40    P      P      18 25 39.7 -0.6
      baz=278,SNR=8.3
N25K  Chitina, Valde    38.52  45    P      P      18 25 41.7 +1.2
      baz=281,SNR=11
N25K  Chitina, Valde    38.52  45    P      P      18 25 40.3 -0.2
BMRM  Bremner River     38.65  46    P      P      18 25 42.5 +1.0
      baz=282,SNR=15
BMRM  Bremner River     38.65  46    P      P      18 25 41.4 -0.1
BMRM                                 IAmb   IAmb   18 25 44.6
      comp=Z,74nm,1.0s
MENT  Mentasta          38.68  42    P      P      18 25 41.1 -0.6
L26K  Log Cabin Wild    38.83  42    P      P      18 25 44.5 +1.5
      baz=280,SNR=8.9
L26K  Log Cabin Wild    38.83  42    P      P      18 25 44.4 +1.5
GLB   Gilahina Butte    38.93  45    P      P      18 25 44.8 +1.0
M26K  Nabesna, AK       39.11  43    P      P      18 25 46.8 +1.5
      baz=282
VRDI  Verde Repeater    39.14  45    P      P      18 25 46.8 +1.1
BERG  Berg Lake         39.21  46    P      P      18 25 47.3 +1.3
BERG                                 IAmb   IAmb   18 25 49.0
      comp=Z,90nm,1.1s
MCARA McCarthy VSAT     39.31  45    P      P      18 25 48.9 +2.0
      baz=283,SNR=18
MCARA McCarthy VSAT     39.31  45    P      P      18 25 47.4 +0.6
MCARA                                IAmb   IAmb   18 25 51.7
      comp=Z,60nm,0.9s
CRQM  Cirque            39.39  46    P      P      18 25 48.1 +0.3
CRQE  Cirque            39.42  46    P      P      18 25 49.2 +1.3
      baz=284,SNR=26
EGAK  Eagle             39.48  39    P      P      18 25 48.1 -0.1
      baz=280,SNR=25
EGAK  Eagle             39.48  39    P      P      18 25 47.4 -0.8
EGAK                                 IAmb   IAmb   18 25 49.7
      comp=Z,66nm,1.2s
L27K  Beaver Creek,     39.51  42    P      P      18 25 50.0 +1.5
      baz=282,SNR=58
L27K  Beaver Creek,     39.51  42    P      P      18 25 49.0 +0.5
L27K                                 IAmb   IAmb   18 25 51.5
      comp=Z,100nm,1.1s
DGZ   Jazzator, Alta    39.52 296d iP    P      18 25 49.4 +0.5
DGZ                                  pmax   pmax
      comp=Z,66nm,1.4s
BCAR  Beaver Creek A    39.52  42    P      P      18 25 48.9 +0.3
GYA   Guiyang           39.53 252  ⇓P      P      18 25 49.8 +0.5
GYA                                  PP     PP     18 27 32.2 +2.4
GYA                                  S      S      18 31 23.0 +0.4
GYA                                  pmax   pmax
      comp=Z,58nm,1.0s
GYA                                  pmax   pmax
      comp=Z,490nm,3.5s
ZAA0  Zalesovo Array    39.53 303    P      P      18 25 47.0 -1.8
ZAA0                                 IAmb   IAmb   18 25 49.0
      comp=Z,29nm,0.5s
ZALV  Zalesovo Beam     39.53 303    P      P      18 25 47.5 -1.2
      comp=Z,32nm,0.4s,baz=60,slow=7.0,SNR=198
ZALV                                 PcP    PcP    18 27 47.5 +0.3
      comp=Z,5.9nm,0.6s,baz=81,slow=3.1,SNR=5.6
ZALV                                 ScP    ScP    18 30 57.6 -0.6
      comp=Z,1.7nm,0.4s,baz=72,slow=4.8,SNR=7.9
ZALV  Zalesovo Beam     39.53 303  i P      P      18 25 47.5 -1.2
ZALV                                 pmax   pmax
      comp=Z,32nm,0.4s
TGL   Tana Glacier      39.54  46    P      P      18 25 49.1 +0.3
TGL                                  IAmb   IAmb   18 25 51.7
      comp=Z,74nm,1.1s
WAX   Waxell Ridge      39.60  46    P      P      18 25 49.6 +0.3
M27K  Edge Creek, AK    39.63  43    P      P      18 25 51.1 +1.5
      baz=282,SNR=52
M27K  Edge Creek, AK    39.63  43    P      P      18 25 50.2 +0.6
M27K                                 IAmb   IAmb   18 25 53.3
      comp=Z,111nm,1.1s
SNH   Sunshine Point    39.67  47    P      P      18 25 50.0 +0.1
ISLE  Juniper Island    39.81  46    P      P      18 25 50.9 -0.2
ISLE                                 IAmb   IAmb   18 25 56.6
      comp=Z,82nm,1.0s
BARN  Barnard Glacie    40.02  45    P      P      18 25 53.7 +0.8
BARN                                 IAmb   IAmb   18 25 56.5
      comp=Z,105nm,1.3s
GRNC  Granite Creek     40.06  45    P      P      18 25 51.5 -1.7
BVCY  Beaver Creek      40.08  43    P      P      18 25 54.3 +1.2
      baz=283,SNR=18
MESA  MESA              40.10  46    P      P      18 25 55.0 +1.5
      baz=285
MESA  MESA              40.10  46    P      P      18 25 54.0 +0.4
MESA                                 IAmb   IAmb   18 25 57.2
      comp=Z,105nm,1.1s
YAH   Yahtse            40.16  46    P      P      18 25 55.0 +1.0
CTG   Chitna Glacier    40.20  45    P      P      18 25 55.6 +1.3
      baz=284,SNR=26
CTGM  Chitina Glacie    40.20  45    P      P      18 25 54.2 -0.1
CTGM                                 IAmb   IAmb   18 25 57.2
      comp=Z,71nm,0.6s
DAWY  Dawson            40.37  40    P      P      18 25 56.3 +0.9
      baz=282,SNR=6.7
DAWY  Dawson            40.37  40    P      P      18 25 55.3 -0.2
LOGN  Logan Glacier     40.39  45    P      P      18 25 55.6 -0.3
YUK3  Moose Creek       40.41  44    P      P      18 25 57.2 +1.2
      baz=284,SNR=12
TABL  Table Mountain    40.43  46    P      P      18 25 56.8 +0.6
TABL                                 IAmb   IAmb   18 25 59.3
      comp=Z,44nm,0.7s
I29M  Ogilvie Camp,     40.56  38    P      P      18 25 57.7 +0.8
      baz=282,SNR=37
PCA   Pinnacle          40.94  46    P      P      18 26 01.6 +1.5
PCA                                  IAmb   IAmb   18 26 02.7
      comp=Z,115nm,1.3s
PINM  Pinnacle          40.95  46    P      P      18 26 01.7 +1.5
      baz=286,SNR=5.2
EPYK  Eagle Plains      40.99  36    P      P      18 26 01.2 +0.7
      baz=282,SNR=25
EPYK  Eagle Plains      40.99  36    P      P      18 26 00.5  0.0
EPYK                                 IAmb   IAmb   18 26 02.7
      comp=Z,59nm,1.1s
YUK4  Talbot Arm        41.36  44    P      P      18 26 04.8 +1.1
      baz=286,SNR=5.9
PNL   Peninsula         41.48  47    P      P      18 26 05.3 +0.9
      baz=287
YUK6  Outpost Mounta    41.61  45    P      P      18 26 07.0 +1.3
      baz=287
INK   Inuvik            41.80  33    P      P      18 26 06.7 -0.1
      comp=Z,33nm,0.5s,baz=285,slow=6.7,SNR=202
INK                                  pP     pP     18 27 23.4 +2.2
      comp=Z,1.4nm,0.3s,baz=260,slow=8.8,SNR=0.9
INK                                  ScP    ScP    18 31 07.8 +0.8
      comp=Z,7.4nm,1.1s,baz=271,slow=5.5,SNR=4.8
INK                                  S      S      18 31 55.5 +1.0
      comp=Z,2.3nm,0.7s,baz=131,slow=27,SNR=12
INK   Inuvik            41.80  33    P      P      18 26 06.4 -0.4
INK                                  *PP    pP     18 27 21.6 +0.4
INK                                  pmax   pmax
      comp=Z,37nm,0.5s
INK   Inuvik            41.80  33    P      P      18 26 06.9 +0.1
      baz=282,SNR=39
INK   Inuvik            41.80  33    P      P      18 26 06.4 -0.4
INK                                  IAmb   IAmb   18 26 10.1
      comp=Z,37nm,0.5s
INK                                         pP     18 27 21.6 +0.4
M30M  Minto, Yukon      41.87  42    P      P      18 26 09.1 +1.6
      baz=286,SNR=14
WMQ   Urumqi            41.89 288  ⇑P      P      18 26 09.4 +1.4
WMQ                                  pmax   pmax
      comp=Z,68nm,0.7s
WMQ                                  pmax   pmax
      comp=Z,390nm,4.5s
ZSN   Zaisan            41.99 294   eP     P      18 26 08.2 -0.5
      baz=294
ZSN   Zaisan            41.99 294   eP     P      18 26 08.2 -0.5
HYT   Haines Junctio    42.04  45    P      P      18 26 11.2 +2.2
      baz=287,SNR=56
HYT   Haines Junctio    42.04  45    P      P      18 26 10.2 +1.1
N31M  Braeburn, Yuko    42.64  43    P      P      18 26 16.0 +2.3
      baz=288,SNR=22
KMI   Kunming           42.98 254  ⇓P      P      18 26 15.7 -1.4
KMI                                  PP     PP     18 28 06.1 -0.1
KMI                                  S      S      18 32 10.1 -3.0
KMI                                  pmax   pmax
      comp=Z,48nm,1.6s
KMI                                  pmax   pmax
      comp=Z,350nm,4.3s
KMI                                  LR     LR
      comp=Z,170nm,9.4s
KMI                                  LR     LR
      comp=Z,130nm,11.1s
KMI                                  LR     LR
      comp=Z,210nm,14.3s
M31M  Drury Creek, Y    43.05  42    P      P      18 26 18.6 +1.7
      baz=288,SNR=12
QIZ   Qiongzhong        43.11 241    P      P      18 26 17.5 -0.4
QIZ                                  S      S      18 32 14.8 +0.2
WHY   Whitehorse        43.32  44    P      P      18 26 20.9 +1.7
      baz=289,SNR=14
WHY   Whitehorse        43.32  44    P      P      18 26 20.5 +1.4
WHY                                  IAmb   IAmb   18 26 22.5
      comp=Z,70nm,1.3s
SEM   Semipalatinsk     43.47 300   eP     P      18 26 18.8 -1.8
      comp=Z,46nm,1.1s,baz=300
SEM   Semipalatinsk     43.47 300   eP     P      18 26 18.8 -1.8
SEM                                  pmax   pmax
      comp=Z,46nm,1.1s
FARO  Faro, Yukon       43.50  42    P      P      18 26 21.8 +1.3
      baz=289,SNR=17
A36M  Sachs Harbour     43.67  27    P      P      18 26 22.0 +0.4
      baz=286,SNR=16
A36M  Sachs Harbour     43.67  27    P      P      18 26 20.9 -0.7
MK31  Makanchi Array    43.86 294    P      P      18 26 22.4 -1.1
MK31                                 pmax   pmax
      comp=Z,155nm,1.4s
MK31  Makanchi Array    43.86 294    P      P      18 26 22.4 -1.1
MK31                                 IAmb   IAmb   18 26 24.5
      comp=Z,155nm,1.4s
MKAR  Makanchi Array    43.86 294    P      P      18 26 22.6 -0.9
      comp=Z,38nm,0.4s,baz=66,slow=6.7,SNR=791
MKAR                                 pP     pP     18 27 40.3 +1.2
      comp=Z,9.3nm,0.9s,baz=67,slow=9.3,SNR=2.4
MKAR                                 PcP    PcP    18 28 04.3 +2.5
      comp=Z,4.4nm,0.5s,baz=241,slow=6.7,SNR=4.1
MKAR                                 ScP    ScP    18 31 14.8 -0.9
      comp=Z,3.8nm,0.6s,baz=61,slow=4.0,SNR=11
MKAR                                 S      S      18 32 25.4 +0.5
      comp=Z,2.4nm,1.1s,baz=67,slow=20,SNR=5.4
MKAR  Makanchi Array    43.86 294    P      P      18 26 21.9 -1.6
MKAR                                        pP     18 27 39.0 -0.1
MKAR                                 ScP    ScP    18 31 14.5 -1.3
MAKZ  Makanchi          44.04 294    P      P      18 26 23.8 -1.1
MAKZ                                 pmax   pmax
      comp=Z,152nm,1.4s
MAKZ  Makanchi          44.04 294    P      P      18 26 23.8 -1.1
MAKZ                                 IAmb   IAmb   18 26 26.1
      comp=Z,152nm,1.4s
KURK  Kurchatov         44.28 301deP     P      18 26 25.4 -1.2
KURK                                 pmax   pmax
      comp=Z,209nm,1.3s
KURK  Kurchatov         44.28 301    P      P      18 26 25.9 -0.7
KURK  Kurchatov         44.28 301   eP     P      18 26 25.4 -1.2
KURK  Kurchatov         44.28 301    P      P      18 26 25.1 -1.5
MMPY  Sheldon Lake,     44.29  41    P      P      18 26 28.0 +1.3
      baz=290,SNR=9.8
KURBB Kurchatov Arra    44.37 301    P      P      18 26 26.1 -1.3
P33M  Teslin, Yukon     44.43  44    P      P      18 26 29.4 +1.6
      baz=291,SNR=25
SLVN  Son La            44.97 250    P      P      18 26 32.3 -0.2
SLVN                                        pP     18 27 47.7 +0.1
TGTN  Hyland Airport    46.00  41    P      P      18 26 41.3 +1.4
      baz=293,SNR=10
DLBC  Dease Lake        46.44  46    P      P      18 26 45.4 +2.0
      comp=Z,20nm,0.5s,baz=248,slow=3.4,SNR=58
DLBC  Dease Lake        46.44  46    P      P      18 26 44.8 +1.4
DLBC                                 IAmb   IAmb   18 26 47.2
      comp=Z,31nm,0.6s
TDK   Taldyqorghan      47.10 294   eP     P      18 26 48.5 -0.1
      baz=294
TDK   Taldyqorghan      47.10 294   eP     P      18 26 48.5 -0.1
PDGK  Podgornoye        47.30 291    P      P      18 26 49.3 -0.9
LSA   Lhasa             47.57 269    P      P      18 26 54.2 +1.3
LSA                                  pmax   pmax
      comp=Z,260nm,1.0s
LSA   Lhasa             47.57 269    P      P      18 26 54.0 +1.1
LSA   Lhasa             47.57 269    P      P      18 26 53.3 +0.4
LSA                                  pmax   pmax
      comp=Z,69nm,0.6s
LSA   Lhasa             47.57 269    P      P      18 26 53.3 +0.4
LSA                                  IAmb   IAmb   18 26 56.4
      comp=Z,69nm,0.6s
UZB   Uzynbulak         47.68 291   eP     P      18 26 52.2 -1.0
      comp=Z,49nm,1.1s,baz=291
UZB   Uzynbulak         47.68 291   eP     P      18 26 52.2 -1.0
UZB                                  pmax   pmax
      comp=Z,49nm,1.1s
KPKS  Kokpek            47.72 292   eP     P      18 26 53.4  0.0
      comp=Z,22nm,0.6s,baz=292
KPKS  Kokpek            47.72 292   eP     P      18 26 53.4  0.0
KPKS                                 pmax   pmax
      comp=Z,22nm,0.6s
BRVK  Borovoye          47.84 307d iP    P      18 26 53.2 -0.9
BRVK                                 pmax   pmax
      comp=Z,100nm,0.6s
BRVK  Borovoye          47.84 307    P      P      18 26 54.0 -0.1
BRVK  Borovoye          47.84 307   eP     P      18 26 53.2 -0.9
BRVK  Borovoye          47.84 307    P      P      18 26 52.5 -1.6
BRZS  Berezniki         47.99 302   eP     P      18 26 54.1 -1.3
      comp=Z,28nm,0.4s,baz=302
BRZS  Berezniki         47.99 302   eP     P      18 26 54.0 -1.3
BRZS                                 pmax   pmax
      comp=Z,28nm,0.4s
SATY  Saty              48.11 292   eP     P      18 26 56.1 -0.4
      comp=Z,54nm,1.3s,baz=292
SATY  Saty              48.11 292   eP     P      18 26 56.0 -0.4
SATY                                 pmax   pmax
      comp=Z,54nm,1.3s
EUNU  Eureka            48.14  11    P      P      18 26 54.9 -1.1
PRZ   Przheval'sk       48.42 291    P      P      18 26 58.8  0.0
PRZ                                  pmax   pmax
      comp=Z,179nm,1.4s
PRZ   Przheval'sk       48.42 291    P      P      18 26 58.8  0.0
CHKK  Chushkaly         48.56 293   eP     P      18 26 58.5 -1.2
      baz=293
MDOK  Medeo             48.90 292   eP     P      18 27 01.2 -1.1
      baz=292
MDOK  Medeo             48.90 292   eP     P      18 27 01.2 -1.1
KUU   Kurty             48.94 294   eP     P      18 27 00.8 -1.7
      comp=Z,42nm,0.5s,baz=294
KUU   Kurty             48.94 294   eP     P      18 27 00.8 -1.7
KUU                                  pmax   pmax
      comp=Z,42nm,0.5s
AAA   Alma-Ata          48.95 293   eP     P      18 27 01.8 -0.9
      baz=292
AAA   Alma-Ata          48.95 293   eP     P      18 27 01.7 -0.9
BTLS  Baital            49.72 296   eP     P      18 27 07.0 -1.3
      baz=296
BTLS  Baital            49.72 296   eP     P      18 27 06.9 -1.3
SHL   Shillong          49.79 264    P      P      18 27 08.5 -0.8
SHL                                  pmax   pmax
      comp=Z,97nm,1.0s
SHL   Shillong          49.79 264    P      P      18 27 09.6 +0.3
      SNR=22
SHL   Shillong          49.79 264    P      P      18 27 08.5 -0.8
SHL                                  IAmb   IAmb   18 27 11.2
      comp=Z,97nm,1.0s
ULHL  Ulahol            49.89 292    P      P      18 27 10.0 +0.1
      SNR=38
TKM2  Tokmak 2          49.92 293    P      P      18 27 10.3 +0.3
      SNR=32
TKM2  Tokmak 2          49.92 293    P      P      18 27 10.1  0.0
CHTO  Chiang Mai        49.95 252    P      P      18 27 09.6 -0.8
CHTO                                 pmax   pmax
      comp=Z,42nm,0.6s
CHTO  Chiang Mai        49.95 252    P      P      18 27 11.2 +0.8
CHTO  Chiang Mai        49.95 252    P      P      18 27 09.6 -0.8
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CHTO				IAmb	IAmb	18 27 12.6	
	comp=Z,42nm,0.6s						
NOR	**Nord**	50.14	357	P	P	18 27 10.2	-0.6
NOR				pmax	pmax		
	comp=Z,13nm,1.3s						
NOR	**Nord**	50.14	357	*i* P	P	18 27 09.7	-1.2
NOR				IAmb	IAmb	18 27 11.8	
	comp=Z,11nm,1.0s						
CM31	**Chiang Mai Arr**	50.22	252	P	P	18 27 13.6	+1.3
	SNR=12						
CM31	**Chiang Mai Arr**	50.22	252	P	P	18 27 12.9	+0.6
CM31				IAmb	IAmb	18 27 14.8	
	comp=Z,27nm,0.6s						
CMAR	**Chiang Mai Arr**	50.22	252	P	P	18 27 13.0	+0.7
	comp=Z,16nm,0.5s,baz=32,slow=7.5,SNR=285						
CMAR				ScP	ScP	18 31 44.4	+1.4
	comp=Z,2.1nm,0.9s,baz=20,slow=4.1,SNR=8.4						
CMAR	**Chiang Mai Arr**	50.22	252	P	P	18 27 12.7	+0.4
CMAR				ScP	ScP	18 31 44.1	+1.1
RES	**Resolute Bay**	50.22	18	P	P	18 27 11.0	-0.5
	comp=Z,18nm,0.5s,baz=359,slow=7.1,SNR=71						
RES	**Resolute Bay**	50.22	18	P	P	18 27 10.1	-1.4
RES				pmax	pmax		
	comp=Z,23nm,0.6s						
RES	**Resolute Bay**	50.22	18	P	P	18 27 10.1	-1.4
SGDS	**Sogindy**	50.22	294	*e*P	P	18 27 11.5	-0.6
	comp=Z,50nm,1.3s,baz=294						
CHMS	**Chumysh**	50.40	293	P	P	18 27 13.5	+0.1
	SNR=27						
USP	**Ospenovka**	50.41	294	P	P	18 27 13.4	-0.1
	SNR=109						
KBK	**Karagaybulak**	50.47	293	P	P	18 27 14.3	+0.2
	SNR=60						
HOPEN	**Hopen**	50.55	345	*e*P	P	18 27 14.4	+0.5
KBS	**Kingsbay**	50.55	350	P	P	18 27 13.0	-0.9
KBS				pmax	pmax		
	comp=Z,44nm,0.9s						
KBS	**Kingsbay**	50.55	350	*i* P	P	18 27 14.0	+0.1
KBS				IAmb	IAmb	18 27 15.1	
	comp=Z,107nm,0.9s						
KBS	**Kingsbay**	50.55	350	*e*P	P	18 27 13.8	-0.1
KBS	**Kingsbay**	50.55	350	P	P	18 27 12.9	-0.9
KBS				IAmb	IAmb	18 27 15.3	
	comp=Z,44nm,0.8s						
FRU1	**Bishkek**	50.58	293	P	P	18 27 14.0	-0.8
FRU1				pmax	pmax		
	comp=Z,65nm,0.7s						
FRU1	**Bishkek**	50.58	293	P	P	18 27 13.9	-0.8
FRU1				IAmb	IAmb	18 27 16.6	
	comp=Z,65nm,0.7s						
SPA0	**Spitsbergen Ar**	50.60	349	*e*P	P	18 27 13.9	-0.5
SPITS	**Spitsbergen Ar**	50.60	349	P	P	18 27 14.1	-0.2
	comp=Z,22nm,0.8s,baz=70,slow=11,SNR=9.9						
SPITS	**Spitsbergen Ar**	50.60	349	P	P	18 27 14.1	-0.2
SPITS				pmax	pmax		
	comp=Z,47nm,1.0s						
SPB2	**Spitsbergen Ar**	50.60	349	P	P	18 27 11.5	-2.9
SPB2				IAmb	IAmb	18 27 27.5	
	comp=Z,80nm,1.3s						
AAK	**Ala-Archa**	50.76	293	P	P	18 27 14.0	-2.2
	SNR=51						
AAK	**Ala-Archa**	50.76	293	*i* P	P	18 27 16.3	+0.1
	SNR=7.8						
AAK	**Ala-Archa**	50.76	293*d*	*i*P	P	18 27 16.4	+0.2
AAK				pmax	pmax		
	comp=Z,286nm,1.3s						
AAK	**Ala-Archa**	50.76	293	P	P	18 27 16.6	+0.4
AAK	**Ala-Archa**	50.76	293	*e*P	P	18 27 16.4	+0.2
AAK	**Ala-Archa**	50.76	293	P	P	18 27 15.3	-0.9
AAK				IAmb	IAmb	18 27 17.6	
	comp=Z,156nm,1.4s						
SVE	**Sverdlovsk**	50.86	315*c*	*i*P	P	18 27 16.6	+0.1
SVE				*e*S	S	18 34 01.0	-1.2
SVE				pmax	pmax		
	comp=Z,102nm,0.8s						
SVE	**Sverdlovsk**	50.86	315	*e*P	P	18 27 16.6	+0.1
UCH	**Uchtor**	50.97	293	P	P	18 27 18.7	+0.5
	SNR=11						
EKS2	**Erkin-Say**	51.18	294	P	P	18 27 19.6	+0.3
	SNR=121						
YKA	**Yellowknife Ar**	51.28	36	P	P	18 27 18.9	-0.6
YKA	**Yellowknife Ar**	51.28	36	P	P	18 27 18.9	-0.6
SWI	**Sorong**	51.37	203	P	P	18 27 21.7	+1.0
	comp=Z,18nm,1.2s						
TAPN	**Taplejung**	51.39	269	*e*P	P	18 27 22.0	+0.8
	comp=Z,58nm,0.4s						
AML	**Almayashu**	51.53	293	P	P	18 27 22.7	+0.6
	SNR=32						
AML	**Almayashu**	51.53	293	*i* P	P	18 27 22.6	+0.4
	SNR=8.0						
AML	**Almayashu**	51.53	293	P	P	18 27 22.9	+0.8
KSH	**Kashi**	51.60	289	P	P	18 27 25.5	+3.1
KSH				S	S	18 34 19.5	+6.5
KSH				pmax	pmax		
	comp=Z,87nm,0.7s						
KSH				pmax	pmax		
	comp=Z,300nm,4.9s						
KSH				LR	LR		
	comp=Z,230nm,7.2s						
KSH				LR	LR		
	comp=Z,290nm,6.5s						
KSH				LR	LR		
	comp=Z,260nm,7.4s						
HSPB	**Hornsund (broa**	51.64	348	*e*P	P	18 27 22.1	+0.2
ODAN	**Odare**	51.92	269	*e*P	P	18 27 25.7	+0.7
ARU	**Arti**	52.05	315*c*	*i*P	P	18 27 23.8	-1.4
ARU						18 28 31.0	
ARU				*PP	pP	18 28 43.0	-0.7
ARU						18 29 23.4	
ARU				SS	SS	18 37 56.0	-4.7
ARU				pmax	pmax		
	comp=Z,115nm,0.6s						
ARU	**Arti**	52.05	315	*e*P	P	18 27 23.8	-1.4
ARU	**Arti**	52.05	315	P	P	18 27 23.2	-2.0
JIRN	**Jiri**	52.20	271	*e*P	P	18 27 27.6	+0.4
	comp=Z,92nm,0.5s						
GUN	**Gumba**	52.24	271	*e*P	P	18 27 27.5	0.0
	comp=Z,115nm,0.4s						
RAMN	**Ramite**	52.39	270	*e*P	P	18 27 28.5	0.0
	comp=Z,246nm,0.3s						
KHLU	**Kahalu`u**	52.43	103	P	P	18 27 28.9	+0.3
DZA	**Taraz**	52.54	295	*e*P	P	18 27 28.0	-1.0
	baz=295						
DZA	**Taraz**	52.54	295	*e*P	P	18 27 28.0	-1.0
MLOA	**Mauna Loa Obse**	52.68	103	P	P	18 27 29.7	-1.1
HMH	**Humu‘ula Sheep**	52.69	103	P	P	18 27 31.6	+0.9
KKN	**Kakani**	52.72	271	*e*P	P	18 27 31.6	+0.8
	comp=Z,121nm,0.4s						
PKI	**Pulchoki**	52.78	271	*e*P	P	18 27 31.9	+0.5
PKIN	**Phulchoki**	52.78	271	*e*P	P	18 27 31.8	+0.5
	comp=Z,81nm,0.4s						
MLH	**Mauna Loa**	52.83	103	P	P	18 27 32.9	+1.2
MLH				IAmb	IAmb	18 27 34.9	
	comp=Z,62nm,0.6s						
AIN	**Ainahou**	52.87	103	P	P	18 27 33.5	+1.6
KK31	**Karatay Array**	52.91	296	*i* P	P	18 27 31.0	-0.7
KK31	**Karatay Array**	52.91	296	P	P	18 27 31.3	-0.5
KKAR	**Karatay Array**	52.91	296	P	P	18 27 30.8	-0.9
KKAR	**Karatay Array**	52.91	296	P	P	18 27 31.5	-0.2
KKAR	**Karatay Array**	52.91	296	P	P	18 27 30.8	-0.9
RSD	**Rainshed**	52.92	103	P	P	18 27 33.7	+1.5
DMN	**Daman**	52.96	271	*e*P	P	18 27 32.9	+0.4
GKN	**Gorkha**	53.01	272	*e*P	P	18 27 33.0	+0.2
	comp=Z,306nm,0.4s						
PUH	**Pauahi**	53.03	103	P	P	18 27 32.5	-0.4
PUH				IAmb	IAmb	18 27 41.6	
	comp=Z,119nm,1.2s						
FAKI	**Fak Fak**	53.09	201	P	P	18 27 33.8	+0.5
TULEG	**Thule**	53.11	10	*i* P	P	18 27 31.1	-1.5
TULEG				IAmb	IAmb	18 27 33.1	
	comp=Z,7.1nm,0.8s						
TULEG	**Thule**	53.11	10	P	P	18 27 32.1	-0.5
MRSI	**Marisa**	53.13	215	P	P	18 27 34.6	+1.1
	comp=Z,344nmcomp=Z,30nm,1.1s						
DANN	**Dangsing**	53.37	273	*e*P	P	18 27 36.2	+0.6
	comp=Z,384nm,0.5s						
IUG	**Iuzhnay**	53.75	295	*e*P	P	18 27 37.6	-0.4
	baz=295						
IUG	**Iuzhnay**	53.75	295	*e*P	P	18 27 37.5	-0.4
KOLN	**Koldanda**	53.86	273	*e*P	P	18 27 39.2	+0.3
NEEM	**North Greenlan**	53.90	5	*i* P	P	18 27 37.3	-1.4
NEEM				IAmb	IAmb	18 27 38.6	
	comp=Z,13nm,0.6s						
SANI	**Sanana**	54.04	209	P	P	18 27 39.8	-0.3
	comp=Z,12nm,0.9s						
PYUN	**Piuthan**	54.05	273	*e*P	P	18 27 40.6	+0.3
LVZ	**Lovozero**	54.26	335	*e*P	P	18 27 40.1	-0.9
LVZ				pmax	pmax		
	comp=Z,236nm,3.8s						
LVZ	**Lovozero**	54.26	335	P	P	18 27 40.9	-0.1
LVZ				IAmb	IAmb	18 27 41.6	
	comp=Z,108nm,1.5s						
CLRS	**Cowichan Lake**	54.28	54	P	P	18 27 42.1	+0.8
MSAI	**Masohi**	54.38	205	P	P	18 27 44.2	+1.8
	comp=Z,130nmcomp=Z,2.6nm,0.5s						
LLLB	**Lillooet**	54.45	52	P	P	18 27 43.1	+0.5
BTK	**Batken**	54.50	293	P	P	18 27 43.3	+0.1
BTK	**Batken**	54.50	293	P	P	18 27 43.3	+0.1
PRGR	**Permogore**	54.60	325	*e*P	P	18 27 43.4	0.0
PRGR				*e**SP	sP	18 29 43.7	-1.3
PRGR				*e*S	S	18 34 45.5	-6.6
PRGR				pmax	pmax		
	comp=Z,46nm,0.6s						
TAS	**Tashkent**	54.68	295	P	P	18 27 45.0	+0.6
TAS				pmax	pmax		
	comp=Z,107nm,0.8s						
TAS	**Tashkent**	54.68	295	P	P	18 27 45.0	+0.6
PGC	**Sidney**	54.74	54	P	P	18 27 45.3	+0.7
APA	**Apatity**	54.84	335⇓	*i*P	P	18 27 42.9	-2.1
APA				*i* *PP	PcP	18 28 42.9	+1.2
APA				pmax	pmax		
	comp=Z,24nm,0.7s						
KIRV	**Kirov**	54.91	321	P	P	18 27 45.3	-0.4
	comp=Z,44nm,0.5s,baz=57,slow=3.5,SNR=20						
KIRV				ScP	ScP	18 32 03.1	+0.4
	comp=Z,8.1nm,0.7s,baz=39,slow=3.1,SNR=3.0						
KIRV	**Kirov**	54.91	321	*i* P	P	18 27 45.4	-0.3
KEV	**Kevo**	54.97	339	P	P	18 27 45.0	-0.9
KEV				pmax	pmax		
	comp=Z,46nm,1.0s						
KEV	**Kevo**	54.97	339	P	P	18 27 45.0	-0.9
KEV				IAmb	IAmb	18 27 47.0	
	comp=Z,46nm,1.0s						
DAG	**Danmarks Havn**	54.98	357	P	P	18 27 46.4	+0.5
DAG				pmax	pmax		
	comp=Z,24nm,1.2s						
DAG	**Danmarks Havn**	54.98	357	*i* P	P	18 27 45.0	-0.9
DAG				IAmb	IAmb	18 27 46.9	
	comp=Z,19nm,1.0s						
HAMF	**Hammerfest**	55.08	341	*e*P	P	18 27 46.3	-0.4
NLWA	**Neilton Lookou**	55.24	56	P	P	18 27 49.5	+1.2
AB31	**Akbulak array**	55.37	307	P	P	18 27 48.3	-0.8
ABKAR	**Akbulak array**	55.37	307	P	P	18 27 48.6	-0.5
GAR	**Garm**	55.45	292	P	P	18 27 49.7	-0.3
ARA0	**ARCESS Array S**	55.49	339	*e*P	P	18 27 48.5	-1.1
ARCES	**ARCESS Array B**	55.49	339	P	P	18 27 48.5	-1.2
	comp=Z,34nm,0.9s,baz=37,slow=7.6,SNR=46						
ARCES	**ARCESS Array B**	55.49	339	P	P	18 27 48.8	-0.8
ARCES				pmax	pmax		
	comp=Z,92nm,1.2s						
ARCES	**ARCESS Array B**	55.49	339	P	P	18 27 48.8	-0.8
ARCES				IAmb	IAmb	18 27 51.1	
	comp=Z,92nm,1.2s						
D03D	**Eldon**	55.59	55	P	P	18 27 52.5	+1.9
	baz=306,SNR=5.3						
B05A	**Bryant**	55.70	54	P	P	18 27 52.8	+1.4
	baz=306,SNR=5.3						
B06A	**Marblemount**	55.88	53	P	P	18 27 53.3	+0.7
CHGR	**Chuyangaron**	56.37	292	P	P	18 27 54.8	-1.6
KTK1	**Kautokeino**	56.42	340	*e*P	P	18 27 56.1	-0.1
E04D	**Cinebar**	56.46	56	P	P	18 27 58.7	+2.0
	baz=307						
JETT	**Jettan, Norway**	56.64	341	*e*P	P	18 27 58.0	+0.3
TRO	**Tromso**	56.90	341	*e*P	P	18 27 59.0	-0.4
NIL	**Nilore**	56.90	285	P	P	18 28 00.4	+0.3
NIL				pmax	pmax		
	comp=Z,351nm,1.1s						
NIL	**Nilore**	56.90	285	P	P	18 28 01.0	+1.0
NIL	**Nilore**	56.90	285	P	P	18 28 00.4	+0.3
LTY	**Liberty**	57.07	54	P	P	18 28 01.4	+0.3
B08A	**Colville Reser**	57.12	53	P	P	18 28 01.8	+0.4
EDM	**Edmonton**	57.16	45	P	P	18 28 01.8	+0.2
EDM				pmax	pmax		
	comp=Z,108nm,1.2s						
EDM	**Edmonton**	57.16	45	P	P	18 28 01.8	+0.2
EDM				IAmb	IAmb	18 28 03.7	
	comp=Z,108nm,1.2s						
COR	**Corvallis**	57.23	58	P	P	18 28 03.6	+1.5
COR				pmax	pmax		
	comp=Z,88nm,1.1s						
COR	**Corvallis**	57.23	58	P	P	18 28 03.6	+1.5
COR				IAmb	IAmb	18 28 06.4	
	comp=Z,88nm,1.1s						
MTKI	**Muara Teweh, K**	57.33	222	P	P	18 28 04.5	+1.3
	comp=Z,12nm,0.9s						
KLMR	**Klimovskoe**	57.38	327	*e*P	P	18 27 57.9	-5.0
KLMR				*e**PP	pP	18 29 21.3	-1.7
KLMR				pmax	pmax		
	comp=Z,67nm,0.8s						
KLMR	**Klimovskoe**	57.38	327	*e*P	P	18 27 58.0	-4.9
KLMR				AMP		18 28 03.6	
	comp=Z,67nm,0.8s						
KLMR				*e*pP	pP	18 29 21.3	-1.7
KLMR				*e*PP	sP	18 30 09.3	+4.2
DBG	**Daneborg**	57.48	357	*i* P	P	18 28 03.0	-0.4
H04D	**Lebanon**	57.59	58	P	P	18 28 07.0	+2.3
	baz=308						
KEBM	**Edson Butte**	57.69	60	P	P	18 28 07.4	+2.0
KEBM				IAmb	IAmb	18 28 11.4	
	comp=Z,98nm,1.2s						
HOOD	**Mount Hood Mea**	57.71	57	P	P	18 28 06.9	+1.3
I03D	**Drain, OR**	57.75	59	P	P	18 28 08.3	+2.5
	baz=308,SNR=5.6						
H04A	**Detroit Lake**	57.81	57	P	P	18 28 07.4	+1.3
H04A				IAmb	IAmb	18 28 09.2	
	comp=Z,55nm,0.8s						
E07A	**Sunnyside**	57.94	54	P	P	18 28 07.9	+0.8
UPNV	**Upernavik**	57.95	9	*i* P	P	18 28 05.8	-0.8
G05D	**Wamic, OR**	57.95	56	P	P	18 28 09.2	+2.1
	baz=308,SNR=5.6						
STKI	**Sintang**	58.03	226	P	P	18 28 10.0	+2.0
D08A	**Wollman Farm,**	58.14	54	P	P	18 28 09.4	+1.0
KBO	**Bosley Butte**	58.16	61	P	P	18 28 09.8	+1.1
KBO				IAmb	IAmb	18 28 12.2	
	comp=Z,67nm,1.1s						
DBO	**Dodson Butte**	58.17	59	P	P	18 28 10.0	+1.3
K02D	**Willamette Mer**	58.19	60	P	P	18 28 10.9	+2.0
	baz=309						
HAWA	**Hanford**	58.22	54	P	P	18 28 09.2	+0.3
I04A	**Tendick Farm,**	58.23	58	P	P	18 28 10.6	+1.5
	baz=308,SNR=8.9						
HNR	**Honiara**	58.25	167	P	P	18 28 10.8	+1.4
	comp=Z,21nm,0.4s,baz=191,slow=20,SNR=5.2						
HNR	**Honiara**	58.25	167	P	P	18 28 11.2	+1.7
HNR				IAmb	IAmb	18 28 12.7	
	comp=Z,41nm,0.9s						
F07A	**Phinny Hill Vi**	58.31	55	P	P	18 28 11.1	+1.5
F07A				IAmb	IAmb	18 28 12.7	
	comp=Z,86nm,1.3s						
NEW	**Newport**	58.34	52	P	P	18 28 10.8	+1.0
	comp=Z,7.0nm,0.5s,baz=295,slow=6.1,SNR=13						
NEW	**Newport**	58.34	52	P	P	18 28 11.0	+1.2
	baz=309,SNR=12						
NEW	**Newport**	58.34	52	P	P	18 28 10.9	+1.0
E08A	**Dider Farm, El**	58.42	54	P	P	18 28 11.1	+0.9
I05D	**Terrebonne, OR**	58.50	57	P	P	18 28 12.3	+1.3
	baz=309,SNR=11						
L02E	**Cave Junction**	58.56	61	P	P	18 28 13.1	+1.8
	baz=309						
HUMO	**Hull Mountain**	58.65	60	P	P	18 28 13.8	+1.9
J04D	**Umpqua Nationa**	58.74	59	P	P	18 28 14.6	+1.8
	baz=309,SNR=8.9						
KRMB	**Red Mountain**	58.78	61	P	P	18 28 14.4	+1.4
E09A	**Wood Farm, Sta**	58.90	54	P	P	18 28 14.1	+0.6
E09A				IAmb	IAmb	18 28 16.2	
	comp=Z,40nm,1.1s						
KBL	**Kabul**	59.02	288	P	P	18 28 13.9	-0.9
KBL				pmax	pmax		
	comp=Z,114nm,0.8s						
KBL	**Kabul**	59.02	288	P	P	18 28 13.9	-0.9
	SNR=70						
KBL	**Kabul**	59.02	288	P	P	18 28 13.9	-0.9
PINE	**Pine Mountain**	59.06	58	P	P	18 28 15.7	+0.7
PINE				IAmb	IAmb	18 28 18.5	
	comp=Z,65nm,1.1s						
STEI	**Steigen**	59.07	341	*e*P	P	18 28 13.8	-0.5
J05D	**Fort Rock, OR**	59.21	58	P	P	18 28 17.9	+2.0
	baz=309,SNR=14						
G08A	**Pilot Rock**	59.22	55	P	P	18 28 16.6	+0.7
PBA	**Port Blair**	59.25	252	P	P	18 28 17.3	+1.0
PBA	**Port Blair**	59.25	252	P	P	18 28 16.5	+0.2
PBA				IAmb	IAmb	18 28 24.0	
	comp=Z,43nm,0.7s						
LOF	**Lofoten**	59.25	342	*e*P	P	18 28 15.3	-0.3
L04D	**Klamath Falls**	59.27	60	P	P	18 28 18.2	+1.9
	baz=309,SNR=12						
KHMM	**Horse Mountain**	59.29	62	P	P	18 28 17.9	+1.4
KHMM				IAmb	IAmb	18 28 20.1	
	comp=Z,45nm,1.0s						
SUMG	**Summit**	59.32	3	P	P	18 28 15.7	-0.8
SUMG				pmax	pmax		
	comp=Z,25nm,0.5s						
SUMG	**Summit**	59.32	3	*i* P	P	18 28 16.2	-0.2
SUMG				IAmb	IAmb	18 28 19.1	
	comp=Z,24nm,0.5s						
SUMG	**Summit**	59.32	3	P	P	18 28 15.7	-0.8
SUMG				IAmb	IAmb	18 28 19.2	
	comp=Z,25nm,0.5s						
K04D	**Chiloquin, OR**	59.33	59	P	P	18 28 19.0	+2.2
	baz=309,SNR=5.8						
YBH	**Yreka Blue Hor**	59.34	60	P	P	18 28 18.7	+2.0
	comp=Z,12nm,0.6s,baz=349,slow=6.6,SNR=25						
YBH	**Yreka Blue Hor**	59.34	60	P	P	18 28 18.4	+1.6
YBH				pmax	pmax		
	comp=Z,22nm,0.9s						
YBH	**Yreka Blue Hor**	59.34	60	P	P	18 28 18.4	+1.6
KULM	**Kulim**	59.42	240	P	P	18 28 19.0	+1.5
M02C	**Callahan**	59.48	61	P	P	18 28 20.1	+2.5
	baz=310,SNR=9.3						
WALA	**Waterton Lakes**	59.50	49	P	P	18 28 17.8	+0.1
FAUS	**Fauske**	59.52	341	*e*P	P	18 28 17.0	-0.3
BELG	**Belogornoye**	59.58	316	P	P	18 28 17.1	-0.9
	comp=Z,124nm,0.5s,baz=242,slow=0.7,SNR=176						
BELG				pP	pP	18 29 41.2	+2.3
	comp=Z,57nm,1.1s,baz=212,slow=4.3,SNR=4.0						
BELG	**Belogornoye**	59.58	316	*i* P	P	18 28 17.3	-0.7
BELG				pmax	pmax		
	comp=Z,26nm,0.7s						
BBKI	**Banjar Baru**	59.60	221	P	P	18 28 20.2	+1.5
	comp=Z,11nm,1.4s						
NBB08	**Skaug oppvekst**	59.65	341	*e*P	P	18 28 18.1	-0.1
I07A	**Izee**	59.68	57	P	P	18 28 20.5	+1.5
KMRM	**Mail Ridge**	59.71	62	P	P	18 28 20.2	+0.9
F10A	**Beach Ranch, E**	59.73	54	P	P	18 28 20.3	+1.0
K05A	**Summer Lake**	59.76	59	P	P	18 28 21.2	+1.5
K05A				IAmb	IAmb	18 28 23.2	
	comp=Z,83nm,1.0s						
M04C	**Macdoel**	59.82	60	P	P	18 28 22.1	+2.1
	baz=310,SNR=14						
N02D	**Trinity Center**	59.83	61	P	P	18 28 21.9	+1.9
	baz=310,SNR=17						
NBB28	**Valnes**	59.85	341	*e*P	P	18 28 19.5	-0.1
NBB05	**Inndyr**	60.08	341	*e*P	P	18 28 20.9	-0.2
KCPM	**Cahto Peak**	60.13	63	P	P	18 28 23.6	+1.5
KCPM				IAmb	IAmb	18 28 25.2	
	comp=Z,55nm,1.2s						
JTMT	**Jette**	60.15	51	P	P	18 28 22.9	+0.8
WDC	**Whiskeytown Da**	60.17	61	P	P	18 28 23.0	+0.8
WDC				pmax	pmax		
	comp=Z,22nm,1.0s						
WDC	**Whiskeytown Da**	60.17	61	P	P	18 28 23.0	+0.8
NBB30	**Finnes**	60.19	341	*e*P	P	18 28 21.9	+0.1
NBB17	**Glomfjord B¥r**	60.28	341	*e*P	P	18 28 22.4	0.0
O02D	**Mt. Diablo Mer**	60.28	62	P	P	18 28 25.1	+2.0
	baz=310,SNR=15						
PBKI	**Pangkalan Bun**	60.37	224	P	P	18 28 25.7	+1.9
	comp=Z,35nm,0.6s						
BMO	**Blue Mountains**	60.41	55	P	P	18 28 24.1	+0.3
BMO				pmax	pmax		
	comp=Z,46nm,1.4s						
BMO	**Blue Mountains**	60.41	55	P	P	18 28 24.1	+0.3
BMO				IAmb	IAmb	18 28 26.8	
	comp=Z,46nm,1.4s						
NBB13	**Alf Garage**	60.57	341	*e*P	P	18 28 24.1	-0.3
MOD	**Modoc Plateau**	60.62	59	P	P	18 28 25.9	+0.5
MOD				IAmb	IAmb	18 28 28.3	
	comp=Z,22nm,0.7s						
MOR8	**Moi Rana**	60.72	341	*e*P	P	18 28 23.4	-2.0
J08A	**Circle Bar Ran**	60.72	57	P	P	18 28 27.1	+1.1
J08A				IAmb	IAmb	18 28 29.2	
	comp=Z,33nm,0.9s						
KONS	**Konsvik**	60.72	341	*e*P	P	18 28 25.6	+0.2
NBB40	**Tonnes**	60.74	341	*e*P	P	18 28 25.5	0.0
O03E	**Paynes Creek**	60.79	61	P	P	18 28 27.8	+1.4
	baz=310,SNR=19						
HOPS	**Hopland Field**	60.88	63	P	P	18 28 27.7	+0.8
STOK	**Stokkvaagen**	60.89	341	*e*P	P	18 28 26.0	-0.5
MSO	**Missoula**	60.92	51	P	P	18 28 28.7	+1.5
	baz=311,SNR=19						
MSO	**Missoula**	60.92	51	P	P	18 28 27.6	+0.3
MSO				IAmb	IAmb	18 28 30.4	
	comp=Z,55nm,1.2s						
PLID	**Pearl Lake**	60.96	54	P	P	18 28 28.1	+0.4
PLID				IAmb	IAmb	18 28 30.2	
	comp=Z,48nm,1.0s						
KNTN	**Kanton**	61.20	134	P	P	18 28 29.9	+0.6
KNTN				IAmb	IAmb	18 28 32.3	
	comp=Z,32nm,0.7s						
WVOR	**Wild Horse Val**	61.23	58	P	P	18 28 29.5	+0.1
WVOR				pmax	pmax		
	comp=Z,45nm,1.1s						
WVOR	**Wild Horse Val**	61.23	58	P	P	18 28 29.5	+0.1
WVOR				IAmb	IAmb	18 28 32.3	
	comp=Z,45nm,1.1s						
FFC	**Flin Flon**	61.25	39	P	P	18 28 29.3	+0.1
FFC				pmax	pmax		
	comp=Z,66nm,1.3s						
FFC	**Flin Flon**	61.25	39	P	P	18 28 29.3	+0.1
FFC				IAmb	IAmb	18 28 31.2	
	comp=Z,66nm,1.3s						
SCO	**Scoresbysund**	61.37	357	P	P	18 28 29.9	+0.3
SCO				pmax	pmax		
	comp=Z,24nm,1.2s						
SCO	**Scoresbysund**	61.37	357	*i* P	P	18 28 30.0	+0.3
SCO	**Scoresbysund**	61.37	357	P	P	18 28 29.9	+0.3
PUL	**Pulkovo**	61.38	330⇓	*i*P	P	18 28 30.3	+0.4
PUL				pmax	pmax		
	comp=Z,56nm,0.9s						
PUL	**Pulkovo**	61.38	330	*e*P	P	18 28 30.3	+0.4
FCC	**Fort Churchill**	61.41	32	P	P	18 28 29.8	-0.3
FCC				pmax	pmax		
	comp=Z,29nm,1.0s						
FCC	**Fort Churchill**	61.41	32	P	P	18 28 29.8	-0.3
FCC				IAmb	IAmb	18 28 39.7	
	comp=Z,29nm,0.9s						
ORV	**Oroville**	61.44	62	P	P	18 28 30.7	0.0
ORV				pmax	pmax		
	comp=Z,13nm,0.8s						
ORV	**Oroville**	61.44	62	P	P	18 28 30.7	0.0
FIA1	**FINESS Array S**	61.47	333	P	P	18 28 29.4	-1.1
FINES	**FINESS Array B**	61.48	333	P	P	18 28 29.4	-1.2
	comp=Z,32nm,0.4s,baz=31,slow=8.0,SNR=300						
FINES				pP	pP	18 29 54.4	+2.4
	comp=Z,7.7nm,0.9s,baz=74,slow=8.1,SNR=3.2						
FINES	**FINESS Array B**	61.48	333	P	P	18 28 29.0	-1.5
MOS	**Moscow**	61.63	323	*e*P	P	18 28 29.7	-1.9
MOS				*e*		18 30 46.4	
MOS				*e*S	S	18 36 18.8	-3.5
MOS				pmax	pmax		
	comp=Z,56nm,0.8s						
SOEI	**Soe**	61.84	208	P	P	18 28 33.8	+0.1
	comp=Z,26nm,1.1s						
SOEI	**Soe**	61.84	208	P	P	18 28 33.4	-0.3
SOEI				IAmb	IAmb	18 28 47.6	
	comp=Z,37nm,1.2s						
ILULI	**Ilulissat**	61.87	8	P	P	18 28 32.7	-0.2
ILULI				pmax	pmax		
	comp=Z,117nm,1.5s						
ILULI	**Ilulissat**	61.87	8	*i* P	P	18 28 31.1	-1.9
ILULI	**Ilulissat**	61.87	8	P	P	18 28 32.7	-0.2
DSRI	**Dabo**	62.00	233	P	P	18 28 36.8	+2.2
	comp=Z,13nm,1.4s						
HRY	**Holter Researc**	62.09	50	P	P	18 28 34.4	-0.6
MFID	**Camas Ranch**	62.15	55	P	P	18 28 36.4	+0.9
EGMT	**Eagleton**	62.26	48	P	P	18 28 37.4	+1.3
	baz=312,SNR=10						
EGMT	**Eagleton**	62.26	48	P	P	18 28 35.5	-0.5
EGMT				IAmb	IAmb	18 28 38.5	
	comp=Z,43nm,0.9s						
LRM	**Limekiln Ridge**	62.36	51	P	P	18 28 37.6	+0.6
MPK	**Martis Peak**	62.48	61	P	P	18 28 38.4	+0.5
OBN	**Obninsk**	62.50	323	P	P	18 28 36.3	-1.0
	comp=Z,7.0nm,0.5s,baz=346,slow=1.8,SNR=9.3						
OBN	**Obninsk**	62.50	323*c*	*i*P	P	18 28 37.1	-0.2

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OBN                               e          18 31 05.9
OBN                               eS   S     18 36 36.0 +2.9
OBN                                SS  SS    18 40 53.0 +8.9
OBN                                pmax pmax
      comp=Z,59nm,0.9s
OBN   Obninsk           62.50 323 eP   P     18 28 37.1  -0.2
OBN   Obninsk           62.50 323  P   P     18 28 35.9  -1.5
OBN                                IAmb IAmb 18 28 37.7
      comp=Z,50nm,0.9s
PAHR  Pah Rah Range     62.58  60  P   P     18 28 38.0  -0.4
PAHR                               IAmb IAmb 18 28 41.0
      comp=Z,34nm,1.0s
DLMT  Dillon            62.59  52  P   P     18 28 38.5  +0.2
DLMT                               IAmb IAmb 18 28 41.8
      comp=Z,34nm,0.9s
EMB   Emerald Bay       62.64  61  P   P     18 28 39.6  +0.8
NSS   Namsos            62.66 341 eP   P     18 28 38.0  -0.2
VCNR  Virginia City     62.70  61  P   P     18 28 40.0  +0.8
ICESG Greenland Ices    62.76   4 i P  P     18 28 39.0  -0.3
ICESG                              IAmb IAmb 18 28 41.1
      comp=Z,33nm,0.6s
MCMT  McKenzie Canyo    62.82  52  P   P     18 28 39.1  -0.9
HLID  Hailey            62.82  54  P   P     18 28 41.4  +1.4
      baz=312,SNR=16
HLID  Hailey            62.82  54  P   P     18 28 40.5  +0.6
PNTR  Pine Nut          62.86  61  P   P     18 28 40.0  -0.3
PNTR                               IAmb IAmb 18 28 43.3
      comp=Z,52nm,1.2s
BOZ   Bozeman (W)       62.94  51  P   P     18 28 38.6  -2.0
BOZ                                pmax pmax
      comp=Z,26nm,0.8s
BOZ   Bozeman (W)       62.94  51  P   P     18 28 42.1  +1.4
      baz=312,SNR=15
BOZ   Bozeman (W)       62.94  51  P   P     18 28 38.6  -2.0
BOZ                                IAmb IAmb 18 28 43.4
      comp=Z,26nm,0.8s
VRH   Novokhopyorsk     63.09 318 eP   P     18 28 40.1  -1.1
VRH                                pmax pmax
      comp=Z,60nm,0.6s
CMB   Columbia Colle    63.10  62  P   P     18 28 41.7   0.0
CMB                                pmax pmax
      comp=Z,31nm,1.2s
CMB   Columbia Colle    63.10  62  P   P     18 28 41.6   0.0
CMB                                IAmb IAmb 18 28 44.3
      comp=Z,31nm,1.1s
YERR  Yerington         63.14  61  P   P     18 28 42.2  +0.1
LPSR  Galich'ya Gora    63.33 320 eP   P     18 28 41.6  -1.2
LPSR                               pmax pmax
      comp=Z,50nm,0.7s
BMN   Battle Mountai    63.34  58  P   P     18 28 43.8  +0.4
BMN                                pmax pmax
      comp=Z,28nm,0.7s
BMN   Battle Mountai    63.34  58  P   P     18 28 43.8  +0.4
BMN                                IAmb IAmb 18 28 46.3
      comp=Z,28nm,0.7s
HRA   Herat             63.38 293  P   P     18 28 43.3  -0.4
HRA                                IAmb IAmb 18 28 46.0
      comp=Z,30nm,0.8s
GEYT  Alibeck           63.52 298  P   P     18 28 44.7  +0.3
      comp=Z,41nm,0.7s,baz=309,slow=0.9,SNR=38
GEYT  Alibeck           63.52 298  P   P     18 28 43.8  -0.6
GYA0B ALIBECK ARRAY     63.52 298  P   P     18 28 43.9  -0.4
QLMT  Earthquake Lak    63.56  52  P   P     18 28 44.6  -0.2
VSU   Vasula            63.58 330 eP   P     18 28 44.7  +0.4
VSU   Vasula            63.58 330⇓iP   P     18 28 44.2  -0.1
VSU                                pmax pmax
      comp=Z,92nm,0.7s
YHL   Hebgen Lake       63.68  51  P   P     18 28 45.9  +0.3
YHL                                IAmb IAmb 18 28 48.4
      comp=Z,35nm,1.1s
KVN   Kaiserville       63.76  60  P   P     18 28 46.9  +0.8
KVN                                pmax pmax
      comp=Z,35nm,0.7s
KVN   Kaiserville       63.76  60  P   P     18 28 46.9  +0.8
KVN                                IAmb IAmb 18 28 49.0
      comp=Z,35nm,0.7s
RYN   Ryan              63.80  61  P   P     18 28 47.4  +1.1
RYN                                IAmb IAmb 18 28 49.1
      comp=Z,18nm,0.7s
YHH   Holmes Hill       63.89  51  P   P     18 28 48.2  +1.2
YHH                                IAmb IAmb 18 28 49.7
      comp=Z,27nm,1.1s
YHH                                    pP    18 30 11.2  +2.0
YMR   Madison River     63.91  52  P   P     18 28 47.7  +0.6
YMR                                IAmb IAmb 18 28 50.0
      comp=Z,24nm,0.8s
YNR   Norris Junctio    64.03  51  P   P     18 28 47.5  -0.4
NVAR  Mina Array Bea    64.06  61  P   P     18 28 49.1  +1.0
      comp=Z,13nm,0.6s,baz=296,slow=7.4,SNR=111
NVAR                               pP  pwP   18 30 13.5  +1.1
      comp=Z,5.9nm,0.8s,baz=291,slow=6.9,SNR=7.3
NVAR  Mina Array Bea    64.06  61  P   P     18 28 48.2  +0.2
NVAR                               pP  pP    18 30 11.0  +0.8
LHV   Little Huntoon    64.06  61  P   P     18 28 48.3  +0.5
LHV                                IAmb IAmb 18 28 51.2
      comp=Z,36nm,0.8s
LHV                                pP  pwP   18 30 11.6  -0.4
SFJD  Kangerlussuaq     64.06   9  P   P     18 28 47.0  -0.3
SFJD                               pmax pmax
      comp=Z,29nm,1.0s
SFJD  Kangerlussuaq     64.06   9 i P  P     18 28 47.5  +0.2
SFJD  Kangerlussuaq     64.06   9  P   P     18 28 47.0  -0.3
SFJD                               IAmb IAmb 18 28 49.5
      comp=Z,29nm,0.9s
MDPB  Devils Postpil    64.14  62  P   P     18 28 49.5  +0.8
NV11  Mina Array Sit    64.14  61  P   P     18 28 49.3  +0.8
VSR   Storozhevoye      64.21 319 eP   P     18 28 47.5  -1.0
VSR                                pmax pmax
      comp=Z,30nm,0.5s
ELK   Elko              64.25  57  P   P     18 28 50.3  +1.0
ELK                                pmax pmax
      comp=Z,16nm,0.9s
ELK   Elko              64.25  57  P   P     18 28 50.3  +1.0
AAL   Aland             64.29 335 eP   P     18 28 48.8  -0.1
H17A  Grant Village     64.30  52  P   P     18 28 52.7  +3.1
      baz=313,SNR=16
H17A  Grant Village     64.30  52  P   P     18 28 52.0  +2.4
H17A                               IAmb IAmb 18 28 54.6
      comp=Z,52nm,1.1s
MTSE  Matsula           64.33 332 eP   P     18 28 49.2  +0.1
VORD  Divnogorie        64.34 319 eP   P     18 28 48.1  -1.2
VORD                               pmax pmax
      comp=Z,40nm,0.7s
GSI   Gunungsitoli      64.42 240  P   P     18 28 51.4  +1.0
      comp=Z,35nm,1.0s
GSI   Gunungsitoli      64.42 240  P   P     18 28 51.0  +0.6
GSI                                IAmb IAmb 18 28 58.0
      comp=Z,56nm,1.4s
FLWY  Flagg Ranch       64.45  52  P   P     18 28 52.2  +1.7
FLWY                               IAmb IAmb 18 28 54.2
      comp=Z,34nm,1.2s
RLMT  Red Lodge         64.48  50  P   P     18 28 52.5  +1.8
      baz=314,SNR=15
RLMT  Red Lodge         64.48  50  P   P     18 28 52.0  +1.3
RLMT                               IAmb IAmb 18 28 53.6
      comp=Z,57nm,1.2s
FXWY  Fox Creek         64.58  52  P   P     18 28 52.1  +0.7
FXWY                                   pP    18 30 14.9  +1.1
DGMT  Dagmar            64.65  45  P   P     18 28 52.0  +0.6
      baz=315,SNR=11
DGMT  Dagmar            64.65  45  P   P     18 28 51.2  -0.2
MOOW  Moose Ponds       64.66  52  P   P     18 28 52.7  +0.9
MOOW                               IAmb IAmb 18 28 55.2
      comp=Z,24nm,0.9s
PAGB  Antelope Grade    64.72  64  P   P     18 28 52.5  +0.4
PAGB                               IAmb IAmb 18 28 54.8
      comp=Z,32nm,1.0s
TPAW  Teton Pass        64.73  52  P   P     18 28 52.6  +0.3
LOHW  Long Hollow       64.83  52  P   P     18 28 52.4  -0.5
LOHW                               IAmb IAmb 18 28 56.3
      comp=Z,38nm,1.1s
SNOW  Snow King Moun    64.85  52  P   P     18 28 54.0  +0.9
SNOW                               IAmb IAmb 18 28 56.6
      comp=Z,24nm,0.8s
REDW  Red Top Meadow    64.87  53  P   P     18 28 53.8  +0.6
HVU   Hansel Valley     64.92  55  P   P     18 28 54.5  +1.1
HVU                                pmax pmax
      comp=Z,25nm,1.1s
HVU   Hansel Valley     64.92  55  P   P     18 28 54.5  +1.1
HVU                                IAmb IAmb 18 28 56.4
      comp=Z,25nm,1.1s
LAO   LASA Array        64.92  47  P   P     18 28 54.6  +1.3
      baz=315,SNR=5.7
LAO   LASA Array        64.92  47  P   P     18 28 52.5  -0.8
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LAO                                IAmb IAmb 18 28 56.0
      comp=Z,34nm,0.9s
TPH   Tonopah           64.92  60  P   P     18 28 54.1  +0.5
TPH                                pmax pmax
      comp=Z,120nm,0.6s
TPH   Tonopah           64.92  60  P   P     18 28 54.1  +0.5
DY2G  Dye2              64.96   7 i P  P     18 28 52.9  -0.5
DY2G                               IAmb IAmb 18 28 55.2
      comp=Z,29nm,0.6s
PWJI  Pagerwojo         65.00 222  P   P     18 28 54.0   0.0
AHID  Auburn Hatcher    65.14  53  P   P     18 28 54.7  -0.2
SMMC  Simmler           65.15  64  P   P     18 28 55.9  +1.1
      baz=313
UPP   Uppsala           65.22 335 eP   P     18 28 54.6  -0.2
LCH   Last Change Ra    65.25  61  P   P     18 28 56.4  +0.8
VES   Vestal, Richgr    65.34  63  P   P     18 28 57.0  +1.0
      baz=313
BGU   Big Grassy Mou    65.36  56  P   P     18 28 56.8  +0.6
SPUT  South Promonto    65.42  55  P   P     18 28 58.1  +1.5
SPUT                               IAmb IAmb 18 28 59.6
      comp=Z,26nm,0.8s
DOMB  Dombas            65.48 341 eP   P     18 28 56.2  -0.3
KLSI                    65.49 230  P   P     18 28 57.5  +0.4
      comp=Z,7.5nm,1.6s
CWC   Cottonwood Cre    65.53  62  P   P     18 28 58.2  +0.8
      baz=313
PKM   Mcpherson Peak    65.55  65  P   P     18 28 58.9  +1.4
      baz=313,SNR=5.8
GRAC  Grapevine Rang    65.57  61  P   P     18 28 59.3  +1.7
      baz=313,SNR=21
NC300 NORSAR Array S    65.63 339  P   P     18 28 57.0  -0.3
NC300                              IAmb IAmb 18 28 58.2
      comp=Z,24nm,0.6s
NC303 NORSAR Array S    65.67 339  P   P     18 28 57.3  -0.4
NC303                              IAmb IAmb 18 28 58.5
      comp=Z,27nm,0.6s
R11A  Troy Canyon, C    65.68  59  P   P     18 28 59.3  +0.9
      baz=313,SNR=36
R11A  Troy Canyon, C    65.68  59  P   P     18 28 58.6  +0.2
R11A                               IAmb IAmb 18 29 00.9
      comp=Z,34nm,1.2s
R11A                                   pwP   18 30 22.8  -0.3
NC405 NORSAR Array S    65.69 339  P   P     18 28 56.4  -1.4
HWUT  Hardware Ranch    65.69  54  P   P     18 28 58.8  +0.4
HWUT                               IAmb IAmb 18 29 01.4
      comp=Z,28nm,0.7s
NC204 NORSAR Array S    65.77 339  P   P     18 28 58.1  -0.3
AKN   Aaknes            65.81 342 eP   P     18 28 59.5  +1.0
ISA   Isabella, Lake    65.82  63  P   P     18 28 59.4  +0.3
ISA                                pmax pmax
      comp=Z,10.0nm,0.7s
ISA   Isabella, Lake    65.82  63  P   P     18 28 59.5  +0.4
      baz=313,SNR=8.3
ISA   Isabella, Lake    65.82  63  P   P     18 28 59.4  +0.3
NB201 NORSAR Array S    65.84 339  P   P     18 28 58.0  -0.7
NB2   NORSAR Subarra    65.87 339  P   P     18 28 58.2  -0.7
      comp=Z,33nm,0.8s,baz=29,slow=6.5
NB2   NORSAR Subarra    65.87 339  P   P     18 28 58.2  -0.7
      baz=29,slow=6.5
NOA   NORSAR Array B    65.87 339  P   P     18 28 58.3  -0.7
      comp=Z,13nm,0.5s,baz=30,slow=6.6,SNR=110
NOA                                pP  pP    18 30 21.3  -0.4
      comp=Z,0.3nm,0.5s,baz=198,slow=6.4,SNR=1.7
SPR3  Spring Creek 3    65.95  58  P   P     18 29 01.7  +1.4
SPR3                               IAmb IAmb 18 29 03.6
      comp=Z,26nm,0.6s
BW06  Boulder Array     65.96  52  P   P     18 29 01.2  +1.1
      baz=314,SNR=15
BW06  Boulder Array     65.96  52  P   P     18 29 00.5  +0.3
BW06                               IAmb IAmb 18 29 02.5
      comp=Z,25nm,0.7s
PD31  Pinedale Array    65.96  52  P   P     18 29 00.5  +0.3
PD31                               IAmb IAmb 18 29 02.5
      comp=Z,23nm,0.7s
PDAR  Pinedale Array    65.96  52  P   P     18 29 00.7  +0.5
      comp=Z,15nm,0.5s,baz=350,slow=0.8,SNR=122
PDAR                               pP  pP    18 30 25.2  +2.3
      comp=Z,4.7nm,0.9s,baz=312,slow=3.5,SNR=3.3
PDAR  Pinedale Array    65.96  52  P   P     18 29 00.2   0.0
PDAR                               pP  pP    18 30 23.1  +0.2
NBO00 NORSAR Array S    65.98 339  P   P     18 28 58.3  -1.3
DUG   Dugway, Tooele    65.98  56  P   P     18 29 00.6  +0.4
DUG                                pmax pmax
      comp=Z,33nm,0.7s
DUG   Dugway, Tooele    65.98  56  P   P     18 29 01.4  +1.3
      baz=314,SNR=35
DUG   Dugway, Tooele    65.98  56  P   P     18 29 00.6  +0.4
NC602 NORSAR Array S    66.06 339 eP   P     18 28 58.8  -1.3
NC602 NORSAR Array S    66.06 339  P   P     18 28 59.2  -0.8
NC602                              IAmb IAmb 18 29 01.2
      comp=Z,30nm,0.9s
NORES NORESS Array B    66.06 339  P   P     18 28 58.8  -1.3
ISAL  Salakas           66.06 329 eP   P     18 29 00.2  +0.1
TCUT  Toone Canyon      66.12  55  P   P     18 29 01.6  +0.4
TCUT                               IAmb IAmb 18 29 04.0
      comp=Z,46nm,1.1s
NAO01 NORSAR Array S    66.12 339  P   P     18 29 00.0  -0.5
NAO01                              IAmb IAmb 18 29 01.2
      comp=Z,47nm,1.1s
CTU   Camp Tracy        66.22  55  P   P     18 29 01.8  +0.1
CTU                                IAmb IAmb 18 29 04.4
      comp=Z,30nm,1.1s
FURC  Furnace Creek,    66.23  61  P   P     18 29 03.0  +1.5
      baz=314,SNR=11
MNK   Minsk             66.28 327 i P  P     18 29 00.9  -0.7
MNK                               i          18 31 31.4
MNK                               i PPP PPP  18 33 13.5
MNK                               i S  S     18 37 19.0  +0.1
MNK                               i SS SS    18 41 45.1  +2.5
MNK                                pmax pmax
      comp=E,3.0nm,1.1s
MNK                                pmax pmax
      comp=Z,63nm,1.1s
MNK                                pmax pmax
      comp=N,28nm,1.1s
MNK                                MLR MLR
      comp=E,9.0nm,10.0s
MNK                                MLR MLR
      comp=Z,110nm,17.0s
MNK   Minsk             66.28 327 i P  P     18 29 00.9  -0.6
      comp=E,3.0nm,1.1s
MNK                               i P  P     18 29 00.9  -0.6
      comp=N,28nm,1.1s
MNK                               i P  P     18 29 00.9  -0.6
      comp=Z,63nm,1.1s,baz=38
MNK                               i pP pP    18 30 23.8  -0.7
MNK                               i PP PP    18 31 31.5  -1.2
MNK                               i PPP PPP  18 33 13.5
MNK                               i S  S     18 37 19.1  +0.1
MNK                               i sS sS    18 39 44.6  -1.6
MNK                               i SS SS    18 41 45.1  +2.5
MNK                               i SSS SSS  18 45 02.2
MNK                               i LRM MLR  19 01 46.4
      comp=N,356nm,28.4s
MNK                               i LRM MLR  19 01 59.2
      comp=E,9.0nm,10.0s
MNK                               i LRM MLR  19 02 24.4
      comp=Z,110nm,16.8s
NACGM Naroch            66.36 328 i P  P     18 29 01.8  -0.2
OSI   Osito Audit: C    66.39  64  P   P     18 29 03.0  +0.2
OSI                                IAmb IAmb 18 29 05.2
      comp=Z,19nm,0.7s
LRMC  Laurel Mtn Rad    66.42  63  P   P     18 29 04.0  +1.0
      baz=314,SNR=14
JLU   Jordanelle        66.45  55  P   P     18 29 04.6  +1.4
JLU                                IAmb IAmb 18 29 06.0
      comp=Z,31nm,1.1s
GWY   Greenwater Val    66.53  62  P   P     18 29 03.7   0.0
GWY                                IAmb IAmb 18 29 06.2
      comp=Z,24nm,0.8s
PSUT  Pine Spring       66.54  58  P   P     18 29 04.1  +0.3
PSUT                               IAmb IAmb 18 29 06.5
      comp=Z,17nm,0.8s
NLU   North Lily Min    66.56  56  P   P     18 29 04.5  +0.6
NLU                                IAmb IAmb 18 29 06.7
      comp=Z,34nm,1.0s
QSM   Queen of Sheba    66.57  62  P   P     18 29 04.2  +0.4
QSM                                IAmb IAmb 18 29 06.3
      comp=Z,41nm,1.1s
PRN   Pahroc Range      66.64  60  P   P     18 29 05.0  +0.7
PRN                                IAmb IAmb 18 29 07.1
      comp=Z,43nm,1.2s
EDW2  Edwards Air Fo    66.64  63  P   P     18 29 05.3  +1.0
      baz=314,SNR=18
POO   Poona             66.69 272 eP   P     18 29 03.0  -1.7
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GROC  Groznyy           66.75 309 eP   P     18 29 05.1  +0.4
GROC                              e          18 29 31.1
GROC                              e          18 31 37.0
GROC                               pmax pmax
      comp=Z,28nm,0.8s
MPU   Maple Canyon      66.76  56  P   P     18 29 05.7  +0.6
GOF   Gofitskoye        66.82 312⇑eP   P     18 29 05.4  +0.3
GOF                                pmax pmax
      comp=Z,203nm,0.9s
PABE  Paberze           66.85 330 eP   P     18 29 05.3  +0.2
PABE  Paberze           66.85 330  P   P     18 29 04.5  -0.6
SKAR  Skarslia          66.86 340 eP   P     18 29 04.7  -0.5
HYA   Hoyanger          66.89 341 eP   P     18 29 05.5  +0.2
OSL   Oslo              66.95 339 eP   P     18 29 05.7   0.0
MWC   Mount Wilson      67.06  64  P   P     18 29 07.8  +0.8
MWC                                pmax pmax
      comp=Z,20nm,0.9s
MWC   Mount Wilson      67.06  64  P   P     18 29 07.8  +0.8
MWC                                IAmb IAmb 18 29 09.3
      comp=Z,20nm,0.9s
BORG  Borgarnes         67.06 356  P   P     18 29 07.1  +0.9
      comp=Z,17nm,0.5s,baz=351,slow=4.5,SNR=19
GSC   Goldstone, Bar    67.06  62  P   P     18 29 07.1  +0.2
GSC                                pmax pmax
      comp=Z,25nm,1.0s
GSC   Goldstone, Bar    67.06  62  P   P     18 29 07.8  +0.8
      baz=314,SNR=16
GSC   Goldstone, Bar    67.06  62  P   P     18 29 07.1  +0.2
GSC                                IAmb IAmb 18 29 09.3
      comp=Z,25nm,1.0s
ULM   Lac du Bonnet     67.06  39  P   P     18 29 06.1  -0.4
      comp=Z,7.0nm,0.4s,baz=333,slow=6.5,SNR=12
ULM   Lac du Bonnet     67.06  39  P   P     18 29 06.2  -0.4
SHPR  Sheep Range       67.19  60  P   P     18 29 09.1  +1.2
SHPR                               IAmb IAmb 18 29 10.8
      comp=Z,21nm,1.0s
MDND  Maddock           67.22  43  P   P     18 29 09.3  +1.7
      baz=318
MDND  Maddock           67.22  43  P   P     18 29 08.0  +0.4
TCRU  Three Creeks R    67.28  57  P   P     18 29 08.5   0.0
TCRU                               IAmb IAmb 18 29 11.6
      comp=Z,50nm,1.5s
SUE   Sulen             67.29 342 eP   P     18 29 07.4  -0.3
SEKA  Sheki             67.42 307  P   P     18 29 08.8  -0.2
KONO  Kongsberg         67.48 339 eP   P     18 29 09.0   0.0
LGD   Lagodekhi         67.48 308  P   P     18 29 09.7  +0.4
TUQ   Turquoise Moun    67.49  62  P   P     18 29 10.7  +1.1
      baz=314,SNR=25
MVU   Marysvale         67.49  57  P   P     18 29 10.3  +0.6
TMUT  Trail Mountain    67.50  56  P   P     18 29 10.6  +0.8
TMUT                                   pP    18 30 35.1  +2.1
RDMU  Red Mountain      67.50  54  P   P     18 29 10.8  +1.1
CCUT  Cedar City        67.50  59  P   P     18 29 10.1  +0.3
CCUT                               pP  pwP   18 30 35.5  +0.2
MSU   Marysvale         67.50  57  P   P     18 29 10.9  +1.1
MSU   Marysvale         67.50  57  P   P     18 29 10.9  +1.1
P17A  Butcher Ranch,    67.63  55  P   P     18 29 11.3  +0.8
P17A                                   pP    18 30 35.9  +2.2
K22A  Casper            67.63  51  P   P     18 29 10.6  +0.1
K22A                               IAmb IAmb 18 29 12.4
      comp=Z,35nm,1.2s
SZCU  Shurtz Canyon     67.63  58  P   P     18 29 11.2  +0.6
STRU  Stroemstad        67.64 338 i P  P     18 29 09.8  -0.1
E28A  Huff              67.66  44  P   P     18 29 10.8  +0.5
E28A                               IAmb IAmb 18 29 12.4
      comp=Z,48nm,1.1s
NCK   Nalchik           67.66 311⇓eP   P     18 29 10.8  +0.4
NCK                                pmax pmax
      comp=Z,73nm,0.8s
HEC   Hector,Ludlow     67.67  62  P   P     18 29 11.8  +1.1
      baz=314,SNR=15
ASK   Askoy             67.72 342 eP   P     18 29 10.8  +0.4
BER   Bergen            67.78 342 eP   P     18 29 11.1  +0.3
Q16A  Castle Valley     67.78  56  P   P     18 29 12.8  +1.3
Q16A                               IAmb IAmb 18 29 14.3
      comp=Z,55nm,1.3s
Q16A                                   pP    18 30 35.8  +1.0
MNGR  Mingechevir, A    67.79 307  P   P     18 29 11.7  +0.5
KIV   Kislovodsk        67.79 312 ⇑P   P     18 29 12.8  +1.5
KIV   Kislovodsk        67.79 312 i P  P     18 29 12.7  +1.4
      SNR=10.0
KIV   Kislovodsk        67.79 312 eP   P     18 29 12.7  +1.4
KIV                               e          18 29 36.9
KIV                               eS   S     18 37 39.2  +1.8
KIV                                pmax pmax
      comp=Z,83nm,1.1s
KIV   Kislovodsk        67.79 312  P   P     18 29 12.8  +1.5
KIV   Kislovodsk        67.79 312  P   P     18 29 10.6  -0.7
KIV                                pP  pP    18 30 34.5  -0.2
P18A  Preston Nutter    67.79  55  P   P     18 29 12.0  +0.3
DDFL  Dedoflistskaro    67.82 308  P   P     18 29 14.7  +3.2
MTPU  Mount Pierson     67.83  57  P   P     18 29 12.8  +0.8
MTPU                               IAmb IAmb 18 29 15.3
      comp=Z,61nm,1.5s
MTPU                                   pP    18 30 36.8  +1.4
RSSD  Black Hills       67.83  48  P   P     18 29 11.3  -0.5
RSSD                               pmax pmax
      comp=Z,85nm,1.5s
RSSD  Black Hills       67.83  48  P   P     18 29 12.5  +0.8
      baz=317
RSSD  Black Hills       67.83  48  P   P     18 29 11.3  -0.5
RSSD                                   pP    18 30 35.8  +0.7
KBZ   Khabaz            67.85 311  P   P     18 29 12.0  +0.5
      comp=Z,48nm,0.9s,baz=83,slow=0.3,SNR=63
KBZ                                pP  pP    18 30 37.3  +2.4
      comp=Z,22nm,1.1s,baz=51,slow=6.1,SNR=4.8
KBZ   Khabaz            67.85 311 i P  P     18 29 12.0  +0.5
KBZ                                pmax pmax
      comp=Z,73nm,1.0s
LCMT  Little Creek M    67.95  59  P   P     18 29 13.6  +1.1
LCMT                               IAmb IAmb 18 29 15.4
      comp=Z,22nm,0.9s
LCMT                                   pwP   18 30 38.0  +0.2
GUDG  Gudauri           67.95 309  P   P     18 29 14.2  +1.7
SRU   San Rafael Swe    68.00  56  P   P     18 29 12.9  +0.1
SRU                                pmax pmax
      comp=Z,62nm,1.1s
SRU   San Rafael Swe    68.00  56  P   P     18 29 12.9  +0.1
SRU                                pP  pP    18 30 36.8  +0.7
MURC  Murrieta          68.00  64  P   P     18 29 13.7  +0.9
      baz=314,SNR=5.3
ZEI   Tsey              68.02 310 eP   P     18 29 11.5  -1.4
ZEI                                pmax pmax
      comp=Z,12nm,1.0s
GMRC  Granite Mounta    68.10  62  P   P     18 29 14.7  +1.3
      baz=314,SNR=14
PKCU  Pink Cliffs       68.18  58  P   P     18 29 14.8  +0.7
PKCU                               IAmb IAmb 18 29 17.4
      comp=Z,20nm,0.8s
KNB   Kanab             68.19  59  P   P     18 29 14.7  +0.7
KNB                                pmax pmax
      comp=Z,53nm,1.3s
KNB   Kanab             68.19  59  P   P     18 29 14.7  +0.7
KNB                                IAmb IAmb 18 29 17.1
      comp=Z,53nm,1.3s
NEY   Neytrino          68.28 311⇑eP   P     18 29 16.2  +1.8
NEY                                pmax pmax
      comp=Z,15nm,1.4s
GANJ  Ganja             68.28 307  P   P     18 29 15.2  +0.9
LKRN  Lenkeran, Azer    68.32 304  P   P     18 29 14.9  +0.4
SUW   Suwalki           68.33 329 eP   P     18 29 14.1  -0.2
SUW   Suwalki           68.33 329 eP   P     18 29 13.8  -0.5
SUW   Suwalki           68.33 329  P   P     18 29 13.2  -1.1
SUW                                pmax pmax
      comp=Z,57nm,1.2s
SUW   Suwalki           68.33 329  P   P     18 29 13.2  -1.1
ONI   Oni               68.39 310  P   P     18 29 15.3  +0.3
ONI                                pmax pmax
      comp=Z,28nm,0.8s
ONI   Oni               68.39 310  P   P     18 29 15.3  +0.3
ONI                                IAmb IAmb 18 29 17.7
      comp=Z,28nm,0.8s
TJOU  Tjoern            68.40 337 i P  P     18 29 13.6  -1.0
BLS5  Blasjo            68.41 341 eP   P     18 29 15.5  +0.8
PFO   Pinyon Flats O    68.44  63  P   P     18 29 15.9  +0.4
PFO                                pmax pmax
      comp=Z,20nm,1.2s
PFO   Pinyon Flats O    68.44  63  P   P     18 29 16.4  +0.9
      baz=315,SNR=5.4
PFO   Pinyon Flats O    68.44  63  P   P     18 29 15.9  +0.4
BELC  Belle Mtn. Jos    68.44  63  P   P     18 29 16.1  +0.5
      baz=315,SNR=8.6
TPFO  Pinon Flats       68.44  63  P   P     18 29 16.5  +0.9
      baz=315
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BORU	**Boraas**	68.45	336	*i* P	P	18 29 14.4	-0.6
O20A	**White River Ci**	68.52	54	P	P	18 29 17.0	+1.0
	baz=316,SNR=11						
O20A	**White River Ci**	68.52	54	P	P	18 29 16.3	+0.3
O20A				IAmb	IAmb	18 29 18.2	
	comp=Z,48nm,1.2s						
AGMN	**Agassiz Nation**	68.55	41	P	P	18 29 15.7	-0.1
	baz=320,SNR=5.3						
AGMN	**Agassiz Nation**	68.55	41	P	P	18 29 15.5	-0.3
AGMN				pP	pP	18 30 40.0	+0.6
109C	**Camp Elliot, M**	68.55	64	P	P	18 29 16.9	+0.8
109C				IAmb	IAmb	18 29 18.2	
	comp=Z,26nm,1.1s						
AKASG	**Malin Array Be**	68.75	324	P	P	18 29 15.4	-1.5
	comp=Z,19nm,0.4s,baz=38,slow=6.1,SNR=136						
AKASG				pP	pP	18 30 40.1	-0.5
	comp=Z,1.7nm,0.5s,baz=36,slow=7.0,SNR=1.7						
AKASG	**Malin Array Be**	68.75	324	P	P	18 29 14.7	-2.2
AKASG				pP	pP	18 30 39.9	-0.6
AKBB	**Malin Array Si**	68.75	324	P	P	18 29 15.1	-1.8
AKBB				pmax	pmax		
	comp=Z,58nm,1.3s						
AKBB	**Malin Array Si**	68.75	324	P	P	18 29 15.1	-1.8
AKBB				IAmb	IAmb	18 29 17.3	
	comp=Z,58nm,1.2s						
BLEU	**Blekinge**	68.75	334	*i* P	P	18 29 15.3	-1.5
BLEU				IAmb	IAmb	18 29 16.3	
	comp=Z,4.5nm,0.4s						
KLNR	**Kaliningrad**	68.83	331	⇓*e*P	P	18 29 15.3	-2.0
KLNR				pmax	pmax		
	comp=Z,191nm,1.4s						
IRM	**Iron Mountain**	68.84	62	P	P	18 29 18.7	+0.9
	baz=315,SNR=21						
ONAU	**Onsala**	68.88	337	*i* P	P	18 29 17.2	-0.4
U15A	**North Rim**	68.90	59	P	P	18 29 18.0	-0.5
U15A				IAmb	IAmb	18 29 21.5	
	comp=Z,70nm,1.4s						
W13A	**Hualapai Mount**	68.92	61	P	P	18 29 17.6	-0.9
W13A				pP	pwP	18 30 44.0	-0.4
D32A	**Dogwood Acres,**	68.92	42	P	P	18 29 17.5	-0.6
BAR	**Barrett**	68.96	64	P	P	18 29 17.7	-0.9
MONP2	**Monument Peak**	68.96	64	P	P	18 29 20.2	+1.4
	baz=315						
HOMB	**Homborsund**	68.97	339	*e*P	P	18 29 18.8	+0.7
HOMB	**Homborsund**	68.97	339	*e*P	P	18 29 18.1	0.0
BC3	**Big Chuckawall**	69.01	63	P	P	18 29 20.0	+1.1
	baz=315,SNR=11						
FABU	**Falkenberg**	69.02	336	*i* P	P	18 29 18.4	0.0
WB0	**Warramunga Arr**	69.02	195	P	P	18 29 18.9	0.0
WB0				IAmb	IAmb	18 29 20.3	
	comp=Z,36nm,1.2s						
DEL	**Delary**	69.16	335	*i* P	P	18 29 18.1	-1.2
DEL				IAmb	IAmb	18 29 18.9	
	comp=Z,2.2nm,0.5s						
WR0	**Warramunga Arr**	69.19	195	P	P	18 29 19.9	0.0
WRAB	**Tennant Creek**	69.19	195*c*	*i*P	P	18 29 20.4	+0.5
WRAB				pmax	pmax		
	comp=Z,31nm,1.7s						
WRAB	**Tennant Creek**	69.19	195	P	P	18 29 19.8	-0.1
WB2	**Warramunga Arr**	69.20	195	P	P	18 29 20.1	+0.1
WRA	**Warramunga Arr**	69.20	195	P	P	18 29 20.3	+0.3
	comp=Z,8.2nm,0.5s,baz=8.5,slow=6.8,SNR=177						
WRA				PcP	PcP	18 29 41.5	+0.7
	comp=Z,2.2nm,0.4s,baz=12,slow=5.0,SNR=8.4						
WRA	**Warramunga Arr**	69.20	195	P	P	18 29 19.0	-1.0
SNART	**Snartemo**	69.21	340	*i* P	P	18 29 20.0	+0.4
SNART				IAmb	IAmb	18 29 20.5	
	comp=Z,23nm,0.5s						
SNART	**Snartemo**	69.21	340	*e*P	P	18 29 19.8	+0.2
BGD	**Bogdanovka**	69.27	309	P	P	18 29 24.1	+3.5
SWSC	**Sam W. Stewart**	69.30	64	P	P	18 29 22.3	+1.8
	baz=315						
IKP	**In-Ko-Pah, Jac**	69.32	64	P	P	18 29 21.9	+1.1
	baz=315						
PDMCI	**Parker Dam,Lak**	69.33	61	P	P	18 29 22.1	+1.4
	baz=315,SNR=8.3						
B35A	**Bob, Littlefor**	69.42	39	P	P	18 29 20.3	-0.7
GNI	**Garni**	69.48	308	P	P	18 29 23.4	+1.6
	comp=Z,14nm,0.6s,baz=298,slow=3.3,SNR=5.8						
GNI	**Garni**	69.48	308	⇑*e*P	P	18 29 23.7	+1.9
GNI				pmax	pmax		
	comp=Z,75nm,1.4s						
GNI	**Garni**	69.48	308	P	P	18 29 23.6	+1.8
GNI	**Garni**	69.48	308	P	P	18 29 22.4	+0.6
GNI				IAmb	IAmb	18 29 24.5	
	comp=Z,47nm,1.1s						
ANN	**Anapa**	69.72	315	*e*P	P	18 29 19.8	-3.1
ANN				*e**PP	PcP	18 29 39.3	-3.5
ANN				*e*		18 31 56.1	
ANN				*e*SS	SS	18 42 36.3	+0.5
ANN				*e*SSS	SSS	18 45 57.1	
ANN				pmax	pmax		
	comp=Z,98nm,1.0s						
BJUU	**Bjuv**	69.74	336	*i* P	P	18 29 22.7	-0.1
NAX	**Nakhchivan**	69.78	306	P	P	18 29 24.0	+0.5
GLA	**Glamis**	69.80	63	P	P	18 29 23.9	+0.2
GLA				pmax	pmax		
	comp=Z,34nm,1.0s						
GLA	**Glamis**	69.80	63	P	P	18 29 25.1	+1.4
	baz=315,SNR=6.9						
GLA	**Glamis**	69.80	63	P	P	18 29 23.9	+0.2
GLA				IAmb	IAmb	18 29 26.3	
	comp=Z,34nm,1.0s						
SMCO	**Snowmass**	69.89	53	P	P	18 29 24.4	-0.2
KARS	**Kars**	70.00	309	P	P	18 29 23.7	-1.2
KARS				pmax	pmax		
	comp=Z,477nm,1.5s						
KARS	**Kars**	70.00	309	P	P	18 29 23.7	-1.2
BSD	**Bornholm Skovb**	70.03	334	*i* P	P	18 29 24.2	-0.4
BSD				IAmb	IAmb	18 29 24.8	
	comp=Z,8.7nm,0.5s						
SUSD	**Miller**	70.06	45	P	P	18 29 25.7	+0.7
	baz=319						
SUSD	**Miller**	70.06	45	P	P	18 29 24.9	-0.1
WUAZ	**Wupatki**	70.07	59	P	P	18 29 27.3	+1.9
	baz=316,SNR=17						
WUAZ	**Wupatki**	70.07	59	P	P	18 29 25.7	+0.3
WUAZ				IAmb	IAmb	18 29 28.5	
	comp=Z,56nm,1.3s						
WUAZ				pP	pwP	18 30 52.1	+0.7
ISCO	**Idaho Springs**	70.16	52	P	P	18 29 26.7	+0.6
ISCO				pmax	pmax		
	comp=Z,40nm,1.2s						
ISCO	**Idaho Springs**	70.16	52	P	P	18 29 27.7	+1.6
	baz=317,SNR=13						
ISCO	**Idaho Springs**	70.16	52	P	P	18 29 26.7	+0.6
ISCO				IAmb	IAmb	18 29 29.6	
	comp=Z,40nm,1.2s						
F33A	**5 Mile Ranch,**	70.23	43	P	P	18 29 23.8	-2.1
F33A				IAmb	IAmb	18 29 27.5	
	comp=Z,45nm,1.2s						
Y14A	**Wickenburg**	70.25	61	P	P	18 29 26.1	-0.3
Y14A				IAmb	IAmb	18 29 29.0	
	comp=Z,20nm,0.8s						
Y14A					pwP	18 30 51.9	-0.7
PALK	**Pallekele**	70.31	259	P	P	18 29 27.4	+0.5
MVCO	**Mesa Verde**	70.48	56	P	P	18 29 29.0	+1.1
	baz=316,SNR=18						
MVCO	**Mesa Verde**	70.48	56	P	P	18 29 28.4	+0.5
MVCO				pP	pP	18 30 51.7	-0.3
MSVF	**Nonsavu**	70.61	151	P	P	18 29 31.8	+3.3
	comp=Z,5.0nm,1.0s,baz=103,slow=5.8,SNR=3.6						
113A	**Mohawk Valley,**	70.63	62	P	P	18 29 27.7	-0.9
113A				pP	pwP	18 30 56.0	+0.9
EYMN	**Ely**	70.68	38	P	P	18 29 28.6	0.0
	baz=322,SNR=8.4						
EYMN	**Ely**	70.68	38	P	P	18 29 27.2	-1.5
EYMN				IAmb	IAmb	18 29 29.7	
	comp=Z,46nm,1.3s						
X16A	**Lo Mia Camp, P**	70.82	60	P	P	18 29 30.2	+0.3
X16A				IAmb	IAmb	18 29 33.6	
	comp=Z,23nm,1.0s						
GKP	**Gorka Klasztor**	70.91	332	*e*P	P	18 29 29.6	-0.2
GKP	**Gorka Klasztor**	70.91	332	*e*P	P	18 29 29.6	-0.2
S22A	**4UR Ranch, Cre**	71.00	54	P	P	18 29 32.7	+1.5
	baz=317,SNR=24						
Q24A	**Divide**	71.02	53	P	P	18 29 31.9	+0.7
	baz=317,SNR=7.7						
SORM	**Soroca**	71.13	323	⇑P	P	18 29 31.0	-0.2
SORM	**Soroca**	71.13	323	⇑P	P	18 29 31.0	-0.2
OGNE	**Ogallala**	71.17	49	P	P	18 29 31.3	-0.5
W18A	**Petrified Fore**	71.29	58	P	P	18 29 34.3	+1.6
	baz=316						
W18A	**Petrified Fore**	71.29	58	P	P	18 29 33.2	+0.5
F36A	**Milaca**	71.44	41	P	P	18 29 32.0	-1.2
LVV	**L'vov**	71.45	326	*e*P	P	18 29 32.2	-1.0
K31A	**O'Neill**	71.53	46	P	P	18 29 32.4	-1.4
X18A	**Snowflake**	71.59	59	P	P	18 29 35.1	+0.6
X18A				IAmb	IAmb	18 29 37.4	
	comp=Z,22nm,1.0s						
X18A					pP	18 30 59.4	+0.7
ECSD	**EROS Data Cent**	71.70	44	P	P	18 29 34.8	-0.1
	baz=320,SNR=16						
ECSD	**EROS Data Cent**	71.70	44	P	P	18 29 34.6	-0.1
ECSD				IAmb	IAmb	18 29 36.3	
	comp=Z,23nm,0.6s						
E38A	**The Farm, Brul**	71.71	39	P	P	18 29 34.3	-0.5
SDCO	**Great Sand Dun**	71.72	54	P	P	18 29 36.6	+1.3
	baz=318,SNR=18						
SDCO	**Great Sand Dun**	71.72	54	P	P	18 29 35.4	+0.1
SDCO				IAmb	IAmb	18 29 37.9	
	comp=Z,28nm,1.2s						
DZM	**Mont Dzumac**	71.73	163	P	P	18 29 37.8	+2.6
	comp=Z,10nm,0.6s,baz=34,slow=9.4,SNR=13						
DZM	**Mont Dzumac**	71.73	163	*e*P	P	18 29 37.2	+2.1
	comp=Z,74nm,1.3s						
DZM	**Mont Dzumac**	71.73	163	P	P	18 29 37.0	+1.8
214A	**Organ Pipe Nat**	71.78	62	P	P	18 29 36.9	+1.4
	baz=316,SNR=7.8						
214A	**Organ Pipe Nat**	71.78	62	P	P	18 29 36.5	+1.0
214A				IAmb	IAmb	18 29 38.0	
	comp=Z,29nm,1.1s						
MILM	**Milestii Mici**	71.91	322	⇑P	P	18 29 35.1	-0.8
MILM	**Milestii Mici**	71.91	322	⇑P	P	18 29 35.1	-0.8
ONTNC	**Ouen Toro**	71.96	163	P	P	18 29 37.6	+1.3
ONTNC				IAmb	IAmb	18 29 39.3	
	comp=Z,30nm,1.0s						
KWP	**Kalwaria Pacla**	72.10	327	*e*P	P	18 29 37.7	+0.7
KWP	**Kalwaria Pacla**	72.10	327	P	P	18 29 36.8	-0.2
KWP				pmax	pmax		
	comp=Z,754nm,1.3s						
KWP	**Kalwaria Pacla**	72.10	327	P	P	18 29 36.8	-0.2
OUENC	**Ouen Island, N**	72.15	163	P	P	18 29 38.2	+0.7
OUENC				IAmb	IAmb	18 29 40.7	
	comp=Z,24nm,1.0s						
BSEG	**Bad Segeberg**	72.37	336	*e*P	P	18 29 38.9	+0.5
	comp=Z,4.8nm,0.8s,baz=29,slow=5.8						
MDO	**Dochfour**	72.37	345	*e*P	P	18 29 38.4	-0.1
KAC	**Achnashellach**	72.47	346	*e*P	P	18 29 39.6	+0.6
D41A	**Chassel**	72.58	37	P	P	18 29 39.7	-0.2
OJC	**Ojcow**	72.64	329	*e*P	P	18 29 39.7	-0.4
OJC	**Ojcow**	72.64	329	P	P	18 29 38.6	-1.6
OJC				IAmb	IAmb	18 29 41.4	
	comp=Z,54nm,1.4s						
OJC				pP	pP	18 31 03.6	-1.3
KPL	**Plockton**	72.68	346	*e*P	P	18 29 39.7	-0.5
KPL				IAmb	IAmb	18 29 41.5	
	comp=Z,22nm,0.5s						
TUC	**Tucson**	72.71	61	P	P	18 29 42.2	+1.2
TUC				pmax	pmax		
	comp=Z,20nm,1.2s						
TUC	**Tucson**	72.71	61	P	P	18 29 42.3	+1.3
	baz=317						
TUC	**Tucson**	72.71	61	P	P	18 29 42.2	+1.2
BGNE	**Belgrade**	72.75	47	P	P	18 29 40.0	-1.0
T25A	**Trinidad**	72.75	53	P	P	18 29 42.4	+1.1
	baz=318,SNR=8.9						
T25A	**Trinidad**	72.75	53	P	P	18 29 41.2	-0.2
T25A				IAmb	IAmb	18 29 43.6	
	comp=Z,26nm,0.9s						
BUR08	**Bucovina Ar. S**	72.78	324	P	P	18 29 39.8	-1.3
BURAR	**Bucovina Array**	72.80	324	⇑P	P	18 29 40.5	-0.7
BURAR	**Bucovina Array**	72.80	324	⇑P	P	18 29 40.5	-0.7
BURAR	**Bucovina Array**	72.80	324	P	P	18 29 40.6	-0.7
KOLS	**Kolonicke sedl**	72.83	326	*e*P	P	18 29 41.7	+0.4
KOLS				pmax	pmax		
	comp=Z,27nm,1.2s						
KOLS	**Kolonicke sedl**	72.83	326	*e*P	P	18 29 41.7	+0.4
SCHQ	**Schefferville**	72.88	21	P	P	18 29 40.9	-0.6
	comp=Z,3.7nm,0.4s,baz=325,slow=5.0,SNR=16						
AS31	**Alice Springs**	72.92	195	P	P	18 29 42.7	+0.7
BIR	**Birlad**	72.92	322	⇑P	P	18 29 42.4	+0.6
BIR	**Birlad**	72.92	322	⇑P	P	18 29 42.4	+0.6
ASAR	**Alice Springs**	72.92	195	P	P	18 29 43.3	+1.3
	comp=Z,4.8nm,0.4s,baz=8.1,slow=5.5,SNR=317						
ASAR				pP	pwP	18 31 10.8	+0.1
	comp=Z,2.1nm,0.8s,baz=5.7,slow=7.9,SNR=4.1						
ASAR	**Alice Springs**	72.92	195	P	P	18 29 42.9	+0.9
ASAR	**Alice Springs**	72.92	195	P	P	18 29 42.9	+0.9
BANOM	**Banah**	72.93	290	*i* P	P	18 29 42.6	+0.4
	SNR=21						
BANOM	**Banah**	72.93	290	P	P	18 29 42.8	+0.5
I37A	**Lemond, Waseca**	72.94	42	P	P	18 29 41.6	-0.4
I37A					pP	18 31 07.5	+0.6
VLDR	**Vladesti**	73.07	321	⇓P	P	18 29 42.9	+0.2
UZH	**Uzhgorod**	73.08	326	*e*P	P	18 29 41.4	-1.3
UZH				*i*		18 29 55.7	
COWI	**Conover**	73.12	38	P	P	18 29 42.2	-0.8
COWI				IAmb	IAmb	18 29 44.1	
	comp=Z,36nm,1.3s						
NIE	**Niedzica**	73.14	328	*e*P	P	18 29 44.3	+1.2
CRVS	**Cervenica-Dubn**	73.16	327	*e*P	P	18 29 43.6	+0.4
CRVS				pmax	pmax		
	comp=Z,33nm,1.3s						
CRVS	**Cervenica-Dubn**	73.16	327	*e*P	P	18 29 43.6	+0.4
ANMO	**Albuquerque**	73.25	56*c*	*i*P	P	18 29 45.7	+1.5
ANMO				pmax	pmax		
	comp=Z,21nm,0.9s						
ANMO	**Albuquerque**	73.25	56	P	P	18 29 45.2	+1.0
	baz=318						
ANMO	**Albuquerque**	73.25	56	P	P	18 29 44.6	+0.4
INVG	**Invergeldie, C**	73.28	345	*e*P	P	18 29 43.6	-0.1
KSP	**Ksiaz**	73.29	331	*e*P	P	18 29 43.6	-0.3
G40A	**Rib Lake**	73.34	39	P	P	18 29 43.0	-1.3
WSAR	**Wadi Sarin**	73.36	286	P	P	18 29 45.9	+1.1
	comp=Z,6.5nm,0.5s,baz=76,slow=5.6,SNR=8.2						
WSAR	**Wadi Sarin**	73.36	286	P	P	18 29 46.1	+1.3
MDH	**Madha**	73.37	289	P	P	18 29 44.1	-0.7
MDH	**Madha**	73.37	289	P	P	18 29 44.6	-0.2
TRPA	**Tarpa**	73.40	326	*e*P	P	18 29 44.5	0.0
MASF	**Masafi**	73.41	289	P	P	18 29 44.9	-0.1
MSFE	**Esma-Masafi**	73.42	289	P	P	18 29 45.1	0.0
BIDO	**Bidbid**	73.48	287	P	P	18 29 47.1	+1.7
FLTG	**Flechtingen**	73.53	335	*e*P	P	18 29 44.8	-0.5
	comp=Z,6.9nm,0.7s,baz=29,slow=5.8						
OSTC	**Ostas**	73.56	331	*e*P	P	18 29 45.8	+0.3
CFR	**Carcaliu**	73.58	321	⇓P	P	18 29 45.3	-0.3
CFR	**Carcaliu**	73.58	321	⇓P	P	18 29 45.3	-0.3
CHVC	**Chvalec**	73.59	331	*e*P	P	18 29 45.8	+0.1
WBK	**Wadi Bani Khal**	73.59	286	P	P	18 29 47.8	+1.7
VRI	**Vrincioaia**	73.61	322	⇓P	P	18 29 46.3	+0.5
VRI	**Vrincioaia**	73.61	322	⇓P	P	18 29 46.3	+0.5
JLN	**Jalan Bani Buh**	73.64	285	P	P	18 29 47.9	+1.5
	SNR=9.0						
PLOR	**Plostina**	73.66	322	⇑P	P	18 29 46.2	+0.1
PLOR	**Plostina**	73.66	322	⇑P	P	18 29 46.2	+0.1
LANS	**Liptovska Anna**	73.66	328	*e*P	P	18 29 46.8	+0.7
LANS				pmax	pmax		
	comp=Z,19nm,1.2s						
LANS	**Liptovska Anna**	73.66	328	*e*P	P	18 29 46.8	+0.7
LAWE	**Loch Awe, Argy**	73.67	346	*e*P	P	18 29 45.9	-0.1
LAWE				IAmb	IAmb	18 29 47.2	
	comp=Z,16nm,0.6s						
UOSS	**Minazif**	73.69	289	*i* P	P	18 29 46.6	0.0
	SNR=6.0						
UOSS	**Minazif**	73.69	289	P	P	18 29 46.9	+0.2
UOSS	**Minazif**	73.69	289	P	P	18 29 46.7	0.0
DPC	**Dobruska-Polom**	73.71	331	*e*P	P	18 29 46.3	-0.1
DPC	**Dobruska-Polom**	73.71	331	*e*P	P	18 29 46.3	-0.1
DPC				*e*pP	pP	18 31 12.9	+1.5
BNM	**Barren Site**	73.75	57	P	P	18 29 47.3	+0.2
E43A	**Lone Tree Farm**	73.77	37	P	P	18 29 46.2	-0.5
E43A				IAmb	IAmb	18 29 47.1	
	comp=Z,17nm,0.5s						
KRLC	**Kraliky**	73.79	330	*e*P	P	18 29 46.8	-0.1
KRLC	**Kraliky**	73.79	330	*e*P	P	18 29 46.8	-0.1
KRLC				*e*pP	pP	18 31 13.0	+1.1
MORC	**Moravsky Berou**	73.79	330	⇓P	P	18 29 46.7	-0.2
MORC	**Moravsky Berou**	73.79	330	⇓P	P	18 29 46.7	-0.2
MORC	**Moravsky Berou**	73.79	330	*e*P	P	18 29 46.5	-0.4
MORC				*e*pP	pP	18 31 12.6	+0.7
MORC	**Moravsky Berou**	73.79	330	P	P	18 29 47.2	+0.3
MORC				IAmb	IAmb	18 29 48.2	
	comp=Z,33nm,1.2s						
MORC				pP	pP	18 31 12.4	+0.5
OZUR		73.81	323	⇑P	P	18 29 47.6	+0.6
F42A	**Maple Grove Fa**	73.81	38	P	P	18 29 46.1	-0.9
F42A				IAmb	IAmb	18 29 48.3	
	comp=Z,26nm,0.7s						
HATD	**Hatta, Dubai**	73.82	289	*i* P	P	18 29 48.0	+0.6
	SNR=6.7						
HATD	**Hatta, Dubai**	73.82	289	P	P	18 29 48.2	+0.8
COVR	**Voineasa-Covas**	73.84	322	⇓P	P	18 29 47.0	-0.2
SMDO	**Samad**	73.86	287	P	P	18 29 48.8	+1.0
ASSE	**Asse, Remlinge**	73.87	335	*e*pP	pP	18 31 15.3	+3.1
CLL	**Collm**	73.92	333	P	P	18 29 46.1	-1.4
CLL				pmax	pmax		
	comp=Z,60nm,1.4s						
CLL	**Collm**	73.92	333	*i* P	P	18 29 47.2	-0.3
	comp=Z,21nm,0.7s						
CLL				*i* pP	pP	18 31 12.7	+0.2
CLL				*e*PP	PP	18 32 37.0	-0.8
CLL	**Collm**	73.92	333	*e*P	P	18 29 46.8	-0.7
	comp=Z,12nm,0.8s,baz=29,slow=5.8						
CLL	**Collm**	73.92	333	P	P	18 29 46.1	-1.4
CLL				IAmb	IAmb	18 29 48.2	
	comp=Z,60nm,1.4s						
PGBU	**Gleniffer braes**	73.95	345	*e*P	P	18 29 48.0	+0.4
PGBU				IAmb	IAmb	18 29 50.3	
	comp=Z,85nm,1.3s						
HOQ	**Hoqain**	73.96	287	P	P	18 29 49.1	+0.9
	SNR=5.8						
ASHO	**Ashiyiah**	73.97	289	*i* P	P	18 29 48.7	+0.4
	SNR=8.1						
ASHO	**Ashiyiah**	73.97	289	P	P	18 29 49.0	+0.8
MBWA	**Marble Bar**	73.99	208	P	P	18 29 48.9	+0.7
BRG	**Berggiesshubel**	74.01	332	*e*P	P	18 29 46.3	-1.7
	comp=Z,4.0nm,1.0s,baz=29,slow=5.8						
BRG	**Berggiesshubel**	74.01	332	*e*P	P	18 29 47.9	-0.1
BRG				Amp		18 29 48.9	
	comp=Z,6.1nm,1.0s						
HARR	**Harsova**	74.06	321	⇑P	P	18 29 47.9	-0.5
HARR	**Harsova**	74.06	321	⇑P	P	18 29 47.9	-0.5
SOHO	**SOHO**	74.06	288	*i* P	P	18 29 48.7	0.0
	SNR=6.9						
SOHO	**SOHO**	74.06	288	P	P	18 29 49.5	+0.7
DOPR	**Dopca**	74.07	323	⇑P	P	18 29 49.1	+0.6
FBE	**Freiberg**	74.15	333	*e*P	P	18 29 49.2	+0.4
	comp=Z,7.4nm,0.7s,baz=29,slow=5.8						
FBE				*e*pP	pP	18 31 17.6	+3.6
EKA	**Eskdalemuir Ar**	74.17	344	P	P	18 29 48.2	-0.6
CJR	**Cluj-Napoca**	74.17	324	⇓P	P	18 29 50.2	+1.1
CJR	**Cluj-Napoca**	74.17	324	⇓P	P	18 29 50.2	+1.1
FAQ	**Al Faqa, Dubai**	74.22	289	P	P	18 29 50.1	+0.4
CLZ	**Clausthal**	74.22	335	*e*P	P	18 29 49.7	+0.5
	comp=Z,5.8nm,0.7s,baz=29,slow=5.8						
MLR	**Muntele Rosu**	74.24	322	⇓P	P	18 29 50.1	+0.5
MLR	**Muntele Rosu**	74.24	322	P	P	18 29 49.7	+0.1
	comp=Z,7.2nm,0.5s,baz=88,slow=9.2,SNR=7.4						
MLR	**Muntele Rosu**	74.24	322	P	P	18 29 49.7	+0.1
MLR				pmax	pmax		
	comp=Z,51nm,1.5s						
MLR	**Muntele Rosu**	74.24	322	P	P	18 29 49.7	+0.1
MLR				IAmb	IAmb	18 29 51.7	
	comp=Z,51nm,1.5s						
I40A	**Norwalk**	74.27	40	P	P	18 29 49.0	-0.7
319A	**Douglas**	74.27	61	P	P	18 29 49.9	-0.1
121A	**Cookes Peak, D**	74.28	59	P	P	18 29 51.8	+1.6
	baz=318,SNR=20						
121A	**Cookes Peak, D**	74.28	59	P	P	18 29 50.7	+0.5
JMDO	**Jabal Madar**	74.32	286	P	P	18 29 51.2	+0.9
	SNR=7.0						
N35A	**Tabor**	74.37	45	P	P	18 29 50.2	-0.1
NEUB	**Neuenburg**	74.37	334	*e*P	P	18 29 50.5	+0.4
	comp=Z,18nm,1.1s,baz=29,slow=5.8						
VYHS	**Vyhne**	74.44	328	*e*P	P	18 29 51.2	+0.6
VYHS	**Vyhne**	74.44	328	*e*P	P	18 29 51.2	+0.6
DRGR		74.45	325	⇑P	P	18 29 50.5	-0.2
DRGR		74.45	325	⇑P	P	18 29 50.5	-0.2
ASUD	**Al Ashush, Dub**	74.47	290	*i* P	P	18 29 52.0	+0.9
	SNR=24						
ASUD	**Al Ashush, Dub**	74.47	290	P	P	18 29 51.8	+0.8
VRAC	**Vranov**	74.51	330	⇑P	P	18 29 51.5	+0.5
VRAC	**Vranov**	74.51	330	⇑P	P	18 29 51.5	+0.5
VRAC	**Vranov**	74.51	330	*e*P	P	18 29 51.1	+0.2
VRAC				*e*pP	pP	18 31 16.7	+0.5
JAVC	**Velka Javorina**	74.53	329	*e*P	P	18 29 52.1	+1.0
JAVC				*e*pP	pP	18 31 18.2	+1.9
PSZ	**Piszkesteto**	74.55	327	⇓P	P	18 29 51.5	+0.2
PSZ	**Piszkesteto**	74.55	327	*e*P	P	18 29 52.6	+1.4
PSZ	**Piszkesteto**	74.55	327	P	P	18 29 50.7	-0.6
PSZ				pmax	pmax		
	comp=Z,28nm,1.3s						
PSZ	**Piszkesteto**	74.55	327	P	P	18 29 50.7	-0.6
PSZ				IAmb	IAmb	18 29 52.9	
	comp=Z,28nm,1.3s						
PRU	**Pruhonice**	74.59	332	*e*P	P	18 29 51.3	-0.1
PRU	**Pruhonice**	74.59	332	*e*P	P	18 29 51.3	-0.1
GTTG	**Gottingen**	74.60	335	*e*P	P	18 29 51.5	+0.1
	comp=Z,11nm,1.1s,baz=29,slow=5.8						
BSY	**Bisya**	74.63	287	P	P	18 29 53.1	+1.1
	SNR=5.4						
ARQ	**Araqi**	74.64	288	P	P	18 29 52.9	+0.8
VOIR		74.64	323	⇑P	P	18 29 51.8	-0.1
VOIR		74.64	323	⇑P	P	18 29 51.8	-0.1
SCIA	**State Center**	74.69	43	P	P	18 29 53.1	+1.0
	baz=322						
SCIA	**State Center**	74.69	43	P	P	18 29 52.3	+0.3
R32A	**Long Quarter,**	74.75	49	P	P	18 29 51.6	-0.9
KRUC	**Moravsky**	74.79	330	*e*P	P	18 29 52.5	0.0
KRUC				*e*pP	pP	18 31 18.7	+0.9
E46A	**Sault Ste Mari**	74.83	35	P	P	18 29 51.5	-1.3
E46A				IAmb	IAmb	18 29 54.7	
	comp=Z,54nm,1.4s						
ARR	**Arges**	74.87	323	⇓P	P	18 29 54.4	+1.3
WERD	**Werda**	74.89	333	*e*P	P	18 29 53.0	-0.1
	comp=Z,8.1nm,1.0s,baz=29,slow=5.8						
SMOL	**Smolenice**	74.91	329	*e*P	P	18 29 54.3	+1.1
SMOL				pmax	pmax		
	comp=Z,16nm,1.3s						
SMOL	**Smolenice**	74.91	329	*e*P	P	18 29 54.3	+1.1
MOX	**Moxa**	74.92	334	*e*P	P	18 29 53.3	+0.1
	comp=Z,2.5nm,0.8s,baz=29,slow=5.8						
GUNZ	**Gunzen**	74.95	333	*e*P	P	18 29 53.8	+0.4
	comp=Z,2.6nm,0.7s,baz=29,slow=5.8						
GUNZ				*e*pP	pP	18 31 19.2	+0.5
I42A	**Draeger Farm,**	75.00	39	P	P	18 29 53.4	-0.4
I42A				IAmb	IAmb	18 29 54.5	
	comp=Z,44nm,1.4s						
WERN	**Wernitzgruen**	75.00	333	*e*P	P	18 29 53.6	-0.2
	comp=Z,3.9nm,0.8s,baz=29,slow=5.8						
HSIG		75.01	63	P	P	18 29 55.0	+0.9
HSIG				IAmb	IAmb	18 29 56.4	
	comp=Z,37nm,1.4s						
BNN	**Bunyan**	75.01	312	P	P	18 29 54.0	-0.1
MODS	**Modra-Piesok**	75.08	329	*e*P	P	18 29 54.0	-0.2
MODS	**Modra-Piesok**	75.08	329	*e*P	P	18 29 54.0	-0.2
HPK	**Haverah Park**	75.17	343	*e*P	P	18 29 54.9	+0.3
HPK				IAmb	IAmb	18 29 56.2	
	comp=Z,40nm,0.5s						
UBBA	**Unterbreizbach**	75.23	335	*e*P	P	18 29 54.6	-0.2
	comp=Z,2.7nm,0.7s,baz=29,slow=5.8						
SIRR	**Siria**	75.28	325	⇑P	P	18 29 55.1	-0.3
MANZ	**Manzenberg**	75.35	333	*e*P	P	18 29 55.7	0.0
	comp=Z,0.7nm,0.9s,baz=29,slow=5.8						
MANZ				*e*pP	pP	18 31 21.7	+0.6
MHTO	**MHTO**	75.40	285	P	P	18 29 57.3	+0.9
	SNR=23						
BR131	**Keskin Array S**	75.41	314	P	P	18 29 56.3	-0.1
BR131				pmax	pmax		
	comp=Z,43nm,1.3s						
BR131	**Keskin Array S**	75.41	314	P	P	18 29 57.3	+0.9
BR131	**Keskin Array S**	75.41	314	P	P	18 29 56.3	-0.1
BR131				IAmb	IAmb	18 29 57.8	
	comp=Z,43nm,1.3s						
BRTR	**Keskin Array B**	75.41	314	P	P	18 29 57.0	+0.6
	comp=Z,8.4nm,0.9s,baz=90,slow=1.2,SNR=13						
BRTR				pP	pP	18 31 23.7	+1.9
	comp=Z,5.2nm,1.0s,baz=64,slow=2.9,SNR=5.7						
BRTR	**Keskin Array B**	75.41	314	P	P	18 29 57.0	+0.6
BRTR	**Keskin Array B**	75.41	314	P	P	18 29 55.7	-0.7
BRTR				pP	pP	18 31 22.9	+1.1
L40A	**Anamosa**	75.46	42	P	P	18 29 55.8	-0.7
ROTZ	**Rotzenmuhle**	75.52	333	*e*P	P	18 29 56.7	+0.1
	comp=Z,1.3nm,1.0s,baz=29,slow=5.8						
ROTZ				*e*pP	pP	18 31 22.0	-0.1
UMR	**Umm Al-Rimmam**	75.54	298	*e*P	P	18 29 57.0	0.0
N38A	**Joes South For**	75.56	44	P	P	18 29 56.6	-0.4
N38A				IAmb	IAmb	18 29 58.3	
	comp=Z,23nm,0.8s						
WIM	**Isle of Man**	75.57	344	*e*P	P	18 29 56.9	+0.1

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MIB   Mutribah          75.57 299 eP    P     18 29 56.7 -0.5
GZR   Gura Zlata        75.58 324 ⇓P    P     18 29 56.8 -0.4
GZR   Gura Zlata        75.58 324 ⇓P    P     18 29 56.8 -0.4
CSKK  Cskako            75.61 328 eP    P     18 29 58.7 +1.6
GAZ   Gaziantep         75.62 310  P    P     18 29 56.9 -0.6
KHC   Kasperske Hory    75.65 332 eP    P     18 29 57.0 -0.4
KHC   Kasperske Hory    75.65 332 eP    P     18 29 57.0 -0.4
KHC                               epP   pP    18 31 24.0 +1.1
CKRC  Cesky Krumlov     75.69 331 eP    P     18 29 57.2 -0.4
ANTO  Ankara            75.70 315  P    P     18 29 58.0 +0.1
ANTO                               pmax pmax
      comp=Z,62nm,1.3s
ANTO  Ankara            75.70 315  P    P     18 29 58.0 +0.1
ANTO                                    pP    18 31 23.6 +0.2
LBWR  Ladybower, Pea    75.72 343 eP    P     18 29 57.9 +0.3
LBWR                               IAmb IAmb  18 29 59.2
      comp=Z,41nm,0.6s
BR231 Keskin MP Arra    75.73 315  P    P     18 29 57.6 -0.5
BR231                              IAmb IAmb  18 30 00.0
      comp=Z,44nm,1.2s
KBD   Kabd              75.83 298 eP    P     18 29 59.0 +0.3
BZS   Buzias            75.85 325 ⇑P    P     18 29 57.7 -0.8
BZS   Buzias            75.85 325 ⇑P    P     18 29 57.7 -0.8
WET   Wettzell          75.86 332 eP    P     18 29 58.0 -0.5
      comp=Z,29nm,1.4s,baz=29,slow=5.8
WET                               epP   pP    18 31 24.8 +0.7
GEC2  GERESS Array S    75.86 331 eP    P     18 29 58.3 -0.4
      comp=Z,2.7nm,0.7s,baz=29,slow=5.8
GEC2                              epP   pP    18 31 25.3 +1.0
GEC2  GERESS Array S    75.86 331  P    P     18 29 57.9 -0.7
GERES GERESS Array B    75.86 331  P    P     18 29 58.3 -0.4
      comp=Z,2.7nm,0.5s,baz=40,slow=6.0,SNR=32
GERES                              pP   pP    18 31 25.2 +1.0
      comp=Z,0.5nm,0.3s,baz=325,slow=46,SNR=2.4
GERES GERESS Array B    75.86 331  P    P     18 29 57.0 -1.7
GERES GERESS Array B    75.86 331  P    P     18 29 57.0 -1.7
GRA1  Grafenberg Arr    75.88 333  P    P     18 29 57.1 -1.6
GRA1                               IAmb IAmb  18 30 00.2
      comp=Z,36nm,1.4s
GRF   Grafenberg Arr    75.88 333  P    P     18 29 57.1 -1.6
GRF                                pmax pmax
      comp=Z,36nm,1.4s
GRF   Grafenberg Arr    75.88 333 eP    P     18 29 58.7  0.0
      comp=Z,74nm,1.5s,baz=29,slow=5.8
GRFO  Grafenberg        75.88 333  P    P     18 29 58.0 -0.6
GRFO                               pmax pmax
      comp=Z,35nm,1.4s
GRFO  Grafenberg        75.88 333  P    P     18 29 58.0 -0.6
GRFO                               IAmb IAmb  18 30 00.1
      comp=Z,35nm,1.4s
AMTX  Amarillo          75.91  53  P    P     18 29 59.9 +0.8
      baz=320
AMTX  Amarillo          75.91  53  P    P     18 29 59.5 +0.4
SOP   Sopron            75.92 329 eP    P     18 30 00.8 +1.9
CONA  Conrad Observa    75.95 330 i P   P     18 29 59.4 +0.3
      comp=Z,11nm,0.7s,SNR=9.8
CONA                              eP    pP    18 31 26.1 +1.3
      comp=Z,11nm,1.3s
MZWR  Madinat Zayed     76.00 290  P    P     18 29 59.7  0.0
QRN   Al-Qurain         76.01 297 eP    P     18 29 59.3 -0.4
MPLH  Magyarpolny       76.03 328 eP    P     18 30 00.2 +0.7
RDF   Al-Radifah        76.09 298 eP    P     18 29 59.9 -0.3
HERR  Herculane         76.15 324 ⇑P    P     18 29 59.5 -0.8
KAN05 Bluff City Nor    76.19  49  P    P     18 30 00.1 -0.5
L42A  Oliver, Polo      76.20  41  P    P     18 29 59.7 -0.8
L42A                               IAmb IAmb  18 30 00.9
      comp=Z,23nm,1.2s
TNS   Taunus Mts        76.21 335 eP    P     18 30 00.9 +0.3
      comp=Z,4.0nm,0.7s,baz=29,slow=5.8
MNTX  Cornudas Mount    76.26  58  P    P     18 30 02.5 +1.3
      baz=319,SNR=15
MNTX  Cornudas Mount    76.26  58  P    P     18 30 01.6 +0.5
MNTX                               IAmb IAmb  18 30 03.7
      comp=Z,18nm,0.8s
MNTX                               pP   pwP   18 31 29.0  0.0
SHMA  Al-Shehemyia      76.29 293  P    P     18 30 01.1 -0.2
AHRW  Bad Neuenahr-A    76.30 336 eP    P     18 30 01.7 +0.8
      comp=Z,9.0nm,1.0s,baz=29,slow=5.8
P38A  Dawn              76.34  45  P    P     18 30 01.0 -0.4
MORH  Mrgy, Hungar      76.45 327 ⇑P    P     18 30 01.1 -0.7
MORH  Mrgy, Hungar      76.45 327 eP    P     18 30 01.5 -0.3
GHWR  Ruwais            76.48 291  P    P     18 30 02.5 +0.1
PLVB  Pleven            76.50 322 ⇓P    P     18 30 02.0 -0.2
BTNL  Ternell           76.51 337 dP    P     18 30 03.2 +1.1
BTNL                              dPcP  PcP   18 30 11.7 -0.3
MDVR  Moldovita         76.51 324 ⇑P    P     18 30 01.6 -0.7
MEM   Membach           76.52 337 dP    P     18 30 02.3 +0.1
      comp=Z,10nm,0.8s
MOA   Molln             76.55 331 i P   P     18 30 01.5 -0.9
      comp=Z,2.3nm,0.4s
CROK  Carrier           76.60  50  P    P     18 30 02.7 -0.2
ARSA  Arzberg           76.65 330 i P   P     18 30 02.8 -0.2
      comp=Z,5.7nm,0.6s,SNR=5.9
ARSA                              eP    pP    18 31 30.2 +1.4
      comp=Z,7.5nm,1.1s
N41A  Harden Midland    76.72  43  P    P     18 30 03.0 -0.4
N41A                               IAmb IAmb  18 30 05.3
      comp=Z,28nm,0.9s
BHOU  Houvegnez         76.75 337 dP    P     18 30 03.8 +0.3
      comp=Z,9.5nm,0.6s
BCLA  Clavier           76.88 337 dP    P     18 30 04.1 -0.1
      comp=Z,9.0nm,0.5s
FRGS  Fruska Gora       76.92 326 ⇓P    P     18 30 04.1 -0.4
TRNA  Turayna           76.95 292  P    P     18 30 05.0  0.0
BGES  Gesves            76.97 337 dP    P     18 30 02.6 -2.0
T35A  Sooner Cattle     77.02  49  P    P     18 30 05.4 +0.2
P40A  Paris             77.11  44  P    P     18 30 05.5 -0.1
P40A                                    pP    18 31 32.6 +1.1
BMRD  Maredsous         77.12 337 dP    P     18 30 05.7 +0.2
RJOB  Jochberg          77.12 331 eP    P     18 30 06.0 +0.4
      comp=Z,4.0nm,0.8s,baz=29,slow=5.8
SLWR  Sila              77.14 292  P    P     18 30 06.1 +0.1
FUR   Furstenfeldbru    77.22 333 eP    P     18 30 06.9 +0.8
      comp=Z,35nm,1.3s,baz=29,slow=5.8
MCH1  Michaelchurch     77.30 343 eP    P     18 30 07.5 +1.1
SOKA  Soboth            77.32 330 i P   P     18 30 06.5 -0.2
      comp=Z,26nm,1.5s,SNR=12
SOKA                              eP    pP    18 31 34.3 +1.7
      comp=Z,7.7nm,1.3s
DOU   Dourbes           77.36 338 dP    P     18 30 06.8  0.0
      comp=Z,5.0nm,0.0s
DOU                               dPcP  PcP   18 30 14.2 -1.4
OK029 Liberty Lake      77.41  50  P    P     18 30 07.7 +0.4
BCOK  Bluff Creek, N    77.44  50  P    P     18 30 08.2 +0.6
BAIF  Baives            77.49 338 eP    P     18 30 07.9 +0.4
BAIF                               pmax pmax
      comp=Z,48nm,1.8s
QUOK  Quay              77.50  49  P    P     18 30 08.5 +0.6
QUOK                               IAmb IAmb  18 30 09.7
      comp=Z,36nm,0.9s
SWN1  Swindon           77.52 342 eP    P     18 30 08.8 +1.2
SWN1                               IAmb IAmb  18 30 09.5
      comp=Z,72nm,0.6s
KBA   Koelnbreinsper    77.53 331 i P   P     18 30 08.2 +0.2
      comp=Z,34nm,1.1s,SNR=19
KBA                               eP    pP    18 31 35.3 +1.3
      comp=Z,12nm,1.0s
HDIL  Hopedale          77.54  42  P    P     18 30 07.9  0.0
HDIL                               IAmb IAmb  18 30 09.2
      comp=Z,28nm,0.9s
WMOK  Wichita Mounta    77.55  51  P    P     18 30 08.4 +0.2
WMOK                               pmax pmax
      comp=Z,36nm,1.1s
WMOK  Wichita Mounta    77.55  51  P    P     18 30 08.8 +0.6
      baz=321,SNR=7.8
WMOK  Wichita Mounta    77.55  51  P    P     18 30 08.4 +0.2
WMOK                               IAmb IAmb  18 30 10.7
      comp=Z,36nm,1.1s
EDC   Edincik           77.60 318  P    P     18 30 09.5 +1.2
OBKA  Obir              77.63 330 eP    P     18 30 08.3 -0.2
      comp=Z,4.7nm,0.6s
OBKA                              eP    pP    18 31 36.3 +1.8
      comp=Z,4.9nm,1.0s
VTS   Vitosha           77.71 322 ⇓P    P     18 30 08.8 -0.3
VTS   Vitosha           77.71 322 ⇓P    P     18 30 08.8 -0.3
VTS   Vitosha           77.71 322  P    P     18 30 07.9 -1.2
VTS                                IAmb IAmb  18 30 10.4
      comp=Z,54nm,1.4s
VTS                                pP   pP    18 31 35.2 +0.1
OKCFA Oklahoma City     77.71  50  P    P     18 30 08.0 -1.0
DIVS  Divibare          77.75 325  P    P     18 30 07.8 -1.4
MYKA  Terra Mystica     77.82 330 i P   P     18 30 09.5  0.0
      comp=Z,6.3nm,0.8s,SNR=5.5
MYKA                              eP    pP    18 31 36.1 +0.5
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      comp=Z,8.0nm,1.4s
FNO   Franklin          77.86  50       P     18 30 10.2 +0.4
WATA  Walderalm         77.86 332 i P   P     18 30 10.0 +0.2
      comp=Z,14nm,0.5s,SNR=10
WATA                              eP    pP    18 31 36.6 +0.7
      comp=Z,12nm,1.4s
WTTA  Wattenberg        77.91 332 i P   P     18 30 09.8 -0.3
      comp=Z,23nm,0.6s,SNR=14
WTTA                              eP    pP    18 31 38.1 +1.9
      comp=Z,18nm,1.6s
BFO   Black Forest      77.95 334  P    P     18 30 09.3 -0.8
BFO                                pmax pmax
      comp=Z,7.0nm,1.0s
BFO   Black Forest      77.95 334 eP    P     18 30 09.9 -0.2
      comp=Z,3.2nm,0.8s,baz=29,slow=5.8
BFO   Black Forest      77.95 334  P    P     18 30 09.3 -0.8
S39A  Bolivar           77.97  46  P    P     18 30 09.6 -0.9
S39A                               IAmb IAmb  18 30 11.2
      comp=Z,26nm,1.2s
RETA  Reutte            77.98 333 eP    P     18 30 10.9 +0.6
      comp=Z,16nm,1.6s
R40A  Maddies Statio    78.00  45  P    P     18 30 10.3 -0.2
R40A                               IAmb IAmb  18 30 11.8
      comp=Z,46nm,1.4s
MOTA  Moosalm           78.00 332 i P   P     18 30 10.4 -0.2
      comp=Z,35nm,1.5s,SNR=8.6
MOTA                              eP    pP    18 31 37.2 +0.6
      comp=Z,3.1nm,0.9s
SQTA  Sankt Quirin      78.08 332 i P   P     18 30 10.6 -0.3
      comp=Z,33nm,1.6s,SNR=8.2
SQTA                              eP    pP    18 31 37.1 +0.1
      comp=Z,6.5nm,0.9s
ABTA  Abfaltersbach     78.09 331 eP    P     18 30 11.0  0.0
      comp=Z,10nm,1.4s
ABTA                              eP    pP    18 31 37.7 +0.7
      comp=Z,6.3nm,1.4s
X34A  Smith Ranch, M    78.15  51  P    P     18 30 12.9 +1.5
BALB  Balikesir         78.16 318  P    P     18 30 09.3 -2.0
BALB                               IAmb IAmb  18 30 13.2
      comp=Z,19nm,1.1s
TUL1  Leonard           78.17  49  P    P     18 30 11.6 +0.1
      baz=322
TUL1  Leonard           78.17  49       P     18 30 11.0 -0.4
CDF   Champ du Feu      78.17 335 eP    P     18 30 11.1 -0.3
CDF                                pmax pmax
      comp=Z,7.0nm,0.8s
P43A  Skaggs, Pawnee    78.18  42  P    P     18 30 10.6 -0.8
P43A                               IAmb IAmb  18 30 12.0
      comp=Z,32nm,1.2s
ECH   Echery            78.39 335  P    P     18 30 11.9 -0.6
ECH                                pmax pmax
      comp=Z,39nm,1.5s
ECH   Echery            78.39 335  P    P     18 30 11.9 -0.6
ECH                                IAmb IAmb  18 30 13.3
      comp=Z,39nm,1.5s
FETA  Feichten          78.41 332 i P   P     18 30 13.3 +0.5
      comp=Z,15nm,1.6s,SNR=7.1
FETA                              eP    pP    18 31 40.7 +1.7
      comp=Z,6.5nm,1.3s
DAVA  Damuels           78.43 333 eP    P     18 30 12.2 -0.7
      comp=Z,8.9nm,1.0s
TRQ   Mont Tremblant    78.43  29  P    P     18 30 12.1 -0.7
TRQ                                IAmb IAmb  18 30 14.4
      comp=Z,41nm,1.2s
U38A  Gravette          78.45  47  P    P     18 30 12.3 -0.7
STAL  STALIGIAL         78.45 331  P    P     18 30 11.3 -1.6
PLVO  Plevna            78.62  31  P    P     18 30 13.4 -0.3
PLVO                               IAmb IAmb  18 30 14.6
      comp=Z,46nm,1.3s
SFIN  Lafayette         78.64  40  P    P     18 30 14.1 +0.1
      baz=326
SFIN  Lafayette         78.64  40  P    P     18 30 13.7 -0.3
SFIN                               IAmb IAmb  18 30 19.6
      comp=Z,25nm,1.4s
SLM   Saint Louis       78.67  43  P    P     18 30 13.4 -0.7
SLM                                pmax pmax
      comp=Z,49nm,1.3s
SLM   Saint Louis       78.67  43  P    P     18 30 13.4 -0.7
SLM                                IAmb IAmb  18 30 15.5
      comp=Z,49nm,1.2s
CCM   Cathedral Cave    78.67  44  P    P     18 30 14.5 +0.3
CCM                                pmax pmax
      comp=Z,27nm,1.2s
CCM   Cathedral Cave    78.67  44  P    P     18 30 14.4 +0.3
      baz=324
CCM   Cathedral Cave    78.67  44  P    P     18 30 14.5 +0.3
CCM                                IAmb IAmb  18 30 15.5
      comp=Z,27nm,1.1s
EZN   Ezine             78.70 319  P    P     18 30 14.7 +0.4
ABTX  Abilene, Hawle    78.72  53  P    P     18 30 16.2 +1.7
      baz=321,SNR=6.4
ABTX  Abilene, Hawle    78.72  53  P    P     18 30 15.3 +0.8
HHAR  Hobbs             78.79  47  P    P     18 30 15.2 +0.3
HHAR                               IAmb IAmb  18 30 16.2
      comp=Z,57nm,1.4s
HAU   Haudompre         78.80 336 eP    P     18 30 14.4 -0.3
HAU                                pmax pmax
      comp=Z,4.0nm,0.7s
N47A  Urbana            78.83  39  P    P     18 30 15.3 +0.4
N47A                               IAmb IAmb  18 30 16.8
      comp=Z,35nm,1.4s
HINF  Hinteralfeld      78.83 335 eP    P     18 30 14.4 -0.5
HINF                               pmax pmax
      comp=Z,28nm,1.7s
DELO  Deloro Mine       78.88  32  P    P     18 30 14.8 -0.3
DELO                               IAmb IAmb  18 30 15.8
      comp=Z,44nm,1.5s
MGMO  Mountain Grove    78.91  46  P    P     18 30 15.1 -0.4
CTI   Castel Tesino     78.98 331  P    P     18 30 14.5 -1.4
CTI                                pmax pmax
      comp=Z,11nm,1.3s
CTI   Castel Tesino     78.98 331  P    P     18 30 14.4 -1.4
Q44A  Meyer Farm, Va    79.00  42  P    P     18 30 15.8 -0.2
Q44A                               IAmb IAmb  18 30 18.0
      comp=Z,38nm,1.1s
TX31  Lajitas Ar. Si    79.01  58  P    P     18 30 16.7 +0.4
TX32  Lajitas Array     79.01  58  P    P     18 30 16.7 +0.4
TX32                                    pP    18 31 42.3 -0.1
TXAR  Lajitas Array     79.01  58  P    P     18 30 17.2 +0.9
      comp=Z,20nm,0.5s,baz=287,slow=4.2,SNR=160
TXAR                               pP   pwP   18 31 44.7 -0.2
      comp=Z,11nm,1.0s,baz=292,slow=3.9,SNR=9.8
TXAR  Lajitas Array     79.01  58  P    P     18 30 16.6 +0.3
TXAR  Lajitas Array     79.01  58  P    P     18 30 16.6 +0.3
SHAO  Shalim            79.06 285  P    P     18 30 16.7 +0.1
FVM   French Village    79.11  44  P    P     18 30 16.6 +0.1
FVM                                pmax pmax
      comp=Z,13nm,1.0s
FVM   French Village    79.11  44  P    P     18 30 16.6 +0.1
P46A  Rosedale          79.22  41  P    P     18 30 16.9 -0.2
U40A  Yellville         79.26  47  P    P     18 30 17.2 -0.2
      baz=323,SNR=24
U40A  Yellville         79.26  47  P    P     18 30 16.8 -0.6
TUE   Stuetta           79.32 333  P    P     18 30 16.9 -0.8
N49A  Columbus Grove    79.43  38  P    P     18 30 18.4 +0.2
N49A                               IAmb IAmb  18 30 19.4
      comp=Z,36nm,1.3s
Z35A  Perchaven, San    79.44  51  P    P     18 30 18.4 +0.1
PDG   Podgorica         79.45 325 ⇑P    P     18 30 16.9 -1.3
PDG   Podgorica         79.45 325  P    P     18 30 16.5 -1.7
PDG                                IAmb IAmb  18 30 18.9
      comp=Z,35nm,1.4s
OLIL  Olney             79.56  42  P    P     18 30 19.0 +0.1
OLIL                               IAmb IAmb  18 30 20.3
      comp=Z,38nm,1.2s
ELL   Elmali            79.56 315  P    P     18 30 18.2 -0.9
ELL                                pmax pmax
      comp=Z,69nm,1.3s
ELL   Elmali            79.56 315  P    P     18 30 18.2 -0.9
T42A  Van Buren         79.56  45  P    P     18 30 18.4 -0.6
T42A                               IAmb IAmb  18 30 20.4
      comp=Z,35nm,1.4s
DOK   Doka              79.59 286  P    P     18 30 20.1 +0.7
      SNR=6.5
ASF   Jabal al Asfar    79.64 307  P    P     18 30 20.6 +1.1
      comp=Z,5.2nm,0.5s,baz=304,slow=2.4,SNR=12
ASF                                pP   pP    18 31 49.1 +3.1
      comp=Z,9.2nm,1.0s,baz=8.0,slow=1.5,SNR=6.8
HPIG                    79.67  61  P    P     18 30 18.0 -1.9
HPIG                               IAmb IAmb  18 30 22.2
      comp=Z,54nm,1.4s
DMTO  DMTO              79.73 285  P    P     18 30 20.3 +0.2
W39A  Magazine          79.73  48  P    P     18 30 20.6 +0.8
      baz=323
W39A  Magazine          79.73  48  P    P     18 30 20.4 +0.5
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W39A                               IAmb IAmb  18 30 21.5
      comp=Z,24nm,1.1s
MMAI  Mount Meron Ar    79.77 309  P    P     18 30 21.1 +0.8
      comp=Z,13nm,0.5s,baz=44,slow=7.3,SNR=39
MMAI                               pP   pP    18 31 49.4 +2.7
      comp=Z,16nm,0.9s,baz=30,slow=6.8,SNR=7.7
FLN   La Foliniere      79.82 340 eP    P     18 30 19.9 -0.2
FLN                                pmax pmax
      comp=Z,60nm,1.5s
S44A  Carbondale        79.88  43  P    P     18 30 20.2 -0.5
S44A                               IAmb IAmb  18 30 22.8
      comp=Z,42nm,1.2s
SIUC  Southern Illin    79.88  43  P    P     18 30 20.4 -0.2
LDF   La Druitiere      79.90 340 eP    P     18 30 21.1 +0.6
LDF                                pmax pmax
      comp=Z,44nm,1.6s
MOQ   Mont Orford       79.98  28  P    P     18 30 20.5 -0.6
FCAR  Ozark Folk Cen    79.99  46  P    P     18 30 20.5 -0.7
FCAR                               IAmb IAmb  18 30 22.5
      comp=Z,22nm,0.6s
ERPA  Erie              80.08  35  P    P     18 30 22.0 +0.4
      baz=329
PBMO  Poplar Bluff      80.08  45  P    P     18 30 21.6  0.0
PBMO                               IAmb IAmb  18 30 23.4
      comp=Z,46nm,1.2s
STKA  Stephens Creek    80.09 187  P    P     18 30 23.8 +2.3
      comp=Z,1.5nm,0.4s,baz=358,slow=6.3,SNR=12
P48A  Milroy            80.12  40  P    P     18 30 21.5 -0.4
P48A                               IAmb IAmb  18 30 23.0
      comp=Z,32nm,1.2s
CABF  La Chapelle       80.15 335 eP    P     18 30 21.9 -0.1
CABF                               pmax pmax
      comp=Z,42nm,2.0s
LOR   Lormes            80.15 337 eP    P     18 30 21.7 -0.2
LOR                                pmax pmax
      comp=Z,9.0nm,0.6s
GRR   Gorron            80.26 340 eP    P     18 30 22.5 +0.1
GRR                                pmax pmax
      comp=Z,9.0nm,0.6s
JCT   Junction City     80.29  55  P    P     18 30 23.0  0.0
JCT                                pmax pmax
      comp=Z,32nm,1.0s
JCT   Junction City     80.29  55  P    P     18 30 23.7 +0.7
      baz=321,SNR=9.9
JCT   Junction City     80.29  55  P    P     18 30 23.0  0.0
JCT                                IAmb IAmb  18 30 25.5
      comp=Z,32nm,1.0s
LCAR  Lake Charles      80.31  46  P    P     18 30 22.7 -0.2
WHFO  Wadi Hawf         80.34 286  P    P     18 30 23.0 -0.4
      SNR=5.9
MIAR  Mount Ida         80.35  48  P    P     18 30 22.7 -0.5
MIAR                               pmax pmax
      comp=Z,25nm,0.7s
MIAR  Mount Ida         80.35  48  P    P     18 30 24.1 +1.0
      baz=323,SNR=9.8
MIAR  Mount Ida         80.35  48  P    P     18 30 22.7 -0.5
MIAR                               IAmb IAmb  18 30 25.2
      comp=Z,25nm,0.7s
RBK   Rabkut            80.36 285  P    P     18 30 24.0 +0.4
P49A  Miami Univ. Ec    80.36  39  P    P     18 30 23.2 +0.1
      baz=327
P49A  Miami Univ. Ec    80.36  39  P    P     18 30 23.1 -0.1
P49A                               IAmb IAmb  18 30 24.9
      comp=Z,36nm,1.3s
WHTX  Lake Whitney,     80.38  52  P    P     18 30 24.4 +1.0
      baz=322,SNR=8.2
WHTX  Lake Whitney,     80.38  52  P    P     18 30 22.9 -0.5
WHAR  Wooly Hollow      80.39  47  P    P     18 30 23.4 +0.1
M53A  WI Miller and     80.40  36  P    P     18 30 23.7 +0.4
      baz=329
M53A  WI Miller and     80.40  36  P    P     18 30 23.2 -0.1
M53A                               IAmb IAmb  18 30 25.2
      comp=Z,38nm,1.1s
SSF   Saint Saulge      80.43 337 eP    P     18 30 22.7 -0.7
SSF                                pmax pmax
      comp=Z,14nm,1.1s
ACSO  Alum Creek Sta    80.50  38  P    P     18 30 23.2 -0.6
ACSO                               IAmb IAmb  18 30 25.7
      comp=Z,36nm,1.2s
W41B  Gary Mavity, V    80.50  47  P    P     18 30 24.7 +0.7
      baz=324,SNR=8.7
Z38A  Mt. Pleasant      80.66  50  P    P     18 30 25.2 +0.4
Z38A                               IAmb IAmb  18 30 26.8
      comp=Z,36nm,0.9s
AVF   Avril sur Loir    80.72 337 eP    P     18 30 23.6 -1.3
AVF                                pmax pmax
      comp=Z,7.0nm,0.6s
M54A  Oil Creek Stat    80.73  35  P    P     18 30 25.1  0.0
      baz=330
M54A  Oil Creek Stat    80.73  35  P    P     18 30 24.5 -0.5
M54A                               IAmb IAmb  18 30 26.3
      comp=Z,29nm,1.1s
SMF   Signal de Mont    80.73 337 eP    P     18 30 25.0  0.0
SMF                                pmax pmax
      comp=Z,15nm,0.9s
SGMF  Saint Gilles      80.76 341 eP    P     18 30 24.0 -1.0
SGMF                               pmax pmax
      comp=Z,71nm,1.3s
X40A  Basin Creek Fa    80.77  48  P    P     18 30 26.4 +1.0
      baz=324,SNR=5.5
X40A  Basin Creek Fa    80.77  48  P    P     18 30 26.0 +0.6
X40A                               IAmb IAmb  18 30 27.9
      comp=Z,32nm,1.2s
ROSF  Rostrenen         80.83 342 eP    P     18 30 26.4 +1.0
ROSF                               pmax pmax
      comp=Z,105nm,1.8s
N53A  Lisbon            80.87  36  P    P     18 30 25.7 -0.1
LPL   La Plagne         80.96 334 eP    P     18 30 25.7 -0.8
LPL                                pmax pmax
      comp=Z,17nm,1.3s
LPG   La Plagne         80.97 334 eP    P     18 30 27.2 +0.6
LPG                                pmax pmax
      comp=Z,27nm,1.5s
GHAJ  Ghor Haditha      81.03 307  P    P     18 30 26.8 +0.1
GHAJ                               IAmb IAmb  18 30 28.7
      comp=Z,42nm,1.3s
GHAJ                                    pP    18 31 55.4 +1.9
ABTO  Aybut             81.06 286  P    P     18 30 27.2  0.0
      SNR=7.3
O52A  Adamsville        81.06  37  P    P     18 30 26.4 -0.4
O52A                               IAmb IAmb  18 30 28.6
      comp=Z,30nm,0.8s
N54A  Moraine State     81.07  35  P    P     18 30 27.1 +0.2
      baz=330
BGF   Bois d'Agland     81.07 337 eP    P     18 30 26.1 -0.6
BGF                                pmax pmax
      comp=Z,5.0nm,0.7s
MURB  Monte Urbino      81.17 329  P    P     18 30 26.4 -1.0
O53A  New Philadelph    81.20  37  P    P     18 30 27.5  0.0
      baz=329
O53A  New Philadelph    81.20  37  P    P     18 30 27.1 -0.4
O53A                               IAmb IAmb  18 30 29.3
      comp=Z,36nm,1.1s
QUIF  Quistinic         81.21 342 eP    P     18 30 27.6 +0.2
QUIF                               pmax pmax
      comp=Z,70nm,1.6s
RAYN  Ar Rayn           81.34 296 i P   P     18 30 29.5 +0.9
      SNR=25
RAYN  Ar Rayn           81.34 296  P    P     18 30 27.4 -1.1
RAYN                               pmax pmax
      comp=Z,60nm,1.5s
RAYN  Ar Rayn           81.34 296  P    P     18 30 28.5 -0.1
RAYN  Ar Rayn           81.34 296  P    P     18 30 27.4 -1.1
RAYN                               IAmb IAmb  18 30 30.3
      comp=Z,60nm,1.4s
NRCA  Norcia            81.34 329  P    P     18 30 27.5 -0.8
NRCA                                    pP    18 31 56.0 +0.7
Q51A  Peebles           81.37  39  P    P     18 30 28.0 -0.4
Q51A                               IAmb IAmb  18 30 30.5
      comp=Z,36nm,1.2s
BNI   Bardonecchia      81.40 334  P    P     18 30 27.2 -1.4
BNI                                pmax pmax
      comp=Z,12nm,1.4s
BNI   Bardonecchia      81.40 334  P    P     18 30 27.2 -1.4
T47A  Sharon Grove      81.44  42  P    P     18 30 28.6 -0.2
T47A                               IAmb IAmb  18 30 30.5
      comp=Z,18nm,0.8s
TCF   Toulx Ste Croi    81.49 338 eP    P     18 30 29.2 +0.3
TCF                                pmax pmax
      comp=Z,8.0nm,1.1s
MBDF  Montbardon        81.67 334 eP    P     18 30 29.7 -0.4
MBDF                               pmax pmax
      comp=Z,3.0nm,0.7s
ORIF  Oris-en-Rattie    81.75 335 eP    P     18 30 30.8 +0.4
ORIF                               pmax pmax
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	comp=Z,6.0nm,0.6s						
MFF	Saint Martin d	81.77	339	eP	P	18 30 30.8	+0.4
MFF				pmax	pmax		
	comp=Z,16nm,1.0s						
WVT	Waverly	81.82	43	P	P	18 30 30.8	0.0
WVT				pmax	pmax		
	comp=Z,11nm,1.0s						
WVT	Waverly	81.82	43	P	P	18 30 31.5	+0.7
	baz=326						
WVT	Waverly	81.82	43	P	P	18 30 30.8	0.0
NATX	Nacogdoches	82.02	51	P	P	18 30 33.3	+1.4
	baz=323,SNR=6.7						
NATX	Nacogdoches	82.02	51	P	P	18 30 32.4	+0.5
VIVF	Saint-Julien-l	82.15	335	eP	P	18 30 33.9	+1.5
VIVF				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SSPA	Standing Stone	82.16	34	P	P	18 30 32.7	+0.2
	baz=331						
833A	Chaparral WMA,	82.18	56	P	P	18 30 35.1	+2.3
	baz=321						
O56A	Blue Knob Stat	82.22	35	P	P	18 30 33.0	+0.2
	baz=330						
SBF	Sospel	82.26	333	eP	P	18 30 33.6	+0.6
SBF				pmax	pmax		
	comp=Z,16nm,1.1s						
T50A	Nancy	82.42	41	P	P	18 30 32.8	-1.1
U49A	Red Boiling Sp	82.42	42	P	P	18 30 33.6	-0.2
U49A				IAmb	IAmb	18 30 36.1	
	comp=Z,30nm,1.4s						
CLTN	Cedars of Leba	82.53	42	P	P	18 30 34.3	-0.1
RJF	Les Rejaudoux	82.58	338	eP	P	18 30 36.2	+1.7
RJF				pmax	pmax		
	comp=Z,28nm,1.5s						
V48A	Smith Brothers	82.60	43	P	P	18 30 34.4	-0.4
EIL	Elat	82.64	307	P	P	18 30 35.5	+0.5
	comp=Z,19nm,0.9s,baz=133,slow=0.6,SNR=17						
EIL				pP	pP	18 32 02.6	+0.4
	comp=Z,11nm,1.1s,baz=123,slow=1.7,SNR=3.2						
PLAL	Pickwick Lake	82.65	44	P	P	18 30 35.0	-0.1
N59A	State Game Lan	82.69	33	P	P	18 30 35.5	+0.3
	baz=332						
CAF	Calviac	82.79	337	eP	P	18 30 35.2	-0.5
CAF				pmax	pmax		
	comp=Z,30nm,1.4s						
ITM	Ithomi	82.81	320	P	P	18 30 34.8	-1.1
Y45A	Yeager Farm, C	82.87	46	P	P	18 30 36.0	-0.2
LMR	La Mourre	83.02	334	eP	P	18 30 36.7	-0.1
LMR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
IDI	Anoyia	83.09	317	P	P	18 30 35.6	-1.7
	comp=Z,7.7nm,0.5s,baz=22,slow=9.7,SNR=20						
TIP	Timpagrande	83.21	325	P	P	18 30 37.3	-0.6
R55A	Marlinton	83.32	37	P	P	18 30 39.5	+1.0
R55A				IAmb	IAmb	18 30 41.2	
	comp=Z,30nm,1.1s						
TZTN	Tazewell	83.37	40	P	P	18 30 39.8	+1.0
	baz=328						
SWET	Sewanee	83.44	43	P	P	18 30 38.8	-0.3
P60A	Greenville	83.71	33	P	P	18 30 40.5	+0.2
	baz=332						
V52A	Sevierville	83.95	41	P	P	18 30 41.0	-0.6
FPAL	Fort Paine	84.14	43	P	P	18 30 42.6	-0.1
FPAL				IAmb	IAmb	18 30 44.0	
	comp=Z,34nm,1.4s						
MTLF	Montolieu	84.22	336	eP	P	18 30 43.7	+0.8
MTLF				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SOCY	Socotra	84.42	282	P	P	18 30 43.1	-1.3
SOCY	Socotra	84.42	282	P	P	18 30 42.0	-2.4
SOCY				IAmb	IAmb	18 30 45.4	
	comp=Z,28nm,0.8s						
ZAIG	Zacatecas	84.66	62	P	P	18 30 46.5	+0.8
ZAIG				IAmb	IAmb	18 30 48.3	
	comp=Z,20nm,1.2s						
EPF	Esparros	85.00	338	eP	P	18 30 46.5	-0.3
EPF				pmax	pmax		
	comp=Z,8.0nm,1.2s						
ETSF	Etsaut	85.36	338	eP	P	18 30 49.5	+1.0
ETSF				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NWAO	Narrogin (SRO)	85.75	206	P	P	18 30 51.1	+0.8
352A	Blakely	87.02	44	P	P	18 30 55.9	-0.7
KEST	Kesra	88.99	328	P	P	18 31 05.1	-0.8
	comp=Z,1.7nm,0.6s,baz=352,slow=2.6,SNR=5.5						
ESDC	Sonseca Array	89.23	340	P	P	18 31 05.3	-1.6
	comp=Z,0.4nm,0.6s,baz=13,slow=3.9,SNR=3.2						
ESDC	Sonseca Array	89.23	340	P	P	18 31 05.5	-1.4
656A	Willston	89.90	43	P	P	18 31 09.3	-0.7
TORD	Torodi Ar. Bea	112.35	325	PKiKP	PKiKP	18 36 44.0	-0.7
	comp=Z,0.4nm,0.3s,baz=29,slow=1.9,SNR=7.0						
DBIC	Dimbokro	120.70	330	PKP	PKPdf	18 37 00.0	-0.8
	comp=Z,1.7nm,0.4s,baz=25,slow=1.2,SNR=7.4						
DBIC	Dimbokro	120.70	330	PKIKP	PKPdf	18 36 59.6	-1.2
DBIC	Dimbokro	120.70	330		PKPdf	18 36 59.6	-1.2
MDP	Montagnes des	123.50	26	PKP	PKPdf	18 37 06.2	0.0
	comp=Z,3.4nm,0.4s,baz=351,slow=4.7,SNR=4.5						
VNDA	Vanda	125.78	177	PKP	PKiKP	18 37 09.2	+0.1
	comp=Z,1.0nm,0.7s,baz=318,slow=4.8,SNR=12						
LBTB	Lobatse	130.39	277	PKP	PKiKP	18 37 19.8	-0.2
	comp=Z,1.8nm,0.6s,baz=125,slow=6.2,SNR=4.4						
MAW	Mawson	132.14	211	PKP	PKPdf	18 37 21.1	+0.3
	comp=Z,1.2nm,0.5s,baz=105,slow=12,SNR=2.5						
BOSA	Boshof	133.01	274	PKP	PKPdf	18 37 24.1	+0.1
	comp=Z,2.1nm,0.7s,baz=353,slow=3.2,SNR=2.0						
BOSA	Boshof	133.01	274	PKIKP	PKPdf	18 37 22.1	-1.9
BOSA	Boshof	133.01	274		PKPdf	18 37 22.1	-1.9
QSPA	South Pole Qui	138.02	180		PKPpre	18 37 24.0	
SYO	Syowa Base	140.79	212⇓	eX	PKiKP	18 37 48.2	+8.6
BDFB	Brasilia	144.51	29	PKP	PKPdf	18 37 45.1	-0.1
	comp=Z,13nm,0.8s,baz=344,slow=3.8,SNR=12						
BDFB	Brasilia	144.51	29		PKPbc	18 37 44.8	0.0
PLCA	Paso Flores	150.95	90	PKPbc	PKiKP	18 38 01.6	0.0
	comp=Z,12nm,0.4s,baz=299,slow=2.4,SNR=31						
PLCA	Paso Flores	150.95	90		PKiKP	18 38 01.8	+0.3

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*FUNV **11** 18:20:12.1, 8°.47N×71°.39W, h5^{km}, MW3.1*

ISC 11 18:20:11.4±1.2, **8°.52N**±0°.03×**71°.37W**±0°.02, **h8**^{km}±10^{km}, **n23**, σ**1^{s}.31**/42, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	Socops	0.56	115	eP	Pg	18 20 22.1	-0.1
SOCV				eS	Sg	18 20 30.2	+0.9
SOCV	Socops	0.56	115	eP	Pg	18 20 22.0	-0.1
SOCV				eS	Sg	18 20 30.3	+0.9
SDV	Santo Domingo	0.81	63	eP	Pg	18 20 26.4	-0.7
SDV				eS	Sg	18 20 38.9	+1.3
CAPV	Capacho	1.14	235	eP	Pg	18 20 31.6	-1.7
CAPV				eS	Sb	18 20 47.9	-0.7
PAMC	Pamplona, Colo	1.77	229	eP	Pb	18 20 44.0	-0.3
PAMC				eS	Sg	18 21 08.0	-0.3
MCQV	Machiques	1.91	323	eP	Pn	18 20 45.0	+0.6
MCQV				eS	Sn	18 21 09.7	+1.0
OCAC	Ocana	1.95	262	eP	Pn	18 20 45.7	+0.6
OCAC				eS	Sn	18 21 11.0	+1.2
TAMC	Tame, Arauca	2.11	192	eP	Pb	18 20 49.3	-0.7
TAMC				eS	Sg	18 21 19.4	+0.1
ELOV	Elorza	2.40	129	eP	Pn	18 20 53.8	+2.7
ELOV				eS	Sb	18 21 25.5	+0.9
ELOV	Elorza	2.40	129	eP	Pn	18 20 51.4	+0.3
ELOV				eS	Sn	18 21 20.5	-0.1
BARC	Barichara	2.63	223	eP	Pn	18 20 55.6	+1.2
BARC				eS	Sb	18 21 31.6	+0.2
BRRC	Barranca, Sant	2.71	239	eS	Sb	18 21 35.3	+1.5
BAUV	El Baul	3.31	82	eP	Pn	18 21 04.8	+1.2
BAUV				eS	Sn	18 21 42.2	-1.1
ZARC	Zaragoza, Cauc	3.61	254	eP	Pn	18 21 07.8	+0.1
ZARC				eS	Sn	18 21 50.8	+0.2
MONV	Montecano	3.68	22	eP	Pn	18 21 08.8	+0.1
MONV				eS	Sn	18 21 51.6	-0.8
SMRC	Santa Marta, M	3.85	313	eS	Sn	18 21 54.3	-2.3
SPBC	San Pablo de B	3.91	224	eP	Pn	18 21 13.7	+1.7
SPBC				eS	Sn	18 22 01.0	+2.8
BENV	Beln	3.99	69	eP	Pn	18 21 13.4	+0.5
BENV				eS	Sn	18 21 58.5	-1.4
MOTC	Monteria, Cord	4.26	274	eP	Pn	18 21 17.4	+0.7
MOTC				eS	Sn	18 22 08.2	+1.6
CHIC	Chingaza	4.52	211	eP	Pn	18 21 21.5	+0.9
CHIC				eS	Sn	18 22 13.2	-0.5
PAYV	Puerto Ayacuch	4.80	130	eP	Pn	18 21 23.8	-0.3
PAYV				eS	Sn	18 22 16.7	-3.2
VILC	Villavicencio,	4.95	208	eP	Pn	18 21 23.9	-2.3
GUY2C	Guyana, Caldas	5.14	231	eP	Pn	18 21 30.0	+0.8

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*IDC **11** 18:24:15.5±1.6, 8°.78N×71°.56W, h0^{km}, mb3.6/1, mb1 3.8/2, mb1mx3.4/44, mbtmp3.8/2, ML3.9/1, Error ellipse: s-maj=246.8km s-min=11.9km az=172.0*

*FUNV **11** 18:24:19.0, 8°.51N×71°.36W, h1^{km}, MW3.6*

ISC 11 18:24:17.6±1.2, **8°.55N**±0°.03×**71°.38W**±0°.03, **h7**^{km}±9^{km}, **n39**, σ**1^{s}.40**/64, **1C**, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	Socops	0.58	117	eP	Pg	18 24 29.0	+0.1
SOCV				eS	Sg	18 24 36.0	-0.5
SOCV	Socops	0.58	117⇑	eP	Pg	18 24 28.8	-0.1
SOCV				eS	Sg	18 24 37.6	+1.1
SDV	Santo Domingo	0.81	66	Pg	Pb	18 24 34.1	0.0
	49nm,0.3s,baz=227,slow=16,SNR=20						
SDV				Lg	Lg	18 24 45.5	
	100nm,0.3s,baz=72,slow=9.5,SNR=11						
SDV	Santo Domingo	0.81	66	eP	Pb	18 24 34.1	0.0
SDV				eS	Sg	18 24 44.4	+0.5
CAPV	Capacho	1.15	234	eS	Sn	18 24 56.5	+0.1
PAMC	Pamplona, Colo	1.77	227	eP	Pn	18 24 49.4	+0.3
PAMC				eS	Sb	18 25 13.2	-0.2
MCQV	Machiques	1.88	323	eP	Pb	18 24 51.6	-0.6
MCQV				eS	Sg	18 25 16.9	-1.0
OCAC	Ocana	1.94	261	eP	Pb	18 24 53.2	-0.2
OCAC				eS	Sb	18 25 17.1	-0.8
TAMC	Tame, Arauca	2.14	191	eP	Pb	18 24 56.1	-0.6
TAMC				eS	Sb	18 25 24.7	+1.2
LL1C	La Loma 1 Cana	2.36	295	eS	Sb	18 25 28.2	-1.7
ELOV	Elorza	2.43	129	eP	Pg	18 25 03.7	-0.5
ELOV				eS	Sg	18 25 34.2	-1.5
ELOV	Elorza	2.43	129	eP	Pn	18 24 58.8	+1.1
ELOV				eS	Sn	18 25 26.9	-0.8
BARC	Barichara	2.64	223	eP	Pb	18 25 04.7	-0.7
SMLC	San Martn de	2.67	276	eP	Pn	18 25 01.5	+0.5
SMLC				eS	Sn	18 25 33.2	-0.5
BRRC	Barranca, Sant	2.72	238	eS	Sb	18 25 39.9	-0.2
RUSC	La Rusia	3.13	213	eP	Pn	18 25 09.1	+1.3
RUSC				eS	Sn	18 25 46.2	+0.4
BAUV	El Baul	3.33	83	eP	Pn	18 25 11.7	+1.6
BAUV				eS	Sn	18 25 49.0	-0.8
ZARC	Zaragoza, Cauc	3.60	253	eP	Pn	18 25 17.1	+3.2
ZARC				eS	Sn	18 25 55.2	-1.4
MONV	Montecano	3.66	22	eP	Pn	18 25 16.4	+1.8
MONV				eS	Sn	18 25 57.8	-0.2
SMRC	Santa Marta, M	3.82	313	eS	Sn	18 25 59.9	-2.1
SPBC	San Pablo de B	3.93	223	eP	Pn	18 25 19.3	+0.9
SPBC				eS	Sn	18 26 08.1	+3.3
SJCC	San Jacinto, C	3.98	290	eP	Pn	18 25 21.0	+1.9
SJCC				eS	Sn	18 26 07.7	+1.6
BENV	Beln	3.99	69	eP	Pn	18 25 20.6	+1.3
BENV				eS	Sn	18 26 05.7	-0.6
MOTC	Monteria, Cord	4.24	273	eP	Pn	18 25 24.7	+2.0
MOTC				eS	Sn	18 26 14.2	+1.8
CHIC	Chingaza	4.54	211	eP	Pn	18 25 27.5	+0.4
CHIC				eS	Sn	18 26 20.0	-0.4
NORC	Norcasia	4.56	230	eP	Pn	18 25 28.3	+1.2
NORC				eS	Sn	18 26 21.9	+1.5
HELC	Santa Helena	4.73	241	eP	Pn	18 25 31.3	+1.6
VILC	Villavicencio,	4.97	208	eP	Pn	18 25 33.2	+0.4
MERV	Las Mercedes	5.07	82	eP	Pn	18 25 34.5	+0.4
MERV				eS	Sn	18 26 29.8	-3.2
GUY2C	Guyana, Caldas	5.15	230	eP	Pn	18 25 36.1	+0.5
CBOC	Ciudad Bolivar	5.31	240	eP	Pn	18 25 39.5	+1.9
ANIL	Santa Ana	5.68	225	eP	Pn	18 25 43.3	+0.6
ANIL				eS	Sn	18 26 50.1	+1.9
ORTC	Ortega, Tolima	6.00	220	eP	Pn	18 25 47.9	+1.0
ORTC				eS	Sn	18 26 55.5	-0.4
PLMC	San Jos del P	6.07	234	eP	Pn	18 25 49.2	+1.4
GUVC	San Jose del G	6.09	192	eP	Pn	18 25 48.3	+0.1
GUVC				eS	Sn	18 26 55.7	-2.5
PCRV	Puerto La Cruz	6.85	76	Pn	Pn	18 26 01.7	+3.1
	2.0nm,0.3s,baz=260,slow=4.0,SNR=3.7						
PCRV				Sn	Sn	18 27 18.7	+1.8
	2.7nm,0.3s,baz=85,slow=20,SNR=6.1						
TORD	Torodi Ar. Bea	71.71	79	P	P	18 35 39.9	-1.1
	0.3nm,0.6s,baz=289,slow=4.4,SNR=2.8						
ASAR	Alice Springs	151.51	235	PKPbc	PKPbc	18 44 12.3	-1.1
	0.6nm,0.6s,baz=115,slow=3.2,SNR=13						
WRA	Warramunga Arr	152.66	243	PKPbc	PKPbc	18 44 15.1	-0.9
	1.0nm,0.5s,baz=108,slow=2.8,SNR=16						

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*FUNV **11** 18:28:49.6, 8°.43N×71°.42W, h5^{km}, MW3.0*

ISC 11 18:28:48.1±1.4, **8°.53N**±0°.05×**71°.41W**±0°.02, **h3**^{km}±11^{km}, **n15**, σ**1^{s}.26**/26, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	Socops	0.60	114	eP	Pb	18 29 00.9	-0.5
SOCV				eS	Sg	18 29 08.1	+0.6
SOCV	Socops	0.60	114	eP	Pg	18 28 59.9	+0.2
SOCV				eS	Sg	18 29 08.4	+0.8
SDV	Santo Domingo	0.84	66	eS	Sb	18 29 16.8	-0.7
CAPV	Capacho	1.11	233	eP	Pb	18 29 08.7	-1.5
CAPV				eS	Sg	18 29 23.6	-0.4
PAMC	Pamplona, Colo	1.74	227	eP	Pb	18 29 20.4	-0.6
PAMC				eS	Sb	18 29 43.5	0.0
OCAC	Ocana	1.91	261	eP	Pb	18 29 22.6	-1.1
OCAC				eS	Sb	18 29 46.9	-1.1
TAMC	Tame, Arauca	2.12	190	eS	Sg	18 29 55.9	-0.4
ELOV	Elorza	2.44	128	eS	Sb	18 30 03.3	0.0
ELOV	Elorza	2.44	128	eP	Pn	18 29 29.4	+0.5
ELOV				eS	Sn	18 29 58.5	-0.9
BARC	Barichara	2.61	222	eP	Pb	18 29 36.1	+0.4
BARC				eS	Sb	18 30 07.2	-1.0
SMLC	San Martn de	2.64	276	eP	Pg	18 29 38.7	-0.1
SMLC				eS	Sb	18 30 07.7	-1.3
BAUV	El Baul	3.36	83	eP	Pn	18 29 42.9	+1.4
BAUV				eS	Sn	18 30 20.4	-1.5
ZARC	Zaragoza, Cauc	3.57	253	eS	Sn	18 30 30.8	+3.7
MONV	Montecano	3.68	23	eP	Pn	18 29 47.4	+1.4
MONV				eS	Sn	18 30 30.5	+0.5
BENV	Beln	4.02	69	eP	Pn	18 29 51.5	+0.8
BENV				eS	Sn	18 30 36.6	-1.9

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*FUNV **11** 18:30:28.9, 8°.42N×71°.41W, h2^{km}, MW3.1*

ISC 11 18:30:28.1±1.3, **8°.47N**±0°.03×**71°.39W**±0°.03, **h5**^{km}±10^{km}, **n21**, σ**1^{s}.20**/39, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	Socops	0.56	109	eP	Pg	18 30 38.8	0.0
SOCV				eS	Sg	18 30 45.0	-1.1
SOCV	Socops	0.56	109	eP	Pg	18 30 39.5	+0.7
SOCV				eS	Sg	18 30 47.5	+1.4
SDV	Santo Domingo	0.85	61	eP	Pg	18 30 44.5	0.0
SDV				eS	Sg	18 30 54.2	-1.3
CAPV	Capacho	1.10	237	eS	Sg	18 31 02.8	-0.6
PAMC	Pamplona, Colo	1.72	229	eP	Pn	18 30 58.8	-0.3
PAMC				eS	Sn	18 31 20.7	-1.0
OCAC	Ocana	1.93	263	eP	Pn	18 31 01.7	0.0
OCAC				eS	Sb	18 31 27.4	-0.8
MCQV	Machiques	1.94	324	eP	Pn	18 31 02.9	+1.2
MCQV				eS	Sn	18 31 26.9	+0.4
TAMC	Tame, Arauca	2.06	191	eS	Sg	18 31 34.1	-0.3
ELOV	Elorza	2.39	128	eP	Pb	18 31 11.3	-0.3
ELOV				eS	Sn	18 31 38.2	+0.7
BARC	Barichara	2.58	224	eP	Pb	18 31 14.7	-0.3
BARC				eS	Sb	18 31 46.0	-1.1
SIQV	Siquisique	2.67	36	eP	Pn	18 31 13.8	+2.0
SIQV				eS	Sn	18 31 46.1	+1.5
BRRC	Barranca, Sant	2.67	240	eS	Sb	18 31 50.8	+1.2
SMLC	San Martn de	2.67	277	eP	Pn	18 31 13.1	+1.2
SMLC				eS	Sn	18 31 45.5	+0.8
RUSC	La Rusia	3.06	213	eP	Pn	18 31 18.4	+0.8
RUSC				eS	Sn	18 31 56.8	+1.8
BAUV	El Baul	3.34	82	eP	Pn	18 31 22.1	+1.1
BAUV				eS	Sn	18 32 00.1	-1.1
MONV	Montecano	3.73	22	eP	Pn	18 31 26.7	+0.3
MONV				eS	Sn	18 32 10.5	-0.3
SJCC	San Jacinto, C	4.00	291	eP	Pn	18 31 29.9	-0.3
SJCC				eS	Sn	18 32 16.8	-0.8
BENV	Beln	4.02	68	eP	Pn	18 31 31.8	+1.4
BENV				eS	Sn	18 32 16.5	-1.6
MOTC	Monteria, Cord	4.24	274	eP	Pn	18 31 33.7	+0.3
MOTC				eS	Sn	18 32 23.2	-0.2
CHIC	Chingaza	4.47	212	eP	Pn	18 31 38.2	+1.3
CHIC				eS	Sn	18 32 29.3	-0.3
MERV	Las Mercedes	5.09	81	eP	Pn	18 31 45.4	+0.3
MERV				eS	Sn	18 32 40.4	-3.9

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*IDC **11** 18:33:41.2±0.8, 29°.86S×71°.98W, h0^{km}, mb4.3/9, mb1 4.4/12, mb1mx4.2/30, mbtmp4.3/12, ML4.4/3, MS3.9/8, Ms1 3.9/8, ms1mx3.6/22, Error ellipse: s-maj=24.8km s-min=22.9km az=69.0*

*VAO **11** 18:33:42.6±0.4, 29°.89S×72°.00W, h12^{km}, mb4.7*

*GUC **11** 18:33:42.4±0.6, 29°.87S×72°.07W, h17^{km}, ML4.7*

*NEIC **11** 18:33:42.1±2.3, 29°.87S±0°.04×72°.02W±0°.03, h7^{km}±3^{km}, mb4.8/16, Mwr4.6/50, ML4.7(GUC), Error ellipse: s-maj=5.7km s-min=4.2km az=173.0*

*NEIC **11** 18:33:42.1, 29°.88S×72°.05W, h10^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}7.18; $M_{\theta\theta}$1.34; $M_{\phi\phi}$-8.53; $M_{r\theta}$1.81; $M_{\theta\phi}$0.43; $M_{\phi r}$-5.33; Fault plane solution: $M_0$9.74000×10^{15} NP1:ϕ_s166.97000°, δ63.10000°, λ79.06000°. NP2:ϕ_s10.10000°, δ28.89000°, λ110.51000°. Principal axes: T 9.1499, Plg70.0000°, Azm54.0000°; N 1.0919, Plg10.0000°, Azm172.0000°; P -10.2418, Plg17.0000°, Azm265.0000°;*

ISC 11 18:33:41.9±1.1, **29°.87S**±0°.04×**72°.12W**±0°.05, **h11**^{km}±6^{km}, **n165**, σ**1^{s}.50**/165, **mb4.6**/15, **MS4.2**/5, **Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO05	La Serena	0.77	94	eP	Pb	18 33 56.6	-0.7
CO05				eS	Sb	18 34 06.2	-1.5
CO05				IAML		18 34 10.5	
	comp=E,27µm,0.6s						
CO05	La Serena	0.77	94		Pb	18 33 56.1	-1.1
CO06	Fray Jorge	0.91	152	eP	Pb	18 33 58.6	-1.0
CO06				eS	Sg	18 34 11.3	0.0
CO06	Fray Jorge	0.91	152		Pb	18 33 58.8	-0.9
GO04	Tololo Observa	1.19	105	eP	Pn	18 34 03.3	-1.3
GO04				eS	Sb	18 34 17.1	-2.9
GO04	Tololo Observa	1.19	105		Pn	18 34 03.5	-1.1
GO04				Sn	Sn	18 34 19.1	-1.7
LCO	Las Campanas	1.50	56	eP	Pn	18 34 08.4	-0.6
LCO				eS	Sb	18 34 28.0	-1.1
LCO	Las Campanas	1.50	56	Pn	Pn	18 34 08.4	-0.6
LCO				Sn	Sb	18 34 28.6	-0.5
CO03	El Pedregal	1.57	128	Pn	Pn	18 34 09.4	-0.4
AC04	Llanos de Chal	1.89	29	eP	Pn	18 34 12.9	-1.2
AC04	Llanos de Chal	1.89	29	Pn	Pn	18 34 12.9	-1.2
VA06	Catapilco	2.78	165	eP	Pn	18 34 25.6	-0.6
VA06				IAML		18 35 21.4	
	comp=N,2µm,0.6s						
GO03	Copiap	2.81	37	eP	Pn	18 34 26.2	-0.6
GO03				IAML		18 35 21.5	
	comp=E,3µm,0.5s						
GO03	Copiap	2.81	37	Pn	Pn	18 34 26.1	-0.6
VA03	San Esteban	3.19	155	eP	Pn	18 34 32.6	+0.6
VA03				IAML		18 35 33.0	
	comp=N,3µm,0.7s						
VA03	San Esteban	3.19	155		Pn	18 34 32.4	+0.4
ROCH	El Roble	3.24	163	eP	Pn	18 34 32.2	-0.6
ROCH				IAML		18 35 38.6	
	comp=E,2µm,0.5s						
ZON	Zonda	3.41	120	Pn	Pn	18 34 37.8	+2.9
MT02	Curacav	3.49	166	eP	Pn	18 34 35.4	-0.6
MT02	Curacav	3.49	166		Pn	18 34 35.3	-0.7
PEL	Peldehue	3.49	160	eP	Pn	18 34 36.5	+0.3
PEL				IAML		18 35 37.5	
	comp=E,1µm,0.3s						
PEL	Peldehue	3.49	160	Pn	Pn	18 34 36.4	+0.3
MT05	Renca	3.71	162	eP	Pn	18 34 39.4	+0.3
MT05				IAML		18 35 48.0	
	comp=E,2µm,0.5s						
MT05	Renca	3.71	162		Pn	18 34 39.7	+0.6
VA05	Santo Domingo	3.81	174		Pn	18 34 38.7	-1.6
MT09	Talagante	4.02	166	eP	Pn	18 34 43.8	+0.4
MT09	Talagante	4.02	166		Pn	18 34 43.6	+0.2
MT01	Popeta	4.05	170	eP	Pn	18 34 43.2	-0.6
MT01				IAML		18 36 01.0	
	comp=E,441nm,0.4s						
MT01	Popeta	4.05	170		Pn	18 34 42.4	-1.4
LMEL	Las Melosas	4.29	158	eP	Pn	18 34 48.5	+1.3
LMEL				IAML		18 36 04.6	
	comp=N,494nm,0.5s						
BO01	Tunca	4.60	169	Pn	Pn	18 34 50.7	-0.6
BO02	Sierra Bellavi	5.04	167		Pn	18 34 57.2	-0.3
GO05	Huala	5.13	178		Pn	18 34 57.0	-1.6
PB14	IPOC Station P	5.44	17	Pn	Pn	18 35 00.1	-3.1
ML02	Panimavida	5.91	174		Pn	18 35 07.3	-2.0
PB10	IPOC Station P	6.48	13	Pn	Pn	18 35 14.2	-2.9
H03N1	Juan Fernandez	6.80	237	T	T	18 42 52.0	
	baz=65,slow=71,SNR=461						
H03N2	Juan Fernandez	6.81	237	T	T	18 42 59.1	
	baz=65,slow=71,SNR=524						
H03N3	Juan Fernandez	6.81	237	T	T	18 43 02.9	
	baz=65,slow=71,SNR=468						
VA04	Juan Fernndez	6.84	235	Pn	Pn	18 35 18.7	-3.4
PB15	IPOC Station P	7.04	20		Pn	18 35 22.6	-2.5
PB06	IPOC Station P	7.49	18		Pn	18 35 27.3	-3.8
PB04	IPOC Station P	7.71	14		Pn	18 35 30.1	-4.0
LVC	Limon Verde	7.78	22	Pn	Pn	18 35 33.4	-2.0
	comp=N,1.8nm,0.3s,baz=163,slow=7.8,SNR=12						
LVC				Sn	Sn	18 37 00.2	-3.4
	comp=N,3.1nm,0.3s,baz=117,slow=6.7,SNR=4.7						
LVC	Limon Verde	7.78	22	Pn	Pn	18 35 32.9	-2.5
PB07	IPOC Station P	8.35	14		Pn	18 35 38.3	-4.7
PB09	IPOC Station P	8.44	19		Pn	18 35 41.8	-2.5
LC01	Cunco	9.01	179	Pn	Pn	18 35 49.4	-2.4
PB01	IPOC Station P	9.10	16		Pn	18 35 49.0	-4.2
PLCA	Paso Flores	10.92	174	Pn	Pn	18 36 17.8	-0.3
	comp=N,1.5nm,0.3s,baz=337,slow=12,SNR=49						
PLCA				LR	LR	18 41 25.5	
	comp=N,243nm,19.4s,baz=352,slow=43						
PLCA	Paso Flores	10.92	174	eP	Pn	18 36 17.2	-0.9
ITQB	Itaqui	13.47	93	eP	Pn	18 36 51.4	-1.5
ITQB	Itaqui	13.47	93	Pn	Pn	18 36 49.4	-3.5
CPUP	Villa Florida	13.52	78	Pn	Pn	18 36 52.4	-1.2
	comp=N,0.2nm,0.3s,baz=258,slow=12,SNR=3.2						
CPUP				Sn	Sn	18 39 30.3	+6.4
	comp=N,0.5nm,0.3s,baz=16,slow=4.5,SNR=3.9						
CPUP				LR	LR	18 42 27.9	
	comp=N,539nm,20.9s,baz=246,slow=39						
CPUP	Villa Florida	13.52	78	eP	Pn	18 36 53.3	-0.4
CPUP	Villa Florida	13.52	78	Pn	Pn	18 36 53.0	-0.6
PLTB	Pedras Altas	16.02	101	eP	Pn	18 37 26.9	-0.3
PLTB	Pedras Altas	16.02	101		Pn	18 37 25.2	-2.0
CPSB	Cacapava Do Su	16.18	97	eP	Pn	18 37 27.4	-1.7
SIV	San Ignacio	17.14	39	LR	LR	18 44 55.0	
	comp=N,584nm,20.5s,baz=230,slow=40						
AQDB	Aquidauana	17.54	62	eP	P	18 37 46.9	-0.7
AQDB	Aquidauana	17.54	62		Pn	18 37 46.2	-0.3
CNLB	Canela	18.51	94	eP	Pn	18 37 58.2	-0.1
PTGB	Pitanga	18.54	79	eP	Pn	18 37 59.5	+0.7
PTLB	Pontes e Lacer	18.67	43	eP	Pn	18 38 00.9	+0.6
PTLB	Pontes e Lacer	18.67	43		Pn	18 38 00.4	+0.2
PP1B	Ponte de Pedra	19.92	56	eP	P	18 38 13.9	+0.2
TER01	Tubaro-SC	20.11	92	eP	P	18 38 15.1	-0.6
VILB	Vilhena	20.13	36	eP	P	18 38 15.6	-0.4
VILB	Vilhena	20.13	36		P	18 38 14.7	-1.3
VILB				IAmb	IAmb	18 38 36.5	
	comp=Z,42nm,0.9s						
PCMB	Pacaembu	20.49	71	eP	P	18 38 19.6	-0.2
SALV	Santo Antonio	20.51	51	eP	P	18 38 19.8	-0.3
ETMB	Extrema	20.70	17	eP	P	18 38 21.9	-0.2
ETMB	Extrema	20.70	17		P	18 38 20.4	-1.7
TIJ01	Guaruva-PR	20.97	83	eP	P	18 38 23.9	-1.2
FRTB	Fartura	21.17	77	eP	P	18 38 27.1	-0.2
CZSB	Cruzeiro do Su	22.03	358	eP	P	18 38 38.5	+2.1
ITRB	Iturama	22.16	68	eP	P	18 38 37.4	-0.5
SAML	Samuel	22.43	24	P	P	18 38 40.9	+0.2
PET01	Itanhaem-SP	22.79	82	eP	P	18 38 43.0	-1.5
BB19B	Bebedouro	23.00	73	eP	P	18 38 46.0	-0.9
PDRB	Porto dos Gac	23.13	41	eP	P	18 38 47.0	-1.0
RCLB	Rio Claro- Sao	23.26	77	eP	P	18 38 48.9	-0.6
ARAG	Araguaiana, MT	23.38	57	eP	P	18 38 50.1	-0.6
CLDB	Colider	24.26	42	eP	P	18 38 57.9	-1.1
PARB	Paraibuna	24.54	81	eP	P	18 39 00.5	-1.2
IPMB	Ipameri, GO	24.80	67	eP	P	18 39 03.5	-0.5
TBTG	Tabatinga, AM	25.63	5	eP	P	18 39 12.7	+1.3
BSCB	Bom Sucesso	26.18	77	eP	P	18 39 17.6	+1.0
BDFB	Brasilia	26.28	63	P	P	18 39 17.4	-0.2
	comp=Z,9.6nm,0.7s,baz=278,slow=4.0,SNR=8.0						
BDFB	Brasilia	26.28	63		P	18 39 17.4	-0.2

SNDB	Serra Nova Dou	26.29	52	*e*P	P	18 39 16.4	-1.1
NPGB	Novo Progresso	27.64	38	*e*P	P	18 39 29.2	-0.5
DUB01	Friburgo-RJ	27.79	81	*e*P	P	18 39 32.1	+1.1
PEXB	Peixe	28.31	56	*e*P	P	18 39 35.3	-0.4
DIAM	Diamantina, MG	28.33	72	*e*P	P	18 39 36.4	+0.3
JANB	Januaria	29.52	66	*e*P	P	18 39 45.9	-0.6
ITTB	Itaituba	29.72	35	*e*P	P	18 39 48.0	-0.1
ALF01	Guarapari-ES	29.78	79	*e*P	P	18 39 47.6	-1.0
BSFB	Barra de Sao F	30.45	76	*e*P	P	18 39 54.1	-0.4
SDBA	SAO DESIDERIO	30.64	61	*e*P	P	18 39 56.6	+0.3
SMTB	Santa Maria do	31.05	53	*e*P	P	18 40 00.2	+0.3
PTGA	Pitinga	31.20	24	P	P	18 40 01.7	+0.5
	baz=186,slow=13						
PRPB	Parauapebas	31.58	46	*e*P	P	18 40 04.2	-0.4
CMC01	Camacan, BA	33.24	71	*e*P	P	18 40 19.1	-0.1
NBIT	Itapeh - BA	33.53	71	*e*P	P	18 40 21.8	+0.1
ORTC	Ortega, Tolima	33.72	354	*e*P	P	18 40 26.6	+3.3
BOAV	Boa Vista	33.94	21	*e*P	P	18 40 25.3	0.0
GDU01	Guandu, BA	34.07	69	*e*P	P	18 40 26.2	-0.2
CHIC	Chingaza	34.33	357	*e*P	P	18 40 31.6	+2.5
ROSC	El Rosal	34.57	356	LR	LR	18 54 05.8	
	comp=Z,143nm,19.4s,baz=137,slow=35						
MCPB	Macapa, AP	35.02	37	*e*P	P	18 40 35.1	+0.6
GUY2C	Guyana, Caldas	35.03	354	*e*P	P	18 40 38.1	+3.0
NBPN	Ponto Novo - B	35.23	64	*e*P	P	18 40 36.3	-0.1
PMSA	Palmer Station	35.29	174	*e*P	P	18 40 37.7	+1.3
NORC	Norcasia	35.32	355	*e*P	P	18 40 39.5	+2.2
RUSC	La Rusia	35.56	358	*e*P	P	18 40 41.5	+1.7
TMAB	Tom-Au,PA,Br	35.60	44	*e*P	P	18 40 40.7	+1.1
NBLA	Lagarto - SE	37.05	67	*e*P	P	18 40 51.6	-0.4
ZARC	Zaragoza, Cauc	37.23	356	*e*P	P	18 40 54.7	+1.2
ZARC	Zaragoza, Cauc	37.23	356	P	P	18 40 54.4	+0.9
ZARC				IAmb	IAmb	18 41 03.9	
	comp=Z,20nm,1.3s						
UREC	San Jos de Ur	37.54	354	*e*P	P	18 40 58.3	+2.2
ROSB	Rosrio	37.73	50	*e*P	P	18 40 58.0	+0.2
SOCV	Socops	37.95	2	*e*P	P	18 40 57.3	-2.3
SMLC	San Martn de	38.49	357	*e*P	P	18 41 04.3	+0.2
NBMA	Muriti-CE	38.49	61	*e*P	P	18 41 04.7	+0.4
NBPS	Pedro II - PI	38.50	55	*e*P	P	18 41 04.4	0.0
NBAN	Anadia - AL	39.02	67	*e*P	P	18 41 07.9	-0.8
NBPB	Pedra_Branca-C	39.06	58	*e*P	P	18 41 07.7	-1.3
MDP	Montagnes des	39.47	32	P	P	18 41 12.2	-0.2
	comp=Z,18nm,1.0s,baz=197,slow=12,SNR=5.3						
VNA3	Neumayer Olymp	53.22	159	P	P	18 43 00.8	+1.0
VNA1	Neumayer--Stat	53.51	158	P	P	18 43 03.5	+1.6
VNA2	Neumayer--Watz	53.86	158	P	P	18 43 03.0	-1.4
	baz=285,slow=8.4						
SNAA	Sanae	55.44	159	P	P	18 43 16.6	+0.6
QSPA	South Pole Qui	60.36	180	P	P	18 43 51.9	+1.2
QSPA				IAmb	IAmb	18 44 21.3	
	comp=Z,8.6nm,1.2s						
TXAR	Lajitas Array	66.11	330	P	P	18 44 31.5	+2.3
	comp=Z,0.3nm,0.5s,baz=147,slow=8.6,SNR=2.6						
FNO	Franklin	69.02	338	P	P	18 44 47.2	-0.1
N49A	Columbus Grove	71.31	350	P	P	18 45 01.2	0.0
DBIC	Dimbokro	73.96	72	P	P	18 45 18.6	+1.0
	comp=Z,4.0nm,0.7s,baz=268,slow=5.3,SNR=8.1						
DBIC				LR	LR	19 16 34.9	
	comp=Z,126nm,18.4s,baz=208,slow=35						
SMCO	Snowmass	75.97	333	P	P	18 45 30.3	+1.1
SMCO				IAmb	IAmb	18 45 50.3	
	comp=Z,5.8nm,0.9s						
ECSD	EROS Data Cent	76.60	342	P	P	18 45 31.6	-0.5
ECSD				IAmb	IAmb	18 45 42.5	
	comp=Z,11nm,1.1s						
MAW	Mawson	77.16	164	LR	LR	19 20 45.9	
	comp=Z,116nm,18.8s,baz=237,slow=37						
KOWA	Kowa	79.02	66	P	P	18 45 45.1	-1.2
KOWA				IAmb	IAmb	18 45 57.2	
	comp=Z,11nm,1.2s						
HWUT	Hardware Ranch	79.90	331	P	P	18 45 51.0	+0.3
PDAR	Pinedale Array	80.05	333	P	P	18 45 52.5	+1.0
	comp=Z,0.6nm,0.6s,baz=136,slow=6.6,SNR=4.9						
PDAR	Pinedale Array	80.05	333	P	P	18 45 52.2	+0.7
NVAR	Mina Array Bea	80.46	325	P	P	18 45 56.2	+2.4
	comp=Z,0.4nm,0.7s,baz=161,slow=33,SNR=3.0						
BOSA	Boshof	82.07	118	P	P	18 46 03.2	+0.5
	comp=Z,3.6nm,0.8s,baz=242,slow=3.1,SNR=5.3						
BOSA				LR	LR	19 20 17.1	
	comp=Z,53nm,18.1s,baz=260,slow=34						
BOSA	Boshof	82.07	118	P	P	18 46 02.7	-0.1
BOSA				IAmb	IAmb	18 46 15.1	
	comp=Z,7.8nm,1.0s						
ULM	Lac du Bonnet	82.50	345	P	P	18 46 04.5	+0.4
	comp=Z,3.6nm,0.8s,baz=224,slow=4.1,SNR=4.4						
HLID	Hailey	82.71	330		P	18 46 04.8	-0.8
HLID				IAmb	IAmb	18 46 17.6	
	comp=Z,8.8nm,1.4s						
TORD	Torodi Ar. Bea	82.89	71	P	P	18 46 07.8	+0.9
	comp=Z,3.7nm,0.8s,baz=263,slow=4.5,SNR=18						
TORD				LR	LR	19 22 15.9	
	comp=Z,102nm,18.2s,baz=150,slow=35						
TORD	Torodi Ar. Bea	82.89	71	P	P	18 46 07.8	+0.9
AKASG	Malin Array Be	119.41	46	PKP	PKPdf	18 52 30.3	-0.6
	comp=Z,0.3nm,0.4s,baz=281,slow=3.5,SNR=2.1						
WRA	Warramunga Arr	124.30	210	PKP	PKiKP	18 52 41.3	-0.4
	comp=Z,0.5nm,0.6s,baz=165,slow=1.6,SNR=7.6						
H11S2	WAKE ISLAND Hy	125.65	272	T	T	21 11 32.5	
	baz=115,slow=74,SNR=14						
H11S1	WAKE ISLAND Hy	125.66	272	T	T	21 11 32.2	
	baz=115,slow=74,SNR=20						
H11S3	WAKE ISLAND Hy	125.67	272	T	T	21 11 32.4	
	baz=115,slow=74,SNR=15						
AAK	Ala-Archa	150.41	55	PKPbc	PKiKP	18 53 35.5	+1.2
	comp=Z,4.1nm,0.6s,baz=183,slow=2.1,SNR=25						
AAK	Ala-Archa	150.41	55		PKiKP	18 53 34.3	+0.1
ZALV	Zalesovo Beam	150.70	28	PKP	PKPdf	18 53 29.2	+1.2
	comp=Z,1.1nm,0.8s,baz=228,slow=1.8,SNR=4.5						
ZALV				PKPbc	sPKPdf	18 53 35.0	+3.3
	comp=Z,12nm,0.6s,baz=301,slow=3.4,SNR=60						
ZALV	Zalesovo Beam	150.70	28		PKiKP	18 53 34.3	0.0
MKAR	Makanchi Array	153.93	42	PKPbc	PKiKP	18 53 42.0	+0.8
	comp=Z,0.7nm,0.7s,baz=5.7,slow=1.2,SNR=6.7						
MKAR	Makanchi Array	153.93	42	PKPdf	PKPdf	18 53 31.4	-1.7
MKAR					PKiKP	18 53 41.4	+0.2
SONM	Songino Array	162.02	3	PKPab	PKPab	18 54 30.9	+1.6
	comp=Z,0.6nm,0.9s,baz=333,slow=1.7,SNR=4.5						

*IDC **11** 18:47:20.8±1.6, 20°.14S×177°.88W, h533^{km}±17^{km}, mb3.4/9, mb1 3.6/10, mb1mx3.3/41, mbtmp4.3/10, Error ellipse: s-maj=23.1km s-min=14.3km az=160.0*

*NEIC **11** 18:47:20.4±1.4, 20°.5S±0°.2×177°.8W±0°.2, h519^{km}±13^{km}, mb4.2/17, Error ellipse: s-maj=30.9km s-min=21.8km az=56.0*

ISC 11 18:47:20.6±0.7**, 20°.3S**±0°.1×**177°.8W**±0°.1**, h534**^{km}**, n39, σ1^{s}.27**/39**, mb4.1**/18**, 1C, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.71	302	P	P	18 48 45.5	-1.7
	4.5nm,0.3s,baz=110,slow=23,SNR=24						
MSVF	Nonsavu	4.71	302		P	18 48 45.4	-1.9
PINNC	Pines Island,	13.94	258	P	P	18 50 19.1	-0.3
DZM	Mont Dzumac	14.82	260	P	P	18 50 32.2	+3.6
	0.8nm,0.3s,baz=84,slow=14,SNR=12						
URZ	Urewera	18.41	193	P	P	18 51 01.0	-1.8
BKZ	Black Stump Fm	19.41	193	P	P	18 51 09.3	-2.7
BFZ	Birch Farm	20.92	193	P	P	18 51 22.7	-3.0
THZ	Tophouse	22.78	198	P	P	18 51 41.9	-0.5
LTZ	Lake Taylor	23.91	198	P	P	18 51 51.9	-0.5
LTZ				IAmb	IAmb	18 52 08.9	
	comp=Z,26nm,1.1s						
CTAO	Charters Tower	33.71	264	P	P	18 53 17.8	0.0
CTAO				IAmb	IAmb	18 53 18.5	
	comp=Z,9.0nm,1.1s						
STKA	Stephens Creek	38.05	244	P	P	18 53 53.8	+0.2
	comp=Z,7.1nm,0.8s,baz=89,slow=11,SNR=13						
STKA	Stephens Creek	38.05	244	P	P	18 53 53.6	+0.1
WR0	Warramunga Arr	44.64	262	P	P	18 54 45.2	-0.7
AS31	Alice Springs	44.76	257	P	P	18 54 46.5	-0.4
AS31				IAmb	IAmb	18 54 47.9	
	comp=Z,4.0nm,0.9s						
ASAR	Alice Springs	44.76	257	P	P	18 54 46.6	-0.3
	comp=Z,12nm,0.8s,baz=96,slow=8.0,SNR=123						
ASAR				S	S	19 00 44.6	-0.6
	comp=Z,0.4nm,0.7s,baz=94,slow=16,SNR=4.7						
WB0	Warramunga Arr	44.81	262	P	P	18 54 46.5	-0.8
WB0				IAmb	IAmb	18 54 46.7	
	comp=Z,4.7nm,0.8s						
WB2	Warramunga Arr	44.82	262	P	P	18 54 46.6	-0.8
WB2				IAmb	IAmb	18 54 47.5	
	comp=Z,18nm,1.4s						
WRAB	Tennant Creek	44.82	262	P	P	18 54 46.5	-0.8
WRAB				IAmb	IAmb	18 54 46.8	
	comp=Z,3.5nm,0.8s						
WRA	Warramunga Arr	44.83	262	P	P	18 54 46.8	-0.7
	comp=Z,1.7nm,0.4s,baz=97,slow=8.1,SNR=47						
WRA				S	S	19 00 46.2	0.0
	comp=Z,0.5nm,1.0s,baz=96,slow=12,SNR=2.2						
WRA	Warramunga Arr	44.83	262	P	P	18 54 46.6	-0.8
VNDA	Vanda	58.10	185	P	P	18 56 24.1	+1.7
	comp=Z,0.7nm,0.3s,baz=349,slow=8.5,SNR=8.8						
VNDA	Vanda	58.10	185	IAmb	IAmb	18 56 24.6	
	comp=Z,6.7nm,1.5s						
CASY	Casey	64.21	205	P	P	18 57 02.5	-0.1
CASY				IAmb	IAmb	18 57 13.6	
	comp=Z,11nm,1.1s						
QSPA	South Pole Qui	69.74	180	P	P	18 57 37.5	+0.7
QSPA				IAmb	IAmb	18 57 38.4	
	comp=Z,8.8nm,0.8s						
LEM	Lembang	73.25	269	P	P	18 57 58.3	0.0
	comp=Z,13nm,0.7s,baz=85,slow=7.9,SNR=4.4						
NVAR	Mina Array Bea	80.76	43	P	P	18 58 38.8	0.0
	comp=Z,0.8nm,0.9s,baz=229,slow=14,SNR=4.3						
MAW	Mawson	81.80	200	P	P	18 58 43.6	+0.3
	comp=Z,2.2nm,1.0s,baz=142,slow=6.5,SNR=2.3						
TXAR	Lajitas Array	86.79	57	P	P	18 59 09.1	+0.5
	comp=Z,0.7nm,0.7s,baz=213,slow=9.0,SNR=3.6						
SNAA	Sanae	88.18	178	P	P	18 59 13.7	-0.7
VNA3	Neumayer Olymp	88.30	176	P	P	18 59 14.4	-0.5
VNA2	Neumayer--Watz	88.75	177	P	P	18 59 16.7	-0.2
	baz=194,slow=3.4						
VNA1	Neumayer--Stat	88.97	177	P	P	18 59 17.8	-0.2
CMAR	Chiang Mai Arr	90.25	289	P	P	18 59 26.3	+1.4
	comp=Z,1.6nm,0.9s,baz=107,slow=3.1,SNR=10						
CHTO	Chiang Mai	90.38	290	P	P	18 59 26.8	+1.3
CHTO				IAmb	IAmb	18 59 27.4	
	comp=Z,1.9nm,0.7s						
KURBB	Kurchatov Arra	114.06	317	PKiKP	PKiKP	19 04 57.1	-1.8
	comp=Z,0.4nm,0.8s,baz=98,slow=2.8,SNR=5.7						
AKASG	Malin Array Be	142.96	331	PKhKP	PKPpre	19 05 49.9	
	comp=Z,1.2nm,0.5s,baz=42,slow=4.5,SNR=8.0						
BRTR	Keskin Array B	146.87	313	PKPbc	PKPdf	19 06 02.1	+1.5
	comp=Z,2.2nm,0.8s,baz=113,slow=3.2,SNR=4.3						
CLL	Collm	147.94	347	⇑*i*PKPbc	PKPbc	19 06 05.6	0.0
GERES	GERESS Array B	150.09	345	PKPbc	PKPbc	19 06 10.2	-0.8
	comp=Z,1.2nm,0.8s,baz=42,slow=2.2,SNR=9.5						

*SKHL **11** 18:57:22.3±0.9, 47°.90N×153°.40E, h144^{km}±7^{km}, mb4.6/6, msha5.4/5*

*MOS **11** 18:57:22.7±1.4, 48°.14N×153°.02E, h154^{km}, mb4.2/5, Error ellipse: s-maj=11.1km s-min=4.9km az=61.8*

*NEIC **11** 18:57:23.2±1.1, 48°.1N±0°.1×152°.8E±0°.2, h140^{km}±7^{km}, mb4.0/7, Error ellipse: s-maj=19.8km s-min=14.1km az=130.0*

*IDC **11** 18:57:25.1±1.2, 48°.21N×152°.80E, h154^{km}±8^{km}, mb3.5/13, mb1 3.6/18, mb1mx3.4/59, mbtmp4.0/18, MS3.4/1, Ms1 3.4/1, ms1mx2.3/35, Error ellipse: s-maj=19.3km s-min=13.7km az=120.0*

ISC 11 18:57:22.4±0.6**, 47°.97N**±0°.07×**153°.17E**±0°.07**, h150**^{km}**, n119, σ1^{s}.84**/124**, mb4.1**/23**, 5C-3D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	3.33	34	*e*PN	Pn	18 58 13.6	-0.2
SKR				*e*S	Sn	18 58 51.8	-1.9
SKR				pmax	pmax		
	comp=Z,214nm,0.7s						
SKR				smax	smax		
	comp=E,304nm,0.5s						
SKR				smax	smax		
	comp=N,312nm,0.5s						
SKR	Severo-Kuril's	3.33	34	*e*P	Pn	18 58 14.0	+0.2
SKR				AMB	AMB	18 58 15.0	
	comp=N,70nm,0.6s						
SKR				*e*S	Sn	18 58 52.5	-1.2
SKR				A	A	18 59 01.4	
	comp=N,90nm,0.2s						
SKR				A	A	18 59 01.4	
	comp=N,160nm,0.2s						
PAU	Pauzhetka	4.22	33	PN	Pn	18 58 25.5	+0.1
PAU				S	Sn	18 59 13.1	-1.4
PAU	Pauzhetka	4.22	33	*e*P	Pn	18 58 25.6	+0.1
PAU				AMB	AMB	18 58 27.9	
	comp=N,50nm,0.5s						
PAU				*e*S	Sn	18 59 13.8	-0.7
PAU				A	A	18 59 16.2	
	comp=N,140nm,0.4s						
PAU				A	A	18 59 16.2	
	comp=N,160nm,0.4s						
KUR	Kuril'sk	4.57	235	⇓*i*PN	Pn	18 58 30.6	+0.6
KUR				*e*S	Sn	18 59 23.9	+1.3
KUR				pmax	pmax		
	comp=Z,44nm,0.3s						
KUR				pmax	pmax		
	comp=E,20nm,0.6s						
KUR				pmax	pmax		
	comp=N,18nm,0.1s						
KUR				smax	smax		
	comp=N,78nm,0.3s						
KUR				smax	smax		
	comp=E,29nm,0.3s						
KUR	Kuril'sk	4.57	235	*i* P	Pn	18 58 30.3	+0.3
KUR				AMB	AMB	18 58 32.2	
	comp=E,50nm,0.5s						
KUR				*e*S	Sn	18 59 21.4	-1.2
KUR				A	A	18 59 25.6	
	comp=E,70nm,0.6s						
KUR				A	A	18 59 25.6	
	comp=E,70nm,0.6s						
KDTR	Khodutka, Kamc	4.98	38	PN	Pn	18 58 33.5	-1.9
KDTR				S	Sn	18 59 27.3	-5.1
GRL	Gorelyy	5.56	33	PN	Pn	18 58 44.3	+1.1
RUS	Russkaya	5.63	35	PN	Pn	18 58 42.9	-1.1
RUS				S	Sn	18 59 43.0	-4.9
PEA0B	Petropavlovsk-	5.90	28	PN	Pn	18 58 48.6	+1.0
PEA0B	Petropavlovsk-	5.90	28	Pn	Pn	18 58 48.6	+1.0
PETK	Petropavlovsk-	5.90	28	P	Pn	18 58 48.6	+1.1
	comp=E,0.9nm,0.3s,baz=193,slow=12,SNR=12						
PETK	Petropavlovsk-	5.90	28	*e*PN	Pn	18 58 48.9	+1.3
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	Petropavlovsk-	5.90	28	Pn	Pn	18 58 47.9	+0.3
DALK	Dalny	6.19	33	PN	Pn	18 58 51.4	-0.1
KOK	Koryaka	6.36	31	PN	Pn	18 58 55.6	+1.8
KOK	Koryaka	6.36	31	*e*P	Pn	18 58 51.4	-2.4
AVH	Avacha	6.38	32	PN	Pn	18 58 55.4	+1.4
SMAR	Somma	6.40	32	PN	Pn	18 58 56.0	+1.6
KRER	Koryakskii	6.41	31	PN	Pn	18 58 55.8	+1.2
YUK	Yuzh-Kuril'sk	6.43	235	⇑*e*PN	Pn	18 58 55.4	+0.6
YUK	Yuzh-Kuril'sk	6.43	235	*e*P	Pn	18 58 55.4	+0.6
YUK				AMB	AMB	18 58 57.6	
	comp=Z,290nm,0.7s						
YUK				*e*S	Sn	19 00 05.6	-1.5
YUK				A	A	19 00 09.5	
	comp=Z,160nm,0.6s						
YUK				A	A	19 00 09.5	
	comp=Z,240nm,0.6s						
SDLR	Sedlovina	6.44	32	PN	Pn	18 58 54.8	-0.1
SPN	Mys Shipunski	6.74	38	PN	Pn	18 58 57.1	-1.7
SPN	Mys Shipunski	6.74	38	*e*P	Pn	18 58 57.1	-1.7
JRA	Rausu	6.91	237	P	Pn	18 59 00.3	-0.8
NEM2	Nemuro 2	6.95	231	P	Pn	18 58 58.3	-3.3
NEM2				*e*S	Sn	19 00 10.5	-8.9
YSS	Yuzh-Sakhalins	7.14	266	*e*PN	Pn	18 59 05.3	+1.2
YSS				pmax	pmax		
	comp=Z,10.0nm,0.7s						
YSS	Yuzh-Sakhalins	7.14	266	*e*P	Pn	18 59 05.3	+1.2
YSS				AMB	AMB	18 59 06.8	
	comp=Z,10.0nm,0.7s						
TYV	Tymovskoe	7.45	297	*e*P	Pn	18 59 10.7	+2.5
TYV				AMB	AMB	19 00 22.1	
	comp=Z,4.0nm,0.9s						
TYV				*e*S	Sn	19 00 31.0	-0.4
TYV				A	A	19 00 56.6	
	comp=Z,6.0nm,0.9s						
TYV				A	A	19 00 56.6	
	comp=Z,12nm,0.9s						
JTKR	Abashiri--Toko	7.59	242	P	Pn	18 59 10.1	-0.1
JAK	Akkeshi	7.76	233	P	Pn	18 59 09.0	-3.4
JAK				*e*S	Sn	19 00 29.1	-10
JAR	Ashorobuto	8.08	238	P	Pn	18 59 15.7	-1.0
JOB	Onbets	8.29	236	P	Pn	18 59 17.0	-2.6
JKA	Kamikawa-asahi	8.30	246	*e*P	Pn	18 59 20.5	+0.8
JKA	Kamikawa-asahi	8.30	246		Pn	18 59 20.5	+0.8
ASAJ	Asahikawa	8.30	246	P	Pn	18 59 20.7	+0.9
	comp=Z,6.4nm,0.3s,baz=69,slow=13,SNR=86						
ASAJ	Asahikawa	8.30	246	PN	Pn	18 59 20.5	+0.8
JKK2	Kamakawa 2	8.34	244	P	Pn	18 59 20.4	+0.1
MKZ	Mys Kozlova	8.50	36	PN	Pn	18 59 19.8	-2.4
TUMR	Tumrok	8.51	28	PN	Pn	18 59 23.9	+1.4
JCH	Churui	8.74	236	P	Pn	18 59 22.6	-3.0
JCH				*e*S	Sn	19 00 52.9	-10
JFR	Furan	8.84	241	P	Pn	18 59 26.6	-0.3
ERM	Erimo	9.26	234	⇓*e*PN	Pn	18 59 31.5	-1.0
ERM	Erimo	9.26	234		Pn	18 59 31.4	-1.0
JNBK	Urakawa-nobuka	9.30	236	P	Pn	18 59 29.1	-3.9
JEW	Eniwo	9.71	242	Pn	Pn	18 59 36.6	-1.8
KBG	Krutoberegovo	10.15	32	*e*P	Pn	18 59 43.6	-0.5
KBTR	Krutoberegovo	10.15	32	PN	Pn	18 59 42.1	-2.1
JNB	Noboribetsu	10.17	242	P	Pn	18 59 42.6	-1.9
JNB				*e*S	Sn	19 01 29.7	-7.3
JKB	Kayabe	10.53	239	P	Pn	18 59 46.1	-3.2
JKB				*e*S	Sn	19 01 32.8	-13
JYM2	Yakumo 2	10.78	242	P	Pn	18 59 49.6	-2.9
JTM	Tenmabayashi	11.24	235	Pn	Pn	18 59 53.0	-5.7
JOSM	Okushiri--Mats	11.33	244	P	Pn	18 59 57.2	-2.6
JRG	Rokugo	12.47	231	P	Pn	19 00 10.3	-4.3
JMM	Marumori	13.56	226	Pn	Pn	19 00 25.0	-3.5
KLR	Kul'dur	14.23	283	P	Pn	19 00 37.1	+0.1
	comp=Z,0.1nm,0.3s,baz=84,slow=14,SNR=7.3						
KLR	Kul'dur	14.23	283	*ce*P	P	19 00 38.6	-1.2
KLR	Kul'dur	14.23	283	*e*P	P	19 00 38.6	-1.2
JSD	Sado	14.72	233	Pn	Pn	19 00 39.1	-4.2
USA0B	Ussuriysk Arra	15.17	263	P	P	19 00 49.0	-1.2
USA0B	Ussuriysk Arra	15.17	263		P	19 00 49.0	-1.2
USRK	Ussuriysk Ar.	15.17	263	P	Pn	19 00 48.8	+0.1
	baz=73,slow=13,SNR=14						
USRK	Ussuriysk Ar.	15.17	263		P	19 00 49.0	-1.3
MJA0	Matsu Arr-Jizo	15.86	229	*e*P	P	19 01 01.4	+3.4
MAJO	Matsushiro	15.88	229	⇑*e*P	P	19 01 00.5	+2.3
MAJO				pmax	pmax		
	comp=Z,10.0nm,1.3s						
MJAR	Matsushiro Arr	15.88	229	P	P	19 01 00.6	+2.4
	comp=Z,0.1nm,0.3s,baz=31,slow=10,SNR=5.3						
ZEA	Zeya	17.30	299	*e*P	Pn	19 01 15.4	+0.8
ZEA	Zeya	17.30	299	*e*P	Pn	19 01 15.4	+0.8
KSRS	Korea Array	21.23	250	P	P	19 01 57.0	+0.7
	comp=Z,4.3nm,0.8s,baz=44,slow=9.9,SNR=11						
H11N2	WAKE ISLAND Hy	30.29	154	T	T	19 35 19.6	
	baz=341,slow=76,SNR=11						
H11N1	WAKE ISLAND Hy	30.30	154	T	T	19 35 23.3	
	baz=341,slow=76,SNR=14						
H11N3	WAKE ISLAND Hy	30.30	154	T	T	19 35 33.8	
	baz=341,slow=76,SNR=12						
SONM	Songino Array	30.99	288	P	P	19 03 24.7	-0.7
	comp=Z,0.2nm,0.4s,baz=98,slow=10,SNR=3.0						
SONM	Songino Array	30.99	288	P	P	19 03 24.7	-0.7
SONM				pmax	pmax		
	comp=Z,1.0nm,1.4s						
SONM	Songino Array	30.99	288	IAmb	IAmb	19 03 53.9	
	comp=Z,1.3nm,1.4s						
H11S1	WAKE ISLAND Hy	31.39	155	T	T	19 36 56.5	
	baz=343,slow=76,SNR=21						
H11S3	WAKE ISLAND Hy	31.40	155	T	T	19 37 01.5	
	baz=343,slow=76,SNR=29						
H11S2	WAKE ISLAND Hy	31.41	155	T	T	19 37 03.3	
	baz=343,slow=76,SNR=19						
ILAR	Eielson Array	35.58	40	P	P	19 04 07.2	+2.4
	comp=Z,0.3nm,0.6s,baz=267,slow=5.9,SNR=4.6						
ZALV	Zalesovo Beam	41.94	305	P	P	19 04 57.0	-0.9
	comp=Z,1.2nm,0.6s,baz=59,slow=7.8,SNR=5.6						
ZALV				pP	pwP	19 05 31.7	-2.6
	comp=Z,0.6nm,0.6s,baz=107,slow=7.7,SNR=1.8						
ZALV				PcP	PcP	19 06 51.2	+0.9
	comp=Z,1.0nm,0.7s,baz=62,slow=6.9,SNR=4.2						
ZALV	Zalesovo Beam	41.94	305	*e*P	P	19 04 57.3	-0.6
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s						
DLBC	Dease Lake	44.72	47	LR	LR	19 25 56.0	
	comp=Z,38nm,18.7s,baz=288,slow=38						
MK31	Makanchi Array	46.43	296	P	P	19 05 33.1	-0.6
MK31				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MK31	Makanchi Array	46.43	296	P	P	19 05 33.1	-0.6
MK31				IAmb	IAmb	19 05 34.2	
	comp=Z,1.9nm,0.7s						
MKAR	Makanchi Array	46.43	296	P	P	19 05 33.2	-0.5
	comp=Z,1.3nm,0.5s,baz=68,slow=7.7,SNR=19						
MKAR				pP	pwP	19 06 07.6	-3.2
	comp=Z,0.6nm,0.7s,baz=67,slow=9.8,SNR=3.1						
MKAR	Makanchi Array	46.43	296	P	P	19 05 32.7	-1.0
MKAR	Makanchi Array	46.43	296	P	P	19 05 32.7	-1.0
KURK	Kurchatov	46.73	303	*ce*P	P	19 05 35.7	-0.3
KURK				pmax	pmax		
	comp=Z,12nm,2.5s						
KURK	Kurchatov	46.73	303	*e*P	P	19 05 35.7	-0.3
KURK	Kurchatov	46.73	303	P	P	19 05 35.4	-0.5
KURK				IAmb	IAmb	19 05 36.5	
	comp=Z,5.1nm,0.7s						
KURBB	Kurchatov Arra	46.83	303	P	P	19 05 35.9	-0.8
	comp=Z,3.4nm,0.6s,baz=68,slow=8.4,SNR=28						
KURBB				pP	pP	19 06 10.0	+0.7
	comp=Z,0.9nm,0.7s,baz=67,slow=8.8,SNR=3.0						
KURBB				PcP	PcP	19 07 08.1	+0.9
	comp=Z,0.6nm,0.8s,baz=64,slow=3.1,SNR=4.6						
BVAR	Borovoye Array	50.12	309	P	P	19 06 01.6	-0.3
	comp=Z,0.9nm,0.3s,baz=107,slow=5.0,SNR=4.8						
LSA	Lhasa	50.26	272	P	P	19 06 03.2	-0.6
LSA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
LSA	Lhasa	50.26	272	P	P	19 06 03.2	-0.6
LSA				IAmb	IAmb	19 06 06.9	
	comp=Z,3.0nm,0.7s						
CMAR	Chiang Mai Arr	52.71	255	P	P	19 06 23.1	+1.6
	comp=Z,0.7nm,0.7s,baz=24,slow=8.5,SNR=7.1						
CMAR	Chiang Mai Arr	52.71	255	*e*P	P	19 06 23.6	+2.1
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
AAK	Ala-Archa	53.34	296	⇓*e*P	P	19 06 26.5	+0.4
AAK				pmax	pmax		
	comp=Z,17nm,2.5s						
AAK	Ala-Archa	53.34	296	*e*P	P	19 06 26.5	+0.4
AAK	Ala-Archa	53.34	296	P	P	19 06 24.6	-1.4
AAK				IAmb	IAmb	19 06 27.0	
	comp=Z,1.4nm,0.7s						
JIRN	Jiri	54.90	274	*e*P	P	19 06 38.5	+0.7
RAMN	Ramite	55.09	273	*e*P	P	19 06 40.1	+1.1
	comp=Z,10nm,0.3s						
KKAR	Karatay Array	55.45	298	P	P	19 06 40.5	-0.7
KKAR	Karatay Array	55.45	298	P	P	19 06 40.5	-0.7
PKIN	Phulchoki	55.48	274	*e*P	P	19 06 42.9	+1.0
	comp=Z,3.4nm,0.4s						
GKN	Gorkha	55.72	275	*e*P	P	19 06 44.8	+1.4
	comp=Z,7.5nm,0.4s						
DANN	Dangsing	56.08	276	*e*P	P	19 06 47.8	+1.7
	comp=Z,14nm,0.6s						
KOLN	Koldanda	56.56	276	*e*P	P	19 06 49.9	+0.4
ARCES	ARCESS Array B	56.72	341	P	P	19 06 50.3	+0.6
	comp=Z,5.0nm,0.9s,baz=15,slow=7.5,SNR=2.0						
BOZ	Bozeman (W)	61.02	53	P	P	19 07 21.5	+1.6
BOZ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BOZ	Bozeman (W)	61.02	53	P	P	19 07 21.5	+1.6
FINES	FINESS Array B	62.96	335	P	P	19 07 32.1	-0.2
	comp=Z,5.8nm,1.1s,baz=35,slow=7.0,SNR=8.2						
FINES	FINESS Array B	62.96	335	*e*P	P	19 07 32.4	+0.1
FINES				pmax	pmax		
	comp=Z,6.0nm,1.1s						
HFS	Hagfors	67.33	339	P	P	19 08 01.3	+0.7
	comp=Z,1.1nm,0.7s,baz=150,slow=6.3,SNR=4.2						
WRAB	Tennant Creek	69.67	199	*ce*P	P	19 08 17.6	+2.1
WRAB				pmax	pmax		
	comp=Z,11nm,1.7s						
WRA	Warramunga Arr	69.68	199	P	P	19 08 17.4	+1.8
	comp=Z,0.7nm,0.8s,baz=24,slow=6.4,SNR=4.6						
WRA	Warramunga Arr	69.68	199	*e*P	P	19 08 18.5	+2.9
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WRA	Warramunga Arr	69.68	199	IAmb	IAmb	19 08 18.7	
	comp=Z,0.4nm,1.4s						
ASAR	Alice Springs	73.38	198	P	P	19 08 41.4	+3.7
	comp=Z,0.5nm,0.5s,baz=11,slow=5.7,SNR=14						

*IDC **11** 19:03:54.1±1.2, 22°.16N×121°.42E, h0^{km}, mb3.4/7, mb1 3.6/7, mb1mx3.4/47, mbtmp3.4/7, MS2.4/1, Ms1 2.4/1, ms1mx2.1/27, Error ellipse: s-maj=52.6km s-min=19.1km*

az=63.0

TAP ***11*** *19:03:59.6, 22°.16N×121°.12E, h11^{km}, ML4.0, C*

JMA ***11*** *19:04:02.6±0.2, 22°.16N×121°.36E, h59^{km}±4^{km}, M3.5*

ISC 11 19:03:59.0±0.9**, 22°.11N**±0°.03×**121°.16E**±0°.02**, h25**^{km}±7^{km}**,** **n70, σ1.^{s}13**/111**, mb3.4**/7**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TSEB	**Hengchuen, Pin** baz=223	0.32	229	P	Pn	19 04 07.6	-0.4
TSEB	baz=223			S	Sn	19 04 13.5	-0.3
TAW	**Tawu** baz=315	0.35	316	P	Pb	19 04 06.4	-0.4
TAW	baz=315			*e*S	Sb	19 04 11.4	-0.7
SLIU	**Shizi** baz=281	0.35	288	P	Pb	19 04 06.5	-0.3
SLIU	baz=281			S	Sb	19 04 11.2	-1.0
TWKBT	**Hengchun** baz=232	0.36	243	P	Pb	19 04 07.3	+0.3
TWKBT	baz=232			S	Sb	19 04 12.8	+0.4
TWK1	**Hengchun** baz=232	0.37	244	P	Pb	19 04 07.5	+0.4
TWK1	baz=232			S	Sb	19 04 12.9	+0.3
LAY	**Lan-yu** baz=106	0.37	101	P	Pn	19 04 09.2	+0.4
LAY	baz=106			S	Sn	19 04 15.7	+0.6
EAST	**Anshuo** baz=312	0.40	314	*i* P	Pb	19 04 07.1	-0.5
EAST	baz=312			S	Sb	19 04 12.5	-1.0
HEN	**Hengchun** baz=246	0.40	256	P	Pb	19 04 07.8	+0.2
HEN	baz=246			*i* S	Sb	19 04 14.0	+0.5
SNW	**Nanwan** baz=240	0.41	249	P	Pb	19 04 08.8	+1.1
SNW	baz=240			S	Sb	19 04 14.8	+1.2
ECL	**Taimali** baz=341	0.52	339	P	Pb	19 04 08.7	-0.9
ECL	baz=341			*e*S	Sb	19 04 15.5	-1.3
SCZT	**Fangliau** baz=295	0.56	298	P	Pb	19 04 09.9	-0.4
SCZT	baz=295			*e*S	Sb	19 04 16.8	-1.2
LDUT	**Ludao** baz=32	0.63	27	P	Pn	19 04 11.6	-0.7
LDUT	baz=32			S	Sn	19 04 20.7	-0.9
SSPT	**Xinbi** baz=302	0.66	304	*i* P	Pb	19 04 12.0	0.0
SSPT	baz=302			*i* S	Sb	19 04 21.1	+0.3
MASBT	**Mashibuluo** baz=315	0.70	316	*e*P	Pb	19 04 12.1	-0.5
TWG	**Pinlang** baz=356	0.71	354	*e*P	Pn	19 04 15.2	+1.7
TWG	baz=356			*e*S	Sn	19 04 25.9	+2.2
TSMG	**Majia** baz=321	0.76	321	P	Pn	19 04 14.2	+0.1
TSMG	baz=321			S	Sn	19 04 24.3	-0.5
TWP	**Hsiaoliuchiu** baz=285	0.78	288	*i* P	Pn	19 04 14.9	+0.6
TWP	baz=285			*e*S	Sn	19 04 26.1	+0.9
SSD	**Sandimen** baz=322	0.80	323	*i* P	Pn	19 04 14.7	+0.1
SSD	baz=322			S	Sn	19 04 25.3	-0.5
TSPT	**Pingtung City** baz=311	0.84	313	*e*P	Pn	19 04 16.1	+1.0
TSPT	baz=311			*e*S	Sn	19 04 28.1	+1.5
EDH	**Donghe** baz=11	0.87	9	*e*P	Pb	19 04 14.9	-0.5
EDH	baz=11			*e*S	Sb	19 04 25.7	-1.1
SLGT	**Liugui** baz=332	1.00	332	*i* P	Pn	19 04 18.2	+0.7
SLGT	baz=332			S	Sn	19 04 31.6	+0.8
CHKT	**Chengkung** baz=14	1.01	11	*e*P	Pb	19 04 16.9	-0.8
CHKT	baz=14			*e*S	Sb	19 04 29.6	-1.0
ELDTW	**Lidau** baz=355	1.08	353	*e*P	Pn	19 04 20.7	+2.0
ELDTW	baz=355			*e*S	Sn	19 04 35.4	+2.5
SGST	**Jiashian** baz=332	1.11	331	*e*P	Pn	19 04 18.3	-0.6
SGST	baz=332			S	Sn	19 04 34.9	+1.5
STYT	**Tauyuan** baz=341	1.11	341	P	Pb	19 04 19.9	+0.3
STYT	baz=341			S	Sn	19 04 35.1	+1.5
STYH	**Taoyuan** baz=342	1.12	342	P	Pb	19 04 19.9	+0.3
STYH	baz=342			*e*S	Sn	19 04 35.8	+2.3
CHN1	**Nanshi** baz=332	1.22	332	*e*P	Pb	19 04 21.1	-0.3
CHN1	baz=332			S	Sn	19 04 37.4	+1.2
WTP	**Ta-pu** baz=337	1.24	336	*e*P	Pb	19 04 21.3	-0.5
WTP	baz=337			S	Sn	19 04 38.0	+1.3
TAI	**Tainan** baz=314	1.25	315	P	Pn	19 04 21.4	+0.5
SNST	**Tainan City** baz=331	1.27	331	*e*P	Pb	19 04 23.2	+1.0
SNST	baz=331			S	Sn	19 04 38.5	+1.3
TPUB	**Ta-pu** baz=338	1.28	338	P	Pb	19 04 22.4	-0.2
TPUB	baz=338			S	Sb	19 04 39.6	+1.0
SCLT	**Jiali** baz=320	1.39	320	*e*P	Pn	19 04 22.6	-0.1
SCLT	baz=320			*e*S	Sn	19 04 39.3	-1.0
YUS	**Yu-Shan** baz=353	1.39	352	P	Pb	19 04 24.6	+0.1
YUS	baz=353			*e*S	Sn	19 04 40.0	-1.0
EHY	**Hungye** baz=8.0	1.40	6	*e*P	Pb	19 04 27.2	+2.7
EHY	baz=8.0			*e*S	Sb	19 04 43.7	+1.7
ALS	**Alishan** baz=348	1.43	347	*e*P	Pb	19 04 26.7	+1.4
ALS	baz=348			*e*S	Sn	19 04 41.5	-0.4
CHN8	**Yiju** baz=325	1.51	325	*e*P	Pn	19 04 23.7	-0.7
CHN8	baz=325			*e*S	Sn	19 04 43.3	0.0
EGFH	**Guangfu** baz=10.0	1.57	9	*e*P	Pb	19 04 27.9	+0.5
ESL	**Shilin** baz=10.0	1.72	8	*e*P	Pb	19 04 30.7	+0.8
ESL	baz=10.0			*e*S	Sb	19 04 49.9	-1.2
TEYL	**Yanliau Villag** baz=14	1.80	13	*e*P	Pb	19 04 30.5	-0.8
TWD	**Chiawan** baz=13	2.00	11	*e*P	Pb	19 04 34.0	-0.8
NACB	**Ninganchiao** baz=12	2.10	11	*e*P	Pb	19 04 34.3	-2.0
ENA	**Nanau** baz=14	2.37	13	*e*P	Pb	19 04 39.1	-1.9
TWC	**Suao** baz=15	2.57	14	*e*P	Pn	19 04 41.1	+2.1
TWC	baz=15			*e*S	Sn	19 05 11.1	+1.6
JYNG	**Yonagunijimaku**	2.85	35	P	Pn	19 04 45.4	+2.5
JYNG				*e*S	Sn	19 05 17.0	+0.6
YOJ	**Yonaguni jima** baz=36	2.90	36	*e*P	Pn	19 04 45.5	+2.0
YOJ	baz=36			*e*S	Sn	19 05 19.1	+1.6
YOJ	**Yonaguni jima**	2.90	36	P	Pn	19 04 45.0	+1.5
YOJ				*e*S	Sn	19 05 18.3	+0.8
HATJ	**Hateruma jima**	3.12	51	P	Pn	19 04 47.8	+1.3
HATJ				*e*S	Sn	19 05 22.7	-0.2
IRIF	**Iriomote-Funau**	3.24	46	P	Pn	19 04 49.5	+1.3
IRIF				S	Sn	19 05 25.6	-0.4
JKRS	**Kuro-shima**	3.37	50	P	Pn	19 04 51.5	+1.5
JKRS				*e*S	Sn	19 05 30.5	+1.3
JIJ	**Ishigaki jima**	3.55	50	P	Pn	19 04 53.7	+1.3
JIJ				*e*S	Sn	19 05 32.7	-0.8
JISG	**Ishigakijimahi**	3.81	49	P	Pn	19 04 57.1	+1.1
JISG				*e*S	Sn	19 05 40.2	+0.3
JTJ	**Tarama**	4.12	52	P	Pn	19 05 01.8	+1.5
JTJ				S	Sn	19 05 47.7	+0.1
JIRB	**Irabujima**	4.57	53	P	Pn	19 05 08.0	+1.5
JIRB				S	Sn	19 05 58.5	-0.4
JMJ2	**Miyako jima3**	4.64	55	P	Pn	19 05 09.2	+1.7
JMJ2				*e*S	Sn	19 06 00.6	+0.1
JIKM	**Ikemajima**	4.68	52	P	Pn	19 05 09.7	+1.6
JIKM				S	Sn	19 06 02.0	+0.4
JOGS	**Gusukube**	4.71	55	S	Sn	19 06 03.0	+0.7
KSRS	**Korea Array** comp=Z,14nm,18.5s,baz=205,slow=39	16.37	19	LR	LR	19 14 28.7	
CMAR	**Chiang Mai Arr** 0.3nm,0.5s,baz=65,slow=9.8,SNR=5.7	21.15	264	P	P	19 08 43.5	+1.1
SONM	**Songino Array** 0.5nm,0.7s,baz=146,slow=9.2,SNR=3.5	28.28	339	P	P	19 09 49.3	-1.0
MKAR	**Makanchi Array** 0.5nm,0.7s,baz=111,slow=6.6,SNR=3.6	39.83	318	P	P	19 11 30.7	+0.5
ZALV	**Zalesovo Beam** 0.3nm,0.3s,baz=101,slow=4.6,SNR=2.3	41.98	328	P	P	19 11 47.3	-0.5
H11N1	**WAKE ISLAND Hy** baz=279,SNR=3.6	42.67	85	T	T	19 57 22.3	
H11N2	**WAKE ISLAND Hy** baz=279	42.67	84	T	T	19 57 32.6	
H11N3	**WAKE ISLAND Hy** baz=279	42.68	84	T	T	19 57 31.2	
H11S3	**WAKE ISLAND Hy** baz=284,slow=75,SNR=10	42.73	86	T	T	19 57 29.7	
H11S1	**WAKE ISLAND Hy** baz=284,slow=75,SNR=12	42.74	86	T	T	19 57 16.4	
H11S2	**WAKE ISLAND Hy** baz=284,slow=75,SNR=8.7	42.75	86	T	T	19 57 26.0	
KURBB	**Kurchatov Arra** 0.6nm,0.7s,baz=150,slow=6.3,SNR=5.8	43.69	321	P	P	19 12 01.5	-0.2
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=333,slow=11,SNR=5.8	43.73	162	P	P	19 12 00.5	-1.8
ASAR	**Alice Springs** 0.2nm,0.3s,baz=346,slow=7.5,SNR=12	47.16	164	P	P	19 12 28.8	-0.7

TUL ***11*** *19:32:54.6±1.3, 36°.66N±0°.03×98°.72W±0°.03, h3^{km}±7^{km}, ML2.6, mb_Lg2.5/11(NEIC), Error ellipse: s-maj=5.1km s-min=2.1km az=143.0*

NEIC 11 19:32:54.9±1.3**, 36°.66N**±0°.03×**98°.71W**±0°.03**, h10**^{km}±2^{km}**, Error ellipse: s-maj=5.4km s-min=2.2km az=144.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	**Winter Ranch,**	0.36	221	Pg	Pg	19 33 01.6	-0.5
U32A				Sg	Sg	19 33 07.5	+0.6
OK032	**Salt Plains WL**	0.43	69	Pg	Pg	19 33 02.5	-0.7
OK032				Sg	Sg	19 33 09.7	+0.8
CROK	**Carrier**	0.60	104	Pg	Pg	19 33 06.5	0.0
KAN14	**Manchester OK**	0.67	63	Pg	Pg	19 33 07.9	0.0
KAN09	**Caldwell North**	1.00	61	Pg	Pg	19 33 13.7	-0.3
BLOK	**Blackwell**	1.20	85	Pg	Pb	19 33 17.5	-0.2
OK029	**Liberty Lake**	1.33	130	Pn	Pn	19 33 19.4	0.0
QUOK	**Quay**	1.68	106		Pb	19 33 25.4	-0.5
OK030	**Cody Creek RV**	1.71	114	Pn	Pb	19 33 25.7	-0.7
OK030	comp=Z,17nm,0.7s			IAmb_Lg		19 33 49.5	
R32A	**Long Quarter,**	1.77	360	Pn	Pb	19 33 26.7	-0.6
R32A	comp=Z,12nm,0.7s			IAmb_Lg		19 33 50.9	
T35A	**Sooner Cattle**	1.78	81	Pn	Pn	19 33 26.0	+0.3
WMOK	**Wichita Mounta**	1.91	182	Pn	Pn	19 33 27.4	-0.2
X34A	**Smith Ranch, M**	2.17	161		Pn	19 33 31.7	+0.6
X34A				Pg	Pb	19 33 34.0	-0.2
AMTX	**Amarillo** comp=Z,20nm,0.8s	3.00	235	IAmb_Lg		19 34 32.8	
X37A	**Clayton** comp=Z,9.5nm,0.8s	3.41	126	IAmb_Lg		19 34 51.6	
U38A	**Gravette**	3.49	92	Pn	Pn	19 33 48.5	-0.6
HHAR	**Hobbs**	3.86	94	Pn	Pn	19 33 53.8	-0.5
T25A	**Trinidad**	4.60	278	Pn	Pn	19 34 00.9	-3.7
U40A	**Yellville** comp=Z,8.9nm,0.8s	4.72	92	IAmb_Lg		19 35 26.1	
N35A	**Tabor** comp=Z,16nm,0.9s	4.83	29	IAmb_Lg		19 35 38.8	
CCM	**Cathedral Cave** comp=Z,6.7nm,1.1s	6.11	75	IAmb_Lg		19 36 11.0	

IASPEI ***11*** *19:46:37.8±0.8, 46°.49N±0°.02×12°.83E±0°.01, h14^{km}±4^{km}, Error ellipse: s-maj=2.7km s-min=1.9km az=12.6, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

STR ***11*** *19:46:38.1±1.1, 47°N±7°×1°3E±°, h0^{km}, mb3.7/1, MLv3.5/11, preliminary*

VIE ***11*** *19:46:38.0±0.2, 46°.52N×12°.83E, h12^{km}±4^{km}, mb2.7/20, ml3.5/20, Error ellipse: s-maj=1.8km s-min=0.9km az=10.0 3 km W of Comeglians*

ROM ***11*** *19:46:38.3±0.1, 46°.482N±0°.005×12°.855E±0°.006, h10^{km}, ML3.2/56, Error ellipse: s-maj=0.6km s-min=0.5km az=18.0*

LDG ***11*** *19:46:38.8±0.2, 46°.54N×12°.85E, h11^{km}, Ml3.2/42, Error ellipse: s-maj=5.9km s-min=3.9km az=38.0*

PRU ***11*** *19:46:40.7±0.0, 46°.58N×12°.93E, h10^{km}*

BGR ***11*** *19:46:42.0±0.2, 46°.62N×12°.88E, h10^{km}, ML3.4/36, Error ellipse: s-maj=4.4km s-min=2.2km az=167.0*

ISC 11 19:46:37.7±0.7**, 46°.50N**±0°.01×**12°.83E**±0°.01**, h17**^{km}±3^{km}**,** **n274, σ2.^{s}44**/401**, 16C-15D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLUD	**Cludinico**	0.05	136	⇑*i*Pg	Pg	19 46 40.6	-0.2
CLUD				*i* Sg	Sg	19 46 42.2	-0.7
CLUD	**Cludinico**	0.05	136	⇑P	Pg	19 46 40.6	-0.2
CLUD				S	Sg	19 46 42.2	-0.7
CLUD	comp=E,20750μm,0.4s			AML	AML		
CLUD	comp=N,19550μm,0.8s			AML	AML		
FVI	**Forni Avoltri**	0.11	342	⇓P	Pg	19 46 41.5	0.0
FVI				S	Sg	19 46 43.6	-0.2
FVI	comp=E,39400μm,0.4s			AML	AML		
FVI	comp=N,39250μm,0.2s			AML	AML		
ZOU	**Zoufplan**	0.12	58	⇑*e*Pg	Pg	19 46 41.7	+0.1
ZOU				*e*Sg	Sg	19 46 44.0	-0.3
ZOU	**Zoufplan**	0.12	58	P	Pg	19 46 41.7	+0.1
ZOU				S	Sg	19 46 43.9	-0.3
ZOU	comp=N,24650μm,0.2s			AML	AML		
ZOU	comp=E,23500μm,0.3s			AML	AML		
CSMI	**Casera Mimoias**	0.12	278	⇑*e*Pg	Pg	19 46 41.8	+0.2
CSMI				*e*Sg	Sg	19 46 44.2	-0.1
FUSE	**Fusea**	0.14	124	⇑*e*Pg	Pg	19 46 41.8	0.0
FUSE				*e*Sg	Sg	19 46 44.4	0.0
PLRO	**Paularo**	0.23	76	⇑*e*Pg	Pg	19 46 43.4	+0.4
PLRO				*e*Sg	Sg	19 46 46.9	+0.3
STAL	**STALIGIAL**	0.25	199	⇓P	Pg	19 46 43.5	+0.2
STAL				S	Sg	19 46 47.5	+0.4
STAL	comp=E,30250μm,0.3s			AML	AML		
STAL	comp=E,30200μm,0.3s			AML	AML		
STAL	comp=N,43100μm,0.6s			AML	AML		
STAL	comp=N,37200μm,1.6s			AML	AML		
STAL	comp=E,27450μm,0.4s			AML	AML		
BOO	**Bordano**	0.26	133	⇓*e*Pg	Pg	19 46 43.7	+0.2
BOO				*e*Sg	Sg	19 46 47.6	+0.3
MPRI	**Monte Prat**	0.28	156	⇓*e*Pg	Pg	19 46 44.0	+0.2
MPRI				*e*Sg	Sg	19 46 48.4	+0.5
MPRI	**Monte Prat**	0.28	156	⇓P	Pg	19 46 44.0	+0.2
MPRI				S	Sg	19 46 48.4	+0.5
MPRI	comp=N,11885μm,0.7s			AML	AML		
MPRI	comp=E,7595μm,0.6s			AML	AML		
GEPF	**Gemona**	0.31	136	⇓P	Pg	19 46 44.4	+0.2
GEPF				S	Sg	19 46 49.2	+0.5
GEPF	comp=E,3450μm,0.3s			AML	AML		
GEPF	comp=N,5800μm,0.2s			AML	AML		
CIMO	**Cimolais**	0.33	236	*e*Pg	Pg	19 46 44.6	0.0
CIMO				*e*Sg	Sg	19 46 49.6	+0.3
CIMO	**Cimolais**	0.33	236	⇑P	Pg	19 46 44.7	+0.1
CIMO				S	Sg	19 46 49.5	+0.3
CIMO	comp=N,1945μm,0.3s			AML	AML		
CIMO	comp=E,1635μm,0.3s			AML	AML		
ABTA	**Abfaltersbach** SNR=508	0.33	319	*i* Pg	Pg	19 46 45.4	+0.7
ABTA	comp=E,509nm,0.1s			*i* Sg	Sg	19 46 50.1	+0.5
BUA	**Buia**	0.34	143	⇑*e*Pg	Pg	19 46 45.1	+0.2
BUA				*e*Sg	Sg	19 46 50.5	+0.8
PTCC	**Patocco-Chiusa**	0.37	104	⇑P	Pg	19 46 45.7	+0.2
PTCC				S	Sb	19 46 51.9	+0.4
PTCC	comp=N,1785μm,1.4s			AML	AML		
PTCC	comp=E,1990μm,0.3s			AML	AML		
MLNI	**Malnisio**	0.38	204	⇑*e*Pg	Pg	19 46 45.9	+0.4
MLNI				*e*Sg	Sb	19 46 51.8	+0.2
BAD	**Bernadia**	0.39	132	⇑*e*Pg	Pg	19 46 46.0	+0.3
BAD				*e*Sg	Sb	19 46 52.0	+0.2
VINO	**Villanova**	0.39	127	⇓*e*Pg	Pg	19 46 45.9	+0.1
VINO				*e*Sg	Sg	19 46 52.1	+0.8
VINO	**Villanova**	0.39	127	⇓P	Pg	19 46 45.9	+0.1
VINO				S	Sg	19 46 52.0	+0.8
VINO	comp=E,974μm,0.6s			AML	AML		
VINO	comp=N,1460μm,0.9s			AML	AML		
CSO	**Casso**	0.41	238	*e*Pg	Pg	19 46 46.4	+0.2
CSO				*e*Sg	Sg	19 46 52.5	+0.6
ACOM	**Acomizza, Ital**	0.48	83	*e*Pg	Pg	19 46 47.9	+0.5
ACOM				*e*Sg	Sb	19 46 55.2	+0.6
ACOM	**Acomizza, Ital**	0.48	83	⇑P	Pg	19 46 47.7	+0.3
ACOM				S	Sb	19 46 55.2	+0.6
ACOM	comp=E,4140μm,0.3s			AML	AML		
ACOM	comp=N,4205μm,0.4s			AML	AML		
LSR	**Lussari**	0.48	92	*e*Pg	Pg	19 46 47.8	+0.3
PRED	**Cave del Predi**	0.51	96	*e*Pg	Pg	19 46 48.2	+0.2
POLC	**Polcenigo**	0.52	206	P	Pb	19 46 48.9	+0.4
POLC				S	Sb	19 46 57.2	+1.5
POLC	comp=E,4975μm,0.6s			AML	AML		
POLC	comp=N,9605μm,0.5s			AML	AML		
COLI	**Coloredo**	0.53	133	*e*Pg	Pg	19 46 48.4	+0.3
COLI				*e*Sg	Sb	19 46 56.5	+0.7
ROBS	**Robic**	0.53	118	*i* Pg	Pg	19 46 48.1	-0.2
ROBS				*i* Sg	Sg	19 46 56.2	+0.7
ROBS	comp=Z,180nm,0.2s			IAML		19 46 59.3	
MYKA	**Terra Mystica** comp=Z,23nm,0.2s,SNR=48	0.58	76	*i* Pg	Pg	19 46 49.3	+0.2
MYKA	comp=Z,153nm,0.3s			*e*Sg	Sg	19 46 57.0	+0.1
AGOR	**Agordo**	0.58	249	*e*Pg	Pg	19 46 49.9	+0.6
AGOR	**Agordo**	0.58	249	P	Pg	19 46 49.7	+0.5
AGOR				S	Sb	19 46 58.5	+1.1
AGOR	comp=N,1925μm,0.4s			AML	AML		
AGOR	comp=E,978μm,1.2s			AML	AML		
KBA	**Koelnbreinsper** SNR=56	0.68	31	*e*Pg	Pb	19 46 51.9	+0.6
KBA	comp=E,274nm,0.3s			*i* Sg	Sg	19 47 00.7	+0.4
KBA	**Koelnbreinsper**	0.68	31	*e*Pg	Pb	19 46 51.9	+0.6
KBA				*e*Sg	Sg	19 47 00.7	+0.4
CADS	**Cadrg**	0.68	113	*i* Pg	Pg	19 46 50.9	-0.3
CADS				*i* Sg	Sb	19 47 01.6	+1.2
CADS	comp=Z,194nm,0.2s			IAML		19 47 03.6	
RISI	**Rein**	0.69	312	⇓P	Pb	19 46 51.9	+0.5
RISI				S	Sb	19 47 01.5	+0.8
RISI	comp=E,6260μm,1.3s			AML	AML		
RISI	comp=N,7850μm,0.4s			AML	AML		
VARN	**Col Varnada, M**	0.71	225	P	Pg	19 46 51.5	-0.2
VARN				S	Sb	19 47 02.7	+1.5
VARN	comp=N,1700μm,0.9s			AML	AML		
VARN	comp=E,2800μm,1.5s			AML	AML		
SABO	**M.te Sabotino**	0.74	134	P	Pg	19 46 52.3	0.0
SABO	comp=N,1630μm,0.9s			AML	AML		
SABO	comp=E,1765μm,1.3s			AML	AML		
BRES	**Bressanone**	0.78	286	P	Pg	19 46 53.4	+0.3
BRES	comp=N,1600μm,0.3s			AML	AML		
BRES	comp=N,1598μm,0.3s			AML	AML		
BRES	comp=E,1660μm,0.1s			AML	AML		
GORS	**Gorjuse**	0.83	102	*i* Pg	Pb	19 46 53.6	-0.1
GORS				*e*Sg	Sn	19 47 06.8	+0.2
GORS	comp=Z,98nm,0.2s			IAML		19 47 12.7	
CRND	**Cornuda**	0.84	219	P	Pg	19 46 54.8	+0.8
VOJS	**Vojsko**	0.87	122	*e*Pg	Pb	19 46 54.0	-0.4
VOJS				*i* Sg	Sn	19 47 08.3	+0.7
VOJS	comp=Z,127nm,0.2s			IAML		19 47 13.1	
CTI	**Castel Tesino**	0.93	242	⇑P	Pb	19 46 55.8	+0.3
CTI	comp=E,2610μm,1.2s			AML	AML		
CTI	comp=N,3345μm,0.4s			AML	AML		
CGRP	**Cima Grappa**	0.94	230	P	Pg	19 46 56.6	+0.5
CGRP	comp=N,1860μm,0.5s			AML	AML		
CGRP	comp=E,1385μm,0.4s			AML	AML		
KOSI	**Kohlern**	1.00	269	P	Pn	19 46 57.9	+0.7
KOSI	comp=N,924μm,0.3s			AML	AML		
KOSI	comp=E,886μm,0.8s			AML	AML		
TRI	**Trieste** comp=N,738μm,0.2s	1.02	140	AML	AML		
TRI	comp=E,1255μm,0.2s			AML	AML		
ABSI	**Aberstueckl**	1.06	283	⇓P	Pn	19 46 58.6	+0.5
ABSI				S	Sn	19 47 13.2	+0.5
ABSI	comp=E,1835μm,0.2s			AML	AML		
ABSI	comp=N,2515μm,0.4s			AML	AML		
ROSI	**Rosskopf**	1.07	294	⇓P	Pn	19 46 58.7	+0.6
ROSI				S	Sg	19 47 13.1	+0.7
ROSI	comp=E,752μm,0.5s			AML	AML		
ROSI	comp=N,1245μm,1.5s			AML	AML		
ROSI	comp=E,753μm,0.5s			AML	AML		
APPI	**Appiano**	1.11	270	⇑P	Pg	19 46 59.5	+0.4
APPI	comp=E,1155μm,0.2s			AML	AML		

APPI				AML	AML		
	comp=N,1470µm,0.4s						
WTTA	**Wattenberg**	**1.12**	**314**	*i* Pg	**Pg**	**19 46 59.8**	**+0.3**
	comp=N,42nm,0.1s,SNR=48						
WTTA				*i* Sg	**Sg**	**19 47 14.5**	**+0.3**
	comp=N,272nm,0.3s						
WTTA	**Wattenberg**	**1.12**	**314**	P	**Pg**	**19 46 59.8**	**+0.3**
WTTA				AML	AML		
	comp=E,1012µm,0.3s						
WTTA				AML	AML		
	comp=N,943µm,0.3s						
WTTA	**Wattenberg**	**1.12**	**314**	*e*Pg	**Pg**	**19 47 00.0**	**+0.6**
WTTA				*e*Sg	**Sn**	**19 47 14.9**	**+0.9**
VENL	**Venezia Lido**	**1.12**	**196**	P	**Pb**	**19 46 58.1**	**-0.6**
VENL				AML	AML		
	comp=N,5305µm,0.8s						
VENL				AML	AML		
	comp=E,2995µm,0.4s						
OBKA	**Obir**	**1.19**	**89**	*i* Pg	**Pn**	**19 47 00.2**	**+0.5**
	comp=E,39nm,0.3s,SNR=42						
OBKA				*i* Sg	**Sg**	**19 47 18.0**	**+1.8**
	comp=E,107nm,0.3s						
OBKA	**Obir**	**1.19**	**89**	*e*Pg	**Pn**	**19 47 00.3**	**+0.5**
OBKA				*e*Sg	**Sg**	**19 47 18.0**	**+1.8**
WATA	**Walderalm**	**1.20**	**315**	*e*Pg	**Pg**	**19 47 01.2**	**+0.3**
	comp=E,19nm,0.1s,SNR=35						
WATA				*i* Sg	**Sg**	**19 47 16.9**	**+0.2**
	comp=E,124nm,0.2s						
SANR	**Sandrigo**	**1.20**	**225**	P	**Pg**	**19 47 01.8**	**+0.9**
LJU	**Ljubljana**	**1.26**	**110**	*e*Pn	**Pb**	**19 47 01.9**	**+0.8**
LJU	**Ljubljana**	**1.26**	**110**	P	**Pb**	**19 47 01.9**	**+0.8**
LJU				AML	AML		
	comp=E,3185µm,0.7s						
LJU				AML	AML		
	comp=N,5230µm,0.6s						
DOSS	**Dosso del Somm**	**1.29**	**242**	P	**Pb**	**19 47 02.8**	**+1.0**
DOSS				AML	AML		
	comp=E,1645µm,0.4s						
DOSS				AML	AML		
	comp=E,1650µm,0.4s						
DOSS				AML	AML		
	comp=E,1680µm,0.3s						
DOSS				AML	AML		
	comp=N,1605µm,0.4s						
DOSS				AML	AML		
	comp=N,1705µm,0.5s						
SQTA	**Sankt Quirin**	**1.33**	**304**	*e*Pg	**Pg**	**19 47 03.4**	**+0.1**
	comp=N,40nm,0.1s,SNR=42						
SQTA				*i* Sg	**Sg**	**19 47 20.7**	**+0.1**
	comp=N,97nm,0.2s						
CEY	**Cerknica**	**1.34**	**124**	*e*Pn	**Pb**	**19 47 03.5**	**+1.0**
GAGG	**Gaggia**	**1.36**	**253**	P	**Pg**	**19 47 04.0**	**+0.1**
GAGG				AML	AML		
	comp=E,986µm,0.8s						
GAGG				AML	AML		
	comp=N,1120µm,0.9s						
GAGG				AML	AML		
	comp=E,1165µm,0.9s						
GAGG				AML	AML		
	comp=N,1118µm,0.9s						
GAGG				AML	AML		
	comp=N,1030µm,0.8s						
GAGG				AML	AML		
	comp=E,984µm,0.8s						
TEOL	**Teolo**	**1.39**	**216**	P	**Pb**	**19 47 04.2**	**+0.9**
TEOL				S	**Sg**	**19 47 22.9**	**+0.2**
TEOL				AML	AML		
	comp=N,3275µm,0.9s						
TEOL				AML	AML		
	comp=E,3635µm,0.6s						
ZOVE	**Zovencedo**	**1.40**	**222**	P	**Pb**	**19 47 04.0**	**+0.6**
ZOVE				S	**Sg**	**19 47 22.9**	**0.0**
MOTA	**Moosalm**	**1.46**	**306**	*e*Pg	**Pb**	**19 47 05.5**	**+1.0**
	comp=E,27nm,0.2s,SNR=23						
MOTA				*i* Sg	**Sg**	**19 47 26.2**	**+1.5**
	comp=E,100nm,0.2s						
ROVR	**Rover Verones**	**1.49**	**236**	P	**Pb**	**19 47 05.9**	**+0.9**
ROVR				AML	AML		
	comp=E,1195µm,0.5s						
ROVR				AML	AML		
	comp=N,2370µm,0.2s						
ROVR				AML	AML		
	comp=E,470µm,0.5s						
ROVR				AML	AML		
	comp=N,980µm,0.2s						
TREG	**Tregnago**	**1.52**	**231**	AML	AML		
	comp=N,1945µm,0.8s						
TREG				AML	AML		
	comp=E,2565µm,0.3s						
TREG				AML	AML		
	comp=E,2560µm,0.3s						
TREG				AML	AML		
	comp=N,1950µm,0.8s						
SOKA	**Soboth**	**1.53**	**82**	*i* Pg	**Pb**	**19 47 06.4**	**+0.7**
	comp=N,4.7nm,0.2s,SNR=32						
SOKA				*i* Sg	**Sg**	**19 47 29.5**	**+2.3**
	comp=N,74nm,0.7s						
FETA	**Feichten**	**1.54**	**291**	*i* Pg	**Pb**	**19 47 07.0**	**+1.1**
	comp=N,6.8nm,0.2s,SNR=21						
FETA				*i* Sg	**Sg**	**19 47 27.7**	**+0.4**
	comp=N,26nm,0.3s						
PART	**Garmisch-Parte**	**1.54**	**311**	*e*Pn	**Pg**	**19 47 07.3**	**-0.1**
PART				*e*Sg	**Sg**	**19 47 29.5**	**+1.9**
ZUGS	**Zugspitze, Sch**	**1.57**	**307**	*e*Pn	**Pg**	**19 47 07.8**	**-0.1**
MOSI	**Grossmontoni**	**1.58**	**275**	P	**Pg**	**19 47 08.0**	**-0.1**
MOSI				AML	AML		
	comp=E,2110µm,0.6s						
MOSI				AML	AML		
	comp=N,2180µm,0.4s						
RIY	**Rijeka**	**1.65**	**135**	*e*Pn	**Pb**	**19 47 08.3**	**+0.7**
RIY	**Rijeka**	**1.65**	**135**	*e*Pn	**Pb**	**19 47 08.2**	**+0.6**
RIY				Sn	**Sg**	**19 47 31.3**	**+0.6**
OPPE	**Oppeano**	**1.66**	**225**	P	**Pb**	**19 47 08.7**	**+0.9**
MABI	**Malga Bissina**	**1.66**	**255**	P	**Pb**	**19 47 09.2**	**+1.1**
MABI				AML	AML		
	comp=E,344µm,0.7s						
MABI				AML	AML		
	comp=N,446µm,1.0s						
MOA	**Molln**	**1.67**	**35**	*e*Pg	**Pg**	**19 47 09.8**	**0.0**
	comp=N,9.2nm,0.2s,SNR=18						
MOA				*i* Sg	**Sg**	**19 47 33.1**	**+1.4**
	comp=N,87nm,0.3s						
MOA	**Molln**	**1.67**	**35**	*e*Pn	**Pg**	**19 47 09.9**	**+0.1**
MOA				*e*Sg	**Sg**	**19 47 32.2**	**+0.6**
MAGA	**Magasa**	**1.69**	**246**	P	**Pb**	**19 47 09.2**	**+0.7**
MAGA				AML	AML		
	comp=N,2685µm,1.4s						
MAGA				AML	AML		
	comp=E,3015µm,0.8s						
BRMO	**Bormio**	**1.70**	**270**	P	**Pb**	**19 47 09.6**	**+1.0**
BRMO				AML	AML		
	comp=E,411µm,0.7s						
BRMO				AML	AML		
	comp=N,296µm,0.8s						
RETA	**Reutte**	**1.73**	**306**	*e*Pg	**Pg**	**19 47 11.5**	**+0.6**
	comp=N,36nm,0.3s,SNR=28						
RETA				*i* Sg	**Sg**	**19 47 36.3**	**+2.9**
	comp=N,192nm,0.4s						
SMRN	**Sveta Marina**	**1.73**	**147**	*e*Pn	**Pb**	**19 47 08.8**	**-0.2**
SALO	**Salr**	**1.83**	**242**	P	**Pb**	**19 47 11.0**	**+0.3**
SALO				AML	AML		
	comp=E,678µm,0.9s						
SALO				AML	AML		
	comp=N,655µm,0.6s						
SALO				AML	AML		
	comp=N,714µm,0.6s						
SALO				AML	AML		
	comp=E,632µm,1.4s						
CRES	**Cresnjev**	**1.95**	**109**	*e*Pn	**Pn**	**19 47 11.7**	**+1.7**
BOJS	**Bojanci**	**1.96**	**120**	P	**Pb**	**19 47 12.3**	**-0.6**
BOJS				AML	AML		
	comp=E,638µm,0.4s						
BOJS				AML	AML		
	comp=N,734µm,0.6s						
FUR	**Furstenfeldbru**	**1.98**	**328**	*e*Pn	**Pb**	**19 47 14.2**	**+0.9**
FUR				*e*Sg	**Sg**	**19 47 42.9**	**+1.5**
ARSA	**Arzberg**	**2.00**	**67**	*i* Pn	**Pb**	**19 47 13.5**	**-0.1**
	comp=N,4.3nm,0.2s,SNR=14						
ARSA				*e*Sg	**Sg**	**19 47 42.5**	**+0.6**
	comp=N,14nm,0.4s						
ARSA	**Arzberg**	**2.00**	**67**	*e*Pn	**Pb**	**19 47 13.5**	**-0.1**
OZLJ	**Ozalj**	**2.04**	**115**	*e*Pn	**Pb**	**19 47 13.5**	**-0.8**
DAVOX	**Davos/Dischmat**	**2.05**	**279**	AML	AML		
	comp=N,306µm,0.5s						
DAVOX				AML	AML		
	comp=E,296µm,1.2s						
DAVA	**Damuels**	**2.17**	**292**	*e*Pg	**Pb**	**19 47 17.9**	**+1.3**
	comp=E,24nm,0.2s,SNR=21						
DAVA				*e*Sg	**Sg**	**19 47 49.5**	**+1.9**
	comp=E,159nm,0.4s						
DAVA	**Damuels**	**2.17**	**292**	*e*Pn	**Pb**	**19 47 18.1**	**+1.4**
DAVA				*e*Sg	**Sg**	**19 47 49.5**	**+1.9**
UBR	**Ueberruh**	**2.21**	**304**	*e*Pn	**Pb**	**19 47 18.1**	**+0.9**
UBR				*e*Sg	**Sg**	**19 47 50.2**	**+1.6**
RABC	**Rab**	**2.22**	**141**	*e*Pn	**Pn**	**19 47 15.9**	**+2.2**
MDI	**Monti di Nese**	**2.28**	**253**	P	**Pn**	**19 47 17.2**	**+2.4**
MDI				AML	AML		
	comp=E,188µm,0.5s						
MDI				AML	AML		
	comp=N,193µm,0.8s						
KOGS	**Kog**	**2.37**	**90**	P	**Pn**	**19 47 16.9**	**+1.2**
KOGS				AML	AML		
	comp=E,758µm,0.6s						
KOGS				AML	AML		
	comp=N,735µm,0.7s						
TUE	**Stuetta**	**2.41**	**271**	P	**Pn**	**19 47 19.1**	**+2.5**
TUE				AML	AML		
	comp=N,176µm,0.9s						
TUE				AML	AML		
	comp=E,174µm,0.6s						
NVLJ	**Novalja**	**2.41**	**143**	*e*Pn	**Pn**	**19 47 18.2**	**+1.9**
GEC2	**GERESS Array S**	**2.42**	**14**	*e*Pn	**Pb**	**19 47 19.5**	**-1.5**
GEC2				*e*Sg	**Sg**	**19 47 56.1**	**+0.4**
PLONS	**Plons/SG**	**2.43**	**284**	AML	AML		
	comp=E,104µm,0.5s						
PLONS				AML	AML		
	comp=N,166µm,0.4s						
PLONS	**Plons/SG**	**2.43**	**284**	*e*Pn	**Pb**	**19 47 21.6**	**+0.5**
PLONS				*e*Sg	**Sg**	**19 47 56.5**	**+0.5**
CONA	**Conrad Observa**	**2.52**	**54**	*i* Pn	**Pb**	**19 47 21.7**	**-0.8**
	comp=N,2.2nm,0.2s,SNR=8.2						
CONA				*e*Sg	**Sg**	**19 48 00.1**	**+1.5**
	comp=N,32nm,0.5s						
CKRC	**Cesky Krumlov**	**2.53**	**23**	*e*PN	**Pb**	**19 47 21.1**	**-1.7**
CKRC				*e*PG	**Pg**	**19 47 25.7**	**-0.6**
CKRC				*e*SG	**Sg**	**19 47 57.3**	**-1.8**
CKRC	**Cesky Krumlov**	**2.53**	**23**	*e*Pn	**Pb**	**19 47 21.2**	**-1.5**
PLIT	**Plitvice**	**2.54**	**129**	*e*Pn	**Pn**	**19 47 20.4**	**+2.1**
LMD	**Lutirano**	**2.54**	**199**	P	**Pn**	**19 47 19.8**	**+1.5**
LMD				AML	AML		
	comp=E,113µm,0.3s						
LMD				AML	AML		
	comp=N,120µm,0.2s						
WET	**Wettzell**	**2.65**	**1**	*e*Pn	**Pn**	**19 47 22.2**	**+2.5**
WET				*e*Sg	**Sg**	**19 48 03.0**	**+0.1**
SEI	**Scarperia**	**2.65**	**204**	AML	AML		
	comp=E,146µm,0.5s						
SEI				AML	AML		
	comp=N,346µm,0.5s						
NORI	**Noerdlinger Ri**	**2.68**	**327**	*e*Pn	**Pn**	**19 47 22.9**	**+2.8**
NORI				*e*Sg	**Sg**	**19 48 03.6**	**-0.2**
KHC	**Kasperske Hory**	**2.69**	**11**	*e*PN	**Pn**	**19 47 23.1**	**+2.8**
KHC				*e*PG	**Pg**	**19 47 28.7**	**-0.5**
KHC				*e*SG	**Sg**	**19 48 03.3**	**-0.7**
	comp=N,78nm,0.4s						
KHC	**Kasperske Hory**	**2.69**	**11**	*e*Pn	**Pn**	**19 47 23.1**	**+2.8**
KHC				*e*Sg	**Sg**	**19 48 03.4**	**-0.6**
BEHE	**Becsehely**	**2.73**	**89**	*e*Pn	**Pg**	**19 47 28.9**	**-1.1**
MTCR	**Monte La Croce**	**2.79**	**208**	P	**Pn**	**19 47 23.7**	**+2.0**
GRAM	**Graiana**	**2.79**	**225**	P	**Pn**	**19 47 24.2**	**+2.5**
GRAM				AML	AML		
	comp=N,167µm,0.4s						
GRAM				AML	AML		
	comp=E,160µm,0.5s						
PE3	**Peglio**	**2.81**	**185**	AML	AML		
	comp=E,178µm,0.4s						
PE3				AML	AML		
	comp=N,209µm,1.2s						
MPPT	**Montemurlo**	**2.82**	**206**	AML	AML		
	comp=N,78µm,0.8s						
MPPT				AML	AML		
	comp=E,59µm,0.5s						
WALHA	**Wallhausen, DE**	**2.83**	**298**	*e*Pn	**Pb**	**19 47 26.5**	**-1.2**
WALHA				*e*Sg	**Sg**	**19 48 09.3**	**+0.8**
WILA	**Wila**	**2.84**	**290**	*e*Pn	**Pb**	**19 47 26.4**	**-1.5**
UDBI	**Udbina**	**2.85**	**133**	*e*Pn	**Pn**	**19 47 25.1**	**+2.5**
MPAG	**Monte Paganucc**	**2.87**	**181**	P	**Pn**	**19 47 24.4**	**+1.6**
MPAG				AML	AML		
	comp=E,81µm,1.6s						
MPAG				AML	AML		
	comp=N,102µm,0.6s						
MOSL	**Moslavina**	**2.87**	**106**	*e*Pn	**Pn**	**19 47 23.9**	**+1.2**
PARC	**Parchiule**	**2.88**	**189**	AML	AML		
	comp=N,75µm,0.7s						
PARC				AML	AML		
	comp=E,64µm,0.7s						
CRE	**Caprese Michel**	**2.94**	**193**	AML	AML		
	comp=E,93µm,0.5s						
CRE				AML	AML		
	comp=N,69µm,1.2s						
DUGI	**Dugi Otok**	**2.96**	**147**	*e*Pn	**Pn**	**19 47 25.6**	**+1.7**
PIEI	**Pieia**	**2.97**	**184**	P	**Pn**	**19 47 25.7**	**+1.6**
PIEI				AML	AML		
	comp=N,64µm,0.8s						
PIEI				AML	AML		
	comp=E,95µm,0.3s						
GUT	**Gutenstein**	**2.98**	**303**	S	**Sb**	**19 48 04.9**	**-1.6**
GUT	**Gutenstein**	**2.98**	**303**	P	**Pb**	**19 47 28.1**	**-2.3**
ARVD	**Arcevia**	**3.00**	**178**	P	**Pn**	**19 47 26.1**	**+1.6**
ARVD				AML	AML		
	comp=N,43µm,0.5s						
ARVD				AML	AML		
	comp=E,55µm,0.6s						
ZUR	**Degenried**	**3.04**	**288**	P	**Pb**	**19 47 29.1**	**-2.2**
BNALP	**Bannalp**	**3.05**	**279**	AML	AML		
	comp=E,72µm,0.8s						
BNALP				AML	AML		
	comp=N,79µm,0.7s						
EMING	**Emmingen-Lipti**	**3.06**	**299**	*e*Pn	**Pb**	**19 47 29.3**	**-2.4**
EMING				*e*Sg	**Sg**	**19 48 15.6**	**-0.3**
OSSC	**Osservatorio P**	**3.18**	**201**	AML	AML		
	comp=E,60µm,0.6s						
OSSC				AML	AML		
	comp=N,47µm,0.9s						
MRAK	**Mrakovica**	**3.21**	**116**	*e*Pn	**Pn**	**19 47 29.4**	**+1.9**
PII	**Pisa**	**3.22**	**211**	⇓P	**Pn**	**19 47 30.0**	**+2.6**
PII				AML	AML		
	comp=N,119µm,0.8s						
PII				AML	AML		
	comp=E,93µm,0.2s						
SLE	**Schleitheim**	**3.22**	**295**	S	**Sn**	**19 48 09.8**	**+4.2**
SLE	**Schleitheim**	**3.22**	**295**	P	**Pn**	**19 47 31.2**	**+3.6**
SLE	**Schleitheim**	**3.22**	**295**	*e*Pn	**Pn**	**19 47 31.1**	**+3.6**
SLE				*e*Sg	**Sg**	**19 48 22.1**	**+0.9**
CAFI	**Castiglion Fio**	**3.22**	**191**	P	**Pn**	**19 47 29.0**	**+1.3**
CAFI				AML	AML		
	comp=E,47µm,0.8s						
CAFI				AML	AML		
	comp=N,41µm,0.9s						
TREC	**Trest**	**3.32**	**32**	*e*Sg	**Sg**	**19 48 23.5**	**-0.9**
MORI	**Morici**	**3.33**	**141**	*e*Pn	**Pn**	**19 47 32.0**	**+3.0**
STU	**Stuttgart**	**3.35**	**314**	*e*Pn	**Pn**	**19 47 32.8**	**+3.5**
STU				*e*Sg	**Sg**	**19 48 25.8**	**+0.6**
METMA	**Mettma DE**	**3.35**	**293**	*e*Pn	**Pn**	**19 47 32.8**	**+3.4**
METMA				*e*Sn	**Sn**	**19 48 11.9**	**+3.0**
METMA				*e*Sg	**Sg**	**19 48 25.8**	**+0.5**
ZST	**Bratislava**	**3.37**	**58**	*e*SG	**Sg**	**19 48 26.2**	**+0.4**
GRF	**Grafenberg Arr**	**3.38**	**342**	*e*Pn	**Pn**	**19 47 32.4**	**+2.7**
GRF				*e*Pg	**Pg**	**19 47 43.1**	**+0.7**
GRF				*e*Sg	**Sg**	**19 48 26.5**	**+0.4**
SULZ	**Cheisacher**	**3.39**	**289**	S	**Sn**	**19 48 14.5**	**+4.8**
SULZ	**Cheisacher**	**3.39**	**289**	P	**Pn**	**19 47 33.5**	**+3.6**
SULZ	**Cheisacher**	**3.39**	**289**	*e*Pn	**Pn**	**19 47 33.6**	**+3.7**
SULZ				*e*Sg	**Sg**	**19 48 26.9**	**+0.4**
CSP1	**Cessapalombo**	**3.41**	**175**	P	**Pn**	**19 47 31.9**	**+1.6**
BERGE	**Lenzkirch (DE)**	**3.46**	**295**	*e*Pn	**Pn**	**19 47 34.3**	**+3.4**
BERGE				*e*Sn	**Sn**	**19 48 12.9**	**+1.4**
BERGE				*e*Sg	**Sg**	**19 48 29.2**	**+0.4**
FDMO	**Fiordimonte**	**3.46**	**177**	P	**Pn**	**19 47 32.6**	**+1.7**
FDMO				AML	AML		
	comp=N,43µm,0.8s						
FDMO				AML	AML		
	comp=E,53µm,0.3s						
EMBD	**Embd, Matterta**	**3.47**	**267**	P	**Pn**	**19 47 34.8**	**+3.7**
ZIRJ	**Zirje**	**3.47**	**144**	*e*Pn	**Pn**	**19 47 33.0**	**+2.1**
KRUC	**Moravsky**	**3.52**	**42**	*e*PN	**Pn**	**19 47 34.1**	**+2.5**
KRUC				*e*PG	**Pg**	**19 47 44.4**	**-0.7**
KRUC				*e*SG	**Sg**	**19 48 26.7**	**-4.0**
KRUC	**Moravsky**	**3.52**	**42**	*e*Pn	**Pn**	**19 47 34.2**	**+2.5**
KRUC				*e*Pg	**Pg**	**19 47 45.4**	**+0.3**
BLY	**Banja Luka**	**3.52**	**118**	*e*Pn	**Pn**	**19 47 33.7**	**+2.0**
KIJV	**Kijevo**	**3.55**	**133**	*e*Pn	**Pn**	**19 47 34.7**	**+2.6**
MODS	**Modra-Piesok**	**3.56**	**56**	*e*PN	**Pn**	**19 47 33.6**	**+1.4**
MODS				*e*SG	**Sg**	**19 48 34.1**	**+2.2**
BFO	**Black Forest**	**3.56**	**303**	*e*Pn	**Pn**	**19 47 35.7**	**+3.5**
FELD	**Feldberg im Sc**	**3.57**	**295**	P	**Pn**	**19 47 35.8**	**+3.4**
FELD	**Feldberg im Sc**	**3.57**	**295**	S	**Sn**	**19 48 16.5**	**+2.2**
PCP	**Piancastagn**	**3.59**	**239**	AML	AML		
	comp=E,54µm,0.6s						
PCP				AML	AML		
	comp=N,60µm,0.6s						
BALST	**Balsthal**	**3.62**	**285**	P	**Pn**	**19 47 36.6**	**+3.5**
BALST	**Balsthal**	**3.62**	**285**	*e*Pn	**Pn**	**19 47 36.6**	**+3.5**
BALST				*e*Sn	**Sn**	**19 48 17.9**	**+2.5**
MGRS	**Mrkonjic Grad**	**3.65**	**123**	*e*Pn	**Pb**	**19 47 38.2**	**-3.5**
KIZ	**Kirchzarten**	**3.65**	**295**	P	**Pn**	**19 47 36.8**	**+3.3**
PRU	**Pruhonice**	**3.68**	**18**	*e*PN	**Pn**	**19 47 35.9**	**+2.1**
PRU				*e*PG	**Pg**	**19 47 46.3**	**-1.9**
PRU				*e*SG	**Sg**	**19 48 33.9**	**-1.9**
	comp=N,62nm,0.6s						
PRU	**Pruhonice**	**3.68**	**18**	*e*Pn	**Pn**	**19 47 36.2**	**+2.3**
PRU				*e*Pg	**Pg**	**19 47 46.8**	**-1.4**
PRU				*e*Sg	**Sg**	**19 48 33.7**	**-2.1**
SMOL	**Smolenice**	**3.71**	**55**	*e*PN	**Pn**	**19 47 36.9**	**+2.6**
SMOL				*e*SG	**Sg**	**19 48 41.4**	**+4.4**
OPP	**Oppenau**	**3.73**	**304**	P	**Pn**	**19 47 38.1**	**+3.5**
PRA	**Prague**	**3.73**	**16**	*e*SG	**Sg**	**19 48 36.5**	**-1.1**
	comp=N,69nm,0.7s						
NKC	**Novy Kostel**	**3.75**	**356**	*e*SG	**Sg**	**19 48 37.5**	**-0.6**
	comp=N,37nm,0.4s						
NKC	**Novy Kostel**	**3.75**	**356**	*e*Pn	**Pn**	**19 47 37.8**	**+3.0**
NKC				*e*Sg	**Sg**	**19 48 38.5**	**+0.4**
VRAC	**Vranov**	**3.79**	**41**	*e*PN	**Pn**	**19 47 38.0**	**+2.7**
VRAC				*e*PG	**Pg**	**19 47 49.1**	**-1.1**
VRAC				*e*SG	**Sg**	**19 48 38.1**	**-1.1**
VRAC	**Vranov**	**3.79**	**41**	*e*Sg	**Sg**	**19 48 35.8**	**-3.5**
QLNO	**Quiliano**	**3.83**	**237**	AML	AML		
	comp=N,40µm,0.5s						
QLNO				AML	AML		
	comp=E,39µm,1.1s						
TERO	**Teramo**	**3.91**	**172**	P	**Pn**	**19 47 38.3**	**+1.2**
TERO				AML	AML		
	comp=E,19µm,0.4s						
TERO				AML	AML		
	comp=N,18µm,0.4s						
BOURR	**Bourrignon**	**3.94**	**285**	P	**Pn**	**19 47 40.9**	**+3.5**
MORH	**Mrgy, Hungar**	**4.04**	**92**	*e*Pn	**Pn**	**19 47 37.3**	**-1.4**
MILB	**Miltenberg**	**4.09**	**326**	*e*Pn	**Pn**	**19 47 42.3**	**+2.8**
MILB				*e*Sg	**Sg**	**19 48 47.8**	**-1.1**
MOF	**Molkenrain**	**4.11**	**291**	P	**Pn**	**19 47 43.2**	**+3.3**
RORO	**Rocca Rossa**	**4.12**	**236**	⇓P	**Pn**	**19 47 42.3**	**+2.4**
HVAR	**Hvar**	**4.20**	**141**	*e*Pn	**Pn**	**19 47 42.5**	**+1.5**
PVCC	**Panska Ves**	**4.20**	**15**	*e*Sg	**Sg**	**19 48 50.6**	**-1.8**
ECH	**Echery**	**4.22**	**296**	P	**Pn**	**19 47 44.4**	**+3.1**
ECH	**Echery**	**4.22**	**296**	*e*Pn	**Pn**	**19 47 44.6**	**+3.3**
ECH				*e*Sn	**Sn**	**19 48 33.9**	**+3.7**
CDF	**Champ du Feu**	**4.23**	**299**	*e*P	**Pn**	**19 47 44.4**	**+2.9**
CDF	**Champ du Feu**	**4.23**	**299**	*e*Pg	**Pg**	**19 47 56.8**	**-1.8**
CDF				*e*Sn	**Sn**	**19 48 27.3**	**-3.2**
	comp=N,14nm,0.3s						
CDF				*e*Sg	**Sg**	**19 48 51.0**	**-2.4**
	comp=N,20nm,0.5s						
MOX	**Moxa**	**4.23**	**349**	*e*Pn	**Pn**	**19 47 43.6**	**+2.2**
MOX				*e*Sg	**Sg**	**19 48 53.1**	**-0.3**
FAGN	**Fagnano**	**4.26**	**172**	⇓P	**Pn**	**19 47 40.3**	**-1.7**
RICI	**Ricice**	**4.28**	**133**	*e*Pn	**Pn**	**19 47 44.4**	**+2.3**
HINF	**Hinteralfeld**	**4.29**	**290**	*e*P	**Pn**	**19 47 45.1**	**+2.9**
HINF				*e*Sn	**Sn**	**19 48 28.5**	**-3.4**
	comp=N,39nm,0.3s						
CHMF	**Charmoille**	**4.30**	**282**	P	**Pn**	**19 47 45.8**	**+3.3**
KOLL	**Kolacno**	**4.31**	**59**	*e*PN	**Pn**	**19 47 45.2**	**+2.7**
LPG	**La Plagne**	**4.35**	**259**	*e*P	**Pn**	**19 47 46.2**	**+2.9**
LPG				*e*Sn	**Sn**	**19 48 30.2**	**-3.6**
	comp=N,9.7nm,0.6s						
LPL	**La Plagne**	**4.36**	**259**	*e*P	**Pn**	**19 47 47.4**	**+4.0**
LPL				*e*Sn	**Sn**	**19 48 30.4**	**-3.5**
	comp=N,5.9nm,0.4s						
RSL	**Roselend**	**4.39**	**262**	P	**Pn**	**19 47 48.1**	**+4.3**
BRANT	**Les Verrieres**	**4.39**	**278**	P	**Pn**	**19 47 47.4**	**+3.6**
BRANT	**Les Verrieres**	**4.39**	**278**	S	**Sn**	**19 48 36.1**	**+1.5**
HROE	**Hohe Rhon--Fla**	**4.42**	**337**	*e*Pn	**Pn**	**19 47 46.7**	**+2.7**
HROE				*e*Sg	**Sg**	**19 49 00.6**	**+1.2**
BRG	**Berggiesshubel**	**4.44**	**9**	*e*Pg	**Pg**	**19 48 01.4**	**-1.4**
BRG				*e*Sg	**Sg**	**19 48 59.1**	**-1.2**
BRG	**Berggiesshubel**	**4.44**	**9**	Pn	**Pn**	**19 47 47.0**	**+2.6**
BRG				Amp		19 47 48.6	
	comp=Z,2.5nm,0.4s						
BRG	**Berggiesshubel**	**4.44**	**9**	Pg	**Pg**	**19 48 01.8**	**-1.0**
BRG				Sn	**Sn**	**19 48 39.0**	**+3.4**
BRG				Sg	**Sg**	**19 49 00.3**	**0.0**
BRG				Amp		19 49 10.3	
	comp=Z,38nm,0.6s						
DPC	**Dobruska-Polom**	**4.50**	**30**	*e*SG	**Sg**	**19 48 59.1**	**-3.2**
	comp=Z,23nm,0.5s						
DPC	**Dobruska-Polom**	**4.50**	**30**	*e*Sg	**Sg**	**19 48 59.0**	**-3.2**
VYHS	**Vyhne**	**4.54**	**62**	*e*PN	**Pn**	**19 47 47.2**	**+1.6**
UPC	**Upice**	**4.54**	**27**	*e*SG	**Sg**	**19 49 01.3**	**-2.0**
	comp=Z,32nm,0.7s						
MORC	**Moravsky Berou**	**4.55**	**42**	*e*PN	**Pn**	**19 47 49.7**	**+3.8**
MORC				*e*SG	**Sg**	**19 49 00.3**	**-3.6**
MBDF	**Montbardon**	**4.60**	**250**	*e*P	**Pn**	**19 47 48.0**	**+1.3**
MBDF				*e*Sn	**Sn**	**19 48 35.9**	**-3.9**
	comp=Z,6.0nm,0.4s						
CHVC	**Chvalec**	**4.62**	**26**	*e*PN	**Pn**	**19 47 48.7**	**+1.9**
SBF	**Sospel**	**4.63**	**237**	*e*P	**Pn**	**19 47 49.6**	**+2.6**
SBF				*e*Sn	**Sn**	**19 48 36.4**	**-4.0**
	comp=Z,16nm,0.3s						
CABF	**La Chapelle**	**4.65**	**274**	*e*P	**Pn**	**19 47 50.3**	**+3.0**
CABF				*e*Sn	**Sn**	**19 48 37.2**	**-3.8**
	comp=Z,5.8nm,0.4s						
HAU	**Haudompre**	**4.66**	**291**	*e*P	**Pn**	**19 47 50.5**	**+3.1**
HAU				*e*Sn	**Sn**	**19 48 37.6**	**-3.6**
	comp=Z,70nm,0.4s						
RMP	**Rome, Mte Porz**	**4.68**	**181**	⇑P	**Pb**	**19 47 55.4**	**-4.0**
SURF	**Saint Ours**	**4.69**	**247**	P	**Pn**	**19 47 48.4**	**+0.5**
UBBA	**Unterbreizbach**	**4.71**	**338**	*e*Pn	**Pn**	**19 47 51.8**	**+3.8**
UBBA				*e*Sg	**Sg**	**19 49 08.8**	**-0.2**
TNS	**Taunus Mts**	**4.74**	**324**	*e*Pn	**Pn**	**19 47 52.2**	**+3.8**
PGF	**Pioggiola**	**4.80**	**216**	*e*P	**Pn**	**19 47 48.5**	**-0.9**
PGF				*e*Sn	**Sn**	**19 48 40.4**	**-4.3**
	comp=Z,4.4nm,0.3s						
CLL	**Collm**	**4.82**	**1**	*e*Pn	**Pn**	**19 47 52.0**	**+2.6**
CLL				*e*Pg	**Pg**	**19 48 09.0**	**-0.9**
CLL				*e*		19 48 45.0	
CLL				*i* Sg	**Sg**	**19 49 11.6**	**-0.7**
	comp=Z,21nm,0.5s						
CLL	**Collm**	**4.82**	**1**	*e*Pn	**Pn**	**19 47 52.0**	**+2.6**
ABH	**Alteburg**	**4.89**	**316**	*e*Pn	**Pn**	**19 47 54.5**	**+4.0**
LIK	**San Giovanni I**	**5.02**	**174**	P	Pn	19 47 58.2	+6.0
STON	**Ston**	**5.02**	**134**	*e*Pn	**Pn**	**19 47 52.7**	**+0.5**
STON	**Ston**	**5.02**	**134**	*e*Pn	**Pn**	**19 47 54.2**	**+2.0**
STON	**Ston**	**5.02**	**134**	P	**Pn**	**19 47 53.7**	**+1.5**
OGSM	**Saint Maurice**	**5.04**	**262**	P	**Pn**	**19 47 56.5**	**+3.9**
FRGS	**Fruska Gora**	**5.06**	**103**	*e*Pn	Pn	19 47 48.5	-4.3
ORIF	**Oris-en-Rattie**	**5.12**	**255**	*e*P	**Pn**	**19 47 57.4**	**+3.7**
ORIF	**Oris-en-Rattie**	**5.12**	**255**	*e*Pn	**Pn**	**19 47 58.0**	**+4.3**
ORIF				*e*Sn	**Sn**	**19 48 48.2**	**-4.2**
	comp=Z,6.7nm,0.5s						
RIVT	**Riveris**	**5.18**	**311**	*e*Pn	**Pn**	**19 47 58.5**	**+4.1**
PAGF	**Fort de Pagny**	**5.23**	**296**	*e*P	**Pn**	**19 47 58.9**	**+3.7**
PAGF	**Fort de Pagny**	**5.23**	**296**	*e*Pg	**Pg**	**19 48 14.9**	**-3.0**
PAGF				*e*Sn	**Sn**	**19 48 57.0**	**+1.8**
	comp=Z,8.9nm,0.3s						
FRF	**La Foret Royal**	**5.27**	**238**	*e*P	**Pn**	**19 47 57.9**	**+2.2**
FRF				*e*Sn	**Sn**	**19 48 51.7**	**-4.4**
	comp=Z,4.2nm,0.3s						
CHRS	**Christianenhau**	**5.29**	**346**	*e*Sg	**Sg**	**19 49 25.5**	**-1.8**
BBLS	**Lazići**	**5.34**	**117**	*e*Pn	**Pn**	**19 47 59.4**	**+2.7**
DBRK	**Dubrovnik**	**5.39**	**133**	*e*Pn	**Pn**	**19 47 58.6**	**+1.2**
GTTG	**Gottingen**	**5.39**	**341**	*e*Sg	**Sg**	**19 49 30.5**	**-0.2**
BRY	**Bratogost**	**5.43**	**129**	*e*Pn	**Pn**	**19 48 01.1**	**+3.1**
RUDO	**Rudo**	**5.45**	**119**	*e*Pn	**Pn**	**19 48 00.2**	**+1.9**
WLF	**Walferdange**	**5.48**	**308**	P	Pn	19 48 03.6	+5.0
WLF	**Walferdange**	**5.48**	**308**	*e*Pn	Pn	19 48 03.8	+5.1
WLF				*e*Sg	**Sg**	**19 49 33.7**	**+0.1**
LMR	**La Mourre**	**5.49**	**237**	*e*P	**Pn**	**19 48 00.7**	**+2.0**
LMR				*e*Sn	**Sn**	**19 48 56.8**	**-4.6**
	comp=Z,3.2nm,0.4s						
KASTN	**Kahler Asten**	**5.54**	**330**	*e*Pn	**Pn**	**19 48 03.1**	**+3.7**
KASTN				*e*Sn	**Sn**	**19 49 05.1**	**+2.4**
SFTF	**Sexfontaines**	**5.56**	**291**	*e*P	**Pn**	**19 48 03.1**	**+3.4**
	baz=111						

SFTF				*e*Sn	Sn	19 48 59.0	-4.3
	comp=Z,7.0nm,0.4s						
CLZ	Clausthal	5.59	344	*e*Sg	Sg	19 49 35.8	-1.1
DIVS	Divibare	5.59	113	*e*Pn	Pn	19 48 01.8	+1.6
SAVF	Savonnieres en	5.63	295	*e*P	Pn	19 48 04.3	+3.7
SAVF				*e*Sn	Sn	19 49 00.5	-4.4
	comp=Z,6.3nm,0.4s						
MEZF	Maizieres J'vi	5.64	294	*e*P	Pn	19 48 04.2	+3.4
	baz=114						
MEZF				*e*Sn	Sn	19 49 00.8	-4.3
	comp=Z,10nm,0.4s						
SMRF	Simiane la Rot	5.71	246	*e*P	Pn	19 48 05.3	+3.5
SMRF				*e*Sn	Sn	19 49 02.3	-4.6
	comp=Z,1.8nm,0.4s						
VIVF	Saint-Julien-l	5.95	257	*e*P	Pn	19 48 07.2	+2.2
VIVF				*e*Sn	Sn	19 49 07.9	-4.8
	comp=Z,3.3nm,0.4s						
LOR	Lormes	6.20	280	*e*P	Pn	19 48 11.2	+2.7
	baz=100						
LOR				*e*Sn	Sn	19 49 14.1	-4.8
	comp=Z,5.9nm,0.3s						
SMF	Signal de Mont	6.20	275	*e*P	Pn	19 48 11.3	+2.8
SMF				*e*Sn	Sn	19 49 14.0	-4.9
	comp=Z,6.0nm,0.3s						
DRME	Dracevica, Mon	6.27	131	*e*Pn	Pn	19 48 11.5	+2.1
SSF	Saint Saulge	6.43	278	*e*P	Pn	19 48 14.2	+2.6
SSF				*e*Sn	Sn	19 49 19.5	-5.1
	comp=Z,1.9nm,0.3s						
GIVF	Givet	6.44	307	*e*P	Pn	19 48 16.5	+4.7
GIVF				*e*Sn	Sn	19 49 27.7	+2.8
	comp=Z,5.6nm,0.3s						
AVF	Avril sur Loir	6.53	276	*e*P	Pn	19 48 15.7	+2.7
AVF				*e*Sn	Sn	19 49 22.1	-5.0
	comp=Z,1.0nm,0.2s						
BAIF	Baives	6.77	305	*e*P	Pn	19 48 20.6	+4.4
BAIF				*e*Sn	Sn	19 49 27.8	-5.1
	comp=Z,4.1nm,0.5s						
LASF	Ste Croix	6.78	252	*e*P	Pn	19 48 18.1	+1.7
LASF				*e*Sn	Sn	19 49 27.5	-5.6
	comp=Z,1.5nm,0.4s						
BGF	Bois d'Agland	6.89	274	*e*P	Pn	19 48 20.8	+2.9
BGF				*e*Sn	Sn	19 49 30.5	-5.4
	comp=Z,15nm,0.3s						
HYF	Humbligny	7.03	280	*e*P	Pn	19 48 23.2	+3.4
HYF				*e*Sn	Sn	19 49 34.1	-5.2
TCF	Toulx Ste Croi	7.35	272	*e*P	Pn	19 48 26.5	+2.3
TCF				*e*Sn	Sn	19 49 41.5	-5.7
	comp=Z,5.3nm,0.4s						
CAF	Calviac	7.70	262	*e*P	Pn	19 48 31.7	+2.6
CAF				*e*Sn	Sn	19 49 49.8	-6.0
	comp=Z,0.6nm,0.3s						
IST3	Stromboli F	7.89	166	⇓P	Pn	19 48 31.8	+0.1
ISTR	Stromboli Gino	7.90	166	⇑P	Pn	19 48 33.0	+1.2
RJF	Les Rejaudoux	7.98	266	*e*P	Pn	19 48 36.1	+3.2
RJF				*e*Sn	Sn	19 49 56.3	-6.5
	comp=Z,0.7nm,0.3s						
MTLF	Montolieu	8.16	251	*e*P	Pn	19 48 38.3	+2.9
MTLF				*e*Sn	Sn	19 50 00.9	-6.4
	comp=Z,1.0nm,0.4s						
MFF	Saint Martin d	8.95	275	*e*P	Pn	19 48 49.4	+3.3
MFF				*e*Sn	Sn	19 50 19.5	-6.9
	comp=Z,2.9nm,0.5s						
LDF	La Druitiere	9.01	288	*e*P	Pn	19 48 51.0	+4.0
LDF				*e*Sn	Sn	19 50 21.1	-6.9
	comp=Z,0.7nm,0.4s						
FLN	La Foliniere	9.27	289	*e*P	Pn	19 48 54.5	+3.9
FLN				*e*Sn	Sn	19 50 27.1	-7.3
	comp=Z,0.3nm,0.2s						
GRR	Gorron	9.47	287	*e*P	Pn	19 48 56.6	+3.3
GRR				*e*Sn	Sn	19 50 32.3	-6.9
	comp=Z,1.2nm,0.3s						
SGMF	Saint Gilles	10.59	285	*e*P	Pn	19 49 12.5	+3.9
QUIF	Quistinic	10.98	283	*e*P	Pn	19 49 17.6	+3.7
QUIF				*e*Sn	Sn	19 51 08.4	-7.8
	comp=Z,1.4nm,0.5s						
ROSF	Rostrenen	11.07	285	*e*P	Pn	19 49 19.2	+4.0
ROSF				*e*Sn	Sn	19 51 10.1	-8.4
	comp=Z,1.0nm,0.2s						

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*WEL **11** 20:03:00, 44°.07S×169°.54E, h6^{km}, ML4.5, Mw4.1, Moment Tensor Solution. s6 Moment tensor: Scale 10^{15} Nm; M$_{rr}$0.03; M$_{\theta\theta}$0.67; M$_{\phi\phi}$-0.70; M$_{r\theta}$-0.29; M$_{\theta\phi}$-1.61; M$_{\phi r}$-0.06; Fault plane solution: M$_0$1.77000×10^{15} NP1: ϕ_s258.00000°, δ90.00000°, λ170.00000°. Principal axes: T 175.7600, Plg7.0000°, Azm213.0000°; N -178.9200, Plg80.0000°, Azm78.0000°; P 3.1600, Plg7.0000°, Azm303.0000°;*

*WEL **11** 20:03:08.3±0.4, 44°S±3°×17°0E±°, h5^{km}, M4.5/10, ML4.7/10, MLv4.5/10 Error ellipse: s-maj=0.0km s-min=0.0km az=159.6*

*NOU **11** 20:03:08.3, 44°.12S×169°.45E, h0^{km}, MLv4.7/9, South Island, New Zealand*

*IDC **11** 20:03:09.4±1.3, 43°.78S×169°.39E, h0^{km}, mb3.8/3, mb1 4.1/4, mb1mx3.8/18, mbtmp3.8/4, ML3.6/1, MS3.4/4, Ms1 3.3/4, ms1mx3.1/17, Error ellipse: s-maj=53.0km s-min=33.6km az=3.0*

*NEIC **11** 20:03:10.1±1.8, 44°.12S±0°.03×169°.55E±0°.04, h20^{km}±4^{km}, mb4.4/5, Error ellipse: s-maj=4.4km s-min=3.5km az=224.0*

ISC 11 20:03:08.1±1.1**, 44°.10S**±0°.03×**169°.57E**±0°.03**, h6**^{km}±8^{km}**, n102,** σ1^{s}.**27**/104**, mb4.1**/5**, MS3.2**/4**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBZ	Lake Benmore	0.53	123	P	Pb	20 03 19.8	+0.1
LBZ				S	Sb	20 03 27.1	-0.5
LBZ	Lake Benmore	0.53	123	Pg	Pb	20 03 19.7	0.0
LBZ				Sg	Sb	20 03 27.9	+0.4
JCZ	Jackson Bay	0.57	273	P	Pg	20 03 19.6	+0.6
JCZ				S	Sg	20 03 26.6	+0.2
FOZ	Fox Glacier	0.60	17	P	Pg	20 03 19.4	-0.1
FOZ	Fox Glacier	0.60	17	Pg	Pg	20 03 19.4	-0.1
WKZ	Wanaka	0.83	208	P	Pg	20 03 24.1	+0.1
WKZ	Wanaka	0.83	208		Pg	20 03 24.1	+0.1
TMZ	Timaru	1.07	106	P	Pn	20 03 29.8	+0.2
RPZ	Rata Peaks	1.14	71	P	Pb	20 03 30.2	+0.1
RPZ				S	Sg	20 03 44.5	-0.2
RPZ	Rata Peaks	1.14	71		Pg	20 03 30.1	+0.1
RPZ	Rata Peaks	1.14	71	P	Pb	20 03 30.4	+0.2
EAZ	Earnscleugh	1.15	189	P	Pg	20 03 29.9	-0.1
EAZ				S	Sb	20 03 46.0	+0.6
ARCZ	Arundel	1.17	83	P	Pn	20 03 31.3	+0.3
ARCZ				S	Sg	20 03 45.4	-0.2
ODZ	Otahua Downs	1.22	141	P	Pn	20 03 31.8	+0.2
ODZ				S	Sn	20 03 48.0	-0.4
ODZ	Otahua Downs	1.22	141		Pn	20 03 31.7	+0.2
ODZ				Sg	Sg	20 03 46.4	-0.8
ODZ	Otahua Downs	1.22	141	P	Pn	20 03 31.8	+0.2
MSZ	Milford Sound	1.31	244	P	Pn	20 03 32.3	-0.5
MSZ				S	Sb	20 03 48.4	-1.7
WVZ	Waitaha Valley	1.33	40	P	Pn	20 03 32.7	-0.4
WVZ				S	Sn	20 03 51.6	+0.4
MHCZ	Mount Hutt	1.55	69	P	Pb	20 03 37.6	+0.3
MLZ	Mavora Lakes	1.64	219	P	Pb	20 03 38.2	-0.4
MLZ	Mavora Lakes	1.64	219		Pn	20 03 38.0	+0.6
WACZ	Wakanui South	1.64	85	P	Pb	20 03 38.7	-0.1
TUZ	Tuapeka	1.85	179	P	Pn	20 03 40.8	+0.4
RACZ	Rakaia	1.89	80	P	Pn	20 03 41.9	+1.0
HHSZ	Highcliff Hill	1.93	158	P	Pb	20 03 43.3	-0.2
INZ	Inchbonnie	1.94	45	P	Pb	20 03 43.4	-0.4
OXZ	Oxford	1.95	67	P	Pn	20 03 42.4	+0.7
OXZ	Oxford	1.95	67		Pn	20 03 42.1	+0.4
WHZ	Wether Hill Ro	2.13	212	P	Pn	20 03 44.3	+0.1
WHZ	Wether Hill Ro	2.13	212		Pn	20 03 44.3	+0.1
DCZ	Deep Cove	2.20	231	P	Pn	20 03 46.1	+1.0
DCZ	Deep Cove	2.20	231		Pn	20 03 45.6	+0.5
MQZ	McQueen's Vall	2.26	81	P	Pn	20 03 46.6	+0.6
MQZ	McQueen's Vall	2.26	81	Pn	Pn	20 03 46.7	+0.8
LTZ	Lake Taylor	2.37	57	P	Pn	20 03 48.5	+1.0
LTZ	Lake Taylor	2.37	57	Pn	Pn	20 03 48.5	+1.0
AMCZ	Amberley	2.42	69	P	Pn	20 03 49.4	+1.2
AKCZ	Akaroa Harbour	2.42	86	P	Pn	20 03 49.1	+0.9
SYZ	Scrubby Hill	2.46	187	P	Pn	20 03 48.6	0.0
OKCZ	Okains Bay	2.55	83	P	Pn	20 03 51.3	+1.4
GVZ	Greta Valley S	2.76	67	P	Pn	20 03 53.7	+0.8
DSZ	Denniston Nort	2.87	36	P	Pn	20 03 54.3	-0.1
PYZ	Puysegur Point	2.91	224	P	Pn	20 03 56.0	+1.1
PYZ	Puysegur Point	2.91	224	Pn	Pn	20 03 55.9	+1.1
APZ	The Paps	2.95	202	P	Pn	20 03 54.8	-0.7
KHZ	Kahutara	3.35	61	P	Pn	20 04 01.7	+0.8
KHZ	Kahutara	3.35	61		Pn	20 04 01.2	+0.3
KHZ	Kahutara	3.35	61	P	Pn	20 04 02.0	+1.1
THZ	Tophouse	3.38	47	P	Pn	20 04 02.6	+1.1
THZ	Tophouse	3.38	47		Pn	20 04 02.3	+0.8
BSWZ	Blackbirch Sta	3.96	54	Pn	Pn	20 04 11.3	+2.0
NNZ	Nelson	4.02	46		Pn	20 04 10.8	+0.6
CMWZ	Cape Campbell	4.14	57		Pn	20 04 13.8	+2.0
TUWZ	Tuamarina	4.18	52		Pn	20 04 15.0	+2.6
DUWZ	D'Urville Isla	4.61	46	P	Pn	20 04 19.6	+1.3
SNZO	South Karori	4.70	55		Pn	20 04 20.2	+0.7
SNZO	South Karori	4.70	55	P	Pn	20 04 21.9	+2.4
KIW	Kapiti Island	5.11	52	P	Pn	20 04 27.4	+2.4
MRZ	Mangatainoka R	5.62	54	P	Pn	20 04 32.1	0.0
NMEZ	Namu Road	5.68	36	P	Pn	20 04 34.2	+1.2
NBEZ	Newall Road No	5.80	35	P	Pn	20 04 35.7	+1.1
KHEZ	Kahui Hut	5.84	36	P	Pn	20 04 36.6	+1.3
PREZ	Palmer Road	5.86	37	P	Pn	20 04 37.2	+1.6
LREZ	Lake Rotokare	5.88	40	P	Pn	20 04 38.8	+3.2
NEZ	North Egmont	5.90	37	P	Pn	20 04 37.5	+1.5
PKE	Pukeiti	5.91	36	P	Pn	20 04 37.4	+1.2
BFZ	Birch Farm	6.01	58	P	Pn	20 04 38.2	+0.7
BFZ	Birch Farm	6.01	58	P	Pn	20 04 40.5	+3.0
TSZ	Takapari Road	6.24	52	P	Pn	20 04 42.3	+1.7
VRZ	Vera Road	6.31	40	P	Pn	20 04 43.3	+1.7
HIZ	Hauiti	6.85	37		Pn	20 04 50.2	+1.1
HIZ	Hauiti	6.85	37	P	Pn	20 04 50.5	+1.4
BKZ	Black Stump Fm	7.15	49	Pn	Pn	20 04 53.8	+0.5
BKZ	Black Stump Fm	7.15	49	P	Pn	20 04 56.1	+2.9
URZ	Urewera	8.14	47	Pn	Pn	20 05 07.2	+0.5
	0.9nm,0.3s,baz=303,slow=23,SNR=1.7						
URZ				Sn	Sn	20 06 33.5	-5.6
	2.5nm,0.3s,baz=296,slow=24,SNR=1.6						
URZ	Urewera	8.14	47	Pn	Pn	20 05 06.6	-0.2
URZ	Urewera	8.14	47	P	Pn	20 05 08.8	+2.0
OUZ	Omahuta	9.40	21		Pn	20 05 23.9	0.0
OUZ	Omahuta	9.40	21	P	Pn	20 05 24.8	+0.9
TAU	Tasmania Unive	16.18	266	Pn	Pn	20 06 54.4	-1.6
TAU				IAmb	IAmb	20 07 06.5	
	comp=Z,47nm,1.4s						
DZM	Mont Dzumac	22.12	352	LR	LR	20 16 40.8	
	comp=Z,115nm,18.2s,baz=49,slow=37						
STKA	Stephens Creek	25.07	290	LR	LR	20 17 04.2	
	comp=Z,53nm,18.3s,baz=41,slow=34						
VNDA	Vanda	33.67	183	LR	LR	20 22 48.0	
	comp=Z,32nm,18.4s,baz=34,slow=35						
SBA	Scott Base	33.88	181	P	P	20 09 49.9	-1.1
ASAR	Alice Springs	35.56	293	P	P	20 10 06.0	-0.1
	comp=Z,0.7nm,0.6s,baz=127,slow=6.6,SNR=10						
ASAR				LR	LR	20 24 03.2	
	comp=Z,86nm,19.0s,baz=82,slow=36						
WB2	Warramunga Arr	37.92	298	P	P	20 10 26.8	+0.5
WB2				IAmb	IAmb	20 10 50.2	
	comp=Z,5.2nm,1.1s						
WRA	Warramunga Arr	37.93	298	P	P	20 10 26.1	-0.2
	comp=Z,1.2nm,0.6s,baz=138,slow=7.6,SNR=11						
WRAB	Tennant Creek	37.93	298	P	P	20 10 23.9	-2.4
WRAB				IAmb	IAmb	20 10 36.2	
	comp=Z,8.5nm,1.2s						
H01W1	Cape Leeuwin H	43.02	263	T	T	20 55 10.8	
	baz=120,slow=75,SNR=4.1						
H01W2	Cape Leeuwin H	43.03	263	T	T	20 55 14.3	
	baz=120,slow=75,SNR=4.7						
H01W3	Cape Leeuwin H	43.04	263	T	T	20 55 15.2	
	baz=120,slow=75,SNR=3.8						
CMAR	Chiang Mai Arr	89.51	296	P	P	20 16 08.4	+2.2
	comp=Z,0.3nm,0.2s,baz=132,slow=3.8,SNR=2.1						
H08S2	Diego Garcia H	89.79	260	T	T	21 54 43.1	
	baz=134,slow=76,SNR=20						
H08S1	Diego Carcia H	89.80	260	T	T	21 54 42.1	
	baz=134,slow=76,SNR=4.7						
H08S3	Diego Garcia H	89.81	260	T	T	21 54 44.5	
	baz=134,slow=76,SNR=28						
TORD	Torodi Ar. Bea	147.45	202	PKPbc	PKiKP	20 22 55.3	-0.1
	comp=Z,1.1nm,0.7s,baz=168,slow=1.0,SNR=11						
TORD	Torodi Ar. Bea	147.45	202		PKPbc	20 22 53.7	+0.5
ARCES	ARCESS Array B	148.69	337	PKPbc	PKiKP	20 22 55.8	-0.5
	comp=Z,6.2nm,0.9s,baz=46,slow=5.2,SNR=6.7						
ARCES	ARCESS Array B	148.69	337		PKPbc	20 22 53.7	-1.2
FINES	FINESS Array B	152.43	322	PKPbc	PKiKP	20 23 05.1	+0.9
	comp=Z,2.2nm,0.6s,baz=76,slow=3.8,SNR=9.7						
FINES	FINESS Array B	152.43	322		PKPdf	20 22 58.0	+1.0
AKASG	Malin Array Be	152.62	298	PKPbc	PKiKP	20 23 06.8	+1.9
	comp=Z,0.8nm,0.4s,baz=334,slow=19,SNR=1.8						

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*MDD **11** 20:13:51.0±3.8, 36°.79N×12°.26W, h0^{km}, mb3.1/4, Error ellipse: s-maj=34.3km s-min=23.1km az=99.0, PRXIMO*

*INMG **11** 20:13:51.8±1.3, 36°.63N×12°.72W, h10^{km}, ML2.1, Error ellipse: s-maj=8.8km s-min=6.8km az=96.0*

*CNRM **11** 20:14:03.8, 35°.89N×11°.75W, h138^{km}, ml2.8*

ISC 11 20:13:47.9±2.4**, 36°.68N**±0°.05×**12°.3W**±0°.1**, h10**^{km}**, n33,** σ3^{s}.**20**/49**, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	2.84	80	*e*Pn	Pn	20 14 35.3	+2.0
PFVI				*e*Sn	Sn	20 15 08.3	+0.8
PFVI				A	A	20 15 10.7	
	6.6nm,0.5s						
PFVI	Vila Bisbo	2.84	80	P	Pn	20 14 35.3	+2.0
	1.6nm,0.1s,SNR=7.9						
PFVI				S	Sn	20 15 08.0	+0.5
	1.9nm,0.2s,SNR=7.9						
PTEO	Sao Teotonio	3.00	72	*e*Sn	Sn	20 15 12.7	+1.1
PTEO				A	A	20 15 19.5	
	4.2nm,0.7s						
MORF	Marmelete	3.00	77	*e*Pn	Pn	20 14 37.9	+2.3
MORF				*e*Sn	Sn	20 15 12.6	+0.9
PMAFR	Mafra	3.31	46	*e*Sn	Sn	20 15 19.8	+0.6
PMAFR	Mafra	3.31	46	S	Sn	20 15 18.9	-0.3
	9.3nm,0.3s,SNR=11						
PNCL	Nicolau / Gran	3.34	63	*e*Pn	Pn	20 14 41.8	+1.6
PNCL				*e*Sn	Sn	20 15 20.8	+0.8
PNCL				A	A	20 15 22.4	
	4.0nm,0.6s						
MESJ	Messejana	3.47	69	*e*Sn	Sn	20 15 24.2	+1.0
PCVE	Castro Verde	3.55	73	*e*Pn	Pn	20 14 46.0	+2.9
PCVE				*e*Sn	Sn	20 15 25.8	+0.7
PCVE				A	A	20 15 28.3	
	2.8nm,0.6s						
PBDV	Barranco-do-Ve	3.56	80	*e*Pn	Pn	20 14 44.5	+1.2
PBDV				*e*Sn	Sn	20 15 26.7	+1.3
PBDV				A	A	20 15 27.9	
	3.9nm,0.7s						
PVAQ	Vaqueiros	3.75	77	*e*Pn	Pn	20 14 48.7	+2.8
PVAQ				*e*Sn	Sn	20 15 30.7	+0.6
EVO	Evora	3.89	60	*e*Sn	Sn	20 15 33.1	-0.4
EVO				A	A	20 15 44.5	
	3.7nm,0.7s						
EGRO	El Granado	3.96	76	P	Pn	20 14 51.0	+2.3
	0.1nm,0.1s,SNR=7.9						
EGRO				S	Sn	20 15 34.2	-1.1
	0.2nm,0.1s,SNR=7.9						
PMTG	Montargil	4.03	52	*e*Sn	Sn	20 15 36.2	-0.6
PMTG				A	A	20 15 49.2	
	1.4nm,0.6s						
PESTR	Estremoz	4.34	58	*e*Sn	Sn	20 15 43.7	-0.9
PBAR	Barrancos	4.46	69	*e*Pn	Pn	20 14 58.4	+2.8
PBAR				A	A	20 15 56.9	
	1.0nm,0.5s						
EMIN	Mina Concepcio	4.64	75	P	Pn	20 14 59.6	+1.5
	0.2nm,0.1s,SNR=7.9						
EMIN				S	Sn	20 15 47.2	-4.7
	0.6nm,0.3s,SNR=7.9						
EBAD	Badajoz	4.69	62	P	Pn	20 15 00.3	+1.6
	0.2nm,0.1s,SNR=7.9						
EBAD				S	Sn	20 15 51.3	-2.0
	0.3nm,0.2s,SNR=7.9						
PMRV	Marv??o	4.76	53	*e*Pn	Pn	20 15 02.1	+2.3
PMRV				*e*Sn	Sn	20 15 53.4	-1.6
PMRV				A	A	20 16 10.6	
	1.2nm,0.7s						
ZHG	ZHG	5.66	123	P	Pn	20 15 16.0	+3.8
ZHG				S	Sn	20 16 12.0	-5.4
ECAB	El Cabril	5.67	74	P	Pn	20 15 14.4	+2.1
	0.1nm,0.1s,SNR=7.9						
ECAB				S	Sn	20 16 16.0	-1.5
	0.1nm,0.2s,SNR=7.9						
POLO	Lamas de Olo	5.87	36	*e*Sn	Sn	20 16 18.5	-3.8
POLO				A	A	20 16 27.1	
	3.3nm,0.8s						
EPLA	Plasencia	5.96	54	S	Sn	20 16 21.9	-2.5
	0.5nm,0.2s,SNR=7.9						
MVO	Moncorvo	6.09	41	S	Sn	20 16 24.6	-3.2
	0.7nm,0.2s,SNR=7.9						
PGAV	Gavieira, Arco	6.14	29	*e*Sn	Sn	20 16 25.5	-3.7
ELOB	Lobios	6.15	31	S	Sn	20 16 25.3	-3.9
	0.3nm,0.1s,SNR=7.9						
OUK	Oukaimeden	6.59	145	P	Pn	20 15 24.9	-0.3
OUK				S	Sn	20 16 29.5	-11
EMAZ	Mazaricos	6.77	21	S	Sn	20 16 37.0	-7.5
	0.9nm,0.1s,SNR=7.9						
ECAL	Calabor	6.81	38	S	Sn	20 16 40.1	-5.4
	1.1nm,0.3s,SNR=7.9						
TTIG	Tnine Tigouga,	6.92	151	P	Pn	20 15 29.8	+0.3
MD31	MD31	7.29	119	P	Pn	20 15 36.7	+2.2
MD31				S	Sn	20 16 50.4	-7.0
OUZM	OUZ	7.38	140	P	Pn	20 15 39.1	+3.2
OUZM				S	Sn	20 16 53.0	-6.8
MDT	Midelt	7.43	119	P	Pn	20 15 39.4	+3.0
MDT				S	Sn	20 16 53.0	-7.8

RSNC 11 20:26:24.4±1.1**, 6°.82N**×**73°.13W, h146**^{km}±4^{km}**, ML3.3, Mw3.6, 2D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.23	193	⇓*i*P	Pn	20 26 44.1	-0.5
BARC				*e*S	Sn	20 26 58.9	-1.1
BARC				*i*		20 27 00.2	
	comp=Z,360nm,0.3s						
BRRC	Barranca, Sant	0.64	297	*e*P	Pn	20 26 46.0	-0.2
BRRC				*e*S	Sn	20 27 02.9	+0.2
BRRC				*i*		20 27 06.8	
	comp=Z,303nm,0.5s						
PAMC	Pamplona, Colo	0.67	40	*e*P	Pn	20 26 46.9	0.0
PAMC				*e*S	Sn	20 27 03.9	-0.1
PAMC				*i*		20 27 06.2	
	comp=Z,624nm,0.5s						
RUSC	La Rusia	0.92	177	*e*P	Pn	20 26 48.0	-0.7
RUSC				*e*S	Sn	20 27 06.7	-0.6
RUSC				*i*		20 27 08.0	
	comp=Z,226nm,0.3s						
TAMC	Tame, Arauca	1.38	106	⇓*i*P	Pn	20 26 52.6	0.0
TAMC				*e*S	Sn	20 27 14.2	+0.2
OCAC	Ocana	1.43	353	*e*P	Pn	20 26 52.1	-1.0
OCAC				*e*S	Sn	20 27 14.0	-1.0
OCAC				*i*		20 27 19.5	
	comp=Z,368nm,0.3s						
SPBC	San Pablo de B	1.49	219	*e*P	Pn	20 26 53.1	-0.6
SPBC				*i* Sg	Sn	20 27 15.0	-1.0
SPBC				*e*S	Sn	20 27 15.3	-0.8
SPBC				*i*		20 27 17.7	
	comp=Z,316nm,0.4s						
ZARC	Zaragoza, Cauc	1.84	292	*e*P	Pn	20 26 57.1	-0.4
ZARC				*e*S	Sn	20 27 22.0	-0.8
ZARC				*i*		20 27 28.2	
	comp=Z,200nm,0.3s						
NORC	Norcasia	2.13	234	*e*P	Pn	20 27 00.2	-0.7
NORC				*e*S	Sn	20 27 28.0	-0.9
NORC				*i*		20 27 33.7	
	comp=Z,103nm,0.2s						
SMLC	San Martn de	2.18	335	*e*P	Pn	20 27 00.5	-1.0
SMLC				*e*S	Sn	20 27 29.2	-0.8
SMLC				*i*		20 27 32.4	
	comp=Z,229nm,0.3s						
CHIC	Chingaza	2.25	195	*e*P	Pn	20 27 02.4	-0.4
CHIC				*e*S	Sn	20 27 31.4	-0.8
CHIC				*i*		20 27 35.1	
	comp=Z,137nm,0.4s						
ROSC	El Rosal	2.29	211	*e*P	Pn	20 27 04.6	+1.4
ROSC				*e*S	Sn	20 27 33.2	+0.2
ROSC				*i*		20 27 37.6	
	comp=Z,221nm,0.3s						
UREC	San Jos de Ur	2.56	291	*e*P	Pn	20 27 05.7	-0.4
UREC				*e*S	Sn	20 27 35.4	-2.7
UREC				*i*		20 27 47.1	
	comp=Z,116nm,0.3s						
GUY2C	Guyana, Caldas	2.73	235	*e*P	Pn	20 27 09.2	+0.6
GUY2C				*e*S	Sn	20 27 43.4	+0.7
GUY2C				*i*		20 27 48.3	
	comp=Z,67nm,0.4s						
LL1C	La Loma 1 Cana	2.74	351	*e*Pg	Pn	20 27 11.0	+2.6
LL1C				*e*S	Sn	20 27 44.2	+1.9
VILC	Villavicencio,	2.74	192	*e*Pg	Pn	20 27 07.4	-1.2
VILC				*e*S	Sn	20 27 40.2	-2.4
PTGC	Puerto Gaitan,	2.78	159	*e*P	Pn	20 27 07.4	-1.5
PTGC				*e*S	Sn	20 27 40.8	-2.5
PTGC				*i*		20 27 45.6	
	comp=Z,164nm,0.3s						
CBOC	Ciudad Bolivar	3.02	252	*e*P	Pn	20 27 11.8	-0.2
CBOC				*e*S	Sn	20 27 49.1	+0.4
DBBC	Dabeiba	3.06	274	*e*P	Pn	20 27 11.6	-0.9
DBBC				*e*S	Sn	20 27 47.1	-2.5
DBBC				*i*		20 27 51.7	
	comp=Z,219nm,0.7s						
MOTC	Monteria, Cord	3.18	308	*e*P	Pn	20 27 11.4	-2.5
MOTC				*e*S	Sn	20 27 49.4	-2.8
MOTC				*i*		20 28 12.4	
	comp=Z,40nm,0.6s						
ANIL	Santa Ana	3.23	224	*e*P	Pn	20 27 15.4	+0.5
ANIL				*e*S	Sn	20 27 54.6	+0.7
ANIL				*i*		20 27 58.8	
	comp=Z,233nm,0.4s						
PRAC	Prado	3.54	210	*e*P	Pn	20 27 17.9	-0.8
PRAC				*e*S	Sn	20 27 59.8	-0.9
PRAC				*i*		20 28 05.1	
	comp=Z,79nm,0.5s						
ORTC	Ortega, Tolima	3.57	216	*e*P	Pn	20 27 18.3	-0.8
ORTC				*e*S	Sn	20 28 01.7	+0.2
ORTC				*i*		20 28 05.5	
	comp=Z,54nm,0.6s						
PLMC	San Jos del P	3.66	239	*e*P	Pn	20 27 19.9	-0.4
PLMC				*e*S	Sn	20 28 03.2	-0.4
PLMC				*i*		20 28 08.0	
	comp=Z,22nm,0.4s						
SJCC	San Jacinto, C	3.67	327	*e*P	Pn	20 27 18.3	-2.0
SJCC				*e*S	Sn	20 27 59.5	-4.3
SJCC				*i*		20 28 03.8	
	comp=Z,34nm,0.5s						
YOTC	Yotoco, Valle	4.26	229	*e*P	Pn	20 27 29.1	+1.0
YOTC				*e*S	Sn	20 28 16.9	-0.8
MACC	Macarena, Meta	4.69	189	*e*P	Pn	20 27 31.2	-2.6
MACC				*e*S	Sn	20 28 22.2	-5.6
MACC				*i*		20 28 30.8	
	comp=Z,17nm,0.4s						
GARC	Garzon, Huila	5.17	207	*e*P	Pn	20 27 37.4	-2.8
GARC				*e*S	Sn	20 28 30.2	-9.1
GARC				*i*		20 28 40.5	
	comp=Z,25nm,0.2s						

IDC 11 20:41:32.0±2.5**, 6°.21S**×**132°.47E, h0**^{km}**, mb3.9**/2**, mb1 4.2**/4**, mb1mx3.8**/19**, mbtmp4.0**/4**, ML4.3**/2**, MS3.0**/1**, Ms1 3.0**/1**, ms1mx2.3**/29**, Error ellipse: s-maj=188.5km s-min=25.8km az=71.0, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.77	173	Pn	Pn	20 44 47.6	-1.0
	1.9nm,0.3s,baz=356,slow=13,SNR=67						
WRA				Sn	Sn	20 47 13.0	-10
	1.8nm,0.3s,baz=359,slow=23,SNR=8.4						
ASAR	Alice Springs	17.41	176	P	Pn	20 45 36.1	-0.4
	0.8nm,0.3s,baz=355,slow=12,SNR=41						
ASAR				S	Sn	20 48 41.9	-9.2
	0.6nm,0.3s,baz=348,slow=22,SNR=8.2						
STKA	Stephens Creek	26.92	163	P	P	20 47 15.7	+0.6
	0.4nm,0.3s,baz=340,slow=12,SNR=1.6						
JCJ	Chichijima	34.42	15	LR	LR	21 02 08.0	
	comp=Z,22nm,18.8s,baz=114,slow=36						
MKAR	Makanchi Array	68.94	326	P	P	20 52 39.0	0.0
	0.9nm,0.7s,baz=116,slow=7.6,SNR=9.9						

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*WEL **11** 20:49:00, 44°.11S×169°.54E, h8^{km}, ML4.0, Mw3.6, Moment Tensor Solution. s7 Moment tensor: Scale 10^{14} Nm; M$_{rr}$0.14; M$_{\theta\theta}$2.13; M$_{\phi\phi}$-2.27; M$_{r\theta}$-0.71; M$_{\theta\phi}$-2.23; M$_{\phi r}$-0.11; Fault plane solution: M$_0$3.21000×10^{14} NP1: ϕ_s338.00000°, δ77.00000°, λ4.00000°. NP2: ϕ_s247.00000°, δ86.00000°, λ167.00000°. Principal axes: T 31.8500, Plg12.0000°, Azm202.0000°; N -32.4000, Plg76.0000°, Azm50.0000°; P 0.5500, Plg6.0000°, Azm293.0000°;*

WEL 11 20:49:33.8±0.3**, 44°S**±3°×**17°0E**±°**, h5**^{km}**, M3.9**/16,

ML4.1/16,**MLv3.9**/16 **Error ellipse: s-maj=0.0km s-min=0.0km az=143.6,South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCZ	**Jackson Bay**	**0.52**	**269**	P	Pb	20 49 44.8	-0.6
JCZ				S	Sg	20 49 51.9	+1.4
FOZ	**Fox Glacier**	**0.58**	**23**	P	Pg	20 49 44.7	-0.2
FOZ				S	Sg	20 49 52.0	-0.3
LBZ	**Lake Benmore**	**0.58**	**123**	P	Pg	20 49 45.1	+0.1
WKZ	**Wanaka**	**0.84**	**205**	P	Pg	20 49 49.4	-0.5
TMZ	**Timaru**	**1.12**	**107**	P	Pg	20 49 55.1	-0.2
RPZ	**Rata Peaks**	**1.17**	**73**	P	Pg	20 49 55.8	-0.5
EAZ	**Earnscleugh**	**1.17**	**187**	P	Pg	20 49 55.1	-1.1
ARCZ	**Arundel**	**1.21**	**85**	P	Pg	20 49 56.5	-0.5
ODZ	**Otahua Downs**	**1.27**	**141**	P	Pg	20 49 57.0	-1.1
ODZ				S	Sg	20 50 13.1	-1.5
MSZ	**Milford Sound**	**1.29**	**241**	P	Pn	20 49 57.8	-0.6
MSZ				S	Sg	20 50 14.0	-1.0
WVZ	**Waitaha Valley**	**1.33**	**42**	P	Pn	20 49 58.0	-1.0
WVZ				S	Sn	20 50 17.0	-0.2
MHCZ	**Mount Hutt**	**1.58**	**71**	P	Pn	20 50 02.9	+0.4
MLZ	**Mavora Lakes**	**1.63**	**217**	P	Pn	20 50 03.5	+0.3
WACZ	**Wakanui South**	**1.69**	**87**	P	Pn	20 50 04.1	+0.2
TUZ	**Tuapeka**	**1.89**	**177**	P	Pn	20 50 06.0	-0.6
RACZ	**Rakaia**	**1.93**	**81**	P	Pn	20 50 07.6	+0.3
INZ	**Inchbonnie**	**1.95**	**47**	P	Pn	20 50 07.5	0.0
HHSZ	**Highcliff Hill**	**1.98**	**157**	P	Pb	20 50 10.2	0.0
OXZ	**Oxford**	**1.98**	**69**	P	Pn	20 50 07.8	-0.1
WHZ	**Wether Hill Ro**	**2.13**	**211**	P	Pn	20 50 09.8	-0.3
DCZ	**Deep Cove**	**2.18**	**229**	P	Pn	20 50 11.7	+1.0
MQZ	**McQueen's Vall**	**2.30**	**82**	P	Pn	20 50 12.4	+0.1
LTZ	**Lake Taylor**	**2.39**	**58**	P	Pn	20 50 14.1	+0.5
AMCZ	**Amberley**	**2.45**	**70**	P	Pn	20 50 14.9	+0.5
AKCZ	**Akaroa Harbour**	**2.46**	**87**	P	Pn	20 50 14.4	-0.2
SYZ	**Scrubby Hill**	**2.48**	**186**	P	Pn	20 50 14.3	-0.5
OKCZ	**Okains Bay**	**2.59**	**84**	P	Pn	20 50 16.9	+0.5
GVZ	**Greta Valley S**	**2.79**	**68**	P	Pn	20 50 19.4	+0.3
DSZ	**Denniston Nort**	**2.87**	**37**	P	Pb	20 50 24.9	-0.5
PYZ	**Puysegur Point**	**2.90**	**223**	P	Pn	20 50 21.4	+0.9
APZ	**The Paps**	**2.96**	**201**	P	Pn	20 50 20.3	-1.2
KHZ	**Kahutara**	**3.38**	**62**	P	Pn	20 50 27.9	+0.9
THZ	**Tophouse**	**3.40**	**48**	P	Pn	20 50 28.3	+0.8
NNZ	**Nelson**	**4.03**	**46**	P	Pn	20 50 38.0	+1.8
TUWZ	**Tuamarina**	**4.20**	**53**	P	Pn	20 50 42.7	+4.4
TCW	**Tory Channel**	**4.53**	**53**	P	Pn	20 50 46.8	+3.8
DUWZ	**D'Urville Isla**	**4.62**	**47**	P	Pn	20 50 46.3	+2.1
KIW	**Kapiti Island**	**5.12**	**53**	P	Pn	20 50 53.2	+2.1
OGWZ	**Otaki Gorge**	**5.30**	**54**	P	Pn	20 50 55.4	+1.8
HOWZ	**Holdsworth Sta**	**5.46**	**57**	P	Pn	20 50 58.3	+2.6
MRZ	**Mangatainoka R**	**5.64**	**55**	P	Pn	20 50 58.7	+0.5
NBEZ	**Newall Road No**	**5.80**	**36**	P	Pn	20 51 01.3	+0.8
KHEZ	**Kahui Hut**	**5.84**	**37**	P	Pn	20 51 02.0	+0.9
LREZ	**Lake Rotokare**	**5.88**	**40**	P	Pn	20 51 05.2	+3.7
NEZ	**North Egmont**	**5.90**	**37**	P	Pn	20 51 03.1	+1.3
PKE	**Pukeiti**	**5.91**	**36**	P	Pn	20 51 03.0	+1.0
WAZ	**Wanganui**	**5.94**	**45**	P	Pn	20 51 05.5	+3.2
TSZ	**Takapari Road**	**6.25**	**52**	P	Pn	20 51 09.4	+2.8
VRZ	**Vera Road**	**6.31**	**40**	P	Pn	20 51 09.1	+1.6
MOVZ	**Moawhango**	**6.59**	**47**	P	Pn	20 51 16.2	+4.8
FWVZ	**Far West T-bar**	**6.60**	**45**	P	Pn	20 51 14.8	+3.2
TWVZ	**Taurewa**	**6.68**	**44**	P	Pn	20 51 14.2	+1.6
WTVZ	**West Tongariro**	**6.73**	**45**	P	Pn	20 51 16.1	+2.9
OTVZ	**Oturere**	**6.73**	**45**	P	Pn	20 51 18.3	+4.9

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*BJI **11** 20:53:01.3±0.0, 9°.32S×158°.31E, h18^{km}, mB5.0/25, mb4.7/40, Ms4.7/8, Ms7 4.3/8*

*IDC **11** 20:53:03.4±0.6, 8°.79S×157°.70E, h0^{km}, mb4.3/21, mb1 4.4/25, mb1mx4.3/48, mbtmp4.3/25, ML4.1/4, MS3.9/20, Ms1 3.9/20, ms1mx3.7/33, Error ellipse: s-maj=15.7km s-min=15.1km az=146.0*

*NEIC **11** 20:53:05.2±2.5, 8°.8S±0°.1×157°.94E±0°.07, h10^{km}±1^{km}, mb4.9/54, Error ellipse: s-maj=19.4km s-min=11.6km az=195.0*

*GCMT **11** 20:53:06.2±0.3, 9°.06S±0°.02×157°.75E±0°.02, h19^{km}±1^{km}, MW5.0/76, Moment Tensor Solution. s31,c33; s76,c99; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.46±.20; M$_{\theta\theta}$-1.78±.14; M$_{\phi\phi}$-0.67±.12; M$_{r\theta}$1.45±.28; M$_{\theta\phi}$1.44±.07; M$_{\phi r}$-1.93±.29; Best double couple: M$_0$3.56600×10^{16} NP1:ϕ_s290.00000°,δ26.00000°,λ65.00000°. NP2: ϕ_s137.00000°,δ67.00000°,λ102.00000°. Principal axes: T 3.4830, Plg66.0000°, Azm68.0000°; N 0.1680, Plg11.0000°, Azm313.0000°; P -3.6500, Plg21.0000°, Azm219.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 11 20:53:07.3±0.4,**8°.87S**±0°.07×**157°.84E**±0°.05,**h23**^{km}**,n142,** σ**1^{s}81**/126,**mb4.8**/73,**MS3.9**/21,**1C-2D,**
Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**2.15**	**105**	Pn	**Pn**	**20 53 40.9**	**-1.0**
	128nm,0.3s,baz=204,slow=6.3,SNR=30						
HNR				Sn	**Sb**	**20 54 16.1**	**+4.2**
	753nm,0.3s,baz=195,slow=18,SNR=8.6						
HNR	**Honiara**	**2.15**	**105**		**Pn**	**20 53 40.6**	**-1.3**
HNR				Sn	Sn	20 53 56.7	-11
PMG	**Port Moresby**	**10.56**	**266**	Pn	**Pn**	**20 55 37.2**	**-0.2**
	0.7nm,0.3s,baz=69,slow=17,SNR=6.6						
PMG				LR	LR	20 59 27.4	
	comp=Z,2μm,19.2s,baz=77,slow=37						
PMG	**Port Moresby**	**10.56**	**266**		**Pn**	**20 55 39.5**	**+2.1**
SANVU	**Saraoutou**	**11.25**	**126**	Pn	**Pn**	**20 55 45.8**	**-1.0**
DZM	**Mont Dzumac**	**15.52**	**149**	Pn	**Pn**	**20 56 45.4**	**+0.4**
	0.3nm,0.3s,baz=340,slow=7.6,SNR=7.3						
DZM				LR	LR	21 01 46.9	
	comp=Z,774nm,18.1s,baz=26,slow=33						
DZM	**Mont Dzumac**	**15.52**	**149**	*e*P	**Pn**	**20 56 45.8**	**+0.9**
	78nm,1.6s						
DZM				*e*LR	LR	21 00 15.4	
	comp=Z,381nm,20.8s						
DZM	**Mont Dzumac**	**15.52**	**149**		**Pn**	**20 56 45.5**	**+0.6**
PATS	**Pohnpei**	**15.61**	**2**	Pn	**Pn**	**20 56 44.4**	**-1.6**
ONTNC	**Ouen Toro**	**15.72**	**149**	P	**Pn**	**20 56 48.3**	**+0.8**
ONTNC				IAmb	IAmb	20 56 54.7	
	comp=Z,74nm,1.4s						
CTA	**Charters Tower**	**15.81**	**224**	Pn	**Pn**	**20 56 46.2**	**-2.4**
	comp=Z,0.4nm,0.3s,baz=60,slow=14,SNR=4.4						
CTAO	**Charters Tower**	**15.81**	**224**	Pn	**Pn**	**20 56 46.4**	**-2.3**
CTAO				P	**P**	**20 56 53.5**	**+1.2**
OUENC	**Ouen Island, N**	**16.01**	**148**	Pn	**Pn**	**20 56 48.6**	**-2.5**
PINNC	**Pines Island,**	**16.49**	**147**	Pn	**Pn**	**20 56 53.6**	**-3.7**
JAY	**Jayapura**	**18.18**	**289**	P	**Pn**	**20 57 16.0**	**-2.5**
	comp=Z,0.8nm,0.3s,baz=95,slow=9.4,SNR=4.4						
SMPI	**Sarmi**	**20.22**	**289**	P	**P**	**20 57 41.3**	**+0.3**
	comp=Z,769nmcomp=Z,25nm,0.7s						
MSVF	**Nonsavu**	**21.53**	**116**	P	**P**	**20 57 58.0**	**+2.8**
	comp=Z,13nm,0.5s,baz=280,slow=11,SNR=10						
MSVF	**Nonsavu**	**21.53**	**116**	P	**P**	**20 57 53.5**	**-1.7**
MSVF				IAmb	IAmb	20 58 00.3	
	comp=Z,24nm,0.7s						
WR0	**Warramunga Arr**	**25.08**	**241**	P	**P**	**20 58 29.2**	**-1.2**
WR0				IAmb	IAmb	20 58 36.0	
	comp=Z,48nm,1.1s						
WB0	**Warramunga Arr**	**25.14**	**242**	P	**P**	**20 58 29.6**	**-1.3**
WRAB	**Tennant Creek**	**25.24**	**242**	P	**P**	**20 58 30.7**	**-1.2**
WRAB				IAmb	IAmb	20 58 38.0	
	comp=Z,38nm,1.1s						
WB2	**Warramunga Arr**	**25.24**	**242**	P	**P**	**20 58 29.8**	**-2.1**
WB2				IAmb	IAmb	20 58 38.1	
	comp=Z,42nm,1.1s						
WRA	**Warramunga Arr**	**25.25**	**242**	P	**P**	**20 58 30.4**	**-1.6**
	comp=Z,12nm,0.9s,baz=69,slow=9.3,SNR=54						
WRA				PcP	**PcP**	**21 02 04.8**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=72,slow=2.7,SNR=5.8						
WRA				LR	LR	21 07 43.1	
	comp=Z,537nm,21.2s,baz=70,slow=35						
WRA	**Warramunga Arr**	**25.25**	**242**	P	**P**	**20 58 30.1**	**-1.9**
GUMO	**Guam**	**25.76**	**330**	LR	LR	21 06 49.7	
	comp=Z,111nm,21.6s,baz=155,slow=32						
FAKI	**Fak Fak**	**26.12**	**282**	P	**P**	**20 58 40.8**	**+0.9**
	comp=Z,23nm,1.0s						
FAKI	**Fak Fak**	**26.12**	**282**		**P**	**20 58 38.4**	**-1.6**
FAKI				IAmb	IAmb	20 58 45.8	
	comp=Z,18nm,0.9s						
AS31	**Alice Springs**	**27.22**	**234**	P	**P**	**20 58 48.0**	**-1.8**
ASAR	**Alice Springs**	**27.22**	**234**	P	**P**	**20 58 47.6**	**-2.2**
	comp=Z,2.2nm,0.8s,baz=65,slow=9.2,SNR=24						
ASAR				PcP	**PcP**	**21 02 09.5**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=74,slow=2.6,SNR=2.7						
ASAR				LR	LR	21 08 55.9	
	comp=Z,352nm,21.4s,baz=58,slow=35						
ASAR	**Alice Springs**	**27.22**	**234**	P	**P**	**20 58 47.9**	**-1.9**
STKA	**Stephens Creek**	**27.42**	**211**	P	**P**	**20 58 51.5**	**0.0**
	comp=Z,8.0nm,0.7s,baz=19,slow=11,SNR=18						
STKA				LR	LR	21 09 03.2	
	comp=Z,366nm,20.7s,baz=30,slow=35						
STKA	**Stephens Creek**	**27.42**	**211**	P	**P**	**20 58 52.1**	**+0.6**
SIJI	**Sorong**	**27.62**	**285**	P	**P**	**20 58 50.1**	**-3.4**
	comp=Z,4.5nm,0.7s,baz=215,slow=23,SNR=2.4						
H11S3	**WAKE ISLAND Hy**	**28.55**	**18**	T	T	21 27 33.5	
	baz=199,slow=76,SNR=85						
H11S2	**WAKE ISLAND Hy**	**28.55**	**18**	T	T	21 27 39.9	
	baz=199,slow=76,SNR=47						
H11S1	**WAKE ISLAND Hy**	**28.57**	**18**	T	T	21 27 49.6	
	baz=199,slow=76,SNR=68						
H11N1	**WAKE ISLAND Hy**	**29.76**	**17**	T	T	21 29 37.8	
	baz=195,slow=76,SNR=32						
H11N3	**WAKE ISLAND Hy**	**29.77**	**17**	T	T	21 29 26.0	
	baz=195,slow=76,SNR=32						
H11N2	**WAKE ISLAND Hy**	**29.78**	**17**	T	T	21 29 40.5	
	baz=195,slow=76,SNR=38						
LBMI	**Labuha**	**31.30**	**283**	P	P	20 59 31.3	+5.2
	comp=Z,510nmcomp=Z,16nm,1.3s						
SANI	**Sanana**	**32.40**	**280**	P	**P**	**20 59 36.7**	**+0.9**
	comp=Z,466nmcomp=Z,36nm,1.1s						
BATI	**Baumata**	**33.72**	**265**	P	**P**	**20 59 47.4**	**0.0**
	comp=Z,9.7nm,0.4s,baz=122,slow=14,SNR=1.4						
MMRI	**Maumere**	**35.18**	**268**	P	**P**	**21 00 03.7**	**+3.7**
	comp=Z,81nm,1.3s						
MMRI	**Maumere**	**35.18**	**268**	P	**P**	**20 59 59.4**	**-0.6**
EDFI	**Ende, Flores**	**35.72**	**267**	P	**P**	**21 00 08.1**	**+3.4**
	comp=Z,19nm,1.2s						
LUWI	**Luwuk**	**35.76**	**281**	P	**P**	**21 00 08.5**	**+3.5**
	comp=Z,4μmcomp=Z,25nm,1.1s						
BSSI	**Bau Bau, Buton**	**37.12**	**272**	P	P	21 00 21.6	+5.0
	comp=Z,28nm,1.4s						
WBSI	**Waikabubak, Su**	**37.95**	**266**	P	**P**	**21 00 26.8**	**+3.2**
	comp=Z,41nm,1.0s						
KAPI	**Kappang**	**37.99**	**273**	P	**P**	**21 00 23.7**	**-0.3**
KAPI				IAmb	IAmb	21 00 29.0	
	comp=Z,21nm,0.9s						
TWSI	**Taliwang, Sumb**	**40.46**	**267**	P	**P**	**21 00 47.4**	**+2.8**
	comp=Z,10.0nm,0.9s						
BBKI	**Banjar Baru**	**43.06**	**274**	P	**P**	**21 01 09.2**	**+3.3**
	comp=Z,48nm,1.1s						
JAGI	**Jajag, Banyuwa**	**43.17**	**267**	P	**P**	**21 01 08.2**	**+1.4**
	comp=Z,95nm,1.1s						
JAGI	**Jajag, Banyuwa**	**43.17**	**267**	P	**P**	**21 01 06.3**	**-0.5**
PWJI	**Pagerwojo**	**45.52**	**267**	P	**P**	**21 01 27.0**	**+1.4**
	comp=Z,38nm,1.0s						
PCJI	**Pacitan**	**46.13**	**267**	P	**P**	**21 01 33.2**	**+2.8**
	comp=Z,2μmcomp=Z,195nm,1.1s						
SMRI	**Semarang**	**46.96**	**269**	P	**P**	**21 01 41.0**	**+4.1**
	comp=Z,60nm,1.1s						
STKI	**Sintang**	**47.02**	**278**	P	**P**	**21 01 41.6**	**+4.2**
	comp=Z,3μmcomp=Z,8.6nm,1.0s						
MJAR	**Matsushiro Arr**	**48.79**	**339**	P	**P**	**21 01 48.3**	**-2.4**
	comp=Z,0.5nm,0.3s,baz=159,slow=13,SNR=2.2						
LEM	**Lembang**	**49.77**	**269**	P	**P**	**21 02 01.8**	**+3.0**
	comp=Z,36nm,1.0s						
CBJI	**Citeko**	**50.57**	**269**	P	**P**	**21 02 07.1**	**+2.4**
CGJI	**Cibinong**	**51.69**	**269**	P	**P**	**21 02 15.1**	**+2.0**
	comp=Z,75nm,1.0s						
PPT	**Papeete**	**51.78**	**105**	LR	LR	21 20 31.2	
	comp=Z,74nm,20.0s,baz=244,slow=32						
PPT2	**Papeete2**	**51.78**	**105**	*e*LR	LR	21 17 08.7	
	comp=Z,203nm,23.0s						
PPBI	**Pangkal Pinang**	**51.85**	**274**	P	**P**	**21 02 17.8**	**+3.5**
	comp=Z,3μmcomp=Z,16nm,0.8s						
KASI	**Kota Agung**	**52.99**	**270**	P	**P**	**21 02 25.5**	**+2.7**
	comp=Z,32nm,1.2s						
MDSI	**Maura Dua**	**53.44**	**271**	P	**P**	**21 02 27.7**	**+1.6**
	comp=Z,9.8nm,1.1s						
LWLI	**Liwa**	**53.49**	**270**	P	**P**	**21 02 28.8**	**+2.2**
	comp=Z,2μmcomp=Z,37nm,1.1s						
KSRS	**Korea Array**	**53.92**	**331**	P	**P**	**21 02 28.5**	**-0.6**
	comp=Z,1.1nm,0.6s,baz=153,slow=8.2,SNR=2.6						
KSRS				LR	LR	21 23 03.5	
	comp=Z,55nm,20.7s,baz=122,slow=34						
NJ2	**Nanjing**	**55.15**	**319**	*e*P	**P**	**21 02 39.6**	**+1.4**
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
WHN	**Wuhan**	**57.24**	**315**	⇑P	**P**	**21 02 55.0**	**+1.8**
USRK	**Ussuriysk Ar.**	**57.77**	**338**	P	**P**	**21 02 55.6**	**-1.0**
	comp=Z,1.2nm,0.6s,baz=191,slow=32,SNR=2.8						
CN2	**Changchun**	**60.09**	**333**	*e*P	**P**	**21 03 12.5**	**-0.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.5s						
ENH	**Enshi**	**60.57**	**312**	P	**P**	**21 03 14.5**	**-1.9**
GYA	**Guiyang**	**60.82**	**307**	⇓P	**P**	**21 03 22.6**	**+4.3**
GYA				pmax	pmax		
	comp=Z,11nm,1.3s						
SLVN	**Son La**	**60.86**	**300**	P	**P**	**21 03 19.1**	**+0.5**
SLVN				IAmb	IAmb	21 03 24.4	
	comp=Z,8.8nm,1.1s						
TAOE	**Nuku Hiva Isla**	**61.20**	**95**	*e*LR	LR	21 21 29.0	
	comp=Z,2μm,32.4s						
PETK	**Petropavlovsk-**	**61.73**	**360**	P	**P**	**21 03 23.5**	**-0.2**
	comp=Z,1.8nm,0.7s,baz=182,slow=7.2,SNR=2.2						
PETK				LR	LR	21 26 34.5	
	comp=Z,83nm,21.0s,baz=168,slow=33						
KLR	**Kul'dur**	**62.21**	**341**	LR	LR	21 29 04.1	
	comp=Z,57nm,19.3s,baz=144,slow=35						
XAN	**Xi'an**	**63.01**	**315**	P	**P**	**21 03 34.7**	**+2.0**
XAN				pP	sP	21 03 44.6	+1.9
XAN				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KMI	**Kunming**	**63.39**	**304**	⇓P	**P**	**21 03 36.3**	**+0.6**
KMI				pP	sP	21 03 48.1	+3.0
KMI				pmax	pmax		
	comp=Z,10.0nm,1.4s						
CM31	**Chiang Mai Arr**	**64.13**	**295**	P	**P**	**21 03 40.0**	**-0.4**
CM31				IAmb	IAmb	21 03 46.2	
	comp=Z,12nm,1.2s						
CMAR	**Chiang Mai Arr**	**64.13**	**295**	P	**P**	**21 03 40.2**	**-0.1**
	comp=Z,2.8nm,1.0s,baz=116,slow=5.0,SNR=12						
CMAR				LR	LR	21 29 05.8	
	comp=Z,30nm,21.9s,baz=80,slow=34						
CMAR	**Chiang Mai Arr**	**64.13**	**295**	P	**P**	**21 03 39.7**	**-0.7**
CHTO	**Chiang Mai**	**64.25**	**296**	P	**P**	**21 03 40.8**	**-0.4**
CHTO				IAmb	IAmb	21 03 46.6	
	comp=Z,9.0nm,1.1s						
HHC	**Hu-ho-hao-te**	**65.27**	**323**	*e*P	**P**	**21 03 50.7**	**+3.2**
HHC				pmax	pmax		
	comp=Z,11nm,0.6s						
HHC				pmax	pmax		
	comp=Z,130nm,7.6s						
LZH	**Lanzhou**	**67.62**	**315**	*e*P	P	21 04 08.2	+5.4
LZH				pP	sP	21 04 15.7	+3.6
LZH				pmax	pmax		
	comp=Z,25nm,1.0s						
LZH	**Lanzhou**	**67.62**	**315**	*e*P	**P**	**21 04 02.9**	**+0.1**
LZH				pP	pP	21 04 08.0	-2.1
LZH				pmax	pmax		
	comp=Z,23nm,1.3s						
MA2	**Magadan**	**68.45**	**356**	LR	LR	21 30 26.3	
	comp=Z,46nm,20.1s,baz=174,slow=33						
VNDA	**Vanda**	**68.66**	**179**	P	**P**	**21 04 08.5**	**+0.1**
	comp=Z,0.6nm,0.8s,baz=14,slow=11,SNR=2.0						
VNDA				LR	LR	21 30 32.9	
	comp=Z,103nm,18.6s,baz=6.5,slow=33						
SEY	**Seymchan**	**71.71**	**357**	LR	LR	21 32 26.1	
	comp=Z,54nm,20.2s,baz=164,slow=33						
GTA	**Gaotai**	**72.03**	**316**	*e*P	**P**	**21 04 30.6**	**+0.8**
GTA				pP	pP	21 04 35.0	-2.1
GTA				sP	pwP	21 04 38.6	+1.5
GTA				PP	**PP**	**21 07 14.4**	**+4.3**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.5s						
GTA				pmax	pmax		
	comp=Z,74nm,6.2s						
GTA				LR	LR		
	comp=Z,60nm,14.5s						
GTA				LR	LR		
	comp=Z,95nm,14.2s						
GTA				LR	LR		
	comp=Z,100nm,14.5s						
ULN	**Ulaanbaatar**	**72.09**	**327**	P	**P**	**21 04 29.7**	**-0.3**
ULN				IAmb	IAmb	21 04 36.0	
	comp=Z,11nm,1.4s						
SONM	**Songino Array**	**72.43**	**326**	P	**P**	**21 04 31.0**	**-1.0**
	comp=Z,0.8nm,0.8s,baz=124,slow=5.5,SNR=5.9						
SONM				LR	LR	21 35 19.0	
	comp=Z,59nm,20.2s,baz=150,slow=35						
SONM	**Songino Array**	**72.43**	**326**	P	**P**	**21 04 32.1**	**+0.1**
SHL	**Shillong**	**72.67**	**300**	P	**P**	**21 04 33.5**	**-0.5**
J20K	**Nowinta River**	**81.26**	**19**	P	**P**	**21 05 21.5**	**+0.2**
J20K				IAmb	IAmb	21 05 31.5	
	comp=Z,8.9nm,1.1s						
CAST	**Castle Rocks**	**81.45**	**20**	P	**P**	**21 05 21.5**	**-0.9**
CAST				IAmb	IAmb	21 05 22.5	
	comp=Z,12nm,0.7s						
WMQ	**Urumqi**	**82.11**	**317**	*e*P	**P**	**21 05 27.8**	**+1.5**
TIXI	**Tiksi**	**82.61**	**351**	P	**P**	**21 05 27.1**	**-1.1**
	comp=Z,0.6nm,0.5s,baz=271,slow=23,SNR=3.8						
TIXI	**Tiksi**	**82.61**	**351**	P	**P**	**21 05 27.6**	**-0.6**
I21K	**Tanana**	**82.63**	**19**	P	**P**	**21 05 28.2**	**-0.3**
I21K				IAmb	IAmb	21 05 30.4	
	comp=Z,14nm,1.3s						
MCK	**McKinley**	**82.75**	**21**	P	**P**	**21 05 28.2**	**-1.0**
MLY	**Manley**	**82.94**	**20**	P	**P**	**21 05 29.2**	**-0.9**
MLY				IAmb	IAmb	21 05 30.1	
	comp=Z,7.7nm,0.8s						
NEA2	**Nenana**	**83.23**	**20**	P	**P**	**21 05 30.3**	**-1.3**
NEA2				IAmb	IAmb	21 05 30.9	
	comp=Z,7.5nm,0.8s						
MAW	**Mawson**	**83.77**	**203**	LR	LR	21 39 50.4	
	comp=Z,70nm,19.3s,baz=60,slow=34						
TCOL	**CIGO, UAF Yank**	**83.81**	**20**	P	**P**	**21 05 33.0**	**-1.5**
COLA	**College**	**83.82**	**20**	P	**P**	**21 05 33.0**	**-1.5**
HDA	**Harding Lake**	**83.86**	**21**	P	**P**	**21 05 34.4**	**-0.5**
IL31		**84.09**	**21**	P	**P**	**21 05 34.4**	**-1.5**
IL31				IAmb	IAmb	21 05 35.8	
	comp=Z,16nm,1.3s						
ILAR	**Eielson Array**	**84.09**	**21**	P	**P**	**21 05 34.6**	**-1.4**
	comp=Z,3.1nm,0.4s,baz=255,slow=5.1,SNR=67						
ILAR				LR	LR	21 41 03.4	
	comp=Z,75nm,19.2s,baz=246,slow=34						
ILAR	**Eielson Array**	**84.09**	**21**	P	**P**	**21 05 34.2**	**-1.8**
RIDG	**Independent Ri**	**84.24**	**22**	P	**P**	**21 05 36.8**	**0.0**
DOT	**Dot Lake**	**84.49**	**22**	P	**P**	**21 05 37.1**	**-1.0**
DOT				IAmb	IAmb	21 05 46.1	
	comp=Z,17nm,1.4s						
SCRK	**Sand Creek**	**84.69**	**22**	P	**P**	**21 05 38.3**	**-1.0**
SCRK				IAmb	IAmb	21 05 49.1	
	comp=Z,6.9nm,1.1s						
L27K	**Beaver Creek,**	**85.04**	**23**	P	**P**	**21 05 40.9**	**0.0**
DAWY	**Dawson**	**86.48**	**23**	P	**P**	**21 05 47.7**	**-0.4**
DAWY				IAmb	IAmb	21 05 49.4	
	comp=Z,9.0nm,1.4s						
MKAR	**Makanchi Array**	**86.67**	**318**	P	**P**	**21 05 48.2**	**-1.1**
	comp=Z,0.9nm,0.5s,baz=95,slow=5.8,SNR=18						
MKAR	**Makanchi Array**	**86.67**	**318**	P	**P**	**21 05 47.9**	**-1.4**
ZALV	**Zalesovo Beam**	**87.30**	**326**	P	**P**	**21 05 50.4**	**-1.8**
	comp=Z,0.5nm,0.5s,baz=135,slow=6.4,SNR=2.6						
MPK	**Martis Peak**	**89.52**	**50**	P	**P**	**21 06 01.6**	**-1.8**
MPK				IAmb	IAmb	21 06 05.1	
	comp=Z,6.1nm,0.9s						
KURK	**Kurchatov**	**90.04**	**321**	P	**P**	**21 06 03.7**	**-1.5**
KURK	**Kurchatov**	**90.04**	**321**	IAmb	IAmb	21 06 08.9	
	comp=Z,5.1nm,1.5s						
KURBB	**Kurchatov Arra**	**90.07**	**321**	P	**P**	**21 06 03.7**	**-1.6**
	comp=Z,0.3nm,0.2s,baz=98,slow=3.8,SNR=3.2						
INK	**Inuvik**	**90.47**	**20**	P	**P**	**21 06 06.6**	**-0.2**
	comp=Z,0.6nm,0.4s,baz=260,slow=7.5,SNR=5.1						
INK	**Inuvik**	**90.47**	**20**	P	**P**	**21 06 04.8**	**-2.0**
INK				IAmb	IAmb	21 06 07.6	
	comp=Z,7.0nm,1.4s						
LHV	**Little Huntoon**	**90.48**	**51**	P	**P**	**21 06 07.7**	**+0.2**
LHV				IAmb	IAmb	21 06 13.7	
	comp=Z,5.4nm,1.0s						
RYN	**Ryan**	**90.54**	**51**	P	**P**	**21 06 06.9**	**-1.2**
RYN				IAmb	IAmb	21 06 09.6	
	comp=Z,4.6nm,0.9s						
NVAR	**Mina Array Bea**	**90.67**	**51**	P	**P**	**21 06 09.8**	**+1.0**
	comp=Z,3.1nm,0.8s,baz=254,slow=6.2,SNR=26						
NVAR				LR	LR	21 41 06.7	
	comp=Z,53nm,18.9s,baz=261,slow=32						
NVAR	**Mina Array Bea**	**90.67**	**51**	P	**P**	**21 06 09.1**	**+0.3**
NV11	**Mina Array Sit**	**90.78**	**51**	P	**P**	**21 06 09.6**	**+0.4**
NV11				IAmb	IAmb	21 06 10.9	
	comp=Z,5.9nm,0.9s						
KVN	**Kaiserville**	**90.94**	**51**	P	**P**	**21 06 10.8**	**+0.8**
KVN				IAmb	IAmb	21 06 11.4	
	comp=Z,4.8nm,0.8s						
TPH	**Tonopah**	**91.44**	**52**	P	**P**	**21 06 10.0**	**-2.3**
BMO	**Blue Mountains**	**92.55**	**45**	P	**P**	**21 06 15.7**	**-1.5**
PRN	**Pahroc Range**	**93.03**	**53**		**P**	**21 06 19.6**	**+0.1**
ELK	**Elko**	**93.39**	**49**	P	**P**	**21 06 22.1**	**+0.8**
	comp=Z,0.6nm,0.5s,baz=257,slow=1.2,SNR=4.4						
ELK	**Elko**	**93.39**	**49**	IAmb	IAmb	21 06 22.6	
	comp=Z,2.8nm,1.1s						
SPR3	**Spring Creek 3**	**93.83**	**51**		**P**	**21 06 24.5**	**+1.0**
SPR3				IAmb	IAmb	21 06 26.6	
	comp=Z,7.4nm,1.2s						
YKA	**Yellowknife Ar**	**96.66**	**28**	LR	LR	21 44 19.3	
	comp=Z,79nm,20.3s,baz=0.0,slow=32						
PDAR	**Pinedale Array**	**97.85**	**48**	LR	LR	21 47 41.0	
	comp=Z,43nm,18.2s,baz=302,slow=34						
BDFB	**Brasilia**	**144.66**	**133**	PKP	**PKPab**	**21 12 41.9**	**-0.1**
	comp=Z,11nm,0.6s,baz=259,slow=2.8,SNR=19						
BDFB	**Brasilia**	**144.66**	**133**		**PKPab**	**21 12 41.8**	**-0.2**
ESDC	**Sonseca Array**	**145.28**	**335**	PKPbc	**PKPbc**	**21 12 42.5**	**-0.9**
	comp=Z,0.3nm,0.4s,baz=11,slow=3.0,SNR=4.6						

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*IDC **11** 21:11:39.1±2.0, 30°.87S×72°.21W, h0^{km}, mb3.7/1, mb1 3.8/5, mb1mx3.7/24, mbtmp3.7/5, ML3.8/4, MS3.1/3, Ms1 3.1/3, ms1mx2.8/24, Error ellipse: s-maj=66.1km s-min=30.1km az=111.0*

*NEIC **11** 21:11:42.7±2.1, 31°.00S±0°.04×71°.85W±0°.05, h20^{km}±5^{km}, mb4.2/4, ML4.2(GUC), Error ellipse: s-maj=6.6km s-min=3.9km az=129.0*

*GUC **11** 21:11:43.2±0.9, 31°.00S×71°.66W, h35^{km}±3^{km}, ML4.2*

ISC 11 21:11:43.2±1.1,**30°.99S**±0°.03×**71°.77W**±0°.06,**h23**^{km}±9^{km},
n69,σ**1^{s}18**/78,**9C-1D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	**Fray Jorge**	**0.33**	**20**	⇓*e*P	**Pb**	**21 11 51.3**	**+0.7**
CO06				*i* S	**Sb**	**21 11 56.4**	**+0.7**
CO06				IAML		21 11 58.3	
	comp=E,25μm,0.2s						
CO06	**Fray Jorge**	**0.33**	**20**		**Pb**	**21 11 50.9**	**+0.4**
CO06				Sg	**Sb**	**21 11 56.5**	**+0.9**
CO03	**El Pedregal**	**0.94**	**81**		**Pb**	**21 12 00.1**	**-0.7**
CO03				Sn	**Sb**	**21 12 12.7**	**-0.2**
CO05	**La Serena**	**1.16**	**23**	*e*P	**Pn**	**21 12 03.7**	**-0.3**
CO05				*e*S	**Sb**	**21 12 18.4**	**-0.7**
CO05				IAML		21 12 24.1	
	comp=N,6μm,0.4s						
CO05	**La Serena**	**1.16**	**23**		**Pn**	**21 12 03.7**	**-0.3**
CO05				Sn	**Sn**	**21 12 19.8**	**+0.7**
GO04	**Tololo Observa**	**1.17**	**46**	*e*P	**Pn**	**21 12 03.8**	**-0.4**
GO04				*e*S	**Sb**	**21 12 17.7**	**-1.8**
GO04				IAML		21 12 23.9	
	comp=N,25μm,0.5s						
GO04	**Tololo Observa**	**1.17**	**46**		**Pn**	**21 12 03.9**	**-0.4**
VA06	**Catapilco**	**1.62**	**166**	⇑*e*P	**Pn**	**21 12 10.0**	**-0.3**
VA06				*e*S	**Sn**	**21 12 30.6**	**+0.2**
VA06				IAML		21 12 39.3	
	comp=E,4μm,0.7s						
VA01	**Torpederas**	**2.03**	**177**	⇑*e*P	**Pn**	**21 12 16.4**	**+0.4**
VA01				*e*S	**Sn**	**21 12 42.1**	**+1.5**
VA01	**Torpederas**	**2.03**	**177**	Pn	**Pn**	**21 12 15.6**	**-0.3**
VA03	**San Esteban**	**2.05**	**150**	*e*P	**Pn**	**21 12 16.9**	**+0.5**
VA03				*e*S	**Sn**	**21 12 41.8**	**+0.6**
VA03				IAML		21 12 46.9	
	comp=E,3μm,0.2s						
VA03	**San Esteban**	**2.05**	**150**		**Pn**	**21 12 17.4**	**+1.1**
ROCH	**El Roble**	**2.08**	**162**	⇑*e*P	**Pn**	**21 12 17.0**	**+0.2**
ROCH				*e*S	**Sn**	**21 12 43.2**	**+1.1**
ROCH				IAML		21 12 49.5	
	comp=N,2μm,0.3s						
LCO	**Las Campanas**	**2.18**	**25**	⇑*e*P	**Pn**	**21 12 17.5**	**-0.7**
LCO				*e*S	**Sn**	**21 12 45.9**	**+1.3**
LCO	**Las Campanas**	**2.18**	**25**	Pn	**Pn**	**21 12 18.3**	**+0.1**
MT02	**Curacav**	**2.33**	**167**	⇑*e*P	**Pn**	**21 12 20.3**	**+0.2**
MT02				*e*S	**Sn**	**21 12 49.1**	**+1.2**
MT02	**Curacav**	**2.33**	**167**		**Pn**	**21 12 20.1**	**+0.1**
PEL	**Peldehue**	**2.34**	**157**	*e*P	**Pn**	**21 12 20.2**	**0.0**
PEL				*e*S	**Sn**	**21 12 49.2**	**+1.0**
PEL				IAML		21 12 54.8	
	comp=E,1μm,0.2s						
PEL	**Peldehue**	**2.34**	**157**	Pn	**Pn**	**21 12 21.3**	**+1.1**
MT05	**Renca**	**2.55**	**160**	⇑*e*P	**Pn**	**21 12 24.4**	**+1.2**
MT05				*e*S	**Sn**	**21 12 54.4**	**+0.8**
MT05				IAML		21 13 09.4	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=E,2µm,0.3s						
MT05	Renca	2.55	160		Pn	21 12 23.2	0.0
VA05	Santo Domingo	2.66	177	⇑eP	Pn	21 12 25.8	+1.2
VA05				eS	Sn	21 12 57.7	+1.5
VA05				IAML		21 13 11.2	
	comp=E,1µm,0.4s						
VA05	Santo Domingo	2.66	177		Pn	21 12 24.9	+0.3
ZON	Zonda	2.70	103	Pn	Pn	21 12 28.5	+3.3
AC04	Llanos de Chal	2.84	12	eP	Pn	21 12 26.4	-0.6
AC04				eS	Sn	21 13 01.4	+0.8
AC04				IAML		21 13 19.6	
	comp=N,557nm,0.3s						
AC04	Llanos de Chal	2.84	12	Pn	Pn	21 12 26.5	-0.6
MT09	Talagante	2.86	167	eP	Pn	21 12 28.2	+0.8
MT09				eS	Sn	21 13 01.9	+0.7
MT09				IAML		21 13 15.0	
	comp=E,821nm,0.4s						
MT09	Talagante	2.86	167		Pn	21 12 28.2	+0.8
MT01	Popeta	2.90	171	⇑eP	Pn	21 12 28.5	+0.6
MT01				eS	Sn	21 13 03.5	+1.4
MT01				IAML		21 13 15.2	
	comp=E,592nm,0.3s						
MT01	Popeta	2.90	171		Pn	21 12 28.4	+0.4
LMEL	Las Melosas	3.14	156	eP	Pn	21 12 32.2	+0.8
LMEL				eS	Sn	21 13 09.1	+0.8
LMEL				IAML		21 13 22.0	
	comp=N,674nm,0.4s						
BO04	La Punta	3.15	162	⇑eP	Pn	21 12 31.8	+0.4
BO04				eS	Sn	21 13 07.0	-1.2
BO01	Tunca	3.44	171	Pn	Pn	21 12 35.7	+0.3
GO03	Copiap	3.64	22	Pn	Pn	21 12 38.2	0.0
BO02	Sierra Bellavi	3.88	168		Pn	21 12 41.7	+0.2
GO05	Huala	4.01	182		Pn	21 12 42.2	-1.0
AC02	Maricunga	4.74	30		Pn	21 12 54.1	+0.4
ML02	Panimavida	4.77	177	Pn	Pn	21 12 54.5	+0.8
PB14	IPOC Station P	6.45	11		Pn	21 13 13.7	-3.4
H03N1	Juan Fernandez	6.53	246	T	T	21 20 09.7	
	baz=74,slow=72,SNR=788						
VA04	Juan Fernndez	6.54	244	Pn	Pn	21 13 15.9	-2.0
H03N3	Juan Fernandez	6.54	246	T	T	21 20 00.2	
	baz=74,slow=72,SNR=862						
H03N2	Juan Fernandez	6.55	246	T	T	21 20 01.5	
	baz=74,slow=72,SNR=804						
LC01	Cunco	7.89	181	Pn	Pn	21 13 35.2	-1.3
PB15	IPOC Station P	8.02	15	Pn	Pn	21 13 38.1	-0.3
LVC	Limon Verde	8.73	18	Pn	Pn	21 13 45.4	-2.9
	comp=N,0.3nm,0.3s,baz=221,slow=11,SNR=1.7						
LVC				LR	LR	21 17 11.4	
	comp=N,106nm,20.5s,baz=206,slow=38						
LVC	Limon Verde	8.73	18		Pn	21 13 47.8	-0.6
PB07	IPOC Station P	9.38	11	Pn	Pn	21 13 57.7	+0.6
PLCA	Paso Flores	9.77	175	Pn	Pn	21 14 01.6	-0.7
	comp=N,0.2nm,0.3s,baz=331,slow=15,SNR=6.7						
PLCA	Paso Flores	9.77	175		Pn	21 14 02.2	-0.2
PSGCX	Pisagua	11.44	8	Pn	Pn	21 14 25.6	+0.4
ITQB	Itaqui	13.15	88	Pn	Pn	21 14 46.7	-1.7
CPUP	Villa Florida	13.50	73	Pn	Pn	21 14 54.3	+1.1
	comp=N,0.3nm,0.3s,baz=250,slow=12,SNR=3.6						
CPUP	Villa Florida	13.50	73		Pn	21 14 51.4	-1.9
PLTB	Pedras Altas	15.54	98	Pn	Pn	21 15 19.0	-1.8
SIV	San Ignacio	17.84	36	P	Pn	21 15 49.7	-0.3
	comp=N,0.2nm,0.3s,baz=240,slow=14,SNR=4.7						
NNA	Nana	19.48	345	LR	LR	21 20 49.0	
	comp=N,28nm,21.2s,baz=226,slow=28						
SNAA	Sanae	54.29	159	P	P	21 21 06.2	-0.9
SNAA				IAmb	IAmb	21 21 15.2	
	comp=Z,4.5nm,1.4s						
SBA	Scott Base	66.06	191	P	P	21 22 28.6	+1.0
BOSA	Boshof	81.27	118	LR	LR	21 59 19.8	
	comp=Z,26nm,18.0s,baz=180,slow=35						
TORD	Torodi Ar. Bea	82.97	70	P	P	21 24 09.7	+2.9
	comp=Z,0.4nm,0.7s,baz=251,slow=4.1,SNR=6.7						
TORD	Torodi Ar. Bea	82.97	70	P	P	21 24 09.3	+2.6
TORD				IAmb	IAmb	21 24 25.0	
	comp=Z,2.4nm,1.3s						
WRA	Warramunga Arr	123.49	210	PKP	PKPdf	21 30 38.2	-1.0
	comp=Z,0.3nm,0.9s,baz=168,slow=1.6,SNR=4.6						
H11S2	WAKE ISLAND Hy	125.99	271	T	T	23 49 30.2	
	baz=116,slow=75,SNR=28						
H11S1	WAKE ISLAND Hy	126.00	271	T	T	23 49 26.9	
	baz=116,slow=75,SNR=40						
H11S3	WAKE ISLAND Hy	126.01	271	T	T	23 49 30.2	
	baz=116,slow=75,SNR=36						
H11N3	WAKE ISLAND Hy	126.33	273	T	T	23 49 51.6	
	baz=116,slow=75,SNR=11						
H11N1	WAKE ISLAND Hy	126.34	273	T	T	23 49 53.7	
	baz=116,slow=75,SNR=5.7						
H11N2	WAKE ISLAND Hy	126.35	273	T	T	23 49 52.7	
	baz=116,slow=75,SNR=12						

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*STR **11** 21:20:28.0±0.9, 46°N±11°×1°3E±°, h0km, mB5.8/1, mb3.3/1, MLv3.0/11, Mw(mB)5.4/1, preliminary*

*ROM **11** 21:20:31.8±0.1, 46.°481N±0.°005×12.°851E±0.°005, h10km, ML2.6/18, Error ellipse: s-maj=0.6km s-min=0.4km az=20.0*

*IASPEI **11** 21:20:32.0±0.8, 46.°50N±0.°02×12.°84E±0.°01, h11km±4km, Error ellipse: s-maj=2.8km s-min=2.1km az=13.4, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*VIE **11** 21:20:31.7±0.2, 46.°51N×12.°82E, h10km, mb2.1/19, ml2.8/20, Error ellipse: s-maj=2.6km s-min=1.4km az=12.0 4 km W of Comeglians*

*LDG **11** 21:20:33.2±0.2, 46.°56N×12.°95E, h10km, Ml2.7/12, Error ellipse: s-maj=6.3km s-min=3.1km az=28.0*

*PRU **11** 21:20:34.1±0.0, 46.°57N×12.°92E, h7km*

ISC 11 21:20:31.9±0.7, **46.°51N**±0.°01×**12.°87E**±0.°01, **h12**km±3km, **n162, σ1.°34**/220, **15C-5D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLUD	Cludinico	0.06	169	⇑ePg	Pg	21 20 34.1	-0.3
CLUD				eSg	Sg	21 20 35.7	-0.5
CLUD	Cludinico	0.06	169	⇑P	Pg	21 20 34.1	-0.3
CLUD				S	Sg	21 20 35.6	-0.7
ZOU	Zoufplan	0.09	60	⇑ePg	Pg	21 20 35.2	+0.3
ZOU				eSg	Sg	21 20 37.5	+0.4
ZOU	Zoufplan	0.09	60	P	Pg	21 20 35.2	+0.3
ZOU				S	Sg	21 20 37.5	+0.4
FVI	Forni Avoltri	0.10	325	P	Pg	21 20 34.9	0.0
FVI				S	Sg	21 20 37.1	-0.1
FVI				AML	AML		
	comp=E,5430µm,0.5s						
FVI				AML	AML		
	comp=N,6375µm,0.7s						
FUSE	Fusea	0.14	137	⇑ePg	Pg	21 20 35.3	0.0
FUSE				eSg	Sg	21 20 37.8	0.0
CSMI	Casera Mimoias	0.15	269	⇑ePg	Pg	21 20 35.3	-0.3
CSMI				eSg	Sg	21 20 37.6	-0.7
PLRO	Paularo	0.20	80	⇑ePg	Pg	21 20 36.9	+0.5
PLRO				eSg	Sb	21 20 40.4	+0.9
BOO	Bordano	0.25	140	⇑ePg	Pg	21 20 37.1	-0.1
BOO				eSg	Sg	21 20 41.1	+0.3
STAL	STALIGIAL	0.28	203	P	Pg	21 20 37.0	-0.6
STAL				S	Sg	21 20 41.1	-0.4
STAL				AML	AML		
	comp=E,7750µm,0.3s						
STAL				AML	AML		
	comp=E,7730µm,0.2s						
STAL				AML	AML		
	comp=N,10515µm,0.2s						
STAL				AML	AML		
	comp=E,7745µm,0.3s						
STAL				AML	AML		
	comp=N,11450µm,0.1s						
MPRI	Monte Prat	0.29	163	⇓ePg	Pg	21 20 37.5	-0.4
MPRI				eSg	Sg	21 20 41.9	+0.1
MPRI	Monte Prat	0.29	163	⇓P	Pg	21 20 37.5	-0.4
MPRI				S	Sg	21 20 41.9	+0.1
MPRI				AML	AML		
	comp=N,3790µm,0.3s						
MPRI				AML	AML		
	comp=E,3030µm,0.5s						
GEPF	Gemona	0.30	142	⇓P	Pg	21 20 38.0	-0.2
GEPF				S	Sg	21 20 42.9	+0.6
GEPF				AML	AML		
	comp=N,1865µm,0.3s						
GEPF				AML	AML		
	comp=E,1100µm,0.6s						
ABTA	Abfaltersbach	0.34	314	i Pg	Pg	21 20 38.9	+0.1
	comp=E,76nm,0.1s,SNR=106						
ABTA				i Sg	Sg	21 20 43.3	-0.1
	comp=E,200nm,0.2s						
BUA	Buia	0.35	149	⇑ePg	Pg	21 20 38.8	-0.1
BUA				eSg	Sg	21 20 44.0	+0.4
PTCC	Patocco-Chiusa	0.35	108	P	Pg	21 20 39.2	+0.1
PTCC				S	Sg	21 20 44.5	+0.6
PTCC				AML	AML		
	comp=E,632µm,0.2s						
PTCC				AML	AML		
	comp=N,565µm,0.9s						
CIMO	Cimolais	0.36	235	⇑ePg	Pg	21 20 38.2	-0.9
CIMO				eSg	Sg	21 20 43.0	-0.9
CIMO	Cimolais	0.36	235	P	Pg	21 20 38.2	-0.9
CIMO				S	Sg	21 20 43.2	-0.8
CIMO				AML	AML		
	comp=E,286µm,0.1s						
CIMO				AML	AML		
	comp=N,309µm,0.4s						
BAD	Bernadia	0.38	137	ePg	Pg	21 20 39.6	0.0
VINO	Villanova	0.39	132	ePg	Pg	21 20 39.6	-0.1
VINO	Villanova	0.39	132	P	Pg	21 20 39.3	-0.3
VINO				S	Sg	21 20 45.4	+0.5
VINO				AML	AML		
	comp=E,404µm,1.1s						
VINO				AML	AML		
	comp=N,455µm,0.4s						
MLNI	Malnisio	0.41	206	⇑ePg	Pg	21 20 39.5	-0.5
MLNI				eSg	Sg	21 20 45.2	-0.3
CSO	Casso	0.45	237	⇓ePg	Pg	21 20 39.9	-0.9
CSO				eSg	Sg	21 20 46.2	-0.5
ACOM	Acomizza, Ital	0.45	85	ePg	Pb	21 20 41.5	-0.4
ACOM	Acomizza, Ital	0.45	85	⇑P	Pg	21 20 41.3	+0.4
ACOM				S	Sb	21 20 48.6	0.0
ACOM				AML	AML		
	comp=E,1165µm,0.9s						
ACOM				AML	AML		
	comp=N,1215µm,0.5s						
LSR	Lussari	0.46	95	ePg	Pg	21 20 41.4	+0.3
AFL	Alpe Faloria	0.47	272	ePg	Pg	21 20 41.2	-0.1
PRED	Cave del Predi	0.49	98	ePg	Pg	21 20 41.9	+0.3
COLI	Coloredo	0.52	137	ePg	Pg	21 20 41.9	-0.2
ROBS	Robic	0.52	121	i Pg	Pg	21 20 41.7	-0.5
ROBS				i Sg	Sg	21 20 49.6	+0.5
ROBS				IAML		21 20 51.9	
	comp=Z,20nm,0.1s						
MYKA	Terra Mystica	0.55	78	i Pg	Pg	21 20 42.8	+0.1
	comp=Z,5.9nm,0.2s,SNR=13						
MYKA				i Sg	Sb	21 20 51.8	+0.5
	comp=Z,20nm,0.1s						
POLC	Polcenigo	0.55	208	P	Pg	21 20 42.3	-0.3
POLC				S	Sg	21 20 49.7	-0.2
POLC				AML	AML		
	comp=E,1104µm,0.6s						
POLC				AML	AML		
	comp=N,1420µm,1.5s						
CAE	Caneva	0.59	210	ePg	Pg	21 20 42.9	-0.6
AGOR	Agordo	0.61	248	ePg	Pg	21 20 43.5	-0.4
AGOR	Agordo	0.61	248	P	Pg	21 20 43.5	-0.4
AGOR				S	Sg	21 20 51.6	-0.3
AGOR				AML	AML		
	comp=E,194µm,1.5s						
AGOR				AML	AML		
	comp=N,245µm,0.4s						
TLI	Talmassons	0.61	164	⇑ePg	Pg	21 20 43.5	-0.5
DRE	Drenchia	0.64	122	ePg	Pg	21 20 43.9	-0.5
KBA	Koelnbreinsper	0.65	30	i Pg	Pb	21 20 45.4	0.0
	comp=N,12nm,0.1s,SNR=12						
KBA				i Sg	Sb	21 20 54.2	-0.2
	comp=N,56nm,0.1s						
CADS	Cadrg	0.67	115	i Pg	Pg	21 20 44.4	-0.5
CADS				i Sg	Sb	21 20 55.2	+0.4
CADS				IAML		21 20 57.7	
	comp=Z,41nm,0.1s						
FAU	Forcella Aurin	0.68	245	⇓ePg	Pg	21 20 44.7	-0.4
RISI	Rein	0.69	309	P	Pg	21 20 45.3	-0.2
RISI				S	Sg	21 20 55.1	+0.5
RISI				AML	AML		
	comp=E,941µm,0.4s						
RISI				AML	AML		
	comp=N,1063µm,1.5s						
SABO	M.te Sabotino	0.74	136	ePg	Pg	21 20 45.9	-0.4
SABO	M.te Sabotino	0.74	136	P	Pg	21 20 45.7	-0.5
SABO				S	Sb	21 20 57.1	+0.4
SABO				AML	AML		
	comp=N,440µm,0.7s						
SABO				AML	AML		
	comp=E,432µm,1.4s						
SABO				AML	AML		
	comp=N,440µm,0.7s						
VARN	Col Varnada, M	0.74	226	ePg	Pg	21 20 45.9	-0.4
VARN	Col Varnada, M	0.74	226	AML	AML		
	comp=E,494µm,0.6s						
VARN				AML	AML		
	comp=N,258µm,0.3s						
VARN				AML	AML		
	comp=N,257µm,0.3s						
ED06	Collalto TV	0.80	215	ePg	Pg	21 20 47.5	+0.1
GORS	Gorjuse	0.81	104	i Pg	Pg	21 20 47.4	-0.2
GORS				IAML		21 21 02.3	
	comp=Z,30nm,0.2s						
MTLO	Montello	0.88	218	ePg	Pg	21 20 49.1	+0.1
CTI	Castel Tesino	0.96	241	AML	AML		
	comp=N,620µm,0.3s						
CTI				AML	AML		
	comp=E,498µm,1.2s						
CTI				AML	AML		
	comp=N,620µm,0.3s						
CTI				AML	AML		
	comp=E,498µm,1.2s						
CGRP	Cima Grappa	0.97	230	AML	AML		
	comp=N,256µm,0.4s						
CGRP				AML	AML		
	comp=E,256µm,0.3s						
TRI	Trieste	1.02	142	P	Pb	21 20 50.2	-1.2
TRI				S	Sn	21 21 08.0	+1.8
TRI				AML	AML		
	comp=E,350µm,0.5s						
TRI				AML	AML		
	comp=N,145µm,0.2s						
KOSI	Kohlern	1.03	268	P	Pb	21 20 51.3	-0.5
KOSI				AML	AML		
	comp=N,180µm,0.3s						
KOSI				AML	AML		
	comp=E,171µm,0.8s						
ROSI	Rosskopf	1.08	293	P	Pb	21 20 52.0	-0.7
ROSI				S	Sb	21 21 06.4	-0.4
ROSI				AML	AML		
	comp=N,252µm,1.5s						
ROSI				AML	AML		
	comp=E,215µm,0.4s						
ABSI	Aberstueckl	1.09	282	P	Pb	21 20 52.0	-0.7
ABSI				S	Sb	21 21 06.3	-0.6
ABSI				AML	AML		
	comp=E,310µm,0.3s						
ABSI				AML	AML		
	comp=N,491µm,0.4s						
WTTA	Wattenberg	1.13	312	i Pg	Pb	21 20 53.3	-0.1
	comp=N,8.8nm,0.1s,SNR=9.1						
WTTA				eSg	Sb	21 21 08.2	0.0
	comp=N,19nm,0.2s						
WTTA	Wattenberg	1.13	312	AML	AML		
	comp=E,166µm,0.4s						
WTTA				AML	AML		
	comp=N,142µm,1.1s						
APPI	Appiano	1.13	269	P	Pb	21 20 53.1	-0.3
APPI				S	Sb	21 21 08.2	+0.1
APPI				AML	AML		
	comp=E,254µm,0.2s						
APPI				AML	AML		
	comp=N,236µm,0.2s						
APPI				AML	AML		
	comp=E,254µm,0.2s						
OBKA	Obir	1.16	90	i Pg	Pn	21 20 54.0	-0.1
	comp=E,2.3nm,0.2s,SNR=10.0						
OBKA				i Sg	Sn	21 21 11.3	+1.4
	comp=E,34nm,0.3s						
WATA	Walderalm	1.21	313	i Pg	Pb	21 20 54.9	+0.1
	comp=E,6.6nm,0.1s						
WATA				i Sg	Sb	21 21 10.5	+0.1
	comp=E,22nm,0.2s						
LJU	Ljubljana	1.25	112	⇑P	Pg	21 20 55.9	+0.1
LJU				S	Sg	21 21 16.0	+3.9
LJU				AML	AML		
	comp=E,1064µm,0.7s						
LJU				AML	AML		
	comp=N,1590µm,0.6s						
LJU				AML	AML		
	comp=N,1585µm,0.6s						
LJU				AML	AML		
	comp=E,1060µm,0.7s						
DOSS	Dosso del Somm	1.33	242	P	Pn	21 20 56.6	+0.3
DOSS				AML	AML		
	comp=E,284µm,0.7s						
DOSS				AML	AML		
	comp=N,286µm,0.7s						
DOSS				AML	AML		
	comp=E,284µm,0.4s						
DOSS				AML	AML		
	comp=E,285µm,0.7s						
DOSS				AML	AML		
	comp=N,258µm,0.4s						
SQTA	Sankt Quirin	1.34	302	i Pg	Pb	21 20 57.1	+0.1
	comp=N,7.2nm,0.1s,SNR=8.0						
SQTA				i Sg	Sn	21 21 14.7	+0.4
	comp=N,36nm,0.3s						
GAGG	Gaggia	1.39	253	P	Pb	21 20 58.4	+0.5
GAGG				S	Sg	21 21 20.0	+3.3
GAGG				AML	AML		
	comp=E,200µm,0.3s						
GAGG				AML	AML		
	comp=N,172µm,0.8s						
GAGG				AML	AML		
	comp=E,200µm,0.3s						
TEOL	Teolo	1.42	216	P	Pn	21 20 57.8	+0.2
TEOL				S	Sn	21 21 16.2	0.0
TEOL				AML	AML		
	comp=E,645µm,0.8s						
TEOL				AML	AML		
	comp=N,520µm,0.8s						
MOTA	Moosalm	1.47	305	i Pg	Pb	21 20 59.2	0.0
	comp=N,5.1nm,0.2s,SNR=5.7						
MOTA				eSg	Sg	21 21 18.8	-0.4
	comp=N,30nm,0.4s						
SOKA	Soboth	1.50	83	ePg	Pg	21 21 00.3	-0.5
	comp=N,3.1nm,0.2s						
SOKA				eSg	Sg	21 21 23.3	+2.9
	comp=N,3.3nm,0.2s						
ROVR	Rover Verones	1.52	236	P	Pn	21 20 59.3	+0.3
ROVR				S	Sn	21 21 18.6	-0.1
ROVR				AML	AML		
	comp=E,71µm,0.5s						
ROVR				AML	AML		
	comp=N,148µm,0.2s						
ROVR				AML	AML		
	comp=E,71µm,0.5s						
ROVR				AML	AML		
	comp=N,148µm,0.2s						
FETA	Feichten	1.55	290	i Pg	Pb	21 21 00.5	-0.2
	comp=N,1.3nm,0.2s						
FETA				i Sg	Sb	21 21 21.4	+1.0
	comp=N,10nm,0.3s						
MOSI	Grossmontoni	1.60	274	P	Pn	21 21 00.8	+0.6
MOSI				S	Sb	21 21 21.6	-0.1
MOSI				AML	AML		
	comp=E,392µm,0.6s						
MOSI				AML	AML		
	comp=N,467µm,0.4s						
RIY	Rijeka	1.64	136	ePn	Pb	21 21 01.4	-0.7
RIY				Sn	Sg	21 21 24.0	-0.6
MOA	Molln	1.64	35	ePg	Pg	21 21 03.7	+0.2
	comp=N,3.0nm,0.1s						
MOA				i Sg	Sg	21 21 26.6	+1.8
	comp=N,25nm,0.4s						
MABI	Malga Bissina	1.69	255	P	Pn	21 21 01.9	+0.5
MABI				S	Sn	21 21 22.7	-0.4
MABI				AML	AML		
	comp=N,78µm,0.4s						
MABI				AML	AML		
	comp=E,67µm,0.7s						
BRMO	Bormio	1.72	270	P	Pn	21 21 02.6	+0.8
BRMO				S	Sb	21 21 24.7	-0.5
BRMO				AML	AML		
	comp=E,73µm,0.7s						
BRMO				AML	AML		
	comp=N,51µm,0.4s						
MAGA	Magasa	1.72	245	P	Pn	21 21 02.4	+0.7
MAGA				AML	AML		
	comp=E,790µm,0.6s						
MAGA				AML	AML		
	comp=N,398µm,0.7s						
SMRN	Sveta Marina	1.73	148	ePn	Pn	21 21 02.2	+0.4
SMRN				Sn	Sb	21 21 25.0	-0.3
RETA	Reutte	1.74	305	ePg	Pg	21 21 04.9	-0.3
	comp=N,2.8nm,0.1s,SNR=7.2						
RETA				eSg	Sg	21 21 29.8	+1.9
	comp=N,41nm,0.3s						
BOJS	Bojanci	1.95	120	P	Pb	21 21 06.4	-0.8
BOJS				AML	AML		
	comp=N,158µm,1.3s						
BOJS				AML	AML		
	comp=E,172µm,0.3s						
ARSA	Arzberg	1.97	67	ePg	Pb	21 21 07.1	-0.5
	comp=E,1.9nm,0.3s						
DAVA	Damuels	2.19	292	ePg	Pb	21 21 11.7	+0.2
	comp=E,5.2nm,0.2s						
DAVA				eSg	Sg	21 21 42.9	+0.7
	comp=E,27nm,0.3s						
RABC	Rab	2.22	142	ePn	Pn	21 21 08.6	+0.2
NVLJ	Novalja	2.41	143	ePn	Pn	21 21 11.4	+0.3
CONA	Conrad Observa	2.48	54	eSn	Sb	21 21 45.2	-1.8
	comp=E,1.5nm,0.2s						
CKRC	Cesky Krumlov	2.50	22	ePN	Pb	21 21 14.7	-2.1
CKRC				ePG	Pg	21 21 18.9	-1.0
CKRC				eSG	Sg	21 21 50.9	-1.5
	comp=E,21nm,0.7s						
KHC	Kasperske Hory	2.66	10	ePN	Pn	21 21 16.7	+2.1
KHC				ePG	Pg	21 21 21.4	-1.5
KHC				eSG	Sg	21 21 57.0	-0.4
	comp=E,17nm,0.5s						
FSSB	Fossombrone	2.82	181	⇑P	Pn	21 21 16.9	+0.1
FSSB				AML	AML		
	comp=E,39µm,0.3s						
FSSB				AML	AML		
	comp=N,52µm,0.4s						
EUCT	Pavia	2.92	245	S	Sg	21 22 07.0	+1.4
DUGI	Dugi Otok	2.96	148	ePn	Pn	21 21 18.5	-0.2
PIEI	Pieia	2.99	185	P	Pn	21 21 20.4	+1.3
PIEI				AML	AML		
	comp=E,21µm,0.4s						
PIEI				AML	AML		
	comp=N,14µm,1.5s						
GUT	Gutenstein	2.99	303	P	Pn	21 21 21.6	+2.5
MMUR	Monte Murano	3.07	178	S	Sb	21 22 06.0	+2.0
TRE1	Treia	3.22	174	S	Sb	21 22 07.0	-1.1
SLE	Schleitheim	3.24	294	P	Pn	21 21 24.7	+2.2
TREC	Trest	3.29	31	ePN	Pn	21 21 25.0	+1.7
MORI	Morici	3.32	142	ePn	Pn	21 21 24.7	+1.0
SULZ	Cheisacher	3.41	289	P	Pn	21 21 27.2	+2.3
ZIRJ	Zirje	3.47	144	ePn	Pn	21 21 26.3	+0.6
ZIRJ				Sn	Sn	21 22 08.1	+1.5
KRUC	Moravsky	3.49	42	ePN	Pn	21 21 28.4	+2.5
KRUC				eSG	Sg	21 22 19.8	-4.1
EMBD	Embd, Matterta	3.50	267	P	Pn	21 21 30.1	+3.9
KIJV	Kijevo	3.54	134	ePn	Pn	21 21 28.0	+1.3
FELD	Feldberg im Sc	3.58	294	P	Pn	21 21 29.4	+2.0
FELD	Feldberg im Sc	3.58	294	S	Sn	21 22 12.4	+2.7
BALST	Balsthal	3.64	285	P	Pn	21 21 30.0	+2.0
PRU	Pruhonice	3.65	17	ePG	Pg	21 21 40.1	-1.8
PRU				eSG	Sg	21 22 27.8	-1.4
	comp=N,17nm,0.6s						
KIZ	Kirchzarten	3.67	295	P	Pn	21 21 30.3	+1.9
NKC	Novy Kostel	3.73	356	eSG	Sg	21 22 30.9	-0.8
	comp=N,11nm,0.4s						
OPP	Oppenau	3.74	304	P	Pn	21 21 31.7	+2.3
VRAC	Vranov	3.75	41	eSG	Sg	21 22 30.8	-1.7
BOURR	Bourrignon	3.96	285	P	Pn	21 21 34.5	+2.0
BOURR	Bourrignon	3.96	285	S	Sn	21 22 21.9	+3.1
AIGLE	Aigle	4.09	270	P	Pn	21 21 36.9	+2.6
PVCC	Panska Ves	4.17	15	eSG	Sg	21 22 45.2	-0.7
	comp=N,9.8nm,0.4s						
WLS	Welschbruch	4.19	299	P	Pn	21 21 37.9	+2.2
HVAR	Hvar	4.20	141	ePn	Pn	21 21 35.6	-0.1
ECH	Echery	4.24	296	P	Pn	21 21 38.1	+1.9
ECH				S	Sn	21 22 28.1	+2.5
CDF	Champ du Feu	4.24	299	ePn	Pn	21 21 36.6	+0.3
CDF	Champ du Feu	4.24	299	eP	Pb	21 21 41.8	-4.6
CDF				eSn	Sn	21 22 25.8	0.0
	comp=N,3.4nm,0.5s						

RICI	Ricice	4.28	133	ePn	Pn	21 21 37.3	+0.5
HINF	Hinteralfeld	4.30	290	ePn	Pn	21 21 38.6	+1.4
HINF	Hinteralfeld	4.30	290	eP	Pn	21 21 42.2	+5.0
HINF				eSn	Sn	21 22 28.2	+0.9
	comp=N,7.4nm,0.3s						
CHMF	Charmoille	4.32	282	P	Pn	21 21 39.2	+1.8
CHMF				S	Sn	21 22 30.0	+2.2
MAKA	Makarska	4.37	136	ePn	Pn	21 21 37.3	-0.7
LPG	La Plagne	4.38	259	ePn	Pn	21 21 37.7	-0.7
LPG	La Plagne	4.38	259	eP	Pn	21 21 43.5	+5.1
BRANT	Les Verrieres	4.42	278	P	Pn	21 21 40.3	+1.5
BRG	Berggiesshubel	4.42	9	Pg	Pg	21 21 55.4	-1.2
BRG				Amp		21 22 02.0	
	comp=Z,2.1nm,0.6s						
BRG	Berggiesshubel	4.42	9	Sg	Sg	21 22 53.3	-0.4
BRG				Amp		21 23 03.8	
	comp=Z,7.5nm,0.6s						
DPC	Dobruska-Polom	4.47	30	eSG	Sg	21 22 52.9	-2.6
	comp=Z,6.3nm,0.5s						
UPC	Upice	4.51	26	eSG	Sg	21 22 54.6	-2.0
	comp=Z,5.9nm,0.5s						
MORC	Moravsky Berou	4.52	42	eSG	Sg	21 22 54.3	-2.8
CHVC	Chvalec	4.59	26	eSG	Sg	21 22 57.0	-2.3
MBDF	Montbardon	4.63	250	ePn	Pn	21 21 42.0	+0.2
SBF	Sospel	4.66	237	ePn	Pn	21 21 41.9	-0.3
SBF	Sospel	4.66	237	eP	Pn	21 21 46.2	+4.0
SBF				eSn	Sn	21 22 35.4	-0.8
	comp=Z,1.2nm,0.2s						
CABF	La Chapelle	4.68	274	ePn	Pn	21 21 43.9	+1.6
CABF	La Chapelle	4.68	274	eP	Pn	21 21 47.7	+5.4
HAU	Haudompre	4.68	291	ePn	Pn	21 21 43.9	+1.6
HAU				eSn	Sn	21 22 36.8	+0.3
	comp=Z,13nm,0.4s						
CLL	Collm	4.80	1	ePn	Pn	21 21 43.0	-0.9
CLL				i Pn(2)		21 21 48.0	
CLL				ePg	Pg	21 22 05.0	+1.2
CLL				eSg	Sg	21 23 05.0	-0.9
	comp=Z,8.0nm,0.9s						
PGF	Pioggiola	4.83	216	eP	Pn	21 21 48.4	+3.9
PGF				eSn	Sn	21 22 38.4	-2.0
	comp=Z,1.4nm,0.4s						
ABH	Alteburg	4.90	315	P	Pn	21 21 48.3	+3.0
MIDA	Miranda	4.97	168	⇑P	Pn	21 21 49.1	+2.7
STON	Ston	5.01	135	ePn	Pn	21 21 48.2	+1.4
ORIF	Oris-en-Rattie	5.14	254	ePn	Pn	21 21 51.1	+2.3
ORIF	Oris-en-Rattie	5.14	254	eP	Pn	21 21 54.0	+5.2
FRF	La Foret Royal	5.30	238	ePn	Pn	21 21 52.1	+1.2
FRF	La Foret Royal	5.30	238	eP	Pn	21 21 56.1	+5.2
LMR	La Mourre	5.52	237	ePn	Pn	21 21 54.0	+0.2
LMR				eSn	Sn	21 22 55.2	-2.0
	comp=Z,0.6nm,0.3s						
SFTF	Sexfontaines	5.58	290	ePn	Pn	21 21 56.1	+1.4
	baz=110						
SFTF	Sexfontaines	5.58	290	eP	Pn	21 22 01.2	+6.5
SMRF	Simiane la Rot	5.74	246	eP	Pn	21 22 01.7	+4.8
LOR	Lormes	6.22	280	ePn	Pn	21 22 04.4	+0.9
	baz=99						
LOR	Lormes	6.22	280	eP	Pn	21 22 09.0	+5.5
LOR				eSn	Sn	21 23 13.7	-0.7
	comp=Z,2.7nm,0.4s						
SMF	Signal de Mont	6.22	274	ePn	Pn	21 22 04.8	+1.3
SMF	Signal de Mont	6.22	274	eP	Pn	21 22 09.6	+6.1
SMF				eSn	Sn	21 23 13.9	-0.6
	comp=Z,3.1nm,0.5s						
SSF	Saint Saulge	6.45	278	ePn	Pn	21 22 07.8	+1.2
AVF	Avril sur Loir	6.55	276	ePn	Pn	21 22 09.4	+1.4
AVF	Avril sur Loir	6.55	276	eP	Pn	21 22 13.3	+5.3
LASF	Ste Croix	6.80	252	ePn	Pn	21 22 12.9	+1.4
BGF	Bois d'Agland	6.91	274	ePn	Pn	21 22 14.6	+1.6
BGF	Bois d'Agland	6.91	274	eP	Pn	21 22 18.6	+5.6
BGF				eSn	Sn	21 23 30.1	-1.3
	comp=Z,4.9nm,0.4s						
TCF	Toulx Ste Croi	7.37	272	ePn	Pn	21 22 20.8	+1.5
TCF	Toulx Ste Croi	7.37	272	eP	Pn	21 22 25.7	+6.4
TCF				eSn	Sn	21 23 41.3	-1.5
	comp=Z,0.2nm,0.2s						
CAF	Calviac	7.72	262	ePn	Pn	21 22 25.5	+1.4

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*JMA **11** 21:24:59.4±0.2, 35.°68N×140.°00E, h67^{km}±2^{km}, M2.6*
*IDC **11** 21:25:01.9±4.0, 35.°05N×138.°90E, h60^{km}±50^{km}, mb3.0/2, mb1 3.2/2, mb1mx2.7/41, mbtmp3.3/2, Error ellipse: s-maj=78.4km s-min=37.7km az=59.0*
ISC 11 21:24:59.5±1.1**, 35.°60N**±0.°09×**139.°97E**±0.°07**, h70**^{km}**, n9, σ0^{s}78**/12**, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCN	Nagara	0.26	134	P	Pn	21 25 10.9	+0.5
JCN				eS	Sn	21 25 19.9	+1.6
JSMT	Sammumatsuo	0.39	84	P	Pn	21 25 11.2	-0.1
JOD2	Odawara 2	0.80	245	P	Pn	21 25 15.5	0.0
JOD2				eS	Sn	21 25 27.5	+0.1
JAG	Ashikaga	0.92	333	P	Pn	21 25 16.6	-0.4
JRY	Ryogami san	0.96	296	P	Pn	21 25 18.2	+0.7
MJAR	Matsushiro Arr	1.71	304	P	Pn	21 25 27.2	0.0
	1.4nm,0.3s,baz=159,slow=13,SNR=53						
MAT	Matsushiro	1.71	304	P	Pn	21 25 27.9	+0.7
MAT				S	Sn	21 25 48.9	+0.6
MKAR	Makanchi Array	43.91	303	P	P	21 32 59.2	+0.1
	0.2nm,0.6s,baz=81,slow=8.2,SNR=1.8						
WRA	Warramunga Arr	55.50	186	P	P	21 34 26.1	-1.2
	0.2nm,0.5s,baz=0.4,slow=7.3,SNR=7.7						

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*NEIC **11** 21:31:55.6±1.2, 25.°01N±0.°06×121.°85E±0.°05, h133^{km}±4^{km}, mb4.2/30, Error ellipse: s-maj=9.4km s-min=7.3km az=183.0*
*IDC **11** 21:31:55.6±2.6, 24.°97N×121.°90E, h138^{km}±25^{km}, mb3.6/18, mb1 3.7/20, mb1mx3.5/55, mbtmp4.0/20, MS2.4/1, Ms1 2.4/1, ms1mx2.1/37, Error ellipse: s-maj=16.7km s-min=10.6km az=72.0*
*JMA **11** 21:31:56.1±0.2, 24.°89N×121.°81E, h132^{km}±2^{km}, M3.8*
*TAP **11** 21:31:56.2, 24.°99N×121.°85E, h133^{km}, ML4.6, B*
*NIED **11** 21:31:56.1, 24.°89N×121.°81E, h132^{km}, MW4.1, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}0.83; $M_{\theta\theta}$-0.05; $M_{\phi\phi}$-0.79; $M_{r\theta}$0.22; $M_{\theta\phi}$0.03; $M_{\phi r}$-1.29; Fault plane solution: $M_0$1.54000×10^{15} NP1: ϕ_s171.00000°, δ74.00000°, λ87.00000°. NP2: ϕ_s2.00000°, δ16.00000°, λ101.00000°.*
ISC 11 21:31:55.7±0.5**, 25.°01N**±0.°03×**121.°81E**±0.°02**, h140**^{km}±4^{km}**, n208, σ0^{s}93**/329**, mb4.0**/32**, 31C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIPB	Shuangxi	0.04	154	⇑iP	Pn	21 32 14.2	-0.4
	baz=226						
TIPB				S	Sn	21 32 27.2	-1.6
	baz=226						
NWF	Wu-fen Shan	0.07	340	⇑iP	Pn	21 32 14.2	-0.4
	baz=328						
NWF				i S	Sn	21 32 28.0	-1.1
	baz=328						
WFSB	Wu-fen Shan	0.07	340	P	Pn	21 32 14.1	-0.5
	baz=327						
WFSB				eS	Sn	21 32 28.1	-0.8
	baz=327						
NTC	Toucheng	0.15	172	eP	Pn	21 32 14.3	-0.4
	baz=182						
NTC				eS	Sn	21 32 28.1	-0.8
	baz=182						
TWB1	Santiao Chiao	0.17	90	eP	Pn	21 32 14.3	-0.3
	baz=97						
TWB1				eS	Sn	21 32 27.8	-1.2
	baz=97						
TWA	Mucha	0.20	262	⇑iP	Pn	21 32 14.6	-0.1
	baz=282						
TWA				i S	Sn	21 32 28.3	-0.8
	baz=282						
NHY	Taipei	0.22	278	eP	Pn	21 32 14.7	-0.1
	baz=295						
NHY				eS	Sn	21 32 28.5	-0.7
	baz=295						
ILA	Ilan	0.25	192	P	Pn	21 32 14.7	-0.2
	baz=199						
ILA				S	Sn	21 32 29.4	0.0
	baz=199						
YM01	YM01	0.26	303	P	Pn	21 32 14.7	-0.2
	baz=311						
YM01				eS	Sn	21 32 28.1	-1.4
	baz=311						
NHDH	Xindian Distri	0.26	260	⇑iP	Pn	21 32 14.8	-0.1
	baz=254						
NHDH				S	Sn	21 32 27.9	-1.5
	baz=254						
TAP1	Taipei	0.26	277	eP	Pn	21 32 14.7	-0.1
	baz=285						
TAP1				eS	Sn	21 32 28.2	-1.1
	baz=285						
YM08	YM08	0.27	312	eP	Pn	21 32 14.3	-0.6
	baz=306						
TAP	Taipei	0.27	277	P	Pn	21 32 14.7	-0.2
	baz=285						
TAP				S	Sn	21 32 28.7	-0.7
	baz=285						
TATO	Taipei	0.29	264	eP	Pn	21 32 14.7	-0.2
	baz=259						
TATO				eS	Sn	21 32 28.3	-1.2
	baz=259						
TATO	Taipei	0.29	264	Pn	Pn	21 32 14.7	-0.2
TATO				Sn	Sn	21 32 28.4	-1.2
TWE	Neicheng	0.31	204	⇑iP	Pn	21 32 15.0	-0.1
	baz=209						
TWE				i S	Sn	21 32 29.6	-0.1
	baz=209						
ANP	Anpu	0.32	304	eP	Pn	21 32 14.7	-0.5
	baz=304						
TWY	Chenhua	0.33	325	⇑P	Pn	21 32 15.0	-0.1
	baz=320						
TWY				S	Sn	21 32 28.5	-1.3
	baz=320						
BACT	New Taipei Cit	0.33	268	eP	Pn	21 32 15.0	0.0
	baz=263						
NSM	Shimen	0.34	325	eP	Pn	21 32 15.2	0.0
	baz=322						
NWLT	Wulai	0.36	230	⇑iP	Pn	21 32 14.8	-0.5
	baz=228						
NWLT				S	Sn	21 32 28.6	-1.4
	baz=228						
NTST	Danshui	0.36	296	eP	Pn	21 32 15.1	-0.1
	baz=296						
TWS1	Kuangyinshan	0.36	285	eP	Pn	21 32 15.0	-0.2
	baz=287						
TWS1				eS	Sn	21 32 29.2	-0.8
	baz=287						
NDS	Dongshan	0.38	192	P	Pn	21 32 15.8	+0.4
	baz=213						
NDS				S	Sn	21 32 30.9	+0.7
	baz=213						
TWC	Suao	0.40	174	P	Pn	21 32 15.3	-0.1
	baz=168						
TWC				S	Sn	21 32 29.2	-1.1
	baz=168						
ENTT	Nioudou	0.43	211	⇑iP	Pn	21 32 15.4	-0.2
	baz=225						
ENTT				S	Sn	21 32 29.1	-1.5
	baz=225						
NTY	Taoyuan	0.46	269	eP	Pn	21 32 15.6	-0.1
	baz=264						
NTY				eS	Sn	21 32 30.1	-0.6
	baz=264						
NDT	Datong Townshi	0.48	214	⇑iP	Pn	21 32 15.7	-0.2
	baz=227						
NDT				S	Sn	21 32 29.0	-2.0
	baz=227						
YHNB	Yeheng	0.52	229	Pn	Pn	21 32 15.5	-0.6
YHNB				Sn	Sn	21 32 29.4	-2.0
YHNB	Yeheng	0.52	229	P	Pn	21 32 15.5	-0.6
NSK	Sanguang	0.52	231	⇑iP	Pn	21 32 15.7	-0.5
	baz=235						
NSK				i S	Sn	21 32 29.8	-1.8
	baz=235						
EWUT	Wuta	0.56	183	P	Pn	21 32 16.6	+0.4
	baz=176						
EWUT				S	Sn	21 32 31.8	0.0
	baz=176						
NCU	National Centr	0.56	266	⇑iP	Pn	21 32 16.4	+0.1
	baz=262						
NCU				i S	Sn	21 32 31.2	-0.5
	baz=262						
NCUH	Zhongli	0.56	266	P	Pn	21 32 16.4	+0.2
	baz=262						
NCUH				eS	Sn	21 32 30.6	-1.2
	baz=262						
ENA	Nanau	0.58	186	P	Pn	21 32 16.4	0.0
	baz=179						
ENA				S	Sn	21 32 32.2	+0.2
	baz=179						
PCYT	Pengchaiyu	0.66	21	eP	Pn	21 32 16.8	0.0
	baz=16						
NNS	Nan Shan	0.69	215	⇑iP	Pn	21 32 17.1	-0.1
	baz=220						
NNS				S	Sn	21 32 32.8	-0.7
	baz=220						
SBCB	Hsinchu	0.78	254	P	Pn	21 32 17.9	+0.2
	baz=256						
SBCB				eS	Sn	21 32 32.8	-1.5
	baz=256						
HSN	Hsinchu	0.79	255	⇑iP	Pn	21 32 17.7	-0.1
	baz=258						
HSN				S	Sn	21 32 33.2	-1.2
	baz=258						
LIOB	Emei	0.80	244	⇑iP	Pn	21 32 18.0	+0.1
	baz=249						
LIOB				eS	Sn	21 32 33.2	-1.5
	baz=249						
NSTT	Nanjuang	0.82	243	⇑iP	Pn	21 32 18.0	0.0
	baz=249						
NSTT				i S	Sn	21 32 33.9	-1.0
	baz=249						
ETLH	Xiulin Townshi	0.85	200	P	Pn	21 32 18.0	-0.4
	baz=209						
ETLH				S	Sn	21 32 34.5	-1.0
	baz=209						
NACB	Ninganchiao	0.85	193	⇑iP	Pn	21 32 17.3	-1.0
	baz=204						
NACB				S	Sn	21 32 33.9	-1.5
	baz=204						
NACB	Ninganchiao	0.85	193	Pn	Pn	21 32 17.1	-1.2
NACB				Sn	Sn	21 32 34.0	-1.5
ETL	Fush Village	0.86	191	eP	Pn	21 32 17.6	-0.8
	baz=202						
FUSS	Fushou	0.91	214	⇑iP	Pn	21 32 19.5	+0.4
	baz=211						
FUSS				S	Sn	21 32 36.5	-0.2
	baz=211						
TWD	Chiawan	0.94	192	⇑iP	Pn	21 32 18.1	-1.0
	baz=203						
TWD				S	Sn	21 32 35.0	-1.8
	baz=203						
TWT	Tachien	0.94	218	P	Pn	21 32 19.8	+0.5
	baz=227						
TWT				S	Sn	21 32 36.9	-0.2
	baz=227						
TDCB	Techi	0.95	218	P	Pn	21 32 19.6	+0.3
	baz=228						
TDCB				eS	Sn	21 32 36.2	-1.0
	baz=228						
WHF	Hehuan Shan	0.99	210	⇑iP	Pn	21 32 20.3	+0.3
	baz=209						
WHF				i S	Sn	21 32 37.7	-0.6
	baz=209						
NMLH	Miaoli	1.03	243	eP	Pn	21 32 19.9	+0.1
	baz=245						
NMLH				eS	Sn	21 32 37.7	-0.5
	baz=245						
HWA	Hwalien	1.04	190	eP	Pn	21 32 19.3	-0.6
	baz=200						
HWA				eS	Sn	21 32 38.1	-0.2
	baz=200						
WHP	Taichung City	1.07	227	⇑iP	Pn	21 32 20.6	+0.3
	baz=224						
WHP				S	Sn	21 32 37.9	-1.0
	baz=224						
CHGB	Renai	1.10	212	⇑iP	Pn	21 32 21.3	+0.6
	baz=219						
CHGB				S	Sn	21 32 39.6	-0.1
	baz=219						
NSY	Sanyi	1.12	238	⇑iP	Pn	21 32 21.1	+0.5
	baz=240						
NSY				S	Sn	21 32 39.5	-0.1
	baz=240						
TWQ1	Liyutan	1.15	235	P	Pn	21 32 21.0	+0.1
	baz=237						
TWQ1				S	Sn	21 32 39.0	-1.0
	baz=237						
JYNG	Yonagunijimaku	1.17	118	P	Pn	21 32 20.8	-0.3
JYNG				S	Sn	21 32 38.5	-1.9
OWD	Renai	1.20	209	P	Pn	21 32 22.1	+0.5
	baz=217						
OWD				S	Sn	21 32 40.6	-0.6
	baz=217						
YOJ	Yonaguni jima	1.22	116	eP	Pn	21 32 21.1	-0.5
	baz=122						
YOJ				eS	Sn	21 32 39.5	-1.8
	baz=122						
YOJ	Yonaguni jima	1.22	116	P	Pn	21 32 21.3	-0.3
YOJ				S	Sn	21 32 39.7	-1.6
YOJ	Yonaguni jima	1.22	116		Pn	21 32 21.2	-0.3
YOJ				Sn	Sn	21 32 39.7	-1.6
YOJ	Yonaguni jima	1.22	116	P	Pn	21 32 21.3	-0.3
WDJ	Dajia District	1.25	238	eP	Pn	21 32 22.2	+0.3
	baz=235						
WDJ				eS	Sn	21 32 41.0	-0.8
	baz=235						
WCS	Beigang Elemen	1.25	221	eP	Pn	21 32 22.1	+0.2
	baz=228						
WCS				eS	Sn	21 32 40.8	-1.0
	baz=228						
TCU	Taichung	1.34	230	eP	Pn	21 32 23.0	+0.2
	baz=232						
TCU				eS	Sn	21 32 43.0	-0.5
	baz=232						
EGFH	Guangfu	1.38	195	eP	Pn	21 32 22.1	-1.1
	baz=196						
EGFH				eS	Sn	21 32 41.7	-2.5
	baz=196						
VWDT	VWDT	1.39	206	P	Pn	21 32 23.9	+0.6
	baz=213						
VWDT				S	Sn	21 32 44.8	+0.5
	baz=213						
SMLT	Sun Moon Lake	1.39	217	⇑iP	Pn	21 32 23.8	+0.3
	baz=219						
SMLT				i S	Sn	21 32 44.1	-0.6
	baz=219						
TYC	Yuchr	1.40	218	⇑iP	Pn	21 32 23.8	+0.3
	baz=220						
TYC				i S	Sn	21 32 44.2	-0.4
	baz=220						
SSLB	Suanglung	1.44	213	⇑iP	Pn	21 32 24.2	+0.3
	baz=222						
SSLB				i S	Sn	21 32 44.5	-0.9
	baz=222						
SSLB	Suanglung	1.44	213	Pn	Pn	21 32 24.1	+0.2
SSLB				Sn	Sn	21 32 44.6	-0.9
SSLB	Suanglung	1.44	213	P	Pn	21 32 24.1	+0.2
WNT	Mingjian	1.52	223	⇑P	Pn	21 32 25.2	+0.4
	baz=230						
WNT				S	Sn	21 32 46.5	-0.4
	baz=230						
WJS	Zhushan	1.54	220	eP	Pn	21 32 25.1	+0.2
	baz=229						
WJS				eS	Sn	21 32 47.1	-0.1
	baz=229						
HGSD	Ruisui	1.55	193	P	Pn	21 32 24.9	-0.2
	baz=195						
HGSD				S	Sn	21 32 47.5	0.0
	baz=195						
EHY	Hungye	1.56	197	eP	Pn	21 32 24.0	-1.2
	baz=190						
EHY				eS	Sn	21 32 46.3	-1.4
	baz=190						
WHYT	Xinyi Township	1.57	214	eP	Pn	21 32 25.8	+0.4
	baz=221						
WHYT				eS	Sn	21 32 47.6	-0.3
	baz=221						
YULB	Yu-li	1.67	196	eP	Pn	21 32 25.3	-1.2
	baz=191						
YULB				eS	Sn	21 32 48.0	-2.1
	baz=191						
YULB	Yu-li	1.67	196	Pn	Pn	21 32 25.2	-1.3
YULB				Sn	Sn	21 32 47.9	-2.1
WRL	Guolierlin Hig	1.71	230	eP	Pn	21 32 26.8	0.0
	baz=227						
WRL				eS	Sn	21 32 49.9	-0.6
	baz=227						
CHN5	Tsauling	1.74	216	⇑iP	Pn	21 32 27.6	+0.2
	baz=226						
CHN5				S	Sn	21 32 51.3	-0.1
	baz=226						
ALS	Alishan	1.75	212	⇑iP	Pn	21 32 28.0	+0.3
	baz=214						
ALS				S	Sn	21 32 51.7	-0.3
	baz=214						
WDLH	Douliu	1.75	222	eP	Pn	21 32 27.7	+0.4
	baz=224						
WDLH				eS	Sn	21 32 51.3	-0.2
	baz=224						
WTK	Tuku	1.84	225	eP	Pn	21 32 28.6	+0.2
	baz=220						
WTK				eS	Sn	21 32 52.6	-0.8
	baz=220						
FULB	Fuli	1.86	195	eP	Pn	21 32 28.7	0.0
	baz=197						
FULB				eS	Sn	21 32 54.3	+0.4
	baz=197						
IRIF	Iriomote-Funau	1.87	111	P	Pn	21 32 28.3	-0.4
IRIF				eS	Sn	21 32 52.9	-1.1
CHN2	Minshiung	1.91	220	eP	Pn	21 32 29.5	+0.4
	baz=227						
CHN2				eS	Sn	21 32 54.9	+0.2
	baz=227						
CHKT	Chengkung	1.94	192	P	Pn	21 32 29.4	-0.2
	baz=185						
CHKT				S	Sn	21 32 54.6	-0.9
	baz=185						
ELDTW	Lidau	1.95	202	P	Pn	21 32 30.0	+0.2
	baz=204						
ELDTW				S	Sn	21 32 56.5	+0.7
	baz=204						
CHY	Chiayi	1.96	220	eP	Pn	21 32 30.1	+0.3
	baz=227						
CHY				eS	Sn	21 32 55.6	-0.2
	baz=227						
WSF	Szhu	1.99	227	eP	Pn	21 32 30.1	+0.1
	baz=222						
WSF				S	Sn	21 32 55.9	-0.5
	baz=222						
TPUB	Ta-pu	2.01	213	eP	Pn	21 32 30.4	0.0
	baz=215						
TPUB				eS	Sn	21 32 55.8	-1.2
	baz=215						
TPUB	Ta-pu	2.01	213	Pn	Pn	21 32 30.4	0.0
TPUB				Sn	Sn	21 32 56.0	-1.0
TPUB	Ta-pu	2.01	213	P	Pn	21 32 30.5	+0.1
MATB	Ma-tsu	2.03	305	eP	Pn	21 32 30.3	-0.2
	baz=303						
HATJ	Hateruma jima	2.05	117	P	Pn	21 32 30.8	0.0
HATJ				S	Sn	21 32 57.1	-0.6
STYH	Taoyuan	2.06	207	eP	Pn	21 32 31.1	+0.2
	baz=210						
STYH				eS	Sn	21 32 56.8	-1.1
	baz=210						
WTP	Ta-pu	2.06	212	⇑iP	Pn	21 32 31.2	+0.1
	baz=213						
WTP				S	Sn	21 32 57.4	-0.8
	baz=213						
EDH	Donghe	2.08	193	eP	Pn	21 32 31.0	-0.1
	baz=187						
EDH				eS	Sn	21 32 57.7	-0.7
	baz=187						
TWK	Hsinying	2.11	215	⇑iP	Pn	21 32 31.7	+0.1
	baz=217						
TWK				S	Sn	21 32 58.7	-0.5
	baz=217						
SNST	Tainan City	2.15	214	eP	Pn	21 32 32.2	+0.2
	baz=216						
SNST				eS	Sn	21 32 59.1	-0.7
	baz=216						
JKRS	Kuro-shima	2.15	110	P	Pn	21 32 32.0	0.0
JKRS				eS	Sn	21 32 59.0	-0.8
ICHU	Yijhu	2.15	221	eP	Pn	21 32 32.1	0.0
	baz=223						
ICHU				eS	Sn	21 32 59.6	-0.3
	baz=223						
CHN1	Nanshi	2.16	213	⇑iP	Pn	21 32 32.3	+0.1
	baz=215						
CHN1				i S	Sn	21 32 59.5	-0.6
	baz=215						
LONT	Longtian	2.18	197	eP	Pn	21 32 32.1	-0.4
	baz=190						
LONT				eS	Sn	21 32 59.0	-1.6
	baz=190						
CHN8	Yiju	2.20	222	eP	Pn	21 32 31.8	-0.9
	baz=223						
CHN8				eS	Sn	21 33 01.0	0.0
	baz=223						

SGST	**Jiashian**	**2.22**	**211**	P	**Pn**	**21 32 32.2**	**-0.7**
	baz=218						
SGST				S	**Sn**	**21 33 00.1**	**-1.4**
	baz=218						
JIJ	**Ishigaki jima**	**2.22**	**106**	P	**Pn**	**21 32 32.6**	**-0.3**
JIJ				S	**Sn**	**21 32 59.8**	**-1.6**
TWG	**Pinlang**	**2.28**	**197**	P	**Pn**	**21 32 32.9**	**-0.8**
	baz=191						
TWG				*e*S	**Sn**	**21 33 00.8**	**-1.9**
	baz=191						
TWG	**Pinlang**	**2.28**	**197**	Pn	**Pn**	**21 32 32.6**	**-1.0**
TWG				Sn	**Sn**	**21 33 00.6**	**-2.1**
TWGBT	**Beinan**	**2.28**	**197**	*e*P	**Pn**	**21 32 33.1**	**-0.5**
	baz=191						
TWGBT				*e*S	**Sn**	**21 33 00.4**	**-2.4**
	baz=191						
JISG	**Ishigakijimahi**	**2.31**	**100**	P	**Pn**	**21 32 33.9**	**-0.1**
JISG				*e*S	**Sn**	**21 33 02.8**	**-0.6**
LDUT	**Ludao**	**2.34**	**188**	*e*P	**Pn**	**21 32 33.9**	**-0.6**
	baz=181						
LDUT				*e*S	**Sn**	**21 33 02.7**	**-1.5**
	baz=181						
LYJJ	**Jianjiangzhen**	**2.40**	**310**	*e*P	**Pn**	**21 32 34.9**	**-0.2**
	baz=309						
XPSS	**Dashiqiu**	**2.41**	**323**	*e*P	**Pn**	**21 32 34.9**	**-0.3**
	baz=323						
PTMZ	**Houxiangcun**	**2.44**	**271**	*e*P	**Pn**	**21 32 35.3**	**-0.2**
	baz=270						
SSD	**Sandimen**	**2.50**	**206**	*e*P	**Pn**	**21 32 36.8**	**+0.5**
	baz=208						
SSD				*e*S	**Sn**	**21 33 07.0**	**-0.5**
	baz=208						
PNG	**Penghu**	**2.50**	**236**	*e*P	**Pn**	**21 32 36.4**	**0.0**
	baz=236						
PNG				*e*S	**Sn**	**21 33 06.2**	**-1.6**
	baz=236						
TWM1	**Shoushan**	**2.52**	**210**	*e*P	**Pn**	**21 32 36.5**	**-0.1**
	baz=212						
ECL	**Taimali**	**2.52**	**198**	*e*P	**Pn**	**21 32 36.0**	**-0.7**
	baz=193						
PHUB	**P'eng-hu**	**2.52**	**234**	*e*P	**Pn**	**21 32 35.9**	**-0.7**
	baz=235						
PHUB				*e*S	**Sn**	**21 33 05.9**	**-2.2**
	baz=235						
TSMG	**Majia**	**2.53**	**205**	*e*P	**Pn**	**21 32 37.1**	**+0.4**
	baz=208						
TSMG				*e*S	**Sn**	**21 33 06.4**	**-1.9**
	baz=208						
MASBT	**Mashibuluo**	**2.62**	**204**	*e*P	**Pn**	**21 32 38.1**	**+0.3**
	baz=207						
MASBT				*e*S	**Sn**	**21 33 08.6**	**-1.6**
	baz=207						
JTJ	**Tarama**	**2.66**	**97**	P	**Pn**	**21 32 38.5**	**+0.2**
JTJ				S	**Sn**	**21 33 10.1**	**-1.0**
MHZQ	**Yeshan**	**2.73**	**294**	*e*P	**Pn**	**21 32 38.8**	**-0.5**
	baz=292						
EAST	**Anshuo**	**2.76**	**199**	*e*P	**Pn**	**21 32 39.4**	**-0.3**
	baz=193						
EAST				*e*S	**Sn**	**21 33 14.3**	**+0.8**
	baz=193						
VCHM	**Qimei**	**2.81**	**231**	*e*P	**Pn**	**21 32 39.8**	**-0.5**
	baz=232						
VCHM				*e*S	**Sn**	**21 33 13.5**	**-1.2**
	baz=232						
SCZT	**Fangliau**	**2.84**	**203**	*e*P	**Pn**	**21 32 40.6**	**-0.1**
	baz=205						
SCZT				*e*S	**Sn**	**21 33 14.0**	**-1.4**
	baz=205						
QZH	**Quanzhou**	**2.92**	**269**	Pn	**Pn**	**21 32 37.9**	**-3.7**
QZH				Sn	**Sn**	**21 33 11.5**	**-5.5**
QZH				smax	smax		
	comp=N,140nm,0.6s						
QZH				smax	smax		
	comp=E,73nm,0.7s						
SLIU	**Shizi**	**2.93**	**199**	*e*P	**Pn**	**21 32 41.7**	**-0.1**
	baz=202						
SLIU				*e*S	**Sn**	**21 33 16.9**	**-0.4**
	baz=202						
LAY	**Lan-yu**	**2.96**	**185**	*e*P	**Pn**	**21 32 41.6**	**-0.7**
	baz=181						
JIRB	**Irabujima**	**3.06**	**93**	P	**Pn**	**21 32 43.7**	**+0.2**
JIRB				*e*S	**Sn**	**21 33 18.9**	**-1.4**
JIKM	**Ikemajima**	**3.12**	**91**	P	**Pn**	**21 32 45.2**	**+0.9**
JIKM				S	**Sn**	**21 33 21.4**	**-0.4**
KNM	**Kinmen**	**3.12**	**260**	*e*P	**Pn**	**21 32 45.5**	**+1.3**
	baz=258						
KNMB	**Chin-men Tao**	**3.15**	**261**	*e*P	**Pn**	**21 32 43.8**	**-0.9**
	baz=259						
KNMB	**Chin-men Tao**	**3.15**	**261**	Pn	**Pn**	**21 32 44.4**	**-0.2**
JMJ	**Miyako jima 2**	**3.17**	**93**	P	**Pn**	**21 32 46.1**	**+1.2**
TWK1	**Hengchun**	**3.19**	**197**	*e*P	**Pn**	**21 32 44.9**	**-0.2**
	baz=199						
TWK1				*e*S	**Sn**	**21 33 22.6**	**-0.6**
	baz=199						
TWKBT	**Hengchun**	**3.19**	**197**	*e*P	**Pn**	**21 32 45.1**	**-0.1**
	baz=200						
TWKBT				*e*S	**Sn**	**21 33 22.8**	**-0.5**
	baz=200						
JMJ2	**Miyako jima3**	**3.21**	**94**	P	**Pn**	**21 32 45.9**	**+0.5**
JMJ2				S	**Sn**	**21 33 23.1**	**-0.6**
JOGS	**Gusukube**	**3.28**	**94**	P	**Pn**	**21 32 47.1**	**+0.8**
JOGS				S	**Sn**	**21 33 25.0**	**-0.3**
AXDP	**Jialang**	**3.48**	**269**	*e*P	**Pn**	**21 32 49.0**	**+0.1**
	baz=266						
JOW	**Kunigami**	**6.10**	**71**	P	**Pn**	**21 33 22.4**	**-1.2**
	comp=E,4.9nm,0.3s,baz=117,slow=24,SNR=24						
JOW				S	**Sn**	**21 34 29.5**	**-2.9**
	comp=E,5.0nm,0.3s,baz=130,slow=27,SNR=6.3						
JOW	**Kunigami**	**6.10**	**71**		**Pn**	**21 33 22.1**	**-1.5**
JOW	**Kunigami**	**6.10**	**71**	P	**Pn**	**21 33 22.4**	**-1.3**
KSRS	**Korea Array**	**13.46**	**21**	P	**Pn**	**21 35 03.2**	**+2.1**
	comp=E,0.4nm,0.3s,baz=198,slow=12,SNR=16						
KSRS				LR	LR	21 40 22.0	
	comp=E,16nm,21.4s,baz=158,slow=38						
JHS	**Saijyo**	**13.96**	**42**	Pn	**Pn**	**21 35 07.9**	**+0.4**
MJAR	**Matsushiro Arr**	**18.16**	**47**	P	**P**	**21 35 57.2**	**-0.3**
	comp=E,0.1nm,0.3s,baz=243,slow=8.6,SNR=6.5						
USRK	**Ussuriysk Ar.**	**20.87**	**21**	P	**P**	**21 36 27.4**	**+0.8**
	comp=E,2.7nm,0.5s,baz=203,slow=8.3,SNR=8.2						
USRK	**Ussuriysk Ar.**	**20.87**	**21**	P	**P**	**21 36 26.2**	**-0.4**
CHTO	**Chiang Mai**	**22.07**	**258**	P	**P**	**21 36 40.3**	**+0.6**
CMAR	**Chiang Mai Arr**	**22.20**	**257**	P	**P**	**21 36 42.9**	**+1.9**
	comp=E,1.1nm,0.7s,baz=60,slow=7.8,SNR=12						
CMAR	**Chiang Mai Arr**	**22.20**	**257**	P	**P**	**21 36 42.5**	**+1.6**
KLR	**Kul'dur**	**25.40**	**15**	P	**P**	**21 37 11.0**	**+0.9**
	comp=E,3.8nm,0.6s,baz=218,slow=7.6,SNR=12						
ASAJ	**Asahikawa**	**25.50**	**36**	P	**P**	**21 37 11.8**	**+0.8**
	comp=E,4.2nm,0.9s,baz=239,slow=18,SNR=1.1						
ULN	**Ulaanbaatar**	**25.63**	**337**	P	**P**	**21 37 13.1**	**+0.8**
ULN				IAmb	IAmb	21 37 14.0	
	comp=Z,2.9nm,0.7s						
SONM	**Songino Array**	**25.84**	**336**	P	**P**	**21 37 15.0**	**+0.8**
	comp=Z,1.5nm,0.7s,baz=154,slow=10,SNR=11						
SONM	**Songino Array**	**25.84**	**336**	P	**P**	**21 37 14.7**	**+0.5**
FAKI	**Fak Fak**	**29.55**	**158**	P	**P**	**21 37 46.9**	**-0.5**
FAKI				IAmb	IAmb	21 38 08.7	
	comp=Z,7.1nm,0.9s						
MK31	**Makanchi Array**	**38.15**	**315**	P	**P**	**21 39 01.1**	**-0.3**
MKAR	**Makanchi Array**	**38.15**	**315**	P	**P**	**21 39 02.4**	**+1.0**
	comp=Z,1.3nm,0.6s,baz=102,slow=9.9,SNR=16						
MKAR	**Makanchi Array**	**38.15**	**315**	P	**P**	**21 39 01.8**	**+0.4**
MAKZ	**Makanchi**	**38.36**	**315**	P	**P**	**21 39 04.1**	**+1.0**
MAKZ				IAmb	IAmb	21 39 30.0	
	comp=Z,7.7nm,1.5s						
ZAA0	**Zalesovo Array**	**39.87**	**326**	P	**P**	**21 39 14.9**	**-0.6**
ZAA0				IAmb	IAmb	21 39 15.7	
	comp=Z,1.7nm,0.6s						
ZALV	**Zalesovo Beam**	**39.87**	**326**	P	**P**	**21 39 15.4**	**-0.1**
	comp=Z,1.3nm,0.4s,baz=119,slow=8.3,SNR=7.1						
ZALV	**Zalesovo Beam**	**39.87**	**326**	P	**P**	**21 39 15.1**	**-0.4**
KURK	**Kurchatov**	**41.83**	**319**	P	**P**	**21 39 32.2**	**+0.6**
FITZ	**Fitzroy Crossi**	**43.01**	**175**	P	**P**	**21 39 40.1**	**-1.3**
	comp=Z,2.5nm,0.8s,baz=21,slow=8.6,SNR=1.9						
WB0	**Warramunga Arr**	**46.16**	**163**	P	**P**	**21 40 05.9**	**-0.5**
WB0				IAmb	IAmb	21 40 07.0	
	comp=Z,8.3nm,1.1s						
WRA	**Warramunga Arr**	**46.31**	**164**	P	**P**	**21 40 07.4**	**-0.3**
	comp=Z,2.5nm,0.6s,baz=347,slow=8.9,SNR=28						
WRA				PcP	**PcP**	**21 41 40.1**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=349,slow=3.6,SNR=5.3						
WRA	**Warramunga Arr**	**46.31**	**164**	P	**P**	**21 40 07.4**	**-0.3**
TIXI	**Tiksi**	**46.84**	**3**	P	**P**	**21 40 10.9**	**-0.2**
TIXI				IAmb	IAmb	21 40 11.6	
	comp=Z,7.2nm,1.2s						
BRVK	**Borovoye**	**47.47**	**320**	P	**P**	**21 40 16.7**	**+0.4**
BRVK				IAmb	IAmb	21 40 19.4	
	comp=Z,2.4nm,0.8s						
AS31	**Alice Springs**	**49.79**	**165**	P	**P**	**21 40 33.7**	**-0.6**
ASAR	**Alice Springs**	**49.79**	**165**	P	**P**	**21 40 34.8**	**+0.4**
	comp=Z,0.8nm,0.4s,baz=350,slow=6.7,SNR=16						
ASAR				PcP	**PcP**	**21 41 51.4**	**-1.8**
	comp=Z,0.7nm,0.6s,baz=351,slow=3.7,SNR=6.6						
ASAR	**Alice Springs**	**49.79**	**165**	P	**P**	**21 40 34.1**	**-0.2**
ABKAR	**Akbulak array**	**53.28**	**314**	P	**P**	**21 41 00.5**	**+0.5**
ABKAR	**Akbulak array**	**53.28**	**314**	P	**P**	**21 41 00.5**	**+0.5**
ABKAR				IAmb	IAmb	21 41 02.3	
	comp=Z,1.6nm,0.6s						
TARA	**Tarawa**	**54.60**	**107**	P	**P**	**21 41 08.6**	**-1.5**
ARU	**Arti**	**54.80**	**323**	P	**P**	**21 41 10.9**	**+0.1**
ARU				IAmb	IAmb	21 41 28.8	
	comp=Z,5.0nm,1.3s						
STKA	**Stephens Creek**	**59.64**	**160**	P	**P**	**21 41 45.0**	**-0.1**
	comp=Z,0.8nm,0.5s,baz=297,slow=6.8,SNR=3.2						
STKA	**Stephens Creek**	**59.64**	**160**	P	**P**	**21 41 44.8**	**-0.3**
STKA				IAmb	IAmb	21 42 12.5	
	comp=Z,1.5nm,1.4s						
TTA	**Tatalina**	**64.51**	**30**	P	**P**	**21 42 17.2**	**-0.2**
L19K	**White Mountain**	**65.12**	**31**	P	**P**	**21 42 22.3**	**+1.0**
IMAR	**Indian Mountai**	**65.19**	**27**	P	**P**	**21 42 22.0**	**+0.3**
J20K	**Nowinta River**	**65.22**	**29**	P	**P**	**21 42 22.9**	**+1.0**
K20K	**Telida**	**65.35**	**30**	P	**P**	**21 42 23.7**	**+1.0**
K20K				IAmb	IAmb	21 42 42.7	
	comp=Z,4.0nm,1.2s						
MLY	**Manley**	**66.56**	**28**	P	**P**	**21 42 31.1**	**+0.6**
MLY				IAmb	IAmb	21 42 54.0	
	comp=Z,3.3nm,1.4s						
BPAW	**Bear Paw Mtn.**	**66.60**	**29**	P	**P**	**21 42 30.9**	**+0.1**
BPAW				IAmb	IAmb	21 42 46.6	
	comp=Z,3.1nm,1.4s						
ILAR	**Eielson Array**	**68.22**	**27**	P	**P**	**21 42 42.3**	**+1.4**
	comp=Z,0.6nm,0.7s,baz=271,slow=7.4,SNR=6.6						
ILAR	**Eielson Array**	**68.22**	**27**	P	**P**	**21 42 41.6**	**+0.7**
BMAR	**Burnt Mountain**	**68.55**	**24**	P	**P**	**21 42 44.1**	**+1.1**
SCM	**Sheep Creek Mo**	**68.68**	**31**	P	**P**	**21 42 44.1**	**+0.2**
ARCES	**ARCESS Array B**	**68.99**	**338**	P	**P**	**21 42 45.9**	**+0.3**
	comp=Z,2.4nm,0.8s,baz=29,slow=2.8,SNR=6.6						
M24K	**Tolsona, Glenn**	**69.15**	**30**	P	**P**	**21 42 47.1**	**+0.4**
KLU	**Klutina**	**69.41**	**31**	P	**P**	**21 42 48.6**	**+0.2**
BCAR	**Beaver Creek A**	**70.84**	**29**	P	**P**	**21 42 58.1**	**+1.1**
FIA1	**FINESS Array S**	**71.02**	**330**	P	**P**	**21 42 58.4**	**+0.3**
FINES	**FINESS Array B**	**71.02**	**330**	P	**P**	**21 42 58.5**	**+0.4**
	comp=Z,3.4nm,0.5s,baz=57,slow=6.1,SNR=43						
FINES	**FINESS Array B**	**71.02**	**330**	P	**P**	**21 42 58.3**	**+0.2**
AKASG	**Malin Array Be**	**72.64**	**318**	P	**P**	**21 43 07.5**	**-0.4**
	comp=Z,1.8nm,0.6s,baz=56,slow=6.6,SNR=5.6						
BRTR	**Keskin Array B**	**73.14**	**306**	P	**P**	**21 43 11.5**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=77,slow=6.5,SNR=3.6						
CSS	**Mathiatis**	**74.95**	**302**	P	**P**	**21 43 22.4**	**+0.6**
CSS				IAmb	IAmb	21 43 37.9	
	comp=Z,8.1nm,1.3s						
BUR08	**Bucovina Ar. S**	**76.16**	**316**	P	**P**	**21 43 29.1**	**+0.6**
BUR08				IAmb	IAmb	21 43 37.5	
	comp=Z,5.1nm,1.5s						
BURAR	**Bucovina Array**	**76.17**	**316**	P	**P**	**21 43 29.4**	**+0.8**
NOA	**NORSAR Array B**	**77.76**	**332**	P	**P**	**21 43 36.4**	**-0.8**
	comp=Z,0.3nm,0.6s,baz=42,slow=6.7,SNR=1.8						
GERES	**GERESS Array B**	**82.57**	**321**	P	**P**	**21 44 04.2**	**+1.0**
	comp=Z,0.3nm,0.5s,baz=66,slow=5.9,SNR=1.9						
ITM	**Ithomi**	**82.61**	**307**	P	**P**	**21 44 02.6**	**-1.0**
ITM				IAmb	IAmb	21 44 10.5	
	comp=Z,6.4nm,1.1s						

IDC ***11*** *21:35:51.0±1.2, 6°.67N×94°.37E, h0^{km}, mb3.6/8, mb1 3.8/10, mb1mx3.5/51, mbtmp3.6/10, ML3.7/2, MS3.1/5, Ms1 3.2/5, ms1mx2.8/39, Error ellipse: s-maj=49.9km s-min=19.8km az=56.0*

ISC 11 21:35:56.7±1.0,**6°.8N**±0°.1×**94°.4E**±0°.2,**h35**^{km}**,n16,** σ**1**^{s}**.00**/10,**mb3.6**/8,**Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	**Prapat**	**5.95**	**131**	Pn	**Pn**	**21 37 23.3**	**+0.8**
	0.5nm,0.3s,baz=306,slow=13,SNR=3.9						
CMAR	**Chiang Mai Arr**	**12.45**	**20**	Pn	**Pn**	**21 38 51.5**	**+0.1**
	0.3nm,0.3s,baz=213,slow=13,SNR=2.7						
CMAR				LR	LR	21 42 48.6	
	comp=Z,66nm,21.9s,baz=210,slow=33						
PALK	**Pallekele**	**13.63**	**273**	LR	LR	21 42 36.6	
	comp=Z,22nm,21.6s,baz=207,slow=30						
LEM	**Lembang**	**18.84**	**135**	LR	LR	21 48 41.1	
	comp=Z,109nm,20.7s,baz=330,slow=41						
H08S3	**Diego Garcia H**	**26.13**	**237**	T	T	22 08 13.0	
	baz=57,slow=75,SNR=10						
H08S2	**Diego Garcia H**	**26.13**	**237**	T	T	22 08 08.1	
	baz=57,slow=75,SNR=8.1						
H08S1	**Diego Carcia H**	**26.15**	**237**	T	T	22 08 13.1	
	baz=57,slow=75,SNR=5.0						
MKAR	**Makanchi Array**	**41.24**	**347**	P	**P**	**21 43 37.5**	**-0.9**
	0.7nm,0.6s,baz=178,slow=9.3,SNR=5.8						
SONM	**Songino Array**	**42.20**	**12**	P	**P**	**21 43 47.2**	**+0.9**
	0.3nm,0.6s,baz=187,slow=5.8,SNR=2.8						
WRA	**Warramunga Arr**	**47.38**	**125**	P	**P**	**21 44 26.3**	**-1.5**
	0.7nm,1.0s,baz=300,slow=9.6,SNR=3.4						
WRA				LR	LR	22 06 59.0	
	comp=Z,23nm,19.9s,baz=175,slow=39						
ZALV	**Zalesovo Beam**	**47.70**	**352**	P	**P**	**21 44 29.3**	**-0.5**
	0.4nm,0.4s,baz=134,slow=11,SNR=2.5						
ASAR	**Alice Springs**	**48.98**	**129**	P	**P**	**21 44 39.5**	**-0.7**
	0.5nm,0.9s,baz=309,slow=7.9,SNR=5.3						
FINES	**FINESS Array B**	**73.84**	**332**	P	**P**	**21 47 26.8**	**-0.7**
	2.1nm,0.9s,baz=131,slow=7.8,SNR=3.5						
GERES	**GERESS Array B**	**78.85**	**318**	P	**P**	**21 47 56.8**	**+0.4**
	0.2nm,0.5s,baz=84,slow=4.0,SNR=2.5						
VNDA	**Vanda**	**91.77**	**168**	LR	LR	22 28 23.9	
	comp=Z,34nm,18.9s,baz=357,slow=34						
ESDC	**Sonseca Array**	**92.16**	**310**	P	**P**	**21 49 04.0**	**+1.0**
	0.1nm,0.3s,baz=61,slow=6.1,SNR=3.8						

BJI ***11*** *22:17:54.2±0.0, 1°.21N×127°.66E, h99^{km}, mB5.1/42, mb5.3/75*

KLM ***11*** *22:17:58, 1°.82N×127°.49E, h89^{km}, mb5.1*

MOS ***11*** *22:17:59.9±0.8, 1°.53N×127°.27E, h124^{km}, mb5.1/35, Error ellipse: s-maj=8.7km s-min=4.6km az=118.3*

DJA ***11*** *22:17:59.7±0.2, 2°N±2°×12°7E±°, h101^{km}±2^{km}, M5.1/102, mB5.6/67, mb5.3/102, MLv5.4/19, Mw(mB)5.0/67, MwMwp4.8/2, Mwp5.2/2*

NEIC ***11*** *22:17:59.5±1.2, 1°.55N±0°.06×127°.29E±0°.07, h97^{km}±4^{km}, mb5.2/111, Error ellipse: s-maj=10.4km s-min=8.3km az=58.0*

IDC ***11*** *22:18:00.4±1.1, 1°.49N×127°.30E, h112^{km}±9^{km}, mb4.6/35, mb1 4.7/41, mb1mx4.6/48, mbtmp5.0/41, MS3.5/12, Ms1 3.5/12, ms1mx3.2/39, Error ellipse: s-maj=11.5km s-min=6.5km az=68.0*

GCMT ***11*** *22:18:01.5±0.2, 1°.56N±0°.02×127°.27E±0°.02, h120^{km}±3^{km}, MW5.0/88, Moment Tensor Solution. s44,c53; s88,c131; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.39±.13; M$_{\theta\theta}$1.13±.13; M$_{\phi\phi}$-1.52±.16; M$_{r\theta}$-1.10±.08; M$_{\theta\phi}$0.55±.14; M$_{\phi r}$-3.01±.10; Best double couple: M$_{0}$3.50600×10^{16} NP1:φ$_{s}$304.00000°,δ22.00000°,λ12.00000°. NP2: φ$_{s}$202.00000°,δ85.00000°,λ112.00000°. Principal axes: T 3.2800, Plg45.0000°, Azm134.0000°; N 0.4540, Plg22.0000°, Azm21.0000°; P -3.7310, Plg37.0000°, Azm273.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 11 22:17:59.6±0.3,**1°.50N**±0°.03×**127°.24E**±0°.04,**h106**^{km}±2^{km}, **h106**^{km}**:pP-P,n513,**σ**1**^{s}**.26**/560,**mb5.2**/165,**42C-74D,Fault plane solution: NP1:**φ$_{s}$276.34946°,δ49.80353°, λ-7.98029°. **NP2:**φ$_{s}$11.51951°,δ83.91261°,λ-139.52844°. **Principal axes:** T Plg22.4197°, Azm137.1037°; N Plg49.1512°, Azm18.6043°; P Plg32.0974°, Azm242.1014°; **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.73**	**170**	P	**Pn**	**22 18 18.3**	**+0.4**
TNTI				S	**Sn**	**22 18 32.4**	**+0.9**
TNTI	**Ternate**	**0.73**	**170**		**Pn**	**22 18 18.1**	**+0.2**
TNTI				Sn	**Sn**	**22 18 32.4**	**+0.9**
TNTI	**Ternate**	**0.73**	**170**	P	**Pn**	**22 18 18.3**	**+0.4**
LBMI	**Labuha**	**2.14**	**173**	P	**Pn**	**22 18 35.9**	**+1.7**
SGSI	**Sangihe**	**2.77**	**322**	P	**Pn**	**22 18 42.0**	**-0.4**
KMSI	**Cibinong**	**3.39**	**254**	P	**Pn**	**22 18 52.2**	**+1.5**
SANI	**Sanana**	**3.74**	**200**	P	**Pn**	**22 18 55.8**	**+0.4**
SANI	**Sanana**	**3.74**	**200**	P	**Pn**	**22 18 55.9**	**+0.5**
GTOI	**Gorontalo**	**4.32**	**259**	P	**Pn**	**22 19 05.9**	**+2.7**
SWI	**Sorong**	**4.65**	**120**	P	**Pn**	**22 19 08.3**	**+0.6**
SWI	**Sorong**	**4.65**	**120**	P	**Pn**	**22 19 08.0**	**+0.3**
SIJI	**Sorong**	**4.66**	**120**	P	**Pn**	**22 19 07.3**	**-0.5**
	6.3nm,0.3s,baz=317,slow=10,SNR=42						
SIJI				S	Sn	22 19 47.2	-14
	2.9nm,0.3s,baz=346,slow=14,SNR=3.6						
MSAI	**Masohi**	**5.10**	**161**	P	**Pn**	**22 19 17.6**	**+3.9**
	0.5nm2μm137nm,0.6s						
LUWI	**Luwuk**	**5.13**	**241**	P	**Pn**	**22 19 14.5**	**+0.3**
	29nm14μm934nm,0.6s						
LUWI	**Luwuk**	**5.13**	**241**		**Pn**	**22 19 14.3**	**+0.1**
LUWI	**Luwuk**	**5.13**	**241**	P	**Pn**	**22 19 15.5**	**+1.3**
MRSI	**Marisa**	**5.40**	**259**	P	**Pn**	**22 19 19.0**	**+1.2**
	5.3nm17μm2μm,0.7s						
DAV	**Davao City (W)**	**5.78**	**343**	P	**Pn**	**22 19 23.2**	**+0.2**
	26nm,0.3s,baz=48,slow=2.3,SNR=5.4						
DAV				S	**Sn**	**22 20 31.7**	**+3.7**
	116nm,0.3s,baz=65,slow=23,SNR=12						
DAV	**Davao City (W)**	**5.78**	**343**	Pn	**Pn**	**22 19 22.2**	**-0.8**
KCP	**Kidapawan**	**5.88**	**339**	⇓*i*P	**Pn**	**22 19 24.4**	**0.0**
KCP				*i* S	**Sn**	**22 20 30.8**	**+0.3**
APSI	**Ampana**	**6.08**	**247**	P	**Pn**	**22 19 27.9**	**+0.8**
	5.8nm8μm944nm,0.8s						
TOLI2	**Tolitoli**	**6.47**	**267**	Pn	**Pn**	**22 19 32.9**	**+0.5**
TOLI2	**Tolitoli**	**6.47**	**267**	P	**Pn**	**22 19 33.5**	**+1.1**
FAKI	**Fak Fak**	**6.66**	**131**	P	**Pn**	**22 19 35.9**	**+1.0**
	0.4nm1μm139nm,0.9s						
FAKI	**Fak Fak**	**6.66**	**131**	Pn	**Pn**	**22 19 35.0**	**+0.1**
FAKI	**Fak Fak**	**6.66**	**131**	P	**Pn**	**22 19 35.2**	**+0.3**
KDI	**Kendari**	**7.12**	**220**	P	**Pn**	**22 19 43.3**	**+2.1**
MPSI	**Mapaga**	**7.43**	**261**	P	**Pn**	**22 19 47.2**	**+1.8**
	0.7nm2μm228nm,0.7s						
TTSI	**Tana Toraja**	**8.69**	**239**	P	**Pn**	**22 20 03.3**	**+0.9**
	11μm1μm,0.8s						
TBP	**Tagbilaran**	**8.81**	**338**	*i* P	**Pn**	**22 20 02.6**	**-1.5**
TBP				*i* S	Sn	22 21 50.7	+9.0
SPSI	**Sidrap Palu**	**9.23**	**234**	P	**Pn**	**22 20 11.7**	**+1.8**
	8μm1μm,0.7s						
BAKI	**Biak**	**9.26**	**107**	P	**Pn**	**22 20 12.8**	**+2.6**
	6μm393nm,1.2s						
BKSI	**Bulukumba**	**9.82**	**226**	P	**Pn**	**22 20 20.6**	**+2.7**
	3μm268nm,0.6s						
SGKI	**Sangatta, Kali**	**9.85**	**258**	P	**Pn**	**22 20 18.2**	**0.0**
	4μm296nm,0.6s						
KAPI	**Kappang**	**9.89**	**229**	P	**Pn**	**22 20 20.4**	**+1.5**
	9.7nm,0.3s,baz=57,slow=5.8,SNR=15						
KAPI				S	**Sn**	**22 22 06.6**	**-1.4**
	22nm,0.3s,baz=225,slow=23,SNR=11						
KAPI	**Kappang**	**9.89**	**229**	P	**Pn**	**22 20 21.0**	**+2.2**
KAPI	**Kappang**	**9.89**	**229**		**Pn**	**22 20 19.6**	**+0.8**
KAPI	**Kappang**	**9.89**	**229**	P	**Pn**	**22 20 21.0**	**+2.2**
BSSI	**Bau Bau, Buton**	**10.15**	**222**	P	**Pn**	**22 20 24.8**	**+2.4**
	1μm105nm,0.5s						
SMKI	**Samarinda**	**10.22**	**259**	P	**Pn**	**22 20 24.6**	**+1.3**
	305nm,0.7s						
SAUI	**Saumlaki**	**10.25**	**157**	P	**Pn**	**22 20 24.1**	**+0.4**
	6μm620nm,0.8s						
SAUI	**Saumlaki**	**10.25**	**157**	Pn	**Pn**	**22 20 23.6**	**-0.1**
RCP	**Roxas**	**10.95**	**336**	⇓*e*P	**Pn**	**22 20 34.5**	**+1.3**
MMRI	**Maumere**	**11.23**	**206**	P	P	22 20 42.1	-4.9
	91nm,0.9s						
MMRI	**Maumere**	**11.23**	**206**		**Pn**	**22 20 38.6**	**+1.5**
SOEI	**Soe**	**11.56**	**195**	Pn	**Pn**	**22 20 44.3**	**+2.7**
EDFI	**Ende, Flores**	**11.59**	**208**	P	**Pn**	**22 20 43.6**	**+1.8**
	690nm82nm,0.9s						
SMPI	**Sarmi**	**11.98**	**107**	P	**Pn**	**22 20 49.9**	**+3.0**
	911nm38nm,1.6s						
KBKI	**Kotabaru**	**12.05**	**247**	P	**Pn**	**22 20 48.7**	**+0.8**
	145nm,0.8s						
BATI	**Baumata**	**12.16**	**197**	P	**Pn**	**22 20 52.0**	**+2.6**
	3.4nm,0.3s,baz=354,slow=18,SNR=8.9						
BATI				LR	LR	22 26 10.0	
	comp=Z,160nm,20.7s,baz=21,slow=40						
BATI	**Baumata**	**12.16**	**197**	P	**Pn**	**22 20 52.9**	**+3.5**
	708nm48nm,1.0s						
MTKI	**Muara Teweh, K**	**12.58**	**259**	P	**Pn**	**22 20 55.7**	**+0.8**
	2μm107nm,1.0s						
WSI	**Waingapu**	**13.07**	**212**	P	**Pn**	**22 21 03.3**	**+2.0**
	29μm724nm,0.8s						
BBKI	**Banjar Baru**	**13.34**	**248**	P	**Pn**	**22 21 06.5**	**+1.6**
	14μm112nm,1.1s						
LQP	**Lukban**	**13.74**	**336**	*e*P	**Pn**	**22 21 10.0**	**-0.3**
PLAI	**Plampang**	**13.94**	**222**	P	**P**	**22 21 16.4**	**-0.8**
	3μm388nm,1.1s						
JAY	**Jayapura**	**14.04**	**106**	P	**Pn**	**22 21 14.6**	**+0.7**
	0.9nm,0.3s,baz=280,slow=6.4,SNR=21						
TWSI	**Taliwang, Sumb**	**14.49**	**225**	P	**P**	**22 21 22.5**	**-0.9**
	2μm190nm,0.9s						
MTN	**Manton Dam**	**14.76**	**165**	P	**Pn**	**22 21 21.8**	**-1.4**
	baz=15,SNR=8.1						
MTN	**Manton Dam**	**14.76**	**165**	Pn	**Pn**	**22 21 22.1**	**-1.0**
SRBI	**Singaraja**	**15.31**	**231**	P	**P**	**22 21 34.0**	**+1.5**
	4μm369nm,1.2s						
DNP	**Denpasar**	**15.68**	**230**	P	**P**	**22 21 40.7**	**+4.1**
	19μm1μm,1.2s						
KMMI	**Kalianget**	**15.73**	**237**	P	**P**	**22 21 37.6**	**+0.4**
	8μm768nm,1.0s						
IGBI	**Denpasar**	**15.82**	**229**	P	**P**	**22 21 40.9**	**+2.7**
	3μm350nm,1.4s						
STKI	**Sintang**	**15.83**	**265**	P	**P**	**22 21 37.8**	**-0.4**
	3μm49nm,0.7s						
ABJI	**Asem Bagus**	**15.92**	**234**	P	**P**	**22 21 41.9**	**+2.6**
	8μm263nm,1.5s						
PBKI	**Pangkalan Bun**	**16.12**	**255**	P	**Pn**	**22 21 39.3**	**-0.9**
	3μm219nm,0.9s						
JAGI	**Jajag, Banyuwa**	**16.38**	**233**	P	**P**	**22 21 46.6**	**+2.2**
	4μm361nm,1.1s						
JAGI	**Jajag, Banyuwa**	**16.38**	**233**	P	**P**	**22 21 45.5**	**+1.1**
JAGI				IAmb	IAmb	22 21 50.7	
	comp=Z,296nm,1.0s						
BLJI	**Banyuglugur**	**16.42**	**236**	P	**P**	**22 21 46.8**	**+2.0**
	comp=Z,2μmcomp=Z,249nm,0.9s						
MMPI	**Merauke**	**16.42**	**127**	P	**P**	**22 21 48.2**	**+3.4**
GMJI	**Gumukmas**	**16.84**	**235**	P	**P**	**22 21 52.3**	**+2.9**
	comp=Z,3μmcomp=Z,265nm,1.2s						
KNRA	**Kununurra**	**17.13**	**175**	P	**Pn**	**22 21 52.3**	**-0.3**
	baz=17,SNR=12						
KNRA	**Kununurra**	**17.13**	**175**		**Pn**	**22 21 52.1**	**-0.5**
KNRA				IAmb	IAmb	22 22 11.0	
	comp=Z,68nm,0.7s						
NGJI	**Ngawi**	**18.04**	**241**	P	**Pn**	**22 22 06.8**	**+3.2**
	comp=Z,1μmcomp=Z,154nm,0.9s						
PCJI	**Pacitan**	**18.69**	**239**	P	**Pn**	**22 22 12.6**	**+1.3**
	comp=Z,5μmcomp=Z,504nm,1.4s						
SMRI	**Semarang**	**18.79**	**243**	P	**Pn**	**22 22 12.4**	**-0.2**
	comp=Z,285nm,0.9s						
SMRI	**Semarang**	**18.79**	**243**	P	**Pn**	**22 22 11.9**	**-0.7**
UGM	**Wanagama**	**19.12**	**240**	P	**Pn**	**22 22 17.6**	**+1.2**
	comp=Z,4μmcomp=Z,399nm,1.0s						
UGM	**Wanagama**	**19.12**	**240**	P	**Pn**	**22 22 16.9**	**+0.5**
YOGI	**Yogyakarta**	**19.27**	**241**	P	**Pn**	**22 22 18.5**	**+0.3**
	comp=Z,6μmcomp=Z,564nm,0.9s						
FITZ	**Fitzroy Crossi**	**19.54**	**185**	P	**P**	**22 22 18.7**	**-0.2**
	comp=Z,2.7nm,0.3s,baz=14,slow=8.9,SNR=45						
FITZ				S	**S**	**22 25 48.3**	**-5.7**
	baz=266,slow=13						
KPJI	**Karang Pucung**	**20.27**	**244**	P	Pn	22 22 28.6	-1.2
	comp=Z,3μmcomp=Z,392nm,0.9s						
MANU	**Manus Island**	**20.43**	**100**	P	**P**	**22 22 28.0**	**-0.6**
JCJI	**Jatiwangi**	**20.53**	**247**	P	Pn	22 22 32.9	0.0
CMJI	**Cimerak**	**20.89**	**244**	P	**P**	**22 22 33.2**	**-0.4**
	comp=Z,2μmcomp=Z,240nm,1.0s						
GUMO	**Guam**	**21.18**	**55**	LR	LR	22 29 42.4	
	comp=Z,126nm,21.1s,baz=246,slow=33						
LEM	**Lembang**	**21.26**	**247**	P	**P**	**22 22 38.6**	**+0.8**
	comp=Z,290nm,0.8s,baz=44,slow=7.9,SNR=41						
LEM	**Lembang**	**21.26**	**247**	P	**P**	**22 22 40.1**	**+2.3**
	comp=Z,2μmcomp=Z,224nm,0.9s						
PPBI	**Pangkal Pinang**	**21.41**	**260**	P	**P**	**22 22 39.8**	**+0.6**
	comp=Z,5μmcomp=Z,233nm,1.0s						
CBJI	**Citeko**	**21.82**	**249**	P	**P**	**22 22 45.8**	**+2.2**
	comp=Z,6μmcomp=Z,452nm,0.9s						
CNJI	**Cibinong**	**21.89**	**246**	P	**P**	**22 22 45.3**	**+1.0**
	comp=Z,5μmcomp=Z,768nm,1.0s						
DBJI	**Dramaga**	**21.96**	**248**	P	**P**	**22 22 47.2**	**+2.1**
	comp=Z,9μmcomp=Z,333nm,1.2s						
COEN	**Coen**	**22.02**	**135**	P	**P**	**22 22 44.0**	**-1.6**
TWG	**Pinlang**	**22.03**	**345**	P	**P**	**22 22 43.0**	**-2.7**
TWG				IAmb	IAmb	22 22 46.5	
	comp=Z,73nm,0.8s						
WB0	**Warramunga Arr**	**22.27**	**162**	P	**P**	**22 22 47.2**	**-1.0**
WB0				IAmb	IAmb	22 22 49.8	
	comp=Z,147nm,0.9s						
SBJI	**Serang**	**22.40**	**250**	P	**P**	**22 22 52.5**	**+2.9**

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       comp=Z,6µmcomp=Z,531nm,1.4s
WRAB  Tennant Creek      22.41 162c iP    P      22 22 48.6 -1.0
WRAB                               pmax  pmax
       comp=Z,156nm,1.0s
WRA   Warramunga Arr     22.41 162   P    P      22 22 48.8 -1.0
       comp=Z,136nm,0.7s,baz=343,slow=9.9,SNR=342
WRA                                  S    S      22 26 45.8 -2.9
       comp=Z,19nm,1.0s,baz=338,slow=15,SNR=8.8
WRA                                  ScP  ScP    22 30 08.2 -0.7
       comp=Z,4.5nm,0.9s,baz=347,slow=3.4,SNR=5.6
WRA   Warramunga Arr     22.41 162  iP    P      22 22 48.7 -1.0
WRA                                  pmax pmax
       comp=Z,134nm,0.7s
WRA   Warramunga Arr     22.41 162   P    P      22 22 47.5 -2.2
YULB  Yu-li              22.52 346   P    P      22 22 49.0 -1.7
YULB                                 IAmb IAmb   22 22 57.3
       comp=Z,72nm,0.9s
PMG   Port Moresby       22.60 119   P    P      22 22 51.0 -0.7
       comp=Z,12nm,0.6s,baz=312,slow=8.3,SNR=8.2
PMG   Port Moresby       22.60 119   P    P      22 22 51.0 -0.7
PMG   Port Moresby       22.60 119   P    P      22 22 50.7 -1.0
TPUB  Ta-pu              22.60 344   P    P      22 22 49.7 -1.9
DSRI  Dabo               22.75 265   P    P      22 22 53.6 +0.5
       comp=Z,492nmcomp=Z,31nm,1.4s
PMBI  Palembang          22.89 259   P    P      22 22 57.9 +3.4
       comp=Z,18µmcomp=Z,128nm,0.8s
PMBI  Palembang          22.89 259   P    P      22 22 55.5 +1.0
CGJI  Cibinong           22.97 249   P    P      22 22 56.1 +0.8
       comp=Z,6µmcomp=Z,631nm,1.0s
SSLB  Suanglung          22.98 345   P    P      22 22 54.5 -0.8
SSLB                                 IAmb IAmb   22 22 57.8
       comp=Z,182nm,1.1s
BLSI  Bandar Lampung     23.00 253   P    P      22 22 56.0 +0.3
       comp=Z,5µmcomp=Z,296nm,0.7s
YOJ   Yonaguni jima      23.19 350   P    P      22 22 56.4 -0.9
YOJ                                  pmax pmax
       comp=Z,208nm,1.2s
YOJ   Yonaguni jima      23.19 350   P    P      22 22 56.4 -0.9
YOJ                                  IAmb IAmb   22 23 01.3
       comp=Z,208nm,1.2s
NACB  Ninganchiao        23.20 347   P    P      22 22 56.5 -0.8
KLI   Kotabumi           23.24 254   P    P      22 22 59.8 +1.9
       comp=Z,265nm,0.9s
KLSI                     23.32 255   P    P      22 22 58.7 +0.1
       comp=Z,506nmcomp=Z,78nm,0.9s
MBWA  Marble Bar         23.69 198   P    P      22 23 02.4 +0.6
YHNB  Yeheng             23.73 347   P    P      22 23 02.1 -0.2
YHNB                                 IAmb IAmb   22 23 03.9
       comp=Z,194nm,1.0s
KASI  Kota Agung         23.76 253   P    P      22 23 04.1 +1.5
       comp=Z,1µmcomp=Z,157nm,1.0s
MDSI  Maura Dua          23.80 255   P    P      22 23 03.0 +0.1
       comp=Z,539nmcomp=Z,66nm,0.8s
JMBI  JAMBI              23.80 263   P    P      22 23 06.4 +3.4
       comp=Z,3µmcomp=Z,153nm,0.8s
PSA00 Pilbara Seismi     24.04 197   P    P      22 23 05.3 +0.3
PSA00 Pilbara Seismi     24.04 197   P    P      22 23 04.9 -0.1
PSA00                                IAmb IAmb   22 23 06.9
       comp=Z,27nm,0.9s
LWLI  Liwa               24.05 254   P    P      22 23 06.1 +0.8
       comp=Z,247nm,0.9s
LHSI  Lahat              24.29 257   P    P      22 23 08.7 +1.4
       comp=Z,114nm,0.9s
QIZ   Qiongzhong         24.38 317   P    P      22 23 08.6 +0.5
QIZ                                  sP   sP     22 23 41.3 -1.4
QIZ                                  S    S      22 27 22.3 +2.0
QIZ                                  sS   sS     22 28 02.4 +3.0
QIZ                                  pmax pmax
       comp=Z,120nm,1.0s
QIZ                                  LR   LR
       comp=Z,400nm,19.8s
QIZ                                  LR   LR
       comp=Z,290nm,20.6s
QIZ   Qiongzhong         24.38 317   P    P      22 23 08.1  0.0
QIZ                                  IAmb IAmb   22 23 09.8
       comp=Z,129nm,1.0s
XMIS  Christmas Isla     24.56 241   P    P      22 23 10.1 +0.3
QZH   Quanzhou           24.76 341⇑iP    P      22 23 09.5 -2.0
JRMM  Jerantut           24.85 276   P    P      22 23 14.0 +1.5
MNAI  Manna              24.96 256   P    P      22 23 14.8 +1.4
QIS   Mount Isa          25.04 152   P    P      22 23 14.6 +0.4
       baz=25,SNR=75
KSI   Kapahiang          25.16 258   P    P      22 23 18.0 +2.6
       comp=Z,179nm,0.8s
JOW   Kunigami           25.21   2   P    P      22 23 15.7 +0.1
       comp=Z,30nm,0.9s,baz=213,slow=8.5,SNR=6.4
JOW   Kunigami           25.21   2   P    P      22 23 14.9 -0.7
MASI  Maura Aman, Be     25.41 260   P    P      22 23 19.9 +2.2
       comp=Z,5µmcomp=Z,643nm,0.9s
UBPT  Khong Chiam        25.48 304   P    P      22 23 18.2  0.0
UBPT                                 IAmb IAmb   22 23 20.8
       comp=Z,111nm,0.9s
MTSU  Mount Surprise     25.75 140   P    P      22 23 21.5 +0.9
       baz=26,SNR=26
AS31  Alice Springs      25.84 166   P    P      22 23 20.7 -0.6
ASAR  Alice Springs      25.84 166   P    P      22 23 20.9 -0.4
       comp=Z,26nm,0.6s,baz=351,slow=7.3,SNR=360
ASAR                                 S    S      22 27 42.3 -1.1
       comp=Z,2.8nm,0.7s,baz=345,slow=14,SNR=4.7
ASAR                                 ScP  ScP    22 30 17.9 -0.4
       comp=Z,8.9nm,1.0s,baz=348,slow=2.6,SNR=14
BKNI  Bangkinang         26.23 268   P    P      22 23 27.2 +2.3
       comp=Z,2µmcomp=Z,118nm,1.3s
BKNI  Bangkinang         26.23 268   P    P      22 23 25.4 +0.4
BKNI                                 IAmb IAmb   22 23 30.0
       comp=Z,162nm,1.2s
IPM   Ipoh               26.34 277   P    P      22 23 27.0 +0.9
WRKA  Warakurna          26.40 178   P    P      22 23 26.3  0.0
       baz=27,SNR=131
KULM  Kulim              26.81 279   P    P      22 23 31.0 +0.8
PDSI  Padang             26.89 265   P    P      22 23 30.8 -0.1
       comp=Z,44nm,0.8s
PPI   Padang Panjang     26.91 266   P    P      22 23 32.5 +1.4
       comp=Z,30nm,0.8s
GIRL  Giralia            27.14 207   P    P      22 23 34.9 +1.9
       baz=27,SNR=5.4
GIRL  Giralia            27.14 207   P    P      22 23 34.4 +1.4
MNSI  Mandailing Nat     27.67 269   P    P      22 23 42.4 +4.5
       comp=Z,47nm,0.9s
PSI   Prapat             28.33 273   P    P      22 23 44.0 +0.1
       comp=Z,28nm,0.8s,baz=85,slow=4.2,SNR=39
PSI                                  ScP  ScP    22 30 24.4 -1.8
       comp=Z,1.3nm,0.3s,baz=136,slow=18,SNR=3.5
PSI   Prapat             28.33 273   P    P      22 23 44.0 +0.1
CTA   Charters Tower     28.42 140   P    P      22 23 45.2 +0.8
       comp=Z,17nm,0.8s,baz=321,slow=12,SNR=18
CTA                                  ScP  ScP    22 30 24.8 -1.4
       comp=Z,2.1nm,0.5s,baz=323,slow=5.3,SNR=4.6
CTAO  Charters Tower     28.42 140   P    P      22 23 44.5  0.0
CTAO                                 pmax pmax
       comp=Z,20nm,0.8s
CTAO  Charters Tower     28.42 140   P    P      22 23 44.5  0.0
MEEK  Meekatharra        29.18 196   P    P      22 23 51.5 +0.3
       baz=29,SNR=15
GSI   Gunungsitoli       29.66 270   P    P      22 23 55.2 -0.4
       comp=Z,58nm,0.9s
GSI   Gunungsitoli       29.66 270   P    P      22 23 55.2 -0.4
GSI                                  IAmb IAmb   22 23 56.8
       comp=Z,48nm,0.9s
SLVN  Son La             30.10 313   P    P      22 24 00.1 +0.6
SLVN                                 IAmb IAmb   22 24 02.0
       comp=Z,30nm,1.0s
WHN   Wuhan              31.37 338 ⇓P    P      22 24 11.8 +1.4
WHN                                  pmax pmax
       comp=Z,120nm,1.0s
NJ2   Nanjing            31.41 346 ⇑P    P      22 24 12.7 +2.0
NJ2                                  pmax pmax
       comp=Z,41nm,0.8s
FORT  Forrest            32.11 179   P    P      22 24 16.6 -0.2
       baz=32,SNR=27
FORT  Forrest            32.11 179   P    P      22 24 16.3 -0.5
FORT                                 IAmb IAmb   22 24 19.6
       comp=Z,61nm,0.7s
MORW  Morawa             32.23 199   P    P      22 24 18.8 +0.8
       baz=32,SNR=11
MORW  Morawa             32.23 199   P    P      22 24 17.7 -0.2
QLP   Quilpie            32.38 151   P    P      22 24 19.4 +0.1
       baz=32,SNR=5.3
CM31  Chiang Mai Arr     32.48 303   P    P      22 24 22.0 +1.7
       SNR=15
CM31  Chiang Mai Arr     32.48 303   P    P      22 24 20.0 -0.3
CM31                                 IAmb IAmb   22 24 22.5
       comp=Z,30nm,1.1s
CMAR  Chiang Mai Arr     32.48 303   P    P      22 24 21.1 +0.9
       comp=Z,12nm,1.0s,baz=122,slow=7.4,SNR=76
CMAR                                 PcP  PcP    22 27 06.8 +1.7
       comp=Z,3.1nm,0.9s,baz=187,slow=1.5,SNR=6.0
CMAR                                 ScP  ScP    22 30 39.6 +0.1
       comp=Z,2.6nm,0.9s,baz=144,slow=2.7,SNR=14
CMAR                                 LR   LR     22 38 15.9
       comp=Z,67nm,19.6s,baz=160,slow=37
CMAR  Chiang Mai Arr     32.48 303   P    P      22 24 20.6 +0.3
CMAR                                      ScP    22 30 40.0 +0.5
CHTO  Chiang Mai         32.64 304   P    P      22 24 22.0 +0.3
CHTO                                 pmax pmax
       comp=Z,70nm,1.4s
CHTO  Chiang Mai         32.64 304   P    P      22 24 22.9 +1.1
CHTO  Chiang Mai         32.64 304   P    P      22 24 22.0 +0.3
CHTO                                 IAmb IAmb   22 24 23.8
       comp=Z,70nm,1.4s
ENH   Enshi              33.21 331   P    P      22 24 26.9 +0.3
ENH                                  IAmb IAmb   22 24 29.1
       comp=Z,70nm,1.0s
KMI   Kunming            33.33 317 ⇓P    P      22 24 28.7 +0.8
KMI                                  pP   pwP    22 24 54.3 +0.3
KMI                                  sP   sP     22 25 06.5 +3.7
KMI                                  S    S      22 29 39.3 -1.9
KMI                                  pmax pmax
       comp=Z,47nm,1.5s
KMI                                  pmax pmax
       comp=Z,180nm,3.5s
KMI                                  LR   LR
       comp=Z,140nm,9.0s
KMI                                  LR   LR
       comp=Z,90nm,5.6s
KMI                                  LR   LR
       comp=Z,180nm,19.2s
BLDU  Ballidu            33.47 197   P    P      22 24 29.8 +1.1
       baz=34,SNR=8.1
JHS   Saijyo             33.78   9   P    P      22 24 31.1 -0.3
JHS                                  IAmb IAmb   22 24 33.2
       comp=Z,48nm,1.1s
KLBR  Kellerberrin       34.12 195   P    P      22 24 35.0 +0.6
       baz=34,SNR=20
JWT   Wachi              34.46  12   P    P      22 24 36.7 -0.5
JWT                                  IAmb IAmb   22 24 38.1
       comp=Z,48nm,1.0s
TJN   Taejon             34.71   0⇑eP    P      22 24 39.6 +0.2
INU   Inuyama            34.89  14   P    P      22 24 40.2 -0.7
INU                                  IAmb IAmb   22 24 41.5
       comp=Z,28nm,0.9s
MUN   Mundaring          34.90 197   P    P      22 24 41.5 +0.5
       baz=35,SNR=4.8
BBOO  Buckleboo          35.12 167   P    P      22 24 42.7 -0.4
       baz=35,SNR=113
BBOO  Buckleboo          35.12 167   P    P      22 24 42.6 -0.5
EIDS  Eidsvold           35.30 141   P    P      22 24 44.9 +0.3
       baz=35,SNR=3.6
EIDS  Eidsvold           35.30 141   P    P      22 24 44.4 -0.2
NWAO  Narrogin (SRO)     35.52 195   P    P      22 24 45.9 -0.5
NWAO  Narrogin (SRO)     35.52 195   P    P      22 24 47.3 +0.9
NWAO  Narrogin (SRO)     35.52 195   P    P      22 24 45.9 -0.5
KSAR  Wonju Array Be     35.77   1   P    P      22 24 48.4 -0.1
KSAR  Wonju Array Be     35.77   1   P    P      22 24 48.4 -0.1
KSRS  Korea Array        35.79   1   P    P      22 24 48.8 +0.2
       comp=Z,13nm,0.8s,baz=179,slow=9.9,SNR=34
TIA   Tai'an             35.79 346 ⇓P    P      22 24 49.0 +0.3
TIA                                  pmax pmax
       comp=Z,16nm,0.9s
KS19  Wonju Array Si     35.83   1   P    P      22 24 48.4 -0.7
KS19                                 IAmb IAmb   22 24 49.7
       comp=Z,26nm,0.9s
STKA  Stephens Creek     35.87 159   P    P      22 24 49.5  0.0
       comp=Z,62nm,0.7s,baz=330,slow=9.3,SNR=101
STKA                                 PP   PP     22 26 12.2 -0.9
       comp=Z,13nm,0.7s,baz=341,slow=10,SNR=3.2
STKA                                 LR   LR     22 43 08.8
       comp=Z,94nm,20.1s,baz=21,slow=42
STKA  Stephens Creek     35.87 159   P    P      22 24 49.5  0.0
       baz=36,SNR=48
STKA  Stephens Creek     35.87 159   P    P      22 24 49.2 -0.3
STKA                                 IAmb IAmb   22 24 51.2
       comp=Z,14nm,0.8s
MJAR  Matsushiro Arr     36.32  15   P    P      22 24 51.8 -1.4
       comp=Z,9.6nm,0.9s,baz=182,slow=9.5,SNR=21
MJAR                                 ScP  ScP    22 30 52.2 -0.6
       comp=Z,0.4nm,0.3s,baz=234,slow=3.4,SNR=4.8
MJAR  Matsushiro Arr     36.32  15   P    P      22 24 51.9 -1.3
MJAR                                 pmax pmax
       comp=Z,5.0nm,1.1s
MJAR  Matsushiro Arr     36.32  15   P    P      22 24 51.9 -1.4
MAJO  Matsushiro         36.32  15ceP    P      22 24 51.9 -1.3
MAJO                                 pmax pmax
       comp=Z,30nm,1.2s
MAJO  Matsushiro         36.32  15   P    P      22 24 51.5 -1.7
MAJO                                 IAmb IAmb   22 24 54.2
       comp=Z,35nm,1.2s
MAT   Matsushiro         36.32  15   P    P      22 24 51.3 -1.9
HTT   Hallett            36.44 163   P    P      22 24 54.7 +0.3
       baz=37,SNR=17
XAN   Xi'an              36.63 334   P    P      22 24 56.3 +0.4
XAN                                  pP   pP     22 25 19.2  0.0
XAN                                  PP   PnPn   22 26 25.2 +2.6
XAN                                  S    S      22 30 28.7 -2.6
XAN                                  PcS  PcS    22 31 02.4 -2.6
XAN                                  sS   sS     22 31 10.9 -0.6
XAN                                  SS   SnSn   22 33 09.1 -3.7
XAN                                  ScS  ScS    22 34 58.9 -2.2
XAN                                  pmax pmax
       comp=Z,140nm,1.1s
XAN                                  pmax pmax
       comp=Z,260nm,3.9s
CD2   Chengdu            36.75 325   P    P      22 24 57.0  0.0
CD2                                  pmax pmax
       comp=Z,90nm,1.3s
CMSA  Cobar Meteorol     37.23 153   P    P      22 25 01.5 +0.5
       baz=37,SNR=13
JSD   Sado               37.75  14   P    P      22 25 04.1 -1.1
JSD                                  IAmb IAmb   22 25 05.7
       comp=Z,49nm,1.1s
JMM   Marumori           38.28  17   P    P      22 25 10.2 +0.5
JMM                                  IAmb IAmb   22 25 11.5
       comp=Z,34nm,0.8s
TIY   Taiyuan            38.53 341  eP    P      22 25 13.1 +1.2
TIY                                  pmax pmax
       comp=Z,28nm,0.6s
ARMA  Armidale           39.34 146   P    P      22 25 19.8 +1.0
       baz=39,SNR=7.2
ARMA  Armidale           39.34 146   P    P      22 25 18.7 -0.1
BJT   Baijiatuau         39.64 347   P    P      22 25 21.1  0.0
BJT                                  pmax pmax
       comp=Z,39nm,1.0s
BJT   Baijiatuau         39.64 347   P    P      22 25 21.1  0.0
BJT                                  IAmb IAmb   22 25 22.5
       comp=Z,39nm,1.0s
BJI   Beijing            39.66 347   P    P      22 25 21.4 +0.2
BJI                                  pP   pP     22 25 45.3 +0.5
BJI                                  sP   sP     22 25 57.2 +0.6
BJI                                  S    S      22 31 21.4 +4.7
BJI                                  pmax pmax
       comp=Z,49nm,0.9s
ARPS  Mount Arapiles     40.42 162   P    P      22 25 28.0 +0.5
       baz=40,SNR=19
LZH   Lanzhou            40.68 330 ⇓P    P      22 25 31.6 +1.7
LZH                                  S    S      22 31 32.8 +0.4
LZH                                  pmax pmax
       comp=Z,150nm,1.1s
LZH                                  pmax pmax
       comp=Z,430nm,4.9s
YNG   Young              40.77 153   P    P      22 25 30.9 +0.4
       baz=41,SNR=5.8
MSHR  Mys Shultsa        41.05   4c iP    P      22 25 33.5 +0.9
MSHR                                 pmax pmax
       comp=Z,39nm,1.2s
HHC   Hu-ho-hao-te       41.67 342  eP    P      22 25 38.7 +0.9
HHC                                  pmax pmax
       comp=Z,32nm,1.2s
HHC                                  pmax pmax
       comp=Z,82nm,6.6s
CAN   Canberra           41.90 153   P    P      22 25 41.0 +1.2
CAN                                  pmax pmax
       comp=Z,23nm,0.8s
CAN   Canberra           41.90 153   P    P      22 25 41.0 +1.2
CAN                                  IAmb IAmb   22 25 42.9
       comp=Z,23nm,0.8s
CN2   Changchun          42.15 358  eP    P      22 25 40.8 -0.8
CN2                                  pmax pmax
       comp=Z,10.0nm,1.2s
TOO   Toolangi           42.39 158   P    P      22 25 45.3 +1.7
       baz=42,SNR=6.7
TOO   Toolangi           42.39 158   P    P      22 25 43.6 -0.1
TOO                                  pmax pmax
       comp=Z,80nm,1.8s
TOO   Toolangi           42.39 158   P    P      22 25 43.6 -0.1
TOO                                  IAmb IAmb   22 26 39.4
       comp=Z,80nm,1.8s
USA0B Ussuriysk Arra     42.73   5   P    P      22 25 45.9 -0.4
USA0B                                pmax pmax
       comp=Z,31nm,1.0s
USA0B Ussuriysk Arra     42.73   5   P    P      22 25 45.9 -0.4
USA0B                                IAmb IAmb   22 25 47.9
       comp=Z,30nm,0.9s
USRK  Ussuriysk Ar.      42.73   5   P    P      22 25 46.5 +0.3
       comp=Z,27nm,0.9s,baz=193,slow=7.3,SNR=48
USRK  Ussuriysk Ar.      42.73   5   P    P      22 25 45.7 -0.5
MDJ   Mudanjiang         42.99   2   P    P      22 25 48.4 +0.1
MDJ                                  pmax pmax
       comp=Z,43nm,1.0s
MDJ                                  pmax pmax
       comp=Z,150nm,4.4s
MILA  Mila               43.41 154   P    P      22 25 53.4 +1.4
       baz=44,SNR=3.3
LSA   Lhasa              44.31 313   P    P      22 26 01.6 +1.9
LSA                                  pmax pmax
       comp=Z,200nm,1.3s
LSA   Lhasa              44.31 313   P    P      22 26 01.9 +2.1
LSA   Lhasa              44.31 313   P    P      22 26 00.7 +1.0
LSA                                  pmax pmax
       comp=Z,235nm,1.9s
LSA   Lhasa              44.31 313   P    P      22 26 00.7 +1.0
DZM   Mont Dzumac        44.86 124   P    P      22 26 02.9 -0.9
       comp=Z,8.2nm,1.1s,baz=308,slow=11,SNR=2.8
DZM   Mont Dzumac        44.86 124   P    P      22 26 04.3 +0.6
GTA   Gaotai             45.27 330 ⇓P    P      22 26 07.8 +1.0
GTA                                  pP   pwP    22 26 35.6 +1.9
GTA                                  sP   sP     22 26 47.6 +5.0
GTA                                  PcP  PcP    22 27 46.3 +1.3
GTA                                  ScP  ScP    22 31 28.3 +0.1
GTA                                  ScS  ScS    22 35 52.7 -0.5
GTA                                  pmax pmax
       comp=Z,40nm,1.2s
GTA                                  pmax pmax
       comp=Z,130nm,6.2s
GTA                                  LR   LR
       comp=Z,96nm,15.6s
GTA                                  LR   LR
       comp=Z,120nm,16.0s
GTA                                  LR   LR
       comp=Z,93nm,17.8s
TAPN  Taplejung          45.76 308  eP    P      22 26 12.0 +0.9
       comp=Z,136nm,1.1s
ODAN  Odare              45.79 307  eP    P      22 26 12.2 +0.9
       comp=Z,142nm,0.9s
RAMN  Ramite             46.47 307  eP    P      22 26 17.8 +1.2
       comp=Z,59nm,0.8s
PALK  Pallekele          46.73 279   P    P      22 26 19.2 +0.6
       comp=Z,7.5nm,0.6s,baz=191,slow=5.9,SNR=8.3
PALK  Pallekele          46.73 279   P    P      22 26 19.2 +0.6
PALK  Pallekele          46.73 279   P    P      22 26 18.9 +0.3
PALK                                 IAmb IAmb   22 26 20.0
       comp=Z,54nm,1.7s
JIRN  Jiri               47.11 307  eP    P      22 26 22.6 +0.9
       comp=Z,119nm,0.9s
YSS   Yuzh-Sakhalins     47.25  14  eP    P      22 26 22.1 +0.1
YSS                                  pmax pmax
       comp=Z,20nm,1.0s
YSS   Yuzh-Sakhalins     47.25  14   P    P      22 26 21.9 -0.2
GUN   Gumba              47.46 307  eP    P      22 26 25.3 +0.8
       comp=Z,152nm,0.8s
PKI   Pulchoki           47.69 307  eP    P      22 26 26.6 +0.4
PKIN  Phulchoki          47.70 307  eP    P      22 26 26.5 +0.3
KLR   Kul'dur            47.71   4deP    P      22 26 25.0 -0.5
KLR                                  pmax pmax
       comp=Z,22nm,1.0s
KKN   Kakani             47.89 307  eP    P      22 26 28.1 +0.5
DMN   Daman              47.95 307  eP    P      22 26 28.8 +0.7
HIA   Hailar             48.02 353   P    P      22 26 27.9 -0.1
HIA                                  pmax pmax
       comp=Z,12nm,0.9s
HIA   Hailar             48.02 353   P    P      22 26 27.9 -0.1
GKN   Gorkha             48.49 307  eP    P      22 26 32.7 +0.5
       comp=Z,164nm,1.2s
KOLN  Koldanda           49.23 306  eP    P      22 26 39.0 +1.2
       comp=Z,198nm,0.8s
DANN  Dangsing           49.34 307  eP    P      22 26 39.6 +0.8
       comp=Z,199nm,0.9s
ULN   Ulaanbaatar        49.39 342d iP    P      22 26 38.9 +0.3
ULN                                  pmax pmax
       comp=Z,61nm,1.2s
ULN   Ulaanbaatar        49.39 342   P    P      22 26 39.6 +1.0
ULN   Ulaanbaatar        49.39 342   P    P      22 26 38.7 +0.1
SONM  Songino Array      49.56 342   P    P      22 26 40.5 +0.5
       comp=Z,20nm,1.1s,baz=159,slow=7.2,SNR=82
SONM                                 ScP  ScP    22 31 45.8 -0.3
       comp=Z,1.1nm,1.0s,baz=163,slow=1.5,SNR=3.7
SONM                                 LR   LR     22 48 49.0
       comp=Z,60nm,21.2s,baz=162,slow=37
SONM  Songino Array      49.56 342   P    P      22 26 39.9 -0.1
SONM                                 IAmb IAmb   22 26 41.7
       comp=Z,24nm,1.0s
PYUN  Piuthan            49.85 306  eP    P      22 26 43.8 +1.2
HYB   Hyderabad          50.38 291  iP    P      22 26 47.0 +0.5
ZEA   Zeya               52.07   0  eP    P      22 26 57.8 -0.6
ZEA                                  pmax pmax
       comp=N,10.0nm,0.9s
ZEA                                  pmax pmax
       comp=Z,10.0nm,1.3s
ZAK   Zakamensk          52.79 341  eP    P      22 27 01.1 -2.9
ZAK                                  pmax pmax
       comp=Z,7.0nm,1.1s
MSVF  Nonsavu            53.54 113   P    P      22 27 11.0 +0.9
       comp=Z,19nm,1.0s,baz=238,slow=6.9,SNR=6.4
MSVF  Nonsavu            53.54 113⇓eP    P      22 27 11.4 +1.4
MSVF                                 pmax pmax
       comp=Z,28nm,1.1s
MSVF  Nonsavu            53.54 113   P    P      22 27 10.1  0.0
MSVF                                 IAmb IAmb   22 27 12.8
       comp=Z,22nm,1.0s
TLY   Talaya             53.80 342   P    P      22 27 12.4 +1.2
       comp=Z,7.0nm,0.7s,baz=158,slow=11,SNR=2.6
TLY   Talaya             53.80 342  eP    P      22 27 12.5 +1.3
TLY                                 e            22 34 48.6
TLY                                  pmax pmax
       comp=Z,21nm,0.8s
TLY   Talaya             53.80 342   P    P      22 27 11.5 +0.3
MOY   Mondy              54.64 340  eP    P      22 27 18.0 +0.5
MOY                                  pmax pmax
       comp=Z,37nm,2.1s
WMQ   Urumqi             54.84 326 ⇑P    P      22 27 20.8 +1.8
WMQ                                  pP   pwP    22 27 49.0 +2.3
WMQ                                  pmax pmax
       comp=Z,95nm,1.1s
WMQ                                  pmax pmax
       comp=Z,220nm,4.5s
POO   Poona              54.98 292  eP    P      22 27 19.0 -1.5
BOD   Bodaibo            57.13 352  eP    P      22 27 35.0  0.0
BOD                                  pmax pmax
       comp=Z,32nm,1.3s
PETK  Petropavlovsk-     57.30  21   P    P      22 27 37.0 +0.7
       comp=Z,10nm,1.0s,baz=191,slow=4.5,SNR=5.4
PETK  Petropavlovsk-     57.30  21   P    P      22 27 37.0 +0.7
PETK  Petropavlovsk-     57.30  21   P    P      22 27 36.0 -0.3
ZSN   Zaisan             58.65 328  eP    P      22 27 45.1 -0.7
       baz=328
ZSN   Zaisan             58.65 328  eP    P      22 27 45.1 -0.7
DGZ   Jazzator, Alta     58.78 331d iP    P      22 27 47.6 +0.8
DGZ                                  pmax pmax
       comp=Z,26nm,1.0s
LBZ   Lake Benmore       59.56 145   P    P      22 27 52.3 +0.1
THZ   Tophouse           59.64 142   P    P      22 27 52.9 +0.1
UZB   Uzynbulak          59.66 321  eP    P      22 27 53.4 +0.3
       comp=Z,18nm,1.0s,baz=321
UZB   Uzynbulak          59.66 321  eP    P      22 27 53.3 +0.3
UZB                                  pmax pmax
       comp=Z,18nm,1.0s
MK31  Makanchi Array     59.67 326   P    P      22 27 53.5 +0.6
MK31                                 pmax pmax
       comp=Z,38nm,0.8s
MK31  Makanchi Array     59.67 326   P    P      22 27 53.5 +0.6
MKAR  Makanchi Array     59.67 326   P    P      22 27 53.7 +0.8
       comp=Z,41nm,0.7s,baz=122,slow=8.4,SNR=291
MKAR                                 ScP  ScP    22 32 29.5 -0.8
       comp=Z,1.4nm,0.8s,baz=116,slow=5.5,SNR=3.6
MKAR                                 LR   LR     22 55 16.4
       comp=Z,69nm,19.5s,baz=104,slow=37
MKAR  Makanchi Array     59.67 326   P    P      22 27 53.4 +0.5
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MKAR  Makanchi Array    59.67 326   P       P       22 27 53.4 +0.5
NIL   Nilore            59.70 309   P       P       22 27 53.7 +0.3
NIL                                 pmax    pmax
      comp=Z,65nm,1.2s
NIL   Nilore            59.70 309   P       P       22 27 54.3 +0.9
NIL   Nilore            59.70 309   P       P       22 27 53.7 +0.3
PRZ   Przheval'sk       59.73 320   P       P       22 27 54.8 +1.2
PRZ                                 pmax    pmax
      comp=Z,42nm,0.8s
PRZ   Przheval'sk       59.73 320   P       P       22 27 54.8 +1.2
MAKZ  Makanchi          59.86 326   P       P       22 27 54.7 +0.5
MAKZ                                pmax    pmax
      comp=Z,53nm,0.9s
MAKZ  Makanchi          59.86 326   P       P       22 27 54.7 +0.5
KSH   Kashi             59.98 316   P       P       22 27 57.2 +1.9
KSH                                 pmax    pmax
      comp=Z,30nm,1.0s
SATY  Saty              60.01 320  eP       P       22 27 55.4 -0.1
      comp=Z,31nm,1.0s,baz=320
SATY  Saty              60.01 320  eP       P       22 27 55.3 -0.1
SATY                                pmax    pmax
      comp=Z,31nm,1.0s
KPKS  Kokpek            60.03 321  i P      P       22 27 55.7 +0.1
      comp=Z,26nm,0.9s,baz=321
KPKS  Kokpek            60.03 321  i P      P       22 27 55.6 +0.1
KPKS                                pmax    pmax
      comp=Z,26nm,0.9s
TUWZ  Tuamarina         60.10 141   P       P       22 27 55.9  0.0
YAK   Yakutsk           60.41   1  eP       P       22 27 57.6  0.0
YAK                                e                22 28 41.0
YAK                                e                22 30 11.4
YAK                                eS       S       22 36 04.3 +0.2
YAK                                eSS      SS      22 40 03.8  0.0
YAK                                 pmax    pmax
      comp=Z,54nm,0.9s
YAK                                 pmax    pmax
      comp=N,21nm,1.1s
YAK                                 pmax    pmax
      comp=E,9.0nm,1.5s
YAK                                 pmax    pmax
      comp=Z,125nm,6.7s
YAK                                 pmax    pmax
      comp=N,64nm,3.4s
YAK                                 pmax    pmax
      comp=E,156nm,5.9s
YAK                                 smax    smax
      comp=E,92nm,4.0s
YAK                                 smax    smax
      comp=N,24nm,1.8s
YAK   Yakutsk           60.41   1   P       P       22 27 57.3 -0.3
BKZ   Black Stump Fm    60.60 137   P       P       22 27 59.0 -0.4
MA2   Magadan           60.74  13⇑eP       P       22 28 00.6 +0.7
MA2                                 pmax    pmax
      comp=Z,26nm,1.0s
MDOK  Medeo             60.92 320  eP       P       22 28 02.4 +0.6
      baz=320
MDOK  Medeo             60.92 320  eP       P       22 28 02.3 +0.6
TDK   Taldyqorghan      60.98 322  eP       P       22 28 02.0 +0.2
      comp=Z,26nm,0.6s,baz=322
TDK   Taldyqorghan      60.98 322  eP       P       22 28 02.0 +0.2
TDK                                 pmax    pmax
      comp=Z,26nm,0.6s
ULHL  Ulahol            61.02 319   P       P       22 28 03.7 +1.3
      SNR=26
CHKK  Chushkaly         61.30 321  eP       P       22 28 03.9 -0.1
      baz=321
KUU   Kurty             61.73 320  eP       P       22 28 07.2 +0.2
      baz=320
KUU   Kurty             61.73 320  eP       P       22 28 07.1 +0.2
TKM2  Tokmak 2          61.75 319   P       P       22 28 08.4 +1.0
      SNR=42
KBK   Karagaybulak      62.06 319   P       P       22 28 10.7 +1.4
      SNR=15
UCH   Uchtor            62.16 318   P       P       22 28 12.0 +1.6
      SNR=46
FRU1  Bishkek           62.34 319   P       P       22 28 11.7 +0.6
FRU1                                pmax    pmax
      comp=Z,19nm,1.2s
FRU1  Bishkek           62.34 319   P       P       22 28 11.7 +0.6
FRU1                                IAmb    IAmb    22 28 15.9
      comp=Z,18nm,1.2s
CHMS  Chumysh           62.34 319   P       P       22 28 11.6 +0.5
      SNR=5.7
AAK   Ala-Archa         62.35 318   P       P       22 28 12.6 +1.3
      comp=Z,6.4nm,0.6s,baz=134,slow=5.7,SNR=19
AAK   Ala-Archa         62.35 318  i P      P       22 28 12.4 +1.2
      SNR=25
AAK   Ala-Archa         62.35 318deP       P       22 28 12.3 +1.0
AAK                                 pmax    pmax
      comp=Z,93nm,1.7s
AAK   Ala-Archa         62.35 318   P       P       22 28 12.8 +1.5
AAK   Ala-Archa         62.35 318   P       P       22 28 11.6 +0.3
AAK                                 IAmb    IAmb    22 28 17.2
      comp=Z,25nm,1.2s
SGDS  Sogindy           62.62 319  eP       P       22 28 11.6 -1.4
      baz=319
USP   Ospenovka         62.63 319   P       P       22 28 14.0 +1.0
      SNR=51
AML   Almayashu         62.67 318   P       P       22 28 15.2 +1.4
      SNR=69
AML   Almayashu         62.67 318  i P      P       22 28 15.1 +1.4
      SNR=70
AML   Almayashu         62.67 318   P       P       22 28 15.6 +1.9
ZAA0  Zalesovo Array    62.80 333   P       P       22 28 13.2 -0.6
ZAA0                                IAmb    IAmb    22 28 17.3
      comp=Z,21nm,1.0s
ZALV  Zalesovo Beam     62.80 333   P       P       22 28 13.1 -0.7
      comp=Z,25nm,1.0s,baz=104,slow=6.3,SNR=35
ZALV                                LR      LR      22 56 12.8
      comp=Z,27nm,19.1s,baz=113,slow=36
ZALV  Zalesovo Beam     62.80 333  i P      P       22 28 13.1 -0.7
ZALV                                pmax    pmax
      comp=Z,16nm,0.8s
ZALV  Zalesovo Beam     62.80 333   P       P       22 28 13.0 -0.8
EKS2  Erkin-Say         62.84 318   P       P       22 28 15.8 +1.3
      SNR=38
SEM   Semipalatinsk     62.86 328  eP       P       22 28 12.7 -1.9
      baz=328
SEM   Semipalatinsk     62.86 328  eP       P       22 28 12.6 -1.9
DRK   Karamyk           62.92 314   P       P       22 28 16.1 +0.8
DRK                                 IAmb    IAmb    22 28 17.6
      comp=Z,39nm,0.9s
KBL   Kabul             63.29 308   P       P       22 28 18.0 +0.3
KBL                                 pmax    pmax
      comp=Z,32nm,1.0s
KBL   Kabul             63.29 308   P       P       22 28 18.7 +1.0
      SNR=14
KBL   Kabul             63.29 308   P       P       22 28 18.0 +0.3
KBL                                 IAmb    IAmb    22 28 19.5
      comp=Z,32nm,1.0s
GAR   Garm              63.81 313   P       P       22 28 21.6 +0.6
BTK   Batken            63.84 315   P       P       22 28 21.6 +0.6
BTK                                 pmax    pmax
      comp=Z,39nm,1.1s
BTK   Batken            63.84 315   P       P       22 28 21.6 +0.6
BTK                                 IAmb    IAmb    22 28 24.5
      comp=Z,39nm,1.1s
KURBB Kurchatov Arra    63.89 328   P       P       22 28 21.2 +0.2
      comp=Z,60nm,0.9s,baz=124,slow=6.0,SNR=342
KURK  Kurchatov         63.89 328d iP       P       22 28 21.0  0.0
KURK                                pmax    pmax
      comp=Z,95nm,0.8s
KURK  Kurchatov         63.89 328   P       P       22 28 21.7 +0.7
KURK  Kurchatov         63.89 328   P       P       22 28 21.2 +0.1
CHGR  Chuyangaron       64.54 313   P       P       22 28 26.1 +0.4
IUG   Iuzhnay           65.17 316  eP       P       22 28 30.4 +0.7
      baz=316
IUG   Iuzhnay           65.17 316  eP       P       22 28 30.4 +0.7
KK31  Karatay Array     65.21 318   P       P       22 28 29.9 +0.1
KK31                                pmax    pmax
      comp=Z,37nm,1.0s
KK31  Karatay Array     65.21 318   P       P       22 28 29.9 +0.1
KK31                                IAmb    IAmb    22 28 31.5
      comp=Z,37nm,0.9s
KKAR  Karatay Array     65.21 318   P       P       22 28 30.0 +0.2
KKAR                                pmax    pmax
      comp=Z,37nm,1.0s
KKAR  Karatay Array     65.21 318   P       P       22 28 30.0 +0.2
KKAR                                IAmb    IAmb    22 28 31.5
      comp=Z,37nm,0.9s
KKAR  Karatay Array     65.21 318   P       P       22 28 30.1 +0.2
TAS   Tashkent          65.38 315   P       P       22 28 31.5 +0.5
TAS                                 pmax    pmax
      comp=Z,77nm,1.1s
TAS   Tashkent          65.38 315   P       P       22 28 31.5 +0.5
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BRZS  Berezniki         66.80 325  eP       P       22 28 39.3 -0.6
      comp=Z,11nm,0.9s,baz=325
BRZS  Berezniki         66.80 325  eP       P       22 28 39.3 -0.6
BRZS                                pmax    pmax
      comp=Z,11nm,0.9s
HRA   Herat             68.65 306   P       P       22 28 52.3 +0.2
CASY  Casey             68.68 187   P       P       22 28 51.7 +0.5
CASY                                IAmb    IAmb    22 31 18.7
      comp=Z,40nm,1.7s
JLN   Jalan Bani Buh    68.94 293   P       P       22 28 54.5 +0.7
WBK   Wadi Bani Khal    69.40 294   P       P       22 28 57.2 +0.6
BRVK  Borovoye          69.53 327d iP       P       22 28 56.8 -0.1
BRVK                                pmax    pmax
      comp=Z,67nm,1.3s
BRVK  Borovoye          69.53 327   P       P       22 28 57.2 +0.3
BRVK  Borovoye          69.53 327   P       P       22 28 57.0 +0.1
BRVK                                IAmb    IAmb    22 28 58.0
      comp=Z,43nm,0.9s
WSAR  Wadi Sarin        69.79 294   P       P       22 28 59.7 +0.6
      comp=Z,20nm,1.2s,baz=159,slow=8.6,SNR=3.8
WSAR  Wadi Sarin        69.79 294   P       P       22 28 59.3 +0.3
TIXI  Tiksi             70.06   1⇑iP       P       22 28 58.6 -1.1
TIXI                                pmax    pmax
      comp=Z,12nm,1.3s
TIXI  Tiksi             70.06   1   P       P       22 28 58.7 -1.0
MHTO  MHTO              70.13 292   P       P       22 29 01.8 +0.6
      SNR=11
JMDO  Jabal Madar       70.16 293   P       P       22 29 02.3 +0.9
BIDO  Bidbid            70.28 294   P       P       22 29 03.3 +1.2
SMDO  Samad             70.30 294   P       P       22 29 02.5 +0.2
HOQ   Hoqain            71.03 294   P       P       22 29 07.9 +1.3
BSY   Bisya             71.04 293   P       P       22 29 07.4 +0.7
ARQ   Araqi             71.72 294   P       P       22 29 11.5 +0.7
SOHO  SOHO              71.80 295   P       P       22 29 11.8 +0.6
SOHO  SOHO              71.80 295   P       P       22 29 12.1 +0.9
SHAO  Shalim            72.06 288   P       P       22 29 14.0 +1.1
UOSS  Minazif           72.20 296   P       P       22 29 14.4 +0.8
UOSS  Minazif           72.20 296   P       P       22 29 13.4 -0.2
UOSS                                IAmb    IAmb    22 29 39.4
      comp=Z,114nm,1.9s
HATD  Hatta, Dubai      72.25 295  i P      P       22 29 15.0 +1.1
      SNR=5.9
HATD  Hatta, Dubai      72.25 295   P       P       22 29 15.2 +1.3
ASHO  Ashiyiah          72.30 295   P       P       22 29 16.3 +2.0
DMTO  DMTO              72.69 288   P       P       22 29 17.1 +0.5
GEYT  Alibeck           72.69 309   P       P       22 29 17.8 +1.4
      comp=Z,12nm,0.8s,baz=167,slow=7.3,SNR=16
GEYT                                LR      LR      23 04 39.8
      comp=Z,20nm,19.1s,baz=0.0,slow=38
GYA0B ALIBECK ARRAY     72.69 309   P       P       22 29 16.6 +0.3
GYA0B                               IAmb    IAmb    22 29 18.4
      comp=Z,21nm,0.8s
NRIK  Noril'sk          72.71 346   P       P       22 29 15.4 -0.3
      comp=Z,16nm,0.9s,baz=127,slow=6.0,SNR=32
NRIK  Noril'sk          72.71 346d iP       P       22 29 15.3 -0.4
NRIK                                pmax    pmax
      comp=Z,26nm,1.0s
NRIK  Noril'sk          72.71 346   P       P       22 29 15.4 -0.3
NRIK                                IAmb    IAmb    22 29 16.5
      comp=Z,22nm,0.9s
FAQ   Al Faqa, Dubai    72.73 295   P       P       22 29 17.5 +0.7
FAQ   Al Faqa, Dubai    72.73 295   P       P       22 29 17.7 +1.0
ASUD  Al Ashush, Dub    72.95 295   P       P       22 29 19.7 +1.7
ASUD  Al Ashush, Dub    72.95 295   P       P       22 29 19.5 +1.4
SOCY  Socotra           73.32 282   P       P       22 29 20.3 -0.2
SOCY  Socotra           73.32 282   P       P       22 29 19.7 -0.8
SOCY                                IAmb    IAmb    22 29 21.2
      comp=Z,48nm,0.9s
DOK   Doka              73.53 289   P       P       22 29 21.8 +0.2
      SNR=7.6
WHFO  Wadi Hawf         73.82 288   P       P       22 29 23.2 -0.1
      SNR=7.3
ABKAR Akbulak array     74.19 321   P       P       22 29 24.6 -0.2
ABKAR Akbulak array     74.19 321   P       P       22 29 24.7 -0.2
ABKAR                               IAmb    IAmb    22 29 25.8
      comp=Z,28nm,1.0s
ABTO  Aybut             74.23 288   P       P       22 29 25.8 +0.1
ABTO                                P       P       22 29 26.0 +0.2
      SNR=7.4
SVE   Sverdlovsk        76.12 329ceP       P       22 29 35.4 -0.3
SVE                                 pmax    pmax
      comp=Z,57nm,0.9s
ARU   Arti              77.09 328c iP       P       22 29 40.0 -1.2
ARU                                 *PP     pP      22 30 07.0 -0.5
ARU                                 S       S       22 39 22.7 +1.3
ARU                                 pmax    pmax
      comp=Z,38nm,0.9s
ARU   Arti              77.09 328   P       P       22 29 40.7 -0.5
ARU                                 IAmb    IAmb    22 29 41.8
      comp=Z,34nm,0.9s
LKRN  Lenkeran, Azer    80.06 309   P       P       22 29 58.1 +0.2
VNDA  Vanda             81.16 173   P       P       22 30 02.9 -0.1
      comp=Z,6.7nm,0.8s,baz=325,slow=5.6,SNR=21
VNDA  Vanda             81.16 173   P       P       22 30 02.9 -0.1
VNDA                                pmax    pmax
      comp=Z,9.0nm,1.1s
VNDA  Vanda             81.16 173   P       P       22 30 02.9 -0.1
MAK   Makhachkala       81.47 313  eP       P       22 30 03.8 -1.5
MAK                                e*SP     sP      22 30 40.6 -2.3
MAK                                eS       S       22 40 06.6 -1.7
MAK                                e*SS     sS      22 40 53.7 -0.5
MAK                                 pmax    pmax
      comp=Z,591nm,3.0s
SEKA  Sheki             81.52 311   P       P       22 30 05.8 +0.1
MNGR  Mingechevir, A    81.57 311   P       P       22 30 06.0 +0.2
VOI   Vohitsoka         81.70 248   P       P       22 30 07.5 +0.4
VOI   Vohitsoka         81.70 248   P       P       22 30 07.2 +0.1
VOI   Vohitsoka         81.70 248   P       P       22 30 08.2 +1.1
RAYN  Ar Rayn           81.83 293  i P      P       22 30 07.9 +0.2
      SNR=27
RAYN  Ar Rayn           81.83 293   P       P       22 30 07.7  0.0
RAYN                                pmax    pmax
      comp=Z,27nm,1.1s
RAYN  Ar Rayn           81.83 293   P       P       22 30 08.1 +0.4
RAYN  Ar Rayn           81.83 293   P       P       22 30 07.7  0.0
RAYN                                IAmb    IAmb    22 30 12.8
      comp=Z,27nm,1.1s
MAW   Mawson            81.85 200   P       P       22 30 07.2 +0.5
      comp=Z,4.3nm,0.7s,baz=82,slow=5.5,SNR=13
MAW                                 LR      LR      23 05 01.0
      comp=Z,35nm,18.3s,baz=236,slow=34
MAW   Mawson            81.85 200   P       P       22 30 07.5 +0.8
      baz=82,SNR=10
MAW   Mawson            81.85 200   P       P       22 30 07.4 +0.7
MAW                                 pmax    pmax
      comp=Z,8.0nm,1.6s
MAW   Mawson            81.85 200   P       P       22 30 07.4 +0.7
GANJ  Ganja             82.13 311   P       P       22 30 08.9  0.0
KIRV  Kirov             82.39 329c iP       P       22 30 09.6 -0.1
BELG  Belogornoye       82.48 323   P       P       22 30 10.2 -0.2
      comp=Z,57nm,1.0s,baz=118,slow=1.6,SNR=11
BELG  Belogornoye       82.48 323c iP       P       22 30 10.0 -0.3
BELG                                pmax    pmax
      comp=Z,11nm,1.0s
GCSA  Galena City Sc    82.64  25   P       P       22 30 12.0 +1.1
      baz=258
NAX   Nakhchivan        82.65 309   P       P       22 30 11.7  0.0
GROC  Groznyy           82.74 313  eP       P       22 30 11.0 -0.9
GROC                               e*PP     pwP     22 30 40.1 -1.3
GROC                               e*SP     sP      22 30 52.2 +2.6
GROC                                pmax    pmax
      comp=Z,22nm,0.7s
M19K  Big River Lodg    83.21  28   P       P       22 30 15.1 +1.1
M19K                                IAmb    IAmb    22 31 43.4
      comp=Z,72nm,1.9s
K20K  Telida            83.59  26   P       P       22 30 17.4 +1.5
      baz=261
PPT   Papeete           83.95 108   LR      LR      23 04 45.3
      comp=Z,20nm,19.9s,baz=358,slow=33
ZEI   Tsey              84.09 313  eP       P       22 30 16.9 -2.3
ZEI                                 pmax    pmax
      comp=Z,10.0nm,1.0s
IMAR  Indian Mountai    84.16  24   P       P       22 30 19.4 +0.6
ATD   Arta Tunnel       84.21 281   P       P       22 30 19.1 -1.1
      comp=Z,11nm,0.9s,baz=305,slow=23,SNR=3.6
PPLA  Purkeypile        84.37  27   P       P       22 30 21.0 +1.0
PPLA                                IAmb    IAmb    22 32 08.4
      comp=Z,64nm,1.6s
PRGR  Permogore         84.70 332  eP       P       22 30 21.3 -0.2
PRGR                                pmax    pmax
      comp=Z,129nm,1.5s
SUA   Susitna One       84.87  29   P       P       22 30 22.5  0.0
KBZ   Khabaz            84.88 314   P       P       22 30 22.3 -0.5
      comp=Z,11nm,1.0s,baz=309,slow=2.3,SNR=6.9
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KBZ   Khabaz            84.88 314⇓eP       P       22 30 22.9 +0.1
KBZ                                 pmax    pmax
      comp=Z,22nm,1.1s
SIRT  Sirnak            84.97 307   P       P       22 30 23.5  0.0
NEY   Neytrino          84.98 313⇑eP       P       22 30 25.7 +2.1
NEY                                 pmax    pmax
      comp=Z,8.0nm,1.2s
KIV   Kislovodsk        85.04 314  eP       P       22 30 21.3 -2.5
KIV                                 pmax    pmax
      comp=Z,13nm,1.1s
KIV   Kislovodsk        85.04 314   P       P       22 30 24.2 +0.4
M22K  Willow            85.19  28   P       P       22 30 24.3 +0.3
      baz=264
GURO  Guroymak-BITLI    85.32 308   P       P       22 30 25.9 +0.5
GURO                                IAmb    IAmb    22 30 27.5
      comp=Z,26nm,1.0s
COLD  Coldfoot          85.74  23   P       P       22 30 28.2 +1.6
      baz=264
I23K  Minto, Yukon-K    85.87  25   P       P       22 30 28.3 +1.1
      baz=265
VRH   Novokhopyorsk     86.03 321  eP       P       22 30 27.4 -0.9
VRH                                 pmax    pmax
      comp=Z,30nm,0.9s
SML   Sawmill           86.05  28   P       P       22 30 28.6 +0.3
      baz=266
TOLK  Toolik Lake Re    86.12  21   P       P       22 30 29.3 +0.7
      baz=264
ILAR  Eielson Array     86.89  25   P       P       22 30 31.2 -1.0
      comp=Z,0.9nm,0.9s,baz=260,slow=5.7,SNR=4.9
VORD  Divnogorie        87.55 321  eP       P       22 30 34.9 -0.8
VORD                                pmax    pmax
      comp=Z,10.0nm,0.8s
KLMR  Klimovskoe        87.59 331  eP       P       22 30 33.5 -2.2
KLMR                               e*SP     sP      22 31 09.9 -3.7
KLMR                               e                22 33 57.1
KLMR                                pmax    pmax
      comp=Z,31nm,1.2s
KLMR  Klimovskoe        87.59 331  eP       P       22 30 33.5 -2.2
KLMR                                AMP             22 30 37.1
      comp=Z,31nm,1.2s
KLMR                               esP      sP      22 31 10.0 -3.7
KLMR                               ePP      PP      22 33 57.1 -5.0
VSR   Storozhevoye      87.63 321  eP       P       22 30 33.6 -2.5
VSR                                 pmax    pmax
      comp=Z,10.0nm,0.8s
LPSR  Galich'ya Gora    87.79 322  eP       P       22 30 35.7 -1.2
LPSR                                pmax    pmax
      comp=Z,20nm,1.1s
BMAR  Burnt Mountain    87.92  23   P       P       22 30 37.9 +0.7
MOS   Moscow            88.56 326  eP       P       22 30 39.1 -1.3
BCAR  Beaver Creek A    89.12  27   P       P       22 30 43.7 +0.7
GAZ   Gaziantep         89.13 307   P       P       22 30 42.4 -1.2
OBN   Obninsk           89.17 325ceP       P       22 30 42.4 -0.9
OBN                                 pmax    pmax
      comp=Z,40nm,1.7s
KIBK  Kibwezi           89.26 268   P       P       22 30 46.0 +1.3
KIBK  Kibwezi           89.26 268   P       P       22 30 45.0 +0.2
KIBK                                IAmb    IAmb    22 30 46.9
      comp=Z,13nm,1.0s
LVZ   Lovozero          89.60 338⇑eP       P       22 30 45.9 +0.8
LVZ                                 pmax    pmax
      comp=Z,72nm,1.4s
KMBO  Kilima Mbogo      90.02 269   P       P       22 30 49.3 +0.8
      comp=Z,3.5nm,0.8s,baz=37,slow=6.9,SNR=9.2
KMBO  Kilima Mbogo      90.02 269  i P      P       22 30 50.0 +1.6
      SNR=8.2
KMBO  Kilima Mbogo      90.02 269   P       P       22 30 50.1 +1.6
KMBO  Kilima Mbogo      90.02 269   P       P       22 30 48.9 +0.4
LODK  Lodwar            91.79 273   P       P       22 30 57.3 +0.8
LODK  Lodwar            91.79 273   P       P       22 30 56.6 +0.1
BRTR  Keskin Array B    91.83 310   P       P       22 30 55.4 -0.9
      comp=Z,3.5nm,0.9s,baz=84,slow=5.1,SNR=6.4
BRTR                                LR      LR      23 17 55.4
      comp=Z,19nm,19.8s,baz=48,slow=39
CSS   Mathiatis         92.36 305   P       P       22 30 58.1 -0.5
CSS                                 IAmb    IAmb    22 30 59.0
      comp=Z,8.4nm,0.9s
ARCES ARCESS Array B    92.71 340   P       P       22 30 58.1 -1.4
      comp=Z,10nm,1.0s,baz=77,slow=4.1,SNR=7.5
FARO  Faro, Yukon       93.07  28   P       P       22 31 02.2 +0.8
      baz=279
AKASG Malin Array Be    93.94 321   P       P       22 31 04.6 -0.9
      comp=Z,0.1nm,0.2s,baz=74,slow=3.7,SNR=7.0
AKASG                               LR      LR      23 17 55.1
      comp=Z,22nm,18.3s,baz=290,slow=38
AKBB  Malin Array Si    93.94 321⇑eP       P       22 31 04.0 -1.5
MMPY  Sheldon Lake,     93.96  27   P       P       22 31 06.8 +1.4
      baz=281
FINES FINESS Array B    94.03 332   P       P       22 31 05.4 -0.2
      comp=Z,2.7nm,1.0s,baz=76,slow=7.5,SNR=2.0
TGTN  Hyland Airport    95.57  28   P       P       22 31 14.1 +1.3
      baz=284
MBAR  Mbarara           96.52 270ceP       P       22 31 16.5 -1.8
BUR08 Bucovina Ar. S    97.00 318   P       P       22 31 19.1 -0.6
UZH   Uzhgorod          98.72 320  eP       Pdif    22 31 27.6 +0.4
CRVS  Cervenica-Dubn    99.20 320  eP       Pdif    22 31 29.6 +0.2
CRVS  Cervenica-Dubn    99.20 320  ePDIFF   Pdif    22 31 29.6 +0.2
NOA   NORSAR Array B   101.00 334   P       Pdif    22 31 35.6 -1.6
      comp=Z,1.8nm,0.9s,baz=66,slow=4.5,SNR=3.9
CLL   Collm            103.73 324  i sPdif  sPdif   22 32 26.0 -1.5
CLL                                i                22 32 40.5
CLL                                e                22 33 11.0
CLL                                ePP      PP      22 36 06.0 -1.0
CLL                                epPP             22 36 27.0
GERES GERESS Array B   104.14 321   Pdiff   Pdif    22 31 51.0 -0.5
      comp=Z,0.1nm,0.3s,baz=32,slow=3.9,SNR=4.1
GERES                               PP      PP      22 36 10.4 +0.1
      comp=Z,0.8nm,0.9s,baz=70,slow=5.6,SNR=2.6
KEST  Kesra            111.44 309   PP      PP      22 37 01.6 -2.3
      comp=Z,2.4nm,0.9s,baz=255,slow=6.6,SNR=4.0
ESDC  Sonseca Array    119.46 318   PKP     PKiKP   22 36 37.4  0.0
      comp=Z,0.2nm,0.6s,baz=42,slow=2.7,SNR=3.2
ESDC                                PP      PP      22 37 57.5 -2.3
      comp=Z,1.3nm,1.1s,baz=53,slow=7.1,SNR=7.3
TXAR  Lajitas Array    122.53  53   PKKPbc  PKKPbc  22 46 39.4 +0.7
      comp=Z,0.7nm,0.7s,baz=111,slow=6.9,SNR=6.1
TORD  Torodi Ar. Bea   124.08 287   PKP     PKPdf   22 36 45.8 -0.9
      comp=Z,5.2nm,0.8s,baz=43,slow=1.8,SNR=32
TORD                                PP      PP      22 38 32.5 +0.3
      comp=Z,4.6nm,1.1s,baz=61,slow=5.3,SNR=11
TORD                                PKKPbc  PKKPbc  22 46 32.2 +0.1
      comp=Z,1.4nm,0.8s,baz=284,slow=3.7,SNR=8.4
TORD  Torodi Ar. Bea   124.08 287           PKPdf   22 36 45.7 -1.1
DBIC  Dimbokro         131.51 280   PKP     PKiKP   22 37 01.8 -0.2
      comp=Z,3.1nm,1.0s,baz=71,slow=3.1,SNR=3.6
DBIC  Dimbokro         131.51 280           PKPdf   22 37 01.0  0.0
PLCA  Paso Flores      137.75 160   PKP     PKiKP   22 37 13.1 -0.9
      comp=Z,1.0nm,0.6s,baz=309,slow=4.0,SNR=5.7
PLCA  Paso Flores      137.75 160   PKIKP   PKPdf   22 37 12.3 +0.3
PLCA  Paso Flores      137.75 160           PKPdf   22 37 12.3 +0.3
MT02  Curacav          144.00 153           PKPbc   22 37 21.9 +0.4
BOAB  BOACO BROADBAN144.51  66              PKPab   22 37 22.9 -0.3
LCO   Las Campanas     147.73 150   PKP2    PKiKP   22 37 35.0 -0.1
LCO   Las Campanas     147.73 150           PKiKP   22 37 35.0 -0.1
PB14  IPOC Station P   151.37 145           PKiKP   22 37 42.8  0.0
LVC   Limon Verde      153.79 144   PKPab   PKPab   22 38 00.8 -0.1
      comp=Z,7.9nm,0.8s,baz=219,slow=6.8,SNR=6.2
CPUP  Villa Florida    154.92 170   PKP     PKPdf   22 37 41.6 +0.8
      comp=Z,0.5nm,0.3s,baz=269,slow=4.1,SNR=1.1
CPUP                                PKPab   PKPab   22 38 06.0 +0.9
      comp=Z,4.3nm,0.9s,baz=180,slow=7.1,SNR=5.8
SIV   San Ignacio      163.43 151   PKP     PKPdf   22 37 51.4 +0.4
      comp=Z,0.5nm,0.4s,baz=158,slow=21,SNR=3.6
SIV                                 PKPab   PKPab   22 38 42.9 +0.7
      comp=Z,6.3nm,0.8s,baz=189,slow=4.1,SNR=24
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IDC ***11*** *22:47:52.3±3.4, 6°.39S×147°.07E, h68km±36km, mb3.5/11, mb1 3.6/13, mb1mx3.6/31, mbtmp3.8/13, ML3.7/1, MS3.0/1, Ms1 3.0/1, ms1mx2.3/23 Error ellipse: s-maj=32.6km s-min=22.5km az=113.0*

NEIC ***11*** *22:47:53.1±1.4, 6°.41S±0°.07×147°.1E±0°.2, h66km±8km, mb4.3/7, Error ellipse: s-maj=28.1km s-min=9.5km az=91.0*

ISC 11 22:47:50.8±0.6**, 6°.37S**±0°.05×**147°.1E**±0°.1**, h49**km**, n30, σ1s.15**/31**, mb3.9**/15**, Eastern New Guinea region**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                    Op      ISC       h  m  s   ISC
PMG   Port Moresby        3.02 178  P       Pn      22 48 38.1 +2.0
      14nm,0.3s,baz=53,slow=5.7,SNR=12
PMG                                 S       Sn      22 49 12.9 +1.8
      8.4nm,0.3s,baz=56,slow=22,SNR=2.0
PMG   Port Moresby        3.02 178          Pn      22 48 37.7 +1.6
```

MANU	**Manus Island**	**4.31**	**4**	Pn	**Pn**	**22 48 56.7**	**+2.8**
COEN	**Coen**	**8.45**	**207**	Pn	**Pn**	**22 49 51.1**	**+0.4**
WB0	**Warramunga Arr**	**18.13**	**222**	P	**Pn**	**22 52 00.4**	**+1.3**
WB0				IAmb	IAmb	22 52 01.4	
	comp=Z,6.1nm,1.3s						
WRA	**Warramunga Arr**	**18.29**	**221**	P	**P**	**22 51 60.0**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=46,slow=11,SNR=8.5						
WRA				LR	LR	23 00 32.1	
	comp=Z,47nm,21.6s,baz=80,slow=42						
WRA	**Warramunga Arr**	**18.29**	**221**	P	**Pn**	**22 52 01.2**	**+0.1**
GUMO	**Guam**	**19.95**	**354**	P	**P**	**22 52 18.9**	**0.0**
AS31	**Alice Springs**	**21.34**	**215**	P	**P**	**22 52 34.5**	**+0.5**
AS31				IAmb	IAmb	22 53 03.1	
	comp=Z,1.2nm,0.9s						
ASAR	**Alice Springs**	**21.34**	**215**	P	**P**	**22 52 33.9**	**0.0**
	comp=Z,0.9nm,0.7s,baz=57,slow=8.5,SNR=8.3						
FITZ	**Fitzroy Crossi**	**23.91**	**239**	P	**P**	**22 52 59.3**	**-1.0**
	comp=Z,1.5nm,0.8s,baz=58,slow=11,SNR=1.4						
FITZ	**Fitzroy Crossi**	**23.91**	**239**	P	**P**	**22 52 59.8**	**-0.6**
WHZ	**Wether Hill Ro**	**43.33**	**159**	P	**P**	**22 55 46.6**	**-1.4**
WHZ				IAmb	IAmb	22 55 51.4	
	comp=Z,29nm,1.4s						
KSRS	**Korea Array**	**47.11**	**339**	P	**P**	**22 56 18.2**	**+0.2**
	comp=Z,1.2nm,0.6s,baz=154,slow=8.3,SNR=2.6						
USRK	**Ussuriysk Ar.**	**52.14**	**346**	P	**P**	**22 56 55.5**	**-0.8**
	comp=Z,0.5nm,0.6s,baz=172,slow=7.7,SNR=2.4						
USRK	**Ussuriysk Ar.**	**52.14**	**346**	P	**P**	**22 56 56.5**	**+0.3**
CMAR	**Chiang Mai Arr**	**53.47**	**298**	P	**P**	**22 57 07.2**	**+0.7**
	comp=Z,1.1nm,0.3s,baz=122,slow=8.9,SNR=4.9						
PETK	**Petropavlovsk-**	**59.94**	**7**	P	**P**	**22 57 52.4**	**+0.6**
	comp=Z,1.3nm,0.5s,baz=150,slow=6.1,SNR=2.1						
SONM	**Songino Array**	**64.75**	**331**	P	**P**	**22 58 24.5**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=116,slow=6.6,SNR=1.4						
SBA	**Scott Base**	**72.19**	**176**	P	**P**	**22 59 10.1**	**0.0**
SBA				IAmb	IAmb	22 59 17.9	
	comp=Z,22nm,0.9s						
MKAR	**Makanchi Array**	**77.81**	**321**	P	**P**	**22 59 41.9**	**-1.2**
	comp=Z,0.2nm,0.6s,baz=107,slow=9.2,SNR=1.6						
ZALV	**Zalesovo Beam**	**79.35**	**328**	P	**P**	**22 59 49.2**	**-2.1**
	comp=Z,0.4nm,0.5s,baz=120,slow=10,SNR=2.1						
QSPA	**South Pole Qui**	**83.60**	**180**	P	**P**	**23 00 13.2**	**-0.6**
QSPA				IAmb	IAmb	23 00 30.8	
	comp=Z,6.1nm,1.5s						
ILAR	**Eielson Array**	**85.80**	**23**	P	**P**	**23 00 23.5**	**-1.2**
	comp=Z,0.4nm,0.5s,baz=248,slow=5.0,SNR=6.3						
BMAR	**Burnt Mountain**	**87.72**	**21**	P	**P**	**23 00 34.9**	**+0.8**
INK	**Inuvik**	**91.98**	**21**	P	**P**	**23 00 52.4**	**-1.5**
	comp=Z,0.7nm,0.6s,baz=221,slow=9.3,SNR=10						
SIV	**San Ignacio**	**144.38**	**129**	PKP	**PKPdf**	**23 07 22.7**	**0.0**
	comp=Z,0.7nm,0.4s,baz=261,slow=13,SNR=2.5						
TORD	**Torodi Ar. Bea**	**145.23**	**284**	PKPbc	**PKPbc**	**23 07 23.9**	**0.0**
	comp=Z,2.2nm,0.8s,baz=72,slow=3.4,SNR=16						
TORD	**Torodi Ar. Bea**	**145.23**	**284**		**PKPbc**	**23 07 23.6**	**-0.2**
KOWA	**Kowa**	**150.45**	**288**	PKPbc	**PKPbc**	**23 07 36.9**	**-1.1**
	comp=Z,0.9nm,0.5s,baz=48,slow=2.5,SNR=4.6						

INET ***11*** *22:54:05.2, 11.°98N×87.°49W, h15^{km}, MW3.6*

SNET 11 22:54:07.8±1.5**, 12.°15N×87.°87W, h20^{km}**±11^{km}**, ML3.5,**
Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**1.12**	**2**	*e*P	Pn	22 54 27.7	-0.8
CNCH				*e*S	Sn	22 54 43.6	+0.2
LCND	**La Caada**	**1.15**	**359**	*e*P	Pn	22 54 28.4	-0.4
LCND				*e*S	Sn	22 54 44.9	+0.9
LCND				IAML		22 54 51.1	
	comp=Z,3µm,0.4s						
JUCU	**Jucuar¡n**	**1.16**	**341**	*e*P	Pn	22 54 28.3	-0.7
JUCU				IAML		22 54 51.1	
	comp=Z,1µm,0.4s						
LCY	**Lacayo**	**1.33**	**342**	*e*P	Pn	22 54 31.0	-0.4
LCY				*e*S	Sb	22 54 50.7	+1.8
PACA	**Pacayal**	**1.39**	**341**	*e*P	Pn	22 54 32.5	+0.3
PACA				*e*S	Sb	22 54 51.0	+0.6
PACA				IAML		22 55 02.2	
	comp=Z,354nm,0.4s						
TECA	**Tecapa**	**1.47**	**335**	*e*P	Pn	22 54 33.0	-0.4
COEB	**Comit de Eme**	**1.49**	**334**	*e*P	Pn	22 54 33.7	+0.2
COEB				*e*S	Sb	22 54 54.2	+0.8
COEB				IAML		22 55 03.7	
	comp=Z,684nm,0.5s						
UESV	**Universidad de**	**1.73**	**329**	*e*P	Pn	22 54 36.7	-0.1
UESV				IAML		22 55 11.4	
	comp=Z,1µm,0.5s						
SCLA	**Alcaldia de Sa**	**1.76**	**332**	*e*P	Pn	22 54 37.5	+0.3
SCLA				IAML		22 55 10.4	
	comp=Z,277nm,0.4s						
COEG	**Centro de Oper**	**1.76**	**326**	*e*P	Pn	22 54 37.6	+0.3
COEG				*e*S	Sn	22 54 58.6	-0.6
COEG				IAML		22 55 09.0	
	comp=Z,550nm,0.3s						
SJTE	**Alcalda de S**	**1.83**	**323**	*e*P	Pn	22 54 38.1	-0.2
SJTE				IAML		22 55 11.7	
	comp=Z,322nm,0.4s						
LFRS	**El Faro**	**1.87**	**322**	*e*P	Pn	22 54 39.0	+0.2
PAVA	**Las Pavas**	**1.87**	**326**	*e*P	Pn	22 54 39.3	+0.5
PAVA				*e*S	Sb	22 55 03.7	-0.7
PAVA				IAML		22 55 11.5	
	comp=Z,542nm,0.6s						
PMON	**Piamonte**	**2.10**	**318**	*e*P	Pn	22 54 42.7	+0.8
JAYA	**Jayaque - finc**	**2.15**	**314**	*e*P	Pn	22 54 42.9	+0.2
JAYA				*e*S	Sn	22 55 09.6	+0.7
JAYA				IAML		22 55 18.6	
	comp=Z,300nm,0.2s						

IDC ***11*** *23:34:46.8±1.2, 51.°42N×98.°48E, h0^{km}, mb3.9/1, mb1 3.3/5, mb1mx3.0/58, mbtmp3.2/5, ML2.5/4, MS4.3/2, Ms1 4.3/2, ms1mx2.8/62, Error ellipse: s-maj=31.0km s-min=10.8km az=180.0*

MOS ***11*** *23:34:47.6±1.8, 51.°53N×98.°67E, h10^{km}, mb4.1/1, Error ellipse: s-maj=18.2km s-min=11.2km az=164.0*

ISC 11 23:34:47.6±0.7**, 51.°42N**±0.°05×**98.°51E**±0.°03**, h9^{km}, n27,**
σ**1.^{s}84**/29**, 1C-2D, Tuva-Buryatia-Mongolia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNGR	**Kungurtug, Tuv**	**1.03**	**218**	Pg	**Pg**	**23 35 04.4**	**-3.0**
KNGR				Sg	**Sg**	**23 35 19.2**	**-1.6**
ORL	**Orlik**	**1.38**	**35**	⇓*i*PG	**Pn**	**23 35 12.3**	**-0.9**
ORL				*e*		23 35 30.2	
ORL				pmax	pmax		
	comp=Z,406nm,0.2s						
ORL				smax	smax		
	comp=E,1µm,0.5s						
MOY	**Mondy**	**1.57**	**80**	⇑*i*PG	**Pg**	**23 35 17.0**	**-0.7**
MOY				*e*		23 35 39.0	
MOY				pmax	pmax		
	comp=Z,262nm,0.5s						
MOY				smax	smax		
	comp=N,2µm,0.9s						
KZLR	**Kyzyl**	**2.55**	**278**	Pg	**Pn**	**23 35 29.7**	**+0.6**
KZLR				Sg	**Sn**	**23 36 01.4**	**+1.1**
ZAK	**Zakamensk**	**3.19**	**107**	Pg	**Pb**	**23 35 45.1**	**+0.6**
ZAK				Sg	**Sg**	**23 36 30.0**	**-0.1**
ZAK	**Zakamensk**	**3.19**	**107**	*e*PN	**Pn**	**23 35 38.7**	**+0.6**
ZAK				*e*		23 35 44.9	
ZAK				*e*		23 36 28.5	
ZAK				pmax	pmax		
	comp=Z,107nm,0.5s						
ZAK				smax	smax		
	comp=N,652nm,0.9s						
TLY	**Talaya**	**3.21**	**83**	Pn	**Pn**	**23 35 40.1**	**+1.8**
	comp=N,0.0nm,0.3s,baz=264,slow=18,SNR=2.4						
TLY				Pg	**Pb**	**23 35 44.7**	**-0.1**
	comp=N,0.1nm,0.3s,baz=273,slow=14,SNR=27						
TLY				Lg	Lg	23 36 28.4	
	comp=N,0.7nm,0.3s,baz=38,slow=16,SNR=53						
TLY	**Talaya**	**3.21**	**83**	*e*PN	**Pb**	**23 35 45.6**	**+0.7**
TLY				*e*		23 36 28.7	
TLY				pmax	pmax		
	comp=Z,113nm,0.5s						
IRK	**Irkutsk**	**3.67**	**75**	Sg	**Sg**	**23 36 41.5**	**-3.8**
IRK	**Irkutsk**	**3.67**	**75**	*e*PN	**Pb**	**23 35 53.6**	**+1.0**
IRK				*e*		23 36 40.0	
IRK				pmax	pmax		
	comp=Z,191nm,2.4s						
IRK				smax	smax		
	comp=N,2µm,0.9s						
LSTR	**Listvyanka**	**3.96**	**81**	*e*PN	**Pb**	**23 35 58.6**	**+1.0**
LSTR				pmax	pmax		
	comp=Z,28nm,0.6s						
BGT	**Bolshoye Golou**	**4.33**	**79**	*e*PN	**Pb**	**23 36 04.4**	**+0.5**
BGT				pmax	pmax		
	comp=Z,51nm,0.5s						
CERR	**Cheremushki**	**4.60**	**291**	Pg	**Pb**	**23 36 06.7**	**-1.8**
CERR				Sg	**Sb**	**23 37 06.0**	**+2.1**
TRG	**Tyrgan**	**5.01**	**71**	*e*PN	**Pg**	**23 36 19.8**	**-3.8**
OGRR	**Ongureny**	**5.97**	**65**	*e*PN	Pn	23 36 20.3	+4.1
OGRR				*e*		23 36 37.9	
OGRR				pmax	pmax		
	comp=Z,29nm,0.6s						
SONM	**Songino Array**	**6.25**	**122**	Pn	**Pn**	**23 36 20.9**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=306,slow=14,SNR=5.7						
SONM				Pg	**Pb**	**23 36 39.2**	**+2.6**
	comp=Z,3.8nm,0.3s,baz=303,slow=18,SNR=35						
SONM				Lg	Lg	23 38 04.5	
	comp=Z,3.7nm,0.3s,baz=303,slow=27,SNR=6.2						
DGZ	**Jazzator, Alta**	**7.27**	**261**	⇓*e*P	**Pn**	**23 36 35.6**	**+1.6**
NIZ	**Nizh Angarsk**	**7.88**	**52**	*e*P	**Pn**	**23 36 44.9**	**+2.6**
NIZ				*e*S	**Sn**	**23 38 10.0**	**-1.4**
NIZ				pmax	pmax		
	comp=Z,28nm,1.7s						
NIZ				smax	smax		
	comp=N,291nm,1.8s						
ZALV	**Zalesovo Beam**	**8.70**	**292**	Pn	**Pn**	**23 36 53.5**	**0.0**
	comp=N,0.2nm,0.3s,baz=107,slow=13,SNR=2.9						
ZALV				Lg	Lg	23 39 09.3	
	comp=N,0.7nm,0.3s,baz=104,slow=29,SNR=3.9						
ZALV	**Zalesovo Beam**	**8.70**	**292**	*i* P	Pn	23 37 02.7	+9.2
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	**Makanchi Array**	**11.59**	**253**	Pn	**Pn**	**23 37 34.0**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=57,slow=16,SNR=1.9						
MKAR				Lg	Lg	23 40 42.8	
	comp=Z,0.1nm,0.3s,baz=64,slow=36,SNR=3.3						
KURBB	**Kurchatov Arra**	**12.61**	**274**	Lg	Lg	23 41 16.6	
	comp=Z,0.1nm,0.3s,baz=82,slow=32,SNR=5.1						
NRIK	**Noril'sk**	**18.72**	**348**	S	**S**	**23 42 38.0**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=161,slow=3.0,SNR=1.2						
NRIK				Lg	Lg	23 44 35.5	
	comp=Z,0.1nm,0.3s,baz=73,slow=22,SNR=1.2						
FINES	**FINESS Array B**	**39.23**	**314**	P	**P**	**23 42 14.7**	**-1.1**
	comp=Z,1.8nm,0.9s,baz=70,slow=8.1,SNR=1.6						
FINES	**FINESS Array B**	**39.23**	**314**	*i* P	**P**	**23 42 18.7**	**+2.9**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BRTR	**Keskin Array B**	**45.46**	**282**	LR	LR	00 04 40.9	
	comp=Z,307nm,19.4s,baz=306,slow=40						
DAVOX	**Davos/Dischmat**	**54.78**	**303**	LR	LR	00 07 48.2	
	comp=Z,297nm,19.6s,baz=360,slow=36						

BJI ***11*** *23:36:15.8±0.0, 7.°37S×129.°28E, h138^{km}, mB5.5/67, mb5.8/87*

NEIC ***11*** *23:36:18.9, 7.°24S×128.°95E, h127^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$3.58; M$_{\theta\theta}$-4.00; M$_{\phi\phi}$0.43; M$_{r\theta}$2.75; M$_{\theta\phi}$3.75; M$_{\phi r}$2.37; Fault plane solution: M$_0$6.46000×10^{17} NP1:φ$_s$86.33000°, δ63.99000°, λ45.10000°. NP2:φ$_s$332.57000°, δ50.47000°, λ145.34000°. Principal axes: T 6.5950, Plg49.0000°, Azm306.0000°; N -0.2796, Plg39.0000°, Azm110.0000°; P -6.3154, Plg8.0000°, Azm207.0000°;*

KLM ***11*** *23:36:19, 7.°54S×129.°20E, h156^{km}, mb5.9*

DJA ***11*** *23:36:19.4±0.1, 7°S±1°×12°9E±°, h142^{km}±2^{km}, M5.5/115, mB5.9/103, mb5.6/115, MLv6.1/14, Mw(mB)5.5/103, MwMwp5.5/64, Mwp5.6/64*

IDC ***11*** *23:36:19.5±0.9, 7.°21S×128.°92E, h134^{km}±7^{km}, mb5.2/47, mb1 5.1/49, mb1mx5.0/53, mbtmp5.6/49, MS4.7/20, Ms1 4.7/20, ms1mx4.4/44, Error ellipse: s-maj=10.0km s-min=7.2km az=68.0*

NEIC ***11*** *23:36:19.2±2.1, 7.°25S±0.°06×128.°93E±0.°05, h126^{km}±1^{km}, mb5.7/185, Mwb5.8/30, Mww5.8, Mwc5.9(GCMT), Error ellipse: s-maj=10.7km s-min=9.0km az=183.0*

MOS ***11*** *23:36:19.4±0.7, 7.°21S×129.°00E, h152^{km}, mb5.7/54, Error ellipse: s-maj=8.6km s-min=4.9km az=109.2*

NEIC ***11*** *23:36:20, 7.°45S×129.°03E, h140^{km}, Moment Tensor Solution. Duration: 2.^{s}0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$4.49; M$_{\theta\theta}$-5.20; M$_{\phi\phi}$0.71; M$_{r\theta}$1.65; M$_{\theta\phi}$2.11; M$_{\phi r}$3.28; Fault plane solution: M$_0$6.46000×10^{17} NP1: φ$_s$316.00000°, δ50.00000°, λ135.00000°. NP2: φ$_s$78.00000°, δ57.00000°, λ49.00000°. Principal axes: T 6.8989, Plg57.0000°, Azm292.0000°; N -0.9848, Plg33.0000°, Azm103.0000°; P -5.9141, Plg4.0000°, Azm196.0000°;*

GCMT ***11*** *23:36:21.2±0.1, 7.°41S×128.°93E, h137^{km}, MW5.8/157, Moment Tensor Solution. s156,c311; s157,c466; Duration: 2.^{s}0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$4.48±.04; M$_{\theta\theta}$-5.58±.06; M$_{\phi\phi}$1.10±.06; M$_{r\theta}$2.35±.04; M$_{\theta\phi}$3.36±.05; M$_{\phi r}$3.10±.04; Best double couple: M$_0$7.24800×10^{17} NP1:φ$_s$324.00000°, δ51.00000°, λ141.00000°. NP2:φ$_s$81.00000°, δ60.00000°, λ46.00000°. Principal axes: T 7.4240, Plg53.0000°, Azm298.0000°; N -0.3510, Plg37.0000°, Azm106.0000°; P -7.0730, Plg6.0000°, Azm200.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***11*** *23:36:22, 7.°39S×128.°96E, h141^{km}, Moment Tensor Solution. Duration: 4.^{s}2 Moment tensor: Scale 10^{17}Nm; M$_{rr}$4.68; M$_{\theta\theta}$-5.76; M$_{\phi\phi}$1.08; M$_{r\theta}$2.40; M$_{\theta\phi}$3.53; M$_{\phi r}$3.21; Fault plane solution: M$_0$7.53000×10^{17} NP1: φ$_s$324.00000°, δ51.00000°, λ140.00000°. NP2: φ$_s$82.00000°, δ60.00000°, λ46.00000°. Principal axes: T 7.6979, Plg53.0000°, Azm298.0000°; N -0.3555, Plg37.0000°, Azm107.0000°; P -7.3425, Plg5.0000°, Azm201.0000°;*

ISC 11 23:36:19.0±0.3**, 7.°27S**±0.°03×**128.°95E**±0.°03**, h138^{km}**±2^{km}**, h138^{km}:pP-P, n1465,** σ**1.^{s}43**/1617**, mb5.6**/280**, 125C-54D, Fault plane solution: NP1:**φ$_s$54.82387°**,** δ59.69883°**,** λ47.27170°. **NP2:**φ$_s$296.17923°**,** δ50.63746°**,** λ139.26320°. **Principal axes:** T Plg53.6327°**,** Azm270.8118°**;** N Plg35.8614°**,** Azm79.8114°**;** P Plg5.2613°**,** Azm173.6281°**;**
Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.43**	**107**	P	**Pn**	**23 36 58.1**	**-0.7**
SAUI				S	**Sn**	**23 37 27.1**	**-2.1**
SAUI	**Saumlaki**	**2.43**	**107**	Pn	**Pn**	**23 36 58.0**	**-0.7**
SAUI				Sn	**Sn**	**23 37 27.5**	**-1.7**
SAUI	**Saumlaki**	**2.43**	**107**	P	**Pn**	**23 36 58.0**	**-0.7**
BNDI	**Bandanaira**	**2.89**	**19**	P	**Pn**	**23 37 06.5**	**+1.9**
MSAI	**Masohi**	**3.90**	**360**	P	**Pn**	**23 37 20.4**	**+2.7**
SOEI	**Soe**	**5.25**	**242**	P	**Pn**	**23 37 36.1**	**+0.3**
	290nm73µm171µm11µm,1.3s						
SOEI	**Soe**	**5.25**	**242**	Pn	**Pn**	**23 37 36.0**	**+0.2**
SOEI	**Soe**	**5.25**	**242**	P	**Pn**	**23 37 36.1**	**+0.3**
FAKI	**Fak Fak**	**5.43**	**37**	P	**Pn**	**23 37 36.6**	**-1.4**
	6.2nm28µm18µm801nm,0.6s						
FAKI	**Fak Fak**	**5.43**	**37**	Pn	**Pn**	**23 37 36.7**	**-1.4**
FAKI	**Fak Fak**	**5.43**	**37**	P	**Pn**	**23 37 37.2**	**-0.8**
DRS	**Darwin Rock St**	**5.47**	**160**	P	**Pn**	**23 37 36.2**	**-2.4**
	3µm,0.8s						
MTN	**Manton Dam**	**5.94**	**159**	P	**Pn**	**23 37 42.5**	**-2.3**
	baz=6.0,SNR=640						
MTN				S	**Sn**	**23 38 45.1**	**-6.8**
	baz=6.0						
MTN	**Manton Dam**	**5.94**	**159**	Pn	**Pn**	**23 37 42.5**	**-2.3**
MTN	**Manton Dam**	**5.94**	**159**	P	**Pn**	**23 37 42.2**	**-2.6**
	3µm,0.4s						
SANI	**Sanana**	**5.97**	**330**	P	**Pn**	**23 37 49.0**	**+3.7**
	2.3nm13µm5µm251nm,0.8s						
SANI	**Sanana**	**5.97**	**330**	P	**Pn**	**23 37 49.5**	**+4.2**
BATI	**Baumata**	**5.99**	**240**	P	**Pn**	**23 37 45.8**	**+0.2**
	baz=124,slow=6.3						
BATI				S	**Sn**	**23 38 50.0**	**-3.1**
	10µm,0.3s,baz=255,slow=24,SNR=25						
BATI				LR	LR	23 39 50.8	
	comp=Z,20µm,19.7s,baz=335,slow=35						
BATI	**Baumata**	**5.99**	**240**	P	**Pn**	**23 37 45.8**	**+0.2**
	107nm56µm63µm6µm,1.3s						
KDU	**Kakadu**	**6.40**	**147**	P	**Pn**	**23 37 48.2**	**-2.9**
	baz=6.4,SNR=565						
KDU				S	**Sn**	**23 38 54.6**	**-8.3**
	baz=6.4						
KDU	**Kakadu**	**6.40**	**147**	P	**Pn**	**23 37 48.0**	**-3.0**
	992nm,0.4s						
LBMI	**Labuha**	**6.75**	**348**	P	**Pn**	**23 37 59.2**	**+3.5**
	2.6nm17µm7µm568nm,1.2s						
SIJI	**Sorong**	**6.76**	**20**	P	**Pn**	**23 37 54.9**	**-1.1**
	33nm,0.3s,baz=189,slow=6.3,SNR=158						
SIJI				S	**Sn**	**23 39 09.1**	**-2.7**
	79nm,0.3s,baz=180,slow=20,SNR=8.1						
SWI	**Sorong**	**6.77**	**20**	P	**Pn**	**23 37 56.0**	**0.0**
SWI				pmax	pmax		
	comp=Z,590nm,1.2s						
SWI	**Sorong**	**6.77**	**20**	P	**Pn**	**23 37 55.8**	**-0.2**
	comp=Z,4.0nmcomp=Z,28µmcomp=Z,10µmcomp=Z,372nm,1.2s						
MMRI	**Maumere**	**6.79**	**258**	P	**Pn**	**23 37 56.7**	**+0.5**
	comp=Z,56nmcomp=Z,43µmcomp=Z,43µmcomp=Z,3µm,1.0s						
MMRI	**Maumere**	**6.79**	**258**	Pn	**Pn**	**23 37 56.7**	**+0.5**
MMRI	**Maumere**	**6.79**	**258**	P	**Pn**	**23 37 57.2**	**+0.9**
KDI	**Kendari**	**7.11**	**297**	P	**Pn**	**23 38 04.6**	**+4.0**
EDFI	**Ende, Flores**	**7.34**	**258**	P	**Pn**	**23 38 03.9**	**+0.1**
	comp=Z,26µmcomp=Z,8µmcomp=Z,685nm,1.0s						
TNTI	**Ternate**	**8.15**	**349**	P	**Pn**	**23 38 17.1**	**+2.6**
	comp=Z,10µmcomp=Z,3µmcomp=Z,181nm,1.2s						
TNTI	**Ternate**	**8.15**	**349**	Pn	**Pn**	**23 38 17.0**	**+2.6**
KNRA	**Kununurra**	**8.36**	**181**	S	Sn	23 39 38.4	-12
	baz=8.4						
KNRA	**Kununurra**	**8.36**	**181**	Pn	**Pn**	**23 38 14.0**	**-3.3**
KNRA	**Kununurra**	**8.36**	**181**	P	**Pn**	**23 38 13.3**	**-4.0**
	comp=Z,8µm,0.6s						
BSSI	**Bau Bau, Buton**	**8.48**	**277**	P	**Pn**	**23 38 20.5**	**+1.5**
	comp=Z,8µmcomp=Z,7µmcomp=Z,683nm,1.2s						
LUWI	**Luwuk**	**8.73**	**315**	P	**Pn**	**23 38 25.7**	**+3.3**
	comp=Z,16µmcomp=Z,10µmcomp=Z,692nm,1.2s						
LUWI	**Luwuk**	**8.73**	**315**		**Pn**	**23 38 25.9**	**+3.5**
BASI	**Baing, Sumba**	**8.78**	**250**	P	**Pn**	**23 38 22.0**	**-1.0**
	comp=Z,37µmcomp=Z,2µm,0.6s						
BKSI	**Bulukumba**	**8.99**	**282**	P	**Pn**	**23 38 27.7**	**+1.9**
	comp=Z,12µmcomp=Z,8µmcomp=Z,545nm,1.0s						
SRPI	**Serui, Papua**	**9.03**	**54**	P	**Pn**	**23 38 25.9**	**-0.4**
	comp=Z,10µmcomp=Z,5µmcomp=Z,335nm,1.3s						
KMSI	**Cibinong**	**9.24**	**327**	P	**Pn**	**23 38 32.1**	**+2.9**
	comp=Z,5µmcomp=Z,389nm,0.7s						
BAKI	**Biak**	**9.35**	**50**	P	**Pn**	**23 38 30.5**	**-0.1**
	comp=Z,2µm,1.2s						
KAPI	**Kappang**	**9.42**	**283**	P	**Pn**	**23 38 34.1**	**+2.5**
	comp=Z,10nm,0.3s,baz=131,slow=12,SNR=46						
KAPI				S	**Sn**	**23 40 17.2**	**+1.3**
	comp=Z,3.8nm,0.3s,baz=198,slow=19,SNR=1.2						
KAPI	**Kappang**	**9.42**	**283**	P	**Pn**	**23 38 33.4**	**+1.8**
KAPI	**Kappang**	**9.42**	**283**	P	**Pn**	**23 38 33.7**	**+2.1**
KAPI	**Kappang**	**9.42**	**283**		**Pn**	**23 38 33.4**	**+1.8**
KAPI	**Kappang**	**9.42**	**283**	P	**Pn**	**23 38 33.9**	**+2.3**
APSI	**Ampana**	**9.64**	**311**	P	**Pn**	**23 38 39.0**	**+4.5**
	comp=Z,8µmcomp=Z,5µmcomp=Z,430nm,1.6s						
SPSI	**Sidrap Palu**	**9.71**	**289**	P	**Pn**	**23 38 38.1**	**+2.6**
	comp=Z,12µmcomp=Z,9µmcomp=Z,532nm,0.8s						
WBSI	**Waikabubak, Su**	**9.75**	**255**	P	**Pn**	**23 38 34.3**	**-1.7**
	comp=Z,23µmcomp=Z,2µm,0.9s						
TTSI	**Tana Toraja**	**10.02**	**294**	P	**Pn**	**23 38 42.5**	**+2.9**
	comp=Z,13µmcomp=Z,5µmcomp=Z,352nm,1.2s						
MRSI	**Marisa**	**10.40**	**317**	P	**Pn**	**23 38 48.9**	**+4.2**
	comp=Z,13µmcomp=Z,10µmcomp=Z,748nm,1.1s						
SMPI	**Sarmi**	**11.05**	**62**	P	**Pn**	**23 38 51.8**	**-1.5**
	comp=Z,7µmcomp=Z,2µmcomp=Z,120nm,1.2s						
PLAI	**Plampang**	**11.18**	**261**	P	**Pn**	**23 38 53.8**	**-1.2**
	comp=Z,13µmcomp=Z,16µmcomp=Z,1µm,0.7s						
PLAI	**Plampang**	**11.18**	**261**	P	**Pn**	**23 38 53.2**	**-1.8**
FITZ	**Fitzroy Crossi**	**11.23**	**196**	P	Pn	23 38 51.0	-4.7
	baz=0.0,slow=11						
FITZ				LR	LR	23 44 20.9	
	comp=Z,11µm,19.5s,baz=26,slow=43						
SGSI	**Sangihe**	**11.41**	**342**	P	**Pn**	**23 39 00.5**	**+2.5**
	comp=Z,16µmcomp=Z,764nm,0.6s						
TOLI2	**Tolitoli**	**11.65**	**315**		**Pn**	**23 39 04.6**	**+3.3**
TOLI2	**Tolitoli**	**11.65**	**315**	P	**Pn**	**23 39 04.9**	**+3.6**
MPSI	**Mapaga**	**11.78**	**310**	P	**P**	**23 39 06.7**	**-3.7**
	comp=Z,14µmcomp=Z,9µmcomp=Z,306nm,1.7s						
TWSI	**Taliwang, Sumb**	**12.04**	**262**	P	**Pn**	**23 39 05.6**	**-0.8**
	comp=Z,8µmcomp=Z,4µmcomp=Z,233nm,0.8s						
JAY	**Jayapura**	**12.62**	**69**	P	**Pn**	**23 39 10.9**	**-3.0**
	comp=Z,0.7nm,0.3s,baz=266,slow=9.3,SNR=9.2						
KBKI	**Kotabaru**	**13.33**	**287**	P	**Pn**	**23 39 24.6**	**+1.6**
	comp=Z,4µmcomp=Z,357nm,0.6s						
SMKI	**Samarinda**	**13.53**	**300**	P	**P**	**23 39 29.9**	**0.0**
	comp=Z,16µmcomp=Z,13µmcomp=Z,660nm,1.1s						
WRA	**Warramunga Arr**	**13.64**	**158**	P	Pn	23 39 21.4	-5.5
	comp=Z,90nm,0.3s,baz=342,slow=12,SNR=438						
WRA				S	Sn	23 41 42.7	-15
	comp=Z,228nm,0.3s,baz=343,slow=21,SNR=18						
WRA				P3KPbc		00 15 04.7	
	baz=154,slow=3.5,SNR=3.1						
SRBI	**Singaraja**	**13.64**	**266**	P	**Pn**	**23 39 28.5**	**+1.5**
	comp=Z,11µmcomp=Z,3µmcomp=Z,126nm,1.4s						
DNP	**Denpasar**	**13.68**	**263**	P	**Pn**	**23 39 29.0**	**+1.5**
	comp=Z,15µmcomp=Z,762nm,0.7s						
IGBI	**Denpasar**	**13.76**	**263**	P	**Pn**	**23 39 27.8**	**-0.7**
GSPH	**General Santos**	**13.86**	**343**	⇑*i*P	**P**	**23 39 35.3**	**+1.6**
BBKI	**Banjar Baru**	**14.55**	**284**	P	**P**	**23 39 41.5**	**+0.3**
	comp=Z,17µmcomp=Z,881nm,1.0s						
ABJI	**Asem Bagus**	**14.60**	**267**	P	**Pn**	**23 39 37.0**	**-2.2**
	comp=Z,14µmcomp=Z,6µmcomp=Z,240nm,0.9s						
DAV	**Davao City (W)**	**14.64**	**347**		**P**	**23 39 41.0**	**-1.2**
KCP	**Kidapawan**	**14.70**	**345**	⇑*e*P	**P**	**23 39 42.4**	**-0.5**
JAGI	**Jajag, Banyuwa**	**14.71**	**264**		**Pn**	**23 39 38.3**	**-2.3**
KMMI	**Kalianget**	**14.87**	**270**	P	**P**	**23 39 45.8**	**+1.0**
	comp=Z,12µmcomp=Z,6µmcomp=Z,359nm,1.4s						
BLJI	**Banyuglugur**	**15.24**	**267**	P	**Pn**	**23 39 47.6**	**+0.5**
	comp=Z,8µmcomp=Z,4µmcomp=Z,294nm,0.7s						
MTKI	**Muara Teweh, K**	**15.36**	**294**	P	**P**	**23 39 51.8**	**+1.6**
	comp=Z,12µmcomp=Z,23µmcomp=Z,870nm,1.0s						
GMJI	**Gumukmas**	**15.40**	**265**	P	**Pn**	**23 39 49.2**	**+0.1**
	comp=Z,3µmcomp=Z,132nm,1.0s						
COEN	**Coen**	**15.47**	**117**		**Pn**	**23 39 46.8**	**-3.2**
COEN	**Coen**	**15.47**	**117**	P	**Pn**	**23 39 47.8**	**-2.2**
	comp=Z,107nm,0.8s						
PAGZ	**Pagadian**	**16.01**	**340**	⇑*i*P	**P**	**23 39 59.2**	**+1.7**
BWJI	**Bawean**	**16.25**	**274**	P	**P**	**23 40 00.5**	**+0.4**
	comp=Z,9µmcomp=Z,10µmcomp=Z,557nm,1.4s						
MBWA	**Marble Bar**	**16.44**	**212**	P	**Pn**	**23 39 58.9**	**-2.9**
DCPH	**Dipolog City**	**16.71**	**340**	⇑*e*P	**Pn**	**23 40 09.9**	**+4.7**
PSA00	**Pilbara Seismi**	**16.72**	**211**	Pn	**P**	**23 40 02.6**	**-2.6**
PSA00	**Pilbara Seismi**	**16.72**	**211**		**P**	**23 40 02.5**	**-2.6**
PSA00				IAmb	IAmb	23 40 04.9	
	comp=Z,486nm,0.7s						
PSA00	**Pilbara Seismi**	**16.72**	**211**	P	**P**	**23 40 02.4**	**-2.8**
	comp=Z,756nm,0.6s						
QIS	**Mount Isa**	**16.76**	**143**	P	**P**	**23 40 03.6**	**-2.1**
	baz=17,SNR=198						
QIS	**Mount Isa**	**16.76**	**143**	P	**P**	**23 40 03.1**	**-2.6**
	comp=Z,195nm,0.5s						
AS31	**Alice Springs**	**16.98**	**164**	P	**P**	**23 40 04.8**	**-3.3**
ASAR	**Alice Springs**	**16.98**	**164**	P	**P**	**23 40 05.6**	**-2.5**
	comp=Z,34nm,0.3s,baz=334,slow=8.6,SNR=687						
ASAR				S	Sn	23 42 59.1	-19
	comp=Z,28nm,0.3s,baz=346,slow=23,SNR=5.9						
ASAR				LR	LR	23 47 19.8	
	comp=Z,6µm,19.4s,baz=344,slow=39						
ASAR				P3KPbc		00 14 53.9	
	comp=Z,0.1nm,0.3s,baz=163,slow=3.5,SNR=2.4						
ASAR	**Alice Springs**	**16.98**	**164**	P	**P**	**23 40 04.7**	**-3.4**
TBJI	**Tambak Boyo**	**16.98**	**270**	P	**P**	**23 40 07.1**	**-1.1**
NGJI	**Ngawi**	**17.35**	**269**	P	**Pn**	**23 40 12.9**	**-0.1**
	comp=Z,2µmcomp=Z,128nm,0.7s						
PCJI	**Pacitan**	**17.64**	**266**	P	**P**	**23 40 13.3**	**-2.1**
	comp=Z,8µmcomp=Z,552nm,0.5s						
WRKA	**Warakurna**	**17.68**	**182**	P	**P**	**23 40 13.6**	**-2.2**
	comp=Z,1µm,1.3s						
PBKI	**Pangkalan Bun**	**17.80**	**284**	P	**Pn**	**23 40 19.2**	**+0.8**
	comp=Z,47µmcomp=Z,6µm,1.3s						
PMG	**Port Moresby**	**18.14**	**98**	P	**Pn**	**23 40 23.5**	**+1.2**
	comp=Z,4.5nm,0.3s,baz=291,slow=8.3,SNR=26						
PMG				S	**S**	**23 43 32.4**	**-9.3**
	comp=Z,1.6nm,0.3s,baz=238,slow=7.9,SNR=1.3						
PMG				LR	LR	23 47 45.9	
	comp=Z,3µm,21.8s,baz=276,slow=38						
PMG	**Port Moresby**	**18.14**	**98**	P	**P**	**23 40 20.8**	**0.0**
UGM	**Wanagama**	**18.28**	**267**	P	**P**	**23 40 22.0**	**-0.5**
	comp=Z,9µmcomp=Z,5µmcomp=Z,366nm,0.6s						
UGM	**Wanagama**	**18.28**	**267**	P	**P**	**23 40 21.0**	**-1.4**
UGM				IAmb	IAmb	23 41 03.4	
	comp=Z,248nm,0.7s						
UGM	**Wanagama**	**18.28**	**267**	P	**P**	**23 40 21.0**	**-1.5**
SMRI	**Semarang**	**18.37**	**270**	P	**P**	**23 40 23.9**	**+0.5**
	comp=Z,10µmcomp=Z,6µmcomp=Z,363nm,0.9s						
SMRI	**Semarang**	**18.37**	**270**	P	**P**	**23 40 22.0**	**-1.4**
SMRI				IAmb	IAmb	23 40 41.9	
	comp=Z,310nm,1.0s						
SMRI	**Semarang**	**18.37**	**270**	P	**Pn**	**23 40 25.1**	**0.0**
MTSU	**Mount Surprise**	**18.45**	**127**	P	**Pn**	**23 40 25.6**	**-0.5**
	baz=18,SNR=99						
MTSU	**Mount Surprise**	**18.45**	**127**	P	**P**	**23 40 25.0**	**+0.7**
	comp=Z,175nm,0.8s						

YOGI	**Yogyakarta**	**18.51**	**267**	P	**P**	**23 40 23.7**	**-1.2**
	comp=Z,4µmcomp=Z,264nm,0.9s						
STKI	**Sintang**	**18.89**	**292**	P	**Pn**	**23 40 30.7**	**-0.5**
	comp=Z,11µmcomp=Z,846nm,1.2s						
MANU	**Manus Island**	**19.07**	**75**	P	**Pn**	**23 40 32.9**	**-0.4**
MANU				IAmb	IAmb	23 40 35.5	
	comp=Z,166nm,0.8s						
SBUM	**Sibu**	**19.29**	**299**	P	**Pn**	**23 40 36.0**	**+0.1**
RCP	**Roxas**	**19.70**	**342**	⇓*e*P	**Pn**	**23 40 39.8**	**-0.8**
CMJI	**Cimerak**	**20.34**	**267**	P	**P**	**23 40 42.0**	**-2.7**
	comp=Z,2µmcomp=Z,259nm,0.8s						
KSM	**Kuching**	**20.53**	**294**	P	**P**	**23 40 48.0**	**+1.2**
GIRL	**Giralia**	**20.84**	**221**	P	**P**	**23 40 51.6**	**+1.6**
	baz=21,SNR=52						
GIRL	**Giralia**	**20.84**	**221**	P	**P**	**23 40 50.9**	**+0.9**
GIRL	**Giralia**	**20.84**	**221**	P	**P**	**23 40 50.9**	**+0.9**
	comp=Z,1µm,1.3s						
CTA	**Charters Tower**	**21.06**	**129**	P	**P**	**23 40 53.2**	**+0.8**
	comp=Z,35nm,0.8s,baz=299,slow=13,SNR=32						
CTA				S	**S**	**23 44 38.4**	**-0.9**
	comp=Z,31nm,0.8s,baz=245,slow=22,SNR=1.8						
CTA	**Charters Tower**	**21.06**	**129**	P	**P**	**23 40 53.7**	**+1.3**
	comp=Z,84nm,0.7s						
CTAO	**Charters Tower**	**21.06**	**129**	P	**P**	**23 40 52.7**	**+0.3**
CTAO				pmax	pmax		
	comp=Z,80nm,1.0s						
CTAO	**Charters Tower**	**21.06**	**129**	P	**P**	**23 40 52.7**	**+0.3**
CTAO	**Charters Tower**	**21.06**	**129**	P	**P**	**23 40 53.1**	**+0.7**
LEM	**Lembang**	**21.18**	**270**	P	**P**	**23 40 51.8**	**-2.1**
	comp=Z,169nm,0.6s,baz=44,slow=9.1,SNR=24						
LEM				S	**S**	**23 44 34.8**	**-7.1**
	comp=Z,92nm,0.7s,baz=16,slow=19,SNR=3.6						
OOD	**Oodnadatta**	**21.39**	**163**	P	**P**	**23 40 54.6**	**-1.2**
	comp=Z,1µm,0.6s						
MEEK	**Meekatharra**	**21.63**	**206**	P	**P**	**23 40 58.2**	**-0.2**
	baz=22,SNR=79						
MEEK	**Meekatharra**	**21.63**	**206**	P	**P**	**23 40 57.7**	**-0.7**
	comp=Z,386nm,0.9s						
CNJI	**Cibinong**	**21.65**	**269**	P	**P**	**23 40 55.8**	**-2.9**
	comp=Z,7µmcomp=Z,628nm,0.8s						
CBJI	**Citeko**	**21.96**	**271**	P	**P**	**23 41 01.1**	**-0.9**
	comp=Z,12µmcomp=Z,443nm,0.9s						
DBJI	**Dramaga**	**22.05**	**270**	P	**P**	**23 40 59.6**	**-3.4**
	comp=Z,9µmcomp=Z,300nm,0.8s						
PGP	**Puerto Galera**	**22.11**	**339**	⇑*e*P	**P**	**23 41 04.4**	**+0.8**
SBJI	**Serang**	**22.70**	**272**	P	**P**	**23 41 06.3**	**-3.0**
	comp=Z,202nm,0.8s						
CGJI	**Cibinong**	**23.10**	**270**	P	**P**	**23 41 10.0**	**-3.0**
	comp=Z,5µmcomp=Z,473nm,1.3s						
INKA	**Innaminka**	**23.22**	**153**	P	**P**	**23 41 14.4**	**+0.4**
	comp=Z,2µm,0.9s						
XMIS	**Christmas Isla**	**23.24**	**260**	P	**P**	**23 41 11.8**	**-2.5**
XMIS				IAmb	IAmb	23 42 08.8	
	comp=Z,154nm,0.8s						
XMIS	**Christmas Isla**	**23.24**	**260**	P	**P**	**23 41 12.2**	**-2.1**
	comp=Z,179nm,1.1s						
PPBI	**Pangkal Pinang**	**23.29**	**281**	P	**P**	**23 41 15.1**	**+0.3**
	comp=Z,9µmcomp=Z,338nm,0.9s						
MULG	**Mulgathing**	**23.39**	**169**	P	**P**	**23 41 15.1**	**-0.4**
	comp=Z,717nm,1.0s						
FORT	**Forrest**	**23.40**	**182**	P	**P**	**23 41 16.0**	**+0.4**
	baz=24,SNR=531						
FORT	**Forrest**	**23.40**	**182**	P	**P**	**23 41 15.8**	**+0.2**
FORT	**Forrest**	**23.40**	**182**	P	**P**	**23 41 15.3**	**-0.3**
	comp=Z,1µm,0.8s						
KLI	**Kotabumi**	**24.08**	**274**	P	**P**	**23 41 22.6**	**+0.6**
	comp=Z,6µmcomp=Z,6µmcomp=Z,395nm,1.3s						
QLP	**Quilpie**	**24.09**	**145**	P	**P**	**23 41 22.4**	**+0.6**
	baz=24,SNR=512						
QLP	**Quilpie**	**24.09**	**145**	P	**P**	**23 41 22.0**	**+0.1**
	comp=Z,1µm,0.5s						
KLSI		**24.23**	**275**	P	**P**	**23 41 20.7**	**-2.6**
	comp=Z,2µmcomp=Z,108nm,1.6s						
KASI	**Kota Agung**	**24.37**	**273**	P	**P**	**23 41 21.2**	**-3.4**
	comp=Z,2µmcomp=Z,85nm,0.5s						
PMBI	**Palembang**	**24.46**	**279**	P	**P**	**23 41 27.6**	**+2.1**
	comp=Z,8µmcomp=Z,16µmcomp=Z,1µm,1.4s						
PMBI	**Palembang**	**24.46**	**279**	P	**P**	**23 41 26.4**	**+0.9**
LCRK	**Leigh Creek**	**24.64**	**161**	P	**P**	**23 41 26.6**	**-0.3**
	comp=Z,507nm,0.9s						
MDSI	**Maura Dua**	**24.80**	**275**	P	**P**	**23 41 26.5**	**-2.0**
	comp=Z,3µmcomp=Z,802nmcomp=Z,36nm,1.1s						
LWLI	**Liwa**	**24.85**	**274**	P	**P**	**23 41 28.1**	**-1.0**
	comp=Z,132nm,1.1s						
MORW	**Morawa**	**24.87**	**208**	P	**P**	**23 41 29.2**	**+0.2**
	baz=25,SNR=115						
MORW	**Morawa**	**24.87**	**208**	P	**P**	**23 41 28.9**	**-0.1**
MORW				IAmb	IAmb	23 42 06.8	
	comp=Z,636nm,1.4s						
MORW	**Morawa**	**24.87**	**208**	P	**P**	**23 41 28.7**	**-0.3**
	comp=Z,264nm,0.8s						
DSRI	**Dabo**	**25.23**	**284**	P	**P**	**23 41 32.9**	**+0.5**
	comp=Z,2µmcomp=Z,74nm,1.5s						
LHSI	**Lahat**	**25.54**	**276**	P	**P**	**23 41 33.5**	**-1.7**
	comp=Z,3µmcomp=Z,173nm,0.7s						
JMBI	**JAMBI**	**25.84**	**281**	P	**P**	**23 41 38.9**	**+1.0**
	comp=Z,224nm,1.1s						
BLDU	**Ballidu**	**25.91**	**205**	P	**P**	**23 41 38.7**	**+0.4**
	baz=26,SNR=52						
BLDU	**Ballidu**	**25.91**	**205**	P	**P**	**23 41 38.1**	**-0.2**
	comp=Z,147nm,0.9s						
MNAI	**Manna**	**26.02**	**275**	P	**P**	**23 41 38.5**	**-1.1**
MNAI	**Manna**	**26.02**	**275**	P	**P**	**23 41 40.8**	**+1.2**
GUMO	**Guam**	**26.06**	**37**	P	**P**	**23 41 40.4**	**+0.6**
	comp=Z,32nm,0.3s,baz=142,slow=19,SNR=2.8						
RK1H	**Rockhampton Ha**	**26.17**	**130**	P	**P**	**23 41 42.3**	**+1.5**
	comp=Z,42nm,0.6s						
BBOO	**Buckleboo**	**26.25**	**166**	P	**P**	**23 41 41.5**	**0.0**
	baz=26,SNR=139						
BBOO	**Buckleboo**	**26.25**	**166**	P	**P**	**23 41 41.5**	**0.0**
BBOO				IAmb	IAmb	23 42 27.5	
	comp=Z,148nm,0.9s						
BBOO	**Buckleboo**	**26.25**	**166**	P	**P**	**23 41 40.8**	**-0.7**
	comp=Z,166nm,1.2s						
KLBR	**Kellerberrin**	**26.36**	**202**	P	**P**	**23 41 43.1**	**+0.7**
	baz=26,SNR=114						
KLBR	**Kellerberrin**	**26.36**	**202**	P	**P**	**23 41 42.7**	**+0.3**
	comp=Z,445nm,0.7s						
RMQ	**Roma**	**26.84**	**138**	P	**P**	**23 41 47.6**	**+0.8**
	baz=27,SNR=29						
RMQ	**Roma**	**26.84**	**138**	P	**P**	**23 41 50.0**	**+3.2**
	comp=Z,56nm,1.0s						
WHYH	**Whyalla**	**26.85**	**164**	P	**P**	**23 41 46.6**	**-0.2**
	comp=Z,134nm,0.8s						
MASI	**Maura Aman, Be**	**26.91**	**277**	P	**P**	**23 41 47.5**	**-0.1**
	comp=Z,6µmcomp=Z,190nm,1.4s						
STKA	**Stephens Creek**	**27.17**	**156**	P	**P**	**23 41 49.8**	**+0.1**
	comp=Z,42nm,0.5s,baz=331,slow=8.9,SNR=107						
STKA				LR	LR	23 53 56.1	
	comp=Z,4µm,20.7s,baz=323,slow=39						
STKA	**Stephens Creek**	**27.17**	**156**	P	**P**	**23 41 50.0**	**+0.3**
	baz=27,SNR=73						
STKA	**Stephens Creek**	**27.17**	**156**	P	**P**	**23 41 49.5**	**-0.2**
STKA	**Stephens Creek**	**27.17**	**156**	P	**P**	**23 41 49.3**	**-0.4**
	comp=Z,35nm,0.8s						
MUN	**Mundaring**	**27.30**	**204**	P	**P**	**23 41 51.3**	**+0.4**
	baz=27,SNR=26						
MUN	**Mundaring**	**27.30**	**204**	P	**P**	**23 41 50.8**	**-0.1**
	comp=Z,142nm,0.9s						
HTT	**Hallett**	**27.62**	**162**	P	**P**	**23 41 54.0**	**+0.3**
	baz=28,SNR=20						
HTT	**Hallett**	**27.62**	**162**	P	**P**	**23 41 53.5**	**-0.2**
	comp=Z,136nm,0.9s						
NWAO	**Narrogin (SRO)**	**27.75**	**202**	P	**P**	**23 41 55.5**	**+0.7**
NWAO	**Narrogin (SRO)**	**27.75**	**202**	P	**P**	**23 41 55.8**	**+1.0**
NWAO	**Narrogin (SRO)**	**27.75**	**202**	P	**P**	**23 41 55.5**	**+0.7**
EIDS	**Eidsvold**	**27.75**	**133**	P	**P**	**23 41 55.7**	**+0.8**
	baz=28,SNR=4.6						
EIDS	**Eidsvold**	**27.75**	**133**	P	**P**	**23 41 54.4**	**-0.5**
JRMM	**Jerantut**	**28.66**	**292**	P	**P**	**23 42 04.0**	**+0.9**
CMSA	**Cobar Meteorol**	**28.76**	**149**	P	**P**	**23 42 04.6**	**+0.8**
	baz=29,SNR=208						
CMSA	**Cobar Meteorol**	**28.76**	**149**	P	**P**	**23 42 04.0**	**+0.2**
	comp=Z,136nm,0.9s						
BKNI	**Bangkinang**	**28.85**	**284**	P	**P**	**23 42 05.0**	**+0.2**
	comp=Z,5µmcomp=Z,3µmcomp=Z,140nm,0.6s						
BKNI	**Bangkinang**	**28.85**	**284**	P	**P**	**23 42 04.7**	**-0.1**
BKNI				IAmb	IAmb	23 42 32.7	
	comp=Z,208nm,1.2s						
PDSI	**Padang**	**29.10**	**281**	P	**P**	**23 42 04.8**	**-2.3**
	comp=Z,4µmcomp=Z,40nm,0.7s						
PPI	**Padang Panjang**	**29.27**	**282**	P	**P**	**23 42 08.1**	**-0.4**
	comp=Z,41nm,0.6s						
IPM	**Ipoh**	**30.22**	**292**	P	**P**	**23 42 17.0**	**+0.1**
MNSI	**Mandailing Nat**	**30.38**	**284**	P	**P**	**23 42 17.4**	**-0.9**
	comp=Z,3µmcomp=Z,264nm,0.9s						
HNR	**Honiara**	**30.73**	**96**	P	**P**	**23 42 21.0**	**-0.5**
	comp=Z,69nm,0.4s,baz=185,slow=12,SNR=5.2						
HNR	**Honiara**	**30.73**	**96**	P	**P**	**23 42 21.0**	**-0.5**
HNR	**Honiara**	**30.73**	**96**	P	**P**	**23 42 20.4**	**-1.0**
HNR				IAmb	IAmb	23 42 34.4	
	comp=Z,132nm,0.9s						
KULM	**Kulim**	**30.88**	**293**	P	**P**	**23 42 23.0**	**+0.3**
ARMA	**Armidale**	**31.34**	**140**	P	**P**	**23 42 28.7**	**+2.0**
	baz=31,SNR=25						
ARMA	**Armidale**	**31.34**	**140**	P	**P**	**23 42 27.9**	**+1.2**
ARMA	**Armidale**	**31.34**	**140**	P	**P**	**23 42 28.6**	**+1.9**
	comp=Z,33nm,0.6s						
TPUB	**Ta-pu**	**31.46**	**345**	P	**P**	**23 42 26.5**	**-1.2**
TPUB	**Ta-pu**	**31.46**	**345**	P	**P**	**23 42 26.4**	**-1.3**
PSI	**Prapat**	**31.59**	**287**	P	**P**	**23 42 28.6**	**-0.6**
	comp=Z,127nm,0.9s,baz=126,slow=6.0,SNR=103						
ARPS	**Mount Arapiles**	**31.63**	**160**	P	**P**	**23 42 30.2**	**+1.2**
	baz=32,SNR=66						
ARPS	**Mount Arapiles**	**31.63**	**160**	P	**P**	**23 42 29.6**	**+0.6**
	comp=Z,384nm,0.6s						
SSLB	**Suanglung**	**31.84**	**346**	P	**P**	**23 42 29.3**	**-1.8**
SSLB	**Suanglung**	**31.84**	**346**	P	**P**	**23 42 28.9**	**-2.2**
NACB	**Ninganchiao**	**32.07**	**347**	P	**P**	**23 42 31.3**	**-1.7**
NACB				IAmb	IAmb	23 42 32.2	
	comp=Z,252nm,1.9s						
YOJ	**Yonaguni jima**	**32.07**	**350**	P	**P**	**23 42 33.0**	**0.0**
YOJ				pmax	pmax		
	comp=Z,167nm,0.6s						
YOJ	**Yonaguni jima**	**32.07**	**350**	P	**P**	**23 42 33.0**	**0.0**
YOJ	**Yonaguni jima**	**32.07**	**350**	P	**P**	**23 42 31.8**	**-1.2**
TSI	**Tuntungan**	**32.16**	**288**	P	**P**	**23 42 34.0**	**0.0**
	comp=Z,4µmcomp=Z,7µmcomp=Z,214nm,1.3s						
QIZ	**Qiongzhong**	**32.22**	**324**	P	**P**	**23 42 35.2**	**+0.8**
QIZ				S	**S**	**23 47 37.4**	**-0.1**
QIZ				pmax	pmax		
	comp=Z,100nm,1.1s						
QIZ				pmax	pmax		
	comp=Z,420nm,4.4s						
QIZ				LR	LR		
	comp=Z,1µm,16.7s						
QIZ				LR	LR		
	comp=Z,2µm,19.1s						
QIZ				LR	LR		
	comp=Z,2µm,29.4s						
QIZ	**Qiongzhong**	**32.22**	**324**	P	**P**	**23 42 34.8**	**+0.4**
QIZ				IAmb	IAmb	23 42 36.5	
	comp=Z,333nm,1.6s						
QIZ	**Qiongzhong**	**32.22**	**324**	P	**P**	**23 42 35.4**	**+1.0**
UBPT	**Khong Chiam**	**32.31**	**314**	P	**P**	**23 42 36.0**	**+0.8**
YNG	**Young**	**32.33**	**149**	P	**P**	**23 42 36.5**	**+1.3**
	baz=32,SNR=36						
YNG	**Young**	**32.33**	**149**	P	**P**	**23 42 36.0**	**+0.8**
	comp=Z,129nm,0.8s						
GSI	**Gunungsitoli**	**32.45**	**284**	P	**P**	**23 42 35.0**	**-1.5**
	comp=Z,4µmcomp=Z,320nm,0.9s						
GSI	**Gunungsitoli**	**32.45**	**284**	P	**P**	**23 42 35.2**	**-1.3**
GSI					**PcP**	**23 45 22.4**	**+1.7**
GSI	**Gunungsitoli**	**32.45**	**284**	P	**P**	**23 42 35.2**	**-1.3**
YHNB	**Yeheng**	**32.60**	**347**	P	**P**	**23 42 36.6**	**-1.1**
YHNB				IAmb	IAmb	23 42 46.7	
	comp=Z,244nm,1.7s						
YHNB	**Yeheng**	**32.60**	**347**	P	**P**	**23 42 37.0**	**-0.7**
MGCD	**Mangrove Creek**	**32.98**	**144**	P	**P**	**23 42 43.9**	**+3.0**
	baz=33,SNR=6.0						
BRAT	**Ballarat**	**33.07**	**158**	P	**P**	**23 42 43.1**	**+1.5**
	comp=Z,56nm,0.8s						
TPTI		**33.39**	**287**	P	**P**	**23 42 42.8**	**-1.9**
	comp=Z,646nmcomp=Z,45nm,1.0s						
CAN	**Canberra**	**33.44**	**149**	P	**P**	**23 42 46.4**	**+1.5**
CAN				pmax	pmax		
	comp=Z,80nm,1.0s						
CAN	**Canberra**	**33.44**	**149**	P	**P**	**23 42 46.4**	**+1.5**
CAN				IAmb	IAmb	23 42 48.3	
	comp=Z,80nm,1.0s						
CAN	**Canberra**	**33.44**	**149**	P	**P**	**23 42 46.6**	**+1.7**
QZH	**Quanzhou**	**33.57**	**343**	⇑*i*P	**P**	**23 42 42.4**	**-3.7**
QZH				sP	**sP**	**23 43 29.9**	**+0.3**
QZH				S	**S**	**23 47 50.9**	**-7.4**
QZH				pmax	pmax		
	comp=Z,67nm,0.7s						
QZH				LR	LR		
	comp=Z,960nm,17.5s						
CNB	**Canberra Magne**	**33.62**	**149**	P	**P**	**23 42 47.8**	**+1.4**
	baz=34,SNR=10						
CNB	**Canberra Magne**	**33.62**	**149**	P	**P**	**23 42 47.8**	**+1.3**
	comp=Z,44nm,2.0s						
TOO	**Toolangi**	**33.70**	**156**	P	**P**	**23 42 49.2**	**+2.1**
	baz=34,SNR=35						
TOO	**Toolangi**	**33.70**	**156**	P	**P**	**23 42 48.4**	**+1.3**
TOO				pmax	pmax		
	comp=Z,54nm,1.0s						
TOO	**Toolangi**	**33.70**	**156**	P	**P**	**23 42 48.4**	**+1.3**
TOO	**Toolangi**	**33.70**	**156**	P	**P**	**23 42 48.7**	**+1.6**
	comp=Z,59nm,1.6s						
JOW	**Kunigami**	**33.91**	**359**	P	**P**	**23 42 50.0**	**+1.0**
	comp=Z,58nm,0.5s,baz=199,slow=9.3,SNR=15						
JOW	**Kunigami**	**33.91**	**359**	P	**P**	**23 42 49.6**	**+0.7**
LHMI	**Lhok Sumawe**	**34.27**	**290**	P	**P**	**23 42 52.4**	**+0.1**
	comp=Z,5µmcomp=Z,8µmcomp=Z,859nm,0.9s						
LHMI	**Lhok Sumawe**	**34.27**	**290**	P	**P**	**23 42 52.1**	**-0.2**
LHMI	**Lhok Sumawe**	**34.27**	**290**	P	**P**	**23 42 52.4**	**+0.1**
MLSI	**Meulaboh, Aceh**	**34.45**	**288**	P	**P**	**23 42 53.0**	**-0.8**
	comp=Z,4µmcomp=Z,262nm,0.6s						
MILA	**Mila**	**34.89**	**151**	P	**P**	**23 42 57.8**	**+0.4**
	baz=35,SNR=4.3						
PBKT	**Sadao Pong**	**36.44**	**311**	P	**P**	**23 43 11.2**	**+0.5**
JCJ	**Chichijima**	**36.49**	**20**	P	**P**	**23 43 10.5**	**-0.6**
	comp=Z,79nm,0.5s,baz=224,slow=4.5,SNR=14						
JCJ	**Chichijima**	**36.49**	**20**	P	**P**	**23 43 10.5**	**-0.6**
JCJ	**Chichijima**	**36.49**	**20**	P	**P**	**23 43 11.2**	**+0.1**
SLVN	**Son La**	**37.59**	**320**	P	**P**	**23 43 21.6**	**+1.0**
GLAD	**Gladstone**	**37.62**	**156**	P	**P**	**23 43 21.8**	**+1.3**
	comp=Z,33nm,0.8s						
SANVU	**Saraoutou**	**38.32**	**106**	P	**P**	**23 43 27.8**	**+1.1**
SANVU	**Saraoutou**	**38.32**	**106**	P	**P**	**23 43 28.0**	**+1.3**
MOO	**Moorlands**	**38.56**	**158**	P	**P**	**23 43 29.4**	**+1.1**
	baz=39,SNR=3.9						
JSU	**Suzuyama**	**38.59**	**2**	P	**P**	**23 43 28.8**	**+0.2**
JSU				IAmb	IAmb	23 43 30.4	
	comp=Z,239nm,1.5s						
SSE	**Sheshan**	**38.87**	**349**	P	**P**	**23 43 31.7**	**+0.7**
SSE				S	**S**	**23 49 16.3**	**-2.5**
SSE				pmax	pmax		
	comp=Z,43nm,1.2s						
SSE				pmax	pmax		
	comp=Z,250nm,9.0s						
SSE				LR	LR		
	comp=Z,110nm,23.0s						
SSE				LR	LR		
	comp=Z,370nm,23.1s						
NOUC	**Port Laguerre**	**38.88**	**116**	P	**P**	**23 43 31.7**	**+0.4**
DZM	**Mont Dzumac**	**39.00**	**116**	P	**P**	**23 43 33.6**	**+1.1**
	comp=Z,14nm,0.4s,baz=249,slow=9.8,SNR=33						
DZM				LR	LR	23 59 50.8	
	comp=Z,709nm,21.2s,baz=270,slow=36						
DZM	**Mont Dzumac**	**39.00**	**116**	*e*P	**P**	**23 43 33.0**	**+0.6**
	comp=Z,65nm,1.4s						
DZM	**Mont Dzumac**	**39.00**	**116**	P	**P**	**23 43 33.1**	**+0.6**
DZM	**Mont Dzumac**	**39.00**	**116**	P	**P**	**23 43 32.6**	**+0.2**
TAU	**Tasmania Unive**	**39.01**	**158**	P	**P**	**23 43 33.1**	**+1.0**
TAU				pmax	pmax		
	comp=Z,42nm,1.1s						
TAU	**Tasmania Unive**	**39.01**	**158**	P	**P**	**23 43 33.0**	**+1.0**
ONTNC	**Ouen Toro**	**39.08**	**117**	P	**P**	**23 43 33.4**	**+0.5**
CM31	**Chiang Mai Arr**	**39.12**	**311**	P	**P**	**23 43 35.0**	**+1.7**
	SNR=88						
CM31	**Chiang Mai Arr**	**39.12**	**311**	P	**P**	**23 43 34.5**	**+1.2**
CM31					**PcP**	**23 45 42.3**	**+1.9**
CMAR	**Chiang Mai Arr**	**39.12**	**311**	P	**P**	**23 43 34.6**	**+1.3**
	comp=Z,55nm,0.7s,baz=144,slow=7.2,SNR=330						
CMAR				PcP	**PcP**	**23 45 42.2**	**+1.9**
	comp=Z,24nm,0.8s,baz=167,slow=2.5,SNR=9.6						
CMAR				ScP	**ScP**	**23 49 17.2**	**+1.1**
	comp=Z,14nm,1.1s,baz=149,slow=3.5,SNR=9.2						
CMAR				LR	LR	00 00 54.6	
	comp=Z,757nm,21.0s,baz=165,slow=38						
CMAR	**Chiang Mai Arr**	**39.12**	**311**	*i* P	**P**	**23 43 34.7**	**+1.4**
CMAR				pmax	pmax		
	comp=Z,55nm,0.7s						
CHTO	**Chiang Mai**	**39.34**	**312**	P	**P**	**23 43 36.0**	**+0.8**
CHTO				pmax	pmax		
	comp=Z,545nm,1.5s						
CHTO	**Chiang Mai**	**39.34**	**312**	P	**P**	**23 43 36.4**	**+1.3**
CHTO	**Chiang Mai**	**39.34**	**312**	P	**P**	**23 43 36.0**	**+0.8**
CHTO	**Chiang Mai**	**39.34**	**312**	P	**P**	**23 43 36.3**	**+1.2**
LIFNC	**LIFOU**	**39.38**	**114**	P	**P**	**23 43 35.5**	**0.0**
LIFNC				IAmb	IAmb	23 43 52.5	
	comp=Z,151nm,1.2s						
OUENC	**Ouen Island, N**	**39.45**	**117**	P	**P**	**23 43 37.1**	**+1.0**
OUENC				IAmb	IAmb	23 43 53.3	
	comp=Z,195nm,2.0s						
OUENC	**Ouen Island, N**	**39.45**	**117**	P	**P**	**23 43 37.4**	**+1.3**
GYA	**Guiyang**	**39.90**	**328**	⇓*i*P	**P**	**23 43 41.2**	**+1.4**
GYA				pP	pwP	23 44 12.4	-3.0
GYA				sP	sP	23 44 27.3	+3.5
GYA				PP	**PnPn**	**23 45 19.2**	**0.0**
GYA				PcP	**PcP**	**23 45 44.5**	**+1.6**
GYA				ScP	**ScP**	**23 49 20.2**	**+1.0**
GYA				S	**S**	**23 49 39.7**	**+5.0**
GYA				sS	sS	23 50 29.3	+3.3
GYA				pmax	pmax		
	comp=Z,170nm,1.0s						
GYA				pmax	pmax		
	comp=Z,870nm,10.7s						
GYA				LR	LR		
	comp=Z,810nm,13.9s						
GYA				LR	LR		
	comp=Z,690nm,14.8s						
GYA				LR	LR		
	comp=Z,1µm,16.2s						
PINNC	**Pines Island,**	**40.04**	**117**	P	**P**	**23 43 42.0**	**+1.1**
WHN	**Wuhan**	**40.12**	**340**	⇑P	**P**	**23 43 42.4**	**+1.0**
WHN				pP	**pP**	**23 44 08.1**	**-2.4**
WHN				S	**S**	**23 49 35.5**	**-2.1**
WHN				pmax	pmax		
	comp=Z,680nm,1.4s						
WHN				LR	LR		
	comp=Z,2µm,11.8s						
WHN				LR	LR		
	comp=Z,4µm,12.6s						
WHN				LR	LR		
	comp=Z,5µm,18.9s						
MARNC	**Mare, Loyalty**	**40.26**	**115**	P	**P**	**23 43 43.6**	**+0.8**
NJ2	**Nanjing**	**40.27**	**347**	⇑*i*P	**P**	**23 43 44.0**	**+1.4**
NJ2				pP	**pP**	**23 44 07.7**	**-4.0**
NJ2				sP	**sP**	**23 44 31.1**	**+4.4**
NJ2				ScP	**ScP**	**23 49 22.0**	**+1.7**
NJ2				S	**S**	**23 49 36.9**	**-2.9**
NJ2				sS	**sS**	**23 50 35.2**	**+4.1**
NJ2				pmax	pmax		
	comp=Z,91nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,430nm,5.0s						
NJ2				LR	LR		
	comp=Z,2µm,19.0s						
NJ2				LR	LR		
	comp=Z,590nm,12.8s						
NJ2				LR	LR		
	comp=Z,1µm,23.5s						
PBA	**Port Blair**	**40.63**	**297**	P	**P**	**23 43 47.4**	**+1.6**
PBA	**Port Blair**	**40.63**	**297**	P	**P**	**23 43 47.1**	**+1.2**
PBA				IAmb	IAmb	23 44 03.4	
	comp=Z,443nm,1.9s						
JMN	**Monobe**	**41.04**	**6**	P	**P**	**23 43 49.7**	**+0.8**
KMI	**Kunming**	**41.09**	**322**	⇑P	**P**	**23 43 51.5**	**+1.8**
KMI				pP	pP	23 44 18.6	-0.3
KMI				sP	sP	23 44 37.1	+3.3
KMI				S	**S**	**23 49 52.3**	**-0.3**
KMI				pmax	pmax		
	comp=Z,280nm,1.2s						
KMI				pmax	pmax		
	comp=Z,770nm,3.5s						
KMI				LR	LR		
	comp=Z,830nm,18.7s						
KMI				LR	LR		
	comp=Z,1µm,17.6s						
KMI				LR	LR		
	comp=Z,2µm,19.8s						
JTU	**Tsushima**	**41.57**	**1**	P	**P**	**23 43 54.6**	**+1.4**
JTU				IAmb	IAmb	23 43 55.5	
	comp=Z,189nm,1.7s						
ENH	**Enshi**	**41.74**	**334**	P	**P**	**23 43 54.8**	**0.0**
ENH				IAmb	IAmb	23 43 55.5	
	comp=Z,76nm,0.7s						
JHS	**Saijyo**	**42.23**	**5**	P	**P**	**23 43 59.1**	**+0.5**
JWT	**Wachi**	**42.76**	**8**	P	**P**	**23 44 03.0**	**+0.1**
JWT				IAmb	IAmb	23 44 04.6	
	comp=Z,147nm,1.2s						
JGF	**Kuroka**	**43.37**	**10**	P	**P**	**23 44 08.3**	**+0.4**
TJN	**Taejon**	**43.44**	**358**	*c i*P	**P**	**23 44 08.7**	**+0.4**
TJN	**Taejon**	**43.44**	**358**	P	**P**	**23 44 09.3**	**+1.0**
MJAR	**Matsushiro Arr**	**44.44**	**11**	P	**P**	**23 44 14.6**	**-1.8**
	comp=Z,40nm,0.9s,baz=188,slow=9.6,SNR=48						
MJAR				PcP	**PcP**	**23 45 57.5**	**-0.1**
	comp=Z,14nm,0.9s,baz=202,slow=3.9,SNR=6.6						
MJAR				ScP	**ScP**	**23 49 37.5**	**+0.5**
	comp=Z,14nm,0.8s,baz=182,slow=5.4,SNR=12						
MJAR				LR	LR	00 02 02.7	
	comp=Z,640nm,19.9s,baz=210,slow=35						
MJAR	**Matsushiro Arr**	**44.44**	**11**	P	**P**	**23 44 15.1**	**-1.2**
MJAR				pmax	pmax		
	comp=Z,34nm,0.9s						
MJAR	**Matsushiro Arr**	**44.44**	**11**	P	**P**	**23 44 15.1**	**-1.2**
MAJO	**Matsushiro**	**44.44**	**11**	*c i*P	**P**	**23 44 15.3**	**-1.0**
MAJO				pmax	pmax		
	comp=Z,62nm,1.0s						
MAJO	**Matsushiro**	**44.44**	**11**	P	**P**	**23 44 15.2**	**-1.1**
MAJO	**Matsushiro**	**44.44**	**11**	P	**P**	**23 44 15.5**	**-0.8**
MAT	**Matsushiro**	**44.44**	**11**	P	**P**	**23 44 15.3**	**-1.0**
MAT				S	**S**	**23 50 37.4**	**-3.5**
KSAR	**Wonju Array Be**	**44.49**	**359**	P	**P**	**23 44 17.6**	**+0.9**
KSAR	**Wonju Array Be**	**44.49**	**359**	P	**P**	**23 44 17.6**	**+0.9**
KSRS	**Korea Array**	**44.50**	**359**	P	**P**	**23 44 17.8**	**+1.1**
	comp=Z,40nm,0.5s,baz=175,slow=8.8,SNR=121						
KSRS				PcP	**PcP**	**23 45 58.8**	**+1.0**
	comp=Z,20nm,0.9s,baz=182,slow=3.9,SNR=11						
KSRS				ScP	**ScP**	**23 49 38.5**	**+1.3**
	comp=Z,10nm,0.9s,baz=184,slow=3.5,SNR=15						
KSRS				LR	LR	00 00 45.8	
	comp=Z,452nm,21.2s,baz=180,slow=33						
KS19	**Wonju Array Si**	**44.55**	**359**	P	**P**	**23 44 17.6**	**+0.5**
INCN	**Inchon**	**44.57**	**357**	P	**P**	**23 44 17.7**	**+0.3**
INCN				pmax	pmax		
	comp=Z,76nm,1.3s						
INCN	**Inchon**	**44.57**	**357**	P	**P**	**23 44 17.7**	**+0.3**
TIA	**Tai'an**	**44.66**	**346**	⇑P	**P**	**23 44 17.7**	**-0.3**
TIA				pP	**pP**	**23 44 48.9**	**+1.2**
TIA				sP	**sP**	**23 45 03.9**	**+1.4**
TIA				PcP	**PcP**	**23 45 59.3**	**+1.0**
TIA				PP	**PP**	**23 46 04.8**	**-0.4**
TIA				S	**S**	**23 50 40.2**	**-3.8**
TIA				pmax	pmax		
	comp=Z,34nm,0.9s						
TIA				pmax	pmax		
	comp=Z,480nm,5.5s						
TIA				LR	LR		
	comp=Z,740nm,13.9s						
TIA				LR	LR		
	comp=Z,440nm,19.6s						
TIA				LR	LR		
	comp=Z,910nm,13.4s						
CD2	**Chengdu**	**44.99**	**329**	P	**P**	**23 44 20.7**	**-0.1**
CD2				PP	**PP**	**23 46 08.6**	**-0.2**
CD2				S	**S**	**23 50 42.5**	**-6.6**
CD2				sS	sS	23 51 42.0	+0.8
CD2				pmax	pmax		
	comp=Z,260nm,0.6s						
CD2				pmax	pmax		
	comp=Z,1µm,12.2s						
CD2				LR	LR		
	comp=Z,1µm,16.5s						
CD2				LR	LR		
	comp=Z,2µm,15.8s						
XAN	**Xi'an**	**45.26**	**336**	P	**P**	**23 44 22.2**	**-0.7**
XAN				sP	sP	23 45 07.6	+0.1
XAN				PcP	**PcP**	**23 46 01.3**	**+0.8**
XAN				PP	**PP**	**23 46 11.9**	**+0.2**
XAN				S	**S**	**23 50 48.9**	**-4.0**
XAN				SS	**ScS**	**23 54 08.2**	**+2.6**
XAN				pmax	pmax		
	comp=Z,170nm,1.0s						
XAN				pmax	pmax		
	comp=Z,840nm,11.2s						
XAN				LR	LR		
	comp=Z,940nm,19.9s						
XAN				LR	LR		
	comp=Z,620nm,19.2s						
XAN				LR	LR		
	comp=Z,2µm,19.9s						
XAN	**Xi'an**	**45.26**	**336**	IAmb	IAmb	23 44 23.5	
	comp=Z,439nm,1.6s						

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JSD   Sado            45.90  10 P         P        23 44 27.7 -0.1
JMM   Marumori        46.24  13 P         P        23 44 30.8 +0.3
JMM                             IAmb      IAmb     23 44 34.8
      comp=Z,69nm,0.6s
DL2   Dalian          46.44 352 P         P        23 44 32.4 +0.4
DL2                             S         S        23 51 08.0 -1.5
DL2                             pmax      pmax
      comp=Z,69nm,0.8s
DL2                             pmax      pmax
      comp=Z,360nm,8.2s
LKP   Lekhapani       47.01 318⇑iP        P        23 44 36.9 +0.2
KOHI  KOHIMA          47.14 315⇑iP        P        23 44 37.9  0.0
MOKO  MOKOCHONG       47.24 316 eP        P        23 44 39.3 +0.6
MOKO                            eS        S        23 51 14.8 -6.8
TIY   Taiyuan         47.34 342 ⇓P        P        23 44 39.4 +0.3
TIY                             sP        sP       23 45 22.4 -1.4
TIY                             PP        PP       23 46 30.2 -1.4
TIY                             S         S        23 51 18.5 -3.9
TIY                             pmax      pmax
      comp=Z,950nm,0.6s
TIY                             LR        LR
      comp=Z,600nm,20.7s
JORH  JORHAT          47.70 316⇑iP        P        23 44 42.4 +0.4
ITAN  ITANAGAR        48.32 317 i P       P        23 44 47.8 +1.0
BJT   Baijiatuau      48.51 347 P         P        23 44 48.2 +0.2
BJT                             IAmb      IAmb     23 44 49.6
      comp=Z,296nm,1.6s
BJT                             PcP       PcP      23 46 13.1 +1.2
BJI   Beijing         48.53 347 P         P        23 44 48.3 +0.2
BJI                             pP        pP       23 45 20.4 +2.2
BJI                             sP        sP       23 45 30.6 -2.3
BJI                             PcP       PcP      23 46 13.2 +1.3
BJI                             PcS       PcS      23 50 08.4 +0.4
BJI                             S         S        23 51 35.7 -3.3
BJI                             sS        sS       23 52 30.8 -1.0
BJI                             ScS       ScS      23 54 28.0 +1.3
BJI                             pmax      pmax
      comp=Z,120nm,1.2s
BJI                             pmax      pmax
      comp=Z,640nm,10.8s
BJI                             LR        LR
      comp=Z,490nm,16.5s
BJI                             LR        LR
      comp=Z,790nm,19.0s
SHL   Shillong        48.63 313 P         P        23 44 49.4  0.0
SHL                             pmax      pmax
      comp=Z,284nm,0.6s
SHL   Shillong        48.63 313⇑iP        P        23 44 49.5 +0.2
SHL                             IAmb      IAmb     23 44 52.6
      comp=Z,124nm,0.6s
SHL   Shillong        48.63 313 P         P        23 44 49.7 +0.3
      SNR=133
SHL   Shillong        48.63 313 P         P        23 44 49.4  0.0
MSVF  Nonsavu         48.91 107 P         P        23 44 53.1 +1.5
MSVF                            pmax      pmax
      comp=Z,27nm,0.9s
MSVF  Nonsavu         48.91 107 P         P        23 44 53.1 +1.5
MSVF  Nonsavu         48.91 107 P         P        23 44 53.5 +1.9
JTM   Tenmabayashi    49.10  12 P         P        23 44 52.5  0.0
JTM                             IAmb      IAmb     23 44 54.2
      comp=Z,160nm,1.2s
SNY   Shenyang        49.11 355 ⇑P        P        23 44 52.6 +0.1
SNY                             S         S        23 51 44.3 -2.7
SNY                             pmax      pmax
      comp=Z,33nm,0.6s
SNY                             pmax      pmax
      comp=Z,410nm,6.0s
SNY                             LR        LR
      comp=Z,940nm,18.9s
SNY                             LR        LR
      comp=Z,1μm,15.6s
SNY                             LR        LR
      comp=Z,2μm,24.9s
LZH   Lanzhou         49.16 333 ⇑P        P        23 44 54.3 +1.0
LZH                             ScP       ScP      23 49 59.0 +1.9
LZH                             S         S        23 51 44.7 -3.7
LZH                             SS        SS       23 55 22.0 +0.2
LZH                             pmax      pmax
      comp=Z,430nm,1.1s
LZH                             pmax      pmax
      comp=Z,1μm,5.1s
LZH                             LR        LR
      comp=Z,3μm,17.1s
LZH                             LR        LR
      comp=Z,3μm,17.9s
LZH                             LR        LR
      comp=Z,1μm,18.4s
OUZ   Omahuta         49.45 131 P         P        23 44 57.3 +2.0
OUZ   Omahuta         49.45 131 P         P        23 44 57.9 +2.6
MSHR  Mys Shultsa     49.65   2c iP       P        23 44 57.6 +1.0
MSHR                            pmax      pmax
      comp=Z,69nm,1.0s
FUNA  Funafuti        49.76  95 P         P        23 44 58.2 +0.3
FUNA                            IAmb      IAmb     23 45 00.3
      comp=Z,70nm,0.8s
VLA   Vladivostok     50.22   3c iP       P        23 45 01.3 +0.4
VLA                             pmax      pmax
      comp=Z,111nm,1.0s
PALK  Pallekele       50.24 286 ScP       ScP      23 50 02.3 +0.3
      comp=Z,8.6nm,0.8s,baz=196,slow=4.5,SNR=3.6
PALK  Pallekele       50.24 286 P         P        23 45 01.0 -0.7
PALK                                               23 46 20.2
PALK                            pmax      pmax
      comp=Z,255nm,1.7s
PALK  Pallekele       50.24 286 P         P        23 45 01.4 -0.3
PALK  Pallekele       50.24 286 P         P        23 45 01.0 -0.7
PALK                            IAmb      IAmb     23 45 03.0
      comp=Z,255nm,1.7s
PALK                            PcP       PcP      23 46 20.2 +1.4
DCZ   Deep Cove       50.36 146 P         P        23 45 02.1 +0.1
DCZ                             PcP       PcP      23 46 19.5 +0.9
HHC   Hu-ho-hao-te    50.49 343 eP        P        23 45 03.7 +0.6
HHC                             S         S        23 52 04.0 -2.5
HHC                             SS        SS       23 55 42.8 +0.3
HHC                             pmax      pmax
      comp=Z,71nm,1.1s
HHC                             pmax      pmax
      comp=Z,530nm,8.5s
BTO   Baotou          50.73 341 eP        P        23 45 05.6 +0.6
BTO                             S         S        23 52 11.9 +2.0
BTO                             LR        LR
      comp=Z,3μm,13.3s
BTO                             LR        LR
      comp=Z,2μm,20.0s
ERM   Erimo           50.74  14 P         P        23 45 05.0 +0.2
ERM                             pmax      pmax
      comp=Z,191nm,1.5s
ERM   Erimo           50.74  14 P         P        23 45 05.0 +0.2
ERM                             IAmb      IAmb     23 45 37.8
      comp=Z,191nm,1.5s
ERM   Erimo           50.74  14 P         P        23 45 09.6 +4.8
      comp=Z,115nm,1.8s
MLZ   Mavora Lakes    50.84 145 P         P        23 45 06.7 +1.0
MLZ                             IAmb      IAmb     23 45 46.1
      comp=Z,228nm,1.9s
MLZ                             PcP       PcP      23 46 20.9 +0.5
CN2   Changchun       50.93 357 eP        P        23 45 04.7 -1.5
CN2                             eS        S        23 52 08.8 -3.5
CN2                             pmax      pmax
      comp=Z,30nm,1.2s
CN2                             pmax      pmax
      comp=Z,400nm,11.0s
CN2                             LR        LR
      comp=Z,500nm,17.0s
CN2                             LR        LR
      comp=Z,600nm,17.0s
CN2                             LR        LR
      comp=Z,700nm,23.0s
WHZ   Wether Hill Ro  51.06 146 P         P        23 45 08.3 +1.1
USA0B Ussuriysk Arra  51.30   3 P         P        23 45 09.6 +0.6
USA0B                           pmax      pmax
      comp=Z,49nm,0.9s
USA0B Ussuriysk Arra  51.30   3 P         P        23 45 09.6 +0.6
USRK  Ussuriysk Ar.   51.30   3 P         P        23 45 09.5 +0.5
      comp=Z,36nm,0.8s,baz=187,slow=7.1,SNR=55
USRK                            ScP       ScP      23 50 06.5 +0.8
      comp=Z,19nm,1.1s,baz=193,slow=3.3,SNR=12
USRK                            LR        LR       00 09 40.5
      comp=Z,272nm,18.0s,baz=165,slow=39
USRK                            PKP2ab             00 16 28.1
      comp=Z,2.7nm,0.8s,baz=347,slow=4.4,SNR=4.6
LBZ   Lake Benmore    51.49 143 P         P        23 45 11.7 +1.2
MDJ   Mudanjiang      51.65   1 P         P        23 45 12.4 +0.8
MDJ                             S         S        23 52 22.5 +0.3
MDJ                             sS        sS       23 53 17.5 +1.9
MDJ                             pmax      pmax
      comp=Z,76nm,0.9s
MDJ                             pmax      pmax
      comp=Z,540nm,8.9s
RPZ   Rata Peaks      51.66 142 P         P        23 45 13.5 +1.7
LSA   Lhasa           51.68 317 P         P        23 45 14.4 +1.7
LSA   Lhasa           51.68 317 P         P        23 45 14.3 +1.7
LSA   Lhasa           51.68 317 P         P        23 45 14.2 +1.5
LSA                             pmax      pmax
      comp=Z,400nm,0.7s
LSA   Lhasa           51.68 317 P         P        23 45 14.2 +1.5
THZ   Tophouse        51.85 139 P         P        23 45 14.2 +0.9
THZ                             IAmb      IAmb     23 46 00.3
      comp=Z,252nm,1.9s
NNZ   Nelson          51.90 138 P         P        23 45 14.0 +0.4
NNZ                             IAmb      IAmb     23 46 44.1
      comp=Z,309nm,1.9s
LTZ   Lake Taylor     51.94 140 P         P        23 45 14.9 +1.0
GTK   Tadong          52.03 313⇑iP        P        23 45 15.9 +1.0
ODZ   Otahua Downs    52.13 143 P         P        23 45 15.9 +0.7
MDRS  Chennai         52.43 293 eP        P        23 45 18.0 +0.1
MDRS                            IAmb      IAmb     23 45 20.4
      comp=Z,79nm,0.7s
TEY   Ternei          52.52   7⇑eP        P        23 45 18.3 +0.3
TEY                             pmax      pmax
      comp=Z,100nm,2.5s
TEY                             pmax      pmax
      comp=E,10.0nm,0.9s
TEY                             pmax      pmax
      comp=N,30nm,1.2s
TEY                             pmax      pmax
      comp=Z,50nm,1.2s
KHZ   Kahutara        52.58 139 P         P        23 45 19.1 +0.6
KHZ                             IAmb      IAmb     23 45 22.9
      comp=Z,76nm,0.8s
KHZ   Kahutara        52.58 139 P         P        23 45 19.3 +0.8
ASAJ  Asahikawa       52.62  12 P         P        23 45 19.2 +0.6
      comp=Z,36nm,0.7s,baz=228,slow=12,SNR=17
ASAJ  Asahikawa       52.62  12 P         P        23 45 19.3 +0.6
ASAJ                            pmax      pmax
      comp=Z,126nm,1.4s
JKA   Kamikawa-asahi  52.62  12 P         P        23 45 19.3 +0.6
JKA                             IAmb      IAmb     23 45 20.5
      comp=Z,126nm,1.4s
ODAN  Odare           52.66 312 eP        P        23 45 20.3 +0.6
      comp=Z,502nm,0.4s
TAPN  Taplejung       52.70 313 eP        P        23 45 20.7 +0.7
      comp=Z,632nm,0.4s
SNZO  South Karori    52.83 137 P         P        23 45 20.9 +0.5
SNZO  South Karori    52.83 137 P         P        23 45 20.7 +0.3
      comp=Z,120nm,1.3s
BHW   Baring Head     52.99 137 P         P        23 45 21.6 +0.1
BKZ   Black Stump Fm  53.15 134 P         P        23 45 23.6 +0.7
BKZ   Black Stump Fm  53.15 134 P         P        23 45 23.6 +0.7
URZ   Urewera         53.23 133 P         P        23 45 24.1 +0.6
URZ   Urewera         53.23 133 P         P        23 45 24.0 +0.6
MSWZ  Moikau Station  53.24 137 P         P        23 45 23.6 +0.1
RAMN  Ramite          53.29 311 eP        P        23 45 25.3 +1.0
      comp=Z,894nm,0.5s
BFZ   Birch Farm      53.60 136 P         P        23 45 26.5 +0.4
GTA   Gaotai          53.72 332 ⇑P        P        23 45 28.0 +0.9
GTA                             PcP       PcP      23 46 33.2 +1.7
GTA                             ScP       ScP      23 50 18.9 +2.3
GTA                             S         S        23 52 52.0 +1.3
GTA                             ScS       ScS      23 55 03.0 +0.1
GTA                             pmax      pmax
      comp=Z,240nm,0.8s
GTA                             pmax      pmax
      comp=Z,510nm,7.6s
GTA                             LR        LR
      comp=Z,2μm,19.6s
GTA                             LR        LR
      comp=Z,2μm,18.9s
GTA                             LR        LR
      comp=Z,1μm,18.5s
JIRN  Jiri            53.99 312 eP        P        23 45 30.1 +0.6
      comp=Z,167nm,0.5s
GUN   Gumba           54.35 312 eP        P        23 45 32.1 -0.1
      comp=Z,2μm,1.0s
PKI   Pulchoki        54.52 311 eP        P        23 45 33.6 +0.3
      comp=Z,280nm,0.4s
PKIN  Phulchoki       54.53 311 eP        P        23 45 33.6 +0.2
      comp=Z,314nm,0.5s
KKN   Kakani          54.73 311 eP        P        23 45 35.3 +0.5
      comp=Z,238nm,0.4s
DMN   Daman           54.77 311 eP        P        23 45 35.7 +0.7
      comp=Z,383nm,0.6s
KUR   Kuril'sk        54.96  16 eP        P        23 45 34.3 -1.4
KUR                             eS        S        23 53 09.6 +2.8
KUR                             pmax      pmax
      comp=Z,152nm,1.5s
KUR                             pmax      pmax
      comp=Z,718nm,10.0s
GKN   Gorkha          55.33 311 eP        P        23 45 39.4 +0.5
      comp=Z,647nm,0.4s
YSS   Yuzh-Sakhalins  55.36  11c iP       P        23 45 38.8 +0.2
YSS                             eS        S        23 53 10.2 -2.0
YSS                             e                  23 55 16.4
YSS                             eSS       SS       23 56 50.5 -8.5
YSS                                                23 59 02.0
YSS                             pmax      pmax
      comp=Z,200nm,2.7s
YSS                             smax      smax
      comp=N,500nm,7.5s
YSS   Yuzh-Sakhalins  55.36  11 P         P        23 45 38.1 -0.5
YSS                             IAmb      IAmb     23 45 39.6
      comp=Z,42nm,0.7s
HYB   Hyderabad       55.51 297 i P       P        23 45 39.0 -1.2
      comp=Z,160nm,1.0s
HYB                             eS        S        23 53 16.0 +0.8
HYB   Hyderabad       55.51 297 eP        P        23 45 39.2 -1.0
HYB                             IAmb      IAmb     23 45 42.1
      comp=Z,94nm,1.1s
H08S2 Diego Garcia H  55.95 266 P         P        23 45 42.6 -0.5
      baz=43,slow=9.0,SNR=5.0
H08S3 Diego Garcia H  55.96 266 P         P        23 45 42.9 -0.3
      baz=43,slow=9.0,SNR=6.3
H08S1 Diego Carcia H  55.97 266 P         P        23 45 44.0 +0.7
      baz=43,slow=9.0,SNR=5.4
KOLN  Koldanda        55.98 310 eP        P        23 45 44.3 +0.6
      comp=Z,817nm,0.8s
DGAR  Diego Garcia    56.00 266c iP       P        23 45 46.2 +2.4
DGAR                            pmax      pmax
      comp=Z,291nm,1.7s
DGAR  Diego Garcia    56.00 266 P         P        23 45 44.6 +0.8
DGAR  Diego Garcia    56.00 266 P         P        23 45 44.2 +0.3
DANN  Dangsing        56.17 311 eP        P        23 45 45.5 +0.4
      comp=Z,334nm,0.6s
KLR   Kul'dur         56.32   2 P         P        23 45 45.8 +0.4
      comp=Z,35nm,1.0s,baz=201,slow=4.5,SNR=64
KLR                             PcP       PcP      23 46 41.4 +0.3
      comp=Z,19nm,0.9s,baz=206,slow=5.2,SNR=4.3
KLR                             ScP       ScP      23 50 28.2 +0.6
      comp=Z,14nm,1.0s,baz=227,slow=4.6,SNR=9.5
KLR                             PKP2bc             00 15 54.3
      comp=Z,1.4nm,0.7s,baz=329,slow=5.7,SNR=4.1
KLR   Kul'dur         56.32   2c iP       P        23 45 45.9 +0.5
KLR                             pmax      pmax
      comp=Z,147nm,2.3s
PYUN  Piuthan         56.61 310 eP        P        23 45 48.8 +0.6
      comp=Z,192nm,0.3s
HIA   Hailar          56.88 353 P         P        23 45 49.5 +0.1
HIA                             pmax      pmax
      comp=Z,32nm,0.9s
HIA   Hailar          56.88 353 P         P        23 45 49.5 +0.1
GRNR  Gornyy          58.16   6⇑iP        P        23 45 59.3 +1.0
GRNR                            pmax      pmax
      comp=Z,40nm,0.9s
GRNR                            MLR       MLR
      comp=Z,300nm,15.0s
ULN   Ulaanbaatar     58.21 343c iP       P        23 45 59.7 +0.8
ULN                             pmax      pmax
      comp=Z,122nm,1.3s
ULN   Ulaanbaatar     58.21 343 P         P        23 46 00.2 +1.3
ULN   Ulaanbaatar     58.21 343 P         P        23 45 59.6 +0.7
ULN                             IAmb      IAmb     23 46 00.9
      comp=Z,139nm,1.4s
SONM  Songino Array   58.38 342 P         P        23 46 01.0 +1.0
      comp=Z,36nm,0.6s,baz=162,slow=6.6,SNR=128
SONM                            PcP       PcP      23 46 49.5 +0.1
      comp=Z,14nm,0.9s,baz=136,slow=4.2,SNR=4.0
SONM                            ScP       ScP      23 50 38.2 +1.2
      comp=Z,7.2nm,0.9s,baz=157,slow=4.9,SNR=5.9
SONM                            PKPPKP    P'P'df   00 15 36.1 -0.6
      comp=Z,1.9nm,0.8s,baz=276,slow=1.3,SNR=5.2
SONM  Songino Array   58.38 342 P         P        23 46 00.8 +0.7
SONM                            IAmb      IAmb     23 46 02.7
      comp=Z,151nm,1.4s
BHPL  Bhopal          58.78 303 eP        P        23 46 02.1 -1.1
BHPL                            IAmb      IAmb     23 46 04.4
      comp=Z,44nm,0.7s
BHPL                            i pP      PcP      23 46 51.2 -0.3
BHPL                            ex        x        23 48 15.1
TYV   Tymovskoe       59.10  10 eP        P        23 46 06.3 +1.5
TYV                             pmax      pmax
      comp=Z,44nm,1.3s
TYV                             pmax      pmax
      comp=Z,500nm,3.9s
GOA   Goa             59.10 293 eP        P        23 46 05.8 +0.4
KNTN  Kanton          59.23  89 P         P        23 46 07.2 +0.8
KNTN  Kanton          59.23  89 P         P        23 46 08.2 +1.8
CASY  Casey           60.28 188 P         P        23 46 13.7 +1.0
CASY                            IAmb      IAmb     23 46 15.9
      comp=Z,42nm,0.9s
CIT   Chita           60.52 349 eP        P        23 46 15.8 +1.3
CIT                             e                  23 46 55.0
CIT                             pmax      pmax
      comp=Z,148nm,2.6s
ZEA   Zeya            60.80 359ceP        P        23 46 16.9 +0.6
ZEA                             e*PP      pP       23 46 49.2 +0.9
ZEA                             e*SP      PcP      23 47 00.2 +1.5
ZEA                             e                  23 47 05.8
ZEA                             eS        S        23 54 21.4 -1.2
ZEA                             e                  23 55 53.4
ZEA                             eSS       SS       23 58 19.4 -4.8
ZEA                             pmax      pmax
      comp=N,30nm,1.3s
ZEA                             pmax      pmax
      comp=Z,70nm,1.0s
ZEA                             smax      smax
      comp=Z,100nm,7.7s
ZEA                             smax      smax
      comp=N,200nm,11.9s
ZEA                             smax      smax
      comp=E,300nm,9.9s
BISR  Bishrakh        61.11 308 eP        P        23 46 18.1 -0.8
SONA  Sohna           61.24 308 eP        P        23 46 19.0 -0.8
AYAN  Aya Nagar       61.31 308⇑iP        P        23 46 18.8 -1.5
DDI   Dehra Dun       61.45 310 eP        P        23 46 21.1 -0.3
DDI                             IAmb      IAmb     23 46 25.6
      comp=Z,94nm,0.8s
ZAK   Zakamensk       61.59 342 eP        P        23 46 22.0 +0.2
ZAK                             e                  23 47 02.6
ZAK                             pmax      pmax
      comp=Z,47nm,1.3s
KUDL  Kundal          61.66 307⇑iP        P        23 46 21.5 -1.1
SMLA  Simla           62.51 311 eP        P        23 46 29.1 +0.9
TLY   Talaya          62.62 343 P         P        23 46 30.0 +1.4
      comp=Z,20nm,0.4s,baz=172,slow=6.2,SNR=18
TLY   Talaya          62.62 343c iP       P        23 46 29.5 +0.9
TLY                             eS        S        23 54 46.7 +1.0
TLY                             pmax      pmax
      comp=Z,114nm,1.2s
TLY   Talaya          62.62 343 P         P        23 46 30.3 +1.7
TLY   Talaya          62.62 343 P         P        23 46 29.7 +1.1
IRK   Irkutsk         62.93 343 eP        P        23 46 31.1 +0.5
IRK                             pmax      pmax
      comp=Z,191nm,2.4s
WMQ   Urumqi          63.06 328 ⇑P        P        23 46 32.9 +1.1
WMQ                             PcP       PcP      23 47 10.1 +1.8
WMQ                             ScP                23 51 00.4
WMQ                             S         S        23 54 50.5 -1.2
WMQ                             sS        sS       23 55 46.7 -0.5
WMQ                             pmax      pmax
      comp=Z,180nm,1.1s
WMQ                             pmax      pmax
      comp=Z,1μm,3.9s
WMQ                             LR        LR
      comp=Z,4μm,17.5s
WMQ                             LR        LR
      comp=Z,2μm,18.5s
WMQ                             LR        LR
      comp=Z,1μm,19.5s
MOY   Mondy           63.43 341 eP        P        23 46 35.2 +1.1
MOY                             pmax      pmax
      comp=Z,207nm,2.4s
DHRM  DHARAMSHALA     63.69 311⇑iP        P        23 46 36.9 +0.5
DHRM                            IAmb      IAmb     23 46 38.5
      comp=Z,626nm,0.6s
PAF   Port-aux-Franc  64.42 218 P         P        23 46 41.9 +1.4
PAF                             pmax      pmax
      comp=Z,555nm,1.5s
PAF   Port-aux-Franc  64.42 218 P         P        23 46 41.9 +1.4
PEA0B Petropavlovsk-  64.91  19c iP       P        23 46 44.3 +0.8
PEA0B Petropavlovsk-  64.91  19 P         P        23 46 44.6 +1.0
PEA0B                           IAmb      IAmb     23 46 45.8
      comp=Z,111nm,0.8s
PETK  Petropavlovsk-  64.91  19 P         P        23 46 44.1 +0.5
      comp=Z,101nm,0.9s,baz=191,slow=6.1,SNR=81
PETK                            PcP       PcP      23 47 15.7 +0.1
      comp=Z,19nm,0.5s,baz=164,slow=2.1,SNR=9.4
PETK                            LR        LR       00 10 02.4
      comp=Z,365nm,21.4s,baz=213,slow=31
PETK  Petropavlovsk-  64.91  19 P         P        23 46 44.4 +0.8
PETK  Petropavlovsk-  64.91  19 P         P        23 46 44.4 +0.8
PET   Petropavlovsk   65.14  19 eP        P        23 46 45.4 +0.4
PET                             eS        S        23 55 15.0 -1.8
PET                                                00 02 21.8
PET                             pmax      pmax
      comp=Z,92nm,1.1s
PET                             pmax      pmax
      comp=Z,600nm,10.2s
PET                             pmax      pmax
      comp=Z,400nm,13.1s
PET   Petropavlovsk   65.14  19 P         P        23 46 45.4 +0.4
PET                             IAmb      IAmb     23 46 47.2
      comp=Z,134nm,1.2s
JOHN  Johnston Islan  65.33  68 P         P        23 46 46.3 -0.7
JASL  Jaisalmer       65.67 304 eP        P        23 46 48.4 -0.6
BOD   Bodaibo         66.00 351 eP        P        23 46 50.9 +0.4
BOD                             pmax      pmax
      comp=Z,93nm,1.6s
ZSN   Zaisan          66.97 329⇑iP        P        23 46 57.5 +0.6
      baz=329
ZSN   Zaisan          66.97 329c iP       P        23 46 57.4 +0.6
DGZ   Jazzator, Alta  67.25 332c iP       P        23 46 59.7 +0.9
DGZ                             pmax      pmax
      comp=Z,70nm,0.8s
PDGK  Podgornoye      67.39 323 i P       P        23 47 00.2 +0.4
PDGK                            pmax      pmax
      comp=Z,124nm,0.7s
TARG  Taragay, Kyrgy  67.52 321 P         P        23 47 01.8 +0.8
TARG                            IAmb      IAmb     23 47 05.5
      comp=Z,296nm,1.7s
KSH   Kashi           67.52 318⇑iP        P        23 47 02.0 +1.3
KSH                             S         S        23 55 46.2 -0.2
KSH                             sS        ScS      23 56 46.2 -0.1
KSH                             pmax      pmax
      comp=Z,180nm,1.1s
KSH                             LR        LR
      comp=Z,730nm,11.0s
KSH                             LR        LR
      comp=Z,750nm,12.4s
KSH                             LR        LR
      comp=Z,1μm,16.8s
UZB   Uzynbulak       67.56 323⇑iP        P        23 47 01.9 +0.9
      comp=Z,81nm,1.0s,baz=323
UZB   Uzynbulak       67.56 323c iP       P        23 47 01.8 +0.9
UZB                             pmax      pmax
      comp=Z,81nm,1.0s
PRZ   Przheval'sk     67.56 322 P         P        23 47 02.7 +1.7
PRZ                             pmax      pmax
      comp=Z,184nm,0.9s
PRZ   Przheval'sk     67.56 322 P         P        23 47 02.7 +1.7
SATY  Saty            67.88 322⇑iP        P        23 47 04.0 +1.1
      comp=Z,106nm,0.9s,baz=322
SATY  Saty            67.88 322c iP       P        23 47 04.0 +1.1
SATY                            pmax      pmax
      comp=Z,106nm,0.9s
MK31  Makanchi Array  67.89 327 P         P        23 47 03.5 +0.8
MK31                            pmax      pmax
      comp=Z,72nm,0.7s
MK31  Makanchi Array  67.89 327 P         P        23 47 03.5 +0.8
MK31                            IAmb      IAmb     23 47 04.3
      comp=Z,72nm,0.7s
MKAR  Makanchi Array  67.89 327 P         P        23 47 03.6 +0.9
      comp=Z,134nm,0.6s,baz=119,slow=7.8,SNR=1405
MKAR                            S         S        23 55 45.6 -4.6
      comp=Z,1.6nm,0.9s,baz=123,slow=11,SNR=2.2
MKAR                            PKPPKP    P'P'df   00 15 21.4 -0.5
      comp=Z,1.0nm,0.7s,baz=302,slow=2.6,SNR=6.5
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MKAR                              P4KPbc             00 23 50.8
      comp=Z,0.4nm,0.5s,baz=120,slow=3.9,SNR=6.4
MKAR  Makanchi Array    67.89 327 i P      P         23 47 03.5 +0.8
MKAR                              pmax     pmax
      comp=Z,135nm,0.6s
KPKS  Kokpek            67.95 323⇑iP       P         23 47 04.2 +0.9
      comp=Z,73nm,0.6s,baz=323
KPKS  Kokpek            67.95 323c iP      P         23 47 04.1 +0.9
KPKS                              pmax     pmax
      comp=Z,73nm,0.6s
MAKZ  Makanchi          68.06 327   P      P         23 47 04.7 +0.9
MAKZ                              pmax     pmax
      comp=Z,81nm,0.7s
MAKZ  Makanchi          68.06 327   P      P         23 47 04.7 +0.9
MAKZ                              IAmb     IAmb      23 47 06.1
      comp=Z,81nm,0.7s
MDOK  Medeo             68.77 322 i P      P         23 47 09.8 +1.3
      baz=322
MDOK  Medeo             68.77 322 i P      P         23 47 09.7 +1.3
ULHL  Ulahol            68.78 321   P      P         23 47 10.8 +2.3
      SNR=13
MA2   Magadan           68.87  12   P      P         23 47 09.5 +1.1
      comp=Z,64nm,0.9s,baz=180,slow=5.5,SNR=19
MA2   Magadan           68.87  12c iP      P         23 47 09.2 +0.7
MA2                               pmax     pmax
      comp=Z,127nm,1.3s
MA2   Magadan           68.87  12   P      P         23 47 09.6 +1.1
MA2                               IAmb     IAmb      23 47 11.0
      comp=Z,109nm,1.0s
ARXS  Arharly           68.88 323 eP       P         23 47 09.5 +0.5
TDK   Taldyqorghan      68.98 324 i P      P         23 47 10.2 +0.6
      comp=Z,386nm,1.7s,baz=324
TDK   Taldyqorghan      68.98 324 i P      P         23 47 10.1 +0.6
TDK                               pmax     pmax
      comp=Z,387nm,1.7s
YAK   Yakutsk           69.10   0   P      P         23 47 10.4 +0.5
      comp=Z,153nm,0.7s,baz=267,slow=0.3,SNR=66
YAK   Yakutsk           69.10   0c iP      P         23 47 10.2 +0.4
YAK                               e*PP     PcP       23 47 34.1 +1.3
YAK                               e                  23 49 41.5
YAK                               eS       S         23 56 03.7 -0.1
YAK                               e*SS     SKSac     23 56 53.2 -3.1
YAK                               pmax     pmax
      comp=Z,342nm,0.9s
YAK                               pmax     pmax
      comp=N,71nm,1.0s
YAK                               pmax     pmax
      comp=E,20nm,1.0s
YAK                               pmax     pmax
      comp=Z,77nm,2.3s
YAK                               pmax     pmax
      comp=E,31nm,2.2s
YAK                               smax     smax
      comp=E,260nm,1.9s
YAK                               smax     smax
      comp=N,126nm,1.9s
YAK   Yakutsk           69.10   0   P      P         23 47 10.3 +0.5
CHKK  Chushkaly         69.18 322⇑iP       P         23 47 11.5 +0.7
      baz=322
TKM2  Tokmak 2          69.54 321   P      P         23 47 14.6 +1.3
      SNR=17
TKM2  Tokmak 2          69.54 321 i P      P         23 47 14.4 +1.2
TKM2                              pmax     pmax
      comp=Z,109nm,0.7s
KUU   Kurty             69.60 322⇑iP       P         23 47 14.4 +1.1
      baz=322
KUU   Kurty             69.60 322c iP      P         23 47 14.4 +1.1
KBK   Karagaybulak      69.81 321   P      P         23 47 16.4 +1.6
      SNR=101
UCH   Uchtor            69.86 320   P      P         23 47 17.2 +1.6
      SNR=90
AAK   Ala-Archa         70.08 320   P      P         23 47 18.1 +1.6
      comp=Z,52nm,0.4s,baz=122,slow=5.3,SNR=137
AAK   Ala-Archa         70.08 320 i P      P         23 47 18.0 +1.5
      SNR=36
AAK   Ala-Archa         70.08 320c iP      P         23 47 18.2 +1.6
AAK                               pmax     pmax
      comp=Z,849nm,1.7s
AAK   Ala-Archa         70.08 320   P      P         23 47 18.5 +2.0
AAK   Ala-Archa         70.08 320   P      P         23 47 18.0 +1.5
AAK                               IAmb     IAmb      23 47 19.6
      comp=Z,106nm,0.8s
FRU1  Bishkek           70.08 321   P      P         23 47 17.5 +1.1
FRU1                              pmax     pmax
      comp=Z,353nm,1.8s
FRU1  Bishkek           70.08 321   P      P         23 47 17.5 +1.1
FRU1                              IAmb     IAmb      23 47 19.5
      comp=Z,353nm,1.8s
CHMS  Chumysh           70.11 321   P      P         23 47 17.5 +1.0
      SNR=38
DRK   Karamyk           70.32 316   P      P         23 47 19.4 +1.2
AML   Almayashu         70.34 320   P      P         23 47 09.0 -9.4
      SNR=9.1
AML   Almayashu         70.34 320 i P      P         23 47 20.0 +1.6
      SNR=34
AML   Almayashu         70.34 320   P      P         23 47 20.2 +1.9
USP   Ospenovka         70.40 321   P      P         23 47 19.6 +1.3
      SNR=185
SGDS  Sogindy           70.42 321⇑iP       P         23 47 19.3 +0.8
      comp=Z,38nm,0.6s,baz=321
EKS2  Erkin-Say         70.55 320   P      P         23 47 21.0 +1.7
      SNR=133
GAR   Garm              71.12 315   P      P         23 47 23.7 +0.8
SEM   Semipalatinsk     71.20 329⇑iP       P         23 47 23.0 -0.2
      comp=Z,42nm,0.7s,baz=329
SEM   Semipalatinsk     71.20 329c iP      P         23 47 22.9 -0.2
SEM                               pmax     pmax
      comp=Z,42nm,0.7s
BTK   Batken            71.25 316   P      P         23 47 24.5 +0.9
BTK                               pmax     pmax
      comp=Z,233nm,1.4s
BTK   Batken            71.25 316   P      P         23 47 24.5 +0.9
BTK                               IAmb     IAmb      23 47 26.2
      comp=Z,233nm,1.4s
ZAA0  Zalesovo Array    71.37 334   P      P         23 47 23.8  0.0
ZAA0                              IAmb     IAmb      23 47 25.5
      comp=Z,219nm,1.5s
ZALV  Zalesovo Beam     71.37 334   P      P         23 47 23.6 -0.2
      comp=Z,84nm,0.7s,baz=120,slow=4.6,SNR=236
ZALV                              S        S         23 56 25.6 -5.0
      comp=Z,1.6nm,0.7s,baz=120,slow=13,SNR=2.9
ZALV                              PKKP     PKKPdf    00 07 08.0 +5.5
      comp=Z,5.7nm,1.2s,baz=291,slow=4.0,SNR=5.9
ZALV                              PKPPKP   P'P'df    00 15 14.1 -1.3
      comp=Z,1.0nm,0.6s,baz=349,slow=6.0,SNR=5.2
ZALV  Zalesovo Beam     71.37 334 i P      P         23 47 23.7 -0.2
ZALV                              pmax     pmax
      comp=Z,84nm,0.7s
BTLS  Baital            71.60 322⇑iP       P         23 47 26.3 +0.8
      comp=Z,95nm,1.6s,baz=322
BTLS  Baital            71.60 322c iP      P         23 47 26.2 +0.8
BTLS                              pmax     pmax
      comp=Z,95nm,1.6s
RER   Riviere de l'E    71.78 250   P      P         23 47 29.3 +2.1
      SNR=7.3
RER   Riviere de l'E    71.78 250   P      P         23 47 28.6 +1.5
CHGR  Chuyangaron       71.79 315   P      P         23 47 27.2 +0.4
KURBB Kurchatov Arra    72.20 329   P      P         23 47 29.5 +0.6
      comp=Z,94nm,0.7s,baz=133,slow=5.0,SNR=492
KURBB                             S        S         23 56 38.8 -1.4
      comp=Z,1.9nm,1.0s,baz=131,slow=14,SNR=6.8
KURK  Kurchatov         72.21 329   P      P         23 47 29.6 +0.7
KURK                              pmax     pmax
      comp=Z,410nm,1.4s
KURK  Kurchatov         72.21 329   P      P         23 47 29.8 +0.8
KURK  Kurchatov         72.21 329   P      P         23 47 29.6 +0.7
DZA   Taraz             72.23 319 eP       P         23 47 28.6 -0.8
      baz=319
DZA   Taraz             72.23 319 eP       P         23 47 28.5 -0.8
SEY   Seymchan          72.27  11   P      P         23 47 30.4 +1.4
      comp=Z,96nm,0.6s,baz=203,slow=4.4,SNR=163
VNDA  Vanda             72.31 173   P      P         23 47 29.6 +0.5
      comp=Z,20nm,0.5s,baz=319,slow=6.6,SNR=183
VNDA                              PKKP     PKKPdf    00 06 55.2 -4.8
      comp=Z,1.7nm,1.0s,baz=135,slow=1.4,SNR=4.9
VNDA                              LR       LR        00 18 37.1
      comp=Z,1µm,20.0s,baz=350,slow=35
VNDA  Vanda             72.31 173   P      P         23 47 29.8 +0.7
VNDA                              pmax     pmax
      comp=Z,25nm,0.7s
VNDA  Vanda             72.31 173   P      P         23 47 29.8 +0.7
IUG   Iuzhnay           72.74 318⇑iP       P         23 47 33.7 +1.2
      baz=318
IUG   Iuzhnay           72.74 318c iP      P         23 47 33.6 +1.2
TAS   Tashkent          72.86 317   P      P         23 47 34.4 +1.4
TAS                               pmax     pmax
      comp=Z,2µm,1.7s
TAS   Tashkent          72.86 317   P      P         23 47 34.4 +1.4
KK31  Karatay Array     72.86 319   P      P         23 47 33.8 +0.8
KK31                              pmax     pmax
      comp=Z,262nm,1.6s
KK31  Karatay Array     72.86 319   P      P         23 47 33.8 +0.8
KK31                              IAmb     IAmb      23 47 35.5
      comp=Z,262nm,1.6s
KKAR  Karatay Array     72.86 319   P      P         23 47 33.8 +0.8
KKAR  Karatay Array     72.86 319   P      P         23 47 33.8 +0.8
MSEY  Mahe Island       73.06 267   P      P         23 47 34.0 -0.8
MSEY  Mahe Island       73.06 267   P      P         23 47 34.6 -0.2
MSEY                              pmax     pmax
      comp=Z,30nm,1.2s
MSEY  Mahe Island       73.06 267   P      P         23 47 35.2 +0.4
MSEY  Mahe Island       73.06 267   P      P         23 47 34.6 -0.2
SBA   Scott Base        73.21 172   P      P         23 47 35.8 +1.4
SBA                               pmax     pmax
      comp=Z,28nm,0.8s
SBA   Scott Base        73.21 172   P      P         23 47 35.8 +1.4
XMAS  Kiritimati        74.01  86   P      P         23 47 41.4 +1.1
XMAS                              IAmb     IAmb      23 47 43.9
      comp=Z,170nm,1.2s
JLN   Jalan Bani Buh    74.08 295   P      P         23 47 40.6 +0.1
      SNR=5.3
OTUK  Ortayu            74.25 325 i P      P         23 47 42.0 +1.0
OTUK                              pmax     pmax
      comp=Z,176nm,0.5s
MAW   Mawson            74.32 201   P      P         23 47 42.7 +1.7
      comp=Z,96nm,0.9s,baz=78,slow=5.3,SNR=125
MAW                               LR       LR        00 18 27.1
      comp=Z,966nm,19.5s,baz=66,slow=34
MAW   Mawson            74.32 201   P      P         23 47 42.8 +1.7
      baz=74,SNR=120
MAW   Mawson            74.32 201   P      P         23 47 42.7 +1.7
MAW                               pmax     pmax
      comp=Z,16nm,0.8s
MAW   Mawson            74.32 201   P      P         23 47 42.7 +1.7
WBK   Wadi Bani Khal    74.59 296   P      P         23 47 44.0 +0.5
ADK   Adak              74.95  31   P      P         23 47 45.7 +0.8
ADK                               pmax     pmax
      comp=Z,258nm,1.6s
ADK   Adak              74.95  31   P      P         23 47 45.7 +0.8
ADK                               IAmb     IAmb      23 47 48.3
      comp=Z,258nm,1.6s
BRZS  Berezniki         74.96 326⇑iP       P         23 47 45.6 +0.6
      comp=Z,117nm,1.3s,baz=326
BRZS  Berezniki         74.96 326c iP      P         23 47 45.6 +0.6
BRZS                              pmax     pmax
      comp=Z,117nm,1.3s
WSAR  Wadi Sarin        75.05 296   P      P         23 47 46.5 +0.4
      comp=Z,36nm,0.7s,baz=191,slow=4.7,SNR=76
WSAR  Wadi Sarin        75.05 296   P      P         23 47 46.7 +0.5
MHTO  MHTO              75.09 294   P      P         23 47 46.2 -0.1
      SNR=14
HRA   Herat             75.30 308   P      P         23 47 48.4 +0.7
HRA                               IAmb     IAmb      23 47 49.7
      comp=Z,199nm,1.0s
JMDO  Jabal Madar       75.31 295   P      P         23 47 47.7  0.0
SMDO  Samad             75.53 296   P      P         23 47 49.3 +0.3
BIDO  Bidbid            75.57 296   P      P         23 47 49.9 +0.8
      SNR=5.3
BSY   Bisya             76.21 295   P      P         23 47 53.0 +0.2
      SNR=5.3
HOQ   Hoqain            76.31 296   P      P         23 47 53.9 +0.6
      SNR=11
SHAO  Shalim            76.58 290 i P      P         23 47 54.6 -0.3
      SNR=25
SHAO  Shalim            76.58 290   P      P         23 47 55.2 +0.3
ARQ   Araqi             76.96 296   P      P         23 47 57.5 +0.6
SOCY  Socotra           76.98 284   P      P         23 47 57.0 -0.4
SOCY  Socotra           76.98 284   P      P         23 47 56.6 -0.7
SOCY                              IAmb     IAmb      23 47 59.7
      comp=Z,65nm,0.5s
SOHO  SOHO              77.14 297 i P      P         23 47 58.0  0.0
      SNR=12
SOHO  SOHO              77.14 297   P      P         23 47 58.3 +0.3
DMTO  DMTO              77.14 290   P      P         23 47 58.0 -0.1
UOSS  Minazif           77.62 297   P      P         23 48 00.3 -0.3
UOSS  Minazif           77.62 297   P      P         23 48 01.2 +0.6
UOSS  Minazif           77.62 297   P      P         23 48 00.6 -0.1
UOSS                              IAmb     IAmb      23 48 22.6
      comp=Z,173nm,1.8s
MDH   Madha             77.63 298   P      P         23 48 00.3 -0.3
MDH   Madha             77.63 298   P      P         23 47 59.9 -0.7
HATD  Hatta, Dubai      77.66 297 i P      P         23 48 01.1 +0.3
      SNR=11
HATD  Hatta, Dubai      77.66 297   P      P         23 48 01.5 +0.7
ASHO  Ashiyiah          77.69 297 i P      P         23 48 01.2 +0.2
      SNR=12
ASHO  Ashiyiah          77.69 297   P      P         23 48 01.8 +0.7
BVAR  Borovoye Array    77.74 328   P      P         23 48 01.0 +0.3
      comp=Z,18nm,0.4s,baz=165,slow=6.2,SNR=99
MASF  Masafi            77.77 298   P      P         23 48 02.7 +1.2
BANOM Banah             77.78 298 i P      P         23 48 02.4 +0.9
      SNR=19
BANOM Banah             77.78 298   P      P         23 48 02.7 +1.2
RBK   Rabkut            77.79 290   P      P         23 48 01.6 -0.2
      SNR=6.9
BRVK  Borovoye          77.81 328c iP      P         23 48 01.5 +0.4
BRVK                              pmax     pmax
      comp=Z,110nm,1.3s
BRVK  Borovoye          77.81 328   P      P         23 48 01.6 +0.6
BRVK  Borovoye          77.81 328   P      P         23 48 01.1 +0.1
BRVK                              IAmb     IAmb      23 48 03.8
      comp=Z,145nm,1.4s
DOK   Doka              78.09 291   P      P         23 48 02.8 -0.5
      SNR=9.6
FAQ   Al Faqa, Dubai    78.12 297 i P      P         23 48 03.3 -0.1
      SNR=13
FAQ   Al Faqa, Dubai    78.12 297   P      P         23 48 03.8 +0.5
WHFO  Wadi Hawf         78.28 290   P      P         23 48 04.1 -0.4
      SNR=13
ASUD  Al Ashush, Dub    78.32 297   P      P         23 48 05.2 +0.7
ASUD  Al Ashush, Dub    78.32 297   P      P         23 48 05.4 +0.9
ABTO  Aybut             78.61 289   P      P         23 48 06.2 -0.1
      SNR=11
TIXI  Tiksi             78.76 360   P      P         23 48 05.4 -0.4
      comp=Z,81nm,0.5s,baz=146,slow=4.8,SNR=135
TIXI  Tiksi             78.76 360c iP      P         23 48 05.3 -0.5
TIXI                              pmax     pmax
      comp=Z,71nm,0.6s
TIXI  Tiksi             78.76 360   P      P         23 48 05.2 -0.7
TIXI                              IAmb     IAmb      23 48 06.9
      comp=Z,96nm,0.5s
MZWR  Madinat Zayed     79.41 296   P      P         23 48 10.7 +0.3
TBI   Tubuai            79.46 112 eP       P         23 48 13.8 +3.1
      comp=Z,201nm,1.0s
TBI                               eS       S         23 58 03.7 +2.7
      comp=Z,411nm,26.6s
TBI   Tubuai            79.46 112 eLR      LR        00 13 11.8
      comp=Z,1µm,32.2s
GEYT  Alibeck           79.60 311   P      P         23 48 12.1 +0.8
      comp=Z,32nm,0.8s,baz=200,slow=11,SNR=37
GEYT                              LR       LR        00 27 23.5
      comp=Z,262nm,22.0s,baz=55,slow=38
GYA0B ALIBECK ARRAY     79.60 311   P      P         23 48 11.7 +0.5
BILL  Bilibino          79.61  13d iP      P         23 48 10.6  0.0
BILL                              e                  23 48 18.8
BILL                               *PP     pwP       23 48 46.0 -1.9
BILL                              S        S         23 58 10.0 +9.1
BILL                              e*SS     sS        23 58 59.9 +1.9
BILL                              SSS      SSS       00 06 33.0
BILL                              pmax     pmax
      comp=Z,29nm,1.3s
BILL                              MLR      MLR
      comp=Z,244nm,20.0s
BILL  Bilibino          79.61  13   P      P         23 48 10.4 -0.2
NIKH  Nikolski High     79.64  33   P      P         23 48 11.5 +0.5
      baz=243
PAE   Paea              79.73 107 eP       P         23 48 14.9 +2.6
      comp=Z,18nm,1.1s
PPT2  Papeete2          79.74 107 eP       P         23 48 15.4 +3.0
      comp=Z,98nm,1.0s
PPT2                              eS       S         23 58 06.4 +2.0
      comp=Z,220nm,21.5s
PPT2  Papeete2          79.74 107 eLQ      LQ        00 09 56.4
      comp=Z,1µm,30.5s
PPT2                              eLR      LR        00 13 14.9
      comp=Z,1µm,30.0s
PPT   Papeete           79.74 107   P      P         23 48 14.6 +2.2
      comp=Z,100nm,0.9s,baz=316,slow=8.9,SNR=8.5
PPT                               LR       LR        00 18 52.9
      comp=Z,172nm,22.0s,baz=246,slow=32
PPTF  Pamatai, Papee    79.75 107   P      P         23 48 13.3 +0.8
PPTF                              IAmb     IAmb      23 48 19.5
      comp=Z,126nm,1.0s
TIAR  Tiarei            79.96 107 eP       P         23 48 16.5 +2.9
      comp=Z,12nm,0.9s
VOI   Vohitsoka         80.08 249   P      P         23 48 15.6 +1.3
      SNR=13
VOI   Vohitsoka         80.08 249   P      P         23 48 14.9 +0.6
VOI                               IAmb     IAmb      23 48 16.0
      comp=Z,106nm,0.8s
VOI   Vohitsoka         80.08 249   P      P         23 48 15.2 +0.9
GHWR  Ruwais            80.35 296   P      P         23 48 16.5 +1.0
SPIA  Saint Paul Isl    80.90  29   P      P         23 48 18.6 +1.0
      baz=241
MEH   Mehetia           81.15 107 eP       P         23 48 22.4 +2.5
      comp=Z,40nm,1.2s
UNV   Unalaska Valle    81.29  33   P      P         23 48 21.4 +1.6
      baz=245
UNV   Unalaska Valle    81.29  33   P      P         23 48 20.4 +0.6
SLWR  Sila              81.44 296   P      P         23 48 22.0 +0.8
PMOR  Pomariorio Ree    81.57 104 eP       P         23 48 24.8 +2.7
      comp=Z,200nm,1.1s
NRIK  Noril'sk          81.57 346   P      P         23 48 21.8 +0.8
      comp=Z,99nm,1.0s,baz=131,slow=5.2,SNR=68
NRIK                              S        S         23 58 18.6 -2.6
      comp=Z,0.9nm,0.3s,baz=11,slow=19,SNR=13
NRIK                              PKKPbc   PKKPbc    00 06 54.0 -2.9
      comp=Z,1.4nm,0.4s,baz=342,slow=3.2,SNR=4.2
NRIK                              LR       LR        00 27 17.1
      comp=Z,422nm,20.4s,baz=146,slow=38
NRIK  Noril'sk          81.57 346   P      P         23 48 21.9 +0.9
NRIK                              IAmb     IAmb      23 48 23.1
      comp=Z,85nm,1.0s
VAH   Vaihoa            81.80 104 eP       P         23 48 25.8 +2.5
      comp=Z,135nm,1.3s
TRNA  Turayna           82.00 296   P      P         23 48 24.8 +0.6
AB31  Akbulak array     82.08 322 i P      P         23 48 23.9 -0.2
AB31                              pmax     pmax
      comp=Z,29nm,0.4s
ABKAR Akbulak array     82.08 322   P      P         23 48 24.3 +0.2
ABKAR Akbulak array     82.08 322   P      P         23 48 24.2 +0.2
ABKAR                             IAmb     IAmb      23 48 27.8
      comp=Z,61nm,0.7s
SHMA  Al-Shehemyia      82.45 297   P      P         23 48 27.1 +0.6
QSPA  South Pole Qui    82.71 180   P      P         23 48 27.5 +0.3
QSPA                              IAmb     IAmb      23 48 28.2
      comp=Z,52nm,0.7s
SYO   Syowa Base        83.03 201⇑iP       P         23 48 30.0 +1.3
SYO   Syowa Base        83.03 201⇓iPcP     PcP       23 48 33.2 +0.2
SYO   Syowa Base        83.03 201⇑esP      sP        23 49 18.0 +2.0
AKTO  Aktyubinsk        83.65 323   P      P         23 48 32.5 +0.4
      comp=Z,82nm,0.7s,baz=102,slow=7.1,SNR=135
AKTO  Aktyubinsk        83.65 323 i P      P         23 48 32.3 +0.1
AKTO                              pmax     pmax
      comp=Z,153nm,0.9s
SVE   Sverdlovsk        84.46 329deP       P         23 48 36.7 +0.6
SVE                               pmax     pmax
      comp=Z,165nm,1.3s
SDPT  Sand Point        85.11  33   P      P         23 48 40.0 +0.7
      baz=250
ARU   Arti              85.39 328   P      P         23 48 40.2 -0.5
      comp=Z,13nm,0.4s,baz=118,slow=1.7,SNR=66
ARU                               PP       PP        23 52 01.3 +0.5
      comp=Z,3.4nm,0.8s,baz=46,slow=0.6,SNR=4.6
ARU   Arti              85.39 328c iP      P         23 48 40.5 -0.2
ARU                                                  23 51 57.8
ARU                               S        S         23 58 52.9 -7.2
ARU                               pmax     pmax
      comp=Z,134nm,1.2s
ARU   Arti              85.39 328   P      P         23 48 39.7 -1.1
ARU                               IAmb     IAmb      23 48 43.2
      comp=Z,71nm,0.7s
QRN   Al-Qurain         85.67 300 eP       P         23 48 42.9 +0.1
KBD   Kabd              85.94 300 eP       P         23 48 44.6 +0.5
UMR   Umm Al-Rimmam     85.99 300 eP       P         23 48 44.4 +0.1
RDF   Al-Radifah        86.02 300 eP       P         23 48 44.5 +0.1
MIB   Mutribah          86.36 301 eP       P         23 48 46.3 +0.1
ANM   Nome              86.38  23   P      P         23 48 46.4 +0.9
ANM                               pmax     pmax
      comp=Z,109nm,1.4s
ANM   Nome              86.38  23   P      P         23 48 46.4 +0.9
ANM                               IAmb     IAmb      23 51 57.7
      comp=Z,109nm,1.4s
RAYN  Ar Rayn           86.91 294 i P      P         23 48 49.4 +0.4
      SNR=27
RAYN                              i P      P         23 48 49.9 +0.8
      SNR=16
RAYN  Ar Rayn           86.91 294   P      P         23 48 49.5 +0.4
RAYN                              pmax     pmax
      comp=Z,176nm,0.8s
RAYN  Ar Rayn           86.91 294   P      P         23 48 49.8 +0.8
RAYN  Ar Rayn           86.91 294   P      P         23 48 49.5 +0.4
ATD   Arta Tunnel       87.65 282   P      P         23 48 54.5 +1.8
      comp=Z,42nm,0.7s,baz=76,slow=1.3,SNR=20
SEKA  Sheki             88.58 312   P      P         23 48 56.3 -0.3
MNGR  Mingechevir, A    88.58 311   P      P         23 48 56.8 +0.3
MAK   Makhachkala       88.69 313 eP       P         23 48 54.1 -2.9
MAK                               e*SP     sP        23 49 44.4 -0.9
MAK                               e                  23 52 26.2
MAK                               ePPP     PPP       23 54 23.0
MAK                               e                  23 59 10.0
MAK                               pmax     pmax
      comp=Z,565nm,2.9s
RDOG  Red Dog Mine      88.72  20   P      P         23 49 02.2 +5.6
      baz=247
SII   Sitkinak Islan    88.85  33   P      P         23 48 58.7 +1.3
      baz=255
ZKTA  Zakatala          89.08 312   P      P         23 49 00.0 +1.1
GANJ  Ganja             89.13 311   P      P         23 48 59.0 -0.2
LGD   Lagodekhi         89.40 312   P      P         23 49 02.4 +2.0
DDFL  Dedoflistskaro    89.42 312   P      P         23 49 04.4 +3.8
OHAK  Old Harbor        89.49  32   P      P         23 49 01.4 +1.0
      baz=256
OHAK  Old Harbor        89.49  32   P      P         23 49 01.0 +0.7
OHAK                              IAmb     IAmb      23 49 02.2
      comp=Z,55nm,0.8s
NAX   Nakhchivan        89.50 309   P      P         23 49 01.4 +0.4
TTA   Tatalina          89.69  26   P      P         23 49 01.9 +0.6
TTA                               pmax     pmax
      comp=Z,23nm,0.8s
TTA   Tatalina          89.69  26   P      P         23 49 01.9 +0.6
      baz=253,SNR=7.9
TTA   Tatalina          89.69  26   P      P         23 49 01.9 +0.6
N19K  Bonanza Creek     89.81  28   P      P         23 49 03.4 +1.5
      baz=255,SNR=5.9
N19K  Bonanza Creek     89.81  28   P      P         23 49 02.3 +0.4
N19K                              IAmb     IAmb      23 49 05.3
      comp=Z,53nm,1.1s
GCSA  Galena City Sc    89.86  24   P      P         23 49 02.5 +0.6
      baz=253,SNR=6.3
GROC  Groznyy           89.96 313 eP       P         23 49 03.0 +0.1
GROC                              e*PP     pP        23 49 37.8 +0.7
GROC                              pmax     pmax
      comp=Z,30nm,1.1s
L19K  White Mountain    90.00  27   P      P         23 49 03.6 +0.9
      baz=254,SNR=8.3
L19K  White Mountain    90.00  27   P      P         23 49 03.2 +0.5
L19K                              IAmb     IAmb      23 49 04.7
      comp=Z,50nm,1.1s
M19K  Big River Lodg    90.14  27   P      P         23 49 04.6 +1.2
      baz=255
M19K  Big River Lodg    90.14  27   P      P         23 49 04.1 +0.7
GNI   Garni             90.23 310   P      P         23 49 05.4 +0.9
      comp=Z,8.8nm,0.7s,baz=146,slow=7.3,SNR=3.8
GNI   Garni             90.23 310   P      P         23 49 05.1 +0.6
GNI   Garni             90.23 310c iP      P         23 49 05.5 +1.0
GNI                               pmax     pmax
      comp=Z,34nm,1.2s
GNI   Garni             90.23 310   P      P         23 49 05.1 +0.6
GNI                               IAmb     IAmb      23 49 43.2
      comp=Z,45nm,1.1s
BELG  Belogornoye       90.44 323   P      P         23 49 04.0 -1.0
      comp=Z,135nm,1.2s,baz=158,slow=0.3,SNR=20
BELG                              S        SKSac     23 59 21.4 -1.9
      comp=Z,11nm,1.1s,baz=110,slow=23,SNR=6.2
BELG  Belogornoye       90.44 323c iP      P         23 49 03.6 -1.3
BELG                              pmax     pmax
      comp=Z,13nm,0.9s
L20K  Farewell, AK      90.52  27   P      P         23 49 06.0 +0.9
      baz=255,SNR=7.5
KIBK  Kibwezi           90.61 268   P      P         23 49 07.8 +1.1
      SNR=13
KIBK  Kibwezi           90.61 268   P      P         23 49 06.6 -0.2
K20K  Telida            90.66  26   P      P         23 49 06.5 +0.8
      baz=255
K20K  Telida            90.66  26   P      P         23 49 06.1 +0.3
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K20K                                IAmb    IAmb     23 49 07.1
      comp=Z,28nm,0.7s
KIRV  Kirov              90.73 329  P       P        23 49 04.8  -1.3
      comp=Z,15nm,0.5s,baz=68,slow=1.9,SNR=11
KIRV                                PP      PP       23 52 43.2  -0.2
      comp=Z,4.7nm,0.5s,baz=82,slow=10,SNR=4.2
KIRV  Kirov              90.73 329⇑ePP      P        23 49 05.0  -1.1
GUDG  Gudauri            90.80 313  P       P        23 49 10.8  +3.7
J20K  Nowinta River      90.83  25  P       P        23 49 07.2  +0.7
      baz=255
J20K  Nowinta River      90.83  25  P       P        23 49 07.0  +0.4
J20K                                IAmb    IAmb     23 49 09.4
      comp=Z,97nm,1.4s
BGD   Bogdanovka         91.26 311  P       P        23 49 12.0  +2.7
ZEI   Tsey               91.27 313 eP       P        23 49 08.8  -0.5
ZEI                                e                 23 52 45.9
ZEI                                 pmax    pmax
      comp=Z,14nm,1.0s
AKH   Akhalkalaki        91.36 311 ⇓P       P        23 49 11.6  +1.8
AKH   Akhalkalaki        91.36 311  P       P        23 49 11.5  +1.8
PPLA  Purkeypile         91.37  27  P       P        23 49 09.0  -0.2
      baz=257,SNR=5.3
PPLA  Purkeypile         91.37  27  P       P        23 49 09.0  -0.2
PPLA                                IAmb    IAmb     23 49 10.4
      comp=Z,58nm,1.2s
IMAR  Indian Mountai     91.46  24  P       P        23 49 09.1  -0.3
CAST  Castle Rocks       91.54  26  P       P        23 49 09.9   0.0
      baz=257,SNR=6.8
CAST  Castle Rocks       91.54  26  P       P        23 49 09.8   0.0
CHUM  Lake Minchumin     91.54  26  P       P        23 49 10.7  +0.9
      baz=257,SNR=22
KMBO  Kilima Mbogo       91.55 269  P       P        23 49 12.3  +1.0
      comp=Z,27nm,1.0s,baz=66,slow=6.0,SNR=54
KMBO                                LR      LR       00 28 26.9
      comp=Z,218nm,19.7s,baz=94,slow=34
KMBO  Kilima Mbogo       91.55 269 i P      P        23 49 12.3  +1.0
      SNR=35
KMBO  Kilima Mbogo       91.55 269  P       P        23 49 12.6  +1.3
KMBO  Kilima Mbogo       91.55 269  P       P        23 49 11.4  +0.1
KMBO                                IAmb    IAmb     23 49 13.5
      comp=Z,38nm,1.1s
KARS  Kars               91.56 311  P       P        23 49 11.0  +0.4
KARS                                pmax    pmax
      comp=Z,547nm,1.8s
KARS  Kars               91.56 311  P       P        23 49 11.0  +0.4
NCK   Nalchik            91.59 313⇑eP       P        23 49 11.1  +0.5
NCK                                 pmax    pmax
      comp=Z,43nm,1.1s
SIRT  Sirnak             91.62 307  P       P        23 49 11.0  +0.1
SUA   Susitna One        91.72  28  P       P        23 49 10.8   0.0
      baz=258
H21K  Melozitna Rive     91.75  24  P       P        23 49 11.1  +0.3
      baz=256,SNR=7.6
A21K  Barrow             91.91  18  P       P        23 49 11.9  +0.6
      baz=253
A21K  Barrow             91.91  18  P       P        23 49 11.0  -0.3
I21K  Tanana             91.98  24  P       P        23 49 12.1  +0.3
      baz=257,SNR=6.3
I21K  Tanana             91.98  24  P       P        23 49 11.8  +0.1
M22K  Willow             92.07  28  P       P        23 49 11.9  -0.3
      baz=259
GURO  Guroymak-BITLI     92.08 308  P       P        23 49 13.2  +0.1
RC01  Rabbit Creek A     92.12  29  P       P        23 49 11.9  -0.7
      baz=259
KBZ   Khabaz             92.13 314  P       P        23 49 12.5  -0.4
      comp=Z,8.7nm,1.0s,baz=101,slow=4.8,SNR=8.8
KBZ   Khabaz             92.13 314⇑eP       P        23 49 12.6  -0.4
KBZ                                 pmax    pmax
      comp=Z,18nm,0.9s
BPAW  Bear Paw Mtn.      92.16  26  P       P        23 49 12.6  -0.2
      baz=258,SNR=8.9
KIV   Kislovodsk         92.31 314 eP       P        23 49 13.2  -0.8
KIV                                 pmax    pmax
      comp=Z,16nm,1.1s
KIV                                 MLR     MLR
      comp=Z,184nm,20.0s
TRF   Thorofare Moun     92.33  26  P       P        23 49 12.9  -0.8
      baz=258
TRF   Thorofare Moun     92.33  26  P       P        23 49 12.9  -0.8
TRF                                 IAmb    IAmb     23 49 14.1
      comp=Z,40nm,1.2s
MLY   Manley             92.46  25  P       P        23 49 14.2  +0.1
      baz=258,SNR=22
PMR   Palmer             92.50  28  P       P        23 49 13.9  -0.3
      baz=260
KOND  Kondoa             92.51 265 i P      P        23 49 15.6  -0.1
KOND                               e                 23 49 17.5
      baz=88,slow=4.6
GHO   Glory Hole Cre     92.64  28  P       P        23 49 14.8  -0.2
GHO                                 IAmb    IAmb     23 52 28.1
      comp=Z,66nm,1.5s
KNK   Knik Glacier       92.79  29  P       P        23 49 16.1  +0.4
      baz=260,SNR=8.9
SML   Sawmill            92.92  28  P       P        23 49 16.2  -0.1
      baz=260,SNR=13
SML   Sawmill            92.92  28  P       P        23 49 16.1  -0.1
MCK   McKinley           92.98  26  P       P        23 49 16.0  -0.5
      baz=260,SNR=16
WAT1  Susitna Watana     92.99  27  P       P        23 49 16.5  -0.1
      baz=260
I23K  Minto, Yukon-K     93.06  25  P       P        23 49 17.1  +0.3
      baz=259,SNR=23
NEA2  Nenana             93.08  25  P       P        23 49 16.8  -0.2
      baz=260,SNR=12
H23K  Yukon River        93.11  24  P       P        23 49 17.5  +0.4
      baz=259,SNR=11
COLD  Coldfoot           93.12  23  P       P        23 49 17.5  +0.5
      baz=259,SNR=17
PRGR  Permogore          93.18 332 eP       P        23 49 13.3  -4.1
PRGR                               e                 23 53 00.2
PRGR                               eS       SKSac    23 59 37.2  -1.1
PRGR                                pmax    pmax
      comp=Z,43nm,1.3s
WAT6  Susitna Watana     93.32  27  P       P        23 49 18.1  -0.2
      baz=261,SNR=12
SCM   Sheep Creek Mo     93.39  28  P       P        23 49 18.2  -0.3
SCM                                 pmax    pmax
      comp=Z,85nm,1.2s
SCM   Sheep Creek Mo     93.39  28  P       P        23 49 18.8  +0.3
      baz=261,SNR=6.1
SCM   Sheep Creek Mo     93.39  28  P       P        23 49 18.1  -0.3
MDM   Murphy Dome        93.50  25  P       P        23 49 18.2  -0.7
MDM                                 IAmb    IAmb     23 49 20.5
      comp=Z,28nm,1.2s
DHY   Denali Highway     93.56  27  P       P        23 49 19.6  +0.2
      baz=261
DHY   Denali Highway     93.56  27  P       P        23 49 19.4   0.0
DHY                                 IAmb    IAmb     23 49 20.4
      comp=Z,68nm,1.0s
TOLK  Toolik Lake Re     93.62  21  P       P        23 49 19.7  +0.3
      baz=260,SNR=7.2
CCB   Clear Creek Bu     93.62  25  P       P        23 49 18.4  -1.0
CCB                                 IAmb    IAmb     23 49 19.4
      comp=Z,55nm,0.9s
COLA  College            93.64  25d iP      P        23 49 18.5  -0.9
COLA                                pmax    pmax
      comp=Z,72nm,2.7s
H24K  Noodor Dome        93.78  24  P       P        23 49 20.6  +0.4
      baz=261
VRH   Novokhopyorsk      93.88 321 eP       P        23 49 19.3  -1.5
VRH                                 pmax    pmax
      comp=Z,30nm,0.7s
HDA   Harding Lake       93.95  26  P       P        23 49 20.0  -0.9
      baz=262,SNR=19
M24K  Tolsona, Glenn     93.97  28  P       P        23 49 22.1  +0.9
      baz=262,SNR=7.8
LODK  Lodwar             93.99 273  P       P        23 49 23.2  +0.8
      SNR=7.6
LODK  Lodwar             93.99 273  P       P        23 49 22.2  -0.1
KLU   Klutina            94.01  29  P       P        23 49 21.6  +0.3
      baz=262
MOPA  Mopani             94.01 246 eP       P        23 49 22.8  +0.7
MOPA  Mopani             94.01 246 eP       P        23 49 22.8  +0.7
DIV   Divide             94.03  29  P       P        23 49 21.5  +0.1
DIV                                 IAmb    IAmb     23 49 22.9
      comp=Z,61nm,1.0s
IL31                     94.03  25  P       P        23 49 19.7  -1.6
ILAR  Eielson Array      94.03  25  P       P        23 49 19.6  -1.7
      comp=Z,13nm,0.8s,baz=270,slow=4.2,SNR=60
ILAR                                PKiKP   PKiKP    23 54 04.4  -0.5
      comp=Z,0.5nm,0.5s,baz=292,slow=3.5,SNR=1.9
ILAR                                PKKP    PKKPdf   00 06 23.6  -1.0
      comp=Z,4.9nm,0.7s,baz=25,slow=1.7,SNR=27
ILAR                                LR      LR       00 27 51.8
      comp=Z,184nm,20.8s,baz=276,slow=33
SOC   Sochi              94.40 313 eP       P        23 49 21.0  -2.5
SOC                                i S      SKSac    23 59 43.5  -2.4
SOC                                eSS      SS       00 06 51.3  +2.1
SOC                                eSSS     SSS      00 10 34.8
SOC                                 pmax    pmax
      comp=Z,67nm,1.0s
PAX   Paxson             94.41  27  P       P        23 49 23.1  -0.1
PAX                                 pmax    pmax
      comp=Z,39nm,0.9s
PAX   Paxson             94.41  27  P       P        23 49 23.3  +0.2
      baz=263,SNR=15
PAX   Paxson             94.41  27  P       P        23 49 23.1  -0.1
PAX                                 IAmb    IAmb     23 49 24.5
      comp=Z,39nm,0.9s
HARP  HAARP              94.48  28  P       P        23 49 23.7  +0.3
      baz=263
BMRM  Bremner River      94.57  29  P       P        23 49 24.1  +0.2
      baz=263
BMRM  Bremner River      94.57  29  P       P        23 49 24.0  +0.1
BMRM                                IAmb    IAmb     23 49 27.8
      comp=Z,62nm,1.2s
N25K  Chitina, Valde     94.65  29  P       P        23 49 24.7  +0.4
      baz=263,SNR=6.6
J25K  Salcha River,      94.66  26  P       P        23 49 23.4  -0.9
      baz=263,SNR=14
PRP   Porcupine Dome     94.70  25  P       P        23 49 22.7  -1.8
      baz=263
RIDG  Independent Ri     94.78  26  P       P        23 49 24.7  -0.1
      baz=263,SNR=12
DOT   Dot Lake           95.12  27  P       P        23 49 26.4   0.0
DOT                                 IAmb    IAmb     23 49 27.3
      comp=Z,37nm,0.9s
SNAA  Sanae              95.16 194  P       P        23 49 27.7  +1.2
SNAA  Sanae              95.16 194  PKKPbc  PKKPbc   00 06 18.1  -4.9
SNAA  Sanae              95.16 194  P       P        23 49 27.6  +1.2
SNAA                                pmax    pmax
      comp=Z,72nm,1.2s
SNAA  Sanae              95.16 194  P       P        23 49 27.6  +1.1
SCRK  Sand Creek         95.19  26  P       P        23 49 26.4  -0.3
      baz=264,SNR=9.9
SCRK  Sand Creek         95.19  26  P       P        23 49 26.8  +0.1
SCRK                                IAmb    IAmb     23 49 27.8
      comp=Z,23nm,1.1s
MENT  Mentasta           95.20  27  P       P        23 49 27.1  +0.4
MENT                                IAmb    IAmb     23 49 28.0
      comp=Z,26nm,1.0s
CRQE  Cirque             95.29  30  P       P        23 49 27.9  +0.6
      baz=265
BMAR  Burnt Mountain     95.30  23  P       P        23 49 27.8  +0.7
MCARA McCarthy VSAT      95.38  29  P       P        23 49 28.7  +1.1
      baz=265
L26K  Log Cabin Wild     95.38  27  P       P        23 49 28.2  +0.7
      baz=265,SNR=7.2
L26K  Log Cabin Wild     95.38  27  P       P        23 49 28.2  +0.7
L26K                                IAmb    IAmb     23 49 28.9
      comp=Z,22nm,1.1s
TGL   Tana Glacier       95.42  30  P       P        23 49 28.2  +0.3
TGL                                 IAmb    IAmb     23 49 29.3
      comp=Z,44nm,1.2s
J26L  Joseph Creek       95.42  26  P       P        23 49 27.9  +0.2
      baz=265,SNR=29
MSNA  Messina            95.45 247 eP       P        23 49 29.0  +0.2
MSNA  Messina            95.45 247 eP       P        23 49 29.0  +0.2
VSR   Storozhevoye       95.48 321 eP       P        23 49 26.2  -2.0
VSR                                 pmax    pmax
      comp=Z,30nm,0.9s
M26K  Nabesna, AK        95.48  28  P       P        23 49 28.1   0.0
      baz=265
M26K  Nabesna, AK        95.48  28  P       P        23 49 28.3  +0.3
M26K                                IAmb    IAmb     23 49 31.1
      comp=Z,24nm,1.4s
ASF   Jabal al Asfar     95.56 302  P       P        23 49 29.7  +0.6
      comp=Z,20nm,1.0s,baz=108,slow=3.2,SNR=24
GAZ   Gaziantep          95.72 307  P       P        23 49 28.4  -1.4
GAZ                                 IAmb    IAmb     23 49 29.6
      comp=Z,41nm,1.3s
LPSR  Galich'ya Gora     95.73 322 eP       P        23 49 28.2  -1.1
LPSR                                pmax    pmax
      comp=Z,50nm,1.3s
M27K  Edge Creek, AK     96.00  28  P       P        23 49 31.0  +0.5
      baz=266,SNR=5.8
KLMR  Klimovskoe         96.02 331 eP       P        23 49 26.3  -4.1
KLMR                               e                 23 53 21.4
KLMR                                pmax    pmax
      comp=Z,11nm,0.6s
KLMR  Klimovskoe         96.02 331 eP       P        23 49 26.3  -4.1
KLMR                                AMP              23 49 31.1
      comp=Z,11nm,0.6s
KLMR                               ePP      PP       23 53 21.5  -3.2
KLMR                               ePPP     PPP      23 55 24.7
L27K  Beaver Creek,      96.07  27  P       P        23 49 31.4  +0.8
      baz=266,SNR=23
L27K  Beaver Creek,      96.07  27  P       P        23 49 30.9  +0.2
L27K                                IAmb    IAmb     23 49 32.4
      comp=Z,45nm,1.1s
BCAR  Beaver Creek A     96.09  27  P       P        23 49 30.9  +0.1
ANN   Anapa              96.14 314 eP       P        23 49 28.0  -3.3
ANN                                e*PP     pP       23 50 02.8  -2.8
ANN                                e                 23 53 22.5
ANN                                eS       SKSac    23 59 51.7  -3.3
ANN                                eSSS     SSS      00 11 00.4
ANN                                 pmax    pmax
      comp=Z,90nm,1.1s
CTG   Chitna Glacier     96.16  29  P       P        23 49 32.0  +0.8
      baz=266
EGAK  Eagle              96.48  26  P       P        23 49 32.3  -0.1
      baz=267,SNR=9.2
EGAK  Eagle              96.48  26  P       P        23 49 32.4  -0.1
EGAK                                IAmb    IAmb     23 49 33.6
      comp=Z,20nm,1.0s
GHAJ  Ghor Haditha       96.61 301  P       P        23 49 34.1  +0.3
GHAJ                                IAmb    IAmb     23 49 35.2
      comp=Z,32nm,0.9s
YUK3  Moose Creek        96.63  29  P       P        23 49 34.6  +1.1
      baz=267,SNR=6.1
MOS   Moscow             96.70 325 eP       P        23 49 30.8  -2.8
MOS                                e                 23 59 54.8
MOS                                 pmax    pmax
      comp=Z,36nm,0.9s
VNA2  Neumayer--Watz     96.73 193  P       P        23 49 34.9  +1.4
      baz=128,slow=4.5
VNA2  Neumayer--Watz     96.73 193  PKKPbc  PKKPbc   00 06 14.7  -4.0
MMAI  Mount Meron Ar     96.88 302  P       P        23 49 35.6  +0.5
      comp=Z,2.7nm,0.4s,baz=90,slow=8.3,SNR=22
MMAI                                PKiKP   PKiKP    23 54 11.8  +0.9
      comp=Z,0.7nm,0.4s,baz=132,slow=2.1,SNR=2.0
VNA3  Neumayer Olymp     97.00 192  P                23 49 35.7
VNA3  Neumayer Olymp     97.00 192  PKKPbc  PKKPbc   00 06 14.2  -3.7
EIL   Elat               97.02 299  P       P        23 49 35.5  -0.2
      comp=Z,8.9nm,0.9s,baz=123,slow=2.4,SNR=6.9
VNA1  Neumayer--Stat     97.13 193  P       Pdif     23 49 36.5  +1.1
VNA1  Neumayer--Stat     97.13 193  PKKPbc  PKKPbc   00 06 14.5  -3.0
MATP  Matopo             97.19 248 eP       Pdif     23 49 38.4  +1.4
MATP  Matopo             97.19 248 eP       Pdif     23 49 38.4  +1.4
DAWY  Dawson             97.21  26  P       Pdif     23 49 36.4  +0.5
      baz=268,SNR=20
DAWY  Dawson             97.21  26  P       Pdif     23 49 36.0  +0.2
DAWY                                IAmb    IAmb     23 49 37.4
      comp=Z,34nm,1.0s
OBN   Obninsk            97.28 325  P       P        23 49 34.7  -1.5
      comp=Z,4.0nm,0.5s,baz=153,slow=22,SNR=6.8
OBN   Obninsk            97.28 325ceP       P        23 49 34.7  -1.5
OBN                                e*SS     S        00 00 51.3  +3.3
OBN                                e                 00 02 08.4
OBN                                e                 00 02 57.8
OBN                                eSS      SS       00 07 34.7  +5.6
OBN                                 SSS     SSS      00 11 20.0
OBN                                 pmax    pmax
      comp=Z,38nm,1.3s
OBN                                 MLR     MLR
      comp=Z,461nm,22.0s
OBN   Obninsk            97.28 325  P       P        23 49 34.7  -1.5
YUK4  Talbot Arm         97.48  29  P       Pdif     23 49 38.3  +0.9
      baz=269
I29M  Ogilvie Camp,      97.70  25  P       Pdif     23 49 38.2  +0.2
      baz=270,SNR=18
HYT   Haines Junctio     98.03  30  Pdiff   Pdif     23 49 40.3  +0.6
      baz=270
MBAR  Mbarara            98.07 268ceP       Pdif     23 49 41.8  +0.8
EPYK  Eagle Plains       98.35  24  Pdiff   P        23 49 40.7  -0.2
      baz=271,SNR=5.3
EPYK  Eagle Plains       98.35  24  P       P        23 49 40.6  -0.3
EPYK                                IAmb    IAmb     23 49 42.0
      comp=Z,50nm,1.4s
M30M  Minto, Yukon       98.37  28  Pdiff   P        23 49 40.9  -0.1
      baz=270
LSZ   Lusaka             98.39 253  P       P        23 49 42.3   0.0
LSZ                                 pmax    pmax
      comp=Z,16nm,1.0s
LSZ   Lusaka             98.39 253  P       P        23 49 42.2   0.0
LSZ                                 IAmb    IAmb     23 49 43.6
      comp=Z,16nm,0.9s
BOSA  Boshof             98.43 240  P       Pdif     23 49 42.8  +0.5
      comp=Z,9.6nm,0.7s,baz=122,slow=3.3,SNR=20
BOSA                                LR      LR       00 28 55.2
      comp=Z,238nm,21.8s,baz=98,slow=32
BOSA  Boshof             98.43 240 eP       Pdif     23 49 43.0  +0.7
BOSA  Boshof             98.43 240 eP       Pdif     23 49 43.0  +0.7
BOSA  Boshof             98.43 240  P       Pdif     23 49 42.7  +0.4
BOSA                                IAmb    IAmb     23 49 43.9
      comp=Z,40nm,1.4s
BRTR  Keskin Array B     98.68 309  P       P        23 49 42.4  -0.7
      comp=Z,2.1nm,0.7s,baz=132,slow=5.2,SNR=7.5
BRTR                                PP      PP       23 53 45.2  -0.8
      comp=Z,3.0nm,0.9s,baz=102,slow=8.9,SNR=4.0
BRTR                                LR      LR       00 42 15.8
      comp=Z,123nm,19.5s,baz=103,slow=40
BRTR  Keskin Array B     98.68 309  P       P        23 49 41.9  -1.2
CSS   Mathiatis          98.72 304  P       P        23 49 42.4  -0.8
CSS                                 IAmb    IAmb     23 49 43.7
      comp=Z,14nm,0.9s
APA   Apatity            98.80 337⇓iP       P        23 49 36.1  -6.7
APA                                i *PP    sP       23 50 34.1  +3.4
APA                                 pmax    pmax
      comp=Z,9.0nm,1.1s
LBTB  Lobatse            98.92 243  P       Pdif     23 49 45.0  +0.5
LBTB                                pmax    pmax
      comp=Z,23nm,1.1s
LBTB  Lobatse            98.92 243 eP       Pdif     23 49 45.3  +0.8
LBTB  Lobatse            98.92 243 eP       Pdif     23 49 45.3  +0.8
LBTB  Lobatse            98.92 243  P       Pdif     23 49 45.0  +0.5
LBTB                                IAmb    IAmb     23 49 46.2
      comp=Z,23nm,1.1s
SKAG  Skagway            99.12  31  Pdiff   Pdif     23 49 45.5  +1.1
      baz=271
WHY   Whitehorse         99.32  30  Pdiff   Pdif     23 49 46.1  +0.6
      baz=272
INK   Inuvik             99.50  22  P       Pdif     23 49 45.0  -0.8
      comp=Z,9.1nm,1.0s,baz=275,slow=7.0,SNR=9.9
INK                                 PKiKP   PKiKP    23 54 15.0  +0.7
      comp=Z,1.5nm,0.5s,baz=338,slow=2.6,SNR=5.7
INK                                 PKKPbc  PKKPbc   00 06 08.9  -2.2
      comp=Z,8.4nm,0.5s,baz=67,slow=2.1,SNR=22
INK   Inuvik             99.50  22  Pdiff   Pdif     23 49 45.5  -0.3
      baz=274,SNR=7.6
FARO  Faro, Yukon        99.98  28  Pdiff   Pdif     23 49 48.6  +0.4
      baz=273
P33M  Teslin, Yukon     100.36  30  Pdiff   Pdif     23 49 50.0   0.0
      baz=274
ARCES ARCESS Array B    101.47 340  P       Pdif     23 49 53.7  -1.0
      comp=Z,4.5nm,0.5s,baz=82,slow=4.3,SNR=34
ARCES                               PKiKP   PKiKP    23 54 18.1  +0.2
      comp=Z,1.8nm,0.6s,baz=102,slow=1.3,SNR=29
ARCES                               PKKPbc  PKKPbc   00 06 02.5  -3.0
      comp=Z,4.9nm,0.5s,baz=261,slow=2.4,SNR=41
ARCES ARCESS Array B    101.47 340  P       Pdif     23 49 53.8  -0.9
A36M  Sachs Harbour     101.74  18  Pdiff   Pdif     23 49 55.6  -0.2
      baz=283,SNR=6.5
AKASG Malin Array Be    101.75 320  P       Pdif     23 49 55.1  -1.1
      comp=Z,3.2nm,0.6s,baz=76,slow=4.1,SNR=14
AKASG                               PP      PP       23 54 09.0  +0.4
      comp=Z,6.2nm,0.9s,baz=79,slow=6.9,SNR=4.7
AKASG                               PKiKP   PKiKP    23 54 19.4  +0.5
      comp=Z,0.8nm,0.4s,baz=79,slow=2.2,SNR=5.2
AKBB  Malin Array Si    101.75 320⇓eP       Pdif     23 49 54.8  -1.5
AKBB                                pmax    pmax
      comp=Z,7.0nm,0.9s
MNK   Minsk             102.31 324 i P      Pdif     23 49 56.7  -2.0
MNK                                i                 23 54 13.6
MNK                                i PPP    PPP      23 56 22.0
MNK                                i S      SKSac    00 00 23.7  -1.5
MNK                                i *SS    SKKSac   00 01 25.0  +20
MNK                                i PS     PS       00 03 21.0  -1.0
MNK                                i SS     SS       00 08 40.1  +0.9
MNK                                i SSS    SSS      00 12 28.0
MNK                                 pmax    pmax
      comp=E,3.0nm,1.3s
MNK                                 pmax    pmax
      comp=N,17nm,1.3s
MNK                                 pmax    pmax
      comp=Z,25nm,1.1s
MNK                                 MLR     MLR
      comp=E,31nm,17.0s
MNK                                 MLR     MLR
      comp=Z,136nm,16.0s
MNK                                 MLR     MLR
      comp=N,218nm,21.0s
MNK   Minsk             102.31 324 i P      Pdif     23 49 56.7  -2.0
      comp=E,3.0nm,1.3s
MNK                                i P      Pdif     23 49 56.7  -2.0
      comp=N,17nm,1.3s
MNK                                i P      Pdif     23 49 56.7  -2.0
      comp=Z,25nm,1.1s,baz=85
MNK                                i pP     pPdif    23 50 30.2  -3.0
MNK                                i PP     PP       23 54 13.7  +1.0
MNK                                i PPP    PPP      23 56 22.1
MNK                                i S      SKSac    00 00 23.8  -1.4
MNK                                i sS     SKKSac   00 01 25.0  +20
MNK                                i PS     PS       00 03 21.0  -1.0
MNK                                i SS     SS       00 08 40.2  +0.9
MNK                                i SSS    SSS      00 12 28.0
MNK                                i LRM    MLR      00 37 28.4
      comp=E,31nm,17.2s
MNK                                i LRM    MLR      00 37 35.5
      comp=Z,136nm,16.0s
MNK                                i LRM    MLR      00 37 53.3
      comp=N,218nm,21.1s
SORM  Soroca            102.45 318 ⇑P       Pdif     23 49 58.5  -0.9
FINES FINESS Array B    102.50 331  P       Pdif     23 49 58.0  -1.3
      comp=N,2.2nm,0.5s,baz=51,slow=4.2,SNR=21
FINES                               PP      PP       23 54 13.3  -0.6
      comp=N,2.3nm,0.8s,baz=83,slow=7.9,SNR=4.1
FINES                               PKiKP   PKiKP    23 54 20.5  +0.5
      comp=N,5.9nm,0.6s,baz=109,slow=3.1,SNR=14
FINES                               PKKPbc  PKKPbc   00 06 01.0  -1.2
      comp=N,1.3nm,0.6s,baz=262,slow=0.3,SNR=6.0
FINES FINESS Array B    102.50 331 i P      Pdif     23 49 59.0  -0.4
FINES                               pmax    pmax
      comp=Z,2.0nm,0.5s
FINES FINESS Array B    102.50 331  Pdif    Pdif     23 49 58.2  -1.1
TPGR  Topolog           102.56 314 ⇓P       Pdif     23 49 59.4  -0.6
CFR   Carcaliu          102.74 315 ⇑P       PKKPbc   00 05 59.7  -1.1
TLBR  Topalu            102.83 314 ⇑P       PKKPbc   00 06 00.3  -0.3
NACGM Naroch            102.91 325 i P      Pdif     23 50 00.1  -1.2
VRI   Vrincioaia        103.69 315 ⇓P       Pdif     23 50 05.5  +0.4
VRI   Vrincioaia        103.69 315 ⇑P       PKKPbc   00 05 58.8  +0.7
TESR  Tescani           103.71 316 ⇓P       Pdif     23 50 05.2  +0.1
PLOR  Plostina          103.75 315 ⇓P       PKiKP    23 54 16.5  -6.3
COVR  Voineasa-Covas    104.06 315 ⇓P       PKiKP    23 54 29.3  +6.0
MLR   Muntele Rosu      104.27 315 ⇓P       PKiKP    23 54 22.4  -1.5
MLR   Muntele Rosu      104.27 315  PP      PP       23 54 28.1  +0.4
      comp=Z,30nm,1.0s,baz=131,slow=9.3,SNR=7.6
BUR01 Bucovina Ar. S    104.59 317 ⇑P       PKiKP    23 54 24.7  +0.4
BURAR Bucovina Array    104.59 317 ⇑P       Pdif     23 50 09.6  +0.4
BURAR Bucovina Array    104.59 317 ⇑P       PKKPbc   00 05 55.1  -0.5
VOIR                    104.90 315 ⇓P       Pdif     23 50 04.2  -6.4
VOIR                    104.90 315 ⇓P       PKKPbc   00 05 54.5  -0.1
ARR   Arges             105.20 315 ⇑P       PKKPbc   00 05 53.7   0.0
ARCR  ARCALIA           105.23 317 ⇑P       PKKPbc   00 05 53.4  -0.1
PLVB  Pleven            105.37 313 ⇑P       PKKPbc   00 05 53.0   0.0
VLAD  Vladila           105.48 314 ⇓P       PKKPbc   00 05 52.8  +0.2
IDI   Anoyia            105.64 305  Pdiff   Pdif     23 50 14.1   0.0
      comp=Z,4.4nm,0.6s,baz=81,slow=6.8,SNR=10.0
IDI                                 PKiKP   PKiKP    23 54 27.4  +0.8
      comp=Z,10nm,0.4s,baz=162,slow=6.8,SNR=5.8
IDI                                 PKKPbc  PKKPbc   00 05 53.7  +1.8
      comp=Z,6.5nm,0.6s,baz=324,slow=8.1,SNR=13
TRPA  Tarpa             106.33 318 ⇑P       PKKPbc   00 05 50.3  +0.1
DRGR                    106.38 317 ⇑P       PKiKP    23 54 27.4  -0.2
KOLS  Kolonicke sedl    106.40 319 e        PKiKP    23 54 29.2  +1.6
UZH   Uzhgorod          106.43 319 eP       Pdif     23 50 15.2  -1.9
VTS   Vitosha           106.45 312 ⇓P       PKiKP    23 54 27.7  -0.3
VTS   Vitosha           106.45 312 ⇑P       PKKPbc   00 05 50.0  +0.1
GZR   Gura Zlata        106.50 315 ⇑P       PKKPbc   00 05 49.7   0.0
HERR  Herculane         106.81 315 ⇑P       PKKPbc   00 05 49.4  +0.8
CRVS  Cervenica-Dubn    106.93 319 eP       Pdif     23 50 22.3  +2.9
CRVS                               e                 23 54 52.5
CRVS  Cervenica-Dubn    106.93 319 ePDIFF   Pdif     23 50 22.3  +2.9
CRVS                               e                 23 54 52.5
SIRR  Siria             107.17 316 ⇓P       Pdif     23 50 21.2  +0.6
SIRR  Siria             107.17 316 ⇓P       PKiKP    23 54 28.5  -0.6
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SIRR	Siria	107.17	316	⇑P	PKKPbc	00 05 47.8	+0.2
BZS	Buzias	107.28	315	⇑P	PKiKP	23 54 29.9	+0.6
BZS	Buzias	107.28	315	⇓P	PKKPbc	00 05 47.7	+0.5
BOVS	Bovan	107.46	313	⇑P	PKiKP	23 54 29.3	-0.4
BOVS	Bovan	107.46	313	⇓P	PKKPbc	00 05 46.2	-0.3
B05A	Bryant	107.99	42	PKiKP	PKiKP	23 54 32.1	+1.6
	baz=280						
RES	Resolute Bay	108.14	11	PKKPbc	PKKPbc	00 05 42.6	-2.7
	comp=Z,3.9nm,0.7s,baz=163,slow=3.6,SNR=7.3						
RES	Resolute Bay	108.14	11	P	Pdif	23 50 24.3	+0.1
RES	Resolute Bay	108.14	11	Pdif	Pdif	23 50 24.3	+0.1
YKA	Yellowknife Ar	108.45	26	PKiKP	PKiKP	23 54 31.1	+0.2
	comp=Z,1.3nm,0.4s,baz=288,slow=2.2,SNR=5.7						
YBH	Yreka Blue Hor	108.48	49	PKKPbc	PKKPbc	00 05 43.5	+0.1
	comp=Z,1.5nm,0.7s,baz=144,slow=3.9,SNR=4.2						
N02D	Trinity Center	108.57	49	PKiKP	PKiKP	23 54 33.6	+1.7
	baz=277						
O02D	Mt. Diablo Mer	108.60	50	PKiKP	PKiKP	23 54 33.5	+1.5
	baz=276						
FRGS	Fruska Gora	108.61	315	⇓P	PKiKP	23 54 32.4	+0.6
HFS	Hagfors	108.71	331	Pdiff	Pdif	23 50 25.9	-1.1
	comp=Z,1.5nm,0.5s,baz=82,slow=3.1,SNR=8.5						
HFS				PKiKP	PKiKP	23 54 31.2	-0.2
	comp=Z,3.7nm,0.6s,baz=116,slow=3.4,SNR=6.8						
HFS				PKKPbc	PKKPbc	00 05 41.4	-1.8
	comp=Z,2.8nm,0.8s,baz=194,slow=3.0,SNR=6.0						
VYHS	Vyhne	108.72	319	*e*	PKiKP	23 54 31.2	-0.7
L04D	Klamath Falls	108.72	48	PKiKP	PKiKP	23 54 33.2	+1.0
	baz=277						
J04D	Umpqua Nationa	108.73	47	PKiKP	PKiKP	23 54 33.7	+1.4
	baz=278						
MORC	Moravsky Berou	109.30	320	⇓P	PKiKP	23 54 33.9	+0.9
MORC	Moravsky Berou	109.30	320	*e*PKIKP	PKiKP	23 54 33.5	+0.5
MORC				*e*		23 55 08.3	
J05D	Fort Rock, OR	109.36	47	PKiKP	PKiKP	23 54 35.2	+1.7
	baz=278,SNR=6.4						
PDG	Podgorica	109.40	312	⇑P	PKKPbc	00 05 40.5	+0.1
JAVC	Velka Javorina	109.40	319	*e*PKIKP	PKiKP	23 54 34.8	+1.6
JAVC				*e*		23 55 08.7	
NB2	NORSAR Subarra	109.55	333	PKPdf	PKiKP	23 54 32.3	-0.8
	comp=Z,1.1nm,0.5s,baz=68,slow=1.9						
NOA	NORSAR Array B	109.55	333	Pdiff	Pdif	23 50 31.7	+0.9
	comp=Z,0.8nm,0.7s,baz=67,slow=4.7,SNR=2.7						
NOA				PKiKP	PKiKP	23 54 32.8	-0.3
	comp=Z,4.7nm,0.8s,baz=57,slow=2.2,SNR=15						
NOA				PKKPbc	PKKPbc	00 05 39.0	-1.5
	comp=Z,2.3nm,0.8s,baz=244,slow=3.8,SNR=6.8						
KRLC	Kraliky	109.72	321	*e*PKP	PKiKP	23 54 34.9	+1.1
MODS	Modra-Piesok	109.76	319	*e*	PKiKP	23 54 33.1	-0.8
NEEM	North Greenlan	109.86	0	*i* P	PKiKP	23 54 34.4	+0.7
NEEM				IAmb	IAmb	23 54 34.8	
	comp=Z,12nm,0.5s						
NEEM	North Greenlan	109.86	0	IAmb	IAmb	00 05 38.7	
	comp=Z,8.5nm,0.8s						
NEEM				*i* P	PKKPbc	00 05 37.2	-3.1
DPC	Dobruska-Polom	109.94	321	*e*PKP	PKiKP	23 54 35.4	+1.2
DPC				*e*PKKP	PKKPab	00 05 50.7	+2.0
OSTC	Ostas	109.96	321	*e*PKP	PKiKP	23 54 35.5	+1.3
VRAC	Vranov	110.00	320	PKiKP	PKiKP	23 54 34.6	+0.3
	comp=Z,4.3nm,0.7s,baz=62,slow=0.4,SNR=7.2						
VRAC				PP	PP	23 55 10.6	+1.3
	comp=Z,13nm,1.1s,baz=60,slow=8.7,SNR=4.5						
VRAC	Vranov	110.00	320	*e*PKIKP	PKiKP	23 54 34.8	+0.5
VRAC				*e*		23 55 14.1	
CHVC	Chvalec	110.06	321	*e*PKP	PKiKP	23 54 35.4	+1.0
TULEG	Thule	110.09	4	*i* P	PKiKP	23 54 33.3	-0.4
TULEG				IAmb	IAmb	23 54 35.4	
	comp=Z,7.9nm,0.9s						
UPC	Upice	110.10	321	*e*PKIKP	PKiKP	23 54 35.5	+1.1
UPC				*e*SP	PS	00 04 45.1	+3.9
UPC	Upice	110.10	321	*e*PKP	PKiKP	23 54 35.5	+1.1
UPC				*e*PS	PS	00 04 45.1	+3.9
KRUC	Moravsky	110.19	320	*e*PKIKP	PKiKP	23 54 35.2	+0.6
KRUC				*e*		23 55 15.1	
TREC	Trest	110.71	320	*e*PKIKP	PKiKP	23 54 36.5	+0.9
TREC				*e*SP	PS	00 04 46.7	-0.3
TREC	Trest	110.71	320	*e*PKP	PKiKP	23 54 36.5	+0.9
TREC				*e*PS	PS	00 04 46.7	-0.3
TREC				*e*PKKP	PKKPbc	00 05 36.2	-0.2
TREC				*e*x	x	00 05 47.0	
CONA	Conrad Observa	110.78	319	*e*P	PKiKP	23 54 36.1	+0.2
	comp=Z,1.8nm,0.5s						
CONA	Conrad Observa	110.78	319	*i* P	PKKPbc	00 05 35.9	-0.4
	comp=Z,2.8nm,0.6s,SNR=5.2						
PVCC	Panska Ves	110.99	321	*e*PKIKP	PKiKP	23 54 37.2	+1.1
PVCC	Panska Ves	110.99	321	*e*PKP	PKiKP	23 54 37.2	+1.1
PRU	Pruhonice	111.14	321	*e*PKIKP	PKiKP	23 54 37.1	+0.7
PRU	Pruhonice	111.14	321	*e*PKP	PKiKP	23 54 37.1	+0.7
PRU				*e*PS	PS	00 04 57.7	+6.9
PRU				*e*PKKP	PKKPab	00 05 44.7	+1.4
ARSA	Arzberg	111.15	318	*e*P	PKiKP	23 54 36.8	+0.3
	comp=Z,4.9nm,0.7s						
NEW	Newport	111.25	41	PKiKP	PKiKP	23 54 37.3	+0.6
	baz=283						
BRG	Berggiesshubel	111.29	322	*e*PKP	PKiKP	23 54 37.3	+0.6
BRG				Amp		23 54 38.2	
	comp=Z,7.7nm,0.7s						
BRG				pPKP	PP	23 55 12.3	-6.1
BRG				Amp		23 55 21.9	
	comp=Z,10nm,1.1s						
MATE	Matera	111.56	311	⇓P	PKiKP	23 54 37.7	+0.3
PERS	Pernice	111.56	317	*i* PKiKP	PKiKP	23 54 37.6	+0.2
CKRC	Cesky Krumlov	111.58	320	*e*PKP	PKiKP	23 54 38.0	+0.7
CKRC				*e*PS	PS	00 04 52.6	-2.3
CKRC				*e*PKKP	PKKPbc	00 05 33.5	0.0
CKRC				*e*x	x	00 05 42.9	
SOKA	Soboth	111.60	317	*e*P	PKiKP	23 54 37.7	+0.2
	comp=Z,3.2nm,0.6s						
SOKA	Soboth	111.60	317	*e*P	PKKPbc	00 05 33.0	-0.5
	comp=Z,4.4nm,1.1s						
BOJS	Bojanci	111.71	316	*i* PKiKP	PKiKP	23 54 38.2	+0.6
BOJS				*e*PP	PP	23 55 24.6	+3.0
CLL	Collm	111.74	323	*i* PKIKP	PKiKP	23 54 37.8	+0.3
CLL				pmax	pmax		
	comp=Z,11nm,0.9s						
CLL	Collm	111.74	323	*e*Pdif	Pdif	23 50 38.0	-2.7
CLL				*i* (pPdif)		23 51 20.5	
CLL				*i* PKiKP	PKiKP	23 54 37.8	+0.3
	comp=Z,11nm,0.9s						
CLL				*e*PP	PP	23 55 20.0	-1.6
CLL				*e*sPP		23 56 08.0	
CLL				*e*pPPPP		23 59 52.0	
CLL				*e*SP	SP	00 04 48.0	+8.6
CLL				*e*pPS		00 05 25.0	
CLL				*e*PPS	PPS	00 06 00.0	
CLL				*e*sPPS		00 06 42.0	
CLL				*e*pPPPrev		00 13 54.0	
CLL				*e*SSS	SSS	00 15 00.0	
TIP	Timpagrande	111.74	309	⇑P	PKiKP	23 54 36.7	-1.2
MOA	Molln	111.84	319	*e*P	PKiKP	23 54 37.9	+0.1
	comp=Z,2.8nm,0.5s						
MOA	Molln	111.84	319	*i* P	PKKPbc	00 05 32.2	-0.4
	comp=Z,3.9nm,0.7s,SNR=5.7						
GERES	GERESS Array B	111.96	320	PKiKP	PKiKP	23 54 38.4	+0.3
	comp=Z,12nm,0.5s,baz=66,slow=2.2,SNR=80						
GERES				PP	PP	23 55 25.0	+1.6
	comp=Z,7.1nm,1.1s,baz=79,slow=6.1,SNR=7.4						
GERES				SKP		23 58 01.1	
	comp=Z,1.0nm,0.6s,baz=58,slow=2.6,SNR=3.7						
GERES				PKKPbc	PKKPbc	00 05 32.1	-0.3
	comp=Z,0.8nm,0.7s,baz=219,slow=1.7,SNR=5.8						
OBKA	Obir	111.97	317	*e*P	PKKPbc	00 05 32.4	+0.1
	comp=Z,4.6nm,0.9s						
KHC	Kasperske Hory	111.97	320	*e*PKIKP	PKiKP	23 54 38.4	+0.3
KHC				*e*		23 55 26.0	
KHC				*e*SP	PS	00 04 57.0	-1.5
KHC	Kasperske Hory	111.97	320	*e*PKP	PKiKP	23 54 38.4	+0.3
KHC				*e*x	x	23 55 26.0	
KHC				*e*PS	PS	00 04 57.0	-1.5
KHC				*e*PKKP	PKKPbc	00 05 30.0	-2.3
KHC				*e*x	x	00 05 40.9	
LJU	Ljubljana	112.08	317	*i* PKiKP	PKiKP	23 54 39.0	+0.7
LJU				*e*PP	PP	23 55 27.6	+3.2
NVAR	Mina Array Bea	112.28	52	Pdiff	Pdif	23 50 46.9	+3.2
	comp=Z,0.7nm,0.7s,baz=260,slow=6.6,SNR=6.3						
NVAR				PKiKP	PKiKP	23 54 40.7	+1.5
	comp=Z,4.2nm,0.9s,baz=252,slow=2.2,SNR=17						
NVAR				PKKPbc	PKKPbc	00 05 30.7	-0.4
	comp=Z,2.6nm,0.7s,baz=111,slow=3.9,SNR=17						
NKC	Novy Kostel	112.38	322	*e*PKIKP	PKiKP	23 54 39.5	+0.7
NKC	Novy Kostel	112.38	322	*e*PKP	PKiKP	23 54 39.5	+0.7
MYKA	Terra Mystica	112.55	318	*e*P	PKiKP	23 54 39.3	0.0
	comp=Z,3.2nm,0.4s						
MYKA	Terra Mystica	112.55	318	*e*P	PKKPbc	00 05 30.3	-0.1
	comp=Z,5.7nm,0.6s						
KBA	Koelnbreinsper	112.64	318	*e*P	PKiKP	23 54 38.9	-0.7
	comp=Z,5.9nm,0.8s						
KBA	Koelnbreinsper	112.64	318	*e*P	PKKPbc	00 05 29.7	-0.4
	comp=Z,2.7nm,0.8s						
CWC	Cottonwood Cre	112.74	54	PKiKP	PKiKP	23 54 41.5	+1.4
	baz=278						
EDW2	Edwards Air Fo	113.01	55	PKiKP	PKiKP	23 54 42.1	+1.6
	baz=277,SNR=11						
LRMC	Laurel Mtn Rad	113.19	55	PKiKP	PKiKP	23 54 42.7	+1.8
	baz=278,SNR=7.2						
GRAC	Grapevine Rang	113.22	53	PKiKP	PKiKP	23 54 42.4	+1.6
	baz=279,SNR=5.3						
ABTA	Abfaltersbach	113.27	318	*i* P	PKiKP	23 54 40.6	-0.1
	comp=Z,15nm,0.7s,SNR=12						
MSO	Missoula	113.69	42	P	PKiKP	23 54 42.0	+0.5
	baz=285						
FURC	Furnace Creek,	113.70	53	P	PKiKP	23 54 43.6	+2.0
	baz=279						
WTTA	Wattenberg	113.71	319	*i* P	PKiKP	23 54 42.0	+0.4
	comp=Z,44nm,0.4s,SNR=33						
WTTA	Wattenberg	113.71	319	*e*P	PKKPbc	00 05 27.6	+1.1
	comp=Z,5.5nm,1.0s						
WATA	Walderalm	113.73	319	*i* P	PKiKP	23 54 41.7	0.0
	comp=Z,16nm,0.5s,SNR=14						
GSC	Goldstone, Bar	113.92	55	P	PKiKP	23 54 44.2	+1.9
	baz=278,SNR=7.7						
SQTA	Sankt Quirin	114.00	319	*i* P	PKiKP	23 54 42.4	+0.3
	comp=Z,7.1nm,0.5s,SNR=7.4						
SQTA	Sankt Quirin	114.00	319	*e*P	PKKPbc	00 05 24.9	-0.6
	comp=Z,14nm,1.2s						
MOTA	Moosalm	114.04	319	*i* P	PKiKP	23 54 42.4	+0.1
	comp=Z,19nm,0.4s,SNR=9.7						
MOTA	Moosalm	114.04	319	*e*P	PKKPbc	00 05 25.8	+0.4
	comp=Z,12nm,1.3s						
HLID	Hailey	114.18	45	P	PKiKP	23 54 44.5	+1.9
	baz=284,SNR=30						
ELK	Elko	114.20	49	PKKPbc	PKKPbc	00 05 24.8	0.0
	comp=Z,0.9nm,0.6s,baz=44,slow=2.8,SNR=4.1						
RETA	Reutte	114.22	319	*e*P	PKPdf	23 54 42.5	0.0
	comp=Z,6.5nm,0.5s						
RETA	Reutte	114.22	319	*e*P	PKKPbc	00 05 24.8	+0.1
	comp=Z,2.0nm,0.6s						
SUMG	Summit	114.31	356	*i* P	PKiKP	23 54 43.0	+0.7
SUMG				IAmb	IAmb	23 54 44.4	
	comp=Z,14nm,0.9s						
SUMG	Summit	114.31	356	IAmb	IAmb	00 05 24.4	
	comp=Z,6.3nm,1.0s						
SUMG				*i* P	PKKPbc	00 05 22.0	-3.6
HEC	Hector,Ludlow	114.37	55	P	PKiKP	23 54 45.0	+1.9
	baz=278						
FETA	Feichten	114.38	319	*i* P	PKiKP	23 54 43.2	+0.4
	comp=Z,7.3nm,0.5s,SNR=7.5						
FETA	Feichten	114.38	319	*e*P	PKKPbc	00 05 24.4	+0.2
	comp=Z,4.9nm,0.9s						
R11A	Troy Canyon, C	114.39	51	P	PKiKP	23 54 44.7	+1.4
	baz=280,SNR=7.8						
PFO	Pinyon Flats O	114.44	56	P	PKiKP	23 54 44.9	+1.5
	baz=278,SNR=7.3						
TPFO	Pinon Flats	114.44	56	P	PKiKP	23 54 44.9	+1.5
	baz=278,SNR=6.2						
MONP2	Monument Peak	114.57	57	P	PKiKP	23 54 45.3	+1.6
	baz=278						
TUQ	Turquoise Moun	114.61	54	P	PKiKP	23 54 45.4	+1.7
	baz=279						
BELC	Belle Mtn. Jos	114.77	56	P	PKiKP	23 54 46.0	+2.0
	baz=278,SNR=9.4						
DAVA	Damuels	114.85	319	*i* P	PKPdf	23 54 44.2	+0.4
	comp=Z,29nm,0.4s,SNR=16						
DAVA	Damuels	114.85	319	*e*P	PKKPbc	00 05 25.3	+2.7
	comp=Z,5.7nm,0.8s						
IKP	In-Ko-Pah, Jac	114.86	57	P	PKiKP	23 54 46.2	+2.1
	baz=278						
GMRC	Granite Mounta	114.93	55	P	PKPdf	23 54 46.4	+2.1
	baz=279,SNR=13						
DAVOX	Davos/Dischmat	115.00	318	PKP	PKPdf	23 54 44.5	+0.4
	comp=Z,21nm,0.6s,baz=356,slow=1.9,SNR=46						
DAVOX				PKKPbc	PKKPbc	00 05 22.6	+0.5
	comp=Z,3.8nm,0.5s,baz=218,slow=7.4,SNR=11						
SWSC	Sam W. Stewart	115.08	57	P	PKPdf	23 54 46.2	+1.7
	baz=278						
SPR3	Spring Creek 3	115.23	50		PKiKP	23 54 44.6	-0.4
BC3	Big Chuckawall	115.27	56	P	PKPdf	23 54 46.9	+2.0
	baz=278,SNR=7.5						
PRMA	PARMA	115.28	316		PKiKP	23 54 44.3	-0.1
VLC	Villacollemand	115.39	316		PKiKP	23 54 44.5	-0.3
LRW	Lerwick	115.40	335	*e*P	PKPdf	23 54 44.5	+0.4
IRM	Iron Mountain	115.44	56	P	PKiKP	23 54 47.3	+2.1
	baz=279,SNR=7.0						
BFO	Black Forest	115.52	320	PKIKP	PKiKP	23 54 44.3	-0.6
BFO	Black Forest	115.52	320		PKiKP	23 54 44.3	-0.6
BOZ	Bozeman (W)	115.57	43	PKIKP	PKPdf	23 54 45.7	+0.5
BOZ	Bozeman (W)	115.57	43	P	PKPdf	23 54 46.4	+1.1
	baz=287,SNR=7.1						
BOZ	Bozeman (W)	115.57	43		PKPdf	23 54 45.6	+0.5
PSUT	Pine Spring	115.69	51		PKiKP	23 54 46.1	+0.4
HVU	Hansel Valley	115.78	47	PKIKP	PKiKP	23 54 46.1	+0.4
HVU	Hansel Valley	115.78	47		PKiKP	23 54 46.1	+0.4
BGU	Big Grassy Mou	115.80	48		PKPdf	23 54 45.8	0.0
GLA	Glamis	115.87	57	P	PKiKP	23 54 47.9	+1.9
	baz=278						
QLMT	Earthquake Lak	115.92	43		PKiKP	23 54 46.4	+0.3
MSSA	Maissana	115.95	316		PKPdf	23 54 44.6	-1.2
EGMT	Eagleton	116.05	40	P	PKiKP	23 54 46.7	+0.8
	baz=289						
EGMT	Eagleton	116.05	40		PKiKP	23 54 46.0	0.0
BTNL	Ternell	116.08	323	*d*PKP	PKiKP	23 54 46.1	+0.3
DUG	Dugway, Tooele	116.12	49	PKIKP	PKiKP	23 54 47.0	+0.5
DUG	Dugway, Tooele	116.12	49	P	PKiKP	23 54 47.8	+1.3
	baz=283,SNR=17						
DUG	Dugway, Tooele	116.12	49		PKiKP	23 54 47.0	+0.5
MEM	Membach	116.15	323	*d*PKP	PKiKP	23 54 46.4	+0.4
CDF	Champ du Feu	116.16	321	*e*PKIKP	PKPdf	23 54 45.0	-1.2
CDF				pmax	pmax		
	comp=Z,6.0nm,0.7s						
PDMCI	Parker Dam,Lak	116.24	55	P	PKiKP	23 54 48.2	+1.6
	baz=280						
BHOU	Houvegnez	116.24	323	*d*PKP	PKiKP	23 54 46.9	+0.8
ECH	Echery	116.30	321	PKIKP	PKPdf	23 54 45.8	-0.6
ECH	Echery	116.30	321		PKPdf	23 54 45.8	-0.6
W13A	Hualapai Mount	116.31	54	PKPdf	PKPdf	23 54 47.0	-0.1
YHH	Holmes Hill	116.33	43		PKiKP	23 54 48.1	+1.2
USHA	Ushuaia	116.44	169	PKP	PKiKP	23 54 47.7	+1.3
	comp=Z,20nm,0.6s,baz=236,slow=1.6,SNR=12						
ECR	Eagle Creek	116.46	45		PKPdf	23 54 46.7	-0.4
LCMT	Little Creek M	116.47	52		PKiKP	23 54 47.9	+0.7
FXWY	Fox Creek	116.54	45		PKiKP	23 54 47.9	+0.6
HINF	Hinteralfeld	116.63	320	*e*PKIKP	PKPdf	23 54 46.0	-1.0
HINF				pmax	pmax		
	comp=Z,23nm,0.6s						
BCLA	Clavier	116.64	323	*d*PKP	PKiKP	23 54 47.4	+0.5
AHID	Auburn Hatcher	116.73	46		PKiKP	23 54 47.9	+0.3
BGES	Gesves	116.78	323	*d*PKP	PKiKP	23 54 47.4	+0.2
PGF	Pioggiola	116.79	314	*e*PKIKP	PKPdf	23 54 47.0	-0.6
PGF				pmax	pmax		
	comp=Z,19nm,0.6s						
SENIN	Lac Senin/Sane	116.82	319	PKPdf	PKPdf	23 54 47.4	-0.3
GCMT	Greycliff	116.83	42		PKiKP	23 54 47.9	+0.3
HAU	Haudompre	116.88	321	*e*PKIKP	PKPdf	23 54 46.7	-0.8
HAU				pmax	pmax		
	comp=Z,17nm,0.8s						
MSU	Marysvale	116.98	50	PKIKP	PKiKP	23 54 49.3	+1.0
MSU	Marysvale	116.98	50		PKiKP	23 54 49.3	+1.0
BMRD	Maredsous	117.00	323	*d*PKP	PKiKP	23 54 48.2	+0.6
GIVF	Givet	117.04	323	*e*PKIKP	PKPdf	23 54 47.5	-0.2
GIVF				pmax	pmax		
	comp=Z,15nm,0.8s						
DOU	Dourbes	117.18	323	*d*PKP	PKiKP	23 54 48.1	+0.1
SNF	Seneffe	117.20	324	*d*PKP	PKiKP	23 54 48.6	+0.7
VSL	Villasalto	117.29	311	PKPdf	PKPdf	23 54 48.4	-0.1
BAIF	Baives	117.42	323	*e*PKIKP	PKPdf	23 54 48.3	-0.1
BAIF				pmax	pmax		
	comp=Z,13nm,0.8s						
LPG	La Plagne	117.47	318	*e*PKIKP	PKPdf	23 54 48.6	-0.4
LPG				pmax	pmax		
	comp=Z,18nm,0.6s						
LPL	La Plagne	117.47	318	*e*PKIKP	PKPdf	23 54 48.5	-0.5
LPL				pmax	pmax		
	comp=Z,27nm,0.6s						
CABF	La Chapelle	117.53	319	*e*PKIKP	PKPdf	23 54 48.5	-0.4
CABF				pmax	pmax		
	comp=Z,43nm,0.5s						
BNI	Bardonecchia	117.66	317	PKIKP	PKiKP	23 54 49.6	+0.3
BNI	Bardonecchia	117.66	317	PKPdf	PKiKP	23 54 49.6	+0.3
MBDF	Montbardon	117.70	317	*e*PKIKP	PKPdf	23 54 48.3	-1.0
MBDF				pmax	pmax		
	comp=Z,13nm,0.7s						
FFC	Flin Flon	117.72	31	PKIKP	PKiKP	23 54 49.1	+0.2
FFC	Flin Flon	117.72	31		PKiKP	23 54 49.1	+0.2
214A	Organ Pipe Nat	117.72	58	P	PKiKP	23 54 51.0	+1.4
	baz=279						
ICESG	Greenland Ices	117.81	355	*i* P	PKPdf	23 54 48.6	-0.4
ICESG				IAmb	IAmb	23 54 50.2	
	comp=Z,11nm,0.5s						
ICESG	Greenland Ices	117.81	355	IAmb	IAmb	00 05 11.1	
	comp=Z,7.1nm,0.7s						
ICESG				*i* P	PKKPbc	00 05 09.3	-3.9
BW06	Boulder Array	117.82	45	P	PKiKP	23 54 50.4	+0.6
	baz=287						
PD31	Pinedale Array	117.82	45		PKPdf	23 54 49.8	0.0
PDAR	Pinedale Array	117.82	45	PKP	PKiKP	23 54 50.3	+0.5
	comp=Z,9.2nm,0.8s,baz=224,slow=1.2,SNR=49						
PDAR				SKP		23 58 12.6	
	comp=Z,1.9nm,1.1s,baz=329,slow=1.6,SNR=4.4						
PDAR				PKKPbc	PKKPbc	00 05 11.3	-0.9
	comp=Z,5.2nm,0.9s,baz=117,slow=5.3,SNR=14						
P17A	Butcher Ranch,	117.85	49		PKiKP	23 54 50.0	+0.1
FRF	La Foret Royal	118.15	316	*e*PKIKP	PKPdf	23 54 49.5	-0.5
FRF				pmax	pmax		
	comp=Z,28nm,0.9s						
KEST	Kesra	118.16	307	PKP	PKiKP	23 54 51.5	+1.0
	comp=Z,18nm,0.5s,baz=108,slow=1.2,SNR=71						
KEST				PKKPbc	PKKPab	00 05 11.8	-0.9
	comp=Z,4.2nm,0.8s,baz=194,slow=3.1,SNR=8.6						
KEST	Kesra	118.16	307	PKPdf	PKiKP	23 54 51.2	+0.8
LINV	Loch Inver, As	118.23	334	*e*P	PKiKP	23 54 50.1	+0.3
LINV				IAmb	IAmb	23 54 50.7	
	comp=Z,30nm,0.6s						
ORIF	Oris-en-Rattie	118.24	317	*e*PKIKP	PKPdf	23 54 49.6	-0.7
ORIF				pmax	pmax		
	comp=Z,19nm,0.6s						
WUAZ	Wupatki	118.25	54	P	PKiKP	23 54 52.4	+1.6
	baz=282,SNR=21						
WUAZ	Wupatki	118.25	54	PKPdf	PKiKP	23 54 51.5	+0.8
MDO	Dochfour	118.28	333	*e*P	PKPdf	23 54 49.8	-0.1
LMR	La Mourre	118.32	316	*e*PKIKP	PKPdf	23 54 49.8	-0.5
LMR				pmax	pmax		
	comp=Z,23nm,1.2s						
ESY	Stoneypath	118.33	331	*e*P	PKiKP	23 54 50.3	+0.3
ELMS	Elmsett, Ipswi	118.39	326	*e*P	PKiKP	23 54 50.4	+0.2
EDMD	Edmundbyers	118.59	330	*e*P	PKPdf	23 54 50.4	-0.1
KAC	Achnashellach	118.66	334	*e*P	PKiKP	23 54 50.6	0.0
INVG	Invergeldie, C	118.71	332	*e*P	PKiKP	23 54 51.1	+0.3
INVG				IAmb	IAmb	23 54 51.9	
	comp=Z,25nm,0.6s						
LAO	LASA Array	118.76	40	P	PKiKP	23 54 52.6	+1.4
	baz=292,SNR=19						
LAO	LASA Array	118.76	40	PKPdf	PKiKP	23 54 51.8	+0.5
EKA	Eskdalemuir Ar	118.90	331	PKP	PKiKP	23 54 51.4	+0.2
	comp=Z,7.0nm,0.5s,baz=36,slow=3.3,SNR=61						
KPL	Plockton	118.91	334	*e*P	PKiKP	23 54 51.3	+0.3
KPL				IAmb	IAmb	23 54 52.0	
	comp=Z,46nm,0.7s						
ESK	Eskdalemuir	118.93	331	*e*P	PKiKP	23 54 51.5	+0.2
SSB	Saint Sauveur	119.00	318	PKIKP	PKiKP	23 54 52.0	+0.3
SSB	Saint Sauveur	119.00	318	PKPdf	PKiKP	23 54 52.0	+0.3
VIVF	Saint-Julien-l	119.07	318	*e*PKIKP	PKPdf	23 54 51.2	-0.6
VIVF				pmax	pmax		
	comp=Z,16nm,0.7s						
AVF	Avril sur Loir	119.22	320	*e*PKIKP	PKPdf	23 54 51.2	-0.8
AVF				pmax	pmax		
	comp=Z,12nm,0.5s						
KESW	Keswick, Cumbr	119.28	330	*e*P	PKiKP	23 54 52.0	+0.1
CWF	Charnwood Fore	119.32	328	*e*P	PKPdf	23 54 52.0	0.0
DGMT	Dagmar	119.33	38	P	PKiKP	23 54 53.2	+0.9
	baz=294						
DGMT	Dagmar	119.33	38	PKPdf	PKiKP	23 54 52.4	+0.1
TUC	Tucson	119.36	57	P	PKiKP	23 54 54.3	+1.4
	baz=281						
CLF	Chambon-Foret	119.42	322		PKiKP	23 54 53.1	+0.8
LAWE	Loch Awe, Argy	119.43	333	*e*P	PKiKP	23 54 52.3	+0.2
O20A	White River Ci	119.52	48	P	PKiKP	23 54 54.5	+1.4
	baz=287,SNR=37						
O20A	White River Ci	119.52	48		PKiKP	23 54 53.9	+0.8
NEWG	New Galloway	119.53	331	*e*P	PKiKP	23 54 52.8	+0.4
W18A	Petrified Fore	119.65	54	P	PKiKP	23 54 55.1	+1.6
	baz=283,SNR=11						
GAL1	Galloway	119.91	331	*e*P	PKiKP	23 54 53.1	0.0
K22A	Casper	119.98	45	P	PKiKP	23 54 54.3	+0.4
	baz=289,SNR=13						
K22A	Casper	119.98	45		PKPdf	23 54 53.6	-0.2
MVCO	Mesa Verde	120.12	51	P	PKiKP	23 54 56.0	+1.6
	baz=285,SNR=23						
IOMK	Kirk Michael	120.17	331	*e*P	PKiKP	23 54 54.0	+0.3
SWN1	Swindon	120.19	327	*e*P	PKiKP	23 54 54.2	+0.5
SWN1				IAmb	IAmb	23 54 54.8	
	comp=Z,106nm,0.7s						
STRD	Stroud	120.26	327	*e*P	PKiKP	23 54 54.2	+0.3
STRD				IAmb	IAmb	23 54 54.3	
	comp=Z,70nm,0.9s						
HLM1	Long Mynd	120.26	328	*e*P	PKiKP	23 54 54.1	+0.2
SFJD	Kangerlussuaq	120.37	360	*i* P	PKPdf	23 54 52.9	-0.7
SFJD				IAmb	IAmb	23 54 54.1	
	comp=Z,9.9nm,0.4s						
SFJD	Kangerlussuaq	120.37	360		PKPdf	23 54 53.3	-0.3
CLGH	Cloghs, Cushen	120.44	332	*e*P	PKPdf	23 54 53.9	-0.1
WME	Myndd Eilian	120.52	330	*e*P	PKPdf	23 54 54.2	0.0
MCH1	Michaelchurch	120.59	328	*e*P	PKPdf	23 54 54.1	-0.3
MCH1				IAmb	IAmb	23 54 55.3	
	comp=Z,27nm,0.8s						
WLF1	Llynfaes	120.62	330	*e*P	PKiKP	23 54 54.9	+0.3
WLF1				IAmb	IAmb	23 54 55.5	
	comp=Z,57nm,0.6s						
CAF	Calviac	120.77	319	*e*PKIKP	PKPdf	23 54 55.1	0.0
CAF				pmax	pmax		
	comp=Z,27nm,0.9s						
DY2G	Dye2	120.80	358	*i* P	PKPdf	23 54 54.0	-0.7
DY2G				IAmb	IAmb	23 54 55.7	
	comp=Z,52nm,0.8s						
DY2G	Dye2	120.80	358	IAmb	IAmb	00 05 00.5	
	comp=Z,8.6nm,0.9s						
DY2G				*i* PKP	PKKPab	00 04 59.5	-1.2
N23A	Red Feather La	120.96	46	P	PKiKP	23 54 57.1	+1.1
	baz=289,SNR=6.7						
RJF	Les Rejaudoux	120.98	319	*e*PKIKP	PKPdf	23 54 55.1	-0.3
RJF				pmax	pmax		
	comp=Z,31nm,1.3s						
ANGG	Ammassalik, Gr	121.00	354	*i* P	PKPdf	23 54 53.6	-1.2
ANGG				IAmb	IAmb	23 54 55.0	
	comp=Z,18nm,0.5s						
GRR	Gorron	121.14	323	*e*PKIKP	PKiKP	23 54 56.2	+0.5
GRR				pmax	pmax		
	comp=Z,15nm,0.9s						
RSSD	Black Hills	121.15	42	PKIKP	PKiKP	23 54 56.2	0.0
RSSD	Black Hills	121.15	42	P	PKiKP	23 54 56.4	+0.2
	baz=292						
RSSD	Black Hills	121.15	42		PKiKP	23 54 56.2	0.0
S22A	4UR Ranch, Cre	121.26	50	P	PKiKP	23 54 58.6	+1.9
	baz=286,SNR=36						
ISCO	Idaho Springs	121.55	47	P	PKiKP	23 54 58.3	+1.0
	baz=289,SNR=7.6						
121A	Cookes Peak, D	121.80	56	P	PKiKP	23 54 59.4	+1.6
	baz=283,SNR=21						
DYA	Yadsworthy	121.90	327	*e*P	PKiKP	23 54 57.2	0.0
Q24A	Divide	122.16	48	P	PKiKP	23 54 59.5	+1.0
	baz=288,SNR=5.9						
SDCO	Great Sand Dun	122.27	50	P	PKiKP	23 55 00.2	+1.5
	baz=287,SNR=23						
E28A	Huff	122.29	38		PKiKP	23 54 58.3	+0.2
ANMO	Albuquerque	122.30	53	P	PKiKP	23 55 00.1	+1.3
	baz=285						
MDND	Maddock	122.36	37	P	PKiKP	23 54 58.5	+0.3
	baz=298						
MDND	Maddock	122.36	37	PKPdf	PKPdf	23 54 57.9	-0.1
QUIF	Quistinic	122.73	324	*e*PKIKP	PKPdf	23 54 58.1	-0.6
QUIF				pmax	pmax		
	comp=Z,31nm,0.9s						
ULM	Lac du Bonnet	123.24	33	PKP	PKPdf	23 54 59.3	-0.3
	comp=Z,23nm,0.6s,baz=316,slow=2.7,SNR=31						
ULM				PKKPab	PKKPab	00 04 49.9	-0.3
	comp=Z,8.9nm,0.8s,baz=134,slow=4.1,SNR=8.2						
ULM	Lac du Bonnet	123.24	33	PKPdf	PKPdf	23 54 59.2	-0.4
T25A	Trinidad	123.28	50	P	PKiKP	23 55 01.7	+1.1
	baz=288,SNR=19						
ETSF	Etsaut	123.31	317	*e*PKIKP	PKiKP	23 55 00.4	+0.1
ETSF				pmax	pmax		
	comp=Z,18nm,0.7s						
SJPF	Ste Jean	123.67	318	*e*PKIKP	PKiKP	23 55 01.0	+0.1
SJPF				pmax	pmax		
	comp=Z,18nm,0.8s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MNTX	Cornudas Mount	123.97	57	P	PKiKP	23 55 02.9	+1.1
	baz=284						
MNTX	Cornudas Mount	123.97	57	PKPdf	PKiKP	23 55 02.6	+0.7
COYC	Coyhaique	124.12	162		PKiKP	23 55 02.4	+0.6
AGMN	Agassiz Nation	124.30	35	P	PKPdf	23 55 01.6	-0.1
	baz=302,SNR=6.4						
CART	Cartagena	125.62	311		PKPdf	23 55 04.5	-0.1
GO07	Milladeo Hill,	125.80	160		PKiKP	23 55 05.7	+0.5
TXAR	Lajitas Array	125.96	59	PKhKP	PKPpre	23 54 54.6	
	comp=Z,0.2nm,0.5s,baz=288,slow=0.9,SNR=3.9						
TXAR				PKP	PKiKP	23 55 06.7	+0.7
	comp=Z,5.4nm,0.5s,baz=181,slow=2.1,SNR=51						
TXAR				SKPbc	SKPbc	23 58 10.6	
	comp=Z,2.8nm,1.0s,baz=285,slow=3.5,SNR=4.4						
TXAR				PKKPbc	PKKPbc	00 04 40.3	-0.5
	comp=Z,0.9nm,0.6s,baz=116,slow=5.0,SNR=10						
TXAR	Lajitas Array	125.96	59	PKPdf	PKiKP	23 55 06.3	+0.3
NRS	Narsarsuaq	126.06	357	PKIKP	PKiKP	23 55 05.3	+0.2
NRS	Narsarsuaq	126.06	357		PKiKP	23 55 05.3	+0.2
AMTX	Amarillo	126.08	52	P	PKiKP	23 55 07.3	+1.2
	baz=288						
IVI	Ivigtut	126.14	358		PKPdf	23 55 04.4	-0.4
ECSD	EROS Data Cent	126.16	40	P	PKiKP	23 55 05.8	-0.1
	baz=299,SNR=28						
ECSD	EROS Data Cent	126.16	40	PKPdf	PKiKP	23 55 05.7	-0.1
CBKS	Cedar Bluff	126.16	47	PKIKP	PKPdf	23 55 05.6	0.0
CBKS	Cedar Bluff	126.16	47	P	PKiKP	23 55 06.5	+0.4
	baz=293,SNR=5.6						
CBKS	Cedar Bluff	126.16	47	PKPdf	PKPdf	23 55 05.6	0.0
BGNE	Belgrade	126.21	43	P	PKiKP	23 55 06.4	+0.3
	baz=296						
BGNE	Belgrade	126.21	43		PKPdf	23 55 05.6	0.0
EYMN	Ely	126.92	33	P	PKiKP	23 55 07.2	0.0
	baz=306,SNR=8.6						
EYMN	Ely	126.92	33	PKPdf	PKPdf	23 55 06.5	-0.2
ESBB	Sonseca Array	126.96	315		PKPdf	23 55 06.9	-0.3
ESDC	Sonseca Array	126.97	315	PKP	PKPdf	23 55 06.8	-0.4
	comp=Z,13nm,1.0s,baz=20,slow=3.0,SNR=54						
ESDC				PP	PP	23 57 06.8	+0.3
	comp=Z,5.2nm,0.9s,baz=60,slow=7.6,SNR=9.3						
ESDC				SKKPbc	SKKPbc	00 08 24.8	+8.4
	comp=Z,1.9nm,1.2s,baz=257,slow=5.3,SNR=4.2						
ESDC	Sonseca Array	126.97	315	PKPdf	PKPdf	23 55 07.3	+0.2
PAB	San Pablo	127.29	315	PKIKP	PKiKP	23 55 08.2	-0.2
PAB	San Pablo	127.29	315		PKiKP	23 55 08.2	-0.2
PAB	San Pablo	127.29	315	P	PKiKP	23 55 09.3	+0.9
FIGM	Figuig	127.59	305	P	PKiKP	23 55 10.0	+0.7
TAF	Taforalt	127.66	309	P	PKiKP	23 55 11.0	+1.8
E38A	The Farm, Brul	127.67	34		PKPdf	23 55 08.3	+0.1
SPMN	Marine on St.	127.73	37	P	PKiKP	23 55 09.4	+0.4
	baz=304,SNR=11						
SPMN	Marine on St.	127.73	37	PKPdf	PKPdf	23 55 08.2	-0.1
TORD	Torodi Ar. Bea	127.84	281	PKhKP	PKPpre	23 54 44.6	
	comp=Z,0.2nm,0.5s,baz=98,slow=2.7,SNR=4.2						
TORD				PKP	PKPdf	23 55 09.6	+0.2
	comp=Z,50nm,1.0s,baz=87,slow=2.0,SNR=14						
TORD				SKPbc	SKPbc	23 58 14.7	
	comp=Z,8.7nm,0.9s,baz=96,slow=3.1,SNR=6.2						
TORD				PKKPbc	PKKPdf	00 04 36.6	-44
	comp=Z,0.9nm,0.9s,baz=258,slow=3.0,SNR=3.5						
TORD	Torodi Ar. Bea	127.84	281		PKPdf	23 55 09.4	0.0
PBRG	Braganca	127.90	319	*e*PKPdf	PKiKP	23 55 09.8	+0.3
TDRA	Tendrara	127.93	306	P	PKiKP	23 55 11.2	+1.2
JBK	JBK	127.94	308	P	PKiKP	23 55 11.0	+1.0
LL04	Puerto Octay	128.19	159		PKiKP	23 55 10.1	0.0
KSU1	Kansas State U	128.27	45	P	PKiKP	23 55 11.1	+0.8
	baz=296,SNR=9.5						
WMOK	Wichita Mounta	128.38	51	PKIKP	PKPdf	23 55 10.2	+0.2
WMOK	Wichita Mounta	128.38	51	P	PKiKP	23 55 11.4	+0.8
	baz=291,SNR=9.9						
WMOK	Wichita Mounta	128.38	51		PKPdf	23 55 10.2	+0.2
MVO	Moncorvo	128.40	318	*e*PKPdf	PKiKP	23 55 10.4	-0.1
MVO	Moncorvo	128.40	318	*e*PP	PP	23 57 19.4	+3.5
ABTX	Abilene, Hawle	128.40	54	P	PKiKP	23 55 11.8	+1.0
	baz=288						
ABTX	Abilene, Hawle	128.40	54	PKPdf	PKiKP	23 55 10.8	0.0
PALE	Palemas	128.69	310	P	PKiKP	23 55 12.0	+0.8
PCAB	Cabril	128.79	319	*e*PKPdf	PKiKP	23 55 11.3	+0.1
PCAB				*e*SKP		23 58 19.6	
PVRL	Vila Real	128.80	318	*e*PKPdf	PKiKP	23 55 12.3	+1.0
PVRL				*e*SKP		23 58 20.5	
POLO	Lamas de Olo	128.80	319	*e*PKPdf	PKiKP	23 55 11.8	+0.5
POLO				*e*SKP		23 58 20.4	
PGAV	Gavieira, Arco	128.82	319	*e*PKPdf	PKiKP	23 55 12.2	+0.8
PGAV				*e*SKP		23 58 20.3	
JCT	Junction City	128.91	57	PKIKP	PKiKP	23 55 11.6	-0.2
JCT	Junction City	128.91	57	P	PKiKP	23 55 12.2	+0.4
	baz=287						
JCT	Junction City	128.91	57	PKPdf	PKiKP	23 55 11.6	-0.2
PLCA	Paso Flores	128.97	161	PKP	PKiKP	23 55 12.2	+0.5
	comp=Z,47nm,0.9s,baz=210,slow=2.4,SNR=62						
PLCA				SKPbc	SKPbc	23 58 20.0	
	comp=Z,26nm,1.0s,baz=189,slow=5.5,SNR=13						
PLCA	Paso Flores	128.97	161	*e*P	PKPdf	23 55 11.2	+0.2
MTE	Manteigas	129.10	317	*e*PKPdf	PKiKP	23 55 12.5	+0.6
MTE				*e*SKP		23 58 21.0	
MTE	Manteigas	129.10	317	PKPdf	PKiKP	23 55 12.2	+0.3
PVIS	Viseu	129.19	318	*e*PKPdf	PKiKP	23 55 13.0	+0.9
PVIS	Viseu	129.19	318	*e*PP	PP	23 57 22.6	+1.6
PVIS				*e*SKP		23 58 21.0	
SCIA	State Center	129.24	40	P	PKiKP	23 55 12.4	+0.3
	baz=301						
SCIA	State Center	129.24	40		PKPdf	23 55 11.7	+0.3
COWI	Conover	129.32	34		PKPdf	23 55 11.7	+0.3
PCBR	Castelo Branco	129.32	317	*e*PKPdf	PKiKP	23 55 12.4	+0.1
PCBR				*e*SKP		23 58 21.5	
PMRV	Marv??o	129.45	316	*e*PKPdf	PKiKP	23 55 13.1	+0.5
PMRV				*e*SKP		23 58 21.9	
CHEFC	Chefchaouen	129.79	310	P	PKiKP	23 55 15.0	+1.5
833A	Chaparral WMA,	129.84	59	P	PKiKP	23 55 15.2	+1.5
	baz=285,SNR=8.7						
PESTR	Estremoz	129.85	316	*e*PKPdf	PKiKP	23 55 13.3	-0.2
PESTR				*e*SKP		23 58 23.4	
PESTR	Estremoz	129.85	316	PKPdf	PKiKP	23 55 13.2	-0.2
PESTR	Estremoz	129.85	316	P	PKiKP	23 55 14.7	+1.3
LCRM	LCR	129.95	308	P	PKiKP	23 55 15.0	+1.0
MDT	Midelt	130.06	307	PKP	PKiKP	23 55 14.6	+0.5
	comp=Z,12nm,0.4s,baz=86,slow=2.4,SNR=50						
MDT				SKPbc	SKPab	23 58 23.1	-0.2
	comp=Z,8.5nm,0.9s,baz=74,slow=4.5,SNR=12						
MDT	Midelt	130.06	307	P	PKiKP	23 55 15.2	+1.1
LC01	Cunco	130.16	159		PKiKP	23 55 13.8	-0.3
PMTG	Montargil	130.19	316	*e*PKPdf	PKiKP	23 55 14.2	+0.1
PMTG				*e*SKP		23 58 24.8	
TUL1	Leonard	130.20	48	P	PKiKP	23 55 14.8	+0.6
	baz=294,SNR=6.7						
RSA	Sarsar	130.24	310	P	PKiKP	23 55 15.0	+0.6
EVO	Evora	130.30	315	*e*PKPdf	PKiKP	23 55 14.6	+0.3
EVO				*e*SKP		23 58 25.5	
CZD	Col de Zad	130.32	308	P	PKiKP	23 55 17.0	+2.1
WHTX	Lake Whitney,	130.35	54	P	PKiKP	23 55 15.7	+1.1
	baz=290						
PBEJ	Beja	130.43	315	*e*PKPdf	PKiKP	23 55 14.7	+0.1
PBEJ				*e*SKP		23 58 25.4	
JFWS	Jewell Farm	130.55	38	PKIKP	PKPdf	23 55 14.2	+0.4
JFWS	Jewell Farm	130.55	38	P	PKiKP	23 55 14.6	-0.1
	baz=304						
JFWS	Jewell Farm	130.55	38	PKPdf	PKPdf	23 55 14.2	+0.4
PVAQ	Vaqueiros	130.60	314	*e*PKPdf	PKiKP	23 55 15.3	+0.4
PVAQ				*e*SKP		23 58 26.8	
PVAQ	Vaqueiros	130.60	314	PKPdf	PKiKP	23 55 15.7	+0.8
PVAQ	Vaqueiros	130.60	314	P	PKiKP	23 55 16.3	+1.4
435B	Jarrell	130.64	55	P	PKiKP	23 55 15.8	+0.6
	baz=288						
GOLM	Goulmima	130.70	306	P	PKiKP	23 55 17.0	+1.5
PCVE	Castro Verde	130.72	314	*e*PKPdf	PKiKP	23 55 15.5	+0.3
PCVE				*e*SKP		23 58 27.2	
MESJ	Messejana	130.76	315	*e*PKPdf	PKiKP	23 55 15.3	+0.1
MESJ	Messejana	130.76	315	*e*PKPdf	PKiKP	23 55 15.6	+0.4
MESJ				*e*SKP		23 58 27.4	
PBDV	Barranco-do-Ve	130.82	314	*e*PKPdf	PKiKP	23 55 15.4	0.0
PBDV	Barranco-do-Ve	130.82	314	*e*PP	PP	23 57 33.6	+1.9
PBDV				*e*SKP		23 58 28.1	
PNCL	Nicolau / Gran	130.85	315	*e*PKPdf	PKiKP	23 55 15.5	+0.1
PNCL				*e*SKP		23 58 28.0	
SCHQ	Schefferville	130.91	12	PKP	PKiKP	23 55 14.8	-0.3
	comp=Z,8.3nm,0.5s,baz=298,slow=2.8,SNR=24						
SCHQ				SKPbc	SKPab	23 58 26.0	-0.1
	comp=Z,48nm,0.8s,baz=360,slow=4.9,SNR=25						
MORF	Marmelete	131.31	314	*e*PKPdf	PKiKP	23 55 16.4	0.0
MORF	Marmelete	131.31	314	*e*PKPdf	PKiKP	23 55 16.3	-0.1
MORF				*e*SKP		23 58 29.6	
HHAR	Hobbs	131.40	47		PKPdf	23 55 15.7	+0.1
ZHG	ZHG	131.42	309	P	PKiKP	23 55 18.0	+1.2
TZRR	Tazzarine	131.51	305	P	PKiKP	23 55 17.3	+0.2
PFVI	Vila Bisbo	131.51	314	*e*PKPdf	PKiKP	23 55 16.8	0.0
PFVI				*e*SKP		23 58 30.4	
ZGR	Zagora	131.76	304	P	PKiKP	23 55 18.0	+0.3
W39A	Magazine	131.98	48	P	PKiKP	23 55 17.5	-0.3
	baz=295,SNR=11						
AVE	Averroes	132.07	309	P	PKiKP	23 55 19.6	+1.6
U40A	Yellville	132.16	47	P	PKiKP	23 55 17.7	-0.5
	baz=297,SNR=18						
MGMO	Mountain Grove	132.21	45	PKPdf	PKiKP	23 55 17.9	-0.3
MIAR	Mount Ida	132.41	49	P	PKiKP	23 55 19.4	+0.7
	baz=295,SNR=13						
OUZM	OUZ	132.43	306	P	PKiKP	23 55 20.0	+1.0
HDIL	Hopedale	132.46	40	P	PKiKP	23 55 18.9	+0.3
	baz=304						
CCM	Cathedral Cave	132.48	44	P	PKPdf	23 55 17.8	+0.2
	baz=300						
GLMI	Grayling	132.58	32	P	PKiKP	23 55 18.8	+0.1
	baz=312						
SRHM	Skhour des Reh	132.77	308	P	PKiKP	23 55 20.1	+0.6
X40A	Basin Creek Fa	132.99	49	P	PKiKP	23 55 20.3	+0.5
	baz=296						
W41B	Gary Mavity, V	133.12	48	P	PKiKP	23 55 20.3	+0.2
	baz=297						
OUK	Oukaimeden	133.21	306	P	PKiKP	23 55 22.0	+1.1
KOWA	Kowa	133.33	283	PKhKP	PKPpre	23 55 02.7	
	comp=Z,1.4nm,0.4s,baz=95,slow=3.3,SNR=11						
KOWA				PKP	PKPdf	23 55 20.2	+0.4
	comp=Z,12nm,0.3s,baz=88,slow=3.1,SNR=36						
KOWA				PP	PP	23 57 49.0	+0.1
	comp=Z,3.3nm,0.7s,baz=79,slow=10,SNR=4.6						
KOWA				SKPbc	SKPbc	23 58 34.7	-0.8
	comp=Z,32nm,1.1s,baz=66,slow=2.9,SNR=7.5						
KOWA	Kowa	133.33	283	P	PKiKP	23 55 21.6	+0.6
LCAR	Lake Charles	133.51	46		PKPdf	23 55 20.1	+0.5
Z41A	Richland Creek	133.53	50	P	PKiKP	23 55 21.9	+0.9
	baz=294						
Q44A	Meyer Farm, Va	133.54	41		PKiKP	23 55 20.4	-0.5
PBMO	Poplar Bluff	133.68	45		PKPdf	23 55 19.7	-0.1
TTIG	Tnine Tigouga,	133.91	306	P	PKiKP	23 55 23.0	+1.0
SFIN	Lafayette	133.94	39	P	PKiKP	23 55 21.8	+0.2
	baz=306						
SFIN	Lafayette	133.94	39		PKiKP	23 55 21.2	-0.4
KIC	Kosan Boka	134.03	272	*e*PKP1	PKiKP	23 55 22.6	+0.1
	comp=Z,74nm,0.9s						
DBIC	Dimbokro	134.16	272	PKhKP	PKPpre	23 55 08.3	
	comp=Z,6.7nm,0.6s,baz=144,slow=1.2,SNR=8.9						
DBIC				PKP	PKPdf	23 55 21.7	+0.3
	comp=Z,25nm,0.6s,baz=88,slow=2.0,SNR=22						
DBIC				SKPbc	SKPbc	23 58 37.5	-0.8
	comp=Z,30nm,0.8s,baz=115,slow=2.3,SNR=13						
DBIC	Dimbokro	134.16	272	PKIKP	PKPdf	23 55 21.8	+0.4
DBIC	Dimbokro	134.16	272		PKPdf	23 55 21.8	+0.4
OLIL	Olney	134.23	41		PKiKP	23 55 22.0	-0.2
LIC	Lamto	134.30	272	*e*PKP1	PKPdf	23 55 21.9	+0.2
	comp=Z,89nm,0.5s						
TIC	Toumodi	134.32	272	*e*PKP1	PKiKP	23 55 22.9	-0.2
BO01	Tunca	134.43	157		PKPdf	23 55 21.8	+0.4
L48A	N Adams	134.56	35		PKPdf	23 55 21.6	+0.2
MT01	Popeta	134.82	156		PKiKP	23 55 23.0	-0.7
MT09	Talagante	135.01	156		PKPdf	23 55 23.3	+0.5
MT02	Curacav	135.40	156		PKPdf	23 55 23.8	+0.5
WCI	Wyandotte Cave	135.69	41	PKIKP	PKiKP	23 55 24.5	-0.7
WCI	Wyandotte Cave	135.69	41	P	PKiKP	23 55 25.8	+0.6
	baz=305						
WCI	Wyandotte Cave	135.69	41		PKiKP	23 55 24.5	-0.7
Y45A	Yeager Farm, C	135.71	48	PKPdf	PKPdf	23 55 24.0	+0.3
VBMS	Vicksburg	135.71	51	P	PKiKP	23 55 26.5	+1.1
	baz=296						
WVT	Waverly	135.81	44	PKIKP	PKPdf	23 55 24.0	+0.1
WVT	Waverly	135.81	44	P	PKPdf	23 55 24.3	+0.4
	baz=302						
WVT	Waverly	135.81	44		PKPdf	23 55 24.0	+0.1
P49A	Miami Univ. Ec	135.91	38	P	PKiKP	23 55 25.7	+0.1
	baz=308,SNR=8.4						
N51A	Ashland	136.41	35		PKPdf	23 55 25.3	+0.4
ACSO	Alum Creek Sta	136.50	36	P	PKPdf	23 55 25.4	+0.3
	baz=310,SNR=6.9						
ACSO	Alum Creek Sta	136.50	36		PKPdf	23 55 25.0	0.0
ERPA	Erie	136.88	32	P	PKPdf	23 55 26.2	+0.4
	baz=316						
R50A	Paris	136.91	39		PKPdf	23 55 26.4	+0.5
M53A	WI Miller and	136.99	33	P	PKPdf	23 55 26.5	+0.6
	baz=314,SNR=5.2						
M53A	WI Miller and	136.99	33		PKPdf	23 55 26.4	+0.4
P52A	Corning	137.39	36	P	PKiKP	23 55 28.4	-0.2
	baz=311,SNR=7.5						
M54A	Oil Creek Stat	137.48	32	P	PKPdf	23 55 27.4	+0.5
	baz=316,SNR=7.5						
O53A	New Philadelph	137.51	35	P	PKPdf	23 55 27.7	+0.7
	baz=313						
LONY	Lake Ozonia	137.52	25	P	PKiKP	23 55 28.5	-0.3
	baz=324						
N54A	Moraine State	137.70	33	P	PKPdf	23 55 27.8	+0.5
	baz=315						
J57A	Williamstown	137.87	27	PKPdf	PKPdf	23 55 28.1	+0.6
ZON	Zonda	137.88	157	PKIKP	PKPdf	23 55 28.7	+0.7
ZON	Zonda	137.88	157		PKPdf	23 55 28.7	+0.7
L56A	Greenwood	138.10	30	PKPdf	PKiKP	23 55 29.2	-0.9
TZTN	Tazewell	138.44	41	P	PKPdf	23 55 29.5	+0.8
	baz=307						
BINY	Binghamton	138.81	28	P	PKPdf	23 55 29.9	+0.6
	baz=321						
BRAL	Brewton	138.82	50		PKPdf	23 55 30.3	+0.7
O56A	Blue Knob Stat	138.95	33	P	PKPdf	23 55 30.7	+1.1
	baz=316						
PMAR	Madeira	139.45	313	*e*PKPdf	PKiKP	23 55 35.1	+1.8
Y52A	Lilburn	139.63	44		PKPdf	23 55 30.9	-0.2
BLA	Blacksburg	139.99	38	PKIKP	PKPdf	23 55 31.5	-0.2
BLA	Blacksburg	139.99	38	P	PKPdf	23 55 32.4	+0.8
	baz=311						
BLA	Blacksburg	139.99	38		PKPdf	23 55 31.4	-0.2
MVL	Millersville	140.31	31	PKPdf	PKPdf	23 55 32.4	+0.4
KMSC	Kings Mountain	140.72	41		PKPdf	23 55 33.7	+0.8
553A	Crawfordville	141.27	50	PKPdf	PKPdf	23 55 34.9	+0.8
CPSB	Cacapava Do Su	142.47	177	*e*P	PKPdf	23 55 34.3	-2.0
ITQB	Itaqui	142.88	172	*e*P	PKPdf	23 55 34.0	-3.0
ITQB	Itaqui	142.88	172	PKPdf	PKPdf	23 55 34.9	-2.1
PB14	IPOC Station P	143.10	150	PKPdf	PKPbc	23 55 36.1	+1.0
CNLB	Canela	143.63	180	*e*P	PKPbc	23 55 36.9	+0.8
TGUH	Tegucigalpa,Un	143.80	76	*e*P	PKPab	23 55 35.3	-1.1
TGUH	Tegucigalpa,Un	143.80	76	PKPdf	PKPbc	23 55 37.7	+0.6
PB10	IPOC Station P	143.95	149	PKPdf	PKPdf	23 55 38.4	-0.6
CRIN	San Cristobal	144.16	78		PKPdf	23 55 39.2	-0.5
TER01	Tubaro-SC	144.36	183	*e*P	PKPab	23 55 37.8	-0.2
DWPF	Disney Wildern	144.58	50		PKPbc	23 55 39.4	+0.5
LVC	Limon Verde	145.53	150	PKPbc	PKPab	23 55 44.3	+1.4
	comp=Z,110nm,0.7s,baz=263,slow=2.0,SNR=86						
LVC				SKPbc	SKiKP	23 59 10.5	+0.6
	comp=Z,24nm,0.9s,baz=300,slow=2.9,SNR=4.6						
LVC	Limon Verde	145.53	150	*e*P	PKPdf	23 55 41.9	-0.3
CPUP	Villa Florida	146.05	170	PKPbc	PKPbc	23 55 43.7	+0.1
	comp=Z,166nm,0.9s,baz=191,slow=1.9,SNR=224						
CPUP				SKPbc	SKiKP	23 59 11.2	+0.9
	comp=Z,45nm,0.8s,baz=206,slow=1.5,SNR=11						
CPUP	Villa Florida	146.05	170	*e*P	PKPdf	23 55 42.4	-0.1
CPUP	Villa Florida	146.05	170		PKPbc	23 55 43.3	-0.2
PATCX	Punta Patache	146.36	146		PKPbc	23 55 45.3	+0.5
JTS	Las Juntas de	146.37	82	PKP2	PKPdf	23 55 43.9	+0.5
JTS	Las Juntas de	146.37	82	*e*P	PKPdf	23 55 43.8	+0.5
JTS	Las Juntas de	146.37	82		PKPdf	23 55 43.9	+0.5
PB01	IPOC Station P	146.53	148		PKPbc	23 55 45.3	0.0
TA01	Diego Aracena	146.55	146		PKPbc	23 55 45.2	0.0
TA02	Huaiquique	146.81	146		PKPdf	23 55 44.4	+0.4
PSGCX	Pisagua	147.35	145		PKPdf	23 55 46.0	+0.9
PB08	IPOC Station P	147.45	147		PKPdf	23 55 45.8	+0.3
RIMA	Rio Macho	147.46	83		PKPdf	23 55 45.9	+0.4
PB11	IPOC Station P	147.48	146		PKPdf	23 55 46.4	+1.1
TIJ01	Guaruva-PR	147.54	183	*e*P	PKPdf	23 55 45.5	+0.2
CVTR	Volcan Turrial	147.55	83		PKPbc	23 55 47.8	-1.0
PEZE	Perez Zeledon,	147.65	84		PKPdf	23 55 46.6	+0.9
RIOS	Rincon, Osa	147.82	85		PKPdf	23 55 46.9	+1.0
SRBA	San Rafael, Bu	147.97	84		PKPbc	23 55 48.2	-1.3
SRBA				PKPab	PKiKP	23 55 51.8	+0.5
NNA	Nana	148.00	127	PKPbc	PKiKP	23 55 50.9	-0.2
	comp=Z,148nm,0.8s,baz=255,slow=6.0,SNR=40						
NNA	Nana	148.00	127		PKPdf	23 55 47.7	+1.5
PB12	IPOC Station P	148.01	144		PKPdf	23 55 47.8	+1.6
AP01	Chacalluta	148.19	143		PKPbc	23 55 50.5	+0.8
PTGB	Pitanga	148.19	178	*e*P	PKPdf	23 55 46.6	+0.3
FSCY	Frank Sound, G	148.39	65		PKPbc	23 55 50.8	+0.6
PET01	Itanhaem-SP	148.41	187	*e*P	PKPdf	23 55 47.1	+0.5
BRU2	Volcan	148.63	85	*e*P	PKiKP	23 55 52.6	0.0
BRU2	Volcan	148.63	85		PKPdf	23 55 49.3	+1.9
PB16	IPOC Station P	148.71	145		PKPbc	23 55 49.9	-1.9
PARB	Paraibuna	149.12	190	*e*P	PKPdf	23 55 48.2	+0.4
ATAH	Atahualpa	149.20	117	PKP	PKPbc	23 55 51.1	-1.9
	comp=Z,71nm,0.9s,baz=270,slow=1.9,SNR=18						
ATAH				PKPbc	PKiKP	23 55 55.6	+1.5
	comp=Z,75nm,0.7s,baz=265,slow=0.8,SNR=11						
MAN01	Angra dos Reis	149.26	193	*e*P	PKPdf	23 55 48.6	+0.6
MAPC	Malpelo	149.42	94	*e*P	PKPbc	23 55 52.4	-0.6
FRTB	Fartura	149.54	183	*e*P	PKPdf	23 55 48.3	-0.1
PRVC	Isla de Provid	149.58	76	*e*P	PKiKP	23 55 54.3	0.0
DUB01	Friburgo-RJ	149.62	196	*e*P	PKPdf	23 55 48.9	+0.3
VAO	Valinhos	149.65	187	*e*P	PKPdf	23 55 49.4	+0.7
CAM01	Campos-RJ	149.65	197	*e*P	PKPdf	23 55 49.5	+0.9
VAS01	Vassouras-RJ	149.70	194	*e*P	PKPdf	23 55 49.1	+0.3
RCLB	Rio Claro- Sao	150.29	187	*e*P	PKPdf	23 55 50.0	+0.3
BSCB	Bom Sucesso	151.24	192	*e*P	PKPdf	23 55 51.8	+0.5
PCMB	Pacaembu	151.30	180	*e*P	PKPdf	23 55 51.8	+0.6
BCIP	Isla Barro Col	151.45	84	*e*P	PKPbc	23 55 55.7	-2.1
PAC1	Pacto, Paraso	151.47	103	*e*P	PKPbc	23 55 57.2	-0.9
RIB01	Linhares ES	151.57	202	*e*P	PKPdf	23 55 52.3	+0.6
BB19B	Bebedouro	151.73	185	*e*P	PKPdf	23 55 52.3	+0.4
OTAV	Otavalo	151.79	103	*e*P	PKPdf	23 55 50.5	-2.2
OTAV	Otavalo	151.79	103	*e*P	PKPdf	23 55 53.2	+0.4
CUSE	Cuicocha Este	151.86	103	*e*P	PKPbc	23 55 59.1	-0.3
MTDJ	Mount Denham	152.01	65		PKPbc	23 55 58.5	-0.6
AQDB	Aquidauana	152.05	171	*e*P	PKPdf	23 55 52.9	+0.6
BSFB	Barra de Sao F	152.18	201	*e*P	PKPdf	23 55 53.2	+0.6
SJMB	Sao Joao De Ma	152.42	201	*e*P	PKPdf	23 55 53.5	+0.6
TULM	Tulcn-Chalpat	152.56	103	*e*P	PKPdf	23 55 54.3	+0.4
NAN01	Guarapari, ES	152.81	203	*e*P	PKPdf	23 55 54.0	+0.5
GCUF	Volcan Galeras	153.11	102	*e*P	PKPdf	23 55 55.3	+0.6
ITRB	Iturama	153.19	181	*e*P	PKPdf	23 55 54.8	+0.8
PTAC	Punta Ardita,	153.45	89	*e*P	PKPbc	23 55 59.1	-3.2
GTBY	Guantanamo Bay	153.49	59		PKiKP	23 56 02.6	+0.3
DIAM	Diamantina, MG	153.57	196	*e*P	PKPdf	23 55 55.0	+0.2
PIZC	Pizarro, Choco	153.74	93	*e*P	PKPdf	23 55 54.3	-0.6
CZSB	Cruzeiro do Su	153.76	124	*e*P	PKPdf	23 55 56.0	+1.0
GUA01	Guaratinga, BA	153.82	205	*e*P	PKPdf	23 55 55.9	+0.9
SOTA	Rioblanco	154.03	100	*e*P	PKiKP	23 56 04.8	+0.6
YOTC	Yotoco, Valle	154.62	96	*e*P	PKPdf	23 55 55.3	-1.1
IPMB	Ipameri, GO	154.75	186	*e*P	PKPdf	23 55 56.5	+0.2
CMC01	Camacan, BA	154.78	207	*e*P	PKPdf	23 55 56.9	+0.5
PLMC	San Jos del P	154.80	94	*e*P	PKPdf	23 55 57.2	+0.6
MARP	Paez Belalcaza	154.81	99	*e*P	PKPdf	23 55 55.3	-1.6
SIV	San Ignacio	154.84	157	PKP	PKPdf	23 55 57.7	+1.2
	comp=Z,16nm,0.9s,baz=222,slow=1.4,SNR=40						
SIV				PKPbc	PKiKP	23 56 06.2	+1.0
	comp=Z,32nm,0.8s,baz=212,slow=2.5,SNR=32						
SIV				PKPab	PKPab	23 56 21.7	+1.0
	comp=Z,34nm,0.7s,baz=224,slow=3.8,SNR=15						
PP1B	Ponte de Pedra	155.00	171	*e*P	PKPdf	23 55 58.4	+1.8
DBBC	Dabeiba	155.03	89	*e*P	PKPdf	23 55 57.2	+0.3
NBIT	Itapeh - BA	155.12	208	*e*P	PKPdf	23 55 58.5	+1.7
CBOC	Ciudad Bolivar	155.16	92	*e*P	PKPdf	23 55 58.1	+0.9
MC01	Montes Claros	155.16	196	*e*P	PKPdf	23 55 57.6	+0.7
PTLC	Puerto Leguiza	155.29	106	*e*P	PKPdf	23 56 05.8	+8.6
MOTC	Monteria, Cord	155.58	85	*e*P	PKPdf	23 55 52.4	-5.1
ANIL	Santa Ana	155.62	95	*e*P	PKPdf	23 55 57.3	-0.7
HELC	Santa Helena	155.66	91	*e*P	PKPdf	23 55 57.2	-0.9
ORTC	Ortega, Tolima	155.69	97	*e*P	PKPdf	23 55 57.2	-0.5
UREC	San Jos de Ur	155.72	87	*e*P	PKPdf	23 55 57.2	-0.5
GUY2C	Guyana, Caldas	155.74	93	*e*P	PKPdf	23 55 58.1	-0.2
SJCC	San Jacinto, C	156.00	82	*e*P	PKPdf	23 55 58.1	0.0
PRAC	Prado	156.01	97	*e*P	PKPdf	23 55 57.2	-1.0
PTLB	Pontes e Lacer	156.04	160	*e*P	PKPdf	23 55 58.9	+0.9
GDU01	Guandu, BA	156.24	209	*e*P	PKPdf	23 55 59.1	+0.7
NORC	Norcasia	156.27	93	*e*P	PKPdf	23 55 57.2	-1.3
ZARC	Zaragoza, Cauc	156.38	88	*e*P	PKPdf	23 55 58.1	-0.4
SALV	Santo Antonio	156.52	169	*e*P	PKPdf	23 55 59.7	+1.0
MACC	Macarena, Meta	156.72	102	*e*P	PKPdf	23 55 58.1	-0.9
ROSC	El Rosal	156.73	95	PKP	PKPdf	23 56 00.3	+0.8
	comp=Z,27nm,0.7s,baz=13,slow=5.8,SNR=10						
ROSC	El Rosal	156.73	95	*e*P	PKPdf	23 55 59.1	-0.4
SMRC	Santa Marta, M	156.80	79	*e*P	PKPdf	23 56 01.0	+1.9
JANB	Januaria	156.83	197	*e*P	PKPdf	23 55 59.4	+0.2
BDFB	Brasilia	157.04	188	PKP	PKPdf	23 56 00.1	+0.6
	comp=Z,25nm,0.9s,baz=150,slow=1.7,SNR=30						
BDFB				PKPab	PKPab	23 56 30.4	+0.3
	comp=Z,11nm,0.8s,baz=89,slow=6.8,SNR=4.0						
SPBC	San Pablo de B	157.06	93	*e*P	PKPdf	23 55 59.1	-0.5
ARAG	Araguaiana, MT	157.16	178	*e*P	PKPdf	23 56 00.6	+1.1
VILC	Villavicencio,	157.25	97	*e*P	PKPdf	23 56 00.1	+0.2
ETMB	Extrema	157.28	138	*e*P	PKPdf	23 56 00.0	+0.3
CHIC	Chingaza	157.29	95	*e*P	PKPdf	23 55 58.9	-1.4
BRRC	Barranca, Sant	157.51	89	*e*P	PKPdf	23 55 58.1	-1.9
NBLA	Lagarto - SE	157.57	216	*e*P	PKPdf	23 56 00.9	+0.8
NBAN	Anadia - AL	157.65	221	*e*P	PKPdf	23 56 01.1	+0.9
OCAC	Ocana	157.91	86	*e*P	PKPdf	23 56 01.0	+0.3
VILB	Vilhena	157.94	156	*e*P	PKPdf	23 56 01.9	+1.4
TBTG	Tabatinga, AM	158.00	121	*e*P	PKPdf	23 56 01.8	+1.1
BARC	Barichara	158.01	90	*e*P	PKPdf	23 56 00.5	-0.4
RUSC	La Rusia	158.07	92	*e*P	PKPdf	23 56 01.0	-0.3
PAMC	Pamplona, Colo	158.52	88	*e*P	PKPdf	23 56 01.9	+0.1
PTGC	Puerto Gaitan,	158.80	97	*e*P	PKPdf	23 55 58.1	-3.5
URIC	Uribia, Colomb	158.88	76	*e*P	PKPdf	23 56 00.1	-1.6
NBPN	Ponto Novo - B	159.01	211	*e*P	PKPdf	23 56 02.6	+0.8
NBPV	Pedro Velho	159.22	230	*e*P	PKPdf	23 56 03.0	+0.9
SDBA	SAO DESIDERIO	159.52	197	*e*P	PKPdf	23 56 04.3	+1.9
NBLV	Livramento - P	159.76	224	*e*P	PKPdf	23 56 03.6	+0.9
PDRB	Porto dos Gac	160.41	163	*e*P	PKPdf	23 56 04.5	+1.0
SDV	Santo Domingo	160.54	84	*e*P	PKPdf	23 56 02.9	-0.9
SDV	Santo Domingo	160.54	84	*e*P	PKPdf	23 56 04.7	+1.0
PEXB	Peixe	160.56	188	*e*P	PKPdf	23 56 04.6	+1.0
SNDB	Serra Nova Dou	160.88	179	*e*P	PKPdf	23 56 05.0	+1.1
NBMA	Muriti-CE	160.99	220	*e*P	PKPdf	23 56 05.1	+1.0
NBPA	Parau_RN	161.01	227	*e*P	PKPdf	23 56 05.1	+1.0
CRPR	Cabo Rojo, PR	161.06	54	PKPdf	PKPdf	23 56 04.2	+0.3
CRPR					PKPab	23 56 48.0	+0.4
OBIP	Obispado Ponce	161.44	53		PKPdf	23 56 04.3	0.0
OBIP					PKPab	23 56 49.6	+0.3
ELOV	Elorza	161.70	90	*e*P	PKPdf	23 56 04.8	0.0
GCPR	Guaynabo City	161.70	52		PKPdf	23 56 04.3	-0.3
GCPR					PKPab	23 56 50.7	+0.3
SJG	San Juan	161.76	52	*e*P	PKPdf	23 56 04.8	+0.1
PDPR	Patillas Dam,	161.92	52		PKPdf	23 56 04.6	-0.2
PDPR					PKPab	23 56 51.8	+0.4
NBPB	Pedra_Branca-C	162.89	222	*e*P	PKPdf	23 56 07.3	+1.3
NBCL	Cascavel-CE	162.90	228	*e*P	PKPdf	23 56 07.2	+1.2
SMTB	Santa Maria do	163.61	192	*e*P	PKPdf	23 56 07.6	+0.9
NBMO	Morrinhos-CE	164.80	227	*e*P	PKPdf	23 56 09.2	+1.4
NBPS	Pedro II - PI	164.96	220	*e*P	PKPdf	23 56 08.2	+0.2
NPGB	Novo Progresso	165.14	163	*e*P	PKPdf	23 56 09.1	+1.1
MACA	Manacapuru-AM	165.86	137	*e*P	PKPdf	23 56 09.5	+0.9
PRPB	Parauapebas	166.59	185	*e*P	PKPdf	23 56 10.1	+0.8
ITTB	Itaituba	167.53	158	*e*P	PKPdf	23 56 10.6	+0.7
PTGA	Pitinga	168.07	131	PKP	PKPdf	23 56 10.7	+0.4
	comp=Z,12nm,0.7s,baz=244,slow=4.5,SNR=4.4						
PTGA				PKPab	PKPab	23 57 19.6	+1.0
	comp=Z,3.7nm,0.3s,baz=257,slow=5.0,SNR=5.2						
MDP	Montagnes des	177.32	144	PKPab	PKPab	23 58 00.1	+0.5
	comp=Z,17nm,0.9s,baz=189,slow=6.2,SNR=5.1						

DDA 11 23:48:02.0, 38°.39N × 39°.07E, h7^{km}±2^{km}, ML1.3, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELZG	Elazig	0.13	328	*i* P	Pg	23 48 04.9	+0.1
ELZG				*i* S	Sg	23 48 07.2	+0.5
ELZG				IAML		23 48 08.0	
	comp=E,109nm,0.5s						
ELZG				IAML		23 48 08.0	
	comp=N,88nm,0.4s						
TNCL	Tunceli-Merkez	0.81	27	*i* P	Pn	23 48 19.7	-0.3
TNCL				*i* S	Sg	23 48 28.6	+0.4
TNCL				IAML		23 48 31.0	
	comp=N,10nm,1.1s						
AKCD	Akcadag	0.91	264	*i* P	Pg	23 48 18.6	-0.8
AKCD				IAML		23 48 32.0	
	comp=E,5.5nm,0.3s						
AKCD				*i* S	Sb	23 48 32.1	-0.4
AKCD				IAML		23 48 33.0	
	comp=N,9.0nm,0.5s						

ISK ***11*** *23:49:40.3, 37°.24N×22°.13E, h6^{km}, ML3.6/31*

NEIC ***11*** *23:49:41.8±2.5, 37°.09N±0°.06×21°.99E±0°.07, h12^{km}±5^{km}, Error ellipse: s-maj=9.8km s-min=6.5km az=211.0*

ATH ***11*** *23:49:41.9, 37°.13N×22°.04E, h13^{km}±2^{km}, ML3.7/7, Error ellipse: s-maj=2.6km s-min=1.2km az=231.0*

THE ***11*** *23:49:41.5, 37°.14N×22°.07E, h0^{km}±3^{km}, ML3.8/8, Error ellipse: s-maj=3.2km s-min=0.8km az=221.0*
PDG ***11*** *23:49:41.5±0.5, 37°.16N×22°.05E, h18^{km}, ML3.6/13, Error ellipse: s-maj=0.8km s-min=0.9km az=0.0*
IDC ***11*** *23:49:44.6±1.4, 37°.22N×22°.08E, h46^{km}±19^{km}, mb3.7/9, mb1 3.8/14, mb1mx3.5/68, mbtmp3.8/14, ML3.4/5, Error ellipse: s-maj=20.3km s-min=11.9km az=35.0*
ISC 11 23:49:41.7±0.7**, 37°.17N**±0°.02×**22°.05E**±0°.03**, h15**^{km}±4^{km}**, n193, σ1^s.30**/230**, mb4.2**/12**, 7C-7D, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ITM	Ithomi	0.10	278	P	Pg	23 49 44.6	-0.3
ITM				S	Sg	23 49 46.7	-0.4
	194μm,0.3s						
ITM	Ithomi	0.10	278	P	Pg	23 49 44.8	-0.2
ITM				S	Sg	23 49 46.9	-0.2
ITM	Ithomi	0.10	278	PG	Pg	23 49 44.7	-0.2
ITM				SG	Sg	23 49 46.9	-0.2
ITM	Ithomi	0.10	278		Pg	23 49 44.7	-0.3
ITM					Sg	23 49 46.9	-0.2
PYL	PYLOS	0.37	223	P	Pg	23 49 48.3	-0.9
PYL				S	Sg	23 49 53.6	-0.7
GUR	Goura	0.80	17	P	Pg	23 49 56.3	-1.0
GUR				S	Sn	23 50 10.3	-0.1
	5μm,0.3s						
GUR	Goura	0.80	17	P	Pg	23 49 56.6	-0.7
GUR				S	Sn	23 50 10.3	-0.1
GUR				AML	AML	23 50 22.4	
	comp=N,12826μm,0.4s						
GUR				AML	AML	23 50 22.9	
	comp=E,10556μm,0.7s						
DRO	Drossia	0.83	341	P	Pg	23 49 57.5	-0.3
DRO				S	Sn	23 50 11.0	0.0
	comp=E,9μm,0.4s						
DRO	Drossia	0.83	341	P	Pb	23 49 58.1	+0.3
DRO				S	Sn	23 50 11.0	0.0
DRO				AML	AML	23 50 14.1	
	comp=E,15876μm,0.4s						
DRO				AML	AML	23 50 14.9	
	comp=N,20656μm,0.4s						
VLI	Veliai	0.84	122	P	Pg	23 49 57.0	-0.9
VLI				S	Sb	23 50 09.8	+0.7
	comp=N,9μm,0.4s						
VLI	Veliai	0.84	122	P	Pg	23 49 57.2	-0.7
VLI				S	Sn	23 50 10.3	-0.7
VLI				AML	AML	23 50 13.1	
	comp=E,23649μm,0.4s						
VLI				AML	AML	23 50 13.8	
	comp=N,13752μm,0.4s						
KLV	Kalavryta, Ach	0.88	5	P	Pb	23 49 57.6	-1.1
KLV				S	Sn	23 50 12.0	-0.2
KLV	Kalavryta, Ach	0.88	5	P	Pb	23 49 58.0	-0.8
KLV				S	Sn	23 50 12.3	+0.1
KLV				AML	AML	23 50 14.4	
	comp=E,5123μm,0.6s						
KLV				AML	AML	23 50 16.4	
	comp=N,3314μm,0.3s						
KRND	KRANIDI	0.90	76	P	Pb	23 49 58.7	-0.4
KRND				S	Sn	23 50 12.1	-0.6
	comp=N,5μm,0.4s						
KRND	KRANIDI	0.90	76	P	Pb	23 49 58.9	-0.1
KRND				S	Sn	23 50 12.1	-0.6
KRND				AML	AML	23 50 14.5	
	comp=N,12636μm,0.4s						
KRND				AML	AML	23 50 16.1	
	comp=E,8707μm,0.4s						
EPID	Epidavros	0.96	62	P	Pb	23 49 59.9	-0.2
EPID	Epidavros	0.96	62	P	Pb	23 49 59.9	-0.2
RLS	Riolos of Patr	1.00	333	P	Pb	23 50 00.3	-0.5
RLS				S	Sn	23 50 15.9	+0.7
	comp=E,4μm,0.5s						
RLS	Riolos of Patr	1.00	333	P	Pb	23 50 00.6	-0.2
RLS				S	Sn	23 50 15.9	+0.7
RLS				AML	AML	23 50 20.9	
	comp=N,8876μm,0.5s						
RLS				AML	AML	23 50 21.7	
	comp=E,6278μm,0.5s						
VTN	Vitineika	1.02	318	P	Pn	23 50 01.8	+0.3
VTN	Vitineika	1.02	318	P	Pn	23 50 02.2	+0.7
LAKA	Lakka	1.07	357	P	Pb	23 50 01.1	-0.9
LAKA				S	Sn	23 50 17.8	+0.8
	comp=E,8μm,0.6s						
LAKA	Lakka	1.07	357	P	Pb	23 50 01.7	-0.3
LAKA				S	Sn	23 50 17.8	+0.8
LTHK	Lithakia	1.11	300	P	Pb	23 50 01.4	-1.2
LTHK	Lithakia	1.11	300	P	Pb	23 50 01.8	-0.8
LTK	Loutraki	1.12	40	P	Pb	23 50 02.4	-0.4
LTK	Loutraki	1.12	40	P	Pb	23 50 02.6	-0.3
KTHA	Kythira Island	1.22	138	P	Pn	23 50 03.5	-0.7
KTHA				S	Sn	23 50 20.6	+0.2
	comp=E,3μm,0.7s						
KTHA	Kythira Island	1.22	138	P	Pn	23 50 03.8	-0.4
KTHA				S	Sn	23 50 20.7	+0.2
KTHA				AML	AML	23 50 27.7	
	comp=E,6165μm,0.3s						
KTHA				AML	AML	23 50 28.6	
	comp=N,4276μm,0.5s						
EFP	Efpalio	1.26	355	P	Pb	23 50 05.2	-0.1
EFP	Efpalio	1.26	355	P	Pb	23 50 05.2	-0.1
PVO	Paravola	1.51	344	P	Pg	23 50 10.4	-0.3
PVO	Paravola	1.51	344	P	Pg	23 50 10.4	-0.3
ATHU	Athens Univers	1.59	59	P	Pn	23 50 09.6	+0.2
ANKY	Antikythira Is	1.64	142	P	Pb	23 50 11.2	-0.5
DION	Dionisos Attik	1.75	58	P	Pn	23 50 12.1	+0.5
AGG	Agios Georgios	1.87	7	P	Pb	23 50 15.3	-0.2
AGG	Agios Georgios	1.87	7	PN	Pb	23 50 14.9	-0.6
AGG	Agios Georgios	1.87	7		Pb	23 50 15.1	-0.4
IMMV	Iera Moni Meta	2.31	137	PN	Pn	23 50 20.5	+1.3
KNDR	Palaiochora Ch	2.34	145	PN	Pn	23 50 20.3	+0.7
GVD	Gavdhos	2.85	144	PN	Pn	23 50 28.1	+1.4
IDI	Anoyia	2.96	128	P	Pn	23 50 29.1	+0.8
	comp=N,5.5nm,0.3s,baz=302,slow=16,SNR=35						
IDI				S	Sn	23 51 04.7	+1.0
	comp=N,11nm,0.3s,baz=360,slow=19,SNR=4.9						
HRKL	Herakleio	3.08	126	PN	Pn	23 50 31.1	+1.2
CHOS	Chios island	3.40	68	P	Pn	23 50 35.0	+0.7
CHOS	Chios island	3.40	68	PN	Pn	23 50 34.2	-0.1
OUR	Ouranopolis	3.50	25	PN	Pn	23 50 35.9	+0.3
HORT	Hortiatis	3.52	13	PN	Pn	23 50 36.2	+0.2
KBN	Korca	3.59	344		Pn	23 50 39.2	+2.3
SIGR	SIGRI	3.63	55	PN	Pn	23 50 37.5	+0.2
FNA	Florina	3.65	352	PN	Pn	23 50 38.9	+1.2
FNA	Florina	3.65	352		Pn	23 50 39.9	+2.1
URLA	Izmir	3.79	70	PN	Pn	23 50 40.3	+0.6
GRG	Griva	3.79	4	PN	Pn	23 50 40.0	+0.3
VLO	Vlora	3.85	330	P	Pn	23 50 41.6	+1.1
VLO	Vlora	3.85	330	Pn	Pn	23 50 41.6	+1.1
ZKR	Zakros	3.94	120	PN	Pn	23 50 42.8	+1.1
KOSK	Kos Island	3.97	95	PN	Pn	23 50 42.9	+0.9
KNT	Kendrikon	4.04	9	PN	Pn	23 50 43.5	+0.4
OHR	Ohrid	4.06	346	*e*Pn	Pb	23 50 50.6	-2.3
BOZC	Bozcaada	4.12	48	PN	Pn	23 50 44.2	+0.1
BLCB	Balcova	4.14	71	PN	Pn	23 50 45.1	+0.8
NIS1	Nisyros Isl.	4.15	96	PN	Pn	23 50 45.5	+1.0
GCAM	G?zelcaml?	4.16	81	PN	Pn	23 50 45.1	+0.5
VAY	Valandovo	4.17	5	*i* Pn	Pn	23 50 47.5	+2.7
BODT	Bodrum	4.20	90	PN	Pn	23 50 46.0	+0.7
GADA	Gvkgeada	4.26	44	PN	Pn	23 50 46.3	+0.2
DKL	Dikili	4.27	62	PN	Pn	23 50 46.7	+0.5
EZN	Ezine	4.28	50	PN	Pn	23 50 46.6	+0.3
DAT	Datca	4.45	94	PN	Pn	23 50 49.5	+0.8
STIP	Stip	4.52	1	*i* Pn	Pn	23 50 52.6	+3.0
MLSB	Milas	4.57	87	PN	Pn	23 50 51.5	+1.2
TIP	Timpagrande	4.63	297	⇓P	Pn	23 50 52.8	+1.6
TIP	Timpagrande	4.63	297		Pn	23 50 51.6	+0.4
AYDB	Zeytinkoy-Aydi	4.70	79	PN	Pn	23 50 52.9	+0.6
GELI	Tayfur-Gelibol	4.73	46	PN	Pn	23 50 52.9	+0.4
ENEZ	Enez	4.79	41	PN	Pn	23 50 53.6	+0.3
RDO	Rodhopi	4.81	33	PN	Pn	23 50 53.9	+0.3
SKO	Skopje	4.82	355	*i* Pn	Pn	23 50 55.2	+1.5
ALN	Alexandroupoli	4.85	39	PN	Pn	23 50 54.4	+0.2
ALN	Alexandroupoli	4.85	39		Pn	23 50 54.6	+0.5
LPK	Lapseki	4.88	48	PN	Pn	23 50 55.3	+0.8
ERIK	Erikli-Kesan	4.93	43	PN	Pn	23 50 55.5	+0.2
ARG	Arkhangelos	4.97	99	PN	Pn	23 50 57.2	+1.4
TURN	Turunc	4.97	93	PN	Pn	23 50 57.3	+1.5
YER	Yerkesik	4.98	88	PN	Pn	23 50 56.7	+0.7
CEL	Celeste	5.00	284		Pn	23 50 55.9	-0.5
BALB	Balikesir	5.20	60	PN	Pn	23 50 59.4	+0.4
BALB	Balikesir	5.20	60	Pn	Pn	23 50 59.8	+0.9
KRBG	Karabiga-Canak	5.21	50	PN	Pn	23 50 59.8	+0.7
ULC	Ulcinj	5.26	337	⇑*i*Pn	Pn	23 51 00.0	+0.2
ULC				*i* Sn	Sn	23 51 59.3	-0.9
DALY	Dalyan (Mula)	5.30	92	PN	Pn	23 51 01.9	+1.6
RKY	Sarkoy-Tekirda	5.32	47	PN	Pn	23 51 01.4	+0.7
UKOP	Uzunkopru-Edir	5.32	41	PN	Pn	23 51 01.5	+0.9
PLD	Plovdiv	5.34	22	PN	Pn	23 51 01.5	+0.6
DRME	Dracevica, Mon	5.48	337	*e*Pn	Pn	23 51 03.1	+0.3
DRME	Dracevica, Mon	5.48	337	⇑*i*Pn	Pn	23 51 03.2	+0.4
DRME				*i* Sn	Sn	23 52 04.6	-1.0
VTS	Vitosha	5.52	9	⇓P	Pn	23 51 06.4	+2.8
VTS	Vitosha	5.52	9		Pn	23 51 05.0	+1.5
PVY	Plav	5.66	344	⇑*i*Pn	Pn	23 51 06.9	+1.6
PVY				*i* Sn	Sn	23 52 08.9	-1.2
BUM	Brajici-Budva	5.68	336	⇑*i*Pn	Pn	23 51 05.7	+0.1
BUM				*i* Sn	Sn	23 52 09.3	-1.2
PDG	Podgorica	5.68	339	*e*Pn	Pn	23 51 05.9	+0.3
PDG	Podgorica	5.68	339		Pn	23 51 06.5	+1.0
TTG	Podgorica	5.68	339	⇑*i*Pn	Pn	23 51 06.7	+1.1
TTG				*i* Sn	Sn	23 52 09.6	-0.9
CEME	Cevo	5.89	337	⇓*i*Pn	Pn	23 51 08.4	-0.1
CEME				*i* Sn	Sn	23 52 14.5	-1.3
IVA	Berane	5.94	344	⇓*i*Pn	Pn	23 51 10.4	+1.3
IVA				*i* Sn	Sn	23 52 15.5	-1.4
HCY	Herceg Novi	5.94	334	*e*Pn	Pn	23 51 07.7	-1.5
HCY	Herceg Novi	5.94	334	⇓*i*Pn	Pn	23 51 08.9	-0.3
HCY				*i* Sn	Sn	23 52 15.7	-1.3
KOME	Kolasin	6.00	342	⇑*i*Pn	Pn	23 51 11.3	+1.2
KOME				*i* Sn	Sn	23 52 17.1	-1.5
NKME	Niksic	6.08	338	⇓*i*Pn	Pn	23 51 11.5	+0.4
NKME				*i* Sn	Sn	23 52 19.0	-1.4
VAE	Valguarnera	6.10	275	P	Pn	23 51 12.8	+1.5
	comp=N,1.4nm,0.3s,baz=183,slow=3.3,SNR=11						
VAE				S	Sn	23 52 21.6	+0.7
	comp=N,2.7nm,0.3s,baz=55,slow=8.8,SNR=1.8						
NKY	Niksic	6.11	338	⇓*i*Pn	Pn	23 51 12.9	+1.3
NKY				*i* Sn	Sn	23 52 19.8	-1.4
RAFF	Raffo Rosso	6.14	273		Pn	23 51 10.6	-1.3
TREB	Trebinje	6.23	334	*e*Pn	Pn	23 51 11.4	-1.7
DBRK	Dubrovnik	6.26	333	*e*Pn	Pn	23 51 13.0	-0.6
ELL	Elmali	6.30	91		Pn	23 51 16.2	+1.9
BRY	Bratogost	6.33	336	*e*Pn	Pn	23 51 13.4	-1.2
BRY	Bratogost	6.33	336	*e*Pn	Pn	23 51 14.6	0.0
BRY				*i* Sn	Sn	23 52 25.0	-1.7
UPM	Unac-Piva	6.49	339	*e*Pn	Pn	23 51 18.2	+1.3
UPM	Unac-Piva	6.49	339	⇑*i*Pn	Pn	23 51 18.2	+1.3
UPM				*i* Sn	Sn	23 52 28.9	-1.9
STON	Ston	6.60	331	*e*Pn	Pn	23 51 16.6	-1.6
STON	Ston	6.60	331	*e*Pn	Pn	23 51 16.5	-1.7
STON				Sn	Sn	23 52 28.4	-4.8
SGRT	San Giovanni R	6.69	315		Pn	23 51 18.9	-0.6
RUDO	Rudo	6.76	343	*e*Pn	Pn	23 51 18.8	-1.6
PAOL	Paolisi	6.98	306		Pn	23 51 24.6	+1.1
BBLS	Lazići	6.99	344	*e*Pn	Pn	23 51 23.2	-0.4
CORL	Corleone	6.99	279		Pn	23 51 24.3	+0.7
CLTB	Caltabellotta	7.05	276		Pn	23 51 25.6	+1.2
DIVS	Divibare	7.10	348	*e*Pn	Pn	23 51 24.8	-0.3
DIVS	Divibare	7.10	348	Pn	Pn	23 51 24.6	-0.5
MAKA	Makarska	7.22	329	*e*Pn	Pn	23 51 25.1	-1.6
RICI	Ricice	7.35	331	*e*Pn	Pn	23 51 27.3	-1.2
RICI				Sn	Sn	23 52 49.3	-2.4
HVAR	Hvar	7.38	326	*e*Pn	Pn	23 51 27.5	-1.4
KIJV	Kijevo	8.07	330	*e*Pn	Pn	23 51 37.5	-0.8
ZIRJ	Zirje	8.12	325	*e*Pn	Pn	23 51 37.3	-1.7
FRGS	Fruska Gora	8.16	349	*e*Pn	Pn	23 51 37.3	-2.3
MGRS	Mrkonjic Grad	8.16	334	*e*Pn	Pn	23 51 39.5	-0.2
MORI	Morici	8.25	326	*e*Pn	Pn	23 51 40.0	-0.8
BLY	Banja Luka	8.42	336	*e*Pn	Pn	23 51 44.2	+1.0
DUGI	Dugi Otok	8.65	324	*e*Pn	Pn	23 51 45.4	-0.8
TIRR	Tirgusor	8.73	32	Pn	Pn	23 51 48.7	+1.3
MRAK	Mrakovica	8.75	335	*e*Pn	Pn	23 51 46.5	-1.2
UDBI	Udbina	8.76	329	*e*Pn	Pn	23 51 48.2	+0.3
MLR	Muntele Rosu	8.82	18	Pn	Pn	23 51 50.9	+2.2
NRCA	Norcia	8.89	312		Pn	23 51 50.9	+1.2
NVLJ	Novalja	9.17	326	*e*Pn	Pn	23 51 53.2	-0.2
RABC	Rab	9.36	326	*e*Pn	Pn	23 51 55.4	-0.6
CSS	Mathiatis	9.39	100	Pn	Pn	23 51 58.1	+1.5
MORH	Mrgy, Hungar	9.39	345	*e*Pn	Pn	23 51 52.7	-3.8
BRTR	Keskin Array B	9.44	71	P	Pn	23 52 01.1	+3.8
	comp=N,0.5nm,0.3s,baz=260,slow=12,SNR=4.3						
BRTR	Keskin Array B	9.44	71	Pn	Pn	23 51 59.0	+1.7
MURB	Monte Urbino	9.49	313	Pn	Pn	23 51 59.1	+1.1
ZAG	Zagreb	9.77	334	*e*Pn	Pn	23 52 13.5	+12
RIY	Rijeka	9.94	327	*e*Pn	Pn	23 52 02.9	-1.1
CRES	Cresnjev	9.96	332	*e*Pn	Pn	23 52 02.7	-1.6
VSL	Villasalto	10.23	287	Pn	Pn	23 52 07.2	-0.8
CEY	Cerknica	10.30	329	*e*Pn	Pn	23 52 07.3	-1.6
KEST	Kesra	10.34	266	P	Pn	23 52 10.0	+0.5
	comp=N,0.2nm,0.3s,baz=41,slow=11,SNR=4.9						
KEST	Kesra	10.34	266	Pn	Pn	23 52 09.3	-0.2
SOKA	Soboth	10.84	333	*e*Pn	Pn	23 52 16.2	-0.2
	comp=N,0.4nm,0.2s						
OBKA	Obir	10.88	331	*e*Pn	Pn	23 52 17.1	+0.2
	comp=N,0.3nm,0.2s						
ZOU	Zoufplan	11.56	327	Pn	Pn	23 52 24.6	-1.8
MMAI	Mount Meron Ar	11.69	107	P	Pn	23 52 25.4	-2.7
	comp=N,0.8nm,0.3s,baz=305,slow=11,SNR=7.2						
MMAI				S	Sn	23 54 34.8	-3.6
	comp=N,1.0nm,0.3s,baz=301,slow=20,SNR=2.1						
CTI	Castel Tesino	11.80	322	Pn	Pn	23 52 28.2	-1.2
GHAJ	Ghor Haditha	12.61	114	Pn	Pn	23 52 40.0	-0.5
EIL	Elat	13.11	121	P	Pn	23 52 47.1	-0.3
	comp=N,0.3nm,0.3s,baz=252,slow=7.4,SNR=2.6						
EIL				S	Sn	23 55 03.8	-9.1
	comp=N,0.2nm,0.3s,baz=33,slow=22,SNR=1.5						
GERES	GERESS Array B	13.16	335	P	Pn	23 52 49.3	+1.2
	comp=N,0.1nm,0.3s,baz=160,slow=12,SNR=2.0						
CLL	Collm	15.54	338	*e*PP	P	23 53 30.0	+5.6
NACGM	Naroch	18.03	9	*i* P	P	23 54 04.8	+13
PABE	Paberze	18.39	3	P	P	23 53 55.1	-0.8
PABE				IAmb	IAmb	23 54 20.5	
	comp=Z,38nm,1.4s						
ESDC	Sonseca Array	20.52	285	P	P	23 54 18.8	-0.6
	comp=Z,0.7nm,0.7s,baz=76,slow=9.3,SNR=5.4						
PAB	San Pablo	20.82	285	P	P	23 54 23.7	+1.0
LBWR	Ladybower, Pea	23.14	322	*e*P	P	23 54 52.0	+4.7
LBWR				IAmb	IAmb	23 54 55.1	
	comp=Z,30nm,0.9s						
HPK	Haverah Park	23.42	323	*e*P	P	23 54 51.5	+1.4
BELG	Belogornoye	23.52	42	P	P	23 54 50.9	-0.1
	comp=Z,4.3nm,0.6s,baz=190,slow=17,SNR=4.4						
HFS	Hagfors	23.60	350	P	P	23 54 50.3	-1.5
	comp=Z,2.7nm,0.3s,baz=159,slow=12,SNR=23						
FOEL	Foel Wylfa	23.61	320	*e*P	P	23 54 54.4	+2.5
LLW	Llanuwychllyn	23.82	319	*e*P	P	23 54 54.5	+0.5
RSBS	Rosebush, Pemb	23.96	317	*e*P	P	23 54 56.1	+0.8
NOA	NORSAR Array B	24.86	347	P	P	23 55 02.1	-1.4
	comp=Z,1.4nm,0.5s,baz=156,slow=8.8,SNR=8.2						
NC204	NORSAR Array S	25.16	347	P	P	23 55 04.9	-1.3
ARCES	ARCESS Array B	32.48	2	P	P	23 56 09.8	-1.4
	comp=Z,1.2nm,0.6s,baz=186,slow=10,SNR=13						
CHGR	Chuyangaron	36.88	73	P	P	23 56 51.3	+1.6
CHGR				IAmb	IAmb	23 57 00.9	
	comp=Z,7.7nm,1.0s						
KURBB	Kurchatov Arra	41.86	53	P	P	23 57 29.2	-1.9
	comp=Z,1.5nm,0.7s,baz=281,slow=8.7,SNR=4.5						
MK31	Makanchi Array	44.80	58	P	P	23 57 54.7	-0.2
MKAR	Makanchi Array	44.80	58	P	P	23 57 52.5	-2.4
	comp=Z,0.5nm,0.5s,baz=282,slow=6.2,SNR=6.4						
MKAR	Makanchi Array	44.80	58	P	P	23 57 54.1	-0.8
ZAA0	Zalesovo Array	45.47	47	P	P	23 58 00.3	+0.2
ZAA0				IAmb	IAmb	23 58 16.5	
	comp=Z,5.4nm,1.4s						
ZALV	Zalesovo Beam	45.47	47	P	P	23 57 58.0	-2.0
	comp=Z,0.6nm,0.3s,baz=272,slow=7.4,SNR=2.7						
ZALV	Zalesovo Beam	45.47	47	P	P	23 58 00.1	+0.1
NRIK	Noril'sk	47.16	26	P	P	23 58 15.0	+1.9
NRIK				IAmb	IAmb	23 58 31.1	
	comp=Z,6.0nm,1.1s						
BOSA	Boshof	65.50	177	P	P	00 00 23.8	-0.7
	comp=Z,1.5nm,0.6s,baz=3.3,slow=9.4,SNR=6.5						
BOSA	Boshof	65.50	177	P	P	00 00 23.6	-0.8

JMA ***11*** *23:51:16.2, 39°.19N×141°.83E, h54^{km}±1^{km}, M3.4*
JMA Felt I J1.
IDC ***11*** *23:51:19.3±3.0, 39°.12N×141°.74E, h83^{km}±26^{km}, mb3.5/5, mb1 3.5/7, mb1mx3.2/63, mbtmp3.7/7, Error ellipse: s-maj=43.1km s-min=20.0km az=79.0*
ISC 11 23:51:16.5±1.0**, 39°.19N**±0°.04×**141°.82E**±0°.07**, h48**^{km}±7^{km}**, n26, σ1^s.48**/33**, mb3.8**/5**, 6C-4D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.16	226	⇓P	Pn	23 51 24.9	+0.5
OFUJ				S	Sn	23 51 30.9	+0.9
MIYJ	Miyakonagasawa	0.38	0	⇓P	Pn	23 51 26.5	+0.2
MIYJ				S	Sn	23 51 33.8	+0.4
JKMT	Kesennumamotoy	0.47	215	⇑P	Pn	23 51 27.3	+0.1
JKMT				S	Sn	23 51 35.1	+0.2
JOM	Ohasama	0.50	305	⇓P	Pn	23 51 27.8	+0.2
JOM				S	Sn	23 51 36.1	+0.5
JMK	Ichinoseki	0.53	243	⇑P	Pn	23 51 28.1	+0.2
JMK				S	Sn	23 51 36.5	+0.4
JTH	Tanohata	0.75	3	⇓P	Pn	23 51 30.7	-0.1
JTH				S	Sn	23 51 41.2	0.0
JIO	Ouri	0.82	207	⇑P	Pn	23 51 31.5	-0.3
JIO				S	Sn	23 51 42.3	-0.6
JRG	Rokugo	0.94	283	⇑P	Pn	23 51 33.3	-0.1
JRG				S	Sn	23 51 46.2	+0.4
JYK	Kaneyama	1.17	257	⇑P	Pn	23 51 36.6	+0.1
JYK				S	Sn	23 51 52.0	+0.7
JANG	Nango	1.20	349	P	Pn	23 51 36.4	-0.5
JANG				*e*S	Sn	23 51 50.7	-1.4
JOU	Okura	1.22	228	⇑P	Pn	23 51 37.0	-0.2
JOU				S	Sn	23 51 52.6	0.0
JAH	Hinai	1.35	318	P	Pn	23 51 39.2	+0.3
MAT	Matsushiro	3.89	228	P	Pn	23 52 16.0	+2.2
MAT				S	Sn	23 53 03.2	+4.9
MJAR	Matsushiro Arr	3.89	228	P	Pn	23 52 15.6	+1.8
	0.3nm,0.3s,baz=31,slow=11,SNR=17						
ASAJ	Asahikawa	4.96	6	P	Pn	23 52 32.0	+3.7
	1.1nm,0.3s,baz=227,slow=19,SNR=1.9						
ASAJ				S	Sn	23 53 26.7	+2.4
	1.2nm,0.3s,baz=85,slow=27,SNR=2.3						
H11N2	WAKE ISLAND Hy	29.04	125	T	T	00 27 36.9	
	baz=317,slow=75,SNR=39						
H11N1	WAKE ISLAND Hy	29.05	125	T	T	00 27 38.3	
	baz=317,slow=75,SNR=42						
H11N3	WAKE ISLAND Hy	29.06	125	T	T	00 27 38.9	
	baz=317,slow=75,SNR=43						
H11S1	WAKE ISLAND Hy	29.82	127	T	T	00 28 32.4	
	baz=318,slow=76,SNR=19						
H11S3	WAKE ISLAND Hy	29.83	127	T	T	00 28 35.1	
	baz=318,slow=76,SNR=30						
H11S2	WAKE ISLAND Hy	29.84	127	T	T	00 28 36.2	
	baz=318,slow=76,SNR=13						
ZALV	Zalesovo Beam	40.73	311	P	P	23 58 51.8	-0.4
	0.6nm,0.4s,baz=99,slow=8.9,SNR=2.3						
MKAR	Makanchi Array	43.28	300	P	P	23 59 12.3	-0.9
	0.6nm,0.7s,baz=86,slow=7.4,SNR=1.3						
KURBB	Kurchatov Arra	44.95	306	P	P	23 59 25.6	-0.9
	0.6nm,0.4s,baz=83,slow=8.8,SNR=4.8						
WRA	Warramunga Arr	59.24	188	P	P	00 01 11.1	-1.8
	0.9nm,0.5s,baz=4.7,slow=7.3,SNR=10.0						
ASAR	Alice Springs	62.97	188	P	P	00 01 37.0	-1.1
	0.6nm,0.7s,baz=17,slow=6.8,SNR=5.0						

MAN ***12*** *00:04:26.1, 6°.64N×125°.78E, h1^{km}, mb4.4, ML3.3, MS3.1*
IDC 12 00:04:00.5±2.4**, 5°.70N×126°.71E, h0**^{km}**, mb3.5**/3**, mb1 3.7**/3**, mb1mx3.4**/32**, mbtmp3.5**/3**, 1C, Error ellipse: s-maj=173.1km s-min=29.8km az=66.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCP	Kidapawan	2.07	309	⇑*e*P	Pg	00 04 41.1	+0.8
WRA	Warramunga Arr	26.56	164	P	P	00 09 40.9	+0.5
	1.2nm,0.7s,baz=344,slow=10,SNR=7.3						
ASAR	Alice Springs	30.02	167	P	P	00 10 10.7	-0.6
	0.1nm,0.3s,baz=353,slow=7.4,SNR=2.3						
MKAR	Makanchi Array	55.95	325	P	P	00 13 40.5	-0.1
	0.2nm,0.4s,baz=121,slow=7.9,SNR=1.9						

GRAL ***12*** *00:04:13.1±0.3, 34°.90N×36°.48E, h4^{km}±3^{km}, MD2.9*
DDA ***12*** *00:04:16.2, 35°.21N×36°.55E, h1^{km}±4^{km}, ML2.4*
ISC 12 00:04:13.7±1.3**, 34°.94N**±0°.04×**36°.28E**±0°.09**, h20**^{km}±6^{km}**, n11, σ0^s.85**/19**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWQ	Hawqa	0.71	203	*e*P	Pb	00 04 26.9	-0.7
HWQ				*e*S	Sb	00 04 37.1	0.0
BHL	Bhannes	1.16	207	*e*P	Pn	00 04 34.5	-0.3
DQRL	Deir Qamar	1.36	206	*e*P	Pn	00 04 37.8	+0.1
DQRL				*e*S	Sb	00 04 56.3	+0.6
ASUZ	Hatay-Arsuz	1.41	343	*i* P	Pn	00 04 36.9	-1.3
ASUZ				*i* S	Sb	00 04 58.2	+1.4
RCY	Rachaya	1.49	195	*e*P	Pn	00 04 39.3	-0.1
SHBL	Chebaa	1.65	196	*e*P	Pn	00 04 42.1	+0.5
KUZU	Kuzuini	1.94	19	*i* P	Pn	00 04 45.5	-0.1
KUZU				*i* S	Sn	00 05 10.6	+1.2
KUZU				IAML		00 05 11.0	
	comp=E,50nm,0.4s						
KUZU				IAML		00 05 13.0	
	comp=N,41nm,0.3s						
KAMA	Osmaniye	2.26	8	*i* P	Pb	00 04 53.9	-0.1
KAMA				*i* S	Sb	00 05 21.3	-0.2
HCB	Kahramanmara	2.45	12	*i* P	Pb	00 04 57.6	+0.5
HCB				*i* S	Sn	00 05 22.2	+0.2
HCB				IAML		00 05 25.0	
	comp=N,26nm,1.0s						
GZT	Gaziantep	2.62	23	*i* P	Pn	00 04 54.6	-0.4
GZT				*i* S	Sn	00 05 25.7	-0.7
SURC	SANLIURFA_SURC	2.71	44	*i* P	Pn	00 04 57.1	+1.0
SURC				*i* S	Sb	00 05 32.7	-1.6

DDA ***12*** *00:06:07.7, 35°.86N×29°.59E, h17^{km}±1^{km}, ML3.0*
NIC ***12*** *00:06:08.6±0.0, 36°.21N×29°.71E, h0^{km}±1^{km}, Ml3.0/3*
ISK ***12*** *00:06:09.2, 36°.11N×29°.67E, h2^{km}, ML3.2/32*
ISC 12 00:06:09.5±1.3**, 36°.07N**±0°.04×**29°.69E**±0°.02**, h1**^{km}±10^{km}**, n76, σ1^s.42**/103**, 1D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSL	Kastellorizon	0.12	313	⇓*i*P	Pg	00 06 11.6	-0.3
KSL				AML	AML	00 06 13.3	
	96nm,0.3s						
KSL				AML	AML	00 06 13.3	
	96nm,0.3s						
KSL				S	Sg	00 06 13.5	+0.1
KSL				AML	AML	00 06 13.6	
	100nm,0.7s						
KSL				AML	AML	00 06 13.6	
	100nm,0.7s						
AKAS	Kas	0.18	337	*i* P	Pg	00 06 12.9	-0.2
AKAS				*i* S	Sg	00 06 14.9	-0.5
AKAS	Kas	0.18	337	PG	Pg	00 06 12.8	-0.2
AKAS				SG	Sg	00 06 15.1	-0.3
DEMR	Demre-Antalya	0.24	46	PG	Pg	00 06 14.6	+0.5
DEMR				SG	Sg	00 06 18.8	+1.5
AKUM	Antalya-Kumluc	0.58	64	*i* P	Pg	00 06 21.8	+1.1
AKUM				*i* S	Sn	00 06 33.7	-1.3
AKUM				IAML		00 06 38.0	
	comp=E,415nm,0.4s						
ELL	Elmali	0.70	14	PG	Pg	00 06 22.1	-0.9
FETY	Fethiye	0.75	319	*i* P	Pb	00 06 24.9	-0.4
FETY				*i* S	Sb	00 06 36.1	+0.1
FETY				IAML		00 06 37.0	
	comp=E,479nm,0.4s						
FETY	Fethiye	0.75	319	PG	Pg	00 06 23.6	-0.3
KEMT	Kemer-ANTALYA	0.88	52	PG	Pg	00 06 26.7	+0.3
CAME	Cameli-Denizli	0.93	340	PG	Pg	00 06 26.9	-0.4
KORT	Korkueli	1.07	29	*i* P	Pg	00 06 29.6	-0.5
KORT				*i* S	Sn	00 06 50.5	+3.2
KORT				IAML		00 06 55.0	
	comp=E,308nm,0.5s						
KORT				IAML		00 06 55.0	
	comp=N,327nm,0.6s						
KORT	Korkueli	1.07	29	PG	Pg	00 06 29.8	-0.3
CAEL	Denizli, Camel	1.09	344	*i* P	Pg	00 06 30.5	0.0
CAEL				*i* S	Sn	00 06 49.4	+1.5
CAEL				IAML		00 06 56.0	
	comp=E,428nm,0.7s						
CAEL				IAML		00 06 56.0	
	comp=N,762nm,0.8s						
DALY	Dalyan (Mula)	1.12	312	*i* P	Pg	00 06 31.2	+0.2
DALY				*i* S	Sn	00 06 48.7	+0.3
DALY				IAML		00 06 52.0	
	comp=E,318nm,0.6s						
DALY	Dalyan (Mula)	1.12	312	PN	Pg	00 06 30.7	-0.3
ANTB	Antalya	1.14	43	PN	Pn	00 06 31.7	-0.8
ARG	Arkhangelos	1.28	277	PN	Pn	00 06 33.9	-0.5

ARG	Arkhangelos	1.28	277	P	Pn	00 06 33.4	-1.0
ARG				S	Sn	00 06 53.1	+1.0
TURN	Turunc	1.36	302	iP	Pn	00 06 34.9	-0.7
TURN				iS	Sg	00 06 57.2	+3.9
TURN	Turunc	1.36	302	PN	Pn	00 06 35.3	-0.3
MRSB	Marmaris-Mugla	1.37	299	PN	Pn	00 06 35.6	-0.1
BUCA	Burdur, Bucak-	1.44	29	iP	Pg	00 06 37.6	+0.5
BUCA				iS	Sg	00 07 02.6	+6.9
BUCA				IAML		00 07 09.0	
	comp=E,153nm,0.5s						
TAVA	DENIZLI_Tavas	1.53	336	iP	Pg	00 06 38.9	+0.1
TAVA				iS	Sg	00 07 02.1	+3.4
TAVA				IAML		00 07 04.0	
	comp=E,210nm,0.6s						
TAVA				IAML		00 07 06.0	
	comp=N,149nm,0.6s						
YER	Yerkesik	1.56	314	PN	Pn	00 06 38.5	+0.2
BCK	Bucak	1.57	27	PN	Pb	00 06 38.7	-0.6
MULA	Mugla, Merkez-	1.62	318	iP	Pg	00 06 40.8	+0.2
MULA				iS	Sg	00 07 03.5	+1.9
MULA				IAML		00 07 05.0	
	comp=N,241nm,0.8s						
MULA				IAML		00 07 07.0	
	comp=E,398nm,0.7s						
BRDR	BURDUR-Merkez	1.65	10	iP	Pg	00 06 41.3	+0.1
BRDR				iS	Sg	00 07 06.0	+3.4
BRDR				IAML		00 07 09.0	
	comp=E,94nm,0.5s						
KEPZ	Antalya-Kepez	1.75	61	iP	Pb	00 06 42.5	+0.1
KEPZ				iS	Sg	00 07 08.0	+2.2
DAT	Datca	1.83	292	iP	Pn	00 06 42.2	+0.1
DAT	Datca	1.83	292	PN	Pn	00 06 42.2	+0.1
BASM	Basmaki-Afyon	1.87	9	PN	Pn	00 06 42.8	+0.1
ISP	Isparta	1.87	21	PN	Pn	00 06 42.5	-0.2
MLSB	Milas	1.97	309	PN	Pn	00 06 44.7	+0.7
BDRM	Kayabasi	2.06	299	iP	Pn	00 06 45.4	+0.1
BDRM				iS	Sg	00 07 17.2	+1.3
BDRM				IAML		00 07 21.0	
	comp=E,73nm,0.6s						
BDRM				IAML		00 07 23.0	
	comp=N,130nm,0.6s						
NIS1	Nisyros Isl.	2.10	285	PN	Pn	00 06 46.0	+0.3
BAGO	Egridir - ISPA	2.11	24	iP	Pg	00 06 49.9	0.0
GAZI	Gazipasa	2.13	85	iP	Pn	00 06 45.3	-0.9
GAZI	Gazipasa	2.13	85	PN	Pn	00 06 46.5	+0.3
AYDN	Tasoluk	2.15	318	iP	Pb	00 06 47.8	-1.5
AYDN				iS	Sg	00 07 18.6	-0.2
AYDN				IAML		00 07 25.0	
	comp=E,64nm,0.5s						
AYDN				IAML		00 07 27.0	
	comp=N,60nm,0.6s						
SEDI	Konya, Seydise	2.16	50	iP	Pb	00 06 50.0	+0.6
SEDI				iS	Sg	00 07 21.9	+3.0
SEDI				IAML		00 07 26.0	
	comp=N,103nm,0.6s						
SEDI				IAML		00 07 28.0	
	comp=E,83nm,1.4s						
BODT	Bodrum	2.16	298	PN	Pn	00 06 46.7	+0.1
SEYD	Seydisehir-KON	2.18	52	PN	Pn	00 06 47.8	+0.8
KZIL	AFYON_Kizioren	2.21	9	iP	Pb	00 06 48.4	-1.9
KZIL				iS	Sg	00 07 19.9	-0.8
PASA	Karahalli, USA	2.28	356	iP	Pn	00 06 49.0	+0.7
PASA				iS	Sg	00 07 21.6	-1.3
KOSK	Kos Island	2.29	288	PN	Pn	00 06 48.9	+0.5
AYDB	Zeytinkoy-Aydi	2.37	323	PN	Pn	00 06 50.3	+0.8
AKMS	Akamas	2.40	115	P	Pn	00 06 50.0	+0.2
AKMS				AML	AML	00 07 25.6	
	comp=E,0.1nm,0.5s						
AKMS				AML	AML	00 07 33.2	
	comp=E,0.2nm,0.9s						
DDIM	Aydin, Didim	2.41	306	iP	Pg	00 06 55.6	0.0
HDMB	Hadim	2.42	67	PN	Pn	00 06 51.1	+0.7
YVAC	Isparta, Yalva	2.52	29	iP	Pb	00 06 55.6	0.0
YVAC				iS	Sg	00 07 28.9	-1.7
ALFC	Alefka	2.54	110	P	Pn	00 06 51.4	-0.4
ALFC				AML	AML	00 07 30.8	
	comp=E,0.2nm,0.9s						
ALFC				AML	AML	00 07 42.9	
	comp=E,0.2nm,0.7s						
GCAM	G?zelcaml?	2.56	310	iP	Pb	00 06 54.7	-1.4
GCAM				IAML		00 07 29.0	
	comp=N,89nm,0.5s						
GCAM				IAML		00 07 31.0	
	comp=E,69nm,0.8s						
GCAM	G?zelcaml?	2.56	310	PN	Pn	00 06 52.9	+0.9
SHUT	Suhut-Afyon	2.57	15	PN	Pn	00 06 53.1	+0.7
DOGA	KONYA_Doganhis	2.58	37	iP	Pb	00 06 56.6	0.0
DOGA				iS	Sg	00 07 31.2	-1.1
DOGA				IAML		00 07 33.0	
	comp=N,65nm,0.6s						
DOGA				IAML		00 07 35.0	
	comp=E,53nm,0.7s						
KULA	Kula-Manisa	2.58	342	PN	Pn	00 06 52.5	+0.1
MANT	Manisa	2.58	340	iP	Pn	00 06 53.0	+0.4
ERMK	Ermenek	2.66	77	iP	Pb	00 06 57.6	-0.4
ERMK				iS	Sg	00 07 33.4	-1.7
NATA	Nata	2.68	118	P	Pn	00 06 54.3	+0.6
USAK	Uak-Merkez	2.70	349	iP	Pn	00 06 54.4	+0.4
USAK				IAML		00 07 36.0	
	comp=N,111nm,0.4s						
USAK				IAML		00 07 40.0	
	comp=E,63nm,1.1s						
TEKE	Tekeli-Mersin	2.77	87	PN	Pn	00 06 55.9	+0.9
KONT	Konya--Tatoy	2.84	48	iP	Pb	00 06 59.5	-1.5
KONT				iS	Sg	00 07 37.5	-3.3
KONT				IAML		00 07 42.0	
	comp=E,44nm,1.2s						
KONT	Konya--Tatoy	2.84	48	PN	Pn	00 06 57.3	+1.3
KKBE	Karaman, Kazim	2.85	65	iP	Pb	00 06 59.1	-2.1
KKBE				iS	Sb	00 07 34.9	-1.8
BERE	Bereket-Mersin	2.87	83	PN	Pn	00 06 57.7	+1.2
ZKR	Zakros	2.99	252	PN	Pn	00 06 58.7	+0.8
DGB	zmir	3.00	312	iP	Pn	00 06 58.1	+0.1
DGB				IAML		00 07 51.0	
	comp=N,63nm,1.1s						
LADK	Ladik-KONYA	3.02	44	PN	Pn	00 06 59.4	+1.0
GDZ	Gediz	3.02	357	iP	Pn	00 06 58.7	+0.2
TEVE	Tevekalti-Mers	3.05	82	PN	Pn	00 06 59.9	+1.0
SIMA	Simav-Kutahya	3.06	350	PN	Pn	00 06 59.6	+0.5
DEMI	Demirci	3.07	346	iP	Pn	00 06 59.0	-0.1
KDHN	Kadinhani	3.12	38	iP	Pb	00 07 02.4	-3.4
KDHN				iS	Sb	00 07 41.9	-2.5
BLCB	Balcova	3.13	318	PN	Pn	00 07 00.8	+0.8
CSS	Mathiatis	3.17	109	P	Pn	00 07 01.6	+1.1
MVOU	Mavrovouni	3.38	107	P	Pn	00 07 03.4	0.0

IDC ***12*** *00:18:40.5±1.0, 45.°17N×131.°03E, h0^{km}, mb3.6/4, mb1 3.8/5, mb1mx3.5/38, mbtmp3.6/5, ML3.5/1, Error ellipse: s-maj=19.1km s-min=10.7km az=60.0*

SKHL ***12*** *00:18:41.5±0.4, 45.°17N×130.°99E, h8^{km}±3^{km}, mb3.8/2*

ISC 12 00:18:42.0±0.9**, 45.°09N**±0.°04×**130.°80E**±0.°08**, h10**^{km}**, n11,** σ**1.^{s}79**/15**, mb3.6**/4**, Priamurye-Northeastern China border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
USRK	Ussuriysk Ar.	1.23	136	Pg	Pb	00 19 03.0	-2.3
	baz=325,slow=17,SNR=291						
USRK				Lg	Lg	00 19 18.8	
	baz=330,slow=30,SNR=16						
GRTR	Gornotajezhnoj	1.69	144	ePn	Pn	00 19 11.7	+0.2
GRTR				ePg	Pb	00 19 12.7	-0.4
GRTR				AMB	AMB	00 19 13.7	
	130nm,0.8s						
GRTR				eSn	Sn	00 19 33.8	+0.6
GRTR				eSg	Sb	00 19 34.6	+0.2
GRTR				A	A	00 19 35.3	
	855nm,0.8s						
GRTR				A	A	00 19 35.3	
	920nm,0.6s						
TEY	Ternei	4.11	89	ePg	Pb	00 19 53.3	-1.2
TEY				AMB	AMB	00 19 54.4	
	11nm,0.6s						
TEY				eSg	Sb	00 20 44.9	+0.7
TEY				A	A	00 20 49.7	
	129nm,0.6s						
KLR	Kul'dur	4.20	9	Pn	Pn	00 19 45.2	-0.8
	3.0nm,0.3s,baz=196,slow=17,SNR=45						
KLR				Lg	Lg	00 20 50.1	
	8.1nm,0.3s,baz=300,slow=12,SNR=6.8						
KLR	Kul'dur	4.20	9	ePn	Pn	00 19 45.0	-1.0
KLR				eSn	Sn	00 20 31.9	-3.2
KLR				eSg	Sb	00 20 50.2	+3.6
KHBR	Khabarovsk	4.48	39	eSg	Sb	00 20 57.7	+3.1
KSRS	Korea Array	7.93	197	Lg	Lg	00 22 56.4	
	0.5nm,0.3s,baz=5.2,slow=30,SNR=6.5						
MKAR	Makanchi Array	33.35	291	P	P	00 25 20.8	+0.7
	0.5nm,0.8s,baz=78,slow=8.6,SNR=2.2						
KURBB	Kurchatov Arra	34.89	298	P	P	00 25 34.1	+0.7
	0.6nm,0.7s,baz=81,slow=9.2,SNR=5.1						
FINES	FINESS Array B	57.83	327	P	P	00 28 32.5	-0.7
	2.7nm,1.0s,baz=46,slow=11,SNR=4.4						
NVAR	Mina Array Bea	76.21	49	P	P	00 30 31.0	+0.3
	0.3nm,0.6s,baz=308,slow=4.2,SNR=5.4						

BUL ***12*** *00:31:29.7±1.0, 20.°49S×26.°45E, h10^{km}, MD3.8*

EAF ***12*** *00:31:29.7±1.0, 20.°49S×26.°45E, h10^{km}, MD3.6*

ISC 12 00:31:28.0±2.9**, 20.°35S**±0.°07×**26.°5E**±0.°1**, h10**^{km}**, n8,** σ**1.^{s}23**/16**, Botswana**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATP	Matopo	1.89	93	eP	Pb	00 32 02.1	-0.6
MATP				eS	Sn	00 32 25.2	+0.7
MATP	Matopo	1.89	93	eP	Pb	00 32 02.1	-0.6
MATP				eS	Sn	00 32 25.2	+0.7
BLWY	Bulawayo	2.00	84	eP	Pn	00 32 03.6	+1.5
BLWY				eS	Sb	00 32 29.7	-0.1
BLWY	Bulawayo	2.00	84	eP	Pn	00 32 03.6	+1.5
BLWY				eS	Sb	00 32 29.7	-0.1
MSNA	Messina	3.85	122	eP	Pn	00 32 28.2	+0.8
MSNA				eS	Sn	00 33 11.3	-1.4
MSNA	Messina	3.85	122	eP	Pn	00 32 28.2	+0.8
MSNA				eS	Sn	00 33 11.3	-1.4
KRI	Karoi	4.59	41	eP	Pn	00 32 38.8	+1.2
KRI				eS	Sn	00 33 29.4	-1.6
KRI	Karoi	4.59	41	eP	Pn	00 32 38.8	+1.2
KRI				eS	Sn	00 33 29.4	-1.6

SKHL ***12*** *01:33:58.5±0.2, 43.°60N×147.°80E, h50^{km}±6^{km}, mb5.2/5*

MOS ***12*** *01:33:59.7±1.0, 43.°76N×147.°57E, h49^{km}, mb4.7/6, Error ellipse: s-maj=9.8km s-min=8.2km az=88.0*

IDC ***12*** *01:34:00.8±0.6, 43.°78N×147.°42E, h41^{km}±6^{km}, mb3.7/16, mb1 3.9/19, mb1mx3.7/53, mbtmp3.9/19, ML3.5/3, MS3.3/3, Ms1 3.3/3, ms1mx2.7/36, Error ellipse: s-maj=20.0km s-min=14.2km az=136.0*

NIED ***12*** *01:34:00.7, 43.°56N×147.°31E, h16^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.16; $M_{\theta\theta}$0.79; $M_{\phi\phi}$-0.95; $M_{r\theta}$1.30; $M_{\theta\phi}$-1.41; $M_{\phi r}$0.41; Fault plane solution: $M_0$2.15000×10^{15} NP1:ϕ_s73.00000°, δ87.00000°, λ140.00000°. NP2:ϕ_s165.00000°, δ50.00000°, λ3.00000°.*

JMA ***12*** *01:34:00.6±0.2, 43.°55N×147.°31E, h16^{km}±3^{km}, M4.6*

NEIC ***12*** *01:34:01.4±1.2, 43.°60N±0.°09×147.°6E±0.°1, h49^{km}±7^{km}, mb4.3/18, Error ellipse: s-maj=14.0km s-min=11.5km az=142.0*

ISC 12 01:34:00.7±0.6**, 43.°64N**±0.°05×**147.°58E**±0.°05**, h45**^{km}±5^{km}**, n121,** σ**1.^{s}42**/141**, mb4.2**/34**, 2C-9D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK	Yuzh-Kuril'sk	1.30	288d	iPN	Pn	01 34 21.9	-0.5
YUK				iS	Sn	01 34 38.3	-0.3
YUK				pmax	pmax		
	comp=N,555nm,0.2s						
YUK				pmax	pmax		
	comp=Z,4µm,0.2s						
YUK				pmax	pmax		
	comp=E,565nm,0.1s						
YUK				smax	smax		
	comp=E,12µm,0.4s						
YUK				smax	smax		
	comp=N,5µm,0.3s						
YUK	Yuzh-Kuril'sk	1.30	288	iP	Pn	01 34 21.0	-1.4
YUK				AMB	AMB	01 34 22.0	
	comp=N,4µm,0.3s						
YUK				iS	Sn	01 34 38.0	-0.6
YUK				A	A	01 34 38.0	
	comp=N,5µm,0.4s						
YUK				A	A	01 34 38.0	
	comp=N,12µm,0.4s						
NEM2	Nemuro 2	1.36	259	P	Pn	01 34 21.8	-1.4
NEM2				eS	Sn	01 34 36.8	-3.3
NMR	Nemuro--Hokkai	1.37	259⇓	iPN	Pn	01 34 21.9	-1.5
NMR				iS	Sn	01 34 38.0	-2.3
NMR	Nemuro--Hokkai	1.37	259	iP	Pn	01 34 21.0	-2.4
NMR				iS	Sn	01 34 38.0	-2.3
GLVR	Golovnino	1.50	275⇓	iPN	Pn	01 34 24.6	-0.5
GLVR				iS	Sn	01 34 43.3	-0.1
GLVR				pmax	pmax		
	comp=N,257nm,0.3s						
GLVR				pmax	pmax		
	comp=Z,1µm,0.3s						
GLVR				smax	smax		
	comp=E,7µm,1.0s						
GLVR				smax	smax		
	comp=N,8µm,1.1s						
GLVR				smax	smax		
	comp=N,7µm,0.3s						
GLVR				smax	smax		
	comp=E,7µm,0.4s						
GLVR	Golovnino	1.50	275	iP	Pn	01 34 24.0	-1.1
GLVR				AMB	AMB	01 34 25.0	
	comp=E,257nm,0.3s						
GLVR				AMB	AMB	01 34 25.0	
	comp=E,1µm,0.3s						
GLVR				iS	Sn	01 34 43.0	-0.4
GLVR				A	A	01 34 46.0	
	comp=E,7µm,0.4s						
GLVR				A	A	01 34 46.0	
	comp=E,7µm,0.4s						
KUR	Kuril'sk	1.61	7	ePN	Pn	01 34 25.5	-1.1
KUR				iS	Sn	01 34 44.7	-1.4
KUR				pmax	pmax		
	comp=Z,691nm,0.4s						
KUR				pmax	pmax		
	comp=N,331nm,0.2s						
KUR				pmax	pmax		
	comp=E,329nm,0.2s						
KUR				smax	smax		
	comp=N,3µm,0.2s						
KUR				smax	smax		
	comp=E,1µm,0.2s						
KUR	Kuril'sk	1.61	7	eP	Pn	01 34 25.9	-0.7
KUR				AMB	AMB	01 34 29.1	
	comp=E,830nm,0.5s						
KUR				iS	Sn	01 34 44.9	-1.2
KUR				A	A	01 34 48.0	
	comp=E,2µm,0.2s						
KUR				A	A	01 34 48.0	
	comp=E,2µm,0.2s						
RUSJ	Misakicho	1.75	286⇓	iPN	Pn	01 34 28.5	0.0
RUSJ				eS	Sn	01 34 50.2	+0.6
JRA	Rausu	1.80	280	P	Pn	01 34 29.0	-0.3
JKHN	Kushirohamanak	1.85	253	P	Pn	01 34 29.4	-0.5
JNSB	Nemuroshibetsu	1.87	275	P	Pn	01 34 29.9	-0.3
JNK	Nakash	2.08	269	P	Pn	01 34 32.6	-0.4
JNK				eS	Sn	01 34 55.9	-1.8
JAK	Akkeshi	2.20	254	P	Pn	01 34 34.4	-0.3
JAK				eS	Sn	01 34 59.5	-1.1
JTKR	Abashiri--Toko	2.68	278	P	Pn	01 34 42.0	+0.8
JAR	Ashorobuto	2.79	264	P	Pn	01 34 42.9	0.0
JOB	Onbets	2.83	256	P	Pn	01 34 43.5	+0.1
JOB				eS	Sn	01 35 16.0	-0.2
JMP	Maruseppu	3.07	278	P	Pn	01 34 47.6	+0.8
JCH	Churui	3.25	253	P	Pn	01 34 49.6	+0.5
JCH				eS	Sn	01 35 26.3	-0.3
JKA	Kamikawa-asahi	3.63	279	eP	Pn	01 34 55.2	+0.8
JKA	Kamikawa-asahi	3.63	279		Pn	01 34 55.2	+0.8
ASAJ	Asahikawa	3.63	279	P	Pn	01 34 55.5	+1.1
	comp=E,11nm,0.3s,baz=93,slow=14,SNR=29						
ASAJ				S	Sn	01 35 42.9	+7.0
	comp=E,7.8nm,0.3s,baz=172,slow=21,SNR=1.8						
ASAJ				LR	LR	01 36 30.8	
	comp=E,294nm,18.4s,baz=212,slow=43						
ASAJ	Asahikawa	3.63	279	PN	Pn	01 34 55.2	+0.8
ERM	Erimo	3.63	245⇓	ePN	Pn	01 34 56.2	+1.8
ERM	Erimo	3.63	245		Pn	01 34 55.2	+0.9
JEM	Erimo	3.63	245		Pn	01 34 55.2	+0.8
JEM				Sn	Sn	01 35 38.0	+2.1
JFR	Furan	3.66	264	P	Pn	01 34 56.1	+1.3
JNBK	Urakawa-nobuka	3.79	251	P	Pn	01 34 57.2	+0.6
JEW	Eniwo	4.55	262		Pn	01 35 07.9	+0.9
YSS	Yuzh-Sakhalins	4.75	316⇓	ePN	Pn	01 35 10.2	+0.5
YSS				eS	Sn	01 36 02.8	-0.6
YSS				pmax	pmax		
	comp=Z,40nm,0.4s						
YSS				smax	smax		
	comp=N,30nm,0.3s						
YSS				MLR	MLR		
	comp=Z,300nm,15.0s						
YSS				MLR	MLR		
	comp=N,200nm,13.0s						
YSS				MLR	MLR		
	comp=E,200nm,14.0s						
YSS	Yuzh-Sakhalins	4.75	316	eP	Pn	01 35 11.5	+1.8
YSS				AMB	AMB	01 35 11.8	
	comp=E,30nm,0.3s						
YSS	Yuzh-Sakhalins	4.75	316	Pn	Pn	01 35 10.2	+0.5
JMM	Marumori	7.73	224	Pn	Pn	01 35 49.2	-1.4
TYV	Tymovskoe	7.96	337	ePN	Pn	01 36 09.7	+16
TYV				pmax	pmax		
	comp=Z,100nm,4.2s						
TYV				pmax	pmax		
	comp=Z,11nm,1.2s						
JSD	Sado	9.01	235	Pn	Pn	01 36 07.5	-0.6
SKR	Severo-Kuril's	9.13	37	ePN	Pn	01 36 13.8	+4.1
SKR				pmax	pmax		
	comp=Z,100nm,3.8s						
SKR				pmax	pmax		
	comp=Z,42nm,0.6s						
SKR				MLR	MLR		
	comp=Z,100nm,12.0s						
SKR	Severo-Kuril's	9.13	37	eP	Pn	01 36 07.1	-2.6
SKR				AMB	AMB	01 36 16.0	
	comp=Z,60nm,0.6s						
JYT	Yasato	9.32	220	Pn	Pn	01 36 10.7	-1.7
MAJO	Matsushiro	10.08	228⇓	ePN	Pn	01 36 25.7	+2.8
MAJO				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MJAR	Matsushiro Arr	10.08	228	P	Pn	01 36 21.6	-1.3
	comp=Z,0.1nm,0.3s,baz=28,slow=13,SNR=1.9						
JGF	Kuroka	11.24	228	Pn	Pn	01 36 38.0	-0.8
PEA0B	Petropavlovsk-	11.61	32⇓	ePN	Pn	01 36 43.2	-0.4
PEA0B	Petropavlovsk-	11.61	32	Pn	Pn	01 36 43.3	-0.4
PETK	Petropavlovsk-	11.61	32	P	Pn	01 36 42.6	-1.1
	comp=Z,0.7nm,0.3s,baz=195,slow=11,SNR=13						
PETK	Petropavlovsk-	11.61	32	PN	Pn	01 36 43.3	-0.3
PETK	Petropavlovsk-	11.61	32	Pn	Pn	01 36 43.3	-0.3
KLR	Kul'dur	12.26	303	P	Pn	01 36 54.3	+1.8
	comp=Z,0.1nm,0.3s,baz=94,slow=15,SNR=2.8						
KLR				LR	LR	01 42 10.5	
	comp=Z,110nm,19.1s,baz=81,slow=40						
JWT	Wachi	12.56	232	Pn	Pn	01 36 56.5	-0.3
SEY	Seymchan	19.53	7	P	P	01 38 22.5	-1.5
	comp=Z,0.6nm,0.3s,baz=194,slow=9.6,SNR=8.3						
SONM	Songino Array	28.80	293	P	P	01 39 54.3	0.0
	comp=Z,0.6nm,0.7s,baz=79,slow=10,SNR=3.9						
SONM				LR	LR	01 51 44.1	
	comp=Z,67nm,18.0s,baz=50,slow=37						
SONM	Songino Array	28.80	293	eP	P	01 39 56.2	+1.9
SONM				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SONM	Songino Array	28.80	293	P	P	01 39 52.5	-1.8
H11N2	WAKE ISLAND Hy	28.82	140	T	T	02 10 34.7	
	baz=331,slow=76,SNR=322						
H11N1	WAKE ISLAND Hy	28.83	140	T	T	02 10 32.7	
	baz=331,slow=76,SNR=357						
H11N3	WAKE ISLAND Hy	28.83	140	T	T	02 10 33.2	
	baz=331,slow=76,SNR=350						
H11S1	WAKE ISLAND Hy	29.79	141	T	T	02 11 45.5	
	baz=332,slow=76,SNR=1309						
H11S3	WAKE ISLAND Hy	29.79	141	T	T	02 11 49.3	
	baz=332,slow=76,SNR=1505						
H11S2	WAKE ISLAND Hy	29.80	141	T	T	02 11 50.8	
	baz=332,slow=76,SNR=879						
M19K	Big River Lodg	38.03	41	P	P	01 41 16.6	+2.4
J20K	Nowinta River	38.24	37	P	P	01 41 16.5	+0.6
J20K				IAmb	IAmb	01 41 25.1	
	comp=Z,3.5nm,1.0s						
IMAR	Indian Mountai	38.56	34	P	P	01 41 19.0	+0.4
H21K	Melozitna Rive	38.92	35	P	P	01 41 22.4	+0.8
H21K				IAmb	IAmb	01 41 23.5	
	comp=Z,11nm,1.4s						
I21K	Tanana	39.23	35	P	P	01 41 25.4	+1.2
I21K				IAmb	IAmb	01 41 26.7	
	comp=Z,4.0nm,0.9s						
H23K	Yukon River	40.27	35	P	P	01 41 33.8	+0.9
H23K				IAmb	IAmb	01 41 35.0	
	comp=Z,5.8nm,0.8s						
SML	Sawmill	40.90	41	P	P	01 41 38.9	+0.8
COLA	College	40.98	36⇑	iP	P	01 41 40.3	+1.7
COLA				pmax	pmax		
	comp=Z,45nm,3.7s						
COLA	College	40.98	36	P	P	01 41 38.4	-0.3
ZALV	Zalesovo Beam	41.31	307	PcP	PcP	01 43 39.5	+0.2
	comp=Z,0.5nm,0.3s,baz=72,slow=6.2,SNR=1.7						
ZALV				pPcP		01 43 51.2	
	comp=Z,1.9nm,0.7s,baz=121,slow=2.3,SNR=5.5						
ZALV	Zalesovo Beam	41.31	307	P	P	01 41 41.9	+0.4
ZALV	Zalesovo Beam	41.31	307	P	P	01 41 41.9	+0.4
IL31		41.39	36	P	P	01 41 42.8	+0.8
ILAR	Eielson Array	41.39	36	P	P	01 41 42.5	+0.5
	comp=Z,2.4nm,0.6s,baz=274,slow=8.1,SNR=26						
ILAR	Eielson Array	41.39	36	P	P	01 41 43.4	+1.3
PRP	Porcupine Dome	41.94	35	P	P	01 41 47.3	+0.6
PRP				IAmb	IAmb	01 41 48.4	
	comp=Z,7.7nm,0.8s						
SCRK	Sand Creek	42.70	37	P	P	01 41 53.1	+0.2
SCRK				IAmb	IAmb	01 41 56.5	
	comp=Z,3.1nm,0.8s						
L27K	Beaver Creek,	43.77	38	P	P	01 42 02.1	+0.6
L27K				IAmb	IAmb	01 42 20.7	
	comp=Z,4.3nm,0.9s						
MK31	Makanchi Array	44.91	298	P	P	01 42 10.6	-0.1
MK31				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MK31	Makanchi Array	44.91	298	P	P	01 42 10.6	-0.1
MKAR	Makanchi Array	44.91	298	P	P	01 42 10.8	+0.1
	comp=Z,0.5nm,0.5s,baz=96,slow=6.5,SNR=11						
MKAR				pPcP		01 44 03.9	
	comp=Z,1.0nm,0.8s,baz=63,slow=5.6,SNR=4.0						
EPYK	Eagle Plains	45.44	33	P	P	01 42 15.6	+0.8
KURK	Kurchatov	45.85	304	iP	P	01 42 19.0	+1.0
KURK				pmax	pmax		
	comp=Z,5.0nm,1.8s						
KURK	Kurchatov	45.85	304	eP	P	01 42 19.0	+1.0
KURBB	Kurchatov Arra	45.93	304	P	P	01 42 17.9	-0.8
	comp=Z,0.5nm,0.4s,baz=73,slow=8.8,SNR=4.9						
KURBB				PcP	PcP	01 43 55.7	+0.8
	comp=Z,0.4nm,0.8s,baz=94,slow=1.2,SNR=0.9						
KURBB				pPcP		01 44 06.9	
	comp=Z,1.3nm,0.7s,baz=81,slow=3.5,SNR=10						
HYT	Haines Junctio	46.21	41	P	P	01 42 22.9	+1.9
HYT				IAmb	IAmb	01 42 40.1	
	comp=Z,8.0nm,1.1s						
INK	Inuvik	46.34	30	P	P	01 42 22.1	+0.4
	comp=Z,7.9nm,0.9s,baz=281,slow=7.6,SNR=12						
AAK	Ala-Archa	51.68	296⇓	eP	P	01 43 03.2	0.0
AAK				pmax	pmax		
	comp=Z,12nm,1.4s						
AAK	Ala-Archa	51.68	296	eP	P	01 43 03.2	0.0
ARU	Arti	54.64	317c	iP	P	01 43 24.4	0.0
ARU						01 45 23.4	
ARU				S	S	01 51 00.7	0.0
ARU				pmax	pmax		
	comp=Z,7.0nm,1.3s						
ARU	Arti	54.64	317	eP	P	01 43 24.4	0.0
ABKAR	Akbulak array	57.37	309	P	P	01 43 44.2	+0.1
ABKAR				IAmb	IAmb	01 43 55.0	
	comp=Z,3.4nm,1.1s						
ARCES	ARCESS Array B	59.46	340	P	P	01 43 57.1	-1.3
	comp=Z,2.0nm,0.8s,baz=15,slow=5.0,SNR=6.9						
ARCES	ARCESS Array B	59.46	340	eP	P	01 43 58.9	+0.6
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
WRA	Warramunga Arr	64.42	194	P	P	01 44 32.9	+0.7
	comp=Z,0.3nm,0.6s,baz=12,slow=6.2,SNR=2.5						
WRA				pP	pP	01 44 44.5	+0.2
	comp=Z,1.0nm,0.7s,baz=15,slow=6.5,SNR=6.1						
WRA	Warramunga Arr	64.42	194	P	P	01 44 31.9	-0.3
FINES	FINESS Array B	65.11	333	P	P	01 44 35.2	-1.1
	comp=Z,1.8nm,0.5s,baz=45,slow=8.4,SNR=33						
NVAR	Mina Array Bea	67.38	58	P	P	01 44 52.5	+1.1
	comp=Z,0.5nm,0.6s,baz=290,slow=7.1,SNR=5.3						
NVAR				pP	pP	01 45 04.1	+0.3
	comp=Z,0.5nm,0.6s,baz=304,slow=7.1,SNR=5.2						

ASAR	**Alice Springs**	**68.14**	**194**	P	**P**	**01 44 58.3**	**+2.3**
	comp=Z,0.2nm,0.3s,baz=7.7,slow=7.6,SNR=1.7						
ASAR				pP	**pwP**	**01 45 10.2**	**-1.6**
	comp=Z,0.8nm,0.8s,baz=16,slow=6.2,SNR=4.7						
MNK	**Minsk**	**69.58**	**327**	*i* P	**P**	**01 45 03.4**	**-1.2**
MNK				*i*		01 45 26.3	
MNK				*i*		01 47 38.3	
MNK				*i* PPP	PPP	01 49 20.1	
MNK				*i* S	**S**	**01 54 05.4**	**-3.6**
MNK				*i*		01 55 00.1	
MNK				*i* SS	**SS**	**01 58 36.2**	**-0.2**
MNK				pmax	pmax		
	comp=E,1.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,10.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MNK				MLR	MLR		
	comp=N,44nm,14.0s						
MNK				MLR	MLR		
	comp=E,9.0nm,14.0s						
MNK				MLR	MLR		
	comp=Z,86nm,15.0s						
MNK	**Minsk**	**69.58**	**327**	*i* P	**P**	**01 45 03.4**	**-1.2**
	comp=E,1.0nm,0.9s						
MNK				*i* P	**P**	**01 45 03.4**	**-1.2**
	comp=N,10.0nm,0.8s						
MNK				*i* P	**P**	**01 45 03.4**	**-1.2**
	comp=Z,10.0nm,1.1s,baz=42						
MNK				*i* PcP	**PcP**	**01 45 26.3**	**-1.1**
MNK				*i* PP	**PP**	**01 47 38.4**	**+0.1**
MNK				*i* PPP	PPP	01 49 20.1	
MNK				*i* S	**S**	**01 54 05.4**	**-3.6**
MNK				*i* SS	**SS**	**01 58 36.3**	**-0.1**
MNK				*i* SSS	SSS	02 01 56.6	
MNK				*i* LR	LR	02 16 03.1	
MNK				*i* LRM	MLR	02 17 57.5	
	comp=N,44nm,14.0s						
MNK				*i* LRM	MLR	02 18 04.3	
	comp=E,9.0nm,14.5s						
MNK				*i* LRM	MLR	02 18 07.9	
	comp=Z,86nm,14.9s						
PDAR	**Pinedale Array**	**69.74**	**50**	P	**P**	**01 45 06.4**	**+0.3**
	comp=Z,0.1nm,0.4s,baz=107,slow=1.5,SNR=1.9						
NB2	**NORSAR Subarra**	**69.82**	**339**	P	**P**	**01 45 05.0**	**-1.0**
	comp=Z,3.3nm,0.7s,baz=32,slow=6.9						
NOA	**NORSAR Array B**	**69.82**	**339**	P	**P**	**01 45 05.2**	**-0.8**
	comp=Z,0.8nm,0.6s,baz=32,slow=6.6,SNR=7.0						
NORES	**NORESS Array B**	**69.99**	**339**	P	**P**	**01 45 06.1**	**-0.9**
KBZ	**Khabaz**	**70.10**	**312**	P	**P**	**01 45 07.3**	**-0.7**
	comp=Z,2.8nm,0.8s,baz=306,slow=7.2,SNR=2.4						
AKASG	**Malin Array Be**	**71.85**	**324**	P	**P**	**01 45 18.1**	**-0.4**
	comp=Z,1.1nm,0.4s,baz=39,slow=6.2,SNR=8.7						
AKASG	**Malin Array Be**	**71.85**	**324**	P	**P**	**01 45 18.7**	**+0.2**
AKASG				pmax	pmax		
	comp=Z,1.0nm,1.0s						
AKASG	**Malin Array Be**	**71.85**	**324**	P	**P**	**01 45 18.6**	**+0.2**
BUR08	**Bucovina Ar. S**	**75.89**	**324**	P	**P**	**01 45 42.6**	**+0.2**
BUR08				IAmb	IAmb	01 45 47.6	
	comp=Z,2.9nm,0.9s						
CLL	**Collm**	**77.56**	**333**	*e*P	**P**	**01 45 52.0**	**+0.5**
KHC	**Kasperske Hory**	**79.21**	**331**	*e*P	**P**	**01 46 00.8**	**+0.1**
KHC	**Kasperske Hory**	**79.21**	**331**	*e*P	**P**	**01 46 00.8**	**+0.1**
GERES	**GERESS Array B**	**79.41**	**331**	P	**P**	**01 46 01.4**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=38,slow=7.1,SNR=3.6						
GERES	**GERESS Array B**	**79.41**	**331**	*e*P	**P**	**01 46 05.0**	**+3.1**
SOKA	**Soboth**	**80.75**	**329**	*e*P	P	01 46 14.6	+5.4
	comp=Z,0.9nm,0.6s						
KBA	**Koelnbreinsper**	**81.03**	**330**	*e*P	**P**	**01 46 13.4**	**+2.6**
OBKA	**Obir**	**81.07**	**329**	*e*P	**P**	**01 46 14.8**	**+3.9**
	comp=Z,1.0nm,0.6s						
TXAR	**Lajitas Array**	**82.45**	**57**	P	**P**	**01 46 18.5**	**0.0**
	comp=Z,0.1nm,0.5s,baz=284,slow=3.6,SNR=4.4						
TXAR				pP	**pP**	**01 46 32.3**	**+1.0**
	comp=Z,0.5nm,0.5s,baz=288,slow=3.6,SNR=5.7						
H03N2	**Juan Fernandez**	**142.65**	**90**	T	T	04 32 41.1	
	baz=305,slow=77,SNR=10						
H03N3	**Juan Fernandez**	**142.67**	**90**	T	T	04 32 42.4	
	baz=305,slow=77,SNR=10						
H03N1	**Juan Fernandez**	**142.67**	**90**	T	T	04 32 43.8	
	baz=305,slow=77,SNR=10						

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*IDC **12** 01:37:53.9±1.8, 2°.17S×133°.93E, h0^{km}, mb3.8/2, mb1 4.1/5, mb1mx3.6/39, mbtmp3.9/5, ML3.6/3, Error ellipse: s-maj=37.6km s-min=17.8km az=51.0*

*DJA **12** 01:37:57.9±2.4, 2°S±4°×13°4E±°, h19^{km}±22^{km}, M3.7/6, MLv3.7/6*

ISC 12 01:37:57.1±1.1**, 2°.2S**±0°.1×**133°.94E**±0°.06**, h25**^{km}**, n8, σ1^{s}.10**/10**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**1.83**	**247**	P	**Pb**	**01 38 28.3**	**-1.5**
FAKI				S	**Sb**	**01 38 52.9**	**+0.6**
BAKI	**Biak**	**2.39**	**65**	P	**Pn**	**01 38 34.4**	**-0.3**
SIJI	**Sorong**	**2.98**	**296**	Pn	**Pn**	**01 38 42.6**	**-0.2**
	4.8nm,0.3s,baz=121,slow=21,SNR=5.0						
SIJI				Sn	**Sn**	**01 39 17.7**	**0.0**
	5.3nm,0.3s,baz=254,slow=21,SNR=2.9						
SIJI				Lg	Lg	01 39 29.5	
	7.8nm,0.3s,baz=151,slow=22,SNR=5.2						
SWI	**Sorong**	**2.99**	**296**	P	**Pn**	**01 38 43.8**	**+0.9**
WRA	**Warramunga Arr**	**17.63**	**179**	P	**Pn**	**01 42 01.2**	**0.0**
	0.2nm,0.3s,baz=356,slow=12,SNR=18						
FITZ	**Fitzroy Crossi**	**17.77**	**207**	P	**Pn**	**01 42 01.9**	**-1.0**
	0.3nm,0.3s,baz=40,slow=7.2,SNR=6.0						
ASAR	**Alice Springs**	**21.34**	**180**	P	**P**	**01 42 44.4**	**+1.9**
	5.6nm,1.0s,baz=6.0,slow=12,SNR=26						
MKAR	**Makanchi Array**	**66.53**	**324**	P	**P**	**01 48 45.2**	**+0.3**
	0.5nm,0.5s,baz=114,slow=7.9,SNR=9.3						

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*TAP **12** 01:49:37.4, 23°.87N×122°.82E, h45^{km}±1^{km}, ML2.6, D*

*JMA **12** 01:49:37.6±0.1, 23°.88N×122°.76E, h43^{km}, M2.2*

ISC 12 01:49:34.7±1.1**, 23°.73N**±0°.03×**122°.77E**±0°.02**, h12**^{km}±10^{km}**, n28, σ1^{s}.23**/54**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.73**	**13**	P	**Pg**	**01 49 49.8**	**+0.9**
JYNG				*e*S	**Sg**	**01 49 58.0**	**-0.5**
YOJ	**Yonaguni jima**	**0.76**	**17**	P	**Pg**	**01 49 50.2**	**+0.8**
	baz=15						
YOJ				S	**Sg**	**01 49 59.5**	**+0.2**
	baz=15						
YOJ	**Yonaguni jima**	**0.76**	**17**	P	**Pg**	**01 49 49.9**	**+0.5**
YOJ				*e*S	**Sg**	**01 49 59.1**	**-0.2**
HATJ	**Hateruma jima**	**1.00**	**71**	P	**Pg**	**01 49 55.1**	**+1.1**
HATJ				*e*S	**Sg**	**01 50 07.8**	**+0.7**
IRIF	**Iriomote-Funau**	**1.06**	**56**	P	**Pg**	**01 49 55.4**	**+0.2**
IRIF				*e*S	**Sg**	**01 50 08.9**	**-0.1**
NACB	**Ninganchiao**	**1.16**	**292**	*i* P	**Pg**	**01 49 57.1**	**+0.1**
	baz=274						
NACB				*e*S	**Sg**	**01 50 10.9**	**-1.1**
	baz=274						
ENA	**Nanau**	**1.17**	**307**	*e*P	**Pg**	**01 49 58.9**	**+1.8**
	baz=300						
ENA				*e*S	**Sg**	**01 50 14.2**	**+1.9**
	baz=300						
TWC	**Suao**	**1.21**	**316**	*i* P	**Pg**	**01 49 57.5**	**-0.4**
	baz=311						
TWC				*e*S	**Sg**	**01 50 12.9**	**-0.8**
	baz=311						
EGFH	**Guangfu**	**1.23**	**267**	P	**Pg**	**01 49 58.8**	**+0.4**
	baz=260						
EGFH				S	**Sg**	**01 50 14.9**	**+0.5**
	baz=260						
JKRS	**Kuro-shima**	**1.24**	**66**	P	**Pg**	**01 49 58.6**	**+0.1**
JKRS				*e*S	**Sg**	**01 50 13.4**	**-1.3**
HGSD	**Ruisui**	**1.26**	**259**	P	**Pg**	**01 49 58.8**	**0.0**
	baz=253						
HGSD				S	**Sg**	**01 50 14.6**	**-0.6**
	baz=253						
ETLH	**Xiulin Townshi**	**1.27**	**292**	P	**Pg**	**01 49 58.6**	**-0.5**
	baz=275						
ETLH				*e*S	**Sg**	**01 50 14.0**	**-1.6**
	baz=275						
ECBN	**Changbin**	**1.28**	**251**	P	**Pg**	**01 49 60.0**	**+0.7**
	baz=236						
ECBN				S	**Sg**	**01 50 15.3**	**-0.6**
	baz=236						
NDS	**Dongshan**	**1.31**	**313**	*e*P	**Pg**	**01 49 59.8**	**-0.1**
	baz=308						
NDS				*e*S	**Sg**	**01 50 15.8**	**-1.3**
	baz=308						
EHY	**Hungye**	**1.35**	**261**	*e*P	**Pg**	**01 50 01.2**	**+0.6**
	baz=254						
EHY				S	**Sg**	**01 50 17.6**	**-0.5**
	baz=254						
EYUL	**Yuli**	**1.38**	**254**	*e*S	**Sg**	**01 50 19.5**	**+0.2**
	baz=241						
YULB	**Yu-li**	**1.39**	**256**	P	**Pn**	**01 50 01.6**	**+1.6**
	baz=243						
YULB				S	**Sg**	**01 50 18.4**	**-1.2**
	baz=243						
TWF1	**Yuli**	**1.40**	**255**	P	**Pn**	**01 50 01.4**	**+1.3**
	baz=241						
TWF1				S	**Sg**	**01 50 19.2**	**-0.7**
	baz=241						
JIJ	**Ishigaki jima**	**1.40**	**63**	P	**Pg**	**01 50 00.2**	**-1.5**
JIJ				*e*S	**Sg**	**01 50 16.5**	**-3.4**
ENTT	**Nioudou**	**1.42**	**310**	*e*P	Pn	01 49 58.6	-1.8
	baz=305						
ENTT				S	**Sg**	**01 50 18.3**	**-2.1**
	baz=305						
CHKT	**Chengkung**	**1.44**	**244**	*i* P	**Pn**	**01 50 01.3**	**+0.7**
	baz=231						
CHKT				*e*S	**Sg**	**01 50 18.5**	**-2.4**
	baz=231						
WHF	**Hehuan Shan**	**1.44**	**287**	P	**Pg**	**01 50 01.5**	**-0.8**
	baz=270						
WHF				S	**Sg**	**01 50 20.1**	**-0.9**
	baz=270						
CHGB	**Renai**	**1.50**	**283**	P	**Pn**	**01 50 02.4**	**+0.8**
	baz=268						
CHGB				S	**Sg**	**01 50 20.4**	**-2.4**
	baz=268						
TIPB	**Shuangxi**	**1.50**	**325**	*e*P	**Pn**	**01 50 03.9**	**+2.4**
	baz=333						
TIPB				*e*S	**Sg**	**01 50 20.9**	**-2.2**
	baz=333						
EDH	**Donghe**	**1.54**	**241**	P	**Pn**	**01 50 03.2**	**+1.1**
	baz=237						
EDH				*e*S	**Sn**	**01 50 21.6**	**-0.5**
	baz=237						
NWLT	**Wulai**	**1.55**	**312**	P	**Pn**	**01 50 02.5**	**+0.3**
	baz=309						
NWLT				S	**Sn**	**01 50 21.8**	**-0.6**
	baz=309						
LDUT	**Ludao**	**1.59**	**229**	P	**Pn**	**01 50 04.2**	**+1.4**
	baz=226						
LDUT				*e*S	**Sn**	**01 50 22.8**	**-0.5**
	baz=226						
JISG	**Ishigakijimahi**	**1.65**	**59**	P	**Pn**	**01 50 04.2**	**+0.7**
JISG				S	**Sn**	**01 50 23.6**	**-1.0**

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*IGIL **12** 02:04:15.8, 36°.57N×12°.25W, h11^{km}, ML1.8*

*MDD **12** 02:04:16.5±1.9, 36°.71N×12°.07W, h0^{km}, mb3.6/15, Error ellipse: s-maj=16.9km s-min=14.0km az=51.0, PRXIMO*

*SFS **12** 02:04:16.0, 36°.69N×12°.00W, ML3.8, AZORES - CABO DE SAN VICENTE*

*INMG **12** 02:04:18.4±1.0, 36°.67N×12°.10W, h10^{km}, ML2.2, Error ellipse: s-maj=4.4km s-min=3.1km az=84.0*

*CNRM **12** 02:04:22.2, 36°.17N×11°.63W, h57^{km}, ml3.1*

ISC 12 02:04:16.8±3.3**, 36°.8N**±0°.1×**12°.0W**±0°.1**, h10**^{km}**, n67, σ1^{s}.39**/99**, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PFVI	**Vila Bisbo**	**2.57**	**81**	*e*Pn	**Pn**	**02 04 58.6**	**+0.1**
PFVI				*e*Sn	**Sn**	**02 05 30.1**	**+0.3**
PFVI				A	A	02 05 33.7	
	5.9nm,0.4s						
PFVI	**Vila Bisbo**	**2.57**	**81**	P	**Pn**	**02 04 58.6**	**+0.1**
	8.0nm,0.1s,SNR=24						
PFVI				S	**Sn**	**02 05 30.0**	**+0.2**
	5.2nm,0.1s,SNR=7.9						
PFVI	**Vila Bisbo**	**2.57**	**81**	P	**Pn**	**02 04 58.8**	**+0.3**
PFVI				S	**Sn**	**02 05 29.8**	**0.0**
PTEO	**Sao Teotonio**	**2.73**	**73**	*e*Pn	**Pn**	**02 05 01.8**	**+1.2**
PTEO				*e*Sn	**Sn**	**02 05 34.8**	**+1.2**
PTEO				A	A	02 05 37.3	
	5.1nm,0.5s						
MORF	**Marmelete**	**2.73**	**78**	*e*P	**Pn**	**02 05 01.3**	**+0.5**
MORF				*e*S	**Sn**	**02 05 34.6**	**+0.7**
MORF				IAML		02 05 35.5	
	comp=N,4.7nm,0.1s						
MORF	**Marmelete**	**2.73**	**78**	*e*Pn	**Pn**	**02 05 01.3**	**+0.5**
MORF				*e*Sn	**Sn**	**02 05 34.6**	**+0.7**
MORF				A	A	02 05 35.6	
	comp=N,3.7nm,0.3s						
MORF	**Marmelete**	**2.73**	**78**	P	**Pn**	**02 05 01.3**	**+0.5**
MORF				S	**Sn**	**02 05 34.6**	**+0.7**
PMAFR	**Mafra**	**3.05**	**44**	*e*Pn	**Pn**	**02 05 06.3**	**+1.2**
PMAFR				*e*Sn	**Sn**	**02 05 43.1**	**+1.4**
PMAFR				A	A	02 05 45.1	
	comp=N,35nm,0.2s						
PMAFR	**Mafra**	**3.05**	**44**	P	**Pn**	**02 05 06.3**	**+1.2**
	comp=N,0.4nm,0.0s,SNR=7.9						
PMAFR				S	**Sn**	**02 05 43.2**	**+1.6**
	comp=N,65nm,0.2s,SNR=26						
PNCL	**Nicolau / Gran**	**3.06**	**64**	*e*Pn	**Pn**	**02 05 06.7**	**+1.4**
PNCL				*e*Sn	**Sn**	**02 05 42.8**	**+0.8**
PNCL				A	A	02 05 46.5	
	comp=N,4.0nm,0.2s						
MESJ	**Messejana**	**3.19**	**70**	*e*S	**Sn**	**02 05 45.9**	**+0.7**
MESJ				IAML		02 05 47.6	
	comp=N,2.4nm,0.1s						
MESJ	**Messejana**	**3.19**	**70**	*e*Pn	**Pn**	**02 05 09.1**	**+2.0**
MESJ				*e*Sn	**Sn**	**02 05 45.9**	**+0.7**
MESJ				A	A	02 05 51.3	
	comp=N,2.2nm,0.5s						
MESJ	**Messejana**	**3.19**	**70**	S	**Sn**	**02 05 45.9**	**+0.7**
PCVE	**Castro Verde**	**3.27**	**74**	*e*Pn	**Pn**	**02 05 09.3**	**+1.1**
PCVE				*e*Sn	**Sn**	**02 05 47.4**	**+0.2**
PCVE				A	A	02 06 01.3	
	comp=N,1.9nm,0.5s						
PBDV	**Barranco-do-Ve**	**3.29**	**81**	*e*Pn	**Pn**	**02 05 09.5**	**+1.0**
PBDV				*e*Sn	**Sn**	**02 05 49.6**	**+1.9**
PVAQ	**Vaqueiros**	**3.48**	**79**	*e*Pn	**Pn**	**02 05 11.8**	**+0.8**
PVAQ				*e*Sn	**Sn**	**02 05 52.4**	**+0.1**
PVAQ				A	A	02 05 58.9	
	comp=N,1.6nm,0.2s						
PVAQ	**Vaqueiros**	**3.48**	**79**	P	**Pn**	**02 05 12.3**	**+1.2**
PVAQ				S	**Sn**	**02 05 52.7**	**+0.4**
PBEJ	**Beja**	**3.52**	**68**	*e*Sn	**Sn**	**02 05 53.4**	**+0.2**
PBEJ				A	A	02 05 56.1	
	comp=N,2.2nm,0.2s						
EVO	**Evora**	**3.61**	**60**	P	**Pn**	**02 05 14.4**	**+1.6**
EVO				S	**Sn**	**02 05 55.5**	**0.0**
EVO	**Evora**	**3.61**	**60**	*e*Pn	**Pn**	**02 05 14.3**	**+1.5**
EVO				*e*Sn	**Sn**	**02 05 55.8**	**+0.3**
EVO				A	A	02 05 57.0	
	comp=N,9.9nm,0.1s						
EVO	**Evora**	**3.61**	**60**	P	**Pn**	**02 05 14.4**	**+1.6**
EVO				S	**Sn**	**02 05 55.5**	**0.0**
EGRO	**El Granado**	**3.69**	**77**	P	**Pn**	**02 05 14.8**	**+0.9**
	comp=N,0.9nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**02 05 57.5**	**+0.1**
	comp=N,1.0nm,0.1s,SNR=7.9						
PSBE	**So Bento**	**3.71**	**42**	*e*Pn	**Pn**	**02 05 16.1**	**+1.9**
PSBE				*e*Sn	**Sn**	**02 05 58.3**	**+0.3**
PSBE				A	A	02 06 01.8	
	comp=N,6.0nm,0.3s						
PMTG	**Montargil**	**3.75**	**52**	*e*Pn	**Pn**	**02 05 15.9**	**+1.1**
PMTG				*e*Sn	**Sn**	**02 05 59.5**	**+0.5**
PMTG				A	A	02 06 05.6	
	comp=N,3.2nm,0.2s						
PESTR	**Estremoz**	**4.06**	**58**	*e*Pn	**Pn**	**02 05 20.5**	**+1.5**
PESTR				*e*Sn	**Sn**	**02 06 06.1**	**-0.6**
PESTR				A	A	02 06 13.2	
	comp=N,2.9nm,0.7s						
PESTR	**Estremoz**	**4.06**	**58**	P	Pn	02 05 23.9	+4.9
PESTR				S	**Sn**	**02 06 09.2**	**+2.5**
PBAR	**Barrancos**	**4.18**	**69**	*e*Pn	**Pn**	**02 05 21.8**	**+1.1**
PBAR				A	A	02 06 14.1	
	comp=N,1.4nm,1.2s						
PCAS	**Casmilo, Conde**	**4.26**	**39**	*e*Pn	**Pn**	**02 05 23.3**	**+1.5**
PCAS				*e*Sn	**Sn**	**02 06 11.7**	**+0.1**
PCAS				A	A	02 06 15.2	
	comp=N,5.3nm,0.5s						
EMIN	**Mina Concepcio**	**4.36**	**76**	P	**Pn**	**02 05 23.9**	**+0.8**
	comp=N,0.7nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**02 06 13.4**	**-0.6**
	comp=N,0.7nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**4.41**	**62**	P	**Pn**	**02 05 24.6**	**+0.8**
	comp=N,0.6nm,0.1s,SNR=5.6						
EBAD				S	**Sn**	**02 06 14.3**	**-1.0**
	comp=N,4.2nm,0.2s,SNR=9.2						
PMRV	**Marv??o**	**4.49**	**53**	*e*Pn	**Pn**	**02 05 25.8**	**+0.9**
PMRV				*e*Sn	**Sn**	**02 06 16.5**	**-0.7**
PMRV				A	A	02 06 18.6	
	comp=N,3.8nm,0.2s						
PCBR	**Castelo Branco**	**4.68**	**48**	*e*Pn	**Pn**	**02 05 29.0**	**+1.5**
PCBR				*e*Sn	**Sn**	**02 06 21.6**	**-0.3**
PCBR				A	A	02 06 23.7	
	comp=N,1.1nm,0.4s						
ESPR	**Espera**	**4.93**	**87**	P	**Pn**	**02 05 31.0**	**+0.1**
	comp=N,1.8nm,0.1s,SNR=4.9						
ESPR				S	**Sn**	**02 06 25.9**	**-2.1**
	comp=N,2.7nm,0.2s,SNR=7.9						
MTE	**Manteigas**	**5.02**	**43**	*e*Sn	**Sn**	**02 06 30.3**	**0.0**
MTE				A	A	02 06 37.1	
	comp=N,2.8nm,0.5s						
PVIS	**Viseu**	**5.06**	**38**	*e*Pn	**Pn**	**02 05 34.1**	**+1.2**
PVIS				*e*Sn	**Sn**	**02 06 30.6**	**-0.8**
PVIS				A	A	02 06 33.8	
	comp=N,5.6nm,0.3s						
EJIF	**Jimena Fronter**	**5.27**	**92**	P	**Pn**	**02 05 35.8**	**+0.2**
	SNR=7.9						
ECAB	**El Cabril**	**5.39**	**74**	P	**Pn**	**02 05 37.9**	**+0.5**
	comp=N,0.5nm,0.1s,SNR=12						
ECAB				S	**Sn**	**02 06 38.0**	**-1.5**
	comp=N,0.8nm,0.2s,SNR=7.9						
SRHM	**Skhour des Reh**	**5.48**	**141**	P	Pn	02 05 34.7	-3.9
SRHM				S	Sn	02 06 28.3	-13
ZHG	**ZHG**	**5.52**	**126**	P	Pn	02 05 34.2	-4.9
ZHG				S	Sn	02 06 31.5	-11
POLO	**Lamas de Olo**	**5.62**	**34**	*e*Pn	**Pn**	**02 05 41.9**	**+1.3**
POLO				*e*Sn	**Sn**	**02 06 44.0**	**-1.3**
POLO				A	A	02 06 45.9	
	comp=N,0.9nm,0.3s						
EPLA	**Plasencia**	**5.68**	**53**	P	**Pn**	**02 05 42.5**	**+1.2**
	comp=N,1.0nm,0.1s,SNR=7.9						
EPLA				S	**Sn**	**02 06 45.4**	**-1.3**
	comp=N,4.3nm,0.2s,SNR=14						
PCAB	**Cabril**	**5.80**	**31**	*e*Sn	**Sn**	**02 06 47.9**	**-1.6**
PCAB				A	A	02 06 50.0	
	comp=N,3.1nm,0.1s						
MVO	**Moncorvo**	**5.84**	**40**	*e*Pn	**Pn**	**02 05 44.7**	**+1.2**
MVO				*e*Sn	**Sn**	**02 06 49.2**	**-1.3**
MVO				A	A	02 06 50.6	
	comp=N,2.1nm,0.1s						
MVO	**Moncorvo**	**5.84**	**40**	P	**Pn**	**02 05 44.4**	**+0.9**
	comp=N,0.4nm,0.1s,SNR=7.9						
MVO				S	**Sn**	**02 06 48.7**	**-1.7**
	comp=N,2.0nm,0.1s,SNR=11						
ELOB	**Lobios**	**5.92**	**30**	P	**Pn**	**02 05 45.6**	**+1.0**
	comp=N,0.2nm,0.1s,SNR=7.9						
ELOB				S	**Sn**	**02 06 50.5**	**-1.9**
	comp=N,1.3nm,0.1s,SNR=6.9						
PGAV	**Gavieira, Arco**	**5.92**	**28**	*e*Pn	**Pn**	**02 05 47.5**	**+2.9**
PGAV				*e*Sn	**Sn**	**02 06 50.7**	**-1.9**
PGAV				A	A	02 06 57.6	
	comp=N,3.1nm,0.6s						
EZAM	**Zamans**	**5.93**	**25**	S	**Sn**	**02 06 50.0**	**-2.6**
	comp=N,3.4nm,0.3s,SNR=7.9						
EADA	**Adamuz**	**6.06**	**75**	P	**Pn**	**02 05 47.7**	**+1.1**
	comp=N,0.3nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**02 06 54.4**	**-1.6**
	comp=N,0.9nm,0.2s,SNR=7.9						
PBRG	**Braganca**	**6.46**	**38**	*e*Sn	**Sn**	**02 07 04.0**	**-1.7**
PBRG				A	A	02 07 07.7	
	comp=N,1.6nm,0.2s						
OUK	**Oukaimeden**	**6.55**	**147**	P	Pn	02 05 46.6	-6.9
OUK				S	Sn	02 06 49.8	-19
ECAL	**Calabor**	**6.56**	**37**	P	**Pn**	**02 05 54.5**	**+1.1**
	comp=N,0.2nm,0.1s,SNR=7.9						
ECAL				S	**Sn**	**02 07 06.4**	**-1.9**
	comp=N,3.4nm,0.3s,SNR=7.9						
EMAZ	**Mazaricos**	**6.57**	**20**	P	**Pn**	**02 05 54.9**	**+1.4**
	comp=N,0.1nm,0.1s,SNR=7.9						
EMAZ				S	Sn	02 07 03.5	-5.1
	comp=N,3.1nm,0.2s,SNR=7.9						
PAB	**San Pablo**	**6.63**	**63**	P	**Pn**	**02 05 56.0**	**+1.7**
	comp=N,0.0nm,0.1s,SNR=7.9						
PAB				S	**Sn**	**02 07 07.7**	**-2.3**
	comp=N,0.2nm,0.2s,SNR=7.9						
ESDC	**Sonseca Array**	**6.95**	**63**	P	**Pn**	**02 05 59.8**	**+1.0**
	baz=247,slow=13,SNR=7.9						
AKLM	**AKL**	**7.01**	**107**	S	Sn	02 07 07.7	-12
MD31	**MD31**	**7.13**	**121**	P	Pn	02 05 57.1	-4.2
MD31				S	Sn	02 07 09.0	-13
EQES	**Quesada**	**7.19**	**79**	P	**Pn**	**02 06 02.4**	**+0.3**
	comp=N,0.1nm,0.1s,SNR=7.9						
EQES				S	**Sn**	**02 07 22.8**	**-1.1**
	comp=N,0.2nm,0.2s,SNR=7.9						
MDT	**Midelt**	**7.26**	**121**	P	Pn	02 05 57.6	-5.5
MDT				S	Sn	02 07 14.1	-12
OUZM	**OUZ**	**7.31**	**142**	P	Pn	02 05 58.1	-5.8
OUZM				S	Sn	02 07 14.2	-13
EPON	**Pontenova**	**7.51**	**28**	S	**Sn**	**02 07 27.9**	**-3.7**
	comp=N,0.7nm,0.2s,SNR=7.9						
SESP	**Santiago Espad**	**7.64**	**77**	S	**Sn**	**02 07 33.5**	**-1.5**
	comp=N,0.3nm,0.2s,SNR=7.9						
TZRR	**Tazzarine**	**8.04**	**136**	P	Pn	02 06 07.6	-6.1
TZRR				S	Sn	02 07 32.2	-13
CFUE	**Fuerteventura**	**8.29**	**192**	S	Sn	02 07 24.0	-27
	comp=N,4.8nm,0.5s,SNR=7.9						
EARI	**Arriondas**	**8.33**	**37**	S	**Sn**	**02 07 48.3**	**-3.4**
	comp=N,0.4nm,0.4s,SNR=7.9						
ETOB	**Tobarra**	**8.49**	**74**	P	**Pn**	**02 06 19.4**	**-0.5**
	comp=N,0.1nm,0.1s,SNR=7.9						
ETOB				S	**Sn**	**02 07 52.5**	**-3.3**
	comp=N,0.1nm,0.2s,SNR=7.9						
ZGR	**Zagora**	**8.53**	**139**	P	Pn	02 06 16.1	-4.4
ZGR				S	Sn	02 07 42.4	-14
ETOR	**Torete**	**8.74**	**60**	P	**Pn**	**02 06 24.4**	**+1.0**
	comp=N,4.4nm,0.2s,SNR=7.9						
ETOR				S	**Sn**	**02 07 58.5**	**-3.6**
	comp=N,1.2nm,0.2s,SNR=7.9						

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*DJA **12** 02:34:43.2±0.3, 10°S±4°×11°2E±°, h60^{km}±5^{km}, M4.6/20, mb4.8/12, mB5.2/4, MLv4.5/20, Mw(mB)4.6/4, MwMwp6.3/1, Mwp6.2/1*

*NEIC **12** 02:34:43.1±1.3, 9°.55S±0°.07×112°.31E±0°.06, h64^{km}±6^{km}, mb4.3/19, Error ellipse: s-maj=11.0km s-min=7.9km az=205.0*

*IDC **12** 02:34:46.6±1.9, 9°.20S×112°.56E, h81^{km}±18^{km}, mb3.9/13, mb1 4.0/16, mb1mx3.8/34, mbtmp4.2/16, MS3.3/11, Ms1 3.3/11, ms1mx3.1/32, Error ellipse: s-maj=18.0km s-min=10.9km az=34.0*

ISC 12 02:34:42.3±0.4**, 9°.54S**±0°.05×**112°.37E**±0°.04**, h50**^{km}**, n97, σ1^{s}.95**/97**, mb4.3**/19**, MS3.2**/8**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PWJI	**Pagerwojo**	**1.61**	**340**	P	**Pn**	**02 35 08.5**	**+0.2**
PWJI				S	**Sn**	**02 35 28.3**	**+0.4**
GMJI	**Gumukmas**	**1.65**	**40**	P	**Pn**	**02 35 09.3**	**+0.5**
GMJI				S	**Sn**	**02 35 31.4**	**+2.5**
PCJI	**Pacitan**	**1.78**	**319**	P	**Pn**	**02 35 10.8**	**+0.1**
PCJI				S	**Sn**	**02 35 32.8**	**+0.7**
JAGI	**Jajag, Banyuwa**	**2.06**	**59**	P	**Pn**	**02 35 15.0**	**+0.5**
JAGI	**Jajag, Banyuwa**	**2.06**	**59**		**Pn**	**02 35 14.8**	**+0.4**
JAGI				Sn	**Sn**	**02 35 38.6**	**-0.3**
BLJI	**Banyuglugur**	**2.16**	**34**	P	**Pn**	**02 35 17.6**	**+1.8**
NGJI	**Ngawi**	**2.34**	**337**	P	**Pn**	**02 35 19.2**	**+0.9**
UGM	**Wanagama**	**2.44**	**311**	P	**Pn**	**02 35 20.2**	**+0.5**
UGM	**Wanagama**	**2.44**	**311**	Pn	**Pn**	**02 35 20.3**	**+0.6**
UGM	**Wanagama**	**2.44**	**311**	P	**Pn**	**02 35 20.1**	**+0.4**
ABJI	**Asem Bagus**	**2.53**	**47**	P	**Pn**	**02 35 23.0**	**+2.1**
YOGI	**Yogyakarta**	**2.67**	**310**	P	**Pn**	**02 35 24.7**	**+1.8**
TBJI	**Tambak Boyo**	**2.75**	**349**	P	**Pn**	**02 35 25.7**	**+1.7**
IGBI	**Denpasar**	**2.83**	**76**	P	**Pn**	**02 35 27.5**	**+2.4**
DNP	**Denpasar**	**2.93**	**73**	P	**Pn**	**02 35 28.4**	**+1.9**
KMMI	**Kalianget**	**2.94**	**33**	P	**Pn**	**02 35 28.3**	**+1.8**
SMRI	**Semarang**	**3.12**	**322**	P	**Pn**	**02 35 30.5**	**+1.4**
SMRI	**Semarang**	**3.12**	**322**		**Pn**	**02 35 30.6**	**+1.4**
SMRI	**Semarang**	**3.12**	**322**	P	**Pn**	**02 35 32.5**	**+3.4**
SRBI	**Singaraja**	**3.16**	**63**	P	**Pn**	**02 35 31.7**	**+2.1**
CMJI	**Cimerak**	**4.25**	**294**	P	**Pn**	**02 35 44.1**	**-0.4**
TWSI	**Taliwang, Sumb**	**4.53**	**80**	P	**Pn**	**02 35 50.7**	**+2.3**
PLAI	**Plampang**	**5.39**	**83**	P	**Pn**	**02 36 02.3**	**+2.1**
	0.7nm1μm124nm,0.9s						
PLAI	**Plampang**	**5.39**	**83**	P	**Pn**	**02 36 02.2**	**+2.1**
LEM	**Lembang**	**5.42**	**299**	P	Pn	02 36 06.0	+5.2
	5.7nm,0.3s,baz=293,slow=23,SNR=1.7						
LEM				S	**Sn**	**02 37 06.5**	**+4.5**

	9.1nm,0.3s,baz=306,slow=23,SNR=2.0						
LEM				LR	LR	02 38 30.0	
	comp=Z,150nm,18.7s,baz=214,slow=41						
CNJI	Cibinong	5.64	293	P	Pn	02 36 04.3	+0.7
	0.4nm58nm,1.1s						
BBKI	Banjar Baru	6.52	22	P	Pn	02 36 17.3	+1.6
	0.4nm43nm,0.6s						
XMIS	Christmas Isla	6.68	261		Pn	02 36 17.3	-0.7
XMIS	Christmas Isla	6.68	261	P	Pn	02 36 16.9	-1.0
	114nm,1.1s						
CGJI	Cibinong	7.22	293	P	Pn	02 36 26.2	+0.9
	0.2nm44nm,0.5s						
KBKI	Kotabaru	7.26	32	P	Pn	02 36 27.4	+1.6
	0.2nm45nm,0.8s						
KAPI	Kappang	8.59	59	P	Pn	02 36 44.2	0.0
	0.5nm,0.3s,baz=261,slow=16,SNR=2.0						
KAPI				S	Sn	02 38 16.3	-3.4
	0.4nm,0.3s,baz=221,slow=22,SNR=1.5						
KAPI				LR	LR	02 40 23.5	
	comp=Z,127nm,21.5s,baz=288,slow=41						
EDFI	Ende, Flores	9.24	86	P	Pn	02 36 53.2	+0.1
MDSI	Maura Dua	9.55	301	P	Pn	02 36 57.6	+0.3
	5.2nm,1.3s						
MNAI	Manna	10.66	298	Pn	Pn	02 37 12.3	-0.2
MNAI	Manna	10.66	298	P	Pn	02 37 14.2	+1.7
BATI	Baumata	11.15	94	P	Pn	02 37 22.7	+3.5
	4.6nm,0.3s,baz=348,slow=7.8,SNR=2.0						
BATI				S	Sn	02 39 18.3	-4.2
	2.2nm,0.3s,baz=54,slow=22,SNR=1.3						
GIRL	Giralia	13.15	172	Pn	Pn	02 37 44.2	-2.2
GIRL	Giralia	13.15	172	P	Pn	02 37 43.6	-2.9
	135nm,1.8s						
LUWI	Luwuk	13.36	51	Pn	Pn	02 37 51.4	+2.1
TOLI2	Tolitoli	13.50	39	Pn	Pn	02 37 51.2	-0.1
MBWA	Marble Bar	13.55	149	P	Pn	02 37 48.2	-3.8
PSA00	Pilbara Seismi	13.96	150	Pn	Pn	02 37 54.9	-2.6
PSA00	Pilbara Seismi	13.96	150	P	Pn	02 37 56.0	-1.5
	14nm,1.4s						
GTOI	Gorontalo	14.64	47	P	Pn	02 38 08.4	+1.8
	212nm21nm,0.8s						
FITZ	Fitzroy Crossi	15.43	125	S	Sn	02 40 54.9	-12
	0.2nm,0.3s,baz=229,slow=16,SNR=2.0						
SANI	Sanana	15.45	62	P	Pn	02 38 19.8	+2.7
KNRA	Kununurra	17.12	113		Pn	02 38 39.3	+1.2
KNRA				IAmb	IAmb	02 38 58.3	
	comp=Z,57nm,1.5s						
MEEK	Meekatharra	18.00	162	P	P	02 38 48.2	-0.8
	comp=Z,12nm,0.6s						
PSI	Prapat	18.16	312	LR	LR	02 45 43.6	
	comp=Z,67nm,18.1s,baz=142,slow=36						
MTN	Manton Dam	18.70	102	Pn	P	02 38 57.9	+1.2
MTN				IAmb	IAmb	02 39 03.7	
	comp=Z,20nm,0.9s						
MORW	Morawa	19.73	170	P	P	02 39 06.8	-1.1
MORW				IAmb	IAmb	02 39 17.8	
	comp=Z,6.6nm,0.8s						
SWI	Sorong	20.68	66	P	P	02 39 19.0	+0.7
	comp=Z,51nm,0.8s						
SIJI	Sorong	20.68	66	P	P	02 39 18.1	-0.3
	comp=Z,16nm,0.5s,baz=280,slow=10,SNR=15						
SIJI				LR	LR	02 49 10.6	
	comp=Z,59nm,18.7s,baz=21,slow=42						
FAKI	Fak Fak	20.82	73	P	P	02 39 20.1	+0.3
	comp=Z,42nm,0.7s						
FAKI	Fak Fak	20.82	73	P	P	02 39 20.1	+0.3
FAKI				IAmb	IAmb	02 39 21.3	
	comp=Z,30nm,0.6s						
WB0	Warramunga Arr	23.58	118	P	P	02 39 48.1	-0.6
WRA	Warramunga Arr	23.60	118	P	P	02 39 49.3	+0.4
	comp=Z,1.6nm,0.6s,baz=296,slow=11,SNR=12						
WRA				S	S	02 44 08.0	+8.1
	comp=Z,0.6nm,0.6s,baz=283,slow=25,SNR=3.0						
WRA				LR	LR	02 49 16.6	
	comp=Z,71nm,21.9s,baz=105,slow=37						
WRA	Warramunga Arr	23.60	118	P	P	02 39 48.4	-0.5
WB2	Warramunga Arr	23.61	118	P	P	02 39 48.6	-0.4
WB2				IAmb	IAmb	02 40 05.9	
	comp=Z,4.8nm,0.8s						
WR0	Warramunga Arr	23.78	118	P	P	02 39 50.3	-0.3
WR0				IAmb	IAmb	02 40 08.1	
	comp=Z,6.5nm,0.8s						
AS31	Alice Springs	24.91	127	P	P	02 40 00.2	-0.7
ASAR	Alice Springs	24.91	127	P	P	02 40 02.8	+1.9
	comp=Z,1.8nm,0.5s,baz=298,slow=8.9,SNR=20						
ASAR				PcP	PcP	02 43 37.5	+1.7
	comp=Z,0.5nm,0.8s,baz=304,slow=1.7,SNR=1.9						
ASAR				S	S	02 44 33.4	+12
	comp=Z,0.2nm,0.3s,baz=306,slow=25,SNR=1.3						
ASAR				LR	LR	02 51 29.3	
	comp=Z,51nm,18.5s,baz=286,slow=40						
ASAR	Alice Springs	24.91	127	P	P	02 39 59.6	-1.3
FORT	Forrest	25.70	148	P	P	02 40 06.4	-1.5
FORT				IAmb	IAmb	02 40 13.0	
	comp=Z,16nm,0.7s						
CMAR	Chiang Mai Arr	30.81	335	P	P	02 40 53.7	+0.1
	comp=Z,0.5nm,0.3s,baz=170,slow=7.9,SNR=6.3						
CMAR				LR	LR	02 54 18.0	
	comp=Z,66nm,19.1s,baz=201,slow=38						
CMAR	Chiang Mai Arr	30.81	335	P	P	02 40 51.9	-1.7
STKA	Stephens Creek	35.03	134	P	P	02 41 32.8	+2.5
	comp=Z,2.0nm,0.6s,baz=318,slow=12,SNR=4.2						
STKA				LR	LR	02 56 23.9	
	comp=Z,60nm,20.6s,baz=21,slow=37						
STKA	Stephens Creek	35.03	134	P	P	02 41 30.0	-0.4
H08S2	Diego Garcia H	39.46	270	T	T	03 24 14.7	
	baz=95,slow=74						
H08S3	Diego Garcia H	39.47	270	T	T	03 24 14.6	
	baz=95,slow=74						
H08S1	Diego Carcia H	39.48	270	T	T	03 24 18.8	
	baz=95						
CD2	Chengdu	41.06	349	P	P	02 42 20.5	-0.6
KSRS	Korea Array	48.97	16	P	P	02 43 23.1	-0.7
	comp=Z,1.1nm,0.4s,baz=202,slow=7.8,SNR=4.9						
KSRS				LR	LR	03 05 24.2	
	comp=Z,8.9nm,18.0s,baz=230,slow=38						
HHC	Hu-ho-hao-te	50.14	359	*e*P	P	02 43 35.7	+2.9
HHC				pmax	pmax		
	comp=Z,19nm,0.7s						
HHC				pmax	pmax		
	comp=Z,56nm,6.6s						
MJAR	Matsushiro Arr	51.88	26	P	P	02 43 43.4	-2.4
	comp=Z,3.7nm,1.0s,baz=205,slow=8.3,SNR=5.4						
USA0B	Ussuriysk Arra	56.37	17	P	P	02 44 17.2	-1.2
USRK	Ussuriysk Ar.	56.37	17	P	P	02 44 16.8	-1.5
	comp=Z,9.5nm,0.8s,baz=204,slow=6.3,SNR=20						
USRK	Ussuriysk Ar.	56.37	17	P	P	02 44 17.4	-1.0
SONM	Songino Array	57.37	355	P	P	02 44 24.0	-1.6
	comp=Z,1.0nm,0.6s,baz=174,slow=9.6,SNR=6.5						
SONM	Songino Array	57.37	355	P	P	02 44 23.8	-1.7
SONM				IAmb	IAmb	02 44 25.7	
	comp=Z,1.0nm,0.8s						
WMQ	Urumqi	57.65	339	*e*P	P	02 44 28.0	+0.5
GAR	Garm	62.13	324	P	P	02 44 55.3	-3.2
GAR				IAmb	IAmb	02 44 59.1	
	comp=Z,3.3nm,0.6s						
MK31	Makanchi Array	62.17	337	P	P	02 44 56.6	-1.9
MK31				IAmb	IAmb	02 44 58.4	
	comp=Z,2.1nm,0.8s						
MKAR	Makanchi Array	62.17	337	P	P	02 44 57.6	-0.9
	comp=Z,2.9nm,0.6s,baz=147,slow=7.2,SNR=31						
MKAR	Makanchi Array	62.17	337	P	P	02 44 56.9	-1.6
AAK	Ala-Archa	62.39	329	P	P	02 44 58.9	-1.3
AAK				IAmb	IAmb	02 45 01.4	
	comp=Z,3.0nm,0.9s						
BKZ	Black Stump Fm	64.01	129	P	P	02 45 11.4	+0.4
URZ	Urewera	64.35	128	P	P	02 45 10.7	-2.4
MAW	Mawson	66.57	199	LR	LR	03 09 21.3	
	comp=Z,34nm,20.4s,baz=246,slow=31						
ZALV	Zalesovo Beam	67.41	343	P	P	02 45 30.9	-1.4
	comp=Z,2.2nm,0.5s,baz=149,slow=4.4,SNR=11						
VNDA	Vanda	72.54	170	P	P	02 46 06.5	+2.9
	comp=Z,1.4nm,0.8s,baz=302,slow=5.8,SNR=4.8						
TIXI	Tiksi	81.76	5	P	P	02 46 53.9	-1.3
	comp=Z,1.6nm,0.5s,baz=129,slow=3.7,SNR=4.6						
LSZ	Lusaka	81.97	256	LR	LR	03 18 23.2	
	comp=Z,52nm,19.7s,baz=148,slow=32						
SNAA	Sanae	88.67	197	P	P	02 47 32.5	+2.5
VNA2	Neumayer--Watz	90.31	197	P	P	02 47 40.8	+3.2
	baz=103,slow=3.8						
VNA3	Neumayer Olymp	90.77	196	P	P	02 47 42.7	+3.0

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*IDC **12** 02:41:02.7±0.8, 51°.73N×173°.03W, h0^{km}, mb3.9/17, mb1 4.2/20, mb1mx4.0/43, mbtmp3.9/20, ML3.5/3, MS3.4/6, Ms1 3.4/6, ms1mx3.0/40, Error ellipse: s-maj=24.5km s-min=14.7km az=170.0*

*AEIC **12** 02:41:03±2.9, 51°.34N±0°.08×172°.74W±0°.09, h7^{km}±4^{km}, Error ellipse: s-maj=11.4km s-min=8.0km az=174.0*

*NEIC **12** 02:41:05.2±1.4, 51°.57N±0°.08×172°.76W±0°.06, h10^{km}±1^{km}, mb4.0/66, ML3.7(AEIC), Error ellipse: s-maj=13.0km s-min=6.4km az=188.0*

ISC 12 02:41:07.6±0.6**, 51°.51N**±0°.09×**172°.83W**±0°.05**, h37^{km}, n126, σ1^{s}.17**/118**, mb4.0**/22**, MS3.2**/5**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOFP	Korovin Flat P	1.09	315		Pn	02 41 26.4	0.0
KOSE	Korovin Southe	1.12	318		Pn	02 41 27.7	+0.9
KOSE					Sn	02 41 46.0	+5.0
KOKL	Mount Kliuchef	1.17	314		Pn	02 41 28.0	+0.5
GSIG	Igitkin Island	1.98	285		Pn	02 41 38.9	+0.4
GSMY	Great Sitkin M	2.07	286		Pn	02 41 40.6	+0.8
GSTR	Great Sitkin T	2.09	287		Pn	02 41 41.0	+1.0
GSTD	Great Sitkin T	2.13	286		Pn	02 41 41.2	+0.6
GSTD					Sn	02 42 07.7	+1.8
ADK	Adak	2.42	280		Pn	02 41 45.6	+1.0
ADK				Sn	Sn	02 42 14.0	+1.0
KIWB	Kanaga Island	2.71	279		Pn	02 41 50.2	+1.7
KIMD	Kanaga Island	2.75	277		Pn	02 41 50.3	+1.1
TAPA	Tanaga Point A	3.12	278		Pn	02 41 55.0	+0.8
TASE	Tanaga Southea	3.26	278		Pn	02 41 57.0	+0.9
UNV	Unalaska Valle	4.50	56	Pn	Pn	02 42 14.1	+0.9
AMKA	Amchitka	4.92	272	Pn	Pn	02 42 20.4	+1.5
P18K	Big Mountain,	12.70	45	Pn	Pn	02 44 05.8	+0.4
OHAK	Old Harbor	12.73	56	Pn	Pn	02 44 06.7	+0.9
O18K	Koktuh Hills	12.95	43	Pn	Pn	02 44 08.2	-0.6
KDAK	Kodiak Island	13.27	54	Pn	Pn	02 44 13.4	+0.3
	0.2nm,0.3s,baz=260,slow=6.1,SNR=1.6						
KDAK	Kodiak Island	13.27	54	Pn	Pn	02 44 12.1	-1.0
M19K	Big River Lodg	14.46	37	Pn	Pn	02 44 29.0	-0.4
CNPM	China Poot	14.57	48	Pn	Pn	02 44 30.9	0.0
BRLK	Bradley Lake	14.83	48	Pn	Pn	02 44 33.3	-1.1
K20K	Telida	15.50	33	Pn	Pn	02 44 44.4	+1.2
K20K				IAmb	IAmb	02 44 52.0	
	comp=Z,5.0nm,0.8s						
SKT	Skwentna	15.61	40	Pn	Pn	02 44 45.5	+0.9
SEW	Seward	15.63	48	Pn	Pn	02 44 43.2	-1.6
PPLA	Purkeypile	15.88	36	Pn	Pn	02 44 48.4	+0.2
PPLA				IAmb	IAmb	02 44 58.7	
	comp=Z,20nm,1.4s						
J20K	Nowinta River	16.03	31	Pn	Pn	02 44 49.0	-1.0
PMR	Palmer	16.41	43	Pn	Pn	02 44 54.4	-0.3
PMR				IAmb	IAmb	02 44 58.3	
	comp=Z,17nm,1.2s						
PWL	Port Wells	16.44	46	Pn	Pn	02 44 54.9	-0.3
PWL				IAmb	IAmb	02 45 00.7	
	comp=Z,14nm,0.8s						
KNK	Knik Glacier	16.62	44	Pn	Pn	02 44 56.5	-0.9
KTH	Kantishna Hill	16.73	35	Pn	Pn	02 44 59.2	+0.3
KTH				IAmb	IAmb	02 45 19.9	
	comp=Z,11nm,1.0s						
SML	Sawmill	16.84	43	Pn	Pn	02 44 58.7	-1.6
SML				IAmb	IAmb	02 45 07.2	
	comp=Z,19nm,1.0s						
TRF	Thorofare Moun	16.90	36	Pn	Pn	02 45 01.2	0.0
BPAW	Bear Paw Mtn.	17.04	34	P	Pn	02 45 02.2	-0.4
BPAW				IAmb	IAmb	02 45 19.6	
	comp=Z,14nm,1.5s						
SCM	Sheep Creek Mo	17.29	43	Pn	Pn	02 45 05.3	-0.5
SCM				IAmb	IAmb	02 45 09.3	
	comp=Z,9.2nm,0.8s						
I21K	Tanana	17.40	30	P	P	02 45 07.8	-0.3
I21K				IAmb	IAmb	02 45 11.6	
	comp=Z,14nm,1.1s						
IMAR	Indian Mountai	17.44	27	P	Pn	02 45 07.6	-0.1
H21K	Melozitna Rive	17.48	28	Pn	Pn	02 45 07.0	-1.1
DIV	Divide	17.70	47		Pn	02 45 10.8	-0.1
DIV				IAmb	IAmb	02 45 28.9	
	comp=Z,18nm,1.3s						
MLY	Manley	17.70	32	P	Pn	02 45 10.3	-0.6
KLU	Klutina	17.76	45		Pn	02 45 11.8	+0.1
KLU				IAmb	IAmb	02 45 16.8	
	comp=Z,8.0nm,1.0s						
DHY	Denali Highway	17.83	40		Pn	02 45 12.4	-0.2
M24K	Tolsona, Glenn	17.89	43	Pn	Pn	02 45 08.2	-5.1
M24K				IAmb	IAmb	02 45 11.4	
	comp=Z,7.1nm,0.8s						
PETK	Petropavlovsk-	18.03	287	P	Pn	02 45 12.0	-3.1
	comp=Z,0.2nm,0.3s,baz=78,slow=14,SNR=2.3						
PETK				LR	LR	02 51 36.1	
	comp=Z,56nm,21.8s,baz=105,slow=36						
PETK	Petropavlovsk-	18.03	287	P	Pn	02 45 14.0	-1.0
BMRM	Bremner River	18.18	48	P	Pn	02 45 15.5	-1.3
BMRM				IAmb	IAmb	02 45 31.3	
	comp=Z,13nm,1.0s						
I23K	Minto, Yukon-K	18.23	33	P	P	02 45 17.5	+0.2
I23K				IAmb	IAmb	02 45 37.1	
	comp=Z,8.6nm,0.9s						
WRH	Wood River Hil	18.28	35	P	P	02 45 16.5	-1.3
CCB	Clear Creek Bu	18.48	35	P	P	02 45 19.3	-0.7
MDM	Murphy Dome	18.51	34	P	P	02 45 20.4	0.0
H23K	Yukon River	18.59	31		Pn	02 45 22.0	+0.2
HDA	Harding Lake	18.67	36	P	P	02 45 22.1	0.0
GLB	Gilahina Butte	18.70	47	P	P	02 45 22.6	+0.1
WAX	Waxell Ridge	18.85	50		P	02 45 23.9	-0.4
IL31		18.88	35	P	P	02 45 24.2	-0.2
IL31				IAmb	IAmb	02 45 28.6	
	comp=Z,8.5nm,1.1s						
ILAR	Eielson Array	18.88	35	P	P	02 45 21.3	-3.2
	comp=Z,0.4nm,0.3s,baz=233,slow=9.8,SNR=28						
ILAR	Eielson Array	18.88	35	P	P	02 45 23.6	-0.8
TGL	Tana Glacier	18.95	49	P	P	02 45 25.5	+0.3
MCARA	McCarthy VSAT	19.04	47	P	Pn	02 45 26.6	-0.6
MCARA				IAmb	IAmb	02 45 35.5	
	comp=Z,22nm,1.4s						
H24K	Noodor Dome	19.14	32	P	P	02 45 27.1	-0.2
H24K				IAmb	IAmb	02 45 30.8	
	comp=Z,8.1nm,0.7s						
RIDG	Independent Ri	19.15	40	P	P	02 45 26.8	-0.6
RIDG				IAmb	IAmb	02 45 45.1	
	comp=Z,20nm,1.2s						
COLD	Coldfoot	19.33	27	P	P	02 45 29.2	0.0
COLD				IAmb	IAmb	02 45 32.2	
	comp=Z,6.7nm,0.9s						
M26K	Nabesna, AK	19.38	44	P	P	02 45 29.7	-0.3
M26K				IAmb	IAmb	02 45 48.3	
	comp=Z,13nm,1.4s						
DOT	Dot Lake	19.42	40	P	P	02 45 30.1	-0.3
GRNC	Granite Creek	19.45	50	P	P	02 45 30.7	-0.2
BARN	Barnard Glacie	19.58	49	P	P	02 45 32.3	0.0
BARN				IAmb	IAmb	02 45 44.8	
	comp=Z,5.7nm,0.9s						
SCRK	Sand Creek	19.59	39	P	P	02 45 31.5	-0.8
SCRK				IAmb	IAmb	02 45 34.3	
	comp=Z,4.2nm,0.8s						
TABL	Table Mountain	19.67	51	P	Pn	02 45 34.2	-0.7
TABL				IAmb	IAmb	02 45 53.7	
	comp=Z,14nm,1.1s						
CTGM	Chitina Glacie	19.71	49	P	P	02 45 31.6	-2.0
CTGM				IAmb	IAmb	02 45 38.5	
	comp=Z,9.8nm,0.8s						
PRP	Porcupine Dome	19.77	34	P	P	02 45 32.8	-1.5
LOGN	Logan Glacier	19.83	50	P	P	02 45 35.4	+0.4
LOGN				IAmb	IAmb	02 45 49.2	
	comp=Z,9.9nm,1.1s						
M27K	Edge Creek, AK	19.86	45	P	P	02 45 35.4	+0.1
PCA	Pinnacle	20.04	52	P	P	02 45 37.1	0.0
L27K	Beaver Creek,	20.12	43		Pn	02 45 39.0	-1.0
L27K				IAmb	IAmb	02 45 45.3	
	comp=Z,4.7nm,0.8s						
BCAR	Beaver Creek A	20.14	43	Pn	Pn	02 45 39.7	-0.6
TOLK	Toolik Lake Re	20.49	24	P	P	02 45 42.2	+0.2
TOLK				IAmb	IAmb	02 45 57.5	
	comp=Z,7.1nm,0.8s						
EGAK	Eagle	21.05	39	P	P	02 45 46.4	-1.6
BMAR	Burnt Mountain	21.14	30	P	P	02 45 49.5	+0.5
DAWY	Dawson	21.49	41	P	P	02 45 52.1	-0.6
DAWY				IAmb	IAmb	02 45 59.5	
	comp=Z,4.4nm,0.9s						
HYT	Haines Junctio	21.51	51	P	P	02 45 54.0	+1.0
HYT				IAmb	IAmb	02 46 02.2	
	comp=Z,11nm,1.1s						
MA2	Magadan	21.87	306	LR	LR	02 53 56.8	
	comp=Z,79nm,18.3s,baz=106,slow=36						
BESE	Bessie Mountai	22.62	57	P	P	02 46 06.9	+2.0
EPYK	Eagle Plains	23.37	37	P	P	02 46 11.8	-0.6
DLBC	Dease Lake	25.16	57	P	P	02 46 30.1	+1.1
	comp=Z,4.4nm,0.8s,baz=300,slow=7.7,SNR=8.2						
INK	Inuvik	25.24	34	P	P	02 46 29.3	-0.3
	comp=Z,6.9nm,0.6s,baz=236,slow=8.8,SNR=42						
INK	Inuvik	25.24	34	P	P	02 46 29.7	+0.1
A36M	Sachs Harbour	29.18	28	P	P	02 47 04.7	-0.2
A36M				IAmb	IAmb	02 47 06.0	
	comp=Z,3.4nm,0.9s						
NEW	Newport	35.31	73	P	P	02 47 60.0	+1.1
	comp=Z,0.8nm,0.5s,baz=293,slow=7.5,SNR=3.9						
NEW	Newport	35.31	73	P	P	02 47 59.7	+0.8
KMRM	Mail Ridge	35.38	89	P	P	02 48 00.7	+1.1
EDM	Edmonton	35.45	63	P	P	02 48 00.5	+0.5
H11N2	WAKE ISLAND Hy	35.49	214	T	T	03 26 11.4	
	baz=21,slow=76,SNR=7.5						
H11N3	WAKE ISLAND Hy	35.50	214	T	T	03 26 14.2	
	baz=21,slow=76,SNR=6.4						
H11N1	WAKE ISLAND Hy	35.51	214	T	T	03 26 08.9	
	baz=21,slow=76,SNR=6.3						
K05A	Summer Lake	35.74	83	P	P	02 48 03.3	+0.5
I07A	Izee	35.88	80	P	P	02 48 04.8	+0.9
I07A				IAmb	IAmb	02 48 08.7	
	comp=Z,2.3nm,1.1s						
H11S1	WAKE ISLAND Hy	36.69	214	T	T	03 27 31.7	
	baz=20,slow=75,SNR=15						
H11S2	WAKE ISLAND Hy	36.70	214	T	T	03 27 33.0	
	baz=20,slow=75,SNR=11						
H11S3	WAKE ISLAND Hy	36.71	214	T	T	03 27 35.7	
	baz=20,slow=75,SNR=4.2						
PAHR	Pah Rah Range	38.38	86	P	P	02 48 25.8	+0.6
PAHR				IAmb	IAmb	02 48 40.1	
	comp=Z,1.7nm,0.8s						
HLID	Hailey	39.28	78	P	P	02 48 33.7	+0.9
MCMT	McKenzie Canyo	39.56	75	P	P	02 48 36.0	+0.9
NVAR	Mina Array Bea	39.82	87	P	P	02 48 39.1	+1.8
	comp=Z,0.5nm,0.7s,baz=297,slow=8.0,SNR=5.3						
NVAR				LR	LR	03 02 53.4	
	comp=Z,37nm,19.6s,baz=304,slow=33						
NVAR	Mina Array Bea	39.82	87	P	P	02 48 37.6	+0.2
PDAR	Pinedale Array	42.68	76	P	P	02 49 01.7	+0.9
	comp=Z,0.8nm,0.6s,baz=317,slow=4.3,SNR=9.0						
SONM	Songino Array	49.88	300	P	P	02 49 55.0	-2.1
	comp=Z,0.4nm,0.4s,baz=68,slow=8.0,SNR=3.1						
KAN01	Argonia South	53.27	74	P	P	02 50 23.1	+0.7
TXAR	Lajitas Array	54.93	86	P	P	02 50 35.2	+0.5
	comp=Z,0.5nm,0.7s,baz=299,slow=5.4,SNR=6.6						
ZALV	Zalesovo Beam	56.58	316	LR	LR	03 17 03.2	
	comp=Z,19nm,18.6s,baz=27,slow=38						
ARCES	ARCESS Array B	58.52	353	P	P	02 50 59.5	0.0
	comp=Z,6.5nm,1.0s,baz=13,slow=8.3,SNR=2.0						
MKAR	Makanchi Array	62.80	312	P	P	02 51 28.2	-0.8
	comp=Z,0.8nm,0.7s,baz=59,slow=5.9,SNR=6.9						
MKAR	Makanchi Array	62.80	312	P	P	02 51 28.9	-0.2
FINES	FINESS Array B	66.38	350	P	P	02 51 51.4	-0.7
	comp=Z,2.2nm,1.1s,baz=29,slow=6.3,SNR=1.6						
FINES				LR	LR	03 23 17.6	
	comp=Z,25nm,18.1s,baz=327,slow=38						
NOA	NORSAR Array B	67.75	358	P	P	02 51 59.1	-1.8
	comp=Z,0.4nm,0.6s,baz=0.6,slow=6.3,SNR=1.9						
CMAR	Chiang Mai Arr	74.69	280	P	P	02 52 44.7	+1.3
	comp=Z,0.7nm,0.3s,baz=32,slow=5.3,SNR=4.2						
CMAR	Chiang Mai Arr	74.69	280	P	P	02 52 43.5	+0.1
AKASG	Malin Array Be	76.45	346	P	P	02 52 51.7	-1.3
	comp=Z,0.7nm,0.5s,baz=16,slow=5.9,SNR=4.4						
AKASG	Malin Array Be	76.45	346	P	P	02 52 52.0	-1.0
AKASG				IAmb	IAmb	02 52 59.9	
	comp=Z,2.4nm,1.4s						
CTA	Charters Tower	79.79	219	LR	LR	03 23 03.4	
	comp=Z,88nm,20.8s,baz=41,slow=32						
GERES	GERESS Array B	79.86	356	P	P	02 53 12.3	+0.2
	comp=Z,0.6nm,0.6s,baz=20,slow=4.3,SNR=4.6						
GERES	GERESS Array B	79.86	356	P	P	02 53 11.3	-0.8
WRA	Warramunga Arr	84.81	229	P	P	02 53 38.1	+0.1
	comp=Z,0.3nm,0.6s,baz=30,slow=6.0,SNR=5.7						
WRA	Warramunga Arr	84.81	229	P	P	02 53 38.5	+0.5
ASAR	Alice Springs	88.22	227	P	P	02 53 55.6	+1.0
	comp=Z,1.2nm,0.6s,baz=31,slow=4.9,SNR=19						
ESDC	Sonseca Array	88.67	9	P	P	02 53 56.6	-0.2
	comp=Z,0.5nm,0.9s,baz=334,slow=4.3,SNR=3.2						
ESDC	Sonseca Array	88.67	9	P	P	02 53 54.7	-2.1
ESDC				IAmb	IAmb	02 54 16.4	
	comp=Z,1.3nm,1.4s						

IDC 12 02:46:41.2±6.7**, 19°.06S×10°.96W, h0^{km}, mb3.6**/4**, mb1 3.8**/4**, mb1mx3.6**/21**, mbtmp3.6**/4**, Error ellipse: s-maj=211.5km s-min=141.8km az=114.0, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TORD	Torodi Ar. Bea	34.35	22	P	P	02 53 29.9	-0.1
	1.1nm,0.5s,baz=204,slow=8.6,SNR=11						
ESDC	Sonseca Array	58.79	6	P	P	02 56 41.4	0.0
	0.5nm,0.8s,baz=185,slow=7.7,SNR=3.2						
GERES	GERESS Array B	71.09	17	P	P	02 58 01.2	-0.1
	0.2nm,0.4s,baz=187,slow=4.9,SNR=3.9						
AKASG	Malin Array Be	77.94	25	P	P	02 58 41.0	+0.1
	0.1nm,0.3s,baz=224,slow=5.7,SNR=5.0						

IDC 12 02:57:41.0±2.3**, 2°.35N×127°.48E, h0^{km}, mb3.5**/3**, mb1 3.8**/3**, mb1mx3.2**/33**, mbtmp3.6**/3**, MS3.5**/1**, Ms1 3.4**/1**, ms1mx2.5**/24**, Error ellipse: s-maj=167.4km s-min=27.6km az=67.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.15	163	P	P	03 02 49.6	+0.4
	0.6nm,0.3s,baz=342,slow=11,SNR=17						
ASAR	Alice Springs	26.61	167	P	P	03 03 20.9	-0.4
	0.4nm,0.5s,baz=355,slow=8.3,SNR=11						
STKA	Stephens Creek	36.58	160	LR	LR	03 20 39.8	
	comp=Z,60nm,18.0s,baz=19,slow=38						
MKAR	Makanchi Array	59.11	325	P	P	03 07 43.5	+0.1
	0.2nm,0.4s,baz=130,slow=8.8,SNR=2.2						

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*IDC **12** 03:08:09.4±0.8, 20°.43S×11°.65W, h0^{km}, mb4.1/13, mb1 4.2/13, mb1mx4.0/30, mbtmp4.1/13, MS3.8/16, Ms1 3.8/16, ms1mx3.6/27, Error ellipse: s-maj=30.2km s-min=20.2km az=128.0*

*NEIC **12** 03:08:11.4±1.4, 20°.4S±0°.1×11°.6W±0°.2, h10^{km}±1^{km}, mb4.5/9, Error ellipse: s-maj=27.3km s-min=18.0km az=97.0*

ISC 12 03:08:11.1±0.6**, 20°.4S**±0°.1×**11°.6W**±0°.1**, h10^{km}, n50, σ0^{s}.91**/40**, mb4.3**/23**, MS3.8**/16**, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DBIC	Dimbokro	27.71	15	LR	LR	03 22 59.5	
	comp=Z,99nm,18.0s,baz=208,slow=32						
BOSA	Boshof	34.41	111	LR	LR	03 26 36.7	
	comp=Z,95nm,21.5s,baz=314,slow=32						
KOWA	Kowa	35.48	13	P	P	03 15 08.2	+0.2
	2.1nm,0.8s,baz=223,slow=7.8,SNR=4.3						
KOWA	Kowa	35.48	13	P	P	03 15 07.9	-0.1
KOWA				IAmb	IAmb	03 15 09.3	
	comp=Z,6.5nm,1.2s						
TORD	Torodi Ar. Bea	35.82	23	P	P	03 15 10.7	-0.3
	comp=Z,3.1nm,0.8s,baz=203,slow=8.2,SNR=16						
TORD				LR	LR	03 27 46.1	
	comp=Z,135nm,18.7s,baz=210,slow=33						
TORD	Torodi Ar. Bea	35.82	23	P	P	03 15 09.7	-1.2
LSZ	Lusaka	38.15	89	P	P	03 15 31.5	+0.5
	comp=Z,1.2nm,0.3s,baz=271,slow=9.5,SNR=5.0						
ITQB	Itaqui	41.60	248	P	P	03 15 58.6	-0.9
CPUP	Villa Florida	42.22	253	P	P	03 16 04.4	-0.2
	comp=Z,2.2nm,0.9s,baz=99,slow=6.3,SNR=3.8						
CPUP				LR	LR	03 32 16.6	
	comp=Z,130nm,20.2s,baz=76,slow=34						
CPUP	Villa Florida	42.22	253	P	P	03 16 03.2	-1.4
SIV	San Ignacio	47.07	267	P	P	03 16 42.8	-0.7
	comp=Z,0.9nm,0.9s,baz=85,slow=12,SNR=2.5						
SIV				LR	LR	03 33 56.7	
	comp=Z,196nm,21.3s,baz=96,slow=33						
MDP	Montagnes des	47.62	298	P	P	03 16 50.4	+2.8
	comp=Z,28nm,1.1s,baz=112,slow=5.4,SNR=3.3						
VNA1	Neumayer--Stat	50.28	179	P	P	03 17 08.1	+0.8
VNA2	Neumayer--Watz	50.58	178	P	P	03 17 10.0	+0.3
	baz=348,slow=8.4						
VNA3	Neumayer Olymp	50.85	179	P	P	03 17 11.9	+0.3
SAML	Samuel	50.99	275	P	P	03 17 13.0	-0.5
SAML				IAmb	IAmb	03 17 14.8	
	comp=Z,5.5nm,1.4s						
KMBO	Kilima Mbogo	51.40	74	LR	LR	03 36 42.6	

	comp=Z,107nm,19.9s,baz=278,slow=33						
SNAA	Sanae	51.52	176	P	P	03 17 17.4	+0.6
SNAA	Sanae	51.52	176	P	P	03 17 16.0	-0.8
	comp=Z,5.0nm,1.3s,baz=335,slow=8.3,SNR=3.3						
SNAA	Sanae	51.52	176	P	P	03 17 17.1	+0.3
SNAA				IAmb	IAmb	03 17 19.0	
	comp=Z,9.6nm,1.5s						
LVC	Limon Verde	53.08	257	LR	LR	03 39 08.3	
	comp=Z,70nm,21.1s,baz=153,slow=35						
PLCA	Paso Flores	53.63	234	LR	LR	03 38 33.8	
	comp=Z,112nm,19.5s,baz=118,slow=34						
KEST	Kesra	59.26	20	P	P	03 18 13.8	+0.9
	comp=Z,2.4nm,0.9s,baz=150,slow=14,SNR=3.4						
KEST	Kesra	59.26	20	P	P	03 18 12.8	0.0
KEST				IAmb	IAmb	03 18 22.5	
	comp=Z,8.4nm,1.4s						
ESDC	Sonseca Array	60.20	7	P	P	03 18 19.1	-0.1
	comp=Z,1.5nm,1.1s,baz=195,slow=7.4,SNR=9.2						
ESDC				LR	LR	03 42 43.3	
	comp=Z,42nm,18.4s,baz=325,slow=34						
ESDC	Sonseca Array	60.20	7	P	P	03 18 17.0	-2.2
NNA	Nana	62.88	267	LR	LR	03 44 15.2	
	comp=Z,77nm,19.1s,baz=130,slow=34						
TIP	Timpagrande	64.95	24	P	P	03 18 50.9	-0.1
TIP				IAmb	IAmb	03 18 58.8	
	comp=Z,10nm,1.5s						
ATAH	Atahualpa	65.82	271	LR	LR	03 46 19.8	
	comp=Z,199nm,18.3s,baz=124,slow=35						
ROSC	El Rosal	66.46	285	LR	LR	03 46 23.4	
	comp=Z,116nm,19.2s,baz=174,slow=34						
OCAC	Ocana	67.01	289	P	P	03 19 04.7	-0.2
DAVA	Damuels	70.11	15	*e*P	P	03 19 23.2	-0.4
	comp=Z,8.0nm,1.4s						
ABTA	Abfaltersbach	70.30	17	*e*P	P	03 19 26.3	+1.6
	comp=Z,2.6nm,0.8s						
SQTA	Sankt Quirin	70.39	16	*e*P	P	03 19 25.4	+0.1
	comp=Z,5.4nm,1.6s						
WTTA	Wattenberg	70.54	17	*e*P	P	03 19 26.4	+0.1
	comp=Z,8.1nm,1.1s						
SOKA	Soboth	70.98	19	*e*P	P	03 19 29.8	+1.0
	comp=Z,5.8nm,1.3s						
ARSA	Arzberg	71.64	19	*e*P	P	03 19 33.5	+0.7
	comp=Z,3.7nm,0.7s						
CONA	Conrad Observa	72.35	19	*e*P	P	03 19 37.9	+0.8
	comp=Z,4.3nm,1.2s						
GERES	GERESS Array B	72.55	17	P	P	03 19 38.0	-0.3
	comp=Z,0.2nm,0.3s,baz=208,slow=3.3,SNR=2.8						
GERES	GERESS Array B	72.55	17	P	P	03 19 37.6	-0.6
BRTR	Keskin Array B	73.22	35	P	P	03 19 44.0	+1.5
	comp=Z,1.9nm,0.8s,baz=208,slow=5.0,SNR=4.4						
BRTR				LR	LR	03 52 57.6	
	comp=Z,23nm,18.0s,baz=220,slow=37						
BRTR	Keskin Array B	73.22	35	P	P	03 19 42.0	-0.5
AKASG	Malin Array Be	79.41	25	P	P	03 20 16.7	-0.5
	comp=Z,0.4nm,0.4s,baz=221,slow=5.5,SNR=6.4						
VNDA	Vanda	82.20	179	LR	LR	03 52 46.2	
	comp=Z,54nm,18.9s,baz=145,slow=33						
NOA	NORSAR Array B	83.23	11	P	P	03 20 36.8	-0.5
	comp=Z,0.8nm,0.7s,baz=197,slow=6.0,SNR=2.4						
NOA				LR	LR	03 57 57.5	
	comp=Z,33nm,18.4s,baz=245,slow=36						
FINES	FINESS Array B	86.98	17	P	P	03 20 55.9	-0.2
	comp=Z,1.8nm,0.9s,baz=209,slow=3.5,SNR=5.7						
FINES	FINESS Array B	86.98	17	P	P	03 20 57.1	+1.0
GEYT	Alibeck	87.43	48	LR	LR	04 00 27.1	
	comp=Z,46nm,18.8s,baz=190,slow=36						
NVAR	Mina Array Bea	115.23	304	PKP	PKiKP	03 26 53.6	+0.3
	comp=Z,0.1nm,0.3s,baz=104,slow=3.8,SNR=1.7						
MJAR	Matsushiro Arr	149.14	52	PKPbc	PKPbc	03 27 59.2	-0.9
	comp=Z,2.1nm,1.0s,baz=237,slow=3.0,SNR=5.0						

IDC 12 03:11:19.3±2.0, 7°.99S×125°.52E, h0^{km}, mb3.5/1, mb1 3.8/5, mb1mx3.4/31, mbtmp3.7/5, ML3.5/4, Error ellipse: s-maj=51.5km s-min=28.4km az=75.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	2.86	220	Pn	Pn	03 12 06.5	+0.3
	9.1nm,0.3s,baz=112,slow=1.6,SNR=5.8						
BATI				Sn	Sn	03 12 37.1	-4.3
	3.0nm,0.3s,baz=160,slow=23,SNR=6.3						
FITZ	Fitzroy Crossi	10.05	179	Pn	Pn	03 13 44.1	-0.8
	0.2nm,0.3s,baz=200,slow=9.3,SNR=3.0						
FITZ				Sn	Sn	03 15 27.6	-11
	0.2nm,0.3s,baz=180,slow=7.1,SNR=3.9						
WRA	Warramunga Arr	14.63	145	Pn	Pn	03 14 47.9	+0.1
	0.2nm,0.3s,baz=318,slow=13,SNR=16						
WRA				Sn	Sn	03 17 22.4	-8.5
	0.0nm,0.3s,baz=322,slow=23,SNR=2.9						
ASAR	Alice Springs	17.54	154	P	Pn	03 15 25.9	+0.4
	0.2nm,0.3s,baz=333,slow=13,SNR=16						
ASAR				S	Sn	03 18 27.4	-14
	0.0nm,0.3s,baz=343,slow=18,SNR=1.6						
MKAR	Makanchi Array	66.70	329	P	P	03 22 12.1	0.0
	0.3nm,0.5s,baz=125,slow=5.3,SNR=2.9						

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*IDC **12** 03:11:25.0±4.9, 21°.03S×11°.55W, h0^{km}, mb4.0/5, mb1 4.1/5, mb1mx3.8/30, mbtmp4.0/5, Error ellipse: s-maj=259.7km s-min=104.1km az=108.0*

*NEIC **12** 03:11:26.6±1.2, 21°.2S±0°.2×11°.3W±0°.2, h10^{km}±2^{km}, mb4.5/6, Error ellipse: s-maj=52.4km s-min=15.7km az=141.0*

ISC 12 03:11:27.4±3.4, 21°.1S±0°.7×11°.4W±0°.5, h16^{km}, n12, σ0^{s}.71/12, mb4.2/7, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOWA	Kowa	36.12	12	P	P	03 18 28.5	-0.4
	2.2nm,1.0s,baz=208,slow=7.0,SNR=3.7						
KOWA	Kowa	36.12	12	P	P	03 18 28.7	-0.3
KOWA				IAmb	IAmb	03 18 33.7	
	comp=Z,6.8nm,1.3s						
TORD	Torodi Ar. Bea	36.39	22	P	P	03 18 31.2	-0.1
	comp=Z,3.5nm,0.9s,baz=204,slow=8.6,SNR=13						
TORD	Torodi Ar. Bea	36.39	22	P	P	03 18 30.7	-0.6
TORD				IAmb	IAmb	03 18 32.7	
	comp=Z,9.2nm,1.3s						
TRCB	Terra Rica	38.21	260	P	P	03 18 46.0	-0.8
TRCB				IAmb	IAmb	03 18 46.5	
	comp=Z,8.6nm,0.4s						
TBTG	Tabatinga, AM	59.19	278	P	P	03 21 29.1	+0.9
KEST	Kesra	59.85	19	P	P	03 21 32.8	+0.5
KEST				IAmb	IAmb	03 21 36.0	
	comp=Z,6.1nm,1.1s						
GERES	GERESS Array B	73.16	17	P	P	03 22 56.2	-1.0
	comp=Z,0.6nm,0.8s,baz=193,slow=3.9,SNR=3.8						
GERES	GERESS Array B	73.16	17	P	P	03 22 56.5	-0.7
AKASG	Malin Array Be	79.96	25	P	P	03 23 36.0	+0.4
	comp=Z,0.2nm,0.3s,baz=216,slow=5.7,SNR=4.5						
AKASG	Malin Array Be	79.96	25	P	P	03 23 35.6	+0.1
NOA	NORSAR Array B	83.88	11	P	P	03 23 56.7	+0.7
	comp=Z,1.2nm,1.0s,baz=198,slow=5.6,SNR=2.2						

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*IDC **12** 03:31:41.8±2.1, 30°.61S×71°.77W, h0^{km}, mb3.9/2, mb1 3.8/5, mb1mx3.6/26, mbtmp3.8/5, ML3.3/3, Error ellipse: s-maj=76.3km s-min=29.0km az=104.0*

*NEIC **12** 03:31:43.3±1.2, 30°.54S±0°.04×72°.04W±0°.04, h10^{km}±1^{km}, mb4.1/4, Error ellipse: s-maj=7.2km s-min=5.6km az=206.0*

ISC 12 03:31:43.5±0.9, 30°.57S±0°.05×71°.97W±0°.09, h16^{km}, n36, σ0^{s}.90/33, mb4.0/3, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.31	109		Pb	03 31 51.2	+0.6
CO06					Sb	03 31 55.9	+0.4
CO05	La Serena	0.91	44	Pn	Pn	03 32 01.9	+0.3
CO05				Sn	Sn	03 32 14.7	+0.3
GO04	Tololo Observa	1.09	69		Pb	03 32 04.5	+0.4
CO03	El Pedregal	1.14	104		Pn	03 32 04.1	-0.8
VA01	Torpederas	2.46	174		Pn	03 32 24.3	+1.3
AC04	Llanos de Chal	2.49	19		Pn	03 32 23.8	+0.4
MT02	Curacav	2.77	165	Pn	Pn	03 32 29.2	+1.9
PEL	Peldehue	2.79	157	Pn	Pn	03 32 28.9	+1.3
MT05	Renca	3.00	160	Pn	Pn	03 32 31.6	+1.1
VA05	Santo Domingo	3.09	174	Pn	Pn	03 32 32.6	+0.9
MT09	Talagante	3.30	166	Pn	Pn	03 32 35.5	+0.7
GO03	Copiap	3.33	28		Pn	03 32 35.3	+0.2
MT01	Popeta	3.34	170	Pn	Pn	03 32 36.1	+1.0
BO02	Sierra Bellavi	4.33	167	Pn	Pn	03 32 49.6	+0.9
AC02	Maricunga	4.48	35		Pn	03 32 52.5	+1.2
H03N1	Juan Fernandez	6.55	242	T	T	03 40 10.7	
	baz=72,slow=72,SNR=1559						
H03N2	Juan Fernandez	6.57	242	T	T	03 40 13.4	
	baz=72,slow=72,SNR=1707						
H03N3	Juan Fernandez	6.57	242	T	T	03 40 12.1	
	baz=72,slow=72,SNR=1554						
LVC	Limon Verde	8.39	20	Pn	Pn	03 33 43.6	-1.3
	0.4nm,0.3s,baz=175,slow=12,SNR=1.2						
LVC				Sn	Sn	03 35 19.9	+0.4
	0.4nm,0.3s,baz=235,slow=5.5,SNR=3.3						
LVC	Limon Verde	8.39	20		Pn	03 33 46.0	+1.2
PLCA	Paso Flores	10.21	174	Pn	Pn	03 34 08.3	-1.0
	0.0nm,0.3s,baz=343,slow=14,SNR=1.9						
PLCA	Paso Flores	10.21	174		Pn	03 34 09.9	+0.5
CPUP	Villa Florida	13.56	75	Pn	P	03 35 03.2	-1.0
	0.1nm,0.3s,baz=242,slow=15,SNR=1.4						
SIV	San Ignacio	17.61	37	P	Pn	03 35 48.9	+0.5
	0.2nm,0.3s,baz=218,slow=12,SNR=10						
ETMB	Extrema	21.34	16	P	P	03 36 28.4	-1.6
BDFB	Brasilia	26.50	61	P	P	03 37 20.1	-0.3
	1.0nm,0.4s,baz=214,slow=15,SNR=2.6						
BDFB	Brasilia	26.50	61	P	P	03 37 19.9	-0.5
BDFB				IAmb	IAmb	03 37 28.0	
	comp=Z,4.9nm,1.0s						
BOAV	Boa Vista	34.55	20	P	P	03 38 31.3	-0.2
BOAV				IAmb	IAmb	03 38 33.1	
	comp=Z,2.2nm,0.8s						
SNAA	Sanae	54.74	159	P	P	03 41 12.0	+0.1
TORD	Torodi Ar. Bea	83.00	70	P	P	03 44 08.2	-0.2
	comp=Z,0.9nm,0.8s,baz=255,slow=5.2,SNR=4.6						
H11S2	WAKE ISLAND Hy	125.81	272	T	T	06 09 31.0	
	baz=115,slow=75,SNR=33						
H11S1	WAKE ISLAND Hy	125.82	272	T	T	06 09 26.3	
	baz=115,slow=75,SNR=42						
H11S3	WAKE ISLAND Hy	125.82	272	T	T	06 09 27.5	
	baz=115,slow=75,SNR=37						
ZALV	Zalesovo Beam	151.25	29	PKPbc	PKiKP	03 51 36.5	+0.2
	comp=Z,2.3nm,0.6s,baz=299,slow=3.1,SNR=10						
ZALV	Zalesovo Beam	151.25	29	PKPbc	PKPbc	03 51 36.0	+0.3
MKAR	Makanchi Array	154.36	44	PKPab	PKPab	03 51 57.9	+0.8
	comp=Z,0.4nm,0.8s,baz=4.1,slow=2.0,SNR=3.9						

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*GCG **12** 04:13:13.2±0.3, 13°.65N×90°.74W, h46^{km}±16^{km}, MD3.5*

*SNET **12** 04:13:13.2±0.8, 13°.68N×90°.58W, h24^{km}±2^{km}, ML2.9*

ISC 12 04:13:12.0±2.2, 13°.60N±0°.10×90°.67W±0°.06, h24^{km}±15^{km}, n17, σ0^{s}.50/30, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCG	Pacaya	0.79	4	*e*P	Pn	04 13 28.2	+0.4
PCG				*e*S	Sn	04 13 38.8	-0.3
FUG	Fuego 3	0.86	349	*e*P	Pb	04 13 28.6	+0.2
FUG				*e*S	Sn	04 13 40.7	+0.1
NBG	Las Nubes	1.03	18	*e*P	Pb	04 13 31.9	+0.6
NBG				*e*S	Sn	04 13 46.3	+1.3
RTR	El Retiro	1.04	73	*e*P	Pn	04 13 31.1	-0.1
CEVE	Cerro Verde	1.04	77	*e*P	Pn	04 13 30.9	-0.4
CEVE				*e*S	Sb	04 13 44.8	-0.1
CEVE				IAML		04 13 46.8	
	comp=Z,1µm,0.3s						
SNJE	San Jose	1.07	75	*e*P	Pn	04 13 31.2	-0.5
SNJE				*e*S	Sb	04 13 45.0	-0.6
UNIC	Universidad Ca	1.15	71	*e*P	Pn	04 13 32.4	-0.3
UNIC				*e*S	Sb	04 13 47.1	-0.8
JAYA	Jayaque - finc	1.19	87	*e*P	Pn	04 13 32.6	-0.7
JAYA				*e*S	Sn	04 13 48.2	-0.6
JAYA				IAML		04 13 50.7	
	comp=Z,692nm,0.2s						
PMON	Piamonte	1.32	85	*e*P	Pn	04 13 35.0	-0.1
PMON				*e*S	Sn	04 13 52.1	+0.1
TACO	Tacachico	1.33	74	*e*P	Pn	04 13 34.7	-0.4
TACO				*e*S	Sn	04 13 52.1	0.0
TACO				IAML		04 13 56.4	
	comp=Z,47nm,0.3s						
STG3	Santiaguito 3,	1.41	322	*e*P	Pn	04 13 35.9	-0.4
STG3				*e*S	Sn	04 13 53.8	-0.5
LFRS	El Faro	1.56	89	*e*P	Pn	04 13 38.5	+0.1
LFRS				*e*S	Sn	04 13 58.0	+0.1
ESQI	Esquipulas	1.60	53	*e*P	Pn	04 13 38.3	-0.6
ESQI				*e*S	Sn	04 13 58.7	-0.2
SJTE	Alcalda de S	1.62	89	*e*P	Pn	04 13 39.2	+0.1
SJTE				*e*S	Sn	04 13 59.5	+0.3
SJTE				IAML		04 14 02.4	
	comp=Z,77nm,0.3s						
COEG	Centro de Oper	1.74	89	*e*P	Pn	04 13 41.2	+0.4
COEG				IAML		04 14 14.4	
	comp=Z,140nm,0.4s						
SCLA	Alcaldia de Sa	1.89	87	*e*P	Pn	04 13 42.9	+0.1
LCND	La Caada	2.72	96	*e*P	Pn	04 13 55.0	+0.8
LCND				IAML		04 14 33.3	
	comp=Z,83nm,0.4s						

IDC 12 04:23:30.6±2.3, 6°.59S×129°.94E, h0^{km}, mb3.6/1, mb1 3.8/4, mb1mx3.3/38, mbtmp3.6/4, ML3.7/3, MS2.9/1, Ms1 2.9/1, ms1mx2.3/29, Error ellipse: s-maj=87.6km s-min=29.7km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.84	13	Sn	Sn	04 26 13.8	+7.5
	2.1nm,0.3s,baz=236,slow=23,SNR=3.0						
FITZ	Fitzroy Crossi	12.18	200	Pn	Pn	04 26 26.0	+0.5
	0.3nm,0.3s,baz=21,slow=7.8,SNR=17						
FITZ				Sn	Sn	04 28 29.9	-12
	0.5nm,0.3s,baz=348,slow=19,SNR=2.5						
WRA	Warramunga Arr	13.94	163	Pn	Pn	04 26 48.9	-0.7
	0.5nm,0.3s,baz=344,slow=13,SNR=19						
WRA				Sn	Sn	04 29 11.0	-14
	0.9nm,0.3s,baz=341,slow=20,SNR=12						
ASAR	Alice Springs	17.40	168	Pn	Pn	04 27 35.1	+0.1
	0.2nm,0.3s,baz=345,slow=12,SNR=9.6						
ASAR				Sn	Sn	04 30 34.6	-15
	0.1nm,0.3s,baz=348,slow=12,SNR=4.0						
GUMO	Guam	24.94	36	LR	LR	04 38 48.9	
	comp=Z,27nm,18.9s,baz=88,slow=37						
MKAR	Makanchi Array	67.85	327	P	P	04 34 30.8	0.0
	0.2nm,0.4s,baz=130,slow=7.2,SNR=4.0						

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*NNC **12** 04:38:15.4±0.5, 45°.15N×79°.69E, h0^{km}, mb3.7, mpv3.6, Error ellipse: s-maj=4.6km s-min=3.5km az=121.0*

*SOME **12** 04:38:15.6, 45°.15N×79°.62E, h15^{km}*

ISC 12 04:38:13.8±1.1, 45°.23N±0°.03×79°.75E±0°.03, h5^{km}±13^{km}, n42, σ1^{s}.02/65, 10C-10D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPS	Kapalarasan	0.28	282	⇑*e*P	Pb	04 38 20.8	-0.5
	354nm,0.2s						
KAPS				*e*S	Sg	04 38 24.4	+1.4
	536nm,0.1s						
KAPS	Kapalarasan	0.28	282	P	Pb	04 38 20.8	-0.5
	354nm,0.2s						
KAPS				S	Sg	04 38 24.4	+1.4
	359nm,0.1s						
DJR	Jarkent	0.90	178	⇓*e*P	Pg	04 38 31.1	+0.2
	141nm,0.1s						
DJR				*e*S	Sg	04 38 42.3	-0.3
	62nm,0.1s						
DJR	Jarkent	0.90	178	P	Pg	04 38 31.1	+0.2
	141nm,0.2s						
DJR				S	Sg	04 38 42.3	-0.3
	66nm,0.2s						
TDK	Taldyqorghan	0.98	257	*e*P	Pn	04 38 33.1	-1.0
	109nm,0.0s						
TDK				*e*S	Sg	04 38 45.5	+0.3
	286nm,0.1s						
TDK	Taldyqorghan	0.98	257	P	Pn	04 38 33.2	-1.0
	109nm,0.1s						
TDK				S	Sg	04 38 45.5	+0.3
	261nm,0.1s						
ARXS	Arharly	1.71	234	⇓*e*P	Pg	04 38 45.8	-0.6
	24nm,0.2s						
ARXS				*e*S	Sb	04 39 07.1	-0.2
	154nm,0.1s						
ARXS	Arharly	1.71	234	P	Pg	04 38 45.8	-0.6
	24nm,0.2s						
ARXS				S	Sb	04 39 07.1	-0.2
	86nm,0.2s						
PDGK	Podgornoye	1.91	186	P	Pb	04 38 49.0	-0.1
	23nm,0.1s						
PDGK				S	Sb	04 39 12.9	-0.3
	27nm,0.2s						
PDGK	Podgornoye	1.91	186	⇓P	Pb	04 38 48.9	-0.1
	18nm,0.5s						
PDGK				⇑S	Sb	04 39 13.4	+0.2
	27nm,0.4s						
KURS	Kuram	2.08	214	*e*P	Pb	04 38 52.3	+0.4
	8.8nm,0.2s						
KURS				*e*S	Sb	04 39 18.4	+0.5
	46nm,0.1s						
KURS	Kuram	2.08	214	Pg	Pb	04 38 52.3	+0.4
	8.8nm,0.2s						
KURS				Lg	Lg	04 39 18.4	
	46nm,0.2s						
UZB	Uzynbulak	2.14	194	*e*P	Pb	04 38 53.1	0.0
	50nm,0.1s						
UZB				*e*S	Sb	04 39 20.0	0.0
	77nm,0.2s						
UZB	Uzynbulak	2.14	194	Pg	Pb	04 38 53.1	0.0
	51nm,0.3s						
UZB				Lg	Lg	04 39 20.0	
	77nm,0.2s						
MAKZ	Makanchi	2.22	44	⇑Pn	Pb	04 38 54.3	0.0
	1.1nm,0.3s						
MAKZ				⇑Sn	Sg	04 39 23.6	-1.4
	10nm,0.3s						
MK31	Makanchi Array	2.37	48	⇓Pn	Pb	04 38 57.0	+0.2
	2.7nm,0.3s,baz=219,slow=14,SNR=66						
MK31				⇓Sn	Sg	04 39 27.7	-2.0
	7.5nm,0.3s,baz=220,slow=24,SNR=21						
KTBS	Karatobe	2.67	236	*e*P	Pb	04 39 02.5	+0.5
	7.3nm,0.2s						
KTBS				*e*S	Sb	04 39 36.1	+1.1
	245nm,0.1s						
KTBS	Karatobe	2.67	236	Pg	Pb	04 39 02.5	+0.5
	7.3nm,0.2s						
KTBS				Lg	Lg	04 39 36.1	
	244nm,0.3s						
KUU	Kurty	2.78	243	*e*P	Pb	04 39 04.0	+0.1
	5.6nm,0.1s						
KUU				*e*S	Sb	04 39 39.0	+0.8
	104nm,0.1s						
KUU	Kurty	2.78	243	Pg	Pb	04 39 04.0	+0.1
	5.6nm,0.1s						
KUU				Lg	Lg	04 39 39.0	
	103nm,0.1s						
MDOK	Medeo	2.83	224	*e*P	Pb	04 39 05.5	+0.6
	5.6nm,0.1s						
MDOK				*e*S	Sb	04 39 41.0	+1.1
	35nm,0.1s						
MDOK	Medeo	2.83	224	⇑Pn	Pb	04 39 04.9	0.0
	4.8nm,0.5s						
MDOK				⇓Lg	Lg	04 39 44.3	
	35nm,0.6s						
MDOK	Medeo	2.83	224	Pg	Pb	04 39 05.5	+0.6
	5.2nm,0.2s						
MDOK				Lg	Lg	04 39 41.0	
	40nm,0.4s						
TNSS	Tian-Shan	2.98	224	*e*P	Pb	04 39 08.2	+0.7
	5.1nm,0.2s						
TNSS				*e*S	Sb	04 39 45.7	+1.4
	24nm,0.2s						
TNSS	Tian-Shan	2.98	224	Pg	Pb	04 39 08.2	+0.7
	5.1nm,0.2s						
TNSS				Lg	Lg	04 39 45.7	
	24nm,0.5s						
IZV	Izvestkoviy	3.15	227	*e*P	Pb	04 39 10.9	+0.7
	3.7nm,0.1s						
IZV				*e*S	Sb	04 39 50.2	+1.3
	55nm,0.2s						
IZV	Izvestkoviy	3.15	227	Pg	Pb	04 39 10.9	+0.7
	3.7nm,0.2s						
IZV				Lg	Lg	04 39 50.2	
	55nm,0.5s						
MTBS	Maitube	3.18	230	*e*P	Pb	04 39 11.5	+0.8
	3.8nm,0.1s						
MTBS				*e*S	Sb	04 39 51.3	+1.6
	156nm,0.1s						
MTBS	Maitube	3.18	230	Pg	Pb	04 39 11.5	+0.8
	3.8nm,0.2s						
MTBS				Lg	Lg	04 39 51.3	
	151nm,0.3s						
KRBS	Karabastau	3.29	244	*e*P	Pb	04 39 13.7	+1.0
	3.6nm,0.1s						
KRBS				*e*S	Sb	04 39 54.8	+1.7
	14nm,0.1s						
KRBS	Karabastau	3.29	244	Pg	Pb	04 39 13.7	+1.0
	3.2nm,0.3s						
KRBS				Lg	Lg	04 39 54.8	
	14nm,0.1s						
DGS	Degeres	3.48	237	*e*P	Pb	04 39 16.2	+0.3
	11nm,0.6s						
DGS				*e*S	Sb	04 39 59.7	+1.2
	23nm,0.2s						
DGS	Degeres	3.48	237	Pg	Pb	04 39 16.2	+0.3
	11nm,0.6s						
DGS				Lg	Lg	04 39 59.7	
	19nm,0.7s						
KST	Kastek	3.49	233	*e*P	Pb	04 39 16.1	0.0
	4.7nm,0.2s						
KST				*e*S	Sb	04 39 59.8	+1.0
	22nm,0.3s						
KST	Kastek	3.49	233	Pg	Pb	04 39 16.1	0.0
	4.7nm,0.2s						
KST				Lg	Lg	04 39 59.8	
	22nm,0.3s						
TKM2	Tokmak 2	3.78	234	⇓Pn	Pb	04 39 17.9	-3.1
	4.0nm,0.6s						
TKM2				⇑Lg	Lg	04 40 16.6	
	7.8nm,0.4s						
ZSN	Zaisan	4.18	56	*e*P	Pb	04 39 29.2	+1.4
	2.8nm,0.3s						
ZSN				*e*S	Sb	04 40 22.1	+3.5
	10nm,0.1s						
ZSN	Zaisan	4.18	56	Pg	Pb	04 39 29.2	+1.4
	2.8nm,0.3s						
ZSN				Lg	Lg	04 40 22.1	
	10nm,0.3s						
KURBB	Kurchatov Arra	5.46	352	⇓Pg	Pg	04 39 57.7	-0.6
	1.2nm,0.4s						
KURBB				⇑Lg	Lg	04 41 13.6	
	8.3nm,0.6s						
KURK	Kurchatov	5.54	353	⇑Pg	Pg	04 39 58.9	-1.0
	0.9nm,0.5s						
KURK				⇓Lg	Lg	04 41 15.0	
	9.7nm,1.0s						
OTUK	Ortayu	5.92	303	⇑Pg	Pg	04 40 06.6	-0.5
	1.9nm,0.8s						
OTUK				⇓Lg	Lg	04 41 31.5	
	7.9nm,0.6s						
KK31	Karatay Array	6.97	256	⇑Lg	Lg	04 41 59.1	
	2.4nm,0.5s,baz=74,slow=28,SNR=7.5						

RSNC 12 04:48:06.5±0.9, 8°.38N×73°.50W, h112^{km}±4^{km}, ML3.6, Mw3.9, 6C-5D, Fault plane solution: NP1:φ$_{s}$0.00000°, δ81.00000°, λ158.00000°., Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OCAC	Ocana	0.23	127	⇑*i*P	Pn	04 48 21.8	-0.6
OCAC				*e*S	Sn	04 48 33.5	-0.9
OCAC				*i*		04 48 36.5	
	comp=Z,3µm,0.1s						
SMLC	San Martn de	0.70	307	⇑*i*P	Pn	04 48 24.6	-0.5
SMLC				*e*S	Sn	04 48 39.5	+0.5
SMLC				*i*		04 48 41.5	
	comp=Z,3µm,0.1s						
LL1C	La Loma 1 Cana	1.16	357	⇓*i*P	Pn	04 48 30.9	+1.4
LL1C				*e*S	Sn	04 48 49.8	+2.8
LL1C				*i*		04 48 51.1	
	comp=Z,3µm,0.2s						
BRRC	Barranca, Sant	1.28	189	⇓*i*P	Pn	04 48 30.4	-0.5
BRRC				*e*S	Sn	04 48 49.5	+0.1
BRRC				*i*		04 48 50.4	
	comp=Z,719nm,0.1s						
PAMC	Pamplona, Colo	1.30	142	⇑*i*P	Pn	04 48 31.5	-0.1
PAMC				*e*S	Sn	04 48 51.0	+0.4
PAMC				*i*		04 48 54.0	
	comp=Z,364nm,0.3s						
LL6C	La Loma 6 Bece	1.37	10	⇓*i*P	Pn	04 48 31.6	-0.3
LL6C				*e*S	Sn	04 48 51.2	0.0
LL6C				*i*		04 48 54.8	
	comp=Z,400nm,0.3s						
LL5C	La Loma 5 El P	1.38	351	*e*P	Pn	04 48 32.4	+0.3
LL5C				*e*S	Sn	04 48 52.7	+1.3
LL5C				*i*		04 48 54.3	
	comp=Z,844nm,0.1s						
ZARC	Zaragoza, Cauc	1.61	237	⇓*e*P	Pn	04 48 34.3	-0.5
ZARC				*e*S	Sn	04 48 57.6	+1.4
ZARC				*i*		04 49 02.2	

	comp=Z,925nm,0.3s						
ARGC	**Ariguani, Magd**	**1.65**	**333**	⇑*i*P	Pn	04 48 36.1	+0.9
ARGC				*e*S	Sn	04 48 58.8	+1.8
ARGC				*i*		04 49 01.9	
	comp=Z,494nm,0.4s						
BARC	**Barichara**	**1.80**	**170**	*e*P	Pn	04 48 36.8	-0.5
BARC				*e*S	Sn	04 49 00.1	-0.7
BARC				*i*		04 49 01.6	
	comp=Z,781nm,0.2s						
UREC	**San Jos de Ur**	**2.11**	**253**	*e*P	Pn	04 48 39.9	-1.1
UREC				*e*S	Sn	04 49 05.6	-1.7
UREC				*i*		04 49 14.5	
	comp=Z,1μm,0.2s						
CVALL	**Valledupar, Ce**	**2.13**	**6**	*e*P	Pn	04 48 40.5	-0.8
CVALL				*e*S	Sn	04 49 07.3	-0.6
CVALL				*i*		04 49 09.8	
	comp=Z,435nm,0.1s						
MOTC	**Monteria, Cord**	**2.18**	**281**	⇓*i*P	Pn	04 48 41.1	-0.7
MOTC				*e*S	Sn	04 49 08.5	-0.4
MOTC				*i*		04 49 22.4	
	comp=Z,146nm,0.7s						
SJCC	**San Jacinto, C**	**2.24**	**312**	⇑*e*P	Pn	04 48 42.5	-0.2
SJCC				*e*S	Sn	04 49 10.2	-0.3
SJCC				*i*		04 49 12.9	
	comp=Z,323nm,0.3s						
RUSC	**La Rusia**	**2.50**	**170**	*e*P	Pn	04 48 45.5	-1.1
RUSC				*e*S	Sn	04 49 16.5	-0.6
RUSC				*i*		04 49 24.5	
	comp=Z,173nm,0.3s						
TAMC	**Tame, Arauca**	**2.57**	**139**	⇑*i*P	Pn	04 48 46.4	-0.6
TAMC				*e*S	Sn	04 49 17.4	-0.6
TAMC				*i*		04 49 18.6	
	comp=Z,132nm,0.3s						
SPBC	**San Pablo de B**	**2.77**	**192**	*e*P	Pn	04 48 49.2	-0.4
SPBC				*e*S	Sn	04 49 22.9	+0.2
SPBC				*i*		04 49 28.2	
	comp=Z,216nm,0.3s						
SMRC	**Santa Marta, M**	**2.86**	**346**	*e*P	Pn	04 48 51.0	+0.2
SMRC				*e*S	Sn	04 49 23.5	-1.3
SMRC				*i*		04 49 25.4	
	comp=Z,169nm,0.7s						
LCBC	**Los crdobas,**	**2.88**	**280**	*e*P	Pn	04 48 50.1	-0.8
LCBC				*e*S	Sn	04 49 24.5	-0.6
HELC	**Santa Helena**	**2.96**	**223**	*e*P	Pn	04 48 52.2	-0.2
HELC				*e*S	Sn	04 49 33.3	+5.6
HELC				*i*		04 49 37.5	
	comp=Z,221nm,0.4s						
DBBC	**Dabeiba**	**3.00**	**243**	*e*P	Pn	04 48 51.4	-1.3
DBBC				*e*S	Sn	04 49 26.2	-2.2
DBBC				*i*		04 49 42.6	
	comp=Z,1μm,0.6s						
NORC	**Norcasia**	**3.11**	**206**	*e*P	Pn	04 48 53.6	-0.5
NORC				*e*S	Sn	04 49 29.5	-1.3
NORC				*i*		04 49 36.3	
	comp=Z,197nm,0.4s						
CBOC	**Ciudad Bolivar**	**3.53**	**225**	*e*P	Pn	04 48 59.9	+0.2
CBOC				*e*S	Sn	04 49 41.0	+0.1
CBOC				*i*		04 50 00.9	
	comp=Z,64nm,0.5s						
ROSC	**El Rosal**	**3.61**	**193**	*e*P	Pn	04 49 01.8	+0.8
ROSC				*e*S	Sn	04 49 45.3	+2.1
ROSC				*i*		04 50 00.7	
	comp=Z,103nm,0.5s						
URIC	**Uribia, Colomb**	**3.62**	**24**	*e*P	Pn	04 48 59.0	-1.9
URIC				*e*S	Sn	04 49 39.7	-3.2
URIC				*i*		04 49 46.3	
	comp=Z,62nm,0.3s						
GUY2C	**Guyana, Caldas**	**3.64**	**211**	*e*P	Pn	04 49 01.1	-0.4
GUY2C				*e*S	Sn	04 49 44.6	+0.6
GUY2C				*i*		04 49 56.4	
	comp=Z,97nm,0.5s						
CHIC	**Chingaza**	**3.73**	**184**	*e*P	Pn	04 49 03.7	+1.0
CHIC				*e*S	Sn	04 49 49.4	+3.3
CHIC				*i*		04 49 57.2	
	comp=Z,82nm,0.4s						
CAPC	**Capurgana**	**3.82**	**274**	*e*P	Pn	04 49 00.8	-2.7
CAPC				*e*S	Sn	04 49 41.7	-5.9
CAPC				*i*		04 49 50.1	
	comp=Z,92nm,0.2s						
VILC	**Villavicencio,**	**4.24**	**183**	*e*P	Pn	04 49 09.8	+0.5
VILC				*e*S	Sn	04 49 57.2	-0.8
ANIL	**Santa Ana**	**4.30**	**206**	*e*P	Pn	04 49 10.4	+0.2
ANIL				*e*S	Sn	04 50 03.5	+3.9
ANIL				*i*		04 50 14.8	
	comp=Z,199nm,0.3s						
PTGC	**Puerto Gaitan,**	**4.37**	**162**	*e*P	Pn	04 49 09.7	-1.2
PTGC				*e*S	Sn	04 49 57.9	-3.0
PTGC				*i*		04 50 07.1	
	comp=Z,82nm,0.3s						
PLMC	**San Jos del P**	**4.42**	**219**	*e*P	Pn	04 49 11.5	-0.1
PLMC				*e*S	Sn	04 50 05.3	+3.1
PLMC				*i*		04 50 22.1	
	comp=Z,40nm,0.4s						
SOLC	**Bahia Solano**	**4.43**	**241**	*e*P	Pn	04 49 11.4	-0.2
SOLC				*e*S	Sn	04 50 01.3	-0.9
PTAC	**Punta Ardita,**	**4.44**	**254**	*e*P	Pn	04 49 11.2	-0.6
PTAC				*e*S	Sn	04 50 01.3	-1.3
PTAC				*i*		04 50 04.3	
	comp=Z,64nm,0.3s						
ORTC	**Ortega, Tolima**	**4.77**	**201**	*e*P	Pn	04 49 15.6	-0.6
ORTC				*e*S	Sn	04 50 16.4	+5.8
ORTC				*i*		04 50 27.0	
	comp=Z,56nm,0.5s						
PRAC	**Prado**	**4.83**	**197**	*e*P	Pn	04 49 16.1	-1.1
PRAC				*e*S	Sn	04 50 14.2	+2.1
PRAC				*i*		04 50 25.3	
	comp=Z,83nm,0.4s						
YOTC	**Yotoco, Valle**	**5.20**	**213**	*e*P	Pn	04 49 21.2	-1.0
YOTC				*e*S	Sn	04 50 21.4	+0.3
YOTC				*i*		04 50 55.0	
	comp=Z,8.1nm,0.6s						
GUVC	**San Jose del G**	**5.86**	**171**	*e*P	Pn	04 49 28.8	-2.2
GUVC				*e*S	Sn	04 50 36.4	-0.6
GUVC				*i*		04 50 40.8	
	comp=Z,61nm,0.5s						
MARP	**Paez Belalcaza**	**6.01**	**204**	*e*P	Pn	04 49 31.4	-2.0
MARP				*e*S	Sn	04 50 46.7	+5.6
MARP				*i*		04 50 57.4	
	comp=Z,3.8nm,0.3s						
MACC	**Macarena, Meta**	**6.20**	**183**	*e*P	Pn	04 49 33.3	-2.4
MACC				*e*S	Sn	04 50 38.8	-6.4
MACC				*i*		04 50 54.7	
	comp=Z,41nm,0.7s						
BCIP	**Isla Barro Col**	**6.31**	**278**	*e*P	Pn	04 49 36.1	-1.0
BCIP				*e*S	Sn	04 50 42.9	-5.0
BCIP				*i*		04 50 46.3	
	comp=Z,12nm,0.4s						
GARC	**Garzon, Huila**	**6.46**	**198**	*e*P	Pn	04 49 35.7	-3.7
GARC				*e*S	Sn	04 50 52.9	+1.0
GARC				*i*		04 51 05.0	
	comp=Z,36nm,0.3s						
PCON	**Cinco Dias**	**6.67**	**206**	*e*P	Pn	04 49 43.3	+0.9
PCON				*e*S	Sn	04 50 59.2	+1.9
PCON				*i*		04 51 17.5	
	comp=Z,9.8nm,0.7s						
SOTA	**Rioblanco**	**6.93**	**207**	*e*P	Pn	04 49 46.9	+0.9
PTLC	**Puerto Leguiza**	**8.25**	**189**	*e*P	Pn	04 50 08.1	+4.6
PTLC				*e*S	Sn	04 51 55.2	+20

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*NNC **12** 05:04:19.1±1.9, 50°.14N×87°.74E, h0^{km}, mb3.5, mpv3.1,*
Error ellipse: s-maj=13.7km s-min=8.4km az=75.0

ISC 12 05:04:18.8±1.3**, 50°.08N**±0°.03×**87°.84E**±0°.07**, h10^{km}, n10,**
σ2^{s}.13/22**, 5C-9D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKAR	**Aktash**	**0.28**	**330**	Pg	**Pg**	**05 04 22.9**	**-1.7**
AKAR				Sg	**Sg**	**05 04 27.8**	**-0.5**
CHBI	**Chibit, Altay**	**0.32**	**318**	Pg	**Pg**	**05 04 24.7**	**-0.6**
CHBI				Sg	**Sg**	**05 04 28.1**	**-1.5**
DGZ	**Jazzator, Alta**	**0.46**	**215**	Pg	**Pg**	**05 04 25.0**	**-2.8**
DGZ				Sg	**Sg**	**05 04 30.7**	**-3.2**
ULGR	**Ulagan, Altay**	**0.55**	**8**	Pg	**Pg**	**05 04 28.3**	**-1.3**
ULGR				Sg	**Sg**	**05 04 35.9**	**-1.0**
ARTR	**Artybash**	**1.76**	**349**	Pg	**Pb**	**05 04 50.5**	**-0.7**
ARTR				Sg	**Sb**	**05 05 13.7**	**+0.4**
UKR	**Ust'-Kan**	**2.14**	**295**	Pg	**Pb**	**05 04 56.7**	**-1.0**
UKR				Sg	**Sg**	**05 05 26.4**	**-1.1**
MK31	**Makanchi Array**	**4.94**	**230**	⇑Pn	**Pn**	**05 05 34.8**	**+1.7**
	1.4nm,0.5s,baz=57,slow=10,SNR=45						
MK31				⇓Pg	**Pg**	**05 05 49.9**	**-3.5**
	1.5nm,0.5s,baz=47,slow=15,SNR=3.0						
MK31				⇓Sn	**Sn**	**05 06 34.0**	**+3.7**
	1.4nm,0.3s,baz=54,slow=26,SNR=6.0						
MK31				⇓Lg	Lg	05 06 54.4	
	2.6nm,0.5s,baz=53,slow=29,SNR=4.9						
MAKZ	**Makanchi**	**5.09**	**232**	⇓Pn	**Pn**	**05 05 37.1**	**+1.9**
	1.3nm,0.6s						
MAKZ				⇑Pg	**Pb**	**05 05 51.0**	**+3.1**
	1.6nm,0.7s						
MAKZ				⇓Sn	**Sn**	**05 06 36.5**	**+2.6**
	3.2nm,0.5s						
MAKZ				⇑Lg	Lg	05 06 58.9	
	3.2nm,0.6s						
KURK	**Kurchatov**	**5.93**	**280**	⇓Pn	**Pn**	**05 05 46.3**	**-0.3**
	2.0nm,0.9s						
KURK				⇑Sn	**Sn**	**05 06 55.7**	**+1.2**
	1.5nm,0.5s						
KURK				⇑Lg	Lg	05 07 23.1	
	5.8nm,0.7s						
KURBB	**Kurchatov Arra**	**5.98**	**279**	⇓Pn	**Pn**	**05 05 47.4**	**0.0**
	1.6nm,0.3s						
KURBB				⇓Sn	**Sn**	**05 06 58.3**	**+2.4**
	5.5nm,0.7s						
KURBB				⇓Lg	Lg	05 07 28.3	
	15nm,0.9s						

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*PRE **12** 05:14:28.6±0.8, 26°.40S×27°.67E, h2^{km}, ML2.6*
*EAF **12** 05:14:32.2±0.8, 26°.51S×27°.72E, h10^{km}, MD4.0*
*BUL **12** 05:14:32.4±0.8, 26°.50S×27°.70E, h10^{km}, MD4.3*

ISC 12 05:14:29.3±1.1**, 26°.41S**±0°.03×**27°.66E**±0°.03**, h5**^{km}±7^{km}**,**
n26, σ1^{s}.39/48**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KLOF	**Kloof**	**0.07**	**319**	*e*P	**Pg**	**05 14 31.0**	**-0.1**
KLOF				*e*S	**Sg**	**05 14 31.8**	**-0.6**
KLOF				IAML		05 14 36.4	
	comp=Z,5μm,0.1s						
HRAO	**HartRAO**	**0.51**	**2**	*e*P	**Pg**	**05 14 38.2**	**-1.0**
HRAO				*e*S	**Sg**	**05 14 45.3**	**-0.6**
HRAO				IAML		05 14 53.4	
	comp=Z,142nm,0.1s						
PRYS	**Parys**	**0.58**	**208**	*e*P	**Pg**	**05 14 40.8**	**+0.1**
PRYS				*e*S	**Sg**	**05 14 48.2**	**-0.1**
PRYS				IAML		05 14 52.8	
	comp=Z,238nm,0.6s						
SLR	**Silverton**	**0.87**	**40**	*e*P	**Pg**	**05 14 45.4**	**-0.6**
SLR				*e*S	**Sg**	**05 14 57.5**	**+0.2**
SLR				IAML		05 15 06.2	
	comp=Z,79nm,0.2s						
KSR	**Koster**	**0.88**	**308**	*e*P	**Pg**	**05 14 45.5**	**-0.7**
KSR				*e*S	**Sg**	**05 14 58.3**	**+0.6**
KSR				IAML		05 15 05.3	
	comp=Z,515nm,0.2s						
SWZ	**Schweizer**	**2.22**	**249**	*e*P	**Pn**	**05 15 07.4**	**+0.5**
SWZ				*e*S	**Sn**	**05 15 35.7**	**+0.8**
SWZ				IAML		05 15 38.6	
	comp=Z,158nm,0.5s						
LBTB	**Lobatse**	**2.32**	**306**	*e*P	**Pn**	**05 15 08.9**	**+0.6**
LBTB				*e*S	**Sn**	**05 15 37.5**	**+0.2**
LBTB				IAML		05 15 41.9	
	comp=Z,102nm,0.6s						
LBTB	**Lobatse**	**2.32**	**306**	*e*P	**Pb**	**05 15 11.8**	**+0.1**
LBTB				*e*S	**Sb**	**05 15 40.4**	**-0.4**
LBTB	**Lobatse**	**2.32**	**306**	*e*P	**Pb**	**05 15 11.8**	**+0.1**
LBTB				*e*S	**Sb**	**05 15 40.4**	**-0.4**
BOSA	**Boshof**	**3.07**	**224**	*e*P	**Pn**	**05 15 19.7**	**+1.1**
BOSA				*e*S	**Sn**	**05 15 55.1**	**-0.6**
BOSA	**Boshof**	**3.07**	**224**	*e*P	**Pn**	**05 15 19.7**	**+1.1**
BOSA				*e*S	**Sn**	**05 15 55.1**	**-0.6**
POGA	**Pongola**	**3.73**	**105**	*e*P	**Pn**	**05 15 27.4**	**-0.1**
POGA				*e*S	**Sn**	**05 16 11.5**	**-0.4**
POGA				IAML		05 16 30.3	
	comp=Z,49nm,0.5s						
MOPA	**Mopani**	**4.44**	**50**	*e*P	**Pn**	**05 15 37.8**	**+0.4**
MOPA				*e*S	**Sn**	**05 16 28.0**	**-1.5**
MOPA				IAML		05 16 28.3	
	comp=Z,16nm,0.3s						
MOPA	**Mopani**	**4.44**	**50**	*e*P	**Pn**	**05 15 40.0**	**+2.6**
MOPA				*e*S	**Sn**	**05 16 28.2**	**-1.3**
MOPA	**Mopani**	**4.44**	**50**	*e*P	**Pn**	**05 15 40.0**	**+2.6**
MOPA				*e*S	**Sn**	**05 16 28.2**	**-1.3**
MSNA	**Messina**	**4.58**	**29**	*e*P	**Pn**	**05 15 42.4**	**+3.1**
MSNA				*e*S	**Sn**	**05 16 33.5**	**+0.6**
MSNA	**Messina**	**4.58**	**29**	*e*P	**Pn**	**05 15 42.4**	**+3.1**
MSNA				*e*S	**Sn**	**05 16 33.5**	**+0.6**
PKA	**Prieska**	**5.42**	**232**	*e*P	**Pn**	**05 15 51.0**	**+0.1**
PKA				*e*S	**Sn**	**05 16 52.2**	**-1.5**
PKA				IAML		05 16 52.3	
	comp=Z,1.8nm,0.2s						
MATP	**Matopo**	**6.00**	**8**	*e*P	**Pn**	**05 16 01.4**	**+2.4**
MATP				*e*S	**Sn**	**05 17 07.0**	**-1.1**
MATP	**Matopo**	**6.00**	**8**	*e*P	**Pn**	**05 16 01.4**	**+2.4**
MATP				*e*S	**Sn**	**05 17 07.0**	**-1.1**
UPI	**Upington**	**6.02**	**250**	*e*P	**Pn**	**05 15 59.6**	**+0.4**
UPI				*e*S	**Sn**	**05 17 06.5**	**-2.1**
UPI				IAML		05 17 53.4	
	comp=Z,9.7nm,3.8s						
BLWY	**Bulawayo**	**6.30**	**8**	*e*P	**Pn**	**05 16 04.9**	**+1.9**
BLWY				*e*S	**Sn**	**05 17 14.2**	**-1.2**
BLWY	**Bulawayo**	**6.30**	**8**	*e*P	**Pn**	**05 16 04.9**	**+1.9**
BLWY				*e*S	**Sn**	**05 17 14.2**	**-1.2**
SOE	**Somerset East**	**6.55**	**196**	*e*P	**Pn**	**05 16 07.1**	**+0.8**
SOE				*e*S	**Sn**	**05 17 19.1**	**-2.3**
SOE				IAML		05 17 42.4	
	comp=Z,23nm,3.0s						
KRI	**Karoi**	**9.70**	**11**	*e*P	Pn	05 16 44.4	-5.3
KRI				*e*S	Sn	05 18 20.5	-19
KRI	**Karoi**	**9.70**	**11**	*e*P	Pn	05 16 44.4	-5.3
KRI				*e*S	Sn	05 18 20.5	-19

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*TUL **12** 05:37:49.8±0.8, 36°.13N±0°.01×97°.60W±0°.01, h6^{km}±7^{km},*
ML2.7, mb_Lg2.3/15(NEIC), Error ellipse: s-maj=1.7km
s-min=1.2km az=183.0

NEIC 12 05:37:49.8±0.6**, 36°.137N**±0°.006×**97°.60W**±0°.02**, h4**^{km}±7^{km}**,**
Error ellipse: s-maj=2.2km s-min=0.8km az=72.0,
Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK029	**Liberty Lake**	**0.36**	**161**	Pg	Pg	05 37 56.9	+0.2
OK029				Sg	Sg	05 38 02.1	+0.7
BCOK	**Bluff Creek, N**	**0.48**	**181**	Pg	Pg	05 37 59.1	+0.1
BCOK				Sg	Sg	05 38 06.0	+0.7
CROK	**Carrier**	**0.48**	**320**	Pg	Pg	05 37 59.4	+0.3
CROK				Sg	Sg	05 38 06.4	+1.0
OK031	**S. Brethren Rd**	**0.64**	**106**	Pg	Pg	05 38 02.2	+0.1
OK031				Sg	Sg	05 38 11.0	+0.5
OK030	**Cody Creek RV**	**0.69**	**107**		Pg	05 38 03.2	+0.2
OK030				Sg	Sg	05 38 12.6	+0.5
BLOK	**Blackwell**	**0.69**	**26**	Pg	Pg	05 38 03.3	+0.1
QUOK	**Quay**	**0.72**	**87**	Pg	Pg	05 38 03.8	+0.1
QUOK				Sg	Sg	05 38 13.6	+0.6
OKCFA	**Oklahoma City**	**0.73**	**171**	Pg	Pg	05 38 03.7	-0.2
OKCFA				IAmb_Lg		05 38 13.6	
	comp=Z,24nm,0.9s						
OKCSW	**OKLAHOMA CITY**	**0.74**	**170**		Pg	05 38 04.1	0.0
GC02	**Grant County #**	**0.74**	**344**	Pg	Pg	05 38 04.1	0.0
OK032	**Salt Plains WL**	**0.83**	**324**		Pg	05 38 05.7	-0.1
KAN14	**Manchester OK**	**0.87**	**340**		Pg	05 38 06.4	-0.1
KAN13	**South Haven SW**	**0.88**	**6**	Pg	Pg	05 38 06.7	-0.1
FNO	**Franklin**	**0.89**	**170**	Pg	Pg	05 38 06.6	-0.3
KAN17	**Caldwell West**	**0.92**	**352**	Pg	Pg	05 38 07.4	0.0
KAN05	**Bluff City Nor**	**0.99**	**347**	Pg	Pg	05 38 08.8	-0.1
KAN09	**Caldwell North**	**1.00**	**359**	Pg	Pg	05 38 08.7	-0.2
KAN01	**Argonia South**	**1.02**	**353**	Pg	Pg	05 38 09.3	-0.1
KAN10	**Anthony SW Sta**	**1.06**	**338**	Pg	Pg	05 38 10.2	-0.1
KAN06	**Argonia West S**	**1.13**	**349**	Pg	Pg	05 38 11.2	-0.3
KAN08	**Anthony NE Sta**	**1.13**	**345**	Pg	Pg	05 38 11.2	-0.3
KAN16	**Harper SW Stat**	**1.15**	**341**	Pg	Pg	05 38 11.6	-0.3
U32A	**Winter Ranch,**	**1.16**	**282**	Pg	Pg	05 38 11.7	-0.4
T35A	**Sooner Cattle**	**1.17**	**48**		Pg	05 38 12.0	-0.3
TUL1	**Leonard**	**1.48**	**98**		Pn	05 38 16.6	-0.7
X34A	**Smith Ranch, M**	**1.54**	**187**		Pn	05 38 18.6	+0.4
WMOK	**Wichita Mounta**	**1.70**	**215**		Pn	05 38 20.1	-0.2
WMOK				IAmb_Lg		05 38 44.4	
	comp=Z,12nm,0.7s						
X37A	**Clayton**	**2.39**	**130**		Pn	05 38 30.3	+0.6
X37A				IAmb_Lg		05 39 08.9	
	comp=Z,11nm,0.8s						
KSU1	**Kansas State U**	**3.06**	**15**	IAmb_Lg		05 39 32.3	
	comp=Z,8.8nm,0.7s						
AMTX	**Amarillo**	**3.56**	**251**	IAmb_Lg		05 39 52.4	
	comp=Z,7.6nm,0.9s						
U40A	**Yellville**	**3.84**	**85**	IAmb_Lg		05 39 48.9	
	comp=Z,5.0nm,0.8s						
X40A	**Basin Creek Fa**	**4.23**	**112**	IAmb_Lg		05 40 08.6	
	comp=Z,8.8nm,0.8s						
CCM	**Cathedral Cave**	**5.43**	**67**	IAmb_Lg		05 40 52.5	
	comp=Z,4.2nm,1.0s						
JCT	**Junction City**	**5.94**	**199**	IAmb_Lg		05 41 01.8	
	comp=Z,8.3nm,0.8s						

JMA 12 05:50:53.2±0.2**, 24°.12N**×**123°.22E, h44**^{km}±3^{km}**, M1.7,**
Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.39**	**331**	P	Pn	05 51 02.8	0.0
YOJ				*e*S	Sn	05 51 09.8	+0.3
JYNG	**Yonagunijimaku**	**0.41**	**323**	P	Pn	05 51 03.0	-0.1
JYNG				*e*S	Sn	05 51 10.2	+0.2
IRIF	**Iriomote-Funau**	**0.51**	**65**	P	Pn	05 51 03.9	-0.4
IRIF				S	Sn	05 51 12.2	+0.1
HATJ	**Hateruma jima**	**0.54**	**97**	P	Pn	05 51 04.5	-0.1
HATJ				S	Sn	05 51 12.8	+0.1
JKRS	**Kuro-shima**	**0.73**	**81**	P	Pn	05 51 07.1	0.0
JKRS				S	Sn	05 51 18.0	+0.8
JIJ	**Ishigaki jima**	**0.88**	**74**	P	Pn	05 51 09.7	+0.6
JIJ				S	Sn	05 51 21.3	+0.5
JISG	**Ishigakijimahi**	**1.10**	**65**	P	Pn	05 51 12.9	+0.8
JISG				S	Sn	05 51 27.6	+1.5
JTJ	**Tarama**	**1.45**	**69**	P	Pn	05 51 16.5	-0.4
JTJ				S	Sn	05 51 34.3	-0.4

TAP 12 05:50:56.2, 24°.12N×**122°.28E, h16**^{km}±1^{km}**, ML2.5, D,**
Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EWUT	**Wuta**	**0.56**	**306**	*e*P	Pb	05 51 07.9	+0.2
	baz=305						
EWUT				*e*S	Sb	05 51 16.5	+1.0
	baz=305						
ENA	**Nanau**	**0.58**	**302**	P	Pb	05 51 08.0	-0.1
	baz=302						
ENA				*e*S	Sb	05 51 17.4	+1.3
	baz=302						
ETL	**Fush Village**	**0.60**	**274**	*e*S	Sb	05 51 17.9	+1.2
	baz=274						
TWD	**Chiawan**	**0.62**	**267**	*e*P	Pb	05 51 09.1	+0.3
	baz=266						
TWD				*e*S	Sb	05 51 18.2	+0.9
	baz=266						
NACB	**Ninganchiao**	**0.63**	**275**	*e*P	Pg	05 51 08.6	0.0
	baz=275						
NACB				*e*S	Sb	05 51 18.6	+1.2
	baz=275						
TWC	**Suao**	**0.63**	**321**	P	Pg	05 51 08.4	-0.2
	baz=322						
TWC				S	Sb	05 51 17.5	+0.1
	baz=322						
NDS	**Dongshan**	**0.73**	**315**	*e*P	Pb	05 51 10.7	+0.2
	baz=315						
NDS				S	Sb	05 51 20.9	+0.7
	baz=315						
ETLH	**Xiulin Townshi**	**0.73**	**277**	*e*P	Pg	05 51 10.2	-0.5
	baz=277						
ETLH				*e*S	Sb	05 51 21.5	+1.0
	baz=277						
YOJ	**Yonaguni jima**	**0.75**	**63**	*e*P	Pg	05 51 11.5	+0.6
	baz=61						
YOJ				*e*S	Sn	05 51 22.4	-0.8
	baz=61						
TWE	**Neicheng**	**0.82**	**317**	*e*P	Pn	05 51 12.9	-0.2
	baz=317						
TWE				*e*S	Sn	05 51 24.2	-0.7
	baz=317						
ENTT	**Nioudou**	**0.83**	**309**	P	Pn	05 51 13.0	-0.4
	baz=308						
ENTT				*e*S	Sn	05 51 25.1	-0.2
	baz=308						
NTC	**Toucheng**	**0.84**	**331**	*e*P	Pg	05 51 12.6	0.0
	baz=330						
NTC				*e*S	Sn	05 51 25.0	-0.4
	baz=330						
NDT	**Datong Townshi**	**0.85**	**305**	*e*P	Pg	05 51 12.8	0.0
	baz=304						
NDT				*e*S	Sg	05 51 24.3	+0.3
	baz=304						
NNSB	**Datong**	**0.88**	**291**	P	Pg	05 51 13.2	-0.1
	baz=290						
NNSB				*e*S	Sg	05 51 25.1	+0.3
	baz=290						
EGFH	**Guangfu**	**0.90**	**240**	*e*P	Pg	05 51 13.6	-0.1
	baz=240						
EGFH				*e*S	Sg	05 51 26.1	+0.6
	baz=240						
TWB1	**Santiao Chiao**	**0.93**	**343**	*e*P	Pn	05 51 14.5	-0.1
	baz=343						
TWB1				*e*S	Sn	05 51 27.5	0.0
	baz=343						
WHF	**Hehuan Shan**	**0.93**	**272**	*e*P	Pb	05 51 13.7	-0.5
	baz=271						
WHF				*e*S	Sg	05 51 26.7	+0.1
	baz=271						
TIPB	**Shuangxi**	**0.95**	**334**	P	Pn	05 51 14.8	-0.1
	baz=334						
TIPB				S	Sg	05 51 27.4	+0.2
	baz=334						
FUSS	**Fushou**	**0.95**	**278**	*e*P	Pb	05 51 14.6	+0.1
	baz=277						
FUSS				*e*S	Sg	05 51 27.6	+0.2
	baz=277						
NWLT	**Wulai**	**0.97**	**313**	*e*P	Pn	05 51 15.5	+0.4
	baz=312						
NWLT				*e*S	Sn	05 51 28.8	+0.3
	baz=312						
HGSD	**Ruisui**	**1.00**	**232**	*e*P	Pn	05 51 15.4	-0.1
	baz=231						
HGSD				*e*S	Sg	05 51 28.5	-0.2
	baz=231						
NSK	**Sanguang**	**1.01**	**304**	*e*P	Pn	05 51 15.6	-0.2
	baz=303						
NSK				*e*S	Sn	05 51 29.6	0.0
	baz=303						
CHGB	**Renai**	**1.01**	**267**	*e*P	Pb	05 51 14.8	-0.7
	baz=266						
CHGB				*e*S	Sn	05 51 30.0	+0.1
	baz=266						
NWF	**Wu-fen Shan**	**1.05**	**335**	*e*P	Pg	05 51 16.8	+0.1
	baz=334						
NWF				*e*S	Sn	05 51 31.1	+0.3
	baz=334						
YULB	**Yu-li**	**1.15**	**232**	*e*P	Pb	05 51 17.9	+0.1
	baz=231						
YULB				*e*S	Sn	05 51 32.9	-0.2
	baz=231						
YM01	**YM01**	**1.21**	**328**	*e*P	Pb	05 51 19.2	+0.4
	baz=327						
YM01				*e*S	Sg	05 51 35.4	-0.1
	baz=327						
WHP	**Taichung City**	**1.23**	**278**	*e*P	Pn	05 51 18.8	-0.1
	baz=277						
WHP				*e*S	Sg	05 51 36.0	-0.1
	baz=277						
WCS	**Beigang Elemen**	**1.25**	**268**	*e*P	Pb	05 51 19.6	+0.2
	baz=267						
WCS				*e*S	Sn	05 51 36.1	+0.5
	baz=267						
SSLB	**Suanglung**	**1.26**	**255**	*e*P	Pn	05 51 18.6	-0.5
	baz=254						
SSLB				*e*S	Sn	05 51 36.1	+0.4
	baz=254						
LIOB	**Emei**	**1.27**	**295**	*e*P	Pn	05 51 19.3	0.0
	baz=294						
LIOB				*e*S	Sn	05 51 36.4	+0.4
	baz=294						
TYC	**Yuchr**	**1.32**	**261**	*e*P	Pn	05 51 19.4	-0.6
	baz=260						
TYC				*e*S	Sn	05 51 37.1	0.0
	baz=260						
WHYT	**Xinyi Township**	**1.37**	**253**	*e*S	Sb	05 51 38.8	0.0
	baz=252						
EDH	**Donghe**	**1.45**	**218**	*e*P	Pn	05 51 22.1	+0.3
	baz=218						
EDH				*e*S	Sn	05 51 40.1	-0.3
	baz=218						

ALS	**Alishan**	1.48	246	eP	Pn	05 51 22.4	-0.1
	baz=245						
ALS				eS	Sn	05 51 41.6	+0.1
	baz=245						
TPUB	**Ta-pu**	1.72	242	eP	Pn	05 51 25.5	+0.1
	baz=241						
TPUB				eS	Sn	05 51 46.5	-0.6
	baz=241						

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*IDC **12** 05:54:08.2±1.5, 32°.50S×71°.95W, h0^{km}, mb4.1/3, mb1 3.9/7, mb1mx3.8/26, mbtmp3.8/7, ML3.9/4, MS2.9/2, Ms1 2.9/2, ms1mx2.8/19, Error ellipse: s-maj=54.3km s-min=23.6km az=107.0*

*NEIC **12** 05:54:12.7±2.0, 32°.69S±0°.03×71°.82W±0°.08, h19^{km}±3^{km}, mb4.4/16, ML3.8(GUC), Error ellipse: s-maj=10.3km s-min=4.2km az=75.0*

*GUC **12** 05:54:14.4±0.8, 32°.72S×71°.71W, h34^{km}±3^{km}, ML3.8*

ISC 12 05:54:13.1±1.0, **32°.66S**±0°.03×**71°.77W**±0°.05, **h28**^{km}±7^{km}, **n86**, σ**1^{s}.07**/90, **mb4.3**/8, **5C-11D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VA01	**Torpederas**	0.38	164	⇓iP	Pb	05 54 21.6	+0.1
VA01				i S	Sb	05 54 27.2	0.0
VA01	**Torpederas**	0.38	164		Pb	05 54 21.5	+0.1
VA06	**Catapilco**	0.41	76	⇓iP	Pn	05 54 22.6	-0.5
VA06				i S	Sb	05 54 28.4	+0.4
VA06				IAML		05 54 32.6	
	comp=N,19µm,0.4s						
ROCH	**El Roble**	0.71	116	⇓iP	Pb	05 54 26.9	-0.1
ROCH				i S	Sb	05 54 36.7	+0.1
ROCH				IAML		05 54 38.0	
	comp=N,9µm,0.5s						
MT02	**Curacav**	0.80	139	⇓iP	Pb	05 54 27.9	-0.5
MT02				i S	Sb	05 54 37.9	-1.0
MT02	**Curacav**	0.80	139		Pb	05 54 27.9	-0.5
VA05	**Santo Domingo**	1.00	173	⇑iP	Pb	05 54 31.4	-0.4
VA05				i S	Sb	05 54 44.2	-0.5
VA05				IAML		05 54 46.4	
	comp=E,6µm,0.4s						
VA05	**Santo Domingo**	1.00	173		Pb	05 54 31.4	-0.4
PEL	**Peldehue**	1.03	118	⇓iP	Pn	05 54 32.1	+0.4
PEL				i S	Sb	05 54 45.0	-0.5
PEL				IAML		05 54 48.1	
	comp=E,5µm,0.5s						
PEL	**Peldehue**	1.03	118	Pn	Pn	05 54 32.0	+0.4
VA03	**San Esteban**	1.03	96	⇓iP	Pn	05 54 31.8	0.0
VA03				i S	Sb	05 54 45.4	-0.2
VA03				IAML		05 54 46.2	
	comp=E,5µm,0.1s						
VA03	**San Esteban**	1.03	96		Pn	05 54 31.8	0.0
MT05	**Renca**	1.13	130	⇓iP	Pn	05 54 33.7	+0.5
MT05				i S	Sb	05 54 48.8	+0.4
MT05				IAML		05 54 51.0	
	comp=E,9µm,0.3s						
MT05	**Renca**	1.13	130		Pn	05 54 33.6	+0.5
MT01	**Popeta**	1.28	160	⇓iP	Pn	05 54 35.4	+0.3
MT01				eS	Sn	05 54 51.0	-0.2
MT01				IAML		05 54 55.1	
	comp=E,2µm,0.7s						
MT01	**Popeta**	1.28	160		Pn	05 54 35.3	+0.3
MT09	**Talagante**	1.29	150	⇓iP	Pn	05 54 36.0	+0.7
MT09				i S	Sn	05 54 52.2	+0.4
MT09				IAML		05 54 58.1	
	comp=N,3µm,0.2s						
MT09	**Talagante**	1.29	150		Pn	05 54 36.0	+0.7
FCH	**Farellones**	1.41	119	⇓iP	Pn	05 54 38.0	+0.8
FCH				eS	Sb	05 54 56.5	-0.2
FCH				IAML		05 54 58.4	
	comp=E,2µm,0.3s						
BO04	**La Punta**	1.64	144	⇑iP	Pb	05 54 41.7	-1.0
BO04				i S	Sb	05 55 03.4	+0.3
LMEL	**Las Melosas**	1.77	133	⇑iP	Pb	05 54 43.9	-1.0
LMEL				i S	Sb	05 55 06.9	+0.2
LMEL				IAML		05 55 12.8	
	comp=N,2µm,0.1s						
BO01	**Tunca**	1.82	162	⇑iP	Pn	05 54 43.1	+0.7
BO01				eS	Sb	05 55 06.6	-1.4
BO01	**Tunca**	1.82	162	Pn	Pn	05 54 43.3	+0.8
CO06	**Fray Jorge**	1.98	3	⇓iP	Pn	05 54 45.1	+0.3
CO06				i S	Sb	05 55 13.9	+1.1
CO06				IAML		05 55 18.2	
	comp=E,1µm,0.5s						
CO06	**Fray Jorge**	1.98	3		Pn	05 54 45.2	+0.5
CO03	**El Pedregal**	2.04	27		Pn	05 54 47.3	+1.8
BO02	**Sierra Bellavi**	2.28	159	⇑iP	Pn	05 54 49.8	+1.0
BO02				i S	Sn	05 55 18.1	+2.0
BO02				IAML		05 55 23.3	
	comp=N,1µm,0.3s						
BO02	**Sierra Bellavi**	2.28	159		Pn	05 54 49.9	+1.0
GO05	**Huala**	2.35	183		Pn	05 54 49.5	-0.3
GO04	**Tololo Observa**	2.61	19		Pn	05 54 55.1	+1.5
CO05	**La Serena**	2.77	10		Pn	05 54 56.5	+1.0
ML02	**Panimavida**	3.11	175		Pn	05 55 00.7	+0.5
LCO	**Las Campanas**	3.75	14	Pn	Pn	05 55 11.4	+2.1
AC04	**Llanos de Chal**	4.48	8	Pn	Pn	05 55 19.0	-0.1
GO03	**Copiap**	5.22	15	Pn	Pn	05 55 29.7	+0.4
H03N1	**Juan Fernandez**	6.05	261	T	T	06 02 04.1	
	baz=88,slow=73,SNR=237						
H03N3	**Juan Fernandez**	6.06	261	T	T	06 02 04.1	
	baz=88,slow=73,SNR=285						
H03N2	**Juan Fernandez**	6.07	261	T	T	06 02 02.9	
	baz=88,slow=73,SNR=351						
H03S1	**Juan Fernandez**	6.09	257	T	T	06 01 59.4	
	baz=81,slow=75,SNR=32						
H03S3	**Juan Fernandez**	6.09	257	T	T	06 02 02.4	
	baz=81,slow=75,SNR=40						
H03S2	**Juan Fernandez**	6.11	257	T	T	06 01 58.8	
	baz=81,slow=75,SNR=59						
LC01	**Cunco**	6.22	181	Pn	Pn	05 55 42.2	-0.8
AC02	**Maricunga**	6.24	22	Pn	Pn	05 55 44.7	+0.9
LR03	**Panguipulli**	6.97	184		Pn	05 55 53.6	+0.3
PLCA	**Paso Flores**	8.12	173	Pn	Pn	05 56 09.8	+0.7
	comp=N,0.6nm,0.3s,baz=334,slow=9.7,SNR=24						
PLCA				Lg	Lg	05 58 28.1	
	comp=N,0.0nm,0.3s,baz=342,slow=23,SNR=2.4						
PLCA	**Paso Flores**	8.12	173		Pn	05 56 09.9	+0.9
LL04	**Puerto Octay**	8.25	183	Pn	Pn	05 56 10.1	-0.8
LVC	**Limon Verde**	10.33	15	Pn	Pn	05 56 34.8	-4.9
	comp=N,0.2nm,0.3s,baz=197,slow=21,SNR=1.6						
LVC				Lg	Lg	05 59 16.8	
	comp=N,1.1nm,0.3s,baz=66,slow=20,SNR=3.9						
LVC				LR	LR	05 59 46.4	
	comp=N,32nm,21.6s,baz=211,slow=33						
ITQB	**Itaqui**	13.31	81		Pn	05 57 18.3	-1.8
CPUP	**Villa Florida**	14.06	67	Pn	Pn	05 57 30.3	-0.1
	comp=N,0.2nm,0.3s,baz=48,slow=18,SNR=1.9						
CPUP				Sn	Sn	06 00 04.1	-1.4
	comp=N,0.1nm,0.3s,baz=265,slow=14,SNR=3.0						
CPUP				Lg	Lg	06 01 29.4	
	comp=N,0.2nm,0.3s,baz=104,slow=17,SNR=3.4						
CPUP				LR	LR	06 03 38.8	
	comp=N,103nm,18.3s,baz=227,slow=40						
CPUP	**Villa Florida**	14.06	67	Pn	Pn	05 57 33.9	+3.5
PLTB	**Pedras Altas**	15.40	92	Pn	Pn	05 57 50.4	+1.9
SIV	**San Ignacio**	19.22	33	P	P	05 58 32.8	-2.3
	comp=N,0.2nm,0.3s,baz=210,slow=8.0,SNR=6.7						
PTLB	**Pontes e Lacer**	20.62	37	P	P	05 58 51.2	+0.9
VILB	**Vilhena**	22.29	31	P	P	05 59 07.7	-0.6
ETMB	**Extrema**	23.30	14	P	P	05 59 19.3	+0.5
SAML	**Samuel**	24.90	21	P	P	05 59 31.5	-2.1
BDFB	**Brasilia**	27.41	57	P	P	05 59 55.5	-1.0
	comp=N,0.9nm,0.4s,baz=251,slow=5.2,SNR=4.6						
BDFB	**Brasilia**	27.41	57	P	P	05 59 54.7	-1.8
BDFB				IAmb	IAmb	05 59 56.6	
	comp=Z,4.0nm,0.9s						
HOPE	**Hope Point**	32.98	142	P	P	06 00 44.3	-1.0
OTAV	**Otavalo**	33.32	348	P	P	06 00 46.3	-2.9
OTAV				IAmb	IAmb	06 01 10.5	
	comp=Z,4.4nm,1.4s						
PAYG	**Puerto Ayora**	36.28	328	P	P	06 01 12.8	-1.4
VNA3	**Neumayer Olymp**	50.51	158	P	P	06 03 09.6	+1.3
CRPR	**Cabo Rojo, PR**	50.58	6	P	P	06 03 10.1	+0.9
VNA1	**Neumayer--Stat**	50.82	157	P	P	06 03 12.0	+1.5
VNA2	**Neumayer--Watz**	51.16	158	P	P	06 03 14.2	+1.0
	baz=288,slow=8.1						
SNAA	**Sanae**	52.74	158	P	P	06 03 25.4	+0.5
SNAA	**Sanae**	52.74	158	P	P	06 03 25.5	+0.5
	comp=Z,1.3nm,0.9s,baz=256,slow=4.9,SNR=3.7						
SNAA	**Sanae**	52.74	158	P	P	06 03 25.9	+0.9
SNAA				IAmb	IAmb	06 03 46.7	
	comp=Z,4.1nm,1.2s						
QSPA	**South Pole Qui**	57.57	180	P	P	06 04 01.6	+1.6
QSPA				IAmb	IAmb	06 04 05.2	
	comp=Z,3.9nm,1.2s						
ABTX	**Abilene, Hawle**	70.06	335	P	P	06 05 23.3	+1.0
ABTX				IAmb	IAmb	06 05 28.0	
	comp=Z,12nm,1.5s						
WHAR	**Wooly Hollow**	70.28	342	P	P	06 05 24.1	+0.5
WHAR				IAmb	IAmb	06 05 34.1	
	comp=Z,13nm,1.5s						
S57A	**Dark Hollow, R**	70.38	354	P	P	06 05 26.0	+1.9
S57A				IAmb	IAmb	06 05 54.4	
	comp=Z,6.1nm,1.1s						
TORD	**Torodi Ar. Bea**	83.54	70	P	P	06 06 39.1	+0.3
	comp=Z,1.4nm,0.8s,baz=248,slow=3.4,SNR=8.3						
TORD	**Torodi Ar. Bea**	83.54	70	P	P	06 06 39.2	+0.4
TORD				IAmb	IAmb	06 06 39.9	
	comp=Z,2.3nm,0.9s						
WRA	**Warramunga Arr**	122.04	209	PKP	PKPdf	06 13 03.7	-1.8
	comp=Z,0.2nm,0.9s,baz=168,slow=2.0,SNR=1.3						
H11S2	**WAKE ISLAND Hy**	126.01	270	T	T	08 32 14.1	
	baz=118,slow=75,SNR=50						
H11S1	**WAKE ISLAND Hy**	126.02	270	T	T	08 32 12.3	
	baz=118,slow=75,SNR=93						
H11S3	**WAKE ISLAND Hy**	126.03	270	T	T	08 32 11.0	
	baz=118,slow=75,SNR=53						
H11N3	**WAKE ISLAND Hy**	126.39	271	T	T	08 32 38.9	
	baz=117,slow=76,SNR=9.2						
H11N1	**WAKE ISLAND Hy**	126.40	271	T	T	08 32 40.0	
	baz=117,slow=76,SNR=4.9						
H11N2	**WAKE ISLAND Hy**	126.40	271	T	T	08 32 33.8	
	baz=117,slow=76,SNR=13						
ZALV	**Zalesovo Beam**	152.97	31	PKPbc	PKiKP	06 14 07.8	+0.5
	comp=Z,1.7nm,0.7s,baz=310,slow=3.0,SNR=9.2						
ZALV	**Zalesovo Beam**	152.97	31		PKiKP	06 14 07.5	+0.3
MKAR	**Makanchi Array**	155.70	47	PKPab	PKPab	06 14 30.8	+0.4
	comp=Z,0.7nm,0.7s,baz=285,slow=3.9,SNR=5.3						
MKAR	**Makanchi Array**	155.70	47		PKPab	06 14 30.6	+0.2

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*NIED **12** 05:54:35.8, 37°.70N×141°.92E, h26^{km}, MW3.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{13}Nm; M$_{rr}$-3.02; M$_{\theta\theta}$4.33; M$_{\phi\phi}$-1.31; M$_{r\theta}$4.13; M$_{\theta\phi}$-6.15; M$_{\phi r}$2.51; Fault plane solution: M$_0$8.72000×10^{13} NP1: φ$_s$264.00000°, δ73.00000°, λ-142.00000°. NP2: φ$_s$161.00000°, δ54.00000°, λ-22.00000°.*

JMA 12 05:54:35.8±0.1, **37°.69N**×**141°.92E**, **h26**^{km}±2^{km}, **M3.6, 3C-1D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	0.72	330	⇑P	Pb	05 54 49.2	-0.5
JIKH				S	Sb	05 54 58.7	-0.4
JMST	**Minamisoumatoc**	0.82	273	P	Pb	05 54 50.8	-0.6
JMST				S	Sb	05 55 01.5	-0.6
JIO	**Ouri**	0.89	330	P	Pb	05 54 52.0	-0.5
JIO				S	Sb	05 55 03.3	-0.7
JFK	**Kawauchi**	0.89	249	P	Pb	05 54 52.1	-0.6
JFK				eS	Sb	05 55 03.6	-0.6
JMM	**Marumori**	0.91	281	⇓P	Pn	05 54 52.3	-0.6
JMM				eS	Sb	05 55 04.3	-0.3
ONAJ	**Iwakimizuishiy**	1.07	237	P	Pn	05 54 54.8	-0.3
ONAJ				S	Sn	05 55 08.6	-0.6
JKMT	**Kesennumamotoy**	1.17	343	⇑P	Pn	05 54 56.3	-0.2
JKMT				eS	Sn	05 55 10.5	-1.2
JOU	**Okura**	1.20	305	⇑P	Pb	05 54 57.7	-0.2
JOU				eS	Sb	05 55 13.2	+0.2
JFT	**Otama**	1.27	263	P	Pb	05 54 58.8	-0.2
JMK	**Ichinoseki**	1.38	337	P	Pn	05 54 59.9	+0.6
JMK				eS	Sn	05 55 16.9	+0.3
JYS	**Shirataka**	1.56	290	P	Pb	05 55 03.4	-0.6
JYK	**Kaneyama**	1.73	315	P	Pb	05 55 05.8	-1.2
MAT	**Matsushiro**	3.18	250	P	Pn	05 55 26.6	+2.4
MAT				eS	Sn	05 56 03.8	+2.5

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*NIC **12** 06:02:09.4±0.0, 34°.97N×32°.11E, h14^{km}±1^{km}, Ml3.1/4*

*DDA **12** 06:02:09.6, 35°.08N×32°.13E, h8^{km}±1^{km}, ML2.4*

*ISK **12** 06:02:09.1, 35°.05N×32°.15E, h8^{km}, ML2.7/17*

ISC 12 06:02:10.1±1.1, **35°.05N**±0°.03×**32°.16E**±0°.04, **h15**^{km}±7^{km}, **n34**, σ**1^{s}.04**/52, **2C-1D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKMS	**Akamas**	0.15	101	⇑iP	Pg	06 02 14.4	+0.4
AKMS				AML	AML	06 02 17.3	
	27nm,0.3s						
AKMS				AML	AML	06 02 17.3	
	27nm,0.3s						
AKMS				AML	AML	06 02 17.6	
	40nm,0.3s						
AKMS				AML	AML	06 02 17.6	
	40nm,0.3s						
AKMS				S	Sg	06 02 17.8	+1.2
ALFC	**Alefka**	0.38	73	⇑iP	Pb	06 02 18.3	-0.1
ALFC				S	Sb	06 02 25.3	+1.1
ALFC				AML	AML	06 02 25.9	
	7.2nm,0.4s						
ALFC				AML	AML	06 02 25.9	
	7.2nm,0.4s						
ALFC				AML	AML	06 02 26.2	
	6.7nm,0.5s						
ALFC				AML	AML	06 02 26.2	
	6.7nm,0.5s						
NATA	**Nata**	0.43	128	⇓eP	Pg	06 02 17.9	-0.9
NATA				S	Sg	06 02 24.9	+0.3
NATA				AML	AML	06 02 25.5	
	9.7nm,0.5s						
NATA				AML	AML	06 02 25.5	
	9.7nm,0.5s						
NATA				AML	AML	06 02 26.4	
	13nm,0.3s						
NATA				AML	AML	06 02 26.4	
	13nm,0.3s						
LEF	**Lefka**	0.61	83	i P	Pg	06 02 20.9	-1.1
LEF				i S	Sg	06 02 29.2	-0.8
LEF				IAML		06 02 32.0	
	comp=E,217nm,0.6s						
LEF				IAML		06 02 32.0	
	comp=N,252nm,0.9s						
LEF	**Lefka**	0.61	83	PG	Pg	06 02 20.7	-1.3
LEF				SG	Sg	06 02 29.1	-0.9
ASGA	**Asgata**	0.93	106	P	Pg	06 02 27.2	-0.9
ASGA				AML	AML	06 02 40.9	
	comp=N,2.1nm,0.5s						
ASGA				AML	AML	06 02 40.9	
	comp=N,2.1nm,0.5s						
ASGA				AML	AML	06 02 41.2	
	comp=N,2.0nm,1.0s						
ASGA				AML	AML	06 02 41.2	
	comp=N,2.0nm,1.0s						
ASGA				S	Sb	06 02 41.5	+1.4
CSS	**Mathiatis**	0.97	95	PG	Pg	06 02 27.7	-1.1
CSS				SG	Sb	06 02 42.2	+1.1
CSS	**Mathiatis**	0.97	95	P	Pg	06 02 27.5	-1.3
CSS				S	Sn	06 02 43.4	+0.9
LFK	**Lefkose**	1.15	78	PN	Pg	06 02 31.7	-0.6
LFK				SN	Sn	06 02 48.4	+1.3
GAZI	**Gazipasa**	1.19	6	i P	Pb	06 02 31.6	-0.7
GAZI				i S	Sn	06 02 48.9	+0.7
GAZI	**Gazipasa**	1.19	6	PN	Pb	06 02 32.0	-0.4
GAZI				SN	Sn	06 02 49.1	+1.0
TEKE	**Tekeli-Mersin**	1.34	35	PN	Pn	06 02 34.6	+0.4
TEKE				SN	Sg	06 02 53.5	0.0
BERE	**Bereket-Mersin**	1.56	33	PN	Pn	06 02 37.9	+0.5
AKKU	**Akkuyu-Mersin**	1.59	45	PN	Pn	06 02 38.1	+0.5
GULN	**MERSIN_Gulnar**	1.60	44	i P	Pb	06 02 39.5	+0.2
GULN				i S	Sn	06 02 59.1	+0.9
ERMK	**Ermenek**	1.71	21	i P	Pg	06 02 44.0	+1.2
ERMK				IAML		06 03 11.0	
	comp=E,32nm,0.4s						
ERMK				IAML		06 03 12.0	
	comp=N,42nm,0.3s						
EREN	**Erenkoy**	1.72	73	i P	Pn	06 02 38.8	-0.6
IKL	**Isikli**	1.72	46	PN	Pn	06 02 40.0	+0.6
TEVE	**Tevekalti-Mers**	1.74	37	PN	Pn	06 02 40.2	+0.5
KEBE	**Keben-Mersin**	1.89	42	PN	Pn	06 02 42.5	+0.7
KEPZ	**Antalya-Kepez**	1.91	347	i P	Pn	06 02 42.8	+0.7
KEPZ				i S	Sg	06 03 09.4	-1.9
KEPZ				IAML		06 03 18.0	
	comp=N,30nm,1.1s						
HDMB	**Hadim**	1.93	8	PN	Pn	06 02 42.9	+0.4
OSC2	**CSNet OBS 4**	1.97	177	S	Sn	06 03 06.3	-0.9
KIZK	**Mersin**	2.16	48	i P	Pg	06 02 51.8	+0.3
KIZK				i S	Sb	06 03 15.2	-0.1
KIZK	**Mersin**	2.16	48	PN	Pn	06 02 46.2	+0.8
KKBE	**Karaman, Kazim**	2.26	16	i P	Pb	06 02 50.0	-0.6
KKBE				i S	Sg	06 03 20.7	-2.1
KRMN	**Karaman**	2.31	23	PN	Pn	06 02 48.5	+0.9
SEYD	**Seydisehir-KON**	2.37	354	PN	Pn	06 02 49.4	+1.0
AKAS	**Kas**	2.39	300	PN	Pn	06 02 49.8	+1.0
SEDI	**Konya, Seydise**	2.42	352	i P	Pb	06 02 53.2	-0.2
SEDI				i S	Sg	06 03 25.9	-2.0
SEDI				IAML		06 03 31.0	
	comp=E,20nm,0.8s						
SEDI				IAML		06 03 32.0	
	comp=N,17nm,0.4s						
KORT	**Korkueli**	2.44	324	PN	Pn	06 02 50.3	+0.9
KERG	**Konya-Eregli**	2.85	33	i P	Pb	06 02 58.3	-2.3
KERG				i S	Sb	06 03 34.6	-0.8
KERG				IAML		06 03 37.0	
	comp=E,13nm,0.6s						
KERG				IAML		06 03 39.0	
	comp=N,27nm,1.2s						
KONT	**Konya--Tatoy**	2.90	3	PN	Pn	06 02 56.9	+1.2
CMRD	**Camardi-Nigde**	3.47	40	PN	Pn	06 03 04.9	+1.3

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*JMA **12** 06:11:16.3±0.2, 24°.07N×122°.67E, h12^{km}±4^{km}, M2.5*

*TAP **12** 06:11:17.1, 24°.20N×122°.69E, h30^{km}±1^{km}, ML2.8, C*

ISC 12 06:11:17.0±1.1, **24°.15N**±0°.04×**122°.67E**±0°.02, **h24**^{km}±11^{km}, **n42**, σ**0^{s}.67**/79, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	0.39	40	P	Pb	06 11 25.2	-0.3
JYNG				eS	Sb	06 11 31.6	+0.4
YOJ	**Yonaguni jima**	0.44	45	P	Pb	06 11 26.1	-0.1
	baz=53						
YOJ				S	Sb	06 11 32.5	0.0
	baz=53						
YOJ	**Yonaguni jima**	0.44	45	P	Pb	06 11 26.4	+0.1
YOJ				S	Sb	06 11 33.0	+0.5
EWUT	**Wuta**	0.86	290	eP	Pb	06 11 32.5	-0.8
	baz=286						
EWUT				eS	Sb	06 11 45.1	+0.6
	baz=286						
TWC	**Suao**	0.87	302	P	Pb	06 11 32.9	-0.6
	baz=298						
TWC				eS	Sb	06 11 45.1	+0.3
	baz=298						
ENA	**Nanau**	0.89	288	eP	Pb	06 11 32.9	-0.9
	baz=285						
ENA				eS	Sn	06 11 46.1	0.0
	baz=285						
NACB	**Ninganchiao**	0.98	272	P	Pb	06 11 35.0	-0.3
	baz=254						
NACB				eS	Sn	06 11 48.6	+0.3
	baz=254						
TWD	**Chiawan**	0.98	266	eP	Pb	06 11 35.0	-0.3
	baz=263						
TWD				eS	Sn	06 11 48.3	-0.1
	baz=263						
IRIF	**Iriomote-Funau**	0.99	79	P	Pn	06 11 35.4	+0.1
IRIF				S	Sn	06 11 48.3	-0.3
NDS	**Dongshan**	0.99	299	P	Pn	06 11 35.6	+0.2
	baz=296						
NDS				S	Sn	06 11 48.8	+0.2
	baz=296						
NTC	**Toucheng**	1.04	313	eP	Pn	06 11 35.6	-0.4
	baz=309						
NTC				eS	Sb	06 11 49.7	+0.3
	baz=309						
HATJ	**Hateruma jima**	1.04	95	P	Pb	06 11 35.8	-0.6
HATJ				eS	Sn	06 11 49.8	-0.1
TWB1	**Santiao Chiao**	1.05	324	eP	Pn	06 11 35.8	-0.5
	baz=332						
TWB1				eS	Sb	06 11 49.3	-0.7
	baz=332						
TWE	**Neicheng**	1.07	302	eP	Pn	06 11 36.7	+0.2
	baz=310						
TWE				eS	Sb	06 11 50.2	-0.3
	baz=310						
ETLH	**Xiulin Townshi**	1.08	273	P	Pn	06 11 36.8	+0.1
	baz=270						
ETLH				S	Sn	06 11 51.8	+0.7
	baz=270						
ENTT	**Nioudou**	1.11	296	P	Pb	06 11 37.7	0.0
	baz=293						
ENTT				eS	Sn	06 11 52.6	+0.8
	baz=293						
TIPB	**Shuangxi**	1.12	317	eP	Pn	06 11 36.7	-0.5
	baz=314						
TIPB				eS	Sb	06 11 51.2	-0.8
	baz=314						
NDT	**Datong Townshi**	1.14	293	P	Pb	06 11 38.3	+0.2
	baz=290						
NDT				eS	Sn	06 11 53.5	+1.1
	baz=290						
ESL	**Shilin**	1.18	254	eS	Sn	06 11 53.7	+0.5
	baz=251						
NNSB	**Datong**	1.20	284	eP	Pb	06 11 39.1	-0.1
	baz=280						
NNSB				eS	Sb	06 11 54.5	+0.1
	baz=280						
NWF	**Wu-fen Shan**	1.22	319	eP	Pn	06 11 38.2	-0.4
	baz=316						
NWF				eS	Sn	06 11 53.7	-0.7
	baz=316						
JKRS	**Kuro-shima**	1.23	86	P	Pb	06 11 39.5	-0.1
JKRS				S	Sn	06 11 56.3	+1.8
NWLT	**Wulai**	1.23	301	eP	Pb	06 11 40.0	+0.3
	baz=298						
NWLT				eS	Sn	06 11 55.1	+0.5
	baz=298						
WHF	**Hehuan Shan**	1.28	270	P	Pn	06 11 39.6	-0.1
	baz=267						
WHF				eS	Sb	06 11 57.2	+0.3
	baz=267						
FUSS	**Fushou**	1.30	275	eP	Pb	06 11 40.5	-0.5
	baz=271						
FUSS				eS	Sn	06 11 56.7	+0.1
	baz=271						
NSK	**Sanguang**	1.30	294	eP	Pb	06 11 40.5	-0.4
	baz=275						
NSK				eS	Sb	06 11 58.0	+0.8
	baz=275						
HGSD	**Ruisui**	1.31	240	eP	Pn	06 11 39.8	0.0
	baz=239						
HGSD				eS	Sn	06 11 56.2	-0.4
	baz=239						
JIJ	**Ishigaki jima**	1.36	81	P	Pb	06 11 41.0	-0.9
JIJ				eS	Sb	06 11 59.1	+0.2
CHGB	**Renai**	1.37	267	eP	Pn	06 11 40.9	+0.1
	baz=264						
CHGB				eS	Sn	06 11 57.6	-0.6
	baz=264						
YM01	**YM01**	1.41	315	eP	Pn	06 11 41.1	0.0
	baz=323						
YM01				eS	Sn	06 11 58.5	-0.5
	baz=323						
YULB	**Yu-li**	1.46	239	eP	Pn	06 11 40.9	-1.0
	baz=227						
YULB				eS	Sn	06 11 58.9	-1.4
	baz=227						
JISG	**Ishigakijimahi**	1.56	73	P	Pn	06 11 43.7	+0.5
JISG				S	Sb	06 12 03.5	-1.1
WHP	**Taichung City**	1.58	275	eP	Pn	06 11 43.6	+0.1
	baz=259						
WHP				eS	Sn	06 12 03.5	+0.3
	baz=259						
CHKT	**Chengkung**	1.59	229	eS	Sn	06 12 02.5	-0.8
	baz=218						
WCS	**Beigang Elemen**	1.61	267	eP	Pb	06 11 45.4	-0.5
	baz=255						
WCS				eS	Sb	06 12 06.8	+0.9
	baz=255						
SSLB	**Suanglung**	1.61	257	eP	Pn	06 11 44.6	+0.7
	baz=255						
SSLB				eS	Sn	06 12 04.8	+0.9
	baz=255						
TYC	**Yuchr**	1.67	262	eP	Pn	06 11 45.9	+1.1
	baz=259						
TYC				eS	Sn	06 12 06.0	+0.6
	baz=259						
EDH	**Donghe**	1.71	227	eS	Sn	06 12 05.6	-0.8
	baz=217						
ALS	**Alishan**	1.82	250	eS	Sn	06 12 09.6	+0.1
	baz=248						
TPUB	**Ta-pu**	2.05	246	eP	Pn	06 11 51.2	+1.2

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	baz=244						
TPUB				eS	Sb	06 12 16.9	-1.7
	baz=244						
SLGT	Liugui	2.18	239	eP	Pn	06 11 52.9	+1.1
	baz=230						
SLGT				eS	Sn	06 12 19.4	+1.4
	baz=230						
TSMG	Majia	2.35	233	eS	Sn	06 12 23.1	+1.0
	baz=226						

NNC 12 06:44:58.7±2.0, 53°.70N×88°.49E, h0^{km}, mb3.5, mpv3.2, 8C-6D, Error ellipse: s-maj=15.4km s-min=8.8km az=58.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	2.19	278	⇑Pn	Pn	06 45 35.5	-0.8
	4.9nm,0.8s						
ZAA0				⇑Sn	Sb	06 46 05.5	-1.2
	9.6nm,0.8s						
KURK	Kurchatov	6.76	248	⇑Pn	Pn	06 46 38.6	-0.5
	1.6nm,0.7s						
KURK				⇑Sn	Sn	06 47 56.8	+0.1
	1.9nm,1.0s						
KURK				⇓Lg	Lg	06 48 33.6	
	12nm,1.1s						
KURBB	Kurchatov Arra	6.86	247	⇑Pn	Pn	06 46 40.1	-0.2
	2.8nm,0.6s						
KURBB				⇓Sn	Sn	06 47 58.9	-0.2
	4.3nm,0.7s						
KURBB				⇑Lg	Lg	06 48 36.9	
	19nm,0.9s						
MK31	Makanchi Array	7.97	212	⇓Pn	Pn	06 46 58.6	+2.8
	0.6nm,0.6s,baz=29,slow=13,SNR=9.2						
MK31				⇓Sn	Sn	06 48 27.9	+1.3
	2.6nm,1.0s						
MK31				⇓Lg	Lg	06 49 13.0	
	1.5nm,0.7s,baz=30,slow=30,SNR=3.7						
MAKZ	Makanchi	8.06	214	⇑Pn	Pn	06 46 57.6	+0.7
	0.5nm,0.5s						
MAKZ				⇓Sn	Sn	06 48 29.4	+0.7
	1.4nm,0.8s						
MAKZ				⇑Lg	Lg	06 49 16.2	
	4.0nm,1.1s						

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*IDC **12** 06:50:26.2±1.1, 51°.69N×172°.89W, h0^{km}, mb3.8/10, mb1 4.1/12, mb1mx3.8/60, mbtmp3.8/12, ML3.6/2, MS3.2/4, Ms1 3.2/4, ms1mx2.8/36, Error ellipse: s-maj=34.1km s-min=16.8km az=173.0*

*AEIC **12** 06:50:27±2.0, 51°.31N±0°.07×172°.81W±0°.02, h5^{km}±7^{km}, ML3.4, Error ellipse: s-maj=10.7km s-min=1.4km az=172.0*

*NEIC **12** 06:50:30.1±1.9, 51°.4N±0°.1×172°.84W±0°.05, h39^{km}±31^{km}, Error ellipse: s-maj=18.9km s-min=1.8km az=168.0*

ISC 12 06:50:31.0±0.8, **51°.5N**±0°.1×**172°.84W**±0°.06, **h37^{km}, n36,** σ1^{s}**13**/27, **mb3.8**/10, **MS3.3**/3, **Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATKA	Atka Island	1.11	311	Pn	Pn	06 50 51.2	+1.2
KOFP	Korovin Flat P	1.11	316		Pn	06 50 50.1	0.0
KOSE	Korovin Southe	1.15	320		Pn	06 50 51.3	+0.8
KOKL	Mount Kliuchef	1.19	316		Pn	06 50 51.5	+0.3
GSIG	Igitkin Island	1.98	286		Pn	06 51 02.4	+0.4
GSMY	Great Sitkin M	2.08	287		Pn	06 51 04.0	+0.7
GSTD	Great Sitkin T	2.13	287		Pn	06 51 05.3	+1.2
ADK	Adak	2.43	281		Pn	06 51 09.2	+1.2
ADK	Adak	2.43	281	Pn	Pn	06 51 06.1	-2.0
KIWB	Kanaga Island	2.71	280	Pn	Pn	06 51 10.7	-1.2
KIMD	Kanaga Island	2.75	278		Pn	06 51 14.2	+1.7
TASE	Tanaga Southea	3.26	278		Pn	06 51 18.9	-0.6
MAPS	Pakushin South	4.28	55		Pn	06 51 33.4	-0.2
UNV	Unalaska Valle	4.53	56		Pn	06 51 36.9	+0.1
AMKA	Amchitka	4.92	272	Pn	Pn	06 51 40.9	-1.4
KDAK	Kodiak Island	13.29	54	Pn	Pn	06 53 36.4	-0.4
	0.2nm,0.3s,baz=186,slow=17,SNR=1.7						
PETK	Petropavlovsk-	18.04	287	LR	LR	07 01 21.2	
	comp=Z,46nm,19.0s,baz=104,slow=36						
ILAR	Eielson Array	18.91	35	P	P	06 54 44.9	-3.2
	0.3nm,0.3s,baz=232,slow=9.7,SNR=18						
DLBC	Dease Lake	25.18	57	P	P	06 55 52.5	-0.2
	3.2nm,0.9s,baz=216,slow=9.2,SNR=4.9						
INK	Inuvik	25.27	33	P	P	06 55 52.8	-0.5
	4.9nm,0.6s,baz=242,slow=8.5,SNR=30						
H11N2	WAKE ISLAND Hy	35.46	214	T	T	07 35 31.2	
	baz=21,slow=76,SNR=4.1						
H11N3	WAKE ISLAND Hy	35.47	214	T	T	07 35 32.9	
	baz=21,slow=76,SNR=5.2						
H11N1	WAKE ISLAND Hy	35.48	214	T	T	07 35 29.5	
	baz=21,slow=76,SNR=4.6						
H11S1	WAKE ISLAND Hy	36.66	214	T	T	07 36 55.9	
	baz=17						
H11S2	WAKE ISLAND Hy	36.67	214	T	T	07 36 55.4	
	baz=17						
H11S3	WAKE ISLAND Hy	36.68	214	T	T	07 36 54.8	
	baz=17						
MJAR	Matsushiro Arr	37.50	266	LR	LR	07 13 09.9	
	comp=Z,24nm,20.2s,baz=90,slow=36						
NVAR	Mina Array Bea	39.83	87	P	P	06 58 01.8	+1.0
	0.9nm,0.9s,baz=328,slow=9.9,SNR=3.3						
PDAR	Pinedale Array	42.69	76	P	P	06 58 25.1	+0.8
	0.4nm,0.7s,baz=307,slow=3.0,SNR=3.9						
SONM	Songino Array	49.89	300	P	P	06 59 20.1	-0.5
	0.4nm,0.6s,baz=44,slow=7.7,SNR=3.6						
SONM				LR	LR	07 21 40.9	
	comp=Z,52nm,18.0s,baz=30,slow=38						
TXAR	Lajitas Array	54.94	86	P	P	06 59 59.1	+0.9
	0.4nm,0.7s,baz=305,slow=4.4,SNR=4.5						
ZALV	Zalesovo Beam	56.60	316	LR	LR	07 24 46.7	
	comp=Z,26nm,20.9s,baz=288,slow=36						
KURBB	Kurchatov Arra	61.68	317	P	P	07 00 44.7	-0.1
	1.2nm,0.8s,baz=42,slow=6.9,SNR=8.4						
MKAR	Makanchi Array	62.82	312	P	P	07 00 52.0	-0.6
	0.9nm,0.9s,baz=50,slow=3.8,SNR=5.1						
CMAR	Chiang Mai Arr	74.69	280	P	P	07 02 07.7	+0.8
	1.1nm,0.3s,baz=17,slow=7.5,SNR=4.1						
ASAR	Alice Springs	88.19	227	P	P	07 03 18.1	+0.2
	0.4nm,0.8s,baz=36,slow=4.5,SNR=4.4						

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*IDC **12** 06:53:49.9±0.7, 29°.61S×71°.79W, h0^{km}, mb4.3/9, mb1 4.4/13, mb1mx4.2/30, mbtmp4.2/13, ML4.1/4, MS3.9/9, Ms1 3.8/9, ms1mx3.6/19, Error ellipse: s-maj=23.9km s-min=20.5km az=99.0*

*VAO **12** 06:53:50.7±0.5, 29°.56S×72°.00W, h10^{km}, mb4.6*

*NEIC **12** 06:53:50.1±1.8, 29°.55S±0°.04×72°.11W±0°.06, h10^{km}±1^{km}, mb4.8/26, Mwr4.4/52, ML4.7(GUC), Error ellipse: s-maj=8.7km s-min=7.0km az=246.0*

*NEIC **12** 06:53:50, 29°.57S×72°.15W, h18^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}3.93; $M_{\theta\theta}$1.00; $M_{\phi\phi}$-4.93; $M_{r\theta}$0.89; $M_{\theta\phi}$0.93; $M_{\phi r}$1.05; Fault plane solution: $M_0$4.81000×10^{15} NP1:ϕ_s7.90000°, δ53.20000°, λ112.29000°. NP2:ϕ_s153.51000°, δ42.20000°, λ63.11000°. Principal axes: T 4.3509, Plg71.0000°, Azm335.0000°; N 0.8108, Plg18.0000°, Azm174.0000°; P -5.1617, Plg6.0000°, Azm82.0000°;*

*GUC **12** 06:53:53.0±0.6, 29°.62S×71°.92W, h22^{km}±4^{km}, ML4.8*

ISC 12 06:53:49.9±1.0, **29°.55S**±0°.03×**72°.06W**±0°.06, **h10^{km}**±5^{km}, **n188,** σ1^{s}**20**/195, **mb4.8**/17, **MS4.0**/6, **2C-2D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	La Serena	0.80	118	⇓iP	Pn	06 54 05.8	-1.5
CO05				iS	Sb	06 54 15.0	-1.9
CO05	La Serena	0.80	118		Pn	06 54 05.9	-1.5
CO06	Fray Jorge	1.18	162	iP	Pb	06 54 12.0	-0.5
CO06				iS	Sb	06 54 26.4	-1.5
CO06	Fray Jorge	1.18	162		Pb	06 54 12.0	-0.5
GO04	Tololo Observa	1.26	120	eP	Pn	06 54 13.5	-0.4
GO04				iS	Sn	06 54 28.5	-2.5
GO04	Tololo Observa	1.26	120		Pn	06 54 13.7	-0.2
LCO	Las Campanas	1.30	66	⇓iP	Pn	06 54 14.6	+0.1
LCO				iS	Sn	06 54 31.9	-0.2
LCO	Las Campanas	1.30	66	Pn	Pn	06 54 14.7	+0.2
AC04	Llanos de Chal	1.59	33	iP	Pn	06 54 18.1	-0.1
AC04	Llanos de Chal	1.59	33	Pn	Pn	06 54 18.1	-0.1
CO03	El Pedregal	1.75	138	eP	Pb	06 54 20.8	-1.4
CO03				iS	Sn	06 54 41.1	-1.8
CO03				IAML		06 54 50.2	
	comp=E,8μm,0.3s						
CO03	El Pedregal	1.75	138		Pb	06 54 20.9	-1.3
GO03	Copiap	2.52	40	⇑iP	Pn	06 54 31.3	+0.2
GO03				iS	Sn	06 55 01.0	-0.9
GO03				IAML		06 55 21.4	
	comp=N,3μm,0.3s						
GO03	Copiap	2.52	40	Pn	Pn	06 54 31.7	+0.6
VA06	Catapilco	3.07	168	iP	Pn	06 54 39.0	+0.4
VA06				IAML		06 55 36.8	
	comp=E,4μm,0.6s						
VA03	San Esteban	3.46	158	eP	Pn	06 54 46.1	+2.1
VA03				eS	Sn	06 55 25.8	+0.7
VA03				IAML		06 55 42.0	
	comp=N,4μm,0.5s						
VA03	San Esteban	3.46	158		Pn	06 54 45.5	+1.5
VA01	Torpederas	3.48	174	eP	Pn	06 54 43.8	-0.4
VA01				IAML		06 55 47.0	
	comp=E,1μm,0.8s						
VA01	Torpederas	3.48	174	Pn	Pn	06 54 43.8	-0.4
ROCH	El Roble	3.53	166	eP	Pn	06 54 45.3	+0.2
ROCH				IAML		06 55 51.0	
	comp=N,2μm,0.8s						
AC02	Maricunga	3.74	44	⇑iP	Pn	06 54 49.7	+1.5
AC02	Maricunga	3.74	44	Pn	Pn	06 54 49.7	+1.5
PEL	Peldehue	3.77	162	eP	Pn	06 54 49.2	+0.9
PEL				eS	Sn	06 55 33.3	+0.5
PEL	Peldehue	3.77	162		Pn	06 54 49.2	+0.9
MT02	Curacav	3.78	168	eP	Pn	06 54 50.1	+1.7
MT02	Curacav	3.78	168		Pn	06 54 48.5	+0.1
MT05	Renca	3.99	164	eP	Pn	06 54 52.4	+1.1
MT05				eS	Sn	06 55 37.0	-1.3
MT05	Renca	3.99	164		Pn	06 54 52.0	+0.6
FCH	Farellones	4.06	159	eP	Pn	06 54 54.5	+2.1
FCH				eS	Sn	06 55 41.4	+1.1
VA05	Santo Domingo	4.11	175	eP	Pn	06 54 52.2	-0.7
VA05	Santo Domingo	4.11	175		Pn	06 54 52.1	-0.8
MT09	Talagante	4.31	168	eP	Pn	06 54 56.7	+0.9
MT09				eS	Sn	06 55 44.6	-1.6
MT09	Talagante	4.31	168		Pn	06 54 56.3	+0.5
MT01	Popeta	4.36	171	eP	Pn	06 54 56.4	+0.1
MT01	Popeta	4.36	171		Pn	06 54 56.2	-0.1
LMEL	Las Melosas	4.57	160	eP	Pn	06 55 01.6	+2.3
LMEL				eS	Sn	06 55 52.8	+0.2
BO04	La Punta	4.59	165	eP	Pn	06 55 00.5	+0.9
BO01	Tunca	4.90	171		Pn	06 55 03.8	0.0
PB14	IPOC Station P	5.12	17	Pn	Pn	06 55 05.3	-1.8
BO02	Sierra Bellavi	5.34	169		Pn	06 55 10.4	+0.5
GO05	Huala	5.45	179		Pn	06 55 10.1	-1.2
PB10	IPOC Station P	6.16	13		Pn	06 55 20.6	-0.4
ML02	Panimavida	6.22	175	Pn	Pn	06 55 21.6	-0.3
PB15	IPOC Station P	6.72	21		Pn	06 55 28.6	-0.4
H03N1	Juan Fernandez	7.02	235	T	T	07 03 07.4	
	baz=66,slow=72,SNR=613						
H03N2	Juan Fernandez	7.04	235	T	T	07 03 05.2	
	baz=66,slow=72,SNR=724						
H03N3	Juan Fernandez	7.04	235	T	T	07 03 05.5	
	baz=66,slow=72,SNR=527						
VA04	Juan Fernndez	7.08	233	eP	Pn	06 55 31.1	-2.5
VA04	Juan Fernndez	7.08	233		Pn	06 55 31.6	-2.1
PB06	IPOC Station P	7.17	19		Pn	06 55 32.9	-2.2
H03S3	Juan Fernandez	7.23	232	T	T	07 03 17.5	
	baz=66,slow=74,SNR=6.3						
H03S1	Juan Fernandez	7.24	232	T	T	07 03 14.5	
	baz=66,slow=74,SNR=2.5						
H03S2	Juan Fernandez	7.25	232	T	T	07 03 18.7	
	baz=66						
PB04	IPOC Station P	7.39	14		Pn	06 55 35.1	-3.0
LVC	Limon Verde	7.46	23	Pn	Pn	06 55 38.2	-1.1
	comp=N,1.9nm,0.3s,baz=202,slow=10,SNR=17						
LVC				Sn	Sn	06 57 00.5	-3.8
	comp=N,4.8nm,0.3s,baz=226,slow=7.7,SNR=2.0						
LVC				Lg	Lg	06 57 36.9	
	comp=N,12nm,0.3s,baz=319,slow=11,SNR=6.7						
LVC				LR	LR	06 58 53.5	
	comp=N,464nm,18.0s,baz=210,slow=41						
LVC	Limon Verde	7.46	23	eP	Pn	06 55 38.8	-0.6
LVC	Limon Verde	7.46	23		Pn	06 55 38.0	-1.4
LC01	Cunco	9.33	179		Pn	06 56 03.7	-0.8
LR03	Panguipulli	10.06	181		Pn	06 56 14.0	-0.6
PLCA	Paso Flores	11.23	174	Pn	Pn	06 56 30.0	-0.6
	comp=N,1.1nm,0.3s,baz=335,slow=12,SNR=41						
PLCA				LR	LR	07 00 55.2	
	comp=N,316nm,18.4s,baz=349,slow=38						
PLCA	Paso Flores	11.23	174	eP	Pn	06 56 30.9	+0.3
PLCA	Paso Flores	11.23	174		Pn	06 56 30.6	0.0
LL04	Puerto Octay	11.34	181		Pn	06 56 31.0	-1.0
LL05	Los Muermos	11.89	185	Pn	Pn	06 56 38.8	-0.7
CPUP	Villa Florida	13.41	80	Pn	Pn	06 56 59.4	-1.0
	comp=N,0.0nm,0.3s,baz=19,slow=16,SNR=1.7						
CPUP				Lg	Lg	07 00 34.2	
	comp=N,0.3nm,0.3s,baz=348,slow=18,SNR=3.0						
CPUP				LR	LR	07 02 31.5	
	comp=N,560nm,18.5s,baz=241,slow=40						
CPUP	Villa Florida	13.41	80	eP	Pn	06 57 00.5	+0.2
CPUP	Villa Florida	13.41	80	Pn	Pn	06 57 00.5	+0.2
ITQB	Itaqui	13.43	94	eP	Pn	06 57 00.3	-0.3
ITQB	Itaqui	13.43	94		Pn	06 57 00.2	-0.5
LPAZ	La Paz	13.68	16		Pn	06 57 03.2	-1.5
PLTB	Pedras Altas	16.03	103	eP	Pn	06 57 35.5	-0.2
CPSB	Cacapava Do Su	16.16	98	eP	Pn	06 57 37.6	+0.4
SIV	San Ignacio	16.85	39	Pn	Pn	06 57 45.5	-0.7
	comp=N,1.4nm,0.3s,baz=224,slow=8.6,SNR=32						
AQDB	Aquidauana	17.34	62	eP	P	06 57 54.2	+0.5
AQDB	Aquidauana	17.34	62	P	Pn	06 57 52.5	+0.2
PTLB	Pontes e Lacer	18.40	43	eP	P	06 58 05.8	+0.5
PTLB	Pontes e Lacer	18.40	43	P	P	06 58 05.4	+0.1
PTGB	Pitanga	18.43	80	eP	P	06 58 07.0	+1.3
CNLB	Canela	18.47	95	eP	P	06 58 08.1	+2.0
PP1B	Ponte de Pedra	19.70	57	eP	Pn	06 58 20.4	-0.7
VILB	Vilhena	19.84	36	eP	P	06 58 22.0	+0.8
VILB	Vilhena	19.84	36	P	P	06 58 21.2	0.0
VILB				IAmb	IAmb	06 58 37.9	
	comp=Z,24nm,0.8s						
TER01	Tubaro-SC	20.07	93	eP	Pn	06 58 23.9	-1.5
SALV	Santo Antonio	20.27	51	eP	P	06 58 26.3	+0.5
PCMB	Pacaembu	20.34	72	eP	Pn	06 58 27.2	-1.3
ETMB	Extrema	20.38	17	eP	Pn	06 58 28.7	-0.4
ETMB	Extrema	20.38	17	P	P	06 58 27.7	+0.7
ETMB				IAmb	IAmb	06 58 42.0	
	comp=Z,16nm,0.7s						
TIJ01	Guaruva-PR	20.88	84	eP	P	06 58 30.3	-2.2
FRTB	Fartura	21.05	78	eP	P	06 58 34.2	-0.1
CZSB	Cruzeiro do Su	21.71	358	eP	P	06 58 44.7	+3.3
ITRB	Iturama	21.99	68	eP	P	06 58 43.9	-0.5
SAML	Samuel	22.12	24	P	P	06 58 46.0	+0.3
PET01	Itanhaem-SP	22.69	83	eP	P	06 58 52.9	+1.0
PDRB	Porto dos Gac	22.85	42	eP	P	06 58 52.9	-0.6
BB19B	Bebedouro	22.85	74	eP	P	06 58 52.5	-1.1
RCLB	Rio Claro- Sao	23.13	78	eP	P	06 58 56.9	+0.4
ARAG	Araguaiana, MT	23.16	58	eP	P	06 58 55.4	-1.4
CLDB	Colider	23.99	43	eP	P	06 59 04.5	-0.4
PARB	Paraibuna	24.43	82	eP	P	06 59 08.2	-0.9
IPMB	Ipameri, GO	24.62	67	eP	P	06 59 10.5	-0.3
TBTG	Tabatinga, AM	25.31	5	eP	P	06 59 15.6	-1.3
MAN01	Angra dos Reis	26.03	82	eP	P	06 59 23.5	0.0
SNDB	Serra Nova Dou	26.05	52	eP	P	06 59 23.9	+0.2
BSCB	Bom Sucesso	26.05	77	eP	P	06 59 24.4	+0.6
BDFB	Brasilia	26.09	63	P	P	06 59 24.2	0.0
	comp=Z,6.2nm,0.4s,baz=237,slow=7.9,SNR=22						
BDFB				LR	LR	07 11 12.5	
	comp=Z,350nm,19.8s,baz=307,slow=40						
BDFB	Brasilia	26.09	63	P	P	06 59 23.8	-0.4
BDFB				IAmb	IAmb	06 59 25.4	
	comp=Z,48nm,1.5s						
NPGB	Novo Progresso	27.35	38	eP	P	06 59 35.4	0.0
PEXB	Peixe	28.08	57	eP	P	06 59 42.5	+0.5
DIAM	Diamantina, MG	28.18	73	eP	P	06 59 43.7	+0.7
MACA	Manacapuru-AM	28.38	24	eP	P	06 59 45.5	+0.9
CAM01	Campos-RJ	28.39	81	eP	P	06 59 45.7	+1.0
MC01	Montes Claros	28.75	70	eP	P	06 59 47.2	-0.8
JANB	Januaria	29.34	67	eP	P	06 59 53.3	0.0
ITTB	Itaituba	29.43	35	eP	P	06 59 53.8	-0.1
SJMB	Sao Joao De Ma	30.08	76	eP	P	06 59 59.5	-0.3
OTAV	Otavalo	30.24	347	P	P	07 00 00.9	-0.7
BSFB	Barra de Sao F	30.31	76	eP	P	07 00 02.0	+0.2
SDBA	SAO DESIDERIO	30.43	62	eP	P	07 00 03.0	+0.1
SMTB	Santa Maria do	30.81	53	eP	P	07 00 07.9	+1.7
PTGA	Pitinga	30.89	24	P	P	07 00 06.4	-0.5
	comp=Z,4.2nm,0.9s,baz=209,slow=8.9,SNR=6.6						
PTGA	Pitinga	30.89	24	eP	P	07 00 05.3	-1.5
PTGA	Pitinga	30.89	24	P	P	07 00 07.0	+0.2
GUA01	Guaratinga, BA	32.24	74	eP	P	07 00 18.9	+0.1
MALB	Monte Alegre	32.33	35	eP	P	07 00 19.9	+0.4
CMC01	Camacan, BA	33.09	72	eP	P	07 00 26.5	+0.3
PRAC	Prado	33.18	355	eP	P	07 00 30.1	+3.0
NBIT	Itapeh - BA	33.38	71	eP	P	07 00 29.1	+0.4
ORTC	Ortega, Tolima	33.41	354	eP	P	07 00 32.6	+3.6
BOAV	Boa Vista	33.63	21	eP	P	07 00 31.9	+1.1
BOAV	Boa Vista	33.63	21	P	P	07 00 30.3	-0.6
BOAV				IAmb	IAmb	07 00 40.5	
	comp=Z,5.3nm,0.9s						
GDU01	Guandu, BA	33.90	69	eP	P	07 00 33.2	-0.1
CHIC	Chingaza	34.02	357	eP	P	07 00 35.5	+0.8
GUY2C	Guyana, Caldas	34.72	354	eP	P	07 00 42.1	+1.2
NORC	Norcasia	35.01	355	eP	P	07 00 42.1	-0.9
NBPN	Ponto Novo - B	35.03	65	eP	P	07 00 43.2	+0.1
SPBC	San Pablo de B	35.05	357	eP	P	07 00 42.1	-1.2
RUSC	La Rusia	35.25	358	eP	P	07 00 46.2	+0.7
TMAB	Tom-Au,PA,Br	35.34	45	eP	P	07 00 47.0	+1.3
CBOC	Ciudad Bolivar	35.41	353	eP	P	07 00 47.8	+1.3
NBLA	Lagarto - SE	36.87	67	eP	P	07 00 58.4	-0.5
ZARC	Zaragoza, Cauc	36.92	355	eP	P	07 00 56.9	-2.4
ZARC	Zaragoza, Cauc	36.92	355	P	P	07 00 58.8	-0.5
ZARC				IAmb	IAmb	07 01 10.9	
	comp=Z,12nm,1.3s						
NBPS	Pedro II - PI	38.27	55	eP	P	07 01 11.2	+0.4
NBMA	Muriti-CE	38.29	61	eP	P	07 01 11.4	+0.5
CAP2	Capurgana	38.32	352	P	P	07 01 10.4	-0.6
CAP2				IAmb	IAmb	07 01 30.6	
	comp=Z,41nm,1.2s						
NBAN	Anadia - AL	38.84	67	eP	P	07 01 15.4	-0.2
NBPB	Pedra_Branca-C	38.85	58	eP	P	07 01 16.2	+0.6
NBLV	Livramento - P	39.72	63	eP	P	07 01 22.8	-0.1
SMRC	Santa Marta, M	40.53	357	eP	P	07 01 21.6	-7.9
NBPV	Pedro Velho	41.56	64	eP	P	07 01 39.1	+0.9
MATN	Matagalpa	44.30	340	P	P	07 01 59.6	-0.7
CRPR	Cabo Rojo, PR	47.52	6	P	P	07 02 23.8	-1.7
VNA3	Neumayer Olymp	53.49	159	P	P	07 03 11.2	+1.0
VNA1	Neumayer--Stat	53.78	158	P	P	07 03 13.5	+1.3
VNA2	Neumayer--Watz	54.13	158	P	P	07 03 15.7	+0.9
	baz=287,slow=8.2						
SNAA	Sanae	55.72	159	P	P	07 03 27.1	+0.7
SNAA	Sanae	55.72	159	P	P	07 03 26.8	+0.4
SNAA				IAmb	IAmb	07 03 37.1	
	comp=Z,9.1nm,1.0s						
QSPA	South Pole Qui	60.67	180	P	P	07 04 03.1	+1.8
QSPA				IAmb	IAmb	07 04 13.3	
	comp=Z,8.8nm,0.8s						
Y45A	Yeager Farm, C	65.20	344	P	P	07 04 31.1	-0.4
TXAR	Lajitas Array	65.87	330	P	P	07 04 37.6	+1.5
	comp=Z,0.6nm,0.8s,baz=158,slow=9.7,SNR=3.7						
TXAR	Lajitas Array	65.87	330	P	P	07 04 34.8	-1.2
BLA	Blacksburg	66.87	353	P	P	07 04 42.2	+0.1
BLA				IAmb	IAmb	07 04 56.6	
	comp=Z,9.6nm,1.1s						
MGMO	Mountain Grove	69.01	343	P	P	07 04 54.0	-1.6
PPT	Papeete	70.92	260	LR	LR	07 27 52.7	
	comp=Z,58nm,19.6s,baz=74,slow=29						
DBIC	Dimbokro	73.81	72	P	P	07 05 25.9	+0.8
	comp=Z,6.1nm,0.6s,baz=228,slow=4.4,SNR=12						
DBIC				LR	LR	07 35 56.2	
	comp=Z,56nm,18.1s,baz=179,slow=34						
DBIC	Dimbokro	73.81	72	P	P	07 05 25.4	+0.3
DBIC				IAmb	IAmb	07 05 26.5	
	comp=Z,8.2nm,0.7s						
GBN	Guysborough	75.21	8	P	P	07 05 33.2	+0.6
MAW	Mawson	77.44	164	P	P	07 05 46.0	+0.9
	comp=Z,2.3nm,0.9s,baz=222,slow=4.5,SNR=4.7						
MAW				LR	LR	07 40 16.0	
	comp=Z,72nm,18.2s,baz=239,slow=36						
MAW	Mawson	77.44	164	P	P	07 05 44.7	-0.4
KOWA	Kowa	78.84	66	P	P	07 05 54.4	+0.7
KOWA				IAmb	IAmb	07 05 55.8	
	comp=Z,12nm,0.8s						
PDAR	Pinedale Array	79.80	333	P	P	07 06 02.8	+4.2
	comp=Z,0.6nm,0.6s,baz=137,slow=5.7,SNR=6.8						
PDAR	Pinedale Array	79.80	333	P	P	07 05 58.0	-0.6
NVAR	Mina Array Bea	80.24	325	P	P	07 06 03.9	+2.8
	comp=Z,0.2nm,0.7s,baz=165,slow=4.7,SNR=2.0						
BOSA	Boshof	82.17	118	P	P	07 06 11.4	-0.2
	comp=Z,3.0nm,0.8s,baz=219,slow=3.9,SNR=4.9						
BOSA	Boshof	82.17	118	P	P	07 06 10.6	-1.1
BOSA				IAmb	IAmb	07 06 18.1	
	comp=Z,8.5nm,1.1s						
GCMT	Greycliff	82.39	334	P	P	07 06 10.9	-1.3
TORD	Torodi Ar. Bea	82.72	71	P	P	07 06 15.3	+0.9
	comp=Z,11nm,0.8s,baz=259,slow=4.8,SNR=53						
TORD				LR	LR	07 41 41.4	
	comp=Z,67nm,18.8s,baz=160,slow=35						
TORD	Torodi Ar. Bea	82.72	71		P	07 06 15.0	+0.5
TORD				IAmb	IAmb	07 06 16.5	
	comp=Z,11nm,0.8s						
LBTB	Lobatse	84.20	115	P	P	07 06 21.2	-1.0
LBTB				IAmb	IAmb	07 06 29.2	
	comp=Z,20nm,1.4s						
ESDC	Sonseca Array	93.50	46	LR	LR	07 49 23.2	
	comp=Z,51nm,18.0s,baz=305,slow=36						
ASAR	Alice Springs	121.50	208	PKP	PKPdf	07 12 44.5	+0.1
	comp=Z,0.1nm,0.4s,baz=148,slow=2.1,SNR=2.0						
WRA	Warramunga Arr	124.61	211	PKP	PKPdf	07 12 51.0	+0.5
	comp=Z,0.5nm,0.4s,baz=160,slow=1.7,SNR=14						
KKAR	Karatay Array	147.23	55	PKPdf	PKPdf	07 13 30.7	-0.6
KKAR					sPKPdf	07 13 34.9	+1.0
GAR	Garm	147.70	63		PKiKP	07 13 36.8	-0.3
ZALV	Zalesovo Beam	150.39	28	PKP	PKPdf	07 13 38.1	+2.1
	comp=Z,18nm,0.7s,baz=266,slow=2.4,SNR=8.7						
ZALV				PKPbc	pPKPbc	07 13 43.4	+0.1
	comp=Z,18nm,0.7s,baz=304,slow=2.9,SNR=44						
KSH	Kashi	151.97	61	PKPbc	PKiKP	07 13 47.3	+1.3
MKAR	Makanchi Array	153.66	42	PKP	PKPdf	07 13 42.2	+1.0
	comp=Z,0.5nm,0.8s,baz=321,slow=5.0,SNR=3.6						
MKAR				PKPbc	PKiKP	07 13 50.1	+1.1
	comp=Z,1.9nm,0.8s,baz=316,slow=2.6,SNR=14						
MKAR	Makanchi Array	153.66	42	PKPdf	PKPdf	07 13 40.5	-0.6
MKAR					PKiKP	07 13 50.5	+1.5
MKAR				PKPab	PKPab	07 13 58.5	-3.2

MAN 12 06:55:33.1, 17°.03N×122°.79E, h8^{km}, mb4.3, ML3.1, MS2.9, Luzon

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NOU 12 06:55:41.4, 15°.45S×173°.69W, h199^{km}, MLv4.2/4**, Tonga Islands, Tonga Islands**

MAN 12 07:08:00.3, 13°.53N×120°.85E, h14^{km}, mb3.6, ML2.3, MS1.8, 2C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PGP	Puerto Galera	0.11	103	⇑eP	Pb	07 08 11.3	+7.1
PGP				iS	Sb	07 08 24.2	+17
LUBP	Lubang	0.62	290	⇑iP	Pb	07 08 12.9	0.0

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*EAF **12** 07:12:08.7±1.2, 25°.86S×29°.24E, h10^{km}, MD3.5*

*BUL **12** 07:12:09.3±0.9, 25°.84S×29°.19E, h10^{km}, MD3.7*

ISC 12 07:12:06.5±1.4, **25°.82S**±0°.06×**29°.20E**±0°.06, **h3^{km}, n12,** σ1^{s}**78**/24, **South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOPA	Mopani	3.04	42	eP	Pn	07 12 55.9	+0.4
MOPA				eS	Sn	07 13 31.3	-1.2
MOPA	Mopani	3.04	42	eP	Pn	07 12 55.9	+0.4
MOPA				eS	Sn	07 13 31.3	-1.2
LBTB	Lobatse	3.35	283	eP	Pn	07 13 00.9	+1.0
LBTB				eS	Sn	07 13 39.6	-0.6
LBTB	Lobatse	3.35	283	eP	Pn	07 13 00.9	+1.0
LBTB				eS	Sn	07 13 39.6	-0.6
MSNA	Messina	3.54	13	eP	Pn	07 13 03.9	+1.5
MSNA				eS	Sn	07 13 45.4	+0.7
MSNA	Messina	3.54	13	eP	Pn	07 13 03.9	+1.5
MSNA				eS	Sn	07 13 45.4	+0.7
BOSA	Boshof	4.48	231	eP	Pn	07 13 16.9	+1.5
BOSA				eS	Sn	07 14 06.0	-2.1
BOSA	Boshof	4.48	231	eP	Pn	07 13 16.9	+1.5
BOSA				eS	Sn	07 14 06.0	-2.1
MATP	Matopo	5.40	353	eP	Pn	07 13 29.8	+1.7
MATP				eS	Sn	07 14 28.4	-2.4
MATP	Matopo	5.40	353	eP	Pn	07 13 29.8	+1.7
MATP				eS	Sn	07 14 28.4	-2.4
BLWY	Bulawayo	5.67	354	eP	Pn	07 13 33.5	+1.6

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLWY				*e*S	**Sn**	**07 14 34.6**	**-3.0**
BLWY	**Bulawayo**	**5.67**	**354**	*e*P	**Pn**	**07 13 33.5**	**+1.6**
BLWY				*e*S	**Sn**	**07 14 34.6**	**-3.0**

IDC 12 07:12:15.3±4.4**,23°.19S**×**68°.92E,h0^{km},mb3.9**/7**, mb1 4.1**/7**,mb1mx3.6**/38**,mbtmp3.9**/7**,MS3.5**/14**, Ms1 3.5**/14**,ms1mx3.3**/47**,Error ellipse: s-maj=136.1km s-min=28.5km az=53.0,Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**15.83**	**13**	T	T	07 30 55.7	
	baz=193,slow=76,SNR=11						
H08S2	**Diego Garcia H**	**15.83**	**13**	T	T	07 30 53.8	
	baz=193,slow=76,SNR=11						
H08S3	**Diego Garcia H**	**15.85**	**13**	T	T	07 30 60.0	
	baz=193,slow=76,SNR=14						
PALK	**Pallekele**	**32.39**	**22**	LR	LR	07 28 01.6	
	comp=Z,108nm,19.6s,baz=290,slow=29						
PSI	**Prapat**	**39.02**	**53**	LR	LR	07 32 35.7	
	comp=Z,49nm,19.0s,baz=62,slow=31						
BOSA	**Boshof**	**39.48**	**253**	LR	LR	07 33 35.1	
	comp=Z,85nm,21.0s,baz=178,slow=32						
LEM	**Lembang**	**40.60**	**73**	LR	LR	07 33 05.8	
	comp=Z,94nm,19.1s,baz=163,slow=31						
CMAR	**Chiang Mai Arr**	**50.73**	**38**	P	P	07 21 17.2	0.0
	0.8nm,0.3s,baz=213,slow=6.5,SNR=1.5						
CMAR				LR	LR	07 40 02.8	
	comp=Z,25nm,19.3s,baz=238,slow=33						
FITZ	**Fitzroy Crossi**	**53.05**	**96**	LR	LR	07 39 38.3	
	comp=Z,37nm,21.1s,baz=246,slow=31						
ASAR	**Alice Springs**	**59.14**	**105**	P	P	07 22 18.4	+0.2
	1.1nm,0.8s,baz=260,slow=6.4,SNR=14						
ASAR				LR	LR	07 43 59.7	
	comp=Z,81nm,21.6s,baz=278,slow=32						
WRA	**Warramunga Arr**	**60.48**	**101**	P	P	07 22 27.2	-0.3
	0.4nm,0.7s,baz=255,slow=6.9,SNR=8.1						
WRA				LR	LR	07 45 13.9	
	comp=Z,44nm,19.2s,baz=165,slow=33						
DAV	**Davao City (W)**	**63.00**	**69**	LR	LR	07 45 46.2	
	comp=Z,28nm,21.4s,baz=301,slow=32						
STKA	**Stephens Creek**	**63.97**	**115**	LR	LR	07 47 37.5	
	comp=Z,60nm,20.2s,baz=206,slow=33						
GNI	**Garni**	**66.92**	**340**	LR	LR	07 49 55.0	
	comp=Z,31nm,18.1s,baz=248,slow=34						
MKAR	**Makanchi Array**	**70.69**	**10**	P	P	07 23 32.9	+0.1
	1.4nm,0.7s,baz=200,slow=6.4,SNR=10						
KURBB	**Kurchatov Arra**	**73.97**	**6**	P	P	07 23 52.6	+0.3
	0.6nm,0.6s,baz=202,slow=6.7,SNR=4.6						
ZALV	**Zalesovo Beam**	**78.03**	**10**	P	P	07 24 15.3	-0.1
	1.9nm,0.8s,baz=206,slow=5.9,SNR=6.2						
SONM	**Songino Array**	**78.31**	**25**	P	P	07 24 16.9	-0.3
	0.2nm,0.3s,baz=210,slow=4.6,SNR=1.8						
KSRS	**Korea Array**	**81.95**	**44**	LR	LR	08 00 42.0	
	comp=Z,26nm,18.6s,baz=216,slow=36						
OBN	**Obninsk**	**82.75**	**342**	LR	LR	07 58 48.9	
	comp=Z,6.2nm,21.8s,baz=290,slow=34						
MJAR	**Matsushiro Arr**	**88.28**	**49**	LR	LR	08 05 06.1	
	comp=Z,18nm,19.2s,baz=325,slow=36						

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*IDC **12** 07:27:01.9±1.3, 6°.71N×94°.49E, h0^{km}, mb3.9/8, mb1 3.9/9, mb1mx3.6/49, mbtmp3.8/9, ML3.2/1, Error ellipse: s-maj=70.1km s-min=16.9km az=56.0*

ISC 12 07:27:07.3±1.2**,6°.7N**±0°.3×**94°.5E**±0°.3**,h35^{km},n13, σ0^{s}.59**/13**,mb3.9**/8**,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**5.90**	**131**	Pn	**Pn**	**07 28 33.1**	**+0.7**
	0.6nm,0.3s,baz=323,slow=13,SNR=4.6						
H08S3	**Diego Garcia H**	**26.16**	**237**	T	T	07 59 14.4	
	baz=57,slow=75,SNR=6.8						
H08S2	**Diego Garcia H**	**26.16**	**237**	T	T	07 59 19.7	
	baz=57,slow=75,SNR=7.4						
H08S1	**Diego Carcia H**	**26.18**	**237**	T	T	07 59 20.9	
	baz=57,slow=75,SNR=5.4						
MKAR	**Makanchi Array**	**41.27**	**347**	P	**P**	**07 34 48.3**	**-0.9**
	0.8nm,0.7s,baz=152,slow=6.5,SNR=5.4						
MKAR				PcP	**PcP**	**07 36 47.3**	**-0.2**
	0.3nm,0.6s,baz=202,slow=3.1,SNR=2.4						
SONM	**Songino Array**	**42.21**	**12**	P	**P**	**07 34 57.2**	**+0.3**
	0.4nm,0.5s,baz=202,slow=7.3,SNR=2.1						
GEYT	**Alibeck**	**45.28**	**319**	P	**P**	**07 35 21.9**	**+0.2**
	1.7nm,0.5s,baz=135,slow=13,SNR=1.8						
KURBB	**Kurchatov Arra**	**45.73**	**346**	P	**P**	**07 35 24.9**	**-0.2**
	0.5nm,0.3s,baz=162,slow=7.2,SNR=1.9						
WRA	**Warramunga Arr**	**47.33**	**125**	P	**P**	**07 35 37.4**	**-0.7**
	0.7nm,0.7s,baz=304,slow=9.0,SNR=7.7						
WRA				PcP	**PcP**	**07 37 08.2**	**-0.5**
	0.3nm,0.8s,baz=289,slow=6.5,SNR=1.8						
ZALV	**Zalesovo Beam**	**47.73**	**352**	P	**P**	**07 35 40.5**	**-0.2**
	0.6nm,0.3s,baz=188,slow=9.5,SNR=2.2						
ASAR	**Alice Springs**	**48.93**	**129**	P	**P**	**07 35 49.6**	**-0.8**
	0.6nm,0.7s,baz=300,slow=7.6,SNR=9.3						
ASAR				PcP	**PcP**	**07 37 14.3**	**-0.1**
	0.5nm,0.7s,baz=314,slow=4.0,SNR=4.6						
AKTO	**Aktyubinsk**	**53.11**	**332**	P	**P**	**07 36 21.7**	**+0.4**
	0.8nm,0.5s,baz=127,slow=5.1,SNR=2.6						
NVAR	**Mina Array Bea**	**125.72**	**32**	PKP	**PKPdf**	**07 46 06.8**	**+0.8**
	0.4nm,0.8s,baz=284,slow=3.6,SNR=2.6						

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*NNC **12** 07:38:21.7±0.8, 50°.00N×78°.77E, h0^{km}, mb3.1, mpv2.8, Error ellipse: s-maj=13.8km s-min=3.9km az=77.0, Suspected Mining explosion.*

*IDC **12** 07:38:22.8±0.8, 50°.06N×78°.76E, h0^{km}, mb1 2.9/3, mb1mx2.7/45, mbtmp2.9/3, ML2.5/3, Error ellipse: s-maj=10.9km s-min=5.9km az=58.0*

ISC 12 07:38:23.0±0.9**,50°.03N**±0°.05×**78°.71E**±0°.05**,h0^{km},n10, σ1^{s}.33**/17**,8C-4D,Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**0.61**	**349**	Pg	**Pg**	**07 38 33.1**	**-1.5**
	3.3nm,0.3s,baz=167,slow=19,SNR=28						
KURBB				Lg	Lg	07 38 43.0	
	2.3nm,0.3s,baz=167,slow=31,SNR=7.0						
KURBB	**Kurchatov Arra**	**0.61**	**349**	⇑P	**Pg**	**07 38 34.1**	**-0.6**
	23nm,0.3s						
KURBB				⇑S	**Sg**	**07 38 43.4**	**+0.8**
	64nm,0.5s						
KURK	**Kurchatov**	**0.69**	**355**	⇑P	**Pg**	**07 38 35.3**	**-0.9**
	10nm,0.4s						
KURK				⇑S	**Sg**	**07 38 45.9**	**+0.6**
	12nm,0.5s						
MAKZ	**Makanchi**	**3.89**	**145**	⇓Pg	**Pb**	**07 39 31.3**	**-1.1**
	1.4nm,0.6s						
MAKZ				⇑Lg	Lg	07 40 20.2	
	8.4nm,0.9s						
MK31	**Makanchi Array**	**4.02**	**142**	⇑Pn	**Pn**	**07 39 26.2**	**+0.4**
	0.2nm,0.3s,baz=277,slow=6.9,SNR=29						
MK31				⇑Pg	**Pb**	**07 39 35.4**	**+0.8**
	0.5nm,0.3s,baz=324,slow=14,SNR=16						
MK31				⇑Lg	Lg	07 40 28.8	
	9.8nm,0.6s,baz=335,slow=35,SNR=17						
MKAR	**Makanchi Array**	**4.02**	**142**	Pn	**Pn**	**07 39 26.1**	**+0.3**
	0.4nm,0.3s,baz=327,slow=10,SNR=30						
MKAR				Pg	**Pb**	**07 39 32.5**	**-2.2**
	0.7nm,0.3s,baz=327,slow=15,SNR=15						
MKAR				Sn	**Sn**	**07 40 15.3**	**+1.8**
	0.8nm,0.3s,baz=330,slow=20,SNR=2.7						
MKAR				Lg	Lg	07 40 29.3	
	2.3nm,0.3s,baz=332,slow=26,SNR=18						
OTUK	**Ortayu**	**4.55**	**249**	⇓Pn	**Pn**	**07 39 33.1**	**0.0**
	1.0nm,0.3s						
OTUK				⇓Pg	**Pb**	**07 39 44.8**	**+1.2**
	1.2nm,0.7s						
OTUK				⇓Lg	Lg	07 40 45.6	
	4.3nm,0.6s						
ZALV	**Zalesovo Beam**	**5.45**	**42**	Pn	**Pn**	**07 39 46.6**	**+1.3**
	0.6nm,0.3s,baz=227,slow=14,SNR=5.9						
ZALV				Sn	**Sn**	**07 40 49.5**	**+0.8**
	0.2nm,0.3s,baz=303,slow=37,SNR=1.4						
ZALV				Lg	Lg	07 41 14.6	
	0.2nm,0.3s,baz=92,slow=40,SNR=1.8						
I46RU	**ZALESOVO INFRA**	**5.45**	**42**	*i*		08 10 00.0	
	baz=227,slow=346,SNR=7.4						
BVAR	**Borovoye Array**	**6.00**	**303**	Pn	**Pn**	**07 39 53.4**	**+0.4**
	0.2nm,0.3s,baz=112,slow=15,SNR=2.2						
BVAR				Sn	**Sn**	**07 40 59.8**	**-2.5**
	0.4nm,0.3s,baz=114,slow=21,SNR=4.3						
BVAR				Lg	Lg	07 41 34.8	
	0.2nm,0.3s,baz=116,slow=24,SNR=2.2						

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*SNET **12** 07:41:05.5±1.7, 12°.65N×86°.38W, h15^{km}±999^{km}, MD3.3, ML3.6*

*INET **12** 07:41:05.1, 12°.90N×86°.62W, h18^{km}, MW3.8*

*UCR **12** 07:41:08.8±3.1, 13°.43N×86°.46W, h5^{km}, ML3.3*

*IDC **12** 07:41:15.8±5.6, 12°.69N×86°.70W, h31^{km}±50^{km}, mb3.2/5, mb1 3.6/6, mb1mx3.4/37, mbtmp3.4/6, ML2.8/1, MS3.0/2, Ms1 3.0/2, ms1mx2.6/16, Error ellipse: s-maj=70.4km s-min=19.9km az=42.0*

ISC 12 07:41:12.6±0.7**,12°.8N**±0°.1×**86°.72W**±0°.08**,h10^{km},n34, σ2^{s}.20**/33**,mb3.3**/5**,Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCND	**La Caada**	**1.23**	**292**	*e*P	Pn	07 41 31.8	-4.1
LCND				*e*S	**Sb**	**07 41 54.2**	**+2.2**
LCND				IAML		07 42 02.2	
	comp=Z,2µm,0.3s						
LCND	**La Caada**	**1.23**	**292**	*e*P	Pn	07 41 31.8	-4.1
LCND				*e*S	**Sb**	**07 41 54.2**	**+2.2**
LCND				IAML		07 42 02.2	
	comp=Z,2µm,0.3s						
ACON	**Acoyapa**	**1.74**	**120**	*e*P	**Pb**	**07 41 43.1**	**-1.6**
COEB	**Comit de Eme**	**1.88**	**290**	*e*P	**Pn**	**07 41 43.3**	**-1.6**
COEB				IAML		07 42 19.9	
	comp=Z,424nm,0.5s						
COEB	**Comit de Eme**	**1.88**	**290**	*e*P	**Pn**	**07 41 43.3**	**-1.6**
COEB				IAML		07 42 19.9	
	comp=Z,424nm,0.5s						
SCLA	**Alcaldia de Sa**	**2.14**	**294**	*e*P	**Pn**	**07 41 47.0**	**-1.4**
SCLA				*e*S	**Sn**	**07 42 18.7**	**+3.7**
SCLA				IAML		07 42 32.3	
	comp=Z,71nm,0.4s						
SCLA	**Alcaldia de Sa**	**2.14**	**294**	*e*P	**Pn**	**07 41 47.0**	**-1.4**
SCLA				*e*S	**Sn**	**07 42 18.7**	**+3.7**
SCLA				IAML		07 42 32.3	
	comp=Z,71nm,0.4s						
COEG	**Centro de Oper**	**2.25**	**290**	*e*P	**Pn**	**07 41 48.0**	**-1.9**
COEG				IAML		07 41 59.6	
	comp=Z,284nm,0.5s						
COEG	**Centro de Oper**	**2.25**	**290**	*e*P	**Pn**	**07 41 48.0**	**-1.9**
COEG				IAML		07 41 59.6	
	comp=Z,284nm,0.5s						
PAVA	**Las Pavas**	**2.33**	**292**	*e*P	**Pn**	**07 41 48.8**	**-2.3**
PAVA				IAML		07 42 02.7	
	comp=Z,405nm,0.5s						
PAVA	**Las Pavas**	**2.33**	**292**	*e*P	**Pn**	**07 41 48.8**	**-2.3**
PAVA				IAML		07 42 02.7	
	comp=Z,405nm,0.5s						
SJTE	**Alcalda de S**	**2.36**	**289**	*e*P	Pn	07 41 48.5	-3.0
SJTE				IAML		07 42 34.8	
	comp=Z,67nm,0.3s						
SJTE	**Alcalda de S**	**2.36**	**289**	*e*P	Pn	07 41 48.5	-3.0
SJTE				IAML		07 42 34.8	
	comp=Z,67nm,0.3s						
HZTE	**Horizontes, Gu**	**2.38**	**152**	*e*P	**Pn**	**07 41 52.7**	**+0.9**
VMAR	**Armenia, Volca**	**2.55**	**142**	*e*P	**Pn**	**07 41 55.1**	**+1.0**
TACO	**Tacachico**	**2.80**	**294**	*e*P	**Pn**	**07 41 55.0**	**-2.5**
TACO	**Tacachico**	**2.80**	**294**	*e*P	**Pn**	**07 41 55.0**	**-2.5**
SAJU	**San Juanillo,**	**2.93**	**160**	*e*P	**Pn**	**07 42 02.3**	**+3.0**
CEDE	**Laguna Cedeo**	**3.06**	**140**	*e*P	**Pb**	**07 42 04.5**	**-2.8**
JTS	**Las Juntas de**	**3.07**	**146**	Pn	**Pn**	**07 42 00.0**	**-1.2**
	comp=Z,1.3nm,0.3s,baz=29,slow=14,SNR=10						
JTS				Sn	**Sn**	**07 42 36.7**	**-1.3**
	comp=Z,8.9nm,0.3s,baz=18,slow=19,SNR=4.6						
JTS				Lg	Lg	07 42 49.9	
	comp=Z,6.8nm,0.3s,baz=37,slow=20,SNR=4.2						
JTS	**Las Juntas de**	**3.07**	**146**	*e*P	**Pn**	**07 42 01.1**	**-0.1**
ARE1	**Arenal 1**	**3.07**	**140**	*e*P	**Pn**	**07 42 03.2**	**+2.0**
COVE	**Coope Vega, Sa**	**3.10**	**133**	*e*P	**Pn**	**07 42 00.8**	**-0.8**
LAFE	**Finca La Fe, P**	**3.50**	**149**	*e*P	**Pb**	**07 42 10.9**	**-3.8**
RAFA	**San Farael, Vo**	**4.04**	**135**	*e*P	**Pn**	**07 42 16.3**	**+1.5**
SJG	**San Juan**	**20.49**	**73**	LR	LR	07 53 49.5	
	comp=Z,41nm,18.4s,baz=264,slow=37						
TXAR	**Lajitas Array**	**22.74**	**319**	P	**P**	**07 46 15.0**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=137,slow=9.4,SNR=4.8						
LPIG	**La Paz**	**24.98**	**300**	LR	LR	07 56 32.5	
	comp=Z,40nm,20.5s,baz=7.0,slow=37						
PDAR	**Pinedale Array**	**35.77**	**331**	P	**P**	**07 48 14.1**	**+1.9**
	comp=Z,0.1nm,0.5s,baz=120,slow=13,SNR=1.8						
NVAR	**Mina Array Bea**	**37.89**	**318**	P	**P**	**07 48 33.0**	**+2.8**
	comp=Z,0.4nm,0.7s,baz=125,slow=7.8,SNR=3.6						
ESDC	**Sonseca Array**	**76.38**	**52**	P	**P**	**07 53 03.1**	**+0.6**
	comp=Z,0.6nm,0.7s,baz=281,slow=5.3,SNR=4.6						
TORD	**Torodi Ar. Bea**	**85.62**	**78**	P	**P**	**07 53 51.7**	**-0.5**
	comp=Z,0.6nm,0.9s,baz=281,slow=4.1,SNR=2.4						
WRA	**Warramunga Arr**	**140.07**	**254**	PKP	**PKPdf**	**08 00 41.2**	**-1.1**
	comp=Z,0.2nm,0.5s,baz=90,slow=2.4,SNR=5.4						
ASAR	**Alice Springs**	**140.08**	**248**	PKP	**PKPdf**	**08 00 39.0**	**-3.3**
	comp=Z,0.2nm,0.6s,baz=90,slow=2.8,SNR=1.7						

IDC 12 08:07:21.9±4.8**,22°.86S**×**179°.65E,h519^{km}**±37^{km}**,mb3.3**/3**, mb1 3.6**/3**,mb1mx3.0**/29**,mbtmp4.2**/3**,Error ellipse: s-maj=227.2km s-min=29.4km az=162.0,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**41.90**	**260**	P	P	08 14 26.8	-0.1
	1.7nm,0.5s,baz=94,slow=7.7,SNR=28						
ASAR				ScP	ScP	08 19 10.9	-0.6
	0.7nm,0.7s,baz=107,slow=4.4,SNR=6.8						
WRA	**Warramunga Arr**	**42.16**	**265**	P	P	08 14 28.8	-0.2
	1.8nm,0.3s,baz=102,slow=8.4,SNR=121						
TXAR	**Lajitas Array**	**90.16**	**58**	P	P	08 19 26.9	-0.1
	0.4nm,0.7s,baz=216,slow=6.2,SNR=4.8						

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*FUNV **12** 08:09:02.6, 8°.49N×71°.39W, h2^{km}, MW3.0*

ISC 12 08:09:02.5±1.2**,8°.50N**±0°.03×**71°.36W**±0°.02**,h13^{km}**±10^{km}**, n36,σ1^{s}.31**/68**,Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOCV	**Socops**	**0.54**	**114**	*e*P	**Pg**	**08 09 13.0**	**-0.2**
SOCV				*e*S	**Sg**	**08 09 21.1**	**+0.6**
SOCV	**Socops**	**0.54**	**114**	*e*P	**Pg**	**08 09 13.0**	**-0.2**
SOCV				*e*S	**Sb**	**08 09 21.8**	**0.0**
SDV	**Santo Domingo**	**0.81**	**62**	*e*P	**Pg**	**08 09 18.3**	**0.0**
SDV				*e*S	**Sb**	**08 09 30.2**	**+0.5**
PAMC	**Pamplona, Colo**	**1.76**	**229**	*e*P	**Pn**	**08 09 34.0**	**+0.8**
PAMC				*e*S	**Sn**	**08 09 56.3**	**+0.5**
MCQV	**Machiques**	**1.93**	**323**	*e*P	**Pn**	**08 09 34.8**	**-0.3**
MCQV				*e*S	**Sn**	**08 10 00.1**	**+0.9**
OCAC	**Ocana**	**1.96**	**262**	*e*P	**Pn**	**08 09 34.8**	**-0.8**
OCAC				*e*S	**Sn**	**08 10 00.2**	**0.0**
TAMC	**Tame, Arauca**	**2.10**	**192**	*e*P	**Pn**	**08 09 38.1**	**+0.6**
TAMC				*e*S	**Sb**	**08 10 06.8**	**+0.2**
ELOV	**Elorza**	**2.38**	**129**	*e*P	**Pb**	**08 09 43.7**	**-1.7**
ELOV				*e*S	**Sb**	**08 10 15.2**	**+0.4**
ELOV	**Elorza**	**2.38**	**129**	*e*P	**Pn**	**08 09 42.4**	**+1.0**
ELOV				*e*S	**Sn**	**08 10 10.7**	**+0.2**
LL1C	**La Loma 1 Cana**	**2.40**	**296**	*e*P	**Pb**	**08 09 45.0**	**-0.7**
LL1C				*e*S	**Sn**	**08 10 12.1**	**+1.2**
DABV	**Dabajuro**	**2.51**	**16**	*e*P	**Pn**	**08 09 44.2**	**+1.1**
DABV				*e*S	**Sn**	**08 10 14.3**	**+0.7**
BARC	**Barichara**	**2.62**	**224**	*e*P	**Pn**	**08 09 46.4**	**+1.5**
BARC				*e*S	**Sn**	**08 10 18.8**	**+2.0**
SIQV	**Siquisique**	**2.62**	**36**	*e*P	**Pn**	**08 09 45.9**	**+1.1**
SIQV				*e*S	**Sn**	**08 10 17.9**	**+1.4**
SMLC	**San Martn de**	**2.70**	**276**	*e*P	**Pn**	**08 09 44.4**	**-1.3**
SMLC				*e*S	**Sn**	**08 10 20.5**	**+2.2**
BRRC	**Barranca, Sant**	**2.71**	**239**	*e*P	**Pn**	**08 09 46.1**	**+0.2**
BRRC				*e*S	**Sn**	**08 10 19.1**	**+0.4**
RUSC	**La Rusia**	**3.11**	**214**	*e*P	**Pn**	**08 09 52.3**	**+0.5**
RUSC				*e*S	**Sn**	**08 10 29.1**	**+0.1**
ARGC	**Ariguani, Magd**	**3.15**	**296**	*e*P	**Pb**	**08 09 55.6**	**-2.9**
ARGC				*e*S	**Sn**	**08 10 28.7**	**-0.9**
BAUV	**El Baul**	**3.31**	**82**	*e*P	**Pn**	**08 09 55.3**	**+1.2**
BAUV				*e*S	**Sn**	**08 10 34.1**	**+0.8**
ZARC	**Zaragoza, Cauc**	**3.61**	**254**	*e*P	**Pn**	**08 09 57.0**	**-1.2**
ZARC				*e*S	**Sn**	**08 10 39.7**	**-1.1**
SPBC	**San Pablo de B**	**3.91**	**224**	*e*P	**Pn**	**08 10 02.6**	**+0.1**
SPBC				*e*S	**Sn**	**08 10 48.1**	**-0.2**
BENV	**Beln**	**3.98**	**68**	*e*P	**Pn**	**08 10 04.7**	**+1.2**
BENV				*e*S	**Sn**	**08 10 49.1**	**-1.1**
SJCC	**San Jacinto, C**	**4.02**	**290**	*e*P	**Pn**	**08 10 04.1**	**+0.2**
SJCC				*e*S	**Sn**	**08 10 50.3**	**-0.7**
UREC	**San Jos de Ur**	**4.20**	**260**	*e*P	**Pn**	**08 10 06.3**	**-0.1**
MOTC	**Monteria, Cord**	**4.27**	**274**	*e*P	**Pn**	**08 10 07.3**	**0.0**
MOTC				*e*S	**Sn**	**08 10 56.6**	**-0.4**
CHIC	**Chingaza**	**4.51**	**212**	*e*P	**Pn**	**08 10 11.5**	**+0.4**
CHIC				*e*S	**Sn**	**08 11 02.5**	**-1.2**
NORC	**Norcasia**	**4.55**	**230**	*e*P	**Pn**	**08 10 12.4**	**+1.2**
TACV	**Tcata**	**4.57**	**69**	*e*P	**Pn**	**08 10 12.1**	**+0.5**
TACV				*e*S	**Sn**	**08 11 02.2**	**-2.5**
HELC	**Santa Helena**	**4.73**	**241**	*e*P	**Pn**	**08 10 14.4**	**+0.4**
VILC	**Villavicencio,**	**4.94**	**208**	*e*P	**Pn**	**08 10 16.7**	**0.0**
VILC				*e*S	**Sn**	**08 11 13.9**	**+0.1**
DBBC	**Dabeiba**	**5.03**	**253**	*e*P	**Pb**	**08 10 32.4**	**+1.8**
DBBC				*e*S	**Sb**	**08 11 34.4**	**+3.4**
GUY2C	**Guyana, Caldas**	**5.14**	**231**	*e*P	**Pn**	**08 10 20.6**	**+0.9**
GUY2C				*e*S	**Sn**	**08 11 19.1**	**-0.2**
BIRV	**Birongo**	**5.39**	**68**	*e*P	**Pn**	**08 10 23.6**	**+0.8**
BIRV				*e*S	**Sn**	**08 11 21.7**	**-3.1**
ANIL	**Santa Ana**	**5.66**	**225**	*e*S	**Sn**	**08 11 32.2**	**+0.4**
PRAC	**Prado**	**5.91**	**217**	*e*P	**Pn**	**08 10 29.6**	**-0.4**
PRAC				*e*S	**Sn**	**08 11 35.2**	**-2.5**
ORTC	**Ortega, Tolima**	**5.98**	**220**	*e*P	**Pn**	**08 10 30.9**	**-0.1**
ORTC				*e*S	**Sn**	**08 11 39.1**	**-0.3**
MACC	**Macarena, Meta**	**6.79**	**202**	*e*P	**Pn**	**08 10 39.9**	**-2.0**
MACC				*e*S	**Sn**	**08 11 54.9**	**-4.3**

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*NEIC **12** 08:16:55.5±1.2, 63°.25S±0°.10×170°.6E±0°.7, h10^{km}±2^{km}, mb4.3/7, Error ellipse: s-maj=57.9km s-min=8.1km az=75.0*

*GCMT **12** 08:16:56.0±0.3, 63°.21S±0°.02×170°.66E±0°.05, h13^{km}±2^{km}, MW5.1/78, Moment Tensor Solution.   s13,c13;   s78,c107; Duration: 0   Moment tensor: Scale 10^{16}Nm; M_{rr}-0.48±.16; $M_{\theta\theta}$2.55±.16; $M_{\phi\phi}$-2.06±.13; $M_{r\theta}$-4.77±1.09; $M_{\theta\phi}$-1.08±.13; $M_{\phi r}$0.65±.38;   Best double couple: $M_0$5.10400×10^{16} NP1:ϕ_s316.00000°,δ12.00000°,λ-48.00000°.   NP2: ϕ_s94.00000°,δ81.00000°,λ-98.00000°.   Principal axes: T 6.2300, Plg36.0000°, Azm191.0000°; N -2.2430, Plg8.0000°, Azm95.0000°; P -3.9780, Plg53.0000°, Azm354.0000°;   nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

*IDC **12** 08:16:58.7±2.5, 63°.41S×168°.41E, h0^{km}, mb3.7/2, mb1 4.2/3, mb1mx3.7/15, mbtmp4.0/3, ML3.9/1, MS4.0/11, Ms1 4.0/11, ms1mx3.9/19 Error ellipse: s-maj=99.4km s-min=42.5km az=70.0*

ISC 12 08:16:55.9±1.0**,63°.24S**±0°.09×**170°.4E**±0°.4**,h10^{km},n45, σ1^{s}.30**/17**,mb4.1**/4**,MS4.1**/13**,Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**14.60**	**187**	Pn	**Pn**	**08 20 22.4**	**+0.2**
	0.5nm,0.3s,baz=26,slow=15,SNR=31						
VNDA				LR	LR	08 24 45.8	
	comp=Z,1µm,21.0s,baz=17,slow=33						
VNDA	**Vanda**	**14.60**	**187**		**Pn**	**08 20 22.1**	**0.0**
SBA	**Scott Base**	**14.73**	**183**	Pn	**Pn**	**08 20 23.0**	**-0.9**
WHZ	**Wether Hill Ro**	**17.44**	**354**	P	**Pn**	**08 20 58.3**	**-0.8**
WHZ				IAmb	IAmb	08 20 59.7	
	comp=Z,27nm,1.1s						
MLZ	**Mavora Lakes**	**17.96**	**355**	P	**Pn**	**08 21 05.2**	**-0.3**
MLZ				IAmb	IAmb	08 21 25.4	
	comp=Z,21nm,1.1s						
ODZ	**Otahua Downs**	**18.24**	**1**	P	**Pn**	**08 21 07.4**	**-1.5**
WKZ	**Wanaka**	**18.47**	**357**	P	**P**	**08 21 11.0**	**-0.7**
WKZ				IAmb	IAmb	08 21 29.4	
	comp=Z,33nm,1.1s						
URZ	**Urewera**	**25.35**	**12**	LR	LR	08 30 41.0	
	comp=Z,574nm,21.2s,baz=211,slow=32						
QSPA	**South Pole Qui**	**26.85**	**180**	P	**P**	**08 22 36.3**	**-0.1**
QSPA				IAmb	IAmb	08 22 38.6	
	comp=Z,10nm,1.4s						
STKA	**Stephens Creek**	**36.28**	**316**	LR	LR	08 36 39.3	
	comp=Z,211nm,18.7s,baz=159,slow=33						
MAW	**Mawson**	**39.52**	**215**	LR	LR	08 40 40.6	
	comp=Z,596nm,19.5s,baz=128,slow=37						
DZM	**Mont Dzumac**	**41.24**	**354**	*e*LR	LR	08 35 56.8	
	comp=Z,455nm,22.9s						
H01W1	**Cape Leeuwin H**	**44.39**	**282**	T	T	09 13 07.4	
	baz=147,slow=76,SNR=150						
H01W2	**Cape Leeuwin H**	**44.40**	**282**	T	T	09 12 57.9	
	baz=147,slow=76,SNR=182						
H01W3	**Cape Leeuwin H**	**44.41**	**282**	T	T	09 12 59.5	
	baz=147,slow=76,SNR=154						
SNAA	**Sanae**	**45.28**	**183**	P	**P**	**08 25 12.0**	**-1.1**
SNAA	**Sanae**	**45.28**	**183**	P	**P**	**08 25 13.5**	**+0.5**
SNAA				IAmb	IAmb	08 25 23.7	
	comp=Z,5.1nm,1.2s						
VNA3	**Neumayer Olymp**	**45.79**	**180**	P	**P**	**08 25 16.7**	**-0.3**
VNA2	**Neumayer--Watz**	**46.10**	**181**	P	**P**	**08 25 18.8**	**-0.6**
VNA1	**Neumayer--Stat**	**46.38**	**181**	P	**P**	**08 25 20.6**	**-1.0**
ASAR	**Alice Springs**	**46.40**	**311**	P	**P**	**08 25 22.2**	**-0.2**
	comp=Z,0.9nm,1.0s,baz=157,slow=7.9,SNR=4.5						
ASAR				LR	LR	08 41 24.5	
	comp=Z,130nm,21.6s,baz=154,slow=32						
AS31	**Alice Springs**	**46.40**	**311**	P	**P**	**08 25 22.9**	**+0.4**
TBI	**Tubuai**	**47.98**	**53**	*e*LR	LR	08 38 38.4	
	comp=Z,263nm,28.5s						
TBI	**Tubuai**	**47.98**	**53**	*e*T	T	09 16 29.7	
	comp=Z,8.2nm,0.3s						
WRA	**Warramunga Arr**	**49.71**	**313**	P	**P**	**08 25 48.3**	**+0.3**
	comp=Z,1.3nm,1.1s,baz=164,slow=7.4,SNR=2.5						
WRA				LR	LR	08 44 08.1	
	comp=Z,93nm,19.3s,baz=165,slow=33						
PAE	**Paea**	**53.18**	**50**	*e*T	T	09 23 01.2	
	comp=Z,3.5nm,0.2s						
PPT2	**Papeete2**	**53.25**	**50**	*e*LR	LR	08 41 17.8	
	comp=Z,259nm,25.5s						
PPT2	**Papeete2**	**53.25**	**50**	*e*T	T	09 23 06.7	
	comp=Z,5.8nm,0.3s						
PPT	**Papeete**	**53.27**	**50**	LR	LR	08 43 53.9	
	comp=Z,76nm,18.4s,baz=133,slow=30						
MEH	**Mehetia**	**53.51**	**52**	*e*T	T	09 23 26.7	
	comp=Z,35nm,0.3s						
VAH	**Vaihoa**	**56.11**	**51**	*e*T	T	09 26 40.5	
	comp=Z,85nm,0.3s						
H03S2	**Juan Fernandez**	**68.83**	**123**	T	T	09 43 49.9	
	baz=204,slow=74,SNR=32						
H03S1	**Juan Fernandez**	**68.83**	**123**	T	T	09 43 51.3	
	baz=204,slow=74,SNR=31						
H03S3	**Juan Fernandez**	**68.84**	**123**	T	T	09 43 49.7	
	baz=204,slow=74,SNR=27						
H03N3	**Juan Fernandez**	**69.17**	**123**	T	T	09 43 55.9	
	baz=276,slow=76,SNR=3.4						
H03N2	**Juan Fernandez**	**69.18**	**123**	T	T	09 43 53.7	
	baz=276,slow=76,SNR=15						
H03N1	**Juan Fernandez**	**69.19**	**123**	T	T	09 43 55.9	
	baz=276,slow=76,SNR=2.7						
CPUP	**Villa Florida**	**83.10**	**138**	LR	LR	09 03 15.0	
	comp=Z,140nm,18.3s,baz=210,slow=33						
PSI	**Prapat**	**84.24**	**288**	LR	LR	09 00 44.3	
	comp=Z,47nm,21.6s,baz=75,slow=32						
BOSA	**Boshof**	**84.36**	**210**	LR	LR	09 06 09.9	
	comp=Z,68nm,18.2s,baz=184,slow=35						
H08S2	**Diego Garcia H**	**86.78**	**260**	T	T	10 06 18.1	
	baz=153,slow=76,SNR=31						
H08S1	**Diego Carcia H**	**86.79**	**260**	T	T	10 06 18.5	
	baz=153,slow=76,SNR=25						
H08S3	**Diego Garcia H**	**86.80**	**260**	T	T	10 06 19.6	
	baz=153,slow=76,SNR=26						
CMAR	**Chiang Mai Arr**	**98.28**	**295**	LR	LR	09 12 20.8	
	comp=Z,34nm,19.9s,baz=196,slow=34						
ILAR	**Eielson Array**	**131.54**	**23**	PKP	**PKiKP**	**08 36 11.9**	**+4.0**
	comp=Z,1.4nm,1.1s,baz=201,slow=4.8,SNR=4.9						

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*NEIC **12** 08:23:29.7±1.3, 55°.5N±0°.1×155°.7W±0°.1, h42^{km}±27^{km}, Error ellipse: s-maj=17.3km s-min=1.1km az=152.0*

*AEIC **12** 08:23:30±1.5, 55°.41N±0°.09×155°.5W±0°.1, h32^{km}±8^{km}, ML3.4, ML3.7/22(NEIC), Error ellipse: s-maj=14.0km s-min=5.4km az=150.0*

ISC 12 08:23:27.7±1.9**,55°.5N**±0°.1×**155°.57W**±0°.07**,h55^{km}**±12^{km}**, n70,σ1^{s}.37**/72**,South of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHIR	**Chirikof Islan**	**0.36**	**355**	P	**Pn**	**08 23 37.8**	**-0.1**
	baz=170						
CHIR				S	**Sn**	**08 23 44.7**	**-0.6**
	baz=170						
CHIR	**Chirikof Islan**	**0.36**	**355**		**Pn**	**08 23 37.8**	**-0.1**
CHIR					**Sn**	**08 23 44.7**	**-0.6**
CHIR	**Chirikof Islan**	**0.36**	**355**	IAML		08 23 44.9	
	comp=N,4µm,0.4s						
CHIR				IAML		08 23 45.1	
	comp=E,5µm,0.4s						
SII	**Sitkinak Islan**	**1.35**	**35**	P	**Pn**	**08 23 50.8**	**+0.5**
	baz=213						
SII				S	**Sn**	**08 24 06.6**	**-0.6**

	baz=213						
SII	Sitkinak Islan	1.35	35		Pn	08 23 50.8	+0.5
SII					Sn	08 24 06.6	-0.6
SII	Sitkinak Islan	1.35	35	IAML		08 24 06.9	
	comp=E,807nm,0.6s						
SII				IAML		08 24 08.1	
	comp=N,829nm,0.5s						
ANPK	Aniakchak Peak	1.99	315		Pn	08 23 59.9	+0.8
ANNE	Aniakchak Nort	2.02	317		Pn	08 24 00.3	+1.0
VNSG	Veniaminof 6	2.10	290		Pn	08 24 01.2	+0.8
OHAK	Old Harbor	2.18	35	P	Pn	08 24 01.7	+0.3
	baz=215						
OHAK				S	Sn	08 24 25.4	-1.9
	baz=215						
OHAK	Old Harbor	2.18	35		Pn	08 24 01.7	+0.3
OHAK					Sn	08 24 25.4	-1.9
VNFG	Fog Glacier, M	2.39	292	P	Pn	08 24 05.9	+1.4
	baz=109						
VNFG	Fog Glacier, M	2.39	292		Pn	08 24 05.9	+1.4
SDPT	Sand Point	2.80	270	P	Pn	08 24 10.9	+0.9
	baz=87						
SDPT				S	Sn	08 24 40.7	-1.8
	baz=87						
SDPT	Sand Point	2.80	270		Pn	08 24 10.9	+0.9
SDPT					Sn	08 24 40.7	-1.8
SDPT	Sand Point	2.80	270	IAML		08 25 21.8	
	comp=N,238nm,4.7s						
SDPT				IAML		08 25 29.5	
	comp=E,229nm,3.0s						
KABU	Katmai Buttres	2.82	3		Pn	08 24 12.0	+1.5
KDAK	Kodiak Island	2.85	34	S	Sn	08 24 41.2	-2.6
	baz=215						
KDAK	Kodiak Island	2.85	34		Pn	08 24 11.0	+0.3
KDAK					Sn	08 24 41.2	-2.6
KAKN	Katmai Knife C	2.86	5		Pn	08 24 12.0	+1.1
Q19K	Cape Douglas,	3.63	16	P	Pn	08 24 22.3	+0.9
	baz=197						
Q19K	Cape Douglas,	3.63	16		Pn	08 24 22.3	+0.9
Q19K	Cape Douglas,	3.63	16	IAML		08 26 34.6	
	comp=N,210nm,1.4s						
P18K	Big Mountain,	3.95	3	P	Pn	08 24 25.8	+0.1
	baz=182						
P18K	Big Mountain,	3.95	3		Pn	08 24 25.9	+0.1
P18K	Big Mountain,	3.95	3	IAML		08 26 34.6	
	comp=E,78nm,4.7s						
P18K				IAML		08 26 38.2	
	comp=N,61nm,3.9s						
O18K	Koktuh Hills	4.41	2	P	Pn	08 24 32.8	+0.7
	baz=182						
O18K	Koktuh Hills	4.41	2		Pn	08 24 32.8	+0.7
O18K	Koktuh Hills	4.41	2	IAML		08 25 43.9	
	comp=N,84nm,3.7s						
O18K				IAML		08 25 50.7	
	comp=E,69nm,3.5s						
FALS	False Pass	4.54	266	P	Pn	08 24 35.1	+1.3
	baz=80						
FALS	False Pass	4.54	266		Pn	08 24 35.1	+1.3
CNPM	China Poot	4.70	28		Pn	08 24 36.9	+0.8
ILSW	Iliamna Southw	4.72	15		Pn	08 24 37.5	+1.1
ISLZ	Isanotski Laza	4.73	264		Pn	08 24 37.5	+0.9
IVE	Iliamna Volcan	4.77	16		Pn	08 24 38.0	+0.9
O19K	Port Alsworth	4.80	7	P	Pn	08 24 38.0	+0.7
	baz=188						
O19K	Port Alsworth	4.80	7		Pn	08 24 38.0	+0.7
O19K	Port Alsworth	4.80	7	IAML		08 25 46.8	
	comp=E,80nm,0.5s						
O19K				IAML		08 26 36.1	
	comp=N,80nm,3.4s						
O20K	Slope Mountain	4.90	18	P	Pn	08 24 40.0	+1.3
	baz=199						
O20K	Slope Mountain	4.90	18		Pn	08 24 40.0	+1.3
SSLS	Shishaldin Sou	4.90	265		Pn	08 24 40.1	+1.3
BRLK	Bradley Lake	5.00	28		Pn	08 24 40.1	0.0
BRSE	Bradley Lake S	5.02	29	P	Pn	08 24 40.6	+0.2
	baz=212						
BRSE	Bradley Lake S	5.02	29		Pn	08 24 40.6	+0.2
RDWB	Redoubt West	5.25	15		Pn	08 24 44.8	+1.2
NCT	North Crescent	5.31	14		Pn	08 24 45.5	+1.1
SVW2	Sparrevohn	5.66	360	Pn	Pn	08 24 49.6	+0.5
SEW	Seward	5.69	33	Pn	Pn	08 24 51.2	+1.7
SLKM	Skilak Lake	5.81	27		Pn	08 24 51.4	+0.2
O22K	Cooper Landing	5.92	29	P	Pn	08 24 54.7	+2.1
	baz=214						
O22K	Cooper Landing	5.92	29		Pn	08 24 54.7	+2.1
SPU	Mount Spurr	6.03	16	Pn	Pn	08 24 55.2	+1.0
M19K	Big River Lodg	6.49	5	Pn	Pn	08 25 01.6	+1.0
SUA	Susitna One	6.53	21	Pn	Pn	08 25 02.2	+1.0
PWL	Port Wells	6.63	32		Pn	08 25 04.4	+1.9
L19K	White Mountain	6.75	3		Pn	08 25 05.7	+1.6
PMR	Palmer	7.01	26	Pn	Pn	08 25 09.3	+1.7
KNK	Knik Glacier	7.04	29	Pn	Pn	08 25 09.6	+1.6
GLI	Glacier Island	7.04	36	Pn	Pn	08 25 09.3	+1.2
FID	Port Fidalgo	7.16	38	Pn	Pn	08 25 10.2	+0.5
EYAK	Cordova Ski Ar	7.29	42	Pn	Pn	08 25 13.2	+1.7
M24K	Tolsona, Glenn	8.25	32	Pn	Pn	08 25 26.6	+2.0
TGL	Tana Glacier	8.58	47	Pn	Pn	08 25 31.4	+2.3
VRDI	Verde Repeater	8.60	43	Pn	Pn	08 25 31.7	+2.2
YAH	Yahtse	8.84	51	Pn	Pn	08 25 35.1	+2.2
PAX	Paxson	9.13	30		Pn	08 25 38.6	+1.9
LOGN	Logan Glacier	9.38	49	Pn	Pn	08 25 42.4	+2.2
M26K	Nabesna, AK	9.51	38	Pn	Pn	08 25 44.0	+2.2
M27K	Edge Creek, AK	9.88	40	Pn	Pn	08 25 49.1	+2.1
SCRK	Sand Creek	10.33	30	Pn	Pn	08 25 54.6	+1.4

NOU 12 09:08:05.4, 15°.48S×173°.66W, h148^{km}, MLv3.9/4, Tonga Islands, Tonga Islands

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TUL 12 09:24:27.2±1.1, 35°.92N±0°.01×97°.34W±0°.02, h5^{km}±7^{km}, ML3.0, mb_Lg2.9/35(NEIC), Error ellipse: s-maj=2.9km s-min=1.1km az=116.0

NEIC 12 09:24:27.4±0.6, 35°.94N±0°.02×97°.36W±0°.05, h5^{km}±2^{km}, Error ellipse: s-maj=6.9km s-min=3.1km az=61.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK029	Liberty Lake	0.16	210	Pg	Pg	09 24 30.7	+0.1
BCOK	Bluff Creek, N	0.35	216	Pg	Pg	09 24 34.2	0.0
OK031	S. Brethren Rd	0.42	88	Pg	Pg	09 24 35.5	0.0
OK030	Cody Creek RV	0.46	91		Pg	09 24 36.2	-0.1
OKCSW	OKLAHOMA CITY	0.54	187		Pg	09 24 37.5	-0.2
QUOK	Quay	0.57	66	Pg	Pg	09 24 38.6	+0.1
FNO	Franklin	0.68	183	Pg	Pg	09 24 40.0	-0.5
CROK	Carrier	0.76	318	Pg	Pg	09 24 42.3	+0.3
BLOK	Blackwell	0.83	8	Pg	Pg	09 24 43.4	+0.1
GC02	Grant County #	1.00	336	Pg	Pg	09 24 46.5	0.0
KAN13	South Haven SW	1.08	355		Pg	09 24 48.0	-0.1
OK032	Salt Plains WL	1.11	322	Pg	Pg	09 24 48.5	-0.1
KAN14	Manchester OK	1.13	334		Pg	09 24 49.0	0.0
KAN17	Caldwell West	1.15	343	Pg	Pg	09 24 49.5	0.0
T35A	Sooner Cattle	1.19	35	Pn	Pg	09 24 49.5	-0.7
KAN09	Caldwell North	1.21	350	Pn	Pg	09 24 50.5	-0.2
KAN05	Bluff City Nor	1.24	341	Pn	Pg	09 24 50.9	-0.3
KAN01	Argonia South	1.26	345		Pg	09 24 51.4	-0.1
TUL1	Leonard	1.27	91	Pn	Pg	09 24 50.1	-1.7
KS20	Mayfield South	1.30	353	Pn	Pn	09 24 51.9	-0.3
KAN10	Anthony SW Sta	1.32	333	Pn	Pn	09 24 52.3	-0.3
KAN06	Argonia West S	1.37	343	Pn	Pn	09 24 53.3	+0.1
X34A	Smith Ranch, M	1.39	196	Pn	Pn	09 24 53.2	-0.3
U32A	Winter Ranch,	1.40	289		Pn	09 24 53.5	-0.1
KAN16	Harper SW Stat	1.41	336	Pn	Pn	09 24 53.8	+0.1
WMOK	Wichita Mounta	1.67	225		Pn	09 24 57.5	+0.1
X37A	Clayton	2.11	129		Pn	09 25 03.5	+0.1
X37A				IAmb_Lg		09 25 35.1	
	comp=Z,48nm,0.9s						
U38A	Gravette	2.45	77		Pn	09 25 09.3	+1.2
Z35A	Perchaven, San	2.60	178	Pn	Pn	09 25 10.2	+0.1
R32A	Long Quarter,	2.71	337	Pn	Pn	09 25 13.4	+1.8
HHAR	Hobbs	2.79	82		Pn	09 25 13.0	+0.3
W39A	Magazine	3.00	103	Pn	Pn	09 25 15.5	-0.1
W39A				IAmb_Lg		09 26 01.6	
	comp=Z,24nm,1.1s						
Z38A	Mt. Pleasant	3.31	143	IAmb_Lg		09 26 18.3	
	comp=Z,33nm,1.1s						
MIAR	Mount Ida	3.39	113		Pn	09 25 21.3	+0.3
S39A	Bolivar	3.68	60	Pn	Pn	09 25 25.5	+0.6
AMTX	Amarillo	3.69	255	IAmb_Lg		09 26 26.1	
	comp=Z,23nm,0.8s						
FCAR	Ozark Folk Cen	4.25	89	IAmb_Lg		09 26 44.0	
	comp=Z,18nm,0.7s						
MGMO	Mountain Grove	4.27	72	IAmb_Lg		09 26 44.6	
	comp=Z,27nm,0.8s						
R40A	Maddies Statio	4.70	58	IAmb_Lg		09 26 56.9	
	comp=Z,24nm,0.7s						
435B	Jarrell	5.14	182	IAmb_Lg		09 27 19.1	
	comp=Z,14nm,1.1s						
T42A	Van Buren	5.16	76	IAmb_Lg		09 27 18.2	
	comp=Z,25nm,0.8s						
CCM	Cathedral Cave	5.33	65	IAmb_Lg		09 27 24.2	
	comp=Z,16nm,0.8s						
P40A	Paris	5.53	48	IAmb_Lg		09 27 25.5	
	comp=Z,21nm,1.0s						
PBMO	Poplar Bluff	5.65	79	IAmb_Lg		09 27 28.1	
	comp=Z,34nm,0.8s						
JCT	Junction City	5.82	201	IAmb_Lg		09 27 35.6	
	comp=Z,14nm,1.0s						
FVM	French Village	5.91	68	IAmb_Lg		09 27 32.6	
	comp=Z,14nm,0.8s						
GNAR	Gosnell	5.95	88	IAmb_Lg		09 27 40.1	
	comp=Z,29nm,0.9s						
W45A	Hickory Valley	6.71	94	IAmb_Lg		09 28 08.0	
	comp=Z,16nm,0.8s						
S44A	Carbondale	6.73	73	IAmb_Lg		09 28 00.5	
	comp=Z,26nm,0.9s						
K31A	O'Neill	6.76	351	IAmb_Lg		09 28 17.7	
	comp=Z,20nm,0.9s						
P43A	Skaggs, Pawnee	7.22	57	IAmb_Lg		09 28 20.6	
	comp=Z,27nm,0.8s						

UCR 12 09:35:20.6±1.9, 8°.31N×82°.69W, h5^{km}, MW4.3

UPA 12 09:35:22.6±1.5, 8°.34N×82°.83W, h11^{km}±7^{km}, MW4.0

ISC 12 09:35:20.5±1.3, 8°.29N±0°.04×82°.75W±0°.03, h13^{km}±10^{km}, n23, σ0^{s}.77/36, 5C-1D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTPM	Petroterminale	0.16	236	⇑iP	Pb	09 35 25.3	0.0
PTPM				eS	Sb	09 35 29.4	+1.0
BAGA3	Bagala, Chiriq	0.28	51	eP	Pn	09 35 29.9	-0.3
CDITO	Canoas	0.31	336	eP	Pb	09 35 27.6	-0.3
DVD	David	0.33	64	eP	Pn	09 35 30.6	-0.3
DVD				eS	Sn	09 35 37.4	-0.1
BCO2	Palmira	0.47	27	eP	Pb	09 35 31.8	+1.0
BCO2				eS	Sn	09 35 40.8	-0.7
BRU2	Volcan	0.50	6	⇑eP	Pb	09 35 32.2	+0.9
BRU2				eS	Sn	09 35 41.1	-1.0
EDSV	San Vito	0.57	337	⇑iP	Pb	09 35 32.7	+0.3
PTJ1	Puerto Jimnez	0.60	294	⇑iP	Pg	09 35 32.0	-0.2
PTJ1				eS	Sb	09 35 41.2	0.0
PTJ1	Puerto Jimnez	0.60	294	eP	Pg	09 35 32.1	-0.2
PTJ1				eS	Sb	09 35 41.5	+0.3
POTG	Potrero Grande	0.84	334	⇑eP	Pb	09 35 37.2	+0.2
POTG				eS	Sn	09 35 49.1	-1.2
CHGR2	Aguacate	0.88	43	eP	Pn	09 35 39.1	+0.6
CHGR2				eS	Sb	09 35 49.5	+0.4
EDPN	Palmar Norte	0.97	313	⇓iP	Pb	09 35 38.1	-1.0
EDPN				eS	Sg	09 35 51.7	-0.2
EDBA	Buenos Aires	1.01	329	eP	Pg	09 35 40.0	-0.1
EDBA				eS	Sn	09 35 55.4	+0.9
CNI2	El Empalme, Bo	1.16	14	eP	Pg	09 35 42.9	+0.1
CNI2				eS	Sg	09 35 58.5	+0.6
PEZE	Perez Zeledon,	1.42	320	eP	Pn	09 35 46.1	0.0
EDDO	Dominical	1.46	311	eP	Pn	09 35 45.7	-0.8
RIMA	Rio Macho	1.83	323	eP	Pn	09 35 52.4	+0.5
BATAN	Batan	1.90	341	eP	Pb	09 35 54.2	-0.8
LCR2	La Lucha 2	1.90	319	eP	Pn	09 35 53.0	+0.2
CVTR	Volcan Turrial	1.99	330	eP	Pb	09 35 55.4	-1.4
HDC	Heredia	2.17	322	eP	Pb	09 35 59.5	-0.2
HDC				eS	Sg	09 36 30.1	-0.3
AZU	Azuero	2.50	101	eP	Pb	09 36 04.9	-0.3
AZU				eS	Sb	09 36 35.3	-0.6
SAJU	San Juanillo,	3.42	301	eP	Pn	09 36 15.9	+2.5

IDC 12 09:37:00.8±4.6, 25°.48S×68°.92W, h98^{km}±33^{km}, mb3.6/3, mb1 3.7/5, mb1mx3.4/25, mbtmp3.9/5, Error ellipse: s-maj=54.7km s-min=24.0km az=52.0

GUC 12 09:37:00.1±0.8, 25°.39S×69°.09W, h103^{km}±10^{km}, ML4.0

ISC 12 09:37:00.7±0.8, 25°.40S±0°.03×69°.06W±0°.08, h101^{km}±8^{km}, n31, σ1^{s}.01/33, mb3.9/3, 4C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AC02	Maricunga	1.43	182	eP	Pn	09 37 27.8	+1.1
AC02				i S	Sn	09 37 47.8	+1.6
AC02				IAML		09 37 51.5	
	comp=E,1μm,0.3s						
PB14	IPOC Station P	1.44	302	⇑iP	Pn	09 37 27.2	+0.6
PB14				i S	Sn	09 37 46.7	+0.5
PB10	IPOC Station P	2.32	324	⇑iP	Pn	09 37 37.8	+0.3
PB10				i S	Sn	09 38 05.7	0.0
GO03	Copiap	2.42	205	⇑iP	Pn	09 37 39.1	+0.2
GO03				eS	Sn	09 38 09.1	+1.0
GO03				IAML		09 38 13.2	
	comp=N,522nm,0.1s						
PB06	IPOC Station P	2.72	350	eP	Pn	09 37 43.4	+0.5
PB05	IPOC Station P	2.74	337	⇑iP	Pn	09 37 43.1	-0.1
PB05				eS	Sn	09 38 15.4	-0.4
PB05				IAML		09 38 26.6	
	comp=E,397nm,0.4s						
LVC	Limon Verde	2.78	3	P	Pn	09 37 44.7	+0.7
	comp=E,14nm,0.3s,baz=176,slow=9.2,SNR=50						
LVC				S	Sn	09 38 19.2	+2.1
	comp=E,39nm,0.3s,baz=30,slow=22,SNR=20						
LVC	Limon Verde	2.78	3	eP	Pn	09 37 44.3	+0.3
LVC				eS	Sn	09 38 18.0	+0.9
PB04	IPOC Station P	3.21	342	eP	Pn	09 37 48.7	-0.8
PB04				IAML		09 38 45.5	
	comp=N,367nm,0.6s						
AC04	Llanos de Chal	3.32	212	eP	Pn	09 37 49.5	-1.2
AC04				IAML		09 38 44.0	
	comp=E,462nm,0.1s						
PB03	IPOC Station P	3.40	349	eP	Pn	09 37 51.6	-0.4
PB09	IPOC Station P	3.59	357	eP	Pn	09 37 55.3	+0.7
PB07	IPOC Station P	3.73	348	eP	Pn	09 37 55.7	-0.8
LCO	Las Campanas	3.88	202	eP	Pn	09 37 57.7	-0.8
PB02	IPOC Station P	4.13	349	eP	Pn	09 38 00.8	-1.0
PB01	IPOC Station P	4.36	355	eP	Pn	09 38 03.9	-0.9
PATCX	Punta Patache	4.67	347	eP	Pn	09 38 06.8	-2.2
GO04	Tololo Observa	5.00	198	eP	Pn	09 38 12.5	-1.0
CPUP	Villa Florida	10.61	98	P	Pn	09 39 28.1	-1.6
	comp=E,0.2nm,0.3s,baz=270,slow=11,SNR=3.4						
H03N1	Juan Fernandez	11.74	225	T	T	09 51 57.5	
	baz=43,slow=71,SNR=18						
H03N2	Juan Fernandez	11.75	225	T	T	09 51 57.9	
	baz=43,slow=71,SNR=12						
H03N3	Juan Fernandez	11.75	225	T	T	09 51 57.9	
	baz=43,slow=71,SNR=9.8						
PDAR	Pinedale Array	77.42	331	P	P	09 48 46.3	+1.4
	comp=E,0.2nm,0.4s,baz=108,slow=8.0,SNR=2.4						
TORD	Torodi Ar. Bea	78.82	70	P	P	09 48 52.6	-0.4
	comp=E,1.0nm,0.6s,baz=266,slow=5.8,SNR=5.7						
TORD				pP	pP	09 49 19.1	-1.1
	comp=E,0.8nm,0.6s,baz=251,slow=5.1,SNR=3.6						
ULM	Lac du Bonnet	78.98	343	P	P	09 48 53.5	+0.5
	comp=E,1.4nm,0.5s,baz=135,slow=5.7,SNR=2.2						
H11S2	WAKE ISLAND Hy	128.12	274	T	T	12 16 12.0	
H11S1	WAKE ISLAND Hy	128.13	274	T	T	12 16 12.5	
	baz=108,slow=74,SNR=5.6						
H11S3	WAKE ISLAND Hy	128.14	274	T	T	12 16 15.4	
	baz=338,slow=74,SNR=4.3						
WRA	Warramunga Arr	129.51	209	PKP	PKPdf	09 55 58.5	+0.1
	comp=E,0.1nm,0.3s,baz=154,slow=1.9,SNR=8.0						
KURBB	Kurchatov Arra	144.61	36	PKP	PKPdf	09 56 25.0	-0.2
	comp=E,0.3nm,0.5s,baz=296,slow=3.8,SNR=4.9						
ZALV	Zalesovo Beam	145.50	27	PKPbc	PKPab	09 56 27.7	+0.5
	comp=E,1.9nm,0.3s,baz=311,slow=5.5,SNR=3.9						

RSNC 12 09:37:28.7±1.2, 7°.37N×78°.05W, h13^{km}±6^{km}, ML3.1, Mw3.5

UPA 12 09:37:28.1±0.8, 7°.30N×78°.17W, h10^{km}±16^{km}, MW4.4

ISC 12 09:37:27.4±1.1, 7°.32N±0°.03×78°.11W±0°.03, h17^{km}±8^{km}, n39, σ1^{s}.90/69, 1D, Panama

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTAC	Punta Ardita,	0.34	120	⇓iP	Pg	09 37 35.3	+0.7
PTAC				eS	Sg	09 37 39.5	+0.1
PTAC				i		09 37 39.8	
	comp=Z,28μm,0.1s						
UPD2	Meteti	1.22	4	i P	Pn	09 37 50.2	+0.4
UPD2				i S	Sg	09 38 07.4	+0.4
SOLC	Bahia Solano	1.29	147	ePg	Pn	09 37 50.5	-0.2
SOLC				eP	Pb	09 37 52.2	+1.0
SOLC				eS	Sn	09 38 09.2	+1.6
SOLC				i		09 38 11.7	
	comp=Z,548nm,0.2s						
CAPC	Capurgana	1.50	30	eP	Pn	09 37 53.5	-0.2
CAPC				eS	Sn	09 38 11.4	-1.4
CAPC				i		09 38 14.5	
	comp=Z,119nm,0.2s						
DBBC	Dabeiba	1.91	99	eP	Pn	09 37 59.8	+0.6
DBBC				eS	Sn	09 38 20.4	-2.5
DBBC				i		09 38 28.1	
	comp=Z,1μm,0.6s						
TABO3	Taboga, Panama	2.05	316	i P	Pn	09 38 01.4	+0.4
TABO3				i S	Sn	09 38 26.4	+0.2
CHPO	Chepo, Panama	2.09	332	eP	Pn	09 38 02.4	+0.7
CHPO				i S	Sn	09 38 28.6	+1.3
FLAM	Flamenco Islan	2.12	318	eP	Pn	09 38 02.0	-0.2
UPA	Univ. de Panam	2.17	320	eP	Pn	09 38 02.7	0.0
UPA				i S	Sn	09 38 30.7	+1.4
AZU	Azuero	2.20	282	i P	Pn	09 38 04.5	+1.4
AZU				eS	Sn	09 38 29.4	-0.6
CHOR3	La Chorrera	2.27	314	eP	Pn	09 38 05.0	+0.9
CHOR3				eS	Sn	09 38 33.4	+1.7
LCBC	Los crdobas,	2.30	48	eP	Pn	09 38 07.3	+2.7
LCBC				eS	Sb	09 38 37.2	+0.5
LCBC				i		09 38 55.3	
	comp=Z,82nm,0.6s						
LCBC	Los crdobas,	2.30	48	i P	Pn	09 38 06.2	+1.7
ZANG	Zanguenga, Cho	2.38	313	i P	Pn	09 38 06.6	+0.9
BCIP	Isla Barro Col	2.51	317	eP	Pn	09 38 08.0	+0.6
BCIP				eS	Sn	09 38 39.2	+1.5
BCIP				i		09 38 54.9	
	comp=Z,89nm,0.5s						
BCIP	Isla Barro Col	2.51	317	i P	Pn	09 38 08.0	+0.6
BCIP				eS	Sn	09 38 39.3	+1.7
CBOC	Ciudad Bolivar	2.54	125	eP	Pn	09 38 07.7	-0.3
CBOC				eS	Sn	09 38 38.6	0.0
CBOC				i		09 38 54.2	
	comp=Z,32nm,0.4s						
MLIR	Monte Lirio	2.57	318	eP	Pn	09 38 08.9	+0.6
UREC	San Jos de Ur	2.59	80	eP	Pn	09 38 10.3	+1.7
UREC				eS	Sn	09 38 39.6	0.0
UREC				i		09 38 45.7	
	comp=Z,54nm,0.3s						
UREC	San Jos de Ur	2.59	80	eP	Pn	09 38 10.1	+1.5
UREC				eS	Sn	09 38 41.8	+2.2
HELC	Santa Helena	2.80	114	eP	Pn	09 38 12.9	+1.2
HELC				eS	Sn	09 38 44.8	-0.5
HELC				i		09 38 53.1	
	comp=Z,21nm,0.5s						
MOTC	Monteria, Cord	2.82	59	eP	Pn	09 38 13.0	+1.3
MOTC				eS	Sn	09 38 44.9	-0.5
MOTC				i		09 38 49.7	
	comp=Z,51nm,0.6s						
PLMC	San Jos del P	3.01	143	eP	Pn	09 38 13.8	-0.6
PLMC				ePg	Pb	09 38 17.7	-2.9
PLMC				i		09 39 01.8	
	comp=N,72nm,0.4s						
ZARC	Zaragoza, Cauc	3.23	87	eP	Pn	09 38 18.9	+1.6
ZARC				eS	Sn	09 38 54.1	-1.4
ZARC				i		09 39 07.2	
	comp=Z,71nm,0.7s						
GUY2C	Guyana, Caldas	3.43	127	eP	Pn	09 38 22.4	+1.9
GUY2C				eS	Sn	09 39 05.8	+4.7
GUY2C				i		09 39 11.4	
	comp=Z,40nm,0.6s						
NORC	Norcasia	3.66	118	eP	Pn	09 38 26.0	+2.7
NORC				i		09 39 16.1	
	comp=Z,12nm,0.6s						
YOTC	Yotoco, Valle	3.75	152	eP	Pn	09 38 25.3	+0.7
YOTC				i		09 39 25.5	
	comp=Z,722nm,1.4s						
SJCC	San Jacinto, C	3.86	48	eP	Pn	09 38 25.9	-0.2
SJCC				eS	Sn	09 39 10.6	-0.7
SJCC				i		09 39 17.6	
	comp=Z,14nm,0.6s						
ANIL	Santa Ana	3.89	136	eP	Pn	09 38 30.1	+3.4
SMLC	San Martn de	4.26	70	eP	Pn	09 38 33.3	+1.8
SMLC				eS	Sn	09 39 19.6	-1.2
SMLC				i		09 39 26.4	
	comp=Z,22nm,0.4s						
SPBC	San Pablo de B	4.34	112	eP	Pn	09 38 35.2	+2.5
SPBC				i		09 39 56.9	
	comp=Z,9.5nm,0.7s						
BRRC	Barranca, Sant	4.37	93	eS	Sn	09 39 23.9	+0.4
BRRC				i		09 39 46.8	
	comp=Z,15nm,0.7s						
ORTC	Ortega, Tolima	4.43	140	eP	Pn	09 38 36.9	+3.0
ORTC				ePg	Pb	09 38 40.9	-3.8
ORTC				eS	Sb	09 39 33.2	-4.8
ORTC				i		09 39 50.7	
	comp=Z,11nm,0.6s						
PRAC	Prado	4.81	138	eP	Pn	09 38 40.0	+0.9
PRAC				i		09 39 56.9	
	comp=Z,5.4nm,0.6s						
OCAC	Ocana	4.83	79	eP	Pn	09 38 42.1	+2.6
OCAC				eS	Sn	09 39 35.2	-0.1
OCAC				i		09 39 39.8	
	comp=Z,83nm,0.5s						
BARC	Barichara	4.94	98	eP	Pn	09 38 43.4	+2.3
BARC				eS	Sn	09 39 37.6	-0.5
BARC				i		09 39 59.9	
	comp=Z,22nm,0.6s						
CHIC	Chingaza	5.11	121	eP	Pn	09 38 48.0	+4.5
CHIC				i		09 40 21.5	
	comp=Z,4.1nm,0.7s						
RUSC	La Rusia	5.19	106	eP	Pn	09 38 47.0	+2.2
RUSC				eS	Sn	09 39 49.3	+4.8
RUSC				i		09 40 09.9	
	comp=Z,13nm,0.7s						
PAMC	Pamplona, Colo	5.36	89	eP	Pn	09 38 49.0	+1.9
PAMC				eS	Sn	09 39 48.9	0.0
PAMC				i		09 39 55.1	
	comp=Z,22nm,0.3s						

IDC 12 10:00:06.7±1.6, 27°.77N×85°.43E, h0^{km}, mb3.7/6, mb1 3.7/7, mb1mx3.5/68, mbtmp3.6/7, ML3.5/1, Error ellipse: s-maj=55.1km s-min=26.5km az=56.0, Nepal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	19.16	353	P	Pn	10 04 32.1	-0.3
	0.1nm,0.3s,baz=172,slow=12,SNR=6.5						
KURBB	Kurchatov Arra	23.42	349	P	P	10 05 17.9	+0.5
	0.3nm,0.5s,baz=174,slow=10,SNR=3.6						
SONM	Songino Array	25.85	34	P	P	10 05 39.6	-0.4
	0.4nm,0.6s,baz=235,slow=11,SNR=3.1						
FINES	FINESS Array B	51.43	328	P	P	10 09 12.8	-0.5
	1.0nm,0.6s,baz=109,slow=8.0,SNR=3.8						
ARCES	ARCESS Array B	53.84	338	P	P	10 09 31.1	0.0
	2.6nm,0.9s,baz=104,slow=8.9,SNR=5.1						
HFS	Hagfors	57.30	326	P	P	10 09 55.8	-0.3
	2.3nm,0.9s,baz=86,slow=10,SNR=1.5						
WRA	Warramunga Arr	67.00	130	P	P	10 11 01.9	+0.2
	0.5nm,1.0s,baz=320,slow=6.9,SNR=4.6						

MAN 12 10:05:50.1, 17°.00N×122°.78E, h8^{km}, mb4.7, ML3.6, MS3.5

IDC 12 10:05:48.1±1.8, 17°.06N×122°.77E, h0^{km}, mb3.4/5, mb1 3.5/5, mb1mx3.3/63, mbtmp3.4/5, Error ellipse: s-maj=166.7km s-min=22.1km az=66.0, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	Songino Array	33.51	340	P	P	10 12 29.9	+0.4
	0.9nm,0.8s,baz=150,slow=8.6,SNR=4.5						
WRA	Warramunga Arr	38.49	162	P	P	10 13 11.6	-0.6
	0.2nm,0.6s,baz=344,slow=9.4,SNR=2.3						
ASAR	Alice Springs	41.91	165	P	P	10 13 41.0	+0.4
	0.2nm,0.6s,baz=350,slow=6.6,SNR=1.4						
MKAR	Makanchi Array	44.62	321	P	P	10 14 02.6	+0.3
	0.5nm,0.8s,baz=100,slow=10,SNR=3.7						
KURBB	Kurchatov Arra	48.60	324	P	P	10 14 32.5	-0.9
	0.2nm,0.3s,baz=123,slow=7.6,SNR=4.9						

IDC 12 10:06:16.6±1.8, 16°.93N×122°.68E, h0^{km}, mb3.4/5, mb1 3.5/5, mb1mx3.3/61, mbtmp3.4/5, Error ellipse: s-maj=177.2km s-min=22.2km az=66.0, Luzon

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

SONM	**Songino Array**	**33.61**	**340**	P	P	10 12 58.6	-0.1
	0.8nm,0.6s,baz=161,slow=8.8,SNR=4.4						
WRA	**Warramunga Arr**	**38.38**	**162**	P	P	10 13 39.8	0.0
	0.2nm,0.7s,baz=342,slow=9.5,SNR=1.9						
ASAR	**Alice Springs**	**41.81**	**164**	P	P	10 14 08.0	-0.2
	0.2nm,0.5s,baz=345,slow=7.2,SNR=2.0						
MKAR	**Makanchi Array**	**44.67**	**321**	P	P	10 14 31.2	0.0
	0.4nm,0.8s,baz=108,slow=9.3,SNR=2.5						
KURBB	**Kurchatov Arra**	**48.66**	**324**	P	P	10 15 02.1	-0.2
	0.5nm,0.6s,baz=121,slow=7.4,SNR=5.1						

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*IDC **12** 10:06:36.0±1.1, 16°.77N×122°.20E, h0^{km}, mb3.8/8, mb1 3.9/8, mb1mx3.7/61, mbtmp3.8/8, MS3.4/3, Ms1 3.4/3, ms1mx2.8/39, Error ellipse: s-maj=60.6km s-min=18.8km az=70.0*

*MAN **12** 10:06:38.0, 17°.06N×122°.96E, h56^{km}, mb4.7, ML3.6, MS3.5*

ISC 12 10:06:41.4±1.1**, 16°.8N**±0°.2×**122°.3E**±0°.4**, h40**^{km}**, n11, σ0^s.89**/8**, mb3.8**/8**, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**10.20**	**161**	LR	LR	10 13 34.8	
	comp=Z,281nm,19.9s,baz=34,slow=41						
KSRS	**Korea Array**	**21.18**	**13**	P	**P**	**10 11 23.9**	**+0.5**
	3.3nm,0.8s,baz=190,slow=13,SNR=7.8						
GUMO	**Guam**	**22.05**	**95**	LR	LR	10 19 56.2	
	comp=Z,47nm,19.1s,baz=122,slow=36						
SONM	**Songino Array**	**33.59**	**341**	P	**P**	**10 13 17.1**	**-0.8**
	2.8nm,0.9s,baz=160,slow=9.7,SNR=12						
WRA	**Warramunga Arr**	**38.39**	**162**	P	**P**	**10 13 58.2**	**-0.8**
	0.6nm,0.8s,baz=345,slow=8.9,SNR=3.6						
ASAR	**Alice Springs**	**41.79**	**164**	P	**P**	**10 14 28.0**	**+0.8**
	0.4nm,0.7s,baz=338,slow=6.5,SNR=4.8						
MKAR	**Makanchi Array**	**44.52**	**321**	P	**P**	**10 14 49.9**	**+0.8**
	1.1nm,0.8s,baz=110,slow=10,SNR=7.5						
ZALV	**Zalesovo Beam**	**47.06**	**331**	P	**P**	**10 15 08.2**	**-0.7**
	0.5nm,0.3s,baz=149,slow=3.1,SNR=4.5						
KURBB	**Kurchatov Arra**	**48.52**	**324**	P	**P**	**10 15 20.6**	**+0.2**
	2.3nm,0.9s,baz=123,slow=7.6,SNR=9.0						
BVAR	**Borovoye Array**	**54.12**	**324**	P	**P**	**10 16 03.1**	**+0.8**
	0.9nm,0.8s,baz=162,slow=16,SNR=4.0						
RAO	**Raoul Island**	**73.67**	**128**	LR	LR	10 44 12.8	
	comp=Z,47nm,21.7s,baz=332,slow=31						

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*IDC **12** 10:40:59.9±3.3, 37°.05S×176°.08E, h0^{km}, mb3.5/2, mb1 3.8/2, mb1mx3.6/25, mbtmp3.5/2, MS3.5/1, Ms1 3.5/1, ms1mx2.7/22, Error ellipse: s-maj=118.3km s-min=19.1km az=42.0*

*WEL **12** 10:41:04.4±0.8, 39°S±6°×17°6E±°, h43^{km}±8^{km}, M3.6/23, ML3.9/23, MLv3.6/23, Error ellipse: s-maj=0.0km s-min=0.0km az=34.5*

*NOU **12** 10:41:04.3, 39°.45S×175°.94E, h34^{km}, MLv3.9/8, North Island, New Zealand*

ISC 12 10:41:03.9±1.0**, 39°.43S**±0°.03×**175°.94E**±0°.03**, h59**^{km}±5^{km}**, n160, σ0^s.90**/167**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BHHZ	**Black Hill Sta**	**0.11**	**123**	P	**Pn**	**10 41 12.9**	**0.0**
BHHZ				S	**Sn**	**10 41 19.2**	**-0.3**
MOVZ	**Moawhango**	**0.15**	**278**	P	**Pn**	**10 41 13.1**	**0.0**
MOVZ				S	**Sn**	**10 41 19.2**	**-0.6**
TUVZ	**Tukino**	**0.28**	**306**	P	**Pn**	**10 41 14.2**	**+0.3**
TUVZ				S	**Sn**	**10 41 21.0**	**-0.1**
WNVZ	**Wahianoa**	**0.28**	**291**	P	**Pn**	**10 41 14.2**	**+0.2**
WNVZ				S	**Sn**	**10 41 21.0**	**-0.3**
WHVZ	**Whangaehu Hut**	**0.31**	**298**	P	**Pn**	**10 41 14.5**	**+0.2**
WHVZ				S	**Sn**	**10 41 21.5**	**-0.3**
DRZ	**Dome Shelter**	**0.33**	**297**	P	**Pn**	**10 41 14.7**	**+0.2**
DRZ				S	**Sn**	**10 41 22.0**	**-0.2**
TRVZ	**Turoa**	**0.33**	**293**	P	**Pn**	**10 41 14.7**	**+0.3**
TRVZ				S	**Sn**	**10 41 21.8**	**-0.2**
SNVZ	**South Ngauruho**	**0.34**	**316**	P	**Pn**	**10 41 14.7**	**+0.3**
SNVZ				S	**Sn**	**10 41 22.0**	**0.0**
OTVZ	**Oturere**	**0.34**	**321**	P	**Pn**	**10 41 14.7**	**+0.3**
ETVZ	**East Tongariro**	**0.34**	**328**	P	**Pn**	**10 41 14.7**	**+0.3**
ETVZ				S	**Sn**	**10 41 22.0**	**0.0**
FWVZ	**Far West T-bar**	**0.35**	**300**	P	**Pn**	**10 41 14.8**	**+0.2**
TMVZ	**Te Maari**	**0.36**	**329**	P	**Pn**	**10 41 14.9**	**+0.3**
NGZ	**Ngauruhoe**	**0.36**	**314**	P	**Pn**	**10 41 15.0**	**+0.4**
MTVZ	**Mangateitei**	**0.37**	**277**	P	**Pn**	**10 41 15.0**	**+0.4**
KWHZ	**Kaweka Forest**	**0.37**	**90**	P	**Pn**	**10 41 15.2**	**+0.6**
NTVZ	**North Tongarir**	**0.39**	**328**	P	**Pn**	**10 41 15.1**	**+0.3**
NNVZ	**North Ngauruho**	**0.39**	**319**	P	**Pn**	**10 41 15.3**	**+0.4**
KRHZ	**Kereru**	**0.40**	**123**	P	**Pn**	**10 41 15.5**	**+0.7**
WTVZ	**West Tongariro**	**0.41**	**319**	P	**Pn**	**10 41 15.5**	**+0.4**
RITZ	**Rihia Road**	**0.46**	**352**	P	**Pn**	**10 41 15.8**	**+0.4**
PKVZ	**Pokaka**	**0.48**	**287**	P	**Pn**	**10 41 16.1**	**+0.5**
KATZ	**Kakaramea**	**0.49**	**337**	P	**Pn**	**10 41 16.3**	**+0.4**
BKZ	**Black Stump Fm**	**0.50**	**59**	P	**Pn**	**10 41 16.0**	**+0.1**
BKZ	**Black Stump Fm**	**0.50**	**59**	P	**Pn**	**10 41 16.0**	**+0.1**
PNHZ	**Pukenui**	**0.52**	**158**	P	**Pn**	**10 41 16.9**	**+0.8**
TWVZ	**Taurewa**	**0.53**	**312**	P	**Pn**	**10 41 16.1**	**-0.1**
HATZ	**Hinemaiaia**	**0.55**	**12**	P	**Pn**	**10 41 16.2**	**-0.1**
RATZ	**Rangitukua**	**0.58**	**347**	P	**Pn**	**10 41 16.8**	**+0.1**
MCHZ	**McNeill Hill**	**0.58**	**92**	P	**Pn**	**10 41 18.3**	**+1.6**
TSZ	**Takapari Road**	**0.63**	**179**	P	**Pn**	**10 41 18.5**	**+1.2**
MRHZ	**Matea Rd**	**0.70**	**32**	P	**Pn**	**10 41 18.1**	**0.0**
WATZ	**Wairara**	**0.74**	**347**	P	**Pn**	**10 41 18.6**	**0.0**
WPHZ	**Waipukurau**	**0.74**	**149**	P	**Pn**	**10 41 19.4**	**+0.8**
NMHZ	**Naumai**	**0.75**	**64**	P	**Pn**	**10 41 20.3**	**+1.5**
WHTZ	**Whakaora**	**0.76**	**1**	P	**Pn**	**10 41 19.3**	**+0.4**
WAZ	**Wanganui**	**0.81**	**246**	P	**Pn**	**10 41 20.7**	**+1.3**
KAHZ	**Kahuranaki**	**0.81**	**117**	P	**Pn**	**10 41 20.3**	**+0.8**
ARHZ	**Aropaoanui**	**0.83**	**79**	P	**Pn**	**10 41 20.8**	**+1.0**
DVHZ	**Dannevirke**	**0.89**	**169**	P	**Pn**	**10 41 21.0**	**+0.6**
MTHZ	**Maungataniwha**	**0.91**	**51**	P	**Pn**	**10 41 21.2**	**+0.5**
CKHZ	**Cape Kidnapper**	**0.91**	**105**	P	**Pn**	**10 41 21.4**	**+0.8**
OHWZ	**Ohakea**	**0.92**	**212**	P	**Pn**	**10 41 22.7**	**+1.9**
ALRZ	**Allen Road**	**0.92**	**20**	P	**Pn**	**10 41 20.8**	**-0.1**
WPRZ	**Whakapapatarin**	**0.92**	**11**	P	**Pn**	**10 41 21.0**	**0.0**
PXZ	**Pawanui**	**0.93**	**131**	P	**Pn**	**10 41 21.8**	**+0.8**
KUTZ	**Kaahu Road**	**0.94**	**354**	P	**Pn**	**10 41 21.2**	**0.0**
VRZ	**Vera Road**	**0.97**	**288**	P	**Pn**	**10 41 21.8**	**+0.4**
POWZ	**Post Office Ro**	**0.97**	**188**	P	**Pn**	**10 41 22.5**	**+1.0**
PRRZ	**Plateau Road**	**0.99**	**21**	P	**Pn**	**10 41 21.8**	**0.0**
PRHZ	**Porangahau**	**0.99**	**148**	P	**Pn**	**10 41 22.5**	**+0.7**
RAHZ	**Arahi**	**1.03**	**60**	P	**Pn**	**10 41 23.2**	**+1.0**
WHHZ	**Waihua**	**1.06**	**71**	P	**Pn**	**10 41 23.6**	**+0.9**
HRRZ	**Handcock Road**	**1.07**	**15**	P	**Pn**	**10 41 23.1**	**+0.2**
GRRZ	**Galatos Road**	**1.08**	**7**	P	**Pn**	**10 41 23.4**	**+0.4**
ANWZ	**Angora Road**	**1.11**	**158**	P	**Pn**	**10 41 24.0**	**+0.7**
PRWZ	**Pori Road**	**1.13**	**179**	P	**Pn**	**10 41 24.5**	**+1.0**
HSRZ	**Hossack Road**	**1.14**	**12**	P	**Pn**	**10 41 24.0**	**+0.3**
TLZ	**Tolley Road**	**1.14**	**344**	P	**Pn**	**10 41 23.5**	**-0.3**
RTZ	**Ruatahuna**	**1.15**	**45**	P	**Pn**	**10 41 24.2**	**+0.3**
MUGZ	**Murupara**	**1.15**	**34**	P	**Pn**	**10 41 23.9**	**0.0**
RRRZ	**Republican Roa**	**1.18**	**23**	P	**Pn**	**10 41 24.2**	**0.0**
LREZ	**Lake Rotokare**	**1.19**	**268**	P	**Pn**	**10 41 25.5**	**+1.1**
HLRZ	**Highlands Stat**	**1.22**	**15**	P	**Pn**	**10 41 24.6**	**-0.2**
HIZ	**Hauiti**	**1.25**	**317**	P	**Pn**	**10 41 25.5**	**+0.3**
HIZ	**Hauiti**	**1.25**	**317**	P	**Pn**	**10 41 25.4**	**+0.3**
MRZ	**Mangatainoka R**	**1.26**	**193**	P	**Pn**	**10 41 25.8**	**+0.4**
SNGZ	**Shannon Statio**	**1.27**	**60**	P	**Pn**	**10 41 26.1**	**+0.7**
TARZ	**Mount Tarawera**	**1.27**	**20**	P	**Pn**	**10 41 26.2**	**+0.6**
BFZ	**Birch Farm**	**1.27**	**170**	P	**Pn**	**10 41 25.7**	**+0.2**
BFZ	**Birch Farm**	**1.27**	**170**	P	**Pn**	**10 41 26.0**	**+0.5**
MHEZ	**Mangahewa**	**1.30**	**285**	P	**Pn**	**10 41 27.2**	**+1.2**
TIWZ	**Tintock**	**1.35**	**182**	P	**Pn**	**10 41 26.9**	**+0.3**
OMRZ	**Omania**	**1.36**	**14**	P	**Pn**	**10 41 27.1**	**+0.4**
DREZ	**Durham Road**	**1.37**	**279**	P	**Pn**	**10 41 28.1**	**+1.3**
PREZ	**Palmer Road**	**1.39**	**273**	P	**Pn**	**10 41 26.6**	**-0.4**
KNZ	**Kokohu**	**1.41**	**74**	P	**Pn**	**10 41 27.2**	**-0.1**
KARZ	**Kaharoa**	**1.43**	**10**	P	Pn	10 41 32.4	+4.8
NEZ	**North Egmont**	**1.44**	**276**	P	**Pn**	**10 41 29.2**	**+1.4**
EDRZ	**Edgecumbe**	**1.46**	**26**	P	**Pn**	**10 41 28.7**	**+0.6**
RAGZ	**Rawiri**	**1.48**	**51**	P	**Pn**	**10 41 30.3**	**+1.9**
URZ	**Urewera**	**1.48**	**38**	Pn	**Pn**	**10 41 28.2**	**-0.1**
	52nm,0.3s,baz=121,slow=24,SNR=267						
URZ				Sn	**Sn**	**10 41 46.8**	**+0.1**
	318nm,0.3s,baz=73,slow=14,SNR=46						
URZ				LR	LR	10 42 01.3	
	comp=Z,85nm,21.2s,baz=212,slow=42						
URZ	**Urewera**	**1.48**	**38**	P	**Pn**	**10 41 28.2**	**-0.1**
URZ	**Urewera**	**1.48**	**38**	P	**Pn**	**10 41 28.7**	**+0.4**
CPWZ	**Castlepoint**	**1.49**	**172**	P	**Pn**	**10 41 29.1**	**+0.7**
KHEZ	**Kahui Hut**	**1.50**	**274**	P	**Pn**	**10 41 30.3**	**+1.7**
HOWZ	**Holdsworth Sta**	**1.50**	**192**	P	**Pn**	**10 41 28.6**	**-0.1**
OGWZ	**Otaki Gorge**	**1.51**	**203**	P	**Pn**	**10 41 29.1**	**+0.4**
PKE	**Pukeiti**	**1.54**	**278**	P	**Pn**	**10 41 30.7**	**+1.7**
MHGZ	**Mahia Peninsul**	**1.55**	**80**	P	**Pn**	**10 41 29.4**	**+0.2**
MARZ	**Manawahe**	**1.55**	**22**	P	**Pn**	**10 41 30.2**	**+0.9**
KMRZ	**Kaimai**	**1.58**	**360**	P	**Pn**	**10 41 29.9**	**+0.2**
RIGZ	**Rimuhau**	**1.59**	**64**	P	**Pn**	**10 41 30.1**	**+0.3**
PRGZ	**Paritu Road**	**1.59**	**72**	P	**Pn**	**10 41 29.7**	**-0.1**
NMEZ	**Namu Road**	**1.60**	**270**	P	**Pn**	**10 41 31.5**	**+1.6**
NBEZ	**Newall Road No**	**1.62**	**275**	P	**Pn**	**10 41 31.5**	**+1.4**
KIW	**Kapiti Island**	**1.64**	**209**	P	**Pn**	**10 41 30.7**	**+0.3**
MWZ	**Matawai**	**1.65**	**49**	P	**Pn**	**10 41 31.0**	**+0.3**
OPRZ	**Ohinepanea**	**1.65**	**17**	P	**Pn**	**10 41 30.7**	**+0.1**
TMWZ	**Te Maipa**	**1.68**	**181**	P	**Pn**	**10 41 30.8**	**-0.2**
TGRZ	**Tauranga**	**1.71**	**8**	P	**Pn**	**10 41 31.7**	**+0.3**
TOZ	**Tahuroa Road**	**1.73**	**348**	P	**Pn**	**10 41 31.6**	**0.0**
MTW	**Mount Morrison**	**1.76**	**191**	P	**Pn**	**10 41 31.5**	**-0.6**
WHRZ	**Whale Island**	**1.77**	**28**	P	**Pn**	**10 41 33.4**	**+1.2**
TKGZ	**Te Karaka**	**1.79**	**57**	P	**Pn**	**10 41 32.7**	**+0.3**
CAW	**Cannon Point**	**1.81**	**201**	P	**Pn**	**10 41 32.4**	**-0.3**
TRWZ	**Traveller**	**1.98**	**186**	P	**Pn**	**10 41 34.6**	**-0.4**
RUGZ	**Raukumara Rang**	**1.99**	**43**	P	**Pn**	**10 41 35.6**	**+0.2**
CNGZ	**Carnagh Statio**	**2.00**	**63**	P	**Pn**	**10 41 35.8**	**+0.4**
TWGZ	**Tauwhareparae**	**2.02**	**53**	P	**Pn**	**10 41 36.4**	**+0.7**
MSWZ	**Moikau Station**	**2.06**	**195**	P	**Pn**	**10 41 35.1**	**-1.0**
WEL	**Wellington**	**2.06**	**205**	P	**Pn**	**10 41 35.6**	**-0.6**
DUWZ	**D'Urville Isla**	**2.07**	**228**	P	**Pn**	**10 41 36.5**	**+0.2**
SNZO	**South Karori**	**2.10**	**206**	P	**Pn**	**10 41 36.2**	**-0.5**
BHW	**Baring Head**	**2.14**	**202**	P	**Pn**	**10 41 36.3**	**-0.9**
TCW	**Tory Channel**	**2.19**	**215**	P	**Pn**	**10 41 37.4**	**-0.5**
PLWZ	**Palliser**	**2.20**	**194**	P	**Pn**	**10 41 36.9**	**-1.2**
HAZ	**Te Kaha**	**2.21**	**41**	P	**Pn**	**10 41 37.5**	**-0.6**
PUZ	**Puketiti**	**2.26**	**54**	P	**Pn**	**10 41 38.4**	**-0.5**
PKGZ	**Pakihiroa**	**2.27**	**48**	P	**Pn**	**10 41 39.3**	**+0.2**
TUWZ	**Tuamarina**	**2.52**	**217**	P	**Pn**	**10 41 41.6**	**-0.7**
WMGZ	**Waiomatatini S**	**2.52**	**51**	P	**Pn**	**10 41 42.1**	**-0.3**
AWAZ	**Awhitu Peninsu**	**2.57**	**336**	P	**Pn**	**10 41 43.8**	**+0.7**
ETAZ	**East Tamaki Re**	**2.60**	**342**	P	**Pn**	**10 41 43.6**	**+0.2**
MXZ	**Matakaoa Point**	**2.63**	**46**	P	**Pn**	**10 41 44.0**	**+0.1**
NNZ	**Nelson**	**2.65**	**227**	P	**Pn**	**10 41 44.0**	**-0.2**
KUZ	**Kuaotunu**	**2.68**	**356**	P	**Pn**	**10 41 45.6**	**+0.9**
WIAZ	**Waiheke Island**	**2.71**	**346**	P	**Pn**	**10 41 45.2**	**+0.3**
WTAZ	**Waiatarua**	**2.71**	**336**	P	**Pn**	**10 41 46.0**	**+0.9**
EPAZ	**Eden Park BICE**	**2.72**	**339**	P	**Pn**	**10 41 45.5**	**+0.4**
BSWZ	**Blackbirch Sta**	**2.77**	**214**	P	**Pn**	**10 41 44.8**	**-1.1**
MBAZ	**Motutapu North**	**2.78**	**342**	P	**Pn**	**10 41 46.2**	**+0.2**
RVAZ	**Riverhead Bore**	**2.86**	**338**	P	**Pn**	**10 41 48.1**	**+1.0**
QRZ	**Quartz Range**	**2.97**	**241**	P	**Pn**	**10 41 48.6**	**+0.2**
QRZ	**Quartz Range**	**2.97**	**241**	P	**Pn**	**10 41 49.4**	**+0.9**
GRZ	**Great Barrier**	**3.19**	**353**	P	**Pn**	**10 41 52.8**	**+1.1**
THZ	**Tophouse**	**3.28**	**224**	P	**Pn**	**10 41 52.4**	**-0.5**
KHZ	**Kahutara**	**3.50**	**211**	P	**Pn**	**10 41 53.9**	**-1.8**
KHZ	**Kahutara**	**3.50**	**211**	P	**Pn**	**10 41 55.8**	**+0.1**
WCZ	**Waipu Caves**	**3.71**	**340**	P	**Pn**	**10 41 59.5**	**+0.9**
DSZ	**Denniston Nort**	**3.91**	**232**	P	**Pn**	**10 42 01.2**	**-0.3**
LTZ	**Lake Taylor**	**4.35**	**218**	P	**Pn**	**10 42 05.1**	**-2.3**
OUZ	**Omahuta**	**4.60**	**335**	P	**Pn**	**10 42 11.7**	**+0.9**
OUZ	**Omahuta**	**4.60**	**335**	P	**Pn**	**10 42 11.8**	**+1.0**
INZ	**Inchbonnie**	**4.73**	**224**	P	**Pn**	**10 42 13.2**	**+0.6**
OXZ	**Oxford**	**4.88**	**216**	P	**Pn**	**10 42 12.8**	**-1.8**
RACZ	**Rakaia**	**5.16**	**212**	P	**Pn**	**10 42 17.4**	**-1.0**
MHCZ	**Mount Hutt**	**5.25**	**217**	P	**Pn**	**10 42 18.4**	**-1.4**
WVZ	**Waitaha Valley**	**5.35**	**225**	P	**Pn**	**10 42 25.0**	**+3.9**
RPZ	**Rata Peaks**	**5.64**	**219**	P	**Pn**	**10 42 26.3**	**+1.2**
GCSZ	**Gaunt Creek Bo**	**5.74**	**226**	P	**Pn**	**10 42 28.5**	**+2.1**
ARCZ	**Arundel**	**5.75**	**217**	P	**Pn**	**10 42 25.9**	**-0.8**
FOZ	**Fox Glacier**	**6.16**	**226**	P	**Pn**	**10 42 34.7**	**+2.5**
CTZ	**Chatham Island**	**7.04**	**130**	P	**Pn**	**10 42 43.0**	**-1.3**
JCZ	**Jackson Bay**	**7.08**	**227**	P	**Pn**	**10 42 46.7**	**+1.8**
MSZ	**Milford Sound**	**7.94**	**226**	P	**Pn**	**10 43 00.6**	**+4.1**
MLZ	**Mavora Lakes**	**8.29**	**222**	P	Pn	10 43 07.1	+5.8
ASAR	**Alice Springs**	**38.75**	**281**	P	**P**	**10 48 22.9**	**+0.4**
	0.3nm,0.5s,baz=133,slow=8.2,SNR=8.9						
WRA	**Warramunga Arr**	**40.60**	**286**	P	**P**	**10 48 37.8**	**-0.1**
	0.3nm,0.3s,baz=125,slow=8.2,SNR=18						
JOW	**Kunigami**	**79.51**	**318**	LR	LR	11 19 55.0	
	comp=Z,34nm,22.0s,baz=109,slow=30						
ARCES	**ARCESS Array B**	**146.00**	**342**	PKP	**PKPdf**	**11 00 34.4**	**-0.6**
	3.6nm,0.9s,baz=62,slow=2.0,SNR=7.5						

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*ANF **12** 10:48:12.8±0.5, 36°.97N×97°.84W, h2^{km}±3^{km}, ML3.1/7, Error ellipse: s-maj=3.0km s-min=2.6km az=29.0*

*NEIC **12** 10:48:13.3±0.7, 36°.963N±0°.007×97°.85W±0°.01, h8^{km}±3^{km}, Error ellipse: s-maj=1.7km s-min=0.9km az=109.0*

*TUL **12** 10:48:13.2±1.0, 36°.966N±0°.010×97°.85W±0°.01, h5^{km}±4^{km}, ML3.0, mb_Lg2.7/30(NEIC), ML2.6/23(NEIC), Error ellipse: s-maj=1.6km s-min=1.2km az=119.0*

*NEIC **12** 10:48:13.3±0.8, 36°.94N±0°.01×97°.83W±0°.01, h9^{km}±3^{km}, Error ellipse: s-maj=1.8km s-min=1.4km az=124.0*

ISC 12 10:48:13.4±0.8**, 36°.96N**±0°.02×**97°.85W**±0°.02**, h8**^{km}±6^{km}**, n54, σ0^s.43**/64**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN14	**Manchester OK**	**0.09**	**271**	Pg	**Pg**	**10 48 15.6**	**-0.1**
KAN14				Sg	**Sg**	**10 48 17.1**	**-0.3**
GC02	**Grant County #**	**0.10**	**185**	Pg	**Pg**	**10 48 16.0**	**+0.1**
GC02				Sg	**Sg**	**10 48 18.0**	**+0.4**
KAN17	**Caldwell West**	**0.11**	**37**	Pg	**Pg**	**10 48 16.0**	**0.0**
KAN17				Sg	**Sg**	**10 48 17.8**	**-0.1**
KAN05	**Bluff City Nor**	**0.15**	**353**		**Pg**	**10 48 16.7**	**0.0**
KAN05					**Sg**	**10 48 19.0**	**0.0**
KAN01	**Argonia South**	**0.21**	**20**		**Pg**	**10 48 17.7**	**0.0**
KAN01					**Sg**	**10 48 20.8**	**+0.1**
KAN09	**Caldwell North**	**0.26**	**45**		**Pg**	**10 48 18.6**	**0.0**
KAN09					**Sg**	**10 48 22.2**	**+0.1**
KAN10	**Anthony SW Sta**	**0.26**	**311**		**Pg**	**10 48 18.6**	**0.0**
KAN10					**Sg**	**10 48 22.3**	**+0.2**
KAN08	**Anthony NE Sta**	**0.29**	**340**		**Pg**	**10 48 19.1**	**-0.1**
KAN08					**Sg**	**10 48 23.1**	**+0.1**
KAN06	**Argonia West S**	**0.29**	**358**		**Pg**	**10 48 19.2**	**0.0**
KAN06					**Sg**	**10 48 23.4**	**+0.2**
KAN13	**South Haven SW**	**0.30**	**79**		**Pg**	**10 48 19.5**	**+0.1**
KAN13					**Sg**	**10 48 23.8**	**+0.3**
KAN16	**Harper SW Stat**	**0.32**	**328**		**Pg**	**10 48 19.7**	**-0.1**
KAN16					**Sg**	**10 48 24.3**	**+0.2**
OK032	**Salt Plains WL**	**0.33**	**243**		**Pg**	**10 48 19.9**	**+0.1**
OK032					**Sg**	**10 48 24.6**	**+0.4**
KAN12	**Harper NE Stat**	**0.36**	**341**		**Pg**	**10 48 20.4**	**-0.1**
KAN12					**Sg**	**10 48 25.5**	**+0.2**
KS20	**Mayfield South**	**0.36**	**41**		**Pg**	**10 48 20.5**	**-0.1**
KS20					**Sg**	**10 48 25.4**	**+0.1**
KS21	**Milan North St**	**0.36**	**24**		**Pg**	**10 48 20.4**	**-0.1**
KS21					**Sg**	**10 48 25.5**	**+0.1**
CROK	**Carrier**	**0.46**	**194**	Pg	**Pg**	**10 48 22.5**	**+0.2**
BLOK	**Blackwell**	**0.54**	**111**	Pg	**Pg**	**10 48 23.9**	**0.0**
T35A	**Sooner Cattle**	**1.07**	**92**		**Pg**	**10 48 33.4**	**-0.6**
T35B	**Sooner Cattle**	**1.07**	**92**	P	**Pg**	**10 48 33.4**	**-0.6**
	baz=273						
T35B				S	**Sg**	**10 48 47.4**	**-0.5**
	baz=273						
U32A	**Winter Ranch,**	**1.09**	**239**	Pg	**Pg**	**10 48 34.3**	**0.0**
U32A					**Sg**	**10 48 48.6**	**+0.1**
U32A	**Winter Ranch,**	**1.09**	**239**	P	**Pg**	**10 48 33.6**	**-0.8**
	baz=57						
OK029	**Liberty Lake**	**1.20**	**164**		**Pb**	**10 48 35.6**	**-0.7**
OK029				Sn	**Sg**	**10 48 52.0**	**0.0**
QUOK	**Quay**	**1.21**	**130**	Pn	**Pb**	**10 48 35.8**	**-0.7**
OK031	**S. Brethren Rd**	**1.29**	**141**	Pn	**Pn**	**10 48 37.2**	**-0.4**
OK031				Sn	**Sb**	**10 48 54.6**	**+0.1**
BCOK	**Bluff Creek, N**	**1.31**	**171**	Pn	**Pn**	**10 48 37.4**	**-0.5**
OK030	**Cody Creek RV**	**1.34**	**140**		**Pn**	**10 48 37.7**	**-0.6**
OKCFA	**Oklahoma City**	**1.57**	**168**		**Pn**	**10 48 41.8**	**+0.3**
OKCFA				IAmb_Lg		10 49 04.9	
	comp=Z,46nm,0.8s						
OKCFA	**Oklahoma City**	**1.57**	**168**	P	**Pb**	**10 48 42.2**	**-0.4**
	baz=348						
OKCFA				S	**Sg**	**10 49 03.6**	**-0.2**
	baz=348						
OKCSW	**OKLAHOMA CITY**	**1.58**	**168**		**Pn**	**10 48 42.0**	**+0.3**
R32A	**Long Quarter,**	**1.62**	**335**		**Pn**	**10 48 42.3**	**+0.1**
R32A	**Long Quarter,**	**1.62**	**335**	P	**Pb**	**10 48 42.8**	**-0.7**
	baz=155						
R32A				S	**Sb**	**10 49 03.6**	**-0.5**
	baz=155						
FNO	**Franklin**	**1.73**	**168**		**Pn**	**10 48 44.3**	**+0.5**
FNO				IAmb_Lg		10 49 09.5	
	comp=Z,37nm,0.8s						
TUL1	**Leonard**	**1.96**	**122**		**Pn**	**10 48 47.4**	**+0.5**
TUL1				IAmb_Lg		10 49 18.0	
	comp=Z,32nm,0.8s						
TUL1	**Leonard**	**1.96**	**122**	S	**Sn**	**10 49 12.7**	**+1.0**
	baz=303						
WMOK	**Wichita Mounta**	**2.34**	**199**		**Pn**	**10 48 52.9**	**+0.7**
WMOK	**Wichita Mounta**	**2.34**	**199**	P	**Pn**	**10 48 52.7**	**+0.6**
	baz=18						
X34A	**Smith Ranch, M**	**2.35**	**180**	Pn	**Pn**	**10 48 52.4**	**+0.2**
KSU1	**Kansas State U**	**2.36**	**24**	Pn	**Pn**	**10 48 52.8**	**+0.4**
KSU1				IAmb_Lg		10 49 31.5	
	comp=Z,42nm,0.9s						
KSU1	**Kansas State U**	**2.36**	**24**	P	**Pn**	**10 48 52.9**	**+0.6**
	baz=205						
CBKS	**Cedar Bluff**	**2.38**	**322**	Pn	**Pn**	**10 48 53.1**	**+0.3**
U38A	**Gravette**	**2.83**	**99**	Pn	**Pn**	**10 49 00.0**	**+1.1**
X37A	**Clayton**	**3.10**	**139**	Pn	**Pn**	**10 49 03.8**	**+1.2**
X37A				IAmb_Lg		10 49 59.8	
	comp=Z,33nm,1.2s						
S39A	**Bolivar**	**3.68**	**77**	IAmb_Lg		10 50 10.2	
	comp=Z,15nm,0.9s						
S39A	**Bolivar**	**3.68**	**77**	P	**Pn**	**10 49 11.0**	**+0.4**
	baz=260						
W39A	**Magazine**	**3.73**	**117**	IAmb_Lg		10 50 20.4	
	comp=Z,27nm,0.8s						
AMTX	**Amarillo**	**3.73**	**238**	IAmb_Lg		10 50 21.3	
	comp=Z,13nm,0.8s						
MIAR	**Mount Ida**	**4.22**	**123**	IAmb_Lg		10 50 31.1	
	comp=Z,11nm,0.8s						
P38A	**Dawn**	**4.32**	**51**	IAmb_Lg		10 50 30.4	
	comp=Z,13nm,0.8s						
Z38A	**Mt. Pleasant**	**4.37**	**147**	IAmb_Lg		10 50 40.4	
	comp=Z,12nm,0.7s						
X40A	**Basin Creek Fa**	**4.76**	**120**	IAmb_Lg		10 50 52.1	
	comp=Z,10nm,0.9s						
WHAR	**Wooly Hollow**	**4.80**	**109**	IAmb_Lg		10 50 46.2	
	comp=Z,17nm,0.8s						
T25A	**Trinidad**	**5.25**	**274**	IAmb_Lg		10 51 03.3	
	comp=Z,8.3nm,0.9s						
PBMO	**Poplar Bluff**	**5.95**	**89**	IAmb_Lg		10 51 23.7	
	comp=Z,12nm,0.9s						
JCT	**Junction City**	**6.66**	**195**	IAmb_Lg		10 52 01.4	
	comp=Z,9.8nm,0.9s						

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*IDC **12** 11:08:07.8±1.8, 29°.50S×71°.81W, h0^{km}, mb4.3/1, mb1 4.0/4, mb1mx3.7/27, mbtmp3.9/4, ML3.7/3, MS3.6/3, Ms1 3.5/3, ms1mx3.0/25, Error ellipse: s-maj=67.1km s-min=48.0km az=135.0*

*GUC **12** 11:08:09.0±0.7, 29°.61S×72°.04W, h20^{km}±11^{km}, ML3.9*

ISC 12 11:08:09.0±1.1**, 29°.59S**±0°.04×**72°.03W**±0°.09**, h25**^{km}**, n26, σ1^s.18**/34**, 2C-2D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	**La Serena**	**0.76**	**116**	*e*P	**Pb**	**11 08 23.1**	**-0.6**
CO05				*i* S	**Sb**	**11 08 33.6**	**-0.1**
CO05				IAML		11 08 37.8	
	comp=E,13µm,0.9s						
CO06	**Fray Jorge**	**1.14**	**163**	⇑*i*P	**Pn**	**11 08 28.6**	**-0.8**
CO06				*i* S	**Sn**	**11 08 43.0**	**-1.2**
CO06				IAML		11 08 47.0	
	comp=E,1µm,0.6s						
GO04	**Tololo Observa**	**1.22**	**119**	⇓*i*P	**Pn**	**11 08 30.8**	**+0.1**
GO04				*i* S	**Sb**	**11 08 47.4**	**+0.4**
LCO	**Las Campanas**	**1.29**	**64**	⇓*i*P	**Pb**	**11 08 32.2**	**-0.6**
LCO				*i* S	**Sb**	**11 08 49.6**	**+0.5**
AC04	**Llanos de Chal**	**1.61**	**32**	⇑*i*P	**Pn**	**11 08 35.6**	**-0.3**
AC04				IAML		11 08 56.6	
	comp=E,604nm,0.4s						
VA06	**Catapilco**	**3.03**	**168**	*e*P	**Pn**	**11 08 55.4**	**0.0**
VA06				*e*S	**Sn**	**11 09 28.8**	**-2.1**
VA06				IAML		11 09 32.7	
	comp=N,590nm,0.4s						
VA03	**San Esteban**	**3.41**	**159**	*e*P	**Pn**	**11 09 02.7**	**+1.9**
VA03				*e*S	**Sn**	**11 09 41.3**	**+0.8**
VA03				IAML		11 10 00.0	
	comp=N,457nm,0.6s						
ROCH	**El Roble**	**3.48**	**166**	*e*P	**Pn**	**11 09 02.2**	**+0.3**
ROCH				*e*S	**Sn**	**11 09 41.6**	**-0.9**
ROCH				IAML		11 10 09.0	
	comp=E,299nm,0.5s						
PEL	**Peldehue**	**3.73**	**162**	*e*P	**Pn**	**11 09 05.9**	**+0.9**
PEL				*e*S	**Sn**	**11 09 48.8**	**+0.6**
MT02	**Curacav**	**3.74**	**168**	*e*P	**Pn**	**11 09 04.9**	**-0.2**
AC02	**Maricunga**	**3.75**	**44**	*e*P	**Pn**	**11 09 07.4**	**+1.6**
FCH	**Farellones**	**4.01**	**159**	*e*P	**Pn**	**11 09 11.0**	**+1.7**
MT09	**Talagante**	**4.27**	**168**	*e*P	**Pn**	**11 09 13.3**	**+0.7**
MT09				*e*S	**Sn**	**11 10 01.3**	**-0.4**
MT01	**Popeta**	**4.32**	**171**	*e*P	**Pn**	**11 09 12.8**	**-0.3**
LMEL	**Las Melosas**	**4.52**	**160**	*e*P	**Pn**	**11 09 17.7**	**+1.6**
BO04	**La Punta**	**4.55**	**165**	*e*P	**Pn**	**11 09 17.2**	**+0.8**
BO01	**Tunca**	**4.86**	**171**	*e*P	**Pn**	**11 09 20.6**	**0.0**
LVC	**Limon Verde**	**7.49**	**23**	Pn	**Pn**	**11 09 55.0**	**-2.0**
	comp=E,0.9nm,0.3s,baz=206,slow=9.0,SNR=2.3						
LVC				Sn	**Sn**	**11 11 19.5**	**-1.9**
	comp=E,1.1nm,0.3s,baz=264,slow=7.9,SNR=1.6						
CPUP	**Villa Florida**	**13.39**	**80**	Pn	**Pn**	**11 11 16.2**	**-1.3**
	comp=E,0.1nm,0.3s,baz=256,slow=18,SNR=2.1						
CPUP				LR	LR	11 16 51.2	
	comp=E,113nm,20.6s,baz=216,slow=40						
SIV	**San Ignacio**	**16.87**	**39**	Pn	**P**	**11 12 05.2**	**-0.3**
	comp=E,0.3nm,0.3s,baz=231,slow=9.2,SNR=9.5						
SNAA	**Sanae**	**55.67**	**159**	LR	LR	11 42 25.4	
	comp=E,40nm,18.2s,baz=12,slow=37						
TORD	**Torodi Ar. Bea**	**82.72**	**71**	P	**P**	**11 20 32.5**	**+1.5**
	comp=E,2.3nm,0.8s,baz=257,slow=4.9,SNR=10						
BBB	**Bella Bella**	**95.04**	**329**	LR	LR	12 00 45.0	
	comp=E,63nm,19.7s,baz=68,slow=33						
KURBB	**Kurchatov Arra**	**149.53**	**38**	PKPbc	**PKiKP**	**11 27 58.3**	**+1.4**
	comp=E,0.9nm,0.6s,baz=300,slow=3.2,SNR=5.7						
ZALV	**Zalesovo Beam**	**150.42**	**28**	PKPbc	**PKiKP**	**11 28 00.4**	**+1.8**
	comp=E,2.8nm,0.6s,baz=297,slow=3.2,SNR=14						
MKAR	**Makanchi Array**	**153.67**	**42**	PKPbc	**PKiKP**	**11 28 07.2**	**+1.5**
	comp=E,0.4nm,0.8s,baz=299,slow=2.0,SNR=3.4						

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*NSSP **12** 11:08:24.7, 38°.30N×42°.52E, h12^{km}, Ms3.3*

*ISK **12** 11:08:25.2, 38°.26N×42°.58E, h10^{km}, ML3.9/14*

*DDA **12** 11:08:25.6, 38°.26N×42°.58E, h16^{km}±1^{km}, MW3.8*

ISC 12 11:08:25.7±1.0**, 38°.25N**±0°.02×**42°.58E**±0°.02**, h16**^{km}±8^{km}**, n44, σ0^s.90**/68**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PERV	**Siirt/Pervari-**	**0.31**	**186**	*i* P	**Pg**	**11 08 32.2**	**-0.2**
PERV				IAML		11 08 39.0	
	comp=E,13µm,0.7s						
PERV				IAML		11 08 40.0	
	comp=N,15µm,0.5s						
AKDM	**Akdamar-Van**	**0.32**	**77**	PG	**Pg**	**11 08 32.1**	**-0.5**
AKDM				SG	**Sb**	**11 08 37.6**	**-0.6**
GEVA	**Gevas**	**0.38**	**81**	*i* P	**Pg**	**11 08 33.2**	**-0.4**
GEVA				*i* S	**Sb**	**11 08 39.6**	**-0.3**
GEVA				IAML		11 08 41.0	
	comp=E,5µm,0.4s						
GEVA				IAML		11 08 42.0	
	comp=N,5µm,0.3s						
BLIS	**Bitlis-Merkez**	**0.40**	**294**	*i* P	**Pb**	**11 08 33.8**	**-0.8**
BLIS				*i* S	**Sb**	**11 08 40.0**	**-0.5**
BLIS				IAML		11 08 41.0	
	comp=E,12µm,0.4s						
BLIS				IAML		11 08 41.0	
	comp=N,7µm,0.3s						
GURO	**Guroymak-BITLI**	**0.52**	**305**	PG	**Pg**	**11 08 35.8**	**-0.4**
GURO				SG	**Sb**	**11 08 43.1**	**-1.0**
ADCV	**BITLIS_Adilcev**	**0.56**	**11**	*i* P	**Pb**	**11 08 37.2**	**-0.1**
ADCV				*i* S	**Sb**	**11 08 44.7**	**-0.6**
ADCV				IAML		11 08 46.0	
	comp=N,8µm,0.3s						
ADCV				IAML		11 08 46.0	
	comp=E,8µm,0.7s						
SRTM	**Siirt_Merkez**	**0.58**	**243**	*i* P	**Pb**	**11 08 37.9**	**+0.2**
SRTM				*i* S	**Sb**	**11 08 46.4**	**+0.7**
SRTM				IAML		11 08 51.0	
	comp=N,3µm,0.8s						
SRTM				IAML		11 08 52.0	
	comp=E,6µm,0.6s						
TVAN	**Van**	**0.70**	**67**	*i* P	**Pg**	**11 08 38.9**	**-0.7**
TVAN				*i* S	**Sb**	**11 08 50.3**	**+1.1**
TVAN				IAML		11 08 55.0	
	comp=E,1µm,0.5s						
TVAN				IAML		11 09 07.0	
	comp=N,2µm,0.7s						
VANB	**Van**	**0.72**	**62**	PG	**Pg**	**11 08 38.4**	**-1.4**
VANB				SG	**Sb**	**11 08 49.3**	**-0.3**
SIRT	**Sirnak**	**0.76**	**189**	PG	**Pb**	**11 08 40.6**	**0.0**

SIRN	Sırnak	0.77	190	*i* P	Pb	11 08 40.7	-0.1
SIRN				*i* S	Sb	11 08 52.2	+1.2
SIRN				IAML		11 08 56.0	
	comp=N,2μm,0.5s						
SIRN				IAML		11 08 56.0	
	comp=E,2μm,0.5s						
MLAZ	Malazgirt-MUS	0.89	358	PG	Pb	11 08 42.5	-0.3
MLAZ				SG	Sn	11 08 55.7	-0.6
VMUR	Van-Muradiye	1.07	46	*i* P	Pg	11 08 45.8	-0.6
VMUR				*i* S	Sn	11 09 00.6	-0.2
VMUR				IAML		11 09 03.0	
	comp=E,1μm,0.9s						
VMUR				IAML		11 09 03.0	
	comp=N,1μm,0.8s						
EKAR	Karacoban	1.08	338	*i* P	Pn	11 08 46.3	-0.1
EKAR				IAML		11 09 06.0	
	comp=E,3μm,0.6s						
SVAN	Silvan-Diyarba	1.10	265	*i* P	Pn	11 08 46.5	+0.1
SVAN				*i* S	Sn	11 09 01.4	+0.1
SVAN				IAML		11 09 03.0	
	comp=N,1μm,0.6s						
SVAN				IAML		11 09 04.0	
	comp=E,603nm,0.3s						
SVAN	Silvan-Diyarba	1.10	265	PN	Pn	11 08 46.8	+0.3
SVAN				SN	Sn	11 09 01.9	+0.6
BTMN	Batman	1.10	251	*i* P	Pn	11 08 47.2	+0.7
BTMN				*i* S	Sn	11 09 02.5	+1.0
BTMN				IAML		11 09 04.0	
	comp=N,3μm,0.6s						
BTMN				IAML		11 09 04.0	
	comp=E,5μm,0.6s						
HAKT	HAKKARI	1.13	128	*i* P	Pg	11 08 47.0	-0.6
HAKT				IAML		11 09 09.0	
	comp=E,741nm,1.3s						
HAKT				IAML		11 09 11.0	
	comp=N,535nm,0.9s						
OZAP	Van, Ozalp-Mer	1.18	69	*i* P	Pg	11 08 49.1	+0.6
OZAP				IAML		11 09 13.0	
	comp=E,371nm,0.8s						
VRTB	Varto-Mus	1.26	316	*i* P	Pn	11 08 48.8	0.0
VRTB				*i* S	Sg	11 09 06.7	+0.1
VRTB				IAML		11 09 09.0	
	comp=E,1μm,0.5s						
VRTB				IAML		11 09 11.0	
	comp=N,917nm,0.5s						
VRTB	Varto-Mus	1.26	316	PN	Pg	11 08 49.2	-0.9
VRTB				SN	Sg	11 09 07.1	+0.5
MIDY	Mardin/Midyat-	1.26	228	*i* P	Pg	11 08 49.3	-0.8
MIDY				IAML		11 09 08.0	
	comp=E,2μm,0.4s						
MIDY				IAML		11 09 12.0	
	comp=N,2μm,0.5s						
CUKT	Cukurca	1.29	141	*i* P	Pn	11 08 45.8	-3.5
AGRB	Hanur-Agry	1.36	13	PN	Pb	11 08 50.9	0.0
CLDR	Caldiran	1.37	49	*i* P	Pn	11 08 50.4	0.0
CLDR				*i* S	Sg	11 09 09.5	-0.6
CLDR				IAML		11 09 12.0	
	comp=E,513nm,0.4s						
CLDR				IAML		11 09 15.0	
	comp=N,357nm,0.6s						
CLDR	Caldiran	1.37	49	PN	Pn	11 08 50.4	0.0
SLHN	Bingol, Solhan	1.41	300	*i* P	Pg	11 08 52.0	-0.9
SLHN				*i* S	Sg	11 09 13.2	+2.0
SLHN				IAML		11 09 17.0	
	comp=E,2μm,0.6s						
SLHN				IAML		11 09 21.0	
	comp=N,804nm,0.7s						
YOVA	Hakkari_Yksek	1.50	116	*i* P	Pg	11 08 54.4	-0.3
YOVA				*i* S	Sg	11 09 16.3	+2.0
YOVA				IAML		11 09 22.0	
	comp=E,322nm,0.7s						
EATA	Eleskirt	1.61	357	*i* P	Pb	11 08 55.1	-0.1
EATA				IAML		11 09 20.0	
	comp=N,482nm,0.4s						
EATA				IAML		11 09 22.0	
	comp=E,336nm,0.5s						
KOTA	Agri, Merkez-K	1.62	17	*i* P	Pb	11 08 55.2	-0.1
KOTA				*i* S	Sb	11 09 16.3	+0.7
BNGB	Bingl	1.66	297	PN	Pb	11 08 55.2	-0.8
KOPR	Koprukoy-ERZUR	1.82	342	PN	Pn	11 08 57.5	+0.9
ECAT	Cat-ERZURUM	1.84	318	*i* P	Pb	11 08 59.2	0.0
ECAT				IAML		11 09 27.0	
	comp=N,215nm,0.5s						
MAZI	Mazidag	1.87	246	PN	Pn	11 08 57.7	+0.6
ERZM	Erzurum	1.90	330	*i* P	Pb	11 09 00.6	+0.4
DYBB	Diyarbakir	1.95	262	PN	Pn	11 08 59.1	+0.9
VNNZ	Vanand	2.08	27	*i* P	Pb	11 09 03.4	+0.2
VNNZ				*i* S	Sg	11 09 33.9	+1.2
KOVA	Elazig, Kovanc	2.22	283	*i* P	Pb	11 09 04.2	-1.3
KOVA				*i* S	Sg	11 09 34.9	-2.2
KOVA				IAML		11 09 43.0	
	comp=N,231nm,1.3s						
KOVA				IAML		11 09 44.0	
	comp=E,304nm,0.6s						
GNI	Garni	2.53	41	*i* P	Pg	11 09 13.9	-0.3
GNI				*i* S	Sg	11 09 48.4	+1.4
TNCL	Tunceli-Merkez	2.53	291	*i* P	Pb	11 09 10.7	-0.1
TNCL				IAML		11 09 57.0	
	comp=E,189nm,0.8s						
SVRC	Sivrice-ELAZID	2.58	274	PN	Pn	11 09 07.7	+0.7
KAPZ	Kaputan	2.64	38	*i* P	Pg	11 09 16.4	+0.1
KAPZ				*i* S	Sg	11 09 51.7	+1.1
ELZG	Elazig	2.84	276	*i* P	Pn	11 09 11.5	+1.0
SURC	SANLIURFA_SURC	3.44	248	*i* P	Pn	11 09 19.1	+0.4

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*NEIC **12** 11:13:28.4±1.1, 58°.84N±0°.04×154°.52W±0°.07, h132^{km}±5^{km}, Error ellipse: s-maj=5.7km s-min=5.3km az=225.0*

*IDC **12** 11:13:29.4±7.4, 59°.26N×154°.97W, h102^{km}±83^{km}, mb3.7/3, mb1 3.7/4, mb1mx3.2/62, mbtmp4.0/4, ML3.9/1, MS3.1/1, Ms1 3.1/1, ms1mx2.4/32, Error ellipse: s-maj=119.8km s-min=51.7km az=131.0*

*AEIC **12** 11:13:29±1.6, 58°.84N±0°.03×154°.6W±0°.1, h125^{km}±5^{km}, ML3.5, ML3.7/76(NEIC), Error ellipse: s-maj=7.9km s-min=4.7km az=96.0*

ISC 12 11:13:28.5±0.9, **58°.86N**±0°.04×**154°.51W**±0°.04, **h134**^{km}±6^{km}, **n206**, σ**0^{s}.88**/204, **mb3.9**/3, **Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
Q19K	Cape Douglas,	0.45	81	P	Pn	11 13 47.7	-0.1
	baz=260						
Q19K				S	Sn	11 14 01.9	-0.6
	baz=260						
Q19K	Cape Douglas,	0.45	81		Pn	11 13 47.7	-0.1
Q19K	Cape Douglas,	0.45	81		Sn	11 14 01.9	-0.6
Q19K	Cape Douglas,	0.45	81	IAML		11 13 50.8	
	comp=N,554nm,0.8s						
KAKN	Katmai Knife C	0.64	207		Pn	11 13 48.7	-0.3
KAKN					Sn	11 14 03.5	-1.0
P18K	Big Mountain,	0.65	325	P	Pn	11 13 48.3	-0.6
	baz=147						
P18K				S	Sn	11 14 02.6	-1.9
	baz=147						
P18K	Big Mountain,	0.65	325		Pn	11 13 48.3	-0.6
P18K					Sn	11 14 02.6	-1.9
KABU	Katmai Buttres	0.72	215		Pn	11 13 49.4	-0.1
KABU					Sn	11 14 05.2	-0.3
AUCH	Augustine Cone	0.74	47		Pn	11 13 50.1	+0.4
AUCH					Sn	11 14 05.4	-0.4
AUQ	Augustine Qik’	0.75	48		Pn	11 13 49.9	+0.2
OPT	Oil Point	1.03	39	P	Pn	11 13 52.5	+0.5
	baz=220						
OPT	Oil Point	1.03	39		Pn	11 13 52.5	+0.5
P19K	Oil Pt	1.03	39	P	Pn	11 13 52.6	+0.6
	baz=220						
P19K				S	Sn	11 14 09.6	-0.4
	baz=220						
P19K	Oil Pt	1.03	39		Pn	11 13 52.6	+0.6
P19K					Sn	11 14 09.6	-0.4
P19K	Oil Pt	1.03	39	IAML		11 14 10.8	
	comp=E,2μm,0.7s						
P19K				IAML		11 14 11.0	
	comp=N,1μm,0.9s						
O18K	Koktuh Hills	1.06	341	P	Pn	11 13 51.9	-0.3
	baz=161						
O18K				S	Sn	11 14 09.1	-1.3
	baz=161						
O18K	Koktuh Hills	1.06	341		Pn	11 13 51.9	-0.3
O18K					Sn	11 14 09.1	-1.3
ILS	Iliamna Low So	1.32	33		Pn	11 13 55.3	+0.3
ILS					Sn	11 14 14.5	-0.8
ILSW	Iliamna Southw	1.32	31		Pn	11 13 55.2	+0.2
ILSW					Sn	11 14 14.6	-0.7
O19K	Port Alsworth	1.34	4	P	Pn	11 13 54.9	-0.1
	baz=185						
O19K	Port Alsworth	1.34	4		Pn	11 13 54.9	-0.1
O19K	Port Alsworth	1.34	4	IAML		11 14 00.9	
	comp=N,284nm,0.4s						
IVE	Iliamna Volcan	1.39	33		Pn	11 13 56.0	+0.3
IVE					Sn	11 14 16.3	-0.2
KDAK	Kodiak Island	1.49	136		Pn	11 13 56.2	-0.5
KDAK	Kodiak Island	1.49	136	IAML		11 14 18.7	
	comp=N,521nm,0.4s						
KDAK				IAML		11 14 19.5	
	comp=N,578nm,0.6s						
O20K	Slope Mountain	1.56	37	P	Pn	11 13 58.0	+0.5
	baz=219						
O20K				S	Sn	11 14 20.0	+0.3
	baz=219						
O20K	Slope Mountain	1.56	37		Pn	11 13 58.0	+0.5
O20K					Sn	11 14 20.0	+0.3
OHAK	Old Harbor	1.77	158	P	Pn	11 13 59.2	-0.6
	baz=338						
OHAK	Old Harbor	1.77	158		Pn	11 13 59.2	-0.6
OHAK	Old Harbor	1.77	158	IAML		11 14 22.6	
	comp=E,494nm,0.7s						
OHAK				IAML		11 14 23.1	
	comp=N,683nm,0.4s						
RED	Redoubt Volcan	1.79	29		Pn	11 14 00.6	+0.4
RED					Sn	11 14 24.5	-0.1
CNPM	China Poot	1.81	67		Pn	11 14 00.6	+0.2
CNPM	China Poot	1.81	67	IAML		11 14 25.0	
	comp=E,466nm,0.6s						
CNPM				IAML		11 14 25.4	
	comp=N,352nm,0.4s						
RSO	Redoubt South	1.83	28		Pn	11 14 01.4	+0.6
RDWB	Redoubt West	1.84	27		Pn	11 14 01.1	+0.3
RDWB					Sn	11 14 25.2	-0.4
NCT	North Crescent	1.88	24		Pn	11 14 01.7	+0.4
N19K	Bonanza Creek	1.96	0	P	Pn	11 14 02.7	+0.6
	baz=181						
N19K	Bonanza Creek	1.96	0		Pn	11 14 02.7	+0.6
DFR	Drift River	1.96	27		Pn	11 14 02.6	+0.3
BRLK	Bradley Lake	2.07	63		Pn	11 14 03.6	+0.2
BRLK	Bradley Lake	2.07	63	IAML		11 14 30.6	
	comp=E,319nm,0.1s						
BRLK				IAML		11 14 31.2	
	comp=N,373nm,0.1s						
BRSE	Bradley Lake S	2.12	64	P	Pn	11 14 04.3	+0.2
	baz=247						
BRSE	Bradley Lake S	2.12	64		Pn	11 14 04.3	+0.2
SVW2	Sparrevohn	2.31	347		Pn	11 14 06.6	+0.3
SII	Sitkinak Islan	2.32	176	P	Pn	11 14 06.0	-0.5
	baz=355						
SII				S	Sn	11 14 33.5	-2.3
	baz=355						
SII	Sitkinak Islan	2.32	176		Pn	11 14 06.0	-0.5
SII					Sn	11 14 33.5	-2.3
SII	Sitkinak Islan	2.32	176	IAML		11 14 44.5	
	comp=N,703nm,2.7s						
SII				IAML		11 14 47.9	
	comp=E,501nm,0.7s						
SPCR	Spurr Chakacha	2.61	25	P	Pn	11 14 10.7	+0.4
	baz=207						
SPCR	Spurr Chakacha	2.61	25		Pn	11 14 10.7	+0.4
SPU	Mount Spurr	2.63	27		Pn	11 14 10.8	+0.3
SPBG	Spurr Blockage	2.63	23		Pn	11 14 11.3	+0.8
SPCN	Chakachatna No	2.64	25		Pn	11 14 11.3	+0.7
SPCP	Crater Peak Br	2.69	25		Pn	11 14 12.0	+0.8
SLKM	Skilak Lake	2.73	51		Pn	11 14 11.8	+0.1
SPCG	Spurr Capps Gl	2.74	26		Pn	11 14 12.4	+0.5
SEW	Seward	2.86	62	P	Pn	11 14 14.1	+0.8
	baz=246						
SEW	Seward	2.86	62		Pn	11 14 14.1	+0.8
O22K	Cooper Landing	2.92	54	P	Pn	11 14 14.6	+0.5
	baz=238						
O22K	Cooper Landing	2.92	54		Pn	11 14 14.6	+0.5
STLK	Strandline Lak	2.96	26		Pn	11 14 15.8	+1.1
M19K	Big River Lodg	3.05	1	P	Pn	11 14 16.4	+0.6
	baz=182						
M19K	Big River Lodg	3.05	1		Pn	11 14 16.4	+0.6
SUA	Susitna One	3.22	34	P	Pn	11 14 18.3	+0.3
	baz=218						
SUA	Susitna One	3.22	34		Pn	11 14 18.4	+0.3
SUA	Susitna One	3.22	34	IAML		11 14 56.2	
	comp=E,187nm,0.7s						
SUA				IAML		11 14 57.8	
	comp=N,181nm,1.3s						
RC01	Rabbit Creek A	3.28	45	P	Pn	11 14 18.7	0.0
	baz=229						
RC01	Rabbit Creek A	3.28	45		Pn	11 14 18.7	0.0
RC01	Rabbit Creek A	3.28	45	IAML		11 14 57.6	
	comp=E,200nm,0.2s						
RC01				IAML		11 14 58.3	
	comp=N,161nm,0.2s						
CHGN	Chignik	3.32	221	P	Pn	11 14 19.6	+0.3
	baz=38						
CHGN	Chignik	3.32	221		Pn	11 14 19.6	+0.3
CHGN	Chignik	3.32	221	IAML		11 14 59.7	
	comp=N,211nm,0.1s						
L19K	White Mountain	3.33	357	P	Pn	11 14 20.2	+0.7
	baz=177						
L19K	White Mountain	3.33	357		Pn	11 14 20.2	+0.7
SKT	Skwentna	3.46	24	P	Pn	11 14 21.5	+0.4
	baz=207						
SKT	Skwentna	3.46	24		Pn	11 14 21.5	+0.4
M22K	Willow	3.63	35	P	Pn	11 14 23.4	+0.1
	baz=219						
M22K	Willow	3.63	35		Pn	11 14 23.4	+0.1
L20K	Farewell, AK	3.64	5	P	Pn	11 14 24.0	+0.5
	baz=186						
L20K	Farewell, AK	3.64	5		Pn	11 14 24.0	+0.5
VNHG	Veniaminof 1	3.65	225		Pn	11 14 25.0	+1.3
VNSG	Veniaminof 6	3.69	224		Pn	11 14 24.7	+0.5
PWL	Port Wells	3.70	55	P	Pn	11 14 23.9	-0.4
	baz=240						
PWL	Port Wells	3.70	55		Pn	11 14 23.9	-0.4
PMR	Palmer	3.83	42	P	Pn	11 14 24.8	-1.1
	baz=227						
PMR	Palmer	3.83	42		Pn	11 14 24.8	-1.1
PMR	Palmer	3.83	42	IAML		11 15 06.3	
	comp=E,58nm,3.6s						
PMR				IAML		11 16 45.4	
	comp=N,97nm,4.3s						
KNK	Knik Glacier	3.96	47	P	Pn	11 14 26.9	-0.8
	baz=232						
KNK	Knik Glacier	3.96	47		Pn	11 14 26.9	-0.8
KNK	Knik Glacier	3.96	47	IAML		11 15 14.0	
	comp=N,149nm,0.4s						
GHO	Glory Hole Cre	4.03	41		Pn	11 14 27.6	-1.0
GHO	Glory Hole Cre	4.03	41	IAML		11 15 15.1	
	comp=N,110nm,2.7s						
GHO				IAML		11 15 39.7	
	comp=E,87nm,3.1s						
CUT	Chulitna	4.12	29		Pn	11 14 30.2	+0.4
CUT				IAML		11 15 45.0	
	comp=E,122nm,2.9s						
CUT				IAML		11 15 50.4	
	comp=N,141nm,4.5s						
TT01	Tatalina	4.12	350		Pn	11 14 30.4	+0.6
TTA	Tatalina	4.15	350	P	Pn	11 14 30.6	+0.4
	baz=170						
TTA	Tatalina	4.15	350		Pn	11 14 30.6	+0.4
TTA	Tatalina	4.15	350	IAML		11 17 12.6	
	comp=N,61nm,4.2s						
PPLA	Purkeypile	4.20	15	P	Pn	11 14 32.1	+1.1
	baz=197						
PPLA	Purkeypile	4.20	15		Pn	11 14 32.1	+1.1
GLI	Glacier Island	4.25	58	P	Pn	11 14 30.5	-1.0
	baz=245						
GLI	Glacier Island	4.25	58		Pn	11 14 30.5	-1.0
SML	Sawmill	4.26	43	P	Pn	11 14 30.6	-1.1
	baz=229						
SML	Sawmill	4.26	43		Pn	11 14 30.6	-1.1
SML	Sawmill	4.26	43	IAML		11 15 26.0	
	comp=E,128nm,4.2s						
SML				IAML		11 15 38.7	
	comp=N,111nm,4.3s						
HIN	Hinchinbrook I	4.35	66		Pn	11 14 32.7	-0.1
FID	Port Fidalgo	4.47	62		Pn	11 14 33.4	-1.1
K20K	Telida	4.51	3	P	Pn	11 14 35.1	+0.1
	baz=183						
K20K	Telida	4.51	3		Pn	11 14 35.1	+0.1
K20K	Telida	4.51	3	IAML		11 16 21.2	
	comp=E,48nm,4.5s						
K20K				IAML		11 17 06.4	
	comp=N,36nm,4.3s						
SCM	Sheep Creek Mo	4.65	47	P	Pn	11 14 36.2	-0.6
	baz=233						
SCM	Sheep Creek Mo	4.65	47		Pn	11 14 36.2	-0.6
CAST	Castle Rocks	4.72	13		Pn	11 14 37.8	+0.1
CAST				IAML		11 16 12.6	
	comp=E,50nm,4.8s						
CAST				IAML		11 17 28.8	
	comp=N,43nm,4.5s						
WAT7	Susitna Watana	4.85	32		Pn	11 14 38.9	-0.7
WAT1	Susitna Watana	4.93	34	P	Pn	11 14 39.6	-0.9
	baz=219						
WAT1	Susitna Watana	4.93	34		Pn	11 14 39.6	-0.9
DIV	Divide	4.94	59	Pn	Pn	11 14 40.9	+0.1
WAT6	Susitna Watana	4.99	39	P	Pn	11 14 40.5	-1.0
	baz=225						
WAT6	Susitna Watana	4.99	39		Pn	11 14 40.5	-1.0
KTH	Kantishna Hill	5.01	19		Pn	11 14 41.5	-0.2
KTH	Kantishna Hill	5.01	19	IAML		11 16 00.2	
	comp=N,66nm,4.9s						
KTH				IAML		11 17 07.8	
	comp=E,54nm,5.0s						
KLU	Klutina	5.03	55	P	Pn	11 14 41.6	-0.4
	baz=242						
KLU	Klutina	5.03	55		Pn	11 14 41.6	-0.4
TRF	Thorofare Moun	5.04	22	P	Pn	11 14 41.6	-0.5
	baz=206						
TRF	Thorofare Moun	5.04	22		Pn	11 14 41.6	-0.5
TRF	Thorofare Moun	5.04	22	IAML		11 16 48.4	
	comp=N,70nm,4.3s						
CHUM	Lake Minchumin	5.15	11	P	Pn	11 14 44.2	+0.8
	baz=193						
CHUM	Lake Minchumin	5.15	11		Pn	11 14 44.1	+0.8
M24K	Tolsona, Glenn	5.25	48	P	Pn	11 14 45.0	+0.1
	baz=235						
M24K	Tolsona, Glenn	5.25	48		Pn	11 14 45.0	+0.1
RND	Reindeer	5.32	29		Pn	11 14 45.1	-0.7
RND	Reindeer	5.32	29	IAML		11 15 29.3	
	comp=N,54nm,4.9s						
RND				IAML		11 17 01.9	
	comp=E,49nm,4.7s						
J20K	Nowinta River	5.34	2	P	Pn	11 14 45.4	-0.5
	baz=182						
J20K	Nowinta River	5.34	2		Pn	11 14 45.4	-0.5
J20K	Nowinta River	5.34	2	IAML		11 15 40.9	
	comp=E,40nm,4.9s						
J20K				IAML		11 16 29.1	
	comp=N,36nm,3.6s						
BMRM	Bremner River	5.41	63	P	Pn	11 14 46.9	-0.2
	baz=251						
BMRM	Bremner River	5.41	63		Pn	11 14 46.9	-0.2
DHY	Denali Highway	5.47	36	P	Pn	11 14 46.9	-1.0
	baz=223						
DHY	Denali Highway	5.47	36		Pn	11 14 46.9	-1.0
BPAW	Bear Paw Mtn.	5.52	16	P	Pn	11 14 48.3	-0.1
	baz=200						
BPAW	Bear Paw Mtn.	5.52	16		Pn	11 14 48.3	-0.1
MCK	McKinley	5.57	26	P	Pn	11 14 48.4	-0.7
	baz=211						
MCK	McKinley	5.57	26		Pn	11 14 48.4	-0.7
N25K	Chitina, Valde	5.65	57	P	Pn	11 14 50.2	-0.1
	baz=245						
N25K	Chitina, Valde	5.65	57		Pn	11 14 50.1	-0.1
HARP	HAARP	5.81	48	P	Pn	11 14 52.1	-0.2
	baz=236						
HARP	HAARP	5.81	48		Pn	11 14 52.1	-0.2
BWN	Browne	5.85	22		Pn	11 14 52.5	-0.3
GLB	Gilahina Butte	5.94	60		Pn	11 14 54.2	+0.1
VRDI	Verde Repeater	6.03	62	Pn	Pn	11 14 55.7	+0.4
PAX	Paxson	6.03	43	P	Pn	11 14 54.8	-0.5
	baz=231						
PAX	Paxson	6.03	43		Pn	11 14 54.9	-0.5
TGL	Tana Glacier	6.19	67		Pn	11 14 57.8	+0.3
NEA2	Nenana	6.30	22	P	Pn	11 14 57.6	-1.3
	baz=207						
NEA2	Nenana	6.30	22		Pn	11 14 57.6	-1.3
FALS	False Pass	6.32	234	P	Pn	11 14 59.5	+0.3
	baz=47						
FALS	False Pass	6.32	234		Pn	11 14 59.5	+0.3
WRH	Wood River Hil	6.40	26		Pn	11 14 58.8	-1.4
MLY	Manley	6.44	14	P	Pn	11 14 59.9	-0.9
	baz=198						
MLY	Manley	6.44	14		Pn	11 14 59.9	-0.9
I21K	Tanana	6.45	10	P	Pn	11 15 01.0	+0.1
	baz=192						
I21K	Tanana	6.45	10		Pn	11 15 01.0	+0.1
KIAG	Kiagna River	6.45	66		Pn	11 15 01.6	+0.5
PTPK	Patty Peak	6.47	64		Pn	11 15 02.1	+0.7
BALM	Baldy	6.49	65		Pn	11 15 01.9	+0.4
HDA	Harding Lake	6.62	30	P	Pn	11 15 02.0	-1.2
	baz=216						
HDA	Harding Lake	6.62	30		Pn	11 15 02.0	-1.2
YAH	Yahtse	6.65	71		Pn	11 15 04.7	+0.9
MENT	Mentasta	6.66	48		Pn	11 15 03.9	+0.2
SSLS	Shishaldin Sou	6.67	235		Pn	11 15 04.8	+0.9
M26K	Nabesna, AK	6.68	53	P	Pn	11 15 04.8	+0.8
	baz=243						
M26K	Nabesna, AK	6.68	53		Pn	11 15 04.8	+0.8
I23K	Minto, Yukon-K	6.75	19	P	Pn	11 15 03.9	-1.0
	baz=204						
I23K	Minto, Yukon-K	6.75	19		Pn	11 15 03.9	-1.0
PS08	TAPS Pump Stn8	6.77	29		Pn	11 15 04.1	-1.0
MDM	Murphy Dome	6.79	23		Pn	11 15 04.1	-1.4
TCOL	CIGO, UAF Yank	6.80	25		Pn	11 15 04.6	-0.9
COLA	College	6.80	25		Pn	11 15 04.2	-1.3
H21K	Melozitna Rive	6.87	6	P	Pn	11 15 06.8	+0.4
	baz=188						
H21K	Melozitna Rive	6.87	6		Pn	11 15 06.8	+0.4
IL31		6.94	28		Pn	11 15 05.9	-1.4
ILAR	Eielson Array	6.94	28	P	Pn	11 15 06.0	-1.4
	comp=N,2.5nm,0.3s,baz=213,slow=13,SNR=88						
ILAR				S	Sn	11 16 19.7	-5.1
	comp=N,1.3nm,0.3s,baz=220,slow=22,SNR=5.4						
ILAR	Eielson Array	6.94	28		Pn	11 15 05.7	-1.7
CTGM	Chitina Glacie	6.95	67	Pn	Pn	11 15 09.6	+1.8
DOT	Dot Lake	6.95	42		Pn	11 15 08.0	+0.3
TABL	Table Mountain	6.96	71		Pn	11 15 09.0	+1.1
IM03		7.16	2		Pn	11 15 10.8	+0.5
SCRK	Sand Creek	7.19	40	P	Pn	11 15 09.4	-1.6
	baz=229						
SCRK	Sand Creek	7.19	40		Pn	11 15 09.4	-1.6
J25K	Salcha River,	7.21	33	P	Pn	11 15 09.8	-1.3
	baz=221						
J25K	Salcha River,	7.21	33		Pn	11 15 09.8	-1.3
H23K	Yukon River	7.36	16	P	Pn	11 15 12.0	-1.0
	baz=201						
H23K	Yukon River	7.36	16		Pn	11 15 12.0	-1.0
L27K	Beaver Creek,	7.46	50	P	Pn	11 15 15.1	+0.6
	baz=241						
L27K	Beaver Creek,	7.46	50		Pn	11 15 15.1	+0.6
BC03		7.48	50		Pn	11 15 15.5	+0.8
H24K	Noodor Dome	7.64	21	P	Pn	11 15 15.8	-1.1
	baz=207						
H24K	Noodor Dome	7.64	21		Pn	11 15 15.8	-1.1
J26L	Joseph Creek	7.68	38	P	Pn	11 15 16.6	-0.9
	baz=228						
J26L	Joseph Creek	7.68	38		Pn	11 15 16.6	-0.9
PRP	Porcupine Dome	7.88	28	P	Pn	11 15 18.7	-1.5
	baz=216						
PRP	Porcupine Dome	7.88	28		Pn	11 15 18.7	-1.5
UNV	Unalaska Valle	8.34	238	P	Pn	11 15 25.7	-0.6
	baz=48						
UNV	Unalaska Valle	8.34	238		Pn	11 15 25.7	-0.6
PETK	Petropavlovsk-	26.86	279	P	P	11 18 57.0	+0.9
	comp=N,1.7nm,0.8s,baz=79,slow=15,SNR=1.7						
ANMO	Albuquerque	39.42	106	LR	LR	11 35 26.7	
	comp=N,22nm,18.4s,baz=24,slow=33						
KLR	Kul'dur	42.22	291	P	P	11 21 08.8	+1.0
	comp=N,1.8nm,0.6s,baz=63,slow=9.2,SNR=6.6						
SONM	Songino Array	54.83	306	P	P	11 22 45.9	+1.6
	comp=N,1.1nm,0.7s,baz=50,slow=5.6,SNR=5.0						

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*TUL **12** 11:14:00±0.7, 36°.87N±0°.01×98°.33W±0°.02, h5^{km}±6^{km}, ML2.5, mb_Lg2.4/22(NEIC), Error ellipse: s-maj=2.5km s-min=1.4km az=86.0*

NEIC 12 11:14:00.7±0.9, **36°.87N**±0°.01×**98°.30W**±0°.02, **h8**^{km}±6^{km}, **Error ellipse: s-maj=2.8km s-min=1.3km az=130.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK032	Salt Plains WL	0.10	135	Pg	Pg	11 14 02.9	-0.2
OK032				Sg	Sg	11 14 04.5	-0.2

KAN14	**Manchester OK**	**0.28**	**73**		Pg	11 14 06.4	+0.1
KAN10	**Anthony SW Sta**	**0.30**	**33**	Pg	Pg	11 14 06.4	-0.2
GC02	**Grant County #**	**0.35**	**93**	Pg	Pg	11 14 07.5	-0.1
KAN16	**Harper SW Stat**	**0.40**	**28**	Pg	Pg	11 14 07.7	-0.8
KAN16				Sg	Sg	11 14 14.2	+0.4
KAN05	**Bluff City Nor**	**0.41**	**55**	Pg	Pg	11 14 08.7	-0.1
KAN05				Sg	Sg	11 14 14.8	+0.5
KAN08	**Anthony NE Sta**	**0.44**	**36**		Pg	11 14 08.6	-0.6
KAN08				Sg	Sg	11 14 15.5	+0.5
CROK	**Carrier**	**0.45**	**145**	Pg	Pg	11 14 09.0	-0.3
CROK				Sg	Sg	11 14 15.5	+0.3
KAN17	**Caldwell West**	**0.46**	**68**	Pg	Pg	11 14 09.5	-0.1
KAN17				Sg	Sg	11 14 16.6	+1.0
KAN12	**Harper NE Stat**	**0.49**	**29**		Pg	11 14 10.0	-0.1
KAN12				Sg	Sg	11 14 17.1	+0.5
KAN06	**Argonia West S**	**0.51**	**43**		Pg	11 14 10.6	0.0
KAN06				Sg	Sg	11 14 17.7	+0.3
KAN01	**Argonia South**	**0.51**	**57**	Pg	Pg	11 14 10.6	0.0
KAN09	**Caldwell North**	**0.60**	**64**	Pg	Pg	11 14 12.2	-0.2
KAN13	**South Haven SW**	**0.67**	**78**	Pg	Pg	11 14 13.3	-0.3
KS20	**Mayfield South**	**0.69**	**59**	Pg	Pg	11 14 13.8	-0.2
U32A	**Winter Ranch,**	**0.75**	**229**	Pg	Pg	11 14 14.8	-0.3
BLOK	**Blackwell**	**0.88**	**97**	Pg	Pg	11 14 17.2	-0.3
BCOK	**Bluff Creek, N**	**1.33**	**155**		Pn	11 14 24.6	-1.0
BCOK				Sn	Sb	11 14 42.9	-0.3
T35A	**Sooner Cattle**	**1.43**	**88**	Pn	Pn	11 14 26.9	-0.1
QUOK	**Quay**	**1.46**	**118**	Pn	Pn	11 14 27.4	+0.1
QUOK				Sn	Sb	11 14 47.0	+0.2
OK031	**S. Brethren Rd**	**1.49**	**128**		Pn	11 14 27.6	-0.2
OK031				Sn	Sg	11 14 48.4	-0.3
OK030	**Cody Creek RV**	**1.54**	**127**		Pn	11 14 28.5	0.0
R32A	**Long Quarter,**	**1.58**	**348**		Pn	11 14 28.8	-0.2
OKCFA	**Oklahoma City**	**1.61**	**155**	Pn	Pn	11 14 29.5	+0.1
FNO	**Franklin**	**1.77**	**155**	Pn	Pn	11 14 32.0	+0.4
FNO				IAmb_Lg		11 15 00.1	
	comp=Z,23nm,0.9s						
WMOK	**Wichita Mounta**	**2.17**	**191**		Pn	11 14 36.7	-0.3
WMOK				IAmb_Lg		11 15 13.7	
	comp=Z,13nm,1.1s						
TUL1	**Leonard**	**2.24**	**115**	Pn	Pn	11 14 39.3	+1.3
TUL1				IAmb_Lg		11 15 15.1	
	comp=Z,30nm,1.1s						
CBKS	**Cedar Bluff**	**2.25**	**330**	Pn	Pn	11 14 38.8	+0.6
X34A	**Smith Ranch, M**	**2.30**	**170**	Pn	Pn	11 14 40.5	+1.6
X37A	**Clayton**	**3.29**	**133**	Pn	Pn	11 14 53.4	+0.8
X37A				IAmb_Lg		11 15 53.4	
	comp=Z,8.6nm,0.8s						
AMTX	**Amarillo**	**3.39**	**235**	IAmb_Lg		11 15 52.2	
	comp=Z,11nm,1.2s						
HHAR	**Hobbs**	**3.56**	**98**	Pn	Pn	11 14 56.5	+0.3
KSCO	**Kaye Shedlock'**	**4.03**	**303**	IAmb_Lg		11 16 16.3	
	comp=Z,9.5nm,0.9s						
U40A	**Yellville**	**4.41**	**95**	IAmb_Lg		11 16 22.6	
	comp=Z,9.1nm,0.8s						
MIAR	**Mount Ida**	**4.49**	**120**	IAmb_Lg		11 16 27.9	
	comp=Z,7.2nm,1.0s						
BGNE	**Belgrade**	**4.53**	**1**	IAmb_Lg		11 16 28.3	
	comp=Z,17nm,0.7s						
P38A	**Dawn**	**4.65**	**52**	IAmb_Lg		11 16 38.0	
	comp=Z,6.8nm,1.1s						
MGMO	**Mountain Grove**	**4.83**	**85**	IAmb_Lg		11 16 44.1	
	comp=Z,5.5nm,0.8s						
PBMO	**Poplar Bluff**	**6.31**	**89**	IAmb_Lg		11 17 30.5	
	comp=Z,4.4nm,0.8s						

IDC ***12*** *11:14:23.3±0.9, 22°.03N×121°.17E, h0^{km}, mb3.9/10, mb1 4.0/12, mb1mx3.7/58, mbtmp3.9/12, ML3.7/2, MS3.0/6, Ms1 3.0/6, ms1mx2.7/45, Error ellipse: s-maj=29.7km s-min=17.1km az=68.0*

NEIC ***12*** *11:14:24.8±1.3, 22°.16N±0°.02×121°.24E±0°.08, h10^{km}±1^{km}, mb4.0/6, ML4.5(TAP), Error ellipse: s-maj=11.8km s-min=4.1km az=270.0*

TAP ***12*** *11:14:27.1, 22°.26N×121°.19E, h18^{km}, ML4.3, C*

NIED ***12*** *11:14:29.0, 22°.57N×121°.44E, h1^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.04; $M_{\theta\theta}$0.31; $M_{\phi\phi}$-0.34; $M_{r\theta}$0.82; $M_{\theta\phi}$-0.93; $M_{\phi r}$0.07; Fault plane solution: $M_0$1.29000×10^{15} NP1:ϕ_s80.00000°, δ88.00000°, λ140.00000°. NP2:ϕ_s172.00000°, δ50.00000°, λ3.00000°.*

JMA ***12*** *11:14:28.9±0.3, 22°.57N×121°.44E, h1^{km}±2^{km}, M4.1*

ISC 12 11:14:26.4±0.9, **22°.27N**±0°.02×**121°.24E**±0°.02, **h17**^{km}±6^{km}, **n175**, σ**0^{s}.96**/240, **mb3.8**/12, **MS2.7**/5, **8C-13D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAW	**Tawu**	**0.33**	**286**	⇓*i*P	**Pb**	**11 14 33.7**	**-0.2**
	baz=290						
TAW				*i* S	**Sg**	**11 14 38.4**	**+0.2**
	baz=290						
LAY	**Lan-yu**	**0.37**	**129**	⇓*i*P	**Pb**	**11 14 35.3**	**+0.8**
	baz=114						
LAY				*e*S	**Sb**	**11 14 40.4**	**+0.5**
	baz=114						
EAST	**Anshuo**	**0.38**	**287**	⇓*i*P	**Pb**	**11 14 34.5**	**-0.3**
	baz=292						
EAST				*i* S	**Sg**	**11 14 39.6**	**0.0**
	baz=292						
SLIU	**Shizi**	**0.41**	**263**	⇑*i*P	**Pg**	**11 14 34.8**	**0.0**
	baz=263						
SLIU				*e*S	**Sg**	**11 14 40.0**	**-0.6**
	baz=263						
ECL	**Taimali**	**0.42**	**321**	⇓*i*P	**Pb**	**11 14 35.3**	**-0.1**
	baz=318						
ECL				*e*S	**Sg**	**11 14 41.2**	**+0.4**
	baz=318						
LDUT	**Ludao**	**0.45**	**27**	⇑*i*P	**Pn**	**11 14 37.1**	**-1.0**
	baz=34						
LDUT				S	**Sn**	**11 14 44.4**	**-1.5**
	baz=34						
TSEB	**Hengchuen, Pin**	**0.48**	**221**	⇑*i*P	**Pb**	**11 14 36.6**	**+0.2**
	baz=230						
TSEB				S	**Sb**	**11 14 43.6**	**+0.3**
	baz=230						
TTN	**Taitung**	**0.49**	**350**	P	**Pn**	**11 14 38.0**	**-0.6**
	baz=357						
TTN				S	**Sn**	**11 14 47.2**	**+0.4**
	baz=357						
TWKBT	**Hengchun**	**0.52**	**231**	⇑*i*P	**Pg**	**11 14 36.6**	**-0.1**
	baz=227						
TWKBT				S	**Sg**	**11 14 43.5**	**-0.1**
	baz=227						
TWK1	**Hengchun**	**0.52**	**232**	⇑*i*P	**Pg**	**11 14 36.6**	**-0.2**
	baz=227						
TWK1				S	**Sg**	**11 14 43.5**	**-0.3**
	baz=227						
HEN	**Hengchun**	**0.54**	**241**	⇑*i*P	**Pg**	**11 14 37.1**	**+0.1**
	baz=228						
HEN				*i* S	**Sg**	**11 14 44.4**	**+0.1**
	baz=228						
SNW	**Nanwan**	**0.55**	**236**	P	**Pb**	**11 14 37.5**	**0.0**
	baz=225						
SNW				*e*S	**Sb**	**11 14 45.5**	**+0.2**
	baz=225						
TWGBT	**Beinan**	**0.57**	**345**	⇓*i*P	**Pb**	**11 14 37.8**	**-0.1**
	baz=350						
TWGBT				S	**Sb**	**11 14 45.9**	**+0.1**
	baz=350						
TWG	**Pinlang**	**0.57**	**344**	⇓*i*P	**Pg**	**11 14 37.8**	**0.0**
	baz=350						
TWG				*e*S	**Sg**	**11 14 45.5**	**0.0**
	baz=350						
TWG	**Pinlang**	**0.57**	**344**	Pg	**Pg**	**11 14 37.8**	**0.0**
SCZT	**Fangliau**	**0.59**	**280**	⇓*i*P	**Pg**	**11 14 37.7**	**-0.3**
	baz=290						
SCZT				*e*S	**Sg**	**11 14 44.5**	**-1.3**
	baz=290						
LONT	**Longtian**	**0.64**	**351**	⇓*e*P	**Pg**	**11 14 39.1**	**0.0**
	baz=342						
LONT				*e*S	**Sg**	**11 14 47.7**	**+0.1**
	baz=342						
MASBT	**Mashibuluo**	**0.66**	**301**	⇓*i*P	**Pg**	**11 14 39.1**	**-0.3**
	baz=305						
SSPT	**Xinbi**	**0.66**	**289**	⇓*i*P	**Pb**	**11 14 39.7**	**+0.2**
	baz=300						
EDH	**Donghe**	**0.70**	**5**	⇑P	**Pb**	**11 14 40.6**	**+0.4**
	baz=354						
EDH				S	**Sb**	**11 14 50.2**	**+0.6**
	baz=354						
TSMG	**Majia**	**0.70**	**308**	⇓P	**Pg**	**11 14 39.7**	**-0.5**
	baz=318						
TSMG				*e*S	**Sg**	**11 14 49.3**	**-0.3**
	baz=318						
SSD	**Sandimen**	**0.74**	**310**	P	**Pb**	**11 14 40.2**	**-0.6**
	baz=320						
SSD				*e*S	**Sb**	**11 14 50.7**	**0.0**
	baz=320						
TSPT	**Pingtung City**	**0.80**	**301**	*e*P	**Pn**	**11 14 43.6**	**+0.7**
	baz=310						
WLCH	**Liuqiu**	**0.81**	**276**	⇓*e*P	**Pn**	**11 14 44.3**	**+1.4**
	baz=278						
TWP	**Hsiaoliuchiu**	**0.82**	**276**	*e*P	**Pn**	**11 14 43.4**	**+0.3**
	baz=278						
ECS	**Chishang**	**0.82**	**358**	P	**Pg**	**11 14 42.5**	**0.0**
	baz=349						
ECS				*e*S	**Sb**	**11 14 53.1**	**0.0**
	baz=349						
SGLT	**Jiouru**	**0.83**	**303**	*e*P	**Pg**	**11 14 42.5**	**0.0**
	baz=313						
CHKT	**Chengkung**	**0.83**	**8**	⇑P	**Pb**	**11 14 42.4**	**-0.1**
	baz=358						
CHKT				*e*S	**Sg**	**11 14 53.8**	**+0.1**
	baz=358						
SLGT	**Liugui**	**0.91**	**323**	*e*P	**Pb**	**11 14 43.6**	**-0.1**
	baz=332						
KAU	**Kaohsiung**	**0.92**	**289**	*e*P	**Pn**	**11 14 45.1**	**+0.6**
	baz=292						
SCST	**Cishan**	**0.93**	**312**	*e*P	**Pg**	**11 14 44.4**	**0.0**
	baz=319						
FULB	**Fuli**	**0.93**	**3**	*e*P	**Pb**	**11 14 43.7**	**-0.3**
	baz=353						
FULB				*e*S	**Sb**	**11 14 56.1**	**0.0**
	baz=353						
TWM1	**Shoushan**	**0.94**	**306**	*e*P	**Pn**	**11 14 45.4**	**+0.6**
	baz=315						
ELDTW	**Lidau**	**0.94**	**347**	*e*P	**Pb**	**11 14 43.2**	**-1.1**
	baz=5.0						
STYH	**Taoyuan**	**1.00**	**334**	*e*P	**Pb**	**11 14 45.0**	**-0.2**
	baz=347						
SGST	**Jiashian**	**1.01**	**323**	P	**Pb**	**11 14 45.2**	**-0.3**
	baz=328						
SGST				*e*S	**Sn**	**11 15 01.1**	**+1.3**
	baz=328						
EYUL	**Yuli**	**1.08**	**4**	*e*P	**Pb**	**11 14 45.6**	**-0.9**
	baz=357						
YULB	**Yu-li**	**1.12**	**3**	*e*P	**Pb**	**11 14 45.4**	**-2.0**
	baz=6.0						
YULB				*e*S	**Sb**	**11 14 58.6**	**-3.0**
	baz=6.0						
YULB	**Yu-li**	**1.12**	**3**	Pn	**Pb**	**11 14 45.7**	**-1.7**
CHN1	**Nanshi**	**1.13**	**324**	P	**Pg**	**11 14 48.6**	**+0.5**
	baz=327						
CHN1				*e*S	**Sg**	**11 15 04.9**	**+1.9**
	baz=327						
WTP	**Ta-pu**	**1.13**	**329**	*e*P	**Pg**	**11 14 48.3**	**0.0**
	baz=341						
WTP				*e*S	**Sg**	**11 15 04.5**	**+1.4**
	baz=341						
CHN3	**Shinhua**	**1.14**	**315**	*e*P	**Pg**	**11 14 49.6**	**+1.2**
	baz=317						
CHN3				*e*S	**Sg**	**11 15 04.6**	**+1.2**
	baz=317						
SNST	**Tainan City**	**1.17**	**324**	*e*P	**Pg**	**11 14 49.3**	**+0.3**
	baz=327						
SNST				*e*S	**Sg**	**11 15 06.5**	**+2.2**
	baz=327						
TPUB	**Ta-pu**	**1.17**	**331**	⇓*i*P	**Pg**	**11 14 48.9**	**-0.1**
	baz=346						
TPUB				*e*S	**Sg**	**11 15 04.9**	**+0.5**
	baz=346						
TPUB	**Ta-pu**	**1.17**	**331**	Pn	**Pg**	**11 14 48.6**	**-0.4**
TPUB	**Ta-pu**	**1.17**	**331**	P	**Pg**	**11 14 49.1**	**0.0**
TWK	**Hsinying**	**1.21**	**325**	P	**Pg**	**11 14 49.8**	**-0.1**
	baz=328						
TWK				*e*S	**Sg**	**11 15 06.7**	**+0.9**
	baz=328						
HGSD	**Ruisui**	**1.23**	**8**	*e*P	**Pn**	**11 14 48.1**	**-0.7**
	baz=12						
EHY	**Hungye**	**1.23**	**3**	*e*P	**Pn**	**11 14 47.3**	**-1.6**
	baz=355						
EHY				*e*S	**Sb**	**11 15 02.5**	**-2.4**
	baz=355						
SSHA	**Shanhua**	**1.23**	**315**	*e*P	**Pg**	**11 14 50.7**	**+0.5**
	baz=317						
YUS	**Yu-Shan**	**1.25**	**348**	P	**Pn**	**11 14 49.5**	**0.0**
	baz=358						
YUS				*e*S	**Sb**	**11 15 04.5**	**-1.2**
	baz=358						
ALS	**Alishan**	**1.30**	**342**	*e*P	**Pb**	**11 14 50.4**	**-0.2**
	baz=355						
ALS				*e*S	**Sn**	**11 15 07.9**	**+0.6**
	baz=355						
SCLT	**Jiali**	**1.32**	**313**	*e*P	**Pg**	**11 14 51.8**	**-0.1**
	baz=314						
SCLT				*e*S	**Sg**	**11 15 09.1**	**-0.1**
	baz=314						
EGFH	**Guangfu**	**1.40**	**7**	*e*P	**Pb**	**11 14 52.0**	**-0.2**
	baz=1.0						
ICHU	**Yijhu**	**1.41**	**321**	*e*P	**Pb**	**11 14 52.1**	**0.0**
	baz=322						
ICHU				*e*S	**Sg**	**11 15 11.6**	**-0.2**
	baz=322						
CHN5	**Tsauling**	**1.42**	**339**	*e*P	**Pg**	**11 14 53.3**	**-0.5**
	baz=351						
CHN5				*e*S	**Sg**	**11 15 13.2**	**+0.9**
	baz=351						
CHN8	**Yiju**	**1.43**	**319**	P	**Pb**	**11 14 52.5**	**-0.2**
	baz=320						
CHN8				*e*S	**Sb**	**11 15 11.5**	**+0.8**
	baz=320						
CHY	**Chiayi**	**1.44**	**328**	*e*P	**Pb**	**11 14 53.0**	**+0.2**
	baz=329						
CHY				*e*S	**Sb**	**11 15 11.3**	**+0.5**
	baz=329						
CHN2	**Minshiung**	**1.44**	**331**	*e*P	**Pb**	**11 14 53.3**	**+0.5**
	baz=333						
CHN2				*e*S	**Sg**	**11 15 13.1**	**0.0**
	baz=333						
WHYT	**Xinyi Township**	**1.47**	**346**	*e*P	**Pb**	**11 14 52.8**	**-0.4**
	baz=356						
WHYT				*e*S	**Sg**	**11 15 13.9**	**+0.2**
	baz=356						
VWDT	**VWDT**	**1.48**	**356**	*e*P	**Pn**	**11 14 52.2**	**0.0**
	baz=9.0						
SSLB	**Suanglung**	**1.54**	**350**	*e*P	**Pb**	**11 14 54.0**	**-0.4**
	baz=1.0						
SSLB				*e*S	**Sn**	**11 15 12.9**	**+0.2**
	baz=1.0						
SSLB	**Suanglung**	**1.54**	**350**		**Pb**	**11 14 54.0**	**-0.4**
SSLB	**Suanglung**	**1.54**	**350**	P	**Pb**	**11 14 54.1**	**-0.3**
ESL	**Shilin**	**1.55**	**6**	*e*P	**Pn**	**11 14 53.3**	**+0.1**
	baz=11						
WDLH	**Douliu**	**1.56**	**335**	*e*P	**Pb**	**11 14 55.2**	**+0.5**
	baz=337						
WDLH				*e*S	**Sg**	**11 15 17.2**	**+0.6**
	baz=337						
WTK	**Tuku**	**1.62**	**331**	*e*P	**Pb**	**11 14 55.1**	**-0.7**
	baz=332						
WTK				*e*S	**Sb**	**11 15 16.6**	**+0.6**
	baz=332						
WJS	**Zhushan**	**1.62**	**343**	*e*P	**Pb**	**11 14 56.4**	**+0.6**
	baz=345						
WJS				*e*S	**Sb**	**11 15 16.8**	**+0.9**
	baz=345						
SMLT	**Sun Moon Lake**	**1.64**	**349**	*e*P	**Pb**	**11 14 56.1**	**-0.1**
	baz=3.0						
SMLT				*e*S	**Sb**	**11 15 16.6**	**-0.1**
	baz=3.0						
WSF	**Szhu**	**1.66**	**326**	*e*P	**Pn**	**11 14 55.0**	**+0.3**
	baz=326						
WSF				*e*S	**Sb**	**11 15 16.8**	**-0.3**
	baz=326						
TYC	**Yuchr**	**1.67**	**348**	*e*P	**Pb**	**11 14 56.9**	**+0.3**
	baz=1.0						
TYC				*e*S	**Sb**	**11 15 18.3**	**+0.9**
	baz=1.0						
OWD	**Renai**	**1.68**	**358**	*e*P	**Pn**	**11 14 54.7**	**-0.4**
	baz=12						
WNT	**Mingjian**	**1.68**	**342**	*e*P	**Pb**	**11 14 57.0**	**+0.1**
	baz=345						
WNT				*e*S	**Sb**	**11 15 17.4**	**-0.5**
	baz=345						
CHGB	**Renai**	**1.79**	**358**	*e*P	**Pn**	**11 14 56.9**	**+0.2**
	baz=9.0						
CHGB				*e*S	**Sn**	**11 15 19.5**	**+0.4**
	baz=9.0						
WCS	**Beigang Elemen**	**1.81**	**350**	*e*P	**Pb**	**11 14 58.6**	**-0.4**
	baz=352						
WCS				*e*S	**Sb**	**11 15 22.3**	**+0.9**
	baz=352						
WRL	**Guolierlin Hig**	**1.81**	**334**	*e*P	**Pn**	**11 14 57.6**	**+0.8**
	baz=334						
WRL				*e*S	**Sb**	**11 15 20.7**	**-0.8**
	baz=334						
TWD	**Chiawan**	**1.83**	**10**	*e*P	**Pn**	**11 14 56.1**	**-1.0**
	baz=13						
WHF	**Hehuan Shan**	**1.87**	**1**	*e*P	**Pn**	**11 14 57.7**	**-0.3**
	baz=14						
WHF				*e*S	**Sn**	**11 15 20.1**	**-1.3**
	baz=14						
WCHH	**Zhanghua**	**1.91**	**341**	*e*P	**Pb**	**11 14 60.0**	**-0.8**
	baz=326						
WCHH				*e*S	**Sn**	**11 15 22.9**	**+1.0**
	baz=326						
ETL	**Fush Village**	**1.91**	**10**	*e*P	**Pn**	**11 14 59.0**	**+0.7**
	baz=14						
VCHM	**Qimei**	**1.92**	**300**	*e*P	**Pn**	**11 14 57.0**	**-1.3**
	baz=300						
VCHM				*e*S	**Sn**	**11 15 19.7**	**-2.3**
	baz=300						
NACB	**Ninganchiao**	**1.92**	**10**	*e*P	**Pn**	**11 14 57.1**	**-1.2**
	baz=11						
NACB				*e*S	**Sn**	**11 15 21.3**	**-0.9**
	baz=11						
NACB	**Ninganchiao**	**1.92**	**10**	Pn	**Pn**	**11 14 57.1**	**-1.2**
ETLH	**Xiulin Townshi**	**1.94**	**6**	*e*P	**Pn**	**11 14 57.8**	**-0.9**
	baz=8.0						
ETLH				*e*S	**Sn**	**11 15 22.3**	**-0.5**
	baz=8.0						
TCU	**Taichung**	**1.94**	**345**	*e*P	**Pb**	**11 15 00.6**	**-0.7**
	baz=329						
TCU				*e*S	**Sb**	**11 15 25.6**	**+0.3**
	baz=329						
FUSS	**Fushou**	**1.97**	**0**	*e*P	**Pn**	**11 14 59.5**	**+0.3**
	baz=14						
PHUB	**P'eng-hu**	**1.98**	**309**	P	**Pn**	**11 14 58.4**	**-0.7**
	baz=298						
PHUB				*e*S	**Sn**	**11 15 21.6**	**-1.9**
	baz=298						
TDCB	**Techi**	**1.98**	**358**	*e*P	**Pn**	**11 14 60.0**	**+0.7**
	baz=10.0						
TDCB				*e*S	**Sn**	**11 15 24.2**	**+0.4**
	baz=10.0						
WHP	**Taichung City**	**2.02**	**352**	*e*P	**Pb**	**11 15 02.3**	**-0.4**
WHP				*e*S	**Sb**	**11 15 27.4**	**-0.2**
PNG	**Penghu**	**2.02**	**310**	P	**Pn**	**11 14 59.2**	**-0.5**
	baz=298						
PNG				*e*S	**Sn**	**11 15 22.9**	**-1.7**
	baz=298						
TWQ1	**Liyutan**	**2.12**	**348**	*e*P	**Pb**	**11 15 03.8**	**-0.5**
	baz=349						
TWQ1				*e*S	**Sb**	**11 15 30.9**	**+0.6**
	baz=349						
WDJ	**Dajia District**	**2.14**	**345**	*e*P	**Pb**	**11 15 03.8**	**-1.0**
	baz=345						
WDJ				*e*S	**Sb**	**11 15 32.3**	**+1.2**
	baz=345						
NNSB	**Datong**	**2.15**	**3**	*e*P	**Pn**	**11 15 01.6**	**0.0**
	baz=16						
NNS	**Nan Shan**	**2.17**	**3**	*e*P	**Pn**	**11 15 03.1**	**+1.3**
	baz=15						
NSY	**Sanyi**	**2.18**	**348**	*e*P	**Pb**	**11 15 04.7**	**-0.8**
	baz=349						
NSY				*e*S	**Sb**	**11 15 33.3**	**+1.0**
	baz=349						
ENA	**Nanau**	**2.20**	**12**	*e*P	**Pn**	**11 15 01.9**	**-0.3**
	baz=14						
EWUT	**Wuta**	**2.22**	**13**	*e*P	**Pn**	**11 15 03.4**	**+0.9**
	baz=7.0						
NMLH	**Miaoli**	**2.30**	**350**	*e*P	**Pb**	**11 15 06.5**	**-0.8**
	baz=351						
NDT	**Datong Townshi**	**2.34**	**6**	*e*P	**Pn**	**11 15 04.7**	**+0.6**
	baz=17						
NSTT	**Nanjuang**	**2.36**	**355**	*e*P	**Pb**	**11 15 07.0**	**-1.5**
	baz=358						
LIOB	**Emei**	**2.38**	**355**	*e*P	**Pn**	**11 15 06.4**	**+1.8**
	baz=356						
LIOB				*e*S	**Sb**	**11 15 36.1**	**-1.7**
	baz=356						
ENTT	**Nioudou**	**2.38**	**7**	*e*P	**Pn**	**11 15 05.4**	**+0.7**
	baz=10.0						
YHNB	**Yeheng**	**2.39**	**3**	P	**Pn**	**11 15 06.2**	**+1.2**
	baz=15						
YHNB	**Yeheng**	**2.39**	**3**	Pn	**Pn**	**11 15 05.8**	**+0.9**
YHNB	**Yeheng**	**2.39**	**3**	P	**Pn**	**11 15 06.3**	**+1.4**
NDS	**Dongshan**	**2.39**	**10**	*e*P	**Pn**	**11 15 05.7**	**+0.8**
	baz=12						
NSK	**Sanguang**	**2.40**	**2**	*e*P	**Pn**	**11 15 06.0**	**+1.0**
	baz=347						
TWE	**Neicheng**	**2.47**	**9**	*e*P	**Pn**	**11 15 06.2**	**+0.3**
	baz=12						
NWLT	**Wulai**	**2.51**	**5**	*e*P	**Pn**	**11 15 07.1**	**+0.7**
	baz=16						
NWLT				*e*S	**Sn**	**11 15 35.6**	**-1.1**
	baz=16						
NTC	**Toucheng**	**2.63**	**12**	*e*P	**Pn**	**11 15 09.9**	**+1.8**
	baz=13						
EGS		**2.64**	**14**	*e*P	**Pn**	**11 15 10.5**	**+2.3**
	baz=8.0						
JYNG	**Yonagunijimaku**	**2.68**	**35**	P	**Pn**	**11 15 09.7**	**+1.0**
JYNG				*e*S	**Sn**	**11 15 41.1**	**+0.3**
NCUH	**Zhongli**	**2.69**	**359**	*e*P	**Pn**	**11 15 10.8**	**+2.0**
	baz=2.0						
NHDH	**Xindian Distri**	**2.69**	**5**	*e*P	**Pn**	**11 15 09.2**	**+0.2**
	baz=15						
TATO	**Taipei**	**2.70**	**5**		**Pn**	**11 15 10.4**	**+1.3**
TWA	**Mucha**	**2.72**	**7**	*e*P	**Pn**	**11 15 10.7**	**+1.4**
	baz=17						
TWA				*e*S	**Sn**	**11 15 42.2**	**+0.4**
	baz=17						
YOJ	**Yonaguni jima**	**2.72**	**36**	*e*P	**Pn**	**11 15 10.1**	**+0.7**
	baz=35						
YOJ	**Yonaguni jima**	**2.72**	**36**	P	**Pn**	**11 15 10.5**	**+1.2**
YOJ				*e*S	**Sn**	**11 15 42.4**	**+0.5**
YOJ	**Yonaguni jima**	**2.72**	**36**		**Pn**	**11 15 10.1**	**+0.7**
YOJ	**Yonaguni jima**	**2.72**	**36**	P	**Pn**	**11 15 10.7**	**+1.4**
TIPB	**Shuangxi**	**2.74**	**11**	*e*P	**Pn**	**11 15 10.8**	**+1.1**
	baz=11						
TIPB				*e*S	**Sn**	**11 15 43.0**	**+0.5**
	baz=11						
TWB1	**Santiao Chiao**	**2.81**	**14**	*e*P	**Pn**	**11 15 12.0**	**+1.5**
	baz=8.0						
NWF	**Wu-fen Shan**	**2.83**	**10**	*e*P	**Pn**	**11 15 12.7**	**+1.8**
	baz=12						
YM01	**YM01**	**2.88**	**6**	*e*P	**Pn**	**11 15 12.0**	**+0.5**
	baz=8.0						
HATJ	**Hateruma jima**	**2.95**	**52**	P	**Pn**	**11 15 13.2**	**+0.7**
HATJ				S	**Sn**	**11 15 46.9**	**-0.7**
IRIF	**Iriomote-Funau**	**3.08**	**48**	P	**Pn**	**11 15 15.3**	**+1.1**
IRIF				*e*S	**Sn**	**11 15 50.1**	**-0.5**
JKRS	**Kuro-shima**	**3.21**	**52**	P	**Pn**	**11 15 17.2**	**+1.1**
JKRS				*e*S	**Sn**	**11 15 53.7**	**-0.3**
KNM	**Kinmen**	**3.35**	**310**	*e*P	**Pn**	**11 15 18.7**	**+0.7**
	baz=310						
PTMZ	**Houxiangcun**	**3.38**	**325**	*e*P	**Pn**	**11 15 17.8**	**-0.5**
	baz=327						
JIJ	**Ishigaki jima**	**3.38**	**51**	P	**Pn**	**11 15 19.0**	**+0.5**
JIJ				*e*S	**Sn**	**11 15 56.9**	**-1.3**
KNMB	**Chin-men Tao**	**3.41**	**310**	*e*P	**Pn**	**11 15 17.8**	**-1.1**
	baz=312						
KNMB	**Chin-men Tao**	**3.41**	**310**	Pn	**Pn**	**11 15 18.6**	**-0.3**
ZPLA	**Ao Xicun**	**3.62**	**298**	*e*P	**Pn**	**11 15 20.8**	**-0.8**
	baz=299						
JISG	**Ishigakijimahi**	**3.64**	**50**	P	**Pn**	**11 15 22.3**	**+0.3**
JISG				*e*S	**Sn**	**11 16 04.1**	**-0.5**
JTJ	**Tarama**	**3.96**	**53**	P	**Pn**	**11 15 27.2**	**+0.9**
JTJ				*e*S	**Sn**	**11 16 11.6**	**-0.8**
AXDP	**Jialang**	**3.98**	**312**	*e*P	**Pn**	**11 15 26.4**	**-0.3**
	baz=313						
MATB	**Ma-tsu**	**4.04**	**343**	*e*P	**Pn**	**11 15 27.5**	**0.0**
	baz=345						
MHZQ	**Yeshan**	**4.32**	**333**	*e*P	**Pn**	**11 15 31.7**	**+0.5**
	baz=334						
JIRB	**Irabujima**	**4.42**	**54**	P	**Pn**	**11 15 33.4**	**+0.8**
JIRB				*e*S	**Sn**	**11 16 22.5**	**-1.2**
LYJJ	**Jianjiangzhen**	**4.47**	**343**	*e*P	**Pn**	**11 15 33.7**	**+0.3**
	baz=346						
JMJ2	**Miyako jima3**	**4.49**	**56**	P	**Pn**	**11 15 34.8**	**+1.2**
JMJ2				*e*S	**Sn**	**11 16 23.9**	**-1.5**
JMJ	**Miyako jima 2**	**4.50**	**55**	P	**Pn**	**11 15 35.4**	**+1.6**
JIKM	**Ikemajima**	**4.53**	**53**	P	**Pn**	**11 15 34.6**	**+0.5**
JOGS	**Gusukube**	**4.55**	**56**	P	**Pn**	**11 15 35.4**	**+0.8**
JOGS				*e*S	**Sn**	**11 16 26.8**	**-0.3**
XPSS	**Dashiqiu**	**4.74**	**349**	*e*P	**Pn**	**11 15 36.5**	**-0.5**
	baz=1.0						
JOW	**Kunigami**	**7.85**	**53**	Pn	**Pn**	**11 16 20.0**	**+0.2**
	3.0nm,0.3s,baz=153,slow=16,SNR=15						

JOW	Kunigami	7.85	53	P	Pn	11 16 20.3	+0.5
KSRS	Korea Array	16.20	19	Pn	Pn	11 18 14.0	+0.8
	0.1nm,0.3s,baz=139,slow=24,SNR=3.6						
KSRS				LR	LR	11 25 29.8	
	comp=Z,55nm,18.2s,baz=188,slow=41						
MAT	Matsushiro	20.47	42	P	Pn	11 19 06.2	+0.7
MJAR	Matsushiro Arr	20.47	42	P	Pn	11 19 06.5	+1.1
	7.3nm,1.1s,baz=225,slow=10,SNR=9.1						
CMAR	Chiang Mai Arr	21.24	264	LR	LR	11 28 31.1	
	comp=Z,22nm,20.4s,baz=110,slow=40						
GUMO	Guam	24.05	107	LR	LR	11 28 49.4	
	comp=Z,26nm,19.4s,baz=108,slow=36						
KAPI	Kappang	27.15	183	LR	LR	11 32 14.6	
	comp=Z,13nm,18.9s,baz=20,slow=40						
SONM	Songino Array	28.16	339	P	P	11 20 19.0	+1.1
	0.6nm,0.4s,baz=150,slow=10,SNR=4.1						
SONM				LR	LR	11 32 55.4	
	comp=Z,71nm,19.2s,baz=102,slow=39						
SONM	Songino Array	28.16	339	IAmb	IAmb	11 20 19.3	
	comp=Z,1.5nm,1.0s						
KLR	Kul'dur	28.17	15	LR	LR	11 30 59.6	
	comp=Z,34nm,20.5s,baz=153,slow=35						
MKAR	Makanchi Array	39.76	318	P	P	11 21 59.2	+0.9
	comp=Z,0.9nm,0.6s,baz=117,slow=10.0,SNR=9.4						
ZALV	Zalesovo Beam	41.89	328	P	P	11 22 16.0	+0.3
	comp=Z,0.8nm,0.4s,baz=124,slow=7.9,SNR=5.0						
H11N1	WAKE ISLAND Hy	42.58	85	T	T	12 07 51.7	
	baz=282,slow=74,SNR=56						
H11N2	WAKE ISLAND Hy	42.58	85	T	T	12 07 57.4	
	baz=282,slow=74,SNR=46						
H11N3	WAKE ISLAND Hy	42.59	85	T	T	12 07 58.5	
	baz=282,slow=74,SNR=59						
H11S3	WAKE ISLAND Hy	42.65	87	T	T	12 07 35.0	
	baz=289,slow=76,SNR=69						
H11S1	WAKE ISLAND Hy	42.66	86	T	T	12 07 54.9	
	SNR=88						
H11S2	WAKE ISLAND Hy	42.66	87	T	T	12 07 41.6	
	baz=279,slow=76,SNR=73						
KURBB	Kurchatov Arra	43.62	321	P	P	11 22 30.4	+0.7
	comp=Z,0.5nm,0.3s,baz=121,slow=7.5,SNR=4.6						
WB0	Warramunga Arr	43.71	162	P	P	11 22 27.2	-3.6
WB0				IAmb	IAmb	11 22 45.1	
	comp=Z,3.3nm,0.9s						
WRAB	Tennant Creek	43.85	162	P	P	11 22 29.2	-2.8
WRAB				IAmb	IAmb	11 22 35.3	
	comp=Z,3.6nm,1.2s						
WRA	Warramunga Arr	43.86	162	P	P	11 22 29.3	-2.7
	comp=Z,0.4nm,0.4s,baz=333,slow=10,SNR=15						
WRA	Warramunga Arr	43.86	162	IAmb	IAmb	11 22 33.4	
	comp=Z,0.2nm,1.2s						
WB2	Warramunga Arr	43.86	162	P	P	11 22 29.8	-2.2
WR0	Warramunga Arr	43.94	162	P	P	11 22 29.9	-2.6
WR0				IAmb	IAmb	11 22 40.2	
	comp=Z,3.4nm,1.1s						
ASAR	Alice Springs	47.29	164	P	P	11 22 57.4	-1.8
	comp=Z,0.4nm,0.4s,baz=346,slow=8.3,SNR=9.4						
BVAR	Borovoye Array	49.20	322	P	P	11 23 13.2	-0.4
	comp=Z,0.4nm,0.6s,baz=152,slow=12,SNR=1.9						
ARCES	ARCESS Array B	71.33	338	P	P	11 25 46.7	+1.9
	comp=Z,3.7nm,1.0s,baz=319,slow=16,SNR=1.5						
FINES	FINESS Array B	73.12	330	P	P	11 25 56.7	+1.0
	comp=Z,1.8nm,0.9s,baz=83,slow=4.3,SNR=1.2						

WEL 12 11:52:31.1±1.0,**35°S**±12°×**17°9E**±1°5,**h197**^{km}±19^{km},
M4.0/16,**ML4.4**/19,**MLv4.0**/16,**Error ellipse:**
s-maj=0.0km s-min=0.0km az=109.4,Off east coast of
North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	2.26	190	P	Pn	11 53 12.1	+0.1
MXZ				S	Sn	11 53 43.4	-0.7
WMGZ	Waiomatatini S	2.50	187	P	Pn	11 53 15.4	+0.7
WMGZ				S	Sn	11 53 49.2	+0.4
HAZ	Te Kaha	2.55	199	P	Pn	11 53 15.2	-0.1
HAZ				S	Sn	11 53 51.2	+1.3
PKGZ	Pakihiroa	2.61	193	P	Pn	11 53 16.5	+0.5
PUZ	Puketiti	2.76	189	P	Pn	11 53 17.9	+0.1
PUZ				S	Sn	11 53 53.9	-0.5
RUGZ	Raukumara Rang	2.77	199	P	Pn	11 53 18.0	0.0
KUZ	Kuaotunu	2.87	240	P	Pn	11 53 18.2	-0.7
TWGZ	Tauwhareparae	2.91	193	P	Pn	11 53 20.4	+0.9
TWGZ				S	Sn	11 53 58.1	+0.6
OPRZ	Ohinepanea	3.09	215	P	Pn	11 53 22.4	+0.8
MWZ	Matawai	3.16	199	P	Pn	11 53 22.5	0.0
MWZ				S	Sn	11 54 03.2	+0.4
CNGZ	Carnagh Statio	3.18	188	P	Pn	11 53 23.1	+0.5
TKGZ	Te Karaka	3.19	194	P	Pn	11 53 22.8	0.0
TKGZ				S	Sn	11 54 02.7	-0.7
URZ	Urewera	3.22	204	P	Pn	11 53 23.0	-0.1
RAGZ	Rawiri	3.34	199	P	Pn	11 53 24.9	+0.2
RIGZ	Rimuhau	3.46	194	P	Pn	11 53 25.8	-0.3
RIGZ				S	Sn	11 54 09.3	-0.1
RTZ	Ruatahuna	3.58	204	P	Pn	11 53 27.1	-0.6
RTZ				S	Sn	11 54 11.8	-0.2
SNGZ	Shannon Statio	3.63	198	P	Pn	11 53 28.2	0.0
SNGZ				S	Sn	11 54 13.9	+0.9
PRGZ	Paritu Road	3.65	191	P	Pn	11 53 28.1	-0.3
PRRZ	Plateau Road	3.70	211	P	Pn	11 53 29.2	+0.2
ALRZ	Allen Road	3.77	211	P	Pn	11 53 29.9	0.0
KNZ	Kokohu	3.79	193	P	Pn	11 53 29.1	-0.9
RAHZ	Arahi	3.83	201	P	Pn	11 53 30.2	-0.4
MTHZ	Maungataniwha	3.84	204	P	Pn	11 53 30.5	-0.3
MHGZ	Mahia Peninsul	3.87	190	P	Pn	11 53 30.9	-0.2
WHHZ	Waihua	3.94	198	P	Pn	11 53 31.5	-0.4
WHHZ				S	Sn	11 54 21.0	+1.2
NMHZ	Naumai	4.08	202	P	Pn	11 53 33.5	-0.2
ARHZ	Aropaoanui	4.17	200	P	Pn	11 53 34.2	-0.7
ARHZ				S	Sn	11 54 25.3	+0.1
BKZ	Black Stump Fm	4.24	205	P	Pn	11 53 34.9	-0.9
MCHZ	McNeill Hill	4.43	202	P	Pn	11 53 37.4	-0.7
MCHZ				S	Sn	11 54 31.1	+0.2
KWHZ	Kaweka Forest	4.50	204	P	Pn	11 53 37.8	-1.2
KWHZ				S	Sn	11 54 32.0	-0.6
OTVZ	Oturere	4.57	212	P	Pn	11 53 39.5	-0.5
BHHZ	Black Hill Sta	4.68	207	P	Pn	11 53 39.7	-1.7
BHHZ				S	Sn	11 54 35.8	-1.0
KAHZ	Kahuranaki	4.70	198	P	Pn	11 53 40.6	-1.0
KRHZ	Kereru	4.71	204	P	Pn	11 53 40.1	-1.6
WNVZ	Wahianoa	4.73	212	P	Pn	11 53 41.2	-0.9
MOVZ	Moawhango	4.73	210	P	Pn	11 53 40.2	-1.8
PXZ	Pawanui	4.93	198	P	Pn	11 53 42.4	-2.1
PNHZ	Pukenui	5.01	204	P	Pn	11 53 43.7	-1.9
PNHZ	Pukenui	5.01	204	P	Sn	11 54 40.6	-3.7
WPHZ	Waipukurau	5.08	201	P	Sn	11 54 40.5	-5.3
TSZ	Takapari Road	5.22	205	P	Pn	11 53 46.0	-2.3
TSZ	Takapari Road	5.22	205	P	Sn	11 54 41.7	-7.5
DVHZ	Dannevirke	5.37	202	P	Sn	11 54 44.2	-8.5
ANWZ	Angora Road	5.43	199	P	Sn	11 54 51.9	-2.1
POWZ	Post Office Ro	5.59	205	P	Sn	11 54 54.9	-2.7
PRWZ	Pori Road	5.67	202	P	Pn	11 53 52.0	-1.9
PRWZ	Pori Road	5.67	202	P	Sn	11 54 51.0	-8.5
BFZ	Birch Farm	5.70	200	P	Sn	11 54 55.2	-5.1
TIWZ	Tintock	5.90	202	P	Sn	11 54 55.5	-9.4

AEIC ***12*** *11:55:43±2.8,61°44N±0°03×154°10W±0°05,h17*^{km}*±6*^{km}*,*
ML3.5,ML3.7/101(NEIC),Error ellipse: s-maj=4.1km
s-min=3.0km az=221.0

NEIC ***12*** *11:55:44.1±1.3,61°429N±0°009×154°10W±0°03,*
h7^{km}*±8*^{km}*,Error ellipse: s-maj=2.1km s-min=0.7km*
az=123.0

ISC 12 11:55:43.7±1.1,**61°44N**±0°02×**154°09W**±0°02,
h10^{km}±12^{km},**n174,**σ**1**^{s}**11**/164,**Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
M19K	Big River Lodg	0.49	343	P	Pb	11 55 53.8	-0.6
	baz=163						
M19K				S	Sg	11 56 00.5	+0.8
	baz=163						
M19K	Big River Lodg	0.49	343		Pb	11 55 53.8	-0.6
M19K					Sg	11 56 00.5	+0.8
M19K	Big River Lodg	0.49	343	IAML		11 56 01.2	
	comp=N,2μm,0.1s						
M19K				IAML		11 56 01.4	
	comp=E,2μm,0.1s						
N19K	Bonanza Creek	0.66	197	P	Pb	11 55 56.9	-0.4
	baz=16						
N19K				S	Sb	11 56 05.3	-1.2
	baz=16						
N19K	Bonanza Creek	0.66	197		Pb	11 55 56.9	-0.4
N19K					Sb	11 56 05.3	-1.2
N19K	Bonanza Creek	0.66	197	IAML		11 56 10.5	
	comp=E,3μm,0.3s						
SPWE	Spurr West	0.76	102		Pb	11 55 58.6	-0.4
SVW2	Sparrevohn	0.80	245		Pb	11 55 59.0	-0.6
SVW2	Sparrevohn	0.80	245	IAML		11 56 13.5	
	comp=N,3μm,0.4s						
L19K	White Mountain	0.83	335	P	Pb	11 55 59.9	-0.4
	baz=154						
L19K				S	Sb	11 56 11.4	0.0
	baz=154						
L19K	White Mountain	0.83	335		Pb	11 55 59.9	-0.4
L19K					Sb	11 56 11.4	0.0
L19K	White Mountain	0.83	335	IAML		11 56 11.9	
	comp=N,3μm,0.4s						
BGL	Barrier Glacie	0.84	101		Pb	11 56 00.1	-0.4
SPBG	Spurr Blockage	0.85	101		Pb	11 56 00.2	-0.4
SPBG					Sb	11 56 11.6	-0.5
SPCR	Spurr Chakacha	0.94	104	P	Pb	11 56 01.9	-0.3
	baz=285						
SPCR				S	Sb	11 56 14.4	-0.3
	baz=285						
SPCR	Spurr Chakacha	0.94	104		Pb	11 56 01.9	-0.3
SPCR					Sb	11 56 14.4	-0.3
SPCN	Chakachatna No	0.95	102		Pb	11 56 02.3	+0.1
SPCP	Crater Peak Br	0.95	100		Pb	11 56 02.1	-0.3
SPCP					Sb	11 56 14.8	-0.3
SPCG	Spurr Capps Gl	1.01	97		Pg	11 56 03.0	-0.2
SPU	Mount Spurr	1.02	104		Pg	11 56 03.2	-0.1
NCT	North Crescent	1.05	147		Pb	11 56 03.5	-0.4
NCT					Sg	11 56 17.5	0.0
L20K	Farewell, AK	1.05	5	P	Pb	11 56 03.5	-0.5
	baz=186						
L20K	Farewell, AK	1.05	5		Pb	11 56 03.5	-0.5
RDJH	Redoubt Jeurge	1.06	143		Pg	11 56 03.9	-0.1
STLK	Strandline Lak	1.09	86		Pb	11 56 04.0	-0.7
DFR	Drift River	1.09	140		Pb	11 56 04.4	-0.3
DFR					Sg	11 56 19.0	+0.1
RDWB	Redoubt West	1.13	147		Pb	11 56 05.1	-0.4
RSO	Redoubt South	1.18	146		Pn	11 56 06.0	-0.4
RED	Redoubt Volcan	1.21	147		Pb	11 56 06.4	-0.4
O19K	Port Alsworth	1.25	185	P	Pb	11 56 07.1	-0.3
	baz=4.9						
O19K	Port Alsworth	1.25	185		Pb	11 56 07.1	-0.3
SKT	Skwentna	1.34	65	P	Pg	11 56 09.0	-0.3
	baz=247						
SKT				S	Sg	11 56 27.1	+0.4
	baz=247						
SKT	Skwentna	1.34	65		Pg	11 56 09.0	-0.3
SKT					Sg	11 56 27.1	+0.4
SKT	Skwentna	1.34	65	IAML		11 56 30.7	
	comp=E,1μm,0.3s						
IVE	Iliamna Volcan	1.52	159		Pb	11 56 11.7	-0.4
ILSW	Iliamna Southw	1.53	162		Pb	11 56 11.8	-0.4
O20K	Slope Mountain	1.54	151	P	Pb	11 56 12.2	-0.2
	baz=333						
O20K	Slope Mountain	1.54	151		Pb	11 56 12.2	-0.2
ILS	Iliamna Low So	1.57	161		Pb	11 56 12.5	-0.4
CAPN	Captain Cook N	1.58	114	Pn	Pg	11 56 14.6	+0.7
SUA	Susitna One	1.61	88	P	Pn	11 56 12.3	0.0
	baz=270						
SUA	Susitna One	1.61	88		Pn	11 56 12.2	0.0
SUA	Susitna One	1.61	88	IAML		11 56 37.5	
	comp=E,798nm,0.6s						
O18K	Koktuh Hills	1.68	200	P	Pn	11 56 13.3	+0.1
	baz=18						
O18K	Koktuh Hills	1.68	200		Pn	11 56 13.3	+0.1
PPLA	Purkeypile	1.71	31	P	Pb	11 56 15.0	-0.3
	baz=212						
PPLA	Purkeypile	1.71	31		Pb	11 56 15.0	-0.3
TT01	Tatalina	1.73	329		Pn	11 56 14.3	+0.5
TTA	Tatalina	1.75	330	P	Pn	11 56 14.4	+0.3
	baz=148						
TTA	Tatalina	1.75	330		Pn	11 56 14.4	+0.3
OPT	Oil Point	1.84	166	P	Pb	11 56 16.4	-1.1
	baz=347						
OPT	Oil Point	1.84	166		Pb	11 56 16.4	-1.1
P19K	Oil Pt	1.84	166	P	Pb	11 56 17.1	-0.3
	baz=347						
P19K	Oil Pt	1.84	166		Pb	11 56 17.1	-0.3
P19K	Oil Pt	1.84	166	IAML		11 56 45.8	
	comp=N,621nm,0.6s						
P19K				IAML		11 56 46.6	
	comp=E,840nm,0.3s						
K20K	Telida	1.93	0	P	Pn	11 56 17.2	+0.7
	baz=180						
K20K	Telida	1.93	0		Pn	11 56 17.2	+0.7
M22K	Willow	1.93	79	P	Pb	11 56 17.7	-1.1
	baz=262						
M22K	Willow	1.93	79		Pb	11 56 17.7	-1.1
CUT	Chulitna	2.05	60	P	Pb	11 56 19.6	-1.5
	baz=243						
CUT	Chulitna	2.05	60		Pb	11 56 19.6	-1.5
SLKM	Skilak Lake	2.11	115		Pn	11 56 19.5	+0.5
AUCH	Augustine Cone	2.11	171		Pb	11 56 20.4	-1.7
P18K	Big Mountain,	2.13	196	P	Pn	11 56 19.4	0.0
	baz=15						
P18K	Big Mountain,	2.13	196		Pn	11 56 19.4	0.0
P18K	Big Mountain,	2.13	196	IAML		11 56 51.1	
	comp=E,604nm,0.5s						
P18K				IAML		11 56 52.4	
	comp=N,403nm,0.5s						
RC01	Rabbit Creek A	2.13	98	P	Pn	11 56 20.0	+0.6
	baz=281						
RC01	Rabbit Creek A	2.13	98		Pn	11 56 20.0	+0.6
CAST	Castle Rocks	2.20	24		Pn	11 56 20.6	+0.4
CAST				IAML		11 56 58.0	
	comp=E,422nm,0.5s						
CAST				IAML		11 56 58.5	
	comp=N,503nm,0.6s						
BRLK	Bradley Lake	2.31	135		Pn	11 56 22.8	+1.0
O22K	Cooper Landing	2.34	112	P	Pb	11 56 25.0	-0.9
	baz=296						
O22K				S	Sb	11 56 55.4	+0.6
	baz=296						
O22K	Cooper Landing	2.34	112		Pb	11 56 25.0	-0.9
O22K					Sb	11 56 55.4	+0.6
BRSE	Bradley Lake S	2.37	134	P	Pn	11 56 23.8	+1.1
	baz=317						
BRSE	Bradley Lake S	2.37	134		Pn	11 56 23.8	+1.1
PMR	Palmer	2.38	84	P	Pn	11 56 24.4	+1.6
	baz=268						
PMR	Palmer	2.38	84		Pn	11 56 24.4	+1.6
CNPM	China Poot	2.38	142		Pn	11 56 23.7	+0.9
GHO	Glory Hole Cre	2.49	80		Pb	11 56 26.8	-1.8
GHO	Glory Hole Cre	2.49	80	IAML		11 57 05.0	
	comp=N,311nm,0.9s						
GHO				IAML		11 57 06.9	
	comp=E,278nm,0.8s						
Q19K	Cape Douglas,	2.53	175	P	Pn	11 56 25.7	+0.9
	baz=355						
Q19K	Cape Douglas,	2.53	175		Pn	11 56 25.7	+0.9
KTH	Kantishna Hill	2.58	33		Pn	11 56 26.5	+0.9
KTH	Kantishna Hill	2.58	33	IAML		11 57 08.5	
	comp=N,349nm,0.6s						
KTH				IAML		11 57 14.0	
	comp=E,270nm,1.0s						
CHUM	Lake Minchumin	2.59	18	P	Pn	11 56 26.1	+0.5
	baz=199						
CHUM	Lake Minchumin	2.59	18		Pn	11 56 26.1	+0.5
SEW	Seward	2.64	118	P	Pn	11 56 28.2	+1.9
	baz=302						
SEW	Seward	2.64	118		Pn	11 56 28.2	+1.9
TRF	Thorofare Moun	2.68	40	P	Pn	11 56 28.7	+1.6
	baz=223						
TRF	Thorofare Moun	2.68	40		Pn	11 56 28.7	+1.6
TRF	Thorofare Moun	2.68	40	IAML		11 57 14.6	
	comp=N,293nm,0.6s						
TRF				IAML		11 57 18.4	
	comp=E,326nm,1.0s						
KNK	Knik Glacier	2.71	88	P	Pb	11 56 29.9	-2.3
	baz=273						
KNK	Knik Glacier	2.71	88		Pb	11 56 29.9	-2.3
KNK	Knik Glacier	2.71	88	IAML		11 57 10.5	
	comp=E,204nm,0.7s						
J20K	Nowinta River	2.75	360	P	Pn	11 56 28.5	+0.7
	baz=180						
J20K	Nowinta River	2.75	360		Pn	11 56 28.5	+0.7
J20K	Nowinta River	2.75	360	IAML		11 57 18.6	
	comp=E,349nm,0.5s						
J20K				IAML		11 57 19.5	
	comp=N,288nm,0.5s						
SML	Sawmill	2.78	80	P	Pb	11 56 30.5	-2.9
	baz=265						
SML	Sawmill	2.78	80		Pb	11 56 30.5	-2.9
SML	Sawmill	2.78	80	IAML		11 57 14.8	
	comp=N,236nm,0.9s						
WAT7	Susitna Watana	2.83	58		Pn	11 56 29.9	+0.9
PWL	Port Wells	2.85	99	P	Pn	11 56 31.0	+1.7
	baz=284						
PWL	Port Wells	2.85	99		Pn	11 56 31.0	+1.7
WAT1	Susitna Watana	2.95	59	P	Pn	11 56 31.5	+0.9
	baz=244						
WAT1	Susitna Watana	2.95	59		Pn	11 56 31.5	+0.9
BPAW	Bear Paw Mtn.	3.03	27	P	Pn	11 56 31.9	+0.3
	baz=210						
BPAW	Bear Paw Mtn.	3.03	27		Pn	11 56 31.9	+0.3
BPAW	Bear Paw Mtn.	3.03	27	IAML		11 57 21.2	
	comp=N,294nm,0.7s						
BPAW				IAML		11 57 23.6	
	comp=E,290nm,0.5s						
RND	Reindeer	3.14	49		Pn	11 56 34.6	+1.4
RND	Reindeer	3.14	49	IAML		11 57 28.4	
	comp=N,150nm,0.7s						
KAKN	Katmai Knife C	3.19	189		Pn	11 56 34.8	+0.9
WAT6	Susitna Watana	3.21	66	P	Pn	11 56 35.4	+1.1
	baz=252						
WAT6	Susitna Watana	3.21	66		Pn	11 56 35.4	+1.1
KABU	Katmai Buttres	3.23	191		Pn	11 56 36.1	+1.5
SCM	Sheep Creek Mo	3.25	80	P	Pn	11 56 36.9	+2.1
	baz=266						
SCM	Sheep Creek Mo	3.25	80		Pn	11 56 36.9	+2.1
SCM	Sheep Creek Mo	3.25	80	IAML		11 57 29.2	
	comp=N,132nm,2.1s						
SCM				IAML		11 57 51.8	
	comp=E,177nm,3.2s						
MCK	McKinley	3.31	44	P	Pn	11 56 37.5	+1.9
	baz=228						
MCK	McKinley	3.31	44		Pn	11 56 37.5	+1.9
MCK	McKinley	3.31	44	IAML		11 57 35.8	
	comp=E,126nm,0.9s						
MCK				IAML		11 57 36.4	
	comp=N,161nm,0.9s						
GLI	Glacier Island	3.44	96	Pn	Pn	11 56 37.1	-0.1
GLI				IAML		11 57 39.6	
	comp=N,197nm,4.6s						
GLI				IAML		11 58 46.2	
	comp=E,152nm,4.9s						
BWN	Browne	3.47	36		Pb	11 56 42.4	-2.8
DHY	Denali Highway	3.54	59	P	Pn	11 56 39.8	+0.9
	baz=245						
DHY	Denali Highway	3.54	59		Pn	11 56 39.8	+0.9
DHY	Denali Highway	3.54	59	IAML		11 57 45.9	
	comp=E,126nm,1.0s						
GCSA	Galena City Sc	3.55	340	P	Pn	11 56 40.4	+1.6
	baz=158						
GCSA	Galena City Sc	3.55	340		Pn	11 56 40.4	+1.6
M24K	Tolsona, Glenn	3.82	76	P	Pn	11 56 45.2	+2.6
	baz=263						
M24K	Tolsona, Glenn	3.82	76		Pn	11 56 45.2	+2.6
I21K	Tanana	3.88	13	P	Pn	11 56 43.8	+0.5
	baz=195						
I21K	Tanana	3.88	13		Pn	11 56 43.8	+0.5
I21K	Tanana	3.88	13	IAML		11 57 49.8	
	comp=N,126nm,1.0s						
I21K				IAML		11 57 57.4	
	comp=E,169nm,2.0s						
NEA2	Nenana	3.91	34	Pn	Pn	11 56 44.3	+0.6
NEA2				IAML		11 57 53.2	
	comp=E,95nm,0.9s						
MLY	Manley	3.91	21	P	Pn	11 56 43.9	+0.1
	baz=204						
MLY	Manley	3.91	21		Pn	11 56 43.9	+0.1
MLY	Manley	3.91	21	IAML		11 57 46.1	
	comp=N,102nm,0.8s						
MLY				IAML		11 57 46.2	
	comp=E,100nm,1.0s						
KLU	Klutina	3.92	86	Pn	Pn	11 56 45.4	+1.4
KLU				IAML		11 58 00.5	
	comp=N,106nm,4.0s						
DIV	Divide	4.03	91	Pn	Pn	11 56 42.8	-2.6
H21K	Melozitna Rive	4.27	7	P	Pn	11 56 49.4	+0.6
	baz=188						
H21K	Melozitna Rive	4.27	7		Pn	11 56 49.4	+0.6
H21K	Melozitna Rive	4.27	7	IAML		11 58 00.6	
	comp=E,81nm,1.4s						
H21K				IAML		11 58 08.4	
	comp=N,57nm,0.6s						
I23K	Minto, Yukon-K	4.29	28	P	Pn	11 56 49.3	+0.3
	baz=212						
I23K	Minto, Yukon-K	4.29	28		Pn	11 56 49.3	+0.3
I23K	Minto, Yukon-K	4.29	28	IAML		11 58 05.3	
	comp=E,104nm,0.7s						
I23K				IAML		11 58 07.8	
	comp=N,118nm,0.8s						
MDM	Murphy Dome	4.42	34		Pn	11 56 50.9	+0.2
MDM	Murphy Dome	4.42	34	IAML		11 58 04.0	
	comp=E,63nm,0.8s						
MDM				IAML		11 58 15.6	
	comp=N,53nm,0.6s						
HDA	Harding Lake	4.42	44		Pn	11 56 51.9	+1.2
HDA				IAML		11 58 12.6	
	comp=N,98nm,0.7s						
HDA				IAML		11 58 16.8	
	comp=E,57nm,0.7s						
TCOL	CIGO, UAF Yank	4.46	37		Pn	11 56 52.4	+1.1
COLA	College	4.46	37		Pn	11 56 52.0	+0.7
N25K	Chitina, Valde	4.55	84	Pn	Pn	11 56 54.5	+1.8
N25K				IAML		11 58 24.5	
	comp=E,70nm,5.0s						
N25K				IAML		11 58 30.0	
	comp=N,76nm,4.2s						
IM03		4.57	2		Pn	11 56 53.6	+0.9
IL31		4.68	41		Pn	11 56 55.2	+0.9
H23K	Yukon River	4.85	23	P	Pn	11 56 56.8	+0.2
	baz=207						
H23K	Yukon River	4.85	23		Pn	11 56 56.8	+0.2
J25K	Salcha River,	5.09	47	P	Pn	11 57 01.0	+1.0
	baz=235						
J25K	Salcha River,	5.09	47		Pn	11 57 01.0	+1.0
DOT	Dot Lake	5.14	60		Pn	11 57 03.0	+2.2
H24K	Noodor Dome	5.21	29		Pn	11 57 02.2	+0.5
H24K				IAML		11 58 38.0	
	comp=E,57nm,4.4s						
H24K				IAML		11 59 27.7	
	comp=N,46nm,4.8s						
SCRK	Sand Creek	5.30	57	P	Pn	11 57 05.1	+2.1
	baz=246						
SCRK	Sand Creek	5.30	57		Pn	11 57 05.1	+2.1
SCRK	Sand Creek	5.30	57	IAML		11 58 11.6	
	comp=E,42nm,4.6s						
SCRK				IAML		11 58 25.7	
	comp=N,42nm,4.6s						
CRQM	Cirque	5.36	93	Pn	Pn	11 57 08.4	+4.5
PRP	Porcupine Dome	5.61	39	P	Pn	11 57 08.3	+1.1
	baz=227						
PRP	Porcupine Dome	5.61	39		Pn	11 57 08.3	+1.1
ANM	Nome	6.02	306	P	Pn	11 57 14.3	+1.7
	baz=116						
ANM	Nome	6.02	306		Pn	11 57 14.3	+1.7
COLD	Coldfoot	6.05	15	P	Pn	11 57 13.7	+0.5
	baz=198						
COLD	Coldfoot	6.05	15		Pn	11 57 13.7	+0.5
FYU	Fort Yukon	6.45	33	Pn	Pn	11 57 18.3	-0.2
EGAK	Eagle	6.75	55		Pn	11 57 24.2	+1.5
DAWY	Dawson	7.24	62	Pn	Pn	11 57 31.0	+1.4
BM03	Burnt Mountain	7.26	30		Pn	11 57 30.0	+0.2
BMAR	Burnt Mountain	7.28	30	Pn	Pn	11 57 30.6	+0.6
TOLK	Toolik Lake Re	7.48	13	Pn	Pn	11 57 34.4	+1.7
HYT	Haines Junctio	8.05	87	Pn	Pn	11 57 41.3	+0.6

BJI ***12*** *12:07:21.0±0.0,6°60S×106°80E,h123*^{km}*,mB4.8/8,*
mb4.6/13

DJA ***12*** *12:07:21.6±0.2,7°S±4°×10°7E±°,h122*^{km}*±2*^{km}*,M4.8/27,*
mB5.3/17,mb4.8/24,MLv5.0/27,Mw(mB)4.8/17

IDC ***12*** *12:07:23.0±0.5,6°46S×106°89E,h128*^{km}*±4*^{km}*,mb4.2/35,*
mb1 4.2/37,mb1mx4.1/70,mbtmp4.6/37,MS3.3/8,
Ms1 3.3/8,ms1mx2.9/43,Error ellipse: s-maj=11.0km
s-min=7.6km az=53.0

NEIC ***12*** *12:07:22.9±1.7,6°48S±0°08×106°86E±0°07,h126*^{km}*±5*^{km}*,*
mb4.7/58,Error ellipse: s-maj=13.6km s-min=8.0km
az=212.0

ISC 12 12:07:22.9±0.6,**6°67S**±0°05×**106°79E**±0°04,**h131**^{km}±4^{km},
n187,σ**1**^{s}**55**/201,**mb4.5**/71,**4C,Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DBJI	Dramaga	0.12	342	P	Pn	12 07 39.9	-0.8

DBJI				S	Sn	12 07 53.0	-1.2
TNG	**Tangerang**	**0.51**	**344**	P	**Pn**	**12 07 43.8**	**+1.7**
TNG				P	**Pn**	**12 07 42.3**	**+0.2**
TNG				S	**Sn**	**12 07 57.7**	**+1.1**
TNG				S	**Sn**	**12 07 59.3**	**+2.7**
CNJI	**Cibinong**	**0.72**	**152**	P	**Pn**	**12 07 40.3**	**-3.2**
LEM	**Lembang**	**0.84**	**101**	P	**Pn**	**12 07 44.0**	**-0.6**
	908nm,0.3s,baz=281,slow=1.0,SNR=906						
LEM				S	**Sn**	**12 08 01.3**	**+0.2**
	623nm,0.3s,baz=106,slow=24,SNR=8.8						
LEM	**Lembang**	**0.84**	**101**	P	**Pn**	**12 07 44.1**	**-0.5**
LEM				S	**Sn**	**12 08 00.5**	**-0.6**
SBJI	**Serang**	**0.85**	**310**	P	**Pn**	**12 07 44.6**	**+0.1**
SBJI				S	**Sn**	**12 08 01.6**	**+0.7**
CGJI	**Cibinong**	**1.09**	**273**	P	**Pn**	**12 07 45.6**	**-1.0**
CGJI				S	**Sn**	**12 08 02.6**	**-2.1**
CMJI	**Cimerak**	**1.99**	**124**	P	**Pn**	**12 07 54.6**	**-2.1**
BLSI	**Bandar Lampung**	**2.00**	**310**	P	**Pn**	**12 07 58.1**	**+1.2**
KASI	**Kota Agung**	**2.54**	**296**	P	**Pn**	**12 08 04.5**	**+0.8**
KLI	**Kotabumi**	**2.63**	**313**	P	**Pn**	**12 08 06.4**	**+1.7**
LWLI	**Liwa**	**3.17**	**301**	P	**Pn**	**12 08 12.8**	**+1.0**
MDSI	**Maura Dua**	**3.38**	**310**	P	**Pn**	**12 08 16.4**	**+1.9**
SMRI	**Semarang**	**3.65**	**96**	P	**Pn**	**12 08 18.8**	**+0.8**
SMRI	**Semarang**	**3.65**	**96**		**Pn**	**12 08 17.6**	**-0.4**
SMRI	**Semarang**	**3.65**	**96**	P	**Pn**	**12 08 17.7**	**-0.4**
YOGI	**Yogyakarta**	**3.66**	**108**	P	**Pn**	**12 08 17.4**	**-0.8**
UGM	**Wanagama**	**3.91**	**109**	P	**Pn**	**12 08 20.3**	**-1.2**
UGM	**Wanagama**	**3.91**	**109**	Pn	**Pn**	**12 08 20.6**	**-0.9**
PMBI	**Palembang**	**4.22**	**332**	P	**Pn**	**12 08 29.4**	**+3.8**
PMBI	**Palembang**	**4.22**	**332**		**Pn**	**12 08 25.0**	**-0.6**
LHSI	**Lahat**	**4.30**	**311**	P	**Pn**	**12 08 28.9**	**+2.2**
MNAI	**Manna**	**4.45**	**301**	P	**Pn**	**12 08 29.6**	**+1.0**
MNAI	**Manna**	**4.45**	**301**		**Pn**	**12 08 29.6**	**+1.0**
PPBI	**Pangkal Pinang**	**4.52**	**352**	P	**Pn**	**12 08 32.7**	**+3.1**
PCJI	**Pacitan**	**4.61**	**109**	P	**Pn**	**12 08 29.6**	**-1.2**
NGJI	**Ngawi**	**4.69**	**99**	P	**Pn**	**12 08 33.2**	**+1.3**
MASI	**Maura Aman, Be**	**5.73**	**307**	P	**Pn**	**12 08 47.2**	**+1.4**
	2.3nm8µm686nm,1.0s						
JMBI	**JAMBI**	**5.90**	**328**	P	**Pn**	**12 08 51.6**	**+3.5**
	0.9nm178nm,1.0s						
DSRI	**Dabo**	**6.53**	**340**	P	**Pn**	**12 08 59.6**	**+3.0**
	0.4nm109nm,1.0s						
GMJI	**Gumukmas**	**6.79**	**104**	P	**Pn**	**12 09 01.3**	**+1.2**
	0.6nm4µm108nm,0.8s						
ABJI	**Asem Bagus**	**7.47**	**99**	P	**Pn**	**12 09 12.7**	**+3.4**
	4.0nm14µm1µm,0.9s						
JAGI	**Jajag, Banyuwa**	**7.52**	**104**	P	**Pn**	**12 09 09.9**	**0.0**
	1.1nm6µm250nm,0.7s						
JAGI	**Jajag, Banyuwa**	**7.52**	**104**	Pn	**Pn**	**12 09 09.6**	**-0.2**
JAGI	**Jajag, Banyuwa**	**7.52**	**104**	P	**Pn**	**12 09 10.3**	**+0.4**
PPSI	**Pulau Pagai**	**7.79**	**300**	P	**Pn**	**12 09 12.2**	**-1.3**
	2.4nm11µm473nm,0.8s						
STKI	**Sintang**	**8.16**	**35**	P	**Pn**	**12 09 22.9**	**+4.3**
	48nm,1.0s						
SRBI	**Singaraja**	**8.47**	**100**	P	**Pn**	**12 09 23.2**	**+0.4**
	3µm230nm,0.9s						
PDSI	**Padang**	**8.51**	**312**	P	**Pn**	**12 09 22.4**	**-0.9**
IGBI	**Denpasar**	**8.55**	**105**	P	**Pn**	**12 09 23.2**	**-0.6**
	3µm120nm,1.2s						
PPI	**Padang Panjang**	**8.87**	**314**	P	**Pn**	**12 09 27.3**	**-0.8**
	20nm,0.6s						
BKNI	**Bangkinang**	**9.01**	**320**	P	**Pn**	**12 09 30.4**	**+0.5**
	2µm93nm,1.1s						
BKNI	**Bangkinang**	**9.01**	**320**		**Pn**	**12 09 28.2**	**-1.7**
SISI	**Saibi**	**9.33**	**304**	P	**Pn**	**12 09 31.7**	**-2.6**
	2µm118nm,0.9s						
KBKI	**Kotabaru**	**9.93**	**71**	P	**Pn**	**12 09 44.8**	**+2.5**
	24nm,1.2s						
TWSI	**Taliwang, Sumb**	**10.21**	**102**	P	**Pn**	**12 09 43.4**	**-2.7**
	880nm18nm,0.4s						
MNSI	**Mandailing Nat**	**10.33**	**316**	P	**Pn**	**12 09 45.5**	**-2.2**
	35nm,0.6s						
PLAI	**Plampang**	**11.10**	**102**	P	**Pn**	**12 09 55.0**	**-3.0**
	656nm60nm,1.0s						
PLAI	**Plampang**	**11.10**	**102**	P	**Pn**	**12 09 56.7**	**-1.3**
GSI	**Gunungsitoli**	**12.13**	**310**	Pn	**Pn**	**12 10 07.6**	**-4.0**
PSI	**Prapat**	**12.25**	**320**	P	**Pn**	**12 10 09.9**	**-3.3**
	baz=158,slow=11						
PSI				LR	LR	12 15 19.4	
	comp=Z,54nm,19.6s,slow=39						
KAPI	**Kappang**	**13.00**	**83**	LR	LR	12 16 05.3	
	comp=Z,43nm,20.4s,baz=277,slow=41						
BSSI	**Bau Bau, Buton**	**13.63**	**89**	P	**Pn**	**12 10 32.8**	**+1.9**
	17nm,0.7s						
MPSI	**Mapaga**	**14.82**	**62**	P	**P**	**12 10 50.0**	**+1.5**
	27nm,1.9s						
EDFI	**Ende, Flores**	**14.91**	**99**	P	**Pn**	**12 10 43.6**	**-3.7**
	364nm15nm,0.6s						
MMRI	**Maumere**	**15.44**	**98**	P	**P**	**12 10 55.0**	**-0.4**
BATI	**Baumata**	**17.06**	**103**	P	**P**	**12 11 13.4**	**0.0**
	16nm,0.3s,baz=60,slow=3.6,SNR=8.4						
BATI				S	**S**	**12 14 24.9**	**+0.2**
	5.3nm,0.3s,baz=45,slow=20,SNR=2.6						
BATI	**Baumata**	**17.06**	**103**	P	**Pn**	**12 11 13.7**	**0.0**
	584nm40nm,0.6s						
GIRL	**Giralia**	**17.43**	**156**	P	**P**	**12 11 17.5**	**+0.2**
SOEI	**Soe**	**17.57**	**101**	P	**P**	**12 11 17.6**	**-1.5**
	927nm104nm,1.1s						
SOEI	**Soe**	**17.57**	**101**	P	**P**	**12 11 17.1**	**-2.0**
SOEI					**S**	**12 14 31.7**	**-3.7**
MBWA	**Marble Bar**	**19.09**	**140**	P	**Pn**	**12 11 40.4**	**+2.7**
PSA00	**Pilbara Seismi**	**19.47**	**141**	P	**Pn**	**12 11 41.0**	**-1.1**
PSA00				IAmb	IAmb	12 11 47.6	
	comp=Z,19nm,0.8s						
PSA00	**Pilbara Seismi**	**19.47**	**141**	P	**Pn**	**12 11 45.9**	**+3.8**
	comp=Z,19nm,0.8s						
FITZ	**Fitzroy Crossi**	**21.61**	**123**	P	**P**	**12 12 02.5**	**-0.1**
	comp=Z,3.5nm,0.5s,baz=324,slow=6.8,SNR=13						
FITZ				S	**S**	**12 15 56.6**	**+2.5**
	comp=Z,3.5nm,0.7s,baz=201,slow=17,SNR=3.9						
MEEK	**Meekatharra**	**22.83**	**152**	P	**P**	**12 12 15.4**	**+0.5**
	comp=Z,21nm,1.1s						
KNRA	**Kununurra**	**23.32**	**114**	P	**P**	**12 12 19.2**	**-0.3**
KNRA				IAmb	IAmb	12 12 32.3	
	comp=Z,36nm,1.1s						
KNRA	**Kununurra**	**23.32**	**114**	P	**P**	**12 12 19.0**	**-0.5**
	comp=Z,32nm,1.1s						
MORW	**Morawa**	**23.93**	**160**	P	**P**	**12 12 24.7**	**-0.2**
MORW				IAmb	IAmb	12 12 43.0	
	comp=Z,21nm,1.3s						
MTN	**Manton Dam**	**24.75**	**106**	P	**P**	**12 12 32.8**	**+0.3**
MTN				IAmb	IAmb	12 12 48.9	
	comp=Z,19nm,1.1s						
SIJI	**Sorong**	**25.09**	**78**	P	**P**	**12 12 32.8**	**-2.8**
	comp=Z,20nm,0.8s,baz=283,slow=3.2,SNR=5.7						
CMAR	**Chiang Mai Arr**	**26.14**	**343**	P	**P**	**12 12 43.9**	**-1.1**
	comp=Z,2.2nm,0.6s,baz=180,slow=8.6,SNR=6.0						
CMAR				ScP	**ScP**	**12 19 38.0**	**+1.1**
	comp=Z,0.8nm,0.4s,baz=192,slow=2.5,SNR=7.7						
NWAO	**Narrogin (SRO)**	**27.88**	**161**	P	**P**	**12 13 00.3**	**-0.1**
NWAO	**Narrogin (SRO)**	**27.88**	**161**	P	**P**	**12 13 01.3**	**+0.9**
WB0	**Warramunga Arr**	**29.80**	**119**	P	**P**	**12 13 17.4**	**-0.2**
WRA	**Warramunga Arr**	**29.82**	**119**	P	**P**	**12 13 17.7**	**-0.1**
	comp=Z,1.0nm,0.3s,baz=293,slow=11,SNR=57						
WRA				PcP	**PcP**	**12 16 18.8**	**+0.5**
	comp=Z,1.6nm,0.4s,baz=309,slow=2.0,SNR=15						
WRA				S	**S**	**12 18 02.2**	**-3.0**
	comp=Z,1.2nm,1.1s,baz=286,slow=16,SNR=3.4						
WRA				ScP	**ScP**	**12 19 49.9**	**+1.5**
	comp=Z,1.0nm,0.7s,baz=293,slow=2.2,SNR=6.1						
WRA				LR	LR	12 26 59.9	
	comp=Z,27nm,19.3s,baz=185,slow=40						
WRA	**Warramunga Arr**	**29.82**	**119**	P	**P**	**12 13 17.5**	**-0.4**
WRAB	**Tennant Creek**	**29.82**	**119**	P	**P**	**12 13 17.7**	**-0.1**
WRAB	**Tennant Creek**	**29.82**	**119**	P	**P**	**12 13 16.3**	**-1.6**
WB2	**Warramunga Arr**	**29.83**	**119**	P	**P**	**12 13 17.7**	**-0.2**
WB2				IAmb	IAmb	12 13 18.7	
	comp=Z,4.3nm,0.5s						
WR0	**Warramunga Arr**	**30.00**	**119**	P	**P**	**12 13 19.5**	**+0.1**
AS31	**Alice Springs**	**31.05**	**126**	P	**P**	**12 13 29.3**	**+0.6**
ASAR	**Alice Springs**	**31.05**	**126**	P	**P**	**12 13 28.8**	**0.0**
	comp=Z,1.8nm,0.5s,baz=298,slow=8.0,SNR=48						
ASAR				PcP	**PcP**	**12 16 22.2**	**+0.8**
	comp=Z,0.8nm,0.4s,baz=322,slow=3.3,SNR=6.0						
ASAR				S	**S**	**12 18 23.6**	**-0.9**
	comp=Z,4.1nm,0.9s,baz=297,slow=15,SNR=20						
ASAR				ScP	**ScP**	**12 19 53.5**	**+1.1**
	comp=Z,1.0nm,0.7s,baz=286,slow=2.4,SNR=7.9						
ASAR				LR	LR	12 27 16.1	
	comp=Z,32nm,18.5s,baz=216,slow=38						
FORT	**Forrest**	**31.20**	**143**	P	**P**	**12 13 29.2**	**-0.6**
FORT				IAmb	IAmb	12 13 55.1	
	comp=Z,16nm,0.9s						
COEN	**Coen**	**36.49**	**104**	P	**P**	**12 14 15.5**	**-0.3**
COEN				IAmb	IAmb	12 14 16.9	
	comp=Z,18nm,1.2s						
BBOO	**Buckleboo**	**37.64**	**138**	P	**P**	**12 14 25.0**	**-0.2**
BBOO				IAmb	IAmb	12 14 43.2	
	comp=Z,11nm,1.0s						
ODAN	**Odare**	**38.26**	**331**	*e*P	**P**	**12 14 28.7**	**-2.1**
	comp=Z,12nm,0.6s						
RAMN	**Ramite**	**38.72**	**330**	*e*P	**P**	**12 14 33.2**	**-1.5**
	comp=Z,6.2nm,0.3s						
JIRN	**Jiri**	**39.51**	**331**	*e*P	**P**	**12 14 39.9**	**-1.5**
	comp=Z,18nm,0.6s						
PKIN	**Phulchoki**	**39.84**	**330**	*e*P	**P**	**12 14 41.7**	**-2.2**
	comp=Z,8.6nm,0.7s						
GUN	**Gumba**	**39.87**	**330**	*e*P	**P**	**12 14 42.5**	**-1.8**
	comp=Z,23nm,0.6s						
DMN	**Daman**	**40.01**	**329**	*e*P	**P**	**12 14 43.7**	**-1.7**
PMG	**Port Moresby**	**40.05**	**97**	P	**P**	**12 14 46.3**	**+0.7**
KKN	**Kakani**	**40.07**	**330**	*e*P	**P**	**12 14 43.6**	**-2.2**
	comp=Z,5.5nm,0.5s						
GKN	**Gorkha**	**40.57**	**329**	*e*P	**P**	**12 14 47.9**	**-1.9**
	comp=Z,10nm,0.3s						
KOLN	**Koldanda**	**40.92**	**328**	*e*P	**P**	**12 14 51.1**	**-1.7**
	comp=Z,32nm,0.6s						
STKA	**Stephens Creek**	**41.02**	**132**	P	**P**	**12 14 54.2**	**+0.9**
	comp=Z,14nm,0.3s,baz=298,slow=8.1,SNR=27						
STKA	**Stephens Creek**	**41.02**	**132**	P	**P**	**12 14 53.6**	**+0.2**
DANN	**Dangsing**	**41.30**	**329**	*e*P	**P**	**12 14 54.1**	**-1.9**
	comp=Z,31nm,0.6s						
GTA	**Gaotai**	**46.30**	**353**	*e*P	**P**	**12 15 35.7**	**+0.1**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TOO	**Toolangi**	**46.69**	**137**	P	**P**	**12 15 39.4**	**+0.8**
TOO				IAmb	IAmb	12 15 58.6	
	comp=Z,13nm,1.2s						
CAN	**Canberra**	**48.09**	**132**	P	**P**	**12 15 49.2**	**-0.3**
CAN				IAmb	IAmb	12 15 51.1	
	comp=Z,29nm,1.2s						
KSRS	**Korea Array**	**48.13**	**23**	P	**P**	**12 15 49.5**	**-0.1**
	comp=Z,1.7nm,0.7s,baz=205,slow=8.3,SNR=5.1						
ARMA	**Armidale**	**48.20**	**125**	P	**P**	**12 15 52.4**	**+1.8**
ARMA				IAmb	IAmb	12 16 07.1	
	comp=Z,19nm,1.4s						
JHS	**Saijyo**	**48.31**	**29**	P	**P**	**12 15 50.0**	**-1.1**
JHS				IAmb	IAmb	12 15 52.9	
	comp=Z,19nm,0.9s						
JWT	**Wachi**	**49.68**	**31**	P	**P**	**12 16 00.3**	**-1.2**
JWT				IAmb	IAmb	12 16 28.9	
	comp=Z,34nm,1.5s						
MJAR	**Matsushiro Arr**	**52.10**	**32**	P	**P**	**12 16 18.2**	**-1.5**
	comp=Z,2.3nm,0.5s,baz=208,slow=7.2,SNR=8.2						
JSD	**Sado**	**53.26**	**31**	P	**P**	**12 16 26.7**	**-1.4**
JSD				IAmb	IAmb	12 16 28.4	
	comp=Z,11nm,0.8s						
SONM	**Songino Array**	**54.27**	**360**	P	**P**	**12 16 35.8**	**+0.4**
	comp=Z,0.9nm,0.5s,baz=170,slow=8.3,SNR=11						
SONM				ScP	**ScP**	**12 21 23.3**	**-0.9**
	comp=Z,1.5nm,0.7s,baz=169,slow=2.4,SNR=8.8						
SONM	**Songino Array**	**54.27**	**360**	P	**P**	**12 16 34.2**	**-1.2**
ULN	**Ulaanbaatar**	**54.30**	**0**	P	**P**	**12 16 34.7**	**-1.0**
JMM	**Marumori**	**54.47**	**33**	P	**P**	**12 16 36.1**	**-0.8**
USRK	**Ussuriysk Ar.**	**55.51**	**22**	P	**P**	**12 16 44.1**	**-0.1**
	comp=Z,5.5nm,0.5s,baz=206,slow=7.4,SNR=15						
SOCY	**Socotra**	**55.73**	**290**	P	**P**	**12 16 47.2**	**+0.7**
SOCY				IAmb	IAmb	12 16 50.6	
	comp=Z,5.8nm,1.0s						
JTM	**Tenmabayashi**	**56.76**	**31**	P	**P**	**12 16 51.1**	**-2.1**
AAK	**Ala-Archa**	**57.20**	**332**	P	**P**	**12 16 54.7**	**-1.8**
	comp=Z,0.9nm,0.6s,baz=128,slow=8.3,SNR=3.6						
AAK				PcP	**PcP**	**12 17 50.9**	**+1.4**
	comp=Z,2.8nm,0.6s,baz=180,slow=7.9,SNR=7.4						
AAK	**Ala-Archa**	**57.20**	**332**	IAmb	IAmb	12 16 55.2	
	comp=Z,1.2nm,0.6s						
FRU1	**Bishkek**	**57.27**	**332**	P	**P**	**12 16 54.9**	**-2.0**
MK31	**Makanchi Array**	**57.50**	**340**	P	**P**	**12 16 57.0**	**-1.3**
MK31				IAmb	IAmb	12 16 57.5	
	comp=Z,3.7nm,0.6s						
MKAR	**Makanchi Array**	**57.50**	**340**	P	**P**	**12 16 56.8**	**-1.6**
	comp=Z,5.6nm,0.5s,baz=145,slow=7.9,SNR=74						
MKAR				ScP	**ScP**	**12 21 38.9**	**+0.5**
	comp=Z,0.6nm,0.8s,baz=148,slow=7.1,SNR=4.5						
MKAR	**Makanchi Array**	**57.50**	**340**	P	**P**	**12 16 57.0**	**-1.4**
UOSS	**Minazif**	**58.39**	**305**	P	**P**	**12 17 03.8**	**-1.2**
ERM	**Erimo**	**58.73**	**31**	P	**P**	**12 17 06.4**	**-0.5**
OPO	**Ambohidratompo**	**59.11**	**252**	P	**P**	**12 17 12.4**	**+2.1**
	comp=Z,15nm,0.6s,baz=77,slow=5.1,SNR=34						
CASY	**Casey**	**59.57**	**178**	P	**P**	**12 17 13.0**	**+0.6**
CASY				IAmb	IAmb	12 17 13.4	
	comp=Z,7.0nm,0.7s						
VOI	**Vohitsoka**	**59.73**	**249**	P	**P**	**12 17 16.5**	**+2.1**
KLR	**Kul'dur**	**59.79**	**19**	P	**P**	**12 17 13.6**	**-0.5**
	comp=Z,5.2nm,0.6s,baz=218,slow=4.5,SNR=19						
ASAJ	**Asahikawa**	**59.99**	**29**	P	**P**	**12 17 14.9**	**-0.6**
	comp=Z,4.7nm,0.6s,baz=244,slow=7.4,SNR=13						
JKA	**Kamikawa-asahi**	**59.99**	**29**	P	**P**	**12 17 14.9**	**-0.6**
JKA	**Kamikawa-asahi**	**59.99**	**29**	IAmb	IAmb	12 17 17.4	
	comp=Z,13nm,1.3s						
KURBB	**Kurchatov Arra**	**62.07**	**340**	P	**P**	**12 17 28.1**	**-1.3**
	comp=Z,3.7nm,0.6s,baz=152,slow=6.3,SNR=36						
KURK	**Kurchatov**	**62.12**	**340**	P	**P**	**12 17 28.5**	**-1.3**
KURK				IAmb	IAmb	12 17 29.2	
	comp=Z,4.7nm,0.8s						
ZALV	**Zalesovo Beam**	**63.16**	**346**	P	**P**	**12 17 34.3**	**-2.4**
	comp=Z,1.4nm,0.3s,baz=154,slow=6.9,SNR=7.5						
ZALV	**Zalesovo Beam**	**63.16**	**346**	P	**P**	**12 17 35.0**	**-1.6**
WHZ	**Wether Hill Ro**	**65.34**	**138**	P	**P**	**12 17 51.0**	**-0.1**
RPZ	**Rata Peaks**	**66.91**	**135**	P	**P**	**12 18 02.1**	**+0.8**
BVAR	**Borovoye Array**	**66.98**	**337**	P	**P**	**12 17 59.8**	**-1.6**
	comp=Z,4.4nm,0.5s,baz=185,slow=14,SNR=20						
BRVK	**Borovoye**	**67.05**	**337**	P	**P**	**12 18 00.6**	**-1.2**
BRVK				IAmb	IAmb	12 18 01.0	
	comp=Z,5.4nm,0.5s						
OXZ	**Oxford**	**67.52**	**134**	P	**P**	**12 18 05.1**	**0.0**
MAW	**Mawson**	**67.62**	**197**	P	**P**	**12 18 06.7**	**+1.6**
	comp=Z,17nm,0.5s,baz=69,slow=5.9,SNR=32						
MAW	**Mawson**	**67.62**	**197**	P	**P**	**12 18 06.8**	**+1.6**
MAW				IAmb	IAmb	12 18 07.2	
	comp=Z,3.8nm,0.6s						
KIBK	**Kibwezi**	**68.62**	**270**	P	**P**	**12 18 13.5**	**+0.9**
KIBK				IAmb	IAmb	12 18 15.0	
	comp=Z,6.3nm,0.8s						
ABKAR	**Akbulak array**	**69.02**	**329**	P	**P**	**12 18 13.0**	**-1.3**
KMBO	**Kilima Mbogo**	**69.54**	**271**	P	**P**	**12 18 19.8**	**+1.3**
	comp=Z,1.7nm,0.4s,baz=63,slow=9.8,SNR=6.3						
KMBO	**Kilima Mbogo**	**69.54**	**271**	P	**P**	**12 18 18.9**	**+0.4**
URZ	**Urewera**	**70.46**	**128**	P	**P**	**12 18 24.1**	**+0.7**
	comp=Z,5.7nm,0.7s,baz=302,slow=23,SNR=1.6						
URZ	**Urewera**	**70.46**	**128**	IAmb	IAmb	12 18 28.2	
	comp=Z,34nm,1.4s						
YAK	**Yakutsk**	**70.75**	**11**	P	**P**	**12 18 22.9**	**-1.6**
	comp=Z,4.6nm,0.4s,baz=22,slow=2.0,SNR=5.0						
YAK	**Yakutsk**	**70.75**	**11**	P	**P**	**12 18 23.1**	**-1.4**
YAK				IAmb	IAmb	12 18 24.0	
	comp=Z,15nm,0.8s						
LODK	**Lodwar**	**72.00**	**276**	P	**P**	**12 18 32.5**	**-0.6**
PETK	**Petropavlovsk-**	**73.41**	**29**	P	**P**	**12 18 39.6**	**-1.0**
	comp=Z,2.0nm,0.5s,baz=212,slow=4.7,SNR=12						
VNDA	**Vanda**	**76.33**	**169**	P	**P**	**12 18 58.0**	**+1.0**
	comp=Z,4.0nm,0.4s,baz=319,slow=6.5,SNR=57						
VNDA	**Vanda**	**76.33**	**169**	P	**P**	**12 18 57.8**	**+0.8**
VNDA				IAmb	IAmb	12 18 59.0	
	comp=Z,17nm,1.4s						
KVAR	**Kislovodsk Arr**	**76.49**	**318**	LR	LR	12 57 08.9	
	comp=Z,285nm,19.7s,baz=93,slow=39						
ASF	**Jabal al Asfar**	**76.79**	**305**	P	**P**	**12 19 02.5**	**+1.9**
	comp=Z,4.8nm,0.7s,baz=120,slow=3.8,SNR=6.2						
NRIK	**Noril'sk**	**77.00**	**353**	P	**P**	**12 18 59.4**	**-1.4**
	comp=Z,2.4nm,0.4s,baz=158,slow=4.9,SNR=2.4						
LSZ	**Lusaka**	**77.31**	**256**	P	**P**	**12 19 05.3**	**+1.5**
LSZ				IAmb	IAmb	12 19 06.2	
	comp=Z,7.8nm,0.9s						
SBA	**Scott Base**	**77.41**	**169**	P	**P**	**12 19 05.2**	**+2.2**
SBA				IAmb	IAmb	12 19 08.9	
	comp=Z,27nm,1.3s						
MMAI	**Mount Meron Ar**	**78.24**	**306**	P	**P**	**12 19 10.9**	**+2.3**
	comp=Z,1.9nm,0.4s,baz=95,slow=7.0,SNR=5.4						
LBTB	**Lobatse**	**79.25**	**246**	P	**P**	**12 19 15.4**	**+1.1**
LBTB				IAmb	IAmb	12 19 16.1	
	comp=Z,10nm,0.8s						
BOSA	**Boshof**	**79.42**	**242**	P	**P**	**12 19 16.4**	**+1.1**
	comp=Z,2.0nm,0.4s,baz=101,slow=4.2,SNR=9.0						
BOSA				LR	LR	12 50 48.6	
	comp=Z,29nm,18.5s,baz=190,slow=33						
KIRV	**Kirov**	**79.50**	**333**	P	**P**	**12 19 14.3**	**-0.4**
	comp=Z,13nm,0.6s,baz=94,slow=1.4,SNR=3.8						
KIRV				LR	LR	12 59 32.6	
	comp=Z,40nm,18.6s,baz=130,slow=39						
TIXI	**Tiksi**	**79.50**	**7**	P	**P**	**12 19 13.0**	**-1.5**
	comp=Z,2.7nm,0.7s,baz=158,slow=2.1,SNR=16						
TIXI	**Tiksi**	**79.50**	**7**	P	**P**	**12 19 13.1**	**-1.5**
BR131	**Keskin Array S**	**81.45**	**312**	P	**P**	**12 19 25.0**	**-0.8**
BRTR	**Keskin Array B**	**81.45**	**312**	P	**P**	**12 19 25.9**	**+0.1**
	comp=Z,4.3nm,0.8s,baz=138,slow=7.0,SNR=12						
BRTR	**Keskin Array B**	**81.45**	**312**	P	**P**	**12 19 25.4**	**-0.4**
QSPA	**South Pole Qui**	**83.32**	**180**	P	**P**	**12 19 34.9**	**-0.1**
QSPA				IAmb	IAmb	12 19 36.8	
	comp=Z,17nm,1.2s						
IDI	**Anoyia**	**87.24**	**306**	LR	LR	13 05 31.9	
	comp=Z,7.8nm,18.2s,baz=270,slow=40						
AKASG	**Malin Array Be**	**87.30**	**322**	P	**P**	**12 19 54.5**	**-0.4**
	comp=Z,3.5nm,0.6s,baz=88,slow=4.1,SNR=8.9						
VRI	**Vrincioaia**	**87.86**	**316**	⇑P	**P**	**12 19 59.1**	**+1.4**
PLOR	**Plostina**	**87.91**	**316**	⇑P	**P**	**12 19 59.2**	**+1.3**
MLR	**Muntele Rosu**	**88.33**	**316**	⇑P	**P**	**12 20 01.3**	**+1.3**
MLR	**Muntele Rosu**	**88.33**	**316**	P	**P**	**12 20 01.1**	**+1.1**
	comp=Z,4.2nm,0.5s,baz=139,slow=14,SNR=5.1						
MLR	**Muntele Rosu**	**88.33**	**316**	P	**P**	**12 20 00.9**	**+0.8**
MLR				IAmb	IAmb	12 20 04.9	
	comp=Z,18nm,1.4s						
VOIR		**88.93**	**316**	⇑P	**P**	**12 20 04.9**	**+2.1**
SNAA	**Sanae**	**89.78**	**197**	P	**P**	**12 20 08.1**	**+1.8**
SNAA	**Sanae**	**89.78**	**197**	P	**P**	**12 20 07.2**	**+0.9**
SNAA				IAmb	IAmb	12 20 09.3	
	comp=Z,13nm,1.1s						
FINES	**FINESS Array B**	**91.38**	**332**	P	**P**	**12 20 13.4**	**-0.3**
	comp=Z,2.2nm,0.8s,baz=116,slow=4.4,SNR=4.5						
VNA2	**Neumayer--Watz**	**91.42**	**197**	P	**P**	**12 20 15.6**	**+1.7**
	baz=96,slow=3.9						
VNA1	**Neumayer--Stat**	**91.80**	**198**	P	**P**	**12 20 17.4**	**+1.9**
ARCES	**ARCESS Array B**	**93.15**	**340**	P	**P**	**12 20 21.2**	**-0.6**
	comp=Z,2.2nm,0.8s,baz=290,slow=7.6,SNR=3.7						
ARCES				LR	LR	13 08 23.9	
	comp=Z,56nm,18.5s,baz=290,slow=39						
PDAR	**Pinedale Array**	**131.85**	**36**	PKP	**PKiKP**	**12 26 22.7**	**+0.4**
	comp=Z,0.4nm,0.8s,baz=64,slow=3.4,SNR=3.9						
TXAR	**Lajitas Array**	**143.50**	**48**	PKP	PKPbc	12 26 41.0	+0.5
	comp=Z,0.8nm,0.8s,baz=314,slow=1.8,SNR=7.7						
CPUP	**Villa Florida**	**143.76**	**205**	PKP	**PKPdf**	**12 26 42.5**	**-0.8**
	comp=Z,5.6nm,0.3s,baz=145,slow=3.0,SNR=11						
BDFB	**Brasilia**	**146.62**	**228**	PKPbc	**PKPab**	**12 26 51.6**	**0.0**
	comp=Z,3.9nm,0.3s,baz=143,slow=3.8,SNR=6.9						
BDFB	**Brasilia**	**146.62**	**228**		**PKPab**	**12 26 51.4**	**-0.2**

ISC 12 12:26:10.2±1.2**, 48°.78N**±0°.05×**18°.11E**±0°.04**, h12**^{km}±10^{km}**,**
n6, σ0^{s}.**62**/11**, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOLL	**Kolacno**	**0.28**	**135**	*e*SG	**Sb**	**12 26 21.5**	**-0.3**
JAVC	**Velka Javorina**	**0.30**	**286**	*e*PG	**Pg**	**12 26 16.1**	**-0.3**
JAVC				*e*SG	**Sg**	**12 26 21.4**	**+0.9**
VYHS	**Vyhne**	**0.56**	**120**	*e*PG	**Pg**	**12 26 21.2**	**+0.1**
VYHS				*e*SG	**Sb**	**12 26 29.7**	**-0.2**
MODS	**Modra-Piesok**	**0.68**	**234**	*e*PG	**Pg**	**12 26 22.6**	**-0.8**
MODS				*e*SG	**Sb**	**12 26 33.7**	**+0.3**
MORC	**Moravsky Berou**	**1.07**	**340**	*e*PG	**Pg**	**12 26 30.1**	**-0.7**
MORC				*e*SG	**Sn**	**12 26 46.0**	**+0.2**
VRAC	**Vranov**	**1.13**	**299**	*e*PG	**Pb**	**12 26 31.6**	**-0.1**
VRAC				*e*SG	**Sn**	**12 26 47.9**	**+0.6**

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*TUL **12** 12:28:02.1±1.1, 36°.19N±0°.01×97°.37W±0°.01, h4^{km}±7^{km}, ML2.6, mb_Lg2.3/16(NEIC), Error ellipse: s-maj=1.7km s-min=1.5km az=56.0*

NEIC 12 12:28:02.2±0.8**, 36°.19N**±0°.01×**97°.38W**±0°.01**, h4**^{km}±7^{km}**,**
Error ellipse: s-maj=1.7km s-min=1.6km az=53.0,
Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK029	**Liberty Lake**	**0.40**	**189**	Pg	Pg	12 28 10.0	+0.1
OK029				Sg	Sg	12 28 15.4	+0.2
OK031	**S. Brethren Rd**	**0.50**	**119**	Pg	Pg	12 28 11.9	0.0
OK031				Sg	Sg	12 28 18.6	+0.3
QUOK	**Quay**	**0.55**	**92**	Pg	Pg	12 28 12.4	-0.3
QUOK				Sg	Sg	12 28 20.1	+0.3
OK030	**Cody Creek RV**	**0.55**	**119**		Pg	12 28 12.8	-0.1
OK030				Sg	Sg	12 28 20.5	+0.5
BCOK	**Bluff Creek, N**	**0.57**	**199**	Pg	Pg	12 28 13.0	-0.1
BCOK				IAmb_Lg		12 28 20.5	
	comp=Z,37nm,0.9s						
BCOK				Sg	Sg	12 28 20.9	+0.4
CROK	**Carrier**	**0.58**	**303**	Pg	Pg	12 28 13.4	+0.1
CROK				Sg	Sg	12 28 20.6	-0.2
BLOK	**Blackwell**	**0.58**	**13**	Pg	Pg	12 28 13.5	+0.1
BLOK				Sg	Sg	12 28 21.8	+0.9
GC02	**Grant County #**	**0.76**	**330**	Pg	Pg	12 28 16.8	0.0
GC02				Sg	Sg	12 28 27.3	+0.6
OKCFA	**Oklahoma City**	**0.78**	**184**	Pg	Pg	12 28 17.0	-0.1
OKCFA				Sg	Sg	12 28 27.7	+0.4
OKCSW	**OKLAHOMA CITY**	**0.79**	**183**		Pg	12 28 17.3	0.0
KAN13	**South Haven SW**	**0.82**	**355**	Pg	Pg	12 28 17.9	-0.1
KAN13				Sg	Sg	12 28 28.6	0.0
KAN14	**Manchester OK**	**0.89**	**329**	Pg	Pg	12 28 19.2	-0.1
KAN17	**Caldwell West**	**0.90**	**340**	Pg	Pg	12 28 19.4	-0.1
OK032	**Salt Plains WL**	**0.90**	**313**	Pg	Pg	12 28 19.4	-0.1
FNO	**Franklin**	**0.94**	**181**	Pg	Pg	12 28 19.8	-0.4
FNO				Sg	Sg	12 28 32.1	-0.2
KAN09	**Caldwell North**	**0.96**	**349**	Pg	Pg	12 28 20.4	-0.2
KAN05	**Bluff City Nor**	**0.99**	**337**	Sg	Sg	12 28 34.8	+0.6
KAN01	**Argonia South**	**1.00**	**343**	Pg	Pg	12 28 21.1	-0.4
KAN01				Sg	Sg	12 28 34.3	-0.3
T35A	**Sooner Cattle**	**1.00**	**44**	Pg	Pg	12 28 21.0	-0.5
KS20	**Mayfield South**	**1.04**	**352**		Pg	12 28 21.7	-0.6
KS20				Sg	Sg	12 28 36.0	+0.2
KAN10	**Anthony SW Sta**	**1.09**	**328**	Pg	Pg	12 28 22.8	-0.3
KAN10				Sg	Sb	12 28 37.8	-0.4
KAN08	**Anthony NE Sta**	**1.13**	**336**	Pg	Pg	12 28 23.7	-0.3
KAN16	**Harper SW Stat**	**1.17**	**332**	Pg	Pg	12 28 24.1	-0.5
KAN12	**Harper NE Stat**	**1.21**	**336**	Pg	Pg	12 28 24.8	-0.6
TUL1	**Leonard**	**1.32**	**102**	Pn	Pn	12 28 26.0	-1.4
U32A	**Winter Ranch,**	**1.32**	**279**	Pn	Pn	12 28 27.1	-0.4
X34A	**Smith Ranch, M**	**1.63**	**193**		Pb	12 28 32.3	-0.5
X34A				IAmb_Lg		12 28 55.3	
	comp=Z,19nm,0.8s						
WMOK	**Wichita Mounta**	**1.85**	**219**		Pn	12 28 34.7	+0.1
WMOK				IAmb_Lg		12 29 00.3	
	comp=Z,15nm,0.8s						
LOOK	**Love County**	**2.20**	**176**	Pn	Pn	12 28 40.4	+0.8
X37A	**Clayton**	**2.29**	**134**	Pn	Pn	12 28 41.2	+0.4
R32A	**Long Quarter,**	**2.46**	**335**	Pn	Pn	12 28 43.9	+0.7
R32A				IAmb_Lg		12 29 22.5	
	comp=Z,10nm,0.8s						
W39A	**Magazine**	**3.09**	**108**	IAmb_Lg		12 29 41.4	
	comp=Z,11nm,0.9s						
MIAR	**Mount Ida**	**3.52**	**117**	Pn	Pn	12 28 58.1	+0.5
U40A	**Yellville**	**3.66**	**86**	Pn	Pn	12 28 59.2	-0.5
AMTX	**Amarillo**	**3.74**	**251**	IAmb_Lg		12 30 09.2	
	comp=Z,11nm,1.0s						
MGMO	**Mountain Grove**	**4.22**	**75**	IAmb_Lg		12 30 13.9	
	comp=Z,11nm,1.1s						

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*IDC **12** 12:47:23.7±1.2, 34°.89N×59°.75E, h0^{km}, mb3.6/7, mb1 3.8/10, mb1mx3.5/46, mbtmp3.6/10, ML3.4/3, MS3.5/1, Ms1 3.5/1, ms1mx2.3/35, Error ellipse: s-maj=22.7km s-min=18.6km az=65.0*

*TEH **12** 12:47:24.3, 35°.02N×59°.76E, h8^{km}, ML3.7*

*THR **12** 12:47:25.8±0.5, 35°.03N×59°.72E, h18^{km}±5^{km}, ML3.9*

ISC 12 12:47:24.6±0.6**, 35°.04N**±0°.02×**59°.75E**±0°.04**, h10**^{km}**, n53,**
σ**1**^{s}.**76**/54**, mb3.7**/5**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBJM	**Torbat-e-JAM**	**0.53**	**64**	*e*Pg	**Pg**	**12 47 35.2**	**+0.3**
TBJM				*e*Sg	**Sb**	**12 47 43.0**	**-0.8**
JRKH	**Jarkhoshk**	**0.99**	**29**	*e*Pg	**Pg**	**12 47 43.8**	**0.0**
JRKH				*e*		12 48 03.1	
	comp=Z,27µm,0.4s						
IMOG	**Moghan**	**1.12**	**343**	*e*Pg	**Pn**	**12 47 47.0**	**+0.4**
IMYA	**Miami**	**1.33**	**12**	*e*Pg	**Pn**	**12 47 49.5**	**+0.1**
SHRT	**Shahrakht**	**1.46**	**162**	*e*Pg	**Pg**	**12 47 52.9**	**+0.2**
SHRT				*e*Sg	**Sg**	**12 48 12.4**	**+0.8**
SHRT				IAML		12 48 15.7	
	comp=E,2µm,0.3s						
SHRT				IAML		12 48 17.0	
	comp=N,2µm,0.3s						
SHRT	**Shahrakht**	**1.46**	**162**	*e*Pg	**Pg**	**12 47 52.9**	**+0.2**
IPAY	**Payeh**	**1.54**	**337**	*e*Pg	**Pb**	**12 47 53.7**	**+0.4**
IPAY				*e*		12 48 18.7	

	comp=Z,7µm,0.6s						
AFRZ	Afriz	1.72	201	*e*Pg	Pg	12 47 56.7	-1.0
AFRZ				*e*		12 48 23.4	
	comp=Z,14µm,0.4s						
IKRD	Kardeh	1.74	354	*e*Pn	Pb	12 47 56.4	-0.5
IKRD				*e*		12 48 00.5	
	comp=Z,9µm,0.8s						
IAKL	Akhelmad	1.76	333	*e*Pn	Pb	12 47 57.3	+0.2
IAKL				*e*		12 48 02.8	
	comp=Z,4µm,0.2s						
IMON	Monand	1.84	182	*e*Pg	Pb	12 47 58.5	-0.1
SBZV	Sabzevar	2.20	308	*e*Pn	Pb	12 48 04.1	-0.5
ITEG	Tejag	2.29	202	*e*		12 48 12.1	
	comp=Z,5µm,0.3s						
ITEG				*e*Pn	Pb	12 48 04.5	-1.7
IDAH	Dahanechah	2.30	178	*e*Pn	Pb	12 48 04.4	-1.9
IDAH				*e*		12 48 41.3	
	comp=Z,7µm,0.4s						
ISFR	Sfrayin	2.46	325	*e*		12 48 15.3	
	comp=Z,2µm,0.4s						
ISFR				*e*Pn	Pb	12 48 07.5	-1.6
IEMG	Emamgholi	2.53	340	*e*		12 48 50.0	
	comp=Z,2µm,0.5s						
IEMG				*e*Pn	Pb	12 48 09.0	-1.3
TABS	Tabas	2.58	238	*e*Pn	Pb	12 48 08.5	-2.6
TABS				*e*Sg	Sg	12 48 46.0	-1.6
TABS				IAML		12 48 54.9	
	comp=N,296nm,0.6s						
TABS	Tabas	2.58	238	*e*Pn	Pb	12 48 08.5	-2.6
TKDS	Koohdasht(Taba	2.60	238	*e*Pn	Pn	12 48 08.6	+1.8
IKOO	Kooshah	2.68	194	*e*		12 48 50.3	
	comp=Z,2µm,0.5s						
IKOO				*e*Pn	Pn	12 48 09.6	+1.5
TNSJ	Nastanj	2.81	248	*e*Pn	Pn	12 48 11.5	+1.8
BSRN	Basiran	3.11	190	*e*Pn	Pn	12 48 15.9	+2.0
BSRN	Basiran	3.11	190	*e*Pn	Pn	12 48 15.9	+2.0
GEYT	Alibeck	3.17	336	Pn	Pb	12 48 18.0	-3.1
	comp=Z,1.5nm,0.3s,baz=165,slow=18,SNR=7.9						
GEYT				Lg	Lg	12 49 08.9	
	comp=Z,1.4nm,0.3s,baz=182,slow=39,SNR=2.3						
SHRO	Shahrood	3.19	288	*e*Pn	Pn	12 48 16.7	+1.7
SHRO	Shahrood	3.19	288	*e*Pn	Pn	12 48 16.7	+1.7
TPRV	Parvadeh(Tabas	3.24	233	*e*Pn	Pn	12 48 17.2	+1.6
BJRD	Bojnurd	3.26	325	*e*Pn	Pn	12 48 18.4	+2.5
BJRD	Bojnurd	3.26	325	*e*Pn	Pn	12 48 18.4	+2.5
NHDN	Nehbandan	3.65	176	*e*Pn	Pn	12 48 23.1	+1.9
MRVT	Maraveh tapeh	3.94	313	*e*Pn	Pn	12 48 27.5	+2.2
MRVT	Maraveh tapeh	3.94	313	*e*Pn	Pn	12 48 27.5	+2.2
IBAF	Bafgh	4.91	227	*e*Pn	Pn	12 48 40.9	+2.3
IBAF				*e*		12 49 07.2	
	comp=Z,771nm,0.5s						
YZKH	Yazd	5.05	240	*e*Pn	Pn	12 48 42.7	+2.2
YZKH				IAML		12 50 28.1	
	comp=E,52nm,0.7s						
YZKH	Yazd	5.05	240	*e*Pn	Pn	12 48 42.7	+2.2
ANAR	Anarak	5.33	251	*e*Pn	Pn	12 48 46.0	+1.7
KHGB	Koh Gabri	5.41	212	*e*Pn	Pn	12 48 46.1	+0.6
IMEH	Mehriz	5.64	231	*e*Pn	Pn	12 48 50.5	+1.8
IFIR	Firoozkooh	5.75	278	*e*Pn	Pn	12 48 52.1	+1.8
NASN	Na'in	6.19	251	*e*Pn	Pn	12 48 58.2	+1.8
NASN	Na'in	6.19	251	*e*Pn	Pn	12 48 58.2	+1.8
ISFB	Sefidab	6.22	266	*e*Pn	Pn	12 48 58.5	+1.9
KRSH	Karshahi	6.38	263	*e*Pn	Pn	12 49 00.3	+1.5
AAK	Ala-Archa	13.76	52	Pn	Pn	12 50 39.6	-0.2
	comp=E,0.2nm,0.3s,baz=230,slow=9.9,SNR=3.8						
AAK				Sn	Sn	12 53 07.6	-5.1
	comp=E,0.1nm,0.3s,baz=9.4,slow=22,SNR=1.9						
BVAR	Borovoye Array	19.50	20	P	Pn	12 51 53.9	+0.9
	comp=E,0.4nm,0.3s,baz=208,slow=21,SNR=9.7						
MKAR	Makanchi Array	20.61	48	P	Pn	12 52 05.1	-1.0
	comp=E,0.4nm,0.6s,baz=243,slow=9.5,SNR=2.8						
KURBB	Kurchatov Arra	20.70	35	P	Pn	12 52 06.6	-0.5
	comp=E,0.2nm,0.4s,baz=233,slow=10,SNR=3.7						
ZALV	Zalesovo Beam	25.79	35	P	P	12 52 56.9	+1.3
	comp=E,0.5nm,0.3s,baz=247,slow=7.4,SNR=1.6						
FINES	FINESS Array B	33.97	332	LR	LR	13 08 56.4	
	comp=E,71nm,18.8s,baz=310,slow=38						
CMAR	Chiang Mai Arr	38.42	105	P	P	12 54 47.9	+1.4
	comp=E,0.9nm,0.6s,baz=302,slow=8.1,SNR=6.9						
TORD	Torodi Ar. Bea	56.49	262	P	P	12 57 07.2	+0.1
	comp=E,0.7nm,0.9s,baz=48,slow=6.2,SNR=3.6						
WRA	Warramunga Arr	89.35	115	P	P	13 00 21.4	-0.2
	comp=E,0.6nm,0.9s,baz=288,slow=3.1,SNR=4.8						
ASAR	Alice Springs	91.30	118	P	P	13 00 31.0	+0.4
	comp=E,0.4nm,1.0s,baz=309,slow=4.7,SNR=2.7						

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*SSNC **12** 12:54:51.1±1.0, 19°.68N×73°.60W, h4^{km}±4^{km}, MD3.2, ML2.7, MW2.7*
*OSPL **12** 12:54:52.7±0.5, 19°.87N×73°.57W, h24^{km}±8^{km}, ML2.4*
ISC 12 12:54:48.6±1.8**, 20°.1N**±0°.2×**73°.51W**±0°.07**, h85**^{km}±16^{km}**,**
n12, σ2^{s}04/18**, 1D, Haiti region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASC	Masc	0.68	273	*i* P	Pn	12 55 04.8	+0.3
MASC				*e*S	Sn	12 55 14.6	-1.7
MASC				IAML		12 55 15.2	
	comp=E,157nm,0.1s						
MASC				IAML		12 55 16.5	
	comp=N,117nm,0.1s						
MOAC	Moa	1.46	291	*e*P	Pn	12 55 17.3	+3.7
MOAC				*e*S	Sn	12 55 36.8	+4.3
MOAC				IAML		12 55 40.6	
	comp=E,101nm,0.3s						
MOAC				IAML		12 55 41.1	
	comp=N,84nm,0.1s						
GTBY	Guantanamo Bay	1.52	262	*e*P	Pn	12 55 15.1	+0.6
GTBY				*e*S	Sn	12 55 32.7	-1.3
GTBY	Guantanamo Bay	1.52	262	*i* P	Pn	12 55 16.1	+1.6
GTBY				*e*S	Sn	12 55 33.1	-0.9
GTBY				IAML		12 55 38.4	
	comp=Z,28nm,0.6s						
GTMO	Guantanamo	1.54	268	*e*P	Pn	12 55 14.9	+0.3
GTMO				*e*S	Sn	12 55 32.1	-2.2
GTMO				IAML		12 55 36.5	
	comp=N,2µm,0.2s						
GTMO				IAML		12 55 40.4	
	comp=E,1µm,0.2s						
PAPH	Port-au-Prince	1.97	144	*i* P	Pn	12 55 20.7	+0.4
PAPH				IAML		12 55 44.9	
	comp=Z,29nm,0.5s						
RCC	Rio Carpintero	2.06	266	*e*P	Pn	12 55 22.8	+1.3
RCC				*e*S	Sn	12 55 46.9	+0.3
RCC				IAML		12 55 53.2	
	comp=N,26nm,0.3s						
RCC				IAML		12 55 53.8	
	comp=E,24nm,0.2s						
SDDR	Presa de Saban	2.39	118	*e*P	Pn	12 55 27.7	+1.8
SDDR				*e*S	Sn	12 55 53.5	-0.9
SDDR	Presa de Saban	2.39	118	*i* P	Pn	12 55 27.9	+2.0
SDDR				*e*S	Sn	12 55 54.4	-0.1
SDDR				IAML		12 55 55.0	
	comp=Z,35nm,0.3s						
LONE2	Loma La Sidra	2.48	129	*i* P	Pn	12 55 29.1	+1.8
LONE2				IAML		12 56 01.8	
	comp=Z,29nm,0.7s						
LMGC	Las Mercedes	3.29	269	*e*P	Pn	12 55 40.2	+2.3
LMGC				*e*S	Sn	12 56 16.0	0.0
LMGC				IAML		12 56 21.4	
	comp=E,18nm,0.1s						
LMGC				IAML		12 56 21.8	
	comp=N,15nm,0.1s						
CCCC	Cccc	4.12	286	⇓*e*P	Pn	12 55 48.3	-1.0
CCCC				*e*S	Sn	12 56 32.2	-4.2
CCCC				IAML		12 56 34.2	
	comp=N,2.6nm,0.1s						
CCCC				IAML		12 56 35.8	
	comp=E,2.4nm,0.1s						

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*BJI **12** 12:58:30.6±0.0, 16°.22N×147°.82E, h24^{km}, mB5.0/22, mb4.4/34, Ms4.4/5, Ms7 3.9/5*
*NEIC **12** 12:58:35.0±2.1, 15°.95N±0°.08×147°.59E±0°.09, h34^{km}±4^{km}, mb4.7/62, Error ellipse: s-maj=13.3km s-min=10.6km az=135.0*
*IDC **12** 12:58:35.8±2.9, 16°.02N×147°.48E, h46^{km}±28^{km}, mb4.0/20, mb1 4.1/22, mb1mx4.0/42, mbtmp4.3/22, ML4.4/2, MS3.6/12, Ms1 3.6/12, ms1mx3.3/33, Error ellipse: s-maj=23.5km s-min=12.1km az=94.0*
ISC 12 12:58:35.3±0.6**, 16°.04N**±0°.06×**147°.41E**±0°.09**, h38**^{km}**, n121,**
σ**1^{s}01**/111**, mb4.7**/67**, MS3.7**/13**, 1D, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	3.46	226	P	Pn	12 59 27.7	+1.0
	28nm,0.3s,baz=144,slow=2.6,SNR=18						
GUMO				S	Sn	13 00 05.1	-1.4
	94nm,0.3s,baz=163,slow=22,SNR=11						
GUMO				LR	LR	13 00 58.2	
	comp=Z,395nm,19.9s,baz=123,slow=41						
GUMO	Guam	3.46	226	Pn	Pn	12 59 27.9	+1.2
GUMO					Sn	13 00 05.7	-0.8
JCJ	Chichijima	12.03	337	P	Pn	13 01 25.2	+1.0
	3.5nm,0.3s,baz=353,slow=23,SNR=1.4						
JCJ				S	Sn	13 03 31.4	-5.7
	2.4nm,0.3s,baz=295,slow=20,SNR=1.6						
PATS	Pohnpei	14.05	129		Pn	13 01 45.5	-6.4
JGF	Kuroka	21.45	337	P	P	13 03 22.3	+1.9
JWT	Wachi	21.97	333	P	P	13 03 27.6	+1.7
JWT				IAmb	IAmb	13 03 49.6	
	comp=Z,41nm,1.5s						
MJAR	Matsushiro Arr	22.00	340	P	P	13 03 25.4	-0.8
	comp=Z,0.7nm,0.3s,baz=303,slow=44,SNR=5.0						
MJAR	Matsushiro Arr	22.00	340	P	P	13 03 26.6	+0.4
MAJO	Matsushiro	22.00	340	P	P	13 03 26.3	0.0
MAT	Matsushiro	22.00	340	P	P	13 03 25.2	-1.1
JMM	Marumori	22.51	346	P	P	13 03 31.6	-0.2
JMM				IAmb	IAmb	13 03 58.6	
	comp=Z,27nm,1.0s						
SIJI	Sorong	23.16	225	P	P	13 03 38.2	-0.5
	comp=Z,7.0nm,0.7s,baz=126,slow=23,SNR=1.8						
JSD	Sado	23.35	342	P	P	13 03 40.0	-0.3
JSD				IAmb	IAmb	13 03 50.6	
	comp=Z,42nm,1.1s						
FAKI	Fak Fak	24.08	220	P	P	13 03 47.0	-0.4
JTM	Tenmabayashi	25.27	349	P	P	13 03 58.4	+0.4
JTM				IAmb	IAmb	13 04 20.6	
	comp=Z,42nm,1.2s						
PMG	Port Moresby	25.28	181	P	P	13 03 56.9	-1.4
	comp=Z,5.8nm,0.5s,baz=83,slow=6.6,SNR=3.2						
PMG	Port Moresby	25.28	181	IAmb	IAmb	13 04 12.3	
	comp=Z,19nm,0.7s						
YHNB	Yeheng	25.84	294	P	P	13 04 04.0	+0.5
KSRS	Korea Array	27.42	325	P	P	13 04 17.0	-0.5
	comp=Z,1.1nm,0.6s,baz=137,slow=9.5,SNR=4.0						
KSRS				LR	LR	13 14 33.4	
	comp=Z,166nm,20.1s,baz=135,slow=35						
JKA	Kamikawa-asahi	28.28	353	P	P	13 04 26.1	+1.0
JKA	Kamikawa-asahi	28.28	353	IAmb	IAmb	13 04 32.9	
	comp=Z,16nm,1.0s						
ASAJ	Asahikawa	28.28	353	P	P	13 04 26.1	+1.0
	comp=Z,5.3nm,0.9s,baz=159,slow=8.6,SNR=5.0						
NJ2	Nanjing	30.44	307	*e*P	P	13 04 47.4	+3.1
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
WB0	Warramunga Arr	37.82	200	P	P	13 05 48.2	-0.2
PETK	Petropavlovsk-	37.86	10	LR	LR	13 19 53.6	
	comp=Z,63nm,20.1s,baz=210,slow=34						
WR0	Warramunga Arr	37.95	200	P	P	13 05 49.1	-0.3
WRAB	Tennant Creek	37.98	200	P	P	13 05 49.1	-0.6
WB2	Warramunga Arr	37.99	200	P	P	13 05 49.2	-0.7
WB2				IAmb	IAmb	13 06 13.3	
	comp=Z,9.0nm,0.9s						
WRA	Warramunga Arr	38.00	200	P	P	13 05 49.8	-0.1
	comp=Z,3.1nm,0.8s,baz=19,slow=6.5,SNR=32						
WRA	Warramunga Arr	38.00	200	P	P	13 05 48.9	-1.0
GYA	Guiyang	39.22	292	⇓P	P	13 06 01.2	+0.8
GYA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
HHC	Hu-ho-hao-te	39.63	316	*e*P	P	13 06 06.5	+2.9
HHC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,60nm,6.6s						
AS31	Alice Springs	41.61	199	P	P	13 06 19.4	-0.6
ASAR	Alice Springs	41.62	199	P	P	13 06 19.8	-0.2
	comp=Z,0.6nm,0.5s,baz=18,slow=11,SNR=18						
ASAR				LR	LR	13 24 16.2	
	comp=Z,36nm,21.0s,baz=55,slow=37						
ASAR	Alice Springs	41.62	199	P	P	13 06 19.0	-0.9
CD2	Chengdu	42.41	298	P	P	13 06 26.9	+0.4
CD2				pmax	pmax		
	comp=Z,10.0nm,0.4s						
LZH	Lanzhou	43.50	306	*e*P	P	13 06 36.2	+0.8
LZH				pP	pP	13 06 40.7	-4.3
LZH				pmax	pmax		
	comp=Z,23nm,1.3s						
LZH				LR	LR		
	comp=Z,200nm,14.2s						
LZH				LR	LR		
	comp=Z,190nm,13.7s						
LZH				LR	LR		
	comp=Z,160nm,16.8s						
CHTO	Chiang Mai	46.22	281	P	P	13 06 57.1	+0.1
SONM	Songino Array	46.23	322	P	P	13 06 56.9	0.0
	comp=Z,1.8nm,0.9s,baz=125,slow=6.8,SNR=7.7						
SONM				LR	LR	13 26 27.3	
	comp=Z,107nm,19.6s,baz=155,slow=36						
CMAR	Chiang Mai Arr	46.25	280	P	P	13 06 58.2	+0.9
	comp=Z,4.5nm,0.6s,baz=73,slow=6.3,SNR=9.8						
CMAR				LR	LR	13 26 32.1	
	comp=Z,44nm,18.8s,baz=176,slow=36						
SEY	Seymchan	46.97	3	P	P	13 07 02.6	+0.4
	comp=Z,4.6nm,1.0s,baz=152,slow=3.1,SNR=4.6						
GTA	Gaotai	47.47	309	*e*P	P	13 07 08.9	+2.1
GTA				pP	sP	13 07 18.7	-1.9
GTA				sP	pwP	13 07 21.9	-0.4
GTA				pmax	pmax		
	comp=Z,2.0nm,1.5s						
GTA				pmax	pmax		
	comp=Z,120nm,5.5s						
GTA				LR	LR		
	comp=Z,73nm,16.4s						
GTA				LR	LR		
	comp=Z,110nm,17.1s						
GTA				LR	LR		
	comp=Z,120nm,17.8s						
STKA	Stephens Creek	47.97	187	P	P	13 07 10.2	-0.2
	comp=Z,0.5nm,0.4s,baz=26,slow=14,SNR=1.4						
GSI	Gunungsitoli	51.23	259	P	P	13 07 34.9	-0.7
LSA	Lhasa	53.13	295	P	P	13 07 50.7	+0.6
LSA				IAmb	IAmb	13 07 57.0	
	comp=Z,6.5nm,0.6s						
BILL	Bilibino	53.37	9	P	P	13 07 50.1	-0.5
TAPN	Taplejung	56.16	292	*e*P	P	13 08 12.3	+0.4
	comp=Z,4.4nm,0.4s						
ODAN	Odare	56.45	292	*e*P	P	13 08 13.9	-0.1
	comp=Z,4.8nm,0.5s						
RAMN	Ramite	57.16	292	*e*P	P	13 08 18.9	-0.1
	comp=Z,5.7nm,0.4s						
WMQ	Urumqi	57.29	312	*e*P	P	13 08 20.3	+0.9
WMQ				pP	pP	13 08 26.1	-3.2
WMQ				sP	sP	13 08 30.1	-3.3
WMQ				pmax	pmax		
	comp=Z,30nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,100nm,4.3s						
JIRN	Jiri	57.49	293	*e*P	P	13 08 21.8	+0.3
	comp=Z,16nm,0.6s						
GUN	Gumba	57.76	293	*e*P	P	13 08 23.7	+0.3
	comp=Z,8.2nm,0.5s						
PKI	Pulchoki	58.19	293	*e*P	P	13 08 26.1	-0.3
	comp=Z,6.2nm,0.4s						
PKIN	Phulchoki	58.20	293	*e*P	P	13 08 26.1	-0.3
	comp=Z,4.3nm,0.3s						
KKN	Kakani	58.30	293	*e*P	P	13 08 26.8	-0.2
	comp=Z,9.3nm,0.8s						
GKN	Gorkha	58.86	293	*e*P	P	13 08 30.9	+0.1
	comp=Z,5.6nm,0.4s						
DANN	Dangsing	59.61	294	*e*P	P	13 08 36.1	-0.1
	comp=Z,32nm,0.6s						
KOLN	Koldanda	59.78	293	*e*P	P	13 08 37.6	+0.3
	comp=Z,15nm,0.9s						
PYUN	Piuthan	60.30	293	*e*P	P	13 08 41.1	+0.3
	comp=Z,16nm,0.9s						
ZALV	Zalesovo Beam	61.11	323	P	P	13 08 45.8	+0.2
	comp=Z,0.5nm,0.4s,baz=108,slow=9.5,SNR=2.5						
ZALV				LR	LR	13 35 12.3	
	comp=Z,47nm,20.8s,baz=122,slow=36						
MK31	Makanchi Array	61.48	315	P	P	13 08 47.9	-0.4
MKAR	Makanchi Array	61.48	315	P	P	13 08 48.3	0.0
	comp=Z,1.3nm,0.4s,baz=90,slow=7.9,SNR=19						
MKAR				LR	LR	13 37 24.8	
	comp=Z,27nm,18.7s,baz=143,slow=38						
MKAR	Makanchi Array	61.48	315	P	P	13 08 47.8	-0.5
MAKZ	Makanchi	61.70	315	P	P	13 08 49.6	-0.2
J20K	Nowinta River	62.14	25	P	P	13 08 53.2	+0.9
IMAR	Indian Mountai	62.99	23	P	P	13 08 57.8	-0.1
H21K	Melozitna Rive	63.22	24	IAmb	IAmb	13 09 01.6	
	comp=Z,7.3nm,0.9s						
KURK	Kurchatov	64.34	319	P	P	13 09 06.4	-0.7
H23K	Yukon River	64.55	24	P	P	13 09 09.2	+0.9
H23K				IAmb	IAmb	13 09 10.2	
	comp=Z,11nm,1.4s						
NRIK	Noril'sk	64.65	340	P	P	13 09 09.0	+0.1
	comp=Z,2.7nm,0.7s,baz=133,slow=7.3,SNR=4.6						
NRIK	Noril'sk	64.65	340	IAmb	IAmb	13 09 21.0	
	comp=Z,12nm,1.4s						
COLD	Coldfoot	64.76	22	P	P	13 09 10.5	+0.9
COLD				IAmb	IAmb	13 09 11.6	
	comp=Z,5.5nm,1.0s						
MDM	Murphy Dome	64.81	25	P	P	13 09 10.1	0.0
MDM				IAmb	IAmb	13 09 21.8	
	comp=Z,6.8nm,1.2s						
H24K	Noodor Dome	65.21	24	P	P	13 09 12.7	+0.1
H24K				IAmb	IAmb	13 09 14.6	
	comp=Z,7.8nm,1.1s						
ILAR	Eielson Array	65.31	25	P	P	13 09 12.1	-1.1
	comp=Z,2.7nm,0.9s,baz=259,slow=5.0,SNR=15						
TOLK	Toolik Lake Re	65.46	21	P	P	13 09 14.6	+0.4
TOLK				IAmb	IAmb	13 09 38.0	
	comp=Z,6.8nm,1.2s						
DOT	Dot Lake	66.24	27	P	P	13 09 19.5	+0.2
SCRK	Sand Creek	66.35	27	P	P	13 09 20.4	+0.3
SCRK				IAmb	IAmb	13 09 36.2	
	comp=Z,7.6nm,1.2s						
BMAR	Burnt Mountain	66.90	23	P	P	13 09 25.1	+1.6
M27K	Edge Creek, AK	66.98	29	P	P	13 09 24.5	+0.3
TABL	Table Mountain	67.03	31	P	P	13 09 24.6	0.0
L27K	Beaver Creek,	67.12	28	P	P	13 09 25.4	+0.5
L27K				IAmb	IAmb	13 09 28.6	
	comp=Z,7.9nm,1.2s						
BCAR	Beaver Creek A	67.14	28	P	P	13 09 25.7	+0.6
NIL	Nilore	68.26	300	P	P	13 09 31.8	-0.8
HYT	Haines Junctio	68.86	31	P	P	13 09 37.2	+1.2
BRVK	Borovoye	69.62	321	P	P	13 09 40.5	-0.2
BRVK				IAmb	IAmb	13 09 46.5	
	comp=Z,6.9nm,0.8s						
KK31	Karatay Array	69.72	310	P	P	13 09 39.9	-1.7
KK31				IAmb	IAmb	13 09 47.5	
	comp=Z,10nm,1.4s						
KKAR	Karatay Array	69.72	310	P	P	13 09 40.8	-0.7
KKAR				IAmb	IAmb	13 09 47.5	
	comp=Z,10nm,1.4s						
KKAR	Karatay Array	69.72	310	P	P	13 09 40.4	-1.2
GAR	Garm	70.16	306	P	P	13 09 44.6	+0.2
PPT	Papeete	70.49	116	LR	LR	13 32 39.7	
	comp=Z,58nm,20.4s,baz=313,slow=29						
CHGR	Chuyangaron	71.09	306	P	P	13 09 50.0	-0.1
INK	Inuvik	71.17	23	P	P	13 09 49.4	-0.4
	comp=Z,4.7nm,0.9s,baz=258,slow=7.6,SNR=7.8						
INK	Inuvik	71.17	23	IAmb	IAmb	13 09 51.0	
	comp=Z,7.5nm,1.0s						
A36M	Sachs Harbour	74.05	19	P	P	13 10 07.0	+0.1
ABKAR	Akbulak array	76.39	318	P	P	13 10 20.0	-0.8
ABKAR	Akbulak array	76.39	318	P	P	13 10 20.1	-0.7
AKTO	Aktyubinsk	77.43	319	LR	LR	13 46 10.1	
	comp=Z,34nm,18.7s,baz=54,slow=37						
HUMO	Hull Mountain	79.06	49	P	P	13 10 37.4	+1.5
HUMO				IAmb	IAmb	13 11 03.2	
	comp=Z,20nm,1.5s						
PINE	Pine Mountain	80.25	47	P	P	13 10 43.0	+0.5
PINE				IAmb	IAmb	13 10 44.4	
	comp=Z,10nm,0.9s						
KIRV	Kirov	80.57	328	LR	LR	13 48 23.5	
	comp=Z,29nm,18.4s,baz=51,slow=37						
NVAR	Mina Array Bea	83.48	52	P	P	13 10 59.7	0.0
	comp=Z,1.5nm,0.8s,baz=260,slow=6.3,SNR=13						
KLMR	Klimovskoe	84.56	332	P	P	13 11 02.8	-1.6
KLMR				AMP		13 11 13.3	
	comp=Z,9.0nm,1.1s						
HLID	Hailey	84.88	46	P	P	13 11 05.6	-1.0
HLID				IAmb	IAmb	13 11 08.1	
	comp=Z,5.5nm,1.2s						
ELK	Elko	85.12	49	P	P	13 11 07.7	-0.3
ELK				IAmb	IAmb	13 11 09.5	
	comp=Z,4.5nm,1.0s						
ARCES	ARCESS Array B	85.51	343	P	P	13 11 08.5	-0.5
	comp=Z,2.2nm,0.6s,baz=68,slow=6.7,SNR=7.8						
ARCES	ARCESS Array B	85.51	343	IAmb	IAmb	13 11 15.3	
	comp=Z,4.2nm,0.8s						
HVU	Hansel Valley	86.58	48	P	P	13 11 14.3	-0.8
HVU				IAmb	IAmb	13 11 16.8	
	comp=Z,5.4nm,1.0s						
YHL	Hebgen Lake	86.69	44	P	P	13 11 16.0	+0.2
YMR	Madison River	86.89	44	P	P	13 11 17.0	+0.3
YHH	Holmes Hill	86.93	44	P	P	13 11 17.4	+0.5
DUG	Dugway, Tooele	87.05	49	P	P	13 11 16.7	-0.7
DUG				IAmb	IAmb	13 11 18.7	
	comp=Z,4.2nm,0.9s						
HWUT	Hardware Ranch	87.49	47	P	P	13 11 19.4	-0.2
HWUT				IAmb	IAmb	13 11 20.8	
	comp=Z,6.9nm,1.1s						
RLMT	Red Lodge	87.87	44	P	P	13 11 21.2	-0.2
RLMT				IAmb	IAmb	13 11 29.3	
	comp=Z,8.4nm,1.5s						
PDAR	Pinedale Array	88.50	46	P	P	13 11 24.0	-0.4
	comp=Z,0.9nm,0.9s,baz=262,slow=1.0,SNR=3.6						
U15A	North Rim	88.64	53	IAmb	IAmb	13 11 27.0	
	comp=Z,3.3nm,0.9s						
KBZ	Khabaz	89.17	315	LR	LR	13 55 21.4	
	comp=Z,45nm,18.3s,baz=148,slow=38						
RDMU	Red Mountain	89.26	48	P	P	13 11 28.1	+0.1
RDMU				IAmb	IAmb	13 11 29.3	
	comp=Z,4.5nm,0.9s						
FINES	FINESS Array B	89.97	336	P	P	13 11 29.0	-1.6
	comp=Z,1.9nm,0.5s,baz=77,slow=4.7,SNR=14						
TORD	Torodi Ar. Bea	135.39	309	PKP	PKPdf	13 17 51.8	-0.4
	comp=Z,0.6nm,0.4s,baz=40,slow=2.5,SNR=4.5						
DBIC	Dimbokro	144.47	307	PKP	PKPab	13 18 06.6	-0.3
	comp=Z,2.6nm,0.4s,baz=51,slow=3.5,SNR=7.5						

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*ISK **12** 13:50:40.5, 38°.30N×42°.58E, h9^{km}, ML2.6/6*
*DDA **12** 13:50:41.3, 38°.25N×42°.55E, h7^{km}±3^{km}, ML2.2*
ISC 12 13:50:41.0±1.1**, 38°.28N**±0°.04×**42°.58E**±0°.02**, h10**^{km}±9^{km}**,**
n13, σ0^{s}57/23**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKDM	Akdamar-Van	0.32	82	PG	Pg	13 50 47.1	-0.4
AKDM				SG	Sg	13 50 52.2	+0.4
BLIS	Bitlis-Merkez	0.38	290	*i* P	Pg	13 50 48.4	-0.3
BLIS				*i* S	Sb	13 50 55.4	-0.7
BLIS				IAML		13 50 57.0	
	comp=N,216nm,0.7s						
BLIS				IAML		13 50 57.0	
	comp=E,211nm,0.9s						
GURO	Guroymak-BITLI	0.50	302	PG	Pg	13 50 50.7	-0.1
GURO				SG	Sg	13 50 58.2	+0.7
ADCV	BITLIS_Adilcev	0.54	13	*i* P	Pg	13 50 52.1	+0.5
ADCV				*i* S	Sb	13 51 00.9	+0.3
ADCV				IAML		13 51 01.0	
	comp=N,170nm,0.4s						
ADCV				IAML		13 51 01.0	
	comp=E,165nm,0.5s						
SRTM	Siirt_Merkez	0.59	241	*i* P	Pg	13 50 52.6	+0.1
SRTM				*i* S	Sb	13 51 01.2	-0.8
SRTM				IAML		13 51 06.0	
	comp=E,199nm,0.7s						
SRTM				IAML		13 51 07.0	
	comp=N,177nm,0.9s						
TVAN	Van	0.70	69	*i* P	Pg	13 50 53.6	-0.9
TVAN				*i* S	Sb	13 51 05.9	+0.7
SIRT	Sirnak	0.79	188	PG	Pg	13 50 56.4	+0.2
SVAN	Silvan-Diyarba	1.09	263	*i* P	Pb	13 51 01.7	-0.3
SVAN				*i* S	Sn	13 51 17.2	-0.4
SVAN	Silvan-Diyarba	1.09	263	PN	Pg	13 51 02.1	+0.1
SVAN				SN	Sn	13 51 17.7	+0.1
BTMN	Batman	1.10	250	*i* P	Pb	13 51 01.7	-0.5
BTMN				*i* S	Sg	13 51 17.0	+0.5
BTMN				IAML		13 51 18.0	
	comp=E,126nm,0.6s						
BTMN				IAML		13 51 20.0	
	comp=N,146nm,0.7s						
HAKT	HAKKARI	1.15	129	*i* P	Pb	13 51 02.6	-0.6
HAKT				*i* S	Sn	13 51 20.4	+1.0
AGRB	Hanur-Agry	1.33	14	PN	Pn	13 51 05.6	-0.3
MAZI	Mazidag	1.87	245	PN	Pn	13 51 13.7	+0.5

IDC **12** *13:54:29.7±6.0, 62°.50S×162°.89E, h0km, mb4.0/4, mb1 4.2/5, mb1mx3.8/35, mbtmp4.1/5, ML4.3/1, MS4.0/6, Ms1 3.9/6, ms1mx3.5/26, Error ellipse: s-maj=291.6km s-min=22.8km az=73.0*

ISC 12 13:54:28.6±5.1**, 62°.3S**±0°.5×**16°5E**±°**, h10km, n31, σ0s.59**/9**, mb4.0**/4**, MS3.9**/6**, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	15.36	182	Pn	Pn	13 58 05.1	+0.1
	1.1nm,0.3s,baz=8.1,slow=15,SNR=61						
VNDA				LR	LR	14 03 07.4	
	comp=Z,558nm,18.7s,baz=12,slow=34						
QSPA	South Pole Qui	27.83	180	P	P	14 00 18.0	+0.2
	4.3nm,1.0s,baz=6.6,slow=5.8,SNR=9.0						
STKA	Stephens Creek	33.83	323	P	P	14 01 11.6	+0.8
	2.5nm,0.8s,baz=168,slow=9.3,SNR=4.8						
MAW	Mawson	38.77	217	LR	LR	14 18 00.5	
	comp=Z,158nm,19.0s,baz=103,slow=37						
DZM	Mont Dzumac	40.18	3	LR	LR	14 18 14.0	
	comp=Z,379nm,18.5s,baz=306,slow=35						
H01W1	Cape Leeuwin H	41.60	287	T	T	14 47 06.4	
	baz=146,slow=76,SNR=192						
H01W2	Cape Leeuwin H	41.60	287	T	T	14 47 06.7	
	baz=146,slow=76,SNR=197						
H01W3	Cape Leeuwin H	41.62	287	T	T	14 47 07.6	
	baz=146,slow=76,SNR=196						
ASAR	Alice Springs	43.83	317	P	P	14 02 34.4	-0.3
	1.6nm,0.8s,baz=158,slow=8.0,SNR=14						
MSVF	Nonsavu	45.46	18	LR	LR	14 20 08.2	
	comp=Z,188nm,18.4s,baz=112,slow=34						
SNAA	Sanae	46.06	185	P	P	14 02 51.7	-0.2
VNA3	Neumayer Olymp	46.72	183	P	P	14 02 56.6	-0.3
VNA2	Neumayer--Watz	46.98	184	P	P	14 02 58.9	0.0
	baz=166,slow=6.4						
WRA	Warramunga Arr	47.19	320	P	P	14 03 00.2	-1.0
	1.2nm,1.1s,baz=161,slow=7.9,SNR=3.9						
VNA1	Neumayer--Stat	47.28	183	P	P	14 03 01.4	+0.1
TBI	Tubuai	49.63	60	eLR	LR	14 17 24.2	
	comp=Z,101nm,23.5s						
TBI	Tubuai	49.63	60	eT	T	14 56 07.1	
	21nm,0.3s						
PMG	Port Moresby	54.28	339	LR	LR	14 25 09.8	
	comp=Z,106nm,18.6s,baz=256,slow=34						
PAE	Paea	54.70	57	eT	T	15 02 28.0	
	2.2nm,0.3s						
PPT2	Papeete2	54.77	57	eT	T	15 02 22.4	
	3.4nm,0.3s						
VAH	Vaihoa	57.67	58	eT	T	15 06 09.8	
	33nm,0.3s						
H03S2	Juan Fernandez	71.54	128	T	T	15 24 33.0	
	baz=208,slow=74						
H03S1	Juan Fernandez	71.54	128	T	T	15 24 32.3	
	baz=208,slow=74						
H03S3	Juan Fernandez	71.55	128	T	T	15 24 34.3	
	baz=208,slow=74						
H03N3	Juan Fernandez	71.88	128	T	T	15 24 56.9	
	baz=213,slow=72						
H03N2	Juan Fernandez	71.89	128	T	T	15 24 48.5	
	baz=213,slow=72						
H03N1	Juan Fernandez	71.90	128	T	T	15 24 56.4	
	baz=213,slow=72						
BOSA	Boshof	83.77	215	LR	LR	14 42 54.5	
	comp=Z,37nm,18.8s,baz=184,slow=35						
H08S2	Diego Garcia H	84.31	265	T	T	15 40 40.9	
	baz=151,slow=76,SNR=13						
H08S1	Diego Carcia H	84.32	264	T	T	15 40 47.6	
	baz=151,slow=76,SNR=12						
H08S3	Diego Garcia H	84.33	265	T	T	15 40 47.5	
	baz=151,slow=76,SNR=18						

KRSC **12** *13:54:52.3±2.0, 51°.40N×158°.91E, h60km±20km, ML5.4*

BJI **12** *13:54:54.2±0.0, 52°.08N×158°.38E, h65km, mB4.7/12, mb4.6/20, Ms4.4/2, Ms7 4.0/2*

MOS **12** *13:54:54.7±1.1, 51°.49N×158°.64E, h71km, mb4.9/49, Error ellipse: s-maj=7.8km s-min=2.9km az=85.6*

MOS Felt (II-III) at Petropavlovsk-Kamchatskiy; (II) at Severo-Kuril'sk.

NEIC **12** *13:54:55.7±2.1, 51°.60N±0°.08×158°.5E±0°.1, h65km±6km, mb4.7/78, Error ellipse: s-maj=12.5km s-min=11.4km az=123.0*

IDC **12** *13:54:57.7±1.5, 51°.64N×158°.39E, h82km±13km, mb4.2/31, mb1 4.3/36, mb1mx4.2/61, mbtmp4.5/36, MS3.4/20, Ms1 3.4/20, ms1mx3.3/51, Error ellipse: s-maj=10.3km s-min=8.9km az=143.0*

ISC 12 13:54:55.9±0.6**, 51°.52N**±0°.04×**158°.64E**±0°.04**, h74km**±4km**, n399, σ1s.39**/425**, mb4.7**/128**, 24C-10D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDTR	Khodutka, Kamc	0.46	310	PN	Pn	13 55 07.5	-1.2
KDTR				S	Sn	13 55 16.2	-1.9
KDTR	Khodutka, Kamc	0.46	310	eP	Pn	13 55 07.5	-1.2
KDTR				eS	Sn	13 55 16.2	-1.9
RUS	Russkaya	0.92	355	PN	Pn	13 55 12.9	-0.7
RUS	Russkaya	0.92	355	eP	Pn	13 55 12.9	-0.7
ASAK	Asacha	0.98	332	PN	Pn	13 55 14.4	0.0
ASAK	Asacha	0.98	332	eP	Pn	13 55 14.4	0.0
MTVR	Mutnovka	1.00	344	PN	Pn	13 55 14.4	-0.4
MTVR	Mutnovka	1.00	344	i P	Pn	13 55 14.4	-0.4
GRL	Gorelyy	1.09	341	PN	Pn	13 55 15.9	0.0
GRL	Gorelyy	1.09	341	eP	Pn	13 55 15.9	0.0
PAU	Pauzhetka	1.15	268	PN	Pn	13 55 16.1	-0.3
PAU				S	Sn	13 55 32.3	+0.6
PAU	Pauzhetka	1.15	268	eP	Pn	13 55 16.1	-0.3
PAU				eS	Sn	13 55 32.3	+0.6
KRMR	Karymshinskiy	1.35	347	PN	Pn	13 55 19.3	+0.3
KRMR				S	Sn	13 55 37.4	+1.0
KRMR	Karymshinskiy	1.35	347	eP	Pn	13 55 19.3	+0.3
KRMR				eS	Sn	13 55 37.4	+1.0
MIPR	Malaya Ipel'ka	1.39	304	PN	Pn	13 55 19.9	+0.3
MIPR	Malaya Ipel'ka	1.39	304	eP	Pn	13 55 19.9	+0.3
PET	Petropavlovsk	1.50	0	cePN	Pn	13 55 20.6	-0.4
PET				pmax	pmax		
	comp=Z,3μm,0.7s						
PET	Petropavlovsk	1.50	0	eP	Pn	13 55 20.9	-0.1
PET	Petropavlovsk	1.50	0		Pn	13 55 20.3	-0.7
DALK	Dalny	1.51	3	PN	Pn	13 55 21.0	-0.1
DALK				S	Sn	13 55 40.2	0.0
DALK	Dalny	1.51	3	eP	Pn	13 55 21.0	-0.1
DALK				eS	Sn	13 55 40.2	0.0
APC	Apacha	1.68	328	PN	Pn	13 55 23.9	+0.6
APC				S	Sn	13 55 47.7	+3.7
APC	Apacha	1.68	328	eP	Pn	13 55 23.9	+0.6
APC				eS	Sn	13 55 47.7	+3.7
PEA0B	Petropavlovsk-	1.69	340	cePN	Pn	13 55 24.0	+0.5
PEA0B	Petropavlovsk-	1.69	340	Pn	Pn	13 55 23.8	+0.3
PETK	Petropavlovsk-	1.69	340	P	Pn	13 55 23.5	0.0
	comp=Z,330nm,0.3s,baz=143,slow=16,SNR=3545						
PETK				S	Sn	13 55 40.0	-4.4
	comp=Z,371nm,0.3s,baz=147,slow=17,SNR=18						
PETK				LR	LR	13 56 22.1	
	comp=Z,1μm,18.7s,baz=114,slow=55						
PETK	Petropavlovsk-	1.69	340	Pn	Pn	13 55 22.7	-0.9
UGLR	Uglovaya	1.69	4	PN	Pn	13 55 23.8	+0.1
UGLR	Uglovaya	1.69	4	eP	Pn	13 55 23.8	+0.1
NLC	Nalytchevo	1.71	14	PN	Pn	13 55 22.4	-1.3
NLC				S	Sn	13 55 42.6	-2.2
NLC	Nalytchevo	1.71	14	eP	Pn	13 55 22.4	-1.3
NLC				eS	Sn	13 55 42.6	-2.2
AVH	Avacha	1.75	2	PN	Pn	13 55 24.7	+0.4
AVH	Avacha	1.75	2	eP	Pn	13 55 24.7	+0.4
SMAR	Somma	1.75	3	PN	Pn	13 55 24.3	-0.2
SMAR				S	Sn	13 55 47.5	+1.4
SMAR	Somma	1.75	3	eP	Pn	13 55 24.3	-0.2
SMAR				eS	Sn	13 55 47.5	+1.4
SDLR	Sedlovina	1.77	5	PN	Pn	13 55 24.2	-0.4
SDLR	Sedlovina	1.77	5	eP	Pn	13 55 24.2	-0.4
KOK	Koryaka	1.77	360	PN	Pn	13 55 25.5	+0.8
KOK	Koryaka	1.77	360	eP	Pn	13 55 25.5	+0.8
KRER	Koryakskii	1.79	2	PN	Pn	13 55 25.3	+0.3
KRER	Koryakskii	1.79	2	eP	Pn	13 55 25.3	+0.3
SPN	Mys Shipunski	1.79	28	PN	Pn	13 55 24.6	-0.2
SPN				S	Sn	13 55 47.5	+0.7
SPN	Mys Shipunski	1.79	28	eP	Pn	13 55 24.6	-0.2
SPN				eS	Sn	13 55 47.5	+0.7
SKR	Severo-Kuril's	1.80	243	ePN	Pn	13 55 24.4	-0.5
SKR				eS	Sn	13 55 45.1	-1.8
SKR				pmax	pmax		
	comp=Z,730nm,0.4s						
SKR				smax	smax		
	comp=N,5μm,0.5s						
SKR				smax	smax		
	comp=E,3μm,0.2s						
SKR	Severo-Kuril's	1.80	243	eP	Pn	13 55 24.3	-0.6
SKR				eS	Sn	13 55 45.5	-1.4
GNL	Ganaly	2.22	349	PN	Pn	13 55 31.4	+0.7
GNL	Ganaly	2.22	349	eP	Pn	13 55 31.4	+0.7
KII	Karymskiy	2.57	11	PN	Pn	13 55 36.7	+1.4
KII				S	Sn	13 56 07.8	+2.3
KII	Karymskiy	2.57	11	eP	Pn	13 55 36.7	+1.4
KII				eS	Sn	13 56 07.8	+2.3
MKZ	Mys Kozlova	3.57	30	PN	Pn	13 55 47.9	-0.9
MKZ				S	Sn	13 56 26.7	-3.0
MKZ	Mys Kozlova	3.57	30	eP	Pn	13 55 47.9	-0.9
MKZ				eS	Sn	13 56 26.7	-3.0
TUMD	Tumrok D	3.84	15	eP	Pn	13 55 53.3	+0.8
TUMD				eS	Sn	13 56 37.5	+1.2
TUMR	Tumrok	3.88	13	PN	Pn	13 55 54.8	+1.7
TUMR	Tumrok	3.88	13	eP	Pn	13 55 54.8	+1.7
KMNR	Kamenistaya	4.35	12	PN	Pn	13 56 01.5	+2.0
KMNR	Kamenistaya	4.35	12	eP	Pn	13 56 01.5	+2.0
ESO	Esso	4.41	0	PN	Pn	13 56 04.7	+4.4
ESO	Esso	4.41	0	eP	Pn	13 56 04.7	+4.4
KPT	Kopyto	4.55	11	PN	Pn	13 56 03.8	+1.5
KPT	Kopyto	4.55	11	eP	Pn	13 56 03.8	+1.5
KIRR	Kirishev	4.55	12	PN	Pn	13 56 04.1	+1.7
KIRR	Kirishev	4.55	12	eP	Pn	13 56 04.1	+1.7
BZWR	Bezymyannyi-We	4.59	13	PN	Pn	13 56 04.8	+2.0
BZWR	Bezymyannyi-We	4.59	13	eP	Pn	13 56 04.8	+2.0
BZGR	Bezymyannyi-Gr	4.59	15	PN	Pn	13 56 04.7	+1.8
BZGR	Bezymyannyi-Gr	4.59	15	eP	Pn	13 56 04.7	+1.8
ZLN	Zelenaya	4.68	15	PN	Pn	13 56 06.1	+2.0
ZLN	Zelenaya	4.68	15	eP	Pn	13 56 06.1	+2.0
LGNR	Loginova	4.73	14	PN	Pn	13 56 07.2	+2.3
LGNR	Loginova	4.73	14	eP	Pn	13 56 07.2	+2.3
CIRR	Tsirk	4.77	14	PN	Pn	13 56 08.0	+2.7
CIRR	Tsirk	4.77	14	eP	Pn	13 56 08.0	+2.7
KRSR	Krestovskiy	4.84	13	PN	Pn	13 56 07.7	+1.4
KRSR	Krestovskiy	4.84	13	eP	Pn	13 56 07.7	+1.4
KLY	Klyuchi	4.95	13	PN	Pn	13 56 09.8	+2.2
KLY	Klyuchi	4.95	13	eP	Pn	13 56 09.8	+2.2
BDR	Baidarnaya	5.28	16	PN	Pn	13 56 14.3	+2.1
BDR	Baidarnaya	5.28	16	eP	Pn	13 56 14.3	+2.1
KBTR	Krutoberegovo	5.31	26	PN	Pn	13 56 12.6	+0.1
KBTR	Krutoberegovo	5.31	26	eP	Pn	13 56 12.6	+0.1
KBG	Krutoberegovo	5.32	25	PN	Pn	13 56 12.9	+0.3
KBG	Krutoberegovo	5.32	25	eP	Pn	13 56 12.9	+0.3
SMKR	Semkarok	5.34	17	PN	Pn	13 56 14.3	+1.3
SMKR	Semkarok	5.34	17	eP	Pn	13 56 14.3	+1.3
SRKR	Sorokina	5.35	15	PN	Pn	13 56 15.0	+1.8
SRKR	Sorokina	5.35	15	eP	Pn	13 56 15.0	+1.8
BKI	Bering	5.73	47	PN	Pn	13 56 17.4	-0.9
BKI	Bering	5.73	47	eP	Pn	13 56 17.4	-0.9
BKI				eS	Sn	13 57 15.6	-7.0
OSSR	Ossora	8.14	16	PN	Pn	13 56 51.4	+0.2
OSSR	Ossora	8.14	16	eP	Pn	13 56 51.4	+0.2
MA2	Magadan	9.22	334	P	Pn	13 57 06.2	+0.4
	comp=E,1.7nm,0.3s,baz=155,slow=8.1,SNR=4.6						
MA2	Magadan	9.22	334		Pn	13 57 05.8	0.0
KUR	Kuril'sk	9.53	233	PN	Pn	13 57 13.3	+3.1
KUR				pmax	pmax		
	comp=Z,28nm,0.7s						
KUR				pmax	pmax		
	comp=N,15nm,0.4s						
KUR				pmax	pmax		
	comp=E,14nm,0.4s						
SMY	Shemya	9.59	77	PN	Pn	13 57 10.4	-0.5
SMY	Shemya	9.59	77	Pn	Pn	13 57 10.4	-0.5
TYV	Tymovskoe	10.06	273	ePN	Pn	13 57 22.3	+4.9
TYV				eS	Sn	13 59 19.0	+11
TYV				pmax	pmax		
	comp=Z,14nm,1.0s						
TYV				pmax	pmax		
	comp=Z,200nm,3.9s						
TYV				smax	smax		
	comp=N,10.0nm,1.6s						
TYV				smax	smax		
	comp=E,7.0nm,1.6s						
TYV				smax	smax		
	comp=N,300nm,7.3s						
TYV				smax	smax		
	comp=E,300nm,7.3s						
YSS	Yuzh-Sakhalins	11.34	252	ePN	Pn	13 57 38.1	+3.2
YSS				eS	Sn	13 59 42.0	+2.3
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
YSS				MLR	MLR		
	comp=Z,300nm,12.0s						
YUK	Yuzh-Kuril'sk	11.39	234	i PN	Pn	13 57 36.7	+1.2
SEY	Seymchan	11.93	346	P	Pn	13 57 43.9	+1.2
	comp=Z,0.7nm,0.3s,baz=173,slow=12,SNR=12						
SEY				LR	LR	14 02 48.1	
	comp=Z,169nm,18.9s,baz=161,slow=40						
AMKA	Amchitka	12.89	83	Pn	Pn	13 57 56.2	+0.4
JKA	Kamikawa-asahi	13.06	242		Pn	13 57 58.5	+0.2
ASAJ	Asahikawa	13.06	242	P	Pn	13 57 58.4	+0.1
	comp=Z,0.9nm,0.3s,baz=58,slow=15,SNR=14						
ASAJ				LR	LR	14 02 42.4	
	comp=Z,89nm,20.9s,baz=152,slow=36						
ASAJ	Asahikawa	13.06	242	PN	Pn	13 57 58.5	+0.2
ERM	Erimo	14.22	234	i P	Pn	13 58 14.9	+1.4
BILL	Bilibino	16.98	10	i P	Pn	13 58 47.5	-0.8
BILL				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BILL				MLR	MLR		
	comp=Z,61nm,13.0s						
BILL	Bilibino	16.98	10		Pn	13 58 47.9	-0.4
BILL				IAmb	IAmb	13 58 51.2	
	comp=Z,18nm,0.5s						
KLR	Kul'dur	17.27	273	P	Pn	13 58 51.1	-0.9
	comp=Z,0.7nm,0.3s,baz=69,slow=13,SNR=11						
KLR				LR	LR	14 05 38.1	
	comp=Z,110nm,20.9s,baz=73,slow=37						
KLR	Kul'dur	17.27	273	ceP	Pn	13 58 51.6	-0.4
YAK	Yakutsk	18.86	315	P	P	13 59 08.3	-1.4
	comp=Z,0.3nm,0.3s,baz=284,slow=2.6,SNR=18						
YAK				S	S	14 02 39.0	-0.9
	baz=169,slow=1.9,SNR=1.0						
YAK				LR	LR	14 07 15.7	
	comp=Z,85nm,19.2s,baz=90,slow=40						
YAK	Yakutsk	18.86	315	eP	P	13 59 07.8	-1.9
YAK				eS	S	14 02 37.9	-1.9
YAK				pmax	pmax		
	comp=Z,59nm,1.0s						
YAK				pmax	pmax		
	comp=E,13nm,0.9s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.1s						
YAK				smax	smax		
	comp=E,64nm,2.0s						
YAK				smax	smax		
	comp=N,28nm,1.5s						
YAK	Yakutsk	18.86	315	P	P	13 59 07.9	-1.9
YAK				IAmb	IAmb	13 59 09.4	
	comp=Z,67nm,1.1s						
ZEA	Zeya	19.11	289	i P	P	13 59 10.4	-2.1
USRK	Ussuriysk Ar.	19.25	258	P	P	13 59 12.3	-1.8
	baz=52,slow=15,SNR=2.0						
USRK				LR	LR	14 06 36.8	
	comp=Z,78nm,20.9s,baz=19,slow=37						
MAJO	Matsushiro	20.87	232	i P	P	13 59 32.3	+0.5
MAJO				pmax	pmax		
	comp=Z,39nm,1.0s						
MAJO	Matsushiro	20.87	232	P	P	13 59 32.0	+0.2
MAJO				IAmb	IAmb	13 59 33.5	
	comp=Z,35nm,0.9s						
MAT	Matsushiro	20.87	232	P	P	13 59 32.1	+0.3
MJAR	Matsushiro Arr	20.87	232	P	P	13 59 32.0	+0.3
	comp=Z,13nm,0.8s,baz=24,slow=10,SNR=25						
MJAR				LR	LR	14 07 56.3	
	comp=Z,50nm,21.4s,baz=20,slow=37						
INU	Inuyama	22.41	232	P	P	13 59 48.4	+0.2
INU				IAmb	IAmb	13 59 54.6	
	comp=Z,21nm,0.7s						
JWT	Wachi	23.27	235	P	P	13 59 56.6	-0.3
TIXI	Tiksi	24.17	337	P	P	14 00 03.9	-0.8
	comp=Z,12nm,0.4s,baz=126,slow=10,SNR=50						
TIXI				PcP	PcP	14 03 44.4	+1.2
	comp=Z,2.2nm,0.3s,baz=104,slow=4.2,SNR=3.6						
TIXI				S	S	14 04 14.7	-2.4
	comp=Z,1.4nm,0.2s,baz=70,slow=2.3,SNR=1.3						
TIXI				LR	LR	14 10 38.0	
	comp=Z,107nm,18.1s,baz=184,slow=39						
TIXI	Tiksi	24.17	337	ceP	P	14 00 03.4	-1.3
TIXI				pmax	pmax		
	comp=Z,15nm,0.9s						
TIXI	Tiksi	24.17	337	P	P	14 00 03.7	-0.9
TIXI				IAmb	IAmb	14 00 06.0	
	comp=Z,18nm,1.0s						
JHS	Saijyo	24.68	238	P	P	14 00 10.5	+0.8
JHS				IAmb	IAmb	14 00 13.3	
	comp=Z,22nm,0.8s						
KSRS	Korea Array	25.81	249	P	P	14 00 21.0	+1.1
	comp=Z,3.5nm,0.5s,baz=47,slow=9.3,SNR=19						
KSRS				LR	LR	14 09 37.3	
	comp=Z,49nm,20.5s,baz=64,slow=34						
BOD	Bodaibo	26.17	302	eP	P	14 00 21.8	-1.2
BOD				pmax	pmax		
	comp=Z,9.0nm,1.2s						
N19K	Bonanza Creek	27.14	52	P	P	14 00 30.7	-1.0
N19K				IAmb	IAmb	14 00 59.1	
	comp=Z,17nm,1.1s						
M19K	Big River Lodg	27.18	49	P	P	14 00 32.1	+0.1
K20K	Telida	27.38	46	P	P	14 00 34.5	+0.7
JCJ	Chichijima	27.39	213	LR	LR	14 09 10.2	
	comp=Z,65nm,21.8s,baz=104,slow=31						
J20K	Nowinta River	27.40	44	P	P	14 00 34.4	+0.5
IMAR	Indian Mountai	27.77	40	P	P	14 00 37.9	+0.6
H21K	Melozitna Rive	28.12	41	P	P	14 00 40.5	+0.2
H21K				IAmb	IAmb	14 01 03.3	
	comp=Z,17nm,1.4s						
PPLA	Purkeypile	28.21	47	P	P	14 00 42.4	+1.0
PPLA				IAmb	IAmb	14 00 43.3	
	comp=Z,35nm,1.4s						
KDAK	Kodiak Island	28.37	58	LR	LR	14 11 57.1	
	comp=Z,192nm,19.5s,baz=261,slow=36						
KTH	Kantishna Hill	28.80	46	P	P	14 00 47.0	+0.5
CNPM	China Poot	28.84	54	P	P	14 00 46.1	-0.8
TRF	Thorofare Moun	29.08	46	P	P	14 00 49.7	+0.6
TRF				IAmb	IAmb	14 01 14.8	
	comp=Z,14nm,1.0s						
H23K	Yukon River	29.47	41	P	P	14 00 53.5	+1.1
I23K	Minto, Yukon-K	29.52	43	P	P	14 00 53.2	+0.5
SEW	Seward	29.67	53	P	P	14 00 53.5	-0.6
RND	Reindeer	29.73	46	P	P	14 00 53.7	-1.0
RND				pmax	pmax		
	comp=Z,23nm,1.2s						
RND	Reindeer	29.73	46	P	P	14 00 53.7	-1.0
RND				IAmb	IAmb	14 00 55.7	
	comp=Z,22nm,1.2s						
TOLK	Toolik Lake Re	29.76	35	P	P	14 00 54.3	-0.7
MDM	Murphy Dome	29.99	43	P	P	14 00 56.4	-0.6
SML	Sawmill	30.05	49	P	P	14 00 56.6	-1.0
COLA	College	30.15	43	i P	P	14 00 58.3	0.0
COLA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
H24K	Noodor Dome	30.16	41	P	P	14 00 57.6	-0.9
DHY	Denali Highway	30.41	47	P	P	14 01 00.9	+0.1
DHY				IAmb	IAmb	14 01 19.3	
	comp=Z,24nm,1.3s						
HDA	Harding Lake	30.55	44	P	P	14 01 02.3	+0.5
HDA				IAmb	IAmb	14 01 10.8	
	comp=Z,15nm,1.3s						
IL31		30.57	43	P	P	14 01 01.8	-0.2
ILAR	Eielson Array	30.57	43	P	P	14 01 02.5	+0.5
	comp=Z,2.4nm,0.7s,baz=264,slow=6.0,SNR=29						
ILAR				PcP	PcP	14 03 58.2	-0.6
	comp=Z,0.6nm,0.5s,baz=290,slow=3.7,SNR=6.1						
ILAR				LR	LR	14 15 37.5	
	comp=Z,52nm,18.2s,baz=240,slow=40						
ILAR	Eielson Array	30.57	43	P	P	14 01 02.6	+0.6
PRP	Porcupine Dome	31.13	42	P	P	14 01 07.0	-0.2
PRP				IAmb	IAmb	14 01 26.3	
	comp=Z,26nm,1.4s						
BMAR	Burnt Mountain	31.52	38	P	P	14 01 11.8	+1.3
N25K	Chitina, Valde	31.84	49	P	P	14 01 14.1	+0.7
N25K				IAmb	IAmb	14 01 42.8	
	comp=Z,11nm,1.3s						
SCRK	Sand Creek	31.86	45	P	P	14 01 13.6	0.0
H11N2	WAKE ISLAND Hy	32.38	165	T	T	14 35 23.7	
	baz=350,slow=76,SNR=846						
H11N3	WAKE ISLAND Hy	32.40	165	T	T	14 35 22.4	
	baz=350,slow=76,SNR=1060						
H11N1	WAKE ISLAND Hy	32.40	165	T	T	14 35 24.9	
	baz=350,slow=76,SNR=1117						
L27K	Beaver Creek,	32.92	46	P	P	14 01 24.3	+1.5
L27K				IAmb	IAmb	14 01 42.0	
	comp=Z,18nm,0.8s						
BCAR	Beaver Creek A	32.94	46	P	P	14 01 24.1	+1.1
M27K	Edge Creek, AK	33.00	48	P	P	14 01 25.0	+1.4
M27K				IAmb	IAmb	14 01 43.5	
	comp=Z,12nm,0.9s						
ULN	Ulaanbaatar	33.00	284	ceP	P	14 01 22.5	-1.3
ULN				pmax	pmax		
	comp=Z,4.0nm,1.7s						
EGAK	Eagle	33.02	43	P	P	14 01 23.4	0.0
EGAK				IAmb	IAmb	14 01 46.5	
	comp=Z,8.8nm,0.9s						
SONM	Songino Array	33.41	285	P	P	14 01 26.5	-0.9
	comp=Z,0.4nm,0.3s,baz=58,slow=8.2,SNR=3.8						
SONM				PcP	PcP	14 04 06.6	-0.4
	comp=Z,2.0nm,0.8s,baz=86,slow=1.2,SNR=7.8						
SONM				LR	LR	14 16 32.0	
	comp=Z,121nm,18.7s,baz=30,slow=39						
YAH	Yahtse	33.42	51	P	P	14 01 29.0	+1.6
H11S1	WAKE ISLAND Hy	33.55	166	T	T	14 36 55.2	
	baz=351,slow=76,SNR=735						
H11S3	WAKE ISLAND Hy	33.56	166	T	T	14 36 51.6	
	baz=351,slow=76,SNR=1142						
H11S2	WAKE ISLAND Hy	33.57	166	T	T	14 36 53.0	
	baz=351,slow=76,SNR=175						
DAWY	Dawson	33.86	44	P	P	14 01 31.6	+0.6
DAWY				IAmb	IAmb	14 01 58.9	
	comp=Z,13nm,1.4s						
ZAK	Zakamensk	34.19	290	eP	P	14 01 33.5	-0.5
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
MOY	Mondy	35.01	293	eP	P	14 01 40.2	-0.8
MOY				pmax	pmax		
	comp=Z,10.0nm,0.8s						
INK	Inuvik	35.66	36	P	P	14 01 47.7	+1.4
	comp=Z,4.4nm,0.6s,baz=277,slow=8.3,SNR=10						
NRIK	Noril'sk	36.69	326	LR	LR	14 17 49.0	
	comp=Z,88nm,18.4s,baz=46,slow=38						
NRIK	Noril'sk	36.69	326	i P	P	14 01 52.2	-2.9
NRIK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
A36M	Sachs Harbour	37.94	29	P	P	14 02 06.0	+0.5
A36M				IAmb	IAmb	14 02 07.9	
	comp=Z,8.2nm,0.8s						
DLBC	Dease Lake	39.71	51	P	P	14 02 22.1	+1.4
ZALV	Zalesovo Beam	42.89	303	P	P	14 02 44.4	-2.2
	comp=Z,0.6nm,0.4s,baz=64,slow=6.8,SNR=4.5						
ZALV				PcP	PcP	14 04 36.8	+0.7
	comp=Z,1.1nm,0.4s,baz=66,slow=3.7,SNR=4.8						
ZALV				LR	LR	14 21 31.6	
	comp=Z,64nm,18.3s,baz=204,slow=37						
DGZ	Jazzator, Alta	43.57	297	i P	P	14 02 49.3	-3.1
DGZ				pmax	pmax		
	comp=Z,6.0nm,0.8s						
EUNU	Eureka	43.69	13	P	P	14 02 54.7	+1.9
YKA	Yellowknife Ar	44.93	41	P	P	14 03 03.2	+0.4
	comp=Z,2.3nm,0.7s,baz=313,slow=13,SNR=7.4						
RES	Resolute Bay	45.12	21	P	P	14 03 04.6	+0.5
RES				pmax	pmax		
	comp=Z,5.0nm,0.7s						
RES	Resolute Bay	45.12	21	P	P	14 03 04.5	+0.5
KURK	Kurchatov	47.81	302	ceP	P	14 03 23.3	-2.2
KURK				pmax	pmax		
	comp=Z,14nm,1.3s						
KURK	Kurchatov	47.81	302	P	P	14 03 23.5	-2.1
KURK				IAmb	IAmb	14 03 25.2	
	comp=Z,9.1nm,0.9s						
KURBB	Kurchatov Arra	47.91	302	P	P	14 03 24.6	-1.7
	comp=Z,2.5nm,0.4s,baz=61,slow=7.6,SNR=13						
KURBB				PcP	PcP	14 04 53.9	+0.3
	comp=Z,2.3nm,0.9s,baz=60,slow=3.4,SNR=5.8						
MK31	Makanchi Array	48.04	296	P	P	14 03 25.8	-1.6
MK31				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MK31	Makanchi Array	48.04	296	P	P	14 03 25.8	-1.6
MK31				IAmb	IAmb	14 03 26.6	
	comp=Z,5.2nm,0.6s						
MKAR	Makanchi Array	48.04	296	P	P	14 03 25.9	-1.5
	comp=Z,5.4nm,0.5s,baz=60,slow=7.2,SNR=127						
MKAR				LR	LR	14 24 19.0	
	comp=Z,67nm,18.3s,baz=136,slow=37						
MKAR	Makanchi Array	48.04	296	i P	P	14 03 25.8	-1.7

MKAR				pmax	pmax		
	comp=Z,5.0nm,0.5s						
MKAR	Makanchi Array	48.04	296	P	P	14 03 25.7	-1.7
MAKZ	Makanchi	48.21	296	P	P	14 03 27.1	-1.6
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MAKZ	Makanchi	48.21	296	P	P	14 03 27.1	-1.6
MAKZ				IAmb	IAmb	14 03 27.8	
	comp=Z,4.6nm,0.6s						
NEEM	North Greenlan	49.97	8	i P	P	14 03 44.0	+2.0
NEEM				IAmb	IAmb	14 03 44.7	
	comp=Z,12nm,0.6s						
B08A	Colville Reser	50.24	59	P	P	14 03 44.2	0.0
B08A				IAmb	IAmb	14 04 04.6	
	comp=Z,10nm,0.9s						
EDM	Edmonton	50.44	51	P	P	14 03 45.8	+0.2
EDM				pmax	pmax		
	comp=Z,12nm,0.8s						
EDM	Edmonton	50.44	51	P	P	14 03 45.8	+0.2
BRVK	Borovoye	50.70	309	ceP	P	14 03 45.2	-2.4
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
BRVK	Borovoye	50.70	309	P	P	14 03 45.6	-1.9
WALA	Waterton Lakes	52.67	56	P	P	14 04 03.0	+0.6
JTMT	Jette	53.30	57	P	P	14 04 07.7	+0.6
JTMT				IAmb	IAmb	14 04 09.9	
	comp=Z,7.9nm,0.8s						
BMO	Blue Mountains	53.50	62	P	P	14 04 08.7	+0.2
BMO				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BMO	Blue Mountains	53.50	62	P	P	14 04 08.7	+0.2
BMO				IAmb	IAmb	14 04 28.8	
	comp=Z,4.5nm,0.7s						
ARU	Arti	53.95	317	d iP	P	14 04 09.6	-1.9
ARU						14 06 12.0	
ARU				S	S	14 11 39.0	-2.1
ARU				SS	SS	14 15 20.0	-2.5
ARU				pmax	pmax		
	comp=Z,4.0nm,0.6s						
PLID	Pearl Lake	54.06	61	P	P	14 04 14.7	+1.9
PLID				IAmb	IAmb	14 04 33.4	
	comp=Z,5.8nm,0.8s						
DBG	Daneborg	54.46	360	i P	P	14 04 15.3	+0.4
ARCES	ARCESS Array B	54.50	342	P	P	14 04 14.7	-0.6
	comp=Z,1.5nm,0.5s,baz=43,slow=7.7,SNR=14						
ARCES				LR	LR	14 31 42.4	
	comp=Z,44nm,18.2s,baz=235,slow=41						
ARCES	ARCESS Array B	54.50	342	P	P	14 04 14.8	-0.6
ARCES				pmax	pmax		
	comp=Z,22nm,1.5s						
ARCES	ARCESS Array B	54.50	342	P	P	14 04 14.8	-0.6
AAK	Ala-Archa	54.97	296	P	P	14 04 18.7	-0.7
	comp=Z,1.8nm,0.3s,baz=117,slow=5.6,SNR=11						
AAK	Ala-Archa	54.97	296	ceP	P	14 04 17.3	-2.1
AAK				pmax	pmax		
	comp=Z,13nm,1.7s						
AAK	Ala-Archa	54.97	296	P	P	14 04 17.8	-1.5
SUMG	Summit	55.62	6	P	P	14 04 25.0	+1.1
SUMG				pmax	pmax		
	comp=Z,16nm,0.9s						
SUMG	Summit	55.62	6	i P	P	14 04 26.4	+2.5
SUMG				IAmb	IAmb	14 04 27.2	
	comp=Z,14nm,0.6s						
SUMG	Summit	55.62	6	P	P	14 04 25.0	+1.1
PNTR	Pine Nut	55.94	68	P	P	14 04 27.9	+1.5
PNTR				IAmb	IAmb	14 04 47.6	
	comp=Z,9.3nm,0.8s						
BOZ	Bozeman (W)	56.08	58	P	P	14 04 28.9	+1.7
BOZ				pmax	pmax		
	comp=Z,17nm,1.5s						
BOZ	Bozeman (W)	56.08	58	P	P	14 04 28.9	+1.7
BOZ				IAmb	IAmb	14 04 29.9	
	comp=Z,16nm,1.4s						
BMN	Battle Mountai	56.42	66	P	P	14 04 32.2	+2.5
BMN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BMN	Battle Mountai	56.42	66	P	P	14 04 32.2	+2.5
BMN				IAmb	IAmb	14 04 50.9	
	comp=Z,6.6nm,0.9s						
CHTO	Chiang Mai	56.71	258	P	P	14 04 33.0	+1.2
CHTO				pmax	pmax		
	comp=Z,12nm,0.6s						
CHTO	Chiang Mai	56.71	258	P	P	14 04 33.0	+1.2
CMAR	Chiang Mai Arr	56.98	258	P	P	14 04 35.5	+1.8
	comp=Z,5.5nm,0.7s,baz=29,slow=7.0,SNR=47						
CMAR	Chiang Mai Arr	56.98	258	P	P	14 04 34.1	+0.3
YHH	Holmes Hill	57.03	58	P	P	14 04 35.3	+1.2
YHH				IAmb	IAmb	14 04 37.0	
	comp=Z,5.4nm,0.7s						
SIJI	Sorong	57.11	213	P	P	14 04 35.0	+0.3
	comp=Z,6.1nm,0.8s,baz=342,slow=8.0,SNR=4.5						
NVAR	Mina Array Bea	57.14	68	P	P	14 04 37.0	+2.1
	comp=Z,2.1nm,0.6s,baz=302,slow=7.2,SNR=18						
NVAR				LR	LR	14 28 30.6	
	comp=Z,51nm,18.6s,baz=277,slow=35						
NVAR	Mina Array Bea	57.14	68	P	P	14 04 36.9	+1.9
ELK	Elko	57.33	64	P	P	14 04 38.6	+2.3
ELK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ELK	Elko	57.33	64	P	P	14 04 38.6	+2.3
TAPN	Taplejung	57.43	274	eP	P	14 04 37.3	+0.1
	comp=Z,7.0nm,0.4s						
RLMT	Red Lodge	57.64	57	P	P	14 04 38.9	+0.6
LOF	Lofoten	57.86	345	eP	P	14 04 39.9	+0.7
ODAN	Odare	57.98	274	eP	P	14 04 41.3	+0.3
REDW	Red Top Meadow	57.98	59	P	P	14 04 43.1	+2.3
ABKAR	Akbulak array	58.13	310	P	P	14 04 39.7	-1.7
JIRN	Jiri	58.15	275	eP	P	14 04 42.5	+0.1
	comp=Z,4.6nm,0.4s						
GUN	Gumba	58.17	276	eP	P	14 04 42.2	-0.2
	comp=Z,8.5nm,0.4s						
FAUS	Fauske	58.26	344	eP	P	14 04 42.7	+0.7
RAMN	Ramite	58.40	274	eP	P	14 04 44.0	0.0
	comp=Z,30nm,0.5s						
KKN	Kakani	58.63	276	eP	P	14 04 45.6	+0.1
	comp=Z,17nm,0.6s						
PKI	Pulchoki	58.70	276	eP	P	14 04 46.1	0.0
PKIN	Phulchoki	58.71	276	eP	P	14 04 46.0	-0.1
	comp=Z,9.7nm,0.6s						
BTK	Batken	58.75	296	P	P	14 04 44.2	-1.8
BTK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BTK	Batken	58.75	296	P	P	14 04 44.2	-1.8
BTK				IAmb	IAmb	14 04 46.2	
	comp=Z,5.8nm,0.8s						
DMN	Daman	58.86	276	eP	P	14 04 47.4	+0.2
	comp=Z,14nm,0.5s						
GKN	Gorkha	58.88	277	eP	P	14 04 47.1	0.0
	comp=Z,17nm,0.6s						
ICESG	Greenland Ices	58.95	8	i P	P	14 04 49.9	+2.6
ICESG				IAmb	IAmb	14 04 50.4	
	comp=Z,17nm,0.5s						
BW06	Boulder Array	59.08	59	P	P	14 04 49.1	+0.7
PD31	Pinedale Array	59.08	59	P	P	14 04 49.4	+0.9
PD31				IAmb	IAmb	14 05 09.1	
	comp=Z,8.2nm,0.8s						
PDAR	Pinedale Array	59.08	59	P	P	14 04 50.3	+1.8
	comp=Z,6.3nm,0.6s,baz=316,slow=2.7,SNR=46						
DANN	Dangsing	59.17	278	eP	P	14 04 49.6	+0.3
	comp=Z,24nm,0.7s						
MOR8	Moi Rana	59.50	344	eP	P	14 04 50.2	-0.5
KOLN	Koldanda	59.68	277	eP	P	14 04 52.6	-0.1
	comp=Z,22nm,0.8s						
PYUN	Piuthan	59.83	278	eP	P	14 04 53.5	-0.2
	comp=Z,22nm,0.4s						
ULM	Lac du Bonnet	60.56	45	P	P	14 04 58.9	+0.7
	comp=Z,3.8nm,0.4s,baz=324,slow=6.9,SNR=8.2						
FINES	FINESS Array B	61.20	336	P	P	14 05 02.0	-0.3
	comp=Z,2.8nm,0.5s,baz=40,slow=7.0,SNR=32						
FINES	FINESS Array B	61.20	336	P	P	14 05 02.0	-0.3
FINES	FINESS Array B	61.20	336	P	P	14 05 01.6	-0.7
OBN	Obninsk	63.35	327	i P	P	14 05 15.5	-1.2
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MVCO	Mesa Verde	63.56	63	P	P	14 05 20.0	+1.3
MVCO				IAmb	IAmb	14 05 21.3	
	comp=Z,5.3nm,0.8s						
MOL	Molde	63.98	346	eP	P	14 05 21.7	+0.9
DOMB	Dombas	64.23	345	eP	P	14 05 22.8	+0.3
AKN	Aaknes	64.43	346	eP	P	14 05 24.5	+0.7
NC405	NORSAR Array S	64.64	343	P	P	14 05 24.1	-1.1
NB2	NORSAR Subarra	64.80	343	P	P	14 05 26.4	+0.2
	comp=Z,6.0nm,0.6s,baz=23,slow=6.9						
NB2	NORSAR Subarra	64.80	343	P	P	14 05 26.4	+0.2
	baz=23,slow=6.9						
NOA	NORSAR Array B	64.80	343	P	P	14 05 26.5	+0.2
	comp=Z,8.0nm,0.6s,baz=21,slow=6.7,SNR=38						
NOA				LR	LR	14 39 35.4	
	comp=Z,24nm,18.9s,baz=290,slow=41						
SDCO	Great Sand Dun	64.82	61	P	P	14 05 27.9	+0.9
NC602	NORSAR Array S	65.02	343	eP	P	14 05 28.0	+0.4
NORES	NORESS Array B	65.02	343	P	P	14 05 28.0	+0.4
HYA	Hoyanger	65.52	346	eP	P	14 05 31.4	+0.7
SKAR	Skarslia	65.64	344	eP	P	14 05 32.3	+0.6
SUE	Sulen	65.84	346	eP	P	14 05 33.9	+1.1
OSL	Oslo	65.92	343	eP	P	14 05 34.4	+1.0
ASK	Askoy	66.32	346	eP	P	14 05 36.8	+0.9
ANMO	Albuquerque	66.34	63	ceP	P	14 05 37.9	+1.2
ANMO				pmax	pmax		
	comp=Z,6.0nm,1.7s						
ANMO	Albuquerque	66.34	63	P	P	14 05 37.1	+0.4
KONO	Kongsberg	66.39	343	eP	P	14 05 37.2	+0.8
BER	Bergen	66.40	346	eP	P	14 05 37.3	+0.9
MNK	Minsk	66.65	331	i P	P	14 05 37.4	-0.8
MNK				i *PP	pP	14 05 58.1	+0.6
MNK				i		14 06 06.1	
MNK				i		14 08 04.5	
MNK				i PPP	PPP	14 09 40.6	
MNK				i S	S	14 14 20.3	-3.2
MNK				i *SS	sS	14 14 58.1	+1.2
MNK				i		14 15 26.6	
MNK				pmax	pmax		
	comp=Z,14nm,0.7s						
MNK				pmax	pmax		
	comp=E,5.0nm,1.1s						
MNK				pmax	pmax		
	comp=N,26nm,0.9s						
MNK				MLR	MLR		
	comp=E,10.0nm,21.0s						
MNK				MLR	MLR		
	comp=Z,124nm,20.0s						
MNK				MLR	MLR		
	comp=N,96nm,20.0s						
BLS5	Blasjo	67.14	345	eP	P	14 05 41.8	+0.6
SCHQ	Schefferville	67.46	27	P	P	14 05 43.9	+0.6
	comp=N,3.3nm,0.4s,baz=341,slow=5.6,SNR=13						
HOMB	Homborsund	67.88	343	eP	P	14 05 46.7	+0.8
SNART	Snartemo	68.04	344	eP	P	14 05 47.0	+0.2
AKASG	Malin Array Be	69.49	328	P	P	14 05 54.9	-1.2
	comp=N,1.7nm,0.4s,baz=35,slow=7.2,SNR=9.5						
KIV	Kislovodsk	69.97	316	eP	P	14 05 55.9	-3.3
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,52nm,17.0s						
KBZ	Khabaz	70.06	316	P	P	14 05 59.1	-0.4
	comp=Z,2.1nm,0.5s,baz=124,slow=2.9,SNR=5.6						
R40A	Maddies Statio	71.28	52	P	P	14 06 06.9	-0.2
R40A				IAmb	IAmb	14 06 08.0	
	comp=Z,8.1nm,0.8s						
TX31	Lajitas Ar. Si	72.09	65	P	P	14 06 13.6	+1.4
TX32	Lajitas Array	72.09	65	P	P	14 06 13.7	+1.4
TX32				IAmb	IAmb	14 06 14.7	
	comp=Z,9.7nm,0.7s						
TXAR	Lajitas Array	72.09	65	P	P	14 06 13.8	+1.6
	comp=Z,6.9nm,0.6s,baz=297,slow=4.8,SNR=82						
TXAR	Lajitas Array	72.09	65	P	P	14 06 13.9	+1.7
EKA	Eskdalemuir Ar	72.44	349	P	P	14 06 14.5	+0.7
KOLS	Kolonicke sedl	73.22	332	eP	P	14 06 19.6	+1.1
KOLS	Kolonicke sedl	73.22	332	eP	P	14 06 19.6	+1.1
CHVC	Chvalec	73.42	336	eP	P	14 06 20.4	+0.7
BURAR	Bucovina Array	73.48	329	⇑P	P	14 06 20.3	+0.1
BURAR	Bucovina Array	73.48	329	⇑P	P	14 06 20.1	-0.1
CRVS	Cervenica-Dubn	73.48	332	eP	P	14 06 20.7	+0.6
CRVS	Cervenica-Dubn	73.48	332	eP	P	14 06 20.7	+0.6
CLL	Collm	73.50	338	⇑iP	P	14 06 20.5	+0.4
CLL				pmax	pmax		
	comp=Z,13nm,1.0s						
CLL	Collm	73.50	338	⇑iP	P	14 06 20.5	+0.4
	comp=Z,13nm,1.0s						
DPC	Dobruska-Polom	73.58	336	eP	P	14 06 21.5	+0.9
DPC	Dobruska-Polom	73.58	336	eP	P	14 06 21.5	+0.9
BRG	Berggiesshubel	73.68	338	eP	P	14 06 21.6	+0.4
BRG				Amp		14 06 23.0	
	comp=Z,3.6nm,0.7s						
KRLC	Kraliky	73.71	336	eP	P	14 06 21.8	+0.4
KRLC	Kraliky	73.71	336	eP	P	14 06 21.8	+0.4
MORC	Moravsky Berou	73.78	335	⇓P	P	14 06 23.1	+1.2
MORC	Moravsky Berou	73.78	335	⇓P	P	14 06 23.1	+1.2
MORC	Moravsky Berou	73.78	335	eP	P	14 06 22.6	+0.7
LANS	Liptovska Anna	73.83	333	eP	P	14 06 23.6	+1.5
LANS				pmax	pmax		
	comp=Z,9.0nm,0.8s						
LANS	Liptovska Anna	73.83	333	eP	P	14 06 23.6	+1.5
WR0	Warramunga Arr	74.25	204	P	P	14 06 25.3	+0.6
WR0				IAmb	IAmb	14 06 26.3	
	comp=Z,11nm,1.1s						
WRAB	Tennant Creek	74.27	204	ceP	P	14 06 25.1	+0.3
WRAB				pmax	pmax		
	comp=Z,15nm,1.3s						
WRAB	Tennant Creek	74.27	204	P	P	14 06 25.3	+0.5
WRAB				IAmb	IAmb	14 06 26.5	
	comp=Z,12nm,1.0s						
WB2	Warramunga Arr	74.28	204	P	P	14 06 25.7	+0.8
WB2				IAmb	IAmb	14 06 26.5	
	comp=Z,10nm,0.8s						
WRA	Warramunga Arr	74.28	204	P	P	14 06 25.6	+0.7
	comp=Z,6.8nm,0.6s,baz=18,slow=6.0,SNR=75						
WRA	Warramunga Arr	74.28	204	P	P	14 06 25.0	+0.1
PRU	Pruhonice	74.36	337	eP	P	14 06 26.0	+0.9
PRU	Pruhonice	74.36	337	eP	P	14 06 26.0	+0.9
VRAC	Vranov	74.46	335	⇑P	P	14 06 27.1	+1.3
VRAC	Vranov	74.46	335	⇑P	P	14 06 27.1	+1.3
VRAC	Vranov	74.46	335	eP	P	14 06 26.9	+1.1
JAVC	Velka Javorina	74.59	334	eP	P	14 06 28.4	+1.8
VYHS	Vyhne	74.60	334	eP	P	14 06 27.7	+1.1
VYHS				pmax	pmax		
	comp=Z,11nm,1.0s						
VYHS	Vyhne	74.60	334	eP	P	14 06 27.7	+1.1
L56A	Greenwood	74.73	40	P	P	14 06 26.9	-0.6
KRUC	Moravsky	74.74	335	eP	P	14 06 28.5	+1.1
DRGR		75.00	330	⇑P	P	14 06 30.0	+1.0
MLR	Muntele Rosu	75.11	328	⇓P	P	14 06 31.1	+1.3
MLR	Muntele Rosu	75.11	328	⇓P	P	14 06 31.9	+2.2
KHC	Kasperske Hory	75.39	337	eP	P	14 06 31.8	+0.7
KHC	Kasperske Hory	75.39	337	eP	P	14 06 31.8	+0.7
VOIR		75.45	328	⇑P	P	14 06 33.1	+1.4
VOIR		75.45	328	⇑P	P	14 06 33.1	+1.4
CKRC	Cesky Krumlov	75.50	337	eP	P	14 06 32.4	+0.7
GERES	GERESS Array B	75.62	337	P	P	14 06 33.4	+0.9
	comp=Z,5.0nm,0.6s,baz=37,slow=5.6,SNR=31						
GERES				LR	LR	14 44 14.9	
	comp=Z,31nm,20.6s,baz=33,slow=39						
GERES	GERESS Array B	75.62	337	P	P	14 06 33.2	+0.6
SIRR	Siria	75.79	331	⇓P	P	14 06 34.8	+1.4
CONA	Conrad Observa	75.92	335	eP	P	14 06 33.7	-0.5
	comp=Z,5.6nm,0.7s						
GZR	Gura Zlata	76.23	330	⇑P	P	14 06 37.0	+1.0
GZR	Gura Zlata	76.23	330	⇑P	P	14 06 37.0	+1.0
BZS	Buzias	76.39	331	⇑P	P	14 06 37.8	+1.0
BAIF	Baives	76.48	343	eP	P	14 06 38.2	+0.9
BAIF				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ARSA	Arzberg	76.64	335	eP	P	14 06 39.9	+1.6
	comp=Z,4.6nm,0.7s						
PALK	Pallekele	76.84	265	P	P	14 06 41.1	+1.3
	comp=Z,10.0nm,0.8s,baz=246,slow=5.4,SNR=4.1						
MDVR	Moldovita	77.11	330	⇑P	P	14 06 40.8	-0.2
BRTR	Keskin Array B	77.25	320	P	P	14 06 41.9	-0.1
	comp=Z,1.1nm,0.6s,baz=104,slow=5.2,SNR=3.6						
SOKA	Soboth	77.29	335	i P	P	14 06 43.4	+1.3
	comp=Z,5.2nm,0.6s,SNR=7.1						
PERS	Pernice	77.31	335	eP	P	14 06 43.0	+0.9
FRGS	Fruska Gora	77.35	331	⇓P	P	14 06 43.1	+0.8
KBA	Koelnbreinsper	77.35	336	i P	P	14 06 44.5	+2.0
	comp=Z,31nm,0.8s,SNR=18						
GROS	Grobnik	77.37	335	eP	P	14 06 43.2	+0.8
CDF	Champ du Feu	77.47	341	eP	P	14 06 43.6	+0.6
CDF				pmax	pmax		
	comp=Z,3.0nm,0.6s						
WATA	Walderalm	77.54	338	eP	P	14 06 44.5	+1.0
	comp=Z,9.9nm,1.1s						
OBKA	Obir	77.58	335	eP	P	14 06 44.9	+1.3
	comp=Z,6.4nm,0.8s						
RETA	Reutte	77.59	338	eP	P	14 06 45.2	+1.5
	comp=Z,4.0nm,0.6s						
WTTA	Wattenberg	77.60	338	eP	P	14 06 45.6	+1.8
	comp=Z,13nm,0.9s						
MOTA	Moosalm	77.64	338	eP	P	14 06 45.5	+1.5
	comp=Z,16nm,1.2s						
MYKA	Terra Mystica	77.70	336	eP	P	14 06 46.4	+2.2
	comp=Z,5.4nm,1.0s						
SQTA	Sankt Quirin	77.74	338	eP	P	14 06 46.3	+1.7
	comp=Z,11nm,0.8s						
ABTA	Abfaltersbach	77.87	337	eP	P	14 06 46.5	+1.3
	comp=Z,9.5nm,0.8s						
AS31	Alice Springs	77.96	203	P	P	14 06 46.4	+0.7
ASAR	Alice Springs	77.96	203	P	P	14 06 47.2	+1.5
	comp=Z,5.5nm,0.7s,baz=14,slow=5.4,SNR=87						
ASAR	Alice Springs	77.96	203	P	P	14 06 46.9	+1.2
DAVA	Damuels	77.98	339	eP	P	14 06 47.8	+1.8
	comp=Z,8.4nm,0.9s						
FETA	Feichten	78.04	338	i P	P	14 06 47.9	+1.7
	comp=Z,7.7nm,0.7s,SNR=5.6						
HAU	Haudompre	78.05	341	eP	P	14 06 46.7	+0.6
HAU				pmax	pmax		
	comp=Z,5.0nm,0.5s						
BOVS	Bovan	78.14	330	⇓P	P	14 06 46.4	-0.3
VTS	Vitosha	78.56	328	⇑P	P	14 06 49.6	+0.4
VTS	Vitosha	78.56	328	P	P	14 06 49.6	+0.4
LDF	La Druitiere	78.62	346	eP	P	14 06 50.9	+1.7
LDF				pmax	pmax		
	comp=Z,40nm,1.4s						
GRR	Gorron	78.93	346	eP	P	14 06 53.0	+2.1
GRR				pmax	pmax		
	comp=Z,43nm,1.4s						
LOR	Lormes	79.23	343	eP	P	14 06 53.5	+0.9
LOR				pmax	pmax		
	comp=Z,13nm,0.7s						
SGMF	Saint Gilles	79.31	347	eP	P	14 06 55.0	+2.0
SGMF				pmax	pmax		
	comp=Z,59nm,1.6s						
AVF	Avril sur Loir	79.79	343	eP	P	14 06 56.8	+1.2
AVF				pmax	pmax		
	comp=Z,8.0nm,0.7s						
PDG	Podgorica	80.00	331	⇓P	P	14 06 56.2	-0.6
LPL	La Plagne	80.35	340	eP	P	14 07 00.6	+1.6
LPL				pmax	pmax		
	comp=Z,9.0nm,0.6s						
LPG	La Plagne	80.36	340	eP	P	14 07 00.8	+1.7
LPG				pmax	pmax		
	comp=Z,23nm,1.0s						
TCF	Toulx Ste Croi	80.48	344	eP	P	14 07 00.8	+1.4
TCF				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BNI	Bardonecchia	80.80	340	P	P	14 07 03.7	+2.4
BNI				pmax	pmax		
	comp=Z,13nm,1.2s						
ORIF	Oris-en-Rattie	81.10	341	eP	P	14 07 04.4	+1.6
ORIF				pmax	pmax		
	comp=Z,11nm,1.0s						
VIVF	Saint-Julien-l	81.40	342	eP	P	14 07 06.0	+1.7
VIVF				pmax	pmax		
	comp=Z,10.0nm,1.0s						
RJF	Les Rejaudoux	81.55	344	eP	P	14 07 07.7	+2.6
RJF				pmax	pmax		
	comp=Z,6.0nm,0.6s						
TIP	Timpagrande	83.73	331	⇓P	P	14 07 17.3	+0.7
SJPF	Ste Jean	84.14	345	eP	P	14 07 22.5	+4.0
SJPF				pmax	pmax		
	comp=Z,29nm,1.9s						
ETSF	Etsaut	84.24	345	eP	P	14 07 22.7	+3.6
ETSF				pmax	pmax		
	comp=Z,2.0nm,0.6s						
STKA	Stephens Creek	84.38	195	P	P	14 07 20.9	+1.3
	comp=Z,3.4nm,0.8s,baz=352,slow=7.6,SNR=6.1						
RAYN	Ar Rayn	85.15	302	P	P	14 07 23.5	-0.5
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
RAYN	Ar Rayn	85.15	302	P	P	14 07 23.5	-0.5
RAYN				IAmb	IAmb	14 07 24.8	
	comp=Z,4.8nm,0.7s						
ESDC	Sonseca Array	87.92	347	P	P	14 07 37.5	+0.3
	comp=Z,1.3nm,0.8s,baz=2.7,slow=3.8,SNR=10.0						
ESDC				LR	LR	14 52 47.3	
	comp=Z,20nm,18.7s,baz=270,slow=40						
KEST	Kesra	89.03	335	P	P	14 07 43.9	+1.3
	comp=Z,8.7nm,0.6s,baz=308,slow=3.5,SNR=13						
H03N2	Juan Fernandez	135.10	89	T	T	16 44 37.5	
	baz=314,slow=77,SNR=3441						
H03N1	Juan Fernandez	135.12	89	T	T	16 44 40.9	
	baz=314,slow=77,SNR=2137						
H03N3	Juan Fernandez	135.12	89	T	T	16 44 40.3	
	baz=314,slow=77,SNR=1722						
PLCA	Paso Flores	144.87	92	PKPbc	PKPdf	14 14 23.9	+0.2
	comp=Z,5.4nm,0.6s,baz=296,slow=4.4,SNR=16						
PLCA	Paso Flores	144.87	92	PKIKP	PKPdf	14 14 24.0	+0.2
PLCA	Paso Flores	144.87	92		PKPdf	14 14 24.0	+0.3

IDC 12 13:55:14.6±1.7, 31°.66N×109°.63E, h0^{km}, mb3.6/3, mb1 3.7/5, mb1mx3.3/60, mbtmp3.6/5, ML3.8/2, Error ellipse: s-maj=62.4km s-min=25.6km az=63.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	16.31	219	Pn	Pn	13 59 06.0	+0.9
	0.2nm,0.3s,baz=28,slow=9.5,SNR=8.8						
SONM	Songino Array	16.34	352	Pn	Pn	13 59 06.9	+1.3
	0.2nm,0.3s,baz=179,slow=9.7,SNR=3.1						
MKAR	Makanchi Array	25.85	314	P	P	14 00 47.0	-0.7
	0.3nm,0.4s,baz=107,slow=9.2,SNR=7.5						
KURBB	Kurchatov Arra	29.80	319	P	P	14 01 23.6	+0.5
	0.4nm,0.3s,baz=120,slow=8.4,SNR=1.0						
ASAR	Alice Springs	59.72	154	P	P	14 05 21.1	-0.1
	0.2nm,0.4s,baz=338,slow=6.0,SNR=5.2						

IDC 12 13:56:03.9±6.3, 8°.45S×158°.10E, h0^{km}, mb3.7/3, mb1 3.8/4, mb1mx3.3/47, mbtmp3.7/4, ML3.9/1, MS3.0/3, Ms1 3.0/3, ms1mx2.6/36, Error ellipse: s-maj=146.0km s-min=29.1km az=5.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	2.07	118	Pn	Pn	13 56 39.9	0.0
	38nm,0.3s,baz=202,slow=11,SNR=10						
HNR				Sn	Sn	13 57 01.9	-4.5
	271nm,0.3s,baz=334,slow=19,SNR=29						
HNR				LR	LR	13 57 29.1	
	comp=Z,93nm,20.3s,baz=322,slow=41						
PMG	Port Moresby	10.85	264	LR	LR	14 02 33.8	
	comp=Z,74nm,19.1s,baz=102,slow=36						
WRA	Warramunga Arr	25.67	241	P	P	14 01 34.7	-1.1
	1.0nm,0.8s,baz=67,slow=9.6,SNR=6.3						
ASAR	Alice Springs	27.67	234	P	P	14 01 55.0	+1.1
	0.6nm,0.8s,baz=61,slow=11,SNR=5.4						
STKA	Stephens Creek	27.91	211	P	P	14 01 55.8	-0.1
	0.7nm,0.5s,baz=27,slow=9.5,SNR=3.6						
STKA				LR	LR	14 12 47.8	
	comp=Z,87nm,19.6s,baz=165,slow=36						

IDC 12 13:58:19.0±3.6, 15°.26S×172°.94W, h0^{km}, mb3.6/4, mb1 4.0/4, mb1mx3.5/37, mbtmp3.6/4, MS3.1/2, Ms1 3.1/2, ms1mx2.7/29, Error ellipse: s-maj=184.7km s-min=21.7km az=144.0

ISC 12 13:58:23.0±3.2, 15°.4S±0°.9×173°.0W±0°.6, h29^{km}, n12, σ0^{s}.18/6, mb3.7/4, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	1.90	37	Pn	Pn	13 58 48.7	-4.9
	90nm,0.3s,baz=198,slow=3.7,SNR=150						
AFI				Sn	Sn	13 59 05.4	-11
	475nm,0.3s,baz=158,slow=23,SNR=16						
AFI				LR	LR	13 59 27.7	
	comp=Z,375nm,18.4s,baz=146,slow=39						
MSVF	Nonsavu	8.92	254	LR	LR	14 02 36.6	
	comp=Z,53nm,20.5s,baz=181,slow=29						
H11S2	WAKE ISLAND Hy	39.21	329	T	T	14 46 25.3	
	baz=146,slow=74						
H11S3	WAKE ISLAND Hy	39.23	329	T	T	14 46 25.6	
	baz=146,slow=74						
H11S1	WAKE ISLAND Hy	39.23	329	T	T	14 46 27.8	
	baz=146						
WRA	Warramunga Arr	50.25	257	P	P	14 07 17.1	0.0
	0.2nm,0.5s,baz=80,slow=6.0,SNR=6.0						
ASAR	Alice Springs	50.50	252	P	P	14 07 18.9	0.0
	1.1nm,0.7s,baz=88,slow=7.3,SNR=8.9						
GUMO	Guam	50.71	302	LR	LR	14 25 03.7	
	comp=Z,41nm,22.0s,baz=207,slow=32						
NVAR	Mina Array Bea	74.07	42	P	P	14 09 56.8	0.0
	0.5nm,0.7s,baz=243,slow=10.0,SNR=3.6						

ILAR	Eielson Array	82.40	11	P	P	14 10 42.0	0.0
	0.6nm,0.7s,baz=229,slow=6.5,SNR=8.4						
GERES	GERESS Array B	146.24	352	PKPbc	PKPab	14 18 01.3	-0.2
	0.9nm,0.4s,baz=15,slow=4.1,SNR=3.4						
BRTR	Keskin Array B	146.45	321	PKPbc	PKPab	14 18 03.0	+0.2
	1.4nm,0.8s,baz=5.7,slow=1.4,SNR=3.1						

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*IDC **12** 14:01:37.3±0.5, 5°.75S×109°.32E, h0km, mb4.2/19, mb1 4.4/22, mb1mx4.2/49, mbtmp4.3/22, ML4.5/3, MS3.7/15, Ms1 3.7/15, ms1mx3.4/37, Error ellipse: s-maj=16.7km s-min=11.7km az=60.0*

*DJA **12** 14:01:40.8±1.2, 6°S±2°×10°9E±°, h18km±10km, M4.9/31, mB5.3/17, mb5.0/26, MLv5.5/31, Mw(mB)4.7/17, MwMwp4.5/1, Mwp4.9/1*

*NEIC **12** 14:01:40.7±1.6, 5°.83S±0°.08×109°.17E±0°.09, h30km±5km, mb4.5/22, Error ellipse: s-maj=16.1km s-min=8.7km az=50.0*

*KLM **12** 14:01:46, 5°.76S×109°.02E, h59km, mb4.7*

ISC 12 14:01:42.5±0.9, **5°.87S**±0°.05×**109°.22E**±0°.05, **h41**km±9km, **n138**, σ**1s.54**/140, **mb4.5**/42, **MS3.7**/15, **Java Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KPJI	Karang Pucung	1.48	191	P	Pn	14 02 06.3	-0.5
SMRI	Semarang	1.68	134	P	Pn	14 02 09.1	-0.4
SMRI				S	Sn	14 02 30.8	+0.9
SMRI	Semarang	1.68	134		Pn	14 02 09.3	-0.2
UWJI	Ujung Watu	1.80	108	P	Pn	14 02 10.4	-0.7
LEM	Lembang	1.86	239	Pn	Pn	14 02 13.4	+1.4
	122nm,0.3s,baz=232,slow=12,SNR=64						
LEM				Sn	Sn	14 02 36.8	+2.4
	1µm,0.3s,baz=146,slow=18,SNR=7.4						
LEM	Lembang	1.86	239	P	Pn	14 02 11.4	-0.7
CMJI	Cimerak	2.05	202	P	Pn	14 02 13.4	-1.2
YOGI	Yogyakarta	2.21	151	P	Pn	14 02 16.0	-0.7
UGM	Wanagama	2.41	148	P	Pn	14 02 19.2	-0.3
UGM	Wanagama	2.41	148		Pn	14 02 19.1	-0.4
CBJI	Citeko	2.42	257	P	Pn	14 02 18.4	-1.3
CBJI				S	Sn	14 02 58.0	+10
CNJI	Cibinong	2.52	235	P	Pn	14 02 20.1	-1.0
DBJI	Dramaga	2.55	254	P	Pn	14 02 20.3	-1.2
TNG	Tangerang	2.58	263	P	Pn	14 02 21.9	+0.1
TNG				P	Pn	14 02 20.4	-1.4
TNG				S	Sn	14 03 02.5	+10
NGJI	Ngawi	2.67	124	P	Pn	14 02 23.7	+0.6
NGJI				S	Sn	14 03 08.9	+15
TBJI	Tambak Boyo	2.77	110	P	Pn	14 02 24.6	+0.1
PCJI	Pacitan	3.02	140	P	Pn	14 02 27.1	-0.7
SBJI	Serang	3.09	265	P	Pn	14 02 27.1	-1.7
PWJI	Pagerwojo	3.34	130	P	Pn	14 02 31.4	-0.8
BWJI	Bawean	3.42	90	P	Pn	14 02 33.5	+0.2
CGJI	Cibinong	3.59	258	P	Pn	14 02 34.3	-1.4
PBKI	Pangkalan Bun	3.98	38	P	Pn	14 02 40.0	-1.1
BLSI	Bandar Lampung	3.99	277	P	Pn	14 02 39.2	-2.0
KLI	Kotabumi	4.46	283	P	Pn	14 02 45.3	-2.4
KASI	Kota Agung	4.72	274	P	Pn	14 02 50.6	-0.6
BLJI	Banyuglugur	4.72	113	P	Pn	14 02 50.6	-0.7
PPBI	Pangkal Pinang	4.80	320	P	Pn	14 02 51.7	-0.7
GMJI	Gumukmas	4.82	120	P	Pn	14 02 52.2	-0.4
KMMI	Kalianget	4.86	104	P	Pn	14 02 51.6	-1.5
MDSI	Maura Dua	5.21	285	P	Pn	14 02 55.7	-2.3
	1.9nm4µm428nm,0.9s						
PMBI	Palembang	5.32	303	P	Pn	14 02 59.7	+0.3
	13nm44µm2µm,1.0s						
PMBI	Palembang	5.32	303		Pn	14 02 57.5	-1.9
ABJI	Asem Bagus	5.33	111	P	Pn	14 02 59.5	-0.1
	2.1nm6µm568nm,0.4s						
JAGI	Jajag, Banyuwa	5.53	118	P	Pn	14 03 02.3	-0.1
	1.5nm3µm230nm,0.9s						
JAGI	Jajag, Banyuwa	5.53	118	Pn	Pn	14 03 01.7	-0.7
LHSI	Lahat	6.03	289	P	Pn	14 03 16.1	+6.8
STKI	Sintang	6.31	21	P	Pn	14 03 12.9	-0.2
	4.1nm106nm,0.7s						
SRBI	Singaraja	6.34	111	P	Pn	14 03 13.0	-0.5
	0.9nm3µm230nm,0.6s						
KSI	Kapahiang	6.97	288	P	Pn	14 03 23.7	+1.5
	20µm216nm,1.0s						
JMBI	JAMBI	6.98	307	P	Pn	14 03 22.9	+0.6
	3.2nm4µm226nm,0.8s						
DSRI	Dabo	7.08	319	P	Pn	14 03 24.2	+0.5
	2.5nm1µm68nm,0.4s						
KSM	Kuching	7.37	8	P	Pn	14 03 27.0	-0.7
KBKI	Kotabaru	7.38	70	P	Pn	14 03 28.9	+1.2
	3.3nm2µm122nm,0.7s						
MASI	Maura Aman, Be	7.47	291	P	Pn	14 03 29.3	+0.2
	4.5nm5µm172nm,0.8s						
MTKI	Muara Teweh, K	7.48	49	P	Pn	14 03 35.8	+6.6
TWSI	Taliwang, Sumb	8.11	111	P	Pn	14 03 38.0	+0.1
	37nm,0.8s						
SBUM	Sibu	8.79	20	P	Pn	14 03 47.0	-0.1
PLAI	Plampang	8.98	110	P	Pn	14 03 50.1	+0.4
	1µm1µm148nm,0.9s						
MYKOM	Kota Tinggi	9.31	325	P	Pn	14 03 56.0	+1.7
PPSI	Pulau Pagai	9.69	288	P	Pn	14 04 00.4	+0.9
	262nm,0.9s						
PDSI	Padang	10.04	299	P	Pn	14 04 05.8	+1.5
	21nm,0.9s						
PPI	Padang Panjang	10.32	301	P	Pn	14 04 08.6	+0.5
KAPI	Kappang	10.52	86	Lg	Lg	14 07 04.0	
	baz=268,slow=19,SNR=1.5						
KAPI				LR	LR	14 08 22.5	
	comp=Z,339nm,18.1s,baz=296,slow=39						
BKSI	Bulukumba	10.86	88	P	Pn	14 04 17.4	+1.9
	326nm20nm,1.0s						
TTSI	Tana Toraja	10.93	76	P	Pn	14 04 20.7	+4.2
SISI	Saibi	11.07	294	P	Pn	14 04 17.4	-1.0
	64nm,1.0s						
BSSI	Bau Bau, Buton	11.21	92	P	Pn	14 04 20.7	+0.4
	652nm48nm,0.7s						
MNSI	Mandailing Nat	11.69	304	P	Pn	14 04 27.2	+0.4
	871nm46nm,0.5s						
MPSI	Mapaga	12.31	60	P	Pn	14 04 35.4	0.0
	10.0nm,0.8s						
EDFI	Ende, Flores	12.69	104	P	Pn	14 04 41.8	+1.1
	292nm18nm,1.1s						
IPM	Ipoh	13.14	321	P	Pn	14 04 48.0	+1.2
MMRI	Maumere	13.20	103	Pn	Pn	14 04 46.5	-1.1
PSI	Prapat	13.42	310	Pn	Pn	14 04 48.9	-1.8
	1.6nm,0.3s,baz=144,slow=11,SNR=12						
PSI				Lg	Lg	14 08 27.9	
	0.7nm,0.3s,baz=156,slow=15,SNR=1.6						
PSI				LR	LR	14 09 24.2	
	comp=Z,309nm,20.9s,baz=136,slow=35						
TOLI2	Tolitoli	13.46	59		Pn	14 04 48.7	-2.5
GSI	Gunungsitoli	13.64	301	P	Pn	14 04 54.9	+1.3
	1µm37nm,0.9s						
GSI	Gunungsitoli	13.64	301		Pn	14 04 51.1	-2.5
KULM	Kulim	14.01	322	P	Pn	14 05 01.0	+2.5
BATI	Baumata	14.93	108	Pn	Pn	14 05 09.6	-1.4
	3.7nm,0.3s,baz=292,slow=5.2,SNR=2.0						
SOEI	Soe	15.39	105		Pn	14 05 13.1	-4.0
SOEI				IAmb	IAmb	14 05 31.1	
	comp=Z,38nm,0.8s						
SANI	Sanana	17.15	78	P	P	14 05 46.7	+6.2
MBWA	Marble Bar	18.30	147		P	14 05 51.0	-2.2
LBMI	Labuha	18.97	75	P	Pn	14 06 05.4	+3.8
	comp=Z,1µmcomp=Z,31nm,1.1s						
FITZ	Fitzroy Crossi	20.11	129	P	P	14 06 13.5	+0.4
	comp=Z,12nm,0.8s,baz=319,slow=7.5,SNR=29						
SIJI	Sorong	22.55	78	P	P	14 06 37.4	-2.0
	comp=Z,3.6nm,0.6s,baz=233,slow=20,SNR=1.6						
SIJI				LR	LR	14 17 48.3	
	comp=Z,166nm,18.2s,baz=156,slow=43						
CM31	Chiang Mai Arr	26.21	337	P	P	14 07 10.9	-2.8
CM31				IAmb	IAmb	14 07 22.4	
	comp=Z,18nm,0.9s						
CMAR	Chiang Mai Arr	26.21	337	P	P	14 07 14.4	+0.7
	comp=Z,5.6nm,0.6s,baz=172,slow=8.2,SNR=35						
CMAR				LR	LR	14 18 28.6	
	comp=Z,193nm,18.8s,baz=195,slow=39						
CMAR	Chiang Mai Arr	26.21	337	P	P	14 07 10.5	-3.2
CHTO	Chiang Mai	26.54	338	P	P	14 07 13.5	-3.2
CHTO				IAmb	IAmb	14 07 25.0	
	comp=Z,9.7nm,0.8s						
WB0	Warramunga Arr	28.10	122	P	P	14 07 29.0	-1.7
WB0				IAmb	IAmb	14 07 52.3	
	comp=Z,6.5nm,0.8s						
WRA	Warramunga Arr	28.13	122	P	P	14 07 30.4	-0.7
	comp=Z,2.0nm,0.6s,baz=296,slow=11,SNR=15						
WRA				PcP	PcP	14 10 46.8	+2.1
	comp=Z,0.7nm,0.7s,baz=291,slow=1.9,SNR=1.9						
WRA				LR	LR	14 21 21.2	
	comp=Z,103nm,18.6s,baz=335,slow=42						
WRA	Warramunga Arr	28.13	122	P	P	14 07 29.3	-1.8
WB2	Warramunga Arr	28.14	122	P	P	14 07 30.2	-0.9
WB2				IAmb	IAmb	14 07 58.0	
	comp=Z,9.7nm,0.9s						
WR0	Warramunga Arr	28.31	122	P	P	14 07 30.8	-1.8
WR0				IAmb	IAmb	14 07 54.4	
	comp=Z,9.4nm,0.9s						
AS31	Alice Springs	29.61	129	P	P	14 07 43.8	-0.4
ASAR	Alice Springs	29.61	129	P	P	14 07 44.6	+0.4
	comp=Z,6.7nm,0.7s,baz=306,slow=8.8,SNR=49						
ASAR				PcP	PcP	14 10 47.9	-0.5
	comp=Z,0.4nm,0.7s,baz=319,slow=3.7,SNR=1.6						
ASAR				LR	LR	14 20 11.8	
	comp=Z,104nm,20.3s,baz=309,slow=38						
ASAR	Alice Springs	29.61	129	P	P	14 07 44.1	-0.1
SSLB	Suanglung	31.62	21	P	P	14 08 01.4	-0.4
CTA	Charters Tower	38.63	115	P	P	14 09 03.1	+0.8
	baz=283,slow=11						
CTAO	Charters Tower	38.63	115	P	P	14 09 01.5	-0.8
CTAO				IAmb	IAmb	14 09 11.7	
	comp=Z,12nm,1.1s						
ODAN	Odare	38.80	328	eP	P	14 09 06.8	+2.9
	comp=Z,19nm,0.7s						
TAPN	Taplejung	39.03	329	eP	P	14 09 09.1	+3.2
	comp=Z,21nm,0.8s						
RAMN	Ramite	39.30	327	eP	P	14 09 10.0	+2.0
	comp=Z,8.0nm,0.5s						
XAN	Xi'an	39.69	360	P	P	14 09 11.9	+0.9
XAN				pP	pP	14 09 19.2	-3.1
XAN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN				LR	LR		
	comp=Z,250nm,13.7s						
XAN				LR	LR		
	comp=Z,340nm,16.9s						
XAN				LR	LR		
	comp=Z,370nm,15.1s						
STKA	Stephens Creek	39.80	135	P	P	14 09 13.0	+1.0
	comp=Z,9.5nm,0.7s,baz=310,slow=9.1,SNR=20						
STKA				LR	LR	14 26 04.2	
	comp=Z,161nm,21.5s,baz=303,slow=37						
STKA	Stephens Creek	39.80	135	P	P	14 09 11.6	-0.3
JIRN	Jiri	40.08	327	eP	P	14 09 17.4	+2.7
	comp=Z,17nm,0.7s						
GUN	Gumba	40.45	327	eP	P	14 09 20.2	+2.5
	comp=Z,24nm,0.7s						
PKIN	Phulchoki	40.45	326	eP	P	14 09 19.2	+1.6
	comp=Z,4.7nm,0.6s						
DMN	Daman	40.63	326	eP	P	14 09 21.1	+2.0
	comp=Z,58nm,0.9s						
KKN	Kakani	40.68	327	eP	P	14 09 21.4	+2.0
	comp=Z,9.1nm,0.7s						
GKN	Gorkha	41.20	326	eP	P	14 09 25.7	+2.1
KOLN	Koldanda	41.60	325	eP	P	14 09 28.5	+1.4
	comp=Z,23nm,0.7s						
DANN	Dangsing	41.95	325	eP	P	14 09 31.2	+1.2
	comp=Z,21nm,0.6s						
PYUN	Piuthan	42.20	324	eP	P	14 09 33.0	+1.0
	comp=Z,11nm,0.5s						
JNU	Nakatsue	43.89	27	P	P	14 09 43.8	-1.5
JCJ	Chichijima	45.73	43	LR	LR	14 27 47.3	
	comp=Z,102nm,21.5s,baz=117,slow=34						
KSRS	Korea Array	46.50	21	P	P	14 10 05.5	-0.3
	comp=Z,3.0nm,0.7s,baz=205,slow=8.6,SNR=11						
KSRS				LR	LR	14 32 00.3	
	comp=Z,33nm,18.1s,baz=190,slow=39						
JWT	Wachi	47.78	29	P	P	14 10 16.4	+0.5
MJAR	Matsushiro Arr	50.16	31	P	P	14 10 32.5	-1.7
	comp=Z,2.6nm,0.8s,baz=200,slow=8.3,SNR=6.4						
MJAR				LR	LR	14 32 33.0	
	comp=Z,35nm,21.8s,baz=240,slow=37						
CN2	Changchun	51.57	15	eP	P	14 10 43.9	-0.7
CN2				ePP	PP	14 12 42.5	+0.1
CN2				eS	S	14 18 04.2	+1.7
CN2				eSS	SS	14 21 38.6	-0.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CN2				LR	LR		
	comp=Z,150nm,16.0s						
CN2				LR	LR		
	comp=Z,100nm,16.0s						
CN2				LR	LR		
	comp=Z,120nm,17.0s						
SONM	Songino Array	53.53	358	P	P	14 10 59.5	+0.2
	comp=Z,2.2nm,0.8s,baz=173,slow=8.3,SNR=12						
SONM				LR	LR	14 35 02.5	
	comp=Z,140nm,18.3s,baz=164,slow=38						
ULN	Ulaanbaatar	53.54	358	P	P	14 10 58.9	-0.4
ULN				IAmb	IAmb	14 11 01.4	
	comp=Z,3.1nm,0.9s						
USRK	Ussuriysk Ar.	53.90	20	P	P	14 11 01.5	-0.3
	comp=Z,4.6nm,0.8s,baz=208,slow=6.6,SNR=9.6						
USRK	Ussuriysk Ar.	53.90	20	P	P	14 11 01.7	-0.1
GAR	Garm	57.35	324	P	P	14 11 25.4	-1.5
MK31	Makanchi Array	57.62	338	P	P	14 11 27.6	-0.8
MK31				IAmb	IAmb	14 11 41.5	
	comp=Z,2.0nm,0.8s						
MKAR	Makanchi Array	57.62	338	P	P	14 11 29.0	+0.5
	comp=Z,1.7nm,0.6s,baz=145,slow=7.2,SNR=18						
MKAR	Makanchi Array	57.62	338	P	P	14 11 28.5	0.0
KLR	Kul'dur	58.28	17	P	P	14 11 32.3	-0.8
	comp=Z,3.9nm,0.7s,baz=214,slow=6.0,SNR=13						
OPO	Ambohidratompo	61.66	252	P	P	14 11 57.8	+0.7
	comp=Z,1.7nm,0.6s,baz=113,slow=3.6,SNR=5.5						
OPO				LR	LR	14 36 12.9	
	comp=Z,23nm,18.9s,baz=21,slow=34						
KURBB	Kurchatov Arra	62.19	338	P	P	14 11 59.5	-0.2
	comp=Z,1.0nm,0.7s,baz=158,slow=5.6,SNR=8.5						
ZALV	Zalesovo Beam	63.03	344	P	P	14 12 05.1	-0.2
	comp=Z,1.9nm,0.6s,baz=158,slow=5.2,SNR=12						
ZALV				LR	LR	14 40 07.5	
	comp=Z,55nm,19.6s,baz=176,slow=37						
ZALV	Zalesovo Beam	63.03	344	P	P	14 12 03.7	-1.6
BKZ	Black Stump Fm	68.73	130	P	P	14 12 41.6	-0.9
MAW	Mawson	69.09	197	P	P	14 12 46.1	+2.1
	comp=Z,1.7nm,0.8s,baz=302,slow=7.3,SNR=2.3						
MAW	Mawson	69.09	197	P	P	14 12 43.5	-0.5
ABKAR	Akbulak array	69.61	328	P	P	14 12 46.1	-1.4
PETK	Petropavlovsk-	71.54	28	P	P	14 12 59.3	0.0
	comp=Z,3.2nm,0.8s,baz=258,slow=13,SNR=2.7						
PETK	Petropavlovsk-	71.54	28	P	P	14 12 58.6	-0.7
VNDA	Vanda	76.67	170	P	P	14 13 29.8	+1.0
	comp=Z,0.8nm,0.8s,baz=325,slow=13,SNR=2.3						
VNDA	Vanda	76.67	170	PKHKP	P	14 13 29.8	+1.0
TIXI	Tiksi	78.44	6	P	P	14 13 37.7	-0.9
TIXI				IAmb	IAmb	14 13 38.5	
	comp=Z,4.9nm,0.7s						
QSPA	South Pole Qui	84.11	180	P	P	14 14 09.1	0.0
QSPA				IAmb	IAmb	14 14 33.3	
	comp=Z,7.5nm,1.1s						
AKASG	Malin Array Be	88.20	321	P	P	14 14 29.7	+0.4
	comp=Z,1.0nm,0.5s,baz=92,slow=4.8,SNR=4.4						
SNAA	Sanae	91.25	197	P	P	14 14 43.7	+0.3
SNAA				IAmb	IAmb	14 14 52.4	
	comp=Z,4.3nm,1.0s						
ARCES	ARCESS Array B	93.26	340	LR	LR	15 01 37.3	
	comp=Z,68nm,19.1s,baz=235,slow=39						
NOA	NORSAR Array B	98.99	331	LR	LR	15 06 19.4	
	comp=Z,33nm,18.0s,baz=335,slow=39						
CPUP	Villa Florida	145.44	202	PKPbc	PKPab	14 21 17.2	+0.1
	comp=Z,0.8nm,0.5s,baz=146,slow=4.6,SNR=1.7						

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*IDC **12** 14:25:05.7±5.9, 37°.17N×142°.14E, h0km, mb3.5/2, mb1 3.6/3, mb1mx3.2/39, mbtmp3.3/3, ML2.3/1, MS3.9/1, Ms1 3.9/1, ms1mx2.4/39, Error ellipse: s-maj=119.0km s-min=35.9km az=15.0*

*JMA **12** 14:25:10.7±0.1, 37°.73N×141°.77E, h60km±1km, M3.7*

ISC 12 14:25:10.1±1.5, **37°.71N**±0°.05×**141°.86E**±0°.10, **h53**km±14km, **n27**, σ**0s.82**/36, **1C-11D**, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.67	333	⇑P	Pn	14 25 24.2	+0.6
JIKH				S	Sn	14 25 33.6	+0.2
JMST	Minamisoumatoc	0.77	271	⇓P	Pn	14 25 25.1	+0.3
JMST				S	Sn	14 25 35.4	-0.2
JIO	Ouri	0.84	332	⇓P	Pn	14 25 26.3	+0.5
JIO				S	Sn	14 25 37.4	+0.1
JFK	Kawauchi	0.86	246	⇓P	Pn	14 25 26.2	+0.2
JFK				S	Sn	14 25 37.2	-0.5
JMM	Marumori	0.86	281	⇓P	Pn	14 25 26.1	+0.1
JMM				S	Sn	14 25 37.3	-0.4
ONAJ	Iwakimizuishiy	1.04	235	⇓P	Pn	14 25 28.6	+0.1
ONAJ				S	Sn	14 25 41.4	-0.7
JOU	Okura	1.15	305	⇓P	Pn	14 25 29.9	0.0
JOU				S	Sn	14 25 44.1	-0.5
JFT	Otama	1.23	261	⇓P	Pn	14 25 31.4	+0.5
JFT				S	Sn	14 25 46.6	+0.2
JMK	Ichinoseki	1.34	338	⇓P	Pn	14 25 33.0	+0.6
JMK				S	Sn	14 25 49.2	+0.1
JYS	Shirataka	1.51	290	⇓P	Pn	14 25 34.9	+0.2
JYS				eS	Sn	14 25 52.7	-0.6
JYK	Kaneyama	1.69	316	⇓P	Pn	14 25 37.5	+0.3
JYK				eS	Sn	14 25 57.5	-0.1
JFY	Yanaizu	1.74	261	P	Pn	14 25 38.2	+0.3
JFY				S	Sn	14 25 58.4	-0.6
JOM	Ohasama	1.81	346	P	Pn	14 25 39.5	+0.6
JOM				S	Sn	14 26 01.4	+0.7
JYA	Atsumi	1.91	298	P	Pn	14 25 40.3	+0.1
JYA				eS	Sn	14 26 02.4	-0.6
JRG	Rokugo	1.94	331	⇓P	Pn	14 25 41.2	+0.6
JNS	Sasagawa	2.02	274	P	Pn	14 25 42.1	+0.4
MJAR	Matsushiro Arr	3.14	249	Pn	Pn	14 25 57.5	+0.3
	0.3nm,0.3s,baz=74,slow=16,SNR=14						
MJAR				Sn	Sn	14 26 35.5	+2.1
	0.3nm,0.3s,baz=98,slow=8.8,SNR=5.8						
MAT	Matsushiro	3.14	249	P	Pn	14 25 58.3	+1.2
MAT				S	Sn	14 26 36.5	+3.1
H11N2	WAKE ISLAND Hy	28.20	122	T	T	15 00 54.7	
	baz=316,slow=75,SNR=12						
H11N1	WAKE ISLAND Hy	28.21	123	T	T	15 00 52.8	
	baz=316,slow=75,SNR=13						
H11N3	WAKE ISLAND Hy	28.22	122	T	T	15 00 53.9	
	baz=316,slow=75,SNR=10.0						
H11S1	WAKE ISLAND Hy	28.94	125	T	T	15 01 41.6	
	baz=317,slow=74						
H11S3	WAKE ISLAND Hy	28.94	125	T	T	15 01 33.4	
	baz=317,slow=74						
H11S2	WAKE ISLAND Hy	28.96	125	T	T	15 01 33.9	
	baz=317,SNR=5.7						
CTA	Charters Tower	57.64	175	LR	LR	14 59 51.5	
	comp=Z,108nm,20.3s,baz=40,slow=36						
WRA	Warramunga Arr	57.78	188	P	P	14 34 55.1	-0.8
	0.6nm,0.5s,baz=7.8,slow=7.7,SNR=12						
ASAR	Alice Springs	61.51	188	P	P	14 35 20.6	-0.9
	0.2nm,0.7s,baz=18,slow=10,SNR=2.2						

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*TAP **12** 14:29:34.1, 24°.11N×121°.35E, h67km, ML3.9, B*

*JMA **12** 14:29:34.2, 24°.03N×121°.39E, h64km±1km, M3.0*

ISC 12 14:29:34.5±1.3, **24°.11N**±0°.02×**121°.36E**±0°.03, **h70**km±5km, **n74**, σ**0s.66**/135, **4C-7D**, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WHF	Hehuan Shan	0.09	292	⇑iP	Pn	14 29 45.5	+0.2
	baz=292						
WHF				i S	Sn	14 29 53.3	0.0
	baz=292						
ETLH	Xiulin Townshi	0.15	49	P	Pn	14 29 45.2	+0.1
	baz=59						
ETLH				S	Sn	14 29 52.4	-0.3
	baz=59						
FUSS	Fushou	0.17	322	P	Pn	14 29 45.7	+0.3
	baz=316						
FUSS				S	Sn	14 29 53.3	0.0
	baz=316						
CHGB	Renai	0.18	254	⇑iP	Pn	14 29 45.4	+0.1
	baz=259						
CHGB				S	Sn	14 29 53.1	-0.1
	baz=259						
ETM	Tongmen	0.19	140	eP	Pn	14 29 44.1	-1.0
	baz=139						
TWD	Chiawan	0.22	98	⇓iP	Pn	14 29 44.1	-1.1
	baz=109						
TWD				i S	Sn	14 29 51.1	-2.0
	baz=109						
TWT	Tachien	0.22	310	P	Pn	14 29 45.6	+0.1
	baz=298						
TWT				S	Sn	14 29 53.2	-0.3
	baz=298						
NACB	Ninganchiao	0.22	73	⇓iP	Pn	14 29 44.4	-0.9
	baz=86						
NACB				S	Sn	14 29 53.0	-0.2
	baz=86						
OWD	Renai	0.23	228	⇑iP	Pn	14 29 45.4	-0.1
	baz=235						
OWD				S	Sn	14 29 52.9	-0.6
	baz=235						
TDCB	Techi	0.23	308	P	Pn	14 29 45.3	-0.3
	baz=299						
TDCB				eS	Sn	14 29 53.1	-0.4
	baz=299						
ETL	Fush Village	0.24	78	P	Pn	14 29 44.8	-0.7
	baz=91						
HWA	Hwalien	0.26	120	eP	Pn	14 29 45.9	+0.5
	baz=112						
HWA				eS	Sn	14 29 54.6	+1.2
	baz=112						
ESL	Shilin	0.30	167	P	Pn	14 29 45.8	+0.1
	baz=157						
ESL				S	Sn	14 29 53.7	-0.2
	baz=157						
NNSB	Datong	0.32	4	P	Pn	14 29 46.4	+0.4
	baz=5.0						
NNSB				S	Sn	14 29 54.6	+0.2
	baz=5.0						
TEYL	Yanliau Villag	0.32	138	eP	Pn	14 29 45.7	-0.2
	baz=137						
NNS	Nan Shan	0.33	2	⇓iP	Pn	14 29 46.5	+0.4
	baz=360						
NNS				i S	Sn	14 29 55.1	+0.5
	baz=360						
WPL	Puli Township	0.38	255	eP	Pn	14 29 46.3	-0.1
	baz=259						
WPL				eS	Sn	14 29 54.5	-0.4
	baz=259						
DPDB	Guoxing	0.40	259	eP	Pn	14 29 46.6	+0.1
	baz=262						
DPDB				eS	Sn	14 29 55.3	-0.1
	baz=262						
VWDT	VWDT	0.41	210	P	Pn	14 29 47.0	+0.5
	baz=212						
VWDT				S	Sn	14 29 56.2	+1.0
	baz=212						
WCS	Beigang Elemen	0.41	263	eP	Pn	14 29 46.5	-0.1
	baz=269						
WHP	Taichung City	0.41	294	eP	Pn	14 29 46.3	-0.4
	baz=294						
WHP				S	Sn	14 29 54.8	-0.8
	baz=294						
EGFH	Guangfu	0.44	172	eP	Pn	14 29 46.8	0.0
	baz=165						
EGFH				eS	Sn	14 29 56.0	+0.2
	baz=165						
ENA	Nanau	0.47	48	P	Pn	14 29 47.0	0.0
	baz=57						
ENA				eS	Sn	14 29 56.3	0.0
	baz=57						
SMLT	Sun Moon Lake	0.48	242	⇑iP	Pn	14 29 47.3	0.0
	baz=241						
SMLT				i S	Sn	14 29 56.8	+0.2
	baz=241						
SSLB	Suanglung	0.49	229	P	Pn	14 29 47.2	-0.1
	baz=238						
SSLB				S	Sn	14 29 56.5	-0.2
	baz=238						
SSLB	Suanglung	0.49	229	P	Pn	14 29 47.3	0.0
TYC	Yuchr	0.50	246	P	Pn	14 29 47.4	+0.1
	baz=245						
TYC				S	Sn	14 29 56.5	-0.3
	baz=245						
EWUT	Wuta	0.51	49	eP	Pn	14 29 47.1	-0.3
	baz=55						
NDT	Datong Townshi	0.51	16	P	Pn	14 29 48.1	+0.6
	baz=11						
NDT				S	Sn	14 29 58.2	+1.2
	baz=11						
ENTT	Nioudou	0.56	19	⇓iP	Pn	14 29 48.4	+0.4
	baz=31						
ENTT				S	Sn	14 29 58.7	+0.8
	baz=31						
NSK	Sanguang	0.56	360	P	Pn	14 29 48.7	+0.6
	baz=355						
NSK				S	Sn	14 29 59.0	+0.9
	baz=355						
TWQ1	Liyutan	0.59	294	⇓iP	Pn	14 29 47.8	-0.4
	baz=294						
TWQ1				i S	Sn	14 29 57.6	-0.7
	baz=294						

EHY	**Hungye**	**0.60**	**183**	*e*P	**Pn**	**14 29 48.8**	**+0.4**
	baz=171						
EHY				*e*S	**Sn**	**14 29 59.2**	**+0.6**
	baz=171						
NSTT	**Nanjuang**	**0.61**	**328**	*e*P	**Pn**	**14 29 48.4**	**-0.1**
	baz=322						
NSTT				*e*S	**Sn**	**14 29 58.3**	**-0.5**
	baz=322						
HGSD	**Ruisui**	**0.62**	**175**	*e*P	**Pn**	**14 29 48.4**	**-0.2**
	baz=167						
LIOB	**Emei**	**0.62**	**330**	*e*P	**Pn**	**14 29 48.4**	**-0.2**
	baz=323						
LIOB				*e*S	**Sn**	**14 29 58.7**	**-0.2**
	baz=323						
WHYT	**Xinyi Township**	**0.62**	**229**	*e*P	**Pn**	**14 29 48.6**	**0.0**
	baz=233						
WHYT				*e*S	**Sn**	**14 29 59.0**	**0.0**
	baz=233						
NSY	**Sanyi**	**0.63**	**299**	P	**Pn**	**14 29 48.4**	**-0.3**
	baz=299						
NSY				S	**Sn**	**14 29 58.9**	**-0.2**
	baz=299						
TCU	**Taichung**	**0.63**	**274**	*e*P	**Pn**	**14 29 48.0**	**-0.6**
	baz=282						
TCU				*e*S	**Sn**	**14 29 58.7**	**-0.3**
	baz=282						
WJS	**Zhushan**	**0.65**	**244**	*e*P	**Pn**	**14 29 49.3**	**+0.4**
	baz=255						
WJS				*e*S	**Sn**	**14 29 59.4**	**0.0**
	baz=255						
WNT	**Mingjian**	**0.66**	**250**	*e*P	**Pn**	**14 29 49.0**	**0.0**
	baz=259						
WNT				*e*S	**Sn**	**14 29 60.0**	**+0.3**
	baz=259						
TWC	**Suao**	**0.67**	**42**	P	**Pn**	**14 29 49.4**	**+0.3**
	baz=37						
TWC				*e*S	**Sn**	**14 29 59.5**	**-0.3**
	baz=37						
TWE	**Neicheng**	**0.67**	**25**	*e*P	**Pn**	**14 29 49.4**	**+0.3**
	baz=37						
TWE				*e*S	**Sn**	**14 30 00.2**	**+0.4**
	baz=37						
NWLT	**Wulai**	**0.68**	**11**	*e*P	**Pn**	**14 29 49.6**	**+0.4**
	baz=15						
NWLT				*e*S	**Sn**	**14 30 00.9**	**+0.8**
	baz=15						
WDJ	**Dajia District**	**0.70**	**290**	P	**Pn**	**14 29 49.1**	**-0.3**
	baz=290						
WDJ				*e*S	**Sn**	**14 29 60.0**	**-0.5**
	baz=290						
YULB	**Yu-li**	**0.72**	**185**	*e*P	**Pn**	**14 29 49.9**	**+0.2**
	baz=174						
YULB				*e*S	**Sn**	**14 30 01.3**	**+0.5**
	baz=174						
YUS	**Yu-Shan**	**0.72**	**211**	⇓*i*P	**Pn**	**14 29 53.0**	**+2.8**
	baz=211						
YUS				S	**Sn**	**14 30 03.0**	**+1.3**
	baz=211						
WCHH	**Zhanghua**	**0.73**	**268**	*e*P	**Pn**	**14 29 49.6**	**-0.2**
	baz=277						
ILA	**Ilan**	**0.74**	**28**	*e*P	**Pn**	**14 29 50.5**	**+0.6**
	baz=36						
ILA				*e*S	**Sn**	**14 30 02.6**	**+1.3**
	baz=36						
EYUL	**Yuli**	**0.76**	**183**	*e*P	**Pn**	**14 29 51.2**	**+1.1**
	baz=175						
EYUL				*e*S	**Sn**	**14 30 03.4**	**+1.8**
	baz=175						
ALS	**Alishan**	**0.78**	**221**	P	**Pn**	**14 29 50.9**	**+0.1**
	baz=230						
ALS				*e*S	**Sn**	**14 30 03.4**	**+0.8**
	baz=230						
CHN5	**Tsauling**	**0.81**	**231**	*e*P	**Pn**	**14 29 51.0**	**+0.2**
	baz=231						
CHN5				*e*S	**Sn**	**14 30 03.0**	**+0.2**
	baz=231						
NHDH	**Xindian Distri**	**0.86**	**10**	*e*P	**Pn**	**14 29 52.1**	**+0.7**
	baz=20						
NHDH				*e*S	**Sn**	**14 30 04.5**	**+0.7**
	baz=20						
TWA	**Mucha**	**0.89**	**13**	*e*P	**Pn**	**14 29 52.1**	**+0.4**
	baz=13						
TWA				*e*S	**Sn**	**14 30 05.3**	**+0.9**
	baz=13						
FULB	**Fuli**	**0.91**	**184**	*e*P	**Pn**	**14 29 52.2**	**+0.3**
	baz=175						
WRL	**Guolierlin Hig**	**0.92**	**257**	*e*P	**Pn**	**14 29 51.7**	**-0.3**
	baz=258						
WRL				*e*S	**Sn**	**14 30 04.4**	**-0.7**
	baz=258						
TIPB	**Shuangxi**	**0.96**	**26**	*e*P	**Pn**	**14 29 53.2**	**+0.7**
	baz=26						
TIPB				*e*S	**Sn**	**14 30 06.4**	**+0.5**
	baz=26						
ELDTW	**Lidau**	**0.97**	**199**	⇓*i*P	**Pn**	**14 29 53.5**	**+0.8**
	baz=191						
ELDTW				S	**Sn**	**14 30 07.4**	**+1.1**
	baz=191						
TWS1	**Kuangyinshan**	**0.99**	**3**	*e*P	**Pn**	**14 29 53.0**	**+0.1**
	baz=2.0						
TWS1				*e*S	**Sn**	**14 30 07.0**	**+0.4**
	baz=2.0						
CHKT	**Chengkung**	**1.01**	**180**	*e*P	**Pn**	**14 29 52.4**	**-0.7**
	baz=170						
CHKT				*e*S	**Sn**	**14 30 06.8**	**0.0**
	baz=170						
NWF	**Wu-fen Shan**	**1.03**	**22**	*e*P	**Pn**	**14 29 53.8**	**+0.3**
	baz=21						
NWF				*e*S	**Sn**	**14 30 07.6**	**0.0**
	baz=21						
CHN4	**Tsaushan**	**1.03**	**223**	*e*P	**Pn**	**14 29 52.2**	**-1.2**
	baz=224						
CHN4				*e*S	**Sn**	**14 30 06.4**	**-1.1**
	baz=224						
TPUB	**Ta-pu**	**1.05**	**220**	P	**Pn**	**14 29 54.1**	**+0.4**
YM01	**YM01**	**1.05**	**10**	*e*P	**Pn**	**14 29 53.7**	**0.0**
	baz=19						
YM01				*e*S	**Sn**	**14 30 07.8**	**-0.2**
	baz=19						
STYH	**Taoyuan**	**1.08**	**210**	*e*P	**Pn**	**14 29 54.8**	**+0.8**
	baz=210						
EDH	**Donghe**	**1.13**	**183**	*e*P	**Pn**	**14 29 53.6**	**-1.2**
	baz=172						
EDH				*e*S	**Sn**	**14 30 09.7**	**0.0**
	baz=172						
JYNG	**Yonagunijimaku**	**1.49**	**76**	P	**Pn**	**14 29 59.3**	**0.0**
JYNG				*e*S	**Sn**	**14 30 18.5**	**+0.6**
YOJ	**Yonaguni jima**	**1.55**	**77**	P	**Pn**	**14 30 00.1**	**0.0**
YOJ				*e*S	**Sn**	**14 30 19.4**	**0.0**
YOJ	**Yonaguni jima**	**1.55**	**77**	P	**Pn**	**14 30 00.3**	**+0.2**
IRIF	**Iriomote-Funau**	**2.17**	**84**	P	**Pn**	**14 30 08.6**	**+0.1**
IRIF				S	**Sn**	**14 30 34.2**	**-0.3**
JKRS	**Kuro-shima**	**2.42**	**86**	P	**Pn**	**14 30 12.4**	**+0.5**
JKRS				S	**Sn**	**14 30 40.5**	**0.0**
JIJ	**Ishigaki jima**	**2.55**	**84**	P	**Pn**	**14 30 13.6**	**0.0**
JIJ				*e*S	**Sn**	**14 30 41.9**	**-1.8**
JISG	**Ishigakijimahi**	**2.73**	**79**	P	**Pn**	**14 30 15.8**	**-0.3**
JISG				S	**Sn**	**14 30 47.1**	**-0.9**
JTJ	**Tarama**	**3.09**	**79**	*e*S	**Sn**	**14 30 55.0**	**-1.8**

*IDC **12** 14:45:30.2±1.6, 30°.23S×72°.17W, h0^{km}, mb4.0/1, mb1 3.8/2, mb1mx3.6/21, mbtmp3.7/2, ML3.5/1, MS3.1/1, Ms1 3.1/1, ms1mx2.7/20, Error ellipse: s-maj=61.1km s-min=35.4km az=134.0*

*NEIC **12** 14:45:30.6±1.3, 30°.11S±0°.05×72°.18W±0°.06, h10^{km}±2^{km}, mb4.3/2, Error ellipse: s-maj=9.8km s-min=8.6km az=235.0*

*GUC **12** 14:45:34.4±0.8, 30°.26S×71°.79W, h34^{km}±6^{km}, ML3.7*

ISC 12 14:45:31.9±0.8**, 30°.13S**±0°.05×**72°.15W**±0°.06**, h25^{km}, n51, σ1^{s}.53**/50**, mb4.2**/3**, 3D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	**Fray Jorge**	**0.70**	**141**	⇓*i*P	**Pb**	**14 45 44.2**	**-1.3**
CO06	**Fray Jorge**	**0.70**	**141**	Pg	**Pb**	**14 45 44.2**	**-1.3**
CO05	**La Serena**	**0.82**	**75**	⇓*i*P	**Pb**	**14 45 46.9**	**-0.6**
CO05				*e*S	**Sb**	**14 45 55.6**	**-2.6**
CO05				*e*S	**Sn**	**14 45 55.7**	**-3.5**
CO05	**La Serena**	**0.82**	**75**		**Pb**	**14 45 46.8**	**-0.7**
GO04	**Tololo Observa**	**1.17**	**92**	⇓*i*P	**Pn**	**14 45 52.3**	**-0.6**
GO04	**Tololo Observa**	**1.17**	**92**		**Pn**	**14 45 52.3**	**-0.6**
LCO	**Las Campanas**	**1.69**	**49**	*e*P	**Pn**	**14 46 00.8**	**+0.7**
LCO				*e*S	**Sb**	**14 46 24.5**	**+1.2**
LCO	**Las Campanas**	**1.69**	**49**		**Pn**	**14 46 01.0**	**+0.9**
AC04	**Llanos de Chal**	**2.14**	**26**	Pn	**Pn**	**14 46 06.4**	**+0.4**
VA06	**Catapilco**	**2.53**	**163**	*e*P	**Pn**	**14 46 11.6**	**+0.2**
VA06				IAML		14 47 00.2	
	comp=E,593nm,0.5s						
VA01	**Torpederas**	**2.91**	**172**	Pn	**Pn**	**14 46 17.2**	**+0.5**
VA03	**San Esteban**	**2.96**	**153**	*e*P	**Pn**	**14 46 18.7**	**+1.3**
VA03				IAML		14 47 09.2	
	comp=E,481nm,0.3s						
VA03	**San Esteban**	**2.96**	**153**	Pn	**Pn**	**14 46 18.6**	**+1.3**
ROCH	**El Roble**	**2.99**	**161**	*e*P	**Pn**	**14 46 18.2**	**+0.3**
ROCH				IAML		14 47 09.9	
	comp=N,216nm,0.5s						
GO03	**Copiap**	**3.04**	**34**	*e*P	**Pn**	**14 46 19.3**	**+0.8**
GO03				IAML		14 47 12.2	
	comp=N,167nm,0.3s						
GO03	**Copiap**	**3.04**	**34**	Pn	**Pn**	**14 46 19.6**	**+1.1**
MT02	**Curacav**	**3.23**	**165**	*e*P	**Pn**	**14 46 21.3**	**+0.2**
MT02	**Curacav**	**3.23**	**165**	Pn	**Pn**	**14 46 21.5**	**+0.4**
PEL	**Peldehue**	**3.25**	**158**	*e*P	**Pn**	**14 46 22.6**	**+1.3**
PEL				IAML		14 47 17.8	
	comp=E,142nm,0.6s						
PEL	**Peldehue**	**3.25**	**158**	Pn	**Pn**	**14 46 23.0**	**+1.6**
MT09	**Talagante**	**3.77**	**165**	*e*P	**Pn**	**14 46 29.6**	**+1.0**
MT09				IAML		14 47 38.0	
	comp=N,98nm,0.4s						
MT09	**Talagante**	**3.77**	**165**	Pn	**Pn**	**14 46 29.5**	**+1.0**
MT01	**Popeta**	**3.80**	**169**	*e*P	**Pn**	**14 46 29.4**	**+0.6**
MT01	**Popeta**	**3.80**	**169**	Pn	**Pn**	**14 46 29.4**	**+0.6**
LMEL	**Las Melosas**	**4.06**	**156**	*e*P	**Pn**	**14 46 34.4**	**+1.9**
AC02	**Maricunga**	**4.23**	**40**	Pn	**Pn**	**14 46 37.1**	**+1.9**
BO01	**Tunca**	**4.34**	**168**	Pn	**Pn**	**14 46 36.6**	**+0.3**
BO02	**Sierra Bellavi**	**4.79**	**166**	Pn	**Pn**	**14 46 43.5**	**+1.0**
PB14	**IPOC Station P**	**5.70**	**16**	Pn	**Pn**	**14 46 53.9**	**-1.4**
H03N1	**Juan Fernandez**	**6.63**	**238**	Pn	**Pn**	**14 47 07.8**	**+0.2**
	baz=199,slow=73,SNR=17						
H03N1				T	T	14 54 19.0	
	baz=70,slow=72,SNR=486						
H03N2	**Juan Fernandez**	**6.65**	**239**	Pn	**Pn**	**14 47 07.1**	**-0.6**
	baz=199,slow=73,SNR=16						
H03N2				T	T	14 54 17.4	
	baz=70,slow=72,SNR=524						
H03N3	**Juan Fernandez**	**6.65**	**238**	Pn	**Pn**	**14 47 07.2**	**-0.5**
	baz=199,slow=73,SNR=15						
H03N3				T	T	14 54 17.7	
	baz=70,slow=72,SNR=331						
PB10	**IPOC Station P**	**6.75**	**13**	Pn	**Pn**	**14 47 06.9**	**-2.4**
H03S3	**Juan Fernandez**	**6.82**	**236**	Pn	**Pn**	**14 47 08.6**	**-1.5**
	baz=242,slow=75,SNR=4.0						
H03S1	**Juan Fernandez**	**6.83**	**235**	Pn	**Pn**	**14 47 06.9**	**-3.3**
	baz=242,slow=75,SNR=4.4						
H03S2	**Juan Fernandez**	**6.84**	**236**	Pn	**Pn**	**14 47 07.4**	**-2.9**
	baz=242,slow=75,SNR=4.5						
PB06	**IPOC Station P**	**7.75**	**18**	Pn	**Pn**	**14 47 20.7**	**-2.6**
PLCA	**Paso Flores**	**10.66**	**173**	Pn	**Pn**	**14 48 03.4**	**+0.3**
	comp=N,0.1nm,0.3s,baz=161,slow=20,SNR=1.8						
PB12	**IPOC Station P**	**11.59**	**9**	Pn	**Pn**	**14 48 15.7**	**-0.2**
CPUP	**Villa Florida**	**13.60**	**77**	LR	LR	14 54 41.8	
	comp=N,66nm,18.3s,baz=218,slow=40						
VNA3	**Neumayer Olymp**	**52.98**	**159**	P	**P**	**14 54 47.6**	**+1.6**
VNA1	**Neumayer--Stat**	**53.27**	**158**	P	**P**	**14 54 48.9**	**+0.8**
VNA2	**Neumayer--Watz**	**53.62**	**158**	P	**P**	**14 54 52.9**	**+2.2**
	baz=285,slow=7.9						
SNAA	**Sanae**	**55.20**	**159**	P	**P**	**14 55 04.4**	**+2.1**
SNAA	**Sanae**	**55.20**	**159**	P	**P**	**14 55 03.3**	**+1.0**
SNAA				IAmb	IAmb	14 55 22.0	
	comp=Z,5.1nm,1.4s						
QSPA	**South Pole Qui**	**60.09**	**180**	P	**P**	**14 55 38.3**	**+1.5**
QSPA				IAmb	IAmb	14 55 50.3	
	comp=Z,1.8nm,1.0s						
TORD	**Torodi Ar. Bea**	**83.00**	**71**	P	**P**	**14 57 57.4**	**+2.1**
	comp=Z,0.5nm,0.4s,baz=229,slow=5.2,SNR=4.3						
H11S2	**WAKE ISLAND Hy**	**125.64**	**272**	T	T	17 23 18.1	
	baz=115,slow=75,SNR=11						
H11S1	**WAKE ISLAND Hy**	**125.65**	**272**	T	T	17 23 18.9	
	baz=115,slow=75,SNR=16						
H11S3	**WAKE ISLAND Hy**	**125.65**	**272**	T	T	17 23 19.4	
	baz=115,slow=75,SNR=14						
ZALV	**Zalesovo Beam**	**150.94**	**28**	PKPbc	**PKiKP**	**15 05 24.8**	**+2.2**
	comp=Z,1.2nm,0.4s,baz=324,slow=2.4,SNR=7.1						

*IDC **12** 14:48:54.6±2.3, 6°.10S×129°.83E, h0^{km}, mb3.6/1, mb1 3.6/4, mb1mx3.2/41, mbtmp3.4/4, ML3.5/3, Error ellipse: s-maj=91.9km s-min=28.9km az=76.0*

*DJA **12** 14:49:14.8±1.0, 6°S±5°×13°0E±°, h196^{km}±19^{km}, M3.7/5, mb3.5/2, mB4.8/2, MLv3.9/5, Mw(mB)4.0/2*

ISC 12 14:49:14.1±1.2**, 6°.06S**±0°.08×**130°.1E**±0°.1**, h200^{km}, n8, σ2^{s}.90**/7**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**2.27**	**148**	P	**Pn**	**14 49 56.7**	**+1.3**
FAKI	**Fak Fak**	**3.79**	**35**	P	**Pn**	**14 50 13.4**	**0.0**
FAKI				S	**Sn**	**14 50 59.3**	**-0.6**
SWI	**Sorong**	**5.29**	**13**	P	**Pn**	**14 50 32.1**	**-0.2**
	0.2nm2μm12nm,1.3s						
LBMI	**Labuha**	**5.96**	**334**	P	**Pn**	**14 50 40.0**	**-0.9**
FITZ	**Fitzroy Crossi**	**12.73**	**200**	Pn	Pn	14 51 56.8	-11
	0.3nm,0.3s,baz=22,slow=13,SNR=18						
FITZ				Sn	S	14 54 05.5	-25
	0.2nm,0.3s,baz=138,slow=14,SNR=2.3						
WRA	**Warramunga Arr**	**14.41**	**164**	Pn	Pn	14 52 20.1	-9.1
	0.3nm,0.3s,baz=343,slow=13,SNR=20						
WRA				Sn	S	14 54 46.8	-23
	0.3nm,0.3s,baz=349,slow=20,SNR=7.6						
ASAR	**Alice Springs**	**17.89**	**169**	P	**P**	**14 53 04.4**	**-4.5**
	0.1nm,0.3s,baz=351,slow=13,SNR=7.6						
ASAR				S	S	14 56 12.0	-12
	0.1nm,0.3s,baz=341,slow=26,SNR=1.9						
MKAR	**Makanchi Array**	**67.48**	**327**	P	**P**	**14 59 51.8**	**+3.3**
	0.3nm,0.4s,baz=119,slow=8.1,SNR=4.4						

IDC 12 14:51:50.9±6.8**, 19°.84S**×**178°.56W, h553^{km}**±50^{km}**, mb2.3**/2**, mb1 2.6**/3**, mb1mx2.3**/37**, mbtmp3.3**/3**, Error ellipse: s-maj=203.2km s-min=31.4km az=151.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.83**	**303**	P	P	14 53 11.8	-0.1
	3.0nm,0.3s,baz=126,slow=23,SNR=22						
MSVF				S	S	14 54 11.4	-6.5
	baz=229,slow=22,SNR=2.4						
ASAR	**Alice Springs**	**44.16**	**256**	P	P	14 59 11.2	0.0
	0.4nm,0.8s,baz=93,slow=7.5,SNR=4.2						
WRA	**Warramunga Arr**	**44.17**	**261**	P	P	14 59 11.1	-0.3
	0.1nm,0.3s,baz=98,slow=8.0,SNR=2.4						
PDAR	**Pinedale Array**	**88.85**	**43**	P	P	15 03 46.5	-0.2
	0.8nm,0.3s,baz=223,slow=4.9,SNR=3.9						

*IDC **12** 14:54:27.6±3.3, 15°.68S×173°.60W, h0^{km}, mb3.7/4, mb1 4.0/5, mb1mx3.6/38, mbtmp3.6/5, ML3.3/1, MS3.4/7, Ms1 3.4/7, ms1mx3.0/32, Error ellipse: s-maj=176.8km s-min=23.0km az=146.0*

ISC 12 14:54:33.7±2.8**, 15°.5S**±0°.9×**173°.5W**±0°.6**, h42^{km}, n13, σ2^{s}.07**/7**, mb3.6**/4**, MS3.6**/5**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.30**	**47**	Pn	**Pn**	**14 55 08.3**	**-0.9**
	6.9nm,0.3s,baz=207,slow=2.7,SNR=23						
AFI				Sn	**Sn**	**14 55 34.8**	**-1.5**
	20nm,0.3s,baz=54,slow=22,SNR=8.4						
AFI				LR	LR	14 56 09.2	
	comp=Z,229nm,20.8s,baz=145,slow=41						
MSVF	**Nonsavu**	**8.40**	**254**	LR	LR	14 59 24.6	
	comp=Z,264nm,21.1s,baz=321,slow=36						
H11N3	**WAKE ISLAND Hy**	**39.96**	**331**	T	T	15 45 12.6	
	baz=150,slow=76,SNR=9.1						
H11N1	**WAKE ISLAND Hy**	**39.96**	**331**	T	T	15 45 24.6	
	baz=150,slow=76,SNR=7.7						
H11N2	**WAKE ISLAND Hy**	**39.98**	**331**	T	T	15 45 14.5	
	baz=150,slow=76,SNR=7.6						
WRA	**Warramunga Arr**	**49.73**	**257**	P	**P**	**15 03 21.0**	**-1.3**
	0.3nm,0.7s,baz=93,slow=8.3,SNR=1.9						
WRA				LR	LR	15 22 55.8	
	comp=Z,51nm,18.0s,baz=215,slow=34						
ASAR	**Alice Springs**	**49.99**	**252**	P	**P**	**15 03 23.0**	**-1.2**
	1.6nm,0.8s,baz=88,slow=8.0,SNR=14						
ASAR				LR	LR	15 22 28.8	
	comp=Z,79nm,20.8s,baz=90,slow=34						
FITZ	**Fitzroy Crossi**	**58.10**	**258**	LR	LR	15 27 27.0	
	comp=Z,39nm,19.3s,baz=96,slow=34						
NVAR	**Mina Array Bea**	**74.47**	**42**	P	**P**	**15 06 10.2**	**+2.1**
	0.7nm,0.7s,baz=225,slow=11,SNR=3.7						
KSRS	**Korea Array**	**76.17**	**316**	LR	LR	15 32 47.6	
	comp=Z,18nm,20.1s,baz=116,slow=30						
TXAR	**Lajitas Array**	**80.75**	**56**	LR	LR	15 35 13.3	
	comp=Z,45nm,20.8s,baz=0.0,slow=30						
ILAR	**Eielson Array**	**82.57**	**11**	P	**P**	**15 06 54.0**	**+2.2**
	0.3nm,0.7s,baz=222,slow=6.1,SNR=5.9						
BRTR	**Keskin Array B**	**146.18**	**321**	PKPbc	**PKPdf**	**15 14 07.6**	**-1.3**
	0.5nm,0.6s,baz=62,slow=3.4,SNR=1.4						

IDC 12 14:56:45.9±2.7**, 6°.73N**×**94°.40E, h0^{km}, mb3.5**/3**, mb1 3.6**/5**, mb1mx3.3**/51**, mbtmp3.4**/5**, ML3.5**/2**, MS2.7**/2**, Ms1 2.8**/2**, ms1mx2.5**/34**, Error ellipse: s-maj=96.4km s-min=24.0km az=62.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**5.96**	**131**	Pn	Pn	14 58 15.8	+0.1
	0.4nm,0.3s,baz=330,slow=20,SNR=1.4						
CMAR	**Chiang Mai Arr**	**12.47**	**20**	Pn	Pn	14 59 45.6	+0.7
	0.2nm,0.3s,baz=209,slow=14,SNR=3.3						
CMAR				LR	LR	15 04 18.8	
	comp=Z,27nm,18.3s,baz=200,slow=36						
PALK	**Pallekele**	**13.60**	**273**	LR	LR	15 04 58.5	
	comp=Z,32nm,19.1s,baz=203,slow=36						
H08S3	**Diego Garcia H**	**26.09**	**237**	T	T	15 29 05.9	
	baz=57,slow=75,SNR=32						
H08S2	**Diego Garcia H**	**26.10**	**237**	T	T	15 29 14.9	
	baz=57,slow=75,SNR=5.9						
H08S1	**Diego Carcia H**	**26.11**	**237**	T	T	15 29 18.4	
	baz=57,slow=75,SNR=5.1						
MKAR	**Makanchi Array**	**41.26**	**347**	P	P	15 04 32.5	-0.4
	0.8nm,0.8s,baz=160,slow=7.8,SNR=7.4						
WRA	**Warramunga Arr**	**47.40**	**125**	P	P	15 05 22.2	-0.2
	0.4nm,0.6s,baz=306,slow=9.7,SNR=7.4						
ASAR	**Alice Springs**	**48.99**	**129**	P	P	15 05 35.0	+0.3
	0.4nm,0.8s,baz=298,slow=6.5,SNR=5.3						

*IDC **12** 14:58:35.9±3.2, 13°.48N×145°.85E, h58^{km}±24^{km}, mb3.4/7, mb1 3.6/7, mb1mx3.3/49, mbtmp3.6/7, MS3.0/1, Ms1 3.0/1, ms1mx2.4/26, Error ellipse: s-maj=35.9km s-min=20.5km az=84.0*

ISC 12 14:58:34.0±1.1**, 13°.5N**±0°.2×**146°.0E**±0°.1**, h43^{km}, n9, σ1^{s}.06**/9**, mb3.7**/7**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.07**	**276**	P	**Pn**	**14 58 52.7**	**+0.2**
	376nm,0.3s,baz=89,slow=4.4,SNR=331						
GUMO				S	**Sn**	**14 59 07.0**	**+0.8**
	286nm,0.3s,baz=234,slow=23,SNR=8.4						
WRA	**Warramunga Arr**	**35.13**	**199**	P	**P**	**15 05 23.9**	**+0.2**
	0.9nm,0.8s,baz=25,slow=9.4,SNR=5.5						
ASAR	**Alice Springs**	**38.76**	**198**	P	**P**	**15 05 54.8**	**+0.3**
	0.4nm,0.5s,baz=15,slow=11,SNR=12						
PETK	**Petropavlovsk-**	**40.62**	**11**	LR	LR	15 22 40.9	
	comp=Z,22nm,20.1s,baz=162,slow=36						
CMAR	**Chiang Mai Arr**	**45.38**	**283**	P	**P**	**15 06 47.0**	**-1.6**
	0.4nm,0.6s,baz=92,slow=6.1,SNR=5.1						
SONM	**Songino Array**	**47.43**	**324**	P	**P**	**15 07 04.4**	**-0.1**
	0.3nm,0.4s,baz=128,slow=9.0,SNR=1.6						
MKAR	**Makanchi Array**	**62.30**	**316**	P	**P**	**15 08 52.7**	**+0.8**
	0.3nm,0.4s,baz=90,slow=8.6,SNR=7.0						
ILAR	**Eielson Array**	**68.21**	**25**	P	**P**	**15 09 31.0**	**+1.1**
	0.3nm,0.5s,baz=249,slow=5.7,SNR=4.0						
FINES	**FINESS Array B**	**91.70**	**335**	P	**P**	**15 11 35.4**	**-1.2**
	1.5nm,0.9s,baz=60,slow=4.6,SNR=6.9						

*IDC **12** 15:02:53.2±1.6, 29°.88S×71°.75W, h0^{km}, mb3.8/1, mb1 3.8/2, mb1mx3.6/16, mbtmp3.7/2, ML3.7/1, Error ellipse: s-maj=151.1km s-min=34.3km az=155.0*

*GUC **12** 15:02:56.1±0.6, 29°.47S×71°.90W, h22^{km}±5^{km}, ML3.8*

ISC 12 15:02:54.2±1.1**, 29°.64S**±0°.05×**71°.86W**±0°.08**, h10^{km}, n18, σ2^{s}.02**/22**, 1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO05	**La Serena**	**0.61**	**117**	*e*P	**Pn**	**15 03 09.9**	**+1.0**
CO05				*e*S	**Sn**	**15 03 19.7**	**+0.9**
CO05				IAML		15 03 22.7	
	comp=N,3μm,0.4s						
CO06	**Fray Jorge**	**1.05**	**169**	*e*P	**Pn**	**15 03 17.4**	**+2.5**
CO06				*e*S	**Sn**	**15 03 33.9**	**+4.2**
GO04	**Tololo Observa**	**1.06**	**120**	*e*P	**Pn**	**15 03 17.6**	**+2.2**
GO04				*e*S	**Sn**	**15 03 33.3**	**+2.9**
LCO	**Las Campanas**	**1.19**	**58**	⇓*i*P	**Pb**	**15 03 16.3**	**-0.8**
LCO				*e*S	**Sb**	**15 03 32.1**	**-0.6**
GO03	**Copiap**	**2.49**	**35**	*e*P	**Pn**	**15 03 33.3**	**-1.6**
GO03				*e*S	**Sb**	**15 04 07.8**	**-2.1**
GO03				IAML		15 04 13.6	
	comp=E,306nm,0.7s						
VA06	**Catapilco**	**2.95**	**171**	IAML		15 04 44.4	
	comp=E,339nm,0.4s						
VA03	**San Esteban**	**3.31**	**160**	*e*P	**Pb**	**15 03 51.2**	**-1.8**
VA03				*e*S	**Sb**	**15 04 32.4**	**-1.0**
VA03				IAML		15 04 49.9	
	comp=E,246nm,0.5s						
ROCH	**El Roble**	**3.40**	**168**	*e*P	**Pb**	**15 03 51.8**	**-2.9**
ROCH				IAML		15 05 01.8	
	comp=N,191nm,0.5s						
MT02	**Curacav**	**3.66**	**170**	*e*P	**Pb**	**15 03 55.7**	**-3.3**
AC02	**Maricunga**	**3.69**	**41**	*e*P	**Pn**	**15 03 51.8**	**0.0**
AC02				IAML		15 04 58.8	
	comp=E,137nm,0.6s						
MT09	**Talagante**	**4.19**	**170**	*e*P	Pb	15 04 02.0	-6.1
MT01	**Popeta**	**4.24**	**173**	*e*P	**Pn**	**15 04 01.4**	**+2.5**
H03N1	**Juan Fernandez**	**7.11**	**236**	Pn	**Pn**	**15 04 37.4**	**-0.6**
	baz=356						
H03N1				T	T	15 12 22.3	
	baz=63,slow=71,SNR=229						
H03N2	**Juan Fernandez**	**7.12**	**236**	Pn	**Pn**	**15 04 37.9**	**-0.3**
	baz=356						
H03N2				T	T	15 12 23.6	
	baz=63,slow=71,SNR=237						
H03N3	**Juan Fernandez**	**7.12**	**236**	Pn	**Pn**	**15 04 37.8**	**-0.5**
	baz=356						
H03N3				T	T	15 12 17.5	
	baz=63,slow=71,SNR=198						
CPUP	**Villa Florida**	**13.26**	**79**	Pn	**Pn**	**15 06 02.0**	**-0.5**
	comp=E,0.1nm,0.3s,baz=259,slow=5.2,SNR=1.4						
TORD	**Torodi Ar. Bea**	**82.60**	**70**	P	**P**	**15 15 18.7**	**+0.7**
	comp=E,0.1nm,0.3s,baz=256,slow=5.1,SNR=3.8						
ZALV	**Zalesovo Beam**	**150.40**	**28**	PKPbc	**PKiKP**	**15 22 46.2**	**0.0**
	comp=E,1.3nm,0.7s,baz=318,slow=2.4,SNR=7.5						

*IDC **12** 15:18:38.2±6.5, 17°.80N×146°.14E, h100^{km}±44^{km}, mb3.5/5, mb1 3.6/7, mb1mx3.3/42, mbtmp3.8/7, Error ellipse: s-maj=126.6km s-min=17.6km az=86.0*

ISC 12 15:18:38.0±1.9**, 17°.8N**±0°.1×**146°.2E**±0°.5**, h100^{km}, n7, σ0^{s}.82**/9**, mb3.4**/5**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**4.36**	**197**	P	**Pn**	**15 19 41.3**	**-0.8**
	3.8nm,0.3s,baz=337,slow=19,SNR=1.6						
GUMO				S	**Sn**	**15 20 32.8**	**+0.9**
	1.5nm,0.3s,baz=194,slow=22,SNR=1.4						
MJAR	**Matsushiro Arr**	**19.98**	**341**	P	**P**	**15 23 03.8**	**+1.3**
	0.1nm,0.3s,baz=167,slow=11,SNR=4.3						
KSRS	**Korea Array**	**25.34**	**324**	P	**P**	**15 23 55.0**	**-0.6**
	0.5nm,0.6s,baz=133,slow=10.0,SNR=1.5						
WRA	**Warramunga Arr**	**39.26**	**198**	P	**P**	**15 25 57.0**	**0.0**
	0.8nm,1.2s,baz=20,slow=9.1,SNR=2.6						
WRA				PcP	**PcP**	**15 28 04.3**	**+0.1**
	0.2nm,0.4s,baz=16,slow=3.7,SNR=2.0						
ASAR	**Alice Springs**	**42.91**	**197**	P	**P**	**15 26 27.4**	**+0.5**
	0.2nm,0.7s,baz=22,slow=7.7,SNR=5.0						
ASAR				PcP	**PcP**	**15 28 16.3**	**+0.2**
	0.2nm,0.8s,baz=24,slow=3.2,SNR=2.1						
ARCES	**ARCESS Array B**	**83.51**	**342**	P	P	15 30 53.7	-0.8
	4.2nm,0.9s,baz=61,slow=6.3,SNR=1.5						
FINES	**FINESS Array B**	**87.92**	**335**	P	**P**	**15 31 15.8**	**-0.5**
	2.0nm,0.9s,baz=46,slow=6.0,SNR=3.3						

DJA 12 15:39:58.4±0.4**, 8°S**±6°×**10°7E**±°**, h70^{km}**±9^{km}**, M3.9**/12**, mb4.0**/1**, MLv3.8**/12**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNJI	**Cibinong**	**0.66**	**59**	P	Pn	15 40 14.0	+1.2
CNJI				S	Sn	15 40 25.7	+2.2

DBJI	**Dramaga**	1.10	10	P	Pn	15 40 18.5	+0.2
DBJI				S	Sn	15 40 33.0	-0.1
LEM	**Lembang**	1.33	52	P	Pn	15 40 21.6	+0.3
CGJI	**Cibinong**	1.34	320	P	Pn	15 40 22.2	+0.9
SBJI	**Serang**	1.58	344	P	Pn	15 40 24.1	-0.3
CMJI	**Cimerak**	1.88	94	P	Pn	15 40 28.4	0.0
KASI	**Kota Agung**	2.94	316	P	Pn	15 40 43.0	+0.1
UGM	**Wanagama**	3.94	94	P	Pn	15 40 56.2	-0.2
PCJI	**Pacitan**	4.61	97	P	Pn	15 41 05.6	+0.1
MNAI	**Manna**	4.85	312	P	Pn	15 41 08.1	-0.8
GMJI	**Gumukmas**	6.85	96	P	Pn	15 41 36.0	-0.2

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*ROM **12** 15:43:41.7±0.3, 42°.15N±0°.02×16°.80E±0°.02, h14^{km}±1^{km}, ML3.4/41, Error ellipse: s-maj=1.5km s-min=1.2km az=354.0*
*RHSSO **12** 15:43:42.5±0.5, 42°.01N×16°.66E, h7^{km}±2^{km}, ML3.3/13*
*PDG **12** 15:43:43.4±0.8, 41°.99N×16°.74E, h14^{km}±1^{km}, ML3.2/13, Error ellipse: s-maj=1.3km s-min=1.3km az=90.0*
*PRU **12** 15:43:44.0±0.0, 42°.23N×16°.62E, h0^{km}*
*BEO **12** 15:43:46.2±0.7, 42°.17N×16°.80E, h0^{km}, ML3.2/6*
ISC 12 15:43:41.7±1.1**, 42°.12N**±0°.02×**16°.69E**±0°.02**, h4**^{km}±10^{km}**,**
n135, σ1^s.44/178**, 4C-5D, Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAG	**Monte S. Angel**	0.71	235	⇑P	Pb	15 43 56.8	+0.2
MSAG				S	Sb	15 44 07.2	+0.4
SGRT	**San Giovanni R**	0.79	243	⇑P	Pb	15 43 58.2	+0.1
SGRT				S	Sb	15 44 08.9	-0.3
SGRT				AML	AML		
	comp=N,3770µm,0.6s						
SGRT				AML	AML		
	comp=E,4780µm,0.7s						
TREM	**Isole Tremiti**	0.88	271	P	Pb	15 43 59.6	+0.1
TREM				S	Sb	15 44 12.1	+0.6
TREM				AML	AML		
	comp=E,3655µm,0.3s						
TREM				AML	AML		
	comp=N,4770µm,0.5s						
STON	**Ston**	1.06	44	*e*Pg	Pn	15 44 03.8	+0.5
STON				*e*Sg	Sn	15 44 18.1	-0.4
STON	**Ston**	1.06	44	*e*Pg	Pn	15 44 03.6	+0.3
STON				*e*Sg	Sn	15 44 19.6	+1.1
STON	**Ston**	1.06	44	*e*Pg	Pn	15 44 03.5	+0.1
HVAR	**Hvar**	1.07	351	*e*Pg	Pn	15 44 02.9	-0.6
HVAR				Sg	Sg	15 44 15.9	-0.3
MRVN	**Minervino Murg**	1.12	199	P	Pn	15 44 03.8	-0.4
MRVN				S	Sn	15 44 19.2	-0.8
MRVN				AML	AML		
	comp=N,1135µm,0.2s						
MRVN				AML	AML		
	comp=E,1182µm,0.2s						
CAPA	**Cerignola FG**	1.16	215	P	Pn	15 44 04.7	0.0
CAPA				S	Sn	15 44 21.0	0.0
CAPA				AML	AML		
	comp=N,2575µm,1.0s						
CAPA				AML	AML		
	comp=E,1615µm,0.9s						
MAKA	**Makarska**	1.19	12	*e*Pg	Pn	15 44 04.9	-0.2
MAKA				Sg	Sb	15 44 19.9	-0.7
AMUR	**Altamura**	1.21	183	⇓P	Pg	15 44 03.9	-1.0
AMUR				AML	AML		
	comp=N,1325µm,0.2s						
AMUR				AML	AML		
	comp=E,1910µm,0.5s						
DBRK	**Dubrovnik**	1.21	63	*e*Pg	Pn	15 44 06.2	+0.7
DBRK				Sg	Sn	15 44 21.6	-0.7
MELA	**Melanico ??? S**	1.24	251	P	Pg	15 44 04.5	-0.9
MELA				S	Sn	15 44 22.9	+0.1
PALZ	**Palazzo San Ge**	1.29	205	P	Pg	15 44 07.5	+1.0
PALZ				S	Sn	15 44 25.2	+0.9
PALZ				AML	AML		
	comp=N,1770µm,1.1s						
PALZ				AML	AML		
	comp=E,1415µm,1.1s						
NOCI	**Noci**	1.36	168	P	Pn	15 44 06.4	-1.1
NOCI				AML	AML		
	comp=E,1920µm,1.1s						
NOCI				AML	AML		
	comp=N,2835µm,0.3s						
MOCO	**Biccari - m.te**	1.37	237	AML	AML		
	comp=E,808µm,0.8s						
MOCO				AML	AML		
	comp=N,532µm,0.5s						
MOCO				AML	AML		
	comp=E,819µm,0.8s						
MOCO				AML	AML		
	comp=N,544µm,0.5s						
MOCO				AML	AML		
	comp=N,544µm,0.5s						
TREB	**Trebinje**	1.37	64	*e*Pg	Pg	15 44 08.5	+0.6
TREB				*e*Sg	Sn	15 44 25.9	-0.2
TREB	**Trebinje**	1.37	64	⇑*i*Pg	Pg	15 44 08.0	+0.1
TREB				*e*Sg	Sn	15 44 27.6	+1.5
HCY	**Herceg Novi**	1.38	76	*e*Pg	Pg	15 44 08.3	+0.2
HCY				*e*Sg	Sn	15 44 28.1	+1.7
HCY	**Herceg Novi**	1.38	76	*e*Pg	Pg	15 44 08.3	+0.2
SGTA	**Sant Agata di**	1.40	226	P	Pg	15 44 09.4	+0.9
SGTA				AML	AML		
	comp=E,2025µm,0.4s						
SGTA				AML	AML		
	comp=N,1645µm,0.4s						
SGTA				AML	AML		
	comp=E,2145µm,0.4s						
SGTA				AML	AML		
	comp=E,2140µm,0.4s						
SGTA				AML	AML		
	comp=N,1650µm,0.4s						
SGTA				AML	AML		
	comp=N,1695µm,0.4s						
CIGN	**Sant'Elia a Pi**	1.41	251	P	Pg	15 44 09.3	+0.6
RICI	**Ricice**	1.41	13	*e*Pn	Pb	15 44 08.0	-0.6
VULT	**Monte Vulture**	1.41	215	P	Pg	15 44 09.5	+0.7
VULT				AML	AML		
	comp=E,1530µm,0.2s						
VULT				AML	AML		
	comp=N,2240µm,0.3s						
VULT				AML	AML		
	comp=E,1535µm,0.2s						
VULT				AML	AML		
	comp=E,1605µm,0.2s						
VULT				AML	AML		
	comp=N,2330µm,0.3s						
ACER	**Acerenza**	1.44	203	P	Pn	15 44 08.2	-0.4
ACER				AML	AML		
	comp=N,1840µm,0.5s						
ACER				AML	AML		
	comp=E,2280µm,0.3s						
ACER				AML	AML		
	comp=N,1635µm,1.2s						
ACER				AML	AML		
	comp=N,1785µm,1.2s						
ACER				AML	AML		
	comp=E,2420µm,0.3s						
ACER				AML	AML		
	comp=N,1725µm,0.5s						
GATE	**Gambatesa**	1.46	246	P	Pg	15 44 10.8	+1.1
GATE				AML	AML		
	comp=E,1510µm,0.6s						
GATE				AML	AML		
	comp=N,1375µm,0.6s						
GATE				AML	AML		
	comp=E,507µm,0.3s						
GATE				AML	AML		
	comp=N,1370µm,0.6s						
GATE				AML	AML		
	comp=E,1515µm,0.6s						
GATE				AML	AML		
	comp=E,508µm,0.3s						
GATE				AML	AML		
	comp=N,1365µm,0.6s						
MATE	**Matera**	1.47	180	P	Pn	15 44 07.7	-1.2
MATE				AML	AML		
	comp=N,1790µm,0.2s						
MATE				AML	AML		
	comp=E,1875µm,0.5s						
MIGL	**Miglionico**	1.52	187	P	Pn	15 44 08.6	-1.1
MIGL				AML	AML		
	comp=N,3210µm,0.7s						
MIGL				AML	AML		
	comp=N,3635µm,0.7s						
MIGL				AML	AML		
	comp=E,3635µm,0.5s						
CAFE	**Carife**	1.54	225	P	Pg	15 44 11.2	0.0
CAFE				AML	AML		
	comp=E,1380µm,0.6s						
CAFE				AML	AML		
	comp=N,664µm,0.6s						
CAFE				AML	AML		
	comp=E,1440µm,0.6s						
CAFE				AML	AML		
	comp=N,702µm,0.4s						
BRY	**Bratogost**	1.58	60	*e*Pn	Pg	15 44 11.4	-0.5
BRY				*e*Sn	Sg	15 44 32.9	+0.6
BRY	**Bratogost**	1.58	60	*e*Pn	Pg	15 44 11.4	-0.5
BRY				*e*Sn	Sg	15 44 35.4	+3.1
SNAL	**S. Angelo Dei**	1.63	223	P	Pn	15 44 11.4	+0.2
SNAL				AML	AML		
	comp=N,833µm,0.6s						
SNAL				AML	AML		
	comp=E,756µm,0.4s						
SNAL				AML	AML		
	comp=E,740µm,0.4s						
SNAL				AML	AML		
	comp=N,888µm,0.6s						
SNAL				AML	AML		
	comp=E,756µm,0.4s						
SNAL				AML	AML		
	comp=N,832µm,0.6s						
MRLC	**Muro Lucano**	1.63	214	P	Pg	15 44 13.6	+0.6
MRLC				AML	AML		
	comp=N,732µm,0.5s						
MRLC				AML	AML		
	comp=E,698µm,1.3s						
MRLC				AML	AML		
	comp=N,732µm,0.5s						
MRLC				AML	AML		
	comp=E,740µm,1.3s						
MRLC				AML	AML		
	comp=N,748µm,0.5s						
TRIV	**Trivento**	1.63	258	P	Pb	15 44 12.3	-0.1
SACR	**S. Croce Del S**	1.65	245	P	Pb	15 44 12.0	-0.7
BSSO	**Busso**	1.67	251	AML	AML		
	comp=N,183µm,0.6s						
BSSO				AML	AML		
	comp=E,485µm,0.6s						
BSSO				AML	AML		
	comp=N,443µm,0.6s						
BSSO				AML	AML		
	comp=E,200µm,0.6s						
PSB1	**Pescosannita**	1.67	238	P	Pb	15 44 12.5	-0.5
CEME	**Cevo**	1.71	75	*e*Pn	Pb	15 44 13.5	-0.2
CEME				*e*Sn	Sg	15 44 37.5	+1.0
ZIRJ	**Zirje**	1.72	334	*i* Pn	Pn	15 44 11.7	-0.6
ZIRJ				Sn	Sn	15 44 32.9	-1.8
MCRV	**Calabrutti - M**	1.76	221	P	Pg	15 44 15.1	-0.3
MCRV				AML	AML		
	comp=E,724µm,0.2s						
MCRV				AML	AML		
	comp=N,878µm,0.5s						
MESG	**Mesagne**	1.76	150	P	Pn	15 44 12.3	-0.6
NKME	**Niksic**	1.80	68	*e*Pn	Pb	15 44 14.9	-0.3
NKME				*e*Sn	Sg	15 44 40.3	+0.9
VITU	**Vitulano (BN)**	1.80	239	P	Pb	15 44 14.3	-1.0
VITU				AML	AML		
	comp=N,704µm,0.3s						
VITU				AML	AML		
	comp=N,704µm,0.3s						
VITU				AML	AML		
	comp=E,882µm,1.2s						
NKY	**Niksic**	1.84	67	*e*Pn	Pg	15 44 17.2	+0.2
NKY				*e*Sn	Sg	15 44 41.4	+0.6
DRME	**Dracevica, Mon**	1.86	87	*e*Pn	Pb	15 44 15.1	-1.1
DRME				*e*Sn	Sb	15 44 38.8	-1.0
DRME	**Dracevica, Mon**	1.86	87	*e*Pn	Pb	15 44 15.7	-0.5
DRME				*e*Sn	Sg	15 44 40.4	-0.9
AG11	**Viggiano (PZ)**	1.87	198	P	Pn	15 44 13.9	-0.6
AG11				AML	AML		
	comp=E,608µm,0.6s						
AG11				AML	AML		
	comp=N,604µm,0.7s						
MORI	**Morici**	1.89	338	*e*Pn	Pn	15 44 14.4	-0.3
MORI				Sn	Sn	15 44 36.5	-2.5
KIJV	**Kijevo**	1.90	354	*e*Pn	Pb	15 44 15.5	-1.4
ULC	**Ulcinj**	1.91	94	⇓*i*Pn	Pb	15 44 15.9	-1.2
ULC				*e*Sn	Sb	15 44 41.6	+0.3
MCEL	**Monticello**	1.91	201	P	Pn	15 44 14.3	-0.8
MCEL				AML	AML		
	comp=E,454µm,0.6s						
MCEL				AML	AML		
	comp=N,558µm,0.3s						
MCEL				AML	AML		
	comp=N,574µm,0.4s						
MCEL				AML	AML		
	comp=E,476µm,0.6s						
PDG	**Podgorica**	1.93	80	*e*Pg	Pg	15 44 20.0	+1.3
PDG				*e*Sg	Sg	15 44 44.4	+0.7
PDG	**Podgorica**	1.93	80	*e*Pn	Pb	15 44 16.9	-0.5
PDG				*e*Sn	Sb	15 44 41.0	-0.8
TTG	**Podgorica**	1.93	80	⇑*i*Pn	Pb	15 44 17.3	-0.1
TTG				*e*Sn	Sg	15 44 43.1	-0.6
CDRU	**Civita di Ruta**	1.93	213	P	Pn	15 44 15.3	-0.1
CDRU				AML	AML		
	comp=E,360µm,1.4s						
CDRU				AML	AML		
	comp=N,192µm,1.1s						
CDRU				AML	AML		
	comp=E,360µm,1.4s						
UPM	**Unac-Piva**	1.96	56	*e*Pn	Pb	15 44 17.2	-0.9
UPM				*e*Sn	Sg	15 44 43.6	-1.1
UPM	**Unac-Piva**	1.96	56	⇓*i*Pn	Pb	15 44 18.2	+0.1
UPM				*e*Sn	Sg	15 44 45.7	+1.0
SCHR	**S. Chirico Rap**	1.97	194	P	Pn	15 44 15.5	-0.5
SCHR				AML	AML		
	comp=E,338µm,0.4s						
SCHR				AML	AML		
	comp=N,272µm,0.4s						
SCHR				AML	AML		
	comp=E,342µm,0.4s						
MTSN	**Montesano sull**	1.98	201	P	Pn	15 44 15.6	-0.5
MTSN				AML	AML		
	comp=E,322µm,1.2s						
MTSN				AML	AML		
	comp=E,366µm,0.6s						
MTSN				AML	AML		
	comp=N,374µm,0.3s						
SIRI	**Monte Sirino -**	2.03	198	P	Pn	15 44 16.2	-0.6
SIRI				AML	AML		
	comp=E,474µm,0.2s						
SIRI				AML	AML		
	comp=N,350µm,1.0s						
SIRI				AML	AML		
	comp=E,498µm,0.2s						
SIRI				AML	AML		
	comp=N,358µm,1.1s						
SIRI				AML	AML		
	comp=N,456µm,0.9s						
SIRI				AML	AML		
	comp=N,462µm,0.3s						
CERA	**Filignano**	2.06	256	P	Pb	15 44 18.6	-1.1
CERA				AML	AML		
	comp=N,558µm,0.6s						
CERA				AML	AML		
	comp=E,392µm,0.4s						
MGR	**Morigerati**	2.16	204	P	Pn	15 44 18.1	-0.3
MGR				AML	AML		
	comp=E,232µm,0.5s						
MGR				AML	AML		
	comp=N,291µm,0.5s						
MGR				AML	AML		
	comp=E,232µm,0.5s						
KOME	**Kolasin**	2.21	70	*e*Pn	Pb	15 44 21.4	-0.9
KOME				*e*Sn	Sb	15 44 50.2	0.0
DUGI	**Dugi Otok**	2.22	328	*e*Pn	Pn	15 44 19.2	-0.1
SALB	**San Lorenzo Be**	2.25	187	P	Pn	15 44 19.0	-0.9
SALB				AML	AML		
	comp=E,356µm,1.3s						
SALB				AML	AML		
	comp=N,294µm,1.4s						
POFI	**Posta Fibreno**	2.26	261	P	Pn	15 44 20.4	+0.5
POFI				AML	AML		
	comp=E,174µm,0.7s						
POFI				AML	AML		
	comp=N,180µm,1.2s						
BULG	**Bulgheria - Ca**	2.27	206	P	Pn	15 44 19.7	-0.2
BULG				AML	AML		
	comp=E,226µm,0.6s						
BULG				AML	AML		
	comp=N,395µm,0.4s						
BULG				AML	AML		
	comp=N,388µm,0.4s						
BULG				AML	AML		
	comp=E,218µm,0.6s						
MGRS	**Mrkonjic Grad**	2.32	7	*e*Pn	Pb	15 44 23.2	-0.8
MGRS				*e*Sn	Sb	15 44 53.0	0.0
MODR	**Mondragone**	2.32	246	P	Pn	15 44 20.0	-0.6
MODR				AML	AML		
	comp=N,260µm,0.5s						
MODR				AML	AML		
	comp=E,188µm,1.1s						
PLE	**Pljevlja**	2.33	58	⇓*i*Pn	Pb	15 44 23.2	-1.1
PLE				*e*Sn	Sb	15 44 52.2	-1.3
SCTE	**Santa Cesarea**	2.45	146	P	Pn	15 44 21.9	-0.4
SCTE				AML	AML		
	comp=N,450µm,0.5s						
SCTE				AML	AML		
	comp=E,590µm,0.5s						
AQU	**L'Aquila**	2.45	277	*e*Pn	Pn	15 44 23.4	+0.9
AQU				*e*Sn	Sn	15 44 53.8	+0.9
PVY	**Plav**	2.47	78	*e*Pn	Pb	15 44 24.7	-2.0
PVY				*e*Sn	Sb	15 44 55.6	-1.9
RUDO	**Rudo**	2.48	52	*e*Pn	Pb	15 44 25.2	-1.5
RUDO				*e*Sn	Sb	15 44 56.1	-1.5
IVA	**Berane**	2.49	71	⇓*i*Pn	Pb	15 44 25.5	-1.5
IVA				*e*Sn	Sb	15 44 56.4	-1.6
UDBI	**Udbina**	2.50	345	*e*Pn	Pb	15 44 24.9	-2.3
HAPS	**Han Pijesak,BI**	2.57	39	*e*Pn	Pn	15 44 25.6	+1.4
HAPS				*e*Sn	Sb	15 44 58.8	-1.6
GIUL	**Giuliano Di Ro**	2.63	259	AML	AML		
	comp=N,72µm,1.3s						
GIUL				AML	AML		
	comp=E,58µm,0.8s						
PIPA	**Pietrapaola**	2.63	178	AML	AML		
	comp=N,193µm,0.5s						
PIPA				AML	AML		
	comp=E,220µm,0.7s						
BBLS	**Lazići**	2.65	48	*e*Pn	Pb	15 44 28.7	-1.0
BBLS	**Lazići**	2.65	48	*e*Pn	Pb	15 44 27.4	-2.3
BBLS				*e*Sn	Sb	15 45 00.7	-1.9
BLY	**Banja Luka**	2.65	8	*e*Pg	Pg	15 44 32.2	-0.3
BLY				*e*Sg	Sg	15 45 09.7	+2.8
BLY	**Banja Luka**	2.65	8	*e*Pn	Pb	15 44 28.1	-1.7
BLY				*e*Sn	Sb	15 45 01.4	-1.3
SJES	**Sjenica**	2.68	64	*e*Pn	Pb	15 44 29.4	-0.8
CELI	**Celico**	2.72	183	P	Pn	15 44 26.3	+0.1
CELI				AML	AML		
	comp=N,306µm,0.5s						
CELI				AML	AML		
	comp=E,280µm,0.7s						
NVLJ	**Novalja**	2.78	332	*e*Pn	Pn	15 44 27.6	+0.7
PLIT	**Plitvice**	2.87	345	*e*Pn	Pn	15 44 30.0	+1.8
MRAK	**Mrakovica**	2.90	3	*e*Pn	Pn	15 44 30.7	+2.0
MRAK				*e*Sn	Sb	15 45 07.0	-2.8
TIP	**Timpagrande**	2.94	179	P	Pn	15 44 29.2	0.0
TIP				AML	AML		
	comp=N,79µm,1.3s						
TIP				AML	AML		
	comp=E,88µm,0.9s						
ARRO	**Arrone**	2.94	280	AML	AML		
	comp=N,82µm,0.4s						
ARRO				AML	AML		
	comp=E,82µm,0.7s						
RABC	**Rab**	2.98	333	*e*Pn	Pn	15 44 29.0	-0.6
DIVS	**Divibare**	3.12	50	*e*Pn	Pb	15 44 34.6	-3.2
DIVS	**Divibare**	3.12	50	*e*Pn	Pn	15 44 33.8	+2.0
DIVS				*e*Sn	Sn	15 45 11.1	+1.5
OHR	**Ohrid**	3.24	107	*i* Pn	Pn	15 44 34.9	+1.5
OHR				*i* Sn	Sn	15 45 08.8	-3.6
KEK	**Kerkira**	3.37	135	P	Pn	15 44 35.2	+0.2
KEK	**Kerkira**	3.37	135	P	Pn	15 44 35.2	+0.2
KEK				AML	AML		
	comp=E,14µm,0.9s						
KEK				AML	AML		
	comp=N,18µm,0.4s						
TRUS	**Trudelj**	3.44	51	*e*Pn	Pb	15 44 39.8	-3.3
GRUS	**Gruza**	3.44	58	*e*Pn	Pb	15 44 40.7	-2.5
SMRN	**Sveta Marina**	3.45	329	*e*Pn	Pn	15 44 36.1	0.0
MOSL	**Moslavina**	3.49	1	*e*Pn	Pn	15 44 36.8	0.0
BRJN	**Brijuni**	3.51	324	*e*Pn	Pn	15 44 36.7	-0.3
ISTR	**Stromboli Gino**	3.52	199	AML	AML		
	comp=E,845µm,0.1s						
ISTR				AML	AML		
	comp=N,990µm,0.9s						
RIY	**Rijeka**	3.58	334	*e*Pn	Pn	15 44 39.2	+1.2
RIY				*e*Sn	Sn	15 45 22.7	+2.0
OZLJ	**Ozalj**	3.61	346	*e*Pn	Pn	15 44 39.5	+1.2
PLAC	**Placanica**	3.67	183	P	Pn	15 44 39.3	0.0
PLAC				AML	AML		
	comp=E,56µm,0.8s						
PLAC				AML	AML		
	comp=N,47µm,0.8s						
FNA	**Florina**	3.77	109	P	Pn	15 44 41.7	+1.1
IGT	**Igoumenitsa**	3.78	132	P	Pn	15 44 41.2	+0.4
CRES	**Cresnjev**	3.81	347	*e*Pn	Pn	15 44 42.2	+1.0
CRES				*e*Sn	Sn	15 45 28.3	+1.9
PTJ	**Puntijarka**	3.82	352	*e*Pn	Pn	15 44 40.6	-0.8
CEY	**Cerknica**	3.97	336	*e*Pn	Pn	15 44 44.3	+0.9
CEY				*e*Sn	Sn	15 45 31.0	+0.6
GMB	**Gambarie**	4.00	190	AML	AML		
	comp=E,1570µm,0.1s						
GMB				AML	AML		
	comp=N,908µm,0.1s						
KALN	**Kalnik**	4.01	358	*e*Pn	Pn	15 44 42.2	-1.8
LOBO	**Lobor**	4.06	354	*e*Pn	Pn	15 44 44.8	+0.2
LMD	**Lutirano**	4.14	300	AML	AML		
	comp=N,162µm,0.6s						
LMD				AML	AML		
	comp=E,206µm,0.2s						
LJU	**Ljubljana**	4.22	339	*e*Pn	Pn	15 44 47.5	+0.7
LJU				*e*Sn	Sn	15 45 37.2	+0.7
MORH	**Mrgy, Hungar**	4.33	18	*e*PN	Pb	15 44 55.1	-3.2
MORH				*e*SN	Sn	15 45 38.6	-0.6
MORH	**Mrgy, Hungar**	4.33	18	*e*Pn	Pn	15 44 49.3	+1.1
MORH				*e*Sn	Sn	15 45 41.0	+1.9
LKD2	**Lefkada island**	4.50	136	P	Pn	15 44 50.9	+0.3
ZAPS	**Zavoj**	4.53	73	*e*Pn	Pn	15 44 54.3	+3.2
OBKA	**Obir**	4.65	341	*i* Pn	Pn	15 44 54.4	+1.7
	comp=E,4.5nm,0.4s						
OBKA				*e*Sn	Sn	15 45 48.5	+1.3
	comp=E,12nm,0.3s						
KEF3	**Kipouria, Keph**	4.81	143	P	Pn	15 44 54.7	-0.2
VLS	**Valsamata**	4.94	142	P	Pn	15 44 56.5	-0.2
VLS	**Valsamata**	4.94	142	P	Pn	15 44 56.2	-0.5
VLS				AML	AML		
	comp=E,25µm,1.0s						
VLS				AML	AML		
	comp=N,22µm,1.3s						
MYKA	**Terra Mystica**	5.01	335	*e*Sn	Sn	15 45 57.8	+1.7
	comp=N,4.7nm,0.3s						
EVR	**Evrytania**	5.04	128	P	Pn	15 44 59.9	+1.7
PVO	**Paravola**	5.09	132	P	Pn	15 44 59.6	+0.9
ARSA	**Arzberg**	5.20	351	*i* Pn	Pb	15 45 07.7	-5.5
	comp=N,8.6nm,0.4s						
AGG	**Agios Georgios**	5.29	124	P	Pn	15 45 02.4	+0.9
KBA	**Koelnbreinsper**	5.50	335	*i* Pn	Pn	15 45 08.6	+4.0
	comp=N,2.9nm,0.3s						
KBA				*e*Sn	Sn	15 46 07.3	-1.0
	comp=N,4.6nm,0.3s						
CONA	**Conrad Observa**	5.84	355	Pn	Pn	15 45 12.7	+3.6
	comp=N,1.6nm,0.3s						
KLV	**Kalavryta, Ach**	5.84	132	P	Pn	15 45 09.9	+0.8
KLV	**Kalavryta, Ach**	5.84	132	P	Pn	15 45 09.9	+0.8
MOA	**Molln**	5.98	344	*i* Pn	Pn	15 45 12.8	+1.8
	comp=N,8.1nm,0.6s						
VYHS	**Vyhne**	6.55	13	*e*PN	Pn	15 45 26.6	+7.8
VYHS				*e*SN	Sn	15 46 41.7	+7.8
KHC	**Kasperske Hory**	7.34	344	*e*SN	Sn	15 46 48.8	-4.6

NOU 12 15:52:46.4, 20°.44S×168°.84E, h0^{km}, MLv3.9/12**, Loyalty Islands, Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	1.28	216	P	Pg	15 53 09.7	-1.3
LIFNC	**LIFOU**	1.54	257	P	Pn	15 53 12.8	-2.3
YATNC	**Mamie plateau,**	2.43	228	P	Pn	15 53 26.8	-0.6
RTV	**Rentapao**	2.66	351	P	Pn	15 53 29.8	-0.8
OUENC	**Ouen Island, N**	2.71	223	P	Pn	15 53 32.1	+0.9
DZM	**Mont Dzumac**	2.76	234	*e*Pn	Pn	15 53 31.2	-0.9
	15nm,0.3s						
DZM				*e*Sn	Sn	15 54 05.9	-0.3

	19nm,0.2s						
DZM	Mont Dzumac	2.76	234	P	Pn	15 53 31.4	-0.7
DVP	Devils Point	2.77	347	P	Pn	15 53 32.4	+0.3
NOUC	Port Laguerre	2.89	235	P	Pn	15 53 33.7	0.0
ONTNC	Ouen Toro	2.90	230	P	Pn	15 53 33.8	0.0
KOUNC	Koumac, New Ca	4.27	268	P	Pn	15 53 53.8	+1.1

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*IDC **12** 15:56:58.3±1.4, 35°.69N×141°.11E, h0^{km}, mb3.3/3, mb1 3.6/4, mb1mx3.4/36, mbtmp3.2/4, ML2.4/1, Error ellipse: s-maj=32.7km s-min=28.1km az=51.0*

*JMA **12** 15:57:03.6±0.1, 35°.89N×140°.90E, h42^{km}±1^{km}, M3.1*

JMA Felt I J1.

ISC 12 15:57:02.6±2.0**, 35°.93N**±0°.05×**141°.01E**±0°.09**, h28**^{km}±14^{km}**, n19, σ1s.03**/18**, mb3.4**/3**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.26	209	P	Pn	15 57 10.8	+0.3
CHOJ				S	Sn	15 57 15.9	+0.5
JIHU	Itakohorinouch	0.39	276	P	Pn	15 57 12.6	+0.2
JIHU				eS	Sn	15 57 19.2	+0.3
JHYU	Hitachinakayam	0.54	321	P	Pn	15 57 14.8	+0.5
JHYU				eS	Sn	15 57 22.8	+0.4
JSMT	Sammumatsuo	0.54	238	P	Pb	15 57 14.3	+0.8
JYT	Yasato	0.72	295	P	Pb	15 57 16.3	-0.4
JHO	Hitachi	0.77	333	P	Pn	15 57 18.0	+0.4
BSO3	Boso 3	1.19	200	P	Pn	15 57 23.6	+0.5
JAG	Ashikaga	1.35	292	P	Pn	15 57 25.1	-0.5
MJAR	Matsushiro Arr	2.34	286	Pn	Pn	15 57 39.8	+0.6
	0.8nm,0.3s,baz=149,slow=8.8,SNR=37						
MJAR				Sn	Sb	15 58 11.6	-1.1
	0.5nm,0.3s,baz=122,slow=12,SNR=2.7						
MAT	Matsushiro	2.35	286	P	Pn	15 57 39.7	+0.4
MAT				eS	Sn	15 58 09.1	+1.9
H11N2	WAKE ISLAND Hy	27.89	118	T	T	16 32 01.9	
	baz=310,slow=74,SNR=8.1						
H11N1	WAKE ISLAND Hy	27.89	118	T	T	16 32 03.4	
	baz=310,slow=74,SNR=12						
H11N3	WAKE ISLAND Hy	27.90	118	T	T	16 32 02.1	
	baz=310,slow=74,SNR=9.3						
H11S1	WAKE ISLAND Hy	28.55	121	T	T	16 32 57.1	
	baz=313,slow=75,SNR=6.8						
H11S3	WAKE ISLAND Hy	28.55	121	T	T	16 32 47.5	
	baz=313,slow=75,SNR=7.9						
H11S2	WAKE ISLAND Hy	28.57	121	T	T	16 32 56.4	
	baz=313,slow=75,SNR=6.9						
ILAR	Eielson Array	50.60	32	P	P	16 05 59.6	+1.1
	0.3nm,0.7s,baz=263,slow=6.5,SNR=4.3						
WRA	Warramunga Arr	55.92	188	P	P	16 06 35.8	-2.3
	0.4nm,0.7s,baz=3.1,slow=7.4,SNR=2.5						
ASAR	Alice Springs	59.65	188	P	P	16 07 03.2	-1.0
	0.1nm,0.6s,baz=14,slow=9.4,SNR=4.2						

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*NEIC **12** 16:01:13.7, 29°.41S×72°.03W, h17^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}7.14; $M_{\theta\theta}$-0.69; $M_{\phi\phi}$-6.45; $M_{r\theta}$2.53; $M_{\theta\phi}$2.11; $M_{\phi r}$-1.10; Fault plane solution: $M_0$7.66000×10^{14} NP1:ϕ_s355.67000°, δ39.51000°, λ112.61000°. NP2:ϕ_s147.31000°, δ54.04000°, λ72.41000°. Principal axes: T 7.9022, Plg74.0000°, Azm7.0000°; N -0.5193, Plg14.0000°, Azm158.0000°; P -7.3828, Plg7.0000°, Azm250.0000°;*

*IDC **12** 16:01:13.3±1.7, 29°.80S×71°.95W, h0^{km}, mb3.9/3, mb1 4.0/3, mb1mx3.8/19, mbtmp3.9/3, MS3.7/1, Ms1 3.7/1, ms1mx2.9/16 Error ellipse: s-maj=80.6km s-min=45.9km az=16.0*

*NEIC **12** 16:01:14.2±2.7, 29°.47S±0°.04×71°.99W±0°.06, h12^{km}±4^{km}, mb4.4/5, Mwr3.9/16, ML3.9(GUC), Error ellipse: s-maj=8.0km s-min=4.9km az=59.0*

*GUC **12** 16:01:17.1±0.7, 29°.46S×71°.82W, h24^{km}±13^{km}, ML3.9*

ISC 12 16:01:15.7±0.7**, 29°.47S**±0°.05×**71°.96W**±0°.07**, h25**^{km}**, n65, σ1s.87**/66**, mb4.2**/4**, 1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	La Serena	0.77	126	iP	Pb	16 01 30.0	-0.5
CO05				eS	Sb	16 01 39.4	-1.2
CO05				IAML		16 01 42.0	
	comp=N,10μm,0.5s						
CO05	La Serena	0.77	126		Pb	16 01 30.1	-0.5
CO05				Sg	Sb	16 01 39.5	-1.2
LCO	Las Campanas	1.19	68	⇓iP	Pn	16 01 36.9	-0.1
LCO				eS	Sn	16 01 51.7	-0.8
LCO	Las Campanas	1.19	68		Pn	16 01 37.0	-0.1
GO04	Tololo Observa	1.23	125	eP	Pb	16 01 37.7	-0.7
GO04				eS	Sn	16 01 52.9	-0.7
GO04	Tololo Observa	1.23	125	Pn	Pb	16 01 37.7	-0.7
CO06	Fray Jorge	1.24	167	eP	Pn	16 01 37.3	-0.1
CO06				eS	Sn	16 01 51.7	-1.6
CO06				IAML		16 02 01.0	
	comp=E,3μm,0.4s						
CO06	Fray Jorge	1.24	167	Pn	Pn	16 01 37.4	-0.1
AC04	Llanos de Chal	1.48	32	iP	Pn	16 01 40.9	+0.1
AC04				IAML		16 02 13.9	
	comp=N,2μm,0.1s						
AC04	Llanos de Chal	1.48	32	Pn	Pn	16 01 40.9	+0.1
GO03	Copiap	2.40	40	eP	Pn	16 01 54.3	+0.8
GO03				IAML		16 02 40.1	
	comp=N,904nm,0.4s						
GO03	Copiap	2.40	40		Pn	16 01 54.4	+0.8
VA06	Catapilco	3.14	170	IAML		16 03 03.2	
	comp=N,844nm,0.3s						
VA03	San Esteban	3.50	160	eP	Pn	16 02 11.2	+2.5
VA03	San Esteban	3.50	160		Pn	16 02 09.0	+0.3
ZON	Zonda	3.51	127		Pn	16 02 08.7	0.0
ROCH	El Roble	3.59	167	eP	Pn	16 02 10.5	+0.6
AC02	Maricunga	3.62	44	Pn	Pn	16 02 12.5	+1.8
PEL	Peldehue	3.83	164	eP	Pn	16 02 15.2	+2.1
PEL	Peldehue	3.83	164	Pn	Pn	16 02 13.7	+0.6
MT02	Curacav	3.85	170		Pn	16 02 14.2	+0.8
MT05	Renca	4.05	165	Pn	Pn	16 02 16.6	+0.4
MT09	Talagante	4.38	169	eP	Pn	16 02 21.8	+1.1
MT09	Talagante	4.38	169		Pn	16 02 21.6	+0.8
MT01	Popeta	4.43	172	eP	Pn	16 02 21.9	+0.6
MT01				eS	Sn	16 03 10.2	-1.8
MT01	Popeta	4.43	172		Pn	16 02 21.1	-0.2
LMEL	Las Melosas	4.62	162	eP	Pn	16 02 26.7	+2.6
BO01	Tunca	4.97	172	Pn	Pn	16 02 29.6	+0.9
PB14	IPOC Station P	5.02	16	eP	Pn	16 02 28.0	-1.7
PB14	IPOC Station P	5.02	16		Pn	16 02 28.1	-1.7
BO02	Sierra Bellavi	5.40	170		Pn	16 02 36.0	+1.2
GO05	Huala	5.53	180	Pn	Pn	16 02 35.4	-1.0
PB10	IPOC Station P	6.06	12	Pn	Pn	16 02 41.6	-2.2
ML02	Panimavida	6.30	176	Pn	Pn	16 02 44.0	-3.0
PB15	IPOC Station P	6.62	20		Pn	16 02 50.9	-0.8
PB06	IPOC Station P	7.07	18	Pn	Pn	16 02 54.5	-3.2
H03N1	Juan Fernandez	7.14	235	T	T	16 10 43.2	
	baz=63,slow=71,SNR=880						
H03N2	Juan Fernandez	7.15	235	T	T	16 10 44.2	
	baz=63,slow=71,SNR=878						
H03N3	Juan Fernandez	7.16	234	T	T	16 10 43.4	
	baz=63,slow=71,SNR=744						
PB04	IPOC Station P	7.29	13	Pn	Pn	16 02 56.6	-4.2
LVC	Limon Verde	7.36	23	Pn	Pn	16 02 59.0	-2.9
PB07	IPOC Station P	7.93	14	Pn	Pn	16 03 07.0	-2.7
PB09	IPOC Station P	8.02	18	Pn	Pn	16 03 08.8	-2.1
PB01	IPOC Station P	8.68	15	Pn	Pn	16 03 15.9	-3.9
PB08	IPOC Station P	9.63	16	Pn	Pn	16 03 31.0	-2.1
PB11	IPOC Station P	9.89	13	Pn	Pn	16 03 32.9	-3.5
PSGCX	Pisagua	9.97	10	Pn	Pn	16 03 33.4	-4.1
PB12	IPOC Station P	10.90	8	Pn	Pn	16 03 47.6	-2.8
LPAZ	La Paz	13.58	16	Pn	Pn	16 04 24.6	-2.8
ETMB	Extrema	20.27	17	P	P	16 05 48.3	-1.3
SAML	Samuel	22.01	24	P	P	16 06 05.8	-2.4
ROSC	El Rosal	34.18	356	LR	LR	16 21 03.9	
	comp=N,112nm,18.2s,baz=245,slow=34						
VNA3	Neumayer Olymp	53.54	159	P	P	16 10 35.8	+1.9
VNA2	Neumayer--Watz	54.17	159	P	P	16 10 40.3	+1.7
	baz=293,slow=8.5						
SNAA	Sanae	55.77	159	P	P	16 10 51.8	+1.7
SNAA	Sanae	55.77	159	P	P	16 10 50.5	+0.4
SNAA				IAmb	IAmb	16 10 52.6	
	comp=Z,8.2nm,1.4s						
QSPA	South Pole Qui	60.76	180	P	P	16 11 25.1	-0.1
TXAR	Lajitas Array	65.84	330	P	P	16 12 02.4	+3.2
	comp=Z,0.6nm,0.9s,baz=126,slow=6.1,SNR=2.6						
DBIC	Dimbokro	73.71	72	P	P	16 12 50.0	+2.1
	comp=Z,1.1nm,0.5s,baz=214,slow=7.3,SNR=1.8						
TORD	Torodi Ar. Bea	82.62	70	P	P	16 13 39.2	+2.0
	comp=Z,1.7nm,0.8s,baz=267,slow=4.1,SNR=8.6						
TORD	Torodi Ar. Bea	82.62	70	P	P	16 13 35.6	-1.6
TORD				IAmb	IAmb	16 13 40.3	
	comp=Z,2.7nm,1.1s						
WRA	Warramunga Arr	124.72	210	PKP	PKiKP	16 20 14.7	+0.5
	comp=Z,0.2nm,0.6s,baz=154,slow=2.0,SNR=1.7						
ZALV	Zalesovo Beam	150.28	28	PKPbc	PKiKP	16 21 06.9	+1.9
	comp=Z,3.4nm,0.6s,baz=310,slow=3.6,SNR=16						
ZALV	Zalesovo Beam	150.28	28		PKiKP	16 21 06.7	+1.7
MKAR	Makanchi Array	153.54	42	PKPbc	PKiKP	16 21 13.8	+1.7
	comp=Z,0.4nm,0.7s,baz=338,slow=2.6,SNR=3.6						

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*TUL **12** 16:11:55.6±1.6, 36°.950N±0°.004×97°.85W±0°.02, h4^{km}±5^{km}, ML2.7, mb_Lg2.4/8(NEIC), Error ellipse: s-maj=1.7km s-min=0.5km az=90.0*

NEIC 12 16:11:55.8±1.1**, 36°.94N**±0°.01×**97°.83W**±0°.01**, h9**^{km}±3^{km}**, Error ellipse: s-maj=1.6km s-min=1.4km az=167.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.09	193	Pg	Pg	16 11 58.0	-0.2
GC02				Sg	Sg	16 11 59.4	-0.5
KAN14	Manchester OK	0.10	279		Pg	16 11 58.0	-0.4
KAN14				Sg	Sg	16 11 59.5	-0.7
KAN17	Caldwell West	0.12	28	Pg	Pg	16 11 58.6	0.0
KAN17				Sg	Sg	16 12 00.4	-0.2
KAN05	Bluff City Nor	0.17	350		Pg	16 11 59.5	0.0
KAN05				Sg	Sg	16 12 01.8	-0.2
KAN01	Argonia South	0.22	16	Pg	Pg	16 12 00.5	+0.1
KAN01				Sg	Sg	16 12 03.6	+0.1
KAN09	Caldwell North	0.26	41	Pg	Pg	16 12 01.3	+0.2
KAN09				Sg	Sg	16 12 05.0	+0.3
KAN10	Anthony SW Sta	0.28	311	Pg	Pg	16 12 01.4	-0.1
KAN10				Sg	Sg	16 12 05.1	0.0
KAN13	South Haven SW	0.29	76	Pg	Pg	16 12 01.9	+0.2
KAN13				Sg	Sg	16 12 06.0	+0.4
KAN08	Anthony NE Sta	0.31	339		Pg	16 12 01.7	-0.3
KAN08				Sg	Sg	16 12 06.2	+0.1
KAN06	Argonia West S	0.31	356		Pg	16 12 02.1	+0.1
KAN06				Sg	Sg	16 12 06.2	0.0
OK032	Salt Plains WL	0.33	246	Pg	Pg	16 12 02.3	-0.1
OK032				Sg	Sg	16 12 06.8	0.0
KAN16	Harper SW Stat	0.34	327	Pg	Pg	16 12 02.5	0.0
KAN16				Sg	Sg	16 12 07.3	+0.2
KS20	Mayfield South	0.37	38	Pg	Pg	16 12 03.2	+0.2
KS20				Sg	Sg	16 12 07.9	0.0
KAN12	Harper NE Stat	0.38	340		Pg	16 12 03.0	-0.3
KAN12				Sg	Sg	16 12 07.9	-0.4
CROK	Carrier	0.45	195	Pg	Pg	16 12 04.7	+0.1
CROK				Sg	Sg	16 12 11.1	+0.6
BLOK	Blackwell	0.53	110	Pg	Pg	16 12 06.3	+0.2
BLOK				Sg	Sg	16 12 14.0	+1.0
T35A	Sooner Cattle	1.06	91	Pg	Pg	16 12 15.9	-0.3
T35A				Sg	Sg	16 12 30.1	+0.1
U32A	Winter Ranch,	1.09	240	Pg	Pg	16 12 16.1	-0.7
OK029	Liberty Lake	1.18	165	Pg	Pb	16 12 18.0	-0.4
QUOK	Quay	1.19	130		Pb	16 12 18.3	-0.2
QUOK				Sg	Sb	16 12 33.8	-0.1
OK031	S. Brethren Rd	1.27	141		Pn	16 12 19.7	0.0
OK031				Sg	Sg	16 12 36.5	-0.2
BCOK	Bluff Creek, N	1.29	172	Pn	Pn	16 12 19.9	-0.1
BCOK					Sb	16 12 36.6	-0.4
OK030	Cody Creek RV	1.32	140		Pn	16 12 20.1	-0.3
OK030				Sn	Sn	16 12 38.0	-0.1
OKCSW	OKLAHOMA CITY	1.56	168	Pn	Pn	16 12 24.3	+0.6
OKCSW				Sn	Sb	16 12 45.4	+0.6
R32A	Long Quarter,	1.64	335		Pb	16 12 25.8	-0.4
R32A				Sn	Sb	16 12 46.5	-0.4
FNO	Franklin	1.72	168		Pn	16 12 26.1	+0.3
TUL1	Leonard	1.94	121	Pn	Pn	16 12 30.1	+1.2
TUL1				IAmb_Lg		16 12 59.5	
	comp=Z,22nm,0.8s						
WMOK	Wichita Mounta	2.33	200		Pn	16 12 33.9	-0.4
X34A	Smith Ranch, M	2.33	180	Pn	Pn	16 12 34.4	0.0
KSU1	Kansas State U	2.36	24	Pn	Pn	16 12 35.7	+0.9
CBKS	Cedar Bluff	2.40	322	Pn	Pn	16 12 37.1	+1.8
U38A	Gravette	2.82	99	Pn	Pn	16 12 40.0	-1.0
X37A	Clayton	3.08	139		Pn	16 12 46.0	+1.3
X37A				IAmb_Lg		16 13 39.7	
	comp=Z,12nm,0.8s						
HHAR	Hobbs	3.20	101		Pn	16 12 46.0	-0.3
HHAR				IAmb_Lg		16 13 37.5	
	comp=Z,9.0nm,1.0s						
S39A	Bolivar	3.67	77	Pn	Pn	16 12 53.7	+0.9
S39A				IAmb_Lg		16 13 56.4	
	comp=Z,6.5nm,0.7s						
AMTX	Amarillo	3.74	238	Pn	Pn	16 12 52.9	-0.8
U40A	Yellville	4.05	97	Pn	Pn	16 12 56.9	-1.0
MIAR	Mount Ida	4.21	123	Pn	Pn	16 12 59.4	-0.7
Z38A	Mt. Pleasant	4.35	147	Pn	Pn	16 13 02.6	+0.6
MGMO	Mountain Grove	4.46	86	Pn	Pn	16 13 02.6	-0.9
R40A	Maddies Statio	4.62	71	Pn	Pn	16 13 05.1	-0.7
FCAR	Ozark Folk Cen	4.72	101	Pn	Pn	16 13 04.1	-3.1
X40A	Basin Creek Fa	4.75	120	Pn	Pn	16 13 04.9	-2.6
WHAR	Wooly Hollow	4.78	108	Pn	Pn	16 13 05.5	-2.5
OGNE	Ogallala	5.17	322	Pn	Pn	16 13 12.2	-1.2
P40A	Paris	5.24	59	Pn	Pn	16 13 12.4	-1.8
CCM	Cathedral Cave	5.36	76	Pn	Pn	16 13 14.9	-0.9
T42A	Van Buren	5.40	87	Pn	Pn	16 13 14.3	-2.2

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*NEIC **12** 16:16:29.9±1.8, 45°.69N±0°.02×122°.79W±0°.03, h22^{km}±6^{km}, Error ellipse: s-maj=3.3km s-min=2.8km az=100.0*

*ANF **12** 16:16:29.3±0.3, 45°.67N×122°.80W, h25^{km}, ML3.0/12, Error ellipse: s-maj=4.0km s-min=2.4km az=92.0*

*SEA **12** 16:16:30.6±1.7, 45°.68N±0°.02×122°.76W±0°.03, h22^{km}±6^{km}, ML2.8/105, ML2.7/58(NEIC), Error ellipse: s-maj=3.4km s-min=3.2km az=118.0*

*PNSN **12** 16:16:30.6, 45°.68N×122°.76W, h22^{km}, MD2.7, Fault plane solution: NP1:ϕ_s135.00000°, δ60.00000°, λ130.00000°.*

ISC 12 16:16:29.7±0.9**, 45°.69N**±0°.02×**122°.78W**±0°.02**, h27**^{km}±5^{km}**, n90, σ0s.72**/110**, Washington-Oregon border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROSS	Ross	0.09	105		Pb	16 16 34.2	-0.3
ROSS					Sb	16 16 36.8	-0.9
HUBA	Hudson Bay Hig	0.10	121		Pb	16 16 34.4	-0.3
HUBA					Sb	16 16 37.6	-0.3
WPO	West Portland	0.11	183		Pb	16 16 34.5	-0.2
KEEL	Keeler	0.16	211		Sb	16 16 38.9	+0.2
PGO	Gresham	0.32	133		Pb	16 16 37.2	+0.1
F04A	Amboy	0.35	46		Pb	16 16 37.6	-0.1
F04A					Sb	16 16 43.0	-0.2
F04A	Amboy	0.35	46	IAML		16 16 43.1	
	comp=N,2μm,0.3s						
F04A				IAML		16 16 43.3	
	comp=E,2μm,0.2s						
F04D	Rainier, OR	0.43	338	P	Pb	16 16 39.1	+0.3
	baz=156,SNR=9.2						
F04D				S	Sb	16 16 45.9	+0.8
	baz=156						
F04D	Rainier, OR	0.43	338		Pb	16 16 39.1	+0.3
F04D					Sb	16 16 46.1	+1.0
ALST	Alston	0.46	338		Sb	16 16 46.7	+0.8
LVP	Lakeview Peak	0.46	34		Pb	16 16 39.4	-0.1
RVW	Rose Valley	0.47	3		Pb	16 16 39.4	-0.1
RVW					Sb	16 16 46.2	+0.1
B023	Clatskanie	0.47	334		Pb	16 16 39.6	+0.1
KMOR	Kings Mountain	0.50	265		Pb	16 16 40.0	-0.1
BULL	Bull Run Dam	0.50	118		Sb	16 16 46.5	-0.5
G04A	Mulino	0.52	156		Pb	16 16 40.2	-0.2
B203	Quarry, Mount	0.58	33		Pb	16 16 41.0	-0.3
G03D	McMinnville, O	0.58	216	P	Pb	16 16 41.1	-0.2
	baz=37,SNR=91						
G03D				S	Sb	16 16 49.8	+0.5
	baz=37						
G03D	McMinnville, O	0.58	216		Pb	16 16 41.2	-0.2
FL2	Flat Top 2	0.59	30		Pb	16 16 41.5	-0.2
SWF2	Southwest Flan	0.63	38		Pb	16 16 42.1	-0.3
SHW	Mount Saint He	0.63	37		Pb	16 16 42.2	-0.2
JLK	June Lake	0.64	43		Pb	16 16 42.0	-0.3
SEPW	September Lobe	0.66	38		Pb	16 16 43.0	+0.1
VALT	Mount Saint He	0.67	38		Pb	16 16 42.9	-0.1
STD	Studebaker Rid	0.68	35		Pb	16 16 42.7	-0.3
BOLM	Sugar Bowl	0.68	38		Pb	16 16 43.1	0.0
ERK	Elk Rock	0.69	26		Pb	16 16 42.9	-0.5
JRO	Jston Ridge Ob	0.71	33		Pb	16 16 43.2	-0.4
B201	Coldwater, Mou	0.72	30		Pb	16 16 43.2	-0.5
B201					Sb	16 16 53.1	-0.1
SOSW	Source of Smit	0.72	39		Pb	16 16 43.4	-0.4
B202	Windy Ridge, M	0.72	39		Pb	16 16 43.2	-0.5
HIYU	Hiyu Mountain	0.73	110		Pb	16 16 43.9	0.0
APM	Augspurger Mou	0.77	86		Pb	16 16 44.6	0.0
TDH	Tom, Dick, Har	0.80	119		Pb	16 16 44.8	-0.3
HEBO	Mount Hebo	0.83	236		Pb	16 16 45.6	-0.1
HEBO	Mount Hebo	0.83	236	Sg	Sb	16 16 56.9	+0.5
B022	Seaside	0.85	289		Pb	16 16 45.6	-0.2
HOOD	Mount Hood Mea	0.87	114		Pb	16 16 46.1	-0.3
HOOD				Sg	Sb	16 16 57.6	-0.1
E04D	Cinebar	0.88	10	P	Pb	16 16 46.1	-0.4
	baz=188,SNR=83						
E04D	Cinebar	0.88	10		Pb	16 16 46.1	-0.4
SHRK	Shell Rock	0.91	104		Pb	16 16 46.7	-0.2
F05D	White Salmon	0.95	77	P	Pb	16 16 47.4	-0.1
	baz=258,SNR=18						
F05D				S	Sn	16 17 00.5	+0.5
	baz=258						
F05D	White Salmon	0.95	77		Pb	16 16 47.5	-0.1
ASR	Mount Adams--S	0.95	60		Pb	16 16 47.1	-0.5
E03A	Lebam	1.02	328		Pn	16 16 48.2	-0.1
E03A				Sg	Sn	16 17 02.0	+0.4
E03A				IAML		16 17 03.4	
	comp=E,278nm,0.4s						
RADR	Rader Ridge	1.02	316	Pn	Pn	16 16 48.3	-0.1
RADR					Sn	16 17 02.5	+0.6
RADR				IAML		16 17 09.2	
	comp=E,146nm,1.0s						
RADR				IAML		16 17 09.5	
	comp=N,150nm,1.9s						
VBEM	Beaver Butte	1.05	126		Pb	16 16 49.3	0.0
H04A	Detroit Lake	1.09	157		Pn	16 16 49.1	-0.1
H04A				Sg	Sb	16 17 03.0	-0.6
G05D	Wamic, OR	1.12	113	P	Pb	16 16 50.8	+0.3
	baz=294,SNR=22						
G05D				S	Sb	16 17 05.6	+0.9
	baz=294						
COR	Corvallis	1.16	199		Pn	16 16 50.5	+0.3
COR				IAML		16 17 15.0	
	comp=N,105nm,0.7s						
H04D	Lebanon	1.16	178	P	Pn	16 16 50.6	+0.3
	baz=359,SNR=8.5						
H04D				S	Sb	16 17 06.5	+0.7
	baz=359						
MPOR	Mary's Peak	1.30	205		Pn	16 16 52.7	+0.4
D04E	Lakebay	1.49	0	Pb	Pb	16 16 57.1	+0.3
	baz=180,SNR=5.2						
BUCK	Buck Mountain	1.50	186		Pn	16 16 55.9	+1.0
BUCK				Sn	Sb	16 17 16.0	+0.5
BUCK				IAML		16 17 17.7	
	comp=N,95nm,1.1s						
WISH	Wishkah	1.59	335	Pn	Pn	16 16 56.6	+0.5
WISH				IAML		16 17 09.6	
	comp=E,90nm,2.0s						
WISH				IAML		16 17 29.9	
	comp=N,144nm,4.0s						
D05A	Enumclaw	1.60	20		Pb	16 16 58.1	-0.6
D05A					Sb	16 17 19.1	+0.7
I05D	Terrebonne, OR	1.69	142	Pb	Pb	16 16 59.2	-0.9
	baz=324						
I05D				Sb	Sb	16 17 21.9	+0.9
	baz=324						
I02E	Swisshome, OR	1.75	206	Pb	Pb	16 17 00.4	-0.8
	baz=26,SNR=34						
D03D	Eldon	1.86	354	Pb	Pb	16 17 01.9	-1.2
	baz=173,SNR=24						
NLWA	Neilton Lookou	1.86	337	Pn	Pn	16 17 01.3	+1.4
NLWA				IAML		16 17 14.0	
	comp=N,51nm,3.1s						
NLWA				IAML		16 17 31.8	
	comp=N,56nm,2.9s						
HBO	Huckleberry Mo	1.87	170		Pb	16 17 02.3	-1.1
I04A	Tendick Farm,	1.91	172	Pb	Pb	16 17 02.6	-1.3
	baz=353,SNR=8.3						
I04A				Sb	Sb	16 17 27.0	-0.3
	baz=353						
VIPM	Ingram Point	1.93	127		Pn	16 17 02.5	+1.5
HDW	Hoodsport	1.97	355		Pb	16 17 03.5	-1.5
F07A	Phinny Hill Vi	2.01	83	Pn	Pn	16 17 02.2	+0.3
F07A				IAML		16 17 37.5	
	comp=E,59nm,0.7s						
I03D	Drain, OR	2.03	192	Pb	Pn	16 17 04.1	+1.9
	baz=12,SNR=31						
I03D				Sb	Sb	16 17 31.5	+0.8
	baz=12						
C04A	Brinnon	2.04	356		Pb	16 17 04.6	-1.4
LTY	Liberty	2.15	42		Pn	16 17 03.8	0.0
C05A	Tolt Reservoir	2.15	20		Pb	16 17 07.0	-0.9
E07A	Sunnyside	2.21	66		Pn	16 17 05.3	+0.6
E07A				IAML		16 17 45.1	
	comp=E,34nm,0.6s						
HTW	Haystack Looko	2.23	18		Pb	16 17 08.2	-1.2
PINE	Pine Mountain	2.30	145		Pn	16 17 07.7	+1.6
PINE				IAML		16 17 52.4	
	comp=E,33nm,4.5s						
PINE				IAML		16 17 53.6	
	comp=N,32nm,2.6s						
HAWA	Hanford	2.37	71	Pn	Pn	16 17 08.2	+1.3
HAWA				IAML		16 17 44.1	
	comp=N,29nm,0.7s						
J04D	Umpqua Nationa	2.49	169	Pb	Pb	16 17 12.9	-1.0
	baz=350,SNR=6.9						
JCW	Jim Creek	2.58	13		Pb	16 17 13.7	-1.6
DBO	Dodson Butte	2.59	188	Pn	Pn	16 17 11.0	+1.1
DBO				IAML		16 17 33.9	
	comp=N,39nm,4.4s						
DBO				IAML		16 18 07.1	
	comp=E,33nm,4.0s						
B05A	Bryant	2.62	10	Pb	Pb	16 17 14.2	-1.8
	baz=190,SNR=10						
B05A				Sb	Sb	16 17 47.3	-0.5
	baz=190						
J05D	Fort Rock, OR	2.64	155	Pb	Pb	16 17 16.0	-0.5
	baz=336,SNR=11						
G08A	Pilot Rock	2.72	97	Pn	Pn	16 17 11.8	0.0
G08A				IAML		16 17 58.9	
	comp=E,20nm,1.2s						
I07A	Izee	2.83	123		Pn	16 17 13.9	+0.6
B06A	Marblemount	2.97	17	Pn	Pn	16 17 15.6	+0.5
B06A				IAML		16 18 54.7	
	comp=N,35nm,3.6s						
B06A				IAML		16 19 07.8	
	comp=E,29nm,2.8s						
PGC	Sidney	3.00	351	Pn	Pn	16 17 15.1	-0.4
PGC				IAML		16 18 39.2	
	comp=N,39nm,3.6s						
KEBM	Edson Butte	3.02	202	Pn	Pn	16 17 14.8	-1.2
K02D	Willamette Mer	3.06	192	Pb	Pb	16 17 21.5	-2.0
	baz=12,SNR=12						
HUMO	Hull Mountain	3.08	182		Pn	16 17 17.3	+0.6
K05A	Summer Lake	3.25	155	Pn	Pn	16 17 19.9	+0.7
K05A				IAML		16 18 07.5	
	comp=E,28nm,4.9s						
K05A				IAML		16 19 18.6	
	comp=N,16nm,4.3s						
KBO	Bosley Butte	3.62	197	Pn	Pn	16 17 24.3	+0.1
YBH	Yreka Blue Hor	3.95	179	Pn	Pn	16 17 27.9	-0.9
YBH				IAML		16 18 15.3	
	comp=N,9.5nm,4.6s						
YBH				IAML		16 19 51.0	
	comp=E,16nm,4.6s						
BMO	Blue Mountains	3.95	100	Pn	Pn	16 17 28.4	-0.3
BMO				IAML		16 18 06.9	
	comp=E,8.6nm,4.1s						
BMO				IAML		16 18 51.7	
	comp=E,9.8nm,4.7s						

IDC 12 16:18:07.5±1.9**, 1°.08N**×**124°.72E, h0**^{km}**, mb3.1**/3**, mb1 3.5**/4**, mb1mx3.3**/33**, mbtmp3.3**/4**, ML3.1**/1**, MS3.1**/2**, Ms1 3.1**/2**, ms1mx2.5**/13**, Error ellipse: s-maj=128.7km s-min=26.8km az=66.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	19.08	177	P	Pn	16 22 32.9	+0.4
	0.0nm,0.3s,baz=346,slow=12,SNR=1.5						
WRA	Warramunga Arr	22.92	156	P	P	16 23 12.7	-0.6
	0.3nm,0.3s,baz=330,slow=11,SNR=8.6						
JOW	Kunigami	25.84	7	LR	LR	16 34 49.8	
	comp=Z,18nm,19.5s,baz=120,slow=39						
ASAR	Alice Springs	26.16	161	P	P	16 23 43.9	0.0
	0.1nm,0.5s,baz=347,slow=7.9,SNR=6.8						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	34.88	22	LR	LR	16 38 57.6	
	comp=Z,90nm,21.9s,baz=286,slow=36						
MKAR	Makanchi Array	58.63	327	P	P	16 28 06.5	-0.1
	0.1nm,0.5s,baz=133,slow=6.5,SNR=1.4						

IDC 12 16:19:47.8±42.0**, 14°.71S**×**166°.04E, h0^{km}, mb3.6**/4**, mb1 3.8**/4**, mb1mx3.6**/35**, mbtmp3.6**/4**, Error ellipse: s-maj=722.0km s-min=102.3km az=68.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	28.10	228	P	P	16 25 41.4	-0.1
	0.6nm,0.4s,baz=50,slow=10,SNR=4.6						
WRA	Warramunga Arr	30.67	256	P	P	16 26 04.1	-0.3
	0.3nm,0.9s,baz=85,slow=8.6,SNR=2.4						
ASAR	Alice Springs	31.57	249	P	P	16 26 12.2	-0.1
	0.2nm,0.3s,baz=77,slow=9.3,SNR=15						
FITZ	Fitzroy Crossi	38.84	259	P	P	16 27 15.2	+0.3
	1.0nm,0.6s,baz=56,slow=7.3,SNR=1.5						

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*INET **12** 16:26:07.8, 12°.94N×86°.59W, h15^{km}, MW3.5*

SNET 12 16:26:12.5±1.0**, 12°.93N**×**86°.70W, h0^{km}**±22^{km}**, ML2.9, 1C, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	1.16	288	eP	Pg	16 26 34.4	-0.4
LCND	La Caada	1.22	288	⇑iP	Pg	16 26 35.3	-0.6
LCND				eS	Sn	16 26 53.5	-0.6
LCND				IAML		16 26 58.3	
	comp=Z,1μm,0.4s						
TGUH	Tegucigalpa,Un	1.25	334	eP	Pg	16 26 35.9	-0.7
TGUH				eS	Sb	16 26 54.3	+0.3
PACA	Pacayal	1.67	289	eP	Pn	16 26 43.0	-0.1
PACA				IAML		16 27 14.7	
	comp=Z,66nm,0.3s						
SCLA	Alcaldia de Sa	2.12	292	eP	Pn	16 26 50.5	+1.3
SCLA				IAML		16 27 51.8	
	comp=Z,36nm,0.5s						

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*MAN **12** 16:28:21.4, 4°.90N×126°.28E, h105^{km}, mb4.6, ML3.4, MS3.3*

*IDC **12** 16:28:27.9±1.3, 5°.62N×126°.78E, h117^{km}±13^{km}, mb3.1/8, mb1 3.3/9, mb1mx3.2/36, mbtmp3.5/9, MS2.8/1, Ms1 2.8/1, ms1mx2.2/16, Error ellipse: s-maj=37.8km s-min=10.5km az=64.0*

*DJA **12** 16:28:29.1±0.9, 5°N±6°×12°6E±°, h131^{km}±13^{km}, M4.0/10, mb4.2/6, mB4.5/5, MLv4.2/10, Mw(mB)3.7/5*

ISC 12 16:28:27.2±0.7**, 5°.34N**±0°.06×**126°.32E**±0°.09**, h100^{km}, n20,** σ**2^{s}02**/23**, mb3.5**/8**, 3C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	General Santos	1.55	299	⇓iP	Pn	16 28 52.4	-1.8
GSPH				i S	Sn	16 29 12.3	-2.4
SGSI	Sangihe	1.82	206	P	Pn	16 28 59.1	+1.6
DAV	Davao City (W)	1.87	337	P	Pn	16 28 58.7	+0.6
	62nm,0.3s,baz=225,slow=19,SNR=1.9						
DAV				S	Sn	16 29 24.7	+3.1
	80nm,0.3s,baz=83,slow=23,SNR=3.4						
DMPH	Davao City--Mi	1.91	335	⇑eP	Pn	16 28 58.3	-0.3
DMPH				eS	Sn	16 29 25.4	+2.7
KCP	Kidapawan	2.06	324	⇑iP	Pn	16 29 01.6	+0.9
KCP				i S	Sn	16 29 29.0	+2.9
BIPH	Bislig	2.83	1	⇑eP	Pn	16 29 17.3	+6.6
BIPH				eS	Sn	16 29 47.6	+3.5
TNTI	Ternate	4.66	167	P	Pn	16 29 34.7	-0.6
GTOI	Gorontalo	5.72	215	P	Pn	16 29 50.6	+0.9
	0.2nm458nm39nm,0.7s						
MRSI	Marisa	6.51	222	P	Pn	16 30 02.3	+1.8
	0.4nm1μm101nm,0.7s						
SANI	Sanana	7.34	183	P	Pn	16 30 10.2	-1.6
SIJI	Sorong	7.90	141	P	Pn	16 30 19.4	0.0
	1.0nm,0.3s,baz=324,slow=19,SNR=9.8						
SIJI				S	Sn	16 31 45.7	-1.6
	0.4nm,0.3s,baz=229,slow=19,SNR=1.3						
BATI	Baumata	15.67	190	LR	LR	16 38 18.8	
	comp=Z,35nm,19.3s,baz=230,slow=37						
FITZ	Fitzroy Crossi	23.30	182	P	P	16 33 27.6	+1.2
	1.9nm,0.7s,baz=2.6,slow=14,SNR=9.4						
WRA	Warramunga Arr	26.33	163	P	P	16 33 55.4	+1.5
	0.1nm,0.4s,baz=345,slow=10.0,SNR=1.7						
ASAR	Alice Springs	29.76	166	P	P	16 34 26.2	+1.7
	0.1nm,0.3s,baz=345,slow=6.9,SNR=5.3						
KSRS	Korea Array	32.00	2	P	P	16 34 38.6	-5.3
	1.0nm,0.7s,baz=152,slow=16,SNR=4.5						
SONM	Songino Array	45.65	341	P	P	16 36 37.7	-0.1
	0.3nm,0.4s,baz=170,slow=9.7,SNR=2.1						
MKAR	Makanchi Array	56.01	325	P	P	16 37 54.1	-1.4
	0.3nm,0.3s,baz=116,slow=7.3,SNR=13						
ZALV	Zalesovo Beam	58.98	333	P	P	16 38 12.9	-3.2
	0.3nm,0.4s,baz=136,slow=9.2,SNR=1.6						
ILAR	Eielson Array	83.84	25	P	P	16 40 43.7	-1.7
	0.2nm,0.6s,baz=251,slow=4.8,SNR=4.6						

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*IDC **12** 16:35:22.1±0.8, 29°.68N×138°.84E, h454^{km}±17^{km}, mb2.6/4, mb1 2.9/10, mb1mx2.7/47, mbtmp3.8/10, Error ellipse: s-maj=27.3km s-min=13.7km az=70.0*

*JMA **12** 16:35:24.2±0.2, 29°.88N×139°.13E, h450^{km}, M3.4*

ISC 12 16:35:22.1±0.8**, 29°.78N**±0°.07×**138°.9E**±0°.1**, h450^{km}, n20,** σ**1^{s}82**/24**, mb2.8**/3**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	3.96	132	P	P	16 36 38.6	+1.6
CBIJ				eS	S	16 37 37.0	-0.8
JCJ	Chichijima	3.96	132	P	P	16 36 38.0	+1.0
	1.9nm,0.3s,baz=264,slow=16,SNR=1.8						
JCJ				S	S	16 37 37.5	-0.3
	26nm,0.3s,baz=283,slow=23,SNR=12						
JTNC	Tanabenakahech	4.89	326	P	P	16 36 48.1	+2.7
JIE	Ise	4.95	339	P	P	16 36 48.9	+3.0
JNY	Yasuok	5.63	352	P	P	16 36 55.3	+2.7
JHU	Hanno	6.06	3	eS	S	16 38 12.5	-2.0
JRY	Ryogami san	6.22	0	P	P	16 37 00.3	+1.7
JYT	Yasato	6.52	9	eS	S	16 38 20.6	-2.6
JAG	Ashikaga	6.64	4	P	P	16 37 03.1	+0.1
JAG				eS	S	16 38 22.2	-3.3
MJAR	Matsushiro Arr	6.76	355	P	P	16 37 04.5	+0.2
	0.2nm,0.3s,baz=167,slow=11,SNR=13						
MAT	Matsushiro	6.76	355	P	P	16 37 05.2	+0.9
MAT				eS	S	16 38 27.4	-0.5
JHO	Hitachi	6.96	11	P	P	16 37 07.9	+1.6
JOW	Kunigami	9.79	255	P	P	16 37 37.3	+0.2
	1.7nm,0.3s,baz=104,slow=14,SNR=5.9						
KSRS	Korea Array	11.90	313	P	P	16 38 00.5	+0.7
	0.3nm,0.3s,baz=128,slow=11,SNR=6.7						
ASAJ	Asahikawa	14.61	11	P	P	16 38 31.4	+2.5
	0.4nm,0.3s,baz=232,slow=8.1,SNR=6.6						
USRK	Ussuriysk Ar.	15.40	341	P	P	16 38 38.5	+1.2
	baz=172,slow=10,SNR=16						
KLR	Kul'dur	20.17	346	P	P	16 39 25.4	+0.6
	1.4nm,0.6s,baz=140,slow=8.7,SNR=3.8						
CMAR	Chiang Mai Arr	37.98	262	P	P	16 41 59.3	-1.0
	0.6nm,0.4s,baz=67,slow=5.0,SNR=11						
WRA	Warramunga Arr	49.63	186	P	P	16 43 30.4	-0.7
	0.1nm,0.5s,baz=2.4,slow=8.2,SNR=1.0						
ASAR	Alice Springs	53.36	186	P	P	16 43 56.6	-1.6
	0.1nm,0.2s,baz=7.5,slow=7.8,SNR=4.4						

MAN 12 16:51:45.8, 17°.48N×**120°.73E, h12^{km}, mb3.8, ML2.5, MS2.0, Luzon**

IDC 12 16:54:40.6±3.6**, 10°.97S**×**165°.92E, h254^{km}**±32^{km}**, mb2.8**/3**, mb1 3.2**/4**, mb1mx3.0**/31**, mbtmp3.7**/4**, Error ellipse: s-maj=38.7km s-min=29.9km az=127.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.05	177	P	Pn	16 57 12.0	-0.3
	0.3nm,0.3s,baz=332,slow=17,SNR=3.1						
DZM				S	S	16 59 16.3	+0.2
	0.2nm,0.3s,baz=344,slow=16,SNR=1.1						
WRA	Warramunga Arr	31.67	250	P	P	17 00 40.7	-0.1
	0.4nm,0.6s,baz=80,slow=8.9,SNR=6.5						
WRA				ScP	ScP	17 06 44.5	-0.8
	0.3nm,0.9s,baz=87,slow=3.4,SNR=2.5						
ASAR	Alice Springs	32.98	243	P	P	17 00 52.2	+0.1
	0.3nm,0.9s,baz=65,slow=9.8,SNR=4.6						
ILAR	Eielson Array	83.39	18	P	P	17 06 39.1	0.0
	0.3nm,0.5s,baz=242,slow=4.7,SNR=5.4						

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*IDC **12** 17:16:54.4±1.8, 30°.41S×71°.62W, h0^{km}, mb4.0/1, mb1 4.0/1, mb1mx3.5/21, mbtmp4.0/1, Error ellipse: s-maj=136.6km s-min=75.9km az=141.0*

*GUC **12** 17:16:56.7±0.7, 29°.67S×72°.02W, h24^{km}±14^{km}, ML3.7*

ISC 12 17:16:57.2±1.1**, 29°.64S**±0°.04×**71°.96W**±0°.09**, h25^{km}, n25,** σ**1^{s}06**/23**, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	La Serena	0.69	114	i P	Pn	17 17 10.3	-1.1
CO05				eS	Sn	17 17 20.4	-0.9
CO05				IAML		17 17 22.0	
	comp=E,4μm,0.3s						
CO06	Fray Jorge	1.07	165	eP	Pn	17 17 15.6	-1.1
CO06				eS	Sb	17 17 29.2	-1.4
CO06				IAML		17 17 36.4	
	comp=E,2μm,0.2s						
GO04	Tololo Observa	1.14	118	eP	Pb	17 17 17.8	-0.6
GO04				eS	Sn	17 17 33.5	+0.7
LCO	Las Campanas	1.27	61	eP	Pb	17 17 19.5	-1.1
LCO				eS	Sb	17 17 37.7	+1.1
AC04	Llanos de Chal	1.63	29	eP	Pn	17 17 23.2	-1.0
GO03	Copiap	2.54	37	eP	Pb	17 17 39.8	-2.3
GO03				IAML		17 18 22.8	
	comp=E,363nm,0.4s						
VA06	Catapilco	2.97	169	IAML		17 18 37.5	
	comp=E,468nm,0.3s						
VA03	San Esteban	3.34	159	eP	Pn	17 17 49.1	+1.1
ROCH	El Roble	3.42	166	eP	Pn	17 17 49.2	0.0
ROCH				IAML		17 18 51.6	
	comp=N,192nm,0.4s						
PEL	Peldehue	3.66	163	eP	Pn	17 17 52.8	+0.5
AC02	Maricunga	3.75	43	eP	Pn	17 17 55.2	+1.3
MT09	Talagante	4.21	169	eP	Pn	17 18 00.4	+0.5
MT01	Popeta	4.26	172	eP	Pn	17 17 59.9	-0.6
LMEL	Las Melosas	4.46	161	eP	Pn	17 18 04.3	+0.9
BO04	La Punta	4.49	165	i P	Pn	17 18 04.3	+0.6
BO01	Tunca	4.80	171	eP	Pn	17 18 07.7	-0.2
H03N1	Juan Fernandez	7.04	236	T	T	17 26 01.5	
	baz=65,slow=71,SNR=381						
H03N2	Juan Fernandez	7.05	236	T	T	17 26 12.6	
	baz=65,slow=71,SNR=510						
H03N3	Juan Fernandez	7.05	236	T	T	17 25 58.0	
	baz=65,slow=71,SNR=376						
TORD	Torodi Ar. Bea	82.68	70	P	P	17 29 20.1	+1.1
	comp=N,0.6nm,0.5s,baz=250,slow=5.2,SNR=4.0						
WRA	Warramunga Arr	124.57	210	PKP	PKPdf	17 35 55.5	+0.4
	comp=N,0.4nm,1.0s,baz=156,slow=1.9,SNR=1.8						
H11S2	WAKE ISLAND Hy	125.78	272	T	T	19 54 50.7	
	baz=115						
H11S1	WAKE ISLAND Hy	125.79	272	T	T	19 55 00.1	
	baz=115						
H11S3	WAKE ISLAND Hy	125.80	272	T	T	19 54 57.6	
	baz=115						
ZALV	Zalesovo Beam	150.43	28	PKPbc	PKiKP	17 36 47.6	+0.9
	comp=N,2.4nm,0.6s,baz=288,slow=3.4,SNR=14						
ZALV				PKPab	sPKPbc	17 36 56.3	+0.4
	comp=N,2.0nm,0.6s,baz=311,slow=2.7,SNR=8.5						

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*IDC **12** 17:22:12.1±1.9, 6°.54S×129°.02E, h219^{km}±26^{km}, mb2.9/1, mb1 3.1/6, mb1mx2.8/48, mbtmp3.6/6, Error ellipse: s-maj=33.7km s-min=18.4km az=92.0*

ISC 12 17:22:09.6±0.9**, 6°.72S**±0°.06×**129°.1E**±0°.1**, h200^{km}, n6,** σ**3^{s}10**/10**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	6.18	20	P	Pn	17 23 40.4	+1.1
	0.8nm,0.3s,baz=198,slow=20,SNR=7.3						
SIJI				S	Sn	17 24 46.6	-3.7
	0.4nm,0.3s,baz=233,slow=22,SNR=5.6						
BATI	Baumata	6.44	237	P	Pn	17 23 44.5	+1.9
	1.0nm,0.3s,baz=45,slow=11,SNR=1.7						
BATI				S	Sn	17 24 54.0	-2.2
	1.9nm,0.3s,baz=73,slow=20,SNR=2.6						
FITZ	Fitzroy Crossi	11.82	196	P	Pn	17 24 54.1	+1.8
	0.1nm,0.3s,baz=21,slow=11,SNR=9.1						
FITZ				S	Sn	17 26 59.1	-4.9
	0.1nm,0.3s,baz=50,slow=19,SNR=1.0						
WRA	Warramunga Arr	14.08	160	P	P	17 25 23.7	+1.3
	0.2nm,0.3s,baz=343,slow=12,SNR=8.4						
WRA				S	S	17 27 55.0	-2.5
	0.1nm,0.3s,baz=334,slow=19,SNR=1.5						
ASAR	Alice Springs	17.46	165	P	Pn	17 26 04.2	+2.8
	0.3nm,0.3s,baz=335,slow=9.4,SNR=40						
MKAR	Makanchi Array	67.53	327	P	P	17 32 43.8	-0.5
	0.2nm,0.4s,baz=131,slow=7.1,SNR=2.1						

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*BJI **12** 17:28:34.3±0.0, 51°.62N×175°.44W, h12^{km}, mB5.0/47, mb4.9/66, Ms4.7/48, Ms7 4.5/50*

*AEIC **12** 17:28:36±1.9, 51°.37N±0°.06×175°.00W±0°.06, h16^{km}±2^{km}, Error ellipse: s-maj=9.0km s-min=5.3km az=175.0*

*MOS **12** 17:28:37.0±1.0, 51°.47N×175°.04W, h38^{km}, mb4.9/29, MS4.3/10, Error ellipse: s-maj=5.8km s-min=4.8km az=96.4*

*IDC **12** 17:28:38.4±2.2, 51°.50N×175°.07W, h33^{km}±15^{km}, mb4.4/34, mb1 4.5/36, mb1mx4.4/45, mbtmp4.5/36, ML4.1/2, MS4.4/56, Ms1 4.4/56, ms1mx4.3/70, Error ellipse: s-maj=14.9km s-min=9.5km az=167.0*

*NEIC **12** 17:28:39.1±1.6, 51°.50N±0°.07×175°.07W±0°.06, h39^{km}±3^{km}, mb5.2/531, ML5.0(AEIC), Error ellipse: s-maj=10.2km s-min=5.5km az=172.0*

*GCMT **12** 17:28:39.1±0.2, 51°.35N±0°.01×174°.95W±0°.04, h18^{km}±1^{km}, MW5.0/90, Moment Tensor Solution. s51,c68; s90,c127; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.62±.15; $M_{\theta\theta}$3.18±.11; $M_{\phi\phi}$-0.56±.10; $M_{r\theta}$2.23±.24; $M_{\theta\phi}$-0.12±.09; $M_{\phi r}$1.48±.30; Best double couple: $M_0$3.97800×10^{16} NP1:ϕ_s115.00000°,δ31.00000°,λ-48.00000°. NP2: ϕ_s249.00000°,δ68.00000°,λ-112.00000°. Principal axes: T 3.9700, Plg20.0000°, Azm355.0000°; N 0.0130, Plg20.0000°, Azm257.0000°; P -3.9860, Plg61.0000°, Azm126.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 12 17:28:37.4±0.4**, 51°.37N**±0°.04×**175°.04W**±0°.03**, h30^{km}**±2^{km}**, h30^{km}:pP-P, n1117,** σ**1^{s}27**/1132**, mb5.2**/331**, MS4.5**/77**, 107C-84D, Fault plane solution: NP1:**ϕ_s262.11887°, δ77.05626°**,** λ-77.86346°. **NP2:**ϕ_s38.28610°**,** δ17.67242°, λ-132.45091°. **Principal axes:** T Plg31.0208°, Azm342.1290°**;** N Plg11.8236°, Azm79.3611°**;** P Plg56.3176°, Azm187.6678°**; Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSIG	Igitkin Island	0.83	319		Pn	17 28 52.9	-0.2
GSMY	Great Sitkin M	0.93	317		Pn	17 28 54.5	0.0
GSTR	Great Sitkin T	0.97	319	Pn	Pn	17 28 54.9	-0.1
GSTD	Great Sitkin T	0.98	315		Pn	17 28 55.3	+0.2
ETKA	Kagalaska Isla	0.99	301		Pn	17 28 55.3	+0.1
KOFP	Korovin Flat P	1.08	32		Pn	17 28 56.4	-0.1
KOKL	Mount Kliuchef	1.09	28		Pn	17 28 56.5	-0.1
KOWE	Korovin West	1.11	26		Pn	17 28 57.1	+0.2
ADK	Adak	1.15	297	P	Pn	17 28 57.4	0.0
ADK	Adak	1.15	297		Pn	17 28 57.4	0.0
ADK	Adak	1.15	297		Sn	17 29 12.1	-0.1
KIWB	Kanaga Island	1.41	291		Pn	17 29 01.4	+0.4
KIKV	Kanaga Island	1.43	292		Pn	17 29 01.8	+0.5
KIMD	Kanaga Island	1.43	287		Pn	17 29 01.5	+0.3
KICM	Kanaga Island	1.46	293		Pn	17 29 02.4	+0.7
TAFP	Tanaga Falls P	1.91	287		Pn	17 29 09.0	+1.1
TASE	Tanaga Southea	1.93	285		Pn	17 29 09.4	+1.2
GAEA	Gareloi East	2.35	282		Pn	17 29 15.8	+1.8
GALAA	Gareloi Lava P	2.37	281		Pn	17 29 16.0	+1.9
GALAA					Sb	17 29 45.8	-2.2
GAKI	Gareloi-Kavalg	2.37	276		Pn	17 29 15.6	+1.4
CERAA	Semis' Rag'd T	3.33	281		Pn	17 29 28.7	+1.3
CERB	Semis' Cerberu	3.37	282		Pn	17 29 29.3	+1.3
CERB					Sn	17 30 11.1	+4.1
CESW	Semis' Southwe	3.41	281		Pn	17 29 29.9	+1.4
AMKA	Amchitka	3.55	272	Pn	Pn	17 29 31.0	+0.6
LSNW	Little Sitkin	4.06	281		Pn	17 29 39.0	+1.6
NIKH	Nikolski High	4.13	65	P	Pn	17 29 39.3	+1.0
	baz=249						
NIKH	Nikolski High	4.13	65		Pn	17 29 39.5	+1.1
NIKH					Sn	17 30 29.9	+4.3
OKSP	Okmok Steeple	4.55	63		Pn	17 29 45.8	+1.7
OKCE	Okmok Cone E	4.69	61		Pn	17 29 46.8	+0.8
OKNC	Okmok New Cone	4.72	61		Pn	17 29 47.3	+0.9
MAPS	Pakushin South	5.51	60		Pn	17 29 59.2	+1.9
MSW	Makushin Switc	5.63	60		Pn	17 30 00.8	+1.8
MNAT	Makushin Natee	5.68	60		Pn	17 30 01.3	+1.7
UNV	Unalaska Valle	5.76	61	P	Pn	17 30 03.4	+2.7
	baz=248,SNR=16						
UNV	Unalaska Valle	5.76	61	Pn	Pn	17 30 00.8	+0.1
AKMO	Akutan Morgan	6.12	60		Pn	17 30 07.5	+1.8
AKBBA	Akutan Broad B	6.17	60		Pn	17 30 08.1	+1.8
AKGG	Akutan Green G	6.18	59		Pn	17 30 08.6	+2.1
AKUT	Akutan	6.27	60	Pn	Pn	17 30 06.7	-1.1
SPIA	Saint Paul Isl	6.46	24	P	Pn	17 30 13.7	+3.4
	baz=208						
SPIA	Saint Paul Isl	6.46	24		Pn	17 30 13.3	+3.0
SMY	Shemya	6.84	286	P	Pn	17 30 16.1	+0.5
SMY	Shemya	6.84	286	Pn	Pn	17 30 16.1	+0.5
WECS	Westdahl Cape	6.96	59		Pn	17 30 19.2	+2.0
ISLZ	Isanotski Laza	7.61	59		Pn	17 30 27.9	+1.8
FALS	False Pass	7.81	59	P	Pn	17 30 31.9	+3.0
	baz=248						
FALS	False Pass	7.81	59		Pn	17 30 28.6	-0.3
SDPT	Sand Point	9.57	60	P	Pn	17 30 53.1	+0.1
	baz=251						
SDPT	Sand Point	9.57	60	Pn	Pn	17 30 52.2	-0.8
CNBA	Chernabura Isl	9.91	64	Pn	Pn	17 30 56.4	-1.2
CHNA	Chernabura Isl	9.91	64	P	Pn	17 30 57.8	+0.2
	baz=256						
CHGN	Chignik	10.98	57		Pn	17 31 11.1	-1.2
P18K	Big Mountain,	13.79	47		Pn	17 31 50.5	-0.1
OHAK	Old Harbor	13.95	57	P	Pn	17 31 50.6	-2.2
	baz=254						
OHAK	Old Harbor	13.95	57		Pn	17 31 49.6	-3.2
O18K	Koktuh Hills	14.01	45		P	17 31 59.0	-2.2
ANM	Nome	14.16	17	P	Pn	17 31 54.9	-0.8
ANM	Nome	14.16	17	Pn	Pn	17 31 54.9	-0.8
ANM				P	P	17 32 00.1	-2.7
Q19K	Cape Douglas,	14.33	50	P	Pn	17 31 56.6	-1.5
KDAK	Kodiak Island	14.47	55	Pn	Pn	17 31 56.7	-3.2
	2.8nm,0.3s,baz=214,slow=1.8,SNR=38						
KDAK				Sn	Sn	17 34 33.2	-6.0
	baz=342,slow=19,SNR=1.8						
KDAK				LR	LR	17 38 27.8	
	comp=Z,5μm,19.6s,baz=265,slow=41						
KDAK	Kodiak Island	14.47	55	P	Pn	17 31 57.6	-2.3
	baz=253						
KDAK	Kodiak Island	14.47	55		Pn	17 31 57.0	-2.9
SVW2	Sparrevohn	14.50	40		Pn	17 31 56.2	-4.1
O19K	Port Alsworth	14.57	45	Pn	Pn	17 32 02.3	+1.1
TNA	Tin City	14.70	12	Pn	Pn	17 32 05.4	+2.6
N19K	Bonanza Creek	14.80	42	P	Pn	17 32 06.7	+2.3
	baz=239,SNR=15						
N19K	Bonanza Creek	14.80	42	Pn	Pn	17 32 03.9	-0.6
P19K	Oil Pt	14.82	48	P	Pn	17 32 07.3	+2.7
	baz=246						
P19K	Oil Pt	14.82	48	Pn	Pn	17 32 04.8	+0.2
O20K	Slope Mountain	15.28	46	P	P	17 32 13.9	-1.4
	baz=245						
RSO	Redoubt South	15.38	45		Pn	17 32 11.1	-1.1
L19K	White Mountain	15.40	38	P	P	17 32 16.6	0.0
	baz=234,SNR=73						
L19K	White Mountain	15.40	38		Pn	17 32 13.5	+1.2
L19K				IAmb	IAmb	17 32 23.9	
	comp=Z,211nm,0.9s						
M19K	Big River Lodg	15.42	39	P	P	17 32 16.6	-0.2
	baz=236,SNR=19						
M19K	Big River Lodg	15.42	39		Pn	17 32 14.3	+1.7
M19K				IAmb	IAmb	17 32 23.8	
	comp=Z,70nm,0.8s						
TTA	Tatalina	15.44	34	P	Pn	17 32 12.9	+0.1
TTA				pmax	pmax		
	comp=Z,71nm,1.1s						
TTA	Tatalina	15.44	34	P	P	17 32 17.0	0.0
	baz=230,SNR=14						
TTA	Tatalina	15.44	34		Pn	17 32 12.8	+0.1
HOM	Homer	15.56	49	Pn	Pn	17 32 13.4	-0.9
CNPM	China Poot	15.71	49		Pn	17 32 15.0	-1.3
CNPM				IAmb	IAmb	17 32 30.5	
	comp=Z,243nm,1.5s						
L20K	Farewell, AK	15.94	38	P	P	17 32 21.3	-1.3
	baz=235,SNR=17						
BRLK	Bradley Lake	15.96	49		Pn	17 32 17.3	-2.2
SPU	Mount Spurr	16.02	43	P	P	17 32 22.6	-0.8
BRSE	Bradley Lake S	16.02	49	P	Pn	17 32 20.4	+0.2
	baz=249						
PET	Petropavlovsk	16.19	286	i P	Pn	17 32 22.6	+0.2
K20K	Telida	16.39	35	P	P	17 32 27.2	-0.4
	baz=232,SNR=15						
K20K	Telida	16.39	35	P	P	17 32 26.8	-0.8
GCSA	Galena City Sc	16.40	28	P	P	17 32 27.8	+0.3
	baz=224,SNR=6.4						
SKT	Skwentna	16.61	41	P	P	17 32 29.7	-0.3
	baz=241,SNR=12						
SKT	Skwentna	16.61	41	P	Pn	17 32 28.8	+0.9
SKT				IAmb	IAmb	17 32 36.3	
	comp=Z,148nm,1.2s						
SEW	Seward	16.75	49	P	Pn	17 32 27.9	-1.7
	baz=250						
SEW	Seward	16.75	49	Pn	Pn	17 32 26.1	-3.4
PEA0B	Petropavlovsk-	16.76	287	i P	Pn	17 32 30.3	+0.7
PETK	Petropavlovsk-	16.76	287	Pn	P	17 32 31.5	-0.1
	comp=Z,1.0nm,0.3s,baz=91,slow=13,SNR=15						
PETK				LR	LR	17 38 23.3	
	comp=Z,1μm,21.5s,baz=95,slow=35						
PETK	Petropavlovsk-	16.76	287	P	Pn	17 32 28.3	-1.3
PETK	Petropavlovsk-	16.76	287	Pn	Pn	17 32 28.3	-1.3
O22K	Cooper Landing	16.76	47	P	Pn	17 32 30.5	+0.9
	baz=248						
O22K	Cooper Landing	16.76	47		Pn	17 32 27.6	-2.0
O22K				IAmb	IAmb	17 32 46.0	
	comp=Z,153nm,0.6s						
PPLA	Purkeypile	16.82	38	P	P	17 32 33.7	+1.2
	baz=237,SNR=15						
PPLA	Purkeypile	16.82	38	P	P	17 32 32.0	-0.5
PPLA				IAmb	IAmb	17 32 46.0	
	comp=Z,188nm,1.3s						
J20K	Nowinta River	16.88	33	P	P	17 32 33.2	+0.3
	baz=230,SNR=19						
J20K	Nowinta River	16.88	33		P	17 32 32.3	-0.6
RC01	Rabbit Creek A	16.99	45	P	Pn	17 32 33.1	+0.6
	baz=246						
RC01	Rabbit Creek A	16.99	45		Pn	17 32 33.1	+0.6
CAST	Castle Rocks	17.15	36	P	P	17 32 36.4	+0.4
	baz=236,SNR=14						
CAST	Castle Rocks	17.15	36	P	P	17 32 36.0	0.0
CHUM	Lake Minchumin	17.34	35	P	P	17 32 39.3	+1.4
	baz=234,SNR=17						
CUT	Chulitna	17.34	41	P	P	17 32 38.6	+0.6
	baz=242,SNR=6.6						
CUT	Chulitna	17.34	41	P	P	17 32 37.9	-0.2
CUT				IAmb	IAmb	17 32 44.1	
	comp=Z,148nm,1.2s						
PWL	Port Wells	17.54	47	P	P	17 32 40.0	-0.2
	baz=249						
PWL	Port Wells	17.54	47		Pn	17 32 36.3	-3.0
GHO	Glory Hole Cre	17.63	44		Pn	17 32 35.4	-5.1
KTH	Kantishna Hill	17.66	37	P	P	17 32 42.0	+0.3
KTH				IAmb	IAmb	17 32 50.2	
	comp=Z,246nm,1.0s						
KNK	Knik Glacier	17.69	45	P	Pn	17 32 40.3	-0.9
	baz=247						
KNK	Knik Glacier	17.69	45		Pn	17 32 39.6	-1.6
TRF	Thorofare Moun	17.85	38	P	P	17 32 44.0	+0.2
	baz=239,SNR=16						
TRF	Thorofare Moun	17.85	38	P	P	17 32 44.1	+0.2
TRF				IAmb	IAmb	17 32 51.1	
	comp=Z,121nm,1.0s						
SML	Sawmill	17.90	44	P	Pn	17 32 43.0	-0.8
SML				pmax	pmax		
	comp=Z,95nm,1.5s						
SML	Sawmill	17.90	44	P	Pn	17 32 42.9	-0.8
	baz=246						
SML	Sawmill	17.90	44	P	Pn	17 32 43.0	-0.8
BPAW	Bear Paw Mtn.	17.94	36	P	P	17 32 45.6	+0.9
	baz=236,SNR=52						
BPAW	Bear Paw Mtn.	17.94	36	P	P	17 32 45.8	+1.1
BPAW				IAmb	IAmb	17 32 53.2	
	comp=Z,151nm,1.0s						
IMAR	Indian Mountai	18.21	28	P	P	17 32 48.5	+1.0
I21K	Tanana	18.23	32	P	P	17 32 49.5	+1.6

	baz=232,SNR=109						
I21K	Tanana	18.23	32	P	Pn	17 32 47.4	-0.5
I21K				IAmb	IAmb	17 32 55.5	
	comp=Z,232nm,1.0s						
WAT1	Susitna Watana	18.24	41	P	P	17 32 48.1	+0.1
	baz=243						
HIN	Hinchinbrook I	18.24	49	P	Pn	17 32 46.4	-1.7
H21K	Melozitna Rive	18.27	30	P	Pn	17 32 50.0	+1.6
	baz=229						
H21K	Melozitna Rive	18.27	30	P	Pn	17 32 49.6	+1.3
H21K				IAmb	IAmb	17 32 55.6	
	comp=Z,215nm,1.1s						
SCM	Sheep Creek Mo	18.35	44	P	P	17 32 47.5	-1.7
SCM				pmax	pmax		
	comp=Z,63nm,1.0s						
SCM	Sheep Creek Mo	18.35	44	P	P	17 32 48.2	-1.0
	baz=248						
SCM	Sheep Creek Mo	18.35	44	P	P	17 32 47.5	-1.7
FID	Port Fidalgo	18.36	48	P	P	17 32 45.5	-3.8
RND	Reindeer	18.39	39	P	P	17 32 49.0	-0.7
RND				pmax	pmax		
	comp=Z,66nm,0.9s						
RND	Reindeer	18.39	39	P	P	17 32 49.0	-0.7
WAT6	Susitna Watana	18.47	42	P	P	17 32 49.6	-1.0
	baz=245						
MCK	McKinley	18.52	38	P	P	17 32 50.4	-0.6
MCK				pmax	pmax		
	comp=Z,91nm,1.0s						
MCK	McKinley	18.52	38	P	P	17 32 50.6	-0.4
	baz=240,SNR=26						
MCK	McKinley	18.52	38	P	P	17 32 50.4	-0.6
BWN	Browne	18.54	36	P	Pn	17 32 51.9	+0.3
BWN				IAmb	IAmb	17 33 08.8	
	comp=Z,266nm,1.2s						
MLY	Manley	18.56	33	P	Pn	17 32 52.6	+0.7
	baz=234,SNR=31						
MLY	Manley	18.56	33	P	P	17 32 51.0	-0.6
DIV	Divide	18.80	47	P	P	17 32 54.0	-0.2
DHY	Denali Highway	18.83	41	P	P	17 32 53.9	-0.7
	baz=244						
DHY	Denali Highway	18.83	41	P	P	17 32 53.9	-0.7
KLU	Klutina	18.85	46	P	P	17 32 53.6	-1.2
	baz=251						
KLU	Klutina	18.85	46	P	P	17 32 53.1	-1.6
NEA2	Nenana	18.91	36	P	P	17 32 54.8	-0.5
	baz=238,SNR=7.9						
NEA2	Nenana	18.91	36	P	P	17 32 54.6	-0.7
M24K	Tolsona, Glenn	18.95	44	P	P	17 32 56.0	+0.1
	baz=249						
M24K	Tolsona, Glenn	18.95	44	P	P	17 32 55.1	-0.8
M24K				IAmb	IAmb	17 33 15.2	
	comp=Z,84nm,0.9s						
BILL	Bilibino	19.05	338	d iP	Pn	17 32 58.2	+0.5
BILL				i S	Sn	17 36 27.6	-2.2
BILL				pmax	pmax		
	comp=Z,111nm,1.2s						
BILL				MLR	MLR		
	comp=Z,1µm,22.0s						
BILL	Bilibino	19.05	338	P	Pn	17 32 58.4	+0.8
BILL				IAmb	IAmb	17 33 03.5	
	comp=Z,222nm,1.4s						
I23K	Minto, Yukon-K	19.11	34	P	Pn	17 32 58.4	-0.1
	baz=236,SNR=68						
I23K	Minto, Yukon-K	19.11	34	P	Pn	17 32 58.3	-0.1
I23K				IAmb	IAmb	17 33 04.7	
	comp=Z,228nm,1.2s						
RAGM	Ragged Mountai	19.11	50	P	Pn	17 32 58.5	-0.1
RAGM				IAmb	IAmb	17 33 22.9	
	comp=Z,126nm,1.3s						
WRH	Wood River Hil	19.21	37	P	P	17 32 57.2	-1.3
HMT	Hamilton	19.30	50	P	P	17 32 58.6	-1.1
BMRM	Bremner River	19.30	48	P	P	17 32 59.8	+0.2
	baz=254						
BMRM	Bremner River	19.30	48	P	P	17 32 58.9	-0.8
MDM	Murphy Dome	19.41	35	P	P	17 33 00.0	-0.8
MDM				IAmb	IAmb	17 33 08.8	
	comp=Z,137nm,1.0s						
H23K	Yukon River	19.44	32	P	Pn	17 33 01.8	-0.6
	baz=234						
H23K	Yukon River	19.44	32	P	P	17 33 01.5	+0.4
H23K				IAmb	IAmb	17 33 09.9	
	comp=Z,101nm,1.1s						
N25K	Chitina, Valde	19.49	47	P	P	17 33 01.3	-0.4
	baz=252						
N25K	Chitina, Valde	19.49	47	P	P	17 33 00.8	-1.0
TCOL	CIGO, UAF Yank	19.50	36	P	P	17 33 00.8	-1.0
TCOL				IAmb	IAmb	17 33 10.9	
	comp=Z,75nm,0.8s						
COLA	College	19.50	36	i P	Pn	17 33 03.6	+0.5
COLA				pmax	pmax		
	comp=Z,89nm,1.0s						
COLA	College	19.50	36	P	P	17 33 00.3	-1.4
COLA				IAmb	IAmb	17 33 10.8	
	comp=Z,76nm,0.8s						
HARP	HAARP	19.50	44	P	Pn	17 33 02.7	-0.5
	baz=249						
BERG	Berg Lake	19.58	50	P	P	17 33 02.2	-0.5
PAX	Paxson	19.58	42	P	P	17 33 02.9	+0.2
PAX				pmax	pmax		
	comp=Z,42nm,0.9s						
PAX	Paxson	19.58	42	P	Pn	17 33 03.8	-0.4
	baz=247						
PAX	Paxson	19.58	42	P	P	17 33 02.9	+0.2
HDA	Harding Lake	19.61	38	P	P	17 33 02.8	-0.2
	baz=242,SNR=46						
HDA	Harding Lake	19.61	38	P	P	17 33 02.3	-0.7
HDA				IAmb	IAmb	17 33 08.9	
	comp=Z,106nm,0.8s						
POKR	Poker Plat Res	19.78	35	P	Pn	17 33 07.3	+0.9
	baz=239,SNR=25						
POKR	Poker Plat Res	19.78	35	P	P	17 33 04.1	-0.7
POKR				IAmb	IAmb	17 33 14.2	
	comp=Z,85nm,0.8s						
GLB	Gilahina Butte	19.80	47		P	17 33 05.5	+0.4
IL31		19.81	37	P	P	17 33 02.1	-3.0
ILAR	Eielson Array	19.81	37	P	P	17 33 02.8	-2.4
	comp=Z,2.0nm,0.3s,baz=243,slow=10,SNR=77						
ILAR				LR	LR	17 41 25.8	
	comp=Z,1µm,18.7s,baz=248,slow=39						
ILAR	Eielson Array	19.81	37	P	P	17 33 03.9	-1.2
ILAR	Eielson Array	19.81	37	P	P	17 33 03.9	-1.2
H24K	Noodor Dome	20.01	33	P	P	17 33 08.1	+0.8
	baz=237						
H24K	Noodor Dome	20.01	33	P	P	17 33 06.8	-0.6
H24K				IAmb	IAmb	17 33 14.6	
	comp=Z,224nm,1.1s						
COLD	Coldfoot	20.09	28	P	Pn	17 33 09.8	-0.4
	baz=230,SNR=19						
COLD	Coldfoot	20.09	28	P	P	17 33 08.6	+0.3
COLD				IAmb	IAmb	17 33 17.7	
	comp=Z,90nm,0.9s						
RIDG	Independent Ri	20.14	41	P	P	17 33 08.3	-0.5
	baz=246,SNR=5.3						
RIDG	Independent Ri	20.14	41	P	P	17 33 07.6	-1.2
RIDG				IAmb	IAmb	17 33 16.6	
	comp=Z,97nm,0.9s						
MCARA	McCarthy VSAT	20.15	48	P	Pn	17 33 12.2	+1.4
	baz=255						
MCARA	McCarthy VSAT	20.15	48	P	Pn	17 33 10.0	-0.8
J25K	Salcha River,	20.31	38	P	P	17 33 09.0	-1.7
	baz=243,SNR=72						
MENT	Mentasta	20.32	43	P	P	17 33 11.5	+0.9
MENT				IAmb	IAmb	17 33 22.2	
	comp=Z,72nm,1.2s						
DOT	Dot Lake	20.43	41	P	P	17 33 10.4	-1.5
DOT				IAmb	IAmb	17 33 17.4	
	comp=Z,122nm,0.8s						
M26K	Nabesna, AK	20.45	45	P	P	17 33 12.9	+0.7
	baz=252						
L26K	Log Cabin Wild	20.50	43	P	P	17 33 12.2	-0.5
	baz=250,SNR=12						
L26K	Log Cabin Wild	20.50	43	P	P	17 33 12.4	-0.3
L26K				IAmb	IAmb	17 33 22.9	
	comp=Z,62nm,0.8s						
SCRK	Sand Creek	20.59	40	P	P	17 33 12.3	-1.4
	baz=247,SNR=159						
SCRK	Sand Creek	20.59	40	P	P	17 33 11.7	-2.0
GRNC	Granite Creek	20.60	50	P	P	17 33 13.0	-0.9
PRP	Porcupine Dome	20.68	36	P	Pn	17 33 16.3	-0.8
	baz=241,SNR=9.0						
PRP	Porcupine Dome	20.68	36	P	P	17 33 14.9	+0.3
BARN	Barnard Glacie	20.71	49	P	Pn	17 33 16.8	-0.8
TABL	Table Mountain	20.83	51	P	P	17 33 14.9	-1.6
TABL				IAmb	IAmb	17 33 42.0	
	comp=Z,64nm,1.0s						
CTG	Chitna Glacier	20.84	50	P	Pn	17 33 18.4	-0.7
	baz=258						
MA2	Magadan	20.84	306	LR	LR	17 41 28.1	
	comp=Z,826nm,18.5s,baz=105,slow=37						
MA2	Magadan	20.84	306	i P	P	17 33 17.4	+1.0
MA2				pmax	pmax		
	comp=Z,86nm,2.0s						
MA2	Magadan	20.84	306	P	P	17 33 16.9	+0.5
CTGM	Chitina Glacie	20.85	50	P	P	17 33 15.2	-1.4
SEY	Seymchan	20.86	316	P	P	17 33 17.6	+1.1
	comp=Z,20nm,0.8s,baz=116,slow=9.5,SNR=32						
SEY				PcP	PcP	17 37 24.4	+0.7
	comp=Z,2.3nm,0.8s,baz=106,slow=3.8,SNR=6.8						
SEY				LR	LR	17 41 51.0	
	comp=Z,2µm,18.1s,baz=100,slow=38						
M27K	Edge Creek, AK	20.94	46	P	Pn	17 33 21.2	+1.0
	baz=254,SNR=6.1						
M27K	Edge Creek, AK	20.94	46	P	P	17 33 15.2	-2.3
J26L	Joseph Creek	20.97	39	P	P	17 33 16.7	-1.0
	baz=246,SNR=101						
LOGN	Logan Glacier	20.98	50	P	P	17 33 16.6	-1.4
L27K	Beaver Creek,	21.17	44	P	P	17 33 19.5	-0.4
	baz=252						
L27K	Beaver Creek,	21.17	44	P	P	17 33 19.0	-1.0
BCAR	Beaver Creek A	21.19	44	P	P	17 33 19.2	-0.9
TOLK	Toolik Lake Re	21.20	26	P	P	17 33 21.2	+0.9
	baz=228,SNR=50						
TOLK	Toolik Lake Re	21.20	26	P	P	17 33 21.1	+0.9
TOLK				IAmb	IAmb	17 33 40.0	
	comp=Z,81nm,0.9s						
PCA	Pinnacle	21.21	52	P	P	17 33 20.1	-0.3
PCA				IAmb	IAmb	17 33 39.8	
	comp=Z,110nm,1.2s						
PINM	Pinnacle	21.21	52	P	P	17 33 22.3	+1.9
	baz=261						
BVCY	Beaver Creek	21.41	46	P	P	17 33 24.2	+1.7
	baz=255,SNR=13						
YUK3	Moose Creek	21.44	48	P	P	17 33 24.9	+1.9
	baz=257						
PNL	Peninsula	21.58	54	P	P	17 33 25.6	+1.2
	baz=263						
A21K	Barrow	21.69	16	P	P	17 33 28.8	+3.5
	baz=212,SNR=20						
A21K	Barrow	21.69	16	P	P	17 33 24.7	-0.6
A21K				IAmb	IAmb	17 33 30.2	
	comp=Z,171nm,0.9s						
BMAR	Burnt Mountain	21.98	32	P	P	17 33 27.9	-0.6
EGAK	Eagle	22.03	40	P	P	17 33 28.5	-0.6
	baz=249,SNR=58						
EGAK	Eagle	22.03	40	P	P	17 33 27.0	-2.1
EGAK				IAmb	IAmb	17 33 35.3	
	comp=Z,93nm,0.7s						
YUK6	Outpost Mounta	22.27	50	P	P	17 33 32.8	+0.9
	baz=261						
DAWY	Dawson	22.52	42	P	P	17 33 33.7	-0.7
	baz=252,SNR=25						
DAWY	Dawson	22.52	42	P	P	17 33 33.1	-1.2
DAWY				IAmb	IAmb	17 33 42.4	
	comp=Z,38nm,0.8s						
HYT	Haines Junctio	22.67	51	P	P	17 33 37.8	+1.7
	baz=262						
HYT	Haines Junctio	22.67	51	P	P	17 33 37.3	+1.2
I29M	Ogilvie Camp,	23.37	39	P	P	17 33 41.7	-1.3
	baz=251,SNR=80						
M31M	Drury Creek, Y	24.33	48	P	P	17 33 53.3	+1.1
	baz=262						
P33M	Teslin, Yukon	24.93	53	P	P	17 33 59.2	+1.5
	baz=268						
CRAG	Craig	25.03	64	P	P	17 34 01.1	+2.7
	baz=278						
KUR	Kuril'sk	25.23	271	eP	P	17 34 05.1	+4.7
KUR				pmax	pmax		
	comp=Z,426nm,2.5s						
KUR				pmax	pmax		
	comp=Z,202nm,1.4s						
KUR				MLR	MLR		
	comp=Z,272nm,13.0s						
WRAK	Wrangell Islan	25.34	62	P	P	17 34 04.1	+2.8
	baz=277						
WRAK	Wrangell Islan	25.34	62	P	P	17 34 03.4	+2.2
WRAK				IAmb	IAmb	17 34 04.7	
	comp=Z,62nm,0.8s						
DIB	Dawson Inlet,	25.82	69	P	P	17 34 07.2	+1.5
DIB				IAmb	IAmb	17 34 23.0	
	comp=Z,108nm,1.0s						
MMPY	Sheldon Lake,	25.82	47	P	P	17 34 08.1	+2.3
	baz=264						
INK	Inuvik	26.13	34	P	P	17 34 07.9	-0.4
	comp=Z,14nm,0.9s,baz=225,slow=5.5,SNR=17						
INK				PcP	PcP	17 37 35.2	+0.5
	comp=Z,8.4nm,0.9s,baz=288,slow=2.7,SNR=5.0						
INK				LR	LR	17 45 22.3	
	comp=Z,793nm,18.6s,baz=224,slow=39						
INK	Inuvik	26.13	34	P	P	17 34 08.6	+0.3
INK						17 37 35.2	
INK				pmax	pmax		
	comp=Z,14nm,0.9s						
INK	Inuvik	26.13	34	P	P	17 34 08.8	+0.4
	baz=251,SNR=6.0						
INK	Inuvik	26.13	34	P	P	17 34 08.6	+0.3
MOBC	Moresby Island	26.13	69	P	P	17 34 10.4	+1.8
MOBC				IAmb	IAmb	17 34 13.4	
	comp=Z,134nm,1.2s						
TYV	Tymovskoe	26.30	286	eP	P	17 34 10.3	+0.3
TYV				pmax	pmax		
	comp=Z,100nm,3.6s						
DLBC	Dease Lake	26.39	57	P	P	17 34 12.1	+1.1
	comp=Z,10nm,0.7s,baz=280,slow=7.3,SNR=8.8						
DLBC				LR	LR	17 45 58.6	
	comp=Z,881nm,18.9s,baz=280,slow=40						
DLBC	Dease Lake	26.39	57	P	P	17 34 13.5	+2.6
YUK	Yuzh-Kuril'sk	27.06	270	eP	P	17 34 12.7	-4.2
YUK				ePPP	PPP	17 35 08.7	
YUK				eS	S	17 38 46.9	-5.8
YUK				MLR	MLR		
	comp=Z,248nm,15.0s						
YSS	Yuzh-Sakhalins	27.67	278	eP	P	17 34 22.1	-0.2
YSS				e*PP	pwP	17 34 37.2	+1.9
YSS				e		17 35 16.5	
YSS				eS	S	17 39 00.0	-2.3
YSS				eSS	SS	17 40 43.5	-16
YSS				pmax	pmax		
	comp=Z,20nm,1.4s						
YSS				pmax	pmax		
	comp=Z,200nm,4.9s						
YSS				smax	smax		
	comp=N,300nm,6.6s						
YSS				MLR	MLR		
	comp=E,300nm,14.0s						
YSS	Yuzh-Sakhalins	27.67	278	P	P	17 34 24.9	+2.5
YSS				IAmb	IAmb	17 34 38.2	
	comp=Z,34nm,1.0s						
BBB	Bella Bella	28.65	70	P	P	17 34 32.3	+1.2
	comp=Z,50nm,1.0s,baz=325,slow=6.9,SNR=3.2						
BBB	Bella Bella	28.65	70	IAmb	IAmb	17 34 35.8	
	comp=Z,327nm,1.5s						
JKA	Kamikawa-asahi	29.06	272	P	P	17 34 36.7	+1.9
ASAJ	Asahikawa	29.07	272	P	P	17 34 37.9	+3.0
	comp=Z,7.6nm,0.6s,baz=82,slow=9.4,SNR=15						
ASAJ				LR	LR	17 49 38.7	
	comp=Z,221nm,18.2s,baz=66,slow=43						
ASAJ	Asahikawa	29.07	272	P	P	17 34 36.7	+1.9
ASAJ				pmax	pmax		
	comp=Z,32nm,1.2s						
ERM	Erimo	29.80	268	i P	P	17 34 41.1	-0.3
ERM				pmax	pmax		
	comp=Z,34nm,1.0s						
ERM	Erimo	29.80	268	P	P	17 34 39.8	-1.6
ERM				IAmb	IAmb	17 35 05.5	
	comp=Z,53nm,1.4s						
A36M	Sachs Harbour	29.96	28	P	P	17 34 42.9	+0.4
	baz=253,SNR=9.8						
A36M	Sachs Harbour	29.96	28	P	P	17 34 41.4	-1.1
A36M				IAmb	IAmb	17 34 48.8	
	comp=Z,35nm,0.8s						
YAK	Yakutsk	31.20	312	P	P	17 34 52.9	-0.5
	comp=Z,5.0nm,0.4s,baz=59,slow=1.7,SNR=2.2						
YAK	Yakutsk	31.20	312	eP	P	17 34 52.6	-0.9
YAK				e*PP	sP	17 35 04.2	+0.3
YAK				e		17 35 56.7	
YAK				e		17 37 47.6	
YAK				eS	S	17 39 56.2	-1.1
YAK				e*SS	sS	17 40 12.4	+1.7
YAK				eSS	SnSn	17 41 45.6	+5.2
YAK				e		17 45 25.0	
YAK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
YAK				pmax	pmax		
	comp=N,2.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,58nm,2.7s						
YAK				pmax	pmax		
	comp=E,49nm,1.9s						
YAK				pmax	pmax		
	comp=N,50nm,2.8s						
YAK				smax	smax		
	comp=E,33nm,2.0s						
YAK				smax	smax		
	comp=N,23nm,1.8s						
YAK				MLR	MLR		
	comp=Z,1µm,22.0s						
YAK				MLR	MLR		
	comp=E,787nm,22.0s						
YAK				MLR	MLR		
	comp=N,945nm,22.0s						
TIXI	Tiksi	31.82	330	LR	LR	17 48 43.1	
	comp=N,609nm,19.2s,baz=97,slow=38						
TIXI	Tiksi	31.82	330	i P	P	17 34 57.7	-1.1
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.1s						
TIXI	Tiksi	31.82	330	P	P	17 34 58.0	-0.8
LLLB	Lillooet	32.86	70	P	P	17 35 09.8	+1.5
LLLB				IAmb	IAmb	17 35 24.9	
	comp=Z,67nm,1.2s						
D03D	Eldon	33.40	76	P	P	17 35 15.1	+2.1
	baz=296,SNR=5.7						
KLR	Kul'dur	33.44	288	LR	LR	17 48 12.5	
	comp=Z,510nm,21.8s,baz=74,slow=35						
KLR	Kul'dur	33.44	288	ceP	P	17 35 12.9	-0.4
KLR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
YKA	Yellowknife Ar	33.52	47	P	P	17 35 13.4	-0.4
	comp=Z,1.4nm,0.6s,baz=266,slow=9.3,SNR=5.4						
YKA				PcP	PcP	17 37 54.8	+0.9
	comp=Z,4.5nm,0.9s,baz=257,slow=0.9,SNR=6.0						
B05A	Bryant	33.69	74	P	P	17 35 17.2	+1.8
	baz=296,SNR=8.1						
E04D	Cinebar	34.16	77	P	P	17 35 21.8	+2.2
	baz=298,SNR=8.2						
ZEA	Zeya	34.35	297	eP	P	17 35 20.5	-0.6
ZEA				pmax	pmax		
	comp=N,10.0nm,0.5s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ZEA				MLR	MLR		
	comp=E,100nm,14.0s						
ZEA				MLR	MLR		
	comp=Z,200nm,15.0s						
F04A	Amboy	34.55	78	P	P	17 35 23.2	+0.2
F04A				IAmb	IAmb	17 35 47.4	
	comp=Z,21nm,0.7s						
I02E	Swisshome, OR	34.57	82	P	P	17 35 25.1	+2.0
	baz=301						
H11N2	WAKE ISLAND Hy	34.63	211	T	T	18 12 11.5	
	baz=18,slow=76,SNR=549						
H11N3	WAKE ISLAND Hy	34.63	211	T	T	18 12 36.4	
	baz=18,slow=76,SNR=7.0						
H11N1	WAKE ISLAND Hy	34.65	211	T	T	18 12 13.0	
	baz=18,slow=76,SNR=514						
H04D	Lebanon	35.05	80	P	P	17 35 28.9	+1.6
	baz=300						
JSD	Sado	35.16	266	P	P	17 35 26.6	-1.7
B08A	Colville Reser	35.30	72	P	P	17 35 30.6	+1.1
H04A	Detroit Lake	35.31	80	P	P	17 35 30.6	+1.0
H04A				IAmb	IAmb	17 35 32.0	
	comp=Z,28nm,0.8s						
HOOD	Mount Hood Mea	35.32	78	P	P	17 35 30.7	+0.9
HOOD				IAmb	IAmb	17 35 39.8	
	comp=Z,29nm,1.1s						
K02D	Willamette Mer	35.42	84	P	P	17 35 32.3	+1.7
	baz=302						
DBO	Dodson Butte	35.46	83	P	P	17 35 32.5	+1.5
DBO				IAmb	IAmb	17 35 39.5	
	comp=Z,43nm,1.5s						
I04A	Tendick Farm,	35.62	81	P	P	17 35 33.9	+1.7
	baz=301,SNR=5.7						
USA0B	Ussuriysk Arra	35.63	280	P	P	17 35 32.3	0.0
USA0B				pmax	pmax		
	comp=Z,8.0nm,0.8s						
USA0B	Ussuriysk Arra	35.63	280	P	P	17 35 32.3	0.0
USRK	Ussuriysk Ar.	35.63	280	P	P	17 35 32.2	0.0
	comp=Z,8.4nm,0.6s,baz=59,slow=8.0,SNR=14						
USRK				PcP	PcP	17 38 01.2	+1.0
	comp=Z,4.4nm,0.8s,baz=96,slow=3.0,SNR=4.6						
USRK				LR	LR	17 51 00.4	
	comp=Z,352nm,20.1s,baz=38,slow=38						
L02E	Cave Junction	35.75	84	P	P	17 35 35.4	+2.1
	baz=303						
E07A	Sunnyside	35.82	75	P	P	17 35 35.0	+1.1
E07A				IAmb	IAmb	17 35 50.3	
	comp=Z,28nm,1.1s						
H11S1	WAKE ISLAND Hy	35.83	211	T	T	18 14 47.9	
	baz=18,slow=74						
H11S2	WAKE ISLAND Hy	35.85	211	T	T	18 14 51.4	
	baz=18,slow=74						
H11S3	WAKE ISLAND Hy	35.85	211	T	T	18 14 17.7	
	baz=18						
HUMO	Hull Mountain	35.91	83	P	P	17 35 33.5	-1.2
I05D	Terrebonne, OR	36.00	80	P	P	17 35 37.1	+1.5
	baz=301,SNR=6.3						
F07A	Phinny Hill Vi	36.09	77	P	P	17 35 37.2	+1.0
F07A				IAmb	IAmb	17 35 53.3	
	comp=Z,38nm,1.1s						
HAWA	Hanford	36.09	76	P	P	17 35 37.1	+0.9
HAWA				IAmb	IAmb	17 35 53.1	
	comp=Z,35nm,0.8s						
J04D	Umpqua Nationa	36.10	82	P	P	17 35 38.5	+1.9
	baz=302,SNR=5.8						
MJAR	Matsushiro Arr	36.12	264	P	P	17 35 36.8	+0.2
	comp=Z,3.9nm,0.8s,baz=50,slow=7.7,SNR=13						
MJAR				PcP	PcP	17 38 02.3	+0.3
	comp=Z,3.5nm,0.9s,baz=138,slow=1.5,SNR=5.5						
MJAR				LR	LR	17 49 16.0	
	comp=Z,501nm,20.7s,baz=65,slow=34						
MJAR	Matsushiro Arr	36.12	264	P	P	17 35 36.6	0.0
MAJO	Matsushiro	36.12	264	i P	P	17 35 36.3	-0.3
MAJO				pmax	pmax		
	comp=Z,21nm,1.1s						
MAJO	Matsushiro	36.12	264	P	P	17 35 35.2	-1.4
MAJO				IAmb	IAmb	17 35 38.9	
	comp=Z,18nm,0.9s						
D08A	Wollman Farm,	36.15	74	P	P	17 35 36.6	-0.1
D08A				IAmb	IAmb	17 35 53.1	
	comp=Z,32nm,0.9s						
C09A	Chrisman Ranch	36.19	73	P	P	17 35 37.2	+0.2
C09A				IAmb	IAmb	17 35 53.4	
	comp=Z,47nm,0.8s						
VLA	Vladivostok	36.26	278	i P	P	17 35 38.5	+0.9
VLA				pmax	pmax		
	comp=Z,29nm,1.5s						
E08A	Dider Farm, El	36.33	75	P	P	17 35 37.8	-0.5
E08A				IAmb	IAmb	17 35 54.3	
	comp=Z,34nm,1.1s						
KHMM	Horse Mountain	36.38	86	P	P	17 35 39.7	+0.8
KHMM				IAmb	IAmb	17 36 02.0	
	comp=Z,54nm,1.4s						
L04D	Klamath Falls	36.52	83	P	P	17 35 41.9	+1.7
	baz=303						
PINE	Pine Mountain	36.53	80	P	P	17 35 41.8	+1.6
PINE				IAmb	IAmb	17 35 43.3	
	comp=Z,33nm,1.2s						
YBH	Yreka Blue Hor	36.54	84	LR	LR	17 47 37.6	
	comp=Z,601nm,20.5s,baz=300,slow=31						
YBH	Yreka Blue Hor	36.54	84	P	P	17 35 41.9	+1.7
YBH				pmax	pmax		
	comp=Z,13nm,1.0s						
YBH	Yreka Blue Hor	36.54	84	P	P	17 35 41.9	+1.7
J05D	Fort Rock, OR	36.62	81	P	P	17 35 42.9	+2.0
	baz=302,SNR=14						
M02C	Callahan	36.64	85	P	P	17 35 43.5	+2.5
	baz=304,SNR=5.5						
K04D	Chiloquin, OR	36.65	82	P	P	17 35 42.2	+1.0
	baz=303						
NEW	Newport	36.66	71	LR	LR	17 48 09.9	
	comp=Z,286nm,19.5s,baz=302,slow=32						
NEW	Newport	36.66	71	P	P	17 35 41.1	0.0
NEW				pmax	pmax		
	comp=Z,84nm,1.0s						
NEW	Newport	36.66	71	P	P	17 35 42.1	+1.0
	baz=297,SNR=28						
NEW	Newport	36.66	71	P	P	17 35 41.1	0.0

EDM	Edmonton	36.74	62	P	P	17 35 42.3	+0.6
EDM				pmax	pmax		
	comp=Z,152nm,0.8s						
EDM	Edmonton	36.74	62	P	P	17 35 42.3	+0.6
E09A	Wood Farm, Sta	36.87	75	P	P	17 35 43.5	+0.6
E09A				IAmb	IAmb	17 35 59.3	
	comp=Z,25nm,0.9s						
MDJ	Mudanjiang	36.89	282	P	P	17 35 42.9	-0.2
MDJ				S	S	17 41 28.2	+2.4
MDJ				pmax	pmax		
	comp=Z,68nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,140nm,6.3s						
MDJ				LR	LR		
	comp=Z,370nm,18.5s						
MDJ				LR	LR		
	comp=Z,540nm,19.5s						
MDJ				LR	LR		
	comp=Z,870nm,22.4s						
N02D	Trinity Center	36.97	85	P	P	17 35 46.2	+2.4
	baz=304,SNR=5.2						
G08A	Pilot Rock	36.98	77	P	P	17 35 44.4	+0.4
MSHR	Mys Shultsa	37.00	278	*i* P	P	17 35 44.1	+0.1
M04C	Macdoel	37.05	84	P	P	17 35 46.4	+1.8
	baz=304,SNR=7.1						
K05A	Summer Lake	37.13	82	P	P	17 35 46.9	+1.6
K05A				IAmb	IAmb	17 36 07.6	
	comp=Z,46nm,1.1s						
JGF	Kuroka	37.25	264	P	P	17 35 47.5	+1.2
JGF				IAmb	IAmb	17 35 48.8	
	comp=Z,21nm,1.0s						
I07A	Izee	37.27	79	P	P	17 35 47.2	+0.9
I07A				IAmb	IAmb	17 35 48.7	
	comp=Z,34nm,1.2s						
WDC	Whiskeytown Da	37.29	86	P	P	17 35 47.5	+1.0
WDC				pmax	pmax		
	comp=Z,20nm,1.1s						
WDC	Whiskeytown Da	37.29	86	P	P	17 35 47.5	+1.0
WDC				IAmb	IAmb	17 36 09.2	
	comp=Z,20nm,1.1s						
O02D	Mt. Diablo Mer	37.37	86	P	P	17 35 49.3	+2.0
	baz=305,SNR=7.1						
F10A	Beach Ranch, E	37.69	75	P	P	17 35 50.6	+0.6
F10A				IAmb	IAmb	17 36 09.5	
	comp=Z,19nm,0.9s						
O03E	Paynes Creek	37.92	86	P	P	17 35 53.1	+1.2
	baz=305,SNR=11						
MOD	Modoc Plateau	37.94	82	P	P	17 35 53.4	+1.2
MOD				IAmb	IAmb	17 35 54.7	
	comp=Z,14nm,0.7s						
GDXM	Geysers	38.17	88	P	P	17 35 55.0	+1.0
GDXM				IAmb	IAmb	17 36 16.4	
	comp=Z,47nm,1.3s						
WALA	Waterton Lakes	38.19	69	P	P	17 35 54.9	+0.7
WALA				IAmb	IAmb	17 36 09.9	
	comp=Z,70nm,1.1s						
BMO	Blue Mountains	38.21	76	P	P	17 35 54.8	+0.5
BMO				pmax	pmax		
	comp=Z,20nm,1.3s						
BMO	Blue Mountains	38.21	76	P	P	17 35 54.8	+0.5
J08A	Circle Bar Ran	38.28	79	P	P	17 35 55.6	+0.6
J08A				IAmb	IAmb	17 35 57.2	
	comp=Z,24nm,0.7s						
ORV	Oroville	38.54	86	P	P	17 35 57.3	+0.3
ORV				pmax	pmax		
	comp=Z,13nm,1.3s						
ORV	Oroville	38.54	86	P	P	17 35 57.3	+0.3
JTMT	Jette	38.59	71	P	P	17 35 58.2	+0.7
JTMT				IAmb	IAmb	17 36 13.3	
	comp=Z,57nm,1.1s						
WVOR	Wild Horse Val	38.68	81	P	P	17 35 59.2	+0.8
WVOR				pmax	pmax		
	comp=Z,26nm,0.9s						
WVOR	Wild Horse Val	38.68	81	P	P	17 35 59.2	+0.8
WVOR				IAmb	IAmb	17 36 00.7	
	comp=Z,26nm,0.8s						
RES	Resolute Bay	38.77	25	PcP	PcP	17 38 10.1	+0.8
	comp=Z,8.2nm,0.9s,baz=309,slow=2.0,SNR=7.6						
RES				LR	LR	17 55 17.2	
	comp=Z,398nm,18.6s,baz=278,slow=41						
PLID	Pearl Lake	38.89	75	P	P	17 36 00.3	+0.2
MSO	Missoula	39.24	72	P	P	17 36 03.6	+0.6
	baz=300,SNR=22						
MSO	Missoula	39.24	72	P	P	17 36 02.9	-0.1
MSO				IAmb	IAmb	17 36 19.1	
	comp=Z,49nm,0.9s						
MPK	Martis Peak	39.61	86	P	P	17 36 06.9	+0.6
MPK				IAmb	IAmb	17 36 28.7	
	comp=Z,61nm,1.3s						
EMB	Emerald Bay	39.75	86	P	P	17 36 06.1	-1.4
PAHR	Pah Rah Range	39.77	85	P	P	17 36 07.4	-0.1
PAHR				IAmb	IAmb	17 36 29.7	
	comp=Z,37nm,1.3s						
VCNR	Virginia City	39.84	85	P	P	17 36 09.3	+1.1
VCNR				IAmb	IAmb	17 36 30.8	
	comp=Z,57nm,1.4s						
CN2	Changchun	39.86	283	*e*P	P	17 36 03.5	-4.5
CN2				*e*sP	sP	17 36 17.5	-0.9
CN2				*e*PP	PP	17 37 39.3	-0.4
CN2				*e*S	S	17 42 04.2	-6.3
CN2				*e*sS	pS	17 42 20.2	+1.1
CN2				*e*SS	SS	17 44 52.9	-14
CN2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CN2				LR	LR		
	comp=Z,670nm,18.0s						
CN2				LR	LR		
	comp=Z,410nm,18.0s						
CN2				LR	LR		
	comp=Z,880nm,20.0s						
BOD	Bodaibo	39.86	308	*e*P	P	17 36 06.6	-1.2
BOD				pmax	pmax		
	comp=Z,11nm,1.9s						
MFID	Camas Ranch	39.88	78	P	P	17 36 08.5	+0.2
PNTR	Pine Nut	40.00	86	P	P	17 36 11.0	+1.5
PNTR				IAmb	IAmb	17 36 28.4	
	comp=Z,31nm,0.8s						
CMB	Columbia Colle	40.14	87	P	P	17 36 11.4	+0.9
CMB				pmax	pmax		
	comp=Z,26nm,1.4s						
CMB	Columbia Colle	40.14	87	P	P	17 36 11.4	+0.9
YERR	Yerington	40.29	85	P	P	17 36 13.1	+1.3
YERR				IAmb	IAmb	17 36 33.7	
	comp=Z,28nm,1.0s						
HIA	Hailar	40.47	294	P	P	17 36 12.3	-0.7
HIA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HIA	Hailar	40.47	294	P	P	17 36 12.3	-0.7
HRY	Holter Researc	40.55	71	P	P	17 36 13.8	-0.1
LRM	Limekiln Ridge	40.64	72	P	P	17 36 14.5	-0.3
HLID	Hailey	40.66	76	P	P	17 36 15.9	+1.0
	baz=303,SNR=29						
HLID	Hailey	40.66	76	P	P	17 36 15.2	+0.4
BMN	Battle Mountai	40.69	82	P	P	17 36 16.1	+0.9
BMN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BMN	Battle Mountai	40.69	82	P	P	17 36 16.1	+0.9
DLMT	Dillon	40.80	73	P	P	17 36 16.2	+0.3
BCYI	Bear Canyon	40.87	75	P	P	17 36 16.9	+0.3
MCMT	McKenzie Canyo	40.93	74	P	P	17 36 17.3	+0.1
RYN	Ryan	40.95	85	P	P	17 36 18.3	+1.1
KVN	Kaiserville	40.96	85	P	P	17 36 18.1	+0.7
KVN				pmax	pmax		
	comp=Z,16nm,1.2s						
KVN	Kaiserville	40.96	85	P	P	17 36 18.1	+0.7
EGMT	Eagleton	41.11	68	P	P	17 36 19.0	+0.6
	baz=300,SNR=14						
EGMT	Eagleton	41.11	68	P	P	17 36 18.6	+0.2
EGMT				IAmb	IAmb	17 36 34.6	
	comp=Z,71nm,1.1s						
LHV	Little Huntoon	41.19	86	P	P	17 36 20.6	+1.6
NVAR	Mina Array Bea	41.20	85	P	P	17 36 20.4	+0.9
	comp=Z,8.1nm,0.8s,baz=292,slow=8.2,SNR=49						
NVAR				PcP	PcP	17 38 19.4	+1.3
	comp=Z,6.3nm,0.8s,baz=280,slow=3.0,SNR=6.9						
NVAR				ScP	ScP	17 42 05.0	-0.6
	comp=Z,1.6nm,0.9s,baz=286,slow=4.3,SNR=5.8						
NVAR				LR	LR	17 49 44.9	
	comp=Z,332nm,21.4s,baz=302,slow=31						
NVAR	Mina Array Bea	41.20	85	P	P	17 36 20.0	+0.6
MDPB	Devils Postpil	41.21	87	P	P	17 36 20.6	+1.1
BOZ	Bozeman (W)	41.25	72	P	P	17 36 19.8	+0.1
BOZ				pmax	pmax		
	comp=Z,33nm,0.7s						
BOZ	Bozeman (W)	41.25	72	P	P	17 36 20.3	+0.6
	baz=302,SNR=57						
BOZ	Bozeman (W)	41.25	72	P	P	17 36 19.8	+0.1
BOZ				IAmb	IAmb	17 36 21.1	
	comp=Z,33nm,0.7s						
NV11	Mina Array Sit	41.30	85	P	P	17 36 20.9	+0.8
PAGB	Antelope Grade	41.66	90	P	P	17 36 24.7	+1.7
ELK	Elko	41.74	81	LR	LR	17 51 42.1	
	comp=Z,653nm,19.7s,baz=316,slow=33						
ELK	Elko	41.74	81	P	P	17 36 24.5	+0.7
ELK				pmax	pmax		
	comp=Z,21nm,1.0s						
ELK	Elko	41.74	81	P	P	17 36 24.5	+0.7
QLMT	Earthquake Lak	41.78	73	P	P	17 36 23.8	-0.2
YHL	Hebgen Lake	41.91	73	P	P	17 36 24.4	-0.9
YHL				IAmb	IAmb	17 36 41.5	
	comp=Z,52nm,1.0s						
KSRS	Korea Array	42.00	274	P	P	17 36 26.9	+1.3
	comp=Z,8.6nm,0.8s,baz=53,slow=8.0,SNR=20						
KSRS				LR	LR	17 53 40.8	
	comp=Z,174nm,20.0s,baz=58,slow=36						
KS19	Wonju Array Si	42.00	274	P	P	17 36 28.5	+2.8
KS19				IAmb	IAmb	17 36 56.8	
	comp=Z,37nm,1.2s						
KSAR	Wonju Array Be	42.03	274	P	P	17 36 29.2	+3.3
KSAR	Wonju Array Be	42.03	274	P	P	17 36 29.2	+3.3
TPH	Tonopah	42.10	85	P	P	17 36 26.6	-0.1
TPH				pmax	pmax		
	comp=Z,79nm,1.1s						
TPH	Tonopah	42.10	85	P	P	17 36 26.6	-0.1
TPH				IAmb	IAmb	17 36 48.2	
	comp=Z,78nm,1.1s						
YMR	Madison River	42.14	73	P	P	17 36 27.1	0.0
YMR				IAmb	IAmb	17 36 42.8	
	comp=Z,56nm,1.1s						
YHH	Holmes Hill	42.15	73	P	P	17 36 27.4	+0.2
YHH				IAmb	IAmb	17 36 28.8	
	comp=Z,58nm,1.0s						
FFC	Flin Flon	42.22	56	P	P	17 36 26.5	-0.8
FFC				pmax	pmax		
	comp=Z,34nm,1.5s						
FFC	Flin Flon	42.22	56	P	P	17 36 26.5	-0.8
YNR	Norris Junctio	42.29	73	P	P	17 36 29.4	+1.1
YNR				IAmb	IAmb	17 36 45.1	
	comp=Z,66nm,1.1s						
GCMT	Greycliff	42.31	71	P	P	17 36 29.5	+1.1
LCH	Last Change Ra	42.35	86	P	P	17 36 28.6	-0.2
YUF	Upper Falls	42.39	73	P	P	17 36 29.4	+0.3
YUF				IAmb	IAmb	17 36 45.6	
	comp=Z,35nm,1.1s						
PKM	Mcpherson Peak	42.47	91	P	P	17 36 31.7	+1.9
	baz=310						
H17A	Grant Village	42.53	73	P	P	17 36 32.5	+2.3
	baz=303,SNR=21						
H17A	Grant Village	42.53	73	P	P	17 36 31.7	+1.5
H17A				IAmb	IAmb	17 36 48.0	
	comp=Z,57nm,1.0s						
LKWY	Lake	42.54	73	P	P	17 36 31.3	+0.9
LKWY				pmax	pmax		
	comp=Z,38nm,0.7s						
LKWY	Lake	42.54	73	P	P	17 36 31.3	+0.9
LKWY				IAmb	IAmb	17 36 33.3	
	comp=Z,38nm,0.7s						
CWC	Cottonwood Cre	42.57	88	P	P	17 36 32.0	+1.4
	baz=309						
YMP	Mirror Lake Pl	42.59	72	P	P	17 36 31.7	+0.9
YMP				IAmb	IAmb	17 36 47.4	
	comp=Z,50nm,1.1s						
FLWY	Flagg Ranch	42.62	74	P	P	17 36 32.1	+1.1
FLWY				IAmb	IAmb	17 36 47.9	
	comp=Z,47nm,1.1s						
HVU	Hansel Valley	42.66	78	P	P	17 36 31.5	+0.2
HVU				pmax	pmax		
	comp=Z,23nm,0.7s						
HVU	Hansel Valley	42.66	78	P	P	17 36 31.4	+0.2
HVU				IAmb	IAmb	17 36 33.1	
	comp=Z,22nm,0.7s						
FXWY	Fox Creek	42.67	74	P	P	17 36 31.6	+0.1
MOOW	Moose Ponds	42.78	74	P	P	17 36 32.8	+0.6
ECR	Eagle Creek	42.79	75	P	P	17 36 32.4	0.0
TPAW	Teton Pass	42.80	74	P	P	17 36 32.5	0.0
ISA	Isabella, Lake	42.82	89	P	P	17 36 32.8	+0.3
ISA				pmax	pmax		
	comp=Z,23nm,1.4s						
ISA	Isabella, Lake	42.82	89	P	P	17 36 33.2	+0.8
	baz=310,SNR=6.8						
ISA	Isabella, Lake	42.82	89	P	P	17 36 32.8	+0.3
RLMT	Red Lodge	42.91	71	P	P	17 36 34.3	+1.0
	baz=303,SNR=56						
RLMT	Red Lodge	42.91	71	P	P	17 36 33.6	+0.3
RLMT				IAmb	IAmb	17 36 49.9	
	comp=Z,84nm,1.0s						
REDW	Red Top Meadow	42.93	75	P	P	17 36 34.2	+0.7
REDW				IAmb	IAmb	17 36 35.9	
	comp=Z,41nm,1.4s						
SNOW	Snow King Moun	42.94	74	P	P	17 36 34.4	+0.8
LOHW	Long Hollow	42.94	74	P	P	17 36 33.9	+0.3
R11A	Troy Canyon, C	42.95	84	P	P	17 36 34.4	+0.7
	baz=308,SNR=25						
R11A	Troy Canyon, C	42.95	84	P	P	17 36 34.0	+0.3
BGU	Big Grassy Mou	43.00	79	P	P	17 36 34.6	+0.7
BGU				IAmb	IAmb	17 36 55.8	
	comp=Z,42nm,1.4s						
AHID	Auburn Hatcher	43.12	75	P	P	17 36 35.4	+0.4
SPUT	South Promonto	43.13	78	P	P	17 36 35.1	+0.1
OSI	Osito Audit: C	43.34	90	P	P	17 36 36.0	-0.6
SPR3	Spring Creek 3	43.34	82	P	P	17 36 36.9	0.0
LRMC	Laurel Mtn Rad	43.43	88	P	P	17 36 37.7	+0.2
	baz=310						
HWUT	Hardware Ranch	43.50	77	P	P	17 36 38.2	+0.2
HWUT				PcP	PcP	17 38 26.3	+0.7
DUG	Dugway, Tooele	43.56	80	P	P	17 36 38.9	+0.4
DUG				pmax	pmax		
	comp=Z,43nm,1.1s						
DUG	Dugway, Tooele	43.56	80	P	P	17 36 39.5	+1.0
	baz=306,SNR=26						
DUG	Dugway, Tooele	43.56	80	P	P	17 36 38.9	+0.4
DUG				IAmb	IAmb	17 36 59.7	
	comp=Z,43nm,1.1s						
GWY	Greenwater Val	43.62	87	P	P	17 36 39.1	+0.1
QSM	Queen of Sheba	43.63	87	P	P	17 36 39.5	+0.5
LAO	LASA Array	43.85	68	P	P	17 36 40.6	-0.1
LAO				IAmb	IAmb	17 36 56.5	
	comp=Z,82nm,1.2s						
PRN	Pahroc Range	43.86	84	P	P	17 36 41.5	+0.5
PRN				IAmb	IAmb	17 37 03.1	
	comp=Z,53nm,1.1s						
TCUT	Toone Canyon	43.88	78	P	P	17 36 41.9	+0.7
TCUT				IAmb	IAmb	17 36 43.1	
	comp=Z,20nm,0.7s						
PSUT	Pine Spring	43.91	82	P	P	17 36 41.7	+0.3
CTU	Camp Tracy	43.92	78	P	P	17 36 42.0	+0.6
CTU				IAmb	IAmb	17 37 02.3	
	comp=Z,33nm,1.2s						
MWC	Mount Wilson	44.01	90	P	P	17 36 42.6	+0.4
MWC	Mount Wilson	44.01	90	P	P	17 36 42.6	+0.4
MWC				IAmb	IAmb	17 37 04.4	
	comp=Z,28nm,1.1s						
BW06	Boulder Array	44.05	74	P	P	17 36 43.2	+0.7
	baz=305,SNR=64						
BW06	Boulder Array	44.05	74	P	P	17 36 42.5	0.0
BW06				IAmb	IAmb	17 36 58.7	
	comp=Z,51nm,1.0s						
PD31	Pinedale Array	44.05	74	P	P	17 36 42.2	-0.3
PD31				IAmb	IAmb	17 36 58.7	
	comp=Z,45nm,1.0s						
PDAR	Pinedale Array	44.05	74	P	P	17 36 43.1	+0.6
	comp=Z,24nm,0.5s,baz=307,slow=4.3,SNR=254						
PDAR				ScP	ScP	17 42 16.7	-0.3
	comp=Z,1.1nm,1.0s,baz=316,slow=2.5,SNR=3.5						
PDAR				LR	LR	17 54 14.9	
	comp=Z,271nm,18.1s,baz=315,slow=35						
PDAR	Pinedale Array	44.05	74	P	P	17 36 42.2	-0.3
DGMT	Dagmar	44.07	65	P	P	17 36 42.8	+0.4
	baz=302,SNR=6.5						
DGMT	Dagmar	44.07	65	P	P	17 36 42.2	-0.1
DGMT				IAmb	IAmb	17 36 57.6	
	comp=Z,68nm,1.1s						
GSC	Goldstone, Bar	44.09	88	P	P	17 36 43.5	+0.7
GSC				pmax	pmax		
	comp=Z,22nm,1.0s						
GSC	Goldstone, Bar	44.09	88	P	P	17 36 44.1	+1.3
	baz=310,SNR=8.0						
GSC	Goldstone, Bar	44.09	88	P	P	17 36 43.5	+0.7
GSC				IAmb	IAmb	17 37 04.1	
	comp=Z,22nm,0.9s						
JLU	Jordanelle	44.16	78	P	P	17 36 43.5	+0.1
JLU				IAmb	IAmb	17 37 04.5	
	comp=Z,44nm,1.2s						
NLU	North Lily Min	44.16	79	P	P	17 36 43.8	+0.4
SHPR	Sheep Range	44.36	85	P	P	17 36 45.3	+0.3
MPU	Maple Canyon	44.39	79	P	P	17 36 45.3	0.0
TUQ	Turquoise Moun	44.56	87	P	P	17 36 47.5	+0.9
	baz=310						
HEC	Hector,Ludlow	44.69	88	P	P	17 36 48.5	+1.0
	baz=310,SNR=6.3						
TCRU	Three Creeks R	44.74	81	P	P	17 36 49.0	+0.9
CCUT	Cedar City	44.83	83	P	P	17 36 49.3	+0.5
MVU	Marysvale	44.95	81	P	P	17 36 50.1	+0.4
MSU	Marysvale	44.97	81	P	P	17 36 50.6	+0.7
MSU	Marysvale	44.97	81	P	P	17 36 50.6	+0.7
SZCU	Shurtz Canyon	44.97	83	P	P	17 36 50.3	+0.4
TMUT	Trail Mountain	45.09	80	P	P	17 36 51.9	+1.0
TMUT				IAmb	IAmb	17 37 12.1	
	comp=Z,38nm,1.1s						
GMRC	Granite Mounta	45.15	88	P	P	17 36 52.0	+0.8
	baz=311,SNR=8.6						
LCMT	Little Creek M	45.24	83	P	P	17 36 52.5	+0.6
MTPU	Mount Pierson	45.25	82	P	P	17 36 52.8	+0.5
MTPU				IAmb	IAmb	17 37 13.9	
	comp=Z,35nm,1.2s						
P17A	Butcher Ranch,	45.27	79	P	P	17 36 52.9	+0.7
P17A				IAmb	IAmb	17 37 12.8	
	comp=Z,15nm,0.9s						
RDMU	Red Mountain	45.33	77	P	P	17 36 53.0	+0.3
RDMU				IAmb	IAmb	17 36 54.6	
	comp=Z,42nm,0.9s						
Q16A	Castle Valley	45.34	80	P	P	17 36 53.6	+0.8
Q16A				IAmb	IAmb	17 37 14.2	
	comp=Z,54nm,1.2s						
PFO	Pinyon Flats O	45.41	89	LR	LR	17 51 57.7	
	comp=Z,442nm,21.8s,baz=286,slow=31						
P18A	Preston Nutter	45.48	79	P	P	17 36 54.3	+0.3
P18A				IAmb	IAmb	17 37 16.5	
	comp=Z,36nm,1.0s						
109C	Camp Elliot, M	45.48	91	P	P	17 36 53.6	-0.2
109C				IAmb	IAmb	17 37 14.7	
	comp=Z,23nm,1.1s						
KNB	Kanab	45.49	83	P	P	17 36 55.0	+1.0
KNB				pmax	pmax		
	comp=Z,38nm,1.3s						
KNB	Kanab	45.49	83	P	P	17 36 55.0	+1.0
KNB				IAmb	IAmb	17 37 16.3	
	comp=Z,38nm,1.3s						
PKCU	Pink Cliffs	45.55	82	P	P	17 36 55.1	+0.5
NRIK	Noril'sk	45.60	330	P	P	17 36 54.7	+0.5
	comp=Z,4.5nm,0.6s,baz=68,slow=6.5,SNR=4.3						
NRIK				ScP	ScP	17 42 22.4	-0.2
	comp=Z,2.5nm,0.5s,baz=92,slow=4.0,SNR=4.0						
NRIK				LR	LR	17 58 57.2	
	comp=Z,442nm,18.4s,baz=46,slow=40						
NRIK	Noril'sk	45.60	330	*ce*P	P	17 36 54.8	+0.6
NRIK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
NRIK	Noril'sk	45.60	330	P	P	17 36 54.5	+0.3
SRU	San Rafael Swe	45.62	79	P	P	17 36 55.5	+0.5
SRU				pmax	pmax		
	comp=Z,32nm,1.1s						
SRU	San Rafael Swe	45.62	79	P	P	17 36 55.5	+0.5
SRU				IAmb	IAmb	17 37 16.9	
	comp=Z,32nm,1.1s						
IRM	Iron Mountain	45.88	88	P	P	17 36 57.5	+0.6
	baz=311						
BAR	Barrett	45.89	91	P	P	17 36 57.5	+0.5
K22A	Casper	45.94	73	P	P	17 36 57.8	+0.3
	baz=306,SNR=9.3						
K22A	Casper	45.94	73	P	P	17 36 57.3	-0.2
K22A				IAmb	IAmb	17 36 58.5	
	comp=Z,33nm,0.8s						
W13A	Hualapai Mount	46.05	86	P	P	17 36 58.2	-0.3
RWWY	Rawlins	46.10	74	P	P	17 36 58.4	-0.5
RWWY				IAmb	IAmb	17 36 59.9	
	comp=Z,25nm,0.9s						
U15A	North Rim	46.20	83	P	P	17 36 59.9	+0.2
U15A				IAmb	IAmb	17 37 21.2	
	comp=Z,29nm,1.1s						
IKP	In-Ko-Pah, Jac	46.27	90	P	P	17 37 00.7	+0.6
	baz=312						
O20A	White River Ci	46.40	77	P	P	17 37 01.7	+0.6
	baz=307,SNR=7.6						
O20A	White River Ci	46.40	77	P	P	17 37 01.0	-0.1
O20A				IAmb	IAmb	17 37 22.3	
	comp=Z,47nm,0.9s						
RSSD	Black Hills	46.57	70	P	P	17 37 02.0	-0.4
RSSD				pmax	pmax		
	comp=Z,42nm,1.4s						
RSSD	Black Hills	46.57	70	P	P	17 37 02.4	0.0
	baz=305						
RSSD	Black Hills	46.57	70	P	P	17 37 02.0	-0.4
RSSD				IAmb	IAmb	17 37 18.0	
	comp=Z,42nm,1.4s						
MDND	Maddock	46.99	63	P	P	17 37 06.2	+0.7
	baz=304						
MDND	Maddock	46.99	63	P	P	17 37 06.0	+0.6
N23A	Red Feather La	47.34	74	P	P	17 37 09.3	+0.8
	baz=307,SNR=18						
WUAZ	Wupatki	47.35	84	P	P	17 37 09.7	+1.1
	baz=310,SNR=11						
WUAZ	Wupatki	47.35	84	P	P	17 37 08.6	0.0
WUAZ				IAmb	IAmb	17 37 10.5	
	comp=Z,19nm,0.9s						
Y14A	Wickenburg	47.36	87	P	P	17 37 08.7	+0.1
113A	Mohawk Valley,	47.66	88	P	P	17 37 11.1	+0.4
BJI	Beijing	47.67	285	P	P	17 37 11.7	+0.9
BJI				pP	pP	17 37 17.3	-1.0
BJI				sP	sP	17 37 19.5	-1.8
BJI				PcP	PcP	17 38 40.1	+0.2
BJI				S	S	17 44 06.3	+1.7
BJI				pmax	pmax		
	comp=Z,23nm,0.9s						
BJI				LR	LR		
	comp=Z,500nm,18.8s						
BJI				LR	LR		
	comp=Z,440nm,19.6s						
BJI				LR	LR		
	comp=Z,780nm,21.8s						
BJT	Baijiatuau	47.69	284	P	P	17 37 11.3	+0.3
BJT				pmax	pmax		
	comp=Z,14nm,0.8s						
BJT	Baijiatuau	47.69	284	P	P	17 37 11.3	+0.3
BJT				IAmb	IAmb	17 37 12.7	
	comp=Z,14nm,0.8s						
ULM	Lac du Bonnet	47.70	58	P	P	17 37 10.4	-0.5
	comp=Z,17nm,0.8s,baz=297,slow=7.7,SNR=13						
ULM				LR	LR	17 58 46.0	
	comp=Z,451nm,19.3s,baz=304,slow=38						
ULM	Lac du Bonnet	47.70	58	P	P	17 37 10.4	-0.5
ULM				IAmb	IAmb	17 37 11.6	
	comp=Z,44nm,1.2s						
SMCO	Snowmass	47.76	77	P	P	17 37 11.6	-0.4
X16A	Lo Mia Camp, P	48.02	85	P	P	17 37 14.5	+0.7
MVCO	Mesa Verde	48.05	80	P	P	17 37 14.4	+0.2
	baz=310,SNR=8.1						
MVCO	Mesa Verde	48.05	80	P	P	17 37 14.2	+0.1
MVCO				IAmb	IAmb	17 37 35.5	
	comp=Z,25nm,1.2s						
ISCO	Idaho Springs	48.20	75	P	P	17 37 15.6	+0.3
ISCO				pmax	pmax		
	comp=Z,19nm,1.2s						
ISCO	Idaho Springs	48.20	75	P	P	17 37 15.9	+0.6
	baz=308,SNR=8.1						
ISCO	Idaho Springs	48.20	75	P	P	17 37 15.6	+0.3
ISCO				IAmb	IAmb	17 37 36.9	
	comp=Z,19nm,1.2s						
ULN	Ulaanbaatar	48.36	298	*ce*P	P	17 37 15.5	-0.8
ULN				pmax	pmax		
	comp=Z,9.0nm,2.5s						
ULN	Ulaanbaatar	48.36	298	P	P	17 37 15.7	-0.6
W18A	Petrified Fore	48.63	83	P	P	17 37 19.4	+0.9
	baz=311,SNR=10						
W18A	Petrified Fore	48.63	83	P	P	17 37 19.2	+0.7
W18A				IAmb	IAmb	17 37 40.3	
	comp=Z,21nm,1.0s						
S22A	4UR Ranch, Cre	48.74	78	P	P	17 37 20.5	+1.0
	baz=309,SNR=16						
SONM	Songino Array	48.74	299	P	P	17 37 19.1	0.0
	comp=Z,2.1nm,0.7s,baz=50,slow=8.6,SNR=10						
SONM				PcP	PcP	17 38 43.8	0.0
	comp=Z,5.1nm,0.9s,baz=64,slow=2.0,SNR=6.1						
SONM				ScP	ScP	17 42 35.5	-0.8
	comp=Z,2.6nm,0.9s,baz=41,slow=4.1,SNR=5.8						

SONM				LR	LR	18 00 37.9	
	comp=Z,340nm,18.1s,baz=58,slow=39						
SONM	Songino Array	48.74	299	P	P	17 37 18.2	-1.0
SONM					ScP	17 42 32.0	-4.4
214A	Organ Pipe Nat	48.80	88	P	P	17 37 20.1	+0.5
	baz=313						
214A	Organ Pipe Nat	48.80	88	P	P	17 37 20.0	+0.3
AGMN	Agassiz Nation	48.81	61	P	P	17 37 19.3	-0.2
	baz=305,SNR=16						
AGMN	Agassiz Nation	48.81	61	P	P	17 37 18.7	-0.8
X18A	Snowflake	48.88	84	P	P	17 37 21.5	+1.1
ZAK	Zakamensk	48.96	303	eP	P	17 37 20.2	-0.6
ZAK				pmax	pmax		
	comp=Z,12nm,1.4s						
Q24A	Divide	49.00	76	P	P	17 37 21.8	+0.3
	baz=309						
SUSD	Miller	49.33	66	P	P	17 37 24.1	+0.5
	baz=307						
SUSD	Miller	49.33	66	P	P	17 37 23.4	-0.2
TIA	Tai'an	49.50	280	eP	P	17 37 21.9	-3.0
TIA				S	S	17 44 32.2	+1.8
TIA				pmax	pmax		
	comp=Z,16nm,1.4s						
TIA				LR	LR		
	comp=Z,210nm,17.9s						
TIA				LR	LR		
	comp=Z,200nm,18.6s						
TIA				LR	LR		
	comp=Z,300nm,17.2s						
SDCO	Great Sand Dun	49.56	77	P	P	17 37 26.5	+0.8
	baz=310,SNR=19						
SDCO	Great Sand Dun	49.56	77	P	P	17 37 26.3	+0.6
SDCO				IAmb	IAmb	17 37 46.8	
	comp=Z,16nm,0.8s						
OGNE	Ogallala	49.65	72	P	P	17 37 27.1	+1.0
	baz=308,SNR=7.4						
OGNE	Ogallala	49.65	72	P	P	17 37 26.7	+0.5
TUC	Tucson	49.83	86	P	P	17 37 27.7	+0.1
TUC				pmax	pmax		
	comp=Z,15nm,0.9s						
TUC	Tucson	49.83	86	P	P	17 37 28.0	+0.4
	baz=312						
TUC	Tucson	49.83	86	P	P	17 37 27.7	+0.1
TUC				IAmb	IAmb	17 37 29.3	
	comp=Z,15nm,0.9s						
B35A	Bob, Littlefor	49.93	59	P	P	17 37 27.8	-0.3
B35A				IAmb	IAmb	17 37 28.6	
	comp=Z,35nm,0.9s						
HHC	Hu-ho-hao-te	49.95	288	eP	P	17 37 29.7	+1.3
HHC				pmax	pmax		
	comp=Z,26nm,0.8s						
HHC				pmax	pmax		
	comp=Z,84nm,6.6s						
F33A	5 Mile Ranch,	50.01	63	P	P	17 37 27.4	-1.2
F33A				IAmb	IAmb	17 37 42.8	
	comp=Z,50nm,1.1s						
KSCO	Kaye Shedlock'	50.50	74	P	P	17 37 33.5	+0.8
	baz=309,SNR=9.3						
KSCO	Kaye Shedlock'	50.50	74	P	P	17 37 32.7	+0.1
SPITS	Spitsbergen Ar	50.53	357	P	P	17 37 31.8	-0.4
	comp=Z,15nm,0.8s,baz=46,slow=7.1,SNR=9.2						
T25A	Trinidad	50.61	77	P	P	17 37 34.9	+1.3
	baz=310,SNR=20						
T25A	Trinidad	50.61	77	P	P	17 37 34.1	+0.5
ANMO	Albuquerque	50.78	81	ceP	P	17 37 35.1	+0.2
ANMO				pmax	pmax		
	comp=Z,10.0nm,1.3s						
ANMO	Albuquerque	50.78	81	P	P	17 37 35.6	+0.8
	baz=311						
ANMO	Albuquerque	50.78	81	P	P	17 37 35.2	+0.4
ECSD	EROS Data Cent	51.10	66	P	P	17 37 36.3	-0.7
	baz=308,SNR=10						
ECSD	EROS Data Cent	51.10	66	P	P	17 37 35.7	-1.3
ECSD				IAmb	IAmb	17 37 51.0	
	comp=Z,43nm,1.1s						
NJ2	Nanjing	51.17	275	eP	P	17 37 37.9	+0.3
NJ2				pP	pP	17 37 44.6	-0.5
NJ2				sP	sP	17 37 47.5	-0.6
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
BNM	Barren Site	51.19	82	P	P	17 37 38.7	+0.6
EYMN	Ely	51.38	59	P	P	17 37 38.9	-0.1
	baz=307						
EYMN	Ely	51.38	59	P	P	17 37 38.6	-0.4
319A	Douglas	51.40	86	P	P	17 37 40.4	+0.8
F36A	Milaca	51.54	62	P	P	17 37 39.2	-1.0
F36A				IAmb	IAmb	17 37 54.3	
	comp=Z,29nm,1.0s						
121A	Cookes Peak, D	51.55	84	P	P	17 37 41.4	+0.7
	baz=313,SNR=8.2						
121A	Cookes Peak, D	51.55	84	P	P	17 37 41.2	+0.5
121A				IAmb	IAmb	17 37 42.4	
	comp=Z,13nm,0.8s						
BGNE	Belgrade	51.66	69	P	P	17 37 41.4	+0.2
	baz=309						
BGNE	Belgrade	51.66	69	P	P	17 37 41.0	-0.2
FRB	Frobisher Bay	51.78	33	P	P	17 37 41.2	-0.5
	comp=Z,8.9nm,0.6s,baz=301,slow=7.8,SNR=13						
FRB				LR	LR	18 02 47.5	
	comp=Z,764nm,18.0s,baz=302,slow=40						
E38A	The Farm, Brul	52.16	60	P	P	17 37 44.0	-0.8
L34A	Svendsen Farm,	52.34	67	P	P	17 37 45.3	-0.9
CBKS	Cedar Bluff	52.36	73	P	P	17 37 46.8	+0.3
CBKS				pmax	pmax		
	comp=Z,83nm,0.8s						
CBKS	Cedar Bluff	52.36	73	P	P	17 37 47.2	+0.7
	baz=310,SNR=16						
CBKS	Cedar Bluff	52.36	73	P	P	17 37 46.8	+0.3
SUMG	Summit	52.72	15	P	P	17 37 48.4	-0.7
SUMG				pmax	pmax		
	comp=Z,19nm,1.4s						
SUMG	Summit	52.72	15	P	P	17 37 48.4	-0.7
SUMG				IAmb	IAmb	17 37 50.1	
	comp=Z,19nm,1.4s						
I37A	Lemond, Waseca	52.75	64	P	P	17 37 48.9	-0.3
R32A	Long Quarter,	53.23	72	P	P	17 37 52.9	0.0
N35A	Tabor	53.47	68	P	P	17 37 53.1	-1.4
MNTX	Cornudas Mount	53.62	83	P	P	17 37 56.5	+0.8
	baz=313,SNR=16						
MNTX	Cornudas Mount	53.62	83	P	P	17 37 55.2	-0.5
MNTX				IAmb	IAmb	17 37 57.5	
	comp=Z,18nm,1.1s						
G40A	Rib Lake	53.74	61	P	P	17 37 56.0	-0.5
G40A				IAmb	IAmb	17 38 11.4	
	comp=Z,49nm,1.1s						
AMTX	Amarillo	53.76	78	P	P	17 37 57.3	+0.4
	baz=312						
AMTX	Amarillo	53.76	78	P	P	17 37 56.8	-0.1
AMTX				IAmb	IAmb	17 38 17.4	
	comp=Z,36nm,1.4s						
COWI	Conover	53.79	59	P	P	17 37 56.2	-0.6
KSU1	Kansas State U	54.04	70	P	P	17 37 58.6	-0.2
	baz=311,SNR=5.6						
KSU1	Kansas State U	54.04	70	P	P	17 37 58.0	-0.8
I40A	Norwalk	54.38	62	P	P	17 38 00.9	-0.3
KAN12	Harper NE Stat	54.39	73	P	P	17 38 00.6	-0.8
KAN12				IAmb	IAmb	17 38 01.3	
	comp=Z,22nm,1.0s						
U32A	Winter Ranch,	54.39	74	P	P	17 38 00.7	-0.7
U32A				IAmb	IAmb	17 38 17.3	
	comp=Z,40nm,0.9s						
F42A	Maple Grove Fa	54.54	59	P	P	17 38 01.8	-0.6
OK032	Salt Plains WL	54.59	74	P	P	17 38 01.2	-1.6
OK032				IAmb	IAmb	17 38 03.5	
	comp=Z,24nm,0.8s						
KAN05	Bluff City Nor	54.59	73	P	P	17 38 01.3	-1.5
KAN01	Argonia South	54.63	73	P	P	17 38 01.8	-1.3
KAN01				IAmb	IAmb	17 38 04.3	
	comp=Z,57nm,1.4s						
KAN17	Caldwell West	54.70	73	P	P	17 38 02.9	-0.7
KAN17				IAmb	IAmb	17 38 04.0	
	comp=Z,30nm,0.7s						
KS20	Mayfield South	54.70	73	P	P	17 38 02.7	-0.9
KAN09	Caldwell North	54.73	73	P	P	17 38 03.0	-0.8
SFJD	Kangerlussuaq	54.75	23	P	P	17 38 04.1	+0.7
	comp=Z,10nm,0.9s,baz=11,slow=10,SNR=4.5						
SFJD	Kangerlussuaq	54.75	23	P	P	17 38 04.2	+0.7
SFJD				pmax	pmax		
	comp=Z,41nm,1.4s						
SFJD	Kangerlussuaq	54.75	23	IAmb	IAmb	17 38 10.8	
	comp=Z,41nm,1.4s						
E43A	Lone Tree Farm	54.76	58	P	P	17 38 03.9	0.0
KAN13	South Haven SW	54.89	73	P	P	17 38 03.2	-1.7
N38A	Joes South For	54.90	67	P	P	17 38 03.7	-1.3
CROK	Carrier	54.92	74	P	P	17 38 04.2	-1.1
CROK				IAmb	IAmb	17 38 05.8	
	comp=Z,28nm,0.8s						
WHN	Wuhan	55.01	277	P	P	17 38 05.4	-0.5
BLOK	Blackwell	55.22	73	P	P	17 38 06.3	-1.1
BLOK				IAmb	IAmb	17 38 07.9	
	comp=Z,36nm,1.1s						
JFWS	Jewell Farm	55.22	63	P	P	17 38 06.3	-1.0
JFWS				pmax	pmax		
	comp=Z,39nm,0.9s						
JFWS	Jewell Farm	55.22	63	P	P	17 38 06.3	-1.0
	baz=311						
JFWS	Jewell Farm	55.22	63	P	P	17 38 06.2	-1.0
JFWS				IAmb	IAmb	17 38 21.1	
	comp=Z,39nm,0.8s						
I42A	Draeger Farm,	55.33	61	P	P	17 38 07.4	-0.6
P38A	Dawn	55.50	68	P	P	17 38 08.3	-1.0
T35A	Sooner Cattle	55.53	72	P	P	17 38 06.9	-2.7
T35A				IAmb	IAmb	17 38 10.1	
	comp=Z,25nm,0.9s						
WMOK	Wichita Mounta	55.62	76	P	P	17 38 10.5	+0.2
WMOK				pmax	pmax		
	comp=Z,25nm,1.0s						
WMOK	Wichita Mounta	55.62	76	P	P	17 38 10.7	+0.4
	baz=313,SNR=20						
WMOK	Wichita Mounta	55.62	76	P	P	17 38 10.4	+0.2
WMOK				IAmb	IAmb	17 38 11.6	
	comp=Z,24nm,0.9s						
SSLB	Suanglung	55.66	266	P	P	17 38 10.7	0.0
SSLB				IAmb	IAmb	17 38 12.2	
	comp=Z,53nm,1.1s						
OK029	Liberty Lake	55.72	74	P	P	17 38 10.7	-0.2
OK029				IAmb	IAmb	17 38 11.8	
	comp=Z,40nm,1.0s						
BCOK	Bluff Creek, N	55.72	74	P	P	17 38 10.8	-0.1
BCOK				IAmb	IAmb	17 38 11.8	
	comp=Z,32nm,1.0s						
ZALV	Zalesovo Beam	55.73	315	P	P	17 38 09.8	-0.9
	comp=Z,0.8nm,0.4s,baz=35,slow=6.6,SNR=2.6						
ZALV				PcP	PcP	17 39 10.3	+0.7
	comp=Z,4.4nm,0.8s,baz=42,slow=4.6,SNR=7.5						
ZALV				LR	LR	18 03 52.2	
	comp=Z,627nm,18.7s,baz=54,slow=38						
ZALV	Zalesovo Beam	55.73	315		PcP	17 39 10.2	+0.5
QUOK	Quay	55.91	73	P	P	17 38 11.4	-0.9
QUOK				IAmb	IAmb	17 38 26.9	
	comp=Z,30nm,1.1s						
XAN	Xi'an	55.97	283	P	P	17 38 13.3	+0.5
XAN				pP	pP	17 38 21.1	+0.6
XAN				PP	PP	17 40 20.4	+2.9
XAN				S	S	17 46 01.8	+2.9
XAN				pmax	pmax		
	comp=Z,21nm,1.3s						
XAN				pmax	pmax		
	comp=Z,220nm,8.2s						
XAN				LR	LR		
	comp=Z,350nm,20.6s						
XAN				LR	LR		
	comp=Z,390nm,19.9s						
XAN				LR	LR		
	comp=Z,550nm,22.7s						
OKCFA	Oklahoma City	55.97	74	P	P	17 38 13.1	+0.3
OK031	S. Brethren Rd	55.98	73	P	P	17 38 12.0	-0.8
OK030	Cody Creek RV	56.03	73	P	P	17 38 12.8	-0.4
FNO	Franklin	56.11	74	P	P	17 38 13.0	-0.8
FNO				IAmb	IAmb	17 38 15.0	
	comp=Z,25nm,0.7s						
X34A	Smith Ranch, M	56.29	75	P	P	17 38 15.9	+0.8
X34A				IAmb	IAmb	17 38 16.9	
	comp=Z,28nm,1.0s						
TX31	Lajitas Ar. Si	56.31	84	P	P	17 38 15.1	-0.3
TX32	Lajitas Array	56.31	84	P	P	17 38 15.0	-0.4
TX32				IAmb	IAmb	17 38 16.6	
	comp=Z,19nm,0.9s						
TXAR	Lajitas Array	56.31	84	P	P	17 38 15.5	+0.1
	comp=Z,12nm,0.8s,baz=298,slow=5.0,SNR=90						
TXAR				LR	LR	17 59 34.9	
	comp=Z,180nm,21.1s,baz=0.0,slow=33						
TXAR	Lajitas Array	56.31	84	P	P	17 38 15.2	-0.3
P40A	Paris	56.42	67	P	P	17 38 14.7	-1.2
ABTX	Abilene, Hawle	56.53	78	P	P	17 38 17.3	+0.5
	baz=314,SNR=7.1						
ABTX	Abilene, Hawle	56.53	78	P	P	17 38 16.9	+0.1
ABTX				IAmb	IAmb	17 38 18.7	
	comp=Z,31nm,1.0s						
TUL1	Leonard	56.64	73	P	P	17 38 17.5	0.0
	baz=313						
TUL1	Leonard	56.64	73	P	P	17 38 16.6	-0.9
TUL1				IAmb	IAmb	17 38 18.3	
	comp=Z,29nm,0.8s						
HPIG		56.75	87	P	P	17 38 16.9	-1.8
HPIG				IAmb	IAmb	17 38 19.7	
	comp=Z,24nm,1.2s						
S39A	Bolivar	56.91	70	P	P	17 38 17.4	-2.0
S39A				IAmb	IAmb	17 38 18.4	
	comp=Z,13nm,0.8s						
GLMI	Grayling	57.03	58	P	P	17 38 20.2	-0.1
LOOK	Love County	57.10	75	P	P	17 38 20.7	-0.1
R40A	Maddies Statio	57.12	68	P	P	17 38 19.1	-1.7
R40A				IAmb	IAmb	17 38 20.1	
	comp=Z,19nm,0.6s						
U38A	Gravette	57.12	71	P	P	17 38 19.4	-1.5
U38A				IAmb	IAmb	17 38 21.1	
	comp=Z,22nm,0.9s						
HDIL	Hopedale	57.31	65	P	P	17 38 21.8	-0.4
	baz=312						
HDIL	Hopedale	57.31	65	P	P	17 38 21.0	-1.2
DGZ	Jazzator, Alta	57.37	310	i P	P	17 38 21.5	-1.2
DGZ				pmax	pmax		
	comp=Z,9.0nm,1.7s						
HHAR	Hobbs	57.49	71	P	P	17 38 21.9	-1.6
HHAR				IAmb	IAmb	17 38 37.4	
	comp=Z,19nm,1.1s						
Z35A	Perchaven, San	57.51	76	P	P	17 38 23.7	0.0
Z35A				IAmb	IAmb	17 38 45.2	
	comp=Z,34nm,0.9s						
JMIC	Jan Mayen	57.57	5	LR	LR	18 02 07.1	
	comp=Z,444nm,19.5s,baz=56,slow=35						
LZH	Lanzhou	57.64	289	eP	P	17 38 26.0	+1.2
LZH				sP	sP	17 38 36.1	+0.7
LZH				S	S	17 46 21.1	0.0
LZH				sS	sS	17 46 32.7	-1.3
LZH				pmax	pmax		
	comp=Z,29nm,1.3s						
LZH				pmax	pmax		
	comp=Z,180nm,7.0s						
LZH				LR	LR		
	comp=Z,460nm,15.2s						
LZH				LR	LR		
	comp=Z,420nm,15.0s						
LZH				LR	LR		
	comp=Z,500nm,18.3s						
GTA	Gaotai	57.74	294	eP	P	17 38 25.3	-0.1
GTA				pP	pP	17 38 33.2	+0.1
GTA				sP	pwP	17 38 37.9	-1.1
GTA				pmax	pmax		
	comp=Z,4.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,87nm,6.9s						
GTA				LR	LR		
	comp=Z,460nm,20.7s						
GTA				LR	LR		
	comp=Z,350nm,20.7s						
GTA				LR	LR		
	comp=Z,700nm,20.4s						
X37A	Clayton	57.79	74	P	P	17 38 25.5	-0.1
X37A				IAmb	IAmb	17 38 40.8	
	comp=Z,28nm,0.8s						
P43A	Skaggs, Pawnee	57.80	65	P	P	17 38 24.7	-0.9
CCM	Cathedral Cave	57.87	68	P	P	17 38 25.0	-1.2
CCM				pmax	pmax		
	comp=Z,19nm,1.1s						
CCM	Cathedral Cave	57.87	68	P	P	17 38 25.0	-1.2
	baz=313						
CCM	Cathedral Cave	57.87	68	P	P	17 38 25.0	-1.2
CCM				IAmb	IAmb	17 38 39.8	
	comp=Z,19nm,1.1s						
MGMO	Mountain Grove	57.88	69	P	P	17 38 24.6	-1.8
MGMO				IAmb	IAmb	17 38 26.1	
	comp=Z,26nm,1.0s						
JCT	Junction City	57.92	80	P	P	17 38 26.0	-0.6
JCT				pmax	pmax		
	comp=Z,15nm,1.0s						
JCT	Junction City	57.92	80	P	P	17 38 26.1	-0.6
	baz=314						
JCT	Junction City	57.92	80	P	P	17 38 26.0	-0.6
JCT				IAmb	IAmb	17 38 28.8	
	comp=Z,15nm,0.9s						
SLM	Saint Louis	58.06	67	P	P	17 38 26.3	-1.2
SLM				pmax	pmax		
	comp=Z,31nm,0.6s						
SLM	Saint Louis	58.06	67	P	P	17 38 26.3	-1.2
U40A	Yellville	58.08	70	P	P	17 38 26.6	-1.1
	baz=313,SNR=13						
U40A	Yellville	58.08	70	P	P	17 38 25.9	-1.8
U40A				IAmb	IAmb	17 38 28.1	
	comp=Z,23nm,0.8s						
ENH	Enshi	58.21	280	P	P	17 38 27.8	-0.9
ENH				IAmb	IAmb	17 38 43.1	
	comp=Z,17nm,0.9s						
WHTX	Lake Whitney,	58.31	77	P	P	17 38 29.7	+0.3
	baz=314						
WHTX	Lake Whitney,	58.31	77	P	P	17 38 29.5	+0.1
W39A	Magazine	58.32	72	P	P	17 38 29.2	-0.2
	baz=313,SNR=12						
W39A	Magazine	58.32	72	P	P	17 38 28.6	-0.8
W39A				IAmb	IAmb	17 38 50.0	
	comp=Z,29nm,0.9s						
FVM	French Village	58.40	67	P	P	17 38 28.4	-1.5
FVM				pmax	pmax		
	comp=Z,23nm,0.8s						
FVM	French Village	58.40	67	P	P	17 38 28.4	-1.5
FVM				IAmb	IAmb	17 38 43.9	
	comp=Z,23nm,0.8s						
ARCES	ARCESS Array B	58.47	352	P	P	17 38 29.6	-0.3
	comp=Z,3.6nm,0.8s,baz=353,slow=2.9,SNR=6.2						
ARCES				LR	LR	18 08 16.0	
	comp=Z,197nm,18.0s,baz=5.0,slow=41						
ARCES	ARCESS Array B	58.47	352	IAmb	IAmb	17 38 37.1	
	comp=Z,34nm,1.4s						
SCHQ	Schefferville	58.52	40	P	P	17 38 29.8	-0.7
	comp=Z,3.4nm,0.7s,baz=298,slow=6.4,SNR=5.5						
SCHQ				LR	LR	18 05 03.9	
	comp=Z,827nm,18.2s,baz=312,slow=37						
Q44A	Meyer Farm, Va	58.58	66	P	P	17 38 30.6	-0.5
T42A	Van Buren	58.66	69	P	P	17 38 29.7	-2.0
T42A				IAmb	IAmb	17 38 30.8	
	comp=Z,10.0nm,0.8s						
SFIN	Lafayette	58.67	63	P	P	17 38 31.6	-0.1
	baz=313						
SFIN	Lafayette	58.67	63	P	P	17 38 31.1	-0.6
FCAR	Ozark Folk Cen	58.83	70	P	P	17 38 31.4	-1.5
MIAR	Mount Ida	58.89	72	P	P	17 38 32.5	-0.8
MIAR				pmax	pmax		
	comp=Z,44nm,1.0s						
MIAR	Mount Ida	58.89	72	P	P	17 38 33.4	+0.1
	baz=314,SNR=21						
MIAR	Mount Ida	58.89	72	P	P	17 38 32.5	-0.8
Z38A	Mt. Pleasant	58.93	74	P	P	17 38 33.1	-0.5
435B	Jarrell	59.07	78	P	P	17 38 34.6	0.0
435B				IAmb	IAmb	17 38 36.0	
	comp=Z,37nm,1.1s						
L48A	N Adams	59.08	60	P	P	17 38 34.0	-0.5
P46A	Rosedale	59.12	64	P	P	17 38 33.6	-1.3
WHAR	Wooly Hollow	59.15	71	P	P	17 38 33.9	-1.2
WHAR				IAmb	IAmb	17 38 35.3	
	comp=Z,28nm,1.1s						
PBMO	Poplar Bluff	59.22	68	P	P	17 38 34.4	-1.2
PBMO				IAmb	IAmb	17 38 36.1	
	comp=Z,34nm,1.1s						
OLIL	Olney	59.22	65	P	P	17 38 35.1	-0.5
W41B	Gary Mavity, V	59.25	71	P	P	17 38 35.1	-0.7
	baz=314,SNR=9.4						
S44A	Carbondale	59.27	67	P	P	17 38 35.0	-0.9
S44A				IAmb	IAmb	17 38 50.0	
	comp=Z,23nm,1.0s						
SIUC	Southern Illin	59.28	67	P	P	17 38 35.3	-0.7
SIUC				IAmb	IAmb	17 38 36.0	
	comp=Z,19nm,0.8s						
LCAR	Lake Charles	59.28	70	P	P	17 38 34.5	-1.5
LCAR				IAmb	IAmb	17 38 50.6	
	comp=Z,18nm,1.2s						
237A	Washetta, Mont	59.31	76	P	P	17 38 35.7	-0.5
X40A	Basin Creek Fa	59.38	72	P	P	17 38 36.7	0.0
	baz=314,SNR=7.5						
X40A	Basin Creek Fa	59.38	72	P	P	17 38 36.2	-0.5
X40A				IAmb	IAmb	17 38 37.4	
	comp=Z,19nm,0.9s						
833A	Chaparral WMA,	59.68	82	P	P	17 38 39.3	+0.4
	baz=315,SNR=5.8						
WLAR	White Oak Lake	59.76	73	P	P	17 38 39.2	-0.1
BLO	Bloomington	59.81	64	P	P	17 38 39.4	-0.3
BLO				pmax	pmax		
	comp=Z,59nm,0.9s						
BLO	Bloomington	59.81	64	P	P	17 38 39.4	-0.3
N49A	Columbus Grove	59.91	61	P	P	17 38 39.3	-1.0
GNAR	Gosnell	60.02	69	P	P	17 38 39.2	-1.9
T45A	Paducah	60.09	67	P	P	17 38 40.8	-0.8
LPAR	Lepanto	60.10	69	P	P	17 38 40.5	-1.2
NATX	Nacogdoches	60.17	75	P	P	17 38 41.8	-0.4
P48A	Milroy	60.23	63	P	P	17 38 41.6	-0.9
CCAR	Cane Creek	60.40	72	P	P	17 38 43.6	-0.1
UTMT	University of	60.43	68	P	P	17 38 43.2	-0.7
HALT	Halls	60.45	69	P	P	17 38 43.1	-0.9
P49A	Miami Univ. Ec	60.58	63	P	P	17 38 44.3	-0.6
	baz=314						
P49A	Miami Univ. Ec	60.58	63	P	P	17 38 44.1	-0.8
WCI	Wyandotte Cave	60.59	65	P	P	17 38 44.6	-0.4
WCI				pmax	pmax		
	comp=Z,54nm,1.0s						
WCI	Wyandotte Cave	60.59	65	P	P	17 38 44.7	-0.4
	baz=314						
WCI	Wyandotte Cave	60.59	65	P	P	17 38 44.6	-0.4
KURK	Kurchatov	60.71	316	ceP	P	17 38 44.9	-0.7
KURK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KURK	Kurchatov	60.71	316	P	P	17 38 44.9	-0.7
KURK				IAmb	IAmb	17 38 46.2	
	comp=Z,9.8nm,0.7s						
HKT	Hockley	60.73	78	P	P	17 38 46.9	+1.0
HKT				pmax	pmax		
	comp=Z,38nm,1.4s						
HKT	Hockley	60.73	78	P	P	17 38 46.9	+1.0
HKT				IAmb	IAmb	17 38 48.5	
	comp=Z,38nm,1.4s						
PLVO	Plevna	60.80	54	P	P	17 38 46.4	+0.1
KURBB	Kurchatov Arra	60.81	316	P	P	17 38 45.7	-0.6
DELO	Deloro Mine	60.89	54	P	P	17 38 46.7	-0.2
N51A	Ashland	60.90	60	P	P	17 38 47.0	-0.1
T47A	Sharon Grove	60.99	66	P	P	17 38 47.4	-0.4
W45A	Hickory Valley	61.07	69	P	P	17 38 47.6	-0.7
WVT	Waverly	61.18	67	P	P	17 38 48.3	-0.7
WVT				pmax	pmax		
	comp=Z,24nm,1.1s						
WVT	Waverly	61.18	67	P	P	17 38 49.0	0.0
	baz=314						
WVT	Waverly	61.18	67	P	P	17 38 48.3	-0.7
WVT				IAmb	IAmb	17 39 03.7	
	comp=Z,24nm,1.1s						
TRQ	Mont Tremblant	61.21	51	P	P	17 38 48.4	-0.8
TRQ				IAmb	IAmb	17 39 15.5	
	comp=Z,38nm,1.4s						
J54A	Appleton	61.24	56	P	P	17 38 49.1	-0.2
CD2	Chengdu	61.27	284	P	P	17 38 50.8	+1.0
CD2				sP	pwP	17 39 03.5	+0.1
CD2				S	S	17 47 08.7	+0.7
CD2				pmax	pmax		
	comp=Z,40nm,0.6s						
CD2				pmax	pmax		
	comp=Z,100nm,4.8s						
CD2				LR	LR		
	comp=Z,330nm,17.0s						
CD2				LR	LR		
	comp=Z,340nm,19.6s						
CD2				LR	LR		
	comp=Z,420nm,23.0s						
WMQ	Urumqi	61.30	305	eP	P	17 38 52.3	+2.4
WMQ				pP	sP	17 38 59.5	-1.2
WMQ				sP	pwP	17 39 03.4	+0.3
WMQ				pmax	pmax		
	comp=Z,18nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,180nm,5.1s						
WMQ				LR	LR		
	comp=Z,840nm,19.7s						
WMQ				LR	LR		
	comp=Z,640nm,17.7s						
WMQ				LR	LR		
	comp=Z,450nm,21.9s						
M53A	WI Miller and	61.45	59	P	P	17 38 51.6	+0.7
	baz=315						

M53A	**WI Miller and**	**61.45**	**59**	P	**P**	**17 38 50.4**	**-0.4**
143A	**Socs Landing,**	**61.47**	**72**	P	**P**	**17 38 51.3**	**+0.3**
ALLY	**Alegheny Colle**	**61.59**	**58**	P	**P**	**17 38 51.5**	**-0.3**
PECO	**Prince Edward**	**61.62**	**54**	P	**P**	**17 38 51.1**	**-0.7**
R50A	**Paris**	**61.67**	**63**	P	**P**	**17 38 51.8**	**-0.5**
J55A	**Hilton**	**61.67**	**55**	P	**P**	**17 38 52.6**	**+0.4**
Q51A	**Peebles**	**61.69**	**62**	P	**P**	**17 38 51.9**	**-0.5**
ZAIG	**Zacatecas**	**61.70**	**88**	P	**P**	**17 38 52.6**	**-0.4**
ZAIG				IAmb	IAmb	17 38 54.3	
	comp=Z,17nm,1.1s						
O52A	**Adamsville**	**61.76**	**60**	P	**P**	**17 38 52.2**	**-0.7**
Y45A	**Yeager Farm, C**	**61.76**	**70**	P	**P**	**17 38 52.5**	**-0.4**
PLAL	**Pickwick Lake**	**61.84**	**68**	P	**P**	**17 38 52.4**	**-1.1**
PLAL				IAmb	IAmb	17 38 53.8	
	comp=Z,21nm,0.8s						
MK31	**Makanchi Array**	**61.86**	**311**	*i* P	**P**	**17 38 52.5**	**-1.0**
MK31	**Makanchi Array**	**61.86**	**311**	P	**P**	**17 38 52.6**	**-1.0**
MKAR	**Makanchi Array**	**61.86**	**311**	P	**P**	**17 38 52.5**	**-1.0**
	comp=Z,1.8nm,0.5s,baz=48,slow=5.6,SNR=30						
MKAR				LR	LR	18 07 59.6	
	comp=Z,303nm,18.8s,baz=34,slow=38						
MKAR	**Makanchi Array**	**61.86**	**311**	P	**P**	**17 38 52.3**	**-1.2**
WVNY	**West Valley, N**	**61.87**	**57**	P	**P**	**17 38 54.2**	**+0.6**
M54A	**Oil Creek Stat**	**61.94**	**58**	P	**P**	**17 38 54.9**	**+0.7**
	baz=315						
M54A	**Oil Creek Stat**	**61.94**	**58**	P	**P**	**17 38 53.0**	**-1.1**
MAKZ	**Makanchi**	**62.00**	**311**	P	**P**	**17 38 53.5**	**-0.9**
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MAKZ	**Makanchi**	**62.00**	**311**	P	**P**	**17 38 53.5**	**-0.9**
MMNY	**Mt. Morris Dam**	**62.00**	**56**	P	**P**	**17 38 54.0**	**-0.5**
V48A	**Smith Brothers**	**62.03**	**67**	P	**P**	**17 38 54.1**	**-0.7**
V48A				IAmb	IAmb	17 39 09.3	
	comp=Z,16nm,1.0s						
CLTN	**Cedars of Leba**	**62.07**	**66**	P	**P**	**17 38 55.0**	**0.0**
CLTN				IAmb	IAmb	17 39 10.0	
	comp=Z,36nm,1.0s						
U49A	**Red Boiling Sp**	**62.09**	**66**	P	**P**	**17 38 54.9**	**-0.3**
U49A				IAmb	IAmb	17 39 09.2	
	comp=Z,13nm,0.9s						
J56A	**Wolcott**	**62.16**	**55**	P	**P**	**17 38 56.0**	**+0.5**
N54A	**Moraine State**	**62.16**	**59**	P	**P**	**17 38 56.0**	**+0.4**
	baz=315						
N54A	**Moraine State**	**62.16**	**59**	P	**P**	**17 38 55.7**	**+0.1**
T50A	**Nancy**	**62.27**	**65**	P	**P**	**17 38 56.0**	**-0.3**
T50A				IAmb	IAmb	17 39 11.1	
	comp=Z,24nm,0.9s						
LMQ	**La Malbaie**	**62.27**	**48**	P	**P**	**17 38 55.6**	**-0.6**
LMQ				IAmb	IAmb	17 39 21.9	
	comp=Z,37nm,1.5s						
Q52A	**Bidwell**	**62.33**	**62**	P	**P**	**17 38 55.5**	**-1.2**
LONY	**Lake Ozonia**	**62.34**	**52**	P	**P**	**17 38 56.2**	**-0.5**
	baz=316						
LONY	**Lake Ozonia**	**62.34**	**52**	P	**P**	**17 38 55.7**	**-1.1**
LONY				IAmb	IAmb	17 38 56.8	
	comp=Z,28nm,1.3s						
VBMS	**Vicksburg**	**62.34**	**72**	P	**P**	**17 38 57.3**	**+0.4**
	baz=315						
VBMS	**Vicksburg**	**62.34**	**72**	P	**P**	**17 38 56.9**	**0.0**
BRVK	**Borovoye**	**62.41**	**322**	P	**P**	**17 38 57.0**	**0.0**
BRVK	**Borovoye**	**62.41**	**322**	P	**P**	**17 38 56.9**	**0.0**
BORG	**Borgarnes**	**62.44**	**12**	LR	LR	18 09 33.4	
	comp=Z,141nm,18.2s,baz=334,slow=39						
P53A	**Whipple**	**62.44**	**61**	P	**P**	**17 38 57.5**	**0.0**
J57A	**Williamstown**	**62.50**	**54**	P	**P**	**17 38 58.1**	**+0.3**
O54A	**Avella**	**62.50**	**59**	P	**P**	**17 38 58.0**	**+0.1**
S51A	**Beattyville**	**62.53**	**63**	P	**P**	**17 38 57.5**	**-0.6**
S51A				IAmb	IAmb	17 39 12.7	
	comp=Z,30nm,0.9s						
L56A	**Greenwood**	**62.60**	**56**	P	**P**	**17 38 59.1**	**+0.5**
GYA	**Guiyang**	**62.66**	**279**	⇑P	**P**	**17 39 01.7**	**+2.4**
GYA				pP	pP	17 39 07.8	+0.8
GYA				PcP	**PcP**	**17 39 41.3**	**+3.4**
GYA				S	**S**	**17 47 27.1**	**+1.4**
GYA				pmax	pmax		
	comp=Z,18nm,1.2s						
GYA				pmax	pmax		
	comp=Z,120nm,3.5s						
GYA				LR	LR		
	comp=Z,110nm,9.0s						
K57A	**Scipio Center**	**62.72**	**55**	P	**P**	**17 38 59.3**	**0.0**
X48A	**Hartselle**	**62.81**	**68**	P	**P**	**17 38 58.5**	**-1.5**
X48A				IAmb	IAmb	17 39 11.5	
	comp=Z,11nm,0.9s						
SVE	**Sverdlovsk**	**62.84**	**329**	*e*P	**P**	**17 39 00.0**	**+0.2**
J58A	**Remsen**	**62.90**	**54**	P	**P**	**17 39 00.8**	**+0.3**
J58A				IAmb	IAmb	17 39 01.8	
	comp=Z,41nm,1.1s						
SWET	**Sewanee**	**62.91**	**67**	P	**P**	**17 39 00.1**	**-0.6**
SWET				IAmb	IAmb	17 39 00.8	
	comp=Z,19nm,1.2s						
146A	**Union**	**62.92**	**71**	P	**P**	**17 39 00.4**	**-0.3**
R53A	**Hurricane**	**62.95**	**62**	P	**P**	**17 39 00.8**	**-0.1**
MOQ	**Mont Orford**	**62.99**	**51**	P	**P**	**17 39 00.2**	**-0.8**
Z47A	**Carrollton**	**63.10**	**70**	P	**P**	**17 39 01.1**	**-0.8**
Q54A	**Coxs Mills**	**63.10**	**61**	P	**P**	**17 39 01.4**	**-0.5**
MCWV	**Mont Chateau**	**63.16**	**59**	P	**P**	**17 39 02.7**	**+0.4**
	baz=316						
MCWV	**Mont Chateau**	**63.16**	**59**	P	**P**	**17 39 02.7**	**+0.4**
D62A	**Allapoint, All**	**63.20**	**47**	P	**P**	**17 39 01.9**	**-0.5**
D62A				IAmb	IAmb	17 39 17.5	
	comp=Z,21nm,0.9s						
J59A	**Piesco**	**63.22**	**53**	P	**P**	**17 39 02.2**	**-0.4**
J59A				IAmb	IAmb	17 39 09.6	
	comp=Z,37nm,1.4s						
W50A	**Signal Mountai**	**63.28**	**66**	P	**P**	**17 39 02.6**	**-0.6**
W50A				IAmb	IAmb	17 39 03.8	
	comp=Z,23nm,0.9s						
TZTN	**Tazewell**	**63.33**	**64**	P	**P**	**17 39 03.8**	**+0.3**
	baz=316						
TZTN	**Tazewell**	**63.33**	**64**	P	**P**	**17 39 03.7**	**+0.2**
TZTN				IAmb	IAmb	17 39 18.5	
	comp=Z,29nm,0.9s						
BINY	**Binghamton**	**63.38**	**55**	P	**P**	**17 39 04.6**	**+1.0**
	baz=316,SNR=18						
BINY	**Binghamton**	**63.38**	**55**	P	**P**	**17 39 04.2**	**+0.5**
M57A	**Sunshine Farm,**	**63.40**	**57**	P	**P**	**17 39 04.3**	**+0.4**
V51A	**Loudon**	**63.40**	**65**	P	**P**	**17 39 03.6**	**-0.3**
V51A				IAmb	IAmb	17 39 04.6	
	comp=Z,32nm,1.4s						
O56A	**Blue Knob Stat**	**63.41**	**58**	P	**P**	**17 39 04.2**	**+0.2**
	baz=316,SNR=5.2						
O56A	**Blue Knob Stat**	**63.41**	**58**	P	**P**	**17 39 03.8**	**-0.2**
SSPA	**Standing Stone**	**63.51**	**58**	P	**P**	**17 39 04.9**	**+0.3**
	baz=316						
SSPA	**Standing Stone**	**63.51**	**58**	P	**P**	**17 39 04.3**	**-0.2**
CPCT	**Cooper Cave**	**63.56**	**66**	P	**P**	**17 39 04.4**	**-0.6**
CPCT				IAmb	IAmb	17 39 20.1	
	comp=Z,22nm,1.2s						
FPAL	**Fort Paine**	**63.58**	**67**	P	**P**	**17 39 04.0**	**-1.2**
Y49A	**Blount Mountai**	**63.60**	**68**	P	**P**	**17 39 04.3**	**-1.0**
Y49A				IAmb	IAmb	17 39 26.9	
	comp=Z,14nm,0.8s						
F62A	**Pittston Farm,**	**63.65**	**49**	P	**P**	**17 39 05.0**	**-0.4**
F62A				IAmb	IAmb	17 39 05.7	
	comp=Z,28nm,1.1s						
S54A	**Dingess, Beckl**	**63.69**	**62**	P	**P**	**17 39 06.2**	**+0.4**
ACCN	**Adirondack Com**	**63.69**	**53**	P	**P**	**17 39 05.8**	**0.0**
ACCN				IAmb	IAmb	17 39 06.5	
	comp=Z,43nm,1.2s						
V52A	**Sevierville**	**63.81**	**65**	P	**P**	**17 39 06.3**	**-0.3**
V52A				IAmb	IAmb	17 39 22.9	
	comp=Z,36nm,1.1s						
ARU	**Arti**	**63.82**	**330**	LR	LR	18 10 18.9	
	comp=Z,359nm,19.7s,baz=40,slow=39						
ARU	**Arti**	**63.82**	**330**	*d i*P	**P**	**17 39 06.1**	**-0.2**
ARU						17 41 24.9	
ARU				S	**S**	**17 47 39.8**	**+0.7**
ARU				SS	**SS**	**17 51 50.5**	**+4.1**
ARU				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ARU	**Arti**	**63.82**	**330**	P	**P**	**17 39 06.5**	**+0.2**
ARU				IAmb	IAmb	17 39 09.1	
	comp=Z,7.5nm,0.7s						
TKL	**Tuckaleechee C**	**63.84**	**65**	P	**P**	**17 39 06.2**	**-0.6**
TKL				pmax	pmax		
	comp=Z,36nm,1.1s						
TKL	**Tuckaleechee C**	**63.84**	**65**	P	**P**	**17 39 06.2**	**-0.6**
TKL				IAmb	IAmb	17 39 21.4	
	comp=Z,36nm,1.1s						
L59A	**Walton**	**63.87**	**55**	P	**P**	**17 39 06.6**	**-0.3**
G62A	**West of Eustis**	**63.88**	**50**	P	**P**	**17 39 06.7**	**-0.2**
G62A				IAmb	IAmb	17 39 07.5	
	comp=Z,20nm,0.8s						
KSPA	**Keystone Colle**	**63.95**	**56**	P	**P**	**17 39 07.9**	**+0.4**
N58A	**Sunbury**	**63.98**	**57**	P	**P**	**17 39 07.9**	**+0.3**
R55A	**Marlinton**	**64.00**	**61**	P	**P**	**17 39 08.3**	**+0.5**
X51A	**Calhoun**	**64.00**	**67**	P	**P**	**17 39 07.4**	**-0.4**
X51A				IAmb	IAmb	17 39 29.6	
	comp=Z,43nm,1.5s						
H62A	**Milan**	**64.06**	**50**	P	**P**	**17 39 07.9**	**-0.2**
W52A	**Murphy**	**64.15**	**66**	P	**P**	**17 39 08.4**	**-0.5**
W52A				IAmb	IAmb	17 39 28.3	
	comp=Z,17nm,0.9s						
TRY	**Troy**	**64.17**	**53**	P	**P**	**17 39 08.2**	**-0.6**
TRY				IAmb	IAmb	17 39 24.6	
	comp=Z,27nm,1.3s						
F63A	**Nahmakanta, Br**	**64.20**	**48**	P	**P**	**17 39 08.5**	**-0.5**
F63A				IAmb	IAmb	17 39 23.2	
	comp=Z,19nm,1.0s						
P57A	**Homestead Farm**	**64.27**	**58**	P	**P**	**17 39 09.8**	**+0.3**
U54A	**Nelsons Funny**	**64.32**	**63**	P	**P**	**17 39 10.2**	**+0.2**
U54A				IAmb	IAmb	17 39 30.2	
	comp=Z,43nm,1.0s						
V53A	**Saluda**	**64.37**	**64**	P	**P**	**17 39 10.3**	**-0.1**
V53A				IAmb	IAmb	17 39 25.4	
	comp=Z,39nm,1.2s						
N59A	**State Game Lan**	**64.42**	**56**	P	**P**	**17 39 11.0**	**+0.5**
	baz=317,SNR=8.5						
N59A	**State Game Lan**	**64.42**	**56**	P	**P**	**17 39 10.8**	**+0.3**
PAGS	**Pennsylvania G**	**64.42**	**57**	P	**P**	**17 39 10.5**	**0.0**
PAGS				IAmb	IAmb	17 39 25.5	
	comp=Z,29nm,0.9s						
F64A	**Sherman**	**64.43**	**48**	P	**P**	**17 39 10.0**	**-0.5**
F64A				IAmb	IAmb	17 39 10.7	
	comp=Z,21nm,1.0s						
KIRV	**Kirov**	**64.58**	**336**	LR	LR	18 09 46.0	
	comp=Z,268nm,20.8s,baz=35,slow=38						
KIRV	**Kirov**	**64.58**	**336**	*ce*P	**P**	**17 39 12.1**	**+0.9**
BLA	**Blacksburg**	**64.60**	**62**	P	**P**	**17 39 11.1**	**-0.7**
BLA				pmax	pmax		
	comp=Z,79nm,1.1s						
BLA	**Blacksburg**	**64.60**	**62**	P	**P**	**17 39 12.3**	**+0.4**
	baz=316						
BLA	**Blacksburg**	**64.60**	**62**	P	**P**	**17 39 11.1**	**-0.7**
KLMR	**Klimovskoe**	**64.75**	**342**	*e*P	**P**	**17 39 11.3**	**-1.0**
KLMR				pmax	pmax		
	comp=Z,17nm,1.5s						
KLMR	**Klimovskoe**	**64.75**	**342**	*e*P	**P**	**17 39 11.4**	**-0.9**
KLMR				AMP		17 39 29.2	
	comp=Z,17nm,1.5s						
KLMR				LQ	LQ	18 03 41.6	
KLMR				LQ	LQ	18 03 41.6	
KLMR				LR	LR	18 07 08.8	
MVL	**Millersville**	**64.78**	**57**	P	**P**	**17 39 12.6**	**-0.2**
MVL				IAmb	IAmb	17 39 27.9	
	comp=Z,42nm,1.1s						
BG3	**Lake Jocassee**	**64.79**	**65**	P	**P**	**17 39 13.2**	**+0.1**
BG3				IAmb	IAmb	17 39 28.0	
	comp=Z,43nm,1.3s						
LUPA	**Lehigh Univers**	**64.85**	**56**	P	**P**	**17 39 14.1**	**+0.7**
L61B	**Northampton**	**64.87**	**53**	P	**P**	**17 39 13.1**	**-0.3**
	baz=318						
ODNJ	**Ogdensburg**	**64.90**	**55**	P	**P**	**17 39 13.9**	**+0.3**
SDMD	**Soldier's Deli**	**64.95**	**58**	P	**P**	**17 39 14.0**	**0.0**
SDMD				IAmb	IAmb	17 39 29.4	
	comp=Z,33nm,1.0s						
Y52A	**Lilburn**	**64.96**	**67**	P	**P**	**17 39 13.6**	**-0.6**
Y52A				IAmb	IAmb	17 39 33.7	
	comp=Z,30nm,1.2s						
S57A	**Dark Hollow, R**	**65.01**	**60**	P	**P**	**17 39 14.9**	**+0.5**
S57A				IAmb	IAmb	17 39 30.0	
	comp=Z,42nm,1.1s						
TRNY	**Table Rock, Ra**	**65.05**	**55**	P	**P**	**17 39 14.8**	**+0.2**
TRNY				IAmb	IAmb	17 39 29.6	
	comp=Z,36nm,0.9s						
V55A	**Taylorsville**	**65.14**	**63**	P	**P**	**17 39 15.6**	**+0.2**
V55A				IAmb	IAmb	17 39 30.6	
	comp=Z,48nm,1.1s						
BRNJ	**Basking Ridge**	**65.21**	**55**	P	**P**	**17 39 16.4**	**+0.7**
U56A	**King**	**65.25**	**62**	P	**P**	**17 39 16.2**	**+0.2**
OTUK	**Ortayu**	**65.28**	**317**	P	**P**	**17 39 15.6**	**-0.4**
PAL	**Palisades**	**65.31**	**55**	P	**P**	**17 39 17.0**	**+0.7**
PAL				pmax	pmax		
	comp=Z,81nm,1.1s						
PAL	**Palisades**	**65.31**	**55**	P	**P**	**17 39 16.4**	**+0.1**
	baz=318,SNR=7.8						
PAL	**Palisades**	**65.31**	**55**	P	**P**	**17 39 17.0**	**+0.7**
T57A	**Hurt**	**65.40**	**61**	P	**P**	**17 39 17.2**	**+0.3**
T57A				IAmb	IAmb	17 39 32.0	
	comp=Z,37nm,1.0s						
CPNY	**Central Park**	**65.44**	**55**	P	**P**	**17 39 17.6**	**+0.5**
R58B	**Mineral**	**65.45**	**60**	P	**P**	**17 39 16.9**	**-0.3**
R58B				IAmb	IAmb	17 39 32.7	
	comp=Z,34nm,0.9s						
WSPT	**Westport, CT**	**65.48**	**54**	P	**P**	**17 39 17.5**	**+0.1**
WSPT				IAmb	IAmb	17 39 32.3	
	comp=Z,39nm,1.1s						
JAY	**Jayapura**	**65.51**	**230**	LR	LR	18 04 21.9	
	comp=Z,389nm,20.2s,baz=16,slow=33						
PAULI	**Pauline**	**65.55**	**64**	P	**P**	**17 39 18.1**	**+0.1**
PAULI				IAmb	IAmb	17 39 32.9	
	comp=Z,32nm,1.1s						
KMSC	**Kings Mountain**	**65.59**	**64**	P	**P**	**17 39 18.6**	**+0.4**
	baz=317,SNR=6.5						
KMSC	**Kings Mountain**	**65.59**	**64**	P	**P**	**17 39 18.3**	**+0.1**
GOGA	**Godfrey**	**65.63**	**67**	P	**P**	**17 39 17.3**	**-1.1**
GOGA				pmax	pmax		
	comp=Z,19nm,0.9s						
GOGA	**Godfrey**	**65.63**	**67**	P	**P**	**17 39 17.8**	**-0.6**
	baz=317,SNR=7.9						
GOGA	**Godfrey**	**65.63**	**67**	P	**P**	**17 39 17.3**	**-1.1**
GOGA				IAmb	IAmb	17 39 18.7	
	comp=Z,19nm,0.8s						
DAV	**Davao City (W)**	**65.66**	**250**	LR	LR	18 03 20.5	
	comp=Z,336nm,22.0s,baz=80,slow=32						
EMMW	**East Machias**	**65.72**	**48**	P	**P**	**17 39 18.5**	**-0.3**
EMMW				IAmb	IAmb	17 39 19.7	
	comp=Z,45nm,1.2s						
HODGE	**Hodges**	**65.72**	**65**	P	**P**	**17 39 18.8**	**-0.3**
HODGE				IAmb	IAmb	17 39 33.9	
	comp=Z,23nm,1.0s						
PDGK	**Podgornoye**	**65.75**	**310**	P	**P**	**17 39 19.2**	**-0.1**
M63A	**Gales Ferry**	**65.96**	**53**	P	**P**	**17 39 20.5**	**+0.1**
KMI	**Kunming**	**66.06**	**281**	⇑P	**P**	**17 39 21.7**	**+0.1**
KMI				pP	pP	17 39 31.0	+1.6
KMI				sP	pwP	17 39 35.6	+0.3
KMI				S	**S**	**17 48 05.4**	**-2.5**
KMI				SS	**SS**	**17 52 22.3**	**-0.8**
KMI				pmax	pmax		
	comp=Z,14nm,1.3s						
KMI				pmax	pmax		
	comp=Z,190nm,7.6s						
KMI				LR	LR		
	comp=Z,200nm,23.0s						
KMI				LR	LR		
	comp=Z,130nm,21.8s						
KMI				LR	LR		
	comp=Z,260nm,24.8s						
352A	**Blakely**	**66.18**	**69**	P	**P**	**17 39 21.9**	**-0.2**
FINES	**FINESS Array B**	**66.28**	**349**	P	**P**	**17 39 20.5**	**-1.7**
	comp=Z,2.7nm,0.7s,baz=0.8,slow=2.6,SNR=4.8						
FINES				LR	LR	18 11 33.1	
	comp=Z,419nm,19.3s,baz=12,slow=39						
FINES	**FINESS Array B**	**66.28**	**349**	*i* P	**P**	**17 39 24.2**	**+2.0**
FINES				pmax	pmax		
	comp=Z,5.0nm,1.0s						
T59A	**Double "B" Far**	**66.35**	**60**	P	**P**	**17 39 23.2**	**+0.1**
V58A	**Windy Hill, Pi**	**66.35**	**62**	P	**P**	**17 39 23.3**	**+0.3**
V58A				IAmb	IAmb	17 39 38.4	
	comp=Z,51nm,1.2s						
154A	**Montrose**	**66.42**	**67**	P	**P**	**17 39 23.1**	**-0.5**
U59A	**Littleton**	**66.67**	**61**	P	**P**	**17 39 25.6**	**+0.5**
U59A				IAmb	IAmb	17 39 40.6	
	comp=Z,31nm,1.1s						
Y57A	**Sumter**	**66.94**	**64**	P	**P**	**17 39 26.3**	**-0.6**
TAOE	**Nuku Hiva Isla**	**67.11**	**142**	*e*LR	LR	17 59 40.8	
	comp=Z,333nm,23.1s						
TAOE	**Nuku Hiva Isla**	**67.11**	**142**	*e*T	T	18 52 40.2	
	comp=Z,26nm,0.2s						
X58A	**Rowland**	**67.14**	**63**	P	**P**	**17 39 29.0**	**+0.9**
X58A				IAmb	IAmb	17 39 43.5	
	comp=Z,38nm,1.0s						
255A	**Hazlehurst**	**67.28**	**67**	P	**P**	**17 39 29.0**	**0.0**
255A				IAmb	IAmb	17 39 48.7	
	comp=Z,31nm,0.9s						
Y58A	**Scranton**	**67.43**	**64**	P	**P**	**17 39 30.6**	**+0.7**
NHSC	**New Hope**	**67.73**	**65**	P	**P**	**17 39 32.7**	**+0.9**
	baz=318						
NHSC	**New Hope**	**67.73**	**65**	P	**P**	**17 39 32.8**	**+0.9**
NB2	**NORSAR Subarra**	**67.83**	**357**	P	**P**	**17 39 31.0**	**-1.1**
	comp=Z,2.0nm,0.8s,baz=4.5,slow=6.5						
NOA	**NORSAR Array B**	**67.83**	**357**	P	**P**	**17 39 31.2**	**-1.0**
	comp=Z,3.4nm,0.8s,baz=7.5,slow=7.4,SNR=10						
NOA				LR	LR	18 09 22.9	
	comp=Z,193nm,20.7s,baz=350,slow=36						
SLVN	**Son La**	**68.12**	**277**	P	**P**	**17 39 35.5**	**+0.9**
SLVN				IAmb	IAmb	17 39 51.2	
	comp=Z,22nm,1.2s						
HFS	**Hagfors**	**68.63**	**355**	P	**P**	**17 39 35.9**	**-1.2**
	comp=Z,3.9nm,0.4s,baz=42,slow=2.4,SNR=18						
HFS				LR	LR	18 08 56.7	
	comp=Z,186nm,20.6s,baz=11,slow=35						
AAK	**Ala-Archa**	**68.65**	**312**	P	**P**	**17 39 38.3**	**+0.5**
AAK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
AAK	**Ala-Archa**	**68.65**	**312**	P	**P**	**17 39 38.2**	**+0.5**
PMG	**Port Moresby**	**68.76**	**220**	LR	LR	18 06 48.4	
	comp=Z,169nm,19.4s,baz=50,slow=33						
AKTO	**Aktyubinsk**	**69.02**	**327**	LR	LR	18 12 24.9	
	comp=Z,340nm,20.6s,baz=34,slow=38						
MSVF	**Nonsavu**	**69.07**	**187**	*i* P	**P**	**17 39 37.6**	**-2.7**
MSVF				pmax	pmax		
	comp=Z,12nm,1.0s						
656A	**Willston**	**69.13**	**69**	P	**P**	**17 39 41.0**	**+0.3**
656A				IAmb	IAmb	17 40 01.9	
	comp=Z,39nm,1.1s						
AB31	**Akbulak array**	**69.34**	**325**	*i* P	**P**	**17 39 41.7**	**0.0**
ABKAR	**Akbulak array**	**69.34**	**325**	P	**P**	**17 39 41.4**	**-0.2**
LSA	**Lhasa**	**69.65**	**292**	P	**P**	**17 39 46.5**	**+2.0**
LSA				pmax	pmax		
	comp=Z,44nm,0.9s						
LSA	**Lhasa**	**69.65**	**292**	P	**P**	**17 39 44.4**	**-0.1**
LSA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
LSA	**Lhasa**	**69.65**	**292**	P	**P**	**17 39 44.4**	**-0.1**
KK31	**Karatay Array**	**70.10**	**315**	P	**P**	**17 39 46.4**	**-0.1**
KK31				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KK31	**Karatay Array**	**70.10**	**315**	P	**P**	**17 39 46.4**	**-0.1**
KKAR	**Karatay Array**	**70.10**	**315**	P	**P**	**17 39 46.4**	**-0.1**
KKAR	**Karatay Array**	**70.10**	**315**	P	**P**	**17 39 46.4**	**-0.1**
PMOR	**Pomariorio Ree**	**70.20**	**152**	*e*T	T	18 56 31.3	
	comp=Z,8.3nm,0.2s						
KSH	**Kashi**	**70.37**	**309**	P	**P**	**17 39 50.7**	**+2.4**
KSH				pP	pP	17 39 56.8	+0.6
KSH				S	**S**	**17 49 02.6**	**+3.8**
KSH				pmax	pmax		
	comp=Z,7.0nm,0.4s						
KSH				pmax	pmax		
	comp=Z,130nm,5.7s						
KSH				LR	LR		
	comp=Z,380nm,13.4s						
KSH				LR	LR		
	comp=Z,510nm,17.2s						
KSH				LR	LR		
	comp=Z,590nm,17.0s						
OBN	**Obninsk**	**70.67**	**341**	LR	LR	18 13 44.4	
	comp=Z,86nm,21.9s,baz=1.0,slow=38						
OBN	**Obninsk**	**70.67**	**341**	*i* P	**P**	**17 39 49.8**	**+0.1**
OBN				*i*		17 40 10.3	
OBN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,350nm,20.0s						
UBPT	**Khong Chiam**	**71.68**	**272**	P	**P**	**17 39 56.1**	**-0.3**
PPT	**Papeete**	**72.17**	**154**	LR	LR	18 05 44.9	
	comp=Z,368nm,19.8s,baz=315,slow=31						
PPT2	**Papeete2**	**72.19**	**154**	*e*S	**S**	**17 49 18.9**	**-0.9**
	comp=Z,134nm,27.2s						
PPT2	**Papeete2**	**72.19**	**154**	*e*LR	LR	18 02 04.2	
	comp=Z,588nm,21.5s						
PPT2	**Papeete2**	**72.19**	**154**	*e*T	T	18 59 01.0	
	comp=Z,9.4nm,0.3s						
SHL	**Shillong**	**72.30**	**289**	P	**P**	**17 40 00.1**	**-0.2**
SHL				pmax	pmax		
	comp=Z,54nm,1.0s						
SHL	**Shillong**	**72.30**	**289**	P	**P**	**17 40 00.1**	**-0.2**
PABE	**Paberze**	**72.33**	**349**	P	**P**	**17 39 58.7**	**-1.0**
PABE				IAmb	IAmb	17 40 00.7	
	comp=Z,21nm,0.8s						
BTK	**Batken**	**72.39**	**313**	P	**P**	**17 39 59.8**	**-0.7**
BTK	**Batken**	**72.39**	**313**	P	**P**	**17 39 59.8**	**-0.7**
DRK	**Karamyk**	**72.39**	**312**	P	**P**	**17 39 59.7**	**-1.1**
DRK				IAmb	IAmb	17 40 17.6	
	comp=Z,19nm,0.6s						
LPSR	**Galich'ya Gora**	**72.53**	**339**	*e*P	**P**	**17 40 00.6**	**-0.3**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MNK	**Minsk**	**72.78**	**346**	*i* P	**P**	**17 40 03.0**	**+0.6**
MNK				*i*		17 40 19.6	
MNK				*i*		17 42 45.1	
MNK				*i* PPP	PPP	17 44 29.9	
MNK				*i* S	**S**	**17 49 26.0**	**+0.3**
MNK				*i*		17 50 07.9	
MNK				*i* SS	**SS**	**17 54 09.1**	**+4.6**
MNK				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MNK				pmax	pmax		
	comp=N,17nm,1.0s						
MNK				pmax	pmax		
	comp=E,2.0nm,0.8s						
MNK				MLR	MLR		
	comp=Z,449nm,20.0s						
MNK				MLR	MLR		
	comp=E,16nm,14.0s						
MNK				MLR	MLR		
	comp=N,195nm,16.0s						
MNK	**Minsk**	**72.78**	**346**	*i* P	**P**	**17 40 03.0**	**+0.6**
	comp=E,2.0nm,0.8s						
MNK				*i* P	**P**	**17 40 03.0**	**+0.6**
	comp=N,17nm,1.0s						
MNK				*i* P	**P**	**17 40 03.0**	**+0.6**
	comp=Z,9.0nm,0.7s,baz=14						
MNK				*i* PcP	**PcP**	**17 40 19.7**	**+0.1**
MNK				*i* PP	**PP**	**17 42 45.2**	**+1.5**
MNK				*i* PPP	PPP	17 44 29.9	
MNK				*i* S	**S**	**17 49 26.0**	**+0.3**
MNK				*i* SS	**SS**	**17 54 09.2**	**+4.7**
MNK				*i* SSS	SSS	17 57 30.2	
MNK				*i* LQ	LQ	18 07 21.0	
MNK				*i* LR	LR	18 11 28.5	
MNK				*i* LRM	MLR	18 14 07.7	
	comp=Z,449nm,20.2s						
MNK				*i* LRM	MLR	18 14 34.5	
	comp=E,16nm,14.5s						
MNK				*i* LRM	MLR	18 14 43.9	
	comp=N,195nm,15.9s						
SPMM	**Sapulut**	**72.99**	**256**	P	**P**	**17 40 05.0**	**+0.7**
CHTO	**Chiang Mai**	**73.08**	**279**	P	**P**	**17 40 04.8**	**0.0**
CHTO				pmax	pmax		
	comp=Z,13nm,1.2s						
CHTO	**Chiang Mai**	**73.08**	**279**	P	**P**	**17 40 04.8**	**0.0**
VRH	**Novokhopyorsk**	**73.16**	**337**	*e*P	**P**	**17 40 03.4**	**-1.3**
VRH				pmax	pmax		
	comp=Z,9.0nm,0.5s						
TOLI2	**Tolitoli**	**73.26**	**250**	P	**P**	**17 40 05.4**	**-0.5**
TOLI2				IAmb	IAmb	17 40 07.1	
	comp=Z,26nm,0.9s						
CM31	**Chiang Mai Arr**	**73.35**	**279**	P	**P**	**17 40 05.5**	**-0.8**
CMAR	**Chiang Mai Arr**	**73.35**	**279**	P	**P**	**17 40 07.0**	**+0.6**
	comp=Z,3.6nm,0.7s,baz=27,slow=7.0,SNR=34						
CMAR				LR	LR	18 15 34.1	
	comp=Z,115nm,19.6s,baz=75,slow=38						
CMAR	**Chiang Mai Arr**	**73.35**	**279**	*i* P	**P**	**17 40 07.4**	**+1.0**
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**73.35**	**279**	P	**P**	**17 40 06.8**	**+0.4**
TAPN	**Taplejung**	**73.40**	**293**	*e*P	**P**	**17 40 07.8**	**+0.9**
	comp=Z,55nm,0.9s						
EKA	**Eskdalemuir Ar**	**73.45**	**5**	P	**P**	**17 40 06.0**	**-0.4**
	comp=Z,2.0nm,0.7s,baz=6.5,slow=5.2,SNR=2.1						
EKA	**Eskdalemuir Ar**	**73.45**	**5**	P	**P**	**17 40 06.0**	**-0.4**
GAR	**Garm**	**73.47**	**312**	P	**P**	**17 40 07.4**	**+0.5**
GAR				IAmb	IAmb	17 40 29.1	
	comp=Z,39nm,1.4s						
VSR	**Storozhevoye**	**73.76**	**338**	*e*P	**P**	**17 40 07.4**	**-0.9**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SOR	**Soroa**	**73.76**	**74**	P	**P**	**17 40 07.6**	**-1.1**
SOR				pmax	pmax		
	comp=Z,26nm,1.1s						
SOR	**Soroa**	**73.76**	**74**	P	**P**	**17 40 07.6**	**-1.1**
SOR				IAmb	IAmb	17 40 25.9	

	comp=Z,26nm,1.1s						
LUWI	**Luwuk**	**73.84**	**247**	P	**P**	**17 40 08.8**	**-0.4**
ODAN	**Odare**	**73.96**	**293**	*e*P	**P**	**17 40 10.7**	**+0.6**
	comp=Z,16nm,0.8s						
GUN	**Gumba**	**74.03**	**295**	*e*P	**P**	**17 40 11.3**	**+0.6**
JIRN	**Jiri**	**74.04**	**294**	*e*P	**P**	**17 40 11.7**	**+0.9**
	comp=Z,47nm,0.6s						
CHGR	**Chuyangaron**	**74.28**	**313**	P	**P**	**17 40 12.0**	**+0.4**
CHGR				IAmb	IAmb	17 40 36.9	
	comp=Z,18nm,0.7s						
RAMN	**Ramite**	**74.35**	**293**	*e*P	**P**	**17 40 12.9**	**+0.5**
	comp=Z,41nm,0.5s						
KKN	**Kakani**	**74.46**	**295**	*e*P	**P**	**17 40 13.6**	**+0.6**
	comp=Z,15nm,0.6s						
PKI	**Pulchoki**	**74.55**	**295**	*e*P	**P**	**17 40 14.1**	**+0.4**
PKIN	**Phulchoki**	**74.56**	**295**	*e*P	**P**	**17 40 14.0**	**+0.4**
	comp=Z,17nm,0.7s						
GKN	**Gorkha**	**74.66**	**296**	*e*P	**P**	**17 40 14.6**	**+0.5**
	comp=Z,8.7nm,0.3s						
DMN	**Daman**	**74.70**	**295**	*e*P	**P**	**17 40 15.1**	**+0.6**
DANN	**Dangsing**	**74.89**	**296**	*e*P	**P**	**17 40 16.1**	**+0.5**
	comp=Z,33nm,0.7s						
DZM	**Mont Dzumac**	**74.91**	**198**	*e*P	**P**	**17 40 16.4**	**+1.1**
	comp=Z,49nm,1.2s						
DZM	**Mont Dzumac**	**74.91**	**198**	*e*LR	LR	18 03 21.6	
	comp=Z,348nm,21.4s						
DZM	**Mont Dzumac**	**74.91**	**198**	P	**P**	**17 40 16.6**	**+1.3**
DZM				IAmb	IAmb	17 40 17.7	
	comp=Z,23nm,1.1s						
KOLN	**Koldanda**	**75.43**	**296**	*e*P	**P**	**17 40 19.0**	**+0.4**
	comp=Z,16nm,0.7s						
PYUN	**Piuthan**	**75.51**	**297**	*e*P	**P**	**17 40 19.5**	**+0.4**
	comp=Z,90nm,1.0s						
MTO3	**Montecristo**	**76.21**	**84**	P	**P**	**17 40 21.7**	**-1.5**
AKASG	**Malin Array Be**	**76.24**	**344**	P	**P**	**17 40 20.6**	**-1.9**
	comp=Z,3.9nm,0.6s,baz=19,slow=6.2,SNR=13						
AKASG				LR	LR	18 17 06.3	
	comp=Z,319nm,19.9s,baz=0.0,slow=38						
AKASG	**Malin Array Be**	**76.24**	**344**	*i* P	**P**	**17 40 21.2**	**-1.4**
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.6s						
AKBB	**Malin Array Si**	**76.24**	**344**	*ce*P	**P**	**17 40 21.5**	**-1.1**
AKBB	**Malin Array Si**	**76.24**	**344**	P	**P**	**17 40 21.5**	**-1.1**
NIL	**Nilore**	**76.33**	**307**	P	**P**	**17 40 23.9**	**+0.4**
NIL				pmax	pmax		
	comp=Z,19nm,1.0s						
NIL	**Nilore**	**76.33**	**307**	P	**P**	**17 40 23.9**	**+0.4**
NIL				IAmb	IAmb	17 40 25.2	
	comp=Z,19nm,1.0s						
SBUM	**Sibu**	**77.36**	**258**	P	**P**	**17 40 31.0**	**+1.6**
CLL	**Collm**	**77.47**	**355**	*e*P	**P**	**17 40 30.0**	**+0.5**
CLL				*e*S	**S**	**17 50 18.0**	**0.0**
CLL				MLR	MLR		
	comp=Z,300nm,21.9s						
CLL	**Collm**	**77.47**	**355**	*e*P	**P**	**17 40 30.0**	**+0.5**
CLL				*e*S	**S**	**17 50 18.0**	**0.0**
CLL				*e*PS	**PnS**	**17 50 54.0**	**-5.5**
CLL				*e*SS	**SS**	**17 55 18.0**	**+2.3**
CLL				Lm	MLR	18 10 00.0	
	comp=Z,300nm,21.9s						
TBI	**Tubuai**	**77.72**	**156**	*e*LR	LR	18 04 36.2	
	comp=Z,476nm,23.2s,baz=335						
TGUH	**Tegucigalpa,Un**	**77.77**	**83**	P	**P**	**17 40 30.9**	**-1.0**
TGUH				IAmb	IAmb	17 40 34.6	
	comp=Z,34nm,0.8s						
DPC	**Dobruska-Polom**	**78.20**	**353**	*e*P	**P**	**17 40 34.3**	**+0.7**
DPC	**Dobruska-Polom**	**78.20**	**353**	*e*P	**P**	**17 40 34.3**	**+0.7**
KRLC	**Kraliky**	**78.43**	**352**	*e*P	**P**	**17 40 35.6**	**+0.6**
KRLC	**Kraliky**	**78.43**	**352**	*e*P	**P**	**17 40 35.6**	**+0.6**
NKC	**Novy Kostel**	**78.58**	**355**	*e*P	**P**	**17 40 36.9**	**+1.2**
NKC	**Novy Kostel**	**78.58**	**355**	*e*P	**P**	**17 40 36.9**	**+1.2**
BCLA	**Clavier**	**78.59**	**360**	*d*P	**P**	**17 40 37.0**	**+1.3**
PRU	**Pruhonice**	**78.69**	**354**	*e*P	**P**	**17 40 36.7**	**+0.4**
PRU	**Pruhonice**	**78.69**	**354**	*e*P	**P**	**17 40 36.7**	**+0.4**
BMRD	**Maredsous**	**78.71**	**0**	*d*P	**P**	**17 40 37.5**	**+1.2**
	comp=Z,7.4nm,0.9s						
KAPI	**Kappang**	**78.80**	**247**	P	**P**	**17 40 38.2**	**+0.9**
KAPI				pmax	pmax		
	comp=Z,22nm,1.0s						
KAPI	**Kappang**	**78.80**	**247**	P	**P**	**17 40 38.2**	**+0.9**
KAPI				IAmb	IAmb	17 40 41.0	
	comp=Z,22nm,0.9s						
CTAO	**Charters Tower**	**78.83**	**217**	P	**P**	**17 40 37.0**	**-0.3**
CTAO				pmax	pmax		
	comp=Z,14nm,0.9s						
CTAO	**Charters Tower**	**78.83**	**217**	P	**P**	**17 40 37.0**	**-0.3**
CTAO				IAmb	IAmb	17 40 38.8	
	comp=Z,14nm,0.9s						
SORM	**Soroca**	**78.87**	**344**	⇑P	**P**	**17 40 36.2**	**-1.1**
SORM	**Soroca**	**78.87**	**344**	⇑P	**P**	**17 40 36.2**	**-1.1**
MAK	**Makhachkala**	**79.05**	**330**	*e*P	**P**	**17 40 36.0**	**-2.3**
MAK				*e*S	**S**	**17 50 33.7**	**-1.5**
VRAC	**Vranov**	**79.21**	**352**	LR	LR	18 17 23.9	
	comp=Z,211nm,19.9s,baz=3.0,slow=37						
KSM	**Kuching**	**79.30**	**259**	P	**P**	**17 40 42.0**	**+1.9**
WLF	**Walferdange**	**79.34**	**359**	*d*P	**P**	**17 40 41.5**	**+1.6**
	comp=Z,8.1nm,1.0s						
KIV	**Kislovodsk**	**79.58**	**333**	*e*P	**P**	**17 40 39.9**	**-1.5**
KIV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KHC	**Kasperske Hory**	**79.61**	**354**	*e*P	**P**	**17 40 42.2**	**+0.8**
KHC				*e*		17 40 51.6	
KHC	**Kasperske Hory**	**79.61**	**354**	*e*P	**P**	**17 40 42.2**	**+0.8**
KHC				*e*pP	**sP**	**17 40 51.6**	**-0.7**
GEYT	**Alibeck**	**79.65**	**320**	LR	LR	18 21 42.6	
	comp=Z,258nm,18.4s,baz=255,slow=40						
KBZ	**Khabaz**	**79.73**	**333**	LR	LR	18 19 48.0	
	comp=Z,324nm,21.6s,baz=16,slow=39						
TRPA	**Tarpa**	**79.74**	**348**	⇑P	**P**	**17 40 43.0**	**+1.0**
BUR08	**Bucovina Ar. S**	**79.85**	**346**	P	**P**	**17 40 42.6**	**-0.2**
CKRC	**Cesky Krumlov**	**79.87**	**354**	*e*P	**P**	**17 40 41.7**	**-1.1**
BURAR	**Bucovina Array**	**79.88**	**346**	P	**P**	**17 40 42.9**	**0.0**
BURAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BURAR	**Bucovina Array**	**79.88**	**346**	P	**P**	**17 40 42.9**	**0.0**
GERES	**GERESS Array B**	**79.89**	**354**	P	**P**	**17 40 43.5**	**+0.5**
	comp=Z,1.4nm,0.9s,baz=355,slow=4.7,SNR=6.7						
GERES				LR	LR	18 16 00.2	
	comp=Z,134nm,21.1s,baz=16,slow=36						
SOEI	**Soe**	**80.14**	**241**	P	**P**	**17 40 44.8**	**+0.1**
SOEI				IAmb	IAmb	17 41 13.2	
	comp=Z,48nm,1.4s						
ANN	**Anapa**	**80.18**	**337**	*e*P	**P**	**17 40 42.3**	**-2.1**
ANN				*e**PP	**sP**	**17 40 55.1**	**-0.3**
ANN				*e*S	**S**	**17 50 45.3**	**-1.8**
ANN				pmax	pmax		
	comp=Z,58nm,1.3s						
ANN				MLR	MLR		
	comp=Z,454nm,19.0s						
ZKTA	**Zakatala**	**80.52**	**330**	P	**P**	**17 40 46.8**	**+0.4**
CONA	**Conrad Observa**	**80.64**	**353**	*e*P	**P**	**17 40 48.6**	**+1.5**
	comp=Z,2.5nm,0.8s						
SEKA	**Sheki**	**80.73**	**329**	P	**P**	**17 40 48.2**	**+0.6**
SOC	**Sochi**	**80.74**	**335**	*e*P	**P**	**17 40 45.0**	**-2.5**
SOC				*e*		17 43 49.1	
SOC				*e*PPP	PPP	17 45 37.7	
SOC				*e*S	**S**	**17 50 50.7**	**-2.3**
SOC				*e*SSS	SSS	17 59 32.0	
SOC				pmax	pmax		
	comp=Z,65nm,0.8s						
HRA	**Herat**	**80.92**	**315**	P	**P**	**17 40 48.3**	**-0.6**
MNGR	**Mingechevir, A**	**81.16**	**329**	P	**P**	**17 40 50.2**	**+0.4**
VRI	**Vrincioaia**	**81.34**	**345**	⇑P	**P**	**17 40 53.3**	**+2.6**
VRI	**Vrincioaia**	**81.34**	**345**	⇑P	**P**	**17 40 53.3**	**+2.6**
COVR	**Voineasa-Covas**	**81.45**	**345**	⇑P	**P**	**17 40 53.1**	**+1.8**
DOPR	**Dopca**	**81.46**	**346**	⇑P	**P**	**17 40 53.1**	**+1.8**
GANJ	**Ganja**	**81.52**	**329**	P	**P**	**17 40 53.0**	**+1.2**
TLCR		**81.64**	**343**	⇑P	**P**	**17 40 54.2**	**+2.0**
TLCR		**81.64**	**343**	⇑P	**P**	**17 40 54.3**	**+2.0**
KBA	**Koelnbreinsper**	**81.67**	**354**	*i* P	**P**	**17 40 53.1**	**+0.5**
	comp=Z,6.5nm,0.9s						
ORTG	**Ortega, Santa**	**81.73**	**84**	P	**P**	**17 40 53.7**	**+0.4**
ORTG				IAmb	IAmb	17 40 55.0	
	comp=Z,17nm,0.8s						
CFR	**Carcaliu**	**81.77**	**344**	⇑P	**P**	**17 40 54.1**	**+1.2**
CFR	**Carcaliu**	**81.77**	**344**	⇑P	**P**	**17 40 54.1**	**+1.2**
MLR	**Muntele Rosu**	**81.83**	**345**	⇑P	**P**	**17 40 56.4**	**+2.9**
MLR	**Muntele Rosu**	**81.83**	**345**	P	**P**	**17 40 54.6**	**+1.1**
	comp=Z,3.7nm,0.6s,baz=45,slow=2.9,SNR=5.8						
FETA	**Feichten**	**81.87**	**356**	*e*P	**P**	**17 40 54.8**	**+1.2**
	comp=Z,5.5nm,1.1s						
SOKA	**Soboth**	**81.95**	**353**	*e*P	**P**	**17 40 54.2**	**+0.2**
	comp=Z,5.6nm,1.0s						
VOIR		**82.03**	**346**	⇑P	**P**	**17 40 57.1**	**+2.7**
VOIR		**82.03**	**346**	⇑P	**P**	**17 40 57.1**	**+2.7**
TPGR	**Topolog**	**82.03**	**343**	⇑P	**P**	**17 40 54.5**	**+0.2**
DAVOX	**Davos/Dischmat**	**82.14**	**357**	P	**P**	**17 40 54.0**	**-1.2**
	comp=Z,1.3nm,0.6s,baz=349,slow=8.8,SNR=2.1						
DAVOX	**Davos/Dischmat**	**82.14**	**357**	P	**P**	**17 40 54.0**	**-1.2**
OBKA	**Obir**	**82.15**	**353**	*e*P	**P**	**17 40 57.8**	**+2.7**
	comp=Z,4.6nm,0.9s						
HARR	**Harsova**	**82.28**	**344**	⇑P	**P**	**17 40 56.8**	**+1.2**
HARR	**Harsova**	**82.28**	**344**	⇑P	**P**	**17 40 56.8**	**+1.2**
JRMM	**Jerantut**	**82.29**	**267**	P	**P**	**17 40 57.0**	**+0.9**
BZS	**Buzias**	**82.33**	**348**	⇑P	**P**	**17 40 56.4**	**+0.5**
BZS	**Buzias**	**82.33**	**348**	⇑P	**P**	**17 40 56.4**	**+0.5**
KULM	**Kulim**	**82.35**	**269**	P	**P**	**17 40 57.0**	**+0.6**
GZR	**Gura Zlata**	**82.40**	**347**	⇑P	**P**	**17 40 57.2**	**+0.9**
GZR	**Gura Zlata**	**82.40**	**347**	⇑P	**P**	**17 40 57.2**	**+0.9**
TIRR	**Tirgusor**	**82.42**	**343**	⇑P	**P**	**17 40 57.6**	**+1.3**
TIRR	**Tirgusor**	**82.42**	**343**	P	**P**	**17 40 57.7**	**+1.3**
TIRR				pmax	pmax		
	comp=Z,27nm,0.9s						
TIRR	**Tirgusor**	**82.42**	**343**	P	**P**	**17 40 57.7**	**+1.3**
TIRR				IAmb	IAmb	17 40 58.8	
	comp=Z,27nm,0.9s						
LKRN	**Lenkeran, Azer**	**82.45**	**327**	P	**P**	**17 40 56.6**	**0.0**
GNI	**Garni**	**82.47**	**330**	LR	LR	18 23 47.0	
	comp=Z,272nm,19.1s,baz=356,slow=40						
CAO2	**Cobano, Puntar**	**82.47**	**84**	P	**P**	**17 40 57.6**	**+0.5**
CAO2				IAmb	IAmb	17 40 58.8	
	comp=Z,38nm,0.8s						
IPM	**Ipoh**	**82.74**	**268**	P	**P**	**17 40 59.0**	**+0.5**
FRGS	**Fruska Gora**	**83.00**	**349**	⇑P	**P**	**17 41 00.8**	**+1.3**
MYKOM	**Kota Tinggi**	**83.05**	**264**	P	**P**	**17 41 01.0**	**+0.9**
NAX	**Nakhchivan**	**83.12**	**329**	P	**P**	**17 41 01.8**	**+1.6**
WB0	**Warramunga Arr**	**83.51**	**227**	P	**P**	**17 41 01.1**	**-1.1**
WR0	**Warramunga Arr**	**83.61**	**227**	P	**P**	**17 41 01.6**	**-1.1**
WRAB	**Tennant Creek**	**83.67**	**227**	*ce*P	**P**	**17 41 00.6**	**-2.4**
WRAB				pmax	pmax		
	comp=Z,17nm,1.7s						
WRAB	**Tennant Creek**	**83.67**	**227**	P	**P**	**17 41 02.1**	**-1.0**
WB2	**Warramunga Arr**	**83.68**	**227**	P	**P**	**17 41 02.4**	**-0.7**
WB2				IAmb	IAmb	17 41 04.0	
	comp=Z,13nm,1.1s						
WRA	**Warramunga Arr**	**83.69**	**227**	P	**P**	**17 41 02.4**	**-0.8**
	comp=Z,5.9nm,0.9s,baz=38,slow=6.2,SNR=33						
WRA				LR	LR	18 15 25.5	
	comp=Z,202nm,20.5s,baz=25,slow=34						
WRA	**Warramunga Arr**	**83.69**	**227**	*i* P	**P**	**17 41 02.7**	**-0.4**
WRA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
WRA	**Warramunga Arr**	**83.69**	**227**	P	**P**	**17 41 02.6**	**-0.5**
SRBA	**San Rafael, Bu**	**83.91**	**83**	P	**P**	**17 41 04.9**	**+0.2**
SRBA				IAmb	IAmb	17 41 06.4	
	comp=Z,11nm,0.7s						
PLVB	**Pleven**	**84.09**	**346**	⇑P	**P**	**17 41 06.0**	**+1.0**
RIOS	**Rincon, Osa**	**84.22**	**83**	P	**P**	**17 41 07.3**	**+1.2**
RIOS				IAmb	IAmb	17 41 08.9	
	comp=Z,29nm,0.9s						
BOVS	**Bovan**	**84.27**	**348**	⇓P	**P**	**17 41 06.4**	**+0.5**
DR12	**Loma Pena Alta**	**84.88**	**66**	P	**P**	**17 41 10.1**	**+0.7**
VTS	**Vitosha**	**85.05**	**347**	⇑P	**P**	**17 41 10.2**	**+0.1**
VTS	**Vitosha**	**85.05**	**347**	⇑P	**P**	**17 41 10.2**	**+0.1**
VTS	**Vitosha**	**85.05**	**347**	P	**P**	**17 41 09.7**	**-0.4**
PDG	**Podgorica**	**85.76**	**349**	⇓P	**P**	**17 41 13.9**	**+0.5**
PDG	**Podgorica**	**85.76**	**349**	P	**P**	**17 41 13.1**	**-0.3**
PDG				IAmb	IAmb	17 41 29.0	
	comp=Z,10nm,0.9s						
BR131	**Keskin Array S**	**85.88**	**338**	P	**P**	**17 41 13.8**	**-0.5**
BR131				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BR131	**Keskin Array S**	**85.88**	**338**	P	**P**	**17 41 13.8**	**-0.5**
BRTR	**Keskin Array B**	**85.88**	**338**	P	**P**	**17 41 14.1**	**-0.2**
	comp=Z,2.0nm,1.0s,baz=78,slow=1.8,SNR=7.2						
BRTR				LR	LR	18 25 45.9	
	comp=Z,132nm,18.8s,baz=30,slow=40						
BRTR	**Keskin Array B**	**85.88**	**338**	*i* P	**P**	**17 41 16.2**	**+1.9**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NRCA	**Norcia**	**85.91**	**354**	P	**P**	**17 41 14.2**	**0.0**
ANTO	**Ankara**	**85.94**	**339**	⇑P	P	17 40 54.7	-20
FITZ	**Fitzroy Crossi**	**86.35**	**235**	LR	LR	18 16 55.1	
	comp=Z,156nm,21.9s,baz=37,slow=34						
HYB	**Hyderabad**	**86.41**	**293**	*i* P	**P**	**17 41 16.0**	**-1.0**
AS31	**Alice Springs**	**87.12**	**226**	P	**P**	**17 41 20.5**	**+0.3**
ASAR	**Alice Springs**	**87.12**	**226**	P	**P**	**17 41 20.2**	**0.0**
	comp=Z,9.6nm,0.9s,baz=30,slow=4.5,SNR=67						
ASAR				LR	LR	18 16 45.8	
	comp=Z,258nm,20.8s,baz=31,slow=33						
ASAR	**Alice Springs**	**87.12**	**226**	P	**P**	**17 41 20.5**	**+0.3**
ASAR	**Alice Springs**	**87.12**	**226**	P	**P**	**17 41 20.5**	**+0.3**
POO	**Poona**	**88.18**	**298**	*e*P	**P**	**17 41 24.0**	**-1.6**
ESDC	**Sonseca Array**	**89.00**	**7**	P	**P**	**17 41 29.1**	**-0.1**
	comp=Z,1.8nm,0.9s,baz=340,slow=4.3,SNR=11						
ESDC				LR	LR	18 24 04.3	
	comp=Z,96nm,18.4s,baz=320,slow=37						
ESDC	**Sonseca Array**	**89.00**	**7**	P	**P**	**17 41 29.4**	**+0.2**
MOTC	**Monteria, Cord**	**89.01**	**77**	P	**P**	**17 41 29.4**	**-0.1**
ZARC	**Zaragoza, Cauc**	**90.51**	**77**	P	**P**	**17 41 36.0**	**-0.5**
ZARC				IAmb	IAmb	17 41 37.9	
	comp=Z,13nm,1.1s						
STKA	**Stephens Creek**	**91.25**	**216**	P	**P**	**17 41 40.0**	**+0.6**
	comp=Z,9.1nm,0.8s,baz=341,slow=8.5,SNR=16						
STKA				LR	LR	18 18 03.1	
	comp=Z,266nm,20.0s,baz=23,slow=32						
STKA	**Stephens Creek**	**91.25**	**216**	P	**P**	**17 41 40.0**	**+0.6**
SDV	**Santo Domingo**	**91.98**	**73**	P	**P**	**17 41 43.6**	**+0.1**
SDV				IAmb	IAmb	17 41 45.0	
	comp=Z,8.5nm,0.7s						
ROSC	**El Rosal**	**92.91**	**79**	LR	LR	18 25 33.7	
	comp=Z,38nm,20.1s,baz=246,slow=37						
RAYN	**Ar Rayn**	**97.36**	**323**	P	**P**	**17 42 07.6**	**-0.3**
RAYN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
RAYN	**Ar Rayn**	**97.36**	**323**	P	**P**	**17 42 07.5**	**-0.3**
RAYN				IAmb	IAmb	17 42 08.9	
	comp=Z,3.8nm,0.9s						
TORD	**Torodi Ar. Bea**	**115.69**	**4**	PKP	**PKiKP**	**17 47 16.4**	**-0.4**
	comp=Z,2.2nm,0.7s,baz=346,slow=2.6,SNR=12						
TORD				PKKPbc	**PKKPbc**	**17 57 46.7**	**-0.4**
	comp=Z,1.9nm,0.9s,baz=187,slow=1.3,SNR=10.0						
TORD	**Torodi Ar. Bea**	**115.69**	**4**		PKKPbc	17 57 48.2	+1.1
H03N2	**Juan Fernandez**	**118.89**	**108**	T	T	19 57 31.6	
	baz=317,slow=77,SNR=164						
H03N1	**Juan Fernandez**	**118.90**	**108**	T	T	19 57 53.3	
	baz=317,slow=77,SNR=39						
H03N3	**Juan Fernandez**	**118.90**	**108**	T	T	19 57 46.9	
	baz=317,slow=77,SNR=32						
DBIC	**Dimbokro**	**121.58**	**11**	PKP	**PKPdf**	**17 47 28.1**	**-0.2**
	comp=Z,3.6nm,0.7s,baz=356,slow=3.0,SNR=3.6						
KMBO	**Kilima Mbogo**	**123.03**	**320**	PKP	**PKiKP**	**17 47 31.7**	**+0.1**
	comp=Z,2.9nm,0.8s,baz=56,slow=2.1,SNR=6.7						
KMBO	**Kilima Mbogo**	**123.03**	**320**	PKIKP	**PKiKP**	**17 47 32.6**	**+1.1**
KMBO	**Kilima Mbogo**	**123.03**	**320**	PKPdf	**PKiKP**	**17 47 32.6**	**+1.1**
AQDB	**Aquidauana**	**123.98**	**80**	PKPdf	**PKPdf**	**17 47 32.0**	**-0.5**
LC01	**Cunco**	**126.77**	**108**	PKPdf	**PKPdf**	**17 47 37.0**	**-0.4**
CPUP	**Villa Florida**	**127.25**	**87**	PKP	**PKPdf**	**17 47 38.5**	**-0.1**
	comp=Z,3.8nm,0.8s,baz=341,slow=2.9,SNR=8.6						
CPUP	**Villa Florida**	**127.25**	**87**	PKPdf	**PKPdf**	**17 47 38.4**	**-0.2**
PLCA	**Paso Flores**	**128.72**	**109**	PKP	**PKiKP**	**17 47 41.6**	**-0.1**
	comp=Z,8.3nm,0.9s,baz=291,slow=3.8,SNR=12						
QSPA	**South Pole Qui**	**141.12**	**180**		PKPpre	17 47 56.6	
TSUM	**Tsumeb**	**146.39**	**338**		**PKPab**	**17 48 16.0**	**-0.3**
MAW	**Mawson**	**147.92**	**218**	PKPbc	**PKPbc**	**17 48 18.2**	**+0.1**
	comp=Z,26nm,0.8s,baz=84,slow=2.1,SNR=43						
MAW	**Mawson**	**147.92**	**218**		**PKPbc**	**17 48 18.6**	**+0.5**
BOSA	**Boshof**	**152.64**	**318**	PKPbc	**PKPbc**	**17 48 30.8**	**-0.1**
	comp=Z,15nm,0.8s,baz=43,slow=1.4,SNR=18						
BOSA	**Boshof**	**152.64**	**318**		**PKPbc**	**17 48 30.9**	**+0.1**
SYO	**Syowa Base**	**155.87**	**210**	⇓*e*PKPdf	**PKPdf**	**17 48 27.6**	**+0.7**
VNA3	**Neumayer Olymp**	**158.98**	**167**	PKPab	**PKPab**	**17 49 06.8**	**-0.6**
VNA3	**Neumayer Olymp**	**158.98**	**167**	PKPdf	**PKPdf**	**17 48 30.1**	**-0.6**
SNAA	**Sanae**	**159.32**	**173**	PKPab	**PKPab**	**17 49 08.7**	**-0.3**
SNAA	**Sanae**	**159.32**	**173**	PKPdf	**PKPdf**	**17 48 30.7**	**-0.5**
SNAA	**Sanae**	**159.32**	**173**	PKP2	**PKPab**	**17 49 08.7**	**-0.3**
SNAA	**Sanae**	**159.32**	**173**	PKPab	**PKPab**	**17 49 08.7**	**-0.3**
VNA2	**Neumayer--Watz**	**159.57**	**168**	PKPab	**PKPab**	**17 49 09.9**	**-0.1**
VNA2	**Neumayer--Watz**	**159.57**	**168**	PKPdf	**PKPdf**	**17 48 31.7**	**+0.2**
VNA1	**Neumayer--Stat**	**159.71**	**167**	PKPab	**PKPab**	**17 49 10.3**	**-0.3**
VNA1	**Neumayer--Stat**	**159.71**	**167**	PKPdf	**PKPdf**	**17 48 30.7**	**-0.9**

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*ATH **12** 17:39:41.9, 39°.76N×26°.01E, h38km±6km, ML1.5/5 Error ellipse: s-maj=6.7km s-min=1.0km az=215.0*

*DDA **12** 17:39:42.1, 39°.77N×26°.13E, h6km±2km, ML1.6*

ISK 12 17:39:41.5, 39°.78N×26°.10E, h9km, ML1.7/12**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOZC	**Bozcaada**	**0.07**	**328**	*i* P	Pg	17 39 44.5	+0.8
BOZC				IAML		17 39 46.0	
	comp=E,522nm,0.2s						
BOZC				IAML		17 39 46.0	
	comp=N,475nm,0.3s						
BOZC				*i* S	Sg	17 39 46.1	+1.0
BOZC	**Bozcaada**	**0.07**	**328**	PG	Pg	17 39 44.4	+0.8
EZN	**Ezine**	**0.18**	**75**	PG	Pg	17 39 45.8	+0.6
EZN				SG	Sg	17 39 48.7	+1.0
ECEA	**Canakkale, Ece**	**0.27**	**12**	*i* P	Pb	17 39 47.9	-0.7
ECEA				IAML		17 39 52.0	
	comp=E,117nm,0.2s						
ECEA				IAML		17 39 52.0	
	comp=N,124nm,0.3s						
ECEA				*i* S	Sb	17 39 52.4	-1.0
KOCA	**Canakkale, Ayv**	**0.28**	**174**	*i* P	Pg	17 39 47.8	+0.7
KOCA				*i* S	Sb	17 39 52.4	-1.1
GPNR	**Gulpinar-Canak**	**0.32**	**176**	PG	Pg	17 39 48.3	+0.4
GPNR				SG	Sg	17 39 53.4	+1.2
GOKA	**anakkale-Gk**	**0.44**	**340**	*i* P	Pg	17 39 50.6	+0.6
GOKA				*i* S	Sg	17 39 54.9	-0.9
GADA	**Gvkgeada**	**0.44**	**339**	PG	Pg	17 39 50.5	+0.4
PRK	**Paraskevi**	**0.55**	**166**	P	Pb	17 39 53.8	+0.5
PRK				S	Sb	17 40 01.3	+0.1
PRK				AML	AML	17 40 04.7	
	comp=N,70µm,0.3s						
PRK				AML	AML	17 40 05.7	
	comp=E,65µm,0.2s						
SIGR	**SIGRI**	**0.60**	**199**	P	Pg	17 39 53.4	+0.4
SIGR				S	Sb	17 40 02.1	-0.6
SIGR				AML	AML	17 40 02.4	
	comp=E,200µm,0.2s						
SIGR				AML	AML	17 40 02.8	
	comp=N,434µm,0.3s						
SIGR	**SIGRI**	**0.60**	**199**	PG	Pg	17 39 53.4	+0.3
SIGR				SG	Sb	17 40 02.4	-0.3
GELI	**Tayfur-Gelibol**	**0.68**	**25**	PG	Pg	17 39 54.9	+0.3
LIA	**Limnos Island**	**0.72**	**280**	P	Pg	17 39 55.6	+0.3
LIA				S	Sg	17 40 04.1	-0.6
LIA				AML	AML	17 40 08.8	
	comp=N,47µm,0.3s						
LIA				AML	AML	17 40 08.9	
	comp=E,74µm,0.4s						
LPK	**Lapseki**	**0.78**	**40**	PG	Pg	17 39 56.6	+0.1
BUHA	**Balikesir, Bur**	**0.80**	**110**	*i* P	Pb	17 39 57.5	-0.2
BUHA				*i* S	Sb	17 40 08.2	-0.3
BUHA				IAML		17 40 11.0	
	comp=E,19nm,0.5s						
BUHA				IAML		17 40 11.0	
	comp=N,17nm,0.3s						
SMTH	**Samothraki Isl**	**0.82**	**328**	P	Pg	17 39 57.4	+0.1
SMTH				S	Sb	17 40 08.6	-0.5
SMTH				AML	AML	17 40 10.8	
	comp=N,88µm,0.1s						
SMTH				AML	AML	17 40 11.1	
	comp=E,79µm,0.2s						
CAVK	**Edirne/Enez-Ca**	**0.91**	**3**	*i* P	Pb	17 39 59.3	-0.2
CAVK				*i* S	Sn	17 40 13.7	-0.1
CAVK				IAML		17 40 15.0	
	comp=E,12nm,0.3s						
CAVK				IAML		17 40 15.0	
	comp=N,12nm,0.3s						
DKL	**Dikili**	**0.94**	**138**	PG	Pn	17 40 00.5	-0.4
ERIK	**Erikli-Kesan**	**0.94**	**19**	PG	Pg	17 39 59.6	-0.1
ENEZ	**Enez**	**0.96**	**2**	PG	Pb	17 40 00.6	+0.3
KRBG	**Karabiga-Canak**	**1.10**	**56**	PN	Pn	17 40 03.2	+0.1
ALN	**Alexandroupoli**	**1.12**	**358**	P	Pg	17 40 02.4	-0.5
ALN				S	Sb	17 40 18.2	+0.5
ALN				AML	AML	17 40 19.1	
	comp=E,32µm,0.3s						
ALN				AML	AML	17 40 19.2	
	comp=N,32µm,0.4s						
ALN	**Alexandroupoli**	**1.12**	**358**	PN	Pb	17 40 03.0	0.0
KESN	**Edirne-Kesan**	**1.14**	**23**	*i* P	Pb	17 40 03.5	-0.1
KESN				*i* S	Sg	17 40 17.9	-0.2
KESN				IAML		17 40 22.0	
	comp=E,16nm,0.2s						
KESN				IAML		17 40 22.0	
	comp=N,16nm,0.2s						
THAS	**Thassos island**	**1.34**	**308**	P	Pn	17 40 05.7	-0.8
THAS				S	Sb	17 40 22.3	-1.9
MAR4	**Marsite Statio**	**1.36**	**42**	PN	Pb	17 40 07.4	+0.2
CHOS	**Chios island**	**1.39**	**182**	P	Pn	17 40 06.2	-1.0
CHOS	**Chios island**	**1.39**	**182**	PN	Pb	17 40 07.6	-0.1
UKOP	**Uzunkopru-Edir**	**1.41**	**16**	PN	Pb	17 40 07.9	-0.1
MRMT	**Marmara Adasi**	**1.41**	**54**	PN	Pn	17 40 07.7	+0.3
RDO	**Rodhopi**	**1.43**	**343**	P	Pn	17 40 07.6	-0.1
RDO				S	Sn	17 40 25.6	-1.1
RDO	**Rodhopi**	**1.43**	**343**	PN	Pn	17 40 07.8	+0.1

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*IDC **12** 17:41:47.0±1.4, 52°.16N×171°.25W, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.4/67, mbtmp3.6/4, Error ellipse: s-maj=53.9km s-min=28.1km az=4.0*

*AEIC **12** 17:41:56±0.9, 52°.3N±0°.1×171°.04W±0°.10, h70km±7km, ML3.3/23, Error ellipse: s-maj=20.5km s-min=6.0km az=162.0*

*NEIC **12** 17:41:57.5±1.3, 52°.5N±0°.1×171°.08W±0°.08, h74km±7km, Error ellipse: s-maj=16.6km s-min=6.1km az=167.0*

ISC 12 17:41:55.4±0.9**, 52°.3N**±0°.1×**171°.04W**±0°.05**, h48km, n31, σ2s.30**/30**, mb3.6**/4**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	**Nikolski High**	**1.49**	**63**		**Pn**	**17 42 21.1**	**+1.4**
NIKH					**Sn**	**17 42 40.4**	**+2.4**
KOSE	**Korovin Southe**	**1.84**	**272**		**Pn**	**17 42 25.8**	**+1.3**
KOFP	**Korovin Flat P**	**1.88**	**270**		**Pn**	**17 42 26.9**	**+1.9**
OKSP	**Okmok Steeple**	**1.92**	**59**		**Pn**	**17 42 27.3**	**+1.7**
KOKL	**Mount Kliuchef**	**1.94**	**272**		**Pn**	**17 42 27.5**	**+1.6**
OKSO	**Okmok South**	**2.04**	**58**		**Pn**	**17 42 28.8**	**+1.6**
OKSO					**Sn**	**17 42 54.7**	**+3.1**
OKCE	**Okmok Cone E**	**2.08**	**56**		**Pn**	**17 42 29.4**	**+1.7**
OKTU	**Okmok Mt. Tuli**	**2.12**	**58**		**Pn**	**17 42 29.8**	**+1.5**
MAPS	**Pakushin South**	**2.90**	**57**		**Pn**	**17 42 40.8**	**+1.8**
MAPS					**Sn**	**17 43 16.2**	**+3.7**
MNAT	**Makushin Natee**	**3.07**	**57**		**Pn**	**17 42 42.9**	**+1.6**
UNV	**Unalaska Valle**	**3.14**	**59**		**Pn**	**17 42 44.1**	**+1.9**
UNV					**Sn**	**17 43 22.0**	**+3.5**
GSTD	**Great Sitkin T**	**3.15**	**267**		**Pn**	**17 42 44.1**	**+1.6**
ADK	**Adak**	**3.50**	**265**		**Pn**	**17 42 49.8**	**+2.6**
ADK					**Sn**	**17 43 31.7**	**+4.3**
AKBBA	**Akutan Broad B**	**3.56**	**58**		**Pn**	**17 42 50.3**	**+2.3**
AKUT	**Akutan**	**3.66**	**58**	Pn	**Pn**	**17 42 49.1**	**-0.2**
KIWB	**Kanaga Island**	**3.79**	**266**	Pn	**Pn**	**17 42 53.7**	**+2.4**
SPIA	**Saint Paul Isl**	**4.90**	**5**	Pn	**Pn**	**17 43 06.2**	**-0.2**
AMKA	**Amchitka**	**6.06**	**265**	Pn	**Pn**	**17 43 24.4**	**+2.1**
SDPT	**Sand Point**	**6.96**	**60**	Pn	**Pn**	**17 43 35.6**	**+1.1**
OHAK	**Old Harbor**	**11.37**	**57**	Pn	**Pn**	**17 44 32.7**	**-2.1**
KDAK	**Kodiak Island**	**11.91**	**55**	Pn	**Pn**	**17 44 39.2**	**-3.0**
	0.2nm,0.3s,baz=279,slow=13,SNR=1.7						
SEY	**Seymchan**	**21.96**	**313**	P	**P**	**17 46 42.1**	**-2.5**
	0.9nm,0.4s,baz=106,slow=18,SNR=4.4						
H11N2	**WAKE ISLAND Hy**	**36.78**	**216**	T	T	18 28 16.4	
	baz=20						
H11N3	**WAKE ISLAND Hy**	**36.79**	**216**	T	T	18 28 13.3	
	baz=20						
H11N1	**WAKE ISLAND Hy**	**36.80**	**216**	T	T	18 28 14.1	
	baz=20						
H11S1	**WAKE ISLAND Hy**	**37.97**	**216**	T	T	18 29 54.5	
	baz=22,slow=76,SNR=4.6						
H11S2	**WAKE ISLAND Hy**	**37.99**	**216**	T	T	18 29 56.1	
	baz=22,slow=76,SNR=4.3						
H11S3	**WAKE ISLAND Hy**	**37.99**	**216**	T	T	18 29 55.4	
	baz=22,slow=76,SNR=4.6						
PDAR	**Pinedale Array**	**41.42**	**78**	P	**P**	**17 49 36.4**	**-0.8**
	0.6nm,0.5s,baz=297,slow=4.0,SNR=8.0						
TXAR	**Lajitas Array**	**53.78**	**88**	P	**P**	**17 51 12.1**	**-0.9**
	0.2nm,0.4s,baz=320,slow=5.7,SNR=4.6						
ASAR	**Alice Springs**	**89.57**	**229**	P	**P**	**17 54 45.2**	**-2.3**
	0.2nm,0.5s,baz=24,slow=4.9,SNR=8.2						

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*IDC **12** 17:50:31.2±0.5, 6°.28S×103°.79E, h0km, mb4.4/25, mb1 4.5/26, mb1mx4.2/59, mbtmp4.4/26, ML4.1/1, MS3.0/2, Ms1 3.0/2, ms1mx2.7/45, Error ellipse: s-maj=17.9km s-min=11.5km az=51.0*

*DJA **12** 17:50:34.0±0.3, 6°S±3°×10°4E±°, h10km, M4.3/24, mb4.7/20, mB4.9/10, MLv4.5/24, Mw(mB)4.2/10*

*KLM **12** 17:50:36, 6.°56S×103.°53E, h51^{km}, mb4.5*
*NEIC **12** 17:50:37.9±1.1, 6.°27S±0.°06×103.°82E±0.°03, h46^{km}±7^{km}, mb4.7/43, Error ellipse: s-maj=9.8km s-min=3.0km az=155.0*
ISC 12 17:50:36.0±0.5**, 6.°41S**±0.°06×**103.°71E**±0.°05**, h35^{km}, n164, σ1.^{s}54**/161**, mb4.8**/64**, 1D, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KASI	Kota Agung	1.18	41	P	Pn	17 50 55.2	-0.9
KASI				S	Sn	17 51 11.9	+1.0
LWLI	Liwa	1.43	14	P	Pn	17 50 59.4	-0.2
LWLI				S	Sn	17 51 20.9	+3.7
BLSI	Bandar Lampung	1.85	56	P	Pn	17 51 05.8	+0.6
KLI	Kotabumi	1.92	37	P	Pn	17 51 07.4	+1.2
MDSI	Maura Dua	1.97	14	P	Pn	17 51 07.6	+0.7
CGJI	Cibinong	1.98	96	P	Pn	17 51 05.7	-1.3
KLSI		1.99	31	P	Pn	17 51 07.9	+0.7
MNAI	Manna	2.17	340	P	Pn	17 51 11.5	+1.7
MNAI	Manna	2.17	340	Pn	Pn	17 51 10.2	+0.4
MNAI	Manna	2.17	340	P	Pn	17 51 11.0	+1.2
SBJI	Serang	2.42	83	P	Pn	17 51 14.1	+1.0
LHSI	Lahat	2.58	356	P	Pn	17 51 17.8	+2.5
DBJI	Dramaga	3.02	93	P	Pn	17 51 22.0	+0.6
CBJI	Citeko	3.12	90	P	Pn	17 51 25.1	+2.4
CNJI	Cibinong	3.51	105	P	Pn	17 51 27.5	-0.6
MASI	Maura Aman, Be	3.57	336	P	Pn	17 51 30.2	+1.2
PMBI	Palembang	3.62	17	P	Pn	17 51 30.7	+1.0
PMBI	Palembang	3.62	17		Pn	17 51 29.3	-0.4
PMBI	Palembang	3.62	17	P	Pn	17 51 31.7	+2.0
LEM	Lembang	3.90	96	Pn	Pn	17 51 33.7	0.0
	14nm,0.3s,baz=300,slow=20,SNR=18						
LEM				Sn	Sn	17 52 21.6	+3.2
	16nm,0.3s,baz=162,slow=23,SNR=4.5						
LEM				LR	LR	17 53 26.7	
	comp=Z,172nm,20.1s,baz=72,slow=46						
LEM	Lembang	3.90	96	P	Pn	17 51 35.0	+1.3
JMBI	JAMBI	4.75	359	P	Pn	17 51 47.1	+1.9
PPBI	Pangkal Pinang	4.87	30	P	Pn	17 51 48.4	+1.6
CMJI	Cimerak	4.89	106	P	Pn	17 51 47.4	+0.2
PPSI	Pulau Pagai	5.17	314	P	Pn	17 51 51.2	+0.2
	1.2nm178nm,0.8s						
DSRI	Dabo	5.96	8	P	Pn	17 52 03.2	+1.4
	0.1nm526nm17nm,0.7s						
PDSI	Padang	6.36	329	P	Pn	17 52 06.7	-0.6
	0.1nm18nm,1.1s						
PPI	Padang Panjang	6.78	331	P	Pn	17 52 16.5	+3.4
	0.1nm17nm,0.4s						
SISI	Saibi	6.84	317	P	Pn	17 52 14.4	+0.5
	0.2nm35nm,0.7s						
UGM	Wanagama	6.92	103	P	Pn	17 52 16.1	+1.0
	0.7nm97nm,1.0s						
UGM	Wanagama	6.92	103		Pn	17 52 15.9	+0.8
UGM	Wanagama	6.92	103	P	Pn	17 52 16.4	+1.3
PCJI	Pacitan	7.61	104	P	Pn	17 52 24.6	0.0
	0.3nm73nm,1.0s						
GSI	Gunungsitoli	9.81	321	Pn	Pn	17 52 52.9	-1.8
GSI	Gunungsitoli	9.81	321	P	Pn	17 52 53.1	-1.7
GMJI	Gumukmas	9.83	101	P	Pn	17 52 55.7	+0.8
	19nm,0.6s						
KSM	Kuching	10.23	40	P	Pn	17 53 04.0	+3.5
ABJI	Asem Bagus	10.53	98	P	Pn	17 53 06.5	+1.9
	116nm,0.7s						
JAGI	Jajag, Banyuwa	10.55	102	P	Pn	17 53 04.9	0.0
	71nm,1.0s						
JAGI	Jajag, Banyuwa	10.55	102	Pn	Pn	17 53 02.4	-2.5
SRBI	Singaraja	11.53	99	P	Pn	17 53 18.3	0.0
	49nm,0.7s						
KULM	Kulim	12.02	345	P	Pn	17 53 27.0	+2.0
PLAI	Plampang	14.14	101	P	Pn	17 53 51.4	-2.6
	32nm,1.0s						
KAPI	Kappang	16.02	86	LR	LR	18 01 27.6	
	comp=Z,70nm,18.8s,baz=303,slow=41						
BKSI	Bulukumba	16.36	87	P	Pn	17 54 24.0	+0.8
	266nm30nm,1.0s						
MPSI	Mapaga	17.49	68	P	P	17 54 38.6	+0.3
	522nm13nm,0.7s						
MMRI	Maumere	18.50	98	P	P	17 54 46.8	-2.6
MMRI				IAmb	IAmb	17 55 03.7	
	comp=Z,42nm,0.9s						
TOLI2	Tolitoli	18.61	67	P	P	17 54 50.1	-0.5
APSI	Ampana	18.71	74	P	Pn	17 54 54.6	+2.3
	comp=Z,427nmcomp=Z,43nm,0.9s						
MRSI	Marisa	19.44	70	P	P	17 54 59.8	+0.1
	comp=Z,453nmcomp=Z,55nm,0.6s						
LUWI	Luwuk	19.75	75	P	Pn	17 55 05.4	+0.6
	comp=Z,475nmcomp=Z,55nm,1.2s						
LUWI	Luwuk	19.75	75	P	P	17 55 00.2	-2.9
BATI	Baumata	20.09	102	P	P	17 55 05.8	-1.1
	comp=Z,37nm,0.4s,baz=253,slow=1.0,SNR=20						
BATI				S	S	17 58 43.1	-7.9
	comp=Z,7.0nm,0.7s,baz=64,slow=23,SNR=2.0						
BATI	Baumata	20.09	102	P	P	17 55 07.4	+0.5
	comp=Z,48nm,0.9s						
GTOI	Gorontalo	20.50	71	P	P	17 55 11.4	+0.2
	comp=Z,9.0nm,1.0s						
SOEI	Soe	20.62	101	P	P	17 55 11.4	-1.3
SOEI	Soe	20.62	101	P	P	17 55 10.5	-2.2
UBPT	Khong Chiam	21.62	5	P	P	17 55 21.9	-1.4
FITZ	Fitzroy Crossi	24.34	120	P	P	17 55 51.0	+0.3
	comp=Z,2.4nm,0.9s,baz=322,slow=8.6,SNR=5.8						
FITZ				S	S	18 00 15.3	+7.3
	comp=Z,1.0nm,0.8s,baz=333,slow=16,SNR=1.2						
CM31	Chiang Mai Arr	25.16	349	P	P	17 55 56.5	-1.7
CM31				IAmb	IAmb	17 55 59.5	
	comp=Z,23nm,0.8s						
CMAR	Chiang Mai Arr	25.16	349	P	P	17 55 57.0	-1.2
	comp=Z,20nm,0.8s,baz=182,slow=9.0,SNR=126						
CMAR	Chiang Mai Arr	25.16	349	P	P	17 55 56.4	-1.8
CHTO	Chiang Mai	25.50	349	P	P	17 55 59.8	-1.6
CHTO				IAmb	IAmb	17 56 02.2	
	comp=Z,10nm,0.8s						
SIJI	Sorong	28.03	80	P	P	17 56 23.1	-1.2
	comp=Z,2.4nm,0.6s,baz=270,slow=10,SNR=2.0						
H01W3	Cape Leeuwin H	29.92	163	T	T	18 27 58.5	
	baz=340,slow=76,SNR=93						
H01W2	Cape Leeuwin H	29.93	163	T	T	18 27 59.4	
	baz=340,slow=76,SNR=99						
H01W1	Cape Leeuwin H	29.93	163	T	T	18 27 57.4	
	baz=340,slow=76,SNR=91						
H08S2	Diego Garcia H	31.00	266	T	T	18 29 14.2	
	baz=90,slow=75,SNR=107						
H08S3	Diego Garcia H	31.01	266	T	T	18 29 15.1	
	baz=90,slow=75,SNR=123						
H08S1	Diego Carcia H	31.02	266	T	T	18 29 23.4	
	baz=90,slow=75,SNR=78						
WB0	Warramunga Arr	32.62	117	P	P	17 57 02.7	-2.1
WB0				IAmb	IAmb	17 57 05.1	
	comp=Z,6.2nm,0.7s						
WRA	Warramunga Arr	32.63	117	P	P	17 57 04.5	-0.4
	comp=Z,5.2nm,0.7s,baz=288,slow=9.7,SNR=82						
WRA				PcP	PcP	17 59 50.7	0.0
	comp=Z,0.3nm,0.6s,baz=293,slow=2.1,SNR=1.7						
WRA	Warramunga Arr	32.63	117	P	P	17 57 04.0	-0.9
WRAB	Tennant Creek	32.64	117	P	P	17 57 04.4	-0.5
WRAB				IAmb	IAmb	17 57 05.4	
	comp=Z,7.9nm,0.6s						
WB2	Warramunga Arr	32.64	117	P	P	17 57 04.4	-0.6
WB2				IAmb	IAmb	17 57 05.3	
	comp=Z,8.3nm,0.6s						
GYA	Guiyang	32.80	5	⇓P	P	17 57 09.5	+3.2
GYA				pmax	pmax		
	comp=Z,7.0nm,1.9s						
WR0	Warramunga Arr	32.82	117	P	P	17 57 06.2	-0.3
ASAR	Alice Springs	33.70	124	P	P	17 57 14.5	+0.3
	comp=Z,1.5nm,0.7s,baz=310,slow=8.0,SNR=40						
ASAR	Alice Springs	33.70	124	P	P	17 57 14.3	+0.1
AS31	Alice Springs	33.71	124	P	P	17 57 15.2	+0.9
ODAN	Odare	36.66	335	*e*P	P	17 57 40.3	+0.5
	comp=Z,64nm,0.7s						
ENH	Enshi	36.89	8	P	P	17 57 40.4	-1.1
ENH				IAmb	IAmb	17 57 41.9	
	comp=Z,7.2nm,0.7s						
TAPN	Taplejung	36.96	336	*e*P	P	17 57 42.9	+0.4
	comp=Z,75nm,0.8s						
RAMN	Ramite	37.08	334	*e*P	P	17 57 43.9	+0.5
	comp=Z,31nm,0.5s						
CD2	Chengdu	37.11	0	P	P	17 57 43.5	+0.1
CD2				pmax	pmax		
	comp=Z,20nm,1.0s						
JIRN	Jiri	37.87	334	*e*P	P	17 57 50.8	+0.5
	comp=Z,81nm,0.7s						
LSA	Lhasa	37.88	342	P	P	17 57 49.5	-0.9
LSA				IAmb	IAmb	17 57 52.0	
	comp=Z,9.6nm,0.7s						
PKI	Pulchoki	38.14	333	*e*P	P	17 57 52.5	0.0
	comp=Z,19nm,0.6s						
PKIN	Phulchoki	38.15	333	*e*P	P	17 57 52.6	+0.1
	comp=Z,19nm,0.6s						
GUN	Gumba	38.23	334	*e*P	P	17 57 53.8	+0.6
	comp=Z,107nm,0.6s						
DMN	Daman	38.31	333	*e*P	P	17 57 54.0	+0.2
KKN	Kakani	38.39	333	*e*P	P	17 57 54.6	+0.2
	comp=Z,53nm,0.6s						
GKN	Gorkha	38.86	333	*e*P	P	17 57 58.6	+0.3
	comp=Z,39nm,0.7s						
KOLN	Koldanda	39.15	331	*e*P	P	17 58 01.2	+0.4
	comp=Z,64nm,0.8s						
DANN	Dangsing	39.56	332	*e*P	P	17 58 04.8	+0.5
	comp=Z,116nm,0.7s						
PYUN	Piuthan	39.72	331	*e*P	P	17 58 06.1	+0.6
	comp=Z,41nm,0.5s						
XAN	Xi'an	40.53	7	P	P	17 58 11.2	-0.8
XAN				pP	pwP	17 58 23.3	-1.0
XAN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
NJ2	Nanjing	40.89	20	*e*P	P	17 58 17.4	+2.5
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
PMG	Port Moresby	43.12	97	P	P	17 58 32.9	-0.5
	comp=Z,21nm,0.8s,baz=262,slow=6.6,SNR=7.4						
PMG	Port Moresby	43.12	97	P	P	17 58 32.5	-0.9
STKA	Stephens Creek	43.48	131	P	P	17 58 36.8	+0.6
	comp=Z,2.6nm,0.4s,baz=291,slow=7.4,SNR=7.4						
STKA	Stephens Creek	43.48	131	P	P	17 58 36.0	-0.1
GTA	Gaotai	45.74	356	*e*P	P	17 58 54.5	+0.4
GTA				pP	pwP	17 59 06.7	+0.5
GTA				sP	sP	17 59 12.6	+4.7
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,68nm,5.8s						
GTA				LR	LR		
	comp=Z,130nm,16.7s						
GTA				LR	LR		
	comp=Z,160nm,18.2s						
GTA				LR	LR		
	comp=Z,140nm,15.6s						
HHC	Hu-ho-hao-te	47.58	8	*e*P	P	17 59 10.3	+1.8
HHC				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,110nm,5.7s						
BJT	Baijiatuau	47.61	13	P	P	17 59 07.0	-1.6
BJT				IAmb	IAmb	17 59 09.1	
	comp=Z,8.1nm,0.8s						
BJI	Beijing	47.63	13	P	P	17 59 08.3	-0.4
BJI				pmax	pmax		
	comp=Z,13nm,0.7s						
KSAR	Wonju Array Be	49.12	26	P	P	17 59 18.8	-1.4
KSRS	Korea Array	49.15	26	P	P	17 59 20.2	-0.3
	comp=Z,6.0nm,0.7s,baz=222,slow=7.6,SNR=22						
NIL	Nilore	49.20	326	P	P	17 59 19.8	-1.3
WMQ	Urumqi	52.06	345	*e*P	P	17 59 43.2	+0.8
WMQ				pP	pwP	17 59 54.7	-0.1
WMQ				pmax	pmax		
	comp=Z,28nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,150nm,4.7s						
KSH	Kashi	52.41	333	P	P	17 59 44.1	-1.1
KSH				pP	pwP	17 59 56.9	-0.5
KSH				pmax	pmax		
	comp=Z,12nm,0.7s						
KSH				pmax	pmax		
	comp=Z,240nm,7.4s						
MJAR	Matsushiro Arr	53.57	35	P	P	17 59 51.6	-2.1
	comp=Z,1.0nm,0.4s,baz=196,slow=8.5,SNR=4.2						
MJAR	Matsushiro Arr	53.57	35	P	P	17 59 51.8	-1.9
SONM	Songino Array	54.07	2	P	P	17 59 57.7	+0.4
	comp=Z,10nm,0.7s,baz=179,slow=9.1,SNR=40						
SONM	Songino Array	54.07	2	P	P	17 59 57.4	+0.2
ULN	Ulaanbaatar	54.12	3	P	P	17 59 57.5	-0.3
ULN				IAmb	IAmb	17 59 58.7	
	comp=Z,6.7nm,0.7s						
GAR	Garm	54.76	328	P	P	18 00 02.6	+0.1
CHGR	Chuyangaron	55.12	327	P	P	18 00 03.7	-1.4
CHGR				IAmb	IAmb	18 00 07.7	
	comp=Z,11nm,1.0s						
BTK	Batken	55.30	330	P	P	18 00 06.0	-0.2
BTK				IAmb	IAmb	18 00 08.4	
	comp=Z,3.9nm,0.8s						
TKM2	Tokmak 2	55.35	335	P	P	18 00 06.8	+0.1
	SNR=24						
KBK	Karagaybulak	55.41	334	P	P	18 00 08.1	+1.0
	SNR=8.7						
AML	Almayashu	55.53	333	P	P	18 00 08.9	+0.6
	SNR=7.8						
AAK	Ala-Archa	55.59	334	P	P	18 00 05.4	-3.0
FRU1	Bishkek	55.67	334	P	P	18 00 08.8	-0.1
EKS2	Erkin-Say	55.92	334	P	P	18 00 11.3	+0.5
	SNR=18						
USP	Ospenovka	56.09	335	P	P	18 00 11.9	0.0
	SNR=5.3						
OPO	Ambohidratompo	56.28	252	P	P	18 00 15.2	+1.4
	comp=Z,1.3nm,0.7s,baz=87,slow=17,SNR=2.1						
MK31	Makanchi Array	56.29	342	P	P	18 00 12.7	-0.5
MK31				IAmb	IAmb	18 00 14.3	
	comp=Z,4.9nm,0.7s						
MKAR	Makanchi Array	56.29	342	P	P	18 00 12.8	-0.4
	comp=Z,4.5nm,0.6s,baz=153,slow=8.8,SNR=61						
MKAR	Makanchi Array	56.29	342	P	P	18 00 12.7	-0.5
MAKZ	Makanchi	56.40	342	P	P	18 00 13.3	-0.6
MAKZ				IAmb	IAmb	18 00 16.2	
	comp=Z,6.3nm,1.4s						
USA0B	Ussuriysk Arra	56.47	24	P	P	18 00 13.2	-1.2
USA0B				IAmb	IAmb	18 00 18.0	
	comp=Z,5.6nm,0.7s						
USRK	Ussuriysk Ar.	56.47	24	P	P	18 00 13.8	-0.6
	comp=Z,3.9nm,0.5s,baz=206,slow=5.8,SNR=18						
USRK	Ussuriysk Ar.	56.47	24	P	P	18 00 13.5	-0.9
KK31	Karatay Array	57.76	332	P	P	18 00 23.4	-0.2
KKAR	Karatay Array	57.76	332	P	P	18 00 23.2	-0.5
KKAR	Karatay Array	57.76	332	P	P	18 00 22.8	-0.9
KKAR				IAmb	IAmb	18 00 27.0	
	comp=Z,2.1nm,0.6s						
KURK	Kurchatov	60.89	342	P	P	18 00 44.2	-0.9
KURK				IAmb	IAmb	18 00 46.5	
	comp=Z,6.9nm,0.8s						
ASAJ	Asahikawa	61.30	31	P	P	18 00 46.9	-1.1
	comp=Z,7.7nm,0.8s,baz=197,slow=7.3,SNR=7.2						
ZAA0	Zalesovo Array	62.21	348	P	P	18 00 53.4	-0.5
ZALV	Zalesovo Beam	62.21	348	P	P	18 00 53.3	-0.6
	comp=Z,3.7nm,0.3s,baz=153,slow=4.5,SNR=40						
ZALV	Zalesovo Beam	62.21	348	P	P	18 00 53.0	-1.0
BRVK	Borovoye	65.66	339	P	P	18 01 16.1	-0.6
BRVK				IAmb	IAmb	18 01 17.1	
	comp=Z,6.1nm,0.8s						
MAW	Mawson	67.01	196	P	P	18 01 26.4	+1.3
	comp=Z,3.0nm,0.7s,baz=49,slow=6.9,SNR=14						
MAW	Mawson	67.01	196	IAmb	IAmb	18 01 26.9	
	comp=Z,0.9nm,0.6s						
ABKAR	Akbulak array	67.27	331	P	P	18 01 26.7	-0.3
ABKAR				IAmb	IAmb	18 01 29.8	
	comp=Z,7.6nm,0.8s						
AKTO	Aktyubinsk	68.99	331	P	P	18 01 37.5	-0.2
	comp=Z,1.9nm,0.6s,baz=115,slow=5.2,SNR=5.5						
YAK	Yakutsk	71.13	13	P	P	18 01 49.1	-1.6
YAK				IAmb	IAmb	18 01 50.0	
	comp=Z,9.8nm,0.9s						
ARU	Arti	72.72	336	P	P	18 02 00.1	-0.2
	comp=Z,1.5nm,0.6s,baz=129,slow=4.5,SNR=6.7						
ARU	Arti	72.72	336	P	P	18 02 00.3	0.0
ARU				IAmb	IAmb	18 02 01.4	
	comp=Z,8.6nm,1.0s						
KBZ	Khabaz	74.05	319	P	P	18 02 09.4	+1.0
	comp=Z,2.9nm,0.7s,baz=170,slow=2.4,SNR=4.6						
NRIK	Noril'sk	76.41	354	P	P	18 02 20.9	-0.5
	comp=Z,1.6nm,0.3s,baz=172,slow=2.3,SNR=5.1						
NRIK	Noril'sk	76.41	354	P	P	18 02 20.3	-1.2
NRIK				IAmb	IAmb	18 02 21.7	
	comp=Z,8.3nm,1.2s						
VNDA	Vanda	77.15	169	P	P	18 02 27.6	+1.9
	comp=Z,0.8nm,0.7s,baz=290,slow=7.7,SNR=2.1						
BRTR	Keskin Array B	79.01	312	P	P	18 02 37.2	+0.3
	comp=Z,0.7nm,0.8s,baz=142,slow=6.3,SNR=4.9						
KLMR	Klimovskoe	83.39	334	*e*P	P	18 02 56.3	-3.1
KLMR				AMP		18 02 57.8	
	comp=Z,14nm,1.5s						
AKASG	Malin Array Be	85.22	322	P	P	18 03 09.3	+0.4
	comp=Z,0.9nm,0.5s,baz=92,slow=4.5,SNR=4.2						
AKASG	Malin Array Be	85.22	322	IAmb	IAmb	18 03 12.7	
	comp=Z,2.0nm,1.3s						
NACGM	Naroch	87.75	326	*i* P	P	18 03 21.2	-0.1
FINES	FINESS Array B	89.72	332	P	P	18 03 30.8	+0.4
	comp=Z,1.5nm,0.6s,baz=105,slow=4.9,SNR=8.3						
NVAR	Mina Array Bea	130.44	44	PKP	PKPdf	18 09 43.7	0.0
	comp=Z,0.2nm,0.5s,baz=300,slow=1.8,SNR=2.0						
PDAR	Pinedale Array	133.39	34	PKP	PKiKP	18 09 50.0	-0.4
	comp=Z,0.2nm,0.4s,baz=318,slow=2.6,SNR=1.9						
TXAR	Lajitas Array	145.56	45	PKPbc	PKPab	18 10 12.3	+0.4
	comp=Z,4.2nm,0.7s,baz=287,slow=1.4,SNR=46						
TXAR	Lajitas Array	145.56	45		PKPab	18 10 12.4	+0.6

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*UPP **12** 18:00:57.2±0.1, 67.°07N×20.°94E, h0^{km}, ML1.8, Explosion*
*IDC **12** 18:00:58.8±0.9, 67.°19N×21.°23E, h0^{km}, mb1 3.0/4, mb1mx2.9/60, mbtmp3.0/4, ML1.8/4, Error ellipse: s-maj=16.5km s-min=7.1km az=114.0*
*HEL **12** 18:01:00.7±0.2, 66.°93N×21.°37E, h0^{km}, ML2.1, ML1.8(UPP), Explosion*
ISC 12 18:00:58.6±0.8**, 66.°98N**±0.°02×**21.°17E**±0.°04**, h0^{km}, n30, σ1.^{s}89**/40**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASU	Masugnsbyn	0.58	33	P	Pg	18 01 08.0	-1.8
MASU	Masugnsbyn	0.58	33	*i* P	Pg	18 01 08.0	-1.8
ERTU	Ertsjaerv	0.58	136	P	Pb	18 01 10.8	-0.9
ERTU				S	Sb	18 01 20.0	-0.6
ERTU	Ertsjaerv	0.58	136	*e*P	Pg	18 01 09.6	-0.2
ERTU				*e*S	Sb	18 01 19.3	-1.2
HARU	Harads	0.82	186	P	Pg	18 01 14.3	0.0
HARU	Harads	0.82	186	*e*P	Pg	18 01 14.3	0.0
SALU	Saltoluokta	1.12	293	P	Pg	18 01 15.8	-4.2
KLF	Kolari	1.12	75	*e*P	Pg	18 01 19.3	-0.9
LANU	Lannavaara	1.12	16	*e*P	Pg	18 01 20.8	+0.6
LANU				*e*SN	Sn	18 01 39.2	+1.4
KALU	Kalix	1.42	141	*e*PB	Pg	18 01 25.0	-0.8
	baz=322						
TOF	Tornio	1.55	124	*e*PN	Pg	18 01 28.0	-0.3
TOF				MSG		18 01 44.3	
	comp=Z,15nm,0.2s						
HEF	Hetta	1.73	32	*e*PN	Pg	18 01 32.8	+1.2
HEF				MSG		18 01 51.5	
	comp=Z,18nm,0.2s						
HEF				*e*SN	Sg	18 01 54.7	+0.7
RNF	Rovaniemi	1.95	99	*e*PN	Pb	18 01 33.9	-1.1
KIF	Kilpisjarvi	2.04	356	*e*PB	Pg	18 01 38.3	+0.6
	baz=170						
KIF				MSG		18 02 04.0	
	comp=Z,33nm,0.2s						
KIF				*e*SG	Sg	18 02 06.8	+2.6
SGF	Sodankyl	2.14	75	*e*P	Pn	18 01 34.1	-1.4
SGF				*e*SG	Sg	18 02 07.6	+0.4
KTK1	Kautokeino	2.19	20	*e*P	Pn	18 01 35.0	-1.2
FAUS	Fauske	2.33	283	*e*P	Pn	18 01 36.6	-1.5
BURU	Burvik	2.40	178	*e*P	Pn	18 01 40.2	+1.1
OUL	Oulu	2.71	132	*e*PG	Pb	18 01 47.2	-0.6
OUF	Merijarvi	3.00	149	*e*PG	Pg	18 01 55.1	-1.0
OUF				MSG		18 02 26.8	
	comp=Z,2.1nm,0.2s						
ARA0	ARCESS Array S	3.04	30	*e*P	Pn	18 01 50.3	+2.4
	baz=212						
ARA0				*e*S	Sn	18 02 26.1	+1.2
ARCES	ARCESS Array B	3.04	30	Pn	Pn	18 01 46.2	-1.6
	baz=211,slow=13,SNR=40						
ARCES				Lg	Lg	18 02 27.5	
	baz=214,slow=29,SNR=5.9						
KEV	Kevo	3.53	35	*e*P	Pn	18 01 56.8	+2.2
KU6	Riekki	3.62	101	*e*PB	Pb	18 02 01.3	-2.1
HUSU	Husum	3.74	194	*e*P	Pn	18 01 59.3	+1.8
VAF	Ylistaro	4.00	170	*e*P	Pn	18 02 02.5	+1.4
SUF	Sumiainen	4.77	151	*e*P	Pn	18 02 15.2	+3.6
SUF				*e*SB	Sb	18 03 15.8	-5.1
FINES	FINESS Array B	5.95	157	Pn	Pn	18 02 29.8	+1.9
	comp=Z,0.1nm,0.3s,baz=342,slow=13,SNR=1.3						
FINES				Sn	Sn	18 03 41.8	+5.2
	comp=Z,0.4nm,0.3s,baz=343,slow=23,SNR=6.9						
FINES				Lg	Lg	18 04 12.1	
	comp=Z,0.2nm,0.3s,baz=343,slow=27,SNR=1.9						
NOA	NORSAR Array B	7.38	221	Pn	Pn	18 02 48.5	+1.0
	comp=Z,0.0nm,0.3s,baz=28,slow=14,SNR=1.1						
NOA				Sn	Sn	18 04 11.1	-0.8
	comp=Z,0.0nm,0.3s,baz=44,slow=25,SNR=1.0						
HFS	Hagfors	7.63	209	Pn	Pn	18 02 52.9	+2.0
	comp=Z,0.1nm,0.3s,baz=19,slow=15,SNR=1.9						
HFS				Sn	Sn	18 04 17.6	-0.3
	comp=Z,0.1nm,0.3s,baz=23,slow=27,SNR=1.3						
HFS				Lg	Lg	18 04 56.7	
	comp=Z,0.0nm,0.3s,baz=38,slow=32,SNR=1.5						

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*IDC **12** 18:12:13.6±1.0, 2.°92S×131.°21E, h0^{km}, mb3.9/6, mb1 4.1/7, mb1mx3.8/31, mbtmp4.0/7, ML4.0/1, MS3.1/1, Ms1 3.1/1, ms1mx2.5/39, Error ellipse: s-maj=52.0km s-min=19.1km az=75.0*
*DJA **12** 18:12:18.0±0.3, 3°S±4°×13°1E±°, h10^{km}, M4.4/11, mb4.8/6, mB5.1/4, MLv4.2/11, Mw(mB)4.4/4*
*NEIC **12** 18:12:19.0±1.6, 2.°87S±0.°06×131.°09E±0.°07, h32^{km}±2^{km}, mb4.0/11, Error ellipse: s-maj=10.6km s-min=7.8km az=71.0*
ISC 12 18:12:17.8±0.6**, 3.°02S**±0.°05×**131.°08E**±0.°05**, h35^{km}, n42, σ2.^{s}55**/38**, mb3.9**/6**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	1.17	85	P	Pn	18 12 39.6	+1.9
FAKI				S	Sn	18 12 52.3	-0.2
FAKI	Fak Fak	1.17	85		Pn	18 12 38.8	+1.1
FAKI	Fak Fak	1.17	85	P	Pn	18 12 39.7	+2.0
BNDI	Bandanaira	1.90	218	P	Pn	18 12 52.7	+5.0
SIJI	Sorong	2.15	5	Pn	Pn	18 12 49.8	-1.4
	59nm,0.3s,baz=61,slow=3.5,SNR=378						
SIJI				Sn	Sn	18 13 12.7	-3.9
	64nm,0.3s,baz=147,slow=23,SNR=5.1						
SWI	Sorong	2.15	5	P	Pn	18 12 51.1	-0.1
MSAI	Masohi	2.17	261	P	Pn	18 12 56.9	+5.4
LBMI	Labuha	4.29	303	P	Pn	18 13 22.6	+1.9
SAUI	Saumlaki	4.93	177	P	Pn	18 13 33.4	+3.9
	1.1nm8μm206nm,0.4s						
SAUI	Saumlaki	4.93	177	Pn	Pn	18 13 32.9	+3.4
SAUI				Sn	Sn	18 14 23.3	-2.1
SAUI	Saumlaki	4.93	177	P	Pn	18 13 33.1	+3.6
SANI	Sanana	5.18	281	P	Pn	18 13 34.5	+1.6
	0.3nm1μm26nm,0.5s						
SANI	Sanana	5.18	281	P	Pn	18 13 34.7	+1.8
TNTI	Ternate	5.29	315	P	Pn	18 13 36.1	+1.7
	0.1nm31nm,0.9s						
TNTI	Ternate	5.29	315	Pn	Pn	18 13 36.0	+1.5
TNTI	Ternate	5.29	315	P	Pn	18 13 36.4	+2.0
BAKI	Biak	5.34	70	P	Pn	18 13 37.3	+2.2
	1μm112nm,0.7s						
SOEI	Soe	9.52	225	Pn	Pn	18 14 33.5	+0.9
BATI	Baumata	10.26	226	LR	LR	18 18 41.6	
	comp=Z,114nm,21.6s,baz=46,slow=37						
TOLI2	Tolitoli	11.08	292	Pn	Pn	18 14 47.7	-6.3
PLAI	Plampang	14.43	246	P	P	18 15 44.3	-1.8
FITZ	Fitzroy Crossi	15.90	199	Pn	Pn	18 15 56.7	-2.4
	1.6nm,0.3s,baz=36,slow=9.7,SNR=46						
FITZ				Sn	Sn	18 18 42.4	-12
	0.3nm,0.3s,baz=96,slow=18,SNR=1.6						
WB0	Warramunga Arr	16.95	169	Pn	Pn	18 16 08.3	-4.1
WB0				IAmb	IAmb	18 16 25.3	
	comp=Z,9.7nm,0.8s						
WRAB	Tennant Creek	17.11	169	Pn	Pn	18 16 10.8	-3.6
WRAB				IAmb	IAmb	18 16 24.8	
	comp=Z,9.6nm,0.8s						
WRA	Warramunga Arr	17.12	170	P	Pn	18 16 10.6	-3.9
	comp=Z,1.6nm,0.3s,baz=355,slow=13,SNR=42						
WRA				S	Sn	18 19 12.8	-11
	comp=Z,0.9nm,0.3s,baz=337,slow=23,SNR=5.9						
WRA	Warramunga Arr	17.12	170	P	Pn	18 16 11.5	-3.0
WB2	Warramunga Arr	17.12	169		Pn	18 16 11.4	-3.1
WB2				IAmb	IAmb	18 16 19.3	
	comp=Z,9.7nm,0.8s						
WR0	Warramunga Arr	17.17	169	Pn	Pn	18 16 12.0	-3.2
WR0				IAmb	IAmb	18 16 35.0	
	comp=Z,8.8nm,0.7s						
AS31	Alice Springs	20.70	173	P	Pn	18 16 57.9	+0.2
AS31				IAmb	IAmb	18 16 58.8	
	comp=Z,7.2nm,0.8s						
ASAR	Alice Springs	20.70	173	P	Pn	18 16 57.6	-0.1
	comp=Z,16nm,0.6s,baz=350,slow=10,SNR=406						
ASAR				S	S	18 20 38.4	-6.3

	comp=Z,1.0nm,0.6s,baz=350,slow=22,SNR=2.9						
ASAR	Alice Springs	20.70	173	P	Pn	18 16 57.5	-0.3
STKA	Stephens Creek	30.36	162	P	P	18 18 28.2	+1.8
	comp=Z,1.4nm,0.7s,baz=339,slow=8.6,SNR=1.9						
CMAR	Chiang Mai Arr	38.17	305	P	P	18 19 35.9	+1.6
	comp=Z,0.4nm,0.7s,baz=142,slow=6.6,SNR=4.2						
MK31	Makanchi Array	65.55	325	P	P	18 22 58.8	+0.9
MK31				IAmb	IAmb	18 23 21.5	
	comp=Z,3.8nm,1.4s						
MKAR	Makanchi Array	65.55	325	P	P	18 22 58.9	+1.0
	comp=Z,1.9nm,0.7s,baz=128,slow=7.8,SNR=16						
MKAR	Makanchi Array	65.55	325	P	P	18 22 58.7	+0.7
KURK	Kurchatov	69.73	327	P	P	18 23 25.1	+0.9
BRVK	Borovoye	75.39	327	P	P	18 23 58.8	+1.0
VNDA	Vanda	76.25	173	P	P	18 24 03.1	+0.8
	comp=Z,0.8nm,0.8s,baz=312,slow=7.0,SNR=2.2						
VNDA	Vanda	76.25	173	IAmb	IAmb	18 24 04.6	
	comp=Z,2.4nm,1.1s						
ILAR	Eielson Array	89.31	25	P	P	18 25 10.7	+0.4
	comp=Z,0.4nm,0.8s,baz=243,slow=4.0,SNR=2.1						
TORD	Torodi Ar. Bea	128.99	284	PKP	PKiKP	18 31 23.6	-0.1
	comp=Z,0.2nm,0.6s,baz=36,slow=2.4,SNR=1.7						

*NEIC **12** 18:28:44.8±2.0, 20°.6S±0°.1×178°.0W±0°.1, h495^{km}±6^{km}, mb4.6/64, Error ellipse: s-maj=17.3km s-min=14.9km az=152.0*

*BGR **12** 18:28:45.8±0.0, 20°.72S×178°.41W, h500^{km}*

*IDC **12** 18:28:45.7±2.0, 20°.82S×178°.05W, h509^{km}±16^{km}, mb3.8/19, mb1 3.9/21, mb1mx3.7/43, mbtmp4.6/21, Error ellipse: s-maj=28.0km s-min=13.9km az=140.0*

*NOU **12** 18:28:45.6, 20°.40S×177°.94W, h528^{km}, mb4.6/22, Fiji Islands Region*

ISC 12 18:28:44.2±0.4, **20°.78S**±0°.08×**177°.99W**±0°.07, **h495**^{km}, **n279**, σ**1^{s}.08**/309, **mb4.5**/56, **52C, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAVE	Taveuni	4.44	336	P	P	18 30 07.9	+1.9
TAVE	Taveuni	4.44	336	P	P	18 30 08.0	+1.9
MSVF	Nonsavu	4.81	308	P	P	18 30 11.1	+1.8
	80nm,0.3s,baz=143,slow=6.4,SNR=353						
MSVF				S	S	18 31 22.0	+3.3
	baz=252,slow=20,SNR=1.4						
MSVF	Nonsavu	4.81	308	P	P	18 30 10.8	+1.4
MSVF	Nonsavu	4.81	308	P	P	18 30 11.0	+1.6
MSVF	Nonsavu	4.81	308	P	P	18 30 11.2	+1.8
DGTI	Dogotuki	4.95	334	P	P	18 30 11.8	+1.2
DGTI	Dogotuki	4.95	334	P	P	18 30 12.0	+1.4
AFI	Afiamalu	9.04	42	P	P	18 30 48.8	-2.8
	16nm,0.3s,baz=215,slow=16,SNR=13						
AFI				S	S	18 32 25.6	-11
	10nm,0.3s,baz=112,slow=18,SNR=6.5						
MARNC	Mare, Loyalty	13.07	264	P	P	18 31 34.5	+0.4
MARNC	Mare, Loyalty	13.07	264	P	P	18 31 35.8	+1.7
RTV	Rentapao	13.17	281	P	P	18 31 38.2	+3.0
	222µm,1.2s						
DVP	Devils Point	13.40	281	P	P	18 31 40.4	+2.7
	148µm,0.9s						
PINNC	Pines Island,	13.66	260	P	P	18 31 41.7	+1.3
PINNC	Pines Island,	13.66	260	P	P	18 31 42.7	+2.3
YATNC	Mamie plateau,	14.14	262	P	P	18 31 46.8	+1.3
OUENC	Ouen Island, N	14.21	261	P	P	18 31 46.8	+0.7
OUENC	Ouen Island, N	14.21	261	P	P	18 31 48.3	+2.2
DZM	Mont Dzumac	14.55	262	P	P	18 31 50.5	+0.6
	2.4nm,0.3s,baz=98,slow=18,SNR=26						
DZM	Mont Dzumac	14.55	262	*e*P	P	18 31 50.5	+0.6
	70nm,0.9s						
DZM	Mont Dzumac	14.55	262	P	P	18 31 51.1	+1.2
ONTNC	Ouen Toro	14.56	261	P	P	18 31 50.0	+0.1
ONTNC	Ouen Toro	14.56	261	P	P	18 31 51.3	+1.5
NOUC	Port Laguerre	14.69	262	P	P	18 31 52.4	+1.2
OUZ	Omahuta	16.18	205	P	P	18 32 08.0	+1.3
OUZ	Omahuta	16.18	205	P	P	18 32 12.4	+5.7
RAR	Rarotonga	17.02	95	P	P	18 32 16.8	+1.3
RAR				IAmb	IAmb	18 32 18.1	
	comp=Z,38nm,1.4s						
URZ	Urewera	17.93	193	P	P	18 32 19.4	-4.6
	comp=Z,0.8nm,0.3s,baz=307,slow=20,SNR=1.9						
URZ	Urewera	17.93	193	P	P	18 32 23.7	-0.3
BKZ	Black Stump Fm	18.93	193	P	P	18 32 32.0	-1.2
BKZ	Black Stump Fm	18.93	193	P	P	18 32 35.3	+2.1
BFZ	Birch Farm	20.44	193	P	P	18 32 50.2	+3.3
QRZ	Quartz Range	21.55	200	P	P	18 32 57.7	+0.7
QRZ	Quartz Range	21.55	200	P	P	18 32 58.8	+1.8
NNZ	Nelson	21.65	198	P	P	18 32 59.1	+1.2
THZ	Tophouse	22.29	198	P	P	18 33 03.7	0.0
THZ				IAmb	IAmb	18 33 31.4	
	comp=Z,17nm,1.0s						
KHZ	Kahutara	22.72	196	P	P	18 33 07.2	-0.2
KHZ				IAmb	IAmb	18 33 14.9	
	comp=Z,29nm,1.0s						
KHZ	Kahutara	22.72	196	P	P	18 33 11.7	+4.3
LTZ	Lake Taylor	23.41	198	P	P	18 33 12.7	-1.1
LTZ				IAmb	IAmb	18 33 23.8	
	comp=Z,38nm,1.5s						
HNR	Honiara	24.07	295	P	P	18 33 17.6	-2.3
RPZ	Rata Peaks	24.63	199	P	P	18 33 24.4	-0.1
RPZ				IAmb	IAmb	18 33 36.0	
	comp=Z,42nm,1.3s						
FOZ	Fox Glacier	24.87	201	P	P	18 33 25.6	-1.0
LBZ	Lake Benmore	25.51	200	P	P	18 33 31.6	-0.7
LBZ				IAmb	IAmb	18 33 45.4	
	comp=Z,23nm,1.2s						
WKZ	Wanaka	26.28	201	P	P	18 33 40.2	+1.1
WKZ				IAmb	IAmb	18 33 59.8	
	comp=Z,43nm,1.3s						
MLZ	Mavora Lakes	27.06	202	P	P	18 33 46.6	+0.6
MLZ				IAmb	IAmb	18 34 10.0	
	comp=Z,39nm,1.5s						
WHZ	Wether Hill Ro	27.58	202	P	P	18 33 52.0	+1.5
WHZ				IAmb	IAmb	18 33 53.9	
	comp=Z,19nm,0.5s						
CTAO	Charters Tower	33.47	265	P	P	18 34 42.0	+0.3
PMG	Port Moresby	35.41	283	P	P	18 34 57.5	-0.6
PMG				IAmb	IAmb	18 34 58.7	
	comp=Z,16nm,0.9s						
PATS	Pohnpei	35.99	317	P	P	18 35 02.0	-0.8
STKA	Stephens Creek	37.68	244	P	P	18 35 17.3	+0.7
	comp=Z,1.5nm,0.5s,baz=96,slow=10,SNR=2.9						
STKA	Stephens Creek	37.68	244	P	P	18 35 16.5	-0.2
WR0	Warramunga Arr	44.38	262	P	P	18 36 09.5	-0.8
AS31	Alice Springs	44.46	257	P	P	18 36 10.5	-0.4
ASAR	Alice Springs	44.47	257	P	P	18 36 10.7	-0.2
	comp=Z,2.2nm,0.5s,baz=89,slow=8.7,SNR=51						
ASAR				PcP	PcP	18 37 44.0	0.0
	comp=Z,3.9nm,0.7s,baz=100,slow=4.1,SNR=17						
ASAR				S	S	18 42 06.0	-3.6
	comp=Z,1.1nm,1.0s,baz=94,slow=14,SNR=7.1						
ASAR	Alice Springs	44.47	257	P	P	18 36 10.6	-0.2
ASAR					PcP	18 37 43.4	-0.6
WB0	Warramunga Arr	44.55	263	P	P	18 36 11.0	-0.5
WB2	Warramunga Arr	44.56	262	P	P	18 36 10.7	-1.0
WRAB	Tennant Creek	44.56	262	P	P	18 36 10.7	-1.0
WRA	Warramunga Arr	44.57	262	P	P	18 36 10.9	-0.9
	comp=Z,1.0nm,0.3s,baz=96,slow=7.7,SNR=37						
WRA				PcP	PcP	18 37 43.9	-0.5
	comp=Z,2.1nm,1.1s,baz=96,slow=3.2,SNR=9.3						
WRA				S	S	18 42 06.9	-4.2
	comp=Z,1.2nm,1.1s,baz=98,slow=13,SNR=4.0						
WRA	Warramunga Arr	44.57	262	P	P	18 36 09.6	-2.1
FAKI	Fak Fak	51.57	283	P	P	18 37 03.8	-0.5
FAKI				IAmb	IAmb	18 37 24.6	
	comp=Z,62nm,1.5s						
SOEI	Soe	56.52	272	P	P	18 37 40.2	+0.8
SOEI				IAmb	IAmb	18 37 41.5	
	comp=Z,18nm,0.7s						
TOLI2	Tolitoli	63.67	282	P	P	18 38 25.5	-1.4
TOLI2				IAmb	IAmb	18 38 28.7	
	comp=Z,5.3nm,0.6s						
QSPA	South Pole Qui	69.29	180	P	P	18 39 02.3	+1.3
JOW	Kunigami	70.35	310	P	P	18 39 08.4	+0.6
	comp=Z,6.0nm,0.4s,baz=99,slow=13,SNR=1.9						
MJAR	Matsushiro Arr	70.44	324	P	P	18 39 07.7	-0.4
	comp=Z,2.7nm,0.5s,baz=151,slow=5.9,SNR=9.0						
MJAR	Matsushiro Arr	70.44	324	P	P	18 39 06.6	-1.5
MAT	Matsushiro	70.44	324	P	P	18 39 07.6	-0.5
ADK	Adak	72.36	1	P	P	18 39 18.4	-0.5
ASAJ	Asahikawa	73.98	332	P	P	18 39 29.8	+1.3
	comp=Z,19nm,0.9s,baz=206,slow=5.5						
SSLB	Suanglung	74.14	304	P	P	18 39 28.1	-1.8
SSLB				IAmb	IAmb	18 39 29.6	
	comp=Z,31nm,1.2s						
TPUB	Ta-pu	74.14	303	P	P	18 39 28.2	-1.7
UNV	Unalaska Valle	74.97	7	P	P	18 39 33.0	-0.8
AKUT	Akutan	75.34	7	P	P	18 39 34.9	-1.0
YSS	Yuzh-Sakhalins	76.15	333	P	P	18 39 40.5	-0.1
YSS				IAmb	IAmb	18 39 42.3	
	comp=Z,30nm,1.1s						
PEA0B	Petropavlovsk-	76.54	345	P	P	18 39 42.7	+0.1
PEA0B				IAmb	IAmb	18 39 59.4	
	comp=Z,25nm,1.1s						
PETK	Petropavlovsk-	76.54	345	P	P	18 39 42.2	-0.4
	comp=Z,8.3nm,0.8s,baz=139,slow=7.3,SNR=8.0						
PETK	Petropavlovsk-	76.54	345	P	P	18 39 41.9	-0.7
KSRS	Korea Array	77.10	319	P	P	18 39 46.8	+0.7
	comp=Z,2.7nm,0.9s,baz=124,slow=6.0,SNR=4.9						
USRK	Ussuriysk Ar.	79.20	326	P	P	18 39 58.3	+1.1
	comp=Z,5.9nm,0.8s,baz=80,slow=4.3,SNR=9.0						
NJ2	Nanjing	80.06	310	*e*P	P	18 40 03.1	+1.1
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
MDJ	Mudanjiang	80.75	325	P	P	18 40 05.6	+0.3
MDJ				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,84nm,6.9s						
KDAK	Kodiak Island	81.08	13	P	P	18 40 07.2	+0.5
	comp=Z,27nm,1.1s,baz=194,slow=8.3,SNR=2.6						
NVAR	Mina Array Bea	81.22	43	P	P	18 40 09.4	+1.2
	comp=Z,1.6nm,0.9s,baz=227,slow=9.1,SNR=10						
KVN	Kaiserville	81.71	43	P	P	18 40 12.0	+1.3
KLR	Kul'dur	82.77	329	P	P	18 40 16.4	+0.8
	comp=Z,2.6nm,0.9s,baz=122,slow=9.5,SNR=6.0						
PRN	Pahroc Range	82.78	46	P	P	18 40 16.7	+0.6
O19K	Port Alsworth	82.96	12	P	P	18 40 13.5	-2.7
WVOR	Wild Horse Val	83.34	40	P	P	18 40 18.5	-0.2
WVOR				IAmb	IAmb	18 40 20.8	
	comp=Z,12nm,1.5s						
J08A	Circle Bar Ran	83.97	39	P	P	18 40 21.6	-0.2
U15A	North Rim	84.14	48	P	P	18 40 24.0	+0.9
G08A	Pilot Rock	84.83	37	P	P	18 40 27.9	+1.8
BJI	Beijing	86.10	315	P	P	18 40 32.9	+0.8
BJI				PcP	PcP	18 40 35.0	+1.1
BJI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ENH	Enshi	86.20	304	P	P	18 40 33.0	+0.1
ENH				IAmb	IAmb	18 40 34.6	
	comp=Z,14nm,0.9s						
SEY	Seymchan	86.65	347	P	P	18 40 34.4	+0.2
	comp=Z,10nm,0.6s,baz=151,slow=5.1,SNR=22						
TRF	Thorofare Moun	86.72	12	P	P	18 40 33.9	-0.9
TRF				IAmb	IAmb	18 40 35.6	
	comp=Z,15nm,0.9s						
MNTX	Cornudas Mount	86.90	55	P	P	18 40 37.6	+1.4
RND	Reindeer	86.97	13	P	P	18 40 35.7	-0.1
TXAR	Lajitas Array	87.20	57	P	P	18 40 38.9	+1.2
	comp=Z,1.4nm,0.9s,baz=219,slow=7.2,SNR=8.5						
TXAR	Lajitas Array	87.20	57	P	P	18 40 36.9	-0.8
MCK	McKinley	87.24	12	P	P	18 40 37.0	0.0
MCK				IAmb	IAmb	18 40 38.0	
	comp=Z,17nm,1.1s						
I21K	Tanana	87.98	11	P	P	18 40 39.8	-0.5
I21K				IAmb	IAmb	18 40 41.5	
	comp=Z,18nm,1.1s						
NEA2	Nenana	87.98	12	P	P	18 40 39.5	-0.9
NEA2				IAmb	IAmb	18 40 40.7	
	comp=Z,5.2nm,0.8s						
MLY	Manley	88.06	11	P	P	18 40 40.3	-0.6
WRH	Wood River Hil	88.07	12	P	P	18 40 40.6	-0.2
HDA	Harding Lake	88.25	13	P	P	18 40 41.5	-0.2
HDA				IAmb	IAmb	18 40 43.1	
	comp=Z,19nm,1.2s						
H21K	Melozitna Rive	88.28	10	P	P	18 40 42.0	+0.2
H21K				IAmb	IAmb	18 40 44.2	
	comp=Z,4.7nm,0.8s						
XAN	Xi'an	88.31	307	P	P	18 40 43.7	+1.0
XAN				pP	pwP	18 42 40.2	+4.7
XAN				pmax	pmax		
	comp=Z,9.0nm,1.2s						
IMAR	Indian Mountai	88.43	10	P	P	18 40 42.5	+0.1
TCOL	CIGO, UAF Yank	88.47	12	P	P	18 40 42.2	-0.4
MDM	Murphy Dome	88.48	12	P	P	18 40 41.9	-0.9
MDM				IAmb	IAmb	18 40 43.0	
	comp=Z,9.8nm,0.8s						
IL31		88.58	13	P	P	18 40 42.3	-0.8
IL31				IAmb	IAmb	18 40 43.4	
	comp=Z,4.2nm,0.8s						
ILAR	Eielson Array	88.58	13	P	P	18 40 42.9	-0.3
	comp=Z,2.7nm,0.6s,baz=223,slow=5.7,SNR=28						
PDAR	Pinedale Array	89.16	43	P	P	18 40 47.7	+1.0
	comp=Z,1.1nm,0.8s,baz=204,slow=3.3,SNR=5.7						
YHL	Hebgen Lake	89.18	41	P	P	18 40 47.7	+0.8
YHL				IAmb	IAmb	18 40 49.9	
	comp=Z,6.2nm,1.1s						
KMI	Kunming	89.48	297	⥣P	P	18 40 50.2	+1.6
KMI				pmax	pmax		
	comp=Z,8.0nm,1.1s						
HHC	Hu-ho-hao-te	89.55	314	*e*P	P	18 40 48.8	+0.3
HHC				pmax	pmax		
	comp=Z,26nm,0.8s						
HHC				pmax	pmax		
	comp=Z,120nm,6.6s						
DAWY	Dawson	89.72	16	P	P	18 40 49.1	+0.5
DAWY				IAmb	IAmb	18 40 50.4	
	comp=Z,6.1nm,0.8s						
EGAK	Eagle	89.87	15	P	P	18 40 49.3	+0.1
EGAK				IAmb	IAmb	18 40 50.8	
	comp=Z,9.0nm,1.0s						
CM31	Chiang Mai Arr	90.22	290	P	P	18 40 52.0	+0.1
CM31				IAmb	IAmb	18 40 54.4	
	comp=Z,7.0nm,0.9s						
CMAR	Chiang Mai Arr	90.22	290	P	P	18 40 53.2	+1.3
	comp=Z,4.5nm,0.8s,baz=121,slow=2.9,SNR=29						
CMAR	Chiang Mai Arr	90.22	290	P	P	18 40 52.6	+0.7
CHTO	Chiang Mai	90.35	290	P	P	18 40 53.4	+0.9
CHTO				IAmb	IAmb	18 40 54.6	
	comp=Z,6.9nm,0.8s						
YAK	Yakutsk	92.37	338	P	P	18 41 00.2	-0.6
	comp=Z,4.4nm,0.5s,baz=131,slow=2.6,SNR=5.7						
LZH	Lanzhou	92.95	307	*e*P	P	18 41 02.5	-1.8
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
INK	Inuvik	94.54	15	P	P	18 41 09.9	-0.6
	comp=Z,2.3nm,1.0s,baz=216,slow=4.1,SNR=3.4						
INK	Inuvik	94.54	15	IAmb	IAmb	18 41 10.9	
	comp=Z,5.6nm,1.1s						
ZALV	Zalesovo Beam	110.72	321	PKiKP	PKiKP	18 46 18.6	-1.3
	comp=Z,0.4nm,0.4s,baz=85,slow=3.1,SNR=3.8						
MKAR	Makanchi Array	111.39	313	PKiKP	PKiKP	18 46 20.4	-1.2
	comp=Z,0.6nm,0.7s,baz=61,slow=3.0,SNR=5.0						
ARU	Arti	125.44	325		PKPdf	18 46 47.7	-0.4
ABKAR	Akbulak array	126.30	316		PKPpre	18 46 43.7	
ARCES	ARCESS Array B	129.19	350	PKP	PKPdf	18 46 54.3	-0.7
	comp=Z,2.5nm,0.8s,baz=3.3,slow=3.2,SNR=4.9						
FINES	FINESS Array B	136.04	344	PKhKP	PKPpre	18 46 58.6	
	comp=Z,2.7nm,1.0s,baz=99,slow=4.4,SNR=1.6						
FINES				PKP	PKPdf	18 47 08.7	+0.7
	comp=Z,1.7nm,0.6s,baz=96,slow=4.2,SNR=4.8						
NOA	NORSAR Array B	139.26	353	PKhKP	PKPpre	18 47 03.8	
	comp=Z,0.8nm,0.7s,baz=15,slow=4.6,SNR=3.6						
LODK	Lodwar	143.24	247	PKPdf	PKPab	18 47 20.5	+0.2
AKASG	Malin Array Be	143.26	331	PKP	PKPab	18 47 18.6	-0.6
	comp=Z,20nm,0.5s,baz=42,slow=4.4,SNR=113						
AKASG	Malin Array Be	143.26	331	PKPdf	PKPab	18 47 18.1	-1.1
AKBB	Malin Array Si	143.26	331		PKPab	18 47 18.1	-1.1
DEL	Delary	143.28	349	*i* P	PKPab	18 47 18.0	-1.1
BJUU	Bjuv	143.81	350	*i* P	PKPab	18 47 20.2	-0.8
MUD	Monsted U'grnd	143.98	353	*i* P	PKPab	18 47 21.7	0.0
BSD	Bornholm Skovb	144.36	347	*i* P	PKPbc	18 47 21.0	-1.9
GAZ	Gaziantep	145.38	306		PKPdf	18 47 24.8	-0.9
SORM	Soroca	145.45	328	⥣P	PKPbc	18 47 26.3	-0.1
PURM	Purcari	145.72	325	⥣P	PKPbc	18 47 27.5	+0.3
BNN	Bunyan	145.82	309		PKPdf	18 47 27.2	+0.8
MILM	Milestii Mici	146.03	326	⥣P	PKPbc	18 47 27.9	-0.2
BSEG	Bad Segeberg	146.29	351	*e*PKPbc	PKPbc	18 47 29.2	+0.6
	baz=15,slow=4.2						
BR131	Keskin Array S	147.03	312		PKPbc	18 47 30.7	-0.6
BRTR	Keskin Array B	147.03	312	PKPbc	PKPbc	18 47 31.1	-0.2
	comp=Z,6.3nm,0.7s,baz=131,slow=4.7,SNR=34						
BRTR	Keskin Array B	147.03	312		PKPbc	18 47 30.2	-1.2
RUE	Ruedersdorf	147.07	347	*e*PKPbc	PKPbc	18 47 30.8	+0.1
	baz=15,slow=4.2						
VLDR	Vladesti	147.11	326	⥣P	PKPbc	18 47 31.8	+0.7
TLCR		147.14	324	⥣P	PKPbc	18 47 31.4	+0.2
BUR08	Bucovina Ar. S	147.29	330		PKPdf	18 47 29.9	+1.4
BURAR	Bucovina Array	147.31	330	⥣P	PKiKP	18 47 32.7	-0.8
BURAR	Bucovina Array	147.31	330		PKPbc	18 47 31.9	+0.1
OJC	Ojcow	147.42	339		PKPbc	18 47 31.8	0.0
IZVR	Izvoarele	147.48	325	⥣P	PKiKP	18 47 34.2	+0.4
CFR	Carcaliu	147.52	325	⥣P	PKPbc	18 47 32.5	+0.3
ANTO	Ankara	147.55	313	PKPdf	PKPdf	18 47 28.0	-1.2
TPGR	Topolog	147.56	324	⥣P	PKPbc	18 47 32.8	+0.4
KOLS	Kolonicke sedl	147.57	335	*e*PKP	PKPab	18 47 36.4	+0.4
FLTG	Flechtingen	147.70	349	*e*PKPbc	PKPbc	18 47 32.7	+0.3
	baz=15,slow=4.2						
FLTG				*e*PKPab	PKPab	18 47 36.2	-0.2
	baz=15,slow=4.2						
NRDL	Niedersach Rie	147.73	351	*e*PKPbc	PKPbc	18 47 32.9	+0.5
	baz=15,slow=4.2						
NRDL				*e*PKPab	PKPab	18 47 36.8	+0.4
	baz=15,slow=4.2						
VRI	Vrincioaia	147.81	327	⥣P	PKPbc	18 47 33.0	0.0
TIRR	Tirgusor	147.82	323	⥣P	PKPbc	18 47 32.3	-0.7
TIRR	Tirgusor	147.82	323		PKPbc	18 47 31.3	-1.7
PLOR	Plostina	147.85	327	⥣P	PKPbc	18 47 33.3	+0.1
CRVS	Cervenica-Dubn	147.91	336	*e*PKP	PKPab	18 47 38.2	+0.8
HARR	Harsova	147.94	324	⥣P	PKPbc	18 47 33.5	+0.2
KSP	Ksiaz	147.96	343	*e*PKP	PKiKP	18 47 34.0	-0.6
TLBR	Topalu	147.97	324	⥣P	PKPbc	18 47 34.0	+0.6
BMR	Baia Mare	148.04	332	⥣P	PKPbc	18 47 34.0	+0.5
COVR	Voineasa-Covas	148.09	327	⥣P	PKPbc	18 47 33.6	-0.1
TRPA	Tarpa	148.09	334	⥣P	PKPbc	18 47 33.9	+0.3
MANR	Mangalia	148.12	322	⥣P	PKiKP	18 47 34.5	-0.6
GHAJ	Ghor Haditha	148.19	296		PKPdf	18 47 29.8	-0.5
OSTC	Ostas	148.24	343	⥣*e*PKP	PKiKP	18 47 34.6	-0.6
CHVC	Chvalec	148.25	343	⥣*e*PKP	PKPbc	18 47 34.4	+0.4
CHVC				*e*PKPAB	PKPab	18 47 39.0	+0.2
OKC	Ostrava-Krasne	148.30	340	⥣*e*PKP	PKPbc	18 47 34.3	+0.3
CLZ	Clausthal	148.32	350	*e*PKPbc	PKPbc	18 47 34.6	+0.5
	baz=15,slow=4.2						
CLL	Collm	148.34	347	*i* PKPbc	PKPbc	18 47 34.0	-0.1
	comp=Z,21nm,0.9s						
CLL				⥣*i*PKPab	PKPab	18 47 38.7	-0.4
	comp=Z,13nm,0.7s						
CLL	Collm	148.34	347	*e*PKPbc	PKPbc	18 47 34.4	+0.3
	baz=15,slow=4.2						
CLL				*e*PKPab	PKPab	18 47 39.2	+0.2
	baz=15,slow=4.2						
CLL	Collm	148.34	347		PKPbc	18 47 33.2	-0.9
UPC	Upice	148.34	343	⥣*e*PKP	PKPbc	18 47 34.0	-0.1
MDUB	Mudurnu	148.35	315		PKPbc	18 47 34.5	-0.1
DPC	Dobruska-Polom	148.39	342	⥣*e*PKP	PKPbc	18 47 34.4	+0.1
DPC				*e*PKPAB	PKPab	18 47 39.1	-0.3
DOPR	Dopca	148.41	328	⥣P	PKiKP	18 47 35.3	-0.4
LANS	Liptovska Anna	148.44	338	*e*PKP	PKiKP	18 47 36.0	+0.3
LANS				*e*		18 47 40.9	
MLR	Muntele Rosu	148.46	327	⥣P	PKPbc	18 47 34.7	0.0
MLR	Muntele Rosu	148.46	327		PKPbc	18 47 34.0	-0.8
KRLC	Kraliky	148.51	342	⥣*e*PKP	PKPbc	18 47 35.0	+0.4
KRLC				*e*PKPAB	PKPab	18 47 40.1	+0.2
BRG	Berggiesshubel	148.53	345	*e*PKPbc	PKiKP	18 47 35.2	-0.6
	baz=15,slow=4.2						
BRG				*e*PKPab	PKPab	18 47 40.2	+0.4
	baz=15,slow=4.2						
BRG	Berggiesshubel	148.53	345	*e*PKP	PKiKP	18 47 35.2	-0.6
BRG				Amp		18 47 35.9	
	comp=Z,8.9nm,0.9s						
BRG	Berggiesshubel	148.53	345	P	PKPab	18 47 40.2	+0.4
MORC	Moravsky Berou	148.54	341	⥣P	PKPbc	18 47 35.1	+0.4
MORC	Moravsky Berou	148.54	341	*e*PKP	PKPbc	18 47 35.1	+0.4
MORC	Moravsky Berou	148.54	341		PKPbc	18 47 34.9	+0.1
FBE	Freiberg	148.62	346	*e*PKPbc	PKiKP	18 47 35.4	-0.5
	baz=15,slow=4.2						
FBE				*e*PKPab	PKPab	18 47 40.9	+0.7
	baz=15,slow=4.2						
GTTG	Gottingen	148.67	350	*e*PKPbc	PKiKP	18 47 35.9	-0.1
	baz=15,slow=4.2						
GTTG				*e*PKPab	PKPab	18 47 40.8	+0.4
	baz=15,slow=4.2						
NEUB	Neuenburg	148.68	348	*e*PKPbc	PKPbc	18 47 35.4	+0.4
	baz=15,slow=4.2						
PVCC	Panska Ves	148.70	345	⥣*e*PKP	PKiKP	18 47 35.9	-0.2
PVCC				*e*PKPAB	PKPab	18 47 41.0	+0.4
SECR		148.71	326	⥣P	PKPbc	18 47 35.8	+0.5
VOIR		148.95	328	⥣P	PKiKP	18 47 36.8	-0.1
DRGR		149.06	332	⥣P	PKPbc	18 47 36.4	+0.2
PRU	Pruhonice	149.20	344	⥣*e*PKP	PKPbc	18 47 36.2	-0.1
PRU				*e*PKPAB	PKPab	18 47 42.7	0.0
ARR	Arges	149.21	328	⥣P	PKiKP	18 47 37.7	+0.2
VYHS	Vyhne	149.22	338	*e*PKP	PKPbc	18 47 36.3	-0.1
VYHS				*e*		18 47 43.5	
VRAC	Vranov	149.25	341	⥣P	PKPbc	18 47 36.3	-0.1
VRAC	Vranov	149.25	341	*e*PKP	PKPbc	18 47 36.8	+0.4
MOX	Moxa	149.25	348	*e*PKPbc	PKPbc	18 47 36.7	+0.3
	baz=15,slow=4.2						
MOX				*e*PKPab	PKPab	18 47 42.9	0.0
	baz=15,slow=4.2						
TANN	Tannenbergstha	149.29	347	*e*PKPbc	PKiKP	18 47 37.0	-0.4
	baz=15,slow=4.2						
WERD	Werda	149.29	347	*e*PKPbc	PKPbc	18 47 36.8	+0.3
	baz=15,slow=4.2						
KOLL	Kolacno	149.30	338	*e*PKP	PKiKP	18 47 37.0	-0.4
JAVC	Velka Javorina	149.30	340	*e*PKP	PKiKP	18 47 38.3	+0.8
PSZ	Piszkesteto	149.32	336	⥣P	PKPab	18 47 43.9	+0.6
LEF	Lefka	149.35	304	⥣P	PKPbc	18 47 37.3	+0.2
GUNZ	Gunzen	149.37	347	*e*PKPbc	PKiKP	18 47 37.4	-0.2
	baz=15,slow=4.2						
GUNZ				*e*PKPab	PKPab	18 47 43.9	+0.5
	baz=15,slow=4.2						
WERN	Wernitzgruen	149.43	347	*e*PKPab	PKPab	18 47 44.4	+0.7
	baz=15,slow=4.2						
NKC	Novy Kostel	149.47	347	⥣*e*PKP	PKiKP	18 47 37.7	0.0
NKC				*e*PKPAB	PKPab	18 47 43.8	0.0
KRUC	Moravsky	149.52	341	*e*PKP	PKPbc	18 47 37.3	+0.2
TREC	Trest	149.58	342	⥣*e*PKP	PKPbc	18 47 37.4	+0.2
TREC				*e*PKPAB	PKPab	18 47 44.4	+0.1
MANZ	Manzenberg	149.77	347	*e*PKPbc	PKiKP	18 47 38.2	-0.2
	baz=15,slow=4.2						
MODS	Modra-Piesok	149.85	340	*e*PKP	PKPbc	18 47 38.0	+0.1
MODS				*e*		18 47 45.4	
SIRR	Siria	149.92	332	⥣P	PKPbc	18 47 38.0	-0.1
ROTZ	Rotzenmuhle	149.96	347	*e*PKPbc	PKiKP	18 47 38.6	-0.2
	comp=Z,0.7nm,1.0s,baz=15,slow=4.2						
GZR	Gura Zlata	150.09	330	⥣P	PKPbc	18 47 38.5	-0.1
TNS	Taunus Mts	150.18	352	*e*PKPbc	PKiKP	18 47 39.6	+0.3
	baz=15,slow=4.2						
GRF	Grafenberg Arr	150.23	348	*e*PKPbc	PKiKP	18 47 39.7	+0.4
	baz=15,slow=4.2						
GRF				*e*PKPab	PKPab	18 47 47.7	+0.7
	baz=15,slow=4.2						
KHC	Kasperske Hory	150.24	345	⥣*e*PKP	PKPbc	18 47 39.1	+0.3
KHC				*e*PKPAB	PKPab	18 47 47.2	+0.1
CKRC	Cesky Krumlov	150.34	343	⥣*e*PKP	PKiKP	18 47 39.4	-0.2
CKRC				*e*PKPAB	PKPab	18 47 47.5	0.0
WET	Wettzell	150.39	345	*e*PKPab	PKPab	18 47 48.4	+0.7
	baz=15,slow=4.2						
BZS	Buzias	150.45	331	⥣P	PKPbc	18 47 38.7	-0.6
GEC2	GERESS Array S	150.47	344	*e*PKPbc	PKPbc	18 47 39.6	+0.2
	baz=15,slow=4.2						
GEC2				*e*PKPab	PKPab	18 47 48.5	+0.3
	baz=15,slow=4.2						
GEC2	GERESS Array S	150.47	344		PKPbc	18 47 39.4	0.0
GERES	GERESS Array B	150.47	344	PKPbc	PKPbc	18 47 39.4	0.0
	comp=Z,3.4nm,0.9s,baz=36,slow=2.5,SNR=19						
GERES				PKPab	PKPab	18 47 48.2	0.0
	comp=Z,1.5nm,0.5s,baz=33,slow=5.1,SNR=11						
PLVB	Pleven	150.59	325	⥣P	PKiKP	18 47 40.2	0.0
HERR	Herculane	150.64	330	⥣P	PKPbc	18 47 39.8	0.0
CONA	Conrad Observa	150.69	341	*e*P	PKPbc	18 47 40.1	+0.1
	comp=Z,4.4nm,0.7s						
CONA				*e*P	PKPab	18 47 49.8	+0.7
	comp=Z,8.8nm,1.4s						
MPLH	Magyarpolny	150.81	338	*e*P	PKPbc	18 47 38.5	-1.7
WLF	Walferdange	150.99	354	*e*PKPab	PKPab	18 47 50.5	+0.4
	baz=15,slow=4.2						
MORH	Mrgy, Hungar	151.21	336	⥣P	PKPbc	18 47 40.4	-0.6
MORH	Mrgy, Hungar	151.21	336	*e*P	PKPbc	18 47 40.5	-0.6
MOA	Molln	151.23	343	*e*P	PKPab	18 47 51.8	+0.5
	comp=Z,7.8nm,1.4s						
ALN	Alexandroupoli	151.38	320		PKPbc	18 47 39.8	-1.8
ARSA	Arzberg	151.40	341	*e*P	PKPab	18 47 49.7	-2.3
	comp=Z,8.0nm,1.7s						
FRGS	Fruska Gora	151.59	333	⥣P	PKPab	18 47 53.6	+0.7
RJOB	Jochberg	151.72	345	*e*PKPab	PKPab	18 47 54.2	+0.8
	baz=15,slow=4.2						
VTS	Vitosha	151.86	325	⥣P	PKiKP	18 47 43.1	0.0
VTS	Vitosha	151.86	325		PKPbc	18 47 42.7	-0.1
BOVS	Bovan	151.91	329	⥣P	PKPbc	18 47 42.2	-0.5
BFO	Black Forest	152.04	351	*e*PKPab	PKPab	18 47 54.7	0.0
	baz=15,slow=4.2						
SOKA	Soboth	152.07	341	*e*P	PKPbc	18 47 42.5	-0.6

	comp=Z,4.4nm,1.1s						
SOKA				eP	PKPab	18 47 54.6	-0.3
	comp=Z,6.1nm,1.1s						
KBA	Koelnbreinsper	152.19	343	eP	PKPbc	18 47 43.2	-0.3
	comp=Z,4.8nm,1.0s						
KBA				eP	PKPab	18 47 56.7	+1.2
	comp=Z,6.5nm,0.7s						
OBKA	Obir	152.37	341	eP	PKPab	18 47 56.4	+0.2
	comp=Z,3.5nm,0.8s						
UBR	Ueberruh	152.37	348	ePKPbc	PKPbc	18 47 43.6	-0.1
	baz=15,slow=4.2						
WATA	Walderalm	152.39	346	eP	PKPdf	18 47 35.9	-0.7
	comp=Z,3.9nm,0.8s						
WATA				eP	PKPbc	18 47 43.9	0.0
	comp=Z,2.2nm,0.5s						
WATA				eP	PKPab	18 47 56.7	+0.4
	comp=Z,7.8nm,0.9s						
RETA	Reutte	152.43	347	eP	PKPab	18 47 56.8	+0.4
	comp=Z,7.6nm,1.2s						
WTTA	Wattenberg	152.45	346	eP	PKPdf	18 47 34.6	-2.1
	comp=Z,4.0nm,1.0s						
WTTA				eP	PKPbc	18 47 44.0	-0.1
	comp=Z,2.9nm,0.5s						
WTTA				eP	PKPab	18 47 56.8	+0.2
	comp=Z,7.9nm,0.7s						
MOTA	Moosalm	152.49	347	eP	PKPab	18 47 57.1	+0.3
MYKA	Terra Mystica	152.52	342	eP	PKPab	18 47 56.2	-0.6
	comp=Z,4.0nm,0.5s						
SQTA	Sankt Quirin	152.58	346	eP	PKPbc	18 47 43.8	-0.5
	comp=Z,3.4nm,0.9s						
SQTA				eP	PKPab	18 47 57.4	+0.3
	comp=Z,5.6nm,1.2s						
VNDS	Vrh nad Dolski	152.68	341	iPKPbc	PKPbc	18 47 44.2	-0.2
ABTA	Abfaltersbach	152.72	344	eP	PKPdf	18 47 36.4	-0.6
	comp=Z,1.6nm,0.8s						
ABTA				iP	PKPbc	18 47 43.9	-0.7
	comp=Z,4.5nm,0.6s,SNR=6.0						
ABTA				eP	PKPab	18 47 57.1	-0.5
	comp=Z,5.9nm,0.7s						
ZOU	Zoufplan	152.77	343		PKPab	18 47 55.9	-2.1
LJU	Ljubljana	152.79	341	iPKPbc	PKiKP	18 47 44.7	0.0
DAVA	Damuels	152.79	348	eP	PKPab	18 47 58.1	0.0
	comp=Z,3.8nm,0.8s						
FETA	Feichten	152.88	347	eP	PKPbc	18 47 45.0	0.0
	comp=Z,4.2nm,1.1s						
FETA				eP	PKPab	18 47 59.8	+1.4
	comp=Z,6.5nm,1.3s						
VOJS	Vojsko	153.00	342	iPKPbc	PKPbc	18 47 44.6	-0.6
VOJS				iPKPab	PKPab	18 47 58.0	-0.9
STAL	STALIGIAL	153.12	343		PKPab	18 47 57.8	-1.5
GBRS	Gornja Briga	153.16	340	iPKPbc	PKPbc	18 47 45.4	-0.1
GBRS				iPKPab	PKPab	18 47 59.5	0.0
CTI	Castel Tesino	153.59	345		PKPab	18 48 00.8	-0.6
PDG	Podgorica	153.99	330	⇑P	PKPab	18 48 03.0	-0.1
FNA	Florina	154.14	325		PKPbc	18 47 46.3	-1.4
NRCA	Norcia	156.12	340		PKPab	18 48 11.2	-1.1
TIP	Timpagrande	157.71	329		PKPab	18 48 17.6	-1.8
ESDC	Sonseca Array	160.48	14	PKPab	PKPab	18 48 30.8	-0.6
	comp=Z,0.9nm,0.7s,baz=351,slow=5.2,SNR=6.6						
KEST	Kesra	163.77	338	PKPab	PKPab	18 48 46.0	+0.1
	comp=Z,1.8nm,0.6s,baz=48,slow=4.2,SNR=4.6						

IDC ***12*** *18:31:24.7±1.0, 41°.67N×144°.12E, h0^{km}, mb3.9/11, mb1 4.0/12, mb1mx3.8/37, mbtmp3.8/12, ML2.9/2, MS3.2/10, Ms1 3.2/10, ms1mx2.9/48, Error ellipse: s-maj=23.7km s-min=19.3km az=129.0*

MOS ***12*** *18:31:27.5±1.0, 41°.65N×144°.21E, h33^{km}, mb4.3/10, Error ellipse: s-maj=10.7km s-min=6.5km az=85.6*

NEIC ***12*** *18:31:27.8±2.2, 41°.64N±0°.07×144°.25E±0°.09, h25^{km}±4^{km}, mb4.2/11, Error ellipse: s-maj=10.7km s-min=9.3km az=156.0*

JMA ***12*** *18:31:28.7±0.2, 41°.74N×144°.22E, h32^{km}±3^{km}, M4.0*

NIED ***12*** *18:31:28.7, 41°.74N×144°.22E, h32^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.12; $M_{\theta\theta}$-0.51; $M_{\phi\phi}$0.39; $M_{r\theta}$-0.30; $M_{\theta\phi}$-1.00; $M_{\phi r}$-0.95; Fault plane solution: $M_0$1.49000×10^{15} NP1: ϕ_s194.00000°, δ88.00000°, λ43.00000°. NP2: ϕ_s102.00000°, δ47.00000°, λ177.00000°.*

ISC 12 18:31:25.9±3.2, **41°.65N**±0°.05×**144°.38E**±0°.05, **h15**^{km}±19^{km}, **n85, σ1ˢ.38**/82, **mb4.1**/22, **MS3.4**/5, **7C-1D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ERM	Erimo	0.98	292	ceP	Pb	18 31 44.8	+0.2
ERM				pmax	pmax		
	comp=Z,974nm,0.7s						
ERM	Erimo	0.98	292	Pn	Pb	18 31 44.7	+0.2
JEM	Erimo	0.98	292	P	Pb	18 31 44.7	+0.1
JTHR	Tokachihiroo	1.03	309	P	Pb	18 31 44.9	-0.5
JTHR				eS	Sb	18 31 57.8	-0.9
JCH	Churui	1.22	322	P	Pn	18 31 47.7	-0.8
JOB	Onbets	1.31	342	P	Pn	18 31 49.5	-0.2
JAK	Akkeshi	1.36	10	P	Pn	18 31 50.8	+0.4
JAK				eS	Sn	18 32 07.9	-0.3
JNBK	Urakawa-nobuka	1.37	298	P	Pn	18 31 50.5	+0.1
JKHN	Kushirohamanak	1.54	22	P	Pb	18 31 54.0	-0.1
JKHN				eS	Sn	18 32 12.8	+0.2
JSHD	Hidakashinhida	1.61	299	P	Pn	18 31 54.4	+0.6
JAR	Ashorobuto	1.70	345	P	Pn	18 31 54.5	-0.6
JAR				eS	Sn	18 32 14.8	-1.9
NMR	Nemuro--Hokkai	1.98	30	⇓iP	Pn	18 31 59.5	+0.6
NMR				iS	Sn	18 32 21.4	-2.1
GLVR	Golovnino	2.25	22	eP	Pn	18 32 03.5	+1.0
GLVR				S	Sn	18 32 28.2	-1.8
GLVR				smax	smax		
	comp=N,160nm,0.2s						
GLVR				smax	smax		
	comp=E,400nm,0.4s						
JEW	Eniwo	2.48	300	Pn	Pn	18 32 05.7	0.0
RUSJ	Misakicho	2.53	14	eP	Pn	18 32 07.9	+1.5
RUSJ				S	Sn	18 32 36.1	-0.9
GRPR	Tuman	2.55	23	eP	Pn	18 32 07.3	+0.6
YUK	Yuzh-Kuril'sk	2.62	24	P	Pn	18 32 08.7	+1.1
YUK				eS	Sn	18 32 38.0	-1.1
YUK				smax	smax		
	comp=N,306nm,0.4s						
YUK				smax	smax		
	comp=E,239nm,0.4s						
JTM	Tenmabayashi	2.64	252	Pn	Pn	18 32 08.0	0.0
JKA	Kamikawa-asahi	2.79	333	Pn	Pn	18 32 09.7	-0.3
ASAJ	Asahikawa	2.79	333	Pn	Pn	18 32 10.1	+0.1
	comp=E,2.5nm,0.3s,baz=188,slow=8.6,SNR=19						
ASAJ				Sn	Sn	18 32 45.3	+1.9
	comp=E,10nm,0.3s,baz=135,slow=27,SNR=7.3						
ASAJ				LR	LR	18 33 34.1	
	comp=E,329nm,18.6s,baz=186,slow=48						
KUR	Kuril'sk	4.39	34	eP	Pn	18 32 34.7	+2.8
KUR				eS	Sn	18 33 23.6	+0.8
KUR				pmax	pmax		
	comp=Z,31nm,0.4s						
KUR				pmax	pmax		
	comp=E,19nm,0.2s						
KUR				smax	smax		
	comp=N,77nm,0.3s						
KUR				smax	smax		
	comp=E,30nm,0.3s						
JMM	Marumori	4.68	217	Pn	Pn	18 32 33.8	-2.2
YSS	Yuzh-Sakhalins	5.43	348	eP	Pn	18 32 47.4	+1.2
YSS				eS	Sn	18 33 48.1	-0.3
YSS				smax	smax		
	comp=N,20nm,1.0s						
YSS				MLR	MLR		
	comp=Z,300nm,16.0s						
YSS				MLR	MLR		
	comp=N,200nm,15.0s						
JSD	Sado	5.93	235	Pn	Pn	18 32 52.7	-0.5
MAJO	Matsushiro	7.00	225	iP	Pn	18 33 08.5	+0.6
MAJO	Matsushiro	7.00	225	Pn	Pn	18 33 06.5	-1.5
MJAR	Matsushiro Arr	7.00	225	Pn	Pn	18 33 08.3	+0.4
	comp=N,0.1nm,0.3s,baz=33,slow=13,SNR=7.0						
MJAR				LR	LR	18 36 09.1	
	comp=N,88nm,21.6s,baz=60,slow=41						
USRK	Ussuriysk Ar.	9.44	290	LR	LR	18 37 25.4	
	comp=N,137nm,18.8s,baz=46,slow=39						
USRK	Ussuriysk Ar.	9.44	290	P	Pn	18 33 42.6	+1.3
USRK	Ussuriysk Ar.	9.44	290	Pn	Pn	18 33 42.5	+1.3
KSRS	Korea Array	13.37	257	LR	LR	18 38 43.8	
	comp=N,45nm,20.1s,baz=44,slow=33						
PETK	Petropavlovsk-	14.55	34	LR	LR	18 41 03.3	
	comp=N,25nm,18.9s,baz=258,slow=40						
ZEA	Zeya	16.65	322	eP	Pn	18 35 17.7	-0.9
YAK	Yakutsk	22.23	342	P	P	18 36 19.0	-2.7
YAK				IAmb	IAmb	18 36 28.7	
	comp=Z,11nm,1.0s						
HHC	Hu-ho-hao-te	24.61	279	eP	P	18 36 46.1	+0.5
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,110nm,6.6s						
ULN	Ulaanbaatar	27.03	296	ceP	P	18 37 07.0	-0.5
ULN				pmax	pmax		
	comp=Z,7.0nm,1.7s						
ULN	Ulaanbaatar	27.03	296	P	P	18 37 07.8	+0.3
ULN				IAmb	IAmb	18 37 09.1	
	comp=Z,9.4nm,1.4s						
SONM	Songino Array	27.47	296	P	P	18 37 10.1	-1.4
	comp=Z,2.6nm,1.0s,baz=87,slow=10.0,SNR=9.5						
SONM	Songino Array	27.47	296	P	P	18 37 12.4	+0.9
SONM				pmax	pmax		
	comp=Z,4.0nm,1.1s						
SONM	Songino Array	27.47	296	P	P	18 37 12.4	+0.9
SONM				IAmb	IAmb	18 37 13.9	
	comp=Z,3.6nm,1.1s						
BILL	Bilibino	28.95	17	iP	P	18 37 27.1	+2.9
BILL				pmax	pmax		
	comp=Z,3.0nm,1.4s						
H11N2	WAKE ISLAND Hy	29.03	132	T	T	19 08 07.6	
	baz=324,slow=75,SNR=107						
H11N1	WAKE ISLAND Hy	29.05	132	T	T	19 08 14.4	
	baz=324,slow=75,SNR=92						
H11N3	WAKE ISLAND Hy	29.05	132	T	T	19 08 09.0	
	baz=324,slow=75,SNR=80						
TLY	Talaya	29.35	304	LR	LR	18 50 01.1	
	comp=Z,60nm,18.4s,baz=180,slow=38						
H11S1	WAKE ISLAND Hy	29.92	134	T	T	19 09 12.9	
	baz=325,slow=75,SNR=77						
H11S3	WAKE ISLAND Hy	29.92	134	T	T	19 09 20.8	
	baz=325,slow=75,SNR=63						
H11S2	WAKE ISLAND Hy	29.93	134	T	T	19 09 14.1	
	baz=325,slow=75,SNR=49						
DGZ	Jazzator, Alta	39.74	302	iP	P	18 38 58.4	+0.5
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.6s						
NRIK	Noril'sk	40.13	333	LR	LR	18 57 14.4	
	comp=Z,87nm,18.9s,baz=52,slow=39						
SVW2	Sparrevohn	40.49	40	P	P	18 38 59.8	-3.9
ZALV	Zalesovo Beam	40.67	309	P	P	18 39 05.2	-0.1
	comp=Z,1.7nm,0.5s,baz=89,slow=7.4,SNR=8.6						
ZALV	Zalesovo Beam	40.67	309	P	P	18 39 04.7	-0.7
WMQ	Urumqi	40.99	293	eP	P	18 39 09.7	+1.5
MK31	Makanchi Array	43.77	299	P	P	18 39 29.9	-0.9
MK31				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MK31	Makanchi Array	43.77	299	P	P	18 39 29.9	-0.9
MKAR	Makanchi Array	43.77	299	P	P	18 39 30.4	-0.4
	comp=Z,1.0nm,0.8s,baz=81,slow=9.1,SNR=9.4						
MKAR	Makanchi Array	43.77	299	ceP	P	18 39 33.2	+2.4
MKAR				pmax	pmax		
	comp=Z,10.0nm,1.3s						
MKAR	Makanchi Array	43.77	299	P	P	18 39 30.1	-0.6
MAKZ	Makanchi	43.97	299	P	P	18 39 32.6	+0.2
MAKZ				pmax	pmax		
	comp=Z,4.0nm,1.1s						
MAKZ	Makanchi	43.97	299	P	P	18 39 32.6	+0.2
MAKZ				IAmb	IAmb	18 39 39.5	
	comp=Z,4.2nm,1.1s						
ILAR	Eielson Array	44.38	35	P	P	18 39 38.5	+3.1
	comp=Z,0.6nm,0.8s,baz=259,slow=5.5,SNR=4.9						
CMAR	Chiang Mai Arr	44.97	253	P	P	18 39 42.0	+1.4
	comp=Z,0.5nm,0.6s,baz=42,slow=7.1,SNR=5.6						
CMAR				LR	LR	18 58 10.5	
	comp=Z,25nm,18.4s,baz=330,slow=36						
CMAR	Chiang Mai Arr	44.97	253	⇑eP	P	18 39 42.0	+1.4
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURK	Kurchatov	45.03	305	ceP	P	18 39 40.2	-0.5
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURK	Kurchatov	45.03	305	P	P	18 39 39.9	-0.8
KURK				IAmb	IAmb	18 39 55.6	
	comp=Z,2.6nm,0.9s						
INK	Inuvik	49.23	29	P	P	18 40 15.1	+1.8
	comp=Z,1.7nm,0.6s,baz=293,slow=3.8,SNR=6.5						
BRVK	Borovoye	49.32	310	iP	P	18 40 14.9	+0.8
BRVK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KKAR	Karatay Array	52.89	298	P	P	18 40 39.7	-1.4
KKAR	Karatay Array	52.89	298	P	P	18 40 39.7	-1.4
ABKAR	Akbulak array	56.78	309	P	P	18 41 08.7	-0.5
RES	Resolute Bay	57.55	16	P	P	18 41 14.7	+0.4
	comp=Z,2.5nm,0.8s,baz=257,slow=8.9,SNR=3.6						
RES	Resolute Bay	57.55	16	IAmb	IAmb	18 41 16.4	
	comp=Z,3.5nm,0.9s						
WRA	Warramunga Arr	61.98	191	P	P	18 41 45.0	-0.3
	comp=Z,0.6nm,1.0s,baz=3.7,slow=6.2,SNR=2.5						
WRA	Warramunga Arr	61.98	191	IAmb	IAmb	18 42 13.2	
	comp=Z,0.3nm,1.2s						
NEW	Newport	65.25	47	LR	LR	19 09 39.7	
	comp=Z,26nm,20.5s,baz=322,slow=35						
FINES	FINESS Array B	65.80	332	P	P	18 42 09.9	-0.1
	comp=Z,2.1nm,0.6s,baz=54,slow=9.7,SNR=8.0						
FINES				LR	LR	19 15 51.6	
	comp=Z,65nm,18.3s,baz=2.0,slow=41						
YERR	Yerington	69.52	56	P	P	18 42 29.9	-4.2
YERR				IAmb	IAmb	18 42 37.6	
	comp=Z,2.0nm,1.1s						
AHID	Auburn Hatcher	71.97	49	P	P	18 42 46.4	-2.6
AKASG	Malin Array Be	72.04	323	P	P	18 42 48.5	-0.5
	comp=Z,1.1nm,0.5s,baz=41,slow=6.2,SNR=7.0						
AKASG	Malin Array Be	72.04	323	ceP	P	18 42 49.4	+0.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KONO	Kongsberg	72.40	338	ceP	P	18 42 51.2	+0.2
KONO				pmax	pmax		
	comp=Z,19nm,1.3s						
CLL	Collm	78.20	331	eP	P	18 43 24.0	-0.5
CLL	Collm	78.20	331	eP	P	18 43 24.0	-0.5
TXAR	Lajitas Array	85.52	54	P	P	18 44 06.4	+2.8
	comp=Z,0.1nm,0.5s,baz=306,slow=5.2,SNR=2.3						

IDC 12 18:57:34.5±1.4, **55°.43S**×**29°.89W, h0**^{km}**, mb3.8**/3, **mb1 3.8**/3, **mb1mx3.7**/16, **mbtmp3.8**/3, **Error ellipse: s-maj=104.5km s-min=30.1km az=97.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QSPA	South Pole Qui	34.82	180	P	P	19 04 26.8	+0.1
	3.3nm,0.6s,baz=195,slow=6.9,SNR=12						
VNDA	Vanda	47.11	183	P	P	19 06 07.1	-0.4
	0.8nm,0.9s,baz=181,slow=8.8,SNR=2.1						
TORD	Torodi Ar. Bea	73.31	32	P	P	19 09 07.6	+0.1
	0.1nm,0.5s,baz=192,slow=7.0,SNR=1.6						
ILAR	Eielson Array	148.57	313	PKPbc	PKPbc	19 17 21.1	-0.6
	0.6nm,0.7s,baz=102,slow=1.6,SNR=5.8						

IDC ***12*** *19:02:48.8±1.2, 43°.22N×105°.22W, h0^{km}, mb1 3.5/4, mb1mx3.3/38, mbtmp3.2/4, ML2.9/3, Error ellipse: s-maj=22.2km s-min=10.7km az=158.0*

NEIC ***12*** *19:02:52.9±2.3, 43°.71N±0°.05×105°.31W±0°.03, h0^{km}±1^{km}, ML3.5/52, Error ellipse: s-maj=9.7km s-min=3.9km az=342.0*

ISC 12 19:02:51.4±0.8, **43°.69N**±0°.05×**105°.19W**±0°.04, **h0**^{km}**, n56, σ1ˢ.42**/56, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	0.94	62		Pb	19 03 11.2	+0.5
K22A	Casper	1.43	224	Pn	Pg	19 03 16.6	-2.0
K22A				IAML		19 03 40.7	
	comp=N,608nm,0.3s						
RWWY	Rawlins	2.49	217		Pn	19 03 34.7	+1.2
RWWY				IAML		19 04 10.4	
	comp=N,296nm,1.0s						
RWWY				IAML		19 04 11.8	
	comp=N,185nm,0.7s						
LAO	LASA Array	3.09	347		Pn	19 03 42.1	+0.7
LAO				IAML		19 04 38.3	
	comp=N,209nm,0.9s						
RLMT	Red Lodge	3.25	298		Pn	19 03 43.2	-0.6
RLMT				IAML		19 04 39.9	
	comp=N,84nm,0.8s						
RLMT				IAML		19 04 40.7	
	comp=N,70nm,0.9s						
PD31	Pinedale Array	3.32	255		Pn	19 03 44.7	-0.1
PDAR	Pinedale Array	3.32	255	Pn	Pn	19 03 44.1	-0.7
	comp=N,10nm,0.3s,baz=76,slow=15,SNR=34						
PDAR				Lg	Lg	19 04 29.1	
	comp=N,15nm,0.3s,baz=81,slow=32,SNR=2.8						
PDAR	Pinedale Array	3.32	255		Pn	19 03 44.8	-0.1
BW06	Boulder Array	3.32	255		Pn	19 03 44.5	-0.3
BW06				IAML		19 04 33.7	
	comp=N,84nm,0.7s						
OGNE	Ogallala	3.61	138	Pn	Pn	19 03 51.2	+2.7
OGNE				IAML		19 05 02.0	
	comp=N,109nm,1.3s						
YMP	Mirror Lake Pl	3.72	288	Pn	Pn	19 03 49.9	-0.5
YMP				IAML		19 04 52.0	
	comp=N,112nm,0.7s						
GCMT	Greycliff	3.82	305	Pn	Pn	19 03 51.2	-0.3
ISCO	Idaho Springs	3.90	185	Pn	Pn	19 03 54.5	+1.6
LOHW	Long Hollow	3.93	271		Pn	19 03 53.4	+0.2
H17A	Grant Village	3.95	282		Pn	19 03 54.3	+0.9
H17A				IAML		19 04 56.9	
	comp=E,39nm,1.4s						
H17A				IAML		19 05 05.3	
	comp=N,48nm,1.1s						
FLWY	Flagg Ranch	4.00	278	Pn	Pn	19 03 54.2	+0.1
FLWY				IAML		19 05 08.9	
	comp=N,66nm,2.1s						
FLWY				IAML		19 05 09.1	
	comp=N,58nm,1.9s						
MOOW	Moose Ponds	4.03	273	Pn	Pn	19 03 55.3	+0.8
SNOW	Snow King Moun	4.05	269		Pn	19 03 55.5	+0.6
SNOW				IAML		19 05 09.9	
	comp=N,93nm,1.1s						
SNOW				IAML		19 05 21.9	
	comp=N,68nm,1.2s						
YPP	Pitchstone Pla	4.09	280	Pn	Pn	19 03 55.8	+0.3
REDW	Red Top Meadow	4.13	267	Pn	Pn	19 03 57.4	+1.5
REDW				IAML		19 05 12.4	
	comp=N,80nm,0.8s						
REDW				IAML		19 05 12.9	
	comp=N,86nm,1.6s						
TPAW	Teton Pass	4.19	269		Pn	19 03 55.8	-0.9
TPAW				IAML		19 05 08.8	
	comp=N,34nm,1.0s						
TPAW				IAML		19 05 24.0	
	comp=N,61nm,0.9s						
YHH	Holmes Hill	4.21	287		Pn	19 03 57.2	+0.1
O20A	White River Ci	4.22	214		Pn	19 03 56.7	-0.4
FXWY	Fox Creek	4.24	271		Pn	19 03 55.7	-1.6
YHL	Hebgen Lake	4.46	287		Pn	19 04 01.5	+1.0
YHL				IAML		19 05 22.6	
	comp=E,66nm,1.0s						
YHL				IAML		19 05 33.4	
	comp=N,57nm,1.1s						
RDMU	Red Mountain	4.51	228		Pn	19 04 02.7	+1.7
RDMU				IAML		19 05 16.5	
	comp=N,48nm,1.2s						
RDMU				IAML		19 05 30.7	
	comp=E,61nm,1.0s						
DGMT	Dagmar	4.83	8	Pn	Pn	19 04 06.7	+1.3
KSCO	Kaye Shedlock'	5.06	157		Pn	19 04 08.5	-0.1
HWUT	Hardware Ranch	5.14	248	Pn	Pn	19 04 09.8	+0.1
HWUT				IAML		19 05 31.3	
	comp=E,45nm,1.1s						
HWUT				IAML		19 05 47.4	
	comp=E,34nm,1.2s						
TCUT	Toone Canyon	5.27	243		Pn	19 04 12.6	+0.9
EGMT	Eagleton	5.38	325	Pn	Pn	19 04 14.1	+1.1
P18A	Preston Nutter	5.55	225		Pn	19 04 15.8	+0.4
JLU	Jordanelle	5.58	239		Sg	19 05 50.0	-0.7
LRM	Limekiln Ridge	5.59	295	Pn	Pn	19 04 16.0	0.0
MCMT	McKenzie Canyo	5.62	284	Pn	Pn	19 04 16.8	+0.4
SPUT	South Promonto	5.87	249	Pn	Pn	19 04 20.6	+0.9
HVU	Hansel Valley	5.90	254		Pn	19 04 19.9	-0.3
HVU					Sg	19 05 58.5	-2.4
P17A	Butcher Ranch,	5.92	227		Pn	19 04 20.9	+0.5
SDCO	Great Sand Dun	5.94	182	Pg	Pg	19 04 43.8	-1.5
SRU	San Rafael Swe	6.08	223		Pn	19 04 22.8	+0.1
ECSD	EROS Data Cent	6.22	87	Pg	Pg	19 04 47.9	-2.5
TMUT	Trail Mountain	6.30	228		Pn	19 04 26.1	+0.3
NLU	North Lily Min	6.35	236		Pg	19 04 56.9	+3.9
CBKS	Cedar Bluff	6.37	138	Pg	Pg	19 04 54.1	+0.7
Q16A	Castle Valley	6.56	225		Pn	19 04 29.5	+0.3
T25A	Trinidad	6.57	175	Pg	Pg	19 04 54.2	-3.1
T25A					LR	19 06 21.5	
DUG	Dugway, Tooele	6.67	241	Pn	Pn	19 04 30.8	+0.1
F33A	5 Mile Ranch,	6.69	68		Pg	19 05 00.3	+0.8
MVU	Marysvale	7.41	228	Pb	Pb	19 05 02.8	+1.9
JTMT	Jette	7.54	306	Pn	Pn	19 04 43.7	+1.0
MTPU	Mount Pierson	7.74	226	Pn	Pn	19 04 45.8	+0.2
KAN06	Argonia West S	8.52	137		Pn	19 04 52.0	-3.9
KAN06					Sn	19 06 33.1	+0.4
I10CA	LAC DU BONNET	9.03	41	i		19 59 00.0	
	baz=221,slow=317,SNR=1.1						
ULM	Lac du Bonnet	9.14	41	Pn	Pn	19 05 04.5	+0.1
	comp=E,1.1nm,0.3s,baz=229,slow=12,SNR=7.5						
ULM				Lg	Lg	19 07 37.0	
	comp=E,0.5nm,0.3s,baz=313,slow=15,SNR=2.3						
NVAR	Mina Array Bea	11.20	246	Pn	Pn	19 05 29.6	-3.3
	comp=E,0.1nm,0.3s,baz=74,slow=13,SNR=1.7						
TXAR	Lajitas Array	14.38	175	Pn	Pn	19 06 08.6	-7.7
	comp=E,0.0nm,0.3s,baz=353,slow=14,SNR=1.9						

PRU ***12*** *19:29:35.7±0.0, 51°.50N×16°.13E, h0^{km}*

IDC ***12*** *19:29:35.8±1.2, 51°.49N×16°.13E, h0^{km}, mb1 3.8/2, mb1mx3.1/43, mbtmp3.8/2, ML2.4/4, Error ellipse: s-maj=25.6km s-min=11.3km az=107.0*

ISC 12 19:29:33.3±0.9, **51°.60N**±0°.05×**16°.19E**±0°.04, **h0**^{km}**, n22, σ0ˢ.85**/38, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.76	175	ePg	Pg	19 29 48.3	+0.5
KSP				eSg	Sg	19 29 56.8	-0.9
CHVC	Chvalec	1.01	185	ePG	Pg	19 29 53.0	+0.3
CHVC				eSG	Sg	19 30 05.0	-0.8
OSTC	Ostas	1.04	179	ePG	Pg	19 29 53.8	+0.5
OSTC				eSG	Sg	19 30 05.8	-1.0
	comp=Z,7.6nm,0.3s						
UPC	Upice	1.10	186	ePG	Pg	19 29 54.3	0.0
UPC				eSG	Sg	19 30 08.0	-0.5
	comp=Z,27nm,0.4s						
DPC	Dobruska-Polom	1.25	176	ePG	Pg	19 29 56.9	-0.4
DPC				eSG	Sg	19 30 11.8	-1.7
	comp=Z,5.0nm,0.4s						
PVCC	Panska Ves	1.48	224	ePG	Pb	19 30 01.9	+0.2
PVCC				eSG	Sn	19 30 21.0	-0.2
	comp=Z,28nm,0.2s						
KRLC	Kraliky	1.57	166	ePG	Pb	19 30 03.3	0.0
KRLC				eSG	Sn	19 30 21.9	-1.6
	comp=Z,8.9nm,0.3s						
BRG	Berggiesshubel	1.59	244	Pg	Pg	19 30 04.2	+0.5
BRG				Sg	Sg	19 30 24.2	-0.1
BRG				Amp		19 30 25.1	
	comp=Z,9.6nm,0.3s						
PRU	Pruhonice	1.92	214	ePN	Pn	19 30 08.1	+0.8
PRU				eSG	Sb	19 30 33.6	-0.1
	comp=Z,2.7nm,0.4s						
CLL	Collm	2.01	263	ePg	Pb	19 30 11.0	+0.2
CLL				eSg	Sg	19 30 38.0	0.0
	comp=Z,4.0nm,0.6s						
MORC	Moravsky Berou	2.02	154	ePN	Pn	19 30 09.2	+0.6
MORC				eSG	Sn	19 30 34.2	-0.4
OKC	Ostrava-Krasne	2.16	144	ePG	Pg	19 30 14.2	-0.5
OKC				eSG	Sb	19 30 41.4	+0.9
VRAC	Vranov	2.31	173	Pn	Pn	19 30 13.1	+0.5
	comp=Z,0.6nm,0.3s,baz=357,slow=10,SNR=5.4						
VRAC				Lg	Lg	19 30 46.9	
	comp=Z,1.1nm,0.3s,baz=66,slow=20,SNR=4.4						
VRAC	Vranov	2.31	173	ePN	Pn	19 30 13.9	+1.3
VRAC				eSG	Sb	19 30 46.0	+1.2
KRUC	Moravsky	2.54	177	ePN	Pn	19 30 16.3	+0.5
NKC	Novy Kostel	2.73	241	eSG	Sg	19 30 59.9	-1.1
	comp=Z,6.8nm,0.3s						
KHC	Kasperske Hory	2.98	215	ePN	Pn	19 30 22.4	+0.5
KHC				ePG	Pb	19 30 28.0	+0.7
KHC				eSN	Sn	19 30 57.0	-1.3
GERES	GERESS Array B	3.18	211	Pn	Pn	19 30 25.8	+1.1
	comp=Z,0.2nm,0.3s,baz=28,slow=12,SNR=5.1						
GERES				Pg	Pb	19 30 31.5	+0.7
	comp=Z,0.5nm,0.3s,baz=29,slow=17,SNR=14						
LANS	Liptovska Anna	3.23	138	eSG	Sg	19 31 18.8	+1.9
MODS	Modra-Piesok	3.30	167	eSG	Sg	19 31 19.2	-0.2
FINES	FINESS Array B	11.26	25	Pn	Pn	19 32 14.3	-1.1

	comp=Z,0.1nm,0.3s,baz=217,slow=16,SNR=1.4						
ARCES	ARCESS Array B	18.53	10	Pn	P	19 33 51.0	0.0
	baz=193,slow=12,SNR=1.9						

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*DNK **12** 19:30:18.3±1.5, 51°.46N×15°.94E, h7^{km}±68^{km}, ML1.5*
*IDC **12** 19:30:20.8±0.8, 51°.46N×16°.04E, h0^{km}, mb1 3.4/6, mb1mx3.2/47, mbtmp3.3/6, ML2.7/6, Error ellipse: s-maj=16.6km s-min=7.8km az=109.0*
*PRU **12** 19:30:20.9±0.0, 51°.45N×16°.10E, h0^{km}*
*VIE **12** 19:30:21.6, 51°.28N×16°.38E, h0^{km}, ML2.5/2 48 km WNW of Wroclaw Suspected Mining induced.*
ISC 12 19:30:18.2±0.7, **51°.56N**±0°.03×**16°.12E**±0°.03, **h0**^{km}, **n37**, σ**1^{s}14**/69, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.73	171	ePg	Pg	19 30 32.5	+0.4
KSP				eSg	Sg	19 30 41.1	-0.4
CHVC	Chvalec	0.97	182	ePG	Pg	19 30 37.3	+0.5
CHVC				eSG	Sg	19 30 49.1	-0.3
	comp=Z,24nm,0.3s						
OSTC	Ostas	1.01	177	ePG	Pg	19 30 37.9	+0.4
OSTC				eSG	Sg	19 30 50.1	-0.4
	comp=Z,33nm,0.3s						
UPC	Upice	1.06	184	ePG	Pg	19 30 38.6	+0.2
UPC				eSG	Sg	19 30 51.8	-0.3
	comp=Z,91nm,0.4s						
DPC	Dobruska-Polom	1.22	174	ePG	Pg	19 30 41.3	-0.2
DPC				eSG	Sg	19 30 55.7	-1.6
	comp=Z,20nm,0.4s						
PVCC	Panska Ves	1.42	224	ePG	Pb	19 30 46.0	+0.4
PVCC				eSG	Sn	19 31 04.7	0.0
	comp=Z,99nm,0.3s						
BRG	Berggiesshubel	1.53	244	Pg	Pg	19 30 48.3	+0.8
BRG				Sg	Sn	19 31 08.3	+0.9
BRG				Amp		19 31 08.9	
	comp=Z,32nm,0.4s						
KRLC	Kraliky	1.54	164	ePG	Pb	19 30 47.4	-0.3
KRLC				eSG	Sn	19 31 06.9	-0.9
	comp=Z,30nm,0.6s						
PRU	Pruhonice	1.87	213	ePG	Pb	19 30 53.4	+0.3
PRU				eSG	Sb	19 31 17.1	+0.1
	comp=Z,12nm,0.4s						
CLL	Collm	1.97	264	ePg	Pg	19 30 57.0	+1.1
CLL				i		19 31 00.4	
CLL				eSg	Sg	19 31 23.0	+1.6
	comp=Z,16nm,0.3s						
MORC	Moravsky Berou	2.00	153	ePN	Pn	19 30 53.4	+0.1
MORC				eSG	Sn	19 31 19.6	+0.5
OKC	Ostrava-Krasne	2.15	142	ePG	Pb	19 30 58.6	+0.6
OKC				eSG	Sb	19 31 26.2	+1.0
	comp=Z,18nm,0.4s						
VRAC	Vranov	2.27	172	Pn	Pn	19 30 58.4	+1.4
	comp=Z,1.0nm,0.3s,baz=325,slow=17,SNR=6.6						
VRAC				Lg	Lg	19 31 29.6	
	comp=Z,3.8nm,0.3s,baz=68,slow=19,SNR=6.5						
VRAC	Vranov	2.27	172	ePN	Pn	19 30 57.9	+0.9
VRAC				eSG	Sb	19 31 29.0	+0.2
TREC	Trest	2.30	190	ePG	Pb	19 31 01.4	+0.8
TREC				eSG	Sb	19 31 30.4	+0.8
	comp=Z,12nm,0.3s						
KRUC	Moravsky	2.51	176	eSG	Sb	19 31 35.6	+0.1
NKC	Novy Kostel	2.68	242	ePG	Pg	19 31 09.0	-0.5
NKC				eSG	Sg	19 31 44.0	-0.2
	comp=Z,25nm,0.4s						
OJC	Ojcow	2.69	119	ePg	Pg	19 31 11.4	+1.7
OJC				eSg	Sg	19 31 46.4	+1.9
JAVC	Velka Javorina	2.88	159	ePN	Pn	19 31 06.5	+1.1
KHC	Kasperske Hory	2.93	215	ePN	Pn	19 31 06.9	+0.9
KHC				ePG	Pb	19 31 12.5	+1.3
KHC				eSN	Sn	19 31 41.5	-0.4
KHC				eSG	Sg	19 31 52.1	-0.1
	comp=Z,8.1nm,0.4s						
KHC	Kasperske Hory	2.93	215	eSG	Pn	19 31 06.5	+0.5
	comp=Z,4.9nm,0.3s						
CKRC	Cesky Krumlov	2.98	204	ePN	Pn	19 31 07.7	+1.0
CKRC				eSG	Sg	19 31 51.7	-2.2
GERES	GERESS Array B	3.13	211	Pn	Pn	19 31 10.2	+1.4
	comp=Z,0.6nm,0.3s,baz=29,slow=12,SNR=6.9						
GERES				Pg	Pb	19 31 15.4	+0.7
	comp=Z,1.8nm,0.3s,baz=30,slow=18,SNR=8.5						
GERES				Lg	Lg	19 31 55.4	
	comp=Z,2.3nm,0.3s,baz=31,slow=30,SNR=8.5						
LANS	Liptovska Anna	3.23	137	eSG	Sg	19 32 02.3	+0.5
MODS	Modra-Piesok	3.28	166	eSG	Sg	19 32 03.6	+0.2
BSD	Bornholm Skovb	3.63	349	i S	Sn	19 31 59.4	+0.2
CONA	Conrad Observa	3.64	183	i Pn	Pn	19 31 17.1	+1.2
	comp=Z,1.3nm,0.4s						
CONA				i Pg	Pg	19 31 27.0	-0.9
	comp=Z,2.3nm,0.3s						
CONA				i Sg	Sg	19 32 14.7	-0.4
	comp=Z,4.0nm,0.3s						
MOA	Molln	3.91	199	i Pn	Pn	19 31 20.2	+0.8
	comp=Z,0.6nm,0.1s						
MOA				ePg	Pg	19 31 32.6	-0.4
	comp=Z,1.3nm,0.3s						
MOA				eSg	Sg	19 32 22.4	-1.2
	comp=Z,6.3nm,0.5s						
ARSA	Arzberg	4.33	185	i Pn	Pn	19 31 28.0	+2.7
	comp=Z,0.7nm,0.2s						
ARSA				eSg	Sg	19 32 37.6	+0.3
	comp=Z,5.3nm,0.6s						
BLEU	Blekinge	4.76	358	e	Pn	19 31 32.4	+1.4
	baz=175,slow=14						
BLEU				i P	Pn	19 31 33.0	+1.9
BLEU				i S	Sn	19 32 25.6	-1.3
BLEU				IAML		19 32 29.3	
	comp=Z,0.2nm,0.3s						
KBA	Koelnbreinsper	4.84	203	i Pn	Pn	19 31 33.3	+0.9
	comp=Z,0.6nm,0.3s						
KBA				eSg	Sg	19 32 53.6	+0.1
	comp=Z,1.4nm,0.3s						
BJUU	Bjuv	4.88	339	i P	Pn	19 31 33.0	+0.2
BJUU				i S	Sn	19 32 27.7	-2.2
DEL	Delary	5.09	346	i P	Pn	19 31 36.1	+0.4
DEL				IAML		19 31 37.2	
	comp=Z,0.4nm,0.2s						
DEL				i S	Sn	19 32 34.0	-1.2
AKASG	Malin Array Be	8.29	91	Pn	Pn	19 32 18.8	-0.8
	comp=Z,0.4nm,0.3s,baz=284,slow=12,SNR=1.8						
HFS	Hagfors	8.70	352	Pn	Pn	19 32 26.1	+0.9
	comp=Z,0.2nm,0.3s,baz=167,slow=13,SNR=1.9						
FINES	FINESS Array B	11.31	25	Pn	Pn	19 33 00.9	0.0
	comp=Z,0.1nm,0.3s,baz=216,slow=12,SNR=5.6						
FINES				Sn	Sn	19 35 03.7	-4.2
	comp=Z,0.1nm,0.3s,baz=211,slow=21,SNR=2.0						
ARCES	ARCESS Array B	18.57	10	Pn	P	19 34 34.0	-2.4
	baz=196,slow=14,SNR=2.0						

MAN 12 19:33:43.0, 19°.26N×121°.23E, h1^{km}, mb4.0, ML2.8, MS2.4, Philippine Islands region

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*REN **12** 19:35:16.9±1.4, 41°.87N±0°.04×119°.62W±0°.03, h9^{km}±7^{km}, ML2.5/6, ML2.5/30(NEIC), Error ellipse: s-maj=6.0km s-min=3.0km az=157.0*
NEIC 12 19:35:17.8±2.3, **41°.99N**±0°.04×**119°.66W**±0°.03, **h10**^{km}±5^{km}, **Error ellipse: s-maj=6.1km s-min=2.7km az=155.0, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOD	Modoc Plateau	0.49	260	Pg	Pg	19 35 27.3	0.0
MOD				IAML		19 35 36.2	
	comp=E,322nm,0.3s						
MOD				IAML		19 35 36.3	
	comp=N,274nm,0.2s						
MOD	Modoc Plateau	0.49	260		Sb	19 35 34.9	-0.9
WVOR	Wild Horse Val	0.88	59		Sb	19 35 47.2	+0.2
WVOR	Wild Horse Val	0.88	59		Pg	19 35 34.3	-0.5
WVOR	Wild Horse Val	0.88	59	IAML		19 35 50.6	
	comp=N,90nm,0.5s						
WVOR				IAML		19 35 50.6	
	comp=N,69nm,1.0s						
K05A	Summer Lake	1.18	309	Pn	Pn	19 35 41.1	+0.7
J08A	Circle Bar Ran	1.62	32		Pn	19 35 46.8	+0.2
PINE	Pine Mountain	2.04	333		Pn	19 35 53.2	+0.9
PINE				IAML		19 36 55.0	
	comp=N,39nm,2.4s						
PINE				IAML		19 37 00.8	
	comp=E,41nm,1.9s						
WVA	Winnemucca Val	2.04	184		Pn	19 35 53.1	+0.8
I07A	Izee	2.10	3	Pg	Pb	19 35 56.8	+0.8
PAHR	Pah Rah Range	2.29	175	Pg	Pn	19 35 57.0	+1.3
YBH	Yreka Blue Hor	2.29	265		Pb	19 35 57.7	-1.5
YBH	Yreka Blue Hor	2.29	265	Pn	Pn	19 35 54.7	-1.0
BMN	Battle Mountai	2.41	129		Pn	19 35 58.6	+1.3
HUMO	Hull Mountain	2.52	285	Pn	Pn	19 35 58.4	-0.5
WDC	Whiskeytown Da	2.59	238	Pg	Pb	19 36 03.2	-1.0
WDC				IAML		19 37 01.4	
	comp=N,22nm,0.7s						
WDC				IAML		19 37 04.8	
	comp=E,16nm,2.8s						
MPK	Martis Peak	2.70	186	Pn	Pn	19 35 59.0	-2.5
DBO	Dodson Butte	2.88	294		Pn	19 36 02.5	-1.3
ELK	Elko	3.55	109		Pb	19 36 17.1	-3.6

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*MAN **12** 19:35:14.6, 19°.26N×121°.18E, h1^{km}, mb4.5, ML3.3, MS3.1*
IDC 12 19:35:34.8±3.9, **17°.01N**×**123°.89E**, **h0**^{km}, **mb3.2**/3, **mb1 3.4**/3, **mb1mx3.1**/44, **mbtmp3.2**/3, **Error ellipse: s-maj=294.8km s-min=29.4km az=63.0, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	38.12	164	P	P	19 42 55.4	-0.4
	0.4nm,0.8s,baz=344,slow=9.1,SNR=8.1						
ASAR	Alice Springs	41.59	166	P	P	19 43 24.9	+0.2
	0.2nm,0.6s,baz=351,slow=7.1,SNR=7.4						
MKAR	Makanchi Array	45.35	320	P	P	19 43 54.7	-0.1
	0.3nm,0.8s,baz=119,slow=6.4,SNR=1.8						

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*IDC **12** 19:42:58.8±2.0, 7°.98S×125°.38E, h0^{km}, mb3.4/1, mb1 3.5/5, mb1mx3.3/29, mbtmp3.3/5, ML3.2/4, Error ellipse: s-maj=51.7km s-min=28.0km az=76.0*
*DJA **12** 19:43:06.1±2.1, 8°S±10°×12°5E±1°4, h13^{km}±5^{km}, M3.1/7, MLv3.1/7*
ISC 12 19:43:03.0±1.2, **8°.22S**±0°.09×**125°.4E**±0°.1, **h35**^{km}, **n10**, σ**2^{s}68**/12, **Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.87	215	P	Pn	19 43 35.7	+3.0
BATI	Baumata	2.59	220	Pn	Pn	19 43 45.3	+2.7
	3.7nm,0.3s,baz=352,slow=1.8,SNR=7.5						
BATI				Sn	Sn	19 44 16.2	+3.3
	2.7nm,0.3s,baz=337,slow=21,SNR=2.4						
BATI	Baumata	2.59	220	P	Pn	19 43 42.6	+0.1
MMRI	Maumere	3.12	262	P	Pn	19 43 46.3	-3.5
EDFI	Ende, Flores	3.67	261	P	Pn	19 43 55.9	-1.6
BSSI	Bau Bau, Buton	5.26	293	P	Pn	19 44 17.7	-1.5
FITZ	Fitzroy Crossi	9.82	178	Pn	Pn	19 45 23.0	+1.1
	0.1nm,0.3s,baz=355,slow=12,SNR=7.0						
FITZ				Sn	Sn	19 47 08.3	-2.7
	0.2nm,0.3s,baz=116,slow=14,SNR=6.0						
WRA	Warramunga Arr	14.54	144	Pn	Pn	19 46 28.8	+2.4
	0.1nm,0.3s,baz=320,slow=13,SNR=6.0						
WRA				Sn	Sn	19 49 04.3	-2.1
	0.0nm,0.3s,baz=326,slow=24,SNR=2.0						
ASAR	Alice Springs	17.41	153	P	P	19 47 06.5	+2.3
	0.1nm,0.3s,baz=320,slow=11,SNR=12						
ASAR				S	Sn	19 50 12.5	-3.6
	0.0nm,0.3s,baz=318,slow=20,SNR=3.2						
MKAR	Makanchi Array	66.82	329	P	P	19 53 51.1	-0.1
	0.3nm,0.9s,baz=135,slow=6.9,SNR=2.0						

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*VAO **12** 19:49:21.5±0.4, 16°.01S×72°.01W, h99^{km}, mb4.8*
*NEIC **12** 19:49:21.2±1.5, 16°.06S±0°.07×72°.0W±0°.1, h92^{km}±6^{km}, mb4.5/51, ML5.1(ARE), Error ellipse: s-maj=14.3km s-min=9.2km az=72.0*
*ARE **12** 19:49:21±2.9, 16°.11S±0°.06×72°.3W±0°.1, h98^{km}±5^{km}, Error ellipse: s-maj=13.7km s-min=8.6km az=75.0*
*IDC **12** 19:49:22.3±0.7, 16°.00S×71°.95W, h106^{km}±5^{km}, mb4.0/15, mb1 4.2/19, mb1mx4.1/31, mbtmp4.5/19, MS3.3/5, Ms1 3.3/5, ms1mx3.1/26, Error ellipse: s-maj=17.7km s-min=11.5km az=63.0*
ISC 12 19:49:21.0±0.4, **16°.07S**±0°.05×**72°.07W**±0°.06, **h100**^{km}, **n181**, σ**1^{s}23**/187, **mb4.4**/28, **1C, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AP01	Chacalluta	2.82	144		Pn	19 50 06.0	+1.6
PB12	IPOC Station P	3.03	147		Pn	19 50 08.0	+0.8
LPAZ	La Paz	3.79	94		Pn	19 50 22.7	+4.8
PSGC	Pisagua	3.97	152	eP	Pn	19 50 18.9	-1.0
PSGC				eS	Sn	19 51 03.0	-2.5
PSGC				IAML		19 51 23.5	
	comp=E,1μm,0.5s						
PSGCX	Pisagua	3.97	152		Pn	19 50 19.6	-0.3
PB11	IPOC Station P	4.33	148		Pn	19 50 24.6	-0.2
TA02	Huaiquique	4.56	156⇑	eP	Pn	19 50 27.4	-0.4
TA02				eS	Sn	19 51 16.5	-3.3
TA02	Huaiquique	4.56	156		Pn	19 50 27.5	-0.4
HMBC	Humberstone	4.67	154	eP	Pn	19 50 28.7	-0.7
HMBC				eS	Sn	19 51 19.8	-2.8
TA01	Diego Aracena	4.82	158		Pn	19 50 30.5	-0.8
PB08	IPOC Station P	4.91	146	eP	Pn	19 50 33.4	+0.5
PB08				eS	Sn	19 51 26.7	-1.9
PB08	IPOC Station P	4.91	146		Pn	19 50 33.0	+0.2
PATCX	Punta Patache	5.06	159	eP	Pn	19 50 34.1	-0.5
PATCX				eS	Sn	19 51 27.1	-4.8
PATCX	Punta Patache	5.06	159		Pn	19 50 34.0	-0.7
PB01	IPOC Station P	5.52	154		Pn	19 50 39.9	-1.0
PB07	IPOC Station P	5.99	160		Pn	19 50 46.5	-0.9
NNA	Nana	6.16	311	P	Pn	19 50 48.8	-0.7
	comp=E,33nm,0.3s,baz=134,slow=13,SNR=38						
NNA				S	Sn	19 51 53.6	-5.1
	comp=E,50nm,0.3s,baz=210,slow=20,SNR=8.7						
NNA	Nana	6.16	311		Pn	19 50 46.9	-2.6
PB09	IPOC Station P	6.29	155		Pn	19 50 51.1	-0.3
PB04	IPOC Station P	6.49	164		Pn	19 50 52.8	-1.3
PB06	IPOC Station P	7.01	161		Pn	19 50 60.0	-1.2
LVC	Limon Verde	7.16	156	P	Pn	19 51 03.7	+0.3
	comp=E,61nm,0.3s,baz=3.6,slow=7.9,SNR=305						
LVC				S	Sn	19 52 20.7	-2.6
	comp=E,21nm,0.3s,baz=327,slow=12,SNR=9.9						
LVC	Limon Verde	7.16	156	eP	Pn	19 51 03.2	-0.1
LVC	Limon Verde	7.16	156		Pn	19 51 02.6	-0.8
PB15	IPOC Station P	7.51	161		Pn	19 51 06.1	-1.9
PB10	IPOC Station P	7.54	169	Pn	Pn	19 51 06.2	-2.0
CZSB	Cruzeiro do Su	8.31	356	Pn	Pn	19 51 15.4	-3.4
ETMB	Extrema	8.44	43	eP	Pn	19 51 20.6	0.0
ETMB	Extrema	8.44	43	Pn	Pn	19 51 19.7	-0.9
PB14	IPOC Station P	8.65	170		Pn	19 51 21.1	-2.6
SIV	San Ignacio	10.58	91	P	Pn	19 51 48.9	-0.8
	comp=E,7.6nm,0.3s,baz=272,slow=11,SNR=48						
ATAH	Atahualpa	10.82	324	P	Pn	19 51 55.2	+1.8
	comp=E,3.3nm,0.3s,baz=143,slow=6.5,SNR=20						
ATAH				LR	LR	19 56 32.4	
	comp=E,312nm,20.6s,baz=168,slow=40						
AC02	Maricunga	11.05	166	Pn	Pn	19 51 55.8	-0.7
SAML	Samuel	11.20	52	Pn	Pn	19 51 56.0	-2.0
GO03	Copiap	11.59	172		Pn	19 52 01.6	-1.7
VILB	Vilhena	11.90	76	eP	Pn	19 52 06.5	-1.1
VILB	Vilhena	11.90	76	Pn	Pn	19 52 05.3	-2.3
PTLB	Pontes e Lacer	12.47	89	eP	Pn	19 52 13.3	-1.7
PTLB	Pontes e Lacer	12.47	89	Pn	Pn	19 52 12.7	-2.2
CO05	La Serena	13.80	177	Pn	Pn	19 52 32.5	+0.2
GO04	Tololo Observa	14.08	175		Pn	19 52 35.9	-0.3
CO06	Fray Jorge	14.54	179		Pn	19 52 42.3	+0.4
ZON	Zonda	15.71	169	P	Pn	19 52 57.3	+0.6
ZON				IAmb	IAmb	19 53 02.2	
	comp=Z,43nm,0.9s						
SALV	Santo Antonio	15.75	92	eP	Pn	19 52 56.7	-0.6
AQDB	Aquidauana	16.15	108		Pn	19 53 01.6	-0.6
AQDB				IAmb	IAmb	19 53 06.5	
	comp=Z,17nm,0.6s						
CLDB	Colider	16.65	74	eP	Pn	19 53 08.2	-0.2
VA03	San Esteban	16.68	176	P	Pn	19 53 07.9	-0.8
VA03				IAmb	IAmb	19 53 13.4	
	comp=Z,41nm,0.9s						
MACA	Manacapuru-AM	17.03	42	eP	Pn	19 53 11.4	-1.8
MACA	Manacapuru-AM	17.03	42		Pn	19 53 10.4	-2.7
PEL	Peldehue	17.04	176		Pn	19 53 11.7	-1.5
PEL				IAmb	IAmb	19 53 17.1	
	comp=Z,17nm,0.8s						
CPUP	Villa Florida	17.11	129	P	Pn	19 53 13.4	-0.6
	comp=Z,0.7nm,0.3s,baz=304,slow=12,SNR=13						
CPUP				LR	LR	20 00 58.8	
	comp=Z,106nm,21.1s,baz=247,slow=41						
CPUP	Villa Florida	17.11	129	eP	Pn	19 53 13.5	-0.4
CPUP	Villa Florida	17.11	129	Pn	Pn	19 53 12.0	-1.9
MT02	Curacav	17.13	177	P	Pn	19 53 13.2	-1.0
MT02				IAmb	IAmb	19 53 18.0	
	comp=Z,60nm,1.1s						
OTAV	Otavalo	17.39	338	eP	P	19 53 16.5	-1.2
VA05	Santo Domingo	17.52	179	P	P	19 53 18.4	-0.1
MT09	Talagante	17.66	177	P	Pn	19 53 21.0	+0.3
MT01	Popeta	17.73	178	P	Pn	19 53 22.2	+0.7
BO01	Tunca	18.26	177	P	P	19 53 27.5	+0.7
SOTA	Rioblanco	18.64	346	eP	Pn	19 53 32.9	-0.1
NPGB	Novo Progresso	18.66	63	eP	P	19 53 31.0	-0.3
BO02	Sierra Bellavi	18.68	177	P	P	19 53 31.8	+0.4
BO02				IAmb	IAmb	19 53 36.4	
	comp=Z,32nm,0.7s						
GO05	Huala	18.86	180	P	P	19 53 34.1	+0.8
GO05				IAmb	IAmb	19 53 40.6	
	comp=Z,19nm,0.9s						
ARAG	Araguaiana, MT	19.49	92	eP	Pn	19 53 41.7	-0.8
TRCB	Terra Rica	19.50	113	P	P	19 53 41.2	+0.7
ITQB	Itaqui	19.61	136	eP	Pn	19 53 43.1	-0.7
ITQB	Itaqui	19.61	136		P	19 53 41.3	-0.2
ML02	Panimavida	19.62	178	P	P	19 53 42.1	+0.6
ITTB	Itaituba	19.82	56	eP	P	19 53 44.0	0.0
PRAC	Prado	19.86	352	eP	P	19 53 43.3	-1.0
ORTC	Ortega, Tolima	20.10	351	eP	P	19 53 48.1	+1.1
YOTC	Yotoco, Valle	20.37	348	eP	P	19 53 50.0	0.0
PCMB	Pacaembu	20.44	109	eP	P	19 53 51.4	+0.8
SNDB	Serra Nova Dou	20.56	81	eP	P	19 53 52.0	0.0
PTGB	Pitanga	20.61	118	eP	P	19 53 53.0	+0.5
ROSC	El Rosal	20.90	354	P	P	19 53 56.4	+0.5
	comp=Z,15nm,0.4s,baz=339,slow=15,SNR=4.9						
ROSC				LR	LR	20 03 59.4	
	comp=Z,49nm,18.5s,baz=242,slow=42						
ROSC	El Rosal	20.90	354	P	P	19 53 56.5	+0.7
ROSC				IAmb	IAmb	19 54 00.2	
	comp=Z,18nm,0.5s						
ITRB	Iturama	20.97	103	eP	P	19 53 56.8	+0.4
PLMC	San Jos del P	21.25	348	eP	P	19 54 00.5	+1.1
GUY2C	Guyana, Caldas	21.41	351	eP	P	19 54 03.3	+1.9
BOAV	Boa Vista	21.61	33	eP	P	19 54 03.0	-0.2
BOAV	Boa Vista	21.61	33	P	P	19 54 02.5	-0.6
NORC	Norcasia	21.67	352	eP	P	19 54 05.2	+1.4
SPBC	San Pablo de B	21.68	355	eP	P	19 54 05.2	+1.4
CBOC	Ciudad Bolivar	22.14	350	eP	P	19 54 07.1	-1.8
CPSB	Cacapava Do Su	22.24	133	eP	P	19 54 09.3	-0.3
FRTB	Fartura	22.37	112	eP	P	19 54 11.0	-0.1
MALB	Monte Alegre	22.52	53	eP	P	19 54 11.9	-0.9
LC01	Cunco	22.74	180	P	P	19 54 14.8	+0.1
LC01				IAmb	IAmb	19 54 23.8	
	comp=Z,20nm,0.8s						
BB19B	Bebedouro	22.85	106	eP	P	19 54 15.8	-0.3
IPMB	Ipameri, GO	22.89	98	eP	P	19 54 15.8	-0.7
PLTB	Pedras Altas	22.94	136	eP	P	19 54 16.7	-0.1
PLTB	Pedras Altas	22.94	136	P	P	19 54 15.9	-0.9
BDFB	Brasilia	23.14	92	P	P	19 54 18.2	-0.8
	comp=Z,12nm,0.5s,baz=265,slow=12,SNR=15						
BDFB	Brasilia	23.14	92	P	P	19 54 17.5	-1.5
BDFB				IAmb	IAmb	19 54 21.2	
	comp=Z,13nm,0.6s						
DBBC	Dabeiba	23.30	350	eP	P	19 54 24.3	+3.9
PEXB	Peixe	23.38	83	eP	P	19 54 20.8	-0.4
CNLB	Canela	23.55	128	eP	P	19 54 23.1	+0.5
ZARC	Zaragoza, Cauc	23.57	353	eP	P	19 54 22.4	-0.4
ZARC	Zaragoza, Cauc	23.57	353	P	P	19 54 22.5	-0.3
PRPB	Parauapebas	23.93	68	eP	P	19 54 25.7	-0.4
RCLB	Rio Claro- Sao	24.00	109	eP	P	19 54 26.3	-0.3
TER01	Tubaro-SC	24.53	124	eP	P	19 54 31.1	-0.3
PLCA	Paso Flores	24.61	177	P	P	19 54 33.0	+1.0
	comp=Z,30nm,0.8s,baz=355,slow=11,SNR=51						
PLCA	Paso Flores	24.61	177	eP	P	19 54 33.9	+1.9
PLCA	Paso Flores	24.61	177	P	P	19 54 32.8	+0.8
PET01	Itanhaem-SP	24.64	113	eP	P	19 54 32.4	0.0
LL04	Puerto Octay	24.75	181	P	P	19 54 33.1	-0.1
LL04				IAmb	IAmb	19 54 34.5	
	comp=Z,17nm,0.8s						
SMLC	San Martn de	24.79	355	eP	P	19 54 31.9	-1.9
SDV	Santo Domingo	24.84	3	P	P	19 54 34.6	+0.2
	comp=Z,2.9nm,0.3s,baz=279,slow=13,SNR=2.0						
SDV	Santo Domingo	24.84	3	eP	P	19 54 34.2	-0.3
SDV	Santo Domingo	24.84	3	P	P	19 54 33.4	-1.0
SDV				IAmb	IAmb	19 55 02.7	
	comp=Z,23nm,1.2s						
SMTB	Santa Maria do	24.94	76	eP	P	19 54 36.8	+1.6
MOTC	Monteria, Cord	24.95	352	P	P	19 54 33.7	-1.5
MCPB	Macapa, AP	25.17	54	eP	P	19 54 37.4	+0.1
SJCC	San Jacinto, C	25.98	353	P	P	19 54 43.4	-1.3
SJCC				IAmb	IAmb	19 55 06.7	
	comp=Z,19nm,1.4s						
BSCB	Bom Sucesso	26.32	105	eP	P	19 54 47.7	-0.1
SDBA	SAO DESIDERIO	26.57	86	eP	P	19 54 49.4	-0.7
JANB	Januaria	26.75	92	eP	P	19 54 51.9	+0.2
MC01	Montes Claros	26.99	95	eP	P	19 54 53.5	-0.2
DIAM	Diamantina, MG	27.21	99	eP	P	19 54 56.0	+0.1
MAN01	Angra dos Reis	27.32	109	eP	P	19 54 57.0	+0.4
VAS01	Vassouras-RJ	27.71	107	eP	P	19 55 00.5	+0.4
SJMB	Sao Joao De Ma	29.57	100	eP	P	19 55 16.7	0.0
BSFB	Barra de Sao F	29.89	100	eP	P	19 55 19.7	+0.2
GUA01	Guaratinga, BA	30.95	96	eP	P	19 55 29.6	+0.7
CMC01	Camacan, BA	31.33	93	eP	P	19 55 33.0	+0.9
NBPN	Ponto Novo - B	31.41	85	eP	P	19 55 33.2	+0.3
NBIT	Itapeh - BA	31.45	92	eP	P	19 55 34.6	+1.3
GDU01	Guandu, BA	31.47	90	eP	P	19 55 33.7	+0.3
NBLA	Lagarto - SE	33.68	86	eP	P	19 55 52.5	-0.3
NBAN	Anadia - AL	35.44	84	eP	P	19 56 07.8	-0.1
USHA	Ushuaia	38.78	177	P	P	19 56 37.2	+1.6
	comp=Z,12nm,0.6s,baz=15,slow=6.5,SNR=11						
ZAIG	Zacatecas	48.80	321	P	P	19 57 57.5	+0.9
ZAIG				IAmb	IAmb	19 58 07.5	
	comp=Z,8.3nm,1.3s						
PAULI	Pauline	51.45	350		pP	19 58 40.9	-0.4
TXAR	Lajitas Array	54.48	326	P	P	19 58 37.8	-0.8
	comp=Z,0.2nm,0.5s,baz=148,slow=8.1,SNR=4.6						
TXAR				pP	pP	19 59 05.2	+0.9
	comp=Z,0.6nm,0.6s,baz=150,slow=8.8,SNR=4.8						
TXAR				LR	LR	20 22 09.1	
	comp=Z,15nm,18.8s,baz=0.0,slow=36						
TXAR	Lajitas Array	54.48	326	P	P	19 58 40.2	+1.6
MNTX	Cornudas Mount	57.25	326	P	P	19 58 58.0	-0.2
MNTX				IAmb	IAmb	19 58 58.8	
	comp=Z,3.7nm,1.1s						
LENM	Lemitar	60.00	327	P	P	19 59 17.4	0.0
SADO	Sadowa	60.89	354	P	P	19 59 23.1	+0.1
SDCO	Great Sand Dun	62.08	330	P	P	19 59 32.5	+0.9
SDCO				IAmb	IAmb	19 59 33.1	
	comp=Z,3.3nm,0.7s						
SMCO	Snowmass	63.91	330	P	P	19 59 43.6	-0.2
U15A	North Rim	64.57	325	P	P	19 59 49.4	+1.3
VNA3	Neumayer Olymp	66.14	162	P	P	19 59 58.6	+1.2
VNA1	Neumayer--Stat	66.37	161	P	P	20 00 00.5	+1.8
VNA2	Neumayer--Watz	66.73	161	P	P	20 00 02.3	+1.1
	baz=287,slow=8.2						
DUG	Dugway, Tooele	67.60	327	P	P	20 00 08.0	+0.8
DUG				IAmb	IAmb	20 00 09.4	
	comp=Z,6.4nm,1.1s						
R11A	Troy Canyon, C	67.78	324	P	P	20 00 09.6	+1.2
PDAR	Pinedale Array	67.94	331	P	P	20 00 09.1	-0.2
	comp=Z,0.2nm,0.4s,baz=129,slow=5.9,SNR=3.7						
PDAR				pP	PcP	20 00 34.9	-0.1
	comp=Z,0.4nm,0.7s,baz=199,slow=7.4,SNR=2.0						
PDAR				LR	LR	20 34 19.6	
	comp=Z,23nm,18.5s,baz=22,slow=40						
SNAA	Sanae	68.36	161	P	P	20 00 12.5	+1.0
SNAA	Sanae	68.36	161	P	P	20 00 12.4	+1.0
NVAR	Mina Array Bea	69.39	323	P	P	20 00 19.5	+1.0
	comp=Z,1.0nm,0.8s,baz=147,slow=5.9,SNR=6.0						
NVAR	Mina Array Bea	69.39	323	P	P	20 00 19.9	+1.4
FLWY	Flagg Ranch	69.48	331	P	P	20 00 19.7	+0.8
FLWY				IAmb	IAmb	20 00 21.0	
	comp=Z,8.3nm,1.1s						
DBIC	Dimbokro	70.24	77	P	P	20 00 23.6	-0.3
	comp=Z,3.1nm,0.8s,baz=259,slow=6.1,SNR=5.2						
DBIC	Dimbokro	70.24	77	P	P	20 00 24.1	+0.2
DBIC				IAmb	IAmb	20 00 37.5	
	comp=Z,16nm,1.5s						
PAHR	Pah Rah Range	70.87	323	P	P	20 00 28.4	+1.0
PAHR				IAmb	IAmb	20 00 30.0	
	comp=Z,6.9nm,0.9s						
HLID	Hailey	70.88	329	P	P	20 00 27.1	-0.3
MFID	Camas Ranch	71.48	328	P	P	20 00 31.5	+0.5
MFID				IAmb	IAmb	20 00 33.5	
	comp=Z,11nm,1.2s						
ORV	Oroville	72.01	322	P	P	20 00 35.3	+1.2
ORV				IAmb	IAmb	20 00 36.7	

	comp=Z,6.3nm,1.0s						
MOD	Modoc Plateau	72.84	324	P	P	20 00 39.7	+0.5
MOD				IAmb	IAmb	20 00 41.9	
	comp=Z,12nm,1.4s						
QSPA	South Pole Qui	74.09	180	P	P	20 00 47.2	+1.1
QSPA				IAmb	IAmb	20 00 48.6	
	comp=Z,18nm,1.2s						
EDM	Edmonton	77.61	336	P	P	20 01 06.3	+0.2
EDM				IAmb	IAmb	20 01 16.3	
	comp=Z,5.6nm,0.9s						
TORD	Torodi Ar. Bea	78.48	73	P	P	20 01 11.6	-0.2
	comp=Z,1.6nm,0.3s,baz=254,slow=4.6,SNR=46						
TORD				pP	pP	20 01 38.6	-0.2
	comp=Z,3.2nm,0.7s,baz=256,slow=5.3,SNR=5.1						
TORD	Torodi Ar. Bea	78.48	73	P	P	20 01 11.3	-0.4
TORD				IAmb	IAmb	20 01 13.7	
	comp=Z,6.5nm,1.1s						
VNDA	Vanda	81.64	190	P	P	20 01 28.7	+1.1
	comp=Z,1.3nm,0.7s,baz=107,slow=6.2,SNR=5.2						
ESDC	Sonseca Array	84.16	46	P	P	20 01 41.9	+0.6
	comp=Z,0.9nm,0.7s,baz=250,slow=5.3,SNR=8.4						
ESDC	Sonseca Array	84.16	46	IAmb	IAmb	20 01 43.4	
	comp=Z,1.1nm,0.9s						
TSUM	Tsumeb	84.52	108	P	P	20 01 45.0	+1.3
YKA	Yellowknife Ar	85.11	342	P	P	20 01 45.2	-0.2
	comp=Z,1.5nm,0.7s,baz=124,slow=6.3,SNR=4.3						
BOSA	Boshof	88.67	119	P	P	20 02 04.1	+0.3
	comp=Z,1.8nm,0.6s,baz=264,slow=5.5,SNR=7.3						
BOSA	Boshof	88.67	119	IAmb	IAmb	20 02 04.4	
	comp=Z,4.9nm,1.1s						
MAW	Mawson	90.35	164	P	P	20 02 11.5	+0.9
	comp=Z,2.6nm,0.6s,baz=222,slow=6.8,SNR=6.8						
ASAR	Alice Springs	133.05	213	PKP	PKPdf	20 08 26.1	+0.4
	comp=Z,0.2nm,0.6s,baz=101,slow=1.7,SNR=6.2						
WRA	Warramunga Arr	135.79	217	PKP	PKPdf	20 08 31.5	+0.6
	comp=Z,0.6nm,0.7s,baz=137,slow=1.8,SNR=11						
ZALV	Zalesovo Beam	138.12	20	PKP	PKPdf	20 08 34.1	0.0
	comp=Z,1.1nm,0.6s,baz=327,slow=2.5,SNR=7.2						
MKAR	Makanchi Array	142.70	29	PKhKP	PKPpre	20 08 39.4	
	comp=Z,0.5nm,0.8s,baz=338,slow=1.3,SNR=4.4						
MJAR	Matsushiro Arr	146.28	313	PKPbc	PKPbc	20 08 50.7	+0.3
	comp=Z,3.3nm,0.7s,baz=113,slow=2.5,SNR=8.6						
MJAR	Matsushiro Arr	146.28	313		PKPdf	20 08 49.3	+0.1
SONM	Songino Array	148.30	2	PKPbc	PKiKP	20 08 56.9	-0.5
	comp=Z,1.2nm,0.8s,baz=332,slow=2.8,SNR=7.7						
SONM				pPKPbc	pPKPbc	20 09 25.8	+1.2
	comp=Z,0.7nm,0.6s,baz=302,slow=1.6,SNR=2.4						
KSRS	Korea Array	152.32	324	PKPbc	PKiKP	20 09 06.4	+0.6
	comp=Z,2.1nm,1.0s,baz=22,slow=1.3,SNR=3.6						

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*IASPEI **12** 19:52:35.7±0.9, 47°.81N±0°.02×121°.93W±0°.02, h31^{km}±4^{km}, Error ellipse: s-maj=3.4km s-min=2.7km az=69.9, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*SEA **12** 19:52:36.5±2.1, 47°.82N±0°.01×121°.89W±0°.04, h25^{km}±7^{km}, ML2.4/53, ML2.2/12(NEIC), Error ellipse: s-maj=4.1km s-min=2.0km az=92.0*

*NEIC **12** 19:52:36.0±1.8, 47°.83N±0°.02×121°.86W±0°.04, h26^{km}±7^{km}, Error ellipse: s-maj=4.4km s-min=2.9km az=75.0*

*PGC **12** 19:52:36.5, 47°.82N×121°.89W, h25^{km}, ML2.4, ML2.0/9, 40km Ene of Seattle, Wa Washington*

ISC 12 19:52:36.1±0.9**, 47°.82N**±0°.02×**121°.93W**±0°.02**, h29**^{km}±4^{km}**, n86,** σ**0ˢ.79**/114**, Washington**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLH	Bald Hill	0.07	285		Pb	19 52 40.8	-0.3
MBPA	Monroe Substat	0.09	17		Pb	19 52 40.8	-0.5
HTW	Haystack Looko	0.11	98		Pb	19 52 40.8	-0.6
EARN	East Ridge Ele	0.11	225		Pb	19 52 41.5	+0.2
EARN					Sb	19 52 45.9	+1.0
C05A	Tolt Reservoir	0.20	128		Pb	19 52 41.7	-0.6
C05A					Sb	19 52 45.6	-0.8
C05A	Tolt Reservoir	0.20	128	P	Pb	19 52 41.7	-0.6
C05A				S	Sb	19 52 45.5	-1.0
TTW	Tolt Reservoir	0.20	128		Pb	19 52 41.7	-0.6
TTW					Sb	19 52 45.7	-0.8
MARYW	Marymoor Park	0.20	221		Pb	19 52 42.7	+0.5
LYNC	Lynnwood City	0.25	272		Pb	19 52 43.0	+0.3
EVCC	Everett Colleg	0.27	315		Pb	19 52 43.4	+0.4
EVCC					Sn	19 52 49.2	0.0
ELW	Echo Lake	0.33	174		Pb	19 52 43.4	-0.4
JCW	Jim Creek	0.38	359		Pb	19 52 44.1	-0.5
JCW	Jim Creek	0.38	359	P	Pb	19 52 44.2	-0.5
JCW				S	Sb	19 52 48.9	-1.5
RATT	Rattlesnake La	0.40	168		Pb	19 52 44.5	-0.5
RATT					Sb	19 52 51.0	+0.1
CDMR	Cedar Moraine	0.41	164		Pb	19 52 44.6	-0.5
B05A	Bryant	0.46	346		Pb	19 52 45.4	-0.5
B05A					Sb	19 52 52.3	-0.2
GPW	Glacier Peak	0.61	60	P	Pb	19 52 47.9	-0.5
GPW				S	Sb	19 52 56.2	-0.6
CMW	Cultus Mountai	0.62	348		Pb	19 52 48.2	-0.4
CMW	Cultus Mountai	0.62	348	P	Pb	19 52 48.2	-0.4
GSM	Grass Mountain	0.62	172		Pb	19 52 47.7	-0.8
D05A	Enumclaw	0.63	184	Pn	Pb	19 52 47.7	-0.9
D05A	Enumclaw	0.63	184	P	Pb	19 52 48.2	-0.4
GNW	Green Mountain	0.66	248		Pb	19 52 48.4	-0.7
GNW	Green Mountain	0.66	248	P	Pb	19 52 48.4	-0.7
SVOH	Skagit Valley	0.67	315		Pb	19 52 49.2	-0.1
RPW	Rockport	0.69	23		Pb	19 52 49.0	-0.6
RPW	Rockport	0.69	23	P	Pb	19 52 49.0	-0.6
RPW				S	Sb	19 52 58.1	-0.7
C06D	Leavenworth	0.70	81		Pb	19 52 49.3	-0.5
WRW	Wenatchee Ridg	0.70	86		Pb	19 52 49.3	-0.6
B06A	Marblemount	0.76	23		Pb	19 52 49.8	-1.0
B06A				IAML		19 53 01.3	
	comp=N,122nm,0.2s						
B06A	Marblemount	0.76	23	P	Pb	19 52 50.0	-0.7
B06A				S	Sb	19 52 60.0	-0.8
HDW	Hoodsport	0.78	258		Pb	19 52 50.1	-1.1
HDW	Hoodsport	0.78	258	P	Pb	19 52 50.1	-1.1
HDW				S	Sb	19 52 59.7	-1.7
GHW	Garrison Hill	0.81	197		Pb	19 52 51.0	-0.6
B941	Kapowsin	0.85	194		Pb	19 52 51.3	-1.1
FMW	Mount Fremont	0.90	169		Pb	19 52 52.1	-1.2
FMW	Mount Fremont	0.90	169	P	Pb	19 52 52.1	-1.2
SLFW	Sugar Loaf	0.94	93		Pn	19 52 53.2	-0.3
RCS	Mount Rainier-	0.96	172		Pn	19 52 53.3	-0.5
MBW	Mount Baker	0.97	1		Pn	19 52 53.9	0.0
MBW	Mount Baker	0.97	1	P	Pn	19 52 53.6	-0.2
MBW				S	Sb	19 53 06.3	-0.5
SR41	SR410 Landslid	0.97	164		Pn	19 52 53.3	-0.5
REMR	Mount Rainier-	1.00	177		Pn	19 52 53.8	-0.5
LTY	Liberty	1.02	123		Pn	19 52 54.4	0.0
LTY				IAML		19 53 08.7	
	comp=N,46nm,0.2s						
LTY	Liberty	1.02	123	P	Pn	19 52 54.5	0.0
LTY				S	Sn	19 53 07.9	+0.1
SHUK	Shuksan-Mt. Ba	1.05	9		Pn	19 52 55.0	0.0
MCW	Mount Constitu	1.05	325		Pn	19 52 55.0	0.0
MCW	Mount Constitu	1.05	325	P	Pn	19 52 54.8	-0.2
MCW				S	Sn	19 53 07.4	-1.3
LON	Longmire	1.07	176		Pn	19 52 54.9	-0.3
B04A	Port Angeles	1.09	283	Pn	Pn	19 52 54.4	-1.0
B04A				IAML		19 53 09.7	
	comp=E,48nm,3.7s						
B04A				IAML		19 53 25.9	
	comp=N,49nm,3.5s						
TBM	Table Mountain	1.11	125		Pb	19 52 56.9	+0.2
VGZ	Gonzales	1.11	303	P	Pn	19 52 54.7	-1.0
VGZ				S	Sn	19 53 08.8	-1.2
WPW	White Pass	1.15	167		Pn	19 52 56.3	0.0
CPW	Capitol Peak	1.18	225	S	Sn	19 53 11.1	-0.7
A05A	Maple Falls	1.19	355	P	Pb	19 52 57.4	-0.5
A05A				S	Sb	19 53 12.9	0.0
VDB	Vedder Mountai	1.22	354		Pn	19 52 57.6	+0.5
VDB	Vedder Mountai	1.22	354	P	Pn	19 52 57.6	+0.5
VDB				S	Sb	19 53 13.7	-0.1
STW	Striped Peak	1.22	286	P	Pn	19 52 56.7	-0.5
SNB	Saturna Island	1.27	319	P	Pn	19 52 58.0	+0.2
SNB				S	Sn	19 53 14.6	+0.7
GLK	Glacier Lake	1.27	170		Pn	19 52 58.8	+0.8
EBG	Ellensburg	1.29	134		Pb	19 53 00.0	+0.2
PA12	PA12 Sannich	1.31	310	S	Sn	19 53 14.7	-0.3
B011	North Saanich	1.32	310		Pn	19 52 58.3	-0.1
B011	North Saanich	1.32	310	P	Pn	19 52 58.3	-0.1
B011				S	Sn	19 53 14.6	-0.4
B009	North Saanich	1.32	310	P	Pn	19 52 58.2	-0.3
B009				S	Sn	19 53 14.7	-0.4
NAC	Naches	1.32	145		Pb	19 52 59.9	-0.3
PGC	Sidney	1.32	310		Pn	19 52 58.0	-0.4
PGC				IAML		19 53 34.9	
	comp=N,46nm,2.2s						
PGC				IAML		19 53 35.1	
	comp=E,49nm,2.7s						
PGC	Sidney	1.32	310	P	Pn	19 52 58.5	0.0
PGC				S	Sn	19 53 14.8	-0.3
B010	North Saanich	1.32	310	P	Pn	19 52 58.5	0.0
B010				S	Sn	19 53 14.8	-0.2
NLWA	Neilton Lookou	1.38	253	Pn	Pn	19 53 00.6	+1.1
B201	Coldwater, Mou	1.53	189		Pn	19 53 02.5	+1.0
HNBB	Haney	1.53	344	P	Pn	19 53 01.9	+0.4
HNBB				S	Sn	19 53 21.5	+1.0
ERK	Elk Rock	1.54	191		Pn	19 53 02.6	+0.9
B202	Windy Ridge, M	1.58	185		Pn	19 53 03.2	+1.0
HOPB	Hope	1.61	12	S	Sb	19 53 25.2	+0.2
FL2	Flat Top 2	1.65	190		Pn	19 53 04.6	+1.4
SWF2	Southwest Flan	1.65	187		Pb	19 53 05.7	-0.2
ASR	Mount Adams--S	1.68	172		Pb	19 53 06.0	-0.5
E03A	Lebam	1.69	222	S	Sn	19 53 26.5	+2.2
B926	Mesachie Lake	1.78	305	P	Pn	19 53 05.3	+0.5
B926				S	Sn	19 53 27.0	+0.5
CLRS	Cowichan Lake	1.78	305	Pn	Pn	19 53 04.4	-0.5
B08A	Colville Reser	1.82	72	S	Sb	19 53 32.4	+1.3
PFB	Port Renfrew	1.84	295	P	Pn	19 53 06.3	+0.5
PFB				S	Sn	19 53 29.1	+1.0
PNT	Penticton	2.15	45	Sg	Sb	19 53 41.9	+1.5
MGB	Mount Grey	2.19	304	P	Pn	19 53 11.6	+0.9
MGB				S	Sn	19 53 38.2	+1.4
SHB	Sechelt	2.20	325	P	Pn	19 53 12.3	+1.6
SHB				S	Sn	19 53 39.9	+2.9

IDC 12 20:02:12.4±22.0**, 22°.85S**×**69°.41E, h0**^{km}**, mb3.5**/4**, mb1 3.7**/4**, mb1mx3.4**/38**, mbtmp3.5**/4**, Error ellipse: s-maj=759.7km s-min=39.0km az=52.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	15.40	12	T	T	20 21 32.8	
	baz=192,slow=76,SNR=178						
H08S2	Diego Garcia H	15.40	12	T	T	20 21 35.1	
	baz=192,slow=76,SNR=31						
H08S3	Diego Garcia H	15.42	12	T	T	20 21 32.7	
	baz=192,slow=76,SNR=34						
H01W2	Cape Leeuwin H	40.66	117	T	T	20 53 16.0	
	baz=274,slow=75,SNR=38						
H01W3	Cape Leeuwin H	40.66	117	T	T	20 53 16.2	
	baz=274,slow=75,SNR=34						
H01W1	Cape Leeuwin H	40.67	117	T	T	20 53 19.6	
	baz=274,slow=75,SNR=39						
ASAR	Alice Springs	58.78	105	P	P	20 12 12.9	+0.1
	0.3nm,0.7s,baz=263,slow=6.1,SNR=2.2						
WRA	Warramunga Arr	60.09	101	P	P	20 12 21.7	-0.2
	0.8nm,0.9s,baz=256,slow=6.8,SNR=4.4						
MKAR	Makanchi Array	70.29	9	P	P	20 13 27.4	0.0
	0.4nm,0.9s,baz=211,slow=4.7,SNR=2.9						
ZALV	Zalesovo Beam	77.63	9	P	P	20 14 10.3	+0.1
	0.3nm,0.4s,baz=190,slow=6.9,SNR=1.9						

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*AEIC **12** 20:16:51±2.8, 65°.44N±0°.04×165°.10W±0°.10, h26^{km}±7^{km}, ML3.6, ML3.7/14(NEIC), Error ellipse: s-maj=6.6km s-min=5.9km az=193.0*

*NEIC **12** 20:16:52.5±2.2, 65°.48N±0°.06×165°.1W±0°.1, h15^{km}±4^{km}, Error ellipse: s-maj=8.8km s-min=6.3km az=186.0*

ISC 12 20:16:51.7±0.9**, 65°.49N**±0°.05×**165°.06W**±0°.06**, h10**^{km}**, n72,** σ**1ˢ.05**/74**, Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANM	Nome	0.94	188	P	Pn	20 17 09.5	-1.4
	baz=7.3						
ANM				S	Sb	20 17 21.8	-0.7
	baz=7.3						
ANM	Nome	0.94	188	Pn	Pn	20 17 09.5	-1.4
ANM				IAML		20 17 26.5	
	comp=N,3µm,0.4s						
ANM	Nome	0.94	188		Sb	20 17 21.8	-0.7
TNA	Tin City	1.19	275	P	Pg	20 17 14.4	-0.1
	baz=94						
TNA				S	Sn	20 17 31.4	+0.7
	baz=94						
TNA	Tin City	1.19	275		Pg	20 17 14.5	-0.1
TNA	Tin City	1.19	275		Sn	20 17 31.4	+0.7
RDOG	Red Dog Mine	2.72	17	P	Pb	20 17 39.9	-0.4
	baz=199						
RDOG	Red Dog Mine	2.72	17		Pn	20 17 34.5	-0.8
GCSA	Galena City Sc	3.54	98	P	Pn	20 17 48.2	+1.6
	baz=285						
GCSA	Galena City Sc	3.54	98		Pn	20 17 48.2	+1.6
IM03		4.70	79		Pn	20 18 03.2	+0.8
IMAR	Indian Mountai	4.70	79	Pn	Pn	20 17 59.9	-2.6
TTA	Tatalina	4.71	119	P	Pn	20 18 04.1	+1.3
	baz=306						
TTA	Tatalina	4.71	119		Pn	20 18 00.5	-2.3
TTA				IAML		20 19 10.1	
	comp=N,58nm,4.8s						
TTA				IAML		20 20 01.4	
	comp=E,64nm,5.0s						
TT01	Tatalina	4.72	119		Pn	20 18 04.3	+1.3
J20K	Nowinta River	4.84	101	P	Pn	20 18 05.6	+1.1
	baz=290						
J20K	Nowinta River	4.84	101	Pn	Pn	20 18 05.8	+1.2
J20K				IAML		20 19 37.1	
	comp=N,43nm,1.3s						
J20K				IAML		20 19 39.3	
	comp=E,53nm,1.1s						
H21K	Melozitna Rive	5.09	83	P	Pn	20 18 08.6	+0.6
	baz=273						
H21K	Melozitna Rive	5.09	83		Pn	20 18 08.3	+0.3
H21K				IAML		20 18 47.4	
	comp=N,32nm,4.9s						
K20K	Telida	5.22	109	P	Pn	20 18 10.7	+0.9
	baz=298						
K20K	Telida	5.22	109	Pn	Pn	20 18 09.4	-0.3
K20K				IAML		20 19 47.3	
	comp=E,47nm,3.3s						
I21K	Tanana	5.49	87	P	Pn	20 18 14.1	+0.7
	baz=279						
I21K	Tanana	5.49	87		Pn	20 18 13.2	-0.2
L19K	White Mountain	5.60	122	P	Pn	20 18 15.9	+0.9
	baz=310						
L19K	White Mountain	5.60	122		Pn	20 18 15.7	+0.7
L20K	Farewell, AK	5.77	116	P	Pn	20 18 18.3	+1.0
	baz=306						
L20K	Farewell, AK	5.77	116		Pn	20 18 18.3	+1.0
M19K	Big River Lodg	5.95	122	P	Pn	20 18 20.8	+1.0
	baz=311						
M19K	Big River Lodg	5.95	122	Pn	Pn	20 18 21.2	+1.4
CAST	Castle Rocks	5.99	104	P	Pn	20 18 21.5	+1.2
	baz=296						
CAST	Castle Rocks	5.99	104		Pn	20 18 21.3	+1.0
MLY	Manley	6.03	88	P	Pn	20 18 21.3	+0.4
	baz=280						
MLY	Manley	6.03	88		Pn	20 18 20.4	-0.5
SVW2	Sparrevohn	6.14	132	Pn	Pn	20 18 22.2	-0.1
BPAW	Bear Paw Mtn.	6.17	97	P	Pn	20 18 24.0	+1.2
	baz=289						
BPAW	Bear Paw Mtn.	6.17	97	Pn	Pn	20 18 23.7	+0.9
PPLA	Purkeypile	6.19	109	P	Pn	20 18 24.1	+0.8
	baz=300						
PPLA	Purkeypile	6.19	109	Pn	Pn	20 18 23.6	+0.4
COLD	Coldfoot	6.23	67	P	Pn	20 18 23.3	-0.2
	baz=260						
COLD	Coldfoot	6.23	67	Pn	Pn	20 18 22.6	-0.9
KTH	Kantishna Hill	6.40	101	Pn	Pn	20 18 27.9	+1.8
H23K	Yukon River	6.43	80	P	Pn	20 18 26.4	+0.1
	baz=274						
H23K	Yukon River	6.43	80		Pn	20 18 25.4	-0.9
A21K	Barrow	6.63	24	P	Pn	20 18 28.2	-0.9
	baz=212						
N19K	Bonanza Creek	6.70	130	P	Pn	20 18 30.4	+0.3
	baz=319						
N19K	Bonanza Creek	6.70	130	Pn	Pn	20 18 28.8	-1.4
TRF	Thorofare Moun	6.70	101	Pn	Pn	20 18 31.4	+1.2
BWN	Browne	6.78	94	Pn	Pn	20 18 31.8	+0.7
TOLK	Toolik Lake Re	6.82	55	P	Pn	20 18 33.0	+1.3
	baz=250						
TOLK	Toolik Lake Re	6.82	55	Pn	Pn	20 18 32.8	+1.1
NEA2	Nenana	6.83	90		Pn	20 18 30.9	-0.9
SKT	Skwentna	6.96	114	Pn	Pn	20 18 34.3	+0.7
MDM	Murphy Dome	7.09	87	Pn	Pn	20 18 35.5	+0.1
H24K	Noodor Dome	7.11	79	P	Pn	20 18 36.2	+0.5
	baz=275						
H24K	Noodor Dome	7.11	79	Pn	Pn	20 18 34.9	-0.7
MCK	McKinley	7.15	97	Pn	Pn	20 18 37.8	+1.6
WRH	Wood River Hil	7.27	90	Pn	Pn	20 18 38.6	+0.8
POKR	Poker Plat Res	7.39	85	Pn	Pn	20 18 39.8	+0.2
RSO	Redoubt South	7.53	126	Pn	Pn	20 18 43.5	+1.8
IL31		7.69	87		Pn	20 18 43.7	+0.1
ILAR	Eielson Array	7.69	87	Pn	Pn	20 18 43.5	-0.1
DHY	Denali Highway	8.06	99	Pn	Pn	20 18 50.0	+1.3
PRP	Porcupine Dome	8.12	81	Pn	Pn	20 18 50.1	+0.5
FYU	Fort Yukon	8.14	73	Pn	Pn	20 18 48.8	-0.9
BMAR	Burnt Mountain	8.41	67	Pn	Pn	20 18 53.4	-0.2
PWL	Port Wells	8.86	114	Pn	Pn	20 19 00.6	+1.0
SCRK	Sand Creek	9.13	90	Pn	Pn	20 19 03.2	-0.2
DOT	Dot Lake	9.21	92	Pn	Pn	20 19 04.4	-0.1
KLU	Klutina	9.43	106	Pn	Pn	20 19 06.7	-0.9
KDAK	Kodiak Island	9.73	137	Pn	Pn	20 19 08.7	-2.8
L27K	Beaver Creek,	10.37	93	Pn	Pn	20 19 19.8	-0.5
BCAR	Beaver Creek A	10.38	93	Pn	Pn	20 19 20.2	-0.3

IDC 12 20:17:23.4±2.2**, 1°.84N**×**126°.02E, h0**^{km}**, mb3.2**/3**, mb1 3.4**/3**, mb1mx3.2**/29**, mbtmp3.2**/3**, Error ellipse: s-maj=187.0km s-min=28.4km az=65.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.14	160	P	P	20 22 30.9	-0.5
	0.6nm,0.7s,baz=338,slow=11,SNR=10						
ASAR	Alice Springs	26.49	164	P	P	20 23 03.4	+0.7
	0.1nm,0.3s,baz=344,slow=10.0,SNR=2.4						
MKAR	Makanchi Array	58.71	326	P	P	20 27 22.8	-0.2
	0.2nm,0.4s,baz=117,slow=8.9,SNR=2.1						

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*IDC **12** 20:57:12.8±11.0, 51°.94N×173°.27W, h0^{km}, mb3.5/3, mb1 3.6/4, mb1mx3.3/68, mbtmp3.5/4, ML3.6/1, Error ellipse: s-maj=289.0km s-min=32.8km az=160.0*

*AEIC **12** 20:57:13±1.7, 51°.3N±0°.1×173°.0W±0°.2, h12^{km}±10^{km}, ML2.8, Error ellipse: s-maj=22.3km s-min=15.2km az=117.0*

*NEIC **12** 20:57:25.7±1.1, 51°.8N±0°.3×174°.02W±0°.03, h41^{km}±93^{km}, Error ellipse: s-maj=49.5km s-min=2.8km az=180.0*

ISC 12 20:57:14.2±2.2**, 51°.3N**±0°.2×**172°.8W**±0°.2**, h37**^{km}**, n18,** σ**0ˢ.91**/15**, mb3.5**/3**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOFP	Korovin Flat P	1.27	321		Pn	20 57 35.5	+0.2
KOSE	Korovin Southe	1.30	324		Pn	20 57 36.3	+0.5
KOKL	Mount Kliuchef	1.34	321		Pn	20 57 36.5	+0.2
GSIG	Igitkin Island	2.06	291		Pn	20 57 46.0	-0.2
GSMY	Great Sitkin M	2.15	292		Pn	20 57 48.1	+0.6
GSTR	Great Sitkin T	2.17	293	Pn	Pn	20 57 45.3	-2.5
GSTD	Great Sitkin T	2.21	291		Pn	20 57 49.1	+0.8
ADK	Adak	2.49	285		Pn	20 57 52.2	+0.2
KIWB	Kanaga Island	2.76	283	Pn	Pn	20 57 55.0	-0.8
KIMD	Kanaga Island	2.80	281		Pn	20 57 56.9	+0.6
TASE	Tanaga Southea	3.31	281		Pn	20 58 04.2	+0.9
ILAR	Eielson Array	19.05	35	P	P	21 01 32.5	-0.4
	0.2nm,0.3s,baz=236,slow=9.2,SNR=12						
INK	Inuvik	25.42	33	P	P	21 02 38.0	+0.3
	1.4nm,0.6s,baz=239,slow=8.0,SNR=7.5						
H11N2	WAKE ISLAND Hy	35.32	214	T	T	21 42 18.5	
	baz=21						
H11N3	WAKE ISLAND Hy	35.33	214	T	T	21 42 19.1	
	baz=21						
H11N1	WAKE ISLAND Hy	35.34	214	T	T	21 42 16.8	
	baz=21						
SONM	Songino Array	50.00	300	P	P	21 06 05.0	+0.4
	0.3nm,0.8s,baz=48,slow=8.7,SNR=3.0						
MKAR	Makanchi Array	62.96	312	P	P	21 07 36.1	-0.6
	0.2nm,0.5s,baz=56,slow=7.5,SNR=3.5						

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*IDC **12** 21:01:05.1±1.9, 6°.61N×93°.74E, h0^{km}, mb3.6/6, mb1 3.7/8, mb1mx3.5/61, mbtmp3.6/8, ML3.1/1, MS3.2/7, Ms1 3.2/7, ms1mx2.9/37, Error ellipse: s-maj=68.2km s-min=20.3km az=59.0*

ISC 12 21:01:09.9±1.5**, 6°.6N**±0°.2×**93°.7E**±0°.2**, h32**^{km}**, n14,** σ**0ˢ.87**/8**, mb3.7**/6**, MS3.2**/4**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	6.41	126	Pn	Pn	21 02 42.6	+0.3
	0.4nm,0.3s,baz=334,slow=21,SNR=1.8						
PSI				LR	LR	21 05 22.5	
	comp=Z,100nm,19.4s,baz=293,slow=40						
CMAR	Chiang Mai Arr	12.80	23	Pn	Pn	21 04 10.3	+0.5
	baz=219,slow=13,SNR=1.5						
CMAR				LR	LR	21 08 32.4	
	comp=Z,55nm,18.3s,baz=224,slow=35						
LEM	Lembang	19.24	134	LR	LR	21 14 35.7	
	comp=Z,124nm,18.1s,baz=273,slow=42						
H08S3	Diego Garcia H	25.50	237	T	T	21 33 15.7	
	baz=56,slow=75,SNR=46						
H08S2	Diego Garcia H	25.50	237	T	T	21 33 23.4	
	baz=56,slow=75,SNR=22						
H08S1	Diego Carcia H	25.51	237	T	T	21 33 25.7	
	baz=56,slow=75,SNR=14						
MKAR	Makanchi Array	41.22	348	P	P	21 08 52.0	+0.2
	0.6nm,0.8s,baz=165,slow=5.0,SNR=6.0						
SONM	Songino Array	42.46	13	P	P	21 09 00.7	-1.4
	0.4nm,0.5s,baz=198,slow=8.9,SNR=4.3						
SONM				LR	LR	21 29 14.6	
	comp=Z,39nm,18.8s,baz=90,slow=40						
KSRS	Korea Array	43.66	40	LR	LR	21 30 01.3	
	comp=Z,11nm,18.6s,baz=318,slow=40						
ZALV	Zalesovo Beam	47.73	353	P	P	21 09 44.5	+0.9
	0.5nm,0.5s,baz=140,slow=7.0,SNR=3.9						
ZALV				LR	LR	21 32 26.7	
	comp=Z,21nm,18.7s,baz=288,slow=39						
WRA	Warramunga Arr	47.88	124	P	P	21 09 44.5	-0.8
	0.7nm,0.7s,baz=305,slow=8.9,SNR=7.8						
ASAR	Alice Springs	49.43	129	P	P	21 09 57.6	+0.3
	0.4nm,0.7s,baz=300,slow=7.4,SNR=2.1						
JCJ	Chichijima	50.25	60	LR	LR	21 28 29.8	
	comp=Z,134nm,20.4s,baz=112,slow=33						
FINES	FINESS Array B	73.62	332	P	P	21 12 40.2	+0.2
	2.1nm,0.9s,baz=122,slow=1.8,SNR=1.8						

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*IDC **12** 21:04:20.4±2.8, 30°.12S×71°.49W, h0^{km}, mb4.0/2, mb1 4.0/3, mb1mx3.7/23, mbtmp3.9/3, ML3.6/1, MS2.9/1, Ms1 2.9/1, ms1mx2.7/17, Error ellipse: s-maj=103.3km s-min=47.1km az=102.0*

*GUC **12** 21:04:25.5±0.5, 30°.75S×71°.48W, h49^{km}±3^{km}, ML3.7*

ISC 12 21:04:25.3±1.0**, 30°.74S**±0°.05×**71°.6W**±0°.1**, h35**^{km}**, n19,** σ**0ˢ.98**/19**, 4C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	La Serena	0.86	19⇑	*e*P	Pn	21 04 41.3	+0.3
CO05				*e*S	Sn	21 04 53.8	+1.4
CO05				IAML		21 05 00.4	
	comp=E,3µm,0.3s						
GO04	Tololo Observa	0.87	50⇑	*e*P	Pn	21 04 41.3	0.0
GO04				*e*S	Sn	21 04 53.1	+0.2
GO04				IAML		21 04 55.4	
	comp=N,7µm,0.3s						
LCO	Las Campanas	1.88	24	*e*P	Pn	21 04 56.2	+1.0
LCO				*e*S	Sn	21 05 19.6	+1.8
ROCH	El Roble	2.28	168⇑	*e*P	Pn	21 05 01.4	+0.7
ROCH				*e*S	Sn	21 05 29.5	+1.8
ROCH				IAML		21 05 36.1	
	comp=N,595nm,0.2s						
GO03	Copiap	3.34	21⇑	*e*P	Pn	21 05 16.1	+0.9
GO03				*e*S	Sn	21 05 54.0	+0.3
GO03				IAML		21 06 09.5	
	comp=N,230nm,0.2s						
H03N1	Juan Fernandez	6.79	245	Pn	Pn	21 06 02.9	+0.7
	baz=112,slow=19,SNR=88						
H03N1				T	T	21 12 55.4	
	baz=72,slow=72,SNR=668						
H03N3	Juan Fernandez	6.80	245	Pn	Pn	21 06 03.0	+0.5
	baz=112,slow=19,SNR=90						
H03N3				T	T	21 13 00.3	

	baz=72,slow=72,SNR=1050						
H03N2	Juan Fernandez	6.80	245	Pn	Pn	21 06 03.1	+0.7
	baz=112,slow=19,SNR=76						
H03N2				T	T	21 12 54.6	
	baz=72,slow=72,SNR=677						
H03S3	Juan Fernandez	6.94	242	Pn	Pn	21 06 04.0	-0.3
	baz=242,slow=74,SNR=5.3						
H03S1	Juan Fernandez	6.94	242	Pn	Pn	21 06 03.6	-0.7
	baz=242,slow=74,SNR=5.8						
H03S2	Juan Fernandez	6.95	242	Pn	Pn	21 06 04.0	-0.5
	baz=242,slow=74,SNR=8.1						
PLCA	Paso Flores	10.01	176	Pn	Pn	21 06 53.9	+7.2
	comp=N,0.1nm,0.3s,baz=335,slow=14,SNR=2.1						
CPUP	Villa Florida	13.26	74	LR	LR	21 13 36.3	
	comp=N,54nm,20.9s,baz=202,slow=43						
DBIC	Dimbokro	73.77	72	P	P	21 15 55.4	-1.0
	comp=N,1.6nm,0.5s,baz=215,slow=8.5,SNR=2.2						
TORD	Torodi Ar. Bea	82.73	70	P	P	21 16 45.2	-0.7
	comp=N,0.3nm,0.5s,baz=280,slow=4.7,SNR=8.3						
H11S2	WAKE ISLAND Hy	126.16	271	T	T	23 42 10.5	
	baz=115,slow=74,SNR=27						
H11S1	WAKE ISLAND Hy	126.17	271	T	T	23 42 12.3	
	baz=115,slow=74,SNR=22						
H11S3	WAKE ISLAND Hy	126.17	271	T	T	23 42 11.5	
	baz=115,slow=74,SNR=19						
ZALV	Zalesovo Beam	151.23	29	PKPbc	PKPbc	21 24 13.6	-0.9
	comp=N,1.4nm,0.8s,baz=316,slow=4.0,SNR=5.7						

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*IDC **12** 21:22:50.0±2.7, 36°.57N×141°.38E, h0^{km}, mb3.6/3, mb1 3.7/4, mb1mx3.3/33, mbtmp3.5/4, ML2.5/1, MS3.6/1, Ms1 3.6/1, ms1mx2.4/46, Error ellipse: s-maj=67.7km s-min=32.4km az=58.0*

*JMA **12** 21:22:58.1±0.1, 36°.53N×140°.89E, h49^{km}±1^{km}, M3.6 Broadband fault plane solution: P waves. NP1: ϕ_s173.00000°, δ3.00000°, λ64.00000°. NP2: ϕ_s19.00000°, δ87.00000°, λ91.00000°. Principal axes: T Plg48.0000°, Azm291.0000°; N Plg1.0000°, Azm199.0000°; P Plg42.0000°, Azm108.0000°;*

JMA Felt I J1.

ISC 12 21:22:57.3±1.4**, 36°.50N**±0°.06×**141°.02E**±0°.09**, h44**^{km}±9^{km}**, n22, σ0^{s}.64**/26**, mb3.6**/3**, 6D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHO	Hitachi	0.38	288	⇓P	Pn	21 23 07.0	+0.3
JHO				S	Sn	21 23 12.9	-0.4
JHYU	Hitachinakayam	0.38	246	⇓P	Pn	21 23 07.3	+0.6
JHYU				S	Sn	21 23 13.6	+0.3
ONAJ	Iwakimizuishiy	0.63	344	⇓P	Pn	21 23 09.9	0.0
ONAJ				S	Sn	21 23 18.1	-0.9
JYT	Yasato	0.72	248	⇓P	Pn	21 23 11.0	0.0
JYT				S	Sn	21 23 19.9	-1.0
JFK	Kawauchi	0.88	353	⇓P	Pn	21 23 13.0	-0.2
JFT	Otama	1.16	332	P	Pn	21 23 17.6	+0.6
JFT				S	Sn	21 23 31.7	0.0
JAG	Ashikaga	1.26	267	⇓P	Pn	21 23 18.2	-0.3
JAG				S	Sn	21 23 32.7	-1.6
JMM	Marumori	1.38	353	P	Pn	21 23 20.5	+0.5
JMM				S	Sn	21 23 37.0	-0.1
JFY	Yanaizu	1.39	311	P	Pn	21 23 20.5	+0.3
JFY				S	Sn	21 23 36.9	-0.5
JKT	Katashina	1.45	281	P	Pn	21 23 21.5	+0.4
JKT				S	Sn	21 23 38.2	-0.7
MJAR	Matsushiro Arr	2.26	272	Pn	Pn	21 23 32.5	+0.3
	1.0nm,0.3s,baz=94,slow=10,SNR=41						
MJAR				Sn	Sn	21 24 00.1	+1.2
	1.6nm,0.3s,baz=101,slow=21,SNR=5.3						
MAT	Matsushiro	2.26	272	P	Pn	21 23 33.0	+0.8
MAT				*e*S	Sn	21 23 58.7	-0.2
SONM	Songino Array	27.82	305	P	P	21 28 42.5	0.0
	0.5nm,0.6s,baz=98,slow=10,SNR=3.3						
H11N2	WAKE ISLAND Hy	28.16	119	T	T	21 58 38.2	
	baz=315,slow=74,SNR=11						
H11N1	WAKE ISLAND Hy	28.16	119	T	T	21 58 29.0	
	baz=315,slow=74,SNR=10						
H11N3	WAKE ISLAND Hy	28.17	119	T	T	21 58 40.0	
	baz=315						
H11S1	WAKE ISLAND Hy	28.84	122	T	T	21 59 24.2	
	baz=314,slow=76,SNR=31						
H11S3	WAKE ISLAND Hy	28.84	122	T	T	21 59 20.5	
	baz=314,slow=76,SNR=20						
H11S2	WAKE ISLAND Hy	28.86	122	T	T	21 59 22.1	
	baz=314,slow=76,SNR=19						
ZALV	Zalesovo Beam	42.04	313	P	P	21 30 44.6	+0.3
	0.4nm,0.3s,baz=74,slow=11,SNR=2.8						
LEM	Lembang	53.27	223	LR	LR	21 53 57.3	
	comp=Z,50nm,18.1s,baz=196,slow=35						
WRA	Warramunga Arr	56.49	188	P	P	21 32 34.6	-0.3
	0.5nm,0.8s,baz=5.2,slow=7.6,SNR=4.7						

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*JMA **12** 21:36:01.6±0.1, 23°.74N×121°.60E, h25^{km}±2^{km}, M2.7*

*TAP **12** 21:36:02.6, 23°.77N×121°.57E, h24^{km}, ML3.0, B*

ISC 12 21:36:02.4±0.9**, 23°.75N**±0°.02×**121°.60E**±0°.02**, h29**^{km}±5^{km}**, n97, σ0^{s}.88**/148**, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TEGC	Jichi Village	0.07	237	*i* P	Pb	21 36 07.1	-0.4
	baz=198						
TEGC				*e*S	Sb	21 36 12.3	+1.3
	baz=198						
TEYL	Yanliau Villag	0.12	357	*i* P	Pn	21 36 07.9	-0.5
	baz=22						
TEYL				*e*S	Sb	21 36 12.5	+1.0
	baz=22						
ESL	Shilin	0.17	293	*i* P	Pb	21 36 07.4	-0.9
	baz=289						
EGFH	Guangfu	0.18	244	*i* P	Pb	21 36 07.9	-0.5
	baz=239						
EGFH				*e*S	Sb	21 36 11.9	-0.5
	baz=239						
HWA	Hwalien	0.23	0	*i* P	Pb	21 36 08.8	-0.1
	baz=17						
ETM	Tongmen	0.24	335	P	Pb	21 36 08.3	-0.7
	baz=334						
HGSD	Ruisui	0.30	213	*e*P	Pn	21 36 10.4	-0.5
	baz=217						
TWD	Chiawan	0.33	359	*e*P	Pb	21 36 09.9	-0.4
	baz=355						
TWD				S	Sb	21 36 15.4	-0.2
	baz=355						
EHY	Hungye	0.35	227	*e*P	Pb	21 36 09.9	-0.7
	baz=228						
ETL	Fush Village	0.41	2	P	Pb	21 36 11.3	-0.2
	baz=358						
ETL				*e*S	Sn	21 36 18.1	-1.1
	baz=358						
NACB	Ninganchiao	0.42	359	P	Pb	21 36 10.9	-0.8
	baz=354						
NACB				*e*S	Sb	21 36 17.1	-0.9
	baz=354						
VWDT	VWDT	0.42	271	*e*P	Pb	21 36 11.2	-0.4
	baz=268						
VWDT				S	Sb	21 36 16.9	-1.0
	baz=268						
OWD	Renai	0.44	298	*e*P	Pb	21 36 11.3	-0.8
	baz=303						
OWD				*e*S	Sb	21 36 17.1	-1.5
	baz=303						
ECBN	Changbin	0.45	198	*e*P	Pn	21 36 12.7	-0.3
	baz=194						
YULB	Yu-li	0.45	219	*e*P	Pb	21 36 11.6	-0.5
	baz=225						
ETLH	Xiulin Townshi	0.47	346	*e*P	Pb	21 36 11.4	-1.0
	baz=349						
ETLH				*e*S	Sb	21 36 18.2	-1.0
	baz=349						
EYUL	Yuli	0.48	213	*e*P	Pn	21 36 12.7	-0.7
	baz=219						
TWF1	Yuli	0.48	216	*e*P	Pb	21 36 11.8	-0.8
	baz=223						
CHGB	Renai	0.50	308	*i* P	Pb	21 36 12.2	-0.9
	baz=314						
CHGB				*e*S	Sb	21 36 19.2	-1.0
	baz=314						
WHF	Hehuan Shan	0.50	322	P	Pb	21 36 12.0	-1.2
	baz=324						
WHF				*e*S	Sb	21 36 19.3	-1.3
	baz=324						
FUSS	Fushou	0.60	327	P	Pb	21 36 13.8	-0.8
	baz=328						
FUSS				*e*S	Sb	21 36 22.3	-0.7
	baz=328						
SSLB	Suanglung	0.60	274	*e*P	Pb	21 36 13.6	-0.9
	baz=272						
SSLB				*e*S	Sb	21 36 21.2	-1.4
	baz=272						
FULB	Fuli	0.62	208	*e*P	Pb	21 36 14.4	-0.4
	baz=217						
FULB				*e*S	Sn	21 36 24.1	-0.1
	baz=217						
TWT	Tachien	0.64	322	*e*P	Pb	21 36 14.7	-0.5
	baz=322						
TWT				*e*S	Sb	21 36 23.3	-0.7
	baz=322						
TDCB	Techi	0.65	321	*e*P	Pb	21 36 14.7	-0.7
	baz=322						
TDCB				*e*S	Sb	21 36 23.0	-1.2
	baz=322						
WPL	Puli Township	0.65	294	*e*P	Pb	21 36 14.6	-0.7
	baz=293						
YUS	Yu-Shan	0.65	247	P	Pb	21 36 15.3	-0.3
	baz=235						
SMLT	Sun Moon Lake	0.66	282	*i* P	Pb	21 36 14.8	-0.8
	baz=281						
SMLT				*e*S	Sb	21 36 24.1	-0.4
	baz=281						
CHKT	Chengkung	0.68	199	*e*P	Pb	21 36 15.5	-0.4
	baz=207						
DPDB	Guoxing	0.68	295	P	Pb	21 36 15.3	-0.6
	baz=294						
DPDB				S	Sb	21 36 24.5	-0.6
	baz=294						
ENA	Nanau	0.69	10	*e*P	Pb	21 36 15.2	-0.8
	baz=3.0						
WHYT	Xinyi Township	0.69	266	*e*P	Pn	21 36 15.8	-0.5
	baz=264						
WHYT				*e*S	Sb	21 36 24.7	-0.6
	baz=264						
TYC	Yuchr	0.70	283	P	Pb	21 36 15.4	-0.7
	baz=287						
TYC				S	Sn	21 36 25.3	-1.0
	baz=287						
WCS	Beigang Elemen	0.70	296	*e*P	Pb	21 36 15.6	-0.6
	baz=296						
WCS				*e*S	Sb	21 36 24.5	-1.1
	baz=296						
NNSB	Datong	0.71	343	*e*P	Pb	21 36 15.6	-0.8
	baz=345						
NNSB				*e*S	Sb	21 36 24.2	-1.7
	baz=345						
EWUT	Wuta	0.71	13	*e*P	Pb	21 36 15.8	-0.6
	baz=3.0						
EWUT				*e*S	Sb	21 36 25.4	-0.5
	baz=3.0						
NNS	Nan Shan	0.72	343	P	Pb	21 36 15.7	-0.9
	baz=345						
NNS				*e*S	Sb	21 36 25.0	-1.2
	baz=345						
ALS	Alishan	0.77	252	*e*P	Pn	21 36 17.3	-0.3
	baz=250						
ELDTW	Lidau	0.78	224	*e*P	Pb	21 36 16.2	-1.3
	baz=215						
ELDTW				*e*S	Sb	21 36 25.7	-2.0
	baz=215						
WHP	Taichung City	0.80	311	*e*P	Pn	21 36 17.5	-0.4
	baz=312						
WHP				*e*S	Sb	21 36 27.0	-1.5
	baz=312						
WJS	Zhushan	0.81	275	*e*P	Pn	21 36 18.3	+0.5
	baz=274						
WJS				*e*S	Sn	21 36 29.8	+1.0
	baz=274						
EDH	Donghe	0.82	200	*e*P	Pb	21 36 17.3	-0.9
	baz=211						
EDH				*e*S	Sn	21 36 29.6	+0.4
	baz=211						
WNT	Mingjian	0.85	279	*e*P	Pn	21 36 19.5	+1.0
	baz=278						
WNT				*e*S	Sn	21 36 30.9	+0.9
	baz=278						
CHN5	Tsauling	0.86	260	*e*P	Pn	21 36 19.2	+0.5
	baz=259						
CHN5				*e*S	Sn	21 36 31.1	+0.8
	baz=259						
TWC	Suao	0.89	15	*e*P	Pn	21 36 19.1	+0.2
	baz=4.0						
NDS	Dongshan	0.89	7	*e*P	Pn	21 36 18.9	-0.1
	baz=357						
ENTT	Nioudou	0.89	358	*e*P	Pb	21 36 18.3	-1.1
	baz=360						
TCU	Taichung	0.94	295	*e*P	Pn	21 36 21.3	+1.6
	baz=296						
TCU				*e*S	Sn	21 36 33.1	+1.0
	baz=296						
YHNB	Yeheng	0.94	347	*e*P	Pb	21 36 19.4	-0.8
	baz=359						
YHNB				*e*S	Sb	21 36 31.3	-1.2
	baz=359						
LONT	Longtian	0.94	208	*e*P	Pb	21 36 18.7	-1.6
	baz=206						
NSK	Sanguang	0.95	346	*e*P	Pb	21 36 19.0	-1.4
	baz=348						
STYH	Taoyuan	0.95	233	*e*P	Pn	21 36 19.9	0.0
	baz=231						
STYH				*e*S	Sb	21 36 32.2	-0.5
	baz=231						
TWQ1	Liyutan	0.97	308	*e*P	Pb	21 36 21.2	+0.5
	baz=309						
TWQ1				*e*S	Sn	21 36 33.7	+0.9
	baz=309						
TWE	Neicheng	0.97	3	*e*P	Pb	21 36 20.9	+0.2
	baz=6.0						
WDLH	Douliu	0.98	267	*e*P	Pb	21 36 20.5	-0.3
	baz=266						
WDLH				*e*S	Sn	21 36 34.0	+0.9
	baz=266						
TPUB	Ta-pu	1.00	244	*e*P	Pb	21 36 20.9	-0.3
	baz=242						
WCHH	Zhanghua	1.01	289	*e*P	Pb	21 36 22.2	+0.8
	baz=289						
WCHH				*e*S	Sn	21 36 35.7	+1.8
	baz=289						
NWLT	Wulai	1.03	355	*e*P	Pb	21 36 21.4	-0.3
	baz=356						
NSTT	Nanjuang	1.04	328	*e*P	Pb	21 36 22.0	+0.1
	baz=322						
NSTT				*e*S	Sn	21 36 34.5	0.0
	baz=322						
WTP	Ta-pu	1.04	241	*e*P	Pb	21 36 21.8	-0.1
	baz=247						
WTP				*e*S	Sn	21 36 36.2	+1.6
	baz=247						
LIOB	Emei	1.04	329	*e*P	Pb	21 36 22.1	+0.2
	baz=338						
WDJ	Dajia District	1.06	304	*e*S	Sn	21 36 36.8	+1.5
	baz=305						
LDUT	Ludao	1.08	187	*e*P	Pn	21 36 20.2	-1.3
	baz=174						
NMLH	Miaoli	1.08	317	*e*S	Sn	21 36 37.0	+1.4
	baz=317						
CHY	Chiayi	1.11	257	*e*P	Pb	21 36 22.9	-0.1
	baz=257						
CHY				*e*S	Sn	21 36 38.0	+1.7
	baz=257						
WTK	Tuku	1.12	267	*e*P	Pb	21 36 24.0	+0.9
	baz=266						
TWK	Hsinying	1.13	245	*e*P	Pb	21 36 23.2	-0.3
	baz=244						
TWK				*e*S	Sb	21 36 38.8	+0.9
	baz=244						
WRL	Guolierlin Hig	1.13	278	*e*P	Pb	21 36 22.9	-0.6
	baz=278						
WRL				*e*S	Sb	21 36 38.1	+0.3
	baz=278						
CHN1	Nanshi	1.14	241	*e*P	Pb	21 36 23.7	+0.2
	baz=252						
CHN1				*e*S	Sb	21 36 39.7	+1.8
	baz=252						
SNST	Tainan City	1.14	243	*e*P	Pb	21 36 23.9	+0.2
	baz=242						
SNST				*e*S	Sb	21 36 39.3	+1.2
	baz=242						
SGST	Jiashian	1.15	235	*e*P	Pb	21 36 23.0	-0.7
	baz=223						
SGST				*e*S	Sb	21 36 38.8	+0.6
	baz=223						
SLGT	Liugui	1.16	230	*e*P	Pb	21 36 23.7	-0.2
	baz=228						
TIPB	Shuangxi	1.23	9	*e*P	Pb	21 36 25.0	-0.2
	baz=360						
WSF	Szhu	1.27	265	*e*S	Sb	21 36 41.5	-0.3
	baz=265						
ICHU	Yijhu	1.28	253	*e*P	Pb	21 36 25.5	-0.3
	baz=251						
NWF	Wu-fen Shan	1.33	7	*e*P	Pb	21 36 27.4	+0.6
	baz=8.0						
SSD	Sandimen	1.34	222	*e*P	Pb	21 36 26.8	-0.1
	baz=215						
TSMG	Majia	1.36	221	*e*P	Pb	21 36 27.7	+0.3
	baz=220						
YM01	YM01	1.39	359	*e*P	Pb	21 36 27.9	+0.1
	baz=359						
JYNG	Yonagunijimaku	1.41	60	P	Pn	21 36 27.1	+0.9
JYNG				S	Sn	21 36 45.0	+1.2
MASBT	Mashibuluo	1.44	219	*e*P	Pn	21 36 27.2	+0.6
	baz=212						
YOJ	Yonaguni jima	1.47	61	P	Pn	21 36 27.8	+0.9
YOJ				S	Sb	21 36 46.7	-0.7
EAST	Anshuo	1.53	207	*e*P	Pn	21 36 28.5	+0.7
	baz=197						
SCZT	Fangliau	1.64	214	*e*P	Pb	21 36 30.9	-1.2
	baz=213						
SLIU	Shizi	1.70	206	*e*P	Pb	21 36 31.9	-1.2
	baz=194						
LAY	Lan-yu	1.70	182	*e*P	Pn	21 36 29.0	-1.2
	baz=172						
PHUB	P'eng-hu	1.88	263	*e*P	Pn	21 36 33.5	+1.0
	baz=249						
PHUB				*e*S	Sb	21 36 57.0	-2.1
	baz=249						
PNG	Penghu	1.89	265	*e*P	Pn	21 36 32.7	0.0
	baz=264						
IRIF	Iriomote-Funau	2.03	73	P	Pn	21 36 35.5	+0.8
IRIF				S	Sn	21 36 59.6	+0.6
HATJ	Hateruma jima	2.04	81	P	Pn	21 36 35.4	+0.6
HATJ				*e*S	Sn	21 36 59.9	+0.7
JKRS	Kuro-shima	2.25	77	*e*S	Sn	21 37 06.0	+1.5
JIJ	Ishigaki jima	2.40	75	P	Pn	21 36 40.3	+0.5
JIJ				S	Sn	21 37 08.3	+0.1
PTMZ	Houxiangcun	2.60	300	*e*P	Pn	21 36 42.6	+0.1
	baz=299						
JISG	Ishigakijimahi	2.61	71	P	Pn	21 36 43.3	+0.7
JISG				S	Sn	21 37 13.4	+0.1
JTJ	Tarama	2.96	72	*e*S	Sn	21 37 23.0	+0.9
KNMB	Chin-men Tao	3.02	284	*e*P	Pn	21 36 48.3	0.0
	baz=283						
AXDP	Jialang	3.51	290	*e*P	Pn	21 36 55.5	+0.5
	baz=289						

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*IDC **12** 21:44:36.1±2.5, 0°.03S×97°.70E, h0^{km}, mb3.5/4, mb1 3.6/5, mb1mx3.3/45, mbtmp3.5/5, ML2.7/1, MS3.2/3, Ms1 3.3/3, ms1mx2.8/31, Error ellipse: s-maj=73.8km s-min=31.5km az=60.0*

*DJA **12** 21:44:40.8±0.6, 0°N±4°×9°8E±°, h10^{km}, M4.0/8, mb4.5/2, MLv3.8/8*

ISC 12 21:44:42.5±1.1**, 0°.48N**±0°.08×**98°.0E**±0°.1**, h29**^{km}**, n19, σ1^{s}.33**/14**, mb3.6**/4**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSI	Gunungsitoli	0.91	334	P	Pn	21 44 59.2	-0.2
GSI				S	Sn	21 45 11.9	+0.3
MNSI	Mandailing Nat	1.63	79	P	Pn	21 45 09.8	+0.5
SISI	Saibi	2.11	148	P	Pn	21 45 15.9	0.0
PSI	Prapat	2.49	22	Pn	Pb	21 45 25.4	-1.2
	1.1nm,0.3s,baz=188,slow=6.8,SNR=2.0						
PPI	Padang Panjang	2.59	111	P	Pn	21 45 22.3	-0.2
PDSI	Padang	2.84	119	P	Pn	21 45 28.6	+2.6
TPTI		2.87	344	P	Pn	21 45 27.1	+0.7
MNAI	Manna	6.92	134	P	Pn	21 46 22.4	+0.3
	1.3nm316nm,2.4s						
MDSI	Maura Dua	7.92	129	P	Pn	21 46 35.7	-0.1
CMAR	Chiang Mai Arr	17.89	3	LR	LR	21 55 57.2	
	comp=Z,33nm,18.9s,baz=4.0,slow=37						
KAPI	Kappang	22.42	104	LR	LR	21 59 59.4	
	comp=Z,38nm,19.3s,baz=262,slow=41						
H08S2	Diego Garcia H	26.67	252	T	T	22 17 46.3	
	baz=72,slow=75,SNR=90						
H08S3	Diego Garcia H	26.67	252	T	T	22 17 46.7	
	baz=72,slow=75,SNR=205						
H08S1	Diego Carcia H	26.68	252	T	T	22 17 54.6	
	baz=72,slow=75,SNR=117						
WRA	Warramunga Arr	41.00	122	P	P	21 52 20.9	-2.4
	0.4nm,0.9s,baz=301,slow=9.6,SNR=1.7						
SONM	Songino Array	47.73	8	P	P	21 53 17.9	+1.0
	0.4nm,0.6s,baz=186,slow=5.7,SNR=2.5						
MKAR	Makanchi Array	48.12	346	P	P	21 53 21.1	+1.2
	0.2nm,0.4s,baz=169,slow=7.5,SNR=5.6						
ZALV	Zalesovo Beam	54.39	350	P	P	21 54 08.1	+1.4
	0.8nm,0.5s,baz=177,slow=8.5,SNR=5.4						
FINES	FINESS Array B	80.99	332	LR	LR	22 36 34.3	
	comp=Z,57nm,20.7s,baz=292,slow=38						

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*TUL **12** 22:15:09.1±1.0, 36°.95N±0°.02×97°.83W±0°.02, h2^{km}±6^{km}, ML2.8, mb_Lg2.6/27(NEIC), Error ellipse: s-maj=2.6km s-min=2.1km az=152.0*

NEIC 12 22:15:09.3±1.1**, 36°.92N**±0°.02×**97°.83W**±0°.03**, h4**^{km}±7^{km}**, Error ellipse: s-maj=2.9km s-min=2.4km az=78.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GC02	Grant County #	0.07	200	Pg	Pg	22 15 11.5	+0.7
GC02				Sg	Sg	22 15 13.2	+1.4
KAN14	Manchester OK	0.11	291		Pg	22 15 11.6	0.0
KAN14				Sg	Sg	22 15 12.8	-0.4
KAN17	Caldwell West	0.14	22	Pg	Pg	22 15 11.8	-0.3
KAN17				Sg	Sg	22 15 13.3	-0.6
KAN05	Bluff City Nor	0.20	350		Pg	22 15 12.8	-0.4
KAN05				Sg	Sg	22 15 15.4	-0.4
KAN01	Argonia South	0.24	14	Pg	Pg	22 15 13.6	-0.5
KAN01				Sg	Sg	22 15 16.9	-0.4
KAN09	Caldwell North	0.28	38	Pg	Pg	22 15 14.3	-0.4
KAN09				Sg	Sg	22 15 16.9	-1.5
KAN10	Anthony SW Sta	0.30	314		Pg	22 15 14.8	-0.2
KAN10				Sg	Sg	22 15 18.8	-0.2
KAN13	South Haven SW	0.30	71	Pg	Pg	22 15 15.2	+0.1
KAN13				Sg	Sg	22 15 19.6	+0.5
OK032	Salt Plains WL	0.32	250	Pg	Pg	22 15 15.9	+0.3
KAN08	Anthony NE Sta	0.33	340		Pg	22 15 15.4	-0.3
KAN06	Argonia West S	0.33	356		Pg	22 15 15.3	-0.4
KAN16	Harper SW Stat	0.36	329	Pg	Pg	22 15 15.9	-0.4
KS20	Mayfield South	0.38	35	Pg	Pg	22 15 16.3	-0.4
KAN12	Harper NE Stat	0.40	341		Pg	22 15 16.6	-0.5
CROK	Carrier	0.43	197	Pg	Pg	22 15 18.3	+0.7
BLOK	Blackwell	0.52	107	Pg	Pg	22 15 19.6	+0.3
T35A	Sooner Cattle	1.06	90	Pg	Pg	22 15 29.2	-0.3
U32A	Winter Ranch,	1.08	241	Pg	Pg	22 15 29.8	-0.3
OK029	Liberty Lake	1.16	165		Pg	22 15 31.5	0.0
QUOK	Quay	1.17	129	Pg	Pg	22 15 31.6	-0.2
OK031	S. Brethren Rd	1.25	140		Pg	22 15 33.2	-0.1
BCOK	Bluff Creek, N	1.27	172	Pn	Pg	22 15 33.4	-0.3
OK030	Cody Creek RV	1.30	139		Pg	22 15 34.0	-0.3
OKCFA	Oklahoma City	1.53	168		Pn	22 15 37.8	+0.4
R32A	Long Quarter,	1.66	335	Pn	Pn	22 15 39.1	-0.2
FNO	Franklin	1.69	168		Pn	22 15 40.1	+0.4
TUL1	Leonard	1.93	121	Pn	Pb	22 15 44.1	-0.9
TUL1				IAmb_Lg		22 16 13.8	
	comp=Z,32nm,0.8s						
WMOK	Wichita Mounta	2.31	200		Pn	22 15 48.6	+0.5
WMOK				IAmb_Lg		22 16 28.4	
	comp=Z,19nm,1.0s						
X34A	Smith Ranch, M	2.31	180	Pn	Pn	22 15 49.4	+1.2
X34A				IAmb_Lg		22 16 22.6	
	comp=Z,18nm,0.9s						
KSU1	Kansas State U	2.38	23		Pn	22 15 48.5	-0.7
CBKS	Cedar Bluff	2.42	322		Pn	22 15 50.5	+0.7
CBKS				IAmb_Lg		22 16 23.6	
	comp=Z,34nm,1.3s						
U38A	Gravette	2.81	99		Pn	22 15 55.3	+0.2
LOOK	Love County	2.96	169	Pn	Pn	22 15 57.4	+0.2
X37A	Clayton	3.06	139		Pn	22 15 60.0	+1.4
HHAR	Hobbs	3.19	100		Pn	22 16 01.1	+0.8
Z35A	Perchaven, San	3.61	172	Pn	Pn	22 16 06.2	+0.2
S39A	Bolivar	3.68	77	Pn	Pn	22 16 07.6	+0.6
S39A				IAmb_Lg		22 17 10.1	
	comp=Z,13nm,0.7s						
W39A	Magazine	3.70	116		Pb	22 16 16.9	+1.6
AMTX	Amarillo	3.73	238	Pn	Pn	22 16 08.5	+0.8
AMTX				IAmb_Lg		22 17 13.4	
	comp=Z,26nm,0.9s						

U40A	Yellville	4.04	96	Pn	Pn	22 16 12.2	+0.2
MIAR	Mount Ida	4.19	123	IAmb_Lg		22 17 24.8	
	comp=Z,8.4nm,0.9s						
KSCO	Kaye Shedlock'	4.33	300	IAmb_Lg		22 17 36.6	
	comp=Z,11nm,0.8s						
P38A	Dawn	4.33	50	IAmb_Lg		22 17 32.1	
	comp=Z,13nm,0.8s						
MGMO	Mountain Grove	4.46	85	IAmb_Lg		22 17 35.0	
	comp=Z,15nm,0.8s						
ABTX	Abilene, Hawle	4.53	200	IAmb_Lg		22 17 34.6	
	comp=Z,8.3nm,0.8s						
R40A	Maddies Statio	4.62	71	IAmb_Lg		22 17 38.8	
	comp=Z,12nm,0.8s						
P40A	Paris	5.25	58	IAmb_Lg		22 17 58.5	
	comp=Z,13nm,0.8s						
JCT	Junction City	6.63	195	IAmb_Lg		22 18 43.8	
	comp=Z,9.8nm,0.9s						
N41A	Harden Midland	6.63	53	IAmb_Lg		22 18 45.7	
	comp=Z,16nm,0.7s						

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*NEIC **12** 22:18:06.3±2.3, 36°.39N±0°.03×22°.17E±0°.07, $h10^{km}\pm1^{km}$, mb4.3/21, ML4.1(THE), Error ellipse: s-maj=9.9km s-min=5.9km az=92.0*

*ATH **12** 22:18:07.1, 36°.48N×22°.19E, $h70^{km}\pm2^{km}$, ML3.9/11, Error ellipse: s-maj=3.7km s-min=1.4km az=54.0*

*PDG **12** 22:18:08.2±0.8, 36°.40N×22°.07E, $h24^{km}\pm1^{km}$, ML4.0/11, Error ellipse: s-maj=1.8km s-min=2.2km az=0.0*

*IDC **12** 22:18:08.3±1.0, 36°.41N×22°.17E, $h34^{km}\pm6^{km}$, mb3.9/17, mb1 3.9/24, mb1mx3.8/58, mbtmp4.0/24, ML3.5/7, MS3.2/5, Ms1 3.2/5, ms1mx2.9/38, Error ellipse: s-maj=18.3km s-min=13.2km az=19.0*

*THE **12** 22:18:08.4, 36°.40N×22°.07E, $h4^{km}\pm1^{km}$, ML4.0/7, Error ellipse: s-maj=1.7km s-min=0.8km az=53.0*

*ISK **12** 22:18:09.2, 36°.64N×22°.45E, $h5^{km}$, ML3.7/15*

ISC 12 22:18:08.4±0.8, **36°.47N**±0°.05×**21°.96E**±0°.05, **$h40^{km}$**$\pm7^{km}$, **n211, σ2.^{s}21**/237, **mb4.3**/32, **7C-4D, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ITM	Ithomi	0.71	358	P	Pn	22 18 23.4	+1.5
ITM				S	Sn	22 18 34.1	+2.4
	8µm,0.5s						
ITM	Ithomi	0.71	358	P	Pn	22 18 23.4	+1.5
ITM				S	Sn	22 18 36.0	+4.3
ITM				AML	AML	22 18 38.3	
	comp=E,17268µm,0.4s						
ITM				AML	AML	22 18 39.7	
	comp=N,13037µm,0.2s						
ITM	Ithomi	0.71	358	PG	Pn	22 18 23.5	+1.5
ITM				SG	Sn	22 18 34.1	+2.4
ITM	Ithomi	0.71	358		Pn	22 18 23.4	+1.5
VLI	Veliai	0.83	72	P	Pn	22 18 23.4	-0.1
VLI				S	Sn	22 18 34.2	-0.4
	comp=N,19µm,0.5s						
VLI	Veliai	0.83	72	P	Pn	22 18 23.0	-0.5
VLI				S	Sn	22 18 34.5	-0.1
VLI				AML	AML	22 18 40.6	
	comp=E,21108µm,0.7s						
VLI				AML	AML	22 18 40.7	
	comp=N,26067µm,0.6s						
MNVA	Monemvasia	0.90	76	P	Pn	22 18 24.0	-0.4
KTHA	Kythira Island	0.92	103	P	Pn	22 18 23.9	-0.9
KTHA				S	Sn	22 18 35.8	-1.0
	comp=N,15µm,0.6s						
KTHA	Kythira Island	0.92	103	P	Pn	22 18 23.6	-1.2
KTHA				S	Sn	22 18 36.4	-0.4
KTHA				AML	AML	22 18 40.4	
	comp=N,24984µm,0.4s						
KTHA				AML	AML	22 18 42.0	
	comp=E,34480µm,0.8s						
ANKY	Antikythira Is	1.24	119	P	Pn	22 18 29.7	+0.4
ANKY				S	Sn	22 18 45.2	+0.4
	comp=E,5µm,0.5s						
ANKY	Antikythira Is	1.24	119	P	Pn	22 18 29.7	+0.4
ANKY				AML	AML	22 18 49.8	
	comp=N,9849µm,0.6s						
ANKY				AML	AML	22 19 02.2	
	comp=E,11646µm,0.6s						
KRND	KRANIDI	1.32	46	P	Pn	22 18 32.5	+2.2
KRND				S	Sn	22 18 51.9	+5.2
	comp=E,5µm,1.1s						
DRO	Drossia	1.49	353	P	Pn	22 18 35.9	+3.2
GUR	Goura	1.50	12	P	Pn	22 18 36.2	+3.4
GUR	Goura	1.50	12	P	Pn	22 18 34.9	+2.1
KLV	Kalavryta, Ach	1.58	6	P	Pn	22 18 37.9	+4.0
KLV	Kalavryta, Ach	1.58	6	P	Pn	22 18 37.0	+3.1
KLV				AML	AML	22 19 13.5	
	comp=E,3560µm,0.6s						
KLV				AML	AML	22 19 19.9	
	comp=N,3682µm,0.8s						
RLS	Riolos of Patr	1.63	346	P	Pn	22 18 39.4	+4.8
RLS	Riolos of Patr	1.63	346	P	Pn	22 18 38.7	+4.1
RLS				AML	AML	22 19 13.6	
	comp=N,2913µm,0.7s						
RLS				AML	AML	22 19 15.9	
	comp=E,2436µm,0.9s						
KNDR	Palaiochora Ch	1.87	131	PN	Pn	22 18 41.0	+3.2
KNDR				SN	Sn	22 19 04.5	+4.3
IMMV	Iera Moni Meta	1.93	121	P	Pn	22 18 39.5	+0.9
IMMV	Iera Moni Meta	1.93	121	P	Pn	22 18 39.5	+0.9
IMMV				AML	AML	22 19 13.8	
	comp=N,4958µm,0.5s						
IMMV				AML	AML	22 19 19.2	
	comp=E,4273µm,0.5s						
IMMV	Iera Moni Meta	1.93	121	PN	Pn	22 18 41.3	+2.7
IMMV				SN	Sn	22 19 04.6	+3.0
MHLO	Agia Marina, M	1.98	83	P	Pn	22 18 40.0	+0.6
MHLO				S	Sn	22 19 05.7	+2.7
	comp=E,7µm,0.5s						
MHLO	Agia Marina, M	1.98	83	P	Pn	22 18 40.0	+0.6
VLY	Voula,Athens	2.02	46	P	Pn	22 18 41.2	+1.4
VLY	Voula,Athens	2.02	46	P	Pn	22 18 40.9	+1.1
VLS	Valsamata	2.02	328	P	Pn	22 18 43.8	+3.8
VIL2	Platees	2.03	31	P	Pn	22 18 41.6	+1.6
VIL2				AML	AML	22 19 16.6	
	comp=E,4591µm,0.7s						
VIL2				AML	AML	22 19 19.2	
	comp=N,2914µm,0.7s						
ATH	Athens Observa	2.06	43	P	Pn	22 18 42.2	+1.8
ATH	Athens Observa	2.06	43	P	Pn	22 18 42.1	+1.7
ATHU	Athens Univers	2.09	44	P	Pn	22 18 42.3	+1.4
ATHU				AML	AML	22 19 21.6	
	comp=E,788µm,1.1s						
ATHU				AML	AML	22 19 27.6	
	comp=N,918µm,0.6s						
VAM	Vamos	2.11	120	P	Pn	22 18 41.9	+0.8
VAM	Vamos	2.11	120	P	Pn	22 18 41.8	+0.8
VAM				AML	AML	22 19 21.6	
	comp=N,5021µm,0.7s						
VAM				AML	AML	22 19 26.9	
	comp=E,3767µm,0.7s						
KEF3	Kipouria, Keph	2.15	324	P	Pn	22 18 45.3	+3.6
PTL	Penteli	2.19	43	P	Pn	22 18 43.7	+1.4
PTL	Penteli	2.19	43	P	Pn	22 18 43.7	+1.4
PTL				AML	AML	22 19 25.5	
	comp=E,2227µm,0.8s						
PTL				AML	AML	22 19 28.3	
	comp=N,1806µm,0.5s						
DION	Dionisos Attik	2.25	44	P	Pn	22 18 44.5	+1.4
DION				S	Sn	22 19 14.5	+4.8
	comp=N,3µm,0.7s						
GVD	Gavdhos	2.38	133	PN	Pn	22 18 48.9	+4.1
AGG	Agios Georgios	2.56	7	PN	Pn	22 18 51.3	+3.9
AGG	Agios Georgios	2.56	7	Pn	Pn	22 18 50.5	+3.0
IDI	Anoyia	2.66	115	Pn	Pn	22 18 47.9	-0.8
	comp=N,4.6nm,0.3s,baz=317,slow=15,SNR=69						
IDI				LR	LR	22 19 55.0	
	comp=N,187nm,18.6s,baz=288,slow=43						
HRKL	Herakleio	2.80	113	PN	Pn	22 18 53.0	+2.3
ZKR	Zakros	3.72	110	PN	Pn	22 19 05.4	+2.1
CHOS	Chios island	3.78	58	PN	Pn	22 19 04.9	+0.7
KOSK	Kos Island	4.05	85	PN	Pn	22 19 08.9	+1.1
URLA	Izmir	4.15	62	PN	Pn	22 19 09.9	+0.7
NIS1	Nisyros Isl.	4.21	87	PN	Pn	22 19 11.4	+1.4
FNA	Florina	4.33	354		Pn	22 19 15.1	+3.4
BODT	Bodrum	4.34	81	PN	Pn	22 19 13.1	+1.3
GCAM	G?zelcaml?	4.39	72	PN	Pn	22 19 13.7	+1.2
VLO	Vlora	4.43	335	Pn	Pn	22 19 16.6	+3.6
BLCB	Balcova	4.48	63	PN	Pn	22 19 14.6	+0.9
SCTE	Santa Cesarea	4.52	324		Pn	22 19 16.9	+2.6
DAT	Datca	4.53	85	PN	Pn	22 19 15.3	+0.8
DKL	Dikili	4.70	55	PN	Pn	22 19 17.6	+0.9
OHR	Ohrid	4.72	349	*i* Pn	Pn	22 19 26.8	+10
MLSB	Milas	4.74	78	PN	Pn	22 19 18.4	+1.1
VAY	Valandovo	4.87	5	*i* Pn	Pn	22 19 23.6	+4.6
TIP	Timpagrande	4.92	305		Pn	22 19 22.9	+3.0
AYDB	Zeytinkoy-Aydi	4.96	71	PN	Pn	22 19 21.6	+1.2
ARG	Arkhangelos	4.99	91	PN	Pn	22 19 22.3	+1.6
TURN	Turunc	5.07	85	PN	Pn	22 19 23.4	+1.6
YER	Yerkesik	5.12	81	PN	Pn	22 19 24.2	+1.6
TIR	Tirane	5.14	342		Pn	22 19 25.5	+2.8
CEL	Celeste	5.15	292	Pn	Pn	22 19 25.8	+2.9
ALN	Alexandroupoli	5.46	35	Pn	Pn	22 19 27.8	+0.7
SKO	Skopje	5.51	356	*i* Pn	Pn	22 19 32.1	+4.3
BALB	Balikesir	5.65	54	Pn	Pn	22 19 29.7	0.0
ULC	Ulcinj	5.88	340	⇓*i*Pn	Pn	22 19 34.9	+2.0
ULC				*i* Sn	Sn	22 20 40.8	+1.8
DRME	Dracevica, Mon	6.10	340	*e*Pn	Pn	22 19 37.8	+1.9
DRME	Dracevica, Mon	6.10	340	⇑*i*Pn	Pn	22 19 38.0	+2.1
DRME				*i* Sn	Sn	22 20 46.8	+2.4
VAE	Valguarnera	6.12	282	Pn	Pn	22 19 40.9	+4.5
	comp=N,0.9nm,0.3s,baz=184,slow=12,SNR=4.5						
VAE				Sn	Sn	22 20 52.9	+7.8
	comp=N,2.1nm,0.3s,baz=225,slow=16,SNR=2.0						
RAFF	Raffo Rosso	6.13	279		Pn	22 19 38.7	+2.3
VTS	Vitosha	6.22	9	Pn	Pn	22 19 40.1	+2.4
BUM	Brajici-Budva	6.29	339	*e*Pn	Pn	22 19 40.2	+1.6
BUM				*i* Sn	Sn	22 20 49.5	+0.4
PDG	Podgorica	6.31	341	*e*Pn	Pn	22 19 41.2	+2.4
PDG	Podgorica	6.31	341	Pn	Pn	22 19 41.6	+2.8
PVY	Plav	6.31	346	⇓*i*Pn	Pn	22 19 41.2	+2.3
PVY				*i* Sn	Sn	22 20 51.4	+1.7
TTG	Podgorica	6.31	341	⇑*i*Pn	Pn	22 19 41.0	+2.2
TTG				*i* Sn	Sn	22 20 50.2	+0.7
ELL	Elmali	6.40	85		Pn	22 19 39.9	-0.4
CEME	Cevo	6.51	340	*e*Pn	Pn	22 19 42.9	+1.3
CEME				*i* Sn	Sn	22 20 55.7	+1.2
HCY	Herceg Novi	6.54	337	*e*Pn	Pn	22 19 42.8	+0.8
HCY	Herceg Novi	6.54	337	⇑*i*Pn	Pn	22 19 43.0	+1.0
HCY				*i* Sn	Sn	22 20 55.6	+0.3
IVA	Berane	6.59	347	⇑*i*Pn	Pn	22 19 45.1	+2.4
IVA				*i* Sn	Sn	22 20 54.8	-1.8
KOME	Kolasin	6.64	344	⇑*i*Pn	Pn	22 19 45.8	+2.3
NKME	Niksic	6.70	341	⇓*i*Pn	Pn	22 19 46.3	+2.1
NKME				*i* Sn	Sn	22 20 57.2	-2.1
NKY	Niksic	6.73	341	⇑*i*Pn	Pn	22 19 46.8	+2.1
NKY				*i* Sn	Sn	22 20 58.0	-2.2
TREB	Trebinje	6.83	337	*e*Pn	Pn	22 19 46.6	+0.6
DBRK	Dubrovnik	6.85	336	*e*Pn	Pn	22 19 47.1	+0.8
DBRK				Sn	Sn	22 21 01.0	-2.0
BRY	Bratogost	6.94	339	*e*Pn	Pn	22 19 48.5	+0.9
BRY	Bratogost	6.94	339	⇓*i*Pn	Pn	22 19 48.9	+1.3
BRY				*i* Sn	Sn	22 21 02.9	-2.4
CORL	Corleone	7.05	284		Pn	22 19 52.7	+3.7
CLTB	Caltabellotta	7.08	282		Pn	22 19 52.6	+3.2
UPM	Unac-Piva	7.12	342	*e*Pn	Pn	22 19 53.3	+3.2
UPM	Unac-Piva	7.12	342	⇑*i*Pn	Pn	22 19 52.3	+2.2
UPM				*i* Sn	Sn	22 21 07.3	-2.5
SGRT	San Giovanni R	7.15	319	Pn	Pn	22 19 52.4	+1.9
STON	Ston	7.18	334	*e*Pn	Pn	22 19 51.5	+0.7
STON	Ston	7.18	334	*i* Pn	Pn	22 19 51.6	+0.7
STON				Sn	Sn	22 21 07.8	-3.3
PAOL	Paolisi	7.35	311		Pn	22 19 56.2	+3.0
RUDO	Rudo	7.41	345	*e*Pn	Pn	22 19 49.8	-4.1
BBLS	Lazići	7.64	346	*e*Pn	Pn	22 19 58.6	+1.5
DIVS	Divibare	7.77	349	*e*Pn	Pn	22 19 59.9	+1.0
DIVS	Divibare	7.77	349	Pn	Pn	22 20 00.2	+1.3
MAKA	Makarska	7.79	332	*e*Pn	Pn	22 19 60.0	+0.8
MAKA				Sn	Sn	22 21 21.2	-4.9
HVAR	Hvar	7.92	329	*e*Pn	Pn	22 20 01.5	+0.6
HVAR				Sn	Sn	22 21 24.8	-4.5
RICI	Ricice	7.93	334	*e*Pn	Pn	22 20 01.6	+0.6
HAPS	Han Pijesak,Bl	7.95	344	*e*Pn	Pn	22 20 02.2	+0.8
KIJV	Kijevo	8.64	332	*e*Pn	Pn	22 20 11.6	+0.8
KIJV				Sn	Sn	22 21 40.8	-6.0
ZIRJ	Zirje	8.65	328	*e*Pn	Pn	22 20 11.3	+0.4
MGRS	Mrkonjic Grad	8.76	336	*e*Pn	Pn	22 20 14.7	+2.2
MORI	Morici	8.80	329	*e*Pn	Pn	22 20 14.2	+1.3
MORI				Sn	Sn	22 21 48.2	-2.5
FRGS	Fruska Gora	8.83	350	*e*Pn	Pn	22 20 14.6	+1.2
BLY	Banja Luka	9.03	338	*e*Pn	Pn	22 20 17.6	+1.5
DUGI	Dugi Otok	9.18	327	*e*Pn	Pn	22 20 18.3	+0.2
NRCA	Norcia	9.32	316		Pn	22 20 24.1	+4.0
UDBI	Udbina	9.32	332	*e*Pn	Pn	22 20 22.0	+1.8
MRAK	Mrakovica	9.35	337	*e*Pn	Pn	22 20 21.2	+0.6
CSS	Mathiatis	9.37	96	Pn	Pn	22 20 15.5	-5.4
PLIT	Plitvice	9.68	332	*e*Pn	Pn	22 20 26.9	+1.9
NVLJ	Novalja	9.71	329	*e*Pn	Pn	22 20 26.9	+1.4
BRTR	Keskin Array B	9.77	67	Pn	Pn	22 20 29.9	+3.5
	comp=N,0.2nm,0.3s,baz=248,slow=13,SNR=17						
BRTR	Keskin Array B	9.77	67		Pn	22 20 26.3	-0.1
BR131	Keskin Array S	9.77	67	Pn	Pn	22 20 25.7	-0.7
RABC	Rab	9.90	329	*e*Pn	Pn	22 20 30.2	+2.2
MURB	Monte Urbino	9.92	316	Pn	Pn	22 20 31.6	+3.1
KEST	Kesra	10.23	270	LR	LR	22 25 26.5	
	comp=N,116nm,19.4s,baz=60,slow=42						
BOJS	Bojanci	10.35	333	*i* Pn	Pn	22 20 35.6	+1.5
BOJS				*e*Sn	Sn	22 22 26.2	-2.4
OZLJ	Ozalj	10.36	334	*e*Pn	Pn	22 20 34.5	+0.2
SMRN	Sveta Marina	10.40	328	*e*Pn	Pn	22 20 37.0	+2.2
BRJN	Brijuni	10.47	326	*e*Pn	Pn	22 20 37.3	+1.4
BRJN				Sn	Sn	22 22 25.4	-6.3
RIY	Rijeka	10.49	330	*e*Pn	Pn	22 20 37.2	+1.1
GBRS	Gornja Briga	10.54	331	*i* Pn	Pn	22 20 38.2	+1.4
GBRS				*e*Sn	Sn	22 22 29.3	-4.1
CRES	Cresnjev	10.55	334	*e*Pn	Pn	22 20 37.3	+0.4
OSSC	Osservatorio P	10.81	314	Pn	Pn	22 20 42.1	+1.6
CEY	Cerknica	10.86	331	*e*Pn	Pn	22 20 41.9	+0.8
CEY	Cerknica	10.86	331	*i* Pn	Pn	22 20 42.1	+1.0
BNN	Bunyan	11.27	74	Pn	Pn	22 20 44.5	-2.3
SOKA	Soboth	11.44	335	*e*Pn	Pn	22 20 51.0	+1.9
	comp=N,0.6nm,0.2s						
OBKA	Obir	11.46	333	*e*Pn	Pn	22 20 51.7	+2.2
	comp=N,0.4nm,0.1s						
OBKA				*e*Sn	Sn	22 22 55.3	-0.8
	comp=N,2.5nm,0.5s						
PSZ	Piszkesteto	11.54	353	Pn	Pn	22 20 52.7	+2.2
MMAI	Mount Meron Ar	11.59	103	Pn	Pn	22 20 45.5	-5.7
	comp=N,0.6nm,0.3s,baz=283,slow=15,SNR=2.2						
MMAI				Sn	Sn	22 22 47.0	-12
	comp=N,0.9nm,0.3s,baz=264,slow=12,SNR=1.9						
MYKA	Terra Mystica	11.90	331	*e*Sn	Sn	22 23 08.4	+1.5
	comp=N,0.9nm,0.4s						
ABTA	Abfaltersbach	12.45	328	*e*Pn	Pn	22 21 06.8	+3.8
	comp=N,0.7nm,0.4s						
ABTA				*e*Sn	Sn	22 23 16.4	-4.0
	comp=N,2.9nm,0.7s						
MOA	Molln	12.71	336	*i* Pn	Pn	22 21 09.9	+3.5
	comp=N,1.0nm,0.3s						
EIL	Elat	12.83	118	Pn	Pn	22 21 06.1	-2.1
	comp=N,0.4nm,0.3s,baz=1.6,slow=21,SNR=1.7						
EIL				Sn	Sn	22 23 13.9	-16
	comp=N,0.9nm,0.3s,baz=32,slow=18,SNR=2.6						
ASF	Jabal al Asfar	13.07	105	Pn	Pn	22 21 07.9	-3.6
	comp=N,0.3nm,0.3s,baz=279,slow=5.6,SNR=5.5						
ASF				Sn	Sn	22 23 25.2	-10
	comp=N,0.0nm,0.3s,baz=336,slow=20,SNR=1.7						
WTTA	Wattenberg	13.23	328	*e*Pn	Pn	22 21 15.7	+2.0
WTTA				*e*Sn	Sn	22 23 38.8	-0.7
WATA	Walderalm	13.31	328	*e*Pn	P	22 21 22.0	-1.8
	comp=N,1.0nm,0.3s						
SQTA	Sankt Quirin	13.38	327	*i* Pn	P	22 21 26.2	+1.7
	comp=N,1.4nm,0.3s						
VRAC	Vranov	13.41	345	Sn	Sn	22 23 46.2	+2.5
	comp=N,0.2nm,0.3s,baz=72,slow=20,SNR=1.4						
MOTA	Moosalm	13.53	327	*e*Pn	P	22 21 22.4	-3.7
	comp=N,2.1nm,0.7s						
DAVOX	Davos/Dischmat	13.68	323	Sn	Sn	22 23 45.2	-5.3
	comp=N,0.2nm,0.3s,baz=326,slow=18,SNR=1.8						
GERES	GERESS Array B	13.77	337	Pn	Pn	22 21 22.3	+1.4
	comp=N,0.2nm,0.3s,baz=149,slow=16,SNR=3.2						
AKASG	Malin Array Be	15.16	18	Pn	Pn	22 21 39.6	+0.1
	comp=N,0.6nm,0.3s,baz=208,slow=12,SNR=2.1						
CLL	Collm	16.16	339	*e*(PP)		22 22 07.0	
CLL				*e*		22 22 14.0	
CLL				*e*		22 22 19.0	
KARS	Kars	17.03	69	P	Pn	22 22 02.3	-1.3
KBZ	Khabaz	17.56	59	P	P	22 22 10.6	0.0
	comp=N,0.2nm,0.3s,baz=272,slow=9.1,SNR=7.0						
KBZ				LR	LR	22 30 25.0	
	comp=N,36nm,20.3s,baz=206,slow=42						
NACGM	Naroch	18.73	9	*i* P	Pn	22 22 24.4	+0.3
ESDC	Sonseca Array	20.63	287	P	Pn	22 22 47.2	+0.4
	comp=N,0.2nm,0.4s,baz=80,slow=9.8,SNR=1.3						
HFS	Hagfors	24.27	350	P	P	22 23 22.3	+0.7
	comp=N,1.1nm,0.4s,baz=159,slow=14,SNR=9.3						
FINES	FINESS Array B	25.13	5	P	P	22 23 30.1	+0.8
	comp=N,3.6nm,0.7s,baz=165,slow=12,SNR=16						
EKA	Eskdalemuir Ar	25.48	326	P	P	22 23 35.6	+3.0
	comp=N,4.1nm,1.0s,baz=112,slow=7.7,SNR=2.3						
NB2	NORSAR Subarra	25.52	348	P	P	22 23 34.6	+1.7
	comp=Z,2.7nm,0.7s,baz=157,slow=11						
NOA	NORSAR Array B	25.52	348	P	P	22 23 35.5	+2.6
	comp=Z,0.4nm,0.5s,baz=153,slow=9.4,SNR=5.8						
KIRV	Kirov	28.50	30	P	P	22 23 59.3	-0.4
	comp=Z,9.0nm,0.5s,baz=232,slow=12,SNR=5.8						
GEYT	Alibeck	28.73	76	P	P	22 24 01.3	-0.7
	comp=Z,2.2nm,0.5s,baz=240,slow=8.1,SNR=3.0						
TORD	Torodi Ar. Bea	29.50	223	P	P	22 24 09.7	+0.8
	comp=Z,0.5nm,0.6s,baz=32,slow=9.6,SNR=5.8						
ABKAR	Akbulak array	30.31	53	P	P	22 24 14.9	-0.8
HRA	Herat	32.73	82	P	P	22 24 36.8	-0.7
HRA				IAmb	IAmb	22 24 37.8	
	comp=Z,3.6nm,1.1s						
ARCES	ARCESS Array B	33.18	2	P	P	22 24 41.8	+1.1
	comp=Z,4.4nm,0.9s,baz=190,slow=9.1,SNR=9.9						
LODK	Lodwar	35.13	156	P	P	22 24 58.8	+0.5
CHGR	Chuyangaron	37.16	72	P	P	22 25 15.3	-0.3
BRVK	Borovoye	37.31	48	P	P	22 25 16.3	-0.2
BRVK				IAmb	IAmb	22 25 17.2	
	comp=Z,4.1nm,0.8s						
KK31	Karatay Array	37.47	64	IAmb	IAmb	22 25 19.1	
	comp=Z,4.6nm,1.0s						
KKAR	Karatay Array	37.47	64	P	P	22 25 17.5	-0.4
KKAR	Karatay Array	37.47	64	IAmb	IAmb	22 25 19.1	
	comp=Z,4.6nm,1.0s						
AAK	Ala-Archa	40.43	65	P	P	22 25 43.3	+0.3
	comp=Z,3.5nm,0.7s,baz=225,slow=6.8						
AAK	Ala-Archa	40.43	65	IAmb	IAmb	22 25 46.1	
	comp=Z,6.3nm,1.1s						
NIL	Nilore	41.68	78	P	P	22 25 53.9	+0.7
KSH	Kashi	42.15	69	P	P	22 25 55.3	-1.8
KURBB	Kurchatov Arra	42.35	52	P	P	22 25 57.3	-1.1
	comp=Z,1.7nm,0.2s,baz=276,slow=9.3,SNR=3.4						
KURK	Kurchatov	42.40	52	P	P	22 25 57.3	-1.5
KURK	Kurchatov	42.40	52	IAmb	IAmb	22 25 58.8	
	comp=Z,2.7nm,0.8s						
MK31	Makanchi Array	45.24	57	IAmb	IAmb	22 26 21.9	
	comp=Z,2.5nm,0.8s						
MKAR	Makanchi Array	45.24	57	P	P	22 26 21.1	-0.6
	comp=Z,2.6nm,0.6s,baz=282,slow=6.9,SNR=34						
MKAR	Makanchi Array	45.24	57	P	P	22 26 21.0	-0.8
ZAA0	Zalesovo Array	46.00	47	IAmb	IAmb	22 26 27.5	
	comp=Z,4.8nm,0.9s						
ZALV	Zalesovo Beam	46.00	47	P	P	22 26 27.0	-0.5
	comp=Z,3.2nm,0.4s,baz=275,slow=8.8,SNR=22						
NRIK	Noril'sk	47.82	26	LR	LR	22 47 34.6	
	comp=Z,48nm,20.5s,baz=228,slow=37						
PYUN	Piuthan	51.53	81	*e*P	P	22 27 10.2	-0.4
	comp=Z,14nm,0.4s						
DANN	Dangsing	52.03	80	*e*P	P	22 27 14.3	-0.1
KOLN	Koldanda	52.16	81	*e*P	P	22 27 15.1	-0.2
GKN	Gorkha	52.88	80	*e*P	P	22 27 19.7	-0.9
	comp=Z,7.3nm,0.4s						
DMN	Daman	53.42	80	*e*P	P	22 27 24.3	-0.4
KKN	Kakani	53.48	80	*e*P	P	22 27 24.6	-0.5
	comp=Z,6.8nm,0.6s						
PKIN	Phulchoki	53.67	80	*e*P	P	22 27 25.6	-0.9
	comp=Z,4.9nm,0.5s						
PKI	Pulchoki	53.68	80	*e*P	P	22 27 25.8	-0.9
GUN	Gumba	53.91	80	*e*P	P	22 27 27.5	-0.8
	comp=Z,12nm,0.5s						
JIRN	Jiri	54.26	80	*e*P	P	22 27 30.6	-0.4
	comp=Z,5.2nm,0.4s						
RAMN	Ramite	54.91	80	*e*P	P	22 27 34.6	-0.9
	comp=Z,5.2nm,0.4s						
ODAN	Odare	55.58	80	*e*P	P	22 27 40.2	-0.1
TAPN	Taplejung	55.61	79	*e*P	P	22 27 39.7	-0.9
GTA	Gaotai	59.63	61	*e*P	P	22 28 08.7	+0.1
GTA				pP	pP	22 28 17.1	-2.4
GTA				sP	pwP	22 28 21.0	-1.4
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SONM	Songino Array	60.66	50	P	P	22 28 15.6	+0.1
	comp=Z,1.3nm,0.9s,baz=276,slow=8.8,SNR=8.8						
SONM				pP	pP	22 28 25.7	-0.7
	comp=Z,0.4nm,0.5s,baz=284,slow=7.9,SNR=3.6						
CMAR	Chiang Mai Arr	68.99	82	P	P	22 29 09.8	-0.2
	comp=Z,1.8nm,0.8s,baz=304,slow=8.3,SNR=11						
INK	Inuvik	73.94	351	P	P	22 29 40.0	+1.1
	comp=Z,1.2nm,1.0s,baz=355,slow=5.3,SNR=1.8						
INK	Inuvik	73.94	351	IAmb	IAmb	22 29 42.6	
	comp=Z,1.9nm,1.1s						
USRK	Ussuriysk Ar.	77.73	44	P	P	22 30 00.7	-0.3
	comp=Z,1.0nm,0.7s,baz=291,slow=5.9,SNR=5.8						
USRK				pP	PcP	22 30 11.5	+0.5
	comp=Z,1.0nm,0.7s,baz=251,slow=5.8,SNR=3.5						
USRK				LR	LR	23 07 21.7	
	comp=Z,74nm,18.2s,baz=263,slow=38						
KSRS	Korea Array	79.52	51	P	P	22 30 11.3	+0.3
	comp=Z,1.3nm,0.6s,baz=313,slow=5.2,SNR=2.9						
KSRS				pP	pP	22 30 21.9	-0.4
	comp=Z,1.7nm,0.6s,baz=304,slow=4.4,SNR=3.5						
WRA	Warramunga Arr	119.30	94	PKP	PKPdf	22 36 52.7	-1.0
	comp=Z,0.3nm,0.7s,baz=317,slow=2.0,SNR=2.1						

NEIC 12 22:23:46.0±0.6, **36°.930N**±0°.010×**97°.824W**±0°.009, **$h4^{km}$**$\pm5^{km}$, **mb_Lg2.7**/38, **Error ellipse: s-maj=1.5km s-min=0.8km az=153.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.08	200	Pg	Pg	22 23 48.2	+0.4
GC02				Sg	Sg	22 23 49.3	+0.4
KAN14	Manchester OK	0.12	284		Pg	22 23 48.3	0.0
KAN14				Sg	Sg	22 23 50.0	+0.1
KAN17	Caldwell West	0.12	22	Pg	Pg	22 23 48.5	0.0
KAN17				Sg	Sg	22 23 50.1	-0.1
KAN05	Bluff City Nor	0.18	348		Pg	22 23 49.4	-0.2
KAN05				Sg	Sg	22 23 51.8	-0.2
KAN01	Argonia South	0.23	13	Pg	Pg	22 23 50.1	-0.4
KAN01				Sg	Sg	22 23 53.3	-0.3
KAN09	Caldwell North	0.26	39	Pg	Pg	22 23 51.0	-0.1
KAN09				Sg	Sg	22 23 54.7	+0.1
KAN13	South Haven SW	0.29	73	Pg	Pg	22 23 51.6	0.0
KAN13				Sg	Sg	22 23 56.3	+0.9
KAN10	Anthony SW Sta	0.29	312		Pg	22 23 51.5	-0.2
KAN10				Sg	Sg	22 23 55.4	-0.1
KAN06	Argonia West S	0.32	355		Pg	22 23 52.0	-0.2
KAN06				Sg	Sg	22 23 56.3	-0.1
KAN08	Anthony NE Sta	0.32	338		Pg	22 23 51.8	-0.4
KAN08				Sg	Sg	22 23 56.4	-0.1
OK032	Salt Plains WL	0.34	248	Pg	Pg	22 23 52.6	+0.1
OK032				Sg	Sg	22 23 57.4	+0.5
KAN16	Harper SW Stat	0.35	327	Pg	Pg	22 23 52.6	-0.2
KAN16				Sg	Sg	22 23 57.4	-0.1
KS20	Mayfield South	0.37	36	Pg	Pg	22 23 53.0	-0.2
KS20				Sg	Sg	22 23 58.1	+0.1
CROK	Carrier	0.44	197	Pg	Pg	22 23 54.9	+0.4
BLOK	Blackwell	0.52	109	Pg	Pg	22 23 56.1	+0.1
T35A	Sooner Cattle	1.05	90	Pg	Pg	22 24 05.9	-0.3
U32A	Winter Ranch,	1.09	240	Pg	Pg	22 24 06.5	-0.6
OK029	Liberty Lake	1.17	165		Pg	22 24 07.5	-1.0
QUOK	Quay	1.18	130		Pg	22 24 08.2	-0.3
BCOK	Bluff Creek, N	1.28	172		Pg	22 24 09.9	-0.7
OKCFA	Oklahoma City	1.54	169		Pn	22 24 14.4	0.0
OKCFA				IAmb_Lg		22 24 37.8	
	comp=Z,43nm,0.7s						
R32A	Long Quarter,	1.65	335		Pn	22 24 15.8	0.0
FNO	Franklin	1.70	168		Pn	22 24 16.4	-0.2
TUL1	Leonard	1.93	121	Pn	Pn	22 24 20.6	+1.0
TUL1				IAmb_Lg		22 24 50.5	
	comp=Z,35nm,0.8s						
WMOK	Wichita Mounta	2.32	200	Pn	Pn	22 24 25.3	+0.2
WMOK				IAmb_Lg		22 25 05.0	
	comp=Z,18nm,1.0s						
X34A	Smith Ranch, M	2.32	180	Pn	Pn	22 24 26.4	+1.3
KSU1	Kansas State U	2.37	23	Pn	Pn	22 24 24.1	-1.6
CBKS	Cedar Bluff	2.42	322	Pn	Pn	22 24 25.9	-0.6
U38A	Gravette	2.81	99	Pn	Pn	22 24 32.7	+0.9
LOOK	Love County	2.98	170	Pn	Pn	22 24 33.7	-0.4
LOOK				IAmb_Lg		22 25 25.3	
	comp=Z,15nm,0.9s						
X37A	Clayton	3.07	139		Pn	22 24 35.3	-0.1
HHAR	Hobbs	3.19	101	Pn	Pn	22 24 37.4	+0.3
Z35A	Perchaven, San	3.62	172	IAmb_Lg		22 25 48.7	
	comp=Z,12nm,0.7s						
S39A	Bolivar	3.67	77	IAmb_Lg		22 25 47.5	

	comp=Z,20nm,0.8s						
W39A	Magazine	3.70	117		Pb	22 24 53.8	+1.8
W39A				IAmb_Lg		22 25 47.8	
	comp=Z,20nm,0.8s						
AMTX	Amarillo	3.74	238		Pb	22 24 54.0	+1.3
AMTX				IAmb_Lg		22 25 50.1	
	comp=Z,26nm,0.9s						
U40A	Yellville	4.04	97	Pn	Pn	22 24 48.5	-0.2
MIAR	Mount Ida	4.19	123	Pn	Pn	22 24 51.4	+0.5
MIAR				IAmb_Lg		22 26 01.0	
	comp=Z,12nm,0.9s						
P38A	Dawn	4.32	50		Pg	22 25 06.9	-1.9
P38A				IAmb_Lg		22 26 02.1	
	comp=Z,15nm,0.8s						
MGMO	Mountain Grove	4.45	85	Pn	Pn	22 24 55.1	+0.7
MGMO				IAmb_Lg		22 26 11.6	
	comp=Z,19nm,0.8s						
R40A	Maddies Statio	4.62	71	IAmb_Lg		22 26 13.2	
	comp=Z,17nm,0.8s						
X40A	Basin Creek Fa	4.74	120	IAmb_Lg		22 26 26.8	
	comp=Z,9.2nm,0.8s						
WHTX	Lake Whitney,	4.94	176	IAmb_Lg		22 26 20.1	
	comp=Z,9.4nm,0.8s						
P40A	Paris	5.24	59	IAmb_Lg		22 26 35.9	
	comp=Z,20nm,0.7s						
T25A	Trinidad	5.27	274	IAmb_Lg		22 26 39.3	
	comp=Z,14nm,1.1s						
FVM	French Village	5.98	78	IAmb_Lg		22 26 58.0	
	comp=Z,15nm,0.9s						
S44A	Carbondale	6.87	81	IAmb_Lg		22 27 22.4	
	comp=Z,13nm,0.7s						
SIUC	Southern Illin	6.90	81	IAmb_Lg		22 27 25.7	
	comp=Z,12nm,0.8s						

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*IDC **12** 22:30:52.6±0.8, 57°.06S×23°.84W, h0^{km}, mb4.2/7, mb1 4.3/8, mb1mx3.9/23, mbtmp4.2/8, ML3.8/1, MS3.6/2, Ms1 3.5/2, ms1mx3.1/16, Error ellipse: s-maj=27.0km s-min=20.9km az=1.0*

*NEIC **12** 22:30:56.8±2.3, 57°.2S±0°.1×23°.9W±0°.1, h32^{km}±5^{km}, mb4.5/13, Error ellipse: s-maj=19.7km s-min=10.3km az=177.0*

ISC 12 22:30:56.3±0.6**, 57°.33S**±0°.09×**23°.90W**±0°.10**, h35^{km}, n32, σ1^{s}79**/28**, mb4.3**/9**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	7.72	288	Pn	Pn	22 32 45.6	-0.4
VNA1	Neumayer--Stat	14.94	160	P	Pn	22 34 26.1	+1.6
VNA1				S	Sn	22 37 02.4	-6.1
VNA3	Neumayer Olymp	15.19	162	P	Pn	22 34 28.7	+0.8
VNA3				S	Sn	22 37 04.6	-10
VNA2	Neumayer--Watz	15.33	159	P	Pn	22 34 30.4	+0.7
	baz=321,slow=14						
VNA2				S	Sn	22 37 06.8	-11
SNAA	Sanae	16.84	157	P	Pn	22 34 51.6	+2.6
SNAA				S	Sn	22 37 46.8	-7.8
SNAA	Sanae	16.84	157	P	Pn	22 34 51.2	+2.3
	0.3nm,0.3s,baz=309,slow=12,SNR=9.8						
SNAA				S	Sn	22 37 45.3	-9.3
	0.1nm,0.3s,baz=360,slow=7.4,SNR=2.1						
SNAA	Sanae	16.84	157	Pn	Pn	22 34 51.4	+2.4
EFI	East Falkland	20.47	271	P	P	22 35 30.7	+0.1
PMSA	Palmer Station	20.49	232	P	Pn	22 35 34.9	+1.9
	16nm,0.7s,baz=63,slow=10,SNR=6.6						
PMSA	Palmer Station	20.49	232		Pn	22 35 34.6	+1.6
PMSA				IAmb	IAmb	22 35 49.4	
	comp=Z,22nm,0.8s						
USHA	Ushuaia	24.64	257	LR	LR	22 44 06.9	
	comp=Z,142nm,20.3s,baz=234,slow=32						
MG02	Cerro Sombrero	25.97	261	P	P	22 36 24.5	-0.7
MG02				IAmb	IAmb	22 36 40.5	
	comp=Z,26nm,1.0s						
PLTB	Pedras Altas	32.71	309	P	P	22 37 25.8	+0.6
PLTB				IAmb	IAmb	22 37 28.7	
	comp=Z,5.5nm,0.8s						
PLCA	Paso Flores	34.00	279	P	P	22 37 37.0	+0.5
	comp=Z,2.3nm,1.1s,baz=193,slow=5.4,SNR=4.0						
PLCA	Paso Flores	34.00	279	P	P	22 37 35.4	-1.1
PLCA				IAmb	IAmb	22 37 38.6	
	comp=Z,3.7nm,1.0s						
MAW	Mawson	38.02	142	P	P	22 38 13.0	+2.5
	comp=Z,1.8nm,0.9s,baz=232,slow=9.2,SNR=2.3						
CPUP	Villa Florida	39.03	308	P	P	22 38 18.9	-0.5
	comp=Z,3.3nm,0.7s,baz=151,slow=11,SNR=6.9						
CPUP	Villa Florida	39.03	308	P	P	22 38 19.5	+0.1
CPUP				IAmb	IAmb	22 38 20.3	
	comp=Z,4.9nm,0.8s						
SHEL	Horse Pasture	43.51	26	P	P	22 38 53.5	-2.7
BOSA	Boshof	44.59	71	P	P	22 39 05.0	0.0
	comp=Z,3.8nm,1.1s,baz=187,slow=9.2,SNR=6.0						
BOSA				LR	LR	22 53 02.9	
	comp=Z,62nm,18.9s,baz=196,slow=30						
BOSA	Boshof	44.59	71	P	P	22 39 05.8	+0.8
LBTB	Lobatse	47.71	69	P	P	22 39 29.4	-0.1
	comp=Z,2.6nm,0.8s,baz=188,slow=13,SNR=4.1						
H10S2	ASCENSION HYDR	48.79	12	T	T	23 32 24.4	
	baz=186						
H10S3	ASCENSION HYDR	48.80	12	T	T	23 32 27.7	
	baz=34,SNR=3.1						
PTLB	Pontes e Lacer	49.49	313	P	P	22 39 43.3	+0.2
LPAZ	La Paz	52.60	303	P	P	22 40 08.6	+1.4
SAML	Samuel	57.01	312	P	P	22 40 38.1	-0.2
BOAV	Boa Vista	66.42	319	P	P	22 41 41.8	0.0
BOAV				IAmb	IAmb	22 41 42.9	
	comp=Z,5.3nm,0.8s						
TORD	Torodi Ar. Bea	73.35	26	P	P	22 42 25.0	+0.8
	comp=Z,1.2nm,0.7s,baz=202,slow=6.5,SNR=11						
FINES	FINESS Array B	124.70	27	PKP	PKiKP	22 49 51.2	+0.4
	comp=Z,2.4nm,0.9s,baz=204,slow=3.8,SNR=3.7						
ARCES	ARCESS Array B	131.48	21	PKP	PKiKP	22 50 04.0	-0.2
	comp=Z,8.1nm,1.2s,baz=151,slow=2.1,SNR=3.8						
SONM	Songino Array	149.00	86	PKPbc	PKPab	22 50 42.8	-1.1
	comp=Z,0.4nm,0.5s,baz=246,slow=3.2,SNR=3.8						

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*IDC **12** 22:34:54.5±1.2, 7°.08N×94°.44E, h0^{km}, mb4.0/11, mb1 4.1/12, mb1mx3.8/45, mbtmp4.0/12, ML3.8/1, MS3.7/10, Ms1 3.7/10, ms1mx3.4/38, Error ellipse: s-maj=34.9km s-min=24.8km az=102.0*

*NEIC **12** 22:34:55.8±1.2, 6°.93N±0°.09×94°.54E±0°.08, h10^{km}±1^{km}, mb4.5/30, Error ellipse: s-maj=17.3km s-min=11.3km az=220.0*

ISC 12 22:34:57.6±0.5**, 6°.94N**±0°.08×**94°.54E**±0°.07**, h26^{km}, n74, σ0^{s}93**/62**, mb4.4**/26**, MS3.8**/6**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	2.93	125		Pn	22 35 41.6	-1.0
LHMI				Sn	Sn	22 36 17.2	+0.2
PSI	Prapat	6.00	133	Pn	Pn	22 36 26.9	+2.0
	2.1nm,0.3s,baz=319,slow=17,SNR=8.4						
PSI				LR	LR	22 39 34.7	
	comp=Z,337nm,20.4s,baz=297,slow=45						
RPSI	Rantau Prapat	6.07	134		Pn	22 36 26.9	+1.1
BKNI	Bangkinang	9.23	135	Pn	Pn	22 37 09.2	0.0
CMAR	Chiang Mai Arr	12.22	20	Pn	Pn	22 37 52.1	+1.9
	0.6nm,0.3s,baz=212,slow=15,SNR=11						
CMAR				LR	LR	22 42 21.6	
	comp=Z,209nm,19.9s,baz=248,slow=37						
CMAR	Chiang Mai Arr	12.22	20		Pn	22 37 50.1	0.0
CHTO	Chiang Mai	12.55	20	Pn	Pn	22 37 55.6	+0.9
UBPT	Khong Chiam	13.54	51	Pn	Pn	22 38 06.6	-1.6
PALK	Pallekele	13.74	272	LR	LR	22 43 32.4	
	comp=Z,382nm,18.1s,baz=193,slow=38						
PALK	Pallekele	13.74	272	Pn	Pn	22 38 09.2	-1.8
LEM	Lembang	18.90	136	LR	LR	22 48 07.3	
	comp=Z,474nm,18.2s,baz=224,slow=42						
ODAN	Odare	20.95	342	*e*P	Pn	22 39 41.4	-0.1
	27nm,0.9s						
RAMN	Ramite	21.29	340	*e*P	P	22 39 43.4	+0.8
	17nm,0.5s						
TAPN	Taplejung	21.31	343	*e*P	P	22 39 43.0	+0.1
JIRN	Jiri	22.08	340	*e*P	P	22 39 50.3	-0.9
PKI	Pulchoki	22.27	338	*e*P	P	22 39 53.6	+0.3
	24nm,0.6s						
PKIN	Phulchoki	22.28	338	*e*P	P	22 39 54.4	+1.1
	26nm,0.6s						
GUN	Gumba	22.41	340	*e*P	P	22 39 53.2	-1.6
DMN	Daman	22.42	338	*e*P	P	22 39 55.8	+1.0
KKN	Kakani	22.52	338	*e*P	P	22 39 55.2	-0.6
LSA	Lhasa	22.86	352	P	P	22 40 00.7	+1.0
GKN	Gorkha	22.95	337	*e*P	P	22 39 58.7	-1.6
	27nm,1.0s						
BHPL	Bhopal	23.10	316	*e*P	P	22 40 10.2	+8.5
KOLN	Koldanda	23.17	335	*e*P	P	22 40 02.7	+0.1
DANN	Dangsing	23.61	336	*e*P	P	22 40 05.2	-1.8
	5.4nm,0.5s						
PYUN	Piuthan	23.72	334	*e*P	P	22 40 07.7	-0.3
DGAR	Diego Garcia	26.25	238	P	P	22 40 30.2	-0.7
H08S3	Diego Garcia H	26.33	237	T	T	23 07 13.2	
	baz=56,slow=75,SNR=154						
H08S2	Diego Garcia H	26.34	237	T	T	23 07 10.1	
	baz=56,slow=75,SNR=160						
H08S1	Diego Carcia H	26.35	237	T	T	23 07 16.8	
	baz=56,slow=75,SNR=109						
DHRM	DHARAMSHALA	30.38	328	*e*P	P	22 41 14.2	+6.3
MMRI	Maumere	31.65	119	P	P	22 41 18.0	-1.0
NIL	Nilore	33.09	326	P	P	22 41 30.9	-0.6
KBL	Kabul	36.15	323	P	P	22 41 58.1	-0.1
PRZ	Przheval'sk	38.17	341	P	P	22 42 14.9	-0.3
PRZ				IAmb	IAmb	22 42 28.2	
	comp=Z,11nm,1.1s						
GAR	Garm	38.68	329	P	P	22 42 19.0	-0.4
GAR				IAmb	IAmb	22 42 37.2	
	comp=Z,9.6nm,0.7s						
CHGR	Chuyangaron	39.02	328		P	22 42 21.6	-0.6
CHGR				IAmb	IAmb	22 42 29.2	
	comp=Z,11nm,0.8s						
BTK	Batken	39.24	331		P	22 42 24.1	0.0
BTK				IAmb	IAmb	22 42 35.7	
	comp=Z,11nm,1.1s						
MK31	Makanchi Array	41.08	347	P	P	22 42 38.0	-1.2
MKAR	Makanchi Array	41.08	347	P	P	22 42 38.9	-0.3
	comp=Z,1.3nm,0.8s,baz=171,slow=8.2,SNR=15						
MKAR	Makanchi Array	41.08	347	P	P	22 42 38.2	-1.0
MAKZ	Makanchi	41.16	347	P	P	22 42 39.1	-0.8
KK31	Karatay Array	41.77	333	P	P	22 42 44.5	-0.4
KKAR	Karatay Array	41.77	333	P	P	22 42 44.8	-0.1
SONM	Songino Array	41.98	12	P	P	22 42 47.4	+0.7
	comp=Z,0.5nm,0.7s,baz=189,slow=8.3,SNR=4.8						
SONM				LR	LR	23 02 00.1	
	comp=Z,63nm,18.0s,baz=166,slow=39						
SONM	Songino Array	41.98	12	P	P	22 42 46.7	0.0
GEYT	Alibeck	45.16	319	LR	LR	23 05 07.5	
	comp=Z,67nm,18.7s,baz=10.0,slow=40						
H01W3	Cape Leeuwin H	45.53	157	T	T	23 32 38.7	
	baz=330						
H01W2	Cape Leeuwin H	45.54	157	T	T	23 32 41.4	
	baz=330						
H01W1	Cape Leeuwin H	45.54	157	T	T	23 32 40.4	
	baz=330						
KURK	Kurchatov	45.61	346	P	P	22 43 15.7	+0.1
ZAA0	Zalesovo Array	47.53	352	P	P	22 43 30.8	+0.2
ZAA0				IAmb	IAmb	22 43 42.3	
	comp=Z,8.4nm,1.2s						
ZALV	Zalesovo Beam	47.53	352	P	P	22 43 30.9	+0.3
	comp=Z,0.6nm,0.3s,baz=200,slow=6.2,SNR=4.9						
ZALV	Zalesovo Beam	47.53	352	P	P	22 43 30.6	0.0
RAYN	Ar Rayn	49.84	295	P	P	22 43 50.1	+1.1
RAYN				IAmb	IAmb	22 43 59.8	
	comp=Z,11nm,1.4s						
BRVK	Borovoye	50.06	341	P	P	22 43 49.8	-0.2
BRVK				IAmb	IAmb	22 43 59.8	
	comp=Z,2.8nm,0.8s						
ABKAR	Akbulak array	51.24	332	P	P	22 43 59.1	+0.1
ABKAR	Akbulak array	51.24	332	P	P	22 43 59.5	+0.4
ABKAR				IAmb	IAmb	22 44 09.0	
	comp=Z,12nm,1.2s						
GURO	Guroymak-BITLI	56.75	312	P	P	22 44 39.5	-0.2
GURO				IAmb	IAmb	22 44 48.1	
	comp=Z,3.2nm,1.1s						
ARU	Arti	56.90	337	P	P	22 44 41.4	+1.2
ARU				IAmb	IAmb	22 44 49.8	
	comp=Z,9.8nm,1.2s						
YSS	Yuzh-Sakhalins	57.27	37	P	P	22 44 43.4	+0.4
KMBO	Kilima Mbogo	57.72	264	P	P	22 44 47.8	+0.7
	comp=Z,1.5nm,0.8s,baz=41,slow=19,SNR=5.8						
KMBO	Kilima Mbogo	57.72	264	P	P	22 44 47.8	+0.7
KMBO				IAmb	IAmb	22 44 59.0	
	comp=Z,2.6nm,0.9s						
CSS	Mathiatis	62.54	306	P	P	22 45 19.1	-0.4
BR131	Keskin Array S	63.34	311	P	P	22 45 23.7	-1.2
BR131				IAmb	IAmb	22 45 33.2	
	comp=Z,2.2nm,0.8s						
BRTR	Keskin Array B	63.34	311	P	P	22 45 23.3	-1.6
	comp=Z,0.8nm,0.7s,baz=125,slow=7.1,SNR=5.7						
BRTR				LR	LR	23 14 36.5	
	comp=Z,60nm,19.9s,baz=98,slow=38						
BRTR	Keskin Array B	63.34	311	P	P	22 45 24.1	-0.8
FINES	FINESS Array B	73.72	332	P	P	22 46 28.3	-0.8
	comp=Z,2.8nm,0.9s,baz=98,slow=7.2,SNR=9.7						
BOSA	Boshof	75.43	238	P	P	22 46 41.7	+1.8
	comp=Z,1.6nm,0.8s,baz=72,slow=3.2,SNR=4.8						
ARCES	ARCESS Array B	76.27	340	P	P	22 46 43.6	-0.1
	comp=Z,6.3nm,1.1s,baz=100,slow=6.6,SNR=5.1						
ARCES				LR	LR	23 23 12.7	
	comp=Z,110nm,18.5s,baz=255,slow=38						
GERES	GERESS Array B	78.78	318	P	P	22 46 58.4	+0.1
	comp=Z,0.5nm,0.7s,baz=96,slow=6.7,SNR=4.8						
GERES				LR	LR	23 26 04.9	
	comp=Z,39nm,19.4s,baz=332,slow=39						
NOA	NORSAR Array B	80.73	331	LR	LR	23 25 14.3	
	comp=Z,34nm,18.4s,baz=245,slow=38						
TORD	Torodi Ar. Bea	91.20	283	P	P	22 48 01.9	+0.6
	comp=Z,0.4nm,0.6s,baz=90,slow=3.8,SNR=3.8						
ESDC	Sonseca Array	92.12	310	P	P	22 48 04.8	-0.3
	comp=Z,0.5nm,0.8s,baz=68,slow=4.6,SNR=6.8						

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*BJI **12** 22:37:57.5±0.0, 1°.30N×126°.60E, h50^{km}, mB5.0/33, mb4.7/52, Ms4.5/14, Ms7 4.2/12*

*IDC **12** 22:37:59.8±3.0, 1°.14N×126°.36E, h43^{km}±29^{km}, mb4.3/24, mb1 4.4/26, mb1mx4.2/35, mbtmp4.5/26, ML4.3/2, MS3.2/3, Ms1 3.3/3, ms1mx2.9/30, Error ellipse: s-maj=20.7km s-min=10.6km az=81.0*

*NEIC **12** 22:38:00.0±2.4, 1°.21N±0°.08×126°.46E±0°.05, h42^{km}±6^{km}, mb4.8/67, Error ellipse: s-maj=11.7km s-min=7.2km az=199.0*

*DJA **12** 22:38:00.6±0.2, 1°N±2°×12°6E±°, h46^{km}±3^{km}, M4.5/28, mb4.8/28, mB5.0/13, MLv4.7/18, Mw(mB)4.3/13, MwMwp4.5/2, Mwp4.9/2*

*KLM **12** 22:38:01, 1°.31N×126°.57E, h56^{km}, mb4.7*

ISC 12 22:37:59.4±0.3**, 1°.17N**±0°.04×**126°.44E**±0°.04**, h39^{km}, n171, σ1^{s}47**/177**, mb4.7**/77**, MS3.9**/5**, 1C-1D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.01	113	P	Pn	22 38 18.0	+0.9
TNTI				S	Sn	22 38 31.5	+1.4
TNTI	Ternate	1.01	113		Pn	22 38 18.0	+0.9
TNTI				Sn	Sn	22 38 31.5	+1.4
LBMI	Labuha	2.09	149	P	Pn	22 38 33.0	+1.1
LBMI				S	Sn	22 38 58.2	+1.6
KMSI	Cibinong	2.52	257	P	Pn	22 38 39.0	+1.1
SANI	Sanana	3.23	188	P	Pn	22 38 48.2	+0.6
SANI	Sanana	3.23	188	P	Pn	22 38 48.6	+1.0
GTOI	Gorontalo	3.46	261	P	Pn	22 38 53.1	+2.3
LUWI	Luwuk	4.27	239	P	Pn	22 39 05.1	+3.2
LUWI	Luwuk	4.27	239	Pn	Pn	22 39 04.0	+2.1
LUWI	Luwuk	4.27	239	P	Pn	22 39 05.9	+4.0
MRSI	Marisa	4.55	261	P	Pn	22 39 07.5	+1.8
MSAI	Masohi	5.13	151	P	Pn	22 39 19.3	+5.6
	0.1nm22nm,0.5s						
APSI	Ampana	5.21	247	P	Pn	22 39 17.4	+2.5
	1.5nm4µm322nm,0.6s						
SWI	Sorong	5.23	113	P	Pn	22 39 18.0	+2.9
	0.3nm930nm61nm,0.9s						
SIJI	Sorong	5.24	113	P	Pn	22 39 17.1	+1.9
	6.7nm,0.3s,baz=324,slow=9.5,SNR=18						
TOLI2	Tolitoli	5.65	269		Pn	22 39 20.8	-0.1
DAV	Davao City (W)	5.92	352	LR	LR	22 42 20.5	
	comp=Z,133nm,18.7s,baz=144,slow=44						
KCP	Kidapawan	5.96	347	⇓*e*P	Pn	22 39 29.1	+3.9
MPSI	Mapaga	6.59	263	P	Pn	22 39 36.1	+2.3
	0.3nm2µm1µm88nm,0.8s						
FAKI	Fak Fak	7.09	125	P	Pn	22 39 43.4	+2.7
	0.4nm2µm109nm,1.0s						
FAKI	Fak Fak	7.09	125	Pn	Pn	22 39 41.9	+1.3
TTSI	Tana Toraja	7.83	238	P	Pn	22 39 52.9	+2.1
	0.5nm2µm128nm,0.5s						
SPSI	Sidrap Palu	8.39	233	P	Pn	22 40 00.9	+2.4
	1µm85nm,0.8s						
BKSI	Bulukumba	9.02	224	P	Pn	22 40 10.3	+3.2
	586nm61nm,0.8s						
KAPI	Kappang	9.07	227	P	Pn	22 40 09.8	+1.9
	3.7nm,0.3s,baz=76,slow=11,SNR=8.9						
KAPI				S	Sn	22 41 47.0	-1.8
	1.6nm,0.3s,baz=154,slow=13,SNR=1.4						
KAPI	Kappang	9.07	227	Pn	Pn	22 40 09.4	+1.5
KAPI	Kappang	9.07	227	P	Pn	22 40 12.0	+4.1
BSSI	Bau Bau, Buton	9.38	219	P	Pn	22 40 14.0	+1.9
	362nm28nm,0.6s						
SPMM	Sapulut	10.56	290	P	Pn	22 40 32.0	+3.7
EDFI	Ende, Flores	10.93	206	P	Pn	22 40 35.7	+2.3
	11nm,0.8s						
SOEI	Soe	11.06	191		Pn	22 40 38.1	+2.8
BATI	Baumata	11.63	194	P	Pn	22 40 48.1	+5.1
	3.1nm,0.3s,baz=19,slow=6.3,SNR=1.9						
BATI				LR	LR	22 46 23.0	
	comp=Z,259nm,21.0s,baz=5.5,slow=43						
SBUM	Sibu	14.27	275	P	P	22 41 27.0	+1.5
MTN	Manton Dam	14.68	162	Pn	Pn	22 41 23.9	-0.6
JAY	Jayapura	14.73	104	P	P	22 41 31.0	+0.3
	1.0nm,0.3s,baz=312,slow=3.7,SNR=4.4						
STKI	Sintang	15.00	266	P	Pn	22 41 30.7	+2.0
JAGI	Jajag, Banyuwa	15.54	232	Pn	Pn	22 41 36.1	+0.2
KSM	Kuching	16.13	271	P	P	22 41 48.0	+1.8
KNRA	Kununurra	16.89	172	P	Pn	22 41 53.5	+0.5
KNRA				IAmb	IAmb	22 41 59.7	
	comp=Z,58nm,1.1s						
PCJI	Pacitan	17.83	238	P	P	22 42 07.5	+2.5
	comp=Z,46nm,0.7s						
FITZ	Fitzroy Crossi	19.16	182	P	P	22 42 19.0	-0.6
	comp=Z,0.8nm,0.3s,baz=12,slow=10,SNR=24						
TWG	Pinlang	22.15	347	P	P	22 42 49.3	-2.6
TWG				IAmb	IAmb	22 42 51.8	
	comp=Z,25nm,0.8s						
WB0	Warramunga Arr	22.22	160	P	P	22 42 52.2	-0.6
WB0				IAmb	IAmb	22 42 55.5	
	comp=Z,63nm,1.1s						
WB0					S	22 46 54.1	-1.2
WRAB	Tennant Creek	22.36	160	P	P	22 42 53.8	-0.5
WRAB				IAmb	IAmb	22 42 59.4	
	comp=Z,64nm,1.0s						
WRAB					S	22 46 56.4	-1.4
WRA	Warramunga Arr	22.36	160	P	P	22 42 53.4	-0.9
	comp=Z,46nm,0.6s,baz=340,slow=11,SNR=356						
WRA				S	S	22 46 55.3	-2.6
	comp=Z,7.5nm,1.0s,baz=330,slow=20,SNR=8.9						
WRA	Warramunga Arr	22.36	160	P	P	22 42 54.1	-0.2
WB2	Warramunga Arr	22.37	160	P	P	22 42 53.5	-0.9
COEN	Coen	22.38	133	P	P	22 42 53.0	-1.5
COEN				IAmb	IAmb	22 43 03.7	
	comp=Z,24nm,1.1s						
WR0	Warramunga Arr	22.45	160	P	P	22 42 54.0	-1.2
WR0				IAmb	IAmb	22 42 57.2	
	comp=Z,57nm,1.1s						
MYKOM	Kota Tinggi	22.59	272	P	P	22 42 57.0	+0.2
YULB	Yu-li	22.65	348	P	P	22 42 54.4	-2.9
TPUB	Ta-pu	22.71	346	P	P	22 42 55.7	-2.3
SSLB	Suanglung	23.11	347	P	P	22 42 59.0	-3.1
SSLB				IAmb	IAmb	22 43 11.7	
	comp=Z,16nm,0.8s						
PMG	Port Moresby	23.16	117	P	P	22 43 00.9	-1.8
PSA00	Pilbara Seismi	23.50	196	P	P	22 43 04.8	-1.1
PSA00				IAmb	IAmb	22 43 08.6	
	comp=Z,25nm,1.1s						
PSA00	Pilbara Seismi	23.50	196	P	P	22 43 04.8	-1.1
XMIS	Christmas Isla	23.70	240	P	P	22 43 07.0	-0.9
JRMM	Jerantut	24.09	277	P	P	22 43 11.0	-0.5
UBPT	Khong Chiam	25.00	305	P	P	22 43 19.9	+0.1
JOW	Kunigami	25.58	4	P	P	22 43 25.5	+0.6
	comp=Z,26nm,0.7s,baz=197,slow=10,SNR=6.4						
AS31	Alice Springs	25.73	164	P	P	22 43 26.0	-0.4
ASAR	Alice Springs	25.73	164	P	P	22 43 26.1	-0.3
	comp=Z,7.6nm,0.7s,baz=343,slow=7.4,SNR=76						
ASAR				S	S	22 47 51.9	-0.9
	comp=Z,2.0nm,1.0s,baz=347,slow=20,SNR=5.0						
ASAR	Alice Springs	25.73	164	P	P	22 43 25.9	-0.5
GIRL	Giralia	26.49	206	P	P	22 43 33.5	+0.3
GIRL				IAmb	IAmb	22 43 35.3	
	comp=Z,33nm,0.9s						
RPSI	Rantau Prapat	27.54	274	P	P	22 43 41.7	-1.1
PSI	Prapat	27.54	274	P	P	22 43 41.7	-1.3
	comp=Z,1.9nm,0.3s,baz=16,slow=4.5,SNR=4.6						
CTAO	Charters Tower	28.70	138	P	P	22 43 53.9	+0.9
GSI	Gunungsitoli	28.85	271	P	P	22 43 53.5	-1.0
GSI				IAmb	IAmb	22 43 56.5	
	comp=Z,19nm,0.8s						
SSE	Sheshan	30.18	351	P	P	22 44 06.9	+0.9
SSE				S	S	22 49 06.0	+3.4
SSE				pmax	pmax		
	comp=Z,16nm,0.7s						
SSE				pmax	pmax		
	comp=Z,130nm,3.7s						
SSE				LR	LR		
	comp=Z,170nm,21.6s						
SSE				LR	LR		
	comp=Z,190nm,20.0s						
GYA	Guiyang	31.53	325	⇑P	P	22 44 18.7	+0.6
GYA				pmax	pmax		
	comp=Z,11nm,0.7s						
NJ2	Nanjing	31.54	348	*e*P	P	22 44 17.8	-0.2
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
MORW	Morawa	31.67	198	P	P	22 44 19.2	0.0
MORW				IAmb	IAmb	22 44 19.8	
	comp=Z,8.6nm,0.8s						
FORT	Forrest	31.81	177	P	P	22 44 20.5	+0.1
CMAR	Chiang Mai Arr	31.98	304	P	P	22 44 21.9	-0.3
	comp=Z,1.2nm,0.3s,baz=129,slow=7.8,SNR=10						
CMAR				PcP	PcP	22 47 12.9	+1.2
	comp=Z,1.3nm,0.7s,baz=169,slow=2.4,SNR=5.8						
CMAR				LR	LR	22 58 12.1	
	comp=Z,33nm,20.4s,baz=130,slow=38						
CHTO	Chiang Mai	32.16	305	P	P	22 44 22.4	-1.3
BBOO	Buckleboo	35.00	166	P	P	22 44 47.8	-0.4
BBOO				IAmb	IAmb	22 44 50.9	
	comp=Z,12nm,0.7s						
STKA	Stephens Creek	35.87	158	P	P	22 44 55.9	+0.2
	comp=Z,8.5nm,0.4s,baz=337,slow=8.9,SNR=32						
STKA	Stephens Creek	35.87	158	P	P	22 44 56.0	+0.3
STKA	Stephens Creek	35.87	158	P	P	22 44 56.0	+0.3
STKA	Stephens Creek	35.87	158	IAmb	IAmb	22 44 57.2	
	comp=Z,2.6nm,0.5s						
KSRS	Korea Array	36.13	2	P	P	22 44 59.2	+1.4
	comp=Z,2.2nm,0.6s,baz=181,slow=10.0,SNR=8.8						
CD2	Chengdu	36.56	326	P	P	22 45 01.6	-0.1
CD2				S	S	22 50 42.5	+0.7
CD2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CD2				pmax	pmax		
	comp=Z,180nm,8.3s						
XAN	Xi'an	36.58	335	P	P	22 45 01.1	-0.7
XAN				pP	sP	22 45 16.1	-0.6
XAN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MJAR	Matsushiro Arr	36.85	16	P	P	22 45 03.5	-0.5
	comp=Z,3.7nm,0.4s,baz=186,slow=9.4,SNR=15						
MJAR	Matsushiro Arr	36.85	16	P	P	22 45 02.0	-2.0
MAT	Matsushiro	36.85	16	P	P	22 45 03.7	-0.3
JSD	Sado	38.27	15	P	P	22 45 15.5	-0.4
JMM	Marumori	38.84	18	P	P	22 45 21.6	+0.8
ARMA	Armidale	39.53	145	P	P	22 45 28.2	+1.4
ARMA				IAmb	IAmb	22 45 32.9	
	comp=Z,9.3nm,0.8s						
BJT	Baijiatuau	39.78	348	P	P	22 45 28.7	+0.1
BJT				IAmb	IAmb	22 45 31.2	
	comp=Z,5.4nm,0.7s						
BJI	Beijing	39.80	348	P	P	22 45 30.2	+1.5
BJI				pmax	pmax		
	comp=Z,6.0nm,0.6s						
LZH	Lanzhou	40.57	331	*e*P	P	22 45 35.7	+0.3
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				LR	LR		
	comp=Z,230nm,14.3s						
LZH				LR	LR		
	comp=Z,280nm,14.0s						
LZH				LR	LR		
	comp=Z,190nm,15.7s						
SHL	Shillong	41.20	309	P	P	22 45 39.5	-1.3
JTM	Tenmabayashi	41.61	17	P	P	22 45 43.6	-0.1
JTM				IAmb	IAmb	22 45 45.8	
	comp=Z,28nm,0.8s						
HHC	Hu-ho-hao-te	41.73	343	*e*P	P	22 45 45.2	+0.4
HHC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,100nm,7.6s						

HHC				LR	LR		
	comp=Z,180nm,11.1s						
HHC				LR	LR		
	comp=Z,350nm,14.8s						
HHC				LR	LR		
	comp=Z,260nm,14.3s						
CAN	Canberra	41.98	152	P	P	22 45 45.6	-1.3
CAN				IAmb	IAmb	22 45 57.0	
	comp=Z,13nm,1.0s						
USA0B	Ussuriysk Arra	43.13	6	P	P	22 45 57.2	+1.2
USA0B				IAmb	IAmb	22 46 01.7	
	comp=Z,11nm,1.1s						
USRK	Ussuriysk Ar.	43.13	6	P	P	22 45 57.0	+1.1
	comp=Z,3.4nm,0.5s,baz=182,slow=7.8,SNR=20						
USRK	Ussuriysk Ar.	43.13	6	P	P	22 45 56.9	+0.9
MDJ	Mudanjiang	43.35	3	P	P	22 45 58.4	+0.6
MDJ				pP	sP	22 46 14.2	+1.3
MDJ				pmax	pmax		
	comp=Z,16nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,130nm,5.5s						
LSA	Lhasa	43.94	314	P	P	22 46 03.7	+0.4
LSA				IAmb	IAmb	22 46 06.3	
	comp=Z,5.4nm,0.6s						
GTA	Gaotai	45.15	331	*e*P	P	22 46 13.3	+0.8
GTA				PcP	PcP	22 47 53.8	+1.4
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,62nm,5.8s						
GTA				LR	LR		
	comp=Z,110nm,17.5s						
GTA				LR	LR		
	comp=Z,80nm,15.3s						
GTA				LR	LR		
	comp=Z,110nm,16.4s						
TAPN	Taplejung	45.33	309	*e*P	P	22 46 13.3	-1.0
	comp=Z,5.7nm,0.4s						
ODAN	Odare	45.35	308	*e*P	P	22 46 13.7	-0.7
	comp=Z,11nm,0.7s						
RAMN	Ramite	46.02	307	*e*P	P	22 46 19.2	-0.5
	comp=Z,11nm,0.5s						
JIRN	Jiri	46.67	308	*e*P	P	22 46 23.7	-1.2
	comp=Z,10nm,0.4s						
GUN	Gumba	47.03	308	*e*P	P	22 46 26.6	-1.1
	comp=Z,20nm,0.5s						
PKIN	Phulchoki	47.26	307	*e*P	P	22 46 28.5	-0.9
	comp=Z,6.3nm,0.4s						
KKN	Kakani	47.44	308	*e*P	P	22 46 29.2	-1.6
	comp=Z,4.6nm,0.4s						
DMN	Daman	47.50	307	*e*P	P	22 46 30.9	-0.4
GKN	Gorkha	48.05	308	*e*P	P	22 46 34.5	-0.9
	comp=Z,10nm,0.7s						
KOLN	Koldanda	48.77	307	*e*P	P	22 46 39.8	-1.2
	comp=Z,33nm,0.7s						
DANN	Dangsing	48.90	308	*e*P	P	22 46 40.7	-1.4
	comp=Z,44nm,0.6s						
PYUN	Piuthan	49.40	307	*e*P	P	22 46 44.7	-1.2
	comp=Z,28nm,0.5s						
SONM	Songino Array	49.63	342	P	P	22 46 47.2	+0.1
	comp=Z,3.0nm,0.7s,baz=153,slow=8.8,SNR=20						
SONM	Songino Array	49.63	342	P	P	22 46 49.0	+1.9
HYB	Hyderabad	49.75	292	*i* P	P	22 46 47.0	-1.4
WMQ	Urumqi	54.66	326	*e*P	P	22 47 21.7	-2.8
WMQ				pP	pP	22 47 34.4	-1.1
WMQ				sP	sP	22 47 45.0	+5.2
WMQ				pmax	pmax		
	comp=Z,23nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,200nm,5.3s						
PEA0B	Petropavlovsk-	57.90	22	P	P	22 47 48.1	+0.7
PETK	Petropavlovsk-	57.90	22	P	P	22 47 47.1	-0.3
	comp=Z,3.6nm,0.5s,baz=165,slow=3.3,SNR=13						
PETK	Petropavlovsk-	57.90	22	P	P	22 47 48.2	+0.9
MLZ	Mavora Lakes	59.20	147	P	P	22 47 56.6	-0.1
MLZ				IAmb	IAmb	22 47 58.4	
	comp=Z,8.2nm,1.0s						
NIL	Nilore	59.27	309	P	P	22 47 57.9	+0.5
NIL				IAmb	IAmb	22 48 03.3	
	comp=Z,8.1nm,1.1s						
TARG	Taragay, Kyrgy	59.47	319	P	P	22 47 59.8	+0.7
TARG				IAmb	IAmb	22 48 13.2	
	comp=Z,3.5nm,0.8s						
MK31	Makanchi Array	59.49	326	P	P	22 47 58.3	-0.4
MK31				IAmb	IAmb	22 48 06.5	
	comp=Z,3.8nm,0.7s						
MKAR	Makanchi Array	59.49	326	P	P	22 47 58.1	-0.5
	comp=Z,4.4nm,0.4s,baz=120,slow=7.7,SNR=94						
MKAR				PcP	PcP	22 48 45.6	-0.3
	comp=Z,2.2nm,0.6s,baz=130,slow=3.9,SNR=3.9						
MKAR	Makanchi Array	59.49	326	P	P	22 47 58.3	-0.3
MAKZ	Makanchi	59.68	326	P	P	22 47 59.4	-0.5
MAKZ				IAmb	IAmb	22 48 07.6	
	comp=Z,5.4nm,0.7s						
LBZ	Lake Benmore	59.75	145	P	P	22 48 00.4	0.0
LBZ				IAmb	IAmb	22 48 10.4	
	comp=Z,9.5nm,0.8s						
BKZ	Black Stump Fm	60.90	137	P	P	22 48 08.6	+0.1
BKZ				IAmb	IAmb	22 48 18.8	
	comp=Z,16nm,1.2s						
MA2	Magadan	61.25	14	P	P	22 48 11.9	+1.6
PLWZ	Palliser	61.28	140	P	P	22 48 10.4	-0.5
KNTN	Kanton	61.95	94	P	P	22 48 13.2	-2.7
AAK	Ala-Archa	62.06	319	P	P	22 48 17.9	+1.5
ZAA0	Zalesovo Array	62.73	334	P	P	22 48 19.1	-1.2
ZAA0				IAmb	IAmb	22 48 20.5	
	comp=Z,3.6nm,0.7s						
ZALV	Zalesovo Beam	62.73	334	P	P	22 48 19.6	-0.8
	comp=Z,2.7nm,0.4s,baz=124,slow=5.9,SNR=16						
ZALV	Zalesovo Beam	62.73	334	P	P	22 48 19.1	-1.3
GAR	Garm	63.45	314	P	P	22 48 24.9	-0.8
BTK	Batken	63.49	315	IAmb	IAmb	22 48 38.5	
	comp=Z,5.0nm,0.7s						
KURK	Kurchatov	63.74	328	P	P	22 48 27.1	0.0
CHGR	Chuyangaron	64.17	313	P	P	22 48 27.1	-3.2
KKAR	Karatay Array	64.91	318	P	P	22 48 34.3	-0.7
BRVK	Borovoye	69.38	328	P	P	22 49 02.9	-0.2
BRVK				IAmb	IAmb	22 49 04.3	
	comp=Z,8.2nm,0.8s						
TIXI	Tiksi	70.39	1	P	P	22 49 08.7	-0.3
GEYT	Alibeck	72.27	310	P	P	22 49 21.1	0.0
	comp=Z,4.8nm,1.0s,baz=200,slow=22,SNR=3.9						
NRIK	Noril'sk	72.83	347	P	P	22 49 23.8	0.0
	comp=Z,8.6nm,0.7s,baz=131,slow=6.4,SNR=16						
NRIK	Noril'sk	72.83	347	IAmb	IAmb	22 49 24.9	
	comp=Z,8.4nm,0.7s						
ABKAR	Akbulak array	73.94	321	P	P	22 49 30.3	-0.4
ABKAR				IAmb	IAmb	22 49 33.9	
	comp=Z,6.8nm,0.7s						
ABKAR	Akbulak array	73.94	321	P	P	22 49 30.4	-0.2
ARU	Arti	76.94	328	P	P	22 49 47.4	-0.2
ARU				IAmb	IAmb	22 49 48.0	
	comp=Z,14nm,0.8s						
VNDA	Vanda	80.94	173	P	P	22 50 09.5	+0.2
	comp=Z,2.6nm,0.6s,baz=325,slow=6.7,SNR=12						
VNDA	Vanda	80.94	173	IAmb	IAmb	22 50 11.3	
	comp=Z,3.8nm,0.8s						
RAYN	Ar Rayn	81.22	293	P	P	22 50 11.4	-0.5
RAYN				IAmb	IAmb	22 50 14.9	
	comp=Z,4.9nm,0.8s						
MAW	Mawson	81.27	200	P	P	22 50 10.4	-0.6
	comp=Z,1.9nm,0.7s,baz=91,slow=6.2,SNR=4.4						
KBZ	Khabaz	84.52	314	P	P	22 50 28.4	0.0
	comp=Z,2.1nm,0.8s,baz=115,slow=7.6,SNR=5.4						
SIRT	Sirnak	84.52	307	P	P	22 50 28.6	-0.3
A21K	Barrow	84.73	18	P	P	22 50 30.3	+1.3
KLMR	Klimovskoe	87.48	331	*e*P	P	22 50 40.4	-2.3
KLMR				AMP		22 50 47.6	
	comp=Z,11nm,0.8s						
ILAR	Eielson Array	87.53	25	P	P	22 50 42.0	-0.9
	comp=Z,0.9nm,0.6s,baz=246,slow=4.9,SNR=13						
KMBO	Kilima Mbogo	89.21	269	P	P	22 50 52.6	+0.3
	comp=Z,0.6nm,0.4s,baz=66,slow=22,SNR=2.3						
BRTR	Keskin Array B	91.42	310	P	P	22 51 00.8	-1.2
	comp=Z,1.2nm,0.8s,baz=120,slow=5.4,SNR=7.2						
BRTR	Keskin Array B	91.42	310	P	P	22 51 02.1	+0.1
ARCES	ARCESS Array B	92.73	340	P	P	22 51 06.0	-1.2
	comp=Z,4.4nm,1.0s,baz=44,slow=6.6,SNR=3.6						
ARCES	ARCESS Array B	92.73	340	P	P	22 51 05.0	-2.2
AKASG	Malin Array Be	93.68	321	P	P	22 51 11.0	-0.9
	comp=Z,0.3nm,0.3s,baz=36,slow=10,SNR=1.2						
FINES	FINESS Array B	93.94	332	P	P	22 51 11.5	-1.3
	comp=Z,1.2nm,0.8s,baz=92,slow=7.2,SNR=3.1						
FINES	FINESS Array B	93.94	332	P	P	22 51 12.2	-0.6
BUR08	Bucovina Ar. S	96.71	318	IAmb	IAmb	22 51 27.9	
	comp=Z,3.9nm,0.9s						
TXAR	Lajitas Array	123.37	53	PKP	PKPdf	22 56 53.0	-0.2
	comp=Z,0.3nm,0.8s,baz=328,slow=4.4,SNR=3.5						
TORD	Torodi Ar. Bea	123.40	287	PKP	PKPdf	22 56 52.9	-0.5
	comp=Z,0.9nm,0.7s,baz=51,slow=1.8,SNR=7.8						
TORD				PKKPbc	PKKPab	23 06 44.9	+2.1
	comp=Z,0.5nm,0.8s,baz=285,slow=4.6,SNR=3.5						
CPUP	Villa Florida	154.72	172	PKPab	PKPab	22 58 12.8	+1.0
	comp=Z,2.3nm,0.8s,baz=223,slow=3.4,SNR=5.9						

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*IDC **12** 22:56:00.4±34.0, 37.°89N×14.°30E, h0^{km}, mb3.6/3, mb1 3.7/3, mb1mx3.4/30, mbtmp3.7/3, Error ellipse: s-maj=672.2km s-min=68.0km az=43.0*

*ROM **12** 22:56:36.9±0.2, 38.°88N±0.°02×15.°27E±0.°03, h271^{km}±2^{km}, ML2.8/18, Error ellipse: s-maj=2.7km s-min=0.9km az=117.0*

ISC 12 22:56:37.3±1.1**, 38.°88N**±0.°08×**15.°3E**±0.°1**, h268**^{km}±7^{km}**, n49, σ0.ˢ94**/57**, mb3.5**/3**, 2C-9D, Sicily**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IST3	Stromboli F	0.09	203	P	Pn	22 57 12.5	+0.9
LLI	Lipari	0.50	211	P	Pn	22 57 13.5	+1.2
JOPP	Joppolo	0.55	120	⇑P	Pn	22 57 12.7	+0.3
JOPP				S	S	22 57 39.2	-0.9
JOPP				AML	AML		
	comp=E,132µm,0.4s						
JOPP				AML	AML		
	comp=N,104µm,1.6s						
VPL	Vulcano Piano	0.55	205	P	Pn	22 57 13.1	+0.7
VPL				AML	AML		
	comp=E,299µm,1.3s						
VPL				AML	AML		
	comp=N,300µm,0.2s						
VPL				AML	AML		
	comp=E,298µm,1.3s						
MILZ	Milazzo	0.61	183	P	Pn	22 57 12.7	+0.1
MILZ				S	S	22 57 40.5	+0.1
MILZ				AML	AML		
	comp=N,52µm,1.4s						
MILZ				AML	AML		
	comp=N,52µm,1.4s						
MILZ				AML	AML		
	comp=E,67µm,0.6s						
IFIL	Filicudi I Eol	0.64	241	P	Pn	22 57 13.3	+0.6
MSRU	Castanea	0.64	163	P	Pn	22 57 12.8	0.0
MSRU				S	S	22 57 40.0	-0.7
MSRU				AML	AML		
	comp=N,92µm,1.2s						
MSRU				AML	AML		
	comp=E,96µm,0.2s						
MSRU				AML	AML		
	comp=N,92µm,1.2s						
MPNC	Port Mandanici	0.74	175	P	Pn	22 57 13.2	+0.1
MSCL	Scilla	0.76	148	P	Pn	22 57 13.5	+0.3
MSCL				AML	AML		
	comp=E,234µm,0.9s						
MSCL				AML	AML		
	comp=N,222µm,0.1s						
MSCL				AML	AML		
	comp=E,234µm,0.9s						
CEL	Celeste	0.79	142	AML	AML		
	comp=N,70µm,0.3s						
CEL				AML	AML		
	comp=E,64µm,0.9s						
MCSR	Castroreale	0.81	181	P	Pn	22 57 14.2	+0.7
MCSR				AML	AML		
	comp=E,192µm,0.2s						
MCSR				AML	AML		
	comp=N,329µm,0.2s						
MCSR				AML	AML		
	comp=E,191µm,0.2s						
CAR1	CAROLEI	0.82	63	P	Pn	22 57 13.8	+0.4
CAR1				S	S	22 57 40.4	-1.4
GMB	Gambarie	0.83	148	P	Pn	22 57 14.1	+0.5
GMB				S	S	22 57 41.7	-0.6
GMB				AML	AML		
	comp=E,588µm,0.4s						
GMB				AML	AML		
	comp=N,414µm,1.3s						
GMB				AML	AML		
	comp=E,589µm,0.4s						
CET2	Cetraro	0.84	39	⇓P	Pn	22 57 13.9	+0.5
CET2				S	S	22 57 41.0	-1.0
NOV	Novara	0.86	187	P	Pn	22 57 14.7	+1.0
NOV				AML	AML		
	comp=E,95µm,0.5s						
NOV				AML	AML		
	comp=N,76µm,0.4s						
NOV				AML	AML		
	comp=N,76µm,0.4s						
NOV				AML	AML		
	comp=E,95µm,0.5s						
MUCR	Ucria	0.89	201	P	Pn	22 57 14.7	+0.8
MUCR				AML	AML		
	comp=N,35µm,0.4s						
MUCR				AML	AML		
	comp=E,22µm,0.4s						
GRI	Girifalco	0.90	93	⇑P	Pn	22 57 14.8	+1.1
AIO	Antillo	0.91	182	P	Pn	22 57 14.9	+1.0
AIO				AML	AML		
	comp=N,80µm,0.4s						
AIO				AML	AML		
	comp=E,57µm,0.2s						
AIO				AML	AML		
	comp=N,80µm,0.4s						
SPS2	Spezzano della	0.93	63	P	Pn	22 57 14.6	+0.8
MTTG	Motta San Giov	0.94	159	⇓P	Pn	22 57 14.6	+0.7
MTTG				AML	AML		
	comp=E,54µm,0.5s						
MTTG				AML	AML		
	comp=N,76µm,0.8s						
MTTG				AML	AML		
	comp=E,54µm,0.5s						
MTTG				AML	AML		
	comp=N,76µm,0.8s						
PLAC	Placanica	1.01	115	⇓P	Pn	22 57 15.1	+0.8
PLAC				S	S	22 57 42.6	-0.9
PLAC				AML	AML		
	comp=E,114µm,0.4s						
PLAC				AML	AML		
	comp=N,94µm,0.7s						
PLAC				AML	AML		
	comp=E,114µm,0.4s						
PLAC				AML	AML		
	comp=N,93µm,0.7s						
SOI	Samo	1.01	143	⇓P	Pn	22 57 14.8	+0.5
SOI				AML	AML		
	comp=E,63µm,0.5s						
SOI				AML	AML		
	comp=N,62µm,0.4s						
SOI				AML	AML		
	comp=E,63µm,0.5s						
SOI				AML	AML		
	comp=N,62µm,0.4s						
T0702	Acquaformosa (	1.05	36	P	Pn	22 57 14.9	+0.5
T0702				S	S	22 57 42.9	-1.0
MNO	Monte Soro	1.05	206	P	Pn	22 57 16.2	+1.4
MNO				AML	AML		
	comp=N,62µm,1.2s						
MNO				AML	AML		
	comp=E,45µm,0.9s						
EMSG	Monte Spagnolo	1.09	194	P	Pn	22 57 16.9	+1.9
EMSG				AML	AML		
	comp=N,446µm,0.6s						
EMSG				AML	AML		
	comp=E,624µm,0.5s						
MPAZ	Palizzi	1.09	148	⇓P	Pn	22 57 15.3	+0.5
MPAZ				AML	AML		
	comp=E,93µm,0.6s						
MPAZ				AML	AML		
	comp=N,128µm,1.1s						
CELI	Celico	1.09	61	P	Pn	22 57 16.1	+1.3
CELI				S	S	22 57 44.9	+0.4
EPZF	Pizzo Felice	1.10	197	P	Pn	22 57 16.5	+1.6
EPZF				AML	AML		
	comp=E,151µm,1.3s						
EPZF				AML	AML		
	comp=N,208µm,1.1s						
EPZF				AML	AML		
	comp=E,203µm,1.6s						
EPZF				AML	AML		
	comp=N,207µm,1.1s						
SERS	Sersale	1.11	82	⇓P	Pn	22 57 16.0	+1.1
SERS				S	S	22 57 44.3	-0.4
TDS	Terranova Siba	1.13	46	P	Pn	22 57 16.0	+1.2
CUC	Castrocucco	1.19	20	P	Pn	22 57 15.9	+0.7
TIP	Timpagrande	1.19	75	⇓P	Pn	22 57 16.5	+1.2
BULG	Bulgheria - Ca	1.20	4	P	Pn	22 57 16.5	+1.2
MGR	Morigerati	1.27	10	P	Pn	22 57 16.8	+1.1
GALF	Gagliano Caste	1.29	206	AML	AML		
	comp=E,42µm,0.4s						
GALF				AML	AML		
	comp=N,55µm,0.6s						
SALB	San Lorenzo Be	1.30	39	⇓P	Pn	22 57 17.2	+1.2
SALB				S	S	22 57 47.1	+0.5
GIB	Gibilmanna	1.32	228	P	Pn	22 57 16.6	+0.4
GIB				AML	AML		
	comp=E,90µm,1.6s						
GIB				AML	AML		
	comp=E,90µm,1.6s						
GIB				AML	AML		
	comp=N,84µm,0.8s						
PIPA	Pietrapaola	1.34	63	P	Pn	22 57 17.4	+1.3
CSLB	Castelbuono	1.34	226	P	Pn	22 57 16.5	+0.2
CSLB				AML	AML		
	comp=E,12µm,1.1s						
CSLB				AML	AML		
	comp=N,22µm,1.0s						
CSLB				AML	AML		
	comp=E,12µm,1.1s						
LADO	San Nicola del	1.39	73	P	Pn	22 57 17.4	+0.9
HLNI	Lentini	1.56	192	⇓P	Pn	22 57 18.4	+0.6
HLNI				AML	AML		
	comp=N,57µm,0.5s						
HLNI				AML	AML		
	comp=E,40µm,0.7s						
CDRU	Civita di Ruta	1.61	1	P	Pn	22 57 19.1	+1.0
ALJA	Alia	1.65	227	P	Pn	22 57 19.8	+1.3
ALJA				AML	AML		
	comp=N,47µm,0.8s						
ALJA				AML	AML		
	comp=E,42µm,1.0s						
SSY	Sortino	1.73	185	P	Pn	22 57 19.8	+0.7
RAFF	Raffo Rosso	1.81	204	P	Pn	22 57 20.9	+1.3
HAVL	Avola	1.92	184	AML	AML		
	comp=E,68µm,1.3s						
HAVL				AML	AML		
	comp=N,107µm,1.6s						
FINES	FINESS Array B	23.56	13	P	P	23 01 23.4	-0.2
	comp=N,0.9nm,0.5s,baz=191,slow=8.5,SNR=5.9						
ARCES	ARCESS Array B	31.20	7	P	P	23 02 29.8	-1.6
	comp=N,1.8nm,0.9s,baz=188,slow=8.3,SNR=5.5						
MKAR	Makanchi Array	48.42	58	P	P	23 04 53.3	+0.6
	comp=N,0.2nm,0.4s,baz=283,slow=6.7,SNR=5.0						

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*NEIC **12** 22:58:24.9±1.2, 52.°7N±0.°1×169.°1W±0.°1, h41^{km}±14^{km}, Error ellipse: s-maj=18.7km s-min=7.9km az=159.0*

AEIC 12 22:58:22±1.8**, 52.°5N**±0.°1×**169.°1W**±0.°1**, h26**^{km}±8^{km}**, ML2.9**/11**, mb3.6**/6(NEIC)**, Error ellipse: s-maj=17.4km s-min=8.1km az=155.0, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	Nikolski High	0.52	13		Pn	22 58 34.0	+0.3
OKSP	Okmok Steeple	0.91	30		Pb	22 58 39.2	0.0
OKSO	Okmok South	1.04	31		Pb	22 58 41.5	+0.1
OKCE	Okmok Cone E	1.10	29		Pb	22 58 42.5	+0.1
OKTU	Okmok Mt. Tuli	1.10	33		Pb	22 58 42.5	+0.1
OKFG	Magazine Ridge	1.17	36		Pb	22 58 43.5	0.0
MAPS	Pakushin South	1.85	43		Pn	22 58 52.8	+0.7
MSW	Makushin Switc	1.99	42		Pn	22 58 54.7	+0.7
MNAT	Makushin Natee	2.01	44		Pn	22 58 55.3	+1.0
UNV	Unalaska Valle	2.06	47		Pn	22 58 55.0	+0.1
AKMO	Akutan Morgan	2.44	47		Pb	22 59 03.2	-2.0
AKBBA	Akutan Broad B	2.48	48		Pb	22 59 03.4	-2.5
AKUT	Akutan	2.58	48	Pn	Pn	22 59 03.7	+1.6
KOFP	Korovin Flat P	3.10	268		Pn	22 59 11.3	+2.1
ADK	Adak	4.74	266	Pn	Pn	22 59 32.9	+1.2
SPIA	Saint Paul Isl	4.77	352	Pn	Pn	22 59 31.8	-0.3
BRLK	Bradley Lake	12.46	47	Pn	Pn	23 01 18.5	+0.9
SEW	Seward	13.26	47	Pn	Pn	23 01 29.0	+0.6
RC01	Rabbit Creek A	13.61	43	Pn	Pn	23 01 33.5	+0.4
J20K	Nowinta River	14.06	28	Pn	Pn	23 01 36.7	-2.5
PWL	Port Wells	14.10	45	Pn	Pn	23 01 39.9	+0.1
GHO	Glory Hole Cre	14.30	41	Pn	Pn	23 01 43.7	+1.0
KNK	Knik Glacier	14.31	43	Pn	Pn	23 01 43.3	+0.6
SML	Sawmill	14.56	42	P	P	23 01 49.8	-2.6
HIN	Hinchinbrook I	14.72	49	Pn	Pn	23 01 48.2	-0.1
FID	Port Fidalgo	14.87	47	Pn	Pn	23 01 49.2	-1.1
SCM	Sheep Creek Mo	14.99	43	Pn	Pn	23 01 51.8	-0.1
KLU	Klutina	15.43	45	Pn	Pn	23 01 57.3	-0.5
M24K	Tolsona, Glenn	15.60	43	Pn	Pn	23 01 59.5	-0.5
VRDI	Verde Repeater	16.42	48	Pn	Pn	23 02 10.3	-0.3
VRDI				IAmb	IAmb	23 02 18.5	
	comp=Z,6.6nm,1.0s						
RIDG	Independent Ri	16.93	39	Pn	Pn	23 02 16.8	0.0
M26K	Nabesna, AK	17.06	44		Pn	23 02 19.0	+0.4
BARN	Barnard Glacie	17.18	49		Pn	23 02 20.6	+0.4
BARN				IAmb	IAmb	23 02 27.3	
	comp=Z,4.4nm,1.2s						
SCRK	Sand Creek	17.38	39	Pn	Pn	23 02 22.2	-0.3
M27K	Edge Creek, AK	17.53	45		Pn	23 02 24.8	+0.4
M27K				IAmb	IAmb	23 02 27.0	
	comp=Z,4.9nm,1.1s						
HYT	Haines Junctio	19.09	52	P	P	23 02 39.9	-2.6
HYT				IAmb	IAmb	23 02 51.9	
	comp=Z,4.6nm,1.1s						
BMAR	Burnt Mountain	19.15	29	P	P	23 02 42.0	-1.1
USA0B	Ussuriysk Arra	39.06	282	P	P	23 05 46.7	+0.2
USRK	Ussuriysk Ar.	39.06	282	P	P	23 05 46.3	-0.2

IDC 12 23:01:15.8±1.9**, 2.°06S**×**139.°35E, h0**^{km}**, mb3.3**/2**, mb1 3.7**/3**, mb1mx3.4**/23**, mbtmp3.3**/3**, ML3.7**/1**, Error ellipse: s-maj=32.1km s-min=18.9km az=9.0, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	1.43	109	Pg	Pn	23 01 42.7	-0.4
	11nm,0.3s,baz=179,slow=24,SNR=8.4						
JAY				Lg	Lg	23 02 01.3	
	18nm,0.3s,baz=103,slow=22,SNR=7.3						
WRA	Warramunga Arr	18.44	195	P	P	23 05 33.9	+0.8
	0.2nm,0.3s,baz=22,slow=12,SNR=15						
ASAR	Alice Springs	22.12	193	P	P	23 06 12.2	-0.9
	0.3nm,0.5s,baz=32,slow=12,SNR=2.6						
ILAR	Eielson Array	84.98	24	P	P	23 13 52.6	-0.2
	0.4nm,0.7s,baz=258,slow=4.9,SNR=4.1						

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*IDC **12** 23:29:22.8±2.3, 34.°13N×73.°66E, h0^{km}, mb3.6/3, mb1 3.5/7, mb1mx3.3/42, mbtmp3.5/7, ML3.3/4, MS3.0/1, Ms1 3.0/1, ms1mx2.5/30, Error ellipse: s-maj=52.3km s-min=26.3km az=138.0*

ISC 12 23:29:27.6±1.8**, 34.°4N**±0.°2×**73.°5E**±0.°2**, h22**^{km}**, n8, σ2.ˢ33**/8**, mb3.6**/3**, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	8.29	5	Pn	Pn	23 31 30.1	+3.3
	0.2nm,0.3s,baz=172,slow=14,SNR=4.1						
AAK				Sn	Sn	23 32 57.5	-2.3
	0.1nm,0.3s,baz=128,slow=9.0,SNR=1.8						
MKAR	Makanchi Array	14.09	26	Pn	Pn	23 32 48.2	+2.3
	0.1nm,0.3s,baz=208,slow=11,SNR=4.1						
KURBB	Kurchatov Arra	16.66	11	Pn	Pn	23 33 17.8	-1.8
	0.1nm,0.3s,baz=197,slow=11,SNR=2.0						
AKTO	Aktyubinsk	19.64	330	P	Pn	23 33 56.4	+0.3
	0.3nm,0.3s,baz=127,slow=11,SNR=2.7						
ZALV	Zalesovo Beam	21.15	19	P	P	23 34 10.0	-1.0
	1.1nm,0.4s,baz=212,slow=9.7,SNR=6.8						
SONM	Songino Array	27.98	51	P	P	23 35 15.7	-1.1
	0.4nm,0.8s,baz=248,slow=7.6,SNR=3.3						
KSRS	Korea Array	43.69	70	LR	LR	23 56 04.2	
	comp=Z,17nm,18.5s,baz=335,slow=37						
TORD	Torodi Ar. Bea	67.74	271	P	P	23 40 23.5	-0.3
	0.8nm,0.7s,baz=49,slow=5.9,SNR=7.0						

NEIC 12 23:53:56.6±1.4**, 36.°57N**±0.°08×**70.°35E**±0.°08**, h206**^{km}±6^{km}**, mb4.1**/4**, 2C-2D, Error ellipse: s-maj=11.6km s-min=9.1km az=185.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	2.28	208	Pn	Pn	23 54 38.3	-0.5

CHGR	**Chuyangaron**	**2.29**	**336**	Pn	Pn	23 54 38.7	+0.1
CHGR				Sn	S	23 55 10.9	-0.2
GAR	**Garm**	**2.43**	**359**		Pn	23 54 40.5	+0.4
DRK	**Karamyk**	**3.13**	**21**		Pn	23 54 48.4	+0.1
BTK	**Batken**	**3.51**	**6**	Pn	Pn	23 54 53.7	+1.2
NIL	**Nilore**	**3.76**	**140**	Pn	Pn	23 54 54.9	-0.7
TAS	**Tashkent**	**4.82**	**351**	Pn	Pn	23 55 08.6	-0.2
KK31	**Karatay Array**	**6.53**	**1**	⇓P	Pn	23 55 30.2	-0.5
	0.8nm,0.3s,baz=171,slow=12,SNR=8.1						
KK31				⇑S	S	23 56 42.1	-3.2
	2.8nm,0.6s,baz=181,slow=20,SNR=7.9						
KK31	**Karatay Array**	**6.53**	**1**		Pn	23 55 30.3	-0.4
KKAR	**Karatay Array**	**6.53**	**1**		Pn	23 55 30.5	-0.2
KKAR	**Karatay Array**	**6.53**	**1**	Pn	Pn	23 55 30.1	-0.6
AAK	**Ala-Archa**	**6.86**	**27**	Pn	Pn	23 55 34.5	-0.6
TKM2	**Tokmak 2**	**7.53**	**31**	⇓P	Pn	23 55 42.2	-1.6
	5.6nm,0.5s						
TKM2				⇑S	S	23 57 11.0	+1.9
	1.0nm,0.6s						
TARG	**Taragay, Kyrgy**	**7.76**	**46**		Pn	23 55 44.7	-2.3
MAKZ	**Makanchi**	**13.41**	**37**	Pn	Pn	23 56 58.2	-0.7
MK31	**Makanchi Array**	**13.55**	**37**	Pn	Pn	23 57 00.1	-0.6
MKAR	**Makanchi Array**	**13.55**	**37**	Pn	Pn	23 57 00.7	+0.1
AGG	**Agios Georgios**	**37.68**	**289**	P	P	00 00 48.9	-3.2
HIA	**Hailar**	**37.68**	**54**	P	P	00 00 51.4	-0.6
SGRT	**San Giovanni R**	**42.06**	**294**	P	P	00 01 31.6	+3.5
NC602	**NORSAR Array S**	**43.82**	**323**	P	P	00 01 42.1	+0.2
GRA1	**Grafenberg Arr**	**44.00**	**307**	P	P	00 01 43.9	+0.4
GRA1				IAmb	IAmb	00 01 47.2	
	comp=Z,4.5nm,0.7s						
GRFO	**Grafenberg**	**44.00**	**307**	P	P	00 01 44.2	+0.7
GRFO				IAmb	IAmb	00 01 47.1	
	comp=Z,4.3nm,0.7s						

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*TUL **13** 00:17:29±0.7, 36°.94N±0°.02×97°.84W±0°.03, h3^{km}±7^{km}, ML2.5, mb_Lg2.3/7(NEIC), Error ellipse: s-maj=2.8km s-min=2.4km az=92.0*

NEIC 13 00:17:29.2±0.9**, 36°.91N**±0°.02×**97°.84W**±0°.02**, h6**^{km}±6^{km}**, Error ellipse: s-maj=2.9km s-min=1.9km az=173.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	**Grant County #**	**0.06**	**199**	Pg	Pg	00 17 31.4	+0.6
GC02				Sg	Sg	00 17 32.7	+1.0
KAN14	**Manchester OK**	**0.11**	**295**		Pg	00 17 31.5	-0.1
KAN14				Sg	Sg	00 17 33.1	-0.1
KAN17	**Caldwell West**	**0.15**	**22**	Pg	Pg	00 17 31.9	-0.3
KAN17				Sg	Sg	00 17 33.8	-0.4
KAN05	**Bluff City Nor**	**0.20**	**351**		Pg	00 17 32.9	-0.3
KAN01	**Argonia South**	**0.25**	**14**	Pg	Pg	00 17 33.9	-0.3
KAN09	**Caldwell North**	**0.29**	**37**	Pg	Pg	00 17 34.6	-0.1
KAN10	**Anthony SW Sta**	**0.30**	**316**		Pg	00 17 34.7	-0.3
KAN13	**South Haven SW**	**0.30**	**70**	Pg	Pg	00 17 35.1	0.0
OK032	**Salt Plains WL**	**0.32**	**251**	Pg	Pg	00 17 35.6	+0.2
KAN08	**Anthony NE Sta**	**0.34**	**341**		Pg	00 17 35.1	-0.6
KAN06	**Argonia West S**	**0.34**	**357**		Pg	00 17 35.4	-0.5
KAN16	**Harper SW Stat**	**0.37**	**330**	Pg	Pg	00 17 35.9	-0.5
KS20	**Mayfield South**	**0.39**	**35**	Pg	Pg	00 17 36.6	-0.2
CROK	**Carrier**	**0.42**	**197**	Pg	Pg	00 17 38.0	+0.6
BLOK	**Blackwell**	**0.52**	**106**	Pg	Pg	00 17 39.4	+0.2
T35A	**Sooner Cattle**	**1.06**	**89**	Pg	Pg	00 17 49.1	-0.4
U32A	**Winter Ranch,**	**1.08**	**241**	Pg	Pg	00 17 49.3	-0.6
OK029	**Liberty Lake**	**1.15**	**164**	Pg	Pg	00 17 51.2	-0.1
QUOK	**Quay**	**1.17**	**129**	Pg	Pg	00 17 51.3	-0.3
OK031	**S. Brethren Rd**	**1.25**	**140**	Pg	Pg	00 17 52.8	-0.3
BCOK	**Bluff Creek, N**	**1.26**	**172**	Pg	Pg	00 17 53.2	-0.2
OK030	**Cody Creek RV**	**1.29**	**139**		Pn	00 17 53.8	-0.1
OKCFA	**Oklahoma City**	**1.52**	**168**	Pn	Pb	00 17 57.5	-0.4
OKCSW	**OKLAHOMA CITY**	**1.53**	**168**	Pn	Pn	00 17 57.6	+0.4
R32A	**Long Quarter,**	**1.66**	**336**		Pn	00 17 59.1	+0.1
FNO	**Franklin**	**1.69**	**168**	Pn	Pn	00 17 59.8	+0.5
TUL1	**Leonard**	**1.93**	**121**	Pn	Pn	00 18 03.3	+0.8
TUL1				IAmb_Lg		00 18 33.2	
	comp=Z,15nm,0.8s						
WMOK	**Wichita Mounta**	**2.30**	**200**	Pn	Pn	00 18 08.8	+1.0
X34A	**Smith Ranch, M**	**2.30**	**180**	Pn	Pn	00 18 07.9	+0.2
KSU1	**Kansas State U**	**2.39**	**23**	Pn	Pn	00 18 08.8	-0.2
KSU1				IAmb_Lg		00 18 44.9	
	comp=Z,11nm,0.8s						
CBKS	**Cedar Bluff**	**2.43**	**322**	Pn	Pn	00 18 10.4	+1.0
U38A	**Gravette**	**2.81**	**99**	Pn	Pn	00 18 14.9	+0.1
X37A	**Clayton**	**3.06**	**138**	Pn	Pn	00 18 19.6	+1.5
HHAR	**Hobbs**	**3.20**	**100**	Pn	Pn	00 18 20.8	+0.8
S39A	**Bolivar**	**3.68**	**76**	IAmb_Lg		00 19 26.5	
	comp=Z,4.7nm,1.1s						
N35A	**Tabor**	**4.30**	**23**	IAmb_Lg		00 19 53.5	
	comp=Z,9.4nm,0.8s						
WHTX	**Lake Whitney,**	**4.92**	**176**	IAmb_Lg		00 20 12.7	
	comp=Z,7.2nm,0.8s						

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*IDC **13** 00:51:47.9±3.7, 3°.12S×101°.41E, h0^{km}, mb3.6/6, mb1 3.7/6, mb1mx3.5/48, mbtmp3.6/6, Error ellipse: s-maj=169.2km s-min=21.5km az=54.0*

*DJA **13** 00:51:58.8±0.7, 3°S±5°×10°2E±°, h29^{km}±8^{km}, M3.7/10, MLv3.7/10*

ISC 13 00:51:56.7±1.0**, 3°.1S**±0°.1×**101°.56E**±0°.08**, h53**^{km}**, n18,** σ**2^{s}.49**/16**, mb3.7**/6**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASI	**Maura Aman, Be**	**0.68**	**91**	P	**Pn**	**00 52 12.4**	**+2.0**
MASI				S	**Sn**	**00 52 22.7**	**+2.3**
KSI	**Kapahiang**	**1.16**	**117**	P	**Pn**	**00 52 18.9**	**+2.2**
PPSI	**Pulau Pagai**	**1.59**	**283**	P	**Pn**	**00 52 25.5**	**+3.0**
MNAI	**Manna**	**1.86**	**131**	P	**Pn**	**00 52 28.2**	**+2.0**
LHSI	**Lahat**	**2.08**	**110**	P	**Pn**	**00 52 32.0**	**+2.8**
PDSI	**Padang**	**2.46**	**334**	P	**Pn**	**00 52 37.6**	**+3.2**
MDSI	**Maura Dua**	**2.94**	**117**	P	**Pn**	**00 52 43.5**	**+2.5**
SISI	**Saibi**	**3.05**	**306**	P	**Pn**	**00 52 44.8**	**+2.3**
KASI	**Kota Agung**	**3.78**	**129**	P	**Pn**	**00 52 54.8**	**+2.3**
H08S2	**Diego Garcia H**	**29.27**	**260**	T	T	01 27 31.9	
	baz=83,slow=75,SNR=5.5						
H08S3	**Diego Garcia H**	**29.28**	**260**	T	T	01 27 34.5	
	baz=83,slow=75,SNR=8.4						
H08S1	**Diego Carcia H**	**29.29**	**260**	T	T	01 27 27.9	
	baz=83,slow=75,SNR=4.0						
WRA	**Warramunga Arr**	**36.09**	**120**	P	**P**	**00 58 52.1**	**-1.7**
	0.4nm,0.7s,baz=309,slow=9.4,SNR=2.1						
ASAR	**Alice Springs**	**37.34**	**126**	P	**P**	**00 59 03.8**	**-0.6**
	0.5nm,0.3s,baz=299,slow=7.6,SNR=13						
SONM	**Songino Array**	**50.93**	**4**	P	**P**	**01 00 52.1**	**-0.7**
	0.2nm,0.3s,baz=187,slow=12,SNR=2.1						
MKAR	**Makanchi Array**	**52.54**	**343**	P	**P**	**01 01 02.7**	**-2.0**
	0.4nm,0.5s,baz=158,slow=8.2,SNR=5.1						
KURBB	**Kurchatov Arra**	**57.07**	**343**	P	**P**	**01 01 35.1**	**-2.3**
	0.4nm,0.5s,baz=168,slow=7.4,SNR=1.9						
ZALV	**Zalesovo Beam**	**58.57**	**348**	P	**P**	**01 01 45.4**	**-2.4**
	0.6nm,0.4s,baz=142,slow=5.1,SNR=4.3						

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*IDC **13** 00:55:44.1±1.8, 37°.50N×135°.61E, h342^{km}±66^{km}, mb2.6/2, mb1 2.9/3, mb1mx2.6/44, mbtmp3.3/3, Error ellipse: s-maj=193.0km s-min=28.0km az=57.0*

*JMA **13** 00:55:44.4±0.4, 37°.48N×135°.74E, h357^{km}±4^{km}, M2.9*

ISC 13 00:55:44.5±1.2**, 37°.5N**±0°.1×**135°.7E**±0°.1**, h350**^{km}**, n10,** σ**0^{s}.49**/12**, Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSD	**Sado**	**2.13**	**75**	P	**Pn**	**00 56 36.7**	**+0.1**
JWT	**Wachi**	**2.22**	**186**	P	**Pn**	**00 56 37.8**	**+0.4**
JWT				S	**S**	**00 57 19.1**	**-0.8**
JNG	**Nsakai**	**2.23**	**118**	P	**Pn**	**00 56 38.3**	**+0.7**
JNG				S	**S**	**00 57 19.9**	**-0.4**
MAT	**Matsushiro**	**2.25**	**114**	P	**Pn**	**00 56 38.0**	**+0.4**
MAT	**Matsushiro**	**2.25**	**114**	P	**Pn**	**00 56 38.0**	**+0.4**
MJAR	**Matsushiro Arr**	**2.25**	**114**	P	**Pn**	**00 56 37.2**	**-0.5**
	0.5nm,0.3s,baz=300,slow=7.7,SNR=27						
JMM	**Marumori**	**4.09**	**83**	P	**Pn**	**00 56 54.3**	**0.0**
JRG	**Rokugo**	**4.34**	**63**	P	**Pn**	**00 56 57.2**	**+0.3**
MKAR	**Makanchi Array**	**39.96**	**301**	P	**P**	**01 02 45.9**	**-0.2**
	0.3nm,0.9s,baz=93,slow=9.1,SNR=1.9						
WRA	**Warramunga Arr**	**57.14**	**181**	P	**P**	**01 04 56.0**	**+0.3**
	0.5nm,0.5s,baz=358,slow=7.5,SNR=11						

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*TUL **13** 00:59:31.5±1.0, 36°.952N±0°.006×97°.82W±0°.01, h1^{km}±7^{km}, ML2.5, mb_Lg2.4/14(NEIC), Error ellipse: s-maj=1.8km s-min=0.7km az=112.0*

NEIC 13 00:59:31.7±0.8**, 36°.93N**±0°.01×**97°.82W**±0°.02**, h9**^{km}±3^{km}**, Error ellipse: s-maj=1.9km s-min=1.7km az=96.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	**Grant County #**	**0.08**	**203**	Pg	Pg	00 59 34.0	+0.1
GC02				Sg	Sg	00 59 35.5	0.0
KAN14	**Manchester OK**	**0.12**	**284**		Pg	00 59 34.2	-0.3
KAN14				Sg	Sg	00 59 35.8	-0.6
KAN17	**Caldwell West**	**0.12**	**21**	Pg	Pg	00 59 34.3	-0.3
KAN17					Sg	00 59 36.1	-0.4
KAN05	**Bluff City Nor**	**0.18**	**347**		Pg	00 59 35.2	-0.3
KAN05				Sg	Sg	00 59 37.7	-0.5
KAN01	**Argonia South**	**0.23**	**12**	Pg	Pg	00 59 36.1	-0.2
KAN01				Sg	Sg	00 59 39.2	-0.3
KAN09	**Caldwell North**	**0.26**	**38**	Pg	Pg	00 59 36.9	-0.1
KAN09				Sg	Sg	00 59 40.5	0.0
KAN13	**South Haven SW**	**0.29**	**73**	Pg	Pg	00 59 37.6	+0.2
KAN13				Sg	Sg	00 59 41.7	+0.4
KAN10	**Anthony SW Sta**	**0.29**	**312**		Pg	00 59 37.5	-0.1
KAN10				Sg	Sg	00 59 41.3	-0.2
KAN06	**Argonia West S**	**0.32**	**354**		Pg	00 59 37.8	-0.3
KAN06				Sg	Sg	00 59 42.1	-0.3
KAN08	**Anthony NE Sta**	**0.32**	**338**		Pg	00 59 37.9	-0.2
KAN08				Sg	Sg	00 59 42.3	-0.1
OK032	**Salt Plains WL**	**0.34**	**249**	Pg	Pg	00 59 38.4	0.0
KAN16	**Harper SW Stat**	**0.36**	**327**	Pg	Pg	00 59 38.6	-0.1
KAN16				Sg	Sg	00 59 43.1	-0.3
KS20	**Mayfield South**	**0.37**	**35**	Pg	Pg	00 59 38.9	-0.1
KS20				Sg	Sg	00 59 43.8	0.0
KAN12	**Harper NE Stat**	**0.40**	**339**		Pg	00 59 38.3	-1.1
CROK	**Carrier**	**0.44**	**197**	Pg	Pg	00 59 40.8	+0.5
BLOK	**Blackwell**	**0.51**	**109**	Pg	Pg	00 59 41.9	+0.2
T35A	**Sooner Cattle**	**1.05**	**90**		Pg	00 59 51.6	-0.3
U32A	**Winter Ranch,**	**1.10**	**240**	Sg	Sg	01 00 07.1	+0.1
OK029	**Liberty Lake**	**1.17**	**165**		Pb	00 59 54.0	0.0
QUOK	**Quay**	**1.17**	**130**		Pb	00 59 53.9	-0.3
OK031	**S. Brethren Rd**	**1.25**	**141**		Pb	00 59 55.5	0.0
BCOK	**Bluff Creek, N**	**1.28**	**172**		Pn	00 59 55.8	0.0
OK030	**Cody Creek RV**	**1.30**	**140**		Pb	00 59 56.3	-0.1
OKCFA	**Oklahoma City**	**1.54**	**169**	Pn	Pb	01 00 00.4	0.0
OKCFA				IAmb_Lg		01 00 24.0	
	comp=Z,26nm,0.9s						
OKCSW	**OKLAHOMA CITY**	**1.55**	**168**	Pn	Pb	01 00 00.5	-0.1
R32A	**Long Quarter,**	**1.65**	**335**		Pn	01 00 01.3	+0.4
FNO	**Franklin**	**1.70**	**168**		Pb	01 00 02.9	-0.4
TUL1	**Leonard**	**1.93**	**121**	Pn	Pb	01 00 05.9	-1.1
TUL1				IAmb_Lg		01 00 35.5	
	comp=Z,19nm,0.9s						
WMOK	**Wichita Mounta**	**2.32**	**200**		Pn	01 00 11.3	+1.2
WMOK				IAmb_Lg		01 00 47.3	
	comp=Z,9.6nm,0.8s						
X34A	**Smith Ranch, M**	**2.32**	**180**		Pn	01 00 11.5	+1.4
KSU1	**Kansas State U**	**2.37**	**23**	Pn	Pn	01 00 11.2	+0.4
KSU1				IAmb_Lg		01 00 49.6	
	comp=Z,33nm,1.1s						
CBKS	**Cedar Bluff**	**2.42**	**322**	Pn	Pn	01 00 12.7	+1.1
U38A	**Gravette**	**2.80**	**99**	Pn	Pn	01 00 18.6	+1.8
X37A	**Clayton**	**3.07**	**139**		Pn	01 00 21.6	+1.2
HHAR	**Hobbs**	**3.19**	**101**	Pn	Pn	01 00 23.0	+1.0
AMTX	**Amarillo**	**3.74**	**238**	IAmb_Lg		01 01 35.4	
	comp=Z,11nm,0.9s						
U40A	**Yellville**	**4.03**	**97**	IAmb_Lg		01 01 51.3	
	comp=Z,11nm,1.2s						
FCAR	**Ozark Folk Cen**	**4.71**	**101**	IAmb_Lg		01 02 05.4	
	comp=Z,5.5nm,0.8s						

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*IDC **13** 01:16:39.0±2.7, 1°.40S×15°.88W, h0^{km}, mb3.8/5, mb1 3.9/6, mb1mx3.6/49, mbtmp3.9/6, ML3.7/1, MS3.2/2, Ms1 3.2/2, ms1mx2.8/38, Error ellipse: s-maj=72.0km s-min=34.8km az=90.0*

ISC 13 01:16:40.9±2.1**, 1°.4S**±0°.2×**15°.8W**±0°.4**, h12**^{km}**, n13,** σ**0^{s}.87**/7**, mb3.9**/5**, North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**6.54**	**168**	T	T	01 24 55.1	
	baz=348,slow=73,SNR=54						
H10N3	**ASCENSION HYDR**	**6.55**	**168**	T	T	01 24 55.8	
	baz=348,slow=73,SNR=55						
H10N1	**ASCENSION HYDR**	**6.56**	**168**	T	T	01 24 56.8	
	baz=348,slow=73,SNR=63						
H10S3	**ASCENSION HYDR**	**7.61**	**171**	T	T	01 26 15.3	
	baz=351,slow=74,SNR=26						
H10S2	**ASCENSION HYDR**	**7.62**	**171**	T	T	01 26 15.9	
	baz=229,slow=74,SNR=19						
KOWA	**Kowa**	**19.65**	**36**	P	**Pn**	**01 21 10.4**	**-0.7**
	0.2nm,0.3s,baz=225,slow=10,SNR=8.4						
KOWA				LR	LR	01 28 00.2	
	comp=Z,84nm,18.8s,baz=335,slow=35						
TORD	**Torodi Ar. Bea**	**22.61**	**50**	P	**P**	**01 21 41.7**	**0.0**
	3.6nm,0.9s,baz=230,slow=11,SNR=17						
TORD				LR	LR	01 29 46.0	
	comp=Z,52nm,20.1s,baz=265,slow=35						
BOSA	**Boshof**	**47.63**	**129**	P	**P**	**01 25 17.8**	**+0.4**
	1.9nm,0.8s,baz=269,slow=10,SNR=4.4						
BRTR	**Keskin Array B**	**60.95**	**42**	P	**P**	**01 26 54.4**	**+0.1**
	0.5nm,0.7s,baz=223,slow=5.3,SNR=2.8						
AKASG	**Malin Array Be**	**64.50**	**30**	P	**P**	**01 27 17.8**	**+0.3**
	0.2nm,0.3s,baz=231,slow=7.0,SNR=1.6						
FINES	**FINESS Array B**	**70.34**	**20**	P	**P**	**01 27 54.9**	**+0.6**
	2.0nm,0.8s,baz=216,slow=13,SNR=2.0						
ASAR	**Alice Springs**	**141.46**	**132**	PKhKP	PKPpre	01 36 08.5	
	0.6nm,0.8s,baz=232,slow=3.4,SNR=6.4						
WRA	**Warramunga Arr**	**143.88**	**127**	PKP	**PKPdf**	**01 36 15.9**	**-1.4**
	0.8nm,0.9s,baz=247,slow=2.8,SNR=5.5						

IDC 13 01:23:53.8±2.3**, 6°.51S**×**149°.01E, h54**^{km}±14^{km}**, mb3.1**/1**, mb1 3.7**/2**, mb1mx3.2**/21**, mbtmp3.6**/2**, ML4.1**/1**, MS3.1**/2**, Ms1 3.1**/2**, ms1mx2.7**/10**, Error ellipse: s-maj=68.5km s-min=11.3km az=120.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.53**	**225**	P	P	01 28 16.9	0.0
	0.5nm,0.3s,baz=52,slow=11,SNR=33						
WRA				LR	LR	01 36 37.1	
	comp=Z,24nm,20.6s,baz=245,slow=39						
ASAR	**Alice Springs**	**22.40**	**219**	P	P	01 28 48.1	+0.1
	1.0nm,0.8s,baz=57,slow=9.2,SNR=10.0						
ASAR				S	S	01 32 51.6	+0.8
	0.6nm,0.8s,baz=36,slow=21,SNR=4.6						
URZ	**Urewera**	**40.59**	**145**	LR	LR	01 47 58.1	
	comp=Z,58nm,18.0s,baz=31,slow=36						
TORD	**Torodi Ar. Bea**	**147.15**	**284**	PKPbc	PKPbc	01 43 31.2	-0.8
	0.4nm,0.5s,baz=88,slow=2.7,SNR=10						

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*IDC **13** 01:26:48.6±1.6, 34°.37N×25°.65E, h56^{km}±13^{km}, mb3.5/8, mb1 3.6/17, mb1mx3.5/47, mbtmp3.8/17, MS3.7/1, Ms1 3.7/1, ms1mx2.5/33, Error ellipse: s-maj=19.1km s-min=13.0km az=25.0*

*THE **13** 01:26:48.1, 34°.41N×25°.59E, h8^{km}±1^{km}, ML3.4/7, Error ellipse: s-maj=1.8km s-min=0.6km az=110.0*

*ATH **13** 01:26:48.2, 34°.47N×25°.60E, h41^{km}±2^{km}, ML3.4/7, Error ellipse: s-maj=5.0km s-min=1.3km az=348.0*

*ISK **13** 01:26:48.0, 34°.52N×25°.59E, h80^{km}, ML3.4/21*

ISC 13 01:26:48.3±1.1**, 34°.40N**±0°.07×**25°.63E**±0°.03**, h52**^{km}±10^{km}**, n117,** σ**1^{s}.17**/142**, mb3.7**/8**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FRMA	**Ierapetra Chan**	**0.62**	**8**	P	**Pn**	**01 27 00.5**	**-0.5**
FRMA				S	**Sn**	**01 27 10.8**	**+0.5**
NPS	**Neapolis**	**0.86**	**359**	P	**Pn**	**01 27 04.1**	**-0.1**
NPS				S	**Sn**	**01 27 15.9**	**+0.1**
	2μm,0.7s						
NPS	**Neapolis**	**0.86**	**359**	P	**Pn**	**01 27 04.0**	**-0.1**
NPS				S	**Sn**	**01 27 15.8**	**-0.1**
NPS				AML	AML	01 27 26.3	
	comp=N,2465μm,0.8s						
NPS				AML	AML	01 27 26.4	
	comp=E,3865μm,0.5s						
ZKR	**Zakros**	**0.86**	**34**	P	**Pn**	**01 27 04.7**	**+0.5**
ZKR				S	**Sn**	**01 27 18.0**	**+2.2**
	comp=E,2μm,0.8s						
ZKR	**Zakros**	**0.86**	**34**	P	**Pn**	**01 27 04.6**	**+0.5**
ZKR				AML	AML	01 27 21.6	
	comp=E,6514μm,0.4s						
ZKR				AML	AML	01 27 22.0	
	comp=N,3661μm,0.5s						
ZKR	**Zakros**	**0.86**	**34**	PG	**Pn**	**01 27 05.3**	**+1.1**
ZKR				SG	**Sn**	**01 27 17.7**	**+1.9**
STIA	**Sitia Lasithi**	**0.88**	**25**	P	**Pn**	**01 27 04.9**	**+0.4**
STIA				S	**Sn**	**01 27 18.8**	**+2.4**
SIVA	**Sivas**	**0.91**	**312**	P	**Pn**	**01 27 05.0**	**+0.1**
SIVA				S	**Sn**	**01 27 17.6**	**+0.5**
	comp=N,6μm,0.8s						
SIVA	**Sivas**	**0.91**	**312**	P	**Pn**	**01 27 04.9**	**0.0**
SIVA				AML	AML	01 27 21.7	
	comp=N,12530μm,0.6s						
SIVA				AML	AML	01 27 24.5	
	comp=E,12839μm,0.5s						
TMBK	**Timbaki Herakl**	**0.98**	**313**	P	**Pn**	**01 27 06.3**	**+0.6**
TMBK				S	**Sn**	**01 27 18.7**	**+0.1**
	comp=E,1μm,0.8s						
HRKL	**Herakleio**	**1.01**	**335**	P	**Pn**	**01 27 06.9**	**+0.8**
HRKL				S	**Sn**	**01 27 21.5**	**+2.2**
	comp=E,4μm,0.8s						
HRKL	**Herakleio**	**1.01**	**335**	PG	**Pn**	**01 27 06.7**	**+0.6**
HRKL				SG	**Sn**	**01 27 20.1**	**+0.8**
KSTL	**Kastelli Herak**	**1.01**	**333**	P	**Pn**	**01 27 03.5**	**-2.7**
KSTL				S	**Sn**	**01 27 15.8**	**-3.6**
IDI	**Anoyia**	**1.07**	**326**	P	**Pn**	**01 27 07.3**	**+0.2**
	comp=E,33nm,0.3s,baz=154,slow=11,SNR=335						
IDI				S	**Sn**	**01 27 22.7**	**+1.7**
	comp=E,94nm,0.3s,baz=353,slow=20,SNR=15						
IDI				LR	LR	01 27 50.6	
	comp=E,156nm,20.3s,baz=148,slow=56						
IDI	**Anoyia**	**1.07**	**326**	P	**Pn**	**01 27 07.1**	**0.0**
IDI				S	**Sn**	**01 27 22.5**	**+1.5**
	comp=E,910nm,0.4s						
IDI	**Anoyia**	**1.07**	**326**	P	**Pn**	**01 27 07.3**	**+0.2**
IDI				AML	AML	01 27 24.9	
	comp=N,2080μm,0.5s						
IDI				AML	AML	01 27 29.1	
	comp=E,1569μm,0.5s						
PRNS	**Prines Rethymn**	**1.34**	**316**	P	**Pn**	**01 27 11.8**	**+1.2**
PRNS				S	**Sn**	**01 27 29.8**	**+2.6**
GVD	**Gavdhos**	**1.34**	**289**	P	**Pn**	**01 27 11.3**	**+0.5**
GVD				S	**Sn**	**01 27 29.1**	**+1.6**
	comp=E,2μm,0.5s						
GVD	**Gavdhos**	**1.34**	**289**	P	**Pn**	**01 27 11.2**	**+0.5**
GVD				AML	AML	01 27 41.2	
	comp=E,4563μm,0.6s						
GVD				AML	AML	01 27 42.1	
	comp=N,2967μm,0.4s						
GVD	**Gavdhos**	**1.34**	**289**	PN	**Pn**	**01 27 11.2**	**+0.5**
GVD				SN	**Sn**	**01 27 28.6**	**+1.1**
VAM	**Vamos**	**1.54**	**311**	P	**Pn**	**01 27 14.1**	**+0.7**
VAM	**Vamos**	**1.54**	**311**	P	**Pn**	**01 27 14.3**	**+0.9**
VAM				AML	AML	01 27 41.5	
	comp=N,1656μm,0.7s						
VAM				AML	AML	01 27 41.5	
	comp=E,1676μm,0.4s						
IMMV	**Iera Moni Meta**	**1.72**	**308**	P	**Pn**	**01 27 16.7**	**+0.9**
IMMV	**Iera Moni Meta**	**1.72**	**308**	P	**Pn**	**01 27 16.7**	**+0.9**
IMMV				AML	AML	01 27 49.7	
	comp=N,1571μm,1.1s						
IMMV				AML	AML	01 27 51.6	
	comp=E,1848μm,0.8s						
IMMV	**Iera Moni Meta**	**1.72**	**308**	PN	**Pn**	**01 27 16.6**	**+0.8**
KNDR	**Palaiochora Ch**	**1.80**	**298**	P	**Pn**	**01 27 17.9**	**+1.0**
KNDR	**Palaiochora Ch**	**1.80**	**298**	PN	**Pn**	**01 27 17.9**	**+1.0**
THR6	**Thira Island,**	**1.96**	**354**	P	**Pn**	**01 27 18.9**	**-0.2**
THR6	**Thira Island,**	**1.96**	**354**	P	**Pn**	**01 27 19.5**	**+0.4**
STAX	**Taxiarchis Har**	**2.00**	**355**	P	**Pn**	**01 27 19.4**	**-0.2**
SNT5	**Nea Kammeni, S**	**2.01**	**355**	P	**Pn**	**01 27 19.5**	**-0.2**
SNT5	**Nea Kammeni, S**	**2.01**	**355**	P	**Pn**	**01 27 19.7**	**0.0**
THR3	**Thira Island,**	**2.01**	**355**	P	**Pn**	**01 27 19.6**	**-0.2**
THR3	**Thira Island,**	**2.01**	**355**	P	**Pn**	**01 27 19.7**	**-0.1**
SFIR	**Foira Santorin**	**2.02**	**355**	P	**Pn**	**01 27 20.2**	**+0.2**
THR7	**Fira-Santorini**	**2.02**	**355**	P	**Pn**	**01 27 19.9**	**0.0**
THR5	**Thira Island,**	**2.02**	**354**	P	**Pn**	**01 27 19.9**	**-0.1**
THR5	**Thira Island,**	**2.02**	**354**	P	**Pn**	**01 27 19.7**	**-0.2**
THR2	**Thira island,**	**2.05**	**356**	P	**Pn**	**01 27 19.7**	**-0.5**
THR2	**Thira island,**	**2.05**	**356**	P	**Pn**	**01 27 19.8**	**-0.5**
ANKY	**Antikythira Is**	**2.40**	**308**	P	**Pn**	**01 27 26.2**	**+1.0**
ANKY	**Antikythira Is**	**2.40**	**308**	P	**Pn**	**01 27 25.9**	**+0.7**
MHLO	**Agia Marina, M**	**2.49**	**337**	P	**Pn**	**01 27 26.5**	**+0.1**
NISR	**Nisiros**	**2.52**	**29**	P	**Pn**	**01 27 27.2**	**+0.4**
NISR	**Nisiros**	**2.52**	**29**	P	**Pn**	**01 27 27.2**	**+0.4**
NIS1	**Nisyros Isl.**	**2.53**	**29**	P	**Pn**	**01 27 28.0**	**+1.0**
NIS1	**Nisyros Isl.**	**2.53**	**29**	PN	**Pn**	**01 27 27.8**	**+0.9**
KOSK	**Kos Island**	**2.59**	**25**	PN	**Pn**	**01 27 27.9**	**+0.2**
ARG	**Arkhangelos**	**2.73**	**48**	P	**Pn**	**01 27 31.4**	**+1.8**
ARG	**Arkhangelos**	**2.73**	**48**	P	**Pn**	**01 27 31.2**	**+1.7**
ARG	**Arkhangelos**	**2.73**	**48**	PN	**Pn**	**01 27 31.4**	**+1.8**
KTHA	**Kythira Island**	**2.80**	**312**	P	**Pn**	**01 27 30.2**	**-0.4**
KTHA	**Kythira Island**	**2.80**	**312**	P	**Pn**	**01 27 30.6**	**0.0**
DAT	**Datca**	**2.81**	**34**	P	**Pn**	**01 27 31.5**	**+0.6**
DAT	**Datca**	**2.81**	**34**	PN	**Pn**	**01 27 31.5**	**+0.6**
KTHR	**Kythira**	**2.84**	**312**	P	**Pn**	**01 27 31.0**	**-0.1**
BODT	**Bodrum**	**2.98**	**27**	PN	**Pn**	**01 27 33.5**	**+0.4**
TURN	**Turunc**	**3.18**	**41**	*i* P	**Pn**	**01 27 36.7**	**+0.9**
TURN				*i* S	**Sn**	**01 28 12.1**	**-0.5**
TURN				IAML		01 28 23.0	
	comp=N,33nm,0.3s						
TURN				IAML		01 28 23.0	
	comp=E,32nm,0.5s						
TURN	**Turunc**	**3.18**	**41**	PN	**Pn**	**01 27 36.8**	**+1.0**
VLI	**Veliai**	**3.19**	**317**	P	**Pn**	**01 27 35.2**	**-0.7**
MLSB	**Milas**	**3.37**	**31**	PN	**Pn**	**01 27 39.4**	**+0.9**
SMG	**Samos**	**3.44**	**16**	P	**Pn**	**01 27 39.4**	**0.0**
DALY	**Dalyan (Mula)**	**3.44**	**45**	*i* P	**Pn**	**01 27 41.0**	**+1.6**
DALY				*i* S	**Sn**	**01 28 17.8**	**-1.2**
DALY				IAML		01 28 28.0	
	comp=N,25nm,0.6s						
DALY	**Dalyan (Mula)**	**3.44**	**45**	PN	**Pn**	**01 27 41.0**	**+1.6**
YER	**Yerkesik**	**3.48**	**38**	PN	**Pn**	**01 27 41.3**	**+1.4**
GCAM	**G?zelcaml?**	**3.54**	**21**	PN	**Pn**	**01 27 41.2**	**+0.5**
FETY	**Fethiye**	**3.59**	**51**	*i* P	**Pn**	**01 27 42.0**	**+0.5**
FETY				*i* S	**Sn**	**01 28 23.2**	**+0.6**
FETY				IAML		01 28 26.0	
	comp=E,15nm,0.6s						
FETY				IAML		01 28 28.0	
	comp=N,24nm,0.4s						
FETY	**Fethiye**	**3.59**	**51**	PN	**Pn**	**01 27 42.0**	**+0.5**
KRND	**KRANIDI**	**3.59**	**327**	P	**Pn**	**01 27 40.9**	**-0.5**
AKAS	**Kas**	**3.73**	**60**	*i* P	**Pn**	**01 27 44.2**	**+0.8**
AKAS				*i* S	**Sn**	**01 28 24.7**	**-1.4**
AKAS				IAML		01 28 28.0	
	comp=E,42nm,0.3s						
AKAS				IAML		01 28 31.0	
	comp=N,50nm,0.4s						
AKAS	**Kas**	**3.73**	**60**	PN	**Pn**	**01 27 44.2**	**+0.8**
PTL	**Penteli**	**3.91**	**339**	P	**Pn**	**01 27 45.8**	**0.0**
DION	**Dionisos Attik**	**3.92**	**340**	P	**Pn**	**01 27 46.0**	**+0.1**
CAME	**Cameli-Denizli**	**3.92**	**49**	PN	**Pn**	**01 27 47.0**	**+0.9**
AYDB	**Zeytinkoy-Aydi**	**3.98**	**27**	PN	**Pn**	**01 27 47.8**	**+0.9**
CHOS	**Chios island**	**3.99**	**5**	P	**Pn**	**01 27 47.2**	**+0.2**
CHOS	**Chios island**	**3.99**	**5**	PN	**Pn**	**01 27 46.8**	**-0.2**
URLA	**Izmir**	**4.03**	**11**	PN	**Pn**	**01 27 47.3**	**-0.1**
TAVA	**DENIZLI_Tavas**	**4.05**	**40**	*i* P	**Pn**	**01 27 48.8**	**+1.0**
TAVA				*i* S	**Sn**	**01 28 37.9**	**+3.8**
TAVA				IAML		01 28 41.0	
	comp=N,23nm,0.4s						
TAVA				IAML		01 28 47.0	
	comp=E,16nm,0.5s						
ITM	**Ithomi**	**4.09**	**314**	P	**Pn**	**01 27 47.9**	**-0.4**
ITM	**Ithomi**	**4.09**	**314**	PN	**Pn**	**01 27 47.7**	**-0.6**
BLCB	**Balcova**	**4.13**	**16**	PN	**Pn**	**01 27 49.0**	**+0.1**
ELL	**Elmali**	**4.20**	**55**	PN	**Pn**	**01 27 50.9**	**+1.0**
AKUM	**Antalya-Kumluc**	**4.30**	**62**	*i* P	**Pn**	**01 27 51.8**	**+0.7**
AKUM				*i* S	**Sn**	**01 28 40.6**	**+0.6**
AKUM				IAML		01 28 42.0	
	comp=N,24nm,0.3s						
AKUM				IAML		01 28 43.0	
	comp=E,29nm,0.3s						
KORT	**Korkueli**	**4.63**	**55**	*i* P	**Pn**	**01 27 58.8**	**+2.9**
KORT				*i* S	**Sn**	**01 28 50.9**	**+2.5**
KORT	**Korkueli**	**4.63**	**55**	PN	**Pn**	**01 27 56.5**	**+0.6**
KULA	**Kula-Manisa**	**4.78**	**30**	PN	**Pn**	**01 27 58.9**	**+1.2**
SIGR	**SIGRI**	**4.80**	**2**	PN	**Pn**	**01 27 57.9**	**-0.1**
MMAI	**Mount Meron Ar**	**8.26**	**97**	P	**Pn**	**01 28 44.4**	**-1.1**
	comp=E,1.8nm,0.3s,baz=259,slow=12,SNR=17						
MMAI				S	**Sn**	**01 30 13.7**	**-3.8**
	comp=E,5.6nm,0.3s,baz=288,slow=24,SNR=6.4						
BRTR	**Keskin Array B**	**8.32**	**48**	P	**Pn**	**01 28 46.4**	**+0.1**
	comp=E,0.1nm,0.3s,baz=227,slow=14,SNR=2.3						
BRTR				S	**Sn**	**01 30 16.6**	**-2.2**
	comp=E,0.1nm,0.3s,baz=224,slow=26,SNR=1.3						

EIL	**Elat**	**9.21**	**118**	P	**Pn**	**01 28 57.5**	**-1.0**
	comp=E,0.6nm,0.3s,baz=308,slow=1.6,SNR=8.9						
EIL				S	**Sn**	**01 30 37.0**	**-3.7**
	comp=E,2.4nm,0.3s,baz=302,slow=5.0,SNR=5.4						
VAE	**Valguarnera**	**9.60**	**292**	P	**Pn**	**01 29 03.1**	**-0.7**
	comp=E,0.8nm,0.3s,baz=357,slow=7.1,SNR=4.0						
SOKA	**Soboth**	**14.65**	**330**	*e*Pn	**P**	**01 30 18.3**	**+0.6**
	comp=E,1.4nm,0.6s						
OBKA	**Obir**	**14.72**	**329**	*i* Pn	**P**	**01 30 18.9**	**+0.5**
	comp=E,0.6nm,0.5s						
KBA	**Koelnbreinsper**	**15.69**	**327**	*e*Pn	**P**	**01 30 29.9**	**+0.6**
	comp=E,1.1nm,0.4s						
ABTA	**Abfaltersbach**	**15.83**	**325**	*e*Pn	**P**	**01 30 31.5**	**+0.9**
	comp=E,1.1nm,0.4s						
MOA	**Molln**	**15.90**	**331**	*e*Pn	**P**	**01 30 32.2**	**+0.7**
	comp=E,0.4nm,0.3s						
KBZ	**Khabaz**	**16.30**	**50**	P	**P**	**01 30 35.4**	**-0.4**
	comp=E,0.2nm,0.3s,baz=241,slow=8.3,SNR=11						
VRAC	**Vranov**	**16.32**	**339**	P	**Pn**	**01 30 33.8**	**-0.1**
	comp=E,0.2nm,0.3s,baz=136,slow=11,SNR=3.2						
AKASG	**Malin Array Be**	**16.50**	**8**	P	**Pn**	**01 30 35.8**	**-0.3**
	comp=E,3.7nm,0.3s,baz=200,slow=11,SNR=13						
WTTA	**Wattenberg**	**16.61**	**325**	*e*Pn	**P**	**01 30 40.8**	**+1.3**
	comp=E,2.6nm,0.6s						
WATA	**Walderalm**	**16.70**	**325**	*e*Pn	**P**	**01 30 41.3**	**+1.0**
	comp=E,1.5nm,0.4s						
SQTA	**Sankt Quirin**	**16.79**	**324**	*e*Pn	**P**	**01 30 42.7**	**+1.3**
	comp=E,2.0nm,0.7s						
FETA	**Feichten**	**16.89**	**323**	*e*Pn	**P**	**01 30 44.3**	**+1.8**
	comp=E,1.4nm,0.6s						
GERES	**GERESS Array B**	**16.93**	**332**	P	**Pn**	**01 30 40.6**	**-1.0**
	comp=E,0.2nm,0.3s,baz=142,slow=13,SNR=8.1						
DAVOX	**Davos/Dischmat**	**17.16**	**321**	P	**P**	**01 30 45.3**	**-0.3**
	comp=E,0.3nm,0.3s,baz=146,slow=22,SNR=3.7						
RETA	**Reutte**	**17.19**	**324**	*e*Pn	**P**	**01 30 46.1**	**+0.3**
	comp=E,0.6nm,0.3s						
DAVA	**Damuels**	**17.50**	**322**	*e*Pn	**P**	**01 30 49.7**	**+0.5**
	comp=E,2.1nm,0.4s						
ESDC	**Sonseca Array**	**24.14**	**291**	P	**P**	**01 31 59.3**	**-0.2**
	comp=E,0.3nm,0.6s,baz=69,slow=10.0,SNR=6.0						
FINES	**FINESS Array B**	**27.06**	**0**	P	**P**	**01 32 24.6**	**-0.9**
	comp=E,0.5nm,0.3s,baz=161,slow=11,SNR=9.9						
TORD	**Torodi Ar. Bea**	**30.31**	**232**	P	**P**	**01 32 55.9**	**+0.9**
	comp=E,0.6nm,0.5s,baz=34,slow=9.1,SNR=6.4						
ARCES	**ARCESS Array B**	**35.19**	**360**	P	**P**	**01 33 36.4**	**-0.6**
	comp=E,0.4nm,0.3s,baz=183,slow=8.6,SNR=20						
MKAR	**Makanchi Array**	**43.87**	**56**	P	**P**	**01 34 50.9**	**+1.4**
	comp=E,1.8nm,0.6s,baz=280,slow=6.4,SNR=20						
ZALV	**Zalesovo Beam**	**45.25**	**46**	P	**P**	**01 35 01.2**	**+0.9**
	comp=E,1.4nm,0.5s,baz=268,slow=7.4,SNR=7.3						
NRIK	**Noril'sk**	**48.40**	**25**	LR	LR	01 56 21.3	
	comp=E,74nm,19.0s,baz=53,slow=37						
SONM	**Songino Array**	**59.67**	**50**	P	**P**	**01 36 45.9**	**-1.4**
	comp=E,0.4nm,0.5s,baz=304,slow=10,SNR=2.9						
INK	**Inuvik**	**76.42**	**352**	P	**P**	**01 38 31.6**	**-0.2**
	comp=E,0.2nm,0.4s,baz=63,slow=2.3,SNR=1.0						

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*ISK **13** 01:33:23.1, 34°.52N×25°.61E, h81^{km}, ML3.1/13*
*THE **13** 01:33:24.0, 34°.45N×25°.57E, h9^{km}±1^{km}, ML2.5/9, Error ellipse: s-maj=1.8km s-min=0.6km az=117.0*
*ATH **13** 01:33:25.1, 34°.65N×25°.57E, h60^{km}±5^{km}, ML2.8/7, Error ellipse: s-maj=8.9km s-min=1.9km az=354.0*
*IDC **13** 01:33:27.6±5.0, 34°.62N×25°.54E, h84^{km}±48^{km}, mb3.4/5, mb1 3.5/6, mb1mx3.2/30, mbtmp3.7/6, ML4.3/1, Error ellipse: s-maj=37.9km s-min=17.1km az=131.0*
ISC 13 01:33:25.1±1.2**, 34°.54N**±0°.09×**25°.60E**±0°.03**, h57**^{km}±10^{km}**, n53, σ0^s.98**/68**, mb3.6**/5**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FRMA	**Ierapetra Chan**	**0.49**	**13**	P	**Pn**	**01 33 35.7**	**-1.0**
FRMA				S	**Sn**	**01 33 45.4**	**+0.3**
	405nm,0.5s						
NPS	**Neapolis**	**0.72**	**1**	P	**Pn**	**01 33 39.4**	**-0.1**
NPS				S	**Sn**	**01 33 51.3**	**+1.3**
	418nm,0.7s						
NPS	**Neapolis**	**0.72**	**1**	P	**Pn**	**01 33 39.1**	**-0.4**
NPS				AML	AML	01 34 00.5	
	comp=N,626µm,0.7s						
NPS				AML	AML	01 34 00.8	
	comp=E,996µm,0.7s						
ZKR	**Zakros**	**0.77**	**41**	P	**Pn**	**01 33 39.9**	**-0.1**
ZKR				S	**Sn**	**01 33 52.8**	**+1.8**
	comp=E,652nm,0.8s						
ZKR	**Zakros**	**0.77**	**41**	P	**Pn**	**01 33 40.0**	**-0.1**
ZKR				S	**Sn**	**01 33 50.9**	**-0.1**
ZKR				AML	AML	01 33 54.3	
	comp=E,1825µm,0.6s						
ZKR				AML	AML	01 33 58.5	
	comp=N,794µm,1.0s						
ZKR	**Zakros**	**0.77**	**41**	PG	**Pn**	**01 33 40.2**	**+0.1**
ZKR				SG	**Sn**	**01 33 52.8**	**+1.8**
STIA	**Sitia Lasithi**	**0.78**	**31**	P	**Pn**	**01 33 40.0**	**-0.2**
STIA				S	**Sn**	**01 33 53.6**	**+2.4**
SIVA	**Sivas**	**0.81**	**307**	P	**Pn**	**01 33 40.1**	**-0.4**
SIVA				S	**Sn**	**01 33 51.9**	**+0.1**
SIVA	**Sivas**	**0.81**	**307**	P	**Pn**	**01 33 40.1**	**-0.4**
SIVA				AML	AML	01 33 56.1	
	comp=E,5007µm,0.4s						
SIVA				AML	AML	01 33 56.7	
	comp=N,4716µm,0.5s						
TMBK	**Timbaki Herakl**	**0.87**	**308**	P	**Pn**	**01 33 41.3**	**0.0**
TMBK				S	**Sn**	**01 33 54.1**	**+0.9**
	comp=N,475nm,0.6s						
HRKL	**Herakleio**	**0.87**	**332**	P	**Pn**	**01 33 41.8**	**+0.4**
HRKL				S	**Sn**	**01 33 54.4**	**+1.1**
	comp=N,1µm,0.7s						
HRKL	**Herakleio**	**0.87**	**332**	PG	**Pn**	**01 33 41.9**	**+0.5**
KSTL	**Kastelli Herak**	**0.88**	**331**	P	**Pn**	**01 33 38.7**	**-2.8**
KSTL				S	**Sn**	**01 33 50.9**	**-2.6**
	comp=N,220nm,0.5s						
IDI	**Anoyia**	**0.95**	**322**	P	**Pn**	**01 33 42.8**	**+0.4**
IDI				S	**Sn**	**01 33 56.5**	**+1.3**
	comp=N,245nm,0.4s						
IDI	**Anoyia**	**0.95**	**322**	P	**Pn**	**01 33 42.3**	**-0.2**
IDI				AML	AML	01 33 59.9	
	comp=N,535µm,0.5s						
IDI				AML	AML	01 34 01.9	
	comp=E,460µm,0.5s						
PRNS	**Prines Rethymn**	**1.22**	**313**	P	**Pn**	**01 33 46.8**	**+0.8**
PRNS				S	**Sn**	**01 34 05.0**	**+3.5**
	comp=E,125nm,0.5s						
GVD	**Gavdhos**	**1.28**	**284**	P	**Pn**	**01 33 47.3**	**+0.5**
GVD				AML	AML	01 34 17.2	
	comp=E,1572µm,0.5s						
GVD				AML	AML	01 34 17.3	
	comp=N,1221µm,0.4s						
GVD	**Gavdhos**	**1.28**	**284**	PN	**Pn**	**01 33 46.8**	**0.0**
GVD				SN	**Sn**	**01 34 03.9**	**+0.9**
VAM	**Vamos**	**1.44**	**307**	P	**Pn**	**01 33 49.3**	**+0.3**
VAM				S	**Sn**	**01 34 08.7**	**+1.9**
	comp=N,308nm,0.5s						
VAM	**Vamos**	**1.44**	**307**	P	**Pn**	**01 33 49.2**	**+0.3**
VAM				AML	AML	01 34 15.7	
	comp=N,616µm,0.5s						
VAM				AML	AML	01 34 16.5	
	comp=E,610µm,0.4s						
IMMV	**Iera Moni Meta**	**1.61**	**305**	P	**Pn**	**01 33 51.7**	**+0.4**
IMMV	**Iera Moni Meta**	**1.61**	**305**	P	**Pn**	**01 33 51.6**	**+0.4**
IMMV				AML	AML	01 34 21.2	
	comp=N,420µm,0.5s						
IMMV				AML	AML	01 34 26.6	
	comp=E,575µm,0.9s						
IMMV	**Iera Moni Meta**	**1.61**	**305**	PN	**Pn**	**01 33 51.7**	**+0.4**
IMMV				SN	**Sn**	**01 34 11.7**	**+0.6**
KNDR	**Palaiochora Ch**	**1.72**	**294**	PN	**Pn**	**01 33 53.1**	**+0.4**
SNT5	**Nea Kammeni, S**	**1.87**	**355**	P	**Pn**	**01 33 54.7**	**0.0**
ANKY	**Antikythira Is**	**2.30**	**306**	P	**Pn**	**01 34 01.3**	**+0.7**
NISR	**Nisiros**	**2.42**	**31**	P	**Pn**	**01 34 02.7**	**+0.5**
NIS1	**Nisyros Isl.**	**2.43**	**32**	PN	**Pn**	**01 34 02.9**	**+0.5**
ARG	**Arkhangelos**	**2.66**	**50**	P	**Pn**	**01 34 06.8**	**+1.3**
ARG	**Arkhangelos**	**2.66**	**50**	P	**Pn**	**01 34 06.6**	**+1.1**
ARG	**Arkhangelos**	**2.66**	**50**	PN	**Pn**	**01 34 05.5**	**0.0**
KTHA	**Kythira Island**	**2.69**	**310**	P	**Pn**	**01 34 05.5**	**-0.5**
KTHA	**Kythira Island**	**2.69**	**310**	P	**Pn**	**01 34 05.6**	**-0.3**
DAT	**Datca**	**2.72**	**36**	P	**Pn**	**01 34 07.0**	**+0.6**
DAT	**Datca**	**2.72**	**36**	PN	**Pn**	**01 34 06.6**	**+0.2**
KTHR	**Kythira**	**2.73**	**310**	P	**Pn**	**01 34 06.8**	**+0.3**
VLI	**Veliai**	**3.07**	**316**	P	**Pn**	**01 34 10.6**	**-0.6**
TURN	**Turunc**	**3.10**	**43**	PN	**Pn**	**01 34 11.8**	**+0.2**
DALY	**Dalyan (Mula)**	**3.37**	**47**	PN	**Pn**	**01 34 15.7**	**+0.5**
YER	**Yerkesik**	**3.39**	**39**	PN	**Pn**	**01 34 15.5**	**-0.1**
FETY	**Fethiye**	**3.53**	**53**	PN	**Pn**	**01 34 17.4**	**-0.1**
AKAS	**Kas**	**3.69**	**62**	PN	**Pn**	**01 34 19.1**	**-0.6**
DION	**Dionisos Attik**	**3.78**	**340**	P	**Pn**	**01 34 20.9**	**0.0**
CAME	**Cameli-Denizli**	**3.85**	**50**	PN	**Pn**	**01 34 22.0**	**0.0**
ITM	**Ithomi**	**3.98**	**313**	PN	**Pn**	**01 34 22.8**	**-0.8**
ELL	**Elmali**	**4.15**	**57**	PN	**Pn**	**01 34 25.8**	**-0.2**
KORT	**Korkueli**	**4.58**	**56**	PN	**Pn**	**01 34 31.7**	**-0.3**
AKASG	**Malin Array Be**	**16.37**	**8**	P	**Pn**	**01 37 11.2**	**+0.2**
	comp=E,1.1nm,0.3s,baz=201,slow=11,SNR=4.0						
FINES	**FINESS Array B**	**26.93**	**1**	P	**P**	**01 38 59.5**	**-1.1**
	comp=E,2.5nm,0.9s,baz=168,slow=16,SNR=2.3						
TORD	**Torodi Ar. Bea**	**30.37**	**231**	P	**P**	**01 39 31.9**	**+0.1**
	comp=E,0.2nm,0.4s,baz=33,slow=8.6,SNR=2.3						
ARCES	**ARCESS Array B**	**35.05**	**360**	P	**P**	**01 40 11.4**	**-0.7**
	comp=E,4.6nm,1.0s,baz=182,slow=9.0,SNR=2.3						
MKAR	**Makanchi Array**	**43.82**	**56**	P	**P**	**01 41 24.7**	**-0.7**
	comp=E,0.2nm,0.4s,baz=263,slow=8.1,SNR=3.1						
ZALV	**Zalesovo Beam**	**45.18**	**46**	P	**P**	**01 41 35.7**	**-0.3**
	comp=E,0.3nm,0.3s,baz=262,slow=9.0,SNR=1.9						

IDC 13 01:39:22.9±12.0**, 15°.27S**×**165°.19E, h0**^{km}**, mb3.8**/4**, mb1 4.0**/5**, mb1mx3.7**/40**, mbtmp3.8**/5**, ML3.3**/1**, Error ellipse: s-maj=211.9km s-min=34.1km az=53.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.87**	**170**	Pn	Pn	01 41 04.7	-0.2
	0.6nm,0.3s,baz=108,slow=12,SNR=9.9						
DZM				Sn	Sn	01 42 26.4	+2.4
	0.3nm,0.3s,baz=155,slow=16,SNR=1.7						
STKA	**Stephens Creek**	**27.12**	**228**	P	P	01 45 07.4	-0.3
	1.0nm,0.3s,baz=50,slow=8.2,SNR=4.8						
WRA	**Warramunga Arr**	**29.74**	**256**	P	P	01 45 31.1	-0.1
	0.3nm,0.8s,baz=83,slow=7.0,SNR=4.7						
ASAR	**Alice Springs**	**30.60**	**249**	P	P	01 45 38.6	-0.2
	0.5nm,0.3s,baz=76,slow=8.8,SNR=9.4						
FITZ	**Fitzroy Crossi**	**37.94**	**260**	P	P	01 46 42.9	+0.5
	0.9nm,0.6s,baz=314,slow=20,SNR=1.4						

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*JMA **13** 01:39:32.2±0.1, 23°.49N×121°.59E, h46^{km}±2^{km}, M3.4*
*TAP **13** 01:39:33.1, 23°.51N×121°.62E, h34^{km}, ML3.7, B*
ISC 13 01:39:33.0±1.0**, 23°.50N**±0°.02×**121°.63E**±0°.02**, h33**^{km}±2^{km}**, n127, σ0^s.73**/194**, 11C-15D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HGSD	**Ruisui**	**0.19**	**269**	⇑*i*P	**Pb**	**01 39 39.7**	**+0.2**
	baz=265						
HGSD				*i* S	**Sb**	**01 39 44.6**	**+0.6**
	baz=265						
TEGC	**Jichi Village**	**0.23**	**339**	⇑*i*P	**Pb**	**01 39 40.2**	**+0.3**
	baz=347						
TEGC				*i* S	**Sb**	**01 39 45.5**	**+0.8**
	baz=347						
ECBN	**Changbin**	**0.24**	**222**	P	**Pb**	**01 39 40.6**	**+0.5**
	baz=219						
ECBN				S	**Sb**	**01 39 45.9**	**+1.1**
	baz=219						
EGFH	**Guangfu**	**0.25**	**313**	⇓*i*P	**Pb**	**01 39 40.6**	**+0.4**
	baz=300						
EGFH				S	**Sb**	**01 39 46.1**	**+0.9**
	baz=300						
EHY	**Hungye**	**0.28**	**272**	⇓*i*P	**Pb**	**01 39 40.6**	**0.0**
	baz=269						
EHY				S	**Sb**	**01 39 45.9**	**+0.1**
	baz=269						
EYUL	**Yuli**	**0.32**	**243**	*e*P	**Pn**	**01 39 41.7**	**+0.4**
	baz=253						
EYUL				*e*S	**Sb**	**01 39 48.0**	**+1.4**
	baz=253						
YULB	**Yu-li**	**0.32**	**251**	⇓*i*P	**Pb**	**01 39 41.2**	**+0.1**
	baz=261						
YULB				*e*S	**Sb**	**01 39 46.7**	**+0.1**
	baz=261						
TWF1	**Yuli**	**0.34**	**245**	⇑*i*P	**Pb**	**01 39 41.4**	**+0.2**
	baz=253						
TWF1				*e*S	**Sb**	**01 39 47.0**	**+0.1**
	baz=253						
ESL	**Shilin**	**0.36**	**331**	⇓*i*P	**Pb**	**01 39 41.4**	**-0.3**
	baz=322						
ESL				S	**Sb**	**01 39 47.4**	**-0.2**
	baz=322						
TEYL	**Yanliau Villag**	**0.37**	**356**	⇑*i*P	**Pn**	**01 39 42.3**	**+0.1**
	baz=4.0						
TEYL				*i* S	**Sn**	**01 39 49.1**	**+1.1**
	baz=4.0						
FULB	**Fuli**	**0.42**	**226**	P	**Pb**	**01 39 42.8**	**+0.2**
	baz=218						
FULB				*i* S	**Sn**	**01 39 49.9**	**+0.4**
	baz=218						
CHKT	**Chengkung**	**0.46**	**211**	*i* P	**Pb**	**01 39 42.7**	**-0.4**
	baz=201						
CHKT				S	**Sb**	**01 39 49.5**	**-0.4**
	baz=201						
HWA	**Hwalien**	**0.48**	**358**	P	**Pb**	**01 39 43.3**	**-0.1**
	baz=5.0						
HWA				*e*S	**Sn**	**01 39 50.9**	**0.0**
	baz=5.0						
ETM	**Tongmen**	**0.48**	**345**	⇓*i*P	**Pb**	**01 39 43.0**	**-0.4**
	baz=345						
VWDT	**VWDT**	**0.52**	**300**	⇓*i*P	**Pn**	**01 39 44.0**	**-0.1**
	baz=305						
ECS	**Chishang**	**0.55**	**223**	*e*P	**Pn**	**01 39 44.0**	**-0.5**
	baz=222						
TWD	**Chiawan**	**0.58**	**357**	*i* P	**Pn**	**01 39 44.4**	**-0.6**
	baz=346						
TWD				*i* S	**Sb**	**01 39 52.9**	**-0.3**
	baz=346						
EDH	**Donghe**	**0.60**	**210**	*e*P	**Pn**	**01 39 44.7**	**-0.5**
	baz=201						
EDH				*e*S	**Sb**	**01 39 53.6**	**+0.1**
	baz=201						
OWD	**Renai**	**0.62**	**318**	*e*P	**Pn**	**01 39 44.9**	**-0.7**
	baz=325						
YUS	**Yu-Shan**	**0.62**	**270**	⇓*e*P	**Pn**	**01 39 45.8**	**-0.1**
	baz=277						
YUS				*e*S	**Sb**	**01 39 54.2**	**-0.5**
	baz=277						
ELDTW	**Lidau**	**0.64**	**242**	⇑*i*P	**Pn**	**01 39 45.0**	**-0.8**
	baz=240						
ETL	**Fush Village**	**0.66**	**360**	*e*P	**Pn**	**01 39 45.6**	**-0.5**
	baz=5.0						
NACB	**Ninganchiao**	**0.68**	**357**	⇓*i*P	**Pn**	**01 39 45.5**	**-0.7**
	baz=348						
NACB				S	**Sn**	**01 39 54.4**	**-1.3**
	baz=348						
SSLB	**Suanglung**	**0.68**	**295**	⇓*i*P	**Pn**	**01 39 46.0**	**-0.3**
	baz=288						
SSLB				S	**Sn**	**01 39 54.7**	**-1.2**
	baz=288						
CHGB	**Renai**	**0.70**	**324**	⇓*i*P	**Pn**	**01 39 46.6**	**-0.2**
	baz=323						
CHGB				*i* S	**Sn**	**01 39 55.5**	**-1.1**
	baz=323						
ETLH	**Xiulin Townshi**	**0.72**	**349**	⇓P	**Pn**	**01 39 46.2**	**-0.8**
	baz=349						
ETLH				S	**Sn**	**01 39 55.5**	**-1.4**
	baz=349						
WHF	**Hehuan Shan**	**0.73**	**333**	⇓*i*P	**Pn**	**01 39 46.6**	**-0.8**
	baz=333						
WHF				*i* S	**Sn**	**01 39 56.3**	**-1.3**
	baz=333						
WHYT	**Xinyi Township**	**0.74**	**286**	*e*P	**Pb**	**01 39 47.6**	**+0.1**
	baz=285						
LONT	**Longtian**	**0.74**	**218**	*e*P	**Pn**	**01 39 46.2**	**-1.1**
	baz=217						
ALS	**Alishan**	**0.76**	**271**	⇓*i*P	**Pb**	**01 39 48.1**	**+0.1**
	baz=276						
ALS				S	**Sb**	**01 39 58.3**	**+0.1**
	baz=276						
SMLT	**Sun Moon Lake**	**0.77**	**300**	⇓*i*P	**Pn**	**01 39 47.7**	**0.0**
	baz=304						
SMLT				*i* S	**Sb**	**01 39 59.0**	**+0.6**
	baz=304						
WPL	**Puli Township**	**0.80**	**310**	*e*P	**Pn**	**01 39 47.9**	**-0.1**
	baz=314						
TYC	**Yuchr**	**0.81**	**300**	P	**Pb**	**01 39 48.4**	**-0.4**
	baz=300						
TYC				*i* S	**Sb**	**01 39 59.6**	**+0.1**
	baz=300						
FUSS	**Fushou**	**0.83**	**335**	*e*P	**Pn**	**01 39 48.3**	**-0.3**
	baz=335						
FUSS				S	**Sn**	**01 39 59.1**	**-0.7**
	baz=335						
LDUT	**Ludao**	**0.83**	**190**	*e*P	**Pn**	**01 39 47.0**	**-1.4**
	baz=189						
LDUT				*e*S	**Sn**	**01 39 57.5**	**-1.9**
	baz=189						
DPDB	**Guoxing**	**0.84**	**310**	P	**Pn**	**01 39 48.7**	**+0.1**
	baz=313						
TWGBT	**Beinan**	**0.84**	**217**	P	**Pn**	**01 39 47.4**	**-1.2**
	baz=224						
TWGBT				*e*S	**Sn**	**01 39 57.6**	**-2.1**
	baz=224						
TWG	**Pinlang**	**0.84**	**217**	⇑*i*P	**Pn**	**01 39 47.4**	**-1.2**
	baz=224						
TWG				*e*S	**Sn**	**01 39 58.0**	**-1.8**
	baz=224						
STYH	**Taoyuan**	**0.85**	**248**	*e*P	**Pn**	**01 39 48.8**	**+0.2**
	baz=238						
TTN	**Taitung**	**0.86**	**211**	P	**Pn**	**01 39 48.7**	**-0.1**
	baz=222						
TTN				*e*S	**Sn**	**01 40 00.8**	**+0.6**
	baz=222						
TWT	**Tachien**	**0.86**	**331**	*i* P	**Pb**	**01 39 49.3**	**-0.4**
	baz=331						
TWT				S	**Sn**	**01 39 59.9**	**-0.6**
	baz=331						
WCS	**Beigang Elemen**	**0.86**	**311**	P	**Pn**	**01 39 49.1**	**+0.3**
	baz=314						
STYT	**Tauyuan**	**0.86**	**248**	⇑*i*P	**Pn**	**01 39 49.2**	**+0.2**
	baz=243						
STYT				S	**Sn**	**01 40 00.5**	**0.0**
	baz=243						
CHN5	**Tsauling**	**0.88**	**277**	P	**Pb**	**01 39 50.0**	**0.0**
	baz=281						
CHN5				S	**Sb**	**01 40 02.0**	**+0.6**
	baz=281						
WJS	**Zhushan**	**0.89**	**292**	P	**Pb**	**01 39 50.4**	**+0.4**
	baz=291						
WJS				*e*S	**Sb**	**01 40 02.3**	**+0.8**
	baz=291						
ENA	**Nanau**	**0.94**	**6**	P	**Pn**	**01 39 49.5**	**-0.3**
	baz=18						
ENA				*e*S	**Sn**	**01 40 01.3**	**-0.8**
	baz=18						
TPUB	**Ta-pu**	**0.94**	**258**	⇑*i*P	**Pb**	**01 39 50.9**	**0.0**
	baz=257						
TPUB				S	**Sb**	**01 40 03.4**	**+0.3**
	baz=257						
WNT	**Mingjian**	**0.94**	**294**	P	**Pb**	**01 39 50.7**	**-0.3**
	baz=294						
WNT				S	**Sb**	**01 40 04.2**	**+1.0**
	baz=294						
EWUT	**Wuta**	**0.96**	**8**	*e*P	**Pn**	**01 39 49.5**	**-0.6**
	baz=8.0						
NNSB	**Datong**	**0.96**	**347**	*e*P	**Pn**	**01 39 49.9**	**-0.3**
	baz=355						
WNT1	**Nantou City**	**0.96**	**295**	*e*P	**Pb**	**01 39 51.6**	**+0.4**
	baz=295						
WTP	**Ta-pu**	**0.96**	**255**	⇑*i*P	**Pb**	**01 39 51.2**	**-0.1**
	baz=254						
WTP				*e*S	**Sb**	**01 40 04.5**	**+0.7**
	baz=254						
NNS	**Nan Shan**	**0.97**	**346**	*e*P	**Pn**	**01 39 49.9**	**-0.6**
	baz=355						
WGK	**Gukeng**	**0.99**	**281**	*e*P	**Pb**	**01 39 51.7**	**-0.1**
	baz=281						
WHP	**Taichung City**	**1.00**	**321**	*e*P	**Pb**	**01 39 52.3**	**+0.4**
	baz=326						
WWF	**Wufeng**	**1.01**	**303**	*e*P	**Pb**	**01 39 52.4**	**+0.3**
	baz=302						
WDLH	**Douliu**	**1.02**	**281**	*e*P	**Pb**	**01 39 51.9**	**-0.3**
	baz=280						
SLGT	**Liugui**	**1.03**	**241**	*e*P	**Pn**	**01 39 51.7**	**+0.5**
	baz=233						
SGST	**Jiashian**	**1.04**	**247**	*e*P	**Pn**	**01 39 51.6**	**+0.2**
	baz=236						
SGST				*e*S	**Sb**	**01 40 06.8**	**+0.8**
	baz=236						
CHN1	**Nanshi**	**1.06**	**253**	⇑*i*P	**Pb**	**01 39 52.8**	**-0.1**
	baz=253						
CHN1				S	**Sb**	**01 40 07.7**	**+1.2**
	baz=253						
CHN2	**Minshiung**	**1.06**	**272**	*e*P	**Pb**	**01 39 52.8**	**-0.1**
	baz=272						
CHN2				*e*S	**Sb**	**01 40 07.4**	**+0.9**
	baz=272						
WYL	**Yuanlin Townsh**	**1.07**	**296**	*e*P	**Pb**	**01 39 53.1**	**+0.1**
	baz=284						
WYL				*e*S	**Sb**	**01 40 07.7**	**+1.0**
	baz=284						
TWK	**Hsinying**	**1.07**	**258**	P	**Pb**	**01 39 52.9**	**-0.2**
	baz=257						
TWK				*i* S	**Sb**	**01 40 07.8**	**+0.9**
	baz=257						
SNST	**Tainan City**	**1.07**	**255**	*e*P	**Pb**	**01 39 53.2**	**+0.1**
	baz=255						
SNST				*e*S	**Sb**	**01 40 07.6**	**+0.7**
	baz=255						
TCU	**Taichung**	**1.09**	**307**	*e*P	**Pb**	**01 39 53.6**	**+0.2**
	baz=307						
TCU				*e*S	**Sb**	**01 40 08.7**	**+1.4**
	baz=307						
CHY	**Chiayi**	**1.10**	**270**	*e*P	**Pb**	**01 39 53.7**	**0.0**
	baz=270						
CHY				*e*S	**Sb**	**01 40 09.1**	**+1.3**
	baz=270						
NDT	**Datong Townshi**	**1.11**	**355**	*e*P	**Pn**	**01 39 52.1**	**-0.1**
	baz=354						
TWC	**Suao**	**1.13**	**10**	*e*P	**Pn**	**01 39 52.7**	**+0.2**
	baz=10.0						
TWC				*e*S	**Sn**	**01 40 07.2**	**+0.3**
	baz=10.0						
NDS	**Dongshan**	**1.14**	**4**	*e*P	**Pb**	**01 39 53.5**	**-0.7**
	baz=351						
WCHH	**Zhanghua**	**1.14**	**301**	*e*P	**Pb**	**01 39 54.2**	**-0.1**
	baz=301						
WCHH				*e*S	**Sb**	**01 40 10.4**	**+1.6**
	baz=301						
ENTT	**Nioudou**	**1.14**	**357**	⇑*i*P	**Pn**	**01 39 52.8**	**+0.1**
	baz=357						
WTK	**Tuku**	**1.15**	**280**	*e*P	**Pb**	**01 39 54.0**	**-0.5**
	baz=280						
WTK				*e*S	**Sb**	**01 40 10.1**	**+1.0**
	baz=280						
TWQ1	**Liyutan**	**1.15**	**318**	*i* P	**Pb**	**01 39 54.6**	**+0.1**
	baz=331						
TWQ1				*e*S	**Sb**	**01 40 10.6**	**+1.4**
	baz=331						
SSD	**Sandimen**	**1.18**	**231**	*e*P	**Pn**	**01 39 54.1**	**+0.8**
	baz=226						
TSMG	**Majia**	**1.20**	**229**	*e*P	**Pb**	**01 39 54.5**	**-0.7**
	baz=221						
NSK	**Sanguang**	**1.20**	**348**	⇓*i*P	**Pn**	**01 39 53.8**	**+0.2**
	baz=358						
NSK				*e*S	**Sn**	**01 40 07.9**	**-0.9**
	baz=358						
NSY	**Sanyi**	**1.21**	**319**	P	**Pb**	**01 39 55.3**	**-0.2**
	baz=334						
NSY				S	**Sb**	**01 40 11.7**	**+0.9**
	baz=334						
WRL	**Guolierlin Hig**	**1.22**	**290**	*e*P	**Pb**	**01 39 54.7**	**-0.8**
	baz=289						
TWE	**Neicheng**	**1.22**	**2**	*e*P	**Pb**	**01 39 54.8**	**-0.8**
	baz=352						
WDJ	**Dajia District**	**1.24**	**313**	P	**Pb**	**01 39 55.7**	**-0.3**
	baz=314						
WDJ				S	**Sb**	**01 40 12.8**	**+1.2**
	baz=314						
ICHU	**Yijhu**	**1.25**	**264**	*e*P	**Pb**	**01 39 55.4**	**-0.7**
	baz=264						
ICHU				*e*S	**Sb**	**01 40 12.1**	**+0.3**
	baz=264						
NSTT	**Nanjuang**	**1.27**	**333**	*e*P	**Pb**	**01 39 55.9**	**-0.5**
	baz=344						
NSTT				S	**Sb**	**01 40 11.4**	**-1.0**
	baz=344						
MASBT	**Mashibuluo**	**1.27**	**226**	P	**Pn**	**01 39 54.7**	**+0.3**
	baz=219						
LIOB	**Emei**	**1.27**	**334**	*e*P	**Pb**	**01 39 56.1**	**-0.4**
	baz=343						
LIOB				*e*S	**Sb**	**01 40 12.5**	**-0.1**
	baz=343						
NWLT	**Wulai**	**1.28**	**355**	*e*P	**Pn**	**01 39 55.1**	**+0.5**
	baz=354						
NMLH	**Miaoli**	**1.29**	**324**	*e*P	**Pb**	**01 39 56.1**	**-0.7**
	baz=324						
TWM1	**Shoushan**	**1.29**	**239**	*e*P	**Pb**	**01 39 57.9**	**+1.0**
	baz=238						
CHN8	**Yiju**	**1.31**	**264**	*e*P	**Pb**	**01 39 56.9**	**-0.2**
	baz=263						
EAST	**Anshuo**	**1.32**	**213**	*e*P	**Pn**	**01 39 54.5**	**-0.7**
	baz=212						

NJD	**Zhudong** baz=345	1.33	338	eP	Pb	01 39 57.5	0.0
NTC	**Toucheng** baz=18	1.37	8	eP	Pn	01 39 56.5	+0.7
EGS	baz=12	1.37	12	eP	Pb	01 39 57.1	-1.1
HSN1	**Hsinchu** baz=323	1.39	337	eP	Pb	01 39 58.3	-0.2
SSPT	**Xinbi** baz=218	1.40	224	eP	Pn	01 39 57.3	+1.1
LAY	**Lan-yu** baz=183	1.45	183	P	Pn	01 39 55.8	-1.2
SCZT	**Fangliau** baz=209	1.45	220	eP	Pn	01 39 57.6	+0.6
TATO	**Taipei** baz=354	1.48	355	eP	Pn	01 39 58.4	+1.1
TWA	**Mucha** baz=358	1.48	358	eP	Pn	01 39 58.3	+0.9
TIPB	**Shuangxi** baz=353	1.48	7	eP	Pb	01 39 58.7	-1.3
SLIU	**Shizi** baz=203	1.48	211	eP	Pn	01 39 56.8	-0.7
JYNG	**Yonagunijimaku**	1.54	51	P	Pn	01 39 58.7	+0.6
JYNG				S	Sn	01 40 17.3	+0.4
NWF	**Wu-fen Shan** baz=353	1.57	5	eP	Pn	01 40 00.1	+1.3
WFSB	**Wu-fen Shan** baz=352	1.57	5	eP	Pn	01 39 59.9	+1.2
WFSB	baz=352			eS	Sn	01 40 19.2	+1.3
YOJ	**Yonaguni jima** baz=52	1.59	52	i P	Pn	01 39 59.5	+0.6
YOJ	baz=52			i S	Sn	01 40 18.6	+0.4
YOJ	**Yonaguni jima**	1.59	52	P	Pn	01 39 59.4	+0.6
YOJ				S	Sn	01 40 18.6	+0.4
YM01	**YM01** baz=357	1.65	358	eP	Pb	01 40 01.6	-1.2
YM08	**YM08** baz=358	1.69	359	eP	Pn	01 40 00.6	+0.4
HEN	**Hengchun** baz=198	1.69	209	eP	Pb	01 40 04.1	+0.5
TWKBT	**Hengchun** baz=197	1.72	206	eP	Pn	01 40 00.6	-0.1
TWK1	**Hengchun** baz=193	1.72	206	eP	Pn	01 40 01.3	+0.7
TWK1	baz=193			eS	Sn	01 40 21.7	+0.2
PHUB	**P'eng-hu** baz=270	1.89	271	eP	Pn	01 40 03.6	+0.6
PHUB	baz=270			eS	Sn	01 40 25.6	+0.1
PNG	**Penghu** baz=272	1.90	273	P	Pn	01 40 03.7	+0.6
PNG	baz=272			eS	Sn	01 40 25.5	-0.5
VCHM	**Qimei** baz=262	2.04	262	eP	Pn	01 40 05.0	0.0
VCHM	baz=262			eS	Sn	01 40 28.4	-1.0
HATJ	**Hateruma jima**	2.07	74	eS	Sn	01 40 29.8	-0.3
IRIF	**Iriomote-Funau**	2.10	66	P	Pn	01 40 06.6	+0.8
IRIF				S	Sn	01 40 31.1	+0.3
JKRS	**Kuro-shima**	2.30	71	P	Pn	01 40 09.9	+1.3
JKRS				eS	Sn	01 40 36.6	+0.8
JIJ	**Ishigaki jima**	2.46	69	P	Pn	01 40 11.3	+0.5
JIJ				eS	Sn	01 40 38.9	-0.8
JISG	**Ishigakijimahi**	2.68	66	P	Pn	01 40 14.0	+0.1
JISG				eS	Sn	01 40 43.8	-1.4
PTMZ	**Houxiangcun** baz=304	2.76	304	eP	Pn	01 40 15.0	+0.1
JTJ	**Tarama**	3.03	67	eS	Sn	01 40 55.1	+1.2
MATB	**Ma-tsu** baz=330	3.05	330	eP	Pn	01 40 17.9	-1.1
KNMB	**Chin-men Tao** baz=288	3.12	289	eP	Pn	01 40 19.7	-0.1
LYJJ	**Jianjiangzhen** baz=331	3.48	331	eP	Pn	01 40 24.5	-0.4
MHZQ	**Yeshan** baz=318	3.51	318	eP	Pn	01 40 25.2	0.0
ZPLA	**Ao Xicun** baz=276	3.58	278	eP	Pn	01 40 26.8	+0.6
AXDP	**Jialang** baz=293	3.62	293	eP	Pn	01 40 27.0	+0.2
XPSS	**Dashiqiu** baz=328	3.66	339	P	Pn	01 40 26.0	-1.3

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*JMA **13** 01:42:44.5±0.1, 23°.49N×121°.60E, h45^{km}±2^{km}*
*TAP **13** 01:42:45.4, 23°.50N×121°.62E, h34^{km}, ML3.0, C*
ISC 13 01:42:45.3±1.0**, 23°.49N**±0°.02×**121°.63E**±0°.02**, h34**^{km}±2^{km}**,**
n80, σ0ˢ.74/137**, 1C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HGSD	**Ruisui** baz=269	0.19	270	⇑P	Pb	01 42 51.9	0.0
HGSD	baz=269			S	Sb	01 42 56.9	+0.4
TEGC	**Jichi Village** baz=347	0.23	338	P	Pb	01 42 52.6	+0.2
TEGC	baz=347			eS	Sb	01 42 57.9	+0.8
ECBN	**Changbin** baz=221	0.24	224	eP	Pb	01 42 52.8	+0.4
ECBN	baz=221			eS	Sb	01 42 58.1	+0.8
EGFH	**Guangfu** baz=302	0.26	313	i P	Pb	01 42 52.8	+0.2
EGFH	baz=302			eS	Sb	01 42 58.1	+0.5
EHY	**Hungye** baz=271	0.29	273	i P	Pn	01 42 52.8	-0.1
EHY	baz=271			eS	Sb	01 42 58.1	0.0
EYUL	**Yuli** baz=255	0.32	244	eP	Pn	01 42 53.8	+0.3
EYUL	baz=255			eS	Sb	01 43 00.6	+1.6
YULB	**Yu-li** baz=263	0.32	252	P	Pb	01 42 53.4	0.0
YULB	baz=263			eS	Sb	01 42 59.1	+0.1
ESL	**Shilin** baz=322	0.37	330	i P	Pb	01 42 53.6	-0.5
ESL	baz=322			eS	Sb	01 42 59.5	-0.6
FULB	**Fuli** baz=219	0.43	227	eP	Pb	01 42 55.0	+0.1
FULB	baz=219			eS	Sn	01 43 02.5	+0.8
CHKT	**Chengkung** baz=202	0.46	212	P	Pb	01 42 54.9	-0.5
CHKT	baz=202			S	Sb	01 43 01.7	-0.6
HWA	**Hwalien** baz=5.0	0.48	357	eS	Sn	01 43 03.8	+0.7
ETM	**Tongmen** baz=336	0.49	345	P	Pb	01 42 55.2	-0.6
ETM	baz=336			eS	Sb	01 43 02.4	-0.6
VWDT	**VWDT** baz=294	0.52	300	P	Pb	01 42 56.2	-0.1
VWDT	baz=294			eS	Sb	01 43 03.4	-0.5
ECS	**Chishang** baz=236	0.55	224	eS	Sn	01 43 05.2	+0.5
TWD	**Chiawan** baz=5.0	0.59	357	eP	Pn	01 42 56.9	-0.3
TWD	baz=5.0			S	Sb	01 43 05.2	-0.4
EDH	**Donghe** baz=202	0.60	210	eP	Pn	01 42 56.8	-0.5
EDH	baz=202			eS	Sb	01 43 05.2	-0.7
ETL	**Fush Village** baz=6.0	0.66	359	eP	Pn	01 42 57.9	-0.4
ETL	baz=6.0			eS	Sn	01 43 06.8	-0.8
NACB	**Ninganchiao** baz=346	0.68	357	eP	Pn	01 42 57.7	-0.8
NACB	baz=346			eS	Sn	01 43 07.0	-0.9
SSLB	**Suanglung** baz=289	0.69	295	eP	Pn	01 42 58.4	-0.2
SSLB	baz=289			eS	Sn	01 43 07.4	-0.8
CHGB	**Renai** baz=335	0.70	323	P	Pn	01 42 58.8	-0.3
CHGB	baz=335			eS	Sn	01 43 07.9	-1.0
ETLH	**Xiulin Townshi** baz=349	0.72	349	eP	Pn	01 42 58.2	-1.0
ETLH	baz=349			eS	Sn	01 43 07.2	-2.0
WHF	**Hehuan Shan** baz=333	0.73	333	eP	Pn	01 42 58.9	-0.8
WHF	baz=333			eS	Sn	01 43 08.6	-1.2
WHYT	**Xinyi Township** baz=284	0.74	286	eP	Pb	01 42 59.7	-0.2
WHYT	baz=284			eS	Sn	01 43 09.3	-0.3
LONT	**Longtian** baz=227	0.74	219	eS	Sn	01 43 08.8	-0.7
ALS	**Alishan** baz=277	0.76	272	P	Pb	01 43 00.4	0.0
ALS	baz=277			eS	Sb	01 43 10.7	+0.1
SMLT	**Sun Moon Lake** baz=304	0.78	300	eP	Pb	01 43 00.4	-0.1
SMLT	baz=304			eS	Sb	01 43 11.6	+0.7
LDUT	**Ludao** baz=190	0.83	191	eP	Pn	01 42 59.3	-1.3
LDUT	baz=190			eS	Sn	01 43 09.9	-1.6
FUSS	**Fushou** baz=335	0.83	335	eP	Pn	01 43 00.8	-0.1
FUSS	baz=335			eS	Sn	01 43 11.1	-1.0
DPDB	**Guoxing** baz=317	0.84	310	eP	Pn	01 43 01.0	+0.2
DPDB	baz=317			eS	Sb	01 43 13.1	+0.4
TWGBT	**Beinan** baz=225	0.84	217	eP	Pn	01 42 59.6	-1.2
TWGBT	baz=225			eS	Sn	01 43 10.4	-1.5
TWG	**Pinlang** baz=225	0.84	218	eP	Pn	01 42 59.8	-1.0
TWG	baz=225			eS	Sn	01 43 10.5	-1.5
STYH	**Taoyuan** baz=245	0.85	248	eP	Pn	01 43 01.0	+0.2
STYH	baz=245			eS	Sb	01 43 12.4	-0.4
TWT	**Tachien** baz=331	0.87	331	P	Pn	01 43 01.6	+0.3
TWT	baz=331			eS	Sn	01 43 12.1	-0.7
WCS	**Beigang Elemen** baz=314	0.87	311	eP	Pn	01 43 01.4	+0.3
STYT	**Tauyuan** baz=242	0.87	248	eP	Pn	01 43 01.5	+0.3
STYT	baz=242			eS	Sb	01 43 13.1	-0.3
TDCB	**Techi** baz=331	0.87	330	P	Pn	01 43 01.6	+0.2
TDCB	baz=331			eS	Sn	01 43 12.1	-0.8
CHN5	**Tsauling** baz=282	0.88	277	eP	Pb	01 43 02.7	+0.4
CHN5	baz=282			eS	Sb	01 43 15.4	+1.5
WJS	**Zhushan** baz=292	0.89	292	eP	Pb	01 43 02.8	+0.5
WJS	baz=292			eS	Sb	01 43 14.8	+0.7
ENA	**Nanau** baz=18	0.94	6	eP	Pn	01 43 01.8	-0.3
ENA	baz=18			eS	Sn	01 43 14.5	+0.2
TPUB	**Ta-pu** baz=258	0.94	259	eP	Pb	01 43 03.3	+0.1
TPUB	baz=258			eS	Sb	01 43 15.8	+0.4
WNT	**Mingjian** baz=294	0.95	294	eS	Sb	01 43 16.8	+1.1
EWUT	**Wuta** baz=8.0	0.96	8	eS	Sn	01 43 14.6	-0.2
NNSB	**Datong** baz=346	0.96	346	eP	Pn	01 43 02.3	-0.2
NNSB	baz=346			eS	Sn	01 43 13.7	-1.4
WTP	**Ta-pu** baz=255	0.97	256	eP	Pb	01 43 04.2	+0.5
WTP	baz=255			eS	Sb	01 43 17.0	+0.8
NNS	**Nan Shan** baz=346	0.97	346	eS	Sn	01 43 14.2	-1.2
WHP	**Taichung City** baz=326	1.00	321	eP	Pb	01 43 04.6	+0.3
WHP	baz=326			eS	Sb	01 43 16.5	-0.7
WWF	**Wufeng** baz=303	1.02	303	eS	Sb	01 43 19.3	+1.7
WDLH	**Douliu** baz=281	1.02	281	eP	Pb	01 43 04.7	+0.2
WDLH	baz=281			eS	Sb	01 43 18.8	+1.1
SLGT	**Liugui** baz=235	1.03	242	eP	Pb	01 43 04.2	-0.5
SLGT	baz=235			eS	Sb	01 43 19.0	+0.9
SGST	**Jiashian** baz=238	1.05	247	eS	Sb	01 43 19.3	+0.9
CHN1	**Nanshi** baz=253	1.06	253	eP	Pb	01 43 05.2	0.0
CHN1	baz=253			eS	Sb	01 43 19.6	+0.8
TWK	**Hsinying** baz=258	1.08	258	eP	Pb	01 43 05.3	-0.2
TWK	baz=258			eS	Sb	01 43 19.3	0.0
SNST	**Tainan City** baz=256	1.08	256	eS	Sb	01 43 21.0	+1.7
TCU	**Taichung** baz=307	1.09	307	eP	Pb	01 43 05.8	+0.1
NDS	**Dongshan** baz=351	1.14	4	eS	Sn	01 43 19.4	+0.1
ENTT	**Nioudou** baz=348	1.14	357	eP	Pn	01 43 05.1	+0.2
ENTT	baz=348			eS	Sn	01 43 19.4	0.0
WCHH	**Zhanghua** baz=301	1.15	301	eP	Pb	01 43 07.0	+0.4
WCHH	baz=301			eS	Sb	01 43 22.2	+1.0
WTK	**Tuku** baz=280	1.16	280	eS	Sb	01 43 21.5	0.0
TWQ1	**Liyutan** baz=326	1.16	317	eP	Pb	01 43 06.8	-0.1
TWQ1	baz=326			eS	Sb	01 43 22.7	+1.0
SSD	**Sandimen** baz=227	1.18	231	eP	Pb	01 43 06.8	-0.5
TSMG	**Majia** baz=227	1.20	229	eS	Sb	01 43 22.3	-0.5
NSK	**Sanguang** baz=348	1.21	348	eP	Pn	01 43 06.2	+0.4
NSK	baz=348			eS	Sn	01 43 20.7	-0.3
WRL	**Guolierlin Hig** baz=280	1.22	290	eS	Sb	01 43 23.7	+0.3
WDJ	**Dajia District** baz=313	1.25	313	eP	Pb	01 43 08.1	-0.2
MASBT	**Mashibuluo** baz=226	1.27	227	eP	Pn	01 43 07.5	+0.8
MASBT	baz=226			eS	Sb	01 43 24.7	-0.1
NSTT	**Nanjuang** baz=344	1.27	333	eP	Pb	01 43 08.2	-0.6
NSTT	baz=344			eS	Sb	01 43 23.8	-1.0
LIOB	**Emei** baz=343	1.28	334	eP	Pb	01 43 08.5	-0.4
LIOB	baz=343			eS	Sb	01 43 24.8	-0.3
NWLT	**Wulai** baz=354	1.28	355	eP	Pb	01 43 08.3	-0.6
NWLT	baz=354			eS	Sn	01 43 23.6	+0.6
CHN8	**Yiju** baz=264	1.31	264	eS	Sb	01 43 26.0	0.0
SCZT	**Fangliau** baz=209	1.45	220	eP	Pb	01 43 11.8	0.0
SCZT	baz=209			eS	Sb	01 43 30.9	+0.9
TIPB	**Shuangxi** baz=355	1.48	7	eP	Pn	01 43 10.9	+1.3
TIPB	baz=355			eS	Sb	01 43 29.9	-1.0
NWF	**Wu-fen Shan** baz=352	1.58	5	eP	Pn	01 43 12.5	+1.5
NWF	baz=352			eS	Sb	01 43 32.7	-0.9
YOJ	**Yonaguni jima** baz=51	1.59	52	eP	Pn	01 43 11.8	+0.9
YOJ	baz=51			eS	Sn	01 43 30.5	+0.2
YOJ	**Yonaguni jima**	1.59	52	P	Pn	01 43 11.6	+0.6
YOJ				S	Sn	01 43 31.5	+1.2
TWK1	**Hengchun** baz=194	1.72	207	eS	Sn	01 43 33.4	-0.2
PHUB	**P'eng-hu** baz=271	1.89	271	eS	Sn	01 43 37.7	-0.2
IRIF	**Iriomote-Funau**	2.09	66	P	Pn	01 43 17.9	-0.1
IRIF				eS	Sn	01 43 43.5	+0.7
JKRS	**Kuro-shima**	2.30	71	eS	Sn	01 43 49.2	+1.3
JIJ	**Ishigaki jima**	2.46	69	eS	Sn	01 43 52.2	+0.4
JISG	**Ishigakijimahi**	2.68	65	P	Pn	01 43 26.4	+0.4

IDC 13 01:48:45.7±3.0**, 0°.65N**×**123°.84E, h0**^{km}**, mb4.0**/3**,**
mb1 4.2/4**, mb1mx3.4**/45**, mbtmp4.0**/4**, ML3.9**/1**, Error**
ellipse: s-maj=64.6km s-min=34.9km az=33.0,
Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi** 0.3nm,0.3s,baz=359,slow=13,SNR=2.0	18.71	175	P	P	01 53 05.8	-0.1
WRA	**Warramunga Arr** 1.5nm,0.3s,baz=338,slow=9.0,SNR=15	22.91	154	P	P	01 53 51.4	0.0
ASAR	**Alice Springs** 1.2nm,0.4s,baz=333,slow=10.0,SNR=36	26.07	159	P	P	01 54 21.1	0.0
STKA	**Stephens Creek** 1.1nm,0.4s,baz=309,slow=9.1,SNR=4.7	36.46	154	P	P	01 55 54.0	+1.5

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*IDC **13** 01:51:16.6±1.1, 37°.02N×97°.85W, h0^{km}, mb3.8/1,*
mb1 3.8/4, mb1mx3.5/48, mbtmp3.4/4, ML3.6/4, MS3.6/2,
Ms1 3.6/2, ms1mx2.9/42, Error ellipse: s-maj=15.2km
s-min=12.9km az=179.0
*TUL **13** 01:51:16.8±1.0, 36°.95N±0°.02×97°.83W±0°.05, h3^{km}±6^{km},*
ML3.4, mb_Lg3.3/81(NEIC), ML3.2/26(NEIC), Error ellipse:
s-maj=5.8km s-min=2.5km az=79.0
*NEIC **13** 01:51:17.0±0.9, 36°.95N±0°.04×97°.83W±0°.07, h5^{km}±6^{km},*
Error ellipse: s-maj=7.6km s-min=5.6km az=80.0
*NEIC **13** 01:51:17.2±0.9, 36°.931N±0°.004×97°.83W±0°.06, h3^{km}±6^{km},*
Error ellipse: s-maj=6.6km s-min=0.6km az=86.0
*ANF **13** 01:51:19.1±1.4, 36°.99N×97°.84W, h20^{km}±11^{km}, ML4.2/11,*
Error ellipse: s-maj=5.1km s-min=3.8km az=95.0
ISC 13 01:51:17.2±0.8**, 36°.95N**±0°.02×**97°.84W**±0°.02**, h9**^{km}±5^{km}**,**
n131, σ0ˢ.84/134**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	**Grant County #**	0.10	192		Pg	01 51 19.3	-0.3
GC02				Sg	Sg	01 51 21.0	-0.3
KAN14	**Manchester OK**	0.10	275		Pg	01 51 19.4	-0.3
KAN14				Sg	Sg	01 51 21.1	-0.3
KAN17	**Caldwell West**	0.11	30	Pg	Pg	01 51 19.6	-0.3
KAN17				Sg	Sg	01 51 21.4	-0.3
KAN05	**Bluff City Nor**	0.16	350		Pg	01 51 20.5	-0.2
KAN05				Sg	Sg	01 51 23.2	+0.1
KAN01	**Argonia South**	0.21	17	Pg	Pg	01 51 21.4	-0.2
KAN01				Sg	Sg	01 51 24.6	0.0
KAN09	**Caldwell North**	0.26	43	Pg	Pg	01 51 22.2	-0.2
KAN10	**Anthony SW Sta**	0.27	310		Pg	01 51 22.6	-0.1
KAN13	**South Haven SW**	0.29	77	Pg	Pg	01 51 22.9	-0.2
KAN08	**Anthony NE Sta**	0.30	339		Pg	01 51 23.2	0.0
KAN06	**Argonia West S**	0.30	356		Pg	01 51 23.1	-0.1
KAN16	**Harper SW Stat**	0.33	327	Pg	Pg	01 51 23.8	-0.1
OK032	**Salt Plains WL**	0.33	245	Pg	Pg	01 51 23.7	-0.1
KS20	**Mayfield South**	0.36	38	Pg	Pg	01 51 24.1	-0.2
KS21	**Milan North St**	0.36	22		Pg	01 51 24.3	-0.2
KS21					Sg	01 51 29.4	+0.1
KAN12	**Harper NE Stat**	0.37	340		Pg	01 51 24.5	-0.1
KAN12					Sg	01 51 29.8	+0.3
CROK	**Carrier**	0.46	195		Pg	01 51 26.1	-0.1
BLOK	**Blackwell**	0.53	110	Pg	Pg	01 51 27.3	-0.2
T35A	**Sooner Cattle**	1.06	91	Pg	Pg	01 51 36.9	-0.7
T35B	**Sooner Cattle** baz=270,SNR=156	1.06	91	P	Pg	01 51 36.9	-0.7
T35B	baz=270			S	Sg	01 51 50.7	-0.7
U32A	**Winter Ranch,**	1.10	239	Pg	Pg	01 51 37.6	-0.7
U32A	**Winter Ranch,** baz=60,SNR=19	1.10	239	P	Pg	01 51 37.6	-0.7
U32A	baz=60			S	Sg	01 51 52.7	+0.2
OK029	**Liberty Lake**	1.19	165		Pg	01 51 39.3	-0.8
QUOK	**Quay**	1.19	130		Pg	01 51 39.4	-0.8
OK031	**S. Brethren Rd**	1.28	141		Pg	01 51 40.8	-0.9
BCOK	**Bluff Creek, N**	1.30	172		Pn	01 51 41.1	-0.5
OK030	**Cody Creek RV**	1.32	140		Pn	01 51 41.5	-0.4
OKCFA	**Oklahoma City**	1.56	168		Pn	01 51 45.5	+0.3
OKCFA	comp=Z,157nm,0.8s			IAmb_Lg		01 52 08.8	
OKCFA	**Oklahoma City** baz=349,SNR=10	1.56	168	P	Pn	01 51 45.8	+0.6
OKCFA	baz=349			Sb	Sb	01 52 07.4	+1.2
OKCSW	**OKLAHOMA CITY**	1.57	168		Pn	01 51 46.0	+0.6
R32A	**Long Quarter,**	1.63	335		Pb	01 51 47.1	-0.4
R32A	**Long Quarter,** baz=155,SNR=104	1.63	335	P	Pb	01 51 47.1	-0.4
R32A	baz=155			S	Sg	01 52 08.3	-1.3
FNO	**Franklin**	1.72	168		Pn	01 51 48.2	+0.7
TUL1	**Leonard** baz=302	1.95	122	P	Pn	01 51 51.2	+0.7
TUL1	baz=302			S	Sb	01 52 17.9	+0.6
TUL1	**Leonard**	1.95	122		Pn	01 51 51.2	+0.7
TUL1	comp=Z,156nm,0.8s			IAmb_Lg		01 52 21.9	
TUL1	**Leonard** baz=302,SNR=80	1.95	122	P	Pn	01 51 51.2	+0.7
TUL1	baz=302			S	Sb	01 52 17.8	+0.6
WMOK	**Wichita Mounta** baz=19	2.33	199	P	Pn	01 51 56.5	+0.5
WMOK	baz=19			S	Sn	01 52 26.5	+1.7
WMOK	**Wichita Mounta**	2.33	199		Pn	01 51 56.4	+0.5
WMOK	**Wichita Mounta** baz=19,SNR=60	2.33	199	P	Pn	01 51 56.5	+0.5
WMOK	baz=19			S	Sn	01 52 26.5	+1.7
X34A	**Smith Ranch, M**	2.34	180	Pn	Pn	01 51 57.4	+1.4
X34A	comp=Z,79nm,1.2s			IAmb_Lg		01 52 30.9	
KSU1	**Kansas State U** baz=204	2.36	24	P	Pn	01 51 57.1	+0.9
KSU1	baz=204			Sb	Sb	01 52 29.4	+0.2
KSU1	**Kansas State U**	2.36	24		Pn	01 51 57.1	+0.9
KSU1	**Kansas State U** baz=204,SNR=23	2.36	24	P	Pn	01 51 57.2	+0.9
KSU1	baz=204			S	Sb	01 52 29.4	+0.2
CBKS	**Cedar Bluff** baz=141	2.40	322	P	Pn	01 51 57.6	+0.9
CBKS	baz=141			Sb	Sb	01 52 31.0	+0.7
CBKS	**Cedar Bluff**	2.40	322	Pn	Pn	01 51 57.8	+0.9
CBKS	**Cedar Bluff** baz=141,SNR=16	2.40	322	P	Pn	01 51 57.7	+0.9
CBKS	baz=141			S	Sb	01 52 30.8	+0.5
U38A	**Gravette**	2.82	99		Pn	01 52 03.7	+1.2
U38A	**Gravette** baz=281,SNR=38	2.82	99	P	Pn	01 52 03.8	+1.3
LOOK	**Love County**	3.00	170	Pn	Pn	01 52 06.1	+1.1
X37A	**Clayton**	3.09	139		Pn	01 52 07.0	+0.8

HHAR	Hobbs	3.20	101		Pn	01 52 08.8	+0.9
HHAR	Hobbs	3.20	101	P	Pn	01 52 09.1	+1.2
	baz=283						
Z35A	Perchaven, San	3.64	172		Pn	01 52 14.7	+0.9
Z35A	Perchaven, San	3.64	172	P	Pn	01 52 14.8	+0.9
	baz=353,SNR=7.3						
Z35A				S	Sn	01 52 58.7	+1.8
	baz=353						
S39A	Bolivar	3.67	77		Pn	01 52 14.7	+0.4
S39A				IAmb_Lg		01 53 18.2	
	comp=Z,49nm,0.7s						
S39A	Bolivar	3.67	77	P	Pn	01 52 14.8	+0.4
	baz=259,SNR=22						
W39A	Magazine	3.72	117	Pb	Pb	01 52 24.2	+1.1
	baz=299						
W39A	Magazine	3.72	117		Pn	01 52 15.7	+0.8
W39A				IAmb_Lg		01 53 20.5	
	comp=Z,96nm,0.8s						
AMTX	Amarillo	3.74	238	Pb	Pb	01 52 25.0	+1.5
	baz=56						
AMTX				Sb	Sg	01 53 14.0	-3.4
	baz=56						
AMTX	Amarillo	3.74	238	Pn	Pn	01 52 15.0	-0.3
N33A	J Bar K, Exete	3.80	4	IAmb_Lg		01 53 25.0	
	comp=Z,68nm,0.9s						
U40A	Yellville	4.05	97	P	Pn	01 52 20.5	+1.0
	baz=280						
U40A	Yellville	4.05	97		Pn	01 52 20.1	+0.7
U40A	Yellville	4.05	97	P	Pn	01 52 20.4	+1.0
	baz=280,SNR=21						
U40A				P	Pn	01 52 20.4	+1.0
	baz=280,SNR=21						
MIAR	Mount Ida	4.21	123		Pn	01 52 22.0	+0.3
MIAR				IAmb_Lg		01 53 32.7	
	comp=Z,48nm,0.9s						
N35A	Tabor	4.27	23	Pn	Pn	01 52 21.8	-0.6
N35A	Tabor	4.27	23	P	Pn	01 52 23.5	+1.0
	baz=204						
KSCO	Kaye Shedlock'	4.31	300	P	Pn	01 52 24.1	+0.9
	baz=118						
KSCO	Kaye Shedlock'	4.31	300	Pn	Pn	01 52 23.5	+0.3
KSCO				IAmb_Lg		01 53 44.6	
	comp=Z,39nm,0.9s						
KSCO	Kaye Shedlock'	4.31	300	P	Pn	01 52 23.7	+0.6
	baz=118,SNR=6.3						
P38A	Dawn	4.31	50	Pn	Pn	01 52 23.9	+0.9
P38A				IAmb_Lg		01 53 34.1	
	comp=Z,48nm,0.8s						
P38A	Dawn	4.31	50	P	Pn	01 52 23.8	+0.7
	baz=233,SNR=9.7						
Z38A	Mt. Pleasant	4.36	147	Pn	Pn	01 52 23.4	-0.3
Z38A					LR	01 53 34.8	
MGMO	Mountain Grove	4.46	86		Pn	01 52 25.1	0.0
BGNE	Belgrade	4.46	357	P	Pn	01 52 25.9	+0.8
	baz=177						
BGNE	Belgrade	4.46	357		Pn	01 52 26.0	+0.8
BGNE	Belgrade	4.46	357	P	Pn	01 52 25.8	+0.8
	baz=177,SNR=14						
ABTX	Abilene, Hawle	4.56	200	Pn	Pn	01 52 26.0	-0.5
R40A	Maddies Statio	4.62	71		Pn	01 52 28.0	+0.7
R40A				IAmb_Lg		01 53 44.2	
	comp=Z,54nm,1.0s						
R40A	Maddies Statio	4.62	71	P	Pn	01 52 28.6	+1.3
	baz=254,SNR=24						
FCAR	Ozark Folk Cen	4.72	101		Pn	01 52 29.2	+0.5
FCAR				IAmb_Lg		01 53 44.9	
	comp=Z,52nm,0.9s						
WHAR	Wooly Hollow	4.79	109		Pn	01 52 29.8	+0.3
WHAR				IAmb_Lg		01 53 53.4	
	comp=Z,65nm,0.9s						
WHTX	Lake Whitney,	4.95	176	P	Pn	01 52 32.0	+0.1
	baz=357						
WHTX				S	Sn	01 53 28.1	-1.2
	baz=357						
WHTX	Lake Whitney,	4.95	176		Pn	01 52 32.0	+0.1
WHTX	Lake Whitney,	4.95	176	P	Pn	01 52 32.1	+0.1
	baz=357,SNR=12						
WLAR	White Oak Lake	5.05	129	Pn	Pn	01 52 33.0	-0.2
WLAR				IAmb_Lg		01 54 08.3	
	comp=Z,51nm,1.1s						
L34A	Svendsen Farm,	5.14	12	Pn	Pn	01 52 34.9	+0.5
OGNE	Ogallala	5.16	322		Pn	01 52 35.2	+0.4
OGNE				IAmb_Lg		01 54 06.0	
	comp=Z,53nm,0.7s						
237A	Washetta, Mont	5.21	161	Pn	Pn	01 52 35.9	+0.5
P40A	Paris	5.23	59	Pn	Pn	01 52 36.0	+0.3
P40A				IAmb_Lg		01 54 07.1	
	comp=Z,54nm,0.9s						
N38A	Joes South For	5.26	42	Pn	Pn	01 52 36.7	+0.6
N38A				IAmb_Lg		01 54 18.5	
	comp=Z,62nm,0.8s						
T25A	Trinidad	5.26	274	P	Pn	01 52 36.8	+0.5
	baz=90						
T25A	Trinidad	5.26	274		Pn	01 52 35.6	-0.7
CCM	Cathedral Cave	5.36	76	Pn	Pn	01 52 38.3	+0.9
CCM				IAmb_Lg		01 54 10.6	
	comp=Z,38nm,0.9s						
T42A	Van Buren	5.40	87	Pn	Pn	01 52 37.8	-0.2
LCAR	Lake Charles	5.45	97	Pn	Pn	01 52 39.0	+0.3
K31A	O'Neill	5.71	353	Pn	Pn	01 52 43.1	+0.8
CCAR	Cane Creek	5.80	120	IAmb_Lg		01 54 32.1	
	comp=Z,34nm,0.8s						
NATX	Nacogdoches	5.80	152	IAmb_Lg		01 54 36.4	
	comp=Z,28nm,0.8s						
PBMO	Poplar Bluff	5.94	89	IAmb_Lg		01 54 25.6	
	comp=Z,41nm,0.9s						
HBAR	Harrisburg	5.96	101	IAmb_Lg		01 54 37.5	
	comp=Z,40nm,0.8s						
FVM	French Village	5.98	78	Pn	Pn	01 52 46.1	+0.1
FVM				IAmb_Lg		01 54 25.9	
	comp=Z,39nm,0.8s						
SCIA	State Center	6.11	34	IAmb_Lg		01 54 36.6	
	comp=Z,54nm,0.8s						
435B	Jarrell	6.15	178	Pn	Pn	01 52 47.5	-0.8
435B					LR	01 54 34.0	
435B				IAmb_Lg		01 54 43.2	
	comp=Z,54nm,1.1s						
SDCO	Great Sand Dun	6.16	280	Pn	Pn	01 52 48.7	0.0
LPAR	Lepanto	6.23	100	IAmb_Lg		01 54 46.9	
	comp=Z,40nm,0.7s						
SLM	Saint Louis	6.25	72	IAmb_Lg		01 54 39.8	
	comp=Z,43nm,0.8s						
N41A	Harden Midland	6.62	53	IAmb_Lg		01 54 49.5	
	comp=Z,44nm,0.7s						
JCT	Junction City	6.66	195	IAmb_Lg		01 54 53.6	
	comp=Z,34nm,0.8s						
ISCO	Idaho Springs	6.74	297		Pn	01 52 56.6	-0.1
LNXT	Lenox	6.77	95	IAmb_Lg		01 55 10.3	
	comp=Z,51nm,0.8s						
ECSD	EROS Data Cent	6.84	7	P	Pn	01 52 57.6	-0.2
	baz=188						
ECSD				S	Sn	01 54 13.4	-2.4
	baz=188						
ECSD	EROS Data Cent	6.84	7	Pn	Pn	01 52 59.7	+1.9
ECSD				IAmb_Lg		01 55 03.9	
	comp=Z,27nm,1.1s						
S44A	Carbondale	6.88	81	Pn	Pn	01 52 59.2	+0.9
S44A				IAmb_Lg		01 54 58.6	
	comp=Z,32nm,0.8s						
K38A	Parkersburg	6.90	33	IAmb_Lg		01 54 59.3	
	comp=Z,40nm,0.7s						
SIUC	Southern Illin	6.91	81	IAmb_Lg		01 54 56.4	
	comp=Z,37nm,0.8s						
HALT	Halls	6.93	96	IAmb_Lg		01 55 05.5	
	comp=Z,51nm,1.0s						
P43A	Skaggs, Pawnee	7.07	65	Pn	Pn	01 53 01.4	+0.5
W45A	Hickory Valley	7.23	102	Pn	Pn	01 53 03.1	-0.1
W45A				IAmb_Lg		01 55 06.1	
	comp=Z,34nm,0.8s						
ANMO	Albuquerque	7.27	257	Pn	Pn	01 53 05.9	+2.0
	comp=Z,0.1nm,0.3s,baz=52,slow=19,SNR=2.2						
ANMO				Lg	Lg	01 55 03.3	
	comp=Z,1.0nm,0.3s,baz=166,slow=22,SNR=6.3						
T45A	Paducah	7.36	87	IAmb_Lg		01 55 29.3	
	comp=Z,44nm,0.7s						
Y45A	Yeager Farm, C	7.43	112	IAmb_Lg		01 55 28.6	
	comp=Z,28nm,0.9s						
SUSD	Miller	7.54	354	IAmb_Lg		01 55 36.5	
	comp=Z,26nm,0.7s						
SMCO	Snowmass	7.54	290	Pn	Pn	01 53 07.6	-0.3
JFWS	Jewell Farm	8.33	42	IAmb_Lg		01 55 47.0	
	comp=Z,25nm,0.7s						
K22A	Casper	8.78	313	IAmb_Lg		01 56 19.3	
	comp=Z,27nm,1.1s						
TXAR	Lajitas Array	9.03	214	Pn	Pn	01 53 26.9	-1.1
	comp=Z,0.2nm,0.3s,baz=40,slow=11,SNR=12						
TXAR				Lg	Lg	01 55 59.6	
	comp=Z,0.5nm,0.3s,baz=52,slow=29,SNR=5.6						
PDAR	Pinedale Array	10.72	306	Pn	Pn	01 53 50.4	-0.7
	comp=Z,0.1nm,0.3s,baz=118,slow=16,SNR=4.0						
PDAR				Lg	Lg	01 56 52.2	
	comp=Z,0.3nm,0.3s,baz=106,slow=30,SNR=5.4						
TKL	Tuckaleechee C	11.42	92	Pn	Pn	01 54 00.2	-0.4
	comp=Z,0.3nm,0.3s,baz=219,slow=8.0,SNR=4.7						
TKL				Lg	Lg	01 57 11.2	
	comp=Z,0.6nm,0.3s,baz=30,slow=22,SNR=6.4						
ILAR	Eielson Array	40.02	330	P	P	01 58 53.4	+1.2
	comp=Z,1.1nm,0.7s,baz=107,slow=7.0,SNR=13						
PTGA	Pitinga	51.33	128	LR	LR	02 24 06.7	
	comp=Z,59nm,20.9s,baz=336,slow=38						
RPN	Rapa Nui	64.65	191	LR	LR	02 25 43.8	
	comp=Z,47nm,19.8s,baz=46,slow=32						

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*IDC **13** 01:56:13.2±0.8, 24°.44N×94°.59E, h0^{km}, mb4.1/10, mb1 4.1/11, mb1mx3.7/55, mbtmp4.0/11, ML3.5/1, MS2.7/1, Ms1 2.9/1, ms1mx2.4/36, Error ellipse: s-maj=37.3km s-min=14.2km az=62.0*

*NEIC **13** 01:56:21.9±1.2, 24°.5N±0°.1×94°.66E±0°.07, h71^{km}±11^{km}, mb4.2/15, Error ellipse: s-maj=16.2km s-min=8.5km az=188.0*

*NDI **13** 01:56:22.0±2.1, 24°.61N×94°.53E, h102^{km}±36^{km}, ML3.6, mb4.2(NEIC)*

ISC 13 01:56:22.9±0.8**, 24°.58N**±0°.08×**94°.62E**±0°.09**, h82^{km}, n32, σ1^{s}.44**/30**, mb4.2**/17**, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOHI	KOHIMA	1.23	338	*e*P	Pn	01 56 44.8	-0.2
KOHI				*e*S	Sn	01 57 00.6	-0.9
KOHI				IAML		01 57 04.4	
	comp=N,969nm,0.4s						
KOHI				IAML		01 57 09.9	
	comp=E,710nm,0.4s						
JORH	JORHAT	2.18	351	*e*S	Sn	01 57 22.4	-1.1
SHL	Shillong	2.67	292	*i* P	Pn	01 57 03.6	-0.3
SHL				*e*S	Sn	01 57 31.9	-3.5
SHL	Shillong	2.67	292	Pn	Pn	01 57 03.5	-0.3
ITAN	ITANAGAR	2.68	343	*e*P	Pn	01 57 01.3	-2.6
LSA	Lhasa	5.96	330	Pn	Pn	01 57 48.9	-0.1
CHTO	Chiang Mai	7.00	144	Pn	Pn	01 57 59.8	-3.1
CM31	Chiang Mai Arr	7.30	146	Pn	Pn	01 57 58.5	-8.4
CMAR	Chiang Mai Arr	7.30	146	Pn	Pn	01 57 59.2	-7.7
	comp=E,0.2nm,0.3s,baz=318,slow=12,SNR=1.2						
CMAR				Lg	Lg	02 00 02.9	
	comp=E,0.4nm,0.3s,baz=311,slow=30,SNR=2.0						
CMAR				LR	LR	02 00 49.7	
	comp=E,54nm,18.1s,baz=79,slow=38						
NIL	Nilore	20.71	301	P	P	02 00 56.2	-0.4
NIL				IAmb	IAmb	02 01 04.3	
	comp=Z,8.3nm,0.4s						
MK31	Makanchi Array	24.27	339	P	P	02 01 33.6	+1.4
MK31				IAmb	IAmb	02 01 34.8	
	comp=Z,2.8nm,0.8s						
MKAR	Makanchi Array	24.27	339	P	P	02 01 34.1	+1.9
	comp=Z,2.8nm,0.5s,baz=148,slow=11,SNR=43						
MKAR	Makanchi Array	24.27	339	P	P	02 01 33.5	+1.3
MAKZ	Makanchi	24.38	339	P	P	02 01 34.2	+0.9
MAKZ				IAmb	IAmb	02 01 36.5	
	comp=Z,4.9nm,0.6s						
AAK	Ala-Archa	24.50	322	P	P	02 01 35.2	+0.6
	comp=Z,1.2nm,0.6s,baz=159,slow=8.6,SNR=6.4						
AAK	Ala-Archa	24.50	322	IAmb	IAmb	02 01 39.0	
	comp=Z,1.6nm,0.7s						
SONM	Songino Array	25.02	19	P	P	02 01 40.9	+1.7
	comp=Z,0.6nm,0.5s,baz=188,slow=9.0,SNR=4.0						
SONM	Songino Array	25.02	19	P	P	02 01 37.2	-2.0
GAR	Garm	25.07	311	P	P	02 01 40.3	+0.5
GAR				IAmb	IAmb	02 01 43.1	
	comp=Z,11nm,1.0s						
KURBB	Kurchatov Arra	28.83	339	P	P	02 02 14.1	+0.9
	comp=Z,1.2nm,0.3s,baz=166,slow=8.8,SNR=1.7						
ZALV	Zalesovo Beam	30.24	348	P	P	02 02 26.9	+1.2
	comp=Z,0.7nm,0.4s,baz=180,slow=8.5,SNR=5.3						
ABKAR	Akbulak array	36.58	321	P	P	02 03 21.3	+0.6
ABKAR				IAmb	IAmb	02 03 50.8	
	comp=Z,3.6nm,1.4s						
TIXI	Tiksi	50.90	13	P	P	02 05 15.5	+0.4
	comp=Z,2.9nm,0.3s,baz=181,slow=3.9,SNR=3.6						
TIXI	Tiksi	50.90	13	IAmb	IAmb	02 05 15.9	
	comp=Z,3.5nm,0.4s						
FINES	FINESS Array B	58.48	328	P	P	02 06 10.5	+0.4
	comp=Z,2.5nm,1.1s,baz=83,slow=12,SNR=3.4						
WB0	Warramunga Arr	58.67	135	P	P	02 06 11.5	-0.5
WB0				IAmb	IAmb	02 06 12.4	
	comp=Z,4.5nm,1.2s						
WRA	Warramunga Arr	58.76	135	P	P	02 06 12.7	0.0
	comp=Z,1.1nm,0.3s,baz=323,slow=7.5,SNR=43						
WRAB	Tennant Creek	58.77	135	P	P	02 06 10.9	-1.8
WB2	Warramunga Arr	58.77	135	P	P	02 06 11.7	-1.0
WB2				IAmb	IAmb	02 06 20.4	
	comp=Z,7.2nm,1.4s						
ASAR	Alice Springs	61.25	139	P	P	02 06 30.1	+0.4
	comp=Z,1.0nm,0.4s,baz=321,slow=6.9,SNR=13						
A36M	Sachs Harbour	79.88	12	P	P	02 08 22.9	+0.7
A36M				IAmb	IAmb	02 08 24.1	
	comp=Z,4.8nm,0.7s						
BOSA	Boshof	85.12	236	P	P	02 08 51.3	+1.1
	comp=Z,1.3nm,0.6s,baz=56,slow=3.6,SNR=6.1						

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*IDC **13** 02:13:26.0±1.2, 8°.49N×71°.45W, h0^{km}, mb3.4/2, mb1 3.9/4, mb1mx3.5/33, mbtmp3.7/4, ML3.1/2, Error ellipse: s-maj=36.2km s-min=10.4km az=159.0*

*FUNV **13** 02:13:28.0, 8°.46N×71°.40W, h2^{km}, MW3.3*

ISC 13 02:13:27.3±1.2**, 8°.51N**±0°.03×**71°.40W**±0°.02**, h5^{km}**±9^{km}**, n56, σ2^{s}.02**/92**, 1C-1D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.58	113	*e*P	Pg	02 13 38.5	0.0
SOCV	Socops	0.58	113	*e*P	Pg	02 13 38.5	0.0
SOCV				*e*S	Sg	02 13 47.3	+1.2
SDV	Santo Domingo	0.84	64	Pg	Pg	02 13 43.8	+0.3
	54nm,0.3s,baz=345,slow=18,SNR=121						
SDV				Lg	Lg	02 13 55.3	
	90nm,0.3s,baz=309,slow=15,SNR=16						
SDV	Santo Domingo	0.84	64	*e*P	Pg	02 13 43.8	+0.3
CAPV	Capacho	1.11	235	⇓*i*P	Pg	02 13 47.6	-1.1
CAPV				*e*S	Sg	02 14 03.4	+0.2
PAMC	Pamplona, Colo	1.74	228	*e*P	Pn	02 13 59.3	+0.6
PAMC				*e*S	Sg	02 14 22.6	-0.7
MCQV	Machiques	1.90	324	⇑*i*P	Pn	02 14 01.1	+0.6
MCQV				*e*S	Sn	02 14 26.1	+1.3
OCAC	Ocana	1.92	262	*e*P	Pn	02 14 01.1	+0.1
OCAC				*e*S	Sn	02 14 25.9	+0.3
TAMC	Tame, Arauca	2.10	191	*e*P	Pn	02 14 04.6	+1.3
TAMC				*e*S	Sb	02 14 32.4	0.0
LL6C	La Loma 6 Bece	2.21	303	*e*P	Pn	02 14 04.4	-0.4
LL6C				*e*S	Sn	02 14 32.3	-0.3
LL1C	La Loma 1 Cana	2.37	296	*e*P	Pn	02 14 09.8	+2.9
LL1C				*e*S	Sn	02 14 38.4	+2.0
ELOV	Elorza	2.42	128	*e*P	Pn	02 14 09.6	+2.0
ELOV				*e*S	Sb	02 14 41.7	+0.2
ELOV	Elorza	2.42	128	*e*P	Pn	02 14 07.2	-0.4
ELOV				*e*S	Sn	02 14 36.7	-1.0
BARC	Barichara	2.60	223	*e*P	Pb	02 14 14.9	+0.2
SIQV	Siquisique	2.64	36	*e*P	Pn	02 14 12.0	+1.2
SIQV				*e*S	Sn	02 14 43.7	+0.5
SMLC	San Martn de	2.66	276	*e*P	Pn	02 14 10.5	-0.4
SMLC				*e*S	Sb	02 14 48.1	-0.5
BRRC	Barranca, Sant	2.69	239	*e*P	Pn	02 14 12.5	+1.2
BRRC				*e*S	Sb	02 14 47.2	-2.1
RUSC	La Rusia	3.09	213	*e*P	Pn	02 14 18.6	+1.2
RUSC				*e*S	Sn	02 14 57.0	+2.0
ARGC	Ariguani, Magd	3.12	296	*e*P	Pn	02 14 17.1	-0.1
URIC	Uribia, Colomb	3.23	350	*e*P	Pn	02 14 19.3	+0.5
BAUV	El Baul	3.34	82	*e*P	Pn	02 14 21.3	+0.9
BAUV				*e*S	Sn	02 14 59.6	-1.0
ZARC	Zaragoza, Cauc	3.57	254	*e*P	Pn	02 14 23.7	+0.2
ZARC				*e*S	Sn	02 15 09.9	+3.6
JACV	Jacura	3.60	44	*e*P	Pn	02 14 25.0	+1.1
JACV				*e*S	Sn	02 15 05.8	-1.1
MONV	Montecano	3.70	22	*e*P	Pn	02 14 25.7	+0.4
MONV				*e*S	Sn	02 15 08.7	-0.6
SMRC	Santa Marta, M	3.84	314	*e*P	Pn	02 14 25.6	-1.6
SMRC				*e*S	Sn	02 15 08.9	-3.8
SPBC	San Pablo de B	3.89	223	*e*P	Pn	02 14 29.2	+1.2
SPBC				*e*S	Sn	02 15 16.6	+2.5
SJCC	San Jacinto, C	3.98	291	*e*P	Pn	02 14 30.0	+0.8
SJCC				*e*S	Sn	02 15 18.3	+1.9
BENV	Beln	4.02	69	*e*P	Pn	02 14 30.4	+0.7
BENV				*e*S	Sn	02 15 15.4	-1.9
UREC	San Jos de Ur	4.16	260	*e*P	Pn	02 14 32.5	+0.8
MOTC	Monteria, Cord	4.23	274	*e*P	Pn	02 14 33.2	+0.7
MOTC				*e*S	Sn	02 15 20.9	-1.5
PTGC	Puerto Gaitan,	4.35	190	*e*P	Pn	02 14 34.7	+0.5
CHIC	Chingaza	4.50	211	*e*P	Pn	02 14 38.1	+1.4
CHIC				*e*S	Sn	02 15 28.8	-0.8
NORC	Norcasia	4.52	230	*e*P	Pn	02 14 37.9	+1.2
NORC				*e*S	Sn	02 15 31.9	+2.1
TACV	Tcata	4.61	69	*e*P	Pn	02 14 38.0	+0.2
ROSC	El Rosal	4.66	219	Pn	Pn	02 14 39.5	+0.7
	7.1nm,0.3s,baz=108,slow=8.8,SNR=5.4						
ROSC				Sn	Sb	02 15 41.0	-5.6
	5.9nm,0.3s,baz=52,slow=19,SNR=3.7						
HELC	Santa Helena	4.70	241	*e*P	Pn	02 14 40.2	+0.8
HELC				*e*S	Sn	02 15 39.0	+4.4
PAYV	Puerto Ayacuch	4.82	129	*e*P	Pn	02 14 40.5	-0.2
PAYV				*e*S	Sn	02 15 33.1	-3.9
CACV	CAICARA DEL OR	4.90	101	*e*P	Pb	02 14 49.2	-4.5
CACV				*e*S	Sn	02 15 47.0	+8.1
VILC	Villavicencio,	4.93	208	*e*P	Pn	02 14 42.8	+0.5
DBBC	Dabeiba	5.00	253	*e*P	Pn	02 14 46.4	+3.2
DBBC				*e*S	Sn	02 15 42.3	+0.9
MERV	Las Mercedes	5.09	81	*e*P	Pn	02 14 44.5	0.0
GUY2C	Guyana, Caldas	5.12	231	*e*P	Pn	02 14 45.6	+0.4
GUY2C				*e*S	Sn	02 15 49.9	+4.9
CBOC	Ciudad Bolivar	5.28	240	*e*P	Pn	02 14 49.3	+2.1
BIRV	Birongo	5.42	68	*e*P	Pn	02 14 49.0	0.0
BIRV				*e*S	Sn	02 15 48.2	-3.7
ANIL	Santa Ana	5.64	225	*e*P	Pn	02 14 54.3	+2.1
ANIL				*e*S	Sn	02 15 57.2	-0.4
PRAC	Prado	5.89	216	*e*P	Pn	02 14 55.9	+0.4
PRAC				*e*S	Sn	02 15 58.1	-5.4
ORTC	Ortega, Tolima	5.96	220	*e*P	Pn	02 14 57.2	+0.8
ORTC				*e*S	Sn	02 16 05.1	-0.2
PLMC	San Jos del P	6.03	234	*e*P	Pn	02 14 59.4	+2.0
PLMC				*e*S	Sn	02 16 08.9	+1.9
PRGV	PARIAGUAN	6.68	87	*e*P	Pn	02 15 05.6	-0.7
MACC	Macarena, Meta	6.78	201	*e*P	Pn	02 15 06.3	-1.4
MACC				*e*S	Sn	02 16 24.0	-1.3
PCRV	Puerto La Cruz	6.87	76	Pn	Pn	02 15 11.1	+2.1
	1.4nm,0.3s,baz=199,slow=3.5,SNR=7.0						
PCRV	Puerto La Cruz	6.87	76	*e*P	Pn	02 15 08.8	-0.2
TXAR	Lajitas Array	36.68	309	P	P	02 20 34.5	-1.1
	0.1nm,0.5s,baz=129,slow=8.7,SNR=2.1						
PDAR	Pinedale Array	47.76	322	P	P	02 22 05.7	-0.2
	0.7nm,0.6s,baz=125,slow=10,SNR=10						
ASAR	Alice Springs	151.48	235	PKPbc	PKPdf	02 33 21.2	+3.8
	0.2nm,0.6s,baz=116,slow=2.2,SNR=2.2						
WRA	Warramunga Arr	152.63	243	PKPbc	PKPbc	02 33 24.6	-1.5
	0.4nm,0.6s,baz=109,slow=2.7,SNR=5.7						

IDC 13 02:16:47.9±61.0**, 18°.71S**×**179°.01W, h0^{km}, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.7**/27**, mbtmp3.7**/3**, Error ellipse: s-maj=1107.0km s-min=162.2km az=80.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	37.75	242	P	P	02 24 05.2	-0.6
	1.1nm,0.5s,baz=85,slow=12,SNR=3.4						
WRA	Warramunga Arr	43.93	260	P	P	02 24 57.3	+0.3
	0.2nm,0.2s,baz=94,slow=7.6,SNR=11						
ASAR	Alice Springs	44.03	255	P	P	02 24 57.5	-0.3
	0.9nm,0.6s,baz=89,slow=8.3,SNR=12						

INET 13 03:05:38.2, 13°.00N×86°.69W, h10^{km}, ML3.7, Nicaragua

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*NOU **13** 03:11:47.9, 37°.84S×178°.55E, h4^{km}, MLv4.1/6, Off E. Coast of N. Island, N.Z.*

*IDC **13** 03:11:57.8±7.4, 37°.34S×176°.81E, h0^{km}, mb3.9/3, mb1 4.1/3, mb1mx3.6/31, mbtmp3.9/3, Error ellipse: s-maj=402.0km s-min=62.2km az=172.0*

*WEL **13** 03:11:59.2, 38°S±4°×17°8E±°, h35^{km}±5^{km}, M3.3/37, ML3.6/37, MLv3.3/37, Error ellipse: s-maj=0.0km s-min=0.0km az=157.1*

ISC 13 03:11:58.9±0.9**, 37°.85S**±0°.03×**177°.55E**±0°.03**, h35^{km}, n105, σ1^{s}.43**/109**, mb3.9**/3**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUGZ	Raukumara Rang	0.15	138	P	Pn	03 12 05.7	+0.2
RUGZ				S	Sn	03 12 10.9	+0.9
HAZ	Te Kaha	0.21	62	P	Pn	03 12 06.1	+0.3
HAZ				S	Sn	03 12 11.5	+1.0
PKGZ	Pakihiroa	0.42	95	P	Pn	03 12 08.3	-0.2
PKGZ				S	Sn	03 12 18.8	+3.8
WIZ	White Island	0.44	318	P	Pn	03 12 09.0	+0.4
WHRZ	Whale Island	0.46	270	P	Pn	03 12 09.8	+0.8
TWGZ	Tauwhareparae	0.47	134	P	Pn	03 12 10.1	+1.0
TWGZ				S	Sn	03 12 19.7	+3.4
MWZ	Matawai	0.48	182	P	Pn	03 12 09.5	+0.2
MWZ				S	Sn	03 12 17.8	+1.2
URZ	Urewera	0.53	221	P	Pn	03 12 10.4	+0.3
URZ	Urewera	0.53	221	P	Pn	03 12 10.4	+0.3
PUZ	Puketiti	0.60	112	P	Pn	03 12 11.3	+0.4
TKGZ	Te Karaka	0.63	158	P	Pn	03 12 12.5	+1.1
RAGZ	Rawiri	0.65	190	P	Pn	03 12 12.5	+0.8
MXZ	Matakaoa Point	0.67	64	P	Pn	03 12 12.0	+0.2
WMGZ	Waiomatatini S	0.68	87	P	Pn	03 12 12.6	+0.5
EDRZ	Edgecumbe	0.69	248	P	Pn	03 12 12.9	+0.6
MARZ	Manawahe	0.71	259	P	Pn	03 12 12.6	+0.1
OPRZ	Ohinepanea	0.79	270	P	Pn	03 12 13.5	0.0
CNGZ	Carnagh Statio	0.81	141	P	Pn	03 12 14.5	+0.6
RIGZ	Rimuhau	0.87	169	P	Pn	03 12 15.4	+0.7
MUGZ	Murupara	0.88	224	P	Pn	03 12 15.1	+0.3
RTZ	Ruatahuna	0.88	210	P	Pn	03 12 14.9	0.0
MKRZ	Makatiti	0.90	251	P	Pn	03 12 16.4	+1.1
TARZ	Mount Tarawera	0.91	245	P	Pn	03 12 16.0	+0.7
SNGZ	Shannon Statio	0.94	190	P	Pn	03 12 17.4	+1.8
OMRZ	Omania	0.97	255	P	Pn	03 12 16.4	+0.4
TGRZ	Tauranga	1.03	277	P	Pn	03 12 16.8	-0.1
KARZ	Kaharoa	1.05	260	P	Pn	03 12 17.4	+0.3
PRGZ	Paritu Road	1.10	166	P	Pn	03 12 17.8	0.0
NGRZ	Ngongotaha	1.11	257	P	Pn	03 12 19.2	+1.2
PRRZ	Plateau Road	1.12	234	P	Pn	03 12 18.4	+0.3
RAHZ	Arahi	1.12	199	P	Pn	03 12 19.0	+0.8
MTHZ	Maungataniwha	1.14	209	P	Pn	03 12 18.5	+0.1
ALRZ	Allen Road	1.19	233	P	Pn	03 12 19.4	+0.3
MYRZ	Mayor Island	1.19	298	P	Pn	03 12 18.8	-0.2
WHHZ	Waihua	1.25	191	P	Pn	03 12 21.5	+1.7
KMRZ	Kaimai	1.27	270	P	Pn	03 12 20.5	+0.2
MHGZ	Mahia Peninsul	1.33	168	P	Pn	03 12 20.9	0.0
NMHZ	Naumai	1.37	205	P	Pn	03 12 22.7	+1.1
ARHZ	Aropaoanui	1.47	197	P	Pn	03 12 23.9	+0.9
KUTZ	Kaahu Road	1.50	245	P	Pn	03 12 24.2	+0.8
BKZ	Black Stump Fm	1.55	212	P	Pn	03 12 24.2	+0.1
BKZ	Black Stump Fm	1.55	212	P	Pn	03 12 24.4	+0.3
TOZ	Tahuroa Road	1.63	274	P	Pn	03 12 25.0	-0.1
MCHZ	McNeill Hill	1.72	203	P	Pn	03 12 28.4	+2.0
RATZ	Rangitukua	1.73	234	P	Pn	03 12 28.7	+2.2
RITZ	Rihia Road	1.74	229	P	Pn	03 12 27.4	+0.8
KWHZ	Kaweka Forest	1.80	209	P	Pn	03 12 28.5	+1.0
KUZ	Kuaotunu	1.83	307	P	Pn	03 12 27.1	-0.7
KATZ	Kakaramea	1.84	232	P	Pn	03 12 29.1	+1.0
TMVZ	Te Maari	1.92	228	P	Pn	03 12 29.8	+0.5
NTVZ	North Tongarir	1.93	229	P	Pn	03 12 30.0	+0.7
OTVZ	Oturere	1.98	228	P	Pn	03 12 30.8	+0.8
NNVZ	North Ngauruho	1.98	229	P	Pn	03 12 30.9	+0.7
WTVZ	West Tongariro	1.99	230	P	Pn	03 12 30.9	+0.7
SNVZ	South Ngauruho	2.00	228	P	Pn	03 12 31.0	+0.6
BHHZ	Black Hill Sta	2.01	215	P	Pn	03 12 31.0	+0.6
KAHZ	Kahuranaki	2.01	195	P	Pn	03 12 30.2	-0.1
KRHZ	Kereru	2.01	207	P	Pn	03 12 30.9	+0.5
NGZ	Ngauruhoe	2.02	229	P	Pn	03 12 32.9	+2.2
TUVZ	Tukino	2.05	226	P	Pn	03 12 31.4	+0.4
MOVZ	Moawhango	2.10	222	P	Pn	03 12 31.7	+0.1
WHVZ	Whangaehu Hut	2.10	227	P	Pn	03 12 32.1	+0.4
FWVZ	Far West T-bar	2.10	228	P	Pn	03 12 32.4	+0.6
DRZ	Dome Shelter	2.11	227	P	Pn	03 12 35.4	+3.4
WNVZ	Wahianoa	2.12	226	P	Pn	03 12 32.4	+0.3
TRVZ	Turoa	2.13	227	P	Pn	03 12 33.8	+1.5
WIAZ	Waiheke Island	2.20	298	P	Pn	03 12 33.0	+0.1
HIZ	Hauiti	2.23	252	P	Pn	03 12 34.6	+1.3

HIZ	Hauiti	2.23	252	P	Pn	03 12 35.8	+2.5
PXZ	Pawanui	2.24	194	P	Pn	03 12 31.9	-1.6
PKVZ	Pokaka	2.25	230	P	Pn	03 12 36.1	+2.5
PNHZ	Pukenui	2.31	207	P	Pn	03 12 34.3	-0.2
GRZ	Great Barrier	2.32	313	P	Pn	03 12 34.2	-0.3
AWAZ	Awhitu Peninsu	2.45	288	P	Pn	03 12 37.3	+0.9
ABAZ	Army Bay	2.51	299	P	Pn	03 12 37.8	+0.6
PRHZ	Porangahau	2.51	196	P	Pn	03 12 35.8	-1.4
TSZ	Takapari Road	2.53	209	P	Pn	03 12 36.8	-0.7
VRZ	Vera Road	2.53	239	P	Pn	03 12 39.3	+1.8
WAZ	Wanganui	2.76	226	P	Pn	03 12 42.5	+1.8
LREZ	Lake Rotokare	2.94	236	P	Pn	03 12 47.3	+4.2
PRWZ	Pori Road	2.96	204	P	Pn	03 12 42.7	-0.7
BFZ	Birch Farm	3.00	199	P	Pn	03 12 42.3	-1.7
NEZ	North Egmont	3.06	241	P	Pn	03 12 48.0	+3.2
PKE	Pukeiti	3.10	243	P	Pn	03 12 48.7	+3.4
KHEZ	Kahui Hut	3.12	242	P	Pn	03 12 49.3	+3.6
MRZ	Mangatainoka R	3.19	208	P	Pn	03 12 44.9	-1.7
WCZ	Waipu Caves	3.20	306	P	Pn	03 12 47.0	+0.3
HOWZ	Holdsworth Sta	3.42	207	P	Pn	03 12 47.7	-2.1
KIW	Kapiti Island	3.63	213	P	Pn	03 12 51.1	-1.5
CAW	Cannon Point	3.78	210	P	Pn	03 12 52.4	-2.2
DUWZ	D'Urville Isla	4.07	223	P	Pn	03 13 00.2	+1.5
OUZ	Omahuta	4.13	308	P	Pn	03 13 00.4	+1.0
OUZ	Omahuta	4.13	308	P	Pn	03 13 00.5	+1.0
TCW	Tory Channel	4.20	216	P	Pn	03 12 58.4	-2.1
TUWZ	Tuamarina	4.53	217	P	Pn	03 13 02.7	-2.2
NNZ	Nelson	4.66	223	P	Pn	03 13 13.5	+6.8
BSWZ	Blackbirch Sta	4.78	215	P	Pn	03 13 06.9	-1.5
QRZ	Quartz Range	4.90	231	P	Pn	03 13 10.7	+0.7
KHZ	Kahutara	5.50	213	P	Pn	03 13 16.4	-1.8
KHZ	Kahutara	5.50	213	P	Pn	03 13 16.6	-1.6
LTZ	Lake Taylor	6.36	218	P	Pn	03 13 28.6	-1.6
ASAR	Alice Springs	39.73	278	P	P	03 19 26.4	-1.8
	0.7nm,0.7s,baz=120,slow=8.2,SNR=12						
WRA	Warramunga Arr	41.42	283	P	P	03 19 40.1	-2.0
	2.3nm,0.9s,baz=125,slow=6.8,SNR=9.0						
FITZ	Fitzroy Crossi	49.22	279	P	P	03 20 43.5	-0.6
	1.5nm,0.7s,baz=120,slow=8.1,SNR=2.2						
FINES	FINESS Array B	150.47	332	PKPbc	PKiKP	03 31 48.3	+1.8
	1.7nm,0.8s,baz=65,slow=6.6,SNR=3.6						

IDC 13 03:15:55.3±9.3,63°.96S×177°.88W,h0^{km},mb3.7/2,mb1 4.0/2,mb1mx3.4/25,mbtmp3.7/2,MS3.7/8,Ms1 3.7/8,ms1mx3.4/28,Error ellipse: s-maj=491.8km s-min=63.5km az=50.0,Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	Vanda	15.00	197	LR	LR	03 22 59.9	
	comp=Z,249nm,20.4s,baz=354,slow=28						
MAW	Mawson	41.74	210	LR	LR	03 40 00.2	
	comp=Z,144nm,19.2s,baz=183,slow=35						
DZM	Mont Dzumac	43.16	339	LR	LR	03 39 43.1	
	comp=Z,150nm,19.1s,baz=252,slow=33						
H01W1	Cape Leeuwin H	49.67	272	T	T	04 17 22.4	
	baz=149,slow=76,SNR=13						
H01W2	Cape Leeuwin H	49.68	272	T	T	04 17 26.2	
	baz=149,slow=76,SNR=14						
H01W3	Cape Leeuwin H	49.69	272	T	T	04 17 23.6	
	baz=149,slow=76,SNR=10						
ASAR	Alice Springs	51.11	299	P	P	03 24 59.0	-0.5
	0.7nm,0.6s,baz=155,slow=7.4,SNR=9.7						
WRA	Warramunga Arr	54.32	301	P	P	03 25 23.6	+0.3
	1.9nm,0.9s,baz=158,slow=6.1,SNR=4.9						
WRA				LR	LR	03 45 02.6	
	comp=Z,62nm,20.9s,baz=40,slow=32						
HNR	Honiara	56.68	334	LR	LR	03 45 39.6	
	comp=Z,76nm,21.5s,baz=74,slow=32						
FITZ	Fitzroy Crossi	59.41	293	LR	LR	03 47 03.3	
	comp=Z,34nm,19.6s,baz=134,slow=31						
PMG	Port Moresby	59.83	319	LR	LR	03 46 55.4	
	comp=Z,85nm,19.1s,baz=104,slow=31						
PLCA	Paso Flores	61.09	124	LR	LR	03 49 48.6	
	comp=Z,35nm,18.0s,baz=188,slow=33						
BRTR	Keskin Array B	149.47	233	PKPbc	PKPbc	03 35 45.1	-0.5
	0.9nm,0.9s,baz=145,slow=4.5,SNR=4.5						

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*IDC **13** 03:23:10.6±2.4,6°.66S×130°.62E,h0^{km},mb3.5/1,mb1 3.8/4,mb1mx3.3/47,mbtmp3.6/4,ML3.6/3,MS3.3/1,Ms1 3.3/1,ms1mx2.6/26,Error ellipse: s-maj=86.8km s-min=29.7km az=78.0*

ISC 13 03:23:20.3±1.6,7°.2S±0°.1×130°.6E±0°.2,h100^{km},n5,σ2^{s}94/7,Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	11.87	204	Pn	Pn	03 26 06.9	+0.6
	0.4nm,0.3s,baz=21,slow=9.6,SNR=41						
FITZ				Sn	Sn	03 28 15.7	-1.2
	0.3nm,0.3s,baz=328,slow=22,SNR=1.8						
WRA	Warramunga Arr	13.17	165	Pn	P	03 26 26.5	-3.3
	0.3nm,0.3s,baz=349,slow=13,SNR=8.2						
WRA				Sn	Sn	03 28 48.4	0.0
	0.5nm,0.3s,baz=334,slow=25,SNR=8.4						
ASAR	Alice Springs	16.67	169	P	P	03 27 13.1	+4.4
	0.2nm,0.3s,baz=3.6,slow=12,SNR=9.2						
ASAR				S	S	03 30 19.4	+1.5
	0.1nm,0.3s,baz=352,slow=26,SNR=5.2						
ASAJ	Asahikawa	52.21	11	LR	LR	03 52 23.9	
	comp=Z,31nm,19.5s,baz=150,slow=34						
MKAR	Makanchi Array	68.74	327	P	P	03 34 13.5	+0.1
	0.3nm,0.5s,baz=113,slow=7.7,SNR=4.1						

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*IDC **13** 03:27:04.3±3.3,29°.11S×71°.84W,h0^{km},mb4.1/3,mb1 4.0/3,mb1mx3.7/24,mbtmp4.1/3,Error ellipse: s-maj=241.6km s-min=63.7km az=170.0*

*GUC **13** 03:27:04.4±0.6,30°.09S×72°.07W,h38^{km}±3^{km},ML3.9*

*NEIC **13** 03:27:05.0±1.1,30°.08S±0°.05×72°.00W±0°.07,h13^{km}±6^{km},mb4.4/4,ML3.9(GUC),Error ellipse: s-maj=8.7km s-min=7.3km az=65.0*

ISC 13 03:27:06.6±1.0,30°.09S±0°.05×72°.0W±0°.1,h36^{km}±3^{km},n44,σ1^{s}41/51,mb4.1/4,3C-3D,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	Fray Jorge	0.68	149	⇓*i*P	Pn	03 27 17.3	-2.4
CO06				*i* S	Sn	03 27 27.7	-1.4
CO06				IAML		03 27 29.6	
	comp=E,5µm,0.2s						
CO06	Fray Jorge	0.68	149		Pn	03 27 17.4	-2.4
CO05	La Serena	0.71	76	⇓*i*P	Pn	03 27 18.6	-1.6
CO05				*i* S	Sn	03 27 28.6	-1.3
CO05				IAML		03 27 31.5	
	comp=E,6µm,0.5s						
CO05	La Serena	0.71	76		Pn	03 27 18.6	-1.6
GO04	Tololo Observa	1.08	95	⇓*i*P	Pn	03 27 24.4	-1.0
GO04				*i* S	Sn	03 27 39.0	-0.2
GO04	Tololo Observa	1.08	95		Pn	03 27 24.4	-1.0
LCO	Las Campanas	1.59	48	*e*P	Pn	03 27 32.0	-0.4
LCO				*i* S	Sn	03 27 53.5	+1.6
LCO	Las Campanas	1.59	48		Pn	03 27 32.2	-0.3
AC04	Llanos de Chal	2.06	24	⇑*i*P	Pn	03 27 37.6	-1.1
AC04	Llanos de Chal	2.06	24		Pn	03 27 38.9	+0.1
VA06	Catapilco	2.54	166	⇑*i*P	Pn	03 27 44.8	-0.6
VA06				*i* S	Sn	03 28 12.9	-2.1
VA06				IAML		03 28 17.5	
	comp=N,644nm,0.4s						
GO03	Copiap	2.95	33	*e*P	Pn	03 27 50.5	-0.5
GO03				IAML		03 28 45.5	
	comp=N,236nm,0.5s						
GO03	Copiap	2.95	33		Pn	03 27 51.5	+0.5
VA03	San Esteban	2.95	155	*e*P	Pn	03 27 51.2	+0.1
VA03				*i* S	Sn	03 28 26.5	+1.2
VA03				IAML		03 28 42.2	
	comp=E,410nm,0.3s						
VA03	San Esteban	2.95	155		Pn	03 27 51.4	+0.3
ROCH	El Roble	3.00	163	⇑*i*P	Pn	03 27 51.5	-0.4
ROCH				*i* S	Sn	03 28 26.3	-0.5
ROCH				IAML		03 28 47.4	
	comp=N,296nm,0.3s						
ZON	Zonda	3.23	117		Pn	03 27 55.1	+0.2
MT02	Curacav	3.25	167		Pn	03 27 55.9	+0.8
PEL	Peldehue	3.25	160	*e*P	Pn	03 27 55.6	+0.4
PEL				*i* S	Sn	03 28 33.3	+0.6
PEL				IAML		03 28 53.0	
	comp=E,212nm,0.2s						
PEL	Peldehue	3.25	160		Pn	03 27 55.5	+0.4
FCH	Farellones	3.55	156	*e*P	Pn	03 27 59.6	0.0
FCH				*i* S	Sn	03 28 42.2	+1.7
FCH				IAML		03 29 00.4	
	comp=E,125nm,0.4s						
VA05	Santo Domingo	3.57	174	IAML		03 29 07.2	
	comp=N,243nm,0.4s						
VA05	Santo Domingo	3.57	174	Pn	Pn	03 28 00.1	+0.7
MT09	Talagante	3.78	167	*e*P	Pn	03 28 02.6	+0.1
MT09				*i* S	Sn	03 28 45.6	-0.2
MT09				IAML		03 28 48.3	
	comp=E,161nm,0.1s						
MT09	Talagante	3.78	167		Pn	03 28 02.4	-0.1
MT01	Popeta	3.82	170		Pn	03 28 01.9	-1.0
LMEL	Las Melosas	4.06	158	IAML		03 28 55.9	
	comp=N,141nm,0.3s						
AC02	Maricunga	4.13	39		Pn	03 28 07.8	+0.1
BO01	Tunca	4.36	170		Pn	03 28 11.5	+1.1
BO02	Sierra Bellavi	4.81	168		Pn	03 28 16.9	+0.4
ML02	Panimavida	5.68	175	Pn	Pn	03 28 29.6	+1.2
PB06	IPOC Station P	7.68	17	Pn	Pn	03 28 55.6	-0.5
LC01	Cunco	8.79	179	Pn	Pn	03 29 11.5	+0.4
BDFB	Brasilia	26.32	62	P	P	03 32 36.1	-3.2
	comp=N,1.3nm,0.7s,baz=212,slow=9.5,SNR=2.0						
BDFB	Brasilia	26.32	62	P	P	03 32 40.5	+1.1
BDFB				IAmb	IAmb	03 32 59.6	
	comp=Z,4.7nm,1.3s						
MACA	Manacapuru-AM	28.86	24	P	P	03 33 02.9	+0.9
MACA				IAmb	IAmb	03 33 17.2	
	comp=Z,9.1nm,1.3s						
VNA3	Neumayer Olymp	52.98	159	P	P	03 36 20.7	+1.4
VNA2	Neumayer--Watz	53.62	158	P	P	03 36 25.4	+1.5
	baz=290,slow=9.0						
SNAA	Sanae	55.21	159	P	P	03 36 36.9	+1.4
DBIC	Dimbokro	73.96	72	P	P	03 38 39.4	+0.6
	comp=Z,2.7nm,0.7s,baz=225,slow=4.3,SNR=1.9						
DBIC	Dimbokro	73.96	72	IAmb	IAmb	03 39 08.2	
	comp=Z,9.8nm,1.2s						
TORD	Torodi Ar. Bea	82.89	70	P	P	03 39 29.2	+1.2
	comp=Z,0.4nm,0.4s,baz=235,slow=5.1,SNR=8.3						
ZALV	Zalesovo Beam	150.86	28	PKPbc	PKPab	03 46 56.7	-5.5
	comp=Z,1.7nm,0.4s,baz=333,slow=1.8,SNR=8.4						
MKAR	Makanchi Array	154.05	43	PKPbc	PKiKP	03 47 01.8	-0.6
	comp=Z,0.3nm,0.8s,baz=33,slow=3.4,SNR=2.0						

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*IDC **13** 03:31:28.1±1.4,23°.18S×179°.09E,h549^{km}±13^{km},mb3.4/12,mb1 3.7/13,mb1mx3.5/28,mbtmp4.3/13,Error ellipse: s-maj=18.2km s-min=14.0km az=141.0*

*NOU **13** 03:31:28.9,23°.13S×179°.35E,h585^{km},mb4.4/29,South of Fiji Islands*

*NEIC **13** 03:31:29.0±1.5,23°.2S±0°.1×179°.1E±0°.1,h553^{km}±6^{km},mb4.5/25,Error ellipse: s-maj=17.4km s-min=16.4km az=142.0*

ISC 13 03:31:30.2±0.3,23°.21S±0°.07×179°.10E±0°.07,h579^{km},n147,σ1^{s}32/155,mb4.3/33,27C-1D,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LKBA	Tubou, Lakemba	5.32	22	P	P	03 33 03.1	-1.4
MSVF	Nonsavu	5.53	350	P	P	03 33 03.5	-3.0
	4.2nm,0.3s,baz=267,slow=23,SNR=17						
MSVF	Nonsavu	5.53	350	P	P	03 33 03.2	-3.2
MSVF	Nonsavu	5.53	350	P	P	03 33 04.1	-2.3
TAVE	Taveuni	6.53	8	P	P	03 33 14.5	-0.6
DGTI	Dogotuki	6.90	5	P	P	03 33 17.2	-1.3
MARNC	Mare, Loyalty	10.39	277	P	P	03 33 50.5	-2.0
NIUE	Niue	11.03	70	P	P	03 33 55.9	-3.2
AFI	Afiamalu	12.66	45	P	P	03 34 10.4	-5.4
	3.7nm,0.3s,baz=25,slow=8.8,SNR=10						
OUZ	Omahuta	12.89	201	P	P	03 34 17.1	-0.7
OUZ	Omahuta	12.89	201	P	P	03 34 18.4	+0.6
URZ	Urewera	15.10	186	P	P	03 34 35.1	-4.6
	2.2nm,0.3s,baz=303,slow=23,SNR=18						
URZ				S	S	03 37 13.9	-1.1
	1.9nm,0.3s,baz=238,slow=24,SNR=7.4						
URZ	Urewera	15.10	186	P	P	03 34 37.9	-1.8
HIZ	Hauiti	15.68	192	P	P	03 34 45.6	+0.3
BKZ	Black Stump Fm	16.06	187	P	P	03 34 46.8	-2.2
BFZ	Birch Farm	17.59	187	P	P	03 35 02.1	-0.7
QRZ	Quartz Range	18.42	196	P	P	03 35 11.4	+1.1
THZ	Tophouse	19.22	194	P	P	03 35 17.5	-0.1
THZ				IAmb	IAmb	03 35 20.4	
	comp=Z,21nm,0.7s						
RAR	Rarotonga	19.66	88	P	P	03 35 17.8	-4.1
KHZ	Kahutara	19.71	192	P	P	03 35 21.4	-0.6
LTZ	Lake Taylor	20.33	195	P	P	03 35 28.1	+0.5
RPZ	Rata Peaks	21.51	196	P	P	03 35 39.3	+1.1
ARMA	Armidale	25.50	248	P	P	03 36 13.9	-0.1
ARMA				IAmb	IAmb	03 36 16.1	
	comp=Z,7.8nm,0.7s						
ARMA	Armidale	25.50	248	P	P	03 36 15.2	+1.2
	comp=Z,12nm,0.8s						
EIDS	Eidsvold	25.61	259	P	P	03 36 14.3	-0.6
EIDS				IAmb	IAmb	03 36 16.1	
	comp=Z,5.1nm,0.7s						
MGCD	Mangrove Creek	26.53	242	P	P	03 36 24.0	+1.1
	comp=Z,35nm,0.7s						
CAN	Canberra	28.78	238	P	P	03 36 43.0	+0.5
CAN				IAmb	IAmb	03 36 44.4	
	comp=Z,18nm,0.9s						
CTA	Charters Tower	30.65	269	P	P	03 36 59.1	+0.3
	comp=Z,32nm,0.6s						
CTAO	Charters Tower	30.65	269	P	P	03 36 59.0	+0.3
CTAO	Charters Tower	30.65	269	P	P	03 37 00.0	+1.2
CMSA	Cobar Meteorol	30.71	247	P	P	03 36 59.6	+0.5
	comp=Z,24nm,0.8s						
TOO	Toolangi	32.14	236	P	P	03 37 11.6	+0.3
TOO				IAmb	IAmb	03 37 14.3	
	comp=Z,7.9nm,0.9s						
PMG	Port Moresby	33.49	289	P	P	03 37 21.9	-0.9
STKA	Stephens Creek	34.22	247	P	P	03 37 28.6	-0.2
	comp=Z,2.8nm,0.4s,baz=96,slow=11,SNR=8.1						
STKA	Stephens Creek	34.22	247	P	P	03 37 28.9	+0.1
HTT	Hallett	36.61	245	P	P	03 37 48.4	-0.2
	comp=Z,11nm,2.6s						
BBOO	Buckleboo	38.96	246	P	P	03 38 06.8	-0.9
BBOO				IAmb	IAmb	03 38 09.9	
	comp=Z,7.4nm,0.8s						
BBOO	Buckleboo	38.96	246	P	P	03 38 06.9	-0.7
	comp=Z,13nm,1.3s						
MULG	Mulgathing	40.63	250	P	P	03 38 20.3	-0.7
	comp=Z,30nm,1.4s						
AS31	Alice Springs	41.33	260	P	P	03 38 26.1	-0.7
ASAR	Alice Springs	41.33	260	P	P	03 38 26.8	0.0
	comp=Z,5.7nm,0.7s,baz=94,slow=8.1,SNR=52						
ASAR				PcP	pwP	03 40 11.9	+0.3
	comp=Z,1.8nm,0.8s,baz=101,slow=3.9,SNR=9.4						
ASAR				ScP	ScP	03 43 11.3	+4.8
	comp=Z,1.1nm,0.7s,baz=106,slow=4.5,SNR=7.9						
ASAR				S	S	03 43 57.8	-2.7
	comp=Z,0.6nm,0.8s,baz=100,slow=15,SNR=4.8						
ASAR	Alice Springs	41.33	260	P	P	03 38 26.6	-0.1
WR0	Warramunga Arr	41.44	266	P	P	03 38 27.2	-0.4
WB2	Warramunga Arr	41.62	266	P	P	03 38 28.5	-0.4
WB2				IAmb	IAmb	03 38 29.4	
	comp=Z,6.7nm,0.7s						
WB0	Warramunga Arr	41.62	266	P	P	03 38 28.2	-0.7
WB0				IAmb	IAmb	03 38 29.4	
	comp=Z,9.3nm,0.6s						
WRAB	Tennant Creek	41.62	266	P	P	03 38 29.6	+0.6
WRA	Warramunga Arr	41.63	266	P	P	03 38 28.6	-0.5
	comp=Z,4.0nm,0.4s,baz=95,slow=8.6,SNR=79						
WRA				PcP	PcP	03 40 12.8	+0.7
	comp=Z,0.2nm,0.5s,baz=92,slow=3.5,SNR=4.5						
WRA				ScP	ScP	03 43 12.3	+4.6
	comp=Z,1.8nm,0.9s,baz=108,slow=4.3,SNR=7.2						
WRA				S	S	03 44 02.6	-2.1
	comp=Z,1.0nm,0.9s,baz=92,slow=16,SNR=5.5						
FORT	Forrest	45.78	249	P	P	03 39 00.3	-0.6
FORT	Forrest	45.78	249	P	P	03 39 00.0	-1.0
	comp=Z,30nm,0.6s						
KNRA	Kununurra	47.86	270	P	P	03 39 17.0	+0.2
KNRA				IAmb	IAmb	03 39 17.4	
	comp=Z,14nm,0.5s						
KNRA	Kununurra	47.86	270	P	P	03 39 16.7	-0.1
FITZ	Fitzroy Crossi	50.06	265	P	P	03 39 33.1	+0.1
MBWA	Marble Bar	54.68	260	P	P	03 40 05.7	-0.2
VNDA	Vanda	55.00	185	P	P	03 40 08.2	+0.9
	comp=Z,2.1nm,0.8s,baz=2.5,slow=7.5,SNR=3.8						
BLDU	Ballidu	55.52	248	P	P	03 40 11.0	-0.6
QSPA	South Pole Qui	66.87	180	P	P	03 41 26.3	+1.0
QSPA				IAmb	IAmb	03 41 27.2	
	comp=Z,23nm,1.1s						
YOJ	Yonaguni jima	72.16	307	P	P	03 41 58.8	+1.5
INCN	Inchon	77.97	320	P	P	03 42 29.1	-0.3
INCN				IAmb	IAmb	03 42 31.3	
	comp=Z,15nm,0.5s						
MAW	Mawson	78.11	201	P	P	03 42 30.2	+0.6
	comp=Z,8.3nm,0.9s,baz=130,slow=7.9,SNR=12						
MAW	Mawson	78.11	201	IAmb	IAmb	03 42 30.9	
	comp=Z,1.6nm,0.8s						
RPSI	Rantau Prapat	82.04	276	P	P	03 42 50.3	-0.9
PSI	Prapat	82.08	276	P	P	03 42 50.3	-1.2
	comp=Z,1.7nm,0.3s,baz=119,slow=2.2,SNR=4.0						
NVAR	Mina Array Bea	84.83	44	P	P	03 43 05.8	+1.1
	comp=Z,0.6nm,0.6s,baz=227,slow=7.8,SNR=5.0						
NVAR	Mina Array Bea	84.83	44	P	P	03 43 05.3	+0.6
SNAA	Sanae	85.37	179	P	P	03 43 05.6	-1.0
VNA3	Neumayer Olymp	85.61	177	P	P	03 43 06.8	-1.0
COYC	Coyhaique	85.96	138	P	P	03 43 10.6	+0.8
VNA2	Neumayer--Watz	86.02	178	P	P	03 43 09.0	-0.6
	baz=176,slow=4.4						
VNA1	Neumayer--Stat	86.26	178	P	P	03 43 10.2	-0.6
XAN	Xi'an	87.66	309	P	P	03 43 20.3	+2.3
XAN				pP	pP	03 45 24.1	+2.0
XAN				pmax	pmax		
	comp=Z,5.0nm,1.4s						
CMAR	Chiang Mai Arr	88.51	291	P	P	03 43 23.4	+1.1
	comp=Z,0.7nm,0.3s,baz=133,slow=4.1,SNR=6.6						
CMAR	Chiang Mai Arr	88.51	291	P	P	03 43 23.0	+0.7
PLCA	Paso Flores	89.34	135	P	P	03 43 27.3	+1.4
	comp=Z,2.7nm,1.1s,baz=190,slow=6.9,SNR=3.8						
PLCA	Paso Flores	89.34	135	IAmb	IAmb	03 43 32.7	
	comp=Z,4.5nm,1.1s						
HHC	Hu-ho-hao-te	89.34	315	*e*P	P	03 43 28.8	+3.0
HHC				pmax	pmax		
	comp=Z,18nm,1.2s						
HHC				pmax	pmax		
	comp=Z,54nm,7.0s						
LC01	Cunco	89.37	132	P	P	03 43 26.8	+0.8
LC01				IAmb	IAmb	03 43 27.8	
	comp=Z,6.7nm,0.8s						
HVU	Hansel Valley	90.21	44	P	P	03 43 30.6	+0.7
SRU	San Rafael Swe	90.33	47	P	P	03 43 31.4	+0.9
SRU				IAmb	IAmb	03 43 32.4	
	comp=Z,3.1nm,0.7s						
TXAR	Lajitas Array	90.77	58	P	P	03 43 34.4	+1.7
	comp=Z,0.9nm,0.8s,baz=207,slow=7.2,SNR=7.8						
TXAR				PKiKP	PKiKP	03 48 24.1	+1.8
	comp=Z,0.2nm,0.7s,baz=35,slow=2.2,SNR=3.7						
ILAR	Eielson Array	91.56	14	P	P	03 43 34.6	-0.6
	comp=Z,0.3nm,0.6s,baz=217,slow=5.7,SNR=8.1						
ILAR	Eielson Array	91.56	14	P	P	03 43 35.3	0.0
LZH	Lanzhou	92.30	308	*e*P	P	03 43 44.9	+5.3
LZH				pmax	pmax		
	comp=Z,19nm,1.4s						
PDAR	Pinedale Array	92.77	44	P	P	03 43 42.1	+0.5
	comp=Z,0.1nm,0.6s,baz=186,slow=4.5,SNR=3.7						
MKAR	Makanchi Array	111.08	313	PKiKP	PKiKP	03 48 57.9	-0.5
	comp=Z,0.2nm,0.4s,baz=74,slow=2.9,SNR=3.2						
MKAR				PKKPbc	PKKPab	04 00 08.9	+1.1
	comp=Z,0.5nm,0.7s,baz=294,slow=3.9,SNR=4.7						
BVAR	Borovoye Array	119.37	319	PKP	PKPdf	03 49 14.1	0.0
	comp=Z,0.9nm,0.4s,baz=193,slow=6.1,SNR=4.7						
FRB	Frobisher Bay	120.44	28	PKP	PKPdf	03 49 15.2	-0.5
	comp=Z,4.3nm,0.9s,baz=10,slow=3.7,SNR=5.2						
BOSA	Boshof	122.64	207	PKP	PKiKP	03 49 21.8	+0.1
	comp=Z,2.3nm,0.9s,baz=209,slow=4.0,SNR=3.5						
ARU	Arti	125.84	324	PKP	PKiKP	03 49 26.9	+0.1
	comp=Z,0.8nm,0.3s,baz=246,slow=4.6,SNR=3.5						
FINES	FINESS Array B	137.53	341	PKhKP	PKPpre	03 49 39.0	
	comp=Z,1.6nm,0.9s,baz=46,slow=5.5,SNR=3.5						
FINES				PKP	PKiKP	03 49 50.4	+0.1
	comp=Z,1.2nm,0.6s,baz=35,slow=1.3,SNR=5.7						
FINES				SKPbc	SKiKP	03 52 30.4	-1.5
	comp=Z,4.9nm,0.8s,baz=55,slow=3.7,SNR=9.2						
NB2	NORSAR Subarra	141.27	351	PKP	PKPdf	03 49 50.5	-4.6
	comp=Z,1.2nm,0.7s,baz=16,slow=3.2						
NOA	NORSAR Array B	141.27	351	PKhKP	PKPpre	03 49 51.0	
	comp=Z,0.6nm,0.8s,baz=49,slow=1.8,SNR=4.4						
HFS	Hagfors	141.70	348	PKhKP	PKPpre	03 49 51.5	
	comp=Z,1.3nm,0.3s,baz=56,slow=3.1,SNR=33						
AKASG	Malin Array Be	143.94	327	PKP	PKPbc	03 49 58.7	-0.8
	comp=Z,3.2nm,0.5s,baz=41,slow=3.6,SNR=10						
AKASG	Malin Array Be	143.94	327		PKPdf	03 50 00.0	0.0
SUW	Suwalki	144.29	336		PKPab	03 50 01.4	+0.5
GAZ	Gaziantep	144.48	302		PKPdf	03 50 01.7	+0.1
SORM	Soroca	145.96	324	⇑P	PKPbc	03 50 06.0	+0.5
BR131	Keskin Array S	146.50	308		PKPbc	03 50 07.5	-0.1
BRTR	Keskin Array B	146.50	308	PKPbc	PKPbc	03 50 07.8	+0.2
	comp=Z,1.7nm,0.6s,baz=111,slow=3.2,SNR=14						
BRTR	Keskin Array B	146.50	308		PKPbc	03 50 07.2	-0.3
KWP	Kalwaria Pacla	147.76	331	PKPbc	PKPbc	03 50 10.9	+0.5
CFR	Carcaliu	147.77	320	⇑P	PKiKP	03 50 11.3	-0.5
TPGR	Topolog	147.77	319	⇑P	PKiKP	03 50 11.7	-0.2
EKA	Eskdalemuir Ar	147.87	2	PKPbc	PKPbc	03 50 10.1	-0.3
	comp=Z,0.8nm,0.4s,baz=351,slow=2.6,SNR=7.0						
BURAR	Bucovina Array	147.93	326	⇑P	PKiKP	03 50 13.1	+0.8
BURAR	Bucovina Array	147.93	326	PKPbc	PKiKP	03 50 12.8	+0.5
MDUB	Mudurnu	147.98	310	PKPbc	PKPbc	03 50 11.5	+0.2
OJC	Ojcow	148.56	334	PKPbc	PKiKP	03 50 13.2	-0.1
MLR	Muntele Rosu	148.86	322	⇑P	PKPbc	03 50 12.8	-0.6
MLR	Muntele Rosu	148.86	322	PKPbc	PKiKP	03 50 14.0	-0.3
	comp=Z,1.2nm,0.4s,baz=4.8,slow=5.5,SNR=3.8						
MLR	Muntele Rosu	148.86	322		PKPbc	03 50 13.8	+0.5
DOPR	Dopca	148.88	323	⇑P	PKiKP	03 50 14.5	+0.3
TRPA	Tarpa	148.91	329	⇑P	PKPbc	03 50 13.4	+0.2
VOIR		149.40	323	⇑P	PKPbc	03 50 14.2	-0.4
OKC	Ostrava-Krasne	149.51	335	⇑*e*PKP	PKiKP	03 50 15.7	+0.4
LANS	Liptovska Anna	149.52	333	*e*PKP	PKiKP	03 50 16.4	+0.9
OSTC	Ostas	149.61	338	⇑*e*PKP	PKiKP	03 50 16.1	+0.5
CHVC	Chvalec	149.64	338	⇑*e*PKP	PKiKP	03 50 16.1	+0.5
ARR	Arges	149.67	323	⇓P	PKiKP	03 50 16.8	+0.9
UPC	Upice	149.72	338	⇑*e*PKP	PKiKP	03 50 16.2	+0.4
DPC	Dobruska-Polom	149.75	338	⇑*e*PKP	PKiKP	03 50 16.4	+0.5
DRGR		149.76	327	⇑P	PKPbc	03 50 14.9	-0.5
MORC	Moravsky Berou	149.78	336	⇑P	PKiKP	03 50 16.4	+0.4
MORC	Moravsky Berou	149.78	336	*e*PKP	PKiKP	03 50 16.4	+0.4
KRLC	Kraliky	149.82	337	⇑*e*PKP	PKiKP	03 50 16.1	+0.1
CLL	Collm	149.95	342	*i* PKPbc	PKiKP	03 50 16.3	+0.1
	comp=Z,17nm,0.9s						
CLL				*i* PKiKP	PKPbc	03 50 18.9	+3.3
CLL				*e*SKPdf	SKPdf	03 52 53.0	+3.8
CLL	Collm	149.95	342		PKPbc	03 50 15.7	+0.1
BRG	Berggiesshubel	150.07	341	*i* PKP	PKiKP	03 50 17.0	+0.5
BRG				Amp		03 50 17.6	
	comp=Z,8.7nm,0.8s						
PVCC	Panska Ves	150.18	340	⇑*e*PKP	PKiKP	03 50 17.3	+0.6
JAVC	Velka Javorina	150.48	335	*e*PKP	PKiKP	03 50 18.5	+1.0
SIRR	Siria	150.65	327	⇑P	PKiKP	03 50 18.4	+0.6
PRU	Pruhonice	150.65	339	⇑*e*PKP	PKiKP	03 50 18.1	+0.4
GZR	Gura Zlata	150.66	325	⇑P	PKiKP	03 50 17.9	-0.1
KRUC	Moravsky	150.80	336	*e*PKP	PKiKP	03 50 18.4	+0.4
PLVB	Pleven	150.86	320	⇑P	PKiKP	03 50 19.0	+0.7
MODS	Modra-Piesok	151.03	335	*e*PKP	PKPbc	03 50 18.3	+0.1
BZS	Buzias	151.12	326	⇑P	PKPbc	03 50 18.3	-0.2
HERR	Herculane	151.19	324	⇑P	PKiKP	03 50 19.2	+0.2
MDVR	Moldovita	151.63	325	⇑P	PKPbc	03 50 19.3	-0.5
KHC	Kasperske Hory	151.71	340	⇑*e*PKP	PKiKP	03 50 20.3	+0.3
CKRC	Cesky Krumlov	151.74	339	⇑*e*PKP	PKiKP	03 50 20.7	+0.7
CKRC				*e*PKPAB	PKPab	03 50 32.6	+1.1
GERES	GERESS Array B	151.92	339	PKPbc	PKiKP	03 50 20.6	+0.1
	comp=Z,0.9nm,0.6s,baz=56,slow=3.4,SNR=11						
BOVS	Bovan	152.39	323	⇑P	PKPbc	03 50 20.8	-0.5
DBIC	Dimbokro	163.12	166	PKP	PKPdf	03 50 27.8	+0.1
	comp=Z,1.9nm,0.6s,baz=287,slow=2.0,SNR=3.7						
TORD	Torodi Ar. Bea	169.70	194	PKP	PKPdf	03 50 31.6	-1.1
	comp=Z,1.9nm,1.0s,baz=244,slow=0.7,SNR=6.6						
TORD				PKPab	PKPab	03 51 49.7	-0.9
	comp=Z,3.1nm,0.9s,baz=171,slow=4.7,SNR=14						
TORD	Torodi Ar. Bea	169.70	194		PKPdf	03 50 31.8	-0.9
TORD				PKPab	PKPab	03 51 50.1	-0.5
KOWA	Kowa	170.85	161	PKPab	PKPab	03 51 55.8	+0.1
	comp=Z,1.5nm,0.7s,baz=264,slow=3.0,SNR=4.8						

IDC 13 03:44:29.7±12.0,6°.84N×94°.66E,h0^{km},mb3.4/4,mb1 3.5/4,mb1mx3.1/62,mbtmp3.4/4,MS2.8/1,Ms1 2.8/1,ms1mx2.4/25,Error ellipse: s-maj=688.0km s-min=26.0km az=57.0,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALK	Pallekele	13.86	273	LR	LR	03 52 41.4	
	comp=Z,40nm,18.3s,baz=112,slow=36						
H08S3	Diego Garcia H	26.38	237	T	T	04 16 48.2	
	baz=56,slow=75,SNR=7.9						
H08S2	Diego Garcia H	26.38	237	T	T	04 16 48.5	
	baz=56,slow=75,SNR=10						
H08S1	Diego Carcia H	26.39	237	T	T	04 16 40.3	
	baz=56,slow=75,SNR=7.4						

MKAR	Makanchi Array	41.20	347	P	P	03 52 15.3	-0.9
	0.4nm,0.7s,baz=165,slow=9.7,SNR=4.1						
KURBB	Kurchatov Arra	45.67	346	P	P	03 52 53.0	+0.8
	0.3nm,0.4s,baz=176,slow=8.2,SNR=2.1						
WRA	Warramunga Arr	47.24	125	P	P	03 53 05.7	+0.7
	0.6nm,1.0s,baz=305,slow=7.6,SNR=2.7						
ASAR	Alice Springs	48.86	130	P	P	03 53 16.8	-0.8
	0.3nm,0.7s,baz=310,slow=8.0,SNR=4.5						

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*JMA **13** 04:16:46.9±0.2,43°.74N×147°.65E,h14km,M3.5*

SKHL 13 04:16:48.1±0.4**,43°.70N×147°.80E,h38**km±4km**,mb4.5**/2**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK	Yuzh-Kuril'sk	1.44	284	iP	Pn	04 17 10.7	-0.9
YUK				AMB	AMB	04 17 12.0	
	90nm,0.2s						
YUK				eS	Sn	04 17 27.7	-1.6
YUK				A	A	04 17 30.0	
	240nm,0.5s						
YUK				A	A	04 17 30.0	
	690nm,0.5s						
NEM2	Nemuro 2	1.53	258	P	Pn	04 17 12.7	-0.2
NEM2				eS	Sn	04 17 31.5	0.0
NMR	Nemuro--Hokkai	1.54	258	iP	Pn	04 17 12.0	-1.0
NMR				eS	Sn	04 17 30.0	-1.8
GLVR	Golovnino	1.65	272	eP	Pn	04 17 14.0	-0.5
GLVR				AMB	AMB	04 17 15.0	
	138nm,0.3s						
GLVR				eS	Sn	04 17 33.0	-1.5
GLVR				A	A	04 17 35.0	
	557nm,0.3s						
GLVR				A	A	04 17 35.0	
	483nm,0.3s						
JRA	Rausu	1.95	278	P	Pn	04 17 18.4	-0.2
JKHN	Kushirohamanak	2.02	253	P	Pn	04 17 20.2	+0.6
JKHN				eS	Sn	04 17 44.2	+0.7
JNSB	Nemuroshibetsu	2.03	273	P	Pn	04 17 19.9	+0.2
JNK	Nakash	2.24	268	P	Pn	04 17 22.8	+0.2
JNK				eS	Sn	04 17 49.5	+0.5
JAK	Akkeshi	2.37	254	P	Pn	04 17 25.1	+0.7
JAK				eS	Sn	04 17 52.4	+0.2
JTKR	Abashiri--Toko	2.83	277	P	Pn	04 17 31.1	+0.4
JAR	Ashorobuto	2.96	264	P	Pn	04 17 34.0	+1.5
JAR				eS	Sn	04 18 09.0	+2.3
JOB	Onbets	3.00	256	P	Pn	04 17 34.4	+1.3
JCH	Churui	3.42	253	P	Pn	04 17 40.5	+1.6

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*IDC **13** 04:40:35.0±1.2,5°.48N×126°.61E,h0km,mb4.1/10, mb1 4.1/10,mb1mx3.8/41,mbtmp4.1/10,MS3.7/1, Ms1 3.7/1,ms1mx2.5/40,Error ellipse: s-maj=103.3km s-min=16.9km az=72.0*

*NEIC **13** 04:40:44.0±1.4,5°.41N±0°.05×126°.3E±0°.1,h59km±10km, mb4.3/16,Error ellipse: s-maj=16.1km s-min=5.5km az=67.0*

*MAN **13** 04:40:47.6,5°.40N×126°.57E,h2km,mb4.7,ML3.6,MS3.5*

ISC 13 04:40:47.3±0.6**,5°.11N**±0°.05×**126°.28E**±0°.08**,h100**km**,n35,** σ**1ˢ.55**/32**,mb4.3**/17**,4C-1D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	General Santos	1.64	306	⇓iP	Pn	04 41 15.5	+0.1
GSPH				iS	Sn	04 41 37.6	+0.8
DAV	Davao City (W)	2.06	340	LR	LR	04 41 36.1	
	comp=Z,49nm,20.2s,baz=345,slow=32						
DAV	Davao City (W)	2.06	340	Pn	Pn	04 41 13.1	-7.6
DMPH	Davao City--Mi	2.10	339	⇑eP	Pn	04 41 22.1	+0.9
DMPH				eS	Sn	04 41 54.2	+7.1
KCP	Kidapawan	2.22	328	⇑eP	Pn	04 41 24.1	+1.2
KCP				iS	Sn	04 41 52.4	+2.4
BUKP	Musuan	3.00	336	⇑eP	Pn	04 41 35.3	+2.2
BUKP				eS	Sn	04 42 09.8	+1.3
BIPH	Bislig	3.05	2	⇑eP	Pn	04 41 36.0	+2.2
BIPH				eS	Sn	04 42 09.3	-0.3
TNTI	Ternate	4.45	166		Pn	04 41 52.6	+0.1
TOLI2	Tolitoli	6.78	234		Pn	04 42 24.1	-0.1
TOLI2					Sn	04 43 41.0	+1.0
SOEI	Soe	14.91	188	Pn	P	04 44 13.6	-2.6
FITZ	Fitzroy Crossi	23.07	182	P	P	04 45 46.4	+2.0
	1.0nm,0.8s,baz=344,slow=9.5,SNR=1.5						
COEN	Coen	25.30	139	P	P	04 46 05.8	+1.1
WB0	Warramunga Arr	25.98	162	P	P	04 46 15.1	+4.2
WB0				IAmb	IAmb	04 46 34.6	
	comp=Z,4.9nm,0.7s						
WRA	Warramunga Arr	26.13	163	P	P	04 46 14.7	+2.5
	comp=Z,0.5nm,0.6s,baz=345,slow=10,SNR=4.6						
WB2	Warramunga Arr	26.14	163	P	P	04 46 14.3	+2.1
AS31	Alice Springs	29.56	166	P	P	04 46 45.4	+2.7
ASAR	Alice Springs	29.56	166	P	P	04 46 43.5	+0.8
	comp=Z,0.2nm,0.4s,baz=356,slow=6.8,SNR=4.4						
SHL	Shillong	38.71	305	P	P	04 48 01.2	-0.8
SHL				IAmb	IAmb	04 48 03.9	
	comp=Z,5.3nm,0.8s						
USA0B	Ussuriysk Arra	39.25	6	P	P	04 48 04.1	-1.9
STKA	Stephens Creek	39.58	159	P	P	04 48 09.6	+0.8
	comp=Z,1.0nm,0.8s,baz=316,slow=13,SNR=1.7						
DZM	Mont Dzumac	47.70	126	LR	LR	05 09 16.7	
	comp=Z,87nm,19.3s,baz=190,slow=36						
MK31	Makanchi Array	56.17	325	P	P	04 50 16.1	-0.7
MK31				IAmb	IAmb	04 50 17.3	
	comp=Z,1.9nm,0.6s						
MKAR	Makanchi Array	56.17	325	P	P	04 50 16.6	-0.1
	comp=Z,2.5nm,0.5s,baz=119,slow=7.8,SNR=40						
MAKZ	Makanchi	56.36	325	P	P	04 50 16.6	-1.5
MAKZ				IAmb	IAmb	04 50 18.5	
	comp=Z,2.2nm,0.6s						
ZAA0	Zalesovo Array	59.16	333	P	P	04 50 35.3	-2.2
ZAA0				IAmb	IAmb	04 52 03.0	
	comp=Z,1.8nm,0.8s						
ZALV	Zalesovo Beam	59.16	333	P	P	04 50 35.7	-1.8
	comp=Z,1.4nm,0.5s,baz=148,slow=4.0,SNR=6.1						
KURK	Kurchatov	60.34	327	P	P	04 50 44.6	-1.0
BRVK	Borovoye	66.00	327	P	P	04 51 22.4	-0.6
BRVK				IAmb	IAmb	04 51 23.9	
	comp=Z,4.0nm,0.8s						
NRIK	Noril'sk	68.99	346	P	P	04 51 41.8	+0.3
NRIK				IAmb	IAmb	04 51 43.0	
	comp=Z,3.8nm,0.7s						
ABKAR	Akbulak array	70.80	321	P	P	04 51 52.4	-0.6
ABKAR				IAmb	IAmb	04 51 53.6	
	comp=Z,1.7nm,0.7s						
MAW	Mawson	84.89	200	P	P	04 53 13.3	+2.7
	comp=Z,1.5nm,0.5s,baz=24,slow=10.0,SNR=2.5						
ARCES	ARCESS Array B	89.00	340	P	P	04 53 30.6	-0.1
	comp=Z,2.6nm,0.6s,baz=40,slow=4.7,SNR=7.4						
FINES	FINESS Array B	90.41	332	P	P	04 53 37.4	0.0
	comp=Z,0.7nm,0.5s,baz=84,slow=5.9,SNR=6.0						
NOA	NORSAR Array B	97.36	334	P	Pdif	04 54 09.1	-0.2
	comp=Z,1.1nm,0.8s,baz=84,slow=7.9,SNR=1.8						
TORD	Torodi Ar. Bea	122.06	289	PKP	PKiKP	04 59 31.9	+0.5
	comp=Z,0.3nm,0.6s,baz=107,slow=0.4,SNR=2.3						

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*MAN **13** 04:42:31.6,13°.24N×120°.13E,h1km,mb4.8,ML3.6,MS3.6*

*IDC **13** 04:42:37.2±4.1,13°.24N×120°.34E,h34km±38km,mb3.6/5, mb1 3.9/5,mb1mx3.5/43,mbtmp3.8/5,MS2.9/3,Ms1 2.9/3, ms1mx2.7/42,Error ellipse: s-maj=44.9km s-min=19.2km az=59.0*

ISC 13 04:42:34.2±0.9**,13°.25N**±0°.06×**120°.23E**±0°.06**,h10**km**,n15,** σ**1ˢ.73**/15**,mb3.8**/5**,3C-2D,Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	Lubang	0.48	2	⇑eP	Pg	04 42 42.0	-1.6
LUBP				eS	Sg	04 42 49.5	-0.4
PGP	Puerto Galera	0.75	71	⇓eP	Pg	04 42 47.6	-1.1
PGP				iS	Sg	04 42 58.6	0.0
TGY	Tagaytay City	1.09	39	Pg	Pg	04 42 56.2	+1.0
TGY				Lg	Lg	04 43 12.1	
TGY	Tagaytay City	1.09	39	⇑eP	Pb	04 42 56.6	+1.4
TGY				eS	Sn	04 43 13.1	+2.3
LQP	Lukban	1.54	56	⇓eP	Pn	04 43 02.4	+0.5
LQP	Lukban	1.54	56	eS	Sn	04 43 18.0	-4.0
RCP	Roxas	2.98	124	⇑eP	Pb	04 43 28.8	+1.4
KAPI	Kappang	18.15	182	LR	LR	04 53 41.7	
	comp=Z,30nm,21.0s,baz=58,slow=37						
CMAR	Chiang Mai Arr	21.11	287	P	P	04 47 20.9	+1.7
	3.9nm,0.8s,baz=96,slow=9.0,SNR=14						
LEM	Lembang	23.55	213	LR	LR	04 59 09.5	
	comp=Z,38nm,20.3s,baz=152,slow=42						
KSRS	Korea Array	25.06	15	LR	LR	04 58 20.8	
	comp=Z,38nm,19.1s,baz=160,slow=38						
WRA	Warramunga Arr	35.79	157	P	P	04 49 32.6	-1.3
	1.2nm,0.5s,baz=336,slow=9.7,SNR=9.8						
SONM	Songino Array	36.36	344	P	P	04 49 37.7	-0.9
	1.2nm,0.7s,baz=149,slow=9.8,SNR=4.3						
ASAR	Alice Springs	39.05	160	P	P	04 50 01.1	-0.5
	1.1nm,0.5s,baz=340,slow=7.3,SNR=15						
MKAR	Makanchi Array	46.12	324	P	P	04 50 59.0	+0.2
	0.3nm,0.5s,baz=131,slow=9.8,SNR=1.2						

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*IDC **13** 04:54:43.1±3.0,0°.68N×123°.92E,h238km±30km,mb3.6/5, mb1 3.7/6,mb1mx3.2/44,mbtmp4.2/6,Error ellipse: s-maj=77.2km s-min=12.7km az=67.0*

*NEIC **13** 04:54:44.8±1.6,0°.5N±0°.1×123°.68E±0°.09,h242km±9km, mb4.1/19,Error ellipse: s-maj=15.3km s-min=12.1km az=196.0*

*DJA **13** 04:54:46.3±0.5,0°N±4°×12°4E±°,h226km±6km,M3.7/13, MLv3.7/13*

ISC 13 04:54:45.6±0.6**,0°.42N**±0°.07×**123°.59E**±0°.07**,h264**km**,n47,** σ**1ˢ.77**/50**,mb4.1**/19**,Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	Cibinong	0.42	69	P	Pn	04 55 16.5	-3.4
MRSI	Marisa	1.65	272	P	Pn	04 55 25.3	-1.1
MRSI				S	S	04 55 54.8	-3.7
LUWI	Luwuk	1.66	209	P	Pn	04 55 25.1	-1.4
LUWI				S	S	04 55 54.4	-4.5
LUWI	Luwuk	1.66	209	Pn	Pn	04 55 24.8	-1.7
APSI	Ampana	2.34	236	P	Pn	04 55 32.1	-0.3
APSI				S	S	04 56 06.4	-3.1
TOLI2	Tolitoli	2.88	284		Pn	04 55 36.7	-1.1
SANI	Sanana	3.43	136	P	Pn	04 55 40.9	-2.8
MPSI	Mapaga	3.69	269	P	Pn	04 55 47.3	+0.8
TNTI	Ternate	3.80	85	P	Pn	04 55 45.6	-2.2
TNTI	Ternate	3.80	85	Pn	Pn	04 55 44.3	-3.4
LBMI	Labuha	4.05	105	P	Pn	04 55 48.6	-2.1
FAKI	Fak Fak	9.28	111	Pn	Pn	04 56 52.7	-2.4
MTN	Manton Dam	15.16	151	P	Pn	04 58 07.6	+0.3
MTN				IAmb	IAmb	04 58 09.0	
	comp=Z,20nm,1.1s						
MTN	Manton Dam	15.16	151	P	Pn	04 58 07.8	+0.5
	comp=Z,19nm,0.9s						
KNRA	Kununurra	16.79	162	P	Pn	04 58 26.1	-0.4
KNRA	Kununurra	16.79	162	P	Pn	04 58 26.6	+0.1
	comp=Z,22nm,1.2s						
FITZ	Fitzroy Crossi	18.51	174	P	P	04 58 43.6	+0.6
	comp=Z,0.9nm,0.3s,baz=15,slow=7.9,SNR=27						
WB0	Warramunga Arr	22.69	153	P	P	04 59 26.0	+1.0
WB0				IAmb	IAmb	04 59 28.1	
	comp=Z,12nm,1.0s						
WRAB	Tennant Creek	22.81	153	P	P	04 59 25.6	-0.4
WRAB				IAmb	IAmb	04 59 29.8	
	comp=Z,6.6nm,0.9s						
WRAB	Tennant Creek	22.81	153	P	P	04 59 27.3	+1.2
WRA	Warramunga Arr	22.82	153	P	P	04 59 27.0	+0.9
	comp=Z,6.9nm,0.7s,baz=343,slow=13,SNR=36						
WB2	Warramunga Arr	22.82	153	P	P	04 59 26.7	+0.5
WB2				IAmb	IAmb	04 59 29.4	
	comp=Z,8.3nm,0.9s						
WR0	Warramunga Arr	22.92	153	P	P	04 59 28.0	+1.0
WR0				IAmb	IAmb	04 59 30.3	
	comp=Z,7.5nm,1.0s						
WRKA	Warakurna	25.71	170	P	P	04 59 53.5	+1.2
	comp=Z,14nm,2.1s						
AS31	Alice Springs	25.96	158	P	P	04 59 55.6	+1.2
AS31				IAmb	IAmb	04 59 58.7	
	comp=Z,1.0nm,0.5s						
ASAR	Alice Springs	25.96	158	P	P	04 59 54.6	+0.2
	comp=Z,0.9nm,0.4s,baz=330,slow=7.5,SNR=16						
ASAR				ScP	ScP	05 06 32.5	+2.5
	comp=Z,0.3nm,0.6s,baz=325,slow=2.7,SNR=4.6						
GSI	Gunungsitoli	26.02	272	P	P	04 59 54.4	-0.7
GSI				IAmb	IAmb	05 00 07.8	
	comp=Z,9.5nm,0.8s						
QIS	Mount Isa	26.09	144	P	P	04 59 56.8	+1.2
	comp=Z,11nm,0.7s						
FORT	Forrest	31.32	173	P	P	05 00 42.8	+1.2
MULG	Mulgathing	32.12	163	P	P	05 00 50.5	+1.8
	comp=Z,8.8nm,2.5s						
BBOO	Buckleboo	35.09	162	P	P	05 01 14.6	+0.4
BBOO	Buckleboo	35.09	162	P	P	05 01 15.9	+1.8
	comp=Z,17nm,2.2s						
STKA	Stephens Creek	36.37	154	P	P	05 01 26.2	+1.2
	comp=Z,2.0nm,0.5s,baz=311,slow=9.5,SNR=5.5						
STKA	Stephens Creek	36.37	154	IAmb	IAmb	05 01 27.5	
	comp=Z,0.4nm,0.8s						
STKA	Stephens Creek	36.37	154	P	P	05 01 27.0	+2.0
JWT	Wachi	36.39	16	P	P	05 01 25.6	+0.5
CMSA	Cobar Meteorol	38.07	149	P	P	05 01 41.6	+2.3
CAN	Canberra	42.74	149	P	P	05 02 19.9	+2.5
SONM	Songino Array	49.53	345	P	P	05 03 08.8	-1.2
	comp=Z,0.9nm,0.6s,baz=149,slow=7.6,SNR=6.8						
MK31	Makanchi Array	58.57	328	P	P	05 04 16.1	+1.2
MKAR	Makanchi Array	58.57	328	P	P	05 04 14.5	-0.4
	comp=Z,1.7nm,0.3s,baz=127,slow=7.1,SNR=24						
ZAA0	Zalesovo Array	62.18	335	P	P	05 04 38.7	-0.4
ZAA0				IAmb	IAmb	05 04 46.8	
	comp=Z,2.2nm,1.0s						
ZALV	Zalesovo Beam	62.18	335	P	P	05 04 39.8	+0.7
KURK	Kurchatov	62.91	330	P	P	05 04 45.5	+1.5
KURK				IAmb	IAmb	05 04 46.2	
	comp=Z,4.8nm,0.9s						
BRVK	Borovoye	68.50	329	P	P	05 05 20.4	+0.8
BRVK				IAmb	IAmb	05 05 21.9	
	comp=Z,3.9nm,1.2s						
ABKAR	Akbulak array	72.76	322	P	P	05 05 45.8	+0.6
IL31		89.42	25	P	P	05 07 13.0	+0.7
IL31				IAmb	IAmb	05 07 25.7	
	comp=Z,0.9nm,0.7s						

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*SOME **13** 05:04:22.6,40°.08N×76°.58E,h10km*

*KRNET **13** 05:04:30.0±0.1,40°.40N×76°.86E,mb3.8*

*NNC **13** 05:04:32.9±1.0,40°.46N×76°.64E,h0km,mb4.2,mpv3.9, Error ellipse: s-maj=7.5km s-min=5.5km az=167.0*

ISC 13 05:04:26.3±1.6**,40°.27N**±0°.06×**76°.56E**±0°.03**,h17**km±13km**, n67,**σ**1ˢ.61**/99**,31C-11D,Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULHL	Ulahol	1.99	353	P	Pg	05 05 09.4	+4.8
	SNR=5.0						
ULHL	Ulahol	1.99	353	⇑iP	Pg	05 05 05.4	+0.8
	baz=46						
ULHL				⇑iS	Sg	05 05 31.2	+0.8
	baz=46						
BOOM	Boomskoye usch	2.27	348	⇑iP	Pg	05 05 09.4	-0.5
	baz=42						
BOOM				⇑iS	Sg	05 05 38.8	-0.5
	baz=42						
UCH	Uchtor	2.49	322	P	Pb	05 05 11.8	+0.9
	SNR=49						
UCH	Uchtor	2.49	322	⇓eP	Pg	05 05 14.5	+0.3
	baz=17						
UCH				⇓iS	Sg	05 05 47.5	+1.0
	baz=17						
PRZ	Przheval'sk	2.61	31	⇓eP	Pb	05 05 12.5	-0.3
	baz=28						
PRZ				⇓iS	Sb	05 05 43.6	-1.0
	baz=28						
ANVS	Anan'yevo	2.65	18	⇓eP	Pb	05 05 13.4	0.0
	baz=14						
ANVS				⇓iS	Sb	05 05 45.3	-0.3
	baz=14						
KBK	Karagaybulak	2.67	334	P	Pb	05 05 15.6	+1.8
	SNR=9.7						
KBK	Karagaybulak	2.67	334	⇑eP	Pg	05 05 16.5	-1.1
	baz=28						
KBK				⇑iS	Sg	05 05 50.3	-2.0
	baz=28						
TKM2	Tokmak 2	2.75	345	P	Pb	05 05 16.3	+1.2
	SNR=14						
TKM2	Tokmak 2	2.75	345	⇓Pn	Pb	05 05 16.2	+1.1
	54nm,0.9s						
TKM2				⇑Lg	Lg	05 05 54.5	
	16nm,0.3s						
TKM2	Tokmak 2	2.75	345	⇑eP	Pb	05 05 16.6	+1.5
	baz=40						
TKM2				⇑iS	Sb	05 05 50.8	+2.3
	baz=40						
TNSS	Tian-Shan	2.78	6	eP	Pb	05 05 16.2	+0.4
	66nm,0.6s						
TNSS				eS	Sg	05 05 55.2	-0.5
	20nm,0.6s						
TNSS	Tian-Shan	2.78	6	Pg	Pg	05 05 21.3	+1.7
	66nm,0.6s						
TNSS				Lg	Lg	05 05 55.2	
	20nm,0.6s						
KST	Kastek	2.81	351	eP	Pb	05 05 16.5	+0.4
	36nm,0.4s						
KST				eS	Sg	05 05 55.5	-1.1
	22nm,0.5s						
KST	Kastek	2.81	351	Pg	Pg	05 05 21.3	+1.1
	36nm,0.4s						
KST				Lg	Lg	05 05 55.5	
	22nm,0.5s						
AAK	Ala-Archa	2.83	327	P	Pb	05 05 17.4	+1.0
	SNR=29						
AAK	Ala-Archa	2.83	327	⇑Pn	Pb	05 05 16.9	+0.4
	54nm,0.7s						
AAK				⇓Lg	Lg	05 05 57.3	
	43nm,0.7s						
AAK	Ala-Archa	2.83	327	⇑eP	Pg	05 05 18.9	-1.7
	baz=22						
AAK				⇑iS	Sb	05 05 54.4	+3.5
	baz=22						
AML	Almayashu	2.85	312	P	Pb	05 05 16.9	0.0
	SNR=21						
AML	Almayashu	2.85	312	⇑iP	Pg	05 05 20.2	-0.8
	baz=7.0						
AML				⇑iS	Sg	05 05 57.2	-0.8
	baz=7.0						
MTBS	Maitube	2.86	358	eP	Pb	05 05 17.6	+0.6
	40nm,0.3s						
MTBS				eS	Sg	05 05 56.8	-1.4
	16nm,0.2s						
MTBS	Maitube	2.86	358	Pg	Pg	05 05 22.6	+1.4
	40nm,0.3s						
MTBS				Lg	Lg	05 05 58.1	
	16nm,0.2s						
OHH	Osh	2.89	276	⇑iP	Pg	05 05 22.4	+0.6
	baz=74						
OHH				⇑iS	Sg	05 06 00.2	+0.9
	baz=74						
MDOK	Medeo	2.91	7	eP	Pb	05 05 17.8	-0.1
	42nm,0.6s						
MDOK				eS	Sg	05 05 57.7	-2.3
	60nm,0.8s						
MDOK	Medeo	2.91	7	⇑Pn	Pb	05 05 18.1	+0.1
	28nm,0.5s						
MDOK				⇑Lg	Lg	05 06 00.9	
	73nm,0.8s						
MDOK	Medeo	2.91	7	Pg	Pg	05 05 22.5	+0.3
	42nm,0.6s						
MDOK				Lg	Lg	05 05 57.3	
	60nm,0.8s						
KNDC	Almaty	2.96	6	⇑Pg	Pg	05 05 23.2	+0.1
	69nm,0.6s						
KNDC				⇑Lg	Lg	05 06 02.3	
	77nm,0.6s						
DGS	Degeres	3.03	349	eP	Pb	05 05 20.6	+0.7
	81nm,0.6s						
DGS				eS	Sg	05 06 02.0	-1.6
	33nm,0.4s						
DGS	Degeres	3.03	349	Pg	Pg	05 05 25.9	+1.6
	81nm,0.6s						
DGS				Lg	Lg	05 06 04.0	
	33nm,0.4s						
CHMS	Chumysh	3.04	334	P	Pb	05 05 20.6	+0.6
	SNR=6.1						
CHMS	Chumysh	3.04	334	⇓iP	Pb	05 05 21.3	+1.2
	baz=29						
CHMS				⇓iS	Sb	05 05 58.5	+1.6
	baz=29						
SATY	Saty	3.11	26	eP	Pb	05 05 21.4	+0.1
	29nm,0.6s						
SATY				eS	Sg	05 06 04.2	-2.1
	28nm,0.3s						
SATY	Saty	3.11	26	Pg	Pg	05 05 26.4	+0.4
	29nm,0.6s						
SATY				Lg	Lg	05 06 04.2	
	28nm,0.3s						
EKS2	Erkin-Say	3.17	320	P	Pb	05 05 21.9	-0.5
	SNR=17						
EKS2	Erkin-Say	3.17	320	⇑eP	Pb	05 05 24.2	+1.9
	baz=15						
EKS2				⇑iS	Sb	05 06 03.6	+2.8
	baz=15						
USP	Ospenovka	3.37	333	P	Pn	05 05 15.5	-2.6
	SNR=5.7						
USP	Ospenovka	3.37	333	⇑eP	Pb	05 05 25.7	+0.1
	baz=29						
USP				⇑iS	Sb	05 06 06.4	+0.2
	baz=29						
UZB	Uzynbulak	3.42	32	eP	Pb	05 05 28.4	+1.9
	9.9nm,0.5s						
UZB				eS	Sg	05 06 15.7	-0.4
	19nm,0.5s						
UZB	Uzynbulak	3.42	32	Pg	Pg	05 05 31.4	-0.4
	9.9nm,0.5s						
UZB				Lg	Lg	05 06 13.1	
	19nm,0.5s						
KURS	Kuram	3.43	20	eP	Pb	05 05 28.2	+1.5
	12nm,0.5s						
KURS				eS	Sg	05 06 15.7	-1.0
	36nm,1.0s						
KURS	Kuram	3.43	20	Pg	Pg	05 05 31.6	-0.5
	12nm,0.5s						
KURS				Lg	Lg	05 06 13.4	
	36nm,1.0s						
KTBS	Karatobe	3.44	1	eP	Pb	05 05 27.2	+0.4
	25nm,0.3s						
KTBS				eS	Sg	05 06 14.0	-2.9
	32nm,0.4s						
KTBS	Karatobe	3.44	1	Pg	Pg	05 05 32.3	0.0
	25nm,0.3s						
KTBS				Lg	Lg	05 06 14.0	
	32nm,0.4s						
KRBS	Karabastau	3.49	349	eP	Pg	05 05 31.0	-2.2
	58nm,0.4s						
KRBS				eS	Sg	05 06 20.2	+1.9
	22nm,0.6s						
KRBS	Karabastau	3.49	349	Pg	Pg	05 05 35.1	+1.9
	58nm,0.4s						
KRBS				Lg	Lg	05 06 19.4	
	22nm,0.6s						
MRKS	Merke	3.52	316	eP	Pb	05 05 29.9	+1.7
	26nm,0.7s						
MRKS				eS	Sg	05 06 18.7	-0.6
	22nm,0.5s						
MRKS	Merke	3.52	316	Pg	Pg	05 05 34.9	+1.1
	26nm,0.7s						
MRKS				Lg	Lg	05 06 18.5	
	22nm,0.5s						
SHLS	Shalkode	3.61	36	eP	Pg	05 05 34.0	-1.6
	15nm,0.5s						
SHLS				eS	Sg	05 06 25.3	+2.9
	24nm,0.5s						
SHLS	Shalkode	3.61	36	Pg	Pg	05 05 38.6	+3.0
	15nm,0.5s						
SHLS				Lg	Lg	05 06 25.3	
	24nm,0.5s						
KUU	Kurty	3.62	357	eP	Pb	05 05 32.2	+2.3
	28nm,0.5s						
KUU				eS	Sg	05 06 22.1	-0.6
	28nm,0.7s						
KUU	Kurty	3.62	357	Pg	Pg	05 05 36.8	+1.0
	28nm,0.5s						
KUU				Lg	Lg	05 06 22.1	
	28nm,0.7s						
PDGK	Podgornoye	3.76	35	Pg	Pg	05 05 39.0	+0.6
	4.4nm,0.6s						
PDGK				Lg	Lg	05 06 25.7	
	13nm,1.0s						
PDGK	Podgornoye	3.76	35	⇑Pg	Pb	05 05 35.3	+3.0
	6.3nm,0.6s						
PDGK				⇑Lg	Lg	05 06 25.5	
	26nm,0.6s						
MNAS	Manas	3.77	307	⇑eP	Pb	05 05 33.2	+0.7
	baz=4.0						
MNAS				⇑iS	Sb	05 06 19.0	+1.1
	baz=4.0						
ARXS	Arharly	4.05	13	eP	Pb	05 05 39.8	+2.6
	9.8nm,0.6s						
ARXS				eS	Sg	05 06 35.5	-0.9
	24nm,0.6s						
ARXS	Arharly	4.05	13	Pg	Pg	05 05 44.2	+0.2
	16nm,0.5s						

ARXS				Lg	Lg	05 06 35.2	
	24nm,0.6s						
KTMS	Ketmen	4.25	41	eP	Pb	05 05 43.3	+2.6
	1.2nm,0.4s						
KTMS				eS	Sg	05 06 40.8	-2.1
	13nm,0.8s						
KTMS	Ketmen	4.25	41	Pg	Pg	05 05 47.9	+0.1
	3.8nm,0.3s						
KTMS				Lg	Lg	05 06 40.8	
	13nm,0.8s						
TRKS	Terek-Say	4.29	289	⇑eP	Pb	05 05 40.9	-0.6
	baz=86						
TRKS				⇑iS	Sb	05 06 32.7	-0.4
	baz=86						
DJR	Jarkent	4.71	29	eP	Pb	05 05 51.6	+3.0
	3.7nm,0.4s						
DJR				eS	Sg	05 06 54.9	-2.7
	9.2nm,0.4s						
DJR	Jarkent	4.71	29	Pg	Pg	05 05 56.2	-0.4
	4.7nm,0.5s						
DJR				Lg	Lg	05 06 55.2	
	6.5nm,0.4s						
BTLS	Baital	5.12	340	eP	Pb	05 05 59.4	+4.1
	7.2nm,0.5s						
BTLS				eS	Sg	05 07 08.4	-2.0
	12nm,0.8s						
BTLS	Baital	5.12	340	Pg	Pg	05 06 03.9	-0.4
	7.2nm,0.5s						
BTLS				Lg	Lg	05 07 08.4	
	12nm,0.8s						
KK31	Karatay Array	5.34	304	⇓Pg	Pg	05 06 07.8	-0.7
	1.6nm,0.5s,baz=128,slow=17,SNR=9.9						
KK31				⇑Lg	Lg	05 07 20.0	
	2.4nm,0.5s,baz=122,slow=27,SNR=4.1						
KAPS	Kapalarasan	5.42	21	eP	Pb	05 06 04.1	+3.6
	4.5nm,0.8s						
KAPS				eS	Sg	05 07 16.8	-3.4
	8.4nm,0.7s						
KAPS	Kapalarasan	5.42	21	Pg	Pg	05 06 08.7	-1.3
	4.5nm,0.6s						
KAPS				Lg	Lg	05 07 16.7	
	5.6nm,0.4s						

IDC ***13*** *05:12:13.0±0.6, 38°.95N×141°.65E, h69^{km}±5^{km}, mb4.0/18, mb1 4.2/24, mb1mx4.0/42, mbtmp4.3/24, MS2.9/4, Ms1 2.9/4, ms1mx2.7/39, Error ellipse: s-maj=13.7km s-min=11.6km az=88.0*

MOS ***13*** *05:12:12.2±1.3, 39°.07N×141°.62E, h75^{km}, mb5.0/12, Error ellipse: s-maj=9.6km s-min=6.3km az=91.1*

NIED ***13*** *05:12:13.7, 38°.97N×141°.66E, h73^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.85; $M_{\theta\theta}$-0.39; $M_{\phi\phi}$-1.46; $M_{r\theta}$-0.16; $M_{\theta\phi}$-0.36; $M_{\phi r}$-0.99; Fault plane solution: $M_0$1.98000×10^{15} NP1: ϕ_s193.00000°, δ60.00000°, λ87.00000°. NP2: ϕ_s19.00000°, δ30.00000°, λ95.00000°.*

JMA ***13*** *05:12:13.7, 38°.97N×141°.66E, h73^{km}±1^{km}, M4.3 Broadband fault plane solution: P waves. NP1: ϕ_s60.00000°, δ29.00000°, λ94.00000°. NP2: ϕ_s235.00000°, δ61.00000°, λ88.00000°. Principal axes: T Plg74.0000°, Azm140.0000°; N Plg2.0000°, Azm236.0000°; P Plg16.0000°, Azm327.0000°;*

JMA Felt II J1.

NEIC ***13*** *05:12:14.2±1.9, 38°.97N±0°.05×141°.61E±0°.08, h73^{km}±7^{km}, mb4.5/38 Error ellipse: s-maj=11.3km s-min=3.1km az=130.0*

ISC 13 05:12:12.6±0.5**, 38°.95N**±0°.04×**141°.81E**±0°.05**, h72**^{km}±3^{km}**, h72**^{km}**:pP-P, n171,** σ1^{s}.**49**/184**, mb4.6**/60**, 19C-22D, Fault plane solution: NP1:** ϕ_s326.72159°**,** δ15.07754°**,** λ9.93047°. **NP2:** ϕ_s227.12653°**,** δ87.42888°**,** λ104.86171°. **Principal axes:** T Plg45.6010°, Azm152.1503°**;** N Plg14.8464°**,** Azm46.4445°**;** P Plg40.6204°**,** Azm303.3026°**; Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.17	321	⇑P	Pn	05 12 24.4	+1.1
OFUJ				S	Sn	05 12 32.1	+0.9
JKMT	Kesennumamotoy	0.29	242	⇑P	Pn	05 12 24.8	+0.9
JKMT				S	Sn	05 12 32.7	+0.4
JMK	Ichinoseki	0.46	271	⇑P	Pn	05 12 25.3	+0.1
JMK				S	Sn	05 12 33.9	-0.5
JIO	Ouri	0.61	216	⇑P	Pn	05 12 27.3	+0.7
JIO				S	Sn	05 12 37.1	+0.1
JOM	Ohasama	0.66	323	⇑P	Pn	05 12 27.6	+0.4
JOM				S	Sn	05 12 37.9	-0.1
JRG	Rokugo	1.02	296	⇑P	Pn	05 12 31.2	-0.2
JRG				S	Sn	05 12 44.5	-0.9
JOU	Okura	1.07	237	⇑P	Pn	05 12 32.2	+0.2
JOU				S	Sn	05 12 46.3	-0.3
JYK	Kaneyama	1.13	269	⇑P	Pn	05 12 32.7	-0.1
JYK				S	Sn	05 12 47.1	-0.8
JMM	Marumori	1.34	217	P	Pn	05 12 35.6	+0.1
JMM				S	Sn	05 12 52.0	-0.8
JMM	Marumori	1.34	217		Pn	05 12 35.8	+0.2
JMM				Sn	Sn	05 12 51.9	-0.9
JANG	Nango	1.44	351	⇓P	Pn	05 12 37.1	+0.3
JANG				S	Sn	05 12 55.4	+0.3
JAH	Hinai	1.53	324	P	Pn	05 12 38.7	+0.7
JAH				S	Sn	05 12 57.4	+0.2
JYS	Shirataka	1.55	243	⇑P	Pn	05 12 38.6	+0.4
JYS				S	Sn	05 12 57.2	-0.4
JYA	Atsumi	1.67	258	P	Pn	05 12 40.0	+0.1
JYA				eS	Sn	05 12 59.9	-0.7
JTM	Tenmabayashi	1.92	343	Pn	Pn	05 12 43.9	+0.7
JSD	Sado	2.93	253	Pn	Pn	05 12 56.9	+0.1
JYT	Yasato	3.00	206		Pn	05 12 57.7	-0.1
ERM	Erimo	3.23	18	ceP	Pn	05 13 00.7	-0.2
ERM				pmax	pmax		
	comp=Z,85nm,1.0s						
ERM	Erimo	3.23	18		Pn	05 13 01.3	+0.4
MJAR	Matsushiro Arr	3.73	231	P	Pn	05 13 08.3	+0.6
	comp=Z,3.7nm,0.3s,baz=37,slow=12,SNR=137						
MJAR				LR	LR	05 14 51.7	
	comp=Z,167nm,21.3s,baz=45,slow=44						
MJAR	Matsushiro Arr	3.73	231	P	Pn	05 13 08.7	+1.0
MJAR	Matsushiro Arr	3.73	231	Pn	Pn	05 13 08.7	+1.0
MJB9	Matsu-Tunnel	3.73	231		Pn	05 13 09.6	+1.9
MAJO	Matsushiro	3.73	231	P	Pn	05 13 09.2	+1.5
MAJO	Matsushiro	3.73	231		Pn	05 13 09.2	+1.5
MAT	Matsushiro	3.73	231	eS	Sn	05 13 53.3	+2.8
MAT	Matsushiro	3.73	231	P	Pn	05 13 09.6	+1.9
JGF	Kuroka	4.87	228		Pn	05 13 25.5	+2.1
ASAJ	Asahikawa	5.20	6	P	Pn	05 13 27.9	+0.2
	comp=Z,5.8nm,0.3s,baz=222,slow=11,SNR=11						
JKA	Kamikawa-asahi	5.20	6		Pn	05 13 27.9	+0.2
INU	Inuyama	5.25	228		Pn	05 13 28.5	+0.1
NMR	Nemuro--Hokkai	5.32	33	⇑iP	Pn	05 13 28.2	-1.1
NMR				eS	Sn	05 14 24.6	-4.5
RUSJ	Misakicho	5.76	26	eP	Pn	05 13 36.3	+0.9
RUSJ				eS	Sn	05 14 39.9	-0.2
YUK	Yuzh-Kuril'sk	5.92	30	eP	Pn	05 13 37.6	0.0
YUK				eS	Sn	05 14 41.6	-2.4
YUK				pmax	pmax		
	comp=N,192nm,0.3s						
YUK				pmax	pmax		
	comp=E,219nm,0.3s						
YUK				pmax	pmax		
	comp=Z,287nm,0.3s						
YUK				smax	smax		
	comp=N,772nm,0.4s						
YUK				smax	smax		
	comp=E,756nm,0.5s						
JHJ	Hachijo jima 2	6.04	196	P	Pn	05 13 38.2	-1.1
	comp=E,12nm,0.3s,baz=38,slow=20,SNR=0.9						
JHJ				S	Sn	05 14 43.4	-3.7
	comp=E,28nm,0.3s,baz=39,slow=18,SNR=1.8						
JWT	Wachi	6.29	236		Pn	05 13 44.9	+2.1
JHS	Saijyo	7.99	243	Pn	Pn	05 14 08.6	+2.6
YSS	Yuzh-Sakhalins	8.03	5	eP	Pn	05 14 16.4	+10
USA0B	Ussuriysk Arra	9.03	309	P	Pn	05 14 21.1	+1.0
USA0B	Ussuriysk Arra	9.03	309		Pn	05 14 21.1	+1.0
USRK	Ussuriysk Ar.	9.03	309	P	Pn	05 14 20.2	+0.1
	baz=117,slow=14,SNR=38						
USRK	Ussuriysk Ar.	9.03	309	P	Pn	05 14 21.3	+1.2
USRK	Ussuriysk Ar.	9.03	309		Pn	05 14 21.3	+1.2
KSRS	Korea Array	11.03	267	P	Pn	05 14 47.2	-0.1
	comp=E,1.4nm,0.3s,baz=81,slow=14,SNR=10.0						
KSRS				LR	LR	05 19 02.6	
	comp=E,62nm,18.6s,baz=48,slow=37						
TYV	Tymovskoe	11.93	3	eP	Pn	05 14 58.6	-0.9
TYV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
TYV				pmax	pmax		
	comp=Z,100nm,4.7s						
KLR	Kul'dur	12.55	328	P	Pn	05 15 07.2	-0.8
	comp=Z,0.2nm,0.3s,baz=151,slow=22,SNR=2.0						
KLR				LR	LR	05 20 22.5	
	comp=Z,24nm,18.6s,baz=68,slow=39						
KLR	Kul'dur	12.55	328	iP	Pn	05 15 03.1	-5.0
ZEA	Zeya	17.83	331	eP	P	05 16 13.8	-1.5
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2	Nanjing	19.89	257	eP	P	05 16 38.0	0.0
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
HHC	Hu-ho-hao-te	23.23	284	eP	P	05 17 10.0	-3.6
HHC				pmax	pmax		
	comp=Z,16nm,0.8s						
HHC				pmax	pmax		
	comp=Z,77nm,4.4s						
YULB	Yu-li	23.34	234	P	P	05 17 13.3	-1.3
YULB				IAmb	IAmb	05 17 14.1	
	comp=Z,19nm,1.3s						
YAK	Yakutsk	24.28	346	iP	P	05 17 21.7	-1.0
YAK				pmax	pmax		
	comp=Z,14nm,0.6s						
SEY	Seymchan	24.86	12	P	P	05 17 30.6	+2.7
	comp=Z,3.4nm,0.8s,baz=175,slow=23,SNR=2.9						
BOD	Bodaibo	26.10	325	eP	P	05 17 38.1	-1.2
BOD				pmax	pmax		
	comp=Z,8.0nm,1.9s						
XAN	Xi'an	26.80	270	P	P	05 17 46.0	+0.1
XAN				pP	pP	05 18 02.0	-0.9
XAN				pmax	pmax		
	comp=Z,14nm,0.6s						
SONM	Songino Array	27.02	301	P	P	05 17 47.8	-0.1
	comp=Z,1.1nm,0.5s,baz=102,slow=9.3,SNR=5.8						
SONM	Songino Array	27.02	301	P	P	05 17 47.4	-0.5
H11N2	WAKE ISLAND Hy	28.91	124	T	T	05 48 36.7	
	baz=317,slow=75,SNR=1030						
H11N1	WAKE ISLAND Hy	28.92	124	T	T	05 48 37.4	
	baz=317,slow=75,SNR=1994						
H11N3	WAKE ISLAND Hy	28.93	124	T	T	05 48 38.1	
	baz=317,slow=75,SNR=1084						
H11S1	WAKE ISLAND Hy	29.69	126	T	T	05 49 36.2	
	baz=318,slow=76,SNR=349						
H11S3	WAKE ISLAND Hy	29.69	126	T	T	05 49 36.4	
	baz=318,slow=76,SNR=431						
H11S2	WAKE ISLAND Hy	29.70	126	T	T	05 49 38.0	
	baz=318,slow=76,SNR=240						
LZH	Lanzhou	30.11	277	eP	P	05 18 17.3	+1.9
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
LZH				LR	LR		
	comp=N,210nm,12.5s						
LZH				LR	LR		
	comp=E,230nm,13.0s						
LZH				LR	LR		
	comp=Z,170nm,15.2s						
CD2	Chengdu	32.03	267	P	P	05 18 30.1	-2.2
GTA	Gaotai	32.34	284	eP	P	05 18 36.4	+1.3
GTA				sP	sP	05 19 02.5	+1.8
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TIXI	Tiksi	33.43	353	iP	P	05 18 42.4	-1.6
TIXI				pmax	pmax		
	comp=Z,7.0nm,2.1s						
KMI	Kunming	35.59	259	⇑P	P	05 19 03.1	-0.4
KMI				pmax	pmax		
	comp=Z,16nm,0.8s						
WMQ	Urumqi	40.28	295	eP	P	05 19 44.3	+1.7
ZAA0	Zalesovo Array	40.88	311	P	P	05 19 46.9	-0.3
ZALV	Zalesovo Beam	40.88	311	P	P	05 19 47.1	-0.1
	comp=Z,12nm,0.5s,baz=89,slow=8.2,SNR=51						
ZALV	Zalesovo Beam	40.88	311	P	P	05 19 46.9	-0.3
CMAR	Chiang Mai Arr	42.31	254	P	P	05 19 59.7	+0.4
	comp=Z,0.7nm,0.3s,baz=44,slow=7.8,SNR=5.0						
CMAR				LR	LR	05 37 36.1	
	comp=Z,20nm,18.4s,baz=180,slow=36						
CMAR	Chiang Mai Arr	42.31	254	P	P	05 19 59.9	+0.6
CMAR	Chiang Mai Arr	42.31	254	P	P	05 19 59.9	+0.6
MK31	Makanchi Array	43.39	300	P	P	05 20 07.5	-0.3
MK31				pmax	pmax		
	comp=Z,13nm,0.7s						
MK31	Makanchi Array	43.39	300	P	P	05 20 07.5	-0.3
MKAR	Makanchi Array	43.39	300	P	P	05 20 07.7	-0.2
	comp=Z,13nm,0.6s,baz=85,slow=10.0,SNR=117						
MKAR	Makanchi Array	43.39	300	P	P	05 20 07.5	-0.3
MAKZ	Makanchi	43.60	301	P	P	05 20 09.4	-0.1
MAKZ				pmax	pmax		
	comp=Z,12nm,0.8s						
MAKZ	Makanchi	43.60	301	P	P	05 20 09.4	-0.1
SVW2	Sparrevohn	43.82	39	P	P	05 20 13.6	+2.5
SVW2				IAmb	IAmb	05 20 24.4	
	comp=Z,15nm,1.4s						
J20K	Nowinta River	44.58	34	P	P	05 20 19.6	+2.6
K20K	Telida	44.58	35	P	P	05 20 20.0	+2.9
K20K				IAmb	IAmb	05 20 38.7	
	comp=Z,8.5nm,1.3s						
IMAR	Indian Mountai	44.85	32	P	P	05 20 21.1	+1.9
KURK	Kurchatov	45.02	307	ceP	P	05 20 20.4	-0.3
KURK				pmax	pmax		
	comp=Z,21nm,1.0s						
KURBB	Kurchatov Arra	45.09	307	P	P	05 20 20.9	-0.4
	comp=Z,14nm,0.8s,baz=82,slow=8.4,SNR=80						
KURBB				pP	pP	05 20 38.2	-1.0
	comp=Z,3.5nm,0.5s,baz=81,slow=8.3,SNR=4.2						
CAST	Castle Rocks	45.48	35	P	P	05 20 26.9	+2.7
CAST				IAmb	IAmb	05 20 43.5	
	comp=Z,9.2nm,1.4s						
MLY	Manley	46.07	33	P	P	05 20 31.5	+2.6
MLY				IAmb	IAmb	05 20 32.3	
	comp=Z,5.0nm,0.9s						
TAPN	Taplejung	46.15	272	eP	P	05 20 29.3	-1.0
	comp=Z,3.4nm,0.4s						
COLD	Coldfoot	46.34	30	P	P	05 20 33.2	+2.4
TOLK	Toolik Lake Re	46.63	28	P	P	05 20 35.5	+2.3
TOLK				IAmb	IAmb	05 20 36.3	
	comp=Z,8.0nm,1.4s						
GHO	Glory Hole Cre	47.00	37	P	P	05 20 38.3	+2.1
JIRN	Jiri	47.18	274	eP	P	05 20 39.1	+0.7
	comp=Z,6.8nm,0.4s						
RAMN	Ramite	47.20	273	eP	P	05 20 38.2	-0.3
	comp=Z,9.8nm,0.5s						
GUN	Gumba	47.30	274	eP	P	05 20 39.1	-0.3
	comp=Z,24nm,0.4s						
POKR	Poker Plat Res	47.47	33	P	P	05 20 41.7	+2.0
IL31		47.72	33	P	P	05 20 43.2	+1.6
IL31				IAmb	IAmb	05 20 44.0	
	comp=Z,5.6nm,0.8s						
ILAR	Eielson Array	47.72	33	P	P	05 20 43.4	+1.7
	comp=Z,4.4nm,0.7s,baz=265,slow=6.1,SNR=65						
KKN	Kakani	47.83	274	eP	P	05 20 43.3	0.0
	comp=Z,29nm,0.7s						
GKN	Gorkha	48.22	275	eP	P	05 20 46.0	-0.3
	comp=Z,13nm,0.5s						
M24K	Tolsona, Glenn	48.26	37	P	P	05 20 48.7	+2.7
BMAR	Burnt Mountain	48.51	30	P	P	05 20 50.9	+3.1
DANN	Dangsing	48.74	276	eP	P	05 20 50.4	0.0
	comp=Z,64nm,0.7s						
KOLN	Koldanda	49.14	275	eP	P	05 20 54.2	+0.8
	comp=Z,6.5nm,0.3s						
PYUN	Piuthan	49.46	276	eP	P	05 20 55.8	0.0
	comp=Z,12nm,0.3s						
BVAR	Borovoye Array	49.53	311	P	P	05 20 55.6	-0.1
	comp=Z,1.7nm,0.5s,baz=182,slow=4.3,SNR=15						
BRVK	Borovoye	49.59	311	ceP	P	05 20 56.0	-0.1
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BRVK	Borovoye	49.59	311	P	P	05 20 56.2	0.0
BRVK				IAmb	IAmb	05 20 57.2	
	comp=Z,2.5nm,0.6s						
AAK	Ala-Archa	49.88	297	P	P	05 20 58.6	-0.1
	comp=Z,1.5nm,0.3s,baz=68,slow=6.0,SNR=6.1						
AAK	Ala-Archa	49.88	297	iP	P	05 20 56.9	-1.8
AAK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
AAK	Ala-Archa	49.88	297	P	P	05 20 58.4	-0.3
AAK				IAmb	IAmb	05 21 00.7	
	comp=Z,2.6nm,0.6s						
BCAR	Beaver Creek A	50.15	35	P	P	05 21 02.7	+2.4
EGAK	Eagle	50.16	33	P	P	05 21 01.7	+1.4
KKAR	Karatay Array	52.45	299	P	P	05 21 17.4	-0.4
KKAR	Karatay Array	52.45	299	P	P	05 21 17.4	-0.4
INK	Inuvik	52.55	28	P	P	05 21 19.8	+1.8
INK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
INK	Inuvik	52.55	28	P	P	05 21 19.8	+1.8
INK				IAmb	IAmb	05 21 20.4	
	comp=Z,3.4nm,0.5s						
GAR	Garm	54.18	294	P	P	05 21 30.6	0.0
GAR				IAmb	IAmb	05 21 33.2	
	comp=Z,7.6nm,1.2s						
ARU	Arti	55.14	318	d iP	P	05 21 36.2	-1.0
ARU				*PP	pP	05 21 54.4	-1.3
ARU				*SP	sP	05 22 02.8	-1.1
ARU				S	S	05 29 09.3	-5.2
ARU				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ABKAR	Akbulak array	56.96	309	P	P	05 21 49.6	-0.6
ABKAR				IAmb	IAmb	05 21 50.9	
	comp=Z,4.6nm,0.6s						
ABKAR	Akbulak array	56.96	309	P	P	05 21 49.9	-0.3
EUNU	Eureka	58.25	9	P	P	05 21 59.6	+0.6
EUNU				IAmb	IAmb	05 22 07.3	
	comp=Z,6.7nm,1.2s						
WB0	Warramunga Arr	58.82	188	P	P	05 22 03.6	+0.2
KIRV	Kirov	58.92	322	iP	P	05 22 03.0	-0.7
WRA	Warramunga Arr	59.00	188	P	P	05 22 04.8	+0.1
	comp=Z,3.8nm,0.4s,baz=5.7,slow=7.4,SNR=45						
WRA				pP	pP	05 22 23.2	-0.1
	comp=Z,1.2nm,0.5s,baz=5.8,slow=7.4,SNR=3.7						
WRA	Warramunga Arr	59.00	188	P	P	05 22 04.7	-0.1
ASAR	Alice Springs	62.73	188	P	P	05 22 30.4	+0.5
	comp=Z,1.1nm,0.4s,baz=0.5,slow=5.6,SNR=17						
ASAR				pP	pP	05 22 49.5	+0.8
	comp=Z,0.5nm,0.5s,baz=11,slow=9.6,SNR=3.6						
TULEG	Thule	63.16	8	P	P	05 22 32.7	+0.5
TULEG				IAmb	IAmb	05 22 34.3	
	comp=Z,11nm,1.3s						
FINES	FINESS Array B	67.27	332	P	P	05 22 59.6	+0.6
	comp=Z,2.4nm,0.8s,baz=41,slow=10.0,SNR=6.3						
FINES				pP	pP	05 23 17.4	-0.7
	comp=Z,5.0nm,0.6s,baz=43,slow=8.6,SNR=7.3						
KIV	Kislovodsk	69.89	311	eP	P	05 23 14.0	-1.8
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
PAHR	Pah Rah Range	72.17	53	P	P	05 23 31.4	+1.7
NB2	NORSAR Subarra	72.54	337	P	pP	05 23 50.6	-0.2
	comp=Z,1.5nm,0.5s,baz=38,slow=6.5						
NOA	NORSAR Array B	72.54	337	P	P	05 23 31.3	-0.2
	comp=Z,0.8nm,0.8s,baz=40,slow=6.1,SNR=1.8						
NOA				pP	pP	05 23 50.1	-0.8
	comp=Z,0.5nm,0.4s,baz=52,slow=7.1,SNR=2.7						
YERR	Yerington	72.68	54	P	P	05 23 35.1	+2.3
YERR				IAmb	IAmb	05 23 36.1	
	comp=Z,3.9nm,0.9s						
AKASG	Malin Array Be	72.98	322	P	P	05 23 33.4	-0.7
	comp=Z,0.4nm,0.3s,baz=47,slow=7.0,SNR=6.5						
AKASG				pP	pP	05 23 52.8	-0.7
	comp=Z,2.5nm,0.4s,baz=44,slow=6.2,SNR=12						
KVN	Kaiserville	73.36	53	P	P	05 23 39.4	+2.5
KVN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KVN	Kaiserville	73.36	53	P	P	05 23 39.4	+2.5
KVN				IAmb	IAmb	05 23 40.2	
	comp=Z,6.0nm,0.9s						
LHV	Little Huntoon	73.58	54	P	P	05 23 41.2	+3.3
LHV				IAmb	IAmb	05 23 42.5	
	comp=Z,10nm,1.2s						
NVAR	Mina Array Bea	73.60	54	P	P	05 23 39.0	+0.7
	comp=Z,3.0nm,0.8s,baz=293,slow=5.7,SNR=19						
R11A	Troy Canyon, C	75.34	52	P	P	05 23 50.7	+2.4
GWY	Greenwater Val	76.00	55	P	P	05 23 54.1	+2.0
GWY				IAmb	IAmb	05 23 55.0	
	comp=Z,3.5nm,0.6s						
QSM	Queen of Sheba	76.00	55	P	P	05 23 54.2	+2.2
QSM				IAmb	IAmb	05 23 55.1	
	comp=Z,11nm,1.3s						
PDAR	Pinedale Array	76.11	46	P	P	05 23 54.5	+1.7
	comp=Z,1.8nm,0.6s,baz=264,slow=2.4,SNR=21						
BUR08	Bucovina Ar. S	76.99	322	P	P	05 23 58.8	+1.4
MSU	Marysvale	77.32	51	P	P	05 24 02.4	+2.8
MSU	Marysvale	77.32	51	P	P	05 24 02.4	+2.8
BRTR	Keskin Array B	77.82	311	P	P	05 24 02.4	+0.1
	comp=Z,0.5nm,0.6s,baz=88,slow=3.9,SNR=2.8						
BRTR	Keskin Array B	77.82	311	P	P	05 24 02.9	+0.6
BRTR	Keskin Array B	77.82	311	P	P	05 24 02.9	+0.6
SRU	San Rafael Swe	77.92	49	P	P	05 24 05.1	+2.2
SRU				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SRU	San Rafael Swe	77.92	49	P	P	05 24 05.1	+2.2
SRU				IAmb	IAmb	05 24 05.9	
	comp=Z,7.0nm,0.9s						
CLL	Collm	79.59	330	eP	P	05 24 12.0	+0.4
CLL				i *PP	pP	05 24 30.9	-0.2
CLL	Collm	79.59	330	eP	P	05 24 12.0	+0.4
CLL				i pP	pP	05 24 30.9	-0.2
KHC	Kasperske Hory	81.08	329	epP	pP	05 24 39.3	0.0
GERES	GERESS Array B	81.25	328	pP	pP	05 24 40.3	0.0
	comp=Z,0.6nm,0.5s,baz=36,slow=5.0,SNR=4.0						
ANMO	Albuquerque	83.12	50	ceP	P	05 24 34.0	+3.2
ANMO				pmax	pmax		
	comp=Z,5.0nm,2.5s						
TX31	Lajitas Ar. Si	88.71	53	P	P	05 24 59.9	+1.5
TXAR	Lajitas Array	88.71	53	P	P	05 25 00.1	+1.8
	comp=Z,1.2nm,0.6s,baz=292,slow=3.0,SNR=19						
TXAR	Lajitas Array	88.71	53	P	P	05 24 60.0	+1.6
SNAA	Sanae	142.67	198	PKPdf	PKPdf	05 31 32.0	-4.3
SNAA	Sanae	142.67	198	PKiKP	PKPdf	05 31 35.4	-0.8
VNA2	Neumayer--Watz	144.24	197	PKPdf	PKPbc	05 31 37.7	+0.3
VNA2	Neumayer--Watz	144.24	197	PKiKP	PKiKP	05 31 41.9	-0.6
VNA2	Neumayer--Watz	144.24	197	pPKPdf	pPKPdf	05 31 58.1	-1.4
VNA3	Neumayer Olymp	144.49	195	PKPdf	PKPab	05 31 38.2	+0.3
VNA3	Neumayer Olymp	144.49	195	PKiKP	PKiKP	05 31 41.7	-1.4
VNA3	Neumayer Olymp	144.49	195	pPKPdf	pPKPdf	05 31 58.4	-1.5
VNA1	Neumayer--Stat	144.64	197	PKPdf	PKPbc	05 31 39.1	+0.5
VNA1	Neumayer--Stat	144.64	197	PKiKP	PKiKP	05 31 43.0	-0.3
VNA1	Neumayer--Stat	144.64	197	pPKPdf	pPKPdf	05 31 59.4	-0.8

IDC ***13*** *05:15:49.9±0.6, 8°.43N×39°.32W, h0^{km}, mb4.1/15, mb1 4.2/15, mb1mx4.0/37, mbtmp4.1/15, MS3.9/13, Ms1 3.9/13, ms1mx3.7/28 Error ellipse: s-maj=22.3km s-min=14.2km az=148.0*

NEIC ***13*** *05:15:52.2±1.0, 8°.5N±0°.1×39°.31W±0°.06, h10^{km}±1^{km}, mb4.6/21, Error ellipse: s-maj=20.8km s-min=8.7km az=189.0*

ISC 13 05:15:52.3±0.5**, 8°.5N**±0°.1×**39°.29W**±0°.09**, h15**^{km}**, n54,** σ1^{s}.**11**/36**, mb4.3**/21**, MS3.9**/12**, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MDP	Montagnes des	13.67	257	LR	LR	05 23 25.7	
	comp=Z,469nm,19.7s,baz=70,slow=33						
SACV	Santiago Islan	16.65	66		Pn	05 19 41.5	-3.8
SACV				IAmb	IAmb	05 19 43.2	
	comp=Z,51nm,0.9s						
H05S1	Guadeloupe/Mar	21.92	288	T	T	05 43 13.7	
	SNR=39						
BOAV	Boa Vista	21.97	255	P	P	05 20 45.1	-0.8
BOAV				IAmb	IAmb	05 20 47.7	
	comp=Z,33nm,1.1s						
PTGA	Pitinga	22.55	247	P	P	05 20 51.5	-0.5
	comp=Z,3.0nm,0.5s,baz=72,slow=12,SNR=12						
PTGA				LR	LR	05 29 51.9	
	comp=Z,275nm,19.1s,baz=72,slow=37						
PTGA	Pitinga	22.55	247	P	P	05 20 51.7	-0.4
PTGA				IAmb	IAmb	05 20 58.3	
	comp=Z,15nm,1.0s						
H05N1	Guadeloupe/Mar	22.62	292	T	T	05 43 59.4	
	SNR=6.1						
BDFB	Brasilia	25.48	200	P	P	05 21 18.5	-1.7
	comp=Z,1.0nm,0.4s,baz=17,slow=14,SNR=4.0						
SJG	San Juan	27.80	293	LR	LR	05 30 28.1	
	comp=Z,251nm,20.6s,baz=92,slow=32						
CELP	Cerrillos	28.18	293	P	P	05 21 43.6	-0.9
CELP				IAmb	IAmb	05 21 54.2	
	comp=Z,16nm,1.1s						
SAML	Samuel	29.43	235	P	P	05 21 55.6	0.0
H10N3	ASCENSION HYDR	29.55	123	T	T	05 53 09.3	
	baz=302,slow=74,SNR=44						
H10N2	ASCENSION HYDR	29.56	123	T	T	05 53 09.7	
	baz=302,slow=74,SNR=45						
H10N1	ASCENSION HYDR	29.57	123	T	T	05 53 10.8	
	baz=302,slow=74,SNR=53						
H10S3	ASCENSION HYDR	30.03	125	T	T	05 53 41.8	
	baz=301,slow=74,SNR=34						
H10S2	ASCENSION HYDR	30.05	125	T	T	05 53 43.1	

	baz=279,slow=74,SNR=12						
PTLB	**Pontes e Lacer**	**30.85**	**220**	P	**P**	**05 22 09.3**	**+1.2**
ETMB	**Extrema**	**32.39**	**236**	P	**P**	**05 22 21.4**	**-0.4**
ETMB				IAmb	IAmb	05 22 24.6	
	comp=Z,7.5nm,1.2s						
SIV	**San Ignacio**	**32.50**	**222**	P	**P**	**05 22 23.0**	**+0.3**
	comp=Z,4.0nm,0.8s,baz=58,slow=9.2,SNR=15						
TBTG	**Tabatinga, AM**	**33.02**	**249**	P	**P**	**05 22 27.0**	**-0.3**
DBIC	**Dimbokro**	**34.18**	**91**	P	**P**	**05 22 37.3**	**-0.1**
	comp=Z,5.4nm,0.6s,baz=288,slow=7.2,SNR=9.8						
DBIC				LR	LR	05 34 21.6	
	comp=Z,154nm,19.1s,baz=296,slow=32						
DBIC	**Dimbokro**	**34.18**	**91**	P	**P**	**05 22 37.1**	**-0.2**
ROSC	**El Rosal**	**34.97**	**266**	LR	LR	05 36 56.3	
	comp=Z,249nm,20.9s,baz=57,slow=36						
KOWA	**Kowa**	**35.05**	**77**	P	**P**	**05 22 44.2**	**-0.8**
	comp=Z,1.2nm,0.7s,baz=280,slow=11,SNR=5.1						
KOWA	**Kowa**	**35.05**	**77**	P	**P**	**05 22 44.7**	**-0.3**
CZSB	**Cruzeiro do Su**	**36.99**	**245**	P	**P**	**05 23 01.3**	**-0.2**
LPAZ	**La Paz**	**37.69**	**229**	P	**P**	**05 23 08.0**	**-0.1**
CPUP	**Villa Florida**	**38.79**	**206**	LR	LR	05 39 27.9	
	comp=Z,157nm,18.2s,baz=36,slow=37						
TORD	**Torodi Ar. Bea**	**40.49**	**80**	P	**P**	**05 23 30.1**	**-0.8**
	comp=Z,1.0nm,0.7s,baz=275,slow=9.0,SNR=5.9						
TORD				LR	LR	05 38 27.6	
	comp=Z,277nm,19.8s,baz=260,slow=34						
LVC	**Limon Verde**	**42.38**	**223**	P	**P**	**05 23 46.8**	**+0.1**
	comp=Z,2.7nm,0.5s,baz=45,slow=13,SNR=2.9						
LVC	**Limon Verde**	**42.38**	**223**	IAmb	IAmb	05 23 59.4	
	comp=Z,10nm,1.3s						
ESDC	**Sonseca Array**	**44.27**	**40**	LR	LR	05 40 04.7	
	comp=Z,116nm,18.5s,baz=250,slow=33						
SCHQ	**Schefferville**	**51.17**	**340**	P	**P**	**05 24 56.4**	**+1.6**
	comp=Z,3.0nm,0.8s,baz=90,slow=4.0,SNR=2.3						
KEST	**Kesra**	**51.90**	**51**	P	**P**	**05 25 02.6**	**+2.0**
	comp=Z,2.1nm,0.6s,baz=0.9,slow=3.3,SNR=4.8						
KEST				LR	LR	05 44 25.2	
	comp=Z,115nm,21.6s,baz=252,slow=33						
H09W1	**TRISTAN DA CUN**	**51.90**	**153**	T	T	06 21 06.1	
	SNR=7.8						
PLCA	**Paso Flores**	**56.81**	**208**	P	**P**	**05 25 36.0**	**-0.2**
	comp=Z,2.6nm,0.8s,baz=89,slow=10.0,SNR=5.3						
PLCA	**Paso Flores**	**56.81**	**208**	IAmb	IAmb	05 25 43.0	
	comp=Z,10nm,1.5s						
GERES	**GERESS Array B**	**59.78**	**38**	P	**P**	**05 25 57.0**	**+0.1**
	comp=Z,1.3nm,1.1s,baz=297,slow=5.8,SNR=3.8						
GERES				LR	LR	05 49 58.3	
	comp=Z,33nm,19.7s,baz=310,slow=34						
ULM	**Lac du Bonnet**	**62.48**	**323**	P	**P**	**05 26 14.3**	**-0.8**
	comp=Z,3.2nm,0.6s,baz=110,slow=6.5,SNR=4.3						
ULM				LR	LR	05 51 40.0	
	comp=Z,220nm,18.6s,baz=304,slow=34						
ULM	**Lac du Bonnet**	**62.48**	**323**	IAmb	IAmb	05 26 16.2	
	comp=Z,5.4nm,0.8s						
TXAR	**Lajitas Array**	**63.58**	**298**	P	**P**	**05 26 21.8**	**-1.2**
	comp=Z,0.6nm,0.6s,baz=89,slow=5.3,SNR=8.6						
SUMG	**Summit**	**64.04**	**0**	*i* P	**P**	**05 26 26.6**	**+1.1**
NOA	**NORSAR Array B**	**64.27**	**25**	LR	LR	05 51 07.1	
	comp=Z,34nm,18.9s,baz=240,slow=33						
DAG	**Danmarks Havn**	**69.16**	**5**	*i* P	**P**	**05 26 57.0**	**-0.7**
WUAZ	**Wupatki**	**70.55**	**305**	P	**P**	**05 27 06.9**	**-0.3**
WUAZ				IAmb	IAmb	05 27 08.8	
	comp=Z,6.0nm,0.9s						
BRTR	**Keskin Array B**	**71.51**	**51**	P	**P**	**05 27 14.1**	**+1.2**
	comp=Z,0.9nm,0.6s,baz=248,slow=6.1,SNR=6.5						
SPUT	**South Promonto**	**71.80**	**311**	P	**P**	**05 27 14.6**	**-0.1**
SPUT				IAmb	IAmb	05 27 27.6	
	comp=Z,7.3nm,1.3s						
BGU	**Big Grassy Mou**	**72.21**	**310**	P	**P**	**05 27 16.6**	**-0.5**
BGU				IAmb	IAmb	05 27 23.6	
	comp=Z,8.0nm,1.3s						
NVAR	**Mina Array Bea**	**76.19**	**307**	LR	LR	05 57 43.9	
	comp=Z,78nm,21.7s,baz=332,slow=33						
VNA1	**Neumayer--Stat**	**81.70**	**170**	P	**P**	**05 28 11.3**	**+1.7**
VNA3	**Neumayer Olymp**	**81.98**	**171**	P	**P**	**05 28 12.1**	**+0.9**
VNA2	**Neumayer--Watz**	**82.08**	**170**	P	**P**	**05 28 13.1**	**+1.4**
SNAA	**Sanae**	**83.53**	**169**	P	**P**	**05 28 20.1**	**+0.8**
ILAR	**Eielson Array**	**89.76**	**336**	P	**P**	**05 28 50.4**	**+0.5**
	comp=Z,0.9nm,0.8s,baz=92,slow=5.5,SNR=5.0						

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*RSNC **13** 06:03:15.9±1.1, 7°.15N×71°.95W, h1^{km}±4^{km}, ML3.4, Mw4.0, Fault plane solution: NP1:φ$_s$8.00000°, δ90.00000°, λ90.00000°.*

*FUNV **13** 06:03:15.2, 7°.16N×71°.97W, h2^{km}, MW3.5*

*IDC **13** 06:03:16.9±2.8, 7°.04N×71°.94W, h35^{km}±24^{km}, mb3.4/5, mb1 3.8/10, mb1mx3.7/37, mbtmp3.8/10, ML3.7/4, Error ellipse: s-maj=25.9km s-min=21.3km az=145.0*

ISC 13 06:03:14.5±1.1, **7°.19N**±0°.02×**71°.93W**±0°.02, **h10**^{km}±8^{km}, **n62,** σ1^{s}**78**/96, **mb3.4**/5, **8C-1D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAMC	**Tame, Arauca**	**0.76**	**170**	*e*P	**Pg**	**06 03 29.5**	**+0.2**
TAMC				*e*S	**Sg**	**06 03 39.8**	**+0.6**
TAMC				*i*		06 03 49.2	
	comp=Z,699nm,0.3s						
PAMC	**Pamplona, Colo**	**0.78**	**281**	⇓*i*P	**Pg**	**06 03 28.7**	**-1.0**
PAMC				*i*		06 03 40.1	
	comp=Z,1µm,0.5s						
BARC	**Barichara**	**1.38**	**245**	*e*P	**Pn**	**06 03 39.3**	**-0.7**
BARC				*i*		06 04 04.2	
	comp=Z,564nm,0.3s						
SOCV	**Socops**	**1.52**	**44**	⇑*e*P	**Pb**	**06 03 42.9**	**+0.2**
SOCV				*e*S	**Sg**	**06 04 04.7**	**+1.4**
SOCV	**Socops**	**1.52**	**44**	*e*P	**Pb**	**06 03 42.9**	**+0.2**
SOCV				*e*S	**Sg**	**06 04 04.5**	**+1.1**
RUSC	**La Rusia**	**1.73**	**222**	*e*P	**Pn**	**06 03 45.7**	**+0.6**
RUSC				*e*S	**Sn**	**06 04 08.3**	**+0.9**
OCAC	**Ocana**	**1.73**	**307**	⇑*i*P	**Pb**	**06 03 46.6**	**+0.1**
OCAC				*e*S	**Sb**	**06 04 08.9**	**+0.6**
BRRC	**Barranca, Sant**	**1.77**	**267**	⇑*i*P	**Pb**	**06 03 46.9**	**-0.2**
BRRC				*e*S	**Sb**	**06 04 09.7**	**+0.3**
BRRC				*i*		06 04 14.8	
	comp=Z,488nm,0.3s						
SDV	**Santo Domingo**	**2.12**	**37**	Pn	**Pb**	**06 03 52.8**	**-0.2**
	comp=Z,61nm,0.3s,baz=185,slow=10.0,SNR=99						
SDV				Pg	**Pg**	**06 03 58.0**	**+2.9**
	comp=Z,97nm,0.3s,baz=210,slow=14,SNR=36						
SDV				Lg	Lg	06 04 21.9	
	comp=Z,188nm,0.3s,baz=75,slow=22,SNR=13						
SDV	**Santo Domingo**	**2.12**	**37**	*e*S	**Sb**	**06 04 20.8**	**+1.3**
ELOV	**Elorza**	**2.43**	**94**	*e*P	**Pn**	**06 03 56.0**	**+1.7**
ELOV				*e*S	**Sg**	**06 04 33.4**	**+0.7**
ELOV	**Elorza**	**2.43**	**94**	*e*P	**Pn**	**06 03 55.9**	**+1.7**
ELOV				*e*S	**Sn**	**06 04 26.0**	**+2.0**
SPBC	**San Pablo de B**	**2.62**	**234**	*e*P	**Pn**	**06 03 58.5**	**+1.5**
SPBC				*e*S	**Sn**	**06 04 31.3**	**+2.3**
SPBC				*i*		06 04 38.1	
	comp=Z,215nm,0.6s						
SMLC	**San Martn de**	**2.66**	**307**	⇑*e*P	**Pn**	**06 03 57.9**	**+0.5**
SMLC				*e*S	**Sb**	**06 04 36.2**	**+1.3**
SMLC				*i*		06 04 37.2	
	comp=Z,246nm,0.5s						
LL1C	**La Loma 1 Cana**	**2.84**	**325**	*e*P	**Pn**	**06 04 01.3**	**+1.4**
LL1C				*e*S	**Sg**	**06 04 43.2**	**-2.6**
MCQV	**Machiques**	**2.90**	**348**	*e*P	**Pn**	**06 04 01.4**	**+0.6**
ZARC	**Zaragoza, Cauc**	**2.92**	**276**	⇑*e*P	**Pn**	**06 04 01.8**	**+0.7**
ZARC				*e*S	**Sn**	**06 04 38.1**	**+1.8**
ZARC				*i*		06 04 51.1	
	comp=Z,136nm,0.4s						
PTGC	**Puerto Gaitan,**	**2.98**	**184**	*e*P	**Pn**	**06 04 02.1**	**+0.3**
PTGC				*e*S	**Sn**	**06 04 38.7**	**+1.1**
PTGC				*i*		06 05 06.9	
	comp=Z,224nm,0.5s						
CHIC	**Chingaza**	**3.12**	**215**	*e*P	**Pn**	**06 04 04.8**	**+0.8**
CHIC				*e*Pg	**Pg**	**06 04 13.6**	**-0.7**
CHIC				*i*		06 05 00.7	
	comp=Z,72nm,0.6s						
ROSC	**El Rosal**	**3.34**	**226**	Pn	**Pn**	**06 04 07.5**	**+0.4**
	comp=Z,7.5nm,0.3s,baz=252,slow=20,SNR=20						
ROSC				Lg	Lg	06 05 03.3	
	comp=Z,17nm,0.3s,baz=23,slow=22,SNR=4.1						
ROSC	**El Rosal**	**3.34**	**226**	*e*P	**Pn**	**06 04 09.9**	**+2.8**
ROSC				*e*S	**Sb**	**06 04 54.5**	**-0.3**
ROSC				*i*		06 05 10.9	
	comp=Z,67nm,0.5s						
NORC	**Norcasia**	**3.34**	**241**	*e*P	**Pn**	**06 04 08.2**	**+1.3**
NORC				*e*S	**Sn**	**06 04 49.6**	**+3.0**
NORC				*i*		06 04 58.2	
	comp=Z,105nm,0.4s						
ARGC	**Ariguani, Magd**	**3.51**	**319**	*e*P	**Pn**	**06 04 10.9**	**+1.9**
ARGC				*e*S	**Sg**	**06 05 07.1**	**-0.1**
VILC	**Villavicencio,**	**3.53**	**210**	*e*	**Pn**	**06 04 09.7**	**+0.2**
VILC				*e*P	**Pn**	**06 04 09.7**	**+0.2**
VILC				*e*S	**Sb**	**06 04 58.3**	**-1.9**
CVALL	**Valledupar, Ce**	**3.55**	**338**	*e*P	**Pb**	**06 04 17.6**	**+0.2**
CVALL				*e*S	**Sb**	**06 04 56.9**	**-3.7**
CVALL				*i*		06 05 22.1	
	comp=Z,145nm,0.5s						
UREC	**San Jos de Ur**	**3.62**	**279**	*e*P	**Pn**	**06 04 12.2**	**+1.6**
UREC				*i*		06 05 02.0	
	comp=Z,60nm,0.7s						
HELC	**Santa Helena**	**3.71**	**255**	*e*P	**Pn**	**06 04 13.1**	**+0.8**
HELC				*e*S	**Sn**	**06 04 59.9**	**+3.6**
HELC				*i*		06 05 12.2	
	comp=Z,84nm,0.4s						
GUY2C	**Guyana, Caldas**	**3.94**	**240**	⇑*e*P	**Pn**	**06 04 16.7**	**+1.2**
GUY2C				*e*S	**Sn**	**06 05 03.0**	**+1.0**
GUY2C				*i*		06 05 33.4	
	comp=Z,91nm,0.6s						
SIQV	**Siquisique**	**4.02**	**31**	*e*P	**Pn**	**06 04 17.1**	**+0.9**
SIQV				*e*S	**Sn**	**06 05 02.8**	**-0.6**
MOTC	**Monteria, Cord**	**4.03**	**293**	⇑*e*P	**Pn**	**06 04 17.7**	**+1.5**
MOTC				*e*S	**Sg**	**06 05 21.5**	**-2.4**
SJCC	**San Jacinto, C**	**4.19**	**310**	⇑*i*P	**Pn**	**06 04 20.8**	**+2.2**
SJCC				*e*S	**Sn**	**06 05 12.1**	**+4.4**
SJCC				*i*		06 05 23.2	
	comp=Z,46nm,0.5s						
BAUV	**El Baul**	**4.22**	**65**	*e*P	**Pn**	**06 04 19.6**	**+0.7**
BAUV	**El Baul**	**4.22**	**65**	*e*P	**Pn**	**06 04 19.2**	**+0.3**
BAUV				*e*S	**Sn**	**06 05 07.6**	**-0.7**
DBBC	**Dabeiba**	**4.26**	**268**	*e*P	**Pn**	**06 04 21.5**	**+2.0**
DBBC				*e*S	**Sn**	**06 05 03.1**	**-6.1**
CBOC	**Ciudad Bolivar**	**4.27**	**252**	*e*P	**Pn**	**06 04 21.7**	**+2.0**
CBOC				*e*S	**Sn**	**06 05 13.8**	**+4.1**
CBOC				*i*		06 05 38.6	
	comp=Z,52nm,0.6s						
ANIL	**Santa Ana**	**4.38**	**232**	*e*P	**Pn**	**06 04 22.8**	**+1.4**
URIC	**Uribia, Colomb**	**4.48**	**359**	*e*P	Pn	06 04 15.4	-7.1
URIC				*e*S	**Sn**	**06 05 13.2**	**-1.6**
URIC				*i*		06 06 06.3	
	comp=Z,70nm,0.5s						
SMRC	**Santa Marta, M**	**4.55**	**330**	*e*P	**Pn**	**06 04 22.3**	**-1.2**
SMRC				*e*S	**Sn**	**06 05 15.4**	**-1.1**
SMRC				*i*		06 05 43.1	
	comp=Z,76nm,0.5s						
ORTC	**Ortega, Tolima**	**4.64**	**226**	*e*P	**Pn**	**06 04 25.3**	**+0.6**
ORTC				*e*S	**Sn**	**06 05 19.9**	**+1.2**
ORTC				*i*		06 05 31.2	
	comp=Z,35nm,0.5s						
GUVC	**San Jose del G**	**4.67**	**189**	*e*P	**Pn**	**06 04 25.4**	**+0.3**
GUVC				*e*S	**Sn**	**06 05 16.7**	**-2.6**
GUVC				*i*		06 05 19.7	
	comp=Z,69nm,0.3s						
PLMC	**San Jos del P**	**4.89**	**243**	*e*P	**Pn**	**06 04 31.1**	**+2.9**
PLMC				*i*		06 05 50.4	
	comp=Z,20nm,0.6s						
JACV	**Jacura**	**4.93**	**38**	*e*P	**Pn**	**06 04 29.4**	**+0.7**
BENV	**Beln**	**5.09**	**57**	*e*P	**Pn**	**06 04 32.0**	**+1.1**
BENV				*e*S	**Sn**	**06 05 28.7**	**-1.0**
MONV	**Montecano**	**5.11**	**22**	*e*P	**Pn**	**06 04 31.7**	**+0.5**
MONV				*e*S	**Sn**	**06 05 28.3**	**-1.9**
TURV	**Turiamo**	**5.17**	**51**	*e*P	**Pn**	**06 04 32.8**	**+0.8**
CACV	**CAICARA DEL OR**	**5.35**	**86**	*e*P	Pb	06 04 42.5	-5.7
CACV				*e*S	**Sb**	**06 05 46.4**	**-6.1**
MACC	**Macarena, Meta**	**5.37**	**201**	*e*P	**Pn**	**06 04 33.7**	**-1.0**
MACC				*i*		06 06 10.2	
	comp=Z,52nm,0.6s						
TACV	**Tcata**	**5.66**	**58**	*e*P	**Pn**	**06 04 39.9**	**+1.2**
MERV	**Las Mercedes**	**5.94**	**69**	*e*P	**Pn**	**06 04 43.2**	**+0.7**
BIRV	**Birongo**	**6.47**	**59**	*e*P	**Pn**	**06 04 50.4**	**+0.5**
PRGV	**PARIAGUAN**	**7.38**	**77**	*e*P	**Pn**	**06 05 02.4**	**+0.1**
PCRV	**Puerto La Cruz**	**7.79**	**67**	Pn	**Pn**	**06 05 09.7**	**+1.6**
	comp=Z,1.7nm,0.3s,baz=264,slow=1.4,SNR=14						
PCRV	**Puerto La Cruz**	**7.79**	**67**	*e*P	**Pn**	**06 05 08.4**	**+0.4**
SJG	**San Juan**	**12.23**	**27**	Pn	**Pn**	**06 06 08.5**	**-0.2**
	comp=Z,0.5nm,0.3s,baz=319,slow=20,SNR=1.4						
PTGA	**Pitinga**	**14.29**	**123**	Pn	**Pn**	**06 06 36.5**	**-0.6**
	comp=Z,0.7nm,0.3s,baz=300,slow=16,SNR=6.9						
TXAR	**Lajitas Array**	**37.12**	**310**	P	**P**	**06 10 25.1**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=124,slow=9.0,SNR=13						
SCHQ	**Schefferville**	**47.68**	**4**	P	**P**	**06 11 51.4**	**+0.4**
	comp=Z,4.0nm,0.7s,baz=193,slow=5.2,SNR=7.6						
PDAR	**Pinedale Array**	**48.49**	**323**	P	**P**	**06 11 56.9**	**-0.8**
	comp=Z,0.2nm,0.6s,baz=131,slow=11,SNR=2.2						
NVAR	**Mina Array Bea**	**52.08**	**314**	P	**P**	**06 12 24.6**	**-0.4**
	comp=Z,0.2nm,0.5s,baz=97,slow=6.5,SNR=2.4						
SUMG	**Summit**	**68.41**	**10**	*i* P	**P**	**06 14 16.8**	**+0.2**
TORD	**Torodi Ar. Bea**	**72.50**	**79**	P	**P**	**06 14 41.0**	**-1.1**
	comp=Z,0.4nm,0.6s,baz=287,slow=6.0,SNR=1.5						
WRA	**Warramunga Arr**	**151.55**	**241**	PKPbc	**PKPdf**	**06 23 06.5**	**+2.8**
	comp=Z,1.2nm,0.9s,baz=89,slow=1.1,SNR=5.5						

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*NEIC **13** 06:04:15.2, 29°.86S×64°.52W, h8^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$2.00; M$_{\theta\theta}$-0.56; M$_{\phi\phi}$-1.44; M$_{r\theta}$1.20; M$_{\theta\phi}$1.61; M$_{\phi r}$-2.18; Fault plane solution: M$_0$3.47000×10^{17} NP1:φ$_s$150.04000°, δ68.64000°, λ96.99000°. NP2:φ$_s$311.43000°, δ22.43000°, λ72.71000°. Principal axes: T 3.1109, Plg66.0000°, Azm72.0000°; N 0.6276, Plg7.0000°, Azm327.0000°; P -3.7385, Plg23.0000°, Azm235.0000°;*

*VAO **13** 06:04:15.0±0.2, 29°.82S×64°.53W, h11^{km}, mb5.9*

*MOS **13** 06:04:15.9±1.1, 29°.77S×64°.46W, h28^{km}, mb6.2/45, Error ellipse: s-maj=8.4km s-min=6.3km az=85.8*

*IDC **13** 06:04:16.8±0.3, 29°.75S×64°.41W, h27^{km}±2^{km}, mb5.3/28, mb1 5.4/32, mb1mx5.4/35, mbtmp5.5/32, ML5.2/4, MS5.4/17, Ms1 5.3/17, ms1mx5.2/21, Error ellipse: s-maj=12.9km s-min=8.5km az=82.0*

*NEIC **13** 06:04:17.2±1.8, 29°.85S±0°.06×64°.50W±0°.07, h27^{km}±1^{km}, mb6.2/116, Ms_20 5.5/115, Mwb5.6/31, Mww5.6, Md5.8(SJA), Mwc5.6(GCMT), Error ellipse: s-maj=10.9km s-min=10.4km az=273.0*

*SJA **13** 06:04:17±2.7, 29°.87S±0°.06×64°.65W±0°.07, h52^{km}±4^{km}, Error ellipse: s-maj=8.9km s-min=8.5km az=128.0*

*GCMT **13** 06:04:20.2±0.1, 29°.83S±0°.01×64°.77W±0°.01, h34^{km}, MW5.6/133, Moment Tensor Solution. s133,c231; s119,c200; Duration: 1^{s}5 Moment tensor: Scale 10^{17} Nm; M$_{rr}$1.81±.03; M$_{\theta\theta}$-0.13±.03; M$_{\phi\phi}$-1.68±.03; M$_{r\theta}$1.02±.04; M$_{\theta\phi}$0.75±.02; M$_{\phi r}$-1.94±.05; Best double couple: M$_0$2.89900×10^{17} NP1:φ$_s$343.00000°, δ21.00000°, λ99.00000°. NP2:φ$_s$153.00000°, δ70.00000°, λ87.00000°. Principal axes: T 2.8180, Plg65.0000°, Azm58.0000°; N 0.1600, Plg3.0000°, Azm155.0000°; P -2.9800, Plg25.0000°, Azm246.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **13** 06:04:21, 29°.87S×64°.74W, h30^{km}, Moment Tensor Solution. Duration: 3^{s}0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.58; M$_{\theta\theta}$-0.10; M$_{\phi\phi}$-1.47; M$_{r\theta}$1.16; M$_{\theta\phi}$0.67; M$_{\phi r}$-2.12; Fault plane solution: M$_0$2.94000×10^{17} NP1: φ$_s$344.00000°, δ18.00000°, λ102.00000°. NP2: φ$_s$152.00000°, δ73.00000°, λ86.00000°. Principal axes: T 2.8566, Plg62.0000°, Azm57.0000°; N 0.1553, Plg3.0000°, Azm153.0000°; P -3.0119, Plg28.0000°, Azm245.0000°;*

*NEIC **13** 06:04:22, 29°.87S×64°.50W, h24^{km}, Moment Tensor Solution. Duration: 14^{s}0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.89; M$_{\theta\theta}$0.06; M$_{\phi\phi}$-1.95; M$_{r\theta}$0.93; M$_{\theta\phi}$0.81; M$_{\phi r}$-1.73; Fault plane solution: M$_0$2.86000×10^{17} NP1: φ$_s$349.00000°, δ24.00000°, λ104.00000°. NP2: φ$_s$154.00000°, δ67.00000°, λ84.00000°. Principal axes: T 2.6930, Plg68.0000°, Azm53.0000°; N 0.3150, Plg6.0000°, Azm156.0000°; P -3.0080, Plg22.0000°, Azm248.0000°;*

ISC 13 06:04:16.4±0.4, **29°.82S**±0°.04×**64°.48W**±0°.04, **h25**^{km}±2^{km}, **h25**^{km}**:pP-P, n992,** σ1^{s}**42**/992, **mb6.1**/129, **MS5.5**/90, **409C-34D, Fault plane solution: NP1:**φ$_s$296.49344°, δ36.25624°, λ53.39964°. **NP2:**φ$_s$159.13846°, δ61.65484°, λ113.61849°. **Principal axes:** T Plg64.9473°, Azm111.1301°; N Plg20.6470°, Azm327.4099°; P Plg13.5607°, Azm232.1953°; **Fault plane solution: NP1:**φ$_s$160.97708°, δ57.32921°, λ61.37587°. **NP2:** φ$_s$26.29127°, δ42.36186°, λ126.76167°. **Principal axes:** T Plg64.7142°, Azm18.5036°; N Plg23.7826°, Azm177.3926°; P Plg8.0930°, Azm270.9853°; **Santiago del Estero Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZON	**Zonda**	**4.01**	**243**	P	**Pn**	**06 05 16.6**	**+0.3**
ZON	**Zonda**	**4.01**	**243**		**Pn**	**06 05 16.6**	**+0.3**
AC02	**Maricunga**	**5.06**	**305**	Pn	**Pn**	**06 05 33.5**	**+2.3**
CO03	**El Pedregal**	**5.47**	**258**		**Pn**	**06 05 37.7**	**+1.3**
LCO	**Las Campanas**	**5.49**	**277**	P	**Pn**	**06 05 37.8**	**+1.0**
LCO	**Las Campanas**	**5.49**	**277**	Pn	**Pn**	**06 05 37.8**	**+1.0**
GO04	**Tololo Observa**	**5.50**	**265**		**Pn**	**06 05 38.1**	**+1.2**
GO03	**Copiap**	**5.52**	**292**	Pn	**Pn**	**06 05 37.8**	**+0.7**
CO05	**La Serena**	**5.87**	**267**		**Pn**	**06 05 41.5**	**-0.4**
VA03	**San Esteban**	**5.97**	**239**		**Pn**	**06 05 44.5**	**+1.2**
AC04	**Llanos de Chal**	**6.00**	**284**	Pn	**Pn**	**06 05 43.1**	**-0.5**
PEL	**Peldehue**	**6.25**	**236**	P	**Pn**	**06 05 47.9**	**+0.7**
PEL	**Peldehue**	**6.25**	**236**		**Pn**	**06 05 47.9**	**+0.7**
MT05	**Renca**	**6.42**	**235**		**Pn**	**06 05 50.1**	**+0.7**
MT02	**Curacav**	**6.64**	**237**		**Pn**	**06 05 51.9**	**-0.6**
MT09	**Talagante**	**6.80**	**233**		**Pn**	**06 05 54.6**	**-0.1**
ITQB	**Itaqui**	**6.83**	**91**	*e*P	**Pn**	**06 05 56.7**	**+1.7**
ITQB	**Itaqui**	**6.83**	**91**	Pn	**Pn**	**06 05 56.6**	**+1.6**
VA01	**Torpederas**	**6.91**	**241**	Pn	**Pn**	**06 05 54.5**	**-1.6**
MT01	**Popeta**	**7.04**	**233**		**Pn**	**06 05 56.5**	**-1.3**
VA05	**Santo Domingo**	**7.18**	**236**		**Pn**	**06 05 58.5**	**-1.4**
CPUP	**Villa Florida**	**7.21**	**63**	Pn	**Pn**	**06 06 01.1**	**+1.0**
	49nm,0.3s,baz=245,slow=12,SNR=147						
CPUP				Lg	Lg	06 08 06.3	
	358nm,0.3s,baz=289,slow=12,SNR=4.9						
CPUP	**Villa Florida**	**7.21**	**63**	*e*P	**Pn**	**06 06 01.1**	**+1.0**
CPUP	**Villa Florida**	**7.21**	**63**		**Pn**	**06 06 00.7**	**+0.5**
BO01	**Tunca**	**7.23**	**229**	Pn	**Pn**	**06 05 59.8**	**-0.7**
BO02	**Sierra Bellavi**	**7.29**	**225**		**Pn**	**06 06 01.9**	**+0.6**
PB14	**IPOC Station P**	**7.38**	**313**	Pn	**Pn**	**06 06 03.5**	**+0.5**
LPA	**La Plata**	**7.51**	**134**	*e*P	**Pn**	**06 06 02.7**	**-1.6**
LPA				pP	Pb	06 06 11.4	-15
LPA				pPP		06 06 22.8	
LPA				PPP	PPP	06 06 36.7	
LPA				sP		06 06 48.1	
LPA				S	**Sn**	**06 07 24.0**	**-4.7**
LPA	**La Plata**	**7.51**	**134**	SN	**Sn**	**06 07 30.2**	**+1.5**
LPA				sS	Sb	06 07 36.5	-19
LPA				SS	**SbSb**	**06 08 07.5**	**+7.2**
LPA				SSS	SSS	06 08 16.2	
LPA				PCP	**PcP**	**06 12 52.7**	**+6.0**
LPA				PKIKP	**PKiKP**	**06 20 41.4**	**-6.4**
LPA				SKIKP		06 24 18.7	
LPA				PKIKS		06 24 30.9	
LPA				SKIKS		06 27 47.0	
PB15	**IPOC Station P**	**7.95**	**325**		**Pn**	**06 06 12.4**	**+1.7**
GO05	**Huala**	**8.15**	**229**		**Pn**	**06 06 10.5**	**-2.7**
LVC	**Limon Verde**	**8.20**	**330**	Pn	**Pn**	**06 06 15.8**	**+1.6**
	7.5nm,0.3s,baz=160,slow=12,SNR=50						
LVC				LR	LR	06 09 58.7	
	comp=Z,12µm,19.6s,baz=160,slow=42						
LVC	**Limon Verde**	**8.20**	**330**	P	**Pn**	**06 06 16.6**	**+2.4**
LVC	**Limon Verde**	**8.20**	**330**		**Pn**	**06 06 16.6**	**+2.4**
PB10	**IPOC Station P**	**8.30**	**318**	Pn	**Pn**	**06 06 16.3**	**+1.1**
ML02	**Panimavida**	**8.32**	**223**	Pn	**Pn**	**06 06 14.1**	**-1.4**
PB06	**IPOC Station P**	**8.43**	**326**		**Pn**	**06 06 17.8**	**+0.7**
PB04	**IPOC Station P**	**9.03**	**324**		**Pn**	**06 06 25.9**	**+0.5**
PB09	**IPOC Station P**	**9.06**	**331**		**Pn**	**06 06 28.0**	**+2.1**
PB07	**IPOC Station P**	**9.41**	**328**		**Pn**	**06 06 31.1**	**+0.4**
PLTB	**Pedras Altas**	**9.55**	**104**	*e*P	**Pn**	**06 06 33.0**	**+0.6**
PLTB	**Pedras Altas**	**9.55**	**104**	Pn	**Pn**	**06 06 32.4**	**0.0**
CPSB	**Cacapava Do Su**	**9.58**	**96**	*e*P	**Pn**	**06 06 33.0**	**+0.3**
PB01	**IPOC Station P**	**9.84**	**331**		**Pn**	**06 06 37.0**	**+0.7**
PB08	**IPOC Station P**	**10.52**	**335**		**Pn**	**06 06 47.1**	**+1.1**
TA01	**Diego Aracena**	**10.55**	**329**		**Pn**	**06 06 45.9**	**-0.2**
LC01	**Cunco**	**10.93**	**212**	Pn	**Pn**	**06 06 48.9**	**-2.2**
PB11	**IPOC Station P**	**11.06**	**334**	Pn	**Pn**	**06 06 53.1**	**-0.1**
LR03	**Panguipulli**	**11.73**	**211**		**Pn**	**06 06 59.0**	**-3.2**
CNLB	**Canela**	**11.87**	**91**	*e*P	**Pn**	**06 07 04.5**	**+0.3**
PLCA	**Paso Flores**	**11.96**	**203**	Pn	**Pn**	**06 07 06.0**	**+0.6**
	1.9nm,0.3s,baz=14,slow=13,SNR=115						
PLCA				Lg	Lg	06 10 35.2	
	24nm,0.3s,baz=126,slow=21,SNR=3.6						
PLCA	**Paso Flores**	**11.96**	**203**	*e*P	**Pn**	**06 07 06.2**	**+0.8**
PLCA	**Paso Flores**	**11.96**	**203**	Pn	**Pn**	**06 07 05.6**	**+0.2**
PTGB	**Pitanga**	**12.15**	**68**	*e*P	**Pn**	**06 07 08.7**	**+0.6**
AQDB	**Aquidauana**	**12.23**	**42**	*e*P	**Pn**	**06 07 09.4**	**+0.3**
AQDB	**Aquidauana**	**12.23**	**42**	Pn	**Pn**	**06 07 09.5**	**+0.5**
PB16	**IPOC Station P**	**12.31**	**337**		**Pn**	**06 07 10.7**	**-0.1**
TRCB	**Terra Rica**	**12.71**	**59**		**Pn**	**06 07 16.0**	**+0.3**
VA04	**Juan Fernndez**	**12.80**	**249**	Pn	**Pn**	**06 07 13.5**	**-3.3**
LL03	**Petrohue**	**13.01**	**208**		**Pn**	**06 07 16.7**	**-2.8**
TER01	**Tubaro-SC**	**13.47**	**88**	*e*P	**Pn**	**06 07 24.4**	**-1.6**
LPAZ	**La Paz**	**13.88**	**345**	P	**Pn**	**06 07 32.1**	**0.0**
LPAZ	**La Paz**	**13.88**	**345**	Pn	**Pn**	**06 07 32.1**	**0.0**
LL01	**San Ignacio de**	**14.07**	**205**		**Pn**	**06 07 34.7**	**+0.6**
SIV	**San Ignacio**	**14.11**	**14**	Pn	**Pn**	**06 07 35.8**	**+0.9**
	27nm,0.3s,baz=198,slow=12,SNR=465						
SIV				Lg	Lg	06 11 49.7	
	8.4nm,0.3s,baz=271,slow=20,SNR=3.7						
SIV				LR	LR	06 14 06.3	
	comp=Z,18µm,18.8s,baz=210,slow=42						
PCMB	**Pacaembu**	**14.44**	**59**	*e*P	**Pn**	**06 07 38.9**	**-0.3**
FRTB	**Fartura**	**14.81**	**68**	*e*P	**Pn**	**06 07 43.5**	**-0.9**
PP1B	**Ponte de Pedra**	**14.99**	**38**	*e*P	**Pn**	**06 07 47.1**	**+0.3**
PTLB	**Pontes e Lacer**	**15.12**	**20**	*e*P	**Pn**	**06 07 48.9**	**+0.5**
PTLB	**Pontes e Lacer**	**15.12**	**20**	Pn	**Pn**	**06 07 49.2**	**+0.7**
GO07	**Milladeo Hill,**	**15.18**	**207**		**Pn**	**06 07 48.9**	**-0.1**
SALV	**Santo Antonio**	**16.03**	**32**	*e*P	**Pn**	**06 08 00.7**	**+0.5**
PET01	**Itanhaem-SP**	**16.28**	**74**	*e*P	**Pn**	**06 08 02.5**	**-0.9**
ITRB	**Iturama**	**16.29**	**55**	*e*P	**Pn**	**06 08 02.7**	**-0.8**
BB19B	**Bebedouro**	**16.82**	**62**	*e*P	**Pn**	**06 08 08.9**	**-1.4**
COYC	**Coyhaique**	**16.83**	**199**	P	**Pn**	**06 08 09.4**	**-0.8**
RCLB	**Rio Claro- Sao**	**16.90**	**68**	*e*P	**Pn**	**06 08 11.2**	**-0.2**
VAO	**Valinhos**	**17.08**	**71**	*e*P	**P**	**06 08 15.2**	**-0.1**
VILB	**Vilhena**	**17.24**	**14**	*e*P	**P**	**06 08 17.9**	**+0.9**
VILB	**Vilhena**	**17.24**	**14**	P	**P**	**06 08 17.3**	**+0.3**
VILB				IAmb	IAmb	06 08 31.6	
	comp=Z,1µm,1.0s						
PARB	**Paraibuna**	**18.05**	**74**	*e*P	**P**	**06 08 26.2**	**+0.3**
ARAG	**Araguaiana, MT**	**18.24**	**42**	*e*P	**P**	**06 08 29.1**	**+1.1**
IPMB	**Ipameri, GO**	**18.94**	**55**	*e*P	**Pn**	**06 08 37.2**	**+0.7**
PDRB	**Porto dos Gac**	**19.49**	**23**	*e*P	**Pn**	**06 08 44.0**	**+0.9**
MAN01	**Angra dos Reis**	**19.63**	**74**	*e*P	**Pn**	**06 08 45.0**	**+0.3**
ETMB	**Extrema**	**19.96**	**355**	*e*P	**P**	**06 08 46.2**	**-0.6**
ETMB	**Extrema**	**19.96**	**355**	P	**P**	**06 08 45.7**	**-1.1**
CLDB	**Colider**	**20.51**	**25**	*e*P	Pn	06 08 54.8	-0.3
BDFB	**Brasilia**	**20.69**	**51**	P	**P**	**06 08 55.6**	**+0.7**
	comp=Z,324nm,0.7s,baz=224,slow=10,SNR=232						
BDFB				Lg	Lg	06 15 15.5	
	comp=Z,321nm,0.9s,baz=98,slow=13,SNR=3.4						
BDFB				LR	LR	06 17 44.7	
	comp=Z,29µm,19.1s,baz=224,slow=39						
BDFB	**Brasilia**	**20.69**	**51**	P	Pn	06 08 56.1	-1.2
BDFB				pmax	pmax		
	comp=Z,1µm,1.3s						
BDFB	**Brasilia**	**20.69**	**51**		**P**	**06 08 56.1**	**+1.2**
BDFB				IAmb	IAmb	06 09 01.1	
	comp=Z,1µm,1.3s						
SAML	**Samuel**	**20.80**	**4**	P	**P**	**06 08 54.5**	**-1.4**
SAML				pmax	pmax		
	comp=Z,3µm,1.2s						
SAML				MLR	MLR		
	comp=Z,182µm,19.0s						
SAML	**Samuel**	**20.80**	**4**	P	**P**	**06 08 54.5**	**-1.4**
NNA	**Nana**	**21.14**	**324**	P	**P**	**06 08 59.4**	**-0.2**
	comp=Z,176nm,1.0s,baz=175,slow=11,SNR=31						
NNA				LR	LR	06 16 43.3	
	comp=Z,4µm,20.9s,baz=153,slow=35						
NNA	**Nana**	**21.14**	**324**	P	**P**	**06 08 59.9**	**+0.3**
NNA				pmax	pmax		
	comp=Z,435nm,1.0s						
NNA	**Nana**	**21.14**	**324**	P	**P**	**06 08 59.9**	**+0.3**
DUB01	**Friburgo-RJ**	**21.29**	**74**	*e*P	**P**	**06 09 03.0**	**+1.7**
SNDB	**Serra Nova Dou**	**21.57**	**37**	*e*P	**P**	**06 09 06.0**	**+1.8**
CAM01	**Campos-RJ**	**22.00**	**74**	*e*P	**P**	**06 09 10.0**	**+1.2**
DIAM	**Diamantina, MG**	**22.15**	**64**	*e*P	**P**	**06 09 12.7**	**+2.1**
GO09	**Cerro Castillo**	**22.22**	**193**	P	**P**	**06 09 10.3**	**-0.7**
EFI	**East Falkland**	**22.36**	**169**	*i* P	**P**	**06 09 11.4**	**-1.0**
EFI				pmax	pmax		
	comp=Z,337nm,1.1s						
EFI	**East Falkland**	**22.36**	**169**	P	**P**	**06 09 11.2**	**-1.1**
EFI	**East Falkland**	**22.36**	**169**	IAMs_20	IAMs_20	06 18 51.0	
	comp=Z,16µm,19.0s						
MG05	**Puerto Natales**	**22.64**	**193**	P	**P**	**06 09 16.5**	**+1.0**
MG05				IAmb	IAmb	06 09 26.3	
	comp=Z,1µm,0.9s						
MC01	**Montes Claros**	**22.89**	**60**	*e*P	**P**	**06 09 19.7**	**+1.2**
PEXB	**Peixe**	**23.16**	**44**	*e*P	**P**	**06 09 22.6**	**+1.4**
CZSB	**Cruzeiro do Su**	**23.29**	**339**	P	**P**	**06 09 20.5**	**-1.9**
ALF01	**Guarapari-ES**	**23.32**	**72**	*e*P	**P**	**06 09 25.0**	**+2.3**
JANB	**Januaria**	**23.67**	**56**	*e*P	**P**	**06 09 27.6**	**+1.3**

GO10	Punta Arenas	23.81	190	P	P	06 09 28.8	+1.5
SJMB	Sao Joao De Ma	23.90	68	*e*P	P	06 09 30.1	+1.8
BSFB	Barra de Sao F	24.10	68	*e*P	P	06 09 30.9	+0.7
NPGB	Novo Progresso	24.22	23	*e*P	P	06 09 30.9	-0.4
RIB01	Linhares ES	24.22	70	*e*P	P	06 09 33.1	+1.8
SDBA	SAO DESIDERIO	25.10	51	*e*P	P	06 09 40.6	+1.3
USHA	Ushuaia	25.16	185	P	P	06 09 39.4	-0.1
	comp=Z,14nm,0.5s,baz=12,slow=9.1,SNR=22						
USHA				LR	LR	06 20 04.2	
	comp=Z,6μm,18.7s,baz=343,slow=38						
NAN01	Guarapari, ES	25.20	67	*e*P	P	06 09 41.6	+1.4
MG01	Puerto William	25.20	184	P	P	06 09 38.9	-0.9
MG01				IAmb	IAmb	06 09 49.2	
	comp=Z,554nm,1.1s						
TBTG	Tabatinga, AM	26.00	348	*e*P	P	06 09 47.2	-0.2
TBTG	Tabatinga, AM	26.00	348	*e*P	P	06 09 46.3	-1.1
TBTG	Tabatinga, AM	26.00	348	P	P	06 09 46.6	-0.9
TBTG				IAmb	IAmb	06 09 49.1	
	comp=Z,1μm,1.2s						
ATAH	Atahualpa	26.08	327	P	P	06 09 48.2	-0.4
	comp=Z,16nm,0.9s,baz=152,slow=9.8,SNR=16						
ATAH				PcP	PcP	06 13 16.9	+0.7
	comp=Z,26nm,0.9s,baz=140,slow=7.9,SNR=2.2						
ATAH				pPcP		06 13 25.9	
	comp=Z,49nm,1.0s,baz=19,slow=5.1,SNR=3.5						
GUA01	Guaratinga, BA	26.15	65	*e*P	P	06 09 50.6	+1.8
SMTB	Santa Maria do	26.17	41	*e*P	P	06 09 49.8	+0.7
ITTB	Itaituba	26.63	20	*e*P	P	06 09 53.2	0.0
MACA	Manacapuru-AM	26.75	8	P	P	06 09 51.7	-2.5
CMC01	Camacan, BA	27.08	63	*e*P	P	06 09 59.1	+1.8
PRPB	Parauapebas	27.28	33	*e*P	P	06 09 59.0	0.0
NBIT	Itapeh - BA	27.40	63	*e*P	P	06 10 01.4	+1.3
GDU01	Guandu, BA	28.04	61	*e*P	P	06 10 06.8	+1.0
PTGA	Pitinga	29.24	9	P	P	06 10 14.3	-2.1
	comp=Z,14nm,0.5s,baz=189,slow=8.2,SNR=7.7						
PTGA				PcP	PcP	06 13 23.4	+0.1
	comp=Z,28nm,0.9s,baz=196,slow=8.2,SNR=2.3						
MALB	Monte Alegre	29.45	21	*e*P	P	06 10 18.8	+0.5
NBPN	Ponto Novo - B	29.46	55	*e*P	P	06 10 19.4	+1.0
NBLA	Lagarto - SE	31.11	59	*e*P	P	06 10 33.7	+0.6
TMAB	Tom-Au,PA,Br	31.41	33	*e*P	P	06 10 36.9	+1.2
MCPB	Macapa, AP	31.59	24	*e*P	P	06 10 37.7	+0.4
HOPE	Hope Point	31.71	148	P	P	06 10 38.2	+0.3
HOPE				pmax	pmax		
	comp=Z,405nm,1.4s						
HOPE	Hope Point	31.71	148	P	P	06 10 38.2	+0.3
HOPE				IAmb	IAmb	06 10 40.1	
	comp=Z,405nm,1.4s						
OTAV	Otavalo	32.72	333	P	P	06 10 48.2	+0.5
OTAV				pmax	pmax		
	comp=Z,56nm,0.9s						
OTAV				MLR	MLR		
	comp=Z,4μm,20.0s						
OTAV	Otavalo	32.72	333	*e*P	P	06 10 44.4	-3.2
OTAV	Otavalo	32.72	333	*e*P	P	06 10 47.9	+0.2
OTAV	Otavalo	32.72	333	P	P	06 10 48.2	+0.5
CUSE	Cuicocha Este	32.76	334	*e*P	P	06 10 49.4	+1.3
PAC1	Pacto, Paraso	32.88	333	*e*P	P	06 10 48.3	-0.5
NBMA	Muriti-CE	32.90	52	*e*P	P	06 10 49.5	+0.7
TULM	Tulcn-Chalpat	32.91	335	*e*P	P	06 10 50.6	+1.2
ROSB	Rosrio	33.01	40	*e*P	P	06 10 50.3	+0.7
MACC	Macarena, Meta	33.02	343	*e*P	P	06 10 46.5	-3.3
NBAN	Anadia - AL	33.10	59	*e*P	P	06 10 51.3	+0.8
GCUF	Volcan Galeras	33.22	336	*e*P	P	06 10 53.5	+1.4
NBPS	Pedro II - PI	33.37	45	*e*P	P	06 10 53.7	+0.8
NBPB	Pedra_Branca-C	33.68	49	*e*P	P	06 10 57.0	+1.4
SOTA	Rioblanco	33.82	338	*e*P	P	06 10 58.6	+1.3
PCON	Cinco Dias	33.93	338	*e*P	P	06 10 57.8	-0.6
NBLV	Livramento - P	34.19	55	*e*P	P	06 11 01.2	+1.1
MARP	Paez Belalcaza	34.28	339	*e*P	P	06 10 58.8	-2.3
TUMC	Tumaco	34.28	334	*e*P	P	06 11 01.3	+0.6
TUMC	Tumaco	34.28	334	P	P	06 11 01.1	+0.3
NBRF	Rio Formoso -	34.60	59	*e*P	P	06 11 04.1	+0.5
PTGC	Puerto Gaitan,	34.61	346	*e*P	P	06 11 00.8	-2.7
PRAC	Prado	34.80	342	*e*P	P	06 11 03.9	-1.4
VILC	Villavicencio,	34.87	344	*e*P	P	06 11 05.2	-0.8
PMSA	Palmer Station	34.98	180	P	P	06 11 06.4	+0.2
	comp=Z,48nm,1.1s,baz=5.7,slow=5.1,SNR=5.0						
PMSA				PcP	PcP	06 13 39.0	+1.0
	comp=Z,17nm,0.8s,baz=217,slow=2.3,SNR=1.7						
PMSA				pPcP		06 13 47.5	
	comp=Z,27nm,0.7s,baz=98,slow=4.8,SNR=5.6						
PMSA	Palmer Station	34.98	180	*e*P	P	06 11 07.4	+1.2
PMSA	Palmer Station	34.98	180	P	P	06 11 05.7	-0.5
ORTC	Ortega, Tolima	35.08	341	*e*P	P	06 11 05.5	-2.3
NBMO	Morrinhos-CE	35.09	46	*e*P	P	06 11 08.6	+0.9
NBPA	Parau_RN	35.19	53	*e*P	P	06 11 10.1	+1.4
CHIC	Chingaza	35.38	344	*e*P	P	06 11 09.6	-1.1
YOTC	Yotoco, Valle	35.48	339	*e*P	P	06 11 10.0	-1.2
NBCL	Cascavel-CE	35.51	49	*e*P	P	06 11 12.4	+1.0
ANIL	Santa Ana	35.68	341	*e*P	P	06 11 10.4	-2.7
ROSC	El Rosal	35.73	343	P	P	06 11 13.5	-0.2
	comp=Z,17nm,0.5s,baz=109,slow=2.7,SNR=8.9						
ROSC				PcP	PcP	06 13 41.6	0.0
	comp=Z,25nm,0.7s,baz=63,slow=4.5,SNR=1.9						
ROSC				LR	LR	06 26 26.2	
	comp=Z,3μm,18.4s,baz=204,slow=37						
ROSC	El Rosal	35.73	343	*e*P	P	06 11 13.4	-0.2
ROSC	El Rosal	35.73	343	P	P	06 11 12.6	-1.0
NBPV	Pedro Velho	36.01	56	*e*P	P	06 11 17.4	+1.8
PLMC	San Jos del P	36.33	340	*e*P	P	06 11 16.0	-2.5
GUY2C	Guyana, Caldas	36.37	342	*e*P	P	06 11 17.8	-1.4
SPBC	San Pablo de B	36.45	344	*e*P	P	06 11 16.4	-3.1
MDP	Montagnes des	36.53	20	P	P	06 11 19.4	-0.6
	comp=Z,33nm,0.5s,baz=194,slow=9.3,SNR=68						
NORC	Norcasia	36.56	342	*e*P	P	06 11 14.1	-6.3
CBOC	Ciudad Bolivar	37.16	341	*e*P	P	06 11 24.2	-1.5
PAMC	Pamplona, Colo	37.78	347	*e*P	P	06 11 27.5	-3.7
ZARC	Zaragoza, Cauc	38.41	343	*e*P	P	06 11 33.3	-2.7
SDV	Santo Domingo	38.93	350	P	P	06 11 38.7	-1.9
	comp=Z,167nm,0.9s,baz=182,slow=6.3,SNR=61						
SDV	Santo Domingo	38.93	350	*e*P	P	06 11 38.7	-1.9
SDV	Santo Domingo	38.93	350	IAMs_20	IAMs_20	06 30 39.6	
	comp=Z,6μm,19.0s						
SMLC	San Martn de	39.49	345	*e*P	P	06 11 41.2	-3.8
PLCV	Puerto La Cruz	39.75	360	P	P	06 11 46.2	-1.0
PCRV	Puerto La Cruz	39.76	360	P	P	06 11 46.2	-1.1
	comp=Z,51nm,1.1s,baz=157,slow=3.7,SNR=6.8						
MOTC	Monteria, Cord	39.85	343	*e*P	P	06 11 44.7	-3.4
ARGC	Ariguani, Magd	40.55	345	⇑*e*P	P	06 11 50.5	-3.3
SJCC	San Jacinto, C	40.80	344	*e*P	P	06 11 52.7	-3.3
BCIP	Isla Barro Col	41.48	337	*e*P	P	06 12 02.5	+1.0
GRGR	Grenville	41.79	4	P	P	06 12 02.4	-1.6
HATO	Hato, Curacao	41.97	353	IAMs_20	IAMs_20	06 32 12.3	
	comp=Z,7μm,19.0s						
CDITO	Canoas	42.07	332	P	P	06 12 07.6	+1.2
CDITO				IAmb	IAmb	06 12 17.7	
	comp=Z,464nm,1.2s						
BBGH	Gun Hill	42.97	7	IAMs_20	IAMs_20	06 30 53.9	
	comp=Z,6μm,22.0s						
JTS	Las Juntas de	44.48	331	P	P	06 12 26.2	+0.4
	comp=Z,143nm,0.9s,baz=217,slow=3.3,SNR=97						
JTS	Las Juntas de	44.48	331	*c i*P	P	06 12 27.1	+1.2
JTS				pmax	pmax		
	comp=Z,326nm,1.3s						
SJG	San Juan	47.67	358	P	P	06 12 48.4	-2.4
	comp=Z,15nm,0.5s,baz=156,slow=4.2,SNR=12						
SJG	San Juan	47.67	358	*e*P	P	06 12 47.5	-3.4
SJG	San Juan	47.67	358	IAMs_20	IAMs_20	06 34 51.6	
	comp=Z,5μm,20.0s						
TGUH	Tegucigalpa,Un	48.84	330	*e*P	P	06 12 59.8	-0.3
SDDR	Presa de Saban	48.95	351	*e*P	P	06 12 58.7	-2.1
HOJ	Hope	48.99	344	*i* P	P	06 13 00.5	-0.5
CMJ	Castle Mountai	49.03	345	*i* P	P	06 13 00.8	-0.6
GWJ	Greenwich	49.05	344	*i* P	P	06 13 01.3	-0.4
STH	Stony Hill	49.08	344	*i* P	P	06 13 02.2	+0.5
MCJ	Malvern	49.14	343	*i* P	P	06 13 03.3	+1.0
ESQI	Esquipulas	50.21	328	P	P	06 13 10.5	0.0
ESQI				IAmb	IAmb	06 13 20.6	
	comp=Z,364nm,0.9s						
VNA3	Neumayer Olymp	50.94	160	P	P	06 13 15.6	+0.3
VNA3	Neumayer Olymp	50.94	160	sP	P	06 13 20.2	+4.8
VNA1	Neumayer--Stat	51.13	159	P	P	06 13 17.5	+0.8
VNA1	Neumayer--Stat	51.13	159	sP	P	06 13 22.1	+5.4
GRTK	Grand Turk	51.43	352	IAMs_20	IAMs_20	06 38 10.4	
	comp=Z,3μm,19.0s						
LCCY	Blossom Villag	51.44	341	P	P	06 13 19.6	0.0
VNA2	Neumayer--Watz	51.51	159	P	P	06 13 19.8	+0.3
VNA2	Neumayer--Watz	51.51	159	sP	sP	06 13 25.8	-4.6
SNAA	Sanae	53.14	160	P	P	06 13 31.9	+0.1
SNAA	Sanae	53.14	160	sP	sP	06 13 37.4	-5.2
SNAA	Sanae	53.14	160	P	P	06 13 30.6	-1.2
	comp=Z,30nm,0.5s,baz=280,slow=7.3,SNR=404						
SNAA	Sanae	53.14	160	*c i*P	P	06 13 31.6	-0.1
SNAA				pmax	pmax		
	comp=Z,166nm,1.2s						
SNAA	Sanae	53.14	160	P	P	06 13 31.5	-0.2
CMIG	Matias Romero	55.09	324	P	P	06 13 46.3	-0.1
	comp=Z,28nm,1.0s,baz=141,slow=4.6,SNR=17						
SOR	Soroa	55.26	339	P	P	06 13 47.3	-0.3
SOR				pmax	pmax		
	comp=Z,342nm,1.0s						
SOR	Soroa	55.26	339	P	P	06 13 47.3	-0.3
SOR				IAmb	IAmb	06 13 48.6	
	comp=Z,342nm,1.0s						
SHEL	Horse Pasture	55.31	89	P	P	06 13 48.3	0.0
SHEL				pmax	pmax		
	comp=Z,241nm,0.8s						
SHEL	Horse Pasture	55.31	89	P	P	06 13 48.3	0.0
SHEL				IAmb	IAmb	06 14 02.6	
	comp=Z,241nm,0.8s						
TLIG	Tlapa	57.44	321	P	P	06 14 04.2	+0.8
061Z	Ochoppi	57.56	342	P	P	06 14 03.9	-0.1
SACV	Santiago Islan	59.46	47	IAMs_20	IAMs_20	06 39 33.0	
	comp=Z,2μm,18.0s						
DWPF	Disney Wildern	59.84	343	P	P	06 14 19.9	+0.2
	baz=163						
DWPF	Disney Wildern	59.84	343	P	P	06 14 19.6	-0.2
QSPA	South Pole Qui	60.41	180	P	P	06 14 24.3	+0.7
QSPA				IAmb	IAmb	06 14 34.4	
	comp=Z,311nm,0.9s						
QSPA	South Pole Qui	60.41	180	IAMs_20	IAMs_20	06 42 29.8	
	comp=Z,3μm,19.0s						
MOIG	Morelia	60.60	320	P	P	06 14 25.9	+0.4
MOIG				IAmb	IAmb	06 14 36.5	
	comp=Z,198nm,0.8s						
456A	Hilliard	62.48	343	P	P	06 14 37.8	+0.1
553A	Crawfordville	62.63	341	P	P	06 14 38.7	+0.1
451A	Vernon	63.42	340	P	P	06 14 43.8	0.0
257A	Skidaway Islan	63.43	344	P	P	06 14 44.2	+0.3
MBO	M'Bour	63.48	53	P	P	06 14 45.5	+0.9
TIGA	Tifton	63.57	342	P	P	06 14 44.3	-0.6
	baz=162,SNR=19						
255A	Hazlehurst	63.74	343	P	P	06 14 45.4	-0.5
NHSC	New Hope	64.32	345	P	P	06 14 50.4	+0.7
	baz=165,SNR=28						
BRAL	Brewton	64.33	339	P	P	06 14 49.7	-0.2
	baz=158,SNR=28						
GOGA	Godfrey	65.40	343	P	P	06 14 56.3	-0.5
	baz=162,SNR=39						
CNNC	Cliffs of the	65.93	348	P	P	06 15 00.2	+0.1
	baz=167,SNR=6.7						
VBMS	Vicksburg	66.46	336	P	P	06 15 03.7	+0.1
	baz=156,SNR=19						
VBMS	Vicksburg	66.46	336	P	P	06 15 03.6	+0.1
VBMS				IAmb	IAmb	06 15 05.0	
	comp=Z,360nm,1.2s						
HKT	Hockley	66.52	331	*d i*P	P	06 15 03.6	-0.4
HKT				pmax	pmax		
	comp=Z,314nm,1.6s						
HKT	Hockley	66.52	331	P	P	06 15 04.1	+0.1
HKT				IAmb	IAmb	06 15 14.6	
	comp=Z,266nm,1.3s						
KMSC	Kings Mountain	66.54	345	P	P	06 15 04.2	+0.2
	baz=164,SNR=60						
833A	Chaparral WMA,	66.75	327	P	P	06 15 06.3	+0.7
	baz=147,SNR=117						
LIC	Lamto	67.30	68	*e*P	P	06 15 09.3	-0.1
	comp=Z,421nm,1.3s						
SYO	Syowa Base	67.34	158	⇑*i*P	P	06 15 08.8	0.0
SYO	Syowa Base	67.34	158	⇑*e*pP	pP	06 15 13.7	-3.1
SYO	Syowa Base	67.34	158	⇓*e*sP	sP	06 15 17.8	-2.0
SYO	Syowa Base	67.34	158	⇑*e*PcP	PcP	06 15 33.9	-2.4
TIC	Toumodi	67.55	68	*e*P	P	06 15 11.0	-0.1
KIC	Kosan Boka	67.61	68	*e*P	P	06 15 11.4	0.0
	comp=Z,594nm,1.4s						
NATX	Nacogdoches	67.62	332	P	P	06 15 11.9	+0.9
	baz=152,SNR=49						
DBIC	Dimbokro	67.70	68	P	P	06 15 12.0	0.0
	comp=Z,41nm,0.5s,baz=226,slow=6.6,SNR=66						
DBIC				LR	LR	06 41 24.6	
	comp=Z,7μm,20.9s,baz=236,slow=33						
DBIC	Dimbokro	67.70	68	P	P	06 15 12.0	0.0
DBIC	Dimbokro	67.70	68	P	P	06 15 11.8	-0.1
DBIC				IAmb	IAmb	06 15 13.6	
	comp=Z,364nm,1.4s						
435B	Jarrell	68.00	330	P	P	06 15 13.8	+0.4
	baz=149,SNR=13						
Z41A	Richland Creek	68.22	335	P	P	06 15 15.4	+0.6
	baz=154,SNR=40						
BLA	Blacksburg	68.33	346	P	P	06 15 16.0	+0.5
	baz=165,SNR=37						
TZTN	Tazewell	68.40	344	P	P	06 15 15.2	-0.6
	baz=162,SNR=28						
CBN	Corbin Frederi	68.73	349	P	P	06 15 18.3	+0.5
	baz=168,SNR=11						
JCT	Junction City	68.75	328	P	P	06 15 18.4	+0.2
	baz=148,SNR=66						
WHTX	Lake Whitney,	68.98	330	P	P	06 15 19.7	+0.1
	baz=150,SNR=29						
WVT	Waverly	69.17	340	P	P	06 15 19.8	-0.8
WVT	Waverly	69.17	340	P	P	06 15 19.9	-0.8
	baz=158						
X40A	Basin Creek Fa	69.33	335	P	P	06 15 21.3	-0.4
	baz=154,SNR=14						
VNDA	Vanda	69.37	190	P	P	06 15 23.1	+1.7
	comp=Z,20nm,1.1s,baz=143,slow=5.1,SNR=21						
VNDA				pP	sP	06 15 31.4	-1.1
	comp=Z,103nm,0.9s,baz=144,slow=5.2,SNR=52						
VNDA				PKPPKP	P'P'df	06 43 26.2	-10
	comp=Z,5.1nm,1.0s,baz=312,slow=4.7,SNR=4.5						
VNDA				LR	LR	06 45 21.6	
	comp=Z,2μm,18.5s,baz=133,slow=36						
VNDA	Vanda	69.37	190	P	P	06 15 22.4	+0.9
VNDA				IAmb	IAmb	06 15 33.0	
	comp=Z,146nm,0.9s						
MIAR	Mount Ida	69.66	335	P	P	06 15 23.2	-0.5
MIAR				pmax	pmax		
	comp=Z,257nm,1.2s						
MIAR	Mount Ida	69.66	335	P	P	06 15 23.7	0.0
	baz=153,SNR=68						
MIAR	Mount Ida	69.66	335	P	P	06 15 23.2	-0.5
MIAR				IAmb	IAmb	06 15 25.1	
	comp=Z,257nm,1.2s						
TXAR	Lajitas Array	69.69	324	P	P	06 15 24.3	+0.1
	comp=Z,20nm,0.9s,baz=152,slow=7.4,SNR=144						
TXAR				PKPPKP	P'P'df	06 43 32.9	+6.6
	comp=Z,1.0nm,1.0s,baz=201,slow=2.4,SNR=5.5						
TXAR				P4KPbc		06 52 09.1	
	comp=Z,0.2nm,0.8s,baz=134,slow=5.4,SNR=4.1						
W41B	Gary Mavity, V	69.74	336	P	P	06 15 24.1	-0.1
	baz=155,SNR=83						
P60A	Greenville	70.05	351	P	P	06 15 26.3	+0.4
	baz=170,SNR=9.0						
W39A	Magazine	70.32	335	P	P	06 15 28.4	+0.7
	baz=153,SNR=101						
ABTX	Abilene, Hawle	70.48	329	P	P	06 15 28.8	-0.1
	baz=148,SNR=83						
MCWV	Mont Chateau	70.58	347	P	P	06 15 29.8	+0.5
	baz=166,SNR=17						
WCI	Wyandotte Cave	70.70	342	P	P	06 15 29.1	-0.9
	baz=160						
O56A	Blue Knob Stat	70.94	349	P	P	06 15 32.1	+0.6
	baz=167,SNR=19						
O56A	Blue Knob Stat	70.94	349	IAMs_20	IAMs_20	06 46 52.8	
	comp=Z,2μm,19.0s						
PAL	Palisades	71.00	352	P	P	06 15 32.0	+0.2
	baz=171,SNR=5.4						
U40A	Yellville	71.02	336	P	P	06 15 31.9	-0.1
	baz=154,SNR=143						
P52A	Corning	71.02	346	P	P	06 15 31.5	-0.4
	baz=164,SNR=36						
SUR	Sutherland	71.09	117	P	P	06 15 33.8	+0.8
SUR				IAmb	IAmb	06 15 35.4	
	comp=Z,449nm,1.6s						
SUR	Sutherland	71.09	117	IAMs_20	IAMs_20	06 41 17.3	
	comp=Z,3μm,21.0s						
N59A	State Game Lan	71.15	351	P	P	06 15 33.5	+0.8
	baz=170,SNR=22						
SSPA	Standing Stone	71.19	349	P	P	06 15 33.4	+0.5
	baz=168						
O53A	New Philadelph	71.42	347	P	P	06 15 34.2	-0.1
	baz=165,SNR=14						
P49A	Miami Univ. Ec	71.52	344	P	P	06 15 34.2	-0.8
	baz=162,SNR=76						
TUL1	Leonard	71.71	334	P	P	06 15 36.0	-0.1
	baz=152,SNR=57						
ACSO	Alum Creek Sta	71.78	345	P	P	06 15 36.1	-0.4
	baz=163,SNR=27						
N54A	Moraine State	71.87	348	P	P	06 15 37.5	+0.5
	baz=166,SNR=24						
WMOK	Wichita Mounta	71.90	331	P	P	06 15 36.9	-0.5
	baz=149,SNR=86						
CCM	Cathedral Cave	72.01	338	P	P	06 15 37.6	-0.3
	baz=156						
HRV	Adam Dziewonsk	72.26	355	P	P	06 15 39.9	+0.6
HRV	Adam Dziewonsk	72.26	355	P	P	06 15 39.9	+0.6
	baz=174						
HRV	Adam Dziewonsk	72.26	355	IAMs_20	IAMs_20	06 47 41.7	
	comp=Z,2μm,20.0s						
L61B	Northampton	72.30	354	P	P	06 15 40.0	+0.4
	baz=173,SNR=8.4						
M54A	Oil Creek Stat	72.34	348	P	P	06 15 39.9	+0.1
	baz=166,SNR=14						
BINY	Binghamton	72.44	351	P	P	06 15 40.9	+0.5
	baz=170,SNR=19						
M53A	WI Miller and	72.46	347	P	P	06 15 40.4	-0.1
	baz=165,SNR=7.7						
MNTX	Cornudas Mount	72.47	324	P	P	06 15 40.1	-0.7
	baz=144,SNR=96						
SFIN	Lafayette	72.93	342	P	P	06 15 42.2	-1.1
	baz=160,SNR=35						
ERPA	Erie	72.99	348	P	P	06 15 43.8	+0.1
	baz=166,SNR=6.7						
KOWA	Kowa	73.03	62	P	P	06 15 44.1	-0.3
KOWA				IAmb	IAmb	06 15 45.9	
	comp=Z,393nm,1.1s						
KOWA				IAMs_20	IAMs_20	06 44 59.4	
	comp=Z,4μm,20.0s						
TAOE	Nuku Hiva Isla	73.25	269	*e*P	P	06 15 46.5	+0.5
	comp=Z,283nm,1.2s						
TAOE				*e*pP	pP	06 15 54.2	+0.1
	comp=Z,705nm,1.2s						
TAOE				*e*S	S	06 25 09.7	-3.6
	comp=Z,557nm,27.5s						
TAOE	Nuku Hiva Isla	73.25	269	*e*LR	LR	06 38 10.9	
	comp=Z,3μm,26.9s						
AMTX	Amarillo	73.30	329	P	P	06 15 45.7	0.0
	baz=147						
HDIL	Hopedale	73.70	341	P	P	06 15 47.2	-0.6
	baz=158,SNR=68						
AAM	Ann Arbor	73.91	345	P	P	06 15 48.4	-0.7
	baz=163						
LBNH	Lisbon	74.01	354	P	P	06 15 50.4	+0.8
	baz=173,SNR=8.6						
TSUM	Tsumeb	74.03	103	P	P	06 15 50.5	-0.2
319A	Douglas	74.27	321	P	P	06 15 52.3	+0.7
319A				IAmb	IAmb	06 16 02.6	
	comp=Z,307nm,0.8s						
121A	Cookes Peak, D	74.37	323	P	P	06 15 53.5	+1.2
	baz=142,SNR=81						
TBI	Tubuai	74.64	252	*e*S	S	06 25 25.9	-2.7
	comp=Z,560nm,29.8s						
TBI	Tubuai	74.64	252	*e*LR	LR	06 38 44.4	
	comp=Z,5μm,25.8s						
LONY	Lake Ozonia	74.65	353	P	P	06 15 53.8	+0.4
	baz=171,SNR=19						
KSU1	Kansas State U	74.82	335	P	P	06 15 54.2	-0.2
	baz=152,SNR=59						
KSU1	Kansas State U	74.82	335	P	P	06 15 53.8	-0.6
KSU1				IAmb	IAmb	06 15 55.4	
	comp=Z,363nm,0.9s						
L44A	Lake County Fo	74.83	342	P	P	06 15 53.7	-0.6
	baz=159						
PKME	Peaks-Kenny Pk	74.85	356	P	P	06 15 55.1	+0.7
	baz=176,SNR=17						
R32A	Long Quarter,	75.04	333	P	P	06 15 55.7	-0.1
BNM	Barren Site	75.05	325	P	P	06 15 56.7	+0.5
Y22D	IRIS PASSCAL I	75.14	325	P	P	06 15 57.8	+1.2
	baz=143						
MAW	Mawson	75.23	162	P	P	06 15 57.3	+0.8
	comp=Z,45nm,1.1s,baz=215,slow=6.1,SNR=31						
ANMO	Albuquerque	75.60	325	*c i*P	P	06 16 00.0	+0.7
ANMO				pmax	pmax		
	comp=Z,222nm,1.7s						
ANMO	Albuquerque	75.60	325	P	P	06 16 00.2	+0.9
	baz=143						
CBKS	Cedar Bluff	75.78	332	P	P	06 16 00.8	+0.7
	baz=149,SNR=151						
TUC	Tucson	75.81	321	P	P	06 16 00.7	+0.3
TUC	Tucson	75.81	321	P	P	06 16 01.1	+0.7
	baz=140						
MEH	Mehetia	75.92	257	*e*P	P	06 16 02.2	+0.8
	comp=Z,44nm,1.2s						
MEH				*e*pP	pP	06 16 10.2	+0.7
	comp=Z,127nm,1.0s						
SCIA	State Center	76.14	338	P	P	06 16 01.6	-0.4
	baz=155,SNR=13						
JFWS	Jewell Farm	76.15	341	P	P	06 16 01.7	-0.3
	baz=157,SNR=36						
BOSA	Boshof	76.16	115	P	P	06 16 02.5	-0.2
	comp=Z,126nm,0.8s,baz=249,slow=4.4,SNR=236						
BOSA				LR	LR	06 45 33.9	
	comp=Z,3μm,19.9s,baz=242,slow=32						
BOSA	Boshof	76.16	115	P	P	06 16 02.2	-0.6
BOSA				IAmb	IAmb	06 16 03.7	
	comp=Z,246nm,1.1s						
E62A	Clayton Lake	76.21	356	P	P	06 16 02.9	+0.6
E62A				IAmb	IAmb	06 16 04.5	
	comp=Z,361nm,1.1s						
T25A	Trinidad	76.40	328	P	P	06 16 05.0	+1.2
	baz=145,SNR=73						
GLMI	Grayling	76.52	345	P	P	06 16 03.8	-0.3
	baz=162,SNR=7.9						
214A	Organ Pipe Nat	76.67	319	P	P	06 16 06.3	+1.1
	baz=138,SNR=51						
I42A	Draeger Farm,	76.69	342	P	P	06 16 04.3	-0.7
I42A				IAmb	IAmb	06 16 05.9	
	comp=Z,319nm,1.1s						
TOA0	Torodi Ar. Sit	76.69	66	P	P	06 16 04.8	-0.9
TOA0				IAmb	IAmb	06 16 06.9	
	comp=Z,382nm,1.1s						
TORD	Torodi Ar. Bea	76.69	66	P	P	06 16 05.3	-0.4
	comp=Z,159nm,0.9s,baz=259,slow=5.5,SNR=586						
TORD				PKKPbc	PKKPbc	06 35 23.9	+8.2
	comp=Z,0.8nm,0.9s,baz=27,slow=4.2,SNR=3.6						
TORD				PKPPKP	P'P'df	06 43 19.7	+2.1
	comp=Z,0.7nm,0.9s,baz=126,slow=3.2,SNR=3.6						
TORD				LR	LR	06 47 19.8	
	comp=Z,8μm,20.2s,baz=225,slow=34						
TORD	Torodi Ar. Bea	76.69	66	P	P	06 16 04.9	-0.8
TORD				IAmb	IAmb	06 16 06.8	
	comp=Z,329nm,1.1s						
PMOZ	Porto Moniz, M	76.73	39	*e*LR	LR	06 41 14.3	
	comp=Z,2μm,20.0s						
VAH	Vaihoa	76.75	260	*e*P	P	06 16 06.9	+0.8
	comp=Z,66nm,1.1s						
VAH				*e*pP	pP	06 16 14.9	+0.7
	comp=Z,206nm,1.1s						
PMAR	Madeira	76.81	40	*e*P	P	06 16 06.8	+0.6
	comp=Z,295nm,1.4s						
PMOR	Pomariorio Ree	77.08	260	*e*P	P	06 16 08.9	+0.9
	comp=Z,108nm,1.1s						
PMOR				*e*pP	pP	06 16 16.8	+0.7
	comp=Z,232nm,0.9s						
TIAR	Tiarei	77.14	257	*e*P	P	06 16 09.2	+0.8
	comp=Z,6.1nm,1.0s						
TIAR				*e*pP	pP	06 16 17.3	+0.8
	comp=Z,27nm,0.9s						
KSCO	Kaye Shedlock'	77.15	330	P	P	06 16 09.0	+1.0
	baz=147,SNR=78						
PAE	Paea	77.30	257	*e*P	P	06 16 10.0	+0.9
	comp=Z,20nm,1.0s						
PAE				*e*pP	pP	06 16 18.0	+0.8
	comp=Z,86nm,1.0s						
PPT2	Papeete2	77.33	257	*e*P	P	06 16 10.5	+1.1
	comp=Z,144nm,1.3s						
PPT2				*e*pP	pP	06 16 18.3	+0.8
	comp=Z,396nm,1.0s						
PPT2				*e*S	S	06 25 55.6	-2.9
	comp=Z,677nm,27.2s						
PPT2	Papeete2	77.33	257	*e*LR	LR	06 40 03.9	
	comp=Z,2μm,23.2s						
PPT	Papeete	77.34	257	P	P	06 16 10.6	+1.1
	comp=Z,120nm,1.1s,baz=63,slow=6.7,SNR=7.5						
PPT				pP	PcP	06 16 19.5	-0.4
	comp=Z,367nm,0.9s,baz=301,slow=0.9,SNR=27						
PPT				LR	LR	06 42 24.4	
	comp=Z,973nm,19.2s,baz=134,slow=30						
W18A	Petrified Fore	77.40	323	P	P	06 16 10.5	+1.0
	baz=141,SNR=22						
SDCO	Great Sand Dun	77.40	328	P	P	06 16 10.5	+1.0
	baz=144,SNR=129						
BGNE	Belgrade	77.40	335	P	P	06 16 09.3	+0.2
	baz=150,SNR=62						
E46A	Sault Ste Mari	77.92	346	P	P	06 16 11.2	-0.7
E46A				IAmb	IAmb	06 16 12.7	
	comp=Z,552nm,1.6s						

S22A	**4UR Ranch, Cre**	**78.02**	**327**	P	**P**	**06 16 14.0**	**+0.9**
	baz=143,SNR=76						
LBTB	**Lobatse**	**78.05**	**112**	P	**P**	**06 16 13.0**	**-0.5**
LBTB				pmax	pmax		
	comp=Z,360nm,1.5s						
LBTB	**Lobatse**	**78.05**	**112**	P	**P**	**06 16 12.9**	**-0.5**
LBTB				IAmb	IAmb	06 16 14.5	
	comp=Z,360nm,1.5s						
Q24A	**Divide**	**78.22**	**329**	P	**P**	**06 16 15.2**	**+1.0**
	baz=145						
Y14A	**Wickenburg**	**78.25**	**320**	P	**P**	**06 16 15.0**	**+0.9**
Y14A				IAmb	IAmb	06 16 24.9	
	comp=Z,173nm,1.0s						
MVCO	**Mesa Verde**	**78.40**	**326**	P	**P**	**06 16 16.0**	**+0.9**
	baz=142,SNR=117						
MVCO	**Mesa Verde**	**78.40**	**326**	P	**P**	**06 16 16.0**	**+0.9**
MVCO				IAmb	IAmb	06 16 17.3	
	comp=Z,398nm,1.5s						
OGNE	**Ogallala**	**78.52**	**332**	P	**P**	**06 16 16.3**	**+0.8**
	baz=147,SNR=21						
OGNE	**Ogallala**	**78.52**	**332**	P	**P**	**06 16 16.3**	**+0.8**
OGNE				IAmb	IAmb	06 16 17.5	
	comp=Z,411nm,1.2s						
WUAZ	**Wupatki**	**78.56**	**323**	P	**P**	**06 16 17.2**	**+1.3**
	baz=140,SNR=119						
WUAZ	**Wupatki**	**78.56**	**323**	P	**P**	**06 16 17.2**	**+1.3**
WUAZ				IAmb	IAmb	06 16 27.1	
	comp=Z,238nm,1.0s						
GLA	**Glamis**	**78.63**	**319**	P	**P**	**06 16 17.0**	**+0.8**
	baz=137,SNR=24						
K31A	**O'Neill**	**78.68**	**335**	P	**P**	**06 16 16.4**	**+0.2**
ECSD	**EROS Data Cent**	**78.89**	**337**	P	**P**	**06 16 17.2**	**-0.2**
	baz=152,SNR=176						
DRLN	**Deer Lake**	**78.96**	**5**	P	**P**	**06 16 17.6**	**+0.1**
DRLN				IAmb	IAmb	06 16 19.1	
	comp=Z,268nm,1.1s						
SPMN	**Marine on St.**	**79.01**	**340**	P	**P**	**06 16 17.4**	**-0.5**
	baz=155,SNR=39						
IKP	**In-Ko-Pah, Jac**	**79.08**	**318**	P	**P**	**06 16 19.6**	**+0.8**
	baz=136,SNR=27						
SWSC	**Sam W. Stewart**	**79.11**	**318**	P	**P**	**06 16 19.4**	**+0.7**
	baz=136,SNR=26						
ISCO	**Idaho Springs**	**79.11**	**329**	P	**P**	**06 16 19.7**	**+0.6**
ISCO				pmax	pmax		
	comp=Z,308nm,1.4s						
ISCO	**Idaho Springs**	**79.11**	**329**	P	**P**	**06 16 20.1**	**+1.0**
	baz=144,SNR=131						
ISCO	**Idaho Springs**	**79.11**	**329**	P	**P**	**06 16 19.7**	**+0.6**
ISCO				IAmb	IAmb	06 16 21.3	
	comp=Z,308nm,1.4s						
PDMCI	**Parker Dam,Lak**	**79.16**	**320**	P	**P**	**06 16 19.8**	**+0.8**
	baz=138,SNR=27						
SMCO	**Snowmass**	**79.23**	**328**	P	**P**	**06 16 21.2**	**+1.3**
SMCO				IAmb	IAmb	06 16 31.1	
	comp=Z,165nm,0.8s						
BC3	**Big Chuckawall**	**79.42**	**319**	P	**P**	**06 16 21.4**	**+0.8**
	baz=137,SNR=40						
MONP2	**Monument Peak**	**79.44**	**318**	P	**P**	**06 16 21.6**	**+0.8**
	baz=136,SNR=25						
CGR	**Cap Guir**	**79.44**	**46**	P	**P**	**06 16 22.1**	**+1.4**
IRM	**Iron Mountain**	**79.61**	**319**	P	**P**	**06 16 22.3**	**+0.8**
	baz=137,SNR=64						
U15A	**North Rim**	**79.73**	**323**	P	**P**	**06 16 23.7**	**+1.2**
U15A				IAmb	IAmb	06 16 33.7	
	comp=Z,168nm,1.0s						
NEE2	**Needles Airpor**	**79.76**	**320**	P	**P**	**06 16 23.0**	**+0.7**
	baz=138,SNR=5.8						
109C	**Camp Elliot, M**	**79.83**	**317**	P	**P**	**06 16 23.3**	**+0.6**
	baz=136,SNR=6.3						
PFO	**Pinyon Flats O**	**79.97**	**318**	P	**P**	**06 16 24.6**	**+1.0**
	baz=136,SNR=42						
BELC	**Belle Mtn. Jos**	**79.99**	**319**	P	**P**	**06 16 24.5**	**+0.8**
	baz=136,SNR=25						
N23A	**Red Feather La**	**80.15**	**329**	P	**P**	**06 16 25.6**	**+1.0**
	baz=144,SNR=52						
TTIG	**Tnine Tigouga,**	**80.29**	**47**	P	**P**	**06 16 27.1**	**+1.7**
SUSD	**Miller**	**80.33**	**336**	P	**P**	**06 16 24.9**	**-0.3**
	baz=150,SNR=31						
GMRC	**Granite Mounta**	**80.36**	**319**	P	**P**	**06 16 26.7**	**+1.0**
	baz=137,SNR=127						
MURC	**Murrieta**	**80.39**	**318**	P	**P**	**06 16 26.6**	**+0.8**
	baz=136,SNR=35						
O20A	**White River Ci**	**80.59**	**327**	P	**P**	**06 16 27.8**	**+0.9**
	baz=143,SNR=214						
BBRC	**Big Bear Solar**	**80.70**	**318**	P	**P**	**06 16 28.8**	**+1.1**
	baz=136						
SCI2	**San Clemente I**	**80.76**	**316**	P	**P**	**06 16 28.3**	**+0.6**
	baz=135						
HEC	**Hector,Ludlow**	**80.78**	**319**	P	**P**	**06 16 28.9**	**+1.1**
	baz=136,SNR=83						
SRU	**San Rafael Swe**	**80.88**	**325**	P	**P**	**06 16 29.1**	**+0.7**
SRU				pmax	pmax		
	comp=Z,203nm,0.9s						
SRU	**San Rafael Swe**	**80.88**	**325**	P	**P**	**06 16 29.1**	**+0.7**
SRU				IAmb	IAmb	06 16 39.0	
	comp=Z,203nm,0.9s						
CIS	**Catalina Islan**	**80.97**	**317**	P	**P**	**06 16 29.4**	**+0.6**
	baz=135,SNR=11						
TUQ	**Turquoise Moun**	**80.98**	**320**	P	**P**	**06 16 29.8**	**+0.8**
	baz=137,SNR=32						
SZCU	**Shurtz Canyon**	**81.03**	**323**	P	**P**	**06 16 30.3**	**+1.0**
OUK	**Oukaimeden**	**81.10**	**46**	P	**P**	**06 16 31.0**	**+1.0**
FMP	**Fort Macarthur**	**81.12**	**317**	P	**P**	**06 16 30.4**	**+0.8**
	baz=135						
EYMN	**Ely**	**81.12**	**342**	P	**P**	**06 16 28.9**	**-0.4**
	baz=156,SNR=21						
RRX	**Edison Barstow**	**81.19**	**319**	P	**P**	**06 16 31.0**	**+1.1**
	baz=136						
GSC	**Goldstone, Bar**	**81.38**	**319**	P	**P**	**06 16 32.0**	**+0.9**
	baz=136,SNR=74						
SHOC	**Shoshone, Teco**	**81.51**	**320**	P	**P**	**06 16 32.2**	**+0.5**
	baz=136,SNR=20						
DECC	**Green Verdugo**	**81.52**	**317**	P	**P**	**06 16 32.4**	**+0.6**
	baz=135,SNR=5.0						
SNCC	**San Nicolas Is**	**81.53**	**316**	P	**P**	**06 16 32.5**	**+0.7**
	baz=134						
OUZM	**OUZ**	**81.60**	**47**	P	**P**	**06 16 33.0**	**+0.6**
EDW2	**Edwards Air Fo**	**81.77**	**318**	P	**P**	**06 16 33.3**	**+0.2**
	baz=135,SNR=41						
ZGR	**Zagora**	**81.81**	**49**	P	**P**	**06 16 34.0**	**+0.5**
K22A	**Casper**	**81.83**	**330**	P	**P**	**06 16 34.2**	**+0.8**
	baz=144,SNR=141						
QSM	**Queen of Sheba**	**81.89**	**320**	P	**P**	**06 16 33.6**	**-0.1**
SRHM	**Skhour des Reh**	**81.94**	**45**	P	**P**	**06 16 35.0**	**+0.9**
PRN	**Pahroc Range**	**81.94**	**322**	P	**P**	**06 16 35.1**	**+1.0**
PRN				IAmb	IAmb	06 16 45.9	
	comp=Z,207nm,1.0s						
GWY	**Greenwater Val**	**81.94**	**320**	P	**P**	**06 16 34.0**	**-0.1**
RSSD	**Black Hills**	**81.99**	**332**	P	**P**	**06 16 34.4**	**+0.2**
RSSD				pmax	pmax		
	comp=Z,172nm,1.1s						
RSSD	**Black Hills**	**81.99**	**332**	P	**P**	**06 16 34.4**	**+0.2**
	baz=146						
RSSD	**Black Hills**	**81.99**	**332**	P	**P**	**06 16 34.4**	**+0.2**
RSSD				IAmb	IAmb	06 16 35.7	
	comp=Z,172nm,1.1s						
OSI	**Osito Audit: C**	**82.00**	**317**	P	**P**	**06 16 34.8**	**+0.4**
	baz=135,SNR=5.1						
LRMC	**Laurel Mtn Rad**	**82.01**	**319**	P	**P**	**06 16 35.1**	**+0.6**
	baz=136,SNR=30						
SCZ2	**Santa Cruz Isl**	**82.11**	**316**	P	**P**	**06 16 35.5**	**+0.6**
	baz=134,SNR=14						
B35A	**Bob, Littlefor**	**82.12**	**341**	P	**P**	**06 16 34.3**	**-0.2**
MPU	**Maple Canyon**	**82.12**	**325**	P	**P**	**06 16 35.7**	**+0.7**
PSUT	**Pine Spring**	**82.13**	**323**	P	**P**	**06 16 36.0**	**+0.9**
FURC	**Furnace Creek,**	**82.25**	**320**	P	**P**	**06 16 36.5**	**+1.1**
	baz=136,SNR=51						
TZRR	**Tazzarine**	**82.28**	**48**	P	**P**	**06 16 37.0**	**+1.0**
ARVC	**Arvin**	**82.43**	**318**	P	**P**	**06 16 37.2**	**+0.8**
	baz=135,SNR=6.8						
SBC	**Santa Barbara**	**82.47**	**317**	P	**P**	**06 16 37.5**	**+0.8**
	baz=134						
ISA	**Isabella, Lake**	**82.59**	**318**	P	**P**	**06 16 38.3**	**+0.9**
	baz=135,SNR=51						
AGMN	**Agassiz Nation**	**82.69**	**339**	P	**P**	**06 16 37.6**	**+0.1**
	baz=153,SNR=98						
AVE	**Averroes**	**82.79**	**45**	P	**P**	**06 16 39.3**	**+0.9**
PKM	**Mcpherson Peak**	**82.84**	**317**	P	**P**	**06 16 39.8**	**+1.0**
	baz=134,SNR=29						
DUG	**Dugway, Tooele**	**82.85**	**325**	P	**P**	**06 16 39.4**	**+0.7**
	baz=139,SNR=72						
GRAC	**Grapevine Rang**	**82.91**	**320**	P	**P**	**06 16 40.0**	**+1.0**
	baz=136,SNR=16						
R11A	**Troy Canyon, C**	**82.91**	**322**	P	**P**	**06 16 40.1**	**+0.9**
	baz=137,SNR=102						
CWC	**Cottonwood Cre**	**82.92**	**319**	P	**P**	**06 16 39.9**	**+0.7**
	baz=135						
VES	**Vestal, Richgr**	**83.07**	**318**	P	**P**	**06 16 40.4**	**+0.6**
	baz=135,SNR=46						
SMMC	**Simmler**	**83.24**	**317**	P	**P**	**06 16 41.8**	**+1.1**
	baz=134,SNR=23						
BW06	**Boulder Array**	**83.27**	**328**	P	**P**	**06 16 41.1**	**+0.2**
	baz=142,SNR=146						
PDAR	**Pinedale Array**	**83.27**	**328**	P	**P**	**06 16 41.0**	**+0.1**
	comp=Z,107nm,1.1s,baz=134,slow=4.3,SNR=248						
PDAR				pP	**pP**	**06 16 50.0**	**+0.9**
	comp=Z,54nm,0.9s,baz=131,slow=7.6,SNR=17						
PDAR				PKPPKP	P'P'df	06 43 11.6	+9.4
	comp=Z,0.7nm,0.9s,baz=343,slow=1.5,SNR=4.8						
PDAR				LR	LR	06 56 25.0	
	comp=Z,435nm,20.6s,baz=134,slow=38						
PDAR	**Pinedale Array**	**83.27**	**328**	P	**P**	**06 16 40.9**	**-0.1**
GOLM	**Goulmima**	**83.28**	**48**	P	**P**	**06 16 42.1**	**+0.9**
ZHG	**ZHG**	**83.37**	**45**	P	**P**	**06 16 42.0**	**+0.5**
TIN	**Tinemaha, Big**	**83.44**	**320**	P	**P**	**06 16 42.8**	**+1.0**
	baz=135,SNR=38						
MDND	**Maddock**	**83.50**	**337**	P	**P**	**06 16 42.4**	**+0.6**
	baz=150,SNR=120						
VOG	**Valley Oaks Go**	**83.58**	**318**	P	**P**	**06 16 41.8**	**-0.6**
	baz=134						
RAR	**Rarotonga**	**84.08**	**249**	P	**P**	**06 16 49.2**	**+3.7**
CZD	**Col de Zad**	**84.10**	**47**	P	**P**	**06 16 46.3**	**+0.8**
CASY	**Casey**	**84.14**	**178**	P	**P**	**06 16 45.8**	**+0.9**
CASY	**Casey**	**84.14**	**178**	IAMs_20	IAMs_20	06 54 23.5	
	comp=Z,2µm,21.0s						
MLAC	**Mammoth, Mammo**	**84.19**	**320**	P	**P**	**06 16 46.7**	**+1.0**
	baz=135,SNR=9.3						
MDT	**Midelt**	**84.23**	**47**	P	**P**	**06 16 46.7**	**+0.8**
SCHQ	**Schefferville**	**84.32**	**359**	P	**P**	**06 16 45.4**	**-0.4**
	comp=Z,120nm,1.0s,baz=170,slow=4.2,SNR=72						
SCHQ				pP	**pP**	**06 16 54.0**	**0.0**
	comp=Z,107nm,1.1s,baz=172,slow=8.0,SNR=11						
SCHQ				LR	LR	06 55 29.1	
	comp=Z,981nm,21.1s,baz=182,slow=36						
ULM	**Lac du Bonnet**	**84.44**	**340**	P	**P**	**06 16 46.2**	**-0.2**
	comp=Z,267nm,1.1s,baz=152,slow=5.2,SNR=118						
ULM				pP	**pP**	**06 16 55.4**	**+0.8**
	comp=Z,173nm,0.9s,baz=158,slow=7.0,SNR=17						
ULM				LR	LR	06 59 25.3	
	comp=Z,1µm,18.2s,baz=140,slow=39						
ULM	**Lac du Bonnet**	**84.44**	**340**	P	**P**	**06 16 46.3**	**-0.2**
ULM				pmax	pmax		
	comp=Z,407nm,1.2s						
ULM	**Lac du Bonnet**	**84.44**	**340**	P	**P**	**06 16 46.2**	**-0.2**
NVAR	**Mina Array Bea**	**84.45**	**320**	P	**P**	**06 16 47.5**	**+0.4**
	comp=Z,28nm,0.9s,baz=152,slow=5.6,SNR=135						
PFVI	**Vila Bisbo**	**84.58**	**42**	*e*P	**P**	**06 16 48.2**	**+0.8**
	comp=Z,130nm,1.6s						
PFVI	**Vila Bisbo**	**84.58**	**42**	P	**P**	**06 16 47.5**	**0.0**
LCRM	**LCR**	**84.64**	**46**	P	**P**	**06 16 49.0**	**+0.9**
MORF	**Marmelete**	**84.80**	**41**	*e*P	**P**	**06 16 48.5**	**-0.1**
MORF				IAMs_20	IAMs_20	06 55 15.1	
	comp=Z,2µm,19.0s						
MORF	**Marmelete**	**84.80**	**41**	*e*P	**P**	**06 16 48.5**	**-0.1**
MORF	**Marmelete**	**84.80**	**41**	*e*P	**P**	**06 16 48.7**	**+0.1**
	comp=Z,86nm,1.6s						
LSZ	**Lusaka**	**84.81**	**105**	P	**P**	**06 16 50.6**	**+1.2**
LSZ				pmax	pmax		
	comp=Z,381nm,1.5s						
LSZ	**Lusaka**	**84.81**	**105**	P	**P**	**06 16 50.6**	**+1.2**
LSZ				IAmb	IAmb	06 16 52.2	
	comp=Z,381nm,1.4s						
PTEO	**Sao Teotonio**	**84.92**	**41**	*e*P	**P**	**06 16 49.2**	**0.0**
	comp=Z,194nm,1.7s						
LAO	**LASA Array**	**84.98**	**333**	P	**P**	**06 16 49.5**	**+0.2**
	baz=145,SNR=69						
RLMT	**Red Lodge**	**84.99**	**330**	P	**P**	**06 16 50.2**	**+0.6**
	baz=142,SNR=41						
H17A	**Grant Village**	**85.00**	**329**	P	**P**	**06 16 50.8**	**+1.0**
	baz=141,SNR=14						
PBDV	**Barranco-do-Ve**	**85.17**	**42**	*e*P	**P**	**06 16 51.1**	**+0.6**
	comp=Z,150nm,1.6s						
CHEFC	**Chefchaouen**	**85.28**	**45**	P	**P**	**06 16 52.0**	**+0.8**
PCVE	**Castro Verde**	**85.37**	**42**	*e*P	**P**	**06 16 51.5**	**+0.1**
	comp=Z,90nm,2.0s						
YMR	**Madison River**	**85.39**	**329**	P	**P**	**06 16 52.7**	**+1.1**
PVAQ	**Vaqueiros**	**85.40**	**42**	*e*P	**P**	**06 16 51.5**	**-0.1**
	comp=Z,151nm,1.7s						
PVAQ	**Vaqueiros**	**85.40**	**42**	*e*LR	LR	06 45 00.3	
	comp=Z,2µm,18.0s						
PVAQ	**Vaqueiros**	**85.40**	**42**	P	**P**	**06 16 51.3**	**-0.3**
PVAQ	**Vaqueiros**	**85.40**	**42**	P	**P**	**06 16 52.1**	**+0.5**
MESJ	**Messejana**	**85.41**	**41**	*e*P	**P**	**06 16 51.6**	**0.0**
MESJ				IAMs_20	IAMs_20	06 55 08.7	
	comp=Z,2µm,17.1s						
MESJ	**Messejana**	**85.41**	**41**	*e*P	**P**	**06 16 51.6**	**0.0**
MESJ	**Messejana**	**85.41**	**41**	*e*P	**P**	**06 16 51.7**	**0.0**
	comp=Z,108nm,1.3s						
PNCL	**Nicolau / Gran**	**85.42**	**41**	*e*P	**P**	**06 16 51.6**	**-0.1**
	comp=Z,83nm,1.9s						
LIS	**Lisbon**	**85.49**	**40**	*e*P	**P**	**06 16 52.1**	**+0.1**
LIS				IAMs_20	IAMs_20	06 52 37.1	
	comp=Z,4µm,26.7s						
LIS	**Lisbon**	**85.49**	**40**	*e*P	**P**	**06 16 52.1**	**+0.1**
SFS	**San Fernando**	**85.66**	**43**	P	**P**	**06 16 53.4**	**+0.5**
SFS				pmax	pmax		
	comp=Z,410nm,1.3s						
SFS				MLR	MLR		
	comp=Z,2µm,19.0s						
SFS	**San Fernando**	**85.66**	**43**	P	**P**	**06 16 53.4**	**+0.5**
SFS				IAMs_20	IAMs_20	06 58 28.1	
	comp=Z,2µm,19.0s						
DGMT	**Dagmar**	**85.66**	**335**	P	**P**	**06 16 53.3**	**+0.7**
	baz=146,SNR=83						
PBEJ	**Beja**	**85.74**	**41**	*e*P	**P**	**06 16 53.5**	**+0.2**
	comp=Z,117nm,1.6s						
AKLM	**AKL**	**85.80**	**46**	P	**P**	**06 16 55.0**	**+1.2**
RUBR	**Rubicon Trail**	**85.92**	**320**	P	**P**	**06 16 55.2**	**+0.8**
RUBR				IAmb	IAmb	06 17 08.8	
	comp=Z,162nm,0.9s						
PAHR	**Pah Rah Range**	**85.95**	**321**	P	**P**	**06 16 55.3**	**+0.8**
PAHR				IAmb	IAmb	06 17 05.3	
	comp=Z,212nm,1.1s						
FIGM	**Figuig**	**85.96**	**49**	P	**P**	**06 16 56.0**	**+1.3**
MPK	**Martis Peak**	**86.02**	**320**	P	**P**	**06 16 55.5**	**+0.5**
TDRA	**Tendrara**	**86.03**	**48**	P	**P**	**06 16 56.0**	**+0.9**
HLID	**Hailey**	**86.16**	**326**	P	**P**	**06 16 56.6**	**+1.1**
	baz=138,SNR=263						
HLID	**Hailey**	**86.16**	**326**	P	**P**	**06 16 56.2**	**+0.7**
HLID				IAmb	IAmb	06 16 57.9	
	comp=Z,367nm,1.3s						
PSBE	**So Bento**	**86.24**	**40**	*e*P	**P**	**06 16 55.8**	**0.0**
	comp=Z,220nm,1.8s						
PMTG	**Montargil**	**86.25**	**40**	*e*P	**P**	**06 16 55.6**	**-0.2**
	comp=Z,199nm,1.6s						
PBAR	**Barrancos**	**86.32**	**42**	*e*P	**P**	**06 16 56.0**	**-0.1**
	comp=Z,103nm,1.7s						
BOZ	**Bozeman (W)**	**86.41**	**329**	P	**P**	**06 16 56.4**	**-0.2**
BOZ				pmax	pmax		
	comp=Z,146nm,1.3s						
BOZ	**Bozeman (W)**	**86.41**	**329**	P	**P**	**06 16 56.9**	**+0.3**
	baz=140,SNR=69						
BOZ	**Bozeman (W)**	**86.41**	**329**	P	**P**	**06 16 56.4**	**-0.2**
BOZ				IAmb	IAmb	06 16 58.3	
	comp=Z,146nm,1.3s						
PESTR	**Estremoz**	**86.48**	**41**	*e*P	**P**	**06 16 56.8**	**-0.1**
	comp=Z,155nm,1.7s						
PESTR	**Estremoz**	**86.48**	**41**	P	**P**	**06 16 56.0**	**-0.9**
PESTR	**Estremoz**	**86.48**	**41**	P	**P**	**06 16 57.1**	**+0.2**
JBK	**JBK**	**86.51**	**47**	P	**P**	**06 16 58.0**	**+0.5**
DLMT	**Dillon**	**86.66**	**328**	P	**P**	**06 16 58.4**	**+0.5**
PCAS	**Casmilo, Conde**	**86.78**	**40**	*e*P	**P**	**06 16 58.2**	**-0.2**
	comp=Z,198nm,1.6s						
TAF	**Taforalt**	**86.91**	**47**	P	**P**	**06 16 60.0**	**+0.8**
COI	**Coimbra**	**86.94**	**40**	*e*P	**P**	**06 16 59.6**	**+0.5**
	comp=Z,233nm,1.4s						
LRM	**Limekiln Ridge**	**86.95**	**329**	P	**P**	**06 16 59.6**	**+0.3**
PMRV	**Marv??o**	**86.97**	**41**	*e*P	**P**	**06 16 58.5**	**-0.8**
	comp=Z,88nm,1.3s						
PMRV	**Marv??o**	**86.97**	**41**	*e*LR	LR	06 45 42.7	
	comp=Z,2µm,20.0s						
ORV	**Oroville**	**87.02**	**320**	P	**P**	**06 16 59.8**	**+0.3**
ORV				pmax	pmax		
	comp=Z,421nm,1.4s						
ORV	**Oroville**	**87.02**	**320**	P	**P**	**06 16 59.8**	**+0.3**
PCBR	**Castelo Branco**	**87.20**	**40**	*e*P	**P**	**06 16 59.6**	**-0.8**
	comp=Z,105nm,1.2s						
HRY	**Holter Researc**	**87.35**	**330**	P	**P**	**06 17 01.3**	**+0.2**
EGMT	**Eagleton**	**87.48**	**331**	P	**P**	**06 17 01.6**	**-0.1**
	baz=142,SNR=63						
MTE	**Manteigas**	**87.55**	**40**	*e*P	**P**	**06 17 01.4**	**-0.8**
	comp=Z,145nm,1.5s						
MTE	**Manteigas**	**87.55**	**40**	*e*LR	LR	06 45 39.6	
	comp=Z,2µm,18.0s						
PVIS	**Viseu**	**87.57**	**39**	*e*P	**P**	**06 17 01.8**	**-0.4**
	comp=Z,94nm,1.6s						
O03E	**Paynes Creek**	**87.70**	**320**	P	**P**	**06 17 02.3**	**-0.6**
	baz=133,SNR=46						
J08A	**Circle Bar Ran**	**88.04**	**324**	P	**P**	**06 17 05.1**	**+0.6**
PVRL	**Vila Real**	**88.05**	**39**	*e*P	**P**	**06 17 04.7**	**+0.2**
	comp=Z,167nm,1.4s						
POLO	**Lamas de Olo**	**88.08**	**39**	*e*P	**P**	**06 17 04.3**	**-0.4**
	comp=Z,68nm,1.4s						
O02D	**Mt. Diablo Mer**	**88.17**	**319**	P	**P**	**06 17 05.2**	**+0.1**
	baz=132,SNR=24						
PCAB	**Cabril**	**88.18**	**39**	*e*P	**P**	**06 17 04.9**	**-0.2**
	comp=Z,133nm,1.5s						
PGAV	**Gavieira, Arco**	**88.23**	**38**	*e*P	**P**	**06 17 05.3**	**-0.1**
	comp=Z,103nm,1.8s						
PGAV	**Gavieira, Arco**	**88.23**	**38**	*e*LR	LR	06 45 50.4	
	comp=Z,2µm,20.0s						
MVO	**Moncorvo**	**88.36**	**40**	*e*P	**P**	**06 17 05.7**	**-0.3**
	comp=Z,156nm,1.5s						
MVO	**Moncorvo**	**88.36**	**40**	*e*LR	LR	06 45 18.4	
	comp=Z,2µm,20.0s						
MSO	**Missoula**	**88.39**	**329**	P	**P**	**06 17 06.7**	**+0.7**
	baz=139,SNR=57						
MSO	**Missoula**	**88.39**	**329**	P	**P**	**06 17 06.1**	**+0.1**
MSO				IAmb	IAmb	06 17 08.2	
	comp=Z,344nm,1.6s						
N02D	**Trinity Center**	**88.66**	**320**	P	**P**	**06 17 07.2**	**-0.3**
	baz=132,SNR=48						
M04C	**Macdoel**	**88.73**	**321**	P	**P**	**06 17 08.3**	**+0.4**
	baz=133,SNR=49						
PAB	**San Pablo**	**88.80**	**42**	IAMs_20	IAMs_20	06 54 16.1	
	comp=Z,2µm,20.0s						
PAB	**San Pablo**	**88.80**	**42**	P	**P**	**06 17 08.1**	**0.0**
K05A	**Summer Lake**	**88.86**	**322**	P	**P**	**06 17 08.8**	**+0.2**
PBRG	**Braganca**	**88.95**	**39**	*e*P	**P**	**06 17 08.4**	**-0.3**
	comp=Z,96nm,1.5s						
M02C	**Callahan**	**89.03**	**320**	P	**P**	**06 17 09.3**	**+0.2**
	baz=132,SNR=30						
I07A	**Izee**	**89.08**	**324**	P	**P**	**06 17 09.4**	**0.0**
I07A				IAmb	IAmb	06 17 20.3	
	comp=Z,165nm,1.2s						
ESDC	**Sonseca Array**	**89.11**	**42**	P	**P**	**06 17 09.2**	**-0.3**
	comp=Z,6.3nm,0.8s,baz=232,slow=4.2,SNR=29						
ESDC				pP	**pP**	**06 17 18.7**	**+0.9**
	comp=Z,9.1nm,0.9s,baz=246,slow=4.5,SNR=10						
ESDC				LR	LR	06 54 49.6	
	comp=Z,1µm,20.7s,baz=255,slow=34						
ESDC	**Sonseca Array**	**89.11**	**42**	P	**P**	**06 17 09.2**	**-0.3**
KHMM	**Horse Mountain**	**89.17**	**319**	P	**P**	**06 17 10.5**	**+0.5**
KHMM				IAmb	IAmb	06 17 21.0	
	comp=Z,200nm,1.0s						
K04D	**Chiloquin, OR**	**89.26**	**322**	P	**P**	**06 17 10.9**	**+0.6**
	baz=133,SNR=24						
L04D	**Klamath Falls**	**89.28**	**321**	P	**P**	**06 17 10.4**	**0.0**
	baz=133,SNR=40						
J05D	**Fort Rock, OR**	**89.43**	**322**	P	**P**	**06 17 11.9**	**+0.8**
	baz=134,SNR=68						
PINE	**Pine Mountain**	**89.62**	**323**	P	**P**	**06 17 12.6**	**+0.5**
PINE				IAmb	IAmb	06 17 23.2	
	comp=Z,238nm,0.9s						
G08A	**Pilot Rock**	**89.66**	**325**	P	**P**	**06 17 11.9**	**-0.1**
KRMB	**Red Mountain**	**89.70**	**320**	P	**P**	**06 17 12.8**	**+0.4**
KRMB				IAmb	IAmb	06 17 23.3	
	comp=Z,168nm,1.0s						
J04D	**Umpqua Nationa**	**89.87**	**322**	P	**P**	**06 17 13.8**	**+0.6**
	baz=133,SNR=27						
HUMO	**Hull Mountain**	**89.90**	**321**	P	**P**	**06 17 12.8**	**-0.4**
L02E	**Cave Junction**	**89.95**	**320**	P	**P**	**06 17 14.3**	**+0.9**
	baz=132,SNR=23						
WALA	**Waterton Lakes**	**90.05**	**330**	P	**P**	**06 17 13.6**	**-0.2**
FFC	**Flin Flon**	**90.17**	**339**	P	**P**	**06 17 13.9**	**-0.1**
FFC				pmax	pmax		
	comp=Z,227nm,1.1s						
FFC	**Flin Flon**	**90.17**	**339**	P	**P**	**06 17 13.9**	**-0.1**
FFC				IAmb	IAmb	06 17 15.4	
	comp=Z,227nm,1.1s						
I05D	**Terrebonne, OR**	**90.21**	**323**	P	**P**	**06 17 15.6**	**+1.0**
	baz=133,SNR=22						
K02D	**Willamette Mer**	**90.35**	**321**	P	**P**	**06 17 16.3**	**+1.0**
	baz=132,SNR=44						
I04A	**Tendick Farm,**	**90.40**	**322**	P	**P**	**06 17 15.4**	**-0.1**
	baz=133,SNR=14						
E08A	**Dider Farm, El**	**90.55**	**326**	P	**P**	**06 17 16.1**	**+0.1**
SNZO	**South Karori**	**90.58**	**220**	IAMs_20	IAMs_20	06 50 04.7	
	comp=Z,1µm,19.0s						
OXZ	**Oxford**	**90.67**	**217**	P	**P**	**06 17 17.6**	**+0.6**
OXZ				IAmb	IAmb	06 17 28.1	
	comp=Z,110nm,1.1s						
OXZ				IAMs_20	IAMs_20	06 50 05.9	
	comp=Z,2µm,20.0s						
J01E	**Myrtle Point**	**90.80**	**321**	P	**P**	**06 17 18.2**	**+1.0**
	baz=132,SNR=7.0						
G05D	**Wamic, OR**	**90.82**	**324**	P	**P**	**06 17 18.3**	**+1.0**
	baz=133,SNR=12						
I03D	**Drain, OR**	**90.84**	**322**	P	**P**	**06 17 18.1**	**+0.6**
	baz=132,SNR=13						
H04A	**Detroit Lake**	**90.89**	**323**	P	**P**	**06 17 17.0**	**-0.8**
H04A				IAmb	IAmb	06 17 27.7	
	comp=Z,115nm,0.9s						
MXZ	**Matakaoa Point**	**90.89**	**225**	IAMs_20	IAMs_20	06 51 13.4	
	comp=Z,2µm,21.0s						
LBZ	**Lake Benmore**	**90.89**	**216**	P	**P**	**06 17 18.5**	**+0.5**
LBZ				IAmb	IAmb	06 17 28.5	
	comp=Z,97nm,1.1s						
NEW	**Newport**	**90.90**	**328**	P	**P**	**06 17 16.6**	**-1.1**
NEW				pmax	pmax		
	comp=Z,36nm,1.1s						
NEW	**Newport**	**90.90**	**328**	P	**P**	**06 17 16.9**	**-0.7**
	baz=136,SNR=20						
NEW	**Newport**	**90.90**	**328**	P	**P**	**06 17 16.6**	**-1.1**
LTZ	**Lake Taylor**	**90.92**	**218**	IAMs_20	IAMs_20	06 49 08.5	
	comp=Z,2µm,22.0s						
H04D	**Lebanon**	**91.07**	**323**	P	**P**	**06 17 19.0**	**+0.5**
	baz=132						
URZ	**Urewera**	**91.17**	**224**	IAMs_20	IAMs_20	06 49 33.7	
	comp=Z,3µm,22.0s						
MLZ	**Mavora Lakes**	**91.22**	**214**	P	**P**	**06 17 20.1**	**+0.6**
MLZ				IAmb	IAmb	06 17 30.0	
	comp=Z,120nm,1.2s						
THZ	**Tophouse**	**91.27**	**219**	P	**P**	**06 17 20.7**	**+0.8**
F05D	**White Salmon**	**91.33**	**324**	P	**P**	**06 17 20.3**	**+0.6**
	baz=133,SNR=12						
I02E	**Swisshome, OR**	**91.38**	**322**	P	**P**	**06 17 21.0**	**+1.1**
	baz=132						
COR	**Corvallis**	**91.41**	**322**	P	**P**	**06 17 21.5**	**+1.4**
FCC	**Fort Churchill**	**91.63**	**345**	P	**P**	**06 17 20.6**	**-0.1**
FCC				pmax	pmax		
	comp=Z,152nm,1.1s						
FCC	**Fort Churchill**	**91.63**	**345**	P	**P**	**06 17 20.6**	**-0.1**
FCC				IAmb	IAmb	06 17 22.0	
	comp=Z,152nm,1.1s						
IVI	**Ivigtut**	**91.66**	**8**	*i* P	**P**	**06 17 20.4**	**-0.3**
IVI	**Ivigtut**	**91.66**	**8**	P	**P**	**06 17 21.0**	**+0.2**
IVI				IAmb	IAmb	06 17 23.2	
	comp=Z,229nm,1.4s						
G03D	**McMinnville, O**	**91.81**	**323**	P	**P**	**06 17 23.7**	**+1.8**
	baz=132,SNR=5.7						
F04A	**Amboy**	**91.85**	**324**	P	**P**	**06 17 21.6**	**-0.5**
E04D	**Cinebar**	**92.35**	**324**	P	**P**	**06 17 24.4**	**0.0**
	baz=132						
C06D	**Leavenworth**	**92.45**	**326**	P	**P**	**06 17 24.3**	**-0.5**
	baz=134						
SJPF	**Ste Jean**	**92.89**	**41**	*e*P	**P**	**06 17 26.8**	**-0.2**
SJPF				pmax	pmax		
	comp=Z,93nm,1.4s						
ETSF	**Etsaut**	**93.14**	**41**	*e*P	**P**	**06 17 27.9**	**-0.3**
ETSF				pmax	pmax		
	comp=Z,106nm,1.8s						
B05A	**Bryant**	**93.27**	**326**	P	**P**	**06 17 28.0**	**-0.5**
	baz=133,SNR=13						
D03D	**Eldon**	**93.27**	**325**	P	**P**	**06 17 29.4**	**+0.8**
	baz=132,SNR=9.2						
EPF	**Esparros**	**93.74**	**42**	*e*P	**P**	**06 17 30.4**	**-0.6**
EPF				pmax	pmax		
	comp=Z,62nm,1.6s						
A04D	**Lummi Island**	**93.88**	**326**	P	**P**	**06 17 31.4**	**+0.1**
	baz=132						
NUUK	**Nuuk**	**94.22**	**6**	*i* P	**P**	**06 17 32.7**	**+0.2**
MBAR	**Mbarara**	**94.23**	**93***c*	*i*P	**P**	**06 17 33.2**	**-0.9**
MBAR	**Mbarara**	**94.23**	**93**	IAMs_20	IAMs_20	06 58 49.2	
	comp=Z,2µm,19.0s						
MTLF	**Montolieu**	**95.02**	**42**	*e*P	**P**	**06 17 36.6**	**-0.2**
MTLF				pmax	pmax		
	comp=Z,112nm,1.7s						
ROSF	**Rostrenen**	**95.11**	**36**	*e*P	**P**	**06 17 34.9**	**-2.1**

ROSF				pmax	pmax		
	comp=Z,251nm,2.0s						
KEST	Kesra	95.20	52	P	P	06 17 38.8	+0.9
	comp=Z,4.2nm,1.1s,baz=210,slow=3.0,SNR=6.1						
KEST				LR	LR	07 03 16.5	
	comp=Z,6µm,18.5s,baz=196,slow=37						
RJF	Les Rejaudoux	95.79	40	eP	P	06 17 39.2	-1.1
RJF				pmax	pmax		
	comp=Z,51nm,1.4s						
CAF	Calviac	95.88	41	eP	P	06 17 39.9	-0.8
CAF				pmax	pmax		
	comp=Z,27nm,1.3s						
GRR	Gorron	96.39	37	eP	P	06 17 41.2	-1.7
GRR				pmax	pmax		
	comp=Z,183nm,2.2s						
TCF	Toulx Ste Croi	96.77	40	eP	P	06 17 43.5	-1.2
TCF				pmax	pmax		
	comp=Z,30nm,1.4s						
DY2G	Dye2	96.99	7	i P	P	06 17 45.1	-0.4
VSL	Villasalto	97.26	49	IAMs_20	IAMs_20	07 00 42.3	
	comp=Z,1µm,21.0s						
VIVF	Saint-Julien-l	97.34	42	eP	P	06 17 46.8	-0.5
VIVF				pmax	pmax		
	comp=Z,40nm,1.6s						
AVF	Avril sur Loir	97.71	40	eP	P	06 17 47.7	-1.2
AVF				pmax	pmax		
	comp=Z,71nm,1.6s						
ORIF	Oris-en-Rattie	98.08	43	eP	P	06 17 50.6	-0.1
ORIF				pmax	pmax		
	comp=Z,32nm,1.2s						
LPL	La Plagne	98.91	42	eP	P	06 17 54.5	-0.1
LPL				pmax	pmax		
	comp=Z,32nm,1.6s						
LPG	La Plagne	98.92	42	eP	P	06 17 54.6	-0.1
LPG				pmax	pmax		
	comp=Z,24nm,1.3s						
KMBO	Kilima Mbogo	99.61	97	P	Pdif	06 17 58.9	+0.3
	comp=Z,0.5nm,0.3s,baz=216,slow=4.5,SNR=4.5						
KMBO				LR	LR	07 00 20.8	
	comp=Z,2µm,20.2s,baz=250,slow=34						
KMBO	Kilima Mbogo	99.61	97	IAMs_20	IAMs_20	07 00 18.5	
	comp=Z,2µm,20.0s						
HAU	Haudompre	100.07	40	eP	Pdif	06 17 58.3	-1.2
HAU				pmax	pmax		
	comp=Z,35nm,1.4s						
LODK	Lodwar	100.23	92	IAMs_20	IAMs_20	07 05 28.2	
	comp=Z,2µm,18.0s						
HINF	Hinteralfeld	100.25	40	eP	Pdif	06 17 59.9	-0.4
HINF				pmax	pmax		
	comp=Z,16nm,1.2s						
ICESG	Greenland Ices	100.28	9	i P	Pdif	06 17 59.5	-0.8
ICESG				IAmb	IAmb	06 18 00.9	
	comp=Z,30nm,1.1s						
YKA	Yellowknife Ar	100.34	339	P	Pdif	06 17 59.9	-0.3
	comp=Z,16nm,0.8s,baz=126,slow=5.8,SNR=18						
YKA				pP	pP	06 18 08.9	+0.4
	comp=Z,4.6nm,0.6s,baz=90,slow=15,SNR=5.8						
VLC	Villacollemand	100.38	45	IAMs_20	IAMs_20	07 00 39.6	
	comp=Z,1µm,20.0s						
WLF	Walferdange	100.88	39	IAMs_20	IAMs_20	07 00 06.7	
	comp=Z,2µm,21.0s						
BFO	Black Forest	101.36	41	ePP	PKiKP	06 22 12.9	-17
BFO	Black Forest	101.36	41	IAMs_20	IAMs_20	07 05 00.5	
	comp=Z,2µm,19.0s						
UBR	Ueberruh	102.04	42	ePP	PKiKP	06 22 18.0	-13
STU	Stuttgart	102.08	40	IAMs_20	IAMs_20	07 05 30.6	
	comp=Z,2µm,18.0s						
TNS	Taunus Mts	102.43	39	ePP	PP	06 22 20.6	-2.7
BUG	Bochum--Univer	102.44	37	ePP	PP	06 22 20.4	-2.8
FUR	Furstenfeldbru	102.96	42	ePP	PP	06 22 24.8	-2.5
IBBN	Ibbenburen	103.16	37	ePP	PP	06 22 25.7	-2.9
RER	Riviere de l'E	103.34	124	IAMs_20	IAMs_20	06 58 19.5	
	comp=Z,969nm,20.0s						
CADS	Cadrg	103.46	44	ePP	PP	06 22 27.5	-3.6
UBBA	Unterbreizbach	103.59	39	ePP	PP	06 22 28.9	-2.9
RJOB	Jochberg	103.64	43	ePP	PP	06 22 29.0	-3.4
SUMG	Summit	103.68	8	i P	Pdif	06 18 14.1	-1.3
SUMG				IAmb	IAmb	06 18 17.3	
	comp=Z,25nm,1.4s						
GRF	Grafenberg Arr	103.69	40	ePP	PP	06 22 30.1	-2.6
GRF				eL	L	07 04 26.4	
	comp=Z,2µm,19.5s						
LJU	Ljubljana	103.86	45	i PP	PKiKP	06 22 31.8	-2.2
GTTG	Gottingen	103.94	38	ePP	PKiKP	06 22 31.7	-2.2
ROTZ	Rotzenmuhle	104.29	41	ePP	PKiKP	06 22 34.0	-0.6
CLZ	Clausthal	104.30	38	ePP	PKiKP	06 22 34.2	-0.5
MANZ	Manzenberg	104.34	40	ePP	PKiKP	06 22 34.5	-0.3
WET	Wettzell	104.37	41	ePP	PKiKP	06 22 34.5	-0.4
MOX	Moxa	104.39	40	ePP	PKiKP	06 22 35.0	+0.1
MOX				eL	L	07 02 14.8	
	comp=Z,1µm,21.3s						
NRDL	Niedersach Rie	104.49	38	ePP	PKiKP	06 22 35.9	+1.1
TGTN	Hyland Airport	104.49	334	Pdiff	Pdif	06 18 20.4	+1.5
	baz=126						
ASSE	Asse, Remlinge	104.61	38	ePP	PKiKP	06 22 36.6	+1.5
WERN	Wernitzgruen	104.64	40	ePP	PKiKP	06 22 36.8	+1.5
GUNZ	Gunzen	104.65	40	ePP	PKiKP	06 22 36.8	+1.5
WERD	Werda	104.68	40	ePP	PKiKP	06 22 36.9	+1.5
GEC2	GERESS Array S	104.70	42	ePP	PKiKP	06 22 36.9	+1.4
GERES	GERESS Array B	104.70	42	PKiKP	PKiKP	06 22 34.1	-1.4
	comp=Z,2.7nm,0.9s,baz=224,slow=3.7,SNR=6.1						
GERES				PKKPbc	PKKPdf	06 34 13.6	-2.2
	comp=Z,1.9nm,0.8s,baz=90,slow=1.3,SNR=8.7						
TANN	Tannenbergstha	104.75	40	ePP	PKiKP	06 22 37.8	+2.2
NEUB	Neuenburg	104.75	39	ePP	PKiKP	06 22 37.2	+1.8
KHC	Kasperske Hory	104.77	42	ePP	PKiKP	06 22 37.3	+1.7
KHC				ex	x	06 26 31.5	
KHC				AMS	AMS	07 09 10.0	
	comp=Z,1µm,20.4s						
FLTG	Flechtingen	105.01	38	ePP	PKiKP	06 22 38.9	+3.1
CKRC	Cesky Krumlov	105.04	42	ePP	PKiKP	06 22 39.4	+3.3
CKRC				AMS	AMS	07 11 30.0	
	comp=Z,1µm,17.6s						
KOGS	Kog	105.10	45	i PP	PKiKP	06 22 40.4	+4.1
PDG	Podgorica	105.21	50	IAMs_20	IAMs_20	07 09 27.7	
	comp=Z,2µm,19.0s						
BSEG	Bad Segeberg	105.32	36	ePP	PP	06 22 40.8	-3.8
CLL	Collm	105.48	39	eP	Pdif	06 18 25.0	+1.6
CLL				pmax	pmax		
	comp=Z,45nm,1.9s						
CLL				MLR	MLR		
	comp=Z,1µm,18.3s						
CLL	Collm	105.48	39	ePdif	Pdif	06 18 25.0	+1.6
CLL				ePKiKP	PKiKP	06 22 37.0	+0.2
	comp=Z,45nm,1.9s						
CLL				ePP	PP	06 22 50.0	+4.1
CLL				ePS	PS	06 32 05.0	+3.3
CLL				ePPS	PPS	06 33 00.0	
CLL				eSS	SS	06 37 42.0	+0.4
CLL				eSSS	SSS	06 42 06.0	
CLL				eSSSS		06 45 36.0	
CLL				e		06 48 06.0	
CLL				Lm	MLR	07 02 00.0	
	comp=Z,2µm,22.0s						
CLL				LmV		07 17 00.0	
	comp=Z,1µm,18.3s						
CLL	Collm	105.48	39	ePP	PP	06 22 42.4	-3.5
CLL	Collm	105.48	39	IAMs_20	IAMs_20	07 02 47.3	
	comp=Z,2µm,22.0s						
FBE	Freiberg	105.49	40	ePP	PP	06 22 42.9	-3.1
BRG	Berggiesshubel	105.80	40	ePP	PP	06 22 45.0	-3.3
BRG	Berggiesshubel	105.80	40	ePKP	PKiKP	06 22 40.4	+3.0
BRG				Amp		06 22 46.1	
	comp=Z,11nm,1.2s						
BRG				Amp		07 05 51.0	
	comp=N,0.5nm,20.2s						
BRG				Amp		07 05 51.0	
	comp=E,1.0nm,18.1s						
BRG				Amp		07 06 05.0	
	comp=Z,1.4nm,15.0s						
KRUC	Moravsky	106.38	43	ePP	PP	06 22 48.9	-3.7
DIVS	Divibare	106.42	48	IAMs_20	IAMs_20	07 07 47.7	
	comp=Z,1µm,20.0s						
DPC	Dobruska-Polom	106.91	41	ePP	PP	06 22 50.9	-5.6
DPC				AMS	AMS	07 08 30.0	
	comp=Z,1µm,19.3s						
KRLC	Kraliky	107.05	42	ePP	PP	06 22 54.2	-3.4
KRLC				AMS	AMS	07 13 30.0	
	comp=Z,2µm,17.9s						
MORC	Moravsky Berou	107.36	42	ePP	PP	06 22 56.8	-3.1
DZM	Mont Dzumac	108.87	230	eSP	SP	06 32 34.9	+1.2
	comp=Z,395nm,22.3s						
DZM	Mont Dzumac	108.87	230	eLR	LR	06 54 46.4	
	comp=Z,3µm,27.4s						
NOA	NORSAR Array B	109.12	30	PKKP		06 34 07.1	
	comp=Z,5.9nm,0.9s,baz=65,slow=4.5,SNR=7.9						
A36M	Sachs Harbour	109.76	343	Pdiff	Pdif	06 18 42.0	0.0
	baz=126						
INK	Inuvik	110.10	338	Pdiff	Pdif	06 18 43.6	+0.2
	comp=Z,2.2nm,0.8s,baz=87,slow=5.6,SNR=7.9						
INK				PKiKP	PKiKP	06 22 44.0	-0.9
	comp=Z,3.7nm,1.0s,baz=78,slow=2.4,SNR=3.7						
INK	Inuvik	110.10	338	i PKIKP	PKiKP	06 22 44.0	-0.9
INK	Inuvik	110.10	338	Pdiff	Pdif	06 18 43.7	+0.2
	baz=120						
I29M	Ogilvie Camp,	110.34	335	Pdiff	Pdif	06 18 44.7	0.0
	baz=117						
ATD	Arta Tunnel	110.60	88	IAMs_20	IAMs_20	07 10 02.3	
	comp=Z,1µm,20.0s						
MLR	Muntele Rosu	110.86	49	PP	PP	06 23 23.9	-1.6
	comp=Z,11nm,1.0s,baz=275,slow=12,SNR=7.2						
ISP	Isparta	111.23	58	IAMs_20	IAMs_20	07 12 53.1	
	comp=Z,2µm,20.0s						
J26L	Joseph Creek	112.01	333	Pdiff	Pdif	06 18 52.4	+0.2
	baz=113						
SUW	Suwalki	112.23	40	IAMs_20	IAMs_20	07 15 15.1	
	comp=Z,2µm,20.0s						
CSS	Mathiatis	112.28	62	IAMs_20	IAMs_20	07 09 13.2	
	comp=Z,2µm,22.0s						
ILAR	Eielson Array	113.44	332	Pdiff	Pdif	06 18 57.9	-0.6
	comp=Z,0.8nm,1.0s,baz=155,slow=2.4,SNR=5.5						
ILAR				PKiKP	PKiKP	06 22 51.1	-0.3
	comp=Z,7.3nm,1.1s,baz=158,slow=0.7,SNR=16						
ILAR				PP	PP	06 23 43.0	-0.3
	comp=Z,6.5nm,0.9s,baz=102,slow=5.8,SNR=8.7						
ILAR				PKKPbc	PKKPbc	06 33 35.1	-2.5
	comp=Z,1.3nm,0.9s,baz=298,slow=2.9,SNR=5.3						
ANTO	Ankara	113.61	56	IAMs_20	IAMs_20	07 14 31.2	
	comp=Z,1µm,20.0s						
COLA	College	113.86	332	i PKIKP	PKiKP	06 22 55.0	+2.9
MCK	McKinley	113.93	331	P	PKiKP	06 22 52.7	+0.3
	baz=109						
SUA	Susitna One	114.00	328	IAMs_20	IAMs_20	07 12 48.6	
	comp=Z,940nm,18.0s						
BR131	Keskin Array S	114.17	57	i PKIKP	PKPdf	06 22 53.1	-0.6
BRTR	Keskin Array B	114.17	57	PKP	PKPdf	06 22 52.1	-1.6
	comp=Z,2.1nm,0.9s,baz=194,slow=4.6,SNR=8.3						
BRTR				pPKP	PKiKP	06 23 02.0	+8.3
	comp=Z,1.1nm,0.7s,baz=204,slow=2.7,SNR=4.2						
BRTR				PP	PP	06 23 51.5	+2.1
	comp=Z,3.6nm,1.0s,baz=224,slow=5.2,SNR=5.0						
BRTR				PKKPbc	PKKPab	06 33 41.8	+2.5
	comp=Z,1.4nm,0.9s,baz=58,slow=3.2,SNR=4.6						
NEA2	Nenana	114.27	332	P	PKPdf	06 22 52.8	-0.1
	baz=108						
TRF	Thorofare Moun	114.42	331	P	PKiKP	06 22 53.8	+0.3
	baz=108						
SKT	Skwentna	114.52	329	P	PKiKP	06 22 53.7	+0.1
	baz=108						
AKASG	Malin Array Be	114.67	44	PKP	PKPdf	06 22 52.5	-1.6
	comp=Z,2.8nm,0.8s,baz=266,slow=2.2,SNR=5.5						
AKASG				pPKP	PKiKP	06 23 01.9	+7.8
	comp=Z,2.0nm,0.6s,baz=270,slow=2.2,SNR=3.6						
AKASG				PKKPbc	PKKPab	06 33 38.0	+1.7
	comp=Z,2.6nm,0.7s,baz=60,slow=4.8,SNR=4.2						
AKBB	Malin Array Si	114.67	44c	i PKIKP	PKPdf	06 22 52.6	-1.5
BPAW	Bear Paw Mtn.	114.91	331	P	PKPdf	06 22 53.2	-1.1
	baz=107						
MNK	Minsk	115.01	40	i PKIKP	PKPdf	06 22 54.2	-0.4
MNK				i PPP	PPP	06 26 16.9	
MNK				pmax	pmax		
	comp=E,2.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,28nm,0.9s						
MNK	Minsk	115.01	40	i PKP	PKPdf	06 22 54.2	-0.4
	comp=E,2.0nm,0.9s						
MNK				i PKP	PKPdf	06 22 54.2	-0.4
	comp=N,28nm,0.9s						
MNK				i PKP	PKPdf	06 22 54.2	-0.4
	comp=Z,9.0nm,0.9s,baz=254						
MNK				i PP	PP	06 24 20.6	+26
MNK				i PPP	PPP	06 26 16.9	
MNK				i SKS	SKSdf	06 29 53.9	-11
MNK				i PS	PKKPbc	06 33 18.9	-13
MNK				i SS	SS	06 39 10.2	-39
MNK				i SSS	SSS	06 45 15.4	
MNK				i LQ	LQ	07 02 24.4	
MNK				i LR	LR	07 12 44.4	
MNK				i LRM	MLR	07 18 07.3	
	comp=N,608nm,20.4s						
MNK				i LRM	MLR	07 18 09.8	
	comp=Z,2µm,20.4s						
MNK				i LRM	MLR	07 18 15.0	
	comp=E,145nm,20.4s						
CAST	Castle Rocks	115.18	330	P	PKiKP	06 22 54.1	-0.6
	baz=106						
CHUM	Lake Minchumin	115.41	331	P	PKPdf	06 22 55.1	0.0
	baz=106						
COLD	Coldfoot	115.50	335	P	PKPdf	06 22 56.2	+1.0
	baz=106						
TOLK	Toolik Lake Re	115.66	336	P	PKiKP	06 22 56.3	+0.7
	baz=106						
FINES	FINESS Array B	115.97	32	PKP	PKPdf	06 22 56.0	-0.2
	comp=E,1.9nm,0.8s,baz=45,slow=1.1,SNR=7.6						
FINES				PKKPbc	PKKPab	06 33 33.0	+2.9
	comp=E,8.7nm,1.0s,baz=46,slow=5.5,SNR=6.9						
FINES	FINESS Array B	115.97	32	PKPdf	PKPdf	06 22 55.9	-0.4
K20K	Telida	116.03	330	P	PKiKP	06 22 56.4	0.0
	baz=105						
H21K	Melozitna Rive	116.08	333	P	PKiKP	06 22 56.7	+0.3
	baz=105						
TTA	Tatalina	116.78	329	P	PKiKP	06 22 58.8	+0.9
	baz=103						
ARCES	ARCESS Array B	117.58	23	PKP	PKPdf	06 22 58.3	-0.9
	comp=E,3.3nm,0.9s,baz=270,slow=1.2,SNR=4.7						
ARCES				PKKPbc	PKKPab	06 33 22.2	-0.6
	comp=E,3.6nm,1.0s,baz=42,slow=3.8,SNR=6.5						
ANN	Anapa	118.36	52	ePKIKP	PKiKP	06 23 03.1	+1.7
A21K	Barrow	118.61	338	P	PKiKP	06 23 01.4	+0.3
	baz=98						
SOC	Sochi	119.65	54	i PKIKP	PKPdf	06 23 02.6	-1.3
SOC				e		06 24 24.4	
SOC				i PPP	PPP	06 27 01.2	
SOC				ePS	PS	06 34 13.9	-2.5
SOC				eSS	SS	06 40 54.6	+4.4
SOC				eSSS	SSS	06 45 16.3	
OBN	Obninsk	120.04	41⇓	i PKIKP	PKPdf	06 23 03.9	-0.4
OBN				e		06 24 29.2	
OBN				e		06 30 08.0	
OBN				pmax	pmax		
	comp=Z,47nm,1.7s						
RDOG	Red Dog Mine	120.42	334	P	PKiKP	06 23 10.5	+5.7
	baz=95						
SOCY	Socotra	120.58	93	IAMs_20	IAMs_20	07 13 58.5	
	comp=Z,1µm,20.0s						
MOS	Moscow	120.73	40	i PKIKP	PKPdf	06 23 03.6	-2.0
MOS				e		06 24 31.8	
MOS				pmax	pmax		
	comp=Z,44nm,1.1s						
VSR	Storozhevoye	120.90	45	ePKIKP	PKPdf	06 23 04.4	-1.7
VSR				pmax	pmax		
	comp=Z,20nm,1.5s						
VORD	Divnogorie	120.93	46	ePKIKP	PKPdf	06 23 04.4	-1.8
VORD				pmax	pmax		
	comp=Z,20nm,1.5s						
LPSR	Galich'ya Gora	120.99	44	ePKIKP	PKPdf	06 23 04.5	-1.7
LPSR				pmax	pmax		
	comp=Z,20nm,0.9s						
NEY	Neytrino	121.70	55	i PKIKP	PKPdf	06 23 06.6	-1.6
KIV	Kislovodsk	121.83	54	i PKIKP	PKPdf	06 23 07.7	-0.6
KIV				e		06 24 41.4	
KIV				ePS	PS	06 34 35.4	-0.7
KIV				pmax	pmax		
	comp=Z,29nm,1.0s						
KIV				MLR	MLR		
	comp=Z,860nm,22.0s						
KIV	Kislovodsk	121.83	54	IAMs_20	IAMs_20	07 16 30.6	
	comp=Z,971nm,22.0s						
KBZ	Khabaz	121.93	55	PKP	PKPdf	06 23 08.0	-0.3
	comp=Z,12nm,1.0s,baz=241,slow=3.6,SNR=9.6						
KBZ	Khabaz	121.93	55	i PKIKP	PKPdf	06 23 08.2	-0.1
KLMR	Klimovskoe	122.29	34	ePKIKP	PKPdf	06 23 04.4	-4.1
KLMR				pmax	pmax		
	comp=Z,31nm,0.9s						
KLMR	Klimovskoe	122.29	34	ePKPdf	PKPdf	06 23 04.4	-4.1
KLMR				AMP		06 23 08.5	
	comp=Z,31nm,0.9s						
KLMR				ePP	PP	06 24 32.9	-12
KLMR				eSKP		06 26 39.5	
KLMR				ePKKPbc	PKKPbc	06 33 04.1	-1.3
KLMR				eSKKPbc	SKKPbc	06 36 52.6	-2.6
KLMR				LQ	LQ	07 07 03.0	
KLMR				LQ	LQ	07 07 03.0	
KLMR				LR	LR	07 15 41.0	
NCK	Nalchik	122.38	55	i PKIKP	PKiKP	06 23 09.5	+0.1
ZEI	Tsey	122.45	56	i PKIKP	PKPdf	06 23 06.8	-2.9
ZEI				pmax	pmax		
	comp=Z,5.0nm,1.2s						
GNI	Garni	122.48	59	i PKIKP	PKPdf	06 23 09.5	-0.2
GNI	Garni	122.48	59	IAMs_20	IAMs_20	07 17 17.0	
	comp=Z,911nm,20.0s						
VRH	Novokhopyorsk	122.48	46	ePKIKP	PKPdf	06 23 06.2	-2.9
VRH				pmax	pmax		
	comp=Z,20nm,1.0s						
ASAR	Alice Springs	123.97	200	PKP	PKPdf	06 23 12.2	-0.9
	comp=Z,18nm,0.8s,baz=138,slow=1.7,SNR=78						
ASAR				pPKP	pPKPdf	06 23 20.9	-0.6
	comp=Z,50nm,0.8s,baz=141,slow=1.7,SNR=41						
ASAR				PKKPbc	PKKPbc	06 32 57.9	-0.7
	comp=Z,3.4nm,1.1s,baz=338,slow=2.6,SNR=9.3						
ASAR				SKKPbc	SKKPbc	06 36 34.2	-10
	comp=Z,0.8nm,0.6s,baz=342,slow=2.9,SNR=4.1						
MAK	Makhachkala	125.08	56	eP	Pdif	06 19 45.6	-5.1
MAK				eSSS	SSS	06 46 43.4	
MAK				pmax	pmax		
	comp=Z,531nm,1.3s						
PRGR	Permogore	125.26	33	ePKIKP	PKPdf	06 23 13.3	-0.8
PRGR				e		06 23 24.1	
PRGR				e		06 25 01.3	
PRGR				pmax	pmax		
	comp=Z,85nm,1.3s						
KIRV	Kirov	127.28	37	PKP	PKPdf	06 23 18.2	+0.2
	comp=Z,12nm,0.6s,baz=288,slow=11,SNR=8.7						
KIRV	Kirov	127.28	37	i PKIKP	PKPdf	06 23 17.7	-0.4
WRA	Warramunga Arr	127.31	202	PKP	PKPdf	06 23 19.2	-0.3
	comp=Z,44nm,0.9s,baz=166,slow=1.5,SNR=29						
WRA				pPKP	pPKPdf	06 23 27.4	-0.5
	comp=Z,134nm,1.0s,baz=173,slow=1.6,SNR=42						
WRA				SKKPbc	SKKPbc	06 36 21.2	-12
	comp=Z,4.8nm,1.0s,baz=350,slow=5.3,SNR=6.3						
WRAB	Tennant Creek	127.32	202	i PKIKP	PKPdf	06 23 16.7	-2.8
UOSS	Minazif	127.59	80	IAMs_20	IAMs_20	07 27 14.9	
	comp=Z,1µm,20.0s						
WSAR	Wadi Sarin	129.10	83	PKP	PKPdf	06 23 22.0	-0.7
	comp=Z,24nm,0.9s,baz=222,slow=3.4,SNR=11						
PMG	Port Moresby	130.53	223	PKP	PKPdf	06 23 25.1	-0.6
	comp=Z,22nm,0.8s,baz=23,slow=3.7,SNR=11						
PMG	Port Moresby	130.53	223	IAMs_20	IAMs_20	07 09 23.0	
	comp=Z,948nm,22.0s						
FITZ	Fitzroy Crossi	131.38	193	PKP	PKPdf	06 23 27.0	-0.2
	comp=Z,46nm,1.3s,baz=17,slow=7.5,SNR=5.5						
FITZ				pPKP	pPKPdf	06 23 35.7	0.0
	comp=Z,22nm,0.8s,baz=184,slow=6.0,SNR=13						
BILL	Bilibino	131.70	337d	i PKIKP	PKiKP	06 23 26.8	-0.5
BILL				pmax	pmax		
	comp=Z,73nm,1.2s						
GEYT	Alibeck	132.30	64	PKP	PKPdf	06 23 28.6	+0.2
	comp=Z,2.2nm,0.4s,baz=327,slow=7.6,SNR=5.7						
ARU	Arti	132.42	39	PKP	PKPdf	06 23 27.9	0.0
	comp=Z,3.3nm,0.5s,baz=281,slow=2.2,SNR=19						
ARU				PP	PP	06 25 56.4	+4.7
	comp=Z,4.2nm,0.7s,baz=206,slow=5.0,SNR=5.3						
ARU	Arti	132.42	39	i PKIKP	PKPdf	06 23 28.2	+0.3
ARU						06 25 51.0	
ARU				PPP	PPP	06 28 43.4	
ARU				SS	SS	06 43 24.9	-4.3
ARU				MLR	MLR		
	comp=Z,2µm,22.0s						
AKTO	Aktyubinsk	132.76	47	PKP	PKPdf	06 23 29.1	+0.4
	comp=Z,9.6nm,0.9s,baz=276,slow=1.0,SNR=19						
SVE	Sverdlovsk	133.48	38	i PKIKP	PKiKP	06 23 30.7	-0.5
SVE				pmax	pmax		
	comp=Z,36nm,1.6s						
AB31	Akbulak array	134.07	49	i PKIKP	PKPdf	06 23 31.2	-0.1
NRIK	Noril'sk	137.30	14	PKP	PKPdf	06 23 37.2	+0.5
	comp=Z,7.0nm,0.8s,baz=3.3,slow=2.5,SNR=13						
TIXI	Tiksi	137.48	354	PKhKP	PKPpre	06 23 22.6	
	comp=Z,3.6nm,0.5s,baz=9.9,slow=4.4,SNR=6.5						
TIXI				PKP	PKPdf	06 23 34.1	-2.8
	comp=Z,17nm,0.9s,baz=358,slow=2.7,SNR=6.0						
TIXI	Tiksi	137.48	354	i PKIKP	PKPdf	06 23 35.1	-1.9
TIXI	Tiksi	137.48	354	IAMs_20	IAMs_20	07 25 33.9	
	comp=Z,727nm,22.0s						
SEY	Seymchan	139.29	335	PKhKP	PKPpre	06 23 32.0	
	comp=Z,4.0nm,0.6s,baz=105,slow=2.4,SNR=5.3						
SEY				PKP	PKPdf	06 23 40.0	-0.5
	comp=Z,55nm,1.0s,baz=111,slow=2.4,SNR=26						
BATI	Baumata	139.45	192	PKP	PKPdf	06 23 43.0	+0.6
	comp=Z,26nm,0.4s,baz=70,slow=5.9,SNR=3.9						
BATI	Baumata	139.45	192	PKP	PKPdf	06 23 43.5	+1.1
BATI				PKP	PKiKP	06 23 47.5	+2.8
SOEI	Soe	139.77	193	PKP	PKiKP	06 23 46.6	+1.1
BRVK	Borovoye	139.80	42	IAMs_20	IAMs_20	07 21 45.3	
	comp=Z,1µm,22.0s						
JAY	Jayapura	139.83	221	PKP	PKPdf	06 23 44.0	+0.9
	comp=Z,18nm,1.0s,baz=305,slow=8.4,SNR=4.4						
BVAR	Borovoye Array	139.87	42	PKhKP	PKPpre	06 23 34.2	
	comp=Z,2.3nm,0.8s,baz=246,slow=13,SNR=6.3						
BVAR				PKP	PKPdf	06 23 42.8	+0.9
	comp=Z,5.5nm,0.7s,baz=224,slow=12,SNR=13						
POO	Poona	140.55	97	eP	PKPdf	06 23 42.0	-2.2
WBSI	Waikabubak, Su	140.60	186	PKP	PKiKP	06 23 46.4	-0.7
PET	Petropavlovsk	141.02	319	ePKIKP	PKPdf	06 23 41.0	-2.9
PET				i		06 23 44.4	
PET				e		06 26 44.8	
PET				eSS	SS	06 45 07.5	-4.1
PET				eSSS	SSS	06 50 35.0	
PET				pmax	pmax		
	comp=Z,56nm,1.4s						
EDFI	Ende, Flores	141.20	190	PKP	PKPdf	06 23 42.1	-3.6
MMRI	Maumere	141.23	191	PKP	PKPdf	06 23 46.4	+0.8
MMRI	Maumere	141.23	191	IAMs_20	IAMs_20	07 21 19.9	
	comp=Z,727nm,19.0s						
SMPI	Sarmi	141.38	219	PKP	PKPdf	06 23 47.1	+1.2
PLAI	Plampang	141.52	184	PKP	PKPdf	06 23 42.1	-4.0
PEA0B	Petropavlovsk-	141.53	319	i PKIKP	PKPdf	06 23 44.4	-0.5
PETK	Petropavlovsk-	141.53	319	PKhKP	PKPpre	06 23 37.1	
	comp=Z,5.3nm,0.8s,baz=90,slow=7.8,SNR=6.6						
PETK				PKP	PKPdf	06 23 45.3	+0.4
	comp=Z,35nm,1.0s,baz=119,slow=5.1,SNR=10						
IUG	Iuzhnay	141.61	59	ePKP	PKPdf	06 23 42.9	-2.6
	baz=59						
IUG				ePP	PP	06 26 47.3	-2.5
	baz=59						
IUG	Iuzhnay	141.61	59	ePKIKP	PKPdf	06 23 42.9	-2.6
IUG				e		06 26 47.3	
TWSI	Taliwang, Sumb	141.65	182	PKP	PKPdf	06 23 46.2	-0.1
TWSI				PKP	PKiKP	06 23 46.7	-2.5
KK31	Karatay Array	141.89	57	i PKHKP	PKPpre	06 23 40.4	
MA2	Magadan	141.91	332	PKP	PKPdf	06 23 45.4	+0.1
	comp=Z,64nm,1.0s,baz=70,slow=4.5,SNR=10						
MA2	Magadan	141.91	332	IAMs_20	IAMs_20	07 32 12.1	
	comp=Z,1µm,22.0s						
PCJI	Pacitan	141.98	173	PKP	PKPdf	06 23 45.3	-1.6
CMJI	Cimerak	142.00	169	PKP	PKPdf	06 23 42.5	-4.5
GMJI	Gumukmas	142.08	177	PKP	PKPdf	06 23 47.6	+0.5
BRZS	Berezniki	142.11	46	ePKP	PKPdf	06 23 45.4	-0.7
	baz=46						
BRZS				ePP	PP	06 26 51.2	-1.1
	baz=46						
BRZS	Berezniki	142.11	46	ePKIKP	PKPdf	06 23 45.4	-0.7
BRZS				e		06 26 51.2	
SRBI	Singaraja	142.32	179	PKP	PKiKP	06 23 52.4	+1.9
OTUK	Ortayu	142.33	48	PKHKP	PKPpre	06 23 41.4	
DZA	Taraz	142.51	57	ePKP	PKPdf	06 23 44.0	-3.1
	baz=58						
DZA	Taraz	142.51	57	ePKIKP	PKPdf	06 23 43.9	-3.1
CGJI	Cibinong	142.57	164	PKP	PKPdf	06 23 45.7	-2.3
ABJI	Asem Bagus	142.59	178	PKP	PKPdf	06 23 47.2	-0.8
BLJI	Banyuglugur	142.61	177	PKP	PKPdf	06 23 47.6	-0.5
LEM	Lembang	142.79	167	PKP	PKPdf	06 23 46.1	-2.5
	comp=Z,90nm,0.7s,baz=159,slow=2.4,SNR=18						
LEM	Lembang	142.79	167	PKP	PKPdf	06 23 46.8	-1.8
NGJI	Ngawi	142.83	173	PKP	PKPdf	06 23 47.6	-0.8
DBJI	Dramaga	142.87	165	PKP	PKPdf	06 23 47.6	-1.0
SMRI	Semarang	143.02	172	PKP	PKPbc	06 23 46.8	+1.3
KASI	Kota Agung	143.30	161	PKP	PKPdf	06 23 48.8	-0.5
KMMI	Kalianget	143.32	177	PKP	PKPbc	06 23 47.2	+0.9
LWLI	Liwa	143.66	160	PKP	PKPdf	06 23 50.0	-0.1
FAKI	Fak Fak	143.73	209	PKP	PKPdf	06 23 50.0	-0.1
FAKI	Fak Fak	143.73	209	IAMs_20	IAMs_20	07 29 52.2	
	comp=Z,535nm,19.0s						
BSSI	Bau Bau, Buton	143.93	188	PKP	PKPbc	06 23 48.8	+0.7
AJM	Ajmer	143.93	85	eP	PKPdf	06 23 49.2	-0.8

MNAI	Manna	143.95	158	PKP	PKPdf	06 23 50.8	+0.3
NIL	Nilore	144.03	73	IAMs_20	IAMs_20	07 27 35.4	
	comp=Z,1μm,22.0s						
KLI	Kotabumi	144.03	162	PKP	PKPdf	06 23 49.6	-1.0
HYB	Hyderabad	144.10	102	i PKP	PKPab	06 23 48.0	-0.2
HYB	Hyderabad	144.10	102	eP	PKPbc	06 23 49.5	+0.9
HYB				IAmb	IAmb	06 23 51.4	
	comp=Z,57nm,1.2s						
BTLS	Baital	144.15	53	⇑iPKP	PKPab	06 23 47.2	-0.3
	baz=53						
BTLS				ePP	PP	06 27 03.2	-1.7
	baz=53						
BTLS	Baital	144.15	53c	iPKIKP	PKPab	06 23 47.2	-0.3
BTLS				e		06 27 03.1	
MDSI	Maura Dua	144.20	160	PKP	PKPbc	06 23 49.2	+0.3
EKS2	Erkin-Say	144.32	57	P	PKPab	06 23 47.9	-0.5
	SNR=30						
AML	Almayashu	144.32	58	P	PKPab	06 23 48.6	-0.2
	SNR=21						
PPSI	Pulau Pagai	144.37	153	PKP	PKPdf	06 23 51.5	+0.3
BWJI	Bawean	144.43	175	PKP	PKPdf	06 23 50.6	-0.7
KSI	Kapahiang	144.49	157	PKP	PKPbc	06 23 50.4	+0.4
LHSI	Lahat	144.63	159	PKP	PKPdf	06 23 51.6	0.0
USP	Ospenovka	144.76	56	P	PKPab	06 23 49.4	-0.5
	SNR=66						
BKSI	Bulukumba	144.79	188	PKP	PKPbc	06 23 50.8	0.0
BKSI				PKP	PKPbc	06 23 50.8	0.0
SGDS	Sogindy	144.83	56	⇑iPKP	PKPab	06 23 49.3	-0.9
	baz=56						
MASI	Maura Aman, Be	144.85	157	PKP	PKPdf	06 23 52.4	+0.3
AAK	Ala-Archa	144.85	57	PKP	PKPab	06 23 50.0	-0.4
	comp=Z,148nm,0.9s,baz=241,slow=3.6,SNR=151						
AAK	Ala-Archa	144.85	57c	iPKIKP	PKPab	06 23 49.9	-0.5
AAK	Ala-Archa	144.85	57	IAMs_20	IAMs_20	07 34 24.2	
	comp=Z,920nm,20.0s						
UCH	Uchtor	144.92	58	P	PKPab	06 23 51.0	-0.1
	SNR=117						
CHMS	Chumysh	144.99	57	P	PKPbc	06 23 50.5	-0.2
	SNR=79						
KAPI	Kappang	145.13	187	PKPbc	PKPdf	06 23 52.7	+0.2
	comp=Z,286nm,1.1s,baz=224,slow=3.5,SNR=127						
KBK	Karagaybulak	145.18	57	P	PKPab	06 23 51.6	0.0
	SNR=130						
SISI	Saibi	145.28	150	PKP	PKPdf	06 23 54.4	+1.7
BHPL	Bhopal	145.40	92	⇑iP	PKPbc	06 23 51.6	-1.0
BHPL				IAmb	IAmb	06 24 03.4	
	comp=Z,35nm,0.7s						
KURBB	Kurchatov Arra	145.44	42	PKPbc	PKPdf	06 23 51.8	0.0
	comp=Z,183nm,1.0s,baz=290,slow=4.1,SNR=492						
KURBB	Kurchatov Arra	145.44	42	PKP2	PKPdf	06 23 50.6	-1.2
KURK	Kurchatov	145.45	42c	iPKIKP	PKPdf	06 23 51.4	-0.4
KURK	Kurchatov	145.45	42	PKPdf	PKPab	06 23 52.0	-0.1
KRJI	Kerinci	145.54	155	PKP	PKiKP	06 23 57.2	-0.1
TKM2	Tokmak 2	145.61	57	P	PKPdf	06 23 52.6	-0.1
	SNR=136						
TKM2	Tokmak 2	145.61	57	PKP2	PKPdf	06 23 51.6	-1.1
BNSI	Bone	145.70	188	PKP	PKPab	06 23 54.6	+0.6
PMBI	Palembang	145.86	161	PKP	PKPab	06 23 55.4	+0.8
KUDL	Kundal	145.92	83	eP	PKPdf	06 23 53.0	-0.3
KUU	Kurty	145.97	55	⇑iPKP	PKPdf	06 23 53.0	0.0
	baz=55						
KUU				ePP	PP	06 27 15.9	+0.1
	baz=55						
KUU	Kurty	145.97	55c	iPKP2	PKPdf	06 23 53.0	0.0
KUU				e		06 27 15.9	
SIJI	Sorong	145.99	209	PKPbc	PKPdf	06 23 53.6	-0.4
	comp=Z,119nm,0.7s,baz=99,slow=1.3,SNR=30						
SIJI				pPKPbc	pPKPbc	06 24 03.0	-0.1
	comp=Z,363nm,0.8s,baz=37,slow=3.0,SNR=28						
SPSI	Sidrap Palu	146.17	188	PKP	PKPbc	06 23 55.0	-0.2
ULHL	Ulahol	146.19	58	P	PKPbc	06 23 55.1	+0.3
	SNR=6.0						
PDSI	Padang	146.23	152	PKP	PKPbc	06 23 55.1	-0.3
KSH	Kashi	146.29	63	⇑iPKPbc	PKPdf	06 23 53.8	0.0
KSH				SS	SS	06 46 09.8	-4.0
KSH				AMB	AMB		
	comp=Z,1μm,3.6s						
KSH				LR	LR		
	comp=Z,700nm,18.2s						
KSH				LR	LR		
	comp=Z,830nm,20.3s						
KSH				LR	LR		
	comp=Z,1μm,23.4s						
DHRM	DHARAMSHALA	146.43	76	⇑iP	PKPdf	06 23 54.9	+0.5
DHRM				IAmb	IAmb	06 23 57.4	
	comp=Z,261nm,1.7s						
CHKK	Chushkaly	146.44	55	ePKP	PKPdf	06 23 53.5	-0.3
	baz=55						
SONA	Sohna	146.46	83	eP	PKPdf	06 23 54.4	+0.1
YAK	Yakutsk	146.46	348	PKPbc	PKPbc	06 23 53.9	-0.7
	comp=Z,219nm,0.9s,baz=222,slow=0.4,SNR=65						
YAK				pPKPbc	pPKPbc	06 24 02.7	-0.3
	comp=Z,271nm,0.8s,baz=187,slow=0.4,SNR=16						
YAK	Yakutsk	146.46	348	ePKP2	PKPdf	06 23 53.5	+0.3
YAK				e		06 27 21.6	
YAK				eSS	SS	06 46 09.0	-3.9
YAK				eSSS	SSS	06 51 38.7	
YAK				pmax	pmax		
	comp=Z,640nm,1.0s						
YAK				pmax	pmax		
	comp=E,25nm,1.3s						
YAK				pmax	pmax		
	comp=N,89nm,1.4s						
YAK	Yakutsk	146.46	348	IAMs_20	IAMs_20	07 39 32.0	
	comp=Z,611nm,20.0s						
AAA	Alma-Ata	146.51	56	ePKP	PKPdf	06 23 54.1	0.0
	baz=56						
AAA	Alma-Ata	146.51	56	ePKP2	PKPdf	06 23 54.0	0.0
SEM	Semipalatinsk	146.53	42	ePKP	PKPdf	06 23 53.6	-0.4
	baz=42						
SEM	Semipalatinsk	146.53	42	ePKP2	PKPdf	06 23 53.6	-0.4
AYAN	Aya Nagar	146.54	83	eP	PKPdf	06 23 54.6	+0.2
TNSS	Tian-Shan	146.57	56	ePKP	PKPdf	06 23 54.9	+0.3
	baz=56						
PPI	Padang Panjang	146.62	152	PKP	PKPbc	06 23 56.3	-0.2
MDOK	Medeo	146.62	56	ePKP	PKPdf	06 23 54.4	0.0
	baz=56						
MDOK	Medeo	146.62	56	ePKP2	PKPdf	06 23 54.3	0.0
NDI	New Delhi	146.66	82	eP	PKPdf	06 23 54.4	-0.2
NDI	New Delhi	146.66	82	eP	PKPdf	06 23 54.5	-0.2
SANI	Sanana	146.77	199	PKP	PKPab	06 23 57.9	-0.2
GSI	Gunungsitoli	146.90	146	PKP	PKPab	06 23 58.4	-0.3
BBKI	Banjar Baru	146.91	179	PKP	PKPbc	06 23 57.5	+0.1
ARXS	Arharly	146.96	54	ePKIKP	PKPdf	06 23 54.9	+0.1
SMLA	Simla	147.02	78	eP	PKPdf	06 23 55.4	+0.3
SMLA				IAmb	IAmb	06 23 59.3	
	comp=Z,230nm,1.0s						
KBKI	Kotabaru	147.07	181	PKP	PKPbc	06 23 57.7	-0.1
TTSI	Tana Toraja	147.07	188	PKP	PKPbc	06 23 57.1	-0.7
TDK	Taldyqorghan	147.17	52	ePKP	PKPdf	06 23 54.6	-0.4
	baz=52						
TDK	Taldyqorghan	147.17	52	ePKIKP	PKPdf	06 23 54.6	-0.4
ZAA0	Zalesovo Array	147.22	34	PKPdf	PKPdf	06 23 54.5	-0.2
ZALV	Zalesovo Beam	147.22	34	PKPbc	PKPdf	06 23 54.9	+0.1
	comp=Z,124nm,0.8s,baz=278,slow=4.3,SNR=83						
MNSI	Mandailing Nat	147.39	149	PKP	PKPdf	06 23 57.1	+0.8
TARG	Taragay, Kyrgy	147.42	58		PKPdf	06 23 53.9	-2.2
PBKI	Pangkalan Bun	147.46	173	PKP	PKPab	06 24 00.2	-0.6
BKNI	Bangkinang	147.59	152	PKP	PKPbc	06 23 58.4	-0.9
SATY	Saty	147.61	56	ePKP	PKPdf	06 23 55.1	-0.8
	baz=56						
SATY				ePP	PP	06 27 24.1	-1.5
	baz=56						
SATY	Saty	147.61	56	ePKIKP	PKPdf	06 23 55.1	-0.8
SATY				e		06 27 24.1	
LBMI	Labuha	147.63	203	PKP	PKiKP	06 24 01.1	-0.4
DDI	Dehra Dun	147.66	80	eP	PKPdf	06 23 55.4	-0.9
DDI				IAmb	IAmb	06 24 01.2	
	comp=Z,468nm,1.2s						
KPKS	Kokpek	147.73	55	ePKP	PKPdf	06 23 55.5	-0.7
	baz=55						
KPKS				ePP	PP	06 27 23.7	-2.5
	baz=55						
KPKS	Kokpek	147.73	55	ePKIKP	PKPdf	06 23 55.4	-0.7
KPKS				e		06 27 23.7	
SBSI	Sibolga	147.75	148	PKP	PKPbc	06 23 59.9	+0.2
UZB	Uzynbulak	148.04	55	ePKP	PKPdf	06 23 55.5	-1.2
	baz=56						
UZB				ePP	PP	06 27 21.6	-6.6
	baz=56						
UZB	Uzynbulak	148.04	55	ePKIKP	PKPdf	06 23 55.5	-1.2
DSRI	Dabo	148.12	159	PKP	PKPdf	06 23 57.7	+0.2
DSRI				PKP	PKPbc	06 23 58.8	-1.9
PDGK	Podgornoye	148.33	55	PKIKP	PKPdf	06 23 57.6	+0.5
SHLS	Shalkode	148.35	55	ePKP	PKPdf	06 23 58.0	+0.8
	baz=55						
SHLS				ePP	PP	06 27 30.6	+0.7
	baz=55						
SHLS	Shalkode	148.35	55	ePKIKP	PKPdf	06 23 57.9	+0.8
SHLS				e		06 27 30.5	
TPTI		148.38	143	PKP	PKPbc	06 24 01.3	-0.1
GUMO	Guam	148.44	246	PKPbc	PKPbc	06 24 00.9	-0.5
	comp=Z,243nm,1.2s,baz=208,slow=8.9,SNR=3.5						
LUWI	Luwuk	148.54	194	PKP	PKiKP	06 24 03.1	-0.3
LUWI	Luwuk	148.54	194	IAMs_20	IAMs_20	07 30 25.9	
	comp=Z,554nm,20.0s						
MLSI	Meulaboh, Aceh	148.81	141	PKP	PKPbc	06 24 01.1	-1.4
PSI	Prapat	148.86	147	PKPbc	PKPbc	06 24 01.3	-1.5
	comp=Z,24nm,0.9s,baz=217,slow=5.4,SNR=13						
APSI	Ampana	148.89	192	PKP	PKPbc	06 24 02.1	-0.6
MAKZ	Makanchi	148.99	47	PKIKP	PKPdf	06 23 57.3	-0.6
MAKZ	Makanchi	148.99	47	IAMs_20	IAMs_20	07 27 25.8	
	comp=Z,892nm,22.0s						
TNTI	Ternate	148.99	203	PKP	PKPbc	06 24 02.8	-0.2
MK31	Makanchi Array	149.19	47	PKIKP	PKPdf	06 23 58.6	+0.3
MK31	Makanchi Array	149.19	47	PKPdf	PKPdf	06 23 58.6	+0.3
MKAR	Makanchi Array	149.19	47	PKP	PKPdf	06 23 58.1	-0.2
	comp=Z,40nm,0.8s,baz=272,slow=1.4,SNR=116						
MKAR				PKPbc	PKPbc	06 24 02.1	-0.4
	comp=Z,40nm,0.8s,baz=302,slow=2.6,SNR=117						
MKAR	Makanchi Array	149.19	47	PKPdf	PKPdf	06 23 58.3	0.0
KRAR	Krasnoyarsk	149.29	25	i PKHKP	PKPpre	06 23 57.5	
MTKI	Muara Teweh, K	149.41	179	PKP	PKPbc	06 24 02.7	-1.3
KMSI	Cibinong	149.83	197	PKP	PKiKP	06 24 05.7	-0.3
SMKI	Samarinda	149.87	183	PKP	PKiKP	06 24 07.0	+0.9
LHMI	Lhok Sumawe	149.91	141	PKP	PKiKP	06 24 06.2	0.0
GTOI	Gorontalo	150.12	195	PKP	PKPbc	06 24 03.5	-2.2
STKI	Sintang	150.17	172	PKP	PKPbc	06 24 03.5	-2.4
MRSI	Marisa	150.19	193	PKP	PKPbc	06 24 04.5	-1.4
KUR	Kuril'sk	150.33	310	ePKIKP	PKPdf	06 23 59.3	-0.7
KUR				i		06 24 06.7	
KUR				pmax	pmax		
	comp=N,120nm,1.4s						
KUR				pmax	pmax		
	comp=E,130nm,1.4s						
KUR				pmax	pmax		
	comp=Z,516nm,1.4s						
MPSI	Mapaga	150.39	189	PKP	PKPdf	06 24 03.5	+2.3
ZSN	Zaisan	150.54	45	ePKP	PKPdf	06 24 00.6	+0.2
	baz=45						
ZSN	Zaisan	150.54	45	ePKIKP	PKPdf	06 24 00.6	+0.2
TOLI2	Tolitoli	151.02	191	IAMs_20	IAMs_20	07 29 06.3	
	comp=Z,639nm,22.0s						
PYUN	Piuthan	151.53	85	eP	PKPdf	06 24 02.8	0.0
	comp=Z,338nm,1.0s						
BOD	Bodaibo	151.98	2	ePKIKP	PKPdf	06 24 02.0	-0.2
BOD				pmax	pmax		
	comp=Z,250nm,1.5s						
KOLN	Koldanda	151.99	86	eP	PKPdf	06 24 02.8	-0.7
YUK	Yuzh-Kuril'sk	152.08	309	ePKIKP	PKPdf	06 24 02.5	-0.3
YUK				e		06 27 52.0	
YUK				ePPP	PPP	06 31 16.9	
YUK				eSS	SS	06 47 20.4	+2.8
YUK				eSSS	SSS	06 53 06.1	
UGL	Uglegorsk	152.12	321	ePKIKP	PKPdf	06 24 04.6	+2.0
UGL				e		06 24 19.0	
UGL				pmax	pmax		
	comp=Z,130nm,1.6s						
DANN	Dangsing	152.25	85	eP	PKPdf	06 24 03.7	-0.2
YSS	Yuzh-Sakhalins	152.84	317	i PKIKP	PKPbc	06 24 11.0	0.0
YSS				e		06 24 21.0	
YSS				e		06 31 19.7	
YSS				eSSS	SSS	06 53 18.3	
YSS	Yuzh-Sakhalins	152.84	317	IAMs_20	IAMs_20	07 34 08.1	
	comp=Z,761nm,21.0s						
BOK	Bokaro	152.92	96	eP	PKPdf	06 24 03.7	-0.9
BOK				IAmb	IAmb	06 24 11.6	
	comp=Z,24nm,0.8s						
BOK				ex	PKPab	06 24 22.2	-0.9
BOK				i x	PP	06 27 55.5	-1.1
GKN	Gorkha	152.94	86	eP	PKPdf	06 24 04.1	-0.7
DMN	Daman	153.27	87	eP	PKPdf	06 24 04.8	-0.6
KKN	Kakani	153.46	87	eP	PKPdf	06 24 04.9	-0.7
PKI	Pulchoki	153.52	87	eP	PKPdf	06 24 05.6	-0.3
WMQ	Urumqi	153.85	50	PKPbc	PKPdf	06 24 04.8	-0.7
WMQ				pPKP	PKPbc	06 24 13.0	-0.4
WMQ				PP	PP	06 28 00.5	-0.7
WMQ				AMB	AMB		
	comp=Z,470nm,8.9s						
WMQ				LR	LR		
	comp=Z,970nm,20.1s						
WMQ				LR	LR		
	comp=Z,900nm,20.1s						
WMQ				LR	LR		
	comp=Z,1μm,21.9s						
GUN	Gumba	154.00	87	eP	PKPdf	06 24 06.1	-0.5
JIRN	Jiri	154.22	88	eP	PKPdf	06 24 06.2	-0.7
ASAJ	Asahikawa	154.23	311	PKP	PKPdf	06 24 05.7	-0.2
	comp=Z,17nm,0.9s,baz=259,slow=15,SNR=5.0						
ASAJ				PKPbc	PKPbc	06 24 12.5	-1.6
	comp=Z,43nm,1.0s,baz=250,slow=6.8,SNR=13						
RAMN	Ramite	154.42	89	eP	PKPdf	06 24 06.9	-0.2
	comp=Z,8.2nm,0.5s						
ZEA	Zeya	154.61	344	ePKIKP	PKPdf	06 24 06.4	+0.3
ZEA				pmax	pmax		
	comp=N,30nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,80nm,0.9s						
ERM	Erimo	154.64	306c	iPKIKP	PKiKP	06 24 16.7	+1.6
ERM				pmax	pmax		
	comp=Z,73nm,1.3s						
ERM	Erimo	154.64	306	IAMs_20	IAMs_20	07 26 34.7	
	comp=Z,891nm,20.0s						
ODAN	Odare	155.09	90	eP	PKPdf	06 24 07.7	-0.3
	comp=Z,62nm,1.3s						
TAPN	Taplejung	155.47	89	eP	PKPdf	06 24 07.8	-0.8
	comp=Z,91nm,1.6s						
MOY	Mondy	155.64	22	ePKIKP	PKPdf	06 24 08.8	+1.0
MOY				pmax	pmax		
	comp=Z,106nm,2.4s						
IRK	Irkutsk	156.10	17	ePKIKP	PKPdf	06 24 08.1	-0.1
IRK				e		06 24 35.8	
IRK				pmax	pmax		
	comp=Z,123nm,2.1s						
TLY	Talaya	156.44	19	PKP	PKPdf	06 24 08.7	0.0
	comp=Z,1.1nm,0.3s,baz=187,slow=2.0,SNR=5.4						
TLY	Talaya	156.44	19	ePKIKP	PKPdf	06 24 09.2	+0.5
TLY				pmax	pmax		
	comp=Z,97nm,1.9s						
TLY	Talaya	156.44	19	IAMs_20	IAMs_20	07 44 37.4	
	comp=Z,901nm,19.0s						
KLR	Kul'dur	157.01	332	PKP	PKPdf	06 24 09.0	-0.5
	comp=Z,29nm,1.2s,baz=38,slow=2.5,SNR=21						
KLR	Kul'dur	157.01	332	PKIKP	PKPdf	06 24 09.0	-0.5
ZAK	Zakamensk	157.48	21	ePKIKP	PKPdf	06 24 10.0	-0.2
ZAK				pmax	pmax		
	comp=Z,24nm,1.6s						
TEY	Ternei	157.49	318	ePKIKP	PKPdf	06 24 09.0	-1.2
CIT	Chita	157.77	3	ePKIKP	PKPdf	06 24 12.2	+1.8
CIT				e		06 24 20.8	
CIT				e		06 28 21.8	
CIT				pmax	pmax		
	comp=Z,212nm,1.5s						
SHL	Shillong	158.66	96	⇑iP	PKPdf	06 24 11.8	-0.7
SHL				IAmb	IAmb	06 24 13.5	
	comp=Z,28nm,1.1s						
SHL				i x	PP	06 28 26.9	-1.9
LSA	Lhasa	158.85	84	PKP	PKPdf	06 24 13.5	+0.5
LSA	Lhasa	158.85	84	IAMs_20	IAMs_20	07 45 22.4	
	comp=Z,642nm,20.0s						
MJAR	Matsushiro Arr	159.88	295	PKP	PKPdf	06 24 12.9	-0.5
	comp=Z,1.1nm,0.4s,baz=92,slow=1.1,SNR=7.1						
MJAR				PKPab	PKPab	06 24 52.9	+0.2
	comp=Z,24nm,0.7s,baz=94,slow=2.5,SNR=19						
MJAR				pPKPab	pPKPab	06 25 01.1	+0.1
	comp=Z,49nm,0.7s,baz=107,slow=2.4,SNR=14						
MAJO	Matsushiro	159.89	295	IAMs_20	IAMs_20	07 44 45.9	
	comp=Z,543nm,21.0s						
MAT	Matsushiro	159.89	295	PKP	PKPdf	06 24 14.8	+1.4
USRK	Ussuriysk Ar.	160.58	322	PKP	PKPdf	06 24 12.4	-1.5
	comp=Z,10nm,1.1s,baz=297,slow=0.9,SNR=12						
USRK				PKPab	PKPab	06 24 54.8	-0.6
	comp=Z,9.9nm,0.9s,baz=60,slow=4.6,SNR=8.5						
USRK				PP	PP	06 28 39.7	+1.9
	comp=Z,5.6nm,1.0s,baz=5.4,slow=3.0,SNR=4.0						
SONM	Songino Array	160.68	19	PKP	PKPdf	06 24 14.1	+0.1
	comp=Z,39nm,1.1s,baz=249,slow=0.7,SNR=94						
SONM				PKPab	PKPab	06 24 55.4	-0.5
	comp=Z,12nm,1.1s,baz=322,slow=3.8,SNR=4.0						
SONM				PP	PP	06 28 43.0	+5.0
	comp=Z,6.6nm,1.1s,baz=5.4,slow=4.4,SNR=3.9						
CMAR	Chiang Mai Arr	161.14	123	PKP	PKPdf	06 24 15.6	+0.3
	comp=Z,1.1nm,0.4s,baz=265,slow=2.5,SNR=17						
CMAR				PKPab	PKPab	06 24 58.2	-0.4
	comp=Z,6.6nm,0.8s,baz=243,slow=4.3,SNR=11						
MDJ	Mudanjiang	161.50	327	PKP	PKPdf	06 24 14.6	-0.2
MDJ				PP	PP	06 28 42.3	-0.3
MDJ				SS	SS	06 49 03.8	+6.2
MDJ				LR	LR		
	comp=Z,430nm,20.6s						
MDJ				LR	LR		
	comp=Z,540nm,23.5s						
MDJ				LR	LR		
	comp=Z,1μm,19.4s						
GTA	Gaotai	163.93	49	⇑PKP	PKPdf	06 24 17.8	+0.2
GTA				PKPab	PKPab	06 25 10.8	+0.3
GTA				AMB	AMB		
	comp=Z,230nm,9.1s						
GTA				LR	LR		
	comp=Z,400nm,24.0s						
GTA				LR	LR		
	comp=Z,520nm,22.9s						
GTA				LR	LR		
	comp=Z,1μm,22.9s						
CN2	Changchun	163.96	333	PKP	PKPdf	06 24 16.6	-0.7
CN2				PP	PP	06 28 59.3	+3.9
CN2				AMB	AMB		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=Z,500nm,19.0s						
CN2				LR	LR		
	comp=Z,600nm,19.0s						
CN2				LR	LR		
	comp=Z,600nm,20.0s						
JNU	Nakatsue	166.49	288		PKPdf	06 24 15.7	-4.1
KSRS	Korea Array	167.17	310	PKP	PKPdf	06 24 20.1	0.0
	comp=Z,13nm,1.1s,baz=142,slow=0.3,SNR=22						
KSRS				pPKP	pPKPdf	06 24 28.6	0.0
	comp=Z,12nm,1.0s,baz=166,slow=0.4,SNR=10						
KSRS				PKPab	PKPab	06 25 25.5	+0.9
	comp=Z,24nm,1.0s,baz=61,slow=4.4,SNR=19						
KSRS				pPKPab	pPKPab	06 25 33.8	+0.9
	comp=Z,46nm,0.8s,baz=66,slow=4.6,SNR=23						
KSRS				PP	PP	06 29 20.4	+7.6
	comp=Z,5.6nm,1.0s,baz=42,slow=5.5,SNR=4.3						
KMI	Kunming	167.73	109	⇑PKP	PKPdf	06 24 20.8	-0.4
QIZ	Qiongzhong	168.09	153	PKP	PKPdf	06 24 21.3	0.0
QIZ				PP	PP	06 29 17.6	+0.8
QIZ				SS	SS	06 50 08.3	+3.6
QIZ				AMB	AMB		
	comp=Z,280nm,11.1s						
QIZ				LR	LR		
	comp=Z,400nm,23.1s						
QIZ				LR	LR		
	comp=Z,530nm,19.2s						
QIZ				LR	LR		
	comp=Z,700nm,18.8s						
BTO	Baotou	168.34	21	ePKP	PKPdf	06 24 21.6	+0.6
BTO				LR	LR		
	comp=Z,1μm,21.2s						
BTO				LR	LR		
	comp=Z,2μm,21.4s						
LZH	Lanzhou	168.37	54	ePKP	PKPdf	06 24 22.3	+1.1
LZH				pPKP	pPKPdf	06 24 27.3	-2.4
LZH				PP	PP	06 29 20.4	+1.0
LZH				SS	SS	06 50 13.3	+3.7
LZH				AMB	AMB		
	comp=Z,480nm,9.2s						
LZH				LR	LR		
	comp=Z,750nm,18.0s						
LZH				LR	LR		
	comp=Z,670nm,18.4s						
LZH				LR	LR		
	comp=Z,940nm,20.1s						
JOW	Kunigami	168.38	258	PKP	PKPdf	06 24 21.2	-0.1
	comp=Z,22nm,1.0s,baz=301,slow=5.9,SNR=4.4						
HHC	Hu-ho-hao-te	168.53	15	i PKP	PKPdf	06 24 22.0	+0.9
HHC				PP	PP	06 29 17.1	-1.8
HHC				SS	SS	06 50 08.4	-0.5
HHC				AMB	AMB		
	comp=Z,430nm,11.6s						
HHC				LR	LR		
	comp=Z,1μm,22.6s						
HHC				LR	LR		
	comp=Z,870nm,21.5s						
HHC				LR	LR		
	comp=Z,2μm,22.1s						
DL2	Dalian	169.63	333	PKP	PKPdf	06 24 21.9	+0.2
DL2				PKPab	PKPab	06 25 35.1	-0.2
DL2				PP	PP	06 29 33.4	+8.8
DL2				AMB	AMB		
	comp=Z,170nm,4.9s						
DL2				LR	LR		
	comp=Z,650nm,18.6s						
DL2				LR	LR		
	comp=Z,510nm,18.0s						
DL2				LR	LR		
	comp=Z,720nm,15.1s						
CD2	Chengdu	169.78	81	PKP	PKPdf	06 24 22.3	+0.2
CD2				PKPab	PKPab	06 25 36.5	-0.1
CD2				PP	PP	06 29 28.4	+1.4
CD2				SKKS		06 36 14.1	
CD2				SS	SS	06 50 25.8	+1.2
CD2				AMB	AMB		
	comp=Z,530nm,8.8s						
CD2				LR	LR		
	comp=Z,880nm,21.3s						
CD2				LR	LR		
	comp=Z,710nm,19.6s						
CD2				LR	LR		
	comp=Z,2μm,22.4s						
BJI	Beijing	169.78	357	PKP	PKPdf	06 24 21.9	+0.2
BJI				PP	PP	06 29 23.8	-1.1
BJI				SS	SS	06 50 25.8	+5.0
BJI				LR	LR		
	comp=Z,650nm,19.4s						
BJI				LR	LR		
	comp=Z,730nm,23.7s						
BJI				LR	LR		
	comp=Z,1μm,24.8s						
GYA	Guiyang	171.50	111	⇓PKP	PKPdf	06 24 23.5	+0.2
GYA				PKPab	PKPab	06 25 43.8	-0.5
GYA				PP	PP	06 29 32.9	-2.5
GYA				LR	LR		
	comp=Z,390nm,15.1s						
GYA				LR	LR		
	comp=Z,350nm,18.6s						
GYA				LR	LR		
	comp=Z,620nm,19.0s						
TIY	Taiyuan	171.71	17	ePKP	PKPdf	06 24 23.3	+0.3
TIY				PP	PP	06 29 39.1	+4.2
TIY				AMB	AMB		
	comp=Z,230nm,4.1s						
TIY				LR	LR		
	comp=Z,450nm,16.6s						
TIY				LR	LR		
	comp=Z,710nm,19.3s						
TIY				LR	LR		
	comp=Z,670nm,20.6s						
XAN	Xi'an	172.99	51	PKP	PKPdf	06 24 23.8	+0.2
XAN				PKPab	PKPab	06 25 50.1	-0.5
XAN				PP	PP	06 29 40.0	-2.2
XAN				AMB	AMB		
	comp=Z,480nm,11.4s						
XAN				LR	LR		
	comp=Z,840nm,24.0s						
XAN				LR	LR		
	comp=Z,500nm,18.5s						
XAN				LR	LR		
	comp=Z,1μm,23.4s						
TIA	Tai'an	173.48	349	PKP	PKPdf	06 24 23.8	+0.1
TIA				AMB	AMB		
	comp=Z,420nm,5.4s						
TIA				LR	LR		
	comp=Z,550nm,21.9s						
TIA				LR	LR		
	comp=Z,590nm,21.8s						
TIA				LR	LR		
	comp=Z,1μm,19.8s						
QZH	Quanzhou	174.43	210	i PKP	PKPdf	06 24 20.0	-4.3
QZH				LR	LR		
	comp=Z,580nm,18.5s						
QZH				LR	LR		
	comp=Z,390nm,15.2s						
QZH				LR	LR		

	comp=Z,940nm,21.8s						
SSE	Sheshan	174.95	286	PKP	PKPdf	06 24 25.0	+0.7
SSE				SS	SS	06 51 17.3	+2.6
SSE				LR	LR		
	comp=Z,400nm,22.7s						
SSE				LR	LR		
	comp=Z,310nm,19.6s						
SSE				LR	LR		
	comp=Z,500nm,20.8s						
NJ2	Nanjing	176.37	309	ePKP	PKPdf	06 24 25.8	+1.2
NJ2				PP	PP	06 29 59.4	+1.0
NJ2				SS	SS	06 51 32.1	+5.0
NJ2				LR	LR		
	comp=Z,850nm,20.8s						
NJ2				LR	LR		
	comp=Z,550nm,14.2s						
NJ2				LR	LR		
	comp=Z,1µm,19.4s						
WHN	Wuhan	178.75	54	⇑PKP	PKPdf	06 24 25.0	0.0
WHN				PKPab	pPKPab	06 26 15.1	-9.4
WHN				PP	PP	06 30 10.3	+0.6
WHN				LR	LR		
	comp=Z,1µm,18.2s						
WHN				LR	LR		
	comp=Z,3µm,19.5s						
WHN				LR	LR		
	comp=Z,3µm,24.2s						

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*IDC **13** 06:07:09.2±2.1, 25°.04S×179°.41W, h447^{km}±18^{km}, mb3.8/9, mb1 4.0/13, mb1mx3.8/37, mbtmp4.7/13 Error ellipse: s-maj=26.9km s-min=16.2km az=125.0*

*NEIC **13** 06:07:10.3±2.1, 25°.0S±0°.1×179°.4W±0°.2, h450^{km}±8^{km}, mb4.4/16, Error ellipse: s-maj=22.3km s-min=17.0km az=128.0*

*NOU **13** 06:07:12.4, 24°.87S×179°.17W, h523^{km}, mb4.4/46, South of Fiji Islands*

ISC 13 06:07:11.0±0.5**, 24°.95S**±0°.05×**179°.48W**±0°.08**, h465**^{km}**, n130,** $\sigma 1^{s}72$/156**, mb4.3**/31**, 1D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RIZ	Raoul Island	4.50	162	P	P	06 08 34.7	+3.2
GLKZ	Green Lake	4.52	162	P	P	06 08 34.0	+2.4
GLKZ				S	S	06 09 37.2	-0.1
LKBA	Tubou, Lakemba	6.71	5	P	P	06 08 55.0	+1.8
MSVF	Nonsavu	7.54	342	P	P	06 09 02.4	+0.5
	9.8nm,0.3s,baz=240,slow=22,SNR=50						
MSVF	Nonsavu	7.54	342		P	06 09 03.3	+1.3
MSVF	Nonsavu	7.54	342	P	P	06 09 03.5	+1.5
TAVE	Taveuni	8.21	357	P	P	06 09 11.5	+2.5
DGTI	Dogotuki	8.63	355	P	P	06 09 16.2	+2.6
NIUE	Niue	10.61	58	P	P	06 09 36.2	+1.4
NIUE	Niue	10.61	58	P	P	06 09 35.5	+0.7
OUZ	Omahuta	11.86	209	P	P	06 09 51.3	+3.2
OUZ	Omahuta	11.86	209	P	P	06 09 50.8	+2.7
OUZ	Omahuta	11.86	209	P	P	06 09 51.1	+3.0
MARNC	Mare, Loyalty	11.99	284	P	P	06 09 50.3	+0.5
GRZ	Great Barrier	12.08	200	P	P	06 09 52.2	+1.8
WCZ	Waipu Caves	12.18	204	P	P	06 09 51.3	-0.2
PINNC	Pines Island,	12.20	278	P	P	06 09 53.6	+1.8
KUZ	Kuaotunu	12.46	198	P	P	06 09 56.4	+1.8
WIAZ	Waiheke Island	12.68	200	P	P	06 09 59.2	+2.3
MXZ	Matakaoa Point	12.72	188	P	P	06 09 57.7	+0.4
MXZ				S	S	06 12 12.2	-2.3
WMGZ	Waiomatatini S	12.96	187	P	P	06 09 59.9	0.0
WMGZ				S	S	06 12 16.6	-2.6
HAZ	Te Kaha	12.98	190	P	P	06 09 59.6	-0.6
HAZ				S	S	06 12 16.3	-3.5
WTAZ	Waiatarua	12.99	202	P	P	06 10 02.4	+2.1
PKGZ	Pakihiroa	13.07	189	P	P	06 10 02.3	+1.1
PKGZ				S	S	06 12 16.4	-5.2
AWAZ	Awhitu Peninsu	13.09	201	P	P	06 10 03.1	+1.9
AFI	Afiamalu	13.16	35	P	P	06 09 59.9	-2.5
	6.4nm,0.3s,baz=52,slow=6.1,SNR=12						
AFI				S	S	06 12 20.4	-3.4
	4.8nm,0.3s,baz=37,slow=22,SNR=5.9						
RUGZ	Raukumara Rang	13.20	190	P	P	06 10 03.5	+0.8
RUGZ				S	S	06 12 23.1	-1.2
PUZ	Puketiti	13.23	188	P	P	06 10 04.5	+1.7
PUZ				S	S	06 12 21.2	-3.4
DZM	Mont Dzumac	13.23	280	P	P	06 10 03.6	+0.4
	0.5nm,0.3s,baz=88,slow=18,SNR=6.3						
DZM	Mont Dzumac	13.23	280	P	P	06 10 05.7	+2.6
NOUC	Port Laguerre	13.35	279	P	P	06 10 09.6	+5.3
URZ	Urewera	13.59	192	P	P	06 10 03.8	-2.8
	6.4nm,0.3s,baz=119,slow=22,SNR=20						
URZ				S	S	06 12 35.5	+3.9
	5.2nm,0.3s,baz=148,slow=22,SNR=8.8						
URZ	Urewera	13.59	192	P	P	06 10 05.9	-0.7
URZ				S	S	06 12 32.8	+1.2
URZ	Urewera	13.59	192	P	P	06 10 05.0	-1.6
MWZ	Matawai	13.59	190	P	P	06 10 06.8	+0.1
MWZ				S	S	06 12 27.3	-4.4
TKGZ	Te Karaka	13.64	189	P	P	06 10 07.9	+0.7
TKGZ				S	S	06 12 33.1	+0.4
RIGZ	Rimuhau	13.92	189	P	P	06 10 10.6	+0.4
RIGZ				S	S	06 12 34.1	-4.0
MTHZ	Maungataniwha	14.21	192	P	P	06 10 14.8	+1.5
MTHZ				S	S	06 12 48.9	+5.0
RAHZ	Arahi	14.23	191	P	P	06 10 15.1	+1.6
RAHZ				S	S	06 12 46.2	+2.0
HIZ	Hauiti	14.36	198	P	P	06 10 16.1	+1.3
HIZ				S	S	06 12 37.1	-10
HIZ	Hauiti	14.36	198	P	P	06 10 17.2	+2.4
BKZ	Black Stump Fm	14.58	193	P	P	06 10 20.5	+3.2
WTVZ	West Tongariro	14.73	195	P	P	06 10 19.6	+0.7
OTVZ	Oturere	14.76	195	P	P	06 10 18.6	-0.7
OTVZ				S	S	06 12 53.1	-1.6
KWHZ	Kaweka Forest	14.85	192	P	P	06 10 19.2	-0.9
KWHZ				S	S	06 12 56.3	+0.1
TUVZ	Tukino	14.86	195	P	P	06 10 20.1	-0.3
TUVZ				S	S	06 12 59.7	+3.0
FWVZ	Far West T-bar	14.87	195	P	P	06 10 20.5	0.0
FWVZ				S	S	06 12 59.3	+2.3
WHVZ	Whangaehu Hut	14.89	195	P	P	06 10 21.0	+0.3
TRVZ	Turoa	14.91	195	P	P	06 10 21.1	+0.1
WNVZ	Wahianoa	14.93	195	P	P	06 10 19.9	-1.2
WNVZ				S	S	06 12 58.2	+0.2
BHHZ	Black Hill Sta	14.98	193	P	P	06 10 20.7	-0.9
BHHZ				S	S	06 12 59.0	+0.2
BFZ	Birch Farm	16.09	192	P	P	06 10 33.4	+0.2
SNZO	South Karori	17.02	195	P	P	06 10 42.2	-0.8
SNZO	South Karori	17.02	195	P	P	06 10 42.8	-0.2
QRZ	Quartz Range	17.19	201	P	P	06 10 43.6	-1.1
QRZ	Quartz Range	17.19	201	P	P	06 10 43.5	-1.2
KHZ	Kahutara	18.36	197	P	P	06 10 55.2	-1.1
LHI	Lord Howe Isla	19.99	246	P	P	06 11 13.5	+2.0
RPZ	Rata Peaks	20.26	200	P	P	06 11 12.6	-1.2
ODZ	Otahua Downs	21.59	199	P	P	06 11 25.6	-0.2
ARMA	Armidale	26.12	251	P	P	06 12 07.4	+0.8
ARMA				IAmb	IAmb	06 12 08.5	
	comp=Z,9.2nm,0.7s						
ARMA	Armidale	26.12	251	P	P	06 12 07.6	+1.0
	comp=Z,22nm,2.8s						
EIDS	Eidsvold	26.63	263	P	P	06 12 11.0	0.0
EIDS	Eidsvold	26.63	263	P	P	06 12 11.3	+0.2
	comp=Z,8.1nm,0.9s						
MGCD	Mangrove Creek	26.93	245	P	P	06 12 14.8	+1.2
	comp=Z,37nm,0.7s						
RMQ	Roma	28.62	260	P	P	06 12 31.0	+2.4
	comp=Z,10nm,1.1s						
CNB	Canberra Magne	28.76	242	P	P	06 12 31.3	+1.6
	comp=Z,40nm,3.0s						
CAN	Canberra	29.05	242	P	P	06 12 32.7	+0.4
CMSA	Cobar Meteorol	31.29	250	P	P	06 12 51.5	-0.2
	comp=Z,11nm,0.7s						
GLAD	Gladstone	31.40	231	P	P	06 12 53.7	+1.2
	comp=Z,16nm,1.3s						
CTA	Charters Tower	31.97	272	P	P	06 12 57.1	-0.6
	comp=Z,32nm,0.9s						
CTAO	Charters Tower	31.97	272	P	P	06 12 57.5	-0.2
CTAO				IAmb	IAmb	06 12 58.3	
	comp=Z,17nm,0.8s						
CTAO	Charters Tower	31.97	272	P	P	06 12 57.4	-0.2
TOO	Toolangi	32.30	239	P	P	06 13 01.6	+1.3
MTSU	Mount Surprise	34.28	274	P	P	06 13 17.2	-0.1
	comp=Z,29nm,0.7s						
STKA	Stephens Creek	34.79	250	P	P	06 13 21.6	+0.2
	comp=Z,1.7nm,0.4s,baz=99,slow=11,SNR=12						
STKA	Stephens Creek	34.79	250	P	P	06 13 21.9	+0.4
STKA	Stephens Creek	34.79	250	P	P	06 13 22.9	+1.4
COEN	Coen	36.76	280	P	P	06 13 37.6	-0.5
COEN				IAmb	IAmb	06 13 38.8	
	comp=Z,12nm,0.8s						
HTT	Hallett	37.09	247	P	P	06 13 40.6	-0.1
	comp=Z,11nm,3.0s						
LCRK	Leigh Creek	37.70	252	P	P	06 13 45.7	+0.1
	comp=Z,13nm,0.6s						
BBOO	Buckleboo	39.48	248	P	P	06 13 59.2	-1.0
	comp=Z,13nm,0.8s						
OOD	Oodnadatta	40.10	256	P	P	06 14 04.8	-0.5
	comp=Z,9.7nm,1.1s						
MULG	Mulgathing	41.29	252	P	P	06 14 13.3	-1.5
	comp=Z,12nm,1.1s						
AS31	Alice Springs	42.34	262	P	P	06 14 22.4	-0.9
ASAR	Alice Springs	42.34	262	P	P	06 14 22.4	-0.9
	comp=Z,2.9nm,0.4s,baz=92,slow=7.5,SNR=73						
ASAR				PcP	PcP	06 16 05.9	-0.5
	comp=Z,0.4nm,0.4s,baz=102,slow=5.6,SNR=4.7						
ASAR				S	S	06 20 06.2	-3.7
	comp=Z,1.6nm,0.7s,baz=100,slow=18,SNR=13						
ASAR	Alice Springs	42.34	262	P	P	06 14 21.8	-1.4
WR0	Warramunga Arr	42.63	267	P	P	06 14 24.4	-1.1
WR0				IAmb	IAmb	06 14 24.5	
	comp=Z,7.7nm,0.5s						
WRAB	Tennant Creek	42.81	267	P	P	06 14 25.4	-1.6
WRA	Warramunga Arr	42.82	267	P	P	06 14 25.6	-1.4
	comp=Z,12nm,0.4s,baz=101,slow=7.9,SNR=171						
WRA				ScP	ScP	06 19 16.2	+1.9
	comp=Z,1.3nm,0.9s,baz=97,slow=3.9,SNR=5.4						
WRA				S	S	06 20 10.3	-6.6
	comp=Z,2.0nm,0.8s,baz=98,slow=14,SNR=8.7						
WRA	Warramunga Arr	42.82	267	P	P	06 14 25.8	-1.2
FORT	Forrest	46.40	250	P	P	06 14 52.7	-1.9
	comp=Z,32nm,0.8s						
WRKA	Warakurna	47.08	258	P	P	06 14 58.1	-1.8
	comp=Z,16nm,1.3s						
KNRA	Kununurra	49.16	270	P	P	06 15 14.8	-0.8
KNRA	Kununurra	49.16	270	P	P	06 15 14.4	-1.2
	comp=Z,46nm,0.8s						
FITZ	Fitzroy Crossi	51.23	266	P	P	06 15 29.9	-0.9
FITZ				IAmb	IAmb	06 15 31.0	
	comp=Z,7.8nm,0.7s						
FITZ	Fitzroy Crossi	51.23	266	P	P	06 15 29.6	-1.2
	comp=Z,15nm,0.9s						
MBWA	Marble Bar	55.67	261	P	P	06 16 01.3	-1.1
BLDU	Ballidu	56.09	249	P	P	06 16 03.5	-1.7
MORW	Morawa	56.97	250	P	P	06 16 10.4	-1.0
MORW				IAmb	IAmb	06 16 39.3	
	comp=Z,24nm,1.4s						
MORW	Morawa	56.97	250	P	P	06 16 10.3	-1.0
MJAR	Matsushiro Arr	73.02	325	P	P	06 17 52.4	-0.2
	comp=Z,5.4nm,0.7s,baz=166,slow=4.7,SNR=9.0						
MJAR	Matsushiro Arr	73.02	325	P	P	06 17 52.5	-0.2
MJAR				IAmb	IAmb	06 17 53.3	
	comp=Z,4.8nm,0.8s						
JWT	Wachi	73.57	323	P	P	06 17 56.2	+0.4
JWT				IAmb	IAmb	06 18 13.9	
	comp=Z,22nm,1.2s						
JSD	Sado	74.15	326	P	P	06 17 59.6	+0.6
KSRS	Korea Array	79.35	320	P	P	06 18 28.4	+0.8
	comp=Z,3.1nm,0.6s,baz=127,slow=5.9,SNR=11						
PETK	Petropavlovsk-	80.22	346	P	P	06 18 32.1	+0.2
	comp=Z,6.6nm,0.8s,baz=125,slow=6.5,SNR=6.2						
USRK	Ussuriysk Ar.	81.90	327	P	P	06 18 41.5	+0.8
	comp=Z,4.0nm,0.6s,baz=131,slow=3.8,SNR=6.3						
USRK	Ussuriysk Ar.	81.90	327	P	P	06 18 41.2	+0.5
KLR	Kul'dur	85.67	330	P	P	06 19 00.3	+0.9
	comp=Z,2.3nm,0.8s,baz=112,slow=3.3,SNR=7.9						
CMAR	Chiang Mai Arr	90.33	290	P	P	06 19 23.6	+1.5
	comp=Z,3.0nm,0.8s,baz=142,slow=3.2,SNR=16						
ARU	Arti	128.00	323	PKP	PKPdf	06 25 22.5	-0.3
	comp=Z,2.3nm,0.4s,baz=114,slow=21,SNR=3.8						
ARCES	ARCESS Array B	133.00	348	PKP	PKPdf	06 25 31.2	-0.8
	comp=Z,3.1nm,0.7s,baz=67,slow=2.5,SNR=8.9						
FINES	FINESS Array B	139.58	341	PKhKP	PKPpre	06 25 34.8	
	comp=Z,1.7nm,0.6s,baz=32,slow=3.4,SNR=8.2						
FINES				SKPbc	SKPbc	06 28 35.9	+0.3
	comp=Z,2.3nm,0.7s,baz=74,slow=2.8,SNR=6.1						
NB2	NORSAR Subarra	143.18	351	PKP	PKPab	06 25 47.9	-0.5
	comp=Z,2.1nm,0.7s,baz=13,slow=3.6						
NOA	NORSAR Array B	143.18	351	PKP	PKPab	06 25 48.1	-0.2
	comp=Z,3.2nm,0.7s,baz=17,slow=2.4,SNR=9.0						
AKASG	Malin Array Be	146.10	327	PKPbc	PKPbc	06 25 57.0	-0.9
	comp=Z,6.3nm,0.4s,baz=46,slow=4.5,SNR=26						
AKASG	Malin Array Be	146.10	327		PKPbc	06 25 57.4	-0.6
AKBB	Malin Array Si	146.10	327		PKPbc	06 25 57.4	-0.5
ASF	Jabal al Asfar	147.36	291	PKPbc	PKPbc	06 26 02.0	-0.1
	comp=Z,6.0nm,0.7s,baz=119,slow=3.4,SNR=7.5						
MMAI	Mount Meron Ar	148.56	293	PKPbc	PKiKP	06 26 06.0	-0.3
	comp=Z,7.8nm,0.4s,baz=80,slow=5.3,SNR=18						
BRTR	Keskin Array B	148.58	306	PKPbc	PKPbc	06 26 04.8	-0.3
	comp=Z,3.0nm,0.6s,baz=144,slow=4.7,SNR=10						
BRTR				PKPab	PKPab	06 26 10.4	+0.1
	comp=Z,4.3nm,0.6s,baz=117,slow=1.6,SNR=11						
BRTR	Keskin Array B	148.58	306		PKPbc	06 26 04.5	-0.6
BURAR	Bucovina Array	150.10	325	PKPbc	PKiKP	06 26 10.0	+1.0
OSTC	Ostas	151.70	339	ePKPDF	PKiKP	06 26 12.3	+0.1
DPC	Dobruska-Polom	151.84	338	ePKPDF	PKiKP	06 26 12.7	+0.2
DPC				ePKPAB	PKPab	06 26 24.3	+0.9
KRLC	Kraliky	151.92	337	ePKPDF	PKiKP	06 26 12.8	+0.1
KRLC				ePKPAB	PKPab	06 26 24.5	+0.7
CLL	Collm	151.99	343	⇓iPKPbc	PKPbc	06 26 12.5	0.0
	comp=Z,9.0nm,0.8s						
KHC	Kasperske Hory	153.78	340	ePKPAB	PKPab	06 26 32.4	+0.7
TORD	Torodi Ar. Bea	168.21	186	PKP	PKPdf	06 26 23.4	-0.9
	comp=Z,1.3nm,0.9s,baz=6.4,slow=1.0,SNR=2.3						
TORD				PKPab	PKPab	06 27 35.5	0.0
	comp=Z,0.6nm,0.9s,baz=165,slow=4.3,SNR=4.3						

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*IDC **13** 06:31:59.1±8.2, 36°.32N×71°.53E, h132^{km}±67^{km}, mb3.3/2, mb1 3.4/6, mb1mx3.0/47, mbtmp3.7/6, MS3.3/1, Ms1 3.3/1, ms1mx2.8/35, Error ellipse: s-maj=98.5km s-min=49.2km az=83.0*

*NNC **13** 06:31:59.6±10.0, 36°.92N×70°.71E, h0^{km}, mb4.3, mpv4.1, Error ellipse: s-maj=80.0km s-min=61.4km az=178.0*

ISC 13 06:32:01.3±1.2**, 36°.65N**±0°.08×**71°.1E**±0°.1**, h188**^{km}**, n22,** $\sigma 1^{s}39$/25**, 3C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	5.83	19	P	Pn	06 33 26.9	+0.4
	SNR=47						
UCH	Uchtor	6.17	24	P	Pn	06 33 31.2	+0.3
	SNR=14						
EKS2	Erkin-Say	6.35	18	P	Pn	06 33 33.9	+0.9
	SNR=32						
KK31	Karatay Array	6.46	356	⇑P	Pn	06 33 34.4	+0.1
	9.1nm,0.4s,baz=187,slow=15,SNR=69						
KK31				S	Sn	06 34 45.8	-2.1
	25nm,0.7s,baz=191,slow=21,SNR=20						
AAK	Ala-Archa	6.53	23	P	Pn	06 33 35.6	+0.2
	2.0nm,0.3s,baz=175,slow=7.9,SNR=16						
AAK				S	Sn	06 34 49.9	+0.1
	2.1nm,0.3s,baz=354,slow=20,SNR=12						
USP	Ospenovka	7.11	21	P	Pn	06 33 44.0	+1.2
	SNR=7.8						
TKM2	Tokmak 2	7.16	28	P	Pn	06 33 44.9	+1.2
	SNR=7.0						
TKM2	Tokmak 2	7.16	28	⇓P	Pn	06 33 44.2	+0.6
	6.5nm,0.5s						
TKM2				⇑S	Sn	06 35 04.9	+0.1
	5.8nm,0.8s						
GEYT	Alibeck	10.41	281	LR	LR	06 39 36.9	
	comp=Z,168nm,19.4s,baz=235,slow=42						
MKAR	Makanchi Array	13.13	36	P	P	06 35 02.6	-1.4
	0.1nm,0.3s,baz=204,slow=8.4,SNR=1.2						
DANN	Dangsing	13.52	124	eP	Pn	06 35 05.4	-0.5
KOLN	Koldanda	13.80	126	eP	Pn	06 35 09.2	-0.2
GKN	Gorkha	14.33	123	eP	Pn	06 35 15.0	-0.9
DMN	Daman	14.90	123	eP	P	06 35 23.2	-0.9
KKN	Kakani	14.90	122	eP	Pn	06 35 22.2	-0.8
	15nm,0.6s						
AB31	Akbulak array	14.98	331	P	Pn	06 35 24.5	+0.9
	1.0nm,0.5s,baz=142,slow=9.7,SNR=24						
AB31				⇑S	Sn	06 38 09.1	-1.8
	0.7nm,0.5s,baz=152,slow=22,SNR=5.3						
JIRN	Jiri	15.61	121	eP	Pn	06 35 30.1	-1.7
	9.3nm,0.4s						
RAMN	Ramite	16.34	122	eP	P	06 35 39.0	-1.0
	5.1nm,0.4s						
BVAR	Borovoye Array	16.38	359	P	Pn	06 35 44.5	+4.0
	0.3nm,0.3s,baz=186,slow=12,SNR=3.8						
ZALV	Zalesovo Beam	19.75	25	P	Pn	06 36 20.8	+0.4
	0.5nm,0.3s,baz=214,slow=10.0,SNR=6.5						
WRA	Warramunga Arr	82.01	122	P	P	06 44 01.5	+1.0
	0.6nm,0.9s,baz=307,slow=7.1,SNR=5.0						
ASAR	Alice Springs	84.29	125	P	P	06 44 14.1	+2.0
	0.4nm,0.5s,baz=313,slow=5.3,SNR=7.7						

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*SNET **13** 06:46:48.6±0.9, 13°.56N×90°.41W, h29^{km}±3^{km}, ML3.1*

*GCG **13** 06:46:50.7±0.5, 13°.58N×90°.61W, h27^{km}±3^{km}, MD3.5*

ISC 13 06:46:47.9±2.6**, 13°.5N**±0°.1×**90°.44W**±0°.07**, h25**^{km}±16^{km}**, n12,** $\sigma 0^{s}77$/23**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEVE	Cerro Verde	0.88	64	eP	Pb	06 47 04.3	-0.4
CEVE				eS	Sn	06 47 16.8	-0.2
JAYA	Jayaque - finc	0.99	78	eP	Pn	06 47 05.6	-0.7
JAYA				eS	Sn	06 47 19.2	-0.4
JAYA				IAML		06 47 19.5	
	comp=Z,2µm,0.2s						
FUG	Fuego 3	1.07	339	eP	Pb	06 47 07.7	-0.2
FUG				eS	Sb	06 47 20.6	-0.9
CEDA	San Andres	1.08	71	eP	Pn	06 47 06.8	-0.6
CEDA				eS	Sb	06 47 21.2	-0.4
CEDA				IAML		06 47 25.6	
	comp=Z,447nm,0.3s						
NBG	Las Nubes	1.14	5	eP	Pb	06 47 09.8	+0.8
NBG				eS	Sb	06 47 25.6	+2.0
TACO	Tacachico	1.18	64	eP	Pn	06 47 08.2	-0.6
TACO				eS	Sb	06 47 23.8	-0.7
SJTE	Alcalda de S	1.40	83	eP	Pn	06 47 12.1	+0.1
SJTE				eS	Sn	06 47 29.6	-0.2
COEG	Centro de Oper	1.53	83	eP	Pn	06 47 14.1	+0.4
COEG				eS	Sn	06 47 32.9	+0.1
COEG				IAML		06 47 39.2	
	comp=Z,230nm,0.2s						
STG3	Santiaguito 3,	1.67	319	eP	Pn	06 47 16.0	+0.3
STG3				eS	Sn	06 47 35.4	-1.1
SCLA	Alcaldia de Sa	1.68	81	eP	Pn	06 47 15.7	-0.2
COEB	Comit de Eme	1.86	88	eP	Pn	06 47 18.2	-0.1
COEB				eS	Sn	06 47 41.8	+0.8
COEB				IAML		06 47 46.8	
	comp=Z,76nm,0.3s						
LCND	La Caada	2.48	93	eP	Pn	06 47 27.5	+0.7
LCND				eS	Sn	06 47 57.4	+1.0
LCND				IAML		06 48 01.2	
	comp=Z,67nm,0.4s						

IDC 13 06:52:39.2±5.4**, 6°.47S**×**155°.68E, h158**^{km}±46^{km}**, mb3.4**/3**, mb1 3.6**/5**, mb1mx3.3**/34**, mbtmp4.0**/5**, Error ellipse: s-maj=41.9km s-min=27.7km az=25.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	8.93	250	P	Pn	06 54 45.3	+0.4
	2.2nm,0.3s,baz=85,slow=20,SNR=5.1						
PMG				S	Sn	06 56 24.5	+0.3
	2.2nm,0.3s,baz=100,slow=14,SNR=3.6						
DZM	Mont Dzumac	18.67	147	P	P	06 56 45.1	-0.3
	0.5nm,0.3s,baz=329,slow=18,SNR=6.2						
WRA	Warramunga Arr	24.67	235	P	P	06 57 44.7	-0.9
	1.5nm,0.6s,baz=60,slow=9.8,SNR=9.1						
ASAR	Alice Springs	27.02	228	P	P	06 58 07.7	+0.9
	0.4nm,0.4s,baz=58,slow=9.0,SNR=10.0						
H11S3	WAKE ISLAND Hy	27.08	23	T	T	07 26 41.4	
	baz=203,slow=75,SNR=11						
H11S2	WAKE ISLAND Hy	27.08	24	T	T	07 26 47.6	
	baz=203,slow=75,SNR=11						
H11S1	WAKE ISLAND Hy	27.10	23	T	T	07 26 41.1	
	baz=203,slow=75,SNR=6.1						
MKAR	Makanchi Array	83.46	318	P	P	07 04 49.2	0.0
	0.7nm,0.8s,baz=119,slow=5.3,SNR=4.6						

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*IDC **13** 06:54:49.9±0.5, 8°.44S×75°.89W, h133^{km}±4^{km}, mb4.4/23, mb1 4.5/30, mb1mx4.4/39, mbtmp4.8/30, Error ellipse: s-maj=12.9km s-min=8.7km az=54.0*

*NEIC **13** 06:54:49.1±1.5, 8°.50S±0°.07×75°.95W±0°.07, h118^{km}±6^{km}, mb5.0/116, Error ellipse: s-maj=10.9km s-min=9.1km az=59.0*

*VAO **13** 06:54:50.9±0.3, 8°.47S×75°.73W, h130^{km}, mb5.0*

ISC 13 06:54:47.0±0.3**, 8°.52S**±0°.04×**75°.90W**±0°.05**, h100**^{km}**, n476,** $\sigma 1^{s}49$/479**, mb5.0**/72**, 2C-4D, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAH	Atahualpa	2.83	299	P	Pn	06 55 33.4	+2.6
	487nm,0.3s,baz=90,slow=5.4,SNR=1248						
ATAH				S	Sn	06 56 01.7	-2.8
	80nm,0.3s,baz=343,slow=12,SNR=4.9						
CZSB	Cruzeiro do Su	3.26	76	eP	Pn	06 55 39.3	+3.0
CZSB	Cruzeiro do Su	3.26	76	Pn	Pn	06 55 39.1	+2.8
NNA	Nana	3.57	195	P	Pn	06 55 43.5	+3.0
	42nm,0.3s,baz=19,slow=13,SNR=65						
NNA				S	Sn	06 56 18.1	-3.7
	37nm,0.3s,baz=1.7,slow=12,SNR=7.0						
NNA	Nana	3.57	195	Pn	Pn	06 55 43.2	+2.8
TBTG	Tabatinga, AM	7.35	55	eP	Pn	06 56 31.6	-0.1
TBTG	Tabatinga, AM	7.35	55	Pn	Pn	06 56 32.3	+0.7
PTLC	Puerto Leguiza	8.70	7	eP	Pn	06 56 38.4	-12
OTAV	Otavalo	9.06	344	eP	Pn	06 56 58.0	+2.6
OTAV	Otavalo	9.06	344	eP	Pn	06 56 58.0	+2.6
OTAV	Otavalo	9.06	344		Pn	06 56 57.6	+2.2
CUSE	Cuicocha Este	9.11	344	eP	Pn	06 56 59.2	+3.1
PAC1	Pacto, Paraso	9.19	342	eP	Pn	06 56 59.6	+2.7
TULM	Tulcn-Chalpat	9.36	348	eP	Pn	06 57 00.7	+1.1
ETMB	Extrema	9.65	98	Pn	Pn	06 57 01.7	-1.3
GCUF	Volcan Galeras	9.79	351	eP	Pn	06 57 06.5	+1.1
SOTA	Rioblanco	10.61	356	eP	Pn	06 57 12.2	-4.3
GARC	Garzon, Huila	10.64	2	eP	Pn	06 57 15.3	-1.5
PCON	Cinco Dias	10.79	357	eP	Pn	06 57 20.9	+1.9
MACC	Macarena, Meta	10.79	11	eP	Pn	06 57 16.4	-2.2
LPAZ	La Paz	10.83	136	Pn	Pn	06 57 20.6	+1.0
BETC	Betania	11.13	2	eP	Pn	06 57 20.7	-2.5
MARP	Paez Belalcaza	11.29	360	eP	Pn	06 57 26.9	+1.4
GUVC	San Jose del G	11.46	17	eP	Pn	06 57 25.6	-2.1
PB16	IPOC Station P	11.57	148		Pn	06 57 31.0	+1.5
PRAC	Prado	12.19	5	eP	P	06 57 44.5	-1.2
ORTC	Ortega, Tolima	12.36	3	eP	Pn	06 57 38.3	-1.3
YOTC	Yotoco, Valle	12.43	358	eP	Pn	06 57 44.2	+3.7
SAML	Samuel	12.58	93	Pn	Pn	06 57 39.7	-2.8
VILC	Villavicencio,	12.74	10	eP	Pn	06 57 44.6	-0.1
PGA4	Puerto Gaitan	13.09	20	eP	Pn	06 57 45.9	-3.3
PTGC	Puerto Gaitan,	13.18	17	eP	Pn	06 57 50.1	-0.3
CHIC	Chingaza	13.24	9	eP	Pn	06 57 50.6	-0.9
PLMC	San Jos del P	13.34	358	eP	Pn	06 57 55.6	+3.1
ROSC	El Rosal	13.36	7	P	Pn	06 57 55.8	+2.7
	2.6nm,0.3s,baz=1.5,slow=19,SNR=9.9						
GUY2C	Guyana, Caldas	13.66	2	eP	Pn	06 58 00.1	+3.0
NORC	Norcasia	14.03	4	eP	Pn	06 57 55.9	-5.5
SPBC	San Pablo de B	14.19	7	eP	Pn	06 57 59.5	-4.2
CBOC	Ciudad Bolivar	14.29	360	eP	P	06 58 10.0	+0.9
RUSC	La Rusia	14.59	11	eP	Pn	06 58 03.0	-6.1
BARC	Barichara	15.25	10	eP	Pn	06 58 17.1	-0.2
DBBC	Dabeiba	15.44	359	eP	Pn	06 58 22.2	+2.8
LVC	Limon Verde	15.54	155	P	Pn	06 58 23.7	+2.8
	0.4nm,0.3s,baz=319,slow=10,SNR=4.0						
LVC	Limon Verde	15.54	155	eP	Pn	06 58 23.3	+2.3
ZARC	Zaragoza, Cauc	15.94	4	eP	Pn	06 58 26.5	+0.8
ZARC	Zaragoza, Cauc	15.94	4		Pn	06 58 25.8	+0.2
VILB	Vilhena	16.04	107	eP	Pn	06 58 26.6	-0.4
PAMC	Pamplona, Colo	16.07	12	eP	Pn	06 58 30.4	+2.6
UREC	San Jos de Ur	16.17	1	eP	Pn	06 58 29.9	+1.4
SIV	San Ignacio	16.28	119	P	Pn	06 58 29.5	-0.4
	5.8nm,0.3s,baz=286,slow=14,SNR=188						
OCAC	Ocana	16.84	9	eP	Pn	06 58 31.2	-5.8
OCAC	Ocana	16.84	9		Pn	06 58 36.8	-0.1
OCAC				IAmb	IAmb	06 58 38.3	
	comp=Z,32nm,0.6s						
MOTC	Monteria, Cord	17.18	1	eP	Pn	06 58 38.2	-2.7
MOTC	Monteria, Cord	17.18	1	P	Pn	06 58 42.1	+1.2
MOTC				IAmb	IAmb	06 58 44.1	
	comp=Z,40nm,0.7s						
SMLC	San Martn de	17.30	6	eP	P	06 58 41.8	-0.5
PTGA	Pitinga	17.66	65	P	P	06 58 44.7	-1.6
	comp=Z,20nm,0.3s,baz=246,slow=13,SNR=40						
PTGA	Pitinga	17.66	65	P	P	06 58 46.3	0.0
PTGA				IAmb	IAmb	06 59 02.9	
	comp=Z,66nm,0.7s						
PTLB	Pontes e Lacer	17.78	114	eP	P	06 58 47.1	-0.5
PTLB	Pontes e Lacer	17.78	114	P	P	06 58 47.4	-0.3
PTLB				IAmb	IAmb	06 58 49.8	
	comp=Z,78nm,0.9s						

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BCIP  Isla Barro Col   18.00 347  P     P      06 58 50.2 +0.2
SDV   Santo Domingo    18.07  17  P     P      06 58 50.9  0.0
      comp=Z,5.8nm,0.3s,baz=202,slow=10,SNR=13
SDV   Santo Domingo    18.07  17 eP     P      06 58 47.2 -3.8
SDV   Santo Domingo    18.07  17 eP     P      06 58 53.1 +2.2
SDV   Santo Domingo    18.07  17        P      06 58 52.0 +1.1
SDV                               IAmb  IAmb   06 59 06.3
      comp=Z,52nm,0.7s
SJCC  San Jacinto, C   18.31   2 eP     P      06 58 48.8 -4.7
SJCC  San Jacinto, C   18.31   2  P     P      06 58 55.1 +1.7
ARGC  Ariguani, Magd   18.33   5 eP     P      06 58 55.0 +1.3
ARGC                             eP     Pn     06 58 56.1 +1.3
BOAV  Boa Vista        18.78  55 eP     P      06 58 58.6  0.0
BOAV  Boa Vista        18.78  55  P     P      06 58 58.9 +0.3
BOAV                              IAmb  IAmb   06 59 01.2
      comp=Z,77nm,1.2s
BAUV  El Baul          19.03  24 eP     P      06 59 02.0 +0.7
BAUV  El Baul          19.03  24  P     P      06 59 02.0 +0.7
PDRB  Porto dos Gac    19.13 101 eP     P      06 59 01.5 -0.9
SRBA  San Rafael, Bu   19.13 337  P     P      06 59 03.6 +1.1
CLDB  Colider          19.96  98 eP     P      06 59 10.4 -1.0
CVTR  Volcan Turrial   20.01 337  P     P      06 59 12.7 +0.3
CVTR                              IAmb  IAmb   06 59 15.3
      comp=Z,55nm,1.0s
NPGB  Novo Progresso   20.41  87 eP     P      06 59 14.7 -1.7
ITTB  Itaituba         20.46  80 eP     P      06 59 16.2 -0.6
URIC  Uribia, Colomb   20.46  11  P     P      06 59 15.0 -1.8
URIC                              IAmb  IAmb   06 59 24.5
      comp=Z,36nm,0.8s
JTS   Las Juntas de    20.74 334  P     P      06 59 20.2 +0.3
      comp=Z,11nm,0.9s,baz=187,slow=8.3,SNR=10
JTS   Las Juntas de    20.74 334 eP     P      06 59 11.6 -8.2
JTS   Las Juntas de    20.74 334  P     P      06 59 21.3 +1.5
COVE  Coope Vega, Sa   20.90 336  P     P      06 59 22.4 +0.9
COVE                              IAmb  IAmb   06 59 26.2
      comp=Z,71nm,0.9s
ORTG  Ortega, Santa    21.03 333  P     P      06 59 24.3 +1.3
SALV  Santo Antonio    21.06 112 eP     P      06 59 22.6 -0.6
PCRV  Puerto La Cruz   21.70  31  P     P      06 59 29.6 -0.4
      comp=Z,12nm,0.4s,baz=201,slow=9.6,SNR=15
PP1B  Ponte de Pedra   22.36 116 eP     P      06 59 37.0 -0.1
CO06  Fray Jorge       22.40 170  P     P      06 59 38.8 +1.5
MALB  Monte Alegre     22.53  74 eP     P      06 59 37.5 -1.4
AQDB  Aquidauana       22.86 124 eP     P      06 59 41.3 -0.8
AQDB  Aquidauana       22.86 124  P     P      06 59 41.3 -0.8
ZON   Zonda            23.88 165  P     P      06 59 52.8 +1.3
SNDB  Serra Nova Dou   24.45 100 eP     P      06 59 57.1 +0.3
ARAG  Araguaiana, MT   24.60 109 eP     P      06 59 58.1 +0.1
VA03  San Esteban      24.63 169  P     P      06 59 59.5 +1.1
VA03                              IAmb  IAmb   07 00 02.1
      comp=Z,36nm,0.8s
CPUP  Villa Florida    25.00 137  P     P      07 00 01.6  0.0
      comp=Z,5.4nm,0.8s,baz=316,slow=9.0,SNR=11
CPUP                              PcP   PcP    07 03 33.8 -0.5
      comp=Z,2.8nm,0.5s,baz=24,slow=2.5,SNR=5.0
CPUP  Villa Florida    25.00 137 eP     P      07 00 01.8 +0.2
CPUP  Villa Florida    25.00 137  P     P      07 00 01.7 +0.2
MT02  Curacav          25.01 171  P     P      07 00 03.0 +1.3
MCPB  Macapa, AP       25.10  72 eP     P      07 00 02.1 -0.6
TGUH  Tegucigalpa,Un   25.11 333  P     P      07 00 03.0 +0.2
MT09  Talagante        25.54 170  P     P      07 00 07.7 +1.1
MT09                              IAmb  IAmb   07 00 08.2
      comp=Z,29nm,0.8s
PRPB  Parauapebas      25.98  87 eP     P      07 00 09.6 -1.1
MTO3  Montecristo      26.39 330  P     P      07 00 14.9 +0.3
MDP   Montagnes des    26.85  61  P     P      07 00 17.3 -1.2
      comp=Z,18nm,0.5s,baz=233,slow=11,SNR=14
PCMB  Pacaembu         27.07 121 eP     P      07 00 20.2 -0.2
ITRB  Iturama          27.11 117 eP     P      07 00 20.6 -0.2
PEXB  Peixe            27.38 100 eP     P      07 00 23.4 +0.1
ITQB  Itaqui           27.75 142 eP     P      07 00 26.9 +0.6
ITQB  Itaqui           27.75 142  P     P      07 00 27.5 +1.2
ITQB                              IAmb  IAmb   07 00 34.6
      comp=Z,22nm,0.5s
PTGB  Pitanga          27.87 128 eP     P      07 00 27.1 -0.5
OBIP  Obispado Ponce   27.94  19  P     P      07 00 28.0 -0.1
OBIP                              IAmb  IAmb   07 00 29.2
      comp=Z,26nm,0.8s
CELP  Cerrillos        27.98  19  P     P      07 00 28.4  0.0
CELP                              IAmb  IAmb   07 00 29.1
      comp=Z,25nm,0.8s
SMTB  Santa Maria do   27.99  93 eP     P      07 00 28.3 -0.4
PDPR  Patillas Dam,    28.11  20  P     P      07 00 29.4 -0.3
PDPR                              IAmb  IAmb   07 00 29.7
      comp=Z,16nm,0.6s
BDFB  Brasilia         28.15 107  P     P      07 00 29.7 -0.5
      comp=Z,19nm,0.7s,baz=277,slow=10,SNR=31
BDFB                              pP    pP     07 01 00.4 +7.8
      comp=Z,34nm,0.8s,baz=266,slow=8.6,SNR=10
BDFB  Brasilia         28.15 107  P     P      07 00 30.4 +0.2
BDFB                              IAmb  IAmb   07 00 31.4
      comp=Z,20nm,0.6s
SJG   San Juan         28.16  20  P     P      07 00 28.5 -1.5
      comp=Z,13nm,0.4s,baz=162,slow=8.7,SNR=7.8
SJG   San Juan         28.16  20  P     P      07 00 29.9 -0.1
SJG                               IAmb  IAmb   07 00 44.0
      comp=Z,23nm,0.5s
CDVI  St. Croix        28.33  23  P     P      07 00 31.1 -0.4
TMAB  Tom-Au,PA,Br     28.33  79 eP     P      07 00 31.8 +0.1
MTP   Monte Pirata     28.35  21  P     P      07 00 31.3 -0.4
MTP                               IAmb  IAmb   07 00 32.4
      comp=Z,31nm,1.2s
GCPR  Guaynabo City    28.36  20  P     P      07 00 31.4 -0.4
IPMB  Ipameri, GO      28.51 112 eP     P      07 00 32.8 -0.5
STVI  Saint Thomas     28.80  22  P     P      07 00 34.5 -1.2
STVI                              IAmb  IAmb   07 00 35.0
      comp=Z,38nm,0.6s
BB19B Bebedouro        29.20 118 eP     P      07 00 39.3 -0.1
FRTB  Fartura          29.23 123 eP     P      07 00 41.2 +1.6
CPSB  Cacapava Do Su   30.25 139 eP     P      07 00 48.2 -0.4
LC01  Cunco            30.46 174  P     P      07 00 50.4  0.0
LC01                              IAmb  IAmb   07 00 51.4
      comp=Z,16nm,0.8s
RCLB  Rio Claro- Sao   30.56 120 eP     P      07 00 52.6 +1.1
SDBA  SAO DESIDERIO    30.72 100 eP     P      07 00 52.5 -0.4
PLTB  Pedras Altas     31.06 141 eP     P      07 00 55.0 -0.6
PET01 Itanhaem-SP      31.52 123 eP     P      07 01 01.2 +1.4
JANB  Januaria         31.57 105 eP     P      07 01 00.6 +0.2
ROSB  Rosrio           32.09  82 eP     P      07 01 04.2 -0.8
MC01  Montes Claros    32.20 108 eP     P      07 01 04.7 -1.2
LL04  Puerto Octay     32.41 175  P     P      07 01 07.4 +0.1
PLCA  Paso Flores      32.43 172  P     P      07 01 07.9 +0.3
      comp=Z,6.3nm,0.7s,baz=339,slow=10,SNR=16
PLCA                              PcP   PcP    07 03 52.3 -0.5
      comp=Z,2.2nm,0.8s,baz=341,slow=5.1,SNR=4.8
PLCA  Paso Flores      32.43 172 eP     P      07 01 08.8 +1.1
PLCA  Paso Flores      32.43 172  P     P      07 01 07.5 -0.1
DIAM  Diamantina, MG   32.77 111 eP     P      07 01 11.9 +0.9
NBPS  Pedro II - PI    34.47  85 eP     P      07 01 24.8 -0.9
SJMB  Sao Joao De Ma   35.16 110 eP     P      07 01 31.3 -0.2
NBPN  Ponto Novo - B   35.26  97 eP     P      07 01 32.0 -0.5
CAM01 Campos-RJ        35.50 116 eP     P      07 01 34.3 -0.1
BSFB  Barra de Sao F   35.50 110 eP     P      07 01 33.8 -0.7
NAN01 Guarapari, ES    35.99 109 eP     P      07 01 38.1 -0.4
GDU01 Guandu, BA       35.99 102 eP     P      07 01 38.5 -0.2
ALF01 Guarapari-ES     36.02 113 eP     P      07 01 37.9 -1.0
RIB01 Linhares ES      36.02 111 eP     P      07 01 38.1 -0.7
NBMO  Morrinhos-CE     36.03  84 eP     P      07 01 38.4 -0.6
GUA01 Guaratinga, BA   36.09 106 eP     P      07 01 40.1 +0.7
NBPB  Pedra_Branca-C   36.16  88 eP     P      07 01 39.5 -0.6
CMC01 Camacan, BA      36.20 104 eP     P      07 01 40.4  0.0
NBIT  Itapeh - BA      36.24 104 eP     P      07 01 41.2 +0.5
NBMA  Muriti-CE        36.79  91 eP     P      07 01 45.0 -0.5
DWPF  Disney Wildern   36.80 352  P     P      07 01 45.1 -0.2
      baz=171
NBCL  Cascavel-CE      37.61  86 eP     P      07 01 51.9 -0.5
NBLA  Lagarto - SE     37.63  97 eP     P      07 01 51.1 -1.5
NBPA  Parau_RN         38.58  89 eP     P      07 01 59.7 -0.8
NBLV  Livramento - P   38.62  91 eP     P      07 02 00.7 -0.3
NBAN  Anadia - AL      39.13  95 eP     P      07 02 04.7 -0.5
NBRF  Rio Formoso -    40.30  93 eP     P      07 02 15.9 +1.0
NBPV  Pedro Velho      40.31  90 eP     P      07 02 15.1 +0.1
154A  Montrose         41.47 351  P     P      07 02 23.6 -0.6
154A                              IAmb  IAmb   07 02 24.1
      comp=Z,52nm,1.0s
NHSC  New Hope         41.59 355  P     P      07 02 24.9 -0.2
      baz=174
NHSC  New Hope         41.59 355  P     P      07 02 24.5 -0.6
GOGA  Godfrey          42.31 351  P     P      07 02 29.6 -1.4
      baz=169
HODGE Hodges           42.94 352  P     P      07 02 34.9 -1.1
Z47A  Carrollton       43.07 345  P     P      07 02 35.6 -1.5
Z47A                              IAmb  IAmb   07 02 36.7
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      comp=Z,46nm,1.4s
833A  Chaparral WMA,   43.09 329  P     P      07 02 37.7 +0.4
      baz=145,SNR=7.6
NATX  Nacogdoches      43.88 337  P     P      07 02 44.2 +0.5
      baz=153,SNR=6.9
Z41A  Richland Creek   44.55 340  P     P      07 02 48.4 -0.6
      baz=156
237A  Washetta, Mont   44.55 336  P     P      07 02 49.4 +0.4
JCT   Junction City    45.05 330  P     P      07 02 52.7 -0.4
      baz=146
WHTX  Lake Whitney,    45.24 334  P     P      07 02 54.4 -0.1
      baz=149,SNR=8.5
Z38A  Mt. Pleasant     45.34 337  P     P      07 02 55.4 +0.1
T57A  Hurt             45.38 356  P     P      07 02 54.8 -0.7
TZTN  Tazewell         45.39 351  P     P      07 02 53.9 -1.8
      baz=169
WVT   Waverly          45.81 347  P     P      07 02 56.0 -2.9
      baz=164
MIAR  Mount Ida        45.98 340  P     P      07 02 59.0 -1.3
      baz=156
MIAR  Mount Ida        45.98 340  P     P      07 02 59.6 -0.7
W41B  Gary Mavity, V   46.12 341  P     P      07 02 59.9 -1.5
      baz=157,SNR=11
TXAR  Lajitas Array    46.17 326  P     P      07 03 01.4 -0.5
      comp=Z,4.3nm,0.7s,baz=148,slow=9.2,SNR=50
TXAR                              pP    pP     07 03 31.8 +5.9
      comp=Z,1.6nm,0.6s,baz=146,slow=9.9,SNR=3.9
TXAR                              PcP   PcP    07 04 35.3 -1.1
      comp=Z,3.4nm,0.7s,baz=141,slow=6.2,SNR=7.7
TX31  Lajitas Ar. Si   46.17 326  P     P      07 03 01.6 -0.4
TX31                              IAmb  IAmb   07 03 02.0
      comp=Z,17nm,0.8s
TX32  Lajitas Array    46.17 326  P     P      07 03 01.3 -0.7
Z35A  Perchaven, San   46.31 335  P     P      07 03 02.7 -0.2
CBN   Corbin Frederi   46.50 358  P     P      07 03 04.1 -0.2
      baz=178
W39A  Magazine         46.64 340  P     P      07 03 05.0 -0.5
      baz=156,SNR=10
X37A  Clayton          46.67 338  P     P      07 03 05.3 -0.3
X37A                              IAmb  IAmb   07 03 06.0
      comp=Z,24nm,0.7s
FCAR  Ozark Folk Cen   46.74 342  P     P      07 03 04.5 -1.6
FCAR                              IAmb  IAmb   07 03 05.1
      comp=Z,20nm,0.8s
ABTX  Abilene, Hawle   46.76 332  P     P      07 03 06.3 -0.2
      baz=147,SNR=15
ABTX  Abilene, Hawle   46.76 332  P     P      07 03 05.9 -0.5
ABTX                              IAmb  IAmb   07 03 07.0
      comp=Z,46nm,0.9s
U40A  Yellville        47.40 341  P     P      07 03 09.9 -1.4
      baz=157,SNR=16
Q54A  Coxs Mills       47.48 355  P     P      07 03 10.9 -1.0
Q54A                              IAmb  IAmb   07 03 11.5
      comp=Z,20nm,0.8s
WCI   Wyandotte Cave   47.50 349  P     P      07 03 09.8 -2.3
      baz=166
X34A  Smith Ranch, M   47.65 335        P      07 03 13.2 -0.1
TUL1  Leonard          48.00 338  P     P      07 03 15.1 -0.9
      baz=153,SNR=12
WMOK  Wichita Mounta   48.16 335  P     P      07 03 16.3 -1.0
      baz=149,SNR=5.0
P52A  Corning          48.25 354  P     P      07 03 16.2 -1.6
      baz=172
MVL   Millersville     48.27 360  P     P      07 03 18.2 +0.3
MVL                               IAmb  IAmb   07 03 18.8
      comp=Z,15nm,0.8s
CCM   Cathedral Cave   48.50 344  P     P      07 03 17.7 -2.0
      baz=160
CCM   Cathedral Cave   48.50 344  P     P      07 03 17.8 -1.9
CCM                               IAmb  IAmb   07 03 19.7
      comp=Z,17nm,0.8s
P49A  Miami Univ. Ec   48.50 351  P     P      07 03 17.3 -2.4
      baz=168
QUOK  Quay             48.57 337        P      07 03 19.8 -0.6
QUOK                              IAmb  IAmb   07 03 20.7
      comp=Z,15nm,0.5s
O56A  Blue Knob Stat   48.60 357  P     P      07 03 20.4 -0.2
      baz=177,SNR=8.9
MNTX  Cornudas Mount   48.93 326  P     P      07 03 22.3 -0.9
      baz=140,SNR=12
MNTX  Cornudas Mount   48.93 326  P     P      07 03 22.6 -0.6
SSPA  Standing Stone   48.94 358  P     P      07 03 22.7 -0.3
      baz=178
SSPA  Standing Stone   48.94 358  P     P      07 03 22.8 -0.3
SSPA                              IAmb  IAmb   07 03 23.1
      comp=Z,22nm,0.6s
N59A  State Game Lan   49.19   0  P     P      07 03 25.0  0.0
      baz=180
PAL   Palisades        49.31   2  P     P      07 03 25.2 -0.7
      baz=183
N54A  Moraine State    49.38 356  P     P      07 03 25.5 -1.0
      baz=175
WSPT  Westport, CT     49.50   3  P     P      07 03 26.9 -0.3
AMTX  Amarillo         49.57 332  P     P      07 03 27.1 -1.0
      baz=146
M57A  Sunshine Farm,   49.62 359  P     P      07 03 28.1 -0.1
SFIN  Lafayette        49.74 349  P     P      07 03 26.7 -2.4
      baz=166,SNR=5.4
M54A  Oil Creek Stat   49.90 356  P     P      07 03 29.5 -0.9
      baz=175
HDIL  Hopedale         50.37 347  P     P      07 03 31.6 -2.3
      baz=163,SNR=9.8
HDIL  Hopedale         50.37 347  P     P      07 03 31.7 -2.2
L56A  Greenwood        50.43 358  P     P      07 03 33.5 -0.9
L56A                              IAmb  IAmb   07 03 34.4
      comp=Z,25nm,0.8s
BINY  Binghamton       50.47 360  P     P      07 03 34.6 -0.1
      baz=180,SNR=5.2
121A  Cookes Peak, D   50.90 325  P     P      07 03 38.4 +0.1
      baz=138,SNR=5.6
KSU1  Kansas State U   51.13 339  P     P      07 03 38.4 -1.4
      baz=153,SNR=9.5
R32A  Long Quarter,    51.31 337  P     P      07 03 40.3 -0.8
ANMO  Albuquerque      51.99 328  P     P      07 03 45.8 -0.7
      baz=140
CBKS  Cedar Bluff      52.05 336  P     P      07 03 45.7 -0.9
      baz=150,SNR=7.9
TUC   Tucson           52.50 322  P     P      07 03 49.6 -0.5
      baz=135
TUC   Tucson           52.50 322  P     P      07 03 49.5 -0.6
LBNH  Lisbon           52.63   4  P     P      07 03 50.6 -0.1
      baz=185
T25A  Trinidad         52.69 331  P     P      07 03 51.4 -0.2
      baz=144,SNR=23
T25A  Trinidad         52.69 331  P     P      07 03 51.4 -0.2
LONY  Lake Ozonia      52.90   1  P     P      07 03 52.1 -0.6
      baz=182
FRNY  Flat Rock        53.15   2  P     P      07 03 54.1 -0.4
KSCO  Kaye Shedlock'   53.41 334  P     P      07 03 55.7 -1.0
      baz=146,SNR=6.1
214A  Organ Pipe Nat   53.50 321  P     P      07 03 56.9 -0.5
      baz=132,SNR=9.2
SDCO  Great Sand Dun   53.70 331  P     P      07 03 58.6 -0.4
      baz=143,SNR=54
BGNE  Belgrade         53.72 339  P     P      07 03 57.6 -1.2
      baz=152
PKME  Peaks-Kenny Pk   53.86   6  P     P      07 03 59.6 -0.1
      baz=188,SNR=5.6
W18A  Petrified Fore   53.89 326  P     P      07 04 00.2 -0.2
      baz=137,SNR=13
S22A  4UR Ranch, Cre   54.34 330  P     P      07 04 03.1 -0.7
      baz=141,SNR=7.8
X16A  Lo Mia Camp, P   54.37 324  P     P      07 04 03.6 -0.3
X16A                              IAmb  IAmb   07 04 04.7
      comp=Z,13nm,0.9s
Q24A  Divide           54.50 332  P     P      07 04 04.1 -0.8
      baz=144
MVCO  Mesa Verde       54.78 328  P     P      07 04 05.9 -1.0
      baz=139
OGNE  Ogallala         54.79 336  P     P      07 04 05.8 -0.9
      baz=148,SNR=5.9
OGNE  Ogallala         54.79 336  P     P      07 04 06.2 -0.4
WUAZ  Wupatki          55.11 325  P     P      07 04 08.9 -0.2
      baz=136,SNR=16
ECSD  EROS Data Cent   55.30 342  P     P      07 04 08.2 -2.0
      baz=155,SNR=13
ECSD  EROS Data Cent   55.30 342  P     P      07 04 08.2 -2.0
ECSD                              IAmb  IAmb   07 04 09.0
      comp=Z,17nm,0.7s
ISCO  Idaho Springs    55.39 332  P     P      07 04 10.6 -0.7
      baz=144,SNR=5.3
ISCO  Idaho Springs    55.39 332  P     P      07 04 10.2 -1.0
SMCO  Snowmass         55.53 331  P     P      07 04 12.1 -0.3
SMCO                              IAmb  IAmb   07 04 13.0
      comp=Z,10.0nm,0.8s
SPMN  Marine on St.    55.62 346  P     P      07 04 10.0 -2.4
      baz=160
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D62A  Allapoint, All   55.69   6  P     P      07 04 12.1 -0.7
D62A                              IAmb  IAmb   07 04 14.0
      comp=Z,23nm,0.8s
PDMCI Parker Dam,Lak   55.90 322  P     P      07 04 14.4 -0.2
      baz=132
BATG  Bathurst New B   56.23   8  P     P      07 04 16.1 -0.6
U15A  North Rim        56.28 325  P     P      07 04 17.7  0.0
U15A                              IAmb  IAmb   07 04 18.6
      comp=Z,15nm,0.9s
BC3   Big Chuckawall   56.29 320  P     P      07 04 17.8 +0.2
      baz=131,SNR=5.1
N23A  Red Feather La   56.42 333  P     P      07 04 17.9 -0.7
      baz=144
IRM   Iron Mountain    56.43 321  P     P      07 04 18.7 +0.2
      baz=132,SNR=24
SUSD  Miller           56.69 340  P     P      07 04 18.1 -1.9
      baz=152,SNR=6.7
BELC  Belle Mtn. Jos   56.86 320  P     P      07 04 21.4 -0.3
      baz=131,SNR=5.3
O20A  White River Ci   56.89 331  P     P      07 04 21.4 -0.4
      baz=141,SNR=9.4
PFO   Pinyon Flats O   56.90 320  P     P      07 04 21.8 -0.2
      baz=130
KNB   Kanab            56.99 325  P     P      07 04 22.7 +0.2
GMRC  Granite Mounta   57.16 321  P     P      07 04 23.6 -0.2
      baz=131,SNR=19
LCMT  Little Creek M   57.23 325  P     P      07 04 24.0 -0.2
LCMT                              IAmb  IAmb   07 04 25.0
      comp=Z,16nm,0.9s
MTPU  Mount Pierson    57.37 326  P     P      07 04 24.8 -0.6
MURC  Murrieta         57.37 319  P     P      07 04 25.1 -0.1
      baz=129
HEC   Hector,Ludlow    57.61 321  P     P      07 04 27.3 +0.5
      baz=131,SNR=12
BBRC  Big Bear Solar   57.61 320  P     P      07 04 27.6 +0.6
      baz=130
CCUT  Cedar City       57.67 325  P     P      07 04 27.5 +0.1
CCUT                              IAmb  IAmb   07 04 28.7
      comp=Z,11nm,0.9s
TUQ   Turquoise Moun   57.75 322  P     P      07 04 27.5 -0.4
      baz=131
K22A  Casper           58.09 334  P     P      07 04 29.4 -0.7
      baz=144,SNR=5.6
GSC   Goldstone, Bar   58.21 321  P     P      07 04 31.0  0.0
      baz=130,SNR=8.0
RSSD  Black Hills      58.26 336  P     P      07 04 30.7 -0.7
      baz=147
SHOC  Shoshone, Teco   58.27 322  P     P      07 04 31.7 +0.3
      baz=131,SNR=9.1
EDW2  Edwards Air Fo   58.69 320  P     P      07 04 33.8 -0.6
      baz=129,SNR=6.4
LRMC  Laurel Mtn Rad   58.87 321  P     P      07 04 35.5 -0.2
      baz=130,SNR=6.0
FURC  Furnace Creek,   59.00 322  P     P      07 04 36.4  0.0
      baz=131,SNR=11
E28A  Huff             59.14 340  P     P      07 04 36.4 -0.8
AGMN  Agassiz Nation   59.25 345  P     P      07 04 36.2 -1.6
      baz=157,SNR=9.3
DUG   Dugway, Tooele   59.26 328  P     P      07 04 38.0 -0.3
      baz=136,SNR=34
DUG   Dugway, Tooele   59.26 328  P     P      07 04 37.5 -0.7
ISA   Isabella, Lake   59.48 320  P     P      07 04 39.3 -0.5
      baz=129,SNR=6.0
R11A  Troy Canyon, C   59.49 324  P     P      07 04 39.9 -0.1
      baz=133,SNR=12
BW06  Boulder Array    59.55 332  P     P      07 04 38.9 -1.5
      baz=141,SNR=6.7
PDAR  Pinedale Array   59.55 332  P     P      07 04 38.9 -1.5
      comp=Z,2.4nm,0.5s,baz=126,slow=9.7,SNR=22
PDAR                              pP    pP     07 05 11.3 +5.9
      comp=Z,2.8nm,0.9s,baz=142,slow=7.4,SNR=3.5
PDAR                              PcP   PcP    07 05 24.6 -2.2
      comp=Z,2.3nm,0.7s,baz=134,slow=6.9,SNR=6.0
GRAC  Grapevine Rang   59.65 322  P     P      07 04 41.2 +0.2
      baz=131
CWC   Cottonwood Cre   59.73 321  P     P      07 04 41.3 -0.3
      baz=130
MDND  Maddock          59.91 342  P     P      07 04 41.7 -0.8
      baz=153,SNR=8.8
VES   Vestal, Richgr   59.98 320  P     P      07 04 43.1 -0.1
      baz=129,SNR=6.2
TIN   Tinemaha, Big    60.22 322  P     P      07 04 44.9  0.0
      baz=130
SMMC  Simmler          60.24 319  P     P      07 04 45.1 +0.1
      baz=128
REDW  Red Top Meadow   60.62 331  P     P      07 04 46.4 -1.2
ULM   Lac du Bonnet    61.05 345  P     P      07 04 48.0 -2.1
      comp=Z,30nm,0.6s,baz=167,slow=6.9,SNR=41
NV11  Mina Array Sit   61.06 323  P     P      07 04 50.4 -0.3
NV11                              IAmb  IAmb   07 04 51.2
      comp=Z,15nm,1.2s
MDPB  Devils Postpil   61.10 322  P     P      07 04 50.4 -0.7
MDPB                              IAmb  IAmb   07 04 51.5
      comp=Z,14nm,0.8s
NVAR  Mina Array Bea   61.15 323  P     P      07 04 50.9 -0.4
      comp=Z,5.9nm,0.7s,baz=137,slow=7.6,SNR=50
NVAR                              pP    pP     07 05 23.2 +6.8
      comp=Z,1.7nm,0.9s,baz=111,slow=8.1,SNR=2.1
NVAR                              PcP   sP     07 05 31.9 +4.4
      comp=Z,1.8nm,0.7s,baz=151,slow=5.8,SNR=5.3
LAO   LASA Array       61.25 337  P     P      07 04 50.5 -1.1
      baz=145
RLMT  Red Lodge        61.25 334  P     P      07 04 50.7 -1.2
      baz=142
DGMT  Dagmar           61.98 339  P     P      07 04 56.1 -0.4
      baz=148,SNR=5.9
YERR  Yerington        62.06 323  P     P      07 04 57.0 -0.4
YERR                              IAmb  IAmb   07 04 57.6
      comp=Z,7.7nm,0.7s
HLID  Hailey           62.51 329  P     P      07 04 59.8 -0.5
      baz=136,SNR=12
PAHR  Pah Rah Range    62.61 323  P     P      07 05 00.8 -0.2
PAHR                              IAmb  IAmb   07 05 01.8
      comp=Z,16nm,0.9s
MCMT  McKenzie Canyo   62.67 331  P     P      07 05 00.7 -0.7
BOZ   Bozeman (W)      62.68 333  P     P      07 05 00.5 -0.9
      baz=140,SNR=6.5
MFID  Camas Ranch      63.13 328  P     P      07 05 03.8 -0.5
MFID                              IAmb  IAmb   07 05 04.8
      comp=Z,32nm,1.0s
SCHQ  Schefferville    63.57   6  P     P      07 05 05.7 -1.2
      comp=Z,8.8nm,0.7s,baz=196,slow=4.7,SNR=16
SCHQ                              PcP   PcP    07 05 40.9 -1.6
      comp=Z,5.2nm,0.6s,baz=232,slow=2.1,SNR=5.3
EGMT  Eagleton         63.74 335  P     P      07 05 07.3 -0.9
      baz=142
PLID  Pearl Lake       64.40 330  P     P      07 05 10.8 -1.9
MSO   Missoula         64.66 332  P     P      07 05 13.8 -0.5
      baz=138,SNR=17
M04C  Macdoel          65.37 324  P     P      07 05 18.4 -0.6
      baz=129,SNR=8.3
N02D  Trinity Center   65.38 323  P     P      07 05 17.0 -2.0
      baz=128
K05A  Summer Lake      65.42 325  P     P      07 05 19.1 -0.3
K05A                              IAmb  IAmb   07 05 20.4
      comp=Z,30nm,1.0s
M02C  Callahan         65.73 323  P     P      07 05 19.9 -1.3
      baz=128
L04D  Klamath Falls    65.91 324  P     P      07 05 21.3 -1.2
      baz=128
J05D  Fort Rock, OR    65.97 325  P     P      07 05 22.1 -0.7
      baz=130,SNR=7.1
J04D  Umpqua Nationa   66.43 325  P     P      07 05 25.7 -0.2
      baz=129
L02E  Cave Junction    66.64 323  P     P      07 05 26.4 -0.6
      baz=127
I05D  Terrebonne, OR   66.70 326  P     P      07 05 27.1 -0.3
      baz=130
K02D  Willamette Mer   67.00 324  P     P      07 05 28.7 -0.6
      baz=127,SNR=5.4
NEW   Newport          67.19 331  P     P      07 05 29.3 -1.1
      baz=135,SNR=5.1
G05D  Wamic, OR        67.27 327  P     P      07 05 31.0 +0.1
      baz=130
B08A  Colville Reser   68.32 330  P     P      07 05 36.8 -0.7
EDM   Edmonton         69.23 337  P     P      07 05 41.2 -1.8
EDM                               IAmb  IAmb   07 05 42.2
      comp=Z,37nm,0.9s
LIC   Lamto            72.16  81 eP     P      07 06 00.8 -0.8
      comp=Z,24nm,0.3s
TIC   Toumodi          72.25  80 eP     P      07 06 01.5 -0.6
DBIC  Dimbokro         72.41  80  P     P      07 06 02.5 -0.6
      comp=Z,11nm,0.7s,baz=272,slow=4.7,SNR=13
DBIC  Dimbokro         72.41  80  P     P      07 06 02.9 -0.2
KIC   Kosan Boka       72.47  81 eP     P      07 06 02.9 -0.5
      comp=Z,43nm,0.4s
VNA3  Neumayer Olymp   74.44 162  P     P      07 06 13.8 -0.2
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VNA1	**Neumayer--Stat**	**74.68**	**161**	P	**P**	**07 06 15.7**	**+0.4**
KOWA	**Kowa**	**74.86**	**72**	P	**P**	**07 06 17.1**	**-0.3**
KOWA				IAmb	IAmb	07 06 27.1	
	comp=Z,15nm,0.6s						
KOWA	**Kowa**	**74.86**	**72**	P	**P**	**07 06 16.8**	**-0.5**
VNA2	**Neumayer--Watz**	**75.04**	**162**	P	**P**	**07 06 17.2**	**-0.2**
	baz=298,slow=5.9						
SNAA	**Sanae**	**76.66**	**162**	P	**P**	**07 06 26.5**	**-0.2**
SNAA	**Sanae**	**76.66**	**162**	P	**P**	**07 06 26.5**	**-0.2**
SNAA				IAmb	IAmb	07 06 27.6	
	comp=Z,25nm,1.1s						
YKA	**Yellowknife Ar**	**76.82**	**343**	P	**P**	**07 06 25.9**	**-1.6**
	comp=Z,4.6nm,0.7s,baz=194,slow=3.0,SNR=13						
MORF	**Marmelete**	**77.52**	**49**	*e*P	**P**	**07 06 32.6**	**+0.5**
ZGR	**Zagora**	**77.55**	**57**	P	**P**	**07 06 33.0**	**+0.5**
ZHG	**ZHG**	**77.75**	**53**	P	**P**	**07 06 34.0**	**+0.5**
TZRR	**Tazzarine**	**77.79**	**56**	P	**P**	**07 06 35.0**	**+1.2**
DY2G	**Dye2**	**77.86**	**12**	*i* P	**P**	**07 06 31.9**	**-1.7**
DY2G				IAmb	IAmb	07 06 32.7	
	comp=Z,35nm,0.9s						
PCVE	**Castro Verde**	**78.09**	**49**	*e*P	**P**	**07 06 35.8**	**+0.7**
PESTR	**Estremoz**	**78.85**	**48**	*e*P	**P**	**07 06 39.8**	**+0.5**
CZD	**Col de Zad**	**78.90**	**54**	P	**P**	**07 06 41.1**	**+1.1**
MDT	**Midelt**	**79.18**	**54**	P	**P**	**07 06 42.3**	**+0.9**
PMRV	**Marv??o**	**79.19**	**47**	*e*P	**P**	**07 06 41.2**	**0.0**
PVIS	**Viseu**	**79.28**	**46**	*e*P	**P**	**07 06 41.1**	**-0.6**
MTE	**Manteigas**	**79.42**	**46**	*e*P	**P**	**07 06 41.9**	**-0.6**
PGAV	**Gavieira, Arco**	**79.47**	**45**	*e*P	**P**	**07 06 42.1**	**-0.7**
PCAB	**Cabril**	**79.55**	**45**	*e*P	**P**	**07 06 42.4**	**-0.7**
POLO	**Lamas de Olo**	**79.59**	**45**	*e*P	**P**	**07 06 42.9**	**-0.5**
PVRL	**Vila Real**	**79.61**	**45**	*e*P	**P**	**07 06 43.4**	**-0.1**
DLBC	**Dease Lake**	**79.64**	**334**	P	**P**	**07 06 42.2**	**-1.1**
	comp=Z,13nm,1.1s,baz=262,slow=2.8,SNR=6.2						
DLBC	**Dease Lake**	**79.64**	**334**	IAmb	IAmb	07 06 46.7	
	comp=Z,26nm,1.4s						
TOA0	**Torodi Ar. Sit**	**80.00**	**75**	P	**P**	**07 06 45.1**	**-0.9**
TORD	**Torodi Ar. Bea**	**80.00**	**75**	P	**P**	**07 06 45.1**	**-0.9**
	comp=Z,9.0nm,0.8s,baz=292,slow=6.1,SNR=47						
TORD				pP	**pP**	**07 07 16.6**	**+4.6**
	comp=Z,4.3nm,0.7s,baz=280,slow=5.4,SNR=2.6						
TORD	**Torodi Ar. Bea**	**80.00**	**75**	P	**P**	**07 06 45.2**	**-0.8**
MVO	**Moncorvo**	**80.06**	**46**	*e*P	**P**	**07 06 45.5**	**-0.4**
PBRG	**Braganca**	**80.48**	**45**	*e*P	**P**	**07 06 47.7**	**-0.5**
TGTN	**Hyland Airport**	**80.78**	**337**	P	**P**	**07 06 49.4**	**+0.1**
	baz=128,SNR=5.4						
JBK	**JBK**	**81.25**	**53**	P	**P**	**07 06 53.0**	**+0.4**
ICESG	**Greenland Ices**	**81.43**	**12**	*i* P	**P**	**07 06 51.4**	**-1.5**
ICESG				IAmb	IAmb	07 06 52.0	
	comp=Z,20nm,0.9s						
PAB	**San Pablo**	**81.45**	**48**	P	**P**	**07 06 53.4**	**0.0**
PAB	**San Pablo**	**81.45**	**48**	P	**P**	**07 06 53.8**	**+0.4**
TAF	**Taforalt**	**81.51**	**53**	P	**P**	**07 06 55.0**	**+1.2**
QSPA	**South Pole Qui**	**81.59**	**180**	P	**P**	**07 06 54.1**	**+0.4**
QSPA				IAmb	IAmb	07 06 55.0	
	comp=Z,26nm,0.9s						
FIGM	**Figuig**	**81.70**	**56**	P	**P**	**07 06 56.0**	**+1.0**
ESDC	**Sonseca Array**	**81.77**	**48**	P	**P**	**07 06 55.4**	**+0.3**
	comp=Z,3.3nm,0.7s,baz=258,slow=5.1,SNR=22						
ESDC	**Sonseca Array**	**81.77**	**48**	P	**P**	**07 06 55.7**	**+0.6**
SKAG	**Skagway**	**82.51**	**334**	P	**P**	**07 06 58.1**	**-0.3**
	baz=121						
MMPY	**Sheldon Lake,**	**82.56**	**337**	P	**P**	**07 06 58.3**	**-0.4**
	baz=125						
FARO	**Faro, Yukon**	**83.15**	**337**	P	**P**	**07 07 01.1**	**-0.6**
	baz=123,SNR=7.1						
M31M	**Drury Creek, Y**	**83.55**	**336**	P	**P**	**07 07 03.2**	**-0.5**
	baz=122						
N31M	**Braeburn, Yuko**	**83.74**	**335**	P	**P**	**07 07 03.9**	**-0.8**
	baz=121						
HYT	**Haines Junctio**	**84.13**	**334**	P	**P**	**07 07 07.0**	**+0.1**
	baz=119						
SUMG	**Summit**	**84.48**	**11**	*i* P	**P**	**07 07 07.3**	**-1.3**
SUMG				IAmb	IAmb	07 07 08.5	
	comp=Z,30nm,0.8s						
SUMG	**Summit**	**84.48**	**11**	P	**P**	**07 07 07.9**	**-0.8**
YUK6	**Outpost Mounta**	**84.56**	**334**	P	**P**	**07 07 09.1**	**0.0**
	baz=118						
M30M	**Minto, Yukon**	**84.70**	**336**	P	**P**	**07 07 08.3**	**-1.2**
	baz=120						
YUK4	**Talbot Arm**	**84.87**	**335**	P	**P**	**07 07 10.6**	**0.0**
	baz=118						
TULEG	**Thule**	**85.01**	**2**	*i* P	**P**	**07 07 09.6**	**-1.2**
TULEG				IAmb	IAmb	07 07 10.6	
	comp=Z,33nm,0.8s						
YUK3	**Moose Creek**	**85.84**	**335**	P	**P**	**07 07 14.7**	**-0.7**
	baz=116						
CTG	**Chitna Glacier**	**85.86**	**334**	P	**P**	**07 07 14.7**	**-0.8**
	baz=116						
BVCY	**Beaver Creek**	**86.29**	**335**	P	**P**	**07 07 16.9**	**-0.6**
	baz=116,SNR=7.2						
DAWY	**Dawson**	**86.45**	**337**	P	**P**	**07 07 16.9**	**-1.3**
	baz=118,SNR=5.1						
A36M	**Sachs Harbour**	**86.52**	**346**	P	**P**	**07 07 16.5**	**-1.8**
	baz=131,SNR=25						
INK	**Inuvik**	**86.54**	**342**	P	**P**	**07 07 16.7**	**-1.8**
	comp=Z,9.6nm,0.7s,baz=95,slow=3.8,SNR=48						
INK	**Inuvik**	**86.54**	**342**	P	**P**	**07 07 17.2**	**-1.3**
	baz=123,SNR=13						
INK	**Inuvik**	**86.54**	**342**	P	**P**	**07 07 17.4**	**-1.1**
INK				IAmb	IAmb	07 07 18.1	
	comp=Z,29nm,1.2s						
EPYK	**Eagle Plains**	**86.57**	**339**	P	**P**	**07 07 17.4**	**-1.3**
	baz=120						
I29M	**Ogilvie Camp,**	**86.65**	**338**	P	**P**	**07 07 17.9**	**-1.3**
	baz=119,SNR=6.7						
M27K	**Edge Creek, AK**	**86.69**	**335**	P	**P**	**07 07 18.9**	**-0.7**
	baz=115,SNR=9.0						
MCARA	**McCarthy VSAT**	**86.78**	**334**	P	**P**	**07 07 19.4**	**-0.4**
	baz=114,SNR=5.9						
NEEM	**North Greenlan**	**86.97**	**5**	*i* P	**P**	**07 07 20.1**	**-0.8**
NEEM				IAmb	IAmb	07 07 20.9	
	comp=Z,26nm,0.8s						
L27K	**Beaver Creek,**	**86.97**	**335**	P	**P**	**07 07 20.1**	**-0.6**
	baz=115,SNR=24						
M26K	**Nabesna, AK**	**87.19**	**335**	P	**P**	**07 07 20.7**	**-1.1**
	baz=114						
M26K	**Nabesna, AK**	**87.19**	**335**	P	**P**	**07 07 20.8**	**-1.1**
M26K				IAmb	IAmb	07 07 21.5	
	comp=Z,17nm,1.1s						
EGAK	**Eagle**	**87.45**	**337**	P	**P**	**07 07 21.7**	**-1.3**
	baz=116						
EGAK	**Eagle**	**87.45**	**337**	P	**P**	**07 07 21.9**	**-1.1**
L26K	**Log Cabin Wild**	**87.59**	**335**	P	**P**	**07 07 22.6**	**-1.1**
	baz=114,SNR=6.0						
KLU	**Klutina**	**88.11**	**333**	P	**P**	**07 07 25.1**	**-1.2**
	baz=112,SNR=7.2						
KLU	**Klutina**	**88.11**	**333**	P	**P**	**07 07 25.1**	**-1.2**
HARP	**HAARP**	**88.11**	**334**	P	**P**	**07 07 25.1**	**-1.1**
	baz=112						
SCRK	**Sand Creek**	**88.23**	**336**	P	**P**	**07 07 25.7**	**-1.1**
	baz=113,SNR=13						
J26L	**Joseph Creek**	**88.28**	**336**	P	**P**	**07 07 26.1**	**-1.0**
	baz=114,SNR=43						
VNDA	**Vanda**	**88.35**	**191**	P	**P**	**07 07 27.7**	**+0.6**
	comp=Z,1.4nm,0.7s,baz=140,slow=3.8,SNR=7.1						
M24K	**Tolsona, Glenn**	**88.44**	**334**	P	**P**	**07 07 27.1**	**-0.7**
	baz=111,SNR=6.1						
PAX	**Paxson**	**88.46**	**335**	P	**P**	**07 07 26.3**	**-1.6**
	baz=112,SNR=7.8						
PAX	**Paxson**	**88.46**	**335**	P	**P**	**07 07 26.8**	**-1.1**
PAX				IAmb	IAmb	07 07 27.2	
	comp=Z,17nm,0.7s						
RIDG	**Independent Ri**	**88.49**	**335**	P	**P**	**07 07 26.9**	**-1.1**
	baz=113,SNR=7.4						
RIDG	**Independent Ri**	**88.49**	**335**	P	**P**	**07 07 27.1**	**-0.9**
RIDG				IAmb	IAmb	07 07 27.8	
	comp=Z,29nm,1.1s						
SCM	**Sheep Creek Mo**	**88.86**	**333**	P	**P**	**07 07 28.6**	**-1.2**
	baz=110						
J25K	**Salcha River,**	**89.04**	**336**	P	**P**	**07 07 29.6**	**-1.0**
	baz=112,SNR=24						
SML	**Sawmill**	**89.29**	**333**	P	**P**	**07 07 30.6**	**-1.2**
	baz=110,SNR=6.3						
WAT6	**Susitna Watana**	**89.30**	**334**	P	**P**	**07 07 30.6**	**-1.3**
	baz=110,SNR=8.3						
PRP	**Porcupine Dome**	**89.44**	**337**	P	**P**	**07 07 31.4**	**-1.1**
	baz=112,SNR=11						
HDA	**Harding Lake**	**89.60**	**336**	P	**P**	**07 07 31.7**	**-1.4**
	baz=111,SNR=5.1						
RC01	**Rabbit Creek A**	**89.70**	**332**	P	**P**	**07 07 32.7**	**-1.0**
	baz=108						
ILAR	**Eielson Array**	**89.70**	**336**	P	**P**	**07 07 31.9**	**-1.7**
	comp=Z,2.6nm,0.5s,baz=148,slow=3.9,SNR=52						
ILAR				pP	**pP**	**07 08 05.7**	**+5.3**
	comp=Z,3.5nm,1.0s,baz=136,slow=3.9,SNR=6.3						
POKR	**Poker Plat Res**	**90.04**	**336**	P	**P**	**07 07 34.2**	**-1.0**
	baz=110						
KDAK	**Kodiak Island**	**90.12**	**329**	P	**P**	**07 07 33.9**	**-1.8**
	comp=Z,11nm,0.7s,baz=188,slow=2.0,SNR=4.7						
MCK	**McKinley**	**90.19**	**335**	P	**P**	**07 07 34.5**	**-1.4**
	baz=109						
MDM	**Murphy Dome**	**90.31**	**336**	P	**P**	**07 07 35.3**	**-1.1**
SNF	**Seneffe**	**90.32**	**39**	*d*P	**P**	**07 07 36.1**	**-0.7**
H24K	**Noodor Dome**	**90.47**	**337**	P	**P**	**07 07 36.3**	**-0.9**
	baz=110						
NEA2	**Nenana**	**90.53**	**336**	P	**P**	**07 07 36.1**	**-1.4**
	baz=109,SNR=10						
NEA2	**Nenana**	**90.53**	**336**	P	**P**	**07 07 36.0**	**-1.4**
BMRD	**Maredsous**	**90.58**	**39**	*d*P	**P**	**07 07 37.0**	**-0.9**
TRF	**Thorofare Moun**	**90.68**	**334**	P	**P**	**07 07 36.8**	**-1.6**
	baz=108						
TRF	**Thorofare Moun**	**90.68**	**334**	P	**P**	**07 07 36.8**	**-1.6**
TRF				IAmb	IAmb	07 07 37.8	
	comp=Z,10nm,0.6s						
SKT	**Skwentna**	**90.79**	**333**	P	**P**	**07 07 37.4**	**-1.4**
	baz=107						
I23K	**Minto, Yukon-K**	**90.82**	**336**	P	**P**	**07 07 37.5**	**-1.3**
	baz=109,SNR=13						
SYO	**Syowa Base**	**90.92**	**161**	⇑*e*P	**P**	**07 07 37.8**	**-1.5**
Q19K	**Cape Douglas,**	**90.97**	**330**	P	**P**	**07 07 38.6**	**-1.1**
	baz=105						
H23K	**Yukon River**	**91.11**	**337**	P	**P**	**07 07 38.7**	**-1.4**
	baz=108						
DAG	**Danmarks Havn**	**91.14**	**11**	*i* P	**P**	**07 07 38.3**	**-1.8**
DAG				IAmb	IAmb	07 07 39.1	
	comp=Z,10nm,0.9s						
BPAW	**Bear Paw Mtn.**	**91.17**	**335**	P	**P**	**07 07 38.9**	**-1.6**
	baz=107,SNR=7.1						
MLY	**Manley**	**91.34**	**336**	P	**P**	**07 07 39.8**	**-1.5**
	baz=107,SNR=7.6						
PPLA	**Purkeypile**	**91.34**	**334**	P	**P**	**07 07 40.0**	**-1.5**
	baz=106						
CAST	**Castle Rocks**	**91.44**	**334**	P	**P**	**07 07 39.9**	**-1.8**
	baz=106,SNR=9.3						
BTNL	**Ternell**	**91.49**	**39**	*d*P	**P**	**07 07 41.7**	**-0.6**
CHUM	**Lake Minchumin**	**91.67**	**335**	P	**P**	**07 07 40.7**	**-2.0**
	baz=106						
COLD	**Coldfoot**	**91.80**	**338**	P	**P**	**07 07 42.7**	**-0.6**
	baz=108						
L20K	**Farewell, AK**	**91.98**	**333**	P	**P**	**07 07 42.3**	**-2.0**
	baz=105						
TOLK	**Toolik Lake Re**	**92.01**	**339**	P	**P**	**07 07 43.0**	**-1.3**
	baz=108						
M19K	**Big River Lodg**	**92.07**	**332**	P	**P**	**07 07 43.3**	**-1.4**
	baz=104						
K20K	**Telida**	**92.29**	**334**	P	**P**	**07 07 43.7**	**-1.9**
	baz=104						
H21K	**Melozitna Rive**	**92.35**	**336**	P	**P**	**07 07 44.2**	**-1.7**
	baz=105						
J20K	**Nowinta River**	**92.52**	**335**	P	**P**	**07 07 44.9**	**-1.8**
	baz=104						
BOSA	**Boshof**	**95.64**	**120**	P	**P**	**07 08 00.9**	**-1.1**
	comp=Z,2.8nm,0.7s,baz=234,slow=4.4,SNR=6.6						
BOSA	**Boshof**	**95.64**	**120**	IAmb	IAmb	07 08 08.2	
	comp=Z,8.7nm,1.2s						
GERES	**GERESS Array B**	**96.08**	**42**	P	**P**	**07 08 03.1**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=247,slow=2.8,SNR=4.7						
UPC	**Upice**	**97.72**	**40**	AMS	AMS	07 08 20.0	
	comp=Z,1µm,17.7s						
KBZ	**Khabaz**	**116.54**	**45**	PKP	**PKPdf**	**07 13 17.9**	**-1.6**
	comp=Z,2.8nm,0.5s,baz=134,slow=2.8,SNR=6.1						
STKA	**Stephens Creek**	**126.18**	**220**	PKP	**PKPdf**	**07 13 37.7**	**-0.8**
	comp=Z,8.3nm,0.6s,baz=112,slow=4.1,SNR=22						
ZALV	**Zalesovo Beam**	**132.11**	**15**	PKP	**PKPdf**	**07 13 47.7**	**-1.3**
	comp=Z,5.6nm,0.4s,baz=253,slow=2.5,SNR=33						
ZALV				pPKP	**pPKPdf**	**07 14 23.0**	**+6.0**
	comp=Z,5.1nm,0.8s,baz=264,slow=1.5,SNR=3.9						
ASAR	**Alice Springs**	**136.74**	**222**	PKhKP	PKPpre	07 13 47.0	
	comp=Z,0.2nm,0.4s,baz=146,slow=3.5,SNR=4.3						
ASAR				PKP	**PKPdf**	**07 13 56.9**	**-1.8**
	comp=Z,6.5nm,0.8s,baz=122,slow=2.1,SNR=37						
ASAR				pPKP	pPKPdf	07 14 32.8	+6.1
	comp=Z,4.0nm,0.9s,baz=124,slow=2.2,SNR=4.5						
USRK	**Ussuriysk Ar.**	**136.97**	**330**	PKP	**PKPdf**	**07 13 55.7**	**-2.7**
	comp=Z,3.2nm,0.7s,baz=242,slow=3.6,SNR=8.8						
MKAR	**Makanchi Array**	**137.55**	**22**	PKP	**PKPdf**	**07 13 57.3**	**-2.1**
	comp=Z,2.0nm,0.6s,baz=348,slow=1.6,SNR=5.0						
MKAR				pPKP	**pPKPdf**	**07 14 33.2**	**+5.7**
	comp=Z,1.2nm,0.7s,baz=345,slow=1.4,SNR=3.0						
MJAR	**Matsushiro Arr**	**138.31**	**317**	PKP	**PKPdf**	**07 13 58.8**	**-2.4**
	comp=Z,1.6nm,0.5s,baz=91,slow=2.8,SNR=4.0						
WRA	**Warramunga Arr**	**138.94**	**226**	PKP	**PKPdf**	**07 14 00.8**	**-2.0**
	comp=Z,6.6nm,0.5s,baz=128,slow=1.8,SNR=36						
SONM	**Songino Array**	**140.77**	**358**	PKhKP	PKPpre	07 13 56.4	
	comp=Z,0.9nm,0.4s,baz=15,slow=2.4,SNR=4.6						
WMQ	**Urumqi**	**142.03**	**19**	*e*PKP	**PKPdf**	**07 14 06.5**	**-1.2**
KSRS	**Korea Array**	**144.01**	**327**	PKP	PKPab	07 14 07.5	-1.4
	comp=Z,7.0nm,0.7s,baz=54,slow=3.2,SNR=18						
BJI	**Beijing**	**146.81**	**343**	PKPbc	**PKPdf**	**07 14 14.9**	**-1.1**
HHC	**Hu-ho-hao-te**	**147.12**	**350**	*e*PKPbc	**PKPdf**	**07 14 16.5**	**-0.2**
HHC				LR	LR		
	comp=Z,150nm,20.6s						
HHC				LR	LR		
	comp=Z,230nm,21.5s						
HHC				LR	LR		
	comp=Z,190nm,21.7s						
BTO	**Baotou**	**147.61**	**352**	*e*PKPbc	**PKPdf**	**07 14 18.3**	**+0.8**
GTA	**Gaotai**	**149.00**	**6**	*e*PKPbc	**PKPdf**	**07 14 19.4**	**-0.4**
GTA				pPKP	pPKPab	07 14 57.6	+2.1
GTA				LR	LR		
	comp=Z,130nm,17.1s						
GTA				LR	LR		
	comp=Z,150nm,20.0s						
GTA				LR	LR		
	comp=Z,170nm,20.0s						
LZH	**Lanzhou**	**152.56**	**0**	⇓PKPbc	**PKPdf**	**07 14 30.8**	**+5.3**
LZH				pPKP	sPKPdf	07 15 06.8	+3.0
NJ2	**Nanjing**	**152.86**	**332**	*e*PKPbc	**PKPdf**	**07 14 25.4**	**-0.4**
HYB	**Hyderabad**	**153.61**	**68**	*i* PKP	**PKPdf**	**07 14 25.0**	**-2.3**
XAN	**Xi'an**	**154.21**	**351**	PKPbc	**PKPdf**	**07 14 26.6**	**-1.2**
XAN				PKPab	**PKPab**	**07 14 48.0**	**-2.0**
XAN				pPKP	pPKPdf	07 14 57.4	+1.5
XAN				LR	LR		
	comp=Z,270nm,19.9s						
XAN				LR	LR		
	comp=Z,180nm,17.2s						
XAN				LR	LR		
	comp=Z,260nm,15.8s						
WHN	**Wuhan**	**156.08**	**338**	⇑PKP	**PKPdf**	**07 14 37.4**	**+7.1**
GYA	**Guiyang**	**161.99**	**353**	PKP	**PKPdf**	**07 14 36.6**	**-0.9**

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*IDC **13** 07:06:11.9±1.2, 51.°65N×173.°17W, h0^{km}, mb3.7/6, mb1 4.0/8, mb1mx3.7/39, mbtmp3.8/8, ML3.8/2, Error ellipse: s-maj=38.3km s-min=21.4km az=166.0*

*AEIC **13** 07:06:17±2.0, 51.°59N±0.°06×173.°31W±0.°09, h34^{km}±6^{km}, ML3.4, mb3.8/4(NEIC), Error ellipse: s-maj=10.4km s-min=6.5km az=215.0*

*NEIC **13** 07:06:17.8±0.9, 51.°61N±0.°08×173.°23W±0.°03, h39^{km}±12^{km}, Error ellipse: s-maj=11.3km s-min=1.0km az=195.0*

ISC 13 07:06:16.8±2.4**, 51.°6N**±0.°1×**173.°18W**±0.°06**, h31**^{km}±16^{km}**, n37, σ0^{s}.53**/36**, mb3.8**/6**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOFP	**Korovin Flat P**	**0.87**	**319**		**Pn**	**07 06 33.0**	**0.0**
KOFP					**Sb**	**07 06 44.8**	**-0.1**
KOSE	**Korovin Southe**	**0.91**	**324**		**Pn**	**07 06 33.6**	**+0.2**
KOKL	**Mount Kliuchef**	**0.95**	**318**		**Pn**	**07 06 34.0**	**0.0**
KOKL					**Sb**	**07 06 47.4**	**+0.4**
KONE	**Korovin Northe**	**0.97**	**323**		**Pb**	**07 06 34.6**	**-0.5**
GSMY	**Great Sitkin M**	**1.84**	**285**		**Pn**	**07 06 46.3**	**+0.1**
GSTR	**Great Sitkin T**	**1.85**	**286**		**Pn**	**07 06 46.9**	**+0.5**
GSTD	**Great Sitkin T**	**1.89**	**285**		**Pn**	**07 06 47.3**	**+0.2**
GSTD					**Sn**	**07 07 10.5**	**+0.6**
GSCK	**Great Sitkin C**	**1.90**	**283**		**Pn**	**07 06 47.2**	**+0.2**
ADAG	**Mount Adagdak**	**2.16**	**281**		**Pn**	**07 06 50.7**	**+0.1**
ADK	**Adak**	**2.20**	**278**		**Pn**	**07 06 51.0**	**-0.2**
ADK					**Sn**	**07 07 17.1**	**-0.1**
KIWB	**Kanaga Island**	**2.48**	**277**		**Pn**	**07 06 55.3**	**+0.2**
KIMD	**Kanaga Island**	**2.53**	**275**		**Pn**	**07 06 55.8**	**0.0**
TAPA	**Tanaga Point A**	**2.89**	**276**		**Pn**	**07 07 01.1**	**+0.3**
TAFP	**Tanaga Falls P**	**3.00**	**277**		**Pn**	**07 07 02.8**	**+0.6**
TAFP					**Sn**	**07 07 37.4**	**+0.3**
TASE	**Tanaga Southea**	**3.03**	**276**		**Pn**	**07 07 03.4**	**+0.7**
GAEA	**Gareloi East**	**3.47**	**275**		**Pn**	**07 07 09.2**	**+0.6**
CESW	**Semis' Southwe**	**4.52**	**276**		**Pn**	**07 07 23.0**	**-0.1**
AMKA	**Amchitka**	**4.71**	**270**		**Pn**	**07 07 25.2**	**-0.4**
KDAK	**Kodiak Island**	**13.38**	**55**	Pn	**Pn**	**07 09 25.3**	**+1.0**
	0.3nm,0.3s,baz=321,slow=13,SNR=1.4						
IL31		**18.92**	**36**	P	**P**	**07 10 34.6**	**-0.1**
ILAR	**Eielson Array**	**18.92**	**36**	P	**P**	**07 10 33.1**	**-1.6**
	0.5nm,0.3s,baz=219,slow=9.1,SNR=22						
H24K	**Noodor Dome**	**19.17**	**32**	P	**Pn**	**07 10 38.3**	**-0.2**
H24K				IAmb	IAmb	07 10 39.9	
	comp=Z,3.7nm,0.8s						
RIDG	**Independent Ri**	**19.20**	**40**	P	**P**	**07 10 38.0**	**+0.1**
RIDG				IAmb	IAmb	07 10 48.9	
	comp=Z,9.3nm,1.2s						
EGAK	**Eagle**	**21.10**	**39**	P	**P**	**07 10 58.1**	**-0.3**
BMAR	**Burnt Mountain**	**21.16**	**31**	P	**P**	**07 10 59.9**	**+0.8**
INK	**Inuvik**	**25.27**	**34**	P	**P**	**07 11 39.4**	**-0.4**
	comp=Z,2.6nm,0.7s,baz=248,slow=9.8,SNR=9.9						
H11N2	**WAKE ISLAND Hy**	**35.46**	**214**	T	T	07 51 17.6	
	baz=21,slow=76,SNR=12						
H11N3	**WAKE ISLAND Hy**	**35.47**	**214**	T	T	07 51 18.2	
	baz=21,slow=76,SNR=11						
H11N1	**WAKE ISLAND Hy**	**35.48**	**214**	T	T	07 51 22.0	
	baz=21,slow=76,SNR=11						
H11S1	**WAKE ISLAND Hy**	**36.66**	**213**	T	T	07 52 37.1	
	baz=20,slow=75,SNR=16						
H11S2	**WAKE ISLAND Hy**	**36.67**	**213**	T	T	07 52 38.3	
	baz=20,slow=75,SNR=13						
H11S3	**WAKE ISLAND Hy**	**36.68**	**213**	T	T	07 52 38.5	
	baz=20,slow=75,SNR=5.1						
PDAR	**Pinedale Array**	**42.86**	**76**	P	**P**	**07 14 12.5**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=292,slow=4.7,SNR=4.1						
SONM	**Songino Array**	**49.64**	**299**	P	**P**	**07 15 06.2**	**+0.9**
	comp=Z,1.0nm,0.4s,baz=60,slow=8.5,SNR=2.9						
TXAR	**Lajitas Array**	**55.13**	**85**	P	**P**	**07 15 46.0**	**-0.3**
	comp=Z,0.1nm,0.4s,baz=313,slow=6.5,SNR=4.6						
MKAR	**Makanchi Array**	**62.57**	**311**	P	**P**	**07 16 36.6**	**-0.9**
	comp=Z,0.3nm,0.5s,baz=47,slow=7.3,SNR=6.5						
ASAR	**Alice Springs**	**88.13**	**227**	P	**P**	**07 19 03.9**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=30,slow=5.1,SNR=5.4						

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*SKO **13** 07:14:54.2, 41.°50N×22.°61E, h15^{km}*

*SOF **13** 07:14:56.9, 41.°43N×22.°62E, h5^{km}, MD2.8*

*ATH **13** 07:14:57.8, 41.°44N×22.°62E, h9^{km}±5^{km}, ML2.2/3, Error ellipse: s-maj=6.0km s-min=1.5km az=140.0*

*THE **13** 07:14:58.2, 41.°42N×22.°62E, h0^{km}±2^{km}, ML2.2/8, Error ellipse: s-maj=2.8km s-min=0.8km az=316.0*

*BEO **13** 07:14:58.4±0.3, 41.°45N×22.°54E, h0^{km}, ML2.1/7*

ISC 13 07:14:57.5±0.9**, 41.°45N**±0.°02×**22.°61E**±0.°02**, h8**^{km}±7^{km}**, n40, σ0^{s}.38**/67**, 2C-1D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.13**	**191**	*e*Pg	**Pg**	**07 15 00.4**	**-0.1**
VAY				*e*Sg	**Sg**	**07 15 02.1**	**-0.3**
VAY	**Valandovo**	**0.13**	**191**	⇑*i*Pg	**Pg**	**07 15 00.4**	**-0.1**
VAY				*i* Sg	**Sg**	**07 15 02.5**	**0.0**
VAY				*e*Lg	Lg	07 15 02.5	
	comp=E,639nm,0.3s						
KNT	**Kendrikon**	**0.36**	**143**	P	**Pg**	**07 15 04.6**	**-0.1**
KNT				S	**Sg**	**07 15 09.7**	**+0.2**
	comp=E,1µm,0.2s						
KNT	**Kendrikon**	**0.36**	**143**	P	**Pg**	**07 15 04.6**	**-0.1**
KNT				S	**Sg**	**07 15 09.8**	**+0.2**
KNT	**Kendrikon**	**0.36**	**143**	*i* Pg	**Pg**	**07 15 04.6**	**-0.1**
KNT				*i* Sg	**Sg**	**07 15 09.8**	**+0.3**
GRG	**Griva**	**0.52**	**197**	P	**Pg**	**07 15 07.2**	**-0.4**
GRG				S	**Sg**	**07 15 14.4**	**0.0**
	comp=E,278nm,0.5s						
GRG	**Griva**	**0.52**	**197**	⇑*i*Pg	**Pg**	**07 15 07.2**	**-0.4**
GRG				*i* Sg	**Sb**	**07 15 16.1**	**-0.5**
KKB	**Krupnik**	**0.55**	**41**	*i* Pg	**Pg**	**07 15 08.1**	**-0.1**
SRS	**Serrai**	**0.82**	**114**	P	**Pg**	**07 15 12.8**	**-0.5**
SRS				S	**Sg**	**07 15 24.2**	**+0.3**
	comp=E,140nm,0.3s						
SRS	**Serrai**	**0.82**	**114**	P	**Pg**	**07 15 12.7**	**-0.5**
SRS				S	**Sg**	**07 15 23.8**	**0.0**
SRS				AML	AML	07 15 24.7	
	comp=N,200µm,0.2s						
SRS				AML	AML	07 15 26.1	
	comp=E,274µm,0.3s						
SRS	**Serrai**	**0.82**	**114**	*i* Pg	**Pg**	**07 15 12.7**	**-0.5**
SRS				*i* Sg	**Sg**	**07 15 24.2**	**+0.3**
SOH	**Sokhos**	**0.85**	**138**	P	**Pg**	**07 15 13.5**	**-0.3**
SOH				S	**Sg**	**07 15 25.0**	**+0.2**
	comp=E,290nm,0.2s						
SOH	**Sokhos**	**0.85**	**138**	P	**Pg**	**07 15 13.5**	**-0.3**
SOH				S	**Sg**	**07 15 24.7**	**-0.1**
SOH				AML	AML	07 15 27.8	
	comp=N,807µm,0.4s						
SOH				AML	AML	07 15 28.3	
	comp=E,645µm,0.2s						
SOH	**Sokhos**	**0.85**	**138**	⇓*i*Pg	**Pg**	**07 15 13.5**	**-0.3**
SOH				*i* Sg	**Sg**	**07 15 25.2**	**+0.4**
MMB	**Musomiste**	**0.85**	**80**	*i* P	**Pg**	**07 15 14.1**	**+0.1**
THE	**Thessaloniki**	**0.86**	**161**	P	**Pg**	**07 15 13.7**	**-0.5**
HORT	**Hortiatis**	**0.93**	**156**	P	**Pg**	**07 15 15.0**	**-0.5**
HORT				S	**Sg**	**07 15 27.7**	**+0.1**
	comp=E,108nm,0.3s						
NVR	**Nevrokopi**	**0.95**	**96**	P	**Pg**	**07 15 15.7**	**-0.1**
NVR				S	**Sb**	**07 15 28.9**	**-0.1**
	comp=E,120nm,0.2s						
NVR	**Nevrokopi**	**0.95**	**96**	P	**Pg**	**07 15 15.6**	**-0.3**
NVR				S	**Sg**	**07 15 28.4**	**+0.2**
NVR				AML	AML	07 15 29.6	
	comp=E,222µm,0.1s						
NVR				AML	AML	07 15 30.8	
	comp=N,218µm,0.3s						
BOSS	**Bosilegrad**	**1.05**	**355**	*e*Pg	**Pg**	**07 15 17.2**	**-0.5**
BOSS				*e*Sg	**Sg**	**07 15 30.8**	**-0.5**
PRVS	**Prvonek**	**1.13**	**340**	*e*Pg	**Pg**	**07 15 18.4**	**-0.8**
PRVS				*e*Sg	**Sg**	**07 15 33.5**	**-0.3**
FNA	**Florina**	**1.14**	**235**	P	**Pg**	**07 15 19.2**	**-0.2**
FNA	**Florina**	**1.14**	**235**	*i* Pg	**Pg**	**07 15 19.3**	**-0.2**
FNA				*i* Sg	**Sg**	**07 15 34.5**	**+0.1**
PLG	**Polygyros**	**1.25**	**149**	P	**Pn**	**07 15 21.0**	**-0.4**
PLG				S	**Sg**	**07 15 38.1**	**+0.3**
	comp=N,68nm,0.3s						
PLG	**Polygyros**	**1.25**	**149**	P	**Pn**	**07 15 20.6**	**-0.7**
VTS	**Vitosha**	**1.26**	**22**	*e*Pg	**Pb**	**07 15 21.6**	**0.0**
VTS				*e*Sg	**Sg**	**07 15 37.7**	**-0.3**
VTS	**Vitosha**	**1.26**	**22**	*i* P	**Pg**	**07 15 22.1**	**+0.4**
VTS	**Vitosha**	**1.26**	**22**	*i* Pg	**Pb**	**07 15 21.4**	**-0.1**
VTS				*i* Sg	**Sg**	**07 15 37.2**	**-0.8**
OHR	**Ohrid**	**1.40**	**257**	*i* Pn	**Pn**	**07 15 23.6**	**+0.2**
OHR				*i* Sn	**Sn**	**07 15 42.5**	**+0.3**
OHR				*e*Lg	Lg	07 15 42.9	
	comp=N,20nm,1.0s						
BARS	**Barje**	**1.48**	**337**	*e*Pg	**Pn**	**07 15 24.8**	**+0.2**
BARS				*e*Sg	**Sb**	**07 15 44.5**	**+0.1**
BARS	**Barje**	**1.48**	**337**	*e*Pg	**Sg**	**07 15 45.3**	**0.0**
BARS	**Barje**	**1.48**	**337**	*i* Pn	**Pn**	**07 15 24.7**	**+0.2**
BARS				*i* Sn	**Sn**	**07 15 43.9**	**-0.2**
KAVA	**Kavala**	**1.51**	**107**	P	**Pb**	**07 15 25.5**	**-0.3**
KAVA				S	**Sg**	**07 15 45.8**	**-0.3**
	comp=N,108nm,0.4s						
KAVA	**Kavala**	**1.51**	**107**	P	**Pn**	**07 15 25.4**	**+0.5**
RZN	**Rozhen**	**1.60**	**81**	*i* P	**Pb**	**07 15 27.5**	**0.0**
THAS	**Thassos island**	**1.81**	**117**	P	**Pn**	**07 15 29.4**	**+0.4**
ZAPS	**Zavoj**	**1.82**	**1**	*e*Pn	**Pb**	**07 15 31.8**	**+0.7**
SELS	**Selova**	**2.08**	**329**	*e*Pg	**Pb**	**07 15 36.0**	**+0.4**
BOVS	**Bovan**	**2.28**	**343**	*e*Pg	**Pb**	**07 15 39.3**	**+0.4**
BOVS				*e*Sg	**Sg**	**07 16 10.3**	**-0.5**
GRUS	**Gruza**	**2.81**	**331**	*e*Pg	**Pb**	**07 15 49.1**	**+1.2**

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*IDC **13** 07:23:04.0±5.1, 60.°14N×147.°28W, h38^{km}±35^{km}, mb3.6/4, mb1 3.8/7, mb1mx3.4/56, mbtmp3.8/7, ML3.4/3, Error ellipse: s-maj=55.9km s-min=22.8km az=39.0*

*NEIC **13** 07:23:04.0±1.2, 60.°37N±0.°03×147.°65W±0.°04, h24^{km}±10^{km}, Error ellipse: s-maj=3.9km s-min=2.7km az=167.0*

*AEIC **13** 07:23:04±1.2, 60.°37N±0.°03×147.°65W±0.°04, h13^{km}±4^{km}, ML3.6, ML3.9/166(NEIC), Error ellipse: s-maj=4.6km s-min=2.5km az=169.0*

ISC 13 07:23:03.4±0.7**, 60.°33N**±0.°03×**147.°64W**±0.°02**, h22**^{km}±6^{km}**, n279, σ0^{s}.73**/258**, mb3.9**/4**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HIN	**Hinchinbrook I**	**0.57**	**82**		**Pb**	**07 23 15.2**	**+0.5**
HIN				IAML		07 23 25.3	
	comp=N,7µm,0.4s						
HIN				IAML		07 23 27.3	
	comp=E,8µm,0.5s						

HIN	Hinchinbrook I	0.57	82		Sb	07 23 24.2	+1.7
GLI	Glacier Island	0.61	26	P	Pb	07 23 14.9	-0.6
	baz=208						
GLI				S	Sb	07 23 23.4	-0.3
	baz=208						
GLI	Glacier Island	0.61	26		Pb	07 23 14.9	-0.6
GLI				IAML		07 23 25.0	
	comp=E,5µm,0.4s						
GLI	Glacier Island	0.61	26		Sb	07 23 23.4	-0.3
PWL	Port Wells	0.64	328	P	Pb	07 23 15.4	-0.4
	baz=145						
PWL				S	Sb	07 23 24.0	-0.3
	baz=145						
PWL	Port Wells	0.64	328		Pb	07 23 15.4	-0.4
PWL	Port Wells	0.64	328		Sb	07 23 24.0	-0.3
PWL	Port Wells	0.64	328	IAML		07 23 24.3	
	comp=E,10µm,0.5s						
PWL				IAML		07 23 25.5	
	comp=N,5µm,0.5s						
FID	Port Fidalgo	0.71	53		Pb	07 23 16.2	-1.0
FID				IAML		07 23 25.8	
	comp=E,4µm,0.8s						
FID	Port Fidalgo	0.71	53		Sb	07 23 25.2	-1.3
JPK	Jack Peak	0.89	35		Pb	07 23 19.4	-0.9
SEW	Seward	0.93	257	P	Pb	07 23 20.9	+0.1
	baz=73						
SEW				S	Sb	07 23 33.4	+0.6
	baz=73						
SEW	Seward	0.93	257	Pg	Pb	07 23 20.9	+0.1
SEW	Seward	0.93	257		Sb	07 23 33.4	+0.6
EYAK	Cordova Ski Ar	0.96	76	P	Pb	07 23 20.9	-0.4
	baz=260						
EYAK				S	Sb	07 23 34.3	+0.7
	baz=260						
EYAK	Cordova Ski Ar	0.96	76		Pb	07 23 21.0	-0.4
EYAK	Cordova Ski Ar	0.96	76		Sb	07 23 34.3	+0.7
VMT	TAPS Tl Valdez	0.98	39		Pb	07 23 20.9	-0.8
VMT					Sb	07 23 33.7	-0.5
O22K	Cooper Landing	1.05	279	P	Pn	07 23 22.6	-0.1
	baz=96						
O22K				S	Sb	07 23 36.3	+0.3
	baz=96						
O22K	Cooper Landing	1.05	279		Pn	07 23 22.6	-0.1
O22K					Sb	07 23 36.3	+0.3
Q23K	Middleton Isla	1.11	144	P	Pn	07 23 24.6	+1.1
	baz=326						
Q23K	Middleton Isla	1.11	144	Pn	Pn	07 23 24.6	+1.1
Q23K				IAML		07 23 42.6	
	comp=E,3µm,0.5s						
Q23K				IAML		07 23 44.2	
	comp=N,2µm,0.5s						
MID	Middleton Isla	1.11	143		Pn	07 23 24.7	+1.1
MID				IAML		07 23 42.6	
	comp=E,3µm,0.5s						
MID				IAML		07 23 45.0	
	comp=N,2µm,0.4s						
KNK	Knik Glacier	1.16	340	P	Pn	07 23 23.6	-0.7
	baz=159						
KNK				S	Sb	07 23 38.6	-0.8
	baz=159						
KNK	Knik Glacier	1.16	340		Pn	07 23 23.9	-0.4
KNK				IAML		07 23 39.5	
	comp=E,3µm,0.8s						
KNK				IAML		07 23 41.1	
	comp=N,2µm,0.8s						
KNK	Knik Glacier	1.16	340		Sb	07 23 38.6	-0.8
DIV	Divide	1.22	48		Pn	07 23 24.8	-0.4
DIV					Sb	07 23 41.4	+0.3
RC01	Rabbit Creek A	1.28	307	P	Pn	07 23 25.9	-0.1
	baz=124						
RC01	Rabbit Creek A	1.28	307		Pn	07 23 25.9	-0.1
SLKM	Skilak Lake	1.29	279		Pn	07 23 26.3	+0.2
KLU	Klutina	1.44	35	P	Pn	07 23 28.0	-0.1
	baz=217						
KLU	Klutina	1.44	35		Pn	07 23 28.1	-0.1
KLU	Klutina	1.44	35	IAML		07 23 47.3	
	comp=E,3µm,0.6s						
KLU				IAML		07 23 49.4	
	comp=N,3µm,0.3s						
PMR	Palmer	1.46	331	P	Pn	07 23 28.2	-0.2
	baz=149						
PMR	Palmer	1.46	331		Pn	07 23 28.2	-0.2
PMR	Palmer	1.46	331	IAML		07 23 47.9	
	comp=N,1µm,0.5s						
PMR				IAML		07 23 48.0	
	comp=E,1µm,0.3s						
GOAT	Goat Mountain	1.47	79		Pn	07 23 29.1	+0.6
RAGM	Ragged Mountai	1.47	86		Pn	07 23 29.1	+0.5
FIS	Fire Island	1.51	304		Pn	07 23 29.7	+0.6
SCM	Sheep Creek Mo	1.52	6	P	Pn	07 23 29.8	+0.6
	baz=186						
SCM	Sheep Creek Mo	1.52	6		Pn	07 23 29.8	+0.6
SCM	Sheep Creek Mo	1.52	6	IAML		07 23 51.0	
	comp=N,2µm,0.5s						
SML	Sawmill	1.52	348	P	Pn	07 23 29.6	+0.3
	baz=167						
SML	Sawmill	1.52	348		Pn	07 23 29.6	+0.3
GHO	Glory Hole Cre	1.58	337		Pn	07 23 30.4	+0.2
BMRM	Bremner River	1.63	65	P	Pn	07 23 30.6	-0.1
	baz=249						
BMRM	Bremner River	1.63	65		Pn	07 23 30.6	-0.1
BMRM	Bremner River	1.63	65	IAML		07 23 53.6	
	comp=E,2µm,0.3s						
BMRM				IAML		07 23 59.2	
	comp=N,1µm,0.6s						
KAIM	Kayak Island	1.66	103	P	Pn	07 23 31.2	+0.1
	baz=287						
KAIM	Kayak Island	1.66	103		Pn	07 23 31.1	-0.1
KAIM				IAML		07 24 08.0	
	comp=E,974nm,0.9s						
BRSE	Bradley Lake S	1.67	251	P	Pn	07 23 31.6	+0.4
	baz=67						
BRSE	Bradley Lake S	1.67	251		Pn	07 23 31.6	+0.4
PS12	TAPS Pump St12	1.68	46		Pn	07 23 31.7	+0.3
HMT	Hamilton	1.68	88		Pn	07 23 32.0	+0.5
HMT	Hamilton	1.68	88	IAML		07 24 09.7	
	comp=N,2µm,0.6s						
BRLK	Bradley Lake	1.73	252		Pn	07 23 32.5	+0.4
BRLK	Bradley Lake	1.73	252	IAML		07 23 55.6	
	comp=N,864nm,0.5s						
CAPN	Captain Cook N	1.79	286	P	Pn	07 23 34.1	+1.2
	baz=102						
CAPN	Captain Cook N	1.79	286		Pn	07 23 34.1	+1.2
NICHA	Nichawak Mount	1.83	91		Pn	07 23 33.1	-0.4
M22K	Willow	1.87	321	P	Pn	07 23 33.9	-0.1
	baz=138						
M22K	Willow	1.87	321		Pn	07 23 33.9	-0.1
SUA	Susitna One	1.90	308	P	Pn	07 23 34.7	+0.2
	baz=125						
SUA	Susitna One	1.90	308		Pn	07 23 34.7	+0.2
M24K	Tolsona, Glenn	1.92	21	P	Pn	07 23 35.9	+1.1
	baz=203						
M24K	Tolsona, Glenn	1.92	21		Pn	07 23 35.7	+0.9
M24K				IAML		07 24 03.0	
	comp=E,1µm,0.8s						
M24K				IAML		07 24 03.1	
	comp=N,930nm,1.1s						
SUCK	Suckling Hills	1.94	96		Pn	07 23 36.7	+1.7
BERG	Berg Lake	1.96	86		Pn	07 23 35.4	+0.2
BERG	Berg Lake	1.96	86	IAML		07 24 05.0	
	comp=N,1µm,0.3s						
N25K	Chitina, Valde	1.96	48	P	Pn	07 23 35.6	+0.2
	baz=231						
N25K	Chitina, Valde	1.96	48		Pn	07 23 35.6	+0.2
N25K	Chitina, Valde	1.96	48	IAML		07 24 02.8	
	comp=E,1µm,0.6s						
CNPM	China Poot	1.98	248		Pn	07 23 35.8	+0.3
CNPM	China Poot	1.98	248	IAML		07 24 08.0	
	comp=N,871nm,0.4s						
PS11	TAPS Pump St11	2.05	30		Pn	07 23 37.9	+1.5
HOM	Homer	2.12	253	Pn	Pn	07 23 37.9	+0.4
GRIN	Grindle Hills	2.15	89		Pn	07 23 37.2	-0.7
GLB	Gilahina Butte	2.18	57		Pn	07 23 38.6	+0.3
GLB	Gilahina Butte	2.18	57	IAML		07 24 07.3	
	comp=N,744nm,0.7s						
GLB				IAML		07 24 07.6	
	comp=E,524nm,0.7s						
KHIT	Khitrov Hills	2.18	85		Pn	07 23 37.7	-0.7
VRDI	Verde Repeater	2.24	64		Pn	07 23 39.5	+0.1
WAT6	Susitna Watana	2.26	359	P	Pn	07 23 39.7	+0.1
	baz=179						
WAT6	Susitna Watana	2.26	359		Pn	07 23 39.7	+0.1
CRQM	Cirque	2.27	77		Pn	07 23 39.5	-0.1
CRQM	Cirque	2.27	77	IAML		07 24 12.0	
	comp=N,713nm,0.5s						
CRQM				IAML		07 24 20.1	
	comp=E,666nm,0.8s						
CRQE	Cirque	2.29	77	P	Pn	07 23 39.5	-0.3
	baz=262						
SPU	Mount Spurr	2.33	293		Pn	07 23 41.0	+0.6
SPCG	Spurr Capps Gl	2.36	296		Pn	07 23 41.4	+0.6
STLK	Strandline Lak	2.36	302		Pn	07 23 41.2	+0.3
WAX	Waxell Ridge	2.38	85		Pn	07 23 40.4	-0.7
WAX	Waxell Ridge	2.38	85	IAML		07 24 21.2	
	comp=E,638nm,0.4s						
HARP	HAARP	2.40	29	P	Pn	07 23 42.6	+1.4
	baz=212						
HARP	HAARP	2.40	29		Pn	07 23 42.6	+1.4
SNH	Sunshine Point	2.40	91	Pn	Pn	07 23 41.0	-0.3
SPCN	Chakachatna No	2.41	294		Pn	07 23 42.2	+0.8
SPCP	Crater Peak Br	2.41	295		Pn	07 23 41.7	+0.2
TGL	Tana Glacier	2.42	78		Pn	07 23 41.5	-0.1
TGL	Tana Glacier	2.42	78	IAML		07 24 16.5	
	comp=E,460nm,0.4s						
CUT	Chulitna	2.44	330	P	Pn	07 23 42.0	+0.2
	baz=147						
CUT	Chulitna	2.44	330		Pn	07 23 42.0	+0.2
MCARA	McCarthy VSAT	2.50	63	P	Pn	07 23 43.1	+0.4
	baz=248						
MCARA	McCarthy VSAT	2.50	63		Pn	07 23 43.0	+0.4
MCARA	McCarthy VSAT	2.50	63	IAML		07 24 28.6	
	comp=E,635nm,0.8s						
O20K	Slope Mountain	2.50	267	P	Pn	07 23 43.2	+0.4
	baz=81						
O20K	Slope Mountain	2.50	267		Pn	07 23 43.2	+0.4
SPBG	Spurr Blockage	2.50	294		Pn	07 23 42.7	-0.1
SKT	Skwentna	2.51	313	P	Pn	07 23 42.7	-0.2
	baz=129						
SKT	Skwentna	2.51	313		Pn	07 23 42.7	-0.2
SKT	Skwentna	2.51	313	IAML		07 24 23.1	
	comp=E,516nm,0.4s						
DFR	Drift River	2.52	278		Pn	07 23 42.6	-0.4
RSO	Redoubt South	2.54	275		Pn	07 23 43.3	-0.1
RED	Redoubt Volcan	2.55	274		Pn	07 23 43.2	-0.2
WAT7	Susitna Watana	2.58	348		Pn	07 23 44.5	+0.6
RDWB	Redoubt West	2.59	276		Pn	07 23 43.6	-0.4
NCT	North Crescent	2.63	277		Pn	07 23 44.3	-0.3
ISLE	Juniper Island	2.64	82		Pn	07 23 44.2	-0.5
ISLE				IAML		07 24 37.9	
	comp=N,374nm,1.1s						
KIAG	Kiagna River	2.67	75		Pn	07 23 45.0	-0.2
PTPK	Patty Peak	2.68	69		Pn	07 23 45.7	+0.3
BALM	Baldy	2.70	72		Pn	07 23 45.5	0.0
IVE	Iliamna Volcan	2.71	266		Pn	07 23 45.4	-0.2
ILS	Iliamna Low So	2.74	265		Pn	07 23 46.0	-0.1
BAGL	Bagley Icefiel	2.76	84		Pn	07 23 46.1	-0.1
DHY	Denali Highway	2.76	2	P	Pn	07 23 47.1	+0.7
	baz=183						
DHY	Denali Highway	2.76	2		Pn	07 23 46.7	+0.3
DHY				IAML		07 24 28.0	
	comp=E,443nm,0.7s						
DHY				IAML		07 24 28.3	
	comp=N,329nm,0.6s						
ILSW	Iliamna Southw	2.77	265		Pn	07 23 46.5	-0.1
MESA	MESA	2.84	91	P	Pn	07 23 47.6	+0.1
	baz=276						
MESA	MESA	2.84	91		Pn	07 23 47.6	+0.1
MESA	MESA	2.84	91	IAML		07 24 48.6	
	comp=E,283nm,0.4s						
MESA				IAML		07 24 48.9	
	comp=N,392nm,0.7s						
PAX	Paxson	2.85	20	P	Pn	07 23 48.5	+0.9
	baz=203						
PAX	Paxson	2.85	20		Pn	07 23 48.5	+0.9
P19K	Oil Pt	2.89	259	P	Pn	07 23 48.1	0.0
	baz=73						
P19K	Oil Pt	2.89	259	Pn	Pn	07 23 48.1	0.0
P19K				IAML		07 24 38.6	
	comp=E,601nm,0.6s						
P19K				IAML		07 24 46.3	
	comp=N,585nm,0.6s						
YAH	Yahtse	2.93	87		Pn	07 23 49.1	+0.3
GRNC	Granite Creek	2.94	80		Pn	07 23 48.8	-0.1
GRNC	Granite Creek	2.94	80	IAML		07 24 44.8	
	comp=N,318nm,0.9s						
BARN	Barnard Glacie	3.03	73		Pn	07 23 50.5	+0.4
M26K	Nabesna, AK	3.05	45	P	Pn	07 23 51.0	+0.7
	baz=230						
M26K	Nabesna, AK	3.05	45		Pn	07 23 51.0	+0.7
AUCH	Augustine Cone	3.09	254		Pn	07 23 51.2	+0.4
RKAV	Rock Avalanche	3.13	88		Pn	07 23 52.0	+0.5
RND	Reindeer	3.14	350	Pn	Pn	07 23 52.2	+0.6
RND				IAML		07 24 37.8	
	comp=E,412nm,0.6s						
RND				IAML		07 24 40.2	
	comp=N,400nm,0.9s						
CTG	Chitna Glacier	3.17	76	P	Pn	07 23 52.1	+0.1
	baz=262						
CTGM	Chitina Glacie	3.17	76		Pn	07 23 52.0	0.0
MENT	Mentasta	3.22	34		Pn	07 23 53.7	+1.1
MENT				IAML		07 24 38.5	
	comp=N,452nm,0.5s						
TABL	Table Mountain	3.23	85	Pn	Pn	07 23 53.0	+0.2
TABL				IAML		07 24 50.8	
	comp=E,188nm,0.9s						
LOGN	Logan Glacier	3.31	78		Pn	07 23 53.9	-0.1
O19K	Port Alsworth	3.33	271		Pn	07 23 54.0	0.0
Q19K	Cape Douglas,	3.36	248	P	Pn	07 23 55.1	+0.6
	baz=62						
Q19K	Cape Douglas,	3.36	248	Pn	Pn	07 23 55.4	+0.9
PPLA	Purkeypile	3.37	322	Pn	Pn	07 23 56.0	+1.3
TRF	Thorofare Moun	3.38	339	P	Pn	07 23 55.7	+0.9
	baz=157						
TRF	Thorofare Moun	3.38	339		Pn	07 23 55.2	+0.3
TRF				IAML		07 24 49.6	
	comp=E,234nm,2.3s						
TRF				IAML		07 24 50.6	
	comp=N,343nm,0.6s						
L26K	Log Cabin Wild	3.39	35	P	Pn	07 23 56.4	+1.4
	baz=219						
L26K	Log Cabin Wild	3.39	35		Pn	07 23 56.4	+1.4
L26K	Log Cabin Wild	3.39	35	IAML		07 24 44.1	
	comp=N,406nm,0.3s						
L26K				IAML		07 24 47.1	
	comp=E,333nm,0.4s						
N19K	Bonanza Creek	3.41	281	P	Pn	07 23 54.7	-0.6
	baz=95						
N19K	Bonanza Creek	3.41	281		Pn	07 23 54.7	-0.6
SAMH	Samovar Hills	3.43	90		Pn	07 23 56.0	+0.5
M27K	Edge Creek, AK	3.44	51	P	Pn	07 23 56.7	+1.0
	baz=237						
M27K	Edge Creek, AK	3.44	51		Pn	07 23 56.7	+1.0
MCK	McKinley	3.47	350	P	Pn	07 23 57.2	+1.2
	baz=169						
MCK	McKinley	3.47	350		Pn	07 23 57.2	+1.2
MCK	McKinley	3.47	350	IAML		07 24 47.2	
	comp=E,243nm,1.1s						
MCK				IAML		07 24 49.2	
	comp=N,307nm,0.6s						
KTH	Kantishna Hill	3.59	336		Pn	07 23 58.3	+0.6
KDAK	Kodiak Island	3.61	227	Pn	Pn	07 23 58.4	+0.5
	comp=N,2.8nm,0.3s,baz=75,slow=9.7,SNR=45						
KDAK				Sn	Sn	07 24 37.3	-2.5
	comp=N,5.3nm,0.3s,baz=300,slow=22,SNR=5.6						
KDAK	Kodiak Island	3.61	227	P	Pn	07 23 58.5	+0.7
	baz=42						
KDAK	Kodiak Island	3.61	227	Pn	Pn	07 23 58.6	+0.7
KDAK				IAML		07 24 28.3	
	comp=N,198nm,3.8s						
KDAK				IAML		07 24 28.8	
	comp=N,146nm,4.9s						
YUK2	White River	3.61	63		Pn	07 23 59.2	+1.2
M19K	Big River Lodg	3.64	299	P	Pn	07 23 58.1	-0.2
	baz=112						
M19K	Big River Lodg	3.64	299		Pn	07 23 58.1	-0.2
RIDG	Independent Ri	3.67	20	P	Pn	07 23 59.9	+1.1
	baz=202						
RIDG	Independent Ri	3.67	20		Pn	07 23 59.9	+1.1
RIDG	Independent Ri	3.67	20	IAML		07 24 53.7	
	comp=N,229nm,0.8s						
RIDG				IAML		07 24 59.7	
	comp=E,326nm,0.8s						
PCA	Pinnacle	3.69	90	Pn	Pn	07 23 59.6	+0.5
PINM	Pinnacle	3.69	90	P	Pn	07 23 59.5	+0.4
	baz=277						
L20K	Farewell, AK	3.70	308	P	Pn	07 23 58.7	-0.4
	baz=123						
L20K	Farewell, AK	3.70	308		Pn	07 23 58.7	-0.4
DOT	Dot Lake	3.74	25		Pn	07 24 01.9	+2.2
CAST	Castle Rocks	3.75	328	P	Pn	07 24 00.3	+0.4
	baz=144						
CAST	Castle Rocks	3.75	328		Pn	07 24 00.3	+0.4
CAST	Castle Rocks	3.75	328	IAML		07 25 05.7	
	comp=E,149nm,0.7s						
YUK3	Moose Creek	3.78	64	P	Pn	07 24 01.6	+1.1
	baz=251						
YUK3	Moose Creek	3.78	64		Pn	07 24 01.6	+1.1
BVCY	Beaver Creek	3.88	54	P	Pn	07 24 02.1	+0.5
	baz=241						
BVCY	Beaver Creek	3.88	54		Pn	07 24 02.1	+0.5
YUK1	Sand Pete Hill	3.89	59		Pn	07 24 03.0	+1.1
L27K	Beaver Creek,	3.90	43	P	Pn	07 24 02.6	+0.7
	baz=228						
L27K	Beaver Creek,	3.90	43		Pn	07 24 02.6	+0.7
BC03		3.91	43		Pn	07 24 02.9	+0.8
BCAR	Beaver Creek A	3.91	43		Pn	07 24 02.9	+0.8
BWN	Browne	3.95	348		Pn	07 24 03.2	+0.6
YUK8	Steele Glacier	3.98	73		Pn	07 24 04.9	+1.7
SVW2	Sparrevohn	3.98	285		Pn	07 24 04.4	+1.4
SCRK	Sand Creek	4.04	23	P	Pn	07 24 04.2	+0.3
	baz=207						
SCRK	Sand Creek	4.04	23		Pn	07 24 04.2	+0.3
SCRK	Sand Creek	4.04	23	IAML		07 25 08.3	
	comp=E,146nm,0.6s						
BPAW	Bear Paw Mtn.	4.10	339	P	Pn	07 24 04.9	+0.2
	baz=156						
BPAW	Bear Paw Mtn.	4.10	339		Pn	07 24 04.8	+0.2
BPAW				IAML		07 25 12.0	
	comp=E,159nm,0.6s						
BPAW				IAML		07 25 12.0	
	comp=N,179nm,0.6s						
HDA	Harding Lake	4.11	4	P	Pn	07 24 05.5	+0.7
	baz=185						
HDA	Harding Lake	4.11	4		Pn	07 24 05.5	+0.7
HDA	Harding Lake	4.11	4	IAML		07 25 10.2	
	comp=E,191nm,0.6s						
WRH	Wood River Hil	4.17	357		Pn	07 24 05.6	+0.1
WRH	Wood River Hil	4.17	357	IAML		07 25 09.9	
	comp=E,111nm,0.9s						
WRH				IAML		07 25 17.6	
	comp=N,132nm,0.8s						
CHUM	Lake Minchumin	4.19	330	P	Pn	07 24 06.1	+0.2
	baz=146						
CHUM	Lake Minchumin	4.19	330		Pn	07 24 06.1	+0.2
PNL	Peninsula	4.19	95	P	Pn	07 24 05.5	-0.4
	baz=283						
PNL	Peninsula	4.19	95		Pn	07 24 05.5	-0.4
OHAK	Old Harbor	4.28	226	P	Pn	07 24 07.1	0.0
	baz=40						
OHAK	Old Harbor	4.28	226	Pn	Pn	07 24 08.0	+0.8
OHAK				IAML		07 24 49.4	
	comp=E,193nm,4.3s						
K20K	Telida	4.30	318	P	Pn	07 24 07.1	-0.4
	baz=132						
K20K	Telida	4.30	318		Pn	07 24 07.1	-0.4
K20K	Telida	4.30	318	IAML		07 25 25.7	
	comp=E,88nm,1.5s						
NEA2	Nenana	4.33	352	P	Pn	07 24 07.6	-0.2
	baz=170						
NEA2	Nenana	4.33	352		Pn	07 24 07.9	0.0
CCB	Clear Creek Bu	4.34	359		Pn	07 24 07.8	-0.1
J25K	Salcha River,	4.43	13	P	Pn	07 24 09.1	-0.1
	baz=195						
J25K	Salcha River,	4.43	13		Pn	07 24 09.1	-0.1
IL31		4.47	4		Pn	07 24 09.7	0.0
ILAR	Eielson Array	4.47	4	Pn	Pn	07 24 09.8	0.0
	comp=E,1.5nm,0.3s,baz=182,slow=13,SNR=35						
ILAR				Sn	Sn	07 25 06.4	+5.3
	comp=E,12nm,0.3s,baz=182,slow=22,SNR=8.4						
ILAR	Eielson Array	4.47	4	Pn	Pn	07 24 10.1	+0.3
COLA	College	4.56	359		Pn	07 24 11.3	+0.4
TCOL	CIGO, UAF Yank	4.56	359	P	Pn	07 24 10.9	-0.1
	baz=179						
TCOL	CIGO, UAF Yank	4.56	359		Pn	07 24 10.9	-0.1
YUK6	Outpost Mounta	4.61	78	P	Pn	07 24 12.2	+0.4
	baz=267						
YUK6	Outpost Mounta	4.61	78		Pn	07 24 12.2	+0.4
MDM	Murphy Dome	4.66	357		Pn	07 24 12.5	+0.2
MDM	Murphy Dome	4.66	357	IAML		07 25 26.0	
	comp=N,85nm,1.0s						
MDM				IAML		07 25 35.0	
	comp=E,70nm,1.4s						
TT01	Tatalina	4.76	307		Pn	07 24 13.1	-0.6
TTA	Tatalina	4.77	307	Pn	Pn	07 24 13.1	-0.8
TTA				IAML		07 25 33.2	
	comp=N,65nm,2.1s						
POKR	Poker Plat Res	4.81	1	P	Pn	07 24 14.6	+0.2
	baz=181						
POKR	Poker Plat Res	4.81	1		Pn	07 24 14.6	+0.2
POKR	Poker Plat Res	4.81	1	IAML		07 25 35.1	
	comp=E,87nm,0.8s						
POKR				IAML		07 25 38.2	
	comp=N,82nm,1.2s						
I23K	Minto, Yukon-K	4.90	351	P	Pn	07 24 15.7	0.0
	baz=170						
I23K	Minto, Yukon-K	4.90	351		Pn	07 24 16.1	+0.5
I23K				IAML		07 25 36.8	
	comp=N,80nm,0.8s						
I23K				IAML		07 25 39.4	
	comp=E,99nm,1.5s						
J20K	Nowinta River	4.92	325	P	Pn	07 24 16.1	+0.3
	baz=139						
J20K	Nowinta River	4.92	325		Pn	07 24 16.1	+0.3
J20K	Nowinta River	4.92	325	IAML		07 25 32.0	
	comp=N,90nm,0.6s						
J20K				IAML		07 25 39.2	
	comp=E,93nm,0.6s						
MLY	Manley	4.93	345	P	Pn	07 24 16.5	+0.4
	baz=162						
MLY	Manley	4.93	345		Pn	07 24 16.7	+0.6
MLY				IAML		07 25 33.5	
	comp=E,64nm,1.0s						
MLY				IAML		07 25 45.6	
	comp=N,53nm,2.2s						
PS07	TAPS Pump Stn7	5.01	357		Pn	07 24 17.4	+0.3
I21K	Tanana	5.26	340	P	Pn	07 24 21.0	+0.4
	baz=156						
I21K	Tanana	5.26	340		Pn	07 24 21.0	+0.4
I21K	Tanana	5.26	340	IAML		07 25 45.2	
	comp=N,58nm,2.5s						
I21K				IAML		07 25 56.9	
	comp=E,43nm,1.6s						
PRP	Porcupine Dome	5.30	10	P	Pn	07 24 21.5	+0.3
	baz=192						
PRP	Porcupine Dome	5.30	10		Pn	07 24 21.5	+0.3
PRP	Porcupine Dome	5.30	10	IAML		07 25 32.9	
	comp=N,82nm,0.6s						
PRP				IAML		07 25 51.2	
	comp=E,64nm,1.0s						
EGAK	Eagle	5.38	31	P	Pn	07 24 23.0	+0.8
	baz=217						
EGAK	Eagle	5.38	31		Pn	07 24 23.0	+0.8
EGAK	Eagle	5.38	31	IAML		07 25 49.5	
	comp=E,89nm,0.8s						
EGAK				IAML		07 25 56.2	
	comp=E,87nm,0.9s						
DAWY	Dawson	5.38	42	P	Pn	07 24 22.9	+0.7
	baz=230						
DAWY	Dawson	5.38	42		Pn	07 24 22.9	+0.7
H24K	Noodor Dome	5.53	359	P	Pn	07 24 24.4	+0.1
	baz=179						
H24K	Noodor Dome	5.53	359		Pn	07 24 24.4	+0.1
H23K	Yukon River	5.59	352	P	Pn	07 24 25.2	+0.2
	baz=170						
H23K	Yukon River	5.59	352		Pn	07 24 25.2	+0.2
M30M	Minto, Yukon	5.67	62	P	Pn	07 24 26.5	+0.3
	baz=252						
M30M	Minto, Yukon	5.67	62		Pn	07 24 26.5	+0.3
H21K	Melozitna Rive	5.84	338	P	Pn	07 24 28.6	0.0
	baz=154						
H21K	Melozitna Rive	5.84	338		Pn	07 24 28.6	0.0
IM03		6.31	337		Pn	07 24 34.8	-0.1
IMAR	Indian Mountai	6.31	337		Pn	07 24 34.7	-0.3
WHY	Whitehorse	6.31	81	P	Pn	07 24 35.2	+0.1
	baz=273						
WHY	Whitehorse	6.31	81		Pn	07 24 35.2	+0.1
FYU	Fort Yukon	6.36	9		Pn	07 24 35.6	+0.1
COLD	Coldfoot	7.02	352	P	Pn	07 24 45.0	+0.3
	baz=170						
COLD	Coldfoot	7.02	352		Pn	07 24 45.0	+0.3
BM03	Burnt Mountain	7.24	9		Pn	07 24 47.3	-0.5
BM01	Burnt Mountain	7.28	10		Pn	07 24 48.6	+0.3
P33M	Teslin, Yukon	7.37	84	P	Pn	07 24 49.9	+0.3
	baz=278						
P33M	Teslin, Yukon	7.37	84		Pn	07 24 49.9	+0.3
TOLK	Toolik Lake Re	8.39	355		Pn	07 25 04.5	+1.0

DLBC	Dease Lake	9.18	94	Pn	Pn	07 25 11.9	-2.5
	comp=E,0.3nm,0.3s,baz=256,slow=12,SNR=1.8						
DLBC	Dease Lake	9.18	94		Pn	07 25 14.4	0.0
INK	Inuvik	10.05	31	Pn	Pn	07 25 26.3	+0.2
	comp=E,0.1nm,0.3s,baz=229,slow=15,SNR=5.6						
SONM	Songino Array	56.72	309	P	P	07 32 45.7	+0.7
	comp=E,1.0nm,0.5s,baz=25,slow=8.5,SNR=4.2						
FINES	FINESS Array B	58.46	4	P	P	07 32 55.7	-1.1
	comp=E,3.0nm,1.0s,baz=11,slow=8.5,SNR=2.1						
MKAR	Makanchi Array	65.78	325	P	P	07 33 45.3	-1.0
	comp=E,0.2nm,0.4s,baz=28,slow=3.0,SNR=1.8						
ESDC	Sonseca Array	75.98	28	P	P	07 34 48.3	-0.1
	comp=E,0.6nm,0.7s,baz=348,slow=5.1,SNR=4.1						

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*NEIC **13** 07:36:07.6±1.6,36°.76N±0°.03×121°.35W±0°.05,h17^{km}±5^{km}, Error ellipse: s-maj=5.7km s-min=3.2km az=64.0*

*ANF **13** 07:36:07.7±1.1,36°.66N×121°.26W,h0^{km},ML3.4/7,Error ellipse: s-maj=11.1km s-min=8.2km az=105.0*

*NCEDC **13** 07:36:07.3±0.9,36°.78N±0°.03×121°.29W±0°.06,h9^{km}±6^{km}, ML3.5/65,ML3.2/32(NEIC),Error ellipse: s-maj=8.6km s-min=2.0km az=60.0*

ISC 13 07:36:07.5±0.9,**36°.77N**±0°.02×**121°.34W**±0°.03,**h17**^{km}±6^{km}, **n68,**σ**0^{s}.81**/72,**Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAO	San Andreas Ge	0.09	264		Pg	07 36 10.8	-0.1
SAO					Sg	07 36 13.6	+0.4
BLRM	Lewis Ranch	0.12	153		Pg	07 36 10.8	-0.5
HSFM	Saint Francis	0.13	287		Pg	07 36 11.8	+0.4
SCZ	Santa Cruz	0.18	196		Pg	07 36 11.7	-0.4
SCZ					Sg	07 36 14.8	-0.3
HFEM	San Felipe	0.22	347		Pg	07 36 12.2	-0.4
BJCM	Johnson Can.	0.23	190		Pg	07 36 12.4	-0.3
PACP	Pacheco Peak	0.24	10		Pg	07 36 12.5	-0.5
PACP					Sb	07 36 16.6	-0.8
HCOM	Corn Cob Canyo	0.32	291		Pg	07 36 14.9	+0.7
GHS	Gilroy Hot Spr	0.33	345		Pg	07 36 14.4	-0.2
BBNM	San Benito	0.34	141		Pg	07 36 12.4	-2.2
BSMM	Soledad Missio	0.40	190		Pg	07 36 15.7	0.0
HAST	Hastings Reser	0.42	204		Pg	07 36 16.1	0.0
MHC	Mount Hamilton	0.62	337		Pg	07 36 19.6	-0.2
SCCB	Santa Clara Co	0.66	321		Pg	07 36 20.8	+0.2
MOBB	Monterey Bay O	0.67	263		Pb	07 36 21.6	+1.1
PMPB	Monarch Peak	0.71	142		Pg	07 36 21.0	-0.3
PMPB				IAML		07 36 40.9	
	comp=N,2μm,0.9s						
PMPB				IAML		07 36 44.9	
	comp=E,1μm,0.8s						
COSM	Mount Oso	0.73	358		Pb	07 36 22.1	+0.2
PAPM	Alder Peak	0.86	181		Pg	07 36 24.0	-0.2
PDRM	Domengine Ranc	0.90	119		Pg	07 36 24.5	-0.4
WENL	Wente Vineyard	0.91	339		Pg	07 36 24.9	-0.3
JRSC	Jasper Ridge	0.95	312		Pg	07 36 25.0	-1.0
PKD	Bear Valley Ra	1.05	142		Pb	07 36 26.6	-0.6
C055	Cottonwood Ave	1.07	324		Pb	07 36 27.3	-0.2
RAMR	Ramage Ranch	1.20	161		Pn	07 36 29.0	-0.4
CMCM	Mills College	1.21	327		Pn	07 36 29.1	-0.4
BDM	Black Diamond	1.25	341		Pn	07 36 29.5	-0.7
BKS	Berkeley--Byer	1.31	327		Pn	07 36 30.6	-0.5
BL67	Building 67, L	1.32	327		Pn	07 36 30.5	-0.7
VAK	Adit at Lawren	1.32	327		Pn	07 36 30.5	-0.6
BRK	Berkeley--Havi	1.32	327		Pn	07 36 30.4	-0.7
TCHL	Shandon	1.32	145		Pn	07 36 31.4	+0.2
PAGB	Antelope Grade	1.36	139		Pn	07 36 32.0	+0.3
PAGB				IAML		07 36 58.4	
	comp=N,411nm,1.2s						
PAGB				IAML		07 37 01.7	
	comp=E,339nm,0.7s						
THIS	South End of C	1.38	139		Pn	07 36 32.5	+0.5
TSCN	Private Proper	1.47	146		Pn	07 36 33.8	+0.6
CMB	Columbia Colle	1.47	31		Pn	07 36 32.7	-0.6
FARB	Farallon Islan	1.61	305		Pn	07 36 34.5	-0.7
VOG	Valley Oaks Go	1.64	105	P	Pn	07 36 35.5	0.0
	baz=287						
VOG				S	Sb	07 36 58.5	+0.9
	baz=287						
KCC	Kaiser Creek	1.71	71		Pn	07 36 36.8	+0.3
CVS	Carmenet Viney	1.80	331		Pn	07 36 37.1	-0.7
SMMC	Simmler	1.82	143	P	Pn	07 36 38.9	+0.9
	baz=325						
MCCM	Marconi Confer	1.84	319		Pn	07 36 37.7	-0.5
HELL	Mitchell Peak,	1.86	92		Pn	07 36 38.1	-0.6
PMLM	Mount Lospe	1.97	162		Pn	07 36 39.8	-0.3
MDPB	Devils Postpil	2.00	64		Pn	07 36 41.6	+0.8
MRDM	Red Cones	2.00	65		Pn	07 36 41.7	+1.0
MDCM	Deadman Creek	2.06	62		Pn	07 36 42.6	+1.1
MLAC	Mammoth, Mammo	2.18	66	P	Pb	07 36 45.7	-0.8
	baz=247						
MDRNC	Doe Ridge	2.18	66		Pn	07 36 45.1	+1.9
FTR	Fort Ross	2.27	321		Pn	07 36 43.3	-0.9
GCRM	Castle Rock Sp	2.27	332		Pn	07 36 43.9	-0.4
MTUM	Tungsten Hills	2.30	75		Pn	07 36 46.2	+1.5
GDXM	Geysers	2.33	331		Pn	07 36 44.9	-0.2
GSGM	Seigler Mounta	2.35	333		Pn	07 36 45.6	+0.3
EMB	Emerald Bay	2.41	24		Pn	07 36 46.7	+0.4
SUTB	Sutter Butte	2.48	352		Pn	07 36 46.5	-0.5
TIN	Tinemaha, Big	2.51	83	P	Pn	07 36 49.5	+1.9
	baz=264						
ISA	Isabella, Lake	2.57	115	P	Pn	07 36 49.1	+0.7
	baz=297						
CWC	Cottonwood Cre	2.65	96	P	Pn	07 36 50.6	+1.1
	baz=278						
PNTR	Pine Nut	2.69	30	Pn	Pn	07 36 51.4	+1.2
PNTR				IAML		07 37 38.2	
	comp=E,143nm,0.7s						
PNTR				IAML		07 37 50.1	
	comp=N,143nm,0.8s						
ORV	Oroville	2.78	357		Pn	07 36 52.3	+1.1
VCNR	Virginia City	2.85	27		Pn	07 36 53.6	+1.2
VCNR				IAML		07 37 42.4	
	comp=E,92nm,0.8s						
VCNR				IAML		07 37 44.3	
	comp=N,78nm,0.6s						
RYN	Ryan	2.90	50		Pn	07 36 54.5	+1.5
RYN				IAML		07 37 39.3	
	comp=E,134nm,0.5s						
RYN				IAML		07 37 39.6	
	comp=N,123nm,0.5s						
NVAR	Mina Array Bea	2.92	55	Pn	Pn	07 36 54.4	+1.0
PAHR	Pah Rah Range	3.31	27	Pn	Pn	07 36 59.4	+0.7
PAHR				IAML		07 37 52.2	
	comp=E,36nm,1.8s						
EDW2	Edwards Air Fo	3.31	124	Pb	Pb	07 37 05.8	0.0
	baz=306						
KVN	Kaiserville	3.43	47		Pn	07 37 01.1	+0.8
KVN				IAML		07 37 57.1	
	comp=E,51nm,1.1s						
KVN				IAML		07 37 57.2	
	comp=N,80nm,1.1s						
QSM	Queen of Sheba	3.70	101		Pn	07 37 05.2	+1.4
QSM				IAML		07 38 12.7	
	comp=N,37nm,0.9s						
QSM				IAML		07 38 18.0	
	comp=E,23nm,1.0s						
SHPR	Sheep Range	4.98	91		Pn	07 37 21.5	-0.1
SHPR				IAML		07 39 50.9	
	comp=E,9.3nm,4.7s						

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*IDC **13** 07:36:21.1±1.3,18°.23S×178°.05W,h561^{km}±14^{km}, mb3.6/12,mb1 3.8/15,mb1mx3.5/29,mbtmp4.5/15,Error ellipse: s-maj=28.3km s-min=12.1km az=152.0*

*NEIC **13** 07:36:21.8±1.4,18°.4S±0°.1×177°.92W±0°.10,h575^{km}±9^{km}, mb4.5/19,Error ellipse: s-maj=22.5km s-min=11.5km az=158.0*

ISC 13 07:36:19.9±0.5,**18°.3S**±0°.1×**177°.95W**±0°.08,**h550**^{km}**,n48,** σ**1^{s}.42**/50,**mb4.4**/23,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.84	277	P	P	07 37 43.6	+2.8
	3.3nm,0.3s,baz=127,slow=10.0,SNR=35						
MSVF	Nonsavu	3.84	277	P	P	07 37 45.0	+4.3
AFI	Afiamalu	7.35	55	P	P	07 38 11.6	+0.1
	16nm,0.3s,baz=179,slow=2.4,SNR=22						
AFI				S	S	07 39 39.0	-3.8
	4.8nm,0.3s,baz=180,slow=22,SNR=2.8						
NIUE	Niue	7.65	97	P	P	07 38 16.0	+1.8
DZM	Mont Dzumac	15.13	253	P	P	07 39 30.0	-0.9
	0.7nm,0.3s,baz=268,slow=23,SNR=7.0						
QRZ	Quartz Range	23.92	198	P	P	07 40 50.1	-0.8
QRZ				IAmb	IAmb	07 41 07.6	
	comp=Z,19nm,1.1s						
EIDS	Eidsvold	29.55	251	P	P	07 41 40.9	+0.3
EIDS				IAmb	IAmb	07 41 41.3	
	comp=Z,5.8nm,0.7s						
CTAO	Charters Tower	33.82	261	P	P	07 42 16.4	-0.7
CAN	Canberra	33.83	233	P	P	07 42 17.2	+0.2
PMG	Port Moresby	34.95	280	P	P	07 42 26.1	-0.5
	comp=Z,7.4nm,0.3s,baz=54,slow=7.2,SNR=4.8						
PMG	Port Moresby	34.95	280	IAmb	IAmb	07 42 28.0	
	comp=Z,16nm,0.8s						
TOO	Toolangi	37.28	231	P	P	07 42 45.6	0.0
TOO				IAmb	IAmb	07 42 46.5	
	comp=Z,16nm,0.8s						
COEN	Coen	37.54	271	P	P	07 42 47.8	-0.1
COEN				IAmb	IAmb	07 42 48.9	
	comp=Z,12nm,0.8s						
STKA	Stephens Creek	38.84	242	P	P	07 42 58.4	+0.2
	comp=Z,11nm,0.7s,baz=89,slow=10.0,SNR=19						
STKA	Stephens Creek	38.84	242	P	P	07 42 58.0	-0.2
JAY	Jayapura	43.42	286	P	P	07 43 34.3	-0.6
	comp=Z,11nm,0.6s,baz=197,slow=2.8,SNR=2.9						
BBOO	Buckleboo	43.61	241	P	P	07 43 35.2	-0.8
BBOO				IAmb	IAmb	07 43 36.0	
	comp=Z,12nm,0.7s						
WR0	Warramunga Arr	44.80	260	P	P	07 43 44.1	-1.4
WB2	Warramunga Arr	44.98	260	P	P	07 43 46.0	-0.8
WB2				IAmb	IAmb	07 43 46.5	
	comp=Z,13nm,0.7s						
WRA	Warramunga Arr	44.99	260	P	P	07 43 46.0	-1.0
	comp=Z,6.1nm,0.5s,baz=96,slow=7.0,SNR=95						
WRA				PcP	PcP	07 45 15.3	-1.0
	comp=Z,1.6nm,0.7s,baz=85,slow=3.9,SNR=5.7						
WRA	Warramunga Arr	44.99	260	P	P	07 43 45.9	-1.0
AS31	Alice Springs	45.11	255	P	P	07 43 47.3	-0.4
AS31				IAmb	IAmb	07 43 48.3	
	comp=Z,8.6nm,0.6s						
ASAR	Alice Springs	45.11	255	P	P	07 43 47.1	-0.6
	comp=Z,28nm,0.7s,baz=87,slow=8.9,SNR=374						
ASAR				PcP	PcP	07 45 15.7	-1.0
	comp=Z,1.9nm,0.5s,baz=101,slow=3.7,SNR=10						
ASAR	Alice Springs	45.11	255	P	P	07 43 46.9	-0.9
FORT	Forrest	50.24	245	P	P	07 44 24.8	-1.2
FORT				IAmb	IAmb	07 44 25.5	
	comp=Z,14nm,0.7s						
KNRA	Kununurra	50.88	264	P	P	07 44 30.3	-0.6
KNRA				IAmb	IAmb	07 44 30.6	
	comp=Z,11nm,0.7s						
FITZ	Fitzroy Crossi	53.40	261	P	P	07 44 48.4	-0.5
	comp=Z,2.1nm,0.5s,baz=108,slow=3.1,SNR=11						
PSA00	Pilbara Seismi	58.24	256	P	P	07 45 21.3	-1.1
PSA00				IAmb	IAmb	07 45 22.0	
	comp=Z,20nm,1.1s						
VNDA	Vanda	60.12	185	P	P	07 45 34.2	+0.2
	comp=Z,2.4nm,1.0s,baz=224,slow=2.7,SNR=2.4						
MAJO	Matsushiro	68.46	323	P	P	07 46 27.0	-0.4
MAJO				IAmb	IAmb	07 46 45.3	
	comp=Z,7.7nm,1.0s						
JHS	Saijyo	70.45	319	P	P	07 46 39.6	+0.2
QSPA	South Pole Qui	71.78	180	P	P	07 46 46.5	-0.4
NVAR	Mina Array Bea	79.39	44	P	P	07 47 30.1	+0.6
	comp=Z,0.8nm,0.7s,baz=221,slow=9.3,SNR=6.2						
TXAR	Lajitas Array	85.82	57	P	P	07 48 03.5	+1.6
	comp=Z,1.5nm,0.7s,baz=223,slow=6.3,SNR=22						
ILAR	Eielson Array	86.14	13	P	P	07 48 01.4	-1.1
	comp=Z,0.6nm,0.5s,baz=219,slow=5.0,SNR=12						
PDAR	Pinedale Array	87.32	43	P	P	07 48 09.2	+0.3
	comp=Z,0.5nm,0.7s,baz=197,slow=4.6,SNR=4.0						
CMAR	Chiang Mai Arr	89.41	290	P	P	07 48 19.2	+0.3
	comp=Z,1.8nm,0.5s,baz=113,slow=3.2,SNR=8.1						
SNAA	Sanae	90.22	178	P	P	07 48 20.6	-1.2
VNA3	Neumayer Olymp	90.35	176	P	P	07 48 21.3	-1.0
VNA2	Neumayer--Watz	90.79	177	P	P	07 48 23.6	-0.7
	baz=173,slow=4.6						
VNA1	Neumayer--Stat	91.02	177	P	P	07 48 24.5	-0.8
MKAR	Makanchi Array	109.70	314	PKiKP	PKiKP	07 53 46.5	-2.1
	comp=Z,0.3nm,0.5s,baz=104,slow=0.8,SNR=4.7						
ARCES	ARCESS Array B	126.75	350	PKP	PKPdf	07 54 19.7	-0.8
	comp=Z,3.1nm,0.9s,baz=350,slow=2.7,SNR=5.7						
KBZ	Khabaz	137.37	316	PKP	PKPdf	07 54 42.8	+1.6
	comp=Z,1.7nm,0.3s,baz=9.7,slow=1.7,SNR=4.2						
AKASG	Malin Array Be	141.08	332	PKhKP	PKPpre	07 54 41.0	
	comp=Z,0.6nm,0.4s,baz=38,slow=4.2,SNR=4.1						
BRTR	Keskin Array B	145.34	315	PKPbc	PKPdf	07 54 56.2	+0.4
	comp=Z,2.1nm,0.6s,baz=134,slow=4.4,SNR=10						
CLL	Collm	145.91	348	*i* PKPbc	PKPdf	07 54 57.6	+1.4
	comp=Z,11nm,0.8s						
CLL				*i* PKPab	PKiKP	07 55 03.0	+2.4
GERES	GERESS Array B	148.07	345	PKPbc	PKPdf	07 55 03.6	+3.6
	comp=Z,1.7nm,0.6s,baz=29,slow=3.0,SNR=13						

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*IDC **13** 07:43:01.4±3.5,18°.55N×147°.56E,h0^{km},mb3.7/6, mb1 3.8/6,mb1mx3.7/28,mbtmp3.7/6,Error ellipse: s-maj=144.3km s-min=23.8km az=83.0*

ISC 13 07:43:07.0±3.3,**18°.5N**±0°.2×**147°.5E**±0°.9,**h35**^{km}**,n6,** σ**0^{s}.49**/6,**mb3.6**/6,**Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	40.33	199	P	P	07 50 41.3	0.0
	0.4nm,0.3s,baz=25,slow=8.3,SNR=5.3						
ASAR	Alice Springs	43.96	198	P	P	07 51 11.0	+0.1
	0.4nm,0.3s,baz=21,slow=6.5,SNR=6.7						
SONM	Songino Array	44.35	321	P	P	07 51 14.5	+0.5
	0.3nm,0.4s,baz=127,slow=9.2,SNR=2.4						
ZALV	Zalesovo Beam	59.19	322	P	P	07 53 04.0	-0.4
	0.3nm,0.3s,baz=116,slow=9.8,SNR=2.0						
MKAR	Makanchi Array	59.81	314	P	P	07 53 08.3	-0.5
	0.2nm,0.4s,baz=89,slow=10.0,SNR=4.6						
FINES	FINESS Array B	87.75	336	P	P	07 55 52.1	0.0
	0.7nm,0.5s,baz=66,slow=6.0,SNR=6.6						

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*IDC **13** 07:43:27.3±4.1,14°.78S×167°.39E,h119^{km}±33^{km},mb4.1/7, mb1 4.3/7,mb1mx3.9/20,mbtmp4.4/7,MS4.1/1,Ms1 4.1/1, ms1mx3.2/28,Error ellipse: s-maj=31.0km s-min=23.1km az=116.0*

*NOU **13** 07:43:28.0,14°.63S×167°.44E,h128^{km},mb4.7/31, Vanuatu Islands*

*NEIC **13** 07:43:29.7±1.8,14°.8S±0°.1×167°.4E±0°.2,h133^{km}±6^{km}, mb4.6/15,Error ellipse: s-maj=25.4km s-min=16.8km az=96.0*

ISC 13 07:43:29.0±0.7,**14°.88S**±0°.08×**167°.4E**±0°.1,**h129**^{km}**,n66,** σ**1^{s}.59**/66,**mb4.7**/24,**Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.59	198	Pn	Pn	07 43 49.6	+1.0
SANVU	Saraoutou	0.59	198	P	Pn	07 43 49.7	+1.2
DVP	Devils Point	2.93	165	P	Pn	07 44 16.9	+2.2
LIFNC	LIFOU	5.87	181	Pn	Pn	07 44 54.3	+0.6
LIFNC	LIFOU	5.87	181	P	Pn	07 44 54.3	+0.6
KOUNC	Koumac, New Ca	6.37	207	P	Pn	07 45 02.8	+2.3
MARNC	Mare, Loyalty	6.59	175	Pn	Pn	07 45 03.4	-0.1
MARNC	Mare, Loyalty	6.59	175	P	Pn	07 45 03.6	+0.1
DZM	Mont Dzumac	7.21	187	*e*Pn	Pn	07 45 14.0	+2.1
	15nm,0.2s						
DZM				*e*Sn	Sn	07 46 25.8	-6.7
	24nm,0.3s						
DZM	Mont Dzumac	7.21	187	Pn	Pn	07 45 14.2	+2.3
ONTNC	Ouen Toro	7.44	187	Pn	Pn	07 45 17.9	+3.0
OUENC	Ouen Island, N	7.52	184	Pn	Pn	07 45 18.0	+2.1
PINNC	Pines Island,	7.69	180	Pn	Pn	07 45 20.4	+2.1
EIDS	Eidsvold	18.51	233	P	Pn	07 47 37.5	+0.3
	60nm,0.6s						
RAO	Raoul Island	19.72	139	P	P	07 47 47.7	-0.8
RMQ	Roma	20.88	233	P	P	07 48 02.7	+1.7
	46nm,0.8s						
OUZ	Omahuta	21.01	166	P	P	07 48 04.8	+2.5
ARMA	Armidale	21.19	220	P	P	07 48 07.9	+3.4
	21nm,1.1s						
URZ	Urewera	24.82	162	P	P	07 48 41.8	+2.6
	86nm,1.4s						
BKZ	Black Stump Fm	25.48	163	P	P	07 48 46.3	+1.0
CMSA	Cobar Meteorol	25.86	226	P	P	07 48 49.9	+1.3
	22nm,0.9s						
CNB	Canberra Magne	26.01	215	P	P	07 48 51.0	+1.0
	31nm,1.5s						
BFZ	Birch Farm	26.84	165	P	P	07 48 59.4	+2.0
	47nm,1.5s						
KHZ	Kahutara	27.95	170	P	P	07 49 07.8	+0.6
	48nm,2.7s						
LTZ	Lake Taylor	28.12	172	P	P	07 49 09.7	+0.9
LTZ				IAmb	IAmb	07 49 10.6	
	comp=Z,16nm,0.7s						
STKA	Stephens Creek	28.99	230	P	P	07 49 18.0	+1.4
	comp=Z,16nm,0.4s,baz=54,slow=9.1,SNR=56						
STKA	Stephens Creek	28.99	230	P	P	07 49 18.0	+1.4
STKA				IAmb	IAmb	07 49 18.9	
	comp=Z,7.4nm,1.1s						
STKA	Stephens Creek	28.99	230	P	P	07 49 17.4	+0.8
	comp=Z,8.2nm,1.5s						
ARPS	Mount Arapiles	31.51	222	P	P	07 49 40.3	+1.5
	comp=Z,25nm,0.7s						
HTT	Hallett	31.71	229	P	P	07 49 41.4	+0.7
	comp=Z,21nm,1.2s						
WB0	Warramunga Arr	31.84	256	P	P	07 49 40.6	-1.4
WB0				IAmb	IAmb	07 49 42.0	
	comp=Z,2.9nm,0.7s						
WRAB	Tennant Creek	31.89	256	P	P	07 49 40.8	-1.6
WRA	Warramunga Arr	31.91	256	P	P	07 49 40.5	-2.0
	comp=Z,1.8nm,0.7s,baz=84,slow=8.8,SNR=17						
WRA	Warramunga Arr	31.91	256	P	P	07 49 41.0	-1.5
OOD	Oodnadatta	32.10	241	P	P	07 49 45.0	+0.9
AS31	Alice Springs	32.73	249	P	P	07 49 48.7	-1.0
ASAR	Alice Springs	32.73	249	P	P	07 49 48.8	-1.0
	comp=Z,4.6nm,0.4s,baz=78,slow=9.2,SNR=35						
ASAR				ScP	ScP	07 56 04.4	-0.2
	comp=Z,0.4nm,0.8s,baz=83,slow=4.5,SNR=5.8						
ASAR	Alice Springs	32.73	249	P	P	07 49 48.5	-1.2
BBOO	Buckleboo	33.58	232	P	P	07 49 57.6	+0.7
BBOO	Buckleboo	33.58	232	P	P	07 49 57.2	+0.3
	comp=Z,33nm,0.7s						
MULG	Mulgathing	34.23	238	P	P	07 50 02.0	-0.5
	comp=Z,20nm,1.2s						
KNRA	Kununurra	37.24	264	P	P	07 50 28.0	-0.4
KNRA				IAmb	IAmb	07 50 37.4	
	comp=Z,33nm,1.4s						
WRKA	Warakurna	37.99	248	P	P	07 50 33.6	-1.1
FORT	Forrest	39.32	239	P	P	07 50 45.6	-0.1
FORT	Forrest	39.32	239	P	P	07 50 45.2	-0.5
FITZ	Fitzroy Crossi	40.10	259	P	P	07 50 52.4	+0.1
FITZ	Fitzroy Crossi	40.10	259	P	P	07 50 51.7	-0.6
BATI	Baumata	42.89	271	LR	LR	08 08 18.4	
	comp=Z,275nm,21.8s,baz=282,slow=35						
EDFI	Ende, Flores	45.08	272	P	P	07 51 32.3	-0.4
	comp=Z,7.9nm,0.9s						
MBWA	Marble Bar	45.62	255	P	P	07 51 36.6	-0.2
MEEK	Meekatharra	46.84	247	P	P	07 51 45.6	-0.7
MORW	Morawa	49.31	244	P	P	07 52 05.1	-0.1
MORW				IAmb	IAmb	07 52 05.6	
	comp=Z,8.7nm,0.7s						
VNDA	Vanda	62.72	181	P	P	07 53 39.5	-0.2
	comp=Z,2.3nm,0.5s,baz=351,slow=8.6,SNR=22						
VNDA	Vanda	62.72	181	IAmb	IAmb	07 53 48.5	
	comp=Z,6.8nm,1.1s						
SBA	Scott Base	62.99	180	P	P	07 53 43.4	+1.8
CASY	Casey	63.44	202	P	P	07 53 45.3	+0.7
CASY				IAmb	IAmb	07 53 46.0	
	comp=Z,10nm,0.7s						
QSPA	South Pole Qui	75.15	180	P	P	07 54 57.2	+0.2
QSPA				IAmb	IAmb	07 54 58.1	
	comp=Z,8.3nm,0.9s						
SONM	Songino Array	82.69	324	P	P	07 55 38.2	-0.1
	comp=Z,0.4nm,0.4s,baz=135,slow=4.6,SNR=2.8						
CAST	Castle Rocks	84.10	17	P	P	07 55 44.8	-0.2
CAST				IAmb	IAmb	07 55 45.5	
	comp=Z,2.5nm,0.7s						
ILAR	Eielson Array	86.63	18	P	P	07 55 56.0	-1.5
	comp=Z,1.1nm,0.7s,baz=236,slow=5.0,SNR=12						
ILAR				pP	pwP	07 56 33.0	+0.4
	comp=Z,0.6nm,0.8s,baz=245,slow=4.6,SNR=4.9						
SNAA	Sanae	93.41	183	P	P	07 56 28.4	-1.0
VNA3	Neumayer Olymp	94.07	181	P	P	07 56 31.3	-1.1
VNA2	Neumayer--Watz	94.34	182	P	P	07 56 32.8	-0.8
	baz=178,slow=4.5						
VNA1	Neumayer--Stat	94.64	181	P	P	07 56 33.9	-1.0
MKAR	Makanchi Array	97.39	316	P	Pdif	07 56 48.4	+0.4
	comp=Z,1.1nm,0.9s,baz=108,slow=4.0,SNR=4.4						
ARCES	ARCESS Array B	120.42	345	PKP	PKPdf	08 02 03.5	-1.0
	comp=Z,3.1nm,0.8s,baz=68,slow=2.7,SNR=5.7						

IDC 13 07:55:58.0±4.1,**5°.82S**×**152°.89E,h0**^{km}**,mb3.4**/2, **mb1 3.7**/2,**mb1mx3.4**/50,**mbtmp3.4**/2,**Error ellipse: s-maj=178.7km s-min=53.3km az=123.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.85	230	P	P	08 01 03.1	-0.1
	0.6nm,0.8s,baz=55,slow=9.8,SNR=5.4						
ASAR	Alice Springs	25.47	224	P	P	08 01 27.9	-0.2
	0.9nm,0.6s,baz=56,slow=8.9,SNR=14						
TORD	Torodi Ar. Bea	150.70	286	PKPbc	PKPbc	08 15 53.3	0.0
	0.4nm,0.7s,baz=96,slow=2.7,SNR=2.2						

IDC 13 08:32:48.0±2.9,**53°.42N**×**87°.54E,h0**^{km}**,mb1 3.0**/2, **mb1mx2.9**/37,**mbtmp3.0**/2,**ML2.7**/2,**Error ellipse: s-maj=26.6km s-min=15.0km az=61.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.70	289	*i*		08 41 40.0	
	baz=109,slow=334,SNR=7.3						
ZALV	Zalesovo Beam	1.70	289	Pg	Pn	08 33 17.8	-1.1
	1.2nm,0.3s,baz=111,slow=14,SNR=15						
ZALV				Lg	Lg	08 33 42.1	
	1.9nm,0.3s,baz=104,slow=24,SNR=10						
KURBB	Kurchatov Arra	6.22	247	Pn	Pn	08 34 21.9	+0.9
	0.1nm,0.3s,baz=62,slow=14,SNR=5.3						
KURBB				Lg	Lg	08 36 07.8	
	0.1nm,0.3s,baz=66,slow=32,SNR=4.2						
MKAR	Makanchi Array	7.44	209	Pn	Pn	08 34 38.9	+1.1
	0.2nm,0.3s,baz=29,slow=12,SNR=7.3						
MKAR				Lg	Lg	08 36 42.8	
	0.1nm,0.3s,baz=21,slow=28,SNR=3.2						

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*KRNET **13** 08:50:02.9±0.1,39°.03N×75°.63E,mb3.2*

*SOME **13** 08:50:02.9,39°.38N×75°.17E,h15^{km}*

*NNC **13** 08:50:04.6±4.1,39°.52N×74°.89E,h0^{km},mb3.7,mpv3.3, Error ellipse: s-maj=29.6km s-min=19.1km az=168.0*

ISC 13 08:50:07.0±2.2,**39°.6N**±0°.1×**75°.06E**±0°.05,**h10**^{km}**,n24,** σ**2^{s}.42**/39,**12C-10D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UCH	Uchtor	2.69	351	⇑*i*P	Pg	08 50 58.4	-0.1
	baz=45						
UCH				⇑*i*S	Sg	08 51 39.0	+5.6
	baz=45						
AML	Almayashu	2.76	338	⇓*i*P	Pg	08 51 00.1	+0.2
	baz=35						
AML				⇓*i*S	Sg	08 51 41.9	+6.1
	baz=35						
ULHL	Ulahol	2.82	18	⇓*e*P	Pb	08 50 57.5	-0.1
	baz=8.0						
ULHL				⇓*i*S	Sg	08 51 37.4	-0.2
	baz=8.0						
TARG	Taragay, Kyrgy	3.00	43	⇓*e*P	Pn	08 50 56.4	+1.4
	baz=31						
TARG				⇓*i*S	Sb	08 51 35.6	-2.0
	baz=31						
KBK	Karagaybulak	3.09	358	⇓*i*P	Pg	08 51 03.3	-2.8
	baz=52						
KBK				⇓*i*S	Sg	08 51 47.5	+1.4
	baz=52						
AAK	Ala-Archa	3.10	352	⇑Pg	Pb	08 51 02.2	0.0
	7.0nm,0.6s						
AAK				⇓Lg	Lg	08 51 44.6	
	12nm,0.8s						
AAK	Ala-Archa	3.10	352	⇑*i*P	Pg	08 51 03.9	-2.4
	baz=47						
AAK				⇑*i*S	Sg	08 51 48.5	+2.0
	baz=47						
EKS2	Erkin-Say	3.24	343	⇑*e*P	Pg	08 51 06.5	-2.5
	baz=39						
EKS2				⇑*i*S	Sg	08 51 53.0	+2.0
	baz=39						
TKM2	Tokmak 2	3.38	7	⇑Pg	Pb	08 51 05.8	-1.2
	1.8nm,0.3s						
TKM2				⇓Lg	Lg	08 51 53.5	
	16nm,0.6s						
TKM2	Tokmak 2	3.38	7	⇑*e*P	Pb	08 51 06.4	-0.6
	baz=60						
TKM2				⇑*i*S	Sg	08 51 52.9	-2.5

	baz=60						
CHMS	Chumysh	3.44	356	⇑*i*P	Pb	08 51 08.3	+0.4
	baz=51						
CHMS				⇑*i*S	Sg	08 51 56.1	-1.2
	baz=51						
MRKS	Merke	3.46	337	*e*P	Pg	08 51 11.5	-1.8
	2.4nm,0.5s						
MRKS				*e*S	Sg	08 52 00.7	+2.5
	6.4nm,0.8s						
DGS	Degeres	3.71	8	*e*P	Pg	08 51 16.0	-2.0
	2.8nm,0.5s						
DGS				*e*S	Sg	08 52 08.1	+2.0
	8.7nm,0.6s						
KRBS	Karabastau	4.15	6	*e*P	Pg	08 51 23.5	-2.9
	2.0nm,0.3s						
KRBS				*e*S	Sg	08 52 21.4	+1.2
	6.9nm,0.5s						
KRBS	Karabastau	4.15	6	Pg	Pg	08 51 24.9	-1.6
	2.8nm,0.4s						
KRBS				Lg	Lg	08 52 21.4	
	6.9nm,0.5s						
SATY	Saty	4.30	35	Pg	Pb	08 51 25.5	+2.8
	3.7nm,0.6s						
SATY				Lg	Lg	08 52 21.8	
	4.3nm,0.3s						
KTBS	Karatobe	4.32	16	*e*P	Pb	08 51 24.9	+2.0
	2.5nm,0.6s						
KTBS				*e*S	Sg	08 52 23.8	-1.7
	10nm,0.8s						
KTBS	Karatobe	4.32	16	Pg	Pg	08 51 27.0	-2.6
	3.1nm,0.6s						
KTBS				Lg	Lg	08 52 24.3	
	10nm,0.8s						
KUU	Kurty	4.43	12	*e*P	Pg	08 51 28.4	-3.3
	1.9nm,0.1s						
KUU				*e*S	Sg	08 52 29.3	+0.3
	7.2nm,0.8s						
KUU	Kurty	4.43	12	Pg	Pg	08 51 29.5	-2.2
	2.7nm,0.4s						
KUU				Lg	Lg	08 52 29.3	
	6.3nm,0.8s						
IUG	Iuzhnay	4.60	306	Pg	Pb	08 51 25.9	-1.9
	3.4nm,0.4s						
IUG				Lg	Lg	08 52 22.7	
	6.9nm,0.4s						
UZB	Uzynbulak	4.66	39	Pg	Pb	08 51 30.8	+2.1
	2.0nm,0.3s						
UZB				Lg	Lg	08 52 30.8	
	3.0nm,0.9s						
PDGK	Podgornoye	5.02	40	Pg	Pb	08 51 37.9	+2.9
	1.1nm,0.6s						
PDGK				Lg	Lg	08 52 42.9	
	2.0nm,0.5s						
BTLS	Baital	5.52	352	*e*P	Pg	08 51 49.7	-2.9
	0.8nm,0.5s						
BTLS				*e*S	Sg	08 53 06.3	+2.1
	2.5nm,0.6s						

IDC ***13*** *09:00:58.4±0.8, 21°.42S×66°.66W, h203^{km}±9^{km}, mb3.3/6, mb1 3.5/11, mb1mx3.4/31, mbtmp3.9/11, Error ellipse: s-maj=15.9km s-min=11.7km az=133.0*

NEIC ***13*** *09:00:59.7±1.5, 21°.62S±0°.05×66°.69W±0°.10, h216^{km}±8^{km}, mb4.1/9, Error ellipse: s-maj=14.5km s-min=3.2km az=116.0*

SCB ***13*** *09:01:03.2±1.8, 21°.59S×66°.85W, h199^{km}±9^{km}, ML3.8/8, Error ellipse: s-maj=5.3km s-min=4.2km az=0.0*

ISC 13 09:00:59.0±0.6**, 21°.54S**±0°.05×**66°.77W**±0°.05**, h218**^{km}±6^{km}**, n60, σ1^{s}46**/72**, mb3.9**/9**, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOCB	Mochara	1.09	75	P	Pn	09 01 33.4	+1.6
MOCB				S	S	09 01 57.3	+0.2
MOCB				IAML		09 01 58.9	
	2µm,0.6s						
YJA	Yavi	1.33	119	P	Pn	09 01 34.9	+1.5
YJA				S	S	09 01 59.6	-0.5
YJA				IAML		09 02 02.0	
	211nm,0.3s						
LVC	Limon Verde	2.25	241	P	Pn	09 01 43.0	+1.2
	7.4nm,0.3s,baz=52,slow=7.1,SNR=56						
LVC				S	S	09 02 15.2	+0.2
	5.3nm,0.3s,baz=248,slow=21,SNR=17						
LVC	Limon Verde	2.25	241	P	Pn	09 01 43.5	+1.7
PB09	IPOC Station P	2.31	263	P	Pn	09 01 44.4	+2.2
PB09	IPOC Station P	2.31	263		Pn	09 01 43.7	+1.5
PB01	IPOC Station P	2.58	281	P	Pn	09 01 46.6	+1.6
PB01	IPOC Station P	2.58	281		Pn	09 01 46.2	+1.2
PB08	IPOC Station P	2.63	302	P	Pn	09 01 48.0	+2.1
PB08				S	S	09 02 21.4	-0.7
PB08				IAML		09 02 30.8	
	154nm,0.2s						
PB08	IPOC Station P	2.63	302		Pn	09 01 47.8	+1.9
PB03	IPOC Station P	2.82	259	P	Pn	09 01 49.0	+1.3
PB03				S	S	09 02 24.0	-1.5
PB03				IAML		09 02 26.1	
	340nm,0.2s						
PB06	IPOC Station P	2.85	245	P	Pn	09 01 49.9	+1.9
PB06				S	S	09 02 24.2	-1.9
PB06				IAML		09 02 30.6	
	96nm,0.4s						
PB06	IPOC Station P	2.85	245		Pn	09 01 49.1	+1.1
PB07	IPOC Station P	2.91	266	P	Pn	09 01 50.0	+1.3
PB07				S	S	09 02 25.6	-1.7
PB07				IAML		09 02 27.3	
	700nm,0.4s						
PB07	IPOC Station P	2.91	266		Pn	09 01 49.5	+0.7
PB02	IPOC Station P	2.92	274	P	Pn	09 01 49.9	+1.1
PB02				S	S	09 02 25.8	-1.7
PB15	IPOC Station P	3.00	236	P	Pn	09 01 51.8	+2.0
PB11	IPOC Station P	3.23	303	P	Pn	09 01 53.4	+0.9
PB11				S	S	09 02 32.6	-1.5
PB04	IPOC Station P	3.24	255	P	Pn	09 01 53.6	+1.1
PB04				S	S	09 02 32.1	-2.1
PB04				IAML		09 02 34.3	
	234nm,0.9s						
TA01	Diego Aracena	3.33	286		Pn	09 01 53.9	+0.5
SLA	San Lorenzo	3.38	160	P	Pn	09 01 55.6	+1.5
PB05	IPOC Station P	3.44	247	P	Pn	09 01 56.1	+1.3
PB05				S	S	09 02 36.0	-2.4
PB05				IAML		09 02 38.9	
	68nm,0.4s						
PB10	IPOC Station P	4.01	240	P	Pn	09 02 01.8	+0.2
PB14	IPOC Station P	4.54	227	P	Pn	09 02 08.8	+0.4
BBOE	La Paz, Chanca	4.84	346	P	Pn	09 02 15.0	+2.5
BBOD	La Paz, Gloria	5.17	340	P	Pn	09 02 19.4	+2.8
LPAZ	La Paz	5.38	346	P	Pn	09 02 21.4	+2.1
LPAZ	La Paz	5.38	346	Pn	Pn	09 02 21.5	+2.1
AHML	Horco Molle	5.38	166	P	Pn	09 02 19.4	+0.7
AC02	Maricunga	5.70	202	Pn	Pn	09 02 23.2	+0.1
GO03	Copiap	6.80	207	Pn	Pn	09 02 35.0	-1.9
SIV	San Ignacio	7.72	45	P	Pn	09 02 47.8	-1.0
	14nm,0.3s,baz=257,slow=9.9,SNR=116						
SIV				S	S	09 04 12.3	-4.1
	1.6nm,0.3s,baz=312,slow=22,SNR=3.3						
PTLB	Pontes e Lacer	9.44	51	Pn	Pn	09 03 11.1	+0.2
CPUP	Villa Florida	9.86	121	P	Pn	09 03 15.7	-0.6
	0.2nm,0.3s,baz=303,slow=12,SNR=4.2						
CPUP	Villa Florida	9.86	121		Pn	09 03 15.1	-1.1
ETMB	Extrema	11.67	3	Pn	Pn	09 03 39.1	-0.2
MT02	Curacav	12.30	197	Pn	Pn	09 03 46.5	-0.6
SAML	Samuel	12.99	16	Pn	Pn	09 03 56.3	+0.4
BO01	Tunca	13.36	196		P	09 04 03.2	+0.7
ATAH	Atahualpa	18.20	320	P	Pn	09 04 58.4	-0.7
	0.4nm,0.3s,baz=50,slow=7.9,SNR=3.1						
MACA	Manacapuru-AM	19.20	19	P	P	09 05 06.7	-0.1
PLCA	Paso Flores	19.40	189	P	Pn	09 05 11.6	-1.0
	0.4nm,0.3s,baz=358,slow=10,SNR=8.2						
PLCA	Paso Flores	19.40	189	P	Pn	09 05 10.9	-1.7
LL04	Puerto Octay	19.89	193	P	P	09 05 13.0	-1.0
LL04				IAmb	IAmb	09 05 34.9	
	comp=Z,9.8nm,1.5s						
PTGA	Pitinga	21.72	19	P	P	09 05 31.5	-1.7
	comp=Z,2.0nm,0.3s,baz=191,slow=20,SNR=9.1						
PTGA	Pitinga	21.72	19	P	P	09 05 31.0	-2.3
PTGA				IAmb	IAmb	09 05 45.3	
	comp=Z,2.9nm,0.8s						
ZARC	Zaragoza, Cauc	29.92	344	P	P	09 06 46.1	-0.9
ZARC				IAmb	IAmb	09 06 47.0	
	comp=Z,2.1nm,0.7s						
SJCC	San Jacinto, C	32.31	344	P	P	09 07 08.9	+1.0
SJCC				IAmb	IAmb	09 07 10.0	
	comp=Z,19nm,1.5s						
SNAA	Sanae	61.60	161	P	P	09 10 52.9	-0.2
TXAR	Lajitas Array	61.82	324	P	P	09 10 55.7	+0.5
	comp=Z,0.1nm,0.3s,baz=149,slow=9.5,SNR=1.6						
QSPA	South Pole Qui	68.65	180	P	P	09 11 40.5	+1.8
QSPA				IAmb	IAmb	09 11 41.1	
	comp=Z,4.1nm,0.9s						
PDAR	Pinedale Array	75.16	329	P	P	09 12 18.7	+1.1
	comp=Z,0.2nm,0.5s,baz=125,slow=7.7,SNR=4.2						
PDAR	Pinedale Array	75.16	329	P	P	09 12 18.8	+1.2
TORD	Torodi Ar. Bea	75.50	69	P	P	09 12 19.5	-0.4
	comp=Z,2.1nm,0.4s,baz=257,slow=5.4,SNR=24						
TORD				pP	pP	09 13 14.0	+1.2
	comp=Z,1.5nm,0.7s,baz=255,slow=5.4,SNR=7.4						
NVAR	Mina Array Bea	76.77	321	P	P	09 12 28.0	+1.2
	comp=Z,0.2nm,0.5s,baz=169,slow=7.2,SNR=2.0						
BOSA	Boshof	81.67	117	P	P	09 12 53.8	+0.3
	comp=Z,1.0nm,0.4s,baz=270,slow=7.1,SNR=2.5						
ASAR	Alice Springs	130.76	205	PKP	PKiKP	09 19 45.6	-0.3
	comp=Z,0.4nm,0.4s,baz=163,slow=1.6,SNR=4.3						
WRA	Warramunga Arr	133.89	208	PKP	PKPdf	09 19 51.5	+0.5
	comp=Z,0.4nm,0.4s,baz=161,slow=1.8,SNR=8.8						
MKAR	Makanchi Array	144.47	37	PKP	PKPdf	09 20 09.6	+0.2
	comp=Z,3.1nm,0.6s,baz=317,slow=3.9,SNR=24						
MKAR	Makanchi Array	144.47	37		PKPbc	09 20 08.9	+0.4

NNC 13 09:03:31.0±8.0**, 36°.92N**×**70°.71E, h0**^{km}**, mb3.9, mpv3.6, 4C, Error ellipse: s-maj=64.6km s-min=60.1km az=40.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.17	359	⇑Pn	Pn	09 05 03.6	+0.2
	0.4nm,0.3s,baz=172,slow=12,SNR=11						
KK31				Sn	Sn	09 06 14.7	-0.1
	2.4nm,0.4s,baz=177,slow=22,SNR=8.8						
AAK	Ala-Archa	6.41	26	⇑Pn	Pn	09 05 07.1	+0.3
	2.5nm,0.4s						
AAK				⇑Sn	Sn	09 06 23.5	+2.8
	4.4nm,0.9s						
TKM2	Tokmak 2	7.07	31	⇑Pn	Pn	09 05 14.9	-1.0
	6.4nm,0.6s						

NNC ***13*** *09:51:17.9±2.6, 54°.15N×86°.67E, h0^{km}, mb2.9, mpv2.8, Error ellipse: s-maj=27.3km s-min=12.5km az=5.0, Suspected Mining explosion.*

IDC ***13*** *09:51:21.8±2.3, 54°.03N×86°.45E, h0^{km}, mb1 3.5/2, mb1mx3.1/39, mbtmp3.5/2, ML3.1/2, Error ellipse: s-maj=19.0km s-min=11.3km az=61.0*

ISC 13 09:51:25.8±3.2**, 54°.2N**±0°.2×**83°.75E**±0°.09**, h0**^{km}**, n7, σ1^{s}04**/10**, 4C-4D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.70	114	*i*		09 57 00.0	
	baz=84,slow=334,SNR=29						
ZAA0	Zalesovo Array	0.70	114	⇑P	Pg	09 51 38.7	-0.4
	0.7nm,0.6s						
ZAA0				⇓S	Sn	09 51 54.6	+0.2
	7.8nm,0.8s						
ZALV	Zalesovo Beam	0.70	114	Pg	Pg	09 51 38.8	-0.2
	2.1nm,0.3s,baz=84,slow=17,SNR=17						
ZALV				Lg	Lg	09 51 53.8	
	9.1nm,0.3s,baz=85,slow=29,SNR=23						
ZALV				Rg	Rg	09 51 59.2	
	96nm,1.2s,baz=84,slow=27,SNR=8.6						
KURBB	Kurchatov Arra	4.83	223	Pn	Pb	09 52 52.1	+1.0
	0.3nm,0.3s,baz=56,slow=14,SNR=24						
KURBB				Lg	Lg	09 54 32.4	
	0.1nm,0.3s,baz=58,slow=32,SNR=3.6						
KURBB	Kurchatov Arra	4.83	223	⇑Pn	Pb	09 52 51.6	+0.5
	2.2nm,0.3s						
KURBB				⇓Sn	Sg	09 53 59.0	-1.7
	2.5nm,0.5s						
KURBB				⇑Lg	Lg	09 54 33.1	
	4.6nm,0.7s						
MK31	Makanchi Array	7.51	188	⇓Pn	Pn	09 53 16.3	-0.2
	0.2nm,0.3s,baz=24,slow=13,SNR=29						
MK31				⇑Sn	Sn	09 54 44.1	+1.8
	0.5nm,0.5s						
MK31				⇓Lg	Lg	09 55 26.4	
	1.8nm,0.8s,baz=24,slow=31,SNR=3.5						
MKAR	Makanchi Array	7.51	188	Pn	Pn	09 53 16.3	-0.2
	0.5nm,0.3s,baz=25,slow=14,SNR=25						
MKAR				Sn	Sn	09 54 42.3	0.0
	0.2nm,0.3s,baz=24,slow=27,SNR=4.5						
MKAR				Lg	Lg	09 55 25.3	
	0.0nm,0.3s,baz=22,slow=31,SNR=4.4						

IDC ***13*** *10:00:31.5±1.3, 48°.79N×156°.33E, h0^{km}, mb3.5/4, mb1 3.8/6, mb1mx3.5/30, mbtmp3.7/6, ML3.4/2, MS3.2/3, Ms1 3.2/3, ms1mx2.7/34, Error ellipse: s-maj=47.1km s-min=24.9km az=134.0*

MOS ***13*** *10:00:33.7±0.9, 48°.82N×156°.29E, h31^{km}, mb4.0/1, Error ellipse: s-maj=32.8km s-min=5.1km az=78.3*

KRSC ***13*** *10:00:36.5±1.7, 49°.26N×156°.59E, h15^{km}±20^{km}, ML4.3*

ISC 13 10:00:36.9±0.9**, 49°.07N**±0°.09×**156°.0E**±0°.1**, h34**^{km}**, n51, σ1^{s}48**/54**, mb3.7**/6**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.61	2	*e*PN	Pn	10 01 02.8	-0.1
SKR				pmax	pmax		
	comp=Z,255nm,0.6s						
SKR	Severo-Kuril's	1.61	2	*e*P	Pn	10 01 01.2	-1.7
SKR				*e*S	Sn	10 01 19.7	-2.8
PAU	Pauzhetka	2.45	12	PN	Pn	10 01 14.0	-0.4
PAU	Pauzhetka	2.45	12	*e*P	Pn	10 01 14.0	-0.4
PAU				*e*S	Sn	10 01 41.5	-1.6
KDTR	Khodutka, Kamc	3.04	25	PN	Pn	10 01 22.5	+0.1
KDTR	Khodutka, Kamc	3.04	25	*e*P	Pn	10 01 22.5	+0.1
KDTR				*e*S	Sn	10 01 56.1	-1.5
ASAK	Asacha	3.52	19	PN	Pn	10 01 30.7	+1.5
ASAK	Asacha	3.52	19	*e*P	Pn	10 01 30.7	+1.5
MTVR	Mutnovka	3.68	21	PN	Pn	10 01 32.7	+1.3
MTVR	Mutnovka	3.68	21	*e*P	Pn	10 01 32.7	+1.3
MTVR				*e*S	Sn	10 02 13.3	-0.3
RUS	Russkaya	3.71	24	PN	Pn	10 01 32.0	+0.2
RUS	Russkaya	3.71	24	*e*P	Pn	10 01 32.0	+0.2
RUS				*e*S	Sn	10 02 13.1	-1.2
GRL	Gorelyy	3.72	20	PN	Pn	10 01 33.5	+1.6
GRL	Gorelyy	3.72	20	*e*P	Pn	10 01 33.5	+1.6
APC	Apacha	3.92	10	PN	Pn	10 01 36.9	+2.3
APC	Apacha	3.92	10	*e*P	Pn	10 01 36.9	+2.3
PETK	Petropavlovsk-	4.17	14	Pn	Pn	10 01 39.0	+0.9
	comp=Z,4.6nm,0.3s,baz=196,slow=15,SNR=49						
PETK				LR	LR	10 03 37.3	
	comp=Z,170nm,19.2s,baz=152,slow=42						
PET	Petropavlovsk	4.29	22	*e*PN	Pn	10 01 40.9	+1.3
PET	Petropavlovsk	4.29	22	*e*P	Pn	10 01 40.7	+1.1
PET				*e*S	Sn	10 02 28.4	0.0
DALK	Dalny	4.32	22	PN	Pn	10 01 41.1	+1.0
DALK	Dalny	4.32	22	*e*P	Pn	10 01 41.1	+1.0
DALK				*e*S	Sn	10 02 28.9	-0.3
AVH	Avacha	4.53	21	PN	Pn	10 01 44.8	+1.7
AVH	Avacha	4.53	21	*e*P	Pn	10 01 44.8	+1.7
KOK	Koryaka	4.53	20	PN	Pn	10 01 45.6	+2.5
KOK	Koryaka	4.53	20	*e*P	Pn	10 01 45.6	+2.5
SMAR	Somma	4.54	22	PN	Pn	10 01 45.8	+2.4
SMAR	Somma	4.54	22	*e*P	Pn	10 01 45.8	+2.4
KRER	Koryakskii	4.57	21	PN	Pn	10 01 45.7	+2.0
KRER	Koryakskii	4.57	21	*e*P	Pn	10 01 45.7	+2.0
SDLR	Sedlovina	4.58	22	PN	Pn	10 01 45.1	+1.3
SDLR	Sedlovina	4.58	22	*e*P	Pn	10 01 45.1	+1.3
SPN	Mys Shipunski	4.75	30	PN	Pn	10 01 46.9	+0.9
SPN	Mys Shipunski	4.75	30	*e*P	Pn	10 01 46.9	+0.9
SPN				*e*S	Sn	10 02 40.3	+0.5
GNL	Ganaly	4.78	14	PN	Pn	10 01 48.5	+2.0
GNL	Ganaly	4.78	14	*e*P	Pn	10 01 48.5	+2.0
MKZ	Mys Kozlova	6.53	31	PN	Pn	10 02 10.0	-0.4
MKZ	Mys Kozlova	6.53	31	*e*P	Pn	10 02 10.0	-0.4
TUMR	Tumrok	6.71	21	PN	Pn	10 02 14.7	+1.6
TUMR	Tumrok	6.71	21	*e*P	Pn	10 02 14.7	+1.6
ASAJ	Asahikawa	10.49	247	Pn	Pn	10 03 04.9	+0.2
	comp=Z,0.4nm,0.3s,baz=74,slow=16,SNR=5.9						
SEY	Seymchan	14.04	353	LR	LR	10 08 43.7	
	comp=Z,70nm,21.2s,baz=116,slow=34						
H11S1	WAKE ISLAND Hy	31.69	160	T	T	10 40 44.2	
	baz=346,slow=76,SNR=63						
H11S3	WAKE ISLAND Hy	31.70	160	T	T	10 40 49.0	
	baz=346,slow=76,SNR=71						
H11S2	WAKE ISLAND Hy	31.71	160	T	T	10 40 45.6	
	baz=346,slow=76,SNR=51						
ILAR	Eielson Array	33.51	41	P	P	10 07 12.1	-0.6
	comp=Z,0.7nm,0.8s,baz=252,slow=6.6,SNR=7.9						
ILAR				pP	sP	10 07 24.9	-0.8
	comp=Z,0.5nm,0.8s,baz=254,slow=9.0,SNR=3.0						
ARCES	ARCESS Array B	56.29	341	LR	LR	10 40 43.0	
	comp=Z,37nm,19.0s,baz=230,slow=43						
NVAR	Mina Array Bea	59.65	65	pP	pP	10 10 52.1	+4.9
	comp=Z,0.5nm,0.8s,baz=290,slow=5.7,SNR=3.5						
PDAR	Pinedale Array	61.81	56	P	P	10 10 53.3	+0.9
	comp=Z,0.5nm,0.8s,baz=298,slow=3.2,SNR=4.3						
PDAR				pP	pwP	10 11 06.0	0.0
	comp=Z,0.4nm,0.8s,baz=318,slow=2.0,SNR=3.2						
TXAR	Lajitas Array	74.66	63	pP	pP	10 12 26.5	+3.9
	comp=Z,0.7nm,0.7s,baz=304,slow=4.2,SNR=8.3						
ASAR	Alice Springs	75.06	201	P	P	10 12 13.1	-1.9
	comp=Z,0.1nm,0.4s,baz=21,slow=5.4,SNR=1.3						
BRTR	Keskin Array B	78.00	318	P	P	10 12 33.8	+2.0
	comp=Z,0.7nm,0.8s,baz=14,slow=6.4,SNR=3.6						

JMA ***13*** *10:15:43.6±0.7, 46°.93N×152°.69E, h30^{km}, M4.3*

SKHL ***13*** *10:15:44.9±0.9, 46°.30N×153°.00E, h68^{km}±7^{km}, mb4.3/5*

IDC ***13*** *10:15:51.4±2.9, 46°.87N×152°.37E, h88^{km}±25^{km}, mb3.5/8, mb1 3.7/12, mb1mx3.5/45, mbtmp3.9/12, MS2.0/1, Ms1 2.0/1, ms1mx2.0/31, Error ellipse: s-maj=30.0km s-min=18.7km az=144.0*

ISC 13 10:15:45.8±0.9**, 46°.4N**±0°.1×**152°.72E**±0°.09**, h50**^{km}**, n46, σ2^{s}16**/45**, mb3.6**/8**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.59	253	*e*P	Pn	10 16 41.4	+2.5
KUR				AMB	AMB	10 16 43.4	
	60nm,0.5s						
KUR				*e*S	Sn	10 17 21.6	+1.6
KUR				A	A	10 17 30.5	
	200nm,0.4s						
KUR				A	A	10 17 30.5	
	60nm,0.4s						
YUK	Yuzh-Kuril'sk	5.39	246	*e*P	Pn	10 17 06.0	+2.4
YUK				AMB	AMB	10 17 09.1	
	20nm,0.9s						
YUK				*e*S	Sn	10 18 05.6	+1.3
YUK				A	A	10 18 23.5	
	30nm,0.7s						
YUK				A	A	10 18 23.5	
	100nm,0.7s						
PAU	Pauzhetka	5.74	27	*e*P	Pn	10 17 09.4	+1.0
PAU				AMB	AMB	10 17 22.1	
	30nm,0.5s						
NEM2	Nemuro 2	5.81	241	P	Pn	10 17 10.0	+0.6
NEM2				*e*S	Sn	10 18 14.6	0.0
JRA	Rausu	5.91	248	P	Pn	10 17 14.0	+3.3
JNK	Nakash	6.33	246	P	Pn	10 17 19.1	+2.6
AKK	Akkeshi	6.55	242	*e*P	Pn	10 17 20.4	+0.9
AKK				*e*S	Sn	10 18 32.7	-0.2
JAK	Akkeshi	6.65	242	P	Pn	10 17 21.6	+0.7
JAK				*e*S	Sn	10 18 34.3	-1.0
JTKR	Abashiri--Toko	6.68	252	P	Pn	10 17 24.5	+3.2
YSS	Yuzh-Sakhalins	6.88	278	*e*P	Pn	10 17 25.9	+1.9
YSS				AMB	AMB	10 17 28.6	
	20nm,0.8s						
JMP	Maruseppu	7.03	253	P	Pn	10 17 29.7	+3.6
JAR	Ashorobuto	7.08	247	P	Pn	10 17 29.2	+2.5
JOB	Onbets	7.24	244	P	Pn	10 17 31.0	+2.1
JOB				*e*S	Sn	10 18 49.8	+0.2
PETK	Petropavlovsk-	7.45	24	P	Pn	10 17 32.3	+0.5
	0.2nm,0.3s,baz=178,slow=11,SNR=1.5						
JKK2	Kamakawa 2	7.49	254	P	Pn	10 17 35.7	+3.3
ASAJ	Asahikawa	7.50	256	P	Pn	10 17 36.6	+4.1
	1.0nm,0.3s,baz=76,slow=23,SNR=7.4						
ASAJ				LR	LR	10 20 37.1	
	comp=Z,12nm,20.1s,baz=345,slow=39						
JCH	Churui	7.68	244	P	Pn	10 17 36.1	+1.1
JCH				*e*S	Sn	10 18 58.6	-2.1
TYV	Tymovskoe	8.02	307	*e*P	Pn	10 17 42.1	+2.5
TYV				AMB	AMB	10 17 49.7	
	5.0nm,0.7s						
JEM	Erimo	8.15	241	*e*S	Sn	10 19 10.3	-1.7
JBT2	Biratori 2	8.23	248	P	Pn	10 17 44.4	+1.9
JNBK	Urakawa-nobuka	8.24	244	*e*S	Sn	10 19 12.3	-2.1
JNB	Noboribetsu	9.23	249	P	Pn	10 17 57.7	+1.5
JKB	Kayabe	9.53	246	P	Pn	10 18 01.1	+0.8
JYM2	Yakumo 2	9.84	249	P	Pn	10 18 05.6	+1.1
JANG	Nango	10.13	238	P	Pn	10 18 07.2	-1.4
JANG				*e*S	Sn	10 19 55.8	-5.0
JOSM	Okushiri--Mats	10.44	250	P	Pn	10 18 13.5	+0.8
MA2	Magadan	13.25	356	P	Pn	10 18 49.8	-1.1
	1.8nm,0.3s,baz=163,slow=17,SNR=4.7						
USRK	Ussuriysk Ar.	14.75	269	P	Pn	10 19 13.5	+2.2
	baz=78,slow=9.9,SNR=6.8						
H11N2	WAKE ISLAND Hy	29.04	152	T	T	10 53 05.6	
	baz=340,slow=76,SNR=690						
H11N1	WAKE ISLAND Hy	29.05	152	T	T	10 53 06.7	
	baz=340,slow=76,SNR=412						
H11N3	WAKE ISLAND Hy	29.06	152	T	T	10 53 06.8	
	baz=340,slow=76,SNR=356						
H11S1	WAKE ISLAND Hy	30.12	153	T	T	10 54 27.2	
	baz=340,slow=76,SNR=584						
H11S3	WAKE ISLAND Hy	30.13	153	T	T	10 54 26.9	
	baz=340,slow=76,SNR=569						
H11S2	WAKE ISLAND Hy	30.14	153	T	T	10 54 26.3	
	baz=340,slow=76,SNR=458						
ILAR	Eielson Array	36.99	38	P	P	10 22 49.6	-0.4
	0.5nm,0.8s,baz=256,slow=7.5,SNR=5.1						
INK	Inuvik	42.09	32	P	P	10 23 32.4	+0.1
	0.5nm,0.5s,baz=275,slow=4.1,SNR=5.6						
MKAR	Makanchi Array	46.86	297	P	P	10 24 08.8	-1.9
	0.4nm,0.7s,baz=66,slow=6.5,SNR=4.0						
FINES	FINESS Array B	64.24	335	P	P	10 26 13.2	-1.9
	0.9nm,0.3s,baz=54,slow=7.7,SNR=9.2						
NB2	NORSAR Subarra	68.47	341	P	P	10 26 40.2	-2.0
	comp=Z,0.5nm,0.4s,baz=26,slow=6.5						
NOA	NORSAR Array B	68.47	341	P	P	10 26 40.6	-1.7
	comp=Z,0.6nm,0.4s,baz=29,slow=6.5,SNR=6.1						
AKASG	Malin Array Be	71.68	326	P	P	10 26 59.8	-2.2
	comp=Z,0.9nm,0.3s,baz=33,slow=5.9,SNR=4.3						
ASAR	Alice Springs	71.79	198	P	P	10 27 06.5	+3.5
	comp=Z,0.4nm,0.4s,baz=21,slow=6.2,SNR=1.5						
TXAR	Lajitas Array	77.90	60	P	P	10 27 39.8	+1.4
	comp=Z,0.3nm,0.5s,baz=309,slow=5.2,SNR=5.5						
H03N2	Juan Fernandez	139.02	90	T	T	13 10 27.7	
	baz=308,slow=77,SNR=39						
H03N1	Juan Fernandez	139.04	90	T	T	13 10 30.4	
	baz=308,slow=77,SNR=54						
H03N3	Juan Fernandez	139.04	90	T	T	13 10 34.6	
	baz=308,slow=77,SNR=39						

IDC ***13*** *10:20:23.0±2.5, 5°.44S×147°.31E, h190^{km}±22^{km}, mb3.6/6, mb1 3.9/8, mb1mx3.6/27, mbtmp4.2/8, Error ellipse: s-maj=28.7km s-min=20.3km az=123.0*

NEIC ***13*** *10:20:26.4±2.3, 5°.53S±0°.08×147°.3E±0°.1, h214^{km}±8^{km}, mb4.5/16, Error ellipse: s-maj=16.9km s-min=11.6km az=105.0*

DJA ***13*** *10:20:26.4±0.5, 6°S±6°×14°7E±°, h200^{km}±10^{km}, M4.5/6, mB4.6/3, mb4.4/6, MLv4.5/3, Mw(mB)3.8/3*

ISC 13 10:20:23.9±0.7**, 5°.44S**±0°.07×**147°.20E**±0°.09**, h195**^{km}**, n54, σ1^{s}22**/55**, mb4.6**/16**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	Manus Island	3.38	3	Pn	Pn	10 21 21.8	+3.9
PMG	Port Moresby	3.94	181	P	Pn	10 21 25.7	+1.0
	10.0nm,0.3s,baz=17,slow=4.3,SNR=14						
PMG				S	Sn	10 22 11.0	-1.6
	27nm,0.3s,baz=202,slow=21,SNR=16						
PMG	Port Moresby	3.94	181		Pn	10 21 25.6	+0.8
PMG	Port Moresby	3.94	181	P	Pn	10 21 25.8	+1.0
PMG	Port Moresby	3.94	181	P	Pn	10 21 25.8	+1.0
RABL	Rabaul	5.10	76	Pn	Pn	10 21 42.1	+2.5
RABL	Rabaul	5.10	76	P	Pn	10 21 41.5	+2.0
COEN	Coen	9.35	205		Pn	10 22 37.2	+2.5
COEN	Coen	9.35	205	P	Pn	10 22 37.0	+2.2
	16nm,1.4s						
CTAO	Charters Tower	14.59	184		P	10 23 43.7	+1.1
KDU	Kakadu	16.22	243	P	P	10 24 01.0	+0.3
	31nm,0.8s						
DRS	Darwin Rock St	17.53	246	P	Pn	10 24 16.2	-0.6
	8.7nm,0.8s						
WB0	Warramunga Arr	18.93	220		P	10 24 31.0	+0.8
WB0				IAmb	IAmb	10 24 35.3	
	comp=Z,21nm,1.0s						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WR0	Warramunga Arr	18.97	219		P	10 24 31.6	+0.9
WRAB	Tennant Creek	19.07	220	P	P	10 24 32.6	+0.8
WRAB	Tennant Creek	19.07	220	P	P	10 24 32.4	+0.6
WB2	Warramunga Arr	19.08	220		P	10 24 32.8	+0.9
WRA	Warramunga Arr	19.09	220	P	P	10 24 32.7	+0.7
	comp=Z,4.7nm,0.3s,baz=45,slow=11,SNR=313						
WRA	Warramunga Arr	19.09	220	P	P	10 24 32.0	0.0
EIDS	Eidsvold	20.16	170	P	P	10 24 44.4	+1.0
EIDS				IAmb	IAmb	10 24 45.1	
	comp=Z,4.5nm,0.7s						
KNRA	Kununurra	20.76	239	P	P	10 24 50.7	+0.9
KNRA				IAmb	IAmb	10 24 52.0	
	comp=Z,29nm,1.0s						
KNRA	Kununurra	20.76	239	P	P	10 24 49.8	-0.1
	comp=Z,34nm,0.9s						
RMQ	Roma	20.98	176	P	P	10 24 52.7	+0.6
	comp=Z,18nm,0.6s						
AS31	Alice Springs	22.19	214		P	10 25 05.3	+0.8
AS31				IAmb	IAmb	10 25 06.0	
	comp=Z,10.0nm,0.4s						
ASAR	Alice Springs	22.19	214	P	P	10 25 05.2	+0.8
	comp=Z,22nm,0.8s,baz=48,slow=7.7,SNR=302						
ASAR	Alice Springs	22.19	214		P	10 25 05.5	+1.1
INKA	Innaminka	23.01	195	P	P	10 25 12.0	+0.2
	comp=Z,67nm,0.9s						
FITZ	Fitzroy Crossi	24.53	237	P	P	10 25 25.8	+0.1
	comp=Z,41nm,0.5s,baz=49,slow=12,SNR=149						
FITZ	Fitzroy Crossi	24.53	237	P	P	10 25 26.6	+0.9
FITZ	Fitzroy Crossi	24.53	237	P	P	10 25 25.7	0.0
	comp=Z,51nm,0.5s						
OOD	Oodnadatta	24.78	205	P	P	10 25 27.8	-0.1
	comp=Z,21nm,0.7s						
ARMA	Armidale	25.19	171	P	P	10 25 32.6	+0.8
ARMA				IAmb	IAmb	10 25 34.6	
	comp=Z,9.8nm,1.1s						
ARMA	Armidale	25.19	171	P	P	10 25 32.9	+1.2
	comp=Z,8.4nm,0.5s						
LCRK	Leigh Creek	26.27	198	P	P	10 25 41.1	-0.2
	comp=Z,19nm,0.7s						
WRKA	Warakurna	26.62	221	P	P	10 25 44.0	-0.5
STKA	Stephens Creek	26.82	191	P	P	10 25 44.3	-1.9
	comp=Z,0.9nm,0.4s,baz=4.4,slow=13,SNR=4.4						
STKA	Stephens Creek	26.82	191	P	P	10 25 45.1	-1.0
MULG	Mulgathing	27.64	205	P	P	10 25 52.8	-0.7
	comp=Z,14nm,1.1s						
BBOO	Buckleboo	29.15	200	P	P	10 26 05.7	-1.2
BBOO				IAmb	IAmb	10 26 31.4	
	comp=Z,14nm,1.4s						
BBOO	Buckleboo	29.15	200	P	P	10 26 06.6	-0.2
	comp=Z,16nm,2.2s						
FORT	Forrest	30.97	213	P	P	10 26 23.2	+0.3
FORT	Forrest	30.97	213	P	P	10 26 22.7	-0.2
	comp=Z,27nm,0.7s						
MORW	Morawa	37.69	228	P	P	10 27 20.4	-0.3
MORW				IAmb	IAmb	10 27 39.2	
	comp=Z,20nm,1.4s						
VNDA	Vanda	72.45	177	P	P	10 31 28.6	+0.1
	comp=Z,0.9nm,0.6s,baz=341,slow=5.9,SNR=11						
VNDA	Vanda	72.45	177	P	P	10 31 28.2	-0.3
VNDA				IAmb	IAmb	10 31 43.1	
	comp=Z,9.2nm,1.5s						
MKAR	Makanchi Array	77.20	320	P	P	10 31 56.2	-0.1
	comp=Z,0.2nm,0.4s,baz=111,slow=6.3,SNR=2.9						
MLY	Manley	83.53	22	P	P	10 32 28.9	-0.8
QSPA	South Pole Qui	84.52	180	P	P	10 32 33.4	-1.5
ILAR	Eielson Array	84.89	23	P	P	10 32 34.9	-1.6
	comp=Z,0.6nm,0.6s,baz=253,slow=5.3,SNR=11						
ILAR	Eielson Array	84.89	23	P	P	10 32 34.2	-2.2
BMAR	Burnt Mountain	86.81	21	P	P	10 32 45.3	-0.6
NVAR	Mina Array Bea	96.87	52	P	P	10 33 34.2	+0.9
	comp=Z,0.2nm,0.6s,baz=277,slow=9.7,SNR=3.3						
TORD	Torodi Ar. Bea	145.14	285	PKPbc	PKPdf	10 39 38.3	-0.9
	comp=Z,0.9nm,0.6s,baz=65,slow=3.8,SNR=6.8						
TORD	Torodi Ar. Bea	145.14	285		PKPdf	10 39 37.9	-1.3

IDC 13 10:24:37.4±6.5**, 12.°70S×168.°24E, h0km, mb3.5**/3, **mb1 3.8**/3, **mb1mx3.5**/21, **mbtmp3.5**/3, **Error ellipse: s-maj=330.0km s-min=33.8km az=141.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	33.28	253	P	P	10 31 16.3	-0.6
	0.2nm,0.4s,baz=85,slow=9.1,SNR=2.0						
ASAR	Alice Springs	34.31	247	P	P	10 31 26.3	+0.4
	0.5nm,0.8s,baz=77,slow=8.7,SNR=4.8						
ILAR	Eielson Array	84.31	18	P	P	10 37 10.9	0.0
	0.5nm,0.6s,baz=229,slow=5.6,SNR=8.8						

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*IDC **13** 10:34:38.9±1.8, 17.°14N×123.°09E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.4/27, mbtmp3.5/4, Error ellipse: s-maj=175.0km s-min=24.0km az=68.0*

*MAN **13** 10:34:41.4, 17.°01N×122.°79E, h15km, mb4.8, ML3.7, MS3.6*

ISC 13 10:34:43.7±1.1**, 17.°06N**±0.°07×**122.°9E**±0.°1**, h35km, n9, σ0.s93**/12**, mb3.4**/4**, 3C-2D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGCP	Mt. Cagua	1.43	326	⇑*e*P	Pn	10 35 06.1	-1.1
SGCP				*e*S	Sn	10 35 25.6	+0.9
APYP	Conner	1.77	297	⇓*e*P	Pn	10 35 10.2	-1.6
APYP				*e*S	Sn	10 35 33.1	0.0
SIPP	Brgy, Tapao	2.48	291	⇓*i*P	Pn	10 35 21.7	+0.1
JCNP	Jose Panganiba	2.76	184	⇑*e*P	Pn	10 35 24.9	-0.6
JCNP				*e*S	Sn	10 35 56.3	-1.3
LQP	Lukban	3.21	204	⇑*e*P	Pn	10 35 32.3	+0.5
SONM	Songino Array	33.55	340	P	P	10 41 20.7	+0.3
	1.0nm,0.7s,baz=157,slow=8.0,SNR=5.0						
WRA	Warramunga Arr	38.45	163	P	P	10 42 02.3	-0.1
	0.5nm,0.9s,baz=345,slow=9.2,SNR=2.7						
ASAR	Alice Springs	41.88	165	P	P	10 42 31.7	+0.9
	0.2nm,0.6s,baz=347,slow=7.7,SNR=2.6						
MKAR	Makanchi Array	44.70	321	P	P	10 42 53.6	+0.2
	0.5nm,0.9s,baz=97,slow=12,SNR=3.4						

NOU 13 10:39:26.3, 22.°37S×169.°68E, h0km, mb4.0/9**, Southeast of Loyalty Islands, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	1.77	300	P	Pn	10 39 57.7	-0.5
PINNC	Pines Island,	2.08	263	P	Pn	10 40 02.1	-0.4
YATNC	Mamie plateau,	2.60	276	P	Pn	10 40 09.0	-0.7
OUENC	Ouen Island, N	2.63	268	P	Pn	10 40 09.8	-0.2
LIFNC	LIFOU	2.77	304	P	Pn	10 40 11.8	-0.1
ONTNC	Ouen Toro	2.99	271	P	Pn	10 40 15.9	+0.9
DZM	Mont Dzumac	3.01	275	*e*P	Pn	10 40 15.0	-0.4
	27nm,0.2s						
DZM	Mont Dzumac	3.01	275	P	Pn	10 40 15.2	-0.2
NOUC	Port Laguerre	3.14	274	P	Pn	10 40 16.6	-0.5
KOUNC	Koumac, New Ca	5.34	289	P	Pn	10 40 47.7	+0.4

BUC 13 10:44:04.3±0.6**, 45.°08N×28.°30E, h5km, ml1.1**/2**, 8C-3D, Error ellipse: s-maj=6.4km s-min=1.9km az=51.0, Ukraine-Moldova-Southwestern Russia region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CFR	Carcaliu	0.15	310	⇑P	Pg	10 44 06.8	-0.6
CFR				⇑S	Sg	10 44 08.8	-0.6
TPGR	Topolog	0.24	159	⇑P	Pg	10 44 09.0	+0.1
TPGR				⇑S	Sg	10 44 12.9	+0.9
HARR	Harsova	0.47	214	⇓P	Pg	10 44 13.2	-0.1
TIRR	Tirgusor	0.63	173	⇑P	Pg	10 44 16.0	-0.3
TIRR				⇑S	Sg	10 44 24.3	-0.1
ISR	Istrita	1.25	272	⇑P	Pn	10 44 28.8	+0.4
ISR				⇓S	Sn	10 44 45.2	-0.4
MLR	Muntele Rosu	1.71	285	⇓P	Pb	10 44 35.6	-0.7
MLR				⇑S	Sg	10 44 59.0	-0.3

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*IDC **13** 10:48:27.3±1.9, 21.°65N×143.°10E, h302km±17km, mb3.3/11, mb1 3.4/13, mb1mx3.2/45, mbtmp4.0/13, Error ellipse: s-maj=23.9km s-min=12.0km az=92.0*

ISC 13 10:48:28.3±0.9**, 21.°7N**±0.°1×**143.°0E**±0.°2**, h311km, n13, σ0.s71**/16**, mb3.6**/10**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	5.44	352	P	Pn	10 49 51.3	0.0
	21nm,0.3s,baz=103,slow=23,SNR=11						
JCJ				S	S	10 50 56.8	-1.4
	7.1nm,0.3s,baz=274,slow=21,SNR=1.7						
MJAR	Matsushiro Arr	15.39	345	P	P	10 51 49.1	+0.1
	0.1nm,0.3s,baz=170,slow=11,SNR=2.0						
KSRS	Korea Array	20.44	324	P	P	10 52 43.7	+0.8
	0.9nm,0.5s,baz=148,slow=8.0,SNR=5.9						
KLR	Kul'dur	28.92	345	P	P	10 53 59.6	+0.5
	2.8nm,0.6s,baz=150,slow=7.5,SNR=11						
WRA	Warramunga Arr	42.24	192	P	P	10 55 51.4	-0.6
	0.9nm,0.6s,baz=13,slow=8.8,SNR=20						
ASAR	Alice Springs	45.95	192	P	P	10 56 20.5	-0.6
	0.4nm,0.6s,baz=15,slow=11,SNR=10						
ZALV	Zalesovo Beam	54.13	322	P	P	10 57 21.9	+0.1
	0.6nm,0.5s,baz=97,slow=11,SNR=4.3						
ZALV				PcP	PcP	10 58 21.6	-0.4
	1.0nm,0.4s,baz=134,slow=4.3,SNR=4.3						
MKAR	Makanchi Array	54.60	313	P	P	10 57 25.7	+0.4
	0.6nm,0.7s,baz=87,slow=8.0,SNR=5.5						
MKAR				PcP	PcP	10 58 24.4	+0.3
	0.2nm,0.6s,baz=131,slow=4.0,SNR=2.3						
ILAR	Eielson Array	62.11	27	P	P	10 58 16.1	-0.5
	1.0nm,0.7s,baz=258,slow=5.4,SNR=16						
INK	Inuvik	67.63	24	P	P	10 58 51.8	0.0
	0.7nm,0.5s,baz=309,slow=3.4,SNR=4.9						
ARCES	ARCESS Array B	78.89	341	P	P	10 59 58.1	+0.9
	2.0nm,0.5s,baz=78,slow=7.8,SNR=8.8						
FINES	FINESS Array B	83.13	334	P	P	11 00 18.6	-1.0
	1.5nm,0.5s,baz=64,slow=5.1,SNR=11						
NVAR	Mina Array Bea	83.26	51	P	P	11 00 21.6	+0.7
	0.9nm,0.7s,baz=271,slow=4.6,SNR=7.7						

KRNET 13 10:51:34.4±0.1**, 40.°86N×69.°48E, h28km, mb2.7, 10C, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	Batken	1.29	128	⇑*i*P	Pb	10 51 58.3	+0.2
	baz=28						
BTK				⇑*i*S	Sb	10 52 15.9	+1.5
	baz=28						
TRKS	Terek-Say	1.42	61	⇑*i*P	Pb	10 52 00.7	+0.4
	baz=64						
TRKS				⇑*i*S	Sb	10 52 19.1	+1.0
	baz=64						
GAR	Garm	1.96	161	⇑*i*P	Pb	10 52 09.2	-0.3
	baz=61						
GAR				⇑*i*S	Sb	10 52 35.0	+1.4
	baz=61						
CHGR	Chuyangaron	2.21	187	⇑*i*P	Pb	10 52 13.2	-0.6
	baz=87						
CHGR				⇑*i*S	Sb	10 52 41.6	+0.9
	baz=87						
DRK	Karamyk	2.24	127	⇑*i*P	Pb	10 52 14.7	+0.2
	baz=27						
DRK				⇑*i*S	Sb	10 52 42.8	+0.9
	baz=27						

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*JMA **13** 11:04:32.5±0.4, 35.°85N×129.°30E, h14km, M3.1*

*KMA **13** 11:04:33.1±0.1, 35.°81N×129.°35E, h0km, Error ellipse: s-maj=1.0km s-min=0.5km az=282.0*

ISC 13 11:04:32.9±0.9**, 35.°82N**±0.°02×**129.°37E**±0.°04**, h10km, n45, σ0.s38**/48**, South Korea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSYOC	YEONGCHEON	0.37	295	P	Pb	11 04 41.6	0.0
	SNR=30						
KSPHA	Pohang	0.38	0	P	Pb	11 04 41.2	-0.5
	SNR=25						
YOCB	Yeongcheon	0.38	296	P	Pb	11 04 41.6	-0.1
	SNR=30						
YOCB				S	Sb	11 04 47.4	-0.2
KSBUS	Busan	0.60	200	P	Pg	11 04 44.9	+0.3
	SNR=33						
MIYA	Miryang-si	0.60	238	P	Pb	11 04 45.2	-0.3
	SNR=12						
KSADO	Andong	0.69	330	P	Pb	11 04 47.0	0.0
	SNR=29						
YODB	Yeongdeok	0.72	3	P	Pb	11 04 47.3	-0.2
	SNR=37						
KSBSA	Busan_acc	0.76	201	P	Pb	11 04 47.9	-0.3
	SNR=19						
EUSB	Uiseong	0.77	315	P	Pb	11 04 49.0	+0.5
	SNR=6.8						
KSULJ	Uljin	0.89	2	P	Pg	11 04 50.0	+0.1
	SNR=51						
KSMAS	Masan	0.92	226	P	Pb	11 04 50.7	-0.1
	SNR=20						
EURB	Uiryeong-eup	1.01	241	P	Pb	11 04 52.5	0.0
	SNR=23						
KSGIC	Gimchen	1.06	285	P	Pn	11 04 53.6	-0.3
	SNR=63						
KUJA	Jangpyeong	1.12	214	P	Pb	11 04 54.0	-0.3
	SNR=6.5						
KSSAJ	Sangju	1.15	301	P	Pn	11 04 55.0	0.0
	SNR=15						
KSKCH	Geochang	1.20	261	P	Pg	11 04 55.8	-0.2
	SNR=30						
YOJB	Youngju	1.26	327	P	Pg	11 04 57.0	-0.1
	SNR=20						
JTU	Tsushima	1.29	179	P	Pn	11 04 56.5	-0.4
JTU				S	Sb	11 05 13.4	-0.4
KSTBA	Taebaek	1.35	346	P	Pg	11 04 58.7	-0.1
	SNR=14						
KSMGY	Mungyeong	1.35	309	P	Pb	11 04 58.3	0.0
	SNR=31						
HAMB	Hamyang	1.36	258	P	Pb	11 04 58.4	0.0
	SNR=19						
OKCB	Cheongsan-myeo	1.38	293	P	Pb	11 04 59.0	+0.1
	SNR=40						
KSBON	Boeun	1.44	299	P	Pg	11 05 00.9	+0.3
	SNR=41						
JTSM	Tsushimamitsus	1.47	180	P	Pn	11 04 59.7	+0.2
JTSM				S	Sn	11 05 18.8	0.0
YKDB	Yokjido	1.49	217	P	Pn	11 05 00.1	+0.3
	SNR=79						
KSHAD	HADONG	1.50	241	P	Pb	11 05 00.8	0.0
	SNR=13						
KSCHJ	Chungju	1.54	314	P	Pg	11 05 02.0	-0.6
	SNR=15						
GWYB	Gwangyang	1.62	238	P	Pb	11 05 03.0	0.0
	SNR=19						
NAWB	Namwon	1.66	257	P	Pb	11 05 03.6	+0.1
	SNR=9.5						
KSJEO	Jeonju	1.69	275	P	Pb	11 05 04.4	+0.3
	SNR=62						
JHGM	Hagimishima	1.78	125	*e*S	Sn	11 05 27.1	+0.8
YNDB	Yeoundo	1.89	223	P	Pb	11 05 07.0	-0.4
	SNR=8.7						
KSCEA	Cheonan	1.98	301	P	Pb	11 05 09.3	+0.3
	SNR=11						
KSJEU	Jeongeup	2.01	262	P	Pb	11 05 09.6	0.0
	SNR=24						
BUYB	Buyeo	2.04	284	P	Pb	11 05 10.0	0.0
	SNR=8.0						
JII	Iki	2.04	171	*e*S	Sb	11 05 35.1	-0.3
KSKWJ	Gwangju	2.05	252	P	Pb	11 05 09.9	-0.2
	SNR=26						
KSKWJ	Gwangju	2.05	252	P	Pb	11 05 10.0	-0.2
	SNR=28						
KSKWJ	Gwangju	2.05	252	P	Pb	11 05 10.0	-0.2
	SNR=9.7						
BOSB	Boseong-gun	2.05	240	P	Pb	11 05 09.8	-0.5
	SNR=56						
JTY	Toyota	2.08	138	*e*S	Sn	11 05 35.1	+1.3
KOHB	KOHEUNG	2.09	236	P	Pb	11 05 10.4	-0.5
	SNR=22						
SMKB	Mukjeong-gil	2.29	268	P	Pb	11 05 15.0	+0.6
	SNR=6.0						
GOCB	Gochang-gun	2.31	259	P	Pb	11 05 15.0	+0.4
	SNR=16						
YNCB	YEONCHEON	2.96	319	P	Pg	11 05 28.9	-0.7
	SNR=6.8						

NOU 13 11:14:12.7, 13.°21S×166.°22E, h319km, MLv5.0/4**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	2.42	157	P	Pn	11 15 05.0	+0.5

IDC 13 11:15:16.3±4.0**, 6.°34S×151.°54E, h0km, mb3.2**/2**, mb1 3.5**/2**, mb1mx3.2**/33**, mbtmp3.2**/2**, Error ellipse: s-maj=162.9km s-min=52.3km az=121.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.49	229	P	P	11 20 07.2	+0.3
	0.6nm,0.8s,baz=53,slow=9.9,SNR=6.4						
ASAR	Alice Springs	24.17	223	P	P	11 20 34.0	-0.6
	0.6nm,0.7s,baz=58,slow=8.6,SNR=10						
TORD	Torodi Ar. Bea	149.54	285	PKPbc	PKPbc	11 35 08.8	0.0
	0.3nm,0.6s,baz=45,slow=4.0,SNR=2.1						

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*TUL **13** 11:15:51.6±1.0, 36.°943N±0.°009×97.°83W±0.°01, h4km±5km, ML2.6, mb_Lg2.4/9(NEIC), Error ellipse: s-maj=1.6km s-min=1.2km az=120.0*

NEIC 13 11:15:52.0±0.8**, 36.°933N**±0.°010×**97.°82W**±0.°01**, h5km**±1km**, Error ellipse: s-maj=1.6km s-min=1.3km az=122.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.09	201	Pg	Pg	11 15 54.0	+0.1
GC02				Sg	Sg	11 15 55.7	+0.5
KAN14	Manchester OK	0.12	282	Pg	Pg	11 15 54.3	-0.1
KAN14				Sg	Sg	11 15 56.1	0.0
KAN17	Caldwell West	0.12	22	Pg	Pg	11 15 54.5	0.0
KAN17				Sg	Sg	11 15 56.5	+0.3
KAN05	Bluff City Nor	0.18	347		Pg	11 15 55.5	0.0
KAN05				Sg	Sg	11 15 58.3	+0.3
KAN01	Argonia South	0.23	13	Pg	Pg	11 15 56.4	0.0
KAN01				Sg	Sg	11 15 58.6	-0.8
KAN09	Caldwell North	0.26	39	Pg	Pg	11 15 57.0	0.0
KAN09				Sg	Sg	11 15 59.3	-1.2
KAN13	South Haven SW	0.29	74	Pg	Pg	11 15 57.7	+0.1
KAN13				Sg	Sg	11 16 01.1	-0.3
KAN10	Anthony SW Sta	0.29	311		Pg	11 15 57.5	-0.1
KAN10				Sg	Sg	11 16 00.0	-1.5
KAN06	Argonia West S	0.32	355		Pg	11 15 58.0	-0.1
KAN06				Sg	Sg	11 16 02.6	+0.3
KAN08	Anthony NE Sta	0.32	338		Pg	11 15 58.1	-0.1
KAN08				Sg	Sg	11 16 02.6	+0.3
OK032	Salt Plains WL	0.34	248	Pg	Pg	11 15 58.4	-0.1
OK032				Sg	Sg	11 16 03.0	+0.1
KAN16	Harper SW Stat	0.35	326	Pg	Pg	11 15 58.6	-0.1
KAN16				Sg	Sg	11 16 03.7	+0.3
KS20	Mayfield South	0.36	36	Pg	Pg	11 15 59.0	-0.1
KS20				Sg	Sg	11 16 04.1	+0.2
KAN12	Harper NE Stat	0.39	339		Pg	11 15 59.3	-0.2
KAN12				Sg	Sg	11 16 04.7	0.0
CROK	Carrier	0.45	197	Pg	Pg	11 16 00.5	-0.1
CROK				Sg	Sg	11 16 06.3	-0.1
BLOK	Blackwell	0.52	109	Pg	Pg	11 16 01.9	-0.1
BLOK				Sg	Sg	11 16 09.2	+0.6
T35A	Sooner Cattle	1.05	91	Pg	Pg	11 16 11.5	-0.6
T35A				Sg	Sg	11 16 26.0	+0.3
U32A	Winter Ranch,	1.10	240		Pg	11 16 12.0	-1.0
U32A					Sg	11 16 27.4	+0.2
OK029	Liberty Lake	1.17	165	Pg	Pg	11 16 14.0	-0.5
OK029				Sg	Sg	11 16 29.7	+0.1
QUOK	Quay	1.18	130	Pg	Pg	11 16 14.0	-0.5
QUOK				Sg	Sg	11 16 29.8	0.0
OK031	S. Brethren Rd	1.26	141	Pg	Pg	11 16 15.3	-0.8
OK031				Sg	Sg	11 16 31.7	-0.7
BCOK	Bluff Creek, N	1.28	172		Pn	11 16 15.7	-0.9
OK030	Cody Creek RV	1.31	140		Pn	11 16 16.2	-0.6
OKCFA	Oklahoma City	1.54	169	Pn	Pn	11 16 20.5	+0.3
OKCSW	OKLAHOMA CITY	1.56	168		Pn	11 16 20.6	+0.3
R32A	Long Quarter,	1.65	335		Pn	11 16 21.5	-0.1
FNO	Franklin	1.71	168	Pn	Pn	11 16 22.2	-0.2
TUL1	Leonard	1.93	121		Pn	11 16 25.5	0.0
WMOK	Wichita Mounta	2.33	200	Pn	Pn	11 16 30.7	-0.2
X34A	Smith Ranch, M	2.33	180		Pn	11 16 31.4	+0.5
KSU1	Kansas State U	2.37	23		Pn	11 16 31.7	+0.2
CBKS	Cedar Bluff	2.41	322	Pn	Pn	11 16 31.2	-0.9
U38A	Gravette	2.81	99		Pn	11 16 37.3	-0.2
X37A	Clayton	3.07	139		Pn	11 16 42.1	+0.9
X37A				IAmb_Lg		11 17 35.8	
	comp=Z,14nm,0.8s						
HHAR	Hobbs	3.19	101	Pn	Pn	11 16 42.8	0.0
S39A	Bolivar	3.67	77	Pn	Pn	11 16 49.7	+0.4
AMTX	Amarillo	3.74	238	Pn	Pn	11 16 50.5	0.0
AMTX				IAmb_Lg		11 17 52.5	
	comp=Z,8.1nm,0.8s						
U40A	Yellville	4.04	97	Pn	Pn	11 16 54.4	0.0
MIAR	Mount Ida	4.20	123		Pn	11 16 56.0	-0.6
N35A	Tabor	4.28	23		Pn	11 16 57.7	0.0
FCAR	Ozark Folk Cen	4.71	101	IAmb_Lg		11 18 18.0	
	comp=Z,4.7nm,0.8s						
WHAR	Wooly Hollow	4.77	108	Pn	Pn	11 17 04.7	+0.2
CCM	Cathedral Cave	5.35	76	Pn	Pn	11 17 11.1	-1.3
SDCO	Great Sand Dun	6.17	280	Pn	Pn	11 17 23.1	-0.9
ECSD	EROS Data Cent	6.86	7	Pn	Pn	11 17 31.6	-1.5
SIUC	Southern Illin	6.90	81	IAmb_Lg		11 19 50.2	
	comp=Z,4.6nm,0.8s						

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*NEIC **13** 11:21:06.6±1.3, 17.°6S±0.°3×178.°8W±0.°3, h569km±12km, mb4.1/15, Error ellipse: s-maj=54.8km s-min=16.5km az=142.0*

*IDC **13** 11:21:07.5±1.9, 17.°34S×179.°03W, h568km±18km, mb3.2/8, mb1 3.5/9, mb1mx3.2/26, mbtmp4.0/9, Error ellipse: s-maj=75.8km s-min=15.7km az=150.0*

ISC 13 11:21:05.4±1.1**, 17.°7S**±0.°3×**178.°8W**±0.°2**, h550km, n30, σ1.s07**/30**, mb4.1**/17**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.02	268	P	P	11 22 23.3	+2.6
	1.8nm,0.3s,baz=344,slow=1.5,SNR=15						
MSVF	Nonsavu	3.02	268	P	P	11 22 23.4	+2.7
MARNC	Mare, Loyalty	13.00	251	P	P	11 23 53.9	-0.4
DZM	Mont Dzumac	14.58	250	P	P	11 24 10.7	0.0
ARMA	Armidale	29.77	239	P	P	11 26 28.8	+0.8
CTAO	Charters Tower	33.14	260	P	P	11 26 56.1	-0.8
CTAO				IAmb	IAmb	11 27 13.1	
	comp=Z,6.1nm,1.2s						
COEN	Coen	36.75	270	P	P	11 27 27.1	+0.1
COEN				IAmb	IAmb	11 27 28.3	
	comp=Z,5.1nm,0.8s						
TOO	Toolangi	37.06	230	P	P	11 27 29.7	+0.5
STKA	Stephens Creek	38.44	241	P	P	11 27 40.8	+0.3
	comp=Z,2.8nm,0.5s,baz=88,slow=9.8,SNR=10						
STKA	Stephens Creek	38.44	241	P	P	11 27 39.9	-0.7
BBOO	Buckleboo	43.22	241	P	P	11 28 18.0	-0.5
BBOO				IAmb	IAmb	11 28 18.8	
	comp=Z,7.4nm,0.8s						
WR0	Warramunga Arr	44.14	259	P	P	11 28 24.3	-1.5
WR0				IAmb	IAmb	11 28 49.4	
	comp=Z,8.5nm,1.4s						
WB0	Warramunga Arr	44.30	260	P	P	11 28 26.8	-0.3
WB0				IAmb	IAmb	11 28 29.4	
	comp=Z,6.6nm,1.4s						
WB2	Warramunga Arr	44.32	259	P	P	11 28 26.8	-0.5
WB2				IAmb	IAmb	11 28 47.5	
	comp=Z,9.6nm,1.4s						
WRAB	Tennant Creek	44.32	259	P	P	11 28 26.1	-1.2
WRA	Warramunga Arr	44.33	259	P	P	11 28 26.1	-1.1
	comp=Z,1.8nm,0.7s,baz=98,slow=7.0,SNR=32						
WRA	Warramunga Arr	44.33	259	P	P	11 28 26.2	-1.1
AS31	Alice Springs	44.52	254	P	P	11 28 28.3	-0.4
AS31				IAmb	IAmb	11 28 28.8	
	comp=Z,4.7nm,0.6s						
ASAR	Alice Springs	44.52	254	P	P	11 28 28.2	-0.5
	comp=Z,16nm,0.6s,baz=88,slow=8.2,SNR=374						
FORT	Forrest	49.80	244	P	P	11 29 06.5	-1.7
FITZ	Fitzroy Crossi	52.72	260	P	P	11 29 29.9	+0.4
	comp=Z,1.7nm,0.8s,baz=60,slow=8.1,SNR=2.3						
NVAR	Mina Array Bea	79.49	44	P	P	11 32 15.8	+0.2
	comp=Z,0.6nm,0.6s,baz=225,slow=9.0,SNR=5.7						
K20K	Telida	83.02	11	P	P	11 32 32.9	0.0
K20K				IAmb	IAmb	11 33 01.1	
	comp=Z,16nm,1.4s						
TRF	Thorofare Moun	83.84	12	P	P	11 32 35.9	-1.2
TRF				IAmb	IAmb	11 32 36.6	
	comp=Z,2.9nm,0.8s						
IMAR	Indian Mountai	85.49	10	P	P	11 32 43.9	-1.0
ILAR	Eielson Array	85.72	13	P	P	11 32 44.8	-1.3
	comp=Z,0.4nm,0.5s,baz=222,slow=5.0,SNR=9.3						
TXAR	Lajitas Array	86.16	58	P	P	11 32 49.8	+0.7

	comp=Z,0.5nm,0.7s,baz=218,slow=7.9,SNR=5.8						
PDAR	**Pinedale Array**	**87.41**	**44**	P	**P**	**11 32 54.5**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=206,slow=3.7,SNR=4.4						
BMAR	**Burnt Mountain**	**88.49**	**13**	P	**P**	**11 32 58.7**	**-0.3**
GERES	**GERESS Array B**	**147.28**	**345**	PKPbc	**PKPbc**	**11 39 47.0**	**-0.5**
	comp=Z,0.9nm,0.6s,baz=64,slow=3.1,SNR=4.9						

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*EST **13** 11:24:15.5±0.1,59°.20N×27°.83E,h0^{km},ML1.5(HEL), Explosion*

HEL 13 11:24:13.7±0.8,59°.23N×28°.05E,h0^{km},ML1.7, Explosion,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EE04	**Vaivara Sinima**	**0.17**	**329**	*e*P	Pg	11 24 18.5	+1.6
EE04				*e*S	Sg	11 24 20.8	+1.6
EE05	**Udria, Vaivara**	**0.17**	**338**	*e*P	Pg	11 24 19.0	+1.9
EE05				*e*S	Sg	11 24 21.6	+2.3
EE03	**Tooma soojaam,**	**0.98**	**249**	*e*P	Pg	11 24 31.3	-1.2
EE03				*e*S	Sg	11 24 42.3	-3.0
VSU	**Vasula**	**1.03**	**222**	*e*P	Pg	11 24 33.0	-0.3
VJF	**Virojoki**	**1.34**	**350**	*e*P	Pn	11 24 39.6	0.0
VJF				*e*SB	Sb	11 24 57.6	+0.4
VJF				MSG		11 25 02.4	
	comp=Z,3.1nm,0.1s						
PVF	**Pernaja**	**1.72**	**321**	*e*PN	Pb	11 24 46.0	-0.1
PVF				MSG		11 25 05.0	
	comp=Z,4.7nm,0.2s						
PVF				*e*SG	Sn	11 25 07.2	-0.2
EE02	**Kiisa, Saku**	**1.72**	**270**	*e*PG	Pn	11 24 44.7	-0.1
EE02				*e*SN	Sn	11 25 06.4	-1.1
MEF	**Metsahovi**	**2.10**	**300**	*e*PG	Pb	11 24 51.9	-0.6
MEF				*e*SG	Sn	11 25 17.6	+0.8
MEF				MSG		11 25 18.5	
	comp=Z,2.8nm,0.1s						
NUR	**Nurmijrvi**	**2.14**	**308**	*e*PG	Pb	11 24 52.5	-0.8
NUR				*e*SB	Sn	11 25 18.5	+0.6
NUR				MSG		11 25 20.0	
	comp=Z,1.7nm,0.1s						
MTSE	**Matsula**	**2.25**	**259**	*e*P	Pb	11 24 53.7	-1.5
MTSE				AML	AML	11 25 02.8	
	comp=Z,20nm,0.7s						
MTSE				*e*S	Sn	11 25 20.7	+0.2
MTSE				AML	AML	11 25 22.5	
	comp=N,40nm,0.2s						
MTSE				AML	AML	11 25 22.5	
	comp=E,24nm,0.3s						
MTSE	**Matsula**	**2.25**	**259**	*e*PG	Pb	11 24 53.7	-1.5
MTSE				*e*SG	Sn	11 25 21.1	+0.5
RUFX	**Ruokolahti**	**2.25**	**11**	*e*P	Pb	11 24 54.7	-0.5
RUFX				*e*S	Sb	11 25 23.3	-0.3
RUFX				*e*SG	Sg	11 25 27.0	+1.0
EE01	**Perakula, Nova**	**2.27**	**271**	*e*PG	Pn	11 24 54.0	+1.5
EE01				*e*SG	Sn	11 25 22.0	+0.9
FIA0	**FINESS Array S**	**2.43**	**337**	*e*P	Pn	11 24 56.1	+1.5
FIA0				*e*PB	Pb	11 24 57.5	-0.7
FIA0				*e*SG	Sb	11 25 29.5	+0.9
FIA0				MSG		11 25 31.2	
	comp=Z,1.4nm,0.1s						
FIA1	**FINESS Array S**	**2.43**	**337**	*e*P	Pn	11 24 56.1	+1.6
FIA1				*e*PB	Pb	11 24 57.7	-0.5
FIA1				*e*SG	Sb	11 25 29.7	+1.1
FIA1				MSG		11 25 31.3	
	comp=Z,2.8nm,0.1s						
EE06	**Soera, Palade,**	**2.69**	**267**	*e*PB	Pb	11 25 00.6	-2.1
KAF	**Kangasniemi**	**3.02**	**344**	*e*PB	Pb	11 25 07.7	-0.5
KAF				*e*SG	Sb	11 25 47.8	+2.2
JOF	**Joensuu**	**4.03**	**22**	*e*P	Pn	11 25 19.5	+3.0

LVSN 13 11:24:23.8±6.5,57°.46N×21°.27E,h0^{km}±108^{km},ML2.4, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLIT	**Slitere, Latvi**	**0.58**	**72**	*e*S	Sg	11 24 40.8	-1.5
PBUR	**Paburge**	**1.48**	**165**	*e*S	Sg	11 25 08.6	-2.8
PBUR				AML	AML	11 25 19.4	
	comp=N,146nm,0.3s						
PBUR				AML	AML	11 25 19.8	
	comp=E,169nm,0.4s						
PBUR				AML	AML	11 25 48.9	
	comp=Z,196nm,0.4s						
VSU	**Vasula**	**3.08**	**69**	AML	AML	11 24 47.3	
	comp=E,50nm,0.4s						
VSU				AML	AML	11 24 51.0	
	comp=N,36nm,0.4s						
VSU				AML	AML	11 25 19.1	
	comp=Z,22nm,0.2s						

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*TUL **13** 11:27:03.8±0.9,36°.942N±0°.008×97°.83W±0°.01,h5^{km}±5^{km}, ML2.6,ML2.2/43(NEIC),Error ellipse: s-maj=1.3km s-min=1.1km az=69.0*

NEIC 13 11:27:04.0±0.7,36°.934N±0°.006×97°.81W±0°.01,h7^{km}±4^{km}, Error ellipse: s-maj=1.7km s-min=0.9km az=91.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GC02	**Grant County #**	**0.09**	**204**	Pg	Pg	11 27 06.2	0.0
GC02				Sg	Sg	11 27 07.9	+0.2
KAN17	**Caldwell West**	**0.12**	**20**	Pg	Pg	11 27 06.8	+0.1
KAN17				Sg	Sg	11 27 08.9	+0.4
KAN14	**Manchester OK**	**0.12**	**281**		Pg	11 27 06.5	-0.2
KAN14				Sg	Sg	11 27 08.3	-0.2
KAN14				IAML		11 27 08.7	
	comp=E,1µm,0.1s						
KAN05	**Bluff City Nor**	**0.18**	**345**		Pg	11 27 07.7	0.0
KAN05				IAML		11 27 10.6	
	comp=N,903nm,0.2s						
KAN05				Sg	Sg	11 27 10.7	+0.5
KAN05				IAML		11 27 11.1	
	comp=E,822nm,0.1s						
KAN01	**Argonia South**	**0.22**	**11**	Pg	Pg	11 27 08.7	+0.2
KAN01				Sg	Sg	11 27 12.0	+0.4
KAN01				IAML		11 27 12.0	
	comp=N,556nm,0.1s						
KAN01				IAML		11 27 12.1	
	comp=E,381nm,0.2s						
KAN09	**Caldwell North**	**0.26**	**38**	Pg	Pg	11 27 09.3	+0.2
KAN09				Sg	Sg	11 27 12.0	-0.6
KAN09				IAML		11 27 13.7	
	comp=N,542nm,0.2s						
KAN13	**South Haven SW**	**0.28**	**74**	Pg	Pg	11 27 09.9	+0.4
KAN13				Sg	Sg	11 27 13.3	-0.1
KAN10	**Anthony SW Sta**	**0.29**	**310**		Pg	11 27 09.8	0.0
KAN10				Sg	Sg	11 27 12.7	-1.1
KAN06	**Argonia West S**	**0.32**	**353**		Pg	11 27 10.3	0.0
KAN06				Sg	Sg	11 27 14.4	0.0
KAN06				IAML		11 27 17.4	
	comp=N,233nm,0.1s						
KAN08	**Anthony NE Sta**	**0.32**	**337**		Pg	11 27 10.3	0.0
KAN08				Sg	Sg	11 27 14.4	-0.1
KAN08				IAML		11 27 15.1	
	comp=N,231nm,0.1s						
KAN16	**Harper SW Stat**	**0.35**	**326**	Pg	Pg	11 27 10.8	-0.2
KAN16				Sg	Sg	11 27 15.5	-0.2
KAN16				IAML		11 27 16.1	
	comp=E,184nm,0.5s						
KS20	**Mayfield South**	**0.36**	**35**	Pg	Pg	11 27 11.2	+0.1
KS20				Sg	Sg	11 27 15.9	0.0
KS20				IAML		11 27 16.5	
	comp=E,261nm,0.2s						
KS20				IAML		11 27 16.8	
	comp=E,254nm,0.2s						
KAN12	**Harper NE Stat**	**0.39**	**338**		Pg	11 27 11.6	-0.1
KAN12				Sg	Sg	11 27 17.1	+0.2
KAN12				IAML		11 27 17.3	
	comp=N,367nm,0.3s						
KAN12				IAML		11 27 20.9	
	comp=E,262nm,0.4s						
CROK	**Carrier**	**0.45**	**198**	Pg	Pg	11 27 12.8	+0.1
CROK				Sg	Sg	11 27 18.8	+0.1
BLOK	**Blackwell**	**0.51**	**110**	Pg	Pg	11 27 13.6	-0.3
BLOK				Sg	Sg	11 27 20.9	+0.4
BLOK				IAML		11 27 25.9	
	comp=N,124nm,0.2s						
BLOK				IAML		11 27 27.1	
	comp=E,120nm,0.2s						
T35A	**Sooner Cattle**	**1.04**	**91**		Pg	11 27 24.0	0.0
T35A				Sg	Sg	11 27 37.7	+0.1
T35A				IAML		11 27 43.2	
	comp=N,73nm,0.3s						
T35A				IAML		11 27 43.3	
	comp=E,58nm,0.3s						
U32A	**Winter Ranch,**	**1.10**	**240**		Pg	11 27 24.4	-0.8
U32A				Sg	Sg	11 27 39.2	-0.3
U32A				IAML		11 27 44.5	
	comp=N,38nm,0.4s						
OK029	**Liberty Lake**	**1.17**	**166**		Pg	11 27 26.2	-0.3
OK029				Sg	Sg	11 27 41.7	0.0
OK029				IAML		11 27 46.7	
	comp=N,35nm,0.3s						
OK029				IAML		11 27 48.3	
	comp=N,55nm,0.3s						
QUOK	**Quay**	**1.17**	**130**		Pg	11 27 26.0	-0.6
QUOK				Sg	Sg	11 27 41.1	-0.6
QUOK				IAML		11 27 45.6	
	comp=N,78nm,0.3s						
OK031	**S. Brethren Rd**	**1.25**	**141**		Pn	11 27 27.4	-0.6
OK031				Sg	Sb	11 27 44.2	-0.1
OK031				IAML		11 27 45.1	
	comp=N,69nm,0.3s						
OK030	**Cody Creek RV**	**1.30**	**140**		Pn	11 27 28.6	0.0
R32A	**Long Quarter,**	**1.65**	**335**		Pn	11 27 32.8	-0.6
FNO	**Franklin**	**1.71**	**169**	Pn	Pn	11 27 34.1	-0.1
TUL1	**Leonard**	**1.92**	**121**		Pb	11 27 38.4	-1.0
WMOK	**Wichita Mounta**	**2.33**	**200**		Pn	11 27 43.2	+0.5
X34A	**Smith Ranch, M**	**2.33**	**180**		Pn	11 27 43.9	+1.2
X37A	**Clayton**	**3.07**	**139**		Pn	11 27 53.1	+0.2
HHAR	**Hobbs**	**3.18**	**101**		Pn	11 27 54.0	-0.5
S39A	**Bolivar**	**3.66**	**77**		Pn	11 28 00.7	-0.3

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*MIRAS **13** 11:33:09.0±0.0,57°.01N×61°.47E,h0^{km},ML3.2/6*

*NNC **13** 11:33:16.6±2.2,56°.44N×61°.96E,h0^{km},mb3.6,mpv3.2, Error ellipse: s-maj=20.0km s-min=7.8km az=159.0, Suspected Mining explosion.*

ISC 13 11:33:07.8±1.1,56°.97N±0°.05×61°.47E±0°.05,h0^{km},n9, σ1^{s}60/18,3C-4D,Ural Mountains region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVE	**Sverdlovsk**	**0.48**	**253**	*e*P	**Pb**	**11 33 18.4**	**-0.7**
	421nm,0.2s,baz=253						
SVE				*e*S	**Sb**	**11 33 25.3**	**-1.3**
	baz=253						
KAUR	**Kamensk Uralsk**	**0.54**	**178**	*i* P	**Pb**	**11 33 19.4**	**-0.7**
	1µm,0.5s,baz=174						
KAUR				*e*S	**Sb**	**11 33 27.6**	**-0.8**
	baz=174						
ARU	**Arti**	**1.69**	**252**	*e*P	**Pg**	**11 33 40.0**	**-0.3**
	383nm,0.2s,baz=253						
ARU				*e*S	**Sg**	**11 34 03.0**	**+0.8**
	baz=253						
PR7R	**Sarany**	**2.15**	**319**	*e*P	**Pb**	**11 33 46.9**	**-0.7**
	439nm,0.2s,baz=320						
PR7R				*e*S	**Sb**	**11 34 15.0**	**+0.2**
	baz=320						
PR3R	**Kungur**	**2.48**	**283**	*e*P	**Pn**	**11 33 49.5**	**+0.3**
	214nm,0.4s,baz=284						
PR3R				*e*S	**Sn**	**11 34 21.4**	**+1.2**
	baz=284						
PR4R	**Vlasy**	**3.27**	**289**	P	**Pn**	**11 34 00.0**	**-0.2**
	268nm,0.2s,baz=290						
PR4R				*e*S	**Sn**	**11 34 40.0**	**+0.2**
	baz=290						
BRVK	**Borovoye**	**6.41**	**124**	⇑Pn	**Pn**	**11 34 45.8**	**+2.5**
	1.0nm,0.3s						
BRVK				⇑Sn	**Sn**	**11 35 54.1**	**-3.0**
	1.6nm,0.3s						
AKTO	**Aktyubinsk**	**6.86**	**199**	⇓Pn	**Pn**	**11 34 53.0**	**+3.5**
	2.0nm,0.8s						
AKTO				⇓Sn	**Sn**	**11 36 08.4**	**+0.1**
	2.5nm,0.7s						
AKTO				⇓Lg	Lg	11 36 44.7	
	2.2nm,0.7s						
AB31	**Akbulak array**	**7.79**	**187**	Pn	**Pn**	**11 35 03.2**	**+1.1**
	0.3nm,0.3s,baz=11,slow=12,SNR=13						
AB31				⇑Sn	**Sn**	**11 36 29.0**	**-1.9**
	0.4nm,0.3s,baz=213,slow=28,SNR=4.2						
AB31				⇓Lg	Lg	11 37 10.0	
	3.3nm,0.6s,baz=8.7,slow=27						

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*SEA **13** 11:36:40.9±1.3,46°.96N±0°.02×123°.95W±0°.06,h35^{km}±7^{km}, ML2.5/28,ML2.4/24(NEIC),Error ellipse: s-maj=5.8km s-min=3.3km az=105.0*

NEIC 13 11:36:40.6±1.7,46°.98N±0°.02×123°.99W±0°.06,h33^{km}±7^{km}, Error ellipse: s-maj=5.6km s-min=2.8km az=83.0, Washington-Oregon border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WISH	**Wishkah**	**0.20**	**46**		Pb	11 36 46.9	-0.2
WISH	**Wishkah**	**0.20**	**46**		Sb	11 36 52.2	+0.6
WISH	**Wishkah**	**0.20**	**46**	IAML		11 36 49.9	
	comp=N,341nm,0.1s						
B017	**Montesano**	**0.29**	**86**		Pb	11 36 47.9	-0.3
B017					Sn	11 36 53.6	-0.1
B019	**Raymond**	**0.40**	**144**		Pb	11 36 49.4	-0.2
B019					Sn	11 36 56.4	+0.1
NLWA	**Neilton Lookou**	**0.42**	**11**		Pb	11 36 50.0	0.0
NLWA					Sn	11 36 57.0	-0.1
NLWA	**Neilton Lookou**	**0.42**	**11**	IAML		11 36 57.1	
	comp=N,360nm,1.0s						
NLWA				IAML		11 36 57.5	
	comp=N,166nm,0.2s						
E03A	**Lebam**	**0.52**	**146**		Pb	11 36 50.7	-0.7
E03A					Sb	11 36 58.5	-0.5
E03A	**Lebam**	**0.52**	**146**	IAML		11 36 58.7	
	comp=N,553nm,0.7s						
E03A				IAML		11 36 59.1	
	comp=E,500nm,0.6s						
RADR	**Rader Ridge**	**0.57**	**167**		Pb	11 36 52.0	-0.3
RADR				IAML		11 37 02.8	
	comp=E,212nm,0.9s						
RADR				IAML		11 37 06.8	
	comp=N,241nm,1.6s						
CPW	**Capitol Peak**	**0.58**	**90**		Pb	11 36 51.4	-1.2
D03D	**Eldon**	**0.83**	**47**		Pn	11 36 55.2	-0.8
D03D					Sn	11 37 06.3	-0.8
D04E	**Lakebay**	**0.85**	**76**		Pn	11 36 56.3	0.0
HDW	**Hoodsport**	**0.93**	**43**		Pn	11 36 56.9	-0.5
GNW	**Green Mountain**	**0.99**	**53**		Pn	11 36 57.6	-0.6
GNW					Sn	11 37 10.2	-0.8
B022	**Seaside**	**1.02**	**178**		Sn	11 37 10.9	-0.8
C03A	**Quillayute Air**	**1.05**	**338**	Pn	Pn	11 36 58.3	-0.7
E04D	**Cinebar**	**1.06**	**113**		Pn	11 36 58.7	-0.5
B023	**Clatskanie**	**1.07**	**144**		Pn	11 36 58.4	-0.9
B04A	**Port Angeles**	**1.13**	**17**	Pn	Pb	11 37 02.0	+0.4
B04A				IAML		11 37 21.9	
	comp=N,92nm,2.1s						
B04A				IAML		11 37 40.4	
	comp=E,95nm,1.8s						
B941	**Kapowsin**	**1.21**	**89**		Pn	11 37 00.6	-0.6
ERK	**Elk Rock**	**1.32**	**120**		Pn	11 37 02.5	-0.3
B201	**Coldwater, Mou**	**1.36**	**119**		Pn	11 37 03.2	-0.2
FL2	**Flat Top 2**	**1.37**	**124**		Pn	11 37 03.5	-0.1
D05A	**Enumclaw**	**1.38**	**80**		Pn	11 37 04.2	+0.6
D05A				IAML		11 37 26.9	
	comp=N,64nm,3.4s						
D05A				IAML		11 37 36.4	
	comp=E,48nm,4.8s						
B203	**Quarry, Mount**	**1.40**	**125**		Pn	11 37 03.8	-0.1
LVP	**Lakeview Peak**	**1.42**	**129**		Pn	11 37 04.3	+0.1
SWF2	**Southwest Flan**	**1.46**	**123**		Pn	11 37 05.4	+0.6
SOSW	**Source of Smit**	**1.47**	**119**		Pn	11 37 05.9	+0.9
F04A	**Amboy**	**1.50**	**133**		Pn	11 37 05.6	+0.3
F04A				IAML		11 37 25.7	
	comp=E,62nm,0.7s						
F04A				IAML		11 37 25.7	
	comp=N,52nm,2.4s						
LON	**Longmire**	**1.51**	**98**		Pn	11 37 05.7	+0.3
LON	**Longmire**	**1.51**	**98**		Pn	11 37 06.1	+0.7
RATT	**Rattlesnake La**	**1.56**	**72**		Pn	11 37 06.0	0.0
SR41	**SR410 Landslid**	**1.68**	**92**		Pn	11 37 09.2	+1.4
C05A	**Tolt Reservoir**	**1.72**	**64**		Pn	11 37 08.3	+0.1
ASR	**Mount Adams--S**	**1.85**	**116**		Pn	11 37 11.3	+1.2
CLRS	**Cowichan Lake**	**1.85**	**357**	Pn	Pn	11 37 09.0	-1.0
CLRS				IAML		11 38 14.2	
	comp=N,59nm,4.5s						
HIYU	**Hiyu Mountain**	**2.16**	**135**		Pn	11 37 15.7	+1.2
RPW	**Rockport**	**2.23**	**48**		Pn	11 37 15.8	+0.5
LTY	**Liberty**	**2.28**	**82**	Pn	Pn	11 37 16.6	+0.5
LTY				IAML		11 37 52.2	
	comp=E,26nm,4.2s						
WRW	**Wenatchee Ridg**	**2.29**	**66**		Pn	11 37 17.1	+1.0
H04A	**Detroit Lake**	**2.62**	**151**	Pn	Pn	11 37 19.8	-0.8

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*NEIC **13** 11:39:21.1±1.4,3°.6N±0°.1×125°.0E±0°.1,h272^{km}±9^{km}, mb4.3/24,Error ellipse: s-maj=16.9km s-min=14.5km az=52.0*

*IDC **13** 11:39:22.1±3.1,3°.44N×124°.88E,h283^{km}±30^{km},mb3.4/9, mb1 3.6/9,mb1mx3.3/31,mbtmp4.1/9,Error ellipse: s-maj=52.0km s-min=11.0km az=65.0*

*DJA **13** 11:39:23.6±0.5,3°N±6°×12°5E±°,h254^{km}±5^{km},M4.1/13, mB4.5/5,mb4.0/13,MLv4.3/12,Mw(mB)3.7/5*

ISC 13 11:39:21.5±0.5,3°.53N±0°.05×124°.93E±0°.08,h272^{km},n78, σ1^{s}01/80,mb4.1/22,1C-1D,Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**0.61**	**75**	P	**Pn**	**11 39 58.1**	**+0.9**
KCP	**Kidapawan**	**3.46**	**3**	⇓*e*P	**Pn**	**11 40 22.0**	**+1.5**
KCP				*e*S	**S**	**11 41 07.5**	**+0.1**
DMPH	**Davao City--Mi**	**3.58**	**9**	⇑*i*P	**Pn**	**11 40 23.6**	**+2.0**
DMPH				*e*S	**S**	**11 41 10.9**	**+1.3**
TNTI	**Ternate**	**3.66**	**138**	P	**Pn**	**11 40 23.1**	**+0.6**
TNTI	**Ternate**	**3.66**	**138**	P	**Pn**	**11 40 23.3**	**+0.8**
MRSI	**Marisa**	**4.26**	**225**	P	**Pn**	**11 40 31.1**	**+1.8**
TOLI2	**Tolitoli**	**4.79**	**240**	Pn	**Pn**	**11 40 35.4**	**-0.2**
TOLI2	**Tolitoli**	**4.79**	**240**	P	**Pn**	**11 40 36.5**	**+0.9**
LBMI	**Labuha**	**4.87**	**148**	P	**Pn**	**11 40 36.4**	**-0.1**
LUWI	**Luwuk**	**5.03**	**206**	P	**Pn**	**11 40 39.5**	**+1.1**
LUWI	**Luwuk**	**5.03**	**206**	Pn	**Pn**	**11 40 39.8**	**+1.4**
APSI	**Ampana**	**5.50**	**217**	P	**Pn**	**11 40 45.2**	**+1.2**
	0.1nm415nm32nm,0.7s						
SANI	**Sanana**	**5.64**	**169**	P	**Pn**	**11 40 44.5**	**-1.2**
SANI	**Sanana**	**5.64**	**169**	P	**Pn**	**11 40 43.5**	**-2.2**
MPSI	**Mapaga**	**5.95**	**238**	P	**Pn**	**11 40 50.7**	**+1.2**
	0.1nm11nm,0.8s						
MSAI	**Masohi**	**7.91**	**150**	P	**Pn**	**11 41 15.0**	**+1.2**
	0.0nm8.5nm,0.5s						
TTSI	**Tana Toraja**	**8.29**	**218**	P	**Pn**	**11 41 20.1**	**+1.5**
	36nm,1.0s						
FAKI	**Fak Fak**	**9.72**	**131**	P	**Pn**	**11 41 36.2**	**-0.2**
	12nm,1.2s						
FAKI	**Fak Fak**	**9.72**	**131**	Pn	**Pn**	**11 41 36.3**	**-0.2**
FAKI	**Fak Fak**	**9.72**	**131**	P	**Pn**	**11 41 36.7**	**+0.3**
BKSI	**Bulukumba**	**10.02**	**209**	P	**Pn**	**11 41 40.6**	**+0.5**
	19nm,0.9s						
BBKI	**Banjar Baru**	**12.24**	**236**	P	**P**	**11 42 09.4**	**-0.3**
	30nm,0.9s						
EDFI	**Ende, Flores**	**12.62**	**195**	P	**Pn**	**11 42 13.4**	**+1.0**
	268nm7.9nm,0.6s						
BATI	**Baumata**	**13.70**	**185**	P	**P**	**11 42 26.7**	**+0.8**
	32nm,0.6s						
PLAI	**Plampang**	**14.20**	**210**	P	**Pn**	**11 42 32.2**	**+0.8**
	48nm,0.7s						
PLAI	**Plampang**	**14.20**	**210**	P	**P**	**11 42 31.7**	**+0.4**
TWSI	**Taliwang, Sumb**	**14.59**	**213**	P	**Pn**	**11 42 37.3**	**+1.2**
	19nm,1.1s						
SMPI	**Sarmi**	**14.82**	**111**	P	**Pn**	**11 42 40.5**	**+1.6**
	23nm,1.4s						
JAGI	**Jajag, Banyuwa**	**16.05**	**222**	P	**Pn**	**11 42 53.3**	**-0.2**
JAGI	**Jajag, Banyuwa**	**16.05**	**222**	P	**Pn**	**11 42 53.4**	**0.0**
MTN	**Manton Dam**	**17.39**	**159**	P	**P**	**11 43 06.2**	**-0.1**
MTN	**Manton Dam**	**17.39**	**159**	P	**P**	**11 43 06.0**	**-0.3**
	18nm,0.6s						
KDU	**Kakadu**	**17.76**	**155**	P	**P**	**11 43 10.0**	**-0.3**
	43nm,0.7s						
KNRA	**Kununurra**	**19.45**	**169**	P	**P**	**11 43 29.2**	**+0.8**
KNRA				IAmb	IAmb	11 43 51.1	
	comp=Z,31nm,1.4s						
FITZ	**Fitzroy Crossi**	**21.50**	**178**	P	**P**	**11 43 47.9**	**-1.4**
	comp=Z,2.0nm,0.3s,baz=359,slow=7.1,SNR=89						
FITZ	**Fitzroy Crossi**	**21.50**	**178**	P	**P**	**11 43 48.1**	**-1.2**
FITZ				IAmb	IAmb	11 44 02.0	
	comp=Z,8.3nm,1.4s						
FITZ	**Fitzroy Crossi**	**21.50**	**178**	P	**P**	**11 43 47.6**	**-1.7**
	comp=Z,4.7nm,0.9s						
WB0	**Warramunga Arr**	**24.94**	**158**	P	**P**	**11 44 19.6**	**-1.0**
WB0				IAmb	IAmb	11 44 34.3	
	comp=Z,5.8nm,1.2s						
MBWA	**Marble Bar**	**25.06**	**192**	P	**P**	**11 44 21.2**	**-0.3**
COEN	**Coen**	**25.08**	**134**	P	**P**	**11 44 20.7**	**-1.2**
COEN				IAmb	IAmb	11 44 45.0	
	comp=Z,8.9nm,1.4s						
COEN	**Coen**	**25.08**	**134**	P	**P**	**11 44 20.9**	**-1.0**
	comp=Z,9.0nm,2.6s						
WRAB	**Tennant Creek**	**25.08**	**159**	P	**P**	**11 44 20.9**	**-0.9**
WRAB				IAmb	IAmb	11 44 34.8	
	comp=Z,11nm,1.3s						
WRAB	**Tennant Creek**	**25.08**	**159**	P	**P**	**11 44 20.9**	**-0.9**
WRA	**Warramunga Arr**	**25.09**	**159**	P	**P**	**11 44 20.6**	**-1.2**
	comp=Z,2.5nm,0.6s,baz=333,slow=11,SNR=77						
WRA	**Warramunga Arr**	**25.09**	**159**	P	**P**	**11 44 21.0**	**-0.9**
WB2	**Warramunga Arr**	**25.09**	**159**	P	**P**	**11 44 20.6**	**-1.3**
WB2				IAmb	IAmb	11 44 21.7	
	comp=Z,4.8nm,0.6s						
WR0	**Warramunga Arr**	**25.17**	**158**	P	**P**	**11 44 21.8**	**-0.9**
PSA00	**Pilbara Seismi**	**25.44**	**191**	P	**P**	**11 44 24.4**	**-0.6**
PSA00				IAmb	IAmb	11 44 24.8	
	comp=Z,8.3nm,0.6s						
PSA00	**Pilbara Seismi**	**25.44**	**191**	P	**P**	**11 44 24.1**	**-0.9**
	comp=Z,15nm,1.6s						
GIRL	**Giralia**	**28.03**	**201**	P	**P**	**11 44 47.6**	**-0.4**
AS31	**Alice Springs**	**28.41**	**163**	P	**P**	**11 44 51.0**	**-0.4**
ASAR	**Alice Springs**	**28.41**	**163**	P	**P**	**11 44 50.5**	**-0.9**
	comp=Z,0.7nm,0.3s,baz=341,slow=8.0,SNR=58						
ASAR				pP	**pwP**	**11 45 47.1**	**+0.9**
	comp=Z,0.6nm,0.6s,baz=340,slow=11,SNR=3.4						
ASAR				ScP	**ScP**	**11 51 09.7**	**-1.9**
	comp=Z,0.7nm,1.0s,baz=353,slow=4.7,SNR=4.3						
ASAR	**Alice Springs**	**28.41**	**163**	P	**P**	**11 44 50.2**	**-1.2**
WRKA	**Warakurna**	**28.58**	**174**	P	**P**	**11 44 51.6**	**-1.3**
CMAR	**Chiang Mai Arr**	**29.45**	**302**	P	**P**	**11 45 01.3**	**+0.7**
	comp=Z,1.3nm,0.6s,baz=106,slow=5.8,SNR=7.9						
MORW	**Morawa**	**33.51**	**194**	P	**P**	**11 45 35.1**	**-0.8**
MORW				IAmb	IAmb	11 45 45.7	
	comp=Z,31nm,1.5s						
BBOO	**Buckleboo**	**37.64**	**165**	P	**P**	**11 46 10.5**	**-0.4**
BBOO				IAmb	IAmb	11 46 12.3	
	comp=Z,18nm,1.4s						
STKA	**Stephens Creek**	**38.61**	**157**	P	**P**	**11 46 18.8**	**-0.1**
	comp=Z,1.7nm,0.5s,baz=340,slow=10,SNR=4.8						
STKA	**Stephens Creek**	**38.61**	**157**	P	**P**	**11 46 18.5**	**-0.4**
ARMA	**Armidale**	**42.31**	**145**	P	**P**	**11 46 49.6**	**+0.4**
ARMA				IAmb	IAmb	11 47 08.1	
	comp=Z,24nm,1.4s						
CAN	**Canberra**	**44.75**	**152**	P	**P**	**11 47 09.9**	**+1.4**
CAN				IAmb	IAmb	11 47 21.6	
	comp=Z,21nm,1.2s						
KKN	**Kakani**	**44.83**	**307**	*e*P	P	11 47 21.3	+12
DMN	**Daman**	**44.90**	**306**	*e*P	P	11 47 22.0	+12
KOLN	**Koldanda**	**46.18**	**306**	*e*P	**P**	**11 47 19.8**	**-0.2**
	comp=Z,19nm,0.5s						
DANN	**Dangsing**	**46.29**	**307**	*e*P	**P**	**11 47 20.1**	**-0.8**
	comp=Z,19nm,0.6s						
PYUN	**Piuthan**	**46.80**	**306**	*e*P	P	11 47 18.0	-6.8
	comp=Z,20nm,0.6s						
SONM	**Songino Array**	**46.94**	**343**	P	**P**	**11 47 26.9**	**+1.5**
	comp=Z,0.4nm,0.3s,baz=168,slow=7.6,SNR=3.7						
MK31	**Makanchi Array**	**56.71**	**326**	P	**P**	**11 48 36.3**	**-0.9**
MKAR	**Makanchi Array**	**56.71**	**326**	P	**P**	**11 48 36.2**	**-1.0**
	comp=Z,1.5nm,0.5s,baz=123,slow=8.2,SNR=23						
MKAR				PcP	**PcP**	**11 49 28.4**	**-1.5**
	comp=Z,0.9nm,0.6s,baz=118,slow=4.6,SNR=7.2						
MAKZ	**Makanchi**	**56.90**	**326**	P	**P**	**11 48 38.8**	**+0.3**
ZALV	**Zalesovo Beam**	**59.97**	**334**	P	**P**	**11 48 58.5**	**-0.9**
	comp=Z,0.6nm,0.5s,baz=116,slow=5.8,SNR=2.4						
KURK	**Kurchatov**	**60.96**	**328**	P	**P**	**11 49 05.2**	**-0.9**
KURK				IAmb	IAmb	11 49 06.8	
	comp=Z,3.4nm,0.7s						
LBZ	**Lake Benmore**	**62.53**	**145**	P	**P**	**11 49 16.6**	**-0.1**
BKZ	**Black Stump Fm**	**63.64**	**137**	P	**P**	**11 49 25.0**	**+0.8**
TIXI	**Tiksi**	**68.08**	**1**	P	**P**	**11 49 50.6**	**-1.1**
IMAR	**Indian Mountai**	**83.26**	**24**	P	**P**	**11 51 17.0**	**-0.5**
BMAR	**Burnt Mountain**	**86.96**	**23**		**P**	**11 51 35.2**	**-0.6**
ARCES	**ARCESS Array B**	**90.02**	**340**	P	**P**	**11 51 50.2**	**+0.2**
	comp=Z,3.8nm,0.9s,baz=54,slow=4.7,SNR=4.3						

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*IDC **13** 11:44:38.3±2.8,27°.94N×55°.92E,h0^{km},mb3.6/4, mb1 3.7/4,mb1mx3.4/28,mbtmp3.7/4,Error ellipse: s-maj=80.1km s-min=27.1km az=154.0*

*TEH **13** 11:44:42.4,28°.34N×55°.87E,h9^{km},ML3.6*

*THR **13** 11:44:46.0±0.3, 28°.49N×55°.76E, h15^{km}, ML3.2*

ISC 13 11:44:42.3±0.9**, 28°.31N**±0°.04×**55°.84E**±0°.04**, h10^{km}, n49, σ2^s.11**/47**, mb3.7**/4**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENO	Geno	0.95	162	*e*Pg	Pb	11 45 01.4	+0.5
LAR1	LAR	1.45	244	*e*Pg	Pb	11 45 10.2	+0.9
LAR1				*e*		11 45 42.8	
	comp=Z,20µm,0.4s						
NGRK	Negar Kerman	1.54	30	*e*		11 45 40.7	
	comp=Z,4µm,0.7s						
NGRK				*e*Pg	Pn	11 45 09.4	-0.8
KHNJ	Kahnooj	1.68	102	*e*Pn	Pb	11 45 13.2	-0.2
KRBR	Kerman	1.85	25	*e*Pg	Pb	11 45 15.6	-0.9
KRBR				IAML		11 45 53.7	
	comp=E,226nm,0.5s						
KRBR				IAML		11 45 58.1	
	comp=N,264nm,0.6s						
KRBR	Kerman	1.85	25	*e*Pg	Pb	11 45 15.6	-0.9
TVBK	TV Kerman	1.86	25	*e*Pn	Pb	11 45 15.2	-1.4
TVBK				*e*		11 45 53.4	
	comp=Z,5µm,0.5s						
JHRM	Jahrom	2.01	276	*e*Pn	Pb	11 45 18.6	-0.3
KHGB	Koh Gabri	2.14	15	*e*Pn	Pb	11 45 19.4	-1.8
KHGB				*e*		11 45 54.4	
	comp=Z,2µm,0.7s						
BANOM	Banah	2.41	170	*e*Pn	Pn	11 45 23.8	+2.0
KBAM	BAM	2.44	70	*e*Pn	Pb	11 45 24.3	-2.0
KBAM				*e*		11 46 07.6	
	comp=Z,2µm,0.5s						
QIR1	Qir	2.47	275	*e*Pn	Pb	11 45 25.3	-1.6
QIR1				*e*		11 46 15.4	
	comp=Z,5µm,0.3s						
MSFE	Esma-Masafi	2.95	174	*e*Pn	Pn	11 45 30.8	+1.6
MDH	Madha	3.02	172	*e*Pn	Pn	11 45 31.5	+1.3
IBAF	Bafgh	3.28	356	*e*Pn	Pn	11 45 35.9	+1.9
IBAF				*e*		11 45 43.3	
	comp=Z,749nm,0.4s						
UOSS	Minazif	3.36	174	*e*Pn	Pn	11 45 35.9	+1.0
HATD	Hatta, Dubai	3.48	176	*e*Pn	Pn	11 45 38.2	+1.7
FAQ	Al Faqa, Dubai	3.55	184	*e*Pn	Pb	11 45 42.4	-2.8
ASHO	Ashiyiah	3.61	177	*e*Pn	Pn	11 45 39.6	+1.2
ICHK	Chekchek	4.12	343	*e*Pn	Pn	11 45 47.5	+2.0
YZKH	Yazd	4.21	345	*e*Pn	Pn	11 45 49.2	+2.5
YZKH	Yazd	4.21	345	*e*Pn	Pn	11 45 49.2	+2.5
ALNE	Al Ain	4.23	181	*e*Pn	Pn	11 45 48.7	+1.8
ZHSF	Zahedan	4.51	72	*e*Pn	Pb	11 45 56.4	-5.3
KLNJ	Kolanjah	4.58	307	*e*Pn	Pn	11 45 54.0	+2.1
IRAM	Ramesheh	4.60	320	*e*Pn	Pn	11 45 53.3	+1.1
BSRN	Basiran	4.62	37	*e*Pn	Pn	11 45 56.2	+3.8
BSRN	Basiran	4.62	37	*e*Pn	Pn	11 45 56.2	+3.8
TPRV	Parvadeh(Tabas	4.76	9	*e*Pn	Pn	11 45 56.2	+2.0
NHDN	Nehbandan	4.78	49	*e*Pn	Pn	11 45 57.1	+2.6
IKOO	Kooshah	4.93	33	*e*Pn	Pn	11 45 59.1	+2.4
ANAR	Anarak	5.20	340	*e*Pn	Pn	11 46 02.4	+2.1
ITEG	Tejag	5.22	28	*e*Pn	Pn	11 46 02.8	+2.2
IBRJ	Brojen	5.35	313	*e*Pn	Pn	11 46 03.7	+1.2
TKDS	Koohdasht(Taba	5.40	11	*e*Pn	Pn	11 46 05.4	+2.3
TABS	Tabas	5.44	11	*e*Pn	Pn	11 46 06.8	+3.3
TABS	Tabas	5.44	11	*e*Pn	Pn	11 46 06.8	+3.3
IZEF	Zefreh	5.49	327	*e*Pn	Pn	11 46 06.3	+1.9
AFRZ	Afriz	5.79	27	*e*Pn	Pn	11 46 11.0	+2.7
SRVN	Saravan	5.87	97	*e*Pn	Pn	11 46 13.1	+3.6
IPIR	Pirpir	6.11	317	*e*Pn	Pn	11 46 14.5	+1.6
KRSH	Karshahi	6.48	332	*e*Pn	Pn	11 46 19.7	+1.8
ISFB	Sefidab	6.77	334	*e*Pn	Pn	11 46 23.5	+1.7
ASAO	Ashtian	7.96	323	*e*Pn	Pn	11 46 41.4	+3.0
ASAO	Ashtian	7.96	323	*e*Pn	Pb	11 46 51.4	-9.1
BRTR	Keskin Array B	21.59	308	P	P	11 49 32.7	+0.4
	comp=Z,0.9nm,0.6s,baz=128,slow=14,SNR=3.5						
MKAR	Makanchi Array	27.73	41	P	P	11 50 30.8	-0.1
	comp=Z,0.2nm,0.5s,baz=227,slow=9.5,SNR=2.5						
ZALV	Zalesovo Beam	33.23	31	P	P	11 51 18.9	-0.5
	comp=Z,1.2nm,0.6s,baz=227,slow=9.5,SNR=5.9						
TORD	Torodi Ar. Bea	52.43	265	P	P	11 53 53.2	-2.2
	comp=Z,1.2nm,0.5s,baz=59,slow=7.3,SNR=13						

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*BJI **13** 12:10:17.0±0.0, 6°.10S×151°.70E, h54^{km}, mB5.0/11, mb4.7/21, Ms5.3/1, Ms7 5.0/2*

*IDC **13** 12:10:19.1±0.7, 6°.20S×151°.67E, h62^{km}±5^{km}, mb4.2/13, mb1 4.4/15, mb1mx4.3/31, mbtmp4.6/15, MS5.3/4, Ms1 5.3/4, ms1mx4.2/18, Error ellipse: s-maj=19.0km s-min=12.1km az=125.0*

*DJA **13** 12:10:19.2±0.4, 6°S±3°×15°2E±°, h66^{km}±5^{km}, M5.0/26, mB5.2/7, mb5.1/26, MLv5.2/3, Mw(mB)4.6/7*

*NEIC **13** 12:10:19.6±1.2, 6°.24S±0°.07×151°.72E±0°.06, h66^{km}±7^{km}, mb4.7/41, Error ellipse: s-maj=11.8km s-min=5.4km az=144.0*

ISC 13 12:10:19.0±0.6**, 6°.23S**±0°.06×**151°.75E**±0°.06**, h65^{km}**±4^{km}**, n127, σ1^s.16**/133**, mb4.7**/55**, 1C-1D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	2.07	12		Pn	12 10 49.0	-2.6
PMG	Port Moresby	5.53	235	P	Pn	12 11 38.3	-0.5
	26nm,0.3s,baz=51,slow=8.2,SNR=42						
PMG				S	Sn	12 12 41.4	+0.3
	71nm,0.3s,baz=30,slow=12,SNR=4.4						
PMG				LR	LR	12 13 53.0	
	comp=Z,514nm,21.3s,baz=52,slow=39						
PMG	Port Moresby	5.53	235	Pn	Pn	12 11 38.5	-0.4
MANU	Manus Island	6.04	313		Pn	12 11 48.3	+2.6
HNR	Honiara	8.72	112	P	Pn	12 12 22.8	+0.3
	14nm,0.3s,baz=11,slow=2.9,SNR=6.9						
HNR				LR	LR	12 15 25.1	
	comp=Z,402nm,20.4s,baz=269,slow=35						
HNR	Honiara	8.72	112		Pn	12 12 23.1	+0.6
COEN	Coen	11.40	227	Pn	Pn	12 12 58.9	-0.3
MTSU	Mount Surprise	13.88	211	P	Pn	12 13 32.5	-0.2
	baz=14,SNR=5.7						
CTAO	Charters Tower	14.77	201	Pn	Pn	12 13 43.9	-0.5
QIS	Mount Isa	18.48	218	P	Pn	12 14 31.1	+0.4
	baz=19,SNR=12						
EIDS	Eidsvold	19.04	182	P	P	12 14 37.0	+1.0
FAKI	Fak Fak	19.71	279	P	P	12 14 42.6	-0.8
KDU	Kakadu	20.06	250	P	P	12 14 46.4	-0.7
	baz=20,SNR=24						
RMQ	Roma	20.34	188	P	P	12 14 51.7	+1.5
	baz=20,SNR=4.8						
DZM	Mont Dzumac	21.20	139	LR	LR	12 21 39.6	
	comp=Z,399nm,21.8s,baz=254,slow=32						
MTN	Manton Dam	21.36	251	P	P	12 15 00.8	-0.3
	baz=21,SNR=45						
MTN	Manton Dam	21.36	251	P	P	12 15 00.5	-0.7
QLP	Quilpie	21.47	199	P	P	12 15 02.5	+0.3
	baz=22,SNR=8.3						
WB0	Warramunga Arr	21.58	230		P	12 15 02.4	-1.1
WB0				IAmb	IAmb	12 15 23.6	
	comp=Z,46nm,1.1s						
WR0	Warramunga Arr	21.58	229		P	12 15 02.8	-0.7
WR0				IAmb	IAmb	12 15 06.6	
	comp=Z,35nm,0.9s						
WRAB	Tennant Creek	21.71	230	P	P	12 15 05.9	+1.1
WRAB				IAmb	IAmb	12 15 07.7	
	comp=Z,32nm,0.8s						
WB2	Warramunga Arr	21.71	229		P	12 15 04.0	-0.9
WB2				IAmb	IAmb	12 15 07.8	
	comp=Z,31nm,0.8s						
WRA	Warramunga Arr	21.72	230	P	P	12 15 04.2	-0.8
	comp=Z,27nm,0.7s,baz=55,slow=10,SNR=55						
WRA				PcP	PcP	12 19 04.5	+0.6
	comp=Z,2.4nm,0.6s,baz=48,slow=2.0,SNR=5.2						
WRA	Warramunga Arr	21.72	230	P	P	12 15 03.1	-1.9
AS31	Alice Springs	24.39	223	P	P	12 15 31.3	-0.2
AS31				IAmb	IAmb	12 15 33.6	
	comp=Z,18nm,0.9s						
ASAR	Alice Springs	24.39	223	P	P	12 15 31.4	0.0
	comp=Z,38nm,0.6s,baz=54,slow=9.0,SNR=219						
ASAR	Alice Springs	24.39	223	P	P	12 15 31.0	-0.4
KNRA	Kununurra	24.41	246	P	P	12 15 30.9	-0.7
	baz=24,SNR=8.7						
KNRA	Kununurra	24.41	246	P	P	12 15 30.9	-0.7
SANI	Sanana	26.02	278	P	P	12 15 48.3	+2.0
	comp=Z,20nm,0.8s						
STKA	Stephens Creek	27.22	199	P	P	12 15 57.0	0.0
	comp=Z,1.9nm,0.5s,baz=32,slow=13,SNR=6.1						
STKA	Stephens Creek	27.22	199	P	P	12 15 56.9	0.0
SOEI	Soe	27.43	261	P	P	12 16 01.3	+2.2
	comp=Z,50nm,0.8s						
SOEI	Soe	27.43	261	P	P	12 15 59.3	+0.2
SOEI				IAmb	IAmb	12 16 28.5	
	comp=Z,45nm,1.0s						
FITZ	Fitzroy Crossi	28.07	243	P	P	12 16 04.2	-0.3
	comp=Z,34nm,0.6s,baz=62,slow=7.4,SNR=131						
FITZ				LR	LR	12 27 54.1	
	comp=Z,103nm,18.8s,baz=104,slow=38						
FITZ	Fitzroy Crossi	28.07	243	P	P	12 16 03.6	-1.0
	baz=28,SNR=88						
FITZ	Fitzroy Crossi	28.07	243	P	P	12 16 04.0	-0.6
BATI	Baumata	28.07	260	P	P	12 16 05.5	+0.8
	comp=Z,33nm,0.7s						
MSVF	Nonsavu	28.11	116	LR	LR	12 25 18.8	
	comp=Z,77nm,20.1s,baz=136,slow=32						
WRKA	Warakurna	29.22	228	P	P	12 16 14.0	-0.9
	baz=29,SNR=22						
EDFI	Ende, Flores	29.90	263	P	P	12 16 19.5	-1.6
	comp=Z,348nmcomp=Z,33nm,1.1s						
BSSI	Bau Bau, Buton	31.07	268	P	P	12 16 31.8	+0.5
	comp=Z,527nmcomp=Z,39nm,1.0s						
BKSI	Bulukumba	31.48	270	P	P	12 16 34.8	-0.1
	comp=Z,17nm,1.0s						
TOLI2	Tolitoli	31.76	282	P	P	12 16 36.2	-1.2
TOLI2				IAmb	IAmb	12 16 37.5	
	comp=Z,7.1nm,0.7s						
WBSI	Waikabubak, Su	32.22	262	P	P	12 16 41.0	-0.4
	comp=Z,73nm,0.7s						
FORT	Forrest	33.02	219	P	P	12 16 47.7	-0.5
	baz=33,SNR=22						
FORT	Forrest	33.02	219	P	P	12 16 47.8	-0.5
PLAI	Plampang	33.77	263	P	P	12 16 52.9	-2.0
	comp=Z,963nmcomp=Z,119nm,0.8s						
JCJ	Chichijima	34.40	345	LR	LR	12 30 32.2	
	comp=Z,6µm,18.5s,baz=160,slow=35						
PSA00	Pilbara Seismi	34.41	241	P	P	12 16 59.9	-0.5
BBKI	Banjar Baru	36.87	273	P	P	12 17 22.5	+0.9
	comp=Z,28nm,1.0s						
JAGI	Jajag, Banyuwa	37.34	264	P	P	12 17 23.4	-2.2
MEEK	Meekatharra	37.51	233	P	P	12 17 26.6	-0.3
	baz=38,SNR=17						
PBKI	Pangkalan Bun	40.10	273	P	P	12 17 50.4	+1.7
	comp=Z,139nm,1.0s						
PCJI	Pacitan	40.29	265	P	P	12 17 50.0	-0.2
	comp=Z,67nm,0.8s						
KLBR	Kellerberrin	40.57	227	P	P	12 17 50.9	-1.5
	baz=41,SNR=6.3						
MORW	Morawa	40.64	232	P	P	12 17 51.1	-1.9
	baz=41,SNR=5.3						
MORW	Morawa	40.64	232	P	P	12 17 52.4	-0.6
MORW				IAmb	IAmb	12 17 53.1	
	comp=Z,9.0nm,0.8s						
JHJ	Hachijo jima 2	40.75	345	LR	LR	12 34 32.6	
	comp=Z,3µm,18.4s,baz=162,slow=36						
MDSI	Maura Dua	47.38	270	P	P	12 18 45.9	-1.3
	comp=Z,1µmcomp=Z,20nm,1.1s						
KSRS	Korea Array	48.82	335	LR	LR	12 37 48.0	
	comp=Z,4µm,20.3s,baz=128,slow=34						
NJ2	Nanjing	49.31	323	*e*P	P	12 19 01.8	+0.1
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
USRK	Ussuriysk Ar.	53.27	342	LR	LR	12 41 39.2	
	comp=Z,2µm,18.7s,baz=135,slow=35						
GYA	Guiyang	54.45	309	⇓P	P	12 19 36.6	-3.6
GYA				pmax	pmax		
	comp=Z,11nm,0.8s						
XAN	Xi'an	56.95	318	P	P	12 19 57.3	-0.6
XAN				pP	pP	12 20 11.8	-1.4
XAN				PcP	PcP	12 20 50.4	-2.2
XAN				S	S	12 27 47.4	0.0
XAN				ScS	ScS	12 29 37.5	-4.2
XAN				SS	SS	12 31 38.4	+1.4
XAN				pmax	pmax		
	comp=Z,11nm,0.8s						
CM31	Chiang Mai Arr	57.55	296	P	P	12 20 01.4	-1.0
CM31				IAmb	IAmb	12 20 09.3	
	comp=Z,3.9nm,0.8s						
CMAR	Chiang Mai Arr	57.55	296	P	P	12 20 02.3	-0.1
	comp=Z,1.7nm,0.7s,baz=128,slow=5.9,SNR=14						
CMAR				PcP	PcP	12 20 55.8	+0.6
	comp=Z,1.3nm,0.8s,baz=102,slow=2.8,SNR=5.3						
CMAR	Chiang Mai Arr	57.55	296	P	P	12 20 02.0	-0.4
PEA0B	Petropavlovsk-	59.33	4	P	P	12 20 14.3	+0.2
PETK	Petropavlovsk-	59.33	4	P	P	12 20 14.5	+0.4
HHC	Hu-ho-hao-te	59.61	325	*e*P	P	12 20 17.0	+0.6
HHC				S	S	12 28 21.6	-0.3
HHC				pmax	pmax		
	comp=Z,19nm,1.1s						
HHC				pmax	pmax		
	comp=Z,100nm,5.8s						
HHC				LR	LR		
	comp=Z,1µm,15.7s						
HHC				LR	LR		
	comp=Z,1µm,18.6s						
LZH	Lanzhou	61.54	317	*e*P	P	12 20 32.3	+2.6
LZH				pP	pwP	12 20 49.8	-2.4
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
ADK	Adak	63.87	21	P	P	12 20 45.1	+0.5
CASY	Casey	66.35	197	P	P	12 21 00.1	-0.4
CASY				IAmb	IAmb	12 21 08.1	
	comp=Z,6.2nm,1.0s						
SONM	Songino Array	66.98	329	P	P	12 21 05.6	+0.5
	comp=Z,1.6nm,0.6s,baz=137,slow=4.4,SNR=6.4						
SONM				pP	pP	12 21 23.2	+2.6
	comp=Z,1.5nm,0.8s,baz=123,slow=5.5,SNR=3.2						
SONM				PcP	PcP	12 21 33.6	+0.5
	comp=Z,1.5nm,0.6s,baz=155,slow=6.1,SNR=3.6						
SONM	Songino Array	66.98	329	P	P	12 21 04.7	-0.4
TAPN	Taplejung	70.26	302	*e*P	P	12 21 25.5	-0.6
	comp=Z,17nm,1.1s						
ODAN	Odare	70.38	301	*e*P	P	12 21 26.3	-0.5
	comp=Z,14nm,0.7s						
RAMN	Ramite	71.08	301	*e*P	P	12 21 31.2	+0.2
	comp=Z,4.2nm,0.5s						
VNDA	Vanda	71.45	178	P	P	12 21 33.0	+0.9
	comp=Z,1.1nm,0.8s,baz=324,slow=5.9,SNR=6.2						
VNDA	Vanda	71.45	178	P	P	12 21 32.5	+0.5
JIRN	Jiri	71.64	302	*e*P	P	12 21 34.5	-0.1
GUN	Gumba	71.97	302	*e*P	P	12 21 36.2	-0.4
KKN	Kakani	72.44	302	*e*P	P	12 21 38.5	-0.7
DMN	Daman	72.54	301	*e*P	P	12 21 39.5	-0.3
GKN	Gorkha	73.05	302	*e*P	P	12 21 42.0	-0.7
KOLN	Koldanda	73.86	301	*e*P	P	12 21 46.9	-0.7
	comp=Z,17nm,0.9s						
DANN	Dangsing	73.89	302	*e*P	P	12 21 47.0	-0.8
PYUN	Piuthan	74.47	301	*e*P	P	12 21 50.4	-0.7
	comp=Z,23nm,0.9s						
BILL	Bilibino	74.81	6	P	P	12 21 53.4	+1.5
BILL				IAmb	IAmb	12 21 54.1	
	comp=Z,7.5nm,0.9s						
WMQ	Urumqi	76.09	318	*e*P	P	12 22 01.1	+1.2
WMQ				LR	LR		
	comp=Z,760nm,21.3s						
CNPM	China Poot	79.45	26	P	P	12 22 19.2	+1.0
K20K	Telida	80.44	22	P	P	12 22 24.8	+1.3
MK31	Makanchi Array	80.72	319	P	P	12 22 24.6	-0.7
MKAR	Makanchi Array	80.72	319	P	P	12 22 25.3	0.0
	comp=Z,0.6nm,0.5s,baz=95,slow=7.7,SNR=10						
MKAR				pP	pP	12 22 42.1	+0.6
	comp=Z,0.6nm,0.5s,baz=103,slow=6.3,SNR=4.1						
MKAR	Makanchi Array	80.72	319	P	P	12 22 24.9	-0.4
MAKZ	Makanchi	80.92	319	P	P	12 22 26.0	-0.4
CAST	Castle Rocks	81.22	22	P	P	12 22 29.3	+1.7
CAST				IAmb	IAmb	12 22 37.6	
	comp=Z,4.9nm,0.9s						
ZALV	Zalesovo Beam	81.76	327	P	P	12 22 29.7	-0.9
	comp=Z,1.9nm,0.4s,baz=120,slow=6.1,SNR=8.3						
ZALV	Zalesovo Beam	81.76	327	P	P	12 22 29.4	-1.2
IMAR	Indian Mountai	82.08	20	P	P	12 22 32.8	+0.7
MLY	Manley	82.59	21	P	P	12 22 35.9	+1.1
MLY				IAmb	IAmb	12 22 37.3	
	comp=Z,4.4nm,0.8s						
KSH	Kashi	83.07	311	P	P	12 22 41.0	+3.0
KSH				pmax	pmax		
	comp=Z,5.0nm,0.9s						
QSPA	South Pole Qui	83.74	180		P	12 22 41.7	+0.9
QSPA				IAmb	IAmb	12 22 42.3	
	comp=Z,7.3nm,0.8s						
MAW	Mawson	83.85	203	P	P	12 22 41.9	+0.7
	comp=Z,2.7nm,0.6s,baz=108,slow=5.0,SNR=7.1						
MAW	Mawson	83.85	203	P	P	12 22 41.6	+0.4
IL31		83.87	22	P	P	12 22 40.6	-0.6
IL31				IAmb	IAmb	12 22 50.7	
	comp=Z,3.6nm,0.8s						
ILAR	Eielson Array	83.87	22	P	P	12 22 41.0	-0.3
	comp=Z,2.0nm,0.7s,baz=249,slow=4.9,SNR=43						
ILAR				pP	pP	12 22 58.1	+0.7
	comp=Z,2.3nm,0.7s,baz=248,slow=5.2,SNR=7.4						
ILAR	Eielson Array	83.87	22	P	P	12 22 40.4	-1.0
NIL	Nilore	83.92	305	P	P	12 22 41.7	-0.6
H24K	Noodor Dome	84.03	21	P	P	12 22 43.7	+1.5
H24K				IAmb	IAmb	12 22 52.9	
	comp=Z,5.6nm,1.4s						
KURK	Kurchatov	84.25	322	P	P	12 22 43.5	-0.1
KURK				IAmb	IAmb	12 22 44.4	
	comp=Z,8.5nm,1.1s						
AAK	Ala-Archa	84.89	314	P	P	12 22 48.1	+0.9
AAK				IAmb	IAmb	12 22 50.2	
	comp=Z,3.9nm,0.8s						
BMAR	Burnt Mountain	85.94	20	P	P	12 22 53.3	+1.6
DAWY	Dawson	86.52	24	P	P	12 22 55.9	+1.3
DAWY				IAmb	IAmb	12 23 13.4	
	comp=Z,13nm,1.4s						
NRIK	Noril'sk	86.97	341	P	P	12 22 56.2	-0.4
	comp=Z,3.4nm,0.5s,baz=106,slow=3.4,SNR=5.3						
NRIK	Noril'sk	86.97	341	P	P	12 22 55.8	-0.9
NRIK				IAmb	IAmb	12 22 58.0	
	comp=Z,4.6nm,0.7s						
KKAR	Karatay Array	87.85	314	P	P	12 23 00.7	-0.8
SYO	Syowa Base	91.98	200	⇑*e*pP	pP	12 23 35.8	-0.5
HRA	Herat	93.07	304	P	P	12 23 26.1	-0.2
HRA				IAmb	IAmb	12 23 26.7	
	comp=Z,5.2nm,0.8s						
NVAR	Mina Array Bea	93.79	52	P	P	12 23 31.5	+1.9
	comp=Z,1.3nm,0.8s,baz=255,slow=5.8,SNR=8.0						
NVAR				pP	sP	12 23 48.9	-2.6
	comp=Z,0.8nm,0.8s,baz=253,slow=6.2,SNR=4.6						
VNA3	Neumayer Olymp	101.70	186	Pdiff	Pdif	12 24 04.1	-0.1
VNA2	Neumayer--Watz	101.75	187	Pdiff	Pdif	12 24 04.6	+0.1
VNA1	Neumayer--Stat	102.11	187	Pdiff	Pdif	12 24 05.4	-0.6
GERES	GERESS Array B	124.71	328	PKP	PKiKP	12 29 11.8	0.0
	comp=Z,0.7nm,0.6s,baz=70,slow=1.6,SNR=4.8						
TORD	Torodi Ar. Bea	149.72	285	PKPbc	PKPbc	12 30 02.3	-0.2
	comp=Z,6.7nm,0.6s,baz=64,slow=2.6,SNR=27						
DBIC	Dimbokro	156.75	272	PKPab	PKPab	12 30 37.9	+0.1
	comp=Z,3.3nm,0.7s,baz=118,slow=2.6,SNR=4.8						

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*IDC **13** 12:21:33.4±0.5, 17°.21N×147°.22E, h0^{km}, mb4.6/26, mb1 4.8/26, mb1mx4.7/37, mbtmp4.6/26, MS4.8/19, Ms1 4.8/19, ms1mx4.7/27, Error ellipse: s-maj=17.5km s-min=10.3km az=88.0*

*BJI **13** 12:21:35.5±0.0, 17°.01N×147°.57E, h47^{km}, mB5.3/52, mb4.7/50, Ms5.3/70, Ms7 5.0/67*

*NEIC **13** 12:21:37.0±2.5, 17°.28N±0°.08×147°.21E±0°.10, h16^{km}±1^{km}, mb5.2/92, Ms_20 5.0/72, Mwb5.4/33, Mwc5.5(GCMT), Error ellipse: s-maj=15.5km s-min=13.1km az=107.0*

*MOS **13** 12:21:37.9±1.3, 17°.25N×146°.93E, h40^{km}, mb5.2/49, MS4.8/18, Error ellipse: s-maj=9.4km s-min=5.0km az=108.5*

*NEIC **13** 12:21:39.9, 17°.22N×147°.17E, h16^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.23; $M_{\theta\theta}$0.09; $M_{\phi\phi}$-1.32; $M_{r\theta}$-0.41; $M_{\theta\phi}$0.54; $M_{\phi r}$0.52; Fault plane solution: $M_0$1.54000×10^{17} NP1:ϕ_s173.51000°, δ33.82000°, λ108.91000°. NP2:ϕ_s331.11000°, δ58.23000°, λ77.76000°. Principal axes: T 1.4061, Plg74.0000°, Azm209.0000°; N 0.2343, Plg10.0000°, Azm338.0000°; P -1.6404, Plg12.0000°, Azm70.0000°;*

*NEIC **13** 12:21:40, 17°.32N×147°.46E, h16^{km}, Moment Tensor Solution. Duration: 2^s.8 Moment tensor: Scale 10^{17}Nm; M_{rr}1.53; $M_{\theta\theta}$-0.26; $M_{\phi\phi}$-1.27; $M_{r\theta}$-0.77; $M_{\theta\phi}$0.69; $M_{\phi r}$1.30; Fault plane solution: $M_0$2.19000×10^{17} NP1: ϕ_s156.00000°, δ23.00000°, λ95.00000°. NP2: ϕ_s330.00000°, δ67.00000°, λ88.00000°. Principal axes: T 2.1394, Plg68.0000°, Azm236.0000°; N 0.0894, Plg2.0000°, Azm331.0000°; P -2.2288, Plg22.0000°, Azm62.0000°;*

*GCMT **13** 12:21:40.0±0.1, 17°.26N±0°.01×147°.47E±0°.01, h16^{km}, MW5.5/134, Moment Tensor Solution. s120,c196; s134,c259; Duration: 1^s.3 Moment tensor: Scale 10^{17} Nm; M_{rr}1.43±.02; $M_{\theta\theta}$-0.21±.02; $M_{\phi\phi}$-1.22±.02; $M_{r\theta}$-0.63±.05; $M_{\theta\phi}$0.62±.01; $M_{\phi r}$1.30±.06; Best double couple: $M_0$2.06300×10^{17} NP1:ϕ_s155.00000°, δ23.00000°, λ91.00000°. NP2:ϕ_s334.00000°, δ67.00000°, λ90.00000°. Principal axes: T 2.0220, Plg68.0000°, Azm244.0000°; N 0.0870, Plg0.0000°, Azm334.0000°; P -2.1050, Plg22.0000°, Azm64.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 13 12:21:40.2±0.5**, 17°.22N**±0°.03×**147°.14E**±0°.05**, h44^{km}**±3^{km}**, h44^{km}:pP-P, n505, σ1^s.87**/517**, mb5.0**/126**, MS5.0**/95**, 23C-12D, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SARN	Sarigan	1.40	248	P	Pn	12 22 05.3	+2.0
ANA2	Anatahan	1.62	238		Pn	12 22 08.9	+2.5
ANA2	Anatahan	1.62	238	P	Pn	12 22 09.0	+2.6
GUMO	Guam	4.22	212	Pn	Pn	12 22 42.6	+0.5
	58nm,0.3s,baz=34,slow=1.7,SNR=32						
GUMO				Sn	Sn	12 23 32.0	+1.8
	64nm,0.3s,baz=1.9,slow=23,SNR=6.8						
GUMO				LR	LR	12 24 08.7	
	comp=Z,11µm,18.7s,baz=41,slow=36						
GUMO	Guam	4.22	212	P	Pn	12 22 43.2	+1.1
JCJ	Chichijima	10.84	336	P	Pn	12 24 21.8	+9.0
PATS	Pohnpei	15.02	132	Pn	Pn	12 25 04.8	-4.8
H11S3	WAKE ISLAND Hy	18.65	83	T	T	12 44 50.6	
	baz=269,slow=75,SNR=5.4						
H11S1	WAKE ISLAND Hy	18.66	83	T	T	12 44 46.5	
	baz=269,slow=75,SNR=5.7						
H11S2	WAKE ISLAND Hy	18.67	83	T	T	12 44 47.1	
	baz=269,slow=75,SNR=8.2						
H11N1	WAKE ISLAND Hy	18.90	79	T	T	12 45 08.7	
	baz=264,slow=74,SNR=20						
H11N2	WAKE ISLAND Hy	18.91	79	T	T	12 45 03.7	
	baz=264,slow=74,SNR=16						
H11N3	WAKE ISLAND Hy	18.92	79	T	T	12 45 06.8	
	baz=264,slow=74,SNR=17						
MANU	Manus Island	19.15	179	P	Pn	12 26 01.3	+0.2
MANU				IAmb	IAmb	12 26 03.4	
	comp=Z,172nm,1.6s						
JYT	Yasato	19.91	343	P	P	12 26 06.1	-1.9
INU	Inuyama	20.18	335	P	P	12 26 10.5	-0.5
INU				IAmb	IAmb	12 26 35.6	
	comp=Z,95nm,0.9s						
INU	Inuyama	20.18	335	P	Pn	12 26 17.3	+4.1
JGF	Kuroka	20.27	336	P	P	12 26 13.0	+1.0
JGF				IAmb	IAmb	12 26 29.2	
	comp=Z,120nm,1.1s						
JSU	Suzuyama	20.77	316	P	Pn	12 26 19.9	-0.4
MJAR	Matsushiro Arr	20.80	339	P	P	12 26 17.0	-0.8
	comp=Z,14nm,0.6s,baz=179,slow=10,SNR=24						
MJAR				S	Sn	12 30 11.4	-3.1
	comp=Z,2.3nm,0.9s,baz=176,slow=20,SNR=2.6						
MJAR	Matsushiro Arr	20.80	339	P	P	12 26 17.6	-0.2
MJAR				pmax	pmax		
	comp=Z,61nm,1.1s						
MJAR	Matsushiro Arr	20.80	339	P	P	12 26 17.6	-0.2
MAJO	Matsushiro	20.80	339	P	P	12 26 18.5	+0.7
MAJO				pmax	pmax		
	comp=Z,75nm,0.9s						
MAJO				MLR	MLR		
	comp=Z,4µm,18.0s						
MAJO	Matsushiro	20.80	339	P	P	12 26 18.5	+0.7
MAJO				IAmb	IAmb	12 26 45.0	
	comp=Z,75nm,0.8s						
MAT	Matsushiro	20.80	339	P	P	12 26 16.8	-1.0
MAT				S	S	12 30 09.0	+1.4
MJB9	Matsu-Tunnel	20.81	339	P	P	12 26 17.0	-0.9
MJB9				IAmb	IAmb	12 26 45.0	
	comp=Z,73nm,0.8s						
JMM	Marumori	21.31	346	P	P	12 26 22.2	-1.0
JNU	Nakatsue	21.57	320	P	P	12 26 24.9	-1.1
JNU				IAmb	IAmb	12 26 36.2	
	comp=Z,112nm,1.1s						
RABL	Rabaul	21.85	166	P	P	12 26 28.6	-0.6
JSD	Sado	22.15	341	P	P	12 26 31.9	-0.3
DAV	Davao City (W)	23.34	247	P	P	12 26 45.3	+0.5
	comp=Z,146nm,0.4s,baz=84,slow=6.1,SNR=3.8						
DAV				LR	LR	12 34 18.3	
	comp=Z,3µm,21.1s,baz=43,slow=33						
DAV	Davao City (W)	23.34	247	P	P	12 26 45.3	+0.5
TBP	Tagbilaran	23.83	255	⇑*i*P	P	12 26 48.5	-0.9
TBP				*i* S	Sn	12 31 52.2	+25
JTM	Tenmabayashi	24.06	349	P	P	12 26 50.9	-0.4
JTM				IAmb	IAmb	12 27 02.1	

	comp=Z,111nm,1.1s				
FAKI	**Fak Fak**	**24.83 218**	P	**P**	**12 26 57.3 -1.2**
	comp=Z,3µmcomp=Z,1µmcomp=Z,47nm,1.4s				
FAKI	**Fak Fak**	**24.83 218**	P	**P**	**12 26 57.1 -1.4**
FAKI			IAmb	IAmb	12 27 17.6
	comp=Z,57nm,1.2s				
FAKI	**Fak Fak**	**24.83 218**	P	**P**	**12 26 58.9 +0.4**
NACB	**Ninganchiao**	**24.85 290**	IAMs_20	IAMs_20	12 35 19.6
	comp=Z,5µm,19.0s				
ERM	**Erimo**	**24.94 353**	⇑*i*P	**P**	**12 26 56.6 -2.7**
ERM			pmax	pmax	
	comp=Z,116nm,2.7s				
ERM	**Erimo**	**24.94 353**	IAMs_20	IAMs_20	12 36 39.5
	comp=Z,5µm,18.0s				
ERM	**Erimo**	**24.94 353**	P	P	12 27 07.6 +8.3
YULB	**Yu-li**	**24.98 288**	P	**P**	**12 26 59.2 -0.7**
YULB			IAmb	IAmb	12 27 40.1
	comp=Z,143nm,2.0s				
YULB			IAMs_20	IAMs_20	12 34 42.0
	comp=Z,4µm,18.0s				
YHNB	**Yeheng**	**25.15 291**	P	**P**	**12 27 01.1 -0.3**
YHNB			IAmb	IAmb	12 27 14.1
	comp=Z,69nm,0.9s				
YHNB			IAMs_20	IAMs_20	12 35 19.3
	comp=Z,5µm,20.0s				
YHNB	**Yeheng**	**25.15 291**	P	**P**	**12 27 02.5 +1.0**
SSLB	**Suanglung**	**25.36 289**	P	**P**	**12 27 03.1 -0.2**
SSLB			IAmb	IAmb	12 27 20.5
	comp=Z,51nm,1.1s				
SSLB			IAMs_20	IAMs_20	12 36 06.0
	comp=Z,4µm,19.0s				
SSLB	**Suanglung**	**25.36 289**	P	**P**	**12 27 04.7 +1.4**
TPUB	**Ta-pu**	**25.57 288**	P	**P**	**12 27 04.2 -1.0**
TPUB			IAMs_20	IAMs_20	12 35 40.7
	comp=Z,4µm,18.0s				
TJN	**Taejon**	**25.90 321**	⇑*i*P	**P**	**12 27 08.8 +0.8**
JEW	**Eniwo**	**25.99 350**	P	**P**	**12 27 10.6 +1.8**
KSRS	**Korea Array**	**26.31 324**	P	**P**	**12 27 10.7 -1.1**
	comp=Z,3.6nm,0.7s,baz=142,slow=9.1,SNR=7.5				
KSAR	**Wonju Array Be**	**26.32 324**	P	**P**	**12 27 12.6 +0.7**
KSAR	**Wonju Array Be**	**26.32 324**	P	**P**	**12 27 12.6 +0.7**
PMG	**Port Moresby**	**26.46 180**	P	**P**	**12 27 12.1 -1.1**
	comp=Z,54nm,1.1s,baz=10,slow=5.8,SNR=12				
PMG	**Port Moresby**	**26.46 180**	P	**P**	**12 27 09.4 -3.8**
PMG			IAmb	IAmb	12 27 20.6
	comp=Z,59nm,0.9s				
YUK	**Yuzh-Kuril'sk**	**26.75 358**	*e*P	**P**	**12 27 15.7 +0.1**
YUK			*e*		12 27 58.5
YUK			*e*PPP	PPP	12 28 07.0
YUK			*e*S	**S**	**12 31 49.3 +1.0**
YUK			*e*SS	**SnSn**	**12 32 57.6 +2.4**
YUK			*e*SSS	SSS	12 33 12.5
YUK			pmax	pmax	
	comp=Z,126nm,1.7s				
YUK			pmax	pmax	
	comp=Z,102nm,0.8s				
YUK			pmax	pmax	
	comp=E,94nm,1.0s				
YUK			pmax	pmax	
	comp=N,56nm,0.9s				
YUK			MLR	MLR	
	comp=N,1µm,15.0s				
YUK			MLR	MLR	
	comp=Z,1µm,15.0s				
YUK			MLR	MLR	
	comp=E,939nm,12.0s				
INCN	**Inchon**	**27.07 322**	IAMs_20	IAMs_20	12 37 49.1
	comp=Z,3µm,19.0s				
JKA	**Kamikawa-asahi**	**27.08 353**	P	**P**	**12 27 18.7 +0.1**
JKA			IAmb	IAmb	12 27 43.8
	comp=Z,51nm,1.1s				
ASAJ	**Asahikawa**	**27.08 353**	P	**P**	**12 27 19.0 +0.4**
	comp=Z,11nm,0.9s,baz=222,slow=11,SNR=3.7				
ASAJ	**Asahikawa**	**27.08 353**	P	**P**	**12 27 18.7 +0.1**
ASAJ			pmax	pmax	
	comp=Z,51nm,1.1s				
SSE	**Sheshan**	**27.32 305**	P	**P**	**12 27 20.0 -1.0**
SSE			S	**S**	**12 31 59.6 +1.9**
SSE			pmax	pmax	
	comp=Z,19nm,0.7s				
SSE			pmax	pmax	
	comp=Z,180nm,9.3s				
SSE			LR	LR	
	comp=Z,2µm,16.6s				
SSE			LR	LR	
	comp=Z,1µm,16.9s				
QZH	**Quanzhou**	**27.68 291**	⇑*i*P	**P**	**12 27 18.9 -5.3**
QZH			S	**S**	**12 31 58.5 -5.0**
QZH			pmax	pmax	
	comp=Z,330nm,2.9s				
QZH			LR	LR	
	comp=N,1µm,16.1s				
QZH			LR	LR	
	comp=E,2µm,17.1s				
QZH			LR	LR	
	comp=Z,3µm,18.0s				
KUR	**Kuril'sk**	**27.93 1**	*e*P	P	12 27 35.4 +9.2
KUR			*e*PPP	PPP	12 28 20.9
KUR			*e*S	**S**	**12 32 09.2 +2.3**
KUR			pmax	pmax	
	comp=Z,968nm,9.7s				
KUR			MLR	MLR	
	comp=Z,1µm,13.0s				
TEY	**Ternei**	**29.10 345**	⇑*e*P	P	12 27 25.7 -11
TEY			*e*		12 27 43.9
TEY			*e*		12 32 25.9
TEY			pmax	pmax	
	comp=Z,10.0nm,1.0s				
TEY			pmax	pmax	
	comp=N,400nm,11.4s				
TEY			pmax	pmax	
	comp=E,600nm,12.8s				
TEY			MLR	MLR	
	comp=N,1µm,15.0s				
TEY			MLR	MLR	
	comp=E,1µm,15.0s				
TEY			MLR	MLR	
	comp=Z,1µm,14.0s				
HNR	**Honiara**	**29.36 154**	IAMs_20	IAMs_20	12 41 04.7
	comp=Z,4µm,18.0s				
NJ2	**Nanjing**	**29.53 305**	*e*P	**P**	**12 27 41.1 +0.5**
NJ2			S	**S**	**12 32 36.6 +4.1**
NJ2			sS	**sS**	**12 32 51.8 +1.8**
NJ2			pmax	pmax	
	comp=Z,8.0nm,0.7s				
NJ2			pmax	pmax	
	comp=Z,740nm,11.9s				
NJ2			LR	LR	
	comp=Z,3µm,15.2s				
NJ2			LR	LR	
	comp=Z,3µm,17.1s				
NJ2			LR	LR	
	comp=Z,2µm,20.8s				
USA0B	**Ussuriysk Arra**	**29.78 338**	P	**P**	**12 27 42.6 0.0**
USA0B			pmax	pmax	
	comp=Z,22nm,1.0s				
USA0B	**Ussuriysk Arra**	**29.78 338**	P	**P**	**12 27 42.5 0.0**
USRK	**Ussuriysk Ar.**	**29.78 338**	P	**P**	**12 27 43.5 +0.9**
	comp=Z,4.4nm,0.6s,baz=143,slow=11,SNR=6.5				
USRK	**Ussuriysk Ar.**	**29.78 338**	P	**P**	**12 27 42.3 -0.3**
USRK	**Ussuriysk Ar.**	**29.78 338**	P	**P**	**12 27 42.3 -0.3**
TARA	**Tarawa**	**29.86 119**	IAMs_20	IAMs_20	12 36 45.5
	comp=Z,3µm,18.0s				
YSS	**Yuzh-Sakhalins**	**29.87 354**	*e*P	**P**	**12 27 40.0 -3.4**
YSS			*e*S	**S**	**12 32 33.5 -3.8**
YSS			pmax	pmax	
	comp=Z,300nm,5.7s				
YSS			pmax	pmax	
	comp=Z,20nm,1.0s				
YSS			MLR	MLR	
	comp=Z,2µm,15.0s				
YSS			MLR	MLR	
	comp=N,2µm,16.0s				
YSS			MLR	MLR	
	comp=E,4µm,15.0s				
YSS	**Yuzh-Sakhalins**	**29.87 354**	P	**P**	**12 27 44.1 +0.8**
YSS			IAmb	IAmb	12 28 45.8
	comp=Z,137nm,2.0s				
LUWI	**Luwuk**	**30.10 235**	P	**P**	**12 27 44.1 -1.8**
LUWI			IAmb	IAmb	12 27 57.9
	comp=Z,59nm,1.1s				
LUWI	**Luwuk**	**30.10 235**	P	**P**	**12 27 45.6 -0.2**
TOLI2	**Tolitoli**	**30.47 241**	P	**P**	**12 27 49.8 +0.7**
TOLI2	**Tolitoli**	**30.47 241**	P	**P**	**12 27 49.4 +0.3**
	comp=Z,20nm,1.3s				
DL2	**Dalian**	**31.01 319**	P	**P**	**12 27 53.8 +0.2**
DL2			S	**S**	**12 32 53.1 -2.4**
DL2			pmax	pmax	
	comp=Z,290nm,9.2s				
DL2			LR	LR	
	comp=Z,1µm,14.9s				
DL2			LR	LR	
	comp=Z,2µm,16.5s				
DL2			LR	LR	
	comp=Z,2µm,16.5s				
MDJ	**Mudanjiang**	**31.04 335**	P	**P**	**12 27 54.6 +0.8**
MDJ			pP	sP	12 28 07.0 -2.1
MDJ			sP	pwP	12 28 14.0 +4.2
MDJ			PP	**PP**	**12 29 03.0 -1.4**
MDJ			S	**S**	**12 32 57.3 +1.4**
MDJ			pmax	pmax	
	comp=Z,9.0nm,0.9s				
MDJ			pmax	pmax	
	comp=Z,350nm,6.1s				
MDJ			LR	LR	
	comp=Z,2µm,15.9s				
MDJ			LR	LR	
	comp=Z,3µm,17.1s				
MDJ			LR	LR	
	comp=Z,3µm,14.7s				
COEN	**Coen**	**31.23 187**	P	**P**	**12 27 55.9 +0.2**
COEN	**Coen**	**31.23 187**	P	**P**	**12 27 57.4 +1.7**
	comp=Z,15nm,1.0s				
SNY	**Shenyang**	**31.76 325**	⇑P	**P**	**12 28 04.1 +4.0**
SNY			S	**S**	**12 33 13.8 +6.7**
SNY			pmax	pmax	
	comp=Z,14nm,0.7s				
SNY			LR	LR	
	comp=Z,1µm,11.8s				
SNY			LR	LR	
	comp=Z,1µm,13.5s				
SNY			LR	LR	
	comp=Z,1µm,15.4s				
CN2	**Changchun**	**32.22 330**	*e*P	P	12 28 10.1 +5.9
CN2			*e*S	**S**	**12 33 22.8 +8.5**
CN2			pmax	pmax	
	comp=Z,10.0nm,0.7s				
CN2			pmax	pmax	
	comp=Z,400nm,6.0s				
CN2			LR	LR	
	comp=N,3µm,16.0s				
CN2			LR	LR	
	comp=E,3µm,16.0s				
CN2			LR	LR	
	comp=Z,2µm,20.0s				
TIA	**Tai'an**	**32.61 311**	⇓P	**P**	**12 28 09.8 +2.1**
TIA			pmax	pmax	
	comp=Z,410nm,11.9s				
TIA			LR	LR	
	comp=Z,2µm,14.3s				
TIA			LR	LR	
	comp=Z,2µm,15.9s				
TIA			LR	LR	
	comp=Z,2µm,16.1s				
WHN	**Wuhan**	**32.65 300**	⇓P	P	12 28 01.9 -6.2
WHN			PP	**PP**	**12 29 19.8 -2.7**
WHN			S	**S**	**12 33 22.9 +1.6**
WHN			LR	LR	
	comp=N,3µm,12.5s				
WHN			LR	LR	
	comp=E,4µm,11.7s				
WHN			LR	LR	
	comp=Z,7µm,15.3s				
MTN	**Manton Dam**	**33.80 209**	P	**P**	**12 28 18.0 -0.3**
MTN	**Manton Dam**	**33.80 209**	P	**P**	**12 28 17.8 -0.4**
	comp=Z,20nm,1.8s				
SKR	**Severo-Kuril’s**	**34.15 10**	*e*P	P	12 28 29.3 +8.5
SKR			*e*S	**S**	**12 33 45.8 +1.9**
SKR			pmax	pmax	
	comp=Z,200nm,4.7s				
SKR			pmax	pmax	
	comp=Z,200nm,7.9s				
SKR			MLR	MLR	
	comp=Z,700nm,14.0s				
SKR			MLR	MLR	
	comp=Z,800nm,17.0s				
KLR	**Kul'dur**	**34.28 342**	P	**P**	**12 28 21.8 -0.3**
	comp=Z,5.3nm,0.5s,baz=140,slow=6.0,SNR=21				
KLR	**Kul'dur**	**34.28 342**	*c i*P	**P**	**12 28 21.2 -0.9**
GRNR	**Gornyy**	**34.55 348**	⇓*i*P	**P**	**12 28 25.5 +1.1**
GRNR			*e*S	**S**	**12 33 54.7 +4.4**
GRNR			pmax	pmax	
	comp=N,3.0nm,0.8s				
GRNR			pmax	pmax	
	comp=Z,6.0nm,0.8s				
GRNR			smax	smax	
	comp=N,9.0nm,0.6s				
GRNR			MLR	MLR	
	comp=N,880nm,14.0s				
GRNR			MLR	MLR	
	comp=E,900nm,14.0s				
KAPI	**Kappang**	**34.93 233**	LR	LR	12 42 31.5
	comp=E,692nm,19.3s,baz=38,slow=36				
KAPI	**Kappang**	**34.93 233**	P	**P**	**12 28 27.1 -1.0**
KAPI			pmax	pmax	
	comp=Z,31nm,1.1s				
KAPI	**Kappang**	**34.93 233**	P	**P**	**12 28 27.1 -1.0**
KAPI			IAmb	IAmb	12 28 44.2
	comp=Z,31nm,1.1s				
BJI	**Beijing**	**35.14 317**	P	**P**	**12 28 30.8 +1.2**
BJI			PP	**PP**	**12 29 54.3 +4.4**
BJI			S	**S**	**12 34 00.3 +0.7**
BJI			pmax	pmax	
	comp=Z,6.0nm,0.9s				
BJI			pmax	pmax	
	comp=Z,310nm,9.5s				
BJI			LR	LR	
	comp=Z,2µm,16.8s				
BJI			LR	LR	
	comp=Z,2µm,16.0s				
BJI			LR	LR	
	comp=Z,2µm,17.3s				
MTSU	**Mount Surprise**	**35.25 185**	P	**P**	**12 28 30.4 -0.3**
	comp=Z,26nm,0.8s				
QIZ	**Qiongzhong**	**35.45 279**	P	**P**	**12 28 32.4 -0.1**
QIZ			PP	**PP**	**12 29 53.4 -0.2**
QIZ			S	**S**	**12 34 05.6 +0.8**
QIZ			pmax	pmax	
	comp=Z,300nm,4.8s				
QIZ			LR	LR	
	comp=Z,270nm,7.9s				
QIZ			LR	LR	
	comp=Z,930nm,19.5s				
QIZ			LR	LR	
	comp=Z,2µm,18.6s				
NKL	**Nikolayevsk**	**36.21 353**	*e*P	**P**	**12 28 36.0 -2.5**
NKL			*e*S	**S**	**12 34 11.6 -3.9**
NKL			pmax	pmax	
	comp=E,4.0nm,0.8s				
NKL			pmax	pmax	
	comp=Z,62nm,1.3s				
NKL			smax	smax	
	comp=E,3.0nm,0.8s				
NKL			smax	smax	
	comp=N,2µm,1.9s				
NKL			MLR	MLR	
	comp=E,25nm,13.0s				
NKL			MLR	MLR	
	comp=N,27µm,15.0s				
NKL			MLR	MLR	
	comp=Z,845nm,15.0s				
PEA0B	**Petropavlovsk-**	**36.75 11**	⇑*e*P	**P**	**12 28 44.0 +0.8**
PET	**Petropavlovsk**	**36.85 12**	*e*P	**P**	**12 28 48.5 +4.5**
PET			*e*S	**S**	**12 34 30.8 +5.5**
PET			pmax	pmax	
	comp=Z,800nm,12.6s				
PET			pmax	pmax	
	comp=Z,500nm,13.3s				
PET			MLR	MLR	
	comp=Z,2µm,19.0s				
PET			MLR	MLR	
	comp=Z,2µm,16.0s				
CTAO	**Charters Tower**	**37.09 181**	P	**P**	**12 28 45.4 -1.1**
CTAO			pmax	pmax	
	comp=Z,33nm,1.4s				
CTAO			MLR	MLR	
	comp=Z,2µm,21.0s				
CTAO	**Charters Tower**	**37.09 181**	P	**P**	**12 28 45.4 -1.1**
CTAO	**Charters Tower**	**37.09 181**	IAMs_20	IAMs_20	12 42 50.4
	comp=Z,2µm,21.0s				
KNRA	**Kununurra**	**37.38 210**	P	**P**	**12 28 49.1 +0.1**
KNRA	**Kununurra**	**37.38 210**	P	**P**	**12 28 49.2 +0.3**
	comp=Z,34nm,1.6s				
SANVU	**Saraoutou**	**38.02 148**	IAMs_20	IAMs_20	12 45 23.9
	comp=Z,2µm,18.0s				
XAN	**Xi'an**	**38.05 304**	P	**P**	**12 28 55.0 +0.4**
XAN			pP	pP	12 29 07.3 +2.0
XAN			S	**S**	**12 34 49.8 +5.6**
XAN			pmax	pmax	
	comp=Z,9.0nm,0.9s				
XAN			pmax	pmax	
	comp=Z,340nm,11.1s				
XAN			LR	LR	
	comp=Z,2µm,21.3s				
XAN			LR	LR	
	comp=Z,2µm,22.0s				
XAN			LR	LR	
	comp=Z,3µm,19.2s				
QIS	**Mount Isa**	**38.27 191**	P	**P**	**12 28 57.2 +0.8**
	comp=Z,26nm,1.2s				
GYA	**Guiyang**	**38.54 291**	⇑P	**P**	**12 29 00.9 +2.0**
GYA			pP	pP	12 29 09.5 -0.2
GYA			PP	**PP**	**12 30 31.6 +3.9**
GYA			S	**S**	**12 34 55.8 +3.7**
GYA			pmax	pmax	
	comp=Z,11nm,0.7s				
GYA			pmax	pmax	
	comp=Z,410nm,12.0s				
GYA			LR	LR	
	comp=Z,1µm,17.0s				
GYA			LR	LR	
	comp=Z,720nm,12.6s				
GYA			LR	LR	
	comp=Z,2µm,18.6s				
HHC	**Hu-ho-hao-te**	**38.61 315**	*e*P	**P**	**12 29 00.6 +1.4**
HHC			S	**S**	**12 34 44.8 -7.8**
HHC			SS	**SnSn**	**12 37 39.3 -3.9**
HHC			pmax	pmax	
	comp=Z,19nm,0.9s				
HHC			pmax	pmax	
	comp=Z,150nm,4.4s				
HHC			LR	LR	
	comp=Z,930nm,13.5s				
HHC			LR	LR	
	comp=Z,2µm,16.4s				
HHC			LR	LR	
	comp=Z,2µm,16.9s				
WB0	**Warramunga Arr**	**38.83 199**	P	**P**	**12 28 59.0 -2.1**
WB0			IAmb	IAmb	12 29 01.9
	comp=Z,150nm,1.6s				
PLAI	**Plampang**	**38.89 231**	P	**P**	**12 29 02.4 +0.7**
HIA	**Hailar**	**38.91 331**	IAMs_20	IAMs_20	12 44 03.8
	comp=Z,2µm,20.0s				
WR0	**Warramunga Arr**	**38.97 199**	P	**P**	**12 29 01.2 -1.0**
WR0			IAmb	IAmb	12 29 17.9
	comp=Z,44nm,1.0s				
WRAB	**Tennant Creek**	**39.00 199**	*ce*P	**P**	**12 29 01.8 -0.8**
WRAB			pmax	pmax	
	comp=Z,143nm,2.5s				
WRAB	**Tennant Creek**	**39.00 199**	P	**P**	**12 29 01.8 -0.8**
WRAB	**Tennant Creek**	**39.00 199**	P	**P**	**12 29 02.0 -0.6**
WB2	**Warramunga Arr**	**39.01 199**	P	**P**	**12 29 02.0 -0.6**
WB2			IAmb	IAmb	12 29 18.3
	comp=Z,55nm,1.1s				
WRA	**Warramunga Arr**	**39.02 199**	P	**P**	**12 29 01.6 -1.0**
	comp=Z,32nm,1.0s,baz=33,slow=9.1,SNR=96				
WRA			ScP	**S**	**12 35 00.8 +1.9**
	comp=Z,2.7nm,1.1s,baz=359,slow=4.2,SNR=5.1				
WRA			LR	LR	12 45 55.2
	comp=Z,1µm,18.5s,baz=20,slow=38				
WRA	**Warramunga Arr**	**39.02 199**	*i* P	**P**	**12 29 02.0 -0.7**
WRA			pmax	pmax	
	comp=Z,21nm,0.8s				
WRA	**Warramunga Arr**	**39.02 199**	P	**P**	**12 28 59.9 -2.8**
BTO	**Baotou**	**39.55 314**	*e*P	**P**	**12 29 07.8 +0.6**
ZEA	**Zeya**	**39.59 342**	*e*P	**P**	**12 29 06.9 -0.2**
ZEA			*e*S	**S**	**12 35 09.0 +2.2**
ZEA			pmax	pmax	
	comp=E,10.0nm,1.1s				
ZEA			pmax	pmax	
	comp=N,20nm,1.4s				
ZEA			pmax	pmax	
	comp=Z,30nm,1.6s				
ZEA			pmax	pmax	
	comp=E,100nm,7.3s				
ZEA			pmax	pmax	
	comp=N,200nm,7.8s				
ZEA			pmax	pmax	
	comp=Z,300nm,8.1s				
ZEA			MLR	MLR	
	comp=N,900nm,16.0s				
ZEA			MLR	MLR	
	comp=Z,800nm,16.0s				
SLVN	**Son La**	**40.92 283**	P	**P**	**12 29 17.4 -1.3**
SLVN			IAmb	IAmb	12 29 21.4
	comp=Z,79nm,1.9s				
SLVN			IAMs_20	IAMs_20	12 47 02.6
	comp=Z,2µm,19.0s				
FITZ	**Fitzroy Crossi**	**40.98 212**	P	**P**	**12 29 17.7 -1.3**
	comp=Z,2.6nm,0.4s,baz=26,slow=10,SNR=41				
FITZ	**Fitzroy Crossi**	**40.98 212**	P	**P**	**12 29 18.5 -0.5**
FITZ	**Fitzroy Crossi**	**40.98 212**	P	**P**	**12 29 18.0 -1.0**
	comp=Z,18nm,2.3s				
CD2	**Chengdu**	**41.63 297**	P	**P**	**12 29 26.1 +1.7**
CD2			S	**S**	**12 35 39.4 +1.4**
CD2			SS	**SS**	**12 38 40.5 -3.8**
CD2			pmax	pmax	
	comp=Z,10.0nm,0.4s				
CD2			pmax	pmax	
	comp=Z,410nm,10.2s				
CD2			LR	LR	
	comp=Z,2µm,15.3s				
CD2			LR	LR	
	comp=Z,3µm,17.9s				
CD2			LR	LR	
	comp=Z,3µm,16.8s				
KMI	**Kunming**	**41.99 289**	⇑P	**P**	**12 29 27.9 +0.3**
KMI			pP	sP	12 29 41.0 -2.1
KMI			PP	**PnPn**	**12 31 11.5 +0.8**
KMI			S	**S**	**12 35 43.3 -0.5**
KMI			sS	sS	12 36 04.8 +3.1
KMI			SS	**SS**	**12 38 53.8 +1.9**
KMI			pmax	pmax	
	comp=Z,10.0nm,1.4s				
KMI			pmax	pmax	
	comp=Z,340nm,8.3s				
KMI			LR	LR	
	comp=Z,710nm,17.0s				
KMI			LR	LR	
	comp=Z,1µm,16.5s				
KMI			LR	LR	
	comp=Z,1µm,15.1s				
MA2	**Magadan**	**42.38 3**	*d i*P	**P**	**12 29 32.1 +2.2**
MA2			pmax	pmax	
	comp=Z,41nm,1.1s				
LZH	**Lanzhou**	**42.61 305**	⇑P	**P**	**12 29 31.6 -0.8**
LZH			pP	pP	12 29 41.9 -1.4
LZH			S	**S**	**12 35 48.6 -3.9**
LZH			sS	sS	12 36 14.8 +4.4
LZH			pmax	pmax	
	comp=Z,26nm,1.3s				
LZH			pmax	pmax	
	comp=Z,360nm,5.2s				
LZH			LR	LR	
	comp=Z,2µm,14.6s				
LZH			LR	LR	
	comp=Z,2µm,14.2s				
LZH			LR	LR	
	comp=Z,2µm,17.0s				
AS31	**Alice Springs**	**42.65 198**	P	**P**	**12 29 32.3 -0.3**
ASAR	**Alice Springs**	**42.65 198**	P	**P**	**12 29 31.7 -0.9**
	comp=Z,4.3nm,0.8s,baz=26,slow=6.9,SNR=43				
ASAR			PcP	**PcP**	**12 31 24.9 +0.8**
	comp=Z,1.7nm,0.5s,baz=19,slow=3.0,SNR=4.1				
ASAR			LR	LR	12 50 22.4
	comp=Z,1µm,18.1s,baz=22,slow=40				
ASAR	**Alice Springs**	**42.65 198**	P	**P**	**12 29 32.3 -0.3**
DZM	**Mont Dzumac**	**43.39 153**	*e*P	**P**	**12 29 41.9 +3.2**
	comp=Z,98nm,1.1s				
DZM			*e*S	**S**	**12 36 05.4 +1.5**
	comp=Z,358nm,26.2s				
DZM			*e*LR	LR	12 41 37.0
	comp=Z,1µm,21.4s				
DZM	**Mont Dzumac**	**43.39 153**	P	**P**	**12 29 37.5 -1.1**
DZM			IAmb	IAmb	12 29 49.5
	comp=Z,36nm,1.0s				
RMQ	**Roma**	**43.48 178**	P	**P**	**12 29 38.0 -1.2**
ULN	**Ulaanbaatar**	**44.77 322**	⇓*i*P	**P**	**12 29 49.1 -0.5**

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ULN                               pmax     pmax
     comp=Z,11nm,1.7s
ULN  Ulaanbaatar       44.77 322  P        P        12 29 49.6  0.0
ULN  Ulaanbaatar       44.77 322  P        P        12 29 49.5 -0.1
ULN  Ulaanbaatar       44.77 322  IAMs_20  IAMs_20  12 49 05.4
     comp=Z,3µm,18.0s
ADK  Adak              44.84  31  P        P        12 29 56.0 +6.2
SONM Songino Array     45.15 322  P        P        12 29 52.4 -0.1
     comp=Z,3.2nm,0.7s,baz=123,slow=11,SNR=7.7
SONM Songino Array     45.15 322  P        P        12 29 52.5 -0.1
CHTO Chiang Mai        45.75 280  P        P        12 29 58.5 +0.9
CHTO                              pmax     pmax
     comp=Z,7.0nm,0.9s
CHTO                              MLR      MLR
     comp=Z,2µm,18.0s
CHTO Chiang Mai        45.75 280  P        P        12 29 58.3 +0.7
CHTO Chiang Mai        45.75 280  P        P        12 29 58.5 +0.9
CHTO Chiang Mai        45.75 280  IAMs_20  IAMs_20  12 51 28.6
     comp=Z,2µm,18.0s
CM31 Chiang Mai Arr    45.79 279  P        P        12 29 58.6 +0.7
     SNR=11
CM31 Chiang Mai Arr    45.79 279  P        P        12 29 58.2 +0.3
CMAR Chiang Mai Arr    45.79 279  P        P        12 29 58.2 +0.2
     comp=Z,6.9nm,0.7s,baz=71,slow=6.8,SNR=46
CMAR                              LR       LR       12 49 47.1
     comp=Z,891nm,18.7s,baz=122,slow=37
CMAR Chiang Mai Arr    45.79 279ceP        P        12 29 59.0 +1.1
CMAR                              pmax     pmax
     comp=Z,7.0nm,0.7s
CMAR Chiang Mai Arr    45.79 279  P        P        12 29 58.8 +0.9
SEY  Seymchan          45.81   3  P        P        12 29 58.8 +1.5
     comp=Z,6.7nm,0.9s,baz=177,slow=6.1,SNR=5.0
WRKA Warakurna         45.84 204  P        P        12 29 57.0 -1.2
OOD  Oodnadatta        46.11 194  P        P        12 29 58.9 -1.2
MSVF Nonsavu           46.18 137⇓iP        P        12 30 03.2 +2.2
MSVF                              pmax     pmax
     comp=Z,46nm,1.3s
MSVF Nonsavu           46.18 137  P        P        12 30 00.7 -0.2
MSVF                              IAmb     IAmb     12 30 12.1
     comp=Z,42nm,1.2s
YAK  Yakutsk           46.42 349 eP        P        12 30 01.1 -1.1
YAK                              e*PP      pP       12 30 11.5 -1.6
YAK                              e                  12 31 42.3
YAK                              eS        S        12 36 46.2 -0.5
YAK                              e*SS      sS       12 37 05.5 +0.7
YAK                              eSS       SS       12 40 04.5 -8.2
YAK                               pmax     pmax
     comp=Z,35nm,1.0s
YAK                               pmax     pmax
     comp=E,3.0nm,1.0s
YAK                               pmax     pmax
     comp=N,13nm,1.0s
YAK                               smax     smax
     comp=E,245nm,3.2s
YAK                               smax     smax
     comp=N,152nm,3.1s
YAK                               MLR      MLR
     comp=Z,2µm,17.0s
YAK                               MLR      MLR
     comp=N,1µm,14.0s
YAK                               MLR      MLR
     comp=E,916nm,16.0s
YAK  Yakutsk           46.42 349  P        P        12 30 01.1 -1.1
YAK                               IAMs_20  IAMs_20  12 49 51.7
     comp=Z,2µm,18.0s
GTA  Gaotai            46.53 308 eP        P        12 30 03.1 -0.5
GTA                               pP       pwP      12 30 21.8 +2.0
GTA                               PP       PP       12 31 54.1 +0.6
GTA                               S        S        12 36 50.8 +1.5
GTA                               sS       sS       12 37 14.0 +6.6
GTA                               pmax     pmax
     comp=Z,320nm,6.2s
GTA                               LR       LR
     comp=Z,2µm,19.3s
GTA                               LR       LR
     comp=Z,1µm,19.3s
GTA                               LR       LR
     comp=Z,1µm,20.0s
BOD  Bodaibo           47.40 337 eP        P        12 30 09.8 -0.1
BOD                               pmax     pmax
     comp=Z,27nm,1.7s
ARMA Armidale          47.56 175  P        P        12 30 11.3 -0.3
ARMA                              IAmb     IAmb     12 30 12.7
     comp=Z,52nm,1.4s
ARMA Armidale          47.56 175  P        P        12 30 11.0 -0.6
ZAK  Zakamensk         48.14 323 eP        P        12 30 13.9 -2.1
ZAK                               pmax     pmax
     comp=Z,12nm,1.1s
LCRK Leigh Creek       48.17 190  P        P        12 30 15.7 -0.4
TLY  Talaya            48.55 325 eP        P        12 30 23.9 +4.9
TLY                              eS        S        12 37 24.6 +7.2
TLY                              e                  12 40 06.5
TLY                               pmax     pmax
     comp=Z,20nm,0.8s
TLY                               MLR      MLR
     comp=Z,4µm,16.0s
TLY  Talaya            48.55 325  IAMs_20  IAMs_20  12 51 41.2
     comp=Z,2µm,19.0s
KSI  Kapahiang         48.61 249  P        P        12 30 20.2 +0.2
MULG Mulgathing        48.88 195  P        P        12 30 20.7 -1.0
STKA Stephens Creek    49.11 186  P        P        12 30 23.1 -0.2
     comp=Z,1.4nm,0.4s,baz=9.7,slow=9.9,SNR=6.3
STKA                              LR       LR       12 52 52.5
     comp=Z,1µm,18.3s,baz=8.2,slow=38
STKA Stephens Creek    49.11 186  P        P        12 30 22.1 -1.3
MOY  Mondy             50.01 324 eP        P        12 30 34.8 +4.5
MOY                               pmax     pmax
     comp=Z,25nm,1.8s
BBOO Buckleboo         50.87 192  P        P        12 30 36.7  0.0
BBOO                              IAmb     IAmb     12 30 38.7
     comp=Z,24nm,0.8s
BBOO Buckleboo         50.87 192  P        P        12 30 36.1 -0.6
HTT  Hallett           50.98 189  P        P        12 30 37.8 +0.2
FORT Forrest           51.13 201  P        P        12 30 39.1 +0.4
FORT Forrest           51.13 201  P        P        12 30 38.4 -0.3
GSI  Gunungsitoli      51.22 257  P        P        12 30 39.2 -0.6
GSI                               IAMs_20  IAMs_20  12 51 50.3
     comp=Z,2µm,20.0s
GSI  Gunungsitoli      51.22 257  P        P        12 30 40.2 +0.5
SHL  Shillong          51.81 289  P        P        12 30 44.4 +0.1
     SNR=7.4
BILL Bilibino          52.24   9ceP        P        12 30 46.9 +0.3
BILL                             e                  12 32 47.9
BILL                             i S       S        12 38 06.4 -1.7
BILL                              pmax     pmax
     comp=Z,36nm,1.0s
BILL                              MLR      MLR
     comp=Z,604nm,17.0s
BILL Bilibino          52.24   9  P        P        12 30 46.5 -0.1
BILL                              IAmb     IAmb     12 30 52.1
     comp=Z,45nm,1.2s
CAN  Canberra          52.28 178  P        P        12 30 47.7 +0.4
CAN                               pmax     pmax
     comp=Z,117nm,1.8s
CAN  Canberra          52.28 178  P        P        12 30 47.7 +0.4
CAN                               IAMs_20  IAMs_20  12 50 51.6
     comp=Z,2µm,21.0s
CAN  Canberra          52.28 178  P        P        12 30 47.7 +0.4
LSA  Lhasa             52.40 294  P        P        12 30 49.5 +0.6
ARPS Mount Arapiles    53.93 185  P        P        12 31 00.0 +0.6
MORW Morawa            54.96 214  P        P        12 31 06.4 -0.6
TAPN Taplejung         55.47 292 eP        P        12 31 12.3 +1.1
TIXI Tiksi             55.49 353⇑eP        P        12 31 09.1 -1.1
TIXI                              pmax     pmax
     comp=Z,17nm,1.2s
TIXI Tiksi             55.49 353  P        P        12 31 09.3 -0.9
TIXI                              IAmb     IAmb     12 31 20.2
     comp=Z,23nm,1.0s
ODAN Odare             55.78 291 eP        P        12 31 13.7 +0.3
BLDU Ballidu           55.85 212  P        P        12 31 13.8 +0.4
WMQ  Urumqi            56.31 311 eP        P        12 31 16.5 -0.2
WMQ                               pP       pwP      12 31 34.0 +1.0
WMQ                               pmax     pmax
     comp=Z,51nm,1.3s
WMQ                               pmax     pmax
     comp=Z,330nm,5.5s
WMQ                               LR       LR
     comp=Z,2µm,18.5s
WMQ                               LR       LR
     comp=Z,1µm,17.5s
WMQ                               LR       LR
     comp=Z,710nm,19.7s
RAMN Ramite            56.48 291 eP        P        12 31 19.7 +1.3
JIRN Jiri              56.80 292 eP        P        12 31 21.6 +0.8
     comp=Z,39nm,0.8s
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GUN  Gumba             57.06 292 eP        P        12 31 23.5 +0.9
PKI  Pulchoki          57.50 292 eP        P        12 31 26.1 +0.4
DGZ  Jazzator, Alta    57.53 318d iP       P        12 31 25.2 -0.1
DGZ                               pmax     pmax
     comp=Z,24nm,1.6s
KKN  Kakani            57.60 292 eP        P        12 31 27.4 +1.1
GKN  Gorkha            58.15 293 eP        P        12 31 30.8 +0.7
ZSN  Zaisan            58.81 315 eP        P        12 31 31.7 -2.4
     baz=315
ZSN  Zaisan            58.81 315 eP        P        12 31 31.6 -2.5
DANN Dangsing          58.90 293 eP        P        12 31 35.9 +0.4
KOLN Koldanda          59.09 292 eP        P        12 31 37.9 +1.3
PYUN Piuthan           59.60 293 eP        P        12 31 40.7 +0.5
TTA  Tatalina          59.95  26  P        P        12 31 43.3 +1.5
TTA                               pmax     pmax
     comp=Z,32nm,1.4s
TTA  Tatalina          59.95  26  P        P        12 31 43.2 +1.5
     baz=248
TTA  Tatalina          59.95  26  P        P        12 31 43.3 +1.5
TTA                               IAmb     IAmb     12 31 52.2
     comp=Z,32nm,1.4s
ZAA0 Zalesovo Array    60.01 323  P        P        12 31 41.1 -1.2
ZALV Zalesovo Beam     60.01 323  P        P        12 31 41.2 -1.1
     comp=Z,3.3nm,0.7s,baz=100,slow=6.2,SNR=9.0
M19K Big River Lodg    60.27  28  P        P        12 31 48.4 +4.4
     baz=250
GCSA Galena City Sc    60.32  24  P        P        12 31 48.9 +4.8
     baz=246
MK31 Makanchi Array    60.47 314  P        P        12 31 45.2 -0.4
MK31                              pmax     pmax
     comp=Z,10.0nm,1.0s
MK31 Makanchi Array    60.47 314  P        P        12 31 45.2 -0.4
MKAR Makanchi Array    60.47 314  P        P        12 31 45.1 -0.5
     comp=Z,1.6nm,0.5s,baz=89,slow=8.3,SNR=20
MKAR Makanchi Array    60.47 314  P        P        12 31 44.4 -1.2
MAKZ Makanchi          60.68 314  P        P        12 31 46.0 -1.1
MAKZ                              pmax     pmax
     comp=Z,15nm,1.0s
MAKZ                              MLR      MLR
     comp=Z,900nm,19.0s
MAKZ Makanchi          60.68 314  P        P        12 31 46.0 -1.1
MAKZ                              IAmb     IAmb     12 31 59.0
     comp=Z,15nm,0.9s
MAKZ                              IAMs_20  IAMs_20  12 57 27.9
     comp=Z,858nm,19.0s
K20K Telida            60.92  26  P        P        12 31 49.9 +1.5
     baz=249
K20K Telida            60.92  26  P        P        12 31 49.1 +0.7
J20K Nowinta River     61.19  25  P        P        12 31 51.4 +1.3
     baz=249,SNR=16
J20K Nowinta River     61.19  25  P        P        12 31 51.6 +1.5
PPLA Purkeypile        61.57  27  P        P        12 31 51.8 -1.2
CAST Castle Rocks      61.79  26  P        P        12 31 54.6 +0.4
     baz=251
CAST Castle Rocks      61.79  26  P        P        12 31 54.4 +0.2
CAST                              IAmb     IAmb     12 32 04.6
     comp=Z,31nm,1.0s
CHUM Lake Minchumin    61.84  26  P        P        12 31 55.8 +1.3
     baz=251
IMAR Indian Mountai    62.01  23  P        P        12 31 56.0 +0.4
RC01 Rabbit Creek A    62.15  29  P        P        12 31 57.5 +0.9
     baz=254
M22K Willow            62.15  29  P        P        12 31 58.8 +2.2
     baz=254
SHLS Shalkode          62.21 310 eP        P        12 31 52.9 -4.7
     baz=310
SHLS Shalkode          62.21 310 eP        P        12 31 52.8 -4.7
H21K Melozitna Rive    62.25  24  P        P        12 31 57.8 +0.5
     baz=249
H21K Melozitna Rive    62.25  24  P        P        12 31 57.9 +0.6
H21K                              IAmb     IAmb     12 32 08.2
     comp=Z,28nm,0.9s
I21K Tanana            62.41  25  P        P        12 31 59.0 +0.7
     baz=250
BPAW Bear Paw Mtn.     62.47  26  P        P        12 31 59.1 +0.4
     baz=252,SNR=9.1
UZB  Uzynbulak         62.53 310 eP        P        12 31 57.7 -2.0
     baz=310
UZB  Uzynbulak         62.53 310 eP        P        12 31 57.6 -2.1
TRF  Thorofare Moun    62.56  27  P        P        12 31 59.1 -0.5
     baz=253
KPKS Kokpek            62.79 310 eP        P        12 31 59.0 -2.4
     baz=310
KPKS Kokpek            62.79 310 eP        P        12 31 58.9 -2.4
MLY  Manley            62.86  25  P        P        12 32 01.6 +0.2
     baz=252,SNR=14
MLY  Manley            62.86  25  P        P        12 32 01.3 -0.1
SATY Saty              62.98 310 eP        P        12 32 00.3 -2.5
     baz=310
SATY Saty              62.98 310 eP        P        12 32 00.2 -2.5
SML  Sawmill           62.99  29  P        P        12 32 02.8 +0.5
     baz=256
MCK  McKinley          63.23  27  IAMs_20  IAMs_20  12 56 33.2
     comp=Z,1µm,19.0s
A21K Barrow            63.28  17  P        P        12 32 04.2 +0.3
     baz=243
KURK Kurchatov         63.28 319ceP        P        12 32 03.0 -1.3
KURK                              pmax     pmax
     comp=Z,36nm,1.7s
KURK Kurchatov         63.28 319  P        P        12 32 04.2 -0.2
KURK Kurchatov         63.28 319  P        P        12 32 03.1 -1.3
NEA2 Nenana            63.41  26  P        P        12 32 06.2 +1.2
     baz=253
NEA2 Nenana            63.41  26  P        P        12 32 06.4 +1.4
ARXS Arharly           63.43 311 eP        P        12 32 05.1 -0.5
WAT6 Susitna Watana    63.45  28  P        P        12 32 05.8 +0.4
     baz=256
I23K Minto, Yukon-K    63.45  25  P        P        12 32 06.3 +1.1
     baz=253,SNR=13
SCM  Sheep Creek Mo    63.46  29  P        P        12 32 06.6 +1.2
     baz=256
NRIK Noril'sk          63.46 340  P        P        12 32 05.0 -0.2
     comp=Z,12nm,1.0s,baz=119,slow=8.0,SNR=21
NRIK Noril'sk          63.46 340c iP       P        12 32 04.7 -0.5
NRIK                              pmax     pmax
     comp=Z,79nm,1.5s
NRIK Noril'sk          63.46 340  P        P        12 32 04.2 -1.0
H23K Yukon River       63.58  24  P        P        12 32 06.0 -0.1
     baz=252
BFZ  Birch Farm        63.65 156  IAMs_20  IAMs_20  12 59 57.7
     comp=Z,1µm,18.0s
COLD Coldfoot          63.77  23  P        P        12 32 08.7 +1.4
     baz=251
MDOK Medeo             63.98 310 eP        P        12 32 07.5 -1.8
     baz=310
MDOK Medeo             63.98 310 eP        P        12 32 07.5 -1.8
COLA College           63.99  26⇓iP        P        12 32 10.1 +1.4
COLA                              pmax     pmax
     comp=Z,9.0nm,1.1s
TNSS Tian-Shan         64.05 310 eP        P        12 32 08.7 -1.4
     baz=310
POKR Poker Plat Res    64.23  25  P        P        12 32 10.7 +0.3
     baz=255
H24K Noodor Dome       64.24  24  P        P        12 32 11.3 +0.8
     baz=254
HDA  Harding Lake      64.25  26  P        P        12 32 10.0 -0.5
     baz=256
IL31                   64.36  26  P        P        12 32 10.4 -0.8
IL31                              IAmb     IAmb     12 32 20.1
     comp=Z,26nm,1.1s
ILAR Eielson Array     64.36  26  P        P        12 32 09.5 -1.7
     comp=Z,9.2nm,1.0s,baz=255,slow=5.4,SNR=28
ILAR Eielson Array     64.36  26  P        P        12 32 09.9 -1.4
ILAR Eielson Array     64.36  26  P        P        12 32 09.9 -1.4
TOLK Toolik Lake Re    64.45  21  P        P        12 32 12.5 +0.7
     baz=251
TOLK Toolik Lake Re    64.45  21  P        P        12 32 12.9 +1.0
TOLK                              IAmb     IAmb     12 32 34.1
     comp=Z,25nm,1.1s
KUU  Kurty             64.50 311 eP        P        12 32 10.3 -2.3
     baz=311
KUU  Kurty             64.50 311 eP        P        12 32 10.2 -2.3
PAX  Paxson            64.56  28  P        P        12 32 13.2 +0.6
     baz=258
BMRM Bremner River     64.56  30  P        P        12 32 17.3 +4.7
     baz=259
HARP HAARP             64.58  28  P        P        12 32 12.9 +0.2
     baz=258
KSH  Kashi             64.84 306  P        P        12 32 16.8 +1.8
KSH                               S        S        12 40 58.1 +4.9
KSH                               sS       sS       12 41 15.3 +2.8
KSH                               pmax     pmax
     comp=Z,17nm,1.9s
KSH                               pmax     pmax
     comp=Z,450nm,7.4s
KSH                               LR       LR
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     comp=Z,1µm,15.3s
KSH                               LR       LR
     comp=Z,2µm,16.7s
KSH                               LR       LR
     comp=Z,1µm,19.7s
J25K Salcha River,     64.96  26  P        P        12 32 15.4 +0.2
     baz=257
MQZ  McQueen's Vall    64.98 160  IAMs_20  IAMs_20  12 58 57.3
     comp=Z,1µm,21.0s
RIDG Independent Ri    64.99  27  P        P        12 32 15.9 +0.4
     baz=258
PRP  Porcupine Dome    65.10  25  P        P        12 32 16.5 +0.3
     baz=256
SCRK Sand Creek        65.41  27  P        P        12 32 18.7 +0.4
     baz=259,SNR=11
SCRK Sand Creek        65.41  27  P        P        12 32 18.5 +0.3
PALK Pallekele         65.42 270  P        P        12 32 18.6 -0.4
PALK Pallekele         65.42 270  IAMs_20  IAMs_20  12 58 47.2
     comp=Z,928nm,20.0s
L26K Log Cabin Wild    65.52  28  P        P        12 32 19.7 +0.9
     baz=260
J26L Joseph Creek      65.70  26  P        P        12 32 20.3 +0.3
     baz=259,SNR=12
SGDS Sogindy           65.74 310 eP        P        12 32 18.1 -2.6
     baz=310
AAK  Ala-Archa         65.86 309  P        P        12 32 21.0 -0.6
AAK  Ala-Archa         65.86 309⇑eP        P        12 32 20.5 -1.1
AAK                               pmax     pmax
     comp=Z,26nm,1.7s
AAK  Ala-Archa         65.86 309  P        P        12 32 22.1 +0.6
AAK  Ala-Archa         65.86 309  P        P        12 32 20.9 -0.6
AAK  Ala-Archa         65.86 309  IAMs_20  IAMs_20  12 58 16.2
     comp=Z,796nm,18.0s
BMAR Burnt Mountain    65.92  23  P        P        12 32 22.2 +0.9
M27K Edge Creek, AK    66.07  29  P        P        12 32 24.2 +1.7
     baz=261
BTLS Baital            66.13 312 eP        P        12 32 21.1 -2.0
     comp=Z,40nm,2.6s,baz=312
BTLS Baital            66.13 312 eP        P        12 32 21.0 -2.0
BTLS                              pmax     pmax
     comp=Z,39nm,2.6s
L27K Beaver Creek,     66.20  28  P        P        12 32 24.0 +0.7
     baz=261
L27K Beaver Creek,     66.20  28  P        P        12 32 23.9 +0.7
L27K                              IAmb     IAmb     12 32 36.1
     comp=Z,14nm,1.1s
BCAR Beaver Creek A    66.22  28  P        P        12 32 23.9 +0.5
AML  Almayashu         66.47 309 i P       P        12 32 25.2 -0.6
     SNR=5.2
AML  Almayashu         66.47 309  P        P        12 32 26.3 +0.5
YUK3 Moose Creek       66.65  30  P        P        12 32 28.1 +1.7
     baz=263
EGAK Eagle             66.77  26  P        P        12 32 27.6 +0.8
     baz=261
BRZS Berezniki         67.04 318 eP        P        12 32 27.1 -1.8
     baz=318
BRZS Berezniki         67.04 318 eP        P        12 32 27.0 -1.8
DAWY Dawson            67.42  27  P        P        12 32 31.9 +0.9
     baz=263,SNR=9.0
DAWY Dawson            67.42  27  P        P        12 32 32.3 +1.3
DAWY                              IAmb     IAmb     12 32 36.7
     comp=Z,29nm,1.2s
HYT  Haines Junctio    67.98  31  P        P        12 32 37.7 +3.0
     baz=266
I29M Ogilvie Camp,     68.04  26  P        P        12 32 35.1 +0.2
     baz=263
M30M Minto, Yukon      68.44  29  P        P        12 32 39.4 +1.9
     baz=266
BRVK Borovoye          68.54 321⇓eP        P        12 32 37.6 -0.6
BRVK                              pmax     pmax
     comp=Z,21nm,1.7s
BRVK Borovoye          68.54 321  P        P        12 32 38.0 -0.2
BRVK Borovoye          68.54 321  P        P        12 32 36.8 -1.3
BRVK                              IAmb     IAmb     12 32 53.6
     comp=Z,18nm,0.9s
KK31 Karatay Array     68.76 310  P        P        12 32 38.0 -1.7
KK31                              pmax     pmax
     comp=Z,46nm,1.5s
KK31 Karatay Array     68.76 310  P        P        12 32 38.0 -1.7
KK31                              IAmb     IAmb     12 32 49.1
     comp=Z,46nm,1.5s
KKAR Karatay Array     68.76 310  P        P        12 32 39.5 -0.3
KKAR                              pmax     pmax
     comp=Z,46nm,1.5s
KKAR Karatay Array     68.76 310  P        P        12 32 39.5 -0.3
KKAR                              IAmb     IAmb     12 32 49.1
     comp=Z,46nm,1.5s
KKAR Karatay Array     68.76 310  P        P        12 32 39.0 -0.8
BTK  Batken            68.77 307  P        P        12 32 40.2 +0.2
BTK                               pmax     pmax
     comp=Z,14nm,1.2s
BTK  Batken            68.77 307  P        P        12 32 40.2 +0.2
EPYK Eagle Plains      68.80  25  P        P        12 32 39.8 +0.2
     baz=264
EPYK Eagle Plains      68.80  25  P        P        12 32 40.1 +0.5
IUG  Iuzhnay           69.19 309 eP        P        12 32 41.0 -1.5
     baz=309
IUG  Iuzhnay           69.19 309 eP        P        12 32 41.0 -1.5
POO  Poona             69.29 284 eP        P        12 32 41.0 -2.5
M31M Drury Creek, Y    69.54  29  P        P        12 32 45.6 +1.3
     baz=268
INK  Inuvik            70.19  23  P        P        12 32 47.3 -0.7
     comp=Z,10nm,1.0s,baz=255,slow=9.0,SNR=12
INK  Inuvik            70.19  23  P        P        12 32 48.1 +0.2
     baz=267
INK  Inuvik            70.19  23  P        P        12 32 48.2 +0.2
INK                               IAmb     IAmb     12 32 58.0
     comp=Z,15nm,0.9s
KBL  Kabul             70.80 301  P        P        12 32 51.1 -1.6
KBL                               pmax     pmax
     comp=Z,33nm,1.2s
KBL  Kabul             70.80 301  P        P        12 32 52.9 +0.2
     SNR=20
KBL  Kabul             70.80 301  P        P        12 32 51.1 -1.6
KBL                               IAmb     IAmb     12 32 59.9
     comp=Z,33nm,1.1s
PPT  Papeete           71.24 116  LR       LR       12 57 19.6
     comp=Z,982nm,20.8s,baz=314,slow=30
PPT2 Papeete2          71.25 116 eS        S        12 42 13.1 +3.0
     comp=Z,1µm,24.8s
PPT2                             eLQ       LQ       12 51 03.2
     comp=Z,1µm,27.0s
PPT2                             eLR       LR       12 54 37.8
     comp=Z,2µm,21.8s,baz=298
A36M Sachs Harbour     73.02  19  P        P        12 33 05.0  0.0
     baz=273
SVE  Sverdlovsk        73.87 325 eP        P        12 33 16.8 +6.5
SVE                               pmax     pmax
     comp=Z,29nm,1.1s
TBI  Tubuai            73.90 121 eS        S        12 42 40.2 +0.2
     comp=Z,281nm,28.0s
TBI                              eLQ       LQ       12 51 52.5
     comp=Z,627nm,29.5s
TBI                              eLR       LR       12 55 47.7
     comp=Z,500nm,21.8s,baz=300
ARU  Arti              75.06 325c iP       P        12 33 17.2  0.0
ARU                                                 12 35 59.9
ARU                               S        S        12 42 53.4 +1.4
ARU                               SS       SS       12 47 39.8 -1.2
ARU                               pmax     pmax
     comp=Z,43nm,2.7s
ARU                               MLR      MLR
     comp=Z,1µm,18.0s
ARU  Arti              75.06 325  P        P        12 33 16.1 -1.1
ARU                               IAmb     IAmb     12 33 29.6
     comp=Z,22nm,0.9s
ABKAR Akbulak array    75.35 317  P        P        12 33 17.7 -1.3
TAOE Nuku Hiva Isla    76.37 104 eS        S        12 43 11.0 +3.0
     comp=Z,249nm,32.3s
TAOE Nuku Hiva Isla    76.37 104 eLR       LR       12 56 43.6
     comp=Z,696nm,24.4s
YKA  Yellowknife Ar    78.64  28  P        P        12 33 37.0 -0.3
     comp=Z,7.2nm,1.0s,baz=288,slow=4.5,SNR=4.7
M02C Callahan          78.83  50  P        P        12 33 40.9 +2.0
     baz=283
GEYT Alibeck           78.87 306  P        P        12 33 39.1 +0.1
     comp=Z,1.7nm,0.5s,baz=42,slow=32,SNR=1.6
EUNU Eureka            78.98   8  P        P        12 33 38.2 -0.8
EUNU                              IAmb     IAmb     12 33 49.9
     comp=Z,19nm,0.9s
N02D Trinity Center    79.03  50  P        P        12 33 41.4 +1.4
     baz=283
O02D Mt. Diablo Mer    79.15  51  P        P        12 33 42.2 +1.5
     baz=283
KIRV Kirov             79.43 328⇑eP        P        12 33 42.8 +1.2
M04C Macdoel           79.48  50  P        P        12 33 43.6 +1.2
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	baz=284						
J05D	**Fort Rock, OR**	**79.56**	**48**	P	**P**	**12 33 44.5**	**+1.7**
	baz=284						
O03E	**Paynes Creek**	**79.86**	**51**	P	**P**	**12 33 44.7**	**+0.2**
	baz=284						
PRGR	**Permogore**	**80.36**	**332**	*e*P	**P**	**12 33 46.4**	**-0.2**
PRGR				pmax	pmax		
	comp=Z,26nm,0.9s						
NEW	**Newport**	**81.08**	**42**	P	**P**	**12 33 50.8**	**0.0**
	baz=286						
JLN	**Jalan Bani Buh**	**81.64**	**291**	P	**P**	**12 33 52.6**	**-1.6**
WBK	**Wadi Bani Khal**	**81.91**	**291**	P	**P**	**12 33 56.3**	**+0.6**
WSAR	**Wadi Sarin**	**82.05**	**292**	P	**P**	**12 33 56.8**	**+0.4**
BIDO	**Bidbid**	**82.42**	**292**	P	**P**	**12 33 59.5**	**+1.2**
SMDO	**Samad**	**82.61**	**292**	P	**P**	**12 34 00.7**	**+1.2**
JMDO	**Jabal Madar**	**82.75**	**291**	P	**P**	**12 34 01.5**	**+1.5**
PKM	**Mcpherson Peak**	**82.77**	**56**	P	**P**	**12 34 01.6**	**+1.4**
	baz=286						
APA	**Apatity**	**82.87**	**339**	⇓*i*P	**P**	**12 34 02.4**	**+2.6**
APA				*i*		12 34 12.7	
APA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
APA				MLR	MLR		
	comp=Z,1µm,15.0s						
NVAR	**Mina Array Bea**	**82.96**	**52**	P	**P**	**12 34 00.9**	**-0.2**
	comp=Z,6.9nm,1.1s,baz=266,slow=4.3,SNR=16						
NVAR				LR	LR	13 04 58.9	
	comp=Z,516nm,20.6s,baz=320,slow=31						
NVAR	**Mina Array Bea**	**82.96**	**52**	P	**P**	**12 34 01.3**	**+0.2**
VES	**Vestal, Richgr**	**83.08**	**55**	P	**P**	**12 34 03.5**	**+2.0**
	baz=286						
HOQ	**Hoqain**	**83.12**	**292**	P	**P**	**12 34 03.6**	**+1.7**
MHTO	**MHTO**	**83.24**	**290**	P	**P**	**12 34 03.0**	**+0.4**
	SNR=6.0						
BANOM	**Banah**	**83.38**	**295**	P	**P**	**12 34 02.7**	**-0.6**
BANOM	**Banah**	**83.38**	**295**	P	**P**	**12 34 03.4**	**+0.1**
KLMR	**Klimovskoe**	**83.40**	**332**	*e*P	**P**	**12 33 58.7**	**-3.8**
KLMR				*e*		12 37 08.4	
KLMR				*e*S	**S**	**12 44 14.2**	**-6.1**
KLMR				pmax	pmax		
	comp=Z,45nm,1.1s						
KLMR	**Klimovskoe**	**83.40**	**332**	*e*P	**P**	**12 33 58.8**	**-3.8**
KLMR				AMP		12 34 07.4	
	comp=Z,45nm,1.1s						
KLMR				*e*PP	**PP**	**12 37 08.4**	**-6.1**
KLMR				*e*S	**S**	**12 44 14.2**	**-6.1**
KLMR				*e*S	**S**	**12 44 14.2**	**-6.1**
KLMR				LQ	LQ	13 02 49.8	
KLMR				LQ	LQ	13 02 49.8	
KLMR				LR	LR	13 11 10.5	
BSY	**Bisya**	**83.45**	**292**	P	**P**	**12 34 03.7**	**0.0**
MDH	**Madha**	**83.55**	**294**	*i* P	**P**	**12 34 03.1**	**-1.0**
	SNR=5.7						
MDH	**Madha**	**83.55**	**294**	P	**P**	**12 34 03.4**	**-0.8**
ISA	**Isabella, Lake**	**83.61**	**55**	P	**P**	**12 34 04.1**	**-0.3**
	baz=286						
MASF	**Masafi**	**83.65**	**294**	P	**P**	**12 34 04.1**	**-0.6**
MSFE	**Esma-Masafi**	**83.65**	**294**	*i* P	**P**	**12 34 04.5**	**-0.2**
	SNR=8.5						
SOHO	**SOHO**	**83.66**	**293**	*i* P	**P**	**12 34 04.1**	**-0.5**
	SNR=11						
SOHO	**SOHO**	**83.66**	**293**	P	**P**	**12 34 04.4**	**-0.3**
CWC	**Cottonwood Cre**	**83.69**	**54**	P	**P**	**12 34 05.5**	**+0.6**
	baz=287						
UOSS	**Minazif**	**83.73**	**294**	*i* P	**P**	**12 34 04.4**	**-0.6**
	SNR=8.0						
UOSS	**Minazif**	**83.73**	**294**	P	**P**	**12 34 05.7**	**+0.6**
HATD	**Hatta, Dubai**	**83.82**	**294**	*i* P	**P**	**12 34 05.8**	**+0.2**
	SNR=11						
HATD	**Hatta, Dubai**	**83.82**	**294**	P	**P**	**12 34 05.8**	**+0.2**
	SNR=6.8						
ARQ	**Araqi**	**83.89**	**292**	P	**P**	**12 34 06.2**	**+0.3**
	SNR=5.5						
DQM	**DQM**	**83.92**	**289**	P	**P**	**12 34 06.1**	**+0.1**
ASHO	**Ashiyiah**	**83.93**	**294**	P	**P**	**12 34 05.8**	**-0.3**
ASHO	**Ashiyiah**	**83.93**	**294**	P	**P**	**12 34 06.6**	**+0.5**
TULEG	**Thule**	**83.98**	**8**	*e*P	**P**	**12 34 07.5**	**+2.2**
EDW2	**Edwards Air Fo**	**84.21**	**55**	P	**P**	**12 34 09.4**	**+2.0**
	baz=287,SNR=7.9						
HLID	**Hailey**	**84.26**	**46**	P	**P**	**12 34 08.0**	**+0.3**
	baz=288						
LRMC	**Laurel Mtn Rad**	**84.28**	**55**	P	**P**	**12 34 08.6**	**+0.7**
	baz=287						
ARCES	**ARCESS Array B**	**84.31**	**342**	P	**P**	**12 34 07.3**	**+0.2**
	comp=Z,12nm,1.0s,baz=71,slow=5.3,SNR=9.4						
ARCES				LR	LR	13 15 34.3	
	comp=Z,652nm,21.3s,baz=55,slow=38						
ARCES	**ARCESS Array B**	**84.31**	**342**	P	**P**	**12 34 08.1**	**+1.0**
FAQ	**Al Faqa, Dubai**	**84.32**	**294**	P	**P**	**12 34 05.6**	**-2.5**
FAQ	**Al Faqa, Dubai**	**84.32**	**294**	P	**P**	**12 34 06.5**	**-1.6**
ASUD	**Al Ashush, Dub**	**84.58**	**294**	P	**P**	**12 34 09.2**	**-0.2**
ASUD	**Al Ashush, Dub**	**84.58**	**294**	P	**P**	**12 34 10.9**	**+1.5**
FURC	**Furnace Creek,**	**84.63**	**54**	P	**P**	**12 34 10.2**	**+0.9**
	baz=287						
NEEM	**North Greenlan**	**84.92**	**4**	*e*P	**P**	**12 34 12.5**	**+2.0**
GSC	**Goldstone, Bar**	**85.02**	**55**	P	**P**	**12 34 12.2**	**+0.7**
	baz=288						
R11A	**Troy Canyon, C**	**85.03**	**52**	P	**P**	**12 34 12.0**	**+0.4**
	baz=288,SNR=14						
UMZA	**Um Al Zommool**	**85.27**	**292**	P	**P**	**12 34 12.3**	**-0.5**
MAK	**Makhachkala**	**85.27**	**313**	*e*P	**P**	**12 34 11.1**	**-1.4**
MAK				*e*		12 44 32.6	
MAK				*e*SSS	SSS	12 53 45.8	
MAK				pmax	pmax		
	comp=Z,269nm,1.9s						
MAK				MLR	MLR		
	comp=Z,1µm,14.0s						
BOZ	**Bozeman (W)**	**85.48**	**44**	P	**P**	**12 34 14.6**	**+0.9**
	baz=290						
HEC	**Hector,Ludlow**	**85.53**	**55**	P	**P**	**12 34 15.7**	**+1.6**
	baz=288						
PFO	**Pinyon Flats O**	**85.80**	**56**	P	**P**	**12 34 16.8**	**+1.3**
PFO				pmax	pmax		
	comp=Z,26nm,1.4s						
PFO	**Pinyon Flats O**	**85.80**	**56**	P	**P**	**12 34 17.2**	**+1.7**
	baz=288						
PFO	**Pinyon Flats O**	**85.80**	**56**	P	**P**	**12 34 16.8**	**+1.3**
PFO				IAmb	IAmb	12 34 20.4	
	comp=Z,26nm,1.4s						
DAG	**Danmarks Havn**	**85.81**	**357**	*e*P	**P**	**12 34 13.7**	**-0.9**
EGMT	**Eagleton**	**85.83**	**41**	P	**P**	**12 34 17.3**	**+1.9**
	baz=291						
YHL	**Hebgen Lake**	**86.03**	**44**	P	**P**	**12 34 16.9**	**+0.3**
MONP2	**Monument Peak**	**86.05**	**57**	P	**P**	**12 34 18.2**	**+1.3**
	baz=288						
GMRC	**Granite Mounta**	**86.07**	**55**	P	**P**	**12 34 18.3**	**+1.5**
	baz=288,SNR=5.7						
MZWR	**Madinat Zayed**	**86.09**	**294**	P	**P**	**12 34 16.4**	**-0.5**
SHAO	**Shalim**	**86.19**	**288**	P	**P**	**12 34 16.6**	**-0.9**
SHAO	**Shalim**	**86.19**	**288**	P	**P**	**12 34 16.8**	**-0.8**
MOS	**Moscow**	**86.44**	**328**	*e*P	**P**	**12 34 13.9**	**-4.1**
MOS				*e*		12 44 49.9	
MOS				pmax	pmax		
	comp=Z,44nm,0.9s						
DUG	**Dugway, Tooele**	**86.48**	**49**	P	**P**	**12 34 19.4**	**+0.7**
	baz=290,SNR=13						
BC3	**Big Chuckawall**	**86.58**	**56**	P	**P**	**12 34 21.0**	**+1.7**
	baz=288						
H17A	**Grant Village**	**86.59**	**45**	P	**P**	**12 34 23.1**	**+3.7**
	baz=291,SNR=5.7						
IRM	**Iron Mountain**	**86.67**	**55**	P	**P**	**12 34 21.5**	**+1.8**
	baz=288,SNR=5.6						
DMTO	**DMTO**	**86.89**	**287**	P	**P**	**12 34 20.1**	**-0.9**
RLMT	**Red Lodge**	**87.20**	**44**	P	**P**	**12 34 24.8**	**+2.6**
	baz=292						
DOK	**Doka**	**87.38**	**289**	P	**P**	**12 34 22.2**	**-1.1**
	SNR=6.5						
PDMCI	**Parker Dam,Lak**	**87.41**	**55**	P	**P**	**12 34 25.5**	**+2.3**
	baz=289						
FFC	**Flin Flon**	**87.59**	**33**	P	**P**	**12 34 23.1**	**-0.5**
FFC				pmax	pmax		
	comp=Z,18nm,1.0s						
FFC	**Flin Flon**	**87.59**	**33**	P	**P**	**12 34 23.1**	**-0.5**
FFC				IAmb	IAmb	12 34 34.6	
	comp=Z,18nm,1.0s						
RBK	**Rabkut**	**87.64**	**287**	P	**P**	**12 34 22.9**	**-1.7**
	SNR=6.6						
BW06	**Boulder Array**	**87.87**	**46**	P	**P**	**12 34 28.0**	**+2.4**
	baz=292						
PDAR	**Pinedale Array**	**87.87**	**46**	P	**P**	**12 34 25.6**	**0.0**
	comp=Z,1.0nm,0.8s,baz=222,slow=1.6,SNR=6.2						
PDAR				LR	LR	13 10 06.0	
	comp=Z,331nm,20.4s,baz=312,slow=33						
PDAR	**Pinedale Array**	**87.87**	**46**	P	**P**	**12 34 26.5**	**+1.0**
WHFO	**Wadi Hawf**	**87.91**	**288**	P	**P**	**12 34 24.4**	**-1.5**
KBZ	**Khabaz**	**88.15**	**315**	LR	LR	13 16 14.9	
	comp=Z,721nm,20.5s,baz=70,slow=37						
KBZ	**Khabaz**	**88.15**	**315**	⇓*e*P	**P**	**12 34 25.7**	**-0.8**
KBZ				pmax	pmax		
	comp=Z,24nm,2.2s						
KIV	**Kislovodsk**	**88.21**	**316**	*e*P	**P**	**12 34 27.2**	**+0.3**
KIV				pmax	pmax		
	comp=Z,14nm,1.0s						
KIV	**Kislovodsk**	**88.21**	**316**	IAMs_20	IAMs_20	13 15 59.0	
	comp=Z,697nm,20.0s						
ABTO	**Aybut**	**88.51**	**288**	P	**P**	**12 34 28.3**	**-0.5**
LAO	**LASA Array**	**88.56**	**41**	P	**P**	**12 34 30.6**	**+2.0**
	baz=294						
FIA1	**FINESS Array S**	**88.79**	**336**	P	**P**	**12 34 27.9**	**-1.2**
FIA1				IAmb	IAmb	12 34 33.1	
	comp=Z,20nm,0.9s						
FINES	**FINESS Array B**	**88.79**	**336**	P	**P**	**12 34 27.8**	**-1.3**
	comp=Z,4.3nm,0.4s,baz=68,slow=4.4,SNR=19						
FINES				LR	LR	13 16 16.1	
	comp=Z,735nm,20.8s,baz=54,slow=37						
FINES	**FINESS Array B**	**88.79**	**336**	P	**P**	**12 34 27.1**	**-2.1**
WUAZ	**Wupatki**	**89.14**	**53**	P	**P**	**12 34 34.2**	**+2.5**
	baz=290						
214A	**Organ Pipe Nat**	**89.24**	**57**	P	**P**	**12 34 34.8**	**+2.8**
	baz=290						
SOCY	**Socotra**	**89.41**	**282**	P	**P**	**12 34 31.1**	**-2.0**
O20A	**White River Ci**	**89.77**	**48**	P	**P**	**12 34 36.2**	**+1.7**
	baz=292						
K22A	**Casper**	**89.98**	**45**	P	**P**	**12 34 37.3**	**+1.9**
	baz=294						
VSU	**Vasula**	**90.22**	**333**	⇑*e*P	**P**	**12 34 36.2**	**+0.3**
VSU				pmax	pmax		
	comp=Z,42nm,1.1s						
SUMG	**Summit**	**90.34**	**2**	*i* P	**P**	**12 34 40.1**	**+3.4**
MVCO	**Mesa Verde**	**90.69**	**51**	P	**P**	**12 34 39.4**	**+0.5**
	baz=292						
TUC	**Tucson**	**90.73**	**56**	P	**P**	**12 34 41.9**	**+2.9**
TUC				pmax	pmax		
	comp=Z,41nm,1.6s						
TUC	**Tucson**	**90.73**	**56**	P	**P**	**12 34 40.5**	**+1.5**
	baz=291						
RSSD	**Black Hills**	**91.03**	**43**	P	**P**	**12 34 37.8**	**-2.5**
RSSD				pmax	pmax		
	comp=Z,32nm,1.6s						
RSSD	**Black Hills**	**91.03**	**43**	P	**P**	**12 34 41.7**	**+1.4**
	baz=295						
RSSD	**Black Hills**	**91.03**	**43**	P	**P**	**12 34 37.8**	**-2.5**
RSSD				IAmb	IAmb	12 34 45.4	
	comp=Z,32nm,1.6s						
N23A	**Red Feather La**	**91.08**	**47**	P	**P**	**12 34 41.5**	**+0.8**
	baz=294						
S22A	**4UR Ranch, Cre**	**91.71**	**50**	P	**P**	**12 34 45.8**	**+2.2**
	baz=293						
ISCO	**Idaho Springs**	**91.76**	**47**	P	**P**	**12 34 46.0**	**+2.2**
	baz=294						
MNK	**Minsk**	**91.91**	**329**	*i* P	**P**	**12 34 42.8**	**-1.0**
MNK				*i* *PP	**sP**	**12 34 59.8**	**-0.3**
MNK				*i* S	**SKSac**	**12 45 10.0**	**-3.2**
MNK				*i* *SS	**ScS**	**12 45 45.4**	**+0.9**
MNK				*i* SP	**SP**	**12 46 50.1**	**-0.8**
MNK				pmax	pmax		
	comp=E,3.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,22nm,0.9s						
MNK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MNK				MLR	MLR		
	comp=E,111nm,20.0s						
MNK				MLR	MLR		
	comp=Z,595nm,20.0s						
MNK				MLR	MLR		
	comp=N,625nm,20.0s						
MNK	**Minsk**	**91.91**	**329**	*i* P	**P**	**12 34 42.9**	**-1.0**
	comp=E,3.0nm,0.9s						
MNK				*i* P	**P**	**12 34 42.9**	**-1.0**
	comp=N,22nm,0.9s						
MNK				*i* P	**P**	**12 34 42.9**	**-1.0**
	comp=Z,9.0nm,0.9s,baz=57						
MNK				*i* pP	**sP**	**12 34 59.9**	**-0.3**
MNK				*i* sP	pwP	12 35 10.7	+9.4
MNK				*i* PPP	PPP	12 41 05.2	
MNK				*i* S	**SKSac**	**12 45 10.0**	**-3.2**
MNK				*i* sS	**ScS**	**12 45 45.4**	**+1.0**
MNK				*i* SSS	SSS	12 54 51.1	
MNK				*i* LR	LR	13 10 19.1	
MNK				*i* LRM	MLR	13 16 41.5	
	comp=E,111nm,19.7s						
MNK				*i* LRM	MLR	13 16 45.1	
	comp=Z,595nm,19.7s						
MNK				*i* LRM	MLR	13 17 23.4	
	comp=N,625nm,19.7s						
NACGM	**Naroch**	**92.22**	**330**	*i* P	**P**	**12 34 48.0**	**+2.8**
Q24A	**Divide**	**92.43**	**48**	P	**P**	**12 34 48.5**	**+1.5**
	baz=294						
SDCO	**Great Sand Dun**	**92.67**	**49**	P	**P**	**12 34 50.0**	**+1.9**
	baz=294						
MSEY	**Mahe Island**	**92.95**	**266**	IAMs_20	IAMs_20	13 15 50.1	
	comp=Z,561nm,18.0s						
ULM	**Lac du Bonnet**	**93.03**	**35**	P	**P**	**12 34 49.7**	**+0.6**
	comp=Z,9.0nm,1.2s,baz=273,slow=7.1,SNR=3.8						
ULM				LR	LR	13 13 30.0	
	comp=Z,460nm,19.7s,baz=308,slow=34						
ANMO	**Albuquerque**	**93.09**	**52**	⇓*e*P	**P**	**12 34 52.3**	**+2.3**
ANMO				pmax	pmax		
	comp=Z,18nm,2.5s						
ANMO	**Albuquerque**	**93.09**	**52**	P	**P**	**12 34 51.2**	**+1.2**
	baz=293						
ANMO	**Albuquerque**	**93.09**	**52**	P	**P**	**12 34 48.4**	**-1.6**
AKASG	**Malin Array Be**	**93.29**	**326**	LR	LR	13 18 41.8	
	comp=Z,984nm,20.7s,baz=30,slow=37						
AKASG	**Malin Array Be**	**93.29**	**326**	*i* P	**P**	**12 34 47.7**	**-2.6**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
RAYN	**Ar Rayn**	**93.45**	**296**	P	**P**	**12 34 49.0**	**-2.7**
RAYN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
RAYN				MLR	MLR		
	comp=Z,400nm,21.0s						
RAYN	**Ar Rayn**	**93.45**	**296**	P	**P**	**12 34 49.0**	**-2.7**
T25A	**Trinidad**	**93.71**	**49**	P	**P**	**12 34 55.0**	**+2.2**
	baz=295						
NOA	**NORSAR Array B**	**94.42**	**340**	LR	LR	13 25 19.3	
	comp=Z,205nm,18.0s,baz=40,slow=40						
VNDA	**Vanda**	**94.94**	**177**	LR	LR	13 11 42.4	
	comp=Z,219nm,19.9s,baz=344,slow=32						
VNDA	**Vanda**	**94.94**	**177**	P	**P**	**12 34 57.9**	**+0.8**
VNDA				pmax	pmax		
	comp=Z,5.0nm,2.4s						
MNTX	**Cornudas Mount**	**95.21**	**55**	P	**P**	**12 35 01.5**	**+1.9**
	baz=294						
MNTX	**Cornudas Mount**	**95.21**	**55**	P	**P**	**12 34 59.7**	**+0.1**
MNTX				IAmb	IAmb	12 35 05.2	
	comp=Z,22nm,1.7s						
BRTR	**Keskin Array B**	**96.12**	**315**	P	**P**	**12 35 03.0**	**-0.7**
	comp=Z,1.4nm,0.8s,baz=39,slow=5.5,SNR=3.1						
BRTR				LR	LR	13 24 09.3	
	comp=Z,504nm,18.3s,baz=58,slow=39						
CBKS	**Cedar Bluff**	**96.29**	**46**	IAMs_20	IAMs_20	13 19 54.6	
	comp=Z,701nm,21.0s						
TXAR	**Lajitas Array**	**97.52**	**56**	P	**P**	**12 35 10.2**	**-0.1**
	comp=Z,0.4nm,0.9s,baz=297,slow=4.0,SNR=2.4						
TXAR				LR	LR	13 18 33.9	
	comp=Z,641nm,18.0s,baz=0.0,slow=35						
GHAJ	**Ghor Haditha**	**98.55**	**306**	IAMs_20	IAMs_20	13 25 50.9	
	comp=Z,440nm,20.0s						
CSS	**Mathiatis**	**98.57**	**311**	IAMs_20	IAMs_20	13 23 28.9	
	comp=Z,681nm,20.0s						
KMBO	**Kilima Mbogo**	**109.32**	**275**	IAMs_20	IAMs_20	13 23 53.5	
	comp=Z,505nm,20.0s						
LODK	**Lodwar**	**109.66**	**280**	IAMs_20	IAMs_20	13 23 21.3	
	comp=Z,406nm,21.0s						
SYO	**Syowa Base**	**112.23**	**202**	⇑*e*pPdiff	pPdif	12 36 22.0	-4.3
MBAR	**Mbarara**	**115.34**	**278**	IAMs_20	IAMs_20	13 27 44.0	
	comp=Z,343nm,19.0s						
SNAA	**Sanae**	**122.75**	**191**	PKPdf	**PKiKP**	**12 40 31.0**	**+0.2**
SNAA	**Sanae**	**122.75**	**191**	⇑*i*PKIKP	**PKPdf**	**12 40 29.7**	**-1.0**
SNAA				pmax	pmax		
	comp=Z,8.0nm,2.5s						
VNA2	**Neumayer--Watz**	**124.17**	**190**	PKPdf	**PKiKP**	**12 40 34.4**	**+0.8**
VNA3	**Neumayer Olymp**	**124.24**	**189**	PKPdf	**PKiKP**	**12 40 33.7**	**-0.1**
SDDR	**Presa de Saban**	**127.83**	**48**	IAMs_20	IAMs_20	13 34 30.2	
	comp=Z,565nm,21.0s						
SJG	**San Juan**	**131.98**	**45**	IAMs_20	IAMs_20	13 41 10.7	
	comp=Z,501nm,20.0s						
TORD	**Torodi Ar. Bea**	**134.44**	**309**	PKP	**PKiKP**	**12 40 55.4**	**-0.5**
	comp=Z,1.3nm,0.7s,baz=31,slow=1.3,SNR=9.4						
TORD	**Torodi Ar. Bea**	**134.44**	**309**	PKPdf	**PKPdf**	**12 40 54.7**	**+0.2**
SAML	**Samuel**	**149.38**	**78**	IAMs_20	IAMs_20	13 36 36.4	
	comp=Z,325nm,22.0s						
CPUP	**Villa Florida**	**155.57**	**116**	PKPab	**PKPab**	**12 41 55.8**	**0.0**
	comp=Z,3.7nm,1.0s,baz=260,slow=11,SNR=2.9						
CPUP	**Villa Florida**	**155.57**	**116**	PKPdf	**PKPdf**	**12 41 28.6**	**-1.1**
CPUP					**PKPab**	**12 41 56.6**	**+0.8**

*IDC **13** 12:44:22.8±2.7, 0°.66S×130°.95E, h0^{km}, mb3.5/2, mb1 3.6/4, mb1mx3.3/27, mbtmp3.5/4, ML3.6/2, Error ellipse: s-maj=132.1km s-min=27.6km az=74.0*

*DJA **13** 12:44:25.7±2.2, 1°S±6°×13°1E±°, h22^{km}±21^{km}, M3.8/6, mb3.8/1, MLv3.8/6*

ISC 13 12:44:26.4±1.1**, 0°.49S**±0°.10×**131°.35E**±0°.09**, h35^{km}, n8, σ1^{s}.32**/9**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**2.57**	**160**	P	**Pn**	**12 45 06.1**	**+0.5**
MSAI	**Masohi**	**3.73**	**221**	P	**Pn**	**12 45 22.5**	**+1.0**
MSAI				S	**Sn**	**12 46 05.1**	**+0.8**
BAKI	**Biak**	**4.80**	**98**	P	**Pn**	**12 45 37.1**	**+0.8**
SANI	**Sanana**	**5.58**	**254**	P	**Pn**	**12 45 46.5**	**-0.5**
FITZ	**Fitzroy Crossi**	**18.37**	**197**	P	**P**	**12 48 36.0**	**-2.3**
	0.1nm,0.3s,baz=16,slow=12,SNR=1.6						
FITZ				S	Sn	12 51 48.1	-15
	0.0nm,0.3s,baz=167,slow=17,SNR=2.3						
WRA	**Warramunga Arr**	**19.55**	**172**	P	**P**	**12 48 50.3**	**-1.0**
	0.2nm,0.3s,baz=350,slow=12,SNR=13						
WRA				S	S	12 52 16.4	-14
	0.1nm,0.3s,baz=351,slow=24,SNR=4.2						
ASAR	**Alice Springs**	**23.17**	**174**	P	**P**	**12 49 30.6**	**+0.5**
	0.9nm,0.7s,baz=353,slow=10,SNR=26						
MKAR	**Makanchi Array**	**63.64**	**325**	P	**P**	**12 54 55.2**	**+1.0**
	0.4nm,0.6s,baz=106,slow=5.1,SNR=2.4						

*NEIC **13** 12:54:38.4±2.1, 17°.32N±0°.09×147°.15E±0°.09, h10^{km}±1^{km}, mb5.1/98, Error ellipse: s-maj=18.8km s-min=8.7km az=316.0*

*IDC **13** 12:54:39.1±2.2, 17°.25N×147°.19E, h23^{km}±13^{km}, mb4.6/22, mb1 4.7/23, mb1mx4.4/43, mbtmp4.7/23, ML4.6/1, MS4.5/28, Ms1 4.5/28, ms1mx4.5/37, Error ellipse: s-maj=19.6km s-min=10.7km az=91.0*

*BJI **13** 12:54:40.0±0.0, 17°.20N×147°.10E, h49^{km}, mB5.4/30, mb4.7/55, Ms5.0/35, Ms7 4.7/35*

*MOS **13** 12:54:40.3±0.9, 17°.27N×147°.02E, h42^{km}, mb5.1/43, Error ellipse: s-maj=10.5km s-min=5.5km az=106.7*

*GCMT **13** 12:54:42.4±0.1, 17°.23N±0°.01×147°.50E±0°.01, h17^{km}, MW5.2/113, Moment Tensor Solution. s79,c106; s113,c181; Duration: 1^{s}.0 Moment tensor: Scale 10^{17} Nm; M$_{rr}$0.65±.02; M$_{\theta\theta}$-0.09±.01; M$_{\phi\phi}$-0.55±.01; M$_{r\theta}$-0.21±.04; M$_{\theta\phi}$0.30±.01; M$_{\phi r}$0.61±.04; Best double couple: M$_0$0.93500×10^{17} NP1:ϕ$_s$147.00000°, δ24.00000°, λ79.00000°. NP2:ϕ$_s$339.00000°, δ67.00000°, λ95.00000°. Principal axes: T 0.9080, Plg68.0000°, Azm258.0000°; N 0.0530, Plg4.0000°, Azm157.0000°; P -0.9610, Plg22.0000°, Azm66.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 13 12:54:42.1±0.5**, 17°.24N**±0°.04×**147°.10E**±0°.07**, h45^{km}**±3^{km}**, h45^{km}:pP-P, n359, σ1^{s}.33**/372**, mb5.0**/140**, MS4.6**/47**, 18C-9D, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANA2	**Anatahan**	**1.60**	**236**	Pn	**Pn**	**12 55 10.6**	**+2.7**
GUMO	**Guam**	**4.22**	**211**	Pn	**Pn**	**12 55 44.7**	**+0.8**
	34nm,0.3s,baz=28,slow=1.1,SNR=26						
GUMO				Sn	**Sn**	**12 56 34.1**	**+2.2**
	30nm,0.3s,baz=152,slow=22,SNR=2.0						
GUMO				LR	LR	12 57 31.2	
	comp=Z,7µm,18.5s,baz=40,slow=40						
GUMO	**Guam**	**4.22**	**211**	Pn	**Pn**	**12 55 45.4**	**+1.5**
H11S3	**WAKE ISLAND Hy**	**18.68**	**83**	T	T	13 17 46.7	
	baz=269,slow=74,SNR=7.7						
H11S1	**WAKE ISLAND Hy**	**18.70**	**83**	T	T	13 18 01.1	
	baz=269,slow=74,SNR=7.9						
H11S2	**WAKE ISLAND Hy**	**18.70**	**83**	T	T	13 17 45.5	
	baz=269,slow=74,SNR=6.5						
H11N1	**WAKE ISLAND Hy**	**18.93**	**79**	T	T	13 18 01.3	
	baz=265,slow=74,SNR=14						
H11N2	**WAKE ISLAND Hy**	**18.94**	**79**	T	T	13 18 02.0	
	baz=265,slow=74,SNR=12						
H11N3	**WAKE ISLAND Hy**	**18.95**	**79**	T	T	13 18 03.9	
	baz=265,slow=74,SNR=13						
INU	**Inuyama**	**20.15**	**335**	P	**P**	**12 59 11.6**	**-0.9**
INU				IAmb	IAmb	12 59 15.4	
	comp=Z,75nm,1.0s						
JGF	**Kuroka**	**20.24**	**337**	P	**P**	**12 59 14.7**	**+1.1**
MJA0	**Matsu Arr-Jizo**	**20.77**	**340**	*e*P	**P**	**12 59 19.3**	**0.0**
MJAR	**Matsushiro Arr**	**20.78**	**339**	P	**P**	**12 59 19.1**	**-0.3**
	comp=Z,38nm,1.0s,baz=174,slow=11,SNR=33						
MJAR				LR	LR	13 07 34.9	
	comp=Z,1µm,18.8s,baz=125,slow=37						
MJAR	**Matsushiro Arr**	**20.78**	**339**	P	**P**	**12 59 19.4**	**0.0**
MAJO	**Matsushiro**	**20.78**	**339**	P	**P**	**12 59 19.8**	**+0.4**
MAJO				pmax	pmax		
	comp=Z,51nm,0.8s						
MAJO	**Matsushiro**	**20.78**	**339**	P	**P**	**12 59 19.8**	**+0.4**
MAJO				IAmb	IAmb	12 59 34.2	
	comp=Z,51nm,0.8s						
MAT	**Matsushiro**	**20.78**	**339**	P	**P**	**12 59 19.2**	**-0.2**
MAT				S	**S**	**13 03 09.1**	**+0.2**
MJB9	**Matsu-Tunnel**	**20.79**	**339**	P	**P**	**12 59 20.0**	**+0.6**
JSD	**Sado**	**22.13**	**341**	P	**P**	**12 59 34.2**	**+0.4**
DAV	**Davao City (W)**	**23.31**	**247**	LR	LR	13 07 20.7	
	comp=Z,1µm,21.3s,baz=55,slow=32						
JTM	**Tenmabayashi**	**24.04**	**349**	P	**P**	**12 59 48.2**	**-4.7**
FAKI	**Fak Fak**	**24.82**	**218**	P	**P**	**12 59 59.7**	**-0.6**
	comp=Z,36nm,1.1s						
FAKI	**Fak Fak**	**24.82**	**218**	P	**P**	**12 59 59.6**	**-0.7**
FAKI				IAmb	IAmb	13 00 13.5	
	comp=Z,41nm,1.1s						
ERM	**Erimo**	**24.93**	**353**	⇑*e*P	**P**	**12 59 58.3**	**-2.6**
ERM				pmax	pmax		
	comp=Z,18nm,0.8s						
YHNB	**Yeheng**	**25.11**	**291**	P	**P**	**13 00 03.2**	**+0.2**
SSLB	**Suanglung**	**25.32**	**289**	P	**P**	**13 00 04.7**	**-0.1**
SSLB				IAmb	IAmb	13 00 07.4	
	comp=Z,42nm,0.9s						
TPUB	**Ta-pu**	**25.53**	**288**	P	**P**	**13 00 06.4**	**-0.3**
TPUB				IAmb	IAmb	13 00 27.3	
	comp=Z,35nm,1.1s						
TJN	**Taejon**	**25.86**	**321**	⇑*e*P	**P**	**13 00 10.1**	**+0.6**
KSRS	**Korea Array**	**26.28**	**324**	P	**P**	**13 00 12.9**	**-0.4**
	comp=Z,5.1nm,0.8s,baz=143,slow=9.0,SNR=9.9						
KSRS				LR	LR	13 10 38.2	
	comp=Z,3µm,18.9s,baz=130,slow=36						
KSAR	**Wonju Array Be**	**26.29**	**324**	P	**P**	**13 00 13.8**	**+0.4**
KSAR	**Wonju Array Be**	**26.29**	**324**	P	**P**	**13 00 13.8**	**+0.4**
PMG	**Port Moresby**	**26.47**	**180**	P	**P**	**13 00 14.4**	**-0.7**
	comp=Z,42nm,0.8s,baz=354,slow=4.7,SNR=13						
PMG	**Port Moresby**	**26.47**	**180**	*e*P	**P**	**13 00 14.6**	**-0.6**
PMG	**Port Moresby**	**26.47**	**180**	P	**P**	**13 00 14.6**	**-0.6**
PMG				IAmb	IAmb	13 00 15.7	
	comp=Z,50nm,0.9s						
JKA	**Kamikawa-asahi**	**27.06**	**353**	P	**P**	**13 00 19.7**	**-0.6**
JKA				IAmb	IAmb	13 00 48.3	
	comp=Z,47nm,1.1s						
ASAJ	**Asahikawa**	**27.07**	**353**	LR	LR	13 13 52.5	
	comp=Z,641nm,18.4s,baz=190,slow=43						
ASAJ	**Asahikawa**	**27.07**	**353**	P	**P**	**13 00 19.7**	**-0.6**
ASAJ				pmax	pmax		
	comp=Z,47nm,1.1s						
HNR	**Honiara**	**29.38**	**153**	LR	LR	13 13 16.0	
	comp=Z,1µm,18.1s,baz=324,slow=38						
NJ2	**Nanjing**	**29.50**	**305**	*e*P	**P**	**13 00 43.6**	**+1.5**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,860nm,11.2s						
NJ2				LR	LR		
	comp=Z,2µm,15.6s						
NJ2				LR	LR		
	comp=Z,2µm,16.6s						
NJ2				LR	LR		
	comp=Z,1µm,14.9s						
USRK	**Ussuriysk Ar.**	**29.75**	**338**	P	**P**	**13 00 44.7**	**+0.5**
	comp=Z,9.5nm,1.0s,baz=162,slow=12,SNR=7.2						
USRK	**Ussuriysk Ar.**	**29.75**	**338**	P	**P**	**13 00 44.9**	**+0.7**

MRSI Marisa 29.84 239 P P 13 00 45.3 -0.1
YSS Yuzh-Sakhalins 29.85 354⇑eP P 13 00 46.2 +1.2
YSS pmax pmax
comp=Z,8.0nm,1.0s
LUWI Luwuk 30.08 235 P P 13 00 46.4 -1.0
comp=Z,2µmcomp=Z,58nm,0.9s
LUWI Luwuk 30.08 235 P P 13 00 46.6 -0.9
TOLI2 Tolitoli 30.45 241 P P 13 00 50.7 0.0
TOLI2 IAmb IAmb 13 01 09.2
comp=Z,34nm,1.3s
MDJ Mudanjiang 31.02 335 P P 13 00 57.1 +1.7
MDJ S S 13 06 00.6 +3.4
MDJ pmax pmax
comp=Z,6.0nm,1.0s
MDJ pmax pmax
comp=Z,540nm,11.0s
MDJ LR LR
comp=Z,990nm,14.7s
MDJ LR LR
comp=Z,1µm,14.9s
MDJ LR LR
comp=Z,980nm,16.7s
CN2 Changchun 32.19 330 eP P 13 01 13.8 +8.0
CN2 pmax pmax
comp=Z,10.0nm,0.5s
CN2 LR LR
comp=N,2µm,17.0s
CN2 LR LR
comp=E,1µm,17.0s
CN2 LR LR
comp=Z,1µm,21.0s
TTSI Tana Toraja 33.63 236 P P 13 01 19.3 +0.7
comp=Z,18nm,1.0s
TYV Tymovskoe 33.73 355 eP P 13 01 24.1 +5.0
TYV pmax pmax
comp=Z,11nm,1.4s
SPSI Sidrap Palu 34.24 235 P P 13 01 23.9 0.0
comp=Z,11nm,1.1s
KLR Kul'dur 34.26 342c iP P 13 01 23.7 0.0
SMKI Samarinda 34.29 242 P P 13 01 26.1 +1.7
GRNR Gornyy 34.53 348d iP P 13 01 27.9 +1.9
GRNR eS S 13 06 56.6 +4.9
GRNR pmax pmax
comp=N,10.0nm,1.2s
GRNR pmax pmax
comp=Z,10.0nm,1.1s
GRNR smax smax
comp=N,3.0nm,0.9s
GRNR MLR MLR
comp=E,260nm,13.0s
GRNR MLR MLR
comp=N,390nm,14.0s
GRNR MLR MLR
comp=Z,430nm,15.0s
BKSI Bulukumba 34.83 232 P P 13 01 29.3 +0.3
comp=Z,14nm,1.3s
KAPI Kappang 34.91 233 P P 13 01 30.0 +0.3
comp=Z,4.2nm,0.4s,baz=66,slow=7.5,SNR=5.9
KAPI Kappang 34.91 233 P P 13 01 30.0 +0.3
KAPI Kappang 34.91 233 P P 13 01 29.8 +0.1
KAPI IAmb IAmb 13 01 40.2
comp=Z,25nm,1.1s
SOEI Soe 35.05 222 P P 13 01 28.8 -2.3
comp=Z,30nm,1.1s
SOEI Soe 35.05 222 P P 13 01 29.0 -2.0
SOEI IAmb IAmb 13 01 46.0
comp=Z,40nm,1.2s
BSSI Bau Bau, Buton 35.09 231 P P 13 01 31.2 0.0
comp=Z,15nm,1.5s
BJI Beijing 35.11 317 P P 13 01 31.9 +0.8
BJI pmax pmax
comp=Z,5.0nm,0.7s
QIZ Qiongzhong 35.41 279 P P 13 01 35.0 +1.0
QIZ S S 13 07 07.8 +1.8
QIZ LR LR
comp=Z,290nm,13.7s
QIZ LR LR
comp=Z,650nm,16.6s
QIZ LR LR
comp=Z,950nm,18.1s
EDFI Ende, Flores 36.02 226 P P 13 01 37.6 -1.8
comp=Z,296nmcomp=Z,5.9nm,1.6s
MTKI Muara Teweh, K 36.52 244 P P 13 01 44.6 +1.1
comp=Z,30nm,1.3s
PEA0B Petropavlovsk- 36.75 11⇓eP P 13 01 44.3 -0.7
PETK Petropavlovsk- 36.75 11 LR LR 13 18 40.7
comp=Z,554nm,18.0s,baz=195,slow=39
XAN Xi'an 38.01 304 P P 13 01 57.6 +1.5
XAN pP pwP 13 02 10.8 -1.1
XAN pmax pmax
comp=Z,12nm,1.9s
XAN LR LR
comp=Z,1µm,17.9s
XAN LR LR
comp=Z,1µm,17.2s
XAN LR LR
comp=Z,1µm,18.5s
WBSI Waikabubak, Su 38.26 228 P P 13 01 57.5 -0.8
comp=Z,23nm,1.2s
GYA Guiyang 38.51 291⇓iP P 13 02 01.9 +1.5
GYA pP pwP 13 02 16.5 0.0
GYA S S 13 07 55.8 +2.6
GYA pmax pmax
comp=Z,16nm,1.0s
GYA pmax pmax
comp=Z,230nm,10.5s
GYA LR LR
comp=Z,450nm,15.2s
GYA LR LR
comp=Z,260nm,15.6s
GYA LR LR
comp=Z,900nm,16.2s
HHC Hu-ho-hao-te 38.57 315 eP P 13 02 01.8 +1.0
HHC pmax pmax
comp=Z,27nm,0.9s
HHC pmax pmax
comp=Z,370nm,5.0s
HHC LR LR
comp=Z,510nm,14.5s
HHC LR LR
comp=Z,670nm,15.7s
HHC LR LR
comp=Z,1µm,14.5s
WB0 Warramunga Arr 38.83 199 P P 13 02 02.8 -0.2
WB0 IAmb IAmb 13 02 03.7
comp=Z,68nm,1.0s
HIA Hailar 38.88 331 P P 13 02 01.7 -1.4
HIA pmax pmax
comp=Z,16nm,0.9s
HIA Hailar 38.88 331 P P 13 02 01.6 -1.4
WR0 Warramunga Arr 38.97 199 P P 13 02 03.7 -0.4
WR0 IAmb IAmb 13 02 04.9
comp=Z,57nm,1.0s
STKI Sintang 39.00 248 P P 13 02 04.8 +0.3
comp=Z,25nm,0.9s
WRAB Tennant Creek 39.00 199c iP P 13 02 03.9 -0.5
WRAB pmax pmax
comp=Z,89nm,1.0s
WRAB Tennant Creek 39.00 199 P P 13 02 04.2 -0.2
WB2 Warramunga Arr 39.01 199 P P 13 02 04.2 -0.2
WRA Warramunga Arr 39.02 199 P P 13 02 04.1 -0.4
comp=Z,58nm,0.9s,baz=21,slow=9.3,SNR=204
WRA ScP S 13 08 01.7 +1.1
comp=Z,2.1nm,0.9s,baz=17,slow=4.7,SNR=4.9
WRA LR LR 13 18 57.9
comp=Z,580nm,18.5s,baz=25,slow=37
WRA Warramunga Arr 39.02 199 i P P 13 02 04.0 -0.4
WRA pmax pmax
comp=Z,61nm,0.9s
WRA Warramunga Arr 39.02 199 P P 13 02 03.5 -1.0
ZEA Zeya 39.57 342 eP P 13 02 09.1 +0.4
ZEA pmax pmax
comp=N,10.0nm,0.9s
ZEA pmax pmax
comp=Z,20nm,1.4s
UBPT Khong Chiam 39.96 273 P P 13 02 13.9 +1.4
SLVN Son La 40.88 283 P P 13 02 21.3 +1.1
FITZ Fitzroy Crossi 40.98 212 P P 13 02 20.2 -0.5
comp=Z,9.6nm,1.0s,baz=37,slow=11,SNR=20
BLJI Banyuglugur 41.39 236 P P 13 02 24.5 +0.2
comp=Z,25nm,1.9s
CD2 Chengdu 41.59 297 P P 13 02 26.3 +0.4
CD2 pmax pmax
comp=Z,10.0nm,0.6s
GMJI Gumukmas 41.83 235 P P 13 02 28.1 +0.3
comp=Z,46nm,1.1s

KMI Kunming 41.95 289 ⇑P P 13 02 28.8 -0.3
KMI pP pwP 13 02 44.8 -0.5
KMI PP PnPn 13 04 11.1 -1.0
KMI S S 13 08 41.3 -3.7
KMI pmax pmax
comp=Z,13nm,2.1s
KMI LR LR
comp=Z,540nm,16.1s
KMI LR LR
comp=Z,320nm,13.2s
KMI LR LR
comp=Z,510nm,22.7s
LZH Lanzhou 42.57 305 eP P 13 02 34.8 +0.9
LZH pP sP 13 02 51.3 +1.4
LZH pmax pmax
comp=Z,21nm,1.3s
LZH LR LR
comp=Z,1µm,14.3s
LZH LR LR
comp=Z,820nm,14.1s
LZH LR LR
comp=Z,840nm,16.8s
AS31 Alice Springs 42.65 198 P P 13 02 34.2 -0.2
ASAR Alice Springs 42.65 198 P P 13 02 34.1 -0.3
comp=Z,13nm,1.0s,baz=20,slow=7.2,SNR=58
ASAR ScP ScP 13 08 16.5 +3.2
comp=Z,0.9nm,0.8s,baz=22,slow=4.7,SNR=4.9
ASAR LR LR 13 23 25.2
comp=Z,639nm,18.0s,baz=24,slow=40
ASAR Alice Springs 42.65 198 P P 13 02 33.9 -0.5
DZM Mont Dzumac 43.41 153 eLR LR 13 15 19.0
comp=Z,600nm,21.6s
ULN Ulaanbaatar 44.74 322deP P 13 02 51.4 +0.2
ULN pmax pmax
comp=Z,13nm,1.7s
ULN Ulaanbaatar 44.74 322 P P 13 02 51.6 +0.4
SONM Songino Array 45.11 322 P P 13 02 54.3 +0.2
comp=Z,5.9nm,1.0s,baz=139,slow=9.0,SNR=14
SONM LR LR 13 22 32.1
comp=Z,1µm,18.0s,baz=120,slow=37
SONM Songino Array 45.11 322 P P 13 02 54.6 +0.5
CHTO Chiang Mai 45.71 280 P P 13 03 00.6 +1.5
CHTO pmax pmax
comp=Z,12nm,0.9s
CHTO Chiang Mai 45.71 280 P P 13 03 00.4 +1.3
CHTO Chiang Mai 45.71 280 P P 13 03 00.6 +1.5
CM31 Chiang Mai Arr 45.75 279 P P 13 03 01.6 +2.1
SNR=18
CM31 Chiang Mai Arr 45.75 279 P P 13 03 01.4 +2.0
CM31 IAmb IAmb 13 03 02.0
comp=Z,38nm,0.9s
CMAR Chiang Mai Arr 45.75 279 P P 13 03 00.6 +1.2
comp=Z,25nm,0.9s,baz=70,slow=6.5,SNR=154
CMAR LR LR 13 22 49.1
comp=Z,337nm,18.9s,baz=124,slow=37
CMAR Chiang Mai Arr 45.75 279 i P P 13 03 01.1 +1.7
CMAR pmax pmax
comp=Z,25nm,0.9s
CMAR Chiang Mai Arr 45.75 279 P P 13 03 00.9 +1.5
YAK Yakutsk 46.40 349 eP P 13 03 03.5 -0.3
YAK e*PP pP 13 03 13.5 -1.4
YAK e 13 04 53.5
YAK eS S 13 09 49.7 +1.6
YAK e*SS sS 13 10 01.2 -5.4
YAK eSSS SSS 13 14 14.4
YAK pmax pmax
comp=Z,55nm,1.0s
YAK pmax pmax
comp=E,4.0nm,1.1s
YAK pmax pmax
comp=N,23nm,1.2s
YAK pmax pmax
comp=Z,69nm,2.3s
YAK pmax pmax
comp=E,47nm,2.4s
YAK pmax pmax
comp=N,109nm,2.8s
YAK smax smax
comp=N,45nm,1.9s
YAK smax smax
comp=E,71nm,2.0s
YAK MLR MLR
comp=Z,811nm,16.0s
YAK MLR MLR
comp=N,572nm,14.0s
YAK MLR MLR
comp=E,507nm,15.0s
YAK Yakutsk 46.40 349 P P 13 03 04.0 +0.2
GTA Gaotai 46.50 308 eP P 13 03 06.9 +1.7
GTA pP pP 13 03 18.4 +2.1
GTA sP sP 13 03 24.3 +3.3
GTA pmax pmax
comp=E,140nm,7.3s
GTA LR LR
comp=E,440nm,17.8s
GTA LR LR
comp=E,540nm,16.7s
GTA LR LR
comp=E,740nm,16.7s
KLSI 47.17 246 P P 13 03 10.7 +0.1
comp=E,511nmcomp=E,39nm,0.9s
BOD Bodaibo 47.37 337 eP P 13 03 11.2 -0.3
BOD pmax pmax
comp=Z,16nm,1.5s
MDSI Maura Dua 47.56 247 P P 13 03 12.9 -0.7
comp=Z,684nmcomp=Z,17nm,1.0s
ZAK Zakamensk 48.11 323 eP P 13 03 16.5 -1.0
ZAK pmax pmax
comp=Z,11nm,1.4s
ZAK pmax pmax
comp=Z,10.0nm,1.6s
TLY Talaya 48.52 325⇑iP P 13 03 20.1 -0.4
TLY pmax pmax
comp=Z,8.0nm,1.1s
KSI Kapahiang 48.59 249 P P 13 03 21.3 -0.3
comp=Z,41nm,0.9s
STKA Stephens Creek 49.12 186 P P 13 03 24.6 -0.6
comp=Z,6.6nm,0.9s,baz=350,slow=7.0,SNR=5.9
STKA LR LR 13 25 36.5
comp=Z,428nm,18.9s,baz=10,slow=38
STKA Stephens Creek 49.12 186 P P 13 03 25.2 0.0
STKA pmax pmax
comp=Z,2.0nm,0.9s
STKA Stephens Creek 49.12 186 P P 13 03 25.2 0.0
PDSI Padang 49.35 253 P P 13 03 26.4 -1.1
comp=Z,13nm,0.6s
MNSI Mandailing Nat 49.51 256 P P 13 03 29.5 +0.9
comp=Z,28nm,0.9s
MOY Mondy 49.98 324 eP P 13 03 30.8 -1.0
MOY pmax pmax
comp=Z,16nm,1.3s
SISI Saibi 50.78 254 P P 13 03 37.7 -0.5
comp=Z,33nm,1.0s
GSI Gunungsitoli 51.19 257 P P 13 03 42.4 +1.1
comp=Z,196nm,1.2s
GSI Gunungsitoli 51.19 257 P P 13 03 42.0 +0.7
BILL Bilibino 52.24 9⇑eP P 13 03 49.4 +1.0
BILL e 13 05 41.5
BILL eS S 13 11 14.9 +5.1
BILL pmax pmax
comp=Z,7.0nm,1.0s
BILL MLR MLR
comp=Z,278nm,20.0s
BILL Bilibino 52.24 9 P P 13 03 49.3 +1.0
BILL IAmb IAmb 13 03 59.4
comp=Z,16nm,0.9s
TAPN Taplejung 55.43 292 eP P 13 04 13.4 +0.7
comp=Z,48nm,1.1s
TIXI Tiksi 55.47 353⇑eP P 13 04 11.8 -0.1
TIXI pmax pmax
comp=Z,7.0nm,1.0s
TIXI Tiksi 55.47 353 P P 13 04 11.5 -0.3
ODAN Odare 55.74 291 eP P 13 04 15.1 +0.2
comp=Z,38nm,1.1s
WMQ Urumqi 56.27 311 eP P 13 04 18.9 +0.7
WMQ pP pP 13 04 26.5 -3.1
WMQ pmax pmax
comp=Z,32nm,1.3s
WMQ pmax pmax
comp=Z,260nm,7.9s
WMQ LR LR
comp=Z,790nm,21.1s
WMQ LR LR
comp=Z,680nm,20.9s
WMQ LR LR
comp=Z,360nm,21.3s

RAMN Ramite 56.44 291 eP P 13 04 19.9 0.0
JIRN Jiri 56.76 292 eP P 13 04 22.6 +0.3
comp=Z,21nm,0.7s
GUN Gumba 57.02 292 eP P 13 04 24.5 +0.3
PKI Pulchoki 57.46 292 eP P 13 04 26.8 -0.4
DGZ Jazzator, Alta 57.50 318deP P 13 04 27.6 +0.7
DGZ pmax pmax
comp=Z,15nm,1.1s
KKN Kakani 57.56 292 eP P 13 04 27.7 -0.1
comp=Z,17nm,0.9s
DMN Daman 57.73 292 eP P 13 04 29.4 +0.4
GKN Gorkha 58.12 293 eP P 13 04 31.6 0.0
comp=Z,60nm,1.2s
DANN Dangsing 58.87 293 eP P 13 04 37.0 0.0
comp=Z,60nm,0.7s
KOLN Koldanda 59.05 292 eP P 13 04 37.9 -0.3
comp=Z,18nm,0.7s
PYUN Piuthan 59.56 293 eP P 13 04 41.5 -0.2
comp=Z,46nm,1.1s
ZAA0 Zalesovo Array 59.98 323 P P 13 04 43.6 -0.2
ZAA0 IAmb IAmb 13 05 01.4
comp=Z,9.4nm,0.8s
ZALV Zalesovo Beam 59.98 323 P P 13 04 43.0 -0.9
comp=Z,11nm,1.0s,baz=101,slow=6.2,SNR=22
ZALV LR LR 13 31 46.9
comp=Z,542nm,18.1s,baz=95,slow=37
ZALV Zalesovo Beam 59.98 323 i P P 13 04 43.4 -0.4
ZALV pmax pmax
comp=Z,11nm,1.0s
ZALV Zalesovo Beam 59.98 323 P P 13 04 43.5 -0.3
MK31 Makanchi Array 60.43 314 P P 13 04 47.4 +0.2
MK31 pmax pmax
comp=Z,12nm,1.2s
MK31 Makanchi Array 60.43 314 P P 13 04 47.4 +0.2
MK31 IAmb IAmb 13 04 48.4
comp=Z,12nm,1.1s
MKAR Makanchi Array 60.43 314 P P 13 04 46.7 -0.5
comp=Z,8.5nm,1.0s,baz=93,slow=8.6,SNR=40
MKAR ScP ScP 13 09 30.4 +1.0
comp=Z,1.5nm,1.0s,baz=112,slow=5.4,SNR=4.1
MKAR LR LR 13 30 33.3
comp=Z,306nm,21.3s,baz=79,slow=36
MKAR Makanchi Array 60.43 314 i P P 13 04 47.4 +0.3
MKAR pmax pmax
comp=Z,9.0nm,1.0s
MKAR Makanchi Array 60.43 314 P P 13 04 47.1 0.0
MAKZ Makanchi 60.65 314 P P 13 04 48.2 -0.4
MAKZ pmax pmax
comp=Z,22nm,1.2s
MAKZ Makanchi 60.65 314 P P 13 04 48.2 -0.4
MAKZ IAmb IAmb 13 04 50.0
comp=Z,22nm,1.1s
K20K Telida 60.93 26 P P 13 04 51.2 +1.0
baz=249
K20K Telida 60.93 26 P P 13 04 49.9 -0.3
K20K IAmb IAmb 13 05 07.3
comp=Z,34nm,1.4s
J20K Nowinta River 61.19 25 P P 13 04 53.4 +1.4
baz=249
J20K Nowinta River 61.19 25 P P 13 04 53.1 +1.2
CAST Castle Rocks 61.79 26 P P 13 04 57.3 +1.3
baz=251
CAST Castle Rocks 61.79 26 P P 13 04 57.2 +1.2
CAST IAmb IAmb 13 05 06.9
comp=Z,22nm,1.0s
CHUM Lake Minchumin 61.85 26 P P 13 04 57.9 +1.6
baz=251
IMAR Indian Mountai 62.01 23 P P 13 04 58.8 +1.3
H21K Melozitna Rive 62.26 24 P P 13 05 00.2 +1.1
baz=249
H21K Melozitna Rive 62.26 24 P P 13 05 00.3 +1.2
H21K IAmb IAmb 13 05 10.4
comp=Z,17nm,1.1s
I21K Tanana 62.41 25 P P 13 05 01.8 +1.7
baz=250
BPAW Bear Paw Mtn. 62.47 26 P P 13 05 01.7 +1.1
baz=252
BPAW Bear Paw Mtn. 62.47 26 P P 13 05 01.3 +0.7
TRF Thorofare Moun 62.57 27 P P 13 05 01.6 +0.2
baz=253
TRF Thorofare Moun 62.57 27 P P 13 05 02.0 +0.6
MLY Manley 62.86 25 P P 13 05 04.6 +1.4
baz=252
MLY Manley 62.86 25 P P 13 05 03.4 +0.1
SML Sawmill 62.99 29 P P 13 05 04.9 +0.8
baz=256
BWN Browne 63.13 26 P P 13 05 04.7 -0.2
KURK Kurchatov 63.24 319c iP P 13 05 05.0 -0.9
KURK pmax pmax
comp=Z,48nm,1.3s
KURK Kurchatov 63.24 319 P P 13 05 05.8 -0.1
KURK Kurchatov 63.24 319 P P 13 05 05.7 -0.2
A21K Barrow 63.27 17 P P 13 05 07.2 +1.5
baz=243
A21K Barrow 63.27 17 P P 13 05 06.2 +0.5
A21K IAmb IAmb 13 05 21.9
comp=Z,20nm,1.1s
NEA2 Nenana 63.41 26 P P 13 05 08.2 +1.4
NEA2 IAmb IAmb 13 05 18.1
comp=Z,11nm,1.0s
NRIK Noril'sk 63.43 340 P P 13 05 07.3 +0.5
comp=Z,34nm,1.1s,baz=113,slow=7.9,SNR=36
NRIK Noril'sk 63.43 340c iP P 13 05 07.0 +0.2
NRIK pmax pmax
comp=Z,59nm,1.3s
NRIK Noril'sk 63.43 340 P P 13 05 07.3 +0.5
I23K Minto, Yukon-K 63.46 25 P P 13 05 08.5 +1.5
baz=253
I23K Minto, Yukon-K 63.46 25 P P 13 05 07.7 +0.7
SCM Sheep Creek Mo 63.46 29 P P 13 05 08.3 +1.0
baz=256
H23K Yukon River 63.59 24 P P 13 05 09.4 +1.4
baz=252
COLD Coldfoot 63.77 23 P P 13 05 10.7 +1.6
baz=251
COLA College 63.99 26⇑eP P 13 05 11.0 +0.4
COLA pmax pmax
comp=Z,5.0nm,1.2s
H24K Noodor Dome 64.25 24 P P 13 05 13.6 +1.3
baz=254
HDA Harding Lake 64.25 26 P P 13 05 11.2 -1.1
HDA IAmb IAmb 13 05 21.6
comp=Z,15nm,0.9s
IL31 64.37 26 P P 13 05 12.4 -0.5
ILAR Eielson Array 64.37 26 P P 13 05 12.2 -0.9
comp=Z,3.9nm,0.9s,baz=256,slow=5.1,SNR=26
ILAR LR LR 13 31 20.3
comp=Z,295nm,20.4s,baz=272,slow=34
ILAR Eielson Array 64.37 26 P P 13 05 12.6 -0.5
TOLK Toolik Lake Re 64.46 21 P P 13 05 15.0 +1.3
baz=251
PAX Paxson 64.56 28 P P 13 05 15.2 +0.8
baz=258
KSH Kashi 64.80 306 P P 13 05 19.4 +2.9
KSH pP pwP 13 05 36.1 +2.6
KSH S S 13 13 53.0 -1.4
KSH pmax pmax
comp=Z,24nm,1.1s
KSH pmax pmax
comp=Z,940nm,14.8s
KSH LR LR
comp=Z,540nm,8.2s
KSH LR LR
comp=Z,800nm,15.5s
KSH LR LR
comp=Z,620nm,15.1s
J25K Salcha River, 64.96 26 P P 13 05 16.8 -0.3
baz=257
TKM2 Tokmak 2 65.01 310 P P 13 05 18.4 +0.4
SNR=11
SCRK Sand Creek 65.42 27 P P 13 05 19.9 -0.2
FYU Fort Yukon 65.47 24 P P 13 05 21.5 +1.3
L26K Log Cabin Wild 65.52 28 P P 13 05 21.8 +1.1
baz=260
J26L Joseph Creek 65.70 26 P P 13 05 22.6 +0.8
baz=259
UCH Uchtor 65.82 309 P P 13 05 24.4 +0.9
SNR=16
AAK Ala-Archa 65.82 309 P P 13 05 23.6 +0.5
SNR=6.9
AAK Ala-Archa 65.82 309deP P 13 05 23.5 +0.4
AAK pmax pmax
comp=Z,29nm,1.0s
AAK Ala-Archa 65.82 309 P P 13 05 23.9 +0.7
AAK Ala-Archa 65.82 309 P P 13 05 23.0 -0.1
AAK IAmb IAmb 13 05 24.5

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            comp=Z,11nm,1.2s
BMAR  Burnt Mountain    65.92  23    P        P         13 05 24.4 +1.3
L27K  Beaver Creek,     66.21  28    P        P         13 05 26.1 +1.1
            baz=261
L27K  Beaver Creek,     66.21  28    P        P         13 05 26.0 +0.9
L27K                                 IAmb     IAmb      13 05 36.5
            comp=Z,24nm,1.4s
BCAR  Beaver Creek A    66.23  28    P        P         13 05 26.1 +0.9
EKS2  Erkin-Say         66.35 310    P        P         13 05 27.3 +0.8
            SNR=5.2
AML   Almayashu         66.43 309    P        P         13 05 28.1 +0.7
            SNR=12
DAWY  Dawson            67.43  27    P        P         13 05 33.9 +1.1
DAWY                                 IAmb     IAmb      13 05 44.0
            comp=Z,15nm,1.1s
HYT   Haines Junctio    67.99  31    P        P         13 05 38.2 +1.7
HYT                                  IAmb     IAmb      13 05 48.0
            comp=Z,23nm,1.0s
I29M  Ogilvie Camp,     68.05  26    P        P         13 05 37.8 +1.1
            baz=263
BRVK  Borovoye          68.51 321c  iP        P         13 05 39.4 -0.3
BRVK                                 pmax     pmax
            comp=Z,23nm,1.3s
BRVK  Borovoye          68.51 321    P        P         13 05 39.9 +0.1
BRVK  Borovoye          68.51 321    P        P         13 05 38.8 -1.0
BRVK                                 IAmb     IAmb      13 05 58.0
            comp=Z,20nm,1.0s
KK31  Karatay Array     68.73 310    P        P         13 05 41.7 +0.4
KK31                                 pmax     pmax
            comp=Z,31nm,1.3s
KK31  Karatay Array     68.73 310    P        P         13 05 41.7 +0.4
KKAR  Karatay Array     68.73 310    P        P         13 05 41.1 -0.2
KKAR  Karatay Array     68.73 310    P        P         13 05 41.1 -0.2
EPYK  Eagle Plains      68.81  25    P        P         13 05 42.3 +0.9
            baz=264
EPYK  Eagle Plains      68.81  25    P        P         13 05 41.7 +0.3
EPYK                                 IAmb     IAmb      13 05 52.4
            comp=Z,15nm,0.9s
POO   Poona             69.25 284   eP        P         13 05 43.0 -2.0
INK   Inuvik            70.19  23    P        P         13 05 50.1 +0.3
INK                                  pmax     pmax
            comp=Z,19nm,1.1s
INK   Inuvik            70.19  23    P        P         13 05 50.5 +0.6
            baz=267
INK   Inuvik            70.19  23    P        P         13 05 50.0 +0.3
INK                                  IAmb     IAmb      13 06 00.2
            comp=Z,19nm,1.1s
KBL   Kabul             70.77 301    P        P         13 05 49.7 -4.6
KBL                                  pmax     pmax
            comp=Z,33nm,0.7s
KBL   Kabul             70.77 301    P        P         13 05 49.7 -4.6
PPT   Papeete           71.28 116    LR       LR        13 30 10.6
            comp=Z,483nm,19.6s,baz=316,slow=30
PPT2  Papeete2          71.29 116   eLR       LR        13 28 10.3
            comp=Z,685nm,21.8s
A36M  Sachs Harbour     73.02  19    P        P         13 06 07.7 +0.9
            baz=273
A36M  Sachs Harbour     73.02  19    P        P         13 06 07.5 +0.7
A36M                                 IAmb     IAmb      13 06 17.5
            comp=Z,17nm,0.8s
SVE   Sverdlovsk        73.83 325   eP        P         13 06 12.1 +0.2
SVE                                  pmax     pmax
            comp=Z,21nm,1.2s
TBI   Tubuai            73.94 121   eLR       LR        13 29 27.4
            comp=Z,222nm,21.5s
ARU   Arti              75.03 325c  iP        P         13 06 18.4 -0.4
ARU                                                     13 09 03.6
ARU                                  S        S         13 15 55.4 +2.1
ARU                                  SS       SS        13 20 40.5 -1.7
ARU                                  pmax     pmax
            comp=Z,21nm,1.1s
ARU   Arti              75.03 325    P        P         13 06 18.4 -0.4
ARU                                  IAmb     IAmb      13 06 36.3
            comp=Z,23nm,1.0s
ABKAR Akbulak array     75.31 317    P        P         13 06 19.9 -0.7
HRA   Herat             76.33 302    P        P         13 06 26.5 -0.5
HRA                                  IAmb     IAmb      13 06 28.5
            comp=Z,22nm,1.1s
YKA   Yellowknife Ar    78.65  28    LR       LR        13 41 48.9
            comp=Z,443nm,19.5s,baz=0.0,slow=36
GEYT  Alibeck           78.83 306    P        P         13 06 41.0 +0.4
            comp=Z,6.1nm,0.8s,baz=63,slow=4.0,SNR=7.8
GEYT                                 LR       LR        13 43 20.3
            comp=Z,205nm,21.2s,baz=245,slow=37
EUNU  Eureka            78.97   8    P        P         13 06 41.3 +0.6
EUNU                                 IAmb     IAmb      13 07 05.9
            comp=Z,13nm,0.9s
KIRV  Kirov             79.40 328⇓  eP        P         13 06 43.9 +0.7
B08A  Colville Reser    79.64  43    P        P         13 06 45.7 +0.8
PINE  Pine Mountain     79.66  47    P        P         13 06 45.8 +0.5
PINE                                 IAmb     IAmb      13 07 10.7
            comp=Z,17nm,0.9s
ORV   Oroville          80.28  52    P        P         13 06 50.8 +2.3
ORV                                  pmax     pmax
            comp=Z,20nm,1.3s
ORV   Oroville          80.28  52    P        P         13 06 50.8 +2.3
ORV                                  IAmb     IAmb      13 06 59.1
            comp=Z,20nm,1.3s
PRGR  Permogore         80.33 332   eP        P         13 06 51.6 +3.4
PRGR                                 pmax     pmax
            comp=Z,45nm,1.1s
NEW   Newport           81.09  42    P        P         13 06 53.3 +0.6
NEW                                  pmax     pmax
            comp=Z,12nm,0.9s
NEW   Newport           81.09  42    P        P         13 06 53.3 +0.6
MPK   Martis Peak       81.45  52    P        P         13 06 56.1 +1.1
MPK                                  IAmb     IAmb      13 07 06.7
            comp=Z,17nm,1.2s
J08A  Circle Bar Ran    81.50  47    P        P         13 06 55.6 +0.6
J08A                                 IAmb     IAmb      13 07 06.9
            comp=Z,26nm,1.5s
WVOR  Wild Horse Val    81.64  48    P        P         13 06 56.4 +0.6
WVOR                                 pmax     pmax
            comp=Z,12nm,1.2s
WVOR  Wild Horse Val    81.64  48    P        P         13 06 56.4 +0.6
PNTR  Pine Nut          81.83  52    P        P         13 06 56.3 -0.7
WBK   Wadi Bani Khal    81.87 291    P        P         13 06 58.3 +1.0
YERR  Yerington         82.12  52    P        P         13 06 59.0 +0.5
BELG  Belogornoye       82.17 322c  iP        P         13 06 58.1  0.0
BELG                                 pmax     pmax
            comp=Z,7.0nm,1.0s
SMDO  Samad             82.57 292    P        P         13 07 01.6 +0.6
RYN   Ryan              82.76  52    P        P         13 07 00.8 -1.0
KVN   Kaiserville       82.96  51    P        P         13 07 02.6 -0.3
KVN                                  pmax     pmax
            comp=Z,9.0nm,1.1s
KVN   Kaiserville       82.96  51    P        P         13 07 02.5 -0.3
NVAR  Mina Array Bea    82.98  52    P        P         13 07 03.4 +0.3
            comp=Z,2.6nm,0.7s,baz=271,slow=6.2,SNR=16
NVAR                                 LR       LR        13 37 29.1
            comp=Z,308nm,20.2s,baz=327,slow=31
NVAR  Mina Array Bea    82.98  52    P        P         13 07 02.8 -0.2
HOQ   Hoqain            83.09 292    P        P         13 07 04.3 +0.7
NV11  Mina Array Sit    83.09  52    P        P         13 07 04.2 +0.7
MHTO  MHTO              83.20 290    P        P         13 07 04.5 +0.3
            SNR=6.1
BMN   Battle Mountai    83.22  50    P        P         13 07 03.9 -0.2
BMN                                  pmax     pmax
            comp=Z,13nm,1.3s
BMN   Battle Mountai    83.22  50    P        P         13 07 03.9 -0.2
BMN                                  IAmb     IAmb      13 07 09.1
            comp=Z,12nm,1.3s
BANOM Banah             83.34 295    P        P         13 07 06.7 +1.8
MFID  Camas Ranch       83.34  47    P        P         13 07 04.9 +0.2
MFID                                 IAmb     IAmb      13 07 15.6
            comp=Z,22nm,1.2s
KLMR  Klimovskoe        83.37 332   eP        P         13 07 02.8 -1.4
KLMR                                e                   13 10 12.6
KLMR                                 pmax     pmax
            comp=Z,58nm,1.2s
KLMR  Klimovskoe        83.37 332   eP        P         13 07 02.8 -1.4
KLMR                                 AMP                13 07 11.6
            comp=Z,58nm,1.2s
KLMR                                ePP       PP        13 10 12.7 -3.3
BSY   Bisya             83.41 292    P        P         13 07 05.8 +0.5
MASF  Masafi            83.61 294    P        P         13 07 07.5 +1.2
            SNR=5.1
SOHO  SOHO              83.62 293    P        P         13 07 07.3 +1.1
UOSS  Minazif           83.69 294    P        P         13 07 07.4 +0.7
HATD  Hatta, Dubai      83.78 294    P        P         13 07 08.4 +1.2
ARQ   Araqi             83.85 292    P        P         13 07 08.0 +0.5
DQM   DQM               83.88 289    P        P         13 07 08.6 +0.9
ASHO  Ashiyiah          83.89 294    P        P         13 07 08.6 +0.9
HLID  Hailey            84.28  46    P        P         13 07 09.7 +0.2
            baz=288
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HLID  Hailey            84.28  46    P        P         13 07 09.8 +0.3
FAQ   Al Faqa, Dubai    84.28 294    P        P         13 07 10.1 +0.5
ARCES ARCESS Array B    84.28 342    P        P         13 07 09.0 +0.2
            comp=Z,19nm,1.0s,baz=54,slow=6.2,SNR=10
ARCES                                LR       LR        13 51 41.4
            comp=Z,256nm,19.3s,baz=65,slow=41
ARCES ARCESS Array B    84.28 342    P        P         13 07 09.0 +0.2
ARCES ARCESS Array B    84.28 342    P        P         13 07 09.0 +0.2
ASUD  Al Ashush, Dub    84.54 294    P        P         13 07 09.8 -1.2
ELK   Elko              84.56  49    P        P         13 07 11.6 +0.5
ELK                                  pmax     pmax
            comp=Z,19nm,1.4s
ELK   Elko              84.56  49    P        P         13 07 11.6 +0.5
ELK                                  IAmb     IAmb      13 07 22.9
            comp=Z,19nm,1.4s
NEEM  North Greenlan    84.91   4   eP        P         13 07 14.8 +2.6
R11A  Troy Canyon, C    85.05  52    P        P         13 07 14.6 +1.1
            baz=288
MAK   Makhachkala       85.24 313   eP        P         13 07 12.3 -1.8
MAK                                 e*PP      pP        13 07 27.0 +1.0
MAK                                 e*SP      sP        13 07 31.6 +1.0
MAK                                 e                   13 17 32.4
MAK                                  pmax     pmax
            comp=Z,230nm,1.6s
DAG   Danmarks Havn     85.80 357   i P       P         13 07 16.0 -0.2
DAG                                  IAmb     IAmb      13 07 17.9
            comp=Z,9.6nm,1.0s
QLMT  Earthquake Lak    85.89  44    P        P         13 07 18.9 +1.3
PSUT  Pine Spring       86.28  51    P        P         13 07 19.4 -0.3
PSUT                                 IAmb     IAmb      13 07 28.2
            comp=Z,13nm,1.1s
YHH   Holmes Hill       86.29  44    P        P         13 07 20.7 +1.0
YHH                                  IAmb     IAmb      13 07 32.2
            comp=Z,18nm,1.3s
MOS   Moscow            86.41 328   eP        P         13 07 18.0 -1.6
DUG   Dugway, Tooele    86.49  49    P        P         13 07 21.7 +1.1
            baz=290
FXWY  Fox Creek         86.57  45    P        P         13 07 20.9 -0.2
FXWY                                 IAmb     IAmb      13 07 33.3
            comp=Z,13nm,1.4s
TPAW  Teton Pass        86.67  45    P        P         13 07 21.0 -0.6
TPAW                                 IAmb     IAmb      13 07 43.4
            comp=Z,14nm,1.4s
DMTO  DMTO              86.86 287    P        P         13 07 23.5 +0.9
DOK   Doka              87.34 289    P        P         13 07 25.5 +0.6
            SNR=5.4
PDMCI Parker Dam,Lak    87.43  55    P        P         13 07 26.1 +1.0
            baz=289
MVU   Marysvale         87.50  51    P        P         13 07 25.9 +0.2
KNB   Kanab             87.55  52    P        P         13 07 25.5 -0.4
KNB                                  pmax     pmax
            comp=Z,33nm,1.4s
KNB   Kanab             87.55  52    P        P         13 07 25.5 -0.4
FFC   Flin Flon         87.59  33    P        P         13 07 27.5 +2.1
FFC                                  pmax     pmax
            comp=Z,14nm,1.1s
FFC   Flin Flon         87.59  33    P        P         13 07 27.5 +2.1
FFC                                  IAmb     IAmb      13 07 35.7
            comp=Z,14nm,1.1s
RBK   Rabkut            87.60 287    P        P         13 07 27.0 +0.8
            SNR=5.0
WHFO  Wadi Hawf         87.87 288    P        P         13 07 27.5  0.0
PDAR  Pinedale Array    87.89  46    P        P         13 07 27.3 -0.1
            comp=Z,0.4nm,0.6s,baz=223,slow=3.3,SNR=4.9
PDAR                                 LR       LR        13 43 16.8
            comp=Z,186nm,19.3s,baz=322,slow=33
TMUT  Trail Mountain    87.96  49    P        P         13 07 28.1 +0.1
TMUT                                 IAmb     IAmb      13 07 35.0
            comp=Z,8.5nm,1.2s
KBZ   Khabaz            88.12 315    LR       LR        13 50 23.2
            comp=Z,335nm,19.6s,baz=63,slow=38
KBZ   Khabaz            88.12 315⇓  eP        P         13 07 27.3 -0.8
KBZ                                  pmax     pmax
            comp=Z,7.0nm,0.9s
KIV   Kislovodsk        88.17 316   eP        P         13 07 28.1 -0.5
KIV                                  pmax     pmax
            comp=Z,14nm,1.0s
ABTO  Aybut             88.47 288    P        P         13 07 31.1 +0.7
            SNR=5.3
FINES FINESS Array B    88.76 336    P        P         13 07 29.3 -1.5
            comp=Z,5.5nm,0.8s,baz=108,slow=4.2,SNR=12
FINES FINESS Array B    88.76 336   i P       P         13 07 29.2 -1.6
FINES                                pmax     pmax
            comp=Z,6.0nm,0.8s
WUAZ  Wupatki           89.16  53    P        P         13 07 34.9 +1.4
            baz=291
WUAZ  Wupatki           89.16  53    P        P         13 07 34.2 +0.7
WUAZ                                 IAmb     IAmb      13 07 45.8
            comp=Z,21nm,1.4s
VSU   Vasula            90.19 333⇑  eP        P         13 07 37.4 -0.1
VSU                                  pmax     pmax
            comp=Z,47nm,1.0s
RSSD  Black Hills       91.04  43    P        P         13 07 41.7 -0.4
RSSD                                 pmax     pmax
            comp=Z,15nm,1.5s
RSSD  Black Hills       91.04  43    P        P         13 07 41.7 -0.4
RSSD                                 IAmb     IAmb      13 07 46.6
            comp=Z,15nm,1.4s
SMCO  Snowmass          91.06  48    P        P         13 07 41.5 -1.0
SMCO                                 IAmb     IAmb      13 07 58.7
            comp=Z,12nm,1.2s
N23A  Red Feather La    91.10  46    P        P         13 07 43.8 +1.3
            baz=294
ISCO  Idaho Springs     91.78  47    P        P         13 07 47.1 +1.3
            baz=294
MNK   Minsk             91.88 329   i P       P         13 07 43.5 -2.0
MNK                                 i *PP     pP        13 07 58.2 +0.7
MNK                                 i *SP     pwP       13 08 04.0 +0.7
MNK                                 i                   13 11 22.8
MNK                                 i PPP     PPP       13 13 21.6
MNK                                 i S       SKSac     13 18 11.5 -3.3
MNK                                 i *SS     S         13 18 37.6 -5.8
MNK                                 i SS      SS        13 25 02.9  +12
MNK                                  pmax     pmax
            comp=N,13nm,0.9s
MNK                                  pmax     pmax
            comp=Z,14nm,0.9s
MNK                                  pmax     pmax
            comp=E,1.0nm,0.9s
MNK                                  MLR      MLR
            comp=N,240nm,19.0s
MNK                                  MLR      MLR
            comp=Z,454nm,19.0s
MNK                                  MLR      MLR
            comp=E,53nm,19.0s
MNK   Minsk             91.88 329   i P       P         13 07 43.6 -1.9
            comp=E,1.0nm,0.9s
MNK                                 i P       P         13 07 43.6 -1.9
            comp=N,13nm,0.9s
MNK                                 i P       P         13 07 43.6 -1.9
            comp=Z,14nm,0.9s,baz=57
MNK                                 i pP      pP        13 07 58.2 +0.7
MNK                                 i sP      pwP       13 08 04.0 +0.8
MNK                                 i PP      PP        13 11 22.8 -1.7
MNK                                 i PPP     PPP       13 13 21.7
MNK                                 i SKS     SKiKP     13 16 07.3 +0.3
MNK                                 i S       SKSac     13 18 11.6 -3.2
MNK                                 i sS      S         13 18 37.7 -5.8
MNK                                 i SS      SS        13 25 02.9  +12
MNK                                 i SSS     SSS       13 28 18.2
MNK                                 i LQ      LQ        13 41 05.5
MNK                                 i LR      LR        13 45 22.9
MNK                                 i LRM     MLR       13 52 30.2
            comp=N,240nm,19.5s
MNK                                 i LRM     MLR       13 52 33.1
            comp=Z,454nm,19.5s
MNK                                 i LRM     MLR       13 52 39.4
            comp=E,53nm,19.5s
NACGM Naroch            92.19 330   i P       P         13 07 47.3 +0.4
SDCO  Great Sand Dun    92.69  49    P        P         13 07 50.7 +0.7
ULM   Lac du Bonnet     93.03  35    LR       LR        13 43 55.2
            comp=E,229nm,20.5s,baz=307,slow=32
ANMO  Albuquerque       93.11  52⇑  eP        P         13 07 53.4 +1.5
AKASG Malin Array Be    93.26 326    LR       LR        13 51 32.9
            comp=E,420nm,19.6s,baz=15,slow=37
RAYN  Ar Rayn           93.41 296    P        P         13 07 52.4 -0.9
RAYN                                 pmax     pmax
            comp=Z,5.0nm,1.0s
RAYN  Ar Rayn           93.41 296    P        P         13 07 52.6 -0.7
RAYN  Ar Rayn           93.41 296    P        P         13 07 52.4 -0.9
NB2   NORSAR Subarra    94.40 340    P        P         13 07 56.1 -0.9
            comp=Z,4.3nm,1.1s,baz=42,slow=4.6
NOA   NORSAR Array B    94.40 340    LR       LR        13 57 35.6
            comp=Z,94nm,18.6s,baz=35,slow=40
VNDA  Vanda             94.96 177    P        P         13 07 58.2 -0.8
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            comp=Z,0.7nm,0.9s,baz=351,slow=5.2,SNR=3.2
VNDA                                 LR       LR        13 49 40.1
            comp=Z,110nm,18.7s,baz=350,slow=35
BRTR  Keskin Array B    96.08 315    P        P         13 08 04.3 -1.0
            comp=Z,1.7nm,1.0s,baz=145,slow=4.5,SNR=5.3
BRTR                                 LR       LR        13 57 02.5
            comp=Z,298nm,18.1s,baz=56,slow=39
TXAR  Lajitas Array     97.55  56    LR       LR        13 51 36.6
            comp=Z,243nm,18.1s,baz=0.0,slow=35
SYO   Syowa Base       112.23 202⇓  eX        PKiKP     13 13 09.5 -2.6
ESDC  Sonseca Array    117.27 335    PP       PP        13 14 31.1 -1.8
            comp=Z,0.6nm,0.6s,baz=19,slow=9.4,SNR=5.3
SNAA  Sanae            122.76 191    PKPdf    PKiKP     13 13 32.5 -0.2
SNAA  Sanae            122.76 191⇑  iPKIKP    PKiKP     13 13 33.2 +0.5
SNAA                                 pmax     pmax
            comp=Z,13nm,2.5s
SNAA  Sanae            122.76 191             PKiKP     13 13 33.4 +0.8
VNA2  Neumayer--Watz   124.17 190    PKPdf    PKiKP     13 13 36.1 +0.7
VNA3  Neumayer Olymp   124.25 189    PKPdf    PKiKP     13 13 35.6  0.0
VNA1  Neumayer--Stat   124.56 190    PKPdf    PKiKP     13 13 37.2 +1.1
TORD  Torodi Ar. Bea   134.41 309    PKP      PKPdf     13 13 54.5 -1.7
            comp=Z,2.2nm,0.9s,baz=22,slow=1.9,SNR=8.4
TORD                                 PP       PP        13 16 24.9 -3.0
            comp=Z,0.9nm,0.9s,baz=51,slow=6.8,SNR=3.4
TORD                                 SKPbc    SKPab     13 17 23.8 -1.8
            comp=Z,3.7nm,1.0s,baz=45,slow=3.0,SNR=8.0
TORD  Torodi Ar. Bea   134.41 309    PKPdf    PKiKP     13 13 57.2 -0.4
DBIC  Dimbokro         143.50 308    PKP      PKPdf     13 14 12.2 -0.7
            comp=Z,3.0nm,0.7s,baz=9.5,slow=6.1,SNR=3.5
DBIC  Dimbokro         143.50 308             PKPdf     13 14 12.7 -0.1
PTGA  Pitinga          148.72  61             PKPdf     13 14 20.2 -1.5
CPUP  Villa Florida    155.61 116    PKPab    PKPab     13 14 57.6 -0.2
            comp=Z,3.7nm,1.1s,baz=320,slow=2.3,SNR=4.3
CPUP  Villa Florida    155.61 116    PKPdf    PKPdf     13 14 30.6 -1.0
CPUP                                          PKPab     13 14 58.0 +0.2
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*FUNV **13** 13:10:53.5, 8°.52N×71°.41W, h5^{km}, MW3.0*

ISC 13 13:10:52.8±1.2, **8°.55N**±0°.04×**71°.38W**±0°.03, **h13**^{km}±10^{km},
n23, σ**1^{s}.76**/37, **1D, Venezuela**

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Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                     Op       ISC       h  m  s   ISC
SOCV  Socops             0.58 117   eP        Pg        13 11 04.1 -0.1
SOCV                                eS        Sg        13 11 12.7 +0.7
SOCV  Socops             0.58 117⇓  iP        Pg        13 11 04.1 -0.1
SOCV                                eS        Sb        13 11 13.2 +0.1
SDV   Santo Domingo      0.81  66   eP        Pg        13 11 09.0 +0.5
SDV                                 eS        Sg        13 11 19.9 +0.6
CAPV  Capacho            1.15 234   eP        Pb        13 11 13.2 -1.4
CAPV                                eS        Sb        13 11 29.6 +0.1
PAMC  Pamplona, Colo     1.78 227   eP        Pb        13 11 25.0 -0.5
PAMC                                eS        Sn        13 11 45.3 -1.0
MCQV  Machiques          1.87 323   eS        Sn        13 11 49.3 +1.2
OCAC  Ocana              1.94 261   eP        Pn        13 11 18.8 -6.8
OCAC                                eS        Sn        13 11 43.6 -6.4
TAMC  Tame, Arauca       2.14 191   eS        Sb        13 11 59.6 +1.6
ELOV  Elorza             2.43 129   eS        Sb        13 12 07.5 +1.2
ELOV  Elorza             2.43 129   eP        Pn        13 11 33.4 +1.1
ELOV                                eS        Sn        13 12 03.2 +1.3
SIQV  Siquisique         2.60  37   eP        Pn        13 11 35.5 +1.0
SIQV                                eS        Sn        13 12 08.1 +2.0
BARC  Barichara          2.64 223   eP        Pb        13 11 40.2 +0.1
BARC                                eS        Sb        13 12 13.4 +0.8
SMLC  San Martn de       2.67 276   eP        Pn        13 11 37.4 +1.8
SMLC                                eS        Sb        13 12 10.8 -2.4
BRRC  Barranca, Sant     2.72 238   eS        Sb        13 12 13.6 -1.0
BAUV  El Baul            3.32  83   eP        Pn        13 11 45.5 +0.9
BAUV                                eS        Sn        13 12 24.3 +0.4
ZARC  Zaragoza, Cauc     3.60 253   eP        Pn        13 11 50.6 +2.3
ZARC                                eS        Sn        13 12 30.9 +0.1
MONV  Montecano          3.66  22   eP        Pn        13 11 49.9 +0.8
MONV                                eS        Sn        13 12 32.7 +0.6
BENV  Beln               3.99  69   eP        Pn        13 11 54.2 +0.5
BENV                                eS        Sn        13 12 39.6 -0.8
MOTC  Monteria, Cord     4.24 273   eP        Pn        13 11 58.4 +1.2
MOTC                                eS        Sn        13 12 48.1 +1.6
TACV  Tcata              4.58  70   eP        Pn        13 12 02.8 +0.9
PAYV  Puerto Ayacuch     4.83 130   eP        Pn        13 12 05.6 +0.3
CACV  CAICARA DEL OR     4.89 101   eP        Pb        13 12 14.1 -4.3
BIRV  Birongo            5.39  69   eP        Pn        13 12 13.8 +0.8
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*JMA **13** 13:16:39.5±0.1, 33°.69N×141°.04E, h58^{km}±3^{km}, M3.1*
*IDC **13** 13:16:40.1±1.2, 32°.92N×138°.75E, h0^{km}, mb3.6/3,*
mb1 3.8/4, mb1mx3.5/33, mbtmp3.5/4, ML2.7/1, MS3.7/1,
Ms1 3.7/1, ms1mx3.0/35, Error ellipse: s-maj=21.6km
s-min=17.7km az=148.0

ISC 13 13:16:39.9±1.6, **33°.65N**±0°.05×**141°.06E**±0°.10, **h52**^{km}±15^{km},
n19, σ**0^{s}.64**/29, **mb3.6**/3, **Off east coast of Honshu**

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Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                     Op       ISC       h  m  s   ISC
BSO1  Boso 1             1.01 356    P        Pn        13 16 57.1 -0.1
BSO1                                eS        Sn        13 17 10.4 +0.3
JHJ2  Mitsune            1.17 243    P        Pn        13 17 00.3 +0.4
JHJ   Hachijo jima 2     1.19 244    Pn       Pn        13 17 00.3 +0.2
            136nm,0.3s,baz=108,slow=22,SNR=48
JHJ                                  Sn       Sn        13 17 15.2 -0.1
            168nm,0.3s,baz=261,slow=23,SNR=14
JHCJ  Hachijojimakas     1.20 242    P        Pn        13 17 00.6 +0.3
JHCJ                                eS        Sn        13 17 15.8 +0.2
BSO3  Boso 3             1.24 339    P        Pn        13 17 00.6  0.0
BSO3                                 S        Sn        13 17 15.6 -0.5
JMKN  Mikurajimanish     1.25 282    P        Pn        13 17 00.9 -0.1
JMKN                                 S        Sn        13 17 16.6 -0.1
BSO4  Boso 4             1.47 336    P        Pn        13 17 04.1 +0.2
BSO4                                eS        Sn        13 17 21.7 -0.2
JKO   Kozu shima         1.69 289    P        Pn        13 17 07.0 +0.1
JKO                                 eS        Sn        13 17 27.1 -0.3
JIM2  Oshima 3           1.72 309    P        Pn        13 17 07.1 -0.3
JIM2                                eS        Sn        13 17 27.5 -0.8
JIZS  Izushimoda         2.10 301    P        Pn        13 17 12.9 +0.3
JOD2  Odawara 2          2.29 315    P        Pn        13 17 15.1 -0.1
JYN   Shimob             2.78 312    P        Pn        13 17 22.7 +0.8
JRY   Ryogami san        2.96 324    P        Pn        13 17 24.6 +0.2
JRY                                 eS        Sn        13 17 58.3 -0.3
MJAR  Matsushiro Arr     3.71 322    Pn       Pn        13 17 36.1 +1.4
            0.6nm,0.3s,baz=178,slow=14,SNR=14
MJAR                                 Sn       Sn        13 18 17.7 +0.5
            0.2nm,0.3s,baz=103,slow=33,SNR=5.9
MAT   Matsushiro         3.72 322    P        Pn        13 17 36.4 +1.6
MAT                                  S        Sn        13 18 18.7 +1.4
PMG   Port Moresby      43.20 171    LR       LR        13 39 45.2
            comp=Z,101nm,19.5s,baz=326,slow=32
MKAR  Makanchi Array    45.74 305    P        P         13 24 55.0 -1.0
            0.2nm,0.5s,baz=77,slow=7.6,SNR=1.8
WRA   Warramunga Arr    53.67 188    P        P         13 25 56.3  0.0
            1.2nm,0.4s,baz=3.6,slow=7.5,SNR=49
ASAR  Alice Springs     57.40 188    P        P         13 26 23.5 +0.4
            0.2nm,0.4s,baz=10,slow=12,SNR=6.5
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TAP 13 13:22:20.0, 24°.80N×121°.89E, h6^{km}, ML1.4, C, Taiwan

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Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                     Op       ISC       h  m  s   ISC
EGS                      0.06  44    P        Pg        13 22 22.1 +0.6
            baz=53
EGS                                 eS        Sg        13 22 24.2 +1.5
            baz=53
NTC   Toucheng           0.07 316   i P       Pg        13 22 22.4 +0.6
            baz=326
NTC                                 i S       Sg        13 22 24.2 +1.2
            baz=326
TIPB  Shuangxi           0.18 342   i P       Pg        13 22 24.2 +0.6
            baz=343
TIPB                                i S       Sg        13 22 26.8 +0.8
            baz=343
TWC   Suao               0.19 190   i P       Pg        13 22 24.3 +0.4
            baz=174
TWC                                 eS        Sg        13 22 28.1 +1.7
            baz=174
TWE   Neicheng           0.21 248    P        Pg        13 22 24.9 +0.6
            baz=245
TWE                                 eS        Sg        13 22 27.9 +0.8
            baz=245
TWB1  Santiao Chiao      0.23  24    P        Pg        13 22 24.7 +0.2
            baz=27
TWB1                                eS        Sg        13 22 27.8 +0.2
            baz=27
NDS   Dongshan           0.23 223   eP        Pg        13 22 25.5 +1.0
            baz=222
NWF   Wu-fen Shan        0.28 340   i P       Pg        13 22 26.3 +0.7
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	baz=331						
NWF				*i* S	Sb	13 22 31.1	-1.5
	baz=331						
ENTT	Nioudou	0.33	241	P	Pg	13 22 27.3	+0.8
	baz=239						
ENTT				*e*S	Sb	13 22 32.7	-1.2
	baz=239						
NWLT	Wulai	0.35	266	*e*P	Pb	13 22 27.8	-0.8
	baz=266						
ENA	Nanau	0.39	200	P	Pb	13 22 29.2	-0.1
	baz=197						

TAP 13 13:22:21.5, 24°.39N×121°.97E, h38^{km}, ML1.9, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EWUT	Wuta	0.18	288	P	Pn	13 22 28.8	-1.8
	baz=288						
EWUT				S	Sn	13 22 33.8	-5.2
	baz=288						
ENA	Nanau	0.21	281	*e*P	Pn	13 22 28.1	-2.0
	baz=280						
ENA				*e*S	Sn	13 22 34.8	-3.1
	baz=280						
TWC	Suao	0.24	334	*e*P	Pn	13 22 29.1	-0.7
	baz=336						
NDS	Dongshan	0.33	317	P	Pn	13 22 30.4	+0.5
	baz=317						
NDS				*e*S	Sn	13 22 36.8	+0.2
	baz=317						
ETL	Fush Village	0.39	234	*e*P	Pn	13 22 30.9	+0.4
	baz=233						
ETL				S	Sn	13 22 38.0	+0.7
	baz=233						
NACB	Ninganchiao	0.40	238	*e*P	Pn	13 22 31.0	+0.3
	baz=237						
NACB				*e*S	Sn	13 22 38.0	+0.6
	baz=237						
TWD	Chiawan	0.46	228	*e*P	Pn	13 22 32.0	+0.6
	baz=225						
TWD				*e*S	Sn	13 22 40.2	+1.6
	baz=225						
NDT	Datong Townshi	0.46	297	*e*P	Pn	13 22 32.2	+0.6
	baz=297						
NDT				*e*S	Sn	13 22 39.9	+1.2
	baz=297						
ETLH	Xiulin Townshi	0.48	248	P	Pn	13 22 32.5	+0.7
	baz=239						
ETLH				S	Sn	13 22 40.1	+0.9
	baz=239						
NNSB	Datong	0.53	274	P	Pn	13 22 33.9	+1.1
	baz=274						
NNSB				S	Sn	13 22 42.0	+1.4
	baz=274						
NNS	Nan Shan	0.54	275	P	Pn	13 22 33.3	+0.4
	baz=275						
NNS				*e*S	Sn	13 22 42.2	+1.3
	baz=275						

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*IDC **13** 13:32:01.3±3.0, 3°.71S×138°.97E, h0^{km}, mb4.0/3, mb1 4.2/5, mb1mx3.8/29, mbtmp4.0/5, ML4.1/2, Error ellipse: s-maj=85.1km s-min=25.4km az=87.0*

*NEIC **13** 13:32:11.7±1.0, 4°.0S±0°.2×138°.7E±0°.1, h82^{km}±13^{km}, mb4.0/9, Error ellipse: s-maj=30.5km s-min=16.3km az=199.0*

ISC 13 13:32:08.1±1.5**, 3°.8S**±0°.1×**138°.9E**±0°.2**, h50^{km}, n18, σ1^{s}07**/18**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	6.67	277	Pn	Pn	13 33 44.9	+1.3
WB0	Warramunga Arr	16.48	195		Pn	13 35 55.4	-0.7
WB0				IAmb	IAmb	13 36 15.3	
	comp=Z,12nm,1.3s						
WR0	Warramunga Arr	16.63	194		Pn	13 35 57.0	-0.9
WR0				IAmb	IAmb	13 36 19.5	
	comp=Z,18nm,1.4s						
WRAB	Tennant Creek	16.65	195	P	Pn	13 35 57.4	-0.7
WRAB				IAmb	IAmb	13 36 16.5	
	comp=Z,8.9nm,0.7s						
WB2	Warramunga Arr	16.66	195	P	Pn	13 35 56.7	-1.6
WB2				IAmb	IAmb	13 36 19.3	
	comp=Z,7.0nm,0.7s						
WRA	Warramunga Arr	16.66	195	Pn	Pn	13 35 56.8	-1.5
	comp=Z,0.8nm,0.3s,baz=17,slow=13,SNR=41						
WRA	Warramunga Arr	16.66	195	P	Pn	13 35 57.0	-1.4
CTAO	Charters Tower	17.73	157	P	Pn	13 36 13.0	+1.4
CTAO				IAmb	IAmb	13 36 29.4	
	comp=Z,12nm,1.2s						
FITZ	Fitzroy Crossi	19.25	221	P	P	13 36 28.4	-0.1
	comp=Z,0.5nm,0.3s,baz=42,slow=9.7,SNR=56						
AS31	Alice Springs	20.35	193	P	P	13 36 40.9	+0.5
ASAR	Alice Springs	20.35	193	P	P	13 36 41.0	+0.5
	comp=Z,3.7nm,0.5s,baz=23,slow=9.7,SNR=72						
ASAR	Alice Springs	20.35	193	P	P	13 36 40.7	+0.2
CM31	Chiang Mai Arr	45.12	301	P	P	13 40 18.4	-1.6
CMAR	Chiang Mai Arr	45.12	301	P	P	13 40 20.2	+0.2
	comp=Z,0.9nm,0.7s,baz=118,slow=5.7,SNR=6.4						
CMAR	Chiang Mai Arr	45.12	301	P	P	13 40 18.6	-1.3
MKAR	Makanchi Array	70.73	323	P	P	13 43 19.4	+0.4
	comp=Z,1.6nm,0.7s,baz=111,slow=8.5,SNR=17						
MKAR	Makanchi Array	70.73	323	P	P	13 43 19.2	+0.1
MAKZ	Makanchi	70.93	322	P	P	13 43 19.9	-0.3

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*IDC **13** 13:37:26.6±0.8, 34°.09N×135°.14E, h0^{km}, mb3.8/7, mb1 4.1/10, mb1mx3.8/39, mbtmp3.8/10, ML3.4/3, Error ellipse: s-maj=21.2km s-min=19.3km az=51.0*

*NIED **13** 13:37:27.4, 34°.20N×135°.13E, h6^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}3.66; $M_{\theta\theta}$1.68; $M_{\phi\phi}$-5.35; $M_{r\theta}$-2.26; $M_{\theta\phi}$-1.66; $M_{\phi r}$-1.19; Fault plane solution: $M_0$5.58000×10^{14} NP1: ϕ_s220.00000°, δ62.00000°, λ126.00000°. NP2: ϕ_s343.00000°, δ44.00000°, λ42.00000°.*

*JMA **13** 13:37:27.3, 34°.20N×135°.13E, h6^{km}±1^{km}, M4.1 Broadband fault plane solution: P waves. NP1: ϕ_s336.00000°, δ54.00000°, λ41.00000°. NP2: ϕ_s219.00000°, δ58.00000°, λ136.00000°. Principal axes: T Plg52.0000°, Azm185.0000°; N Plg38.0000°, Azm10.0000°; P Plg2.0000°, Azm278.0000°;*

JMA Felt III J1.

ISC 13 13:37:27.2±1.1**, 34°.17N**±0°.04×**135°.14E**±0°.03**, h5^{km}**±8^{km}**, n25, σ1^{s}10**/30**, mb3.8**/7**, 7D, Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWM	Minabe	0.36	151	⇓P	Pb	13 37 35.2	-0.9
JWM				S	Sb	13 37 40.4	-1.7
JAWN	Awajishima-nag	0.37	328	⇓P	Pg	13 37 34.4	-0.1
JAWN				S	Sg	13 37 39.1	-0.3
JWY	Kouya	0.38	82	⇓P	Pg	13 37 34.6	+0.1
JWY				S	Sg	13 37 40.3	+0.8
JTNC	Tanabenakahech	0.52	132	⇓P	Pb	13 37 38.2	-0.6
JTNC				S	Sb	13 37 45.5	-1.2
JHE	Heguri	0.66	43	⇓P	Pg	13 37 39.9	0.0
JHE				S	Sg	13 37 48.7	+0.2
JAI	Aioi	0.69	237	⇓P	Pg	13 37 40.2	-0.2
JAI				S	Sg	13 37 49.5	+0.2
JKS	Kasai	0.85	343	⇓P	Pg	13 37 43.0	-0.5
JKS				S	Sg	13 37 53.9	-0.6
JKN2	Miekihoku	0.94	85	P	Pg	13 37 45.2	0.0
JKN2				*e*S	Sb	13 37 58.6	-0.1
MAT	Matsushiro	3.45	46	P	Pn	13 38 22.4	+0.9
MAT				*e*S	Sn	13 38 58.8	-4.0
MJAR	Matsushiro Arr	3.45	46	Pn	Pn	13 38 22.7	+1.2
	0.6nm,0.3s,baz=249,slow=14,SNR=22						
JHJ	Hachijo jima 2	4.01	104	Pn	Pn	13 38 30.2	+0.9
	19nm,0.3s,baz=177,slow=23,SNR=1.7						
JHJ				Sn	Sn	13 39 17.9	+1.3
	16nm,0.3s,baz=98,slow=20,SNR=1.8						
KSRS	Korea Array	6.72	301	Pn	Pn	13 39 07.5	+1.1
	2.0nm,0.3s,baz=117,slow=14,SNR=25						
KSRS				Sn	Sn	13 40 22.7	-0.6
	1.4nm,0.3s,baz=118,slow=24,SNR=12						
SONM	Songino Array	25.46	311	P	P	13 42 56.8	+0.7
	1.6nm,0.7s,baz=123,slow=10,SNR=6.6						
H11N2	WAKE ISLAND Hy	31.60	109	T	T	14 16 27.5	
	baz=302,slow=74,SNR=11						
H11N1	WAKE ISLAND Hy	31.60	109	T	T	14 16 31.0	
	baz=302,slow=74,SNR=11						
H11N3	WAKE ISLAND Hy	31.61	109	T	T	14 16 31.9	
	baz=302,slow=74,SNR=8.9						
H11S3	WAKE ISLAND Hy	32.13	111	T	T	14 17 05.4	
	baz=304,slow=75,SNR=12						
H11S1	WAKE ISLAND Hy	32.13	111	T	T	14 17 03.8	
	baz=304,slow=75,SNR=11						
H11S2	WAKE ISLAND Hy	32.15	111	T	T	14 17 06.2	
	baz=304,slow=75,SNR=7.2						
MKAR	Makanchi Array	41.39	304	P	P	13 45 14.8	+0.5
	0.5nm,0.6s,baz=94,slow=11,SNR=4.5						
WRA	Warramunga Arr	53.81	181	P	P	13 46 50.5	-0.4
	3.3nm,0.8s,baz=354,slow=7.9,SNR=24						
ILAR	Eielson Array	54.61	31	P	P	13 46 56.4	+0.1
	0.5nm,0.7s,baz=268,slow=6.5,SNR=6.7						
ASAR	Alice Springs	57.53	181	P	P	13 47 17.1	-0.5
	0.5nm,0.6s,baz=10.0,slow=12,SNR=9.8						
NVAR	Mina Array Bea	80.76	50	P	P	13 49 43.1	+1.0
	0.8nm,0.8s,baz=297,slow=6.5,SNR=6.5						
PDAR	Pinedale Array	83.26	42	P	P	13 49 55.4	+0.3
	0.4nm,0.6s,baz=297,slow=4.0,SNR=2.8						

ROM 13 13:47:28.9±0.1**, 46°.485N**±0°.004×**12°.817E**±0°.009**, h11^{km}, Md1.1**/2**, 3C, Error ellipse: s-maj=0.7km s-min=0.5km az=53.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLUD	Cludinico	0.05	122	⇑*e*Pg	Pg	13 47 31.5	+0.5
CLUD				*e*Sg	Sg	13 47 33.0	+0.4
CLUD	Cludinico	0.05	122	P	Pg	13 47 31.5	+0.5
CLUD				S	Sg	13 47 33.0	+0.4
CLUD				END			
FVI	Forni Avoltri	0.12	347	P	Pg	13 47 32.3	+0.5
FVI				S	Sg	13 47 34.4	+0.5
CSMI	Casera Mimoias	0.12	284	⇑*e*Pg	Pb	13 47 32.7	-0.5
CSMI				*e*Sg	Sg	13 47 35.1	+1.0
ZOU	Zoufplan	0.13	56	⇑*e*Pg	Pg	13 47 32.6	+0.5
ZOU				*e*Sg	Sg	13 47 34.7	+0.3
ZOU	Zoufplan	0.13	56	P	Pg	13 47 32.6	+0.4
ZOU				S	Sg	13 47 35.0	+0.5
ZOU				END			
FUSE	Fusea	0.15	119	*e*Pg	Pg	13 47 32.7	+0.5
FUSE				*e*Sg	Sg	13 47 35.2	+0.6
STAL	STALIGIAL	0.24	198	P	Pg	13 47 34.4	+0.6
STAL				S	Sg	13 47 38.3	+1.3
PLRO	Paularo	0.24	74	*e*Pg	Pg	13 47 34.3	+0.5
MPRI	Monte Prat	0.27	154	P	Pb	13 47 35.2	-0.6
MPRI				S	Sg	13 47 39.2	+1.2

UCR 13 13:55:11.2±1.0**, 9°.56N**×**85°.88W, h26^{km}**±2^{km}**, MW3.8, 5C, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
INDI	Punta indio, G	0.48	50	⇑*e*P	Pb	13 55 21.1	-0.1
INDI				*e*S	Sb	13 55 28.8	+0.9
SAJU	San Juanillo,	0.53	18	⇑*e*P	Pb	13 55 21.7	-0.3
SAJU				*e*S	Sb	13 55 29.7	+0.3
GUAI	GUAI	0.80	27	⇑*i*P	Pb	13 55 25.6	-0.9
GUAI				*e*S	Sb	13 55 37.1	+0.3
LAFE	Finca La Fe, P	0.98	75	*e*P	Pn	13 55 27.8	-1.6
LAFE				*e*S	Sn	13 55 42.9	+0.4
JTS	Las Juntas de	1.17	51	*e*P	Pn	13 55 31.2	-0.7
HZTE	Horizontes, Gu	1.18	14	⇑*e*P	Pn	13 55 32.0	0.0
HZTE				*e*S	Sb	13 55 47.9	0.0
COLC	Colonia	1.28	31	*i* P	Pn	13 55 33.4	-0.2
COLC				*e*S	Sb	13 55 50.7	-0.2
GBS3	Finca Las Img	1.28	19	*i* P	Pn	13 55 33.2	-0.3
GBS3				*e*S	Sn	13 55 50.0	+0.1
GPS2	Hotel Rincn d	1.29	23	*e*P	Pn	13 55 33.4	-0.3
CUI	Cuipilapa	1.30	33	*i* P	Pn	13 55 33.5	-0.3
CUI				*e*S	Sn	13 55 50.5	+0.2
GUAB	Guayabo de Bag	1.31	29	*i* P	Pn	13 55 33.6	-0.3
BUEV	Buena Vista	1.32	21	*i* P	Pn	13 55 33.7	-0.3
GB1A	Borinquen Arri	1.34	21	*i* P	Pn	13 55 34.1	-0.3
GB1A				*e*S	Sn	13 55 51.5	+0.1
HORNC	Hornillas	1.34	31	*i* P	Pn	13 55 33.9	-0.4
ACAL	Aguas Claras	1.35	38	*i* P	Pn	13 55 34.4	-0.1
PTEN	Parque Tenorio	1.45	37	*i* P	Pn	13 55 35.9	+0.1
ARE1	Arenal 1	1.45	52	*e*P	Pn	13 55 36.0	+0.2
VMAR	Armenia, Volca	1.45	31	⇑*e*P	Pn	13 55 36.1	+0.2
CEDE	Laguna Cedeo	1.48	51	*e*P	Pn	13 55 36.7	+0.4
LCR2	La Lucha 2	1.85	84	*e*P	Pn	13 55 41.8	+0.3
RIMA	Rio Macho	2.00	84	*e*P	Pn	13 55 43.7	+0.3

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*FUNV **13** 14:01:40.8, 8°.51N×71°.41W, h1^{km}, MW3.1*

ISC 13 14:01:40.3±1.4**, 8°.57N**±0°.04×**71°.40W**±0°.03**, h7^{km}**±11^{km}**, n25, σ0^{s}98**/41**, 1D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.61	117	*e*P	Pg	14 01 51.7	-0.2
SOCV				*e*S	Sg	14 02 00.3	+0.4
SOCV	Socops	0.61	117	*e*P	Pg	14 01 51.3	-0.7
SOCV				*e*S	Sg	14 02 01.0	+1.1
SDV	Santo Domingo	0.82	67	*e*P	Pb	14 01 56.6	-0.4
SDV				*e*S	Sb	14 02 08.3	-0.1
CAPV	Capacho	1.14	233	*e*P	Pb	14 02 01.5	-0.9
CAPV				*e*S	Sb	14 02 16.8	-0.8
PAMC	Pamplona, Colo	1.77	227	*e*P	Pn	14 02 12.5	+0.7
PAMC				*e*S	Sn	14 02 35.3	+0.5
OCAC	Ocana	1.93	260	*e*P	Pn	14 02 13.9	+0.3
OCAC				*e*S	Sn	14 02 38.9	+0.7
TAMC	Tame, Arauca	2.15	190	*e*P	Pb	14 02 19.6	0.0
TAMC				*e*S	Sb	14 02 48.1	+1.6
ELOV	Elorza	2.45	129	*e*P	Pn	14 02 20.2	-0.5
ELOV				*e*S	Sn	14 02 50.5	-0.5
SIQV	Siquisique	2.60	37	*e*P	Pn	14 02 24.4	+1.6
SIQV				*e*S	Sn	14 02 55.2	+0.6
BARC	Barichara	2.64	222	⇓*i*P	Pb	14 02 27.7	-0.3
BARC				*e*S	Sn	14 02 58.2	+2.3
SMLC	San Martn de	2.65	275	*e*P	Pn	14 02 23.0	-0.5
SMLC				*e*S	Sb	14 02 60.0	-0.9
RUSC	La Rusia	3.14	212	*e*P	Pn	14 02 30.5	0.0
RUSC				*e*S	Sn	14 03 09.2	+0.7
BAUV	El Baul	3.34	83	*e*P	Pn	14 02 34.0	+1.1
BAUV				*e*S	Sn	14 03 11.5	-1.4
JACV	Jacura	3.56	45	*e*P	Pn	14 02 36.3	+0.3
ZARC	Zaragoza, Cauc	3.59	253	*e*P	Pn	14 02 36.4	0.0
ZARC				*e*S	Sn	14 03 17.2	-1.8
MONV	Montecano	3.65	23	*e*P	Pn	14 02 38.5	+1.3
MONV				*e*S	Sn	14 03 19.7	-0.9
SPBC	San Pablo de B	3.92	223	*e*P	Pn	14 02 40.7	-0.4
SPBC				*e*S	Sn	14 03 27.3	-0.2
BENV	Beln	4.00	69	*e*P	Pn	14 02 42.5	+0.4
BENV				*e*S	Sn	14 03 28.4	-0.9
MOTC	Monteria, Cord	4.22	273	*e*P	Pn	14 02 45.8	+0.7
CHIC	Chingaza	4.54	211	*e*P	Pn	14 02 50.6	+0.7
TACV	Tcata	4.59	70	*e*P	Pn	14 02 50.8	+0.6
PAYV	Puerto Ayacuch	4.85	130	*e*P	Pn	14 02 52.9	-0.8
CACV	CAICARA DEL OR	4.91	101	*e*P	Pb	14 03 01.6	-5.1
GUY2C	Guyana, Caldas	5.15	230	*e*P	Pn	14 03 00.6	+2.4
BIRV	Birongo	5.41	69	*e*P	Pn	14 03 01.8	+0.5

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*IDC **13** 14:04:00.8±0.5, 58°.99S×25°.35W, h0^{km}, mb4.7/12, mb1 4.7/13, mb1mx4.6/21, mbtmp4.7/13, ML5.5/1, MS4.0/8, Ms1 4.0/8, ms1mx3.7/25, Error ellipse: s-maj=19.7km s-min=16.1km az=77.0*

*NEIC **13** 14:04:06.0±1.4, 59°.17S±0°.10×25°.5W±0°.2, h35^{km}±1^{km}, mb4.9/28, Error ellipse: s-maj=18.2km s-min=14.3km az=217.0*

ISC 13 14:04:05.3±0.3**, 59°.20S**±0°.06×**25°.37W**±0°.08**, h35^{km}, n236, σ1^{s}22**/235**, mb4.8**/22**, MS4.2**/8**, 1D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	7.85	304	Pn	Pn	14 06 03.7	+6.9
VNA1	Neumayer--Stat	13.51	155	P	Pn	14 07 15.6	+1.5
VNA1				S	Sn	14 09 38.6	-3.9
VNA3	Neumayer Olymp	13.69	158	P	Pn	14 07 17.6	+1.0
VNA3				S	Sn	14 09 41.8	-5.3
VNA2	Neumayer--Watz	13.90	155	P	Pn	14 07 20.4	+0.9
	baz=312,slow=14						
VNA2	Neumayer--Watz	13.90	155	PcP	PcP	14 12 41.3	+1.9
VNA2				S	Sn	14 09 44.2	-8.1
SNAA	Sanae	15.47	153	P	Pn	14 07 41.8	+1.3
SNAA	Sanae	15.47	153	PcP	PcP	14 12 43.4	+1.7
SNAA	Sanae	15.47	153	Pn	Pn	14 07 41.8	+1.3
	21nm,0.3s,baz=318,slow=14,SNR=493						
SNAA				LR	LR	14 12 31.3	
	comp=Z,535nm,19.5s,baz=11,slow=33						
SNAA	Sanae	15.47	153		Pn	14 07 41.7	+1.1
SNAA				IAmb	IAmb	14 07 43.2	
	comp=Z,66nm,0.6s						
PMSA	Palmer Station	18.76	236	LR	LR	14 14 29.0	
	comp=Z,508nm,18.6s,baz=83,slow=33						
PMSA	Palmer Station	18.76	236	*e*P	P	14 08 21.3	+0.4
PMSA	Palmer Station	18.76	236	P	P	14 08 21.1	+0.2
PMSA				IAmb	IAmb	14 08 30.4	
	comp=Z,78nm,1.4s						
EFI	East Falkland	19.85	278	P	P	14 08 32.8	-0.2
EFI				IAmb	IAmb	14 08 36.3	
	comp=Z,113nm,1.2s						
USHA	Ushuaia	23.53	262	P	P	14 09 13.7	+1.8
	comp=Z,20nm,0.7s,baz=115,slow=12,SNR=10						
MG02	Cerro Sombrero	24.97	265	P	P	14 09 24.6	-0.6
GO09	Cerro Castillo	27.41	266	P	P	14 09 46.3	-0.9
GO09				IAmb	IAmb	14 10 00.7	
	comp=Z,21nm,1.1s						
SYO	Syowa Base	28.56	137	⇓*e*P	P	14 09 55.6	-1.7
QSPA	South Pole Qui	31.04	180	P	P	14 10 22.9	+3.4
	comp=Z,6.9nm,0.5s,baz=211,slow=2.4,SNR=66						
QSPA	South Pole Qui	31.04	180	P	P	14 10 22.5	+3.0
PLTB	Pedras Altas	33.35	313	*e*P	P	14 10 37.8	-2.1
PLTB	Pedras Altas	33.35	313	P	P	14 10 38.6	-1.3
PLCA	Paso Flores	33.59	283	P	P	14 10 42.0	0.0
	comp=Z,4.5nm,0.8s,baz=127,slow=7.5,SNR=9.8						
PLCA				LR	LR	14 23 23.7	
	comp=Z,297nm,18.8s,baz=160,slow=35						
PLCA	Paso Flores	33.59	283	*e*P	P	14 10 42.3	+0.3
PLCA	Paso Flores	33.59	283	P	P	14 10 41.7	-0.3
PLCA				IAmb	IAmb	14 10 43.5	
	comp=Z,16nm,1.3s						
LC01	Cunco	35.65	284	P	P	14 10 59.4	-0.3
LC01				IAmb	IAmb	14 11 02.3	
	comp=Z,16nm,1.0s						
MAW	Mawson	37.05	141	P	P	14 11 13.8	+2.5
	comp=Z,1.0nm,0.4s,baz=277,slow=8.1,SNR=1.5						
MAW				LR	LR	14 24 58.0	
	comp=Z,169nm,19.0s,baz=241,slow=34						
MAW	Mawson	37.05	141	P	P	14 11 12.1	+0.8
BO02	Sierra Bellavi	38.34	289	P	P	14 11 24.0	+1.3
BO02				IAmb	IAmb	14 11 30.4	
	comp=Z,18nm,0.9s						
GO05	Huala	38.73	288	P	P	14 11 25.0	-0.8
GO05				IAmb	IAmb	14 11 27.4	
	comp=Z,16nm,0.7s						
BO01	Tunca	38.81	289	P	P	14 11 26.2	-0.3
BO01				IAmb	IAmb	14 11 29.8	
	comp=Z,29nm,1.1s						
PTGB	Pitanga	39.23	320	*e*P	P	14 11 28.7	-1.5
MT09	Talagante	39.26	290	P	P	14 11 30.2	-0.2
MT01	Popeta	39.32	289	P	P	14 11 30.3	-0.5
MT01				IAmb	IAmb	14 11 33.8	
	comp=Z,30nm,1.0s						
CPUP	Villa Florida	39.64	312	LR	LR	14 27 32.7	
	comp=Z,110nm,18.6s,baz=85,slow=36						
CPUP	Villa Florida	39.64	312	*e*P	P	14 11 33.4	-0.1
MT02	Curacav	39.76	290	P	P	14 11 34.1	-0.3
ZON	Zonda	40.00	294	P	P	14 11 36.6	+0.1
ZON				IAmb	IAmb	14 11 53.1	
	comp=Z,11nm,0.7s						
VA01	Torpederas	40.19	290	P	P	14 11 39.0	+1.0
BSCB	Bom Sucesso	40.63	332	*e*P	P	14 11 40.1	-1.7
RIB01	Linhares ES	41.30	338	*e*P	P	14 11 45.6	-1.6
BB19B	Bebedouro	41.56	326	*e*P	P	14 11 49.1	-0.3
BSFB	Barra de Sao F	41.86	338	*e*P	P	14 11 51.3	-0.6
PCMB	Pacaembu	41.87	322	*e*P	P	14 11 51.1	-0.8
SJMB	Sao Joao De Ma	42.05	337	*e*P	P	14 11 53.1	-0.3
DIAM	Diamantina, MG	42.97	334	*e*P	P	14 12 00.3	-0.8
ITRB	Iturama	43.38	325	*e*P	P	14 12 03.1	-1.1
VNDA	Vanda	43.46	182	P	P	14 12 08.0	+3.8
	comp=Z,8.2nm,0.7s,baz=188,slow=6.8,SNR=78						
VNDA				LR	LR	14 28 09.1	
	comp=Z,101nm,21.4s,baz=160,slow=33						
VNDA	Vanda	43.46	182	P	P	14 12 07.8	+3.6
GUA01	Guaratinga, BA	43.86	340	*e*P	P	14 12 07.5	-0.5
AC02	Maricunga	44.19	298	P	P	14 12 11.4	+0.2
AQDB	Aquidauana	44.39	317	*e*P	P	14 12 10.1	-2.2
IPMB	Ipameri, GO	44.40	328	*e*P	P	14 12 11.8	-0.6
MC01	Montes Claros	44.57	334	*e*P	P	14 12 13.1	-0.7
CMC01	Camacan, BA	45.01	341	*e*P	P	14 12 16.7	-0.5
NBIT	Itapeh - BA	45.41	341	*e*P	P	14 12 19.8	-0.6
BOSA	Boshof	45.93	71	P	P	14 12 24.8	+0.2
	comp=Z,2.9nm,0.6s,baz=225,slow=8.6,SNR=5.5						
BOSA	Boshof	45.93	71	P	P	14 12 27.2	+2.6
JANB	Januaria	46.25	334	*e*P	P	14 12 26.6	-0.4
BDFB	Brasilia	46.59	329	P	P	14 12 29.3	-0.6
	comp=Z,4.9nm,0.5s,baz=156,slow=8.5,SNR=6.4						
GDU01	Guandu, BA	46.62	341	*e*P	P	14 12 29.5	-0.4
PB14	IPOC Station P	46.67	298	P	P	14 12 29.9	-0.8
PP1B	Ponte de Pedra	46.78	320	*e*P	P	14 12 30.1	-1.1
ARAG	Araguaiana, MT	47.59	324	*e*P	P	14 12 36.9	-0.7
LVC	Limon Verde	47.74	301	*e*P	P	14 12 38.9	-0.2
LVC	Limon Verde	47.74	301	P	P	14 12 39.4	+0.3
LVC				IAmb	IAmb	14 12 55.2	
	comp=Z,10nm,1.2s						
PB04	IPOC Station P	48.54	300	P	P	14 12 45.3	+0.3
SALV	Santo Antonio	48.64	320	*e*P	P	14 12 44.1	-1.4
SDBA	SAO DESIDERIO	48.94	334	*e*P	P	14 12 47.6	-0.4
NBLA	Lagarto - SE	49.02	344	*e*P	P	14 12 48.1	-0.4
PB01	IPOC Station P	49.37	301	P	P	14 12 51.1	-0.2
PB01				IAmb	IAmb	14 13 07.6	
	comp=Z,8.3nm,1.0s						
NBPN	Ponto Novo - B	49.54	341	*e*P	P	14 12 52.1	-0.4
PEXB	Peixe	50.05	330	*e*P	P	14 12 56.1	-0.3
NBAN	Anadia - AL	50.12	346	*e*P	P	14 12 56.4	-0.5
PTLB	Pontes e Lacer	50.25	316	*e*P	P	14 12 56.0	-1.8
H10S2	ASCENSION HYDR	50.79	14	T	T	15 07 32.3	
	baz=32,slow=74,SNR=9.6						
H10S3	ASCENSION HYDR	50.80	14	T	T	15 07 31.7	
	baz=188,slow=74,SNR=14						
NBRF	Rio Formoso -	50.96	348	*e*P	P	14 13 03.0	-0.2
SNDB	Serra Nova Dou	50.98	327	*e*P	P	14 13 02.4	-1.0
H10N1	ASCENSION HYDR	51.91	14	T	T	15 08 48.2	
	baz=180,slow=71,SNR=7.0						
H10N3	ASCENSION HYDR	51.91	14	T	T	15 08 47.5	
	baz=180,slow=71,SNR=12						
H10N2	ASCENSION HYDR	51.93	14	T	T	15 08 59.1	
	baz=180,slow=71,SNR=8.2						
NBLV	Livramento - P	52.47	345	*e*P	P	14 13 14.2	-0.4
NBMA	Muriti-CE	52.72	343	*e*P	P	14 13 16.6	+0.2
VILB	Vilhena	52.94	316	*e*P	P	14 13 18.0	0.0
PDRB	Porto dos Gac	52.99	320	*e*P	P	14 13 16.3	-2.0
SMTB	Santa Maria do	52.99	332	*e*P	P	14 13 18.1	-0.3
LPAZ	La Paz	53.00	305	P	P	14 13 18.9	-0.3
NBPV	Pedro Velho	53.21	348	*e*P	P	14 13 19.8	-0.2
CLDB	Colider	53.38	322	*e*P	P	14 13 19.4	-1.8
NBPA	Parau_RN	54.08	346	*e*P	P	14 13 26.6	+0.2
NBPB	Pedra_Branca-C	54.64	343	*e*P	P	14 13 30.6	+0.2
NBCL	Cascavel-CE	55.74	344	*e*P	P	14 13 38.5	+0.2
NBPS	Pedro II - PI	56.07	341	*e*P	P	14 13 40.6	-0.2
PRPB	Parauapebas	56.13	330	*e*P	P	14 13 41.1	0.0
NPGB	Novo Progresso	56.85	324	*e*P	P	14 13 44.6	-1.7
NBMO	Morrinhos-CE	56.90	342	*e*P	P	14 13 46.6	0.0
ROSB	Rosrio	58.02	338	*e*P	P	14 13 54.8	+0.3
ETMB	Extrema	58.07	311	*e*P	P	14 13 52.3	-2.6
TMAB	Tom-Au,PA,Br	59.38	333	*e*P	P	14 14 04.0	+0.1
ITTB	Itaituba	59.50	324	*e*P	P	14 14 03.3	-1.5
MALB	Monte Alegre	61.46	327	*e*P	P	14 14 17.3	-0.9
MCPB	Macapa, AP	62.28	330	*e*P	P	14 14 23.6	-0.1
LIC	Lamto	67.21	22	*e*P	P	14 14 56.1	+0.3
	comp=Z,40nm,0.7s						
BOAV	Boa Vista	67.37	321	*e*P	P	14 14 54.8	-2.0
KIC	Kosan Boka	67.40	22	*e*P	P	14 14 57.0	0.0
	comp=Z,14nm,0.7s						
TIC	Toumodi	67.62	22	*e*P	P	14 14 58.7	+0.3
DBIC	Dimbokro	67.68	22	P	P	14 14 59.1	+0.5
	comp=Z,6.3nm,0.7s,baz=194,slow=8.4,SNR=9.2						
DBIC	Dimbokro	67.68	22	P	P	14 14 59.8	+1.1
DBIC				IAmb	IAmb	14 15 06.7	
	comp=Z,9.2nm,0.9s						
OTAV	Otavalo	72.21	303	*e*P	P	14 15 27.7	+0.6
TOA0	Torodi Ar. Sit	75.37	27	P	P	14 15 45.6	+0.6
TORD	Torodi Ar. Bea	75.37	27	P	P	14 15 46.0	+1.0
	comp=Z,32nm,0.5s,baz=200,slow=6.3,SNR=210						
STKA	Stephens Creek	88.62	169	P	P	14 16 56.0	+1.6
	comp=Z,4.1nm,0.7s,baz=181,slow=4.5,SNR=8.2						
STKA				LR	LR	14 54 24.7	

	comp=Z,121nm,19.4s,baz=204,slow=34						
STKA	Stephens Creek	88.62	169	P	P	14 16 50.4	-4.0
ASAR	Alice Springs	95.68	161	P	P	14 17 27.8	+0.5
	comp=Z,2.1nm,0.8s,baz=182,slow=3.9,SNR=37						
ASAR				PKiKP	PKiKP	14 22 06.7	-0.1
	comp=Z,0.2nm,0.5s,baz=187,slow=1.2,SNR=4.9						
ASAR				PKKPbc	PKKPbc	14 34 16.3	+1.9
	comp=Z,0.7nm,0.5s,baz=20,slow=2.5,SNR=13						
WRA	Warramunga Arr	99.40	161	P	Pdif	14 17 44.2	+0.1
	comp=Z,0.4nm,0.8s,baz=197,slow=4.6,SNR=2.3						
WRA				PKKPbc	PKKPdf	14 34 06.5	-0.3
	comp=Z,1.0nm,0.9s,baz=354,slow=1.9,SNR=6.3						
WRA				LR	LR	15 01 29.4	
	comp=Z,89nm,18.4s,baz=50,slow=35						
TXAR	Lajitas Array	109.08	295	PKiKP	PKiKP	14 22 31.3	+0.5
	comp=Z,0.3nm,0.8s,baz=164,slow=7.2,SNR=3.4						
121A	Cookes Peak, D	113.68	294	P	PKiKP	14 22 40.6	+1.1
	baz=146						
SDCO	Great Sand Dun	116.92	299	P	PKiKP	14 22 46.4	+0.6
	baz=146						
S22A	4UR Ranch, Cre	117.53	298	P	PKiKP	14 22 47.9	+0.9
	baz=145						
MVCO	Mesa Verde	117.85	296	P	PKiKP	14 22 48.1	+0.6
	baz=145						
ECSD	EROS Data Cent	118.08	309	P	PKPdf	14 22 47.3	-0.1
	baz=147						
PDMCI	Parker Dam,Lak	118.16	290	P	PKiKP	14 22 48.8	+1.0
	baz=144						
AKASG	Malin Array Be	118.18	36	PKP	PKPdf	14 22 47.2	-0.1
	comp=Z,0.4nm,0.4s,baz=238,slow=2.3,SNR=4.8						
ISCO	Idaho Springs	118.65	300	P	PKiKP	14 22 49.6	+0.6
	baz=145						
BELC	Belle Mtn. Jos	118.81	289	P	PKiKP	14 22 50.5	+1.2
	baz=144						
GMRC	Granite Mounta	119.28	289	P	PKiKP	14 22 51.2	+1.0
	baz=144						
O20A	White River Ci	120.11	298	P	PKiKP	14 22 52.2	+0.4
	baz=144						
EDW2	Edwards Air Fo	120.50	288	P	PKiKP	14 22 53.6	+1.1
	baz=144						
LRMC	Laurel Mtn Rad	120.83	288	P	PKiKP	14 22 54.2	+1.0
	baz=143						
ISA	Isabella, Lake	121.36	288	P	PKiKP	14 22 55.1	+0.9
	baz=143						
K22A	Casper	121.36	301	P	PKPdf	14 22 54.0	0.0
	baz=144						
RSSD	Black Hills	121.47	304	P	PKPdf	14 22 54.1	-0.1
	baz=144						
AGMN	Agassiz Nation	121.57	312	P	PKPdf	14 22 53.6	-0.3
	baz=145						
CWC	Cottonwood Cre	121.78	289	P	PKiKP	14 22 55.9	+0.8
	baz=143						
R11A	Troy Canyon, C	122.10	292	P	PKiKP	14 22 56.4	+0.7
	baz=143						
DUG	Dugway, Tooele	122.25	295	P	PKiKP	14 22 56.8	+0.9
	baz=143						
BW06	Boulder Array	122.80	299	P	PKPdf	14 22 56.6	-0.2
	baz=143						
PDAR	Pinedale Array	122.80	299	PKP	PKPdf	14 22 56.2	-0.6
	comp=Z,1.5nm,0.5s,baz=129,slow=5.2,SNR=16						
PDAR	Pinedale Array	122.80	299		PKPdf	14 22 56.6	-0.2
PYUN	Piuthan	123.02	90	*e*P	PKPdf	14 22 57.1	-0.6
	comp=Z,5.0nm,0.5s						
CMAR	Chiang Mai Arr	123.03	111	PKP	PKiKP	14 22 58.5	+0.6
	comp=Z,1.8nm,0.8s,baz=233,slow=4.2,SNR=9.5						
CMAR	Chiang Mai Arr	123.03	111		PKPdf	14 22 57.5	-0.2
KOLN	Koldanda	123.07	91	*e*P	PKPdf	14 22 57.7	-0.1
	comp=Z,9.1nm,0.7s						
ULM	Lac du Bonnet	123.17	314	PKP	PKPdf	14 22 56.5	-0.4
	comp=Z,7.0nm,0.5s,baz=127,slow=2.2,SNR=16						
ULM	Lac du Bonnet	123.17	314		PKPdf	14 22 56.6	-0.3
NOA	NORSAR Array B	123.23	20	PKP	PKPdf	14 22 56.8	0.0
	comp=Z,1.2nm,0.7s,baz=199,slow=2.0,SNR=4.3						
NVAR	Mina Array Bea	123.47	290	PKP	PKiKP	14 22 59.5	+1.0
	comp=Z,2.8nm,0.6s,baz=128,slow=3.3,SNR=23						
DANN	Dangsing	123.62	90	*e*P	PKiKP	14 22 59.2	0.0
	comp=Z,8.9nm,0.7s						
DMN	Daman	123.71	92	*e*P	PKiKP	14 22 59.3	0.0
	comp=Z,16nm,1.0s						
GKN	Gorkha	123.79	91	*e*P	PKPdf	14 22 59.0	-0.1
	comp=Z,8.9nm,0.7s						
RAMN	Ramite	123.94	94	*e*P	PKiKP	14 23 00.2	+0.4
	comp=Z,9.0nm,0.5s						
KKN	Kakani	123.95	92	*e*P	PKPdf	14 22 59.4	-0.1
	comp=Z,5.7nm,0.6s						
ODAN	Odare	124.28	95	*e*P	PKiKP	14 23 00.6	+0.2
	comp=Z,6.1nm,0.6s						
JIRN	Jiri	124.31	93	*e*P	PKiKP	14 23 00.6	-0.1
	comp=Z,12nm,0.6s						
GUN	Gumba	124.35	92	*e*P	PKPdf	14 23 00.6	+0.2
LAO	LASA Array	124.45	304	P	PKiKP	14 23 00.1	+0.2
	baz=142						
TAPN	Taplejung	124.84	94	*e*P	PKiKP	14 23 01.9	+0.3
O03E	Paynes Creek	126.62	289	P	PKiKP	14 23 05.2	+0.8
	baz=140						
FINES	FINESS Array B	126.72	28	PKP	PKPdf	14 23 03.5	+0.1
	comp=Z,2.8nm,0.7s,baz=168,slow=1.7,SNR=16						
FINES	FINESS Array B	126.72	28		PKiKP	14 23 04.0	+0.2
N02D	Trinity Center	127.58	289	P	PKiKP	14 23 07.2	+0.9
	baz=140						
M04C	Macdoel	127.78	290	P	PKiKP	14 23 07.6	+0.8
	baz=140						
MSO	Missoula	127.92	300	P	PKiKP	14 23 07.4	+0.5
	baz=139,SNR=6.0						
J05D	Fort Rock, OR	128.62	292	P	PKiKP	14 23 09.3	+0.8
	baz=139						
ARCES	ARCESS Array B	133.51	22	PKP	PKPdf	14 23 16.2	+0.2
	comp=Z,5.0nm,0.7s,baz=235,slow=1.3,SNR=14						
MKAR	Makanchi Array	136.91	73	PKhKP	PKPpre	14 23 20.3	
	comp=Z,0.7nm,0.8s,baz=231,slow=1.9,SNR=4.9						
MKAR	Makanchi Array	136.91	73		PKPdf	14 23 23.0	-0.1
WMQ	Urumqi	137.52	80	*e*P	PKiKP	14 23 26.1	-0.3
WMQ				pmax	pmax		
	comp=Z,290nm,7.5s						
YKA	Yellowknife Ar	139.13	315	PKP	PKPdf	14 23 27.2	+0.6
	comp=Z,11nm,0.7s,baz=142,slow=2.1,SNR=21						
LZH	Lanzhou	140.03	102	*e*PKP	PKPdf	14 23 25.8	-3.6
GTA	Gaotai	140.52	95	*e*PKPbc	PKiKP	14 23 33.3	+0.6
GTA				pPKP	sPKPdf	14 23 42.9	-1.2
GTA				sPKP		14 23 48.5	
GTA				LR	LR		
	comp=N,230nm,19.3s						
GTA				LR	LR		
	comp=E,1µm,22.5s						
GTA				LR	LR		
	comp=Z,120nm,17.1s						
XAN	Xi'an	140.91	110	PKP	PKPdf	14 23 31.6	+0.7
XAN				LR	LR		
	comp=N,160nm,17.9s						
XAN				LR	LR		
	comp=E,170nm,19.2s						
XAN				LR	LR		
	comp=Z,140nm,17.2s						
ZALV	Zalesovo Beam	142.81	67	PKhKP	PKPpre	14 23 29.7	
	comp=Z,1.3nm,0.5s,baz=227,slow=3.7,SNR=5.2						
EUNU	Eureka	143.24	345	PKPdf	PKPdf	14 23 32.9	-0.8
NJ2	Nanjing	143.84	123	*e*P	PKiKP	14 23 38.1	-1.4
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
P33M	Teslin, Yukon	145.08	304	P	PKPdf	14 23 37.3	-0.1
	baz=121						
MMPY	Sheldon Lake,	145.63	308	P	PKPab	14 23 38.9	-0.2
	baz=119						
M31M	Drury Creek, Y	146.72	306	P	PKPbc	14 23 42.1	+0.2
	baz=118						
A36M	Sachs Harbour	147.39	325	P	PKPbc	14 23 43.9	+0.4
	baz=110						
HHC	Hu-ho-hao-te	147.55	105	*e*P	PKPdf	14 23 39.8	-2.5
M30M	Minto, Yukon	147.89	306	P	PKPbc	14 23 44.8	-0.4
	baz=116						
INK	Inuvik	148.83	317	P	PKPbc	14 23 47.5	+0.2
	baz=109						
INK	Inuvik	148.83	317	PKPbc	PKPbc	14 23 46.6	-0.7
CTG	Chitna Glacier	149.14	301	P	PKiKP	14 23 49.2	-0.6
	baz=116						
EPYK	Eagle Plains	149.34	313	P	PKPbc	14 23 49.0	+0.2
	baz=110						
DAWY	Dawson	149.57	308	P	PKPbc	14 23 49.3	0.0
	baz=112						
I29M	Ogilvie Camp,	149.60	310	P	PKPbc	14 23 49.2	-0.2
	baz=111						
SONM	Songino Array	149.83	91	PKPbc	PKiKP	14 23 51.4	-0.2
	comp=Z,5.9nm,0.7s,baz=213,slow=2.8,SNR=22						
M27K	Edge Creek, AK	149.95	304	P	PKiKP	14 23 51.0	-0.4
	baz=113						
M27K	Edge Creek, AK	149.95	304	PKPdf	PKPdf	14 23 44.4	-1.2
M27K				PKPbc	PKPbc	14 23 50.6	+0.1
BCAR	Beaver Creek A	150.19	305	PKPdf	PKPdf	14 23 44.8	-1.0
BCAR					PKPbc	14 23 50.8	-0.1
L27K	Beaver Creek,	150.20	305	P	PKiKP	14 23 51.4	-0.4
	baz=112,SNR=7.9						
EGAK	Eagle	150.54	308	P	PKPbc	14 23 51.8	+0.2
	baz=110						
NRIK	Noril'sk	150.78	42	PKPbc	PKiKP	14 23 52.9	+0.2
	comp=Z,4.4nm,0.8s,baz=228,slow=1.5,SNR=6.4						
L26K	Log Cabin Wild	150.83	304	P	PKiKP	14 23 53.0	0.0
	baz=111,SNR=6.4						
N25K	Chitina, Valde	150.84	301	P	PKiKP	14 23 54.0	+0.8
	baz=113						
HARP	HAARP	151.38	302	P	PKiKP	14 23 54.6	+0.4
	baz=111						
KLU	Klutina	151.38	300	P	PKiKP	14 23 54.9	+0.6
	baz=112						
J26L	Joseph Creek	151.43	307	P	PKiKP	14 23 54.6	+0.3
	baz=109,SNR=29						
SCRK	Sand Creek	151.43	306	P	PKiKP	14 23 54.8	+0.4
	baz=109,SNR=20						
RIDG	Independent Ri	151.71	305	P	PKiKP	14 23 55.6	+0.7
	baz=109,SNR=12						
PAX	Paxson	151.72	303	P	PKiKP	14 23 55.1	+0.2
	baz=110,SNR=5.4						
M24K	Tolsona, Glenn	151.72	302	P	PKiKP	14 23 56.1	+1.2
	baz=111						
SCM	Sheep Creek Mo	152.13	301	P	PKiKP	14 23 56.3	+0.5
	baz=111						
J25K	Salcha River,	152.20	307	P	PKiKP	14 23 56.5	+0.6
	baz=107,SNR=13						
PWL	Port Wells	152.22	298	P	PKiKP	14 23 56.3	+0.4
	baz=112						
KSRS	Korea Array	152.25	130	PKPbc	PKiKP	14 23 57.0	+0.3
	comp=Z,2.1nm,0.7s,baz=209,slow=2.1,SNR=4.8						
KNK	Knik Glacier	152.48	299	P	PKiKP	14 23 56.9	+0.4
	baz=111						
PRP	Porcupine Dome	152.52	309	P	PKiKP	14 23 57.0	+0.4
	baz=105,SNR=12						
SML	Sawmill	152.57	300	P	PKiKP	14 23 57.2	+0.5
	baz=110						
WAT6	Susitna Watana	152.57	302	P	PKiKP	14 23 57.4	+0.6
	baz=109,SNR=8.1						
DHY	Denali Highway	152.57	303	P	PKiKP	14 23 57.4	+0.6
	baz=109						
HDA	Harding Lake	152.80	306	P	PKiKP	14 23 57.2	+0.1
	baz=106,SNR=5.2						
PMR	Palmer	152.85	299	P	PKiKP	14 23 57.5	+0.4
	baz=110						
ILAR	Eielson Array	152.87	307	PKPbc	PKiKP	14 23 57.2	0.0
	comp=Z,17nm,0.8s,baz=308,slow=0.4,SNR=88						
ILAR				PKPab	PKPab	14 24 08.6	+0.2
	comp=Z,3.2nm,0.7s,baz=146,slow=2.0,SNR=4.6						
ILAR	Eielson Array	152.87	307	PKPdf	PKPdf	14 23 47.6	-2.2
ILAR					PKPbc	14 23 57.0	0.0
BRSE	Bradley Lake S	152.90	295	P	PKiKP	14 23 57.9	+0.6
	baz=113						
KDAK	Kodiak Island	152.97	290	P	PKiKP	14 23 58.1	+0.6
	baz=116						
POKR	Poker Plat Res	153.19	307	P	PKPbc	14 23 57.4	-0.3
	baz=105						
COLA	College	153.30	307	P	PKiKP	14 23 58.1	+0.1
	baz=105						
TCOL	CIGO, UAF Yank	153.30	307	P	PKiKP	14 23 58.2	+0.2
	baz=105,SNR=7.1						
M22K	Willow	153.35	299	P	PKiKP	14 23 59.0	+0.8
	baz=110						
MCK	McKinley	153.44	304	P	PKiKP	14 23 59.2	+0.8
	baz=106,SNR=7.2						
H24K	Noodor Dome	153.54	309	P	PKiKP	14 23 59.2	+0.6
	baz=103,SNR=7.4						
CUT	Chulitna	153.63	301	P	PKiKP	14 23 59.6	+0.9
	baz=108						
NEA2	Nenana	153.73	306	P	PKiKP	14 23 59.0	+0.1
	baz=105,SNR=9.0						
TRF	Thorofare Moun	153.94	303	P	PKiKP	14 24 00.1	+0.5
	baz=106						
I23K	Minto, Yukon-K	153.99	307	P	PKiKP	14 23 59.5	+0.1
	baz=104						
SKT	Skwentna	154.06	299	P	PKiKP	14 24 00.2	+0.5
	baz=108						
H23K	Yukon River	154.21	308	P	PKiKP	14 24 00.1	+0.2
	baz=102						
BPAW	Bear Paw Mtn.	154.42	304	P	PKiKP	14 24 00.8	+0.4
	baz=104,SNR=8.8						
TOLK	Toolik Lake Re	154.66	315	P	PKiKP	14 24 01.8	+0.9
	baz=96,SNR=23						
CAST	Castle Rocks	154.71	302	P	PKiKP	14 24 01.3	+0.3
	baz=105						
COLD	Coldfoot	154.72	312	P	PKiKP	14 24 02.1	+1.2
	baz=98,SNR=8.6						
CHUM	Lake Minchumin	154.93	303	P	PKiKP	14 24 01.7	+0.3
	baz=104						
H21K	Melozitna Rive	155.50	307	P	PKPdf	14 24 03.4	+10
	baz=100						

BER ***13*** *14:15:17.5±0.4, 58°.36N×6°.47E, h0km, ML1.9, Explosion*

DNK 13 14:15:16.2±1.6, 58°.30N×6°.43E, h0km, ML2.2, 2C, Explosion, Southern Norway

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNART	Snartemo	0.41	84	*i* P	Pg	14 15 24.0	-0.1
SNART				⇑*i*P	Pb	14 15 24.3	-2.1
SNART				*e*S	Sg	14 15 29.9	+0.4
SNART				IAML		14 15 33.6	
	comp=Z,103nm,0.8s						
SNART	Snartemo	0.41	84	⇑*i*P	Pg	14 15 24.3	+0.2
SNART				*e*S	Sg	14 15 29.9	+0.4
SNART				IAML		14 15 33.6	
	comp=Z,103nm,0.8s						
HOMB	Homborsund	1.10	91	*e*P	Pg	14 15 36.8	-0.4
HOMB				*i* P	Pb	14 15 36.9	-1.1
HOMB	Homborsund	1.10	91	*e*P	Pg	14 15 36.8	-0.4
KMY	Karmoy	1.10	327	*e*P	Pg	14 15 36.7	-0.6
KMY	Karmoy	1.10	327	*e*P	Pg	14 15 36.7	-0.6
BLS5	Blasjo	1.12	1	*e*P	Pg	14 15 36.5	-1.3
BLS5	Blasjo	1.12	1	*e*P	Pg	14 15 36.5	-1.3
STRU	Stroemstad	2.59	71	*i* P	Pn	14 15 57.7	-1.6

BER 13 14:15:29.8±0.7, 58°.27N×6°.31E, h0km, ML2.1, Explosion, Southern Norway

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNART	Snartemo	0.48	82	*e*P	Pg	14 15 37.9	-1.1
SNART				*e*S	Sg	14 15 45.0	-0.1
SNART				IAML		14 15 47.4	
	comp=Z,158nm,0.8s						
SNART	Snartemo	0.48	82	IAML		14 15 47.4	
	comp=Z,158nm,0.8s						
KMY	Karmoy	1.09	330	*e*P	Pg	14 15 49.6	-1.1
KMY	Karmoy	1.09	330	*e*P	Pg	14 15 49.6	-1.1
BLS5	Blasjo	1.16	4	*e*P	Pg	14 15 50.1	-1.8
BLS5	Blasjo	1.16	4	*e*P	Pg	14 15 50.1	-1.8
HOMB	Homborsund	1.16	89	*e*P	Pg	14 15 50.6	-1.4
HOMB	Homborsund	1.16	89	*i* S	Sg	14 15 50.2	-17

IDC ***13*** *14:21:19.6±1.0, 41°.91N×135°.31E, h389km±12km, mb2.9/10, mb1 3.1/15, mb1mx3.0/43, mbtmp3.7/15, Error ellipse: s-maj=15.4km s-min=13.3km az=109.0*

JMA ***13*** *14:21:19.3±0.4, 41°.88N×135°.82E, h417km, M3.4*

ISC 13 14:21:19.6±0.7, 41°.86N±0°.07×135°.66E±0°.07, h400km, n30, σ1ˢ63/33, mb3.3/10, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOMM	Oshimamatsumae	3.27	94	P	Pn	14 22 25.6	+0.6
JSH	Shimam	3.35	75	P	Pn	14 22 26.0	+0.4
JIW	Iwasaki	3.52	110	P	Pn	14 22 27.8	+0.6
USRK	Ussuriysk Ar.	3.56	312	P	Pn	14 22 25.4	-2.1
	baz=134,slow=7.2,SNR=48						
JSK	Shakotan	3.85	66	P	Pn	14 22 30.5	+0.4
JKB	Kayabe	4.01	88	P	Pn	14 22 32.0	+0.3
JOT	Ohata	4.07	95	P	Pn	14 22 32.5	+0.3
JRG	Rokugo	4.52	121	P	Pn	14 22 37.1	+0.4
JMK	Ichinoseki	5.14	123	P	Pn	14 22 42.8	-0.3
JMK				*e*S	S	14 23 49.3	-1.7
ASAJ	Asahikawa	5.56	64	P	Pn	14 22 47.8	+0.4
	4.9nm,0.3s,baz=249,slow=11,SNR=27						
JFT	Otama	5.64	139	P	Pn	14 22 48.5	+0.1
MJAR	Matsushiro Arr	5.67	159	P	Pn	14 22 50.7	+2.0
	0.1nm,0.3s,baz=346,slow=8.7,SNR=4.9						
JCH	Churui	5.77	80	P	Pn	14 22 49.2	-0.4
JCH				S	S	14 24 00.6	-2.3
JFK	Kawauchi	6.03	136	P	Pn	14 22 51.0	-1.6
JRY	Ryogami san	6.36	156	P	Pn	14 22 57.3	+1.0
JTKR	Abashiri--Toko	6.41	68	P	Pn	14 22 56.7	+0.1
JOD2	Odawara 2	7.12	157	*e*S	S	14 24 28.1	-2.3
KSRS	Korea Array	7.42	236	P	Pn	14 23 07.1	-0.8
	baz=61,slow=10.0,SNR=3.6						
NEM2	Nemuro 2	7.59	75	P	P	14 23 09.1	-1.1
NEM2				S	S	14 24 35.9	-4.0
KLR	Kul'dur	7.86	341	P	Pn	14 23 10.8	-1.9
	0.5nm,0.3s,baz=158,slow=11,SNR=8.5						
SONM	Songino Array	21.51	296	P	P	14 25 36.1	-1.7
	0.7nm,0.5s,baz=99,slow=8.8,SNR=2.3						
ZALV	Zalesovo Beam	35.40	308	P	P	14 27 37.9	-1.3
	0.6nm,0.4s,baz=100,slow=8.1,SNR=3.9						
MKAR	Makanchi Array	37.88	296	P	P	14 27 58.3	-1.7
	0.4nm,0.6s,baz=85,slow=13,SNR=5.1						
ILAR	Eielson Array	47.91	34	P	P	14 29 20.4	+1.4
	0.5nm,0.6s,baz=275,slow=6.6,SNR=13						
INK	Inuvik	52.17	28	P	P	14 29 52.4	+1.9
	0.7nm,0.3s,baz=293,slow=5.1,SNR=6.7						
WRA	Warramunga Arr	61.50	181	P	P	14 30 56.5	+0.8
	0.2nm,0.3s,baz=360,slow=7.0,SNR=11						
ASAR	Alice Springs	65.22	182	P	P	14 31 21.1	+1.3
	1.2nm,1.1s,baz=2.4,slow=7.4,SNR=4.2						
NVAR	Mina Array Bea	75.55	51	P	P	14 32 24.5	+2.8
	0.7nm,0.6s,baz=293,slow=5.1,SNR=7.3						
PDAR	Pinedale Array	77.33	43	P	P	14 32 33.5	+1.9
	0.6nm,0.6s,baz=36,slow=0.4,SNR=6.4						
TXAR	Lajitas Array	90.50	49	P	P	14 33 39.4	+2.0
	0.3nm,0.7s,baz=251,slow=2.8,SNR=3.8						

AEIC ***13*** *14:25:52±1.2, 51°.74N±0°.05×173°.5W±0°.1, h4km±8km, Error ellipse: s-maj=9.7km s-min=5.8km az=63.0*

NEIC ***13*** *14:25:52.3±0.8, 51°.6N±0°.1×173°.4W±0°.1, h19km±16km, ML3.0(AEIC), Error ellipse: s-maj=17.0km s-min=9.5km az=153.0*

IDC ***13*** *14:26:11.1±8.6, 53°.55N×173°.58W, h150km±79km, mb3.2/4, mb1 3.4/6, mb1mx3.2/45, mbtmp3.7/6, Error ellipse: s-maj=44.7km s-min=31.5km az=12.0*

ISC 13 14:25:47.4±1.5, 51°.7N±0°.2×172°.67W±0°.06, h27km, n28, σ0ˢ70/19, mb3.7/4, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOFP	Korovin Flat P	1.05	303		Pn	14 26 06.1	-0.3
KOSE	Korovin Southe	1.06	307		Pb	14 26 07.1	-0.2
KONE	Korovin Northe	1.13	308		Pb	14 26 07.6	-0.7
KOKL	Mount Kliuchef	1.13	303		Pn	14 26 07.3	-0.2
GSIG	Igitkin Island	2.04	279		Pn	14 26 20.2	+0.2
GSTR	Great Sitkin T	2.14	282	Pn	Pn	14 26 21.4	+0.1
GSTD	Great Sitkin T	2.18	280		Pn	14 26 21.9	-0.1
GSCK	Great Sitkin C	2.19	279		Pn	14 26 22.1	+0.1
ADK	Adak	2.50	276		Pn	14 26 26.0	-0.3
ADK	Adak	2.50	276		Pn	14 26 26.4	+0.2
KIWB	Kanaga Island	2.79	275		Pn	14 26 30.6	+0.4
KIMD	Kanaga Island	2.84	273		Pn	14 26 31.2	+0.2
TASE	Tanaga Southea	3.34	274		Pn	14 26 37.6	-0.3
UNV	Unalaska Valle	4.31	58	Pn	Pb	14 27 02.6	+0.2
AKUT	Akutan	4.83	57	Pn	Pb	14 27 09.4	-1.7
AMKA	Amchitka	5.03	269	Pn	Pn	14 27 00.5	-0.5
KDAK	Kodiak Island	13.07	54	P	P	14 29 04.8	+3.7
	1.0nm,0.3s,baz=220,slow=1.7,SNR=13						
ILAR	Eielson Array	18.66	36	P	Pn	14 30 04.7	+1.3
	0.4nm,0.3s,baz=226,slow=9.1,SNR=24						
INK	Inuvik	25.02	34	P	P	14 31 09.8	+1.2
	2.6nm,0.7s,baz=246,slow=7.9,SNR=15						
H11N2	WAKE ISLAND Hy	35.72	214	T	T	15 10 57.1	
	baz=21,slow=76,SNR=9.7						
H11N3	WAKE ISLAND Hy	35.72	214	T	T	15 10 44.4	
	baz=21,slow=76,SNR=8.7						
H11N1	WAKE ISLAND Hy	35.73	214	T	T	15 10 48.2	
	baz=21,slow=76,SNR=8.9						
H11S1	WAKE ISLAND Hy	36.91	214	T	T	15 12 11.2	
	baz=19,slow=76,SNR=13						
H11S2	WAKE ISLAND Hy	36.93	214	T	T	15 12 12.7	
	baz=19,slow=76,SNR=9.1						
H11S3	WAKE ISLAND Hy	36.93	214	T	T	15 12 12.3	
	baz=19,slow=76,SNR=4.1						
TXAR	Lajitas Array	54.81	86	P	P	14 35 28.8	+14
	0.4nm,0.7s,baz=298,slow=5.7,SNR=3.7						
MKAR	Makanchi Array	62.75	312	P	P	14 36 09.2	-0.7
	0.2nm,0.4s,baz=49,slow=6.7,SNR=6.5						
ASAR	Alice Springs	88.43	227	P	P	14 38 49.7	+13
	0.3nm,0.7s,baz=26,slow=5.0,SNR=4.7						

JMA ***13*** *14:30:14.2, 24°.45N×122°.51E, h22km±1km, M2.1*

TAP ***13*** *14:30:14.1, 24°.51N×122°.51E, h22km, ML2.6, D*

ISC 13 14:30:14.2±1.3, 24°.49N±0°.03×122°.50E±0°.02, h21km±4km, n57, σ0ˢ70/113, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.40	95	P	Pb	14 30 22.4	-0.1
JYNG				S	Sb	14 30 28.2	0.0
YOJ	Yonaguni jima	0.46	93	P	Pb	14 30 23.3	-0.3
	baz=90						
YOJ				S	Sb	14 30 30.6	+0.6
	baz=90						
YOJ	Yonaguni jima	0.46	93	P	Pb	14 30 23.5	-0.1
YOJ				S	Sb	14 30 30.4	+0.4
TWC	Suao	0.61	282	P	Pb	14 30 25.2	-1.0
	baz=269						
TWC				S	Sb	14 30 34.4	0.0
	baz=269						
EGS		0.63	305	*e*P	Pb	14 30 25.6	-1.0
	baz=295						
EGS				*e*S	Sb	14 30 35.6	+0.5
	baz=295						
EWUT	Wuta	0.66	267	P	Pb	14 30 26.5	-0.6
	baz=273						
EWUT				S	Sb	14 30 35.9	-0.1
	baz=273						
ENA	Nanau	0.70	265	P	Pb	14 30 27.0	-0.7
	baz=271						
ENA				S	Sb	14 30 37.3	+0.4
	baz=271						
TWB1	Santiao Chiao	0.70	318	P	Pb	14 30 27.2	-0.5
	baz=329						
TWB1				S	Sb	14 30 35.8	-1.1
	baz=329						
NTC	Toucheng	0.71	301	P	Pb	14 30 27.7	-0.2
	baz=299						
NTC				S	Sb	14 30 37.5	+0.1
	baz=299						
NDS	Dongshan	0.73	282	P	Pb	14 30 28.2	0.0
	baz=273						
NDS				S	Sb	14 30 38.2	+0.4
	baz=273						
TIPB	Shuangxi	0.78	308	P	Pb	14 30 28.7	-0.5
	baz=319						
TIPB				S	Sb	14 30 39.3	0.0
	baz=319						
TWE	Neicheng	0.80	287	P	Pb	14 30 28.8	-0.6
	baz=285						
TWE				S	Sb	14 30 39.8	+0.1
	baz=285						
ETL	Fush Village	0.87	248	*e*P	Pb	14 30 29.9	-0.7
	baz=253						
ETL				*e*S	Sn	14 30 42.6	-0.6
	baz=253						
ENTT	Nioudou	0.87	280	P	Pb	14 30 30.5	-0.1
	baz=278						
ENTT				S	Sn	14 30 42.8	-0.4
	baz=278						
NWF	Wu-fen Shan	0.88	312	P	Pb	14 30 30.7	-0.1
	baz=322						
NWF				S	Sb	14 30 41.6	-0.5
	baz=322						
WFSB	Wu-fen Shan	0.88	312	P	Pb	14 30 30.9	+0.1
	baz=311						
WFSB				S	Sb	14 30 42.0	0.0
	baz=311						
NACB	Ninganchiao	0.89	250	P	Pb	14 30 30.4	-0.4
	baz=253						
NACB				S	Sn	14 30 43.7	+0.1
	baz=253						
NDT	Datong Townshi	0.91	278	P	Pb	14 30 31.3	0.0
	baz=275						
NDT				S	Sn	14 30 44.1	-0.2
	baz=275						
NWLT	Wulai	0.96	288	P	Pn	14 30 32.4	0.0
	baz=286						

NWLT				S	Sb	14 30 44.3	0.0
	baz=286						
TWA	Mucha	0.97	301	eP	Pb	14 30 31.6	-0.7
	baz=300						
TWA				S	Sb	14 30 45.0	+0.2
	baz=300						
ETLH	Xiulin Townshi	0.97	254	P	Pb	14 30 32.3	-0.1
	baz=253						
ETLH				S	Sn	14 30 46.0	0.0
	baz=253						
NNSB	Datong	1.02	267	P	Pb	14 30 33.1	-0.1
	baz=265						
NNSB				S	Sb	14 30 46.2	-0.1
	baz=265						
NNS	Nan Shan	1.03	268	P	Pn	14 30 33.4	-0.2
	baz=265						
NNS				S	Sb	14 30 46.4	-0.1
	baz=265						
NSK	Sanguang	1.06	281	P	Pb	14 30 34.1	+0.3
	baz=291						
NSK				S	Sb	14 30 46.9	-0.4
	baz=291						
YM01	YM01	1.07	308	P	Pn	14 30 33.8	-0.3
	baz=307						
YM01				S	Sb	14 30 47.8	+0.1
	baz=307						
IRIF	Iriomote-Funau	1.13	97	P	Pn	14 30 34.4	-0.3
IRIF				eS	Sb	14 30 48.5	-0.7
TWY	Chenhua	1.14	314	P	Pn	14 30 34.7	-0.2
	baz=313						
TWY				S	Sb	14 30 49.6	+0.1
	baz=313						
WHF	Hehuan Shan	1.18	254	eP	Pb	14 30 36.5	+0.4
	baz=253						
WHF				eS	Sn	14 30 51.4	-0.1
	baz=253						
ESL	Shilin	1.19	236	eP	Pn	14 30 35.4	-0.1
	baz=235						
ESL				eS	Sb	14 30 51.4	+0.6
	baz=235						
TWT	Tachien	1.23	259	eP	Pb	14 30 38.2	+1.3
	baz=259						
TWT				eS	Sb	14 30 53.5	+1.1
	baz=259						
TDCB	Techi	1.25	260	eP	Pn	14 30 36.4	-0.1
	baz=259						
TDCB				eS	Sn	14 30 52.7	-0.2
	baz=259						
HATJ	Hateruma jima	1.26	110	P	Pn	14 30 36.6	0.0
HATJ				eS	Sb	14 30 53.3	+0.2
CHGB	Renai	1.28	251	P	Pb	14 30 38.2	+0.3
	baz=235						
CHGB				S	Sb	14 30 53.9	-0.1
	baz=235						
OWD	Renai	1.32	247	eP	Pn	14 30 37.6	+0.1
	baz=246						
OWD				eS	Sb	14 30 55.1	+0.1
	baz=246						
LIOB	Emei	1.36	277	eP	Pb	14 30 39.2	+0.2
	baz=288						
LIOB				eS	Sb	14 30 57.6	+1.6
	baz=288						
NSTT	Nanjuang	1.38	276	eP	Pb	14 30 38.9	-0.4
	baz=292						
NSTT				eS	Sb	14 30 57.6	+1.2
	baz=292						
JKRS	Kuro-shima	1.40	100	P	Pn	14 30 38.7	+0.3
JKRS				S	Sb	14 30 56.9	0.0
HGSD	Ruisui	1.40	225	P	Pn	14 30 38.2	-0.3
	baz=212						
HGSD				S	Sn	14 30 56.4	+0.1
	baz=212						
WHP	Taichung City	1.44	262	eP	Pb	14 30 40.8	+0.5
	baz=261						
WHP				eS	Sb	14 30 59.3	+1.2
	baz=261						
EHY	Hungye	1.46	228	eP	Pn	14 30 39.2	-0.1
	baz=215						
EHY				eS	Sb	14 30 58.5	-0.2
	baz=215						
JIJ	Ishigaki jima	1.50	94	P	Pn	14 30 39.5	-0.4
JIJ				eS	Sn	14 30 58.3	-0.5
YULB	Yu-li	1.55	226	P	Pn	14 30 40.9	+0.3
	baz=243						
YULB				S	Sn	14 31 00.6	+0.5
	baz=243						
SSLB	Suanglung	1.58	244	P	Pb	14 30 42.3	-0.4
	baz=244						
SSLB				S	Sn	14 31 00.9	+0.1
	baz=244						
JISG	Ishigakijimahi	1.65	86	P	Pn	14 30 42.1	+0.2
JISG				S	Sb	14 31 03.8	-0.4
ALS	Alishan	1.83	238	eP	Pb	14 30 46.4	-0.8
	baz=225						
ALS				eS	Sb	14 31 09.7	-0.1
	baz=225						
EDH	Donghe	1.86	216	eP	Pn	14 30 44.2	-0.7
	baz=216						
EDH				eS	Sn	14 31 06.2	-1.6
	baz=216						
ELDTW	Lidau	1.88	227	eP	Pn	14 30 45.5	+0.4
	baz=226						
ELDTW				eS	Sn	14 31 07.9	-0.4
	baz=226						
CHN5	Tsauling	1.89	242	eP	Pb	14 30 47.5	-0.6
	baz=228						
CHN5				eS	Sb	14 31 11.4	+0.1
	baz=228						
JTJ	Tarama	2.01	85	P	Pn	14 30 47.7	+0.8
JTJ				S	Sn	14 31 12.4	+1.1
LDUT	Ludao	2.04	208	eS	Sn	14 31 10.5	-1.6
	baz=218						
STYH	Taoyuan	2.05	231	eP	Pn	14 30 48.5	+1.0
	baz=220						
STYH				eS	Sn	14 31 13.8	+1.3
	baz=220						
TPUB	Ta-pu	2.08	236	eP	Pn	14 30 49.4	+1.4
	baz=235						
TPUB				eS	Sb	14 31 16.4	-0.4
	baz=235						
WTP	Ta-pu	2.12	235	eP	Pb	14 30 50.2	-1.8
	baz=236						
WTP				eS	Sb	14 31 16.9	-1.1
	baz=236						
TWK	Hsinying	2.21	237	eP	Pn	14 30 51.1	+1.4
	baz=238						
TWK				eS	Sb	14 31 19.5	-0.9
	baz=238						
CHN1	Nanshi	2.23	235	eP	Pn	14 30 51.4	+1.5
	baz=236						
CHN1				eS	Sb	14 31 19.5	-1.4
	baz=236						
SSD	Sandimen	2.44	225	eP	Pn	14 30 54.2	+1.4
	baz=215						
SSD				eS	Sn	14 31 24.1	+2.1
	baz=215						
MASBT	Mashibuluo	2.54	223	eP	Pn	14 30 54.5	+0.4
	baz=213						
MASBT				eS	Sn	14 31 25.8	+1.4
	baz=213						

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*SOME **13** 14:32:26.0, 39°.18N×71°.25E, h0^{km}*

*KRNET **13** 14:32:28.0±0.1, 38°.95N×70°.70E, h10^{km}, mb3.5*

*NNC **13** 14:32:31.3±2.4, 39°.01N×70°.27E, h0^{km}, mb3.8, mpv3.5, Error ellipse: s-maj=18.3km s-min=13.9km az=23.0*

ISC 13 14:32:31.4±0.9, **39°.07N**±0°.05×**70°.58E**±0°.05, **h17**^{km}**, n23,** σ**2^s.69**/35**, 21C-8D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAR	Garm	0.21	251	⇑iP	Pg	14 32 34.0	-2.5
	baz=80						
GAR				⇑iS	Sg	14 32 38.2	-1.8
	baz=80						
BTK	Batken	1.01	11	⇑iP	Pb	14 32 48.9	-1.5
	baz=5.0						
BTK				⇑iS	Sn	14 33 04.3	-0.4
	baz=5.0						
DRK	Karamyk	1.04	66	⇑iP	Pb	14 32 47.1	-3.9
	baz=58						
DRK				⇑iS	Sb	14 33 01.3	-3.2
	baz=58						
CHGR	Chuyangaron	1.18	250	⇓iP	Pb	14 32 51.3	-2.0
	baz=57						
CHGR				⇓iS	Sb	14 33 08.1	-0.3
	baz=57						
IUG	Iuzhnay	3.10	353	eP	Pb	14 33 24.9	-1.3
	279nm,0.4s						
IUG				eS	Sg	14 34 06.7	-4.4
	188nm,0.5s						
MNAS	Manas	3.72	23	⇑iP	Pn	14 33 28.9	+0.8
	baz=21						
MNAS				⇑iS	Sn	14 34 13.9	+2.3
	baz=21						
AML	Almayashu	3.87	37	P	Pn	14 33 33.6	+3.1
	SNR=24						
AML	Almayashu	3.87	37	⇑eP	Pn	14 33 30.8	+0.3
	baz=35						
AML				⇑iS	Sn	14 34 17.0	+1.2
	baz=35						
KK31	Karatay Array	4.03	359	⇓Pn	Pn	14 33 36.3	+4.0
	1.3nm,0.2s,baz=176,slow=13,SNR=24						
KK31				⇓Pg	Pg	14 33 46.0	-2.6
	1.7nm,0.3s,baz=184,slow=14,SNR=5.0						
KK31				⇑Sn	Sb	14 34 25.3	-5.1
	3.7nm,0.3s						
KK31				⇑Lg	Lg	14 34 38.8	
	6.8nm,0.5s,baz=175,slow=27,SNR=4.7						
MRKS	Merke	4.19	28	eP	Pn	14 33 38.0	+3.4
	5.4nm,0.3s						
MRKS				eS	Sn	14 34 28.8	+5.7
	7.5nm,0.4s						
EKS2	Erkin-Say	4.33	33	P	Pn	14 33 41.9	+5.4
	SNR=7.6						
EKS2	Erkin-Say	4.33	33	⇑iP	Pn	14 33 37.4	+0.8
	baz=31						
EKS2				⇑iS	Sn	14 34 27.9	+1.1
	baz=31						
UCH	Uchtor	4.35	42	P	Pn	14 33 41.8	+4.6
	SNR=27						
UCH	Uchtor	4.35	42	⇑eP	Pn	14 33 37.4	+0.3
	baz=40						
UCH				⇑iS	Sn	14 34 27.9	+0.2
	baz=40						
AAK	Ala-Archa	4.64	39	P	Pn	14 33 45.4	+4.6
	SNR=15						
AAK	Ala-Archa	4.64	39	⇑Pn	Pn	14 33 45.1	+4.2
	6.3nm,0.5s						
AAK				⇑Sn	Sb	14 34 43.5	-4.6
	6.7nm,0.9s						
AAK	Ala-Archa	4.64	39	⇓iP	Pn	14 33 41.1	+0.3
	baz=37						
AAK				⇓eS	Sn	14 34 34.7	+0.3
	baz=37						
KBK	Karagaybulak	4.88	41	P	Pn	14 33 49.2	+5.0
	SNR=9.8						
USP	Ospenovka	5.13	34	P	Pn	14 33 51.0	+3.5
	SNR=6.6						
USP	Ospenovka	5.13	34	⇑iP	Pn	14 33 48.0	+0.5
	baz=32						
USP				⇑iS	Sn	14 34 46.6	+0.2
	baz=32						
ULHL	Ulahol	5.35	52	⇓eP	Pn	14 33 50.6	0.0
	baz=50						
ULHL				⇓eS	Sn	14 34 50.8	-1.2
	baz=50						
TKM2	Tokmak 2	5.41	43	⇑Pn	Pn	14 33 55.8	+4.4
	4.7nm,0.4s						
AB31	Akbulak array	12.71	327	Pn	Pn	14 35 30.9	-0.3
	0.7nm,0.6s,baz=167,slow=8.6,SNR=19						
AB31				Sn	Sn	14 37 53.1	+0.8
	1.6nm,0.7s,baz=151,slow=22,SNR=5.6						

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*VAO **13** 14:36:50.6±0.5, 29°.71S×72°.44W, h10^{km}, mb4.4*

*NEIC **13** 14:36:51.9, 29°.59S×72°.33W, h9^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-3.89; $M_{\theta\theta}$-0.71; $M_{\phi\phi}$4.61; $M_{r\theta}$-0.66; $M_{\theta\phi}$0.46; $M_{\phi r}$0.94; Fault plane solution: $M_0$4.47000×10^{15} NP1:ϕ_s173.29000°, δ52.04000°, λ-105.29000°. NP2:ϕ_s17.25000°, δ40.49000°, λ-71.33000°. Principal axes: T 4.7384, Plg6.0000°, Azm274.0000°; N -0.5969, Plg12.0000°, Azm183.0000°; P -4.1416, Plg77.0000°, Azm30.0000°;*

*IDC **13** 14:36:52.8±0.8, 29°.65S×72°.11W, h0^{km}, mb4.3/6, mb1 4.3/9, mb1mx4.1/25, mbtmp4.2/9, ML4.0/3, MS3.8/9, Ms1 3.8/9, ms1mx3.6/24 Error ellipse: s-maj=29.2km s-min=21.4km az=102.0*

*NEIC **13** 14:36:52.1±2.0, 29°.59S±0°.05×72°.32W±0°.05, h10^{km}±1^{km}, mb4.7/6, Mwr4.4/48, ML3.9(GUC), Error ellipse: s-maj=7.9km s-min=6.7km az=205.0*

*GUC **13** 14:36:53.5±1.0, 29°.58S×72°.22W, h20^{km}±12^{km}, ML4.1*

ISC 13 14:36:51.8±1.3, **29°.60S**±0°.04×**72°.27W**±0°.05, **h7**^{km}±7^{km}**, n119,** σ**1^s.14**/121**, mb4.5**/8**, MS4.2**/4**, 1C-2D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO05	La Serena	0.95	110	eP	Pg	14 37 09.1	-1.0
CO05				eS	Sg	14 37 22.6	+0.1
CO05				IAML		14 37 25.5	
	comp=E,17μm,0.6s						
CO05	La Serena	0.95	110		Pn	14 37 11.3	-0.4
CO05				Sg	Sg	14 37 22.5	+0.1
CO06	Fray Jorge	1.20	153	⇓iP	Pb	14 37 14.3	-0.7
CO06				eS	Sb	14 37 28.6	-2.1
CO06	Fray Jorge	1.20	153		Pb	14 37 14.5	-0.5
GO04	Tololo Observa	1.40	114	⇑eP	Pn	14 37 18.1	0.0
GO04				i S	Sb	14 37 36.0	-0.7
GO04	Tololo Observa	1.40	114		Pb	14 37 18.4	-0.1
LCO	Las Campanas	1.49	67	eP	Pn	14 37 19.5	+0.1
LCO				eS	Sn	14 37 38.4	-0.9
LCO	Las Campanas	1.49	67		Pb	14 37 19.9	-0.2
AC04	Llanos de Chal	1.74	37	⇓iP	Pn	14 37 22.4	-0.2
AC04				eS	Sn	14 37 43.9	-1.2
AC04				IAML		14 37 44.5	
	comp=N,2μm,0.3s						
AC04	Llanos de Chal	1.74	37		Pn	14 37 22.4	-0.2
AC04				Sn	Sn	14 37 43.2	-1.9
GO03	Copiap	2.68	42	i P	Pn	14 37 36.2	+0.6
GO03				IAML		14 38 37.6	
	comp=N,665nm,0.4s						
GO03	Copiap	2.68	42		Pn	14 37 35.1	-0.5
VA06	Catapilco	3.06	164	eP	Pn	14 37 40.8	+0.1
VA06				IAML		14 38 51.2	
	comp=E,773nm,0.4s						
VA01	Torpederas	3.45	171		Pn	14 37 45.2	-0.9
VA03	San Esteban	3.48	155	eP	Pn	14 37 48.0	+1.4
VA03	San Esteban	3.48	155		Pn	14 37 47.2	+0.6
ROCH	El Roble	3.53	163	eP	Pn	14 37 47.7	+0.3
ZON	Zonda	3.65	123		Pn	14 37 51.8	+2.9
MT02	Curacav	3.77	165	eP	Pn	14 37 50.1	-0.4
MT02	Curacav	3.77	165		Pn	14 37 51.2	+0.7
PEL	Peldehue	3.78	159	eP	Pn	14 37 51.4	+0.8
PEL	Peldehue	3.78	159		Pn	14 37 51.5	+0.8
AC02	Maricunga	3.91	46	eP	Pn	14 37 54.5	+1.6
AC02	Maricunga	3.91	46		Pn	14 37 54.0	+1.2
MT05	Renca	4.00	161	eP	Pn	14 37 54.2	+0.5
VA05	Santo Domingo	4.08	172	eP	Pn	14 37 54.1	-0.7
VA05	Santo Domingo	4.08	172		Pn	14 37 54.3	-0.5
MT09	Talagante	4.30	166	eP	Pn	14 37 58.4	+0.5
MT09	Talagante	4.30	166		Pn	14 37 58.5	+0.5
MT01	Popeta	4.34	169	eP	Pn	14 37 58.1	-0.2
MT01	Popeta	4.34	169		Pn	14 37 57.6	-0.7
BO04	La Punta	4.60	163	eP	Pn	14 38 02.7	+0.8
BO01	Tunca	4.88	168	eP	Pn	14 38 05.9	+0.1
BO01	Tunca	4.88	168	Pn	Pn	14 38 05.7	0.0
PB14	IPOC Station P	5.23	19	eP	Pn	14 38 08.9	-1.9
PB14	IPOC Station P	5.23	19	Pn	Pn	14 38 09.2	-1.6
BO02	Sierra Bellavi	5.33	167		Pn	14 38 11.6	-0.3
GO05	Huala	5.40	177	Pn	Pn	14 38 11.9	-1.0
PB10	IPOC Station P	6.25	15	Pn	Pn	14 38 22.3	-2.3
H03N1	Juan Fernandez	6.84	234	Pn	Pn	14 38 32.1	-0.3
	baz=112,slow=18,SNR=32						
H03N1				T	T	14 46 29.7	
	baz=64,slow=72,SNR=150						
PB15	IPOC Station P	6.84	22		Pn	14 38 32.5	-0.5
H03N2	Juan Fernandez	6.86	234	Pn	Pn	14 38 32.3	-0.3
	baz=112,slow=18,SNR=26						
H03N2				T	T	14 46 26.8	
	baz=64,slow=72,SNR=117						
H03N3	Juan Fernandez	6.86	234	Pn	Pn	14 38 32.2	-0.4
	baz=112,slow=18,SNR=24						
H03N3				T	T	14 46 28.8	
	baz=64,slow=72,SNR=100						
VA04	Juan Fernndez	6.89	233	Pn	Pn	14 38 32.0	-1.3
PB06	IPOC Station P	7.28	20	Pn	Pn	14 38 37.0	-1.9
LVC	Limon Verde	7.59	24	Pn	Pn	14 38 43.2	-0.1
	comp=E,1.0nm,0.3s,baz=153,slow=7.0,SNR=9.0						
LVC				LR	LR	14 41 45.5	
	comp=E,257nm,20.0s,baz=200,slow=39						
LVC	Limon Verde	7.59	24	eP	Pn	14 38 42.1	-1.2
LVC	Limon Verde	7.59	24		Pn	14 38 42.6	-0.7
LC01	Cunco	9.28	178	Pn	Pn	14 39 04.9	-1.2
PLCA	Paso Flores	11.19	173	Pn	Pn	14 39 32.6	+0.2
	comp=E,0.4nm,0.3s,baz=342,slow=13,SNR=15						
PLCA				LR	LR	14 44 15.5	
	comp=E,360nm,20.3s,baz=14,slow=40						
PLCA	Paso Flores	11.19	173	eP	Pn	14 39 30.1	-2.3
PLCA	Paso Flores	11.19	173	Pn	Pn	14 39 32.2	-0.2
CPUP	Villa Florida	13.60	80	LR	LR	14 46 07.9	
	comp=E,356nm,21.4s,baz=243,slow=41						
CPUP	Villa Florida	13.60	80	eP	Pn	14 40 05.9	+0.7
CPSB	Cacapava Do Su	16.33	97	eP	Pn	14 40 42.1	+0.4
SIV	San Ignacio	17.01	40	Pn	Pn	14 40 51.3	+0.8
	comp=E,0.7nm,0.3s,baz=231,slow=12,SNR=15						
SIV				LR	LR	14 48 01.6	
	comp=E,330nm,18.6s,baz=300,slow=39						
AQDB	Aquidauana	17.53	63	eP	Pn	14 40 57.5	+0.5
ITAB	Concordia	17.87	87	eP	P	14 41 02.2	+0.4
NNA	Nana	18.04	345	LR	LR	14 45 10.9	
	comp=E,99nm,19.8s,baz=159,slow=28						
PTLB	Pontes e Lacer	18.56	43	eP	Pn	14 41 10.5	+0.9
PTGB	Pitanga	18.62	80	eP	P	14 41 09.8	-0.4
CNLB	Canela	18.65	94	eP	P	14 41 08.9	-1.6
VILB	Vilhena	20.00	37	eP	Pn	14 41 26.7	-0.2
SALV	Santo Antonio	20.45	52	eP	Pn	14 41 31.2	-1.0
ETMB	Extrema	20.48	17	eP	P	14 41 30.4	-0.1
PCMB	Pacaembu	20.53	72	eP	Pn	14 41 32.4	-0.8
TIJ01	Guaruva-PR	21.07	84	eP	P	14 41 35.6	-1.3
FRTB	Fartura	21.24	78	eP	P	14 41 38.5	-0.2
CZSB	Cruzeiro do Su	21.76	359	eP	P	14 41 44.6	+0.3
ITRB	Iturama	22.18	69	eP	P	14 41 48.3	-0.5
PDRB	Porto dos Gac	23.02	42	eP	P	14 41 57.4	-0.3
BB19B	Bebedouro	23.05	74	eP	P	14 41 58.5	+0.5
ARAG	Araguaiana, MT	23.35	58	eP	P	14 42 01.1	0.0
CLDB	Colider	24.15	43	eP	P	14 42 09.1	+0.3
PARB	Paraibuna	24.62	82	eP	P	14 42 11.6	-1.6
IPMB	Ipameri, GO	24.81	68	eP	P	14 42 13.4	-1.5
USHA	Ushuaia	25.36	175	P	P	14 42 21.6	+2.1
	comp=E,8.2nm,0.6s,baz=330,slow=7.2,SNR=4.4						
SNDB	Serra Nova Dou	26.23	52	eP	P	14 42 27.9	+0.2
BDFB	Brasilia	26.28	63	P	P	14 42 29.0	+0.8
	comp=E,2.7nm,0.4s,baz=238,slow=6.3,SNR=5.1						
NPGB	Novo Progresso	27.51	39	eP	P	14 42 39.5	+0.3
DUB01	Friburgo-RJ	27.87	81	eP	P	14 42 41.9	-0.6
PEXB	Peixe	28.27	57	eP	P	14 42 46.4	+0.4
DIAM	Diamantina, MG	28.38	73	eP	P	14 42 48.3	+1.2
MC01	Montes Claros	28.95	70	eP	P	14 42 51.7	-0.4
JANB	Januaria	29.53	67	eP	P	14 42 57.4	0.0
ITTB	Itaituba	29.58	35	eP	P	14 42 56.0	-1.6
OTAV	Otavalo	30.25	348	eP	P	14 43 01.8	-2.3
SJMB	Sao Joao De Ma	30.28	76	eP	P	14 43 04.5	+0.7
BSFB	Barra de Sao F	30.51	77	eP	P	14 43 04.8	-1.0
SDBA	SAO DESIDERIO	30.62	62	eP	P	14 43 07.2	+0.2
SMTB	Santa Maria do	30.99	53	eP	P	14 43 09.4	-0.8
NBPN	Ponto Novo - B	35.23	65	eP	P	14 43 45.7	-1.5
ZARC	Zaragoza, Cauc	36.96	356	P	P	14 44 02.6	+0.7
NBMA	Muriti-CE	38.48	62	eP	P	14 44 14.8	-0.1
VNA3	Neumayer Olymp	53.51	159	P	P	14 46 14.4	+1.7
VNA1	Neumayer--Stat	53.80	158	P	P	14 46 16.8	+2.0
VNA2	Neumayer--Watz	54.15	158	P	P	14 46 18.9	+1.6
	baz=289,slow=8.6						
SNAA	Sanae	55.73	159	P	P	14 46 30.3	+1.4
SNAA	Sanae	55.73	159	P	P	14 46 28.8	-0.1
SNAA				IAmb	IAmb	14 46 32.0	
	comp=Z,8.6nm,0.9s						
QSPA	South Pole Qui	60.62	180	P	P	14 47 02.6	-0.7
QSPA				IAmb	IAmb	14 47 07.2	
	comp=Z,5.2nm,0.9s						
TXAR	Lajitas Array	65.82	330	P	P	14 47 41.2	+3.1
	comp=Z,0.4nm,0.6s,baz=154,slow=8.6,SNR=5.3						
TXAR	Lajitas Array	65.82	330	P	P	14 47 38.6	+0.5
DBIC	Dimbokro	74.00	73	P	P	14 48 30.2	+1.6
	comp=Z,1.7nm,0.5s,baz=206,slow=4.8,SNR=5.9						
DBIC				LR	LR	15 22 05.3	
	comp=Z,71nm,18.2s,baz=264,slow=37						
DBIC	Dimbokro	74.00	73	P	P	14 48 29.0	+0.3
DBIC				IAmb	IAmb	14 48 43.8	
	comp=Z,4.1nm,0.8s						
RAR	Rarotonga	77.75	253	LR	LR	15 12 25.6	
	comp=Z,192nm,21.5s,baz=294,slow=27						
PDAR	Pinedale Array	79.76	333	P	P	14 49 03.4	+2.6
	comp=Z,0.5nm,0.5s,baz=143,slow=6.4,SNR=6.4						
PDAR	Pinedale Array	79.76	333	P	P	14 49 00.8	0.0
TOA0	Torodi Ar. Sit	82.92	71	P	P	14 49 18.2	+0.3
TORD	Torodi Ar. Bea	82.92	71	P	P	14 49 19.5	+1.6
	comp=Z,5.0nm,0.6s,baz=264,slow=4.6,SNR=22						
TORD				LR	LR	15 26 42.8	
	comp=Z,68nm,18.3s,baz=355,slow=36						
TORD	Torodi Ar. Bea	82.92	71	P	P	14 49 18.3	+0.4
TORD				IAmb	IAmb	14 49 21.3	
	comp=Z,5.4nm,0.7s						
URZ	Urewera	86.47	228	LR	LR	15 18 04.7	
	comp=Z,239nm,21.9s,baz=31,slow=29						
ASAR	Alice Springs	121.36	208	PKP	PKiKP	14 55 47.1	+0.4
	comp=Z,0.2nm,0.6s,baz=139,slow=1.8,SNR=5.0						
ASAR	Alice Springs	121.36	208		PKPdf	14 55 45.4	-1.2
WRA	Warramunga Arr	124.47	211	PKP	PKiKP	14 55 53.7	+0.8
	comp=Z,0.6nm,0.6s,baz=132,slow=1.4,SNR=12						
WRA	Warramunga Arr	124.47	211		PKPdf	14 55 50.3	-2.3
ZALV	Zalesovo Beam	150.53	28	PKP	PKPdf	14 56 40.3	+1.7
	comp=Z,0.6nm,0.6s,baz=329,slow=1.7,SNR=3.8						
ZALV				PKPbc	pPKPbc	14 56 46.4	+2.2
	comp=Z,16nm,0.6s,baz=302,slow=3.3,SNR=67						
ZALV	Zalesovo Beam	150.53	28		PKPdf	14 56 36.7	-1.9
MKAR	Makanchi Array	153.82	42	PKPbc	PKiKP	14 56 53.9	+2.0
	comp=Z,1.4nm,0.7s,baz=338,slow=2.0,SNR=13						
MKAR	Makanchi Array	153.82	42	PKPdf	PKPdf	14 56 42.2	-1.6

IDC 13 14:59:40.7±394.0**, 15°.77N**×**122°.91E, h0**^{km}**, Error ellipse: s-maj=208.0km s-min=83.3km az=114.0, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I39PW	PALAU INFRASON	14.02	124	i		16 19 00.0	
	baz=311,slow=315,SNR=6.3						
I45RU	USSURIYSK INFR	29.36	13	i		17 59 20.0	
	baz=196,slow=280,SNR=1.6						
I44RU	PETROPAVLOVSK	46.20	28	i		19 41 20.0	
	baz=230,slow=321,SNR=1.8						

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*DJA **13** 14:59:39.8±0.4, 1°S±2°×12°7E±°, h11^{km}±4^{km}, M4.5/12, mb4.7/11, mB5.0/10, MLv4.6/12, Mw(mB)4.3/10*

*NEIC **13** 14:59:41.4±1.4, 1°.23S±0°.07×127°.09E±0°.08, h33^{km}±3^{km}, mb4.3/17, Error ellipse: s-maj=12.0km s-min=10.6km az=79.0*

*IDC **13** 14:59:43.0±4.3, 1°.24S×127°.18E, h58^{km}±43^{km}, mb3.7/14, mb1 3.9/17, mb1mx3.7/60, mbtmp4.0/17, ML4.0/3, MS3.1/1, Ms1 3.1/1, ms1mx2.5/39, Error ellipse: s-maj=32.7km s-min=15.9km az=63.0*

ISC 13 14:59:41.0±0.5, **1°.22S**±0°.05×**127°.12E**±0°.06, **h34**^{km}**, n70,** σ**1^s.05**/75**, mb4.3**/26**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANI	Sanana	1.40	234	P	Pn	15 00 02.8	-1.3
SANI				S	Sb	15 00 23.9	-0.2
TNTI	Ternate	2.00	7	P	Pn	15 00 14.0	+1.7
TNTI				S	Sn	15 00 38.2	+2.1
TNTI	Ternate	2.00	7	Pn	Pn	15 00 13.5	+1.2
KMSI	Cibinong	3.61	300	P	Pn	15 00 34.9	+0.4
KMSI				S	Sn	15 01 17.3	+1.4
LUWI	Luwuk	4.35	272	P	Pn	15 00 44.1	-0.6
LUWI	Luwuk	4.35	272	Pn	Pn	15 00 44.1	-0.6
FAKI	Fak Fak	5.40	108	P	Pn	15 01 00.4	+1.2
	0.4nm1μm95nm,1.1s						
FAKI	Fak Fak	5.40	108	Pn	Pn	15 00 59.9	+0.7
MRSI	Marisa	5.44	288	P	Pn	15 01 00.0	+0.2
	0.6nm2μm62nm,0.7s						
MRSI				S	Sn	15 02 00.7	-0.6
	0.6nm2μm62nm,0.7s						
APSI	Ampana	5.47	273	P	Pn	15 01 00.7	+0.5
	2.6nm11μm451nm,0.4s						
APSI				S	Sn	15 02 01.6	-0.5
	2.6nm11μm451nm,0.4s						
TOLI2	Tolitoli	6.74	290	Pn	Pn	15 01 18.2	+0.5
MPSI	Mapaga	7.38	282	P	Pn	15 01 27.1	+0.7
	0.2nm1μm20nm,0.7s						
TTSI	Tana Toraja	7.51	256	P	Pn	15 01 29.1	+0.9

	0.3nm1µm48nm,0.4s						
SPSI	Sidrap Palu	7.83	249	P	Pn	15 01 34.4	+1.8
BKSI	Bulukumba	8.08	240	P	Pn	15 01 38.6	+2.6
	725nm49nm,0.5s						
BSSI	Bau Bau, Buton	8.22	233	P	Pn	15 01 39.9	+1.9
	749nm33nm,0.5s						
KAPI	Kappang	8.26	243	P	Pn	15 01 40.7	+2.2
	4.4nm,0.3s,baz=79,slow=7.6,SNR=15						
KAPI				LR	LR	15 05 09.7	
	comp=Z,131nm,19.7s,baz=120,slow=39						
KAPI	Kappang	8.26	243	Pn	Pn	15 01 39.3	+0.8
EDFI	Ende, Flores	9.23	216	P	Pn	15 01 54.5	+2.7
	279nm16nm,0.8s						
FITZ	Fitzroy Crossi	16.84	185	P	P	15 03 36.1	+0.1
	0.1nm,0.3s,baz=18,slow=12,SNR=2.5						
WB0	Warramunga Arr	19.76	159	P	P	15 04 07.0	-1.3
WB0				IAmb	IAmb	15 04 08.0	
	comp=Z,9.8nm,1.0s						
WRAB	Tennant Creek	19.90	160	P	P	15 04 08.5	-1.2
WRA	Warramunga Arr	19.90	160	P	P	15 04 08.5	-1.3
	comp=Z,0.9nm,0.3s,baz=340,slow=12,SNR=64						
WRA	Warramunga Arr	19.90	160	P	P	15 04 08.7	-1.1
WB2	Warramunga Arr	19.91	160	P	P	15 04 08.8	-1.1
WB2				IAmb	IAmb	15 04 10.2	
	comp=Z,26nm,1.4s						
WR0	Warramunga Arr	19.99	159	P	P	15 04 09.9	-0.9
WR0				IAmb	IAmb	15 04 11.0	
	comp=Z,10nm,1.1s						
AS31	Alice Springs	23.26	164	P	P	15 04 44.7	-1.0
ASAR	Alice Springs	23.26	164	P	P	15 04 44.3	-1.4
	comp=Z,3.4nm,0.6s,baz=344,slow=11,SNR=79						
ASAR	Alice Springs	23.26	164	P	P	15 04 44.7	-1.0
CTAO	Charters Tower	26.49	136	P	P	15 05 16.3	+0.9
CTAO				IAmb	IAmb	15 05 19.8	
	comp=Z,8.0nm,1.1s						
STKA	Stephens Creek	33.42	157	P	P	15 06 17.2	+0.6
	comp=Z,4.2nm,0.8s,baz=344,slow=9.0,SNR=7.3						
STKA	Stephens Creek	33.42	157	P	P	15 06 16.8	+0.1
CMAR	Chiang Mai Arr	33.91	307	P	P	15 06 21.8	+0.7
	comp=Z,0.2nm,0.3s,baz=100,slow=5.0,SNR=4.2						
JWT	Wachi	37.13	11	P	P	15 06 48.1	-0.4
KSRS	Korea Array	38.49	1	P	P	15 06 59.8	-0.2
	comp=Z,1.2nm,0.6s,baz=168,slow=10,SNR=3.3						
USA0B	Ussuriysk Arra	45.43	5	P	P	15 07 56.5	0.0
USA0B				IAmb	IAmb	15 08 05.3	
	comp=Z,4.8nm,0.7s						
USRK	Ussuriysk Ar.	45.43	5	P	P	15 07 55.9	-0.6
	comp=Z,2.4nm,0.5s,baz=175,slow=7.7,SNR=7.8						
USRK	Ussuriysk Ar.	45.43	5	P	P	15 07 56.1	-0.4
TAPN	Taplejung	47.36	310	eP	P	15 08 13.3	+1.0
	comp=Z,4.0nm,0.4s						
ODAN	Odare	47.36	309	eP	P	15 08 13.1	+0.8
	comp=Z,8.6nm,0.7s						
RAMN	Ramite	48.02	309	eP	P	15 08 17.6	+0.2
	comp=Z,17nm,0.5s						
JIRN	Jiri	48.68	309	eP	P	15 08 23.7	+1.0
	comp=Z,11nm,0.5s						
GUN	Gumba	49.04	309	eP	P	15 08 26.4	+1.0
KKN	Kakani	49.45	309	eP	P	15 08 29.0	+0.6
DMN	Daman	49.50	309	eP	P	15 08 29.6	+0.8
GKN	Gorkha	50.05	309	eP	P	15 08 33.4	+0.5
	comp=Z,13nm,0.7s						
KOLN	Koldanda	50.76	308	eP	P	15 08 39.4	+1.1
	comp=Z,36nm,0.8s						
DANN	Dangsing	50.90	309	eP	P	15 08 40.2	+0.8
	comp=Z,32nm,0.7s						
PYUN	Piuthan	51.38	308	eP	P	15 08 44.2	+1.2
	comp=Z,21nm,0.5s						
SONM	Songino Array	52.09	342	P	P	15 08 47.6	-0.3
	comp=Z,0.6nm,0.6s,baz=154,slow=9.2,SNR=4.3						
SONM	Songino Array	52.09	342	P	P	15 08 47.5	-0.3
SONM				IAmb	IAmb	15 09 09.0	
	comp=Z,2.1nm,1.0s						
PEA0B	Petropavlovsk-	59.87	21	P	P	15 09 43.7	+0.5
PETK	Petropavlovsk-	59.87	21	P	P	15 09 43.7	+0.5
	comp=Z,1.1nm,0.5s,baz=204,slow=4.7,SNR=4.5						
PETK	Petropavlovsk-	59.87	21	P	P	15 09 43.3	+0.1
MK31	Makanchi Array	61.85	327	P	P	15 09 57.1	+0.2
MK31				IAmb	IAmb	15 10 07.6	
	comp=Z,2.3nm,1.0s						
MKAR	Makanchi Array	61.85	327	P	P	15 09 56.6	-0.2
	comp=Z,0.9nm,0.4s,baz=112,slow=8.0,SNR=17						
MKAR	Makanchi Array	61.85	327	P	P	15 09 57.3	+0.4
MAKZ	Makanchi	62.03	327	P	P	15 09 58.2	+0.2
MAKZ				IAmb	IAmb	15 10 07.5	
	comp=Z,2.0nm,0.8s						
YAK	Yakutsk	63.11	1	P	P	15 10 05.1	+0.2
ZALV	Zalesovo Beam	65.16	334	P	P	15 10 16.9	-1.6
	comp=Z,0.3nm,0.3s,baz=143,slow=5.2,SNR=2.1						
KURBB	Kurchatov Arra	66.11	329	P	P	15 10 24.2	-0.5
	comp=Z,1.9nm,0.7s,baz=128,slow=5.9,SNR=11						
KURK	Kurchatov	66.12	329	P	P	15 10 25.1	+0.4
BVAR	Borovoye Array	71.67	328	P	P	15 10 59.1	-0.2
	comp=Z,0.5nm,0.5s,baz=94,slow=21,SNR=3.0						
NRIK	Noril'sk	75.30	346	P	P	15 11 19.4	-0.9
	comp=Z,3.1nm,0.7s,baz=114,slow=6.4,SNR=6.4						
NRIK	Noril'sk	75.30	346	P	P	15 11 19.5	-0.8
NRIK				IAmb	IAmb	15 11 27.3	
	comp=Z,4.2nm,0.9s						
ABKAR	Akbulak array	76.22	322	P	P	15 11 26.1	+0.1
AKTO	Aktyubinsk	77.77	322	P	P	15 11 34.3	-0.4
	comp=Z,0.9nm,0.3s,baz=103,slow=6.2,SNR=4.6						
ILAR	Eielson Array	89.38	25	P	P	15 12 32.0	-1.9
	comp=Z,0.4nm,0.9s,baz=246,slow=5.4,SNR=4.5						
TORD	Torodi Ar. Bea	124.70	285	PKP	PKPdf	15 18 37.4	-0.8
	comp=Z,0.5nm,0.6s,baz=77,slow=2.8,SNR=4.4						
TORD	Torodi Ar. Bea	124.70	285	PKPdf	PKPdf	15 18 36.3	-1.9

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*IDC **13** 15:04:21.6±2.0, 15°.11S×173°.87W, h0^{km}, mb4.0/5, mb1 4.4/5, mb1mx3.9/32, mbtmp4.0/5, MS3.8/15, Ms1 3.8/15, ms1mx3.7/31, Error ellipse: s-maj=117.1km s-min=23.8km az=150.0*

ISC 13 15:04:31.0±1.9, **15°.1S**±0°.6×**173°.9W**±0°.4, **h73**^{km}, **n30**, σ**0^s.72**/7, **mb3.8**/5, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.41	60	Pn	Pn	15 04 50.7	-18
	19nm,0.3s,baz=208,slow=3.7,SNR=88						
AFI				Sn	Sn	15 05 12.6	-24
	118nm,0.3s,baz=197,slow=19,SNR=7.2						
AFI				LR	LR	15 05 41.5	
	comp=Z,1µm,21.8s,baz=242,slow=34						
MSVF	Nonsavu	8.12	250	LR	LR	15 09 01.6	
	comp=Z,335nm,20.2s,baz=52,slow=34						
RAO	Raoul Island	14.53	194	LR	LR	15 12 17.5	
	comp=Z,555nm,18.7s,baz=166,slow=33						
DZM	Mont Dzumac	19.83	247	eLR	LR	15 13 31.4	
	comp=Z,410nm,28.6s						
PPT	Papeete	23.49	99	LR	LR	15 15 49.7	
	comp=Z,99nm,20.8s,baz=60,slow=29						
PAE	Paea	23.49	100	eT	T	15 33 13.4	
	2.1nm,0.3s						
PPT2	Papeete2	23.49	99	eLQ	LQ	15 13 56.7	
	869nm,26.0s						
PPT2				eLR	LR	15 14 56.8	
	comp=Z,282nm,25.8s						
TBI	Tubuai	24.48	113	eLQ	LQ	15 14 25.2	
	584nm,26.8s						
TBI				eLR	LR	15 15 29.9	
	comp=Z,435nm,27.8s						
TBI	Tubuai	24.48	113	eT	T	15 34 33.3	
	8.9nm,0.4s						
HNR	Honiara	26.13	279	LR	LR	15 18 20.8	
	comp=Z,253nm,21.9s,baz=119,slow=32						
PMG	Port Moresby	38.41	274	LR	LR	15 25 24.1	
	comp=Z,125nm,19.4s,baz=101,slow=33						
H11S2	WAKE ISLAND Hy	38.47	330	T	T	15 52 38.9	
	baz=149,slow=76,SNR=22						
H11S3	WAKE ISLAND Hy	38.48	330	T	T	15 52 40.0	
	baz=149,slow=76,SNR=33						
H11S1	WAKE ISLAND Hy	38.49	330	T	T	15 52 38.4	
	baz=149,slow=76,SNR=22						
H11N3	WAKE ISLAND Hy	39.42	331	T	T	15 54 06.8	
	baz=149,slow=76,SNR=14						
H11N1	WAKE ISLAND Hy	39.43	331	T	T	15 53 53.4	
	baz=149,slow=76,SNR=21						
H11N2	WAKE ISLAND Hy	39.44	331	T	T	15 53 50.4	
	baz=149,slow=76,SNR=13						
WRA	Warramunga Arr	49.41	257	P	P	15 13 13.9	0.0
	1.1nm,0.8s,baz=96,slow=7.5,SNR=9.1						
ASAR	Alice Springs	49.71	252	P	P	15 13 15.8	-0.4
	7.1nm,0.7s,baz=87,slow=7.9,SNR=70						
ASAR				LR	LR	15 32 44.8	
	comp=Z,90nm,19.4s,baz=102,slow=34						
GUMO	Guam	49.76	303	LR	LR	15 32 22.6	
	comp=Z,76nm,18.7s,baz=159,slow=34						
VNDA	Vanda	63.59	186	LR	LR	15 37 26.8	
	comp=Z,58nm,21.4s,baz=43,slow=31						
MJAR	Matsushiro Arr	68.40	320	LR	LR	15 39 46.2	
	comp=Z,85nm,21.8s,baz=130,slow=31						
NVAR	Mina Array Bea	74.47	42	P	P	15 16 01.5	-0.4
	1.1nm,0.8s,baz=231,slow=10,SNR=5.9						
NVAR				LR	LR	15 42 03.5	
	comp=Z,172nm,19.4s,baz=330,slow=30						
USRK	Ussuriysk Ar.	76.86	323	LR	LR	15 44 09.6	
	comp=Z,97nm,21.9s,baz=128,slow=31						
TXAR	Lajitas Array	80.89	56	P	P	15 16 38.1	+0.4
	0.8nm,0.9s,baz=243,slow=5.5,SNR=5.1						
TXAR				LR	LR	15 46 38.7	
	comp=Z,58nm,19.0s,baz=0.0,slow=31						
ILAR	Eielson Array	82.28	11	P	P	15 16 43.5	-0.6
	0.5nm,1.0s,baz=208,slow=5.1,SNR=4.9						
MAW	Mawson	87.89	199	LR	LR	15 53 07.1	
	comp=Z,90nm,21.5s,baz=199,slow=33						
CMAR	Chiang Mai Arr	92.04	288	LR	LR	15 52 29.5	
	comp=Z,37nm,21.6s,baz=131,slow=31						
BRTR	Keskin Array B	145.62	321	PKPbc	PKPab	15 24 03.3	+1.1
	1.7nm,0.8s,baz=55,slow=0.8,SNR=6.6						
GERES	GERESS Array B	145.80	351	PKPbc	PKPab	15 24 02.6	+0.1
	0.3nm,0.6s,baz=325,slow=2.1,SNR=3.6						

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*DJA **13** 15:20:44.2±1.7, 0°S±4°×12°3E±1°7, h120^{km}±10^{km}, M2.6/4, MLv2.6/4*

*IDC **13** 15:20:55.5±1.6, 0°.78N×125°.81E, h0^{km}, mb3.6/4, mb1 3.8/4, mb1mx3.3/43, mbtmp3.6/4, MS3.9/3, Ms1 3.9/3, ms1mx3.0/33, Error ellipse: s-maj=176.3km s-min=21.0km az=65.0*

ISC 13 15:21:02.6±1.1, **1°.1S**±0°.2×**122°.34E**±0°.07, **h35**^{km}, **n9**, σ**3^s.54**/7, **mb3.6**/4, **MS4.0**/3, **Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUWI	Luwuk	0.44	78	P	Pn	15 21 09.4	-3.0
LUWI				S	Sn	15 21 24.2	+5.0
APSI	Ampana	0.73	288	P	Pn	15 21 15.6	-0.8
WRA	Warramunga Arr	22.07	149	P	P	15 25 52.8	-2.0
	0.9nm,0.4s,baz=336,slow=11,SNR=22						
ASAR	Alice Springs	25.05	154	P	P	15 26 27.1	+3.2
	0.5nm,0.3s,baz=346,slow=11,SNR=35						
SONM	Songino Array	50.72	346	LR	LR	15 54 07.7	
	comp=Z,131nm,19.3s,baz=73,slow=40						
MKAR	Makanchi Array	59.23	329	P	P	15 31 00.3	-0.2
	0.3nm,0.4s,baz=122,slow=7.1,SNR=7.3						
KURBB	Kurchatov Arra	63.61	331	P	P	15 31 28.9	-1.0
	0.5nm,0.8s,baz=125,slow=6.9,SNR=4.5						
AKASG	Malin Array Be	92.85	321	LR	LR	16 20 17.0	
	comp=Z,55nm,20.4s,baz=315,slow=38						
FINES	FINESS Array B	93.99	331	LR	LR	16 18 31.3	
	comp=Z,63nm,18.3s,baz=307,slow=37						

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*IDC **13** 15:28:00.7±10.0, 14°.70S×67°.81W, h0^{km}, mb3.9/1, mb1 4.1/2, mb1mx3.6/26, mbtmp4.1/2, ML4.3/1, Error ellipse: s-maj=423.0km s-min=81.6km az=20.0*

*GUC **13** 15:28:10.6±0.5, 24°.12S×67°.42W, h220^{km}±6^{km}, ML4.4*

ISC 13 15:28:09.7±1.6, **24°.2S**±0°.1×**67°.3W**±0°.2, **h209**^{km}±19^{km}, **n15**, σ**0^s.63**/27, **1C**, **Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	2.12	316	eP	Pn	15 28 50.9	+0.3
LVC				eS	S	15 29 21.7	-0.3
PB15	IPOC Station P	2.18	295	eP	Pn	15 28 51.5	+0.5
PB15				eS	S	15 29 22.5	-0.3
PB06	IPOC Station P	2.52	305	eP	Pn	15 28 55.3	+0.7
PB06				i S	S	15 29 29.2	+0.1
PB06				IAML		15 29 31.6	
	comp=N,967nm,0.2s						
PB09	IPOC Station P	2.94	323	⇑eP	Pn	15 29 00.5	+1.1
PB09				i S	S	15 29 38.0	+0.3
PB09				IAML		15 29 41.0	
	comp=N,382nm,0.4s						
PB05	IPOC Station P	2.94	296	eP	Pn	15 28 59.8	+0.4
PB05				i S	S	15 29 37.1	-0.5
PB10	IPOC Station P	3.03	282	eP	Pn	15 29 00.9	+0.7
PB10				eS	S	15 29 38.4	-0.8
PB03	IPOC Station P	3.07	313	eP	Pn	15 29 01.2	+0.4
PB03				eS	S	15 29 39.8	-0.5
PB03				IAML		15 29 42.6	
	comp=N,546nm,0.2s						
PB04	IPOC Station P	3.17	304	eP	Pn	15 29 02.5	+0.4
PB04				eS	S	15 29 42.1	-0.4
PB07	IPOC Station P	3.38	315	eP	Pn	15 29 05.0	+0.4
PB07				eS	S	15 29 46.4	-0.6
PB01	IPOC Station P	3.69	327	eP	Pn	15 29 08.4	+0.3
PB01				eS	S	15 29 52.9	-0.7
PB02	IPOC Station P	3.69	319	eP	Pn	15 29 08.3	+0.1
PB02				eS	S	15 29 52.7	-1.0
PB08	IPOC Station P	4.34	337	eP	Pn	15 29 17.3	+0.8
PB08				eS	S	15 30 08.8	+0.2
BDFB	Brasilia	20.02	69	P	P	15 32 25.7	-1.2
	comp=N,0.5nm,0.3s,baz=253,slow=9.6,SNR=7.9						
TORD	Torodi Ar. Bea	76.90	69	P	P	15 39 39.7	+0.3
	comp=N,0.5nm,0.4s,baz=268,slow=4.7,SNR=4.7						
MKAR	Makanchi Array	146.83	39	PKP	PKiKP	15 47 29.9	+0.3
	comp=N,0.5nm,0.4s,baz=333,slow=2.5,SNR=7.9						

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*ISU **13** 15:30:25, 40°.08N×72°.13E, h5^{km}*

*KRNET **13** 15:30:25.4±0.1, 40°.08N×72°.04E, h19^{km}, mb3.0*

*SOME **13** 15:30:33.4, 40°.68N×72°.03E, h5^{km}*

*NNC **13** 15:30:35.2±3.9, 40°.66N×72°.11E, h0^{km}, mb3.6, mpv3.3, Error ellipse: s-maj=30.2km s-min=12.6km az=4.0*

ISC 13 15:30:25.9±1.1, **40°.09N**±0°.03×**72°.03E**±0°.02, **h3**^{km}±10^{km}, **n32**, σ**1^s.13**/58, **32C-7D**, **Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FRG	Fergana	0.34	327	eP	Pg	15 30 32.0	-0.5
FRG				eS	Sg	15 30 37.0	0.0
DRK	Karamyk	0.63	196	⇑iP	Pg	15 30 37.7	-0.3
	baz=97						
DRK				⇑iS	Sg	15 30 46.3	+0.1
	baz=97						
ANR	Andizhan	0.71	21	eP	Pg	15 30 40.0	+0.4
ANR				eS	Sg	15 30 51.0	+2.1
OHH	Osh	0.73	53	eP	Pg	15 30 38.0	-1.9
OHH				eS	Sg	15 30 49.0	-0.3
OHH	Osh	0.73	53	⇑iP	Pg	15 30 39.0	-0.9
	baz=52						
OHH				⇑iS	Sg	15 30 48.9	-0.3
	baz=52						
BTK	Batken	0.93	269	⇑iP	Pg	15 30 42.8	-0.9
	baz=69						
BTK				⇑iS	Sg	15 30 55.8	+0.1
	baz=69						
SFK	Sufi-Kurgan	1.14	93	⇑iP	Pg	15 30 46.6	-1.1
	baz=93						
SFK				⇑iS	Sg	15 31 01.4	-1.0
	baz=93						
SALK	Salom-Alik	1.58	59	⇑eP	Pn	15 30 54.1	-0.9
	baz=59						
SALK				⇑eS	Sn	15 31 15.2	-0.9
	baz=59						
TRKS	Terek-Say	1.59	335	⇑iP	Pn	15 30 53.6	-1.6
	baz=35						
TRKS				⇑iS	Sn	15 31 14.1	-2.2
	baz=35						
GAR	Garm	1.71	231	⇑iP	Pn	15 30 56.4	-0.3
	baz=31						
GAR				⇑iS	Sn	15 31 19.0	-0.2
	baz=31						
CHRV	Charvak	2.21	315	eP	Pb	15 31 08.0	+1.4
CHRV				eS	Sb	15 31 36.0	+1.6
YBZ	Yangibazar	2.22	304	eP	Pb	15 31 08.0	+1.3
YBZ				eS	Sg	15 31 37.0	-0.1
AML	Almayashu	2.40	31	⇑iP	Pn	15 31 06.6	+0.1
	baz=31						
AML				⇑iS	Sn	15 31 36.2	-0.4
	baz=31						
MNAS	Manas	2.42	8	⇑eP	Pn	15 31 06.7	+0.1
	baz=8.0						
MNAS				⇑iS	Sn	15 31 36.6	-0.3
	baz=8.0						
IUG	Iuzhnay	2.55	324	eP	Pb	15 31 11.7	-0.7
	149nm,0.2s						
IUG				eS	Sn	15 31 39.3	-0.6
	58nm,0.5s						
IUG	Iuzhnay	2.55	324	Pg	Pb	15 31 11.7	-0.7
	149nm,0.2s						
IUG				Lg	Lg	15 31 39.3	
	58nm,0.5s						
CHGR	Chuyangaron	2.64	238	⇑iP	Pn	15 31 09.6	+0.1
	baz=38						
CHGR				⇑iS	Sn	15 31 42.0	-0.1
	baz=38						
MRKS	Merke	2.81	18	eP	Pb	15 31 16.0	-0.7
	6.0nm,0.4s						
MRKS				eS	Sn	15 31 46.7	+0.5
	20nm,0.4s						
MRKS	Merke	2.81	18	Pg	Pb	15 31 16.0	-0.7
	6.0nm,0.4s						
MRKS				Lg	Lg	15 31 46.7	
	20nm,0.4s						
UCH	Uchtor	2.85	40	⇑eP	Pn	15 31 12.7	0.0
	baz=40						
UCH				⇑iS	Sn	15 31 46.9	-0.8
	baz=40						
EKS2	Erkin-Say	2.89	27	⇓iP	Pn	15 31 13.2	+0.2
	baz=26						
EKS2				⇓iS	Sn	15 31 47.7	-0.6
	baz=26						
AAK	Ala-Archa	3.15	35	⇑Pg	Pb	15 31 23.5	+0.8
	2.5nm,0.5s						
AAK				⇑Lg	Lg	15 32 01.6	
	5.9nm,0.5s						
AAK	Ala-Archa	3.15	35	⇓iP	Pn	15 31 16.8	+0.2
	baz=35						
AAK				⇓iS	Sn	15 31 54.1	-0.8
	baz=35						
KK31	Karatay Array	3.22	340	⇑Pn	Pb	15 31 23.4	-0.3
	0.7nm,0.2s,baz=154,slow=15,SNR=13						
KK31				⇓Sn	Sn	15 31 55.0	-1.3
	1.2nm,0.2s,baz=145,slow=22,SNR=3.6						
KK31				⇑Lg	Lg	15 32 04.0	
	1.9nm,0.3s,baz=156,slow=30,SNR=3.6						
KBK	Karagaybulak	3.38	40	⇓eP	Pn	15 31 19.6	-0.2
	baz=39						
KBK				⇓iS	Sn	15 31 59.5	-1.0
	baz=39						
CHMS	Chumysh	3.56	34	⇑iP	Pn	15 31 22.5	+0.4
	baz=34						
CHMS				⇑iS	Sn	15 32 04.1	-0.5
	baz=34						
USP	Ospenovka	3.68	29	⇑iP	Pn	15 31 24.0	+0.3
	baz=29						
USP				⇑iS	Sn	15 32 06.4	-1.2
	baz=29						
TKM2	Tokmak 2	3.90	42	⇑Pg	Pb	15 31 37.6	+2.2
	4.3nm,0.8s						
TKM2				⇑Lg	Lg	15 32 25.5	
	5.0nm,0.8s						
DGS	Degeres	4.22	40	eP	Pb	15 31 41.6	+0.8
	3.8nm,0.6s						
DGS				eS	Sb	15 32 31.1	-1.2
	4.3nm,1.0s						
DGS	Degeres	4.22	40	Pg	Pb	15 31 41.6	+0.8
	3.8nm,0.6s						
DGS				Lg	Lg	15 32 31.1	
	4.3nm,1.0s						
KUU	Kurty	4.98	39	eP	Pb	15 31 56.6	+2.9
	1.9nm,0.1s						
KUU				eS	Sb	15 32 56.7	+2.7
	6.6nm,0.9s						
KUU	Kurty	4.98	39	Pg	Pb	15 31 56.6	+2.9
	1.9nm,0.1s						
KUU				Lg	Lg	15 32 56.7	
	6.6nm,0.9s						

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*IDC **13** 15:34:04.3±1.1, 39°.46N×29°.94W, h0^{km}, mb3.6/5, mb1 3.8/5, mb1mx3.5/37, mbtmp3.6/5, MS3.4/3, Ms1 3.4/3, ms1mx3.0/39, Error ellipse: s-maj=45.0km s-min=16.3km az=180.0*

*SVSA **13** 15:34:07.9±1.2, 39°.41N×29°.89W, h10^{km}, ML3.2(INMG), Error ellipse: s-maj=15.2km s-min=2.9km az=30.0*

ISC 13 15:34:05.0±1.9, **39°.3N**±0°.1×**29°.91W**±0°.08, **h14**^{km}±14^{km}, **n19**, σ**1^s.47**/24, **mb3.8**/4, **MS3.1**/3, **Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H07S1	FLORES T-PHASE	1.01	278	Pn	Pg	15 34 25.1	+0.6
H07S1	FLORES T-PHASE	1.01	278	eP	Pb	15 34 23.8	-0.5
H07S1				eS	Sb	15 34 35.2	-2.3
H07N1	FLORES T-PHASE	1.04	296	Pn	Pn	15 34 24.1	-1.0
H07N1	FLORES T-PHASE	1.04	296	eP	Pb	15 34 23.5	-1.2
PCED	Cedros	1.13	123	eS	Sb	15 34 39.5	-1.2
PCED				A	A	15 34 43.5	
	153nm,0.3s						
CALA	Caldeira	1.15	125	eP	Pn	15 34 26.3	-0.5
CALA				eS	Sb	15 34 41.1	-0.5
CALA				A	A	15 34 44.8	
	420nm,0.3s						
PFCBR	Castelo Branco	1.18	127	eP	Pn	15 34 26.8	-0.2
PFCBR				eS	Sb	15 34 41.8	-0.4
PFCBR				A	A	15 34 42.9	
	107nm,0.3s						
HOR	Horta	1.23	125	eP	Pb	15 34 28.0	0.0
HOR				eS	Sb	15 34 42.3	-1.4
HOR				A	A	15 34 46.1	
	311nm,0.1s						
PCAN	Candelaria	1.36	125	eP	Pn	15 34 29.4	-0.1
PCAN				eS	Sn	15 34 46.4	-1.0
PCAN				A	A	15 34 47.4	
	326nm,0.2s						
PICO	Pico	1.38	122	eP	Pn	15 34 29.5	-0.3
PICO				eS	Sn	15 34 46.1	-1.8
PICO				A	A	15 34 47.9	
	175nm,0.2s						
ROSA	Rosais	1.40	111	eS	Sn	15 34 45.7	-2.7
ROSA				A	A	15 34 46.7	
	38nm,0.1s						
PID	Ribeirinha	1.61	119	eP	Pb	15 34 33.3	-1.2
PID				eS	Sn	15 34 51.1	-2.5
PID				A	A	15 34 54.7	
	92nm,0.3s						
ESDC	Sonseca Array	20.02	81	P	Pn	15 38 38.9	-0.2
	0.3nm,0.3s,baz=278,slow=8.8,SNR=1.6						
ESDC				LR	LR	15 44 59.8	
	comp=Z,87nm,18.7s,baz=305,slow=33						
MDT	Midelt	21.41	100	LR	LR	15 45 03.8	
	comp=Z,64nm,18.3s,baz=323,slow=31						
DAVOX	Davos/Dischmat	29.80	62	LR	LR	15 50 23.4	
	comp=Z,93nm,19.8s,baz=268,slow=33						
TORD	Torodi Ar. Bea	38.13	124	P	P	15 41 25.9	+2.2
	0.4nm,0.5s,baz=324,slow=4.6,SNR=3.1						
TXAR	Lajitas Array	60.21	285	P	P	15 44 14.8	+2.0
	0.9nm,0.8s,baz=68,slow=8.0,SNR=9.9						
ZALV	Zalesovo Beam	71.57	34	P	P	15 45 26.7	+1.3
	0.6nm,0.6s,baz=316,slow=12,SNR=3.6						
MKAR	Makanchi Array	75.15	41	P	P	15 45 46.6	-0.1
	0.7nm,0.8s,baz=336,slow=3.2,SNR=5.1						

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*ISK **13** 16:08:57.8, 34°.80N×32°.09E, h8^{km}, ML3.6/36*

*NIC **13** 16:08:59.1±0.0, 34°.96N×32°.05E, h14^{km}±1^{km}, Ml3.8/5*

*DDA **13** 16:09:00.2, 35°.07N×32°.14E, h6^{km}±1^{km}, MW3.6*

*IDC **13** 16:09:01.2±5.7, 34°.95N×32°.09E, h29^{km}±47^{km}, mb3.7/6, mb1 3.7/12, mb1mx3.5/43, mbtmp3.7/12, ML3.6/6, MS3.1/1, Ms1 3.0/1, ms1mx2.2/49, Error ellipse: s-maj=21.4km s-min=17.1km az=36.0*

*GII **13** 16:09:02.2±0.0, 34°.73N×32°.08E, h20^{km}, MD3.2/4, Mm3.3/5*

ISC 13 16:09:00.1±1.5, **34°.91N**±0°.03×**32°.13E**±0°.03, **h20**^{km}±11^{km}, **n109**, σ**1^s.60**/149, **mb3.8**/6, **Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKMS	Akamas	0.20	57	P	Pb	16 09 05.3	0.0
AKMS				S	Sb	16 09 08.6	-0.2
NATA	Nata	0.39	109	P	Pb	16 09 08.5	+0.3
NATA				S	Sn	16 09 16.4	-1.0
ALFC	Alefka	0.46	57	P	Pb	16 09 09.2	-0.3
ALFC				S	Sb	16 09 16.5	+0.5
ALFC				AML	AML	16 09 17.9	
	42nm,0.3s						
ALFC				AML	AML	16 09 17.9	
	42nm,0.3s						
ALFC				AML	AML	16 09 18.8	
	40nm,0.3s						
ALFC				AML	AML	16 09 18.8	
	40nm,0.3s						

LEF	Lefka	0.66	71	*i* P	Pb	16 09 11.5	-1.4
LEF				*i* S	Sb	16 09 19.8	-2.0
LEF				IAML		16 09 23.0	
	comp=E,1µm,0.6s						
LEF				IAML		16 09 25.0	
	comp=N,2µm,0.6s						
LEF	Lefka	0.66	71	PG	Pb	16 09 11.6	-1.4
LEF				SG	Sb	16 09 21.5	-0.3
AKDN	Akdeniz- Kıbrı	0.79	60	PG	Pb	16 09 15.1	-0.1
AKDN				SG	Sn	16 09 27.6	+0.2
ASGA	Asgata	0.93	97	P	Pb	16 09 17.4	-0.2
ASGA				S	Sn	16 09 32.4	+1.6
ASGA				AML	AML	16 09 32.6	
	comp=N,16nm,0.3s						
ASGA				AML	AML	16 09 32.6	
	comp=N,16nm,0.3s						
ASGA				AML	AML	16 09 32.6	
	comp=N,11nm,0.5s						
ASGA				AML	AML	16 09 32.6	
	comp=N,11nm,0.5s						
CSS	Mathiatis	0.99	86	PG	Pb	16 09 18.3	-0.3
CSS				SG	Sn	16 09 32.9	+0.6
CSS	Mathiatis	0.99	86	P	Pb	16 09 18.3	-0.3
CSS				S	Sn	16 09 33.1	+0.8
ATHAL	Athalassa	1.07	77	P	Pn	16 09 20.5	+0.6
ATHAL				S	Sn	16 09 36.5	+2.3
ATHAL				AML	AML	16 09 36.9	
	comp=N,7.7nm,0.9s						
ATHAL				AML	AML	16 09 36.9	
	comp=N,7.7nm,0.9s						
ATHAL				AML	AML	16 09 43.0	
	comp=N,11nm,0.7s						
ATHAL				AML	AML	16 09 43.0	
	comp=N,11nm,0.7s						
LFK	Lefkose	1.21	72	PN	Pb	16 09 22.6	+0.2
LFK				SN	Sn	16 09 40.6	+2.8
MVOU	Mavrovouni	1.24	84	P	Pb	16 09 22.7	-0.1
MVOU				AML	AML	16 09 45.5	
	comp=N,2.4nm,0.6s						
MVOU				AML	AML	16 09 45.6	
	comp=N,2.6nm,0.4s						
GAZI	Gazipasa	1.33	7	*i* P	Pn	16 09 22.1	-1.5
GAZI				*i* S	Sn	16 09 39.1	-1.7
GAZI				IAML		16 09 41.0	
	comp=E,346nm,0.8s						
GAZI				IAML		16 09 44.0	
	comp=N,390nm,0.4s						
TEKE	Tekeli-Mersin	1.48	33	PN	Pn	16 09 25.3	-0.2
OSC1	CSNet OBS 1	1.57	207	P	Pn	16 09 26.4	-0.4
PARAL	Paralimni	1.57	86	P	Pb	16 09 30.2	+1.7
PARAL				AML	AML	16 09 60.0	
	comp=N,3.0nm,0.8s						
PARAL				AML	AML	16 10 00.8	
	comp=N,1.4nm,0.6s						
AKK1	Akkuyu-Mersin	1.69	43	PN	Pb	16 09 29.9	-0.6
AKK2	Akkuyu-Mersin	1.69	43	PN	Pb	16 09 30.1	-0.4
BERE	Bereket-Mersin	1.69	32	PN	Pn	16 09 28.9	+0.2
AKKU	Akkuyu-Mersin	1.71	43	PN	Pn	16 09 28.8	+0.1
GULN	MERSIN_Gulnar	1.72	42	*i* P	Pn	16 09 28.8	-0.1
GULN				*i* S	Sn	16 09 49.7	-0.6
GULN				IAML		16 09 55.0	
	comp=N,79nm,0.3s						
GULN				IAML		16 09 58.0	
	comp=E,77nm,0.4s						
EREN	Erenkoy	1.79	69	PN	Pn	16 09 30.8	+1.0
IKL	Isikli	1.84	43	PN	Pb	16 09 32.4	-0.6
KEBE	Keben-Mersin	2.01	40	PN	Pn	16 09 33.9	+1.0
AKUM	Antalya-Kumluc	2.03	315	*i* P	Pb	16 09 35.4	-0.8
AKUM				*i* S	Sb	16 10 09.5	+8.5
AKUM				IAML		16 10 16.0	
	comp=N,157nm,0.8s						
AKUM				IAML		16 10 20.0	
	comp=E,115nm,0.4s						
KEPZ	Antalya-Kepez	2.04	348	*i* P	Pn	16 09 33.2	-0.1
KEPZ				*i* S	Sn	16 09 58.2	0.0
KEPZ				IAML		16 10 08.0	
	comp=N,142nm,0.8s						
SILI	Silifke-Mersin	2.07	45	PN	Pn	16 09 35.1	+1.4
HDMB	Hadim	2.08	8	PN	Pn	16 09 35.5	+1.5
HDMB				SN	Sb	16 10 02.9	+0.3
KIZK	Mersin	2.27	46	*i* P	Pn	16 09 37.4	+0.9
KIZK				*i* S	Sn	16 10 04.6	+0.7
KIZK				IAML		16 10 13.0	
	comp=E,80nm,0.3s						
KIZK				IAML		16 10 14.0	
	comp=N,84nm,0.7s						
KIZK	Mersin	2.27	46	PN	Pn	16 09 38.1	+1.6
KKBE	Karaman, Kazim	2.40	16	*i* P	Pn	16 09 40.3	+2.0
KKBE				*i* S	Sb	16 10 11.2	-0.7
KKBE				IAML		16 10 21.0	
	comp=N,69nm,0.6s						
KKBE				IAML		16 10 23.0	
	comp=E,65nm,0.6s						
AKAS	Kas	2.44	304	*i* P	Pn	16 09 40.4	+1.4
AKAS	Kas	2.44	304	PN	Pn	16 09 40.4	+1.4
KRMN	Karaman	2.44	22	PN	Pn	16 09 40.9	+1.9
SEYD	Seydisehir-KON	2.51	355	PN	Pn	16 09 41.9	+2.1
KORT	Korkueli	2.54	326	*i* P	Pb	16 09 45.0	-0.1
SEDI	Konya, Seydise	2.56	353	*i* P	Pn	16 09 42.8	+2.3
SEDI				*i* S	Sb	16 10 15.5	-0.9
SEDI				IAML		16 10 25.0	
	comp=N,171nm,0.6s						
SEDI				IAML		16 10 25.0	
	comp=E,165nm,0.5s						
MERS	Mersin	2.76	44	PN	Pn	16 09 45.3	+2.0
KMER	Konya-Meram	2.86	4	*i* P	Pn	16 09 46.1	+1.4
KMER				*i* S	Sb	16 10 22.8	-2.5
KMER				IAML		16 10 33.0	
	comp=E,73nm,0.4s						
KERG	Konya-Eregli	2.98	32	*i* P	Pn	16 09 48.5	+2.2
KERG				*i* S	Sn	16 10 24.7	+3.1
KERG				IAML		16 10 34.0	
	comp=N,60nm,0.5s						
KERG				IAML		16 10 35.0	
	comp=E,95nm,0.4s						
FETY	Fethiye	3.02	306	*i* P	Pn	16 09 48.4	+1.6
FETY	Fethiye	3.02	306	PN	Pn	16 09 47.7	+1.0
KONT	Konya--Tatoy	3.04	4	*i* P	Pn	16 09 49.2	+2.2
KONT				*i* S	Sb	16 10 27.3	-2.9
KONT				IAML		16 10 41.0	
	comp=E,51nm,0.6s						
KONT	Konya--Tatoy	3.04	4	PN	Pn	16 09 49.9	+2.8
CAME	Cameli-Denizli	3.06	312	PN	Pn	16 09 48.8	+1.3
HNTI	Hanita	3.12	125	Pn	Pn	16 09 49.2	+1.1
HNTI				Sn	Sn	16 10 25.3	+0.5
YESY	Yesilyurt	3.15	24	PN	Pn	16 09 51.1	+2.4
CAEL	Denizli, Camel	3.17	315	*i* P	Pn	16 09 51.2	+2.2
DOGA	KONYA_Doganhis	3.21	354	*i* P	Pb	16 09 54.4	-2.2
DOGA				*i* S	Sb	16 10 33.4	-1.9
DOGA				IAML		16 10 43.0	
	comp=E,36nm,0.7s						
DOGA				IAML		16 10 47.0	
	comp=N,39nm,0.6s						
BAGO	Egridir - ISPA	3.26	341	*i* P	Pn	16 09 53.4	+3.2
BAGO				*i* S	Sb	16 10 35.3	-1.4
BAGO				IAML		16 10 44.0	
	comp=E,34nm,0.6s						
OFRI	`Ofer	3.30	133	Pn	Pn	16 09 51.6	+1.0
OFRI				Sn	Sn	16 10 28.9	-0.3
MMA0B	Mount Meron ar	3.31	124	Pn	Pn	16 09 51.7	+0.8
MMA0B				Sn	Sn	16 10 30.1	+0.4
MMAI	Mount Meron Ar	3.31	124	Pn	Pn	16 09 50.3	-0.5
	comp=E,4.4nm,0.3s,baz=311,slow=11,SNR=40						
MMAI				Sn	Sn	16 10 29.8	+0.1
	comp=E,16nm,0.3s,baz=316,slow=13,SNR=8.7						
KARA	Karaisali	3.34	44	PN	Pn	16 09 53.6	+2.4
BLGI	Bet Lehem HaGe	3.35	129	Pn	Pn	16 09 52.9	+1.6
GEM	Giv'at Ha'Em	3.39	119	Pn	Pn	16 09 53.1	+1.3
GEM				Sn	Sn	16 10 32.6	+1.1
DALY	Dalyan (Mula)	3.40	305	*i* P	Pn	16 09 53.1	+1.0
DALY	Dalyan (Mula)	3.40	305	PN	Pn	16 09 53.8	+1.8
YURE	YUREGIR	3.43	55	*i* P	Pn	16 09 53.9	+1.5
YVAC	Isparta, Yalva	3.43	348	*i* P	Pn	16 09 55.4	+2.8
ALIN	Konya, Altinte	3.44	10	*i* P	Pn	16 09 50.3	-2.3
BASM	Basmaki-Afyon	3.44	332	PN	Pn	16 09 55.2	+2.5
ARG	Arkhangelos	3.51	293	PN	Pn	16 09 54.6	+1.1
CMRD	Camardi-Nigde	3.59	39	PN	Pn	16 09 57.1	+2.3
SLTI	Sal'it	3.60	137	Pn	Pn	16 09 56.2	+1.4
KDHN	Kadinhani	3.61	360	*i* P	Pn	16 09 55.1	+0.2
TAHT	Tahtakopru-Hat	3.62	65	PN	Pn	16 09 57.2	+2.2
TAVA	DENIZLI_Tavas	3.64	315	*i* P	Pn	16 09 56.4	+1.0
TURN	Turunc	3.66	302	*i* P	Pn	16 09 56.5	+0.9
TURN	Turunc	3.66	302	PN	Pn	16 09 56.9	+1.3
MRSB	Marmaris-Mugla	3.67	301	PN	Pn	16 09 57.1	+1.4
MMLI	Mount Malkishu	3.69	131	Pn	Pn	16 09 57.3	+1.3
MMLI				Sn	Sn	16 10 38.9	0.0
AKO	Adana	3.70	46	*i* P	Pn	16 09 58.1	+2.0
AKO				*i* S	Sn	16 10 41.5	+2.2
AKO				IAML		16 10 50.0	
	comp=E,18nm,1.1s						
AKO				IAML		16 10 57.0	
	comp=N,27nm,0.6s						
KZIL	AFYON_Kizioren	3.71	335	*i* P	Pn	16 09 57.4	+1.1
NIDE	Nigde/Merkez-G	3.75	34	*i* P	Pb	16 10 01.8	-4.0
YER	Yerkesik	3.83	307	PN	Pn	16 09 59.8	+1.9
MULA	Mugla, Merkez-	3.87	308	*i* P	Pn	16 10 00.3	+1.7
HMDT	Nahal Hemdat	3.88	132	Pn	Pn	16 09 59.9	+1.3
HMDT				Sn	Sn	16 10 44.1	+0.5
KOZT	Kozan	3.94	48	PN	Pn	16 10 01.7	+2.2
AMAZ	Amatzia	4.10	144	Pn	Pn	16 10 02.3	+0.7
AMAZ				Sn	Sn	16 10 48.9	-0.1
YAHY	KAYSERI_Yahyal	4.12	38	*i* P	Pn	16 10 04.9	+2.9
DAT	Datca	4.12	298	PN	Pn	16 10 03.2	+1.2
MLSB	Milas	4.25	305	PN	Pn	16 10 05.0	+1.3
DSI	Dead Sea	4.30	140	Pn	Pn	16 10 05.3	+0.9
KAMA	Osmaniye	4.33	57	*i* P	Pn	16 10 05.4	+0.6
YTIR	Yattir	4.33	144	Pn	Pn	16 10 05.5	+0.6
YTIR				Sn	Sn	16 10 54.4	-0.5
NIS1	Nisyros Isl.	4.37	294	PN	Pn	16 10 06.4	+1.1
KZIT	Kziot	4.42	154	Pn	Pn	16 10 06.1	0.0
KZIT				Sn	Sn	16 10 55.5	-1.5
KIRS	Kırehir-Merke	4.46	18	*i* P	Pn	16 10 07.8	+1.2
BODT	Bodrum	4.46	300	PN	Pn	16 10 07.4	+0.8
ASF	Jabal al Asfar	4.83	123	Pn	Pn	16 10 13.8	+2.0
	comp=N,1.5nm,0.3s,baz=308,slow=5.1,SNR=13						
GCAM	G?zelcaml?	4.84	307	PN	Pn	16 10 12.5	+0.8
BRTR	Keskin Array B	4.96	14	Pn	Pn	16 10 15.6	+2.1
	comp=N,0.4nm,0.3s,baz=187,slow=15,SNR=9.7						
PRNI	Paran	5.15	151	Pn	Pn	16 10 15.9	-0.2
PRNI				Sn	Sn	16 11 13.4	-1.5
KRMI	Paran Flat	5.25	155	Pn	Pn	16 10 18.0	+0.5
KRMI				Sn	Sn	16 11 16.4	-1.2
HRFI	Mount Harif	5.44	152	Pn	Pn	16 10 20.5	+0.4
HRFI				Sn	Sn	16 11 21.1	-1.1
MBRI	Mt Berech	5.62	154	Pn	Pn	16 10 23.3	+0.8
EIL	Elat	5.74	155	Pn	Pn	16 10 24.3	+0.1
	comp=N,1.7nm,0.3s,baz=297,slow=1.3,SNR=28						
EIL				Sn	Sn	16 11 27.9	-1.6
	comp=N,1.4nm,0.3s,baz=85,slow=12,SNR=6.2						
EIL	Elat	5.74	155	Pn	Pn	16 10 24.9	+0.7
EIL				Sn	Sn	16 11 28.9	-0.6
IDI	Anoyia	5.94	276	Pn	Pn	16 10 27.0	0.0
	comp=N,1.2nm,0.3s,baz=87,slow=16,SNR=3.7						
IDI				Sn	Sn	16 11 33.4	-1.2
	comp=N,1.7nm,0.3s,baz=194,slow=19,SNR=3.3						
KBZ	Khabaz	12.12	40	LR	LR	16 17 18.5	
	comp=N,78nm,18.2s,baz=24,slow=41						
GERES	GERESS Array B	19.48	321	P	P	16 13 25.5	-0.2
	comp=N,0.3nm,0.3s,baz=128,slow=10,SNR=10						
KHC	Kasperske Hory	19.72	322	*e*P	P	16 13 28.1	-0.2
FINES	FINESS Array B	26.84	354	P	P	16 14 37.1	-1.7
	comp=N,5.5nm,1.1s,baz=163,slow=10,SNR=1.7						
ARCES	ARCESS Array B	34.88	356	P	P	16 15 48.2	-1.5
	comp=N,1.1nm,0.5s,baz=157,slow=6.6,SNR=7.1						
TORD	Torodi Ar. Bea	35.01	239	P	P	16 15 51.8	+0.5
	comp=N,0.6nm,1.0s,baz=35,slow=5.3,SNR=2.8						
MKAR	Makanchi Array	39.14	57	P	P	16 16 26.5	+0.3
	comp=N,0.4nm,0.6s,baz=254,slow=4.5,SNR=5.6						
SPITS	Spitsbergen Ar	43.90	355	P	P	16 17 04.2	-0.7
	comp=N,6.8nm,0.9s,baz=134,slow=12,SNR=0.9						
SONM	Songino Array	55.17	52	P	P	16 18 31.8	+0.5
	comp=N,0.3nm,0.6s,baz=300,slow=6.5,SNR=2.4						

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*NAO **13** 16:10:04.3±1.2, 67°.83N×20°.32E, ML2.6*

*IDC **13** 16:10:05.4±1.4, 67°.83N×20°.70E, h0^{km}, mb1 3.2/3, mb1mx3.0/44, mbtmp3.1/3, ML2.3/3, Error ellipse: s-maj=23.2km s-min=8.4km az=118.0*

*HEL **13** 16:10:05.0±0.1, 67°.83N×20°.21E, h0^{km}, ML2.2, ML2.4(UPP), Explosion*

*BER **13** 16:10:06.8±3.4, 67°.84N×20°.26E, h0^{km}, ML2.0, ML2.6(NAO), Suspected explosion*

ISC 13 16:10:04.2±0.7**, 67°.81N**±0°.02×**20°.23E**±0°.02**, h0^{km}, n43, σ1^{s}13**/63**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RATU	Laukkuluspa	0.24	274	*i* P	Pg	16 10 09.1	+0.3
RATU				*i* S	Sg	16 10 12.2	+0.3
KOVU	Salmi	0.42	357	*i* P	Pg	16 10 12.0	-0.2
KOVU				*i* S	Sg	16 10 17.3	-0.3
NIKU	Nikkaluokta	0.46	278	*i* P	Pg	16 10 12.9	0.0
NIKU				*i* S	Sg	16 10 19.2	+0.4
DUNU	Dundret	0.70	169	*i* P	Pg	16 10 18.0	+0.4
LANU	Lannavaara	0.71	69	*e*P	Pg	16 10 17.6	-0.2
LANU				*e*S	Sg	16 10 27.0	+0.1
MASU	Masugnsbyn	0.76	117	*i* P	Pg	16 10 19.4	+0.6
SALU	Saltoluokta	0.79	238	*i* P	Pg	16 10 19.3	+0.1
KIF	Kilpisjarvi	1.22	10	Pg	Pg	16 10 27.3	-0.3
KIF				Lg	Lg	16 10 43.6	
KIF	Kilpisjarvi	1.22	10	*e*P	Pg	16 10 27.1	-0.4
KIF	Kilpisjarvi	1.22	10	*e*P	Pg	16 10 26.8	-0.8
	baz=188						
KIF				MSG		16 10 42.4	
	comp=Z,28nm,0.2s						
KIF				*e*SB	Sb	16 10 44.4	0.0
HEF	Hetta	1.42	63	Pg	Pn	16 10 30.6	-0.7
HEF				Lg	Lg	16 10 49.5	
HEF	Hetta	1.42	63	*e*P	Pn	16 10 30.5	-0.7
HEF	Hetta	1.42	63	*e*P	Pn	16 10 30.3	-1.0
HEF				MSG		16 10 47.8	
	comp=Z,15nm,0.2s						
HEF				*e*SB	Sg	16 10 49.4	-0.5
ERTU	Ertsjaerv	1.47	148	*e*PG	Pn	16 10 31.7	-0.3
ERTU				*e*SN	Sn	16 10 52.8	+0.9
KLF	Kolari	1.55	110	*e*PG	Pn	16 10 32.8	-0.1
	baz=298						
KLF				*e*SN	Sg	16 10 54.6	+0.8
KTK1	Kautokeino	1.64	41	Pn	Pn	16 10 34.2	-0.2
KTK1				Sn	Sg	16 10 57.5	+0.5
KTK1	Kautokeino	1.64	41	*e*P	Pn	16 10 34.1	-0.2
KTK1				IAML		16 10 59.1	
	comp=Z,29nm,0.3s						
HARU	Harads	1.68	170	*e*P	Pn	16 10 35.1	+0.4
JETT	Jettan, Norway	1.76	2	Pn	Pn	16 10 36.1	+0.2
JETT				Sn	Sb	16 10 59.6	-0.3
STEI	Steigen	1.89	276	*e*P	Pb	16 10 38.9	-0.7
STEI				IAML		16 11 11.4	
	comp=Z,20nm,0.8s						
FAUS	Fauske	1.94	260	*e*P	Pn	16 10 39.6	+1.2
FAUS				IAML		16 11 08.8	
	comp=Z,21nm,0.3s						
KALU	Kalix	2.32	146	*e*PB	Pn	16 10 45.1	+1.6
KALU				*e*SG	Sb	16 11 17.0	+1.2
TOF	Tornio	2.37	135	*e*PB	Pn	16 10 45.9	+1.7
	baz=315						
TOF				MSG		16 11 15.0	
	comp=Z,14nm,0.2s						
TOF				*e*SG	Sb	16 11 18.3	+0.9
SGF	Sodankyl	2.44	96	*e*P	Pn	16 10 46.5	+1.3
	baz=280						
SGF				*e*SB	Sb	16 11 19.1	-0.3
ARA0	ARCESS Array S	2.59	46	Pn	Pn	16 10 47.7	+0.3
	baz=235,slow=14						
ARA0				Sn	Sn	16 11 20.5	+0.9
	baz=234,slow=28						
ARA0	ARCESS Array S	2.59	46	Pn	Pn	16 10 47.7	+0.3
	baz=235,slow=14						
ARA0	ARCESS Array S	2.59	46	*e*P	Pn	16 10 48.2	+0.8
ARA0				*e*SB	Sn	16 11 21.6	+2.0
ARCES	ARCESS Array B	2.59	46	Pn	Pn	16 10 47.8	+0.4
	baz=228,slow=14,SNR=66						
ARCES				Lg	Lg	16 11 21.6	
	baz=225,slow=24,SNR=16						
KEV	Kevo	3.15	48	*e*P	Pn	16 10 55.8	+0.9
KEV				*e*S	Sn	16 11 34.3	+1.2
KEV				MSG		16 11 37.3	
	comp=Z,6.7nm,0.2s						
BURU	Burvik	3.27	171	*e*P	Pn	16 10 58.7	+2.1
	baz=351						
OUL	Oulu	3.56	138	*e*PG	Pb	16 11 08.6	+0.7
	baz=321						
MSF	Maaselka	3.97	115	*e*P	Pn	16 11 07.8	+1.6
KU6	Riekki	4.21	111	*e*P	Pn	16 11 10.7	+1.2
	baz=299						
APA0	Apatity Array	4.87	86	Pn	Pn	16 11 18.2	-0.3
	baz=286,slow=12						
APA0				Sn	Sn	16 12 14.4	-1.0
	baz=297,slow=22						
APA0				Lg	Lg	16 12 32.2	
	baz=282,slow=28						
APA0	Apatity Array	4.87	86	Pn	Pn	16 11 18.2	-0.3
	baz=286,slow=12						
APA0				Sn	Sn	16 12 14.4	-1.0
	baz=297,slow=22						
FIA0	FINESS Array S	6.86	156	Pn	Pn	16 11 46.5	+0.5
	baz=341,slow=12						
FIA0				Sn	Sn	16 13 03.9	-0.8
	baz=353,slow=22						
FIA0				Lg	Lg	16 13 39.5	
	baz=349,slow=37						
FIA0	FINESS Array S	6.86	156	Pn	Pn	16 11 46.5	+0.5
	baz=341,slow=12						
FIA0				Sn	Sn	16 13 03.9	-0.8
	baz=353,slow=22						
FIA0				Sg	Sg	16 13 39.5	-4.9
	baz=349,slow=37						
FINES	FINESS Array B	6.86	156	Pn	Pn	16 11 46.9	+0.9
	comp=Z,0.1nm,0.3s,baz=345,slow=14,SNR=5.6						
FINES				Lg	Lg	16 13 39.7	
	comp=Z,0.4nm,0.3s,baz=342,slow=27,SNR=6.1						
NB2	NORSAR Subarra	7.82	214	Pn	Pn	16 11 59.8	+0.6
NB2	NORSAR Subarra	7.82	214	Pn	Pn	16 11 59.8	+0.6
NOA	NORSAR Array B	7.82	214	Pn	Pn	16 11 59.4	+0.2
	comp=Z,0.0nm,0.3s,baz=24,slow=12,SNR=1.6						
NRA0	NORESS Array S	8.03	212	Lg	Lg	16 14 18.4	
	baz=22,slow=28						
NRA0	NORESS Array S	8.03	212	Sg	Sg	16 14 18.4	-3.4
	baz=22,slow=28						

NOU 13 16:11:48.6, 18°.18S×167°.65E, h0^{km}, MLv4.3/6**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	0.68	49	P	Pg	16 12 01.6	-0.1
RTV	Rentapao	0.83	63	P	Pg	16 12 05.0	+0.4
SANVU	Saraoutou	2.75	351	P	Pn	16 12 34.6	+0.6

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*NAO **13** 16:18:51.8±1.8, 67°.39N×33°.39E, ML2.9*

*HEL **13** 16:18:51.5±0.5, 67°.64N×33°.88E, h0^{km}, ML2.2, Explosion*

ISC 13 16:18:50.6±2.2**, 67°.65N**±0°.05×**33°.9E**±0°.1**, h0^{km}, n25, σ1^{s}64**/44**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APZ9	Apatity	0.20	247	Pg	Pg	16 18 55.3	+0.9
APZ9				Lg	Lg	16 18 57.5	
APZ9	Apatity	0.20	247	Pg	Pg	16 18 55.3	+0.9
APZ9				Sg	Sg	16 18 57.5	+0.5
APA0	Apatity Array	0.35	263	Pg	Pg	16 18 57.3	+0.1
APA0				Lg	Lg	16 19 01.7	
APA0	Apatity Array	0.35	263	Pg	Pg	16 18 57.3	+0.1
APA0				Sg	Sg	16 19 01.7	0.0
VRF	Varrio	1.64	275	PG	Pn	16 19 20.6	0.0
VRF				MSG		16 19 40.5	
	comp=Z,24nm,0.2s						
VRF				SG	Sn	16 19 40.8	-1.5
KU6	Riekki	2.27	226	PG	Pb	16 19 31.7	-0.7
	baz=44						
KU6				MSG		16 19 58.4	
	comp=Z,8.5nm,0.2s						
KU6				SG	Sb	16 20 01.5	+0.5
MSF	Maaselka	2.60	230	PG	Pb	16 19 36.8	-1.2
MSF				SG	Sb	16 20 11.2	+0.8
SGF	Sodankyl	2.84	269	PB	Pb	16 19 41.2	-0.8
	baz=82						
KEV	Kevo	3.28	313	*e*P	Pn	16 19 44.5	+1.4
KEV				*e*S	Sn	16 20 22.2	-0.6
KEV	Kevo	3.28	313	PN	Pn	16 19 44.6	+1.4
KEV				SN	Sn	16 20 23.1	+0.3
ARA0	ARCESS Array S	3.61	305	Pn	Pn	16 19 48.5	+0.8
	baz=122,slow=16						
ARA0				Sn	Sn	16 20 29.7	-1.2
	baz=122,slow=28						
ARA0				Lg	Lg	16 20 43.9	
	baz=123,slow=28						
ARA0	ARCESS Array S	3.61	305	Pn	Pn	16 19 48.5	+0.8
	baz=122,slow=16						
ARA0				Sn	Sn	16 20 29.7	-1.2
	baz=122,slow=28						
ARA0				Sg	Sg	16 20 43.9	-2.5
	baz=123,slow=28						
ARA0				IAML		16 20 46.8	
	comp=Z,18nm,0.5s						
KLF	Kolari	3.85	268	PG	Pb	16 19 59.3	+0.1
KLF				SN	Sn	16 20 36.0	-0.8
HEF	Hetta	3.92	286	*e*P	Pn	16 19 52.1	+0.2
HEF	Hetta	3.92	286	PN	Pn	16 19 52.5	+0.6
	baz=98						
HEF				SN	Sn	16 20 39.6	+1.0
TOF	Tornio	4.09	252	PG	Pb	16 20 05.1	+1.7
TOF				SN	Sn	16 20 42.1	-0.6
OUL	Oulu	4.12	235	PB	Pb	16 20 01.4	-2.5
KTK1	Kautokeino	4.18	294	Pn	Pn	16 19 56.8	+1.3
KTK1				Sn	Sn	16 20 42.2	-2.7
KTK1				Lg	Lg	16 20 56.9	
KTK1	Kautokeino	4.18	294	*e*P	Pn	16 19 56.9	+1.3
KTK1				*e*S	Sn	16 20 41.5	-3.5
KTK1				IAML		16 21 05.0	
	comp=Z,19nm,0.6s						
LANU	Lannavaara	4.53	281	PN	Pn	16 20 00.6	+0.4
	baz=91						
LANU				SG	Sb	16 21 09.0	+3.2
KALU	Kalix	4.55	252	PG	Pb	16 20 13.5	+2.5
ERTU	Ertsjaerv	4.70	262	PN	Pn	16 20 02.8	+0.2
ERTU				SN	Sn	16 20 56.3	-1.5
HAMF	Hammerfest	4.72	314	*e*P	Pn	16 20 03.4	+0.4
KIF	Kilpisjarvi	5.04	292	Pn	Pn	16 20 08.5	+1.2
KIF				Sn	Sn	16 21 02.0	-4.0
KIF	Kilpisjarvi	5.04	292	Pn	Pn	16 20 08.5	+1.2
KIF				Sn	Sn	16 21 02.0	-4.0

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*TUL **13** 16:43:26.2±1.0, 36°.57N±0°.02×97°.40W±0°.01, h3^{km}±7^{km}, ML2.5, ML2.3/39(NEIC), Error ellipse: s-maj=2.3km s-min=1.7km az=183.0*

NEIC 13 16:43:26.4±0.7**, 36°.56N**±0°.02×**97°.40W**±0°.01**, h6^{km}**±7^{km}**, Error ellipse: s-maj=2.2km s-min=1.5km az=190.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLOK	Blackwell	0.25	37	Pg	Pg	16 43 31.5	+0.2
BLOK				Sg	Sg	16 43 35.2	+0.6
BLOK				IAML		16 43 35.2	
	comp=E,655nm,0.3s						
BLOK				IAML		16 43 36.2	
	comp=N,701nm,0.2s						
KAN13	South Haven SW	0.46	352	Pg	Pg	16 43 35.3	+0.2
KAN13				Sg	Sg	16 43 41.7	+0.5
KAN13				IAML		16 43 41.8	
	comp=N,278nm,0.3s						
GC02	Grant County #	0.47	308	Pg	Pg	16 43 35.6	+0.2
GC02				Sg	Sg	16 43 42.1	+0.5
CROK	Carrier	0.47	263	Pg	Pg	16 43 35.8	+0.3
CROK				IAML		16 43 51.5	
	comp=E,170nm,0.7s						
KAN17	Caldwell West	0.56	329	Pg	Pg	16 43 36.9	-0.3
KAN17				IAML		16 43 45.3	
	comp=N,183nm,0.3s						
KAN09	Caldwell North	0.60	343	Pg	Pg	16 43 37.4	-0.6
KAN09				IAML		16 43 48.1	
	comp=N,219nm,0.3s						
KAN14	Manchester OK	0.60	311	Pg	Pg	16 43 37.8	-0.2
KAN14				IAML		16 43 51.1	
	comp=N,118nm,0.2s						
KAN14				IAML		16 43 51.1	
	comp=E,135nm,0.1s						
KAN05	Bluff City Nor	0.67	325	Pg	Pg	16 43 39.1	-0.1
KAN05				IAML		16 43 50.9	
	comp=N,187nm,0.4s						
QUOK	Quay	0.68	125		Pg	16 43 39.5	0.0
QUOK				IAML		16 43 50.3	
	comp=N,138nm,0.3s						
QUOK				IAML		16 43 52.1	
	comp=E,82nm,0.5s						
OK032	Salt Plains WL	0.69	291	Pg	Pg	16 43 39.5	-0.2
OK032				IAML		16 44 00.1	

	comp=E,166nm,0.2s						
OK031	**S. Brethren Rd**	0.76	143	Pg	Pg	16 43 41.0	0.0
OK031				IAML		16 43 55.0	
	comp=E,118nm,0.7s						
OK029	**Liberty Lake**	0.77	183		Pg	16 43 40.7	-0.4
KAN06	**Argonia West S**	0.78	332	Pg	Pg	16 43 41.5	+0.1
KAN10	**Anthony SW Sta**	0.79	315	Pg	Pg	16 43 41.4	-0.2
KAN10				IAML		16 43 54.4	
	comp=N,115nm,0.1s						
T35A	**Sooner Cattle**	0.80	63	Pg	Pg	16 43 41.5	-0.2
BCOK	**Bluff Creek, N**	0.92	191	Pg	Pg	16 43 43.5	-0.5
FNO	**Franklin**	1.30	180		Pn	16 43 50.5	-0.6
FNO				IAML		16 44 12.2	
	comp=N,37nm,0.2s						
U32A	**Winter Ranch,**	1.30	262	Pg	Pn	16 43 50.6	-0.5
U32A				IAML		16 44 11.3	
	comp=N,52nm,0.6s						
TUL1	**Leonard**	1.45	116	Pn	Pn	16 43 53.1	-0.1
WMOK	**Wichita Mounta**	2.14	212	Pn	Pn	16 44 03.7	+1.0
U38A	**Gravette**	2.43	92	Pn	Pn	16 44 05.9	-0.8

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*OTT **13** 16:52:08.7±0.3, 61°.00N×60°.14W, h18^{km}, ML3.7/5, LAlbertaRADOR Sea Seismic Zone. 258km east from Resolution Island, Nu*
*DNK **13** 16:52:11.2±2.3, 61°.10N×58°.82W, h0^{km}±147^{km}, ML2.5*
ISC 13 16:52:03.1±0.9, **60°.94N**±0°.06×**59°.81W**±0°.06, **h10^{km}, n11,** σ**3^{s}.39**/19, **Davis Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAJQ	**Kangiqsualujju**	3.82	237	PN	Pn	16 53 05.0	+3.2
KAJQ				SN	Sn	16 53 46.5	-0.3
KAJQ				Trac		16 53 50.1	
	comp=Z,5.2nm,0.1s						
FRB	**Frobisher Bay**	4.95	308	PN	Pn	16 53 20.4	+3.1
FRB				SN	Sn	16 54 11.5	-3.1
FRB				Trac		16 54 15.2	
	comp=Z,8.6nm,0.1s						
NUUK	**Nuuk**	4.95	45	*e*P	Pn	16 53 18.6	+1.2
NUUK				*e*S	Sn	16 54 10.8	-3.8
NUUK				IAML		16 54 14.1	
	comp=Z,21nm,0.9s						
IVI	**Ivigtut**	5.66	82	*e*P	Pn	16 53 28.4	+1.4
IVI				*e*S	Sn	16 54 25.8	-6.1
IVI				IAML		16 54 30.4	
	comp=Z,27nm,0.8s						
MKVL	**Makkovik**	5.87	176	PN	Pn	16 53 31.7	+1.7
MKVL				Trac		16 54 33.4	
	comp=Z,23nm,0.0s						
KNGQ	**Kangiqsujuaq**	5.89	282	PN	Pn	16 53 32.5	+2.3
KNGQ				SN	Sn	16 54 33.5	-4.2
KNGQ				Trac		16 54 39.1	
	comp=Z,4.0nm,0.1s						
SCHQ	**Schefferville**	7.17	215	PN	Pn	16 53 51.2	+3.3
SCHQ				SN	Sn	16 55 07.4	-1.9
SCHQ				Trac		16 55 11.2	
	comp=Z,30nm,0.4s						
SFJD	**Kangerlussuaq**	7.29	30	*i* P	Pn	16 53 52.0	+2.5
SFJD	**Kangerlussuaq**	7.29	30	PN	Pn	16 53 53.1	+3.6
SFJD				SN	Sn	16 55 12.7	+0.5
SFJD				Trac		16 55 16.1	
	comp=Z,25nm,2.5s						
DY2G	**Dye2**	8.17	41	*e*P	Pn	16 54 04.7	+3.0
LG4Q	**La Grande 4**	10.63	233	PN	Pn	16 54 35.4	+0.1
LG4Q				SN	Sn	16 56 28.7	-5.6
LG4Q				Trac		16 56 31.1	
	comp=Z,3.0nm,0.2s						

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*MOS **13** 16:55:08.4±1.3, 23°.31N×100°.33E, h15^{km}, mb4.5/13, Error ellipse: s-maj=12.9km s-min=7.1km az=97.3*
*BJI **13** 16:55:08.4±0.0, 23°.33N×100°.53E, h10^{km}, mB4.7/22, mb4.3/39, ML4.6/9, Ms4.6/47, Ms7 4.3/42*
*IDC **13** 16:55:10.8±5.2, 23°.30N×100°.48E, h21^{km}±38^{km}, mb4.0/9, mb1 4.1/10, mb1mx3.7/46, mbtmp4.1/10, ML4.2/1, MS3.9/25, Ms1 3.8/25, ms1mx3.7/48, Error ellipse: s-maj=26.2km s-min=20.7km az=66.0*
*NEIC **13** 16:55:10.2±1.3, 23°.28N±0°.09×100°.47E±0°.04, h15^{km}±6^{km}, mb4.3/11, Error ellipse: s-maj=12.9km s-min=3.0km az=198.0*
ISC 13 16:55:09.0±0.5, **23°.27N**±0°.05×**100°.43E**±0°.04, **h10^{km}, n107,** σ**1^{s}.72**/101, **mb4.4**/30, **MS3.8**/29, **11C-4D, Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMI	**Kunming**	2.81	48	⇓Pn	Pn	16 55 53.1	-1.1
KMI				Pg	Pb	16 55 59.1	-0.3
KMI				Sn	Sn	16 56 26.1	-2.1
KMI				Sg	Sb	16 56 34.0	+0.1
KMI				smax	smax		
	comp=N,2µm,1.1s						
KMI				smax	smax		
	comp=E,1µm,1.3s						
SLVN	**Son La**	3.75	120	Pn	Pn	16 56 05.5	-1.5
CHTO	**Chiang Mai**	4.64	198	P	Pn	16 56 20.2	+0.9
CHTO	**Chiang Mai**	4.64	198	Pn	Pn	16 56 20.2	+0.9
CM31	**Chiang Mai Arr**	4.98	196		Pn	16 56 24.5	+0.6
CMAR	**Chiang Mai Arr**	4.98	196	Pn	Pn	16 56 25.1	+1.1
	2.2nm,0.3s,baz=12,slow=13,SNR=44						
CMAR				Pg	Pg	16 56 43.1	-1.4
	11nm,0.3s,baz=10,slow=16,SNR=80						
CMAR				Lg	Lg	16 57 50.1	
	12nm,0.3s,baz=23,slow=26,SNR=11						
CMAR	**Chiang Mai Arr**	4.98	196	Pn	Pn	16 56 24.5	+0.6
GYA	**Guiyang**	6.49	59	⇓Pn	Pn	16 56 43.8	-1.0
GYA				Sn	Sn	16 57 59.0	0.0
GYA				smax	smax		
	comp=N,160nm,1.8s						
GYA				smax	smax		
	comp=E,120nm,1.3s						
GYA				LR	LR		
	comp=N,3µm,5.6s						
GYA				LR	LR		
	comp=E,2µm,5.6s						
GYA				LR	LR		
	comp=Z,3µm,7.9s						
CD2	**Chengdu**	8.17	21	P	Pn	16 57 06.8	-1.0
CD2				pmax	pmax		
	comp=Z,80nm,0.8s						
CD2				LR	LR		
	comp=N,4µm,6.7s						
CD2				LR	LR		
	comp=E,5µm,5.7s						
CD2				LR	LR		
	comp=Z,3µm,11.4s						
UBPT	**Khong Chiam**	9.26	148	Pn	Pn	16 57 24.0	+1.3
QIZ	**Qiongzhong**	9.74	114	P	Pn	16 57 29.6	+0.3
QIZ				S	Sn	16 59 19.8	+1.0
QIZ				LR	LR		
	comp=N,720nm,13.1s						
QIZ				LR	LR		
	comp=E,800nm,16.1s						
QIZ				LR	LR		
	comp=Z,890nm,15.7s						
QIZ	**Qiongzhong**	9.74	114	P	Pn	16 57 29.4	+0.1
QIZ				S	Sn	16 59 20.6	+1.8
QIZ				LR	LR		
	comp=Z,440nm,11.8s						
QIZ				LR	LR		
	comp=Z,780nm,16.6s						
LSA	**Lhasa**	10.49	310	P	Pn	16 57 42.5	+2.5
LSA				pP		16 57 46.0	
LSA				S	Sn	16 59 44.5	+6.6
LSA				pmax	pmax		
	comp=Z,13nm,1.6s						
LSA				LR	LR		
	comp=Z,2µm,12.8s						
LSA				LR	LR		
	comp=Z,3µm,11.4s						
LSA				LR	LR		
	comp=Z,1µm,10.0s						
LSA	**Lhasa**	10.49	310	P	Pn	16 57 40.7	+0.7
LSA	**Lhasa**	10.49	310	Pn	Pn	16 57 40.7	+0.7
ENH	**Enshi**	10.68	47	Pn	Pn	16 57 43.0	+0.8
TAPN	**Taplejung**	12.20	292	*e*P	Pn	16 58 03.6	+0.3
	comp=Z,48nm,1.0s						
ODAN	**Odare**	12.35	290	*e*P	Pn	16 58 04.6	-0.6
	comp=Z,38nm,0.8s						
XAN	**Xi'an**	13.06	33	P	Pn	16 58 13.9	-0.8
XAN				S	Sn	17 00 33.4	-6.8
XAN				LR	LR		
	comp=Z,3µm,7.8s						
XAN				LR	LR		
	comp=Z,2µm,7.7s						
XAN				LR	LR		
	comp=Z,2µm,12.4s						
LZH	**Lanzhou**	13.12	12	*e*P	Pn	16 58 19.3	+3.7
LZH				sP	P	16 58 27.8	+1.9
LZH				pmax	pmax		
	comp=Z,25nm,1.0s						
LZH				pmax	pmax		
	comp=Z,140nm,4.5s						
LZH				LR	LR		
	comp=Z,1µm,8.4s						
LZH				LR	LR		
	comp=Z,1µm,8.1s						
LZH				LR	LR		
	comp=Z,860nm,10.5s						
JIRN	**Jiri**	13.59	292	*e*P	Pn	16 58 21.4	-0.8
	comp=Z,48nm,1.1s						
GUN	**Gumba**	13.92	292	*e*P	Pn	16 58 26.1	-0.6
PKI	**Pulchoki**	14.23	291	*e*P	Pn	16 58 29.7	-1.3
WHN	**Wuhan**	14.37	57	P	P	16 58 41.1	+1.5
WHN				S	Sn	17 01 14.8	+2.7
WHN				LR	LR		
	comp=N,1µm,6.0s						
WHN				LR	LR		
	comp=E,2µm,8.1s						
WHN				LR	LR		
	comp=Z,1µm,8.4s						
KKN	**Kakani**	14.40	291	*e*P	Pn	16 58 31.7	-1.5
DMN	**Daman**	14.50	291	*e*P	Pn	16 58 32.8	-1.9
GKN	**Gorkha**	15.00	292	*e*P	Pn	16 58 39.8	-1.6
	comp=Z,75nm,1.2s						
KOLN	**Koldanda**	15.84	290	*e*P	Pn	16 58 49.6	-2.8
	comp=Z,67nm,1.5s						
DANN	**Dangsing**	15.84	292	*e*P	Pn	16 58 50.7	-1.8
	comp=Z,25nm,0.8s						
GTA	**Gaotai**	16.11	358	*e*P	Pn	16 58 55.0	-0.7
GTA				pP	pP	16 59 02.1	-0.1
GTA				sP	sP	16 59 05.6	+1.9
GTA				pmax	pmax		
	comp=Z,37nm,5.1s						
GTA				LR	LR		
	comp=Z,780nm,14.5s						
GTA				LR	LR		
	comp=Z,2µm,14.2s						
GTA				LR	LR		
	comp=Z,850nm,15.3s						
PYUN	**Piuthan**	16.44	291	*e*P	Pn	16 58 57.2	-2.9
NJ2	**Nanjing**	18.50	58	*e*P	P	16 59 23.1	-2.3
NJ2				S	Sn	17 02 52.8	+0.5
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
NJ2				LR	LR		
	comp=Z,2µm,9.9s						
NJ2				LR	LR		
	comp=Z,980nm,7.1s						
NJ2				LR	LR		
	comp=Z,390nm,7.6s						
BTO	**Baotou**	19.09	23	*e*P	P	16 59 29.3	-2.6
BTO				S	Sn	17 03 07.3	+0.7
BTO				LR	LR		
	comp=Z,2µm,14.4s						
BTO				LR	LR		
	comp=Z,3µm,9.8s						
HHC	**Hu-ho-hao-te**	19.88	26	*e*P	P	16 59 41.6	+1.0
HHC				S	S	17 03 24.6	+0.2
HHC				pmax	pmax		
	comp=Z,23nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,4.2s						
HHC				LR	LR		
	comp=Z,1µm,11.8s						
HHC				LR	LR		
	comp=Z,920nm,11.2s						
HHC				LR	LR		
	comp=Z,1µm,11.6s						
BJT	**Baijiatuau**	21.36	35	P	P	16 59 55.9	-0.6
BJT				pmax	pmax		
	comp=Z,35nm,1.3s						
BJT	**Baijiatuau**	21.36	35	P	P	16 59 55.9	-0.6
BJI	**Beijing**	21.38	35	P	P	16 59 56.5	-0.1
BJI				S	S	17 03 52.5	-1.4
BJI				pmax	pmax		
	comp=Z,12nm,0.9s						
BJI				LR	LR		
	comp=Z,800nm,15.3s						
BJI				LR	LR		
	comp=Z,930nm,15.7s						
BJI				LR	LR		
	comp=Z,810nm,11.3s						
WMQ	**Urumqi**	23.03	336	*e*P	P	17 00 15.4	+1.0
PALK	**Pallekele**	24.74	233	LR	LR	17 10 54.2	
	comp=Z,130nm,19.2s,baz=153,slow=38						
SONM	**Songino Array**	24.98	10	P	P	17 00 31.3	-1.6
	comp=Z,3.0nm,0.8s,baz=193,slow=10.0,SNR=14						
SONM				LR	LR	17 11 16.6	
	comp=Z,249nm,19.4s,baz=192,slow=39						
SONM	**Songino Array**	24.98	10	*e*P	P	17 00 34.0	+1.1
SONM				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SONM	**Songino Array**	24.98	10	P	P	17 00 32.9	0.0
SONM				IAmb	IAmb	17 00 36.2	
	comp=Z,7.9nm,1.2s						
ULN	**Ulaanbaatar**	25.11	11	⇑*e*P	P	17 00 34.2	+0.1
ULN				pmax	pmax		
	comp=Z,19nm,1.7s						
ULN	**Ulaanbaatar**	25.11	11	P	P	17 00 30.7	-3.4
ULN				IAmb	IAmb	17 00 40.3	
	comp=Z,4.4nm,0.9s						
JOW	**Kunigami**	25.45	76	LR	LR	17 10 57.7	
	comp=Z,232nm,18.6s,baz=66,slow=37						
NIL	**Nilore**	25.97	300	P	P	17 00 40.9	-1.1
NIL				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NIL	**Nilore**	25.97	300	P	P	17 00 40.9	-1.1
NIL				IAmb	IAmb	17 00 53.1	
	comp=Z,10nm,0.8s						
KSH	**Kashi**	26.30	314	*e*P	P	17 00 48.3	+3.3
KSH				pP	sP	17 00 53.8	+3.9
KSH				pmax	pmax		
	comp=Z,4.0nm,0.4s						
KSH				LR	LR		
	comp=Z,690nm,17.7s						
KSH				LR	LR		
	comp=Z,270nm,6.5s						
KSH				LR	LR		
	comp=Z,290nm,7.2s						
ZAK	**Zakamensk**	27.16	4	*e*P	P	17 00 53.6	+1.0
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.2s						
KSRS	**Korea Array**	27.50	53	LR	LR	17 11 40.6	
	comp=Z,152nm,20.2s,baz=242,slow=36						
MK31	**Makanchi Array**	27.65	333	P	P	17 00 54.6	-2.3
MK31				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MK31	**Makanchi Array**	27.65	333	P	P	17 00 54.6	-2.3
MKAR	**Makanchi Array**	27.65	333	P	P	17 00 56.9	0.0
	comp=Z,3.2nm,0.7s,baz=140,slow=9.3,SNR=22						
MKAR				LR	LR	17 12 12.9	
	comp=Z,176nm,20.9s,baz=153,slow=37						
MKAR	**Makanchi Array**	27.65	333	*e*P	P	17 00 57.2	+0.3
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MKAR	**Makanchi Array**	27.65	333	P	P	17 00 55.7	-1.2
DGZ	**Jazzator, Alta**	28.29	342	⇓*e*P	P	17 01 02.9	+0.1
DGZ				pmax	pmax		
	comp=Z,6.0nm,1.8s						
TLY	**Talaya**	28.48	4	LR	LR	17 13 31.3	
	comp=Z,227nm,21.3s,baz=179,slow=39						
AAK	**Ala-Archa**	28.92	318	LR	LR	17 14 34.9	
	comp=Z,194nm,18.9s,baz=121,slow=40						
AAK	**Ala-Archa**	28.92	318	⇑*i*P	P	17 01 10.1	+1.7
AAK				pmax	pmax		
	comp=Z,11nm,1.1s						
CN2	**Changchun**	29.04	39	*e*P	P	17 01 07.3	-2.0
CN2				S	S	17 05 57.3	-3.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				LR	LR		
	comp=Z,500nm,17.0s						
CN2				LR	LR		
	comp=Z,400nm,17.0s						
CN2				LR	LR		
	comp=Z,400nm,17.0s						
GAR	**Garm**	30.00	309	P	P	17 01 17.2	-0.8
GAR				IAmb	IAmb	17 01 24.5	
	comp=Z,5.5nm,0.8s						
BTK	**Batken**	30.07	311	P	P	17 01 18.9	+0.3
BTK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
BTK	**Batken**	30.07	311	P	P	17 01 18.9	+0.3
BTK				IAmb	IAmb	17 01 22.3	
	comp=Z,6.7nm,1.2s						
HIA	**Hailar**	30.09	26	⇑*e*P	P	17 01 19.5	+0.9
HIA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KURK	**Kurchatov**	32.23	334	⇑*e*P	P	17 01 38.7	+1.4
KURK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ZAA0	**Zalesovo Array**	32.82	343	P	P	17 01 42.8	+0.2
ZAA0				IAmb	IAmb	17 01 46.4	
	comp=Z,4.1nm,0.8s						
ZALV	**Zalesovo Beam**	32.82	343	P	P	17 01 42.5	-0.1
	comp=Z,5.3nm,0.9s,baz=154,slow=8.2,SNR=8.8						
ZALV				LR	LR	17 16 40.7	
	comp=Z,204nm,19.4s,baz=206,slow=39						
ZALV	**Zalesovo Beam**	32.82	343	P	P	17 01 42.4	-0.2
USRK	**Ussuriysk Ar.**	33.23	43	P	P	17 01 46.1	-0.1
	comp=Z,3.1nm,0.9s,baz=234,slow=12,SNR=5.2						
USRK				LR	LR	17 15 01.6	
	comp=Z,145nm,20.0s,baz=220,slow=36						
ZEA	**Zeya**	36.53	27	⇑*e*P	P	17 02 14.2	-0.4
BVAR	**Borovoye Array**	37.45	330	P	P	17 02 23.0	+0.6
	comp=Z,0.9nm,0.6s,baz=184,slow=13,SNR=4.3						
BRVK	**Borovoye**	37.52	330	⇑*e*P	P	17 02 22.6	-0.4
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
GEYT	**Alibeck**	38.91	302	LR	LR	17 22 13.1	
	comp=Z,135nm,19.3s,baz=75,slow=42						
ERM	**Erimo**	40.06	52	⇑*e*P	P	17 02 47.7	+3.2
ERM				pmax	pmax		
	comp=Z,78nm,1.3s						
ASAJ	**Asahikawa**	40.23	48	P	P	17 02 46.2	+0.3
	comp=Z,12nm,1.0s,baz=263,slow=14,SNR=5.3						
ASAJ	**Asahikawa**	40.23	48	P	P	17 02 45.3	-0.6
ASAJ				pmax	pmax		
	comp=Z,44nm,1.4s						
JKA	**Kamikawa-asahi**	40.24	48	P	P	17 02 45.3	-0.6
DGAR	**Diego Garcia**	40.96	225	⇑*e*P	P	17 02 57.6	+5.4
DGAR				pmax	pmax		
	comp=Z,268nm,2.5s						
ABKAR	**Akbulak array**	40.98	320	P	P	17 02 51.2	-0.8
ABKAR	**Akbulak array**	40.98	320	P	P	17 02 52.1	+0.2
ABKAR				IAmb	IAmb	17 02 58.8	
	comp=Z,3.2nm,1.0s						
AKTO	**Aktyubinsk**	42.60	320	LR	LR	17 23 23.1	
	comp=Z,118nm,19.8s,baz=118,slow=40						
YAK	**Yakutsk**	43.56	20	⇑*e*P	P	17 03 14.3	+1.5
YAK				pmax	pmax		
	comp=Z,5.0nm,0.5s						
SVE	**Sverdlovsk**	44.23	330	*e*P	P	17 03 19.0	+0.7
ARU	**Arti**	45.01	328	LR	LR	17 22 27.2	
	comp=Z,143nm,18.1s,baz=96,slow=36						
NRIK	**Noril'sk**	46.74	354	LR	LR	17 24 16.1	
	comp=Z,272nm,21.2s,baz=163,slow=37						
NRIK	**Noril'sk**	46.74	354	⇑*e*P	P	17 03 40.1	+2.1
NRIK				pmax	pmax		
	comp=Z,6.0nm,1.5s						
BELG	**Belogornoye**	49.38	320	LR	LR	17 27 19.4	
	comp=Z,143nm,19.6s,baz=309,slow=39						
TIXI	**Tiksi**	51.05	11	LR	LR	17 29 30.4	
	comp=Z,93nm,18.3s,baz=185,slow=40						
TIXI	**Tiksi**	51.05	11	⇓*e*P	P	17 04 11.1	+0.1
TIXI				pmax	pmax		
	comp=Z,9.0nm,2.5s						
KBZ	**Khabaz**	51.07	308	LR	LR	17 31 41.7	
	comp=Z,107nm,18.1s,baz=57,slow=43						
KVAR	**Kislovodsk Arr**	51.23	308	LR	LR	17 27 50.3	
	comp=Z,249nm,21.2s,baz=266,slow=38						
KIV	**Kislovodsk**	51.23	308	*e*P	P	17 04 10.5	-2.5
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,75nm,16.0s						
SEY	**Seymchan**	52.52	27	LR	LR	17 28 12.5	
	comp=Z,200nm,19.1s,baz=239,slow=38						
WRA	**Warramunga Arr**	54.21	140	P	P	17 04 34.5	-0.6
	comp=Z,1.0nm,0.7s,baz=327,slow=7.9,SNR=5.4						
WRA				LR	LR	17 30 07.3	
	comp=Z,68nm,18.1s,baz=320,slow=39						
WRA	**Warramunga Arr**	54.21	140	*e*P	P	17 04 41.7	+6.6
WRA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KLMR	**Klimovskoe**	55.85	329	*e*P	P	17 04 44.9	-1.5
KLMR				pmax	pmax		
	comp=Z,22nm,1.5s						
KLMR	**Klimovskoe**	55.85	329	*e*P	P	17 04 45.0	-1.5
KLMR				AMP		17 04 46.7	
	comp=Z,22nm,1.5s						
ASAR	**Alice Springs**	56.87	143	LR	LR	17 32 28.4	
	comp=Z,42nm,19.5s,baz=346,slow=39						
ASAR	**Alice Springs**	56.87	143	*e*P	P	17 05 02.7	+8.5
ASAR				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BRTR	**Keskin Array B**	58.03	303	LR	LR	17 32 42.0	
	comp=Z,60nm,18.5s,baz=346,slow=39						
AKASG	**Malin Array Be**	60.56	316	P	P	17 05 18.9	-0.7
	comp=Z,2.6nm,0.7s,baz=76,slow=6.4,SNR=8.9						
AKASG				LR	LR	17 35 38.2	
	comp=Z,82nm,18.9s,baz=265,slow=40						
AKASG	**Malin Array Be**	60.56	316	*e*P	P	17 05 18.6	-1.0
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AKBB	**Malin Array Si**	60.56	316	⇑*e*P	P	17 05 19.7	+0.1
GERES	**GERESS Array B**	70.76	316	P	P	17 06 26.8	+1.1
	comp=Z,0.7nm,0.9s,baz=81,slow=8.2,SNR=3.7						
GERES				LR	LR	17 43 30.8	
	comp=Z,176nm,18.2s,baz=353,slow=41						
GERES	**GERESS Array B**	70.76	316	*e*P	P	17 06 27.4	+1.8
GERES				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BOSA	**Boshof**	88.87	238	LR	LR	17 46 23.3	
	comp=Z,34nm,18.2s,baz=205,slow=35						
AFI	**Afiamalu**	93.41	104	LR	LR	17 51 53.0	
	comp=Z,31nm,18.3s,baz=177,slow=36						

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*IDC **13** 16:55:42.8±3.0, 11°.65S×166°.28E, h47^{km}±25^{km}, mb4.1/15, mb1 4.2/17, mb1mx4.1/37, mbtmp4.4/17, ML2.3/1, MS3.6/12, Ms1 3.6/12, ms1mx3.4/30, Error ellipse: s-maj=24.3km s-min=13.7km az=70.0*
*NEIC **13** 16:55:42.9±1.7, 11°.6S±0°.1×166°.4E±0°.1, h54^{km}±7^{km}, mb4.5/19, Error ellipse: s-maj=20.5km s-min=11.2km az=57.0*
*NOU **13** 16:55:53.8, 12°.67S×166°.20E, h0^{km}, mb4.5/14, Santa Cruz Islands*
ISC 13 16:55:43.9±1.7, **11°.80S**±0°.08×**166°.2E**±0°.1, **h59^{km}**±14^{km}, **n102,** σ**1^{s}.32**/98, **mb4.8**/38, **MS3.6**/12, **2C-1D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	3.75	165	Pn	Pn	16 56 40.2	+0.8
SANVU	**Saraoutou**	3.75	165	P	Pn	16 56 40.5	+1.1
DVP	**Devils Point**	6.19	162	P	Pn	16 57 16.8	+4.0
	171µm,0.7s						
HNR	**Honiara**	6.60	290	P	Pn	16 57 18.4	0.0
	142nm,0.3s,baz=153,slow=2.7,SNR=44						
HNR				S	Sn	16 58 30.3	-2.1
	24nm,0.3s,baz=156,slow=21,SNR=1.7						
HNR				LR	LR	17 00 07.6	
	comp=Z,437nm,21.5s,baz=121,slow=40						
KOUNC	**Koumac, New Ca**	8.90	192	P	Pn	16 57 52.1	+2.2
	34nm,0.6s						
LIFNC	**LIFOU**	8.98	174	P	Pn	16 57 53.1	+2.1
	79nm,1.6s						
MARNC	**Mare, Loyalty**	9.79	170	P	Pn	16 58 03.1	+1.1
	0.7nm,1.5s						
DZM	**Mont Dzumac**	10.22	179	P	Pn	16 58 09.7	+1.6
	2.5nm,0.3s,baz=35,slow=8.3,SNR=59						
DZM				S	Sn	16 59 57.3	-3.9
	0.4nm,0.3s,baz=141,slow=22,SNR=1.2						
DZM				LR	LR	17 01 47.8	
	comp=Z,237nm,20.1s,baz=4.0,slow=35						
DZM	**Mont Dzumac**	10.22	179	*e*Pn	Pn	16 58 09.5	+1.4
	7.7nm,0.2s						
DZM				*e*Sn	Sn	16 59 56.9	-4.3
	7.4nm,0.2s						
DZM				*e*LR	LR	17 00 31.5	
	comp=Z,423nm,26.1s						
DZM	**Mont Dzumac**	10.22	179	P	Pn	16 58 09.7	+1.6

	12nm,0.6s						
YATNC	Mamie plateau,	10.23	177	P	Pn	16 58 08.8	+0.7
NOUC	Port Laguerre	10.25	180	P	Pn	16 58 10.7	+2.4
	16nm,1.3s						
ONTNC	Ouen Toro	10.46	179	P	Pn	16 58 13.6	+2.4
	37nm,2.2s						
OUENC	Ouen Island, N	10.58	177	Pn	Pn	16 58 15.0	+2.1
OUENC	Ouen Island, N	10.58	177	P	Pn	16 58 14.7	+1.8
	29nm,2.2s						
PINNC	Pines Island,	10.82	174	Pn	Pn	16 58 18.2	+2.1
PINNC	Pines Island,	10.82	174	P	Pn	16 58 18.3	+2.1
	54nm,3.0s						
MSVF	Nonsavu	12.87	119	LR	LR	17 02 46.1	
	comp=Z,604nm,19.8s,baz=324,slow=33						
PMG	Port Moresby	18.89	275	P	Pn	17 00 01.5	+0.6
	0.3nm,0.3s,baz=94,slow=4.4,SNR=7.9						
PMG				LR	LR	17 06 44.6	
	comp=Z,254nm,21.1s,baz=92,slow=35						
CTAO	Charters Tower	20.88	244	P	P	17 00 22.3	+0.9
AFI	Afiamalu	21.55	98	LR	LR	17 07 23.1	
	comp=Z,77nm,20.9s,baz=274,slow=33						
URZ	Urewera	28.09	162	P	P	17 01 31.2	+1.1
	2.9nm,0.4s,baz=303,slow=23,SNR=7.0						
URZ				LR	LR	17 11 15.7	
	comp=Z,120nm,21.7s,baz=31,slow=33						
BKZ	Black Stump Fm	28.75	163	P	P	17 01 36.1	+0.1
BKZ				IAmb	IAmb	17 01 47.8	
	comp=Z,38nm,1.5s						
H11S2	WAKE ISLAND Hy	30.10	1	T	T	17 32 36.7	
	baz=184,slow=76,SNR=22						
H11S3	WAKE ISLAND Hy	30.10	1	T	T	17 32 35.3	
	baz=184,slow=76,SNR=14						
H11S1	WAKE ISLAND Hy	30.11	1	T	T	17 32 43.2	
	baz=184,slow=76,SNR=16						
STKA	Stephens Creek	30.23	225	P	P	17 01 50.7	+1.5
	comp=Z,1.1nm,0.4s,baz=68,slow=9.0,SNR=6.3						
STKA				PcP	PcP	17 04 49.7	+0.8
	comp=Z,1.0nm,0.5s,baz=312,slow=2.1,SNR=5.4						
STKA				LR	LR	17 12 28.6	
	comp=Z,115nm,21.7s,baz=27,slow=33						
STKA	Stephens Creek	30.23	225	P	P	17 01 48.9	-0.3
MSWZ	Moikau Station	30.55	167	P	P	17 01 50.5	-1.3
KHZ	Kahutara	31.17	170	P	P	17 01 56.6	-0.6
KHZ				IAmb	IAmb	17 02 09.9	
	comp=Z,29nm,1.2s						
H11N1	WAKE ISLAND Hy	31.32	1	T	T	17 34 09.0	
	baz=182,slow=76,SNR=13						
H11N3	WAKE ISLAND Hy	31.32	1	T	T	17 34 08.2	
	baz=182,slow=76,SNR=2.8						
H11N2	WAKE ISLAND Hy	31.33	1	T	T	17 34 09.6	
	baz=182,slow=76,SNR=2.6						
WR0	Warramunga Arr	31.49	251	P	P	17 02 00.6	+0.1
WR0				IAmb	IAmb	17 02 04.2	
	comp=Z,6.8nm,1.4s						
WB0	Warramunga Arr	31.60	251	P	P	17 02 01.4	0.0
WB0				IAmb	IAmb	17 02 03.4	
	comp=Z,14nm,1.4s						
WB0				PcP	PcP	17 04 52.9	+0.2
WB2	Warramunga Arr	31.66	251	P	P	17 02 02.1	+0.1
WB2				IAmb	IAmb	17 02 21.4	
	comp=Z,3.7nm,0.9s						
WRA	Warramunga Arr	31.68	251	P	P	17 02 02.4	+0.3
	comp=Z,1.3nm,0.5s,baz=83,slow=9.2,SNR=12						
WRA				PcP	PcP	17 04 53.8	+0.8
	comp=Z,1.9nm,0.6s,baz=76,slow=3.2,SNR=9.4						
WRA				LR	LR	17 13 17.6	
	comp=Z,80nm,21.5s,baz=75,slow=33						
WRA	Warramunga Arr	31.68	251	P	P	17 02 02.0	-0.1
AS31	Alice Springs	32.88	245	P	P	17 02 12.3	-0.3
AS31				PcP	PcP	17 04 56.8	+0.5
ASAR	Alice Springs	32.89	245	P	P	17 02 12.5	-0.2
	comp=Z,1.9nm,0.7s,baz=69,slow=9.6,SNR=32						
ASAR				PcP	PcP	17 04 56.6	+0.4
	comp=Z,2.0nm,0.5s,baz=84,slow=2.6,SNR=15						
ASAR				LR	LR	17 14 54.1	
	comp=Z,91nm,18.6s,baz=89,slow=35						
ASAR	Alice Springs	32.89	245	P	P	17 02 11.9	-0.8
ASAR					PcP	17 04 56.5	+0.2
PPT	Papeete	43.07	103	LR	LR	17 18 05.8	
	comp=Z,102nm,18.5s,baz=360,slow=31						
PPT2	Papeete2	43.07	103	eLR	LR	17 16 04.7	
	comp=Z,172nm,27.5s						
TBI	Tubuai	43.62	111	eLR	LR	17 16 26.8	
	comp=Z,184nm,30.0s						
JOW	Kunigami	53.22	317	LR	LR	17 25 19.1	
	comp=Z,41nm,18.9s,baz=177,slow=33						
MJAR	Matsushiro Arr	54.85	332	P	P	17 05 06.5	-1.8
	comp=Z,2.3nm,0.8s,baz=176,slow=8.7,SNR=4.0						
MJAR	Matsushiro Arr	54.85	332	P	P	17 05 06.0	-2.3
MJAR				IAmb	IAmb	17 05 07.2	
	comp=Z,2.8nm,0.9s						
JSU	Suzuyama	55.04	322	P	P	17 05 08.6	-1.2
KSRS	Korea Array	60.76	326	P	P	17 05 49.3	-0.3
	comp=Z,1.8nm,0.7s,baz=132,slow=6.3,SNR=4.1						
NJ2	Nanjing	62.88	315	eP	P	17 06 05.0	+0.9
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s						
USRK	Ussuriysk Ar.	63.82	333	P	P	17 06 10.1	0.0
	comp=Z,1.9nm,0.6s,baz=147,slow=8.4,SNR=5.9						
USRK	Ussuriysk Ar.	63.82	333	P	P	17 06 08.0	-2.1
VNDA	Vanda	65.76	181	P	P	17 06 23.2	+1.0
	comp=Z,2.9nm,0.7s,baz=347,slow=7.6,SNR=39						
VNDA	Vanda	65.76	181	P	P	17 06 23.0	+0.8
VNDA				IAmb	IAmb	17 06 24.0	
	comp=Z,7.5nm,1.2s						
GYA	Guiyang	69.22	304	⇓P	P	17 06 46.0	+0.9
GYA				pmax	pmax		
	comp=Z,11nm,1.1s						
BJI	Beijing	69.36	321	P	P	17 06 46.0	+0.6
BJI				pmax	pmax		
	comp=Z,12nm,1.0s						
XAN	Xi'an	70.97	312	P	P	17 06 56.0	+0.5
XAN				pP	pP	17 07 11.6	+1.0
XAN				pmax	pmax		
	comp=Z,14nm,0.9s						
XAN				LR	LR		
	comp=N,150nm,15.1s						
XAN				LR	LR		
	comp=E,210nm,17.9s						
KMI	Kunming	71.91	301	⇑P	P	17 07 03.3	+1.7
KMI				pP	pP	17 07 08.3	-8.1
KMI				pmax	pmax		
	comp=Z,18nm,1.1s						
HHC	Hu-ho-hao-te	72.70	320	eP	P	17 07 06.1	+0.2
HHC				pmax	pmax		
	comp=Z,44nm,1.0s						
HHC				pmax	pmax		
	comp=Z,230nm,7.9s						
CMAR	Chiang Mai Arr	72.84	294	P	P	17 07 08.2	+1.1
	comp=Z,3.0nm,0.7s,baz=125,slow=4.8,SNR=25						
CMAR	Chiang Mai Arr	72.84	294	P	P	17 07 07.3	+0.3
CD2	Chengdu	73.43	307	P	P	17 07 11.8	+1.5
CD2				pmax	pmax		
	comp=Z,30nm,0.7s						
LZH	Lanzhou	75.61	312	eP	P	17 07 25.1	+2.1
LZH				sP	sP	17 07 46.3	+2.1
LZH				pmax	pmax		
	comp=Z,25nm,1.3s						
QSPA	South Pole Qui	78.21	180	P	P	17 07 37.5	+0.4
ULN	Ulaanbaatar	79.18	324	P	P	17 07 42.3	-0.4
ULN				IAmb	IAmb	17 07 44.1	
	comp=Z,9.9nm,0.8s						
SONM	Songino Array	79.54	324	P	P	17 07 44.8	+0.1
	comp=Z,3.4nm,0.6s,baz=145,slow=5.6,SNR=22						
SONM	Songino Array	79.54	324	P	P	17 07 44.6	0.0
SONM				IAmb	IAmb	17 07 45.9	
	comp=Z,9.6nm,1.4s						
GTA	Gaotai	79.91	314	⇑P	P	17 07 47.9	+1.1
GTA				pP	pP	17 07 59.9	-2.1
GTA				sP	pwP	17 08 07.1	-0.3
GTA				pmax	pmax		
	comp=Z,12nm,1.0s						
GTA				pmax	pmax		
	comp=Z,62nm,4.0s						
GTA				LR	LR		
	comp=N,100nm,17.5s						
GTA				LR	LR		
	comp=E,160nm,18.5s						
GTA				LR	LR		
	comp=Z,130nm,17.4s						
TLY	Talaya	83.00	326	P	P	17 08 02.9	+0.1
	comp=Z,5.1nm,0.6s,baz=310,slow=3.2,SNR=5.6						
TLY	Talaya	83.00	326	P	P	17 08 01.6	-1.2
TLY				IAmb	IAmb	17 08 03.5	
	comp=Z,6.2nm,0.8s						
ILAR	Eielson Array	84.07	18	P	P	17 08 06.6	-1.3
	comp=Z,0.5nm,0.6s,baz=236,slow=5.5,SNR=11						
ILAR	Eielson Array	84.07	18	P	P	17 08 05.8	-2.1
MAW	Mawson	84.21	202	P	P	17 08 09.0	+0.4
	comp=Z,3.3nm,0.6s,baz=105,slow=5.8,SNR=7.1						
MAW	Mawson	84.21	202	P	P	17 08 08.5	-0.2
MAW				IAmb	IAmb	17 08 10.1	
	comp=Z,3.8nm,1.4s						
TAPN	Taplejung	85.38	299	eP	P	17 08 16.2	+0.5
	comp=Z,25nm,0.9s						
ODAN	Odare	85.52	298	eP	P	17 08 16.8	+0.5
	comp=Z,29nm,0.7s						
RAMN	Ramite	86.22	298	eP	P	17 08 20.2	+0.4
	comp=Z,8.6nm,0.4s						
JIRN	Jiri	86.76	299	eP	P	17 08 23.2	+0.6
GUN	Gumba	87.09	299	eP	P	17 08 24.7	+0.5
PKI	Pulchoki	87.41	299	eP	P	17 08 25.8	+0.1
KKN	Kakani	87.57	299	eP	P	17 08 26.7	+0.3
DMN	Daman	87.68	299	eP	P	17 08 27.4	+0.5
	comp=Z,59nm,0.7s						
GKN	Gorkha	88.18	299	eP	P	17 08 29.1	-0.1
	comp=Z,48nm,0.8s						
KOLN	Koldanda	89.01	298	eP	P	17 08 32.8	-0.4
	comp=Z,22nm,0.6s						
DANN	Dangsing	89.01	299	eP	P	17 08 32.9	-0.4
	comp=Z,46nm,0.6s						
PYUN	Piuthan	89.61	299	eP	P	17 08 35.5	-0.5
	comp=Z,34nm,0.8s						
WMQ	Urumqi	89.95	315	eP	P	17 08 38.1	+1.1
MK31	Makanchi Array	94.39	317	P	P	17 08 56.2	-1.2
MKAR	Makanchi Array	94.39	317	P	P	17 08 57.4	-0.1
	comp=Z,7.5nm,0.6s,baz=94,slow=6.3,SNR=86						
MKAR	Makanchi Array	94.39	317	P	P	17 08 57.0	-0.4
ZALV	Zalesovo Beam	94.44	324	P	P	17 08 56.0	-1.4
	comp=Z,1.8nm,0.7s,baz=125,slow=4.2,SNR=9.6						
MAKZ	Makanchi	94.60	317	P	P	17 08 57.3	-1.0
TXAR	Lajitas Array	95.78	61	LR	LR	17 44 53.7	
	comp=Z,58nm,20.2s,baz=0.0,slow=31						
SNAA	Sanae	96.40	183	P	P	17 09 05.4	-0.8
VNA3	Neumayer Olymp	97.11	181	P	P	17 09 08.4	-1.0
VNA2	Neumayer--Watz	97.36	182	P	P	17 09 09.5	-1.0
	baz=160,slow=5.1						
ARCES	ARCESS Array B	117.17	346	PKP	PKPdf	17 14 20.8	-1.1
	comp=Z,5.5nm,0.9s,baz=10,slow=1.5,SNR=11						
FINES	FINESS Array B	122.64	339	PKP	PKPdf	17 14 32.5	-0.1
	comp=Z,1.9nm,0.9s,baz=64,slow=3.2,SNR=3.3						
BOSA	Boshof	124.89	222	PKP	PKiKP	17 14 38.7	+0.1
	comp=Z,1.4nm,0.6s,baz=176,slow=2.9,SNR=7.1						
KEST	Kesra	148.29	323	PKPbc	PKPbc	17 15 24.1	0.0
	comp=Z,3.8nm,0.9s,baz=15,slow=15,SNR=3.8						
ESDC	Sonseca Array	150.90	344	PKPbc	PKPbc	17 15 29.8	-0.6
	comp=Z,0.8nm,0.9s,baz=6.7,slow=1.7,SNR=4.5						
TORD	Torodi Ar. Bea	164.83	277	PKPab	PKPab	17 16 39.4	+0.8
	comp=Z,0.6nm,0.7s,baz=69,slow=4.9,SNR=4.4						

NEIC ***13*** *17:17:17.3±2.4, 31.°59N±0.°03×116.°03W±0.°03, h7^{km}±5^{km},*
Error ellipse: s-maj=4.5km s-min=3.0km az=209.0

PAS ***13*** *17:17:18.0±2.4, 31.°61N±0.°03×116.°02W±0.°02, h5^{km}±2^{km},*
Error ellipse: s-maj=5.0km s-min=3.0km az=205.0

ANF ***13*** *17:17:17.1±0.9, 31.°65N×116.°03W, h2^{km}±4^{km}, ML4.1/26,*
Error ellipse: s-maj=6.1km s-min=4.8km az=50.0

ECX ***13*** *17:17:18.9±0.6, 31.°63N×116.°01W, h6^{km}±5^{km}, MD3.8, ML4.0*

MEX ***13*** *17:17:18.0±1.7, 31.°46N×116.°13W, h8^{km}±27^{km}, MD4.2*

IDC ***13*** *17:17:19.3±2.2, 31.°75N×115.°80W, h0^{km}, mb3.4/1, mb1 3.8/5, mb1mx3.6/47, mbtmp3.4/5, ML3.8/4, MS3.3/1, Ms1 3.3/1, ms1mx2.7/16, Error ellipse: s-maj=36.5km s-min=11.3km az=48.0*

ISC 13 17:17:16.8±1.2**, 31.°58N**±0.°02×**116.°02W**±0.°02**, h4**^{km}±9^{km}**,**
n141, σ1^{s}**61**/187**, 6C-6D, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVX	San Vicente	0.32	218	⇓iP	Pb	17 17 25.4	+0.2
SVX				eS	Sb	17 17 30.5	-0.3
CCX	Cicese	0.62	297	⇑iP	Pb	17 17 29.9	-0.4
CCX				eS	Sb	17 17 38.1	-1.3
CCX	Cicese	0.62	297		Pb	17 17 29.7	-0.5
CCX				Sg	Sb	17 17 38.4	-0.9
ECBX	El Chinero	0.83	97	⇑iP	Pg	17 17 33.4	+0.7
ECBX				eS	Sg	17 17 44.3	+0.8
CBX	Cerro Bola	0.91	323	⇑eP	Pg	17 17 34.2	-0.1
CBX				eS	Sg	17 17 46.6	+0.3
CBX				IAML		17 17 50.4	
	comp=N,9µm,0.5s						
CBX				⇓e		17 17 50.4	
CBX				IAML		17 17 53.6	
	comp=E,5µm,1.0s						
CBX				⇑e		17 17 53.6	
CBX	Cerro Bola	0.91	323		Pg	17 17 34.2	-0.1
CBX				Sg	Sg	17 17 45.0	-1.2
CBX				IAML		17 17 50.3	
	comp=N,5µm,0.5s						
CBX				IAML		17 17 53.4	
	comp=E,3µm,1.0s						
CBX	Cerro Bola	0.91	323	eP	Pg	17 17 34.2	-0.1
CBX				eS	Sg	17 17 46.5	+0.2
TJIG	Tijuana	1.02	327	eP	Pg	17 17 35.9	-0.4
TJIG				eS	Sg	17 17 49.0	-0.5
TJIG	Tijuana	1.02	327	eP	Pg	17 17 35.9	-0.4
TJIG				eS	Sg	17 17 48.9	-0.7
RMX	La Rumorosa	1.02	357	⇓iP	Pg	17 17 35.3	-1.1
RMX				i S	Sg	17 17 47.0	-2.6
RMX	La Rumorosa	1.02	357		Pg	17 17 35.2	-1.1
RMX				Sg	Sg	17 17 46.4	-3.2
CPBX	Cerro Prieto	1.03	36	⇓eP	Pg	17 17 36.7	+0.1
CPBX				eS	Sb	17 17 51.1	-0.1
CPBX	Cerro Prieto	1.03	36		Pg	17 17 36.4	-0.1
CPBX				Sg	Sg	17 17 50.6	+0.6
YUH2	Yuha Desert	1.07	4	⇓iP	Pg	17 17 36.8	-0.5
YUH2				eS	Sg	17 17 49.9	-1.2
IKP	In-Ko-Pah, Jac	1.07	356	P	Pg	17 17 37.1	-0.2
	baz=176,SNR=482						
IKP				S	Sg	17 17 50.3	-0.9
	baz=176						
IKP	In-Ko-Pah, Jac	1.07	356	⇓iP	Pg	17 17 37.1	-0.2
IKP				eS	Sg	17 17 50.1	-1.1
GUVIX	Guadalupe Vict	1.07	48	eP	Pg	17 17 37.5	+0.1
GUVIX	Guadalupe Vict	1.07	48		Pg	17 17 37.5	+0.1
GUVIX				Sg	Sg	17 17 51.5	+0.2
MBIG	Mexicali	1.08	40	eP	Pg	17 17 36.6	-0.9
MBIG				i P	Pn	17 17 38.6	-0.1
MBIG				eS	Sg	17 17 51.0	-0.5
MBIG				i S	Sn	17 17 53.5	-0.6
TKX	Tecate	1.10	333	eP	Pg	17 17 37.5	-0.5
TKX				eS	Sg	17 17 51.3	-1.0
TKX	Tecate	1.10	333		Pg	17 17 37.5	-0.5
TKX				Sg	Sg	17 17 50.7	-1.6
SFX	San Felipe	1.14	118	⇑eP	Pg	17 17 38.4	-0.2
SFX				eS	Sb	17 17 54.5	+0.3
SFX				IAML		17 17 55.6	
	comp=N,3µm,0.7s						
SFX				e		17 17 55.6	
SFX	San Felipe	1.14	118		Pg	17 17 38.2	-0.3
SFX				Sg	Sg	17 17 52.8	-0.5
SFX				IAML		17 17 55.3	
	comp=N,3µm,0.6s						
SFX				IAML		17 17 58.2	
	comp=E,3µm,0.7s						
CTLX	Tlaxcala, TLX	1.16	40	⇑eP	Pg	17 17 38.7	-0.3
UABX	UABC, Campus M	1.16	25		Pg	17 17 39.2	+0.2
UABX				Sg	Sg	17 17 53.7	-0.3
BAR	Barrett	1.23	333		Pg	17 17 39.2	-1.1
BAR				Sg	Sg	17 17 53.7	-2.6
BAR				IAML		17 18 00.6	
	comp=N,3µm,0.9s						
TJX	Tijuana	1.28	317		Pn	17 17 40.7	-0.8
TJX				Sg	Sb	17 17 56.5	-1.8
MONP2	Monument Peak	1.35	345	P	Pn	17 17 42.0	-0.7
	baz=165,SNR=728						
MONP2				S	Sb	17 17 59.0	-1.6
	baz=165						
SWSC	Sam W. Stewart	1.37	8	P	Pn	17 17 41.6	-1.1
	baz=188,SNR=664						
SWSC				S	Sb	17 18 00.8	-0.2
	baz=188						
SUP	Superstition M	1.38	7		Pb	17 17 43.2	0.0
SUP					Sb	17 18 00.5	-0.7
YMD	Yuma Desert	1.58	52	eP	Pn	17 17 44.4	-1.3
109C	Camp Elliot, M	1.60	325	P	Pn	17 17 45.5	-0.4
	baz=144,SNR=83						
109C				S	Sn	17 18 05.6	-1.4
	baz=144						
109C	Camp Elliot, M	1.60	325		Pn	17 17 45.4	-0.5
109C				Sn	Sn	17 18 05.4	-1.5
109C				IAML		17 18 06.6	
	comp=E,2µm,0.5s						
109C				IAML		17 18 07.1	
	comp=N,2µm,0.5s						
GLA	Glamis	1.78	34	P	Pn	17 17 47.0	-1.4
	baz=215,SNR=30						
GLA				S	Sb	17 18 12.7	-0.1
	baz=215						
GLA	Glamis	1.78	34		Pn	17 17 47.0	-1.4
GLA				Sn	Sn	17 18 08.7	-2.8
GLA				IAML		17 18 22.6	
	comp=E,2µm,0.7s						
GLA				IAML		17 18 26.3	
	comp=N,1µm,0.5s						
PFO	Pinyon Flats O	2.06	350	Pn	Pn	17 17 52.0	-0.3
	comp=N,20nm,0.3s,baz=157,slow=15,SNR=75						
PFO				Lg	Lg	17 18 20.2	
	comp=N,69nm,0.3s,baz=222,slow=14,SNR=16						
PFO				LR	LR	17 18 39.8	
	comp=N,178nm,18.2s,baz=18,slow=42						
PFO	Pinyon Flats O	2.06	350	Pn	Pn	17 17 52.0	-0.3
	baz=169,SNR=102						
PFO				Pb	Pb	17 17 54.7	-0.1
	baz=169						
PFO				Sb	Sb	17 18 20.3	-0.6
	baz=169						
PFO	Pinyon Flats O	2.06	350	Pn	Pn	17 17 51.9	-0.5
PFO				Sn	Sb	17 18 19.5	-1.4
PFO				IAML		17 18 23.8	
	comp=N,787nm,0.9s						
BC3	Big Chuckawall	2.12	13	Pn	Pn	17 17 52.6	-0.6
	baz=193,SNR=49						
BC3				Pg	Pg	17 17 58.8	+1.3
	baz=193						
113A	Mohawk Valley,	2.24	58		Pn	17 17 53.9	-0.9
113A				Sn	Sn	17 18 18.9	-4.1
113A				IAML		17 18 34.1	
	comp=N,459nm,0.6s						
MURC	Murrieta	2.25	334	P	Pn	17 17 55.6	+0.7
	baz=153,SNR=49						
MURC				S	Sb	17 18 24.4	-1.8
	baz=153						
BELC	Belle Mtn. Jos	2.41	0	P	Pn	17 17 57.0	-0.2
	baz=180,SNR=77						
SCI2	San Clemente I	2.56	304	P	Pn	17 17 58.7	-0.4
	baz=122,SNR=18						
SCI2				S	Sn	17 18 30.4	-0.3
	baz=122						
IRM	Iron Mountain	2.67	16	P	Pn	17 18 00.5	-0.2
	baz=196,SNR=24						
CIS	Catalina Islan	2.72	312	P	Pn	17 18 00.4	-0.9
	baz=131,SNR=15						
214A	Organ Pipe Nat	2.75	81	P	Pn	17 18 00.7	-1.1
	baz=264,SNR=64						
214A	Organ Pipe Nat	2.75	81	Pn	Pn	17 17 60.0	-1.8
214A				IAML		17 18 34.7	
	comp=N,244nm,0.3s						
214A				IAML		17 18 35.6	
	comp=E,362nm,0.4s						
214A	Organ Pipe Nat	2.75	81		Sn	17 18 30.3	-5.3
214A	Organ Pipe Nat	2.75	81	eP	Pn	17 17 59.3	-2.5
214A				eS	Sn	17 18 29.5	-6.1
BBRC	Big Bear Solar	2.78	344	P	Pn	17 18 02.6	+0.3
	baz=164,SNR=38						
BBRC				Sb	Sb	17 18 41.6	-0.1
	baz=164						
MWC	Mount Wilson	3.15	327		Pn	17 18 07.5	+0.2
MWC				IAML		17 18 56.5	
	comp=E,409nm,0.7s						
PASC	Pasadena Art C	3.16	325		Pn	17 18 07.3	-0.2
PASC				IAML		17 18 57.3	
	comp=E,315nm,1.0s						
PASC				IAML		17 18 58.8	
	comp=N,273nm,1.1s						
GMRC	Granite Mounta	3.21	5	P	Pn	17 18 08.5	+0.3
	baz=186,SNR=26						
HEC	Hector,Ludlow	3.25	355	Pb	Pb	17 18 15.8	+0.7
	baz=175,SNR=14						
HEC				Sb	Sg	17 18 59.1	-2.1
	baz=175						
DECC	Green Verdugo	3.30	324	Sb	Sb	17 18 58.7	+2.2
	baz=143						
RRX	Edison Barstow	3.39	346	Pg	Pb	17 18 19.5	+2.1
	baz=166,SNR=8.9						
RRX				Sb	Sb	17 19 01.5	+2.5
	baz=166						
SNCC	San Nicolas Is	3.40	300	Pn	Pn	17 18 10.3	-0.3
Y14A	Wickenburg	3.46	46		Pn	17 18 11.5	0.0
Y14A				IAML		17 19 20.5	
	comp=E,234nm,0.7s						
Y14A				IAML		17 19 20.8	
	comp=N,299nm,0.7s						
EDW2	Edwards Air Fo	3.68	334	P	Pn	17 18 16.2	+1.5
	baz=153,SNR=24						
EDW2				Sb	Sb	17 19 08.7	+1.1
	baz=153						
GSC	Goldstone, Bar	3.77	350	Pg	Pb	17 18 26.5	+2.5
	baz=170,SNR=6.6						
GSC				Sb	Sb	17 19 13.1	+3.0
	baz=170						
GSC	Goldstone, Bar	3.77	350		Pn	17 18 16.5	+0.7
OSI	Osito Audit: C	3.78	324	S	Sn	17 18 59.9	-1.1
	baz=142						
OSI	Osito Audit: C	3.78	324		Pn	17 18 16.5	+0.5
OSI				IAML		17 19 17.9	
	comp=E,266nm,0.8s						
OSI				IAML		17 19 35.3	
	comp=N,166nm,0.9s						
W13A	Hualapai Mount	3.94	26		Pn	17 18 18.5	+0.2
LRMC	Laurel Mtn Rad	4.13	341	Sb	Sb	17 19 23.4	+2.9
	baz=160						
ARVC	Arvin	4.25	327	Sb	Sb	17 19 28.3	+4.5
	baz=145						
SHOC	Shoshone, Teco	4.31	357	Sb	Sb	17 19 29.5	+3.9
	baz=177						
QSM	Queen of Sheba	4.43	351	Pn	Pn	17 18 25.2	+0.4
QSM				IAML		17 19 40.0	
	comp=E,167nm,0.8s						
QSM				IAML		17 19 43.9	
	comp=N,150nm,0.7s						
TUC	Tucson	4.50	79	P	Pn	17 18 26.0	+0.1
	baz=262						
TUC	Tucson	4.50	79	Pn	Pn	17 18 25.8	-0.2
ISA	Isabella, Lake	4.56	334	Sb	Sb	17 19 34.6	+1.8
	baz=152						
ISA	Isabella, Lake	4.56	334	Pn	Pn	17 18 26.5	-0.1
ISA				IAML		17 19 45.9	
	comp=N,59nm,0.8s						
ISA				IAML		17 19 49.7	
	comp=E,96nm,1.6s						
GWY	Greenwater Val	4.62	353	Pn	Pn	17 18 27.3	-0.4
GWY				IAML		17 19 50.8	
	comp=N,109nm,1.3s						
GWY				IAML		17 19 53.9	
	comp=E,157nm,1.0s						
X16A	Lo Mia Camp, P	4.77	52		Pn	17 18 30.2	+0.5
X16A				IAML		17 20 04.9	
	comp=N,116nm,1.1s						
X16A				IAML		17 20 04.9	
	comp=E,97nm,1.2s						
SHPR	Sheep Range	4.96	8	Pn	Pn	17 18 33.3	+1.0
WUAZ	Wupatki	5.51	43	P	Pn	17 18 42.0	+2.1
	baz=226,SNR=11						
WUAZ	Wupatki	5.51	43		Pn	17 18 39.8	-0.1
U15A	North Rim	5.74	32		Pn	17 18 44.2	+1.1
319A	Douglas	5.76	90		Pn	17 18 43.2	0.0
LCH	Last Change Ra	5.80	347		Pn	17 18 45.4	+1.7
PRN	Pahroc Range	5.87	8		Pn	17 18 46.2	+1.5
X18A	Snowflake	5.88	58		Pn	17 18 45.8	+0.9
LCMT	Little Creek M	5.88	22		Pn	17 18 46.3	+1.4
KNB	Kanab	6.03	25		Pn	17 18 48.5	+1.5
PMPB	Monarch Peak	6.10	321	Pn	Pn	17 18 45.7	-2.1
W18A	Petrified Fore	6.33	54		Pn	17 18 52.5	+1.4
CCUT	Cedar City	6.34	19		Pn	17 18 51.6	+0.3
SZCU	Shurtz Canyon	6.47	21		Pn	17 18 54.8	+1.8
MDPB	Devils Postpil	6.54	338		Pn	17 18 54.7	+0.6
TPH	Tonopah	6.55	352		Pn	17 18 56.0	+1.8
PKCU	Pink Cliffs	6.60	27		Pn	17 18 54.4	-0.6
R11A	Troy Canyon, C	6.76	3		Pn	17 18 55.9	-1.1
LHV	Little Huntoon	6.96	344		Pn	17 18 59.2	-0.4
121A	Cookes Peak, D	7.05	80	Pn	Pn	17 19 01.7	+0.7
NV11	Mina Array Sit	7.06	346		Pn	17 19 00.2	-0.8
NV11					LR	17 21 02.4	

NVAR	Mina Array Bea	7.08	345	Pn	Pn	17 19 04.5	+3.0
	comp=E,0.2nm,0.3s,baz=169,slow=14,SNR=5.7						
NVAR				Lg	Lg	17 21 02.2	
	comp=E,0.1nm,0.3s,baz=168,slow=31,SNR=3.8						
NVAR	Mina Array Bea	7.08	345		Pn	17 19 03.0	+1.5
PSUT	Pine Spring	7.16	14		Pn	17 19 03.1	+0.6
MTPU	Mount Pierson	7.17	25		Pn	17 19 05.2	+2.4
RYN	Ryan	7.32	344		Pn	17 19 07.5	+2.8
CMB	Columbia Colle	7.37	332	Pn	Pn	17 19 06.1	+0.8
SPR3	Spring Creek 3	7.53	10	Pn	Pn	17 19 07.9	+0.2
MVU	Marysvale	7.58	23		Pn	17 19 09.3	+1.0
MSU	Marysvale	7.60	23		Pn	17 19 06.3	-2.2
TCRU	Three Creeks R	7.60	22		Pn	17 19 08.3	-0.2
KVN	Kaiserville	7.64	348	Pn	Pn	17 19 09.2	0.0
YERR	Yerington	7.84	341	Pn	Pn	17 19 10.2	-1.7
LENM	Lemitar	8.03	69		Pn	17 19 13.1	-1.3
EMB	Emerald Bay	8.10	337	Pn	Pn	17 19 15.9	+0.5
RUBR	Rubicon Trail	8.18	337	Pn	Pn	17 19 16.9	+0.3
BNM	Barren Site	8.30	70	Pn	Pn	17 19 16.8	-1.5
Q16A	Castle Valley	8.32	27	Pn	Pn	17 19 18.7	+0.2
MVCO	Mesa Verde	8.37	46	P	Pn	17 19 22.2	+3.0
	baz=230						
MVCO	Mesa Verde	8.37	46		Pn	17 19 19.6	+0.4
PAHR	Pah Rah Range	8.56	342	Pn	Pn	17 19 19.9	-1.7
TMUT	Trail Mountain	8.64	26	Pn	Pn	17 19 22.1	-0.8
MCCM	Marconi Confer	8.64	321	Pn	Pn	17 19 21.5	-1.1
SRU	San Rafael Swe	8.75	29		Pn	17 19 22.0	-2.3
P17A	Butcher Ranch,	8.97	27		Pn	17 19 27.0	-0.3
DUG	Dugway, Tooele	8.98	16	Pn	Pn	17 19 27.2	-0.2
MNTX	Cornudas Mount	9.07	86	Pn	Pn	17 19 29.3	+0.8
ELK	Elko	9.17	4	Pn	Pn	17 19 31.9	+1.8
	comp=E,0.2nm,0.3s,baz=178,slow=12,SNR=7.2						
ELK				Lg	Lg	17 22 11.2	
	comp=E,0.1nm,0.3s,baz=138,slow=18,SNR=2.7						
ELK	Elko	9.17	4	Pn	Pn	17 19 30.4	+0.3
BGU	Big Grassy Mou	9.63	14	Pn	Pn	17 19 36.8	+0.4
JLU	Jordanelle	9.73	21	Pn	Pn	17 19 36.3	-1.5
KCPM	Cahto Peak	10.16	325	Pn	Pn	17 19 43.4	-0.2
TCUT	Toone Canyon	10.21	20	Pn	Pn	17 19 43.0	-1.5
RDMU	Red Mountain	10.37	28		Pn	17 19 45.0	-1.6
HVU	Hansel Valley	10.50	13	Pn	Pn	17 19 47.2	-1.1
SMCO	Snowmass	10.57	42		Pn	17 19 49.1	-0.5
O20A	White River Ci	10.61	34	Pn	Pn	17 19 49.9	+0.1
HWUT	Hardware Ranch	10.62	18	Pn	Pn	17 19 47.8	-2.2
TX31	Lajitas Ar. Si	10.89	99		Pn	17 19 55.5	+1.9
TX32	Lajitas Array	10.89	99	Pn	Pn	17 19 55.3	+1.7
TXAR	Lajitas Array	10.89	99	Pn	Pn	17 19 56.0	+2.4
	comp=E,0.6nm,0.3s,baz=276,slow=12,SNR=41						
TXAR	Lajitas Array	10.89	99	Pn	Pn	17 19 54.2	+0.6
PDAR	Pinedale Array	12.29	23	Pn	Pn	17 20 17.0	+4.2
	comp=E,0.2nm,0.3s,baz=203,slow=8.8,SNR=5.9						
CMIG	Matias Romero	24.00	122	LR	LR	17 33 21.5	
	comp=E,67nm,19.8s,baz=252,slow=40						
ILAR	Eielson Array	38.30	339	P	P	17 24 41.1	+2.9
	comp=E,0.5nm,0.7s,baz=150,slow=7.3,SNR=3.5						
HHC	Hu-ho-hao-te	95.58	326	eP	P	17 30 39.0	-4.6
HHC				pmax	pmax		
	comp=Z,12nm,1.4s						
HHC				pmax	pmax		
	comp=Z,130nm,7.2s						
VNA3	Neumayer Olymp	124.81	158	PKiKP	PKiKP	17 36 23.7	+6.4

IDC 13 17:41:08.9±11.0, 3°.72N×98°.13E, h201^{km}±102^{km}, mb2.7/4, mb1 2.8/5, mb1mx2.7/37, mbtmp3.2/5, Error ellipse: s-maj=125.9km s-min=21.4km az=60.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	14.67	3	P	Pn	17 44 26.8	-0.3
	0.1nm,0.3s,baz=192,slow=11,SNR=4.9						
WRA	Warramunga Arr	42.64	125	P	P	17 48 45.5	-0.3
	0.5nm,1.0s,baz=304,slow=9.3,SNR=1.4						
ASAR	Alice Springs	44.22	130	P	P	17 48 58.6	+0.1
	0.1nm,0.5s,baz=308,slow=8.0,SNR=1.4						
SONM	Songino Array	44.52	8	P	P	17 49 01.0	+0.4
	0.4nm,0.4s,baz=191,slow=8.8,SNR=2.6						
MKAR	Makanchi Array	45.05	345	P	P	17 49 04.2	-0.5
	0.2nm,0.5s,baz=155,slow=8.5,SNR=4.8						

IDC 13 17:42:30.5±7.7, 31°.15S×176°.96W, h47^{km}±59^{km}, mb3.1/2, mb1 3.4/2, mb1mx3.2/24, mbtmp3.4/2, ML4.4/1, MS3.2/1, Ms1 3.2/1, ms1mx2.5/10, Error ellipse: s-maj=66.2km s-min=45.8km az=117.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.07	336	P	Pn	17 43 02.7	-0.1
	136nm,0.3s,baz=255,slow=18,SNR=5.8						
RAO				S	Sn	17 43 27.9	+0.6
	231nm,0.3s,baz=119,slow=23,SNR=5.7						
MSVF	Nonsavu	14.11	340	LR	LR	17 50 51.7	
	comp=Z,100nm,18.7s,baz=67,slow=36						
ASAR	Alice Springs	43.97	267	P	P	17 50 32.9	-0.4
	0.4nm,0.7s,baz=108,slow=7.2,SNR=5.2						
WRA	Warramunga Arr	45.02	272	P	P	17 50 41.8	0.0
	0.2nm,0.3s,baz=111,slow=8.1,SNR=6.2						
FINES	FINESS Array B	146.16	340	PKPbc	PKPdf	18 02 04.0	+0.2
	3.8nm,0.8s,baz=29,slow=3.2,SNR=5.4						

IDC 13 17:47:01.2±6.0, 5°.90S×151°.18E, h43^{km}±51^{km}, mb3.8/5, mb1 4.0/6, mb1mx3.5/32, mbtmp4.1/6, ML1.3/1, MS3.4/7, Ms1 3.4/7, ms1mx3.1/33, Error ellipse: s-maj=75.1km s-min=32.1km az=121.0

ISC 13 17:47:01.5±1.3, 5°.9S±0°.3×151°.1E±0°.4, h43^{km}, n14, σ1^{s}.25/9, mb3.9/5, MS3.2/6, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	5.23	227	P	Pn	17 48 18.5	+1.3
	0.6nm,0.3s,baz=46,slow=8.2,SNR=4.4						
PMG				S	Sn	17 49 14.5	-1.8
	1.6nm,0.3s,baz=291,slow=23,SNR=9.7						
HNR	Honiara	9.50	112	LR	LR	17 52 14.5	
	comp=Z,146nm,20.4s,baz=200,slow=33						
GUMO	Guam	20.27	342	LR	LR	17 58 16.6	
	comp=Z,58nm,20.0s,baz=92,slow=33						
WRA	Warramunga Arr	21.45	228	P	P	17 51 45.2	-1.2
	4.8nm,0.9s,baz=53,slow=10,SNR=8.1						
DZM	Mont Dzumac	21.93	139	LR	LR	17 59 30.0	
	comp=Z,103nm,18.1s,baz=58,slow=34						
ASAR	Alice Springs	24.20	221	P	P	17 52 13.9	-0.4
	5.3nm,0.7s,baz=54,slow=9.3,SNR=42						
ASAR				LR	LR	18 01 39.9	
	comp=Z,66nm,18.9s,baz=55,slow=36						
STKA	Stephens Creek	27.36	198	P	P	17 52 43.0	+0.3
	2.6nm,0.8s,baz=7.7,slow=12,SNR=3.8						
FITZ	Fitzroy Crossi	27.63	242	P	P	17 52 46.8	+1.5
	1.9nm,0.8s,baz=56,slow=6.9,SNR=2.4						
MSVF	Nonsavu	28.89	116	LR	LR	18 03 44.5	
	comp=Z,19nm,20.6s,baz=29,slow=35						
RAO	Raoul Island	37.41	132	LR	LR	18 05 35.4	
	comp=Z,305nm,21.2s,baz=141,slow=30						
MJAR	Matsushiro Arr	43.86	345	LR	LR	18 12 52.9	
	comp=Z,48nm,18.1s,baz=255,slow=35						
ILAR	Eielson Array	83.79	22	P	P	17 59 25.4	-0.7
	0.9nm,0.7s,baz=240,slow=5.6,SNR=10						
GERES	GERESS Array B	124.02	327	PKP	PKPdf	18 05 55.4	-0.1
	0.4nm,0.5s,baz=102,slow=4.4,SNR=4.1						
TORD	Torodi Ar. Bea	148.95	286	PKPbc	PKPbc	18 06 45.5	-0.4
	1.5nm,0.7s,baz=63,slow=3.3,SNR=8.5						

KRNET 13 17:57:36.5±0.1, 39°.74N×72°.00E, h12^{km}, mb3.0
ISU 13 17:57:36, 39°.70N×72°.10E, h5^{km}
SOME 13 17:57:39.0, 39°.83N×72°.17E, h10^{km}
NNC 13 17:57:40.0±4.0, 39°.90N×72°.19E, h0^{km}, mb3.8, mpv3.4, Error ellipse: s-maj=29.7km s-min=14.1km az=179.0

ISC 13 17:57:37.3±0.8, 39°.68N±0°.03×72°.04E±0°.03, h10^{km}, n30, σ1^{s}.47/52, 22C-9D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	0.27	224	⇑iP	Pg	17 57 42.4	-0.5
	baz=11						
DRK				⇑iS	Sg	17 57 46.6	0.0
	baz=11						
FRG	Fergana	0.73	344	eP	Pb	17 57 52.0	-0.1
FRG				eS	Sg	17 58 00.0	-0.9
BTK	Batken	1.01	293	eP	Pg	17 57 55.0	-1.9
BTK				eS	Sg	17 58 08.0	-2.1
BTK	Batken	1.01	293	⇑iP	Pg	17 57 54.9	-1.9
	baz=90						
BTK				⇑iS	Sg	17 58 08.4	-1.7
	baz=90						
OHH	Osh	1.02	34	eP	Pg	17 57 55.0	-2.1
OHH				eS	Sg	17 58 08.0	-2.3
OHH	Osh	1.02	34	⇑iP	Pg	17 57 54.9	-2.1
	baz=37						
OHH				⇑iS	Sg	17 58 08.4	-1.9
	baz=37						
SFK	Sufi-Kurgan	1.18	73	⇑iP	Pb	17 57 59.2	-0.7
	baz=76						
SFK				⇑iS	Sn	17 58 15.8	-0.5
	baz=76						
GAR	Garm	1.50	244	⇑iP	Pn	17 58 04.3	-0.1
	baz=41						
GAR				⇑iS	Sb	17 58 24.7	+0.3
	baz=41						
TRKS	Terek-Say	1.98	340	⇓iP	Pn	17 58 10.4	-0.6
	baz=40						
TRKS				⇓iS	Sn	17 58 35.3	-0.6
	baz=40						
CHMG	Chimgan	2.43	321	eP	Pb	17 58 22.0	+0.8
CHMG				eS	Sg	17 58 53.0	-2.4
CHGR	Chuyangaron	2.46	247	⇓iP	Pn	17 58 19.4	+1.8
	baz=45						
CHGR				⇓iS	Sb	17 58 50.5	-1.6
	baz=45						
YBZ	Yangibazar	2.48	312	eP	Pg	17 58 24.0	-0.8
YBZ				eS	Sg	17 58 57.0	0.0
CHRV	Charvak	2.53	322	S	Sg	17 58 58.0	-0.5
AML	Almayashu	2.76	27	⇓eP	Pn	17 58 22.9	+1.0
	baz=28						
AML				⇓iS	Sn	17 58 57.1	+1.6
	baz=28						
MNAS	Manas	2.83	7	⇑iP	Pn	17 58 23.5	+0.8
	baz=8.0						
MNAS				⇑iS	Sn	17 58 58.3	+1.3
	baz=8.0						
IUG	Iuzhnay	2.90	329	eP	Pb	17 58 30.2	+1.0
	49nm,0.2s						
IUG				eS	Sb	17 59 06.9	+2.1
	25nm,0.3s						
IUG	Iuzhnay	2.90	329	Pg	Pb	17 58 30.2	+1.0
	119nm,0.4s						
IUG				Lg	Lg	17 59 08.1	
	24nm,0.4s						
UCH	Uchtor	3.16	35	⇑eP	Pn	17 58 28.8	+1.2
	baz=37						
UCH				⇑iS	Sn	17 59 06.7	+1.1
	baz=37						
MRKS	Merke	3.19	16	eP	Pb	17 58 34.9	+0.6
	4.7nm,0.4s						
MRKS				eS	Sb	17 59 14.6	+1.3
	20nm,0.5s						
MRKS	Merke	3.19	16	Pg	Pb	17 58 34.9	+0.6
	4.7nm,0.4s						
MRKS				Lg	Lg	17 59 16.0	
	20nm,0.5s						
EKS2	Erkin-Say	3.26	23	⇑eP	Pn	17 58 29.6	+1.0
	baz=24						
EKS2				⇑iS	Sn	17 59 08.6	+1.1
	baz=24						
AAK	Ala-Archa	3.49	31	⇑Pg	Pb	17 58 40.4	+1.1
	4.1nm,0.5s						
AAK				⇓Lg	Lg	17 59 24.4	
	4.3nm,0.3s						
AAK	Ala-Archa	3.49	31	⇑iP	Pn	17 58 33.0	+1.2
	baz=32						
AAK				⇑iS	Sn	17 59 14.3	+1.0
	baz=32						
KK31	Karatay Array	3.61	342	Pg	Pb	17 58 41.9	+0.6
	0.8nm,0.3s,baz=151,slow=14,SNR=5.7						
KK31				⇑Lg	Lg	17 59 29.0	
	2.7nm,0.5s,baz=151,slow=30,SNR=6.4						
KBK	Karagaybulak	3.70	35	⇑eP	Pn	17 58 35.7	+1.0
	baz=36						
KBK				⇑iS	Sn	17 59 19.6	+1.1
	baz=36						
TKM2	Tokmak 2	4.21	38	⇓Pg	Pb	17 58 53.5	+2.0
	22nm,1.3s						
TKM2				⇓Lg	Lg	17 59 46.9	
	18nm,1.4s						
DGS	Degeres	4.54	37	eP	Pb	17 58 55.4	-1.6
	3.6nm,0.5s						
DGS				eS	Sb	17 59 50.0	-1.8
	4.6nm,1.4s						
DGS	Degeres	4.54	37	Pg	Pb	17 58 55.4	-1.6
	3.6nm,0.5s						
DGS				Lg	Lg	17 59 51.8	
	4.6nm,1.4s						
KUU	Kurty	5.30	36	eP	Pb	17 59 11.3	+1.3
	2.3nm,0.8s						
KUU				eS	Sb	18 00 17.8	+4.1
	4.3nm,0.7s						
KUU	Kurty	5.30	36	Pg	Pb	17 59 11.0	+1.0
	2.3nm,0.8s						
KUU				Lg	Lg	18 00 18.6	
	4.3nm,0.7s						

IDC 13 18:02:13.4±2.5, 20°.32S×178°.88W, h624^{km}±23^{km}, mb3.0/2, mb1 3.3/4, mb1mx2.8/27, mbtmp4.1/4, Error ellipse: s-maj=46.8km s-min=32.5km az=64.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.88	311	P	P	18 03 39.8	-0.1
	1.6nm,0.3s,baz=127,slow=18,SNR=5.6						
URZ	Urewera	18.22	190	P	P	18 05 49.9	+0.2
	2.0nm,0.3s,baz=302,slow=23,SNR=15						
ASAR	Alice Springs	43.76	257	P	P	18 09 25.9	-0.1
	2.4nm,0.8s,baz=97,slow=7.7,SNR=39						
WRA	Warramunga Arr	43.81	262	P	P	18 09 26.4	+0.1
	1.4nm,0.7s,baz=98,slow=7.6,SNR=15						
AKASG	Malin Array Be	142.45	331	PKP	PKPdf	18 20 35.8	-0.6
	0.5nm,0.4s,baz=43,slow=4.7,SNR=7.1						

KRSC 13 18:42:12.0±1.5, 50°.73N×157°.53E, h60^{km}±20^{km}, ML4.1, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAU	Pauzhetka	0.86	329	eP	Pn	18 42 30.0	+1.7
PAU				eS	Sn	18 42 42.0	+1.8
SKR	Severo-Kuril's	0.90	267	eP	Pn	18 42 29.2	+0.5
SKR				eS	Sn	18 42 41.2	+0.2
KDTR	Khodutka, Kamc	1.13	17	eP	Pn	18 42 33.4	+1.7
KDTR				eS	Sn	18 42 47.9	+1.5
ASAK	Asacha	1.67	8	eP	Pn	18 42 41.9	+2.9
ASAK				eS	Sn	18 43 02.2	+2.8
MTVR	Mutnovka	1.80	13	eP	Pn	18 42 43.1	+2.3
MTVR				eS	Sn	18 43 05.0	+2.3
RUS	Russkaya	1.81	19	eP	Pn	18 42 42.5	+1.7
RUS				eS	Sn	18 43 04.0	+1.3
GRL	Gorelyy	1.85	10	eP	Pn	18 42 44.2	+2.7
GRL				eS	Sn	18 43 06.7	+2.7
APC	Apacha	2.21	354	eP	Pn	18 42 48.7	+2.5
PET	Petropavlovsk	2.40	16	eP	Pn	18 42 51.6	+2.8
PET				eS	Sn	18 43 19.5	+2.5
DALK	Dalny	2.42	18	eP	Pn	18 42 51.7	+2.5
DALK				eS	Sn	18 43 20.4	+2.8
UGLR	Uglovaya	2.61	17	eP	Pn	18 42 54.5	+2.7
AVH	Avacha	2.64	16	eP	Pn	18 42 56.0	+3.7
AVH				eS	Sn	18 43 27.6	+4.4
KOK	Koryaka	2.65	14	eP	Pn	18 42 56.4	+4.0
SMAR	Somma	2.65	17	eP	Pn	18 42 55.7	+3.2
KRER	Koryakskii	2.68	16	eP	Pn	18 42 56.6	+3.7
SDLR	Sedlovina	2.68	18	eP	Pn	18 42 55.6	+2.8
NLC	Nalytchevo	2.69	24	eP	Pn	18 42 55.3	+2.5
NLC				eS	Sn	18 43 24.3	+0.2
SPN	Mys Shipunski	2.83	32	eP	Pn	18 42 57.4	+2.7
SPN				eS	Sn	18 43 29.6	+2.1
GNL	Ganaly	2.98	5	eP	Pn	18 43 00.8	+3.9
MKZ	Mys Kozlova	4.60	32	eP	Pn	18 43 21.2	+2.3
MKZ				eS	Sn	18 44 13.7	+2.7
TUMD	Tumrok D	4.80	20	eP	Pn	18 43 26.8	+5.1
TUMD				eS	Sn	18 44 19.4	+3.4
TUMR	Tumrok	4.82	18	eP	Pn	18 43 26.5	+4.4
KBTR	Krutoberegovo	6.33	28	eP	Pn	18 43 45.0	+2.5

JMA 13 19:08:02.3±0.1, 24°.31N×123°.37E, h51^{km}±2^{km}, M2.1

ISC 13 19:08:03.8±2.4, 24°.30N±0°.10×123°.39E±0°.04, h37^{km}±2^{km}, n13, σ0^{s}.59/21, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IRIF	Iriomote-Funau	0.32	84	P	Pn	19 08 11.6	-0.4
IRIF				S	Sn	19 08 18.8	-0.1
YOJ	Yonaguni jima	0.38	295	P	Pn	19 08 12.2	-0.3
YOJ				S	Sn	19 08 19.3	0.0
YOJ	Yonaguni jima	0.38	295	P	Pn	19 08 12.4	-0.1
JYNG	Yonagunijimaku	0.43	291	P	Pn	19 08 12.7	-0.5
JYNG				eS	Sn	19 08 20.1	0.0
HATJ	Hateruma jima	0.45	122	P	Pn	19 08 13.2	-0.4
HATJ				eS	Sn	19 08 21.2	+0.6
JKRS	Kuro-shima	0.57	96	P	Pn	19 08 14.8	-0.7
JKRS				S	Sn	19 08 24.5	+0.8
JIJ	Ishigaki jima	0.69	85	P	Pn	19 08 16.1	-1.0
JIJ				S	Sn	19 08 26.4	-0.2
JISG	Ishigakijimahi	0.89	71	P	Pn	19 08 18.9	-0.8
JISG				S	Sn	19 08 31.6	+0.2
JTJ	Tarama	1.25	74	P	Pn	19 08 24.1	-0.5
JTJ				eS	Sn	19 08 40.4	+0.3
JMJ	Miyako jima 2	1.81	73	P	Pn	19 08 33.4	+1.0
YHNB	Yeheng	1.87	282	P	Pn	19 08 33.4	+0.2
SSLB	Suanglung	2.28	258	P	Pn	19 08 38.1	-0.8
TPUB	Ta-pu	2.71	249	P	Pn	19 08 45.0	+0.2

NEIC 13 19:54:34.8±1.8, 7°.90S±0°.07×125°.2E±0°.1, h10^{km}±2^{km}, mb4.1/5, Error ellipse: s-maj=18.9km s-min=12.0km az=78.0
IDC 13 19:54:35.3±1.3, 8°.02S×125°.26E, h0^{km}, mb3.8/4, mb1 4.0/8, mb1mx3.6/40, mbtmp3.8/8, ML3.6/4, MS2.9/2, Ms1 2.9/2, ms1mx2.5/45, Error ellipse: s-maj=47.3km s-min=20.4km az=76.0
DJA 13 19:54:35.7±1.2, 8°S±4°×12°5E±1°0, h10^{km}, M4.2/7, mb4.9/1, mB5.0/1, MLv3.8/7, Mw(mB)4.3/1

ISC 13 19:54:37.0±0.8, 8°.05S±0°.06×125°.21E±0°.08, h27^{km}, n26, σ2^{s}.34/32, mb3.9/6, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.94	209	P	Pn	19 55 09.2	+0.9
SOEI				S	Sn	19 55 32.1	+0.3
SOEI	Soe	1.94	209		Pn	19 55 06.8	-1.5
BATI	Baumata	2.63	215	Pn	Pn	19 55 19.0	+1.2
	12nm,0.3s,baz=163,slow=1.3,SNR=15						
BATI				Sn	Sn	19 55 50.3	+1.4
	29nm,0.3s,baz=133,slow=21,SNR=13						
BATI				LR	LR	19 56 27.6	
	comp=Z,193nm,21.7s,baz=44,slow=42						
BATI	Baumata	2.63	215	P	Pn	19 55 18.9	+1.1
BATI				S	Sn	19 55 48.3	-0.6
MMRI	Maumere	3.00	259	P	Pn	19 55 21.4	-1.4
MMRI	Maumere	3.00	259		Pn	19 55 21.5	-1.4
EDFI	Ende, Flores	3.55	258	P	Pn	19 55 29.4	-1.2
BSSI	Bau Bau, Buton	5.05	292	P	Pn	19 55 50.2	-0.9
BSSI				S	Sn	19 56 43.4	-5.3
LUWI	Luwuk	7.37	341	Pn	Pn	19 56 20.7	-2.3
FITZ	Fitzroy Crossi	10.00	178	Pn	Pn	19 56 60.0	+1.0
	0.3nm,0.3s,baz=0.8,slow=9.0,SNR=12						
FITZ				Sn	Sn	19 58 46.2	-4.2
	0.8nm,0.3s,baz=162,slow=21,SNR=7.6						
WB0	Warramunga Arr	14.66	144	Pn	Pn	19 58 04.3	+1.5
WRA	Warramunga Arr	14.76	144	Pn	Pn	19 58 05.0	+0.8
	0.3nm,0.3s,baz=317,slow=13,SNR=12						
WRA				Sn	Sn	20 00 43.8	-3.2
	0.2nm,0.3s,baz=318,slow=23,SNR=10						
WB2	Warramunga Arr	14.77	144	Pn	Pn	19 58 05.2	+0.9
WR0	Warramunga Arr	14.89	144	Pn	Pn	19 58 06.2	+0.3
WR0				IAmb	IAmb	19 58 30.3	
	comp=Z,10nm,1.4s						
LEM	Lembang	17.49	273	LR	LR	20 05 53.1	
	comp=Z,52nm,20.1s,baz=104,slow=39						
AS31	Alice Springs	17.62	153		P	19 58 42.1	+0.5
ASAR	Alice Springs	17.62	153	P	P	19 58 44.1	+2.5
	comp=Z,0.2nm,0.3s,baz=331,slow=11,SNR=13						
ASAR				S	Sn	20 01 50.8	-5.7
	comp=Z,0.1nm,0.3s,baz=325,slow=23,SNR=3.5						
CTAO	Charters Tower	23.62	123	P	P	19 59 45.5	-0.7
CTAO				IAmb	IAmb	19 59 58.6	
	comp=Z,8.8nm,1.4s						
CMAR	Chiang Mai Arr	36.95	316	P	P	20 01 47.3	+3.1
	comp=Z,0.9nm,0.6s,baz=137,slow=6.6,SNR=5.9						
MK31	Makanchi Array	66.60	329	P	P	20 05 28.0	+3.0
MK31				IAmb	IAmb	20 05 30.7	
	comp=Z,1.1nm,1.1s						
MKAR	Makanchi Array	66.60	329	P	P	20 05 27.9	+2.9
	comp=Z,1.1nm,0.6s,baz=132,slow=8.2,SNR=16						
MKAR	Makanchi Array	66.60	329	P	P	20 05 27.2	+2.1
ZALV	Zalesovo Beam	70.51	336	P	P	20 05 50.1	+0.9
	comp=Z,0.6nm,0.5s,baz=133,slow=6.1,SNR=2.8						
ZALV	Zalesovo Beam	70.51	336	P	P	20 05 48.4	-0.8
KURBB	Kurchatov Arra	71.00	331	P	P	20 05 54.7	+2.4
	comp=Z,0.5nm,0.6s,baz=138,slow=5.4,SNR=6.0						
KURK	Kurchatov	71.02	331	P	P	20 05 51.7	-0.7

SOME 13 20:22:06.6, 39°.55N×74°.90E, h0^{km}
KRNET 13 20:22:10.5±0.1, 39°.51N×74°.79E, mb3.1
NNC 13 20:22:12.7±3.7, 39°.45N×74°.48E, h0^{km}, mb3.6, mpv3.3, Error ellipse: s-maj=27.0km s-min=18.4km az=167.0

ISC 13 20:22:13.2±1.5, 39°.56N±0°.07×74°.76E±0°.05, h10^{km}, n30, σ1^{s}.93/50, 27C-10D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	Osh	1.80	303	⇑eP	Pn	20 22 44.7	+0.3
	baz=4.0						
OHH				⇑iS	Sb	20 23 09.7	+0.7
	baz=4.0						
DRK	Karamyk	2.29	269	⇑iP	Pn	20 22 52.0	+0.6
	baz=70						
DRK				⇑iS	Sb	20 23 21.9	-1.5
	baz=70						
UCH	Uchtor	2.68	356	P	Pb	20 22 59.2	-2.3
	SNR=13						
UCH	Uchtor	2.68	356	⇑eP	Pn	20 22 57.5	+0.7
	baz=56						
UCH				⇑iS	Sb	20 23 32.0	-2.5
	baz=56						
AML	Almayashu	2.70	343	P	Pn	20 22 58.6	+1.6
	SNR=6.4						
AML	Almayashu	2.70	343	⇓eP	Pn	20 22 57.9	+0.9
	baz=43						
AML				⇓iS	Sb	20 23 32.6	-2.5
	baz=43						
ULHL	Ulahol	2.91	22	⇓iP	Pn	20 23 00.5	+0.7
	baz=21						
ULHL				⇓iS	Sn	20 23 36.9	+2.0
	baz=21						
BOOM	Boomskoye usch	3.06	16	⇓iP	Pn	20 23 02.7	+0.9
	baz=16						
BOOM				⇓iS	Sn	20 23 40.3	+1.7
	baz=16						
BTK	Batken	3.08	281	⇑eP	Pn	20 23 02.7	+0.7
	baz=81						
BTK				⇑iS	Sn	20 23 40.8	+1.9
	baz=81						
AAK	Ala-Archa	3.09	356	P	Pb	20 23 05.0	-3.2
	SNR=8.1						
AAK	Ala-Archa	3.09	356	⇓Pn	Pn	20 23 04.7	+2.5
	6.4nm,0.7s						
AAK				⇑Lg	Lg	20 23 53.6	
	9.1nm,1.0s						
AAK	Ala-Archa	3.09	356	⇑iP	Pn	20 23 03.0	+0.9
	baz=56						
AAK				⇑iS	Sn	20 23 41.4	+2.2
	baz=56						
KBK	Karagaybulak	3.10	3	P	Pb	20 23 05.4	-3.1
	SNR=9.9						
KBK	Karagaybulak	3.10	3	⇑eP	Pn	20 23 03.2	+0.8
	baz=2.0						
KBK				⇑iS	Sn	20 23 41.7	+2.1
	baz=2.0						
TARG	Taragay, Kyrgy	3.17	46	⇑eP	Pn	20 23 04.1	+0.6
	baz=45						
TARG				⇑iS	Sn	20 23 42.8	+1.1
	baz=45						
EKS2	Erkin-Say	3.19	347	⇑eP	Pn	20 23 04.5	+1.0
	baz=47						
EKS2				⇑iS	Sn	20 23 44.1	+2.4
	baz=47						
MNAS	Manas	3.39	330	⇑iP	Pn	20 23 07.3	+1.0
	baz=31						

MNAS				⇑*i*S	**Sn**	**20 23 48.9**	**+2.2**
	baz=31						
MRKS	**Merke**	**3.39**	**340**	*e*P	**Pb**	**20 23 11.0**	**-2.5**
	4.8nm,0.4s						
MRKS				*e*S	**Sb**	**20 23 57.1**	**+2.4**
	5.0nm,0.4s						
MRKS	**Merke**	**3.39**	**340**	Pg	**Pb**	**20 23 12.8**	**-0.6**
	4.8nm,0.4s						
MRKS				Lg	Lg	20 23 57.1	
	5.0nm,0.4s						
TRKS	**Terek-Say**	**3.39**	**307**	⇑*i*P	**Pn**	**20 23 06.5**	**+0.1**
	baz=6.0						
TRKS				⇑*i*S	**Sn**	**20 23 47.3**	**+0.5**
	baz=6.0						
TKM2	**Tokmak 2**	**3.42**	**10**	P	**Pn**	**20 23 09.5**	**+2.8**
	SNR=6.8						
TKM2	**Tokmak 2**	**3.42**	**10**	⇑Pn	**Pn**	**20 23 09.0**	**+2.2**
	6.5nm,0.6s						
TKM2				⇑Sn	**Sb**	**20 23 54.2**	**-1.5**
	8.8nm,0.8s						
TKM2	**Tokmak 2**	**3.42**	**10**	⇑*e*P	**Pn**	**20 23 07.4**	**+0.6**
	baz=10.0						
TKM2				⇑*i*S	**Sn**	**20 23 49.2**	**+1.7**
	baz=10.0						
CHMS	**Chumysh**	**3.44**	**360**	P	**Pn**	**20 23 09.8**	**+2.9**
	SNR=6.5						
GAR	**Garm**	**3.50**	**262**	⇓*i*P	**Pn**	**20 23 08.1**	**+0.4**
	baz=63						
GAR				⇓*i*S	**Sn**	**20 23 50.6**	**+1.4**
	baz=63						
DGS	**Degeres**	**3.76**	**11**	*e*P	**Pb**	**20 23 17.7**	**-2.0**
	5.7nm,0.5s						
DGS				*e*S	**Sb**	**20 24 08.7**	**+3.3**
	4.0nm,0.7s						
DGS	**Degeres**	**3.76**	**11**	Pg	**Pb**	**20 23 19.5**	**-0.2**
	5.7nm,0.5s						
DGS				Lg	Lg	20 24 08.7	
	4.0nm,0.7s						
KUU	**Kurty**	**4.49**	**15**	*e*P	**Pb**	**20 23 31.6**	**-0.5**
	3.5nm,0.4s						
KUU				*e*S	**Sg**	**20 24 32.7**	**-4.7**
	4.9nm,0.6s						
KUU	**Kurty**	**4.49**	**15**	Pg	**Pb**	**20 23 33.6**	**+1.4**
	3.5nm,0.4s						
KUU				Lg	Lg	20 24 32.7	
	4.9nm,0.6s						
KK31	**Karatay Array**	**4.78**	**319**	⇑Pg	**Pb**	**20 23 37.9**	**+0.9**
	0.3nm,0.3s,baz=142,slow=15,SNR=4.7						
KK31				⇓Sn	**Sn**	**20 24 23.0**	**+2.4**
	0.5nm,0.4s						
KK31				⇑Lg	Lg	20 24 43.9	
	2.1nm,0.7s,baz=139,slow=30						

IDC ***13*** *20:24:50.5±9.8, 38.°43N×13.°84E, h308^{km}±35^{km}, mb3.1/3, mb1 3.0/5, mb1mx2.7/59, mbtmp3.6/5, Error ellipse: s-maj=184.4km s-min=27.0km az=48.0*

ROM ***13*** *20:24:54.5±0.2, 38.°80N±0.°01×14.°97E±0.°02, h288^{km}±1^{km}, ML3.0/35, Error ellipse: s-maj=2.1km s-min=1.1km az=126.0*

ISC 13 20:24:55.1±1.1**, 38.°79N**±0.°07×**14.°99E**±0.°08**, h282**^{km}±8^{km}**, n73, σ1^{s}27**/83**, mb3.7**/3**, 7C-7D, Sicily**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IST3	**Stromboli F**	**0.19**	**88**	P	**Pn**	**20 25 32.5**	**+1.3**
IST3				AML	AML		
	comp=N,266µm,0.4s						
IST3				AML	AML		
	comp=E,229µm,1.1s						
LLI	**Lipari**	**0.35**	**185**	P	**Pn**	**20 25 32.8**	**+1.3**
IFIL	**Filicudi I Eol**	**0.40**	**235**	P	**Pn**	**20 25 32.4**	**+0.8**
IFIL				AML	AML		
	comp=N,192µm,0.4s						
IFIL				AML	AML		
	comp=E,532µm,0.5s						
VPL	**Vulcano Piano**	**0.41**	**180**	P	**Pn**	**20 25 32.3**	**+0.6**
VPL				AML	AML		
	comp=N,386µm,1.3s						
VPL				AML	AML		
	comp=N,386µm,1.3s						
VPL				AML	AML		
	comp=E,322µm,1.3s						
MILZ	**Milazzo**	**0.55**	**160**	P	**Pn**	**20 25 31.8**	**-0.1**
MILZ				S	**S**	**20 26 01.0**	**0.0**
MILZ				AML	AML		
	comp=N,202µm,0.7s						
MILZ				AML	AML		
	comp=E,204µm,0.4s						
MILZ				AML	AML		
	comp=N,170µm,0.7s						
MILZ				AML	AML		
	comp=N,202µm,0.7s						
MILZ				AML	AML		
	comp=E,220µm,0.4s						
IACL	**Alicudi**	**0.56**	**243**	P	**Pn**	**20 25 32.8**	**+0.8**
MSRU	**Castanea**	**0.67**	**142**	P	**Pn**	**20 25 32.7**	**+0.3**
MSRU				S	**S**	**20 26 01.5**	**-0.3**
MSRU				AML	AML		
	comp=E,192µm,1.1s						
MSRU				AML	AML		
	comp=N,215µm,0.3s						
MSRU				AML	AML		
	comp=N,216µm,0.3s						
MSRU				AML	AML		
	comp=E,214µm,1.1s						
MPNC	**Port Mandanici**	**0.71**	**156**	P	**Pn**	**20 25 33.1**	**+0.6**
MPNC				S	**S**	**20 26 02.2**	**+0.2**
MPNC				AML	AML		
	comp=E,150µm,0.6s						
MPNC				AML	AML		
	comp=N,161µm,1.4s						
JOPP	**Joppolo**	**0.73**	**104**	P	**Pn**	**20 25 33.0**	**+0.5**
JOPP				S	**S**	**20 26 01.8**	**-0.3**
JOPP				AML	AML		
	comp=E,190µm,0.3s						
JOPP				AML	AML		
	comp=E,189µm,0.3s						
JOPP				AML	AML		
	comp=N,171µm,0.4s						
MUCR	**Ucria**	**0.75**	**187**	P	**Pn**	**20 25 33.5**	**+0.7**
MUCR				AML	AML		
	comp=E,30µm,1.3s						
MUCR				AML	AML		
	comp=N,32µm,0.3s						
MUCR				AML	AML		
	comp=E,55µm,0.4s						
MUCR				AML	AML		
	comp=N,42µm,1.1s						
MCSR	**Castroreale**	**0.76**	**164**	P	**Pn**	**20 25 33.5**	**+0.7**
MCSR				AML	AML		
	comp=E,170µm,0.8s						
MCSR				AML	AML		
	comp=N,228µm,0.3s						
MCSR				AML	AML		
	comp=E,194µm,0.3s						
MCSR				AML	AML		
	comp=N,238µm,0.3s						
NOV	**Novara**	**0.77**	**171**	P	**Pn**	**20 25 33.9**	**+1.1**
NOV				AML	AML		
	comp=N,92µm,1.6s						
NOV				AML	AML		
	comp=E,94µm,0.3s						
NOV				AML	AML		
	comp=N,78µm,0.3s						
NOV				AML	AML		
	comp=E,126µm,0.6s						
MSFR	**San Fratello**	**0.82**	**202**	P	**Pn**	**20 25 33.8**	**+0.8**
AIO	**Antillo**	**0.84**	**167**	P	**Pn**	**20 25 34.3**	**+1.2**
AIO				AML	AML		
	comp=E,67µm,0.6s						
AIO				AML	AML		
	comp=N,98µm,0.6s						
AIO				AML	AML		
	comp=N,98µm,0.6s						
AIO				AML	AML		
	comp=E,84µm,0.4s						
MSCL	**Scilla**	**0.84**	**131**	P	**Pn**	**20 25 33.9**	**+0.8**
MSCL				S	**S**	**20 26 02.6**	**-0.5**
MSCL				AML	AML		
	comp=E,249µm,1.1s						
MSCL				AML	AML		
	comp=N,208µm,0.1s						
MSCL				AML	AML		
	comp=N,383µm,0.4s						
MSCL				AML	AML		
	comp=E,522µm,0.5s						
CEL	**Celeste**	**0.89**	**127**	P	**Pn**	**20 25 33.8**	**+0.6**
MNO	**Monte Soro**	**0.89**	**195**	P	**Pn**	**20 25 34.5**	**+1.1**
MNO				AML	AML		
	comp=E,64µm,0.3s						
MNO				AML	AML		
	comp=N,57µm,0.6s						
GMB	**Gambarie**	**0.91**	**133**	P	**Pn**	**20 25 34.2**	**+0.8**
GMB				S	**S**	**20 26 03.6**	**-0.1**
GMB				AML	AML		
	comp=E,1190µm,0.3s						
GMB				AML	AML		
	comp=N,766µm,0.9s						
MTTG	**Motta San Giov**	**0.96**	**145**	P	**Pn**	**20 25 34.7**	**+1.1**
MTTG				S	**S**	**20 26 03.5**	**-0.5**
MTTG				AML	AML		
	comp=E,75µm,0.5s						
MTTG				AML	AML		
	comp=N,116µm,0.5s						
MTTG				AML	AML		
	comp=E,92µm,0.4s						
MTTG				AML	AML		
	comp=N,172µm,0.5s						
EMSG	**Monte Spagnolo**	**0.97**	**182**	P	**Pn**	**20 25 36.2**	**+2.4**
EPZF	**Pizzo Felice**	**0.97**	**186**	P	**Pn**	**20 25 35.7**	**+1.9**
EPZF				AML	AML		
	comp=N,131µm,0.5s						
EPZF				AML	AML		
	comp=E,97µm,0.5s						
CET2	**Cetraro**	**1.05**	**45**	P	**Pn**	**20 25 34.5**	**+0.6**
CET2				AML	AML		
	comp=E,252µm,0.8s						
CET2				AML	AML		
	comp=N,192µm,0.8s						
CET2				AML	AML		
	comp=N,204µm,0.8s						
CET2				AML	AML		
	comp=E,276µm,0.8s						
CAR1	**CAROLEI**	**1.06**	**64**	P	**Pn**	**20 25 34.3**	**+0.4**
CAR1				AML	AML		
	comp=E,234µm,0.5s						
CAR1				AML	AML		
	comp=N,222µm,0.6s						
CAR1				AML	AML		
	comp=E,246µm,0.5s						
CAR1				AML	AML		
	comp=N,227µm,0.5s						
GIB	**Gibilmanna**	**1.10**	**224**	P	**Pn**	**20 25 34.7**	**+0.3**
SOI	**Samo**	**1.10**	**130**	P	**Pn**	**20 25 35.0**	**+0.8**
SOI				S	**S**	**20 26 04.4**	**-0.8**
SOI				AML	AML		
	comp=E,91µm,1.2s						
SOI				AML	AML		
	comp=N,101µm,0.6s						
SOI				AML	AML		
	comp=E,49µm,0.3s						
SOI				AML	AML		
	comp=N,69µm,0.2s						
GRI	**Girifalco**	**1.12**	**88**	P	**Pn**	**20 25 35.5**	**+1.2**
CSLB	**Castelbuono**	**1.12**	**221**	P	**Pn**	**20 25 34.8**	**+0.4**
CSLB				AML	AML		
	comp=E,13µm,1.3s						
CSLB				AML	AML		
	comp=E,13µm,1.3s						
CSLB				AML	AML		
	comp=N,20µm,0.6s						
MPAZ	**Palizzi**	**1.16**	**136**	P	**Pn**	**20 25 35.8**	**+1.2**
MPAZ				S	**S**	**20 26 06.4**	**+0.6**
SPS2	**Spezzano della**	**1.17**	**64**	P	**Pn**	**20 25 35.3**	**+0.8**
SPS2				AML	AML		
	comp=E,12µm,0.9s						
SPS2				AML	AML		
	comp=N,37µm,0.4s						
SPS2				AML	AML		
	comp=E,59µm,0.8s						
SPS2				AML	AML		
	comp=N,81µm,0.4s						
PETRA	**Petralia Sopra**	**1.18**	**216**	⇑P	**Pn**	**20 25 36.0**	**+1.2**
PETRA				AML	AML		
	comp=N,80µm,1.1s						
PETRA				AML	AML		
	comp=E,61µm,1.5s						
PLAC	**Placanica**	**1.19**	**106**	P	**Pn**	**20 25 35.5**	**+0.8**
PLAC				AML	AML		
	comp=E,237µm,0.8s						
PLAC				AML	AML		
	comp=N,194µm,1.3s						
ECNV	**Catenanuova**	**1.21**	**190**	⇑P	**Pn**	**20 25 37.2**	**+2.3**
CAGR	**Agira**	**1.23**	**198**	P	**Pn**	**20 25 37.0**	**+2.0**
CAGR				AML	AML		
	comp=E,66µm,0.5s						
CAGR				AML	AML		
	comp=N,84µm,0.4s						
CAGR				AML	AML		
	comp=E,66µm,0.5s						
T0702	**Acquaformosa (**	**1.26**	**42**	P	**Pn**	**20 25 35.7**	**+0.6**
BULG	**Bulgheria - Ca**	**1.32**	**13**	P	**Pn**	**20 25 36.6**	**+1.1**
CELI	**Celico**	**1.33**	**62**	P	**Pn**	**20 25 36.9**	**+1.3**
CELI				S	**S**	**20 26 06.7**	**-1.0**
CELI				AML	AML		
	comp=E,166µm,0.4s						
CELI				AML	AML		
	comp=N,248µm,0.6s						
SERS	**Sersale**	**1.35**	**79**	⇓P	**Pn**	**20 25 36.9**	**+1.2**
SERS				S	**S**	**20 26 07.5**	**-0.4**
SERS				AML	AML		
	comp=E,39µm,0.4s						
SERS				AML	AML		
	comp=N,36µm,1.2s						
SERS				AML	AML		
	comp=N,146µm,0.4s						
SERS				AML	AML		
	comp=E,150µm,0.4s						
RESU	**Resuttano**	**1.36**	**213**	⇑P	**Pn**	**20 25 37.4**	**+1.6**
RESU				AML	AML		
	comp=N,42µm,1.6s						
RESU				AML	AML		
	comp=E,37µm,0.6s						
RESU				AML	AML		
	comp=N,42µm,0.6s						
CUC	**Castrocucco**	**1.36**	**28**	P	**Pn**	**20 25 36.6**	**+1.0**
TDS	**Terranova Siba**	**1.36**	**50**	P	**Pn**	**20 25 36.8**	**+1.2**
TDS				AML	AML		
	comp=N,27µm,1.6s						
TDS				AML	AML		
	comp=E,36µm,1.2s						
MGR	**Morigerati**	**1.41**	**18**	P	**Pn**	**20 25 37.1**	**+1.2**
ALJA	**Alia**	**1.42**	**223**	P	**Pn**	**20 25 37.2**	**+1.0**
ALJA				AML	AML		
	comp=E,78µm,0.8s						
ALJA				AML	AML		
	comp=N,67µm,0.7s						
ALJA				AML	AML		
	comp=E,78µm,0.8s						
MPG	**Monte Pellegri**	**1.42**	**244**	P	**Pn**	**20 25 36.4**	**+0.3**
MPG				AML	AML		
	comp=E,46µm,0.2s						
MPG				AML	AML		
	comp=N,35µm,1.2s						
TIP	**Timpagrande**	**1.43**	**74**	⇓P	**Pn**	**20 25 37.4**	**+1.2**
TIP				AML	AML		
	comp=E,107µm,1.2s						
TIP				AML	AML		
	comp=N,75µm,0.5s						
HLNI	**Lentini**	**1.45**	**184**	⇓P	**Pn**	**20 25 37.0**	**+0.8**
HLNI				AML	AML		
	comp=E,35µm,1.2s						
HLNI				AML	AML		
	comp=N,45µm,0.5s						
HAGA	**Augusta**	**1.51**	**175**	P	**Pn**	**20 25 37.5**	**+0.8**
HAGA				AML	AML		
	comp=E,36µm,0.9s						
HAGA				AML	AML		
	comp=N,61µm,1.3s						
SALB	**San Lorenzo Be**	**1.51**	**44**	P	**Pn**	**20 25 38.0**	**+1.2**
SALB				S	**S**	**20 26 08.9**	**-0.8**
SALB				AML	AML		
	comp=E,54µm,0.4s						
SALB				AML	AML		
	comp=N,39µm,0.7s						
SIRI	**Monte Sirino -**	**1.55**	**26**	P	**Pn**	**20 25 37.5**	**+0.6**
MCT	**Mte Cammarata**	**1.57**	**223**	P	**Pn**	**20 25 39.2**	**+1.8**
PIPA	**Pietrapaola**	**1.58**	**63**	P	**Pn**	**20 25 38.5**	**+1.4**
MTSN	**Montesano sull**	**1.59**	**22**	P	**Pn**	**20 25 37.8**	**+0.6**
CORL	**Corleone**	**1.60**	**236**	P	**Pn**	**20 25 37.8**	**+0.4**
LADO	**San Nicola del**	**1.63**	**72**	P	**Pn**	**20 25 38.4**	**+0.9**
SSY	**Sortino**	**1.64**	**178**	P	**Pn**	**20 25 40.1**	**+2.4**
SSY				AML	AML		
	comp=E,43µm,1.0s						
SSY				AML	AML		
	comp=N,118µm,0.2s						
RAFF	**Raffo Rosso**	**1.64**	**198**	⇓P	**Pn**	**20 25 38.7**	**+1.0**
MCEL	**Monticello**	**1.66**	**22**	P	**Pn**	**20 25 38.8**	**+1.1**
MEU	**Monte Lauro**	**1.69**	**182**	⇓P	**Pn**	**20 25 39.1**	**+1.0**
AG11	**Viggiano (PZ)**	**1.71**	**26**	P	**Pn**	**20 25 39.7**	**+1.6**
TT08	**Gorgoglione (M**	**1.81**	**30**	P	**Pn**	**20 25 40.9**	**+2.1**
CLTA	**Licata**	**1.82**	**207**	⇑P	**Pn**	**20 25 40.3**	**+1.3**
CLTA				AML	AML		
	comp=E,128µm,0.2s						
CLTA				AML	AML		
	comp=N,194µm,1.2s						
HAVL	**Avola**	**1.83**	**177**	⇓P	**Pn**	**20 25 40.2**	**+1.0**
FAVR	**Favara**	**1.84**	**215**	⇑P	**Pn**	**20 25 41.1**	**+1.9**
MMGO	**Monte Magaggia**	**1.94**	**235**	⇑P	**Pn**	**20 25 39.9**	**-0.1**
MCRV	**Calabrutti - M**	**1.99**	**4**	P	**Pn**	**20 25 42.2**	**+1.9**
AMUR	**Altamura**	**2.45**	**30**	S	**S**	**20 26 24.0**	**+0.6**
CSP1	**Cessapalombo**	**4.50**	**343**	⇑P	Pn	20 26 17.3	+11
STON	**Ston**	**4.56**	**26**	P	**Pn**	**20 26 09.0**	**+2.3**
MMUR	**Monte Murano**	**4.88**	**343**	⇓P	**Pn**	**20 26 14.3**	**+3.7**
IDI	**Anoyia**	**8.65**	**111**	P	Pn	20 27 00.9	+4.1
	comp=N,0.4nm,0.3s,baz=298,slow=11,SNR=6.4						
GERES	**GERESS Array B**	**10.09**	**355**	P	**Pn**	**20 27 14.1**	**-0.4**
	comp=N,0.2nm,0.3s,baz=173,slow=12,SNR=5.1						
HFS	**Hagfors**	**21.38**	**358**	P	**P**	**20 29 16.8**	**-3.7**
	comp=N,2.5nm,0.7s,baz=182,slow=13,SNR=5.9						
FINES	**FINESS Array B**	**23.70**	**13**	P	**P**	**20 29 39.7**	**-1.8**
	comp=N,3.4nm,0.9s,baz=194,slow=9.3,SNR=9.5						
MKAR	**Makanchi Array**	**48.66**	**58**	P	**P**	**20 33 11.3**	**+0.4**
	comp=N,0.2nm,0.5s,baz=274,slow=7.0,SNR=5.0						

SJA ***13*** *20:28:19.3±0.7, 29.°72S×72.°10W, h12^{km}, ML4.3, MW4.1*

NEIC ***13*** *20:28:20.4±2.9, 29.°75S±0.°04×72.°00W±0.°04, h18^{km}±6^{km}, mb4.3/1, ML4.4(GUC), Error ellipse: s-maj=6.5km s-min=5.3km az=152.0*

IDC ***13*** *20:28:20.6±1.1, 29.°90S×71.°84W, h0^{km}, mb3.6/2, mb1 3.8/5, mb1mx3.6/29, mbtmp3.7/5, ML3.6/3, MS3.1/3, Ms1 3.1/3, ms1mx3.0/27, Error ellipse: s-maj=42.0km s-min=26.1km az=121.0*

GUC ***13*** *20:28:23.8±0.7, 29.°84S×71.°78W, h23^{km}±5^{km}, ML4.4*

ISC 13 20:28:21.4±1.3**, 29.°81S**±0.°02×**71.°86W**±0.°04**, h9**^{km}±8^{km}**, n96, σ2^{s}12**/114**, mb4.1**/3**, 5C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	**La Serena**	**0.55**	**101**	⇑*e*P	**Pg**	**20 28 33.6**	**+1.5**
CO05				*e*S	**Sg**	**20 28 40.3**	**+0.9**
CO05				IAML		20 28 41.1	
	comp=N,30µm,0.3s						
CO05	**La Serena**	**0.55**	**101**		**Pg**	**20 28 33.6**	**+1.5**
CO05				Sg	**Sb**	**20 28 40.6**	**-0.7**
CO06	**Fray Jorge**	**0.88**	**167**	*e*P	**Pg**	**20 28 39.1**	**+0.7**
CO06				*i* S	**Sg**	**20 28 50.7**	**+0.9**
CO06	**Fray Jorge**	**0.88**	**167**		**Pg**	**20 28 39.0**	**+0.7**
CO06					**Sg**	**20 28 51.4**	**+1.6**
GO04	**Tololo Observa**	**0.99**	**112**	⇑*e*P	**Pg**	**20 28 40.7**	**+0.3**
GO04				*e*S	**Sg**	**20 28 52.7**	**-0.6**
GO04				IAML		20 29 00.3	
	comp=E,32µm,0.5s						
GO04	**Tololo Observa**	**0.99**	**112**		**Pg**	**20 28 40.8**	**+0.3**
GO04	**Tololo Observa**	**0.99**	**112**	*e*P	**Pb**	**20 28 41.9**	**+1.0**
GO04				*e*S	**Sn**	**20 28 59.4**	**+3.3**
LCO	**Las Campanas**	**1.29**	**52**	*e*P	**Pn**	**20 28 45.8**	**-0.1**
LCO				*e*S	**Sb**	**20 29 02.9**	**0.0**
LCO	**Las Campanas**	**1.29**	**52**	Pn	**Pn**	**20 28 45.6**	**-0.3**
LCO					**Sb**	**20 29 02.6**	**-0.2**
LCO	**Las Campanas**	**1.29**	**52**	*e*P	**Pn**	**20 28 46.0**	**+0.1**
AC04	**Llanos de Chal**	**1.75**	**24**	*e*P	**Pn**	**20 28 51.8**	**-0.1**
AC04				*e*S	**Sn**	**20 29 13.5**	**-0.8**
AC04	**Llanos de Chal**	**1.75**	**24**		**Pn**	**20 28 51.7**	**-0.3**
AC04	**Llanos de Chal**	**1.75**	**24**	*e*P	**Pn**	**20 28 51.9**	**0.0**
AC04				*e*S	**Sn**	**20 29 12.3**	**-2.1**
AROD	**Rodeo**	**2.10**	**100**	*e*P	**Pb**	**20 29 00.0**	**+0.1**
AROD				*e*S	**Sg**	**20 29 28.1**	**-0.9**
ACCO	**Cerro Coronel**	**2.54**	**108**	*e*P	**Pb**	**20 29 07.0**	**-0.4**
ACCO				*e*S	**Sg**	**20 29 42.7**	**-0.4**
GO03	**Copiap**	**2.63**	**33**	⇑*e*P	**Pn**	**20 29 04.8**	**+0.6**
GO03				*e*S	**Sn**	**20 29 38.9**	**+2.6**
GO03	**Copiap**	**2.63**	**33**		**Pn**	**20 29 04.2**	**0.0**
GO03	**Copiap**	**2.63**	**33**	*e*P	**Pn**	**20 29 05.0**	**+0.8**
GO03				*e*S	**Sn**	**20 29 37.3**	**+0.9**
VA06	**Catapilco**	**2.78**	**170**	⇑*e*P	**Pn**	**20 29 07.8**	**+1.6**
VA06				*e*S	**Sn**	**20 29 37.1**	**-2.8**
VA06				IAML		20 29 57.7	
	comp=N,2µm,0.4s						
RTLS	**Leoncito**	**2.96**	**133**	*e*P	**Pb**	**20 29 13.5**	**-1.1**
RTLS				*e*P	Pn	20 29 14.0	+5.0
RTLS				*e*S	**Sg**	**20 29 55.0**	**-1.6**
RTLS				IAML		20 29 55.6	
	comp=Z,593nm,1.2s						
VA03	**San Esteban**	**3.15**	**159**	⇑*e*P	**Pn**	**20 29 13.5**	**+2.2**
VA03				*e*S	**Sn**	**20 29 51.6**	**+2.5**
VA03				IAML		20 30 07.0	
	comp=E,1µm,0.5s						
VA03	**San Esteban**	**3.15**	**159**		**Pn**	**20 29 12.5**	**+1.2**
VA03	**San Esteban**	**3.15**	**159**	*e*P	**Pn**	**20 29 13.9**	**+2.5**
VA03				*e*P	Pb	20 29 14.0	-3.6
VA03				*e*S	**Sb**	**20 29 56.8**	**+0.6**
VA03				IAML		20 30 05.8	
	comp=Z,696nm,1.1s						
VA01	**Torpederas**	**3.21**	**177**		Pn	20 29 08.5	-3.4
AUSP	**Uspallata**	**3.21**	**139**	*e*P	**Pn**	**20 29 11.8**	**-0.5**
AUSP				*e*P	**Pb**	**20 29 16.9**	**-1.9**
AUSP				*e*S	**Sn**	**20 29 47.8**	**-3.1**
ROCH	**El Roble**	**3.23**	**167**	*e*P	**Pn**	**20 29 14.4**	**+1.9**
ROCH				*e*S	**Sn**	**20 29 51.8**	**+0.4**
ROCH				IAML		20 30 11.2	
	comp=E,914nm,0.7s						
ZON	**Zonda**	**3.24**	**123**		**Pn**	**20 29 12.5**	**0.0**
VCA	**Vinchina**	**3.37**	**72**	*e*P	**Pn**	**20 29 14.8**	**+0.3**
VCA				*e*P	**Pb**	**20 29 20.0**	**-1.4**
VCA				*e*S	**Sg**	**20 30 13.9**	**+4.2**
VCA				IAML		20 30 15.9	
	comp=Z,605nm,0.5s						
PEL	**Peldehue**	**3.47**	**163**	Pn	**Pn**	**20 29 16.4**	**+0.7**
PEL	**Peldehue**	**3.47**	**163**	*e*P	**Pn**	**20 29 18.0**	**+2.3**
PEL				*e*S	**Sg**	**20 30 13.0**	**+0.1**
MT02	**Curacav**	**3.49**	**170**	*e*P	**Pn**	**20 29 17.3**	**+1.4**
MT02				*e*S	**Sn**	**20 29 59.5**	**+2.1**
MT02				IAML		20 30 16.6	
	comp=E,355nm,0.4s						
MT02	**Curacav**	**3.49**	**170**		**Pn**	**20 29 17.1**	**+1.2**
MT02	**Curacav**	**3.49**	**170**	*e*P	**Pn**	**20 29 18.0**	**+2.1**
MT02				*e*S	**Sn**	**20 30 02.8**	**+5.3**
MT02				IAML		20 30 15.0	
	comp=Z,499nm,1.4s						
RTCV	**Cerro Valdivia**	**3.51**	**126**	*e*P	**Pn**	**20 29 20.0**	**+3.7**
RTCV				*e*S	**Sb**	**20 30 06.3**	**-0.4**
MT05	**Renca**	**3.69**	**165**	*e*P	**Pn**	**20 29 21.1**	**+2.3**
MT05	**Renca**	**3.69**	**165**		**Pn**	**20 29 19.3**	**+0.5**
MT05	**Renca**	**3.69**	**165**	*e*P	**Pn**	**20 29 22.3**	**+3.5**
MT05				*e*S	**Sb**	**20 30 11.8**	**-0.1**
MT05				IAML		20 30 24.6	
	comp=Z,630nm,0.9s						
ASAL	**Salagasta**	**3.79**	**138**	*e*P	Pn	20 29 25.0	+4.8
ASAL				*e*S	**Sb**	**20 30 15.8**	**+1.0**
AC02	**Maricunga**	**3.82**	**40**	Pn	**Pn**	**20 29 22.4**	**+1.5**
AC02	**Maricunga**	**3.82**	**40**	*e*P	**Pn**	**20 29 22.7**	**+1.8**
AC02				*e*S	**Sn**	**20 30 11.8**	**+5.5**
AC02				IAML		20 30 25.8	
	comp=Z,278nm,0.4s						
VA05	**Santo Domingo**	**3.84**	**177**	*e*P	**Pn**	**20 29 21.1**	**+0.4**
VA05	**Santo Domingo**	**3.84**	**177**		**Pn**	**20 29 20.9**	**+0.2**
AVFE	**Valle Fertil**	**3.91**	**104**	*e*P	**Pn**	**20 29 25.0**	**+3.3**
AVFE				*e*P	Pb	20 29 25.0	-5.5
AVFE				*e*S	**Sb**	**20 30 14.8**	**-3.2**
AVFE				IAML		20 30 25.4	
	comp=Z,306nm,0.7s						
ARCO	**CERRO ARCO**	**3.92**	**141**	*e*P	Pn	20 29 27.0	+4.9
ARCO				*e*S	**Sb**	**20 30 16.8**	**-1.8**
ARCO				IAML		20 30 33.8	
	comp=Z,425nm,1.0s						
MT09	**Talagante**	**4.02**	**170**	*e*P	**Pn**	**20 29 25.0**	**+1.6**
MT09				*e*S	**Sn**	**20 30 08.9**	**-1.8**
MT09	**Talagante**	**4.02**	**170**		**Pn**	**20 29 24.9**	**+1.5**
MT01	**Popeta**	**4.07**	**173**	*e*P	**Pn**	**20 29 24.8**	**+0.8**
MT01	**Popeta**	**4.07**	**173**		**Pn**	**20 29 24.4**	**+0.4**

AAGR	**Agrelo**	**4.17**	**142**	*e*P	**Pn**	**20 29 26.8**	**+1.4**
AAGR				*e*P	Pb	20 29 31.0	-4.0
AAGR				*e*S	**Sg**	**20 30 36.1**	**+0.8**
LMEL	**Las Melosas**	**4.26**	**161**	*e*P	**Pn**	**20 29 29.6**	**+2.9**
ACLC	**CERRO LA CRUZ**	**4.29**	**86**	*e*P	**Pn**	**20 29 25.3**	**-1.9**
ACLC				*e*P	Pb	20 29 31.0	-6.2
ACLC				*e*S	**Sb**	**20 30 25.3**	**-4.0**
ACLC				IAML		20 30 35.2	
	comp=Z,448nm,0.5s						
BO04	**La Punta**	**4.30**	**166**	*e*P	**Pn**	**20 29 28.7**	**+1.7**
BO01	**Tunca**	**4.61**	**172**	*e*P	**Pn**	**20 29 32.2**	**+0.9**
BO01	**Tunca**	**4.61**	**172**	Pn	**Pn**	**20 29 29.5**	**-1.9**
BO01	**Tunca**	**4.61**	**172**	*e*P	**Pn**	**20 29 33.0**	**+1.6**
APLL	**PUNTA DE LOS L**	**4.66**	**98**	*e*P	**Pn**	**20 29 35.7**	**+3.6**
ACHE	**Chepes**	**4.68**	**108**	*e*S	**Sb**	**20 30 34.3**	**-6.2**
BO02	**Sierra Bellavi**	**5.05**	**170**	*e*P	**Pn**	**20 29 38.6**	**+1.2**
BO02	**Sierra Bellavi**	**5.05**	**170**		**Pn**	**20 29 35.4**	**-2.0**
BO02	**Sierra Bellavi**	**5.05**	**170**	*e*P	**Pn**	**20 29 39.3**	**+1.8**
BO02				*e*S	**Sn**	**20 30 44.3**	**+8.3**
BO02				IAML		20 31 02.1	
	comp=Z,192nm,1.0s						
GO05	**Huala**	**5.18**	**181**	Pn	**Pn**	**20 29 38.2**	**-1.0**
PB14	**IPOC Station P**	**5.33**	**14**	Pn	Pn	20 29 34.8	-6.7
PB14	**IPOC Station P**	**5.33**	**14**	*e*P	**Pn**	**20 29 40.0**	**-1.5**
CYA	**Choya**	**5.47**	**77**	*e*P	**Pn**	**20 29 46.0**	**+2.7**
CYA				*e*S	**Sn**	**20 30 49.3**	**+2.8**
RFA	**San Rafael**	**5.72**	**151**	*e*P	**Pn**	**20 29 44.3**	**-2.4**
RFA				*e*P	Pb	20 29 49.3	-12
ML02	**Panimavida**	**5.95**	**177**		**Pn**	**20 29 47.2**	**-2.5**
PB10	**IPOC Station P**	**6.38**	**11**	Pn	Pn	20 29 49.5	-6.2
PB15	**IPOC Station P**	**6.92**	**19**	Pn	**Pn**	**20 30 01.2**	**-2.1**
H03N1	**Juan Fernandez**	**7.01**	**237**	Pn	**Pn**	**20 30 03.4**	**-0.7**
	baz=145,slow=75,SNR=39						
H03N1				T	T	20 37 28.2	
	baz=66,slow=71,SNR=891						
H03N2	**Juan Fernandez**	**7.03**	**237**	Pn	**Pn**	**20 30 03.7**	**-0.6**
	baz=145,slow=75,SNR=24						
H03N2				T	T	20 37 29.0	
	baz=66,slow=71,SNR=1047						
H03N3	**Juan Fernandez**	**7.03**	**237**	Pn	**Pn**	**20 30 03.4**	**-0.9**
	baz=145,slow=75,SNR=38						
H03N3				T	T	20 37 26.8	
	baz=66,slow=71,SNR=1003						
VA04	**Juan Fernndez**	**7.06**	**235**	Pn	Pn	20 30 02.7	-2.3
PB06	**IPOC Station P**	**7.37**	**17**	Pn	Pn	20 30 06.4	-3.0
PB04	**IPOC Station P**	**7.61**	**12**	Pn	Pn	20 30 10.1	-2.5
LVC	**Limon Verde**	**7.65**	**21**	Pn	**Pn**	**20 30 12.3**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=144,slow=14,SNR=1.4						
LVC				LR	LR	20 33 33.3	
	comp=Z,211nm,18.4s,baz=214,slow=40						
LVC	**Limon Verde**	**7.65**	**21**	Pn	**Pn**	**20 30 10.9**	**-2.5**
PB07	**IPOC Station P**	**8.25**	**13**	Pn	Pn	20 30 17.1	-4.4
PB09	**IPOC Station P**	**8.32**	**17**	Pn	Pn	20 30 18.3	-4.3
PB01	**IPOC Station P**	**8.99**	**14**	Pn	Pn	20 30 28.1	-3.5
LC01	**Cunco**	**9.06**	**180**	Pn	**Pn**	**20 30 30.9**	**-1.5**
PB08	**IPOC Station P**	**9.94**	**15**	Pn	Pn	20 30 41.3	-3.6
PB11	**IPOC Station P**	**10.21**	**12**	Pn	Pn	20 30 44.4	-3.9
PLCA	**Paso Flores**	**10.95**	**175**	Pn	**Pn**	**20 30 58.8**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=343,slow=12,SNR=3.2						
PLCA	**Paso Flores**	**10.95**	**175**	Pn	**Pn**	**20 30 55.5**	**-2.8**
PB16	**IPOC Station P**	**11.63**	**11**	Pn	Pn	20 31 02.7	-5.4
LPAZ	**La Paz**	**13.89**	**15**	Pn	Pn	20 31 35.8	-3.3
SIV	**San Ignacio**	**16.95**	**38**	P	**Pn**	**20 32 21.8**	**+2.8**
	comp=Z,0.3nm,0.3s,baz=224,slow=12,SNR=8.3						
SIV				LR	LR	20 39 09.4	
	comp=Z,52nm,20.6s,baz=302,slow=38						
NNA	**Nana**	**18.33**	**344**	LR	LR	20 38 01.5	
	comp=Z,61nm,21.2s,baz=216,slow=32						
SNAA	**Sanae**	**55.41**	**159**	P	**P**	**20 37 55.9**	**+0.1**
SNAA				IAmb	IAmb	20 38 05.6	
	comp=Z,2.2nm,0.7s						
TXAR	**Lajitas Array**	**66.18**	**330**	P	**P**	**20 39 11.7**	**+2.1**
	comp=Z,0.2nm,0.7s,baz=146,slow=9.8,SNR=2.9						
TORD	**Torodi Ar. Bea**	**82.66**	**70**	P	**P**	**20 40 46.0**	**+0.3**
	comp=Z,1.1nm,0.8s,baz=264,slow=4.9,SNR=5.8						
WRA	**Warramunga Arr**	**124.46**	**210**	PKP	**PKPdf**	**20 47 21.3**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=163,slow=1.7,SNR=4.7						
H11S2	**WAKE ISLAND Hy**	**125.88**	**272**	T	T	23 06 14.9	
	baz=115,slow=75,SNR=22						
H11S1	**WAKE ISLAND Hy**	**125.89**	**272**	T	T	23 06 12.3	
	baz=115,slow=75,SNR=23						
H11S3	**WAKE ISLAND Hy**	**125.89**	**272**	T	T	23 06 12.8	
	baz=115,slow=75,SNR=15						
ZALV	**Zalesovo Beam**	**150.54**	**28**	PKPbc	**PKPbc**	**20 48 14.0**	**+0.7**
	comp=Z,2.3nm,0.7s,baz=300,slow=3.3,SNR=12						

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*IDC **13** 20:44:08.6±1.3, 1°.91N×99°.20E, h0^{km}, mb3.8/5, mb1 3.8/6, mb1mx3.5/50, mbtmp3.7/6, MS3.1/1, Ms1 3.1/1, ms1mx2.9/47, Error ellipse: s-maj=45.1km s-min=11.7km az=65.0*

*NEIC **13** 20:44:10.3±1.7, 1°.94N±0°.03×99°.04E±0°.06, h10^{km}±1^{km}, mb4.4/5, Error ellipse: s-maj=9.5km s-min=5.4km az=85.0*

*DJA **13** 20:44:12.2±0.3, 2°N±3°×9°9E±°, h10^{km}, M3.7/7, MLv3.7/7*

ISC 13 20:44:09.5±1.6**, 1°.98N**±0°.05×**99°.05E**±0°.05**, h4**^{km}±11^{km}**, n26,** σ**1^{s}.44**/29**, mb4.0**/7**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPSI	**Rantau Prapat**	**0.72**	**350**		**Pg**	**20 44 24.7**	**+1.3**
PSI	**Prapat**	**0.83**	**351**	Pg	**Pg**	**20 44 24.7**	**-0.7**
	20nm,0.3s,baz=169,slow=13,SNR=50						
PSI				Lg	Lg	20 44 35.7	
	30nm,0.3s,baz=160,slow=13,SNR=9.3						
MNSI	**Mandailing Nat**	**1.29**	**156**	P	**Pn**	**20 44 32.3**	**-2.0**
MNSI				S	**Sn**	**20 44 55.1**	**+3.0**
TSI	**Tuntungan**	**1.59**	**342**	P	**Pg**	**20 44 41.0**	**+1.0**
GSI	**Gunungsitoli**	**1.62**	**246**	P	**Pn**	**20 44 38.3**	**-0.6**
GSI				S	**Sb**	**20 45 00.9**	**+0.1**
GSI	**Gunungsitoli**	**1.62**	**246**		**Pn**	**20 44 37.9**	**-0.9**
GSI				Sn	**Sb**	**20 45 00.6**	**-0.2**
TPTI		**2.26**	**304**	P	**Pb**	**20 44 49.8**	**-1.1**
TPTI				S	**Sn**	**20 45 17.7**	**+1.6**
BKNI	**Bangkinang**	**2.58**	**129**	P	**Pb**	**20 44 56.5**	**+0.1**
BKNI				S	**Sb**	**20 45 28.5**	**0.0**
BKNI	**Bangkinang**	**2.58**	**129**		**Pn**	**20 44 51.7**	**-0.4**
PPI	**Padang Panjang**	**2.77**	**151**	P	**Pb**	**20 45 00.7**	**+1.1**
PPI				S	**Sb**	**20 45 30.9**	**-3.0**
PDSI	**Padang**	**3.20**	**154**	P	**Pn**	**20 45 02.3**	**+1.6**
SISI	**Saibi**	**3.28**	**179**	P	**Pn**	**20 45 01.5**	**-0.3**
LHMI	**Lhok Sumawe**	**3.85**	**327**	Pn	**Pn**	**20 45 09.6**	**0.0**
CMAR	**Chiang Mai Arr**	**16.38**	**360**	Pn	**P**	**20 48 03.1**	**-0.3**
	baz=196,slow=13,SNR=2.7						
PALK	**Pallekele**	**19.02**	**287**	LR	LR	20 56 13.8	
	comp=Z,54nm,18.4s,baz=173,slow=38						
WB0	**Warramunga Arr**	**40.87**	**124**	P	**P**	**20 51 51.4**	**-1.6**
WB0				IAmb	IAmb	20 52 11.1	
	comp=Z,9.9nm,1.4s						
WRA	**Warramunga Arr**	**40.90**	**124**	P	**P**	**20 51 51.3**	**-2.1**
	comp=Z,0.9nm,0.7s,baz=302,slow=9.1,SNR=9.4						
WRA	**Warramunga Arr**	**40.90**	**124**	IAmb	IAmb	20 51 52.6	
	comp=Z,0.5nm,1.6s						
WB2	**Warramunga Arr**	**40.91**	**124**	P	**P**	**20 51 50.8**	**-2.6**
WB2				IAmb	IAmb	20 52 08.2	
	comp=Z,8.4nm,1.3s						
WR0	**Warramunga Arr**	**41.08**	**124**	P	**P**	**20 51 53.6**	**-1.1**
MKAR	**Makanchi Array**	**46.97**	**344**	P	**P**	**20 52 42.6**	**+0.9**
	comp=Z,0.2nm,0.4s,baz=153,slow=9.8,SNR=5.9						
ZALV	**Zalesovo Beam**	**53.11**	**350**	P	**P**	**20 53 28.1**	**-0.1**
	comp=Z,1.6nm,0.7s,baz=156,slow=7.5,SNR=5.6						
ABKAR	**Akbulak array**	**57.72**	**331**	P	**P**	**20 54 02.1**	**+0.7**
BRTR	**Keskin Array B**	**69.97**	**312**	P	**P**	**20 55 23.2**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=104,slow=6.1,SNR=3.8						
TIXI	**Tiksi**	**72.11**	**10**	P	**P**	**20 55 34.7**	**-0.1**
	comp=Z,1.1nm,0.6s,baz=214,slow=1.4,SNR=3.1						
TIXI	**Tiksi**	**72.11**	**10**	IAmb	IAmb	20 55 35.4	
	comp=Z,4.7nm,1.2s						

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*NEIC **13** 20:45:57.7±2.2, 78°.36N±0°.08×8°.0E±0°.3, h10^{km}±1^{km}, mb4.6/53, Error ellipse: s-maj=13.5km s-min=7.6km az=338.0*

*NAO **13** 20:45:57.5±2.3, 78°.31N×8°.60E, h3^{km}±13^{km}, ML4.1*

*BER **13** 20:45:57.5±2.8, 78°.30N×7°.87E, h15^{km}±13^{km}, ML3.1, MW3.8, ML3.2(DNK), Confirmed Earthquake*

*IDC **13** 20:45:58.0±0.7, 78°.25N×8°.33E, h0^{km}, mb4.1/18, mb1 4.2/22, mb1mx4.0/58, mbtmp4.1/22, ML3.1/4, MS3.2/3, Ms1 3.2/3, ms1mx3.0/67, Error ellipse: s-maj=12.8km s-min=11.9km az=168.0*

*IEPN **13** 20:45:59.0, 78°.32N×8°.53E, h10^{km}*

*DNK **13** 20:45:59.5±4.9, 78°.37N×7°.55E, h50^{km}±144^{km}, ML3.1*

ISC 13 20:45:57.0±0.4**, 78°.31N**±0°.03×**8°.17E**±0°.03**, h10**^{km}**, n167,** σ**2^{s}.43**/179**, mb4.5**/48**, 6C-3D, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**0.97**	**49**	Pg	**Pg**	**20 46 15.5**	**-0.2**
KBS				Lg	Lg	20 46 26.8	
KBS	**Kingsbay**	**0.97**	**49**	*i* P	**Pg**	**20 46 15.4**	**-0.2**
KBS				IAML		20 46 29.1	
	comp=Z,6µm,0.3s						
KBS				IVMs_BB	IVMs_BB	20 46 59.8	
	comp=Z,6µm,4.4s						
KBS	**Kingsbay**	**0.97**	**49**	⇑*i*P	**Pg**	**20 46 15.5**	**-0.2**
KBS				*e*S	**Sg**	**20 46 27.0**	**-1.3**
KBS				IAML		20 46 29.1	
	comp=Z,6µm,0.3s						
KBS				IAML		20 46 29.4	
	comp=Z,2µm,0.3s						
KBS				IVMs_BB	IVMs_BB	20 46 59.8	
	comp=Z,6µm,4.4s						
KBS	**Kingsbay**	**0.97**	**49**	⇑*i*P	**Pg**	**20 46 15.5**	**-0.2**
KBS				*i* S	**Sg**	**20 46 26.8**	**-1.6**
KBS	**Kingsbay**	**0.97**	**49**		**Pg**	**20 46 15.4**	**-0.3**
BRBB	**Barentsburg B**	**1.26**	**97**	Pn	**Pg**	**20 46 19.9**	**-1.3**
BRBB	**Barentsburg B**	**1.26**	**97**	⇑*i*P	**Pg**	**20 46 19.9**	**-1.3**
BRBB				*e*S	**Sg**	**20 46 35.8**	**-1.8**
BRBA	**Barentsburg A**	**1.27**	**98**	Pn	**Pg**	**20 46 20.0**	**-1.4**
BRBA				Lg	Lg	20 46 35.7	
BRBA	**Barentsburg A**	**1.27**	**98**	⇑*i*P	**Pg**	**20 46 20.0**	**-1.4**
BRBA				*e*S	**Sg**	**20 46 35.9**	**-2.0**
BRBA				IAML		20 46 37.0	
	comp=Z,626nm,0.6s						
BRBA				IAML		20 46 37.2	
	comp=Z,546nm,0.5s						
SPA0	**Spitsbergen Ar**	**1.69**	**90**	Pn	**Pb**	**20 46 26.9**	**-1.2**
	baz=271,slow=16						
SPA0				Pg	**Pg**	**20 46 27.8**	**-1.5**
	baz=272,slow=16						
SPA0				Lg	Lg	20 46 48.2	
	baz=261,slow=37						
SPA0	**Spitsbergen Ar**	**1.69**	**90**	Pn	**Pb**	**20 46 26.9**	**-1.2**
	baz=271,slow=16						
SPA0				Pg	**Pg**	**20 46 27.8**	**-1.5**
	baz=272,slow=16						
SPA0				Sg	**Sb**	**20 46 48.2**	**-1.1**
	baz=261,slow=37						
SPITS	**Spitsbergen Ar**	**1.69**	**90**	Pn	**Pb**	**20 46 27.0**	**-1.2**
	baz=263,slow=13						
SPITS				Sn	**Sg**	**20 46 48.9**	**-2.3**
	baz=282,slow=18,SNR=1.8						
SPB2	**Spitsbergen Ar**	**1.69**	**91**		**Pb**	**20 46 26.9**	**-1.3**
HSPB	**Hornsund (broa**	**2.06**	**126**	Pn	**Pn**	**20 46 30.4**	**-1.1**
HSPB	**Hornsund (broa**	**2.06**	**126**	⇑*i*P	**Pn**	**20 46 30.4**	**-1.1**
HSPB				*e*S	**Sn**	**20 46 55.2**	**-2.0**
HSPB				IAML		20 46 58.6	
	comp=Z,132nm,0.4s						
HSPB				IAML		20 46 58.8	
	comp=Z,131nm,0.4s						
HSPB	**Hornsund (broa**	**2.06**	**126**	⇑*i*P	**Pn**	**20 46 30.4**	**-1.1**
HSPB				*e*S	**Sn**	**20 46 54.8**	**-2.4**
HOPEN	**Hopen**	**4.09**	**108**	Pn	**Pn**	**20 46 59.0**	**-0.5**
HOPEN				Sn	**Sn**	**20 47 45.0**	**-2.4**
HOPEN	**Hopen**	**4.09**	**108**	*e*P	**Pn**	**20 46 58.9**	**-0.7**
HOPEN				*e*S	**Sn**	**20 47 44.0**	**-3.3**
HOPEN				IAML		20 47 50.1	
	comp=Z,80nm,0.6s						
HOPEN				IAML		20 47 50.3	
	comp=Z,82nm,0.4s						
HOPEN	**Hopen**	**4.09**	**108**	*e*P	**Pn**	**20 46 58.3**	**-1.2**
HOPEN				*e*S	**Sn**	**20 47 43.5**	**-3.9**
BJO1	**Bjornoya**	**4.59**	**141**	Pn	**Pn**	**20 47 07.6**	**+1.3**
BJO1				Sn	**Sn**	**20 47 55.6**	**-4.1**
BJO1	**Bjornoya**	**4.59**	**141**	*e*P	**Pn**	**20 47 05.6**	**-0.8**
BJO1				*e*S	**Sn**	**20 47 54.4**	**-5.3**
BJO1				IAML		20 48 00.1	
	comp=Z,66nm,0.9s						
BJO1				IAML		20 48 00.4	
	comp=Z,34nm,0.7s						
BJO1	**Bjornoya**	**4.59**	**141**	*e*P	**Pn**	**20 47 06.0**	**-0.3**
BJO1				*e*S	**Sn**	**20 47 57.1**	**-2.5**
NOR	**Nord**	**5.41**	**319**	*i* P	**Pn**	**20 47 15.0**	**-2.5**
NOR				*e*S	**Sn**	**20 48 11.9**	**-7.8**
NOR				IAML		20 48 16.8	
	comp=Z,7.1nm,0.4s						
NOR	**Nord**	**5.41**	**319**	*i* P	**Pn**	**20 47 15.0**	**-2.5**
NOR				IAML		20 47 31.0	
	comp=Z,21nm,0.9s						
NOR				*e*S	**Sn**	**20 48 11.9**	**-7.8**
DAG	**Danmarks Havn**	**5.97**	**268**	*i* P	**Pn**	**20 47 21.6**	**-3.6**
DAG				*i* S	Sn	20 48 22.7	-11
DAG				IAML		20 48 25.9	
	comp=Z,56nm,1.4s						
DAG	**Danmarks Havn**	**5.97**	**268**	*i* P	**Pn**	**20 47 23.0**	**-2.2**
DAG				*e*S	Sn	20 48 22.7	-11
DAG				IAML		20 48 25.9	
	comp=Z,56nm,1.4s						
ZFI	**Zemlya Franca-**	**7.45**	**52**	*e*P	**Pn**	**20 47 45.1**	**-0.5**
ZFI				*e*S	**Sn**	**20 49 02.7**	**-7.3**
	comp=Z,53nm,3.3s						
DBG	**Daneborg**	**7.75**	**254**	*e*P	**Pn**	**20 47 46.1**	**-3.6**
DBG				*e*S	Sn	20 49 05.8	-12
DBG				IAML		20 49 12.2	
	comp=Z,29nm,0.4s						
DBG	**Daneborg**	**7.75**	**254**	*e*P	**Pn**	**20 47 46.1**	**-3.6**
DBG				*e*S	Sn	20 49 05.8	-12
DBG				IAML		20 49 12.2	
	comp=Z,29nm,0.4s						
JNW	**Jan Mayen West**	**8.48**	**219**	*e*P	**Pn**	**20 47 58.9**	**-0.8**
JNE	**Jan Mayen East**	**8.50**	**219**	*e*P	**Pn**	**20 47 59.1**	**-0.8**
JMIC	**Jan Mayen**	**8.53**	**219**	Pn	**Pn**	**20 47 58.9**	**-1.4**
	baz=42,slow=4.6,SNR=7.3						
JMIC				LR	LR	20 49 50.5	
	comp=Z,44nm,21.2s,baz=91,slow=27						
JMIC	**Jan Mayen**	**8.53**	**219**	*e*P	**Pn**	**20 47 59.2**	**-1.1**
JMI	**Jan Mayen**	**8.61**	**220**	*e*P	**Pn**	**20 48 00.6**	**-0.9**
HAMF	**Hammerfest**	**8.71**	**144**	*e*P	**Pn**	**20 48 00.0**	**-2.7**
HAMF				IAML		20 50 58.8	
	comp=Z,8.5nm,0.8s						
TRO	**Tromso**	**9.19**	**156**	*e*P	**Pn**	**20 48 07.0**	**-2.3**
TRO				*e*S	Sn	20 49 38.4	-14
JETT	**Jettan, Norway**	**9.39**	**153**	*e*P	**Pn**	**20 48 08.2**	**-4.1**
JETT				IAML		20 51 24.4	
	comp=Z,6.5nm,0.7s						
KEV	**Kevo**	**9.95**	**139**	*e*P	**Pn**	**20 48 17.2**	**-2.6**
KEV	**Kevo**	**9.95**	**139**		**Pn**	**20 48 19.6**	**-0.3**
KIF	**Kilpisjarvi**	**9.96**	**153**	Pn	**Pn**	**20 48 19.2**	**-0.8**
KIF				Sn	**Sn**	**20 50 04.9**	**-6.7**
KIF	**Kilpisjarvi**	**9.96**	**153**	*e*	**Pn**	**20 48 19.5**	**-0.5**
ARA0	**ARCESS Array S**	**9.97**	**143**	Pn	**Pn**	**20 48 18.6**	**-1.4**
	baz=346,slow=12						
ARA0				Sn	Sn	20 50 02.4	-9.4
	baz=344,slow=28						
ARA0	**ARCESS Array S**	**9.97**	**143**	Pn	**Pn**	**20 48 18.6**	**-1.4**
	baz=346,slow=12						
ARA0				Sn	Sn	20 50 02.4	-9.4
	baz=344,slow=28						
ARCES	**ARCESS Array B**	**9.97**	**143**	Pn	**Pn**	**20 48 18.7**	**-1.3**
	baz=347,slow=13,SNR=20						
ARCES				LR	LR	20 52 07.2	
	comp=Z,178nm,18.9s,baz=275,slow=37						
ARCES	**ARCESS Array B**	**9.97**	**143**	Pn	**Pn**	**20 48 20.6**	**+0.6**
KTK1	**Kautokeino**	**10.20**	**148**	*e*P	**Pn**	**20 48 20.1**	**-3.1**
LOF	**Lofoten**	**10.34**	**169**	*e*P	**Pn**	**20 48 21.7**	**-3.4**
LOF				IAML		20 51 52.7	
	comp=Z,6.8nm,0.7s						
STEI	**Steigen**	**10.62**	**165**	*e*	**Pn**	**20 48 28.1**	**-0.8**
HEF	**Hetta**	**10.83**	**148**	*e*P	**Pn**	**20 48 28.2**	**-3.6**
SCO	**Scoresbysund**	**11.09**	**241**	*e*P	**Pn**	**20 48 31.2**	**-4.1**
SCO				*i* S	Sn	20 50 20.3	-19
SCO	**Scoresbysund**	**11.09**	**241**	*e*P	**Pn**	**20 48 33.5**	**-1.9**
SCO	**Scoresbysund**	**11.09**	**241**	Pn	**Pn**	**20 48 32.5**	**-2.9**
FAUS	**Fauske**	**11.17**	**166**	*e*P	**Pn**	**20 48 32.4**	**-4.0**
FAUS				IAML		20 52 11.6	
	comp=Z,12nm,1.2s						
KONS	**Konsvik**	**11.96**	**170**	*e*	**Pn**	**20 48 45.4**	**-1.8**
NEEM	**North Greenlan**	**12.02**	**295**	*i* P	Pn	20 48 42.4	-5.9
NEEM				*i* S	Sn	20 50 40.7	-21
STOK	**Stokkvaagen**	**12.12**	**171**	*e*	**Pn**	**20 48 49.1**	**-0.4**
MOR8	**Moi Rana**	**12.34**	**168**	*e*	**Pn**	**20 48 50.9**	**-1.5**
SUMG	**Summit**	**12.66**	**268**	*e*P	Pn	20 48 52.6	-4.6
SUMG				*e*S	Sn	20 50 51.0	-27
SUMG	**Summit**	**12.66**	**268**	*e*P	**Pn**	**20 48 55.0**	**-2.1**
SUMG	**Summit**	**12.66**	**268**	Pn	Pn	20 48 52.2	-5.0
APA0	**Apatity Array**	**12.79**	**133**	Pn	**Pn**	**20 48 56.2**	**-2.4**
	baz=338,slow=14						
APA0	**Apatity Array**	**12.79**	**133**	Pn	**Pn**	**20 48 56.2**	**-2.4**
	baz=338,slow=14						
TULEG	**Thule**	**15.74**	**303**	Pn	**Pn**	**20 49 31.8**	**-6.6**
TULEG				IAmb	IAmb	20 49 52.4	
	comp=Z,28nm,1.1s						
EUNU	**Eureka**	**16.00**	**321**	Pn	**Pn**	**20 49 36.6**	**-5.2**
AMDE	**Amderma**	**16.26**	**92**	P	**Pn**	**20 49 40.0**	**-5.1**
	comp=Z,13nm,0.6s						
NC405	**NORSAR Array S**	**17.32**	**174**	Pn	**P**	**20 49 58.9**	**-1.0**
NC405				IAmb	IAmb	20 50 04.3	
	comp=Z,218nm,2.0s						
NOA	**NORSAR Array B**	**17.38**	**175**	P	**P**	**20 50 02.0**	**+1.3**
	comp=Z,0.0nm,0.3s,baz=351,slow=11,SNR=3.9						
LSH	**Leshukonskoye**	**17.39**	**119**	P	**Pn**	**20 49 54.3**	**-5.0**
	comp=Z,24nm,0.6s						
FIA1	**FINESS Array S**	**17.86**	**151**	P	**P**	**20 50 04.2**	**-1.6**
FIA1				IAmb	IAmb	20 50 15.0	
	comp=Z,41nm,1.3s						
FIA0	**FINESS Array S**	**17.86**	**151**	P	**P**	**20 50 05.2**	**-0.7**
	baz=5.3,slow=12						
FIA0	**FINESS Array S**	**17.86**	**151**	P	**P**	**20 50 05.2**	**-0.7**
	baz=5.3,slow=12						
FINES	**FINESS Array B**	**17.86**	**151**	P	**P**	**20 50 05.5**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=3.6,slow=10,SNR=10						
FINES	**FINESS Array B**	**17.86**	**151**	P	**P**	**20 50 04.3**	**-1.5**
HFS	**Hagfors**	**18.35**	**171**	P	**P**	**20 50 13.8**	**+2.5**
	comp=Z,0.5nm,0.3s,baz=19,slow=9.4,SNR=14						
SFJD	**Kangerlussuaq**	**19.65**	**268**	LR	LR	20 57 55.8	
	comp=Z,194nm,20.2s,baz=8.0,slow=36						
KLMR	**Klimovskoe**	**20.13**	**132**	*e*	Pn	20 50 30.9	-1.6
KLMR				AMP		20 50 32.4	
	comp=Z,9.0nm,0.9s						
PRGR	**Permogore**	**20.37**	**123**	*e*P	Pn	20 50 34.1	-1.3
	comp=Z,88nm,1.0s						
PRGR				*i* S	S	20 53 57.1	-24
NRIK	**Noril'sk**	**21.79**	**70**	P	**P**	**20 50 52.5**	**+4.0**
	comp=Z,9.5nm,0.8s,baz=345,slow=6.9,SNR=8.9						
NRIK	**Noril'sk**	**21.79**	**70**	P	**P**	**20 50 48.6**	**+0.2**
NRIK				IAmb	IAmb	20 50 53.8	
	comp=Z,10nm,0.8s						
PABE	**Paberze**	**23.55**	**157**	P	**P**	**20 51 08.3**	**+1.4**
KIRV	**Kirov**	**23.90**	**122**	P	**P**	**20 51 11.7**	**+1.4**
	comp=Z,20nm,0.6s,baz=325,slow=2.8,SNR=7.5						
TIXI	**Tiksi**	**26.41**	**38**	P	**P**	**20 51 35.9**	**+2.8**
	comp=Z,3.3nm,0.7s,baz=325,slow=8.3,SNR=14						
TIXI	**Tiksi**	**26.41**	**38**	P	**P**	**20 51 35.0**	**+1.9**
CLL	**Collm**	**27.17**	**173**	*e*(P)	**P**	**20 51 44.0**	**+3.9**
ARU	**Arti**	**27.60**	**112**	P	**P**	**20 51 46.1**	**+2.2**
	comp=Z,3.9nm,0.6s,baz=301,slow=4.1,SNR=7.9						
ARU				LR	LR	21 04 53.9	
	comp=Z,5µm,19.1s,baz=172,slow=41						
ARU	**Arti**	**27.60**	**112**	P	**P**	**20 51 45.7**	**+1.8**
ARU				IAmb	IAmb	20 51 51.5	
	comp=Z,11nm,0.7s						
BMRD	**Maredsous**	**28.15**	**185**	*d*PP	P	20 52 37.4	+49
DOU	**Dourbes**	**28.36**	**185**	*d*P	**P**	**20 51 51.3**	**+0.5**
DOU				*d*PP	**PP**	**20 52 54.3**	**-0.2**
AKASG	**Malin Array Be**	**28.77**	**152**	P	**P**	**20 51 55.2**	**+0.8**
	comp=Z,1.8nm,0.5s,baz=351,slow=9.4,SNR=4.9						
VRAC	**Vranov**	**29.28**	**169**	P	**P**	**20 52 01.6**	**+2.6**
	comp=Z,4.5nm,0.9s,baz=358,slow=13,SNR=5.5						
BELG	**Belogornoye**	**29.53**	**128**	P	**P**	**20 52 03.0**	**+1.9**
	comp=Z,12nm,0.8s,baz=317,slow=2.2,SNR=8.4						
GERES	**GERESS Array B**	**29.65**	**173**	P	**P**	**20 52 05.5**	**+3.2**
	comp=Z,1.0nm,0.7s,baz=7.8,slow=11,SNR=5.6						
GERES	**GERESS Array B**	**29.65**	**173**	P	**P**	**20 52 03.0**	**+0.7**
BUR08	**Bucovina Ar. S**	**31.45**	**158**	P	**P**	**20 52 20.1**	**+1.9**
BUR08				IAmb	IAmb	20 52 56.8	
	comp=Z,12nm,1.6s						
BURAR	**Bucovina Array**	**31.48**	**158**	P	**P**	**20 52 20.2**	**+1.7**
BRVK	**Borovoye**	**33.06**	**102**	P	**P**	**20 52 34.0**	**+1.9**
BRVK				IAmb	IAmb	20 52 35.7	
	comp=Z,4.7nm,0.8s						
TEOL	**Teolo**	**33.09**	**175**	P	**P**	**20 52 33.9**	**+1.3**
TEOL				IAmb	IAmb	20 52 36.0	
	comp=Z,12nm,0.7s						
BMAR	**Burnt Mountain**	**33.58**	**341**	P	**P**	**20 52 36.7**	**0.0**
RDOG	**Red Dog Mine**	**33.75**	**354**	P	**P**	**20 52 37.3**	**-0.7**
VLC	**Villacollemand**	**34.28**	**177**	P	**P**	**20 52 42.5**	**-0.4**
VLC				IAmb	IAmb	20 53 23.4	
	comp=Z,6.0nm,0.7s						
DIVS	**Divibare**	**34.64**	**165**	P	**P**	**20 52 47.9**	**+1.8**
ABKAR	**Akbulak array**	**34.69**	**115**	P	**P**	**20 52 48.2**	**+1.8**
ABKAR	**Akbulak array**	**34.69**	**115**	P	**P**	**20 52 47.7**	**+1.4**
OSSC	**Osservatorio P**	**34.92**	**176**	P	**P**	**20 52 50.0**	**+1.6**
OSSC				IAmb	IAmb	20 52 52.6	
	comp=Z,9.9nm,1.3s						
ZAA0	**Zalesovo Array**	**35.17**	**87**	P	**P**	**20 52 52.0**	**+1.6**
ZALV	**Zalesovo Beam**	**35.17**	**87**	P	**P**	**20 52 52.8**	**+2.4**
	comp=Z,2.6nm,0.6s,baz=337,slow=8.3,SNR=14						
ZALV	**Zalesovo Beam**	**35.17**	**87**	P	**P**	**20 52 52.0**	**+1.6**
MURB	**Monte Urbino**	**35.20**	**174**	P	**P**	**20 52 51.4**	**+0.5**
MURB				IAmb	IAmb	20 52 56.2	
	comp=Z,6.8nm,0.9s						
NRCA	**Norcia**	**35.65**	**174**	P	**P**	**20 52 56.6**	**+1.8**
NRCA				IAmb	IAmb	20 52 58.7	
	comp=Z,6.5nm,1.0s						
ILAR	**Eielson Array**	**36.36**	**342**	P	**P**	**20 53 03.2**	**+2.6**
	comp=Z,0.4nm,0.7s,baz=357,slow=7.5,SNR=4.3						
SGRT	**San Giovanni R**	**36.80**	**171**	P	**P**	**20 53 05.4**	**+0.8**
KURK	**Kurchatov**	**36.96**	**95**	P	**P**	**20 53 07.0**	**+1.2**
KURK				IAmb	IAmb	20 53 09.1	
	comp=Z,9.8nm,0.8s						
BWN	**Browne**	**37.11**	**344**	P	**P**	**20 53 06.3**	**-0.6**
BCAR	**Beaver Creek A**	**37.70**	**338**	P	**P**	**20 53 13.9**	**+1.8**
FNA	**Florina**	**38.02**	**164**	P	**P**	**20 53 16.8**	**+1.8**
FNA				IAmb	IAmb	20 53 17.7	
	comp=Z,3.6nm,0.6s						
ESDC	**Sonseca Array**	**39.07**	**195**	P	**P**	**20 53 26.0**	**+2.3**
	comp=Z,0.5nm,0.9s,baz=352,slow=9.7,SNR=4.4						
BRTR	**Keskin Array B**	**40.08**	**149**	P	**P**	**20 53 35.0**	**+2.7**
	comp=Z,2.1nm,1.0s,baz=344,slow=8.3,SNR=5.1						
MAKZ	**Makanchi**	**41.36**	**93**	P	**P**	**20 53 44.4**	**+1.8**
MK31	**Makanchi Array**	**41.44**	**93**	P	**P**	**20 53 45.5**	**+2.2**
MK31				IAmb	IAmb	20 53 46.5	
	comp=Z,7.3nm,0.7s						
MKAR	**Makanchi Array**	**41.44**	**93**	P	**P**	**20 53 45.6**	**+2.3**
	comp=Z,6.6nm,0.7s,baz=341,slow=6.7,SNR=68						
MKAR	**Makanchi Array**	**41.44**	**93**	P	**P**	**20 53 45.0**	**+1.8**
ITM	**Ithomi**	**41.64**	**163**	P	**P**	**20 53 47.5**	**+2.5**
ITM				IAmb	IAmb	20 54 06.4	
	comp=Z,7.4nm,1.0s						
KK31	**Karatay Array**	**42.62**	**107**	P	**P**	**20 53 54.7**	**+1.8**
KKAR	**Karatay Array**	**42.62**	**107**	P	**P**	**20 53 54.0**	**+1.1**
KKAR	**Karatay Array**	**42.62**	**107**	P	**P**	**20 53 54.8**	**+1.9**
ELL	**Elmali**	**42.66**	**154**	P	**P**	**20 53 54.6**	**+1.1**
ELL				IAmb	IAmb	20 53 58.6	
	comp=Z,14nm,1.1s						
F64A	**Sherman**	**42.82**	**269**	P	**P**	**20 53 55.6**	**+1.1**
USP	**Ospenovka**	**43.25**	**102**	P	**P**	**20 54 01.3**	**+3.2**
	SNR=5.8						
CHMS	**Chumysh**	**43.56**	**102**	P	**P**	**20 54 04.3**	**+3.8**
	SNR=8.9						
EKS2	**Erkin-Say**	**43.69**	**103**	P	**P**	**20 54 05.0**	**+3.3**
	SNR=5.8						
FRU1	**Bishkek**	**43.71**	**103**	P	**P**	**20 54 02.2**	**+0.3**
FRU1				IAmb	IAmb	20 54 13.8	
	comp=Z,29nm,1.4s						
AAK	**Ala-Archa**	**43.85**	**103**	P	**P**	**20 54 04.6**	**+1.5**
	SNR=5.2						
AAK	**Ala-Archa**	**43.85**	**103**	P	**P**	**20 54 04.0**	**+0.9**
AAK				IAmb	IAmb	20 54 07.7	
	comp=Z,8.0nm,0.8s						
AML	**Almayashu**	**44.18**	**104**	P	P	20 54 10.7	+4.7
	SNR=10						
UCH	**Uchtor**	**44.25**	**103**	P	P	20 54 10.9	+4.3
	SNR=9.9						
SONM	**Songino Array**	**45.27**	**70**	P	**P**	**20 54 16.6**	**+2.3**
	comp=Z,1.4nm,0.7s,baz=333,slow=6.9,SNR=6.9						
SONM	**Songino Array**	**45.27**	**70**	P	**P**	**20 54 15.7**	**+1.4**
ULN	**Ulaanbaatar**	**45.37**	**69**	P	**P**	**20 54 15.8**	**+0.7**
ULN				IAmb	IAmb	20 54 18.5	
	comp=Z,9.1nm,0.8s						
TARG	**Taragay, Kyrgy**	**45.39**	**100**	P	**P**	**20 54 16.9**	**+1.2**
TARG				IAmb	IAmb	20 54 20.5	
	comp=Z,8.0nm,0.6s						
E46A	**Sault Ste Mari**	**45.56**	**284**	P	**P**	**20 54 16.1**	**-0.3**
BTK	**Batken**	**45.62**	**107**	P	**P**	**20 54 19.3**	**+2.3**
BTK				IAmb	IAmb	20 54 21.3	
	comp=Z,8.5nm,0.8s						
DRK	**Karamyk**	**46.37**	**107**	P	**P**	**20 54 24.8**	**+1.6**
GAR	**Garm**	**46.54**	**108**	P	**P**	**20 54 26.4**	**+2.0**
GAR				IAmb	IAmb	20 54 28.7	
	comp=Z,9.7nm,0.8s						

CHGR	**Chuyangaron**	**46.65**	**110**	P	**P**	**20 54 24.9**	**-0.4**
CHGR				IAmb	IAmb	20 54 29.1	
	comp=Z,8.3nm,0.7s						
ECSD	**EROS Data Cent**	**50.45**	**295**	P	**P**	**20 54 55.4**	**+1.0**
ECSD				IAmb	IAmb	20 54 56.4	
	comp=Z,7.0nm,0.9s						
ACSO	**Alum Creek Sta**	**51.19**	**281**	P	**P**	**20 54 57.8**	**-2.1**
P53A	**Whipple**	**51.59**	**279**	P	**P**	**20 55 01.8**	**-1.1**
GTA	**Gaotai**	**52.09**	**79**	*e*P	**P**	**20 55 09.3**	**+2.5**
GTA				pP	pwP	20 55 20.9	+9.1
GTA				sP	sP	20 55 24.8	+14
GTA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
R55A	**Marlinton**	**52.50**	**277**	P	**P**	**20 55 09.9**	**+0.1**
KMRM	**Mail Ridge**	**58.30**	**318**	P	**P**	**20 55 53.4**	**+1.9**
NVAR	**Mina Array Bea**	**59.28**	**313**	P	**P**	**20 56 02.6**	**+4.0**
	comp=Z,0.3nm,0.6s,baz=21,slow=8.0,SNR=3.6						
DANN	**Dangsing**	**59.52**	**98**	*e*P	**P**	**20 56 02.7**	**+2.3**
	comp=Z,40nm,1.0s						
PYUN	**Piuthan**	**59.61**	**99**	*e*P	**P**	**20 56 03.2**	**+2.3**
	comp=Z,17nm,0.5s						
LSA	**Lhasa**	**59.72**	**90**	P	**P**	**20 56 02.3**	**+0.3**
LSA				IAmb	IAmb	20 56 06.0	
	comp=Z,5.2nm,1.1s						
GKN	**Gorkha**	**60.04**	**97**	*e*P	**P**	**20 56 05.9**	**+2.1**
	comp=Z,6.9nm,0.5s						
KOLN	**Koldanda**	**60.05**	**98**	*e*P	**P**	**20 56 06.1**	**+2.1**
	comp=Z,17nm,1.1s						
MDPB	**Devils Postpil**	**60.18**	**313**	P	**P**	**20 56 03.9**	**-0.9**
MDPB				IAmb	IAmb	20 56 26.5	
	comp=Z,3.7nm,1.0s						
KKN	**Kakani**	**60.37**	**97**	*e*P	**P**	**20 56 08.6**	**+2.4**
	comp=Z,37nm,1.0s						
GUN	**Gumba**	**60.38**	**96**	*e*P	**P**	**20 56 09.1**	**+2.7**
DMN	**Daman**	**60.51**	**97**	*e*P	**P**	**20 56 09.5**	**+2.3**
JIRN	**Jiri**	**60.69**	**96**	*e*P	**P**	**20 56 11.2**	**+2.7**
	comp=Z,15nm,0.7s						
TAPN	**Taplejung**	**61.29**	**94**	*e*P	**P**	**20 56 15.5**	**+3.0**
RAMN	**Ramite**	**61.46**	**95**	*e*P	**P**	**20 56 16.3**	**+2.7**
ODAN	**Odare**	**61.70**	**95**	*e*P	**P**	**20 56 17.9**	**+2.7**
	comp=Z,14nm,0.7s						
TORD	**Torodi Ar. Bea**	**65.25**	**187**	P	**P**	**20 56 40.0**	**+1.5**
	comp=Z,2.2nm,0.9s,baz=1.0,slow=6.5,SNR=12						
TXAR	**Lajitas Array**	**65.74**	**297**	P	**P**	**20 56 44.0**	**+2.4**
	comp=Z,0.6nm,0.7s,baz=44,slow=5.6,SNR=4.2						
CMAR	**Chiang Mai Arr**	**72.21**	**85**	P	**P**	**20 57 23.6**	**+1.7**
	comp=Z,0.7nm,0.4s,baz=336,slow=6.6,SNR=6.6						

TUL ***13*** *20:47:22.5±1.1, 36°.69N±0°.01×98°.26W±0°.03, h6^{km}±6^{km}, ML3.1, mb_Lg2.8/34(NEIC), Error ellipse: s-maj=3.1km s-min=1.6km az=97.0*

NEIC 13 20:47:22.9±0.9**, 36°.69N**±0°.01×**98°.24W**±0°.03**, h11**^{km}±3^{km}**, Error ellipse: s-maj=3.2km s-min=1.7km az=107.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
OK032	**Salt Plains WL**	**0.12**	**13**	Pg	Pg	20 47 25.5	-0.5
OK032				Sg	Sg	20 47 27.5	-0.7
CROK	**Carrier**	**0.28**	**131**	Pg	Pg	20 47 28.5	-0.1
CROK				Sg	Sg	20 47 32.4	0.0
GC02	**Grant County #**	**0.35**	**62**	Pg	Pg	20 47 29.9	-0.1
GC02				Sg	Sg	20 47 35.1	+0.5
KAN14	**Manchester OK**	**0.35**	**40**		Pg	20 47 29.9	-0.1
KAN14				Sg	Sg	20 47 34.9	+0.2
KAN10	**Anthony SW Sta**	**0.45**	**15**		Pg	20 47 31.5	-0.4
KAN10				Sg	Sg	20 47 38.0	+0.1
KAN05	**Bluff City Nor**	**0.52**	**35**		Pg	20 47 32.8	-0.3
KAN05				Sg	Sg	20 47 40.0	+0.1
KAN17	**Caldwell West**	**0.52**	**47**	Pg	Pg	20 47 33.0	-0.1
KAN17				Sg	Sg	20 47 40.2	+0.1
KAN16	**Harper SW Stat**	**0.56**	**15**	Pg	Pg	20 47 33.5	-0.3
KAN16				Sg	Sg	20 47 41.3	+0.1
KAN08	**Anthony NE Sta**	**0.58**	**22**		Pg	20 47 34.0	-0.3
KAN08				Sg	Sg	20 47 42.0	0.0
KAN01	**Argonia South**	**0.61**	**40**	Pg	Pg	20 47 34.4	-0.3
KAN01				Sg	Sg	20 47 42.7	0.0
KAN06	**Argonia West S**	**0.64**	**29**		Pg	20 47 35.1	-0.3
KAN06				Sg	Sg	20 47 43.8	0.0
KAN12	**Harper NE Stat**	**0.64**	**18**		Pg	20 47 35.0	-0.4
KAN12				Sg	Sg	20 47 43.8	-0.1
KAN09	**Caldwell North**	**0.67**	**48**		Pg	20 47 35.5	-0.5
KAN09				Sg	Sg	20 47 44.8	0.0
U32A	**Winter Ranch,**	**0.68**	**244**	Pg	Pg	20 47 35.3	-0.9
U32A				Sg	Sg	20 47 44.7	-0.5
KAN13	**South Haven SW**	**0.69**	**62**	Pg	Pg	20 47 36.0	-0.4
KAN13				Sg	Sg	20 47 45.5	-0.1
KS20	**Mayfield South**	**0.77**	**45**	Pg	Pg	20 47 37.9	0.0
KS20				Sg	Sg	20 47 47.7	-0.3
BLOK	**Blackwell**	**0.83**	**85**	Pg	Pg	20 47 38.2	-0.7
BLOK				Sg	Sg	20 47 50.0	+0.2
OK029	**Liberty Lake**	**1.09**	**144**	Pg	Pb	20 47 42.9	-0.9
OK029				Sg	Sb	20 47 57.9	-0.2
BCOK	**Bluff Creek, N**	**1.15**	**153**		Pb	20 47 43.9	-0.9
BCOK				Sg	Sb	20 47 59.6	-0.1
QUOK	**Quay**	**1.34**	**112**		Pn	20 47 47.7	+0.1
QUOK				Sn	Sn	20 48 05.4	0.0
OK031	**S. Brethren Rd**	**1.35**	**122**		Pn	20 47 47.7	0.0
OK031				Sn	Sb	20 48 05.5	0.0
OK030	**Cody Creek RV**	**1.40**	**122**		Pn	20 47 48.4	0.0
OK030				Sn	Sn	20 48 06.2	-0.7
T35A	**Sooner Cattle**	**1.41**	**80**	Pn	Pn	20 47 48.6	+0.1
T35A				Sn	Sb	20 48 07.7	+0.5
OKCFA	**Oklahoma City**	**1.42**	**153**	Pn	Pn	20 47 48.8	+0.1
FNO	**Franklin**	**1.58**	**154**		Pn	20 47 51.0	+0.1
R32A	**Long Quarter,**	**1.77**	**348**		Pn	20 47 54.0	+0.5
WMOK	**Wichita Mounta**	**1.99**	**193**		Pn	20 47 56.8	+0.2
X34A	**Smith Ranch, M**	**2.11**	**171**	Pn	Pn	20 47 59.1	+1.0
X34A				IAmb_Lg		20 48 31.3	
	comp=Z,66nm,0.8s						
TUL1	**Leonard**	**2.13**	**111**		Pn	20 47 58.0	-0.4
TUL1				IAmb_Lg		20 48 31.8	
	comp=Z,45nm,1.1s						
CBKS	**Cedar Bluff**	**2.43**	**331**	Pn	Pn	20 48 03.1	+0.5
KSU1	**Kansas State U**	**2.73**	**28**		Pn	20 48 06.9	+0.2
KSU1				IAmb_Lg		20 48 51.8	
	comp=Z,30nm,0.7s						
LOOK	**Love County**	**2.83**	**162**		Pn	20 48 07.9	-0.1
U38A	**Gravette**	**3.12**	**93**		Pn	20 48 12.0	0.0
X37A	**Clayton**	**3.14**	**131**	Pn	Pn	20 48 12.6	+0.3
AMTX	**Amarillo**	**3.32**	**238**		Pn	20 48 14.6	-0.3
AMTX				IAmb_Lg		20 49 13.2	
	comp=Z,20nm,0.9s						
Z35A	**Perchaven, San**	**3.45**	**166**	Pn	Pn	20 48 16.7	+0.2
HHAR	**Hobbs**	**3.49**	**95**		Pn	20 48 17.2	0.0
W39A	**Magazine**	**3.91**	**111**		Pn	20 48 24.2	+1.3
W39A				IAmb_Lg		20 49 30.7	
	comp=Z,19nm,0.8s						
S39A	**Bolivar**	**4.05**	**74**		Pn	20 48 25.0	+0.1
S39A				IAmb_Lg		20 49 35.6	
	comp=Z,20nm,0.8s						
KSCO	**Kaye Shedlock’**	**4.17**	**305**		Pn	20 48 26.6	-0.1
KSCO				IAmb_Lg		20 49 39.6	
	comp=Z,17nm,0.7s						
Z38A	**Mt. Pleasant**	**4.34**	**141**	Pn	Pn	20 48 29.4	+0.6
Z38A				IAmb_Lg		20 49 44.3	
	comp=Z,14nm,0.8s						
U40A	**Yellville**	**4.35**	**93**		Pn	20 48 29.8	+0.8
U40A				IAmb_Lg		20 49 41.5	
	comp=Z,24nm,0.9s						
MIAR	**Mount Ida**	**4.36**	**118**	Pn	Pn	20 48 28.1	-0.9
N35A	**Tabor**	**4.64**	**25**	Pn	Pn	20 48 32.4	-0.5
P38A	**Dawn**	**4.73**	**50**	Pn	Pn	20 48 34.5	+0.3
P38A				IAmb_Lg		20 50 04.6	
	comp=Z,19nm,0.7s						
MGMO	**Mountain Grove**	**4.81**	**83**	Pn	Pn	20 48 34.7	-0.6
MGMO				IAmb_Lg		20 50 06.4	
	comp=Z,14nm,0.8s						
X40A	**Basin Creek Fa**	**4.92**	**115**	Pn	Pn	20 48 38.1	+1.3
X40A				IAmb_Lg		20 50 05.8	
	comp=Z,17nm,1.2s						
T25A	**Trinidad**	**4.96**	**277**		Pn	20 48 37.9	+0.3
FCAR	**Ozark Folk Cen**	**5.01**	**97**	Pn	Pn	20 48 39.0	+1.0
R40A	**Maddies Statio**	**5.01**	**70**	Pn	Pn	20 48 38.9	+0.8
R40A				IAmb_Lg		20 50 07.9	
	comp=Z,17nm,0.8s						
WHAR	**Wooly Hollow**	**5.03**	**104**		Pn	20 48 36.7	-1.6
WLAR	**White Oak Lake**	**5.16**	**124**	Pn	Pn	20 48 39.2	-0.8
OGNE	**Ogallala**	**5.18**	**326**	Pn	Pn	20 48 39.3	-1.2
OGNE				IAmb_Lg		20 50 06.4	
	comp=Z,25nm,0.7s						
P40A	**Paris**	**5.65**	**58**	Pn	Pn	20 48 46.2	-0.6
CCM	**Cathedral Cave**	**5.74**	**74**	Pn	Pn	20 48 49.0	+1.0
CCM				IAmb_Lg		20 50 33.0	
	comp=Z,14nm,0.8s						
T42A	**Van Buren**	**5.74**	**84**	Pn	Pn	20 48 47.5	-0.6
LCAR	**Lake Charles**	**5.75**	**94**	Pn	Pn	20 48 45.2	-3.0
SDCO	**Great Sand Dun**	**5.89**	**283**	Pn	Pn	20 48 49.0	-1.3
PBMO	**Poplar Bluff**	**6.28**	**87**	Pn	Pn	20 48 54.3	-1.1
JCT	**Junction City**	**6.33**	**192**	Pn	Pn	20 48 54.2	-1.9
JCT				IAmb_Lg		20 50 59.8	
	comp=Z,11nm,1.0s						
FVM	**French Village**	**6.36**	**76**	Pn	Pn	20 48 56.3	-0.3
SCIA	**State Center**	**6.51**	**35**	IAmb_Lg		20 50 53.1	
	comp=Z,20nm,0.8s						
ISCO	**Idaho Springs**	**6.58**	**300**	Pn	Pn	20 48 59.6	-0.3
ANMO	**Albuquerque**	**6.90**	**258**	Pn	Pn	20 49 05.5	+1.4
SIUC	**Southern Illin**	**7.28**	**79**	IAmb_Lg		20 51 19.1	
	comp=Z,14nm,0.8s						

JMA ***13*** *20:51:30.1±0.2, 30°.94N×128°.59E, h17^{km}, M7.1*

JMA Felt IV J1.

NEIC ***13*** *20:51:30.9, 31°.00N×128°.86E, h17^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M_{rr}-0.10; $M_{\theta\theta}$0.52; $M_{\phi\phi}$-0.42; $M_{r\theta}$-0.14; $M_{\theta\phi}$1.10; $M_{\phi r}$0.02; Fault plane solution: $M_0$1.21000×10^{19} NP1:ϕ_s191.64000°, δ83.29000°, λ-179.33000°. NP2:ϕ_s101.56000°, δ89.34000°, λ-6.71000°. Principal axes: T 1.2590, Plg4.0000°, Azm147.0000°; N -0.0985, Plg83.0000°, Azm276.0000°; P -1.1605, Plg5.0000°, Azm56.0000°;*

NIED ***13*** *20:51:30.1, 30°.94N×128°.59E, h17^{km}, MW6.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{19}Nm; M_{rr}-0.19; $M_{\theta\theta}$0.52; $M_{\phi\phi}$-0.32; $M_{r\theta}$-0.18; $M_{\theta\phi}$1.50; $M_{\phi r}$0.54; Fault plane solution: $M_0$1.66000×10^{19} NP1: ϕ_s190.00000°, δ80.00000°, λ-161.00000°. NP2: ϕ_s96.00000°, δ71.00000°, λ-10.00000°.*

MOS ***13*** *20:51:30.9±1.9, 30°.87N×128°.90E, h18^{km}, mb6.3/69, MS7.3/60 Error ellipse: s-maj=5.9km s-min=3.9km az=99.4 Broadband fault plane solution: P waves. $M_0$1.30000×10^{19} NP1:ϕ_s202.00000°, δ72.00000°, λ-161.00000°. NP2:ϕ_s105.00000°, δ72.00000°, λ-19.00000°. Principal axes: T Plg0.0000°, Azm153.0000°; N Plg64.0000°, Azm243.0000°; P Plg26.0000°, Azm63.0000°;*

NEIC ***13*** *20:51:31.0±2.5, 31°.00N±0°.05×128°.87E±0°.07, h12^{km}±1^{km}, mb6.3/292, Ms_20 7.0/428, Mwb6.7/71, Mwc6.7/111, Mww6.7, Mwc6.8(GCMT) Error ellipse: s-maj=10.0km s-min=7.9km az=280.0*

IDC ***13*** *20:51:32.8±0.4, 31°.05N×128°.69E, h0^{km}, mb5.2/48, mb1 5.2/52, mb1mx5.2/54, mbtmp5.2/52, ML4.1/4, MS7.0/36, Ms1 7.0/36, ms1mx6.9/39, Error ellipse: s-maj=11.8km s-min=10.0km az=133.0*

BJI ***13*** *20:51:34.0±0.0, 31°.05N×128°.75E, h10^{km}, mB6.8/45, mb7.2/6, Ms7.5/90, Ms7 7.3/83*

KMA ***13*** *20:51:34.4, 31°.00N×128°.70E, h15^{km}*

NEIC ***13*** *20:51:42, 31°.13N×128°.68E, h12^{km}, Moment Tensor Solution. Duration: 11^{s}6 Moment tensor: Scale 10^{19}Nm; M_{rr}-0.35; $M_{\theta\theta}$0.79; $M_{\phi\phi}$-0.44; $M_{r\theta}$-0.12; $M_{\theta\phi}$1.55; $M_{\phi r}$0.17; Fault plane solution: $M_0$1.71000×10^{19} NP1: ϕ_s191.00000°, δ83.00000°, λ-173.00000°. NP2: ϕ_s100.00000°, δ83.00000°, λ-7.00000°. Principal axes: T 1.8408, Plg0.0000°, Azm146.0000°; N -0.3137, Plg80.0000°, Azm236.0000°; P -1.5271, Plg10.0000°, Azm56.0000°;*

GCMT ***13*** *20:51:43.0±0.0, 31°.13N×128°.67E, h12^{km}, MW6.8/164, Moment Tensor Solution. s162,c413; s164,c740; Duration: 5^{s}8 Moment tensor: Scale 10^{19}Nm; M_{rr}-0.37±.01; $M_{\theta\theta}$0.81±.01; $M_{\phi\phi}$-0.43±.01; $M_{r\theta}$0.08±.02; $M_{\theta\phi}$1.53±.01; $M_{\phi r}$0.38±.02; Best double couple: $M_0$1.70100×10^{19} NP1:ϕ_s101.00000°, δ75.00000°, λ-4.00000°. NP2:ϕ_s192.00000°, δ86.00000°, λ-165.00000°. Principal axes: T 1.8690, Plg7.0000°, Azm325.0000°; N -0.3360, Plg75.0000°, Azm208.0000°; P -1.5330, Plg13.0000°, Azm57.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

BGR ***13*** *20:51:43.1±0.0, 31°.61N×129°.54E, h33^{km}, mb6.4, mB_BB6.6, Ms7.8*

NEIC ***13*** *20:51:45, 30°.96N×128°.47E, h24^{km}, Moment Tensor Solution. Duration: 26^{s}0 Moment tensor: Scale 10^{19}Nm; M_{rr}-0.41; $M_{\theta\theta}$0.71; $M_{\phi\phi}$-0.30; $M_{r\theta}$0.00; $M_{\theta\phi}$1.46; $M_{\phi r}$0.23; Fault plane solution: $M_0$1.60000×10^{19} NP1:ϕ_s99.00000°, δ80.00000°, λ-5.00000°. NP2:ϕ_s190.00000°, δ85.00000°, λ-169.00000°. Principal axes: T 1.7620, Plg4.0000°, Azm324.0000°; N -0.3843, Plg78.0000°, Azm217.0000°; P -1.3777, Plg11.0000°, Azm55.0000°;*

NEIC ***13*** *20:51:55.4, 30°.97N×128°.50E, h16^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M_{rr}-0.37; $M_{\theta\theta}$0.75; $M_{\phi\phi}$-0.38; $M_{r\theta}$-0.32; $M_{\theta\phi}$1.49; $M_{\phi r}$-0.07; Fault plane solution: $M_0$1.62000×10^{19} NP1:ϕ_s190.15000°, δ79.31000°, λ179.55000°. NP2:ϕ_s280.23000°, δ89.55000°, λ10.69000°. Principal axes: T 1.8224, Plg8.0000°, Azm146.0000°; N -0.3999, Plg79.0000°, Azm283.0000°; P -1.4226, Plg7.0000°, Azm55.0000°;*

ISC 13 20:51:35.9±0.1**, 30°.86N**±0°.01×**128°.73E**±0°.01**, h10**^{km}**, h10**^{km}**:pP-P, n2170, σ2^{s}66**/1961**, mb6.2**/417**, MS7.0**/343**, 161C-177D, Fault plane solution: NP1:**ϕ_s90.99638°, δ78.11165°, λ-2.10632°. **NP2:**ϕ_s181.43048°**,** δ87.93888°, λ-168.10384°. **Principal axes:** T Plg6.9057°**,** Azm315.6154°**;** N Plg77.9291°**,** Azm191.1189°**;** P Plg9.8517°**,** Azm46.8206°**; Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JSJ	**Shimokoshiki**	**1.17**	**46**	⇓P	Pn	20 51 51.6	-6.8
JKC	**Kuchinoerabu**	**1.32**	**107**	P	**Pn**	**20 51 56.1**	**-4.3**
JNN	**Nakanoshima**	**1.42**	**135**	⇑P	**Pn**	**20 51 57.1**	**-4.6**
JSU	**Suzuyama**	**1.61**	**66**	⇓P	Pn	20 51 59.6	-4.8
JSU	**Suzuyama**	**1.61**	**66**	Pn	Pn	20 51 58.1	-6.3
JYAK	**Yakushimahirau**	**1.65**	**112**	⇑P	**Pn**	**20 52 00.2**	**-4.8**
JTAJ	**Takarajima**	**1.75**	**166**	P	**Pn**	**20 52 02.3**	**-4.0**
JFU	**Fukue jima 2**	**1.79**	**0**	⇓P	Pn	20 51 59.8	-7.1
JMTN	**Minamitane**	**1.92**	**103**	P	**Pn**	**20 52 04.4**	**-4.3**
JTN	**Tanegashima 3**	**1.94**	**95**	P	**Pn**	**20 52 05.2**	**-3.8**
NGSJ	**Nagasakinomoza**	**1.99**	**27**	P	Pn	20 52 03.5	-6.1
JHD	**Hondo**	**2.00**	**36**	⇓P	Pn	20 52 04.0	-5.8
JZO	**Okuchi**	**2.04**	**51**	⇓P	Pn	20 52 05.3	-5.1
JTZ	**Takazaki**	**2.27**	**62**	P	**Pn**	**20 52 08.8**	**-4.6**
JIU3	**Izumi3**	**2.45**	**46**	P	Pn	20 52 11.0	-4.9
JUR	**Ureshino**	**2.46**	**25**	P	Pn	20 52 10.5	-5.5
JAM	**Amami Oshima**	**2.56**	**162**	P	**Pn**	**20 52 13.5**	**-3.9**
JAMN	**Amaminishikomi**	**2.63**	**171**	P	**Pn**	**20 52 15.0**	**-3.5**
JNU	**Nakatsue**	**2.90**	**38**	Pn	**Pn**	**20 52 18.3**	**-3.9**
	2μm,0.3s,SNR=1.1						
JNU	**Nakatsue**	**2.90**	**38**	P	**Pn**	**20 52 21.4**	**-0.8**
KSSGP	**Seogwipo**	**3.05**	**322**	P	**Pn**	**20 52 20.0**	**-4.2**
	SNR=45						
KSJJU	**Jeju**	**3.17**	**325**	P	Pn	20 52 21.3	-4.5
	SNR=75						
KSJJU	**Jeju**	**3.17**	**325**	P	**Pn**	**20 52 24.7**	**-1.1**
	SNR=634						
KSJJU	**Jeju**	**3.17**	**325**	P	**Pn**	**20 52 22.3**	**-3.5**
	SNR=92						
GOS1	**Gosan-ri**	**3.24**	**319**	P	**Pn**	**20 52 23.4**	**-3.4**
	SNR=54						
GOS1	**Gosan-ri**	**3.24**	**319**	P	Pn	20 52 21.0	-5.8
	SNR=75						
GOS1	**Gosan-ri**	**3.24**	**319**	P	**Pn**	**20 52 27.6**	**+0.8**
	SNR=158						
GOS2	**Gosang-Q330s**	**3.24**	**319**	P	**Pn**	**20 52 24.0**	**-2.9**
	SNR=48						
GOS2	**Gosang-Q330s**	**3.24**	**319**	P	Pn	20 52 21.0	-5.9
	SNR=76						
GOS2	**Gosang-Q330s**	**3.24**	**319**	P	**Pn**	**20 52 28.0**	**+1.1**
	SNR=150						
HALB	**Hallimjungang-**	**3.28**	**321**	P	**Pn**	**20 52 24.0**	**-3.4**
	SNR=62						
HALB	**Hallimjungang-**	**3.28**	**321**	P	Pn	20 52 21.0	-6.4
	SNR=136						
HALB	**Hallimjungang-**	**3.28**	**321**	P	**Pn**	**20 52 28.0**	**+0.6**
	SNR=143						
GMDB	**Geomundo**	**3.40**	**339**	P	**Pn**	**20 52 25.0**	**-4.0**
	SNR=68						
GMDB	**Geomundo**	**3.40**	**339**	P	Pn	20 52 23.5	-5.5
	SNR=96						
GMDB	**Geomundo**	**3.40**	**339**	P	**Pn**	**20 52 29.0**	**0.0**
	SNR=128						
YNDB	**Yeoundo**	**3.65**	**348**	P	**Pn**	**20 52 30.0**	**-2.5**
	SNR=45						
YNDB	**Yeoundo**	**3.65**	**348**	P	**Pn**	**20 52 34.0**	**+1.5**
	SNR=60						
YNDB	**Yeoundo**	**3.65**	**348**	P	Pn	20 52 27.1	-5.4
	SNR=74						
JTU	**Tsushima**	**3.70**	**9**	Pn	Pn	20 52 27.1	-6.0
CJD	**Chujado**	**3.72**	**327**	P	**Pn**	**20 52 34.0**	**+0.6**
	SNR=98						
CJD	**Chujado**	**3.72**	**327**	P	Pn	20 52 27.0	-6.3
	SNR=94						
CJD	**Chujado**	**3.72**	**327**	P	**Pn**	**20 52 30.0**	**-3.4**
	SNR=96						
YKDB	**Yokjido**	**3.77**	**354**	P	Pn	20 52 29.0	-5.2
	SNR=163						
YKDB	**Yokjido**	**3.77**	**354**	P	**Pn**	**20 52 31.0**	**-3.2**
	SNR=28						
YKDB	**Yokjido**	**3.77**	**354**	P	**Pn**	**20 52 36.0**	**+1.8**
	SNR=61						
KOHB	**KOHEUNG**	**3.94**	**342**	P	**Pn**	**20 52 32.2**	**-4.3**
	SNR=98						
KOHB	**KOHEUNG**	**3.94**	**342**	P	**Pn**	**20 52 36.9**	**+0.4**
	SNR=38						
KOHB	**KOHEUNG**	**3.94**	**342**	P	Pn	20 52 30.6	-5.9
	SNR=143						
KSNAH	**Namhae**	**4.00**	**350**	P	Pn	20 52 32.5	-4.8
	SNR=142						
KSNAH	**Namhae**	**4.00**	**350**	P	**Pn**	**20 52 38.4**	**+1.1**
	SNR=80						
KUJA	**Jangpyeong**	**4.02**	**358**	P	**Pn**	**20 52 39.0**	**+1.5**
	SNR=93						
KUJA	**Jangpyeong**	**4.02**	**358**	P	**Pn**	**20 52 33.3**	**-4.2**
	SNR=30						
JOW	**Kunigami**	**4.03**	**186**	Pn	**Pn**	**20 52 34.9**	**-2.9**
	32nm,0.3s,baz=357,slow=12,SNR=36						
JOW	**Kunigami**	**4.03**	**186**	Pn	**Pn**	**20 52 35.1**	**-2.7**
JOW	**Kunigami**	**4.03**	**186**	P	Pb	20 52 41.8	-5.3
BOSB	**Boseong-gun**	**4.10**	**342**	P	**Pn**	**20 52 40.1**	**+1.5**
	SNR=37						
BOSB	**Boseong-gun**	**4.10**	**342**	P	**Pn**	**20 52 36.0**	**-2.6**
	SNR=67						
BOSB	**Boseong-gun**	**4.10**	**342**	P	Pn	20 52 33.0	-5.6
	SNR=233						
HANB	**Haenam**	**4.11**	**334**	P	**Pn**	**20 52 35.0**	**-3.8**
	SNR=86						
HANB	**Haenam**	**4.11**	**334**	P	**Pn**	**20 52 36.1**	**-2.7**
	SNR=65						
HANB	**Haenam**	**4.11**	**334**	P	Pn	20 52 34.0	-4.8
	SNR=77						
KSJDO	**Jindo**	**4.14**	**331**	P	Pn	20 52 34.7	-4.5
	SNR=218						
KSJDO	**Jindo**	**4.14**	**331**	P	**Pn**	**20 52 37.3**	**-1.9**
	SNR=132						
KSJDO	**Jindo**	**4.14**	**331**	P	Pn	20 52 34.7	-4.5
	SNR=36						
GWYB	**Gwangyang**	**4.17**	**348**	P	**Pn**	**20 52 36.0**	**-3.6**
	SNR=38						
GWYB	**Gwangyang**	**4.17**	**348**	P	**Pn**	**20 52 41.1**	**+1.6**
	SNR=35						
KSBSA	**Busan_acc**	**4.24**	**3**	P	**Pn**	**20 52 41.6**	**+1.0**
	SNR=64						
KSBSA	**Busan_acc**	**4.24**	**3**	P	**Pn**	**20 52 36.4**	**-4.2**
	SNR=12						
KSHAD	**HADONG**	**4.29**	**349**	P	**Pn**	**20 52 39.6**	**-1.6**
	SNR=23						
KSMAS	**Masan**	**4.30**	**358**	P	**Pn**	**20 52 37.3**	**-4.1**
	SNR=76						
KSMAS	**Masan**	**4.30**	**358**	P	**Pn**	**20 52 38.6**	**-2.8**
	SNR=88						
KSSCH	**SUNCHEON**	**4.38**	**344**	P	**Pn**	**20 52 38.3**	**-4.1**
	SNR=92						
KSSCH	**SUNCHEON**	**4.38**	**344**	P	**Pn**	**20 52 42.6**	**+0.2**
	SNR=45						
KSBUS	**Busan**	**4.39**	**4**	P	**Pn**	**20 52 45.1**	**+2.5**
	SNR=78						
KSBUS	**Busan**	**4.39**	**4**	P	**Pn**	**20 52 39.0**	**-3.6**
	SNR=33						
GGDB	**Gageodo**	**4.41**	**317**	P	**Pn**	**20 52 39.0**	**-3.9**
	SNR=28						
GGDB	**Gageodo**	**4.41**	**317**	P	**Pn**	**20 52 47.0**	**+4.1**
	SNR=52						
GGDB	**Gageodo**	**4.41**	**317**	P	Pn	20 52 38.0	-4.9
	SNR=46						
EURB	**Uiryeong-eup**	**4.47**	**355**	P	**Pn**	**20 52 44.1**	**+0.5**
	SNR=52						
EURB	**Uiryeong-eup**	**4.47**	**355**	P	**Pn**	**20 52 41.0**	**-2.7**
	SNR=33						
KSKWJ	**Gwangju**	**4.53**	**342**	P	**Pn**	**20 52 40.8**	**-3.8**
	SNR=34						
KSKWJ	**Gwangju**	**4.53**	**342**	P	**Pn**	**20 52 41.0**	**-3.6**
	SNR=35						
KSKWJ	**Gwangju**	**4.53**	**342**	P	**Pn**	**20 52 47.0**	**+2.4**
	SNR=20						
KSKWJ	**Gwangju**	**4.53**	**342**	P	**Pn**	**20 52 41.6**	**-3.0**
	SNR=29						
KSKWJ	**Gwangju**	**4.53**	**342**	P	**Pn**	**20 52 42.0**	**-2.6**
	SNR=29						
KSKWJ	**Gwangju**	**4.53**	**342**	P	**Pn**	**20 52 44.4**	**-0.2**
	SNR=21						
MIYA	**Miryang-si**	**4.62**	**0**	P	**Pn**	**20 52 48.0**	**+2.2**
	SNR=47						
NAWB	**Namwon**	**4.69**	**347**	P	**Pn**	**20 52 49.0**	**+2.3**
	SNR=23						
NAWB	**Namwon**	**4.69**	**347**	P	**Pn**	**20 52 44.0**	**-2.7**
	SNR=45						
SUCA	**Sunchang**	**4.70**	**344**	P	**Pn**	**20 52 50.0**	**+3.1**
	SNR=26						
SUCA	**Sunchang**	**4.70**	**344**	P	**Pn**	**20 52 44.0**	**-2.9**
	SNR=48						
HAMB	**Hamyang**	**4.71**	**350**	P	**Pn**	**20 52 43.0**	**-4.0**
	SNR=18						
HAMB	**Hamyang**	**4.71**	**350**	P	**Pn**	**20 52 44.0**	**-3.1**
	SNR=32						
HAMB	**Hamyang**	**4.71**	**350**	P	**Pn**	**20 52 49.0**	**+1.9**
	SNR=42						
HUK2	**Heuksan-myeon**	**4.71**	**325**	P	Pn	20 52 41.0	-6.1
	SNR=183						
HUK2	**Heuksan-myeon**	**4.71**	**325**	P	**Pn**	**20 52 47.0**	**-0.1**
	SNR=130						
HUK2	**Heuksan-myeon**	**4.71**	**325**	P	**Pn**	**20 52 43.1**	**-3.9**
	SNR=117						
KSKCH	**Geochang**	**4.79**	**352**	P	**Pn**	**20 52 44.3**	**-3.8**
	SNR=43						
GOCB	**Gochang-gun**	**4.82**	**339**	P	**Pn**	**20 52 47.0**	**-1.6**
	SNR=33						
GOCB	**Gochang-gun**	**4.82**	**339**	P	**Pn**	**20 52 52.0**	**+3.4**
	SNR=46						
GOCB	**Gochang-gun**	**4.82**	**339**	P	**Pn**	**20 52 45.0**	**-3.6**
	SNR=93						
KSUSN	**Ulsan**	**4.84**	**4**	P	**Pn**	**20 52 45.2**	**-3.6**
	SNR=29						
KSUSN	**Ulsan**	**4.84**	**4**	P	Pn	20 52 53.7	+4.8
	SNR=68						
KSJEU	**Jeongeup**	**4.86**	**342**	P	**Pn**	**20 52 45.2**	**-3.9**
	SNR=114						
KSJEU	**Jeongeup**	**4.86**	**342**	P	**Pn**	**20 52 45.7**	**-3.4**
	SNR=40						
KSJEU	**Jeongeup**	**4.86**	**342**	P	**Pn**	**20 52 48.0**	**-1.1**
	SNR=49						
KSDAG	**Daegu**	**4.90**	**2**	P	**Pn**	**20 52 52.1**	**+2.4**
	SNR=53						
KSDAG	**Daegu**	**4.90**	**2**	P	**Pn**	**20 52 46.0**	**-3.7**
	SNR=22						
ANMD	**Anmado**	**5.01**	**334**	P	**Pn**	**20 52 49.0**	**-2.2**
	SNR=47						
ANMD	**Anmado**	**5.01**	**334**	P	**Pn**	**20 52 47.0**	**-4.2**
	SNR=46						
KSYOC	**YEONGCHEON**	**5.10**	**2**	P	**Pn**	**20 52 49.0**	**-3.4**
	SNR=33						
YOCB	**Yeongcheon**	**5.11**	**2**	P	**Pn**	**20 52 55.1**	**+2.6**
	SNR=35						
YOCB	**Yeongcheon**	**5.11**	**2**	P	**Pn**	**20 52 50.0**	**-2.5**
	SNR=18						
SMKB	**Mukjeong-gil**	**5.15**	**340**	P	**Pn**	**20 52 50.0**	**-3.1**
	SNR=41						
KSJEO	**Jeonju**	**5.21**	**347**	P	**Pn**	**20 52 56.2**	**+2.3**
	SNR=17						
KSJEO	**Jeonju**	**5.21**	**347**	P	**Pn**	**20 52 52.1**	**-1.8**
	SNR=39						
KSJEO	**Jeonju**	**5.21**	**347**	P	Pn	20 52 49.0	-4.9
	SNR=63						
JMN	**Monobe**	**5.21**	**55**	Pn	Pn	20 52 47.2	-6.8
KSGIC	**Gimchen**	**5.23**	**354**	P	**Pn**	**20 52 50.5**	**-3.7**
	SNR=42						

MNYD	Munyeodo	5.30	339	P	Pn	20 52 52.0	-3.1
	SNR=36						
MNYD	Munyeodo	5.30	339	P	Pn	20 52 51.1	-4.0
	SNR=69						
KSPHA	Pohang	5.35	6	P	Pn	20 52 53.0	-2.8
	SNR=22						
KSPHA	Pohang	5.35	6	P	Pn	20 53 01.0	+5.2
	SNR=26						
KSCPR	CHUPUNGNYEONG	5.39	353	P	Pn	20 52 53.4	-3.0
	SNR=28						
KSCPR	CHUPUNGNYEONG	5.39	353	P	Pn	20 52 52.6	-3.7
	SNR=123						
KSGUS	GUNSAN	5.42	343	P	Pn	20 52 55.8	-0.9
	SNR=36						
JMZ	Minamidaito 2	5.48	156	Pn	Pn	20 52 54.3	-3.3
KSEUS	ULSEONG	5.48	360	P	Pn	20 52 54.3	-3.3
	SNR=63						
EUSB	Uiseong	5.48	360	P	Pn	20 52 55.0	-2.7
	SNR=20						
EUSB	Uiseong	5.48	360	P	Pn	20 53 01.0	+3.3
	SNR=37						
OKCB	Cheongsan-myeo	5.53	352	P	Pn	20 52 55.0	-3.3
	SNR=33						
OKCB	Cheongsan-myeo	5.53	352	P	Pn	20 53 01.0	+2.7
	SNR=41						
JHS	Saijyo	5.53	41	Pn	Pn	20 52 52.2	-6.2
KSADO	Andong	5.54	2	P	Pn	20 52 55.0	-3.5
	SNR=71						
KSADO	Andong	5.54	2	P	Pn	20 53 02.0	+3.6
	SNR=48						
KSSAJ	Sangju	5.55	355	P	Pn	20 52 55.0	-3.7
	SNR=90						
KSSAJ	Sangju	5.55	355	P	Pn	20 53 00.6	+2.0
	SNR=79						
BUYB	Buyeo	5.61	345	P	Pn	20 52 57.0	-2.4
	SNR=18						
BUYB	Buyeo	5.61	345	P	Pn	20 52 59.0	-0.3
	SNR=24						
TJN	Taejon	5.62	349	⇓eP	Pn	20 52 56.1	-3.4
TJN	Taejon	5.62	349	P	Pn	20 52 57.6	-1.9
KSBON	Boeun	5.68	352	P	Pn	20 52 58.9	-1.5
	SNR=85						
KSBON	Boeun	5.68	352	P	Pn	20 52 56.7	-3.6
	SNR=42						
YODB	Yeongdeok	5.69	6	P	Pn	20 53 06.1	+5.6
	SNR=22						
PORA	Boryeong	5.75	342	P	Pn	20 53 04.0	+2.7
	SNR=11						
PORA	Boryeong	5.75	342	P	Pn	20 52 59.0	-2.2
	SNR=35						
KOJ2	Gongju-si	5.75	347	P	Pn	20 53 05.0	+3.6
	SNR=50						
KOJ2	Gongju-si	5.75	347	P	Pn	20 52 59.0	-2.3
	SNR=70						
OYDB	Oeyeondo	5.80	338	P	Pn	20 53 01.0	-1.0
	SNR=29						
OYDB	Oeyeondo	5.80	338	P	Pn	20 52 58.0	-4.0
	SNR=36						
KSMGY	Mungyeong	5.81	355	P	Pn	20 52 57.9	-4.3
	SNR=38						
KSMGY	Mungyeong	5.81	355	P	Pn	20 52 58.4	-3.7
	SNR=49						
KSULJ	Uljin	5.86	5	P	Pn	20 52 60.0	-2.8
	SNR=22						
KSULJ	Uljin	5.86	5	P	Pn	20 53 08.0	+5.2
	SNR=17						
YOJB	Youngju	6.00	358	P	Pn	20 53 10.0	+5.3
	SNR=30						
YOJB	Youngju	6.00	358	P	Pn	20 53 01.5	-3.3
	SNR=32						
KSCHJ	Chungju	6.03	354	P	Pn	20 53 02.0	-3.2
	SNR=45						
KSCHJ	Chungju	6.03	354	P	Pn	20 53 08.0	+2.8
	SNR=37						
CHYB	Chungyang	6.07	1	P	Pn	20 53 01.1	-4.6
	SNR=210						
CHYB	Chungyang	6.07	1	P	Pn	20 53 02.1	-3.7
	SNR=28						
CHYB	Chungyang	6.07	1	P	Pn	20 53 11.1	+5.4
	SNR=28						
KSCEA	Cheonan	6.07	349	P	Pn	20 53 02.3	-3.4
	SNR=99						
KSCEA	Cheonan	6.07	349	P	Pn	20 53 02.1	-3.6
	SNR=52						
KSCEA	Cheonan	6.07	349	P	Pn	20 53 06.0	+0.3
	SNR=55						
UJN	ULJIN	6.14	5	P	Pn	20 53 04.0	-2.7
	SNR=34						
UJN	ULJIN	6.14	5	P	Pn	20 53 11.0	+4.3
	SNR=32						
KSSES	Seosan	6.21	343	P	Pn	20 53 10.0	+2.4
	SNR=15						
KSSES	Seosan	6.21	343	P	Pn	20 53 05.0	-2.7
	SNR=14						
KSSES	Seosan	6.21	343	P	Pn	20 53 08.0	+0.3
	SNR=27						
KSTBA	Taebaek	6.25	2	P	Pn	20 53 05.1	-3.1
	SNR=29						
KSTBA	Taebaek	6.25	2	P	Pn	20 53 12.9	+4.7
	SNR=30						
PYTK	Pyeongtaek	6.26	348	P	Pn	20 53 04.9	-3.4
	SNR=59						
JECH	Jecheon	6.30	356	P	Pn	20 53 14.2	+5.3
	SNR=27						
JECH	Jecheon	6.30	356	P	Pn	20 53 06.0	-2.9
	SNR=12						
KSYOW	Yeongwol	6.30	358	P	Pn	20 53 05.6	-3.4
	SNR=109						
KSGBI	Gyogryolbido	6.33	336	P	Pn	20 53 08.3	-1.0
	SNR=32						
KSGWL	Sabuk	6.33	1	P	Pn	20 53 15.5	+6.2
	SNR=20						
KSGWL	Sabuk	6.33	1	P	Pn	20 53 05.9	-3.4
	SNR=51						
IMWB	Imwonan-gil	6.38	4	P	Pn	20 53 08.0	-2.0
	SNR=16						
IMWB	Imwonan-gil	6.38	4	P	Pn	20 53 16.0	+6.0
	SNR=36						
HAWB	Hwaseong-si	6.42	346	P	Pn	20 53 13.0	+2.5
	SNR=28						
HAWB	Hwaseong-si	6.42	346	P	Pn	20 53 08.0	-2.5
	SNR=26						
HAWB	Hwaseong-si	6.42	346	P	Pn	20 53 10.1	-0.4
	SNR=45						
SSE	Sheshan	6.49	274	Pn	Pn	20 53 08.8	-2.6
SSE				Sn	Sn	20 54 26.0	+0.5
SSE				LR	LR		
	comp=N,2076µm,17.5s						
SSE				LR	LR		
	comp=E,436µm,18.6s						
SSE				LR	LR		
	comp=Z,524µm,17.3s						
KSICN	Icheon	6.51	351	P	Pn	20 53 14.6	+2.9
	SNR=29						
KSICN	Icheon	6.51	351	P	Pn	20 53 08.6	-3.2
	SNR=46						
KSWJU	Wonju	6.55	355	P	Pn	20 53 09.0	-3.3
	SNR=42						
KSWJU	Wonju	6.55	355	P	Pn	20 53 15.0	+2.6
	SNR=80						
KSSWO	Suwon	6.56	348	P	Pn	20 53 09.1	-3.3
	SNR=76						
KSSWO	Suwon	6.56	348	P	Pn	20 53 11.8	-0.6
	SNR=53						
KSAR	Wonju Array Be	6.60	354	P	Pn	20 53 06.4	-6.6
KSAR	Wonju Array Be	6.60	354		Pn	20 53 06.4	-6.6
KSRS	Korea Array	6.61	354	Pn	Pn	20 53 08.1	-5.0
	9.7nm,0.3s,baz=174,slow=13,SNR=195						
KS19	Wonju Array Si	6.67	354		Pn	20 53 07.1	-6.8
SHHB	Siheung-si	6.69	346	P	Pn	20 53 18.0	+3.8
	SNR=21						
SHHB	Siheung-si	6.69	346	P	Pn	20 53 12.0	-2.2
	SNR=31						
KSDEI	Deokjeokdo	6.74	342	P	Pn	20 53 11.6	-3.3
	SNR=36						
KSDEI	Deokjeokdo	6.74	342	P	Pn	20 53 14.9	0.0
	SNR=35						
JMJ	Miyako jima 2	6.75	208	P	Pn	20 53 19.5	+4.5
KSSEO	Seoul	6.78	348	P	Pn	20 53 12.3	-3.2
	SNR=60						
KSSEO	Seoul	6.78	348	P	Pn	20 53 14.0	-1.5
	SNR=59						
KSDGY	Daegwallycong	6.81	360	P	Pn	20 53 22.0	+6.0
	SNR=21						
KSDGY	Daegwallycong	6.81	360	P	Pn	20 53 13.0	-3.0
	SNR=15						
INCN	Inchon	6.83	346	P	Pn	20 53 10.9	-5.3
INCN	Inchon	6.83	346	Pn	Pn	20 53 13.8	-2.4
INCN				Sn	Sn	20 54 43.5	+9.5
INCN	Inchon	6.83	346	Pn	Pn	20 53 10.9	-5.3
INCN	Inchon	6.83	346	P	Pn	20 53 13.7	-2.5
JKSM	Kasumi	6.85	45	P	Pn	20 53 15.2	-1.2
KSSOD	Songwoldong	6.85	348	P	Pn	20 53 19.1	+2.6
	SNR=38						
KSSOD	Songwoldong	6.85	348	P	Pn	20 53 14.4	-2.1
	SNR=74						
KSCHC	Chuncheon	6.94	354	P	Pn	20 53 15.0	-2.7
	SNR=40						
KSCHC	Chuncheon	6.94	354	P	Pn	20 53 14.0	-3.7
	SNR=53						
GAPB	Gapyeong	7.04	352	P	Pn	20 53 16.0	-3.1
	SNR=53						
KSGAH	Ganghwa	7.09	345	P	Pn	20 53 17.2	-2.5
	SNR=60						
KSGAH	Ganghwa	7.09	345	P	Pn	20 53 22.0	+2.4
	SNR=16						
KSGAH	Ganghwa	7.09	345	P	Pn	20 53 16.2	-3.5
	SNR=39						
JWT	Wachi	7.12	50	P	Pn	20 53 17.1	-3.1
JWT	Wachi	7.12	50	Pn	Pn	20 53 12.8	-7.4
KSIJA	INJE	7.13	356	P	Pn	20 53 18.1	-2.2
	SNR=18						
KSIJA	INJE	7.13	356	P	Pn	20 53 23.6	+3.3
	SNR=30						
KSDDC	Dongducheon	7.16	349	P	Pn	20 53 24.0	+3.4
	SNR=16						
KSDDC	Dongducheon	7.16	349	P	Pn	20 53 17.8	-2.8
	SNR=40						
YPDB	Yeonpyeongdo	7.18	340	P	Pn	20 53 23.0	+2.0
	SNR=24						
YPDB	Yeonpyeongdo	7.18	340	P	Pn	20 53 18.0	-3.0
	SNR=22						
KSMUS	Musan	7.20	347	P	Pn	20 53 18.7	-2.5
	SNR=11						
KSMUS	Musan	7.20	347	P	Pn	20 53 17.5	-3.7
	SNR=101						
KSMUS	Musan	7.20	347	P	Pn	20 53 21.9	+0.7
	SNR=25						
KSCWO	Cheorwon	7.28	352	P	Pn	20 53 26.3	+4.0
	SNR=36						
KSCWO	Cheorwon	7.28	352	P	Pn	20 53 18.8	-3.5
	SNR=48						
YNCB	YEONCHEON	7.32	349	P	Pn	20 53 20.3	-2.5
	SNR=41						
HWCB	Hwacheon	7.40	353	P	Pn	20 53 21.0	-3.0
	SNR=37						
SEHB	SEOHWA	7.40	357	P	Pn	20 53 21.5	-2.5
	SNR=27						
KSSKC	Sokcho	7.42	359	P	Pn	20 53 25.5	+1.4
	SNR=5.8						
JFM	Mihama	7.65	51	P	Pn	20 53 26.3	-1.2
DACB	Daecheong-do R	7.71	336	P	Pn	20 53 28.1	-0.2
	SNR=15						
DACB	Daecheong-do R	7.71	336	P	Pn	20 53 26.0	-2.2
	SNR=29						
KSBAR	Backryungdo	7.84	336	P	Pn	20 53 26.9	-3.0
	SNR=22						
JAA	Atsumi	8.02	60	P	Pn	20 53 31.6	-0.9
YOJ	Yonaguni jima	8.14	220	P	Pn	20 53 32.5	-1.7
YOJ	Yonaguni jima	8.14	220		Pn	20 53 32.5	-1.7
YOJ	Yonaguni jima	8.14	220	P	Pn	20 53 38.9	+4.7
JYTA	Yamagatataniai	8.20	53	P	Pn	20 53 32.6	-2.3
INU	Inuyama	8.27	55		Pn	20 53 28.5	-7.3
INU	Inuyama	8.27	55	P	Pn	20 53 35.1	-0.8
NJ2	Nanjing	8.52	281	⇓iP	Pn	20 53 36.9	-2.5
NJ2				pP	Pn	20 53 39.7	+0.3
NJ2				sP		20 53 43.8	
NJ2				S	Sn	20 55 12.9	-2.7
NJ2				sS	Sn	20 55 25.4	+10
NJ2				LR	LR		
	comp=N,4856µm,16.6s						
NJ2				LR	LR		
	comp=E,1624µm,12.8s						
NJ2				LR	LR		
	comp=Z,1876µm,13.7s						
JYZW	Yoshizawa	8.62	59	P	Pn	20 53 38.6	-2.1
JGF	Kuroka	8.63	55		Pn	20 53 34.7	-6.3
TATO	Taipei	8.68	229	pPn	Pn	20 53 48.6	+7.0
TATO	Taipei	8.68	229		Pn	20 53 40.0	-1.6
JSG	Sagara	8.82	62		Pn	20 53 36.8	-6.6
JNY	Yasuok	8.87	57	P	Pn	20 53 41.8	-2.5
JGN	Niukaw	8.94	51	P	Pn	20 53 43.1	-2.1
YHNB	Yeheng	8.97	228		Pn	20 53 42.7	-2.9
YHNB	Yeheng	8.97	228	P	Pn	20 53 49.3	+3.7
JJH	Hakui	9.02	46	P	Pn	20 53 45.0	-1.1
JTT	Ttatey	9.17	49	P	Pn	20 53 47.7	-0.6
NACB	Ninganchiao	9.19	225		Pn	20 53 46.4	-2.2
JNG	Nsakai	9.57	52	P	Pn	20 53 52.2	-1.6
AJI	Ajiro2	9.65	62	P	Pn	20 53 53.1	-1.8
JHJ	Hachijo jima 2	9.65	74	Pn	Pn	20 53 55.4	+0.5
	112nm,0.3s,baz=53,slow=23,SNR=10						
JHJ				LR	LR	20 57 43.8	
	comp=Z,482µm,19.2s,baz=268,slow=38						
JHJ2	Mitsune	9.68	74		Pn	20 53 48.2	-7.0
JHJ2	Mitsune	9.68	74	P	Pn	20 53 54.0	-1.2
MJB9	Matsu-Tunnel	9.71	52		Pn	20 53 49.3	-6.4
MAT	Matsushiro	9.71	52	P	Pn	20 53 51.6	-4.1
MAT				eS	Sn	20 55 38.1	-6.8
MJAR	Matsushiro Arr	9.71	52	Pn	Pn	20 53 54.0	-1.7
	1.7nm,0.3s,baz=250,slow=14,SNR=53						
MJAR				LR	LR	20 58 11.1	
	comp=Z,705µm,18.7s,baz=240,slow=41						
MJAR	Matsushiro Arr	9.71	52	P	Pn	20 53 47.8	-8.0
MJAR	Matsushiro Arr	9.71	52		Pn	20 53 47.8	-7.9
SSLB	Suanglung	9.87	226		Pn	20 53 55.8	-2.1
SSLB	Suanglung	9.87	226	P	Pn	20 54 02.4	+4.5
DL2	Dalian	9.92	326	P	Pn	20 53 56.4	-2.1
DL2				S	Sn	20 55 45.4	-4.5
DL2				pmax	pmax		
	comp=Z,29µm,11.1s						
DL2				LR	LR		
	comp=N,1790µm,12.7s						
DL2				LR	LR		
	comp=E,1469µm,12.7s						
DL2				LR	LR		
	comp=Z,2171µm,15.1s						
JRY	Ryogami san	9.93	56	P	Pn	20 53 57.6	-1.1
YULB	Yu-li	9.96	223		Pn	20 53 57.1	-2.0
TPUB	Ta-pu	10.43	226		Pn	20 54 04.2	-1.3
TPUB	Ta-pu	10.43	226	P	Pn	20 54 09.8	+4.2
TWG	Pinlang	10.53	222		Pn	20 54 04.2	-2.7
JSD	Sado	10.63	45		Pn	20 54 01.3	-7.0
QZH	Quanzhou	10.73	239	⇓iP	Pn	20 54 02.3	-7.4
QZH				S	Sn	20 56 06.3	-3.6
QZH				LR	LR		
	comp=N,572µm,13.5s						
QZH				LR	LR		
	comp=E,266µm,8.3s						
QZH				LR	LR		
	comp=Z,457µm,11.4s						
JYT	Yasato	10.96	58		Pn	20 54 06.5	-6.2
TIA	Tai'an	11.06	302	P	Pn	20 54 09.8	-4.4
TIA				S	Sn	20 56 32.9	+15
TIA				pmax	pmax		
	comp=Z,5.0nm,0.4s						
TIA				pmax	pmax		
	comp=Z,19µm,10.3s						
TIA				LR	LR		
	comp=N,2528µm,14.6s						
TIA				LR	LR		
	comp=E,1691µm,16.7s						
TIA				LR	LR		
	comp=Z,1272µm,15.5s						
TIA	Tai'an	11.06	302	P	Pn	20 54 09.7	-4.4
TIA				pmax	pmax		
	comp=Z,19µm,12.0s						
TIA				LR	LR		
	comp=Z,2528µm,14.6s						
TIA				LR	LR		
	comp=Z,1272µm,15.5s						
KNMB	Chin-men Tao	11.16	238		Pn	20 54 12.1	-3.5
SNY	Shenyang	11.71	341	⇑P	Pn	20 54 24.0	+1.1
SNY				S	Sn	20 56 33.4	-0.2
SNY				SS	SnSn	20 56 45.7	-0.1
SNY				LR	LR		
	comp=Z,2188µm,14.7s						
SNY				LR	LR		
	comp=Z,4607µm,14.7s						
SNY				LR	LR		
	comp=Z,4576µm,12.3s						
MSHR	Mys Shultsa	11.86	9	⇑eP	Pn	20 54 24.3	-0.7
JMM	Marumori	12.16	52		Pn	20 54 22.3	-6.9
JCJ	Chichijima	12.36	104	Pn	Pn	20 54 35.6	+3.7
	comp=Z,10nm,0.3s,baz=313,slow=8.0,SNR=2.4						
JCJ				LR	LR	20 58 51.8	
	comp=Z,194µm,22.0s,baz=284,slow=35						
JCJ	Chichijima	12.36	104		Pn	20 54 24.6	-7.3
JCJ	Chichijima	12.36	104	P	Pn	20 54 35.1	+3.1
WHN	Wuhan	12.38	272	⇑P	Pn	20 54 33.8	+1.5
WHN				LR	LR		
	comp=Z,2538µm,9.2s						
WHN				LR	LR		
	comp=Z,2008µm,12.9s						
VLA	Vladivostok	12.49	11	⇑eP	Pn	20 54 32.9	-0.8
VLA				pmax	pmax		
	comp=Z,79nm,1.3s						
CN2	Changchun	13.18	350	eP	Pn	20 54 42.1	-1.0
CN2				eS	Sn	20 57 05.8	-3.9
CN2				pmax	pmax		
	comp=Z,42µm,11.0s						
CN2				LR	LR		
	comp=Z,2819µm,11.0s						
CN2				LR	LR		
	comp=Z,3307µm,12.0s						
USA0B	Ussuriysk Arra	13.56	10	P	Pn	20 54 39.0	-9.3
USA0B	Ussuriysk Arra	13.56	10		Pn	20 54 39.0	-9.3
USRK	Ussuriysk Ar.	13.56	10	Pn	Pn	20 54 47.8	-0.6
	baz=187,slow=13,SNR=15						
USRK	Ussuriysk Ar.	13.56	10	P	Pn	20 54 40.2	-8.1
USRK	Ussuriysk Ar.	13.56	10		Pn	20 54 40.2	-8.1
BJT	Baijiatuau	13.71	315	P	Pn	20 54 45.2	-5.2
BJT	Baijiatuau	13.71	315		Pn	20 54 45.2	-5.2
BJI	Beijing	13.72	315	P	Pn	20 54 48.6	-1.9
BJI				LR	LR		
	comp=Z,1643µm,17.5s						
BJI				LR	LR		
	comp=Z,1497µm,18.4s						
BJI				LR	LR		
	comp=Z,2665µm,15.8s						
MDJ	Mudanjiang	13.75	3	P	Pn	20 54 49.4	-1.5
MDJ				pP	Pn	20 54 51.7	+0.8
MDJ				PP	PnPn	20 54 57.2	-1.7
MDJ				S	Sn	20 57 21.4	-2.2
MDJ				SS	SnSn	20 57 37.0	+0.8
MDJ				pmax	pmax		
	comp=Z,35µm,8.4s						
MDJ				LR	LR		
	comp=Z,952µm,13.7s						
MDJ				LR	LR		
	comp=Z,2391µm,14.1s						
MDJ				LR	LR		
	comp=Z,1372µm,15.7s						
JTM	Tenmabayashi	14.07	42		Pn	20 54 43.1	-12
TIY	Taiyuan	15.10	301	⇑P	Pn	20 55 09.8	+0.4
TIY				pP	sP	20 55 19.3	+0.8
TIY				PP	pP	20 55 22.8	+5.5
TIY				sP	P	20 55 25.3	+11
TIY				S	Sn	20 57 55.3	-1.4
TIY				SS	SnSn	20 58 10.5	+1.2
TIY				pmax	pmax		
	comp=Z,28nm,0.5s						
TIY				pmax	pmax		
	comp=Z,10µm,5.2s						
TIY				LR	LR		
	comp=N,1890µm,12.7s						
TIY				LR	LR		
	comp=E,701µm,13.4s						
TIY				LR	LR		
	comp=Z,1016µm,17.9s						
TIY	Taiyuan	15.10	301	⇑P	Pn	20 55 09.7	+0.4
TIY				pmax	pmax		
	comp=Z,10µm,5.2s						
TIY				LR	LR		
	comp=Z,1890µm,12.7s						
TIY				LR	LR		
	comp=Z,701µm,13.4s						
TIY				LR	LR		
	comp=Z,1016µm,17.9s						
TEY	Ternei	15.44	21	⇑eP	Pn	20 55 14.7	+1.0
TEY				eS	Sn	20 58 02.6	-2.2
TEY				pmax	pmax		
	comp=E,30nm,2.7s						
TEY				pmax	pmax		
	comp=N,50nm,2.2s						
TEY				pmax	pmax		
	comp=Z,60nm,2.2s						
TEY				pmax	pmax		
	comp=Z,38µm,5.5s						
TEY				pmax	pmax		
	comp=N,27µm,5.3s						
TEY				pmax	pmax		
	comp=E,11µm,10.6s						
TEY				smax	smax		
	comp=N,198µm,13.4s						
TEY				MLR	MLR		
	comp=N,557µm,12.0s						
TEY				MLR	MLR		
	comp=Z,385µm,13.0s						
HKC	Hong Kong Obse	15.55	240	⇑P	P	20 55 19.0	-0.7
JEW	Eniwo	15.68	37	P	Pn	20 55 12.5	-4.4
GZH	Guangzhou	15.74	244	P	Pn	20 55 12.6	-5.2
GZH				S	Sn	20 58 06.8	-5.5
GZH				LR	LR		
	comp=Z,1308µm,12.6s						
GZH				LR	LR		
	comp=Z,935µm,13.3s						
ERM	Erimo	16.06	42	⇓eP	Pn	20 55 18.0	-3.8
ERM				pmax	pmax		
	comp=Z,429nm,0.8s						
ERM	Erimo	16.06	42	P	Pn	20 55 14.5	-7.2
ERM	Erimo	16.06	42	P	Pn	20 55 20.9	-0.9
MCO	Taipa Grande	16.12	241	P	P	20 55 27.0	+1.0
ENH	Enshi	16.59	273	P	Pn	20 55 25.5	-3.2
XAN	Xi'an	17.02	286	P	Pn	20 55 30.3	-3.9
XAN				S	Sn	20 58 38.8	-4.6
XAN				SS	SnSn	20 59 06.3	+10
XAN				LR	LR		
	comp=N,3005µm,13.1s						
XAN				LR	LR		
	comp=E,1377µm,13.3s						
XAN				LR	LR		
	comp=Z,639µm,19.9s						
XAN	Xi'an	17.02	286	P	Pn	20 55 30.2	-3.9
XAN				S	Sn	20 58 38.7	-4.6
XAN				SS	SnSn	20 59 06.2	+10
XAN				LR	LR		
	comp=Z,1377µm,13.3s						
XAN				LR	LR		
	comp=Z,639µm,19.9s						
HHC	Hu-ho-hao-te	17.09	310	eP	Pn	20 55 33.4	-1.6
HHC				S	Sn	20 58 49.2	+4.0
HHC				pmax	pmax		
	comp=Z,10µm,4.9s						
HHC				LR	LR		
	comp=Z,1288µm,13.8s						
HHC				LR	LR		
	comp=Z,1289µm,15.2s						
HHC				LR	LR		
	comp=Z,1910µm,16.8s						
ASAJ	Asahikawa	17.18	36	Pn	Pn	20 55 31.4	-4.5
	comp=Z,0.4nm,0.3s,baz=314,slow=33,SNR=4.6						
ASAJ				LR	LR	21 01 37.8	
	comp=Z,391µm,19.9s,baz=240,slow=36						
ASAJ	Asahikawa	17.18	36	P	Pn	20 55 28.9	-7.0
ASAJ				pmax	pmax		
	comp=Z,2µm,1.1s						
JKA	Kamikawa-asahi	17.18	36	P	Pn	20 55 28.9	-7.0
JKA				IAmb	IAmb	20 55 46.8	
	comp=Z,2µm,1.1s						
JCNP	Jose Panganiba	17.40	200	⇑eP	P	20 55 43.9	+3.7
GQP	Guinayangan	17.84	200	⇓eP	P	20 55 50.3	+5.2
LQP	Lukban	17.93	203	⇓eP	P	20 55 52.2	+5.9
BTO	Baotou	18.01	308	eP	Pn	20 55 45.5	-0.9
BTO				S	Sn	20 59 09.4	+2.1
BTO				LR	LR		
	comp=Z,3549µm,16.2s						
TGY	Tagaytay City	18.16	205	eP	P	20 55 56.0	+7.4
KLR	Kul'dur	18.49	6	P	P	20 55 48.1	-3.9
	comp=Z,3.9nm,0.3s,baz=190,slow=9.5,SNR=155						
KLR				LR	LR	21 02 15.2	
	comp=Z,139µm,21.0s,baz=181,slow=35						
KLR	Kul'dur	18.49	6	deP	P	20 55 50.7	-1.3
PGP	Puerto Galera	18.70	204	⇓eP	Pn	20 55 54.6	-0.3
LUBP	Lubang	18.75	206	⇑eP	Pn	20 55 58.1	+2.6
YUK	Yuzh-Kuril'sk	18.87	41	eP	P	20 55 49.3	-6.9
YUK				eS	Sn	20 59 20.3	-7.6
YUK				MLR	MLR		
	comp=Z,409µm,16.0s						

YUK				MLR	MLR		
	comp=N,568µm,14.0s						
YUK				MLR	MLR		
	comp=E,385µm,14.0s						
YSS	**Yuzh-Sakhalins**	**19.38**	**30**	κ *i*P	**P**	**20 55 57.7**	**-4.0**
YSS				*e*S	**Sn**	**20 59 34.9**	**-5.2**
YSS				pmax	pmax		
	comp=Z,1µm,1.2s						
YSS				pmax	pmax		
	comp=Z,28µm,8.6s						
YSS				pmax	pmax		
	comp=N,15µm,8.4s						
YSS				pmax	pmax		
	comp=E,10µm,8.4s						
YSS				smax	smax		
	comp=N,64µm,9.3s						
YSS				smax	smax		
	comp=E,42µm,8.4s						
YSS				MLR	MLR		
	comp=Z,792µm,12.8s						
YSS				MLR	MLR		
	comp=N,557µm,13.3s						
YSS				MLR	MLR		
	comp=E,357µm,13.0s						
YSS	**Yuzh-Sakhalins**	**19.38**	**30**	P	P	20 55 54.1	-7.6
YSS				IAmb	IAmb	20 56 14.5	
	comp=Z,2µm,1.3s						
YSS	**Yuzh-Sakhalins**	**19.38**	**30**	P	**P**	**20 56 02.0**	**+0.3**
HIA	**Hailar**	**19.61**	**342**	P	**P**	**20 55 58.0**	**-6.3**
HIA				pmax	pmax		
	comp=Z,1µm,1.3s						
HIA	**Hailar**	**19.61**	**342**	P	**P**	**20 55 58.0**	**-6.3**
GYA	**Guiyang**	**19.85**	**263**	⇑P	**P**	**20 56 06.1**	**-1.1**
GYA				S	**Sn**	**20 59 50.4**	**-1.6**
GYA				sS	pS	21 00 00.7	-2.3
GYA				pmax	pmax		
	comp=Z,37µm,13.6s						
GYA				LR	LR		
	comp=Z,347µm,10.4s						
GYA				LR	LR		
	comp=Z,288µm,13.9s						
GYA				LR	LR		
	comp=Z,345µm,11.0s						
RCP	**Roxas**	**19.99**	**197**	⇑*e*P	**Pn**	**20 56 12.6**	**+2.2**
GRNR	**Gornyy**	**20.70**	**14**	⇓*i*P	Pn	20 56 18.1	-0.4
GRNR				*e*S	Sn	21 00 15.3	+3.3
GRNR				pmax	pmax		
	comp=N,40nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,50nm,1.0s						
GRNR				MLR	MLR		
	comp=E,488µm,14.0s						
GRNR				MLR	MLR		
	comp=N,157µm,11.0s						
GRNR				MLR	MLR		
	comp=Z,392µm,11.0s						
KUR	**Kuril'sk**	**20.73**	**41**	*d* *i*P	**P**	**20 56 14.4**	**-2.1**
KUR				*i*		20 56 31.4	
KUR				*i* PPP	PPP	20 56 39.7	
KUR				*i* S	**S**	**21 00 05.7**	**-2.3**
KUR				*e*SS	**SnSn**	**21 00 22.2**	**-5.4**
KUR				*i* SSS	SSS	21 00 39.3	
KUR				pmax	pmax		
	comp=E,1µm,1.3s						
KUR				pmax	pmax		
	comp=Z,6µm,1.3s						
KUR				pmax	pmax		
	comp=N,2µm,1.2s						
KUR				pmax	pmax		
	comp=Z,61µm,8.5s						
KUR				pmax	pmax		
	comp=E,49µm,9.0s						
KUR				pmax	pmax		
	comp=N,29µm,4.5s						
KUR				MLR	MLR		
	comp=Z,475µm,15.0s						
KUR				MLR	MLR		
	comp=N,526µm,14.0s						
KUR				MLR	MLR		
	comp=E,411µm,14.0s						
QIZ	**Qiongzhong**	**20.75**	**240**	P	Pn	20 56 18.1	-1.2
QIZ				S	**S**	**21 00 09.3**	**+0.6**
QIZ				PcP	**PcP**	**21 00 26.0**	**-0.4**
QIZ				LR	LR		
	comp=E,453µm,13.2s						
QIZ				LR	LR		
	comp=E,407µm,13.2s						
QIZ				LR	LR		
	comp=E,235µm,12.6s						
QIZ	**Qiongzhong**	**20.75**	**240**	P	**P**	**20 56 11.9**	**-5.0**
QIZ	**Qiongzhong**	**20.75**	**240**	P	Pn	20 56 20.6	+1.3
UGL	**Uglegorsk**	**20.81**	**25**	*e*P	**P**	**20 56 10.5**	**-6.8**
UGL				pmax	pmax		
	comp=Z,700nm,1.0s						
UGL				pmax	pmax		
	comp=E,19µm,9.1s						
UGL				pmax	pmax		
	comp=N,17µm,6.5s						
UGL				pmax	pmax		
	comp=Z,31µm,5.7s						
UGL				MLR	MLR		
	comp=E,419µm,11.0s						
UGL				MLR	MLR		
	comp=N,124µm,14.0s						
UGL				MLR	MLR		
	comp=Z,505µm,11.0s						
LLP	**Lapu-Lapu**	**20.91**	**193**	*e*P	Pn	20 56 21.4	+0.2
MSLP	**Maasin**	**20.93**	**191**	⇑*e*P	Pn	20 56 21.8	+0.4
LZH	**Lanzhou**	**21.38**	**291**	⇑P	**P**	**20 56 21.5**	**-2.3**
LZH				pP	pP	20 56 25.4	-1.1
LZH				PP	**PnPn**	**20 56 46.2**	**+2.6**
LZH				*e*S	**S**	**21 00 16.5**	**-4.8**
LZH				sS	sS	21 00 23.5	-2.0
LZH				SS	**SnSn**	**21 00 51.7**	**+7.8**
LZH				pmax	pmax		
	comp=Z,2µm,1.0s						
LZH				pmax	pmax		
	comp=Z,28µm,4.8s						
LZH				LR	LR		
	comp=Z,1069µm,13.1s						
LZH				LR	LR		
	comp=Z,1459µm,15.0s						
CD2	**Chengdu**	**21.43**	**277**	P	**P**	**20 56 21.8**	**-2.4**
CD2				pmax	pmax		
	comp=Z,3µm,1.1s						
CD2				pmax	pmax		
	comp=Z,20µm,4.5s						
CD2				LR	LR		
	comp=Z,1635µm,12.1s						
CD2				LR	LR		
	comp=Z,1337µm,14.9s						
TBP	**Tagbilaran**	**21.55**	**193**	*e*P	**P**	**20 56 25.2**	**-0.3**
TBP				*i* S	**S**	**21 00 25.0**	**+0.7**
SNPH	**Sibulan**	**22.01**	**195**	*e*P	**P**	**20 56 34.8**	**+4.2**
TYV	**Tymovskoe**	**22.52**	**23**	*e*P	**P**	**20 56 36.4**	**+0.8**
TYV				pmax	pmax		
	comp=Z,269nm,1.3s						
TYV				pmax	pmax		
	comp=Z,25µm,7.1s						
TYV				MLR	MLR		
	comp=E,739µm,13.0s						
TYV				MLR	MLR		
	comp=Z,474µm,13.0s						
GUMO	**Guam**	**22.72**	**136**	P	**P**	**20 56 37.4**	**-0.7**
	comp=Z,294nm,1.1s,baz=35,slow=4.3,SNR=5.0						
GUMO				LR	LR	21 04 37.4	
	comp=Z,190µm,19.4s,baz=317,slow=34						
GUMO	**Guam**	**22.72**	**136**	P	**P**	**20 56 33.6**	**-4.5**
GUMO				pmax	pmax		
	comp=Z,5µm,1.8s						
GUMO	**Guam**	**22.72**	**136**	P	**P**	**20 56 33.6**	**-4.5**
GUMO	**Guam**	**22.72**	**136**	P	**P**	**20 56 41.5**	**+3.4**
DCPH	**Dipolog City**	**22.73**	**194**	⇑*e*P	**P**	**20 56 43.2**	**+5.0**
ZEA	**Zeya**	**22.89**	**358**	*e*P	**P**	**20 56 36.0**	**-3.6**
ZEA				*e*		20 56 43.1	
ZEA				MLR	MLR		
	comp=E,314µm,11.0s						
ZEA				MLR	MLR		
	comp=N,324µm,10.0s						
ZEA				MLR	MLR		
	comp=Z,449µm,12.0s						
PAGZ	**Pagadian**	**23.43**	**193**	⇓*e*P	**P**	**20 56 44.4**	**-1.0**
KMI	**Kunming**	**23.63**	**262**	⇑P	**P**	**20 56 47.3**	**-0.3**
KMI				sP	sP	20 56 51.3	-0.2
KMI				S	**S**	**21 01 02.4**	**0.0**
KMI				sS	sS	21 01 06.9	-0.1
KMI				pmax	pmax		
	comp=Z,12µm,5.9s						
KMI				LR	LR		
	comp=Z,612µm,13.2s						
KMI				LR	LR		
	comp=Z,282µm,14.8s						
KMI				LR	LR		
	comp=Z,346µm,13.6s						
ULN	**Ulaanbaatar**	**23.73**	**322**	⇑*e*P	**P**	**20 56 44.7**	**-3.6**
ULN				pmax	pmax		
	comp=Z,1µm,1.6s						
ULN				MLR	MLR		
	comp=Z,815µm,16.0s						
ULN	**Ulaanbaatar**	**23.73**	**322**	P	**P**	**20 56 44.6**	**-3.8**
ULN	**Ulaanbaatar**	**23.73**	**322**	P	**P**	**20 56 41.9**	**-6.4**
ULN				IAmb	IAmb	20 57 03.8	
	comp=Z,1µm,1.4s						
DMPH	**Davao City--Mi**	**23.85**	**188**	⇑*e*P	**P**	**20 56 50.6**	**+1.1**
DAV	**Davao City (W)**	**23.85**	**188**	P	**P**	**20 56 48.5**	**-1.0**
	comp=Z,128nm,0.4s,baz=39,slow=2.8,SNR=1.7						
DAV				LR	LR	21 05 34.9	
	comp=Z,108µm,21.0s,baz=7.0,slow=35						
DAV	**Davao City (W)**	**23.85**	**188**	P	**P**	**20 56 43.8**	**-5.7**
DAV				IAmb	IAmb	20 58 19.3	
	comp=Z,785nm,1.1s						
DAV	**Davao City (W)**	**23.85**	**188**	P	**P**	**20 56 54.3**	**+4.8**
NKL	**Nikolayevsk**	**23.91**	**18**	*e*P	**P**	**20 56 45.7**	**-4.1**
NKL				*e*S	S	21 00 55.2	-11
NKL				pmax	pmax		
	comp=N,601nm,0.5s						
NKL				pmax	pmax		
	comp=Z,811nm,1.2s						
NKL				smax	smax		
	comp=E,2.0nm,1.7s						
NKL				smax	smax		
	comp=N,1µm,0.5s						
NKL				MLR	MLR		
	comp=Z,512µm,13.0s						
CIT	**Chita**	**23.92**	**336**	*e*P	**P**	**20 56 46.0**	**-3.9**
CIT				*e*		20 57 18.0	
CIT				pmax	pmax		
	comp=Z,4µm,1.8s						
KCP	**Kidapawan**	**23.97**	**189**	⇓*e*P	**P**	**20 56 50.2**	**-0.5**
SONM	**Songino Array**	**24.07**	**321**	P	**P**	**20 56 48.0**	**-3.5**
	comp=Z,84nm,0.8s,baz=138,slow=8.5,SNR=101						
SONM				LR	LR	21 07 20.2	
	comp=Z,894µm,19.4s,baz=130,slow=40						
SONM	**Songino Array**	**24.07**	**321**	P	**P**	**20 56 44.7**	**-6.8**
SONM	**Songino Array**	**24.07**	**321**	P	**P**	**20 56 44.7**	**-6.8**
SLVN	**Son La**	**24.18**	**253**	P	**P**	**20 56 48.0**	**-4.8**
SLVN				IAmb	IAmb	20 57 06.0	
	comp=Z,1µm,1.7s						
SLVN				IAMs_20	IAMs_20	21 07 18.7	
	comp=Z,307µm,19.0s						
GSPH	**General Santos**	**24.90**	**189**	⇑*e*P	**P**	**20 57 04.8**	**+5.6**
GTA	**Gaotai**	**25.06**	**298**	⇑P	**P**	**20 56 56.9**	**-3.7**
GTA				pP	pP	20 57 02.0	-1.4
GTA				sP	sP	20 57 05.0	+0.4
GTA				S	**S**	**21 01 24.6**	**-0.4**
GTA				sS	sS	21 01 34.1	+4.4
GTA				pmax	pmax		
	comp=Z,12µm,8.0s						
GTA				LR	LR		
	comp=Z,1090µm,18.2s						
GTA				LR	LR		
	comp=Z,665µm,16.0s						
GTA				LR	LR		
	comp=Z,546µm,17.8s						
UBPT	**Khong Chiam**	**26.35**	**239**	P	**P**	**20 57 09.5**	**-2.7**
UBPT				IAmb	IAmb	20 57 26.7	
	comp=Z,2µm,1.8s						
ZAK	**Zakamensk**	**27.23**	**323**	*e*P	**P**	**20 57 17.4**	**-2.7**
ZAK				pmax	pmax		
	comp=Z,494nm,1.3s						
TLY	**Talaya**	**27.84**	**326**	P	**P**	**20 57 22.9**	**-2.5**
	comp=Z,33nm,0.9s,baz=139,slow=2.0,SNR=12						
TLY				LR	LR	21 09 28.7	
	comp=Z,945µm,18.1s,baz=125,slow=39						
TLY	**Talaya**	**27.84**	**326**	*c* *i*P	**P**	**20 57 22.6**	**-2.8**
TLY				*e*S	**S**	**21 02 10.3**	**+1.9**
TLY				pmax	pmax		
	comp=Z,1µm,1.8s						
TLY				MLR	MLR		
	comp=Z,1871µm,15.0s						
TLY	**Talaya**	**27.84**	**326**	P	**P**	**20 57 25.2**	**-0.2**
TLY	**Talaya**	**27.84**	**326**	P	**P**	**20 57 19.0**	**-6.4**
TLY				IAmb	IAmb	20 57 35.7	
	comp=Z,844nm,1.7s						
IRK	**Irkutsk**	**27.89**	**327**	*e*P	**P**	**20 57 23.1**	**-2.8**
IRK				pmax	pmax		
	comp=Z,1µm,1.7s						
SKR	**Severo-Kuril's**	**28.41**	**38**	*e*P	**P**	**20 57 28.6**	**-1.9**
SKR				*e*S	**S**	**21 02 16.1**	**-1.3**
SKR				pmax	pmax		
	comp=Z,144nm,1.3s						
SKR				pmax	pmax		
	comp=Z,5µm,10.9s						
SKR				pmax	pmax		
	comp=Z,8µm,3.1s						
SKR				MLR	MLR		
	comp=Z,172µm,17.0s						
SPMM	**Sapulut**	**28.46**	**206**	P	P	20 57 35.0	+3.7
BOD	**Bodaibo**	**28.81**	**344**	*e*P	**P**	**20 57 31.4**	**-2.5**
BOD				pmax	pmax		
	comp=Z,463nm,1.7s						
LKP	**Lekhapani**	**28.89**	**271**	*e*P	**P**	**20 57 33.2**	**-1.8**
PBKT	**Sadao Pong**	**29.02**	**247**	P	P	20 57 30.4	-5.8
MOY	**Mondy**	**29.15**	**323**	*e*P	**P**	**20 57 36.3**	**-0.9**
MOY				pmax	pmax		
	comp=Z,696nm,3.7s						
CHTO	**Chiang Mai**	**29.48**	**253**	P	P	20 57 34.9	-5.4
CHTO				pmax	pmax		
	comp=Z,557nm,1.8s						
CHTO				MLR	MLR		
	comp=Z,207µm,22.0s						
CHTO	**Chiang Mai**	**29.48**	**253**	pP	pP	20 57 45.4	+2.3
CHTO	**Chiang Mai**	**29.48**	**253**	P	P	20 57 34.9	-5.4
CHTO	**Chiang Mai**	**29.48**	**253**	P	**P**	**20 57 40.2**	**-0.1**
CM31	**Chiang Mai Arr**	**29.66**	**252**	P	P	20 57 36.2	-5.7
CMAR	**Chiang Mai Arr**	**29.66**	**252**	P	**P**	**20 57 40.1**	**-1.8**
	comp=Z,6.4nm,0.7s,baz=56,slow=7.8,SNR=15						
CMAR				LR	LR	21 10 34.0	
	comp=Z,213µm,18.2s,baz=92,slow=38						
CMAR	**Chiang Mai Arr**	**29.66**	**252**	*i* P	**P**	**20 57 40.5**	**-1.4**
CMAR	**Chiang Mai Arr**	**29.66**	**252**	P	P	20 57 35.6	-6.2
DIBR	**DIBRUGARH**	**29.66**	**272**	*e*P	**P**	**20 57 42.2**	**+0.4**
DIBR				IAmb	IAmb	20 57 51.1	
	comp=Z,12µm,3.7s						
TNTI	**Ternate**	**29.95**	**183**	P	**P**	**20 57 43.3**	**-1.1**
	comp=Z,21µmcomp=Z,8µmcomp=Z,266nm,1.7s						
TNTI	**Ternate**	**29.95**	**183**	P	**P**	**20 57 39.9**	**-4.5**
TNTI				IAmb	IAmb	20 58 07.9	
	comp=Z,787nm,1.6s						
TNTI	**Ternate**	**29.95**	**183**	P	P	20 57 48.0	+3.6
MOKO	**MOKOCHONG**	**30.31**	**270**	*e*x	**P**	**20 57 51.4**	**+3.6**
JORH	**JORHAT**	**30.42**	**271**	*e*P	**P**	**20 57 51.9**	**+3.3**
KMSI	**Cibinong**	**30.45**	**189**	P	**P**	**20 57 52.2**	**+3.3**
	comp=Z,428nmcomp=Z,198nm,0.8s						
TOLI2	**Tolitoli**	**30.53**	**196**	P	P	20 57 44.1	-5.5
TOLI2				IAmb	IAmb	20 58 00.5	
	comp=Z,567nm,1.6s						
TOLI2	**Tolitoli**	**30.53**	**196**	P	**P**	**20 57 52.9**	**+3.3**
GTOI	**Gorontalo**	**30.55**	**191**	P	**P**	**20 57 46.9**	**-2.8**
	comp=Z,12µmcomp=Z,2µmcomp=Z,65nm,1.6s						
PEA0B	**Petropavlovsk-**	**30.59**	**35**	⇑*e*P	**P**	**20 57 46.8**	**-3.0**
PEA0B	**Petropavlovsk-**	**30.59**	**35**	P	P	20 57 41.1	-8.7
PEA0B				IAmb	IAmb	20 58 09.4	
	comp=Z,649nm,1.3s						
PETK	**Petropavlovsk-**	**30.59**	**35**	P	**P**	**20 57 47.8**	**-2.1**
	comp=Z,18nm,0.8s,baz=186,slow=1.4,SNR=8.5						
PETK				LR	LR	21 09 38.5	
	comp=Z,284µm,18.9s,baz=218,slow=36						
PETK				P3KPbc		21 29 31.4	
	comp=Z,1.3nm,0.5s,baz=79,slow=7.7,SNR=7.7						
PETK	**Petropavlovsk-**	**30.59**	**35**	P	P	20 57 41.2	-8.6
PETK	**Petropavlovsk-**	**30.59**	**35**	P	P	20 57 41.2	-8.6
ITAN	**ITANAGAR**	**30.77**	**272**	*e*P	**P**	**20 57 51.8**	**+0.2**
ITAN				IAmb	IAmb	20 58 03.3	
	comp=Z,573nm,1.4s						
KOHI	**KOHIMA**	**30.84**	**269**	*e*P	**P**	**20 57 53.5**	**+1.1**
MRSI	**Marisa**	**30.90**	**193**	P	**P**	**20 57 51.2**	**-1.6**
	comp=Z,26µmcomp=Z,9µmcomp=Z,378nm,2.0s						
PET	**Petropavlovsk**	**31.02**	**36**	*de*P	**P**	**20 57 51.9**	**-1.6**
PET				*e*		20 59 05.1	
PET				*e*S	**S**	**21 02 54.1**	**-4.2**
PET				pmax	pmax		
	comp=Z,2µm,1.3s						
PET				pmax	pmax		
	comp=Z,12µm,9.4s						
PET				pmax	pmax		
	comp=Z,17µm,8.4s						
PET				smax	smax		
	comp=N,56µm,19.6s						
PET				smax	smax		
	comp=E,85µm,19.9s						
PET				smax	smax		
	comp=N,40µm,15.5s						
PET				MLR	MLR		
	comp=Z,491µm,18.0s						
PET	**Petropavlovsk**	**31.02**	**36**	P	P	20 57 44.6	-8.9
PET				IAMs_20	IAMs_20	21 11 29.0	
	comp=Z,354µm,18.0s						
PET	**Petropavlovsk**	**31.02**	**36**	P	**P**	**20 57 53.1**	**-0.5**
YAK	**Yakutsk**	**31.19**	**1**	P	**P**	**20 57 50.3**	**-4.6**
	comp=Z,31nm,0.7s,baz=7.5,slow=0.7,SNR=21						
YAK				LR	LR	21 09 52.1	
	comp=Z,140µm,20.3s,baz=176,slow=36						
YAK	**Yakutsk**	**31.19**	**1**	*e*P	**P**	**20 57 50.7**	**-4.2**
YAK				e*PP	**sP**	**20 58 00.8**	**+1.9**
YAK				*e*		20 59 13.5	
YAK				*e*SS	SS	21 04 56.4	-17
YAK				pmax	pmax		
	comp=Z,446nm,1.1s						
YAK				pmax	pmax		
	comp=N,195nm,1.1s						
YAK				pmax	pmax		
	comp=E,56nm,1.3s						
YAK				MLR	MLR		
	comp=Z,381µm,11.0s						
YAK				MLR	MLR		
	comp=N,204µm,10.0s						
YAK				MLR	MLR		
	comp=E,97µm,10.0s						
YAK	**Yakutsk**	**31.19**	**1**	P	P	20 57 47.0	-7.9
YAK				IAmb	IAmb	20 57 59.5	
	comp=Z,334nm,0.9s						
YAK				IAMs_20	IAMs_20	21 10 20.1	
	comp=Z,287µm,18.0s						
LBMI	**Labuha**	**31.34**	**182**	P	**P**	**20 57 56.3**	**-0.4**
	comp=Z,28µmcomp=Z,7µmcomp=Z,353nm,1.7s						
MPSI	**Mapaga**	**31.49**	**197**	P	**P**	**20 57 56.8**	**-1.2**
	comp=Z,30µmcomp=Z,8µmcomp=Z,249nm,2.1s						
SWI	**Sorong**	**31.64**	**175**	P	**P**	**20 58 00.7**	**+1.4**
SWI				pmax	pmax		
	comp=Z,124nm,0.9s						
SWI	**Sorong**	**31.64**	**175**	P	**P**	**20 57 58.2**	**-1.1**
	comp=Z,47µmcomp=Z,6µmcomp=Z,126nm,0.8s						
LUWI	**Luwuk**	**32.23**	**191**	P	**P**	**20 58 02.5**	**-2.0**
	comp=Z,18µmcomp=Z,7µmcomp=Z,164nm,2.7s						
LUWI	**Luwuk**	**32.23**	**191**	P	**P**	**20 57 59.9**	**-4.6**
LUWI	**Luwuk**	**32.23**	**191**	P	**P**	**20 58 07.8**	**+3.3**
SILR	**SILCHAR**	**32.25**	**268**	*e*P	**P**	**20 58 06.2**	**+1.4**
SILR				IAmb	IAmb	20 58 15.5	
	comp=Z,370nm,1.2s						
SBUM	**Sibu**	**32.28**	**212**	P	P	20 58 09.0	+4.0
APSI	**Ampana**	**32.30**	**193**	P	**P**	**20 58 02.5**	**-2.7**
	comp=Z,12µmcomp=Z,5µmcomp=Z,144nm,1.9s						
MA2	**Magadan**	**32.33**	**21**	P	**P**	**20 58 00.9**	**-4.0**
	comp=Z,35nm,0.8s,baz=210,slow=10,SNR=10						
MA2	**Magadan**	**32.33**	**21**	⇓*e*P	**P**	**20 58 03.8**	**-1.2**
MA2				pmax	pmax		
	comp=Z,665nm,1.1s						
MA2				MLR	MLR		
	comp=Z,321µm,15.0s						
MA2	**Magadan**	**32.33**	**21**	P	P	20 57 56.8	-8.2
MA2				IAMs_20	IAMs_20	21 10 57.6	
	comp=Z,287µm,18.0s						
MA2	**Magadan**	**32.33**	**21**	P	**P**	**20 58 04.0**	**-1.0**
LSA	**Lhasa**	**32.38**	**278**	pmax	pmax	20 58 08.3	
LSA				pmax	pmax		
	comp=Z,1µm,2.2s						
LSA	**Lhasa**	**32.38**	**278**	P	**P**	**20 58 05.0**	**-1.4**
LSA				pP	**sP**	**20 58 13.8**	**+3.4**
LSA				S	**S**	**21 03 19.3**	**-1.7**
LSA				LR	LR		
	comp=Z,352µm,14.2s						
LSA				LR	LR		
	comp=Z,348µm,11.4s						
LSA				LR	LR		
	comp=Z,726µm,11.4s						
LSA	**Lhasa**	**32.38**	**278**	P	**P**	**20 58 06.9**	**+0.5**
LSA	**Lhasa**	**32.38**	**278**	P	P	20 58 01.1	-5.3
LSA				pmax	pmax		
	comp=Z,205nm,1.2s						
LSA				MLR	MLR		
	comp=Z,172µm,19.0s						
LSA	**Lhasa**	**32.38**	**278**	P	P	20 58 01.1	-5.3
LSA				IAMs_20	IAMs_20	21 10 50.5	
	comp=Z,172µm,19.0s						
BAKI	**Biak**	**32.64**	**166**	P	**P**	**20 58 08.8**	**+0.7**
	comp=Z,13µmcomp=Z,384nm,2.1s						
SHL	**Shillong**	**32.80**	**270**	P	P	20 58 04.1	-5.6
SHL				pmax	pmax		
	comp=Z,490nm,1.4s						
SHL	**Shillong**	**32.80**	**270**	*e*x	**P**	**20 58 05.4**	**-4.3**
SHL				IAmb	IAmb	20 58 14.0	
	comp=Z,135nm,1.1s						
SHL	**Shillong**	**32.80**	**270**	P	**P**	**20 58 08.9**	**-0.9**
	SNR=149						
SHL	**Shillong**	**32.80**	**270**	P	P	20 58 04.1	-5.6
SHL				IAmb	IAmb	20 58 18.4	
	comp=Z,490nm,1.4s						
SANI	**Sanana**	**32.83**	**185**	P	**P**	**20 58 11.3**	**+1.5**
SMKI	**Samarinda**	**33.00**	**202**	P	P	20 58 15.9	+4.6
	comp=Z,33µmcomp=Z,28µmcomp=Z,393nm,1.4s						
SRPI	**Serui, Papua**	**33.32**	**166**	P	**P**	**20 58 12.2**	**-1.9**
	comp=Z,31µmcomp=Z,6µmcomp=Z,136nm,1.0s						
FAKI	**Fak Fak**	**33.76**	**174**	P	**P**	**20 58 16.0**	**-1.9**
	comp=Z,48µmcomp=Z,17µmcomp=Z,504nm,0.8s						
FAKI	**Fak Fak**	**33.76**	**174**	P	**P**	**20 58 13.2**	**-4.7**
FAKI				IAmb	IAmb	20 58 32.9	
	comp=Z,367nm,0.9s						
FAKI	**Fak Fak**	**33.76**	**174**	P	**P**	**20 58 20.2**	**+2.3**
MSAI	**Masohi**	**34.01**	**180**	P	**P**	**20 58 18.5**	**-1.6**
	comp=Z,659nmcomp=Z,60nm,1.4s						
SMPI	**Sarmi**	**34.02**	**162**	P	**P**	**20 58 18.9**	**-1.3**
	comp=Z,34µmcomp=Z,10µmcomp=Z,207nm,2.7s						
KSM	**Kuching**	**34.04**	**214**	P	P	20 58 25.0	+4.6
MTKI	**Muara Teweh, K**	**34.26**	**205**	P	**P**	**20 58 21.1**	**-1.1**
	comp=Z,12µmcomp=Z,8µmcomp=Z,234nm,2.4s						
STKI	**Sintang**	**34.73**	**211**	P	**P**	**20 58 29.6**	**+3.2**
	comp=Z,11µmcomp=Z,110nm,1.9s						
WMQ	**Urumqi**	**34.75**	**304**	P	**P**	**20 58 23.1**	**-3.3**
WMQ				pmax	pmax		
	comp=Z,8µm,5.1s						
WMQ				LR	LR		
	comp=Z,437µm,13.9s						
WMQ				LR	LR		
	comp=Z,303µm,16.1s						
WMQ				LR	LR		
	comp=Z,217µm,16.9s						
TTSI	**Tana Toraja**	**34.77**	**196**	P	**P**	**20 58 27.2**	**+0.5**
	comp=Z,14µmcomp=Z,6µmcomp=Z,89nm,1.0s						
GTK	**Tadong**	**35.12**	**275**	*e*P	**P**	**20 58 30.1**	**+0.2**
GTK				IAmb	IAmb	20 58 42.0	
	comp=Z,146nm,3.4s						
BNDI	**Bandanaira**	**35.20**	**178**	P	P	20 58 33.9	+3.5
SEY	**Seymchan**	**35.49**	**18**	P	**P**	**20 58 30.1**	**-2.4**
	comp=Z,22nm,0.7s,baz=221,slow=4.4,SNR=22						
SPSI	**Sidrap Palu**	**35.67**	**195**	P	**P**	**20 58 34.2**	**-0.2**
	comp=Z,16µmcomp=Z,4µmcomp=Z,75nm,2.6s						
TAPN	**Taplejung**	**35.87**	**275**	*e*P	**P**	**20 58 34.2**	**-2.3**
	comp=Z,2µm,1.5s						
KBKI	**Kotabaru**	**36.02**	**202**	P	**P**	**20 58 39.0**	**+1.6**
	comp=Z,3µmcomp=Z,144nm,1.8s						
WAKE	**Wake Island**	**36.07**	**100**	P	P	20 58 32.4	-5.4
WAKE				IAmb	IAmb	20 58 47.1	
	comp=Z,1µm,1.8s						
H11N2	**WAKE ISLAND Hy**	**36.08**	**99**	T	T	21 34 56.9	
	baz=296,slow=74,SNR=83						
H11N1	**WAKE ISLAND Hy**	**36.08**	**99**	T	T	21 34 57.1	
	baz=296,slow=74,SNR=54						
H11N3	**WAKE ISLAND Hy**	**36.10**	**99**	T	T	21 35 12.6	
	baz=296,slow=74,SNR=77						
DGZ	**Jazzator, Alta**	**36.13**	**313**	⇓*e*P	**P**	**20 58 35.6**	**-2.7**
DGZ				pmax	pmax		
	comp=Z,211nm,1.8s						
DGZ				MLR	MLR		
	comp=Z,799µm,16.0s						
ODAN	**Odare**	**36.28**	**274**	*e*P	**P**	**20 58 36.6**	**-3.3**
	comp=Z,637nm,1.0s						

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JRMM  Jerantut          36.50 228   P        P        20 58 47.0 +5.4
PATS  Pohnpei           36.59 125   P        P        20 58 35.9 -6.4
PATS  Pohnpei           36.59 125   P        P        20 58 44.7 +2.4
BBKI  Banjar Baru       36.61 204   P        P        20 58 42.9 +0.4
      comp=Z,17µmcomp=Z,953nm,1.6s
KULM  Kulim             36.65 232   P        P        20 58 47.0 +4.1
KAPI  Kappang           36.69 195   P        P        20 58 42.9 -0.3
      comp=Z,32nm,1.0s,baz=38,slow=7.3,SNR=15
KAPI  Kappang           36.69 195   P        P        20 58 39.2 -3.9
KAPI                                pmax     pmax
      comp=Z,801nm,2.0s
KAPI                                MLR      MLR
      comp=Z,60µm,20.0s
KAPI  Kappang           36.69 195   P        P        20 58 39.2 -3.9
KAPI                                IAmb     IAmb     20 58 55.1
      comp=Z,801nm,2.0s
KAPI  Kappang           36.69 195   P        P        20 58 46.2 +3.1
BKSI  Bulukumba         36.91 194   P        P        20 58 43.6 -1.4
      comp=Z,16µmcomp=Z,4µmcomp=Z,98nm,1.6s
RAMN  Ramite            36.93 275  eP        P        20 58 43.2 -2.3
      comp=Z,66nm,0.7s
IPM   Ipoh              37.00 230   P        P        20 58 50.0 +4.1
JIRN  Jiri              37.09 276  eP        P        20 58 44.4 -2.6
      comp=Z,846nm,1.2s
PBKI  Pangkalan Bun     37.13 209   P        P        20 58 47.9 +1.0
      comp=Z,16µmcomp=Z,11µmcomp=Z,570nm,1.4s
ZSN   Zaisan            37.29 309  eP        P        20 58 44.4 -3.7
      baz=309
ZSN                                eS        S        21 04 34.2 -1.2
      baz=309
ZSN   Zaisan            37.29 309  eP        P        20 58 44.3 -3.7
ZSN                                eS        S        21 04 34.1 -1.2
MYKOM Kota Tinggi       37.29 224   P        P        20 58 55.0 +6.7
GUN   Gumba             37.29 277  eP        P        20 58 46.4 -2.3
      comp=Z,370nm,0.6s
DGPR  DIGLIPUR          37.35 250  eP        P        20 58 51.5 +2.6
BSSI  Bau Bau, Buton    37.63 194   P        P        20 58 48.6 -2.5
      comp=Z,12µmcomp=Z,7µmcomp=Z,284nm,2.0s
PKI   Pulchoki          37.78 276  eP        P        20 58 50.1 -2.7
KKN   Kakani            37.84 277  eP        P        20 58 50.3 -2.8
DMN   Daman             38.03 276  eP        P        20 58 52.4 -2.4
      comp=Z,3µm,1.4s
GKN   Gorkha            38.33 277  eP        P        20 58 54.7 -2.5
      comp=Z,4µm,1.8s
PBA   Port Blair        38.36 248  eP        P        20 59 02.2 +4.8
PBA   Port Blair        38.36 248   pP       pP       20 59 02.9 +2.6
PBA   Port Blair        38.36 248   P        P        20 58 50.3 -7.1
BOK   Bokaro            38.53 270  ex        P        20 58 56.3 -2.5
BOK                                 IAmb     IAmb     20 59 08.7
      comp=Z,142nm,1.1s
SAUI  Saumlaki          38.70 176   P        P        20 59 02.5 +2.4
      comp=Z,38µmcomp=Z,24µmcomp=Z,575nm,2.0s
SAUI  Saumlaki          38.70 176   P        P        20 58 54.4 -5.7
SAUI  Saumlaki          38.70 176   P        P        20 59 03.9 +3.8
DSRI  Dabo              38.70 221   P        P        20 58 59.9 -0.3
      comp=Z,14µmcomp=Z,4µmcomp=Z,60nm,1.2s
MK31  Makanchi Array    38.92 308  i P       P        20 58 58.9 -2.9
MK31                                pmax     pmax
      comp=Z,190nm,1.2s
MK31  Makanchi Array    38.92 308   P        P        20 58 54.9 -7.0
MKAR  Makanchi Array    38.92 308   P        P        20 58 58.3 -3.5
      comp=Z,55nm,0.9s,baz=96,slow=9.9,SNR=105
MKAR                                LR       LR       21 16 09.9
      comp=Z,264µm,18.5s,baz=92,slow=38
MKAR  Makanchi Array    38.92 308  i P       P        20 58 58.7 -3.1
MKAR                                pmax     pmax
      comp=Z,56nm,0.9s
MKAR  Makanchi Array    38.92 308   P        P        20 58 55.8 -6.1
ZAA0  Zalesovo Array    38.94 319   P        P        20 58 56.0 -5.8
ZALV  Zalesovo Beam     38.94 319   P        P        20 58 57.8 -4.0
      comp=Z,18nm,0.8s,baz=108,slow=7.6,SNR=27
ZALV                                PcP      PcP      21 01 13.2 +1.0
      comp=Z,56nm,0.9s,baz=120,slow=4.8,SNR=5.3
ZALV                                LR       LR       21 16 22.5
      comp=Z,501µm,18.8s,baz=115,slow=38
ZALV                                P3KP              21 30 39.8
      comp=Z,3.4nm,0.6s,baz=297,slow=2.3,SNR=13
ZALV  Zalesovo Beam     38.94 319  i P       P        20 58 59.0 -2.8
ZALV                                pmax     pmax
      comp=Z,18nm,0.8s
ZALV  Zalesovo Beam     38.94 319   P        P        20 58 55.3 -6.5
DANN  Dangsing          38.99 278  eP        P        20 59 00.6 -2.3
      comp=Z,2µm,1.3s
MAKZ  Makanchi          39.14 308   P        P        20 58 57.3 -6.3
MAKZ                                pmax     pmax
      comp=Z,724nm,1.7s
MAKZ                                MLR      MLR
      comp=Z,259µm,18.0s
MAKZ  Makanchi          39.14 308   P        P        20 58 57.3 -6.3
MAKZ                                IAMs_20  IAMs_20  21 17 04.3
      comp=Z,259µm,18.0s
LHMI  Lhok Sumawe       39.27 236   P        P        20 59 05.5 +0.5
      comp=Z,36µmcomp=Z,12µmcomp=Z,480nm,1.5s
LHMI  Lhok Sumawe       39.27 236   P        P        20 59 00.2 -4.8
LHMI  Lhok Sumawe       39.27 236   P        P        20 59 08.0 +3.0
KOLN  Koldanda          39.27 277  eP        P        20 59 02.3 -2.9
      comp=Z,2µm,1.6s
TSI   Tuntungan         39.37 232   P        P        20 59 07.5 +1.7
      comp=Z,28µmcomp=Z,13µmcomp=Z,290nm,2.7s
SMY   Shemya            39.41  43   P        P        20 58 58.5 -7.3
SMY                                 pmax     pmax
      comp=Z,2µm,1.4s
SMY   Shemya            39.41  43   P        P        20 58 58.5 -7.3
PSI   Prapat            39.64 231   P        P        20 59 06.8 -1.5
      comp=Z,24nm,0.8s,baz=355,slow=4.8,SNR=17
PYUN  Piuthan           39.71 278  eP        P        20 59 06.1 -2.7
      comp=Z,1µm,1.2s
MMRI  Maumere           39.76 190   P        P        20 59 09.3 +0.3
      comp=Z,18µmcomp=Z,7µmcomp=Z,254nm,1.0s
MMRI  Maumere           39.76 190   P        P        20 59 03.9 -5.1
MMRI  Maumere           39.76 190   P        P        20 59 12.1 +3.1
EDFI  Ende, Flores      39.96 191   P        P        20 59 10.1 -0.7
      comp=Z,10µmcomp=Z,4µmcomp=Z,73nm,1.1s
BKNI  Bangkinang        40.15 226   P        P        20 59 12.0 -0.3
      comp=Z,26µmcomp=Z,7µmcomp=Z,212nm,1.1s
BKNI  Bangkinang        40.15 226   P        P        20 59 08.2 -4.1
BKNI  Bangkinang        40.15 226   P        P        20 59 16.1 +3.8
JMBI  JAMBI             40.18 221   P        P        20 59 16.7 +4.2
      comp=Z,6µmcomp=Z,241nm,0.9s
MLSI  Meulaboh, Aceh    40.33 236   P        P        20 59 14.8 +1.0
      comp=Z,445nmcomp=Z,2µmcomp=Z,164nm,0.8s
TPTI                    40.49 234   P        P        20 59 17.1 +1.9
      comp=Z,6µmcomp=Z,803nmcomp=Z,24nm,1.4s
SOEI  Soe               40.61 187   P        P        20 59 15.7 -0.5
      comp=Z,21µmcomp=Z,6µmcomp=Z,337nm,1.2s
SOEI  Soe               40.61 187   P        P        20 59 12.0 -4.1
SOEI  Soe               40.61 187   P        P        20 59 19.2 +3.0
PMBI  Palembang         40.63 219   P        P        20 59 18.9 +2.6
      comp=Z,24µmcomp=Z,12µmcomp=Z,740nm,1.3s
PMBI  Palembang         40.63 219   P        P        20 59 11.7 -4.6
PMBI                                IAmb     IAmb     20 59 28.1
      comp=Z,1µm,1.3s
PMBI  Palembang         40.63 219   P        P        20 59 20.3 +4.0
PDGK  Podgornoye        40.65 302  i P       P        20 59 14.1 -2.3
PDGK                                pmax     pmax
      comp=Z,603nm,1.4s
MMPI  Merauke           40.67 162   P        P        20 59 20.0 +3.5
      comp=Z,44µmcomp=Z,40µmcomp=Z,593nm,0.6s
SHLS  Shalkode          40.67 302  eP        P        20 59 10.2 -6.3
      baz=302
SHLS                               eS        S        21 05 24.1 -2.6
      baz=302
SHLS  Shalkode          40.67 302  eP        P        20 59 10.2 -6.4
SHLS                               eS        S        21 05 24.1 -2.6
MNSI  Mandailing Nat    40.71 228   P        P        20 59 17.7 +0.7
      comp=Z,26µmcomp=Z,6µmcomp=Z,136nm,1.0s
UWJI  Ujung Watu        40.79 208   P        P        20 59 19.0 +1.4
      comp=Z,13µmcomp=Z,794nm,1.8s
SEM   Semipalatinsk     40.80 313  eP        P        20 59 13.7 -4.0
      baz=313
SEM                                eS        S        21 05 24.3 -4.3
      baz=313
SEM                                eLR       LR       21 16 52.5
      comp=Z,259µm,16.7s,baz=313
SEM   Semipalatinsk     40.80 313  eP        P        20 59 13.6 -4.0
SEM                                eS        S        21 05 24.3 -4.3
SEM                                 MLR      MLR
      comp=Z,259µm,17.0s
PLAI  Plampang          40.84 197   P        P        20 59 17.6 -0.3
      comp=Z,19µmcomp=Z,14µmcomp=Z,738nm,2.0s
PLAI  Plampang          40.84 197   P        P        20 59 20.7 +2.8
TIXI  Tiksi             40.84   0   P        P        20 59 13.8 -3.7
      comp=Z,21nm,0.8s,baz=155,slow=8.8,SNR=24
TIXI                                LR       LR       21 14 52.8
      comp=Z,215µm,18.8s,baz=206,slow=34
TIXI  Tiksi             40.84   0d iP        P        20 59 13.7 -3.7
TIXI                                pmax     pmax
      comp=Z,337nm,1.1s
TIXI                                MLR      MLR
      comp=Z,338µm,15.0s
TIXI  Tiksi             40.84   0   P        P        20 59 10.1 -7.3
ABJI  Asem Bagus        40.87 202   P        P        20 59 18.8 +0.6
      comp=Z,19µmcomp=Z,12µmcomp=Z,461nm,2.2s
TWSI  Taliwang, Sumb    40.98 198   P        P        20 59 20.7 +1.6
      comp=Z,10µmcomp=Z,8µmcomp=Z,207nm,1.2s
UZB   Uzynbulak         40.99 302  eP        P        20 59 16.5 -2.8
      baz=302
UZB                                eS        S        21 05 29.0 -2.5
      baz=302
UZB   Uzynbulak         40.99 302  eP        P        20 59 16.4 -2.8
UZB                                eS        S        21 05 29.0 -2.5
BLJI  Banyuglugur       41.04 203   P        P        20 59 20.9 +1.3
      comp=Z,10µmcomp=Z,7µmcomp=Z,139nm,1.9s
WSI   Waingapu          41.10 193   P        P        20 59 21.8 +1.7
      comp=Z,213nm,1.2s
BATI  Baumata           41.12 188   P        P        20 59 15.5 -4.8
      comp=Z,20nm,0.6s,baz=125,slow=3.9,SNR=2.4
BATI  Baumata           41.12 188   P        P        20 59 20.8 +0.5
      comp=Z,9µmcomp=Z,4µmcomp=Z,195nm,0.9s
PPI   Padang Panjang    41.16 226   P        P        20 59 22.2 +1.5
      comp=Z,1µmcomp=Z,93nm,1.3s
KPKS  Kokpek            41.24 302  eP        P        20 59 18.2 -3.1
      baz=302
KPKS                               eS        S        21 05 37.3 +2.1
      baz=302
KPKS  Kokpek            41.24 302  eP        P        20 59 18.1 -3.1
KPKS                               eS        S        21 05 37.2 +2.1
WBSI  Waikabubak, Su    41.25 194   P        P        20 59 22.5 +1.1
      comp=Z,5µmcomp=Z,261nm,1.4s
SATY  Saty              41.45 302  eP        P        20 59 19.5 -3.4
      baz=301
SATY                               eS        S        21 05 38.6 +0.4
      baz=301
SATY  Saty              41.45 302  eP        P        20 59 19.5 -3.4
SATY                               eS        S        21 05 38.6 +0.4
PRZ   Przheval'sk       41.45 301   P        P        20 59 17.9 -5.2
PRZ                                 pmax     pmax
      comp=Z,5µm,2.5s
PRZ   Przheval'sk       41.45 301   P        P        20 59 17.9 -5.2
NGJI  Ngawi             41.46 206   P        P        20 59 26.5 +3.5
      comp=Z,1µmcomp=Z,3µmcomp=Z,184nm,1.3s
PDSI  Padang            41.48 226   P        P        20 59 24.7 +1.4
      comp=Z,15µmcomp=Z,4µmcomp=Z,40nm,1.0s
TDK   Taldyqorghan      41.48 304  eP        P        20 59 19.9 -3.2
      baz=304
TDK                                eS        S        21 05 36.1 -2.4
      baz=304
TDK                                eLR       LR       21 17 16.5
      comp=Z,254µm,17.1s,baz=304
TDK   Taldyqorghan      41.48 304  eP        P        20 59 19.8 -3.2
TDK                                eS        S        21 05 36.0 -2.4
TDK                                 MLR      MLR
      comp=Z,254µm,17.0s
JAGI  Jajag, Banyuwa    41.53 202   P        P        20 59 26.2 +2.6
      comp=Z,9µmcomp=Z,197nm,1.4s
JAGI  Jajag, Banyuwa    41.53 202   P        P        20 59 18.3 -5.3
JAGI  Jajag, Banyuwa    41.53 202   P        P        20 59 26.8 +3.2
IGBI  Denpasar          41.55 200   P        P        20 59 27.2 +3.4
      comp=Z,6µmcomp=Z,153nm,1.0s
SMRI  Semarang          41.57 208   P        P        20 59 27.2 +3.2
      comp=Z,29µmcomp=Z,23µmcomp=Z,579nm,2.8s
SMRI  Semarang          41.57 208   P        P        20 59 17.8 -6.1
SMRI                                IAmb     IAmb     20 59 41.6
      comp=Z,2µm,1.6s
SMRI  Semarang          41.57 208   P        P        20 59 27.7 +3.7
GMJI  Gumukmas          41.58 203   P        P        20 59 27.5 +3.5
      comp=Z,15µmcomp=Z,9µmcomp=Z,142nm,1.3s
BASI  Baing, Sumba      41.59 192   P        P        20 59 26.2 +2.1
      comp=Z,8µmcomp=Z,3µmcomp=Z,121nm,1.3s
GSI   Gunungsitoli      41.65 231   P        P        20 59 25.8 +1.1
      comp=Z,25µmcomp=Z,13µmcomp=Z,202nm,1.9s
GSI   Gunungsitoli      41.65 231   P        P        20 59 19.5 -5.2
GSI                                 IAmb     IAmb     20 59 37.5
      comp=Z,1µm,1.8s
GSI                                 IAMs_20  IAMs_20  21 18 26.3
      comp=Z,117µm,18.0s
GSI   Gunungsitoli      41.65 231   P        P        20 59 27.2 +2.5
KURK  Kurchatov         41.88 313c iP        P        20 59 22.7 -3.5
KURK                                pmax     pmax
      comp=Z,512nm,1.9s
KURK                                MLR      MLR
      comp=Z,974µm,17.0s
KURK  Kurchatov         41.88 313   P        P        20 59 22.4 -3.8
KURK  Kurchatov         41.88 313   P        P        20 59 21.1 -5.1
KURK                                IAmb     IAmb     20 59 34.8
      comp=Z,991nm,1.9s
TARG  Taragay, Kyrgy    41.91 300   P        P        20 59 20.8 -6.3
TARG                                IAmb     IAmb     20 59 41.3
      comp=Z,573nm,1.2s
KURBB Kurchatov Arra    41.92 313   P        P        20 59 23.0 -3.5
      comp=Z,47nm,0.8s,baz=100,slow=8.9,SNR=85
KLSI                    42.14 217   P        P        20 59 30.0 +1.4
      comp=Z,9µmcomp=Z,8µmcomp=Z,101nm,1.7s
MASI  Maura Aman, Be    42.21 222   P        P        20 59 31.2 +1.9
      comp=Z,24µmcomp=Z,16µmcomp=Z,1µm,1.5s
KLI   Kotabumi          42.22 217   P        P        20 59 30.9 +1.6
      comp=Z,21µmcomp=Z,15µmcomp=Z,813nm,1.3s
MDSI  Maura Dua         42.26 218   P        P        20 59 31.5 +1.9
      comp=Z,13µmcomp=Z,8µmcomp=Z,311nm,2.1s
AMKA  Amchitka          42.27  46   P        P        20 59 23.6 -5.7
UGM   Wanagama          42.32 207   P        P        20 59 31.6 +1.5
      comp=Z,19µmcomp=Z,28µmcomp=Z,1µm,1.9s
UGM   Wanagama          42.32 207   P        P        20 59 27.0 -3.1
UGM   Wanagama          42.32 207   P        P        20 59 32.9 +2.8
PCJI  Pacitan           42.32 206   P        P        20 59 33.2 +3.1
      comp=Z,15µmcomp=Z,8µmcomp=Z,204nm,1.5s
YOGI  Yogyakarta        42.32 208   P        P        20 59 31.4 +1.3
      comp=Z,10µmcomp=Z,19µmcomp=Z,889nm,1.9s
KWAJ  Kwajalein Atol    42.33 113   P        P        20 59 25.1 -5.2
KWAJ                                pmax     pmax
      comp=Z,1µm,1.5s
KWAJ                                MLR      MLR
      comp=Z,46µm,18.0s
KWAJ  Kwajalein Atol    42.33 113   P        P        20 59 25.1 -5.2
KWAJ                                IAmb     IAmb     21 00 37.6
      comp=Z,1µm,1.5s
KSI   Kapahiang         42.43 221   P        P        20 59 32.4 +1.3
MDOK  Medeo             42.44 302  eP        P        20 59 27.5 -3.6
      baz=302
MDOK                               eS        S        21 05 51.4 -1.6
      baz=302
MDOK                               eLR       LR       21 18 15.2
      comp=Z,251µm,16.4s,baz=302
MDOK  Medeo             42.44 302  eP        P        20 59 27.5 -3.6
MDOK                               eS        S        21 05 51.3 -1.6
MDOK                                MLR      MLR
      comp=Z,251µm,16.0s
BLSI  Bandar Lampung    42.45 216   P        P        20 59 32.2 +1.0
      comp=Z,18µmcomp=Z,12µmcomp=Z,536nm,1.3s
TNG   Tangerang         42.46 214   P        P        20 59 32.7 +1.5
      comp=Z,28µmcomp=Z,48µmcomp=Z,2µm,1.7s
TNG                                 P        P        20 59 32.8 +1.5
      comp=Z,19µmcomp=Z,33µmcomp=Z,1µm,1.7s
CHKK  Chushkaly         42.48 303  eP        P        20 59 28.2 -3.0
      baz=303
AAA   Alma-Ata          42.53 302  eP        P        20 59 30.5 -1.3
      baz=302
AAA                                eS        S        21 05 57.0 +2.8
      baz=302
AAA   Alma-Ata          42.53 302  eP        P        20 59 30.4 -1.3
AAA                                eS        S        21 05 57.0 +2.8
LEM   Lembang           42.58 212   P        P        20 59 31.7 -0.7
      comp=Z,104nm,0.8s,baz=44,slow=3.8,SNR=28
LEM   Lembang           42.58 212   P        P        20 59 34.1 +1.7
      comp=Z,15µmcomp=Z,21µmcomp=Z,866nm,2.3s
SISI  Saibi             42.65 227   P        P        20 59 34.1 +1.2
      comp=Z,3µmcomp=Z,129nm,0.9s
SBJI  Serang            42.66 214   P        P        20 59 33.8 +0.9
      comp=Z,29µmcomp=Z,33µmcomp=Z,1µm,1.7s
DBJI  Dramaga           42.74 213   P        P        20 59 34.5 +0.9
      comp=Z,23µmcomp=Z,37µmcomp=Z,2µm,2.3s
LWLI  Liwa              42.77 218   P        P        20 59 34.8 +0.9
      comp=Z,8µmcomp=Z,330nm,0.8s
MNAI  Manna             42.81 220   P        P        20 59 30.0 -4.1
MNAI                                IAmb     IAmb     21 00 19.3
      comp=Z,536nm,1.3s
KUU   Kurty             42.95 303  eP        P        20 59 32.4 -2.7
      baz=303
KUU                                eS        S        21 06 01.8 +1.7
      baz=303
KUU   Kurty             42.95 303  eP        P        20 59 32.3 -2.7
KUU                                eS        S        21 06 01.8 +1.7
KASI  Kota Agung        42.97 217   P        P        20 59 37.0 +1.6
      comp=Z,18µmcomp=Z,7µmcomp=Z,300nm,1.0s
ULHL  Ulahol            43.06 300   P        P        20 59 42.1 +5.9
      SNR=8.5
CMJI  Cimerak           43.06 210   P        P        20 59 37.1 +1.0
      comp=Z,9µmcomp=Z,4µmcomp=Z,97nm,1.6s
BILL  Bilibino          43.16  20d iP        P        20 59 34.4 -2.0
BILL                               i                  21 01 22.9
BILL                               i S       S        21 05 55.1 -7.5
BILL                                pmax     pmax
      comp=Z,248nm,1.2s
BILL                                MLR      MLR
      comp=Z,286µm,17.0s
BILL  Bilibino          43.16  20   P        P        20 59 29.9 -6.5
PPSI  Pulau Pagai       43.21 225   P        P        20 59 39.0 +1.6
      comp=Z,22µmcomp=Z,9µmcomp=Z,193nm,1.1s
CNJI  Cibinong          43.23 212   P        P        20 59 39.0 +1.5
      comp=Z,18µmcomp=Z,9µmcomp=Z,332nm,1.3s
DDI   Dehra Dun         43.32 283  eP        P        20 59 38.3 +0.1
DDI                                 IAmb     IAmb     20 59 57.4
      comp=Z,332nm,1.7s
KSH   Kashi             43.45 296   P        P        20 59 40.6 +1.3
KSH   Kashi             43.45 296   P        P        20 59 40.8 +1.5
KSH                                 pP       sP       20 59 45.8 +2.5
KSH                                 sP       pP       20 59 47.9 +5.7
KSH                                 S        S        21 06 10.5 +2.7
KSH                                 sS       sS       21 06 18.3 +5.8
KSH                                 SS       SS       21 09 20.6 -1.1
KSH                                 pmax     pmax
      comp=Z,32nm,1.2s
KSH                                 pmax     pmax
      comp=Z,6µm,3.8s
KSH                                 AMB      AMB
      comp=Z,6µm,3.8s
KSH                                 LR       LR
      comp=N,267µm,16.1s
KSH                                 LR       LR
      comp=E,489µm,17.2s
KSH                                 LR       LR
      comp=Z,289µm,19.1s
TKM2  Tokmak 2          43.51 301   P        P        20 59 38.6 -1.2
      SNR=56
TKM2  Tokmak 2          43.51 301  i P       P        20 59 38.7 -1.2
TKM2                                pmax     pmax
      comp=Z,485nm,1.3s
PMG   Port Moresby      43.77 153   P        P        20 59 37.1 -4.7
PMG                                 pmax     pmax
      comp=Z,286nm,1.4s
PMG                                 MLR      MLR
      comp=Z,82µm,21.0s
PMG   Port Moresby      43.77 153   P        P        20 59 37.0 -4.7
PMG   Port Moresby      43.77 153   P        P        20 59 45.0 +3.2
PMG   Port Moresby      43.77 153   P        P        20 59 45.0 +3.2
SMLA  Simla             43.87 284  eP        P        20 59 40.2 -2.4
SMLA                                IAmb     IAmb     20 59 49.6
      comp=Z,208nm,1.2s
KBK   Karagaybulak      44.00 301   P        P        20 59 42.3 -1.4
      SNR=28
CHMS  Chumysh           44.12 302   P        P        20 59 43.0 -1.5
      SNR=25
SGDS  Sogindy           44.20 302  eP        P        20 59 42.3 -2.8
      baz=302
SGDS                               eS        S        21 06 17.4 -1.0
      baz=302
SGDS                               eSS       ScS      21 09 45.6 +1.6
      baz=302
FRU1  Bishkek           44.22 301   P        P        20 59 38.8 -6.6
FRU1                                pmax     pmax
      comp=Z,511nm,1.2s
FRU1  Bishkek           44.22 301   P        P        20 59 38.8 -6.6
FRU1                                IAmb     IAmb     20 59 59.2
      comp=Z,510nm,1.2s
USP   Ospenovka         44.30 302   P        P        20 59 46.0  0.0
      SNR=20
AAK   Ala-Archa         44.33 301   P        P        20 59 43.8 -2.5
      comp=Z,18nm,0.8s,baz=133,slow=5.6,SNR=24
AAK   Ala-Archa         44.33 301   P        P        20 59 46.6 +0.2
      SNR=27
AAK   Ala-Archa         44.33 301  i P       P        20 59 45.3 -1.0
      SNR=43
AAK   Ala-Archa         44.33 301  i P       P        20 59 46.4  0.0
AAK                                 pmax     pmax
      comp=Z,651nm,1.2s
AAK                                 MLR      MLR
      comp=Z,1577µm,16.0s
AAK   Ala-Archa         44.33 301   P        P        20 59 44.9 -1.5
AAK   Ala-Archa         44.33 301   P        P        20 59 41.1 -5.2
DHRM  DHARAMSHALA       44.33 286  eP        P        20 59 44.1 -2.5
DHRM                                IAmb     IAmb     21 00 07.5
      comp=Z,3µm,2.6s
UCH   Uchtor            44.34 300   P        P        20 59 46.1 -0.7
      SNR=41
NDI   New Delhi         44.45 281  eP        P        20 59 47.0 -0.3
KIWB  Kanaga Island     44.52  46   P        P        20 59 41.1 -6.4
BTLS  Baital            44.57 304  eP        P        20 59 44.7 -3.4
      baz=304
BTLS                               eS        S        21 06 22.1 -1.7
      baz=304
BTLS                               eSS       SS       21 09 42.5 -0.9
      baz=304
BTLS  Baital            44.57 304  eP        P        20 59 44.6 -3.4
BTLS                               eS        S        21 06 22.1 -1.7
BTLS                               eSS       SS       21 09 42.4 -0.9
AYAN  Aya Nagar         44.58 281  eP        P        20 59 47.0 -1.3
ADK   Adak              44.81  46   P        P        20 59 42.8 -7.0
ADK                                 pmax     pmax
      comp=Z,452nm,1.2s
ADK                                 MLR      MLR
      comp=Z,67µm,19.0s
ADK   Adak              44.81  46   P        P        20 59 42.8 -7.0
ADK                                 IAmb     IAmb     20 59 59.6
      comp=Z,452nm,1.1s
ADK   Adak              44.81  46   P        P        20 59 51.6 +1.8
EKS2  Erkin-Say         44.86 301   P        P        20 59 48.9 -1.7
      SNR=16
AML   Almayashu         44.95 300   P        P        20 59 50.6 -1.1
      SNR=13
AML   Almayashu         44.95 300  i P       P        20 59 49.5 -2.1
      SNR=89
AML   Almayashu         44.95 300   P        P        20 59 50.4 -1.2
NRIK  Noril'sk          45.02 341   P        P        20 59 48.0 -3.2
      comp=Z,36nm,1.0s,baz=121,slow=9.1,SNR=18
NRIK                                LR       LR       21 18 02.3
      comp=Z,263µm,19.7s,baz=124,slow=36
NRIK  Noril'sk          45.02 341deP         P        20 59 47.9 -3.4
NRIK                                pmax     pmax
      comp=Z,815nm,1.1s
NRIK                                MLR      MLR
      comp=Z,507µm,15.0s
NRIK  Noril'sk          45.02 341   P        P        20 59 45.2 -6.0
NRIK                                IAmb     IAmb     21 00 00.9
      comp=Z,696nm,1.1s
KUDL  Kundal            45.21 280  eP        P        20 59 53.1 -0.3
GSTR  Great Sitkin T    45.22  46   P        P        20 59 47.0 -6.1
BRZS  Berezniki         45.59 311  eP        P        20 59 52.5 -3.6
      baz=311
BRZS                               eS        S        21 06 42.3 +3.8
      baz=311
BRZS  Berezniki         45.59 311  eP        P        20 59 52.5 -3.6
BRZS                               eS        S        21 06 42.2 +3.8
BHPL  Bhopal            45.99 274  eP        P        20 59 58.6 -1.1
BHPL                                IAmb     IAmb     21 00 11.9
      comp=Z,67nm,0.7s
NIL   Nilore            46.53 289   P        P        20 59 58.6 -5.2
NIL                                 pmax     pmax
      comp=Z,2µm,2.2s
NIL                                 MLR      MLR
      comp=Z,228µm,19.0s
NIL   Nilore            46.53 289   P        P        20 59 58.6 -5.2
NIL   Nilore            46.53 289   IAMs_20  IAMs_20  21 19 24.2
      comp=Z,228µm,19.0s
MIDW  Midway            46.59  79   P        P        20 59 57.5 -6.7
DRK   Karamyk           46.66 297   P        P        21 00 01.1 -3.9
BVAR  Borovoye Array    47.21 316   P        P        21 00 05.6 -3.2
      comp=Z,85nm,0.8s,baz=169,slow=8.3,SNR=49
KK31  Karatay Array     47.22 302   P        P        21 00 04.6 -4.4
KK31                                pmax     pmax
      comp=Z,3µm,2.3s
KK31  Karatay Array     47.22 302   P        P        21 00 04.6 -4.4
KKAR  Karatay Array     47.22 302   P        P        21 00 03.7 -5.3
KKAR                                                  21 00 04.1
KKAR  Karatay Array     47.22 302   P        P        21 00 03.6 -5.3
KKAR  Karatay Array     47.22 302   P        P        21 00 04.1 -4.9
KKAR                                IAmb     IAmb     21 00 22.6
      comp=Z,3µm,2.3s
```

BRVK	**Borovoye**	**47.27**	**316**	*i* P	**P**	**21 00 07.7**	**-1.5**
BRVK				pmax	pmax		
	comp=Z,1µm,2.0s						
BRVK				MLR	MLR		
	comp=Z,922µm,15.0s						
BRVK	**Borovoye**	**47.27**	**316**	P	**P**	**21 00 07.0**	**-2.3**
BRVK	**Borovoye**	**47.27**	**316**	P	**P**	**21 00 05.0**	**-4.3**
AJM	**Ajmer**	**47.28**	**279**	*e*P	**P**	**21 00 08.5**	**-1.3**
BTK	**Batken**	**47.33**	**298**	P	**P**	**21 00 05.6**	**-4.4**
BTK				pmax	pmax		
	comp=Z,637nm,1.7s						
BTK	**Batken**	**47.33**	**298**	P	**P**	**21 00 05.6**	**-4.4**
BTK				IAmb	IAmb	21 00 23.5	
	comp=Z,636nm,1.6s						
HYB	**Hyderabad**	**47.34**	**266**	*i* P	**P**	**21 00 06.0**	**-4.3**
HYB				*e*PP	PcP	21 01 00.0	-41
HYB				*e*PPP	PPP	21 02 52.0	
HYB				*e*S	**S**	**21 07 00.0**	**-4.3**
HYB				*e*LR	LR		
	comp=Z,93nm,18.0s						
HYB	**Hyderabad**	**47.34**	**266**	*e*P	**P**	**21 00 11.0**	**+0.7**
HYB				IAmb	IAmb	21 00 19.9	
	comp=Z,128nm,1.2s						
IUG	**Iuzhnay**	**47.67**	**301**	*e*P	**P**	**21 00 09.5**	**-3.1**
	baz=301						
IUG				*e*S	**S**	**21 07 09.8**	**+1.3**
	baz=301						
IUG	**Iuzhnay**	**47.67**	**301**	*e*P	**P**	**21 00 09.5**	**-3.1**
IUG				*e*S	**S**	**21 07 09.8**	**+1.3**
GAR	**Garm**	**47.87**	**296**	P	**P**	**21 00 10.8**	**-3.5**
MDRS	**Chennai**	**47.93**	**259**	*e*P	P	21 00 19.6	+4.8
MDRS				IAmb	IAmb	21 00 26.2	
	comp=Z,170nm,1.1s						
TAS	**Tashkent**	**48.31**	**300**	P	P	21 00 12.3	-5.2
TAS				pmax	pmax		
	comp=Z,488nm,1.3s						
TAS	**Tashkent**	**48.31**	**300**	P	P	21 00 12.3	-5.2
TAS				IAmb	IAmb	21 01 30.4	
	comp=Z,488nm,1.3s						
CHGR	**Chuyangaron**	**48.82**	**296**	P	**P**	**21 00 17.0**	**-4.5**
SPIA	**Saint Paul Isl**	**49.08**	**39**	P	**P**	**21 00 25.2**	**+2.1**
	baz=265						
SPIA				S	S	21 07 39.0	+11
	baz=265						
SPIA	**Saint Paul Isl**	**49.08**	**39**	P	P	21 00 16.4	-6.7
GAMB	**Gambell**	**49.40**	**30**	P	**P**	**21 00 25.6**	**+0.2**
	baz=258						
GAMB				S	S	21 07 44.8	+13
	baz=258						
GAMB	**Gambell**	**49.40**	**30**	P	P	21 00 19.1	-6.3
GAMB				IAmb	IAmb	21 00 35.5	
	comp=Z,357nm,1.2s						
GAMB				IAMs_20	IAMs_20	21 22 43.9	
	comp=Z,87µm,18.0s						
NIKH	**Nikolski High**	**49.66**	**45**	P	**P**	**21 00 29.5**	**+1.8**
	baz=269						
NIKH				S	**S**	**21 07 38.9**	**+2.9**
	baz=269						
KBL	**Kabul**	**49.73**	**291**	P	**P**	**21 00 24.6**	**-4.2**
KBL				pmax	pmax		
	comp=Z,316nm,1.4s						
KBL	**Kabul**	**49.73**	**291**	P	**P**	**21 00 27.1**	**-1.6**
	SNR=165						
KBL	**Kabul**	**49.73**	**291**	P	**P**	**21 00 24.6**	**-4.2**
KBL				IAmb	IAmb	21 01 07.0	
	comp=Z,316nm,1.4s						
HNR	**Honiara**	**50.02**	**138**	P	**P**	**21 00 26.3**	**-4.4**
HNR				pmax	pmax		
	comp=Z,449nm,1.2s						
HNR	**Honiara**	**50.02**	**138**	P	**P**	**21 00 26.3**	**-4.4**
HNR				IAmb	IAmb	21 01 38.6	
	comp=Z,449nm,1.2s						
HNR	**Honiara**	**50.02**	**138**	P	P	21 00 35.3	+4.6
JASL	**Jaisalmer**	**50.31**	**281**	*e*P	**P**	**21 00 36.4**	**+3.4**
PALK	**Pallekele**	**50.60**	**253**	P	P	21 00 30.7	-4.7
PALK				pmax	pmax		
	comp=Z,263nm,1.3s						
PALK				MLR	MLR		
	comp=Z,76µm,18.0s						
PALK	**Pallekele**	**50.60**	**253**	P	P	21 00 39.8	+4.5
PALK	**Pallekele**	**50.60**	**253**	P	P	21 00 30.6	-4.7
WB0	**Warramunga Arr**	**50.63**	**173**	P	**P**	**21 00 31.3**	**-4.0**
WRAB	**Tennant Creek**	**50.79**	**173**	*de*P	**P**	**21 00 36.8**	**+0.3**
WRAB				pmax	pmax		
	comp=Z,194nm,1.0s						
WRAB	**Tennant Creek**	**50.79**	**173**	P	**P**	**21 00 32.6**	**-3.8**
WRAB	**Tennant Creek**	**50.79**	**173**	P	**P**	**21 00 39.7**	**+3.2**
WRA	**Warramunga Arr**	**50.80**	**173**	P	**P**	**21 00 33.1**	**-3.5**
	comp=Z,10nm,0.6s,baz=352,slow=8.3,SNR=32						
WRA				LR	LR	21 21 00.9	
	comp=Z,33µm,21.2s,baz=5.0,slow=35						
WRA				PKPPKP	**P'P'df**	**21 31 18.1**	**+4.0**
	comp=Z,1.9nm,1.0s,baz=156,slow=1.4,SNR=5.6						
WRA				PKP2bc		21 31 30.9	
	comp=Z,1.9nm,0.9s,baz=162,slow=1.6,SNR=5.5						
WRA	**Warramunga Arr**	**50.80**	**173**	*i* P	**P**	**21 00 33.5**	**-3.0**
WRA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
WRA	**Warramunga Arr**	**50.80**	**173**	P	**P**	**21 00 32.8**	**-3.7**
WB2	**Warramunga Arr**	**50.80**	**173**	P	**P**	**21 00 32.0**	**-4.6**
WR0	**Warramunga Arr**	**50.83**	**173**	P	**P**	**21 00 32.3**	**-4.5**
POO	**Poona**	**50.91**	**269**	*e*P	**P**	**21 00 37.4**	**-0.2**
POO				IAmb	IAmb	21 00 46.6	
	comp=Z,85nm,0.7s						
TARA	**Tarawa**	**51.07**	**116**	P	P	21 00 32.2	-6.6
TARA	**Tarawa**	**51.07**	**116**	P	**P**	**21 00 41.8**	**+3.1**
UNV	**Unalaska Valle**	**51.07**	**44**	P	**P**	**21 00 38.8**	**+0.5**
	baz=270						
UNV				S	S	21 08 04.3	+8.7
	baz=270						
UNV	**Unalaska Valle**	**51.07**	**44**	P	P	21 00 33.0	-5.3
TNA	**Tin City**	**51.34**	**28**	P	**P**	**21 00 40.6**	**+0.5**
	baz=260,SNR=10						
TNA				S	S	21 08 13.1	+14
	baz=260						
TNA	**Tin City**	**51.34**	**28**	P	P	21 00 32.2	-7.9
TNA				IAmb	IAmb	21 00 50.9	
	comp=Z,540nm,1.2s						
AKUT	**Akutan**	**51.50**	**43**	P	P	21 00 35.1	-6.3
BOM	**Bombay**	**51.65**	**270**	*e*P	**P**	**21 00 45.5**	**+2.4**
BOM				IAmb	IAmb	21 00 53.4	
	comp=Z,0.0nm,1.0s						
GOA	**Goa**	**52.26**	**266**	*e*P	**P**	**21 00 48.3**	**+0.7**
GOA				IAmb	IAmb	21 00 57.1	
	comp=Z,961nm,2.0s						
ANM	**Nome**	**52.26**	**30**	P	P	21 00 39.6	-7.5
ANM				pmax	pmax		
	comp=Z,361nm,1.2s						
ANM				MLR	MLR		
	comp=Z,74µm,20.0s						
ANM	**Nome**	**52.26**	**30**	P	**P**	**21 00 47.8**	**+0.8**
	baz=263,SNR=5.8						
ANM				S	**S**	**21 08 14.3**	**+2.4**
	baz=263						
ANM	**Nome**	**52.26**	**30**	P	P	21 00 39.6	-7.5
ANM				IAmb	IAmb	21 00 52.4	
	comp=Z,361nm,1.2s						
MBWA	**Marble Bar**	**52.44**	**191**	P	**P**	**21 00 45.5**	**-3.2**
MBWA				IAmb	IAmb	21 01 09.2	
	comp=Z,449nm,1.3s						
MBWA	**Marble Bar**	**52.44**	**191**	P	P	21 00 53.8	+5.0
BHUJ	**Bhuj**	**52.64**	**277**	*e*P	**P**	**21 00 48.9**	**-1.5**
BHUJ				IAmb	IAmb	21 01 00.0	
	comp=Z,209nm,1.3s						
COCO	**West Island**	**52.65**	**221**	P	P	21 00 45.2	-5.2
COCO				pmax	pmax		
	comp=Z,2µm,2.0s						
COCO	**West Island**	**52.65**	**221**	P	P	21 00 45.2	-5.2
FALS	**False Pass**	**52.85**	**42**	P	P	21 00 45.0	-6.5
SVE	**Sverdlovsk**	**52.94**	**320**	*de*P	**P**	**21 00 51.3**	**-0.8**
SVE				*e*S	**S**	**21 08 22.0**	**+0.8**
SVE				*e*		21 12 01.7	
SVE				pmax	pmax		
	comp=Z,765nm,1.6s						
SVE				pmax	pmax		
	comp=Z,8µm,17.4s						
SVE				MLR	MLR		
	comp=E,841µm,17.0s						
SVE				MLR	MLR		
	comp=Z,1081µm,16.0s						
TRD	**Trivandrum**	**53.03**	**257**	*e*P	**P**	**21 00 51.0**	**-2.5**
TRD				*e*x	**P**	**21 00 52.1**	**-1.3**
CTAO	**Charters Tower**	**53.38**	**159**	P	**P**	**21 00 51.7**	**-4.1**
CTAO				pmax	pmax		
	comp=Z,590nm,1.7s						
CTAO				MLR	MLR		
	comp=Z,49µm,20.0s						
CTAO	**Charters Tower**	**53.38**	**159**	P	**P**	**21 00 51.7**	**-4.1**
CTAO				IAmb	IAmb	21 01 04.5	
	comp=Z,590nm,1.6s						
RDOG	**Red Dog Mine**	**53.69**	**26**	P	P	21 01 02.9	+5.3
	baz=263,SNR=21						
RDOG				S	**S**	**21 08 36.8**	**+5.6**
	baz=263						
RDOG	**Red Dog Mine**	**53.69**	**26**	P	P	21 00 51.3	-6.3
RDOG				IAmb	IAmb	21 01 13.3	
	comp=Z,309nm,1.3s						
RDOG				IAMs_20	IAMs_20	21 24 31.2	
	comp=Z,132µm,18.0s						
ABKAR	**Akbulak array**	**53.88**	**311**	P	P	21 00 54.4	-4.8
ABKAR	**Akbulak array**	**53.88**	**311**	P	P	21 00 53.6	-5.6
ABKAR				IAmb	IAmb	21 01 15.0	
	comp=Z,254nm,1.2s						
ARU	**Arti**	**54.10**	**320**	P	**P**	**21 00 58.4**	**-2.3**
	comp=Z,12nm,0.7s,baz=82,slow=2.1,SNR=33						
ARU	**Arti**	**54.10**	**320**	*d i*P	**P**	**21 00 58.4**	**-2.3**
ARU						21 02 02.3	
ARU						21 02 56.2	
ARU				PPP	PPP	21 04 04.4	
ARU				S	**S**	**21 08 36.6**	**-0.4**
ARU						21 10 46.3	
ARU				pmax	pmax		
	comp=Z,46nm,0.8s						
ARU				pmax	pmax		
	comp=Z,6µm,11.7s						
ARU				MLR	MLR		
	comp=Z,659µm,16.0s						
ARU	**Arti**	**54.10**	**320**	P	**P**	**21 00 56.2**	**-4.5**
ARU				IAmb	IAmb	21 01 10.8	
	comp=Z,454nm,1.0s						
AS31	**Alice Springs**	**54.44**	**174**	P	**P**	**21 00 59.9**	**-3.6**
ASAR	**Alice Springs**	**54.44**	**174**	P	**P**	**21 01 00.3**	**-3.2**
	comp=Z,7.1nm,0.7s,baz=353,slow=6.2,SNR=56						
ASAR				LR	LR	21 23 16.3	
	comp=Z,26µm,21.1s,baz=3.0,slow=35						
ASAR				PKPPKP	**P'P'df**	**21 31 04.8**	**-4.3**
	comp=Z,1.7nm,0.9s,baz=136,slow=1.9,SNR=5.7						
ASAR				PKP2bc		21 31 32.6	
	comp=Z,4.9nm,1.0s,baz=167,slow=1.8,SNR=7.9						
ASAR	**Alice Springs**	**54.44**	**174**	P	**P**	**21 00 59.8**	**-3.7**
ASAR	**Alice Springs**	**54.44**	**174**	P	**P**	**21 00 59.8**	**-3.7**
SDPT	**Sand Point**	**54.51**	**41**	P	**P**	**21 01 06.3**	**+2.6**
	baz=274						
SDPT	**Sand Point**	**54.51**	**41**	P	P	21 00 57.9	-5.8
CHNA	**Chernabura Isl**	**55.06**	**42**	P	**P**	**21 01 09.2**	**+1.5**
	baz=275						
CHNA				S	**S**	**21 08 50.4**	**+0.4**
	baz=275						
CNBA	**Chernabura Isl**	**55.06**	**42**	P	P	21 00 59.8	-7.9
CNBA				IAmb	IAmb	21 01 11.4	
	comp=Z,252nm,1.1s						
HRA	**Herat**	**55.20**	**293**	P	P	21 01 03.7	-5.6
HRA				IAmb	IAmb	21 01 23.8	
	comp=Z,767nm,2.0s						
CHGN	**Chignik**	**55.59**	**40**	P	**P**	**21 01 13.4**	**+1.9**
	baz=275						
CHGN				S	**S**	**21 08 56.2**	**-0.8**
	baz=275						
CHGN	**Chignik**	**55.59**	**40**	P	P	21 01 03.8	-7.6
GCSA	**Galena City Sc**	**55.92**	**30**	P	**P**	**21 01 13.6**	**-0.1**
	baz=271,SNR=6.6						
GCSA				S	**S**	**21 08 60.0**	**-1.2**
	baz=271						
A21K	**Barrow**	**56.19**	**22**	P	**P**	**21 01 13.6**	**-1.9**
	baz=266,SNR=48						
A21K				S	**S**	**21 09 02.3**	**-2.2**
	baz=266						
A21K	**Barrow**	**56.19**	**22**	P	P	21 01 09.7	-5.8
A21K				IAmb	IAmb	21 01 19.9	
	comp=Z,343nm,1.1s						
A21K				IAMs_20	IAMs_20	21 26 07.2	
	comp=Z,142µm,18.0s						
TTA	**Tatalina**	**56.36**	**32**	P	P	21 01 11.4	-5.6
TTA				pmax	pmax		
	comp=Z,130nm,1.1s						
TTA	**Tatalina**	**56.36**	**32**	P	**P**	**21 01 17.2**	**+0.2**
	baz=273,SNR=26						
TTA				S	**S**	**21 09 07.6**	**+0.3**
	baz=273						
TTA	**Tatalina**	**56.36**	**32**	P	P	21 01 11.3	-5.7
SVW2	**Sparrevohn**	**56.67**	**34**	P	P	21 01 13.0	-6.2
P18K	**Big Mountain,**	**57.00**	**36**	P	**P**	**21 01 21.8**	**+0.2**
	baz=276,SNR=8.3						
P18K				S	**S**	**21 09 18.2**	**+2.5**
	baz=276						
P18K	**Big Mountain,**	**57.00**	**36**	P	P	21 01 13.7	-7.8
P18K				IAmb	IAmb	21 01 26.4	
	comp=Z,237nm,1.1s						
J20K	**Nowinta River**	**57.13**	**31**	P	**P**	**21 01 20.7**	**-1.6**
	baz=273,SNR=122						
J20K				S	**S**	**21 09 20.1**	**+2.9**
	baz=273						
J20K	**Nowinta River**	**57.13**	**31**	P	P	21 01 14.4	-7.9
J20K				IAMs_20	IAMs_20	21 26 06.2	
	comp=Z,124µm,19.0s						
M19K	**Big River Lodg**	**57.18**	**33**	P	**P**	**21 01 23.6**	**+0.8**
	baz=275,SNR=16						
M19K				S	**S**	**21 09 20.0**	**+2.0**
	baz=275						
M19K	**Big River Lodg**	**57.18**	**33**	P	P	21 01 15.7	-7.1
M19K				IAmb	IAmb	21 01 29.4	
	comp=Z,899nm,2.2s						
IMAR	**Indian Mountai**	**57.20**	**28**	P	P	21 01 16.4	-6.4
CHIR	**Chirikof Islan**	**57.20**	**41**	P	P	21 01 16.5	-6.4
K20K	**Telida**	**57.22**	**32**	P	**P**	**21 01 20.9**	**-2.1**
	baz=274,SNR=42						
K20K				S	**S**	**21 09 21.7**	**+3.3**
	baz=274						
K20K	**Telida**	**57.22**	**32**	P	P	21 01 17.0	-6.0
K20K				IAmb	IAmb	21 01 28.5	
	comp=Z,244nm,1.0s						
N19K	**Bonanza Creek**	**57.23**	**35**	P	**P**	**21 01 24.1**	**+0.9**
	baz=275,SNR=12						
N19K				S	**S**	**21 09 22.4**	**+3.5**
	baz=275						
N19K	**Bonanza Creek**	**57.23**	**35**	P	P	21 01 16.1	-7.2
L20K	**Farewell, AK**	**57.37**	**33**	P	**P**	**21 01 23.1**	**-1.1**
	baz=275,SNR=25						
L20K				S	**S**	**21 09 23.3**	**+2.8**
	baz=275						
O19K	**Port Alsworth**	**57.37**	**35**	P	**P**	**21 01 25.0**	**+0.9**
	baz=276,SNR=19						
O19K				S	**S**	**21 09 23.4**	**+2.9**
	baz=276						
O19K	**Port Alsworth**	**57.37**	**35**	P	P	21 01 17.9	-6.2
O19K				IAmb	IAmb	21 01 29.2	
	comp=Z,204nm,0.9s						
O19K				IAMs_20	IAMs_20	21 27 41.8	
	comp=Z,85µm,18.0s						
GEYT	**Alibeck**	**57.45**	**298**	P	**P**	**21 01 22.8**	**-2.2**
	comp=Z,9.7nm,0.7s,baz=242,slow=2.5,SNR=10						
GEYT				LR	LR	21 29 42.3	
	comp=Z,203µm,19.3s,baz=65,slow=40						
GEYT	**Alibeck**	**57.45**	**298**	P	**P**	**21 01 20.4**	**-4.7**
GEYT				IAmb	IAmb	21 02 53.3	
	comp=Z,431nm,1.6s						
GYA0B	**ALIBECK ARRAY**	**57.45**	**298**	P	P	21 01 19.7	-5.4
JOHN	**Johnston Islan**	**57.57**	**89**	P	P	21 01 18.9	-7.3
JOHN				IAmb	IAmb	21 02 02.8	
	comp=Z,361nm,1.1s						
H21K	**Melozitna Rive**	**57.60**	**29**	P	**P**	**21 01 23.1**	**-2.6**
	baz=274,SNR=45						
H21K				S	**S**	**21 09 26.5**	**+3.0**
	baz=274						
H21K	**Melozitna Rive**	**57.60**	**29**	P	P	21 01 19.8	-5.9
H21K				IAMs_20	IAMs_20	21 27 26.7	
	comp=Z,87µm,20.0s						
Q19K	**Cape Douglas,**	**57.86**	**37**	P	**P**	**21 01 26.1**	**-1.6**
	baz=277						
Q19K				S	**S**	**21 09 27.1**	**0.0**
	baz=277						
Q19K	**Cape Douglas,**	**57.86**	**37**	P	P	21 01 21.7	-5.9
Q19K				IAmb	IAmb	21 01 31.2	
	comp=Z,227nm,1.0s						
Q19K				IAMs_20	IAMs_20	21 28 27.8	
	comp=Z,71µm,18.0s						
SII	**Sitkinak Islan**	**57.90**	**40**	P	P	21 01 21.2	-6.7
CHUM	**Lake Minchumin**	**57.95**	**31**	P	**P**	**21 01 26.0**	**-2.1**
	baz=275,SNR=36						
CHUM				S	**S**	**21 09 30.9**	**+2.9**
	baz=275						
P19K	**Oil Pt**	**57.98**	**36**	P	**P**	**21 01 28.5**	**0.0**
	baz=277,SNR=6.7						
P19K				S	**S**	**21 09 28.7**	**0.0**
	baz=277						
P19K	**Oil Pt**	**57.98**	**36**	P	P	21 01 21.6	-6.8
P19K				IAmb	IAmb	21 01 33.4	
	comp=Z,204nm,0.9s						
P19K				IAMs_20	IAMs_20	21 27 37.9	
	comp=Z,88µm,19.0s						
I21K	**Tanana**	**57.98**	**29**	P	**P**	**21 01 26.5**	**-1.9**
	baz=275,SNR=71						
I21K				S	**S**	**21 09 31.6**	**+3.2**
	baz=275						
I21K	**Tanana**	**57.98**	**29**	P	P	21 01 21.5	-6.8
I21K				IAmb	IAmb	21 01 33.8	
	comp=Z,393nm,1.1s						
I21K				IAMs_20	IAMs_20	21 24 19.8	
	comp=Z,79µm,21.0s						
CAST	**Castle Rocks**	**58.10**	**31**	P	**P**	**21 01 26.2**	**-3.0**
	baz=276,SNR=33						
CAST				S	**S**	**21 09 34.5**	**+4.4**
	baz=276						
CAST	**Castle Rocks**	**58.10**	**31**	P	P	21 01 23.0	-6.2
CAST				IAmb	IAmb	21 01 40.3	
	comp=Z,647nm,1.6s						
CAST				IAMs_20	IAMs_20	21 27 05.9	
	comp=Z,74µm,19.0s						
PPLA	**Purkeypile**	**58.11**	**32**	P	**P**	**21 01 26.8**	**-2.7**
	baz=276,SNR=41						
PPLA				S	**S**	**21 09 34.0**	**+3.6**
	baz=276						
PPLA	**Purkeypile**	**58.11**	**32**	P	P	21 01 21.8	-7.6
PPLA				IAmb	IAmb	21 01 39.9	
	comp=Z,316nm,1.0s						
RSO	**Redoubt South**	**58.12**	**35**	P	P	21 01 22.2	-7.4
OHAK	**Old Harbor**	**58.28**	**39**	P	**P**	**21 01 28.2**	**-2.4**
	baz=279,SNR=6.0						
OHAK				S	**S**	**21 09 33.9**	**+1.4**
	baz=279						
OHAK	**Old Harbor**	**58.28**	**39**	P	P	21 01 24.0	-6.5
SPCR	**Spurr Chakacha**	**58.29**	**34**	P	**P**	**21 01 31.0**	**+0.4**
	baz=277,SNR=8.7						
SPCR				S	**S**	**21 09 38.4**	**+5.6**
	baz=277						
SPU	**Mount Spurr**	**58.37**	**34**	P	P	21 01 24.7	-6.4
BPAW	**Bear Paw Mtn.**	**58.51**	**31**	P	**P**	**21 01 29.6**	**-2.5**
	baz=276,SNR=62						
BPAW				S	**S**	**21 09 37.4**	**+1.9**
	baz=276						
BPAW	**Bear Paw Mtn.**	**58.51**	**31**	P	P	21 01 25.6	-6.5
BPAW				IAMs_20	IAMs_20	21 26 59.8	
	comp=Z,92µm,19.0s						
MLY	**Manley**	**58.52**	**29**	P	**P**	**21 01 29.2**	**-3.0**
	baz=276,SNR=109						
MLY				S	**S**	**21 09 38.9**	**+3.3**
	baz=276						
MLY	**Manley**	**58.52**	**29**	P	P	21 01 25.7	-6.5
MLY				IAMs_20	IAMs_20	21 26 46.9	
	comp=Z,70µm,18.0s						
COLD	**Coldfoot**	**58.53**	**27**	P	**P**	**21 01 30.4**	**-1.7**
	baz=275,SNR=33						
COLD				S	**S**	**21 09 35.4**	**-0.1**
	baz=275						
COLD	**Coldfoot**	**58.53**	**27**	P	P	21 01 26.7	-5.5
KDAK	**Kodiak Island**	**58.58**	**38**	P	**P**	**21 01 28.7**	**-3.9**
	comp=Z,59nm,0.8s,baz=286,slow=4.8,SNR=19						
KDAK				LR	LR	21 27 00.3	
	comp=Z,98µm,20.7s,baz=290,slow=36						
KDAK	**Kodiak Island**	**58.58**	**38**	P	P	21 01 26.3	-6.3
KDAK				pmax	pmax		
	comp=Z,252nm,1.0s						
KDAK				MLR	MLR		
	comp=Z,121µm,20.0s						
KDAK	**Kodiak Island**	**58.58**	**38**	P	**P**	**21 01 30.8**	**-1.8**
	baz=279						
KDAK				S	**S**	**21 09 40.9**	**+4.6**
	baz=279						
KDAK	**Kodiak Island**	**58.58**	**38**	P	P	21 01 26.3	-6.2
KDAK				IAmb	IAmb	21 01 37.4	
	comp=Z,252nm,0.9s						
KDAK	**Kodiak Island**	**58.58**	**38**	IAMs_20	IAMs_20	21 26 48.7	
	comp=Z,121µm,20.0s						
KTH	**Kantishna Hill**	**58.60**	**31**	P	P	21 01 25.7	-7.1
KTH				IAmb	IAmb	21 01 44.5	
	comp=Z,314nm,1.2s						
KTH				IAMs_20	IAMs_20	21 26 52.2	
	comp=Z,98µm,20.0s						
TOLK	**Toolik Lake Re**	**58.64**	**25**	P	**P**	**21 01 30.6**	**-2.4**
	baz=275						
TOLK				S	**S**	**21 09 42.2**	**+5.2**
	baz=275						
TOLK	**Toolik Lake Re**	**58.64**	**25**	P	P	21 01 26.3	-6.7
TOLK				IAMs_20	IAMs_20	21 25 52.1	
	comp=Z,99µm,19.0s						
HOM	**Homer**	**58.78**	**36**	IAMs_20	IAMs_20	21 28 19.9	
	comp=Z,71µm,19.0s						
KIRV	**Kirov**	**58.78**	**323**	P	**P**	**21 01 30.7**	**-3.3**
	comp=Z,231nm,1.0s,baz=98,slow=5.0,SNR=23						
KIRV	**Kirov**	**58.78**	**323**	⇓*e*P	**P**	**21 01 31.5**	**-2.5**
CAPN	**Captain Cook N**	**58.86**	**34**	IAMs_20	IAMs_20	21 27 32.1	
	comp=Z,88µm,20.0s						
TRF	**Thorofare Moun**	**58.90**	**31**	P	**P**	**21 01 34.1**	**-0.8**
	baz=277,SNR=6.9						
TRF				S	**S**	**21 09 43.1**	**+2.3**
	baz=277						
TRF	**Thorofare Moun**	**58.90**	**31**	P	P	21 01 27.0	-8.0
TRF				IAmb	IAmb	21 01 41.0	
	comp=Z,294nm,1.6s						
TRF				IAMs_20	IAMs_20	21 26 51.0	
	comp=Z,88µm,20.0s						
H23K	**Yukon River**	**58.93**	**28**	P	**P**	**21 01 33.4**	**-1.6**
	baz=276,SNR=89						
H23K				S	**S**	**21 09 44.8**	**+3.9**
	baz=276						
H23K	**Yukon River**	**58.93**	**28**	P	P	21 01 29.5	-5.5
H23K				IAmb	IAmb	21 01 41.1	
	comp=Z,309nm,0.8s						
H23K				IAMs_20	IAMs_20	21 28 06.8	
	comp=Z,101µm,19.0s						
SUA	**Susitna One**	**58.95**	**34**	P	**P**	**21 01 33.3**	**-2.0**
	baz=278						
SUA				S	**S**	**21 09 40.5**	**-1.0**
	baz=278						
SUA	**Susitna One**	**58.95**	**34**	P	P	21 01 29.8	-5.5
SUA				IAmb	IAmb	21 01 40.5	
	comp=Z,356nm,0.9s						
SUA				IAMs_20	IAMs_20	21 24 36.5	
	comp=Z,80µm,22.0s						
CNPM	**China Poot**	**59.00**	**36**	P	P	21 01 28.3	-7.3
CNPM				IAmb	IAmb	21 01 41.3	
	comp=Z,147nm,0.8s						
CNPM				IAMs_20	IAMs_20	21 29 04.9	
	comp=Z,78µm,19.0s						
CUT	**Chulitna**	**59.05**	**32**	P	**P**	**21 01 35.3**	**-0.5**
	baz=278,SNR=13						
CUT				S	**S**	**21 09 42.1**	**-0.2**
	baz=278						
CUT	**Chulitna**	**59.05**	**32**	P	P	21 01 28.3	-7.5
CUT				IAMs_20	IAMs_20	21 26 00.1	
	comp=Z,96µm,19.0s						
SANVU	**Saraoutou**	**59.06**	**136**	P	P	21 01 29.4	-7.0
SANVU				IAmb	IAmb	21 01 45.4	
	comp=Z,306nm,1.1s						
I23K	**Minto, Yukon-K**	**59.09**	**29**	P	**P**	**21 01 34.4**	**-1.6**
	baz=277,SNR=35						
I23K				S	**S**	**21 09 45.4**	**+2.6**
	baz=277						
I23K	**Minto, Yukon-K**	**59.09**	**29**	P	P	21 01 28.1	-7.9
BRLK	**Bradley Lake**	**59.14**	**36**	P	P	21 01 30.2	-6.3
BRLK				IAmb	IAmb	21 01 42.1	
	comp=Z,192nm,0.9s						
BRLK				IAMs_20	IAMs_20	21 28 49.4	
	comp=Z,87µm,19.0s						
BWN	**Browne**	**59.17**	**30**	P	P	21 01 29.6	-7.0
BWN				IAMs_20	IAMs_20	21 27 22.0	
	comp=Z,112µm,18.0s						
BRSE	**Bradley Lake S**	**59.22**	**36**	P	**P**	**21 01 36.8**	**-0.3**
	baz=279						
BRSE				S	**S**	**21 09 44.6**	**-0.1**
	baz=279						
FIS	**Fire Island**	**59.25**	**34**	P	P	21 01 31.1	-6.2
NEA2	**Nenana**	**59.28**	**30**	P	**P**	**21 01 34.6**	**-2.8**
	baz=278,SNR=74						
NEA2				S	**S**	**21 09 46.7**	**+1.3**
	baz=278						
NEA2	**Nenana**	**59.28**	**30**	P	P	21 01 29.9	-7.6
NEA2				IAmb	IAmb	21 01 42.9	

	comp=Z,346nm,0.9s						
NEA2				IAMs_20	IAMs_20	21 27 21.1	
	comp=Z,96µm,19.0s						
MCK	**McKinley**	**59.46**	**31**	P	P	21 01 32.4	-6.3
MCK				pmax	pmax		
	comp=Z,285nm,1.3s						
MCK				MLR	MLR		
	comp=Z,100µm,19.0s						
MCK	**McKinley**	**59.46**	**31**	P	**P**	**21 01 36.7**	**-2.0**
	baz=278,SNR=39						
MCK				S	**S**	**21 09 49.0**	**+1.2**
	baz=278						
MCK	**McKinley**	**59.46**	**31**	P	P	21 01 32.4	-6.3
MCK				IAmb	IAmb	21 01 48.9	
	comp=Z,285nm,1.3s						
MCK				IAMs_20	IAMs_20	21 27 47.8	
	comp=Z,100µm,19.0s						
RC01	**Rabbit Creek A**	**59.49**	**34**	P	**P**	**21 01 37.3**	**-1.6**
	baz=279,SNR=8.2						
RC01				S	**S**	**21 09 47.2**	**-1.0**
	baz=279						
RC01	**Rabbit Creek A**	**59.49**	**34**	P	P	21 01 33.9	-5.0
RC01				IAmb	IAmb	21 01 43.7	
	comp=Z,323nm,1.2s						
RND	**Reindeer**	**59.55**	**31**	P	P	21 01 31.7	-7.6
RND				pmax	pmax		
	comp=Z,285nm,0.9s						
RND				MLR	MLR		
	comp=Z,86µm,20.0s						
RND	**Reindeer**	**59.55**	**31**	P	P	21 01 31.7	-7.6
RND				IAmb	IAmb	21 01 44.0	
	comp=Z,285nm,0.9s						
RND				IAMs_20	IAMs_20	21 26 26.0	
	comp=Z,86µm,20.0s						
MDM	**Murphy Dome**	**59.59**	**29**	P	P	21 01 33.8	-5.8
MDM				IAMs_20	IAMs_20	21 28 24.2	
	comp=Z,84µm,18.0s						
O22K	**Cooper Landing**	**59.60**	**35**	S	**S**	**21 09 47.9**	**-1.6**
	baz=280						
O22K	**Cooper Landing**	**59.60**	**35**	P	P	21 01 32.4	-7.3
O22K				IAmb	IAmb	21 02 30.7	
	comp=Z,269nm,0.9s						
O22K				IAMs_20	IAMs_20	21 25 59.7	
	comp=Z,101µm,22.0s						
H24K	**Noodor Dome**	**59.61**	**28**	P	**P**	**21 01 38.5**	**-1.2**
	baz=278,SNR=99						
H24K				S	**S**	**21 09 53.0**	**+3.3**
	baz=278						
H24K	**Noodor Dome**	**59.61**	**28**	P	P	21 01 33.7	-6.1
H24K				IAmb	IAmb	21 01 51.9	
	comp=Z,475nm,1.4s						
H24K				IAMs_20	IAMs_20	21 28 56.7	
	comp=Z,86µm,19.0s						
PMR	**Palmer**	**59.70**	**33**	P	P	21 01 33.8	-6.5
PMR				pmax	pmax		
	comp=Z,186nm,1.0s						
PMR	**Palmer**	**59.70**	**33**	P	**P**	**21 01 37.7**	**-2.6**
	baz=279,SNR=25						
PMR				S	**S**	**21 09 49.6**	**-1.1**
	baz=279						
PMR	**Palmer**	**59.70**	**33**	P	P	21 01 33.8	-6.5
PMR				IAmb	IAmb	21 01 45.0	
	comp=Z,186nm,1.0s						
WRH	**Wood River Hil**	**59.72**	**30**	P	P	21 01 34.2	-6.2
WRH				IAmb	IAmb	21 01 47.9	
	comp=Z,546nm,1.9s						
WRH				IAMs_20	IAMs_20	21 27 44.6	
	comp=Z,93µm,19.0s						
TCOL	**CIGO, UAF Yank**	**59.76**	**29**	P	**P**	**21 01 39.8**	**-0.8**
	baz=278,SNR=9.8						
TCOL				S	**S**	**21 09 52.5**	**+1.1**
	baz=278						
TCOL	**CIGO, UAF Yank**	**59.76**	**29**	P	P	21 01 34.1	-6.5
TCOL				IAmb	IAmb	21 01 58.9	
	comp=Z,506nm,1.6s						
TCOL				IAMs_20	IAMs_20	21 27 33.6	
	comp=Z,66µm,19.0s						
COLA	**College**	**59.76**	**29***c*	*i*P	**P**	**21 01 38.6**	**-2.1**
COLA				pmax	pmax		
	comp=Z,657nm,3.6s						
COLA				MLR	MLR		
	comp=Z,89µm,15.0s						
COLA	**College**	**59.76**	**29**	P	P	21 01 34.5	-6.1
COLA				IAmb	IAmb	21 01 58.9	
	comp=Z,504nm,1.6s						
COLA	**College**	**59.76**	**29**	IAMs_20	IAMs_20	21 27 33.6	
	comp=Z,63µm,19.0s						
GHO	**Glory Hole Cre**	**59.77**	**33**	P	P	21 01 35.3	-5.6
GHO				IAmb	IAmb	21 01 51.3	
	comp=Z,225nm,1.0s						
WAT1	**Susitna Watana**	**59.77**	**32**	P	**P**	**21 01 40.4**	**-0.5**
	baz=279						
WAT1				S	**S**	**21 09 52.1**	**+0.3**
	baz=279						
SEW	**Seward**	**59.80**	**35**	P	**P**	**21 01 37.8**	**-3.2**
	baz=280,SNR=22						
SEW				S	**S**	**21 09 52.3**	**+0.3**
	baz=280						
SEW	**Seward**	**59.80**	**35**	P	P	21 01 33.6	-7.4
CCB	**Clear Creek Bu**	**59.81**	**30**	P	P	21 01 34.5	-6.5
POKR	**Poker Plat Res**	**59.90**	**29**	P	**P**	**21 01 39.5**	**-2.1**
	baz=279,SNR=103						
POKR				S	**S**	**21 09 57.4**	**+4.1**
	baz=279						
POKR	**Poker Plat Res**	**59.90**	**29**	P	P	21 01 34.6	-7.1
POKR				IAmb	IAmb	21 01 47.4	
	comp=Z,309nm,0.9s						
POKR	**Poker Plat Res**	**59.90**	**29**		P	21 01 35.4	-6.3
POKR				IAMs_20	IAMs_20	21 27 06.4	
	comp=Z,54µm,18.0s						
SML	**Sawmill**	**60.04**	**33**	P	**P**	**21 01 42.3**	**-0.4**
	baz=280,SNR=24						
SML				S	**S**	**21 09 59.1**	**+3.7**
	baz=280						
SML	**Sawmill**	**60.04**	**33**	P	P	21 01 34.9	-7.9
SML				IAmb	IAmb	21 01 52.2	
	comp=Z,230nm,1.0s						
SML				IAMs_20	IAMs_20	21 26 52.3	
	comp=Z,77µm,19.0s						
KNK	**Knik Glacier**	**60.05**	**33**	P	**P**	**21 01 40.5**	**-2.3**
	baz=280,SNR=27						
KNK				S	**S**	**21 09 58.2**	**+2.8**
	baz=280						
KNK	**Knik Glacier**	**60.05**	**33**	P	P	21 01 34.2	-8.5
KNK				IAmb	IAmb	21 01 47.7	
	comp=Z,255nm,0.9s						
KNK				IAMs_20	IAMs_20	21 25 48.5	
	comp=Z,79µm,22.0s						
PRGR	**Permogore**	**60.15**	**327**	*e*P	**P**	**21 01 43.3**	**-0.1**
PRGR				*e*		21 02 23.5	
PRGR				pmax	pmax		
	comp=Z,57nm,0.9s						
WAT6	**Susitna Watana**	**60.18**	**32**	P	**P**	**21 01 41.8**	**-2.0**
	baz=280,SNR=21						
WAT6				S	**S**	**21 09 57.2**	**-0.1**
	baz=280						
IL31		**60.18**	**29**	P	P	21 01 35.6	-8.0
ILAR	**Eielson Array**	**60.18**	**29**	P	**P**	**21 01 40.1**	**-3.5**
	comp=Z,14nm,0.9s,baz=280,slow=6.0,SNR=42						
ILAR				LR	LR	21 29 12.0	
	comp=Z,71µm,19.1s,baz=295,slow=38						
ILAR				PKPPKP	P'P'df	21 31 03.5	-11
	comp=Z,1.3nm,1.0s,baz=50,slow=1.1,SNR=4.1						
ILAR				PKP2bc		21 31 13.6	
	comp=Z,7.1nm,1.3s,baz=165,slow=2.4,SNR=4.9						
ILAR	**Eielson Array**	**60.18**	**29**	P	P	21 01 36.1	-7.5
ILAR	**Eielson Array**	**60.18**	**29**	P	P	21 01 36.1	-7.5
PWL	**Port Wells**	**60.21**	**34**	P	**P**	**21 01 43.4**	**-0.5**
	baz=280,SNR=8.6						
PWL				S	**S**	**21 09 59.6**	**+2.2**
	baz=280						
PWL	**Port Wells**	**60.21**	**34**	P	P	21 01 36.0	-7.8
PWL				IAmb	IAmb	21 01 48.4	
	comp=Z,271nm,0.9s						
PWL				IAMs_20	IAMs_20	21 25 15.7	
	comp=Z,79µm,21.0s						
HDA	**Harding Lake**	**60.22**	**30**	P	**P**	**21 01 40.1**	**-3.7**
	baz=280,SNR=130						
HDA				S	**S**	**21 09 56.1**	**-1.3**
	baz=280						
HDA				S	**S**	**21 09 56.1**	**-1.3**
	baz=280						
HDA	**Harding Lake**	**60.22**	**30**	P	P	21 01 37.6	-6.3
HDA				IAmb	IAmb	21 01 48.1	
	comp=Z,204nm,0.9s						
HDA				IAMs_20	IAMs_20	21 27 59.9	
	comp=Z,104µm,20.0s						
DHY	**Denali Highway**	**60.26**	**31**	P	**P**	**21 01 42.3**	**-2.0**
	baz=280						
DHY				S	**S**	**21 09 59.8**	**+1.5**
	baz=280						
DHY	**Denali Highway**	**60.26**	**31**	P	P	21 01 37.0	-7.4
DHY				IAmb	IAmb	21 01 54.3	
	comp=Z,569nm,1.9s						
DHY				IAMs_20	IAMs_20	21 26 39.0	
	comp=Z,82µm,20.0s						
SCM	**Sheep Creek Mo**	**60.50**	**33**	P	P	21 01 39.3	-6.7
SCM				pmax	pmax		
	comp=Z,478nm,1.2s						
SCM				MLR	MLR		
	comp=Z,80µm,20.0s						
SCM	**Sheep Creek Mo**	**60.50**	**33**	P	**P**	**21 01 43.9**	**-2.1**
	baz=281,SNR=31						
SCM				S	**S**	**21 10 04.8**	**+3.5**
	baz=281						
SCM	**Sheep Creek Mo**	**60.50**	**33**	P	P	21 01 39.3	-6.7
SCM				IAmb	IAmb	21 01 56.4	
	comp=Z,478nm,1.2s						
SCM				IAMs_20	IAMs_20	21 26 46.5	
	comp=Z,80µm,20.0s						
FYU	**Fort Yukon**	**60.56**	**27**	P	P	21 01 40.9	-5.2
FYU				IAMs_20	IAMs_20	21 28 57.7	
	comp=Z,87µm,19.0s						
PRP	**Porcupine Dome**	**60.62**	**28**	P	**P**	**21 01 44.3**	**-2.5**
	baz=280,SNR=29						
PRP				S	**S**	**21 10 06.0**	**+3.1**
	baz=280						
PRP	**Porcupine Dome**	**60.62**	**28**	P	P	21 01 40.8	-6.0
PRP				IAmb	IAmb	21 01 54.2	
	comp=Z,732nm,2.0s						
PRP				IAMs_20	IAMs_20	21 29 09.5	
	comp=Z,74µm,18.0s						
BMAR	**Burnt Mountain**	**60.66**	**26**	P	**P**	**21 01 42.4**	**-4.5**
KAAM	**Kaadhehdhoo**	**60.76**	**251**	P	P	21 01 52.0	+3.8
KAAM	**Kaadhehdhoo**	**60.76**	**251**	P	P	21 01 42.2	-6.0
KAAM				IAmb	IAmb	21 02 05.5	
	comp=Z,290nm,1.1s						
KAAM				IAMs_20	IAMs_20	21 28 09.0	
	comp=Z,68µm,20.0s						
GLI	**Glacier Island**	**60.80**	**34**	P	**P**	**21 01 47.6**	**-0.3**
	baz=281,SNR=6.4						
GLI	**Glacier Island**	**60.80**	**34**	P	P	21 01 41.2	-6.7
GLI				IAmb	IAmb	21 01 54.5	
	comp=Z,262nm,1.1s						
GLI				IAMs_20	IAMs_20	21 31 48.3	
	comp=Z,67µm,18.0s						
J25K	**Salcha River,**	**60.85**	**29**	P	**P**	**21 01 46.5**	**-1.8**
	baz=281,SNR=8.3						
J25K				S	**S**	**21 10 04.2**	**-1.5**
	baz=281						
M24K	**Tolsona, Glenn**	**60.99**	**32**	P	**P**	**21 01 48.4**	**-0.8**
	baz=282,SNR=26						
M24K				S	**S**	**21 10 10.9**	**+3.5**
	baz=282						
M24K	**Tolsona, Glenn**	**60.99**	**32**	P	P	21 01 41.9	-7.3
M24K				IAmb	IAmb	21 02 01.9	
	comp=Z,401nm,1.1s						
M24K				IAMs_20	IAMs_20	21 30 00.2	
	comp=Z,61µm,18.0s						
BELG	**Belogornoye**	**61.00**	**316**	P	**P**	**21 01 46.3**	**-3.0**
	comp=Z,29nm,0.9s,baz=252,slow=3.3,SNR=6.5						
BELG	**Belogornoye**	**61.00**	**316**⇑	*e*P	**P**	**21 01 45.9**	**-3.4**
BELG				pmax	pmax		
	comp=Z,92nm,1.6s						
BELG				MLR	MLR		
	comp=Z,75µm,16.0s						
FID	**Port Fidalgo**	**61.12**	**34**	P	P	21 01 41.7	-8.4
FID				IAmb	IAmb	21 01 55.0	
	comp=Z,188nm,0.9s						
FID				IAMs_20	IAMs_20	21 31 59.1	
	comp=Z,67µm,18.0s						
PAX	**Paxson**	**61.13**	**31**	P	P	21 01 44.2	-6.0
PAX				pmax	pmax		
	comp=Z,408nm,1.9s						
PAX	**Paxson**	**61.13**	**31**	P	**P**	**21 01 47.7**	**-2.5**
	baz=282,SNR=22						
PAX				S	**S**	**21 10 09.4**	**+0.1**
	baz=282						
PAX	**Paxson**	**61.13**	**31**	P	P	21 01 44.2	-6.0
PAX				IAmb	IAmb	21 02 00.5	
	comp=Z,408nm,1.9s						
HIN	**Hinchinbrook I**	**61.18**	**34**	P	P	21 01 43.8	-6.7
HIN				IAmb	IAmb	21 01 57.5	
	comp=Z,254nm,1.0s						
KLU	**Klutina**	**61.23**	**33**	P	**P**	**21 01 49.7**	**-1.2**
	baz=282,SNR=22						
KLU				S	**S**	**21 10 09.6**	**-1.0**
	baz=282						
KLU	**Klutina**	**61.23**	**33**	P	P	21 01 43.3	-7.6
KLU				IAmb	IAmb	21 01 57.0	
	comp=Z,355nm,1.5s						
KLU				IAMs_20	IAMs_20	21 26 23.7	
	comp=Z,96µm,22.0s						
RIDG	**Independent Ri**	**61.25**	**30**	P	**P**	**21 01 49.4**	**-1.6**
	baz=282,SNR=21						
RIDG				S	**S**	**21 10 09.7**	**-1.1**
	baz=282						
RIDG	**Independent Ri**	**61.25**	**30**	P	P	21 01 44.5	-6.4
RIDG				IAmb	IAmb	21 02 08.5	
	comp=Z,419nm,1.4s						
RIDG				IAMs_20	IAMs_20	21 30 58.2	
	comp=Z,105µm,18.0s						
DIV	**Divide**	**61.38**	**33**	P	P	21 01 45.2	-6.6
DIV				IAmb	IAmb	21 01 57.2	
	comp=Z,223nm,0.9s						
HARP	**HAARP**	**61.39**	**32**	P	**P**	**21 01 49.9**	**-2.0**
	baz=282,SNR=20						
HARP				S	**S**	**21 10 14.8**	**+2.3**
	baz=282						
Q23K	**Middleton Isla**	**61.47**	**35**	IAMs_20	IAMs_20	21 26 10.3	
	comp=Z,72µm,20.0s						
MID	**Middleton Isla**	**61.48**	**35**	P	P	21 01 46.1	-6.3
MID				pmax	pmax		
	comp=Z,896nm,1.4s						
MID	**Middleton Isla**	**61.48**	**35**	P	P	21 01 46.0	-6.4
EYAK	**Cordova Ski Ar**	**61.52**	**34**	S	**S**	**21 10 18.8**	**+4.8**
	baz=283						
EYAK	**Cordova Ski Ar**	**61.52**	**34**	P	P	21 01 45.5	-7.2
SCRK	**Sand Creek**	**61.57**	**30**	P	P	21 01 48.4	-4.9
	baz=282,SNR=58						
SCRK				S	**S**	**21 10 13.4**	**-1.6**
	baz=282						
SCRK	**Sand Creek**	**61.57**	**30**	P	P	21 01 46.6	-6.7
SCRK				IAmb	IAmb	21 01 57.4	
	comp=Z,216nm,1.0s						
SCRK				IAMs_20	IAMs_20	21 28 50.6	
	comp=Z,92µm,20.0s						
DOT	**Dot Lake**	**61.61**	**30**	P	P	21 01 47.2	-6.2
J26L	**Joseph Creek**	**61.64**	**29**	P	**P**	**21 01 49.9**	**-3.8**
	baz=282,SNR=55						
J26L				S	**S**	**21 10 15.9**	**+0.2**
	baz=282						
N25K	**Chitina, Valde**	**61.82**	**33**	P	**P**	**21 01 53.1**	**-1.8**
	baz=283,SNR=41						
N25K				S	**S**	**21 10 17.2**	**-0.9**
	baz=283						
N25K	**Chitina, Valde**	**61.82**	**33**	P	P	21 01 48.5	-6.4
N25K				IAmb	IAmb	21 02 01.7	
	comp=Z,186nm,1.0s						
N25K				IAMs_20	IAMs_20	21 27 16.4	
	comp=Z,90µm,22.0s						
MENT	**Mentasta**	**61.92**	**31**	P	P	21 01 49.1	-6.3
MENT				IAmb	IAmb	21 02 01.1	
	comp=Z,218nm,0.9s						
BMRM	**Bremner River**	**61.97**	**33**	P	**P**	**21 01 53.4**	**-2.4**
	baz=283,SNR=22						
BMRM				S	**S**	**21 10 23.4**	**+3.5**
	baz=283						
BMRM	**Bremner River**	**61.97**	**33**	P	P	21 01 49.9	-5.9
BMRM				IAmb	IAmb	21 02 01.2	
	comp=Z,217nm,1.0s						
BMRM				IAMs_20	IAMs_20	21 27 45.2	
	comp=Z,102µm,20.0s						
L26K	**Log Cabin Wild**	**62.06**	**31**	P	**P**	**21 01 53.9**	**-2.6**
	baz=283,SNR=28						
L26K				S	**S**	**21 10 23.0**	**+1.9**
	baz=283						
L26K	**Log Cabin Wild**	**62.06**	**31**	P	P	21 01 49.6	-6.8
L26K				IAmb	IAmb	21 02 07.2	
	comp=Z,605nm,1.7s						
L26K				IAMs_20	IAMs_20	21 29 20.7	
	comp=Z,119µm,18.0s						
RAGM	**Ragged Mountai**	**62.07**	**34**	P	P	21 01 50.2	-6.3
RAGM				IAMs_20	IAMs_20	21 33 14.9	
	comp=Z,100µm,21.0s						
FUNA	**Funafuti**	**62.21**	**120**	P	P	21 01 51.5	-6.5
GLB	**Gilahina Butte**	**62.23**	**33**	P	P	21 01 50.0	-7.6
GLB				IAmb	IAmb	21 02 04.9	
	comp=Z,203nm,1.1s						
GLB				IAMs_20	IAMs_20	21 27 05.1	
	comp=Z,72µm,21.0s						
HMT	**Hamilton**	**62.28**	**34**	P	P	21 01 50.8	-7.1
HMT				IAmb	IAmb	21 02 05.3	
	comp=Z,377nm,1.2s						
HMT				IAMs_20	IAMs_20	21 33 22.6	
	comp=Z,65µm,20.0s						
KAIM	**Kayak Island**	**62.31**	**35**	P	**P**	**21 01 58.7**	**+0.7**
	baz=284						
KAIM	**Kayak Island**	**62.31**	**35**	P	P	21 01 51.9	-6.1
KAIM				IAMs_20	IAMs_20	21 30 24.2	
	comp=Z,70µm,18.0s						
M26K	**Nabesna, AK**	**62.37**	**32**	P	**P**	**21 01 55.5**	**-3.0**
	baz=284						
M26K				S	**S**	**21 10 26.6**	**+1.6**
	baz=284						
M26K	**Nabesna, AK**	**62.37**	**32**	P	P	21 01 52.5	-6.0
M26K				IAMs_20	IAMs_20	21 32 24.8	
	comp=Z,87µm,19.0s						
VRDI	**Verde Repeater**	**62.45**	**33**	P	P	21 01 53.5	-5.7
VRDI				IAmb	IAmb	21 02 06.3	
	comp=Z,184nm,0.9s						
VRDI				IAMs_20	IAMs_20	21 30 36.9	
	comp=Z,81µm,18.0s						
BERG	**Berg Lake**	**62.54**	**34**	P	P	21 01 52.9	-6.7
BERG				IAmb	IAmb	21 02 05.2	
	comp=Z,268nm,0.9s						
BERG				IAMs_20	IAMs_20	21 28 55.3	
	comp=Z,62µm,19.0s						
SUCK	**Suckling Hills**	**62.58**	**34**	P	P	21 01 53.0	-6.9
SUCK				IAmb	IAmb	21 02 07.7	
	comp=Z,411nm,1.4s						
SUCK				IAMs_20	IAMs_20	21 29 55.5	
	comp=Z,110µm,18.0s						
EGAK	**Eagle**	**62.58**	**29**	P	**P**	**21 01 57.1**	**-2.7**
	baz=284						
EGAK				S	**S**	**21 10 30.1**	**+2.7**
	baz=284						
EGAK	**Eagle**	**62.58**	**29**	P	P	21 01 51.4	-8.5
EGAK				IAmb	IAmb	21 02 25.7	
	comp=Z,340nm,1.6s						
EGAK				IAMs_20	IAMs_20	21 27 00.4	
	comp=Z,61µm,20.0s						
MCARA	**McCarthy VSAT**	**62.61**	**33**	P	**P**	**21 01 59.9**	**-0.2**
	baz=284,SNR=31						
MCARA	**McCarthy VSAT**	**62.61**	**33**	P	P	21 01 50.7	-9.4
MCARA				IAMs_20	IAMs_20	21 30 42.2	
	comp=Z,93µm,18.0s						
CRQM	**Cirque**	**62.72**	**34**	P	P	21 01 53.7	-7.3
CRQM				IAmb	IAmb	21 02 06.3	
	comp=Z,278nm,1.0s						
CRQM				IAMs_20	IAMs_20	21 28 16.6	
	comp=Z,123µm,21.0s						
L27K	**Beaver Creek,**	**62.73**	**31**	P	**P**	**21 01 58.6**	**-2.3**
	baz=285,SNR=143						
L27K				S	**S**	**21 10 32.1**	**+2.7**
	baz=285						
L27K	**Beaver Creek,**	**62.73**	**31**	P	P	21 01 53.5	-7.4
L27K				IAmb	IAmb	21 02 06.3	
	comp=Z,183nm,0.9s						
L27K				IAMs_20	IAMs_20	21 29 31.2	
	comp=Z,107µm,20.0s						
CRQE	**Cirque**	**62.74**	**34**	P	**P**	**21 01 58.7**	**-2.4**
	baz=285,SNR=22						
BCAR	**Beaver Creek A**	**62.75**	**31**	P	P	21 01 53.1	-7.9
TGL	**Tana Glacier**	**62.86**	**33**	P	P	21 01 54.2	-7.7
TGL				IAmb	IAmb	21 02 07.1	
	comp=Z,237nm,0.9s						
TGL				IAMs_20	IAMs_20	21 28 20.9	
	comp=Z,109µm,20.0s						
M27K	**Edge Creek, AK**	**62.89**	**32**	P	**P**	**21 01 59.4**	**-2.7**
	baz=285,SNR=29						
M27K				S	**S**	**21 10 35.8**	**+4.2**
	baz=285						
M27K	**Edge Creek, AK**	**62.89**	**32**	P	P	21 01 53.9	-8.2
M27K				IAmb	IAmb	21 02 07.6	
	comp=Z,169nm,0.8s						
M27K				IAMs_20	IAMs_20	21 30 07.5	
	comp=Z,76µm,20.0s						
BANOM	**Banah**	**62.89**	**285**	*i* P	**P**	**21 02 03.8**	**+1.2**
	SNR=21						
BANOM	**Banah**	**62.89**	**285**	pP	pP	21 02 10.0	+4.4
	SNR=7.6						
WAX	**Waxell Ridge**	**62.93**	**34**	P	P	21 01 54.9	-7.4
WAX				IAmb	IAmb	21 02 13.8	
	comp=Z,256nm,1.1s						
WAX				IAMs_20	IAMs_20	21 30 06.7	
	comp=Z,82µm,18.0s						
HOQ	**Hoqain**	**62.97**	**283**	pP	pP	21 02 09.0	+2.8
	SNR=18						
SNH	**Sunshine Point**	**63.01**	**34**	P	P	21 01 55.1	-7.7
SNH				IAmb	IAmb	21 02 08.0	
	comp=Z,227nm,1.0s						
SNH				IAMs_20	IAMs_20	21 27 19.8	
	comp=Z,84µm,20.0s						
ISLE	**Juniper Island**	**63.13**	**34**	P	P	21 01 56.4	-7.4
ISLE				IAmb	IAmb	21 02 13.9	
	comp=Z,368nm,1.3s						
ISLE				IAMs_20	IAMs_20	21 29 01.1	
	comp=Z,75µm,21.0s						
MDH	**Madha**	**63.14**	**285**	*i* P	**P**	**21 02 04.8**	**+0.7**
	SNR=13						
MDH	**Madha**	**63.14**	**285**	pP	pP	21 02 10.5	+3.3
KLMR	**Klimovskoe**	**63.20**	**327***c*	*i*P	**P**	**21 02 06.2**	**+2.3**
KLMR				*e*		21 02 40.6	
KLMR				*e*		21 04 27.7	
KLMR				pmax	pmax		
	comp=Z,596nm,1.5s						
KLMR	**Klimovskoe**	**63.20**	**327**⇑	*i*P	**P**	**21 02 06.3**	**+2.3**
KLMR				*i* P	**P**	**21 02 06.3**	**+2.3**
KLMR			⇓	*i*P	**P**	**21 02 06.3**	**+2.3**
KLMR				AMP		21 02 16.5	
	comp=Z,596nm,1.5s						
KLMR				*e*PcP	**PcP**	**21 02 40.6**	**-0.8**
KLMR				*e*PP	**PP**	**21 04 27.8**	**+5.2**
KLMR				*e*		21 06 06.2	
KLMR				*e*		21 06 06.2	
KLMR				*e*S	**S**	**21 10 42.0**	**+6.7**
KLMR				*e*S	**S**	**21 10 42.0**	**+6.7**
KLMR				*e*SS	SS	21 14 51.1	+10
KLMR				*e*SS	SS	21 14 51.1	+10
KLMR				LQ	LQ	21 25 13.7	
KLMR				LQ	LQ	21 25 13.7	
KLMR				LR	LR	21 30 20.7	
KLMR				AMP		21 35 44.1	
	comp=Z,184µm,13.5s						
LIFNC	**LIFOU**	**63.27**	**139**	P	P	21 01 59.4	-5.5
LIFNC				IAmb	IAmb	21 02 13.2	
	comp=Z,331nm,1.3s						
LVZ	**Lovozero**	**63.30**	**335**	*e*P	**P**	**21 02 03.8**	**-0.8**
LVZ				pmax	pmax		
	comp=Z,379nm,2.1s						
LVZ	**Lovozero**	**63.30**	**335**	P	P	21 01 59.1	-5.5
LVZ				IAmb	IAmb	21 02 24.3	
	comp=Z,186nm,1.0s						
BVCY	**Beaver Creek**	**63.33**	**31**	P	**P**	**21 02 01.7**	**-3.2**
	baz=286,SNR=6.9						
BVCY				S	**S**	**21 10 40.8**	**+3.9**
	baz=286						
BARN	**Barnard Glacie**	**63.33**	**33**	P	P	21 01 57.8	-7.4
BARN				IAmb	IAmb	21 02 10.0	
	comp=Z,126nm,0.8s						
BARN				IAMs_20	IAMs_20	21 27 53.3	
	comp=Z,103µm,22.0s						
UOSS	**Minazif**	**63.36**	**284**	*i* P	**P**	**21 02 06.4**	**+0.7**
	SNR=23						
UOSS	**Minazif**	**63.36**	**284**	P	P	21 02 00.5	-5.2
UOSS	**Minazif**	**63.36**	**284**	IAMs_20	IAMs_20	21 30 50.8	
	comp=Z,107µm,20.0s						
HOPEN	**Hopen**	**63.37**	**345**	*e*P	**P**	**21 02 03.9**	**-0.9**
HOPEN				IVmB_BB		21 02 11.0	
	comp=Z,6µm,3.5s						
HOPEN				*e*S	**S**	**21 10 37.8**	**+0.9**
GRNC	**Granite Creek**	**63.38**	**33**	P	P	21 01 57.3	-8.2
GRNC				IAMs_20	IAMs_20	21 28 57.5	
	comp=Z,73µm,20.0s						
SOHO	**SOHO**	**63.40**	**283**	*i* P	**P**	**21 02 06.6**	**+0.6**
	SNR=58						
SOHO	**SOHO**	**63.40**	**283**	P	**P**	**21 02 07.3**	**+1.4**
MESA	**MESA**	**63.44**	**34**	P	**P**	**21 02 07.4**	**+1.5**
	baz=286,SNR=7.1						

MESA				S	**S**	**21 10 43.1**	**+4.4**
	baz=286						
MESA	**MESA**	**63.44**	**34**	P	P	21 01 58.0	-7.9
MESA				IAmb	IAmb	21 02 12.3	
	comp=Z,210nm,1.1s						
MESA				IAMs_20	IAMs_20	21 32 15.1	
	comp=Z,108µm,18.0s						
HATD	**Hatta, Dubai**	**63.46**	**284**	*i* P	**P**	**21 02 06.7**	**+0.4**
	SNR=9.0						
HATD	**Hatta, Dubai**	**63.46**	**284**	pP	pP	21 02 13.0	+3.6
	SNR=17						
YAH	**Yahtse**	**63.48**	**34**	P	P	21 01 58.8	-7.4
YAH				IAMs_20	IAMs_20	21 29 14.3	
	comp=Z,91µm,19.0s						
CTG	**Chitna Glacier**	**63.51**	**33**	P	**P**	**21 02 04.5**	**-1.8**
	baz=286,SNR=25						
CTGM	**Chitina Glacie**	**63.51**	**33**	P	P	21 01 58.6	-7.7
CTGM				IAmb	IAmb	21 02 16.3	
	comp=Z,225nm,1.0s						
CTGM				IAMs_20	IAMs_20	21 27 23.9	
	comp=Z,84µm,21.0s						
DAWY	**Dawson**	**63.51**	**29**	P	**P**	**21 02 03.3**	**-2.8**
	baz=286,SNR=24						
DAWY				S	**S**	**21 10 42.5**	**+3.3**
	baz=286						
DAWY	**Dawson**	**63.51**	**29**	P	P	21 01 59.4	-6.7
STKA	**Stephens Creek**	**63.58**	**168**	P	**P**	**21 02 04.0**	**-2.7**
	comp=Z,31nm,0.9s,baz=335,slow=6.2,SNR=18						
STKA				LR	LR	21 30 57.9	
	comp=Z,27µm,20.0s,baz=348,slow=37						
STKA				PKP2ab		21 31 19.8	
	comp=Z,3.1nm,0.8s,baz=212,slow=4.9,SNR=4.2						
STKA	**Stephens Creek**	**63.58**	**168**	P	P	21 02 01.4	-5.3
STKA				pmax	pmax		
	comp=Z,21nm,1.1s						
STKA	**Stephens Creek**	**63.58**	**168**	P	P	21 02 01.4	-5.3
UMQ	**Umm Al-Quwin**	**63.58**	**285**	pP	pP	21 02 13.8	+3.7
ASHO	**Ashiyiah**	**63.58**	**284**	*i* P	**P**	**21 02 07.3**	**+0.1**
	SNR=13						
ASHO	**Ashiyiah**	**63.58**	**284**	pP	pP	21 02 12.0	+1.8
	SNR=31						
I29M	**Ogilvie Camp,**	**63.59**	**28**	P	**P**	**21 02 05.0**	**-1.6**
	baz=286,SNR=34						
I29M				S	**S**	**21 10 42.0**	**+1.9**
	baz=286						
YUK3	**Moose Creek**	**63.69**	**32**	P	**P**	**21 02 05.2**	**-2.3**
	baz=286,SNR=24						
YUK3				S	**S**	**21 10 44.7**	**+2.9**
	baz=286						
LOGN	**Logan Glacier**	**63.71**	**33**	IAMs_20	IAMs_20	21 27 10.1	
	comp=Z,70µm,21.0s						
MAK	**Makhachkala**	**63.71**	**306**	*e*P	P	21 01 59.1	-8.6
MAK				*e*		21 04 21.8	
MAK				*e*PPP	PPP	21 05 54.9	
MAK				*e*S	S	21 10 30.9	-11
MAK				pmax	pmax		
	comp=Z,5µm,3.9s						
MAK				pmax	pmax		
	comp=Z,534nm,2.2s						
MAK				MLR	MLR		
	comp=Z,201µm,16.0s						
MAK				MLR	MLR		
	comp=N,248µm,17.0s						
MAK				MLR	MLR		
	comp=E,232µm,16.0s						
ARQ	**Araqi**	**63.73**	**283**	pP	pP	21 02 14.0	+2.8
	SNR=21						
TABL	**Table Mountain**	**63.75**	**34**	P	P	21 01 58.0	-10
TABL				IAMs_20	IAMs_20	21 28 30.3	
	comp=Z,86µm,22.0s						
APA	**Apatity**	**63.85**	**335**	⇓*i*P	**P**	**21 02 08.2**	**0.0**
APA				*i*		21 02 40.1	
APA				*i*		21 04 30.0	
APA				*i* PPP	PPP	21 06 02.0	
APA				*i* S	**S**	**21 10 44.0**	**+0.8**
APA				*i* PS	**PnS**	**21 10 57.0**	**-2.6**
APA				pmax	pmax		
	comp=Z,166nm,0.4s						
APA				MLR	MLR		
	comp=Z,230µm,16.0s						
DZM	**Mont Dzumac**	**63.87**	**141**	*e*P	**P**	**21 02 08.5**	**-0.5**
	comp=Z,420nm,1.4s						
DZM				*e*S	**S**	**21 10 47.5**	**+2.8**
	comp=Z,117µm,29.7s						
DZM	**Mont Dzumac**	**63.87**	**141**	*e*LR	LR	21 21 13.0	
	comp=Z,165µm,33.5s						
DZM	**Mont Dzumac**	**63.87**	**141**	P	P	21 02 01.4	-7.6
J29M	**Klondike Camp**	**63.89**	**29**	P	**P**	**21 02 09.0**	**+0.3**
	baz=287						
J29M				S	**S**	**21 10 49.7**	**+5.7**
	baz=287						
EPYK	**Eagle Plains**	**63.92**	**27**	P	**P**	**21 02 06.7**	**-2.1**
	baz=287,SNR=35						
EPYK				S	**S**	**21 10 46.8**	**+2.5**
	baz=287						
EPYK	**Eagle Plains**	**63.92**	**27**	P	**P**	**21 02 04.5**	**-4.2**
EPYK				IAMs_20	IAMs_20	21 29 07.7	
	comp=Z,77µm,19.0s						
FAQ	**Al Faqa, Dubai**	**63.95**	**284**	*i* P	**P**	**21 02 10.2**	**+0.6**
	SNR=14						
FAQ	**Al Faqa, Dubai**	**63.95**	**284**	pP	pP	21 02 15.0	+2.5
	SNR=13						
ONTNC	**Ouen Toro**	**64.07**	**141**	P	P	21 02 04.8	-5.3
ASUD	**Al Ashush, Dub**	**64.21**	**284**	*i* P	**P**	**21 02 13.1**	**+1.8**
	SNR=6.5						
ASUD	**Al Ashush, Dub**	**64.21**	**284**	pP	pP	21 02 18.0	+3.8
PCA	**Pinnacle**	**64.27**	**34**	P	P	21 02 03.6	-7.5
PCA				IAmb	IAmb	21 02 21.4	
	comp=Z,308nm,1.0s						
PINM	**Pinnacle**	**64.27**	**34**	P	**P**	**21 02 09.4**	**-1.8**
	baz=287,SNR=14						
PINM				S	**S**	**21 10 52.8**	**+4.0**
	baz=287						
MARNC	**Mare, Loyalty**	**64.28**	**139**	P	P	21 02 04.3	-7.3
OUENC	**Ouen Island, N**	**64.37**	**141**	P	P	21 02 04.8	-7.4
SPB2	**Spitsbergen Ar**	**64.41**	**348**	P	P	21 02 04.6	-7.1
SPB2				IAmb	IAmb	21 02 16.5	
	comp=Z,191nm,1.1s						
SPA0	**Spitsbergen Ar**	**64.41**	**348**	*e*P	**P**	**21 02 10.6**	**-1.2**
SPA0				IVmB_BB		21 02 16.5	
	comp=Z,3µm,1.7s						
SPA0				*e*S	**S**	**21 10 49.7**	**-0.2**
SPITS	**Spitsbergen Ar**	**64.41**	**348**	P	**P**	**21 02 09.1**	**-2.7**
	comp=Z,12nm,0.5s,baz=78,slow=9.5,SNR=17						
INK	**Inuvik**	**64.49**	**24**	P	**P**	**21 02 09.9**	**-2.4**
	comp=Z,13nm,0.7s,baz=288,slow=6.0,SNR=24						
INK	**Inuvik**	**64.49**	**24**	P	P	21 02 04.4	-7.9
INK				pmax	pmax		
	comp=Z,2µm,3.0s						
INK	**Inuvik**	**64.49**	**24**	P	**P**	**21 02 09.9**	**-2.4**
	baz=289,SNR=60						
INK				S	**S**	**21 10 50.4**	**-0.5**
	baz=289						
INK	**Inuvik**	**64.49**	**24**	P	P	21 02 04.3	-8.0
BCPM	**Bancas Point**	**64.61**	**34**	IAMs_20	IAMs_20	21 32 02.2	
	comp=Z,76µm,18.0s						
YUK4	**Talbot Arm**	**64.64**	**32**	P	**P**	**21 02 12.3**	**-1.4**
	baz=288,SNR=19						
KBS	**Kingsbay**	**64.80**	**349**	⇑*e*P	**P**	**21 02 11.7**	**-2.5**
KBS				pmax	pmax		
	comp=Z,128nm,1.4s						
KBS	**Kingsbay**	**64.80**	**349**	*e*P	P	21 02 19.3	+5.1
KBS				IAmb	IAmb	21 02 19.7	
	comp=Z,225nm,1.1s						
KBS	**Kingsbay**	**64.80**	**349**	*e*P	**P**	**21 02 12.9**	**-1.4**
KBS				IVmB_BB		21 02 24.1	
	comp=Z,4µm,5.3s						
KBS				*e*S	**S**	**21 10 55.6**	**+1.0**
KBS				*e*SS	**SS**	**21 15 06.7**	**+1.7**
KBS	**Kingsbay**	**64.80**	**349**	P	P	21 02 07.4	-6.9
PNL	**Peninsula**	**64.82**	**34**	P	**P**	**21 02 13.4**	**-1.3**
	baz=288,SNR=7.5						
GROC	**Groznyy**	**64.82**	**307**	*e*P	**P**	**21 02 13.5**	**-1.5**
GROC				*e*		21 02 48.2	
GROC				*e*S	**S**	**21 10 53.8**	**-2.1**
GROC				pmax	pmax		
	comp=Z,111nm,1.0s						
GROC				MLR	MLR		
	comp=Z,52µm,12.0s						
VRH	**Novokhopyorsk**	**64.85**	**316**	*e*P	**P**	**21 02 15.2**	**+0.2**
VRH				*e*PPP	PPP	21 06 06.3	
VRH				*e*S	**S**	**21 10 49.8**	**-6.2**
VRH				pmax	pmax		
	comp=Z,110nm,1.0s						
VRH				smax	smax		
	comp=E,5µm,9.4s						
VRH				MLR	MLR		
	comp=Z,486µm,18.0s						
PINNC	**Pines Island,**	**64.86**	**140**	P	P	21 02 09.5	-5.8
PINNC				IAmb	IAmb	21 02 48.3	
	comp=Z,543nm,1.7s						
YUK6	**Outpost Mounta**	**64.90**	**33**	P	**P**	**21 02 13.9**	**-1.6**
	baz=288,SNR=23						
YUK6				S	**S**	**21 11 01.0**	**+4.2**
	baz=288						
LGD	**Lagodekhi**	**64.97**	**305**	P	**P**	**21 02 16.0**	**0.0**
M30M	**Minto, Yukon**	**65.08**	**31**	P	**P**	**21 02 15.1**	**-1.3**
	baz=289,SNR=34						
M30M				S	**S**	**21 11 02.7**	**+4.1**
	baz=289						
MAYO	**Mayo, Yukon**	**65.13**	**29**	P	**P**	**21 02 17.7**	**+1.0**
	baz=289						
MAYO				S	**S**	**21 11 03.6**	**+4.4**
	baz=289						
HSPB	**Hornsund (broa**	**65.14**	**347**	*e*P	**P**	**21 02 14.3**	**-2.2**
HSPB				*e*sP	**pP**	**21 02 18.8**	**-0.6**
HSPB				*e*S	**S**	**21 11 01.6**	**+2.8**
HSPB				*e*L	L	21 31 12.8	
	comp=Z,347µm,17.1s						
DDFL	**Dedoflistskaro**	**65.19**	**305**	P	**P**	**21 02 20.6**	**+3.1**
KEV	**Kevo**	**65.31**	**338**	P	P	21 02 10.9	-6.8
KEV				pmax	pmax		
	comp=Z,195nm,1.0s						
KEV				MLR	MLR		
	comp=Z,227µm,20.0s						
KEV	**Kevo**	**65.31**	**338**	P	P	21 02 10.9	-6.8
KEV				IAmb	IAmb	21 02 22.5	
	comp=Z,195nm,1.0s						
HYT	**Haines Junctio**	**65.34**	**33**	P	**P**	**21 02 17.1**	**-1.1**
	baz=289,SNR=52						
HYT				S	**S**	**21 11 05.4**	**+3.4**
	baz=289						
KIP	**Kipapa**	**65.40**	**79**	⇓*e*P	**P**	**21 02 19.7**	**+0.6**
KIP				pmax	pmax		
	comp=Z,85nm,1.4s						
BJO1	**Bjornoya**	**65.57**	**344**	*e*P	**P**	**21 02 19.3**	**0.0**
BJO1				*e*S	**S**	**21 11 05.7**	**+1.5**
BJO1				*e*SS	**SS**	**21 15 20.1**	**+3.0**
MOS	**Moscow**	**65.70**	**322**	*e*P	**P**	**21 02 17.2**	**-3.2**
MOS				*e*		21 04 50.5	
MOS				*e*PPP	PPP	21 06 25.9	
MOS				*e*S	**S**	**21 11 03.9**	**-2.4**
MOS				*i* SS	**SS**	**21 15 25.7**	**+5.9**
MOS				pmax	pmax		
	comp=Z,581nm,1.6s						
MOS				pmax	pmax		
	comp=Z,2µm,3.2s						
MOS				smax	smax		
	comp=N,18µm,10.0s						
MOS				MLR	MLR		
	comp=N,250µm,17.0s						
MOS				MLR	MLR		
	comp=E,460µm,17.0s						
MOS				MLR	MLR		
	comp=Z,570µm,17.0s						
A36M	**Sachs Harbour**	**65.72**	**19**	P	**P**	**21 02 17.6**	**-2.7**
	baz=295,SNR=66						
A36M				S	**S**	**21 11 03.6**	**-2.4**
	baz=295						
A36M	**Sachs Harbour**	**65.72**	**19**	P	P	21 02 13.8	-6.5
A36M				IAMs_20	IAMs_20	21 33 25.1	
	comp=Z,91µm,20.0s						
KNTN	**Kanton**	**65.75**	**109**	P	P	21 02 12.9	-8.4
KNTN				IAmb	IAmb	21 02 36.2	
	comp=Z,219nm,1.1s						
MZWR	**Madinat Zayed**	**65.77**	**284**	P	P	21 02 25.5	+4.1
ARA0	**ARCESS Array S**	**65.88**	**338**	*e*P	**P**	**21 02 21.9**	**+0.4**
ARCES	**ARCESS Array B**	**65.89**	**338**	P	**P**	**21 02 18.9**	**-2.6**
	comp=Z,21nm,1.0s,baz=63,slow=8.2,SNR=21						
ARCES				LR	LR	21 35 21.4	
	comp=Z,231µm,18.6s,baz=65,slow=40						
ARCES	**ARCESS Array B**	**65.89**	**338**	IAmb	IAmb	21 02 48.0	
	comp=Z,416nm,1.6s						
N31M	**Braeburn, Yuko**	**65.90**	**32**	P	**P**	**21 02 20.7**	**-1.1**
	baz=290,SNR=22						
DGAR	**Diego Garcia**	**65.92**	**245**	⇑*e*P	**P**	**21 02 22.3**	**-0.1**
DGAR	**Diego Garcia**	**65.92**	**245**	P	P	21 02 17.6	-4.8
DGAR				IAmb	IAmb	21 02 47.8	
	comp=Z,409nm,1.3s						
GUDG	**Gudauri**	**65.98**	**306**	P	**P**	**21 02 24.4**	**+1.6**
HAMF	**Hammerfest**	**66.00**	**339**	*e*P	**P**	**21 02 22.2**	**0.0**
HAMF				IVmB_BB		21 02 31.6	
	comp=Z,7µm,4.7s						
HAMF				*e*S	**S**	**21 11 10.7**	**+1.2**
LPSR	**Galich'ya Gora**	**66.03**	**318**	*e*P	**P**	**21 02 23.1**	**+0.5**
LPSR				*e*S	**S**	**21 11 09.8**	**-0.6**
LPSR				pmax	pmax		
	comp=Z,250nm,1.2s						
LPSR				smax	smax		
	comp=N,13µm,13.7s						
LPSR				MLR	MLR		
	comp=Z,232µm,16.0s						
GOF	**Gofitskoye**	**66.06**	**309**	⇑*e*P	**P**	**21 02 21.0**	**-1.9**
GOF				*e*S	**S**	**21 11 13.8**	**+2.8**
GOF				pmax	pmax		
	comp=Z,82nm,1.0s						
GOF				smax	smax		
	comp=E,20nm,1.0s						
GOF				smax	smax		
	comp=N,50nm,1.4s						
VORR	**Voronezh**	**66.19**	**317**	*e*P	**P**	**21 02 20.0**	**-3.6**
VORR				pmax	pmax		
	comp=Z,500nm,1.2s						
M31M	**Drury Creek, Y**	**66.26**	**31**	P	**P**	**21 02 24.4**	**+0.4**
	baz=291,SNR=25						
M31M				S	**S**	**21 11 16.1**	**+3.0**
	baz=291						
ZEI	**Tsey**	**66.27**	**307**	*e*P	**P**	**21 02 21.6**	**-3.0**
ZEI				pmax	pmax		
	comp=Z,64nm,1.5s						
VSR	**Storozhevoye**	**66.37**	**317**	*e*P	**P**	**21 02 25.3**	**+0.5**
VSR				*e*PPP	PPP	21 06 22.5	
VSR				*e*S	**S**	**21 11 10.7**	**-3.9**
VSR				pmax	pmax		
	comp=Z,140nm,1.0s						
VSR				smax	smax		
	comp=E,7µm,10.2s						
VSR				MLR	MLR		
	comp=Z,473µm,17.0s						
NOR	**Nord**	**66.38**	**355**	*i* P	**P**	**21 02 26.1**	**+1.6**
NOR				IAmb	IAmb	21 02 35.0	
	comp=Z,69nm,1.0s						
VORD	**Divnogorie**	**66.38**	**316**	*e*P	**P**	**21 02 24.3**	**-0.6**
VORD				*e*S	**S**	**21 11 15.5**	**+0.8**
VORD				pmax	pmax		
	comp=Z,30nm,0.9s						
VORD				smax	smax		
	comp=N,1µm,6.6s						
VORD				MLR	MLR		
	comp=Z,157µm,16.0s						
OBN	**Obninsk**	**66.48**	**321**	⇑P	**P**	**21 02 26.9**	**+1.5**
OBN	**Obninsk**	**66.48**	**321**	P	**P**	**21 02 24.1**	**-1.3**
	comp=Z,6.9nm,0.7s,baz=58,slow=3.4,SNR=26						
OBN	**Obninsk**	**66.48**	**321**	⇓*e*P	**P**	**21 02 23.5**	**-1.9**
OBN				*i*		21 02 52.7	
OBN				*e*		21 04 51.1	
OBN				*i* S	**S**	**21 11 14.5**	**-1.2**
OBN				pmax	pmax		
	comp=Z,414nm,1.7s						
OBN				MLR	MLR		
	comp=Z,463µm,17.0s						
OBN	**Obninsk**	**66.48**	**321**	P	**P**	**21 02 26.9**	**+1.5**
GHWR	**Ruwais**	**66.53**	**285**	pP	pP	21 02 31.7	+2.4
WHY	**Whitehorse**	**66.60**	**32**	P	**P**	**21 02 25.0**	**-1.4**
	baz=291,SNR=27						
KBZ	**Khabaz**	**66.62**	**308**	P	**P**	**21 02 25.3**	**-1.2**
	comp=Z,68nm,1.1s,baz=129,slow=2.1,SNR=19						
KBZ				LR	LR	21 32 55.9	
	comp=Z,144µm,18.6s,baz=71,slow=37						
KBZ	**Khabaz**	**66.62**	**308**	*de*P	**P**	**21 02 25.2**	**-1.3**
KBZ				pmax	pmax		
	comp=Z,354nm,1.4s						
GNI	**Garni**	**66.62**	**304**	P	**P**	**21 02 27.0**	**+0.1**
GNI	**Garni**	**66.62**	**304**	⇓*e*P	**P**	**21 02 27.5**	**+0.6**
GNI				pmax	pmax		
	comp=Z,403nm,1.5s						
GNI				MLR	MLR		
	comp=Z,103µm,21.0s						
GNI	**Garni**	**66.62**	**304**	IAMs_20	IAMs_20	21 32 29.9	
	comp=Z,111µm,22.0s						
ONI	**Oni**	**66.65**	**307**	P	**P**	**21 02 28.1**	**+1.2**
KIV	**Kislovodsk**	**66.68**	**308**	⇑P	**P**	**21 02 28.9**	**+1.8**
KIV	**Kislovodsk**	**66.68**	**308**	*i* P	**P**	**21 02 25.4**	**-1.7**
	SNR=28						
KIV	**Kislovodsk**	**66.68**	**308**	*e*P	**P**	**21 02 24.3**	**-2.8**
KIV				*e*PPP	PPP	21 06 26.5	
KIV				*e*S	**S**	**21 11 16.2**	**-2.7**
KIV				pmax	pmax		
	comp=Z,239nm,1.1s						
KIV				MLR	MLR		
	comp=Z,133µm,17.0s						
KIV	**Kislovodsk**	**66.68**	**308**	P	P	21 02 21.8	-5.3
FARO	**Faro, Yukon**	**66.71**	**30**	P	**P**	**21 02 24.9**	**-2.0**
	baz=292,SNR=28						
FARO				S	**S**	**21 11 22.5**	**+4.1**
	baz=292						
ALE	**Alert**	**66.73**	**2**	IAMs_20	IAMs_20	21 30 02.0	
	comp=Z,107µm,20.0s						
SHAO	**Shalim**	**66.75**	**278**	*i* P	**P**	**21 02 28.8**	**+1.0**
	SNR=11						
SHAO	**Shalim**	**66.75**	**278**	pP	pP	21 02 34.0	+3.1
	SNR=12						
SKAG	**Skagway**	**66.83**	**34**	P	**P**	**21 02 29.0**	**+1.3**
	baz=292,SNR=11						
SKAG	**Skagway**	**66.83**	**34**	P	P	21 02 21.4	-6.2
SKAG				IAmb	IAmb	21 02 40.8	
	comp=Z,255nm,1.1s						
KTK1	**Kautokeino**	**66.84**	**338**	*e*P	**P**	**21 02 27.7**	**+0.2**
KTK1				IVmB_BB		21 02 33.5	
	comp=Z,3µm,2.0s						
KTK1				*e*S	**S**	**21 11 19.2**	**-0.6**
KHOR	**Al-Khor Airpor**	**66.97**	**287**	pP	pP	21 02 34.1	+2.0
AKH	**Akhalkalaki**	**67.05**	**306**	⇓P	**P**	**21 02 32.0**	**+2.5**
MMPY	**Sheldon Lake,**	**67.45**	**30**	P	**P**	**21 02 30.7**	**-0.9**
	baz=294,SNR=27						
MMPY				S	**S**	**21 11 30.9**	**+3.4**
	baz=294						
JETT	**Jettan, Norway**	**67.49**	**339**	*e*P	**P**	**21 02 32.4**	**+0.7**
CHVG	**Ch'k'valeri**	**67.54**	**307**	⇓P	**P**	**21 02 34.4**	**+2.0**
KARS	**Kars**	**67.63**	**305**	P	P	21 02 27.7	-5.5
KARS				pmax	pmax		
	comp=Z,7µm,2.5s						
KARS	**Kars**	**67.63**	**305**	P	P	21 02 27.7	-5.5
EUNU	**Eureka**	**67.64**	**6**	P	P	21 02 26.7	-5.9
EUNU				IAmb	IAmb	21 03 05.6	
	comp=Z,217nm,1.3s						
MSVF	**Nonsavu**	**67.68**	**129**	⇓*e*P	**P**	**21 02 33.2**	**-0.4**
MSVF	**Nonsavu**	**67.68**	**129**	P	P	21 02 26.4	-7.3
MSVF				IAmb	IAmb	21 02 43.8	
	comp=Z,203nm,1.1s						
P33M	**Teslin, Yukon**	**67.72**	**32**	P	**P**	**21 02 33.9**	**+0.6**
	baz=293,SNR=34						
P33M				S	**S**	**21 11 35.8**	**+4.9**
	baz=293						
JIS	**Juneau Island**	**67.74**	**35**	IAMs_20	IAMs_20	21 33 25.8	
	comp=Z,83µm,18.0s						
TRO	**Tromso**	**67.91**	**339**	*e*P	**P**	**21 02 33.6**	**-0.7**
TRO				IVmBBB		21 02 40.4	
	comp=Z,4µm,2.6s						
TRO				*e*S	**S**	**21 11 34.1**	**+1.6**
TRO				*e*SS	**SS**	**21 15 54.8**	**+1.3**
UMR	**Umm Al-Rimmam**	**68.44**	**292**	*e*P	**P**	**21 02 37.5**	**-0.8**
AIN	**Ainahou**	**68.45**	**80**	P	P	21 02 30.8	-7.9
CAN	**Canberra**	**68.53**	**162**	P	**P**	**21 02 42.0**	**+3.4**
CAN				pmax	pmax		
	comp=Z,238nm,2.1s						
QRN	**Al-Qurain**	**68.61**	**291**	*e*P	**P**	**21 02 38.2**	**-1.2**
KBD	**Kabd**	**68.61**	**292**	*e*P	**P**	**21 02 38.4**	**-1.0**
MIB	**Mutribah**	**68.64**	**293**	*e*P	**P**	**21 02 38.0**	**-1.6**
SOC	**Sochi**	**68.82**	**309**	*e*P	**P**	**21 02 43.2**	**+2.8**
SOC				*e*PPP	PPP	21 06 47.4	
SOC				*e*S	**S**	**21 11 44.1**	**-0.1**
SOC				*e*SSS	SSS	21 19 11.2	
SOC				pmax	pmax		
	comp=Z,314nm,1.4s						
RDF	**Al-Radifah**	**68.83**	**292**	*e*P	**P**	**21 02 39.5**	**-1.3**
FIA1	**FINESS Array S**	**69.08**	**330**	P	P	21 02 35.3	-6.4
FINES	**FINESS Array B**	**69.08**	**330**	P	**P**	**21 02 38.3**	**-3.4**
	comp=Z,18nm,0.9s,baz=62,slow=6.2,SNR=25						
FINES				LR	LR	21 35 53.5	
	comp=Z,274µm,19.5s,baz=51,slow=39						
TGTN	**Hyland Airport**	**69.19**	**30**	P	**P**	**21 02 41.0**	**-1.5**
	baz=296,SNR=55						
TGTN				S	**S**	**21 11 51.7**	**+3.5**
	baz=296						
WRAK	**Wrangell Islan**	**69.50**	**36**	IAMs_20	IAMs_20	21 32 58.4	
	comp=Z,72µm,19.0s						
DLBC	**Dease Lake**	**69.76**	**33**	P	**P**	**21 02 45.0**	**-1.1**
	comp=Z,12nm,0.8s,baz=296,slow=5.8,SNR=14						
ANN	**Anapa**	**69.85**	**311**	*e*P	**P**	**21 02 48.2**	**+1.4**
ANN				e*PP	**sP**	**21 02 51.5**	**+0.6**
ANN				*e*		21 03 07.6	
ANN				*e*S	**S**	**21 11 58.5**	**+2.2**
ANN				*e*		21 12 42.7	
ANN				pmax	pmax		
	comp=Z,422nm,1.3s						
ANN				pmax	pmax		
	comp=E,110nm,1.3s						
ANN				pmax	pmax		
	comp=N,74nm,1.3s						
ANN				MLR	MLR		
	comp=N,233µm,21.0s						
ANN				MLR	MLR		
	comp=Z,283µm,18.0s						
ANN				MLR	MLR		
	comp=E,199µm,21.0s						
STEI	**Steigen**	**69.94**	**338**	*e*P	**P**	**21 02 47.2**	**+0.3**
STEI				IVmB_BB		21 03 01.1	
	comp=Z,4µm,3.8s						
STEI				*e*S	**S**	**21 11 57.3**	**+0.6**
STEI				*e*SS	**SS**	**21 16 27.2**	**+2.4**
VSU	**Vasula**	**70.11**	**327**	*e*P	**P**	**21 02 48.8**	**+0.7**
VSU	**Vasula**	**70.11**	**327**	*de*P	**P**	**21 02 48.5**	**+0.4**
VSU				pmax	pmax		
	comp=Z,646nm,1.1s						
VSU				MLR	MLR		
	comp=Z,1103µm,16.0s						
FAUS	**Fauske**	**70.22**	**338**	*e*P	**P**	**21 02 48.4**	**-0.3**
FAUS				IVmB_BB		21 02 54.5	
	comp=Z,3µm,1.7s						
FAUS				*e*S	**S**	**21 12 00.4**	**+0.3**
FAUS				*e*SS	**SS**	**21 16 29.5**	**+0.3**
LOF	**Lofoten**	**70.36**	**339**	*e*P	**P**	**21 02 48.6**	**-0.9**
LOF				IVmBBB		21 02 55.0	
	comp=Z,5µm,3.6s						
LOF				*e*S	**S**	**21 12 03.2**	**+1.6**
WRGLY	**Wrigley**	**70.37**	**27**	P	**P**	**21 02 49.0**	**-0.6**
	baz=300,SNR=8.3						
WRGLY				S	**S**	**21 12 02.6**	**+0.8**
	baz=300						
DAG	**Danmarks Havn**	**70.74**	**352**	P	**P**	**21 02 50.3**	**-1.4**
DAG				pmax	pmax		
	comp=Z,190nm,1.2s						
DAG	**Danmarks Havn**	**70.74**	**352**	*i* P	**P**	**21 02 50.3**	**-1.4**
DAG				IAmb	IAmb	21 02 59.2	
	comp=Z,177nm,1.1s						
SOCY	**Socotra**	**70.84**	**273**	P	P	21 02 46.2	-7.2
SOCY				IAMs_20	IAMs_20	21 33 46.0	
	comp=Z,92µm,20.0s						
RES	**Resolute Bay**	**70.94**	**11**	P	**P**	**21 02 51.0**	**-1.9**
	comp=Z,27nm,0.8s,baz=312,slow=6.6,SNR=18						
RES	**Resolute Bay**	**70.94**	**11**	P	P	21 02 47.6	-5.3
RES				pmax	pmax		
	comp=Z,261nm,1.0s						
RES	**Resolute Bay**	**70.94**	**11**	P	P	21 02 47.6	-5.3
RES				IAmb	IAmb	21 02 58.2	
	comp=Z,261nm,1.0s						
MOR8	**Moi Rana**	**71.18**	**337**	*e*P	**P**	**21 02 52.9**	**-1.7**
MOR8				IVmB_BB		21 02 59.1	
	comp=Z,3µm,1.6s						
MOR8				*e*S	**S**	**21 12 09.7**	**-1.6**
MOR8				*e*SS	**SS**	**21 16 46.8**	**+2.8**
MNK	**Minsk**	**71.33**	**323**	*i* P	**P**	**21 02 54.9**	**-0.7**
MNK				*i*		21 03 14.7	
MNK				*i*		21 05 32.5	
MNK				*i* PPP	PPP	21 07 15.6	
MNK				*i* S	**S**	**21 12 12.6**	**-0.7**
MNK				*i* SS	**SS**	**21 16 47.3**	**+0.6**
MNK				pmax	pmax		
	comp=Z,112nm,1.0s						
MNK				pmax	pmax		
	comp=E,13nm,1.0s						
MNK				pmax	pmax		
	comp=N,41nm,1.0s						
MNK				MLR	MLR		
	comp=Z,167µm,20.0s						
MNK				MLR	MLR		

	comp=E,74µm,20.0s						
MNK				MLR	MLR		
	comp=N,126µm,20.0s						
MNK	Minsk	71.33	323	i P	P	21 02 55.0	-0.6
	comp=E,13nm,1.0s						
MNK				i P	P	21 02 55.0	-0.6
	comp=N,41nm,1.0s,baz=63						
MNK				i P	P	21 02 55.0	-0.6
	comp=Z,112nm,1.0s						
MNK				i PcP	PcP	21 03 14.8	-0.6
MNK				i PP	PP	21 05 32.6	-0.8
MNK				i PPP	PPP	21 07 15.6	
MNK				i S	S	21 12 12.7	-0.6
MNK				i SS	SS	21 16 47.3	+0.6
MNK				i SSS	SSS	21 20 06.4	
MNK				i LQ	LQ	21 28 56.8	
MNK				i LR	LR	21 31 32.6	
MNK				i LRM	MLR	21 36 43.5	
	comp=E,74µm,19.7s						
MNK				i LRM	MLR	21 36 43.5	
MNK				i LRM	MLR	21 36 43.5	
MTSE	Matsula	71.35	328	eP	P	21 02 56.2	+0.6
KONS	Konsvik	71.43	338	eP	P	21 02 55.4	-0.6
KONS				eS	S	21 12 13.4	-0.6
KONS				eSS	SS	21 16 49.5	+1.8
STOK	Stokkvaagen	71.56	337	eP	P	21 02 56.8	0.0
STOK				eS	S	21 12 18.1	+2.6
NACGM	Naroch	71.71	323	i P	P	21 02 54.3	-3.6
ISAL	Salakas	71.73	324	eP	P	21 02 58.7	+0.6
MALT	Malatya	71.85	304	P	P	21 02 58.6	-0.6
SIM	Simferopol'	71.93	312	P	P	21 03 01.8	+2.4
SIM				eS	S	21 12 20.7	+0.1
SIM				pmax	pmax		
	comp=Z,172nm,1.0s						
NEEM	North Greenlan	71.95	360	eP	P	21 03 00.8	+1.4
NEEM				IAmb	IAmb	21 03 23.7	
	comp=Z,2µm,2.4s						
TULEG	Thule	72.30	4	i P	P	21 03 03.1	+2.0
TULEG				IAmb	IAmb	21 03 05.3	
	comp=Z,156nm,1.1s						
AKASG	Malin Array Be	72.33	319	P	P	21 02 59.2	-2.5
	comp=Z,13nm,0.7s,baz=52,slow=5.9,SNR=40						
AKASG				LR	LR	21 37 21.5	
	comp=Z,379µm,18.1s,baz=50,slow=38						
AKASG	Malin Array Be	72.33	319	i P	P	21 03 01.5	-0.2
AKASG				pmax	pmax		
	comp=Z,13nm,0.7s						
AKASG	Malin Array Be	72.33	319	P	P	21 02 55.3	-6.4
AKBB	Malin Array Si	72.33	319	deP	P	21 03 01.4	-0.3
SLIT	Slitere, Latvi	72.58	327	eP	P	21 03 04.0	+0.9
DIKM	Dikmen	72.61	308	⇑P	P	21 03 07.3	+3.7
RAYN	Ar Rayn	72.81	287	i P	P	21 03 05.1	0.0
	SNR=50						
RAYN	Ar Rayn	72.81	287	P	P	21 02 59.5	-5.6
RAYN				pmax	pmax		
	comp=Z,367nm,1.5s						
RAYN				MLR	MLR		
	comp=Z,17µm,20.0s						
RAYN	Ar Rayn	72.81	287	P	P	21 02 59.5	-5.6
RAYN				IAmb	IAmb	21 03 19.3	
	comp=Z,366nm,1.5s						
PABE	Paberze	72.84	325	eP	P	21 03 05.2	+0.6
PABE	Paberze	72.84	325	P	P	21 02 58.4	-6.2
PABE				IAmb	IAmb	21 03 24.7	
	comp=Z,510nm,1.2s						
NSS	Namsos	72.98	336	eP	P	21 03 05.3	0.0
NSS				IVmBBB		21 03 23.8	
	comp=Z,5µm,3.5s						
NSS				eS	S	21 12 32.1	+0.3
NSS				eSS	SS	21 17 11.2	-0.2
DBG	Daneborg	73.11	352	eP	P	21 03 07.9	+2.0
DBG				IAmb	IAmb	21 03 09.5	
	comp=Z,133nm,1.2s						
GAZ	Gaziantep	73.21	303		P	21 03 05.3	-2.0
BZK	Bozkurt	73.32	309	⇓P	P	21 03 10.8	+3.0
UPP	Uppsala	73.48	331	eP	P	21 03 08.8	+0.4
PBUR	Paburge	73.57	326	eP	P	21 03 09.6	+0.6
PURM	Purcari	73.87	315	⇑P	P	21 03 12.4	+1.5
SUW	Suwalki	73.98	324	eP	P	21 03 10.1	-1.3
SUW				esP	sP	21 03 14.4	-1.2
SUW				eS	S	21 12 47.1	+3.6
SUW				eL	L	21 38 53.6	
	comp=Z,537µm,17.5s						
SUW	Suwalki	73.98	324	eP	P	21 03 12.0	+0.6
SUW	Suwalki	73.98	324	P	P	21 03 05.8	-5.6
SUW				pmax	pmax		
	comp=Z,385nm,1.0s						
SUW				MLR	MLR		
	comp=Z,432µm,18.0s						
SUW	Suwalki	73.98	324	P	P	21 03 05.8	-5.6
SUW				IAmb	IAmb	21 03 31.2	
	comp=Z,385nm,1.0s						
JMIC	Jan Mayen	74.02	347	eP	P	21 03 10.7	-0.7
JMIC				IVmBBB		21 03 17.4	
	comp=Z,4µm,1.1s						
JMIC				eS	S	21 12 44.5	+1.0
JMIC				eSS	SS	21 17 29.9	+2.8
SORM	Soroca	74.03	317	⇓P	P	21 03 13.6	+1.8
YKA	Yellowknife Ar	74.16	26	P	P	21 03 09.0	-3.4
	comp=Z,38nm,0.9s,baz=302,slow=4.5,SNR=20						
YKA				LR	LR	21 39 09.6	
	comp=Z,54µm,18.5s,baz=0.0,slow=39						
YKA	Yellowknife Ar	74.16	26	P	P	21 03 05.6	-6.7
YKA	Yellowknife Ar	74.16	26	P	P	21 03 05.6	-6.8
KIS	Kishinev	74.29	316	eP	P	21 03 12.0	-1.4
	comp=Z,2µm,1.9s						
KIS	Kishinev	74.29	316	ePP	PP	21 06 03.0	+4.1
KIS	Kishinev	74.29	316	eP	P	21 03 12.0	-1.4
KIS				e		21 06 03.0	
KIS				eS	SKiKP	21 12 40.0	-0.7
KIS				eSSS	SSS	21 17 37.0	
KIS				smax	smax		
	comp=E,3µm,10.3s						
KIS				MLR	MLR		
	comp=Z,125µm,16.0s						
MILM	Milestii Mici	74.33	315	⇓P	P	21 03 15.5	+1.9
MILM	Milestii Mici	74.33	315	c iP	P	21 03 14.0	+0.4
MILM				e		21 06 05.0	
MILM				ePPP	PPP	21 07 50.0	
MILM				i S	SKiKP	21 12 40.0	-0.7
MILM				ePS		21 13 13.0	
MILM				eSSS	SSS	21 17 35.0	
MILM				smax	smax		
	comp=N,10µm,15.4s						
MILM				smax	smax		
	comp=E,6µm,10.9s						
TBLU	Trondheim	74.36	336	eP	P	21 03 12.4	-1.1
TBLU				eS	S	21 12 44.7	-2.8
TBLU				eSS	SS	21 17 30.1	-2.4
BR131	Keskin Array S	74.57	307	i P	P	21 03 13.4	-2.0
BRTR	Keskin Array B	74.57	307	P	P	21 03 12.0	-3.3
	comp=E,17nm,0.9s,baz=102,slow=5.2,SNR=28						
BRTR				LR	LR	21 41 12.7	
	comp=E,89µm,19.2s,baz=54,slow=40						
BRTR	Keskin Array B	74.57	307	i P	P	21 03 12.8	-2.6
BRTR				pmax	pmax		
	comp=Z,17nm,0.9s						
BRTR	Keskin Array B	74.57	307	P	P	21 03 08.6	-6.8
IAS	Iasi	74.95	316	⇓P	P	21 03 18.4	+1.2
IAS	Iasi	74.95	316	P	P	21 03 20.1	+2.9
VASR	Vaslui	75.08	316	⇑P	P	21 03 19.3	+1.3
ANTO	Ankara	75.08	308	⇑P	P	21 03 18.6	+0.4
ANTO	Ankara	75.08	308	P	P	21 03 21.6	+3.4
ANTO	Ankara	75.08	308	IAMs_20	IAMs_20	21 41 15.4	
	comp=Z,91µm,20.0s						
NC405	NORSAR Array S	75.14	333	P	P	21 03 11.5	-6.6
KLNR	Kaliningrad	75.16	325	ceP	P	21 03 15.8	-2.4
KLNR				pmax	pmax		
	comp=Z,502nm,2.1s						
KLNR				MLR	MLR		
	comp=Z,185µm,19.0s						
TLCR		75.16	314	⇓P	P	21 03 20.6	+2.1
VLDR	Vladesti	75.29	315	⇑P	P	21 03 20.7	+1.5
KDZE	Karadeniz Ereo	75.32	309	⇓P	P	21 03 22.0	+2.5
JURR	Jurilovca	75.32	313	⇑P	P	21 03 21.6	+2.2
BIR	Birlad	75.36	315	⇑P	P	21 03 21.1	+1.5
TAU	Tasmania Unive	75.37	166	P	P	21 03 14.3	-5.1
TAU				pmax	pmax		
	comp=Z,407nm,1.8s						
TAU				MLR	MLR		
	comp=Z,41µm,22.0s						
TAU	Tasmania Unive	75.37	166	P	P	21 03 14.3	-5.1
TAU				IAmb	IAmb	21 03 36.6	
	comp=Z,407nm,1.8s						
NB2	NORSAR Subarra	75.38	334	P	P	21 03 16.1	-3.4
	comp=Z,454nm,2.0s,baz=51,slow=6.2						
NB2	NORSAR Subarra	75.38	334	P	P	21 03 16.1	-3.4
	baz=51,slow=6.2						
NOA	NORSAR Array B	75.38	334	P	P	21 03 16.3	-3.2
	comp=Z,47nm,0.9s,baz=51,slow=5.8,SNR=50						
NOA				LR	LR	21 39 22.7	
	comp=Z,188µm,19.2s,baz=60,slow=38						
VARL	Varlezi	75.41	315	⇑P	P	21 03 20.8	+0.9
SCTR	Scanteiesti	75.43	315	⇑P	P	21 03 21.5	+1.5
HWQ	Hawqa	75.43	301	eP	P	21 03 23.4	+3.0
TATR	Tatarca	75.43	315	⇑P	P	21 03 22.0	+2.1
NC602	NORSAR Array S	75.44	333	eP	P	21 03 19.6	-0.1
NORES	NORESS Array B	75.44	333	P	P	21 03 22.8	+3.0
NORES				pmax	pmax		
	comp=Z,5.0nm,0.3s						
DOMB	Dombas	75.55	335	eP	P	21 03 18.8	-1.7
DOMB				IVmBBB		21 03 18.8	
	comp=Z,5µm,5.2s						
DOMB				eS	S	21 13 01.5	+0.5
TPGR	Topolog	75.56	314	⇑P	P	21 03 22.0	+1.2
CFR	Carcaliu	75.58	314	⇓P	P	21 03 22.6	+1.7
SCHL	Schela	75.61	315	⇑P	P	21 03 22.9	+1.8
IZVR	Izvoarele	75.63	315	⇑P	P	21 03 23.2	+2.1
PRAR	RASCA	75.66	317	⇓P	P	21 03 22.7	+1.4
LVV	L'vov	75.67	320	eP	P	21 03 21.3	0.0
LVV				e		21 03 40.9	
LVV				e		21 06 09.4	
LVV				ePPP	PPP	21 07 58.1	
LVV				eS	S	21 13 02.0	-0.6
LVV				ePS		21 13 41.8	
LVV				eSS	SS	21 17 59.0	+5.9
LVV				pmax	pmax		
	comp=Z,300nm,1.6s						
LVV				MLR	MLR		
	comp=E,266µm,16.0s						
LVV				MLR	MLR		
	comp=N,90µm,14.0s						
LVV				MLR	MLR		
	comp=Z,233µm,16.0s						
MOL	Molde	75.75	336	eP	P	21 03 17.1	-4.4
MOL				eS	S	21 13 02.5	-0.5
MOL				eSS	SS	21 17 53.8	+0.2
TIRR	Tirgusor	75.76	313	⇑P	P	21 03 24.1	+2.2
BHL	Bhannes	75.82	301	eP	P	21 03 24.7	+2.1
TESR	Tescani	75.83	316	⇓P	P	21 03 24.2	+1.9
MFTR	Murfatlar	75.89	313	⇑P	P	21 03 24.7	+2.1
HARR	Harsova	75.95	314	⇑P	P	21 03 24.8	+1.9
TLBR	Topalu	75.95	314	⇑P	P	21 03 24.4	+1.4
ODBI	Odobesti	75.96	315	⇑P	P	21 03 24.8	+1.8
MANR	Mangalia	75.97	313	⇑P	P	21 03 25.2	+2.1
DQRL	Deir Qamar	75.97	301	eP	P	21 03 25.0	+1.5
SHBL	Chebaa	76.01	301	eP	P	21 03 26.4	+2.7
VRI	Vrincioaia	76.11	315	⇓P	P	21 03 25.8	+1.9
VRI	Vrincioaia	76.11	315	P	P	21 03 25.0	+1.1
BUR08	Bucovina Ar. S	76.12	317	P	P	21 03 20.5	-3.5
BURAR	Bucovina Array	76.12	317	⇓P	P	21 03 25.2	+1.1
BURAR	Bucovina Array	76.12	317	P	P	21 03 21.0	-3.1
BURAR				pmax	pmax		
	comp=Z,90nm,1.0s						
BURAR	Bucovina Array	76.12	317	P	P	21 03 18.5	-5.6
PLOR	Plostina	76.16	315	⇑P	P	21 03 26.2	+2.0
PLOR				⇑P	pP	21 03 26.4	-0.9
AKN	Aaknes	76.20	336	eP	P	21 03 23.9	-0.3
AKN				e		21 03 27.3	
AKN				eS	S	21 13 07.8	-0.3
OSL	Oslo	76.25	333	eP	P	21 03 23.7	-0.7
OSL				IVmB_BB		21 03 30.9	
	comp=Z,4µm,2.6s						
OSL				eS	S	21 13 07.8	-0.8
BISRR	Bisoca	76.28	315	⇑P	P	21 03 27.5	+2.6
KALB	Balgarevo	76.28	312	⇓P	P	21 03 27.4	+2.6
ICOR	Ion Corvin	76.31	313	⇑P	P	21 03 27.6	+2.5
AMRR	Amara	76.36	314	⇓P	P	21 03 27.7	+2.4
COVR	Voineasa-Covas	76.43	315	⇓P	P	21 03 27.1	+1.3
SUMG	Summit	76.46	356	P	P	21 03 21.4	-4.5
SUMG				pmax	pmax		
	comp=Z,347nm,1.1s						
SUMG				MLR	MLR		
	comp=Z,173µm,20.0s						
SUMG	Summit	76.46	356	i P	P	21 03 30.1	+4.2
SUMG				IAmb	IAmb	21 03 32.1	
	comp=Z,448nm,1.2s						
SUMG	Summit	76.46	356	P	P	21 03 21.4	-4.5
SUMG				IAmb	IAmb	21 03 32.4	
	comp=Z,347nm,1.1s						
KWP	Kalwaria Pacla	76.50	320	eP	P	21 03 25.4	-0.6
KWP				esP	sP	21 03 29.0	-1.2
KWP				eS	S	21 13 16.4	+4.5
KWP				eSS	SS	21 18 13.5	+7.8
KWP				eL	L	21 39 10.4	
	comp=Z,411µm,19.3s						
KWP	Kalwaria Pacla	76.50	320	P	P	21 03 26.1	0.0
OZUR		76.56	316	⇑P	P	21 03 28.4	+1.9
UPNV	Upernavik	76.58	1	⇑iP	P	21 03 30.5	+4.5
NEHR	Nehoiu	76.59	315	⇑P	P	21 03 29.3	+2.6
ISR	Istrita	76.59	315	⇑P	P	21 03 29.1	+2.4
SKAR	Skarslia	76.71	334	eP	P	21 03 26.3	-0.8
SKAR				eS	S	21 13 15.2	+1.4
SKAR				eSS	SS	21 18 07.6	-0.7
LEHL	Lehliu	76.75	314	⇓P	P	21 03 29.9	+2.4
MLR	Muntele Rosu	76.77	315	⇑P	P	21 03 28.8	+0.9
MLR				⇑P	P	21 03 29.9	+2.1
MLR	Muntele Rosu	76.77	315	P	P	21 03 24.1	-3.7
MLR				pmax	pmax		
	comp=Z,118nm,1.2s						
MLR				MLR	MLR		
	comp=Z,334µm,18.0s						
MLR	Muntele Rosu	76.77	315	P	P	21 03 24.1	-3.7
SCO	Scoresbysund	76.78	350	i P	P	21 03 31.6	+4.4
SCO				IAmb	IAmb	21 03 31.7	
	comp=Z,197nm,1.2s						
SCO	Scoresbysund	76.78	350	IAMs_20	IAMs_20	21 36 01.2	
	comp=Z,78µm,21.0s						
DOPR	Dopca	76.86	316	⇑P	P	21 03 30.8	+2.7
KONO	Kongsberg	76.88	333	⇓eP	P	21 03 23.5	-4.4
KONO				pmax	pmax		
	comp=Z,218nm,2.0s						
KONO				MLR	MLR		
	comp=Z,269µm,16.0s						
KONO	Kongsberg	76.88	333	eP	P	21 03 26.6	-1.3
KONO				eS	S	21 13 17.6	+2.1
KONO				eSS	SS	21 18 12.1	+1.3
ARCR	ARCALIA	76.90	317	⇓P	P	21 03 30.6	+2.2
SECR		76.92	315	⇑P	P	21 03 30.8	+2.3
SULR		76.99	314	⇑P	P	21 03 31.1	+2.2
CSS	Mathiatis	77.02	303	IAMs_20	IAMs_20	21 42 01.2	
	comp=Z,96µm,21.0s						
BMR	Baia Mare	77.09	318	⇑P	P	21 03 30.9	+1.5
KOLS	Kolonicke sedl	77.11	320	eP	P	21 03 32.3	+2.8
KOLS				pmax	pmax		
	comp=Z,135nm,1.5s						
KOLS	Kolonicke sedl	77.11	320	eP	P	21 03 32.3	+2.8
KOLS				eS	S	21 13 19.0	+0.5
KOLS				eSS	SS	21 18 17.7	+2.7
KOLS				eL	L	21 40 18.2	
HYA	Hoyanger	77.17	335	eP	P	21 03 29.2	-0.3
HYA				eS	S	21 13 20.8	+2.3
LEF	Lefka	77.26	303	⇑P	P	21 03 32.5	+1.9
UZH	Uzhgorod	77.27	319	eP	P	21 03 29.0	-1.3
UZH				eS	S	21 13 13.0	-7.1
UZH				MLR	MLR		
	comp=Z,100µm,16.0s						
FOO	Floro	77.28	336	eP	P	21 03 30.1	0.0
FOO				IVmB_BB		21 03 36.1	
	comp=Z,9µm,3.3s						
FOO				eS	S	21 13 20.4	+0.6
GKP	Gorka Klasztor	77.36	325	eP	P	21 03 31.4	+0.6
TRPA	Tarpa	77.39	319	⇑P	P	21 03 32.8	+1.7
TRPA	Tarpa	77.39	319	eP	P	21 03 30.0	-1.0
TRPA	Tarpa	77.39	319	eP	P	21 03 31.6	+0.6
BSD	Bornholm Skovb	77.39	327	eP	P	21 03 33.0	+2.1
BSD				IAmb	IAmb	21 03 35.1	
	comp=Z,150nm,0.9s						
SGRR	Singureni	77.40	314	⇓P	P	21 03 32.6	+1.5
RAZG	Razgrad	77.40	313	⇑P	P	21 03 33.4	+2.2
STHS	Stebnicka Huta	77.42	320	eP	P	21 03 33.9	+2.6
STHS	Stebnicka Huta	77.42	320	eP	P	21 03 33.9	+2.6
CJR	Cluj-Napoca	77.53	317	⇓P	P	21 03 34.0	+2.0
CRVS	Cervenica-Dubn	77.58	320	eP	P	21 03 35.7	+3.5
CRVS				eS	S	21 13 25.9	+2.3
CRVS				eSS	SS	21 18 31.6	+10
CRVS				eL	L	21 40 04.8	
ISP	Isparta	77.62	307	IAMs_20	IAMs_20	21 43 03.6	
	comp=Z,104µm,21.0s						
ARR	Arges	77.62	316	⇑P	P	21 03 34.1	+1.5
MESR	Meseseni	77.68	318	⇓P	P	21 03 34.6	+1.9
SUE	Sulen	77.75	336	eP	P	21 03 30.8	-1.9
SUE				eS	S	21 13 27.9	+3.0
SUE				eSS	SS	21 18 27.3	+3.5
OJC	Ojcow	77.77	322	eP	P	21 03 31.7	-1.4
OJC				esP	pP	21 03 35.7	-0.5
OJC				eS	S	21 13 28.4	+2.9
OJC				eSS	SS	21 18 28.7	+3.9
OJC				eL	L	21 41 12.4	
	comp=Z,453µm,18.2s						
OJC	Ojcow	77.77	322	P	P	21 03 33.5	+0.3
OJC				pmax	pmax		
	comp=Z,331nm,1.5s						
OJC	Ojcow	77.77	322	P	P	21 03 25.9	-7.2
OJC				IAmb	IAmb	21 04 02.3	
	comp=Z,605nm,1.4s						
ODD1	Odda	77.84	334	eP	P	21 03 33.2	-0.3
ODD1				eS	S	21 13 24.4	-1.7
HUMR	Humele	77.85	315	⇑P	P	21 03 35.2	+1.5
NUUG	Nuugaatsiaq	77.88	1	eP	P	21 03 37.8	+4.4
COPA	Copaceanca	77.91	314	⇓P	P	21 03 35.5	+1.5
NIE	Niedzica	77.94	321	eP	P	21 03 34.1	-0.1
NIE				esP	sP	21 03 37.9	-0.4
NIE				eS	S	21 13 34.5	+6.9
NIE				eSS	SS	21 18 33.2	+5.8
NIE				eL	L	21 41 03.5	
	comp=Z,207µm,19.8s						
NIE	Niedzica	77.94	321	P	P	21 03 35.2	+1.0
BER	Bergen	78.00	335	eP	P	21 03 33.8	-0.4
BER				IVmB_BB		21 03 34.3	
	comp=Z,5µm,3.1s						
BER				eS	S	21 13 28.3	+0.6
DRGR		78.01	318	⇑P	P	21 03 36.8	+2.2
ZIMR		78.06	314	⇑P	P	21 03 36.7	+1.8
LOT	Lotru	78.10	316	⇓P	P	21 03 37.2	+1.9
OUZ	Omahuta	78.11	144	P	P	21 03 29.0	-6.1
EDRB	Edirne	78.13	312	P	P	21 03 35.9	+0.6
MSEY	Mahe Island	78.13	257	i P	P	21 03 37.6	+1.8
	SNR=19						
MSEY	Mahe Island	78.13	257	IAMs_20	IAMs_20	21 38 57.0	
	comp=Z,102µm,20.0s						
COP	Copenhagen	78.18	329	⇑iP	P	21 03 38.5	+3.3
COP				IAmb	IAmb	21 03 57.1	
	comp=Z,1µm,0.9s						
HOMB	Homborsund	78.20	332	eP	P	21 03 35.0	-0.4
HOMB				eS	S	21 13 30.6	+0.8
HOMB				eSS	SS	21 18 34.1	+3.4
BLS5	Blasjo	78.24	334	eP	P	21 03 35.5	-0.2
BLS5				IVmB_BB		21 03 41.8	
	comp=Z,3µm,3.6s						
BLS5				eS	S	21 13 30.5	+0.2
BLS5				eSS	SS	21 18 33.6	+2.3
KECS	Kecovo	78.35	320	eP	P	21 03 40.7	+4.3
DEV	Deva	78.38	317	⇑P	P	21 03 38.9	+2.2
A04D	Lummi Island	78.39	40	P	P	21 03 37.4	+0.7
	baz=304						
VLAD	Vladila	78.48	314	⇑P	P	21 03 39.3	+2.1
LANS	Liptovska Anna	78.54	321	eP	P	21 03 39.8	+2.3
LANS				pmax	pmax		
	comp=Z,30nm,1.1s						
LANS	Liptovska Anna	78.54	321	eP	P	21 03 39.8	+2.3
KULA	Kula-Manisa	78.55	308	P	P	21 03 36.7	-1.1
ELL	Elmali	78.58	306	P	P	21 03 35.2	-2.9
ELL				pmax	pmax		
	comp=Z,2µm,1.7s						
ELL	Elmali	78.58	306	P	P	21 03 35.2	-2.9
PLVB	Pleven	78.67	314	⇑P	P	21 03 40.4	+2.2
SNART	Snartemo	78.67	333	eP	P	21 03 37.8	-0.1
SNART				eS	S	21 13 35.6	+0.7
RAC	Raciborz	78.70	322	eP	P	21 03 39.5	+1.2
RAC				eS	S	21 13 37.3	+1.8
RAC				LMZ	LR	21 41 38.5	
	comp=Z,301nm,18.8s						
RAC	Raciborz	78.70	322	eP	P	21 03 39.5	+1.2
RAC				eS	S	21 13 37.3	+1.8
RAC				MLR	MLR		
	comp=Z,301µm,18.8s						
GOET	G??ttrup	78.71	331	eP	P	21 03 42.3	+4.1
GOET				IAmb	IAmb	21 03 48.3	
	comp=Z,868nm,1.7s						
GZR	Gura Zlata	78.72	316	⇑P	P	21 03 40.3	+1.6
D03D	Eldon	78.84	41	P	P	21 03 40.7	+1.5
	baz=304						
D03D				S	S	21 13 41.0	+3.9
	baz=304						
SRE	Strehaia	78.86	316	⇑P	P	21 03 41.7	+2.4
OKC	Ostrava-Krasne	78.86	322	eP	P	21 03 38.0	-1.2
OKC				e		21 06 42.6	
OKC				eS	S	21 13 42.7	+5.4
OKC				MLR	MLR		
	comp=Z,272µm,16.4s						
OKC	Ostrava-Krasne	78.86	322	eP	P	21 03 38.0	-1.2
OKC				ePP	PP	21 06 42.6	+5.4
OKC				eS	S	21 13 42.7	+5.4
OKC				AMS	AMS	21 40 40.0	
	comp=Z,272µm,16.4s						
SIRR	Siria	78.90	317	⇓P	P	21 03 41.5	+2.0
B05A	Bryant	78.99	40	P	P	21 03 40.6	+0.7
	baz=304						
B05A				S	S	21 13 37.6	-1.0
	baz=304						
PSZ	Piszkesteto	79.00	320	⇓P	P	21 03 42.4	+2.3
PSZ	Piszkesteto	79.00	320	eP	P	21 03 37.4	-2.7
PSZ	Piszkesteto	79.00	320	eP	P	21 03 41.2	+1.1
ALN	Alexandroupoli	79.06	311	P	P	21 03 39.1	-1.4
KSL	Kastellorizon	79.10	306	P	P	21 03 38.3	-2.5
MUD	Monsted U'grnd	79.11	331	eP	P	21 03 42.6	+2.3
MUD				IAmb	IAmb	21 03 54.4	
	comp=Z,252nm,1.5s						
BAIL	Bailesti	79.12	315	⇑P	P	21 03 43.2	+2.5
BSZH	Besenyszg	79.13	319	⇓P	P	21 03 42.4	+1.7
BSZH	Besenyszg	79.13	319	eP	P	21 03 41.2	+0.5
FETY	Fethiye	79.20	306	P	P	21 03 39.1	-2.3
HERR	Herculane	79.21	316	⇑P	P	21 03 43.1	+1.9
MORC	Moravsky Berou	79.22	322	⇑P	P	21 03 41.8	+0.6
MORC	Moravsky Berou	79.22	322	P	P	21 03 40.7	-0.5
MORC				pmax	pmax		
	comp=Z,128nm,1.1s						
MORC	Moravsky Berou	79.22	322	eP	P	21 03 39.9	-1.3
MORC	Moravsky Berou	79.22	322	eS	S	21 13 46.9	+5.7
MORC				e		21 18 58.8	
PUNG	Punghina	79.23	315	⇑P	P	21 03 42.7	+1.4
KSP	Ksiaz	79.25	323	eP	P	21 03 39.8	-1.5
KSP				esP	pP	21 03 44.1	-0.3
KSP				eS	S	21 13 47.6	+6.3
KSP				eSS	SS	21 18 50.1	+3.3
KSP				eL	L	21 42 18.6	
	comp=Z,400µm,18.2s						
KSP	Ksiaz	79.25	323	P	P	21 03 40.7	-0.6
KSP				pmax	pmax		
	comp=Z,166nm,1.2s						
VYHS	Vyhne	79.26	320	eP	P	21 03 43.9	+2.5
VYHS				pmax	pmax		
	comp=Z,266nm,1.4s						
VYHS	Vyhne	79.26	320	eP	P	21 03 43.9	+2.5
VYHS				ePP	PP	21 06 44.7	+4.2
VYHS				eS	S	21 13 44.9	+3.3
VYHS				eSS	SS	21 18 54.3	+7.1
VYHS				eL	L	21 42 08.3	
RDO	Rodhopi	79.26	312	P	P	21 03 40.7	-0.9
BZS	Buzias	79.28	317	⇑P	P	21 03 43.1	+1.5
BZS	Buzias	79.28	317	P	P	21 03 41.7	+0.1
AMBH	Ambrzfalva	79.40	318	⇑P	P	21 03 44.8	+2.7
AMBH	Ambrzfalva	79.40	318	eP	P	21 03 42.9	+0.7
KRLC	Kraliky	79.44	323	eP	P	21 03 43.1	+0.6
KRLC				MLR	MLR		
	comp=Z,298µm,18.0s						
KRLC	Kraliky	79.44	323	eP	P	21 03 43.1	+0.6
KRLC				AMS	AMS	21 41 30.0	
	comp=Z,298µm,18.0s						
OSTC	Ostas	79.45	323	eP	P	21 03 42.0	-0.5
OSTC				AMS	AMS	21 41 50.0	
	comp=Z,435µm,16.8s						
YER	Yerkesik	79.50	307	P	P	21 03 42.3	-0.8
YER	Yerkesik	79.50	307	P	P	21 03 44.0	+0.9
CHVC	Chvalec	79.52	323	eP	P	21 03 41.4	-1.4
CHVC				ePP	PP	21 06 49.2	+6.5
CHVC				eS	S	21 13 49.9	+5.6

CHVC				AMS	AMS	21 42 00.0	
	comp=Z,414µm,17.2s						
RUE	Ruedersdorf	79.52	326	*e*P	P	21 03 43.2	+0.5
RUE	Ruedersdorf	79.52	326	*e*P	P	21 03 44.2	+1.5
	comp=Z,2µm,2.8s,baz=49,slow=5.2						
DPC	Dobruska-Polom	79.52	323	*e*P	P	21 03 41.3	-1.6
DPC				*e*		21 03 46.7	
DPC				*e*S	S	21 13 46.8	+2.4
DPC				MLR	MLR		
	comp=Z,381µm,16.3s						
DPC	Dobruska-Polom	79.52	323	*e*P	P	21 03 41.3	-1.6
DPC				*e*x	x	21 03 46.7	
DPC				*e*S	S	21 13 46.8	+2.4
DPC				AMS	AMS	21 42 00.0	
	comp=Z,381µm,16.3s						
UPC	Upice	79.59	323	*e*P	P	21 03 44.2	+1.0
UPC				MLR	MLR		
	comp=Z,448µm,16.9s						
UPC	Upice	79.59	323	*e*P	P	21 03 44.2	+1.0
UPC				AMS	AMS	21 42 00.0	
	comp=Z,448µm,16.9s						
SMTH	Samothraki Isl	79.62	311	P	P	21 03 42.3	-1.3
JAVC	Velka Javorina	79.68	321	*e*P	P	21 03 43.4	-0.4
JAVC	Velka Javorina	79.68	321	*e*S	S	21 13 55.2	+9.0
JAVC				*e*		21 19 02.3	
E04D	Cinebar	79.68	42	P	P	21 03 44.2	+0.5
	baz=304						
E04D				S	S	21 13 47.2	+1.2
	baz=304						
MDVR	Moldovita	79.69	316	⇑P	P	21 03 45.4	+1.5
BANR	Banloc	79.70	317	⇓P	P	21 03 46.1	+2.2
BLCB	Balcova	79.71	309	P	P	21 03 43.1	-0.9
PRK	Paraskevi	79.78	310	P	P	21 03 43.9	-0.5
C06D	Leavenworth	79.84	40	P	P	21 03 44.9	+0.3
	baz=305						
C06D				S	S	21 13 48.2	+0.3
	baz=305						
SRO	Srobarova	79.93	320	*e*P	P	21 03 49.4	+4.3
VTS	Vitosha	79.94	314	⇑P	P	21 03 46.4	+1.0
ICESG	Greenland Ices	79.98	356	*e*P	P	21 03 48.0	+2.6
ICESG				IAmb	IAmb	21 03 55.6	
	comp=Z,588nm,1.3s						
VRAC	Vranov	79.99	322	⇑P	P	21 03 46.3	+0.9
VRAC	Vranov	79.99	322	P	P	21 03 43.7	-1.7
	comp=Z,24nm,0.9s,baz=68,slow=5.1,SNR=11						
VRAC	Vranov	79.99	322	*e*P	P	21 03 43.6	-1.8
VRAC	Vranov	79.99	322	*e*S	S	21 13 55.9	+6.5
VRAC				*e*		21 19 02.3	
SMOL	Smolenice	80.01	321	*e*P	P	21 03 48.4	+2.9
G03D	McMinnville, O	80.03	43	P	P	21 03 45.7	0.0
	baz=304						
G03D				S	S	21 13 52.8	+3.0
	baz=304						
SIGR	SIGRI	80.07	310	P	P	21 03 44.7	-1.3
THAS	Thassos island	80.08	311	P	P	21 03 43.9	-2.1
ARG	Arkhangelos	80.08	306	P	P	21 03 43.9	-2.2
LIA	Limnos Island	80.15	311	P	P	21 03 46.4	0.0
MODS	Modra-Piesok	80.17	321	*e*P	P	21 03 49.3	+2.9
MODS				*e*PP	PP	21 06 49.8	+1.6
MODS				*e*S	S	21 13 54.3	+3.0
MODS				*e*SS	SS	21 19 02.8	+1.8
MODS				*e*L	L	21 42 42.3	
SMG	Samos	80.20	308	P	P	21 03 46.4	-0.3
DAT	Datca	80.20	307	P	P	21 03 47.2	+0.3
BODT	Bodrum	80.21	307	P	P	21 03 45.5	-1.3
CSKK	Cskako	80.22	320	*e*P	P	21 03 46.7	+0.1
ILULI	Ilulissat	80.23	360	P	P	21 03 35.1	-11
ILULI				pmax	pmax		
	comp=Z,120nm,1.0s						
ILULI				MLR	MLR		
	comp=Z,137µm,21.0s						
ILULI	Ilulissat	80.23	360	*i* P	P	21 03 51.3	+5.1
ILULI				IAmb	IAmb	21 03 51.7	
	comp=Z,156nm,1.1s						
ILULI	Ilulissat	80.23	360	P	P	21 03 35.1	-11
NVR	Nevrokopi	80.23	312	P	P	21 03 46.4	-0.5
BSEG	Bad Segeberg	80.23	328	*e*P	P	21 03 47.6	+1.1
	comp=Z,154nm,1.2s,baz=49,slow=5.2						
KRUC	Moravsky	80.24	322	*e*P	P	21 03 44.5	-2.2
KRUC	Moravsky	80.24	322	*e*S	S	21 13 53.7	+1.7
KRUC				*e*		21 19 03.4	
I02E	Swisshome, OR	80.30	44	S	S	21 13 56.0	+3.3
	baz=304						
PVCC	Panska Ves	80.31	324	*e*P	P	21 03 47.3	+0.2
PVCC				*e*S	S	21 13 53.1	+0.5
PVCC				MLR	MLR		
	comp=Z,443µm,17.0s						
PVCC	Panska Ves	80.31	324	*e*P	P	21 03 47.3	+0.2
PVCC				*e*S	S	21 13 53.1	+0.5
PVCC				AMS	AMS	21 43 00.0	
	comp=Z,443µm,17.0s						
BOVS	Bovan	80.32	315	⇑P	P	21 03 48.5	+1.2
CHOS	Chios island	80.37	309	P	P	21 03 46.4	-1.3
ZST	Bratislava	80.37	321	*e*P	P	21 03 52.7	+5.3
ZST	Bratislava	80.37	321	*e*S	S	21 13 55.1	+1.8
ZST				*e*SS	SS	21 19 12.8	+8.9
BRG	Berggiesshubel	80.42	324	*e*P	P	21 03 48.9	+1.3
	comp=Z,301nm,2.1s,baz=49,slow=5.2						
BRG	Berggiesshubel	80.42	324	*e*P	P	21 03 49.7	+2.0
BRG				Amp		21 03 53.0	
	comp=Z,57nm,1.2s						
BRG	Berggiesshubel	80.42	324	P	P	21 04 00.9	+13
BRG				Amp		21 04 07.4	
	comp=Z,105nm,1.4s						
BRG	Berggiesshubel	80.42	324	S	S	21 13 58.0	+4.3
BRG	Berggiesshubel	80.42	324	SS	SS	21 19 16.0	+12
BRG				Amp		21 43 20.0	
	comp=Z,462nm,17.1s						
BRG				Amp		21 43 26.0	
	comp=E,290nm,17.8s						
BRG				Amp		21 43 26.0	
	comp=N,298nm,15.9s						
B08A	Colville Reser	80.44	39	P	P	21 03 43.9	-4.0
B08A				IAmb	IAmb	21 03 54.3	
	comp=Z,540nm,1.8s						
SRS	Serrai	80.52	312	P	P	21 03 46.4	-2.0
TREC	Trest	80.58	322	*e*S	S	21 13 59.0	+3.4
TREC				AMS	AMS	21 44 20.0	
	comp=Z,278µm,16.0s						
FRGS	Fruska Gora	80.60	317	⇓P	P	21 03 50.1	+1.3
FRGS	Fruska Gora	80.60	317	*e*P	P	21 03 47.4	-1.4
CLL	Collm	80.62	325	P	P	21 03 41.2	-7.5
CLL				pmax	pmax		
	comp=Z,120nm,0.9s						
CLL				MLR	MLR		
	comp=Z,424µm,18.0s						
CLL	Collm	80.62	325	*e*P(2)		21 03 47.0	
	comp=Z,115nm,1.0s						
CLL				*i* Pmax		21 04 03.0	
	comp=Z,147nm,1.0s						
CLL				*e*Pmax		21 04 09.0	
CLL				*e*PP(2)		21 06 54.0	
CLL				*e*		21 07 31.0	
CLL				*e*PPP(2)		21 08 42.0	
CLL				*e*		21 10 08.0	
CLL				*e*S	S	21 13 57.0	+1.2
	comp=N,21µm,21.7s						
CLL				*e*S	S	21 13 57.0	+1.2
	comp=E,18µm,26.1s						
CLL				*e*S	S	21 13 57.0	+1.2
	comp=Z,12µm,23.9s						
CLL				*e*SKSac	SKSac	21 14 06.0	-1.0
CLL				*e*		21 14 36.0	
CLL				*e*PS		21 14 43.0	
CLL				*e*		21 16 00.0	
CLL				*e*SS	SS	21 19 11.0	+3.6
CLL				*e*(SSS)		21 23 12.0	
CLL				*e*SSSS		21 25 06.0	
CLL				*e*		21 27 24.0	
CLL				Lm	MLR	21 43 00.0	
	comp=Z,433µm,18.3s						
CLL				Lmax		21 43 00.0	
CLL	Collm	80.62	325	*e*P	P	21 03 49.6	+0.9
	comp=Z,115nm,1.0s,baz=49,slow=5.2						
CLL	Collm	80.62	325	P	P	21 03 41.2	-7.5
PRU	Pruhonice	80.66	323	*e*P	P	21 03 46.7	-2.2
PRU				*e*		21 03 53.1	
PRU				*e*S	S	21 13 57.9	+1.7
PRU				MLR	MLR		
	comp=Z,399µm,16.5s						
PRU	Pruhonice	80.66	323	*e*P	P	21 03 46.7	-2.2
PRU				*e*x	x	21 03 53.1	
PRU				*e*S	S	21 13 57.9	+1.7
PRU				AMS	AMS	21 42 30.0	
	comp=Z,399µm,16.5s						
PRA	Prague	80.66	323	*e*P	P	21 03 53.8	+4.8
PRA				*e*S	S	21 14 01.4	+5.1
PRA				AMS	AMS	21 43 50.0	
	comp=Z,398µm,14.4s						
MORH	Mrgy, Hungar	80.67	319	⇑P	P	21 03 50.4	+1.3
MORH	Mrgy, Hungar	80.67	319	*e*P	P	21 03 47.4	-1.6
MORH	Mrgy, Hungar	80.67	319	*e*P	P	21 03 46.8	-2.2
FBE	Freiberg	80.69	325	*e*P	P	21 03 50.5	+1.5
	comp=Z,184nm,1.4s,baz=49,slow=5.2						
ATD	Arta Tunnel	80.69	278	IAMs_20	IAMs_20	21 40 27.8	
	comp=Z,47µm,21.0s						
ATD	Arta Tunnel	80.69	278	*i* P	P	21 03 53.7	+4.0
TIH	Tihany	80.69	320	*e*P	P	21 03 47.5	-1.7
F05D	White Salmon	80.69	42	P	P	21 03 52.1	+2.8
	baz=305						
F05D				S	S	21 13 58.7	+1.9
	baz=305						
OUR	Ouranopolis	80.70	311	P	P	21 03 48.0	-1.3
EGYH	Egyhazaskeszo	80.70	320	*e*P	P	21 03 48.8	-0.4
H04D	Lebanon	80.72	43	P	P	21 03 53.9	+4.5
	baz=304						
H04D				S	S	21 14 00.8	+3.6
	baz=304						
MPLH	Magyarpolny	80.73	320	*e*P	P	21 03 47.1	-2.4
J01E	Myrtle Point	80.77	45	P	P	21 03 54.5	+4.8
	baz=304						
J01E				S	S	21 14 01.4	+3.7
	baz=304						
I03D	Drain, OR	80.82	44	P	P	21 03 49.1	-0.8
	baz=304						
I03D				S	S	21 14 01.5	+3.3
	baz=304						
FLTG	Flechtingen	80.83	327	*e*P	P	21 03 50.5	+0.8
	comp=Z,168nm,1.2s,baz=49,slow=5.2						
SOH	Sokhos	80.83	312	P	P	21 03 51.2	+1.1
SOP	Sopron	80.97	321	*e*P	P	21 03 53.2	+2.6
VAY	Valandovo	81.06	313	*i* P	P	21 03 50.9	-0.3
DIVS	Divibare	81.09	316	*e*P	P	21 03 48.7	-2.8
DIVS	Divibare	81.09	316	P	P	21 03 47.8	-3.7
PAIG	Paliouri	81.11	311	P	P	21 03 48.8	-2.8
HORT	Hortiatis	81.12	312	P	P	21 03 50.4	-1.3
G05D	Wamic, OR	81.15	42	P	P	21 03 53.5	+1.8
	baz=305						
G05D				S	S	21 14 03.6	+1.9
	baz=305						
THE	Thessaloniki	81.19	312	P	P	21 03 55.4	+3.5
	baz=144						
K02D	Willamette Mer	81.19	45	P	P	21 03 51.2	-0.8
	baz=304						
K02D				S	S	21 14 03.9	+1.6
	baz=304						
CONA	Conrad Observa	81.20	321	*e*P	P	21 03 51.9	-0.2
	comp=Z,133nm,1.3s,SNR=37						
CONA				*e*P	PP	21 06 58.2	+1.5
	comp=Z,72nm,1.5s						
ASSE	Asse, Remlinge	81.23	327	*e*P	P	21 03 53.2	+1.4
	comp=Z,437nm,2.4s,baz=49,slow=5.2						
NRDL	Niedersach Rie	81.26	327	*e*P	P	21 03 53.5	+1.5
	comp=Z,485nm,2.3s,baz=49,slow=5.2						
NEUB	Neuenburg	81.28	325	*e*P	P	21 03 53.5	+1.2
	comp=Z,2µm,3.0s,baz=49,slow=5.2						
HIZ	Hauiti	81.31	145	P	P	21 03 45.7	-6.7
HIZ				IAmb	IAmb	21 04 16.2	
	comp=Z,326nm,1.4s						
I04A	Tendick Farm,	81.33	44	P	P	21 03 51.3	-1.5
	baz=305,SNR=10						
I04A				S	S	21 14 05.4	+1.8
	baz=305						
GRG	Griva	81.37	313	P	P	21 03 52.0	-1.0
SKO	Skopje	81.41	314	*i* P	P	21 03 52.7	-0.4
HARA	HARA	81.43	276	*e*P	P	21 04 04.0	+10
HARA				*i* S	S	21 14 23.0	+17
TANN	Tannenbergstha	81.44	325	*e*P	P	21 03 54.5	+1.3
	comp=Z,1µm,3.6s,baz=49,slow=5.2						
RETH	Rethem/Aller,	81.45	328	*e*P	P	21 03 54.1	+1.1
	comp=Z,2µm,4.3s,baz=49,slow=5.2						
CKRC	Cesky Krumlov	81.49	323	*e*P	P	21 03 51.5	-1.9
CKRC				*e*PP	PP	21 06 59.5	+0.5
CKRC				*e*S	S	21 14 03.9	-1.1
CKRC				AMS	AMS	21 42 30.0	
	comp=Z,290µm,16.6s						
WERD	Werda	81.50	325	*e*P	P	21 03 54.7	+1.3
	comp=Z,2µm,3.7s,baz=49,slow=5.2						
L02E	Cave Junction	81.53	46	P	P	21 03 52.7	-1.1
	baz=304						
L02E				S	S	21 14 11.0	+5.3
	baz=304						
KYMI	Kymi, Euboea I	81.53	310	P	P	21 03 50.4	-3.5
GUNZ	Gunzen	81.54	325	*e*P	P	21 03 55.0	+1.3
	comp=Z,959nm,2.9s,baz=49,slow=5.2						
CLZ	Clausthal	81.56	327	*e*P	P	21 03 55.3	+1.5
	comp=Z,2µm,2.8s,baz=49,slow=5.2						
NKC	Novy Kostel	81.57	324	*e*P	P	21 03 52.9	-0.9
NKC				*e*		21 03 55.7	
NKC				*e*S	S	21 14 06.1	+0.3
NKC				MLR	MLR		
	comp=Z,559µm,15.9s						
NKC	Novy Kostel	81.57	324	*e*P	P	21 03 52.9	-0.9
NKC				*e*P	pP	21 03 55.7	-1.2
NKC				*e*S	S	21 14 06.1	+0.3
NKC				AMS	AMS	21 43 40.0	
	comp=Z,559µm,15.9s						
WERN	Wernitzgruen	81.57	324	*e*P	P	21 03 55.3	+1.4
	comp=Z,112nm,1.3s,baz=49,slow=5.2						
BBLS	Lazići	81.57	316	*e*P	P	21 03 52.0	-2.0
KARY	Karystos	81.64	309	P	P	21 03 54.4	0.0
I05D	Terrebonne, OR	81.65	43	P	P	21 03 53.3	-1.2
	baz=305						
KHC	Kasperske Hory	81.68	323	*e*P	P	21 03 51.3	-3.2
KHC				*e*		21 03 57.0	
KHC				*e*S	S	21 14 04.7	-2.3
KHC				MLR	MLR		
	comp=Z,327µm,14.6s						
KHC	Kasperske Hory	81.68	323	*e*P	P	21 03 51.3	-3.2
KHC				*e*x	x	21 03 57.0	
KHC				*e*x	x	21 04 10.5	
KHC				*e*S	S	21 14 04.7	-2.3
KHC				AMS	AMS	21 44 30.0	
	comp=Z,327µm,14.6s						
NEW	Newport	81.68	38	P	P	21 03 52.6	-1.9
	comp=Z,44nm,1.0s,baz=297,slow=5.3,SNR=13						
NEW	Newport	81.68	38	P	P	21 03 53.1	-1.4
	baz=308,SNR=20						
NEW				S	S	21 14 07.5	+0.4
	baz=308						
NEW	Newport	81.68	38	IAMs_20	IAMs_20	21 40 52.8	
	comp=Z,58µm,20.0s						
HAPS	Han Pijesak,BI	81.71	317	*e*P	P	21 03 54.0	-0.8
MOX	Moxa	81.72	325	*e*P	P	21 03 56.0	+1.4
	comp=Z,488nm,2.5s,baz=49,slow=5.2						
MOX				*e*S	SKSac	21 14 16.8	+2.2
MOX				*e*L	L	21 43 41.3	
	comp=Z,378µm,19.5s						
XOR	Xorichti	81.73	311	P	P	21 03 52.3	-2.6
RUDO	Rudo	81.73	316	*e*P	P	21 03 53.9	-0.9
GEC2	GERESS Array S	81.79	323	*e*P	P	21 03 56.2	+1.1
	comp=Z,318nm,2.8s,baz=49,slow=5.2						
GERES	GERESS Array B	81.79	323	P	P	21 03 53.0	-2.1
	comp=Z,13nm,0.8s,baz=49,slow=4.1,SNR=14						
GERES				PKKPbc	PKKPbc	21 22 25.4	-0.9
	comp=Z,2.4nm,1.0s,baz=211,slow=1.6,SNR=5.9						
GERES				LR	LR	21 43 46.6	
	comp=Z,215µm,19.4s,baz=64,slow=38						
GERES	GERESS Array B	81.79	323	P	P	21 03 53.0	-2.1
ARSA	Arzberg	81.79	321	*e*P	P	21 03 54.4	-0.7
	comp=Z,89nm,1.3s,SNR=19						
J04D	Umpqua Nationa	81.83	44	P	P	21 03 54.4	-1.2
	baz=305,SNR=14						
J04D				S	S	21 14 12.5	+3.4
	baz=305						
IVA	Berane	81.84	315	⇑*i*P	P	21 03 56.6	+1.1
PLE	Pljevlja	81.89	316	⇑*i*P	P	21 03 55.2	-0.6
MANZ	Manzenberg	81.89	324	*e*P	P	21 03 57.0	+1.4
	comp=Z,230nm,2.8s,baz=49,slow=5.2						
GTTG	Gottingen	81.94	326	*e*P	P	21 03 57.2	+1.5
	comp=Z,5µm,4.4s,baz=49,slow=5.2						
DION	Dionisos Attik	81.95	310	P	P	21 03 54.4	-1.7
KALN	Kalnik	81.95	319	*i* P	P	21 03 55.9	-0.1
ROTZ	Rotzenmuhle	81.98	324	*e*P	P	21 03 57.6	+1.6
	comp=Z,214nm,2.7s,baz=49,slow=5.2						
ZKR	Zakros	81.98	306	P	P	21 03 56.8	+0.5
PTL	Penteli	82.01	310	P	P	21 03 56.0	-0.4
STIA	Sitia Lasithi	82.02	306	P	P	21 03 56.0	-0.5
QRZ	Quartz Range	82.03	148	P	P	21 03 49.1	-7.0
WET	Wettzell	82.03	323	*e*P	P	21 03 57.8	+1.6
	comp=Z,913nm,2.9s,baz=49,slow=5.2						
MOSL	Moslavina	82.09	319	*i* P	P	21 03 56.6	-0.1
MOA	Molln	82.11	322	*e*P	P	21 03 54.4	-2.3
	comp=Z,64nm,1.2s,SNR=18						
MOA				*e*P	PP	21 07 01.9	-2.3
	comp=Z,50nm,1.6s						
FNA	Florina	82.11	313	P	P	21 03 56.8	-0.1
FNA	Florina	82.11	313	P	P	21 03 57.2	+0.3
	baz=216						
KZN	Kozani	82.12	312	P	P	21 03 56.0	-1.0
TEND	Ethiopian Broa	82.12	279	*e*P	P	21 04 03.2	+5.9
TEND				*e*S	S	21 14 24.1	+11
LOBO	Lobor	82.15	320	*i* P	P	21 03 56.2	-0.7
PHP	Peshkopia	82.18	314	P	P	21 03 58.4	+1.1
	baz=277						
PINE	Pine Mountain	82.20	43	P	P	21 03 54.1	-3.5
PINE				IAmb	IAmb	21 04 05.8	
	comp=Z,227nm,1.1s						
URZ	Urewera	82.25	144	P	P	21 03 51.8	-5.5
URZ				IAmb	IAmb	21 04 42.6	
	comp=Z,288nm,1.5s						
LKR	Lokris	82.25	310	P	P	21 03 53.6	-4.0
OHR	Ohrid	82.29	313	*i* P	P	21 03 57.8	0.0
L04D	Klamath Falls	82.29	45	P	P	21 03 56.1	-1.9
	baz=305,SNR=20						
L04D				S	S	21 14 17.5	+3.7
	baz=305						
VILL	Villia	82.31	310	P	P	21 03 53.6	-4.4
NPS	Neapolis	82.32	306	P	P	21 03 54.4	-3.7
J05D	Fort Rock, OR	82.32	44	P	P	21 03 56.3	-1.9
	baz=306,SNR=18						
J05D				S	S	21 14 17.6	+3.5
	baz=306						
MXZ	Matakaoa Point	82.34	142	P	P	21 03 50.1	-7.7
BLY	Banja Luka	82.36	318	*e*P	P	21 03 58.1	+0.1
PTJ	Puntijarka	82.36	319	P	P	21 03 57.1	-1.0
THL	Klokotos Trika	82.38	312	P	P	21 03 55.2	-3.1
PERS	Pernice	82.39	320	*e*P	P	21 03 57.6	-0.7
PERS				*i*		21 04 02.4	
PERS				*e*S	S	21 14 14.4	0.0
ZAG	Zagreb	82.39	319	P	P	21 04 01.1	+2.9
K04D	Chiloquin, OR	82.39	45	P	P	21 03 58.3	-0.2
	baz=305						
K04D				S	S	21 14 19.2	+4.4
	baz=305						
UBBA	Unterbreizbach	82.39	326	*e*P	P	21 03 59.4	+1.4
	comp=Z,422nm,1.9s,baz=49,slow=5.2						
SOKA	Soboth	82.41	321	*e*P	P	21 03 55.8	-2.6
	comp=Z,135nm,1.2s,SNR=32						
SOKA				*e*P	PP	21 07 04.8	-1.9
	comp=Z,43nm,1.5s						
M02C	Callahan	82.42	46	P	P	21 03 57.7	-0.9
	baz=305,SNR=18						
M02C				S	S	21 14 18.2	+3.1
	baz=305						
SFJD	Kangerlussuaq	82.45	360	*i* P	P	21 04 02.5	+4.4
IBBN	Ibbenburen	82.47	328	*e*P	P	21 03 59.3	+0.9
	comp=Z,1µm,2.3s,baz=49,slow=5.2						
AGG	Agios Georgios	82.48	311	P	P	21 03 56.8	-2.1
AGG	Agios Georgios	82.48	311	P	P	21 03 54.0	-4.9
AGG				pmax	pmax		
	comp=Z,87nm,1.2s						
AGG	Agios Georgios	82.48	311	P	P	21 03 54.0	-4.9
PDG	Podgorica	82.48	315	⇑P	P	21 04 00.4	+1.7
PDG	Podgorica	82.48	315	*e*P	P	21 03 56.3	-2.4
TTG	Podgorica	82.48	315	⇑*i*P	P	21 04 01.8	+3.1
GRF	Grafenberg Arr	82.52	324	*e*P	P	21 04 00.4	+1.6
	comp=Z,1µm,2.6s,baz=49,slow=5.2						
GRF				*e*S	S	21 14 23.7	+8.0
GRF				*e*L	L	21 44 05.7	
	comp=Z,343µm,18.0s						
NEST	Nestorio	82.52	313	P	P	21 03 58.5	-0.6
KBN	Korca	82.57	313	P	P	21 03 59.5	+0.2
	baz=228						
KPRO	Kipourio	82.58	312	P	P	21 03 59.3	-0.1
MGRS	Mrkonjic Grad	82.61	318	*e*P	P	21 03 59.3	-0.1
MAKR	Makrakomi, Fth	82.61	311	P	P	21 04 00.1	+0.6
CEME	Cevo	82.62	315	⇑*i*P	P	21 04 00.8	+1.2
BIGH	Upper Bighouse	82.62	337	IAMs_20	IAMs_20	21 42 08.4	
	comp=Z,195µm,22.3s						
BKZ	Black Stump Fm	82.62	145	P	P	21 03 51.5	-7.8
BRY	Bratogost	82.64	316	*e*P	P	21 04 00.9	+1.1
BRY	Bratogost	82.64	316	⇑*i*P	P	21 03 59.8	0.0
DRME	Dracevica, Mon	82.67	315	*e*P	P	21 03 57.4	-2.3
DRME	Dracevica, Mon	82.67	315	⇑*i*P	P	21 04 00.8	+1.1
CRES	Cresnjev	82.69	320	*e*P	P	21 03 57.5	-2.3
NNZ	Nelson	82.73	148	P	P	21 03 52.4	-7.4
TIR	Tirane	82.73	314	⇑P	P	21 04 02.0	+1.9
TIR	Tirane	82.73	314	P	P	21 04 01.6	+1.5
	baz=264						
N02D	Trinity Center	82.75	46	P	P	21 04 00.4	+0.1
	baz=305,SNR=16						
N02D				S	S	21 14 20.7	+2.3
	baz=305						
ULC	Ulcinj	82.76	315	⇑*i*P	P	21 04 02.5	+2.3
OBKA	Obir	82.77	321	*e*P	P	21 03 59.1	-1.2
	comp=Z,36nm,0.8s,SNR=26						
BUM	Brajici-Budva	82.78	315	⇑*i*P	P	21 04 02.6	+2.2
IDI	Anoyia	82.81	307	P	P	21 04 00.1	-0.6
OZLJ	Ozalj	82.81	319	*i* P	P	21 04 00.4	0.0
M04C	Macdoel	82.83	45	P	P	21 03 59.6	-1.1
	baz=305,SNR=29						
M04C				S	S	21 14 23.9	+4.7
	baz=305						
KRND	KRANIDI	82.84	309	P	P	21 03 59.3	-1.4
TREB	Trebinje	82.86	316	*e*P	P	21 04 02.2	+1.5
EVR	Evrytania	82.88	311	P	P	21 04 00.9	-0.1
DY2G	Dye2	82.90	358	*e*P	P	21 04 00.9	+0.1
DY2G				IAmb	IAmb	21 04 21.9	
	comp=Z,2µm,2.1s						
HCY	Herceg Novi	82.93	316	*e*P	P	21 04 02.6	+1.5
THZ	Tophouse	82.95	148	P	P	21 03 52.3	-8.7
RJOB	Jochberg	82.95	322	*e*P	P	21 04 02.9	+1.7
	comp=Z,5µm,4.5s,baz=49,slow=5.2						
LSK	Leskovik	82.95	313	P	P	21 04 01.7	+0.3
LSK	Leskovik	82.95	313	P	P	21 04 01.6	+0.2
	baz=220						
TRIZ	Trizonia	83.01	311	P	P	21 03 59.8	-1.8
DBRK	Dubrovnik	83.01	316	*i* P	P	21 04 00.5	-1.0
LJU	Ljubljana	83.07	320	*e*P	P	21 04 00.8	-1.0
LJU	Ljubljana	83.07	320	*e*P	P	21 04 03.1	+1.4
LJU				*e*PP	PP	21 07 16.4	+4.3
LJU				*e*		21 07 39.1	
LJU				*e*		21 10 43.5	
LJU				*e*S	S	21 14 26.1	+4.7
LJU				*e*		21 15 11.7	
LJU				*e*		21 17 35.1	
LJU				*e*SS	SS	21 19 44.6	+0.5
GUR	Goura	83.07	310	P	P	21 03 56.8	-5.3
KBA	Koelnbreinsper	83.07	322	*i* P	P	21 04 01.4	-0.6
	comp=Z,61nm,0.9s,SNR=7.9						
KBA				*e*P	PP	21 07 11.7	-0.6
	comp=Z,125nm,1.8s						
WDC	Whiskeytown Da	83.08	47	P	P	21 03 53.8	-8.1
WDC				pmax	pmax		
	comp=Z,2µm,2.9s						
WDC				MLR	MLR		
	comp=Z,29µm,19.0s						
WDC	Whiskeytown Da	83.08	47	P	P	21 03 53.8	-8.2
EFP	Efpalio	83.09	311	P	P	21 04 01.7	-0.3
RICI	Ricice	83.13	317	*i* P	P	21 04 01.2	-0.9
KLV	Kalavryta, Ach	83.14	310	P	P	21 03 59.3	-3.0
LAKA	Lakka	83.14	311	P	P	21 03 58.5	-3.8
O02D	Mt. Diablo Mer	83.16	47	P	P	21 04 01.6	-0.9
	baz=305,SNR=40						
O02D				S	S	21 14 32.3	+10
	baz=305						
TUWZ	Tuamarina	83.16	147	P	P	21 03 56.0	-6.0
STON	Ston	83.16	316	*e*P	P	21 04 01.0	-1.2
STON	Ston	83.16	316	*i* P	P	21 04 02.7	+0.5
PLIT	Plitvice	83.17	319	*i* P	P	21 04 01.6	-0.7
MYKA	Terra Mystica	83.19	321	*e*P	P	21 04 00.8	-1.6
	comp=Z,68nm,1.7s,SNR=14						
MYKA				*e*P	PP	21 07 11.3	-1.9
	comp=Z,158nm,1.7s						
KIJV	Kijevo	83.25	318	*i* P	P	21 04 03.9	+1.2
ANGG	Ammassalik, Gr	83.26	354	*e*P	P	21 03 51.6	-11
ANGG				IAmb	IAmb	21 04 15.1	
	comp=Z,172nm,1.3s						
BUG	Bochum--Univer	83.27	327	*e*P	P	21 04 03.6	+1.0
	comp=Z,246nm,1.4s,baz=49,slow=5.2						
UDBI	Udbina	83.30	318	*i* P	P	21 04 03.9	+0.9

CEY	**Cerknica**	**83.31**	**320**	*e*P	**P**	**21 03 59.9**	**-3.2**
MAKA	**Makarska**	**83.32**	**317**	*i* P	**P**	**21 04 02.0**	**-1.1**
IMMV	**Iera Moni Meta**	**83.34**	**307**	P	**P**	**21 04 01.7**	**-1.6**
DRUM	**Mains of Drumt**	**83.34**	**335**	IAMs_20	IAMs_20	21 45 06.7	
	comp=Z,151µm,17.9s						
BSWZ	**Blackbirch Sta**	**83.35**	**148**	P	P	21 03 55.6	-7.4
SNZO	**South Karori**	**83.42**	**147**	P	P	21 03 55.9	-7.4
SNZO				IAmb	IAmb	21 04 53.4	
	comp=Z,323nm,1.6s						
SNZO	**South Karori**	**83.42**	**147**	IAMs_20	IAMs_20	21 35 02.2	
	comp=Z,43µm,22.0s						
FUR	**Furstenfeldbru**	**83.47**	**323**	*e*P	**P**	**21 04 05.4**	**+1.6**
	comp=Z,2µm,2.7s,baz=49,slow=5.2						
LTZ	**Lake Taylor**	**83.48**	**149**	P	P	21 03 57.1	-6.6
SRN	**Sarande**	**83.49**	**313**	P	**P**	**21 04 03.3**	**-0.7**
SRN	**Sarande**	**83.49**	**313**	P	**P**	**21 04 05.0**	**+1.0**
	baz=225						
TNS	**Taunus Mts**	**83.53**	**326**	*e*P	**P**	**21 04 05.5**	**+1.4**
	comp=Z,5µm,4.3s,baz=49,slow=5.2						
RIY	**Rijeka**	**83.54**	**320**	P	**P**	**21 04 06.1**	**+1.9**
BHW	**Baring Head**	**83.57**	**147**	P	P	21 03 56.6	-7.5
RLS	**Riolos of Patr**	**83.58**	**311**	P	**P**	**21 04 02.5**	**-2.0**
GVD	**Gavdhos**	**83.60**	**307**	P	**P**	**21 04 01.7**	**-3.0**
DESE	**Dese**	**83.62**	**279**	*e*P	**P**	**21 04 08.0**	**+2.5**
DESE				*e*S	S	21 14 40.5	+12
BMO	**Blue Mountains**	**83.67**	**41**	IAMs_20	IAMs_20	21 41 03.5	
	comp=Z,40µm,20.0s						
LKD2	**Lefkada island**	**83.69**	**312**	P	**P**	**21 04 03.3**	**-1.8**
LKD2	**Lefkada island**	**83.69**	**312**	P	**P**	**21 04 04.0**	**-1.2**
	baz=203						
O03E	**Paynes Creek**	**83.71**	**47**	P	**P**	**21 04 04.3**	**-1.0**
	baz=306,SNR=23						
O03E				S	**S**	**21 14 30.1**	**+2.0**
	baz=306						
RPZ	**Rata Peaks**	**83.71**	**151**	P	P	21 03 57.1	-7.7
HVAR	**Hvar**	**83.72**	**317**	*i* P	**P**	**21 04 05.2**	**+0.1**
RABC	**Rab**	**83.72**	**319**	*i* P	**P**	**21 04 07.9**	**+2.8**
ABTA	**Abfaltersbach**	**83.73**	**322**	*e*P	**P**	**21 04 02.8**	**-2.4**
	comp=Z,83nm,1.0s,SNR=30						
ABTA				*e*P	**PP**	**21 07 16.8**	**-0.7**
	comp=Z,44nm,1.4s						
KHZ	**Kahutara**	**83.75**	**148**	P	P	21 03 58.1	-6.9
EDU	**Dundee**	**83.81**	**335**	*e*P	**P**	**21 04 04.8**	**-0.5**
WATA	**Walderalm**	**83.85**	**323**	*e*P	**P**	**21 04 05.9**	**0.0**
	comp=Z,57nm,1.3s,SNR=12						
WATA				*e*P	**PP**	**21 07 16.1**	**-2.5**
	comp=Z,63nm,1.3s						
KAC	**Achnashellach**	**83.86**	**337**	*e*P	**P**	**21 04 05.3**	**-0.3**
WTTA	**Wattenberg**	**83.86**	**322**	*e*P	**P**	**21 04 05.1**	**-0.9**
	comp=Z,82nm,1.4s,SNR=15						
WTTA				*e*P	**PP**	**21 07 17.5**	**-1.2**
	comp=Z,136nm,1.6s						
STAL	**STALIGIAL**	**83.93**	**321**	IAmb	IAmb	21 04 34.2	
	comp=Z,390nm,1.4s						
AHRW	**Bad Neuenahr-A**	**83.97**	**327**	*e*P	**P**	**21 04 07.6**	**+1.3**
	comp=Z,2µm,2.6s,baz=49,slow=5.2						
DUGI	**Dugi Otok**	**84.03**	**318**	*i* P	**P**	**21 04 07.9**	**+1.2**
PYL	**PYLOS**	**84.05**	**310**	P	**P**	**21 04 04.9**	**-2.1**
MOTA	**Moosalm**	**84.09**	**323**	*e*P	**P**	**21 04 04.9**	**-2.2**
	comp=Z,66nm,1.0s,SNR=7.9						
MOTA				*e*P	**PP**	**21 07 17.5**	**-3.0**
	comp=Z,79nm,1.5s						
KPL	**Plockton**	**84.11**	**337**	*e*P	**P**	**21 04 06.3**	**-0.5**
KPL				IAMs_20	IAMs_20	21 46 42.8	
	comp=Z,163µm,14.4s						
SQTA	**Sankt Quirin**	**84.11**	**323**	*e*P	**P**	**21 04 05.2**	**-2.0**
	comp=Z,46nm,0.9s,SNR=16						
SQTA				*e*P	**PP**	**21 07 19.7**	**-1.0**
	comp=Z,75nm,1.5s						
STU	**Stuttgart**	**84.13**	**325**	P	**P**	**21 04 10.4**	**+3.3**
STU				pmax	pmax		
	comp=Z,358nm,1.0s						
STU	**Stuttgart**	**84.13**	**325**	*e*P	**P**	**21 04 08.3**	**+1.2**
	comp=Z,337nm,1.1s,baz=49,slow=5.2						
ESY	**Stoneypath**	**84.14**	**335**	*e*P	**P**	**21 04 06.9**	**-0.1**
RETA	**Reutte**	**84.17**	**323**	*e*P	**P**	**21 04 05.5**	**-1.9**
	comp=Z,129nm,2.2s,SNR=22						
BRJN	**Brijuni**	**84.20**	**320**	*i* P	**P**	**21 04 06.6**	**-0.9**
SILA	**Clinic, Silare**	**84.20**	**281**	*i* P	**P**	**21 04 10.4**	**+2.1**
PLID	**Pearl Lake**	**84.25**	**40**	IAMs_20	IAMs_20	21 48 42.8	
	comp=Z,45µm,18.0s						
MSO	**Missoula**	**84.26**	**38**	P	**P**	**21 04 06.1**	**-1.9**
	baz=310,SNR=27						
MSO				S	**S**	**21 14 35.2**	**+1.7**
	baz=310						
MSO	**Missoula**	**84.26**	**38**	IAmb	IAmb	21 04 27.4	
	comp=Z,231nm,1.4s						
MSO				IAMs_20	IAMs_20	21 42 52.0	
	comp=Z,67µm,19.0s						
FFC	**Flin Flon**	**84.27**	**27**	P	P	21 04 00.3	-7.4
FFC				pmax	pmax		
	comp=Z,283nm,1.0s						
FFC				MLR	MLR		
	comp=Z,39µm,19.0s						
FFC	**Flin Flon**	**84.27**	**27**	P	P	21 04 00.3	-7.4
FFC				IAmb	IAmb	21 04 13.2	
	comp=Z,283nm,1.0s						
FFC	**Flin Flon**	**84.27**	**27**	IAMs_20	IAMs_20	21 42 27.3	
	comp=Z,39µm,19.0s						
ANKE	**Ethiopia-Afar**	**84.30**	**278**	*i* P	**P**	**21 04 09.6**	**+0.5**
ANKE				*e*S	S	21 14 45.9	+10
ORV	**Oroville**	**84.33**	**47**	P	P	21 04 03.3	-5.0
ORV				pmax	pmax		
	comp=Z,2µm,3.2s						
ORV				MLR	MLR		
	comp=Z,14µm,20.0s						
ORV	**Oroville**	**84.33**	**47**	P	P	21 04 03.3	-5.0
EDI	**Edinburgh**	**84.35**	**335**	IAMs_20	IAMs_20	21 43 39.8	
	comp=Z,162µm,21.9s						
WVOR	**Wild Horse Val**	**84.37**	**43**	IAMs_20	IAMs_20	21 43 47.2	
	comp=Z,36µm,19.0s						
BTNL	**Ternell**	**84.38**	**327**	*d*P	P	21 04 00.9	-7.5
BTNL				*d*x	**P**	**21 04 08.5**	**0.0**
UBR	**Ueberruh**	**84.39**	**323**	*e*P	**P**	**21 04 09.7**	**+1.2**
	comp=Z,3µm,3.7s,baz=49,slow=5.2						
EBL	**Broad Law**	**84.41**	**335**	*e*P	**P**	**21 04 08.5**	**+0.1**
MEM	**Membach**	**84.42**	**327**	*d*P	**P**	**21 04 06.3**	**-2.3**
BEBN	**Eben Emael**	**84.45**	**328**	*d*P	**P**	**21 04 06.9**	**-1.7**
FETA	**Feichten**	**84.49**	**323**	*e*P	**P**	**21 04 06.6**	**-2.6**
	comp=Z,33nm,1.1s,SNR=15						
FETA				*e*P	**PP**	**21 07 21.3**	**-2.5**
	comp=Z,51nm,1.4s						
BHOU	**Houvegnez**	**84.60**	**327**	*d*x	**P**	**21 04 10.2**	**+0.7**
CTI	**Castel Tesino**	**84.63**	**321**	IAmb	IAmb	21 04 27.1	
	comp=Z,404nm,1.5s						
GINR	**Hospital, Gini**	**84.69**	**275**	*i* P	**P**	**21 04 11.7**	**+0.8**
FRB	**Frobisher Bay**	**84.72**	**8**	P	**P**	**21 04 08.6**	**-1.2**
	comp=Z,85nm,1.1s,baz=355,slow=6.5,SNR=22						
EDMD	**Edmundbyers**	**84.73**	**334**	IAMs_20	IAMs_20	21 47 18.5	
	comp=Z,228µm,16.3s						
GOND	**University, Go**	**84.74**	**281**	*i* P	**P**	**21 04 14.6**	**+3.5**
DAVA	**Damuels**	**84.76**	**323**	*e*P	**P**	**21 04 08.0**	**-2.5**
	comp=Z,111nm,1.0s,SNR=19						
EKA	**Eskdalemuir Ar**	**84.79**	**335**	P	**P**	**21 04 08.5**	**-1.8**
ESK	**Eskdalemuir**	**84.82**	**335**	*e*P	**P**	**21 04 10.5**	**0.0**
ESK				IAMs_20	IAMs_20	21 46 23.0	
	comp=Z,140µm,16.7s						
BFO	**Black Forest**	**84.85**	**325**	P	P	21 04 04.2	-6.6
BFO				pmax	pmax		
	comp=Z,414nm,1.5s						
BFO				MLR	MLR		
	comp=Z,559µm,18.0s						
BFO	**Black Forest**	**84.85**	**325**	*e*P	**P**	**21 04 11.8**	**+1.0**
	comp=Z,2µm,3.0s,baz=49,slow=5.2						
BFO	**Black Forest**	**84.85**	**325**	P	P	21 04 04.2	-6.7
BFO				IAmb	IAmb	21 04 29.6	
	comp=Z,414nm,1.5s						
BCLA	**Clavier**	**84.88**	**328**	*d*P	P	21 04 06.0	-4.9
MERTO	**Secondary Scho**	**84.91**	**280**	*i* P	**P**	**21 04 15.5**	**+3.5**
SGRT	**San Giovanni R**	**84.99**	**316**	P	P	21 04 04.1	-7.7
SGRT				IAmb	IAmb	21 04 22.4	
	comp=Z,636nm,2.2s						
SGRT	**San Giovanni R**	**84.99**	**316**	P	**P**	**21 04 09.5**	**-2.2**
	baz=275						
BGES	**Gesves**	**85.00**	**328**	*d*x	**P**	**21 04 11.2**	**-0.3**
WLF	**Walferdange**	**85.00**	**327**	*d*x	**P**	**21 04 09.6**	**-1.9**
WLF	**Walferdange**	**85.00**	**327**	*e*P	**P**	**21 04 12.9**	**+1.4**
	comp=Z,2µm,2.6s,baz=49,slow=5.2						
TEOL	**Teolo**	**85.06**	**321**	IAmb	IAmb	21 04 17.2	
	comp=Z,237nm,1.0s						
MATE	**Matera**	**85.08**	**315**	⇓P	**P**	**21 04 13.4**	**+1.3**
RCHB	**Rochefort**	**85.10**	**327**	*d*x	**P**	**21 04 11.9**	**0.0**
BMRD	**Maredsous**	**85.21**	**328**	*d*P	P	21 04 04.9	-7.6
BMRD				*d*PcP	pP	21 04 08.2	-7.4
NUUK	**Nuuk**	**85.28**	**0**	*e*P	**P**	**21 04 15.7**	**+3.2**
SNF	**Seneffe**	**85.28**	**328**	*d*x	**P**	**21 04 12.6**	**-0.3**
BAHR	**High School, B**	**85.31**	**281**	*i* P	**P**	**21 04 15.7**	**+1.7**
GIVF	**Givet**	**85.32**	**328**	*e*P	**P**	**21 04 13.4**	**+0.3**
GIVF				pmax	pmax		
	comp=Z,649nm,2.3s						
NEWG	**New Galloway**	**85.35**	**335**	IAMs_20	IAMs_20	21 43 56.4	
	comp=Z,174µm,18.9s						
AAE	**Adis Abeba**	**85.41**	**278**	*e*P	**P**	**21 04 18.3**	**+3.8**
AAE				*e*S	S	21 14 54.6	+8.3
DOU	**Dourbes**	**85.43**	**328**	*e*P	**P**	**21 04 15.1**	**+1.4**
DOU	**Dourbes**	**85.43**	**328**	*d*x	**P**	**21 04 15.3**	**+1.7**
ECH	**Echery**	**85.51**	**325**	P	**P**	**21 04 16.4**	**+2.3**
ECH				pmax	pmax		
	comp=Z,772nm,1.1s						
FURI	**Furi**	**85.55**	**278**	*e*P	P	21 04 22.3	+7.0
FURI				*i* S	**S**	**21 14 49.2**	**+1.4**
FURI	**Furi**	**85.55**	**278**	IAMs_20	IAMs_20	21 45 54.6	
	comp=Z,53µm,18.0s						
FURI	**Furi**	**85.55**	**278**	*i* P	**P**	**21 04 18.0**	**+2.7**
PAHR	**Pah Rah Range**	**85.55**	**46**	P	P	21 04 06.0	-8.6
PAHR				IAmb	IAmb	21 04 21.1	
	comp=Z,170nm,1.0s						
SHAW	**Medical Clinic**	**85.56**	**281**	*i* P	**P**	**21 04 16.2**	**+0.9**
ELMS	**Elmsett, Ipswi**	**85.59**	**331**	*e*P	**P**	**21 04 17.1**	**+2.8**
ELMS				IAMs_20	IAMs_20	21 47 25.4	
	comp=Z,285µm,15.1s						
EGMT	**Eagleton**	**85.61**	**35**	P	**P**	**21 04 13.2**	**-1.5**
	baz=313,SNR=24						
EGMT				S	**S**	**21 14 50.2**	**+3.3**
	baz=313						
EGMT	**Eagleton**	**85.61**	**35**	IAMs_20	IAMs_20	21 40 54.5	
	comp=Z,86µm,21.0s						
BAIF	**Baives**	**85.64**	**328**	*e*P	**P**	**21 04 14.8**	**+0.1**
BAIF				pmax	pmax		
	comp=Z,340nm,2.2s						
LBWR	**Ladybower, Pea**	**85.72**	**333**	*e*P	**P**	**21 04 16.7**	**+1.7**
LBWR				IAMs_20	IAMs_20	21 48 56.2	
	comp=Z,256µm,15.3s						
GAL1	**Galloway**	**85.72**	**335**	*e*P	**P**	**21 04 15.3**	**+0.3**
GAL1				IAMs_20	IAMs_20	21 44 06.7	
	comp=Z,149µm,18.5s						
NRCA	**Norcia**	**85.86**	**318**	IAmb	IAmb	21 04 51.3	
	comp=Z,247nm,1.1s						
MUKA	**Police Camp, M**	**85.91**	**282**	*i* P	**P**	**21 04 17.8**	**+1.0**
CMB	**Columbia Colle**	**85.92**	**48**	P	P	21 04 07.8	-8.6
CMB				pmax	pmax		
	comp=Z,2µm,2.8s						
CMB				MLR	MLR		
	comp=Z,31µm,20.0s						
CMB	**Columbia Colle**	**85.92**	**48**	P	P	21 04 07.8	-8.6
DLMT	**Dillon**	**85.92**	**38**	IAMs_20	IAMs_20	21 47 34.0	
	comp=Z,66µm,18.0s						
TIP	**Timpagrande**	**85.93**	**314**	⇑P	**P**	**21 04 17.8**	**+1.4**
HINF	**Hinteralfeld**	**85.93**	**325**	*e*P	**P**	**21 04 16.2**	**-0.1**
HINF				pmax	pmax		
	comp=Z,407nm,2.4s						
AQU	**L'Aquila**	**85.99**	**318**	P	**P**	**21 04 15.8**	**-0.9**
AQU	**L'Aquila**	**85.99**	**318**	*e*P	**P**	**21 04 15.1**	**-1.6**
AQU	**L'Aquila**	**85.99**	**318**	IAmb	IAmb	21 04 27.0	
	comp=Z,331nm,1.1s						
CLGH	**Cloghs, Cushen**	**86.05**	**336**	*e*P	**P**	**21 04 18.8**	**+2.2**
CLGH				IAMs_20	IAMs_20	21 47 06.3	
	comp=Z,141µm,16.4s						
HAU	**Haudompre**	**86.05**	**325**	*e*P	**P**	**21 04 16.6**	**-0.2**
HAU				pmax	pmax		
	comp=Z,453nm,2.4s						
CWF	**Charnwood Fore**	**86.05**	**332**	*e*P	**P**	**21 04 15.7**	**-1.0**
CWF				IAMs_20	IAMs_20	21 44 54.8	
	comp=Z,189µm,18.5s						
MELAE	**School, Dubaba**	**86.09**	**282**	*i* P	**P**	**21 04 20.2**	**+2.6**
HLID	**Hailey**	**86.09**	**41**	P	**P**	**21 04 16.4**	**-0.9**
	baz=310,SNR=42						
HLID				S	**S**	**21 14 57.6**	**+5.7**
	baz=310						
HLID	**Hailey**	**86.09**	**41**	IAMs_20	IAMs_20	21 48 19.7	
	comp=Z,38µm,20.0s						
BOZ	**Bozeman (W)**	**86.28**	**38**	P	**P**	**21 04 16.7**	**-1.5**
	baz=312,SNR=50						
BOZ				S	**S**	**21 14 55.6**	**+2.0**
	baz=312						
BOZ	**Bozeman (W)**	**86.28**	**38**	IAMs_20	IAMs_20	21 44 25.4	
	comp=Z,62µm,19.0s						
CHGE	**School, Chagni**	**86.34**	**280**	*i* P	P	21 04 23.3	+4.3
KIRE	**School, Kiremu**	**86.55**	**279**	*i* P	**P**	**21 04 22.7**	**+2.5**
NGLE	**Hospital, Nege**	**86.58**	**274**	*i* P	**P**	**21 04 23.6**	**+3.4**
WADE	**Clinic, Wadera**	**86.58**	**275**	*i* P	P	21 04 24.8	+4.6
FOEL	**Foel Wylfa**	**86.69**	**333**	*e*P	**P**	**21 04 20.3**	**+0.5**
FOEL				IAMs_20	IAMs_20	21 50 28.8	
	comp=Z,206µm,14.3s						
ABMD	**Abulta/Almeha**	**86.69**	**282**	*i* P	**P**	**21 04 23.0**	**+2.5**
RYN	**Ryan**	**86.74**	**46**	P	P	21 04 12.6	-8.0
KVN	**Kaiserville**	**86.74**	**46**	P	P	21 04 12.5	-8.1
KVN				pmax	pmax		
	comp=Z,3µm,2.8s						
KVN	**Kaiserville**	**86.74**	**46**	P	P	21 04 12.5	-8.1
LLW	**Llanuwychllyn**	**86.90**	**333**	*e*P	**P**	**21 04 21.5**	**+0.7**
MSSA	**Maissana**	**86.90**	**321**	P	P	21 04 13.2	-8.0
NVAR	**Mina Array Bea**	**87.00**	**46**	P	**P**	**21 04 19.9**	**-2.0**
	comp=Z,25nm,1.0s,baz=295,slow=5.4,SNR=28						
NVAR				LR	LR	21 37 45.3	
	comp=Z,17µm,21.7s,baz=318,slow=32						
HARO	**School, Haroo**	**87.08**	**280**	*i* P	**P**	**21 04 25.3**	**+2.6**
DILA	**Dilla**	**87.12**	**276**	*i* P	P	21 04 30.2	+7.4
DILA				*e*S	**S**	**21 15 04.5**	**+1.6**
MLAC	**Mammoth, Mammo**	**87.15**	**47**	P	**P**	**21 04 21.1**	**-1.6**
	baz=307						
GUBA	**Police Station**	**87.22**	**281**	*i* P	**P**	**21 04 25.8**	**+2.5**
DEBR	**School, Debre**	**87.23**	**281**	*i* P	**P**	**21 04 26.6**	**+3.1**
MCH1	**Michaelchurch**	**87.29**	**332**	*e*P	**P**	**21 04 23.6**	**+0.9**
MCH1				IAMs_20	IAMs_20	21 48 34.8	
	comp=Z,146µm,17.0s						
VOG	**Valley Oaks Go**	**87.59**	**49**	P	**P**	**21 04 23.3**	**-1.2**
	baz=307						
H17A	**Grant Village**	**87.64**	**38**	P	**P**	**21 04 25.5**	**+0.5**
	baz=312,SNR=89						
H17A				S	S	21 15 17.8	+11
	baz=312						
FLWY	**Flagg Ranch**	**87.78**	**38**	IAMs_20	IAMs_20	21 45 16.3	
	comp=Z,49µm,18.0s						
SMMC	**Simmler**	**87.79**	**50**	P	**P**	**21 04 25.2**	**-0.3**
	baz=307						
RLMT	**Red Lodge**	**87.83**	**37**	P	**P**	**21 04 23.9**	**-1.9**
	baz=313,SNR=77						
RLMT				S	**S**	**21 15 11.7**	**+3.0**
	baz=313						
RLMT	**Red Lodge**	**87.83**	**37**	IAmb	IAmb	21 04 46.0	
	comp=Z,289nm,1.2s						
RLMT				IAMs_20	IAMs_20	21 47 36.4	
	comp=Z,42µm,19.0s						
TIN	**Tinemaha, Big**	**87.88**	**47**	P	**P**	**21 04 25.5**	**-0.5**
	baz=308,SNR=16						
TIN				S	**S**	**21 15 03.1**	**-6.2**
	baz=308						
FXWY	**Fox Creek**	**87.91**	**39**	IAMs_20	IAMs_20	21 48 49.5	
	comp=Z,36µm,18.0s						
BNI	**Bardonecchia**	**87.91**	**323**	P	**P**	**21 04 29.1**	**+3.0**
DGMT	**Dagmar**	**87.94**	**32**	P	**P**	**21 04 24.7**	**-1.3**
	baz=317,SNR=36						
DGMT				S	**S**	**21 15 13.8**	**+4.5**
	baz=317						
DGMT	**Dagmar**	**87.94**	**32**	IAMs_20	IAMs_20	21 43 06.9	
	comp=Z,47µm,20.0s						
MOOW	**Moose Ponds**	**87.98**	**39**	IAMs_20	IAMs_20	21 45 23.6	
	comp=Z,37µm,19.0s						
SHERE	**Police Station**	**87.99**	**281**	*i* P	**P**	**21 04 29.6**	**+2.7**
TPAW	**Teton Pass**	**88.05**	**39**	IAMs_20	IAMs_20	21 45 18.2	
	comp=Z,34µm,18.0s						
VES	**Vestal, Richgr**	**88.07**	**49**	P	**P**	**21 04 24.0**	**-2.8**
	baz=307						
MBDF	**Montbardon**	**88.08**	**323**	*e*P	**P**	**21 04 26.2**	**-0.7**
MBDF				pmax	pmax		
	comp=Z,20nm,0.8s						
SSF	**Saint Saulge**	**88.09**	**326**	*e*P	**P**	**21 04 29.8**	**+3.1**
SSF				pmax	pmax		
	comp=Z,517nm,3.0s						
MEND	**High School, M**	**88.13**	**280**	*i* P	**P**	**21 04 31.4**	**+3.7**
LOHW	**Long Hollow**	**88.15**	**39**	IAMs_20	IAMs_20	21 45 30.0	
	comp=Z,40µm,18.0s						
PKM	**Mcpherson Peak**	**88.16**	**50**	P	**P**	**21 04 26.9**	**-0.6**
	baz=307,SNR=14						
PKM				S	**S**	**21 15 17.7**	**+5.5**
	baz=307						
SNOW	**Snow King Moun**	**88.17**	**39**	IAMs_20	IAMs_20	21 45 31.5	
	comp=Z,35µm,19.0s						
REDW	**Red Top Meadow**	**88.19**	**39**	IAMs_20	IAMs_20	21 46 10.9	
	comp=Z,33µm,18.0s						
NRS	**Narsarsuaq**	**88.19**	**357**	*e*P	**P**	**21 04 30.8**	**+4.0**
SMF	**Signal de Mont**	**88.22**	**326**	*e*P	**P**	**21 04 27.0**	**-0.4**
SMF				pmax	pmax		
	comp=Z,474nm,2.7s						
IVI	**Ivigtut**	**88.23**	**359**	*e*P	**P**	**21 04 31.2**	**+4.2**
IVI				IAmb	IAmb	21 04 31.9	
	comp=Z,2µm,3.1s						
LAO	**LASA Array**	**88.27**	**34**	P	**P**	**21 04 26.6**	**-1.0**
	baz=315,SNR=18						
LAO	**LASA Array**	**88.27**	**34**	IAMs_20	IAMs_20	21 44 07.7	
	comp=Z,50µm,20.0s						
CWC	**Cottonwood Cre**	**88.35**	**48**	P	**P**	**21 04 29.4**	**+1.1**
	baz=308						
CWC				S	**S**	**21 15 14.8**	**+0.9**
	baz=308						
ORIF	**Oris-en-Rattie**	**88.41**	**323**	*e*P	**P**	**21 04 29.5**	**+1.1**
ORIF				pmax	pmax		
	comp=Z,307nm,2.7s						
AHID	**Auburn Hatcher**	**88.45**	**40**	IAMs_20	IAMs_20	21 46 27.0	
	comp=Z,49µm,18.0s						
SBC	**Santa Barbara**	**88.50**	**50**	P	**P**	**21 04 29.6**	**+0.7**
	baz=307						
ISA	**Isabella, Lake**	**88.57**	**49**	P	**P**	**21 04 29.8**	**+0.5**
	baz=308,SNR=11						
ISA				S	**S**	**21 15 17.5**	**+1.7**
	baz=308						
GOREE	**District Admin**	**88.60**	**279**	*i* P	P	21 04 36.0	+6.0
LDF	**La Druitiere**	**88.65**	**329**	*e*P	**P**	**21 04 31.1**	**+1.8**
LDF				pmax	pmax		
	comp=Z,342nm,2.2s						
ARVC	**Arvin**	**88.66**	**49**	P	**P**	**21 04 29.7**	**0.0**
	baz=308						
ARVC				S	**S**	**21 15 17.6**	**+1.0**
	baz=308						
FLN	**La Foliniere**	**88.69**	**329**	*e*P	**P**	**21 04 30.3**	**+0.8**
FLN				pmax	pmax		
	comp=Z,158nm,1.7s						
R11A	**Troy Canyon, C**	**88.72**	**45**	P	**P**	**21 04 29.1**	**-1.0**
	baz=309,SNR=61						
R11A				S	**S**	**21 15 19.0**	**+1.6**
	baz=309						
SCZ2	**Santa Cruz Isl**	**88.81**	**51**	P	**P**	**21 04 33.0**	**+2.6**
	baz=307						
SCZ2				S	**S**	**21 15 23.7**	**+5.6**
	baz=307						
DYA	**Yadsworthy**	**88.87**	**332**	IAMs_20	IAMs_20	21 49 31.1	
	comp=Z,234µm,16.7s						
HWUT	**Hardware Ranch**	**88.96**	**41**	IAMs_20	IAMs_20	21 49 57.7	
	comp=Z,61µm,18.0s						
GIDAE	**Health Center,**	**88.97**	**280**	*i* P	**P**	**21 04 35.0**	**+3.3**
OSI	**Osito Audit: C**	**89.04**	**50**	P	**P**	**21 04 31.8**	**+0.3**
	baz=308						
OSI				S	**S**	**21 15 23.5**	**+3.2**
	baz=308						
FURC	**Furnace Creek,**	**89.10**	**47**	P	**P**	**21 04 30.7**	**-0.9**
	baz=309,SNR=17						
FURC				S	**S**	**21 15 23.3**	**+2.7**
	baz=309						
LMR	**La Mourre**	**89.17**	**322**	*e*P	**P**	**21 04 30.7**	**-1.2**
LMR				pmax	pmax		
	comp=Z,54nm,1.3s						
DUG	**Dugway, Tooele**	**89.18**	**42**	P	**P**	**21 04 31.3**	**-0.9**
	baz=311,SNR=100						
DUG				S	**S**	**21 15 25.6**	**+4.0**
	baz=311						
DUG	**Dugway, Tooele**	**89.18**	**42**	IAMs_20	IAMs_20	21 50 12.6	
	comp=Z,35µm,18.0s						
LRMC	**Laurel Mtn Rad**	**89.19**	**48**	P	**P**	**21 04 32.4**	**+0.1**
	baz=308,SNR=25						
TCF	**Toulx Ste Croi**	**89.27**	**326**	*e*P	**P**	**21 04 34.4**	**+2.1**
TCF				pmax	pmax		
	comp=Z,205nm,2.2s						
BW06	**Boulder Array**	**89.29**	**39**	P	**P**	**21 04 31.1**	**-1.6**
	baz=313,SNR=43						
BW06				S	**S**	**21 15 26.0**	**+3.3**
	baz=313						
BW06	**Boulder Array**	**89.29**	**39**	IAMs_20	IAMs_20	21 48 12.1	
	comp=Z,58µm,20.0s						
PD31	**Pinedale Array**	**89.29**	**39**	IAmb	IAmb	21 04 52.4	
	comp=Z,244nm,1.4s						
PDAR	**Pinedale Array**	**89.29**	**39**	P	**P**	**21 04 29.5**	**-3.2**
	comp=Z,32nm,0.9s,baz=325,slow=0.8,SNR=29						
PDAR				PP	**PP**	**21 08 05.0**	**+2.3**
	comp=Z,14nm,1.1s,baz=318,slow=4.0,SNR=4.2						
PDAR				PKKPbc	**PKKPbc**	**21 22 09.0**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=92,slow=6.3,SNR=3.4						
PDAR	**Pinedale Array**	**89.29**	**39**	P	P	21 04 25.6	-7.2
SNCC	**San Nicolas Is**	**89.34**	**51**	P	**P**	**21 04 33.2**	**+0.4**
	baz=307						
SNCC				S	**S**	**21 15 27.8**	**+4.8**
	baz=307						
EDW2	**Edwards Air Fo**	**89.36**	**49**	P	**P**	**21 04 34.7**	**+1.7**
	baz=308,SNR=29						
EDW2				S	**S**	**21 15 26.6**	**+3.3**
	baz=308						
DECC	**Green Verdugo**	**89.52**	**50**	P	**P**	**21 04 32.4**	**-1.3**
	baz=308						
CCA1	**Carnmenellis**	**89.59**	**332**	IAMs_20	IAMs_20	21 50 40.9	
	comp=Z,281µm,14.6s						
PASC	**Pasadena Art C**	**89.67**	**50**	IAMs_20	IAMs_20	21 37 35.1	
	comp=Z,43µm,22.0s						
SHOC	**Shoshone, Teco**	**89.83**	**47**	P	**P**	**21 04 34.8**	**-0.3**
	baz=309						
SHOC				S	**S**	**21 15 30.0**	**+2.5**
	baz=309						
GSC	**Goldstone, Bar**	**89.86**	**48**	P	**P**	**21 04 35.0**	**-0.4**
	baz=309,SNR=24						
GSC				S	**S**	**21 15 29.8**	**+1.7**
	baz=309						
FMP	**Fort Macarthur**	**89.87**	**50**	P	**P**	**21 04 35.1**	**-0.3**
	baz=308						
SGMF	**Saint Gilles**	**89.97**	**330**	*e*P	**P**	**21 04 37.7**	**+2.2**
SGMF				pmax	pmax		
	comp=Z,256nm,1.9s						
CIS	**Catalina Islan**	**89.98**	**50**	P	P	21 04 40.6	+4.7
	baz=308,SNR=5.2						
CIS				S	**S**	**21 15 30.0**	**+0.9**
	baz=308						
RRX	**Edison Barstow**	**90.01**	**49**	P	**P**	**21 04 36.9**	**+0.9**
	baz=308						
ULM	**Lac du Bonnet**	**90.10**	**27**	P	**P**	**21 04 33.1**	**-3.0**
	comp=Z,229nm,0.9s,baz=325,slow=5.3,SNR=23						
ULM				LR	LR	21 48 43.1	
	comp=Z,49µm,18.2s,baz=332,slow=38						
ULM	**Lac du Bonnet**	**90.10**	**27**	IAmb	IAmb	21 04 41.5	
	comp=Z,255nm,0.9s						
SCI2	**San Clemente I**	**90.15**	**51**	P	**P**	**21 04 36.4**	**-0.3**
	baz=308						
ROSF	**Rostrenen**	**90.22**	**330**	*e*P	**P**	**21 04 38.9**	**+2.2**
ROSF				pmax	pmax		
	comp=Z,73nm,1.2s						
RJF	**Les Rejaudoux**	**90.31**	**326**	*e*P	**P**	**21 04 39.6**	**+2.4**
RJF				pmax	pmax		
	comp=Z,205nm,2.2s						
CAF	**Calviac**	**90.32**	**325**	*e*P	**P**	**21 04 37.6**	**+0.3**
CAF				pmax	pmax		
	comp=Z,176nm,2.5s						
TUQ	**Turquoise Moun**	**90.34**	**48**	P	**P**	**21 04 38.3**	**+0.6**
	baz=309,SNR=14						
TUQ				S	**S**	**21 15 34.8**	**+2.3**
	baz=309						
BBRC	**Big Bear Solar**	**90.44**	**49**	P	**P**	**21 04 38.6**	**+0.4**
	baz=309						
MDND	**Maddock**	**90.45**	**30**	P	**P**	**21 04 38.7**	**+0.9**
	baz=320,SNR=9.9						
MDND				S	**S**	**21 15 31.1**	**-1.7**
	baz=320						
HEC	**Hector,Ludlow**	**90.46**	**48**	P	**P**	**21 04 37.3**	**-0.9**
	baz=309,SNR=21						
MURC	**Murrieta**	**90.67**	**50**	P	**P**	**21 04 38.8**	**-0.3**
	baz=308						
GMRC	**Granite Mounta**	**90.92**	**48**	P	**P**	**21 04 39.2**	**-1.2**
	baz=309,SNR=22						
K22A	**Casper**	**90.97**	**37**	P	**P**	**21 04 39.4**	**-1.1**
	baz=315,SNR=7.7						
K22A				S	**S**	**21 15 38.0**	**-0.2**
	baz=315						
PFO	**Pinyon Flats O**	**91.14**	**49**	P	**P**	**21 04 39.9**	**-1.6**
	baz=309,SNR=20						
PFO	**Pinyon Flats O**	**91.14**	**49**	IAMs_20	IAMs_20	21 38 09.1	
	comp=Z,53µm,22.0s						
109C	**Camp Elliot, M**	**91.16**	**50**	P	**P**	**21 04 40.8**	**-0.6**
	baz=308						
RSSD	**Black Hills**	**91.18**	**35**	P	**P**	**21 04 41.1**	**-0.4**
RSSD				pmax	pmax		
	comp=Z,321nm,0.9s						
RSSD	**Black Hills**	**91.18**	**35**	P	**P**	**21 04 41.4**	**-0.2**
	baz=317						

RSSD				S	S	21 15 40.9	+0.8
	baz=317						
RSSD	Black Hills	91.18	35	IAMs_20	IAMs_20	21 51 05.9	
	comp=Z,63µm,18.0s						
BELC	Belle Mtn. Jos	91.20	49	P	P	21 04 39.9	-1.8
	baz=309,SNR=13						
RWWY	Rawlins	91.29	38	IAMs_20	IAMs_20	21 47 02.1	
	comp=Z,53µm,18.0s						
NEE2	Needles Airpor	91.59	47	P	P	21 04 43.6	+0.3
	baz=310						
MONP2	Monument Peak	91.61	50	P	P	21 04 44.5	+0.8
	baz=309,SNR=14						
MONP2				S	S	21 15 47.8	+3.4
	baz=309						
IRM	Iron Mountain	91.65	48	P	P	21 04 42.5	-1.2
	baz=310,SNR=17						
IRM				S	S	21 15 47.5	+3.2
	baz=310						
AGMN	Agassiz Nation	91.66	28	P	P	21 04 43.6	+0.3
	baz=323,SNR=18						
AGMN				S	S	21 15 41.4	-2.4
	baz=323						
AGMN	Agassiz Nation	91.66	28	IAMs_20	IAMs_20	21 47 03.2	
	comp=Z,62µm,20.0s						
BC3	Big Chuckawall	91.77	49	P	P	21 04 43.1	-1.2
	baz=309,SNR=21						
KIBK	Kibwezi	91.78	268	IAMs_20	IAMs_20	21 51 53.0	
	comp=Z,36µm,20.0s						
O20A	White River Ci	91.81	40	P	P	21 04 43.7	-0.8
	baz=314,SNR=21						
KMBO	Kilima Mbogo	91.84	270	P	P	21 04 45.0	-0.1
	comp=Z,3.7nm,0.8s,baz=51,slow=3.0,SNR=7.6						
KMBO				PP	PP	21 08 26.7	+2.5
	comp=Z,6.1nm,1.1s,baz=39,slow=6.6,SNR=2.5						
KMBO	Kilima Mbogo	91.84	270	*i* P	P	21 04 46.9	+1.7
	SNR=17						
KMBO	Kilima Mbogo	91.84	270	⇓*e*P	P	21 04 44.6	-0.5
KMBO	Kilima Mbogo	91.84	270	P	P	21 04 45.2	+0.1
KMBO				IAmb	IAmb	21 05 00.9	
	comp=Z,263nm,2.8s						
KMBO	Kilima Mbogo	91.84	270	IAMs_20	IAMs_20	21 47 18.4	
	comp=Z,36µm,19.0s						
KMBO	Kilima Mbogo	91.84	270	*i* P	P	21 04 57.0	+12
IKP	In-Ko-Pah, Jac	91.97	50	P	P	21 04 46.4	+1.2
	baz=309,SNR=12						
IKP				S	S	21 15 50.2	+2.9
	baz=309						
PPT	Papeete	91.98	109	LR	LR	21 43 54.8	
	comp=Z,13µm,18.1s,baz=296,slow=34						
SWSC	Sam W. Stewart	91.99	49	P	P	21 04 45.8	+0.6
	baz=309,SNR=7.9						
SWSC				S	S	21 15 50.7	+3.5
	baz=309						
PPT2	Papeete2	91.99	109	*e*P	P	21 04 48.6	+3.2
	comp=Z,113nm,1.5s						
PPT2	Papeete2	91.99	109	*e*S	S	21 15 47.1	-0.6
	comp=Z,24µm,29.2s						
PPT2	Papeete2	91.99	109	*e*LQ	LQ	21 29 46.5	
	comp=Z,80µm,28.0s						
PPT2				*e*LR	LR	21 34 11.6	
	comp=Z,62µm,27.0s						
RMX	La Rumorosa	92.02	50	P	P	21 04 38.6	-6.9
PAE	Paea	92.03	109	*e*P	P	21 04 48.5	+3.1
	comp=Z,30nm,1.4s						
PMOR	Pomariorio Ree	92.03	106	*e*P	P	21 04 48.1	+2.6
	comp=Z,71nm,0.9s						
TIAR	Tiarei	92.16	109	*e*P	P	21 04 49.3	+3.2
	comp=Z,11nm,1.4s						
PDMCI	Parker Dam,Lak	92.19	48	P	P	21 04 46.5	+0.4
	baz=310,SNR=19						
PDMCI				S	S	21 15 51.2	+2.1
	baz=310						
N23A	Red Feather La	92.53	38	P	P	21 04 47.3	-0.6
	baz=316,SNR=36						
N23A				S	S	21 15 51.3	-1.1
	baz=316						
GLA	Glamis	92.55	49	P	P	21 04 47.9	0.0
	baz=310,SNR=15						
GLA				S	S	21 15 53.7	+1.3
	baz=310						
KEST	Kesra	92.67	315	P	P	21 04 46.5	-1.9
	comp=Z,15nm,1.1s,baz=247,slow=2.0,SNR=12						
KEST				LR	LR	21 50 55.9	
	comp=Z,137µm,18.5s,baz=331,slow=38						
MAHO	Mahon	92.77	321	Pdif	P	21 04 49.0	+0.4
MAHO	Mahon	92.77	321	PP	PP	21 08 30.9	+0.9
WUAZ	Wupatki	93.12	45	P	P	21 04 50.0	-0.6
	baz=312,SNR=30						
SMCO	Snowmass	93.18	40	IAMs_20	IAMs_20	21 53 37.2	
	comp=Z,54µm,18.0s						
SUSD	Miller	93.35	32	P	P	21 04 51.5	+0.2
	baz=320						
ISCO	Idaho Springs	93.48	39	P	P	21 04 52.7	+0.3
	baz=316,SNR=24						
ISCO				S	S	21 16 04.3	+3.3
	baz=316						
ISCO	Idaho Springs	93.48	39	IAMs_20	IAMs_20	21 48 26.1	
	comp=Z,52µm,19.0s						
SCHQ	Schefferville	93.61	9	P	P	21 04 49.5	-2.8
	comp=Z,9.0nm,0.9s,baz=270,slow=4.0,SNR=2.3						
SCHQ				LR	LR	21 49 06.1	
	comp=Z,94µm,20.1s,baz=350,slow=37						
SCHQ	Schefferville	93.61	9	P	P	21 04 45.4	-6.9
SCHQ				IAmb	IAmb	21 05 16.2	
	comp=Z,418nm,2.5s						
EYMN	Ely	93.64	26	P	P	21 04 53.5	+1.0
	baz=326,SNR=7.6						
EYMN				S	S	21 15 59.5	-2.0
	baz=326						
EYMN	Ely	93.64	26	IAMs_20	IAMs_20	21 46 25.6	
	comp=Z,73µm,21.0s						
MVCO	Mesa Verde	93.68	42	P	P	21 04 53.3	+0.1
	baz=314,SNR=32						
MVCO	Mesa Verde	93.68	42	IAMs_20	IAMs_20	21 50 18.8	
	comp=Z,31µm,18.0s						
S22A	4UR Ranch, Cre	94.27	41	P	P	21 04 55.4	-0.6
	baz=315,SNR=23						
Q24A	Divide	94.33	39	P	P	21 04 57.4	+1.1
	baz=316,SNR=9.8						
Q24A				S	S	21 16 11.1	+2.6
	baz=316						
W18A	Petrified Fore	94.38	44	P	P	21 04 57.1	+0.6
	baz=313						
W18A				S	S	21 16 13.1	+4.3
	baz=313						
VOI	Vohitsoka	94.44	247	IAMs_20	IAMs_20	21 49 29.1	
	comp=Z,41µm,18.0s						
214A	Organ Pipe Nat	94.56	49	P	P	21 04 57.4	+0.3
	baz=311,SNR=22						
ECSD	EROS Data Cent	94.96	31	P	P	21 04 58.9	+0.2
	baz=322,SNR=15						
ECSD	EROS Data Cent	94.96	31	IAMs_20	IAMs_20	21 51 47.7	
	comp=Z,59µm,19.0s						
SDCO	Great Sand Dun	95.01	40	P	P	21 05 00.8	+1.4
	baz=316,SNR=39						
SDCO				S	S	21 16 18.7	+4.3
	baz=316						
SDCO	Great Sand Dun	95.01	40	IAMs_20	IAMs_20	21 53 01.6	
	comp=Z,46µm,18.0s						
TBI	Tubuai	95.08	114	*e*S	S	21 16 13.8	-0.7
	comp=Z,27µm,28.0s						
TBI	Tubuai	95.08	114	*e*LQ	LQ	21 31 32.8	
	comp=Z,60µm,38.8s						
TBI				*e*LR	LR	21 35 37.6	
	comp=Z,43µm,32.0s						
SPMN	Marine on St.	95.38	28	P	P	21 05 02.2	+1.6
	baz=325						
TAOE	Nuku Hiva Isla	95.43	97	*e*S	S	21 16 16.3	-1.9
	comp=Z,15µm,29.2s						
TAOE	Nuku Hiva Isla	95.43	97	*e*LR	LR	21 35 46.6	
	comp=Z,53µm,23.7s						
TUC	Tucson	95.62	47	P	P	21 05 04.8	+2.8
	baz=312						
TUC				S	S	21 16 27.4	+7.9
	baz=312						
TUC	Tucson	95.62	47	IAMs_20	IAMs_20	21 48 24.4	
	comp=Z,35µm,20.0s						
KSCO	Kaye Shedlock'	95.64	38	P	P	21 05 04.2	+2.1
	baz=318,SNR=5.5						
KSCO				S	S	21 16 20.7	+1.2
	baz=318						
DODT	Dodoma, Tanzan	95.69	266	*i* P	P	21 05 05.3	+2.7
T25A	Trinidad	96.05	40	P	P	21 05 06.2	+2.1
	baz=316						
T25A				S	S	21 16 25.9	+2.6
	baz=316						
T25A	Trinidad	96.05	40	IAMs_20	IAMs_20	21 50 27.1	
	comp=Z,52µm,20.0s						
BGNE	Belgrade	96.07	34	P	P	21 05 04.0	+0.1
	baz=321						
UCM	Universidad Co	96.37	325	Pdif	P	21 05 05.7	+0.5
UCM	Universidad Co	96.37	325	PP	PP	21 09 00.5	+2.5
ANMO	Albuquerque	96.44	43	*de*P	P	21 05 06.6	+0.7
ANMO				pmax	pmax		
	comp=Z,148nm,2.9s						
ANMO	Albuquerque	96.44	43	P	P	21 05 08.8	+3.0
	baz=315						
ANMO				S	S	21 16 31.4	+4.7
	baz=315						
ANMO	Albuquerque	96.44	43	IAMs_20	IAMs_20	21 56 19.9	
	comp=Z,56µm,19.0s						
Y22D	IRIS PASSCAL I	96.78	44	P	P	21 05 11.5	+4.1
	baz=314						
Y22D	IRIS PASSCAL I	96.78	44	IAMs_20	IAMs_20	21 55 41.9	
	comp=Z,38µm,19.0s						
PBRG	Braganca	96.86	328	*e*P	P	21 05 14.7	+7.3
	comp=Z,33nm,1.8s						
PBRG	Braganca	96.86	328	*e*PP	PP	21 09 00.8	-0.9
MBAR	Mbarara	97.18	274	IAMs_20	IAMs_20	21 57 04.3	
	comp=Z,49µm,19.0s						
MBAR	Mbarara	97.18	274	*i* P	Pdif	21 05 18.5	+8.9
ESDC	Sonseca Array	97.21	325	P	P	21 05 06.8	-2.3
	comp=Z,3.8nm,1.0s,baz=36,slow=5.6,SNR=11						
ESDC				PP	PP	21 09 05.6	+1.1
	comp=Z,13nm,1.0s,baz=38,slow=7.6,SNR=4.7						
ESDC				LR	LR	21 53 47.3	
	comp=Z,182µm,18.1s,baz=345,slow=38						
CART	Cartagena	97.28	322	Pdif	P	21 04 58.9	-10
CART	Cartagena	97.28	322	PP	PKiKP	21 09 29.3	-15
CBKS	Cedar Bluff	97.29	36	P	Pdif	21 05 10.0	+0.5
	baz=320						
CBKS				S	S	21 16 33.8	+0.3
	baz=320						
121A	Cookes Peak, D	97.33	45	P	Pdif	21 05 12.7	+2.7
	baz=314						
PGAV	Gavieira, Arco	97.41	329	*e*P	Pdif	21 05 13.5	+3.4
PGAV	Gavieira, Arco	97.41	329	*e*PP	PP	21 09 06.2	+0.2
PGAV				*e*S	SKSac	21 15 57.5	+10
PGAV				*i* LQ	LQ	21 18 06.1	
PGAV				*e*SS	SS	21 23 21.0	+10
PGAV	Gavieira, Arco	97.41	329	*e*LR	LR	21 38 41.6	
	comp=Z,164µm,18.0s						
MVO	Moncorvo	97.50	328	*e*P	Pdif	21 05 13.8	+3.4
	comp=Z,42nm,1.5s						
MVO	Moncorvo	97.50	328	*e*PP	PP	21 09 10.3	+3.7
MVO				*e*S	SKSac	21 15 56.6	+8.5
MVO				*i* LQ	LQ	21 18 11.2	
MVO				*e*SS	SS	21 23 17.2	+4.6
MVO	Moncorvo	97.50	328	*e*LR	LR	21 41 59.4	
	comp=Z,303µm,18.0s						
POLO	Lamas de Olo	97.68	329	*e*P	P	21 05 08.7	-2.5
	comp=Z,22nm,2.1s						
POLO	Lamas de Olo	97.68	329	*e*PP	PP	21 09 11.4	+3.4
PVIS	Viseu	98.25	328	*e*P	Pdif	21 05 15.6	+1.9
PVIS	Viseu	98.25	328	*e*PP	PP	21 09 20.4	+8.0
JFWS	Jewell Farm	98.33	28	IAMs_20	IAMs_20	21 51 00.6	
	comp=Z,61µm,20.0s						
MTE	Manteigas	98.34	328	*e*P	Pdif	21 05 17.8	+3.6
	comp=Z,53nm,2.0s						
MTE	Manteigas	98.34	328	*e*PP	PP	21 09 16.4	+3.3
MTE				*e*S	SKSac	21 16 00.9	+8.5
MTE				*i* LQ	LQ	21 18 21.0	
MTE				*e*SS	SS	21 23 43.0	+18
MTE	Manteigas	98.34	328	*e*LR	LR	21 42 08.7	
	comp=Z,357µm,16.0s						
KSU1	Kansas State U	98.61	34	S	S	21 16 44.2	-0.5
	baz=322						
EPT	El Paso	98.64	45	IAMs_20	IAMs_20	21 57 05.1	
	comp=Z,43µm,19.0s						
PCBR	Castelo Branco	98.76	327	*e*PP	PP	21 09 23.9	+7.7
GLMI	Grayling	98.78	23	IAMs_20	IAMs_20	21 49 06.3	
	comp=Z,63µm,21.0s						
COI	Coimbra	98.89	328	*e*P	Pdif	21 05 26.5	+10
COI	Coimbra	98.89	328	*e*PP	PP	21 09 25.5	+8.3
PMRV	Marv??o	99.05	327	*e*P	Pdif	21 05 19.6	+2.3
PMRV	Marv??o	99.05	327	*e*PP	PP	21 09 21.3	+2.8
PMRV				*e*S	SKSac	21 15 59.0	+3.1
PMRV				*i* LQ	LQ	21 18 25.4	
PMRV				*e*SS	SS	21 23 39.8	+5.5
PMRV	Marv??o	99.05	327	*e*LR	LR	21 42 56.1	
	comp=Z,308µm,20.0s						
PCAS	Casmilo, Conde	99.06	328	*e*P	Pdif	21 05 16.8	-0.5
PCAS	Casmilo, Conde	99.06	328	*e*PP	PP	21 09 21.6	+3.1
AMTX	Amarillo	99.20	40	P	Pdif	21 05 22.7	+4.5
	baz=318						
AMTX	Amarillo	99.20	40	IAMs_20	IAMs_20	21 52 45.6	
	comp=Z,40µm,18.0s						
MNTX	Cornudas Mount	99.37	44	Pdiff	Pdif	21 05 21.2	+2.4
	baz=315,SNR=6.4						
MNTX	Cornudas Mount	99.37	44	IAMs_20	IAMs_20	21 58 27.5	
	comp=Z,52µm,18.0s						
KS21	Milan North St	99.51	36	IAMs_20	IAMs_20	21 56 57.3	
	comp=Z,55µm,18.0s						
U32A	Winter Ranch,	99.52	37	IAMs_20	IAMs_20	21 57 28.7	
	comp=Z,45µm,18.0s						
PESTR	Estremoz	99.59	327	*e*P	Pdif	21 05 23.4	+3.7
PESTR	Estremoz	99.59	327	*e*PP	PP	21 09 27.3	+4.7
OK032	Salt Plains WL	99.60	36	IAMs_20	IAMs_20	21 53 07.9	
	comp=Z,45µm,19.0s						
KS20	Mayfield South	99.60	36	IAMs_20	IAMs_20	21 52 08.9	
	comp=Z,47µm,18.0s						
PSBE	So Bento	99.63	328	*e*P	Pdif	21 05 29.8	+10
PSBE	So Bento	99.63	328	*e*PP	PP	21 09 19.5	-3.4
EMAL	Malaga-Limoner	99.69	324	Pdif	Pdif	21 05 22.1	+2.0
EMAL	Malaga-Limoner	99.69	324	PP	PP	21 09 26.0	+2.6
PMTG	Montargil	99.72	327	*e*P	Pdif	21 05 23.6	+3.4
PMTG	Montargil	99.72	327	*e*PP	PP	21 09 28.8	+5.2
CHAS	Isla Isabel II	99.84	321	Pdif	Pdif	21 05 19.1	-1.7
CHAS	Isla Isabel II	99.84	321	PP	PP	21 09 29.3	+4.7
EVO	Evora	100.05	327	Pdif	Pdif	21 05 23.7	+2.0
EVO	Evora	100.05	327	PP	PP	21 09 32.6	+6.5
EVO	Evora	100.05	327	*e*P	Pdif	21 05 31.1	+9.4
EVO	Evora	100.05	327	*e*PP	PP	21 09 30.6	+4.5
PMAFR	Mafra	100.30	328	*e*P	Pdif	21 05 27.3	+4.5
PMAFR	Mafra	100.30	328	*e*PP	PP	21 09 33.5	+5.5
PBEJ	Beja	100.39	327	*e*PP	PP	21 09 37.3	+8.6
PMST	Lisbon--Monsan	100.43	328	*e*PP	PP	21 09 36.2	+7.3
ZOMB	Zomba	100.57	258	⇓*i*P	Pdif	21 05 28.1	+3.7
PNCL	Nicolau / Gran	100.63	327	*e*P	Pdif	21 05 32.1	+7.8
PNCL	Nicolau / Gran	100.63	327	*e*PP	PP	21 09 33.5	+3.0
MESJ	Messejana	100.70	327	*e*P	Pdif	21 05 30.3	+5.7
MESJ	Messejana	100.70	327	*e*PP	PP	21 09 33.7	+2.7
OK029	Liberty Lake	100.76	37	IAMs_20	IAMs_20	21 58 41.7	
	comp=Z,42µm,19.0s						
PCVE	Castro Verde	100.79	326	*e*P	Pdif	21 05 33.4	+8.4
PCVE	Castro Verde	100.79	326	*e*PP	PP	21 09 33.2	+1.5
PVAQ	Vaqueiros	100.81	326	*e*P	Pdif	21 05 28.5	+3.4
PVAQ	Vaqueiros	100.81	326	*e*PP	PP	21 09 35.6	+3.7
PVAQ				*e*S	Sdif	21 17 00.2	-3.0
PVAQ				*i* LQ	LQ	21 18 43.5	
PVAQ				*e*SS	SS	21 24 07.3	+8.3
PVAQ	Vaqueiros	100.81	326	*e*LR	LR	21 39 56.3	
	comp=Z,120µm,16.0s						
SFS	San Fernando	100.81	324	PP	PP	21 09 38.2	+6.3
CEU	Ceuta	100.84	324	Pdif	Pdif	21 05 27.3	+2.0
CEU	Ceuta	100.84	324	PP	PP	21 09 34.0	+1.9
PVLZ	Peæn de	100.84	322	Pdif	Pdif	21 05 26.7	+1.4
PVLZ	Peæn de	100.84	322	PP	PP	21 09 33.0	+0.9
WMOK	Wichita Mounta	100.88	38	Pdiff	Pdif	21 05 29.7	+4.1
	baz=320,SNR=8.5						
WMOK	Wichita Mounta	100.88	38	IAMs_20	IAMs_20	21 56 23.0	
	comp=Z,47µm,18.0s						
OK031	S. Brethren Rd	100.96	36	IAMs_20	IAMs_20	21 52 59.8	
	comp=Z,50µm,18.0s						
OK030	Cody Creek RV	101.00	36	IAMs_20	IAMs_20	21 53 02.0	
	comp=Z,49µm,18.0s						
PBDV	Barranco-do-Ve	101.05	326	*e*P	Pdif	21 05 36.1	+10
PBDV	Barranco-do-Ve	101.05	326	*e*PP	PP	21 09 36.4	+2.7
PTEO	Sao Teotonio	101.18	327	*e*PP	PP	21 09 40.8	+6.2
AAM	Ann Arbor	101.33	24	IAMs_20	IAMs_20	21 53 43.8	
	comp=Z,61µm,20.0s						
MORF	Marmelete	101.34	327	*e*P	Pdif	21 05 37.5	+10
MORF	Marmelete	101.34	327	*e*PP	PP	21 09 38.5	+2.6
PQI	Presque Isle	101.36	12	IAMs_20	IAMs_20	21 55 51.3	
	comp=Z,67µm,20.0s						
TUL1	Leonard	101.52	36	IAMs_20	IAMs_20	21 53 49.6	
	comp=Z,50µm,20.0s						
PFVI	Vila Bisbo	101.56	327	*e*P	Pdif	21 05 32.0	+3.5
PFVI	Vila Bisbo	101.56	327	*e*PP	PP	21 09 42.0	+4.5
CCM	Cathedral Cave	101.94	31	Pdiff	Pdif	21 05 32.7	+2.6
	baz=326						
CCM	Cathedral Cave	101.94	31	IAMs_20	IAMs_20	21 57 40.4	
	comp=Z,61µm,19.0s						
TXAR	Lajitas Array	102.09	45	P	Pdif	21 05 29.5	-1.6
	comp=Z,3.5nm,0.7s,baz=280,slow=1.6,SNR=12						
TXAR				PP	PP	21 09 37.5	-4.5
	comp=Z,10nm,1.2s,baz=294,slow=4.0,SNR=5.2						
TXAR				PKKP	PKKPdf	21 21 37.5	-2.5
	comp=Z,0.4nm,0.6s,baz=152,slow=6.1,SNR=3.0						
TXAR	Lajitas Array	102.09	45	Pdif	Pdif	21 05 33.0	+2.0
TETE	Tete	102.44	259	⇓*i*P	Pdif	21 05 30.8	-1.7
IFR	Ifrane	102.55	322	Pdif	Pdif	21 05 33.1	-0.1
IFR	Ifrane	102.55	322	PP	PKiKP	21 09 48.5	-5.9
U40A	Yellville	102.59	33	Pdiff	Pdif	21 05 36.6	+3.5
	baz=324,SNR=7.4						
ERPA	Erie	102.71	22	IAMs_20	IAMs_20	21 53 25.3	
	comp=Z,66µm,21.0s						
X37A	Clayton	102.77	36	IAMs_20	IAMs_20	21 54 20.7	
	comp=Z,50µm,19.0s						
LBNH	Lisbon	102.92	15	IAMs_20	IAMs_20	21 53 36.5	
	comp=Z,59µm,20.0s						
M53A	WI Miller and	103.11	22	IAMs_20	IAMs_20	21 55 33.7	
	comp=Z,55µm,18.0s						
EMMW	East Machias	103.36	12	IAMs_20	IAMs_20	22 00 00.2	
	comp=Z,48µm,19.0s						
M54A	Oil Creek Stat	103.37	22	IAMs_20	IAMs_20	21 53 55.6	
	comp=Z,62µm,20.0s						
JCT	Junction City	103.53	42	IAMs_20	IAMs_20	22 01 05.4	
	comp=Z,50µm,20.0s						
MIAR	Mount Ida	103.70	35	Pdiff	Pdif	21 05 39.3	+1.3
	baz=324						
MIAR	Mount Ida	103.70	35	IAMs_20	IAMs_20	21 55 11.3	
	comp=Z,53µm,19.0s						
W41B	Gary Mavity, V	103.84	34	Pdiff	Pdif	21 05 40.9	+2.3
	baz=325						
AVE	Averroes	103.91	323	Pdif	Pdif	21 05 42.4	+3.4
AVE	Averroes	103.91	323	PP	PKiKP	21 09 59.5	+2.9
O53A	New Philadelph	104.00	23	IAMs_20	IAMs_20	21 54 14.3	
	comp=Z,58µm,20.0s						
435B	Jarrell	104.55	40	IAMs_20	IAMs_20	22 00 08.2	
	comp=Z,46µm,19.0s						
QUA2	Belchertown	104.68	16	IAMs_20	IAMs_20	21 55 01.1	
	comp=Z,58µm,20.0s						
NATX	Nacogdoches	105.36	37	IAMs_20	IAMs_20	21 52 25.5	
	comp=Z,37µm,20.0s						
WSPT	Westport, CT	105.48	17	IAMs_20	IAMs_20	21 57 50.5	
	comp=Z,61µm,19.0s						
PLAL	Pickwick Lake	105.91	31	IAMs_20	IAMs_20	21 57 14.4	
	comp=Z,61µm,19.0s						
HKT	Hockley	106.15	39	IAMs_20	IAMs_20	22 02 40.3	
	comp=Z,52µm,18.0s						
TZTN	Tazewell	106.43	27	IAMs_20	IAMs_20	21 58 48.0	
	comp=Z,57µm,20.0s						
LSZ	Lusaka	106.59	262	IAMs_20	IAMs_20	21 54 51.7	
	comp=Z,43µm,20.0s						
KVTX	Kingsville	106.83	42	IAMs_20	IAMs_20	22 02 15.9	
	comp=Z,38µm,18.0s						
PMPST	Porto Santo, M	108.34	330	*e*PP	PP	21 10 31.6	+3.8
PMPS	Porto Santo	108.36	330	*e*PP	PP	21 10 34.3	+6.4
PMAR	Madeira	108.89	330	*e*PP	PP	21 10 36.2	+4.2
PMOZ	Porto Moniz, M	108.93	330	*e*PP	PP	21 10 35.7	+3.5
PMOZ				*e*S	Sdif	21 18 18.1	+6.8
PMOZ				*i* LQ	LQ	21 20 15.7	
PMOZ				*e*SS	SS	21 26 05.7	+15
PMOZ	Porto Moniz, M	108.93	330	*e*LR	LR	21 43 56.3	
	comp=Z,73µm,20.0s						
BRAL	Brewton	109.58	32	IAMs_20	IAMs_20	21 59 23.7	
	comp=Z,46µm,20.0s						
MAW	Mawson	109.67	202	PKKPbc	PKKPbc	21 21 12.8	+0.8
	comp=Z,1.6nm,0.6s,baz=17,slow=6.4,SNR=3.8						
NHSC	New Hope	110.75	26	IAMs_20	IAMs_20	22 01 23.4	
	comp=Z,50µm,18.0s						
UNM	Universidad Na	112.11	49	IAMs_20	IAMs_20	22 00 40.5	
	comp=Z,36µm,19.0s						
TORD	Torodi Ar. Bea	112.91	302	PKiKP	PKiKP	21 10 12.7	-1.2
	comp=Z,5.6nm,1.0s,baz=12,slow=2.3,SNR=8.1						
TORD				PKKPbc	PKKPbc	21 21 00.1	0.0
	comp=Z,1.2nm,1.0s,baz=290,slow=2.7,SNR=2.8						
BOSA	Boshof	114.80	250	PKP	PKiKP	21 10 16.5	-0.7
	comp=Z,1.9nm,0.8s,baz=314,slow=3.2,SNR=3.9						
BBSR	BB Station	115.84	13	IAMs_20	IAMs_20	22 07 22.6	
	comp=Z,28µm,19.0s						
CMIG	Matias Romero	116.51	47	PKP	PKiKP	21 10 20.8	+0.1
	comp=Z,6.6nm,0.9s,baz=17,slow=4.9,SNR=4.7						
TSUM	Tsumeb	117.39	263	IAMs_20	IAMs_20	22 05 12.0	
	comp=Z,37µm,18.0s						
SYO	Syowa Base	118.13	204	⇑*e*Pdiff	Pdif	21 06 37.4	-3.7
SYO	Syowa Base	118.13	204	⇑*e*pPdiff	Pdif	21 06 40.4	-0.7
SYO	Syowa Base	118.13	204	⇑*e*sPdiff	Pdif	21 06 45.6	+4.5
SYO	Syowa Base	118.13	204	⇓*e*P	PKiKP	21 10 25.4	+3.2
SYO	Syowa Base	118.13	204	⇓*e*P	PKiKP	21 10 28.0	+5.8
SUR	Sutherland	119.73	248	IAMs_20	IAMs_20	22 05 30.4	
	comp=Z,32µm,19.0s						
DBIC	Dimbokro	122.01	302	PKP	PKiKP	21 10 31.1	-0.5
	comp=Z,13nm,0.7s,baz=53,slow=2.7,SNR=13						
DBIC				PP	PP	21 12 03.3	-1.8
	comp=Z,11nm,1.1s,baz=40,slow=6.8,SNR=1.8						
DBIC	Dimbokro	122.01	302	PKPdf	PKiKP	21 10 34.0	+2.5
KIC	Kosan Boka	122.13	302	*e*PKP2	PKPdf	21 10 29.9	-1.8
TIC	Toumodi	122.15	302	*e*PKP2	PKiKP	21 10 31.0	-0.9
LIC	Lamto	122.44	302	*e*PKP2	PKPdf	21 10 31.2	-1.0
	comp=Z,121nm,1.3s						
SNET	Serv Nac Est T	122.61	45	IAMs_20	IAMs_20	22 13 04.5	
	comp=Z,28µm,18.0s						
TGUH	Tegucigalpa,Un	123.50	43	IAMs_20	IAMs_20	22 11 38.5	
	comp=Z,29µm,20.0s						
GRTK	Grand Turk	124.54	23	IAMs_20	IAMs_20	22 13 04.4	
	comp=Z,34µm,18.0s						
GTBY	Guantanamo Bay	124.55	28	IAMs_20	IAMs_20	22 07 20.9	
	comp=Z,34µm,22.0s						
MTDJ	Mount Denham	125.05	31	IAMs_20	IAMs_20	22 08 26.6	
	comp=Z,43µm,20.0s						
JTS	Las Juntas de	127.85	44	IAMs_20	IAMs_20	22 13 51.8	
	comp=Z,29µm,20.0s						
HDC	Heredia	128.58	43	IAMs_20	IAMs_20	22 12 55.8	
	comp=Z,38µm,20.0s						
SJG	San Juan	129.25	18	*e*P	PKiKP	21 10 46.0	+0.2
SJG	San Juan	129.25	18	IAMs_20	IAMs_20	22 08 29.8	
	comp=Z,34µm,22.0s						
SMRT	St. Maarten	130.06	15	IAMs_20	IAMs_20	22 11 11.1	
	comp=Z,34µm,21.0s						
SABA	Saba	130.44	15	IAMs_20	IAMs_20	22 07 17.1	
	comp=Z,48µm,22.0s						
SEUS	St. Eustatius	130.62	15	IAMs_20	IAMs_20	22 11 37.0	
	comp=Z,40µm,20.0s						
ANWB	Willy Bob	130.70	13	IAMs_20	IAMs_20	22 09 40.1	
	comp=Z,26µm,20.0s						
SNAA	Sanae	131.66	198	PKPdf	PKPdf	21 10 45.2	-3.0
SNAA	Sanae	131.66	198	PKHKP	PKPpre	21 10 30.4	
SNAA				MLR	MLR		
	comp=Z,16µm,21.0s						
SNAA	Sanae	131.66	198		PKPpre	21 10 30.4	
SNAA				PKPdf	PKPdf	21 10 41.4	-6.8
BCIP	Isla Barro Col	131.68	39	IAMs_20	IAMs_20	22 10 08.5	
	comp=Z,27µm,22.0s						
PAYG	Puerto Ayora	132.38	58	IAMs_20	IAMs_20	21 59 18.5	
	comp=Z,28µm,22.0s						
SMRC	Santa Marta, M	132.75	31	*e*P	PKiKP	21 10 55.5	+2.5
URIC	Uribia, Colomb	133.23	28	*e*P	PKiKP	21 10 56.5	+2.5
VNA2	Neumayer--Watz	133.30	198	PKPdf	PKPdf	21 10 48.9	-2.2
SJCC	San Jacinto, C	133.43	33	*e*P	PKiKP	21 10 57.5	+3.0
CAPC	Capurgana	133.44	37	*e*P	PKiKP	21 10 57.5	+3.0
SVN	Savane Anatole	133.58	13	IAMs_20	IAMs_20	22 15 19.5	
	comp=Z,26µm,20.0s						
FDF	Fort de France	133.69	13	IAMs_20	IAMs_20	22 19 34.4	
	comp=Z,31µm,20.0s						
VNA1	Neumayer--Stat	133.69	198	PKPdf	PKPdf	21 10 50.5	-1.3
VNA3	Neumayer Olymp	133.71	197	PKPdf	PKPdf	21 10 49.3	-2.6
ARGC	Ariguani, Magd	133.90	32	*e*P	PKiKP	21 10 56.1	+0.7
HATO	Hato, Curacao	133.95	24	IAMs_20	IAMs_20	22 10 16.6	
	comp=Z,33µm,20.0s						
LL6C	La Loma 6 Bece	134.44	31	*e*P	PKiKP	21 10 58.4	+1.9
PTAC	Punta Ardita,	134.45	38	*e*P	PKiKP	21 10 58.4	+1.9
LL1C	La Loma 1 Cana	134.49	32	*e*P	PKiKP	21 11 00.3	+3.8
MAPC	Malpelo	134.83	45	*e*P	PKiKP	21 10 58.4	+1.1
SMLC	San Martn de	134.91	33	*e*P	PKiKP	21 10 59.4	+2.0
UREC	San Jos de Ur	135.11	35	*e*P	PKiKP	21 10 59.4	+1.5
DBBC	Dabeiba	135.40	37	*e*P	PKiKP	21 11 01.3	+2.7
BBGH	Gun Hill	135.53	12	IAMs_20	IAMs_20	22 09 36.0	
	comp=Z,34µm,21.0s						
ZARC	Zaragoza, Cauc	135.67	35	*e*P	PKiKP	21 10 59.4	+0.4
OCAC	Ocana	135.75	32	*e*P	PKiKP	21 10 59.4	+0.1
SHEL	Horse Pasture	135.98	279	IAMs_20	IAMs_20	22 21 33.8	
	comp=Z,31µm,19.0s						
GRGR	Grenville	136.11	15	IAMs_20	IAMs_20	22 12 22.2	
	comp=Z,45µm,22.0s						
SDV	Santo Domingo	136.33	28	*e*P	PKiKP	21 10 59.4	-1.2
SDV	Santo Domingo	136.33	28	*e*P	PKiKP	21 10 59.0	-1.5

SDV	Santo Domingo	136.33	28	PKPdf	PKPdf	21 10 49.9	-9.0
HELC	Santa Helena	136.45	36	*e*P	PKiKP	21 11 00.3	-0.7
CBOC	Ciudad Bolivar	136.48	37	*e*P	PKiKP	21 11 04.1	+3.3
PIZC	Pizarro, Choco	136.52	40	*e*P	PKiKP	21 11 02.2	+1.5
BRRC	Barranca, Sant	136.56	33	*e*P	PKiKP	21 11 00.3	-0.5
PLMC	San Jos del P	137.15	38	*e*P	PKPdf	21 10 59.4	-0.9
BARC	Barichara	137.26	33	*e*P	PKiKP	21 11 03.2	+0.7
NORC	Norcasia	137.32	36	*e*P	PKiKP	21 11 01.3	-1.1
GUY2C	Guyana, Caldas	137.36	37	*e*P	PKiKP	21 11 02.2	-0.8
SPBC	San Pablo de B	137.65	35	*e*P	PKiKP	21 11 03.2	+0.1
YOTC	Yotoco, Valle	137.88	39	*e*P	PKiKP	21 11 02.2	-1.4
RUSC	La Rusia	137.91	33	*e*P	PKiKP	21 11 03.2	-1.0
ANIL	Santa Ana	137.96	38	*e*P	PKiKP	21 11 03.2	-0.8
TAMC	Tame, Arauca	138.03	31	*e*P	PKiKP	21 11 03.2	-0.7
ROSC	El Rosal	138.22	36	*e*P	PKiKP	21 11 05.1	+0.4
TUMC	Tumaco	138.29	44	*e*P	PKiKP	21 11 03.2	-1.1
ORTC	Ortega, Tolima	138.53	38	*e*P	PKiKP	21 11 03.2	-1.7
CHIC	Chingaza	138.69	35	*e*P	PKiKP	21 11 05.1	-0.6
PRAC	Prado	138.89	37	*e*P	PKiKP	21 11 05.1	-0.5
MARP	Paez Belalcaza	139.05	40	*e*P	PKPdf	21 10 58.4	-5.6
PCON	Cinco Dias	139.23	41	*e*P	PKPdf	21 11 03.2	-1.5
SOTA	Rioblanco	139.27	41	*e*P	PKPdf	21 11 04.1	-0.5
PAC1	Pacto, Paraso	139.49	45	*e*P	PKPdf	21 11 04.1	-0.5
GCUF	Volcan Galeras	139.59	43	*e*P	PKiKP	21 11 07.0	-0.6
CUSE	Cuicocha Este	139.69	45	*e*P	PKiKP	21 11 06.0	-1.7
OTAV	Otavalo	139.72	45	*e*P	PKPdf	21 11 01.3	-4.2
OTAV	Otavalo	139.72	45	*e*P	PKPdf	21 11 05.8	+0.3
OTAV	Otavalo	139.72	45	IAMs_20	IAMs_20	22 19 30.4	
	comp=Z,25µm,22.0s						
TULM	Tulcn-Chalpat	139.74	44	*e*P	PKPdf	21 11 03.2	-2.3
PTGC	Puerto Gaitan,	139.84	33	*e*P	PKPdf	21 11 05.1	0.0
GARC	Garzon, Huila	139.84	39	*e*P	PKiKP	21 11 08.9	+1.1
MACC	Macarena, Meta	140.76	37	*e*P	PKPdf	21 10 58.4	-8.4
PTLC	Puerto Leguiza	141.90	40	*e*P	PKPdf	21 11 02.2	-6.6
ATAH	Atahualpa	145.33	53	PKPbc	PKPbc	21 11 13.8	-1.3
	comp=Z,110nm,1.2s,baz=326,slow=2.1,SNR=7.4						
BOAV	Boa Vista	145.77	17	*e*P	PKPdf	21 11 14.9	-0.7
TBTG	Tabatinga, AM	148.18	37	*e*P	PKiKP	21 11 23.2	-1.4
TBTG	Tabatinga, AM	148.18	37	*e*P	PKPdf	21 11 19.8	+0.2
PTGA	Pitinga	148.92	17	PKPbc	PKPbc	21 11 22.1	-2.7
	comp=Z,90nm,1.1s,baz=346,slow=4.1,SNR=19						
PTGA	Pitinga	148.92	17		PKPdf	21 11 21.7	+0.9
CZSB	Cruzeiro do Su	149.48	46	*e*P	PKPdf	21 11 21.1	-0.6
MCPB	Macapa, AP	149.66	2	*e*P	PKPdf	21 11 20.5	-1.5
NNA	Nana	149.81	57	PKPbc	PKPbc	21 11 24.4	-2.5
	comp=Z,157nm,0.8s,baz=321,slow=2.2,SNR=11						
NNA	Nana	149.81	57	PKIKP	PKPdf	21 11 15.9	-6.3
NNA				MLR	MLR		
	comp=Z,16µm,19.0s						
NNA	Nana	149.81	57	PKPdf	PKPdf	21 11 15.9	-6.3
NNA	Nana	149.81	57	IAMs_20	IAMs_20	22 26 25.4	
	comp=Z,16µm,19.0s						
NBMO	Morrinhos-CE	150.62	337	*e*P	PKPdf	21 11 24.1	+0.6
NBCL	Cascavel-CE	150.82	333	*e*P	PKPdf	21 11 24.1	+0.3
MALB	Monte Alegre	151.01	6	*e*P	PKPdf	21 11 23.7	-0.4
MACA	Manacapuru-AM	151.05	20	*e*P	PKPdf	21 11 25.1	+0.9
MACA	Manacapuru-AM	151.05	20		PKPdf	21 11 17.8	-6.4
ROSB	Rosrio	151.38	345	*e*P	PKPdf	21 11 24.7	0.0
NBPV	Pedro Velho	151.44	325	*e*P	PKPdf	21 11 25.2	+0.5
TMAB	Tom-Au,PA,Br	151.51	353	*e*P	PKPdf	21 11 26.7	+1.8
NBPA	Parau_RN	151.70	329	*e*P	PKPdf	21 11 25.7	+0.5
NBPS	Pedro II - PI	152.09	339	*e*P	PKPdf	21 11 26.9	+1.1
NBPB	Pedra_Branca-C	152.53	334	*e*P	PKPdf	21 11 27.1	+0.7
NBLV	Livramento - P	153.04	327	*e*P	PKPdf	21 11 26.8	-0.4
NBRF	Rio Formoso -	153.28	322	*e*P	PKPdf	21 11 27.2	-0.2
ITTB	Itaituba	153.31	10	*e*P	PKPdf	21 11 28.1	+0.6
NBMA	Muriti-CE	153.86	331	*e*P	PKPdf	21 11 29.4	+1.0
HOPE	Hope Point	154.29	200	IAMs_20	IAMs_20	22 20 50.1	
	comp=Z,21µm,22.0s						
NBAN	Anadia - AL	154.71	323	*e*P	PKPdf	21 11 30.4	+0.9
ETMB	Extrema	154.86	37	*e*P	PKPdf	21 11 30.8	+1.2
PRPB	Parauapebas	155.40	357	*e*P	PKPdf	21 11 29.7	-0.8
SAML	Samuel	155.53	30	PKIKP	PKPdf	21 11 22.5	-8.1
SAML				MLR	MLR		
	comp=Z,755µm,21.0s						
SAML	Samuel	155.53	30	PKPdf	PKPdf	21 11 22.5	-8.1
NPGB	Novo Progresso	156.00	10	*e*P	PKPdf	21 11 32.5	+1.3
NBLA	Lagarto - SE	156.61	325	*e*P	PKPdf	21 11 32.5	+0.6
NBPN	Ponto Novo - B	157.59	330	*e*P	PKPdf	21 11 33.8	+0.6
SMTB	Santa Maria do	157.85	350	*e*P	PKPdf	21 11 38.3	+4.7
COYC	Coyhaique	158.11	138	IAMs_20	IAMs_20	22 23 49.3	
	comp=Z,13µm,19.0s						
EFI	East Falkland	158.60	168	IAMs_20	IAMs_20	22 37 47.5	
	comp=Z,14µm,20.0s						
PB12	IPOC Station P	158.87	59	PKPdf	PKPdf	21 11 27.3	-7.5
PB12					PKPab	21 12 00.5	-10
PB12				IAMs_20	IAMs_20	22 28 24.7	
	comp=Z,23µm,22.0s						
PB16	IPOC Station P	159.29	57	IAMs_20	IAMs_20	22 40 21.6	
	comp=Z,23µm,22.0s						
CLDB	Colider	159.67	13	*e*P	PKPdf	21 11 37.3	+1.5
GDU01	Guandu, BA	159.83	325	*e*P	PKPdf	21 11 37.1	+1.3
PB11	IPOC Station P	160.07	61	IAMs_20	IAMs_20	22 35 10.8	
	comp=Z,27µm,22.0s						
PDRB	Porto dos Gac	160.19	16	*e*P	PKPdf	21 11 38.7	+2.4
VILB	Vilhena	160.37	27	*e*P	PKPdf	21 11 38.1	+1.6
NBIT	Itapeh - BA	160.79	323	*e*P	PKPdf	21 11 39.0	+2.1
PEXB	Peixe	161.14	351	*e*P	PKPdf	21 11 38.8	+1.5
CMC01	Camacan, BA	161.19	322	*e*P	PKPdf	21 11 39.1	+1.8
SNDB	Serra Nova Dou	161.21	0	*e*P	PKPdf	21 11 38.7	+1.3
PLCA	Paso Flores	161.55	128	PKP	PKPdf	21 11 38.3	+1.2
	comp=Z,30nm,1.4s,baz=265,slow=3.3,SNR=6.7						
PLCA	Paso Flores	161.55	128	PKIKP	PKPdf	21 11 39.2	+2.1
PLCA	Paso Flores	161.55	128	*e*P	PKPdf	21 11 39.0	+1.9
PLCA	Paso Flores	161.55	128		PKPdf	21 11 39.1	+2.1
LVC	Limon Verde	162.24	67	*e*P	PKPdf	21 11 39.3	+0.5
SIV	San Ignacio	162.70	33	PKP	PKPdf	21 11 37.4	-1.5
	comp=Z,3.7nm,0.8s,baz=351,slow=1.8,SNR=8.8						
SIV				PP	PP	21 16 11.5	+0.6
	comp=Z,16nm,1.0s,baz=358,slow=6.0,SNR=7.8						
JANB	Januaria	163.03	336	*e*P	PKPdf	21 11 41.6	+2.3
PTLB	Pontes e Lacer	163.05	27	*e*P	PKPdf	21 11 40.8	+1.7
BDFB	Brasilia	164.56	348	PKP	PKPdf	21 11 39.4	-1.3
	comp=Z,5.1nm,0.9s,baz=287,slow=17,SNR=3.2						
BDFB				PKPab	pPKPab	21 12 36.4	-2.2
	comp=Z,27nm,1.0s,baz=39,slow=3.2,SNR=7.9						
BDFB	Brasilia	164.56	348		PKPdf	21 11 35.1	-5.7
SALV	Santo Antonio	164.57	16	*e*P	PKPdf	21 11 43.0	+2.4
SJMB	Sao Joao De Ma	164.84	321	*e*P	PKPdf	21 11 42.7	+1.9
RIB01	Linhares ES	164.88	317	*e*P	PKPdf	21 11 42.7	+1.9
ARAG	Araguaiana, MT	164.91	2	*e*P	PKPdf	21 11 43.0	+2.1
DIAM	Diamantina, MG	165.72	329	*e*P	PKPdf	21 11 43.7	+2.0
PP1B	Ponte de Pedra	166.40	15	*e*P	PKPdf	21 11 43.7	+1.6
CAM01	Campos-RJ	167.55	314	*e*P	PKPdf	21 11 44.9	+2.0
DUB01	Friburgo-RJ	168.18	316	*e*P	PKPdf	21 11 45.9	+2.5
BSCB	Bom Sucesso	168.58	328	*e*P	PKPdf	21 11 45.7	+2.0
ITRB	Iturama	168.86	356	*e*P	PKPdf	21 11 44.9	+1.0
AQDB	Aquidauana	168.92	22	*e*P	PKPdf	21 11 45.9	+2.1
VAS01	Vassouras-RJ	168.96	319	*e*P	PKPdf	21 11 44.6	+0.8
MAN01	Angra dos Reis	169.71	319	*e*P	PKPdf	21 11 46.4	+2.1
BB19B	Bebedouro	169.94	345	*e*P	PKPdf	21 11 46.4	+2.0
PCMB	Pacaembu	170.79	360	*e*P	PKPdf	21 11 47.0	+2.1
RCLB	Rio Claro- Sao	170.96	337	*e*P	PKPdf	21 11 47.0	+2.0
VAO	Valinhos	171.28	333	*e*P	PKPdf	21 11 47.0	+1.8
FRTB	Fartura	172.36	348	*e*P	PKPdf	21 11 45.6	-0.1
PET01	Itanhaem-SP	172.56	331	*e*P	PKPdf	21 11 47.1	+1.5
CPUP	Villa Florida	173.02	51	PKP	PKPdf	21 11 44.5	-1.3
	comp=Z,15nm,1.1s,baz=17,slow=1.0,SNR=8.6						
CPUP				PKPab	PKPab	21 13 13.7	+1.0
	comp=Z,12nm,0.9s,baz=308,slow=3.1,SNR=6.0						
CPUP				PP	PP	21 17 06.0	+1.9
	comp=Z,4.1nm,0.9s,baz=341,slow=12,SNR=7.6						
CPUP	Villa Florida	173.02	51	PKIKP	PKPdf	21 11 43.9	-1.9
CPUP	Villa Florida	173.02	51	*e*P	PKPdf	21 11 45.7	0.0
CPUP	Villa Florida	173.02	51		PKPdf	21 11 43.9	-1.9
LPA	La Plata	173.09	128	PKIKP	PKPdf	21 11 38.6	-6.9
PTGB	Pitanga	173.84	7	*e*P	PKPdf	21 11 48.1	+1.9
TIJ01	Guaruva-PR	174.13	340	*e*P	PKPdf	21 11 47.3	+0.9
ITQB	Itaqui	175.22	77	*e*P	PKPdf	21 11 48.9	+2.5
TER01	Tubaro-SC	177.03	321	*e*P	PKPdf	21 11 49.3	+2.4
CNLB	Canela	178.42	347	*e*P	PKPdf	21 11 49.4	+2.3

PRU 13 20:51:51.3±0.0**, 50°.19N**×**18°.65E, h0km, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LANS	Liptovska Anna	1.17	153	*e*PG	Pb	20 52 14.6	+0.2
LANS				*e*SG	Sn	20 52 31.7	+0.1
KRLC	Kraliky	1.21	265	*e*PG	Pg	20 52 13.1	-1.3
KRLC				*e*SG	Sg	20 52 29.2	-0.9
DPC	Dobruska-Polom	1.50	277	*e*PG	Pn	20 52 18.6	-0.9
DPC				*e*SG	Sg	20 52 39.0	-0.5
OSTC	Ostas	1.60	284	*e*SG	Sb	20 52 42.4	-0.1

ATH ***13*** *20:56:49.4, 40°.42N×19°.89E, h14km±3km, ML2.2/5, Error ellipse: s-maj=5.5km s-min=1.4km az=289.0*

TIR ***13*** *20:56:49.5, 40°.35N×20°.03E, h11km, Md2.5, Ml2.5*

IASPEI ***13*** *20:56:50.2±0.9, 40°.35N±0°.02×20°.03E±0°.02, h10km±6km, Error ellipse: s-maj=3.5km s-min=3.2km az=97.9, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

BEO ***13*** *20:56:50.0±0.8, 40°.25N×19°.95E, h0km, ML2.5/6*

THE ***13*** *20:56:50.8, 40°.34N×20°.02E, h10km±2km, ML2.2/6, Error ellipse: s-maj=2.1km s-min=0.8km az=216.0*

ISC 13 20:56:50.1±0.9**, 40°.35N**±0°.02×**20°.03E**±0°.02**, h10**km±6km**, n41,** σ0.**85**/62**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPE	Tepelena	0.06	190	P	Pg	20 56 52.0	-0.1
	baz=193						
TPE				S	Sg	20 56 53.6	0.0
	baz=193						
VLO	Vlora	0.42	286	P	Pg	20 56 58.7	+0.4
VLO				S	Sb	20 57 05.8	-0.3
VLO	Vlora	0.42	286	P	Pg	20 56 58.3	0.0
	baz=287						
VLO				S	Sb	20 57 05.0	-1.1
	baz=287						
VLO				AMP			
	comp=N,6.0nm,0.3s,baz=287						
SRN	Sarande	0.47	182	P	Pg	20 56 59.2	-0.1
SRN				S	Sb	20 57 06.4	-1.2
SRN	Sarande	0.47	182	P	Pg	20 56 59.2	-0.1
	baz=183						
SRN				S	Sb	20 57 06.4	-1.2
	baz=183						
SRN				AMP			
	comp=E,0.8nm,0.5s,baz=183						
LSK	Leskovik	0.48	115	P	Pg	20 56 59.4	-0.1
LSK				S	Sb	20 57 07.1	-0.9
LSK	Leskovik	0.48	115	P	Pg	20 56 59.3	-0.3
	baz=114						
LSK				S	Sg	20 57 06.6	+0.7
	baz=114						
LSK				AMP			
	comp=E,1.7nm,0.5s,baz=114						
KASA	Kassiopi	0.61	186	P	Pb	20 57 02.6	-0.3
KASA				S	Sb	20 57 11.7	+0.1
KASA				AML	AML	20 57 13.9	
	comp=N,380µm,0.3s						
KASA				AML	AML	20 57 14.3	
	comp=E,312µm,0.5s						
KBN	Korca	0.64	65	P	Pb	20 57 03.1	-0.4
KBN				S	Sb	20 57 12.2	-0.3
KBN	Korca	0.64	65	P	Pg	20 57 02.4	-0.1
	baz=64						
KBN				S	Sb	20 57 12.2	-0.3
	baz=64						
KBN				AMP			
	comp=E,0.6nm,0.4s,baz=64						
KEK	Kerkira	0.66	195	P	Pg	20 57 02.9	0.0
KEK				S	Sb	20 57 13.1	0.0
	comp=E,168nm,0.3s						
KEK	Kerkira	0.66	195	P	Pg	20 57 02.6	-0.3
KEK				AML	AML	20 57 19.1	
	comp=N,272µm,0.3s						
KEK				AML	AML	20 57 19.2	
	comp=E,414µm,0.3s						
NEST	Nestorio	0.79	85	P	Pb	20 57 06.4	+0.5
NEST				S	Sn	20 57 17.9	-1.4
	comp=E,75nm,0.4s						
NEST	Nestorio	0.79	85	P	Pb	20 57 06.4	+0.5
NEST				S	Sn	20 57 17.9	-1.4
NEST				AML	AML	20 57 20.1	
	comp=E,206µm,0.3s						
NEST				AML	AML	20 57 21.8	
	comp=N,187µm,0.4s						
IGT	Igoumenitsa	0.85	164	P	Pg	20 57 06.4	-0.1
IGT				S	Sb	20 57 18.5	-0.1
	comp=N,188nm,0.6s						
IGT	Igoumenitsa	0.85	164	P	Pg	20 57 06.4	-0.1
IGT				S	Sn	20 57 20.2	-0.6
IGT				AML	AML	20 57 25.0	
	comp=E,373µm,0.7s						
IGT				AML	AML	20 57 27.0	
	comp=N,382µm,0.5s						
IGT	Igoumenitsa	0.85	164	P	Pg	20 57 06.5	0.0
	baz=164						
JAN	Janina	0.94	137	P	Pb	20 57 08.4	-0.1
JAN				S	Sn	20 57 22.6	-0.4
	comp=N,190nm,0.3s						
JAN	Janina	0.94	137	P	Pb	20 57 08.4	-0.1
OHR	Ohrid	0.96	38	*e*Pg	Pn	20 57 09.3	-0.4
OHR				*e*Sg	Sn	20 57 23.5	0.0
TIR	Tirane	1.00	353	*e*Pg	Pn	20 57 09.9	-0.3
TIR				*e*Sg	Sn	20 57 25.4	+0.9
TIR	Tirane	1.00	353	P	Pg	20 57 08.9	-0.4
KPRO	Kipourio	1.10	111	P	Pn	20 57 12.0	+0.3
KPRO				S	Sn	20 57 26.7	-0.3
	comp=N,122nm,0.5s						
KPRO	Kipourio	1.10	111	P	Pn	20 57 12.0	+0.3
FNA	Florina	1.11	67	P	Pb	20 57 11.2	-0.4
FNA				S	Sn	20 57 28.9	+1.5
	comp=N,160nm,0.4s						
FNA	Florina	1.11	67	P	Pb	20 57 11.2	-0.4
FNA				AML	AML	20 57 30.2	
	comp=N,323µm,0.5s						
FNA				AML	AML	20 57 34.1	
	comp=E,274µm,0.4s						
FNA	Florina	1.11	67	P	Pb	20 57 11.4	-0.2
	baz=66						
PHP	Peshkopia	1.37	13	P	Pg	20 57 16.9	+0.6
	baz=12						
PHP				AMP			
	comp=N,0.4nm,0.8s,baz=12						
TSLK	Tsoukalades, L	1.60	162	P	Pb	20 57 20.1	+0.3
LKD2	Lefkada island	1.64	162	P	Pb	20 57 20.2	-0.3
LKD2	Lefkada island	1.64	162	P	Pb	20 57 20.6	+0.1
	baz=162						
NYDR	Nydri-Lefkada	1.72	162	P	Pb	20 57 21.3	-0.5
DRAG	Dragano-Lefkad	1.72	166	P	Pb	20 57 21.5	-0.3
EVGI	Lefkada island	1.80	164	P	Pb	20 57 23.6	+0.5
PDG	Podgorica	2.15	345	*e*Pn	Pb	20 57 28.2	-1.0
PDG				*e*Sg	Sg	20 58 00.9	+1.6
AGG	Agios Georgios	2.22	126	P	Pb	20 57 30.6	+0.3
BARS	Barje	2.80	28	*e*Pn	Pb	20 57 37.9	-2.4
SJES	Sjenica	2.91	359	*e*Pn	Pb	20 57 40.3	-1.8
STON	Ston	3.06	326	*e*Pn	Pn	20 57 38.4	-0.1
BBLS	Lazići	3.54	353	*e*Pn	Pn	20 57 48.0	+2.8
DIVS	Divibare	3.74	360	*e*Pn	Pn	20 57 50.2	+2.2

SJA ***13*** *21:10:45.0, 29°.57S×72°.48W, h10km, ML4.3*

GUC ***13*** *21:10:49.0±0.6, 29°.70S×72°.01W, h27km±9km, ML3.9*

ISC 13 21:10:46.7±1.6**, 29°.64S**±0°.06×**72°.22W**±0°.08**, h25km, n46,** σ2.**39**/49**, 3D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	La Serena	0.90	108	⇓*i*P	Pb	21 11 02.2	-1.3
CO05				*e*S	Sb	21 11 12.0	-3.2
CO05				IAML		21 11 13.9	
	comp=E,9µm,0.3s						
CO06	Fray Jorge	1.15	154	*e*P	Pn	21 11 07.2	+0.1
CO06				*e*S	Sn	21 11 20.8	-1.3
CO06				IAML		21 11 25.4	
	comp=E,3µm,0.1s						
GO04	Tololo Observa	1.34	114	⇓*i*P	Pn	21 11 09.9	-0.2
GO04				*e*S	Sn	21 11 25.0	-2.3
GO04	Tololo Observa	1.34	114	*i* P	Pn	21 11 10.0	-0.1
LCO	Las Campanas	1.47	65	⇓*i*P	Pn	21 11 12.0	+0.2
LCO	Las Campanas	1.47	65	*i* P	Pn	21 11 12.0	+0.2
AC04	Llanos de Chal	1.75	35	*e*P	Pn	21 11 16.6	+1.1
AC04				IAML		21 11 50.8	
	comp=N,852nm,0.4s						
AC04	Llanos de Chal	1.75	35	*i* P	Pn	21 11 17.0	+1.5
AROD	Rodeo	2.44	103	*i* P	Pn	21 11 28.0	+2.7
GO03	Copiap	2.68	41	*e*P	Pn	21 11 29.5	+1.1
GO03				IAML		21 12 17.7	
	comp=E,466nm,0.5s						
GO03	Copiap	2.68	41	*i* P	Pn	21 11 31.0	+2.6
ACDV	Cuesta del Vie	2.74	102	*i* P	Pb	21 11 35.0	-0.1
ACCO	Cerro Coronel	2.89	110	*i* P	Pn	21 11 35.0	+3.5
VA06	Catapilco	3.02	165	*e*P	Pn	21 11 34.6	+1.7
VA06				IAML		21 12 29.2	
	comp=E,461nm,0.3s						
RTLS	Leoncito	3.31	131	*i* P	Pn	21 11 41.0	+3.8
VA03	San Esteban	3.42	156	*e*P	Pn	21 11 41.6	+3.0
VA03				IAML		21 12 37.9	
	comp=E,454nm,0.5s						
VA03	San Esteban	3.42	156	*i* P	Pn	21 11 42.0	+3.4
ROCH	El Roble	3.48	163	*e*P	Pn	21 11 41.3	+1.9
ROCH				IAML		21 12 45.9	
	comp=E,344nm,0.6s						
ROC1	El Roble	3.48	163	*i* P	Pn	21 11 41.0	+1.5
AUSP	Uspallata	3.54	137	*i* P	Pn	21 11 45.0	+4.6
VCA	Vinchina	3.62	77	*i* P	Pn	21 11 47.0	+5.6
MT02	Curacav	3.72	166	*e*P	Pn	21 11 44.0	+1.4
MT02	Curacav	3.72	166	*i* P	Pn	21 11 44.0	+1.4
PEL	Peldehue	3.73	160	*e*P	Pn	21 11 45.2	+2.4
PEL				*e*S	Sn	21 12 26.7	+0.8
RTCV	Cerro Valdivia	3.86	126	*i* P	Pn	21 11 49.0	+4.4
AC02	Maricunga	3.90	45	*e*P	Pn	21 11 48.2	+2.6
AC02	Maricunga	3.90	45	*i* P	Pn	21 11 48.0	+2.4
ASAL	Salagasta	4.13	136	*i* P	Pn	21 11 53.0	+4.7
MT09	Talagante	4.25	166	*e*P	Pn	21 11 52.4	+2.4
MT01	Popeta	4.29	169	*e*P	Pn	21 11 52.0	+1.6
MT01	Popeta	4.29	169	*i* P	Pn	21 11 52.0	+1.6
LMEL	Las Melosas	4.53	158	*e*P	Pn	21 11 57.1	+3.2
BO04	La Punta	4.55	163	*e*P	Pn	21 11 56.2	+2.2
ACLC	CERRO LA CRUZ	4.59	89	*i* P	Pn	21 11 57.0	+2.2
BO01	Tunca	4.83	169	*e*P	Pn	21 11 59.4	+1.6
BO01	Tunca	4.83	169	*i* P	Pn	21 12 00.0	+2.1
APLL	PUNTA DE LOS L	4.99	100	*i* P	Pn	21 12 03.0	+2.9
PB14	IPOC Station P	5.25	18	*i* P	Pn	21 12 04.0	+0.1
BO02	Sierra Bellavi	5.28	167	*e*P	Pn	21 12 06.1	+2.0
BO02	Sierra Bellavi	5.28	167	*i* P	Pn	21 12 06.0	+2.0
GO05	Huala	5.36	177	*i* P	Pn	21 12 06.0	+0.9
CYA	Choya	5.74	80	*i* P	Pn	21 12 14.0	+3.6
RFA	San Rafael	6.02	149	*i* P	Pn	21 12 17.0	+2.7
MRA	San Martin	6.23	118	*i* P	Pn	21 12 19.0	+1.9
PB05	IPOC Station P	7.00	15	*i* P	Pn	21 12 27.0	-0.8
LC01	Cunco	9.24	178	*i* P	Pn	21 13 00.0	+1.7

IDC ***13*** *21:13:22.6±7.7, 14°.92N×92°.05W, h75km±48km, mb3.9/3, mb1 4.1/5, mb1mx3.5/51, mbtmp4.0/5, ML3.7/1, MS4.7/1, Ms1 4.7/1, ms1mx3.6/33, Error ellipse: s-maj=70.4km s-min=36.8km az=177.0*

NEIC ***13*** *21:13:24.9±1.5, 14°.78N±0°.07×92°.33W±0°.06, h102km±6km, Error ellipse: s-maj=11.7km s-min=7.1km az=213.0*

MEX ***13*** *21:13:25.1±0.7, 14°.71N×92°.32W, h103km±6km, MD4.3*

GCG ***13*** *21:13:27.5±0.3, 14°.93N×92°.15W, h85km±10km, MD4.1*

ISC 13 21:13:24.7±0.8**, 14°.83N**±0°.07×**92°.30W**±0°.05**, h104**km±6km**, n93,** σ1.**14**/103**, mb4.3**/26**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.09	21		Pn	21 13 39.4	+0.2
THIG					Sn	21 13 50.1	+0.2
THIG		0.09	21	*i* P	Pn	21 13 39.4	+0.2
THIG				*e*S	Sn	21 13 50.1	+0.2
RTAL	Retalhuleu	0.66	117	Pn	Pn	21 13 42.9	+0.7
RTAL				Sn	Sn	21 13 54.8	-0.5
STG3	Santiaguito 3,	0.71	99	*e*P	Pn	21 13 43.3	+0.5
HUEH	Huehuetenango	0.91	57	Pn	Pn	21 13 44.8	0.0
PCIG		1.25	315		Pn	21 13 48.4	+0.2
PCIG					Sn	21 14 05.9	-0.1
PCIG		1.25	315	*e*P	Pn	21 13 48.4	+0.2
PCIG				*e*S	Sn	21 14 05.9	-0.1
CCIG	Comitan	1.46	6	Pn	Pn	21 13 51.5	+0.6
CCIG				Sn	Sn	21 14 12.0	+1.4
CCIG	Comitan	1.46	6	*i* P	Pn	21 13 51.5	+0.6
CCIG				*i* S	Sn	21 14 12.1	+1.4
FUG	Fuego 3	1.46	105	*e*P	Pn	21 13 51.9	+1.0
FUG				*e*S	Sn	21 14 10.9	+0.2
TGIG		2.10	338		Pn	21 13 58.1	-0.7
TGIG					Sn	21 14 23.8	-1.0
TGIG		2.10	338	*i* P	Pn	21 13 58.1	-0.7
TGIG				*i* S	Sn	21 14 23.8	-1.0
MRL	Marmol	2.54	84	*e*P	Pn	21 14 05.8	+1.1
MTO3	Montecristo	2.88	98	Pn	Pn	21 14 09.0	-0.1
CMIG	Matias Romero	3.36	312	P	Pn	21 14 15.5	+0.2
	6.9nm,0.3s,baz=138,slow=8.9,SNR=108						
CMIG				S	Sn	21 14 54.4	-0.1
	20nm,0.3s,baz=124,slow=14,SNR=7.7						
CMIG	Matias Romero	3.36	312		Pn	21 14 15.4	0.0
CMIG					Sn	21 14 53.8	-0.6
CMIG	Matias Romero	3.36	312	*e*P	Pn	21 14 15.4	0.0
CMIG				*e*S	Sn	21 14 53.8	-0.6
HUIG	Huatulco	3.79	285		Pn	21 14 20.6	-0.6
HUIG					Sn	21 14 59.0	-6.0
HUIG	Huatulco	3.79	285	*i* P	Pn	21 14 20.6	-0.6
HUIG				*i* S	Sn	21 14 59.0	-6.0
CRIN	San Cristobal	5.52	112	Pn	Pn	21 14 45.1	+0.5
CNGN	Cerro Negro	5.91	112	Pn	Pn	21 14 51.0	+1.1
HZTE	Horizontes, Gu	7.71	121	Pn	Pn	21 15 16.3	+1.9
ORTG	Ortega, Santa	8.01	123		Pn	21 15 20.3	+1.7
RIMA	Rio Macho	9.65	120	Pn	Pn	21 15 42.0	+1.1
SOR	Soroa	11.83	47	Pn	Pn	21 16 09.9	-0.2
LCCY	Blossom Villag	12.62	66	Pn	Pn	21 16 16.1	-4.4
061Z	Ochoppi	15.31	42	Pn	P	21 16 56.6	-0.9
553A	Crawfordville	16.92	24		P	21 17 15.6	+0.2
GTBY	Guantanamo Bay	17.17	70		P	21 17 17.4	-0.8
GTBY				IAmb	IAmb	21 17 30.0	
	comp=Z,47nm,1.1s						
TXAR	Lajitas Array	17.85	326	P	P	21 17 25.5	-0.3
	baz=148,slow=10,SNR=3.6						
Z47A	Carrollton	18.69	11	P	P	21 17 33.9	-0.9
Z47A				IAmb	IAmb	21 17 35.9	
	comp=Z,16nm,0.8s						
PLAL	Pickwick Lake	20.43	10	P	P	21 17 54.0	+0.4
SDDR	Presa de Saban	20.52	75	P	Pn	21 17 56.2	-1.7
SDDR				IAmb	IAmb	21 18 04.5	
	comp=Z,11nm,0.9s						
FPAL	Fort Paine	20.54	16	P	P	21 17 55.2	+0.3
FPAL				IAmb	IAmb	21 17 55.5	
	comp=Z,11nm,0.6s						
MNTX	Cornudas Mount	20.62	327	P	P	21 17 56.8	+1.0
CLTN	Cedars of Leba	21.84	13	P	P	21 18 08.1	-0.6
CLTN				IAmb	IAmb	21 18 09.1	
	comp=Z,7.8nm,0.8s						
PBMO	Poplar Bluff	21.93	4	P	P	21 18 09.6	0.0
TKL	Tuckaleechee C	22.11	19	P	P	21 18 10.3	-1.3
	comp=Z,3.7nm,0.6s,baz=188,slow=12,SNR=7.7						
TKL	Tuckaleechee C	22.11	19	IAmb	IAmb	21 18 11.6	
	comp=Z,4.1nm,0.7s						
U49A	Red Boiling Sp	22.37	14	P	P	21 18 13.3	-1.0
U49A				IAmb	IAmb	21 18 14.3	
	comp=Z,7.7nm,0.6s						
T47A	Sharon Grove	22.55	11	P	P	21 18 15.0	-1.1
T47A				IAmb	IAmb	21 18 16.3	
	comp=Z,17nm,1.0s						
S44A	Carbondale	22.94	6	P	P	21 18 18.9	-1.0
S44A				IAmb	IAmb	21 18 20.1	
	comp=Z,19nm,0.8s						
Y60A	Bolivia	22.95	31	P	P	21 18 21.6	+1.5
WCI	Wyandotte Cave	23.91	12	P	P	21 18 28.0	-0.8
WCI				IAmb	IAmb	21 18 29.2	
	comp=Z,22nm,0.8s						
U56A	King	23.93	24	P	P	21 18 28.6	-0.6
U56A				IAmb	IAmb	21 18 28.9	
	comp=Z,15nm,1.1s						
S51A	Beattyville	24.00	17	P	P	21 18 28.6	-1.1
S51A				IAmb	IAmb	21 18 30.5	
	comp=Z,8.2nm,0.8s						
X16A	Lo Mia Camp, P	26.05	322	P	P	21 18 48.6	0.0
X16A				IAmb	IAmb	21 18 58.0	
	comp=Z,4.5nm,0.8s						
Q54A	Coxs Mills	26.10	21	P	P	21 18 49.9	+1.2
Q54A				IAmb	IAmb	21 18 52.2	
	comp=Z,7.5nm,0.7s						
PCRV	Puerto La Cruz	27.39	96	LR	LR	21 31 20.9	
	comp=Z,2µm,20.7s,slow=40						
TPH	Tonopah	31.97	321	P	P	21 19 41.4	+0.3
TPH				IAmb	IAmb	21 19 55.9	
	comp=Z,8.2nm,0.9s						
NV11	Mina Array Sit	32.76	321	P	P	21 19 49.7	+1.7
NV11				IAmb	IAmb	21 19 51.9	
	comp=Z,4.6nm,0.9s						
MDPB	Devils Postpil	32.85	319	P	P	21 19 49.1	+0.2

NVAR	Mina Array Bea	32.85	321	P	P	21 19 52.2	+3.4
	comp=Z,4.7nm,0.6s,baz=132,slow=8.5,SNR=39						
NVAR	Mina Array Bea	32.85	321	P	P	21 19 51.2	+2.4
LHV	Little Huntoon	32.87	320	P	P	21 19 51.3	+2.7
LHV				IAmb	IAmb	21 19 53.1	
	comp=Z,4.8nm,0.6s						
KVN	Kaiserville	33.12	322	P	P	21 19 52.9	+1.8
KVN				IAmb	IAmb	21 19 55.3	
	comp=Z,3.9nm,1.0s						
BMN	Battle Mountai	33.51	324	P	P	21 19 55.6	+1.1
YHL	Hebgen Lake	33.94	336	P	P	21 19 56.2	-2.0
YHL				IAmb	IAmb	21 19 58.6	
	comp=Z,2.4nm,0.8s						
GCMT	Greycliff	34.16	338	P	P	21 20 00.7	+0.8
WVOR	Wild Horse Val	35.65	326	P	P	21 20 15.1	+2.3
WVOR				IAmb	IAmb	21 20 16.2	
	comp=Z,2.6nm,1.0s						
EGMT	Eagleton	36.12	340	P	P	21 20 19.2	+2.5
J08A	Circle Bar Ran	36.20	327	P	P	21 20 19.2	+1.8
J08A				IAmb	IAmb	21 20 20.1	
	comp=Z,5.0nm,0.8s						
BCAR	Beaver Creek A	59.17	336	P	P	21 23 15.2	+0.7
N25K	Chitina, Valde	59.60	334	P	P	21 23 19.4	+2.0
KLU	Klutina	60.11	334	P	P	21 23 22.4	+1.5
KLU				IAmb	IAmb	21 23 40.1	
	comp=Z,4.1nm,0.9s						
SCRK	Sand Creek	60.48	337	P	P	21 23 24.6	+1.0
M24K	Tolsona, Glenn	60.49	334	P	P	21 23 25.1	+1.6
PAX	Paxson	60.59	335	P	P	21 23 25.1	+0.8
PAX				IAmb	IAmb	21 23 25.9	
	comp=Z,1.8nm,0.8s						
RC01	Rabbit Creek A	61.63	332	P	P	21 23 32.2	+1.1
BRLK	Bradley Lake	61.68	331	P	P	21 23 31.7	+0.2
KDAK	Kodiak Island	61.87	328	P	P	21 23 33.6	+0.8
IL31		61.97	337	P	P	21 23 33.9	+0.6
ILAR	Eielson Array	61.97	337	P	P	21 23 33.8	+0.4
	comp=Z,1.0nm,0.7s,baz=156,slow=5.5,SNR=9.3						
RND	Reindeer	62.16	335	P	P	21 23 35.7	+0.9
DHH	Diamond Head	62.24	286	P	P	21 23 34.6	-1.4
MCK	McKinley	62.33	335	P	P	21 23 36.4	+0.6
BMAR	Burnt Mountain	62.42	340	P	P	21 23 37.6	+1.2
MDM	Murphy Dome	62.57	337	P	P	21 23 37.9	+0.5
NEA2	Nenana	62.74	336	P	P	21 23 38.7	+0.2
Q19K	Cape Douglas,	62.75	329	P	P	21 23 39.0	+0.3
TRF	Thorofare Moun	62.77	335	P	P	21 23 39.8	+0.8
TRF				IAmb	IAmb	21 23 40.4	
	comp=Z,5.4nm,1.0s						
H24K	Noodor Dome	62.82	338	P	P	21 23 39.9	+0.8
KTH	Kantishna Hill	63.07	335	P	P	21 23 41.1	+0.3
I23K	Minto, Yukon-K	63.08	337	P	P	21 23 41.6	+0.9
BPAW	Bear Paw Mtn.	63.31	335	P	P	21 23 42.7	+0.4
PPLA	Purkeypile	63.37	334	P	P	21 23 43.2	+0.3
PPLA				IAmb	IAmb	21 23 48.7	
	comp=Z,5.7nm,1.0s						
MLY	Manley	63.57	336	P	P	21 23 44.7	+0.6
N19K	Bonanza Creek	63.72	331	P	P	21 23 45.8	+0.6
N19K				IAmb	IAmb	21 23 51.7	
	comp=Z,7.3nm,1.1s						
M19K	Big River Lodg	64.01	332	P	P	21 23 47.3	+0.3
M19K				IAmb	IAmb	21 23 49.9	
	comp=Z,3.7nm,0.9s						
SVW2	Sparrevohn	64.31	331	P	P	21 23 49.2	+0.2
K20K	Telida	64.33	334	P	P	21 23 49.2	+0.2
J20K	Nowinta River	64.63	335	P	P	21 23 50.9	0.0
J20K				IAmb	IAmb	21 24 07.0	
	comp=Z,2.5nm,1.1s						
CMAR	Chiang Mai Arr	145.12	341	PKPbc	PKPbc	21 32 50.3	-0.2
	comp=Z,1.7nm,0.8s,baz=331,slow=3.2,SNR=9.0						

IDC ***13*** *21:15:59.9±1.1, 30°.95N×128°.29E, h0^{km}, mb3.5/5, mb1 3.6/8, mb1mx3.4/48, mbtmp3.5/8, ML4.0/2, Error ellipse: s-maj=30.3km s-min=20.6km az=77.0*

JMA ***13*** *21:16:00.9±0.5, 31°.26N×128°.73E, h14^{km}, M3.9*

ISC 13 21:16:03.8±0.9, **31°.22N**±0°.08×**128°.81E**±0°.10, **h35^{km}, n15,** σ1^{s}.**18**/15, **mb3.5**/5, **Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.90	59	P	Pn	21 16 18.1	-2.0
JKC	Kuchinoerabu	1.41	122	P	Pn	21 16 27.3	+0.3
JKC				eS	Sn	21 16 46.3	+1.9
JFU	Fukue jima 2	1.43	358	P	Pn	21 16 26.8	-0.5
JSU	Suzuyama	1.44	78	P	Pn	21 16 28.0	+0.6
JTN	Tanegashima 3	1.95	106	P	Pn	21 16 34.0	-0.5
JMTN	Minamitane	1.98	114	P	Pn	21 16 33.8	-1.1
JTZ	Takazaki	2.06	70	P	Pn	21 16 36.0	0.0
JNU	Nakatsue	2.59	42	Pn	Pn	21 16 50.8	+7.5
	55nm,0.3s,baz=271,slow=0.0,SNR=9.1						
KSRS	Korea Array	6.26	354	Pn	Pn	21 17 34.5	+0.8
	0.5nm,0.3s,baz=177,slow=15,SNR=4.5						
KSRS				Sn	Sn	21 18 44.6	+0.6
	0.4nm,0.3s,baz=169,slow=25,SNR=1.6						
MJAR	Matsushiro Arr	9.45	53	Pn	Pn	21 18 24.4	+7.0
	0.0nm,0.3s,baz=248,slow=14,SNR=1.8						
SONM	Songino Array	23.83	321	P	P	21 21 15.1	+1.4
	1.3nm,0.9s,baz=143,slow=10,SNR=6.5						
MKAR	Makanchi Array	38.76	307	P	P	21 23 23.3	-1.5
	0.3nm,0.6s,baz=99,slow=6.4,SNR=2.7						
BVAR	Borovoye Array	46.99	315	P	P	21 24 32.0	+0.6
	0.7nm,0.7s,baz=150,slow=6.0,SNR=3.0						
WRA	Warramunga Arr	51.14	173	P	P	21 25 02.1	-1.3
	0.4nm,0.7s,baz=353,slow=8.1,SNR=2.6						
ASAR	Alice Springs	54.79	174	P	P	21 25 30.4	+0.1
	0.5nm,0.6s,baz=4.3,slow=14,SNR=8.1						

JMA ***13*** *21:17:20.9±0.3, 30°.86N×128°.55E, h1^{km}±3^{km}, M5.2*

JMA Felt II J1.

IDC ***13*** *21:17:23.7±0.5, 30°.91N×128°.56E, h0^{km}, mb4.3/26, mb1 4.5/32, mb1mx4.4/49, mbtmp4.3/32, ML3.8/5, MS5.5/1, Ms1 5.5/1, ms1mx4.8/42, Error ellipse: s-maj=16.0km s-min=11.8km az=86.0*

MOS ***13*** *21:17:25.2±1.3, 31°.04N×128°.69E, h17^{km}, mb4.8/27, Error ellipse: s-maj=8.4km s-min=4.6km az=91.8*

BJI ***13*** *21:17:25.9±0.0, 30°.83N×128°.72E, h14^{km}, mb4.8/23, ML4.8/2*

NEIC ***13*** *21:17:26.6±1.9, 31°.02N±0°.06×128°.80E±0°.07, h10^{km}±1^{km}, mb4.9/77, Error ellipse: s-maj=10.5km s-min=8.8km az=130.0*

ISC 13 21:17:27.4±1.3, **30°.96N**±0°.03×**128°.76E**±0°.03, **h16^{km}**±8^{km}, **n297,** σ1^{s}.**62**/283, **mb4.8**/106, **21C-29D, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	1.09	48	P	Pg	21 17 45.2	-3.2
JSJ				S	Sg	21 18 02.4	-0.3
JKC	Kuchinoerabu	1.33	111	P	Pn	21 17 48.2	-3.1
JKC				S	Sb	21 18 07.4	-1.3
JNN	Nakanoshima	1.47	139	P	Pn	21 17 49.7	-3.5
JNN				S	Sn	21 18 10.2	-1.9
JSU	Suzuyama	1.55	69	P	Pn	21 17 52.7	-1.7
JSU				S	Sb	21 18 16.1	+1.0
JSU	Suzuyama	1.55	69		Pn	21 17 53.1	-1.3
JYAK	Yakushimahirau	1.67	115	P	Pn	21 17 52.9	-3.0
JYAK				eS	Sn	21 18 17.0	0.0
JFU	Fukue jima 2	1.69	360	⇓P	Pn	21 17 53.5	-2.8
JFU				S	Sn	21 18 16.7	-1.0
JTAJ	Takarajima	1.84	168	P	Pn	21 17 54.2	-4.1
JMTN	Minamitane	1.92	106	P	Pn	21 17 57.1	-2.4
JMTN				S	Sn	21 18 24.1	+0.8
JTN	Tanegashima 3	1.93	98	⇓P	Pn	21 17 57.7	-1.9
JTN				S	Sn	21 18 24.8	+1.3
JZO	Okuchi	1.96	53	P	Pn	21 17 58.8	-1.2
JTZ	Takazaki	2.20	64	P	Pn	21 18 02.2	-1.1
JTZ				S	Sn	21 18 32.1	+2.0
JNAR	Kushima--Naru	2.22	75	P	Pn	21 18 02.7	-0.9
JNU	Nakatsue	2.81	39	Pn	Pn	21 18 15.5	+3.8
	52nm,0.3s,baz=200,slow=0.7,SNR=1.6						
JNU				Sn	Sb	21 18 53.3	+1.9
	52nm,0.3s,baz=191,slow=24,SNR=1.4						
JTU	Tsushima	3.60	8	Pn	Pn	21 18 21.0	-1.5
JOW	Kunigami	4.13	186	Pn	Pn	21 18 28.6	-1.3
	10nm,0.3s,baz=2.9,slow=13,SNR=12						
JOW	Kunigami	4.13	186	Pn	Pn	21 18 29.0	-0.9
JMN	Monobe	5.14	56	Pn	Pn	21 18 43.9	+0.2
JHS	Saijyo	5.44	41	Pn	Pn	21 18 47.6	-0.3
TJN	Taejon	5.53	348	⇑eP	Pn	21 18 45.3	-3.8
JMZ	Minamidaito 2	5.56	156	Pn	Pn	21 18 48.5	-1.0
SSE	Sheshan	6.50	273	Pn	Pn	21 19 02.5	+0.1
SSE				Sn	Sn	21 20 16.3	0.0
KSAR	Wonju Array Be	6.51	354	P	Pn	21 19 03.3	+0.8
KSAR	Wonju Array Be	6.51	354	Pn	Pn	21 19 03.3	+0.8
KSRS	Korea Array	6.52	354	Pn	Pn	21 19 01.9	-0.6
	1.9nm,0.3s,baz=175,slow=15,SNR=24						
KSRS				Sn	Sn	21 20 16.7	+0.1
	2.6nm,0.3s,baz=179,slow=16,SNR=4.2						
KSRS				Lg	Lg	21 20 56.1	
	7.7nm,0.3s,baz=176,slow=30,SNR=7.5						
KSRS				LR	LR	21 21 10.0	
	comp=Z,42µm,19.1s,baz=236,slow=35						
KSRS	Korea Array	6.52	354	P	Pn	21 19 02.0	-0.6
KS19	Wonju Array Si	6.57	354		Pn	21 19 02.1	-1.3
JWT	Wachi	7.04	50	Pn	Pn	21 19 10.4	+0.6
TSUJ	Tsu 2	7.45	58	P	Pn	21 19 15.3	-0.1
INU	Inuyama	8.19	55	Pn	Pn	21 19 26.9	+1.3
YOJ	Yonaguni jima	8.23	220	P	Pn	21 19 30.3	+4.1
YOJ	Yonaguni jima	8.23	220	Pn	Pn	21 19 30.3	+4.1
NJ2	Nanjing	8.53	280	eP	Pn	21 19 30.4	+0.1
NJ2				pmax	pmax		
	comp=Z,59nm,0.5s						
JGF	Kuroka	8.55	55		Pn	21 19 32.0	+1.4
TATO	Taipei	8.77	229	Pn	Pn	21 19 34.5	+1.0
YHNB	Yeheng	9.05	228		Pn	21 19 38.5	+0.9
NACB	Ninganchiao	9.28	225		Pn	21 19 42.3	+1.8
JHTM	Izuhatsuma	9.49	62	P	Pn	21 19 44.4	+1.0
JMKN	Mikurajimanish	9.61	69	P	Pn	21 19 46.1	+1.1
JHJ2	Mitsune	9.62	74	Pn	Pn	21 19 44.8	-0.5
MAJO	Matsushiro	9.63	52	P	Pn	21 19 46.4	+1.0
MAJO	Matsushiro	9.63	52		Pn	21 19 46.4	+1.0
MAT	Matsushiro	9.63	52	P	Pn	21 19 46.2	+0.8
MAT				eS	Sn	21 21 37.7	+4.4
MJB9	Matsu-Tunnel	9.63	52		Pn	21 19 45.6	+0.2
MJAR	Matsushiro Arr	9.63	52	Pn	Pn	21 19 46.8	+1.4
	0.7nm,0.3s,baz=238,slow=13,SNR=37						
SSLB	Suanglung	9.96	226	Pn	Pn	21 19 52.0	+2.1
YULB	Yu-li	10.04	223		Pn	21 19 50.9	-0.2
TPUB	Ta-pu	10.51	225	Pn	Pn	21 19 59.0	+1.5
MSHR	Mys Shultsa	11.76	9	⇓eP	Pn	21 20 12.2	-2.2
JMM	Marumori	12.08	52	Pn	Pn	21 20 18.6	-0.3
VLA	Vladivostok	12.39	11	⇑eP	Pn	21 20 21.0	-2.1
VLA				pmax	pmax		
	comp=Z,17nm,1.0s						
CN2	Changchun	13.09	349	eP	Pn	21 20 39.1	+6.5
CN2				pmax	pmax		
	comp=Z,20nm,1.5s						
USA0B	Ussuriysk Arra	13.46	10	P	Pn	21 20 37.5	-0.2
USA0B	Ussuriysk Arra	13.46	10	Pn	Pn	21 20 37.5	-0.2
USRK	Ussuriysk Ar.	13.46	10	Pn	Pn	21 20 38.7	+1.0
	baz=202,slow=10,SNR=3.0						
USRK	Ussuriysk Ar.	13.46	10	P	Pn	21 20 37.9	+0.2
USRK	Ussuriysk Ar.	13.46	10	Pn	Pn	21 20 37.9	+0.2
BJT	Baijiatuau	13.66	315	P	Pn	21 20 41.5	+1.0
BJT	Baijiatuau	13.66	315	Pn	Pn	21 20 41.5	+1.0
JEM	Erimo	15.97	42	Pn	P	21 21 23.4	+8.6
ENH	Enshi	16.61	273		Pn	21 21 20.1	+0.4
HHC	Hu-ho-hao-te	17.05	310	eP	Pn	21 21 23.9	-1.3
HHC				pmax	pmax		
	comp=Z,46nm,0.8s						
ASAJ	Asahikawa	17.08	36	P	Pn	21 21 24.4	-1.1
	comp=Z,0.5nm,0.3s,baz=236,slow=17,SNR=8.6						
ASAJ	Asahikawa	17.08	36	P	Pn	21 21 23.7	-1.8
ASAJ				pmax	pmax		
	comp=Z,53nm,1.0s						
JKA	Kamikawa-asahi	17.08	36		Pn	21 21 23.7	-1.8
KLR	Kul'dur	18.39	6	P	Pn	21 21 41.5	-0.1
	comp=Z,0.6nm,0.3s,baz=190,slow=8.8,SNR=27						
KLR	Kul'dur	18.39	6	⇓eP	Pn	21 21 41.9	+0.3
KLR				pmax	pmax		
	comp=Z,74nm,1.2s						
YSS	Yuzh-Sakhalins	19.28	30	eP	P	21 21 52.8	+1.5
YSS				pmax	pmax		
	comp=Z,40nm,1.0s						
YSS	Yuzh-Sakhalins	19.28	30		P	21 21 51.0	-0.3
YSS				IAmb	IAmb	21 22 08.8	
	comp=Z,55nm,1.0s						
HIA	Hailar	19.52	342	⇓iP	P	21 21 53.9	-0.1
HIA				pmax	pmax		
	comp=Z,27nm,1.1s						
HIA	Hailar	19.52	342	P	P	21 21 53.8	-0.2
HIA				IAmb	IAmb	21 21 55.8	
	comp=Z,120nm,1.8s						
GYA	Guiyang	19.89	262	⇓P	P	21 21 58.6	+0.3
GYA				pmax	pmax		
	comp=Z,44nm,1.4s						
KUR	Kuril'sk	20.64	41	⇑eP	P	21 22 04.9	-1.3
KUR				pmax	pmax		
	comp=Z,55nm,1.0s						
LZH	Lanzhou	21.37	291	eP	P	21 22 19.1	+4.8
LZH				sP	sP	21 22 24.4	+3.7
LZH				PP	PnPn	21 22 38.3	+4.0
LZH				pmax	pmax		
	comp=Z,42nm,1.1s						
CD2	Chengdu	21.44	276	P	P	21 22 14.3	-0.7
ZEA	Zeya	22.79	358	eP	P	21 22 29.4	+0.2
ZEA				pmax	pmax		
	comp=N,40nm,1.7s						
ZEA				pmax	pmax		
	comp=Z,40nm,1.6s						
ULN	Ulaanbaatar	23.67	322	⇑eP	P	21 22 36.6	-1.7
ULN				pmax	pmax		
	comp=Z,13nm,1.1s						
ULN	Ulaanbaatar	23.67	322	P	P	21 22 36.9	-1.4
SONM	Songino Array	24.01	321	P	P	21 22 39.2	-2.3
	comp=Z,4.5nm,0.9s,baz=138,slow=9.0,SNR=13						
SONM	Songino Array	24.01	321	P	P	21 22 40.1	-1.4
SONM				IAmb	IAmb	21 23 13.4	
	comp=Z,45nm,1.8s						
GTA	Gaotai	25.04	298	eP	P	21 22 55.9	+4.9
GTA				sP	sP	21 23 04.0	+6.4
GTA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
UBPT	Khong Chiam	26.42	239	P	P	21 23 03.3	-0.1
UBPT				IAmb	IAmb	21 23 21.8	
	comp=Z,50nm,1.6s						
TLY	Talaya	27.77	325	P	P	21 23 14.8	-0.5
	comp=Z,2.3nm,0.8s,baz=122,slow=17,SNR=2.2						
TLY	Talaya	27.77	325	⇑eP	P	21 23 12.3	-3.1
TLY				pmax	pmax		
	comp=Z,7.0nm,1.1s						
CHTO	Chiang Mai	29.53	253	P	P	21 23 30.3	-1.1
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CHTO	Chiang Mai	29.53	253	P	P	21 23 30.3	-1.1
CMAR	Chiang Mai Arr	29.71	252	P	P	21 23 29.9	-3.1
	comp=Z,0.7nm,0.7s,baz=45,slow=6.8,SNR=6.1						
CMAR				PcP	PcP	21 26 36.8	-0.1
	comp=Z,0.3nm,0.6s,baz=20,slow=3.0,SNR=1.9						
CMAR	Chiang Mai Arr	29.71	252	P	P	21 23 32.4	-0.5
PETK	Petropavlovsk-	30.50	35	P	P	21 23 39.4	-0.2
	comp=Z,2.6nm,0.7s,baz=208,slow=5.7,SNR=2.1						
PETK	Petropavlovsk-	30.50	35	P	P	21 23 38.5	-1.0
PETK	Petropavlovsk-	30.50	35	P	P	21 23 38.5	-1.0
TOLI2	Tolitoli	30.63	196	P	P	21 23 42.2	+1.2
PET	Petropavlovsk	30.93	36	⇓eP	P	21 23 42.5	-0.8
PET				pmax	pmax		
	comp=Z,80nm,1.3s						
PET	Petropavlovsk	30.93	36	P	P	21 23 42.1	-1.2
YAK	Yakutsk	31.09	1	⇓iP	P	21 23 42.9	-1.7
YAK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MA2	Magadan	32.22	21	P	P	21 23 54.5	-0.1
	comp=Z,8.9nm,0.7s,baz=256,slow=5.8,SNR=4.0						
MA2	Magadan	32.22	21	⇑iP	P	21 23 53.7	-0.9
MA2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MA2	Magadan	32.22	21	P	P	21 23 53.9	-0.7
SANI	Sanana	32.93	185	P	P	21 24 02.2	+1.0
	comp=Z,17nm,0.9s						
FAKI	Fak Fak	33.85	174	P	P	21 24 10.3	+1.1
MTKI	Muara Teweh, K	34.35	205	P	P	21 24 17.6	+4.0
WMQ	Urumqi	34.72	303	eP	P	21 24 19.1	+2.4
SEY	Seymchan	35.39	18	P	P	21 24 23.2	+1.1
	comp=Z,4.8nm,0.9s,baz=192,slow=8.7,SNR=5.4						
TAPN	Taplejung	35.89	275	eP	P	21 24 25.5	-1.7
	comp=Z,16nm,0.9s						
ODAN	Odare	36.30	274	eP	P	21 24 28.1	-2.6
	comp=Z,34nm,1.0s						
BBKI	Banjar Baru	36.71	204	P	P	21 24 37.4	+3.5
	comp=Z,8µmcomp=Z,41nm,1.0s						
RAMN	Ramite	36.95	275	eP	P	21 24 32.9	-3.3
JIRN	Jiri	37.11	276	eP	P	21 24 35.5	-2.2
GUN	Gumba	37.31	276	eP	P	21 24 37.3	-2.0
PKI	Pulchoki	37.80	276	eP	P	21 24 41.0	-2.5
KKN	Kakani	37.85	276	eP	P	21 24 41.6	-2.2
	comp=Z,49nm,0.8s						
DMN	Daman	38.05	276	eP	P	21 24 43.2	-2.3
GKN	Gorkha	38.34	277	eP	P	21 24 46.3	-1.6
ZALV	Zalesovo Beam	38.88	319	P	P	21 24 49.7	-2.1
	comp=Z,0.8nm,0.5s,baz=111,slow=7.0,SNR=5.8						
ZALV				PcP	PcP	21 27 01.1	-1.4
	comp=Z,0.9nm,0.8s,baz=86,slow=2.0,SNR=1.8						
MK31	Makanchi Array	38.88	307	P	P	21 24 50.3	-1.8
MK31				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MK31	Makanchi Array	38.88	307	P	P	21 24 50.3	-1.8
MKAR	Makanchi Array	38.88	307	P	P	21 24 49.6	-2.4
	comp=Z,3.5nm,0.9s,baz=94,slow=8.4,SNR=18						
MKAR				PcP	PcP	21 27 01.1	-1.6
	comp=Z,1.0nm,0.8s,baz=70,slow=4.5,SNR=2.4						
MKAR	Makanchi Array	38.88	307	P	P	21 24 50.0	-2.1
MKAR	Makanchi Array	38.88	307	P	P	21 24 50.0	-2.1
DANN	Dangsing	39.00	278	eP	P	21 24 52.0	-1.5
	comp=Z,26nm,0.7s						
MAKZ	Makanchi	39.10	307	P	P	21 24 52.7	-1.1
MAKZ	Makanchi	39.10	307	P	P	21 24 52.7	-1.1
KOLN	Koldanda	39.29	277	eP	P	21 24 53.7	-2.2
	comp=Z,21nm,0.9s						
LHMI	Lhok Sumawe	39.35	236	P	P	21 24 56.1	-0.1
LHMI				IAmb	IAmb	21 25 05.5	
	comp=Z,30nm,1.0s						
PYUN	Piuthan	39.72	278	eP	P	21 24 57.9	-1.6
	comp=Z,38nm,1.0s						
MMRI	Maumere	39.86	190	P	P	21 24 58.7	-1.7
MMRI				IAmb	IAmb	21 25 03.2	
	comp=Z,36nm,1.1s						
SOEI	Soe	40.71	187	P	P	21 25 12.6	+5.1
	comp=Z,31nm,1.0s						
SOEI	Soe	40.71	187	P	P	21 25 06.9	-0.6
SOEI				IAmb	IAmb	21 25 23.5	
	comp=Z,45nm,1.2s						
TIXI	Tiksi	40.75	0	P	P	21 25 06.3	-0.8
	comp=Z,3.1nm,1.1s,baz=158,slow=12,SNR=4.6						
TIXI	Tiksi	40.75	0	ceP	P	21 25 05.7	-1.4
TIXI				pmax	pmax		
	comp=Z,13nm,1.3s						
TIXI	Tiksi	40.75	0	P	P	21 25 06.2	-0.9
PLAI	Plampang	40.94	197	P	P	21 25 12.2	+2.9
	comp=Z,34nm,0.8s						
TWSI	Taliwang, Sumb	41.08	198	P	P	21 25 13.0	+2.5
	comp=Z,22nm,1.0s						
KURK	Kurchatov	41.83	313	⇑eP	P	21 25 15.0	-1.3
KURK				pmax	pmax		
	comp=Z,9.0nm,1.2s						
KURK	Kurchatov	41.83	313	P	P	21 25 14.5	-1.8
KURBB	Kurchatov Arra	41.88	313	P	P	21 25 14.2	-2.5
	comp=Z,5.8nm,1.1s,baz=100,slow=8.7,SNR=9.5						
MDSI	Maura Dua	42.35	218	P	P	21 25 22.0	+1.1
BILL	Bilibino	43.06	20	⇑eP	P	21 25 25.9	-0.2
BILL				e		21 27 03.8	
BILL				eS	S	21 31 48.1	-3.0
BILL				pmax	pmax		
	comp=Z,8.0nm,1.1s						
AAK	Ala-Archa	44.30	301	⇑eP	P	21 25 35.3	-1.4
AAK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
NRIK	Noril'sk	44.94	341	P	P	21 25 39.9	-1.2
	comp=Z,6.2nm,0.9s,baz=123,slow=11,SNR=3.5						
NRIK	Noril'sk	44.94	341	⇑eP	P	21 25 40.4	-0.7
NRIK				pmax	pmax		
	comp=Z,11nm,1.3s						
BVAR	Borovoye Array	47.16	315	P	P	21 25 56.8	-2.1
	comp=Z,5.1nm,1.0s,baz=170,slow=9.0,SNR=14						
KK31	Karatay Array	47.19	302	P	P	21 25 58.1	-1.2
KK31	Karatay Array	47.19	302	P	P	21 25 58.0	-1.2
KKAR	Karatay Array	47.19	302	P	P	21 25 58.4	-0.9
KKAR	Karatay Array	47.19	302	P	P	21 25 58.0	-1.4
KKAR	Karatay Array	47.19	302	P	P	21 25 58.4	-0.9
BRVK	Borovoye	47.22	315	⇓iP	P	21 25 57.8	-1.6
BRVK				pmax	pmax		
	comp=Z,14nm,1.2s						
BRVK	Borovoye	47.22	315	P	P	21 25 58.0	-1.3
BRVK				IAmb	IAmb	21 26 12.8	
	comp=Z,10.0nm,0.8s						
GAR	Garm	47.85	296	P	P	21 26 03.0	-1.6
CHGR	Chuyangaron	48.80	296	P	P	21 26 11.8	-0.1
WB0	Warramunga Arr	50.72	173	P	P	21 26 25.4	-1.1
WB0				IAmb	IAmb	21 26 29.8	
	comp=Z,10.0nm,0.9s						
WRAB	Tennant Creek	50.88	173	⇑eP	P	21 26 29.9	+2.2
WRAB				pmax	pmax		
	comp=Z,32nm,2.5s						
WRA	Warramunga Arr	50.89	173	P	P	21 26 26.1	-1.6
	comp=Z,7.9nm,0.9s,baz=352,slow=8.3,SNR=28						
WRA	Warramunga Arr	50.89	173	i P	P	21 26 29.5	+1.7
WRA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
WRA	Warramunga Arr	50.89	173	P	P	21 26 26.9	-0.9
WB2	Warramunga Arr	50.89	173	P	P	21 26 26.9	-0.9
WB2				IAmb	IAmb	21 26 31.6	
	comp=Z,13nm,0.9s						
WR0	Warramunga Arr	50.93	173	P	P	21 26 27.6	-0.4
WR0				IAmb	IAmb	21 26 36.6	
	comp=Z,16nm,1.1s						
CTAO	Charters Tower	53.46	159	P	P	21 26 46.7	-0.2
CTAO				pmax	pmax		
	comp=Z,12nm,0.8s						
CTAO	Charters Tower	53.46	159	P	P	21 26 46.7	-0.2
CTAO				IAmb	IAmb	21 26 51.7	
	comp=Z,12nm,0.8s						
ABKAR	Akbulak array	53.84	311	P	P	21 26 48.1	-1.4
ABKAR	Akbulak array	53.84	311	P	P	21 26 47.9	-1.6
ARU	Arti	54.04	320	d iP	P	21 26 49.7	-1.1
ARU				S	S	21 34 27.4	+1.3
ARU				SS	SKiKP	21 38 01.8	-0.7
ARU				pmax	pmax		
	comp=Z,50nm,2.0s						
AS31	Alice Springs	54.53	174	P	P	21 26 54.6	-0.1
ASAR	Alice Springs	54.54	174	P	P	21 26 52.8	-1.9
	comp=Z,5.8nm,0.9s,baz=10,slow=7.9,SNR=29						
HRA	Herat	55.19	293	P	P	21 27 00.1	+0.3
J20K	Nowinta River	57.03	31	P	P	21 27 11.3	-0.8
J20K				IAmb	IAmb	21 27 44.2	
	comp=Z,24nm,1.7s						
IMAR	Indian Mountai	57.10	28	P	P	21 27 11.2	-1.5
K20K	Telida	57.12	32	P	P	21 27 11.9	-1.0
H21K	Melozitna Rive	57.51	29	P	P	21 27 14.7	-0.9
H21K				IAmb	IAmb	21 27 21.4	
	comp=Z,11nm,1.1s						
I21K	Tanana	57.88	29	P	P	21 27 17.7	-0.4
PPLA	Purkeypile	58.01	32	P	P	21 27 18.7	-0.6
MLY	Manley	58.42	29	P	P	21 27 22.7	+0.7
MLY				IAmb	IAmb	21 27 28.6	
	comp=Z,19nm,1.3s						
COLD	Coldfoot	58.43	27	P	P	21 27 22.4	+0.5
KIRV	Kirov	58.72	323	⇓eP	P	21 27 23.1	-1.0
H23K	Yukon River	58.83	28	P	P	21 27 24.8	0.0
SANVU	Saraoutou	59.11	136	P	P	21 27 25.4	-1.8
NEA2	Nenana	59.18	30	P	P	21 27 27.4	+0.1
RND	Reindeer	59.45	31	P	P	21 27 28.9	-0.3
RND				pmax	pmax		
	comp=Z,52nm,1.6s						
RND	Reindeer	59.45	31	P	P	21 27 28.9	-0.3
MDM	Murphy Dome	59.49	29	P	P	21 27 29.2	-0.2
H24K	Noodor Dome	59.51	28	P	P	21 27 29.4	-0.2
H24K				IAmb	IAmb	21 27 38.5	
	comp=Z,18nm,1.2s						
COLA	College	59.66	29	⇑eP	P	21 27 30.1	-0.4
COLA				pmax	pmax		
	comp=Z,7.0nm,1.2s						
POKR	Poker Plat Res	59.80	29	P	P	21 27 31.6	+0.1
ILAR	Eielson Array	60.09	29	P	P	21 27 33.2	-0.3
	comp=Z,2.6nm,1.0s,baz=282,slow=7.4,SNR=8.5						
BMAR	Burnt Mountain	60.56	26	P	P	21 27 37.8	+1.1
SCRK	Sand Creek	61.48	30	P	P	21 27 42.3	-0.8
SCRK				IAmb	IAmb	21 27 50.5	
	comp=Z,16nm,1.2s						
MENT	Mentasta	61.82	31	P	P	21 27 44.4	-0.9
MENT				IAmb	IAmb	21 27 53.6	
	comp=Z,13nm,1.0s						
L26K	Log Cabin Wild	61.97	31	P	P	21 27 46.7	+0.4
L26K				IAmb	IAmb	21 28 07.8	
	comp=Z,10nm,1.0s						
L27K	Beaver Creek,	62.63	31	P	P	21 27 51.2	+0.4
L27K				IAmb	IAmb	21 28 13.1	
	comp=Z,8.4nm,1.0s						
BCAR	Beaver Creek A	62.65	31	P	P	21 27 51.0	+0.1
KLMR	Klimovskoe	63.14	327	eP	P	21 27 51.3	-2.8

KLMR				pmax	pmax		
	comp=Z,16nm,1.5s						
KLMR	Klimovskoe	63.14	327	eP	P	21 27 51.4	-2.7
KLMR				AMP		21 27 53.8	
	comp=Z,16nm,1.5s						
STKA	Stephens Creek	63.66	168	P	P	21 27 57.3	-0.5
	comp=Z,9.8nm,0.9s,baz=341,slow=7.4,SNR=17						
STKA	Stephens Creek	63.66	168	P	P	21 27 58.1	+0.3
INK	Inuvik	64.39	24	P	P	21 28 01.5	-0.7
INK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
INK	Inuvik	64.39	24	P	P	21 28 01.5	-0.7
INK				IAmb	IAmb	21 28 24.1	
	comp=Z,6.9nm,1.2s						
VRH	Novokhopyorsk	64.80	316	eP	P	21 28 00.4	-4.8
VRH				pmax	pmax		
	comp=Z,8.0nm,1.1s						
LPSR	Galich'ya Gora	65.98	318	eP	P	21 28 09.2	-3.6
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
VSR	Storozhevoye	66.31	317	eP	P	21 28 11.8	-3.2
VSR				pmax	pmax		
	comp=Z,20nm,1.5s						
OBN	Obninsk	66.42	321	⇓eP	P	21 28 13.7	-1.8
OBN				e		21 28 50.2	
OBN				eSS	SS	21 41 26.6	+5.7
OBN				pmax	pmax		
	comp=Z,8.0nm,1.5s						
KBZ	Khabaz	66.58	308	P	P	21 28 16.1	-0.7
	comp=Z,6.9nm,1.0s,baz=157,slow=17,SNR=3.6						
KBZ	Khabaz	66.58	308	⇑eP	P	21 28 15.1	-1.7
KBZ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KIV	Kislovodsk	66.64	308	eP	P	21 28 16.4	-0.9
KIV				pmax	pmax		
	comp=Z,14nm,1.0s						
FINES	FINESS Array B	69.01	330	P	P	21 28 30.1	-1.7
	comp=Z,7.7nm,1.1s,baz=85,slow=4.0,SNR=8.5						
FINES	FINESS Array B	69.01	330	i P	P	21 28 32.7	+0.9
FINES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GURO	Guroymak-BITLI	69.14	303	P	P	21 28 32.5	-0.7
GURO				IAmb	IAmb	21 28 38.7	
	comp=Z,6.2nm,0.9s						
AKASG	Malin Array Be	72.27	319	P	P	21 28 50.0	-1.9
	comp=Z,1.0nm,0.4s,baz=53,slow=6.3,SNR=4.8						
AKASG	Malin Array Be	72.27	319	i P	P	21 28 52.5	+0.6
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	Malin Array Be	72.27	319	P	P	21 28 50.5	-1.3
AKASG				IAmb	IAmb	21 28 57.2	
	comp=Z,12nm,1.6s						
RAYN	Ar Rayn	72.80	287	P	P	21 28 55.5	-0.1
RAYN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
RAYN	Ar Rayn	72.80	287	P	P	21 28 55.5	-0.1
SORM	Soroca	73.98	317	⇓P	P	21 29 08.2	+6.2
SORM	Soroca	73.98	317	⇓P	P	21 29 08.2	+6.2
YKA	Yellowknife Ar	74.06	26	P	P	21 29 02.8	+0.6
	comp=Z,7.2nm,1.0s,baz=304,slow=4.6,SNR=6.2						
BR131	Keskin Array S	74.53	307	⇑eP	P	21 29 04.3	-1.3
BR131	Keskin Array S	74.53	307	P	P	21 29 05.6	0.0
BR131				IAmb	IAmb	21 29 31.9	
	comp=Z,16nm,1.2s						
BRTR	Keskin Array B	74.53	307	P	P	21 29 05.0	-0.6
	comp=Z,1.9nm,0.7s,baz=132,slow=1.8,SNR=5.9						
BRTR	Keskin Array B	74.53	307	P	P	21 29 05.6	0.0
NB2	NORSAR Subarra	75.30	334	P	P	21 29 07.4	-2.1
	comp=Z,4.8nm,1.0s,baz=52,slow=5.9						
NOA	NORSAR Array B	75.30	334	P	P	21 29 07.3	-2.2
	comp=Z,1.8nm,1.0s,baz=54,slow=6.5,SNR=1.9						
TPGR	Topolog	75.52	314	⇓P	P	21 29 16.9	+5.8
TESR	Tescani	75.78	316	⇓P	P	21 29 16.5	+4.0
VRI	Vrincioaia	76.06	315	⇓P	P	21 29 18.1	+4.0
VRI	Vrincioaia	76.06	315	⇓P	P	21 29 18.1	+4.0
BURAR	Bucovina Array	76.07	317	⇓P	P	21 29 19.0	+4.8
BURAR	Bucovina Array	76.07	317	⇓P	P	21 29 19.0	+4.8
PLOR	Plostina	76.11	315	⇑P	P	21 29 23.7	+9.3
BISRR	Bisoca	76.22	315	⇑P	P	21 29 21.8	+6.7
SUMG	Summit	76.37	356	P	P	21 29 15.5	-0.3
SUMG				pmax	pmax		
	comp=Z,43nm,1.8s						
SUMG	Summit	76.37	356	i P	P	21 29 15.0	-0.9
SUMG				IAmb	IAmb	21 29 16.4	
	comp=Z,4.8nm,0.8s						
SUMG	Summit	76.37	356	P	P	21 29 15.5	-0.3
MLR	Muntele Rosu	76.72	315	⇓P	P	21 29 32.6	+15
DOPR	Dopca	76.81	316	⇓P	P	21 29 25.6	+7.2
ARR	Arges	77.57	316	⇓P	P	21 29 29.9	+7.2
DRGR		77.95	318	⇓P	P	21 29 31.5	+6.7
DRGR		77.95	318	⇓P	P	21 29 31.5	+6.7
LOT	Lotru	78.05	316	⇑P	P	21 29 31.1	+5.7
LANS	Liptovska Anna	78.48	321	eP	P	21 29 35.7	+8.0
LANS	Liptovska Anna	78.48	321	e	P	21 29 35.7	+8.0
MORC	Moravsky Berou	79.16	322	⇓P	P	21 29 36.7	+5.4
MORC	Moravsky Berou	79.16	322	P	P	21 29 31.5	+0.1
MORC				pmax	pmax		
	comp=Z,12nm,1.4s						
VYHS	Vyhne	79.20	320	eP	P	21 29 39.3	+7.7
VYHS	Vyhne	79.20	320	e	P	21 29 39.3	+7.7
VTS	Vitosha	79.89	314	⇑P	P	21 29 40.4	+4.8
VTS	Vitosha	79.89	314	P	P	21 29 36.0	+0.4
VTS				pmax	pmax		
	comp=Z,8.0nm,1.4s						
VRAC	Vranov	79.93	322	⇓P	P	21 29 39.8	+4.2
VRAC	Vranov	79.93	322	⇓P	P	21 29 39.8	+4.2
SMOL	Smolenice	79.95	321	eP	P	21 29 42.2	+6.5
SMOL	Smolenice	79.95	321	e	P	21 29 42.2	+6.5
BOVS	Bovan	80.27	315	⇑P	P	21 29 43.1	+5.6
FRGS	Fruska Gora	80.54	317	⇑P	P	21 29 46.1	+7.1
CLL	Collm	80.56	325	eP	P	21 29 42.0	+3.2
CLL				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CLL	Collm	80.56	325	eP	P	21 29 38.0	-0.8
CLL				e		21 29 42.0	
	comp=Z,9.0nm,0.8s						
CLL				e		21 29 57.0	
CONA	Conrad Observa	81.14	321	eP	P	21 29 42.8	+0.6
	comp=Z,10nm,1.1s						
GERES	GERESS Array B	81.73	323	P	P	21 29 43.0	-2.3
	comp=Z,0.3nm,0.4s,baz=66,slow=10,SNR=3.6						
ARSA	Arzberg	81.73	321	eP	P	21 29 46.3	+1.1
	comp=Z,13nm,1.6s						
MOA	Molln	82.05	322	P	P	21 29 47.5	+0.6
	comp=Z,6.1nm,1.1s						
SOKA	Soboth	82.35	321	eP	P	21 29 49.5	+1.0
	comp=Z,14nm,1.3s						
PDG	Podgorica	82.43	315	⇓P	P	21 29 53.0	+4.1
OBKA	Obir	82.72	321	eP	P	21 29 50.9	+0.4
	comp=Z,3.9nm,0.7s						
ABTA	Abfaltersbach	83.67	322	eP	P	21 29 55.5	+0.1
	comp=Z,14nm,1.5s						
WATA	Walderalm	83.79	323	eP	P	21 29 55.7	-0.4
	comp=Z,6.4nm,1.3s						
WTTA	Wattenberg	83.80	322	eP	P	21 29 57.3	+1.1
	comp=Z,14nm,1.5s						
J08A	Circle Bar Ran	83.81	43	P	P	21 29 55.8	-0.5
J08A				IAmb	IAmb	21 30 03.0	
	comp=Z,12nm,1.1s						
MOTA	Moosalm	84.03	323	eP	P	21 29 59.3	+2.0
	comp=Z,6.5nm,0.9s						
CTI	Castel Tesino	84.57	321	P	P	21 29 58.9	-1.1
CTI				pmax	pmax		
	comp=Z,28nm,1.5s						
CTI	Castel Tesino	84.57	321	P	P	21 29 58.9	-1.1
DAVA	Damuels	84.70	323	eP	P	21 30 00.6	-0.1
	comp=Z,13nm,1.2s						
EMB	Emerald Bay	85.46	47	P	P	21 30 03.1	-1.7
PAHR	Pah Rah Range	85.47	46	P	P	21 30 03.4	-1.3
PAHR				IAmb	IAmb	21 30 10.4	
	comp=Z,8.5nm,1.0s						
NRCA	Norcia	85.80	318	P	P	21 30 05.9	-0.3
CMB	Columbia Colle	85.84	48	P	P	21 30 05.2	-1.3
CMB				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CMB	Columbia Colle	85.84	48	P	P	21 30 05.2	-1.3
CMB				IAmb	IAmb	21 30 12.6	
	comp=Z,6.2nm,0.9s						
HLID	Hailey	86.00	41	P	P	21 30 07.1	-0.3
HLID				IAmb	IAmb	21 30 15.0	
	comp=Z,16nm,1.8s						
RYN	Ryan	86.65	46	P	P	21 30 09.7	-0.9
KVN	Kaiserville	86.66	46	P	P	21 30 09.8	-0.9
KVN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KVN	Kaiserville	86.66	46	P	P	21 30 09.8	-0.9
KVN				IAmb	IAmb	21 30 16.0	
	comp=Z,7.6nm,0.9s						
LHV	Little Huntoon	86.89	47	P	P	21 30 10.3	-1.2
LHV				IAmb	IAmb	21 30 18.7	
	comp=Z,14nm,1.2s						
NVAR	Mina Array Bea	86.91	46	P	P	21 30 10.6	-1.4
	comp=Z,1.1nm,0.7s,baz=292,slow=5.3,SNR=9.9						
NVAR	Mina Array Bea	86.91	46	P	P	21 30 11.3	-0.7
RLMT	Red Lodge	87.74	37	P	P	21 30 15.6	-0.3
MOOW	Moose Ponds	87.89	39	P	P	21 30 16.0	-0.6
MOOW				IAmb	IAmb	21 30 38.7	
	comp=Z,5.9nm,1.4s						
TPAW	Teton Pass	87.95	39	P	P	21 30 16.3	-0.7
TPAW				IAmb	IAmb	21 30 23.0	
	comp=Z,5.5nm,0.9s						
HVU	Hansel Valley	88.08	41	P	P	21 30 16.6	-0.8
HVU				pmax	pmax		
	comp=Z,6.0nm,1.1s						
HVU	Hansel Valley	88.08	41	P	P	21 30 16.6	-0.8
HVU				IAmb	IAmb	21 30 22.7	
	comp=Z,6.0nm,1.1s						
HWUT	Hardware Ranch	88.87	41	P	P	21 30 20.2	-1.0
HWUT				IAmb	IAmb	21 30 27.7	
	comp=Z,11nm,1.1s						
SPR3	Spring Creek 3	88.97	44	P	P	21 30 21.6	-0.4
SPR3				IAmb	IAmb	21 30 48.7	
	comp=Z,12nm,1.6s						
PD31	Pinedale Array	89.19	39	P	P	21 30 21.9	-0.9
PD31				IAmb	IAmb	21 30 28.9	
	comp=Z,9.9nm,1.3s						
PDAR	Pinedale Array	89.19	39	P	P	21 30 21.4	-1.4
	comp=Z,0.9nm,0.8s,baz=335,slow=2.1,SNR=7.6						
ULM	Lac du Bonnet	90.00	27	P	P	21 30 24.3	-1.7
	comp=Z,7.5nm,1.1s,baz=312,slow=14,SNR=2.5						
P17A	Butcher Ranch,	90.77	42	P	P	21 30 30.1	0.0
P17A				IAmb	IAmb	21 30 37.8	
	comp=Z,12nm,1.1s						
MTPU	Mount Pierson	90.88	44	P	P	21 30 29.6	-1.3
MTPU				IAmb	IAmb	21 30 52.8	
	comp=Z,18nm,1.7s						
U15A	North Rim	91.87	45	P	P	21 30 33.9	-1.6
U15A				IAmb	IAmb	21 30 42.1	
	comp=Z,5.5nm,1.0s						
SNAA	Sanae	131.76	198	PKiKP	PKiKP	21 36 41.5	+1.7
VNA2	Neumayer--Watz	133.40	198	PKiKP	PKiKP	21 36 45.9	+2.9
VNA3	Neumayer Olymp	133.81	197	PKiKP	PKiKP	21 36 45.5	+1.6

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*IDC **13** 21:28:59.6±0.8, 30°.93N×128°.65E, h0^{km}, mb3.9/9, mb1 4.1/15, mb1mx3.9/41, mbtmp3.9/15, ML3.5/6, Error ellipse: s-maj=25.7km s-min=17.3km az=94.0*

*NEIC **13** 21:29:00.7±2.4, 30°.74N±0°.07×128°.78E±0°.07, h10^{km}±1^{km}, mb4.3/7, Error ellipse: s-maj=13.4km s-min=6.5km az=141.0*

*JMA **13** 21:29:00.9±0.3, 31°.04N×128°.59E, h17^{km}, M4.1*

ISC 13 21:29:00.9±3.0**, 30°.99N**±0°.04×**128°.62E**±0°.05**, h6**^{km}±19^{km}**,**
n51, $\sigma 1^{s}$**42**/56**, mb4.0**/13**, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	1.17	54	P	Pn	21 29 21.7	-2.0
JSJ				S	Sb	21 29 36.7	-2.1
JKC	Kuchinoerabu	1.46	111	P	Pn	21 29 27.7	0.0
JKC				S	Sn	21 29 46.1	-1.0
JNN	Nakanoshima	1.58	136	P	Pb	21 29 29.6	-0.8
JSU	Suzuyama	1.66	71	P	Pn	21 29 29.4	-1.1
JSU	Suzuyama	1.66	71	Pn	Pb	21 29 32.1	+0.3
JSU				Sn	Sn	21 29 51.5	-0.6
JFU	Fukue jima 2	1.67	4	P	Pn	21 29 29.6	-1.0
JFU				S	Sn	21 29 49.8	-2.5
JYAK	Yakushimahirau	1.79	114	P	Pn	21 29 32.3	-0.1
JTN	Tanegashima 3	2.06	99	P	Pn	21 29 34.7	-1.3
JTZ	Takazaki	2.30	66	P	Pn	21 29 38.8	-0.5
JNU	Nakatsue	2.87	41	Pn	Pn	21 29 48.2	+1.0
	37nm,0.3s,baz=25,slow=0.2,SNR=2.1						
JNU				Sn	Sb	21 30 29.9	+2.1
	23nm,0.3s,baz=44,slow=2.3,SNR=1.4						
JTU	Tsushima	3.59	10	Pn	Pb	21 30 03.5	-1.2
JOW	Kunigami	4.15	184	Pn	Pn	21 30 04.8	0.0
	3.4nm,0.3s,baz=58,slow=14,SNR=4.1						
JMN	Monobe	5.22	57	Pn	Pn	21 30 20.8	+1.3
JHS	Saijyo	5.50	42	Pn	Pn	21 30 26.1	+2.7
JMZ	Minamidaito 2	5.64	155	Pn	Pn	21 30 21.9	-3.3
KSRS	Korea Array	6.48	355	Pn	Pn	21 30 34.7	-2.0
	0.9nm,0.3s,baz=165,slow=40,SNR=3.6						
KSRS				Sn	Sn	21 31 50.5	-0.3
	1.2nm,0.3s,baz=180,slow=29,SNR=5.0						
KSRS				Lg	Lg	21 32 23.4	
	2.2nm,0.3s,baz=182,slow=29,SNR=6.3						
JWT	Wachi	7.12	51	Pn	Pn	21 30 47.2	+1.6
YOJ	Yonaguni jima	8.18	219	Pn	Pn	21 31 02.8	+2.7
INU	Inuyama	8.27	56	Pn	Pn	21 31 03.8	+2.4
MAJO	Matsushiro	9.71	53	Pn	Pn	21 31 19.7	-1.5
MJB9	Matsu-Tunnel	9.71	53	Pn	Pn	21 31 19.9	-1.3
MJAR	Matsushiro Arr	9.71	53	Pn	Pn	21 31 20.1	-1.1
	0.1nm,0.3s,baz=239,slow=14,SNR=5.6						
ASAJ	Asahikawa	17.13	36	P	Pn	21 33 01.1	+0.3
	0.4nm,0.3s,baz=199,slow=8.4,SNR=8.0						
JKA	Kamikawa-asahi	17.13	36	P	Pn	21 33 01.1	+0.2
JKA	Kamikawa-asahi	17.13	36	IAmb	IAmb	21 33 01.6	
	comp=Z,11nm,0.8s						
KLR	Kul'dur	18.38	7	P	P	21 33 16.5	+0.2
	comp=Z,0.2nm,0.3s,baz=210,slow=7.2,SNR=11						
SONM	Songino Array	23.91	321	P	P	21 34 15.8	+0.3
	comp=Z,0.6nm,0.7s,baz=145,slow=12,SNR=3.8						
SONM	Songino Array	23.91	321	P	P	21 34 16.4	+0.9
MKAR	Makanchi Array	38.77	307	P	P	21 36 26.4	+0.3
	comp=Z,0.6nm,0.7s,baz=98,slow=10,SNR=7.9						
MAKZ	Makanchi	38.98	307	P	P	21 36 28.3	+0.4
KURK	Kurchatov	41.72	313	P	P	21 36 50.7	+0.3
KKAR	Karatay Array	47.07	302	P	P	21 37 34.3	+0.9
BRVK	Borovoye	47.11	315	P	P	21 37 34.3	+0.8
WRA	Warramunga Arr	50.94	173	P	P	21 38 03.3	+0.1
	comp=Z,1.6nm,1.1s,baz=353,slow=8.2,SNR=3.3						
ABKAR	Akbulak array	53.73	311	P	P	21 38 24.8	+1.1
ASAR	Alice Springs	54.58	174	P	P	21 38 27.4	-2.7
	comp=Z,1.0nm,0.9s,baz=354,slow=4.9,SNR=5.7						
ASAR	Alice Springs	54.58	174	P	P	21 38 26.6	-3.5
K20K	Telida	57.16	32	P	P	21 38 48.9	+0.7
PPLA	Purkeypile	58.05	32	P	P	21 38 55.1	+0.5
PPLA				IAmb	IAmb	21 39 14.3	
	comp=Z,1.3nm,0.9s						
H23K	Yukon River	58.87	28	P	P	21 39 00.8	+0.7
H23K				IAmb	IAmb	21 39 02.2	
	comp=Z,2.7nm,0.8s						
MDM	Murphy Dome	59.52	29	P	P	21 39 04.7	0.0
H24K	Noodor Dome	59.54	28	P	P	21 39 05.3	+0.5
H24K				IAmb	IAmb	21 39 06.7	
	comp=Z,4.0nm,1.1s						
WRH	Wood River Hil	59.66	30	P	P	21 39 04.8	-0.7
WRH				IAmb	IAmb	21 39 06.9	
	comp=Z,4.4nm,1.1s						
ILAR	Eielson Array	60.12	29	P	P	21 39 07.7	-1.1
	comp=Z,0.9nm,0.9s,baz=285,slow=7.1,SNR=6.9						
SCRK	Sand Creek	61.51	30	P	P	21 39 17.1	-1.3
M26K	Nabesna, AK	62.31	32	P	P	21 39 23.4	-0.3
VRDI	Verde Repeater	62.40	33	P	P	21 39 23.2	-1.3
FINES	FINESS Array B	68.92	330	P	P	21 40 06.5	+0.2
	comp=Z,5.5nm,0.9s,baz=78,slow=14,SNR=3.4						
NVAR	Mina Array Bea	86.98	46	P	P	21 41 48.1	+0.6
	comp=Z,0.4nm,0.6s,baz=310,slow=5.8,SNR=3.5						
PDAR	Pinedale Array	89.25	39	P	P	21 41 59.0	+0.9
	comp=Z,0.7nm,0.7s,baz=338,slow=1.6,SNR=5.7						
ULM	Lac du Bonnet	90.03	27	P	P	21 42 01.5	+0.2
	comp=Z,2.4nm,0.6s,baz=79,slow=12,SNR=3.8						

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*JMA **13** 21:36:24.9±0.2, 31°.23N×128°.67E, h2^{km}±2^{km}, M4.5*

JMA Felt I J1.

*IDC **13** 21:36:27.0±0.8, 31°.16N×128°.70E, h0^{km}, mb3.8/9, mb1 3.9/15, mb1mx3.8/46, mbtmp3.8/15, ML3.5/6, Error ellipse: s-maj=25.6km s-min=15.7km az=91.0*

*NEIC **13** 21:36:28.4±1.7, 31°.22N±0°.05×128°.86E±0°.05, h10^{km}±1^{km}, mb4.4/14, Error ellipse: s-maj=8.8km s-min=7.4km az=221.0*

*KMA **13** 21:36:29.6, 31°.20N×128°.70E, h35^{km}*

ISC 13 21:36:27.5±1.7**, 31°.25N**±0°.04×**128°.81E**±0°.04**, h6**^{km}±11^{km}**,**
n68, $\sigma 1^{s}$**21**/75**, mb4.0**/15**, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.89	61	P	Pg	21 36 44.0	-0.5
JSJ				S	Sb	21 36 57.2	-0.1
JFU	Fukue jima 2	1.41	358	P	Pn	21 36 51.7	-2.0
JFU				S	Sn	21 37 10.4	-2.1
JKC	Kuchinoerabu	1.42	123	P	Pn	21 36 53.8	-0.1
JKC				S	Sg	21 37 13.4	+0.1
JSU	Suzuyama	1.43	79	P	Pn	21 36 53.7	-0.3
JSU				S	Sg	21 37 14.8	+1.3
JSU	Suzuyama	1.43	79	Pn	Pn	21 36 54.1	+0.2
JSU				Sn	Sb	21 37 12.1	-1.0
JZO	Okuchi	1.77	59	P	Pn	21 36 58.3	-0.3
JZO				S	Sb	21 37 23.4	+0.7
JYAK	Yakushimahirau	1.77	124	P	Pn	21 36 57.1	-1.6
JYAK				S	Sb	21 37 22.3	-0.6
JTN	Tanegashima 3	1.95	107	P	Pn	21 37 01.0	-0.2
JTN				S	Sg	21 37 28.4	-1.9
JMTN	Minamitane	1.99	115	P	Pn	21 37 01.7	+0.1
JNU	Nakatsue	2.56	43	Pn	Pn	21 37 10.7	+1.1
	66nm,0.3s,baz=223,slow=0.2,SNR=1.6						
JNU	Nakatsue	2.56	43		Pn	21 37 09.3	-0.3
GOS1	Gosan-ri	3.01	314	P	Pn	21 37 14.4	-1.3
	SNR=10.0						
GOS2	Gosang-Q330s	3.01	314	P	Pn	21 37 14.4	-1.3
	SNR=10.0						
HALB	Hallimjungang-	3.04	316	P	Pn	21 37 15.0	-1.1
	SNR=10						
JTU	Tsushima	3.31	8	Pn	Pn	21 37 23.6	+3.8
YKDB	Yokjido	3.40	352	P	Pn	21 37 21.0	-0.1
	SNR=9.3						
CJD	Chujado	3.44	323	P	Pn	21 37 20.5	-1.1
	SNR=12						
KOHB	KOHEUNG	3.60	339	P	Pn	21 37 22.7	-1.1
	SNR=9.4						
BOSB	Boseong-gun	3.76	339	P	Pn	21 37 25.0	-1.0
	SNR=9.3						
HANB	Haenam	3.80	331	P	Pn	21 37 26.0	-0.6
	SNR=7.0						
KSJDO	Jindo	3.84	328	P	Pn	21 37 26.3	-0.9
	SNR=8.2						
GGDB	Gageodo	4.18	313	P	Pn	21 37 30.1	-1.7
	SNR=16						
JOW	Kunigami	4.42	186	Pn	Pn	21 37 35.4	+0.2
	1.6nm,0.3s,baz=331,slow=13,SNR=1.4						
JOW	Kunigami	4.42	186		Pn	21 37 36.2	+1.1
HUK2	Heuksan-myeon	4.45	321	P	Pn	21 37 34.4	-1.1
	SNR=19						
KSBON	Boeun	5.31	351	P	Pn	21 37 48.6	+1.3
	SNR=9.0						
CHYB	Chungyang	5.69	1	P	Pn	21 37 53.2	+0.7
	SNR=16						
KSAR	Wonju Array Be	6.23	353	Pn	Pn	21 38 00.8	+0.9
KSRS	Korea Array	6.24	353	Pn	Pn	21 38 00.3	+0.3
	1.8nm,0.3s,baz=175,slow=14,SNR=14						
KSRS				Sn	Sn	21 39 10.3	-1.2
	3.0nm,0.3s,baz=176,slow=25,SNR=6.4						
KSRS				Lg	Lg	21 39 39.6	
	2.3nm,0.3s,baz=170,slow=30,SNR=4.8						
KS19	Wonju Array Si	6.29	353		Pn	21 38 01.1	+0.3
JWT	Wachi	6.83	52	Pn	Pn	21 38 10.4	+2.2
INU	Inuyama	7.99	57	Pn	Pn	21 38 24.2	0.0
MJAR	Matsushiro Arr	9.43	53	Pn	Pn	21 38 46.5	+2.7
	0.1nm,0.3s,baz=239,slow=14,SNR=7.6						
MJAR	Matsushiro Arr	9.43	53		Pn	21 38 45.6	+1.7
NACB	Ninganchiao	9.51	224	Pn	Pn	21 38 45.3	+0.3
SSLB	Suanglung	10.19	225		Pn	21 38 56.0	+1.7
JSD	Sado	10.31	46	Pn	Pn	21 38 54.5	-1.4
ASAJ	Asahikawa	16.83	36	Pn	Pn	21 40 23.6	0.0
	0.3nm,0.3s,baz=230,slow=14,SNR=6.6						
JKA	Kamikawa-asahi	16.83	36		Pn	21 40 23.6	0.0
JKA	Kamikawa-asahi	16.83	36	IAmb	IAmb	21 40 29.9	
	comp=Z,22nm,1.2s						
KLR	Kul'dur	18.10	6	P	P	21 40 41.2	+1.4
	comp=Z,0.1nm,0.3s,baz=168,slow=19,SNR=3.2						
SONM	Songino Array	23.81	320	P	P	21 41 41.0	-0.2
	comp=Z,1.5nm,0.8s,baz=138,slow=8.9,SNR=9.2						
SONM	Songino Array	23.81	320	IAmb	IAmb	21 41 47.6	
	comp=Z,1.3nm,0.7s						
PBKT	Sadao Pong	29.24	246	P	P	21 42 30.9	+0.6
PBKT				IAmb	IAmb	21 42 50.2	
	comp=Z,11nm,0.9s						
MKAR	Makanchi Array	38.74	307	P	P	21 43 51.9	-0.6
	comp=Z,0.7nm,0.8s,baz=93,slow=12,SNR=5.4						
TIXI	Tiksi	40.46	0	P	P	21 44 09.1	+2.7
	comp=Z,0.7nm,0.5s,baz=221,slow=1.5,SNR=4.3						
TIXI	Tiksi	40.46	0	P	P	21 44 07.7	+1.3
KURK	Kurchatov	41.67	313	P	P	21 44 17.5	+0.9
BRVK	Borovoye	47.05	315	P	P	21 45 00.5	+0.9
BRVK				IAmb	IAmb	21 45 04.6	
	comp=Z,1.8nm,0.5s						
KK31	Karatay Array	47.07	302	P	P	21 45 00.2	+0.2
KK31				IAmb	IAmb	21 45 05.6	
	comp=Z,3.9nm,0.8s						
KKAR	Karatay Array	47.07	302	P	P	21 45 00.3	+0.3
WRA	Warramunga Arr	51.17	173	P	P	21 45 30.8	-0.8
	comp=Z,1.1nm,0.7s,baz=351,slow=8.1,SNR=6.5						
ABKAR	Akbulak array	53.68	311	P	P	21 45 49.6	-0.4
AS31	Alice Springs	54.82	174	P	P	21 45 57.6	-0.8
AS31				IAmb	IAmb	21 46 00.3	
	comp=Z,0.9nm,0.9s						
ASAR	Alice Springs	54.82	174	P	P	21 45 58.1	-0.3
	comp=Z,1.2nm,0.8s,baz=1.7,slow=7.8,SNR=15						
HRA	Herat	55.12	292	P	P	21 46 00.9	0.0
HRA				IAmb	IAmb	21 46 16.4	
	comp=Z,1.2nm,0.6s						
ILAR	Eielson Array	59.81	30	P	P	21 46 33.9	+0.6
	comp=Z,0.7nm,0.7s,baz=285,slow=9.2,SNR=4.3						
BMAR	Burnt Mountain	60.28	26	P	P	21 46 36.3	-0.2
MENT	Mentasta	61.56	31	P	P	21 46 44.7	-0.6
MENT				IAmb	IAmb	21 46 49.3	
	comp=Z,4.3nm,0.9s						
BCAR	Beaver Creek A	62.38	31	P	P	21 46 50.5	-0.3
BARN	Barnard Glacie	62.97	33	P	P	21 46 53.9	-1.0
INK	Inuvik	64.11	24	P	P	21 47 03.2	+1.2
	comp=Z,1.2nm,0.9s,baz=267,slow=2.1,SNR=1.5						
KBS	Kingsbay	64.43	349	P	P	21 47 03.1	-1.0
OUENC	Ouen Island, N	64.62	141	P	P	21 47 03.9	-2.1
FINES	FINESS Array B	68.78	330	P	P	21 47 33.4	+1.4
	comp=Z,4.9nm,1.1s,baz=69,slow=6.3,SNR=5.8						
FINES	FINESS Array B	68.78	330	P	P	21 47 32.2	+0.2
PDAR	Pinedale Array	88.94	39	P	P	21 49 25.2	+1.9
	comp=Z,0.2nm,0.6s,baz=329,slow=1.1,SNR=2.0						
PDAR	Pinedale Array	88.94	39	P	P	21 49 22.0	-1.3

JMA 13 21:46:01.7±0.5**, 31°.43N**×**128°.79E, h4**^{km}**, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.83	72	P	Pg	21 46 17.5	-0.1
JFU	Fukue jima 2	1.22	358	P	Pg	21 46 24.8	-0.4
JSU	Suzuyama	1.43	87	P	Pn	21 46 28.1	-0.3

IDC 13 21:46:03.4±1.6**, 30°.83N**×**128°.21E, h0**^{km}**, mb3.3**/3**, mb1 3.5**/6**, mb1mx3.4**/36**, mbtmp3.4**/6**, ML3.7**/2**, Error ellipse: s-maj=31.5km s-min=23.0km az=89.0, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNU	Nakatsue	3.22	44	Pn	Pn	21 46 56.3	+1.0
	15nm,0.3s,baz=72,slow=0.2,SNR=1.3						
KSRS	Korea Array	6.61	358	Pn	Pn	21 47 41.8	0.0
	0.6nm,0.3s,baz=174,slow=14,SNR=3.9						
KSRS				Lg	Lg	21 49 33.4	
	1.1nm,0.3s,baz=179,slow=30,SNR=4.8						
MJAR	Matsushiro Arr	10.09	53	Pn	Pn	21 48 28.3	-1.3
	baz=248,slow=22,SNR=1.3						
SONM	Songino Array	23.81	322	P	P	21 51 18.2	+0.2
	0.3nm,0.6s,baz=116,slow=6.6,SNR=3.5						
MKAR	Makanchi Array	38.58	308	P	P	21 53 27.6	-0.4
	0.6nm,0.8s,baz=91,slow=9.7,SNR=4.6						
ASAR	Alice Springs	54.46	174	P	P	21 55 32.9	+0.1
	0.2nm,0.7s,baz=7.9,slow=14,SNR=2.1						

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*JMA **13** 21:46:12.6±0.3, 31°.12N×128°.71E, h8^{km}, M3.9*

*IDC **13** 21:46:13.1±1.1, 30°.90N×128°.36E, h0^{km}, mb3.4/5, mb1 3.7/7, mb1mx3.5/35, mbtmp3.5/7, ML3.1/2, Error ellipse: s-maj=36.6km s-min=21.4km az=80.0*

ISC 13 21:46:13.5±1.0**, 31°.08N**±0°.07×**128°.86E**±0°.07**, h6**^{km}**, n14,**
$\sigma 1^{s}$**81**/15**, mb3.6**/5**, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	Shimokoshiki	0.94	51	P	Pb	21 46 31.5	-0.8
JSJ				S	Sn	21 46 45.3	-1.9
JKC	Kuchinoerabu	1.31	118	P	Pn	21 46 39.0	+0.7
JKC				*e*S	Sn	21 46 57.2	+1.1
JSU	Suzuyama	1.43	72	P	Pg	21 46 41.3	+0.3
JFU	Fukue jima 2	1.57	357	P	Pn	21 46 40.8	-1.2
JYAK	Yakushimahirau	1.66	120	P	Pn	21 46 43.7	+0.6
JTN	Tanegashima 3	1.88	103	P	Pn	21 46 46.6	+0.4
JMTN	Minamitane	1.89	111	P	Pn	21 46 47.0	+0.7
KSRS	Korea Array	6.40	353	Pn	Pn	21 47 52.6	+4.2
	1.4nm,0.3s,baz=176,slow=15,SNR=8.0						
MJAR	Matsushiro Arr	9.49	53	Pn	Pn	21 48 37.6	+6.8
	0.0nm,0.3s,baz=237,slow=14,SNR=2.0						
SONM	Songino Array	23.96	321	P	P	21 51 28.8	+0.1
	0.4nm,0.6s,baz=128,slow=9.3,SNR=3.6						
MKAR	Makanchi Array	38.87	307	P	P	21 53 37.0	-2.6
	0.7nm,0.9s,baz=100,slow=7.9,SNR=3.0						
WRA	Warramunga Arr	51.01	173	P	P	21 55 15.2	-1.1
	0.7nm,0.9s,baz=2.7,slow=7.9,SNR=2.6						
ASAR	Alice Springs	54.65	174	P	P	21 55 43.6	+0.2
	0.4nm,0.6s,baz=2.4,slow=14,SNR=9.4						
ILAR	Eielson Array	59.94	30	P	P	21 56 22.3	+2.1
	0.3nm,0.6s,baz=278,slow=8.1,SNR=1.7						

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*FUNV **13** 21:56:09.9, 8°.44N×71°.42W, h5^{km}, MW3.3*

ISC 13 21:56:08.4±1.3**, 8°.48N**±0°.04×**71°.38W**±0°.02**, h3**^{km}±11^{km}**, n25,** σ**1^s.07**/43**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	Socops	0.55	111	*e*P	Pg	21 56 20.3	+1.3
SOCV				*e*S	Sb	21 56 28.6	-0.5
SDV	Santo Domingo	0.84	61	*e*P	Pb	21 56 26.0	+0.3
SDV				*e*S	Sb	21 56 38.0	+0.5
SDV				*i*		21 56 41.0	
	comp=Z,137nm,0.4s						
CAPV	Capacho	1.11	237	*e*P	Pg	21 56 28.7	-1.1
CAPV				*e*S	Sg	21 56 44.3	+0.1
PAMC	Pamplona, Colo	1.73	229	*e*P	Pn	21 56 40.5	+0.6
PAMC				*e*S	Sg	21 57 05.1	+1.0
PAMC				*i*		21 57 07.3	
	comp=Z,252nm,0.2s						
MCQV	Machiques	1.93	324	*e*P	Pn	21 56 42.8	+0.6
OCAC	Ocana	1.94	263	*e*P	Pn	21 56 42.6	+0.2
OCAC				*e*S	Sn	21 57 07.8	+0.5
OCAC				*i*		21 57 10.9	
	comp=Z,1μm,0.4s						
TAMC	Tame, Arauca	2.08	191	*e*P	Pg	21 56 48.1	-0.1
TAMC				*e*S	Sg	21 57 16.6	+1.5
TAMC				*i*		21 57 20.7	
	comp=Z,137nm,0.3s						
LL6C	La Loma 6 Bece	2.25	304	*i* P	Pn	21 56 46.6	+0.1
LL6C				*e*P	Pn	21 56 46.6	+0.1
LL6C				*e*S	Sn	21 57 15.3	+0.5
ELOV	Elorza	2.39	128	*e*P	Pg	21 56 53.9	-0.3
ELOV				*i*		21 57 23.9	
	comp=Z,407nm,4.0s						
ELOV				*e*S	Sg	21 57 24.3	-0.8
ELOV	Elorza	2.39	128	*e*P	Pn	21 56 48.5	+0.1
BARC	Barichara	2.59	224	*e*P	Pb	21 56 56.4	+0.7
BARC				*e*S	Sg	21 57 31.5	-0.3
BARC				*i*		21 57 33.3	
	comp=Z,135nm,0.4s						
SIQV	Siquisique	2.65	36	*e*P	Pn	21 56 53.6	+1.5
SIQV				*e*S	Sn	21 57 25.5	+0.7
SMLC	San Martn de	2.68	277	*e*P	Pn	21 56 51.9	-0.6
SMLC				*e*S	Sb	21 57 28.8	-1.6
SMLC				*i*		21 57 29.6	
	comp=Z,203nm,0.3s						
BRRC	Barranca, Sant	2.69	240	*e*P	Pb	21 56 57.8	+0.6
BRRC				*e*S	Sb	21 57 29.8	-0.8
BRRC				*i*		21 57 39.2	
	comp=Z,44nm,0.4s						
BAUV	El Baul	3.33	82	*e*P	Pn	21 57 02.8	+1.4
BAUV				*e*S	Sn	21 57 41.2	-0.3
ZARC	Zaragoza, Cauc	3.58	254	*e*P	Pn	21 57 05.5	+0.5
ZARC				*e*S	Sn	21 57 47.3	-0.6
ZARC				*i*		21 57 59.4	
	comp=Z,36nm,0.6s						
MONV	Montecano	3.72	22	*e*P	Pn	21 57 06.9	+0.2
SPBC	San Pablo de B	3.88	224	*e*P	Pn	21 57 10.8	+1.7
SPBC				*e*S	Sn	21 57 56.7	+1.5
SPBC				*i*		21 58 16.1	
	comp=Z,18nm,0.6s						
BENV	Beln	4.01	68	*e*P	Pn	21 57 12.1	+1.2
BENV				*e*S	Sn	21 57 57.5	-0.9
CHIC	Chingaza	4.49	212	*e*P	Pn	21 57 19.2	+1.5
CHIC				*e*S	Sn	21 58 10.4	-0.3
CHIC				*i*		21 58 18.5	
	comp=Z,8.8nm,0.4s						
TACV	Tcata	4.60	69	*e*P	Pn	21 57 20.3	+1.4
PAYV	Puerto Ayacuch	4.79	129	*e*P	Pn	21 57 21.8	+0.4
CACV	CAICARA DEL OR	4.88	100	*e*P	Pb	21 57 30.8	-3.7
MERV	Las Mercedes	5.08	81	*e*P	Pn	21 57 25.8	+0.4
BIRV	Birongo	5.41	68	*e*P	Pn	21 57 30.7	+0.6

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*IDC **13** 22:12:21.3±0.9, 16°.00S×172°.49W, h0^{km}, mb3.9/7, mb1 4.1/8, mb1mx3.9/39, mbtmp3.9/8, ML4.0/1, Error ellipse: s-maj=42.1km s-min=18.8km az=122.0*

*NEIC **13** 22:12:22.0±1.3, 15°.99S±0°.06×172°.2W±0°.1, h10^{km}±1^{km}, mb4.5/11, Error ellipse: s-maj=17.6km s-min=8.5km az=110.0*

*NOU **13** 22:12:44.2, 14°.71S×172°.07W, h9^{km}, MLv3.7/4, Samoa Islands*

ISC 13 22:12:25.3±0.6**, 16°.00S**±0°.07×**172°.24W**±0°.09**, h41**^{km}**, n25,** σ**1^s.25**/26**, mb4.0**/13**, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	2.13	12	Pn	Pn	22 12 59.6	+1.0
	50nm,0.3s,baz=99,slow=1.9,SNR=27						
AFI				Sn	Sn	22 13 24.4	+0.6
	187nm,0.3s,baz=70,slow=20,SNR=15						
FUNA	Funafuti	11.19	311	Pn	Pn	22 15 00.8	-2.0
RAR	Rarotonga	12.90	116	Pn	Pn	22 15 23.8	-2.4
KNTN	Kanton	13.16	2	Pn	Pn	22 15 28.6	-1.2
DZM	Mont Dzumac	21.02	250	P	P	22 17 05.6	-0.2
DZM				IAmb	IAmb	22 17 22.1	
	comp=Z,8.6nm,1.1s						
TARA	Tarawa	22.64	318	P	P	22 17 23.0	0.0
XMAS	Kiritimati	23.14	40	P	P	22 17 26.9	-1.3
XMAS				IAmb	IAmb	22 17 39.5	
	comp=Z,18nm,0.8s						
URZ	Urewera	24.07	201	P	P	22 17 39.2	+2.3
	comp=Z,5.8nm,0.3s,baz=302,slow=23,SNR=4.2						
URZ	Urewera	24.07	201	P	P	22 17 37.5	+0.6
URZ				IAmb	IAmb	22 17 44.0	
	comp=Z,15nm,0.9s						
BKZ	Black Stump Fm	25.10	201	P	P	22 17 46.9	+0.6
BKZ				IAmb	IAmb	22 17 49.7	
	comp=Z,6.6nm,1.0s						
BFZ	Birch Farm	26.54	200	P	P	22 17 59.6	+0.3
BFZ				IAmb	IAmb	22 18 13.0	
	comp=Z,30nm,1.2s						
QRZ	Quartz Range	28.04	205	P	P	22 18 11.8	-0.9
STKA	Stephens Creek	44.71	241	P	P	22 20 34.4	-0.3
	comp=Z,1.1nm,0.7s,baz=110,slow=6.4,SNR=3.1						
WB0	Warramunga Arr	50.76	257	P	P	22 21 22.2	+0.4
WB0				IAmb	IAmb	22 21 33.3	
	comp=Z,4.0nm,1.1s						
WRA	Warramunga Arr	50.80	257	P	P	22 21 21.5	-0.5
	comp=Z,0.3nm,0.5s,baz=95,slow=7.9,SNR=1.9						
ASAR	Alice Springs	50.99	252	P	P	22 21 23.1	-0.4
	comp=Z,1.3nm,0.8s,baz=87,slow=8.3,SNR=17						
ASAR				PcP	PcP	22 22 40.5	+1.1
	comp=Z,0.3nm,0.4s,baz=101,slow=4.9,SNR=5.0						
VNDA	Vanda	62.90	186	P	P	22 22 48.1	+1.3
	comp=Z,1.0nm,1.1s,baz=15,slow=7.2,SNR=5.0						
VNDA	Vanda	62.90	186	IAmb	IAmb	22 22 48.9	
	comp=Z,0.9nm,0.9s						
NVAR	Mina Array Bea	74.03	41	P	P	22 23 59.1	+1.8
	comp=Z,0.4nm,0.7s,baz=241,slow=9.2,SNR=3.0						
LENM	Lemitar	79.60	50	P	P	22 24 28.8	+0.1
ILAR	Eielson Array	82.82	11	P	P	22 24 47.2	+2.3
	comp=Z,1.0nm,0.6s,baz=228,slow=5.8,SNR=13						
ILAR	Eielson Array	82.82	11	P	P	22 24 46.5	+1.6
POKR	Poker Plat Res	83.04	10	P	P	22 24 46.0	-0.1
POKR				IAmb	IAmb	22 24 49.7	
	comp=Z,9.9nm,0.9s						
GERES	GERESS Array B	146.89	353	PKPbc	PKiKP	22 32 06.0	0.0
	comp=Z,0.2nm,0.3s,baz=35,slow=3.6,SNR=2.4						
BRTR	Keskin Array B	147.32	321	PKPbc	PKiKP	22 32 07.2	0.0
	comp=Z,1.1nm,0.8s,baz=66,slow=3.0,SNR=5.1						

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*JMA **13** 22:14:21.3±0.4, 31°.31N×128°.85E, h4^{km}, M4.3*

*NEIC **13** 22:14:21.8±2.1, 31°.13N±0°.06×128°.75E±0°.06, h10^{km}±1^{km}, mb4.4/21, Error ellipse: s-maj=10.1km s-min=8.2km az=163.0*

*IDC **13** 22:14:21.2±0.8, 31°.08N×128°.36E, h0^{km}, mb3.9/9, mb1 4.0/15, mb1mx3.8/61, mbtmp3.9/15, ML3.2/4, Error ellipse: s-maj=22.2km s-min=15.7km az=81.0*

ISC 13 22:14:21.4±0.5**, 31°.21N**±0°.04×**128°.77E**±0°.05**, h6**^{km}**, n64,** σ**1^s.44**/63**, mb4.3**/18**, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	Shimokoshiki	0.93	60	P	Pg	22 14 36.9	-2.4
JKC	Kuchinoerabu	1.44	121	P	Pn	22 14 48.0	0.0
JKC				*e*S	Sg	22 15 07.5	-0.1
JFU	Fukue jima 2	1.44	359	P	Pn	22 14 46.2	-1.8
JSU	Suzuyama	1.47	78	P	Pn	22 14 48.8	+0.3
JSU	Suzuyama	1.47	78	Pn	Pn	22 14 48.0	-0.5
JSU				Sn	Sg	22 15 08.7	0.0
JNN	Nakanoshima	1.67	145	P	Pb	22 14 52.1	-0.4
JNN				*e*S	Sb	22 15 14.0	+0.2
JYAK	Yakushimahirau	1.79	123	P	Pb	22 14 53.9	-0.6
JTN	Tanegashima 3	1.98	106	P	Pn	22 14 54.4	-1.0
JMTN	Minamitane	2.00	113	P	Pn	22 14 55.5	-0.3
JTZ	Takazaki	2.09	70	P	Pn	22 14 56.5	-0.5
JNU	Nakatsue	2.61	43	Pn	Pb	22 15 10.1	+1.5
	baz=129,slow=0.2,SNR=22						
JNU	Nakatsue	2.61	43		Pb	22 15 09.6	+1.0
JTU	Tsushima	3.34	9		Pb	22 15 19.8	-1.3
JOW	Kunigami	4.39	186	Pn	Pn	22 15 27.1	-1.5
	4.1nm,0.3s,baz=346,slow=14,SNR=6.3						
JOW	Kunigami	4.39	186		Pn	22 15 29.6	+1.0
KSRS	Korea Array	6.26	354	Pn	Pn	22 15 54.1	-0.2
	0.7nm,0.3s,baz=175,slow=14,SNR=9.2						
KSRS				Sn	Sn	22 17 05.4	-0.8
	1.8nm,0.3s,baz=175,slow=25,SNR=4.1						
KSRS				Lg	Lg	22 17 34.3	
	2.7nm,0.3s,baz=180,slow=31,SNR=7.9						
KS19	Wonju Array Si	6.32	353		Pn	22 15 57.4	+2.3
JWT	Wachi	6.88	52	Pn	Pn	22 16 05.0	+2.2
INU	Inuyama	8.04	57	Pn	Pn	22 16 22.1	+3.4
JGF	Kuroka	8.40	56	Pn	Pn	22 16 26.4	+2.7
YOJ	Yonaguni jima	8.44	219		Pn	22 16 27.6	+3.4
MJAR	Matsushiro Arr	9.47	53	Pn	Pn	22 16 44.1	+5.7
	0.0nm,0.3s,baz=240,slow=13,SNR=1.8						
SSLB	Suanglung	10.14	225		Pn	22 16 51.0	+3.5
JCJ	Chichijima	12.42	106	Pn	Pn	22 17 19.4	+0.6
USRK	Ussuriysk Ar.	13.21	10	Pn	Pn	22 17 29.5	+0.1
ASAJ	Asahikawa	16.87	36	P	P	22 18 22.4	+2.2
	0.1nm,0.3s,baz=233,slow=17,SNR=4.3						
JKA	Kamikawa-asahi	16.87	36	P	P	22 18 22.4	+2.2
JKA	Kamikawa-asahi	16.87	36	IAmb	IAmb	22 18 33.8	
	comp=Z,9.2nm,0.9s						
KLR	Kul'dur	18.14	6	P	P	22 18 36.4	+2.2
	comp=Z,0.1nm,0.3s,baz=188,slow=4.0,SNR=9.2						
SONM	Songino Array	23.81	321	P	P	22 19 35.0	-0.2
	comp=Z,2.0nm,0.7s,baz=139,slow=10,SNR=16						
SONM	Songino Array	23.81	321	IAmb	IAmb	22 19 35.8	
	comp=Z,2.7nm,1.0s						
MK31	Makanchi Array	38.73	307	P	P	22 21 45.9	-0.4
MKAR	Makanchi Array	38.73	307	P	P	22 21 45.9	-0.5
	comp=Z,1.8nm,1.0s,baz=94,slow=12,SNR=12						
KURK	Kurchatov	41.66	313	P	P	22 22 09.4	-1.1
KURK	Kurchatov	41.66	313	IAmb	IAmb	22 22 15.8	
	comp=Z,2.2nm,0.9s						
KURBB	Kurchatov Arra	41.70	313	P	P	22 22 09.4	-1.5
	comp=Z,0.6nm,0.4s,baz=101,slow=9.1,SNR=4.4						
KIWB	Kanaga Island	44.25	46	P	P	22 22 29.3	-2.1
NRIK	Noril'sk	44.70	341	P	P	22 22 33.6	-1.2
NRIK				IAmb	IAmb	22 22 39.9	
	comp=Z,4.2nm,1.1s						
BVAR	Borovoye Array	46.98	315	P	P	22 22 52.5	-0.6
	comp=Z,2.1nm,0.6s,baz=165,slow=6.2,SNR=8.7						
BRVK	Borovoye	47.04	315	P	P	22 22 52.7	-0.9
BRVK				IAmb	IAmb	22 22 53.6	
	comp=Z,3.9nm,0.7s						
KK31	Karatay Array	47.06	302	P	P	22 22 54.0	+0.1
KK31				IAmb	IAmb	22 22 54.7	
	comp=Z,4.1nm,0.9s						
KKAR	Karatay Array	47.06	302	P	P	22 22 53.2	-0.7
KKAR				IAmb	IAmb	22 22 54.7	
	comp=Z,4.1nm,0.9s						
KKAR	Karatay Array	47.06	302	P	P	22 22 53.9	0.0
CHGR	Chuyangaron	48.69	296	P	P	22 23 06.1	-0.6
WRA	Warramunga Arr	51.14	173	P	P	22 23 24.5	-0.7
	comp=Z,1.8nm,1.0s,baz=350,slow=8.3,SNR=5.3						
WRA	Warramunga Arr	51.14	173	IAmb	IAmb	22 23 33.4	
	comp=Z,0.2nm,1.1s						
RDOG	Red Dog Mine	53.36	26	P	P	22 23 41.2	0.0
ABKAR	Akbulak array	53.68	311	P	P	22 23 42.7	-1.1
ABKAR				IAmb	IAmb	22 23 45.4	
	comp=Z,3.9nm,1.2s						
ABKAR	Akbulak array	53.68	311	P	P	22 23 43.0	-0.8
CTAO	Charters Tower	53.70	159	P	P	22 23 43.4	-0.8
CTAO				IAmb	IAmb	22 23 45.1	
	comp=Z,9.4nm,1.4s						
ARU	Arti	53.85	320	P	P	22 23 43.8	-1.2
	comp=Z,0.3nm,0.3s,baz=124,slow=7.8,SNR=3.3						
ARU	Arti	53.85	320	P	P	22 23 44.5	-0.5
ARU				IAmb	IAmb	22 24 02.2	
	comp=Z,9.2nm,1.4s						
AS31	Alice Springs	54.79	174	P	P	22 23 51.2	-1.0
AS31				IAmb	IAmb	22 23 53.6	
	comp=Z,1.3nm,1.0s						
ASAR	Alice Springs	54.79	174	P	P	22 23 52.2	0.0
	comp=Z,1.8nm,0.8s,baz=0.2,slow=7.4,SNR=20						
ASAR	Alice Springs	54.79	174	P	P	22 23 50.5	-1.7
SVW2	Sparrevohn	56.36	34	P	P	22 24 01.9	-1.2
SVW2				IAmb	IAmb	22 24 13.7	
	comp=Z,9.3nm,1.2s						
ILAR	Eielson Array	59.86	30	P	P	22 24 30.4	+2.8
	comp=Z,0.6nm,0.6s,baz=285,slow=8.1,SNR=9.6						
DOT	Dot Lake	61.29	31	P	P	22 24 37.2	-0.2
GLB	Gilahina Butte	61.91	33	P	P	22 24 41.2	-0.4
L27K	Beaver Creek,	62.41	31	P	P	22 24 45.3	+0.4
L27K				IAmb	IAmb	22 25 03.6	
	comp=Z,3.6nm,1.4s						
BCAR	Beaver Creek A	62.43	31	P	P	22 24 44.0	-1.0
DAWY	Dawson	63.19	30	P	P	22 24 49.3	-0.8
STKA	Stephens Creek	63.91	168	P	P	22 24 54.0	-1.0
FINES	FINESS Array B	68.79	330	P	P	22 25 28.0	+1.9
	comp=Z,2.9nm,0.9s,baz=64,slow=9.4,SNR=3.3						

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*IDC **13** 22:25:50.7±0.9, 31°.11N×128°.55E, h0^{km}, mb3.3/2, mb1 3.6/4, mb1mx3.3/48, mbtmp3.5/4, ML3.8/2, Error ellipse: s-maj=19.2km s-min=13.2km az=113.0*

*JMA **13** 22:25:50.4±0.5, 31°.16N×128°.66E, h5^{km}, M3.8*

ISC 13 22:25:51.5±1.2**, 31°.18N**±0°.08×**128°.75E**±0°.07**, h10**^{km}**, n8,** σ**1^s.04**/10**, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	Shimokoshiki	0.96	59	P	Pg	22 26 09.9	-0.2
JSJ				*e*S	Sg	22 26 23.7	+1.1
JKC	Kuchinoerabu	1.44	120	P	Pn	22 26 17.5	-0.1
JKC				*e*S	Sn	22 26 36.3	-0.2
JSU	Suzuyama	1.50	77	P	Pb	22 26 20.0	+0.6
JTN	Tanegashima 3	1.99	105	P	Pn	22 26 25.5	+0.3
JNU	Nakatsue	2.65	42	Pn	Pb	22 26 37.0	-2.0
	45nm,0.3s,baz=148,slow=0.4,SNR=5.6						
KSRS	Korea Array	6.29	354	Pn	Pn	22 27 25.6	+1.2
	0.3nm,0.3s,baz=175,slow=14,SNR=1.6						
MKAR	Makanchi Array	38.74	307	P	P	22 33 15.6	-0.3
	0.4nm,0.7s,baz=95,slow=8.7,SNR=3.0						
ASAR	Alice Springs	54.76	174	P	P	22 35 21.8	+0.3
	0.2nm,0.5s,baz=4.6,slow=14,SNR=4.2						

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*JMA **13** 22:39:51.5±0.3, 30°.92N×128°.57E, h19^{km}, M3.5*

*IDC **13** 22:39:53.4±3.7, 30°.83N×128°.87E, h0^{km}, mb3.3/3, mb1 3.4/3, mb1mx3.3/27, mbtmp3.3/3, Error ellipse: s-maj=185.8km s-min=16.3km az=62.0*

ISC 13 22:39:54.0±1.1**, 30°.90N**±0°.06×**128°.88E**±0°.09**, h6**^{km}**, n10,** σ**0^s.81**/13**, mb3.2**/3**, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	Shimokoshiki	1.06	43	P	Pg	22 40 13.7	-0.7
JSJ				S	Sn	22 40 30.2	-0.3
JKC	Kuchinoerabu	1.22	111	P	Pb	22 40 17.1	-0.4
JKC				*e*S	Sn	22 40 36.2	+1.8
JNN	Nakanoshima	1.36	140	P	Pn	22 40 18.9	-0.7
JNN				*e*S	Sn	22 40 38.3	+0.3
JSU	Suzuyama	1.48	66	P	Pn	22 40 21.3	0.0
JYAK	Yakushimahirau	1.56	115	P	Pn	22 40 21.3	-0.9
JMTN	Minamitane	1.81	105	P	Pn	22 40 26.4	+0.6
JTN	Tanegashima 3	1.83	97	P	Pn	22 40 26.2	+0.2
SONM	Songino Array	24.11	321	P	P	22 45 11.2	+0.5
	0.4nm,0.6s,baz=128,slow=9.3,SNR=2.9						
MKAR	Makanchi Array	39.00	308	P	P	22 47 21.8	+0.6
	0.3nm,0.7s,baz=94,slow=10,SNR=4.6						
ASAR	Alice Springs	54.47	174	P	P	22 49 22.2	-0.3
	0.3nm,0.8s,baz=1.1,slow=14,SNR=5.2						

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*IDC **13** 22:50:23.7±1.1, 31°.15N×128°.44E, h0^{km}, mb3.4/5, mb1 3.7/8, mb1mx3.5/48, mbtmp3.6/8, ML3.6/3, Error ellipse: s-maj=28.6km s-min=19.7km az=94.0*

*JMA **13** 22:50:24.8±0.4, 31°.30N×128°.76E, h18^{km}±4^{km}, M3.9*

ISC 13 22:50:24.9±0.9**, 31°.26N**±0°.05×**128°.80E**±0°.07**, h10**^{km}**, n14,** σ**1^s.20**/17**, mb3.6**/5**, 1D, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	Shimokoshiki	0.88	62	⇓P	Pg	22 50 41.0	-0.9
JSJ				*e*S	Sg	22 50 53.5	+0.1
JFU	Fukue jima 2	1.39	358	P	Pn	22 50 49.0	-1.3
JKC	Kuchinoerabu	1.44	123	P	Pn	22 50 51.2	+0.2
JNN	Nakanoshima	1.69	147	P	Pn	22 50 54.7	+0.2
JYAK	Yakushimahirau	1.79	124	P	Pn	22 50 54.0	-1.8
JTZ	Takazaki	2.05	71	P	Pn	22 50 59.1	-0.3
JNU	Nakatsue	2.56	43	Pn	Pb	22 51 11.1	+0.3
	41nm,0.3s,baz=312,slow=0.1,SNR=33						
JNU				Sn	Sg	22 51 47.1	+0.1
	26nm,0.3s,baz=60,slow=3.9,SNR=1.6						
KSRS	Korea Array	6.22	354	Pn	Pn	22 51 57.0	+0.4
	0.6nm,0.3s,baz=178,slow=15,SNR=7.4						
KSRS				Sn	Sn	22 53 07.2	-0.7
	1.5nm,0.3s,baz=174,slow=24,SNR=5.9						
KSRS				Lg	Lg	22 53 37.8	
	1.5nm,0.3s,baz=178,slow=30,SNR=5.1						
KLR	Kul'dur	18.09	6	P	P	22 54 39.6	+3.1
	0.1nm,0.3s,baz=189,slow=8.0,SNR=3.9						
SONM	Songino Array	23.79	320	P	P	22 55 36.9	-0.9
	0.8nm,0.7s,baz=144,slow=11,SNR=6.9						
MKAR	Makanchi Array	38.73	307	P	P	22 57 48.2	-0.9
	0.3nm,0.8s,baz=112,slow=8.4,SNR=4.4						
WRA	Warramunga Arr	51.19	173	P	P	22 59 28.7	+0.3
	0.6nm,0.8s,baz=359,slow=8.4,SNR=2.5						
ASAR	Alice Springs	54.84	174	P	P	22 59 54.9	-0.5
	0.5nm,0.8s,baz=1.0,slow=14,SNR=5.4						
ILAR	Eielson Array	59.80	30	P	P	23 00 31.1	+1.2
	0.4nm,0.7s,baz=277,slow=7.4,SNR=5.2						

DJA 13 22:57:23.4±0.4**, 7°S**±8°×**10°7E**±°**, h118**^{km}±4^{km}**, M4.2**/13**, mb4.8**/3**, MLv3.9**/13**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNJI	Cibinong	0.14	77	P	Pn	22 57 40.6	+1.0
CNJI				S	Sn	22 57 53.2	+1.4
LEM	Lembang	0.81	51	P	Pn	22 57 45.2	+1.6
LEM				S	Sn	22 58 00.7	+1.8
DBJI	Dramaga	0.82	343	P	Pn	22 57 44.5	+0.9
DBJI				S	Sn	22 57 59.7	+0.9
TNG	Tangerang	1.21	344	P	Pn	22 57 47.9	+0.4
TNG				S	Sn	22 58 07.3	+1.6
SBJI	Serang	1.48	325	P	Pn	22 57 50.9	+0.4
SBJI				S	Sn	22 58 11.4	+0.3
CMJI	Cimerak	1.51	107	P	Pn	22 57 51.6	+0.8
CMJI				S	Sn	22 58 12.2	+0.5
KASI	Kota Agung	3.06	306	P	Pn	22 58 10.8	+0.3
KLSI		3.46	319	P	Pn	22 58 16.0	+0.2
UGM	Wanagama	3.55	99	P	Pn	22 58 17.3	+0.4
UGM				S	Sn	22 58 57.3	-1.0
LWLI	Liwa	3.72	308	P	Pn	22 58 19.6	+0.3
MDSI	Maura Dua	3.98	315	P	Pn	22 58 22.8	+0.1
PCJI	Pacitan	4.24	102	P	Pn	22 58 26.8	+0.7
PCJI				S	Sn	22 59 13.6	-1.1
MNAI	Manna	4.99	306	P	Pn	22 58 36.1	-0.1
MASI	Maura Aman, Be	6.31	311	P	Pn	22 58 53.9	-0.1
	0.5nm94nm,0.7s						

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*IDC **13** 22:59:18.8±7.1, 46°.21N×143°.04E, h355^{km}±71^{km}, mb2.9/4, mb1 3.0/6, mb1mx2.8/52, mbtmp3.7/6, Error ellipse: s-maj=86.6km s-min=49.1km az=51.0*

*JMA **13** 22:59:20.3±0.3, 45°.92N×143°.07E, h347^{km}, M3.3*

ISC 13 22:59:18.3±1.1**, 46°.02N**±0°.09×**143°.0E**±0°.1**, h341**^{km}**, n17,** σ**1^s.85**/21**, mb3.0**/4**, Sakhalin Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JWK2	Keihoku	1.03	228	P	Pn	23 00 05.7	+2.5
JWK2				*e*S	S	23 00 42.3	+3.1
JSE	Soyaes	1.09	195	P	Pn	23 00 05.6	+2.1
JTKR	Abashiri--Toko	2.15	162	P	Pn	23 00 12.4	+2.5
JAR	Ashorobuto	2.78	168	P	Pn	23 00 17.6	+2.5
JAK	Akkeshi	3.26	157	P	Pn	23 00 20.6	+1.1
NEM2	Nemuro 2	3.31	142	P	Pn	23 00 21.5	+1.6
NEM2				*e*S	S	23 01 08.2	-1.2
JCH	Churui	3.41	175	P	Pn	23 00 21.8	+0.8
JCH				*e*S	S	23 01 10.3	-1.0
JNBK	Urakawa-nobuka	3.74	183	P	Pn	23 00 26.3	+2.1
JKB	Kayabe	4.36	199	P	Pn	23 00 31.9	+1.3
JOT	Ohata	4.84	197	P	Pn	23 00 37.1	+1.3
JOM	Ohasama	6.66	191	P	Pn	23 00 57.5	+1.0
JOM				*e*S	S	23 02 14.5	-1.6
USRK	Ussuriysk Ar.	7.98	261	P	Pn	23 01 13.6	+1.5
	baz=75,slow=14,SNR=4.9						
MJAR	Matsushiro Arr	10.12	202	P	P	23 01 40.5	+1.0
	0.2nm,0.3s,baz=25,slow=11,SNR=7.6						
SONM	Songino Array	24.90	288	P	P	23 04 11.0	-0.3
	0.4nm,0.5s,baz=86,slow=7.8,SNR=2.9						
MKAR	Makanchi Array	40.93	294	P	P	23 06 27.1	-1.3
	0.3nm,0.5s,baz=81,slow=8.9,SNR=4.5						
KURBB	Kurchatov Arra	41.89	301	P	P	23 06 34.5	-1.5
	0.4nm,0.5s,baz=74,slow=8.3,SNR=4.9						
FINES	FINESS Array B	61.48	331	P	P	23 08 57.4	-1.8
	3.7nm,1.0s,baz=36,slow=7.4,SNR=1.7						

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*FUNV **13** 23:10:12.5, 8°.48N×71°.44W, h5^{km}, MW3.0*

ISC 13 23:10:11.9±1.2**, 8°.51N**±0°.03×**71°.42W**±0°.03**, h5**^{km}±11^{km}**, n28,** σ**1^s.02**/45**, 1C, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	Socops	0.60	112	⇑*e*P	Pg	23 10 23.3	-0.1
SOCV				*e*S	Sg	23 10 32.4	+1.1
SDV	Santo Domingo	0.86	64	*e*P	Pg	23 10 29.2	+0.8
SDV				*e*S	Sg	23 10 40.1	+0.5
SDV				*i*		23 10 46.4	
	comp=Z,71nm,0.5s						
CAPV	Capacho	1.09	234	*e*P	Pg	23 10 31.7	-1.2
CAPV				*e*S	Sb	23 10 47.0	-1.1
PAMC	Pamplona, Colo	1.72	227	*e*P	Pb	23 10 44.1	-0.2
PAMC				*e*S	Sg	23 11 08.1	+0.8
PAMC				*i*		23 11 10.1	
	comp=Z,169nm,0.2s						
MCQV	Machiques	1.88	324	*e*P	Pn	23 10 44.9	+0.1
MCQV				*e*S	Sn	23 11 08.9	0.0
OCAC	Ocana	1.90	262	*e*P	Pn	23 10 45.5	+0.4
OCAC				*e*S	Sb	23 11 10.9	-0.4
OCAC				*i*		23 11 13.8	
	comp=Z,910nm,0.4s						
TAMC	Tame, Arauca	2.10	190	*e*P	Pb	23 10 50.4	-0.1
TAMC				*e*S	Sg	23 11 19.3	+0.1
TAMC				*i*		23 11 25.8	
	comp=Z,106nm,0.3s						
LL6C	La Loma 6 Bece	2.19	304	*e*P	Pn	23 10 49.4	+0.4
LL6C				*e*S	Sb	23 11 18.6	-1.0
LL6C				*i*		23 11 21.6	
	comp=Z,1μm,1.0s						
ELOV	Elorza	2.44	128	*e*P	Pn	23 10 51.8	-0.6
DABV	Dabajuro	2.52	18	*e*P	Pn	23 10 54.0	+0.5
DABV				*e*S	Sn	23 11 24.3	-0.3

BARC	Barichara	2.59	223	eP	Pb	23 10 59.4	+0.5
BARC				eS	Sg	23 11 34.4	-0.6
BARC				i		23 11 36.1	
	comp=Z,90nm,0.4s						
SMLC	San Martn de	2.64	276	eP	Pn	23 10 55.0	-0.2
SMLC				eS	Sb	23 11 31.8	-0.6
SMLC				i		23 11 32.4	
	comp=Z,133nm,0.3s						
SIQV	Siquisique	2.65	37	eP	Pn	23 10 56.1	+0.7
BRRC	Barranca, Sant	2.67	239	eP	Pb	23 11 01.0	+0.9
BRRC				eS	Sg	23 11 35.1	-2.5
BRRC				i		23 11 42.6	
	comp=Z,31nm,0.5s						
RUSC	La Rusia	3.08	212	eP	Pn	23 11 03.2	+1.5
RUSC				eS	Sn	23 11 40.9	+1.7
RUSC				i		23 11 54.4	
	comp=Z,26nm,0.5s						
URIC	Uribia, Colomb	3.22	350	i S	Sn	23 11 40.0	-1.9
URIC				i		23 11 56.6	
	comp=Z,24nm,0.3s						
BAUV	El Baul	3.37	82	eP	Pn	23 11 05.2	-0.1
BAUV				eS	Sn	23 11 44.0	-1.6
ZARC	Zaragoza, Cauc	3.55	254	eP	Pn	23 11 08.4	+0.7
ZARC				eS	Sb	23 12 00.3	+1.6
ZARC				i		23 12 02.2	
	comp=Z,24nm,0.5s						
MONV	Montecano	3.71	23	eP	Pn	23 11 10.3	+0.4
BENV	Beln	4.04	69	eP	Pn	23 11 14.8	+0.3
MOTC	Monteria, Cord	4.21	274	eP	Pn	23 11 17.7	+0.9
MOTC				eS	Sn	23 12 08.6	+2.3
MOTC				i		23 12 35.5	
	comp=Z,5.4nm,0.7s						
CHIC	Chingaza	4.49	211	eP	Pn	23 11 21.9	+0.9
CHIC				eS	Sn	23 12 13.3	-0.5
CHIC				i		23 12 21.9	
	comp=Z,26nm,1.0s						
TACV	Tcata	4.63	69	eP	Pn	23 11 22.7	+0.1
PAYV	Puerto Ayacuch	4.84	129	eP	Pn	23 11 24.8	-0.6
CACV	CAICARA DEL OR	4.92	101	eP	Pb	23 11 33.4	-5.3
GUY2C	Guyana, Caldas	5.10	230	eP	Pn	23 11 31.1	+1.6
GUY2C				eS	Sn	23 12 28.9	-0.2
GUY2C				i		23 13 03.7	
	comp=Z,8.5nm,0.6s						
MERV	Las Mercedes	5.12	81	eP	Pn	23 11 27.9	-1.4
BIRV	Birongo	5.44	69	eP	Pn	23 11 33.6	-0.2

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*RSNC **13** 23:23:39.9±1.0, 6°.82N×73°.13W, h147^{km}±4^{km}, ML3.4, Mw3.6*
*IDC **13** 23:23:43.5±7.0, 4°.69N×76°.58W, h102^{km}±74^{km}, mb3.0/1, mb1 3.6/2, mb1mx3.2/21, mbtmp3.6/2, ML2.7/1, Error ellipse: s-maj=94.8km s-min=37.2km az=41.0*
ISC 13 23:23:39.1±0.9, **6°.83N**±0°.03×**73°.10W**±0°.04, **h152**^{km}±6^{km}, **n34**, σ**1^{s}48**/65, **5C**, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.25	200⇑	eP	Pn	23 23 59.7	-0.3
BARC				eS	Sn	23 24 14.5	-1.5
BARC				i		23 24 15.5	
	comp=Z,497nm,0.2s						
PAMC	Pamplona, Colo	0.64	38⇑	eP	Pn	23 24 02.5	+0.6
PAMC				eS	Sn	23 24 19.3	-0.2
PAMC				i		23 24 21.4	
	comp=Z,615nm,0.4s						
BRRC	Barranca, Sant	0.67	294⇑	iP	Pn	23 24 01.6	0.0
BRRC				eS	Sn	23 24 18.4	-0.3
BRRC				i		23 24 21.4	
	comp=Z,324nm,0.4s						
RUSC	La Rusia	0.93	179	eP	Pn	23 24 03.7	-0.3
RUSC				eS	Sn	23 24 22.4	-0.7
RUSC				i		23 24 23.9	
	comp=Z,396nm,0.4s						
TAMC	Tame, Arauca	1.35	107⇑	iP	Pn	23 24 08.2	+0.8
TAMC				i		23 24 28.4	
	comp=Z,124nm,0.3s						
TAMC				eS	Sn	23 24 29.5	+0.6
OCAC	Ocana	1.42	351	eP	Pn	23 24 08.0	-0.1
OCAC				eS	Sn	23 24 29.4	-1.0
OCAC				i		23 24 32.9	
	comp=Z,509nm,0.4s						
SPBC	San Pablo de B	1.52	220	eP	Pn	23 24 08.7	-0.4
SPBC				eS	Sn	23 24 30.6	-1.6
SPBC				i		23 24 37.5	
	comp=Z,304nm,0.2s						
ZARC	Zaragoza, Cauc	1.87	291	eP	Pn	23 24 13.0	+0.2
ZARC				eS	Sn	23 24 38.5	-0.2
ZARC				i		23 24 44.2	
	comp=Z,228nm,0.3s						
NORC	Norcasia	2.17	235	eP	Pn	23 24 16.3	0.0
NORC				eS	Sn	23 24 44.0	-1.0
NORC				i		23 24 45.6	
	comp=Z,158nm,0.2s						
SMLC	San Martn de	2.18	334	eP	Pn	23 24 15.9	-0.5
SMLC				eS	Sn	23 24 44.9	-0.4
SMLC				i		23 24 47.3	
	comp=Z,186nm,0.2s						
CHIC	Chingaza	2.28	196	eP	Pn	23 24 18.1	+0.1
CHIC				eS	Sn	23 24 47.1	-0.8
CHIC				i		23 24 50.8	
	comp=Z,89nm,0.3s						
ROSC	El Rosal	2.32	212	P	Pn	23 24 19.8	+1.3
	comp=Z,45nm,0.3s,baz=261,slow=4.7,SNR=32						
ROSC				S	Sn	23 24 48.3	-0.6
	comp=Z,68nm,0.3s,baz=233,slow=23,SNR=14						
ROSC	El Rosal	2.32	212	eP	Pn	23 24 19.9	+1.4
ROSC				eS	Sn	23 24 50.6	+1.8
ROSC				i		23 24 53.4	
	comp=Z,172nm,0.3s						
HELC	Santa Helena	2.50	255	eP	Pn	23 24 20.9	+0.3
HELC				eS	Sn	23 24 52.2	-0.4
HELC				i		23 24 58.0	
	comp=Z,93nm,0.4s						
UREC	San Jos de Ur	2.58	291	eP	Pn	23 24 20.2	-1.2
UREC				eS	Sn	23 24 51.4	-2.6
UREC				i		23 24 53.5	
	comp=Z,164nm,0.1s						
LL1C	La Loma 1 Cana	2.73	350	eP	Pn	23 24 24.9	+1.8
LL1C				eS	Sn	23 25 00.7	+3.4
LL1C				i		23 25 07.0	
	comp=Z,232nm,0.4s						
GUY2C	Guyana, Caldas	2.76	235	eP	Pn	23 24 24.5	+0.4
GUY2C				eS	Sn	23 25 00.9	+2.3
GUY2C				i		23 25 06.6	
	comp=Z,84nm,0.5s						
VILC	Villavicencio,	2.77	192	eP	Pn	23 24 23.5	-0.2
VILC				eS	Sn	23 24 57.5	-0.7
PTGC	Puerto Gaitan,	2.78	160	eP	Pn	23 24 23.1	-0.8
PTGC				eS	Sn	23 24 56.4	-2.1
PTGC				i		23 24 58.9	
	comp=Z,149nm,0.5s						
LL6C	La Loma 6 Bece	2.89	357	eP	Pn	23 24 24.4	-0.7
LL6C				eS	Sn	23 24 58.4	-2.5
CBOC	Ciudad Bolivar	3.05	252	eP	Pn	23 24 29.0	+1.6
CBOC				eS	Sn	23 25 05.3	+0.6
CBOC				i		23 25 32.5	
	comp=Z,103nm,0.2s						
DBBC	Dabeiba	3.10	274	eP	Pn	23 24 27.9	0.0
DBBC				eS	Sn	23 25 04.0	-1.6
DBBC				i		23 25 05.5	
	comp=Z,319nm,0.6s						
SDV	Santo Domingo	3.18	50	eP	Pn	23 24 29.5	+0.5
SDV				eS	Sn	23 25 06.2	-1.5
SDV				i		23 25 10.4	
	comp=Z,48nm,0.6s						
MOTC	Monteria, Cord	3.20	307	eP	Pn	23 24 27.5	-1.5
MOTC				eS	Sn	23 25 05.8	-2.0
MOTC				i		23 25 06.6	
	comp=Z,50nm,0.2s						
ANIL	Santa Ana	3.27	225	eP	Pn	23 24 32.4	+2.2
ANIL				eS	Sn	23 25 11.7	+1.9
ANIL				i		23 25 19.6	
	comp=Z,212nm,0.3s						
PRAC	Prado	3.57	210	eP	Pn	23 24 33.3	-0.6
PRAC				eS	Sn	23 25 15.9	-0.6
PRAC				i		23 25 21.4	
	comp=Z,87nm,0.6s						
ORTC	Ortega, Tolima	3.61	217	eP	Pn	23 24 34.6	+0.3
ORTC				eS	Sn	23 25 18.3	+1.1
ORTC				i		23 25 24.5	
	comp=Z,64nm,0.5s						
SJCC	San Jacinto, C	3.68	326	eP	Pn	23 24 34.5	-0.7
SJCC				eS	Sn	23 25 15.5	-3.5
SJCC				i		23 25 19.2	
	comp=Z,67nm,0.5s						
PLMC	San Jos del P	3.70	239⇑	eP	Pn	23 24 35.9	+0.3
PLMC				eS	Sn	23 25 18.4	-1.1
PLMC				i		23 25 24.6	
	comp=Z,48nm,0.4s						
MACC	Macarena, Meta	4.71	189	eP	Pn	23 24 47.2	-1.6
MACC				eS	Sn	23 25 38.9	-4.3
MACC				i		23 26 09.6	
	comp=Z,25nm,0.6s						
GARC	Garzon, Huila	5.19	207	eP	Pn	23 24 54.5	-0.8
GARC				eS	Sn	23 25 52.3	-2.6
GARC				i		23 26 01.1	
	comp=Z,22nm,0.2s						
TXAR	Lajitas Array	36.48	312	P	P	23 30 30.4	+0.6
	comp=Z,0.3nm,0.6s,baz=131,slow=9.0,SNR=4.7						
ASAR	Alice Springs	149.14	234	PKPbc	PKPdf	23 43 08.9	+2.8
	comp=Z,0.3nm,0.5s,baz=115,slow=3.9,SNR=4.5						
WRA	Warramunga Arr	150.36	241	PKPbc	PKPbc	23 43 12.3	-1.1
	comp=Z,0.2nm,0.4s,baz=108,slow=2.9,SNR=4.6						

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*JMA **13** 23:26:08.7±0.2, 30°.81N×128°.51E, h7^{km}±3^{km}, M3.9*
*IDC **13** 23:26:11.9±1.0, 30°.90N×128°.48E, h0^{km}, mb3.5/6, mb1 3.7/7, mb1mx3.6/28, mbtmp3.5/7, ML2.8/1, Error ellipse: s-maj=38.6km s-min=22.0km az=75.0*
ISC 13 23:26:16.2±0.9, **30°.86N**±0°.06×**128°.70E**±0°.08, **h35**^{km}, **n16**, σ**1^{s}92**/20, **mb3.5**/6, **Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	1.19	47	P	Pn	23 26 33.4	-3.0
JSJ				eS	Sn	23 26 51.6	+0.3
JKC	Kuchinoerabu	1.35	107	P	Pn	23 26 36.1	-2.4
JKC				S	Sn	23 26 55.5	+0.3
JNN	Nakanoshima	1.44	135	P	Pn	23 26 36.4	-3.4
JSU	Suzuyama	1.64	67	P	Pn	23 26 40.9	-1.6
JYAK	Yakushimahirau	1.68	111	P	Pn	23 26 40.7	-2.4
JYAK				eS	Sn	23 27 04.3	+0.9
JMTN	Minamitane	1.96	103	P	Pn	23 26 45.2	-1.6
JTN	Tanegashima 3	1.98	95	P	Pn	23 26 45.2	-1.9
JTZ	Takazaki	2.29	63	P	Pn	23 26 50.3	-1.2
JIU3	Izumi3	2.46	46	P	Pn	23 26 52.4	-1.5
KSRS	Korea Array	6.61	355	Pn	Pn	23 27 50.2	-0.5
	0.2nm,0.3s,baz=174,slow=15,SNR=2.5						
KSRS				Sn	Sn	23 29 02.2	-2.6
	0.5nm,0.3s,baz=177,slow=22,SNR=2.0						
KSRS				Lg	Lg	23 29 35.6	
	1.4nm,0.3s,baz=181,slow=30,SNR=5.7						
SONM	Songino Array	24.05	321	P	P	23 31 27.1	-0.9
	0.6nm,0.9s,baz=139,slow=9.6,SNR=3.0						
MKAR	Makanchi Array	38.90	308	P	P	23 33 37.6	-0.7
	0.7nm,0.8s,baz=106,slow=8.9,SNR=7.2						
WRA	Warramunga Arr	50.80	173	P	P	23 35 15.2	+2.0
	0.4nm,0.8s,baz=347,slow=8.1,SNR=2.8						
ASAR	Alice Springs	54.45	174	P	P	23 35 41.2	+1.1
	0.4nm,0.6s,baz=4.2,slow=13,SNR=6.0						
ILAR	Eielson Array	60.19	29	P	P	23 36 21.8	+1.6
	0.2nm,0.5s,baz=293,slow=6.9,SNR=4.4						
NVAR	Mina Array Bea	87.01	46	P	P	23 38 59.8	+1.4
	0.4nm,0.6s,baz=301,slow=4.8,SNR=5.3						

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*FUNV **13** 23:37:01.2, 8°.44N×71°.39W, h3^{km}, MW3.0*
ISC 13 23:37:00.6±1.2, **8°.47N**±0°.03×**71°.38W**±0°.03, **h7**^{km}±10^{km}, **n27**, σ**1^{s}21**/44, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.55	110	eP	Pg	23 37 11.5	+0.3
SOCV				eS	Sg	23 37 19.5	+1.0
SDV	Santo Domingo	0.85	61	eP	Pb	23 37 18.1	+0.3
SDV				eS	Sg	23 37 29.2	+1.2
SDV				i		23 37 32.4	
	comp=Z,133nm,0.5s						
CAPV	Capacho	1.10	237	eS	Sb	23 37 36.0	-0.7
PAMC	Pamplona, Colo	1.72	229	eP	Pb	23 37 32.5	-0.4
PAMC				eS	Sg	23 37 56.5	+0.4
PAMC				i		23 38 00.4	
	comp=Z,102nm,0.5s						
OCAC	Ocana	1.93	263	eP	Pn	23 37 33.8	-0.2
OCAC				eS	Sn	23 37 59.3	+0.6
OCAC				i		23 38 01.1	
	comp=Z,590nm,0.5s						
MCQV	Machiques	1.94	324	eP	Pn	23 37 34.3	+0.4
TAMC	Tame, Arauca	2.06	191	eP	Pg	23 37 39.7	-0.5
TAMC				eS	Sg	23 38 06.2	-0.8
TAMC				i		23 38 11.9	
	comp=Z,86nm,0.5s						
LL6C	La Loma 6 Bece	2.25	304	eP	Pn	23 37 37.8	-0.5
LL6C				eS	Sn	23 38 05.6	-0.7
LL6C				i		23 38 08.4	
	comp=Z,722nm,0.4s						
ELOV	Elorza	2.38	128	eP	Pn	23 37 39.9	-0.2
ELOV				eS	Sn	23 38 09.6	+0.1
DABV	Dabajuro	2.54	17	eP	Pn	23 37 43.3	+0.9
DABV				eS	Sn	23 38 14.1	+0.5
BARC	Barichara	2.58	224	eP	Pb	23 37 47.7	+0.3
BARC				eS	Sg	23 38 23.1	-0.6
BARC				i		23 38 27.2	
	comp=Z,74nm,0.6s						
SIQV	Siquisique	2.66	36	eP	Pn	23 37 44.5	+0.6
SIQV				eS	Sn	23 38 16.3	-0.3
BRRC	Barranca, Sant	2.68	240	eS	Sg	23 38 24.0	-2.7
BRRC				i		23 38 33.1	
	comp=Z,25nm,0.4s						
SMLC	San Martn de	2.68	277	eP	Pn	23 37 43.4	-0.7
SMLC				eS	Sn	23 38 19.9	+3.0
SMLC				i		23 38 21.4	
	comp=Z,45nm,0.4s						
RUSC	La Rusia	3.07	214	eP	Pn	23 37 51.5	+1.6
RUSC				eS	Sn	23 38 29.3	+2.2
RUSC				i		23 38 43.2	
	comp=Z,22nm,0.6s						
BAUV	El Baul	3.33	82	eP	Pn	23 37 53.3	+0.1
BAUV				eS	Sn	23 38 31.6	-1.5
ZARC	Zaragoza, Cauc	3.58	254	eP	Pn	23 37 56.4	-0.1
ZARC				eS	Sn	23 38 37.6	-1.5
ZARC				i		23 38 50.6	
	comp=Z,15nm,0.3s						
JACV	Jacura	3.62	44	eP	Pn	23 37 58.1	+1.0
JACV				eS	Sn	23 38 38.7	-1.4
MONV	Montecano	3.73	22	eP	Pn	23 37 59.2	+0.6
SPBC	San Pablo de B	3.87	224	eP	Pn	23 38 02.6	+2.0
SPBC				eS	Sn	23 38 49.4	+3.0
SPBC				i		23 39 11.2	
	comp=Z,12nm,0.6s						
SJCC	San Jacinto, C	4.01	291	eP	Pn	23 38 03.2	+0.7
SJCC				eS	Sn	23 38 49.8	0.0
SJCC				i		23 39 10.6	
	comp=Z,11nm,0.7s						
BENV	Beln	4.02	68	eP	Pn	23 38 03.0	+0.4
BENV				eS	Sn	23 38 48.1	-1.9
TACV	Tcata	4.61	69	eP	Pn	23 38 10.8	+0.1
PAYV	Puerto Ayacuch	4.78	129	eP	Pn	23 38 12.1	-1.0
CACV	CAICARA DEL OR	4.88	100	eP	Pb	23 38 21.5	-4.9
MERV	Las Mercedes	5.08	81	eP	Pn	23 38 17.0	-0.3
BIRV	Birongo	5.42	68	eP	Pn	23 38 21.9	0.0

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*JMA **13** 23:38:10.4±0.4, 30°.85N×128°.51E, h7^{km}±4^{km}, M4.1*
*IDC **13** 23:38:13.2±1.2, 30°.76N×128°.29E, h0^{km}, mb3.3/4, mb1 3.6/7, mb1mx3.5/48, mbtmp3.5/7, ML3.6/3, Error ellipse: s-maj=32.3km s-min=20.1km az=90.0*
ISC 13 23:38:14.4±2.1, **30°.85N**±0°.05×**128°.82E**±0°.09, **h17**^{km}±14^{km}, **n17**, σ**1^{s}36**/25, **mb3.4**/4, **Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	1.13	43	P	Pn	23 38 34.8	-0.6
JSJ				eS	Sg	23 38 52.2	+1.2
JKC	Kuchinoerabu	1.25	108	P	Pb	23 38 37.8	+0.3
JKC				eS	Sg	23 38 56.4	+1.5
JNN	Nakanoshima	1.36	137	P	Pg	23 38 39.5	-1.1
JNN				eS	Sg	23 38 59.7	+1.4
JSU	Suzuyama	1.55	65	P	Pn	23 38 41.3	+0.1
JSU				eS	Sg	23 39 05.3	+0.9
JYAK	Yakushimahirau	1.58	112	P	Pb	23 38 42.2	-1.0
JYAK				eS	Sg	23 39 06.3	+0.8
JFU	Fukue jima 2	1.80	358	eS	Sn	23 39 05.3	-1.8
JMTN	Minamitane	1.85	104	P	Pb	23 38 46.3	-1.5
JMTN				eS	Sg	23 39 13.2	-0.9
JTN	Tanegashima 3	1.87	95	P	Pb	23 38 46.6	-1.5
JTN				eS	Sg	23 39 13.8	-0.9
JTZ	Takazaki	2.21	61	P	Pn	23 38 51.4	+1.2
JIU3	Izumi3	2.40	45	P	Pn	23 38 54.0	+1.1
JNU	Nakatsue	2.86	37	Pn	Pb	23 39 04.8	-0.2
	24nm,0.3s,baz=299,slow=1.4,SNR=9.6						
JNU				Sn	Sg	23 39 46.1	-0.3
	11nm,0.3s,baz=360,slow=22,SNR=7.0						
KSRS	Korea Array	6.63	354	Pn	Pn	23 39 51.0	0.0
	0.6nm,0.3s,baz=176,slow=14,SNR=5.0						
KSRS				Sn	Sn	23 41 04.4	-1.7
	0.5nm,0.3s,baz=174,slow=24,SNR=0.6						
KSRS				Lg	Lg	23 41 39.3	
	1.5nm,0.3s,baz=180,slow=30,SNR=5.1						
KLR	Kul'dur	18.49	6	P	Pn	23 42 32.9	+3.2
	0.1nm,0.3s,baz=205,slow=7.6,SNR=6.1						
SONM	Songino Array	24.12	321	P	P	23 43 29.1	-0.2
	0.3nm,0.5s,baz=123,slow=10,SNR=3.1						
MKAR	Makanchi Array	38.98	308	P	P	23 45 38.6	-1.1
	0.5nm,0.8s,baz=93,slow=9.8,SNR=4.3						
WRA	Warramunga Arr	50.78	173	P	P	23 47 14.5	+0.7
	0.4nm,0.8s,baz=351,slow=8.2,SNR=1.8						
ASAR	Alice Springs	54.43	174	P	P	23 47 42.1	+1.4
	0.2nm,0.5s,baz=5.2,slow=11,SNR=5.1						

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*IDC **13** 23:43:04.1±3.8, 11°.70S×167°.02E, h0^{km}, mb3.7/6, mb1 3.9/6, mb1mx3.7/36, mbtmp3.7/6, Error ellipse: s-maj=138.8km s-min=29.9km az=136.0*
ISC 13 23:43:31.2±3.7, **12°.4S**±0°.7×**167°.1E**±0°.6, **h250**^{km}, **n6**, σ**0^{s}53**/6, **mb3.4**/6, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	32.27	252	P	P	23 49 36.2	-0.8
	0.5nm,0.7s,baz=83,slow=8.2,SNR=2.5						
ASAR	Alice Springs	33.39	246	P	P	23 49 46.5	-0.2
	0.6nm,0.7s,baz=68,slow=10,SNR=6.1						
FITZ	Fitzroy Crossi	40.30	257	P	P	23 50 45.0	+0.3
	1.1nm,0.6s,baz=63,slow=11,SNR=2.4						
SONM	Songino Array	80.47	323	P	P	23 55 15.7	+0.2
	0.1nm,0.4s,baz=108,slow=4.7,SNR=1.3						
ILAR	Eielson Array	84.35	18	P	P	23 55 34.9	-0.1
	0.7nm,0.8s,baz=226,slow=5.5,SNR=6.3						
MKAR	Makanchi Array	95.35	317	P	P	23 56 26.9	-0.2
	0.3nm,0.5s,baz=114,slow=3.6,SNR=5.2						

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*JMA **13** 23:48:29.6±0.3, 31°.28N×128°.69E, h4^{km}±3^{km}, M3.9*
*IDC **13** 23:48:36.0±3.9, 31°.64N×128°.41E, h0^{km}, mb3.2/2, mb1 3.4/4, mb1mx3.1/53, mbtmp3.4/4, ML3.4/2, Error ellipse: s-maj=60.2km s-min=27.5km az=167.0*
ISC 13 23:48:31.5±2.4, **31°.32N**±0°.05×**128°.79E**±0°.07, **h5**^{km}±14^{km}, **n13**, σ**1^{s}26**/22, **Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.87	65	P	Pg	23 48 47.7	-0.5
JSJ				S	Sb	23 49 00.2	-0.9
JFU	Fukue jima 2	1.34	359	P	Pn	23 48 55.2	-1.6
JFU				S	Sb	23 49 12.8	-1.7
JSU	Suzuyama	1.44	82	P	Pn	23 48 58.2	0.0
JSU				S	Sg	23 49 17.8	+0.1
JKC	Kuchinoerabu	1.48	125	P	Pn	23 48 58.2	-0.6
JKC				S	Sn	23 49 17.9	-0.6
JNN	Nakanoshima	1.74	147	P	Pn	23 49 01.6	-0.8
JNN				S	Sn	23 49 23.8	-1.2
JYAK	Yakushimahirau	1.83	126	P	Pn	23 49 01.9	-1.7
JYAK				S	Sn	23 49 27.2	+0.1
JTN	Tanegashima 3	1.99	109	P	Pn	23 49 04.6	-1.3
JMTN	Minamitane	2.03	116	P	Pn	23 49 05.7	-0.7
JMTN				S	Sn	23 49 33.6	+1.4
JTZ	Takazaki	2.05	73	P	Pn	23 49 06.2	-0.4
JNU	Nakatsue	2.53	44	Pn	Pb	23 49 18.4	+1.1
	23nm,0.3s,baz=103,slow=0.1,SNR=28						
JNU				Sn	Sg	23 49 53.5	+0.8
	25nm,0.3s,baz=136,slow=0.5,SNR=1.6						
KSRS	Korea Array	6.17	354	Pn	Pn	23 50 04.0	+0.8
	0.3nm,0.3s,baz=175,slow=14,SNR=4.8						
KSRS				Sn	Sn	23 51 12.1	-1.9
	0.7nm,0.3s,baz=173,slow=24,SNR=2.1						
KSRS				Lg	Lg	23 51 46.7	
	1.1nm,0.3s,baz=167,slow=30,SNR=6.4						
SONM	Songino Array	23.75	320	P	P	23 53 44.1	-0.7
	0.3nm,0.4s,baz=120,slow=8.5,SNR=3.2						
MKAR	Makanchi Array	38.69	307	P	P	23 55 58.6	+2.4
	0.3nm,0.8s,baz=82,slow=11,SNR=2.2						

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*TUL **14** 00:02:41.1±1.4, 36°.647N±0°.010×97°.90W±0°.02, h6^{km}±4^{km}, ML2.5, ML2.2/35(NEIC), Error ellipse: s-maj=2.0km s-min=1.3km az=99.0*
NEIC 14 00:02:41.2±0.6, **36°.636N**±0°.010×**97°.90W**±0°.02, **h9**^{km}±4^{km}, **Error ellipse: s-maj=2.2km s-min=1.5km az=99.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CROK	Carrier	0.15	209		Pg	00 02 44.5	0.0
CROK				Sg	Sg	00 02 47.2	+0.5
CROK				IAML		00 02 47.3	
	comp=E,1µm,0.4s						
GC02	Grant County #	0.22	7	Pg	Pg	00 02 45.8	+0.1
GC02				Sg	Sg	00 02 49.1	+0.4
OK032	Salt Plains WL	0.30	303	Sg	Sg	00 02 51.8	+0.4
KAN14	Manchester OK	0.33	350		Pg	00 02 47.7	0.0
KAN14				Sg	Sg	00 02 52.4	+0.4
KAN14				IAML		00 02 53.6	
	comp=N,487nm,0.1s						
KAN14				IAML		00 02 54.6	
	comp=E,342nm,0.1s						
KAN10	Anthony SW Sta	0.51	342		Pg	00 02 51.1	-0.1
KAN01	Argonia South	0.53	12	Pg	Pg	00 02 51.5	0.0
KAN01				IAML		00 03 00.2	
	comp=N,144nm,0.1s						
KAN09	Caldwell North	0.55	24	Pg	Pg	00 02 51.9	+0.1
BLOK	Blackwell	0.56	77	Pg	Pg	00 02 52.2	+0.1
BLOK				IAML		00 03 10.0	
	comp=N,116nm,0.2s						
BLOK				IAML		00 03 10.0	
	comp=E,125nm,0.2s						
KAN08	Anthony NE Sta	0.59	354	Pg	Pg	00 02 52.7	0.0
KAN08				IAML		00 03 04.9	
	comp=N,181nm,0.1s						
KAN08				IAML		00 03 05.3	
	comp=E,115nm,0.1s						
KAN06	Argonia West S	0.61	3	Pg	Pg	00 02 52.9	-0.2
KAN06				IAML		00 03 01.5	
	comp=N,206nm,0.3s						
KAN06				IAML		00 03 01.5	
	comp=E,124nm,0.3s						
KS20	Mayfield South	0.65	25	Pg	Pg	00 02 53.7	-0.2
KS20				IAML		00 03 02.8	
	comp=E,187nm,0.2s						
KS20				IAML		00 03 06.4	
	comp=E,127nm,0.1s						
KAN12	Harper NE Stat	0.67	353	Pg	Pg	00 02 53.8	-0.4
KAN12				IAML		00 03 08.2	
	comp=E,198nm,0.3s						
U32A	Winter Ranch,	0.93	254	Pg	Pg	00 02 58.6	-0.5
BCOK	Bluff Creek, N	1.00	167	Pg	Pg	00 03 00.0	-0.5
BCOK				IAML		00 03 20.2	
	comp=N,48nm,0.2s						
BCOK				IAML		00 03 20.3	
	comp=E,50nm,0.2s						
OK031	S. Brethren Rd	1.09	128	Pg	Pg	00 03 01.9	-0.4
OK031				IAML		00 03 20.9	
	comp=E,75nm,0.1s						
T35A	Sooner Cattle	1.15	75		Pg	00 03 02.7	-0.5
FNO	Franklin	1.43	164	Pn	Pn	00 03 07.2	-0.3
TUL1	Leonard	1.85	112	Pn	Pn	00 03 12.5	-0.7
WMOK	Wichita Mounta	2.03	201	Pn	Pn	00 03 16.3	+0.6

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*IDC **14** 00:05:56.9±1.1, 34°.96N×24°.22E, h0^{km}, mb3.9/9, mb1 3.9/14, mb1mx3.7/50, mbtmp3.8/14, ML3.3/5, Error ellipse: s-maj=22.3km s-min=12.7km az=168.0*
*THE **14** 00:06:03.2, 34°.91N×24°.24E, h36^{km}±2^{km}, ML3.5/7, Error ellipse: s-maj=2.8km s-min=0.9km az=205.0*
*ISK **14** 00:06:03.5, 35°.00N×24°.24E, h22^{km}, ML3.5/4*
*ATH **14** 00:06:03.0, 34°.98N×24°.30E, h32^{km}±3^{km}, ML3.5/7, Error ellipse: s-maj=3.9km s-min=1.3km az=198.0*
*DDA **14** 00:06:12.0, 35°.05N×25°.04E, h35^{km}±381^{km}, ML3.0*
ISC 14 00:06:01.1±0.8, **34°.82N**±0°.06×**24°.28E**±0°.03, **h40**^{km}±7^{km},

n70,σ2^{s}31/97,mb3.9/9,Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GVD	**Gavdhos**	**0.16**	**276**	P	**Pn**	**00 06 08.9**	**+0.8**
GVD				S	**Sn**	**00 06 14.4**	**+1.4**
	13µm,0.5s						
GVD	**Gavdhos**	**0.16**	**276**	P	**Pn**	**00 06 09.1**	**+0.9**
GVD				S	**Sn**	**00 06 13.7**	**+0.7**
GVD	**Gavdhos**	**0.16**	**276**	PG	**Pn**	**00 06 09.1**	**+0.9**
GVD				SG	**Sn**	**00 06 13.5**	**+0.5**
TMBK	**Timbaki Herakl**	**0.47**	**58**	P	**Pn**	**00 06 12.3**	**+0.8**
TMBK				S	**Sn**	**00 06 20.8**	**+2.0**
	6µm,0.5s						
SIVA	**Sivas**	**0.48**	**66**	P	**Pn**	**00 06 12.7**	**+1.1**
SIVA	**Sivas**	**0.48**	**66**	P	**Pn**	**00 06 12.4**	**+0.8**
SIVA				S	**Sn**	**00 06 19.7**	**+0.8**
SIVA				AML	AML	00 06 23.1	
	comp=N,29372µm,0.5s						
SIVA				AML	AML	00 06 26.8	
	comp=E,38544µm,0.8s						
PRNS	**Prines Rethymn**	**0.57**	**19**	P	**Pn**	**00 06 12.1**	**-0.7**
PRNS				S	**Sn**	**00 06 20.5**	**-0.6**
	comp=E,4µm,0.6s						
VAM	**Vamos**	**0.59**	**354**	P	**Pn**	**00 06 13.0**	**-0.1**
VAM				S	**Sn**	**00 06 21.6**	**+0.1**
	comp=E,10µm,0.5s						
VAM	**Vamos**	**0.59**	**354**	P	**Pn**	**00 06 12.7**	**-0.3**
VAM				S	**Sn**	**00 06 19.3**	**-2.2**
VAM				AML	AML	00 06 24.3	
	comp=E,26407µm,0.6s						
VAM				AML	AML	00 06 24.3	
	comp=N,14441µm,0.4s						
KNDR	**Palaiochora Ch**	**0.64**	**310**	P	**Pn**	**00 06 15.0**	**+1.3**
KNDR				S	**Sn**	**00 06 24.2**	**+1.5**
	comp=N,2µm,0.5s						
KNDR	**Palaiochora Ch**	**0.64**	**310**	PG	**Pn**	**00 06 15.2**	**+1.5**
KNDR				SG	**Sn**	**00 06 23.7**	**+1.0**
IMMV	**Iera Moni Meta**	**0.68**	**339**	P	**Pn**	**00 06 14.6**	**+0.3**
IMMV				S	**Sn**	**00 06 23.2**	**-0.6**
	comp=N,6µm,0.6s						
IMMV	**Iera Moni Meta**	**0.68**	**339**	P	**Pn**	**00 06 14.2**	**-0.2**
IMMV				S	**Sn**	**00 06 22.2**	**-1.6**
IMMV				AML	AML	00 06 28.6	
	comp=E,13074µm,0.5s						
IMMV				AML	AML	00 06 29.1	
	comp=N,12477µm,0.7s						
IMMV	**Iera Moni Meta**	**0.68**	**339**	PG	**Pn**	**00 06 14.7**	**+0.4**
IMMV				SG	**Sn**	**00 06 22.4**	**-1.4**
IDI	**Anoyia**	**0.68**	**47**	Pn	**Pn**	**00 06 14.5**	**+0.1**
	comp=N,89nm,0.3s,baz=235,slow=11,SNR=820						
IDI				Sn	**Sn**	**00 06 25.6**	**+1.7**
	comp=N,408nm,0.3s,baz=144,slow=20,SNR=37						
IDI	**Anoyia**	**0.68**	**47**	P	**Pn**	**00 06 14.5**	**+0.1**
IDI				S	**Sn**	**00 06 22.0**	**-1.9**
IDI				AML	AML	00 06 27.5	
	comp=N,9373µm,0.6s						
IDI				AML	AML	00 06 29.1	
	comp=E,10905µm,0.4s						
KSTL	**Kastelli Herak**	**0.81**	**53**	P	**Pn**	**00 06 20.1**	**+4.1**
IACM	**Heraklion**	**0.81**	**53**	P	**Pn**	**00 06 18.0**	**+2.0**
HRKL	**Herakleio**	**0.83**	**54**	P	**Pn**	**00 06 18.2**	**+1.8**
HRKL				S	**Sn**	**00 06 28.9**	**+1.4**
	comp=E,5µm,0.6s						
HRKL	**Herakleio**	**0.83**	**54**	PG	**Pn**	**00 06 18.6**	**+2.2**
HRKL				SG	**Sn**	**00 06 30.6**	**+3.1**
NPS	**Neapolis**	**1.18**	**68**	P	**Pn**	**00 06 24.1**	**+2.9**
NPS				AML	AML	00 06 41.7	
	comp=N,2125µm,0.5s						
NPS				AML	AML	00 06 48.2	
	comp=E,4314µm,0.6s						
ANKY	**Antikythira Is**	**1.31**	**323**	P	**Pn**	**00 06 25.8**	**+2.8**
ANKY				AML	AML	00 06 50.8	
	comp=E,1897µm,0.6s						
ANKY				AML	AML	00 06 50.9	
	comp=N,2074µm,0.6s						
ZKR	**Zakros**	**1.62**	**79**	P	**Pn**	**00 06 31.0**	**+3.8**
ZKR	**Zakros**	**1.62**	**79**	PN	**Pn**	**00 06 31.9**	**+4.7**
KTHA	**Kythira Island**	**1.74**	**326**	P	**Pn**	**00 06 31.7**	**+2.8**
KTHA				AML	AML	00 07 02.7	
	comp=E,1239µm,0.6s						
KTHA				AML	AML	00 07 04.7	
	comp=N,1224µm,0.7s						
THR9	**Santorini-Faro**	**1.77**	**30**	P	**Pn**	**00 06 31.4**	**+2.2**
THR6	**Thira Island,**	**1.78**	**30**	P	**Pn**	**00 06 32.1**	**+2.7**
THR5	**Thira Island,**	**1.81**	**28**	P	**Pn**	**00 06 32.1**	**+2.3**
SNT5	**Nea Kammeni, S**	**1.82**	**30**	P	**Pn**	**00 06 32.4**	**+2.4**
STAX	**Taxiarchis Har**	**1.82**	**30**	P	**Pn**	**00 06 32.2**	**+2.2**
THR3	**Thira Island,**	**1.83**	**30**	P	**Pn**	**00 06 32.4**	**+2.4**
THT2	**Imerovigli**	**1.86**	**30**	P	**Pn**	**00 06 33.1**	**+2.6**
MHLO	**Agia Marina, M**	**1.86**	**3**	P	**Pn**	**00 06 32.4**	**+1.8**
NIS1	**Nisyros Isl.**	**2.95**	**52**	PN	**Pn**	**00 06 49.2**	**+3.7**
ITM	**Ithomi**	**3.03**	**322**	PN	**Pn**	**00 06 49.3**	**+2.7**
DAT	**Datca**	**3.29**	**54**	*i* P	**Pn**	**00 06 51.4**	**+1.2**
BDRM	**Kayabasi**	**3.41**	**48**	*i* P	**Pn**	**00 06 52.2**	**+0.5**
DDIM	**Aydin, Didim**	**3.56**	**42**	*i* P	**Pn**	**00 06 57.1**	**+3.3**
TURN	**Turunc**	**3.77**	**58**	*i* P	**Pn**	**00 06 58.5**	**+1.9**
TURN				*i* S	**Sn**	**00 07 38.5**	**-1.2**
AYDN	**Tasoluk**	**4.06**	**45**	*i* P	**Pn**	**00 07 03.0**	**+2.2**
DALY	**Dalyan (Mula)**	**4.07**	**60**	*i* P	**Pn**	**00 07 04.6**	**+3.7**
DALY				*i* S	**Sn**	**00 07 47.3**	**0.0**
DALY				IAML		00 07 59.0	
	comp=E,26nm,0.8s						
MULA	**Mugla, Merkez-**	**4.08**	**52**	*i* P	**Pn**	**00 07 04.2**	**+3.1**
FETY	**Fethiye**	**4.31**	**64**	*i* P	**Pn**	**00 07 05.7**	**+1.5**
FETY				*i* S	**Sn**	**00 07 47.7**	**-5.4**
AKAS	**Kas**	**4.57**	**71**	*i* P	**Pn**	**00 07 08.0**	**+0.2**
AKAS				*i* S	**Sn**	**00 07 58.9**	**-0.7**
AKAS				IAML		00 08 03.0	
	comp=E,42nm,0.7s						
AKAS				IAML		00 08 04.0	
	comp=N,61nm,0.5s						
TAVA	**DENIZLI_Tavas**	**4.58**	**54**	*i* P	**Pn**	**00 07 12.0**	**+4.0**
TAVA				*i* S	**Sn**	**00 07 56.2**	**-3.8**
CAEL	**Denizli, Camel**	**4.69**	**59**	*i* P	**Pn**	**00 07 11.0**	**+1.5**
AKUM	**Antalya-Kumluc**	**5.16**	**71**	*i* P	**Pn**	**00 07 17.0**	**+1.1**
AKUM				*i* S	**Sn**	**00 08 10.5**	**-3.7**
AKUM				IAML		00 08 18.0	
	comp=N,14nm,0.4s						
AKUM				IAML		00 08 21.0	
	comp=E,14nm,0.5s						
KORT	**Korkueli**	**5.38**	**64**	*i* P	**Pn**	**00 07 22.8**	**+3.8**
USAK	**Uak-Merkez**	**5.43**	**43**	*i* P	**Pn**	**00 07 22.1**	**+2.4**
PASA	**Karahalli, USA**	**5.47**	**48**	*i* P	**Pn**	**00 07 23.8**	**+3.6**
BRDR	**BURDUR-Merkez**	**5.48**	**57**	*i* P	**Pn**	**00 07 20.4**	**0.0**
GDZ	**Gediz**	**5.96**	**43**	*i* P	**Pn**	**00 07 30.4**	**+3.5**
KEPZ	**Antalya-Kepez**	**6.30**	**69**	*i* P	**Pn**	**00 07 33.2**	**+1.7**
VAE	**Valguarnera**	**8.41**	**291**	Pn	**Pn**	**00 08 01.0**	**+0.5**
	comp=E,0.4nm,0.3s,baz=246,slow=2.1,SNR=7.8						
VAE				Sn	**Sn**	**00 09 30.1**	**-4.0**
	comp=E,0.4nm,0.3s,baz=88,slow=3.1,SNR=6.1						
BRTR	**Keskin Array B**	**8.92**	**54**	Pn	**Pn**	**00 08 09.0**	**+1.5**
	comp=E,0.1nm,0.3s,baz=229,slow=12,SNR=2.8						
BRTR				Sn	**Sn**	**00 09 42.1**	**-4.7**
	comp=E,0.0nm,0.3s,baz=304,slow=19,SNR=1.0						
MMAI	**Mount Meron Ar**	**9.42**	**98**	Pn	**Pn**	**00 08 15.0**	**+0.6**
	comp=E,1.4nm,0.3s,baz=262,slow=12,SNR=14						
MMAI				Sn	**Sn**	**00 09 54.3**	**-4.7**
	comp=E,1.3nm,0.3s,baz=262,slow=21,SNR=2.1						
EIL	**Elat**	**10.39**	**117**	Pn	**Pn**	**00 08 28.6**	**+0.9**
	comp=E,0.8nm,0.3s,baz=232,slow=3.8,SNR=21						
EIL				Sn	**Sn**	**00 10 16.3**	**-6.4**
	comp=E,0.7nm,0.3s,baz=197,slow=10,SNR=4.5						
CKRC	**Cesky Krumlov**	**15.81**	**335**	*e*P	**P**	**00 09 44.6**	**+0.5**
GERES	**GERESS Array B**	**16.05**	**334**	Pn	**Pn**	**00 09 44.5**	**+0.6**
	comp=E,0.1nm,0.3s,baz=165,slow=11,SNR=3.3						
AKASG	**Malin Array Be**	**16.27**	**11**	Pn	**Pn**	**00 09 47.8**	**+1.2**
	comp=E,1.5nm,0.3s,baz=200,slow=10,SNR=7.7						
KHC	**Kasperske Hory**	**16.34**	**334**	*e*P	**P**	**00 09 51.4**	**+1.5**
ESDC	**Sonseca Array**	**22.95**	**291**	P	**P**	**00 11 02.9**	**+0.9**
	comp=E,1.6nm,0.8s,baz=85,slow=9.3,SNR=13						
HFS	**Hagfors**	**26.25**	**348**	P	**P**	**00 11 31.6**	**-0.5**
	comp=E,2.9nm,0.8s,baz=149,slow=15,SNR=5.5						
FINES	**FINESS Array B**	**26.66**	**2**	P	**P**	**00 11 36.5**	**+0.6**
	comp=E,5.2nm,0.9s,baz=184,slow=7.5,SNR=4.0						
NOA	**NORSAR Array B**	**27.55**	**346**	P	**P**	**00 11 43.3**	**-0.6**
	comp=E,0.3nm,0.7s,baz=150,slow=9.7,SNR=3.8						
TORD	**Torodi Ar. Bea**	**29.72**	**229**	P	**P**	**00 12 05.6**	**+2.0**
	comp=E,0.7nm,0.5s,baz=33,slow=8.6,SNR=11						
ARCES	**ARCESS Array B**	**34.77**	**1**	P	**P**	**00 12 45.9**	**-1.4**
	comp=E,4.0nm,0.8s,baz=183,slow=7.9,SNR=4.8						
MKAR	**Makanchi Array**	**44.56**	**56**	P	**P**	**00 14 09.2**	**+0.2**
	comp=E,0.7nm,0.6s,baz=269,slow=8.1,SNR=9.4						
ZALV	**Zalesovo Beam**	**45.76**	**46**	P	**P**	**00 14 18.2**	**-0.1**
	comp=E,0.8nm,0.4s,baz=273,slow=8.8,SNR=4.7						
SONM	**Songino Array**	**60.26**	**50**	P	**P**	**00 16 06.2**	**+0.7**
	comp=E,0.7nm,0.5s,baz=298,slow=9.0,SNR=5.1						

JMA ***14*** *00:09:15.6±0.3,30°.84N×128°.57E,h7^{km}±4^{km},M4.3*
IDC ***14*** *00:09:17.3±0.9,30°.83N×128°.58E,h0^{km},mb3.5/7,*
mb1 3.8/12,mb1mx3.7/57,mbtmp3.7/12,ML3.4/5,Error
ellipse: s-maj=27.5km s-min=17.1km az=88.0
ISC 14 00:09:20.2±2.2,**30°.85N**±0°.06×**128°.70E**±0°.09,**h20**^{km}±17^{km},
n23,σ1^{s}27/29,**mb3.6**/7,**1D,Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	**Shimokoshiki**	**1.20**	**46**	⇓P	**Pn**	**00 09 39.1**	**-2.7**
JSJ				S	**Sn**	**00 09 56.3**	**-1.2**
JKC	**Kuchinoerabu**	**1.35**	**106**	P	**Pn**	**00 09 42.6**	**-1.2**
JKC				*e*S	**Sn**	**00 10 01.5**	**+0.3**
JNN	**Nakanoshima**	**1.43**	**134**	P	**Pn**	**00 09 43.5**	**-1.5**
JSU	**Suzuyama**	**1.64**	**66**	P	**Pn**	**00 09 46.7**	**-1.2**
JSU				*e*S	**Sb**	**00 10 09.4**	**-0.6**
JYAK	**Yakushimahirau**	**1.68**	**111**	P	**Pn**	**00 09 46.1**	**-2.3**
JYAK				*e*S	**Sn**	**00 10 09.8**	**+0.5**
JMTN	**Minamitane**	**1.95**	**103**	P	**Pn**	**00 09 51.2**	**-1.0**
JTN	**Tanegashima 3**	**1.98**	**95**	P	**Pn**	**00 09 51.8**	**-0.7**
JTZ	**Takazaki**	**2.30**	**62**	P	**Pn**	**00 09 56.2**	**-0.7**
JIU3	**Izumi3**	**2.47**	**46**	P	**Pn**	**00 09 58.4**	**-0.9**
JAM	**Amami Oshima**	**2.56**	**162**	P	**Pn**	**00 09 58.9**	**-1.6**
JAMN	**Amaminishikomi**	**2.63**	**171**	P	**Pn**	**00 10 00.3**	**-1.2**
JNU	**Nakatsue**	**2.92**	**39**	Pn	**Pn**	**00 10 06.2**	**+0.6**
	31nm,0.3s,baz=69,slow=0.4,SNR=1.7						
JNU				Sn	**Sb**	**00 10 48.1**	**+1.1**
	7.5nm,0.3s,baz=83,slow=1.7,SNR=1.1						
JOW	**Kunigami**	**4.02**	**185**	Pn	**Pn**	**00 10 21.1**	**+0.5**
	1.8nm,0.3s,baz=95,slow=17,SNR=2.1						
KSRS	**Korea Array**	**6.62**	**355**	Pn	**Pn**	**00 10 56.4**	**+0.1**
	1.4nm,0.3s,baz=175,slow=15,SNR=12						
KSRS				Sn	**Sn**	**00 12 09.2**	**-1.8**
	1.6nm,0.3s,baz=176,slow=22,SNR=4.6						
KSRS				Lg	Lg	00 12 44.0	
	2.0nm,0.3s,baz=177,slow=33,SNR=6.3						
MJAR	**Matsushiro Arr**	**9.74**	**52**	Pn	**Pn**	**00 11 40.5**	**+1.3**
	0.1nm,0.3s,baz=242,slow=14,SNR=1.9						
KLR	**Kul'dur**	**18.50**	**6**	P	**Pn**	**00 13 37.1**	**+1.9**
	0.1nm,0.3s,baz=197,slow=6.5,SNR=8.3						
SONM	**Songino Array**	**24.05**	**321**	P	**P**	**00 14 33.3**	**-0.8**
	0.3nm,0.6s,baz=34,slow=40,SNR=3.6						
MKAR	**Makanchi Array**	**38.90**	**308**	P	**P**	**00 16 43.3**	**-1.0**
	0.8nm,0.9s,baz=82,slow=9.9,SNR=4.1						
ZALV	**Zalesovo Beam**	**38.92**	**319**	P	**P**	**00 16 45.0**	**+0.7**
	0.3nm,0.4s,baz=106,slow=14,SNR=1.5						
WRA	**Warramunga Arr**	**50.79**	**173**	P	**P**	**00 18 19.3**	**+0.1**
	0.6nm,0.7s,baz=353,slow=8.1,SNR=3.5						
ASAR	**Alice Springs**	**54.44**	**174**	P	**P**	**00 18 46.2**	**+0.1**
	0.4nm,0.4s,baz=3.0,slow=13,SNR=9.8						
ILAR	**Eielson Array**	**60.20**	**29**	P	**P**	**00 19 27.2**	**+0.8**
	0.6nm,1.0s,baz=258,slow=4.5,SNR=4.1						
NVAR	**Mina Array Bea**	**87.02**	**46**	P	**P**	**00 22 04.7**	**+0.1**
	0.5nm,0.7s,baz=299,slow=4.4,SNR=4.5						

IDC ***14*** *00:11:56.1±1.6,31°.25N×128°.53E,h0^{km},mb3.3/3,*
mb1 3.6/5,mb1mx3.4/47,mbtmp3.5/5,ML3.8/1,Error
ellipse: s-maj=40.5km s-min=25.8km az=87.0
JMA ***14*** *00:11:57.6±0.3,31°.30N×128°.75E,h14^{km}±3^{km},M3.9*
ISC 14 00:11:56.8±3.0,**31°.27N**±0°.06×**128°.77E**±0°.07,**h6**^{km}±18^{km},
n15,σ0^{s}86/21,**mb3.5**/3,**Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	**Shimokoshiki**	**0.91**	**63**	P	**Pb**	**00 12 14.4**	**-0.5**
JSJ				S	**Sg**	**00 12 27.0**	**+1.1**
JFU	**Fukue jima 2**	**1.38**	**359**	P	**Pb**	**00 12 22.5**	**-0.5**
JFU				S	**Sb**	**00 12 40.0**	**-0.9**
JSU	**Suzuyama**	**1.46**	**80**	P	**Pb**	**00 12 24.6**	**+0.2**
JSU				*e*S	**Sb**	**00 12 43.2**	**0.0**
JKC	**Kuchinoerabu**	**1.47**	**123**	P	**Pn**	**00 12 24.1**	**+0.4**
JKC				S	**Sn**	**00 12 43.3**	**+0.1**
JNN	**Nakanoshima**	**1.71**	**146**	P	**Pn**	**00 12 27.8**	**+0.6**
JYAK	**Yakushimahirau**	**1.82**	**124**	P	**Pn**	**00 12 27.1**	**-1.5**
JTN	**Tanegashima 3**	**2.00**	**107**	P	**Pn**	**00 12 31.4**	**+0.4**
JMTN	**Minamitane**	**2.03**	**115**	P	**Pn**	**00 12 31.6**	**+0.1**
JTZ	**Takazaki**	**2.08**	**72**	P	**Pn**	**00 12 32.5**	**+0.4**
JIU3	**Izumi3**	**2.15**	**53**	P	**Pn**	**00 12 33.9**	**+0.7**
JNU	**Nakatsue**	**2.57**	**44**	Pn	**Pb**	**00 12 41.3**	**-2.0**
	28nm,0.3s,baz=234,slow=0.2,SNR=1.6						
JNU				Sn	**Sg**	**00 13 19.3**	**-0.1**
	baz=228,slow=5.0,SNR=0.9						
KSRS	**Korea Array**	**6.21**	**354**	Pn	**Pn**	**00 13 30.2**	**+1.3**
	baz=175,slow=14,SNR=2.1						
KSRS				Sn	**Sn**	**00 14 40.0**	**-0.2**
	1.3nm,0.3s,baz=175,slow=24,SNR=1.7						
KSRS				Lg	Lg	00 15 10.0	
	0.6nm,0.3s,baz=172,slow=30,SNR=4.2						
SONM	**Songino Array**	**23.77**	**320**	P	**P**	**00 17 09.4**	**-0.7**
	0.5nm,0.7s,baz=137,slow=11,SNR=3.0						
ASAR	**Alice Springs**	**54.85**	**174**	P	**P**	**00 21 28.1**	**+0.2**
	0.2nm,0.3s,baz=1.1,slow=14,SNR=3.1						
ILAR	**Eielson Array**	**59.81**	**30**	P	**P**	**00 22 03.1**	**+0.6**
	0.3nm,0.8s,baz=291,slow=7.6,SNR=4.1						

IDC ***14*** *01:02:25.8±2.0,5°.51S×131°.30E,h0^{km},mb3.7/1,*
mb1 3.7/5,mb1mx3.4/48,mbtmp3.6/5,ML3.3/4,Error
ellipse: s-maj=94.4km s-min=24.6km az=84.0
ISC 14 01:02:26.5±1.1,**5°.57S**±0°.06×**131°.2E**±0°.2,**h50**^{km},**n5,**
σ4^{s}12/8,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.67**	**1**	Pn	**Pn**	**01 03 36.9**	**+2.5**
	0.6nm,0.3s,baz=225,slow=23,SNR=6.3						
SIJI				Sn	**Sn**	**01 04 23.9**	**-3.5**
	3.2nm,0.3s,baz=217,slow=20,SNR=3.0						
FITZ	**Fitzroy Crossi**	**13.59**	**203**	Pn	**P**	**01 05 40.9**	**-3.3**
	0.1nm,0.3s,baz=25,slow=7.8,SNR=14						
FITZ				Sn	**Sn**	**01 08 08.1**	**+1.9**
	0.1nm,0.3s,baz=255,slow=20,SNR=2.0						
WRA	**Warramunga Arr**	**14.61**	**168**	Pn	**P**	**01 05 53.9**	**-1.7**
	0.2nm,0.3s,baz=351,slow=13,SNR=4.6						
WRA				Sn	**Sn**	**01 08 26.7**	**-4.4**
	0.1nm,0.3s,baz=348,slow=24,SNR=2.0						
ASAR	**Alice Springs**	**18.18**	**172**	P	**Pn**	**01 06 40.9**	**+5.4**
	0.1nm,0.3s,baz=351,slow=9.6,SNR=8.6						
ASAR				S	**Sn**	**01 09 58.0**	**+0.4**
	0.1nm,0.3s,baz=356,slow=27,SNR=2.7						
MKAR	**Makanchi Array**	**67.70**	**326**	P	P	01 13 25.0	+6.4
	0.3nm,0.3s,baz=115,slow=7.7,SNR=8.2						

JMA ***14*** *01:11:49.0±0.3,31°.25N×128°.71E,h9^{km}±3^{km},M4.3*
JMA Felt II J1.
NIED ***14*** *01:11:49.1,31°.25N×128°.71E,h9^{km},MW4.4,Moment*
Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm;
M$_{rr}$-0.42; M$_{θθ}$2.12; M$_{ϕϕ}$-1.71; M$_{rθ}$1.44; M$_{θϕ}$2.60; M$_{ϕr}$-1.50;
Fault plane solution: M$_0$3.83000×10^{15} NP1:
ϕ$_s$286.00000°,δ78.00000°,λ-28.00000°. NP2:ϕ$_s$22.00000°,
δ62.00000°,λ-166.00000°.
BJI ***14*** *01:11:50.5±0.0,31°.32N×128°.91E,h10^{km},mB4.8/12,*
mb4.4/29,ML4.2/1,Ms4.3/24,Ms7 3.9/23
IDC ***14*** *01:11:50.8±0.7,31°.17N×128°.45E,h0^{km},mb3.8/14,*
mb1 4.0/19,mb1mx3.9/57,mbtmp3.9/19,ML3.5/5,MS3.6/6,
Ms1 3.7/6,ms1mx3.4/36,Error ellipse: s-maj=19.5km
s-min=15.5km az=86.0
NEIC ***14*** *01:11:53.6±2.6,31°.39N±0°.05×128°.91E±0°.06,h10^{km}±1^{km},*
mb4.3/15,Error ellipse: s-maj=9.3km s-min=8.0km
az=109.0
KMA ***14*** *01:11:56.4,31°.40N×128°.47E,h35^{km}*
ISC 14 01:11:53.1±1.6,**31°.34N**±0°.04×**128°.87E**±0°.04,**h11**^{km}±10^{km},
n97,σ1^{s}72/105,**mb4.1**/26,**MS4.0**/9,**2C-2D,Northwest of**
Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	**Shimokoshiki**	**0.80**	**65**	⇓P	**Pg**	**01 12 07.0**	**-1.5**
JSJ				S	**Sg**	**01 12 19.4**	**+0.5**
JFU	**Fukue jima 2**	**1.32**	**355**	⇑P	**Pn**	**01 12 14.8**	**-2.7**
JFU				S	**Sb**	**01 12 33.8**	**-1.0**
JSU	**Suzuyama**	**1.36**	**83**	P	**Pn**	**01 12 16.7**	**-1.3**
JSU				S	**Sb**	**01 12 37.0**	**+0.9**
JSU	**Suzuyama**	**1.36**	**83**		**Pn**	**01 12 16.8**	**-1.3**
JSU					**Sb**	**01 12 36.8**	**+0.8**
JKC	**Kuchinoerabu**	**1.43**	**127**	P	**Pn**	**01 12 16.7**	**-2.3**
JKC				S	**Sn**	**01 12 36.0**	**-1.8**
JNN	**Nakanoshima**	**1.72**	**150**	P	**Pn**	**01 12 18.9**	**-4.1**
JYAK	**Yakushimahirau**	**1.78**	**128**	⇑P	**Pn**	**01 12 20.2**	**-3.6**
JTN	**Tanegashima 3**	**1.93**	**110**	P	**Pn**	**01 12 23.5**	**-2.4**
JTZ	**Takazaki**	**1.97**	**73**	⇓P	**Pn**	**01 12 25.3**	**-1.1**
JMTN	**Minamitane**	**1.98**	**118**	P	**Pn**	**01 12 23.9**	**-2.6**
JIU3	**Izumi3**	**2.04**	**53**	P	**Pn**	**01 12 26.5**	**-0.9**
JTAJ	**Takarajima**	**2.20**	**172**	P	**Pn**	**01 12 26.3**	**-3.2**
JNU	**Nakatsue**	**2.46**	**43**	Pn	**Pb**	**01 12 38.3**	**+0.9**
	25nm,0.3s,baz=232,slow=0.1,SNR=61						
JNU				Sn	**Sg**	**01 13 12.2**	**+0.1**
	35nm,0.3s,baz=206,slow=2.4,SNR=6.2						
KSJJU	**Jeju**	**2.87**	**317**	P	**Pn**	**01 12 36.5**	**-2.4**
	SNR=8.3						
GMDB	**Geomundo**	**3.01**	**334**	P	**Pn**	**01 12 39.0**	**-1.7**
	SNR=13						
JTU	**Tsushima**	**3.21**	**8**		**Pn**	**01 12 43.0**	**-0.4**
YNDB	**Yeoundo**	**3.21**	**344**	P	**Pn**	**01 12 43.0**	**-0.5**
	SNR=5.6						
YKDB	**Yokjido**	**3.31**	**351**	P	**Pn**	**01 12 43.6**	**-1.3**
	SNR=13						
CJD	**Chujado**	**3.40**	**321**	P	**Pn**	**01 12 43.2**	**-2.9**
	SNR=12						
BOSB	**Boseong-gun**	**3.69**	**338**	P	**Pn**	**01 12 48.0**	**-2.1**
	SNR=9.5						
KSJDO	**Jindo**	**3.79**	**326**	P	**Pn**	**01 12 49.0**	**-2.5**
	SNR=8.0						
HUK2	**Heuksan-myeon**	**4.41**	**320**	P	**Pn**	**01 12 57.2**	**-2.7**
	SNR=30						
JOW	**Kunigami**	**4.52**	**187**	Pn	**Pn**	**01 12 59.9**	**-1.6**
	1.9nm,0.3s,baz=280,slow=11,SNR=1.8						
JOW				LR	LR	01 14 32.8	
	comp=Z,198nm,20.9s,baz=210,slow=38						
JOW	**Kunigami**	**4.52**	**187**	Pn	**Pn**	**01 13 01.0**	**-0.5**
KSJEO	**Jeonju**	**4.77**	**344**	P	**Pn**	**01 13 04.1**	**-0.9**
	SNR=10						
JMN	**Monobe**	**4.85**	**59**	Pn	**Pn**	**01 13 05.6**	**-0.5**
KSCPR	**CHUPUNGNYEONG**	**4.93**	**351**	P	**Pn**	**01 13 06.7**	**-0.4**
	SNR=11						
OKCB	**Cheongsan-myeo**	**5.08**	**350**	P	**Pn**	**01 13 09.1**	**0.0**
	SNR=7.5						
JHS	**Saijyo**	**5.10**	**43**		**Pn**	**01 13 10.2**	**+0.7**
KSBON	**Boeun**	**5.23**	**350**	P	**Pn**	**01 13 11.3**	**+0.1**
	SNR=19						
CHYB	**Chungyang**	**5.59**	**0**	P	**Pn**	**01 13 16.1**	**-0.1**
	SNR=21						
KSCEA	**Cheonan**	**5.63**	**347**	P	**Pn**	**01 13 16.5**	**-0.3**
	SNR=5.4						
KSGWL	**Sabuk**	**5.86**	**360**	P	**Pn**	**01 13 19.9**	**+0.1**
	SNR=6.1						
KSAR	**Wonju Array Be**	**6.14**	**353**	Pn	**Pn**	**01 13 23.6**	**-0.2**
KSRS	**Korea Array**	**6.15**	**353**	Pn	**Pn**	**01 13 23.6**	**-0.2**
	4.4nm,0.3s,baz=175,slow=14,SNR=51						
KSRS				Sn	**Sn**	**01 14 32.3**	**-1.9**
	5.4nm,0.3s,baz=174,slow=24,SNR=5.7						
KS19	**Wonju Array Si**	**6.21**	**353**		**Pn**	**01 13 23.6**	**-1.1**
INCN	**Inchon**	**6.40**	**344**	Pn	**Pn**	**01 13 26.4**	**-0.9**
SSE	**Sheshan**	**6.59**	**270**	Pn	**Pn**	**01 13 31.6**	**+1.7**
SSE				Sn	**Sn**	**01 14 48.4**	**+3.4**
SSE				smax	smax		
	comp=N,170nm,0.9s						
SSE				smax	smax		
	comp=E,100nm,1.0s						
SSE				LR	LR		
	comp=N,1µm,15.0s						
SSE				LR	LR		
	comp=E,240nm,15.5s						
JWT	**Wachi**	**6.73**	**53**	Pn	**Pn**	**01 13 31.6**	**-0.2**
SEHB	**SEOHWA**	**6.93**	**356**	P	**Pn**	**01 13 34.8**	**+0.2**
	SNR=11						
INU	**Inuyama**	**7.90**	**57**	Pn	**Pn**	**01 13 48.9**	**+1.0**
JGF	**Kuroka**	**8.26**	**57**	Pn	**Pn**	**01 13 53.1**	**+0.2**
NJ2	**Nanjing**	**8.57**	**277**	*e*P	**Pn**	**01 13 56.6**	**-0.5**
NJ2				S	**Sn**	**01 15 32.8**	**-0.9**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
NJ2				LR	LR		
	comp=N,2µm,11.9s						
NJ2				LR	LR		
	comp=E,550nm,14.3s						
NJ2				LR	LR		
	comp=Z,570nm,12.6s						
YOJ	**Yonaguni jima**	**8.59**	**219**	Pn	**Pn**	**01 13 59.7**	**+2.3**
MJAR	**Matsushiro Arr**	**9.33**	**54**	Pn	**Pn**	**01 14 10.1**	**+2.6**
	0.1nm,0.3s,baz=238,slow=13,SNR=1.5						
MJAR				LR	LR	01 18 05.1	
	comp=Z,229nm,18.8s,baz=280,slow=38						
SSLB	**Suanglung**	**10.29**	**225**	Pn	**Pn**	**01 14 21.7**	**+1.0**
YULB	**Yu-li**	**10.39**	**222**	Pn	**Pn**	**01 14 23.4**	**+1.3**
TWG	**Pinlang**	**10.96**	**221**	Pn	**Pn**	**01 14 30.7**	**+0.7**
WHN	**Wuhan**	**12.50**	**270**	P	**Pn**	**01 14 53.3**	**+2.4**
WHN				LR	LR		
	comp=N,2µm,9.3s						
WHN				LR	LR		
	comp=E,1µm,12.1s						
WHN				LR	LR		
	comp=Z,870nm,12.0s						
BJI	**Beijing**	**13.48**	**314**	P	**Pn**	**01 15 04.8**	**+0.6**
BJI				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ASAJ	**Asahikawa**	**16.72**	**36**	Pn	**Pn**	**01 15 47.4**	**+0.1**
	0.4nm,0.3s,baz=228,slow=22,SNR=4.2						
JKA	**Kamikawa-asahi**	**16.72**	**36**	Pn	**Pn**	**01 15 47.6**	**+0.3**
JKA				IAmb	IAmb	01 15 52.2	
	comp=Z,37nm,1.3s						
HHC	**Hu-ho-hao-te**	**16.88**	**309**	*e*P	**Pn**	**01 15 49.6**	**+0.2**
HHC				pmax	pmax		
	comp=Z,25nm,0.8s						
HHC				pmax	pmax		
	comp=Z,140nm,4.0s						
HHC				LR	LR		
	comp=Z,610nm,13.5s						
HHC				LR	LR		
	comp=Z,550nm,13.1s						
HHC				LR	LR		
	comp=Z,540nm,12.3s						
XAN	**Xi'an**	**17.01**	**284**	P	**P**	**01 15 52.1**	**-0.8**
XAN				pP	pP	01 15 54.6	-1.3
XAN				S	**S**	**01 19 06.0**	**-4.2**
XAN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
XAN				LR	LR		
	comp=Z,1µm,12.6s						
XAN				LR	LR		
	comp=Z,660nm,13.8s						
XAN				LR	LR		
	comp=Z,320nm,16.5s						
KLR	**Kul'dur**	**18.00**	**6**	P	**P**	**01 16 05.3**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=221,slow=6.2,SNR=9.4						
HIA	**Hailar**	**19.19**	**342**	P	**P**	**01 16 14.9**	**-1.8**
HIA				IAmb	IAmb	01 16 36.4	
	comp=Z,15nm,1.2s						
QIZ	**Qiongzhong**	**21.10**	**239**	P	**P**	**01 16 37.8**	**+0.1**
QIZ				S	**S**	**01 20 33.8**	**+1.3**
QIZ				LR	LR		
	comp=Z,460nm,12.4s						
QIZ				LR	LR		
	comp=Z,290nm,12.4s						
QIZ				LR	LR		
	comp=Z,310nm,14.5s						
LZH	**Lanzhou**	**21.33**	**290**	*e*P	**P**	**01 16 39.8**	**-0.5**
LZH				sP	sP	01 16 44.0	-0.7
LZH				pmax	pmax		
	comp=Z,18nm,1.1s						
LZH				LR	LR		
	comp=Z,1µm,12.3s						
LZH				LR	LR		
	comp=Z,460nm,13.0s						
LZH				LR	LR		
	comp=Z,410nm,15.3s						
CD2	**Chengdu**	**21.50**	**275**	P	**P**	**01 16 40.3**	**-1.7**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				LR	LR		
	comp=Z,1µm,12.9s						
CD2				LR	LR		
	comp=Z,830nm,10.6s						
CD2				LR	LR		
	comp=Z,590nm,13.7s						
GUMO	**Guam**	**22.98**	**137**	LR	LR	01 25 23.5	
	comp=Z,136nm,19.7s,baz=119,slow=35						
ULN	**Ulaanbaatar**	**23.44**	**321**	P	**P**	**01 17 02.3**	**-0.1**
ULN				IAmb	IAmb	01 17 25.3	
	comp=Z,7.2nm,1.1s						
SONM	**Songino Array**	**23.77**	**320**	P	**P**	**01 17 04.4**	**-1.3**
	comp=Z,1.9nm,0.9s,baz=137,slow=8.4,SNR=12						

SONM				LR	LR	01 26 51.9	
	comp=Z,291nm,18.3s,baz=175,slow=38						
SONM	Songino Array	23.77	320	P	P	01 17 04.1	-1.6
GTA	Gaotai	24.95	297	*e*P	P	01 17 25.1	+8.5
GTA				pP	sP	01 17 30.5	+9.4
GTA				sP	pP	01 17 33.8	+14
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,110nm,6.5s						
GTA				LR	LR		
	comp=N,450nm,15.3s						
GTA				LR	LR		
	comp=E,330nm,15.6s						
GTA				LR	LR		
	comp=Z,320nm,16.4s						
CMAR	Chiang Mai Arr	29.92	252	P	P	01 18 03.8	+2.5
	comp=Z,1.6nm,0.5s,baz=78,slow=7.5,SNR=7.4						
CMAR				LR	LR	01 31 27.3	
	comp=Z,172nm,18.0s,baz=54,slow=40						
WMQ	Urumqi	34.59	303	*e*P	P	01 18 41.8	-0.2
WMQ				pP	sP	01 18 47.8	+1.2
WMQ				pmax	pmax		
	comp=Z,16nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,200nm,3.8s						
WMQ				LR	LR		
	comp=Z,450nm,29.3s						
WMQ				LR	LR		
	comp=Z,1µm,24.9s						
WMQ				LR	LR		
	comp=Z,780nm,27.9s						
MKAR	Makanchi Array	38.73	307	P	P	01 19 14.7	-2.5
	comp=Z,0.8nm,0.9s,baz=87,slow=12,SNR=3.5						
MKAR				LR	LR	01 36 44.4	
	comp=Z,195nm,18.1s,baz=290,slow=39						
MKAR	Makanchi Array	38.73	307	P	P	01 19 17.2	-0.1
KURK	Kurchatov	41.64	313	P	P	01 19 39.5	-1.8
KURK	Kurchatov	41.64	313	IAmb	IAmb	01 19 56.1	
	comp=Z,4.5nm,1.2s						
KURBB	Kurchatov Arra	41.69	312	P	P	01 19 39.5	-2.1
	comp=Z,0.2nm,0.3s,baz=83,slow=9.6,SNR=4.7						
KSH	Kashi	43.34	296	P	P	01 19 59.0	+3.5
KSH				pmax	pmax		
	comp=Z,4.0nm,0.4s						
KSH				pmax	pmax		
	comp=Z,470nm,6.5s						
NRIK	Noril'sk	44.61	341	P	P	01 20 03.2	-1.8
	comp=Z,4.0nm,0.8s,baz=104,slow=12,SNR=4.8						
NRIK	Noril'sk	44.61	341	P	P	01 20 04.7	-0.3
NRIK				IAmb	IAmb	01 20 14.2	
	comp=Z,5.0nm,0.8s						
BVAR	Borovoye Array	46.95	315	P	P	01 20 21.9	-1.9
	comp=Z,0.9nm,0.6s,baz=148,slow=8.6,SNR=5.0						
BRVK	Borovoye	47.02	315	P	P	01 20 23.7	-0.6
BRVK				IAmb	IAmb	01 20 34.6	
	comp=Z,3.8nm,0.7s						
KK31	Karatay Array	47.07	302	P	P	01 20 23.1	-1.7
KK31				IAmb	IAmb	01 20 28.5	
	comp=Z,3.0nm,0.8s						
KKAR	Karatay Array	47.07	302	P	P	01 20 23.4	-1.4
KKAR				IAmb	IAmb	01 20 28.5	
	comp=Z,3.0nm,0.8s						
WB0	Warramunga Arr	51.09	173	P	P	01 20 57.3	+1.6
WB0				IAmb	IAmb	01 21 04.0	
	comp=Z,6.1nm,1.1s						
WRA	Warramunga Arr	51.26	173	P	P	01 20 54.7	-2.3
	comp=Z,1.5nm,0.8s,baz=352,slow=8.4,SNR=5.1						
ABKAR	Akbulak array	53.66	311	P	P	01 21 13.7	-0.9
ARU	Arti	53.81	320	P	P	01 21 16.8	+1.2
AS31	Alice Springs	54.90	174	P	P	01 21 24.4	+0.5
ASAR	Alice Springs	54.90	174	P	P	01 21 21.8	-2.1
	comp=Z,1.1nm,0.6s,baz=2.8,slow=14,SNR=18						
ASAR	Alice Springs	54.90	174	P	P	01 21 25.2	+1.3
IMAR	Indian Mountai	56.72	29	P	P	01 21 37.1	+0.7
H23K	Yukon River	58.45	29	P	P	01 21 49.7	+1.0
NEA2	Nenana	58.81	30	P	P	01 21 51.6	+0.5
ILAR	Eielson Array	59.71	30	P	P	01 21 58.4	+1.0
	comp=Z,1.0nm,0.7s,baz=284,slow=8.2,SNR=13						
BCAR	Beaver Creek A	62.27	31	P	P	01 22 17.1	+2.2
KLMR	Klimovskoe	62.87	327	*e*P	P	01 22 21.4	+2.6
KLMR				AMP		01 22 23.1	
	comp=Z,26nm,1.4s						
INK	Inuvik	64.00	24	P	P	01 22 29.4	+3.2
	comp=Z,1.7nm,0.9s,baz=0.0,slow=3.0,SNR=3.6						
FINES	FINESS Array B	68.73	330	P	P	01 22 55.4	-1.1
	comp=Z,2.6nm,0.9s,baz=80,slow=4.6,SNR=8.4						
AKASG	Malin Array Be	72.05	319	P	P	01 23 17.2	+0.2
	comp=Z,0.3nm,0.2s,baz=59,slow=3.6,SNR=2.1						
BRTR	Keskin Array B	74.38	307	P	P	01 23 30.2	-1.1
	comp=Z,0.5nm,0.8s,baz=95,slow=2.9,SNR=3.8						
NVAR	Mina Array Bea	86.58	46	P	P	01 24 39.8	+3.0
	comp=Z,0.6nm,0.8s,baz=274,slow=5.6,SNR=4.4						
PDAR	Pinedale Array	88.84	39	P	P	01 24 48.2	+0.6
	comp=Z,0.5nm,0.7s,baz=260,slow=0.9,SNR=4.2						

IDC 14 01:12:46.8±55.0**, 18°.10S×179°.85E, h0^{km}, mb3.9**/3**, mb1 4.1**/3**, mb1mx3.7**/42**, mbtmp3.9**/3**, Error ellipse: s-maj=997.2km s-min=91.8km az=78.0, Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	37.09	241	P	P	01 19 58.9	-0.1
	2.1nm,0.7s,baz=90,slow=7.1,SNR=3.6						
WRA	Warramunga Arr	42.96	260	P	P	01 20 48.3	+0.3
	0.2nm,0.3s,baz=91,slow=7.8,SNR=3.2						
ASAR	Alice Springs	43.14	254	P	P	01 20 49.4	-0.1
	2.2nm,0.5s,baz=87,slow=8.6,SNR=32						

MDD 14 01:14:26.9±0.4**, 39°.73N×0°.59W, h11^{km}, mbLg2.1**/22**, Error ellipse: s-maj=4.2km s-min=2.4km az=121.0, PRXIMO, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ECHE	Chera	0.32	245	Pg	Pg	01 14 32.5	-0.8
	21nm,0.1s,SNR=7.9						
ECHE				Lg	Lg	01 14 37.1	
	43nm,0.1s,SNR=7.9						
EMOS	Mosqueruela	0.64	8	Pg	Pg	01 14 38.9	-0.5
	6.6nm,0.3s,SNR=39						
EMOS				Lg	Lg	01 14 46.3	
	5.5nm,0.1s,SNR=12						
AFON	Font Roja	1.06	178	Pg	Pg	01 14 46.4	-0.9
	0.4nm,0.1s,SNR=7.9						
AFON				Lg	Lg	01 15 00.0	
	11nm,0.3s,SNR=7.9						
EBEN2	Beniarda presa	1.10	163	Pg	Pg	01 14 48.0	0.0
	8.2nm,0.1s,SNR=7.9						
EBEN2				Lg	Lg	01 15 01.7	
	11nm,0.1s,SNR=7.9						
ETOB	Tobarra	1.31	215	Pg	Pn	01 14 49.8	-1.4
	3.1nm,0.5s,SNR=18						
ETOB				Lg	Lg	01 15 07.6	
	10.0nm,0.2s,SNR=13						
ERTA	Horta de San J	1.42	30	Pg	Pn	01 14 51.9	-0.7
	2.8nm,0.3s,SNR=30						
ERTA				Lg	Lg	01 15 10.3	
	10.0nm,0.1s,SNR=9.7						
ETOR	Torete	1.56	315	Pg	Pb	01 14 55.7	-0.1
	8.7nm,0.3s,SNR=23						
ETOR				Lg	Lg	01 15 14.8	
	30nm,0.2s,SNR=6.5						
EIBI	Ibiza	1.66	114	Pn	Pn	01 14 53.9	-2.0
	8.8nm,0.7s,SNR=7.7						
EIBI				Sn	Sn	01 15 12.0	-5.1
	18nm,1.0s						
EMUR	La Murta	1.95	195	Pg	Pg	01 15 03.6	-0.6
	5.1nm,0.7s,SNR=6.8						
EMUR				Sn	Sn	01 15 22.1	-2.3
	0.4nm,0.2s,SNR=7.9						
EMUR				Lg	Lg	01 15 27.7	
	3.3nm,0.3s,SNR=5.3						
EPOB	Poblet	2.06	38	Pn	Pn	01 15 00.5	-1.1
	0.2nm,0.1s,SNR=7.9						
EPOB				Pg	Pb	01 15 04.9	+0.5
	1.8nm,0.5s,SNR=8.2						
EPOB				Sn	Sn	01 15 24.9	-2.4
	1.3nm,0.1s,SNR=7.9						
EPOB				Lg	Lg	01 15 30.9	
	1.7nm,0.1s,SNR=7.9						
UCM	Universidad Co	2.12	287	P	Pb	01 15 05.1	-0.2
UCM				S	Sb	01 15 32.1	+0.5
SESP	Santiago Espad	2.21	224	Pn	Pn	01 15 02.5	-1.2
	0.1nm,0.2s,SNR=7.9						
SESP				Pg	Pb	01 15 07.8	+0.8
	0.8nm,0.1s,SNR=7.9						
SESP				Sn	Sn	01 15 28.5	-2.6
	4.0nm,0.1s,SNR=7.9						
SESP				Lg	Lg	01 15 35.3	
	9.8nm,0.1s,SNR=7.9						
ESDC	Sonseca Array	2.60	270	Pn	Pn	01 15 07.5	-1.4
	0.4nm,0.3s,baz=89,slow=17,SNR=6.9						
ESDC				Pg	Pb	01 15 14.3	+0.8
	0.3nm,0.4s,baz=89,slow=17,SNR=4.6						
ESDC				Sn	Sn	01 15 39.1	-1.4
	0.2nm,0.3s,baz=94,slow=17,SNR=3.8						
ESDC				Lg	Lg	01 15 45.7	
	2.2nm,0.5s,baz=88,slow=30,SNR=9.2						
ETOS	Mallorca	2.63	88	Pn	Pn	01 15 07.4	-1.9
	0.3nm,0.1s,SNR=7.9						
ETOS				Sn	Sn	01 15 37.7	-3.4
	0.4nm,0.2s,SNR=7.9						
EQES	Quesada	2.73	226	Pn	Pn	01 15 09.6	-1.1
	0.2nm,0.1s,SNR=7.9						
EQES				Pg	Pb	01 15 17.1	+1.4
	3.7nm,0.5s,SNR=9.7						
EQES				Lg	Lg	01 15 51.9	
	4.8nm,0.3s,SNR=12						
PAB	San Pablo	2.91	268	Pn	Pn	01 15 11.8	-1.3
	0.5nm,0.1s,SNR=7.9						
PAB				Pg	Pb	01 15 19.8	+1.0
	1.4nm,0.4s,SNR=7.9						
PAB				Sn	Sn	01 15 45.7	-2.4
	0.6nm,0.2s,SNR=4.0						
PAB				Lg	Lg	01 15 55.7	
	4.7nm,0.4s,SNR=7.9						
CSOR	Sort	2.95	26	Pn	Pn	01 15 13.8	0.0
	0.3nm,0.2s,SNR=7.9						
CSOR				Sn	Sn	01 15 47.7	-1.5
	0.6nm,0.2s,SNR=7.9						
CSOR				Lg	Lg	01 15 57.5	
	7.3nm,0.5s,SNR=7.9						
GORA	Gorafe	2.95	221	Pg	Pg	01 15 22.2	-1.2
	3.0nm,0.2s,SNR=7.9						
GORA				Lg	Lg	01 16 00.5	
	11nm,0.2s,SNR=7.9						
CFON	Fontmartina	3.07	48	Pn	Pn	01 15 13.8	-1.5
	0.7nm,0.2s,SNR=7.9						
CFON				Sn	Sn	01 15 48.7	-3.4
	1.3nm,0.2s,SNR=7.9						
CFON				Lg	Lg	01 16 03.6	
	3.0nm,0.3s,SNR=4.0						
EORO	Oroz-Betelu	3.21	351	Lg	Lg	01 16 04.9	
	5.3nm,0.3s,SNR=7.9						
EBER	Berja	3.35	213	Lg	Lg	01 16 12.5	
	1.5nm,0.3s,SNR=7.9						
ATE	Arette	3.36	359	Pn	Pn	01 15 19.4	+0.2
	0.1nm,0.1s,SNR=7.9						
ATE				Sn	Sn	01 15 56.0	-3.0
	0.4nm,0.1s,SNR=7.9						
ATE				Lg	Lg	01 16 10.6	
	1.7nm,0.2s,SNR=7.9						
CLLI	Llivia	3.36	34	Pn	Pn	01 15 18.9	-0.6
	0.1nm,0.1s,SNR=7.9						
CLLI				Sn	Sn	01 15 56.1	-3.4
	0.3nm,0.1s,SNR=7.9						
CLLI				Lg	Lg	01 16 11.2	
	SNR=7.9						
EQUE	Quentar	3.37	222	Lg	Lg	01 16 11.8	
	2.3nm,0.3s,SNR=7.9						
EADA	Adamuz	3.48	245	Pn	Pn	01 15 19.2	-1.7
	0.2nm,0.1s,SNR=7.9						
EADA				Pg	Pg	01 15 31.3	-2.1
	0.3nm,0.1s,SNR=7.9						
EADA				Sn	Sn	01 15 59.6	-2.5
	0.9nm,0.1s,SNR=7.9						
EADA				Lg	Lg	01 16 13.8	
	3.1nm,0.2s,SNR=7.9						
ELGU	Los Guajares,	3.72	221	Pg	Pg	01 15 35.6	-2.6
	0.6nm,0.4s,SNR=7.9						
ELGU				Lg	Lg	01 16 22.9	
	1.0nm,0.2s,SNR=7.9						
EJON	La Jonquera	3.78	43	Lg	Lg	01 16 24.9	
	SNR=7.9						
EGOR	Sierra Gorda,	3.80	228	Pn	Pn	01 15 24.8	-0.6
	0.1nm,0.1s,SNR=7.9						
EGOR				Pg	Pb	01 15 34.4	+0.4
	0.5nm,0.4s,SNR=7.9						
EGOR				Sn	Sn	01 16 05.9	-4.4
	0.2nm,0.2s,SNR=7.9						
EGOR				Lg	Lg	01 16 26.8	
	2.6nm,0.4s,SNR=7.9						
SJAF	Saint Jean de	3.81	43	Lg	Lg	01 16 25.1	
	0.1nm,0.1s,SNR=7.9						
ECAB	El Cabril	4.11	248	Sn	Sn	01 16 13.6	-4.1
	2.1nm,0.4s,SNR=5.7						
ECAB				Lg	Lg	01 16 34.0	
	0.8nm,0.3s,SNR=8.8						
EBAD	Badajoz	5.08	261	Lg	Lg	01 17 05.8	
	1.5nm,0.2s,SNR=7.9						

NNC ***14*** *01:21:24.7±3.2, 36°.81N×70°.82E, h139^{km}±74^{km}, mb3.1, mpv3.9, Error ellipse: s-maj=32.6km s-min=22.6km az=39.0*

ISC 14 01:21:24.5±3.7**, 36°.8N**±0°.2×**70°.9E**±0°.2**, h150^{km}, n9, σ0s.51**/11**, 1C-5D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.77	21	P	Pn	01 22 48.8	+0.2
	SNR=34						
UCH	Uchtor	6.13	26	P	Pn	01 22 53.3	0.0
	SNR=13						
EKS2	Erkin-Say	6.29	20	P	Pn	01 22 56.0	+0.8
	SNR=13						
KK31	Karatay Array	6.33	358	⇑P	Pn	01 22 55.7	+0.1
	2.3nm,0.5s,baz=196,slow=15,SNR=24						
KK31				⇓S	Sn	01 24 06.1	-0.7
	2.0nm,0.3s,baz=188,slow=23,SNR=11						
AAK	Ala-Archa	6.48	24	P	Pn	01 22 57.9	+0.1
	SNR=9.7						
AAK	Ala-Archa	6.48	24	⇓P	Pn	01 22 57.6	-0.2
	4.8nm,0.3s						
AAK				⇓S	Sn	01 24 11.3	+0.5
	5.8nm,0.9s						
TKM2	Tokmak 2	7.13	29	P	Pn	01 23 05.8	-0.6
	SNR=9.9						
TKM2	Tokmak 2	7.13	29	⇓P	Pn	01 23 06.0	-0.4
	5.9nm,0.6s						
AB31	Akbulak array	14.80	331	⇓P	Pn	01 24 46.3	0.0
	0.6nm,0.6s,baz=143,slow=13,SNR=9.2						

JMA ***14*** *01:24:49.1±0.4, 31°.17N×128°.63E, h1^{km}±4^{km}, M3.8*

IDC ***14*** *01:24:49.7±2.1, 31°.19N×128°.63E, h0^{km}, mb3.4/3, mb1 3.5/4, mb1mx3.3/33, mbtmp3.4/4, ML3.5/1, Error ellipse: s-maj=69.5km s-min=26.0km az=75.0*

ISC 14 01:24:50.6±1.0**, 31°.16N**±0°.05×**128°.72E**±0°.06**, h10^{km}, n12, σ0s.94**/15**, mb3.3**/3**, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	1.00	58	P	Pg	01 25 09.4	-0.4
JSJ				*e*S	Sg	01 25 23.3	+0.5
JKC	Kuchinoerabu	1.45	118	P	Pb	01 25 17.2	-0.4
JKC				*e*S	Sb	01 25 37.0	+0.9
JFU	Fukue jima 2	1.50	1	P	Pb	01 25 17.0	-1.4
JSU	Suzuyama	1.53	76	*e*S	Sg	01 25 40.2	+0.5
JNN	Nakanoshima	1.65	142	P	Pb	01 25 20.2	-0.8
JYAK	Yakushimahirau	1.79	120	P	Pn	01 25 20.3	-1.3
JTN	Tanegashima 3	2.01	104	P	Pn	01 25 24.2	-0.3
JMTN	Minamitane	2.02	111	P	Pn	01 25 24.8	0.0
KSRS	Korea Array	6.32	354	Pn	Pn	01 26 24.6	+0.9
	1.1nm,0.3s,baz=173,slow=14,SNR=10.0						
KSRS				Sn	Sn	01 27 36.4	+0.4
	0.8nm,0.3s,baz=172,slow=24,SNR=4.1						
SONM	Songino Array	23.83	321	P	P	01 30 02.5	-1.4
	0.8nm,0.9s,baz=140,slow=10,SNR=5.1						
MKAR	Makanchi Array	38.73	307	P	P	01 32 15.6	+0.7
	0.3nm,0.5s,baz=115,slow=9.7,SNR=3.6						
ASAR	Alice Springs	54.74	174	P	P	01 34 21.3	+1.0
	0.2nm,0.6s,baz=4.2,slow=14,SNR=2.3						

NEIC ***14*** *01:25:11.2±2.2, 34°.79S±0°.06×74°.16W±0°.07, h10^{km}±1^{km}, mb4.6/20, Mwr4.2/43, ML4.4(GUC), Error ellipse: s-maj=10.2km s-min=9.4km az=256.0*

GUC ***14*** *01:25:11.9±0.7, 34°.92S×74°.07W, h17^{km}±5^{km}, ML4.7*

NEIC ***14*** *01:25:11.1, 34°.82S×74°.19W, h6^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-1.41; $M_{\theta\theta}$-0.14; $M_{\phi\phi}$1.54; $M_{r\theta}$0.91; $M_{\theta\phi}$1.86; $M_{\phi r}$1.24; Fault plane solution: $M_0$2.83000×10^{15} NP1:ϕ_s20.45000°, δ27.63000°, λ-107.22000°. NP2:ϕ_s219.74000°, δ63.71000°, λ-81.19000°. Principal axes: T 3.2468, Plg18.0000°, Azm303.0000°; N -1.3210, Plg8.0000°, Azm36.0000°; P -1.9258, Plg70.0000°, Azm148.0000°;*

IDC ***14*** *01:25:13.0±0.6, 35°.02S×73°.68W, h0^{km}, mb4.2/14, mb1 4.3/17, mb1mx4.3/28, mbtmp4.2/17, ML4.4/3, MS3.7/3, Ms1 3.7/3, ms1mx3.4/26 Error ellipse: s-maj=25.3km s-min=13.6km az=90.0*

VAO ***14*** *01:25:16.2±0.6, 34°.92S×73°.63W, h12^{km}, mb4.5*

ISC 14 01:25:13.1±0.5**, 34°.94S**±0°.04×**73°.83W**±0°.05**, h10^{km}, n132, σ2s.01**/127**, mb4.3**/19**, 6C, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO05	Huala	1.56	93	⇑*i*P	Pg	01 25 42.5	-0.5
GO05				*e*S	Sg	01 26 03.2	-0.1
GO05				IAML		01 26 05.0	
	comp=N,8µm,0.2s						
GO05	Huala	1.56	93	Pn	Pg	01 25 42.6	-0.4
BI05	Punta Hualpn	1.87	164	*e*P	Pn	01 25 44.1	-1.1
BI05				*e*S	Sn	01 26 05.5	-3.4
BI05				IAML		01 26 07.7	
	comp=E,6µm,0.2s						
CCSP	San Pedro de C	1.98	163	*e*P	Pn	01 25 45.9	-0.8
CCSP				*e*S	Sn	01 26 08.6	-3.0
CCSP				IAML		01 26 09.7	
	comp=E,6µm,0.4s						
ML02	Panimavida	2.13	113	*e*P	Pb	01 25 49.9	-1.9
ML02				*e*S	Sb	01 26 18.2	-0.1
ML02				IAML		01 26 20.7	
	comp=E,5µm,0.3s						
ML02	Panimavida	2.13	113		Pb	01 25 51.3	-0.5
VA05	Santo Domingo	2.24	56	*e*P	Pn	01 25 50.7	+0.6
VA05				*e*S	Sn	01 26 18.6	+0.8
VA05				IAML		01 26 20.8	
	comp=N,7µm,0.7s						
VA05	Santo Domingo	2.24	56		Pn	01 25 50.8	+0.6
BO01	Tunca	2.33	77	⇑*i*P	Pb	01 25 52.7	-2.4
BO01				IAML		01 26 25.9	
	comp=N,1µm,0.3s						
BO01	Tunca	2.33	77		Pb	01 25 52.9	-2.2
MT01	Popeta	2.39	64	⇑*i*P	Pn	01 25 52.9	+0.6
MT01				IAML		01 26 22.8	
	comp=E,5µm,0.2s						
MT01	Popeta	2.39	64		Pn	01 25 52.8	+0.5
BO02	Sierra Bellavi	2.51	87	⇑*i*P	Pb	01 25 56.5	-1.8
BO02				*e*S	Sb	01 26 28.1	-1.2
BO02	Sierra Bellavi	2.51	87		Pb	01 25 55.8	-2.5
MT09	Talagante	2.62	64	⇑*i*P	Pn	01 25 56.3	+0.7
MT09				*e*S	Sn	01 26 29.2	+1.7
MT09				IAML		01 26 32.5	
	comp=N,3µm,0.1s						
MT09	Talagante	2.62	64		Pn	01 25 56.3	+0.7
VA01	Torpederas	2.64	44	*e*P	Pn	01 25 55.4	-0.3
VA01	Torpederas	2.64	44	Pn	Pn	01 25 55.3	-0.3
MT02	Curacav	2.79	54	*e*P	Pn	01 25 58.1	+0.3
MT02				*e*S	Sn	01 26 31.8	+0.2
MT02				IAML		01 26 34.6	
	comp=N,968nm,0.4s						
MT02	Curacav	2.79	54		Pn	01 25 58.3	+0.5
BO04	La Punta	2.83	71	⇑*i*P	Pb	01 26 00.2	-3.4
BO04				*e*S	Sb	01 26 35.3	-3.0
BO04				IAML		01 26 36.7	
	comp=N,3µm,0.4s						
MT05	Renca	2.99	60	*e*P	Pn	01 26 02.1	+1.4
MT05	Renca	2.99	60		Pn	01 26 01.7	+1.1
ROCH	El Roble	3.06	51	*e*P	Pn	01 26 02.0	+0.4
PEL	Peldehue	3.17	56	*e*P	Pn	01 26 04.5	+1.5
PEL				IAML		01 26 45.5	
	comp=E,2µm,0.6s						
PEL	Peldehue	3.17	56	Pn	Pn	01 26 03.8	+0.7
VA06	Catapilco	3.18	42	*i* P	Pn	01 26 02.6	-0.5
VA06				IAML		01 26 42.9	
	comp=E,2µm,0.4s						
LMEL	Las Melosas	3.19	71	*e*P	Pn	01 26 05.5	+2.1
LMEL				IAML		01 26 48.2	
	comp=N,2µm,0.1s						
VA03	San Esteban	3.49	52	*e*P	Pn	01 26 08.6	+1.2
VA03	San Esteban	3.49	52		Pn	01 26 08.3	+0.9
LC01	Cunco	4.25	159	*e*P	Pn	01 26 17.6	-0.1
LC01	Cunco	4.25	159	Pn	Pn	01 26 17.9	+0.1
VA04	Juan Fernndez	4.34	286	*e*P	Pn	01 26 12.1	-7.0
VA04	Juan Fernndez	4.34	286	Pn	Pn	01 26 11.6	-7.4
H03S1	Juan Fernandez	4.34	283	T	T	01 29 52.8	
	baz=99,slow=71,SNR=29						
H03S3	Juan Fernandez	4.35	283	T	T	01 29 52.9	
	baz=99,slow=71,SNR=18						
H03S2	Juan Fernandez	4.36	283	T	T	01 29 51.1	
	baz=99,slow=71,SNR=24						
CO06	Fray Jorge	4.64	24	*i* P	Pn	01 26 20.8	-2.5
CO06	Fray Jorge	4.64	24		Pn	01 26 20.3	-3.0
LR03	Panguipulli	4.83	166	*e*P	Pn	01 26 25.6	-0.2
LR03	Panguipulli	4.83	166		Pn	01 26 25.6	-0.2
LR02	Universidad Au	4.88	175	*e*P	Pn	01 26 24.9	-1.5
GO04	Tololo Observa	5.40	29	*e*P	Pn	01 26 32.3	-1.6
CO05	La Serena	5.47	24		Pn	01 26 31.6	-2.9
LL04	Puerto Octay	6.06	170	Pn	Pn	01 26 41.2	-1.5
PLCA	Paso Flores	6.33	157	Pn	Pn	01 26 48.3	+1.7
	comp=N,5.4nm,0.3s,baz=323,slow=11,SNR=198						
PLCA				Sn	Sn	01 27 57.0	-2.0
	comp=N,2.0nm,0.3s,baz=299,slow=11,SNR=3.8						
PLCA				LR	LR	01 29 31.6	
	comp=N,552nm,18.9s,baz=341,slow=42						
PLCA	Paso Flores	6.33	157	*e*P	Pn	01 26 48.6	+2.0
PLCA	Paso Flores	6.33	157	Pn	Pn	01 26 47.8	+1.3
LL05	Los Muermos	6.46	178		Pn	01 26 47.0	-1.2
LCO	Las Campanas	6.48	25	Pn	Pn	01 26 45.9	-2.9
GO03	Copiap	7.95	24	Pn	Pn	01 27 05.3	-3.4
AC02	Maricunga	9.03	28	Pn	Pn	01 27 21.6	-2.4
LVC	Limon Verde	13.02	21	Pn	Pn	01 28 20.4	+1.9
	comp=N,0.4nm,0.3s,baz=235,slow=12,SNR=2.9						
LVC				LR	LR	01 32 31.8	
	comp=N,250nm,21.7s,baz=340,slow=34						
ITQB	Itaqui	15.46	75	*e*P	P	01 28 52.6	-3.1
PB11	IPOC Station P	15.57	15	Pn	Pn	01 28 50.7	-2.1
PB11				IAmb	IAmb	01 29 02.8	
	comp=Z,40nm,1.1s						
CPUP	Villa Florida	16.58	63	Pn	Pn	01 29 04.9	-0.7
	comp=Z,0.2nm,0.3s,baz=246,slow=10.0,SNR=3.1						
PB16	IPOC Station P	16.98	14	Pn	Pn	01 29 05.9	-5.4
PB16				IAmb	IAmb	01 29 20.2	
	comp=Z,56nm,1.5s						
PLTB	Pedras Altas	17.19	85	*e*P	P	01 29 13.6	-1.4
CPSB	Cacapava Do Su	17.75	81	*e*P	P	01 29 20.6	-0.5
LPAZ	La Paz	19.27	17	P	P	01 29 34.4	-4.1
CNLB	Canela	20.23	80	*e*P	Pn	01 29 49.1	-1.3
USHA	Ushuaia	20.24	171	P	Pn	01 29 50.5	+0.4
	comp=Z,22nm,1.0s,baz=340,slow=12,SNR=4.0						
PTGB	Pitanga	21.41	67	*e*P	P	01 30 02.1	+0.8
AQDB	Aquidauana	21.52	53	*e*P	P	01 30 02.6	+0.3
AQDB	Aquidauana	21.52	53	P	P	01 30 01.0	-1.3
AQDB				IAmb	IAmb	01 30 13.3	
	comp=Z,12nm,0.8s						
TER01	Tubaro-SC	21.93	80	*e*P	P	01 30 07.4	+0.7
SIV	San Ignacio	22.07	34	P	P	01 30 08.8	+0.5
	comp=Z,9.5nm,1.0s,baz=222,slow=7.7,SNR=16						
NNA	Nana	23.02	352	P	P	01 30 15.3	-3.1
TIJ01	Guaruva-PR	23.46	73	*e*P	P	01 30 23.7	+0.8
PTLB	Pontes e Lacer	23.47	38	*e*P	P	01 30 24.5	+1.6
PTLB	Pontes e Lacer	23.47	38	P	P	01 30 20.6	-2.3
PTLB				IAmb	IAmb	01 30 28.6	
	comp=Z,23nm,1.5s						
PCMB	Pacaembu	23.84	62	*e*P	P	01 30 26.9	+0.4
FRTB	Fartura	24.08	68	*e*P	P	01 30 30.0	+1.2
PP1B	Ponte de Pedra	24.16	49	*e*P	P	01 30 31.2	+1.8
SALV	Santo Antonio	24.98	45	*e*P	P	01 30 38.5	+1.5
VILB	Vilhena	25.13	33	*e*P	P	01 30 40.5	+2.1
PET01	Itanhaem-SP	25.34	72	*e*P	P	01 30 42.5	+2.3
ETMB	Extrema	25.96	17	*e*P	P	01 30 47.0	+1.2
ETMB	Extrema	25.96	17	P	P	01 30 42.0	-3.8
ETMB				IAmb	IAmb	01 30 52.5	
	comp=Z,17nm,1.0s						
RCLB	Rio Claro- Sao	26.14	68	*e*P	P	01 30 49.1	+1.5
CZSB	Cruzeiro do Su	27.10	2	*e*P	P	01 30 58.6	+2.4
CLDB	Colider	29.05	39	*e*P	P	01 31 14.9	+1.3
BDFB	Brasilia	30.09	57	P	P	01 31 25.7	+2.8
	comp=Z,1.7nm,0.6s,baz=123,slow=4.9,SNR=3.6						
BDFB	Brasilia	30.09	57	IAmb	IAmb	01 31 49.1	
	comp=Z,11nm,1.4s						

PMSA	**Palmer Station**	**30.45**	**172**	LR	LR	01 42 13.8	
	comp=Z,210nm,18.1s,baz=67,slow=34						
SNDB	**Serra Nova Dou**	**30.68**	**47**	*e*P	**P**	**01 31 28.2**	**+0.1**
TBTG	**Tabatinga, AM**	**30.82**	**8**	*e*P	**P**	**01 31 32.5**	**+3.3**
DIAM	**Diamantina, MG**	**31.48**	**66**	*e*P	**P**	**01 31 37.8**	**+2.5**
NPGB	**Novo Progresso**	**32.56**	**36**	*e*P	**P**	**01 31 47.5**	**+2.9**
MACA	**Manacapuru-AM**	**33.90**	**24**	*e*P	**P**	**01 31 59.7**	**+3.5**
NAN01	**Guarapari, ES**	**34.45**	**69**	*e*P	**P**	**01 32 04.7**	**+3.7**
ITTB	**Itaituba**	**34.74**	**33**	*e*P	**P**	**01 32 06.5**	**+3.0**
SMTB	**Santa Maria do**	**35.37**	**49**	*e*P	**P**	**01 32 10.1**	**+1.1**
PTGA	**Pitinga**	**36.41**	**24**	P	**P**	**01 32 20.3**	**+2.4**
	comp=Z,3.1nm,0.4s,baz=318,slow=22,SNR=7.2						
NBPN	**Ponto Novo - B**	**38.87**	**60**	*e*P	**P**	**01 32 38.7**	**-0.1**
BOAV	**Boa Vista**	**39.19**	**21**	*e*P	**P**	**01 32 41.7**	**+0.3**
NBMA	**Muriti-CE**	**42.31**	**58**	*e*P	**P**	**01 33 08.9**	**+1.7**
SDV	**Santo Domingo**	**43.70**	**5**	P	**P**	**01 33 20.5**	**+2.0**
	comp=Z,5.7nm,1.0s,baz=358,slow=7.7,SNR=4.3						
SDV	**Santo Domingo**	**43.70**	**5**	*e*P	**P**	**01 33 19.8**	**+1.3**
VNA3	**Neumayer Olymp**	**49.05**	**157**	P	**P**	**01 34 00.7**	**+0.8**
VNA3	**Neumayer Olymp**	**49.05**	**157**	P	P	01 33 52.6	-7.3
VNA1	**Neumayer--Stat**	**49.40**	**156**	P	**P**	**01 34 03.5**	**+1.1**
VNA1	**Neumayer--Stat**	**49.40**	**156**	P	P	01 33 48.1	-14
VNA2	**Neumayer--Watz**	**49.73**	**157**	P	P	01 33 52.9	-12
	baz=326,slow=14						
VNA2	**Neumayer--Watz**	**49.73**	**157**	P	**P**	**01 34 05.6**	**+0.6**
SNAA	**Sanae**	**51.28**	**157**	P	**P**	**01 34 17.4**	**+0.6**
SNAA	**Sanae**	**51.28**	**157**	P	**P**	**01 34 12.3**	**-4.5**
SNAA	**Sanae**	**51.28**	**157**	P	**P**	**01 34 17.3**	**+0.5**
	comp=Z,10nm,0.8s,baz=265,slow=9.0,SNR=31						
SNAA	**Sanae**	**51.28**	**157**	P	**P**	**01 34 16.5**	**-0.3**
QSPA	**South Pole Qui**	**55.29**	**180**	P	**P**	**01 34 47.1**	**+0.6**
	baz=154,slow=16						
QSPA	**South Pole Qui**	**55.29**	**180**	IAmb	IAmb	01 34 47.9	
	comp=Z,19nm,1.5s						
VNDA	**Vanda**	**62.88**	**192**	P	**P**	**01 35 39.7**	**+1.0**
	comp=Z,0.8nm,0.9s,baz=79,slow=5.7,SNR=3.9						
TXAR	**Lajitas Array**	**69.86**	**332**	P	**P**	**01 36 26.9**	**+2.8**
	comp=Z,1.5nm,0.6s,baz=155,slow=8.2,SNR=17						
TX31	**Lajitas Ar. Si**	**69.86**	**332**	P	**P**	**01 36 20.0**	**-4.1**
TX31				IAmb	IAmb	01 36 27.2	
	comp=Z,6.0nm,0.8s						
TX32	**Lajitas Array**	**69.86**	**332**	P	**P**	**01 36 20.0**	**-4.1**
WVT	**Waverly**	**71.91**	**348**	P	**P**	**01 36 32.7**	**-3.6**
LCAR	**Lake Charles**	**72.47**	**345**	P	**P**	**01 36 37.0**	**-2.6**
LCAR				IAmb	IAmb	01 36 42.7	
	comp=Z,5.3nm,0.9s						
MAW	**Mawson**	**72.69**	**164**	P	**P**	**01 36 41.3**	**+0.7**
	comp=Z,3.4nm,0.9s,baz=220,slow=15,SNR=4.6						
MAW	**Mawson**	**72.69**	**164**	IAmb	IAmb	01 36 41.7	
	comp=Z,1.4nm,1.1s						
CCM	**Cathedral Cave**	**74.41**	**346**	P	**P**	**01 36 47.9**	**-3.0**
CCM				IAmb	IAmb	01 36 54.2	
	comp=Z,8.4nm,1.0s						
ANMO	**Albuquerque**	**75.92**	**333**	P	**P**	**01 36 56.9**	**-3.2**
DBIC	**Dimbokro**	**76.88**	**72**	P	**P**	**01 37 07.1**	**+1.4**
	comp=Z,1.7nm,0.8s,baz=270,slow=4.0,SNR=1.4						
BOSA	**Boshof**	**80.93**	**118**	P	**P**	**01 37 28.9**	**+0.8**
	comp=Z,4.6nm,0.9s,baz=220,slow=3.7,SNR=7.2						
NVAR	**Mina Array Bea**	**83.83**	**326**	P	**P**	**01 37 46.4**	**+3.5**
	comp=Z,0.6nm,0.7s,baz=147,slow=5.7,SNR=5.7						
PDAR	**Pinedale Array**	**83.95**	**334**	P	**P**	**01 37 45.0**	**+1.6**
	comp=Z,1.1nm,1.0s,baz=151,slow=3.4,SNR=5.0						
TORD	**Torodi Ar. Bea**	**85.92**	**71**	P	**P**	**01 37 54.3**	**+0.7**
	comp=Z,1.3nm,0.9s,baz=258,slow=7.0,SNR=5.7						
TORD	**Torodi Ar. Bea**	**85.92**	**71**	IAmb	IAmb	01 37 59.7	
	comp=Z,2.5nm,0.8s						
BRTR	**Keskin Array B**	**123.58**	**62**	PKP	**PKPdf**	**01 44 09.7**	**-1.1**
	comp=Z,0.6nm,0.7s,baz=169,slow=4.0,SNR=3.7						
ZALV	**Zalesovo Beam**	**155.81**	**32**	PKPab	**PKPab**	**01 45 33.8**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=344,slow=4.7,SNR=1.7						
MKAR	**Makanchi Array**	**158.50**	**49**	PKPab	**PKPab**	**01 45 45.6**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=305,slow=4.3,SNR=3.6						
SONM	**Songino Array**	**167.12**	**359**	PKPab	**PKPab**	**01 46 25.2**	**+2.2**
	comp=Z,0.2nm,0.5s,baz=349,slow=4.4,SNR=4.0						
LZH	**Lanzhou**	**177.79**	**58**	*e*PKP	**PKPdf**	**01 45 22.8**	**-1.2**

TAP 14 01:49:04.5, 24°.33N×121°.26E, h12^{km}, ML1.7, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUSS	**Fushou**	**0.08**	**190**	P	Pg	01 49 08.0	+0.5
	baz=190						
FUSS				S	Sg	01 49 09.5	0.0
	baz=190						
TWT	**Tachien**	**0.11**	**226**	*i* P	Pb	01 49 08.3	-0.4
	baz=228						
TWT				S	Sg	01 49 10.8	+0.9
	baz=228						
TDCB	**Techi**	**0.12**	**231**	P	Pg	01 49 08.2	+0.5
	baz=230						
NNSB	**Datong**	**0.15**	**48**	P	Pg	01 49 08.5	+0.3
	baz=48						
NNSB				S	Sg	01 49 12.1	+1.2
	baz=48						
NNS	**Nan Shan**	**0.15**	**43**	*i* P	Pg	01 49 08.6	+0.4
	baz=45						
NNS				S	Sg	01 49 12.0	+1.1
	baz=45						
WHF	**Hehuan Shan**	**0.18**	**179**	P	Pg	01 49 09.4	+0.5
	baz=176						
WHF				S	Sg	01 49 13.1	+1.1
	baz=176						
ETLH	**Xiulin Townshi**	**0.24**	**121**	P	Pb	01 49 10.8	+0.1
	baz=120						
ETLH				S	Sg	01 49 14.4	+1.4
	baz=120						
CHGB	**Renai**	**0.28**	**196**	P	Pb	01 49 11.2	-0.4
	baz=196						
CHGB				S	Sb	01 49 15.7	-0.6
	baz=196						
WHP	**Taichung City**	**0.29**	**260**	*i* P	Pb	01 49 11.8	0.0
	baz=260						
WHP				S	Sb	01 49 15.8	-0.8
	baz=260						
NACB	**Ninganchiao**	**0.34**	**117**	P	Pb	01 49 12.7	+0.2
	baz=116						
NACB				S	Sb	01 49 17.6	-0.3
	baz=116						
NSK	**Sanguang**	**0.36**	**14**	P	Pb	01 49 12.6	-0.3
	baz=15						
NSK				*e*S	Sg	01 49 16.4	-0.2
	baz=15						
NSTT	**Nanjuang**	**0.38**	**322**	P	Pb	01 49 13.0	-0.3
	baz=322						
NSTT				S	Sb	01 49 19.0	-0.1
	baz=322						
LIOB	**Emei**	**0.39**	**325**	P	Pb	01 49 13.1	-0.2
	baz=325						
LIOB				S	Sb	01 49 19.4	+0.1
	baz=325						
TWD	**Chiawan**	**0.39**	**129**	P	Pb	01 49 13.7	+0.3
	baz=127						
TWD				S	Sb	01 49 19.7	+0.2
	baz=127						
ENTT	**Nioudou**	**0.42**	**42**	P	Pb	01 49 13.5	-0.4
	baz=42						
WCS	**Beigang Elemen**	**0.42**	**230**	*i* P	Pb	01 49 13.7	-0.2
	baz=229						
WCS				*i* S	Sb	01 49 19.3	-0.8
	baz=229						
ENA	**Nanau**	**0.45**	**77**	*i* P	Pb	01 49 14.5	+0.1
	baz=77						
ENA				*i* S	Sb	01 49 21.2	+0.2
	baz=77						
NWLT	**Wulai**	**0.50**	**26**	*i* P	Pb	01 49 15.0	-0.3
	baz=26						
NWLT				S	Sb	01 49 22.7	+0.1
	baz=26						
SSLB	**Suanglung**	**0.61**	**208**	P	Pb	01 49 17.0	-0.1
	baz=207						

JMA 14 01:49:53.0±0.3, 24°.83N×123°.20E, h136^{km}±3^{km}, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.41**	**205**	P	Pn	01 50 12.5	+0.2
IRIF	**Iriomote-Funau**	**0.69**	**136**	P	Pn	01 50 14.2	+0.3
IRIF				S	Sn	01 50 29.7	-0.1
JKRS	**Kuro-shima**	**0.94**	**129**	P	Pn	01 50 16.7	+0.8
JKRS				S	Sn	01 50 34.1	+0.8
JIJ	**Ishigaki jima**	**0.98**	**118**	S	Sn	01 50 33.3	-0.5
JISG	**Ishigakijimahi**	**1.04**	**103**	S	Sn	01 50 34.8	0.0
JTJ	**Tarama**	**1.38**	**98**	P	Pn	01 50 20.4	+0.2
JTJ				S	Sn	01 50 40.6	-0.3

KRSC 14 01:57:31.2±1.1, 55°.55N×161°.21E, h156^{km}±10^{km}, ML4.0, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BZGR	**Bezymyannyi-Gr**	**0.48**	**324**	*e*P	Pn	01 57 54.8	+1.5
BZGR				*e*S	Sn	01 58 11.9	+1.7
ZLN	**Zelenaya**	**0.52**	**334**	*e*P	Pn	01 57 55.0	+1.6
BZWR	**Bezymyannyi-We**	**0.57**	**316**	*e*P	Pn	01 57 54.9	+1.1
BZWR				*e*S	Sn	01 58 12.2	+1.1
TUMD	**Tumrok D**	**0.58**	**233**	*e*P	Pn	01 57 54.8	+1.1
TUMD				*e*S	Sn	01 58 12.1	+1.3
KMNR	**Kamenistaya**	**0.58**	**291**	*e*P	Pn	01 57 55.3	+1.5
KMNR				*e*S	Sn	01 58 12.8	+1.8
CIRR	**Tsirk**	**0.62**	**336**	*e*S	Sn	01 58 12.0	+0.5
KIRR	**Kirishev**	**0.63**	**310**	*e*P	Pn	01 57 55.0	+0.9
KIRR				*e*S	Sn	01 58 12.2	+0.6
TUMR	**Tumrok**	**0.66**	**246**	*e*P	Pn	01 57 56.1	+1.8
TUMR				*e*S	Sn	01 58 13.7	+1.9
KLY	**Klyuchi**	**0.82**	**338**	*e*P	Pn	01 57 55.5	+0.4
KLY				*e*S	Sn	01 58 13.5	0.0
BDR	**Baidarnaya**	**1.02**	**0**	*e*P	Pn	01 57 57.7	+1.0
BDR				*e*S	Sn	01 58 16.7	+0.3
SMKR	**Semkarok**	**1.04**	**8**	*e*P	Pn	01 57 57.9	+1.0
SMKR				*e*S	Sn	01 58 17.5	+0.8
MKZ	**Mys Kozlova**	**1.04**	**163**	*e*P	Pn	01 57 58.6	+1.7
MKZ				*e*S	Sn	01 58 18.5	+2.0
KBG	**Krutoberegovo**	**1.10**	**50**	*e*P	Pn	01 57 58.5	+1.2
KBG				*e*S	Sn	01 58 18.7	+1.3
SRKR	**Sorokina**	**1.10**	**359**	*e*P	Pn	01 57 58.2	+0.7
SRKR				*e*S	Sn	01 58 17.7	0.0
KBTR	**Krutoberegovo**	**1.12**	**54**	*e*P	Pn	01 57 58.8	+1.3
KBTR				*e*S	Sn	01 58 18.5	+0.8
ESO	**Esso**	**1.47**	**286**	*e*P	Pn	01 58 04.2	+3.4
SPN	**Mys Shipunski**	**2.56**	**196**	*e*P	Pn	01 58 13.8	+0.5
SPN				*e*S	Sn	01 58 45.0	-0.7
NLC	**Nalytchevo**	**2.62**	**205**	*e*P	Pn	01 58 15.5	+1.4
NLC				*e*S	Sn	01 58 47.7	+0.5
SDLR	**Sedlovina**	**2.65**	**212**	*e*P	Pn	01 58 16.4	+1.8
SDLR				*e*S	Sn	01 58 49.0	+0.9
GNL	**Ganaly**	**2.66**	**227**	*e*P	Pn	01 58 16.4	+1.7
KRER	**Koryakskii**	**2.67**	**213**	*e*P	Pn	01 58 17.2	+2.3
SMAR	**Somma**	**2.69**	**212**	*e*P	Pn	01 58 17.2	+2.0
AVH	**Avacha**	**2.71**	**213**	*e*P	Pn	01 58 17.6	+2.4
KOK	**Koryaka**	**2.72**	**215**	*e*P	Pn	01 58 17.5	+2.1
BKI	**Bering**	**2.74**	**95**	*e*P	Pn	01 58 18.2	+2.7
BKI				*e*S	Sn	01 58 51.7	+1.9
DALK	**Dalny**	**2.91**	**211**	*e*P	Pn	01 58 19.3	+1.7
DALK				*e*S	Sn	01 58 54.7	+1.2
PET	**Petropavlovsk**	**2.94**	**212**	*e*P	Pn	01 58 19.8	+1.8
PET				*e*S	Sn	01 58 55.1	+0.8
RUS	**Russkaya**	**3.51**	**208**	*e*P	Pn	01 58 26.0	+0.8
RUS				*e*S	Sn	01 59 06.8	-0.3
ASAK	**Asacha**	**3.73**	**213**	*e*P	Pn	01 58 29.5	+1.4
KDTR	**Khodutka, Kamc**	**4.19**	**208**	*e*P	Pn	01 58 34.3	+0.3
KDTR				*e*S	Sn	01 59 20.8	-2.0

RSNC 14 01:59:17.0±1.6, 5°.06N×74°.68W, h12^{km}±3^{km}, ML3.6, Mw3.8, 2C-10D, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**0.42**	**121**	*e*Pg	Pg	01 59 24.8	-0.8
ROSC				⇓*e*P	Pb	01 59 25.5	-1.1
ROSC				*e*S	Sg	01 59 32.1	+0.8
ROSC				*i*		01 59 34.4	
	comp=Z,4μm,0.3s						
NORC	**Norcasia**	**0.53**	**340**	⇓*e*P	Pg	01 59 26.1	-1.3
NORC				*e*S	Sg	01 59 34.3	-0.3
NORC				*i*		01 59 35.7	
	comp=Z,2μm,0.1s						
GUY2C	**Guyana, Caldas**	**0.70**	**283**	⇓*i*P	Pg	01 59 30.3	-0.4
GUY2C				⇓*e*Pg	Pb	01 59 31.1	-0.3
GUY2C				*e*S	Sb	01 59 40.9	-0.2
GUY2C				*i*		01 59 41.7	
	comp=Z,2μm,0.2s						
SPBC	**San Pablo de B**	**0.84**	**46**	*e*P	Pg	01 59 30.9	-2.5
SPBC				*e*S	Sg	01 59 43.0	-1.4
SPBC				*i*		01 59 50.3	
	comp=Z,943nm,0.6s						
ANIL	**Santa Ana**	**0.92**	**232**	*e*P	Pg	01 59 33.2	-1.6
ANIL				*e*S	Sg	01 59 45.0	-1.7
CHIC	**Chingaza**	**1.04**	**114**	⇓*e*P	Pg	01 59 35.6	-1.6
CHIC				*e*S	Sb	01 59 51.0	+0.1
CHIC				*i*		01 59 59.3	
	comp=Z,539nm,0.4s						
ORTC	**Ortega, Tolima**	**1.28**	**206**	*e*P	Pn	01 59 38.5	-2.1
ORTC				*e*S	Sb	01 59 56.4	-1.0
ORTC				*i*		01 59 59.3	
	comp=Z,3μm,0.4s						
PRAC	**Prado**	**1.35**	**189**	*e*P	Pn	01 59 39.7	-2.0
PRAC				*e*S	Sb	01 59 58.5	-1.1
PRAC				*i*		02 00 00.5	
	comp=Z,2μm,0.6s						
VILC	**Villavicencio,**	**1.36**	**134**	⇓*i*P	Pn	01 59 41.3	-0.7
HELC	**Santa Helena**	**1.40**	**323**	⇑*e*P	Pn	01 59 41.3	-1.4
HELC				*e*S	Sn	01 59 59.3	-2.0
HELC				*i*		02 00 03.9	
	comp=Z,1μm,0.6s						
CBOC	**Ciudad Bolivar**	**1.54**	**301**	*e*P	Pn	01 59 44.6	+0.1
CBOC				*e*S	Sn	02 00 04.2	-0.4
CBOC				*i*		02 00 08.5	
	comp=Z,367nm,0.5s						
PLMC	**San Jos del P**	**1.60**	**264**	*e*P	Pn	01 59 45.7	+0.5
PLMC				*e*S	Sb	02 00 07.4	+0.6
PLMC				*i*		02 00 13.9	
	comp=Z,426nm,0.4s						
RUSC	**La Rusia**	**1.79**	**63**	⇓*e*P	Pn	01 59 48.2	0.0
RUSC				*e*S	Sn	02 00 11.1	0.0
RUSC				*i*		02 00 18.3	
	comp=Z,332nm,0.5s						
YOTC	**Yotoco, Valle**	**1.97**	**237**	*e*P	Pn	01 59 50.2	-0.1
YOTC				*e*S	Sb	02 00 16.4	-1.1
YOTC				*i*		02 00 20.8	
	comp=Z,206nm,0.5s						
BARC	**Barichara**	**2.13**	**44**	*e*S	Sb	02 00 21.1	-1.1
BARC				*i*		02 00 28.7	
	comp=Z,604nm,0.4s						
BRRC	**Barranca, Sant**	**2.25**	**25**	*e*P	Pn	01 59 52.3	-1.8
BRRC				*e*S	Sn	02 00 21.5	-0.2
BRRC				*i*		02 00 39.6	
	comp=Z,194nm,0.2s						
ZARC	**Zaragoza, Cauc**	**2.42**	**356**	⇑*e*P	Pn	01 59 56.4	0.0
ZARC				*e*S	Sn	02 00 25.6	-0.4
ZARC				*i*		02 00 34.6	
	comp=Z,491nm,0.3s						
DBBC	**Dabeiba**	**2.47**	**322**	⇓*e*P	Pn	01 59 59.0	+1.9
DBBC				*e*S	Sn	02 00 24.8	-2.4
BETC	**Betania**	**2.48**	**198**	*e*P	Pn	01 59 56.0	-1.3
BETC				*e*S	Sn	02 00 24.6	-2.9
BETC				*i*		02 00 33.9	
	comp=Z,282nm,0.3s						
MARP	**Paez Belalcaza**	**2.54**	**210**	*e*P	Pn	01 59 57.8	-0.5
MARP				*e*S	Sn	02 00 28.4	-1.0
MARP				*i*		02 00 42.0	
	comp=Z,112nm,0.4s						
PIZC	**Pizarro, Choco**	**2.67**	**268**	*e*P	Pb	02 00 04.9	+0.2
PIZC				*e*S	Sg	02 00 44.0	+1.1
PIZC				*i*		02 00 51.5	
	comp=Z,74nm,0.6s						
PTGC	**Puerto Gaitan,**	**2.68**	**109**	*e*P	Pn	01 59 59.1	-0.9
PTGC				*e*S	Sn	02 00 31.8	-0.5
PTGC				*i*		02 00 52.0	
	comp=Z,182nm,0.3s						
UREC	**San Jos de Ur**	**2.80**	**343**	*e*P	Pn	02 00 02.2	+0.5
UREC				*e*S	Sn	02 00 37.3	+1.9
UREC				*i*		02 00 47.5	
	comp=Z,167nm,0.5s						
SOLC	**Bahia Solano**	**2.95**	**293**	*e*P	Pn	02 00 06.2	+2.6
SOLC				*e*S	Sb	02 00 43.5	-2.0
GARC	**Garzon, Huila**	**2.97**	**196**	*e*P	Pn	02 00 02.5	-1.6
GARC				*e*S	Sn	02 00 38.8	-1.0
PAMC	**Pamplona, Colo**	**3.00**	**41**	*e*P	Pn	02 00 04.3	-0.5
PAMC				*e*S	Sn	02 00 43.5	+2.5
PAMC				*i*		02 00 51.6	
	comp=Z,323nm,0.4s						
MACC	**Macarena, Meta**	**3.02**	**164**	*e*P	Pn	02 00 03.1	-1.4
MACC				*e*S	Sb	02 00 45.8	-1.6
MACC				*e*S	Sn	02 00 46.5	+5.8
MACC				*i*		02 00 49.9	
	comp=Z,467nm,0.5s						
TAMC	**Tame, Arauca**	**3.18**	**64**	*e*P	Pn	02 00 07.0	0.0
TAMC				*e*S	Sn	02 00 41.3	-3.5
TAMC				*i*		02 01 00.3	
	comp=Z,82nm,0.5s						
PCON	**Cinco Dias**	**3.21**	**212**	⇓*e*P	Pn	02 00 08.7	+1.0
PCON				*e*S	Sn	02 00 47.6	+1.4
PCON				*i*		02 01 09.7	
	comp=Z,142nm,0.5s						
GUVC	**San Jose del G**	**3.23**	**141**	*e*P	Pb	02 00 16.4	+2.0
GUVC				*e*S	Sn	02 00 47.3	+1.3
GUVC				*i*		02 00 58.0	
	comp=Z,389nm,0.3s						
OCAC	**Ocana**	**3.43**	**23**	*e*P	Pn	02 00 09.1	-1.4
OCAC				*e*S	Sn	02 00 48.5	-2.6
OCAC				*i*		02 01 17.1	
	comp=Z,492nm,0.4s						
SOTA	**Rioblanco**	**3.48**	**214**	⇓*e*P	Pn	02 00 13.2	+1.8
SOTA				*i*		02 00 25.2	
	comp=Z,74nm,0.6s						
SMLC	**San Martn de**	**3.76**	**9**	*e*P	Pn	02 00 14.3	-0.6
SMLC				*e*S	Sn	02 01 02.0	+2.9
SMLC				*i*		02 01 21.9	
	comp=Z,131nm,0.4s						
MOTC	**Monteria, Cord**	**3.82**	**345**	*e*P	Pn	02 00 15.7	+0.1
MOTC				*e*S	Sn	02 01 02.0	+1.6
MOTC				*i*		02 01 18.7	
	comp=Z,67nm,0.5s						
ARGC	**Ariguani, Magd**	**4.79**	**5**	*i*		02 01 50.1	
	comp=Z,31nm,0.4s						
SJCC	**San Jacinto, C**	**4.83**	**354**	*e*P	Pn	02 00 28.6	-1.0
SJCC				*e*S	Sn	02 01 25.6	+0.1
SJCC				*i*		02 01 50.2	
	comp=Z,39nm,0.8s						
PTLC	**Puerto Leguiza**	**4.86**	**181**	*e*P	Pn	02 00 34.2	+4.2
PTLC				*e*S	Sg	02 01 50.5	-2.7
PTLC				*i*		02 02 04.3	
	comp=Z,90nm,0.4s						
ELOV	**Elorza**	**5.52**	**69**	*e*P	Pn	02 00 37.9	-1.1
ELOV				*e*S	Sn	02 01 39.3	-3.1
SDV	**Santo Domingo**	**5.53**	**46**	*e*P	Pn	02 00 38.8	-0.5
SDV				*i*		02 02 07.5	
	comp=Z,29nm,0.5s						

IDC ***14*** *02:07:18.3±5.7, 20°.39S×169°.39E, h128^{km}±40^{km}, mb3.4/3, mb1 3.6/5, mb1mx3.4/40, mbtmp3.9/5, Error ellipse: s-maj=53.9km s-min=27.0km az=32.0*

NOU ***14*** *02:07:19.0, 20°.43S×169°.50E, h63^{km}, MLv4.4/8, Vanuatu Islands*

ISC 14 02:07:14.7±1.4, 20°.3S±0°.2×169°.6E±0°.1, h100^{km}, n23, σ2^{s}18/23, mb3.7/3, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**1.86**	**232**	P	**Pn**	**02 07 46.9**	**+1.5**
YATNC	**Mamie plateau,**	**3.05**	**235**	P	**Pn**	**02 08 02.9**	**+1.7**
YATNC	**Mamie plateau,**	**3.05**	**235**	P	**Pn**	**02 08 02.9**	**+1.7**
OUENC	**Ouen Island, N**	**3.30**	**230**	P	**Pn**	**02 08 06.7**	**+2.2**
OUENC	**Ouen Island, N**	**3.30**	**230**	P	**Pn**	**02 08 08.2**	**+3.7**
DZM	**Mont Dzumac**	**3.41**	**239**	P	**Pn**	**02 08 08.0**	**+1.9**
	12nm,0.3s,baz=88,slow=8.6,SNR=235						
DZM				S	**Sn**	**02 08 46.3**	**+0.5**
	52nm,0.3s,baz=132,slow=21,SNR=31						
DZM	**Mont Dzumac**	**3.41**	**239**	*e*Pn	**Pn**	**02 08 07.8**	**+1.8**
	36nm,0.2s						
DZM				*e*Sn	**Sn**	**02 08 41.4**	**-4.3**
	155nm,0.3s						
DZM	**Mont Dzumac**	**3.41**	**239**	P	**Pn**	**02 08 07.9**	**+1.9**
DZM	**Mont Dzumac**	**3.41**	**239**	P	**Pn**	**02 08 08.1**	**+2.1**
ONTNC	**Ouen Toro**	**3.53**	**236**	P	**Pn**	**02 08 09.4**	**+1.9**
ONTNC	**Ouen Toro**	**3.53**	**236**	P	**Pn**	**02 08 09.2**	**+1.7**
NOUC	**Port Laguerre**	**3.54**	**240**	P	**Pn**	**02 08 10.0**	**+2.3**
NOUC	**Port Laguerre**	**3.54**	**240**	P	**Pn**	**02 08 09.9**	**+2.2**
KOUNC	**Koumac, New Ca**	**4.98**	**267**	P	**Pn**	**02 08 30.1**	**+2.9**
URZ	**Urewera**	**19.02**	**162**	P	**P**	**02 11 30.4**	**+1.8**
	0.6nm,0.3s,baz=127,slow=20,SNR=2.3						
WRA	**Warramunga Arr**	**33.06**	**264**	P	**P**	**02 13 39.9**	**-1.2**
	0.4nm,0.5s,baz=95,slow=8.8,SNR=4.6						
ASAR	**Alice Springs**	**33.20**	**258**	P	**P**	**02 13 41.8**	**-0.5**
	1.7nm,0.7s,baz=80,slow=9.0,SNR=20						
VNDA	**Vanda**	**57.36**	**182**	P	**P**	**02 16 51.7**	**-0.3**
	0.4nm,0.5s,baz=11,slow=4.9,SNR=2.2						
SNAA	**Sanae**	**88.09**	**182**	P	P	02 19 52.2	-1.6
VNA3	**Neumayer Olymp**	**88.67**	**180**	P	P	02 19 54.8	-1.6
VNA2	**Neumayer--Watz**	**88.97**	**181**	P	**P**	**02 19 56.4**	**-1.4**
	baz=172,slow=4.0						
VNA1	**Neumayer--Stat**	**89.25**	**181**	P	**P**	**02 19 57.6**	**-1.5**
GERES	**GERESS Array B**	**145.60**	**331**	PKPbc	**PKPdf**	**02 26 40.9**	**-0.4**
	0.9nm,0.8s,baz=46,slow=2.8,SNR=2.8						

JMA ***14*** *02:09:50.5±0.3, 30°.89N×128°.56E, h10^{km}, M4.2*

NIED ***14*** *02:09:50.5, 30°.89N×128°.56E, h10^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.11; M$_{\theta\theta}$0.35; M$_{\phi\phi}$-0.24; M$_{r\theta}$-0.27; M$_{\theta\phi}$2.38; M$_{\phi r}$-0.35; Fault plane solution: M$_{0}$2.44000×10^{15} NP1: φ$_{s}$183.00000°, δ85.00000°, λ172.00000°. NP2: φ$_{s}$274.00000°, δ82.00000°, λ5.00000°.*

IDC ***14*** *02:09:52.2±0.9, 30°.86N×128°.57E, h0^{km}, mb3.5/6, mb1 3.8/10, mb1mx3.6/52, mbtmp3.6/10, ML3.4/4, MS3.4/6, Ms1 3.5/6, ms1mx3.2/30 Error ellipse: s-maj=32.4km s-min=17.6km az=81.0*

ISC 14 02:09:52.9±0.8, 31°.00N±0°.05×128°.73E±0°.08, h10^{km}, n23, σ2^{s}20/22, mb3.6/6, MS3.6/4, 1D, Northwest of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	**Shimokoshiki**	**1.08**	**51**	⇓P	**Pn**	**02 10 13.5**	**-0.6**
JKC	**Kuchinoerabu**	**1.37**	**113**	P	**Pb**	**02 10 17.6**	**-1.0**
JKC				S	**Sn**	**02 10 36.1**	**-0.1**
JNN	**Nakanoshima**	**1.52**	**139**	P	**Pn**	**02 10 18.1**	**-2.0**
JSU	**Suzuyama**	**1.56**	**71**	P	**Pn**	**02 10 20.9**	**+0.2**
JFU	**Fukue jima 2**	**1.65**	**1**	P	**Pb**	**02 10 22.1**	**-1.3**
JYAK	**Yakushimahirau**	**1.71**	**116**	P	**Pn**	**02 10 21.7**	**-1.0**
JMTN	**Minamitane**	**1.96**	**107**	P	**Pn**	**02 10 25.7**	**-0.5**
JTN	**Tanegashima 3**	**1.96**	**100**	P	**Pn**	**02 10 26.4**	**+0.2**
JTZ	**Takazaki**	**2.21**	**65**	P	**Pn**	**02 10 30.4**	**+0.9**
JIU3	**Izumi3**	**2.35**	**48**	P	**Pn**	**02 10 32.6**	**+1.0**
JNU	**Nakatsue**	**2.79**	**40**	Pn	**Pb**	**02 10 40.8**	**-2.1**
	32nm,0.3s,baz=22,slow=0.0,SNR=1.9						
JOW	**Kunigami**	**4.17**	**186**	Pn	**Pn**	**02 10 57.1**	**+0.5**
	1.2nm,0.3s,baz=14,slow=17,SNR=1.9						
JOW				LR	LR	02 12 16.0	
	comp=Z,111nm,18.6s,baz=149,slow=36						
KSRS	**Korea Array**	**6.47**	**354**	Pn	**Pn**	**02 11 30.2**	**+2.0**
	1.0nm,0.3s,baz=176,slow=14,SNR=6.4						
KSRS				Sn	**Sb**	**02 12 55.7**	**-7.2**
	1.5nm,0.3s,baz=182,slow=26,SNR=4.5						
KSRS				LR	LR	02 14 02.3	
	comp=Z,154nm,21.2s,baz=172,slow=38						
KLR	**Kul'dur**	**18.35**	**6**	P	**Pn**	**02 14 11.2**	**+3.8**
	0.2nm,0.3s,baz=197,slow=8.2,SNR=9.4						
SONM	**Songino Array**	**23.96**	**321**	P	**P**	**02 15 08.8**	**+1.4**
	0.6nm,0.6s,baz=144,slow=13,SNR=4.3						
SONM				LR	LR	02 25 45.0	
	comp=Z,188nm,18.9s,baz=160,slow=40						
TLY	**Talaya**	**27.72**	**325**	LR	LR	02 27 53.5	
	comp=Z,179nm,18.4s,baz=170,slow=39						
CMAR	**Chiang Mai Arr**	**29.70**	**252**	LR	LR	02 28 03.0	
	comp=Z,61nm,18.3s,baz=40,slow=37						
MKAR	**Makanchi Array**	**38.84**	**307**	P	**P**	**02 17 18.9**	**+0.9**
	0.5nm,0.7s,baz=83,slow=11,SNR=4.4						
WRA	**Warramunga Arr**	**50.94**	**173**	P	**P**	**02 18 53.7**	**-0.8**
	0.8nm,0.9s,baz=352,slow=8.1,SNR=2.9						
ASAR	**Alice Springs**	**54.58**	**174**	P	**P**	**02 19 21.8**	**+0.3**
	0.5nm,0.6s,baz=4.3,slow=13,SNR=6.4						
AKASG	**Malin Array Be**	**72.22**	**319**	LR	LR	02 58 12.5	
	comp=Z,69nm,18.8s,baz=320,slow=40						
BRTR	**Keskin Array B**	**74.49**	**307**	P	**P**	**02 21 31.9**	**+0.1**
	0.5nm,0.8s,baz=75,slow=1.6,SNR=2.7						
NVAR	**Mina Array Bea**	**86.90**	**46**	P	**P**	**02 22 40.1**	**+1.7**
	0.3nm,0.6s,baz=301,slow=6.1,SNR=4.5						

IDC ***14*** *02:12:21.4±1.1, 60°.47N×140°.98W, h0^{km}, mb4.0/4, mb1 4.0/8, mb1mx3.6/49, mbtmp3.9/8, ML3.5/4, MS3.5/4, Ms1 3.5/4, ms1mx3.1/44, Error ellipse: s-maj=20.3km s-min=9.5km az=40.0*

NEIC ***14*** *02:12:22.4±2.1, 60°.37N±0°.03×141°.23W±0°.05, h17^{km}±5^{km}, Error ellipse: s-maj=4.0km s-min=3.3km az=205.0*

NEIC ***14*** *02:12:22, 60°.42N×141°.18W, h27^{km}, Moment Tensor*

Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-1.07; $M_{\theta\theta}$1.06; $M_{\phi\phi}$0.01; $M_{r\theta}$0.09; $M_{\theta\phi}$-0.25; $M_{\phi r}$0.37; Fault plane solution: $M_0$1.16000×10^{15} NP1:ϕ_s265.33000°, δ47.95000°,λ-115.16000°. NP2:ϕ_s120.37000°, δ47.77000°,λ-64.76000°. Principal axes: T 1.1190, Plg0.0000°, Azm13.0000°; N 0.0792, Plg18.0000°, Azm283.0000°; P -1.1982, Plg72.0000°, Azm103.0000°;

*AEIC **14** 02:12:22.4±1.6,60.°43N±0.°04×141.°20W±0.°06,h13^{km}±5^{km}, ML3.7/114,ML3.9/114(NEIC),Mwr4.0/46(NEIC) Error ellipse: s-maj=6.1km s-min=3.7km az=204.0*

ISC 14 02:12:22.2±0.8,**60.°41N**±0.°02×**141.°20W**±0.°02,**h16**^{km}±5^{km}, **n207,**σ**1.ˢ16**/211,**mb4.0**/4,**Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TABL	Table Mountain	0.04	45	Pg	Pg	02 12 25.2	-0.3
RKAV	Rock Avalanche	0.14	213		Pg	02 12 25.7	-0.5
RKAV					Sg	02 12 28.6	-0.3
YAH	Yahtse	0.28	260	Pg	Pg	02 12 28.1	-0.3
SAMH	Samovar Hills	0.35	144		Pg	02 12 29.5	0.0
CHX	Chaix Hills	0.35	174		Pg	02 12 29.6	0.0
GRNC	Granite Creek	0.42	320	Pg	Pg	02 12 30.3	-0.5
GRNC				IAML		02 12 36.9	
	comp=E,8µm,0.3s						
GRNC	Granite Creek	0.42	320		Sg	02 12 36.5	-0.2
LOGN	Logan Glacier	0.42	13	Pg	Pg	02 12 30.3	-0.5
LOGN				IAML		02 12 37.9	
	comp=E,8µm,0.5s						
LOGN	Logan Glacier	0.42	13		Sg	02 12 36.9	+0.2
MESA	MESA	0.44	238	P	Pg	02 12 31.5	+0.3
	baz=56						
MESA				S	Sb	02 12 38.9	+0.8
	baz=56						
MESA	MESA	0.44	238	Pg	Pg	02 12 31.4	+0.3
MESA	MESA	0.44	238		Sb	02 12 38.9	+0.8
BAGL	Bagley Icefiel	0.45	280		Pg	02 12 30.7	-0.5
BAGL					Sg	02 12 37.2	-0.1
CTGM	Chitina Glacie	0.56	353		Pg	02 12 33.0	-0.3
CTGM					Sg	02 12 40.9	+0.2
CTGM	Chitina Glacie	0.56	353	IAML		02 12 41.8	
	comp=N,7µm,0.3s						
CTG	Chitna Glacier	0.56	353	P	Pg	02 12 32.9	-0.3
	baz=173						
CTG				S	Sg	02 12 40.9	+0.2
	baz=173						
PCA	Pinnacle	0.57	124	Pg	Pg	02 12 32.3	-1.1
PINM	Pinnacle	0.57	124	P	Pg	02 12 33.0	-0.4
	baz=306						
ISLE	Juniper Island	0.60	289	Pg	Pg	02 12 32.6	-1.4
ISLE				IAML		02 12 45.7	
	comp=N,4µm,1.0s						
BARN	Barnard Glacie	0.69	341	Pg	Pg	02 12 34.8	-0.9
CYK	Cape Yakataga	0.72	243		Pg	02 12 36.5	+0.2
KIAG	Kiagna River	0.77	312		Pg	02 12 36.2	-1.0
WAX	Waxell Ridge	0.82	273	Pg	Pg	02 12 37.6	-0.5
BALM	Baldy	0.84	318		Pg	02 12 37.5	-1.1
SNH	Sunshine Point	0.85	255	Pg	Pg	02 12 38.0	-0.7
SNH				IAML		02 12 52.1	
	comp=E,3µm,0.4s						
SNH				IAML		02 12 53.5	
	comp=N,3µm,0.6s						
TGL	Tana Glacier	0.88	294	Pg	Pg	02 12 37.1	-2.1
TGL				IAML		02 12 52.4	
	comp=E,2µm,0.9s						
BCPM	Bancas Point	0.91	120	Pg	Pg	02 12 37.4	-2.4
BCPM				IAML		02 12 56.4	
	comp=N,2µm,0.3s						
BCPM				IAML		02 12 58.1	
	comp=E,3µm,0.3s						
PTPK	Patty Peak	0.99	322		Pg	02 12 40.1	-1.4
CRQE	Cirque	1.00	291	P	Pb	02 12 40.0	-1.1
	baz=108						
KHIT	Khitrov Hills	1.02	273		Pb	02 12 41.1	-0.3
CRQM	Cirque	1.02	291	Pg	Pb	02 12 39.4	-2.1
CRQM				IAML		02 12 57.5	
	comp=N,3µm,0.9s						
CRQM				IAML		02 12 59.5	
	comp=E,3µm,0.6s						
GRIN	Grindle Hills	1.06	264		Pb	02 12 42.0	-0.2
BGLC	Bering Glacier	1.08	255	P	Pb	02 12 42.6	+0.1
	baz=72						
BGLC	Bering Glacier	1.08	255		Pb	02 12 42.6	+0.1
YUK8	Steele Glacier	1.12	38		Pb	02 12 42.8	-0.5
PNL	Peninsula	1.17	129	P	Pn	02 12 42.4	-1.4
	baz=311						
PNL	Peninsula	1.17	129		Pn	02 12 42.4	-1.4
YKU2	Yakutat	1.19	139		Pn	02 12 43.3	-0.7
YKU2	Yakutat	1.19	139	IAML		02 13 03.2	
	comp=N,3µm,0.3s						
BERG	Berg Lake	1.24	270		Pn	02 12 44.7	-0.2
MCARA	McCarthy VSAT	1.32	318	P	Pn	02 12 45.2	-0.7
	baz=136						
MCARA	McCarthy VSAT	1.32	318		Pn	02 12 45.0	-0.9
MCARA				IAML		02 13 10.0	
	comp=N,3µm,0.5s						
MCARA				IAML		02 13 11.9	
	comp=E,3µm,0.6s						
SUCK	Suckling Hills	1.33	256	Pn	Pn	02 12 46.6	+0.6
SUCK				IAML		02 13 07.2	
	comp=E,2µm,0.6s						
SUCK				IAML		02 13 10.0	
	comp=N,1µm,0.6s						
VRDI	Verde Repeater	1.37	307		Pn	02 12 46.0	-0.8
VRDI				IAML		02 13 08.3	
	comp=E,2µm,0.8s						
VRDI				IAML		02 13 08.4	
	comp=N,2µm,1.0s						
YUK2	White River	1.39	7		Pn	02 12 47.3	+0.4
NICHA	Nichawak Mount	1.39	264		Pn	02 12 47.5	+0.6
YUK3	Moose Creek	1.41	14	P	Pn	02 12 47.8	+0.4
	baz=195						
YUK3	Moose Creek	1.41	14		Pn	02 12 47.8	+0.4
YUK6	Outpost Mounta	1.49	68	P	Pn	02 12 49.2	+0.7
	baz=251						
YUK6	Outpost Mounta	1.49	68		Pn	02 12 49.2	+0.7
YUK7	Dusty Glacier	1.52	84		Pn	02 12 49.4	+0.6
HMT	Hamilton	1.52	268	Pn	Pn	02 12 49.5	+0.8
YUK4	Talbot Arm	1.56	52	P	Pg	02 12 52.3	+0.2
	baz=233						
GLB	Gilahina Butte	1.64	310		Pn	02 12 49.7	-0.7
GLB	Gilahina Butte	1.64	310	IAML		02 13 15.0	
	comp=E,1µm,0.9s						
GLB				IAML		02 13 15.6	
	comp=N,1µm,1.1s						
KAIM	Kayak Island	1.68	255	P	Pn	02 12 51.1	+0.2
	baz=71						
KAIM	Kayak Island	1.68	255	Pn	Pn	02 12 50.9	+0.1
KAIM				IAML		02 13 17.0	
	comp=E,830nm,0.5s						
RAGM	Ragged Mountai	1.73	271	Pn	Pn	02 12 52.3	+0.8
GOAT	Goat Mountain	1.75	277		Pn	02 12 52.4	+0.4
BMRM	Bremner River	1.77	290	P	Pn	02 12 53.0	+0.9
	baz=106						
BMRM	Bremner River	1.77	290		Pn	02 12 53.0	+0.9
BMRM	Bremner River	1.77	290	IAML		02 13 19.9	
	comp=E,2µm,0.8s						
YUK1	Sand Pete Hill	1.77	10		Pb	02 12 53.9	-0.4
YUK5	Granite Creek	1.79	65		Pn	02 12 54.0	+1.6
HYT	Haines Junctio	1.87	76	P	Pn	02 12 54.7	+1.2
	baz=259						
HYT	Haines Junctio	1.87	76	Pn	Pn	02 12 54.0	+0.4
M27K	Edge Creek, AK	1.98	351	P	Pb	02 12 57.1	-0.7
	baz=170						
M27K	Edge Creek, AK	1.98	351		Pn	02 12 56.7	+1.6
M27K				IAML		02 13 28.5	
	comp=E,662nm,0.9s						
M27K				IAML		02 13 31.0	
	comp=N,752nm,1.4s						
BVCY	Beaver Creek	2.01	4	P	Pb	02 12 57.7	-0.7
	baz=185						
BVCY	Beaver Creek	2.01	4		Pb	02 12 57.7	-0.7
N25K	Chitina, Valde	2.04	307	P	Pn	02 12 56.7	+0.8
	baz=124						
M26K	Nabesna, AK	2.17	337	P	Pn	02 12 59.5	+1.8
	baz=156						
M26K	Nabesna, AK	2.17	337		Pn	02 12 59.5	+1.8
M26K	Nabesna, AK	2.17	337	IAML		02 13 30.2	
	comp=E,668nm,0.8s						
M26K				IAML		02 13 38.5	
	comp=N,759nm,0.7s						
EYAK	Cordova Ski Ar	2.26	275	P	Pn	02 12 59.5	+0.7
	baz=91						
EYAK	Cordova Ski Ar	2.26	275	Pn	Pn	02 12 59.8	+1.1
DIV	Divide	2.36	290		Pn	02 13 01.2	+1.0
KLU	Klutina	2.55	297	P	Pn	02 13 03.7	+0.9
	baz=113						
KLU	Klutina	2.55	297		Pn	02 13 03.4	+0.6
FID	Port Fidalgo	2.63	280	Pn	Pn	02 13 03.5	-0.4
FID				IAML		02 13 46.1	
	comp=E,684nm,0.5s						
FID				IAML		02 13 51.5	
	comp=N,441nm,0.6s						
HIN	Hinchinbrook I	2.63	272	Pn	Pn	02 13 04.9	+1.0
HIN				IAML		02 13 49.4	
	comp=E,557nm,0.8s						
HIN				IAML		02 14 03.9	
	comp=N,418nm,1.2s						
PS11	TAPS Pump St11	2.66	311		Pn	02 13 05.0	+0.8
L27K	Beaver Creek,	2.67	354	P	Pn	02 13 06.0	+1.5
	baz=173						
L27K	Beaver Creek,	2.67	354		Pn	02 13 04.8	+0.3
BC03		2.68	354		Pn	02 13 06.0	+1.5
BCAR	Beaver Creek A	2.68	354		Pn	02 13 05.1	+0.5
JPK	Jack Peak	2.73	286		Pn	02 13 07.2	+1.9
HARP	HAARP	2.75	318	P	Pn	02 13 08.0	+2.4
	baz=134						
HARP	HAARP	2.75	318		Pn	02 13 08.0	+2.4
MENT	Mentasta	2.80	336		Pn	02 13 06.6	+0.3
MENT				IAML		02 13 54.0	
	comp=E,324nm,0.8s						
MENT				IAML		02 13 59.1	
	comp=N,269nm,0.6s						
L26K	Log Cabin Wild	2.81	340	P	Pn	02 13 08.7	+2.2
	baz=158						
L26K	Log Cabin Wild	2.81	340		Pn	02 13 07.0	+0.6
L26K				IAML		02 13 48.4	
	comp=N,354nm,0.3s						
L26K				IAML		02 13 48.5	
	comp=E,548nm,0.4s						
N31M	Braeburn, Yuko	2.85	66	P	Pn	02 13 08.2	+1.3
	baz=250						
N31M	Braeburn, Yuko	2.85	66		Pn	02 13 08.2	+1.3
GLI	Glacier Island	2.94	282	Pn	Pn	02 13 09.9	+1.8
GLI				IAML		02 13 58.3	
	comp=N,414nm,0.8s						
GLI				IAML		02 13 58.6	
	comp=E,359nm,0.6s						
M24K	Tolsona, Glenn	2.94	307	P	Pn	02 13 10.2	+2.0
	baz=123						
M24K	Tolsona, Glenn	2.94	307		Pn	02 13 08.3	+0.1
M24K				IAML		02 14 02.1	
	comp=N,490nm,1.2s						
M30M	Minto, Yukon	3.03	42	P	Pn	02 13 10.9	+1.5
	baz=226						
M30M	Minto, Yukon	3.03	42		Pn	02 13 10.9	+1.5
SKAG	Skagway	3.10	105	Pn	Pn	02 13 11.2	+0.8
WHY	Whitehorse	3.13	83	P	Pn	02 13 11.5	+0.7
	baz=268						
WHY	Whitehorse	3.13	83		Pn	02 13 10.7	-0.2
PAX	Paxson	3.27	323	P	Pn	02 13 14.5	+1.7
	baz=140						
PAX	Paxson	3.27	323	Pn	Pn	02 13 12.8	0.0
SCM	Sheep Creek Mo	3.30	298	P	Pn	02 13 14.6	+1.5
	baz=113						
SCM	Sheep Creek Mo	3.30	298		Pn	02 13 14.0	+0.9
SCM				IAML		02 14 13.8	
	comp=E,379nm,0.7s						
DOT	Dot Lake	3.52	339		Pn	02 13 16.4	+0.3
PWL	Port Wells	3.54	280	Pn	Pn	02 13 17.1	+0.7
PWL				IAML		02 14 17.1	
	comp=N,277nm,0.8s						
PWL				IAML		02 14 23.1	
	comp=E,218nm,0.8s						
KNK	Knik Glacier	3.69	289	P	Pn	02 13 20.8	+2.4
	baz=102						
KNK	Knik Glacier	3.69	289		Pn	02 13 19.9	+1.5
KNK				IAML		02 14 25.3	
	comp=E,274nm,1.0s						
BESE	Bessie Mountai	3.72	117	Pn	Pn	02 13 19.4	+0.5
SML	Sawmill	3.73	295	P	Pn	02 13 20.5	+1.5
	baz=109						
SML	Sawmill	3.73	295	Pn	Pn	02 13 21.1	+2.0
SML				IAML		02 14 24.3	
	comp=E,304nm,1.3s						
M31M	Drury Creek, Y	3.74	58	P	Pn	02 13 20.9	+1.7
	baz=244						
M31M	Drury Creek, Y	3.74	58		Pn	02 13 20.9	+1.7
RIDG	Independent Ri	3.75	334	P	Pn	02 13 21.0	+1.7
	baz=151						
RIDG	Independent Ri	3.75	334		Pn	02 13 19.4	+0.1
RIDG				IAML		02 14 33.9	
	comp=E,140nm,2.3s						
DAWY	Dawson	3.76	12	P	Pn	02 13 21.4	+1.9
	baz=194						
DAWY	Dawson	3.76	12		Pn	02 13 18.9	-0.5
SCRK	Sand Creek	3.81	341	P	Pn	02 13 21.4	+1.3
	baz=159						
SCRK	Sand Creek	3.81	341	Pn	Pn	02 13 19.6	-0.5
WAT6	Susitna Watana	3.82	308	P	Pn	02 13 21.5	+1.2
	baz=122						
WAT6	Susitna Watana	3.82	308		Pn	02 13 21.5	+1.2
DHY	Denali Highway	3.97	315	P	Pn	02 13 24.2	+1.8
	baz=129						
DHY	Denali Highway	3.97	315		Pn	02 13 21.4	-1.1
GHO	Glory Hole Cre	3.99	293	Pn	Pn	02 13 23.3	+0.6
GHO				IAML		02 14 27.4	
	comp=N,268nm,0.8s						
GHO				IAML		02 14 32.6	
	comp=E,211nm,1.0s						
PMR	Palmer	4.04	290	Pn	Pn	02 13 24.8	+1.6
PMR				IAML		02 14 24.2	
	comp=N,156nm,1.5s						
PMR				IAML		02 14 29.7	
	comp=E,164nm,1.1s						
JIS	Juneau Island	4.09	119	Pn	Pn	02 13 25.3	+1.4
P33M	Teslin, Yukon	4.17	89	P	Pn	02 13 25.7	+0.5
	baz=277						
P33M	Teslin, Yukon	4.17	89		Pn	02 13 25.7	+0.5
O22K	Cooper Landing	4.22	275	Pn	Pn	02 13 25.7	0.0
O22K					Sn	02 14 16.9	+2.3
RC01	Rabbit Creek A	4.25	283	Pn	Pn	02 13 26.2	+0.2
RC01				IAML		02 14 45.7	
	comp=E,112nm,0.7s						
RC01				IAML		02 14 46.7	
	comp=N,200nm,1.1s						
J26L	Joseph Creek	4.25	346	P	Pn	02 13 28.1	+1.9
	baz=164						
J26L	Joseph Creek	4.25	346		Pn	02 13 28.1	+1.9
WAT1	Susitna Watana	4.26	308	P	Pn	02 13 28.2	+1.8
	baz=121						
WAT1	Susitna Watana	4.26	308		Pn	02 13 28.2	+1.8
J29M	Klondike Camp	4.28	18	P	Pn	02 13 28.8	+2.1
	baz=200						
J29M	Klondike Camp	4.28	18		Pn	02 13 28.8	+2.1
EGAK	Eagle	4.38	0	P	Pn	02 13 29.8	+1.9
	baz=180						
EGAK	Eagle	4.38	0		Pn	02 13 28.5	+0.6
EGAK				IAML		02 14 49.8	
	comp=N,141nm,0.9s						
EGAK				IAML		02 14 54.0	
	comp=N,168nm,0.8s						
WAT7	Susitna Watana	4.38	307		Pn	02 13 29.9	+1.8
RND	Reindeer	4.70	313	Pn	Pn	02 13 34.1	+1.7
RND				IAML		02 14 54.2	
	comp=E,85nm,0.8s						
RND				IAML		02 14 55.3	
	comp=N,80nm,1.1s						
CUT	Chulitna	4.79	299		Pn	02 13 33.5	0.0
HDA	Harding Lake	4.82	329	P	Pn	02 13 35.7	+1.8
	baz=144						
HDA	Harding Lake	4.82	329		Pn	02 13 34.1	+0.1
PS08	TAPS Pump Stn8	4.89	330		Pn	02 13 36.2	+1.3
MCK	McKinley	4.93	316	P	Pn	02 13 37.2	+1.7
	baz=129						
MCK	McKinley	4.93	316		Pn	02 13 34.8	-0.6
MCK				IAML		02 15 04.5	
	comp=E,79nm,1.7s						
MCK				IAML		02 15 10.1	
	comp=N,101nm,1.5s						
IL31		5.10	331		Pn	02 13 37.9	+0.2
ILAR	Eielson Array	5.10	331	Pn	Pn	02 13 39.0	+1.2
	comp=N,2.6nm,0.3s,baz=151,slow=12,SNR=131						
ILAR				Sn	Sn	02 14 38.1	+1.8
	comp=N,1.5nm,0.3s,baz=79,slow=13,SNR=5.5						
ILAR				Lg	Lg	02 15 01.7	
	comp=N,1.3nm,0.3s,baz=143,slow=27,SNR=4.7						
ILAR				LR	LR	02 15 56.0	
	comp=N,379nm,18.7s,baz=167,slow=42						
ILAR	Eielson Array	5.10	331	Pn	Pn	02 13 37.9	+0.1
WRH	Wood River Hil	5.18	325		Pn	02 13 39.5	+0.7
CCB	Clear Creek Bu	5.23	327		Pn	02 13 40.0	+0.4
TRF	Thorofare Moun	5.26	309	P	Pn	02 13 41.6	+1.4
	baz=121						
TRF	Thorofare Moun	5.26	309		Pn	02 13 40.7	+0.6
TRF				IAML		02 15 16.3	
	comp=N,86nm,1.9s						
TRF				IAML		02 15 29.1	
	comp=E,74nm,1.8s						
SPU	Mount Spurr	5.37	283	Pn	Pn	02 13 40.5	-1.1
BWN	Browne	5.39	318		Pn	02 13 41.2	-0.6
COLA	College	5.42	328	Pn	Pn	02 13 42.7	+0.5
TCOL	CIGO, UAF Yank	5.43	328	Pn	Pn	02 13 42.7	+0.4
PRP	Porcupine Dome	5.49	341	P	Pn	02 13 44.9	+1.6
	baz=157						
PRP	Porcupine Dome	5.49	341	Pn	Pn	02 13 43.5	+0.3
POKR	Poker Flat Res	5.52	331	Pn	Pn	02 13 43.7	+0.1
NEA2	Nenana	5.55	322	Pn	Pn	02 13 44.2	+0.2
KTH	Kantishna Hill	5.56	309		Pn	02 13 44.8	+0.7
MDM	Murphy Dome	5.59	328		Pn	02 13 45.0	+0.4
RSO	Redoubt South	5.72	276	Pn	Pn	02 13 46.6	+0.1
PPLA	Purkeypile	5.80	300	P	Pn	02 13 48.6	+1.1
	baz=110						
PPLA	Purkeypile	5.80	300	Pn	Pn	02 13 47.3	-0.2
BPAW	Bear Paw Mtn.	5.88	313	P	Pn	02 13 49.8	+1.3
	baz=124						
BPAW	Bear Paw Mtn.	5.88	313	Pn	Pn	02 13 48.1	-0.4
CAST	Castle Rocks	5.96	305	Pn	Pn	02 13 49.2	-0.3
DLBC	Dease Lake	6.04	104	Pn	Pn	02 13 51.8	+1.0
	comp=E,0.3nm,0.3s,baz=308,slow=12,SNR=1.5						
DLBC				Sn	Sn	02 14 58.5	-0.9
	comp=E,1.1nm,0.3s,baz=45,slow=26,SNR=3.4						
DLBC				Lg	Lg	02 15 32.2	
	comp=E,1.3nm,0.3s,baz=35,slow=24,SNR=4.3						
I23K	Minto, Yukon-K	6.05	325	P	Pn	02 13 52.0	+1.3
	baz=138						
I23K	Minto, Yukon-K	6.05	325		Pn	02 13 50.4	-0.3
H24K	Noodor Dome	6.23	334		Pn	02 13 54.2	+0.9
CHUM	Lake Minchumin	6.26	309	P	Pn	02 13 54.8	+1.1
	baz=119						
CHUM	Lake Minchumin	6.26	309		Pn	02 13 54.9	+1.1
EPYK	Eagle Plains	6.31	17		Pn	02 13 54.0	-0.3
MLY	Manley	6.38	321	P	Pn	02 13 56.3	+1.0
	baz=132						
MLY	Manley	6.38	321		Pn	02 13 55.8	+0.4
L20K	Farewell, AK	6.42	294	P	Pn	02 13 56.8	+0.8
	baz=103						
L20K	Farewell, AK	6.42	294		Pn	02 13 56.8	+0.8
KDAK	Kodiak Island	6.43	251	Pn	Pn	02 13 55.5	-0.5
	comp=E,2.2nm,0.3s,baz=89,slow=8.0,SNR=29						
KDAK				Sn	Sn	02 15 04.3	-4.7
	comp=E,2.1nm,0.3s,baz=102,slow=23,SNR=7.8						
KDAK	Kodiak Island	6.43	251	P	Pn	02 13 56.1	+0.1
	baz=61						
KDAK	Kodiak Island	6.43	251		Pn	02 13 56.1	+0.1
FYU	Fort Yukon	6.43	345	Pn	Pn	02 13 57.3	+1.2
H23K	Yukon River	6.62	329	P	Pn	02 13 59.7	+1.2
	baz=141						
H23K	Yukon River	6.62	329		Pn	02 13 59.8	+1.2
K20K	Telida	6.76	301	Pn	Pn	02 13 60.0	-0.6
I21K	Tanana	6.87	319		Pn	02 14 02.3	+0.2
J20K	Nowinta River	7.12	308	P	Pn	02 14 06.5	+1.1
	baz=116						
J20K	Nowinta River	7.12	308	Pn	Pn	02 14 06.2	+0.8
BMAR	Burnt Mountain	7.20	350	Pn	Pn	02 14 08.3	+1.7
BMAR					LR	02 16 13.1	
H21K	Melozitna Rive	7.44	320		Pn	02 14 12.2	+2.3
TTA	Tatalina	7.48	296	Pn	Pn	02 14 10.7	+0.2
COLD	Coldfoot	7.90	334	Pn	Pn	02 14 17.2	+1.0
IMAR	Indian Mountai	7.95	320	Pn	Pn	02 14 17.6	+0.8
INK	Inuvik	8.59	19	Pn	Pn	02 14 26.0	+0.5
	comp=E,0.5nm,0.3s,baz=207,slow=19,SNR=23						
INK				Sn	Sn	02 15 59.7	-2.1
	comp=E,0.5nm,0.3s,baz=130,slow=16,SNR=4.7						
INK				LR	LR	02 17 28.6	
	comp=E,210nm,19.6s,baz=148,slow=36						
INK	Inuvik	8.59	19		Pn	02 14 26.2	+0.7
TOLK	Toolik Lake Re	9.00	340	Pn	Pn	02 14 31.7	+0.4
A36M	Sachs Harbour	13.21	22	P	Pn	02 15 27.9	-0.8
	baz=217						
A36M	Sachs Harbour	13.21	22	Pn	Pn	02 15 28.1	-0.5
RES	Resolute Bay	21.86	31	LR	LR	02 24 52.4	
	comp=E,153nm,21.9s,baz=242,slow=34						
NVAR	Mina Array Bea	26.30	136	P	P	02 17 59.3	+2.3
	comp=E,1.2nm,0.9s,baz=312,slow=6.5,SNR=6.5						
FINES	FINESS Array B	58.08	7	P	P	02 22 13.8	0.0
	comp=E,4.1nm,0.9s,baz=2.9,slow=6.5,SNR=7.9						
AKASG	Malin Array Be	68.97	7	P	P	02 23 26.4	+0.4
	comp=E,0.9nm,0.5s,baz=1.2,slow=6.8,SNR=6.1						
ESDC	Sonseca Array	74.28	33	P	P	02 23 59.9	+1.7
	comp=E,0.8nm,0.9s,baz=337,slow=6.9,SNR=3.5						
ESDC				LR	LR	02 56 39.4	
	comp=E,35nm,18.1s,baz=330,slow=36						

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*JMA **14** 02:13:15.4±0.3,31.°32N×128.°78E,h11^{km}±2^{km},M3.8*

*NIED **14** 02:13:15.2,31.°36N×128.°85E,h0^{km},MW3.9,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.87; $M_{\theta\theta}$-1.43; $M_{\phi\phi}$3.30; $M_{r\theta}$-1.85; $M_{\theta\phi}$8.25; $M_{\phi r}$0.58; Fault plane solution: $M_0$8.87000×10^{14} NP1:ϕ_s81.00000°, δ81.00000°,λ-14.00000°. NP2:ϕ_s173.00000°,δ76.00000°, λ-171.00000°.*

*IDC **14** 02:13:16.9±0.7,31.°42N×128.°58E,h0^{km},mb3.4/3, mb1 3.8/6,mb1mx3.5/50,mbtmp3.7/6,ML3.7/2,MS3.2/1, Ms1 3.2/1,ms1mx2.6/34 Error ellipse: s-maj=16.6km s-min=6.8km az=128.0*

ISC 14 02:13:16.3±1.0,**31.°34N**±0.°05×**128.°80E**±0.°07,**h10**^{km},**n17,** σ**1.ˢ48**/19,**mb3.4**/3,**Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.85	67	P	Pg	02 13 32.2	-0.5
JSJ				*e*S	Sg	02 13 43.6	-0.3
JFU	Fukue jima 2	1.31	358	P	Pn	02 13 39.8	-0.9
JFU				*e*S	Sb	02 13 56.4	-1.5
JSU	Suzuyama	1.43	83	P	Pn	02 13 41.2	-1.1
JKC	Kuchinoerabu	1.49	126	P	Pn	02 13 42.0	-1.1
JNN	Nakanoshima	1.76	148	P	Pb	02 13 46.8	-1.9
JYAK	Yakushimahirau	1.84	126	P	Pn	02 13 47.7	-0.2
JTN	Tanegashima 3	2.00	110	P	Pn	02 13 50.4	+0.3
JTZ	Takazaki	2.03	73	P	Pn	02 13 51.2	+0.6
JMTN	Minamitane	2.04	117	P	Pn	02 13 51.0	+0.3
JIU3	Izumi3	2.09	54	P	Pn	02 13 51.8	+0.4
JNU	Nakatsue	2.50	44	Pn	Pb	02 14 00.8	-0.6
	50nm,0.3s,baz=80,slow=0.0,SNR=8.8						
JNU				Sn	Sb	02 14 31.8	-0.5
	83nm,0.3s,baz=192,slow=1.9,SNR=4.0						
MJAR	Matsushiro Arr	9.38	54	Pn	Pn	02 15 35.3	+3.8
	0.1nm,0.3s,baz=234,slow=13,SNR=3.4						
ASAJ	Asahikawa	16.76	37	Pn	P	02 17 12.9	-0.4
	baz=264,slow=17,SNR=4.0						
KLR	Kul'dur	18.01	6	LR	LR	02 24 29.5	
	comp=Z,78nm,19.3s,baz=84,slow=38						
SONM	Songino Array	23.73	320	P	P	02 18 28.7	+0.1
	0.3nm,0.4s,baz=131,slow=7.9,SNR=3.6						
WRA	Warramunga Arr	51.27	173	P	P	02 22 21.2	+0.8
	0.4nm,0.7s,baz=357,slow=8.3,SNR=2.6						
ASAR	Alice Springs	54.91	174	P	P	02 22 50.4	+3.1
	0.6nm,0.6s,baz=3.0,slow=14,SNR=7.2						

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*NEIC **14** 02:48:01.9±1.3,18.°70S±0.°08×169.°47E±0.°08,h272^{km}±6^{km}, mb4.6/78,Error ellipse: s-maj=11.6km s-min=11.4km az=169.0*

*NOU **14** 02:48:02.8,18.°74S×169.°42E,h274^{km},mb4.6/42, Vanuatu Islands*

*IDC **14** 02:48:02.4±1.5,18.°74S×169.°52E,h278^{km}±14^{km}, mb4.1/11,mb1 4.4/14,mb1mx4.0/24,mbtmp4.8/14,Error ellipse: s-maj=24.6km s-min=12.3km az=156.0*

ISC 14 02:48:01.7±0.4,**18.°72S**±0.°05×**169.°47E**±0.°07,**h272**^{km}, **n151,**σ**1.ˢ18**/134,**mb4.6**/69,**Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTV	Rentapao	1.35	313	P	Pn	02 48 42.9	+1.7
DVP	Devils Point	1.56	309	P	Pn	02 48 43.8	+1.1
LIFNC	LIFOU	2.93	225		Pn	02 48 54.6	-0.3
LIFNC	LIFOU	2.93	225	P	Pn	02 48 54.7	-0.2
MARNC	Mare, Loyalty	3.06	206		Pn	02 48 55.9	-0.4
MARNC	Mare, Loyalty	3.06	206	P	Pn	02 48 55.9	-0.4
SANVU	Saraoutou	3.91	326		Pn	02 49 05.2	-0.3
SANVU	Saraoutou	3.91	326	P	Pn	02 49 06.5	+0.9
YATNC	Mamie plateau,	4.11	216	P	Pn	02 49 07.4	-0.4

PINNC	**Pines Island,**	**4.31**	**206**		**Pn**	**02 49 10.7**	**+0.6**
DZM	**Mont Dzumac**	**4.38**	**220**	P	**Pn**	**02 49 11.9**	**+1.0**
	12nm,0.3s,baz=59,slow=18,SNR=59						
DZM	**Mont Dzumac**	**4.38**	**220**	*e*P	**Pn**	**02 49 12.0**	**+1.0**
	857nm,1.4s						
DZM	**Mont Dzumac**	**4.38**	**220**		**Pn**	**02 49 11.5**	**+0.5**
DZM	**Mont Dzumac**	**4.38**	**220**	P	**Pn**	**02 49 12.2**	**+1.2**
OUENC	**Ouen Island, N**	**4.43**	**213**		**Pn**	**02 49 11.9**	**+0.5**
OUENC	**Ouen Island, N**	**4.43**	**213**	P	**Pn**	**02 49 13.0**	**+1.5**
NOUC	**Port Laguerre**	**4.49**	**221**	P	**Pn**	**02 49 13.6**	**+1.4**
ONTNC	**Ouen Toro**	**4.55**	**218**		**Pn**	**02 49 13.8**	**+0.9**
ONTNC	**Ouen Toro**	**4.55**	**218**	P	**Pn**	**02 49 14.2**	**+1.3**
MSVF	**Nonsavu**	**8.22**	**85**	P	**Pn**	**02 49 59.5**	**+1.6**
	2.7nm,0.3s,baz=245,slow=24,SNR=6.5						
MSVF	**Nonsavu**	**8.22**	**85**	Pn	**Pn**	**02 49 58.9**	**+0.9**
MSVF	**Nonsavu**	**8.22**	**85**	P	**Pn**	**02 49 59.6**	**+1.6**
HNR	**Honiara**	**13.05**	**314**	P	**P**	**02 50 59.3**	**+0.5**
	22nm,0.3s,baz=183,slow=2.3,SNR=16						
HNR	**Honiara**	**13.05**	**314**	P	**P**	**02 50 58.4**	**-0.5**
FUNA	**Funafuti**	**13.85**	**44**		**P**	**02 51 08.5**	**+0.8**
OUZ	**Omahuta**	**16.84**	**168**	P	**P**	**02 51 41.6**	**+1.2**
EIDS	**Eidsvold**	**18.27**	**246**	P	**P**	**02 51 55.9**	**-0.1**
EIDS				IAmb	IAmb	02 52 00.8	
	comp=Z,14nm,0.6s						
HAZ	**Te Kaha**	**20.32**	**161**	P	**P**	**02 52 20.4**	**+2.8**
RUGZ	**Raukumara Rang**	**20.48**	**161**	P	**P**	**02 52 22.3**	**+2.9**
URZ	**Urewera**	**20.58**	**163**	P	**P**	**02 52 21.3**	**+1.0**
URZ	**Urewera**	**20.58**	**163**	P	**P**	**02 52 20.6**	**+0.2**
MWZ	**Matawai**	**20.77**	**162**	P	**P**	**02 52 23.7**	**+1.4**
RIGZ	**Rimuhau**	**21.18**	**162**	P	**P**	**02 52 27.3**	**+0.9**
WNVZ	**Wahianoa**	**21.21**	**167**	P	**P**	**02 52 30.1**	**+3.3**
BKZ	**Black Stump Fm**	**21.27**	**165**	P	**P**	**02 52 28.4**	**+1.2**
BKZ	**Black Stump Fm**	**21.27**	**165**	P	**P**	**02 52 28.9**	**+1.7**
BHHZ	**Black Hill Sta**	**21.47**	**166**	P	**P**	**02 52 30.3**	**+1.1**
ARHZ	**Aropaoanui**	**21.49**	**164**	P	**P**	**02 52 27.5**	**-1.8**
KWHZ	**Kaweka Forest**	**21.50**	**165**	P	**P**	**02 52 30.2**	**+0.8**
MGCD	**Mangrove Creek**	**21.87**	**225**	P	**P**	**02 52 34.6**	**+1.8**
	comp=Z,29nm,1.2s						
CTA	**Charters Tower**	**21.93**	**263**	P	**P**	**02 52 34.9**	**+1.4**
	baz=82,slow=14						
CTA	**Charters Tower**	**21.93**	**263**	P	**P**	**02 52 35.5**	**+2.0**
	comp=Z,38nm,1.3s						
CTAO	**Charters Tower**	**21.93**	**263**	P	**P**	**02 52 33.6**	**+0.1**
CTAO				IAmb	IAmb	02 52 35.7	
	comp=Z,30nm,0.9s						
CTAO	**Charters Tower**	**21.93**	**263**	P	**P**	**02 52 35.1**	**+1.6**
KAHZ	**Kahuranaki**	**21.96**	**165**	P	**P**	**02 52 34.4**	**+0.9**
SYDH	**Sydney Hard Ro**	**22.45**	**224**	P	**P**	**02 52 38.3**	**+0.3**
	comp=Z,48nm,0.6s						
PMG	**Port Moresby**	**23.51**	**290**	P	**P**	**02 52 49.0**	**+1.2**
	comp=Z,88nm,0.8s,baz=116,slow=6.2,SNR=28						
PMG	**Port Moresby**	**23.51**	**290**	P	**P**	**02 52 48.3**	**+0.4**
CNB	**Canberra Magne**	**24.30**	**223**	P	**P**	**02 52 55.4**	**+0.5**
	comp=Z,27nm,2.2s						
QLP	**Quilpie**	**24.53**	**247**	P	**P**	**02 52 58.3**	**+1.3**
	comp=Z,29nm,0.8s						
CMSA	**Cobar Meteorol**	**24.96**	**235**	P	**P**	**02 53 01.8**	**+1.0**
QIS	**Mount Isa**	**28.17**	**261**	P	**P**	**02 53 30.0**	**+0.5**
	comp=Z,10nm,1.2s						
STKA	**Stephens Creek**	**28.30**	**237**	P	**P**	**02 53 31.4**	**+0.9**
	comp=Z,10nm,0.7s,baz=70,slow=9.2,SNR=30						
STKA				ScP	**ScP**	**02 59 52.1**	**+1.0**
	comp=Z,0.8nm,0.5s,baz=214,slow=2.0,SNR=3.7						
STKA	**Stephens Creek**	**28.30**	**237**	P	**P**	**02 53 30.4**	**-0.2**
STKA	**Stephens Creek**	**28.30**	**237**	P	**P**	**02 53 31.5**	**+0.9**
	comp=Z,3.3nm,0.7s						
LCRK	**Leigh Creek**	**30.62**	**242**	P	**P**	**02 53 50.8**	**-0.2**
	comp=Z,16nm,0.9s						
OOD	**Oodnadatta**	**32.23**	**247**	P	**P**	**02 54 05.2**	**+0.1**
	comp=Z,29nm,1.1s						
WR0	**Warramunga Arr**	**32.94**	**262**	P	**P**	**02 54 10.0**	**-1.4**
WR0				IAmb	IAmb	02 54 11.3	
	comp=Z,17nm,1.1s						
BBOO	**Buckleboo**	**33.04**	**238**	P	**P**	**02 54 11.8**	**-0.2**
	comp=Z,12nm,2.9s						
WB0	**Warramunga Arr**	**33.09**	**262**	P	**P**	**02 54 12.0**	**-0.7**
WB0				IAmb	IAmb	02 54 12.6	
	comp=Z,25nm,0.9s						
WB2	**Warramunga Arr**	**33.12**	**262**	P	**P**	**02 54 11.0**	**-1.9**
WB2				IAmb	IAmb	02 54 12.9	
	comp=Z,23nm,1.1s						
WRAB	**Tennant Creek**	**33.12**	**262**	P	**P**	**02 54 13.2**	**+0.3**
WRA	**Warramunga Arr**	**33.13**	**262**	P	**P**	**02 54 12.2**	**-0.8**
	comp=Z,14nm,0.9s,baz=97,slow=8.0,SNR=76						
AS31	**Alice Springs**	**33.46**	**255**	P	**P**	**02 54 15.0**	**-0.8**
ASAR	**Alice Springs**	**33.46**	**255**	P	**P**	**02 54 15.8**	**0.0**
	comp=Z,48nm,0.5s,baz=83,slow=8.9,SNR=1028						
ASAR				ScP	**ScP**	**03 00 08.3**	**-0.3**
	comp=Z,0.9nm,0.8s,baz=106,slow=4.0,SNR=5.9						
ASAR	**Alice Springs**	**33.46**	**255**	P	**P**	**02 54 15.2**	**-0.6**
MULG	**Mulgathing**	**34.08**	**243**	P	**P**	**02 54 20.3**	**-0.7**
	comp=Z,39nm,0.7s						
MTN	**Manton Dam**	**37.29**	**273**	P	**P**	**02 54 47.2**	**-1.2**
WRKA	**Warakurna**	**38.61**	**253**	P	**P**	**02 54 58.5**	**-0.8**
	comp=Z,29nm,0.9s						
KNRA	**Kununurra**	**38.94**	**268**	P	**P**	**02 55 01.2**	**-0.9**
KNRA				IAmb	IAmb	02 55 02.3	
	comp=Z,34nm,1.0s						
KNRA	**Kununurra**	**38.94**	**268**	P	**P**	**02 55 02.5**	**+0.4**
	comp=Z,44nm,0.9s						
FORT	**Forrest**	**39.27**	**244**	P	**P**	**02 55 03.7**	**-0.9**
	comp=Z,20nm,1.0s						
FAKI	**Fak Fak**	**39.65**	**289**	P	**P**	**02 55 07.5**	**-0.5**
FAKI				IAmb	IAmb	02 55 08.4	
	comp=Z,29nm,0.8s						
FAKI	**Fak Fak**	**39.65**	**289**	P	**P**	**02 55 08.2**	**+0.2**
FITZ	**Fitzroy Crossi**	**41.51**	**264**	P	**P**	**02 55 22.7**	**-0.3**
FITZ				IAmb	IAmb	02 55 24.2	
	comp=Z,22nm,0.8s						
FITZ	**Fitzroy Crossi**	**41.51**	**264**	P	**P**	**02 55 22.8**	**-0.2**
	comp=Z,31nm,1.0s						
PSA00	**Pilbara Seismi**	**46.52**	**258**	P	**P**	**02 56 01.5**	**-1.1**
PSA00	**Pilbara Seismi**	**46.52**	**258**	P	**P**	**02 56 02.9**	**+0.3**
	comp=Z,26nm,0.9s						
MBWA	**Marble Bar**	**46.67**	**258**	P	**P**	**02 56 03.2**	**-0.6**
MBWA				IAmb	IAmb	02 56 04.7	
	comp=Z,32nm,1.1s						
MBWA	**Marble Bar**	**46.67**	**258**	P	**P**	**02 56 04.1**	**+0.3**
MEEK	**Meekatharra**	**47.33**	**251**	P	**P**	**02 56 08.2**	**-0.6**
	comp=Z,61nm,0.9s						
KLBR	**Kellerberrin**	**48.13**	**244**	P	**P**	**02 56 15.0**	**+0.1**
	comp=Z,55nm,0.8s						
MORW	**Morawa**	**49.57**	**247**	P	**P**	**02 56 25.6**	**-0.2**
	comp=Z,14nm,1.4s						
KAPI	**Kappang**	**50.34**	**279**	P	**P**	**02 56 31.4**	**-0.4**
KAPI				IAmb	IAmb	02 56 33.2	
	comp=Z,23nm,0.9s						
GIRL	**Giralia**	**51.58**	**256**	P	**P**	**02 56 42.4**	**+1.6**
	comp=Z,100nm,1.7s						
NJ2	**Nanjing**	**69.98**	**316**	*e*P	**P**	**02 58 44.8**	**+0.7**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
QSPA	**South Pole Qui**	**71.33**	**180**	P	**P**	**02 58 51.5**	**-0.4**
QSPA					**pP**	**02 59 53.5**	**-0.4**
USA0B	**Ussuriysk Arra**	**71.37**	**332**	P	**P**	**02 58 51.4**	**-0.8**
USA0B				IAmb	IAmb	02 58 58.6	
	comp=Z,16nm,1.4s						
PETK	**Petropavlovsk-**	**72.25**	**353**	P	**P**	**02 58 58.0**	**+0.8**
	comp=Z,11nm,0.9s,baz=171,slow=10,SNR=7.8						
PETK	**Petropavlovsk-**	**72.25**	**353**	P	**P**	**02 58 57.1**	**-0.1**
GSI	**Gunungsitoli**	**73.30**	**277**	P	**P**	**02 59 03.8**	**-0.5**
GSI				IAmb	IAmb	02 59 05.2	
	comp=Z,15nm,1.0s						
BJI	**Beijing**	**76.67**	**321**	P	**P**	**02 59 25.0**	**+2.2**
BJI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**78.49**	**294**	P	**P**	**02 59 34.8**	**+1.4**
	comp=Z,2.4nm,0.8s,baz=135,slow=3.9,SNR=14						
CMAR	**Chiang Mai Arr**	**78.49**	**294**	P	**P**	**02 59 32.9**	**-0.5**
CHTO	**Chiang Mai**	**78.63**	**294**	P	**P**	**02 59 33.4**	**-0.8**
HHC	**Hu-ho-hao-te**	**79.97**	**319**	*e*P	**P**	**02 59 40.0**	**-1.0**
HHC				pmax	pmax		
	comp=Z,8.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,65nm,6.1s						
LZH	**Lanzhou**	**82.54**	**312**	*e*P	**P**	**02 59 59.3**	**+4.6**
LZH				pmax	pmax		
	comp=Z,20nm,1.4s						
P18K	**Big Mountain,**	**83.01**	**17**	P	**P**	**02 59 55.2**	**-1.1**
O19K	**Port Alsworth**	**83.93**	**17**	P	**P**	**03 00 00.0**	**-0.9**
WDC	**Whiskeytown Da**	**86.34**	**45**	IAmb	IAmb	03 00 14.0	
	comp=Z,7.9nm,1.0s						
BILL	**Bilibino**	**86.54**	**359**	P	**P**	**03 00 12.5**	**-1.1**
BILL				IAmb	IAmb	03 00 14.2	
	comp=Z,11nm,0.9s						
ORV	**Oroville**	**86.57**	**46**	IAmb	IAmb	03 00 15.3	
	comp=Z,8.4nm,1.0s						
CMB	**Columbia Colle**	**86.65**	**48**	IAmb	IAmb	03 00 15.7	
	comp=Z,8.7nm,0.9s						
YBH	**Yreka Blue Hor**	**86.78**	**44**	P	**P**	**03 00 14.9**	**-0.6**
YBH				IAmb	IAmb	03 00 16.9	
	comp=Z,12nm,1.1s						
109C	**Camp Elliot, M**	**86.84**	**54**	P	**P**	**03 00 15.0**	**-0.9**
109C				IAmb	IAmb	03 00 16.5	
	comp=Z,14nm,1.0s						
SONM	**Songino Array**	**86.93**	**323**	P	**P**	**03 00 16.5**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=150,slow=4.3,SNR=4.7						
ISA	**Isabella, Lake**	**86.99**	**51**	IAmb	IAmb	03 00 17.6	
	comp=Z,8.2nm,0.8s						
HUMO	**Hull Mountain**	**87.03**	**43**	IAmb	IAmb	03 00 18.2	
	comp=Z,8.4nm,0.8s						
MPK	**Martis Peak**	**87.46**	**47**	IAmb	IAmb	03 00 21.0	
	comp=Z,9.4nm,1.1s						
PFO	**Pinyon Flats O**	**87.64**	**53**	P	**P**	**03 00 19.3**	**-0.5**
PNTR	**Pine Nut**	**87.67**	**47**	P	**P**	**03 00 19.4**	**-0.6**
PNTR				IAmb	IAmb	03 00 21.2	
	comp=Z,7.6nm,0.9s						
LHV	**Little Huntoon**	**88.08**	**49**	IAmb	IAmb	03 00 23.0	
	comp=Z,13nm,1.4s						
PAHR	**Pah Rah Range**	**88.09**	**47**	P	**P**	**03 00 21.4**	**-0.5**
PAHR				IAmb	IAmb	03 00 23.0	
	comp=Z,9.7nm,1.2s						
NVAR	**Mina Array Bea**	**88.30**	**48**	P	**P**	**03 00 22.7**	**-0.2**
	comp=Z,3.0nm,0.8s,baz=226,slow=8.5,SNR=21						
NV11	**Mina Array Sit**	**88.40**	**48**	IAmb	IAmb	03 00 24.4	
	comp=Z,7.7nm,1.1s						
MOD	**Modoc Plateau**	**88.45**	**45**	IAmb	IAmb	03 00 24.4	
	comp=Z,8.5nm,0.9s						
GWY	**Greenwater Val**	**88.53**	**51**	IAmb	IAmb	03 00 24.8	
	comp=Z,9.4nm,1.1s						
GLA	**Glamis**	**88.66**	**54**	P	**P**	**03 00 24.6**	**+0.1**
GLA				IAmb	IAmb	03 00 26.1	
	comp=Z,11nm,0.8s						
113A	**Mohawk Valley,**	**89.37**	**55**	P	**P**	**03 00 27.8**	**0.0**
ILAR	**Eielson Array**	**89.67**	**17**	P	**P**	**03 00 26.6**	**-1.9**
	comp=Z,1.7nm,0.7s,baz=231,slow=5.9,SNR=14						
SNAA	**Sanae**	**89.69**	**182**	P	**P**	**03 00 26.5**	**-2.2**
SHPR	**Sheep Range**	**89.78**	**51**	IAmb	IAmb	03 00 31.1	
	comp=Z,9.5nm,1.2s						
214A	**Organ Pipe Nat**	**89.81**	**56**	IAmb	IAmb	03 00 31.3	
	comp=Z,10nm,1.1s						
W13A	**Hualapai Mount**	**90.18**	**53**	IAmb	IAmb	03 00 32.9	
	comp=Z,6.4nm,0.9s						
HSIG		**90.22**	**59**	P	**P**	**03 00 31.2**	**-0.7**
VNA3	**Neumayer Olymp**	**90.27**	**180**	P	**P**	**03 00 29.9**	**-1.5**
VNA3	**Neumayer Olymp**	**90.27**	**180**	pP	pP	03 01 35.3	-1.5
VNA2	**Neumayer--Watz**	**90.57**	**181**	P	**P**	**03 00 31.1**	**-1.7**
	baz=188,slow=3.8						
VNA2	**Neumayer--Watz**	**90.57**	**181**	pP	pP	03 01 37.7	-0.5
G08A	**Pilot Rock**	**90.83**	**42**	IAmb	IAmb	03 00 35.5	
	comp=Z,9.0nm,0.9s						
VNA1	**Neumayer--Stat**	**90.86**	**181**	P	**P**	**03 00 31.8**	**-2.2**
LCMT	**Little Creek M**	**91.39**	**51**	IAmb	IAmb	03 00 38.3	
	comp=Z,8.4nm,0.9s						
KNB	**Kanab**	**91.71**	**51**	P	**P**	**03 00 38.1**	**-0.7**
KNB				IAmb	IAmb	03 00 40.1	
	comp=Z,6.1nm,1.0s						
X16A	**Lo Mia Camp, P**	**91.79**	**54**	IAmb	IAmb	03 00 40.7	
	comp=Z,9.5nm,1.0s						
WUAZ	**Wupatki**	**92.24**	**53**	IAmb	IAmb	03 00 42.5	
	comp=Z,7.5nm,1.0s						
PKCU	**Pink Cliffs**	**92.24**	**51**	P	**P**	**03 00 42.0**	**+0.5**
X18A	**Snowflake**	**92.98**	**55**	IAmb	IAmb	03 00 45.8	
	comp=Z,5.0nm,0.9s						
PDAR	**Pinedale Array**	**96.10**	**47**	P	**P**	**03 00 59.5**	**+0.7**
	comp=Z,0.5nm,0.7s,baz=190,slow=0.9,SNR=3.7						
TX31	**Lajitas Ar. Si**	**96.33**	**61**	P	**P**	**03 00 58.3**	**-1.7**
TX31				IAmb	IAmb	03 01 08.9	
	comp=Z,5.4nm,1.4s						
TXAR	**Lajitas Array**	**96.33**	**61**	P	**P**	**03 01 00.3**	**+0.3**
	comp=Z,1.0nm,0.8s,baz=229,slow=4.8,SNR=7.9						
YMP	**Mirror Lake Pl**	**96.36**	**45**	P	**P**	**03 00 59.8**	**-0.3**
YMP				IAmb	IAmb	03 01 10.3	
	comp=Z,1.9nm,0.6s						
PSZ	**Piszkesteto**	**141.79**	**327**	PKPdf	**PKPdf**	**03 06 57.7**	**-3.3**
DIVS	**Divibare**	**144.04**	**321**	PKPdf	**PKPab**	**03 07 02.5**	**-0.8**
GERES	**GERESS Array B**	**144.13**	**332**	PKP	**PKPab**	**03 07 02.6**	**-1.0**
	comp=Z,1.1nm,0.8s,baz=67,slow=3.3,SNR=3.4						
IDI	**Anoyia**	**144.61**	**305**	PKP	**PKPab**	**03 07 04.9**	**-0.9**
	comp=Z,1.9nm,0.3s,baz=141,slow=6.5,SNR=3.1						
FNA	**Florina**	**144.93**	**316**	PKPdf	**PKPdf**	**03 07 06.8**	**+0.1**
STAL	**STALIGIAL**	**146.50**	**330**	PKPbc	**PKPbc**	**03 07 10.4**	**-0.7**
DAVOX	**Davos/Dischmat**	**147.37**	**334**	PKPbc	**PKPdf**	**03 07 12.1**	**+1.3**
	comp=Z,2.1nm,0.5s,baz=46,slow=1.6,SNR=9.8						
TUE	**Stuetta**	**147.83**	**334**	PKPbc	**PKPbc**	**03 07 14.0**	**-0.9**
NRCA	**Norcia**	**148.73**	**325**	PKPbc	**PKPbc**	**03 07 16.0**	**-1.2**
SENIN	**Lac Senin/Sane**	**148.75**	**336**	PKPbc	**PKPdf**	**03 07 14.4**	**+1.3**

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*NIED **14** 02:51:28.7, 31°.40N×128°.77E, h8^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$0.37; M$_{\theta\theta}$-0.44; M$_{\phi\phi}$0.06; M$_{r\theta}$-0.12; M$_{\theta\phi}$3.71; M$_{\phi r}$0.07; Fault plane solution: M$_0$3.72000×10^{14} NP1:φ$_s$88.00000°, δ89.00000°, λ-2.00000°. NP2:φ$_s$178.00000°, δ88.00000°, λ-179.00000°.*

JMA 14 02:51:28.7±0.3**, 31°.40N×128°.77E, h8**^{km}±2^{km}**, M3.5, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	**Shimokoshiki**	**0.85**	**71**	P	Pg	02 51 44.5	-0.6
JSJ				S	Sg	02 51 56.0	-0.2
JFU	**Fukue jima 2**	**1.25**	**359**	P	Pn	02 51 52.4	-0.1
JSU	**Suzuyama**	**1.44**	**85**	P	Pn	02 51 54.8	-0.4
NGSJ	**Nagasakinomoza**	**1.51**	**35**	P	Pn	02 51 56.2	+0.2
JTZ	**Takazaki**	**2.04**	**75**	P	Pn	02 52 03.5	+0.2
JIU3	**Izumi3**	**2.08**	**56**	P	Pn	02 52 04.6	+0.7

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*IASPEI **14** 03:46:49.1±1.1, 37°.01N±0°.03×97°.93W±0°.03, h10^{km}±7^{km}, Error ellipse: s-maj=4.2km s-min=3.9km az=108.9, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*ANF **14** 03:46:49.9±0.4, 37°.02N×97°.91W, h6^{km}, ML3.2/9, Error ellipse: s-maj=3.9km s-min=3.6km az=26.0*

*NEIC **14** 03:46:49.5±1.0, 37°.02N±0°.04×97°.92W±0°.05, h5^{km}±5^{km}, mb_Lg2.7/26, ML2.8/23, Error ellipse: s-maj=6.4km s-min=5.2km az=207.0*

*NEIC **14** 03:46:49.3±1.0, 37°.00N±0°.04×97°.94W±0°.05, h4^{km}±5^{km}, Error ellipse: s-maj=6.3km s-min=5.6km az=205.0*

ISC 14 03:46:49.5±0.9**, 37°.01N**±0°.02×**97°.93W**±0°.02**, h8**^{km}±6^{km}**, n67, σ0^{s}.58**/70**, Kansas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN14	**Manchester OK**	**0.06**	**209**		**Pg**	**03 46 51.3**	**-0.1**
KAN14				Sg	**Sg**	**03 46 52.6**	**-0.1**
KAN05	**Bluff City Nor**	**0.10**	**24**		**Pg**	**03 46 51.6**	**-0.3**
KAN17	**Caldwell West**	**0.13**	**76**	Pg	**Pg**	**03 46 52.3**	**-0.1**
KAN17				Sg	**Sg**	**03 46 54.4**	**+0.1**
GC02	**Grant County #**	**0.17**	**162**	Sg	**Sg**	**03 46 55.4**	**0.0**
KAN10	**Anthony SW Sta**	**0.17**	**309**		**Pg**	**03 46 52.9**	**-0.2**
KAN01	**Argonia South**	**0.19**	**43**	Pg	**Pg**	**03 46 53.1**	**-0.3**
KAN08	**Anthony NE Sta**	**0.22**	**350**		**Pg**	**03 46 53.7**	**-0.2**
KAN08				Sg	**Sg**	**03 46 56.8**	**0.0**
KAN16	**Harper SW Stat**	**0.24**	**332**	Pg	**Pg**	**03 46 53.6**	**-0.7**
KAN06	**Argonia West S**	**0.24**	**13**		**Pg**	**03 46 54.0**	**-0.3**
KAN06				Sg	**Sg**	**03 46 57.6**	**0.0**
KAN09	**Caldwell North**	**0.27**	**63**	Pg	**Pg**	**03 46 54.4**	**-0.5**
KAN12	**Harper NE Stat**	**0.29**	**348**	Sg	**Sg**	**03 46 59.1**	**-0.1**
KS21	**Milan North St**	**0.34**	**37**		**Pg**	**03 46 56.2**	**0.0**
KS21					**Sg**	**03 47 01.0**	**+0.2**
KAN13	**South Haven SW**	**0.36**	**90**		**Pg**	**03 46 56.6**	**+0.1**
KAN13				Sg	**Sg**	**03 47 01.5**	**+0.2**
CROK	**Carrier**	**0.51**	**185**	Pg	**Pg**	**03 46 59.4**	**0.0**
BLOK	**Blackwell**	**0.62**	**114**	Pg	**Pg**	**03 47 01.0**	**-0.5**
U32A	**Winter Ranch,**	**1.07**	**234**	Pg	**Pg**	**03 47 09.6**	**-0.5**
U32A	**Winter Ranch,**	**1.07**	**234**	P	**Pg**	**03 47 09.7**	**-0.3**
	baz=53						
T35A	**Sooner Cattle**	**1.14**	**94**		**Pg**	**03 47 10.2**	**-1.1**
T35B	**Sooner Cattle**	**1.14**	**94**	P	**Pg**	**03 47 10.8**	**-0.4**
	baz=276,SNR=9.0						
T35B				S	**Sg**	**03 47 25.8**	**-0.3**
	baz=276						
OK029	**Liberty Lake**	**1.27**	**163**		**Pn**	**03 47 12.7**	**-0.9**
QUOK	**Quay**	**1.29**	**130**		**Pn**	**03 47 13.3**	**-0.6**
OK031	**S. Brethren Rd**	**1.37**	**140**		**Pn**	**03 47 14.4**	**-0.6**
BCOK	**Bluff Creek, N**	**1.38**	**169**		**Pn**	**03 47 14.7**	**-0.3**
OK030	**Cody Creek RV**	**1.42**	**139**		**Pn**	**03 47 15.0**	**-0.6**
R32A	**Long Quarter,**	**1.54**	**336**		**Pn**	**03 47 17.1**	**-0.2**
R32A	**Long Quarter,**	**1.54**	**336**	P	**Pn**	**03 47 17.8**	**+0.4**
	baz=156,SNR=51						
OKCFA	**Oklahoma City**	**1.64**	**166**		**Pn**	**03 47 19.1**	**+0.5**
OKCFA	**Oklahoma City**	**1.64**	**166**	P	**Pn**	**03 47 19.3**	**+0.7**
	baz=347						
OKCFA				S	**Sg**	**03 47 42.3**	**+0.1**
	baz=347						
OKCSW	**OKLAHOMA CITY**	**1.65**	**166**		**Pn**	**03 47 19.3**	**+0.5**
FNO	**Franklin**	**1.80**	**166**		**Pn**	**03 47 21.4**	**+0.5**
TUL1	**Leonard**	**2.04**	**122**		**Pn**	**03 47 24.9**	**+0.8**
TUL1				IAmb_Lg		03 47 55.5	
	comp=Z,55nm,1.0s						
TUL1	**Leonard**	**2.04**	**122**	S	**Sb**	**03 47 53.2**	**+0.9**
	baz=304						
CBKS	**Cedar Bluff**	**2.30**	**322**		**Pn**	**03 47 29.2**	**+1.4**
CBKS	**Cedar Bluff**	**2.30**	**322**	P	**Pn**	**03 47 28.6**	**+0.9**
	baz=141,SNR=13						
KSU1	**Kansas State U**	**2.33**	**26**		**Pn**	**03 47 28.8**	**+0.7**
KSU1				IAmb_Lg		03 48 04.3	
	comp=Z,28nm,0.8s						
KSU1	**Kansas State U**	**2.33**	**26**	P	**Pn**	**03 47 28.9**	**+0.7**
	baz=207,SNR=7.2						
KSU1				S	**Sb**	**03 47 59.2**	**-1.5**
	baz=207						
X34A	**Smith Ranch, M**	**2.41**	**178**	Pn	**Pn**	**03 47 29.4**	**+0.2**
X34A				IAmb_Lg		03 48 07.6	
	comp=Z,21nm,0.7s						
U38A	**Gravette**	**2.90**	**100**	Pn	**Pn**	**03 47 36.1**	**+0.1**
X37A	**Clayton**	**3.19**	**139**	Pn	**Pn**	**03 47 39.8**	**-0.1**
X37A	**Clayton**	**3.19**	**139**	P	**Pn**	**03 47 40.9**	**+0.9**
	baz=320,SNR=16						
HHAR	**Hobbs**	**3.29**	**102**		**Pn**	**03 47 41.7**	**+0.4**
AMTX	**Amarillo**	**3.71**	**236**	Pn	**Pn**	**03 47 47.0**	**-0.3**
AMTX					LR	03 48 46.7	
Z35A	**Perchaven, San**	**3.71**	**171**	Pn	**Pn**	**03 47 47.3**	**+0.1**
S39A	**Bolivar**	**3.73**	**78**	Pn	**Pn**	**03 47 47.8**	**+0.4**
S39A	**Bolivar**	**3.73**	**78**	P	**Pn**	**03 47 47.6**	**+0.2**
	baz=261,SNR=7.1						
N33A	**J Bar K, Exete**	**3.74**	**6**	IAmb_Lg		03 48 56.5	
	comp=Z,15nm,0.8s						
W39A	**Magazine**	**3.81**	**117**	Pn	**Pn**	**03 47 48.9**	**+0.4**
W39A					LR	03 48 49.1	
U40A	**Yellville**	**4.13**	**98**	Pn	**Pn**	**03 47 52.5**	**-0.4**
U40A					**Sn**	**03 48 41.4**	**0.0**
N35A	**Tabor**	**4.24**	**24**	Pn	**Pn**	**03 47 53.6**	**-0.7**
MIAR	**Mount Ida**	**4.31**	**124**	Pn	**Pn**	**03 47 56.0**	**+0.7**
P38A	**Dawn**	**4.33**	**52**	Pn	**Pn**	**03 47 56.0**	**+0.4**
P38A					LR	03 49 07.5	
P38A	**Dawn**	**4.33**	**52**	P	**Pn**	**03 47 56.3**	**+0.7**
	baz=234,SNR=7.7						
BGNE	**Belgrade**	**4.39**	**358**	IAmb_Lg		03 49 12.5	
	comp=Z,21nm,0.8s						
Z38A	**Mt. Pleasant**	**4.45**	**146**	IAmb_Lg		03 49 13.5	
	comp=Z,19nm,0.9s						
MGMO	**Mountain Grove**	**4.53**	**87**	Pn	**Pn**	**03 47 58.2**	**-0.1**
MGMO				IAmb_Lg		03 49 11.1	
	comp=Z,11nm,0.8s						
R40A	**Maddies Statio**	**4.67**	**72**	Pn	**Pn**	**03 48 00.4**	**+0.1**
R40A	**Maddies Statio**	**4.67**	**72**	P	**Pn**	**03 48 00.8**	**+0.6**
	baz=256,SNR=7.3						
FCAR	**Ozark Folk Cen**	**4.81**	**102**	Pn	**Pn**	**03 48 02.6**	**+0.4**
FCAR				IAmb_Lg		03 49 28.4	
	comp=Z,14nm,1.0s						
X40A	**Basin Creek Fa**	**4.85**	**120**	Pn	**Pn**	**03 48 03.8**	**+1.0**
X40A				IAmb_Lg		03 49 33.2	
	comp=Z,12nm,1.0s						
WHAR	**Wooly Hollow**	**4.87**	**109**	Pn	**Pn**	**03 48 02.8**	**-0.3**
T25A	**Trinidad**	**5.19**	**273**	IAmb_Lg		03 49 39.4	
	comp=Z,11nm,0.8s						
N38A	**Joes South For**	**5.26**	**43**	IAmb_Lg		03 49 48.1	
	comp=Z,17nm,1.0s						
CCM	**Cathedral Cave**	**5.41**	**77**		**Sb**	**03 49 30.0**	**+0.7**
CCM				IAmb_Lg		03 49 41.3	
	comp=Z,12nm,0.7s						
T42A	**Van Buren**	**5.47**	**88**	Pn	**Pn**	**03 48 12.8**	**+1.6**
LCAR	**Lake Charles**	**5.53**	**98**	Pn	**Pn**	**03 48 11.9**	**-0.2**
PBMO	**Poplar Bluff**	**6.01**	**90**	IAmb_Lg		03 50 02.0	
	comp=Z,11nm,0.8s						
JCT	**Junction City**	**6.70**	**194**	IAmb_Lg		03 50 30.3	
	comp=Z,10nm,1.0s						

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*IDC **14** 03:48:13.9±1.4, 8°.62N×71°.48W, h0^{km}, mb3.5/1, mb1 3.8/3, mb1mx3.4/31, mbtmp3.7/3, ML2.7/2, MS2.7/1, Ms1 2.7/1, ms1mx2.4/24, Error ellipse: s-maj=43.5km s-min=11.2km az=165.0*

ISC 14 03:48:14.0±1.4**, 8°.58N**±0°.04×**71°.47W**±0°.03**, h1**^{km}±10^{km}**, n34, σ1^{s}.91**/52**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	**Socops**	**0.68**	**116**	*e*P	**Pg**	**03 48 25.9**	**-1.1**
SDV	**Santo Domingo**	**0.88**	**70**	Pg	**Pb**	**03 48 31.9**	**-0.3**
	13nm,0.3s,baz=225,slow=9.0,SNR=31						
SDV				Lg	Lg	03 48 42.5	
	38nm,0.3s,baz=357,slow=18,SNR=16						
SDV	**Santo Domingo**	**0.88**	**70**	*e*P	**Pb**	**03 48 31.6**	**-0.6**
SDV				*e*S	**Sg**	**03 48 42.6**	**+0.3**
PAMC	**Pamplona, Colo**	**1.73**	**225**	*e*P	**Pn**	**03 48 46.4**	**+0.7**
PAMC				*e*S	**Sn**	**03 49 09.7**	**+0.9**
OCAC	**Ocana**	**1.86**	**260**	*e*P	**Pb**	**03 48 48.0**	**-0.9**
OCAC				*e*S	**Sb**	**03 49 12.7**	**-0.1**
LL6C	**La Loma 6 Bece**	**2.12**	**303**	*e*P	**Pb**	**03 48 51.7**	**-1.5**
LL6C				*e*S	**Sb**	**03 49 19.6**	**-0.4**
TAMC	**Tame, Arauca**	**2.16**	**189**	*e*P	**Pb**	**03 48 53.9**	**0.0**
ELOV	**Elorza**	**2.52**	**128**	*e*P	**Pn**	**03 48 57.2**	**+1.1**
ELOV				*e*S	**Sn**	**03 49 28.5**	**+1.0**
SMLC	**San Martn de**	**2.58**	**275**	*e*P	**Pn**	**03 48 57.1**	**+0.1**
SMLC				*e*S	**Sn**	**03 49 25.8**	**-3.2**
BARC	**Barichara**	**2.60**	**221**	*e*P	**Pn**	**03 48 59.1**	**+1.6**
BRRC	**Barranca, Sant**	**2.66**	**237**	*e*P	**Pb**	**03 49 03.4**	**+0.9**
BRRC				*e*S	**Sb**	**03 49 34.0**	**-1.7**
ARGC	**Ariguani, Magd**	**3.02**	**295**	*e*P	**Pg**	**03 49 11.9**	**0.0**
RUSC	**La Rusia**	**3.11**	**211**	*e*P	**Pn**	**03 49 04.7**	**-0.1**
RUSC				*e*S	**Sn**	**03 49 43.4**	**+0.5**
ZARC	**Zaragoza, Cauc**	**3.52**	**252**	*e*S	**Sn**	**03 49 50.6**	**-1.7**
SJCC	**San Jacinto, C**	**3.89**	**290**	*e*P	**Pn**	**03 49 17.6**	**+2.6**
SPBC	**San Pablo de B**	**3.89**	**222**	*e*P	**Pn**	**03 49 16.2**	**+1.1**
UREC	**San Jos de Ur**	**4.11**	**259**	*e*P	**Pn**	**03 49 20.7**	**+2.7**
MOTC	**Monteria, Cord**	**4.15**	**273**	*e*P	**Pn**	**03 49 20.0**	**+1.4**
MOTC				*e*S	**Sn**	**03 50 10.6**	**+2.8**
PTGC	**Puerto Gaitan,**	**4.40**	**189**	*e*P	**Pg**	**03 49 40.8**	**+2.3**
PTGC				*e*S	**Sn**	**03 50 15.2**	**+1.1**
NORC	**Norcasia**	**4.51**	**229**	*e*P	**Pn**	**03 49 26.2**	**+2.6**
NORC				*e*S	**Sn**	**03 50 17.6**	**+0.8**
CHIC	**Chingaza**	**4.52**	**210**	*e*P	**Pn**	**03 49 24.5**	**+0.4**
CHIC				*e*S	**Sn**	**03 50 15.8**	**-1.8**
ROSC	**El Rosal**	**4.67**	**217**	Pn	**Pn**	**03 49 28.4**	**+2.3**
	2.4nm,0.3s,baz=90,slow=20,SNR=2.9						
HELC	**Santa Helena**	**4.67**	**240**	*e*P	**Pn**	**03 49 29.4**	**+3.3**
HELC				*e*S	**Sn**	**03 50 22.6**	**+1.4**
DBBC	**Dabeiba**	**4.95**	**252**	*e*P	**Pg**	**03 49 46.4**	**-2.5**
GUY2C	**Guyana, Caldas**	**5.11**	**229**	*e*P	**Pn**	**03 49 34.0**	**+1.9**
GUY2C				*e*S	**Sn**	**03 50 30.4**	**-1.7**
CBOC	**Ciudad Bolivar**	**5.25**	**239**	*e*P	**Pn**	**03 49 36.9**	**+3.0**
ANIL	**Santa Ana**	**5.64**	**224**	*e*P	**Pn**	**03 49 41.3**	**+2.0**
ANIL				*e*S	**Sn**	**03 50 46.5**	**+1.6**
ORTC	**Ortega, Tolima**	**5.97**	**219**	*e*P	**Pn**	**03 49 45.8**	**+2.2**
ORTC				*e*S	**Sn**	**03 50 50.3**	**-2.4**
PLMC	**San Jos del P**	**6.01**	**233**	*e*P	**Pn**	**03 49 45.0**	**+0.7**
PLMC				*e*S	**Sn**	**03 50 55.1**	**+1.2**
MACC	**Macarena, Meta**	**6.82**	**200**	*e*P	**Pn**	**03 49 52.6**	**-2.7**
MACC				*e*S	**Sn**	**03 51 07.8**	**-5.9**
PCRV	**Puerto La Cruz**	**6.93**	**76**	Pn	**Pn**	**03 49 58.0**	**+1.2**
	0.5nm,0.3s,baz=317,slow=2.8,SNR=5.4						
PCRV				Sn	**Sn**	**03 51 16.4**	**0.0**
	0.8nm,0.3s,baz=306,slow=23,SNR=7.8						
NNA	**Nana**	**21.12**	**195**	LR	LR	04 01 13.1	
	comp=Z,24nm,21.8s,baz=242,slow=37						
PDAR	**Pinedale Array**	**47.66**	**322**	P	**P**	**03 56 52.7**	**+0.3**
	0.3nm,0.4s,baz=118,slow=10,SNR=4.8						
WRA	**Warramunga Arr**	**152.60**	**243**	PKPbc	**PKPbc**	**04 08 11.6**	**-1.8**
	0.3nm,0.4s,baz=105,slow=2.8,SNR=6.4						

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*NIED **14** 03:51:50.9, 31°.19N×128°.68E, h13^{km}, MW4.6, Moment*

Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.79; $M_{\theta\theta}$3.01; $M_{\phi\phi}$-1.22; $M_{r\theta}$0.46; $M_{\theta\phi}$6.60; $M_{\phi r}$-4.83; Fault plane solution: $M_0$8.60000×10^{15} NP1:ϕ_s13.00000°, δ79.00000°, λ-145.00000°. NP2:ϕ_s275.00000°, δ56.00000°, λ-14.00000°.

*JMA **14** 03:51:50.9±0.2, 31°.19N×128°.68E, h13^{km}±2^{km}, M4.6*

JMA Felt II J1.

*IDC **14** 03:51:51.6±0.7, 31°.24N×128°.75E, h0^{km}, mb4.0/14, mb1 4.2/19, mb1mx4.0/54, mbtmp4.0/19, ML3.8/5, MS3.8/26, Ms1 3.9/26, ms1mx3.7/48, Error ellipse: s-maj=20.4km s-min=15.7km az=81.0*

*MOS **14** 03:51:53.1±1.4, 31°.38N×128°.83E, h15^{km}, mb4.6/18, Error ellipse: s-maj=11.9km s-min=6.0km az=100.4*

*BJI **14** 03:51:53.3±0.0, 31°.39N×128°.98E, h12^{km}, mB4.6/22, mb4.3/37, ML4.6/2, Ms4.6/40, Ms7 4.2/40*

*NEIC **14** 03:51:54.2±1.9, 31°.45N±0°.05×128°.88E±0°.06, h10^{km}±1^{km}, mb4.6/29, Error ellipse: s-maj=9.3km s-min=6.6km az=228.0*

*KMA **14** 03:51:56.3, 31°.40N×128°.47E, h15^{km}*

ISC 14 03:51:54.1±1.5**, 31°.37N**±0°.04×**128°.95E**±0°.03**, h11**^{km}±9^{km}**, n154,** $\sigma 1^{s}$**.72**/153**, mb4.4**/39**, MS4.1**/28**, 9C-10D, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	**Shimokoshiki**	**0.73**	**65**	⇓P	**Pb**	**03 52 09.3**	**+0.5**
JSJ				S	**Sn**	**03 52 22.2**	**+0.7**
JFU	**Fukue jima 2**	**1.29**	**353**	P	**Pn**	**03 52 17.1**	**-1.1**
JFU				*e*S	**Sg**	**03 52 35.5**	**-0.3**
JSU	**Suzuyama**	**1.30**	**84**	⇓P	**Pn**	**03 52 18.6**	**+0.3**
JSU				*e*S	**Sg**	**03 52 38.4**	**+2.5**
JSU	**Suzuyama**	**1.30**	**84**	Pn	**Pn**	**03 52 18.3**	**0.0**
JSU				Sn	**Sg**	**03 52 37.5**	**+1.5**
JKC	**Kuchinoerabu**	**1.40**	**130**	P	**Pn**	**03 52 17.4**	**-2.3**
JNN	**Nakanoshima**	**1.72**	**152**	P	**Pn**	**03 52 20.6**	**-3.5**
JYAK	**Yakushimahirau**	**1.75**	**130**	P	**Pn**	**03 52 22.2**	**-2.3**
JTN	**Tanegashima 3**	**1.89**	**112**	P	**Pn**	**03 52 25.7**	**-0.6**
JTN				*e*S	**Sn**	**03 52 51.0**	**+0.9**
JTZ	**Takazaki**	**1.90**	**73**	⇓P	**Pn**	**03 52 27.3**	**+0.7**
JMTN	**Minamitane**	**1.94**	**119**	P	**Pn**	**03 52 25.9**	**-1.2**
JMTN				*e*S	**Sn**	**03 52 52.0**	**+0.5**
JIU3	**Izumi3**	**1.98**	**53**	⇓P	**Pn**	**03 52 28.9**	**+1.3**
JNU	**Nakatsue**	**2.40**	**43**	Pn	**Pb**	**03 52 36.1**	**-1.2**
	77nm,0.3s,baz=251,slow=0.1,SNR=60						
KSJJU	**Jeju**	**2.89**	**316**	P	**Pn**	**03 52 38.0**	**-2.2**
	SNR=9.8						
GMDB	**Geomundo**	**3.01**	**333**	P	**Pn**	**03 52 40.2**	**-1.5**
	SNR=17						
GOS1	**Gosan-ri**	**3.01**	**310**	P	**Pn**	**03 52 39.5**	**-2.3**
	SNR=12						
GOS2	**Gosang-Q330s**	**3.02**	**310**	P	**Pn**	**03 52 39.3**	**-2.5**
	SNR=12						
HALB	**Hallimjungang-**	**3.04**	**313**	P	**Pn**	**03 52 40.0**	**-2.2**
	SNR=11						
JTU	**Tsushima**	**3.17**	**7**	Pn	**Pn**	**03 52 41.6**	**-2.4**
YKDB	**Yokjido**	**3.29**	**350**	P	**Pn**	**03 52 46.0**	**+0.3**
	SNR=14						
CJD	**Chujado**	**3.42**	**320**	P	**Pn**	**03 52 45.3**	**-2.1**
	SNR=17						
BOSB	**Boseong-gun**	**3.69**	**337**	P	**Pn**	**03 52 50.0**	**-1.1**
	SNR=13						
KSJDO	**Jindo**	**3.80**	**325**	P	**Pn**	**03 52 51.0**	**-1.7**
	SNR=6.9						
GGDB	**Gageodo**	**4.19**	**311**	P	**Pn**	**03 52 55.1**	**-2.9**
	SNR=19						
HUK2	**Heuksan-myeon**	**4.42**	**319**	P	**Pn**	**03 52 59.3**	**-2.0**
	SNR=29						
JOW	**Kunigami**	**4.56**	**188**	Pn	**Pn**	**03 53 01.1**	**-2.0**
	5.7nm,0.3s,baz=5.4,slow=4.9,SNR=8.2						
JOW	**Kunigami**	**4.56**	**188**	Pn	**Pn**	**03 53 02.6**	**-0.5**
JMN	**Monobe**	**4.78**	**59**	Pn	**Pn**	**03 53 05.7**	**-0.6**
KSCPR	**CHUPUNGNYEONG**	**4.91**	**351**	P	**Pn**	**03 53 08.8**	**+0.9**
	SNR=11						
JHS	**Saijyo**	**5.03**	**43**	Pn	**Pn**	**03 53 08.2**	**-1.5**
TJN	**Taejon**	**5.17**	**346**	*de*P	**Pn**	**03 53 12.0**	**+0.6**
KSBON	**Boeun**	**5.21**	**350**	P	**Pn**	**03 53 13.7**	**+1.6**
	SNR=11						
CHYB	**Chungyang**	**5.56**	**360**	P	**Pn**	**03 53 18.3**	**+1.4**
	SNR=8.6						
KSYOW	**Yeongwol**	**5.80**	**356**	P	**Pn**	**03 53 21.8**	**+1.5**
	SNR=8.2						
KSAR	**Wonju Array Be**	**6.12**	**352**	P	**Pn**	**03 53 24.8**	**+0.2**
KSAR	**Wonju Array Be**	**6.12**	**352**	Pn	**Pn**	**03 53 24.8**	**+0.2**
KSRS	**Korea Array**	**6.13**	**352**	Pn	**Pn**	**03 53 25.6**	**+1.0**
	3.0nm,0.3s,baz=175,slow=14,SNR=47						
KSRS				Sn	**Sn**	**03 54 34.6**	**-0.1**
	6.3nm,0.3s,baz=175,slow=25,SNR=8.9						
KS19	**Wonju Array Si**	**6.18**	**352**	Pn	**Pn**	**03 53 24.5**	**-0.9**
INCN	**Inchon**	**6.39**	**343**	P	**Pn**	**03 53 25.7**	**-2.6**
INCN	**Inchon**	**6.39**	**343**	Pn	**Pn**	**03 53 25.7**	**-2.6**
KSCHC	**Chuncheon**	**6.46**	**352**	P	**Pn**	**03 53 30.4**	**+1.2**
	SNR=9.0						
SSE	**Sheshan**	**6.65**	**270**	Pn	Pn	03 53 18.0	-14
SSE				Sn	**Sn**	**03 54 49.3**	**+1.6**
SSE				smax	smax		
	comp=N,170nm,0.9s						
SSE				smax	smax		
	comp=E,93nm,1.2s						
SSE				LR	LR		
	comp=N,2µm,15.4s						
SSE				LR	LR		
	comp=E,410nm,12.9s						
JWT	**Wachi**	**6.66**	**52**	Pn	**Pn**	**03 53 29.9**	**-2.2**
INU	**Inuyama**	**7.83**	**57**	Pn	**Pn**	**03 53 48.6**	**+0.6**
JGF	**Kuroka**	**8.20**	**57**	Pn	**Pn**	**03 53 52.4**	**-0.7**
NJ2	**Nanjing**	**8.62**	**277**	*e*P	**Pn**	**03 54 00.4**	**+1.5**
NJ2				S	**Sn**	**03 55 37.6**	**+1.4**
NJ2				pmax	pmax		
	comp=E,14nm,0.5s						
NJ2				LR	LR		
	comp=E,4µm,10.9s						
NJ2				LR	LR		
	comp=E,1µm,16.0s						
NJ2				LR	LR		
	comp=E,2µm,13.8s						
YOJ	**Yonaguni jima**	**8.65**	**219**	P	**Pn**	**03 53 59.2**	**-0.1**
YOJ	**Yonaguni jima**	**8.65**	**219**	Pn	**Pn**	**03 53 59.2**	**-0.1**
MJAR	**Matsushiro Arr**	**9.26**	**54**	Pn	**Pn**	**03 54 11.7**	**+4.0**
	comp=E,0.2nm,0.3s,baz=236,slow=14,SNR=10						
MJAR				LR	LR	03 58 32.7	
	comp=E,224nm,18.6s,baz=250,slow=42						
JHJ	**Hachijo jima 2**	**9.34**	**76**	LR	LR	03 57 43.2	
	comp=E,293nm,19.4s,baz=123,slow=37						
NACB	**Ninganchiao**	**9.68**	**224**	Pn	**Pn**	**03 54 13.6**	**+0.2**
SSLB	**Suanglung**	**10.35**	**225**		**Pn**	**03 54 23.1**	**+0.4**
YULB	**Yu-li**	**10.45**	**222**	Pn	**Pn**	**03 54 23.9**	**-0.1**
TPUB	**Ta-pu**	**10.91**	**225**	Pn	**Pn**	**03 54 30.0**	**-0.4**
TIA	**Tai'an**	**10.96**	**299**	P	**Pn**	**03 54 34.5**	**+3.6**
TIA				pmax	pmax		
	comp=E,6.0nm,0.7s						
TIA				LR	LR		
	comp=E,2µm,15.0s						
TIA				LR	LR		
	comp=E,1µm,15.8s						
TIA				LR	LR		
	comp=E,880nm,12.3s						
TWG	**Pinlang**	**11.03**	**221**	Pn	**Pn**	**03 54 31.5**	**-0.4**
JCJ	**Chichijima**	**12.32**	**107**	LR	LR	03 59 04.1	
	comp=E,233nm,21.8s,baz=124,slow=35						
WHN	**Wuhan**	**12.56**	**270**	⇑P	**Pn**	**03 54 51.8**	**-1.0**
WHN				S	**Sn**	**03 57 11.9**	**-0.8**
WHN				LR	LR		
	comp=E,3µm,9.8s						
WHN				LR	LR		
	comp=E,1µm,11.5s						
WHN				LR	LR		
	comp=E,2µm,11.0s						
CN2	**Changchun**	**12.71**	**348**	*e*P	**P**	**03 55 03.4**	**-2.8**
CN2				*e*S	Sn	03 57 26.4	+10
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=N,1µm,14.0s						
CN2				LR	LR		
	comp=E,4µm,14.0s						
CN2				LR	LR		
	comp=Z,2µm,15.1s						
USRK	**Ussuriysk Ar.**	**13.03**	**10**	P	**Pn**	**03 54 58.4**	**-0.8**
USRK	**Ussuriysk Ar.**	**13.03**	**10**	Pn	**Pn**	**03 54 58.4**	**-0.8**
MDJ	**Mudanjiang**	**13.24**	**2**	P	**Pn**	**03 55 01.8**	**-0.2**
MDJ				S	**Sn**	**03 57 31.4**	**+2.2**
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,170nm,5.4s						
MDJ				LR	LR		
	comp=Z,730nm,13.8s						
MDJ				LR	LR		
	comp=Z,1µm,12.0s						
MDJ				LR	LR		
	comp=Z,790nm,16.7s						
BJI	**Beijing**	**13.50**	**313**	P	**Pn**	**03 55 05.8**	**+0.2**
BJI				S	**Sn**	**03 57 40.8**	**+5.2**
BJI				pmax	pmax		
	comp=Z,7.0nm,0.5s						
ASAJ	**Asahikawa**	**16.66**	**36**	Pn	**Pn**	**03 55 48.7**	**+1.1**
	comp=Z,0.6nm,0.3s,baz=225,slow=12,SNR=9.1						
ASAJ				LR	LR	04 01 35.6	
	comp=Z,320nm,21.7s,baz=211,slow=35						
JKA	**Kamikawa-asahi**	**16.66**	**36**	Pn	**Pn**	**03 55 45.8**	**-1.8**
JKA				IAmb	IAmb	03 55 55.6	
	comp=Z,46nm,1.2s						
HHC	**Hu-ho-hao-te**	**16.91**	**309**	*e*P	**Pn**	**03 55 49.6**	**-1.3**
HHC				S	**Sn**	**03 59 01.8**	**+3.0**
HHC				pmax	pmax		
	comp=Z,14nm,0.8s						
HHC				pmax	pmax		
	comp=Z,82nm,4.2s						
HHC				LR	LR		
	comp=Z,1µm,14.6s						
HHC				LR	LR		
	comp=Z,770nm,12.3s						
HHC				LR	LR		
	comp=Z,980nm,12.1s						
XAN	**Xi'an**	**17.06**	**284**	P	**P**	**03 55 55.8**	**+1.2**
XAN				S	**S**	**03 59 09.8**	**-2.6**
XAN				pmax	pmax		
	comp=Z,10.0nm,1.5s						
XAN				LR	LR		
	comp=Z,2µm,13.3s						
XAN				LR	LR		
	comp=Z,1µm,11.8s						
XAN				LR	LR		
	comp=Z,670nm,13.5s						
KLR	**Kul'dur**	**17.97**	**6**	P	**P**	**03 56 07.2**	**+2.8**
	comp=Z,0.0nm,0.3s,baz=219,slow=8.0,SNR=5.4						
YSS	**Yuzh-Sakhalins**	**18.84**	**30**	*e*P	**Pn**	**03 56 16.9**	**+2.3**
YSS				MLR	MLR		
	comp=Z,400nm,13.0s						
YSS				MLR	MLR		
	comp=N,300nm,11.0s						
YSS	**Yuzh-Sakhalins**	**18.84**	**30**	P	**P**	**03 56 12.1**	**-2.0**
YSS				IAmb	IAmb	03 56 22.6	
	comp=Z,54nm,1.4s						
HIA	**Hailar**	**19.18**	**341**	⇓*e*P	**P**	**03 56 17.1**	**-0.6**
HIA				pmax	pmax		
	comp=Z,14nm,1.2s						
QIZ	**Qiongzhong**	**21.17**	**239**	P	**P**	**03 56 39.3**	**-0.2**
QIZ				S	**S**	**04 00 37.4**	**+2.4**
QIZ				LR	LR		
	comp=Z,510nm,12.8s						
QIZ				LR	LR		
	comp=Z,440nm,14.2s						
QIZ				LR	LR		
	comp=Z,360nm,12.0s						
LZH	**Lanzhou**	**21.38**	**289**	*e*P	P	03 56 49.3	+7.4
LZH				sP	sP	03 56 54.6	+8.5
LZH				PP	PnPn	03 57 19.0	+17
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				pmax	pmax		
	comp=Z,100nm,4.6s						
LZH				LR	LR		
	comp=N,2µm,13.0s						
LZH				LR	LR		
	comp=E,940nm,14.1s						
LZH				LR	LR		
	comp=Z,850nm,15.2s						
CD2	**Chengdu**	**21.55**	**275**	P	**P**	**03 56 44.0**	**+0.3**
CD2				pmax	pmax		
	comp=Z,30nm,1.1s						
CD2				LR	LR		
	comp=Z,2µm,13.7s						
CD2				LR	LR		
	comp=Z,1µm,12.2s						
CD2				LR	LR		
	comp=Z,1µm,14.5s						
ZEA	**Zeya**	**22.39**	**357**	⇑*e*P	**P**	**03 56 54.1**	**+1.7**
GUMO	**Guam**	**22.96**	**137**	LR	LR	04 04 50.4	
	comp=Z,150nm,18.7s,baz=62,slow=34						
ULN	**Ulaanbaatar**	**23.45**	**321**	⇓*e*P	**P**	**03 57 03.3**	**-0.4**
ULN				pmax	pmax		
	comp=Z,8.0nm,1.3s						
ULN	**Ulaanbaatar**	**23.45**	**321**	P	**P**	**03 57 00.1**	**-3.5**
SONM	**Songino Array**	**23.79**	**320**	P	**P**	**03 57 05.7**	**-1.3**
	comp=Z,4.2nm,0.9s,baz=144,slow=10.0,SNR=16						
SONM				LR	LR	04 07 19.8	
	comp=Z,432nm,20.8s,baz=154,slow=39						
SONM	**Songino Array**	**23.79**	**320**	P	**P**	**03 57 04.3**	**-2.6**
KMI	**Kunming**	**23.88**	**261**	⇑P	**P**	**03 57 05.6**	**-2.5**
KMI				S	**S**	**04 01 23.3**	**-1.1**
KMI				SS	**SnSn**	**04 02 08.4**	**+5.0**
KMI				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KMI				pmax	pmax		
	comp=Z,170nm,5.4s						
KMI				LR	LR		
	comp=Z,980nm,16.9s						
KMI				LR	LR		
	comp=Z,350nm,18.6s						
KMI				LR	LR		
	comp=Z,330nm,13.5s						
DAV	**Davao City (W)**	**24.38**	**188**	LR	LR	04 09 07.6	
	comp=Z,115nm,18.1s,baz=338,slow=43						
GTA	**Gaotai**	**24.99**	**297**	P	**P**	**03 57 22.9**	**+4.8**
GTA				pP	sP	03 57 29.8	+7.4
GTA				sP	pP	03 57 32.9	+12
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,78nm,5.8s						
GTA				LR	LR		
	comp=Z,860nm,14.9s						
GTA				LR	LR		
	comp=Z,430nm,14.2s						
GTA				LR	LR		
	comp=Z,640nm,15.6s						
ZAK	**Zakamensk**	**26.94**	**322**	*e*P	**P**	**03 57 37.6**	**+2.1**
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
TLY	**Talaya**	**27.52**	**325**	LR	LR	04 09 38.0	
	comp=Z,449nm,18.7s,baz=154,slow=39						
CMAR	**Chiang Mai Arr**	**29.99**	**252**	LR	LR	04 10 38.8	
	comp=Z,124nm,19.1s,baz=89,slow=38						
PETK	**Petropavlovsk-**	**30.07**	**35**	LR	LR	04 09 56.4	
	comp=Z,185nm,18.1s,baz=204,slow=36						
WMQ	**Urumqi**	**34.62**	**303**	*e*P	**P**	**03 58 44.8**	**+1.4**
WMQ				pP	sP	03 58 48.3	+0.5
WMQ				sP	pP	03 58 59.0	+12
WMQ				pmax	pmax		
	comp=Z,25nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,200nm,6.5s						
WMQ				LR	LR		
	comp=Z,590nm,8.9s						
WMQ				LR	LR		
	comp=Z,440nm,8.3s						
WMQ				LR	LR		
	comp=Z,160nm,18.9s						
JAY	**Jayapura**	**35.51**	**159**	LR	LR	04 11 44.6	
	comp=Z,113nm,20.7s,baz=318,slow=34						
ZALV	**Zalesovo Beam**	**38.67**	**319**	P	**P**	**03 59 18.3**	**+0.6**
	comp=Z,0.5nm,0.4s,baz=138,slow=9.3,SNR=3.9						
ZALV				LR	LR	04 16 31.5	
	comp=Z,320nm,18.9s,baz=132,slow=38						
MK31	**Makanchi Array**	**38.76**	**307**	P	**P**	**03 59 16.8**	**-1.8**
MK31				pmax	pmax		
	comp=Z,4.0nm,1.2s						
MK31	**Makanchi Array**	**38.76**	**307**	P	**P**	**03 59 16.8**	**-1.8**
MKAR	**Makanchi Array**	**38.76**	**307**	P	**P**	**03 59 17.4**	**-1.2**
	comp=Z,1.2nm,1.0s,baz=82,slow=12,SNR=5.1						
MKAR				LR	LR	04 16 10.7	
	comp=Z,170nm,20.5s,baz=90,slow=38						
MKAR	**Makanchi Array**	**38.76**	**307**	*ce*P	**P**	**03 59 22.3**	**+3.7**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MKAR	**Makanchi Array**	**38.76**	**307**	P	**P**	**03 59 17.3**	**-1.3**
TIXI	**Tiksi**	**40.34**	**360**	⇓*e*P	**P**	**03 59 30.0**	**-1.3**
TIXI				pmax	pmax		
	comp=Z,11nm,2.0s						
KURK	**Kurchatov**	**41.67**	**313**	⇑*e*P	**P**	**03 59 40.8**	**-1.8**
KURK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
KURK	**Kurchatov**	**41.67**	**313**	P	**P**	**03 59 40.1**	**-2.4**
KURBB	**Kurchatov Arra**	**41.71**	**312**	P	**P**	**03 59 40.1**	**-2.8**
	comp=Z,0.5nm,0.5s,baz=96,slow=8.6,SNR=4.4						
AAK	**Ala-Archa**	**44.23**	**301**	P	**P**	**04 00 05.6**	**+2.0**
	comp=Z,2.0nm,0.8s,baz=60,slow=8.1,SNR=3.7						
AAK	**Ala-Archa**	**44.23**	**301**	P	**P**	**04 00 05.6**	**+2.0**
AAK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
AAK	**Ala-Archa**	**44.23**	**301**	IAmb	IAmb	04 00 08.0	
	comp=Z,4.5nm,1.1s						
NRIK	**Noril'sk**	**44.60**	**340**	P	**P**	**04 00 05.1**	**-1.0**
	comp=Z,1.8nm,0.6s,baz=141,slow=13,SNR=2.2						
NRIK				LR	LR	04 19 12.8	
	comp=Z,138nm,20.4s,baz=64,slow=37						
NRIK	**Noril'sk**	**44.60**	**340**	⇑*e*P	**P**	**04 00 04.9**	**-1.1**
NRIK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NRIK	**Noril'sk**	**44.60**	**340**	P	**P**	**04 00 04.5**	**-1.6**
NRIK				IAmb	IAmb	04 00 13.1	
	comp=Z,6.0nm,0.9s						
BRVK	**Borovoye**	**47.04**	**315**	⇓*e*P	**P**	**04 00 24.5**	**-1.0**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BRVK	**Borovoye**	**47.04**	**315**	P	**P**	**04 00 23.9**	**-1.6**
KK31	**Karatay Array**	**47.11**	**302**	P	**P**	**04 00 24.9**	**-1.4**
KK31				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KK31	**Karatay Array**	**47.11**	**302**	P	**P**	**04 00 24.9**	**-1.4**
KK31				IAmb	IAmb	04 00 30.7	
	comp=Z,6.6nm,0.9s						
KKAR	**Karatay Array**	**47.11**	**302**	P	**P**	**04 00 24.9**	**-1.4**
KKAR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KKAR	**Karatay Array**	**47.11**	**302**	P	**P**	**04 00 24.9**	**-1.4**
KKAR				IAmb	IAmb	04 00 30.7	
	comp=Z,6.6nm,0.9s						
FITZ	**Fitzroy Crossi**	**49.28**	**184**	P	**P**	**04 00 45.1**	**+2.0**
FITZ				IAmb	IAmb	04 00 47.7	
	comp=Z,10nm,1.2s						
HNR	**Honiara**	**50.28**	**139**	LR	LR	04 19 44.9	
	comp=Z,47nm,20.1s,baz=288,slow=33						
WRAB	**Tennant Creek**	**51.27**	**173**	P	**P**	**04 01 00.0**	**+1.8**
WRAB				pmax	pmax		
	comp=Z,18nm,1.3s						
WRAB	**Tennant Creek**	**51.27**	**173**	P	**P**	**04 00 60.0**	**+1.8**
WRA	**Warramunga Arr**	**51.28**	**173**	P	**P**	**04 00 55.8**	**-2.5**
	comp=Z,1.2nm,0.8s,baz=355,slow=7.7,SNR=5.6						
WRA				LR	LR	04 22 17.5	
	comp=Z,51nm,21.9s,baz=310,slow=36						
WRA	**Warramunga Arr**	**51.28**	**173**	*i* P	**P**	**04 01 00.1**	**+1.8**
WRA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WB2	**Warramunga Arr**	**51.28**	**173**	P	**P**	**04 00 58.7**	**+0.4**
WB2				IAmb	IAmb	04 01 04.3	
	comp=Z,7.0nm,1.1s						
WR0	**Warramunga Arr**	**51.32**	**173**	P	**P**	**04 00 58.2**	**-0.4**
WR0				IAmb	IAmb	04 01 04.9	
	comp=Z,8.1nm,1.1s						
PSA00	**Pilbara Seismi**	**53.36**	**191**	P	**P**	**04 01 13.7**	**0.0**
PSA00				IAmb	IAmb	04 01 38.6	
	comp=Z,4.7nm,1.1s						
ABKAR	**Akbulak array**	**53.69**	**311**	P	**P**	**04 01 15.2**	**-0.8**
CTAO	**Charters Tower**	**53.79**	**160**	P	**P**	**04 01 17.1**	**+0.2**
CTAO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CTAO	**Charters Tower**	**53.79**	**160**	P	**P**	**04 01 17.1**	**+0.2**
CTAO				IAmb	IAmb	04 01 21.9	
	comp=Z,5.4nm,0.9s						
ARU	**Arti**	**53.83**	**320**	*d i*P	**P**	**04 01 16.0**	**-0.8**
ARU				S	**S**	**04 08 51.6**	**+0.2**
ARU				SS	**SS**	**04 12 31.7**	**-0.2**
ARU				pmax	pmax		
	comp=Z,15nm,2.2s						
ARU	**Arti**	**53.83**	**320**	P	**P**	**04 01 15.8**	**-1.0**
ARU				IAmb	IAmb	04 01 22.7	
	comp=Z,9.0nm,0.9s						
AS31	**Alice Springs**	**54.93**	**174**	P	**P**	**04 01 24.0**	**-1.2**
ASAR	**Alice Springs**	**54.93**	**174**	P	**P**	**04 01 23.6**	**-1.6**
	comp=Z,2.1nm,0.8s,baz=2.5,slow=8.3,SNR=22						
ASAR				LR	LR	04 24 56.9	
	comp=Z,26nm,21.9s,baz=8.5,slow=36						
ASAR	**Alice Springs**	**54.93**	**174**	P	**P**	**04 01 24.6**	**-0.6**
H23K	**Yukon River**	**58.40**	**29**	IAmb	IAmb	04 01 57.1	
	comp=Z,7.3nm,0.9s						
KIRV	**Kirov**	**58.49**	**323**	⇑*e*P	**P**	**04 01 49.5**	**-0.5**
NEA2	**Nenana**	**58.75**	**30**	P	**P**	**04 01 52.1**	**+0.3**
NEA2				IAmb	IAmb	04 01 59.3	
	comp=Z,10nm,1.2s						
MDM	**Murphy Dome**	**59.05**	**29**	P	**P**	**04 01 54.0**	**0.0**
POKR	**Poker Plat Res**	**59.37**	**29**	P	**P**	**04 01 56.4**	**+0.3**
ILAR	**Eielson Array**	**59.65**	**30**	P	**P**	**04 01 57.5**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=282,slow=7.7,SNR=14						
ILAR				LR	LR	04 28 30.5	
	comp=Z,51nm,18.0s,baz=224,slow=37						
EPYK	**Eagle Plains**	**63.39**	**27**	P	**P**	**04 02 23.6**	**+0.2**
A36M	**Sachs Harbour**	**65.18**	**19**	P	**P**	**04 02 35.8**	**+0.9**
ARCES	**ARCESS Array B**	**65.48**	**338**	LR	LR	04 39 05.8	
	comp=Z,161nm,18.6s,baz=285,slow=43						
KBZ	**Khabaz**	**66.45**	**308**	LR	LR	04 32 55.8	
	comp=Z,103nm,18.0s,baz=34,slow=37						
KBZ	**Khabaz**	**66.45**	**308**	⇑*e*P	**P**	**04 02 42.2**	**-1.4**
KBZ				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KIV	**Kislovodsk**	**66.51**	**308**	*e*P	**P**	**04 02 45.5**	**+1.4**
KIV				pmax	pmax		
	comp=Z,16nm,1.1s						
FINES	**FINESS Array B**	**68.73**	**330**	P	**P**	**04 02 56.6**	**-1.0**
	comp=Z,2.3nm,0.9s,baz=90,slow=6.1,SNR=3.8						
FINES				LR	LR	04 37 13.0	
	comp=Z,191nm,21.3s,baz=264,slow=40						
FINES	**FINESS Array B**	**68.73**	**330**	*i* P	**P**	**04 02 58.5**	**+0.8**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
AKASG	**Malin Array Be**	**72.07**	**319**	P	**P**	**04 03 17.6**	**-0.7**
	comp=Z,0.3nm,0.4s,baz=50,slow=6.1,SNR=1.7						
AKASG				LR	LR	04 37 21.0	
	comp=Z,154nm,18.3s,baz=80,slow=38						
AKASG	**Malin Array Be**	**72.07**	**319**	P	**P**	**04 03 18.3**	**+0.1**
AKASG				pmax	pmax		
	comp=Z,4.0nm,1.4s						
AKASG	**Malin Array Be**	**72.07**	**319**	P	**P**	**04 03 18.3**	**+0.1**
AKASG				IAmb	IAmb	04 03 23.0	
	comp=Z,3.7nm,1.4s						
BR131	**Keskin Array S**	**74.41**	**307**	⇑*e*P	**P**	**04 03 31.8**	**-0.7**
BRTR	**Keskin Array B**	**74.41**	**307**	P	**P**	**04 03 32.7**	**+0.2**
	comp=Z,1.2nm,0.9s,baz=64,slow=6.6,SNR=4.2						
NOA	**NORSAR Array B**	**75.00**	**334**	LR	LR	04 38 22.3	
	comp=Z,91nm,18.2s,baz=0.0,slow=37						
GERES	**GERESS Array B**	**81.50**	**323**	LR	LR	04 43 15.2	
	comp=Z,170nm,19.6s,baz=357,slow=38						
NVAR	**Mina Array Bea**	**86.51**	**47**	P	**P**	**04 04 38.4**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=331,slow=5.8,SNR=3.9						
PDAR	**Pinedale Array**	**88.78**	**39**	P	**P**	**04 04 48.6**	**+0.1**
	comp=Z,0.4nm,0.7s,baz=236,slow=1.6,SNR=3.8						
ULM	**Lac du Bonnet**	**89.56**	**27**	P	**P**	**04 04 51.6**	**-0.1**
	comp=Z,4.7nm,0.8s,baz=30,slow=8.1,SNR=2.2						
ULM	**Lac du Bonnet**	**89.56**	**27**	IAmb	IAmb	04 04 58.5	
	comp=Z,15nm,1.1s						
SCHQ	**Schefferville**	**93.08**	**9**	LR	LR	04 50 35.4	
	comp=Z,71nm,18.2s,baz=66,slow=38						
ESDC	**Sonseca Array**	**96.90**	**325**	LR	LR	04 52 11.0	
	comp=Z,111nm,20.0s,baz=330,slow=37						

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*IDC **14** 04:02:40.1±1.9, 21°.67N×142°.59E, h303^{km}±20^{km}, mb3.2/7, mb1 3.3/8, mb1mx3.0/56, mbtmp3.9/8, Error ellipse: s-maj=54.2km s-min=14.7km az=84.0*

ISC 14 04:02:40.1±1.3**, 21°.6N**±0°.1×**142°.5E**±0°.5**, h300**^{km}**, n9,** $\sigma 1^{s}$**.07**/10**, mb3.3**/7**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**5.44**	**357**	P	**Pn**	**04 04 03.5**	**+0.8**
	16nm,0.3s,baz=314,slow=23,SNR=28						
JCJ				S	**S**	**04 05 08.1**	**-1.1**
	17nm,0.3s,baz=287,slow=19,SNR=1.8						
KLR	**Kul'dur**	**28.83**	**345**	P	**P**	**04 08 11.5**	**+0.5**
	1.1nm,0.5s,baz=204,slow=7.2,SNR=4.5						
WRA	**Warramunga Arr**	**42.09**	**191**	P	**P**	**04 10 03.5**	**+0.1**
	0.9nm,0.5s,baz=14,slow=8.3,SNR=13						

ASAR	**Alice Springs**	**45.80**	**191**	P	**P**	**04 10 32.2**	**-0.5**
	0.3nm,0.5s,baz=14,slow=11,SNR=5.5						
MKAR	**Makanchi Array**	**54.26**	**313**	P	**P**	**04 11 37.1**	**+1.5**
	0.2nm,0.5s,baz=95,slow=6.0,SNR=1.6						
KURBB	**Kurchatov Arra**	**57.12**	**317**	P	**P**	**04 11 54.1**	**-1.7**
	0.4nm,0.4s,baz=96,slow=7.5,SNR=3.2						
ARCES	**ARCESS Array B**	**78.77**	**341**	P	**P**	**04 14 09.6**	**+0.2**
	4.4nm,1.0s,baz=105,slow=6.0,SNR=2.3						
FINES	**FINESS Array B**	**82.95**	**334**	P	**P**	**04 14 30.7**	**-0.8**
	1.3nm,0.5s,baz=90,slow=6.1,SNR=5.9						
PLCA	**Paso Flores**	**146.21**	**132**	PKPbc	**PKPdf**	**04 21 44.2**	**+0.2**
	2.1nm,1.1s,baz=235,slow=8.0,SNR=3.1						

IDC 14 04:03:01.5±6.9**, 18°.18S**×**174°.76W, h198**^{km}±31^{km}**, mb3.7**/3**, mb1 3.9**/4**, mb1mx3.3**/38**, mbtmp4.2**/4**, Error ellipse: s-maj=196.2km s-min=20.0km az=140.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.12**	**34**	P	Pn	04 04 16.2	-1.4
	2.7nm,0.3s,baz=30,slow=20,SNR=1.8						
AFI				S	Sn	04 05 19.0	+1.5
	7.6nm,0.3s,baz=42,slow=21,SNR=7.2						
WRA	**Warramunga Arr**	**47.99**	**259**	P	P	04 11 20.1	-0.8
	1.3nm,0.5s,baz=96,slow=6.8,SNR=25						
ASAR	**Alice Springs**	**48.06**	**254**	P	P	04 11 21.8	+0.5
	9.1nm,0.7s,baz=88,slow=9.0,SNR=128						
ILAR	**Eielson Array**	**85.41**	**12**	P	P	04 15 15.6	-0.6
	0.4nm,0.6s,baz=221,slow=6.0,SNR=14						
BRTR	**Keskin Array B**	**147.39**	**317**	PKPbc	PKPbc	04 22 22.6	+0.3
	0.9nm,0.8s,baz=122,slow=1.6,SNR=4.5						

RSNC 14 04:25:07.2±1.5**, 6°.90N**×**73°.11W, h156**^{km}±6^{km}**, ML3.2, Mw3.5, 5C-4D, Fault plane solution: NP1:**φ$_s$91.00000°, δ9.00000°, λ-82.00000°.**, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.31**	**194**	⇑*e*P	Pn	04 25 28.5	-0.3
BARC				*e*S	Sn	04 25 44.0	-1.3
BARC				*i*		04 25 45.6	
	comp=Z,376nm,0.2s						
PAMC	**Pamplona, Colo**	**0.60**	**43**	⇓*i*P	Pn	04 25 30.8	+0.5
PAMC				⇓*e*P	Pn	04 25 30.8	+0.5
PAMC				*e*S	Sn	04 25 47.7	-0.2
PAMC				*i*		04 25 50.1	
	comp=Z,297nm,0.3s						
BRRC	**Barranca, Sant**	**0.64**	**289**	⇓*i*P	Pn	04 25 30.1	+0.2
BRRC				*e*S	Sn	04 25 47.6	+0.3
BRRC				*i*		04 25 48.4	
	comp=Z,253nm,0.1s						
RUSC	**La Rusia**	**1.00**	**179**	*e*P	Pn	04 25 32.6	-0.6
RUSC				*e*S	Sn	04 25 51.5	-1.4
RUSC				*i*		04 25 53.7	
	comp=Z,120nm,0.4s						
OCAC	**Ocana**	**1.35**	**351**	⇓*i*P	Pn	04 25 35.8	-0.1
OCAC				*e*S	Sn	04 25 58.1	+0.2
OCAC				*i*		04 26 01.1	
	comp=Z,346nm,0.4s						
TAMC	**Tame, Arauca**	**1.38**	**109**	⇑*e*P	Pn	04 25 36.5	+0.4
TAMC				*e*S	Sn	04 25 58.0	-0.2
TAMC				*i*		04 25 59.4	
	comp=Z,90nm,0.5s						
SPBC	**San Pablo de B**	**1.57**	**218**	*e*P	Pn	04 25 37.6	-0.5
SPBC				*e*S	Sn	04 26 01.4	-0.3
SPBC				*i*		04 26 05.5	
	comp=Z,204nm,0.3s						
ZARC	**Zaragoza, Cauc**	**1.84**	**289**	*e*P	Pn	04 25 40.7	-0.2
ZARC				*e*S	Sn	04 26 06.7	0.0
ZARC				*i*		04 26 12.8	
	comp=Z,408nm,0.4s						
SMLC	**San Martn de**	**2.12**	**333**	*e*P	Pn	04 25 43.6	-0.5
SMLC				*e*S	Sn	04 26 10.8	-1.8
SMLC				*i*		04 26 14.1	
	comp=Z,76nm,0.2s						
NORC	**Norcasia**	**2.20**	**233**	*e*P	Pn	04 25 44.8	-0.3
NORC				*e*S	Sn	04 26 12.5	-1.7
NORC				*i*		04 26 20.9	
	comp=Z,134nm,0.5s						
CHIC	**Chingaza**	**2.34**	**195**	⇑*e*P	Pn	04 25 46.5	-0.6
CHIC				*e*S	Sn	04 26 18.0	+0.1
CHIC				*i*		04 26 27.1	
	comp=Z,79nm,0.7s						
ROSC	**El Rosal**	**2.38**	**211**	*e*P	Pn	04 25 47.0	-0.5
ROSC				*e*S	Sn	04 26 18.8	+0.2
ROSC				*i*		04 26 25.7	
	comp=Z,214nm,0.7s						
HELC	**Santa Helena**	**2.51**	**254**	*e*P	Pn	04 25 50.1	+1.1
HELC				*e*S	Sn	04 26 21.2	-0.1
HELC				*i*		04 26 30.0	
	comp=Z,78nm,0.4s						
UREC	**San Jos de Ur**	**2.55**	**290**	*e*P	Pn	04 25 48.0	-1.2
UREC				*e*S	Sn	04 26 19.2	-2.5
UREC				*i*		04 26 29.8	
	comp=Z,87nm,0.4s						
GUY2C	**Guyana, Caldas**	**2.79**	**234**	*e*P	Pn	04 25 53.6	+0.9
GUY2C				*e*S	Sn	04 26 29.3	+1.5
GUY2C				*i*		04 26 36.1	
	comp=Z,98nm,0.6s						
VILC	**Villavicencio,**	**2.83**	**192**	*e*P	Pn	04 25 51.9	-0.9
VILC				*e*S	Sn	04 26 28.2	+0.1
PTGC	**Puerto Gaitan,**	**2.85**	**160**	⇑*i*P	Pn	04 25 51.5	-1.4
PTGC				*e*S	Sn	04 26 25.6	-2.9
PTGC				*i*		04 26 36.5	
	comp=Z,38nm,0.3s						
CBOC	**Ciudad Bolivar**	**3.06**	**251**	*e*P	Pn	04 25 57.0	+1.2
CBOC				*e*S	Sn	04 26 31.4	-2.1
CBOC				*i*		04 26 44.9	
	comp=Z,30nm,0.5s						
DBBC	**Dabeiba**	**3.08**	**272**	*e*P	Pn	04 25 55.8	-0.1
DBBC				*e*S	Sn	04 26 30.2	-3.5
DBBC				*i*		04 26 41.0	
	comp=Z,120nm,0.3s						
SDV	**Santo Domingo**	**3.15**	**51**	*e*P	Pn	04 25 56.6	-0.3
SDV				*e*S	Sn	04 26 33.0	-2.3
SDV				*i*		04 26 36.3	
	comp=Z,26nm,0.4s						
MOTC	**Monteria, Cord**	**3.15**	**307**	*e*P	Pn	04 25 55.0	-1.7
MOTC				*e*S	Sn	04 26 33.1	-1.9
MOTC				*i*		04 26 37.1	
	comp=Z,23nm,0.5s						
ANIL	**Santa Ana**	**3.31**	**224**	*e*P	Pn	04 26 00.2	+1.1
ANIL				*e*S	Sn	04 26 38.7	-0.5
SJCC	**San Jacinto, C**	**3.62**	**326**	*e*P	Pn	04 26 01.5	-1.2
SJCC				*e*S	Sn	04 26 42.2	-3.7
SJCC				*i*		04 26 47.3	
	comp=Z,34nm,0.5s						
PRAC	**Prado**	**3.63**	**209**	*e*P	Pn	04 26 02.3	-0.6
PRAC				*e*S	Sn	04 26 45.7	-0.4
PRAC				*i*		04 26 51.4	
	comp=Z,98nm,0.4s						
ORTC	**Ortega, Tolima**	**3.66**	**216**	*e*P	Pn	04 26 02.8	-0.4
ORTC				*e*S	Sn	04 26 47.1	+0.3
ORTC				*i*		04 26 53.3	
	comp=Z,91nm,0.4s						
PLMC	**San Jos del P**	**3.73**	**238**	⇑*e*P	Pn	04 26 04.3	+0.1
PLMC				*e*S	Sn	04 26 46.8	-1.7
PLMC				*i*		04 26 54.5	
	comp=Z,29nm,0.3s						
LCBC	**Los crdobas,**	**3.77**	**301**	*e*S	Sn	04 26 50.4	+1.1
LCBC				*i*		04 27 02.5	
	comp=Z,27nm,0.8s						
YOTC	**Yotoco, Valle**	**4.33**	**228**	*e*P	Pn	04 26 11.4	-0.8
YOTC				*e*S	Sn	04 26 59.5	-3.2
GUVC	**San Jose del G**	**4.35**	**174**	*e*P	Pn	04 26 10.1	-2.1
GUVC				*e*S	Sn	04 27 00.5	-2.5
GUVC				*i*		04 27 05.9	
	comp=Z,39nm,0.4s						
SMRC	**Santa Marta, M**	**4.38**	**345**	*e*P	Pn	04 26 12.6	0.0
SMRC				*e*S	Sn	04 26 60.0	-3.7
MACC	**Macarena, Meta**	**4.78**	**189**	*e*P	Pn	04 26 15.6	-2.3
MACC				*e*S	Sn	04 27 07.3	-5.8
MACC				*i*		04 27 11.8	
	comp=Z,16nm,0.5s						
MARP	**Paez Belalcaza**	**4.93**	**215**	*e*P	Pn	04 26 19.6	-0.5
MARP				*e*S	Sn	04 27 14.0	-3.0
GARC	**Garzon, Huila**	**5.25**	**207**	*e*S	Sn	04 27 15.4	-9.1

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*NIED **14** 04:29:24.0, 30°.80N×128°.67E, h5^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-1.66; M$_{\theta\theta}$1.61; M$_{\phi\phi}$0.05; M$_{r\theta}$0.81; M$_{\theta\phi}$1.23; M$_{\phi r}$-1.12; Fault plane solution: M$_0$2.46000×10^{15} NP1: φ$_s$271.00000°, δ57.00000°, λ-47.00000°. NP2:φ$_s$32.00000°, δ52.00000°, λ-136.00000°.*

*IDC **14** 04:29:24.1±0.8, 30°.83N×128°.59E, h0^{km}, mb3.9/9, mb1 4.1/14, mb1mx3.9/41, mbtmp3.9/14, ML3.5/5, MS3.4/15, Ms1 3.4/15, ms1mx3.2/51 Error ellipse: s-maj=23.6km s-min=16.5km az=85.0*

*JMA **14** 04:29:24.0±0.4, 30°.80N×128°.66E, h5^{km}, M3.9*

*NEIC **14** 04:29:25.9±1.9, 30°.92N±0°.07×128°.69E±0°.08, h10^{km}±1^{km}, mb4.2/11, Error ellipse: s-maj=13.7km s-min=10.4km az=135.0*

ISC 14 04:29:25.2±0.6**, 30°.78N**±0°.06×**128°.71E**±0°.06**, h10**^{km}**, n49,** σ**1**^{s}.**15**/40**, mb3.9**/15**, MS3.5**/11**, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	**Shimokoshiki**	**1.25**	**44**	P	**Pn**	**04 29 47.3**	**-1.4**
JKC	**Kuchinoerabu**	**1.32**	**103**	P	**Pn**	**04 29 49.8**	**+0.1**
JKC				*e*S	**Sg**	**04 30 08.7**	**+1.0**
JNN	**Nakanoshima**	**1.38**	**132**	P	**Pn**	**04 29 49.7**	**-0.7**
JYAK	**Yakushimahirau**	**1.65**	**109**	P	**Pn**	**04 29 53.5**	**-0.6**
JSU	**Suzuyama**	**1.67**	**64**	P	**Pn**	**04 29 54.3**	**-0.1**
JSU	**Suzuyama**	**1.67**	**64**	Pn	**Pn**	**04 29 54.2**	**-0.3**
JTAJ	**Takarajima**	**1.68**	**165**	P	**Pn**	**04 29 54.5**	**0.0**
JNU	**Nakatsue**	**2.98**	**38**	Pn	**Pn**	**04 30 14.3**	**+1.8**
	32nm,0.3s,baz=240,slow=0.1,SNR=8.3						
JTU	**Tsushima**	**3.78**	**9**	Pn	**Pn**	**04 30 25.8**	**+2.3**
JOW	**Kunigami**	**3.95**	**186**	Pn	**Pn**	**04 30 28.4**	**+2.5**
	2.2nm,0.3s,baz=0.6,slow=13,SNR=2.5						
JOW				LR	LR	04 32 15.7	
	comp=Z,420nm,20.8s,baz=79,slow=43						
JMN	**Monobe**	**5.28**	**55**	Pn	**Pn**	**04 30 44.1**	**0.0**
KSAR	**Wonju Array Be**	**6.68**	**354**	Pn	**Pn**	**04 31 01.5**	**-1.9**
KSRS	**Korea Array**	**6.69**	**355**	Pn	**Pn**	**04 31 03.6**	**+0.1**
	0.3nm,0.3s,baz=176,slow=14,SNR=7.7						
KSRS				LR	LR	04 33 45.4	
	comp=Z,387nm,19.4s,baz=172,slow=40						
INCN	**Inchon**	**6.91**	**346**	Pn	**Pn**	**04 31 06.5**	**+0.1**
INU	**Inuyama**	**8.33**	**55**	Pn	**Pn**	**04 31 26.8**	**+0.8**
YHNB	**Yeheng**	**8.90**	**229**	Pn	**Pn**	**04 31 36.4**	**+2.5**
JCJ	**Chichijima**	**12.36**	**104**	LR	LR	04 36 52.4	
	comp=Z,41nm,19.1s,baz=132,slow=36						
USRK	**Ussuriysk Ar.**	**13.65**	**10**	LR	LR	04 36 47.0	
	comp=Z,114nm,20.1s,baz=177,slow=32						
ASAJ	**Asahikawa**	**17.25**	**36**	P	**Pn**	**04 33 26.3**	**+0.1**
	0.7nm,0.3s,baz=190,slow=11,SNR=4.6						
KLR	**Kul'dur**	**18.57**	**6**	P	**Pn**	**04 33 43.9**	**+1.5**
	0.1nm,0.3s,baz=196,slow=8.3,SNR=11						
KLR				LR	LR	04 40 32.6	
	comp=Z,42nm,20.5s,baz=188,slow=36						
GUMO	**Guam**	**22.68**	**135**	LR	LR	04 42 00.1	
	comp=Z,56nm,20.1s,baz=99,slow=33						
DAV	**Davao City (W)**	**23.77**	**188**	LR	LR	04 43 41.7	
	comp=Z,66nm,21.2s,baz=334,slow=36						
ULN	**Ulaanbaatar**	**23.78**	**322**	P	**P**	**04 34 38.5**	**+0.4**
ULN				IAmb	IAmb	04 34 50.9	
	comp=Z,4.8nm,1.2s						
SONM	**Songino Array**	**24.12**	**321**	P	**P**	**04 34 40.2**	**-1.0**
	comp=Z,1.2nm,0.9s,baz=142,slow=7.3,SNR=6.5						
SONM				LR	LR	04 44 10.4	
	comp=Z,156nm,20.6s,baz=174,slow=37						
TLY	**Talaya**	**27.89**	**326**	LR	LR	04 47 37.3	
	comp=Z,142nm,19.9s,baz=170,slow=39						
JAY	**Jayapura**	**35.03**	**159**	LR	LR	04 48 05.8	
	comp=Z,81nm,21.1s,baz=336,slow=32						
KAPI	**Kappang**	**36.61**	**195**	LR	LR	04 50 34.3	
	comp=Z,31nm,21.3s,baz=354,slow=35						
MK31	**Makanchi Array**	**38.96**	**308**	P	**P**	**04 36 49.1**	**-2.2**
MK31				IAmb	IAmb	04 36 52.1	
	comp=Z,2.4nm,0.9s						
MKAR	**Makanchi Array**	**38.96**	**308**	P	**P**	**04 36 51.0**	**-0.4**
	comp=Z,2.1nm,0.8s,baz=96,slow=10,SNR=13						
MKAR				PcP	**PcP**	**04 39 01.6**	**-0.2**
	comp=Z,0.9nm,0.8s,baz=71,slow=5.3,SNR=4.8						
MKAR				LR	LR	04 55 24.3	
	comp=Z,72nm,18.2s,baz=317,slow=40						
ZALV	**Zalesovo Beam**	**38.98**	**319**	P	**P**	**04 36 50.2**	**-1.2**
KURK	**Kurchatov**	**41.92**	**313**	P	**P**	**04 37 15.4**	**-0.4**
KURK				IAmb	IAmb	04 37 15.8	
	comp=Z,4.1nm,0.7s						
KURBB	**Kurchatov Arra**	**41.96**	**313**	P	**P**	**04 37 15.7**	**-0.5**
	comp=Z,2.2nm,0.6s,baz=100,slow=8.9,SNR=12						
NRIK	**Noril'sk**	**45.09**	**341**	LR	LR	04 58 14.0	
	comp=Z,160nm,19.2s,baz=326,slow=38						
KK31	**Karatay Array**	**47.24**	**302**	P	**P**	**04 37 57.4**	**-1.1**
KK31				IAmb	IAmb	04 38 14.0	
	comp=Z,3.4nm,1.1s						
BRVK	**Borovoye**	**47.31**	**316**	P	**P**	**04 37 58.5**	**-0.3**
BTK	**Batken**	**47.35**	**298**	P	**P**	**04 37 58.2**	**-1.2**
WRA	**Warramunga Arr**	**50.72**	**173**	P	**P**	**04 38 25.4**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=353,slow=8.0,SNR=4.5						
ABKAR	**Akbulak array**	**53.92**	**311**	P	**P**	**04 38 47.4**	**-1.3**
ABKAR				IAmb	IAmb	04 38 49.0	
	comp=Z,2.3nm,0.7s						
AS31	**Alice Springs**	**54.36**	**174**	P	**P**	**04 38 52.3**	**+0.1**
AS31				IAmb	IAmb	04 40 25.3	
	comp=Z,1.2nm,1.2s						
ASAR	**Alice Springs**	**54.36**	**174**	P	**P**	**04 38 53.4**	**+1.2**
	comp=Z,2.0nm,1.0s,baz=2.3,slow=14,SNR=11						
ILAR	**Eielson Array**	**60.26**	**29**	P	**P**	**04 39 32.6**	**-0.8**
	comp=Z,0.5nm,0.8s,baz=283,slow=6.7,SNR=7.1						
FINES	**FINESS Array B**	**69.14**	**330**	LR	LR	05 16 01.7	
	comp=Z,335nm,19.6s,baz=318,slow=40						
AKASG	**Malin Array Be**	**72.38**	**319**	LR	LR	05 15 10.7	
	comp=Z,86nm,19.7s,baz=340,slow=38						
BRTR	**Keskin Array B**	**74.60**	**307**	P	**P**	**04 41 04.8**	**0.0**
	comp=Z,1.0nm,0.9s,baz=64,slow=5.7,SNR=5.0						
BRTR	**Keskin Array B**	**74.60**	**307**	P	**P**	**04 41 04.4**	**-0.4**
URZ	**Urewera**	**82.19**	**144**	LR	LR	05 17 11.2	
	comp=Z,44nm,18.1s,baz=32,slow=35						
NVAR	**Mina Array Bea**	**87.07**	**46**	P	**P**	**04 42 12.8**	**+1.2**
	comp=Z,0.6nm,0.8s,baz=277,slow=4.9,SNR=5.2						
PD31	**Pinedale Array**	**89.36**	**39**	P	**P**	**04 42 21.3**	**-1.1**
PD31				IAmb	IAmb	04 42 23.9	
	comp=Z,8.3nm,1.7s						
PDAR	**Pinedale Array**	**89.36**	**39**	P	**P**	**04 42 23.1**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=182,slow=4.3,SNR=3.8						

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*IDC **14** 04:45:43.9±1.4, 1°.42N×100°.10E, h190^{km}±23^{km}, mb3.5/5, mb1 3.6/5, mb1mx3.1/49, mbtmp4.0/5, Error ellipse: s-maj=164.0km s-min=15.5km az=53.0*

*DJA **14** 04:45:45.2±0.6, 1°N±4°×10°0E±°, h174^{km}±5^{km}, M3.7/7, MLv3.7/7*

ISC 14 04:45:43.5±0.9**, 1°.28N**±0°.06×**99°.82E**±0°.08**, h193**^{km}±7^{km}**, n14,** σ**0**^{s}.**87**/21**, mb3.8**/5**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	**0.53**	**206**	P	**Pn**	**04 46 10.7**	**+0.7**
MNSI				S	**Sn**	**04 46 29.4**	**-1.1**
BKNI	**Bangkinang**	**1.55**	**128**	P	**Pn**	**04 46 17.3**	**+0.2**
BKNI				S	**Sn**	**04 46 43.5**	**+0.4**
PSI	**Prapat**	**1.76**	**330**	P	**Pn**	**04 46 19.7**	**+0.5**
	baz=352,slow=7.1						
PSI				S	**Sn**	**04 46 46.1**	**-0.9**
	1.5nm,0.3s,baz=308,slow=19,SNR=2.6						
GSI	**Gunungsitoli**	**2.24**	**271**	P	**Pn**	**04 46 25.7**	**+1.6**
GSI				S	**Sn**	**04 46 55.1**	**-0.5**
PDSI	**Padang**	**2.27**	**163**	P	**Pn**	**04 46 24.6**	**+0.1**
PDSI				S	**Sn**	**04 46 56.5**	**0.0**
TSI	**Tuntungan**	**2.54**	**331**	P	**Pn**	**04 46 28.1**	**+0.6**
SISI	**Saibi**	**2.69**	**196**	P	**Pn**	**04 46 28.9**	**-0.3**
SISI				S	**Sn**	**04 47 04.4**	**-0.5**
TPTI		**3.29**	**307**	P	**Pn**	**04 46 37.3**	**+1.0**
TPTI				S	**Sn**	**04 47 16.1**	**-1.5**
MLSI	**Meulaboh, Aceh**	**4.52**	**311**	P	**Pn**	**04 46 51.5**	**-0.2**
WRA	**Warramunga Arr**	**39.88**	**124**	P	**P**	**04 52 57.5**	**-1.4**
	0.9nm,0.3s,baz=303,slow=9.0,SNR=15						
ASAR	**Alice Springs**	**41.38**	**129**	P	**P**	**04 53 12.1**	**+1.0**
	0.1nm,0.4s,baz=301,slow=7.5,SNR=1.4						
MKAR	**Makanchi Array**	**47.85**	**344**	P	**P**	**04 54 02.2**	**+0.4**
	0.5nm,0.3s,baz=156,slow=8.1,SNR=14						
ZALV	**Zalesovo Beam**	**53.94**	**349**	P	**P**	**04 54 47.3**	**+0.2**
	1.4nm,0.6s,baz=178,slow=7.2,SNR=7.0						
ARCES	**ARCESS Array B**	**83.35**	**340**	P	**P**	**04 57 48.4**	**-0.1**
	7.4nm,1.0s,baz=98,slow=5.5,SNR=4.4						

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*NIED **14** 04:47:05.3, 30°.80N×128°.53E, h9^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-1.59; M$_{\theta\theta}$1.92; M$_{\phi\phi}$-0.33; M$_{r\theta}$0.58; M$_{\theta\phi}$3.06; M$_{\phi r}$-1.74; Fault plane solution: M$_0$3.98000×10^{14} NP1:φ$_s$17.00000°, δ68.00000°, λ-147.00000°. NP2:φ$_s$274.00000°, δ60.00000°, λ-25.00000°.*

JMA 14 04:47:05.3±0.4**, 30°.80N**×**128°.52E, h9**^{km}**, M3.6, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKC	**Kuchinoerabu**	**1.48**	**103**	P	Pb	04 47 32.7	-0.3
JKC				*e*S	Sn	04 47 51.5	-0.1
JNN	**Nakanoshima**	**1.51**	**129**	P	Pn	04 47 32.7	+0.1
JNN				*e*S	Sn	04 47 52.2	-0.2
JSU	**Suzuyama**	**1.80**	**67**	P	Pn	04 47 37.3	+0.7
JYAK	**Yakushimahirau**	**1.81**	**108**	P	Pn	04 47 36.2	-0.4

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*NOU **14** 04:48:46.4, 37°.53S×179°.30E, h151^{km}, MLv4.2/6, Off E. Coast of N. Island, N.Z.*

*WEL **14** 04:48:50.5±1.3, 37°S±10°×17°9E±°, h33^{km}, M3.7/15, ML4.0/15, MLv3.7/15, Error ellipse: s-maj=0.0km s-min=0.0km az=174.7*

ISC 14 04:48:47.1±2.9**, 37°.37S**±0°.08×**179°.2E**±0°.1**, h50**^{km}±23^{km}**, n106,** σ**1**^{s}.**47**/115**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.73**	**255**	P	**Pn**	**04 49 00.5**	**-0.7**
MXZ				S	**Sn**	**04 49 08.0**	**-3.6**
WMGZ	**Waiomatatini S**	**0.77**	**234**	P	**Pn**	**04 49 03.0**	**+1.3**
WMGZ				S	**Sn**	**04 49 12.8**	**+0.5**
PUZ	**Puketiti**	**1.02**	**227**	P	**Pn**	**04 49 06.6**	**+1.5**
PUZ				S	**Sn**	**04 49 19.2**	**+0.7**
PKGZ	**Pakihiroa**	**1.03**	**240**	P	**Pn**	**04 49 06.2**	**+1.0**
PKGZ				S	**Sn**	**04 49 18.2**	**-0.5**
HAZ	**Te Kaha**	**1.19**	**251**	P	**Pn**	**04 49 08.0**	**+0.7**
HAZ				S	**Sn**	**04 49 22.4**	**0.0**
TWGZ	**Tauwhareparae**	**1.26**	**230**	P	**Pn**	**04 49 10.1**	**+1.8**
RUGZ	**Raukumara Rang**	**1.34**	**243**	P	**Pn**	**04 49 10.9**	**+1.3**
CNGZ	**Carnagh Statio**	**1.36**	**215**	P	**Pn**	**04 49 12.4**	**+2.7**
TKGZ	**Te Karaka**	**1.51**	**225**	P	**Pn**	**04 49 13.2**	**+1.5**
MWZ	**Matawai**	**1.64**	**233**	P	**Pn**	**04 49 14.8**	**+1.3**
RIGZ	**Rimuhau**	**1.75**	**220**	P	**Pn**	**04 49 16.7**	**+1.6**
RAGZ	**Rawiri**	**1.80**	**231**	P	**Pn**	**04 49 17.1**	**+1.3**
WHRZ	**Whale Island**	**1.83**	**254**	P	**Pn**	**04 49 17.5**	**+1.4**
PRGZ	**Paritu Road**	**1.86**	**213**	P	**Pn**	**04 49 18.1**	**+1.5**
URZ	**Urewera**	**1.88**	**241**	P	**Pn**	**04 49 18.2**	**+1.6**
URZ				S	**Sn**	**04 49 40.1**	**+0.9**
URZ	**Urewera**	**1.88**	**241**	P	**Pn**	**04 49 18.3**	**+1.6**
SNGZ	**Shannon Statio**	**2.03**	**226**	P	**Pn**	**04 49 20.6**	**+1.7**
KNZ	**Kokohu**	**2.04**	**216**	P	**Pn**	**04 49 19.8**	**+0.9**
MHGZ	**Mahia Peninsul**	**2.05**	**209**	P	**Pn**	**04 49 21.0**	**+1.9**
EDRZ	**Edgecumbe**	**2.08**	**249**	P	**Pn**	**04 49 20.9**	**+1.2**
MARZ	**Manawahe**	**2.09**	**252**	P	**Pn**	**04 49 20.8**	**+1.1**
RTZ	**Ruatahuna**	**2.15**	**234**	P	**Pn**	**04 49 22.2**	**+1.6**
RTZ				S	**Sn**	**04 49 46.3**	**+0.3**
OPRZ	**Ohinepanea**	**2.15**	**257**	P	**Pn**	**04 49 21.1**	**+0.6**
MUGZ	**Murupara**	**2.21**	**239**	S	**Sn**	**04 49 47.1**	**-0.5**
RAHZ	**Arahi**	**2.27**	**227**	P	**Pn**	**04 49 24.3**	**+2.1**
RAHZ				S	**Sn**	**04 49 48.3**	**-0.6**
TARZ	**Mount Tarawera**	**2.30**	**247**	P	**Pn**	**04 49 23.9**	**+1.3**
WHHZ	**Waihua**	**2.30**	**222**	P	**Pn**	**04 49 23.9**	**+1.4**
RRRZ	**Republican Roa**	**2.33**	**245**	P	**Pn**	**04 49 24.9**	**+1.9**
OMRZ	**Omania**	**2.36**	**251**	P	**Pn**	**04 49 25.8**	**+2.5**
MYRZ	**Mayor Island**	**2.36**	**271**	P	**Pn**	**04 49 23.7**	**+0.3**
TGRZ	**Tauranga**	**2.36**	**260**	P	**Pn**	**04 49 24.0**	**+0.6**
MTHZ	**Maungataniwha**	**2.38**	**231**	P	**Pn**	**04 49 25.2**	**+1.6**
HLRZ	**Highlands Stat**	**2.42**	**248**	P	**Pn**	**04 49 26.0**	**+1.8**
KARZ	**Kaharoa**	**2.43**	**254**	P	**Pn**	**04 49 25.4**	**+1.0**
PRRZ	**Plateau Road**	**2.49**	**242**	P	**Pn**	**04 49 26.9**	**+1.8**
HSRZ	**Hossack Road**	**2.52**	**247**	P	**Pn**	**04 49 27.8**	**+2.3**
ALRZ	**Allen Road**	**2.55**	**241**	P	**Pn**	**04 49 27.2**	**+1.2**
NMHZ	**Naumai**	**2.55**	**227**	P	**Pn**	**04 49 27.7**	**+1.7**
NMHZ				S	**Sn**	**04 49 57.4**	**+1.4**
ARHZ	**Aropaoanui**	**2.56**	**222**	P	**Pn**	**04 49 27.9**	**+1.7**
MRHZ	**Matea Rd**	**2.64**	**235**	P	**Pn**	**04 49 28.4**	**+1.2**
MRHZ				S	**Sn**	**04 49 56.9**	**-1.1**
WPRZ	**Whakapapatarin**	**2.66**	**244**	P	**Pn**	**04 49 30.0**	**+2.5**
BKZ	**Black Stump Fm**	**2.78**	**229**	P	**Pn**	**04 49 29.6**	**+0.4**
BKZ	**Black Stump Fm**	**2.78**	**229**	P	**Pn**	**04 49 30.0**	**+0.8**
BKZ	**Black Stump Fm**	**2.78**	**229**	P	**Pn**	**04 49 30.3**	**+1.1**
CKHZ	**Cape Kidnapper**	**2.83**	**215**	P	**Pn**	**04 49 30.7**	**+1.0**
CKHZ				S	**Sn**	**04 50 01.6**	**-0.9**
KUZ	**Kuaotunu**	**2.85**	**282**	P	**Pn**	**04 49 29.9**	**-0.2**
KUZ				S	**Sn**	**04 49 58.1**	**-5.1**
MCHZ	**McNeill Hill**	**2.85**	**223**	P	**Pn**	**04 49 31.0**	**+0.9**
TOZ	**Tahuroa Road**	**2.96**	**262**	P	**Pn**	**04 49 32.3**	**+0.7**
KWHZ	**Kaweka Forest**	**2.99**	**226**	P	**Pn**	**04 49 32.6**	**+0.5**
KAHZ	**Kahuranaki**	**3.03**	**216**	P	**Pn**	**04 49 33.0**	**+0.5**
RITZ	**Rihia Road**	**3.08**	**238**	P	**Pn**	**04 49 34.6**	**+1.4**
KRHZ	**Kereru**	**3.17**	**223**	P	**Pn**	**04 49 34.9**	**+0.4**
GRZ	**Great Barrier**	**3.20**	**289**	P	**Pn**	**04 49 35.8**	**+0.9**
PXZ	**Pawanui**	**3.22**	**214**	P	**Pn**	**04 49 35.4**	**+0.2**
BHHZ	**Black Hill Sta**	**3.25**	**228**	P	**Pn**	**04 49 36.3**	**+0.8**
TMVZ	**Te Maari**	**3.26**	**237**	P	**Pn**	**04 49 36.5**	**+0.8**
ETVZ	**East Tongariro**	**3.26**	**236**	P	**Pn**	**04 49 36.5**	**+0.6**
NTVZ	**North Tongarir**	**3.27**	**237**	P	**Pn**	**04 49 37.0**	**+1.1**
KRVZ	**Karewarewa**	**3.29**	**237**	P	**Pn**	**04 49 37.3**	**+1.1**
WIAZ	**Waiheke Island**	**3.30**	**279**	P	**Pn**	**04 49 37.0**	**+0.8**
OTVZ	**Oturere**	**3.31**	**236**	P	**Pn**	**04 49 37.2**	**+0.7**
NNVZ	**North Ngauruho**	**3.32**	**237**	P	**Pn**	**04 49 37.8**	**+1.1**
WTVZ	**West Tongariro**	**3.33**	**237**	P	**Pn**	**04 49 38.0**	**+1.2**
SNVZ	**South Ngauruho**	**3.34**	**236**	P	**Pn**	**04 49 37.8**	**+0.9**
NGZ	**Ngauruhoe**	**3.36**	**236**	P	**Pn**	**04 49 37.9**	**+0.7**
MOVZ	**Moawhango**	**3.39**	**232**	P	**Pn**	**04 49 38.1**	**+0.6**
WHVZ	**Whangaehu Hut**	**3.42**	**235**	P	**Pn**	**04 49 38.8**	**+0.7**
FWVZ	**Far West T-bar**	**3.43**	**236**	P	**Pn**	**04 49 38.9**	**+0.7**
DRZ	**Dome Shelter**	**3.43**	**235**	P	**Pn**	**04 49 39.3**	**+1.0**
ETAZ	**East Tamaki Re**	**3.44**	**276**	P	**Pn**	**04 49 39.7**	**+1.6**
WNVZ	**Wahianoa**	**3.44**	**234**	P	**Pn**	**04 49 39.0**	**+0.7**
WPHZ	**Waipukurau**	**3.45**	**218**	P	**Pn**	**04 49 38.4**	**+0.2**
TRVZ	**Turoa**	**3.46**	**235**	P	**Pn**	**04 49 39.2**	**+0.7**
PNHZ	**Pukenui**	**3.46**	**222**	P	**Pn**	**04 49 38.2**	**-0.3**
MBAZ	**Motutapu North**	**3.49**	**279**	P	**Pn**	**04 49 40.4**	**+1.6**
PRHZ	**Porangahau**	**3.52**	**214**	P	**Pn**	**04 49 39.0**	**-0.2**
MTVZ	**Mangateitei**	**3.55**	**234**	P	**Pn**	**04 49 40.6**	**+0.9**
ABAZ	**Army Bay**	**3.58**	**281**	P	**Pn**	**04 49 41.8**	**+1.7**
EPAZ	**Eden Park BICE**	**3.59**	**277**	P	**Pn**	**04 49 42.2**	**+2.0**
HBAZ	**Herne Bay Bore**	**3.61**	**277**	P	**Pn**	**04 49 41.7**	**+1.3**
HIZ	**Hauiti**	**3.62**	**250**	P	**Pn**	**04 49 42.6**	**+2.0**
HIZ	**Hauiti**	**3.62**	**250**	P	**Pn**	**04 49 42.6**	**+2.0**
HIZ	**Hauiti**	**3.62**	**250**	P	**Pn**	**04 49 42.6**	**+2.0**
AWAZ	**Awhitu Peninsu**	**3.65**	**273**	P	**Pn**	**04 49 42.9**	**+1.9**
TSZ	**Takapari Road**	**3.69**	**222**	P	**Pn**	**04 49 41.4**	**-0.2**
RVAZ	**Riverhead Bore**	**3.74**	**278**	P	**Pn**	**04 49 43.8**	**+1.5**
DVHZ	**Dannevirke**	**3.76**	**218**	P	**Pn**	**04 49 42.2**	**-0.3**
BFZ	**Birch Farm**	**4.03**	**214**	P	**Pn**	**04 49 45.0**	**-1.2**
PRWZ	**Pori Road**	**4.05**	**217**	P	**Pn**	**04 49 46.8**	**+0.2**
WAZ	**Wanganui**	**4.07**	**233**	P	**Pn**	**04 49 48.3**	**+1.5**
WCZ	**Waipu Caves**	**4.16**	**289**	P	**Pn**	**04 49 49.4**	**+1.4**
NEZ	**North Egmont**	**4.44**	**243**	P	**Pn**	**04 49 54.9**	**+3.0**
PKE	**Pukeiti**	**4.49**	**244**	P	Pn	04 49 56.1	+3.6
KHEZ	**Kahui Hut**	**4.51**	**243**	P	Pn	04 49 56.5	+3.7
OGWZ	**Otaki Gorge**	**4.65**	**221**	P	**Pn**	**04 49 53.8**	**-0.9**
KIW	**Kapiti Island**	**4.82**	**222**	P	**Pn**	**04 49 56.2**	**-0.9**
OUZ	**Omahuta**	**5.01**	**294**	P	**Pn**	**04 50 01.8**	**+2.1**
OUZ	**Omahuta**	**5.01**	**294**	P	**Pn**	**04 50 01.7**	**+2.1**
OUZ	**Omahuta**	**5.01**	**294**	P	**Pn**	**04 50 01.6**	**+1.9**
QRZ	**Quartz Range**	**6.23**	**234**	P	**Pn**	**04 50 15.1**	**-1.3**
QRZ	**Quartz Range**	**6.23**	**234**	P	**Pn**	**04 50 15.1**	**-1.3**
KHZ	**Kahutara**	**6.66**	**219**	P	**Pn**	**04 50 21.9**	**-0.3**
KHZ	**Kahutara**	**6.66**	**219**	P	**Pn**	**04 50 22.0**	**-0.3**
CTZ	**Chatham Island**	**7.11**	**155**	P	Pn	04 50 32.6	+4.1
ODZ	**Otahua Downs**	**10.01**	**217**	P	**Pn**	**04 51 04.9**	**-3.2**
ODZ	**Otahua Downs**	**10.01**	**217**	P	**Pn**	**04 51 06.2**	**-1.9**

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*VIE **14** 04:51:36.7±0.3, 47°.33N×11°.62E, h4^{km}±1^{km}, mb1.7/12, ml2.3/17, Error ellipse: s-maj=2.3km s-min=1.0km az=30.0 7 km WSW of Schwaz felt 4 ems98 near Wattens / Tyrol*

*STR **14** 04:51:37.2±1.1, 47°N±12°×1°2E±°, h5^{km}, MLv2.6/6, preliminary*

*LDG **14** 04:51:38.6±0.2, 47°.31N×11°.65E, h2^{km}, Ml2.3/12, Error ellipse: s-maj=3.3km s-min=2.8km az=132.0*

*ROM **14** 04:51:38.2±0.2, 47°.233N±0°.008×11°.66E±0°.02, h2^{km}, ML1.9/11, Error ellipse: s-maj=1.3km s-min=0.9km az=256.0*

*PRU **14** 04:51:38.0±0.0, 47°.33N×11°.77E, h0^{km}, Schwaz*

BGR ***14*** *04:51:39.0±0.3, 47°.34N×11°.60E, h10^{km}, ML2.2/10, Error ellipse: s-maj=5.6km s-min=3.3km az=157.0*

ISC 14 04:51:36.2±0.8**, 47°.34N**±0°.02×**11°.66E**±0°.01**, h8**^{km}±4^{km}**, n94,** σ**1^{s}35**/148**, 5C-4D, Austria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WATA	Walderalm	0.06	268	*i* Pg	Pg	04 51 38.3	+0.1
	507nm,0.1s,SNR=7712						
WATA				*i* Sg	Sg	04 51 39.0	-0.5
	4µm,0.1s						
WTTA	Wattenberg	0.07	192	*i* Pg	Pg	04 51 38.9	+0.5
	636nm,0.1s,SNR=3498						
WTTA				*i* Sg	Sg	04 51 40.0	0.0
	770nm,0.2s						
WTTA	Wattenberg	0.07	192	⇓P	Pg	04 51 38.9	+0.5
WTTA				S	Sg	04 51 40.0	0.0
WTTA	Wattenberg	0.07	192	*e*Pg	Pg	04 51 38.9	+0.5
WTTA				*e*Sg	Sg	04 51 40.1	0.0
SQTA	Sankt Quirin	0.33	249	*e*Pg	Pg	04 51 42.9	+0.2
	34nm,0.1s,SNR=128						
SQTA				*i* Sg	Sg	04 51 47.3	+0.2
	61nm,0.2s						
MOTA	Moosalm	0.38	271	*e*Pg	Pg	04 51 43.5	-0.2
	13nm,0.1s,SNR=84						
MOTA				*e*Sg	Sg	04 51 48.9	+0.3
	35nm,0.1s						
PART	Garmisch-Parte	0.40	294	*e*Pg	Pg	04 51 44.4	+0.3
PART				*e*Sg	Sg	04 51 50.1	+0.7
ROSI	Rosskopf	0.44	202	⇑P	Pg	04 51 45.4	+0.5
ROSI				S	Sg	04 51 51.3	+0.6
ROSI				AML	AML		
	comp=E,167µm,0.7s						
ROSI				AML	AML		
	comp=N,150µm,1.1s						
ROSI				AML	AML		
	comp=E,166µm,0.7s						
ZUGS	Zugspitze, Sch	0.47	280	*e*Pg	Pg	04 51 45.7	+0.3
ZUGS				*e*Sg	Sg	04 51 52.3	+0.7
RISI	Rein	0.48	144	⇓P	Pb	04 51 46.7	-0.4
RISI				S	Sb	04 51 53.4	-1.1
RISI				AML	AML		
	comp=E,512µm,0.4s						
RISI				AML	AML		
	comp=N,628µm,0.5s						
RETA	Reutte	0.63	284	*i* Pg	Pg	04 51 47.7	-0.6
	comp=N,0.2nm,0.0s,SNR=6.0						
RETA				*e*Sg	Sg	04 51 57.3	+0.7
	comp=N,6.1nm,0.2s,SNR=7.5						
BRES	Bressanone	0.64	175	⇑P	Pb	04 51 49.8	-0.1
BRES				S	Sg	04 51 58.1	+1.1
BRES				AML	AML		
	comp=E,104µm,1.6s						
BRES				AML	AML		
	comp=N,108µm,0.2s						
BRES				AML	AML		
	comp=E,102µm,1.6s						
BRES				AML	AML		
	comp=N,111µm,1.2s						
ABSI	Aberstueckl	0.65	201	P	Pg	04 51 49.2	+0.4
ABSI				AML	AML		
	comp=E,71µm,0.5s						
ABSI				AML	AML		
	comp=E,71µm,0.5s						
ABSI				AML	AML		
	comp=N,97µm,0.7s						
FETA	Feichten	0.71	244	*e*Pg	Pg	04 51 49.9	0.0
	comp=N,1.8nm,0.1s,SNR=16						
FETA				*e*Sg	Sg	04 51 59.0	-0.2
	comp=N,3.5nm,0.1s						
ABTA	Abfaltersbach	0.83	135	*e*Pg	Pb	04 51 53.2	+0.2
	comp=N,0.5nm,0.1s,SNR=11						
ABTA				*i* Sg	Sg	04 52 03.5	+0.5
	comp=N,9.7nm,0.2s						
KOSI	Kohlern	0.90	193	⇑P	Pb	04 51 54.7	+0.6
KOSI				S	Sb	04 52 06.7	+0.4
KOSI				AML	AML		
	comp=E,84µm,0.7s						
KOSI				AML	AML		
	comp=N,69µm,1.3s						
APPI	Appiano	0.91	199	P	Pb	04 51 54.3	+0.1
APPI				AML	AML		
	comp=E,75µm,0.7s						
APPI				AML	AML		
	comp=N,78µm,1.2s						
APPI				AML	AML		
	comp=N,78µm,1.2s						
APPI				AML	AML		
	comp=E,75µm,0.7s						
AGOR	Agordo	1.09	166	⇑P	Pn	04 51 58.0	+0.2
AGOR				S	Sn	04 52 12.6	-0.5
AGOR				AML	AML		
	comp=N,52µm,0.3s						
AGOR				AML	AML		
	comp=E,34µm,1.5s						
UBR	Ueberruh	1.11	289	*e*Pg	Pn	04 52 00.2	+2.1
UBR				*e*Sg	Sn	04 52 13.7	+0.1
CIMO	Cimolais	1.16	152	P	Pn	04 51 59.6	+0.8
KBA	Koelnbreinsper	1.18	102	*e*Pg	Pn	04 51 59.7	+0.5
	comp=E,2.0nm,0.2s						
KBA				*e*Sg	Sn	04 52 15.6	+0.1
	comp=E,12nm,0.3s						
DAVA	Damuels	1.21	268	*e*Pg	Pn	04 52 01.8	+2.1
	comp=E,7.7nm,0.2s						
DAVA				*e*Sg	Sn	04 52 18.5	+2.2
	comp=E,25nm,0.2s						
DAVA	Damuels	1.21	268	*e*Pg	Pn	04 52 02.0	+2.4
DAVA				*e*Sg	Sn	04 52 18.6	+2.3
STAL	STALIGIAL	1.30	146	P	Pg	04 52 02.2	+1.1
STAL				AML	AML		
	comp=E,55µm,1.0s						
STAL				AML	AML		
	comp=N,52µm,0.8s						
DAVOX	Davos/Dischmat	1.34	246	⇓P	Pg	04 52 04.5	+2.6
DAVOX				AML	AML		
	comp=N,123µm,0.4s						
DAVOX				AML	AML		
	comp=E,76µm,0.5s						
GAGG	Gaggia	1.34	201	P	Pg	04 52 02.3	+0.3
GAGG				S	Sn	04 52 20.8	+1.2
VARN	Col Varnada, M	1.38	167	P	Pg	04 52 03.8	+1.1
VARN				AML	AML		
	comp=E,171µm,1.6s						
VARN				AML	AML		
	comp=N,120µm,0.9s						
DOSS	Dosso del Somm	1.49	193	P	Pg	04 52 05.0	+0.2
DOSS				S	Sg	04 52 24.4	+0.2
DOSS				AML	AML		
	comp=E,101µm,0.3s						
DOSS				AML	AML		
	comp=N,86µm,0.3s						
MABI	Malga Bissina	1.51	212	⇓P	Pg	04 52 05.1	0.0
MYKA	Terra Mystica	1.53	117	*e*Pn	Pb	04 52 05.1	+0.2
	comp=N,2.2nm,0.2s						
MYKA				*e*Sn	Sg	04 52 25.6	+0.2
	comp=N,5.0nm,0.3s						
NORI	Noerdlinger Ri	1.55	334	*e*Pg	Pg	04 52 06.6	+0.7
NORI				*e*Sg	Sg	04 52 28.1	+2.1
PLONS	Plons/SG	1.58	260	⇑P	Pg	04 52 07.9	+1.4
PLONS	Plons/SG	1.58	260	*e*Pg	Pg	04 52 07.7	+1.2
PLONS				*e*Sg	Sg	04 52 29.3	+2.3
WALHA	Wallhausen, DE	1.77	285	*e*Pn	Pg	04 52 10.0	-0.1
WALHA				*e*Sg	Sg	04 52 34.1	+1.1
MOA	Molln	1.84	73	*e*Pg	Pg	04 52 12.0	+0.6
	comp=N,1.4nm,0.2s						
MOA				*e*Sg	Sg	04 52 37.5	+2.2
	comp=N,5.6nm,0.2s						
GUT	Gutenstein	1.87	294	P	Pb	04 52 10.2	-0.5
GUT	Gutenstein	1.87	294	S	Sg	04 52 36.5	+0.3
WILA	Wila	1.87	273	*e*Sg	Sg	04 52 37.5	+1.1
SABO	M.te Sabotino	1.91	135	P	Pg	04 52 13.3	+0.5
GEC2	GERESS Array S	2.04	41	*e*Pn	Pb	04 52 12.9	-0.6
GEC2				*e*Sn	Sb	04 52 39.4	+0.3
GEC2				*e*Sg	Sg	04 52 44.2	+2.5
OBKA	Obir	2.15	112	*e*Pg	Pg	04 52 17.1	-0.3
	comp=N,2.4nm,0.4s						
OBKA				Sg	Sg	04 52 46.0	+0.8
	comp=N,3.0nm,0.4s						
SLE	Schleitheim	2.19	282	P	Pb	04 52 15.1	-0.9
SLE	Schleitheim	2.19	282	S	Sg	04 52 46.5	+0.1
SLE	Schleitheim	2.19	282	*e*Pn	Pb	04 52 15.9	-0.2
SLE				*e*Sg	Sg	04 52 46.6	+0.1
KHC	Kasperske Hory	2.21	35	*e*PN	Pn	04 52 14.6	+1.4
KHC				*e*SG	Sg	04 52 47.9	+0.8
	comp=N,14nm,0.4s						
CKRC	Cesky Krumlov	2.31	49	*e*PN	Pb	04 52 17.2	-1.0
CKRC				*e*SG	Sg	04 52 50.8	+0.2
GRF	Grafenberg Arr	2.37	353	*e*Sg	Sg	04 52 53.7	+1.2
SOKA	Soboth	2.40	105	*e*Pn	Pn	04 52 16.5	+0.6
	comp=N,0.5nm,0.2s						
BERGE	Lenzkirch (DE)	2.42	284	*e*Pn	Pb	04 52 18.2	-1.8
BERGE				*e*Sg	Sg	04 52 53.1	-0.6
BFO	Black Forest	2.45	295	*e*Pn	Pn	04 52 18.5	+1.9
BFO				*e*Sg	Sg	04 52 54.7	-0.3
MILN	Milano	2.50	223	S	Sg	04 52 57.0	+0.4
KIZ	Kirchzarten	2.60	285	S	Sg	04 52 59.6	-0.2
KIZ	Kirchzarten	2.60	285	P	Pn	04 52 19.9	+1.3
OPP	Oppenau	2.61	298	P	Pn	04 52 20.2	+1.5
OPP				S	Sg	04 52 58.8	-1.1
BALST	Balsthal	2.70	271	P	Pn	04 52 22.1	+2.2
BALST	Balsthal	2.70	271	*e*Pn	Pb	04 52 22.6	-2.2
BALST				*e*Sg	Sg	04 53 03.1	+0.3
NKC	Novy Kostel	2.94	10	*e*SG	Sg	04 53 10.9	+0.1
	comp=N,7.2nm,0.3s						
MILB	Miltenberg	2.95	329	*e*Pn	Pn	04 52 24.6	+1.3
MILB				*e*Sg	Sg	04 53 11.1	+0.3
BOURR	Bourrignon	3.01	273	P	Pn	04 52 26.4	+2.2
CDF	Champ du Feu	3.14	292	*e*Pn	Pn	04 52 27.9	+1.8
CDF				*e*Sg	Sg	04 53 17.7	+0.7
	comp=N,2.9nm,0.3s						
ECH	Echery	3.16	288	P	Pn	04 52 28.0	+1.7
ECH	Echery	3.16	288	*e*Pn	Pn	04 52 28.6	+2.3
ECH				*e*Sg	Sg	04 53 16.9	-0.8
PRU	Pruhonice	3.27	35	*e*SG	Sg	04 53 21.3	+0.1
HINF	Hinteralfeld	3.29	280	*e*Pn	Pn	04 52 29.6	+1.5
HINF				*e*Sn	Sn	04 53 05.6	-1.8
	comp=N,1.1nm,0.2s						
HINF				*e*Sg	Sg	04 53 22.9	+1.1
	comp=N,1.8nm,0.3s						
MOX	Moxa	3.31	360	*e*Pn	Pn	04 52 29.1	+0.7
MOX				*e*Sg	Sg	04 53 23.2	+0.7
AIGLE	Aigle	3.38	255	P	Pn	04 52 31.8	+2.5
BRANT	Les Verrieres	3.56	265	P	Pn	04 52 34.1	+2.2
HAU	Haudompre	3.65	283	*e*Pn	Pn	04 52 34.6	+1.6
HAU				*e*Sn	Sn	04 53 14.3	-2.0
	comp=N,2.6nm,0.3s						
HAU				*e*Sg	Sg	04 53 33.6	+0.2
	comp=N,1.5nm,0.2s						
PVCC	Panska Ves	3.73	30	*e*SG	Sg	04 53 36.2	+0.4
ABH	Alteburg	3.73	315	P	Pn	04 52 36.2	+2.1
ABH	Alteburg	3.73	315	S	Sn	04 53 16.1	-2.2
APEC	Apecchio	3.82	172	P	Pn	04 52 35.5	+0.2
APEC				AML	AML		
	comp=N,35µm,0.5s						
APEC				AML	AML		
	comp=E,27µm,1.4s						
BRG	Berggiesshubel	3.84	22	Sg	Sg	04 53 39.8	+0.2
BRG				Amp		04 53 44.1	
	comp=Z,2.2nm,0.4s						
LPG	La Plagne	3.86	243	*e*Pn	Pn	04 52 37.4	+1.2
CABF	La Chapelle	3.88	261	*e*Pn	Pn	04 52 36.7	+0.4
CABF				*e*Sn	Sn	04 53 20.5	-1.6
PAGF	Fort de Pagny	4.17	289	*e*Pn	Pn	04 52 41.6	+1.5
PAGF				*e*Sn	Sn	04 53 31.2	+2.2
	comp=Z,1.8nm,0.3s						
UPC	Upice	4.28	41	*e*SG	Sg	04 53 52.4	-1.1
MBDF	Montbardon	4.29	234	*e*Pn	Pn	04 52 42.6	+0.7
MBDF				*e*Sn	Sn	04 53 29.7	-2.5
	comp=Z,0.6nm,0.3s						
DPC	Dobruska-Polom	4.31	44	*e*SG	Sg	04 53 52.4	-2.1
CHVC	Chvalec	4.36	40	*e*SG	Sg	04 53 53.1	-2.9
OSTC	Ostas	4.40	41	*e*SG	Sg	04 53 55.0	-2.6
SFTF	Sexfontaines	4.55	283	*e*Pn	Pn	04 52 46.2	+0.9
SFTF				*e*Sg	Sg	04 54 02.0	-0.2
	comp=Z,1.4nm,0.3s						
SBF	Sospel	4.57	222	*e*Pn	Pn	04 52 46.4	+0.7
SBF				*e*Sg	Sg	04 54 02.9	+0.1
	comp=Z,0.4nm,0.1s						
ORIF	Oris-en-Rattie	4.69	241	*e*Pn	Pn	04 52 47.5	+0.1
ORIF				*e*Sn	Sn	04 53 39.2	-2.8
	comp=Z,0.6nm,0.4s						
FRF	La Foret Royal	5.17	225	*e*Pn	Pn	04 52 52.9	-0.9
TOLF	Tolfa	5.28	177	P	Pn	04 52 55.0	-0.4
SMF	Signal de Mont	5.39	265	*e*Pn	Pn	04 52 57.6	+0.6
VIVF	Saint-Julien-l	5.46	245	*e*Pn	Pn	04 52 59.6	+1.8
VIVF				*e*Sn	Sn	04 53 57.4	-3.4
	comp=Z,0.3nm,0.2s						
SSF	Saint Saulge	5.56	270	*e*Pn	Pn	04 53 00.9	+1.6
AVF	Avril sur Loir	5.70	268	*e*Pn	Pn	04 53 02.3	+1.1
BGF	Bois d'Agland	6.08	266	*e*Pn	Pn	04 53 07.6	+1.2
BGF				*e*Sn	Sn	04 54 12.6	-3.6
	comp=Z,1.2nm,0.3s						
TCF	Toulx Ste Croi	6.57	264	*e*Pn	Pn	04 53 13.9	+0.8
CAF	Calviac	7.09	254	*e*Pn	Pn	04 53 20.8	+0.5
CAF				*e*Sn	Sn	04 54 36.3	-4.7
MFF	Saint Martin d	8.11	269	*e*Pn	Pn	04 53 36.0	+1.8

JMA ***14*** *04:58:34.8±0.2, 30°.75N×128°.48E, h16^{km}, M3.7*
IDC ***14*** *04:58:37.0±1.0, 30°.60N×128°.22E, h0^{km}, mb3.6/6, mb1 3.8/10, mb1mx3.6/49, mbtmp3.7/10, ML3.4/4, MS2.9/4, Ms1 2.9/4, ms1mx2.7/37, Error ellipse: s-maj=32.5km s-min=18.0km az=78.0*

ISC 14 04:58:37.4±0.8**, 30°.80N**±0°.05×**128°.66E**±0°.07**, h10**^{km}**, n20,** σ**1^{s}23**/19**, mb3.7**/6**, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	Shimokoshiki	1.26	46	P	Pn	04 58 59.6	-1.5
JSJ				*e*S	Sn	04 59 18.2	+0.1
JKC	Kuchinoerabu	1.37	104	*e*S	Sn	04 59 20.9	+0.2
JNN	Nakanoshima	1.42	132	P	Pn	04 59 01.5	-1.8
JYAK	Yakushimahirau	1.69	109	P	Pn	04 59 06.0	-1.0
JFU	Fukue jima 2	1.85	2	*e*S	Sn	04 59 30.7	-2.0
JMTN	Minamitane	1.97	101	P	Pn	04 59 10.3	-0.6
JTN	Tanegashima 3	2.00	94	P	Pn	04 59 11.2	-0.1
JTZ	Takazaki	2.35	62	P	Pn	04 59 16.3	+0.2
JIU3	Izumi3	2.53	46	P	Pn	04 59 18.2	-0.4
JNU	Nakatsue	2.99	39	Pn	Pg	04 59 33.2	-1.4
	27nm,0.3s,baz=22,slow=0.3,SNR=1.5						
JOW	Kunigami	3.97	185	Pn	Pn	04 59 37.6	-0.7
	2.6nm,0.3s,baz=103,slow=17,SNR=2.8						
JOW				LR	LR	05 01 27.3	
	comp=Z,125nm,18.8s,baz=45,slow=45						
KSRS	Korea Array	6.67	355	Pn	Pn	05 00 20.7	+5.3
	0.2nm,0.3s,baz=169,slow=14,SNR=3.1						
KSRS				LR	LR	05 03 20.0	
	comp=Z,75nm,18.4s,baz=162,slow=41						
JCJ	Chichijima	12.41	104	LR	LR	05 05 38.7	
	comp=Z,38nm,21.9s,baz=124,slow=33						
KLR	Kul'dur	18.56	6	P	Pn	05 02 57.1	+2.6
	0.1nm,0.3s,baz=176,slow=15,SNR=4.7						
SONM	Songino Array	24.07	321	P	P	05 03 52.7	-0.3
	0.8nm,0.9s,baz=130,slow=6.3,SNR=3.8						
SONM				LR	LR	05 14 29.4	
	comp=Z,92nm,18.5s,baz=15,slow=40						
MKAR	Makanchi Array	38.91	308	P	P	05 06 03.3	+0.1
	1.3nm,0.8s,baz=96,slow=12,SNR=9.6						
KURBB	Kurchatov Arra	41.91	313	P	P	05 06 27.9	-0.1
	1.0nm,0.6s,baz=101,slow=9.1,SNR=4.2						
WRA	Warramunga Arr	50.74	173	P	P	05 07 37.9	+0.2
	0.5nm,0.6s,baz=352,slow=8.2,SNR=6.8						
ASAR	Alice Springs	54.39	174	P	P	05 08 04.2	-0.4
	0.5nm,0.8s,baz=1.9,slow=8.4,SNR=2.6						
NVAR	Mina Array Bea	87.08	46	P	P	05 11 25.7	+1.8
	0.3nm,0.6s,baz=330,slow=3.4,SNR=2.2						

ATH ***14*** *05:04:17.3, 35°.37N×28°.50E, h10^{km}±8^{km}, ML2.9/5, Error ellipse: s-maj=9.7km s-min=1.7km az=342.0*
ISK ***14*** *05:04:21.0, 35°.48N×28°.79E, h20^{km}, ML2.9/15*
NIC ***14*** *05:04:21.5±0.0, 35°.39N×28°.81E, h31^{km}±2^{km}, Ml3.5/3*
THE ***14*** *05:04:22.4, 35°.55N×28°.85E, h10^{km}±18^{km}, ML2.9/1, Error ellipse: s-maj=23.1km s-min=2.4km az=172.0*
DDA ***14*** *05:04:23.1, 35°.67N×28°.75E, h40^{km}±1^{km}, ML2.8*

ISC 14 05:04:18.0±1.5**, 35°.42N**±0°.04×**28°.80E**±0°.03**, h6**^{km}±11^{km}**, n69,** σ**1^{s}36**/89**, 3C-2D, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARG	Arkhangelos	0.96	326	P	Pn	05 04 38.5	+0.4
ARG				S	Sn	05 04 52.8	+0.6
	842nm,0.8s						
ARG	Arkhangelos	0.96	326	P	Pg	05 04 34.1	-2.4
ARG				AML	AML	05 05 01.4	
	comp=N,1518µm,0.8s						
ARG				AML	AML	05 05 02.2	
	comp=E,1885µm,0.8s						
ARG	Arkhangelos	0.96	326	PG	Pn	05 04 39.3	+1.2
ARG				SG	Sn	05 04 52.6	+0.4
ARG	Arkhangelos	0.96	326	P	Pn	05 04 38.5	+0.4
ARG				S	Sn	05 04 52.9	+0.8
KSL	Kastellorizon	0.97	41	P	Pn	05 04 39.0	+0.8
KSL	Kastellorizon	0.97	41	P	Pn	05 04 39.1	+0.9
KSL				AML	AML	05 05 04.5	
	comp=N,402µm,0.6s						
KSL				AML	AML	05 05 05.1	
	comp=E,557µm,0.6s						
KSL	Kastellorizon	0.97	41	⇓*e*P	Pn	05 04 38.9	+0.7
KSL				S	Sn	05 04 52.2	-0.1
AKAS	Kas	1.04	39	*i* P	Pn	05 04 39.7	+0.3
AKAS				*i* S	Sn	05 04 53.7	-0.6
AKAS				IAML		05 04 56.0	
	comp=E,359nm,0.3s						
AKAS				IAML		05 05 08.0	
	comp=N,311nm,0.7s						
AKAS	Kas	1.04	39	PG	Pn	05 04 40.4	+1.1
AKAS				SG	Sn	05 04 54.7	+0.4
DEMR	Demre-Antalya	1.22	48	PN	Pn	05 04 43.0	+1.4
FETY	Fethiye	1.23	11	P	Pb	05 04 41.9	+0.1
FETY				S	Sg	05 04 56.6	-1.2
FETY	Fethiye	1.23	11	*i* P	Pb	05 04 41.9	+0.1
FETY	Fethiye	1.23	11	PN	Pb	05 04 41.9	+0.1
FETY				SN	Sn	05 04 58.9	0.0
MRSB	Marmaris-Mugla	1.38	340	PN	Pg	05 04 45.2	+0.6
DALY	Dalyan (Mula)	1.40	355	*i* P	Pn	05 04 44.2	+0.1
DALY	Dalyan (Mula)	1.40	355	PN	Pg	05 04 45.4	+0.5
TURN	Turunc	1.43	342	*i* P	Pg	05 04 45.6	+0.3
TURN	Turunc	1.43	342	PN	Pg	05 04 45.7	+0.3
AKUM	Antalya-Kumluc	1.54	54	*i* P	Pb	05 04 47.2	+0.1
AKUM				*i* S	Sn	05 05 03.9	-2.5
CAME	Cameli-Denizli	1.57	15	PN	Pb	05 04 47.9	+0.2
ELL	Elmali	1.60	34	PN	Pg	05 04 48.7	-0.1
ELL	Elmali	1.60	34	⇑*e*P	Pb	05 04 48.3	+0.2
DAT	Datca	1.64	323	P	Pn	05 04 47.9	+0.4
DAT	Datca	1.64	323	*i* P	Pn	05 04 48.1	+0.6
DAT	Datca	1.64	323	PN	Pn	05 04 48.7	+1.2
CAEL	Denizli, Camel	1.75	14	*i* P	Pb	05 04 50.8	+0.1
YER	Yerkesik	1.76	346	P	Pn	05 04 50.3	+1.1
YER				S	Sn	05 05 10.8	-1.1
YER	Yerkesik	1.76	346	PN	Pb	05 04 50.5	-0.3
NIS1	Nisyros Isl.	1.77	312	P	Pn	05 04 49.8	+0.6
NIS1	Nisyros Isl.	1.77	312	P	Pn	05 04 46.6	-2.5
NIS1				AML	AML	05 05 26.8	
	comp=E,1106µm,0.5s						
NIS1				AML	AML	05 05 27.8	
	comp=N,1152µm,0.4s						
NIS1	Nisyros Isl.	1.77	312	PN	Pn	05 04 50.6	+1.4
MULA	Mugla, Merkez-	1.87	348	*i* P	Pb	05 04 52.4	-0.3
MULA				*i* S	Sn	05 05 12.6	-2.2
BDRM	Kayabasi	1.97	327	*i* P	Pg	05 04 57.9	+2.0
KORT	Korkueli	2.02	38	*i* P	Pb	05 04 54.9	-0.3
KORT	Korkueli	2.02	38	PN	Pb	05 04 54.5	-0.7
BODT	Bodrum	2.03	324	PN	Pn	05 04 54.3	+1.5
TAVA	DENIZLI_Tavas	2.04	3	*i* P	Pn	05 04 54.3	+1.2
TAVA				*i* S	Sn	05 05 16.0	-3.0
MLSB	Milas	2.04	337	PN	Pn	05 04 54.7	+1.7
AYDN	Tasoluk	2.36	342	*i* P	Pn	05 04 58.8	+1.4
AYDN				*i* S	Sn	05 05 25.2	-1.4
AYDN				IAML		05 05 26.0	
	comp=N,53nm,0.3s						
AYDN				IAML		05 05 27.0	
	comp=E,74nm,0.4s						
BUCA	Burdur, Bucak-	2.38	36	*i* P	Pb	05 04 59.7	-1.6
BCK	Bucak	2.50	35	PN	Pn	05 05 01.3	+2.0
GCAM	G?zelcaml?	2.60	332	PN	Pn	05 05 02.5	+1.9
NPS	Neapolis	2.61	267	P	Pn	05 04 59.2	-1.5
AYDB	Zeytinkoy-Aydi	2.62	344	PN	Pn	05 05 02.9	+1.8
BASM	Basmaki-Afyon	2.69	22	PN	Pn	05 05 03.8	+1.9
KEPZ	Antalya-Kepez	2.71	56	*i* P	Pn	05 05 02.9	+0.8
KEPZ				*i* S	Sn	05 05 32.1	-3.2
SMG	Samos	2.78	326	P	Pn	05 05 03.7	+0.7
OSC1	CSNet OBS 1	2.80	132	P	Pn	05 05 04.2	+0.8
OSC1				S	Sn	05 05 37.3	-0.2
STAX	Taxiarchis Har	2.92	291	P	Pn	05 05 05.8	+0.7
AKMS	Akamas	2.92	97	⇑*e*P	Pn	05 05 05.9	+0.8
AKMS				AML	AML	05 05 39.9	
	comp=E,0.3nm,0.2s						
AKMS				AML	AML	05 05 39.9	
	comp=E,0.4nm,0.3s						
THR3	Thira Island,	2.93	291	P	Pn	05 05 05.8	+0.7
THR3	Thira Island,	2.93	291	P	Pn	05 05 05.9	+0.7
SNT5	Nea Kammeni, S	2.93	291	P	Pn	05 05 05.4	+0.2
GAZI	Gazipasa	2.97	73	*i* P	Pn	05 05 08.3	+2.6
GAZI				*i* S	Sn	05 05 38.5	-3.2
GAZI				IAML		05 05 41.0	
	comp=E,48nm,0.6s						
GAZI				IAML		05 05 43.0	
	comp=N,45nm,0.3s						
PASA	Karahalli, USA	2.98	11	*i* P	Pn	05 05 06.3	+0.5
ALFC	Alefka	3.12	94	P	Pn	05 05 08.7	+0.9
ALFC				AML	AML	05 05 45.5	
	comp=N,0.3nm,0.2s						
ALFC				AML	AML	05 05 45.5	
	comp=N,0.3nm,0.2s						
ALFC				S	Sn	05 05 45.7	+0.2
ALFC				AML	AML	05 05 46.2	
	comp=N,0.4nm,0.2s						
ALFC				AML	AML	05 05 46.2	
	comp=N,0.4nm,0.2s						
SEDI	Konya, Seydise	3.13	49	*i* P	Pn	05 05 10.3	+2.3
SEDI				*i* S	Sn	05 05 46.5	+0.7
SEDI				IAML		05 05 51.0	
	comp=N,34nm,0.6s						
SEDI				IAML		05 05 53.0	
	comp=E,35nm,0.6s						
NATA	Nata	3.16	101	⇑*e*P	Pn	05 05 09.5	+1.2
IDI	Anoyia	3.20	269	P	Pn	05 05 09.2	+0.3
IDI				AML	AML	05 05 52.2	
	comp=E,54µm,0.2s						
IDI				AML	AML	05 05 55.5	
	comp=N,63µm,0.4s						
YVAC	Isparta, Yalva	3.46	34	*i* P	Pn	05 05 14.7	+2.2
DOGA	KONYA_Doganhis	3.54	40	*i* P	Pn	05 05 16.1	+2.5
DOGA				*i* S	Sn	05 05 54.6	-1.3
DOGA				IAML		05 05 58.0	
	comp=N,19nm,0.3s						
DOGA				IAML		05 05 59.0	
	comp=E,28nm,0.4s						
ASGA	Asgata	3.70	99	⇓P	Pn	05 05 16.7	+0.9
ASGA				AML	AML	05 05 59.5	
	comp=E,0.3nm,0.2s						
ASGA				AML	AML	05 06 03.8	
	comp=E,0.3nm,0.3s						
OSC2	CSNet OBS 4	3.71	128	P	Pn	05 05 16.9	+1.2
OSC2				S	Sn	05 05 59.1	-0.6
CSS	Mathiatis	3.74	96	P	Pn	05 05 16.9	+0.6
VAM	Vamos	3.75	271	P	Pn	05 05 18.1	+1.6
GVD	Gavdhos	3.90	263	P	Pn	05 05 20.1	+1.6
GVD				AML	AML	05 06 10.1	
	comp=N,145µm,0.4s						
GVD				AML	AML	05 06 11.8	
	comp=E,130µm,0.3s						
IMMV	Iera Moni Meta	3.93	272	P	Pn	05 05 21.7	+2.8
IMMV	Iera Moni Meta	3.93	272	P	Pn	05 05 21.2	+2.2
MVOU	Mavrovouni	3.98	94	P	Pn	05 05 20.2	+0.7

KRNET ***14*** *05:10:06.9±0.1, 41°.61N×72°.66E, h16^{km}, mb3.1*
KNET ***14*** *05:10:09.0±0.4, 41°.71N×72°.75E, h0^{km}, ml2.3, Error ellipse: s-maj=4.6km s-min=3.0km az=134.0*
SOME ***14*** *05:10:08.1, 41°.68N×72°.65E, h5^{km}*
NNC ***14*** *05:10:09.2±1.9, 41°.67N×72°.67E, h0^{km}, mb3.9, mpv3.6, Error ellipse: s-maj=19.7km s-min=6.5km az=176.0*

ISC 14 05:10:07.2±1.1**, 41°.60N**±0°.02×**72°.72E**±0°.02**, h10**^{km}±10^{km}**, n60,** σ**0^{s}93**/101**, 21C-29D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNAS	Manas	0.90	350	⇓*i*P	Pg	05 10 24.2	-0.3
	baz=53						
MNAS				⇓*i*S	Sb	05 10 36.5	-0.6
	baz=53						
AML	Almayashu	0.90	54	⇓P	Pb	05 10 24.7	-0.6
	27nm,0.2s,SNR=10						
AML				⇑S	Sn	05 10 38.4	-1.3
	36nm,0.1s						
AML	Almayashu	0.90	54	⇑*e*P	Pb	05 10 24.6	-0.6
	baz=56						
AML				⇑*i*S	Sb	05 10 37.5	0.0
	baz=56						
OHH	Osh	1.08	177	⇓*e*P	Pg	05 10 27.2	-0.8

	baz=75						
OHH				⇓iS	Sg	05 10 42.7	+0.7
	baz=75						
TRKS	Terek-Say	1.19	267	⇓iP	Pb	05 10 28.4	-1.5
	baz=63						
TRKS				⇓iS	Sb	05 10 44.1	-1.3
	baz=63						
MRKS	Merke	1.20	18	eP	Pn	05 10 31.3	+1.0
	5.8nm,0.1s						
MRKS				eS	Sn	05 10 47.4	+0.7
	40nm,0.3s						
MRKS	Merke	1.20	18	P	Pn	05 10 30.5	+0.2
	5.8nm,0.1s						
MRKS				S	Sn	05 10 45.6	-1.1
	40nm,0.3s						
MRKS	Merke	1.20	18	eP	Pn	05 10 30.5	+0.2
	baz=20						
MRKS				eS	Sn	05 10 45.6	-1.1
	baz=20						
EKS2	Erkin-Say	1.32	36	⇑P	Pg	05 10 32.4	-0.2
	7.0nm,0.2s,SNR=11						
EKS2	Erkin-Say	1.32	36	⇓eP	Pg	05 10 32.1	-0.5
	baz=38						
EKS2				⇓iS	Sn	05 10 50.8	+1.2
	baz=38						
UCH	Uchtor	1.48	64	⇑P	Pg	05 10 35.7	0.0
	18nm,0.2s,SNR=17						
UCH				⇓S	Sg	05 10 57.6	+2.8
	31nm,0.3s						
UCH	Uchtor	1.48	64	⇑iP	Pg	05 10 35.3	-0.4
	baz=65						
UCH				⇑iS	Sg	05 10 56.1	+1.2
	baz=65						
DZA	Taraz	1.65	322	eP	Pb	05 10 37.9	+0.1
	66nm,0.1s						
DZA				eS	Sb	05 10 58.2	-0.4
	248nm,0.2s						
DZA	Taraz	1.65	322	P	Pb	05 10 37.9	+0.1
	66nm,0.1s						
DZA				S	Sb	05 10 58.2	-0.4
	248nm,0.2s						
DZA	Taraz	1.65	322	eP	Pb	05 10 37.9	+0.1
	baz=23						
DZA				eS	Sb	05 10 58.2	-0.4
	baz=23						
AAK	Ala-Archa	1.68	51	⇓P	Pg	05 10 40.0	+0.5
	10nm,0.2s,SNR=16						
AAK				⇓S	Sg	05 11 03.4	+2.2
	17nm,0.3s						
AAK	Ala-Archa	1.68	51	P	Pg	05 10 40.0	+0.5
	7.2nm,0.4s						
AAK				S	Sg	05 11 03.0	+1.8
	8.6nm,0.3s						
AAK	Ala-Archa	1.68	51	⇑eP	Pg	05 10 38.6	-0.8
	baz=52						
AAK				⇑iS	Sg	05 11 01.8	+0.6
	baz=52						
SFK	Sufi-Kurgan	1.70	159	⇑iP	Pb	05 10 38.8	+0.1
	baz=58						
SFK				⇑iS	Sg	05 11 02.1	+0.2
	baz=58						
KBK	Karagaybulak	1.96	57	⇑P	Pg	05 10 44.6	-0.3
	15nm,0.1s,SNR=11						
KBK				⇓S	Sg	05 11 12.5	+2.1
	27nm,0.2s						
KBK	Karagaybulak	1.96	57	⇓iP	Pb	05 10 43.6	+0.3
	baz=58						
KBK				⇓iS	Sg	05 11 10.5	+0.1
	baz=58						
CHMS	Chumysh	2.05	47	⇓P	Pg	05 10 45.6	-1.0
	13nm,0.2s,SNR=7.7						
CHMS				⇓S	Sg	05 11 14.3	+1.0
	31nm,0.4s						
CHMS	Chumysh	2.05	47	⇑eP	Pb	05 10 44.7	0.0
	baz=48						
CHMS				⇑iS	Sg	05 11 12.7	-0.6
	baz=48						
IUG	Iuzhnay	2.08	286	eP	Pg	05 10 47.1	0.0
	634nm,0.3s						
IUG				eS	Sg	05 11 14.2	+0.2
	73nm,0.1s						
IUG	Iuzhnay	2.08	286	Pg	Pg	05 10 47.1	0.0
	634nm,0.3s						
IUG				Lg	Lg	05 11 14.2	
	73nm,0.1s						
BTK	Batken	2.11	224	⇑iP	Pb	05 10 44.9	-0.8
	baz=23						
BTK				⇑iS	Sb	05 11 13.0	+1.0
	baz=23						
USP	Ospenovka	2.12	38	⇑P	Pg	05 10 46.8	-1.1
	18nm,0.2s,SNR=18						
USP				⇓S	Sg	05 11 15.9	+0.4
	46nm,0.3s						
USP	Ospenovka	2.12	38	⇓iP	Pb	05 10 45.8	-0.1
	baz=39						
USP				⇓iS	Sg	05 11 14.1	-1.3
	baz=39						
KK31	Karatay Array	2.22	313	⇓Pn	Pb	05 10 47.7	+0.3
	2.4nm,0.2s,baz=134,slow=17,SNR=70						
KK31				⇓Sn	Sg	05 11 19.1	+0.7
	9.6nm,0.3s,baz=138,slow=26,SNR=13						
DRK	Karamyk	2.23	199	⇓iP	Pb	05 10 46.9	-1.0
	baz=97						
DRK				⇓iS	Sb	05 11 16.2	+0.5
	baz=97						
TKM2	Tokmak 2	2.51	57	⇑P	Pb	05 10 53.5	+0.9
	14nm,0.3s,SNR=17						
TKM2	Tokmak 2	2.51	57	⇑Pg	Pb	05 10 53.4	+0.9
	6.7nm,0.3s						
TKM2				⇓Lg	Lg	05 11 28.5	
	49nm,0.6s						
TKM2	Tokmak 2	2.51	57	⇓iP	Pb	05 10 51.4	-1.2
	baz=58						
TKM2				⇓iS	Sb	05 11 23.9	+0.3
	baz=58						
BOOM	Boomskoye usch	2.56	69	⇑iP	Pb	05 10 52.6	-0.8
	baz=69						
BOOM				⇑iS	Sb	05 11 25.3	+0.3
	baz=69						
ULHL	Ulahol	2.71	75	⇓iP	Pb	05 10 54.3	-1.6
	baz=75						
ULHL				⇓iS	Sb	05 11 28.7	-0.6
	baz=75						
DGS	Degeres	2.79	53	eP	Pg	05 11 00.3	-0.4
	5.5nm,0.3s						
DGS				eS	Sg	05 11 36.8	-0.1
	31nm,0.6s						
DGS	Degeres	2.79	53	Pg	Pg	05 11 00.3	-0.4
	5.5nm,0.3s						
DGS				Lg	Lg	05 11 36.8	
	31nm,0.6s						
KST	Kastek	2.80	58	eP	Pg	05 11 00.6	-0.4
	14nm,0.2s						
KST				eS	Sg	05 11 37.1	-0.2
	59nm,0.6s						
KST	Kastek	2.80	58	Pg	Pg	05 11 00.5	-0.4
	14nm,0.2s						
KST				Lg	Lg	05 11 37.1	
	59nm,0.6s						
KRBS	Karabastau	3.02	45	eP	Pg	05 11 03.9	-1.3
	4.3nm,0.4s						
KRBS				eS	Sg	05 11 42.7	-1.6
	14nm,0.5s						
KRBS	Karabastau	3.02	45	Pg	Pg	05 11 03.9	-1.3
	4.3nm,0.4s						
KRBS				Lg	Lg	05 11 42.7	
	14nm,0.5s						
MTBS	Maitube	3.15	60	eP	Pg	05 11 07.2	-0.3
	5.1nm,0.4s						
MTBS				eS	Sg	05 11 48.5	+0.2
	21nm,0.4s						
MTBS	Maitube	3.15	60	Pg	Pg	05 11 07.2	-0.3
	5.1nm,0.4s						
MTBS				Lg	Lg	05 11 48.5	
	21nm,0.4s						
IZV	Izvestkoviy	3.22	62	eP	Pg	05 11 08.9	-0.1
	12nm,0.6s						
IZV				eS	Sg	05 11 51.3	+0.5
	18nm,0.5s						
IZV	Izvestkoviy	3.22	62	Pg	Pg	05 11 08.9	-0.1
	12nm,0.6s						
IZV				Lg	Lg	05 11 51.3	
	18nm,0.5s						
TNSS	Tian-Shan	3.45	64	eP	Pg	05 11 12.9	-0.4
	9.2nm,0.5s						
TNSS				eS	Sg	05 11 58.5	+0.4
	9.5nm,0.3s						
TNSS	Tian-Shan	3.45	64	Pg	Pg	05 11 12.9	-0.4
	9.2nm,0.5s						
TNSS				Lg	Lg	05 11 58.5	
	9.5nm,0.3s						
KUU	Kurty	3.51	48	eP	Pg	05 11 13.1	-1.5
	5.2nm,0.5s						
KUU				eS	Sg	05 11 58.9	-1.2
	8.8nm,0.3s						
KUU	Kurty	3.51	48	Pg	Pg	05 11 13.1	-1.5
	5.2nm,0.5s						
KUU				Lg	Lg	05 11 58.9	
	8.8nm,0.3s						
MDOK	Medeo	3.57	63	eP	Pg	05 11 14.7	-0.9
	18nm,0.7s						
MDOK				eS	Sg	05 12 01.4	-0.4
	9.7nm,0.9s						
MDOK	Medeo	3.57	63	Pg	Pg	05 11 14.1	-1.4
	13nm,0.8s						
MDOK				Lg	Lg	05 12 01.3	
	30nm,1.0s						
MDOK	Medeo	3.57	63	Pg	Pg	05 11 14.7	-0.9
	18nm,0.7s						
MDOK				Lg	Lg	05 12 01.4	
	9.7nm,0.9s						
KTBS	Karatobe	3.60	53	eP	Pg	05 11 15.0	-1.3
	2.5nm,0.3s						
KTBS				eS	Sg	05 12 01.9	-1.1
	12nm,0.4s						
KTBS	Karatobe	3.60	53	Pg	Pg	05 11 15.0	-1.3
	2.5nm,0.3s						
KTBS				Lg	Lg	05 12 01.9	
	12nm,0.4s						
CHKK	Chushkaly	3.87	53	eP	Pg	05 11 20.5	-0.8
	1.9nm,0.2s						
CHKK				eS	Sg	05 12 11.4	-0.1
	6.7nm,0.2s						
CHKK	Chushkaly	3.87	53	Pg	Pg	05 11 20.5	-0.8
	1.9nm,0.2s						
CHKK				Lg	Lg	05 12 11.4	
	6.7nm,0.2s						
ARXS	Arharly	4.57	54	eP	Pg	05 11 33.3	-1.5
	5.2nm,0.5s						
ARXS				eS	Sg	05 12 33.3	-0.7
	9.9nm,0.6s						
ARXS	Arharly	4.57	54	Pg	Pg	05 11 33.3	-1.5
	5.2nm,0.5s						
ARXS				Lg	Lg	05 12 33.3	
	9.9nm,0.6s						
PDGK	Podgornoye	5.30	69	Lg	Lg	05 12 59.0	
	5.2nm,0.7s						
AB31	Akbulak array	11.78	315	P	Pn	05 12 56.6	+1.3
	0.9nm,0.7s,baz=116,slow=14,SNR=9.5						

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*ATH **14** 05:14:22.8, 35°.32N×28°.62E, h10^{km}±6^{km}, ML2.8/3, Error ellipse: s-maj=7.1km s-min=1.4km az=324.0*
*ISK **14** 05:14:25.3, 35°.39N×28°.75E, h18^{km}, ML2.8/13*
*NIC **14** 05:14:27.8±0.0, 35°.51N×28°.86E, h29^{km}±3^{km}, Ml3.2/2*
*THE **14** 05:14:29.0, 35°.48N×28°.80E, h27^{km}±39^{km}, ML2.6/1, Error ellipse: s-maj=40.2km s-min=2.3km az=171.0*
*DDA **14** 05:14:32.0, 35°.87N×28°.89E, h35^{km}±1^{km}, ML2.5*
ISC 14 05:14:24.3±1.4**, 35°.43N**±0°.04×**28°.79E**±0°.03**, h6**^{km}±10^{km}**, n57,** σ1^{s}**26**/82**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARG	Arkhangelos	0.95	326	P	Pn	05 14 45.1	+0.9
ARG				S	Sn	05 14 57.9	-0.1
	370nm,0.6s						
ARG	Arkhangelos	0.95	326	P	Pg	05 14 41.0	-1.6
ARG				S	Sg	05 14 54.6	-0.3
ARG				AML	AML	05 15 07.3	
	comp=N,1041µm,0.7s						
ARG				AML	AML	05 15 08.2	
	comp=E,1339µm,0.8s						
ARG	Arkhangelos	0.95	326	PG	Pn	05 14 44.5	+0.4
ARG				SG	Sn	05 14 58.4	+0.4
ARG	Arkhangelos	0.95	326	P	Pn	05 14 45.0	+0.9
ARG				S	Sb	05 14 57.3	+1.4
KSL	Kastellorizon	0.97	42	P	Pn	05 14 45.0	+0.7
KSL	Kastellorizon	0.97	42	P	Pb	05 14 44.2	+0.8
KSL				S	Sn	05 14 59.5	+1.2
KSL				AML	AML	05 15 10.5	
	comp=N,279µm,0.6s						
KSL				AML	AML	05 15 11.2	
	comp=E,371µm,0.7s						
KSL	Kastellorizon	0.97	42	P	Pb	05 14 44.0	+0.6
KSL				S	Sb	05 14 56.3	-0.1
AKAS	Kas	1.04	39	iP	Pn	05 14 45.8	+0.3
AKAS				iS	Sn	05 15 00.6	+0.2
AKAS				IAML		05 15 02.0	
	comp=E,279nm,0.3s						
AKAS				IAML		05 15 14.0	
	comp=N,226nm,0.5s						
AKAS	Kas	1.04	39	PN	Pn	05 14 46.4	+0.9
AKAS				SN	Sn	05 15 01.5	+1.1
FETY	Fethiye	1.23	11	P	Pg	05 14 47.8	0.0
FETY				S	Sg	05 15 03.2	-0.6
FETY	Fethiye	1.23	11	iP	Pg	05 14 47.9	0.0
DALY	Dalyan (Mula)	1.39	356	iP	Pn	05 14 50.1	0.0
DALY	Dalyan (Mula)	1.39	356	PN	Pg	05 14 51.2	+0.3
DALY				SN	Sn	05 15 10.0	+1.2
TURN	Turunc	1.41	342	iP	Pb	05 14 51.5	+0.5
TURN	Turunc	1.41	342	PN	Pb	05 14 51.4	+0.5
TURN				SN	Sg	05 15 09.9	+0.2
AKUM	Antalya-Kumluc	1.55	54	iP	Pb	05 14 53.2	0.0
AKUM				iS	Sn	05 15 09.9	-2.8
CAME	Cameli-Denizli	1.57	15	PN	Pn	05 14 53.5	+0.8
CAME				SN	Sg	05 15 14.3	-0.4
ELL	Elmali	1.60	34	PN	Pn	05 14 53.9	+0.7
ELL				SN	Sg	05 15 15.2	-0.5
DAT	Datca	1.62	323	P	Pn	05 14 54.0	+0.5
DAT				S	Sn	05 15 13.1	-1.7
DAT	Datca	1.62	323	iP	Pn	05 14 54.1	+0.6
DAT	Datca	1.62	323	PN	Pn	05 14 54.0	+0.5
DAT				SN	Sn	05 15 14.2	-0.6
CAEL	Denizli, Camel	1.75	14	iP	Pb	05 14 56.5	-0.2
YER	Yerkesik	1.75	347	P	Pn	05 14 56.2	+1.0
YER				S	Sn	05 15 16.8	-1.0
YER	Yerkesik	1.75	347	PN	Pb	05 14 56.6	-0.2
NIS1	Nisyros Isl.	1.75	312	P	Pn	05 14 54.2	-0.9
NIS1				AML	AML	05 15 37.8	
	comp=E,913µm,0.5s						
NIS1				AML	AML	05 15 40.3	
	comp=N,764µm,0.4s						
NIS1	Nisyros Isl.	1.75	312	PN	Pn	05 14 55.7	+0.6
MULA	Mugla, Merkez-	1.86	348	iP	Pb	05 14 58.8	+0.1
MULA				iS	Sn	05 15 18.6	-1.9
MULA				IAML		05 15 23.0	
	comp=E,42nm,0.7s						
BDRM	Kayabasi	1.96	327	iP	Pg	05 15 02.4	+0.6
KORT	Korkueli	2.02	38	iP	Pb	05 15 00.9	-0.4
KORT	Korkueli	2.02	38	PN	Pn	05 15 00.0	+1.1
BODT	Bodrum	2.02	324	P	Pn	05 14 59.0	+0.2
BODT				S	Sn	05 15 22.0	-2.4
BODT	Bodrum	2.02	324	PN	Pn	05 14 59.3	+0.5
TAVA	DENIZLI_Tavas	2.04	3	iP	Pn	05 15 00.2	+1.1
TAVA				iS	Sn	05 15 21.3	-3.6
TAVA				IAML		05 15 26.0	
	comp=E,35nm,0.3s						
AYDN	Tasoluk	2.34	342	iP	Pn	05 15 04.5	+1.2
AYDN				iS	Sn	05 15 31.9	-0.5
AYDN				IAML		05 15 32.0	
	comp=N,43nm,0.3s						
AYDN				IAML		05 15 33.0	
	comp=E,57nm,0.4s						
BUCA	Burdur, Bucak-	2.37	37	iP	Pb	05 15 05.9	-1.5
GCAM	G?zelcaml?	2.59	332	PN	Pn	05 15 07.9	+1.3
NPS	Neapolis	2.60	267	P	Pn	05 15 06.5	-0.3
AYDB	Zeytinkoy-Aydi	2.61	344	PN	Pn	05 15 08.2	+1.1
KEPZ	Antalya-Kepez	2.71	56	iP	Pn	05 15 08.9	+0.5
KEPZ				iS	Sn	05 15 39.0	-2.5
KEPZ				IAML		05 15 44.0	
	comp=E,13nm,0.5s						
KEPZ				IAML		05 15 53.0	
	comp=N,19nm,0.5s						
OSC1	CSNet OBS 1	2.82	132	P	Pn	05 15 10.2	+0.5
OSC1				S	Sn	05 15 45.4	+1.5
STAX	Taxiarchis Har	2.91	290	P	Pn	05 15 11.6	+0.5
THR3	Thira Island,	2.92	291	P	Pn	05 15 11.8	+0.7
SNT5	Nea Kammeni, S	2.92	290	P	Pn	05 15 12.1	+0.9
AKMS	Akamas	2.93	97	P	Pn	05 15 12.1	+0.7
AKMS				AML	AML	05 15 43.4	
	comp=N,0.1nm,0.3s						
AKMS				AML	AML	05 15 45.1	
	comp=N,0.2nm,0.3s						
PASA	Karahalli, USA	2.97	11	iP	Pn	05 15 12.0	+0.1
GAZI	Gazipasa	2.98	73	iP	Pn	05 15 12.0	0.0
GAZI				iS	Sn	05 15 43.8	-4.2
KULA	Kula-Manisa	3.08	358	PN	Pn	05 15 14.9	+1.4
ALFC	Alefka	3.13	94	P	Pn	05 15 14.9	+0.8
ALFC				AML	AML	05 15 52.1	
	comp=N,0.2nm,0.3s						
ALFC				AML	AML	05 15 52.2	
	comp=N,0.3nm,0.3s						
SEDI	Konya, Seydise	3.13	49	iP	Pn	05 15 17.1	+2.9
SEDI				iS	Sn	05 15 51.4	-0.5
SEDI				IAML		05 15 57.0	
	comp=N,27nm,0.6s						
SEDI				IAML		05 15 59.0	
	comp=E,24nm,0.6s						
NATA	Nata	3.17	101	P	Pn	05 15 15.6	+1.0
IDI	Anoyia	3.19	269	P	Pn	05 15 16.1	+1.2
BLCB	Balcova	3.27	335	PN	Pn	05 15 17.5	+1.6
USAK	Uak-Merkez	3.28	3	iP	Pn	05 15 16.4	+0.2
YVAC	Isparta, Yalva	3.45	34	iP	Pn	05 15 21.6	+3.0
DOGA	KONYA_Doganhis	3.53	40	iP	Pn	05 15 22.2	+2.5
OSC2	CSNet OBS 4	3.72	128	P	Pn	05 15 23.2	+1.1
CSS	Mathiatis	3.75	96	P	Pn	05 15 22.7	0.0

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*BGR **14** 05:25:15.8±0.0, 4°.47N×35°.81W, h33^{km}, mb5.1, Ms4.6*
*MOS **14** 05:25:32.7±0.9, 7°.19N×34°.27W, h10^{km}, mb5.3/76, Error ellipse: s-maj=9.7km s-min=4.3km az=51.3*
*IDC **14** 05:25:32.4±0.5, 7°.13N×34°.25W, h0^{km}, mb4.7/25, mb1 4.8/26, mb1mx4.7/32, mbtmp4.7/26, ML4.1/1, MS4.6/31, Ms1 4.6/31, ms1mx4.6/31, Error ellipse: s-maj=16.2km s-min=11.2km az=154.0*
*NEIC **14** 05:25:35.5±1.3, 7°.22N±0°.10×34°.27W±0°.09, h10^{km}±1^{km}, mb5.3/116, Ms_20 4.8/54, Mwb5.3/9, Error ellipse: s-maj=17.4km s-min=13.8km az=141.0*
*NEIC **14** 05:25:35.7, 7°.18N×34°.28W, h14^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-0.49; $M_{\theta\theta}$-0.50; $M_{\phi\phi}$0.98; $M_{r\theta}$-3.27; $M_{\theta\phi}$-9.00; $M_{\phi r}$0.46; Fault plane solution: $M_0$9.62000×10^{16} NP1:ϕ_s2.54000°, δ69.99000°, λ0.17000°. NP2:ϕ_s272.48000°, δ89.84000°, λ159.99000°. Principal axes: T 9.9150, Plg14.0000°, Azm226.0000°; N -0.6113, Plg70.0000°, Azm92.0000°; P -9.3037, Plg14.0000°, Azm319.0000°;*
*GCMT **14** 05:25:36.5±0.1, 7°.28N±0°.01×34°.24W±0°.01, h12^{km}, MW5.3/139, Moment Tensor Solution. s105,c163; s139,c262; Duration: 1^{s}1 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.02±.01; $M_{\theta\theta}$0.00±.02; $M_{\phi\phi}$0.01±.02; $M_{r\theta}$0.07±.04; $M_{\theta\phi}$-1.15±.01; $M_{\phi r}$-0.12±.04; Best double couple: $M_0$1.15800×10^{17} NP1:ϕ_s90.00000°, δ84.00000°, λ177.00000°. NP2:ϕ_s180.00000°, δ87.00000°, λ6.00000°. Principal axes: T 1.1760, Plg6.0000°, Azm45.0000°; N -0.0360, Plg83.0000°, Azm211.0000°; P -1.1400, Plg2.0000°, Azm315.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 14 05:25:34.3±0.7**, 7°.16N**±0°.05×**34°.33W**±0°.05**, h8**^{km}±4^{km}**, h9**^{km}**:pP-P, n656,** σ1^{s}**14**/598**, mb5.2**/187**, MS4.7**/67**, 20C-41D, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NBMO	Morrinhos-CE	11.86	209	eP	Pn	05 28 22.6	-1.3
NBCL	Cascavel-CE	11.98	199	eP	Pn	05 28 23.8	-1.7
SACV	Santiago Islan	13.06	53	Pn	Pn	05 28 34.4	-6.0
NBPA	Parau_RN	13.12	192	eP	Pn	05 28 39.3	-1.8
NBPS	Pedro II - PI	13.50	212	eP	Pn	05 28 45.6	-0.7
NBPV	Pedro Velho	13.52	184	eP	Pn	05 28 45.4	-1.2
NBPB	Pedra_Branca-C	13.67	203	eP	Pn	05 28 46.9	-1.7
ROSB	Rosrio	13.98	225	eP	Pn	05 28 49.7	-3.1
NBLV	Livramento - P	14.65	190	eP	Pn	05 29 02.2	0.0
NBMA	Muriti-CE	15.10	197	eP	Pn	05 29 08.3	+0.2
NBRF	Rio Formoso -	15.76	183	eP	Pn	05 29 17.1	+0.3
TMAB	Tom-Au,PA,Br	16.69	236	eP	Pn	05 29 29.1	+0.4
NBAN	Anadia - AL	16.83	187	eP	Pn	05 29 30.3	-0.2
MDP	Montagnes des	18.32	265	P	Pn	05 29 48.4	-0.6
	0.6nm,0.3s,baz=92,slow=11,SNR=5.2						
MDP				LR	LR	05 35 17.5	
	comp=Z,968nm,21.1s,baz=75,slow=32						
NBLA	Lagarto - SE	18.36	191	eP	P	05 29 49.7	+0.1
MBO	M'Bour	18.50	66	P	P	05 29 49.7	-1.4
NBPN	Ponto Novo - B	18.82	198	eP	P	05 29 54.0	-0.7
MCPB	Macapa, AP	19.20	248	eP	P	05 29 59.1	+0.2
PRPB	Parauapebas	20.35	230	eP	P	05 30 11.3	-0.1
SMTB	Santa Maria do	20.69	220	eP	P	05 30 15.0	-0.1
GDU01	Guandu, BA	21.39	194	eP	P	05 30 21.7	-0.9
MALB	Monte Alegre	21.82	246	eP	P	05 30 26.8	-0.4
SDBA	SAO DESIDERIO	22.10	208	eP	P	05 30 30.3	-0.1
NBIT	Itapeh - BA	22.53	193	eP	P	05 30 34.3	-0.4
CMC01	Camacan, BA	22.96	193	eP	P	05 30 39.0	-0.3
PEXB	Peixe	23.65	216	eP	P	05 30 47.0	+0.6
JANB	Januaria	24.19	204	eP	P	05 30 51.1	-0.5
GUA01	Guaratinga, BA	24.21	193	eP	P	05 30 50.7	-0.9
ITTB	Itaituba	24.24	242	eP	P	05 30 51.7	-0.3
H10N3	ASCENSION HYDR	24.76	127	T	T	05 56 36.2	
	baz=306,slow=75,SNR=1217						
H10N2	ASCENSION HYDR	24.76	127	T	T	05 56 36.8	
	baz=306,slow=75,SNR=1237						
H10N1	ASCENSION HYDR	24.78	127	T	T	05 56 37.7	
	baz=306,slow=75,SNR=1369						
NPGB	Novo Progresso	25.28	237	eP	P	05 31 00.9	-0.6
H10S3	ASCENSION HYDR	25.30	129	T	T	05 57 23.5	
	baz=307,slow=74,SNR=1744						
H10S2	ASCENSION HYDR	25.32	129	T	T	05 57 25.0	
	baz=273,slow=74,SNR=812						
SNDB	Serra Nova Dou	25.42	222	eP	P	05 31 03.1	+0.5
NAN01	Guarapari, ES	25.50	193	eP	P	05 31 03.3	0.0
MC01	Montes Claros	25.55	202	eP	P	05 31 04.1	+0.2
BDFB	Brasilia	26.40	211	P	P	05 31 11.8	+0.1
	39nm,0.9s,baz=37,slow=9.8,SNR=28						
BDFB				LR	LR	05 40 55.1	
	comp=Z,3µm,19.0s,baz=2.3,slow=35						
BDFB	Brasilia	26.40	211	P	P	05 31 11.7	+0.1
BDFB				pmax	pmax		
	comp=Z,68nm,1.1s						
BDFB	Brasilia	26.40	211	P	P	05 31 11.7	+0.1
BDFB				IAmb	IAmb	05 31 15.4	
	comp=Z,68nm,1.1s						
BOAV	Boa Vista	26.52	261	eP	P	05 31 13.5	+0.8
BOAV	Boa Vista	26.52	261	P	P	05 31 13.0	+0.3
SJMB	Sao Joao De Ma	26.58	195	eP	P	05 31 12.9	-0.2
BSFB	Barra de Sao F	26.62	194	eP	P	05 31 12.5	-0.9
PTGA	Pitinga	26.75	254	P	P	05 31 13.8	-1.0
	comp=Z,7.6nm,0.8s,baz=79,slow=11,SNR=12						
PTGA				LR	LR	05 40 54.4	
	comp=Z,1µm,21.7s,baz=74,slow=34						
PTGA	Pitinga	26.75	254	P	P	05 31 15.2	+0.3
DIAM	Diamantina, MG	26.93	200	eP	P	05 31 16.4	0.0
RIB01	Linhares ES	26.98	193	eP	P	05 31 16.8	+0.1
H05S1	Guadeloupe/Mar	27.00	288	T	T	05 59 24.6	
	SNR=167						
H05N1	Guadeloupe/Mar	27.68	292	T	T	06 00 11.1	
CLDB	Colider	27.89	230	eP	P	05 31 23.1	-1.9
MACA	Manacapuru-AM	28.23	250	eP	P	05 31 28.8	+0.7
MACA	Manacapuru-AM	28.23	250	P	P	05 31 28.0	0.0
ALF01	Guarapari-ES	28.31	193	eP	P	05 31 25.1	-3.5
IPMB	Ipameri, GO	28.50	209	eP	P	05 31 30.4	0.0
ARAG	Araguaiana, MT	28.57	217	eP	P	05 31 31.5	+0.5
PDRB	Porto dos Gac	29.06	230	eP	P	05 31 35.7	+0.3
TIC	Toumodi	29.10	89	eP	P	05 31 42.2	+6.4
LIC	Lamto	29.11	90	eP	P	05 31 37.3	+1.4
	comp=Z,65nm,1.2s						
DBIC	Dimbokro	29.26	89	P	P	05 31 35.0	-2.2
	comp=Z,9.9nm,0.9s,baz=277,slow=7.5,SNR=6.6						
DBIC				LR	LR	05 41 06.3	
	comp=Z,803nm,18.1s,baz=272,slow=32						
DBIC	Dimbokro	29.26	89	P	P	05 31 35.4	-1.8
DBIC				pmax	pmax		
	comp=Z,19nm,1.1s						
DBIC	Dimbokro	29.26	89	P	P	05 31 35.4	-1.8
KIC	Kosan Boka	29.39	90	eP	P	05 31 39.7	+1.3
	comp=Z,19nm,1.0s						
CAM01	Campos-RJ	29.69	194	eP	P	05 31 41.2	+0.4
BSCB	Bom Sucesso	29.81	200	eP	P	05 31 41.9	-0.1
PMOZ	Porto Moniz, M	30.09	30	eLQ	LQ	05 38 07.3	
PMOZ				eLR	LR	05 39 10.2	
	comp=Z,731nm,20.0s						
PMOZ	Porto Moniz, M	30.09	30	eT	T	06 02 30.7	
FUL	Funchal	30.10	30	eT	T	06 02 28.5	
DUB01	Friburgo-RJ	30.11	195	eP	P	05 31 44.7	0.0

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PMAR  Madeira         30.15  30 eT       T        06 02 31.6
VAS01 Vassouras-RJ    30.59 197 eP       P        05 31 49.0 +0.1
KOWA  Kowa            30.62  74 P        P        05 31 47.8 -1.5
KOWA                            IAmb     IAmb     05 31 49.1
      comp=Z,33nm,1.1s
KOWA                            IAMs_20  IAMs_20  05 41 55.6
      comp=Z,2μm,21.0s
ITRB  Iturama         31.02 210 eP       P        05 31 52.5 -0.2
SALV  Santo Antonio   31.19 223 eP       P        05 31 54.3 +0.1
MAN01 Angra dos Reis  31.30 197 eP       P        05 31 54.9 -0.2
BB19B Bebedouro       31.33 206 eP       P        05 31 56.3 +0.9
BIRV  Birongo         31.73 278 P        P        05 31 58.7 -0.3
BIRV                            IAmb     IAmb     05 32 12.7
      comp=Z,32nm,1.0s
PP1B  Ponte de Pedra  31.90 219 eP       P        05 32 00.8 +0.3
RCLB  Rio Claro- Sao  32.12 203 eP       P        05 32 02.7 +0.3
PARB  Paraibuna       32.26 200 eP       P        05 32 03.7 +0.1
VILB  Vilhena         32.56 232 eP       P        05 32 08.0 +1.6
VILB  Vilhena         32.56 232 P        P        05 32 06.9 +0.5
HUMP  Col San Antoni  32.58 293 P        P        05 32 06.7 +0.2
PDPR  Patillas Dam,   32.70 292 P        P        05 32 07.5  0.0
SJG   San Juan        32.84 292 P        P        05 32 09.0 +0.2
      comp=Z,19nm,0.8s,baz=75,slow=7.1,SNR=8.2
SJG   San Juan        32.84 292 P        P        05 32 08.2 -0.6
SJG                             pmax     pmax
      comp=Z,22nm,0.8s
SJG   San Juan        32.84 292 P        P        05 32 08.2 -0.6
SJG                             IAmb     IAmb     05 32 09.6
      comp=Z,22nm,0.8s
SAML  Samuel          32.91 241 P        P        05 32 09.5 +0.1
SAML  Samuel          32.91 241 P        P        05 32 09.5 +0.1
PCMB  Pacaembu        33.07 210 eP       P        05 32 11.0 +0.4
OBIP  Obispado Ponce  33.25 292 P        P        05 32 12.1 -0.2
OBIP                            IAmb     IAmb     05 32 28.1
      comp=Z,46nm,1.1s
PTLB  Pontes e Lacer  33.30 227 eP       P        05 32 13.5 +0.7
PTLB  Pontes e Lacer  33.30 227 P        P        05 32 13.3 +0.6
AOPR  Arecibo Observ  33.46 293 P        P        05 32 13.9 -0.3
AOPR                            IAmb     IAmb     05 32 19.2
      comp=Z,28nm,0.8s
AQDB  Aquidauana      34.58 217 eP       P        05 32 24.3 +0.5
AQDB  Aquidauana      34.58 217 P        P        05 32 24.5 +0.7
TRCB  Terra Rica      34.75 211 P        P        05 32 25.6 +0.2
TIJ01 Guaruva-PR      35.31 203 eP       P        05 32 29.8 -0.4
TORD  Torodi Ar. Bea  35.92  78 P        P        05 32 33.5 -2.0
      comp=Z,19nm,1.0s,baz=271,slow=9.1,SNR=76
TORD                            PcP      PcP      05 35 03.9 +1.2
      comp=Z,5.5nm,1.2s,baz=292,slow=3.9,SNR=4.0
TORD                            LR       LR       05 45 05.3
      comp=Z,2μm,20.4s,baz=240,slow=33
TORD  Torodi Ar. Bea  35.92  78 P        P        05 32 33.9 -1.7
ETMB  Extrema         35.96 242 eP       P        05 32 35.9 +0.1
ETMB  Extrema         35.96 242 P        P        05 32 36.2 +0.3
SDV   Santo Domingo   35.98 275 eP       P        05 32 37.1 +0.9
SDV   Santo Domingo   35.98 275 P        P        05 32 36.3  0.0
PTGB  Pitanga         36.09 208 eP       P        05 32 38.8 +1.9
TBTG  Tabatinga, AM   37.26 253 eP       P        05 32 48.3 +1.3
TBTG  Tabatinga, AM   37.26 253 P        P        05 32 47.3 +0.4
TBTG                            IAmb     IAmb     05 33 08.2
      comp=Z,39nm,0.6s
SDDR  Presa de Saban  37.78 292 P        P        05 32 52.2 +0.8
SDDR                            IAMs_20  IAMs_20  05 45 15.1
      comp=Z,1μm,22.0s
PFVI  Vila Bisbo      37.79  34 eP       P        05 32 53.4 +2.2
      comp=Z,105nm,1.3s
MORF  Marmelete       38.02  34 eP       P        05 32 53.6 +0.5
MORF                            IAmb     IAmb     05 32 57.0
      comp=Z,49nm,0.8s
MORF  Marmelete       38.02  34 eP       P        05 32 53.6 +0.5
MORF  Marmelete       38.02  34 eP       P        05 32 53.6 +0.5
      comp=Z,83nm,1.2s
MORF  Marmelete       38.02  34 eT       T        06 12 32.6
PAMC  Pamplona, Colo  38.06 273 eP       P        05 32 55.4 +1.1
PTEO  Sao Teotonio    38.15  34 eP       P        05 32 54.7 +0.6
      comp=Z,66nm,1.1s
PTEO  Sao Teotonio    38.15  34 eT       T        06 12 38.1
PBDV  Barranco-do-Ve  38.38  35 eP       P        05 32 56.4 +0.3
      comp=Z,100nm,1.2s
PBDV  Barranco-do-Ve  38.38  35 eT       T        06 12 46.0
GUVC  San Jose del G  38.42 265 eP       P        05 32 54.6 -2.3
RUSC  La Rusia        38.52 270 eP       P        05 33 00.6 +2.5
BARC  Barichara       38.57 272 eP       P        05 32 53.7 -4.6
PCVE  Castro Verde    38.59  34 eP       P        05 32 57.8 -0.1
PCVE  Castro Verde    38.59  34 eT       T        06 12 54.6
PVAQ  Vaqueiros       38.61  35 eP       P        05 32 57.5 -0.5
      comp=Z,87nm,1.3s
PVAQ                            eS       S        05 38 53.8 -0.8
PVAQ                            eLQ      LQ       05 41 22.5
PVAQ                            eLR      LR       05 43 25.4
      comp=Z,918nm,20.0s
PVAQ  Vaqueiros       38.61  35 eT       T        06 12 53.4
PVAQ  Vaqueiros       38.61  35 P        P        05 32 57.6 -0.4
MESJ  Messejana       38.63  34 eP       P        05 32 58.8 +0.5
MESJ                            IAmb     IAmb     05 33 02.8
      comp=Z,42nm,1.3s
MESJ                            eS       S        05 38 56.2 +1.2
MESJ  Messejana       38.63  34 eP       P        05 32 58.8 +0.5
MESJ                            eS       S        05 38 56.1 +1.2
MESJ  Messejana       38.63  34 eP       P        05 32 58.7 +0.5
      comp=Z,38nm,1.2s
MESJ  Messejana       38.63  34 eT       T        06 12 41.8
OCAC  Ocana           38.65 274 eP       P        05 32 57.0 -1.8
OCAC  Ocana           38.65 274 P        P        05 32 58.1 -0.8
PNCL  Nicolau / Gran  38.66  33 eP       P        05 32 59.0 +0.6
      comp=Z,87nm,1.3s
PNCL  Nicolau / Gran  38.66  33 eT       T        06 12 42.2
SFS   San Fernando    38.85  37 IAMs_20  IAMs_20  05 45 43.8
      comp=Z,2μm,21.0s
PMAFR Mafra           38.88  32 eT       T        06 13 09.5
PBEJ  Beja            38.96  34 eP       P        05 33 01.6 +0.6
      comp=Z,49nm,1.2s
EVO   Evora           39.24  33 eP       P        05 33 03.5 +0.1
      comp=Z,55nm,1.1s
EVO   Evora           39.24  33 eT       T        06 13 02.7
CHIC  Chingaza        39.27 269 eP       P        05 33 03.6 -0.8
PMTG  Montargil       39.52  33 eP       P        05 33 06.0 +0.4
      comp=Z,106nm,1.3s
PMTG  Montargil       39.52  33 eT       T        06 13 03.3
PBAR  Barrancos       39.53  35 eP       P        05 33 06.4 +0.6
      comp=Z,42nm,1.3s
PBAR  Barrancos       39.53  35 eT       T        06 13 07.6
PSBE  So Bento        39.54  32 eP       P        05 33 06.6 +0.7
      comp=Z,97nm,1.6s
PSBE  So Bento        39.54  32 eT       T        06 13 19.2
CNLB  Canela          39.60 203 eP       P        05 33 06.3 -0.2
PESTR Estremoz        39.72  33 eP       P        05 33 08.1 +0.8
      comp=Z,38nm,1.3s
ROSC  El Rosal        39.83 269 P        P        05 33 10.5 +1.4
      comp=Z,18nm,0.8s,baz=70,slow=15,SNR=9.7
ROSC                            LR       LR       05 49 22.5
      comp=Z,814nm,20.8s,baz=73,slow=36
ROSC  El Rosal        39.83 269 P        P        05 33 10.0 +0.9
ROSC                            pmax     pmax
      comp=Z,22nm,0.9s
ROSC  El Rosal        39.83 269 P        P        05 33 10.0 +0.9
CPUP  Villa Florida   40.09 213 P        P        05 33 11.1 +0.6
      comp=Z,14nm,1.1s,baz=25,slow=9.0,SNR=8.9
CPUP                            LR       LR       05 49 28.7
      comp=Z,1μm,18.2s,baz=50,slow=36
CPUP  Villa Florida   40.09 213 P        P        05 33 11.2 +0.7
CPUP                            pmax     pmax
      comp=Z,31nm,1.3s
CPUP  Villa Florida   40.09 213 eP       P        05 33 10.7 +0.3
CPUP  Villa Florida   40.09 213 P        P        05 33 11.2 +0.7
PCAS  Casmilo, Conde  40.10  31 eP       P        05 33 11.2 +0.8
      comp=Z,86nm,1.3s
ZARC  Zaragoza, Cauc  40.19 273 eP       P        05 33 05.3 -6.4
PMRV  Marv??o         40.22  33 eP       P        05 33 12.1 +0.6
      comp=Z,150nm,1.3s
PMRV                            eS       S        05 39 23.6 +4.7
PMRV                            eLQ      LQ       05 42 19.7
PMRV                            eLR      LR       05 44 15.3
      comp=Z,671nm,20.0s
PMRV  Marv??o         40.22  33 eT       T        06 13 52.7
COI   Coimbra         40.26  31 P        P        05 33 12.2 +0.5
COI                             pmax     pmax
      comp=Z,94nm,1.0s
COI   Coimbra         40.26  31 eP       P        05 33 12.3 +0.5
      comp=Z,135nm,1.1s
COI   Coimbra         40.26  31 P        P        05 33 12.2 +0.5
COI                             IAmb     IAmb     05 33 16.2
      comp=Z,94nm,1.0s
NORC  Norcasia        40.32 270 eP       P        05 33 11.0 -1.7
PCBR  Castelo Branco  40.48  32 eP       P        05 33 14.0 +0.4
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      comp=Z,50nm,1.4s
LPAZ  La Paz          40.77 235 P        P        05 33 17.9 +0.9
LPAZ  La Paz          40.77 235 P        P        05 33 17.9 +0.9
GUY2C Guyana, Caldas  40.84 270 eP       P        05 33 16.0 -1.5
MTE   Manteigas       40.85  32 eP       P        05 33 17.4 +0.7
      comp=Z,73nm,1.8s
MTE                             eS       S        05 39 25.6 -2.6
MTE                             eLQ      LQ       05 42 28.4
MTE                             eLR      LR       05 44 34.8
      comp=Z,651nm,18.0s
ORTC  Ortega, Tolima  40.85 268 eP       P        05 33 16.8 -0.3
PVIS  Viseu           40.90  31 eP       P        05 33 17.8 +0.7
      comp=Z,67nm,1.2s
CZSB  Cruzeiro do Su  41.03 250 eP       P        05 33 19.1 +0.6
CZSB  Cruzeiro do Su  41.03 250 P        P        05 33 18.0 -0.5
CZSB                            IAmb     IAmb     05 33 46.4
      comp=Z,54nm,1.1s
PVRL  Vila Real       41.40  31 eP       P        05 33 21.5 +0.3
      comp=Z,56nm,1.7s
CBOC  Ciudad Bolivar  41.43 271 eP       P        05 33 20.1 -1.9
POLO  Lamas de Olo    41.43  31 eP       P        05 33 21.6  0.0
      comp=Z,26nm,1.2s
DBBC  Dabeiba         41.55 272 eP       P        05 33 20.9 -2.0
CPSB  Cacapava Do Su  41.61 205 eP       P        05 33 23.6 +0.6
PGAV  Gavieira, Arco  41.64  30 eP       P        05 33 21.9 -1.4
      comp=Z,61nm,1.6s
PGAV                            eS       S        05 39 38.9 -1.1
PGAV                            eLQ      LQ       05 42 29.5
PGAV                            eLR      LR       05 44 52.3
      comp=Z,623nm,20.0s
MVO   Moncorvo        41.67  31 eP       P        05 33 23.9 +0.4
      comp=Z,60nm,1.2s
MVO                             eLQ      LQ       05 42 49.9
MVO                             eLR      LR       05 44 59.3
      comp=Z,784nm,18.0s
PLMC  San Jos del P   41.77 269 eP       P        05 33 22.5 -2.2
PBRG  Braganca        42.28  31 eP       P        05 33 29.1 +0.6
      comp=Z,70nm,2.0s
ESDC  Sonseca Array   42.31  35 P        P        05 33 28.4 -0.3
      comp=Z,6.5nm,1.1s,baz=232,slow=8.7,SNR=22
ESDC                            LR       LR       05 47 58.4
      comp=Z,735nm,20.4s,baz=240,slow=32
ITQB  Itaqui          42.44 209 eP       P        05 33 30.3 +0.6
PLTB  Pedras Altas    42.86 204 eP       P        05 33 33.0 -0.3
PB12  IPOC Station P  43.78 234 IAMs_20  IAMs_20  05 51 12.2
      comp=Z,1μm,19.0s
OTAV  Otavalo         44.54 263 P        P        05 33 47.8 +0.2
OTAV                            pmax     pmax
      comp=Z,6.0nm,1.1s
OTAV  Otavalo         44.54 263 eP       P        05 33 48.1 +0.5
OTAV  Otavalo         44.54 263 P        P        05 33 47.8 +0.2
LVC   Limon Verde     44.96 228 eP       P        05 33 50.3 -0.4
PB07  IPOC Station P  45.17 230 P        P        05 33 51.8 -0.3
PB07                            IAmb     IAmb     05 34 20.1
      comp=Z,38nm,1.5s
PB04  IPOC Station P  45.72 229 IAMs_20  IAMs_20  05 52 21.7
      comp=Z,2μm,22.0s
ETSF  Etsaut          46.36  34 eP       P        05 34 01.1  0.0
ETSF                            pmax     pmax
      comp=Z,24nm,1.2s
NNA   Nana            46.36 246 IAMs_20  IAMs_20  05 52 56.6
      comp=Z,1μm,18.0s
EPF   Esparros        46.95  35 eP       P        05 34 07.8 +2.1
EPF                             pmax     pmax
      comp=Z,35nm,1.2s
AC02  Maricunga       47.74 224 P        P        05 34 13.2 +0.6
AC02                            IAmb     IAmb     05 34 18.4
      comp=Z,42nm,1.1s
BRU2  Volcan          47.90 275 P        P        05 34 15.3 +1.6
HRV   Adam Dziewonsk  48.12 323 P        P        05 34 16.4 +1.6
      baz=126
MTLF  Montolieu       48.22  36 P        P        05 34 16.0 +0.5
MTLF                            pmax     pmax
      comp=Z,32nm,1.6s
LFF   La Frestale     48.39  33 eP       P        05 34 16.9 +0.1
LFF                             pmax     pmax
      comp=Z,45nm,1.2s
H09N1 TRISTAN DA CUN  48.58 156 T        T        06 26 34.2
      SNR=6.3
H09W1 TRISTAN DA CUN  48.60 156 T        T        06 26 34.6
      SNR=10
PAL   Palisades       48.72 320 P        P        05 34 20.0 +0.6
PAL                             pmax     pmax
      comp=Z,50nm,1.0s
PAL   Palisades       48.72 320 P        P        05 34 20.3 +0.9
      baz=123
PAL   Palisades       48.72 320 P        P        05 34 19.9 +0.6
ROSF  Rostrenen       48.74  27 eP       P        05 34 19.2 -0.2
ROSF                            pmax     pmax
      comp=Z,78nm,1.2s
I62A  Tamworth        48.81 325 P        P        05 34 21.2 +1.1
I62A                            IAmb     IAmb     05 34 22.1
      comp=Z,33nm,0.9s
TRNY  Table Rock, Ra  49.00 320 P        P        05 34 22.5 +0.9
KEST  Kesra           49.01  48 P        P        05 34 21.6 -0.3
      comp=Z,25nm,1.2s,baz=211,slow=5.9,SNR=6.6
KEST                            LR       LR       05 53 44.9
      comp=Z,1μm,21.6s,baz=209,slow=35
SGMF  Saint Gilles    49.01  28 eP       P        05 34 21.4 -0.1
SGMF                            pmax     pmax
      comp=Z,66nm,1.2s
MFF   Saint Martin d  49.03  31 eP       P        05 34 21.2 -0.5
MFF                             pmax     pmax
      comp=Z,41nm,1.3s
RJF   Les Rejaudoux   49.05  33 eP       P        05 34 21.3 -0.6
RJF                             pmax     pmax
      comp=Z,30nm,1.2s
DWPF  Disney Wildern  49.11 301 IAMs_20  IAMs_20  05 50 13.8
      comp=Z,866nm,19.0s
CAF   Calviac         49.11  34 eP       P        05 34 22.3 -0.1
CAF                             pmax     pmax
      comp=Z,65nm,1.2s
G62A  West of Eustis  49.19 327 P        P        05 34 23.3 +0.3
ODNJ  Ogdensburg      49.21 320 P        P        05 34 22.9 -0.3
ODNJ                            IAmb     IAmb     05 34 27.8
      comp=Z,49nm,1.4s
WUPA  West Chester U  49.26 318 P        P        05 34 24.3 +0.7
WUPA                            IAmb     IAmb     05 34 25.3
      comp=Z,29nm,1.0s
D62A  Allapoint, All  49.62 329 P        P        05 34 27.4 +1.1
NHSC  New Hope        49.65 308 P        P        05 34 28.4 +1.7
      baz=111
MVL   Millersville    49.79 318 P        P        05 34 28.3 +0.7
MVL                             IAmb     IAmb     05 34 29.6
      comp=Z,38nm,1.0s
SDMD  Soldier’s Deli  49.84 317 P        P        05 34 28.4 +0.4
V58A  Windy Hill, Pi  49.86 311 P        P        05 34 28.6 +0.4
V58A                            IAmb     IAmb     05 34 33.0
      comp=Z,45nm,0.8s
N59A  State Game Lan  49.87 319 P        P        05 34 28.8 +0.5
      baz=121
R58B  Mineral         49.89 315 P        P        05 34 28.6 +0.2
R58B                            IAmb     IAmb     05 34 33.0
      comp=Z,25nm,0.9s
GRR   Gorron          49.90  29 eP       P        05 34 27.8 -0.5
GRR                             pmax     pmax
      comp=Z,51nm,1.1s
TCF   Toulx Ste Croi  50.05  33 eP       P        05 34 29.2 -0.4
TCF                             pmax     pmax
      comp=Z,35nm,1.4s
L59A  Walton          50.07 321 P        P        05 34 30.3 +0.5
L59A                            IAmb     IAmb     05 34 31.6
      comp=Z,54nm,1.1s
JTS   Las Juntas de   50.10 277⇓eP       P        05 34 29.9 -0.5
JTS                             pmax     pmax
      comp=Z,7.0nm,1.2s
Y57A  Sumter          50.15 309 P        P        05 34 30.5 +0.1
Y57A                            IAmb     IAmb     05 34 32.2
      comp=Z,38nm,0.8s
W57A  Gilead          50.27 310 P        P        05 34 31.7 +0.4
W57A                            IAmb     IAmb     05 34 36.6
      comp=Z,56nm,1.5s
ACON  Acoyapa         50.31 280 P        P        05 34 32.1 +0.1
ACON                            IAmb     IAmb     05 34 38.1
      comp=Z,31nm,1.2s
FLN   La Foliniere    50.34  29 eP       P        05 34 31.1 -0.6
FLN                             pmax     pmax
      comp=Z,47nm,1.2s
LDF   La Druitiere    50.40  29 eP       P        05 34 31.6 -0.5
LDF                             pmax     pmax
      comp=Z,36nm,1.1s
VIVF  Saint-Julien-l  50.54  35 eP       P        05 34 33.5 +0.2
VIVF                            pmax     pmax
      comp=Z,55nm,1.4s
BGF   Bois d'Agland   50.56  33 eP       P        05 34 33.2 -0.2
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BGF                             pmax     pmax
      comp=Z,55nm,1.2s
S57A  Dark Hollow, R  50.56 314 P        P        05 34 34.0 +0.5
BINY  Binghamton      50.67 320 P        P        05 34 35.1 +0.7
      baz=122
BINY  Binghamton      50.67 320 P        P        05 34 35.0 +0.6
BINY                            IAmb     IAmb     05 34 36.9
      comp=Z,35nm,1.1s
VSL   Villasalto      50.69  44 P        P        05 34 34.4 -0.1
LMR   La Mourre       50.77  38 eP       P        05 34 38.7 +3.7
LMR                             pmax     pmax
      comp=Z,12nm,1.0s
BOAB  BOACO BROADBAN50.80 280   P        P        05 34 35.9 +0.2
AVF   Avril sur Loir  50.98  33 eP       P        05 34 39.4 +2.9
AVF                             pmax     pmax
      comp=Z,30nm,1.3s
GO04  Tololo Observa  51.02 221          S        05 41 56.2 +1.0
SSPA  Standing Stone  51.13 318 P        P        05 34 38.3 +0.5
      baz=118
SSPA  Standing Stone  51.13 318 P        P        05 34 38.1 +0.4
SSPA                            IAmb     IAmb     05 34 44.6
      comp=Z,38nm,1.3s
ORIF  Oris-en-Rattie  51.27  36 eP       P        05 34 39.9 +1.0
ORIF                            pmax     pmax
      comp=Z,9.0nm,1.0s
KMSC  Kings Mountain  51.28 310 P        P        05 34 39.8 +0.8
      baz=112
K57A  Scipio Center   51.28 321 P        P        05 34 39.2 +0.2
K57A                            IAmb     IAmb     05 34 40.3
      comp=Z,43nm,0.8s
Q56A  Snyder Ridge,   51.28 315 P        P        05 34 40.2 +1.2
Q56A                            IAmb     IAmb     05 34 41.1
      comp=Z,43nm,1.1s
BLA   Blacksburg      51.39 313 P        P        05 34 41.4 +1.5
BLA                             pmax     pmax
      comp=Z,45nm,0.9s
BLA   Blacksburg      51.39 313 P        P        05 34 40.8 +0.9
      baz=114,SNR=9.2
BLA   Blacksburg      51.39 313 P        P        05 34 41.4 +1.5
BLA                             IAmb     IAmb     05 34 45.0
      comp=Z,45nm,0.9s
O56A  Blue Knob Stat  51.41 317 P        P        05 34 40.9 +0.9
      baz=118,SNR=5.8
O56A  Blue Knob Stat  51.41 317 P        P        05 34 40.7 +0.7
O56A                            IAmb     IAmb     05 34 41.8
      comp=Z,44nm,1.1s
V55A  Taylorsville    51.45 311 P        P        05 34 41.2 +0.9
V55A                            IAmb     IAmb     05 34 45.4
      comp=Z,35nm,1.0s
LOR   Lormes          51.55  33 P        P        05 34 41.4 +0.6
LOR                             pmax     pmax
      comp=Z,26nm,0.9s
SBF   Sospel          51.62  38 eP       P        05 34 45.5 +4.0
SBF                             pmax     pmax
      comp=Z,73nm,1.4s
HODGE Hodges          51.67 308 P        P        05 34 42.4 +0.5
HODGE                           IAmb     IAmb     05 34 43.9
      comp=Z,24nm,0.9s
BNI   Bardonecchia    51.82  36 P        P        05 34 43.2 +0.2
BNI                             pmax     pmax
      comp=Z,70nm,1.4s
BNI   Bardonecchia    51.82  36 P        P        05 34 43.2 +0.2
BNI                             IAmb     IAmb     05 34 48.2
      comp=Z,70nm,1.4s
MCWV  Mont Chateau    52.02 316 P        P        05 34 45.4 +1.0
      baz=116
LPG   La Plagne       52.11  36 eP       P        05 34 45.5 +0.1
LPG                             pmax     pmax
      comp=Z,33nm,1.3s
LPL   La Plagne       52.11  36 eP       P        05 34 46.4 +1.1
LPL                             pmax     pmax
      comp=Z,18nm,1.2s
GOGA  Godfrey         52.35 307 P        P        05 34 48.1 +1.1
      baz=109
GOGA  Godfrey         52.35 307 IAMs_20  IAMs_20  05 53 17.4
      comp=Z,1μm,21.0s
CABF  La Chapelle     52.37  34 eP       P        05 34 45.8 -1.2
CABF                            pmax     pmax
      comp=Z,19nm,1.1s
TGUH  Tegucigalpa,Un  52.40 282 P        P        05 34 48.3 +0.5
TGUH                            IAmb     IAmb     05 34 53.4
      comp=Z,63nm,1.4s
N54A  Moraine State   52.69 317 P        P        05 34 50.4 +0.9
      baz=117,SNR=6.5
M54A  Oil Creek Stat  52.73 318 P        P        05 34 50.3 +0.6
      baz=118,SNR=5.7
PEL   Peldehue        52.91 219 P        P        05 34 51.4 +0.2
PEL                             pmax     pmax
      comp=Z,27nm,1.5s
O53A  New Philadelph  53.22 316 P        P        05 34 54.0 +0.7
      baz=115,SNR=6.5
RAFF  Raffo Rosso     53.31  48 P        P        05 34 54.7 +0.6
RAFF                            IAmb     IAmb     05 34 59.2
      comp=Z,34nm,1.1s
HAU   Haudompre       53.33  33 eP       P        05 34 52.5 -1.6
HAU                             pmax     pmax
      comp=Z,51nm,1.3s
Q52A  Bidwell         53.43 314 P        P        05 34 55.1 +0.2
TZTN  Tazewell        53.46 311 P        P        05 34 55.9 +0.7
      baz=111,SNR=6.5
BAIF  Baives          53.49  30 eP       P        05 34 54.3 -0.8
BAIF                            pmax     pmax
      comp=Z,51nm,1.3s
VLC   Villacollemand  53.59  39 P        P        05 34 56.6 +0.6
VLC                             IAmb     IAmb     05 35 15.4
      comp=Z,26nm,1.2s
P52A  Corning         53.60 315 P        P        05 34 56.6 +0.4
      baz=114,SNR=7.9
DOU   Dourbes         53.70  30 dP       P        05 34 56.4 -0.3
      comp=Z,18nm,1.2s
DOU                             dpP      sP       05 34 59.4 +0.7
SNF   Seneffe         53.81  30 dP       P        05 34 57.2 -0.2
SNF                             dpP      sP       05 35 00.2 +0.7
GIVF  Givet           53.82  30 eP       P        05 34 56.7 -0.9
GIVF                            pmax     pmax
      comp=Z,51nm,1.2s
OSSC  Osservatorio P  53.83  40 P        P        05 34 57.9 +0.2
OSSC                            IAmb     IAmb     05 35 03.2
      comp=Z,34nm,1.1s
ECH   Echery          53.90  33 P        P        05 35 01.6 +3.4
ECH                             pmax     pmax
      comp=Z,113nm,1.3s
BMRD  Maredsous       53.92  30 dPcP     PcP      05 36 03.3 -0.4
RCHB  Rochefort       54.06  30 dP       P        05 34 58.6 -0.6
CDF   Champ du Feu    54.07  33 eP       P        05 34 58.7 -0.9
CDF                             pmax     pmax
      comp=Z,36nm,1.4s
BGES  Gesves          54.13  30 bP       P        05 34 58.9 -1.0
BGES                            dpP      sP       05 35 02.6 +0.8
SCHQ  Schefferville   54.19 337 P        P        05 35 00.5 +0.3
      comp=Z,14nm,0.8s,baz=141,slow=8.0,SNR=8.0
SCHQ                            LR       LR       05 55 53.1
      comp=Z,540nm,18.9s,baz=126,slow=34
SNET  Serv Nac Est T  54.29 282 IAMs_20  IAMs_20  05 55 28.0
      comp=Z,531nm,19.0s
ACSO  Alum Creek Sta  54.44 315 P        P        05 35 03.0 +0.7
      baz=114,SNR=11
BFO   Black Forest    54.60  34 P        P        05 35 04.0 +0.7
BFO                             pmax     pmax
      comp=Z,31nm,1.3s
BRAL  Brewton         54.62 303 IAMs_20  IAMs_20  05 53 44.8
      comp=Z,1μm,20.0s
AQU   L'Aquila        54.70  42 P        P        05 35 04.3 +0.1
AQU                             pmax     pmax
      comp=Z,39nm,1.2s
AQU   L'Aquila        54.70  42 P        P        05 35 04.3 +0.1
AQU                             IAmb     IAmb     05 35 15.1
      comp=Z,39nm,1.2s
AQU                             IAMs_20  IAMs_20  05 56 09.4
      comp=Z,636nm,18.0s
MEM   Membach         54.73  30 dP       P        05 35 04.0 -0.2
      comp=Z,18nm,1.1s
MEM                             dpP      sP       05 35 07.0 +0.9
MEM                             dx       x        05 35 13.2
MEM   Membach         54.73  30 P        P        05 35 04.4 +0.2
MEM                             pmax     pmax
      comp=Z,37nm,1.2s
BTNL  Ternell         54.78  30 dP       P        05 35 05.1 +0.5
BTNL                            dPcP     PcP      05 36 12.7 +5.7
CEL   Celeste         54.82  48 IAMs_20  IAMs_20  05 57 21.6
      comp=Z,1μm,22.0s
DAVA  Damuels         54.90  35 eP       P        05 35 04.3 -1.4
      comp=Z,38nm,1.0s
TEOL  Teolo           54.98  38 P        P        05 35 05.9 -0.2
ML02  Panimavida      55.13 217 P        P        05 35 07.6 +0.3
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FETA	Feichten	55.26	36	*e*P	P	05 35 07.3	-0.9
	comp=Z,24nm,1.2s						
P49A	Miami Univ. Ec	55.41	314	P	P	05 35 09.9	+0.6
	baz=112,SNR=8.1						
RETA	Reutte	55.52	36	*e*P	P	05 35 09.0	-1.0
	comp=Z,24nm,1.3s						
SQTA	Sankt Quirin	55.64	36	*e*P	P	05 35 09.7	-1.3
	comp=Z,45nm,1.1s,SNR=13						
MOTA	Moosalm	55.64	36	*e*P	P	05 35 10.0	-1.1
	comp=Z,23nm,1.3s						
AAM	Ann Arbor	55.75	317	P	P	05 35 12.6	+0.9
	baz=114						
TIP	Timpagrande	55.78	47	IAMs_20	IAMs_20	05 58 32.0	
	comp=Z,794nm,20.0s						
WTTA	Wattenberg	55.91	36	*e*P	P	05 35 11.9	-1.1
	comp=Z,40nm,1.5s						
WATA	Walderalm	55.91	36	*e*P	P	05 35 11.6	-1.4
	comp=Z,38nm,1.2s,SNR=5.8						
STAL	STALIGIAL	56.05	38	P	P	05 35 13.2	-0.6
STAL				IAmb	IAmb	05 35 18.8	
	comp=Z,38nm,1.1s						
WCI	Wyandotte Cave	56.10	312	P	P	05 35 15.1	+0.8
WCI				pmax	pmax		
	comp=Z,18nm,0.7s						
WCI	Wyandotte Cave	56.10	312	P	P	05 35 15.0	+0.7
	baz=110						
ABTA	Abfaltersbach	56.17	37	*e*P	P	05 35 14.0	-0.8
	comp=Z,58nm,1.3s,SNR=31						
TRI	Trieste	56.44	39	P	P	05 35 20.6	+4.0
ROBS	Robic	56.53	38	*e*P	P	05 35 16.2	-1.0
WVT	Waverly	56.60	309	P	P	05 35 18.4	+0.5
WVT				pmax	pmax		
	comp=Z,41nm,1.3s						
WVT	Waverly	56.60	309	P	P	05 35 18.1	+0.2
	baz=107						
CADS	Cadrg	56.67	38	*e*P	P	05 35 17.8	-0.4
MYKA	Terra Mystica	56.80	38	*e*P	P	05 35 19.0	-0.2
	comp=Z,67nm,1.3s,SNR=21						
GRFO	Grafenberg	56.94	34	P	P	05 35 20.7	+0.6
GRFO				pmax	pmax		
	comp=Z,43nm,1.2s						
GRF	Grafenberg Arr	56.94	34	*e*P	P	05 35 19.9	-0.2
	comp=Z,23nm,1.2s,baz=232,slow=6.6						
GRF				*e*L	L	05 54 28.8	
	comp=Z,433nm,21.2s						
P46A	Rosedale	57.23	313	P	P	05 35 22.7	+0.4
OBKA	Obir	57.29	38	*e*P	P	05 35 22.5	-0.2
	comp=Z,43nm,1.4s,SNR=21						
SFIN	Lafayette	57.42	314	P	P	05 35 24.1	+0.5
	baz=110						
TSUM	Tsumeb	57.45	118	P	P	05 35 26.4	+2.1
	comp=Z,6.8nm,0.8s,baz=288,slow=7.8,SNR=4.1						
TSUM	Tsumeb	57.45	118	IAMs_20	IAMs_20	05 54 10.4	
	comp=Z,706nm,20.0s						
TSUM	Tsumeb	57.45	118	IAmb	IAmb	05 35 27.3	
	comp=Z,11nm,1.0s						
UTMT	University of	57.46	309	P	P	05 35 24.6	+0.6
OLIL	Olney	57.60	312	P	P	05 35 25.1	+0.2
SOKA	Soboth	57.67	38	*e*P	P	05 35 24.7	-0.6
	comp=Z,42nm,1.3s,SNR=20						
PERS	Pernice	57.70	38	*e*P	P	05 35 24.9	-0.7
VBMS	Vicksburg	57.74	304	IAMs_20	IAMs_20	05 53 44.4	
	comp=Z,957nm,22.0s						
MOA	Molln	57.75	37	*e*P	P	05 35 25.6	-0.3
	comp=Z,34nm,1.1s,SNR=7.4						
GEC2	GERESS Array S	57.90	35	P	P	05 35 26.7	-0.3
GERES	GERESS Array B	57.90	35	P	P	05 35 26.3	-0.7
	comp=Z,2.4nm,0.8s,baz=235,slow=6.3,SNR=8.5						
GERES				LR	LR	05 57 19.1	
	comp=Z,690nm,21.2s,baz=267,slow=33						
GERES	GERESS Array B	57.90	35	P	P	05 35 25.9	-1.1
GERES	GERESS Array B	57.90	35	P	P	05 35 25.9	-1.1
KHC	Kasperske Hory	57.97	35	*e*P	P	05 35 26.9	-0.5
KHC				*e*		05 35 29.6	
KHC				*e*		05 36 14.5	
KHC				MLR	MLR		
	comp=Z,900nm,23.2s						
KHC	Kasperske Hory	57.97	35	*e*P	P	05 35 26.9	-0.5
KHC				*e*pP	sP	05 35 29.6	+0.2
KHC				*e*x	x	05 36 14.5	
KHC				AMS	AMS	05 55 50.0	
	comp=Z,900nm,23.2s						
PLCA	Paso Flores	58.14	212	P	P	05 35 26.7	-2.0
	comp=Z,9.2nm,1.2s,baz=39,slow=9.5,SNR=5.9						
PLCA				LR	LR	06 00 59.5	
	comp=Z,4µm,18.1s,baz=57,slow=37						
PLCA	Paso Flores	58.14	212	*e*P	P	05 35 27.6	-1.1
ARSA	Arzberg	58.23	38	*e*P	P	05 35 27.8	-1.4
	comp=Z,12nm,1.1s						
CKRC	Cesky Krumlov	58.24	36	*e*P	P	05 35 28.5	-0.8
Q44A	Meyer Farm, Va	58.33	312	P	P	05 35 30.1	+0.1
H03N1	Juan Fernandez	58.47	224	T	T	06 38 37.7	
	baz=64,slow=71,SNR=14						
H03N2	Juan Fernandez	58.48	224	T	T	06 38 38.4	
	baz=64,slow=71,SNR=15						
H03N3	Juan Fernandez	58.48	224	T	T	06 38 36.9	
	baz=64,slow=71,SNR=16						
HBAR	Harrisburg	58.65	307	P	P	05 35 32.4	+0.1
PDG	Podgorica	58.71	44	⇓P	P	05 35 33.5	+0.9
PDG	Podgorica	58.71	44	P	P	05 35 32.7	+0.1
PDG				IAmb	IAmb	05 35 34.2	
	comp=Z,42nm,1.4s						
CONA	Conrad Observa	58.74	37	*e*P	P	05 35 31.5	-1.3
	comp=Z,20nm,1.2s,SNR=8.2						
TIR	Tirane	58.76	46	IAMs_20	IAMs_20	06 00 45.9	
	comp=Z,565nm,19.0s						
PRU	Pruhonice	58.94	35	*e*P	P	05 35 33.5	-0.6
PRU	Pruhonice	58.94	35	*e*P	P	05 35 33.5	-0.6
ITM	Ithomi	59.02	51	P	P	05 35 34.3	-0.6
ITM				IAmb	IAmb	05 35 36.3	
	comp=Z,38nm,1.2s						
BRG	Berggiesshubel	59.05	33	*e*P	P	05 35 34.3	-0.5
BRG				Amp		05 35 39.2	
	comp=Z,16nm,1.2s						
SOP	Sopron	59.05	38	*e*P	P	05 35 31.3	-3.5
SOP	Sopron	59.05	38	P	P	05 35 37.5	+2.6
HDIL	Hopedale	59.05	313	P	P	05 35 35.1	0.0
	baz=109						
CCAR	Cane Creek	59.15	305	P	P	05 35 36.0	+0.2
KBN	Korca	59.18	47	P	P	05 35 37.1	+1.0
KBN				pmax	pmax		
	comp=Z,36nm,1.4s						
KBN	Korca	59.18	47	P	P	05 35 37.1	+1.0
KBN				IAmb	IAmb	05 35 55.1	
	comp=Z,36nm,1.4s						
PVCC	Panska Ves	59.22	34	*e*P	P	05 35 36.2	+0.2
PVCC	Panska Ves	59.22	34	*e*P	P	05 35 36.2	+0.2
OHR	Ohrid	59.35	46	*i* P	P	05 35 44.6	+7.5
EGYH	Egyhazaskeszo	59.41	38	*e*P	P	05 35 36.2	-1.1
MPLH	Magyarpolny	59.43	39	*e*P	P	05 35 34.5	-3.0
KRUC	Moravsky	59.57	36	*e*P	P	05 35 37.6	-0.9
ZST	Bratislava	59.60	37	*e*P	P	05 35 38.4	-0.3
ZST	Bratislava	59.60	37	*e*P	P	05 35 38.4	-0.3
FNA	Florina	59.66	47	P	P	05 35 39.3	0.0
FNA				pmax	pmax		
	comp=Z,22nm,1.4s						
FNA	Florina	59.66	47	P	P	05 35 39.3	0.0
MORH	Mrgy, Hungar	59.73	40	*e*P	P	05 35 37.7	-1.9
CCM	Cathedral Cave	59.76	310	P	P	05 35 40.1	+0.1
CCM				pmax	pmax		
	comp=Z,68nm,1.5s						
CCM	Cathedral Cave	59.76	310	P	P	05 35 39.7	-0.3
	baz=106						
CCM	Cathedral Cave	59.76	310	P	P	05 35 40.1	+0.1
MODS	Modra-Piesok	59.78	37	*e*P	P	05 35 38.4	-1.6
MODS				pmax	pmax		
	comp=Z,40nm,1.3s						
MODS	Modra-Piesok	59.78	37	*e*P	P	05 35 38.4	-1.6
VRAC	Vranov	59.80	36	*e*P	P	05 35 39.5	-0.6
W41B	Gary Mavity, V	59.82	307	P	P	05 35 40.0	-0.4
	baz=103,SNR=8.9						
AGG	Agios Georgios	59.83	49	P	P	05 35 40.9	+0.4
AGG				pmax	pmax		
	comp=Z,41nm,1.4s						
AGG	Agios Georgios	59.83	49	P	P	05 35 40.9	+0.4
AGG				IAmb	IAmb	05 35 42.2	
	comp=Z,41nm,1.4s						
Z41A	Richland Creek	59.85	304	P	P	05 35 41.3	+0.7
	baz=102						
SMOL	Smolenice	59.94	37	*e*P	P	05 35 40.8	-0.2
SMOL	Smolenice	59.94	37	*e*P	P	05 35 40.8	-0.2
SKO	Skopje	60.08	45	*i* P	P	05 35 42.5	+0.4
CHVC	Chvalec	60.08	35	*e*P	P	05 35 41.9	-0.1
DPC	Dobruska-Polom	60.12	35	*e*P	P	05 35 42.2	-0.1
DPC	Dobruska-Polom	60.12	35	*e*P	P	05 35 42.2	-0.1
X40A	Basin Creek Fa	60.13	306	P	P	05 35 42.3	-0.3
	baz=103						
OSTC	Ostas	60.16	35	*e*P	P	05 35 42.5	0.0
OSTC				*e*x	x	05 35 45.4	
SRO	Srobarova	60.17	38	*e*P	P	05 35 42.7	+0.1
SRO				pmax	pmax		
	comp=Z,33nm,1.0s						
SRO	Srobarova	60.17	38	*e*P	P	05 35 42.7	+0.1
N41A	Harden Midland	60.23	313	P	P	05 35 42.6	-0.6
JFWS	Jewell Farm	60.49	316	P	P	05 35 44.9	-0.1
	baz=109						
MORC	Moravsky Berou	60.56	36	P	P	05 35 45.3	0.0
MORC				pmax	pmax		
	comp=Z,18nm,1.4s						
MORC	Moravsky Berou	60.56	36	*e*P	P	05 35 45.1	-0.2
MORC	Moravsky Berou	60.56	36	P	P	05 35 45.3	0.0
U40A	Yellville	60.57	308	P	P	05 35 44.9	-0.8
	baz=104,SNR=16						
VAY	Valandovo	60.68	46	*i* P	P	05 35 46.7	+0.4
MIAR	Mount Ida	60.74	306	P	P	05 35 46.5	-0.3
	baz=102,SNR=7.3						
VYHS	Vyhne	60.78	38	*e*P	P	05 35 46.4	-0.4
VYHS				pmax	pmax		
	comp=Z,51nm,2.0s						
VYHS	Vyhne	60.78	38	*e*P	P	05 35 46.4	-0.4
VYHS	Vyhne	60.78	38	*e*SN	S	05 44 05.3	+1.1
BOVS	Bovan	60.81	44	⇓P	P	05 35 46.9	-0.2
L40A	Anamosa	60.91	314	P	P	05 35 47.6	-0.2
W39A	Magazine	61.05	306	P	P	05 35 48.4	-0.4
	baz=102,SNR=10						
NATX	Nacogdoches	61.10	302	P	P	05 35 50.5	+1.2
	baz=100						
PSZ	Piszkesteto	61.19	39	⇓P	P	05 35 50.4	+0.7
PSZ	Piszkesteto	61.19	39	*e*P	P	05 35 49.5	-0.2
PSZ	Piszkesteto	61.19	39	⇓P	P	05 35 50.4	+0.7
PSZ	Piszkesteto	61.19	39	P	P	05 35 49.6	-0.1
PSZ				IAmb	IAmb	05 36 00.7	
	comp=Z,27nm,1.1s						
MDVR	Moldovita	61.20	42	⇓P	P	05 35 50.6	+0.8
LANS	Liptovska Anna	61.43	37	*e*P	P	05 35 52.0	+0.8
LANS	Liptovska Anna	61.43	37	*e*P	P	05 35 52.0	+0.8
BZS	Buzias	61.43	41	⇑P	P	05 35 51.4	+0.2
BZS	Buzias	61.43	41	⇑P	P	05 35 51.4	+0.2
SIRR	Siria	61.69	41	⇓P	P	05 35 54.0	+0.9
HKT	Hockley	61.81	300	⇓*e*P	P	05 35 53.2	-0.8
HKT				pmax	pmax		
	comp=Z,8.0nm,1.2s						
P38A	Dawn	61.90	311	P	P	05 35 53.8	-0.8
P38A				IAmb	IAmb	05 36 00.5	
	comp=Z,27nm,1.2s						
ICESG	Greenland Ices	61.95	358	*e*P	P	05 35 53.6	-1.1
ICESG				IAmb	IAmb	05 36 04.3	
	comp=Z,36nm,1.1s						
NIE	Niedzica	62.03	37	P	P	05 35 58.0	+2.7
OJC	Ojcow	62.06	36	P	P	05 35 55.2	-0.2
OJC				pmax	pmax		
	comp=Z,29nm,1.4s						
OJC	Ojcow	62.06	36	P	P	05 35 55.2	-0.2
OJC				IAmb	IAmb	05 36 00.1	
	comp=Z,29nm,1.4s						
GZR	Gura Zlata	62.12	42	⇑P	P	05 35 55.9	-0.1
GZR	Gura Zlata	62.12	42	⇑P	P	05 35 55.9	-0.1
CRVS	Cervenica-Dubn	62.53	38	*e*P	P	05 35 58.4	-0.2
CRVS				pmax	pmax		
	comp=Z,38nm,1.6s						
CRVS	Cervenica-Dubn	62.53	38	*e*P	P	05 35 58.4	-0.2
DRGR		62.55	41	⇓P	P	05 35 59.3	+0.4
DRGR		62.55	41	⇓P	P	05 35 59.3	+0.4
TUL1	Leonard	62.80	307	P	P	05 36 00.1	-0.5
	baz=101,SNR=12						
TRPA	Tarpa	62.91	39	⇓P	P	05 36 01.4	+0.3
TRPA	Tarpa	62.91	39	*e*P	P	05 36 00.0	-1.1
UZH	Uzhgorod	62.94	38	*e*P	P	05 36 00.9	-0.4
UZH				*e*		05 36 06.9	
SPMN	Marine on St.	62.98	317	P	P	05 36 00.7	-0.9
	baz=108,SNR=9.1						
EZN	Ezine	63.03	49	P	P	05 36 02.5	+0.4
ALN	Alexandroupoli	63.09	48	P	P	05 36 03.2	+0.8
ALN				pmax	pmax		
	comp=Z,23nm,1.2s						
ARR	Arges	63.35	43	⇓P	P	05 36 04.3	+0.1
435B	Jarrell	63.43	301	P	P	05 36 04.3	-0.6
435B				IAmb	IAmb	05 36 09.9	
	comp=Z,26nm,1.0s						
NB2	NORSAR Subarra	63.48	23	P	P	05 36 03.9	-0.9
	comp=Z,38nm,1.4s,baz=233,slow=6.5						
NB2	NORSAR Subarra	63.48	23	P	P	05 36 03.9	-0.9
	baz=233,slow=6.5						
NOA	NORSAR Array B	63.48	23	P	P	05 36 03.9	-0.9
	comp=Z,7.9nm,0.9s,baz=233,slow=6.2,SNR=8.6						
NOA				LR	LR	05 59 36.2	
	comp=Z,590nm,20.9s,baz=230,slow=32						
WHTX	Lake Whitney,	63.49	302	P	P	05 36 04.7	-0.6
	baz=98						
Z35A	Perchaven, San	63.52	304	P	P	05 36 04.9	-0.6
ARG	Arkhangelos	63.64	53	P	P	05 36 06.8	+0.6
VOIR		63.65	43	⇓P	P	05 36 06.4	+0.2
VOIR		63.65	43	⇓P	P	05 36 06.4	+0.2
DOPR	Dopca	64.04	42	⇑P	P	05 36 08.7	0.0
KSU1	Kansas State U	64.09	310	P	P	05 36 08.0	-1.2
	baz=102,SNR=7.2						
OK029	Liberty Lake	64.10	306	IAMs_20	IAMs_20	05 56 29.7	
	comp=Z,736nm,22.0s						
KLNR	Kaliningrad	64.17	32	⇑*e*P	P	05 36 09.0	-0.3
MLR	Muntele Rosu	64.27	43	⇑P	P	05 36 10.7	+0.3
MLR	Muntele Rosu	64.27	43	⇑P	P	05 36 10.7	+0.3
EDC	Edincik	64.30	49	P	P	05 36 10.9	+0.4
OZUR		64.34	42	⇓P	P	05 36 10.7	0.0
KAN13	South Haven SW	64.34	308		P	05 36 10.3	-0.5
LVV	L'vov	64.43	38	*e*P	P	05 36 10.1	-1.1
BURAR	Bucovina Array	64.44	40	⇓P	P	05 36 10.6	-0.8
BURAR	Bucovina Array	64.44	40	⇓P	P	05 36 10.6	-0.8
COVR	Voineasa-Covas	64.55	42	⇑P	P	05 36 12.4	+0.4
KAN01	Argonia South	64.59	308		P	05 36 12.2	-0.3
833A	Chaparral WMA,	64.71	298	P	P	05 36 13.2	-0.2
	baz=96						
PLOR	Plostina	64.84	42	⇑P	P	05 36 11.8	-2.2
PLOR	Plostina	64.84	42	⇑P	P	05 36 11.8	-2.2
VRI	Vrincioaia	64.90	42	⇓P	P	05 36 12.3	-2.1
VRI	Vrincioaia	64.90	42	⇓P	P	05 36 12.3	-2.1
WMOK	Wichita Mounta	65.00	305	P	P	05 36 13.9	-1.3
	baz=99,SNR=8.3						
TESR	Tescani	65.03	42	⇑P	P	05 36 14.7	-0.5
ELL	Elmali	65.15	53	P	P	05 36 16.9	+0.6
ELL				pmax	pmax		
	comp=Z,278nm,1.3s						
ELL	Elmali	65.15	53	P	P	05 36 16.9	+0.6
ECSD	EROS Data Cent	65.18	315	P	P	05 36 15.1	-1.1
	baz=104,SNR=14						
JCT	Junction City	65.29	300	P	P	05 36 16.7	-0.5
	baz=96,SNR=9.1						
SUMG	Summit	65.40	359	*e*P	P	05 36 18.6	+1.1
SUMG				IAmb	IAmb	05 36 27.5	
	comp=Z,30nm,1.0s						
ABTX	Abilene, Hawle	65.41	303	P	P	05 36 17.2	-0.7
	baz=97,SNR=11						
ABTX	Abilene, Hawle	65.41	303	P	P	05 36 17.3	-0.7
SUW	Suwalki	65.51	33	*e*P	P	05 36 18.0	-0.1
SUW	Suwalki	65.51	33	*e*P	P	05 36 18.7	+0.7
R32A	Long Quarter,	65.57	309	P	P	05 36 18.5	-0.3
PBUR	Paburge	65.67	31	*e*P	P	05 36 20.6	+1.5
BGNE	Belgrade	65.74	312	P	P	05 36 19.7	-0.2
	baz=102						
TPGR	Topolog	65.78	44	⇓P	P	05 36 19.7	-0.3
AGMN	Agassiz Nation	65.92	320	P	P	05 36 20.0	-0.9
	baz=107						
CBKS	Cedar Bluff	66.43	309	P	P	05 36 24.4	0.0
	baz=100,SNR=13						
PABE	Paberze	66.51	32	*e*P	P	05 36 25.3	+0.8
ULM	Lac du Bonnet	66.52	322	P	P	05 36 23.1	-1.5
	comp=Z,12nm,1.0s,baz=98,slow=4.9,SNR=6.7						
ULM				LR	LR	06 00 59.6	
	comp=Z,439nm,20.2s,baz=112,slow=32						
MDUB	Mudurnu	66.81	49	P	P	05 36 26.3	-0.6
AMTX	Amarillo	67.38	305	P	P	05 36 30.4	-0.2
	baz=97						
AMTX	Amarillo	67.38	305	P	P	05 36 29.8	-0.8
AMTX				IAmb	IAmb	05 36 35.1	
	comp=Z,40nm,1.4s						
BOSA	Boshof	67.50	125	P	P	05 36 29.7	-1.7
	comp=Z,6.1nm,0.9s,baz=278,slow=4.3,SNR=5.4						
BOSA				LR	LR	05 59 46.3	
	comp=Z,460nm,21.5s,baz=291,slow=30						
BOSA	Boshof	67.50	125	P	P	05 36 29.7	-1.7
BOSA				pmax	pmax		
	comp=Z,20nm,1.2s						
BOSA	Boshof	67.50	125	IAmb	IAmb	05 36 55.8	
	comp=Z,20nm,1.2s						
CSS	Mathiatis	67.64	55	P	P	05 36 31.6	-0.5
CSS				IAmb	IAmb	05 36 33.7	
	comp=Z,44nm,1.5s						
ISAL	Salakas	67.67	32	*e*P	P	05 36 33.2	+1.3
MTSE	Matsula	67.73	29	*e*P	P	05 36 33.5	+1.3
NACGM	Naroch	67.79	33	*i* P	P	05 36 32.9	+0.3
AKASG	Malin Array Be	67.87	38	P	P	05 36 31.6	-1.7
	comp=Z,6.9nm,0.8s,baz=256,slow=6.1,SNR=22						
AKASG				LR	LR	06 04 47.8	
	comp=Z,128nm,19.7s,baz=275,slow=35						
AKASG	Malin Array Be	67.87	38	*ce*P	P	05 36 32.5	-0.7
AKASG				pmax	pmax		
	comp=Z,7.0nm,0.8s						
AKBB	Malin Array Si	67.87	38	⇓*e*P	P	05 36 32.4	-0.8
ANTO	Ankara	67.91	50	P	P	05 36 33.6	-0.2
ANTO				pmax	pmax		
	comp=Z,29nm,1.2s						
ANTO	Ankara	67.91	50	P	P	05 36 33.6	-0.2
ANTO				IAmb	IAmb	05 36 34.8	
	comp=Z,30nm,1.2s						
MDND	Maddock	68.22	319	P	P	05 36 34.9	-0.6
	baz=104,SNR=8.5						
MDND	Maddock	68.22	319	P	P	05 36 34.7	-0.8
TX31	Lajitas Ar. Si	68.53	299	P	P	05 36 37.8	-0.1
TX31				IAmb	IAmb	05 36 58.2	
	comp=Z,38nm,1.4s						
TXAR	Lajitas Array	68.53	299	P	P	05 36 37.8	-0.2
	comp=Z,1.2nm,0.6s,baz=106,slow=6.8,SNR=19						
BR131	Keskin Array S	68.53	50	*d i*P	P	05 36 37.5	-0.4
BR131	Keskin Array S	68.53	50	P	P	05 36 37.0	-0.8
BR131				IAmb	IAmb	05 36 38.6	
	comp=Z,37nm,1.2s						
BRTR	Keskin Array B	68.53	50	P	P	05 36 37.4	-0.4
	comp=Z,8.2nm,1.0s,baz=255,slow=4.9,SNR=34						
BRTR				LR	LR	06 08 17.1	
	comp=Z,254nm,19.0s,baz=257,slow=37						
BRTR	Keskin Array B	68.53	50	P	P	05 36 36.9	-0.9
KSCO	Kaye Shedlock'	68.69	309	P	P	05 36 39.0	+0.2
	baz=98						
GHAJ	Ghor Haditha	69.14	59	IAMs_20	IAMs_20	06 04 18.5	
	comp=Z,385nm,19.0s						
T25A	Trinidad	69.84	307	P	P	05 36 47.0	+0.9
	baz=96,SNR=14						
FINES	FINESS Array B	69.87	26	P	P	05 36 45.2	-0.3
	comp=Z,8.6nm,0.9s,baz=172,slow=3.9,SNR=7.4						
FINES				LR	LR	06 03 34.1	
	comp=Z,558nm,21.1s,baz=246,slow=33						
FINES	FINESS Array B	69.87	26	*i* P	P	05 36 47.9	+2.4
FINES				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MNTX	Cornudas Mount	70.16	301	P	P	05 36 47.1	-0.8
	baz=94,SNR=11						
MNTX	Cornudas Mount	70.16	301	IAMs_20	IAMs_20	06 01 45.4	
	comp=Z,656nm,18.0s						
RSSD	Black Hills	70.50	314	P	P	05 36 49.9	-0.1
RSSD				pmax	pmax		
	comp=Z,6.0nm,1.0s						
Q24A	Divide	70.63	309	P	P	05 36 51.6	+0.6
	baz=96						
SDCO	Great Sand Dun	70.77	307	P	P	05 36 52.2	+0.3
	baz=96,SNR=21						
NEEM	North Greenlan	70.81	356	*e*P	P	05 36 51.1	-0.2
NEEM				IAmb	IAmb	05 37 00.0	
	comp=Z,1µm,4.2s						
ISCO	Idaho Springs	71.08	310	P	P	05 36 54.5	+0.7
	baz=96,SNR=22						
ANMO	Albuquerque	71.29	304	⇑*e*P	P	05 36 55.7	+0.7
ANMO				pmax	pmax		
	comp=Z,18nm,1.3s						
ANMO	Albuquerque	71.29	304	P	P	05 36 55.6	+0.6
	baz=94						
FFC	Flin Flon	71.35	326	P	P	05 36 54.9	+0.3
FFC				pmax	pmax		
	comp=Z,37nm,1.3s						
DGMT	Dagmar	71.35	319	P	P	05 36 55.2	+0.4
	baz=100,SNR=16						
N23A	Red Feather La	71.46	311	P	P	05 36 56.7	+0.8
	baz=97,SNR=16						
S22A	4UR Ranch, Cre	71.82	307	P	P	05 36 58.6	+0.4
	baz=95,SNR=16						
KMBO	Kilima Mbogo	71.88	94	LR	LR	06 06 38.7	
	comp=Z,265nm,19.6s,baz=268,slow=34						
KMBO	Kilima Mbogo	71.88	94	IAMs_20	IAMs_20	06 09 39.3	
	comp=Z,367nm,18.0s						
ANN	Anapa	72.06	45	*e*P	P	05 36 55.5	-3.5
ANN				*e*S	S	05 46 22.5	+1.3
ANN				pmax	pmax		
	comp=Z,78nm,1.0s						
K22A	Casper	72.10	312	P	P	05 36 59.5	-0.2
	baz=97						
FURI	Furi	72.20	83	IAMs_20	IAMs_20	06 08 24.7	
	comp=Z,455nm,22.0s						
121A	Cookes Peak, D	72.25	302	P	P	05 37 01.6	+0.9
	baz=93						
KIBK	Kibwezi	72.83	95	IAMs_20	IAMs_20	06 06 43.6	
	comp=Z,438nm,18.0s						
ARCES	ARCESS Array B	73.06	19	P	P	05 37 06.2	+1.6
	comp=Z,3.6nm,0.8s,baz=248,slow=4.8,SNR=5.5						
ARCES				LR	LR	06 07 55.2	
	comp=Z,208nm,18.3s,baz=220,slow=35						
MVCO	Mesa Verde	73.10	307	P	P	05 37 06.7	+0.9
	baz=94,SNR=13						
O20A	White River Ci	73.12	310	P	P	05 37 06.8	+1.0
	baz=95,SNR=40						
OBN	Obninsk	73.26	35	*de*P	P	05 37 05.6	-0.4
OBN				*e*		05 37 15.4	
OBN				*e*		05 39 48.7	
OBN				pmax	pmax		
	comp=Z,38nm,1.7s						
OBN				MLR	MLR		
	comp=Z,376nm,16.0s						
MOS	Moscow	73.98	34	*e*P	P	05 37 08.6	-1.6
MOS				*e*		05 37 19.3	
MOS				pmax	pmax		
	comp=Z,28nm,0.8s						
W18A	Petrified Fore	73.99	304	P	P	05 37 11.4	+0.4
	baz=92,SNR=10						
VSR	Storozhevoye	74.12	39	*e*P	P	05 37 09.4	-1.8
VSR				pmax	pmax		
	comp=Z,30nm,1.2s						
LPSR	Galich'ya Gora	74.19	37	*e*P	P	05 37 09.7	-1.8
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PDAR	Pinedale Array	74.33	312	P	P	05 37 12.5	-0.4
	comp=Z,7.2nm,0.9s,baz=96,slow=6.8,SNR=30						
PDAR				LR	LR	06 05 29.5	
	comp=Z,279nm,21.7s,baz=120,slow=32						
BW06	Boulder Array	74.33	312	P	P	05 37 12.3	-0.6
	baz=95,SNR=22						
RLMT	Red Lodge	74.34	315	P	P	05 37 13.7	+0.9
	baz=96						
TUC	Tucson	74.77	301	P	P	05 37 16.3	+0.8
TUC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
TUC	Tucson	74.77	301	P	P	05 37 16.2	+0.7
	baz=91						
NOR	Nord	74.84	3	*e*P	P	05 37 15.3	+0.4
NOR				IAmb	IAmb	05 37 18.9	
	comp=Z,4.0nm,0.7s						
APA	Apatity	75.01	22	⇓*i*P	P	05 37 24.2	+8.2
APA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PMSA	Palmer Station	75.08	193	*e*P	P	05 37 16.7	+0.4
LOHW	Long Hollow	75.16	313	P	P	05 37 17.6	-0.1
LOHW				IAmb	IAmb	05 37 23.0	
	comp=Z,42nm,1.2s						
H17A	Grant Village	75.20	314	P	P	05 37 19.7	+1.7
	baz=94,SNR=8.4						
WUAZ	Wupatki	75.34	305	P	P	05 37 19.8	+1.0
	baz=92,SNR=16						
X16A	Lo Mia Camp, P	75.37	304	P	P	05 37 19.8	+0.8
X16A				IAmb	IAmb	05 37 25.5	
	comp=Z,31nm,1.4s						
YHL	Hebgen Lake	75.67	314	P	P	05 37 21.6	+1.0
YHL				IAmb	IAmb	05 37 26.8	
	comp=Z,37nm,1.3s						
VRH	Novokhopyorsk	75.71	39	*e*P	P	05 37 18.4	-1.9
VRH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KIV	Kislovodsk	75.72	47	*e*P	P	05 37 20.2	-0.5
KIV				pmax	pmax		
	comp=Z,28nm,1.0s						

KIV				MLR	MLR		
	comp=Z,152nm,18.0s						
KIV	Kislovodsk	75.72	47	P	P	05 37 20.2	-0.5
KIV				IAmb	IAmb	05 37 21.7	
	comp=Z,36nm,1.2s						
KBZ	Khabaz	75.85	47	P	P	05 37 20.9	-0.4
	comp=Z,8.5nm,1.0s,baz=77,slow=6.4,SNR=6.2						
KBZ				LR	LR	06 13 21.4	
	comp=Z,144nm,19.4s,baz=292,slow=38						
KBZ	Khabaz	75.85	47	*de*P	P	05 37 21.9	+0.6
KBZ				pmax	pmax		
	comp=Z,14nm,1.1s						
KLMR	Klimovskoe	75.93	29	*e*P	P	05 37 18.9	-2.4
KLMR				pmax	pmax		
	comp=Z,89nm,1.5s						
KLMR	Klimovskoe	75.93	29	*e*P	P	05 37 19.0	-2.4
KLMR				AMP		05 37 32.4	
	comp=Z,89nm,1.5s						
BOZ	Bozeman (W)	76.04	315	P	P	05 37 23.0	+0.4
	baz=94						
GOF	Gofitskoye	76.05	45	⇑*e*P	P	05 37 22.9	+0.5
GOF				pmax	pmax		
	comp=Z,54nm,1.0s						
MTPU	Mount Pierson	76.07	307	P	P	05 37 23.5	+0.4
ATD	Arta Tunnel	76.08	80	IAMs_20	IAMs_20	06 06 09.4	
	comp=Z,370nm,22.0s						
HRY	Holter Researc	76.25	316	P	P	05 37 23.9	+0.1
214A	Organ Pipe Nat	76.49	301	P	P	05 37 26.0	+0.8
	baz=90						
ZEI	Tsey	76.53	48	*e*P	P	05 37 24.8	-0.7
ZEI				pmax	pmax		
	comp=Z,10.0nm,1.6s						
DUG	Dugway, Tooele	76.62	310	P	P	05 37 26.7	+0.7
	baz=92,SNR=17						
MCMT	McKenzie Canyo	76.85	314	P	P	05 37 27.4	0.0
CCUT	Cedar City	76.99	307	P	P	05 37 29.0	+0.8
CCUT				IAmb	IAmb	05 37 34.6	
	comp=Z,31nm,1.3s						
GNI	Garni	77.07	51	IAMs_20	IAMs_20	06 11 12.7	
	comp=Z,360nm,21.0s						
PDMCI	Parker Dam,Lak	77.60	303	P	P	05 37 33.5	+2.1
	baz=90						
MSO	Missoula	77.71	316	P	P	05 37 31.9	0.0
	baz=93						
RAYN	Ar Rayn	77.88	68	P	P	05 37 33.7	+0.5
RAYN				pmax	pmax		
	comp=Z,9.0nm,1.2s						
RAYN				MLR	MLR		
	comp=Z,600nm,18.0s						
RAYN	Ar Rayn	77.88	68	P	P	05 37 33.7	+0.5
RAYN	Ar Rayn	77.88	68	IAMs_20	IAMs_20	06 15 49.3	
	comp=Z,558nm,18.0s						
HLID	Hailey	77.92	313	P	P	05 37 33.6	+0.3
	baz=92,SNR=24						
IRM	Iron Mountain	78.43	303	P	P	05 37 37.1	+0.9
	baz=89,SNR=14						
BC3	Big Chuckawall	78.70	303	P	P	05 37 38.4	+0.7
	baz=89						
R11A	Troy Canyon, C	78.75	308	P	P	05 37 38.8	+0.9
	baz=90,SNR=19						
R11A	Troy Canyon, C	78.75	308	P	P	05 37 38.4	+0.4
GMRC	Granite Mounta	78.85	304	P	P	05 37 39.3	+0.7
	baz=89						
PRGR	Permogore	78.96	29	*e*P	P	05 37 39.0	+0.7
PRGR				pmax	pmax		
	comp=Z,71nm,1.0s						
SWSC	Sam W. Stewart	79.00	302	P	P	05 37 40.6	+1.4
	baz=88						
TUQ	Turquoise Moun	79.05	305	P	P	05 37 40.6	+1.0
	baz=89						
BELC	Belle Mtn. Jos	79.14	303	P	P	05 37 41.1	+0.9
	baz=89						
YKA	Yellowknife Ar	79.19	332	P	P	05 37 38.6	-1.0
	comp=Z,6.5nm,1.0s,baz=100,slow=7.0,SNR=5.9						
YKA				LR	LR	06 07 48.8	
	comp=Z,399nm,21.5s,baz=0.0,slow=32						
YKA	Yellowknife Ar	79.19	332	*ce*P	P	05 37 38.5	-1.1
YKA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
SHOC	Shoshone, Teco	79.33	305	P	P	05 37 42.0	+1.0
	baz=89						
HEC	Hector,Ludlow	79.40	304	P	P	05 37 42.8	+1.3
	baz=88						
BELG	Belogornoye	79.45	38	⇑*e*P	P	05 37 40.8	-0.4
BELG				pmax	pmax		
	comp=Z,6.0nm,1.2s						
MONP2	Monument Peak	79.53	302	P	P	05 37 43.6	+1.2
	baz=88						
VNA1	Neumayer--Stat	79.61	171	P	P	05 37 44.9	+3.3
GWY	Greenwater Val	79.64	305	P	P	05 37 43.6	+0.7
GSC	Goldstone, Bar	79.78	305	P	P	05 37 44.1	+0.6
	baz=88						
FURC	Furnace Creek,	79.79	306	P	P	05 37 44.9	+1.5
	baz=88,SNR=16						
QSM	Queen of Sheba	79.81	305	P	P	05 37 44.2	+0.6
QSM				IAmb	IAmb	05 37 50.6	
	comp=Z,56nm,1.3s						
NEW	Newport	79.91	318	P	P	05 37 43.1	-0.8
	baz=90						
VNA3	Neumayer Olymp	79.95	172	P	P	05 37 46.5	+2.9
VNA2	Neumayer--Watz	79.99	171	P	P	05 37 47.4	+3.7
	baz=334,slow=6.3						
MURC	Murrieta	80.15	303	P	P	05 37 46.5	+1.0
	baz=88						
LRMC	Laurel Mtn Rad	80.49	305	P	P	05 37 48.1	+0.7
	baz=88,SNR=23						
KIRV	Kirov	80.67	32	⇓*e*P	P	05 37 47.4	-0.2
EDW2	Edwards Air Fo	80.77	304	P	P	05 37 49.7	+0.9
	baz=88,SNR=17						
CWC	Cottonwood Cre	80.78	306	P	P	05 37 49.8	+0.8
	baz=88						
NVAR	Mina Array Bea	80.88	308	P	P	05 37 49.8	+0.2
	comp=Z,4.5nm,1.1s,baz=95,slow=5.0,SNR=16						
NVAR				LR	LR	06 13 56.4	
	comp=Z,114nm,18.1s,baz=110,slow=36						
ISA	Isabella, Lake	81.12	305	P	P	05 37 51.4	+0.7
ISA				pmax	pmax		
	comp=Z,38nm,1.4s						
ISA	Isabella, Lake	81.12	305	P	P	05 37 51.9	+1.2
	baz=88,SNR=17						
ISA	Isabella, Lake	81.12	305	P	P	05 37 51.4	+0.7
ISA				IAmb	IAmb	05 37 58.0	
	comp=Z,38nm,1.4s						
SNAA	Sanae	81.36	170	P	P	05 37 53.4	+2.3
SNAA	Sanae	81.36	170	⇓*e*P	P	05 37 52.8	+1.7
SNAA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SNAA	Sanae	81.36	170	P	P	05 37 52.5	+1.4
PKM	Mcpherson Peak	82.26	304	P	P	05 37 57.9	+1.0
	baz=87						
SMMC	Simmler	82.38	305	P	P	05 37 58.9	+1.6
	baz=86						
F05D	White Salmon	82.92	315	P	P	05 38 00.5	+0.6
	baz=87						
WRGLY	Wrigley	83.27	333	P	P	05 38 01.3	0.0
	baz=88						
A36M	Sachs Harbour	83.53	342	P	P	05 38 02.3	-0.2
	baz=87						
ARU	Arti	85.69	34	*c i*P	P	05 38 14.4	+0.7
ARU						05 41 27.1	
ARU				S	SKSac	05 48 39.0	-0.5
ARU				pmax	pmax		
	comp=Z,31nm,1.8s						
ARU	Arti	85.69	34	P	P	05 38 13.7	+0.1
ARU				IAmb	IAmb	05 38 15.0	
	comp=Z,29nm,1.4s						
BBB	Bella Bella	86.72	322	LR	LR	06 12 15.7	
	comp=Z,347nm,20.6s,baz=74,slow=32						
SVE	Sverdlovsk	86.78	33	*e*P	P	05 38 19.7	+0.7
INK	Inuvik	86.79	338	LR	LR	06 15 29.4	
	comp=Z,276nm,18.3s,baz=79,slow=34						
INK	Inuvik	86.79	338	P	P	05 38 18.0	-0.8
	baz=79						
DLBC	Dease Lake	86.93	328	LR	LR	06 14 12.4	
	comp=Z,378nm,18.7s,baz=152,slow=34						
ABKAR	Akbulak array	87.41	41	P	P	05 38 21.8	-0.5
ABKAR	Akbulak array	87.41	41	P	P	05 38 22.3	0.0
ABKAR				IAmb	IAmb	05 38 25.1	
	comp=Z,7.4nm,1.2s						
UOSS	Minazif	87.50	65	IAMs_20	IAMs_20	06 20 07.0	
	comp=Z,569nm,20.0s						
GEYT	Alibeck	87.57	52	LR	LR	06 19 23.2	
	comp=Z,67nm,21.5s,baz=25,slow=37						
EPYK	Eagle Plains	88.42	337	P	P	05 38 27.3	+0.5
	baz=76						
DAWY	Dawson	90.12	335	P	P	05 38 34.4	-0.5
	baz=73						
J26L	Joseph Creek	91.71	336	P	P	05 38 42.3	0.0
	baz=70						
TOLK	Toolik Lake Re	92.28	341	P	P	05 38 45.4	+0.6
	baz=64						
ILAR	Eielson Array	92.94	337	P	P	05 38 46.9	-0.9
	comp=Z,1.9nm,1.0s,baz=40,slow=4.5,SNR=9.3						
ILAR				PP	PP	05 42 28.3	-1.7
	comp=Z,0.8nm,1.0s,baz=57,slow=8.7,SNR=4.8						
ILAR				LR	LR	06 17 46.9	
	comp=Z,418nm,20.5s,baz=82,slow=34						
BRVK	Borovoye	93.00	36	⇓*e*P	P	05 38 48.5	+0.1
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
NRIK	Noril'sk	94.03	18	LR	LR	06 21 43.7	
	comp=Z,160nm,18.9s,baz=310,slow=36						
MAW	Mawson	99.33	157	LR	LR	06 17 53.3	
	comp=Z,184nm,18.4s,baz=242,slow=32						
KSH	Kashi	100.82	48	P	Pdif	05 39 26.8	+2.5
KSH				pmax	pmax		
	comp=Z,5.0nm,0.4s						
TAOE	Nuku Hiva Isla	106.64	263	*e*LR	LR	06 15 07.2	
	comp=Z,172nm,27.9s						
SONM	Songino Array	115.21	28	PP	PP	05 45 12.5	-3.7
	comp=Z,1.5nm,1.0s,baz=309,slow=6.9,SNR=4.4						
ULN	Ulaanbaatar	115.50	28	IAMs_20	IAMs_20	06 32 57.5	
	comp=Z,288nm,20.0s						
TBI	Tubuai	115.86	248	*e*LR	LR	06 19 23.9	
	comp=Z,237nm,28.0s						
PPT2	Papeete2	116.16	254	*e*PS	PS	05 54 49.5	-17
	comp=Z,68nm,23.2s						
PPT2				*e*SS	SS	06 01 14.4	-14
	comp=Z,216nm,31.2s						
PPT2	Papeete2	116.16	254	*e*LR	LR	06 19 31.4	
	comp=Z,294nm,23.8s						
HHC	Hu-ho-hao-te	122.86	30	*e*PKP	PKPdf	05 44 26.5	-5.1
HHC				LR	LR		
	comp=Z,300nm,20.6s						
HHC				LR	LR		
	comp=Z,260nm,20.5s						
HHC				LR	LR		
	comp=Z,440nm,20.2s						
XAN	Xi'an	126.24	38	PKP	PKiKP	05 44 40.3	+1.6
XAN				LR	LR		
	comp=Z,470nm,21.3s						
XAN				LR	LR		
	comp=Z,280nm,17.2s						
XAN				LR	LR		
	comp=Z,360nm,18.6s						
GYA	Guiyang	129.52	47	⇑P	PKiKP	05 44 52.8	+7.3
GYA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
NJ2	Nanjing	133.36	32	*e*PKP	PKPdf	05 44 50.9	-0.8
QIZ	Qiongzhong	136.13	53	PKP	PKPdf	05 44 55.5	-1.7
QIZ				PP	PP	05 47 35.9	-0.5
QIZ				SS	SS	06 05 36.8	-0.5
QIZ				LR	LR		
	comp=Z,150nm,19.8s						
QIZ				LR	LR		
	comp=Z,170nm,22.4s						
QIZ				LR	LR		
	comp=Z,170nm,19.6s						
BKZ	Black Stump Fm	137.76	216	IAMs_20	IAMs_20	06 57 32.9	
	comp=Z,254nm,21.0s						
H01W2	Cape Leeuwin H	139.97	138	T	T	08 21 06.8	
	baz=238,slow=75,SNR=46						
H01W3	Cape Leeuwin H	139.98	138	T	T	08 21 04.5	
	baz=238,slow=75,SNR=55						
H01W1	Cape Leeuwin H	139.98	138	T	T	08 21 09.2	
	baz=238,slow=75,SNR=65						
DZM	Mont Dzumac	155.08	231	*e*LR	LR	06 37 30.9	
	comp=Z,520nm,24.2s						
ASAR	Alice Springs	160.07	147	PKP	PKPdf	05 45 36.0	+0.8
	comp=Z,2.8nm,1.1s,baz=207,slow=1.0,SNR=14						
ASAR				PKPab	PKPab	05 46 13.1	-1.7
	comp=Z,0.9nm,0.9s,baz=196,slow=2.8,SNR=1.7						

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*NIED **14** 05:26:24.9, 31°.23N×128°.69E, h7^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.85; $M_{\theta\theta}$0.26; $M_{\phi\phi}$1.59; $M_{r\theta}$-0.42; $M_{\theta\phi}$4.75; $M_{\phi r}$1.24; Fault plane solution: $M_0$5.08000×10^{15} NP1: ϕ_s179.00000°, δ77.00000°, λ-159.00000°. NP2: ϕ_s84.00000°, δ69.00000°, λ-14.00000°.*

*JMA **14** 05:26:24.8±0.3, 31°.23N×128°.69E, h7^{km}±3^{km}, M4.3*

JMA Felt I J1.

*IDC **14** 05:26:26.3±0.9, 31°.24N×128°.79E, h0^{km}, mb3.8/7, mb1 4.0/11, mb1mx3.8/45, mbtmp3.9/11, ML3.5/3, MS3.6/12, Ms1 3.6/12, ms1mx3.4/40, Error ellipse: s-maj=27.3km s-min=17.1km az=83.0*

*NEIC **14** 05:26:28.0±1.0, 31°.27N±0°.06×128°.69E±0°.06, h10^{km}±1^{km}, mb4.2/7, Error ellipse: s-maj=10.8km s-min=7.9km az=192.0*

*KMA **14** 05:26:38.4, 31°.80N×128°.24E, h35^{km}*

ISC 14 05:26:26.7±0.7**, 31°.24N**±0°.04**×128°.77E**±0°.04**, h10^{km}, n59, σ1^{s}21**/55**, mb3.9**/10**, MS3.6**/8**, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	Shimokoshiki	0.92	61	P	Pg	05 26 43.2	-1.2
JSJ				*e*S	Sg	05 26 56.2	-0.2
JFU	Fukue jima 2	1.41	359	P	Pb	05 26 51.2	-2.0
JKC	Kuchinoerabu	1.45	122	P	Pn	05 26 52.2	-0.8
JKC				*e*S	Sg	05 27 13.4	0.0
JSU	Suzuyama	1.47	79	P	Pn	05 26 52.8	-0.5
JSU	Suzuyama	1.47	79		Pb	05 26 53.6	-0.5
JNN	Nakanoshima	1.69	145	P	Pn	05 26 55.2	-1.1
JYAK	Yakushimahirau	1.80	123	P	Pn	05 26 56.7	-1.1
JTN	Tanegashima 3	1.99	107	P	Pn	05 26 59.8	-0.6
JMTN	Minamitane	2.02	114	P	Pn	05 27 00.3	-0.5
JTZ	Takazaki	2.09	71	P	Pn	05 27 01.7	-0.1
JIU3	Izumi3	2.17	53	P	Pn	05 27 03.0	0.0
JNU	Nakatsue	2.59	43	Pn	Pb	05 27 10.1	-3.3
	34nm,0.3s,baz=345,slow=0.0,SNR=1.6						
JNU				Sn	Sg	05 27 48.8	-1.2
	36nm,0.3s,baz=90,slow=5.1,SNR=1.5						
KSJJU	Jeju	2.88	320	P	Pn	05 27 12.1	-0.7
	SNR=6.8						
GOS1	Gosan-ri	2.99	314	P	Pn	05 27 14.0	-0.2
	SNR=7.7						
GOS2	Gosang-Q330s	2.99	314	P	Pn	05 27 14.0	-0.2
	SNR=7.8						
HALB	Hallimjungang-	3.02	316	P	Pn	05 27 14.0	-0.6
	SNR=13						
GMDB	Geomundo	3.06	336	P	Pn	05 27 14.4	-0.8
	SNR=26						
JTU	Tsushima	3.32	9		Pn	05 27 19.3	+0.6
CJD	Chujado	3.42	323	P	Pn	05 27 19.4	-0.8
	SNR=19						
KOHB	KOHEUNG	3.60	340	P	Pn	05 27 22.0	-0.6
	SNR=9.7						
BOSB	Boseong-gun	3.75	340	P	Pn	05 27 24.1	-0.5
	SNR=8.2						
HANB	Haenam	3.79	331	P	Pn	05 27 25.0	-0.1
	SNR=7.1						
KSJDO	Jindo	3.83	328	P	Pn	05 27 25.1	-0.7
	SNR=8.7						
GGDB	Gageodo	4.16	313	P	Pn	05 27 30.0	-0.3
	SNR=9.0						
JOW	Kunigami	4.41	186	Pn	Pn	05 27 35.6	+1.8
	1.5nm,0.3s,baz=0.0,slow=6.1,SNR=1.6						
HUK2	Heuksan-myeon	4.43	322	P	Pn	05 27 33.5	-0.5
	SNR=22						
KSJEO	Jeonju	4.84	346	P	Pn	05 27 40.0	+0.3
	SNR=6.6						
JMN	Monobe	4.98	59	Pn	Pn	05 27 43.6	+2.0
JHS	Saijyo	5.23	43		Pn	05 27 47.8	+2.8
KSBON	Boeun	5.31	352	P	Pn	05 27 48.2	+2.2
	SNR=12						
CHYB	Chungyang	5.69	1	P	Pn	05 27 52.4	+1.1
	SNR=9.4						
KSAR	Wonju Array Be	6.23	353	Pn	Pn	05 28 00.3	+1.6
KSRS	Korea Array	6.24	354	Pn	Pn	05 27 59.7	+0.9
	1.8nm,0.3s,baz=175,slow=14,SNR=20						
KSRS				Sn	Sn	05 29 09.3	-0.9
	2.4nm,0.3s,baz=183,slow=15,SNR=4.3						
KSRS				LR	LR	05 29 45.0	
	comp=Z,62nm,21.2s,baz=176,slow=32						
KS19	Wonju Array Si	6.29	353		Pn	05 28 00.0	+0.5
JWT	Wachi	6.86	52	Pn	Pn	05 28 08.7	+1.2
MJAR	Matsushiro Arr	9.46	53	LR	LR	05 32 24.3	
	comp=Z,270nm,21.2s,baz=270,slow=38						
JCJ	Chichijima	12.43	106	LR	LR	05 33 46.9	
	comp=Z,99nm,18.9s,baz=201,slow=36						
ASAJ	Asahikawa	16.85	36	Pn	P	05 30 23.7	-1.1
	baz=247,slow=15,SNR=5.0						
ASAJ				LR	LR	05 36 19.8	
	comp=Z,258nm,20.2s,baz=229,slow=35						
JKA	Kamikawa-asahi	16.85	36		P	05 30 23.7	-1.1
JKA	Kamikawa-asahi	16.85	36	IAmb	IAmb	05 30 29.1	
	comp=Z,21nm,1.2s						
KLR	Kul'dur	18.11	6	P	P	05 30 42.6	+4.0
	comp=Z,0.1nm,0.3s,baz=206,slow=9.9,SNR=4.1						
GUMO	Guam	22.97	136	LR	LR	05 39 25.2	
	comp=Z,119nm,19.3s,baz=34,slow=34						
ULN	Ulaanbaatar	23.46	321	P	P	05 31 36.7	+0.3
ULN				IAmb	IAmb	05 31 38.3	
	comp=Z,3.5nm,0.8s						
SONM	Songino Array	23.79	321	P	P	05 31 40.9	+1.2
	comp=Z,3.3nm,0.8s,baz=139,slow=9.2,SNR=20						
SONM				LR	LR	05 41 53.1	
	comp=Z,472nm,18.7s,baz=133,slow=39						
SONM	Songino Array	23.79	321	P	P	05 31 40.3	+0.7
SONM				IAmb	IAmb	05 31 41.3	
	comp=Z,3.3nm,0.9s						
TLY	Talaya	27.54	325	LR	LR	05 44 11.4	
	comp=Z,331nm,18.4s,baz=136,slow=39						
CMAR	Chiang Mai Arr	29.80	252	LR	LR	05 44 27.2	
	comp=Z,96nm,18.0s,baz=78,slow=36						
PETK	Petropavlovsk-	30.27	35	LR	LR	05 44 13.8	
	comp=Z,122nm,18.8s,baz=209,slow=35						
ZALV	Zalesovo Beam	38.67	319	P	P	05 33 50.5	+0.1
	comp=Z,0.5nm,0.5s,baz=112,slow=7.0,SNR=2.1						
ZALV				LR	LR	05 50 55.5	
	comp=Z,214nm,18.9s,baz=125,slow=38						
MK31	Makanchi Array	38.72	307	P	P	05 33 51.0	0.0
MKAR	Makanchi Array	38.72	307	P	P	05 33 51.6	+0.7
	comp=Z,1.8nm,0.9s,baz=91,slow=9.7,SNR=9.2						
MKAR				LR	LR	05 49 50.1	
	comp=Z,114nm,18.6s,baz=94,slow=36						
BRVK	Borovoye	47.02	315	P	P	05 34 58.2	+0.1
KK31	Karatay Array	47.05	302	P	P	05 34 58.6	+0.1
KK31				IAmb	IAmb	05 35 05.7	
	comp=Z,3.6nm,0.8s						
KKAR	Karatay Array	47.05	302	P	P	05 34 58.6	+0.1
KKAR	Karatay Array	47.05	302	P	P	05 34 58.4	0.0
KKAR				IAmb	IAmb	05 35 05.7	
	comp=Z,3.6nm,0.8s						
WRA	Warramunga Arr	51.17	173	P	P	05 35 30.1	-0.1
	comp=Z,0.8nm,0.9s,baz=355,slow=8.3,SNR=4.1						
WRA				LR	LR	05 56 54.4	
	comp=Z,41nm,21.4s,baz=145,slow=36						
ASAR	Alice Springs	54.82	174	P	P	05 35 58.6	+1.6
	comp=Z,0.7nm,0.6s,baz=3.9,slow=14,SNR=9.0						
ILAR	Eielson Array	59.84	30	P	P	05 36 32.5	+0.4
	comp=Z,0.7nm,0.7s,baz=281,slow=7.5,SNR=14						
FINES	FINESS Array B	68.77	330	P	P	05 37 33.8	+3.2
	comp=Z,2.7nm,0.8s,baz=90,slow=2.8,SNR=4.4						

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*ATH **14** 05:30:16.7, 41°.94N×18°.98E, h13^{km}±5^{km}, ML2.7/2, Error ellipse: s-maj=8.6km s-min=2.5km az=172.0*

*TIR **14** 05:30:16.8, 42°.09N×19°.30E, h0^{km}±4^{km}, Md3.0, Ml2.5*

*PDG **14** 05:30:17.0±0.4, 41°.99N×19°.26E, h11^{km}, MD3.0/6, ML2.6/14, Error ellipse: s-maj=0.6km s-min=0.4km az=90.0*

*RHSSO **14** 05:30:17.0±0.7, 41°.97N×19°.35E, h5^{km}±1^{km}, ML3.0/12*

*BEO **14** 05:30:19.5±0.3, 42°.08N×19°.25E, h7^{km}±2^{km}, ML2.6/19*

ISC 14 05:30:18.4±0.8**, 42°.04N**±0°.02**×19°.26E**±0°.02**, h15^{km}**±5^{km}**, n96, σ1^{s}26**/165**, 36C-7D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ULC	Ulcinj	0.07	191	⇑*i*Pg	Pg	05 30 21.2	-0.2
ULC				*i* Sg	Sg	05 30 23.5	+0.1
DRME	Dracevica, Mon	0.16	339	⇑*i*Pg	Pg	05 30 22.2	-0.3
DRME				*e*Sg	Sg	05 30 25.6	+0.4
DRME	Dracevica, Mon	0.16	339	⇑*i*Pg	Pg	05 30 21.8	-0.7
DRME				*i* Sg	Sg	05 30 25.4	+0.2
BUM	Brajici-Budva	0.38	314	⇓*i*Pg	Pg	05 30 25.3	-0.9
BUM				*e*Sg	Sg	05 30 31.7	+0.2
PDG	Podgorica	0.39	359	⇑P	Pg	05 30 25.6	-0.8
PDG				⇑S	Sg	05 30 31.6	-0.2
PDG	Podgorica	0.39	359	*e*Pg	Pg	05 30 25.8	-0.6
PDG				*e*Sg	Sg	05 30 32.1	+0.3
PDG	Podgorica	0.39	359	⇑*i*Pg	Pg	05 30 25.6	-0.8
PDG				*e*Sg	Sg	05 30 31.8	0.0
TTG	Podgorica	0.39	359	⇑*i*Pg	Pg	05 30 25.6	-0.8
TTG				*i* Sg	Sg	05 30 32.0	+0.3
CEME	Cevo	0.57	333	⇓*i*Pg	Pg	05 30 28.5	-1.2
CEME				*e*Sg	Sg	05 30 37.6	+0.3
BCI	Bajram Curri	0.68	61	P	Pg	05 30 30.3	-1.4
	baz=63						
BCI				S	Sg	05 30 40.1	-0.7
	baz=63						
BCI				AMP			
	comp=N,1.1nm,0.3s,baz=63						
HCY	Herceg Novi	0.70	306	⇑*i*Pg	Pg	05 30 31.1	-1.0
HCY				*e*Sg	Sb	05 30 42.7	+0.8
HCY	Herceg Novi	0.70	306	⇑*i*Pg	Pg	05 30 31.4	-0.7
HCY				*e*Sg	Sb	05 30 42.2	+0.3
PVY	Plav	0.76	43	⇑*i*Pg	Pg	05 30 32.1	-1.1
PVY				*i* Sg	Sb	05 30 44.1	+0.4
NKME	Niksic	0.77	343	⇑*i*Pg	Pg	05 30 32.0	-1.3
NKME				*i* Sg	Sb	05 30 44.1	+0.3
NKY	Niksic	0.80	346	*e*Pg	Pg	05 30 32.2	-1.8
NKY				*i* Sg	Sb	05 30 45.3	+0.4
TIR	Tirane	0.82	147	⇑S	Sn	05 30 48.9	+1.5
TIR	Tirane	0.82	147	*e*Pg	Pb	05 30 33.7	-0.7
TIR				*e*Sg	Sn	05 30 48.4	+1.0
TIR	Tirane	0.82	147	P	Pb	05 30 33.8	-0.7
TIR				S	Sn	05 30 47.7	+0.3
TIR	Tirane	0.82	147	P	Pb	05 30 33.6	-0.9
TIR				S	Sn	05 30 46.1	-1.3
TIR				AML	AML	05 30 54.2	
	comp=N,744µm,0.5s						
TIR				AML	AML	05 30 55.8	
	comp=E,904µm,0.5s						
TIR	Tirane	0.82	147	P	Pb	05 30 34.0	-0.4
	baz=150						
TIR				S	Sn	05 30 47.7	+0.3
	baz=150						
TIR				AMP			
	comp=N,0.5nm,0.4s,baz=150						
KOME	Kolasin	0.83	13	⇑*i*Pg	Pg	05 30 33.4	-1.2
KOME				*e*Sg	Sb	05 30 46.4	+0.6
PHP	Peshkopia	0.95	111	P	Pb	05 30 35.8	-0.8
PHP				S	Sn	05 30 51.3	+0.7
PHP	Peshkopia	0.95	111	P	Pb	05 30 35.7	-0.9
	baz=114						
PHP				S	Sn	05 30 50.2	-0.4
	baz=114						
PHP				AMP			
	comp=N,4.4nm,0.3s,baz=114						
IVA	Berane	0.96	29	⇓*i*Pg	Pg	05 30 35.6	-1.3
IVA				*e*Sg	Sn	05 30 50.6	-0.3
TREB	Trebinje	0.96	315	*e*Pg	Pg	05 30 35.6	-1.4
TREB				*e*Sg	Sb	05 30 50.0	+0.7
TREB	Trebinje	0.96	315	⇑*i*Pg	Pg	05 30 35.6	-1.4
TREB				*e*Sg	Sb	05 30 50.6	+1.3
BRY	Bratogost	1.02	328	*e*Pg	Pg	05 30 36.9	-1.2
BRY				*e*Sg	Sn	05 30 52.7	+0.3
BRY	Bratogost	1.02	328	⇓*i*Pg	Pg	05 30 36.5	-1.6
BRY				*i* Sg	Sn	05 30 52.6	+0.2
DBRK	Dubrovnik	1.04	308	*e*Pg	Pg	05 30 37.0	-1.6
DBRK				Sg	Sb	05 30 52.4	+0.8
UPM	Unac-Piva	1.20	347	⇑*i*Pg	Pb	05 30 39.9	-1.0
UPM				*e*Sg	Sn	05 30 57.5	+0.6
UPM	Unac-Piva	1.20	347	*e*Pg	Pb	05 30 39.8	-1.1
UPM				*i* Sg	Sn	05 30 58.6	+1.7
PLE	Pljevlja	1.30	4	*e*Pg	Pn	05 30 41.7	-0.4
PLE				*i* Sg	Sn	05 31 01.1	+1.8
SJES	Sjenica	1.33	23	*e*Pg	Pb	05 30 42.8	-0.4
SJES				*e*Sg	Sg	05 31 01.6	+0.2
STON	Ston	1.43	306	*e*Pg	Pn	05 30 43.6	-0.2
STON	Ston	1.43	306	*e*Pg	Pn	05 30 43.9	+0.1
STON				*e*Sg	Sg	05 31 04.9	+0.6
STON	Ston	1.43	306	*e*Pg	Pn	05 30 43.5	-0.2
STON				*e*Sg	Sg	05 31 05.0	+0.6
STON	Ston	1.43	306	*i* Pn	Pn	05 30 43.5	-0.2
STON				Sn	Sg	05 31 05.1	+0.7
OHR	Ohrid	1.48	128	*e*Pg	Pg	05 30 45.6	-1.2
OHR				*e*Sg	Sg	05 31 08.6	+2.6
OHR	Ohrid	1.48	128	*i* Pn	Pg	05 30 46.0	-0.9
OHR				*i* Sn	Sg	05 31 09.3	+3.2
RUDO	Rudo	1.58	3	⇑*i*Pn	Pn	05 30 46.2	+0.2
RUDO				*e*Sn	Sg	05 31 08.4	-1.0

SKO	Skopje	1.62	92	iPn	Pg	05 30 49.0	-0.6
SKO				iSn	Sg	05 31 11.3	+0.7
SELS	Selova	1.81	49	ePg	Pb	05 30 50.8	-0.5
SELS				eSg	Sg	05 31 15.9	-0.7
BBLS	Lazići	1.83	3	ePg	Pb	05 30 51.7	0.0
BBLS				eSg	Sg	05 31 16.0	-1.4
BBLS	Lazići	1.83	3	⇑iPn	Pn	05 30 49.7	+0.2
BBLS				eSn	Sb	05 31 14.3	-0.2
FNA	Florina	2.02	128	P	Pb	05 30 54.2	-0.7
FNA				S	Sg	05 31 22.3	-1.2
FNA	Florina	2.02	128	P	Pb	05 30 54.5	-0.4
FNA	comp=E,251µm,0.3s			AML	AML	05 31 32.2	
FNA	comp=N,282µm,0.3s			AML	AML	05 31 32.3	
BARS	Barje	2.04	67	ePn	Pb	05 30 54.3	-1.0
BARS	Barje	2.04	67	ePn	Pg	05 31 04.4	+6.8
HAPS	Han Pijesak,Bl	2.06	354	ePn	Pn	05 30 53.4	+0.8
HAPS				eSn	Sn	05 31 19.9	+1.7
NOCI	Noci	2.07	234	P	Pn	05 30 50.2	-2.5
MAKA	Makarska	2.07	308	ePn	Pn	05 30 53.5	+0.9
NEST	Nestorio	2.11	140	P	Pg	05 30 56.5	-2.3
NEST	Nestorio	2.11	140	P	Pb	05 30 55.6	-0.7
DIVS	Divibare	2.13	14	ePn	Pb	05 30 55.1	-1.7
DIVS	Divibare	2.13	14	⇑iPn	Pn	05 30 54.0	+0.4
DIVS				eSn	Sn	05 31 21.0	+1.2
GRUS	Gruza	2.14	29	ePn	Pn	05 30 54.9	+1.3
PRVS	Prvonek	2.14	76	ePn	Pb	05 30 55.7	-1.2
RICI	Ricice	2.14	314	ePn	Pn	05 30 55.0	+1.3
TRUS	Trudelj	2.34	21	ePn	Pb	05 30 58.4	-1.9
KEK	Kerkira	2.36	170	P	Pn	05 30 57.1	+0.5
HVAR	Hvar	2.37	300	ePn	Pn	05 30 56.8	+0.1
HVAR				Sn	Sn	05 31 25.5	-0.1
MATE	Matera	2.37	235	⇑P	Pg	05 31 02.7	-1.2
MATE				⇑S	Sg	05 31 37.1	+2.4
BOVS	Bovan	2.41	48	⇓P	Pb	05 30 59.0	-2.4
BOVS				⇑S	Sn	05 31 27.9	+1.5
BOVS	Bovan	2.41	48	ePn	Pn	05 30 58.7	+1.5
BOSS	Bosilegrad	2.43	78	ePn	Pb	05 30 59.6	-2.3
VAY	Valandovo	2.58	105	ePn	Pb	05 31 01.8	-2.5
VAY	Valandovo	2.58	105	iPn	Pb	05 31 01.8	-2.5
VAY				iSn	Sb	05 31 34.5	-1.3
KPRO	Kipourio	2.62	142	P	Pb	05 31 03.4	-1.7
IGT	Igoumenitsa	2.63	162	P	Pn	05 31 01.7	+1.3
ZAGS	Zajecar	2.81	50	ePn	Pn	05 31 04.7	+1.9
MGRS	Mrkonjic Grad	2.86	327	ePn	Pn	05 31 04.0	+0.4
MGRS				eSn	Sn	05 31 39.7	+1.9
KIJV	Kijevo	2.88	314	ePn	Pn	05 31 05.4	+1.7
BLKB	Belogradchik	2.97	57	⇓S	Sn	05 31 42.2	+1.7
VTS	Vitosha	3.00	78	⇑P	Pn	05 31 07.5	+1.9
VTS				⇑S	Sn	05 31 43.0	+1.6
VTS	Vitosha	3.00	78	ePn	Pn	05 31 07.9	+2.3
BLY	Banja Luka	3.11	332	ePn	Pn	05 31 08.9	+2.0
BLY	Banja Luka	3.11	332	ePn	Pn	05 31 08.0	+1.1
BLY				eSn	Sn	05 31 45.7	+2.0
ZIRJ	Zirje	3.11	303	ePn	Pn	05 31 08.2	+1.2
ZIRJ				Sn	Sn	05 31 44.7	+0.8
FRGS	Fruska Gora	3.15	7	⇑P	Pn	05 31 09.9	+2.4
FRGS				⇑S	Sn	05 31 45.9	+1.1
FRGS	Fruska Gora	3.15	7	⇑iPn	Pn	05 31 07.3	-0.2
FRGS				eSn	Sn	05 31 45.9	+1.1
MORI	Morici	3.19	306	ePn	Pn	05 31 09.3	+1.3
MORI				Sn	Sn	05 31 48.4	+2.7
MDVR	Moldovita	3.27	32	⇓P	Pn	05 31 10.4	+1.1
MDVR				⇑S	Sn	05 31 49.6	+1.7
UDBI	Udbina	3.57	315	ePn	Pn	05 31 15.7	+2.4
UDBI				Sn	Sn	05 31 58.3	+3.0
DUGI	Dugi Otok	3.65	304	ePn	Pn	05 31 15.4	+1.0
DUGI				Sn	Sn	05 31 57.3	+0.1
HERR	Herculane	3.65	38	⇑P	Pn	05 31 15.6	+1.1
HERR				⇑S	Sn	05 31 57.9	+0.6
BZS	Buzias	3.96	25	ePn	Pn	05 31 20.3	+1.6
MORH	Mrgy, Hungar	4.20	354	ePn	Pn	05 31 22.9	+1.0
MORH				eSn	Sn	05 32 11.5	+0.8
GZR	Gura Zlata	4.21	36	⇑P	Pn	05 31 24.5	+2.3
GZR				⇑S	Sn	05 32 11.2	+0.1
RABC	Rab	4.25	311	ePn	Pn	05 31 23.2	+0.7
RABC				Sn	Sn	05 32 13.4	+1.7
CRES	Cresnjev	4.68	325	ePn	Pn	05 31 28.9	+0.4
CRES				eSn	Sn	05 32 23.0	+0.4
BRJN	Brijuni	4.93	307	ePn	Pn	05 31 31.8	-0.2
BRJN				Sn	Sn	05 32 26.9	-1.8
CEY	Cerknica	5.09	318	⇑iPn	Pn	05 31 35.0	+0.8
CEY				eSn	Sn	05 32 32.5	-0.2
DRGR		5.36	26	⇑P	Pn	05 31 39.1	+1.2
DRGR				⇑S	Sn	05 32 40.2	+0.9
VOIR		5.40	49	⇑P	Pn	05 31 40.7	+2.2
VOIR				⇑S	Sn	05 32 40.2	-0.1
SOKA	Soboth comp=N,0.6nm,0.2s	5.54	328	iPn	Pn	05 31 42.2	+1.8
SOKA	comp=N,0.6nm,0.4s			eSn	Sn	05 32 43.4	-0.5
OBKA	Obir comp=N,0.4nm,0.2s	5.61	324	iPn	Pn	05 31 42.8	+1.5
OBKA	comp=N,2.1nm,0.3s			eSn	Sn	05 32 45.6	0.0

NEIC **14** *05:32:34.4±1.8, 22°.76N±0°.04×121°.59E±0°.05, $h16^{km}\pm5^{km}$, mb4.1/7, ML4.5(TAP), Error ellipse: s-maj=7.1km s-min=4.5km az=64.0*

TAP **14** *05:32:35.3, 22°.77N×121°.56E, $h20^{km}$, ML4.3, C*

JMA **14** *05:32:35.5±0.1, 22°.80N×121°.54E, $h36^{km}$, M4.1*

IDC **14** *05:32:40.0±3.6, 22°.78N×121°.84E, $h69^{km}\pm34^{km}$, mb3.6/12, mb1 3.7/15, mb1mx3.6/42, mbtmp3.9/15, ML3.7/3, Error ellipse: s-maj=21.9km s-min=17.1km az=75.0*

ISC 14 05:32:34.0±1.0**, 22°.77N**±0°.02×**121°.62E**±0°.02**, $h17^{km}\pm6^{km}$, n154, $\sigma 0^{s}.98$**/224**, mb3.7**/15**, 1C-21D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LDUT	Ludao baz=221	0.17	236	⇑iP	Pb	05 32 39.7	+1.1
LDUT	baz=221			S	Sb	05 32 42.8	+1.0
EDH	Donghe baz=311	0.36	305	⇓iP	Pb	05 32 42.0	+0.1
EDH	baz=311			S	Sg	05 32 46.4	-0.1
CHKT	Chengkung baz=340	0.41	325	⇓iP	Pb	05 32 43.0	+0.2
CHKT	baz=340			iS	Sb	05 32 48.2	-0.5
TTN	Taitung baz=268	0.44	268	⇓P	Pg	05 32 43.3	+0.4
TTN	baz=268			S	Sg	05 32 48.8	0.0
LONT	Longtian baz=290	0.47	287	P	Pg	05 32 43.6	0.0
LONT	baz=290			S	Sb	05 32 51.3	+0.7
ECS	Chishang baz=317	0.49	312	⇓P	Pb	05 32 44.6	+0.4
ECS	baz=317			S	Sb	05 32 51.8	+0.6
TWGBT	Beinan baz=277	0.50	276	⇓iP	Pg	05 32 43.9	-0.1
TWGBT	baz=277			iS	Sg	05 32 51.2	+0.4
TWG	Pinlang baz=277	0.51	276	⇓iP	Pg	05 32 43.9	-0.3
TWG	baz=277			iS	Sg	05 32 51.2	+0.1
TWG	Pinlang	0.51	276		Pg	05 32 43.8	-0.4
FULB	Fuli baz=331	0.53	325	P	Pg	05 32 44.7	+0.2
FULB	baz=331			S	Sb	05 32 52.2	0.0
ECBN	Changbin baz=358	0.57	344	P	Pb	05 32 45.9	+0.4
ECBN	baz=358			S	Sb	05 32 53.3	-0.1
ECL	Taimali baz=253	0.64	255	⇓iP	Pg	05 32 46.1	-0.4
ECL	baz=253			iS	Sg	05 32 53.7	-1.4
EYUL	Yuli baz=348	0.64	334	P	Pb	05 32 47.1	+0.3
EYUL	baz=348			S	Sb	05 32 55.3	-0.2
TWF1	Yuli baz=347	0.66	333	⇓iP	Pb	05 32 47.1	+0.1
TWF1	baz=347			iS	Sb	05 32 56.4	+0.6
YULB	Yu-li baz=324	0.69	335	⇓iP	Pb	05 32 47.7	0.0
YULB	baz=324			S	Sg	05 32 56.1	-0.7
YULB	Yu-li	0.69	335		Pb	05 32 47.6	0.0
ELDTW	Lidau baz=311	0.70	307	⇓iP	Pg	05 32 47.0	-0.7
ELDTW	baz=311			S	Sg	05 32 54.8	-2.2
LAY	Lan-yu baz=180	0.73	185	P	Pb	05 32 48.1	-0.1
LAY	baz=180			S	Sb	05 32 56.4	-1.6
HGSD	Ruisui	0.74	346	⇓P	Pb	05 32 48.3	-0.3
HGSD				eS	Sn	05 33 01.6	+0.9
TAW	Tawu baz=236	0.78	239	eP	Pb	05 32 48.6	-0.6
TAW	baz=236			eS	Sb	05 32 57.7	-1.9
EHY	Hungye baz=328	0.79	340	P	Pb	05 32 49.3	0.0
EHY	baz=328			S	Sb	05 32 59.3	-0.3
EAST	Anshuo baz=240	0.81	242	⇓iP	Pb	05 32 49.1	-0.6
EAST	baz=240			S	Sb	05 32 57.9	-2.4
STYH	Taoyuan baz=307	0.88	297	P	Pb	05 32 50.5	-0.3
STYH	baz=307			S	Sb	05 33 01.1	-1.1
TSMG	Majia baz=257	0.90	266	eP	Pb	05 32 50.4	-0.9
SSD	Sandimen baz=269	0.91	269	⇓iP	Pb	05 32 50.5	-0.9
SSD	baz=269			S	Sb	05 33 00.1	-3.2
EGFH	Guangfu baz=335	0.92	349	eP	Pb	05 32 51.5	0.0
EGFH	baz=335			eS	Sg	05 33 03.5	-0.4
MASBT	Mashibuluo baz=260	0.93	261	⇓iP	Pb	05 32 50.9	-0.7
SLIU	Shizi baz=232	0.94	234	eP	Pb	05 32 50.8	-1.0
SCZT	Fangliau baz=251	1.00	247	⇓iP	Pb	05 32 52.2	-0.8
SCZT	baz=251			eS	Sb	05 33 04.5	-1.4
SGST	Jiashian baz=291	1.01	288	⇓iP	Pb	05 32 52.4	-0.6
SGST	baz=291			S	Sb	05 33 05.4	-0.6
SSPT	Xinbi baz=246	1.01	254	eP	Pb	05 32 53.0	-0.1
SGLT	Jiouru baz=268	1.04	268	eP	Pb	05 32 53.8	+0.2
SGLT	baz=268			eS	Sn	05 33 09.3	+1.2
WTP	Ta-pu baz=299	1.04	297	P	Pb	05 32 53.6	0.0
WTP	baz=299			S	Sb	05 33 07.4	+0.3
SCST	Cishan baz=272	1.05	277	eP	Pb	05 32 53.9	+0.2
ALS	Alishan baz=317	1.05	315	⇓iP	Pb	05 32 53.9	-0.1
ALS	baz=317			S	Sb	05 33 07.8	+0.2
TPUB	Ta-pu baz=302	1.06	300	⇓iP	Pb	05 32 53.9	-0.1
TPUB	baz=302			S	Sb	05 33 07.6	+0.2
TPUB	Ta-pu	1.06	300		Pb	05 32 53.8	-0.1
ESL	Shilin baz=340	1.06	351	eP	Pb	05 32 53.2	-0.7
ESL	baz=340			eS	Sb	05 33 06.0	-1.4
VWDT	VWDT baz=349	1.08	336	eP	Pb	05 32 54.2	0.0
CHN1	Nanshi baz=299	1.09	293	⇓P	Pn	05 32 54.8	+0.3
CHN1	baz=299			S	Sn	05 33 09.3	0.0
TSEB	Hengchuen, Pin baz=217	1.09	218	eP	Pb	05 32 54.8	+0.4
TSEB	baz=217			eS	Sb	05 33 09.1	+0.7
TWM1	Shoushan baz=268	1.11	273	P	Pg	05 32 55.7	+0.3
TWKBT	Hengchun baz=220	1.11	222	eP	Pn	05 32 54.1	-0.7
HEN	Hengchun baz=225	1.11	227	eP	Pn	05 32 54.6	-0.2
HEN	baz=225			eS	Sb	05 33 08.0	-1.0
TWK1	Hengchun baz=220	1.11	223	eP	Pn	05 32 54.3	-0.6
SNST	Tainan City baz=295	1.13	294	eP	Pg	05 32 55.7	-0.2
SNST	baz=295			eS	Sg	05 33 11.7	+1.0
TWK	Hsinying baz=297	1.16	296	⇓iP	Pb	05 32 55.7	+0.1
TWK	baz=297			S	Sg	05 33 12.3	+0.8
SSLB	Suanglung baz=341	1.19	329	eP	Pn	05 32 55.8	-0.2
SSLB	baz=341			eS	Sb	05 33 10.5	-0.8
SSLB	Suanglung	1.19	329		Pn	05 32 56.0	0.0
CHN3	Shinhua baz=286	1.20	285	P	Pg	05 32 58.0	+0.8
CHN3	baz=286			S	Sg	05 33 14.9	+2.1
CHN5	Tsauling baz=316	1.20	314	P	Pg	05 32 57.0	-0.1
CHN5	baz=316			S	Sg	05 33 13.3	+0.4
HWA	Hwalien baz=14	1.21	359	eP	Pn	05 32 55.9	-0.2
HWA	baz=14			eS	Sn	05 33 11.8	-0.2
KAU	Kaohsiung baz=260	1.23	261	eP	Pg	05 32 59.1	+1.4
KAU	baz=260			eS	Sg	05 33 16.7	+2.9
SMLT	Sun Moon Lake baz=340	1.29	329	P	Pb	05 32 57.9	-0.1
SMLT	baz=340			S	Sb	05 33 13.9	-0.5
CHN2	Minshiung baz=308	1.30	306	P	Pg	05 32 59.1	0.0
CHN2	baz=308			S	Sg	05 33 16.3	+0.2
TWD	Chiawan baz=13	1.31	359	eP	Pn	05 32 57.0	-0.6
CHY	Chiayi baz=306	1.32	304	P	Pb	05 32 58.3	0.0
CHY	baz=306			S	Sg	05 33 16.2	-0.6
TYC	Yuchr baz=341	1.33	328	P	Pb	05 32 59.1	+0.5
TYC	baz=341			S	Sb	05 33 15.8	+0.5
WJS	Zhushan baz=340	1.33	322	eP	Pg	05 32 59.4	-0.3
WJS	baz=340			eS	Sg	05 33 16.2	-0.9
CHGB	Renai baz=356	1.35	342	P	Pn	05 32 58.4	+0.1
CHGB	baz=356			S	Sn	05 33 14.6	-1.5
WDLH	Douliu baz=315	1.35	313	P	Pg	05 32 59.7	-0.5
WDLH	baz=315			S	Sg	05 33 16.8	-1.0
ICHU	Yijhu baz=297	1.37	296	eP	Pb	05 32 59.1	0.0
ICHU	baz=297			eS	Sb	05 33 17.2	+0.7
ETL	Fush Village baz=13	1.39	0	eP	Pn	05 32 58.0	-0.6
NACB	Ninganchiao baz=12	1.40	359	eP	Pn	05 32 58.0	-0.8
NACB	baz=12			eS	Sn	05 33 14.5	-2.5
NACB	Ninganchiao	1.40	359		Pn	05 32 58.3	-0.5
WNT	Mingjian baz=325	1.40	322	eP	Pb	05 33 00.3	+0.5
WNT	baz=325			S	Sg	05 33 18.3	-1.0
WHF	Hehuan Shan baz=349	1.41	347	eP	Pn	05 32 59.2	-0.2
ETLH	Xiulin Townshi baz=10.0	1.44	355	eP	Pn	05 32 59.1	-0.4
WCS	Beigang Elemen baz=343	1.44	333	eP	Pb	05 33 00.9	+0.4
WCS	baz=343			eS	Sn	05 33 17.9	0.0
WTK	Tuku baz=311	1.46	309	eP	Pb	05 33 01.0	+0.3
WTK	baz=311			eS	Sb	05 33 19.1	+0.1
FUSS	Fushou baz=360	1.51	347	eP	Pb	05 33 01.3	-0.6
TWT	Tachien baz=346	1.54	345	eP	Pb	05 33 02.0	-0.1
TDCB	Techi baz=346	1.54	344	eP	Pn	05 33 01.5	+0.7
WRL	Guolierlin Hig baz=317	1.61	315	eP	Pb	05 33 03.0	-0.2
WRL	baz=317			eS	Sb	05 33 22.8	-0.5
TCU	Taichung baz=330	1.62	328	eP	Pg	05 33 04.7	-0.6
TCU	baz=330			eS	Sb	05 33 24.4	+0.6
WHP	Taichung City baz=345	1.63	338	eP	Pb	05 33 04.4	+0.8
WCHH	Zhanghua baz=339	1.63	323	eP	Pb	05 33 04.0	+0.3
WCHH	baz=339			eS	Sb	05 33 24.4	+0.4
WTCT	Ta-ch'eng baz=314	1.65	312	eS	Sb	05 33 24.1	-0.3
ENA	Nanau baz=6.0	1.66	4	eP	Pn	05 33 02.4	0.0
NNSB	Datong baz=6.0	1.67	353	eP	Pn	05 33 03.4	+0.8
EWUT	Wuta baz=17	1.68	5	eP	Pn	05 33 02.7	+0.1
EWUT	baz=17			eS	Sn	05 33 22.3	-1.4
NNS	Nan Shan baz=6.0	1.68	352	eP	Pn	05 33 03.2	+0.4
TWQ1	Liyutan baz=336	1.76	334	P	Pb	05 33 06.2	+0.4
TWQ1	baz=336			S	Sb	05 33 28.6	+1.0
NSY	Sanyi baz=337	1.82	335	⇓iP	Pb	05 33 07.4	+0.5
NSY	baz=337			iS	Sb	05 33 30.6	+1.1
NDT	Datong Townshi baz=359	1.83	357	eP	Pn	05 33 05.8	+1.1
TWC	Suao baz=18	1.85	6	eP	Pn	05 33 05.5	+0.5
TWC	baz=18			eS	Sn	05 33 27.1	-0.8
NDS	Dongshan baz=15	1.86	3	eP	Pn	05 33 06.0	+0.8
ENTT	Nioudou baz=1.0	1.87	358	eP	Pn	05 33 05.9	+0.6
YHNB	Yeheng	1.91	353		Pn	05 33 06.9	+1.0
NSK	Sanguang baz=6.0	1.92	353	eP	Pn	05 33 07.0	+1.0
NMLH	Miaoli baz=339	1.92	337	eP	Pb	05 33 08.1	-0.5
NMLH	baz=339			eS	Sb	05 33 32.3	0.0
NSTT	Nanjuang baz=345	1.94	343	eP	Pb	05 33 08.4	-0.5
NSTT	baz=345			eS	Sb	05 33 32.6	-0.3
TWE	Neicheng baz=3.0	1.95	1	eP	Pn	05 33 07.3	+1.0
LIOB	Emei baz=345	1.95	344	eP	Pb	05 33 08.2	-1.0
LIOB	baz=345			eS	Sb	05 33 32.8	-0.4
NWLT	Wulai baz=359	2.00	357	eP	Pn	05 33 08.5	+1.4
PHUB	P'eng-hu baz=293	2.03	292	eP	Pn	05 33 07.8	+0.4
PHUB	baz=293			eS	Sn	05 33 30.2	-2.2
PNG	Penghu baz=294	2.06	293	eP	Pn	05 33 08.4	+0.6
PNG	baz=294			eS	Sn	05 33 31.8	-1.4
VCHM	Qimei baz=283	2.07	283	eP	Pn	05 33 08.3	+0.4
VCHM	baz=283			eS	Sn	05 33 31.4	-1.9
JYNG	Yonagunijimaku	2.07	36	P	Pn	05 33 09.3	+1.3
JYNG				eS	Sn	05 33 34.4	+1.0
NTC	Toucheng baz=354	2.09	5	eP	Pn	05 33 09.8	+1.5
EGS	baz=20	2.09	8	eP	Pb	05 33 10.2	-1.3
YOJ	Yonaguni jima baz=49	2.12	37	eP	Pn	05 33 10.1	+1.4
YOJ	baz=49			eS	Sn	05 33 34.4	-0.2
YOJ	Yonaguni jima	2.12	37	P	Pb	05 33 10.5	-1.4
YOJ				eS	Sb	05 33 36.2	-1.7
YOJ	Yonaguni jima	2.12	37		Pb	05 33 10.6	-1.4
TATO	Taipei	2.20	357		Pn	05 33 10.4	+0.6
TIPB	Shuangxi baz=355	2.20	5	eP	Pn	05 33 11.6	+1.8
TIPB	baz=355			eS	Sn	05 33 38.0	+1.3
TWA	Mucha baz=1.0	2.20	359	eP	Pn	05 33 11.1	+1.2
NWF	Wu-fen Shan baz=356	2.30	4	eP	Pn	05 33 12.8	+1.6
NWF	baz=356			eS	Sb	05 33 41.1	-2.2
HATJ	Hateruma jima	2.38	57	P	Pn	05 33 13.6	+1.3
HATJ				S	Sn	05 33 41.0	-0.1
IRIF	Iriomote-Funau	2.49	51	P	Pn	05 33 15.3	+1.6
IRIF				eS	Sn	05 33 45.2	+1.5
JKRS	Kuro-shima	2.64	56	P	Pn	05 33 17.4	+1.6
JKRS				S	Sn	05 33 48.2	+0.8
JIJ	Ishigaki jima	2.81	55	P	Pn	05 33 20.0	+1.8
JIJ				S	Sn	05 33 51.6	0.0
JISG	Ishigakijimahi	3.06	53	P	Pn	05 33 22.7	+1.1
JISG				eS	Sn	05 33 58.4	+0.5
PTMZ	Houxiangcun baz=314	3.22	315	eP	Pn	05 33 24.1	+0.3
KNM	Kinmen baz=298	3.35	300	eP	Pn	05 33 27.9	+2.3
JTJ	Tarama	3.38	56	P	Pn	05 33 27.9	+1.8
JTJ				S	Sn	05 34 06.0	+0.1
KNMB	Chin-men Tao baz=300	3.41	300	eP	Pn	05 33 27.2	+0.7
KNMB	Chin-men Tao	3.41	300	Pn	Pn	05 33 27.1	+0.7
MATB	Ma-tsu baz=336	3.70	336	eP	Pn	05 33 30.8	+0.4
ZPLA	Ao Xicun baz=288	3.74	289	eP	Pn	05 33 31.5	+0.5
JIRB	Irabujima	3.85	57	P	Pn	05 33 34.3	+1.9
JIRB				eS	Sn	05 34 17.6	+0.3
JMJ2	Miyako jima3	3.92	59	P	Pn	05 33 35.4	+1.9
JMJ2				eS	Sn	05 34 18.7	-0.5
JIKM	Ikemajima	3.96	56	P	Pn	05 33 36.0	+2.1
JIKM				S	Sn	05 34 20.1	+0.2
AXDP	Jialang baz=302	3.96	303	eP	Pn	05 33 34.3	+0.3
JOW	Kunigami 3.7nm,0.3s,baz=161,slow=13,SNR=7.3	7.28	55	P	Pn	05 34 19.6	0.0
JOW	1.1nm,0.3s,baz=294,slow=19,SNR=1.3			S	Sn	05 35 40.6	-1.2
KSRS	Korea Array 0.4nm,0.3s,baz=199,slow=13,SNR=6.6	15.61	19	P	P	05 36 15.7	-1.7
MJAR	Matsushiro Arr 0.1nm,0.3s,baz=214,slow=6.2,SNR=4.0	19.86	43	P	Pn	05 37 05.6	-0.4
MJAR	Matsushiro Arr comp=Z,12nm,1.5s	19.86	43	IAmb	IAmb	05 37 15.0	
CMAR	Chiang Mai Arr comp=Z,0.7nm,0.3s,baz=67,slow=6.9,SNR=1.8	21.65	263	P	P	05 37 27.9	+4.2
KLR	Kul'dur	27.60	14	P	P	05 38 21.6	+1.3

	comp=Z,1.1nm,0.6s,baz=111,slow=14,SNR=2.5						
SONM	Songino Array	27.82	338	P	P	05 38 22.7	+0.1
	comp=Z,1.1nm,0.7s,baz=157,slow=9.2,SNR=7.1						
SONM	Songino Array	27.82	338	IAmb	IAmb	05 38 25.3	
	comp=Z,1.1nm,0.9s						
MK31	Makanchi Array	39.64	317	P	P	05 40 05.9	+1.0
MK31				IAmb	IAmb	05 40 07.3	
	comp=Z,4.6nm,0.9s						
MKAR	Makanchi Array	39.64	317	P	P	05 40 06.9	+2.0
	comp=Z,4.7nm,0.8s,baz=112,slow=9.5,SNR=19						
MKAR	Makanchi Array	39.64	317	P	P	05 40 05.9	+1.1
ZAA0	Zalesovo Array	41.65	328	P	P	05 40 21.3	0.0
ZAA0				IAmb	IAmb	05 40 22.8	
	comp=Z,12nm,0.8s						
ZALV	Zalesovo Beam	41.65	328	P	P	05 40 21.6	+0.3
	comp=Z,7.6nm,0.4s,baz=114,slow=8.0,SNR=52						
ZALV	Zalesovo Beam	41.65	328	P	P	05 40 21.1	-0.3
H11N1	WAKE ISLAND Hy	42.18	85	T	T	06 25 35.2	
	baz=282,slow=75,SNR=115						
H11N2	WAKE ISLAND Hy	42.19	85	T	T	06 25 35.5	
	baz=282,slow=75,SNR=188						
H11N3	WAKE ISLAND Hy	42.20	85	T	T	06 25 41.6	
	baz=282,slow=75,SNR=121						
H11S3	WAKE ISLAND Hy	42.27	87	T	T	06 25 45.5	
	baz=284,slow=75,SNR=222						
H11S1	WAKE ISLAND Hy	42.28	87	T	T	06 25 42.3	
	baz=284,slow=75,SNR=250						
H11S2	WAKE ISLAND Hy	42.29	87	T	T	06 25 41.4	
	baz=284,slow=75,SNR=258						
KURK	Kurchatov	43.44	321	P	P	05 40 36.4	+0.5
KURK				IAmb	IAmb	05 40 37.8	
	comp=Z,4.0nm,0.8s						
WRA	Warramunga Arr	44.23	163	P	P	05 40 41.3	-1.3
	comp=Z,0.8nm,0.7s,baz=343,slow=9.0,SNR=4.9						
WRA	Warramunga Arr	44.23	163	IAmb	IAmb	05 40 48.6	
	comp=Z,0.4nm,1.4s						
ASAR	Alice Springs	47.67	165	P	P	05 41 10.1	+0.3
	comp=Z,0.1nm,0.4s,baz=343,slow=7.7,SNR=5.1						
ILAR	Eielson Array	70.28	27	P	P	05 43 45.7	-0.5
	comp=Z,0.2nm,0.6s,baz=269,slow=5.1,SNR=4.3						
ARCES	ARCESS Array B	71.00	338	P	P	05 43 49.7	-0.8
	comp=Z,5.3nm,1.1s,baz=73,slow=7.7,SNR=2.1						
ARCES	ARCESS Array B	71.00	338	IAmb	IAmb	05 43 55.2	
	comp=Z,9.2nm,1.2s						
FINES	FINESS Array B	72.87	330	P	P	05 44 01.4	-0.4
	comp=Z,3.0nm,0.8s,baz=20,slow=6.1,SNR=6.7						
AKASG	Malin Array Be	74.19	319	P	P	05 44 09.0	-0.8
	comp=Z,0.2nm,0.2s,baz=60,slow=5.7,SNR=2.9						
NOA	NORSAR Array B	79.66	332	P	P	05 44 40.1	-0.4
	comp=Z,0.5nm,0.6s,baz=59,slow=5.4,SNR=1.9						

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*ISK **14** 05:40:31.6, 38°.18N×38°.95E, h7^{km}, ML3.5/19*

*DDA **14** 05:40:31.7, 38°.18N×38°.96E, h7^{km}±3^{km}, ML3.4*

ISC 14 05:40:32.2±1.0**, 38°.18N**±0°.02×**38°.95E**±0°.02**, h10**^{km}±9^{km}**, n51, σ0^{s}.77**/72**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVRC	Sivrice-ELAZID	0.34	55	PG	Pg	05 40 38.4	-0.7
SVRC				SG	Sg	05 40 44.2	+0.5
MALT	Malatya	0.43	288	PG	Pg	05 40 40.5	-0.3
MALT				SG	Sg	05 40 47.1	+0.6
URFA	Urfa	0.75	188	PG	Pg	05 40 46.8	+0.2
URFA				SG	Sg	05 40 57.0	+0.6
AKCD	Akcadag	0.82	278	i P	Pg	05 40 47.8	-0.3
KOVA	Elazig, Kovanc	0.85	52	i P	Pg	05 40 48.6	-0.1
DYBB	Diyarbakir	0.96	103	PG	Pb	05 40 50.9	-0.2
DYBB				SG	Sb	05 41 04.4	+0.5
SANL	SANLIURFA_Merk	1.01	178	i P	Pg	05 40 51.7	+0.1
SANL				i S	Sn	05 41 06.3	-0.5
SANL				IAML		05 41 08.0	
	comp=E,2µm,0.7s						
SANL				IAML		05 41 09.0	
	comp=N,2µm,0.5s						
ARPR	Arapgir-MALATY	1.03	332	PG	Pg	05 40 51.6	-0.5
ARPR				SG	Sn	05 41 06.8	-0.7
KEMA	Kemaliye	1.14	342	i P	Pb	05 40 52.9	-1.3
KEMA				i S	Sg	05 41 08.9	-0.2
KEMA				IAML		05 41 16.0	
	comp=E,738nm,1.0s						
KEMA				IAML		05 41 17.0	
	comp=N,816nm,0.6s						
DARE	Darende-Malaty	1.22	289	PN	Pb	05 40 54.7	-0.7
DARE				SN	Sn	05 41 12.5	+0.5
GZT	Gaziantep	1.38	234	i P	Pn	05 40 57.6	0.0
GZT				i S	Sg	05 41 16.3	-0.2
GZT				IAML		05 41 19.0	
	comp=N,1µm,0.8s						
MAZI	Mazidag	1.39	121	PN	Pn	05 40 57.9	+0.2
MAZI				SN	Sg	05 41 16.9	+0.1
CUGUR	Gurin_SVAS	1.43	293	i P	Pg	05 40 59.2	-0.4
CUGUR				i S	Sg	05 41 19.0	+0.9
CUGUR				IAML		05 41 30.0	
	comp=E,641nm,0.6s						
ELBS	KAHRAMANMARAS	1.44	276	i P	Pg	05 40 59.5	-0.4
ELBS				i S	Sg	05 41 19.6	+1.0
ELBS				IAML		05 41 24.0	
	comp=N,478nm,0.6s						
ELBS				IAML		05 41 27.0	
	comp=E,763nm,1.1s						
BNGB	Bingl	1.58	59	PN	Pn	05 41 00.8	+0.4
CUKAN	kangal_SIVAS	1.62	315	i P	Pb	05 41 01.6	-0.7
CUKAN				i S	Sb	05 41 22.7	-0.3
CUKAN				IAML		05 41 25.0	
	comp=N,168nm,0.4s						
CUKAN				IAML		05 41 29.0	
	comp=E,255nm,0.4s						
KHMN	Narli-Kahraman	1.63	242	PN	Pn	05 41 01.1	+0.1
EUZM	Uzumlu	1.63	21	i P	Pb	05 41 02.7	+0.2
MARD	Mardin	1.69	120	i P	Pb	05 41 02.9	-0.5
MARD				i S	Sb	05 41 24.9	+0.1
MARD				IAML		05 41 26.0	
	comp=E,1µm,0.5s						
MARD				IAML		05 41 27.0	
	comp=N,1µm,0.4s						
GAZ	Gaziantep	1.71	234	PN	Pn	05 41 01.7	-0.5
REFA	Refahiye_ERZN	1.73	355	i P	Pb	05 41 04.0	-0.1
YEDI	Yedisu-Bingol	1.77	44	PN	Pn	05 41 03.6	+0.6
SVAN	Silvan-Diyarba	1.77	90	i P	Pn	05 41 03.3	+0.3
SVAN				i S	Sn	05 41 23.8	-1.7
SVAN				IAML		05 41 33.0	
	comp=N,225nm,0.5s						
SVAN	Silvan-Diyarba	1.77	90	PN	Pn	05 41 03.3	+0.3
SLHN	Bingol, Solhan	1.80	64	i P	Pb	05 41 05.5	+0.2
SLHN				i S	Sg	05 41 30.3	+0.2
SLHN				IAML		05 41 34.0	
	comp=E,394nm,0.5s						
SLHN				IAML		05 41 36.0	
	comp=N,280nm,0.5s						
HCB	Kahramanmara	1.82	243	i P	Pn	05 41 03.6	-0.1
HCB				i S	Sg	05 41 30.8	0.0
BTMN	Batman	1.85	98	i P	Pb	05 41 05.3	-0.9
BTMN				i S	Sb	05 41 30.0	+0.6
BTMN				IAML		05 41 33.0	
	comp=N,620nm,0.5s						
BTMN				IAML		05 41 33.0	
	comp=E,461nm,0.4s						
CUZAR	Zara_SIVAS	1.94	332	i P	Pb	05 41 07.5	-0.3
CUZAR				i S	Sg	05 41 35.2	+0.7
CUZAR				IAML		05 41 40.0	
	comp=N,131nm,0.8s						
CUZAR				IAML		05 41 43.0	
	comp=E,247nm,0.7s						
KELT	Kelkit	1.98	7	i P	Pb	05 41 07.6	-0.9
SARI	SarD1z-Kayseri	2.01	277	PN	Pn	05 41 07.3	+1.0
CUAYA	Sivas-Altinyay	2.04	303	i P	Pb	05 41 08.1	-1.3
MUSM	Mu-Merkez	2.08	74	i P	Pb	05 41 08.8	-1.4
MUSM				i S	Sn	05 41 33.6	+0.2
MUSM				IAML		05 41 38.0	
	comp=E,91nm,0.5s						
MUSM				IAML		05 41 44.0	
	comp=N,90nm,0.5s						
MIDY	Mardin/Midyat-	2.09	111	i P	Pb	05 41 10.1	-0.1
MIDY				i S	Sb	05 41 35.8	-0.4
MIDY				IAML		05 41 45.0	
	comp=N,379nm,0.4s						
MIDY				IAML		05 41 52.0	
	comp=E,493nm,0.3s						
SUSE	Susehri	2.11	344	i P	Pb	05 41 09.7	-1.0
ALUC	Giresun/Alucra	2.17	356	i P	Pb	05 41 10.2	-1.4
VRTB	Varto-Mus	2.19	63	PN	Pn	05 41 09.9	+1.1
SAIM	ADANA	2.27	266	i P	Pn	05 41 10.8	+0.9
SVSK	Karacayir	2.31	319	PN	Pn	05 41 11.3	+1.0
SRTM	Siirt_Merkez	2.35	94	i P	Pn	05 41 11.2	+0.2
BAYT	Aydıntepe-Bayb	2.39	22	PN	Pn	05 41 12.5	+0.8
GURO	Guroymak-BITLI	2.45	80	PN	Pn	05 41 13.1	+0.7
CUSAR	Sarkisla-SIVAS	2.45	301	i P	Pn	05 41 14.3	+1.9
BLIS	Bitlis-Merkez	2.50	84	i P	Pn	05 41 14.2	+1.1
BNN	Bunyan	2.53	286	PN	Pn	05 41 14.9	+1.4
KOZT	Kozan	2.57	255	PN	Pn	05 41 14.6	+0.6
CEYT	Ceyhan	2.80	246	PN	Pn	05 41 17.7	+0.6
SIRT	Sirnak	2.84	103	PN	Pn	05 41 18.9	+1.2
TAHT	Tahtakopru-Hat	2.85	232	PN	Pn	05 41 18.7	+0.9
YAYL	Yayladag	3.12	228	PN	Pn	05 41 22.7	+1.0
CMRD	Camardi-Nigde	3.18	262	PN	Pn	05 41 23.3	+0.9
KARA	Karaisali	3.23	255	PN	Pn	05 41 24.2	+1.3

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*IDC **14** 05:41:30.1±1.1, 31°.31N×128°.92E, h0^{km}, mb3.5/4, mb1 3.7/8, mb1mx3.6/34, mbtmp3.6/8, ML3.3/4, MS3.1/7, Ms1 3.1/7, ms1mx2.9/33, Error ellipse: s-maj=38.6km s-min=17.9km az=94.0*

*NIED **14** 05:41:30.2, 31°.27N×128°.70E, h2^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.42; $M_{\theta\theta}$-0.19; $M_{\phi\phi}$0.61; $M_{r\theta}$-0.17; $M_{\theta\phi}$1.40; $M_{\phi r}$0.68; Fault plane solution: $M_0$1.65000×10^{15} NP1: ϕ_s175.00000°, δ80.00000°, λ-151.00000°. NP2: ϕ_s80.00000°, δ62.00000°, λ-12.00000°.*

*JMA **14** 05:41:30.1±0.4, 31°.27N×128°.70E, h2^{km}±4^{km}, M4.2*

ISC 14 05:41:32.1±0.8**, 31°.28N**±0°.04×**128°.83E**±0°.05**, h10**^{km}**, n23, σ1^{s}.43**/24**, mb3.5**/4**, MS3.2**/3**, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.85	62	P	Pg	05 41 48.4	-0.1
JSJ				eS	Sb	05 42 01.6	+1.1
JFU	Fukue jima 2	1.37	357	P	Pn	05 41 56.5	-0.8
JSU	Suzuyama	1.41	80	P	Pb	05 41 58.3	-0.1
JSU				eS	Sg	05 42 19.3	+1.9
JKC	Kuchinoerabu	1.43	124	P	Pb	05 41 58.8	0.0
JKC				eS	Sg	05 42 19.5	+1.4
JNN	Nakanoshima	1.69	148	P	Pn	05 42 00.6	-1.1
JYAK	Yakushimahirau	1.78	125	P	Pn	05 42 01.7	-1.2
JTN	Tanegashima 3	1.95	108	P	Pn	05 42 04.9	-0.3
JMTN	Minamitane	1.99	116	P	Pn	05 42 06.2	+0.5
JNU	Nakatsue	2.53	43	Pn	Pn	05 42 13.3	+0.2
	29nm,0.3s,baz=292,slow=0.1,SNR=1.4						
JNU				Sn	Sg	05 42 52.4	-0.8
	30nm,0.3s,baz=304,slow=7.3,SNR=1.5						
JOW	Kunigami	4.46	186	Pn	Pn	05 42 40.1	+0.3
	0.7nm,0.3s,baz=125,slow=19,SNR=1.2						
KSRS	Korea Array	6.20	353	Pn	Pn	05 43 03.9	+0.3
	0.7nm,0.3s,baz=176,slow=14,SNR=9.4						
KSRS				Sn	Sn	05 44 14.4	-0.2
	3.5nm,0.3s,baz=174,slow=25,SNR=10.0						
KSRS				LR	LR	05 45 17.6	
	comp=Z,38nm,19.6s,baz=220,slow=37						
MJAR	Matsushiro Arr	9.39	54	LR	LR	05 47 41.9	
	comp=Z,134nm,19.4s,baz=260,slow=40						
JCJ	Chichijima	12.39	106	LR	LR	05 48 39.6	
	comp=Z,106nm,22.0s,baz=109,slow=35						
ASAJ	Asahikawa	16.79	36	Pn	Pn	05 45 24.8	-2.4
	0.3nm,0.3s,baz=163,slow=19,SNR=2.0						
ASAJ				LR	LR	05 51 34.9	
	comp=Z,106nm,18.9s,baz=255,slow=36						
XAN	Xi'an	16.99	285	P	Pn	05 45 29.8	-0.1
XAN				S	Sn	05 48 42.3	+3.5
XAN				pmax	pmax		
	comp=Z,8.0nm,1.7s						
XAN				LR	LR		
	comp=N,390nm,15.1s						
XAN				LR	LR		
	comp=E,230nm,15.1s						
XAN				LR	LR		
	comp=Z,290nm,10.8s						
KLR	Kul'dur	18.06	6	P	P	05 45 46.4	+2.9
	comp=Z,0.1nm,0.3s,baz=192,slow=14,SNR=2.8						
GUMO	Guam	22.97	136	LR	LR	05 53 52.0	
	comp=Z,32nm,18.3s,baz=140,slow=32						
SONM	Songino Array	23.79	320	P	P	05 46 45.2	+0.2
	comp=Z,1.0nm,0.8s,baz=131,slow=10,SNR=2.6						
TLY	Talaya	27.54	325	LR	LR	05 59 34.3	
	comp=Z,94nm,18.8s,baz=144,slow=39						
PETK	Petropavlovsk-	30.20	35	LR	LR	05 59 39.5	
	comp=Z,49nm,18.6s,baz=228,slow=36						
WRA	Warramunga Arr	51.20	173	P	P	05 50 35.4	-0.4
	comp=Z,0.4nm,0.8s,baz=352,slow=8.4,SNR=3.5						
ASAR	Alice Springs	54.85	174	P	P	05 51 02.3	-0.3
	comp=Z,0.4nm,0.7s,baz=6.2,slow=9.1,SNR=6.6						
ILAR	Eielson Array	59.78	30	P	P	05 51 34.9	-2.1
	comp=Z,0.7nm,0.9s,baz=280,slow=7.2,SNR=5.3						

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*JMA **14** 06:04:27.5, 42°.39N×144°.61E, h26^{km}±2^{km}, M3.7*

*SKHL **14** 06:04:29.4±0.7, 42°.40N×144°.70E, h35^{km}±1^{km}, mb4.5/3*

ISC 14 06:04:28.4±2.0**, 42°.4N**±0°.1×**144°.59E**±0°.07**, h32**^{km}±13^{km}**, n14, σ0^{s}.74**/20**, 2C-3D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAK	Akkeshi	0.57	8	⇑P	Pb	06 04 39.5	-0.5
JAK				eS	Sb	06 04 48.8	+0.9
JOB	Onbets	0.73	311	⇓P	Pn	06 04 42.1	-0.3
JKHN	Kushirohamanak	0.78	33	⇑P	Pn	06 04 42.7	-0.4
JCH	Churui	0.92	282	⇓P	Pn	06 04 44.7	-0.4
JCH				eS	Sn	06 04 57.4	+0.1
JTHR	Tokachihiroo	0.96	262	⇓P	Pn	06 04 45.4	-0.3
JAR	Ashorobuto	1.05	325	P	Pn	06 04 46.3	-0.6
JEM	Erimo	1.14	249	P	Pn	06 04 48.2	+0.1
JNK	Nakash	1.16	5	P	Pn	06 04 47.5	-0.9
NMR	Nemuro--Hokkai	1.26	41	eP	Pn	06 04 48.0	-1.7
NMR				eS	Sn	06 05 06.0	+0.5
NEM2	Nemuro 2	1.26	42	P	Pn	06 04 49.0	-0.8
JNBK	Urakawa-nobuka	1.37	264	P	Pn	06 04 51.2	0.0
GLVR	Golovnino	1.47	27	eP	Pn	06 04 53.0	+0.3
GLVR				AMB	AMB	06 04 54.0	
	25nm,0.4s						
GLVR				AMB	AMB	06 04 54.0	
	273nm,0.4s						
GLVR				eS	Sn	06 05 11.0	+0.1
GLVR				A	A	06 05 16.0	
	963nm,0.3s						
GLVR				A	A	06 05 16.0	
	1µm,0.3s						
GRPR	Tuman	1.79	29	i P	Pn	06 04 57.0	0.0
GRPR				AMB	AMB	06 04 58.0	
	200nm,0.4s						
GRPR				eS	Sn	06 05 19.0	+0.4
GRPR				A	A	06 05 20.0	
	448nm,0.4s						
GRPR				A	A	06 05 20.0	
	622nm,0.4s						
YUK	Yuzh-Kuril'sk	1.85	30	eP	Pn	06 04 59.2	+1.3
YUK				AMB	AMB	06 05 03.0	
	150nm,0.4s						
YUK				eS	Sn	06 05 20.9	+0.7
YUK				A	A	06 05 25.0	
	420nm,0.5s						
YUK				A	A	06 05 25.0	
	510nm,0.5s						

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*CNRM **14** 06:05:07.5, 35°.76N×5°.09W, h0^{km}*

*IGIL **14** 06:05:14.2, 35°.97N×4°.90W, h20^{km}, ML1.8*

*INMG **14** 06:05:14.5±1.6, 36°.07N×4°.81W, h47^{km}±16^{km}, ML1.8, Error ellipse: s-maj=4.5km s-min=3.4km az=166.0*

*MDD **14** 06:05:14.4±0.9, 35°.99N×4°.79W, h54^{km}±12^{km}, mb3.0/12, Error ellipse: s-maj=8.9km s-min=4.6km az=167.0, PRXIMO*

ISC 14 06:05:11.2±1.2**, 35°.93N**±0°.03×**4°.80W**±0°.03**, h81**^{km}±9^{km}**, n47, σ1^{s}.74**/87**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ECEU	Ceuta	0.47	267	P	Pn	06 05 25.4	+0.6
	1.7nm,0.1s,SNR=31						
ECEU				S	Sn	06 05 32.7	-2.0
	4.1nm,0.1s,SNR=7.9						
EJIF	Jimena Fronter	0.75	314	P	Pn	06 05 30.0	+2.5
	SNR=7.9						
EJIF				S	Sn	06 05 42.3	+2.7
	SNR=7.9						
EMAL	Malaga-Limoner	0.89	20	P	Pn	06 05 29.0	+0.1
EMAL				S	Sn	06 05 40.2	-1.9
EMAL	Malaga-Limoner	0.89	20	P	Pn	06 05 29.0	+0.1
EMAL				S	Sn	06 05 40.2	-1.9
ESPR	Espera	1.27	318	P	Pn	06 05 35.5	+2.0
	0.8nm,0.1s,SNR=5.6						
ESPR				S	Sn	06 05 49.5	-0.9
	5.6nm,0.2s,SNR=7.9						
EGOR	Sierra Gorda,	1.30	25	P	Pn	06 05 35.9	+1.8
	SNR=7.9						
EGOR				S	Sn	06 05 49.8	-1.6
	0.2nm,0.0s,SNR=7.9						
ELGU	Los Guajares,	1.33	45	P	Pn	06 05 34.3	-0.1
	1.9nm,0.1s,SNR=7.9						
ELGU				S	Sn	06 05 50.0	-2.0
	4.5nm,0.1s,SNR=7.9						
EALB	Alboran	1.43	89	S	Sn	06 05 52.9	-1.1
	4.9nm,0.2s,SNR=4.0						
EBER	Berja	1.82	57	P	Pn	06 05 42.0	+1.1
	0.1nm,0.1s,SNR=5.3						
EBER				S	Sn	06 06 02.7	-0.7
	1.9nm,0.2s,SNR=7.9						
ECAB	El Cabril	2.20	347	P	Pn	06 05 47.1	+1.3
	0.1nm,0.0s,SNR=31						
ECAB				S	Sn	06 06 10.7	-1.5
	2.7nm,0.1s,SNR=7.9						
EADA	Adamuz	2.24	4	P	Pn	06 05 48.5	+2.1
	0.5nm,0.1s,SNR=7.9						
EADA				S	Sn	06 06 12.4	-0.8
	2.0nm,0.2s,SNR=7.9						
EQES	Quesada	2.33	36	P	Pn	06 05 50.1	+2.6
	0.3nm,0.1s,SNR=7.9						
EQES				S	Sn	06 06 13.3	-2.1
	0.6nm,0.2s,SNR=4.0						
ENIJ	Nijar	2.33	63	S	Sn	06 06 14.2	-1.2
	SNR=7.9						
EMIN	Mina Concepcio	2.37	321	P	Pn	06 05 49.3	+1.2
	0.4nm,0.1s,SNR=6.8						
EMIN				S	Sn	06 06 14.8	-1.6
	1.1nm,0.1s,SNR=8.1						
JBK	JBK	2.42	130	P	Pn	06 05 50.3	+1.4
JBK				S	Sn	06 06 17.9	+0.1
EGRO	El Granado	2.69	307	P	Pn	06 05 53.7	+1.4
	3.9nm,0.1s,SNR=25						
EGRO				S	Sn	06 06 22.5	-1.4
	3.9nm,0.1s						
PVAQ	Vaqueiros	2.77	303	eP	Pn	06 05 54.8	+1.4
PVAQ				eS	Sn	06 06 24.6	-1.3
PVAQ				A	A	06 06 26.4	
	3.9nm,0.1s						
PVAQ	Vaqueiros	2.77	303	P	Pn	06 05 53.5	+0.1
PVAQ				S	Sn	06 06 23.5	-2.4
SESP	Santiago Espad	2.83	39	P	Pn	06 05 57.0	+2.6
	0.4nm,0.2s,SNR=7.9						
SESP				S	Sn	06 06 28.3	+0.6
	0.3nm,0.1s,SNR=7.9						
PBDV	Barranco-do-Ve	2.84	298	eP	Pn	06 05 56.1	+1.7
PBDV				eS	Sn	06 06 27.1	-0.6
PBDV				A	A	06 06 31.4	
	3.7nm,0.7s						
PBAR	Barrancos	2.87	322	eP	Pn	06 05 56.1	+1.3
PBAR				A	A	06 06 28.0	
	1.6nm,0.6s						
ZHG	ZHG	2.90	212	P	Pn	06 05 54.4	-0.9
ZHG				S	Sn	06 06 28.0	-1.3
MD31	MD31	3.05	179	S	Sn	06 06 31.1	-1.7
MDT	Midelt	3.11	177	P	Pn	06 05 59.8	+1.7
MDT				S	Sn	06 06 33.1	-1.2
PCVE	Castro Verde	3.11	304	eP	Pn	06 05 59.4	+1.4
PCVE				eS	Sn	06 06 32.8	-1.3
PCVE				A	A	06 06 36.4	
	1.8nm,0.5s						
PBEJ	Beja	3.23	311	eP	Pn	06 06 01.8	+2.2
PBEJ				eS	Sn	06 06 35.6	-1.4
PBEJ				A	A	06 06 38.7	
	1.4nm,0.3s						
EBAD	Badajoz	3.33	329	P	Pn	06 06 02.6	+1.6
	0.1nm,0.0s,SNR=7.9						
EBAD				S	Sn	06 06 38.2	-1.3
	1.4nm,0.1s,SNR=7.1						
MESJ	Messejana	3.34	306	eP	Pn	06 06 02.7	+1.5
MESJ				eS	Sn	06 06 38.0	-1.8
MESJ				IAML		06 06 39.5	
	comp=E,3.6nm,0.3s						
MESJ	Messejana	3.34	306	eP	Pn	06 06 02.7	+1.5
MESJ				eS	Sn	06 06 38.7	-1.0
MESJ				A	A	06 06 41.3	
	comp=E,2.5nm,0.5s						
MESJ	Messejana	3.34	306	P	Pn	06 06 02.7	+1.5
MESJ				S	Sn	06 06 38.0	-1.8
MORF	Marmelete	3.39	295	eP	Pn	06 06 03.3	+1.4
MORF				eS	Sn	06 06 39.2	-1.8
MORF				IAML		06 06 41.2	
	comp=N,2.5nm,0.2s						
MORF	Marmelete	3.39	295	eP	Pn	06 06 03.5	+1.6
MORF				eS	Sn	06 06 40.1	-0.9
MORF				A	A	06 06 51.1	
	comp=N,2.9nm,0.9s						
MORF	Marmelete	3.39	295	P	Pn	06 06 03.3	+1.4
MORF				S	Sn	06 06 39.2	-1.8
PFVI	Vila Bisbo	3.46	292	eP	Pn	06 06 04.4	+1.6
PFVI				eS	Sn	06 06 42.2	-0.4
PFVI				A	A	06 06 43.4	
	comp=N,3.7nm,0.6s						
PFVI	Vila Bisbo	3.46	292	P	Pn	06 06 04.4	+1.6
	comp=N,0.4nm,0.0s,SNR=7.9						
PFVI				S	Sn	06 06 41.4	-1.2
	comp=N,2.1nm,0.1s,SNR=7.9						
PTEO	Sao Teotonio	3.54	298	eP	Pn	06 06 05.2	+1.3
PTEO				eS	Sn	06 06 43.9	-0.7
PTEO				A	A	06 06 54.4	
	comp=N,4.5nm,0.3s						
PAB	San Pablo	3.63	5	P	Pn	06 06 06.9	+1.7
	comp=N,0.2nm,0.1s,SNR=7.9						
PAB				S	Sn	06 06 44.6	-2.2
	comp=N,0.1nm,0.1s,SNR=7.9						
EVO	Evora	3.65	316	eP	Pn	06 06 07.1	+1.7
EVO				eS	Sn	06 06 45.9	-1.4
EVO				A	A	06 06 47.4	
	comp=N,3.9nm,0.3s						
PESTR	Estremoz	3.68	324	eP	Pn	06 06 08.2	+2.4
PESTR				eS	Sn	06 06 46.4	-1.6
PNCL	Nicolau / Gran	3.70	307	eP	Pn	06 06 07.5	+1.5
PNCL				eS	Sn	06 06 46.1	-2.3
PNCL				A	A	06 06 48.1	
	comp=N,2.3nm,0.8s						
PMRV	Marv??o	4.06	330	eP	Pn	06 06 12.7	+1.8
PMRV				eS	Sn	06 06 55.1	-2.0
PMRV				A	A	06 07 03.4	
	comp=N,0.9nm,0.3s						
PMTG	Montargil	4.16	320	eP	Pn	06 06 14.0	+1.8
PMTG				eS	Sn	06 06 57.5	-2.0
PMTG				A	A	06 07 01.9	
	comp=N,1.0nm,0.4s						
EPLA	Plasencia	4.25	347	S	Sn	06 06 59.2	-2.8
	comp=N,0.3nm,0.2s,SNR=7.9						
PMAFR	Mafra	4.68	312	S	Sn	06 07 10.1	-2.2
	comp=N,7.6nm,0.4s,SNR=7.9						
PSBE	So Bento	4.78	320	eP	Pn	06 06 23.3	+2.5
PSBE				eS	Sn	06 07 13.2	-1.7
ETOR	Torete	5.34	23	P	Pn	06 06 30.1	+1.7
	comp=N,2.1nm,0.1s,SNR=7.9						
ETOR				S	Sn	06 07 24.9	-3.6
	comp=N,1.7nm,0.3s,SNR=7.5						
MVO	Moncorvo	5.51	342	S	Sn	06 07 29.2	-3.6
	comp=N,0.9nm,0.4s,SNR=7.9						

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*IDC **14** 06:15:45.6±0.7, 30°.95N×130°.79E, h58^{km}±6^{km}, mb3.7/15, mb1 4.0/20, mb1mx3.8/45, mbtmp4.1/20, Error ellipse: s-maj=17.2km s-min=7.0km az=94.0*

*NIED **14** 06:15:45.9, 30°.92N×130°.93E, h56^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.87; $M_{\theta\theta}$-0.63; $M_{\phi\phi}$-0.23; $M_{r\theta}$0.22; $M_{\theta\phi}$0.57; $M_{\phi r}$0.26; Fault plane solution: $M_0$1.02000×10^{15} NP1: ϕ_s105.00000°, δ50.00000°, λ61.00000°. NP2: ϕ_s326.00000°, δ48.00000°, λ120.00000°.*

*JMA **14** 06:15:45.9, 30°.92N×130°.93E, h56^{km}±1^{km}, M3.7*

JMA Felt I J1.

ISC 14 06:15:45.4±0.6**, 30°.92N**±0°.03×**130°.89E**±0°.05**, h57**^{km}±5^{km}**, n39, σ0^{s}.90**/53**, mb3.9**/15**, 4C-8D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTSR	Tashiro 2	0.25	6	⇑P	Pn	06 15 54.9	0.0
JTSR				S	Sn	06 16 01.8	+0.1
JTN	Tanegashima 3	0.28	164	⇑P	Pn	06 15 55.2	+0.1

JTN				S	Sn	06 16 02.4	+0.4
JMTN	Minamitane	0.52	179	P	Pn	06 15 58.0	+0.6
JMTN				S	Sn	06 16 07.0	+1.0
JNAR	Kushima--Naru	0.69	28	⇓P	Pn	06 15 59.8	+0.5
JSU	Suzuyama	0.69	328	⇑P	Pn	06 16 00.0	+0.6
JSU				S	Sn	06 16 10.5	+0.8
JKC	Kuchinoerabu	0.75	233	⇓P	Pn	06 16 00.6	+0.5
JKC				S	Sn	06 16 11.7	+0.8
JYAK	Yakushimahirau	0.75	206	⇓P	Pn	06 16 00.5	+0.4
JYAK				S	Sn	06 16 11.6	+0.7
JNKG	Nichinankitago	0.85	29	⇓P	Pn	06 16 02.1	+0.7
JNKG				S	Sn	06 16 15.0	+1.9
JTZ	Takazaki	0.99	10	⇓P	Pn	06 16 03.6	+0.4
JTZ				*e*S	Sn	06 16 16.5	+0.1
JZO	Okuchi	1.24	349	⇓P	Pn	06 16 07.3	+0.7
JZO				S	Sn	06 16 23.8	+1.4
JSJ	Shimokoshiki	1.26	307	⇑P	Pn	06 16 07.0	+0.2
JSJ				S	Sn	06 16 23.5	+0.8
JNN	Nakanoshima	1.39	220	⇓P	Pn	06 16 09.1	+0.6
JNN				S	Sn	06 16 26.8	+1.0
JTSN	Tsuno	1.42	21	⇓P	Pn	06 16 09.2	+0.2
JNU	Nakatsue	2.20	360	P	Pn	06 16 21.3	+1.8
	69nm,0.3s,baz=13,slow=0.0,SNR=98						
JNU				S	Sn	06 16 46.2	+0.6
	33nm,0.3s,baz=346,slow=7.5,SNR=11						
JOW	Kunigami	4.67	210	P	Pn	06 16 54.1	+0.7
	13nm,0.3s,baz=106,slow=24,SNR=64						
JOW				S	Sn	06 17 47.4	+1.0
	6.6nm,0.3s,baz=140,slow=18,SNR=1.7						
KSRS	Korea Array	6.97	340	P	Pn	06 17 27.7	+2.9
	0.4nm,0.3s,baz=151,slow=15,SNR=3.0						
JHJ	Hachijo jima 2	7.86	71	P	Pn	06 17 38.1	+1.0
	24nm,0.3s,baz=81,slow=23,SNR=5.3						
MAT	Matsushiro	8.28	45	P	Pn	06 17 43.4	+0.6
MAT				*e*S	Sn	06 19 14.8	-0.1
MJAR	Matsushiro Arr	8.28	45	P	Pn	06 17 43.0	+0.2
	0.8nm,0.3s,baz=232,slow=13,SNR=23						
KLR	Kul'dur	18.30	2	P	P	06 19 54.6	+0.1
	0.5nm,0.3s,baz=179,slow=9.2,SNR=10						
SONM	Songino Array	25.21	319	P	P	06 21 05.9	+0.1
	0.5nm,0.5s,baz=129,slow=8.7,SNR=5.4						
H11N2	WAKE ISLAND Hy	34.26	100	T	T	06 58 34.4	
	baz=296,slow=75,SNR=32						
H11N1	WAKE ISLAND Hy	34.26	100	T	T	06 58 33.8	
	baz=296,slow=75,SNR=22						
H11N3	WAKE ISLAND Hy	34.28	100	T	T	06 58 35.6	
	baz=296,slow=75,SNR=35						
MKAR	Makanchi Array	40.36	307	P	P	06 23 17.3	-0.2
	0.6nm,0.5s,baz=88,slow=10.0,SNR=9.5						
KURBB	Kurchatov Arra	43.24	313	P	P	06 23 39.5	-1.4
	0.9nm,0.3s,baz=100,slow=8.8,SNR=6.7						
NRIK	Noril'sk	45.59	340	P	P	06 23 58.3	-1.0
	2.0nm,0.4s,baz=104,slow=8.3,SNR=2.4						
WRA	Warramunga Arr	50.68	176	P	P	06 24 39.2	+0.1
	0.9nm,0.6s,baz=355,slow=8.2,SNR=13						
WRA				pP	pP	06 24 54.4	+0.1
	0.7nm,0.7s,baz=357,slow=8.3,SNR=4.3						
ASAR	Alice Springs	54.35	177	P	P	06 25 07.8	+1.6
	0.7nm,0.8s,baz=10,slow=14,SNR=14						
ASAR				pP	pP	06 25 21.3	-0.2
	0.4nm,0.7s,baz=10,slow=12,SNR=3.6						
ILAR	Eielson Array	59.22	30	P	P	06 25 40.2	-0.1
	0.4nm,0.6s,baz=287,slow=7.9,SNR=8.0						
STKA	Stephens Creek	63.27	170	P	P	06 26 09.0	+1.0
	1.1nm,0.5s,baz=342,slow=6.4,SNR=3.4						
ARCES	ARCESS Array B	66.52	338	P	P	06 26 27.8	-0.9
	4.1nm,1.0s,baz=62,slow=6.2,SNR=1.7						
FINES	FINESS Array B	69.95	330	P	P	06 26 49.5	-0.7
	2.6nm,0.4s,baz=67,slow=5.8,SNR=41						
FINES				pP	pP	06 27 05.2	-1.0
	3.6nm,1.0s,baz=69,slow=7.6,SNR=1.5						
AKASG	Malin Array Be	73.50	319	P	P	06 27 10.9	-0.8
	1.6nm,0.5s,baz=55,slow=6.0,SNR=6.8						
BRTR	Keskin Array B	76.01	308	P	P	06 27 26.7	0.0
	1.4nm,0.9s,baz=92,slow=4.2,SNR=5.9						
NOA	NORSAR Array B	76.14	334	P	P	06 27 26.0	-0.9
	0.8nm,0.8s,baz=59,slow=7.2,SNR=1.5						
NVAR	Mina Array Bea	85.60	47	P	P	06 28 18.6	+0.6
	0.7nm,0.7s,baz=314,slow=5.1,SNR=6.1						
PDAR	Pinedale Array	88.06	40	P	P	06 28 30.5	+0.6
	0.9nm,0.9s,baz=36,slow=2.8,SNR=5.5						
QSPA	South Pole Qui	120.68	180	PKP	PKPdf	06 34 29.4	-0.6
	0.8nm,0.8s,baz=264,slow=3.1,SNR=2.6						

IDC 14 06:46:01.6±2.1**, 38°.81N×110°.51E, h0km, mb3.4**/4**, mb1 3.7**/4**, mb1mx3.4**/54**, mbtmp3.5**/4**, Error ellipse: s-maj=61.8km s-min=29.8km az=43.0, Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	9.50	343	Lg	Lg	06 50 59.4	
	0.2nm,0.3s,baz=171,slow=19,SNR=3.2						
MKAR	Makanchi Array	22.10	300	P	P	06 50 58.3	-0.1
	0.8nm,0.8s,baz=95,slow=12,SNR=6.7						
CMAR	Chiang Mai Arr	22.64	210	P	P	06 51 04.0	-0.2
	0.6nm,0.3s,baz=17,slow=9.4,SNR=4.6						
WRA	Warramunga Arr	62.57	155	P	P	06 56 26.8	-0.6
	0.5nm,0.8s,baz=346,slow=7.4,SNR=4.8						
ASAR	Alice Springs	65.90	156	P	P	06 56 49.8	+0.5
	0.5nm,0.7s,baz=344,slow=6.4,SNR=8.7						

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*IDC **14** 06:47:54.4±9.2, 18°.27N×107°.73W, h0km, mb3.4/2, mb1 3.9/4, mb1mx3.6/37, mbtmp3.5/4, ML3.3/2, MS3.5/11, Ms1 3.5/11, ms1mx3.4/20, Error ellipse: s-maj=149.0km s-min=39.3km az=148.0*

*MEX **14** 06:48:01.0±0.9, 19°.42N×107°.56W, h10km, MD4.1*

ISC 14 06:47:49.9±2.1**, 17°.8N**±0°.2×**107°.24W**±0°.07**, h10km, n24, σ1s.96**/14**, MS3.4**/7**, Off coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CJM	Chamela	2.65	51	*i* P	Pb	06 48 36.7	-0.8
CJM				*i* S	Sn	06 49 05.0	0.0
R15V		3.36	66	*e*P	Pb	06 48 51.7	+2.1
R15V				*e*P	Pg	06 48 51.8	-2.5
R15V				*e*S	Sb	06 49 27.6	-3.0
COIG	Colima	3.62	68	*e*P	Pb	06 48 55.9	+1.8
COIG				*e*S	Sb	06 49 38.1	0.0
H06E1	SOCORRO T-PHAS	3.62	285	Pn	Pn	06 48 43.5	-2.6
H06E1				Sn	Sn	06 49 16.7	-12
H06E1				T	T	06 51 37.1	
	SNR=102						
H06S1	SOCORRO T	3.64	285	T	T	06 51 56.1	
	SNR=43						
H06N1	SOCORRO T-PHAS	3.70	286	T	T	06 51 55.1	
	SNR=22						
EZ5V		3.81	64	*e*P	Pb	06 48 59.1	+1.6
EZ5V				*e*S	Sb	06 49 44.1	+0.3
LPIG	La Paz	6.86	336	LR	LR	06 51 12.9	
	comp=Z,742nm,18.3s,baz=178,slow=32						
CMIG	Matias Romero	11.81	92	LR	LR	06 54 43.2	
	comp=Z,71nm,18.8s,baz=313,slow=33						
TXAR	Lajitas Array	11.89	15	Pn	Pn	06 50 41.3	+1.6
	0.1nm,0.3s,baz=195,slow=14,SNR=10.0						
ANMO	Albuquerque	17.05	2	Pn	Pn	06 51 49.5	+0.9
	0.1nm,0.3s,baz=262,slow=7.1,SNR=2.4						
ANMO				LR	LR	06 57 27.1	
	comp=Z,136nm,19.5s,baz=192,slow=34						
PFO	Pinyon Flats O	17.75	334	LR	LR	06 57 31.3	
	comp=Z,205nm,21.6s,baz=134,slow=34						
NVAR	Mina Array Bea	22.68	337	P	P	06 52 52.4	+0.6
	0.9nm,0.8s,baz=160,slow=13,SNR=7.2						
ELK	Elko	23.84	345	LR	LR	07 01 19.9	
	comp=Z,54nm,19.8s,baz=172,slow=35						
PDAR	Pinedale Array	24.92	356	LR	LR	07 01 38.0	
	comp=Z,121nm,20.8s,baz=296,slow=34						
YBH	Yreka Blue Hor	27.24	334	LR	LR	07 02 27.2	
	comp=Z,116nm,18.0s,baz=358,slow=33						
TKL	Tuckaleechee C	27.34	45	LR	LR	07 05 10.8	
	comp=Z,83nm,19.1s,baz=258,slow=38						
YKA	Yellowknife Ar	44.90	355	LR	LR	07 15 12.8	
	comp=Z,101nm,19.2s,baz=0.0,slow=37						
ILAR	Eielson Array	53.88	340	P	P	06 57 15.3	+2.3
	0.5nm,0.8s,baz=156,slow=6.5,SNR=5.1						
PPT	Papeete	54.53	232	LR	LR	07 14 19.9	
	comp=Z,28nm,21.1s,baz=331,slow=29						
H03N2	Juan Fernandez	57.71	152	T	T	08 01 49.5	
	baz=330,slow=78,SNR=76						
H03N1	Juan Fernandez	57.72	152	T	T	08 01 56.7	
	baz=330,slow=78,SNR=89						
H03N3	Juan Fernandez	57.73	152	T	T	08 01 49.7	
	baz=330,slow=78,SNR=54						
RAR	Rarotonga	64.47	235	LR	LR	07 20 30.4	
	comp=Z,79nm,21.7s,baz=28,slow=30						

IDC 14 06:48:24.3±3.7**, 26°.98N×52°.66E, h0km, mb3.9**/3**, mb1 4.0**/3**, mb1mx3.2**/53**, mbtmp3.9**/3**, Error ellipse: s-maj=93.5km s-min=35.7km az=144.0, Persian Gulf**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZALV	Zalesovo Beam	35.85	32	P	P	06 55 25.5	-0.1
	0.9nm,0.4s,baz=239,slow=9.1,SNR=4.9						
FINES	FINESS Array B	38.81	340	P	P	06 55 50.5	-0.1
	3.6nm,0.9s,baz=139,slow=13,SNR=7.2						
TORD	Torodi Ar. Bea	49.49	264	P	P	06 57 16.8	-0.1
	0.7nm,0.9s,baz=58,slow=8.6,SNR=4.4						

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*IDC **14** 06:51:55.9±1.6, 31°.34N×128°.22E, h0km, mb3.3/3, mb1 3.6/5, mb1mx3.2/60, mbtmp3.4/5, ML3.7/2, MS3.7/1, Ms1 3.7/1, ms1mx2.6/28, Error ellipse: s-maj=51.2km s-min=21.0km az=104.0*

*JMA **14** 06:51:59.0±0.5, 31°.29N×128°.79E, h16km±3km, M3.4*

ISC 14 06:51:57.9±1.1**, 31°.28N**±0°.05×**128°.75E**±0°.07**, h10km, n15, σ0s.54**/17**, mb3.2**/3**, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.92	64	P	Pg	06 52 15.2	-0.4
JFU	Fukue jima 2	1.38	360	P	Pn	06 52 23.8	+0.6
JSU	Suzuyama	1.48	81	P	Pn	06 52 24.9	+0.3
JKC	Kuchinoerabu	1.48	123	P	Pb	06 52 25.4	-0.2
JKC				*e*S	Sb	06 52 44.4	-0.1
JNN	Nakanoshima	1.73	146	P	Pb	06 52 29.6	-0.2
JYAK	Yakushimahirau	1.83	124	P	Pn	06 52 29.6	+0.1
JTN	Tanegashima 3	2.01	107	P	Pn	06 52 32.0	0.0
JTZ	Takazaki	2.09	72	P	Pn	06 52 33.5	+0.5
JIU3	Izumi3	2.17	54	P	Pn	06 52 34.8	+0.8
JNU	Nakatsue	2.58	44	Pn	Pb	06 52 44.0	-0.3
	44nm,0.3s,baz=286,slow=0.2,SNR=12						
JNU				Sn	Sg	06 53 21.3	+0.6
	35nm,0.3s,baz=200,slow=1.6,SNR=1.7						
KSRS	Korea Array	6.20	354	Pn	Pn	06 53 29.4	-0.1
	0.2nm,0.3s,baz=177,slow=14,SNR=3.2						
KSRS				Sn	Sn	06 54 40.1	-0.3
	0.8nm,0.3s,baz=169,slow=28,SNR=2.5						
AAK	Ala-Archa	44.13	301	LR	LR	07 18 10.1	
	comp=Z,95nm,18.8s,baz=306,slow=36						
WRA	Warramunga Arr	51.21	173	P	P	07 01 01.9	+0.3
	0.2nm,0.7s,baz=354,slow=7.9,SNR=1.6						
ASAR	Alice Springs	54.85	174	P	P	07 01 29.6	+1.1
	0.2nm,0.7s,baz=5.1,slow=13,SNR=2.6						
ILAR	Eielson Array	59.81	30	P	P	07 02 02.2	-0.8
	0.3nm,0.6s,baz=287,slow=8.4,SNR=6.2						

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*IDC **14** 06:53:24.9±10.0, 36°.33N×70°.56E, h191km±104km, mb2.9/2, mb1 2.9/5, mb1mx2.6/65, mbtmp3.4/5, Error ellipse: s-maj=102.0km s-min=36.3km az=6.0*

*NNC **14** 06:53:27.3±5.2, 36°.84N×70°.45E, h0km, mb4.3, mpv4.0, Error ellipse: s-maj=55.6km s-min=36.4km az=69.0*

ISC 14 06:53:26.4±1.4**, 36°.6N**±0°.1×**70°.4E**±0°.2**, h204km, n13, σ0s.91**/16**, 2C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	6.12	23	P	Pn	06 54 56.1	+0.5
	SNR=82						
UCH	Uchtor	6.50	28	P	Pn	06 55 01.0	+0.5
	SNR=15						
KK31	Karatay Array	6.55	1	P	Pn	06 55 01.8	+1.0
	2.6nm,0.2s,baz=180,slow=7.4,SNR=76						
KK31				S	S	06 56 13.7	-1.7
	2.0nm,0.3s,baz=190,slow=24,SNR=7.2						
EKS2	Erkin-Say	6.63	22	P	Pn	06 55 02.9	+1.0
	SNR=10						
AAK	Ala-Archa	6.84	26	P	Pn	06 55 05.1	+0.3
	1.9nm,0.3s,baz=158,slow=4.9,SNR=17						
AAK				S	S	06 56 21.8	-0.8
	0.4nm,0.3s,baz=342,slow=19,SNR=2.3						
AAK	Ala-Archa	6.84	26	P	Pn	06 55 05.7	+0.9
	SNR=5.8						
AAK	Ala-Archa	6.84	26	⇑P	Pn	06 55 05.2	+0.5
	3.4nm,0.5s						
AAK				⇑S	S	06 56 23.1	+0.4
	3.1nm,0.8s						
TKM2	Tokmak 2	7.51	30	P	Pn	06 55 14.2	+0.8
	SNR=7.1						
TKM2	Tokmak 2	7.51	30	⇓P	Pn	06 55 13.6	+0.2
	8.2nm,0.5s						
MKAR	Makanchi Array	13.53	37	P	Pn	06 56 31.2	+1.0
	0.1nm,0.3s,baz=215,slow=13,SNR=5.0						
KURBB	Kurchatov Arra	15.23	20	P	P	06 56 51.5	+0.2
	0.0nm,0.3s,baz=203,slow=12,SNR=2.2						
TORD	Torodi Ar. Bea	65.26	268	P	P	07 03 47.1	+0.5
	0.2nm,0.4s,baz=54,slow=5.6,SNR=4.2						
WRA	Warramunga Arr	82.41	122	P	P	07 05 24.8	-1.1
	0.2nm,0.6s,baz=318,slow=6.2,SNR=1.8						

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*IDC **14** 06:53:45.7±1.0, 57°.37S×26°.42W, h0km, mb4.1/3, mb1 4.1/4, mb1mx3.7/27, mbtmp4.1/4, ML3.9/1, Error ellipse: s-maj=65.0km s-min=24.0km az=91.0*

ISC 14 06:53:52.7±1.2**, 57°.5S**±0°.2×**26°.0W**±0°.4**, h50km, n11, σ0s.55**/10**, mb4.0**/3**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	15.23	157	P	Pn	06 57 23.8	-0.3
VNA3	Neumayer Olymp	15.43	160	P	Pn	06 57 26.2	-0.6
VNA2	Neumayer--Watz	15.63	157	P	Pn	06 57 29.0	-0.3
	baz=320,slow=14						
SNAA	Sanae	17.18	155	P	P	06 57 49.7	-0.2
SNAA	Sanae	17.18	155	P	Pn	06 57 49.1	+0.3
	0.5nm,0.3s,baz=313,slow=13,SNR=22						
QSPA	South Pole Qui	32.78	180	P	P	07 00 20.8	0.0
	1.6nm,0.6s,baz=195,slow=0.8,SNR=16						
VNDA	Vanda	45.19	182	P	P	07 02 04.6	+0.7
	1.0nm,0.9s,baz=184,slow=7.9,SNR=1.9						
TORD	Torodi Ar. Bea	73.98	28	P	P	07 05 23.0	+0.3
	2.3nm,0.7s,baz=199,slow=6.2,SNR=13						
TAOE	Nuku Hiva Isla	95.16	245	*e*LR	LR	07 07 08.9	
	comp=Z,114nm,26.3s						
INK	Inuvik	147.31	319	PKPbc	PKPbc	07 13 28.4	-0.6
	2.1nm,1.0s,baz=98,slow=2.0,SNR=8.4						
ILAR	Eielson Array	151.54	309	PKPbc	PKPbc	07 13 38.9	-0.7
	1.6nm,0.9s,baz=88,slow=1.4,SNR=11						

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*IDC **14** 07:43:07.5±1.1, 29°.73S×71°.86W, h0km, mb4.0/3, mb1 4.1/5, mb1mx3.9/17, mbtmp3.9/5, ML4.0/2, MS4.0/7, Ms1 3.9/7, ms1mx3.7/17, Error ellipse: s-maj=37.5km s-min=34.8km az=155.0*

*NEIC **14** 07:43:07.5, 29°.57S×72°.10W, h15km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}4.29; $M_{\theta\theta}$0.99; $M_{\phi\phi}$-5.27; $M_{r\theta}$1.38; $M_{\theta\phi}$-0.83; $M_{\phi r}$-2.93; Fault plane solution: $M_0$5.90000×10^{15} NP1:ϕ_s168.18000°, δ62.81000°, λ68.72000°. NP2:ϕ_s28.63000°, δ34.02000°, λ125.25000°. Principal axes: T 5.6379, Plg65.0000°, Azm40.0000°; N 0.4890, Plg19.0000°, Azm178.0000°; P -6.1268, Plg15.0000°, Azm274.0000°;*

*NEIC **14** 07:43:07.5±1.6, 29°.57S±0°.04×72°.10W±0°.07, h10km±2km, mb4.6/5, Mwr4.4/41, ML4.3(GUC) Error ellipse: s-maj=9.3km s-min=6.3km az=88.0*

*GUC **14** 07:43:08.7±0.6, 29°.69S×72°.10W, h25km±10km, ML4.1*

ISC 14 07:43:07.6±1.9**, 29°.63S**±0°.04×**72°.09W**±0°.07**, h8km**±11km**, n74, σ1s.16**/71**, mb4.5**/6**, MS4.0**/6**, 9C-8D, Fault plane solution: NP1:**ϕ_s186.97824°, δ52.24535°, λ76.00332°. **NP2:**ϕ_s29.13002°, δ39.89997°, λ107.34470°. **Principal axes:** T Plg77.2692°, Azm46.0751°; N Plg11.0245°, Azm195.6558°; P Plg6.2876°, Azm286.8858°; **Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	La Serena	0.79	111	⇓*i*P	Pg	07 43 23.1	+0.4
CO05				*i* S	Sg	07 43 34.2	+1.1
CO05				IAML		07 43 37.6	
	comp=E,10µm,0.7s						
CO05	La Serena	0.79	111		Pg	07 43 23.2	+0.4
CO06	Fray Jorge	1.11	159	⇑*i*P	Pb	07 43 28.5	-0.5
CO06				*i* S	Sb	07 43 41.5	-2.0
CO06				IAML		07 43 46.0	
	comp=E,3µm,0.3s						
CO06	Fray Jorge	1.11	159		Pn	07 43 29.0	-0.4
GO04	Tololo Observa	1.24	116	⇓*i*P	Pn	07 43 30.8	-0.6
GO04				*i* S	Sb	07 43 46.4	-1.2
GO04				IAML		07 43 52.5	
	comp=N,13µm,0.5s						
GO04	Tololo Observa	1.24	116		Pn	07 43 30.9	-0.6
LCO	Las Campanas	1.36	63	⇑*i*P	Pn	07 43 32.8	-0.3
LCO				*i* S	Sn	07 43 51.6	+0.2
LCO	Las Campanas	1.36	63	Pn	Pn	07 43 32.4	-0.7
AC04	Llanos de Chal	1.68	32	⇑*i*P	Pn	07 43 36.0	-1.2
AC04				*e*S	Sn	07 43 56.3	-2.6
AC04				IAML		07 43 57.4	
	comp=N,2µm,0.4s						
AC04	Llanos de Chal	1.68	32	Pn	Pn	07 43 36.1	-1.1
GO03	Copiap	2.60	39	*e*P	Pn	07 43 50.1	0.0
GO03				IAML		07 44 37.6	
	comp=E,658nm,0.4s						
VA06	Catapilco	3.00	167	*e*P	Pn	07 43 55.5	+0.1
VA06				*i* S	Sn	07 44 29.8	-1.6
VA06				IAML		07 44 33.2	
	comp=N,1µm,0.5s						
VA03	San Esteban	3.39	158	*i* P	Pn	07 44 02.2	+1.4
VA03				*e*S	Sn	07 44 39.5	-1.8
VA03				IAML		07 45 05.5	
	comp=N,801nm,0.6s						
VA03	San Esteban	3.39	158		Pn	07 44 02.9	+2.1
VA01	Torpederas	3.40	174	Pn	Pn	07 44 00.9	+0.1
ROCH	El Roble	3.45	165	*e*P	Pn	07 44 02.4	+0.5
ROCH				*e*S	Sn	07 44 41.2	-1.9
ROCH				IAML		07 45 06.7	
	comp=E,590nm,0.5s						
PEL	Peldehue	3.70	161	Pn	Pn	07 44 05.7	+0.6
MT02	Curacav	3.70	168	*e*P	Pn	07 44 05.1	0.0
MT02	Curacav	3.70	168		Pn	07 44 05.6	+0.5
MT05	Renca	3.92	163	*e*P	Pn	07 44 08.9	+0.8
FCH	Farellones	3.99	158	*i* P	Pn	07 44 10.7	+1.3
VA05	Santo Domingo	4.03	174	*e*P	Pn	07 44 09.2	-0.4
VA05				*e*S	Sn	07 44 54.2	-2.7
VA05	Santo Domingo	4.03	174	Pn	Pn	07 44 09.6	0.0
MT09	Talagante	4.23	168	*e*P	Pn	07 44 13.2	+0.7
MT09	Talagante	4.23	168	Pn	Pn	07 44 14.1	+1.6
MT01	Popeta	4.28	171	*e*P	Pn	07 44 13.1	+0.1
MT01	Popeta	4.28	171	Pn	Pn	07 44 13.5	+0.5
LMEL	Las Melosas	4.50	160	*e*P	Pn	07 44 17.4	+1.3
BO04	La Punta	4.52	164	*e*P	Pn	07 44 17.1	+0.8
BO01	Tunca	4.82	170	*e*P	Pn	07 44 20.4	0.0
BO01	Tunca	4.82	170		Pn	07 44 20.6	+0.2
PB14	IPOC Station P	5.21	17		Pn	07 44 23.7	-2.4
BO02	Sierra Bellavi	5.26	168	*e*P	Pn	07 44 27.2	+0.6
BO02	Sierra Bellavi	5.26	168	Pn	Pn	07 44 27.3	+0.7
GO05	Huala	5.36	179	Pn	Pn	07 44 27.1	-0.8
PB15	IPOC Station P	6.81	21	Pn	Pn	07 44 46.6	-1.5
H03N1	Juan Fernandez	6.95	235	T	T	07 52 24.0	
	baz=64,slow=71,SNR=331						
H03N2	Juan Fernandez	6.97	235	T	T	07 52 23.4	
	baz=64,slow=71,SNR=279						
H03N3	Juan Fernandez	6.97	235	T	T	07 52 19.7	
	baz=64,slow=71,SNR=272						
LVC	Limon Verde	7.55	23	Pn	Pn	07 44 56.8	-1.6
LC01	Cunco	9.24	179	Pn	Pn	07 45 20.8	-0.3
LR03	Panguipulli	9.98	181	Pn	Pn	07 45 32.0	+0.8
PLCA	Paso Flores	11.14	174	Pn	Pn	07 45 45.8	-1.5
	comp=E,0.4nm,0.3s,baz=332,slow=11,SNR=16						
PLCA	Paso Flores	11.14	174		Pn	07 45 48.5	+1.2
LL04	Puerto Octay	11.25	181	Pn	Pn	07 45 48.6	-0.1
CPUP	Villa Florida	13.45	79	Pn	Pn	07 46 17.8	-1.0
	comp=E,0.1nm,0.3s,baz=284,slow=17,SNR=1.9						
ITQB	Itaqui	13.45	94	Pn	Pn	07 46 17.6	-1.1
SIV	San Ignacio	16.94	39	LR	LR	07 54 14.7	
	comp=E,364nm,19.1s,baz=240,slow=40						
SAML	Samuel	22.21	24	P	P	07 48 04.8	+0.3
USHA	Ushuaia	25.32	175	LR	LR	07 59 07.0	
	comp=E,730nm,18.2s,baz=37,slow=38						
TBTG	Tabatinga, AM	25.39	5	P	P	07 48 35.3	-0.2
TBTG				IAmb	IAmb	07 48 52.0	
	comp=Z,20nm,1.0s						
BDFB	Brasilia	26.15	63	P	P	07 48 41.7	-0.9
	comp=Z,1.4nm,0.4s,baz=241,slow=12,SNR=4.1						
BDFB	Brasilia	26.15	63	P	P	07 48 42.3	-0.2
TUMC	Tumaco	31.92	347	P	P	07 49 32.9	-0.8
PMSA	Palmer Station	35.52	174	LR	LR	08 04 24.0	
	comp=Z,179nm,18.4s,baz=8.5,slow=36						
VNA3	Neumayer Olymp	53.42	159	P	P	07 52 29.5	+2.0
VNA1	Neumayer--Stat	53.71	158	P	P	07 52 31.5	+2.0
VNA2	Neumayer--Watz	54.06	158	P	P	07 52 34.1	+1.9
	baz=288,slow=8.3						
SNAA	Sanae	55.65	159	P	P	07 52 45.0	+1.2
SNAA	Sanae	55.65	159	P	P	07 52 44.5	+0.7
SNAA				IAmb	IAmb	07 52 46.2	
	comp=Z,5.9nm,1.1s						
QSPA	South Pole Qui	60.59	180	P	P	07 53 19.6	+1.1
QSPA				IAmb	IAmb	07 53 38.9	
	comp=Z,4.2nm,1.1s						
TXAR	Lajitas Array	65.93	330	P	P	07 53 55.9	+1.7
	comp=Z,0.4nm,0.9s,baz=140,slow=7.1,SNR=2.3						
DBIC	Dimbokro	73.86	72	LR	LR	08 26 26.0	
	comp=Z,84nm,18.4s,baz=208,slow=35						
MAW	Mawson	77.37	164	LR	LR	08 28 12.3	
	comp=Z,75nm,20.7s,baz=239,slow=35						
BOSA	Boshof	82.15	118	LR	LR	08 29 11.9	
	comp=Z,44nm,18.2s,baz=192,slow=34						
TORD	Torodi Ar. Bea	82.78	71	P	P	07 55 33.0	+0.3
	comp=Z,3.5nm,0.8s,baz=257,slow=4.7,SNR=16						
TORD				LR	LR	08 30 49.2	
	comp=Z,79nm,18.7s,baz=205,slow=35						
WRA	Warramunga Arr	124.52	211	PKP	PKiKP	08 02 09.1	+0.7
	comp=Z,0.2nm,0.5s,baz=166,slow=1.5,SNR=1.5						
H11S2	WAKE ISLAND Hy	125.68	272	T	T	10 21 08.0	
	baz=115,slow=74,SNR=5.7						
H11S1	WAKE ISLAND Hy	125.69	272	T	T	10 21 04.2	
	baz=115,slow=74,SNR=5.6						
H11S3	WAKE ISLAND Hy	125.69	272	T	T	10 21 07.4	
	baz=115,slow=74,SNR=5.0						
KURBB	Kurchatov Arra	149.59	38	PKPbc	PKPbc	08 02 58.1	+0.8
	comp=Z,1.9nm,0.8s,baz=319,slow=3.7,SNR=12						
AAK	Ala-Archa	150.25	55	PKPbc	PKiKP	08 03 01.0	+0.8
	comp=Z,2.9nm,0.6s,baz=230,slow=3.0,SNR=7.0						
ZALV	Zalesovo Beam	150.48	28	PKPbc	PKiKP	08 03 00.9	+0.9
	comp=Z,8.6nm,0.8s,baz=295,slow=3.4,SNR=27						
MKAR	Makanchi Array	153.74	42	PKPbc	PKPbc	08 03 07.5	+0.5
	comp=Z,0.9nm,0.8s,baz=258,slow=3.6,SNR=4.4						

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*IDC **14** 07:44:26.2±6.7, 8°.03S×127°.21E, h229km±75km, mb3.1/1, mb1 3.5/5, mb1mx3.0/28, mbtmp4.0/5 Error ellipse: s-maj=89.6km s-min=23.1km az=44.0*

ISC 14 07:44:23.5±1.4**, 8°.1S**±0°.1×**127°.56E**±0°.08**, h200km, n11, σ2s.52**/15**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	3.64	243	P	Pn	07 45 22.0	+1.0
BATI	Baumata	4.38	241	P	Pn	07 45 31.6	+1.6
	27nm,0.3s,baz=90,slow=4.0,SNR=13						
BATI				S	Sn	07 46 21.6	-0.8
	14nm,0.3s,baz=71,slow=23,SNR=8.4						
DRS	Darwin Rock St	5.42	143	P	Pn	07 45 44.8	+1.6
MTN	Manton Dam	5.88	144	P	Pn	07 45 50.9	+1.7
	30nm,0.5s						
KDU	Kakadu	6.65	134	P	Pn	07 46 00.3	+1.2
	42nm,0.8s						
KNRA	Kununurra	7.62	171	P	Pn	07 46 13.9	+2.1
	29nm,0.5s						
FITZ	Fitzroy Crossi	10.11	190	P	Pn	07 46 45.8	+1.6
	0.9nm,0.3s,baz=355,slow=9.5,SNR=18						
FITZ				S	Sn	07 48 35.6	-1.6
	2.0nm,0.3s,baz=106,slow=22,SNR=8.1						
FITZ	Fitzroy Crossi	10.11	190	P	Pn	07 46 46.1	+1.9
	6.8nm,2.1s						
WRA	Warramunga Arr	13.48	152	P	Pn	07 47 30.1	+3.0
	0.6nm,0.3s,baz=331,slow=12,SNR=24						
WRA				S	S	07 49 55.0	-2.4
	1.2nm,0.3s,baz=297,slow=12,SNR=9.8						
ASAR	Alice Springs	16.63	159	P	Pn	07 48 09.2	+3.7
	0.6nm,0.3s,baz=338,slow=12,SNR=47						
ASAR				S	S	07 51 03.7	-4.5
	0.1nm,0.3s,baz=319,slow=13,SNR=1.8						
MKAR	Makanchi Array	67.84	328	P	P	07 54 58.2	-1.9
	0.4nm,0.6s,baz=113,slow=7.0,SNR=4.8						

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*IDC **14** 08:02:34.4±2.0, 20°.43S×178°.02W, h541km±15km, mb3.4/7, mb1 3.5/10, mb1mx3.1/34, mbtmp4.3/10, Error ellipse:*

s-maj=47.9km s-min=14.0km az=146.0

ISC 14 08:02:33.0±1.5,**20°.5S**±0°.3×**177°.9W**±0°.2,**h534**^{km},**n13**, σ**1^{s}.80**/15,**mb3.9**/7,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	4.75	305	P	P	08 04 01.1	+1.1
	4.4nm,0.3s,baz=240,slow=22,SNR=15						
AFI	**Afiamalu**	8.78	42	P	P	08 04 39.1	+0.6
	2.5nm,0.3s,baz=67,slow=3.4,SNR=5.6						
AFI				S	S	08 06 18.1	-3.1
	1.5nm,0.3s,baz=108,slow=22,SNR=1.7						
DZM	**Mont Dzumac**	14.70	261	P	P	08 05 39.5	-0.3
	0.3nm,0.3s,baz=75,slow=17,SNR=2.5						
STKA	**Stephens Creek**	37.89	244	P	P	08 09 05.4	+0.7
	1.8nm,0.5s,baz=85,slow=12,SNR=7.5						
JAY	**Jayapura**	44.16	288	P	P	08 09 54.7	-0.1
	2.9nm,0.3s,baz=221,slow=18,SNR=4.1						
ASAR	**Alice Springs**	44.63	257	P	P	08 09 58.2	0.0
	5.7nm,0.8s,baz=89,slow=8.3,SNR=48						
ASAR				S	S	08 15 51.6	-4.1
	0.6nm,0.8s,baz=92,slow=16,SNR=4.5						
WRA	**Warramunga Arr**	44.72	262	P	P	08 09 58.5	-0.4
	1.1nm,0.4s,baz=98,slow=8.5,SNR=13						
PETK	**Petropavlovsk-**	76.32	345	P	P	08 13 27.6	+0.7
	1.5nm,0.7s,baz=134,slow=7.7,SNR=7.6						
ILAR	**Eielson Array**	88.31	13	P	P	08 14 27.6	+0.4
	0.5nm,0.5s,baz=218,slow=5.1,SNR=7.1						
CMAR	**Chiang Mai Arr**	90.23	290	P	P	08 14 38.9	+1.6
	0.9nm,0.4s,baz=120,slow=3.6,SNR=1.6						
ARCES	**ARCESS Array B**	128.96	350	PKP	PKPdf	08 20 40.2	+0.8
	3.5nm,0.8s,baz=64,slow=2.1,SNR=2.0						
AKASG	**Malin Array Be**	143.09	331	PKP	PKPdf	08 21 03.6	-2.4
	1.3nm,0.5s,baz=41,slow=4.1,SNR=15						
BRTR	**Keskin Array B**	146.94	312	PKPbc	PKPbc	08 21 16.6	+0.5
	0.7nm,0.4s,baz=141,slow=4.9,SNR=3.9						

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*IDC **14** 08:04:52.1±5.3, 8°.96S×124°.40E, h92^{km}±63^{km}, mb3.3/1, mb1 3.6/4, mb1mx3.2/32, mbtmp3.7/4, ML3.7/3, Error ellipse: s-maj=73.5km s-min=30.1km az=35.0*

ISC 14 08:05:00.6±1.5,**10°.0S**±0°.1×**124°.62E**±0°.08,**h10**^{km},**n10**, σ**1^{s}.76**/9,**Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	0.41	302	P	Pn	08 05 12.3	-0.4
BATI	**Baumata**	0.97	256	P	Pn	08 05 17.8	-2.5
	23nm,0.3s,baz=303,slow=3.0,SNR=19						
BATI				S	Sn	08 05 35.9	+1.8
	51nm,0.3s,baz=219,slow=22,SNR=8.3						
DRS	**Darwin Rock St**	6.63	112	P	Pn	08 06 39.8	+1.6
	4.8nm,0.7s						
FITZ	**Fitzroy Crossi**	8.14	173	P	Pn	08 07 00.5	+1.6
	0.6nm,0.3s,baz=353,slow=11,SNR=30						
FITZ				S	Sn	08 08 36.5	+5.5
	3.7nm,0.3s,baz=97,slow=4.7,SNR=21						
FITZ	**Fitzroy Crossi**	8.14	173	P	Pn	08 07 00.2	+1.3
	4.2nm,2.2s						
KDU	**Kakadu**	8.16	110	P	Pn	08 06 59.2	0.0
WRA	**Warramunga Arr**	13.65	138	P	Pn	08 08 13.1	-1.3
	0.3nm,0.3s,baz=317,slow=13,SNR=13						
WRA				S	Sn	08 10 46.0	-0.2
	0.9nm,0.3s,baz=318,slow=22,SNR=10						
WRAB	**Tennant Creek**	13.65	138	P	Pn	08 08 13.6	-0.8
ASAR	**Alice Springs**	16.25	148	P	Pn	08 08 48.0	-1.2
	0.3nm,0.3s,baz=325,slow=13,SNR=18						
ASAR				S	Sn	08 11 53.2	+3.5
	0.3nm,0.3s,baz=315,slow=20,SNR=11						
MKAR	**Makanchi Array**	67.95	330	P	P	08 15 34.8	-25
	0.6nm,0.8s,baz=147,slow=8.2,SNR=3.7						

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*IDC **14** 08:20:11.7±6.0, 36°.23N×71°.21E, h170^{km}±54^{km}, mb3.2/4, mb1 3.2/8, mb1mx3.0/46, mbtmp3.7/8, MS3.4/3, Ms1 3.4/3, ms1mx2.9/39, Error ellipse: s-maj=44.9km s-min=29.1km az=25.0*

*NNC **14** 08:20:21.1±2.0, 36°.90N×71°.31E, h224^{km}±24^{km}, mb2.9, mpv3.9, Error ellipse: s-maj=19.1km s-min=11.8km az=18.0*

*SOME **14** 08:20:23.3, 37°.25N×71°.45E, h0^{km}*

ISC 14 08:20:19.4±2.1,**36°.8N**±0°.1×**71°.3E**±0°.1,**h200**^{km},**n22**, σ**1^{s}.07**/28,**mb3.2**/3,**6C-4D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IUG	**Iuzhnay**	5.44	350	eP	Pn	08 21 40.8	+1.3
	468nm,0.4s						
IUG				eS	Sn	08 22 42.3	-0.5
	62nm,0.3s						
AML	**Almayashu**	5.66	19	P	Pn	08 21 43.5	+0.9
	SNR=146						
UCH	**Uchtor**	5.98	24	P	Pn	08 21 47.7	+0.8
	SNR=18						
DZA	**Taraz**	6.10	0	eP	Pn	08 21 49.1	+1.2
	87nm,0.1s						
DZA				eS	Sn	08 22 56.4	-1.6
	100nm,0.1s						
MRKS	**Merke**	6.14	14	eP	Pn	08 21 48.9	+0.4
	10nm,0.5s						
MRKS				eS	Sn	08 22 56.5	-2.5
	37nm,0.4s						
EKS2	**Erkin-Say**	6.18	17	P	Pn	08 21 50.4	+1.3
	SNR=11						
KK31	**Karatay Array**	6.34	355	⇑P	Pn	08 21 51.5	+0.5
	5.2nm,0.5s,baz=176,slow=12,SNR=47						
KK31				⇓S	Sn	08 23 03.4	-0.2
	15nm,0.4s,baz=180,slow=25,SNR=4.5						
AAK	**Ala-Archa**	6.35	22	P	Pn	08 21 52.0	+0.7
	2.4nm,0.3s,baz=196,slow=9.2,SNR=16						
AAK				S	Sn	08 23 05.1	+1.0
	1.2nm,0.3s,baz=182,slow=12,SNR=4.8						
AAK	**Ala-Archa**	6.35	22	P	Pn	08 21 52.6	+1.4
	SNR=7.8						
AAK	**Ala-Archa**	6.35	22	⇑P	Pn	08 21 52.2	+1.0
	4.1nm,0.5s						
AAK				⇑S	Sn	08 23 04.7	+0.6
	34nm,0.7s						
TKM2	**Tokmak 2**	6.97	27	P	Pn	08 22 00.0	+0.6
	SNR=9.5						
TKM2	**Tokmak 2**	6.97	27	⇓P	Pn	08 21 59.7	+0.3
	8.9nm,0.6s						
TKM2				⇑S	Sn	08 23 19.3	+0.6
	13nm,1.1s						
MAKZ	**Makanchi**	12.79	35	⇓P	Pn	08 23 12.5	-1.7
	3.2nm,0.5s						
MK31	**Makanchi Array**	12.93	36	⇓P	Pn	08 23 15.0	-0.9
	0.5nm,0.3s,baz=221,slow=12,SNR=18						
MKAR	**Makanchi Array**	12.93	36	P	Pn	08 23 14.8	-1.1
	0.3nm,0.3s,baz=213,slow=14,SNR=13						
MKAR				LR	LR	08 28 38.4	
	comp=Z,46nm,18.6s,baz=352,slow=38						
KURBB	**Kurchatov Arra**	14.78	18	P	P	08 23 39.7	0.0
	0.0nm,0.3s,baz=203,slow=12,SNR=2.3						
AB31	**Akbulak array**	14.94	330	⇑P	Pn	08 23 41.2	+0.4
	2.0nm,0.7s,baz=162,slow=11,SNR=15						
AB31				⇑S	S	08 26 26.7	+0.1
	1.0nm,0.7s,baz=150,slow=23,SNR=3.1						
AKTO	**Aktyubinsk**	16.65	329	P	P	08 24 00.3	0.0
	0.4nm,0.3s,baz=139,slow=14,SNR=6.5						
AKTO				LR	LR	08 32 07.7	
	comp=Z,120nm,18.8s,baz=339,slow=42						
ZALV	**Zalesovo Beam**	19.56	24	P	P	08 24 32.8	+0.9
	0.8nm,0.5s,baz=222,slow=9.7,SNR=4.3						
ARCES	**ARCESS Array B**	40.97	337	P	P	08 27 41.1	-1.1
	7.5nm,1.1s,baz=116,slow=8.1,SNR=3.6						
ARCES				LR	LR	08 47 23.4	
	comp=Z,183nm,21.8s,baz=255,slow=39						
TORD	**Torodi Ar. Bea**	65.95	269	P	P	08 30 38.6	-5.8
	0.3nm,0.6s,baz=40,slow=5.7,SNR=1.9						
ASAR	**Alice Springs**	84.24	125	P	P	08 32 22.6	-6.0
	0.4nm,0.7s,baz=316,slow=4.4,SNR=6.1						

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*ISK **14** 08:24:03.7, 38°.89N×28°.61E, h13^{km}, ML2.5/10*

*DDA **14** 08:24:03.3, 38°.87N×28°.61E, h7^{km}±2^{km}, ML1.9*

ISC 14 08:24:03.5±0.9,**38°.88N**±0°.03×**28°.60E**±0°.03,**h12**^{km}±9^{km}, **n20**, σ**0^{s}.49**/29,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DEMI	**Demirci**	0.19	30	iP	Pg	08 24 07.5	-0.2
DEMI				IAML		08 24 10.0	
	comp=N,414nm,0.1s						
DEMI				IAML		08 24 10.0	
	comp=E,447nm,0.4s						
DEMI				iS	Sg	08 24 10.0	-0.6
SIMA	**Simav-Kutahya**	0.36	56	PG	Pg	08 24 11.2	+0.4
SIMA				SG	Sg	08 24 16.3	+0.6
USAK	**Uak-Merkez**	0.37	117	iP	Pb	08 24 11.4	-0.6
USAK				iS	Sg	08 24 16.2	+0.4
USAK				IAML		08 24 17.0	
	comp=E,76nm,0.2s						
USAK				IAML		08 24 17.0	
	comp=N,94nm,0.3s						
KULA	**Kula-Manisa**	0.37	172	PG	Pb	08 24 12.0	0.0
KULA				SG	Sb	08 24 17.2	-0.6
SMAA	**Simav-Kutahya**	0.37	53	PG	Pg	08 24 11.4	+0.5
SMAA				SG	Sb	08 24 16.9	-0.9
MANT	**Manisa**	0.39	185	iP	Pg	08 24 11.4	0.0
MANT				IAML		08 24 17.0	
	comp=E,183nm,0.4s						
MANT				iS	Sg	08 24 17.1	+0.5
MANT				IAML		08 24 18.0	
	comp=N,83nm,0.2s						
SHAP	**Saphane-Kutahy**	0.51	73	PG	Pb	08 24 13.9	-0.5
SHAP				SG	Sb	08 24 21.4	-0.4
GOMA	**Golmarmara-Man**	0.56	252	PG	Pb	08 24 15.2	0.0
AKHS	**Akhisar**	0.61	270	iP	Pg	08 24 15.7	+0.3
AKS	**Akhisar**	0.61	270	PG	Pb	08 24 16.2	0.0
GEDZ	**Gediz**	0.65	75	PG	Pb	08 24 16.8	-0.1
GEDZ				SG	Sb	08 24 26.1	+0.1
GDZ	**Gediz**	0.72	73	iP	Pb	08 24 18.1	+0.1
GDZ				iS	Sg	08 24 26.9	-0.1
GDZ				IAML		08 24 28.0	
	comp=E,43nm,0.3s						
GDZ				IAML		08 24 32.0	
	comp=N,40nm,0.3s						
DURS	**Dursunbey**	0.73	352	iP	Pb	08 24 19.1	+0.9
STEP	**BALIKESIR_Sava**	0.84	306	iP	Pg	08 24 18.9	-0.9
PASA	**Karahalli, USA**	0.88	127	iP	Pn	08 24 21.7	0.0
TVSB	**Tavsanli**	0.88	49	PG	Pb	08 24 20.7	-0.1
BALB	**Balikesir**	0.94	324	PG	Pn	08 24 22.5	0.0
AYDB	**Zeytinkoy-Aydi**	1.08	211	PN	Pn	08 24 25.0	+0.4
CAVI	**Cavuskoy**	1.63	36	PN	Pb	08 24 33.3	-0.3
BORA	**Eskisehir**	1.75	55	PN	Pn	08 24 34.5	+0.7

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*NIED **14** 08:40:52.9, 31°.34N×128°.71E, h5^{km}, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.90; $M_{\theta\theta}$1.88; $M_{\phi\phi}$0.02; $M_{r\theta}$-1.20; $M_{\theta\phi}$9.55; $M_{\phi r}$1.41; Fault plane solution: $M_0$9.83000×10^{15} NP1: ϕ_s184.00000°, δ80.00000°, λ-170.00000°. NP2: ϕ_s92.00000°, δ80.00000°, λ-10.00000°.*

*JMA **14** 08:40:52.8±0.3, 31°.34N×128°.71E, h5^{km}±2^{km}, M4.7*

JMA Felt I J1.

*BJI **14** 08:40:53.7±0.0, 31°.17N×129°.09E, h9^{km}, mB4.6/29, mb4.3/45, Ms4.7/48, Ms7 4.4/45*

*IDC **14** 08:40:54.3±0.6, 31°.37N×128°.87E, h0^{km}, mb4.2/18, mb1 4.4/24, mb1mx4.3/51, mbtmp4.2/24, ML3.6/6, MS4.0/37, Ms1 4.0/37, ms1mx3.9/52, Error ellipse: s-maj=18.0km s-min=12.1km az=87.0*

*MOS **14** 08:40:55.7±1.0, 31°.30N×128°.92E, h21^{km}, mb4.5/15, MS4.4/5, Error ellipse: s-maj=11.0km s-min=5.8km az=97.2*

*NEIC **14** 08:40:56±1.1, 31°.28N±0°.04×128°.93E±0°.03, h7^{km}±5^{km}, mb4.7/27, Error ellipse: s-maj=6.2km s-min=3.6km az=175.0*

*KMA **14** 08:40:56.3, 31°.40N×128°.70E, h15^{km}*

*GCMT **14** 08:40:58.0±0.4, 31°.47N±0°.02×128°.78E±0°.03, h16^{km}±1^{km}, MW4.8/71, Moment Tensor Solution. s4,c4; s71,c98; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.07±.08; $M_{\theta\theta}$0.40±.08; $M_{\phi\phi}$-0.33±.08; $M_{r\theta}$0.51±.23; $M_{\theta\phi}$1.54±.08; $M_{\phi r}$0.28±.20; Best double couple: $M_0$1.67600×10^{16} NP1: ϕ_s5.00000°, δ75.00000°, λ170.00000°. NP2: ϕ_s98.00000°, δ81.00000°, λ15.00000°. Principal axes: T 1.7970, Plg17.0000°, Azm322.0000°; N -0.2420, Plg72.0000°, Azm129.0000°; P -1.5550, Plg4.0000°, Azm231.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 08:40:57.8±1.3,**31°.34N**±0°.03×**128°.97E**±0°.03,**h18**^{km}±6^{km}, **n170**, σ**2^{s}.30**/169,**mb4.5**/49,**MS4.2**/43,**10C-6D,Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	**Shimokoshiki**	0.72	62	⇓P	Pb	08 41 10.2	-1.7
JSJ				eS	Sg	08 41 21.8	+0.1
JSU	**Suzuyama**	1.28	82	P	Pn	08 41 20.8	-0.1
JSU				S	Sg	08 41 40.6	+1.2
JSU	**Suzuyama**	1.28	82		Pn	08 41 20.5	-0.4
JFU	**Fukue jima 2**	1.32	352	⇑P	Pn	08 41 17.6	-3.8
JFU				S	Sn	08 41 36.2	-2.4
JKC	**Kuchinoerabu**	1.37	129	P	Pn	08 41 20.6	-1.5
JKC				S	Sg	08 41 42.3	+0.1
JNN	**Nakanoshima**	1.69	152	P	Pn	08 41 24.6	-1.8
JYAK	**Yakushimahirau**	1.72	129	P	Pn	08 41 25.3	-1.6
JTN	**Tanegashima 3**	1.86	111	P	Pn	08 41 28.2	-0.6
JTZ	**Takazaki**	1.90	72	⇓P	Pn	08 41 29.1	-0.2
JMTN	**Minamitane**	1.91	119	P	Pn	08 41 29.3	-0.2
JNU	**Nakatsue**	2.41	42	Pn	Pn	08 41 35.9	-0.4
	32nm,0.3s,baz=259,slow=0.1,SNR=56						
JNU				Sn	Sb	08 42 11.5	+1.6
	50nm,0.3s,baz=46,slow=22,SNR=1.7						
JNU				LR	LR	08 42 49.1	
	comp=Z,18μm,21.4s,baz=34,slow=47						
GMDB	**Geomundo**	3.04	333	P	Pn	08 41 41.1	-3.9
	SNR=17						
HALB	**Hallimjungang-**	3.07	313	P	Pn	08 41 42.0	-3.4
	SNR=7.5						
JTU	**Tsushima**	3.20	6		Pn	08 41 47.3	+0.2
YNDB	**Yeoundo**	3.24	343	P	Pn	08 41 45.0	-2.7
	SNR=15						
YKDB	**Yokjido**	3.33	350	P	Pn	08 41 46.4	-2.5
	SNR=8.5						
CJD	**Chujado**	3.45	320	P	Pn	08 41 47.0	-3.7
	SNR=8.8						
KOHB	**KOHEUNG**	3.56	337	P	Pn	08 41 48.6	-3.6
	SNR=12						
KSNAH	**Namhae**	3.58	346	P	Pn	08 41 50.4	-2.0
	SNR=16						
BOSB	**Boseong-gun**	3.72	337	P	Pn	08 41 50.4	-3.9
	SNR=15						
KSJDO	**Jindo**	3.83	325	P	Pn	08 41 52.2	-3.8
	SNR=22						
KSSCH	**SUNCHEON**	3.99	339	P	Pn	08 41 55.2	-2.8
	SNR=8.2						
KSKWJ	**Gwangju**	4.15	337	P	Pn	08 41 57.8	-2.5
	SNR=5.4						
KSKWJ	**Gwangju**	4.15	337	P	Pn	08 41 58.0	-2.3
	SNR=5.5						
GGDB	**Gageodo**	4.22	311	P	Pn	08 41 57.0	-4.2
	SNR=8.6						
HUK2	**Heuksan-myeon**	4.46	319	P	Pn	08 42 01.0	-3.5
	SNR=11						
JOW	**Kunigami**	4.53	188	Pn	Pn	08 42 05.8	+0.3
	5.9nm,0.3s,baz=5.7,slow=9.8,SNR=11						
JOW				LR	LR	08 43 52.0	
	comp=Z,616nm,21.8s,baz=114,slow=39						
JOW	**Kunigami**	4.53	188	Pn	Pn	08 42 03.9	-1.7
JMN	**Monobe**	4.78	59	Pn	Pn	08 42 10.6	+1.5
KSJEO	**Jeonju**	4.79	344	P	Pn	08 42 07.0	-2.1
	SNR=9.6						
KSCPR	**CHUPUNGNYEONG**	4.94	351	P	Pn	08 42 09.5	-1.6
	SNR=11						
JHS	**Saijyo**	5.04	43		Pn	08 42 15.3	+2.8
OKCB	**Cheongsan-myeo**	5.09	349	P	Pn	08 42 12.0	-1.2
	SNR=14						
TJN	**Taejon**	5.20	346	ceP	Pn	08 42 12.8	-1.9
KSBON	**Boeun**	5.24	350	P	Pn	08 42 14.1	-1.1
	SNR=16						
KSCEA	**Cheonan**	5.65	346	P	Pn	08 42 19.1	-1.7
	SNR=12						
KSYOW	**Yeongwol**	5.83	356	P	Pn	08 42 22.7	-0.7
	SNR=9.4						
KSAR	**Wonju Array Be**	6.15	352	P	Pn	08 42 27.4	-0.4
KSAR	**Wonju Array Be**	6.15	352	Pn	Pn	08 42 27.4	-0.4
KSRS	**Korea Array**	6.16	352	Pn	Pn	08 42 26.1	-1.7
	4.0nm,0.3s,baz=173,slow=14,SNR=49						
KSRS				Sn	Sn	08 43 35.5	-2.3
	2.1nm,0.3s,baz=175,slow=24,SNR=1.9						
KSRS				Lg	Lg	08 44 04.7	
	6.9nm,0.3s,baz=176,slow=31,SNR=6.2						
KSRS				LR	LR	08 44 37.7	
	comp=Z,628nm,21.9s,baz=180,slow=37						
KS19	**Wonju Array Si**	6.21	352	Pn	Pn	08 42 26.8	-1.9
INCN	**Inchon**	6.42	343	P	Pn	08 42 32.5	+0.9
INCN	**Inchon**	6.42	343	Pn	Pn	08 42 32.5	+0.9
JWT	**Wachi**	6.67	52	Pn	Pn	08 42 35.7	+0.8
JWT					LR	08 44 32.4	
SSE	**Sheshan**	6.67	270	Pn	Pn	08 42 34.1	-0.8
SSE				Sn	Sn	08 43 51.9	+1.5
SSE				LR	LR		
	comp=N,3μm,14.6s						
SSE				LR	LR		
	comp=E,730nm,11.9s						
KSGAH	**Ganghwa**	6.68	343	P	Pn	08 42 33.2	-1.9
	SNR=6.0						
INU	**Inuyama**	7.83	57	Pn	Pn	08 42 52.4	+1.6
NJ2	**Nanjing**	8.65	277	eP	Pn	08 43 02.3	+0.3
NJ2				pP		08 43 04.8	
NJ2				pmax	pmax		
	comp=Z,21nm,0.5s						
NJ2				LR	LR		
	comp=N,5μm,12.5s						
NJ2				LR	LR		
	comp=E,1μm,11.7s						
NJ2				LR	LR		
	comp=Z,2μm,13.5s						
MJAR	**Matsushiro Arr**	9.27	53	Pn	Pn	08 43 12.1	+1.6
	0.2nm,0.3s,baz=236,slow=14,SNR=14						
MJAR				LR	LR	08 46 47.9	
	comp=Z,622nm,21.2s,baz=240,slow=38						
MJAR	**Matsushiro Arr**	9.27	53	Pn	Pn	08 43 11.3	+0.8
DL2	**Dalian**	9.64	324	P	Pn	08 43 21.3	+5.6
DL2				S	Sn	08 45 09.8	+6.2
DL2				pmax	pmax		
	comp=Z,19nm,1.2s						
DL2				pmax	pmax		
	comp=Z,120nm,5.7s						
DL2				LR	LR		
	comp=N,2μm,11.1s						
DL2				LR	LR		
	comp=E,2μm,14.2s						
DL2				LR	LR		
	comp=Z,3μm,12.2s						
TIA	**Tai'an**	10.98	299	⇓P	Pn	08 43 43.8	+10
TIA				S	Sn	08 45 53.9	+17
TIA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
TIA				LR	LR		
	comp=N,2μm,12.0s						
TIA				LR	LR		
	comp=E,2μm,12.4s						
TIA				LR	LR		
	comp=Z,2μm,11.6s						
JCJ	**Chichijima**	12.29	107	LR	LR	08 48 05.5	
	comp=Z,337nm,21.8s,baz=326,slow=35						
WHN	**Wuhan**	12.57	270	P	Pn	08 43 52.3	-3.5
WHN				LR	LR		
	comp=Z,2μm,10.4s						
WHN				LR	LR		
	comp=Z,3μm,11.9s						
WHN				LR	LR		
	comp=Z,3μm,11.3s						
CN2	**Changchun**	12.75	348	eP	Pn	08 44 00.8	+2.7
CN2				S	Sn	08 46 24.6	+5.1
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,2μm,17.0s						
CN2				LR	LR		
	comp=Z,7μm,17.0s						
CN2				LR	LR		
	comp=Z,3μm,14.0s						
BJT	**Baijiatuau**	13.52	313	P	Pn	08 44 12.8	+4.1
BJT	**Baijiatuau**	13.52	313	Pn	Pn	08 44 12.8	+4.1
BJI	**Beijing**	13.53	313	P	P	08 44 13.4	-4.5
BJI				S	Sn	08 46 49.8	+11
BJI				pmax	pmax		
	comp=Z,22nm,1.4s						
TEY	**Ternei**	14.92	21	⇓eP	P	08 44 35.5	+2.2
TEY				eS	S	08 47 23.9	-6.5
TEY				pmax	pmax		
	comp=N,20nm,1.0s						
TEY				pmax	pmax		
	comp=E,10.0nm,1.0s						
TEY				pmax	pmax		
	comp=Z,20nm,1.0s						
TEY				pmax	pmax		
	comp=Z,100nm,2.6s						
TEY				MLR	MLR		
	comp=E,200nm,9.0s						
TEY				MLR	MLR		
	comp=N,500nm,13.0s						
TEY				MLR	MLR		
	comp=Z,400nm,15.0s						
ASAJ	**Asahikawa**	16.67	36	Pn	Pn	08 44 50.5	0.0
	comp=Z,0.5nm,0.3s,baz=243,slow=12,SNR=19						
ASAJ				LR	LR	08 50 53.9	
	comp=Z,569nm,18.7s,baz=232,slow=36						
JKA	**Kamikawa-asahi**	16.67	36	Pn	Pn	08 44 50.4	-0.1
JKA				IAmb	IAmb	08 44 51.6	
	comp=Z,36nm,0.9s						
HHC	**Hu-ho-hao-te**	16.94	309	eP	P	08 45 00.1	+4.2
HHC				S	S	08 48 08.5	-3.4
HHC				pmax	pmax		
	comp=Z,25nm,1.1s						
HHC				pmax	pmax		
	comp=Z,170nm,4.4s						
HHC				LR	LR		
	comp=Z,1μm,12.3s						
HHC				LR	LR		
	comp=Z,2μm,13.6s						
HHC				LR	LR		
	comp=Z,2μm,13.5s						
XAN	**Xi'an**	17.09	284	P	Pn	08 44 53.8	-2.0
XAN				pP	P	08 44 57.3	-0.2
XAN				S	Sn	08 48 07.3	+1.9
XAN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
XAN				LR	LR		
	comp=Z,3μm,13.7s						
XAN				LR	LR		
	comp=Z,2μm,13.7s						
XAN				LR	LR		
	comp=Z,1μm,15.1s						
BTO	**Baotou**	17.88	306	eP	Pn	08 45 04.8	-0.8
KLR	**Kul'dur**	17.99	6	P	P	08 45 07.4	+0.1
	comp=Z,0.2nm,0.3s,baz=204,slow=7.6,SNR=21						
KLR	**Kul'dur**	17.99	6	ceP	P	08 45 08.9	+1.6
KLR				pmax	pmax		
	comp=Z,20nm,0.9s						
YSS	**Yuzh-Sakhalins**	18.86	30	iP	Pn	08 45 17.6	+0.1
YSS				pmax	pmax		
	comp=Z,13nm,1.0s						
HIA	**Hailar**	19.21	341	P	P	08 45 19.9	-0.9
HIA				pmax	pmax		
	comp=Z,17nm,1.1s						
HIA	**Hailar**	19.21	341	P	P	08 45 19.9	-0.9
GYA	**Guiyang**	20.11	262	⇓P	Pn	08 45 33.8	+1.1
GYA				S	Sn	08 49 18.5	-0.2
GYA				PcP	PcP	08 49 49.5	+3.7
GYA				pmax	pmax		
	comp=Z,16nm,1.0s						
GYA				pmax	pmax		
	comp=Z,84nm,3.5s						
GYA				LR	LR		
	comp=Z,460nm,5.9s						
GYA				LR	LR		
	comp=Z,510nm,10.2s						
GYA				LR	LR		
	comp=Z,680nm,13.0s						
QIZ	**Qiongzhong**	21.17	239	P	P	08 45 41.8	-0.4
QIZ				S	S	08 49 38.4	+1.4
QIZ				LR	LR		
	comp=Z,860nm,12.0s						
QIZ				LR	LR		
	comp=Z,790nm,13.5s						
QIZ				LR	LR		
	comp=Z,750nm,13.1s						
LZH	**Lanzhou**	21.40	290	eP	P	08 45 48.6	+3.8
LZH				sP	sP	08 45 55.4	+3.4
LZH				sS	Sn	08 49 54.3	+4.5
LZH				SS	SnSn	08 50 14.0	+9.2
LZH				pmax	pmax		
	comp=Z,24nm,1.1s						
LZH				pmax	pmax		
	comp=Z,130nm,4.6s						

LZH				LR	LR		
	comp=Z,2µm,13.6s						
LZH				LR	LR		
	comp=Z,1µm,13.6s						
LZH				LR	LR		
	comp=Z,1µm,15.2s						
CD2	Chengdu	21.57	275	P	P	08 45 47.6	+1.0
CD2				S	S	08 49 41.8	-3.3
CD2				pmax	pmax		
	comp=Z,30nm,1.3s						
CD2				pmax	pmax		
	comp=Z,150nm,6.4s						
CD2				LR	LR		
	comp=Z,3µm,15.7s						
CD2				LR	LR		
	comp=Z,1µm,14.9s						
CD2				LR	LR		
	comp=Z,2µm,12.4s						
TYV	Tymovskoe	22.00	24	*e*P	P	08 45 54.9	+4.1
TYV				pmax	pmax		
	comp=Z,200nm,3.5s						
TYV				pmax	pmax		
	comp=Z,11nm,1.3s						
ZEA	Zeya	22.42	357	*e*P	P	08 45 56.6	+1.3
ZEA				*e*		08 46 00.0	
ZEA				*e*		08 46 24.4	
ZEA				*e*S	S	08 50 02.4	+1.7
ZEA				pmax	pmax		
	comp=Z,100nm,2.2s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ZEA				smax	smax		
	comp=E,200nm,9.2s						
ZEA				MLR	MLR		
	comp=N,700nm,11.0s						
ZEA				MLR	MLR		
	comp=Z,500nm,9.0s						
GUMO	Guam	22.93	137	LR	LR	08 53 53.7	
	comp=Z,233nm,18.9s,baz=340,slow=34						
ULN	Ulaanbaatar	23.48	321	*ce*P	P	08 46 07.2	+0.6
ULN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ULN	Ulaanbaatar	23.48	321	P	P	08 46 05.6	-1.0
ULN				IAmb	IAmb	08 46 17.9	
	comp=Z,17nm,1.4s						
SONM	Songino Array	23.82	320	P	P	08 46 07.5	-2.3
	comp=Z,2.6nm,0.8s,baz=136,slow=9.7,SNR=9.3						
SONM				LR	LR	08 56 08.8	
	comp=Z,659nm,21.7s,baz=146,slow=38						
SONM	Songino Array	23.82	320	P	P	08 46 09.4	-0.5
SONM				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SONM	Songino Array	23.82	320	P	P	08 46 09.4	-0.5
KMI	Kunming	23.89	262	⇑P	P	08 46 09.1	-1.7
KMI				pP	pP	08 46 13.9	-2.1
KMI				sP	sP	08 46 15.8	-2.4
KMI				S	S	08 50 22.3	-4.2
KMI				sS	pS	08 50 32.8	+0.3
KMI				pmax	pmax		
	comp=Z,20nm,0.8s						
KMI				pmax	pmax		
	comp=Z,60nm,3.8s						
KMI				LR	LR		
	comp=Z,1µm,16.2s						
KMI				LR	LR		
	comp=Z,480nm,17.2s						
KMI				LR	LR		
	comp=Z,560nm,14.3s						
DAV	Davao City (W)	24.35	188	LR	LR	08 58 31.9	
	comp=Z,105nm,18.0s,baz=355,slow=43						
GTA	Gaotai	25.02	297	*e*P	P	08 46 23.8	+2.9
GTA				pP	sP	08 46 29.0	+0.7
GTA				sP	pP	08 46 32.4	+6.3
GTA				S	S	08 50 51.0	+6.8
GTA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
GTA				pmax	pmax		
	comp=Z,88nm,4.7s						
GTA				LR	LR		
	comp=Z,1µm,14.9s						
GTA				LR	LR		
	comp=Z,900nm,14.9s						
GTA				LR	LR		
	comp=Z,1µm,15.6s						
ZAK	Zakamensk	26.97	322	*e*P	P	08 46 36.3	-2.1
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
TLY	Talaya	27.56	325	LR	LR	08 58 29.0	
	comp=Z,441nm,18.5s,baz=120,slow=38						
CMAR	Chiang Mai Arr	30.00	252	P	P	08 47 04.5	-1.1
	comp=Z,1.0nm,0.3s,baz=57,slow=6.6,SNR=5.9						
CMAR				LR	LR	09 00 15.1	
	comp=Z,180nm,20.1s,baz=90,slow=39						
PETK	Petropavlovsk-	30.09	35	LR	LR	08 58 47.7	
	comp=Z,312nm,19.4s,baz=215,slow=36						
PET	Petropavlovsk	30.52	36	*e*P	P	08 47 10.5	+0.7
PET				*e*S	S	08 52 08.4	-1.9
PET				pmax	pmax		
	comp=Z,26nm,1.3s						
PET				MLR	MLR		
	comp=Z,300nm,16.0s						
PET				MLR	MLR		
	comp=Z,400nm,13.0s						
YAK	Yakutsk	30.71	1	*i* P	P	08 47 12.1	+0.8
YAK				pmax	pmax		
	comp=Z,12nm,0.7s						
WMQ	Urumqi	34.65	303	*e*P	P	08 47 48.1	+1.9
WMQ				pmax	pmax		
	comp=Z,17nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,310nm,5.1s						
WMQ				LR	LR		
	comp=Z,610nm,10.7s						
WMQ				LR	LR		
	comp=Z,940nm,10.7s						
WMQ				LR	LR		
	comp=Z,350nm,14.5s						
SEY	Seymchan	34.97	18	LR	LR	09 02 27.9	
	comp=Z,188nm,18.4s,baz=216,slow=37						
JAY	Jayapura	35.47	159	LR	LR	09 00 58.9	
	comp=Z,142nm,19.0s,baz=12,slow=34						
KAPI	Kappang	37.20	195	LR	LR	09 03 09.9	
	comp=Z,61nm,20.5s,baz=25,slow=36						
ZALV	Zalesovo Beam	38.70	319	P	P	08 48 18.9	-1.6
	comp=Z,0.5nm,0.4s,baz=104,slow=9.4,SNR=2.0						
ZALV				LR	LR	09 05 49.2	
	comp=Z,542nm,18.0s,baz=146,slow=39						
ZALV	Zalesovo Beam	38.70	319	*i* P	P	08 48 29.1	+8.6
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	Makanchi Array	38.79	307	P	P	08 48 20.3	-1.1
	comp=Z,1.0nm,0.6s,baz=96,slow=10,SNR=7.5						
MKAR				LR	LR	09 05 21.8	
	comp=Z,170nm,20.3s,baz=92,slow=38						
MKAR	Makanchi Array	38.79	307	*ce*P	P	08 48 23.7	+2.3
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	Makanchi Array	38.79	307	P	P	08 48 20.7	-0.7
MAKZ	Makanchi	39.01	307	P	P	08 48 23.1	-0.1
MAKZ				pmax	pmax		
	comp=Z,5.0nm,1.2s						
MAKZ	Makanchi	39.01	307	P	P	08 48 23.1	-0.1
PSI	Prapat	40.10	231	LR	LR	09 05 50.7	
	comp=Z,168nm,18.6s,baz=34,slow=37						
TIXI	Tiksi	40.36	360	*i* P	P	08 48 34.7	+0.6
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TIXI	Tiksi	40.36	360	P	P	08 48 34.1	+0.1
TIXI				IAmb	IAmb	08 48 44.4	
	comp=Z,12nm,1.4s						
KURK	Kurchatov	41.70	313	*i* P	P	08 48 44.1	-1.3
KURK				pmax	pmax		
	comp=Z,4.0nm,1.6s						
BILL	Bilibino	42.65	20	*e*P	P	08 48 52.8	-0.1
BILL				pmax	pmax		
	comp=Z,3.0nm,1.1s						
MTN	Manton Dam	43.98	177	P	P	08 49 03.2	-1.0
MTN				IAmb	IAmb	08 49 07.6	
	comp=Z,15nm,0.9s						
AAK	Ala-Archa	44.26	301	LR	LR	09 09 42.7	
	comp=Z,456nm,18.6s,baz=100,slow=39						
AAK	Ala-Archa	44.26	301	*i* P	P	08 49 05.6	-0.8
NRIK	Noril'sk	44.63	340	P	P	08 49 07.1	-1.7
	comp=Z,7.5nm,0.8s,baz=110,slow=10,SNR=13						
NRIK				LR	LR	09 07 10.0	
	comp=Z,226nm,18.2s,baz=130,slow=35						
NRIK	Noril'sk	44.63	340	*ce*P	P	08 49 06.8	-2.0
NRIK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NRIK	Noril'sk	44.63	340	P	P	08 49 08.0	-0.9
NRIK				IAmb	IAmb	08 49 12.7	
	comp=Z,19nm,1.3s						
KNRA	Kununurra	46.75	180	P	P	08 49 24.8	-1.2
BRVK	Borovoye	47.07	315	*ce*P	P	08 49 26.8	-1.5
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
BRVK	Borovoye	47.07	315	P	P	08 49 27.2	-1.1
BRVK				IAmb	IAmb	08 49 31.4	
	comp=Z,5.9nm,1.0s						
KK31	Karatay Array	47.14	302	P	P	08 49 28.0	-1.0
KK31				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KK31	Karatay Array	47.14	302	P	P	08 49 28.0	-1.0
KK31				IAmb	IAmb	08 49 32.7	
	comp=Z,7.6nm,0.8s						
KKAR	Karatay Array	47.14	302	P	P	08 49 28.1	-0.9
KKAR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KKAR	Karatay Array	47.14	302	P	P	08 49 28.1	-0.9
KKAR				IAmb	IAmb	08 49 32.7	
	comp=Z,7.6nm,0.8s						
KKAR	Karatay Array	47.14	302	P	P	08 49 28.1	-0.9
GAR	Garm	47.83	296	P	P	08 49 33.8	-0.9
CHGR	Chuyangaron	48.78	296	P	P	08 49 41.6	-0.4
FITZ	Fitzroy Crossi	49.26	184	P	P	08 49 44.1	-1.4
FITZ				IAmb	IAmb	08 49 50.4	
	comp=Z,5.8nm,0.8s						
HNR	Honiara	50.24	139	LR	LR	09 08 48.5	
	comp=Z,58nm,20.6s,baz=317,slow=33						
WB0	Warramunga Arr	51.08	173	P	P	08 49 58.4	-0.9
WB0				IAmb	IAmb	08 50 03.3	
	comp=Z,5.1nm,0.7s						
WRAB	Tennant Creek	51.24	174	*ce*P	P	08 49 59.2	-1.3
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.7s						
WRA	Warramunga Arr	51.25	174	P	P	08 49 59.5	-1.1
	comp=Z,4.4nm,0.8s,baz=353,slow=8.0,SNR=24						
WRA				LR	LR	09 10 32.6	
	comp=Z,55nm,21.1s,baz=20,slow=35						
WRA	Warramunga Arr	51.25	174	*i* P	P	08 49 59.5	-1.1
WRA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
WRA	Warramunga Arr	51.25	174	P	P	08 49 59.8	-0.7
WB2	Warramunga Arr	51.25	173	P	P	08 49 59.7	-0.9
WB2				IAmb	IAmb	08 50 05.5	
	comp=Z,5.5nm,0.8s						
WR0	Warramunga Arr	51.29	173	P	P	08 49 59.8	-1.0
WR0				IAmb	IAmb	08 50 11.9	
	comp=Z,7.8nm,1.1s						
SVE	Sverdlovsk	52.70	320	*e*P	P	08 50 10.0	-1.0
ABKAR	Akbulak array	53.72	311	P	P	08 50 18.1	-0.6
ABKAR	Akbulak array	53.72	311	P	P	08 50 18.8	+0.1
ABKAR				IAmb	IAmb	08 50 22.3	
	comp=Z,5.9nm,1.0s						
CTAO	Charters Tower	53.76	160	P	P	08 50 19.0	-0.2
CTAO				pmax	pmax		
	comp=Z,9.0nm,1.0s						
CTAO	Charters Tower	53.76	160	P	P	08 50 19.0	-0.2
CTAO				IAmb	IAmb	08 50 20.6	
	comp=Z,9.0nm,1.0s						
ARU	Arti	53.86	320	*c i*P	P	08 50 18.8	-0.8
ARU				S	S	08 57 58.4	+4.8
ARU				SS	SKiKP	09 01 26.1	-6.1
ARU				pmax	pmax		
	comp=Z,13nm,0.9s						
ARU				MLR	MLR		
	comp=Z,1µm,19.0s						
AS31	Alice Springs	54.90	174	P	P	08 50 26.4	-1.1
ASAR	Alice Springs	54.90	174	P	P	08 50 26.5	-1.0
	comp=Z,3.5nm,0.8s,baz=4.4,slow=12,SNR=45						
ASAR				LR	LR	09 13 49.9	
	comp=Z,51nm,20.8s,baz=15,slow=36						
ASAR	Alice Springs	54.90	174	P	P	08 50 27.2	-0.3
ASAR	Alice Springs	54.90	174	P	P	08 50 27.1	-0.3
GEYT	Alibeck	57.40	298	LR	LR	09 18 46.7	
	comp=Z,229nm,18.9s,baz=335,slow=40						
H23K	Yukon River	58.41	29	P	P	08 50 52.6	+0.5
H23K				IAmb	IAmb	08 50 57.8	
	comp=Z,9.7nm,0.9s						
MDM	Murphy Dome	59.07	29	P	P	08 50 56.7	+0.1
ILAR	Eielson Array	59.67	30	P	P	08 50 59.1	-1.5
	comp=Z,2.0nm,0.9s,baz=290,slow=7.2,SNR=11						
ILAR				LR	LR	09 19 09.4	
	comp=Z,56nm,18.8s,baz=300,slow=38						
M26K	Nabesna, AK	61.86	32	P	P	08 51 15.4	-0.3
KLMR	Klimovskoe	62.91	327	*e*P	P	08 51 27.2	+4.6
KLMR				pmax	pmax		
	comp=Z,18nm,1.3s						
KLMR	Klimovskoe	62.91	327	*e*P	P	08 51 27.3	+4.6
KLMR				AMP		08 51 35.4	
	comp=Z,18nm,1.3s						
STKA	Stephens Creek	64.00	168	P	P	08 51 29.6	-0.6
	comp=Z,1.9nm,0.7s,baz=337,slow=13,SNR=5.1						
STKA				LR	LR	09 18 34.1	
	comp=Z,44nm,21.9s,baz=23,slow=35						
STKA	Stephens Creek	64.00	168	IAmb	IAmb	08 51 35.7	
	comp=Z,0.7nm,0.9s						
A36M	Sachs Harbour	65.20	19	P	P	08 51 37.7	+0.2
ARCES	ARCESS Array B	65.52	338	LR	LR	09 23 58.5	
	comp=Z,170nm,18.9s,baz=225,slow=40						
OBN	Obninsk	66.23	321	⇓*i*P	P	08 51 50.2	+5.8
OBN				*e*		08 54 06.8	
OBN				pmax	pmax		
	comp=Z,10.0nm,1.3s						
OBN				MLR	MLR		
	comp=Z,344nm,18.0s						
KBZ	Khabaz	66.48	308	P	P	08 51 46.8	+0.5
	comp=Z,1.5nm,0.4s,baz=82,slow=7.1,SNR=2.8						
KBZ				LR	LR	09 25 08.3	
	comp=Z,102nm,18.6s,baz=72,slow=40						
KIV	Kislovodsk	66.54	308	*e*P	P	08 51 49.0	+2.2
KIV				pmax	pmax		
	comp=Z,14nm,1.0s						
KIV				MLR	MLR		
	comp=Z,123nm,17.0s						
FINES	FINESS Array B	68.77	330	P	P	08 51 58.6	-1.7
	comp=Z,3.3nm,0.5s,baz=83,slow=6.9,SNR=11						
FINES				LR	LR	09 25 09.2	
	comp=Z,448nm,18.0s,baz=46,slow=39						
AKASG	Malin Array Be	72.10	319	P	P	08 52 19.8	-1.2
	comp=Z,1.8nm,0.6s,baz=57,slow=5.9,SNR=1.9						
AKASG				LR	LR	09 26 47.3	
	comp=Z,235nm,18.8s,baz=50,slow=38						
YKA	Yellowknife Ar	73.64	26	P	P	08 52 29.9	0.0
	comp=Z,2.2nm,0.9s,baz=308,slow=6.2,SNR=2.5						
BRTR	Keskin Array B	74.44	307	P	P	08 52 34.6	-0.6
	comp=Z,0.3nm,0.5s,baz=73,slow=4.8,SNR=5.1						
BRTR				LR	LR	09 29 54.5	
	comp=Z,149nm,19.0s,baz=57,slow=40						
BRTR	Keskin Array B	74.44	307	P	P	08 52 35.3	+0.1
BRTR	Keskin Array B	74.44	307	P	P	08 52 35.3	+0.1
NOA	NORSAR Array B	75.03	334	P	P	08 52 38.2	+0.1
	comp=Z,0.7nm,0.5s,baz=50,slow=5.5,SNR=3.3						
NOA				LR	LR	09 28 09.5	
	comp=Z,88nm,19.3s,baz=65,slow=38						
GERES	GERESS Array B	81.53	323	LR	LR	09 35 29.2	
	comp=Z,194nm,19.2s,baz=48,slow=40						
NVAR	Mina Array Bea	86.52	47	P	P	08 53 40.2	+0.1
	comp=Z,1.6nm,0.9s,baz=302,slow=5.1,SNR=7.5						
PDAR	Pinedale Array	88.79	39	P	P	08 53 49.6	-1.4
	comp=Z,1.4nm,1.0s,baz=296,slow=2.9,SNR=2.6						
ULM	Lac du Bonnet	89.58	27	P	P	08 53 54.0	-0.2
	comp=Z,10nm,1.0s,baz=346,slow=6.8,SNR=4.2						
ULM				LR	LR	09 38 11.6	
	comp=Z,79nm,18.1s,baz=55,slow=38						
ULM	Lac du Bonnet	89.58	27	P	P	08 53 54.0	-0.2
PPT	Papeete	91.95	109	LR	LR	09 32 44.0	
	comp=Z,48nm,18.2s,baz=337,slow=34						
KEST	Kesra	92.47	315	LR	LR	09 42 57.4	
	comp=Z,112nm,18.9s,baz=290,slow=40						
ESDC	Sonseca Array	96.93	325	LR	LR	09 42 57.4	
	comp=Z,162nm,18.4s,baz=340,slow=38						

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*NEIC **14** 08:48:31.6±1.5, 22°.04N±0°.10×142°.9E±0°.1, h249^{km}±8^{km}, mb4.2/13, Error ellipse: s-maj=20.0km s-min=13.4km az=105.0*

*IDC **14** 08:48:31.4±2.2, 21°.96N×142°.87E, h253^{km}±21^{km}, mb3.4/19, mb1 3.5/22, mb1mx3.4/57, mbtmp4.1/22, Error ellipse: s-maj=19.0km s-min=11.3km az=98.0*

ISC 14 08:48:31.4±0.8, 22°.03N±0°.08×142°.9E±0°.1, h250^{km}, n42, σ0^s.98/39, mb3.8/23, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	5.08	353	P	Pn	08 49 47.5	-0.7
	23nm,0.3s,baz=273,slow=19,SNR=37						
JCJ				S	S	08 50 46.1	-3.3
	32nm,0.3s,baz=305,slow=23,SNR=9.3						
JOW	Kunigami	14.11	293	P	P	08 51 43.0	+1.6
	1.3nm,0.3s,baz=90,slow=14,SNR=1.3						
JOW	Kunigami	14.11	293		P	08 51 43.2	+1.7
JYT	Yasato	14.34	351		Pn	08 51 43.5	0.0
JWT	Wachi	14.73	335		Pn	08 51 49.5	+1.2
MJAR	Matsushiro Arr	15.02	345	P	P	08 51 51.1	-0.3
	0.3nm,0.3s,baz=165,slow=11,SNR=9.8						
JHS	Saijyo	15.49	329	P	Pn	08 51 57.9	+0.5
JHS				IAmb	IAmb	08 52 07.1	
	comp=Z,32nm,1.4s						
YHNB	Yeheng	19.89	282	P	P	08 52 43.2	-1.2
KSRS	Korea Array	20.07	323	P	P	08 52 47.6	+1.6
	comp=Z,1.8nm,0.5s,baz=146,slow=9.1,SNR=13						
SSLB	Suanglung	20.25	279	P	P	08 52 48.8	+0.5
JKA	Kamikawa-asahi	22.03	360	P	P	08 53 06.7	+1.2
JKA	Kamikawa-asahi	22.03	360	IAmb	IAmb	08 53 08.8	
	comp=Z,8.7nm,0.8s						
ASAJ	Asahikawa	22.03	360	P	P	08 53 06.7	+1.2
	comp=Z,6.1nm,0.6s,baz=183,slow=12,SNR=7.6						
KLR	Kul'dur	28.54	345	P	P	08 54 03.9	-0.1
	comp=Z,0.9nm,0.2s,baz=167,slow=18,SNR=4.5						
PETK	Petropavlovsk-	33.05	16	P	P	08 54 44.5	+1.1
	comp=Z,2.9nm,1.0s,baz=223,slow=11,SNR=1.3						
SONM	Songino Array	38.89	320	P	P	08 55 33.0	0.0
	comp=Z,1.0nm,0.4s,baz=123,slow=7.1,SNR=2.9						
SONM	Songino Array	38.89	320	IAmb	IAmb	08 55 36.2	
	comp=Z,0.7nm,0.7s						
CMAR	Chiang Mai Arr	41.25	273	P	P	08 55 52.5	-0.1
	comp=Z,0.8nm,0.4s,baz=78,slow=7.0,SNR=4.1						
SEY	Seymchan	41.39	7	P	P	08 55 53.5	+0.4
	comp=Z,1.1nm,0.5s,baz=169,slow=10,SNR=1.6						
WB2	Warramunga Arr	42.53	192	P	P	08 56 02.4	-0.4
WRA	Warramunga Arr	42.53	192	P	P	08 56 01.8	-1.0
	comp=Z,0.4nm,0.4s,baz=7.6,slow=8.6,SNR=17						
WRA	Warramunga Arr	42.53	192	IAmb	IAmb	08 56 03.2	
	comp=Z,0.2nm,1.2s						
FITZ	Fitzroy Crossi	43.29	204	P	P	08 56 08.3	-0.6
FITZ				IAmb	IAmb	08 56 09.3	
	comp=Z,5.3nm,1.1s						
ASAR	Alice Springs	46.25	191	P	P	08 56 31.1	-1.0
	comp=Z,0.4nm,0.6s,baz=16,slow=9.3,SNR=8.0						
PSI	Prapat	46.72	252	P	P	08 56 36.0	-0.1
	comp=Z,3.5nm,0.5s,baz=144,slow=8.7,SNR=5.6						
RPSI	Rantau Prapat	46.77	252	P	P	08 56 36.0	-0.3
GSI	Gunungsitoli	48.61	251	P	P	08 56 49.9	-0.6
ZALV	Zalesovo Beam	53.76	322	P	P	08 57 27.5	-0.5
	comp=Z,1.2nm,0.3s,baz=114,slow=8.0,SNR=3.5						
MKAR	Makanchi Array	54.25	312	P	P	08 57 31.5	-0.2
	comp=Z,0.7nm,0.3s,baz=91,slow=8.5,SNR=22						
KURK	Kurchatov	57.02	317	P	P	08 57 51.9	+0.7
KURK				IAmb	IAmb	08 57 53.3	
	comp=Z,2.0nm,0.7s						
NRIK	Noril'sk	57.58	340	P	P	08 57 54.5	-0.3
	comp=Z,0.8nm,0.3s,baz=99,slow=5.6,SNR=4.0						
ILAR	Eielson Array	61.89	27	P	P	08 58 23.5	-0.7
	comp=Z,0.4nm,0.6s,baz=278,slow=5.8,SNR=2.8						
KKAR	Karatay Array	62.61	308	P	P	08 58 28.8	-0.5
INK	Inuvik	67.39	24	P	P	08 58 59.9	+0.4
INK				IAmb	IAmb	08 59 17.7	
	comp=Z,5.3nm,1.5s						
ABKAR	Akbulak array	69.10	316	P	P	08 59 10.1	-0.4
ABKAR				IAmb	IAmb	08 59 12.6	
	comp=Z,1.9nm,0.7s						
ABKAR	Akbulak array	69.10	316	P	P	08 59 09.7	-0.8
YKA	Yellowknife Ar	76.31	28	P	P	08 59 52.6	+0.1
	comp=Z,0.8nm,0.6s,baz=292,slow=5.9,SNR=1.6						
ARCES	ARCESS Array B	78.51	341	P	P	09 00 04.6	0.0
	comp=Z,3.0nm,0.9s,baz=40,slow=7.1,SNR=16						
ARCES	ARCESS Array B	78.51	341	IAmb	IAmb	09 00 12.2	
	comp=Z,18nm,1.4s						
FINES	FINESS Array B	82.75	334	P	P	09 00 26.2	-0.9
	comp=Z,2.3nm,0.3s,baz=61,slow=5.3,SNR=28						
NVAR	Mina Array Bea	83.18	51	P	P	09 00 30.9	+0.8
	comp=Z,0.4nm,0.6s,baz=284,slow=5.5,SNR=4.1						
AKASG	Malin Array Be	87.06	324	P	P	09 00 49.3	+0.5
	comp=Z,0.5nm,0.3s,baz=50,slow=5.1,SNR=2.1						

NOU 14 08:55:26.1, 18°.71S×168°.08E, h0^{km}, MLv3.5/8, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTV	Rentapao	0.97	20	P	Pg	08 55 44.0	-0.7
DVP	Devils Point	0.98	6	P	Pb	08 55 46.1	+0.1
MARNC	Mare, Loyalty	2.76	181	P	Pn	08 56 12.6	+1.0
DZM	Mont Dzumac	3.68	204	P	Pn	08 56 23.7	-0.7
NOUC	Port Laguerre	3.76	206	P	Pn	08 56 24.5	-0.9
KOUNC	Koumac, New Ca	4.02	242	P	Pn	08 56 29.2	+0.3

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*JMA **14** 09:12:57.1±0.4, 31°.21N×128°.73E, h11^{km}±3^{km}, M3.4*

*IDC **14** 09:12:58.8±1.6, 31°.30N×128°.34E, h0^{km}, mb3.2/2, mb1 3.6/4, mb1mx3.3/33, mbtmp3.4/4, ML3.5/2, MS3.0/2, Ms1 3.0/2, ms1mx2.5/23, Error ellipse: s-maj=42.2km s-min=18.4km az=97.0*

ISC 14 09:12:58.4±1.3, 31°.22N±0°.05×128°.83E±0°.07, h10^{km}, n15, σ0^s.80/17, Northwest of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.89	59	P	Pg	09 13 15.0	-0.5
JSJ				*e*S	Sg	09 13 27.2	+0.2
JKC	Kuchinoerabu	1.40	122	P	Pb	09 13 24.6	-0.1
JKC				*e*S	Sb	09 13 43.5	+0.9
JSU	Suzuyama	1.42	78	P	Pn	09 13 24.3	-0.1
JFU	Fukue jima 2	1.43	357	P	Pn	09 13 23.5	-0.9
JFU				*e*S	Sn	09 13 41.7	-1.6
JYAK	Yakushimahirau	1.75	124	P	Pn	09 13 27.5	-1.4
JTN	Tanegashima 3	1.94	107	P	Pn	09 13 30.9	-0.5
JMTN	Minamitane	1.97	114	P	Pn	09 13 31.5	-0.3
JTZ	Takazaki	2.04	70	P	Pn	09 13 33.1	+0.2
JIU3	Izumi3	2.15	51	P	Pn	09 13 34.6	+0.3
JNU	Nakatsue	2.57	42	Pn	Pb	09 13 45.1	+0.5
	18nm,0.3s,baz=17,slow=0.1,SNR=16						
JNU				Sn	Sg	09 14 20.4	-0.7
	baz=54,slow=0.5,SNR=1.0						
KSRS	Korea Array	6.26	353	Pn	Pn	09 14 31.4	+0.5
	0.4nm,0.3s,baz=174,slow=15,SNR=5.7						
KSRS				Sn	Sn	09 15 42.3	0.0
	0.5nm,0.3s,baz=172,slow=26,SNR=4.4						
KSRS				Lg	Lg	09 16 13.2	
	0.3nm,0.3s,baz=181,slow=30,SNR=2.9						
SONM	Songino Array	23.84	320	LR	LR	09 28 25.6	
	comp=Z,53nm,18.1s,baz=154,slow=39						
DAV	Davao City (W)	24.22	188	LR	LR	09 26 58.4	
	comp=Z,20nm,20.9s,baz=160,slow=35						
WRA	Warramunga Arr	51.15	173	P	P	09 22 06.3	+4.6
	0.3nm,0.7s,baz=352,slow=7.9,SNR=1.9						
ASAR	Alice Springs	54.80	174	P	P	09 22 29.6	+1.0
	0.3nm,0.8s,baz=5.0,slow=14,SNR=4.2						

NNC 14 09:26:14.6±2.4, 43°.81N×90°.31E, h0^{km}, mb3.7, mpv3.2, 4C-3D, Error ellipse: s-maj=36.1km s-min=18.6km az=39.0, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MK31	Makanchi Array	6.40	301	Pn	Pn	09 27 51.0	+0.9
	0.7nm,0.5s,baz=101,slow=11,SNR=14						
MK31				⇑Sn	Sn	09 29 05.4	+1.6
	0.4nm,0.3s,baz=0.0,slow=0.1,SNR=5.5						
MK31				⇓Lg	Lg	09 29 37.2	
	5.7nm,0.8s,baz=115,slow=27,SNR=4.4						
MAKZ	Makanchi	6.60	300	⇓Pn	Pn	09 27 53.4	+0.5
	1.1nm,0.5s						
MAKZ				⇑Sn	Sn	09 29 09.8	+1.0
	3.8nm,1.1s						
MAKZ				⇑Lg	Lg	09 29 45.8	
	4.6nm,1.0s						
PDGK	Podgornoye	7.88	270	⇑Pn	Pn	09 28 10.0	-0.5
	1.6nm,0.7s						
KURK	Kurchatov	10.52	315	⇓Pn	Pn	09 28 45.2	-1.3
	1.0nm,0.4s						

RSNC 14 09:34:37.9±1.0, 9°.13N×77°.90W, h32^{km}±16^{km}, ML3.1, Mw3.4

UPA 14 09:34:38.8±2.2, 8°.98N×78°.15W, h0^{km}±21^{km}, MW4.2

ISC 14 09:34:35.5±1.3, 9°.18N±0°.04×77°.90W±0°.02, h23^{km}±14^{km}, n41, σ2^{s}.12/77, 2D, Near north coast of Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UPD2	Meteti	0.64	190	⇓iP	Pb	09 34 48.6	+0.6
UPD2				eS	Sb	09 34 56.6	+0.2
CAPC	Capurgana	0.76	135	eP	Pb	09 34 51.1	+0.9
CAPC				eS	Sn	09 35 01.8	+0.1
CHPO	Chepo, Panama	1.20	270	eP	Pn	09 34 57.4	+0.5
CHPO				eS	Sn	09 35 12.1	-0.4
LCBC	Los crdobas,	1.54	102	eP	Pb	09 35 03.7	+0.2
LCBC				ePg	Pn	09 35 04.2	+2.6
LCBC				eS	Sn	09 35 21.1	+0.1
LCBC				i		09 35 26.4	
	comp=Z,566nm,0.4s						
FLAM	Flamenco Islan	1.64	261	eP	Pn	09 35 04.1	+1.2
FLAM				eS	Sn	09 35 23.2	-0.1
CORZ	Corozal	1.67	263	eS	Sn	09 35 25.0	+1.0
TABO3	Taboga, Panama	1.68	257	eP	Pn	09 35 04.9	+1.5
TABO3				eS	Sn	09 35 24.1	-0.2
MAD3	Madden Dam	1.70	271	eP	Pb	09 35 05.7	-0.3
MAD3				eS	Sb	09 35 27.5	+0.5
CHOR3	La Chorrera	1.86	262	eP	Pn	09 35 07.5	+1.5
CHOR3				eS	Sn	09 35 29.6	+0.7
BCIP	Isla Barro Col	1.91	270	eP	Pn	09 35 08.3	+1.6
BCIP				eS	Sn	09 35 30.0	-0.1
BCIP				i		09 35 35.4	
	comp=Z,196nm,0.3s						
BCIP	Isla Barro Col	1.91	270	eP	Pn	09 35 08.7	+2.0
BCIP				eS	Sn	09 35 29.7	-0.4
MLIR	Monte Lirio	1.93	272	eP	Pb	09 35 09.8	-0.2
MLIR				eS	Sb	09 35 32.9	-0.8
ZANG	Zanguenga, Cho	1.96	264	eP	Pn	09 35 09.0	+1.7
ZANG				eS	Sb	09 35 34.6	+0.2
PTAC	Punta Ardita,	2.02	177	eP	Pn	09 35 08.4	+0.2
PTAC				eS	Sn	09 35 31.3	-1.3
PTAC				i		09 35 35.9	
	comp=Z,201nm,0.7s						
MOTC	Monteria, Cord	2.24	100	eP	Pn	09 35 11.9	+0.7
MOTC				eS	Sn	09 35 38.1	0.0
MOTC				i		09 35 50.7	
	comp=Z,51nm,0.5s						
VTON	El Valle, Cocl	2.26	256	eP	Pn	09 35 13.6	+2.0
VTON				eS	Sn	09 35 38.6	-0.1
PNME	Penonome	2.50	254	eP	Pn	09 35 15.6	+0.9
DBBC	Dabeiba	2.72	142	eP	Pn	09 35 19.6	+1.7
DBBC				i		09 35 31.1	
	comp=Z,316nm,0.6s						
AZU	Azuero	2.72	240	eP	Pn	09 35 18.3	+0.4
AZU				eS	Sn	09 35 49.1	-0.9
UREC	San Jos de Ur	2.74	121	eP	Pn	09 35 18.3	+0.3
UREC				eS	Sn	09 35 49.3	-1.1
UREC				i		09 35 56.8	
	comp=Z,57nm,0.2s						
UREC	San Jos de Ur	2.74	121	eP	Pn	09 35 18.3	+0.3
CHIT3	Chitre	2.77	244	eP	Pn	09 35 18.8	+0.3
CHIT3				eS	Sn	09 35 50.2	-1.1
CHIT3				eS	Sb	09 35 51.2	-6.7
SJCC	San Jacinto, C	2.77	75	eP	Pn	09 35 20.5	+1.9
SJCC				eS	Sn	09 35 51.4	-0.1
SJCC				i		09 35 55.6	
	comp=Z,45nm,0.4s						
CALO3	Calobre, Verag	3.03	254	eP	Pn	09 35 24.6	+2.5
ZARC	Zaragoza, Cauc	3.44	119	⇓eP	Pn	09 35 28.1	+0.3
ZARC				eS	Sn	09 36 05.1	-2.8
ZARC				i		09 36 10.3	
	comp=Z,107nm,0.4s						
CACAO	El Cacao, Vera	3.45	238	eP	Pn	09 35 31.1	+3.2
CACAO				eS	Sn	09 36 10.0	+1.9
ARGC	Ariguani, Magd	3.67	79	eP	Pn	09 35 32.8	+2.0
ARGC				eS	Sn	09 36 12.9	-0.4
ARGC				i		09 36 14.1	
	comp=Z,23nm,0.3s						
HELC	Santa Helena	3.78	141	eP	Pn	09 35 33.8	+1.1
HELC				eS	Sn	09 36 17.8	+1.0
CBOC	Ciudad Bolivar	3.79	150	eP	Pn	09 35 34.4	+1.8
CBOC				eS	Sn	09 36 19.1	+2.5
CBOC				i		09 36 21.8	
	comp=Z,17nm,0.5s						
SMLC	San Martn de	3.80	95	eP	Pn	09 35 32.5	-0.1
SMLC				eS	Sn	09 36 13.3	-3.3
SMLC				i		09 36 18.9	
	comp=Z,60nm,0.1s						
SMRC	Santa Marta, M	4.12	61	eP	Pn	09 35 38.2	+1.1
SMRC				eS	Sn	09 36 23.7	-0.8
SMRC				i		09 36 26.6	
	comp=Z,17nm,0.3s						
PLMC	San Jos del P	4.54	159	eP	Pn	09 35 42.5	-0.3
PLMC				eS	Sn	09 36 26.4	-8.6
OCAC	Ocana	4.62	101	eP	Pn	09 35 44.1	0.0
OCAC				eS	Sn	09 36 35.6	-1.6
BRRC	Barranca, Sant	4.63	116	eP	Pn	09 35 45.0	+1.0
BRRC				eS	Sn	09 36 36.3	-0.8
BRRC				i		09 36 43.1	
	comp=Z,25nm,0.2s						
GUY2C	Guyana, Caldas	4.66	147	eP	Pn	09 35 48.1	+3.2
GUY2C				i		09 35 52.7	
	comp=Z,15nm,0.6s						
GUY2C				eS	Sn	09 36 44.3	+5.7
NORC	Norcasia	4.68	140	eP	Pn	09 35 47.4	+2.5
SPBC	San Pablo de B	5.16	132	eP	Pn	09 35 55.2	+3.7
SPBC				eS	Sn	09 36 50.3	-0.2
SPBC				i		09 36 54.8	
	comp=Z,5.9nm,0.3s						
ANIL	Santa Ana	5.27	152	eP	Pn	09 35 55.2	+2.0
ANIL				i		09 35 59.8	
	comp=Z,16nm,0.4s						
RUSC	La Rusia	5.78	124	eP	Pn	09 36 03.3	+2.9
RUSC				eS	Sn	09 37 05.5	-0.8
RUSC				i		09 37 12.4	
	comp=Z,10nm,0.5s						
CHIC	Chingaza	6.13	137	eP	Pn	09 36 07.4	+2.4
CHIC				eS	Sn	09 37 11.5	-3.1
CHIC				i		09 37 20.3	
	comp=Z,7.8nm,0.8s						
SDV	Santo Domingo	7.18	92	eP	Pn	09 36 17.6	-1.7
SDV				eS	Sn	09 37 37.2	-3.2

RSNC 14 09:41:29.0±1.1, 6°.81N×73°.10W, h144^{km}±5^{km}, ML2.1, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	Barichara	0.23	200	eP	Pn	09 41 48.4	-0.6
BARC				eS	Sn	09 42 04.0	-0.2
BARC				i		09 42 06.3	
	comp=Z,22nm,0.3s						
BARC	Barichara	0.23	200	eP	Pn	09 41 48.4	-0.6
BARC				eS	Sn	09 42 04.0	-0.2
BARC				i		09 42 06.3	
	comp=Z,22nm,0.3s						
PAMC	Pamplona, Colo	0.66	37	eP	Pn	09 41 51.1	-0.2
PAMC				eS	Sn	09 42 08.6	+0.4
PAMC				i		09 42 10.7	
	comp=Z,19nm,0.2s						
PAMC	Pamplona, Colo	0.66	37	eP	Pn	09 41 51.1	-0.2
PAMC				eS	Sn	09 42 08.6	+0.4
PAMC				i		09 42 10.7	
	comp=Z,19nm,0.2s						
BRRC	Barranca, Sant	0.67	296	eP	Pn	09 41 50.3	-0.4
BRRC				eS	Sn	09 42 07.3	+0.1
BRRC				i		09 42 15.7	
	comp=Z,12nm,0.3s						
BRRC	Barranca, Sant	0.67	296	eP	Pn	09 41 50.3	-0.4
BRRC				eS	Sn	09 42 07.3	+0.1
BRRC				i		09 42 15.7	
	comp=Z,12nm,0.3s						
RUSC	La Rusia	0.91	179	eP	Pn	09 41 52.5	-0.6
RUSC				eS	Sn	09 42 10.5	-0.9
RUSC				i		09 42 12.4	
	comp=Z,7.3nm,0.5s						
RUSC	La Rusia	0.91	179	eP	Pn	09 41 52.5	-0.6
RUSC				eS	Sn	09 42 10.5	-0.9
RUSC				i		09 42 12.4	
	comp=Z,7.3nm,0.5s						
OCAC	Ocana	1.44	351	eP	Pn	09 41 57.3	-0.4
OCAC				eS	Sn	09 42 18.5	-1.1
OCAC				i		09 42 23.8	
	comp=Z,17nm,0.3s						
OCAC	Ocana	1.44	351	eP	Pn	09 41 57.3	-0.4
OCAC				eS	Sn	09 42 18.5	-1.1
OCAC				i		09 42 23.8	
	comp=Z,17nm,0.3s						
SPBC	San Pablo de B	1.50	220	eP	Pn	09 41 57.5	-0.7
SPBC				eS	Sn	09 42 20.5	-0.1
SPBC				i		09 42 25.4	
	comp=Z,27nm,0.2s						
SPBC	San Pablo de B	1.50	220	eP	Pn	09 41 57.5	-0.7
SPBC				eS	Sn	09 42 20.5	-0.1
SPBC				i		09 42 25.4	
	comp=Z,27nm,0.2s						
ZARC	Zaragoza, Cauc	1.87	291	eP	Pn	09 42 01.6	-0.7
ZARC				eS	Sn	09 42 26.7	-1.1
ZARC				i		09 42 33.0	
	comp=Z,12nm,0.2s						
ZARC	Zaragoza, Cauc	1.87	291	eP	Pn	09 42 02.7	+0.4
ZARC				eS	Sn	09 42 27.5	-0.3
ZARC				i		09 42 33.0	
	comp=Z,12nm,0.2s						
NORC	Norcasia	2.15	235	eP	Pn	09 42 04.6	-1.0
NORC				eS	Sn	09 42 32.5	-1.2
NORC				i		09 42 36.4	
	comp=Z,9.8nm,0.2s						
NORC	Norcasia	2.15	235	eP	Pn	09 42 04.6	-1.0
NORC				eS	Sn	09 42 32.5	-1.2
NORC				i		09 42 36.4	
	comp=Z,9.8nm,0.2s						
SMLC	San Martn de	2.20	334	eP	Pn	09 42 05.1	-1.1
SMLC				eS	Sn	09 42 33.2	-1.6
SMLC				i		09 42 37.1	
	comp=Z,13nm,0.3s						
SMLC	San Martn de	2.20	334	eP	Pn	09 42 05.5	-0.8
SMLC				eS	Sn	09 42 33.2	-1.6
SMLC				i		09 42 37.1	
	comp=Z,13nm,0.3s						
CHIC	Chingaza	2.25	196	eP	Pn	09 42 06.7	-0.5
CHIC				eS	Sn	09 42 35.5	-1.2
CHIC				i		09 42 41.9	
	comp=Z,4.0nm,0.4s						
CHIC	Chingaza	2.25	196	eP	Pn	09 42 06.7	-0.5
CHIC				eS	Sn	09 42 35.5	-1.2
CHIC				i		09 42 41.9	
	comp=Z,4.0nm,0.4s						
ROSC	El Rosal	2.30	212	eP	Pn	09 42 08.0	+0.2
ROSC				eS	Sn	09 42 37.6	0.0
ROSC	El Rosal	2.30	212	eP	Pn	09 42 08.0	+0.2
ROSC				eS	Sn	09 42 37.6	0.0
HELC	Santa Helena	2.49	256	eP	Pn	09 42 09.6	-0.4
HELC				eS	Sn	09 42 41.8	+0.2
HELC				i		09 42 47.1	
	comp=Z,6.5nm,0.4s						
HELC	Santa Helena	2.49	256	eP	Pn	09 42 09.6	-0.4
HELC				eS	Sn	09 42 41.8	+0.2
HELC				i		09 42 47.1	
	comp=Z,6.5nm,0.4s						
GUY2C	Guyana, Caldas	2.75	235	eP	Pn	09 42 14.3	+0.9
GUY2C				eS	Sn	09 42 48.0	+0.5
GUY2C				i		09 42 55.4	
	comp=Z,11nm,0.8s						
GUY2C	Guyana, Caldas	2.75	235	eP	Pn	09 42 14.7	+1.3
GUY2C				eS	Sn	09 42 48.0	+0.5
GUY2C				i		09 42 55.4	
	comp=Z,11nm,0.8s						
CBOC	Ciudad Bolivar	3.04	252	eP	Pn	09 42 15.9	-0.9
CBOC				eS	Sn	09 42 45.9	-7.9
CBOC				i		09 43 00.8	
	comp=Z,1.9nm,0.5s						
CBOC	Ciudad Bolivar	3.04	252	eP	Pn	09 42 15.9	-0.9
CBOC				eS	Sn	09 42 45.9	-7.9
CBOC				i		09 43 00.8	
	comp=Z,1.9nm,0.5s						
MOTC	Monteria, Cord	3.21	308	eP	Pn	09 42 25.7	+6.9
MOTC				eS	Sn	09 42 53.4	-3.9
MOTC				i		09 42 56.9	
	comp=Z,2.2nm,0.4s						
MOTC	Monteria, Cord	3.21	308	eP	Pn	09 42 25.7	+6.9
MOTC				eS	Sn	09 42 53.4	-3.9
MOTC				i		09 42 56.9	
	comp=Z,2.2nm,0.4s						
ANIL	Santa Ana	3.25	225	eP	Pn	09 42 24.8	+5.2
ANIL				eS	Sn	09 43 00.5	+1.8
ANIL				i		09 43 02.6	
	comp=Z,14nm,0.4s						
ANIL	Santa Ana	3.25	225	eP	Pn	09 42 24.8	+5.2
ANIL				eS	Sn	09 43 00.5	+1.8
ANIL				i		09 43 02.6	
	comp=Z,14nm,0.4s						
PRAC	Prado	3.55	210	eP	Pn	09 42 21.9	-1.5
PRAC				eS	Sn	09 43 05.4	0.0
PRAC				i		09 43 10.0	
	comp=Z,6.2nm,0.6s						
PRAC	Prado	3.55	210	eP	Pn	09 42 21.9	-1.5
PRAC				eS	Sn	09 43 05.4	0.0
PRAC				i		09 43 10.0	
	comp=Z,6.2nm,0.6s						
ORTC	Ortega, Tolima	3.58	217	eP	Pn	09 42 23.7	-0.1
ORTC				eS	Sn	09 43 06.1	-0.1
ORTC				i		09 43 13.2	
	comp=Z,5.0nm,0.6s						
ORTC	Ortega, Tolima	3.58	217	eP	Pn	09 42 23.7	-0.1
ORTC				eS	Sn	09 43 06.1	-0.1
ORTC				i		09 43 13.2	
	comp=Z,5.0nm,0.6s						

WEL 14 09:57:53.2±0.8, 45°S±6°×16°7E±°, h39^{km}±9^{km}, M3.8/12, ML4.0/13, MLv3.8/12, Error ellipse: s-maj=0.0km s-min=0.0km az=122.1, South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DCZ	Deep Cove	0.28	187	P	Pn	09 58 02.4	+1.1
DCZ				S	Sn	09 58 09.4	+2.1
MLZ	Mavora Lakes	0.67	106	P	Pn	09 58 07.2	+0.9
MLZ				S	Sn	09 58 18.4	+2.7
MSZ	Milford Sound	0.73	45	P	Pn	09 58 07.9	+0.9
WHZ	Wether Hill Ro	0.88	144	P	Pn	09 58 09.6	+0.6
WHZ				S	Sn	09 58 22.5	+1.9
PYZ	Puysegur Point	1.04	200	P	Pn	09 58 11.4	+0.1
WKZ	Wanaka	1.34	75	P	Pn	09 58 16.4	+1.0
WKZ				S	Sn	09 58 33.6	+1.6
EAZ	Earnscleugh	1.49	92	P	Pn	09 58 18.3	+0.9
EAZ				S	Sn	09 58 36.4	+0.7
JCZ	Jackson Bay	1.59	46	P	Pn	09 58 18.5	-0.4
APZ	The Paps	1.73	162	P	Pn	09 58 20.6	-0.2
TUZ	Tuapeka	1.87	115	P	Pn	09 58 22.7	+0.1
SYZ	Scrubby Hill	1.91	136	P	Pn	09 58 23.2	0.0
LBZ	Lake Benmore	2.27	70	P	Pn	09 58 27.8	-0.4
ODZ	Otahua Downs	2.44	88	P	Pn	09 58 30.2	-0.4
HHSZ	Highcliff Hill	2.49	107	P	Pn	09 58 31.4	+0.2
HHSZ				S	Sn	09 58 58.2	-2.1
FOZ	Fox Glacier	2.50	49	P	Pn	09 58 30.0	-1.3
TMZ	Timaru	2.83	75	P	Pn	09 58 34.7	-1.1
GCSZ	Gaunt Creek Bo	2.92	51	P	Pn	09 58 35.6	-1.6
ARCZ	Arundel	3.10	68	P	Pn	09 58 38.2	-1.4
RPZ	Rata Peaks	3.13	63	P	Pn	09 58 38.7	-1.3
RPZ				S	Sn	09 59 14.4	-1.8
WVZ	Waitaha Valley	3.31	52	P	Pn	09 58 40.7	-1.7
WACZ	Wakanui South	3.54	71	P	Pn	09 58 44.1	-1.5
WACZ				S	Sn	09 59 23.2	-3.0
MHCZ	Mount Hutt	3.54	64	P	Pn	09 58 43.8	-2.0
MHCZ				S	Sn	09 59 23.4	-3.0
RACZ	Rakaia	3.83	69	P	Pn	09 58 48.9	-0.6
INZ	Inchbonnie	3.93	53	P	Pn	09 58 49.6	-1.4
MQZ	McQueen’s Vall	4.18	71	P	Pn	09 58 52.6	-1.8
AKCZ	Akaroa Harbour	4.29	74	P	Pn	09 58 54.1	-1.8
LTZ	Lake Taylor	4.38	58	P	Pn	09 58 54.7	-2.5
AMCZ	Amberley	4.41	65	P	Pn	09 58 55.5	-2.0
OKCZ	Okains Bay	4.44	73	P	Pn	09 58 56.6	-1.4
GVZ	Greta Valley S	4.75	64	P	Pn	09 58 60.0	-2.3
DSZ	Denniston Nort	4.80	46	P	Pn	09 59 00.8	-2.3
THZ	Tophouse	5.38	52	P	Pn	09 59 08.5	-2.5
QRZ	Quartz Range	5.86	44	P	Pn	09 59 15.5	-1.9
NNZ	Nelson	6.01	51	P	Pn	09 59 18.8	-0.7
TUWZ	Tuamarina	6.19	55	P	Pn	09 59 22.6	+0.6
TCW	Tory Channel	6.52	55	P	Pn	09 59 27.9	+1.3
DUWZ	D’Urville Isla	6.59	51	P	Pn	09 59 27.0	-0.6
MSWZ	Moikau Station	6.98	60	P	Pn	09 59 36.5	+3.6
NBEZ	Newall Road No	7.71	42	P	Pn	09 59 41.4	-1.5
KHEZ	Kahui Hut	7.76	43	P	Pn	09 59 42.7	-1.0
NEZ	North Egmont	7.82	43	P	Pn	09 59 43.5	-1.0
PKE	Pukeiti	7.83	42	P	Pn	09 59 43.3	-1.2
VRZ	Vera Road	8.26	45	P	Pn	09 59 49.9	-0.5
HIZ	Hauiti	8.78	43	P	Pn	09 59 56.6	-1.0

MAN 14 10:02:47.5, 17°.80N×122°.43E, h46^{km}, mb4.9, ML3.9, MS3.9

IDC 14 10:02:49.8±3.9, 17°.58N×122°.44E, h41^{km}±37^{km}, mb3.9/18, mb1 4.0/19, mb1mx3.8/55, mbtmp4.1/19, ML4.0/1, MS2.9/3, Ms1 2.9/3, ms1mx2.6/46, Error ellipse: s-maj=22.6km s-min=15.1km az=81.0

NEIC 14 10:02:50.5±1.5, 17°.60N±0°.09×122°.4E±0°.1, h43^{km}±8^{km}, mb4.4/22, Error ellipse: s-maj=18.5km s-min=13.2km az=77.0

ISC 14 10:02:48.8±0.5, 17°.68N±0°.05×122°.42E±0°.06, h31^{km}, n64, σ1^{s}.37/60, mb4.2/26, 2C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CVP	Callao Caves	0.57	272	⇓iP	Pb	10 02 58.9	-1.4
CVP				i S	Sb	10 03 06.7	-1.6
APYP	Conner	1.13	279	eP	Pn	10 03 08.0	-0.5
LQP	Lukban	3.65	194	⇑eP	Pn	10 03 44.5	+1.2
GQP	Guinayangan	3.75	180	⇑eP	Pn	10 03 46.4	+1.8
GQP				eS	Sn	10 04 28.4	+0.7
TWG	Pinlang	5.27	346	Pn	Pn	10 04 07.2	+1.9
YULB	Yu-li	5.78	350		Pn	10 04 13.2	+0.8
TPUB	Ta-pu	5.84	344		Pn	10 04 14.8	+1.6
SSLB	Suanglung	6.23	348		Pn	10 04 20.7	+2.1
NACB	Ninganchiao	6.50	353	Pn	Pn	10 04 23.2	+0.8
YHNB	Yeheng	7.02	352		Pn	10 04 32.2	+2.7
JOW	Kunigami	10.60	30	P	Pn	10 05 18.6	+0.1
	2.8nm,0.3s,baz=218,slow=19,SNR=12						
JOW				S	Sn	10 07 10.0	-6.2
	1.7nm,0.3s,baz=110,slow=26,SNR=2.3						
JOW	Kunigami	10.60	30		Pn	10 05 18.3	-0.2
DAV	Davao City (W)	10.99	163	LR	LR	10 10 15.3	
	comp=Z,141nm,21.7s,baz=3.0,slow=41						
KSRS	Korea Array	20.28	13	P	P	10 07 23.4	+1.5
	1.9nm,0.6s,baz=198,slow=11,SNR=11						
KSRS				LR	LR	10 16 08.3	
	comp=Z,24nm,18.4s,baz=320,slow=39						
CMAR	Chiang Mai Arr	22.33	276	P	P	10 07 44.5	+0.4
	0.5nm,0.3s,baz=84,slow=8.2,SNR=8.8						
CMAR	Chiang Mai Arr	22.33	276	P	P	10 07 44.3	+0.1
KAPI	Kappang	22.70	187	LR	LR	10 16 30.0	
	comp=Z,17nm,21.3s,baz=311,slow=36						
USRK	Ussuriysk Ar.	27.64	15	P	P	10 08 34.6	+1.0
	1.9nm,0.6s,baz=195,slow=9.8,SNR=3.6						
KLR	Kul'dur	32.37	11	P	P	10 09 16.9	+1.6
	3.4nm,0.6s,baz=227,slow=6.9,SNR=13						
SONM	Songino Array	32.81	340	P	P	10 09 20.5	+1.1
	1.4nm,0.5s,baz=157,slow=9.6,SNR=8.3						
SONM	Songino Array	32.81	340	P	P	10 09 20.9	+1.4
TLY	Talaya	37.04	341	P	P	10 09 56.5	+0.8
	4.4nm,0.6s,baz=120,slow=8.1,SNR=2.9						
TLY	Talaya	37.04	341	P	P	10 09 57.2	+1.4
TLY				IAmb	IAmb	10 09 58.0	
	comp=Z,5.0nm,0.7s						
COEN	Coen	37.52	146	P	P	10 10 00.0	-0.2
COEN				IAmb	IAmb	10 10 02.5	
	comp=Z,16nm,1.4s						
WB0	Warramunga Arr	39.03	162	P	P	10 10 11.4	-1.4
WB0				IAmb	IAmb	10 10 21.8	
	comp=Z,4.5nm,1.1s						
PSA00	Pilbara Seismi	39.09	184	P	P	10 10 11.8	-1.5
WRA	Warramunga Arr	39.18	162	P	P	10 10 12.7	-1.4
	comp=Z,0.8nm,0.9s,baz=342,slow=9.3,SNR=7.6						
WB2	Warramunga Arr	39.18	162	P	P	10 10 13.2	-0.9
WB2				IAmb	IAmb	10 10 23.2	
	comp=Z,3.3nm,0.9s						
WR0	Warramunga Arr	39.26	162	P	P	10 10 13.1	-1.6
H11S3	WAKE ISLAND Hy	42.01	82	T	T	10 55 46.3	
	baz=276,slow=75						
H11S1	WAKE ISLAND Hy	42.02	82	T	T	10 55 46.8	
	baz=276,slow=75						
H11S2	WAKE ISLAND Hy	42.03	82	T	T	10 55 47.4	
	baz=276,slow=75						
H11N1	WAKE ISLAND Hy	42.09	80	T	T	10 55 44.4	
	baz=274,slow=75						
H11N2	WAKE ISLAND Hy	42.09	80	T	T	10 55 51.2	
	baz=274,slow=75						
H11N3	WAKE ISLAND Hy	42.10	80	T	T	10 55 50.0	
	baz=274,slow=75						
AS31	Alice Springs	42.60	164	P	P	10 10 41.2	-1.1
ASAR	Alice Springs	42.60	164	P	P	10 10 41.4	-0.8
	comp=Z,0.3nm,0.4s,baz=344,slow=7.2,SNR=10						
MK31	Makanchi Array	43.93	320	P	P	10 10 53.7	+0.9
MK31				IAmb	IAmb	10 10 54.4	
	comp=Z,3.9nm,1.1s						
MKAR	Makanchi Array	43.93	320	P	P	10 10 53.6	+0.8
	comp=Z,2.5nm,0.5s,baz=115,slow=8.5,SNR=29						
MAKZ	Makanchi	44.13	320	P	P	10 10 55.5	+1.1
MAKZ				IAmb	IAmb	10 10 55.9	
	comp=Z,5.8nm,1.4s						
PETK	Petropavlovsk-	44.76	30	P	P	10 10 59.8	+0.5
	comp=Z,2.3nm,0.8s,baz=224,slow=12,SNR=2.5						
PETK	Petropavlovsk-	44.76	30	P	P	10 11 00.2	+0.9
ZAA0	Zalesovo Array	46.37	330	P	P	10 11 11.4	-0.6
ZALV	Zalesovo Beam	46.37	330	P	P	10 11 11.9	-0.1
	comp=Z,1.3nm,0.6s,baz=115,slow=10.0,SNR=6.4						
ZALV	Zalesovo Beam	46.37	330	P	P	10 11 11.8	-0.2
NIL	Nilore	46.65	300	P	P	10 11 14.4	-0.2
KURK	Kurchatov	47.90	324	P	P	10 11 24.3	+0.4
KURK				IAmb	IAmb	10 11 25.3	
	comp=Z,7.2nm,1.1s						
KURBB	Kurchatov Arra	47.91	323	P	P	10 11 24.6	+0.6
	comp=Z,4.5nm,0.5s,baz=121,slow=7.7,SNR=19						
KK31	Karatay Array	50.48	312	P	P	10 11 43.6	-0.3
KK31				IAmb	IAmb	10 11 45.0	
	comp=Z,1.5nm,0.7s						
KKAR	Karatay Array	50.48	312	P	P	10 11 44.2	+0.3
CHGR	Chuyangaron	50.63	306	P	P	10 11 45.2	-0.1
CHGR				IAmb	IAmb	10 11 48.1	
	comp=Z,6.0nm,0.6s						
TIXI	Tiksi	54.10	3	P	P	10 12 09.6	-0.7
	comp=Z,1.1nm,0.5s,baz=183,slow=2.3,SNR=8.1						
TIXI	Tiksi	54.10	3	IAmb	IAmb	10 12 09.7	
	comp=Z,3.6nm,1.1s						
TIXI				P	P	10 12 10.6	+0.4
ABKAR	Akbulak array	58.89	317	P	P	10 12 45.2	+0.5
ARU	Arti	61.03	325	P	P	10 12 59.1	-0.2
KLMR	Klimovskoe	71.28	329	eP	P	10 14 03.2	-1.8
KLMR				AMP		10 14 13.2	
	comp=Z,21nm,1.5s						
KLMR				ePP	PP	10 16 41.0	-2.0
MLY	Manley	72.81	26	P	P	10 14 15.6	+1.5
MLY				IAmb	IAmb	10 14 44.6	
	comp=Z,3.2nm,1.2s						
ARCES	ARCESS Array B	75.98	339	P	P	10 14 32.6	+0.1
	comp=Z,2.2nm,0.7s,baz=39,slow=4.7,SNR=4.3						
ARCES	ARCESS Array B	75.98	339	P	P	10 14 32.6	+0.1
ARCES				IAmb	IAmb	10 14 34.2	
	comp=Z,21nm,1.4s						
SPB2	Spitsbergen Ar	76.05	348	P	P	10 14 33.5	+0.7
FINES	FINESS Array B	77.63	331	P	P	10 14 41.7	-0.2
	comp=Z,1.8nm,0.6s,baz=54,slow=5.3,SNR=17						
INK	Inuvik	78.80	22	P	P	10 14 48.9	+0.6
	comp=Z,0.8nm,0.9s,baz=274,slow=4.0,SNR=2.0						
NOA	NORSAR Array B	84.50	333	P	P	10 15 17.6	-0.9
	comp=Z,1.9nm,0.9s,baz=64,slow=5.0,SNR=2.7						
KMBO	Kilima Mbogo	85.73	267	P	P	10 15 26.2	+0.4
	comp=Z,1.5nm,0.6s,baz=75,slow=5.6,SNR=5.1						

IDC 14 10:08:54.6±1.3, 0°.93S×16°.02W, h0^{km}, mb3.8/7, mb1 4.0/9, mb1mx3.8/36, mbtmp3.9/9, ML3.8/2, MS3.7/8, Ms1 3.7/8, ms1mx3.4/28, Error ellipse: s-maj=37.8km s-min=27.1km az=110.0

NEIC 14 10:08:56.2±1.4, 1°.00S±0°.10×15°.89W±0°.10, h10^{km}±1^{km}, mb4.7/19, Error ellipse: s-maj=21.7km s-min=8.5km az=136.0

ISC 14 10:08:57.2±0.7, 1°.0S±0°.1×15°.97W±0°.09, h20^{km}, n45, σ1^{s}.09/36, mb4.5/18, MS3.6/6, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10N2	ASCENSION HYDR	6.97	168	T	T	10 18 00.3	
	baz=348,slow=74,SNR=269						
H10N3	ASCENSION HYDR	6.98	168	T	T	10 18 00.4	
	baz=348,slow=74,SNR=284						
H10N1	ASCENSION HYDR	6.99	168	T	T	10 18 01.9	

	baz=348,slow=74,SNR=360						
LIC	Lamto	13.05	57	eP	Pn	10 12 03.7	+2.1
	78nm,1.7s						
TIC	Toumodi	13.29	55	eP	Pn	10 12 02.1	-2.8
KIC	Kosan Boka	13.36	57	eP	Pn	10 12 07.0	+1.1
	75nm,1.6s						
DBIC	Dimbokro	13.43	55	Pn	Pn	10 12 06.5	-0.3
	0.6nm,0.3s,baz=254,slow=13,SNR=6.3						
DBIC				LR	LR	10 16 18.0	
	comp=Z,312nm,20.6s,baz=226,slow=33						
KOWA	Kowa	19.39	37	P	P	10 13 22.1	0.0
	0.2nm,0.3s,baz=228,slow=7.0,SNR=6.7						
KOWA				LR	LR	10 20 02.3	
	comp=Z,228nm,19.0s,baz=212,slow=34						
KOWA	Kowa	19.39	37	P	P	10 13 21.9	-0.2
TOA0	Torodi Ar. Sit	22.44	51	P	P	10 13 54.4	-0.7
TORD	Torodi Ar. Bea	22.44	51	P	P	10 13 54.9	-0.1
	3.4nm,0.7s,baz=236,slow=12,SNR=14						
TORD				LR	LR	10 21 40.3	
	comp=Z,157nm,19.8s,baz=260,slow=34						
TORD	Torodi Ar. Bea	22.44	51	P	P	10 13 55.0	-0.1
MACI	Morro de la Ar	29.05	359	P	P	10 14 56.4	-0.1
ROSA	Rosais	41.08	345	P	P	10 16 39.5	-0.1
ESDC	Sonseca Array	41.91	14	LR	LR	10 32 50.2	
	comp=Z,62nm,19.0s,baz=265,slow=34						
ESBB	Sonseca Array	41.91	14	P	P	10 16 46.9	+0.3
ESBB				IAmb	IAmb	10 16 51.8	
	comp=Z,7.8nm,1.2s						
KEST	Kesra	43.48	30	LR	LR	10 35 44.1	
	comp=Z,145nm,19.8s,baz=212,slow=37						
CPUP	Villa Florida	47.09	234	LR	LR	10 34 06.6	
	comp=Z,87nm,22.0s,baz=46,slow=32						
SAML	Samuel	47.66	259	P	P	10 17 32.4	-0.3
BOSA	Boshof	47.99	129	P	P	10 17 36.2	+1.0
	comp=Z,1.8nm,0.7s,baz=323,slow=8.6,SNR=3.8						
BOSA				LR	LR	10 34 40.5	
	comp=Z,42nm,18.7s,baz=338,slow=32						
BOSA	Boshof	47.99	129	P	P	10 17 33.7	-1.6
TIP	Timpagrande	49.96	33	P	P	10 17 49.4	-0.7
TIP				IAmb	IAmb	10 18 13.4	
	comp=Z,6.4nm,1.2s						
BNI	Bardonecchia	50.04	21	P	P	10 17 50.4	-0.2
BNI				IAmb	IAmb	10 18 11.9	
	comp=Z,16nm,1.6s						
CBYP	Canovanas	52.64	294	P	P	10 18 10.6	+0.1
CBYP				IAmb	IAmb	10 18 37.3	
	comp=Z,15nm,1.1s						
SJG	San Juan	52.86	294	P	P	10 18 11.3	-0.8
SJG				IAmb	IAmb	10 18 24.2	
	comp=Z,35nm,1.4s						
KMBO	Kilima Mbogo	53.21	91	P	P	10 18 14.3	-0.8
KMBO				IAmb	IAmb	10 18 32.1	
	comp=Z,5.3nm,1.4s						
OBIP	Obispado Ponce	53.26	293	P	P	10 18 14.9	-0.1
OBIP				IAmb	IAmb	10 18 38.1	
	comp=Z,24nm,1.2s						
BFO	Black Forest	53.44	20	P	P	10 18 16.2	+0.4
BFO				IAmb	IAmb	10 18 29.8	
	comp=Z,7.5nm,1.3s						
AGPR	Aguadilla, PR	53.84	294	P	P	10 18 19.2	0.0
GERES	GERESS Array B	55.85	23	P	P	10 18 33.8	+0.4
	comp=Z,0.6nm,0.7s,baz=210,slow=5.5,SNR=2.7						
GERES	GERESS Array B	55.85	23	P	P	10 18 34.0	+0.6
ROSC	El Rosal	58.58	276	LR	LR	10 40 41.3	
	comp=Z,98nm,21.5s,baz=248,slow=33						
BRTR	Keskin Array B	60.72	42	P	P	10 19 10.1	+2.4
	comp=Z,0.4nm,0.8s,baz=258,slow=7.2,SNR=1.7						
FINES	FINESS Array B	69.99	20	P	P	10 20 07.5	+0.3
	comp=Z,3.3nm,0.9s,baz=235,slow=6.6,SNR=1.6						
352A	Blakely	72.66	303	P	P	10 20 23.5	-0.4
V51A	Loudon	73.16	308	P	P	10 20 27.6	+0.7
V51A				IAmb	IAmb	10 20 50.9	
	comp=Z,8.8nm,1.2s						
OLIL	Olney	76.73	310	P	P	10 20 47.4	0.0
OLIL				IAmb	IAmb	10 21 03.0	
	comp=Z,18nm,1.3s						
GEYT	Alibeck	78.08	51	P	P	10 20 52.2	-2.8
PBMO	Poplar Bluff	78.17	308	P	P	10 20 54.5	-1.0
PBMO				IAmb	IAmb	10 20 57.9	
	comp=Z,16nm,1.5s						
ABKAR	Akbulak array	81.56	40	P	P	10 21 14.6	+1.0
MAW	Mawson	84.86	158	P	P	10 21 31.6	+1.5
	comp=Z,0.9nm,0.9s,baz=282,slow=9.3,SNR=1.8						
TXAR	Lajitas Array	88.46	299	P	P	10 21 49.2	+0.4
	comp=Z,0.4nm,0.8s,baz=116,slow=5.7,SNR=3.7						
ASAR	Alice Springs	141.83	132	PKhKP	PKPpre	10 28 24.7	
	comp=Z,0.3nm,0.6s,baz=218,slow=2.1,SNR=8.7						
WRA	Warramunga Arr	144.24	127	PKP	PKPbc	10 28 31.2	+0.2
	comp=Z,0.6nm,0.6s,baz=242,slow=2.7,SNR=9.8						
WRA	Warramunga Arr	144.24	127		PKPdf	10 28 32.0	-0.8

ISK 14 10:18:25.8, 41.°18N×28.°84E, h0^{km}, ML1.0/4, Suspected Mining explosion., Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BGKT	Bogazkoy	0.05	275	PG	Pg	10 18 27.6	+0.8
BGKT				SG	Sg	10 18 28.9	+1.4
KLYT	Kilyos	0.17	63	PG	Pg	10 18 29.8	+0.7
KLYT				SG	Sg	10 18 32.6	+1.3
KAVV	Kandilli-Istan	0.20	124	PG	Pg	10 18 30.3	+0.7
CTKS	Kestanelik-??a	0.26	283	PG	Pg	10 18 31.5	+0.7
CTKS				SG	Sg	10 18 35.5	+1.4

DDA 14 10:19:19.1, 39.°64N×30.°06E, h7^{km}±1^{km}, ML1.5, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANDZ	Kutahya, Merke	0.18	223	iP	Pg	10 19 23.4	+0.6
ANDZ				iS	Sg	10 19 26.8	+1.5
AUBOZ	BOZOYUK	0.27	356	iP	Pg	10 19 24.5	0.0
AUBOZ				iS	Sg	10 19 28.8	+0.7
AUBOZ				IAML		10 19 30.0	
	comp=N,56nm,0.4s						
BORA	Eskisehir	0.39	52	iP	Pg	10 19 26.2	-0.5
BORA				iS	Sg	10 19 32.6	+0.8
BORA				IAML		10 19 33.0	
	comp=N,52nm,0.3s						
BORA				IAML		10 19 34.0	
	comp=E,46nm,0.3s						
BILE	Bilecik/Merkez	0.54	345	iP	Pg	10 19 29.9	+0.4
BILE				iS	Sb	10 19 38.4	-0.6
BILE				IAML		10 19 39.0	
	comp=E,27nm,0.4s						

BJI ***14*** *10:21:37.1±0.0, 38.°13N×144.°09E, h7^{km}, mB5.1/56, mb4.9/79, Ms4.9/87, Ms7 4.6/80*

IDC ***14*** *10:21:37.9±0.4, 37.°91N×143.°98E, h0^{km}, mb4.7/32, mb1 4.9/40, mb1mx4.8/44, mbtmp4.8/40, ML4.0/6, MS4.2/46, Ms1 4.2/46, ms1mx4.1/66, Error ellipse: s-maj=12.1km s-min=10.3km az=113.0*

MOS ***14*** *10:21:41.1±1.1, 38.°15N×143.°82E, h26^{km}, mb5.3/51, MS4.2/9, Error ellipse: s-maj=6.0km s-min=3.7km az=112.3*

JMA ***14*** *10:21:41.6±0.1, 38.°02N×143.°81E, h44^{km}, M5.1*

JMA Felt II J1.

NIED ***14*** *10:21:41.7, 38.°02N×143.°81E, h44^{km}, MW5.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.33; $M_{\theta\theta}$-1.41; $M_{\phi\phi}$2.74; $M_{r\theta}$1.18; $M_{\theta\phi}$1.51; $M_{\phi r}$0.54; Fault plane solution: $M_0$3.03000×10^{16} NP1: ϕ_s235.00000°, δ72.00000°, λ-37.00000°. NP2: ϕ_s338.00000°, δ55.00000°, λ-158.00000°.*

NEIC ***14*** *10:21:42.4±1.7, 37.°94N±0.°06×143.°85E±0.°08, h27^{km}±4^{km}, mb5.2/299, Mww5.2 Error ellipse: s-maj=9.8km s-min=7.7km az=130.0*

GCMT ***14*** *10:21:43.4±0.2, 37.°97N±0.°01×143.°94E±0.°01, h20^{km}±1^{km}, MW5.1/124, Moment Tensor Solution. s44,c54; s124,c201; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.61±.18; $M_{\theta\theta}$-3.48±.14; $M_{\phi\phi}$5.09±.15; $M_{r\theta}$-1.12±.29; $M_{\theta\phi}$3.12±.10; $M_{\phi r}$1.67±.27; Best double couple: $M_0$5.76100×10^{16} NP1:ϕ_s61.00000°, δ66.00000°, λ-11.00000°. NP2:ϕ_s156.00000°, δ80.00000°, λ-156.00000°. Principal axes: T 6.3060, Plg9.0000°, Azm287.0000°; N -1.0890, Plg64.0000°, Azm178.0000°; P -5.2170, Plg24.0000°, Azm21.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***14*** *10:21:44, 38.°15N×143.°94E, h18^{km}, Moment Tensor Solution. Duration: 8^s.0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.94; $M_{\theta\theta}$-3.54; $M_{\phi\phi}$5.49; $M_{r\theta}$-3.80; $M_{\theta\phi}$2.82; $M_{\phi r}$-2.36; Fault plane solution: $M_0$7.16000×10^{16} NP1: ϕ_s154.00000°, δ47.00000°, λ-166.00000°. NP2: ϕ_s55.00000°, δ80.00000°, λ-43.00000°. Principal axes: T 7.5558, Plg21.0000°, Azm111.0000°; N -0.8788, Plg46.0000°, Azm224.0000°; P -6.6770, Plg37.0000°, Azm5.0000°;*

BGR ***14*** *10:21:47.6±0.0, 39.°15N×144.°20E, h16^{km}, mb5.0*

ISC 14 10:21:41.2±0.4, 38.°02N±0.°03×143.°93E±0.°03, h19^{km}±1^{km}, h19^{km}:pP-P, n850, σ1^s.74/807, mb5.1/248, MS4.5/71, 77C-29D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKH	Ishinomakikobu	1.97	279	⇑P	Pn	10 22 12.1	-1.4
JIKH				S	Sn	10 22 34.2	-3.4
OFUJ	Ofunato	2.07	302	⇑P	Pn	10 22 13.8	-1.1
OFUJ				S	Sn	10 22 37.6	-2.5
JIO	Ouri	2.08	283	⇑P	Pn	10 22 13.8	-1.2
JIO				S	Sn	10 22 37.4	-3.0
JKMT	Kesennumamotoy	2.09	293	⇑P	Pn	10 22 14.0	-1.1
JKMT				S	Sn	10 22 38.0	-2.6
MIYJ	Miyakonagasawa	2.27	314	⇑P	Pn	10 22 16.4	-1.2
JMK	Ichinoseki	2.33	295	⇑P	Pn	10 22 17.5	-0.9
JMK				S	Sn	10 22 44.2	-2.2
JMST	Minamisoumatoc	2.43	264	⇑P	Pn	10 22 18.0	-1.8
JOFO	Osakifurukawao	2.45	285	⇑P	Pn	10 22 19.8	-0.3
JMM	Marumori	2.49	268	⇑P	Pn	10 22 19.2	-1.4
JMM	Marumori	2.49	268		Pn	10 22 19.5	-1.1
JMM				Sn	Sn	10 22 46.9	-3.6
JFK	Kawauchi	2.51	256	⇑P	Pn	10 22 18.9	-2.1
JOM	Ohasama	2.52	306	⇑P	Pn	10 22 20.6	-0.6
JOM				S	Sn	10 22 49.7	-1.7
JOU	Okura	2.60	279	⇑P	Pn	10 22 21.7	-0.5
ONAJ	Iwakimizuishiy	2.65	251	⇑P	Pn	10 22 20.9	-2.1
JKZ	Kuzumaki	2.82	315	⇑P	Pn	10 22 24.9	-0.4
JFFD	Fukushimafurud	2.83	252	⇑P	Pn	10 22 23.5	-1.9
JFT	Otama	2.89	261	⇑P	Pn	10 22 25.6	-0.6
JFT				S	Sn	10 22 58.1	-2.4
JRG	Rokugo	2.92	299	⇑P	Pn	10 22 26.2	-0.5
JYK	Kaneyama	2.95	289	⇑P	Pn	10 22 26.6	-0.3
JYK				eS	Sn	10 22 59.5	-2.3
JANG	Nango	3.01	322	P	Pn	10 22 26.9	-0.9
JANG				S	Sn	10 23 00.5	-2.9
JHO	Hitachi	3.03	243	⇑P	Pn	10 22 25.7	-2.3
JYS	Shirataka	3.06	275	P	Pn	10 22 28.0	-0.5
JYW	Yuwa	3.28	299	⇑P	Pn	10 22 31.7	+0.1
JYA	Atsumi	3.37	281	⇑P	Pn	10 22 32.5	-0.2
JIHU	Itakohorinouch	3.41	234	P	Pn	10 22 31.5	-1.8
JYT	Yasato	3.48	240		Pn	10 22 32.4	-1.9
JYT				Sn	Sn	10 23 08.4	-6.5
JTM	Tenmabayashi	3.55	322		Pn	10 22 36.4	+1.2
JSMT	Sammumatsuo	3.66	231	P	Pn	10 22 34.8	-2.0
JAW	Awa shima	3.71	278	⇑P	Pn	10 22 37.3	-0.2
JAG	Ashikaga	3.91	247	⇑P	Pn	10 22 38.6	-1.6
JKT	Katashina	3.93	253	P	Pn	10 22 40.6	0.0
JOT	Ohata	4.03	327	P	Pn	10 22 42.1	+0.3
ERM	Erimo	4.04	352	ceP	Pn	10 22 41.0	-0.9
ERM				pmax	pmax		
	comp=Z,2μm,1.3s						
ERM	Erimo	4.04	352		Pn	10 22 41.2	-0.7
TOK	Tokyo	4.08	236	P	Pn	10 22 41.3	-1.1
BSO1	Boso 1	4.12	216	⇑P	Pn	10 22 40.1	-2.4
BSO4	Boso 4	4.18	225	P	Pn	10 22 41.9	-2.0
BSO3	Boso 3	4.23	222	P	Pn	10 22 42.0	-2.4
JNBK	Urakawa-nobuka	4.35	348	⇓P	Pn	10 22 45.6	-0.7
JGK	Kuni	4.46	253	P	Pn	10 22 47.5	-0.3
JKB	Kayabe	4.46	331	P	Pn	10 22 48.0	+0.2
JKB				S	Sn	10 23 35.0	-4.1
JSD	Sado	4.48	272		Pn	10 22 47.0	-1.0
JSGW	Sagamiharawaka	4.49	239	P	Pn	10 22 46.5	-1.7
JRY	Ryogami san	4.49	245	P	Pn	10 22 47.0	-1.2
JRY				S	Sn	10 23 35.5	-4.5
JCH	Churui	4.61	355	P	Pn	10 22 48.7	-1.1
JCH				S	Sn	10 23 39.3	-3.6
JJN	Nakama	4.67	261	P	Pn	10 22 51.5	+0.8
JOD2	Odawara 2	4.77	236	P	Pn	10 22 49.8	-2.2
JOD2				S	Sn	10 23 40.8	-5.9
MJAR	Matsushiro Arr	4.80	254	Pn	Pn	10 22 51.4	-1.0
	comp=Z,10nm,0.3s,baz=85,slow=15,SNR=325						
MJAR				Sn	Sn	10 23 44.1	-3.4
	comp=Z,16nm,0.3s,baz=93,slow=11,SNR=5.2						
MJAR				LR	LR	10 24 42.7	
	comp=Z,2μm,21.3s,baz=70,slow=39						
MJAR	Matsushiro Arr	4.80	254	P	Pn	10 22 51.6	-0.8
MJAR	Matsushiro Arr	4.80	254		Pn	10 22 51.6	-0.8
MAJO	Matsushiro	4.80	254	P	Pn	10 22 52.3	-0.1
MAJO	Matsushiro	4.80	254		Pn	10 22 52.3	-0.1
MAT	Matsushiro	4.80	254	P	Pn	10 22 52.1	-0.3
MAT				S	Sn	10 23 44.8	-2.7
MAT	Matsushiro	4.80	254	P	Pn	10 22 52.1	-0.3
MJB9	Matsu-Tunnel	4.80	254		Pn	10 22 51.6	-0.8
JIM2	Oshima 3	4.90	229	P	Pn	10 22 50.5	-3.4
JYN	Shimob	5.00	241	P	Pn	10 22 54.2	-1.1
JHTM	Izuhatsuma	5.00	234	P	Pn	10 22 52.9	-2.3
JFNN	Fujinakano	5.07	238	P	Pn	10 22 54.4	-1.8
JNT	Takato	5.11	247	P	Pn	10 22 56.6	-0.2
JKHN	Kushirohamanak	5.15	10	⇓P	Pn	10 22 55.2	-2.0
JEW	Eniwo	5.18	339		Pn	10 22 58.4	+0.8
JAR	Ashorobuto	5.28	359	⇓P	Pn	10 22 57.0	-2.0
JOSM	Okushiri--Mats	5.31	321	P	Pn	10 22 59.7	+0.3
JOSM				S	Sn	10 23 57.1	-2.9
JMKN	Mikurajimanish	5.42	222	P	Pn	10 22 57.3	-3.6
JTT	Ttatey	5.45	257	P	Pn	10 23 02.1	+0.8
NEM2	Nemuro 2	5.52	14	⇓P	Pn	10 22 59.4	-2.8
NMR	Nemuro--Hokkai	5.52	14	⇓iP	Pn	10 22 59.3	-3.0
NMR				eS	Sn	10 23 58.9	-6.3
JGN	Niukaw	5.58	253	P	Pn	10 23 03.6	+0.4
JSG	Sagara	5.71	236		Pn	10 23 03.5	-1.5
JGF	Kuroka	5.80	247		Pn	10 23 05.7	-0.5
GLVR	Golovnino	5.84	11	d iP	Pn	10 23 04.1	-2.6
GLVR				iS	Sn	10 24 07.0	-6.1
GLVR				pmax	pmax		
	comp=N,759nm,0.5s						
GLVR				pmax	pmax		
	comp=Z,2μm,0.5s						
GLVR				pmax	pmax		
	comp=E,599nm,0.3s						
GLVR				smax	smax		
	comp=N,5μm,0.4s						
GLVR				smax	smax		
	comp=E,3μm,0.3s						
JKK2	Kamakawa 2	5.92	352	P	Pn	10 23 06.8	-1.0
JHJ2	Mitsune	5.93	216		Pn	10 23 03.9	-4.1
JHJ	Hachijo jima 2	5.94	216	Pn	Pn	10 23 04.2	-3.9
	comp=E,352nm,0.3s,baz=267,slow=18,SNR=45						
JHJ				Sn	Sn	10 24 06.9	-8.7
	comp=E,392nm,0.3s,baz=231,slow=22,SNR=8.3						
JHJ				LR	LR	10 25 43.0	
	comp=E,1μm,20.4s,baz=88,slow=42						
JTKR	Abashiri--Toko	5.95	360	P	Pn	10 23 06.6	-1.6
GRPR	Tuman	6.13	13	eP	Pn	10 23 07.9	-2.8
GRPR				eS	Sn	10 24 12.4	-7.8
GRPR				pmax	pmax		
	comp=Z,2μm,0.3s						
GRPR				smax	smax		
	comp=N,4μm,0.3s						
GRPR				smax	smax		
	comp=E,3μm,0.2s						
INU	Inuyama	6.16	246		Pn	10 23 11.5	+0.3
RUSJ	Misakicho	6.16	9	⇓iP	Pn	10 23 09.0	-2.1
RUSJ				iS	Sn	10 24 17.1	-3.9
ASAJ	Asahikawa	6.18	351	Pn	Pn	10 23 11.3	0.0
	comp=E,62nm,0.3s,baz=195,slow=16,SNR=564						
ASAJ				Sn	Sn	10 24 18.1	-3.4
	comp=E,36nm,0.3s,baz=48,slow=20,SNR=6.6						
ASAJ	Asahikawa	6.18	351	P	Pn	10 23 11.5	+0.2
JKA	Kamikawa-asahi	6.18	351		Pn	10 23 11.4	+0.1
YUK	Yuzh-Kuril'sk	6.19	13	d iP	Pn	10 23 08.9	-2.5
YUK				iS	Sn	10 24 15.0	-6.6
YUK				pmax	pmax		
	comp=Z,2μm,0.3s						
YUK				pmax	pmax		
	comp=E,748nm,0.4s						
YUK				pmax	pmax		
	comp=N,422nm,0.2s						
YUK				smax	smax		
	comp=E,5μm,0.7s						
YUK				smax	smax		
	comp=N,2μm,0.4s						
YUK				MLR	MLR		
	comp=Z,1μm,12.0s						
JYTA	Yamagatataniai	6.26	249	P	Pn	10 23 12.4	-0.1
JKN2	Miekihoku	7.25	241	P	Pn	10 23 25.4	-0.7
JWT	Wachi	7.38	251	Pn	Pn	10 23 28.0	+0.1
JMMH	Miemihama	7.66	239	P	Pn	10 23 30.2	-1.5
KUR	Kuril'sk	7.79	21	d iP	Pn	10 23 30.7	-2.7
KUR				eS	Sn	10 24 53.0	-8.0
KUR				pmax	pmax		
	comp=Z,2μm,3.0s						
KUR				pmax	pmax		
	comp=Z,722nm,0.8s						
KUR				pmax	pmax		
	comp=E,287nm,0.3s						
KUR				pmax	pmax		
	comp=N,294nm,0.5s						
KUR				smax	smax		
	comp=E,684nm,0.4s						
KUR				smax	smax		
	comp=N,306nm,0.2s						
KUR				smax	smax		
	comp=N,2μm,2.4s						
KUR				MLR	MLR		
	comp=N,2μm,12.0s						
KUR				MLR	MLR		
	comp=Z,2μm,12.0s						
KUR				MLR	MLR		
	comp=E,6μm,11.0s						
TEY	Ternei	8.91	324	⇓eP	Pn	10 23 49.5	+0.8
TEY				eS	Sn	10 25 27.9	-0.6
TEY				pmax	pmax		
	comp=N,30nm,0.7s						
TEY				pmax	pmax		
	comp=E,30nm,0.7s						
TEY				pmax	pmax		
	comp=Z,40nm,0.7s						
TEY				MLR	MLR		
	comp=N,900nm,13.0s						
TEY				MLR	MLR		
	comp=E,2μm,13.0s						
TEY				MLR	MLR		
	comp=Z,2μm,15.0s						
YSS	Yuzh-Sakhalins	8.97	355	eP	Pn	10 23 48.9	-0.8
YSS				pmax	pmax		
	comp=Z,500nm,3.3s						
YSS				pmax	pmax		
	comp=Z,160nm,0.8s						
YSS				MLR	MLR		
	comp=N,2μm,13.0s						
YSS				MLR	MLR		
	comp=Z,2μm,13.0s						
YSS	Yuzh-Sakhalins	8.97	355	Pn	Pn	10 23 49.3	-0.3
JMN	Monobe	9.21	245	Pn	Pn	10 23 51.9	-1.1
JHS	Saijyo	9.21	254	Pn	Pn	10 23 53.1	+0.1
VLA	Vladivostok	10.48	303	iP	Pn	10 24 12.2	+1.8
MSHR	Mys Shultsa	10.77	299	ceP	Pn	10 24 15.2	+1.0
MSHR				pmax	pmax		
	comp=Z,68nm,0.8s						
USA0B	Ussuriysk Arra	10.92	308	P	Pn	10 24 17.4	+1.1
USA0B	Ussuriysk Arra	10.92	308	Pn	Pn	10 24 17.4	+1.1
USRK	Ussuriysk Ar.	10.92	308	Pn	Pn	10 24 17.7	+1.4
	baz=115,slow=14,SNR=72						
USRK				LR	LR	10 28 07.1	
	comp=Z,1μm,20.6s,baz=116,slow=35						
USRK	Ussuriysk Ar.	10.92	308	P	Pn	10 24 17.7	+1.4
USRK	Ussuriysk Ar.	10.92	308	Pn	Pn	10 24 17.4	+1.0
JCJ	Chichijima	10.99	188	Pn	Pn	10 24 11.1	-6.3
	comp=Z,76nm,0.3s,baz=75,slow=9.4,SNR=64						
JCJ				Sn	Sn	10 26 04.8	-15
	comp=Z,40nm,0.3s,baz=266,slow=22,SNR=3.6						
UGL	Uglegorsk	11.14	354	eP	Pn	10 24 15.8	-3.5
UGL				eS	Sn	10 26 20.6	-2.6
UGL				pmax	pmax		
	comp=Z,400nm,1.3s						
UGL				pmax	pmax		
	comp=Z,159nm,1.2s						
UGL				smax	smax		
	comp=E,135nm,1.0s						
UGL				smax	smax		
	comp=N,68nm,1.1s						
UGL				smax	smax		
	comp=E,1μm,3.0s						
UGL				smax	smax		
	comp=N,600nm,3.6s						
UJN	ULJIN	11.58	269	P	Pn	10 24 26.8	+1.4
	SNR=7.1						
KSTBA	Taebaek	11.92	270	P	Pn	10 24 32.1	+1.9
	SNR=18						
CHYB	Chungyang	11.98	269	P	Pn	10 24 32.2	+1.3
	SNR=14						
KSADO	Andong	12.05	267	P	Pn	10 24 34.0	+2.1
	SNR=6.1						
KSUSN	Ulsan	12.09	263	P	Pn	10 24 33.6	+1.2
	SNR=9.9						
YOCB	Yeongcheon	12.15	265	P	Pn	10 24 35.0	+1.7
	SNR=7.2						
KSDAG	Daegu	12.25	264	P	Pn	10 24 36.0	+1.4
	SNR=10.0						
KSEUS	ULSEONG	12.27	267	P	Pn	10 24 37.5	+2.6
	SNR=7.3						
KSYOW	Yeongwol	12.31	271	P	Pn	10 24 37.1	+1.7
	SNR=7.5						
YOJB	Youngju	12.31	269	P	Pn	10 24 38.0	+2.6
	SNR=8.1						
KSIJA	INJE	12.48	275	P	Pn	10 24 38.8	+1.1
	SNR=8.2						
JECH	Jecheon	12.52	271	P	Pn	10 24 40.0	+1.7
	SNR=11						
KSWJU	Wonju	12.59	272	P	Pn	10 24 41.1	+1.8
	SNR=17						
MDJ	Mudanjiang	12.63	306	P	Pn	10 24 40.4	+0.7
MDJ				pP	P	10 24 44.8	-6.2
MDJ				sP		10 24 47.1	
MDJ				S	Sn	10 27 03.3	+3.6
MDJ				sS		10 27 08.6	
MDJ				ScP	ScP	10 33 46.9	-2.1
MDJ				PcS	PcS	10 33 51.4	+0.2
MDJ				ScS	ScS	10 37 25.8	+0.7
MDJ				pmax	pmax		
	comp=N,190nm,0.9s						
MDJ				pmax	pmax		
	comp=N,640nm,3.7s						
MDJ				LR	LR		
	comp=N,3μm,15.4s						
MDJ				LR	LR		
	comp=N,2μm,17.7s						
MDJ				LR	LR		
	comp=N,2μm,17.9s						
KSRS	Korea Array	12.69	272	Pn	Pn	10 24 42.0	+1.5
	comp=N,1.4nm,0.3s,baz=86,slow=13,SNR=47						
KSRS				LR	LR	10 28 59.7	
	comp=N,874nm,21.3s,baz=72,slow=35						
KSRS	Korea Array	12.69	272	P	Pn	10 24 42.1	+1.5
KSMGY	Mungyeong	12.71	269	P	Pn	10 24 41.7	+0.8
	SNR=10						
KSAR	Wonju Array Be	12.72	272	P	Pn	10 24 40.4	-0.6
KSAR	Wonju Array Be	12.72	272	Pn	Pn	10 24 40.4	-0.6
KS19	Wonju Array Si	12.73	273		Pn	10 24 40.6	-0.5
KSCHC	Chuncheon	12.74	274	P	Pn	10 24 42.3	+1.1
	SNR=8.7						
HWCB	Hwacheon	12.81	276	P	Pn	10 24 43.2	+0.9
	SNR=5.6						
KSCPR	CHUPUNGNYEONG	12.87	267	P	Pn	10 24 44.1	+1.1
	SNR=5.7						
TYV	Tymovskoe	12.88	356	eP	Pn	10 24 42.5	-0.5
TYV				eS	Sn	10 27 07.4	+1.7
TYV				pmax	pmax		
	comp=Z,300nm,2.6s						
TYV				pmax	pmax		
	comp=Z,105nm,0.9s						
TYV				smax	smax		
	comp=N,12nm,0.9s						
TYV				smax	smax		
	comp=E,10.0nm,0.9s						
TYV				smax	smax		
	comp=N,600nm,6.7s						
TYV				smax	smax		
	comp=E,200nm,6.7s						
TYV				MLR	MLR		
	comp=Z,1μm,16.0s						
KSCWO	Cheorwon	12.94	275	P	Pn	10 24 44.9	+0.8
	SNR=16						
GAPB	Gapyeong	12.98	274	P	Pn	10 24 46.0	+1.4
	SNR=7.2						
KSICN	Icheon	13.11	272	P	Pn	10 24 47.5	+1.2
	SNR=17						

KSCEA	**Cheonan**	**13.31**	**270**	P	**Pn**	**10 24 50.1**	**+1.1**
	SNR=8.5						
TJN	**Taejon**	**13.31**	**268**	*ce*P	**Pn**	**10 24 47.9**	**-1.2**
KSSWO	**Suwon**	**13.47**	**272**	P	**Pn**	**10 24 52.1**	**+0.9**
	SNR=8.3						
KSSEO	**Seoul**	**13.48**	**273**	P	**Pn**	**10 24 52.5**	**+1.2**
	SNR=6.6						
KSSEO	**Seoul**	**13.48**	**273**	P	**Pn**	**10 24 53.0**	**+1.7**
	SNR=6.6						
KSMUS	**Musan**	**13.56**	**275**	P	**Pn**	**10 24 52.9**	**+0.5**
	SNR=10						
HAWB	**Hwaseong-si**	**13.65**	**271**	P	**Pn**	**10 24 56.0**	**+2.3**
	SNR=8.4						
SHHB	**Siheung-si**	**13.67**	**272**	P	**Pn**	**10 24 55.0**	**+1.1**
	SNR=10						
INCN	**Inchon**	**13.70**	**273**	P	**Pn**	**10 24 55.0**	**+0.6**
INCN	**Inchon**	**13.70**	**273**	Pn	**Pn**	**10 24 55.0**	**+0.6**
GRNR	**Gornyy**	**13.82**	**340**	⇑*i*P	**Pn**	**10 24 55.2**	**-0.8**
GRNR				*e*S	**Sn**	**10 27 31.0**	**+2.1**
GRNR				pmax	pmax		
	comp=N,20nm,0.9s						
GRNR				pmax	pmax		
	comp=E,10.0nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,20nm,0.9s						
GRNR				smax	smax		
	comp=N,2.0nm,0.6s						
GRNR				MLR	MLR		
	comp=N,860nm,15.0s						
GRNR				MLR	MLR		
	comp=E,2µm,15.0s						
KSDEI	**Deokjeokdo**	**14.15**	**272**	P	**Pn**	**10 25 02.1**	**+1.6**
	SNR=7.4						
KLR	**Kul'dur**	**14.24**	**326**	Pn	**Pn**	**10 25 01.2**	**-0.5**
	comp=E,0.7nm,0.3s,baz=133,slow=12,SNR=60						
KLR				LR	LR	10 30 58.5	
	comp=E,1µm,18.8s,baz=142,slow=39						
KLR	**Kul'dur**	**14.24**	**326**	*ce*P	**Pn**	**10 25 01.1**	**-0.6**
KLR				pmax	pmax		
	comp=Z,68nm,1.4s						
CN2	**Changchun**	**15.11**	**298**	*e*P	**Pn**	**10 25 10.3**	**-3.2**
CN2				S	**Sn**	**10 27 58.3**	**-2.0**
CN2				pmax	pmax		
	comp=Z,200nm,13.0s						
CN2				LR	LR		
	comp=Z,1µm,15.0s						
CN2				LR	LR		
	comp=Z,1µm,15.0s						
CN2				LR	LR		
	comp=Z,700nm,17.1s						
SKR	**Severo-Kuril's**	**15.35**	**30**	*e*P	**Pn**	**10 25 11.9**	**-4.6**
SKR				*e*S	**S**	**10 28 15.2**	**-6.8**
SKR				pmax	pmax		
	comp=Z,100nm,3.3s						
SKR				pmax	pmax		
	comp=Z,65nm,1.0s						
SKR				MLR	MLR		
	comp=Z,600nm,12.0s						
OKH	**Okha**	**15.55**	**358**	*de*P	Pn	10 25 11.7	-7.5
OKH				*e*S	**Sn**	**10 28 03.8**	**-7.0**
OKH				smax	smax		
	comp=N,200nm,15.8s						
SNY	**Shenyang**	**16.07**	**290**	⇓P	**Pn**	**10 25 25.0**	**-0.9**
SNY				pmax	pmax		
	comp=N,32nm,1.7s						
SNY				pmax	pmax		
	comp=N,420nm,3.8s						
SNY				LR	LR		
	comp=N,2µm,15.1s						
SNY				LR	LR		
	comp=N,1µm,16.4s						
SNY				LR	LR		
	comp=N,2µm,16.1s						
JOW	**Kunigami**	**17.27**	**234**	P	**Pn**	**10 25 41.2**	**-0.1**
	comp=N,1.4nm,0.3s,baz=45,slow=5.3,SNR=6.0						
JOW				LR	LR	10 32 59.0	
	comp=N,265nm,18.6s,baz=92,slow=40						
JOW	**Kunigami**	**17.27**	**234**	P	**Pn**	**10 25 40.5**	**-0.7**
DL2	**Dalian**	**17.49**	**280**	⇑*i*P	**Pn**	**10 25 42.3**	**-1.6**
DL2				S	**Sn**	**10 28 52.5**	**-5.6**
DL2				pmax	pmax		
	comp=N,120nm,1.3s						
DL2				pmax	pmax		
	comp=N,660nm,4.4s						
DL2				LR	LR		
	comp=N,800nm,13.5s						
DL2				LR	LR		
	comp=N,570nm,15.4s						
DL2				LR	LR		
	comp=N,980nm,25.9s						
PEA0B	**Petropavlovsk-**	**17.86**	**28**	*i* P	**Pn**	**10 25 48.7**	**+0.3**
PEA0B	**Petropavlovsk-**	**17.86**	**28**		**Pn**	**10 25 46.9**	**-1.5**
PEA0B				IAmb	IAmb	10 25 51.5	
	comp=Z,291nm,1.5s						
PETK	**Petropavlovsk-**	**17.86**	**28**	P	**Pn**	**10 25 48.4**	**0.0**
	comp=Z,0.7nm,0.3s,baz=114,slow=3.6,SNR=27						
PETK				LR	LR	10 33 11.8	
	comp=Z,453nm,20.8s,baz=211,slow=39						
PETK	**Petropavlovsk-**	**17.86**	**28**	P	**Pn**	**10 25 48.4**	**0.0**
PETK	**Petropavlovsk-**	**17.86**	**28**		**Pn**	**10 25 47.6**	**-0.8**
PET	**Petropavlovsk**	**18.15**	**30**	*c* *i*P	**P**	**10 25 52.9**	**+0.7**
PET				*e*S	**Sn**	**10 29 12.3**	**-1.6**
PET				pmax	pmax		
	comp=Z,80nm,1.1s						
PET				pmax	pmax		
	comp=Z,500nm,8.7s						
PET	**Petropavlovsk**	**18.15**	**30**	P	**Pn**	**10 25 52.0**	**0.0**
ZEA	**Zeya**	**19.47**	**329**	*e*P	**P**	**10 26 06.6**	**0.0**
ZEA				*e*S	Sn	10 29 32.8	-13
ZEA				pmax	pmax		
	comp=E,100nm,2.0s						
ZEA				pmax	pmax		
	comp=N,100nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,200nm,1.6s						
ZEA				pmax	pmax		
	comp=Z,60nm,1.3s						
ZEA				smax	smax		
	comp=E,200nm,2.5s						
ZEA				smax	smax		
	comp=N,200nm,4.7s						
ZEA				MLR	MLR		
	comp=Z,500nm,14.0s						
SSE	**Sheshan**	**19.94**	**257**	P	**P**	**10 26 10.3**	**-1.6**
SSE				S	**S**	**10 29 56.8**	**+1.3**
SSE				pmax	pmax		
	comp=Z,30nm,0.7s						
SSE				pmax	pmax		
	comp=Z,130nm,3.1s						
SSE				LR	LR		
	comp=Z,1µm,19.2s						
SSE				LR	LR		
	comp=Z,860nm,19.6s						
HIA	**Hailar**	**20.71**	**311**	P	**P**	**10 26 19.0**	**-1.3**
HIA				pmax	pmax		
	comp=Z,40nm,0.9s						
HIA	**Hailar**	**20.71**	**311**	P	**P**	**10 26 19.0**	**-1.3**
NJ2	**Nanjing**	**21.35**	**261**	⇑P	**P**	**10 26 30.4**	**+3.2**
NJ2				pP	**pwP**	**10 26 35.8**	**-3.3**
NJ2				S	Sn	10 30 31.8	+0.6
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,220nm,3.5s						
NJ2				LR	LR		
	comp=Z,2µm,16.0s						
NJ2				LR	LR		
	comp=Z,690nm,17.5s						
NJ2				LR	LR		
	comp=Z,2µm,16.5s						
TIA	**Tai'an**	**21.43**	**273**	⇓P	**P**	**10 26 26.6**	**-1.5**
TIA				S	**S**	**10 30 16.0**	**-9.1**
TIA				pmax	pmax		
	comp=Z,18nm,0.9s						
TIA				pmax	pmax		
	comp=Z,230nm,3.6s						
TIA				LR	LR		
	comp=Z,970nm,12.8s						
TIA				LR	LR		
	comp=Z,1µm,15.5s						
TIA				LR	LR		
	comp=Z,2µm,15.5s						
BJI	**Beijing**	**21.63**	**284**	P	**P**	**10 26 27.4**	**-2.7**
BJI				S	**S**	**10 30 33.3**	**+4.5**
BJI				pmax	pmax		
	comp=Z,13nm,0.9s						
BJI				pmax	pmax		
	comp=Z,160nm,3.5s						
BJI				LR	LR		
	comp=Z,540nm,13.6s						
BJI				LR	LR		
	comp=Z,620nm,14.0s						
BJI				LR	LR		
	comp=Z,700nm,15.8s						
BJT	**Baijiatuau**	**21.63**	**284**	P	**P**	**10 26 27.8**	**-2.4**
BJT				pmax	pmax		
	comp=Z,73nm,1.0s						
BJT	**Baijiatuau**	**21.63**	**284**	P	**P**	**10 26 27.8**	**-2.4**
BJT				IAmb	IAmb	10 26 33.0	
	comp=Z,73nm,1.0s						
MA2	**Magadan**	**22.02**	**9**	P	**P**	**10 26 34.6**	**+0.5**
	comp=Z,33nm,0.8s,baz=184,slow=10,SNR=14						
MA2				LR	LR	10 35 30.6	
	comp=Z,213nm,20.5s,baz=203,slow=38						
MA2	**Magadan**	**22.02**	**9**	*ce*P	**P**	**10 26 35.2**	**+1.0**
MA2				pmax	pmax		
	comp=Z,35nm,0.8s						
MA2	**Magadan**	**22.02**	**9**	P	**P**	**10 26 34.8**	**+0.6**
MA2				IAmb	IAmb	10 26 49.8	
	comp=Z,82nm,0.8s						
NACB	**Ninganchiao**	**23.51**	**240**	P	**P**	**10 26 48.3**	**-1.7**
YULB	**Yu-li**	**24.23**	**240**	P	**P**	**10 26 55.3**	**-1.5**
YULB				IAmb	IAmb	10 27 10.8	
	comp=Z,37nm,0.9s						
GUMO	**Guam**	**24.34**	**178**	LR	LR	10 35 19.8	
	comp=Z,245nm,20.3s,baz=8.0,slow=34						
TPUB	**Ta-pu**	**24.75**	**240**	P	**P**	**10 27 00.7**	**-0.9**
TPUB				IAmb	IAmb	10 27 15.7	
	comp=Z,58nm,0.7s						
TWG	**Pinlang**	**24.77**	**239**	P	**P**	**10 27 01.0**	**-0.7**
TWG				IAmb	IAmb	10 27 26.4	
	comp=Z,99nm,1.2s						
TIY	**Taiyuan**	**24.81**	**279**	⇓P	**P**	**10 27 03.3**	**+1.2**
TIY				pP	**sP**	**10 27 08.1**	**+0.6**
TIY				sP	**pwP**	**10 27 11.4**	**-2.4**
TIY				PP	**PnPn**	**10 27 40.1**	**+5.6**
TIY				S	**S**	**10 31 22.8**	**-1.0**
TIY				sS	**sS**	**10 31 31.5**	**+1.0**
TIY				pmax	pmax		
	comp=Z,52nm,0.7s						
TIY				pmax	pmax		
	comp=Z,220nm,4.8s						
TIY				LR	LR		
	comp=Z,720nm,16.8s						
TIY				LR	LR		
	comp=Z,720nm,14.7s						
TIY				LR	LR		
	comp=Z,1µm,16.0s						
HHC	**Hu-ho-hao-te**	**25.08**	**287**	*e*P	**P**	**10 27 03.4**	**-1.2**
HHC				S	**S**	**10 31 26.1**	**-2.1**
HHC				pmax	pmax		
	comp=Z,41nm,1.0s						
HHC				pmax	pmax		
	comp=Z,280nm,4.2s						
HHC				LR	LR		
	comp=Z,570nm,12.7s						
HHC				LR	LR		
	comp=Z,880nm,12.8s						
HHC				LR	LR		
	comp=Z,1µm,16.8s						
QZH	**Quanzhou**	**25.14**	**246**	*e*P	**P**	**10 27 06.4**	**+1.3**
QZH				S	**S**	**10 31 24.6**	**-4.5**
QZH				LR	LR		
	comp=Z,880nm,18.9s						
QZH				LR	LR		
	comp=Z,970nm,22.3s						
QZH				LR	LR		
	comp=Z,520nm,17.5s						
CIT	**Chita**	**25.41**	**313**	*e*P	**P**	**10 27 08.0**	**+0.6**
CIT				*e*		10 27 21.1	
CIT				*e*		10 27 43.5	
CIT				*e*		10 27 56.7	
CIT				*e*S	**S**	**10 31 35.0**	**+1.9**
CIT				pmax	pmax		
	comp=Z,174nm,1.5s						
SEY	**Seymchan**	**25.48**	**9**	P	**P**	**10 27 08.8**	**+1.0**
	comp=Z,31nm,0.8s,baz=195,slow=7.1,SNR=40						
SEY				LR	LR	10 38 34.6	
	comp=Z,181nm,19.8s,baz=200,slow=40						
SEY	**Seymchan**	**25.48**	**9**	P	**P**	**10 27 08.8**	**+1.0**
WHN	**Wuhan**	**25.48**	**262**	⇑P	**P**	**10 27 08.1**	**0.0**
WHN				pP	**sP**	**10 27 13.5**	**+0.1**
WHN				S	**S**	**10 31 38.8**	**+4.4**
WHN				pmax	pmax		
	comp=Z,160nm,1.5s						
WHN				LR	LR		
	comp=Z,1µm,10.3s						
WHN				LR	LR		
	comp=Z,4µm,15.4s						
WHN				LR	LR		
	comp=Z,5µm,16.1s						
YAK	**Yakutsk**	**25.61**	**344**	P	**P**	**10 27 08.6**	**-0.4**
	comp=Z,21nm,0.5s,baz=27,slow=0.7,SNR=14						
YAK				LR	LR	10 38 07.0	
	comp=Z,1µm,19.6s,baz=126,slow=38						
YAK	**Yakutsk**	**25.61**	**344**	*e*P	**P**	**10 27 08.8**	**-0.1**
YAK				*e**PP	**pwP**	**10 27 18.3**	**-3.0**
YAK				*e*S	**S**	**10 31 37.9**	**+2.1**
YAK				*e*SS	**SnSn**	**10 32 31.5**	**+1.5**
YAK				*e*SSS	SSS	10 32 53.0	
YAK				pmax	pmax		
	comp=Z,56nm,0.9s						
YAK				pmax	pmax		
	comp=N,14nm,0.8s						
YAK				pmax	pmax		
	comp=E,6.0nm,0.8s						
YAK				smax	smax		
	comp=E,280nm,1.5s						
YAK				smax	smax		
	comp=N,425nm,1.7s						
YAK				MLR	MLR		
	comp=Z,889nm,17.0s						
YAK	**Yakutsk**	**25.61**	**344**	P	**P**	**10 27 08.4**	**-0.5**
BTO	**Baotou**	**26.27**	**286**	*e*P	**P**	**10 27 16.3**	**+0.9**
BTO				S	**S**	**10 31 51.6**	**+4.6**
BTO				LR	LR		
	comp=Z,2µm,14.3s						
BTO				LR	LR		
	comp=Z,3µm,15.1s						
H11N2	**WAKE ISLAND Hy**	**27.01**	**126**	T	T	10 54 30.9	
	baz=317						
H11N1	**WAKE ISLAND Hy**	**27.02**	**126**	T	T	10 54 21.7	
	baz=317						
H11N3	**WAKE ISLAND Hy**	**27.03**	**126**	T	T	10 54 31.3	
	baz=317						
BOD	**Bodaibo**	**27.82**	**325**	*e*P	**P**	**10 27 29.2**	**+0.3**
BOD				pmax	pmax		
	comp=Z,77nm,1.2s						
XAN	**Xi'an**	**28.49**	**273**	P	**P**	**10 27 35.0**	**-0.2**
XAN				pP	pP	10 27 38.0	-1.3
XAN				PP	**PnPn**	**10 28 22.8**	**-1.9**
XAN				S	**S**	**10 32 24.0**	**+2.0**
XAN				ScP	**ScP**	**10 34 26.3**	**-0.6**
XAN				pmax	pmax		
	comp=Z,48nm,0.9s						
XAN				pmax	pmax		
	comp=Z,380nm,5.5s						
XAN				LR	LR		
	comp=Z,2µm,15.5s						
XAN				LR	LR		
	comp=Z,940nm,18.4s						
XAN				LR	LR		
	comp=Z,1µm,19.2s						
ULN	**Ulaanbaatar**	**28.50**	**302**	*ce*P	**P**	**10 27 36.3**	**+1.0**
ULN				pmax	pmax		
	comp=Z,123nm,1.7s						
ULN	**Ulaanbaatar**	**28.50**	**302**	P	**P**	**10 27 35.9**	**+0.6**
ULN				IAmb	IAmb	10 27 41.6	
	comp=Z,93nm,1.2s						
SONM	**Songino Array**	**28.93**	**302**	P	**P**	**10 27 39.9**	**+0.8**
	comp=Z,19nm,0.9s,baz=95,slow=8.1,SNR=47						
SONM				LR	LR	10 39 06.9	
	comp=Z,331nm,20.1s,baz=94,slow=36						
SONM	**Songino Array**	**28.93**	**302**	P	**P**	**10 27 39.9**	**+0.8**
SONM	**Songino Array**	**28.93**	**302**	P	**P**	**10 27 38.7**	**-0.4**
SONM				IAmb	IAmb	10 27 49.6	
	comp=Z,62nm,1.3s						
ENH	**Enshi**	**29.41**	**265**	P	**P**	**10 27 42.2**	**-1.3**
TLY	**Talaya**	**31.23**	**309**	P	**P**	**10 28 00.7**	**+1.4**
	comp=Z,20nm,0.9s,baz=103,slow=8.1,SNR=6.8						
TLY	**Talaya**	**31.23**	**309**	*e*P	**P**	**10 28 03.1**	**+3.8**
TLY				*e*S	**S**	**10 33 07.4**	**+2.7**
TLY				pmax	pmax		
	comp=Z,85nm,1.1s						
TLY				MLR	MLR		
	comp=Z,3µm,16.0s						
TLY	**Talaya**	**31.23**	**309**	P	**P**	**10 27 58.6**	**-0.7**
TLY				IAmb	IAmb	10 28 08.4	
	comp=Z,27nm,1.0s						
ZAK	**Zakamensk**	**31.26**	**307**	*e*P	**P**	**10 28 00.5**	**+0.8**
ZAK				pmax	pmax		
	comp=Z,43nm,1.1s						
LZH	**Lanzhou**	**31.88**	**279**	*e*P	**P**	**10 28 05.8**	**+0.4**
LZH				pP	sP	10 28 10.8	+0.3
LZH				S	**S**	**10 33 15.3**	**-0.1**
LZH				pmax	pmax		
	comp=Z,37nm,1.3s						
LZH				pmax	pmax		
	comp=Z,290nm,4.9s						
LZH				LR	LR		
	comp=Z,1µm,13.1s						
LZH				LR	LR		
	comp=Z,900nm,13.2s						
LZH				LR	LR		
	comp=Z,990nm,15.3s						
BILL	**Bilibino**	**32.53**	**15**	⇑*i*P	**P**	**10 28 10.6**	**+0.1**
BILL				*e*		10 29 14.8	
BILL				pmax	pmax		
	comp=Z,49nm,1.2s						
BILL	**Bilibino**	**32.53**	**15**	P	**P**	**10 28 10.8**	**+0.2**
BILL				IAmb	IAmb	10 28 11.7	
	comp=Z,34nm,1.0s						
MOY	**Mondy**	**32.86**	**309**	*e*P	**P**	**10 28 15.4**	**+1.6**
MOY				pmax	pmax		
	comp=Z,64nm,1.9s						
GYA	**Guiyang**	**33.36**	**261**	⇑P	**P**	**10 28 18.0**	**-0.3**
GYA				sP	pwP	10 28 31.0	+1.0
GYA				PP	**PnPn**	**10 29 31.0**	**+1.9**
GYA				PcP	**PcP**	**10 30 58.8**	**-1.1**
GYA				S	**S**	**10 33 40.5**	**+2.1**
GYA				pmax	pmax		
	comp=Z,18nm,0.9s						
GYA				pmax	pmax		
	comp=Z,20nm,3.5s						
GYA				LR	LR		
	comp=Z,1µm,15.6s						
GYA				LR	LR		
	comp=Z,690nm,15.2s						
GYA				LR	LR		
	comp=Z,980nm,18.5s						
CD2	**Chengdu**	**33.67**	**270**	P	**P**	**10 28 20.0**	**-1.0**
CD2				S	**S**	**10 33 42.8**	**-0.3**
CD2				pmax	pmax		
	comp=Z,40nm,0.7s						
CD2				pmax	pmax		
	comp=Z,280nm,5.9s						
CD2				LR	LR		
	comp=Z,2µm,15.5s						
CD2				LR	LR		
	comp=Z,2µm,16.3s						
CD2				LR	LR		
	comp=Z,2µm,16.4s						
GTA	**Gaotai**	**34.20**	**286**	*e*P	**P**	**10 28 26.8**	**+1.3**
GTA				pP	pwP	10 28 34.0	-3.3
GTA				sP	sP	10 28 38.3	+7.6
GTA				S	**S**	**10 33 48.8**	**-2.4**
GTA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,210nm,4.4s						
GTA				LR	LR		
	comp=Z,790nm,15.3s						
GTA				LR	LR		
	comp=Z,830nm,17.8s						
GTA				LR	LR		
	comp=Z,830nm,17.4s						
TIXI	**Tiksi**	**34.58**	**352**	P	**P**	**10 28 27.8**	**-0.5**
	comp=Z,3.1nm,0.5s,baz=143,slow=6.5,SNR=11						
TIXI	**Tiksi**	**34.58**	**352**	*ce*P	**P**	**10 28 27.0**	**-1.3**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TIXI	**Tiksi**	**34.58**	**352**	P	**P**	**10 28 27.8**	**-0.5**
DAV	**Davao City (W)**	**35.01**	**213**	LR	LR	10 41 55.7	
	comp=Z,368nm,22.0s,baz=38,slow=35						
QIZ	**Qiongzhong**	**35.16**	**247**	P	**P**	**10 28 33.9**	**+0.1**
QIZ				S	**S**	**10 34 07.3**	**+1.3**
QIZ				LR	LR		
	comp=Z,890nm,24.0s						
QIZ				LR	LR		
	comp=Z,820nm,22.6s						
QIZ				LR	LR		
	comp=Z,310nm,15.7s						
KMI	**Kunming**	**37.09**	**262**	⇓P	**P**	**10 28 50.6**	**0.0**
KMI				pP	sP	10 28 54.8	-0.9
KMI				sP	pwP	10 28 57.5	-4.7
KMI				PP	**PP**	**10 30 14.8**	**-0.3**
KMI				S	**S**	**10 34 36.0**	**+0.1**
KMI				SS	**SnSn**	**10 37 07.6**	**-2.6**
KMI				pmax	pmax		
	comp=Z,20nm,1.0s						
KMI				pmax	pmax		
	comp=Z,55nm,3.5s						
KMI				LR	LR		
	comp=Z,220nm,15.1s						
KMI				LR	LR		
	comp=Z,1µm,16.0s						
KMI				LR	LR		
	comp=Z,1µm,16.9s						
TNTI	**Ternate**	**40.08**	**206**	P	**P**	**10 29 15.0**	**-0.4**
TNTI				IAmb	IAmb	10 29 35.0	
	comp=Z,57nm,1.2s						
SMPI	**Sarmi**	**40.10**	**188**	P	**P**	**10 29 14.3**	**-1.3**
	comp=Z,35nm,1.2s						
SIJI	**Sorong**	**40.42**	**200**	LR	LR	10 44 28.2	
	comp=Z,166nm,20.8s,baz=38,slow=34						
JAY	**Jayapura**	**40.44**	**185**	P	**P**	**10 29 18.0**	**-0.5**
	comp=Z,21nm,0.8s,baz=359,slow=5.5,SNR=6.6						
JAY				LR	LR	10 44 30.7	
	comp=Z,184nm,20.4s,baz=14,slow=34						
JAY	**Jayapura**	**40.44**	**185**	P	**P**	**10 29 18.0**	**-0.5**
UBPT	**Khong Chiam**	**40.76**	**247**	P	**P**	**10 29 20.5**	**-0.6**
UBPT				IAmb	IAmb	10 29 36.4	
	comp=Z,40nm,1.5s						
DGZ	**Jazzator, Alta**	**41.45**	**305**	*i* P	**P**	**10 29 27.9**	**+1.2**
DGZ				pmax	pmax		
	comp=Z,54nm,0.7s						
RDOG	**Red Dog Mine**	**41.73**	**27**	P	P	10 29 35.1	+6.6
	baz=252						
WMQ	**Urumqi**	**42.19**	**296**	*e*P	**P**	**10 29 33.9**	**+1.2**
WMQ				pP	sP	10 29 38.4	+0.5
WMQ				sP	pwP	10 29 45.3	-0.4
WMQ				pmax	pmax		
	comp=Z,13nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,83nm,3.6s						
WMQ				LR	LR		
	comp=Z,580nm,12.9s						
WMQ				LR	LR		
	comp=Z,500nm,19.3s						
WMQ				LR	LR		
	comp=Z,410nm,20.7s						
ZAA0	**Zalesovo Array**	**42.75**	**312**	P	**P**	**10 29 36.8**	**-0.2**
ZALV	**Zalesovo Beam**	**42.75**	**312**	P	**P**	**10 29 37.3**	**+0.3**
	comp=Z,2.8nm,0.4s,baz=91,slow=7.4,SNR=18						
ZALV				PcP	**PcP**	**10 31 28.0**	**-0.2**
	comp=Z,5.8nm,0.6s,baz=81,slow=2.9,SNR=3.0						
ZALV				LR	LR	10 47 57.5	
	comp=Z,362nm,20.0s,baz=82,slow=37						
ZALV	**Zalesovo Beam**	**42.75**	**312**	*i* P	**P**	**10 29 37.2**	**+0.2**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.4s						
SANI	**Sanana**	**43.18**	**207**	P	**P**	**10 29 37.1**	**-3.8**
	comp=Z,498nmcomp=Z,44nm,0.9s						
NRIK	**Noril'sk**	**43.23**	**334**	P	**P**	**10 29 41.3**	**+0.6**
	comp=Z,11nm,1.1s,baz=104,slow=8.0,SNR=11						
NRIK				LR	LR	10 48 51.8	
	comp=Z,1µm,19.4s,baz=107,slow=38						
NRIK	**Noril'sk**	**43.23**	**334**	*ce*P	**P**	**10 29 40.3**	**-0.4**
NRIK				pmax	pmax		
	comp=Z,19nm,1.3s						
NRIK	**Noril'sk**	**43.23**	**334**	P	**P**	**10 29 40.5**	**-0.2**
ZSN	**Zaisan**	**43.45**	**302**	*e*P	**P**	**10 29 42.6**	**-0.2**
	baz=302						
ZSN	**Zaisan**	**43.45**	**302**	*e*P	**P**	**10 29 42.6**	**-0.2**
CHTO	**Chiang Mai**	**43.47**	**257**	P	**P**	**10 29 42.7**	**-0.6**
CHTO				pmax	pmax		
	comp=Z,58nm,1.4s						
CHTO	**Chiang Mai**	**43.47**	**257**	P	**P**	**10 29 42.7**	**-0.6**

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CHTO                                 IAmb   IAmb   10 29 58.2
      comp=Z,58nm,1.4s
TTA   Tatalina         43.47  35     P      P      10 29 43.6 +0.8
TTA                                  pmax   pmax
      comp=Z,31nm,1.3s
TTA   Tatalina         43.47  35     P      P      10 29 44.1 +1.3
      baz=264,SNR=5.3
TTA   Tatalina         43.47  35     P      P      10 29 43.6 +0.8
TTA                                  IAmb   IAmb   10 30 07.1
      comp=Z,31nm,1.3s
SVW2  Sparrevohn       43.52  38     P      P      10 29 44.7 +1.5
SVW2                                 IAmb   IAmb   10 29 46.0
      comp=Z,57nm,1.2s
P18K  Big Mountain,    43.62  40     P      P      10 29 45.5 +1.5
      baz=268
P18K  Big Mountain,    43.62  40     P      P      10 29 44.5 +0.4
P18K                                 IAmb   IAmb   10 29 46.5
      comp=Z,72nm,1.1s
CMAR  Chiang Mai Arr   43.68 256     P      P      10 29 45.7 +0.8
      comp=Z,2.6nm,0.8s,baz=52,slow=5.7,SNR=13
CMAR                                 LR     LR     10 49 05.4
      comp=Z,403nm,18.6s,baz=84,slow=38
CMAR  Chiang Mai Arr   43.68 256     P      P      10 29 45.7 +0.8
N19K  Bonanza Creek    44.04  38     P      P      10 29 49.0 +1.5
      baz=268
N19K  Bonanza Creek    44.04  38     IAmb   IAmb   10 29 50.0
      comp=Z,26nm,1.1s
O19K  Port Alsworth    44.10  39     P      P      10 29 49.3 +1.5
      baz=268,SNR=6.3
O19K  Port Alsworth    44.10  39     IAmb   IAmb   10 29 50.9
      comp=Z,27nm,0.8s
LSA   Lhasa            44.11 275     P      P      10 29 51.4 +2.5
LSA                                  pmax   pmax
      comp=Z,40nm,2.1s
M19K  Big River Lodg   44.14  37     P      P      10 29 49.4 +1.2
      baz=267
K20K  Telida           44.39  35     P      P      10 29 51.7 +1.6
      baz=266,SNR=7.2
K20K  Telida           44.39  35     IAmb   IAmb   10 29 52.7
      comp=Z,27nm,1.1s
L20K  Farewell, AK     44.41  36     P      P      10 29 51.9 +1.6
      baz=266,SNR=10
J20K  Nowinta River    44.42  34     P      P      10 29 51.9 +1.5
      baz=265,SNR=9.5
J20K  Nowinta River    44.42  34     P      P      10 29 51.0 +0.6
J20K                                 IAmb   IAmb   10 30 14.9
      comp=Z,24nm,0.8s
A21K  Barrow           44.77  23     P      P      10 29 54.1 +1.1
      baz=255,SNR=22
KDAK  Kodiak Island    45.03  43     P      P      10 29 54.9 -0.3
      comp=Z,67nm,0.9s,baz=291,slow=4.1,SNR=16
KDAK  Kodiak Island    45.03  43     P      P      10 29 55.5 +0.3
KDAK                                 pmax   pmax
      comp=Z,69nm,0.9s
KDAK  Kodiak Island    45.03  43     P      P      10 29 55.3 +0.1
      baz=272
KDAK  Kodiak Island    45.03  43     P      P      10 29 55.5 +0.3
H21K  Melozitna Rive   45.13  31     P      P      10 29 56.8 +0.8
      baz=264
H21K  Melozitna Rive   45.13  31     P      P      10 29 56.8 +0.8
H21K                                 IAmb   IAmb   10 29 58.4
      comp=Z,48nm,1.4s
SPCR  Spurr Chakacha   45.16  38     P      P      10 29 57.6 +1.3
      baz=269
CHUM  Lake Minchumin   45.20  34     P      P      10 29 58.0 +1.4
      baz=267,SNR=9.5
PPLA  Purkeypile       45.21  35     P      P      10 29 58.3 +1.4
      baz=268,SNR=7.6
PPLA  Purkeypile       45.21  35     P      P      10 29 56.3 -0.6
SPU   Mount Spurr      45.24  38     P      P      10 29 57.8 +0.9
CAST  Castle Rocks     45.28  35     P      P      10 29 58.8 +1.5
      baz=267,SNR=8.9
CAST  Castle Rocks     45.28  35     IAmb   IAmb   10 30 23.0
      comp=Z,25nm,1.0s
MK31  Makanchi Array   45.30 302   i P      P      10 29 57.5 -0.1
MK31  Makanchi Array   45.30 302     P      P      10 29 57.6 -0.1
MK31                                 IAmb   IAmb   10 30 05.1
      comp=Z,41nm,0.9s
MKAR  Makanchi Array   45.30 302     P      P      10 29 57.8 +0.2
      comp=Z,10nm,0.8s,baz=84,slow=9.4,SNR=57
MKAR                                 LR     LR     10 48 50.9
      comp=Z,343nm,20.5s,baz=74,slow=36
MKAR  Makanchi Array   45.30 302     P      P      10 29 57.8 +0.2
I21K  Tanana           45.44  32     P      P      10 29 59.8 +1.4
      baz=266,SNR=6.3
I21K  Tanana           45.44  32     IAmb   IAmb   10 30 22.8
      comp=Z,33nm,1.1s
MAKZ  Makanchi         45.51 302     P      P      10 29 59.2 -0.1
MAKZ  Makanchi         45.51 302     P      P      10 29 59.2 -0.1
MAKZ                                 IAmb   IAmb   10 30 06.9
      comp=Z,46nm,0.9s
SBUM  Sibu             45.78 227     P      P      10 30 02.0 +0.3
BPAW  Bear Paw Mtn.    45.80  34     P      P      10 30 01.9 +0.6
      baz=268,SNR=5.9
BRSE  Bradley Lake S   45.91  40     P      P      10 30 03.7 +1.4
      baz=272
SEM   Semipalatinsk    45.94 307    eP      P      10 30 01.7 -1.2
      baz=307
SEM   Semipalatinsk    45.94 307    eP      P      10 30 01.6 -1.2
MLY   Manley           45.95  32     P      P      10 30 03.6 +1.0
      baz=267,SNR=17
MLY   Manley           45.95  32     IAmb   IAmb   10 30 05.1
      comp=Z,42nm,1.2s
CUT   Chulitna         46.09  36     P      P      10 30 04.0 +0.5
      baz=270
CUT   Chulitna         46.09  36     IAmb   IAmb   10 30 29.3
      comp=Z,58nm,1.2s
TRF   Thorofare Moun   46.09  35     P      P      10 30 04.6 +0.8
      baz=269,SNR=6.4
TRF   Thorofare Moun   46.09  35     IAmb   IAmb   10 30 06.9
      comp=Z,17nm,1.0s
M22K  Willow           46.16  37     P      P      10 30 04.9 +0.8
      baz=271
COLD  Coldfoot         46.32  29     P      P      10 30 06.1 +0.7
      baz=265
RC01  Rabbit Creek A   46.36  38     P      P      10 30 06.2 +0.5
      baz=272,SNR=5.9
H23K  Yukon River      46.49  31     P      P      10 30 08.4 +1.7
      baz=267
I23K  Minto, Yukon-K   46.54  32     P      P      10 30 08.1 +1.0
      baz=268,SNR=14
SEW   Seward           46.54  39     P      P      10 30 08.0 +0.9
      baz=273
PMR   Palmer           46.64  37     P      P      10 30 08.2 +0.3
      baz=272,SNR=14
NEA2  Nenana           46.65  33     P      P      10 30 08.9 +1.0
      baz=269,SNR=27
TOLK  Toolik Lake Re   46.68  28     P      P      10 30 09.4 +1.1
      baz=265,SNR=12
TOLK  Toolik Lake Re   46.68  28     IAmb   IAmb   10 30 10.5
      comp=Z,28nm,1.1s
MCK   McKinley         46.70  34     P      P      10 30 08.9 +0.5
      baz=270,SNR=10
MCK   McKinley         46.70  34     IAmb   IAmb   10 30 10.1
      comp=Z,30nm,1.1s
WAT1  Susitna Watana   46.88  36     P      P      10 30 10.1 +0.2
      baz=271
KURK  Kurchatov        46.91 308ceP         P      10 30 09.8 -0.4
KURK                                 pmax   pmax
      comp=Z,27nm,1.1s
KURK  Kurchatov        46.91 308     P      P      10 30 10.1  0.0
KNK   Knik Glacier     46.97  37     P      P      10 30 11.0 +0.4
      baz=272,SNR=5.2
KURBB Kurchatov Arra   46.98 308     P      P      10 30 10.9 +0.2
      comp=Z,8.1nm,0.4s,baz=81,slow=8.1,SNR=34
KURBB Kurchatov Arra   46.98 308     P      P      10 30 10.1 -0.7
SML   Sawmill          47.01  37     P      P      10 30 11.6 +0.6
      baz=272,SNR=12
SML   Sawmill          47.01  37     P      P      10 30 11.3 +0.4
PWL   Port Wells       47.05  38     P      P      10 30 11.4 +0.2
      baz=273
WRH   Wood River Hil   47.07  33     IAmb   IAmb   10 30 36.3
      comp=Z,18nm,1.0s
TCOL  CIGO, UAF Yank   47.17  33     P      P      10 30 13.0 +1.0
      baz=270,SNR=6.0
COLA  College          47.18  33   i P      P      10 30 13.0 +1.0
COLA                                 pmax   pmax
      comp=Z,14nm,1.0s
COLA  College          47.18  33     P      P      10 30 12.6 +0.6
H24K  Noodor Dome      47.18  31     P      P      10 30 13.5 +1.4
      baz=269
H24K  Noodor Dome      47.18  31     IAmb   IAmb   10 30 14.9
      comp=Z,42nm,1.2s
WAT6  Susitna Watana   47.26  36     P      P      10 30 13.6 +0.6
      baz=272,SNR=6.1
POKR  Poker Plat Res   47.35  32     P      P      10 30 14.9 +1.4
      baz=270,SNR=29
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DHY   Denali Highway   47.41  35     P      P      10 30 14.4 +0.2
      baz=272
DHY   Denali Highway   47.41  35     IAmb   IAmb   10 30 39.8
      comp=Z,23nm,0.8s
SCM   Sheep Creek Mo   47.49  37     P      P      10 30 15.4 +0.8
      baz=273,SNR=11
HDA   Harding Lake     47.57  33     P      P      10 30 15.5 +0.4
      baz=271,SNR=16
HDA   Harding Lake     47.57  33     IAmb   IAmb   10 30 16.3
      comp=Z,40nm,1.1s
IL31                   47.59  33     IAmb   IAmb   10 30 39.8
      comp=Z,34nm,1.0s
ILAR  Eielson Array    47.59  33     P      P      10 30 15.3  0.0
      comp=Z,20nm,0.9s,baz=265,slow=6.2,SNR=148
ILAR                                 LR     LR     10 50 37.1
      comp=Z,88nm,20.5s,baz=277,slow=36
ILAR  Eielson Array    47.59  33     P      P      10 30 15.3  0.0
KSM   Kuching          47.69 228     P      P      10 30 17.0 +0.4
TAPN  Taplejung        47.87 274    eP      P      10 30 19.1 +0.8
M24K  Tolsona, Glenn   48.01  36     P      P      10 30 20.0 +1.3
      baz=274,SNR=8.5
PDGK  Podgornoye       48.09 298     P      P      10 30 19.1 -0.5
PRP   Porcupine Dome   48.15  32     P      P      10 30 20.5 +0.6
      baz=271,SNR=14
PRP   Porcupine Dome   48.15  32     IAmb   IAmb   10 30 44.2
      comp=Z,27nm,0.8s
SHLS  Shalkode         48.16 298    eP      P      10 30 17.1 -3.1
      comp=Z,13nm,1.2s,baz=297
SHLS  Shalkode         48.16 298    eP      P      10 30 17.0 -3.1
SHLS                                 pmax   pmax
      comp=Z,13nm,1.2s
KLU   Klutina          48.18  37     P      P      10 30 21.1 +1.1
      baz=274,SNR=16
PAX   Paxson           48.28  35     P      P      10 30 22.0 +1.2
      baz=274,SNR=7.8
PAX   Paxson           48.28  35     IAmb   IAmb   10 30 22.8
      comp=Z,31nm,1.3s
EYAK  Cordova Ski Ar   48.34  39     P      P      10 30 21.8 +0.6
      baz=276
ODAN  Odare            48.35 274    eP      P      10 30 22.1 +0.1
UZB   Uzynbulak        48.47 298    eP      P      10 30 22.2 -0.5
      comp=Z,30nm,2.0s,baz=298
UZB   Uzynbulak        48.47 298    eP      P      10 30 22.1 -0.5
UZB                                  pmax   pmax
      comp=Z,30nm,2.0s
HARP  HAARP            48.47  36     P      P      10 30 23.2 +1.0
      baz=274
RIDG  Independent Ri   48.52  34     P      P      10 30 22.4 -0.2
      baz=273,SNR=5.8
RIDG  Independent Ri   48.52  34     IAmb   IAmb   10 30 48.5
      comp=Z,16nm,0.9s
KPKS  Kokpek           48.61 298    eP      P      10 30 23.4 -0.3
      comp=Z,20nm,1.5s,baz=298
KPKS  Kokpek           48.61 298    eP      P      10 30 23.3 -0.3
KPKS                                 pmax   pmax
      comp=Z,20nm,1.5s
N25K  Chitina, Valde   48.80  37     P      P      10 30 25.7 +0.9
      baz=276
N25K  Chitina, Valde   48.80  37     IAmb   IAmb   10 30 26.6
      comp=Z,17nm,0.9s
BMRM  Bremner River    48.86  38     P      P      10 30 26.5 +1.3
      baz=276
DOT   Dot Lake         48.87  34     IAmb   IAmb   10 30 26.6
      comp=Z,28nm,1.3s
SCRK  Sand Creek       48.88  34     P      P      10 30 25.7 +0.2
      baz=274,SNR=25
JIRN  Jiri             48.92 276    eP      P      10 30 27.0 +0.5
      comp=Z,40nm,1.0s
SATY  Saty             48.92 298    eP      P      10 30 25.2 -1.0
      baz=298
SATY  Saty             48.92 298    eP      P      10 30 25.1 -1.0
RAMN  Ramite           48.93 275    eP      P      10 30 26.5 +0.1
      comp=Z,24nm,0.6s
ARXS  Arharly          48.98 299    eP      P      10 30 26.5  0.0
J26L  Joseph Creek     49.03  33     P      P      10 30 26.9 +0.4
      baz=274,SNR=8.4
GUN   Gumba            49.05 276    eP      P      10 30 28.1 +0.6
BSSI  Bau Bau, Buton   49.05 212     P      P      10 30 26.3 -0.8
      comp=Z,405nmcomp=Z,17nm,1.1s
MENT  Mentasta         49.08  35     IAmb   IAmb   10 30 29.6
      comp=Z,47nm,1.2s
GLB   Gilahina Butte   49.19  37     IAmb   IAmb   10 30 30.2
      comp=Z,34nm,1.1s
L26K  Log Cabin Wild   49.24  35     P      P      10 30 29.5 +1.4
      baz=275,SNR=31
M26K  Nabesna, AK      49.47  36     P      P      10 30 31.1 +1.2
      baz=276
KKN   Kakani           49.57 276    eP      P      10 30 31.7 +0.4
      comp=Z,59nm,0.9s
MCARA McCarthy VSAT    49.58  37     P      P      10 30 32.2 +1.6
      baz=277,SNR=16
CRQE  Cirque           49.62  38     P      P      10 30 32.5 +1.3
      baz=278,SNR=19
CHKK  Chushkaly        49.67 299    eP      P      10 30 30.6 -1.0
      baz=299
TARG  Taragay, Kyrgy   49.76 296     IAmb   IAmb   10 30 47.8
      comp=Z,43nm,1.2s
DMN   Daman            49.79 276    eP      P      10 30 33.5 +0.4
MDOK  Medeo            49.84 298    eP      P      10 30 32.0 -1.1
      baz=298
MDOK  Medeo            49.84 298     P      P      10 30 32.4 -0.7
L27K  Beaver Creek,    49.93  35     P      P      10 30 34.9 +1.5
      baz=277,SNR=25
TNSS  Tian-Shan        49.95 298    eP      P      10 30 33.7 -0.6
      baz=298
GKN   Gorkha           49.98 277    eP      P      10 30 34.5 +0.1
M27K  Edge Creek, AK   49.99  36     P      P      10 30 35.3 +1.4
      baz=277,SNR=15
M27K  Edge Creek, AK   49.99  36     IAmb   IAmb   10 31 02.8
      comp=Z,29nm,0.8s
EGAK  Eagle            50.04  33     P      P      10 30 34.4 +0.3
      baz=276
EGAK  Eagle            50.04  33     IAmb   IAmb   10 30 59.3
      comp=Z,18nm,0.9s
KUU   Kurty            50.10 299    eP      P      10 30 34.1 -0.8
      comp=Z,44nm,1.8s,baz=299
KUU   Kurty            50.10 299    eP      P      10 30 34.1 -0.8
KUU                                  pmax   pmax
      comp=Z,44nm,1.8s
MESA  MESA             50.26  39     P      P      10 30 36.6 +0.5
      baz=279
BARN  Barnard Glacie   50.27  38     IAmb   IAmb   10 30 39.0
      comp=Z,37nm,1.0s
CTG   Chitna Glacier   50.44  38     P      P      10 30 38.5 +1.1
      baz=279,SNR=8.3
BVCY  Beaver Creek     50.45  36     P      P      10 30 38.7 +1.4
      baz=278,SNR=9.0
DANN  Dangsing         50.51 278    eP      P      10 30 39.1 +0.6
YUK3  Moose Creek      50.73  36     P      P      10 30 40.7 +1.0
      baz=279,SNR=13
BRZS  Berezniki        50.78 308    eP      P      10 30 39.3 -0.7
      baz=308
BRZS  Berezniki        50.78 308    eP      P      10 30 39.2 -0.7
JRMM  Jerantut         50.81 238     P      P      10 30 42.0 +1.5
DAWY  Dawson           50.88  33     P      P      10 30 41.3 +0.8
      baz=278
KOLN  Koldanda         50.90 277    eP      P      10 30 41.6 +0.2
TKM2  Tokmak 2         50.92 298     P      P      10 30 42.2 +0.8
      SNR=15
TKM2  Tokmak 2         50.92 298     P      P      10 30 41.8 +0.4
EDFI  Ende, Flores     50.95 209     P      P      10 30 38.9 -2.7
      comp=Z,16nm,1.1s
KULM  Kulim            51.04 241     P      P      10 30 46.0 +3.7
I29M  Ogilvie Camp,    51.17  32     P      P      10 30 43.9 +1.3
      baz=278,SNR=40
PYUN  Piuthan          51.22 278    eP      P      10 30 44.1 +0.3
BTLS  Baital           51.31 301    eP      P      10 30 43.4 -0.7
      baz=301
BTLS  Baital           51.31 301    eP      P      10 30 43.3 -0.7
IPM   Ipoh             51.36 240     P      P      10 30 46.0 +1.3
SGDS  Sogindy          51.42 299    eP      P      10 30 44.5 -0.4
      baz=299
BRVK  Borovoye         51.45 312     P      P      10 30 45.0 +0.1
BRVK                                 pmax   pmax
      comp=Z,18nm,0.9s
BRVK  Borovoye         51.45 312     P      P      10 30 45.0 +0.1
BRVK                                 IAmb   IAmb   10 30 59.4
      comp=Z,18nm,0.8s
KBK   Karagaybulak     51.46 298     P      P      10 30 46.0 +0.6
      SNR=16
OTUK  Ortayu           51.48 306     P      P      10 30 44.9 -0.3
USP   Ospenovka        51.57 299     P      P      10 30 46.8 +0.7
      SNR=6.6
BATI  Baumata          51.58 206     LR     LR     10 50 22.5
      comp=Z,110nm,22.0s,slow=34
YUK4  Talbot Arm       51.66  37     P      P      10 30 48.3 +1.7
      baz=281,SNR=6.3
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COEN  Coen             51.70 181     P      P      10 30 46.2 -0.9
COEN                                 IAmb   IAmb   10 31 00.7
      comp=Z,40nm,0.8s
AAK   Ala-Archa        51.78 298     P      P      10 30 48.2 +0.5
      SNR=5.8
AAK   Ala-Archa        51.78 298     P      P      10 30 47.8  0.0
AAK                                  pmax   pmax
      comp=Z,44nm,1.3s
AAK   Ala-Archa        51.78 298     P      P      10 30 47.8  0.0
AAK                                  IAmb   IAmb   10 31 02.9
      comp=Z,44nm,1.3s
KSH   Kashi            51.83 294     P      P      10 30 53.3 +5.2
KSH                                  sP     pwP    10 30 58.0 -3.1
KSH                                  S      S      10 38 16.6 +7.0
KSH                                  sS     sS     10 38 24.5 +8.2
KSH                                  SS     SS     10 41 50.8 +4.8
KSH                                  pmax   pmax
      comp=Z,11nm,0.5s
KSH                                  pmax   pmax
      comp=Z,360nm,6.2s
KSH                                  LR     LR
      comp=Z,550nm,13.1s
KSH                                  LR     LR
      comp=Z,750nm,11.7s
KSH                                  LR     LR
      comp=Z,470nm,15.3s
YUK6  Outpost Mounta   51.88  37     P      P      10 30 49.1 +0.9
      baz=281
UCH   Uchtor           51.91 298     P      P      10 30 50.6 +1.6
      SNR=6.1
MTN   Manton Dam       52.00 196     P      P      10 30 47.5 -1.8
MTN                                  IAmb   IAmb   10 30 48.9
      comp=Z,35nm,0.9s
EKS2  Erkin-Say        52.27 299     P      P      10 30 51.8 +0.5
      SNR=5.8
M30M  Minto, Yukon     52.29  35     P      P      10 30 52.9 +1.8
      baz=281,SNR=13
HYT   Haines Junctio   52.31  37     P      P      10 30 53.5 +2.1
      baz=282,SNR=44
MAYO  Mayo, Yukon      52.49  34     P      P      10 30 54.5 +2.0
      baz=281,SNR=8.3
AML   Almayashu        52.52 298     P      P      10 30 54.5 +1.0
      SNR=21
INK   Inuvik           52.59  28     P      P      10 30 54.0 +0.9
      comp=Z,5.8nm,0.4s,baz=296,slow=6.7,SNR=71
INK   Inuvik           52.59  28     P      P      10 30 54.0 +0.9
INK   Inuvik           52.59  28     P      P      10 30 54.0 +0.9
      baz=280,SNR=19
INK   Inuvik           52.59  28     IAmb   IAmb   10 30 55.2
      comp=Z,29nm,1.2s
N31M  Braeburn, Yuko   52.98  36     P      P      10 30 58.2 +2.0
      baz=283,SNR=11
M31M  Drury Creek, Y   53.46  35     P      P      10 31 01.0 +1.3
      baz=283,SNR=11
WHY   Whitehorse       53.60  37     P      P      10 31 02.6 +1.7
      baz=284,SNR=8.3
WHY   Whitehorse       53.60  37     IAmb   IAmb   10 31 03.7
      comp=Z,36nm,1.1s
SKAG  Skagway          53.69  39     P      P      10 31 02.8 +1.5
      baz=285,SNR=5.9
FARO  Faro, Yukon      53.93  35     P      P      10 31 04.4 +1.2
      baz=284,SNR=11
KK31  Karatay Array    54.36 300   i P      P      10 31 06.2 -0.4
KK31  Karatay Array    54.36 300     IAmb   IAmb   10 31 21.5
      comp=Z,41nm,1.2s
KKAR  Karatay Array    54.36 300     IAmb   IAmb   10 31 21.5
      comp=Z,41nm,1.2s
JIS   Juneau Island    54.48  40     IAmb   IAmb   10 31 24.9
      comp=Z,50nm,1.2s
A36M  Sachs Harbour    54.59  22     P      P      10 31 08.9 +1.1
      baz=284,SNR=19
P33M  Teslin, Yukon    54.71  37     P      P      10 31 10.6 +1.6
      baz=286,SNR=11
MMPY  Sheldon Lake,    54.77  34     P      P      10 31 10.9 +1.6
      baz=286,SNR=9.5
IUG   Iuzhnay          55.05 299    eP      P      10 31 11.0 -0.7
      baz=299
IUG   Iuzhnay          55.05 299    eP      P      10 31 11.0 -0.7
KNRA  Kununurra        55.28 198     P      P      10 31 11.2 -2.1
BTK   Batken           55.30 297     IAmb   IAmb   10 31 28.6
      comp=Z,40nm,1.2s
SVE   Sverdlovsk       55.73 319deP         P      10 31 17.7 +1.5
SVE                                  pmax   pmax
      comp=Z,59nm,1.1s
SVE                                  MLR    MLR
      comp=Z,1µm,16.0s
LEM   Lembang          55.98 225     LR     LR     10 55 05.3
      comp=Z,141nm,20.2s,baz=5.0,slow=36
NIL   Nilore           56.20 289     P      P      10 31 20.7 +0.7
NIL                                  pmax   pmax
      comp=Z,152nm,1.1s
NIL   Nilore           56.20 289     P      P      10 31 20.6 +0.7
TGTN  Hyland Airport   56.44  35     P      P      10 31 23.1 +1.8
      baz=289,SNR=9.3
DLBC  Dease Lake       56.61  39     P      P      10 31 24.4 +1.9
      comp=Z,11nm,1.0s,baz=285,slow=8.6,SNR=6.9
DLBC  Dease Lake       56.61  39     IAmb   IAmb   10 31 25.9
      comp=Z,38nm,1.4s
ARU   Arti             56.95 319d iP        P      10 31 25.0 +0.1
ARU                                                10 33 26.2
ARU                                  S      S      10 39 19.1 +1.3
ARU                                  SS     SS     10 43 02.5 -3.2
ARU                                  pmax   pmax
      comp=Z,42nm,0.8s
ARU                                  MLR    MLR
      comp=Z,660nm,14.0s
ARU   Arti             56.95 319     P      P      10 31 24.8 -0.1
WRAB  Tennant Creek    58.34 191ceP         P      10 31 32.4 -2.6
WRAB                                 pmax   pmax
      comp=Z,47nm,0.7s
WRAB  Tennant Creek    58.34 191     P      P      10 31 33.3 -1.7
WRA   Warramunga Arr   58.35 191     P      P      10 31 33.4 -1.7
      comp=Z,55nm,0.7s,baz=12,slow=7.2,SNR=470
WRA                                  LR     LR     10 55 50.5
      comp=Z,111nm,21.8s,baz=10.0,slow=35
WRA   Warramunga Arr   58.35 191     P      P      10 31 33.4 -1.7
FITZ  Fitzroy Crossi   58.41 201     P      P      10 31 34.8 -0.7
FITZ                                 IAmb   IAmb   10 31 59.8
      comp=Z,17nm,1.1s
AB31  Akbulak array    58.83 310   i P      P      10 31 37.7 -0.5
ABKAR Akbulak array    58.83 310     IAmb   IAmb   10 31 52.4
      comp=Z,37nm,1.2s
EUNU  Eureka           58.91   9     P      P      10 31 38.7 +0.2
EUNU                                 IAmb   IAmb   10 32 01.4
      comp=Z,13nm,0.8s
KBL   Kabul            58.93 291     P      P      10 31 37.6 -1.8
KBL                                  pmax   pmax
      comp=Z,57nm,1.1s
KBL   Kabul            58.93 291     P      P      10 31 37.6 -1.8
AKTO  Aktyubinsk       59.50 312     LR     LR     10 58 41.5
      comp=Z,215nm,19.2s,baz=60,slow=37
AKTO  Aktyubinsk       59.50 312   i P      P      10 31 42.4 -0.5
AKTO                                 pmax   pmax
      comp=Z,24nm,0.9s
SPA0  Spitsbergen Ar   59.94 349    eP      P      10 31 46.6 +1.1
NOR   Nord             60.19 357   i P      P      10 31 46.3 -0.8
NOR                                  IAmb   IAmb   10 32 12.5
      comp=Z,20nm,1.5s
HYB   Hyderabad        60.22 269   i P      P      10 31 53.0 +4.7
KIRV  Kirov            60.67 323     LR     LR     11 00 51.7
      comp=Z,476nm,18.7s,baz=45,slow=39
KIRV  Kirov            60.67 323ceP         P      10 31 51.5 +0.8
PRGR  Permogore        61.03 327    eP      P      10 31 52.4 -0.7
PRGR                                 pmax   pmax
      comp=Z,6.0nm,0.4s
YKA   Yellowknife Ar   61.95  31     P      P      10 31 59.7 +0.4
      comp=Z,6.7nm,1.0s,baz=302,slow=5.5,SNR=8.7
YKA   Yellowknife Ar   61.95  31   i P      P      10 31 59.7 +0.4
YKA                                  pmax   pmax
      comp=Z,8.0nm,1.0s
AS31  Alice Springs    62.07 190     P      P      10 31 59.3 -1.3
ASAR  Alice Springs    62.08 190     P      P      10 31 59.3 -1.3
      comp=Z,13nm,0.7s,baz=14,slow=8.6,SNR=179
ASAR                                 LR     LR     10 57 54.5
      comp=Z,149nm,21.9s,baz=16,slow=35
ASAR  Alice Springs    62.08 190     P      P      10 31 59.4 -1.2
ASAR  Alice Springs    62.08 190     P      P      10 31 59.4 -1.2
APA   Apatity          62.61 336⇓iP         P      10 31 59.4 -4.2
APA                                  pmax   pmax
      comp=Z,11nm,1.1s
APA                                  MLR    MLR
      comp=Z,2µm,11.0s
POO   Poona            63.32 273    eP      P      10 32 20.0  +11
DZM   Mont Dzumac      63.40 157     LR     LR     11 00 25.3
      comp=Z,182nm,18.5s,baz=26,slow=37
DZM   Mont Dzumac      63.40 157    eLR     LR     10 50 58.4
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      comp=Z,355nm,22.9s
HAMF  Hammerfest      63.54 341 eP     P      10 32 09.5 -0.3
ARA0  ARCESS Array S  63.77 340 eP     P      10 32 11.7 +0.3
ARCES ARCESS Array B  63.77 340  P     P      10 32 11.7 +0.3
      comp=Z,5.4nm,0.9s,baz=60,slow=8.5,SNR=10
ARCES                            LR    LR     11 04 29.8
      comp=Z,288nm,20.1s,baz=245,slow=40
ARCES ARCESS Array B  63.77 340  P     P      10 32 11.7 +0.3
ARCES ARCESS Array B  63.77 340  IAmb  IAmb   10 32 12.7
      comp=Z,44nm,1.4s
KLMR  Klimovskoe      63.99 328 eP     P      10 32 11.9 -1.0
KLMR                            e             10 32 47.7
KLMR                            e             10 34 32.6
KLMR                             pmax  pmax
      comp=Z,32nm,1.5s
KLMR  Klimovskoe      63.99 328 eP     P      10 32 11.9 -1.0
KLMR                             AMP          10 32 16.1
      comp=Z,32nm,1.5s
KLMR                            ePcP   PcP    10 32 47.7 -0.5
KLMR                            ePP    PP     10 34 32.7 -0.5
KLMR                             LQ    LQ     10 54 57.8
KLMR                             LQ    LQ     10 54 57.8
KLMR                             LR    LR     10 59 47.8
LLLB  Lillooet        64.15  45  IAmb  IAmb   10 32 40.6
      comp=Z,21nm,1.2s
NEEM  North Greenlan  64.43   4 eP     P      10 32 14.5 -1.5
NEEM                             IAmb  IAmb   10 32 16.8
      comp=Z,46nm,1.2s
BELG  Belogornoye     64.44 318 i P    P      10 32 16.6 +0.7
BELG                             pmax  pmax
      comp=Z,4.0nm,0.9s
KTK1  Kautokeino      64.73 340 eP     P      10 32 17.4 -0.3
DAG   Danmarks Havn   64.96 356  P     P      10 32 21.8 +2.8
DAG                              pmax  pmax
      comp=Z,13nm,1.2s
D03D  Eldon           64.96  48  P     P      10 32 21.5 +2.0
      baz=300
GEYT  Alibeck         65.10 300  P     P      10 32 21.4 +0.8
      comp=Z,9.0nm,0.8s,baz=192,slow=4.1,SNR=8.0
GEYT                             LR    LR     11 03 39.8
      comp=Z,176nm,18.1s,baz=220,slow=39
GEYT  Alibeck         65.10 300  IAmb  IAmb   10 32 35.1
      comp=Z,23nm,0.9s
GYA0B ALIBECK ARRAY   65.10 300  P     P      10 32 21.9 +1.3
GYA0B                            IAmb  IAmb   10 32 35.1
      comp=Z,24nm,0.9s
JETT  Jettan, Norway  65.11 341 eP     P      10 32 21.4 +1.3
TRO   Tromso          65.42 342 eP     P      10 32 22.5 +0.4
B08A  Colville Reser  66.72  46  IAmb  IAmb   10 32 47.9
      comp=Z,14nm,1.1s
I04A  Tendick Farm,   67.26  52  P     P      10 32 35.8 +1.4
      baz=301
E07A  Sunnyside       67.36  48  IAmb  IAmb   10 32 51.3
      comp=Z,30nm,1.3s
STEI  Steigen         67.59 341 eP     P      10 32 36.5 +0.6
C09A  Chrisman Ranch  67.62  46  IAmb  IAmb   10 32 53.5
      comp=Z,21nm,1.1s
HAWA  Hanford         67.64  48  IAmb  IAmb   10 32 38.8
      comp=Z,17nm,1.3s
MOS   Moscow          67.64 324 eP     P      10 32 34.2 -2.3
MOS                             e             10 32 48.9
MOS                              MLR   MLR
      comp=Z,500nm,16.0s
FAUS  Fauske          67.99 341 eP     P      10 32 39.3 +0.8
NEW   Newport         68.02  45  P     P      10 32 40.0 +0.8
      baz=303
NEW   Newport         68.02  45  IAmb  IAmb   10 32 55.5
      comp=Z,24nm,1.2s
L04D  Klamath Falls   68.16  53  P     P      10 32 41.4 +1.2
      baz=302
PINE  Pine Mountain   68.17  51  P     P      10 32 41.5 +1.2
VRH   Novokhopyorsk   68.18 319 eP     P      10 32 39.3 -0.7
VRH                             e*SP   pwP    10 32 52.9 +0.1
VRH                              pmax  pmax
      comp=Z,10.0nm,0.5s
M02C  Callahan        68.24  54  P     P      10 32 42.2 +1.6
      baz=302
J05D  Fort Rock, OR   68.26  52  P     P      10 32 41.5 +0.7
      baz=302
E09A  Wood Farm, Sta  68.38  47  P     P      10 32 42.0 +0.7
E09A                             IAmb  IAmb   10 32 57.0
      comp=Z,20nm,1.2s
OBN   Obninsk         68.50 324ceP     P      10 32 40.8 -1.1
OBN                             e             10 35 13.0
OBN                              pmax  pmax
      comp=Z,34nm,1.2s
OBN                              MLR   MLR
      comp=Z,488nm,15.0s
N02D  Trinity Center  68.56  54  P     P      10 32 44.3 +1.6
      baz=302
M04C  Macdoel         68.68  53  P     P      10 32 44.8 +1.3
      baz=302
K05A  Summer Lake     68.77  52  P     P      10 32 45.8 +1.7
LPSR  Galich'ya Gora  68.82 321 eP     P      10 32 43.5 -0.4
LPSR                            e*SP   pwP    10 32 56.2 -0.5
LPSR                             pmax  pmax
      comp=Z,10.0nm,0.6s
FIA1  FINESS Array S  68.86 333  P     P      10 32 44.1  0.0
FINES FINESS Array B  68.87 333  P     P      10 32 44.1 +0.1
      comp=Z,7.5nm,0.7s,baz=54,slow=9.7,SNR=25
FINES                            LR    LR     11 04 34.9
      comp=Z,298nm,18.2s,baz=50,slow=37
FINES FINESS Array B  68.87 333 i P    P      10 32 44.0 -0.1
FINES                            pmax  pmax
      comp=Z,8.0nm,0.7s
FINES FINESS Array B  68.87 333  P     P      10 32 44.3 +0.2
WDC   Whiskeytown Da  68.87  55  P     P      10 32 45.5 +1.0
WDC                              pmax  pmax
      comp=Z,24nm,1.3s
WDC   Whiskeytown Da  68.87  55  P     P      10 32 45.5 +1.0
WDC                              IAmb  IAmb   10 33 03.3
      comp=Z,24nm,1.3s
O02D  Mt. Diablo Mer  68.93  55  P     P      10 32 46.5 +1.5
      baz=302
MOR8  Moi Rana        69.12 340 eP     P      10 32 44.7 -0.9
KONS  Konsvik         69.22 341 eP     P      10 32 47.0 +0.9
WALA  Waterton Lakes  69.36  43  P     P      10 32 48.0 +0.4
WALA                             IAmb  IAmb   10 33 04.1
      comp=Z,17nm,1.0s
STOK  Stokkvaagen     69.37 341 eP     P      10 32 48.1 +1.0
MAK   Makhachkala     69.42 309 eP     P      10 32 42.3 -5.5
MAK                             eS     S      10 41 44.9 -9.0
MAK                             eSS    SS     10 46 13.8 -6.7
MAK                              pmax  pmax
      comp=Z,308nm,1.5s
MAK                              MLR   MLR
      comp=Z,363nm,17.0s
VSR   Storozhevoye    69.50 320 eP     P      10 32 46.9 -1.3
VSR                             e*SP   pwP    10 33 00.6 -0.3
VSR                              pmax  pmax
      comp=Z,20nm,1.3s
O03E  Paynes Creek    69.50  55  P     P      10 32 49.1 +0.6
      baz=303
STKA  Stephens Creek  69.57 182  P     P      10 32 47.7 -1.0
      comp=Z,2.5nm,0.6s,baz=15,slow=11,SNR=6.7
STKA                             LR    LR     11 02 58.7
      comp=Z,86nm,21.0s,baz=16,slow=36
STKA  Stephens Creek  69.57 182  P     P      10 32 47.7 -1.0
VORD  Divnogorie      69.58 319 eP     P      10 32 47.5 -1.2
VORD                            e*SP   pwP    10 33 00.9 -0.5
VORD                             pmax  pmax
      comp=Z,10.0nm,0.6s
MOD   Modoc Plateau   69.58  52  IAmb  IAmb   10 33 05.8
      comp=Z,20nm,1.4s
SUMG  Summit          69.69   1  P     P      10 32 49.5 -0.1
SUMG                             pmax  pmax
      comp=Z,36nm,1.2s
SUMG  Summit          69.69   1 eP     P      10 32 49.2 -0.3
SUMG                             IAmb  IAmb   10 32 51.2
      comp=Z,461nm,3.1s
SUMG  Summit          69.69   1  P     P      10 32 49.5 -0.1
SUMG                             IAmb  IAmb   10 32 51.5
      comp=Z,36nm,1.2s
J08A  Circle Bar Ran  69.91  50  IAmb  IAmb   10 33 06.9
      comp=Z,23nm,1.0s
FORT  Forrest         70.03 195  P     P      10 32 51.0 -0.5
ORV   Oroville        70.10  55  IAmb  IAmb   10 33 07.1
      comp=Z,15nm,1.1s
WVOR  Wild Horse Val  70.33  51  IAmb  IAmb   10 32 56.0
      comp=Z,21nm,1.4s
VSU   Vasula          70.61 330 eP     P      10 32 55.9 +1.0
MSO   Missoula        70.61  45  P     P      10 32 55.6 +0.3
      baz=305
MSO   Missoula        70.61  45  IAmb  IAmb   10 33 12.1
      comp=Z,16nm,1.3s
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GOF   Gofitskoye      70.92 313⇑eP     P      10 32 57.8 +0.8
GOF                              pmax  pmax
      comp=Z,40nm,0.9s
NSS   Namsos          71.06 340 eP     P      10 32 58.4 +1.0
MPK   Martis Peak     71.19  55  IAmb  IAmb   10 33 14.7
      comp=Z,27nm,1.2s
PAHR  Pah Rah Range   71.38  54  P     P      10 33 00.8 +0.7
PAHR                             IAmb  IAmb   10 33 15.5
      comp=Z,14nm,1.1s
MFID  Camas Ranch     71.48  49  IAmb  IAmb   10 33 15.5
      comp=Z,15nm,1.1s
GUDG  Gudauri         71.55 310  P     P      10 33 05.0 +3.9
KIV   Kislovodsk      71.76 312 eP     P      10 33 03.8 +1.5
KIV                              pmax  pmax
      comp=Z,33nm,1.1s
KBZ   Khabaz          71.77 311  P     P      10 33 03.4 +1.3
      comp=Z,7.1nm,0.7s,baz=51,slow=2.4,SNR=8.1
KBZ   Khabaz          71.77 311ceP     P      10 33 02.6 +0.5
KBZ                              pmax  pmax
      comp=Z,6.0nm,0.6s
FFC   Flin Flon       71.79  34  P     P      10 33 02.1  0.0
FFC                              pmax  pmax
      comp=Z,34nm,1.1s
FFC   Flin Flon       71.79  34  P     P      10 33 02.1  0.0
FFC                              IAmb  IAmb   10 33 03.6
      comp=Z,34nm,1.1s
YERR  Yerington       71.87  55  IAmb  IAmb   10 33 18.7
      comp=Z,18nm,1.1s
ONI   Oni             72.09 310  P     P      10 33 07.2 +3.0
ONI   Oni             72.09 310  IAmb  IAmb   10 33 20.0
      comp=Z,33nm,1.0s
EGMT  Eagleton        72.20  43  P     P      10 33 05.2 +0.4
      baz=307
EGMT  Eagleton        72.20  43  IAmb  IAmb   10 33 21.5
      comp=Z,13nm,0.9s
HLID  Hailey          72.23  48  P     P      10 33 05.8 +0.6
      baz=306,SNR=9.8
KVN   Kaiserville     72.57  54  IAmb  IAmb   10 33 22.9
      comp=Z,16nm,1.0s
BOZ   Bozeman (W)     72.64  45  P     P      10 33 08.0 +0.5
      baz=307
LHV   Little Huntoon  72.77  55  IAmb  IAmb   10 33 24.9
      comp=Z,30nm,1.1s
MNK   Minsk           72.79 327 i P    P      10 33 06.3 -1.8
MNK                             i             10 35 46.9
MNK                             i PPP  PPP    10 37 34.4
MNK                             i S    S      10 42 32.6 -0.1
MNK                             i             10 43 14.3
MNK                             i SS   SS     10 47 13.1 +1.5
MNK                              pmax  pmax
      comp=N,20nm,1.3s
MNK                              pmax  pmax
      comp=Z,24nm,1.2s
MNK                              pmax  pmax
      comp=E,5.0nm,1.3s
MNK                              MLR   MLR
      comp=Z,937nm,24.0s
MNK                              MLR   MLR
      comp=N,384nm,19.0s
MNK                              MLR   MLR
      comp=E,73nm,18.0s
MNK   Minsk           72.79 327 i P    P      10 33 06.4 -1.7
      comp=E,5.0nm,1.3s
MNK                             i P    P      10 33 06.4 -1.7
      comp=N,20nm,1.3s
MNK                             i P    P      10 33 06.4 -1.7
      comp=Z,24nm,1.2s,baz=48
MNK                             i PP   PP     10 35 46.9 -2.6
MNK                             i PPP  PPP    10 37 34.4
MNK                             i S    S      10 42 32.6 -0.1
MNK                             i SS   SS     10 47 13.2 +1.6
MNK                             i SSS  SSS    10 50 33.7
MNK                             i LQ   LQ     11 00 08.9
MNK                             i LR   LR     11 03 47.0
MNK                             i LRM  MLR    11 08 13.2
      comp=Z,937nm,24.2s
MNK                             i LRM  MLR    11 08 29.1
      comp=N,384nm,19.1s
MNK                             i LRM  MLR    11 08 48.2
      comp=E,73nm,17.8s
NVAR  Mina Array Bea  72.79  55  P     P      10 33 09.6 +0.9
      comp=E,5.9nm,1.0s,baz=287,slow=6.0,SNR=29
ISAL  Salakas         72.81 328 eP     P      10 33 09.0 +0.9
MLAC  Mammoth, Mammo72.91  55  P     P      10 33 11.7 +2.3
      baz=305
NACGM Naroch          72.99 327 i P    P      10 33 23.6  +14
SOC   Sochi           73.72 313 eP     P      10 33 12.4 -1.3
SOC                             e             10 35 57.0
SOC                             ePPP   PPP    10 37 47.3
SOC                             eS     SKiKP  10 42 43.5 +1.3
SOC                             eSS    SS     10 47 29.8 +3.5
SOC                              MLR   MLR
      comp=Z,177nm,17.0s
PABE  Paberze         73.74 329 eP     P      10 33 14.7 +1.1
VES   Vestal, Richgr  73.77  57  P     P      10 33 14.3 +0.1
      baz=305
DOMB  Dombas          73.84 340 eP     P      10 33 14.6 +0.4
H17A  Grant Village   73.96  46  P     P      10 33 18.1 +2.6
      baz=308,SNR=11
H17A  Grant Village   73.96  46  IAmb  IAmb   10 33 32.6
      comp=Z,18nm,0.9s
HFS   Hagfors         74.00 337  LR    LR     11 08 46.2
      comp=Z,583nm,19.6s,baz=36,slow=38
NB2   NORSAR Subarra  74.04 338  P     P      10 33 14.9 -0.5
      comp=Z,1.4nm,0.6s,baz=37,slow=6.2
NB2   NORSAR Subarra  74.04 338  P     P      10 33 14.9 -0.5
      baz=37,slow=6.2
NOA   NORSAR Array B  74.04 338  P     P      10 33 15.1 -0.3
      comp=Z,1.0nm,0.4s,baz=44,slow=4.6,SNR=11
NOA                              LR    LR     11 11 08.8
      comp=Z,509nm,19.1s,baz=15,slow=40
NOA   NORSAR Array B  74.04 338  P     P      10 33 15.1 -0.3
FLWY  Flagg Ranch     74.08  46  IAmb  IAmb   10 33 19.2
      comp=Z,22nm,1.3s
CWC   Cottonwood Cre  74.08  56  P     P      10 33 16.3 +0.1
      baz=306
NORES NORESS Array B  74.19 338  P     P      10 33 16.5 +0.3
RLMT  Red Lodge       74.25  45  P     P      10 33 17.5 +0.4
      baz=308
ISA   Isabella, Lake  74.28  57  P     P      10 33 17.2  0.0
      baz=306
TPAW  Teton Pass      74.29  47  IAmb  IAmb   10 33 33.4
      comp=Z,13nm,0.8s
SNOW  Snow King Moun  74.42  47  IAmb  IAmb   10 33 34.0
      comp=Z,11nm,0.8s
R11A  Troy Canyon, C  74.58  53  P     P      10 33 19.9 +0.8
      baz=306,SNR=12
AKASG Malin Array Be  74.73 323  P     P      10 33 19.6 +0.2
      comp=Z,6.1nm,0.5s,baz=46,slow=6.2,SNR=24
AKASG                            LR    LR     11 11 22.3
      comp=Z,414nm,18.5s,baz=50,slow=40
AKASG Malin Array Be  74.73 323  P     P      10 33 19.7 +0.2
AKBB  Malin Array Si  74.73 323 i P    P      10 33 19.6 +0.1
DGMT  Dagmar          74.81  40  P     P      10 33 20.3 +0.2
      baz=311
DGMT  Dagmar          74.81  40  IAmb  IAmb   10 33 34.8
      comp=Z,21nm,1.1s
FURC  Furnace Creek,  74.86  56  P     P      10 33 21.6 +1.1
      baz=306,SNR=9.1
LRMC  Laurel Mtn Rad  74.91  57  P     P      10 33 21.4 +0.4
      baz=306,SNR=6.8
EDW2  Edwards Air Fo  75.05  57  P     P      10 33 22.7 +1.0
      baz=306,SNR=7.7
HWUT  Hardware Ranch  75.08  49  IAmb  IAmb   10 33 24.3
      comp=Z,22nm,1.2s
GWY   Greenwater Val  75.16  56  IAmb  IAmb   10 33 37.1
      comp=Z,14nm,0.9s
QSM   Queen of Sheba  75.16  56  IAmb  IAmb   10 33 37.5
      comp=Z,19nm,0.9s
DUG   Dugway, Tooele  75.19  50  P     P      10 33 23.6 +1.0
      baz=307,SNR=8.8
BW06  Boulder Array   75.54  47  P     P      10 33 24.9 +0.2
      baz=309,SNR=8.3
PDAR  Pinedale Array  75.54  47  P     P      10 33 24.8 +0.1
      comp=Z,2.9nm,0.6s,baz=297,slow=1.6,SNR=30
SHOC  Shoshone, Teco  75.58  56  P     P      10 33 25.7 +0.9
      baz=307
GSC   Goldstone, Bar  75.59  56  P     P      10 33 25.6 +0.7
      baz=306
TUQ   Turquoise Moun  76.09  56  P     P      10 33 28.5 +0.7
      baz=307
MVU   Marysvale       76.59  52  IAmb  IAmb   10 33 57.1
      comp=Z,47nm,1.2s
GMRC  Granite Mounta  76.65  56  P     P      10 33 31.1 +0.1
      baz=307
SORM  Soroca          76.88 322 ⇓P     P      10 33 30.9 -1.0
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SORM  Soroca          76.88 322 ⇓P     P      10 33 30.9 -1.0
P17A  Butcher Ranch,  76.90  50  IAmb  IAmb   10 33 47.8
      comp=Z,15nm,0.9s
RDMU  Red Mountain    76.91  49  IAmb  IAmb   10 33 47.9
      comp=Z,38nm,1.0s
P18A  Preston Nutter  77.10  50  IAmb  IAmb   10 33 35.8
      comp=Z,21nm,1.4s
SRU   San Rafael Swe  77.25  50  IAmb  IAmb   10 33 49.5
      comp=Z,16nm,0.9s
K22A  Casper          77.34  45  P     P      10 33 35.1 +0.3
      baz=310
K22A  Casper          77.34  45  IAmb  IAmb   10 33 49.6
      comp=Z,25nm,1.2s
IRM   Iron Mountain   77.37  57  P     P      10 33 35.7 +0.8
      baz=307
ULM   Lac du Bonnet   77.57  35  P     P      10 33 35.1 -0.5
      comp=Z,6.6nm,1.0s,baz=332,slow=3.9,SNR=5.6
ULM                              LR    LR     11 12 23.2
      comp=Z,39nm,19.6s,baz=338,slow=39
ULM   Lac du Bonnet   77.57  35  P     P      10 33 35.2 -0.5
ULM   Lac du Bonnet   77.57  35  P     P      10 33 35.1 -0.5
ULM                              IAmb  IAmb   10 33 50.4
      comp=Z,14nm,0.9s
IKP   In-Ko-Pah, Jac  77.64  58  P     P      10 33 37.6 +1.1
      baz=307
LVV   L'vov           77.75 325 eP     P      10 33 37.0 +0.3
LVV                              MLR   MLR
      comp=N,500nm,15.0s
LVV                              MLR   MLR
      comp=E,800nm,15.0s
LVV                              MLR   MLR
      comp=Z,900nm,16.0s
RSSD  Black Hills     77.75  43  P     P      10 33 36.7 -0.4
RSSD                             pmax  pmax
      comp=Z,8.0nm,0.8s
RSSD  Black Hills     77.75  43  P     P      10 33 37.0 -0.1
      baz=312
RSSD  Black Hills     77.75  43  P     P      10 33 36.7 -0.4
PDMCI Parker Dam,Lak  77.94  56  P     P      10 33 38.2 +0.2
      baz=308
O20A  White River Ci  77.97  48  P     P      10 33 38.5 +0.1
      baz=310
O20A  White River Ci  77.97  48  IAmb  IAmb   10 33 53.2
      comp=Z,11nm,0.9s
BUR08 Bucovina Ar. S  78.75 323  IAmb  IAmb   10 33 57.6
      comp=Z,13nm,0.8s
BURAR Bucovina Array  78.76 323 ⇑P     P      10 33 43.2 +0.7
BURAR Bucovina Array  78.76 323 ⇑P     P      10 33 43.2 +0.7
BURAR Bucovina Array  78.76 323  IAmb  IAmb   10 33 57.5
      comp=Z,10.0nm,0.8s
N23A  Red Feather La  78.81  47  P     P      10 33 43.7 +0.6
      baz=311
TESR  Tescani         78.84 321 ⇑P     P      10 33 42.3 -0.5
WUAZ  Wupatki         78.97  54  P     P      10 33 45.3 +1.3
      baz=309
AGMN  Agassiz Nation  78.98  36  P     P      10 33 42.9 -0.6
      baz=316
AGMN  Agassiz Nation  78.98  36  IAmb  IAmb   10 33 44.1
      comp=Z,19nm,1.2s
CFR   Carcaliu        79.02 320 ⇑P     P      10 33 44.9 +1.1
CFR   Carcaliu        79.02 320 ⇑P     P      10 33 44.9 +1.1
TPGR  Topolog         79.10 319 ⇓P     P      10 33 44.3 +0.1
RAR   Rarotonga       79.14 128  LR    LR     11 01 02.7
      comp=Z,89nm,20.8s,baz=296,slow=30
VRI   Vrincioaia      79.25 321 ⇑P     P      10 33 47.5 +2.4
VRI   Vrincioaia      79.25 321 ⇑P     P      10 33 47.5 +2.4
PLOR  Plostina        79.30 321 ⇑P     P      10 33 55.3  +10
PLOR  Plostina        79.30 321 ⇑P     P      10 33 55.3  +10
OJC   Ojcow           79.32 327  IAmb  IAmb   10 34 00.8
      comp=Z,49nm,1.2s
UZH   Uzhgorod        79.39 325 eP     P      10 33 42.9 -2.9
UZH                             e             10 33 49.7
UZH                             e             10 33 56.7
HARR  Harsova         79.46 319 ⇑P     P      10 33 52.6 +6.4
HARR  Harsova         79.46 319 ⇑P     P      10 33 52.6 +6.4
BISRR Bisoca          79.49 321 ⇑P     P      10 33 48.6 +2.2
CRVS  Cervenica-Dubn  79.57 326 eP     P      10 33 46.2 -0.6
CRVS  Cervenica-Dubn  79.57 326 eP     P      10 33 46.2 -0.6
TRPA  Tarpa           79.65 324 eP     P      10 33 47.9 +0.8
BR131 Keskin Array S  79.68 313 i P    P      10 33 48.4 +0.8
BRTR  Keskin Array B  79.68 313  P     P      10 33 48.5 +0.8
      comp=Z,3.3nm,1.1s,baz=112,slow=5.5,SNR=11
BRTR                             LR    LR     11 13 22.1
      comp=Z,143nm,19.2s,baz=34,slow=39
BRTR  Keskin Array B  79.68 313  P     P      10 33 48.5 +0.8
BRTR  Keskin Array B  79.68 313  P     P      10 33 47.5 -0.2
MVCO  Mesa Verde      79.69  51  P     P      10 33 48.6 +0.7
      baz=310
ISCO  Idaho Springs   79.72  47  P     P      10 33 49.1 +1.0
      baz=311
DOPR  Dopca           79.85 322 ⇑P     P      10 33 50.3 +2.0
ISR   Istrita         79.87 320 ⇑P     P      10 33 54.9 +6.4
ISR   Istrita         79.87 320 ⇑P     P      10 33 54.9 +6.4
B35A  Bob, Littlefor  79.91  35  IAmb  IAmb   10 34 02.6
      comp=Z,28nm,1.4s
ICOR  Ion Corvin      79.93 319 ⇓P     P      10 33 54.2 +5.5
ANTO  Ankara          80.07 313 ⇑P     P      10 33 44.8 -5.0
ANTO  Ankara          80.07 313 ⇑P     P      10 33 44.8 -4.9
LANS  Liptovska Anna  80.26 327 eP     P      10 33 52.2 +1.6
LANS                             pmax  pmax
      comp=Z,7.0nm,1.2s
LANS  Liptovska Anna  80.26 327 eP     P      10 33 52.2 +1.6
S22A  4UR Ranch, Cre  80.35  49  P     P      10 33 52.5 +0.9
      baz=311
VOIR                  80.39 321 ⇑P     P      10 33 52.7 +1.3
VOIR                  80.39 321 ⇑P     P      10 33 52.7 +1.3
F33A  5 Mile Ranch,   80.54  38  IAmb  IAmb   10 34 06.6
      comp=Z,20nm,1.1s
DRGR                  80.54 323 ⇓P     P      10 33 52.7 +0.5
DRGR                  80.54 323 ⇓P     P      10 33 52.7 +0.5
MORC  Moravsky Berou  80.61 328 ⇑P     P      10 33 53.1 +0.7
MORC  Moravsky Berou  80.61 328 ⇑P     P      10 33 53.1 +0.7
MORC  Moravsky Berou  80.61 328 eP     P      10 33 53.2 +0.7
MORC                            e             10 34 07.0
MORC  Moravsky Berou  80.61 328  IAmb  IAmb   10 34 07.8
      comp=Z,17nm,1.1s
ARR   Arges           80.65 321 ⇑P     P      10 33 53.5 +0.8
DPC   Dobruska-Polom  80.67 329 eP     P      10 33 53.1 +0.4
DPC                             e             10 34 07.1
DPC   Dobruska-Polom  80.67 329 eP     P      10 33 53.1 +0.4
DPC                             esP    pwP    10 34 07.1 +1.7
PSZ   Piszkesteto     81.00 326 ⇓P     P      10 33 55.8 +1.2
PSZ   Piszkesteto     81.00 326 eP     P      10 33 55.2 +0.7
PSZ   Piszkesteto     81.00 326 ⇓P     P      10 33 55.8 +1.2
PSZ   Piszkesteto     81.00 326  P     P      10 33 54.5 -0.1
PSZ                              IAmb  IAmb   10 34 10.2
      comp=Z,22nm,1.0s
VYHS  Vyhne           81.03 327 eP     P      10 33 55.6 +0.9
VYHS  Vyhne           81.03 327 eP     P      10 33 55.6 +0.9
SDCO  Great Sand Dun  81.15  49  P     P      10 33 56.4 +0.6
      baz=312
JAVC  Velka Javorina  81.26 327 e      P      10 34 11.3  +15
JAVC  Velka Javorina  81.26 327 eP     P      10 33 57.7 +1.8
VRAC  Vranov          81.36 328 ⇓P     P      10 33 57.6 +1.2
VRAC  Vranov          81.36 328  LR    LR     11 13 07.0
      comp=Z,283nm,19.2s,baz=34,slow=38
VRAC  Vranov          81.36 328 ⇓P     P      10 33 57.6 +1.2
VRAC  Vranov          81.36 328 e      P      10 34 11.1  +15
VRAC  Vranov          81.36 328 eP     P      10 33 57.3 +0.9
GZR   Gura Zlata      81.53 322 ⇑P     P      10 33 57.9 +0.5
GZR   Gura Zlata      81.53 322 ⇑P     P      10 33 57.9 +0.5
SMOL  Smolenice       81.62 327 eP     P      10 33 59.4 +1.6
SMOL                             pmax  pmax
      comp=Z,8.0nm,1.3s
SMOL  Smolenice       81.62 327 eP     P      10 33 59.4 +1.6
KRUC  Moravsky        81.64 328 e      P      10 34 12.4  +15
KRUC  Moravsky        81.64 328 eP     P      10 33 58.5 +0.7
PRU   Pruhonice       81.67 330 eP     P      10 33 58.4 +0.4
PRU                             e             10 34 12.4
PRU                              MLR   MLR
      comp=Z,800nm,20.8s
PRU   Pruhonice       81.67 330 eP     P      10 33 58.4 +0.4
PRU                             esP    pwP    10 34 12.4 +1.7
PRU                              AMS   AMS    11 14 30.0
      comp=Z,800nm,20.8s
MODS  Modra-Piesok    81.80 327 eP     P      10 33 59.4 +0.7
MODS  Modra-Piesok    81.80 327 eP     P      10 33 59.4 +0.7
URZ   Urewera         81.82 154  LR    LR     11 07 55.9
      comp=Z,81nm,19.9s,baz=31,slow=34
ECSD  EROS Data Cent  81.90  40  P     P      10 33 58.8 -0.5
      baz=316
ECSD  EROS Data Cent  81.90  40  IAmb  IAmb   10 34 00.0
      comp=Z,23nm,1.3s
KSCO  Kaye Shedlock'  81.97  46  P     P      10 34 00.1 +0.2
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	baz=313						
KSCO	Kaye Shedlock’	81.97	46	IAmb	IAmb	10 34 01.2	
	comp=Z,16nm,1.1s						
RAYN	Ar Rayn	82.12	294	P	P	10 33 59.9	-1.0
RAYN				pmax	pmax		
	comp=Z,11nm,1.0s						
RAYN	Ar Rayn	82.12	294	P	P	10 33 59.9	-1.0
T25A	Trinidad	82.20	49	P	P	10 34 02.1	+0.8
	baz=312						
T25A	Trinidad	82.20	49	IAmb	IAmb	10 34 16.4	
	comp=Z,11nm,0.8s						
E38A	The Farm, Brul	82.20	35	IAmb	IAmb	10 34 01.2	
	comp=Z,30nm,1.2s						
ANMO	Albuquerque	82.42	51	ceP	P	10 34 03.2	+0.7
ANMO				pmax	pmax		
	comp=Z,12nm,1.3s						
ANMO	Albuquerque	82.42	51	P	P	10 34 03.1	+0.6
	baz=311						
ANMO	Albuquerque	82.42	51	P	P	10 34 02.9	+0.4
MDVR	Moldovita	82.49	323	⇑P	P	10 34 03.7	+1.2
CKRC	Cesky Krumlov	82.68	329	eP	P	10 34 04.0	+0.7
CKRC				ex	x	10 34 17.0	
KHC	Kasperske Hory	82.73	330	eP	P	10 34 03.9	+0.3
KHC				e		10 34 17.8	
KHC	Kasperske Hory	82.73	330	eP	P	10 34 03.9	+0.3
KHC				esP	pwP	10 34 17.8	+1.5
CONA	Conrad Observa	82.74	328	eP	P	10 34 05.0	+1.2
	comp=Z,12nm,1.2s,SNR=5.0						
CONA				i S	pwP	10 34 18.3	+1.9
	comp=Z,12nm,0.9s						
PMOR	Pomariorio Ree	82.76	115	eT	T	12 04 28.0	
	comp=Z,3.7nm,0.2s						
GERES	GERESS Array B	82.91	329	P	P	10 34 04.6	0.0
	comp=Z,1.0nm,0.6s,baz=0.0,slow=4.0,SNR=6.5						
GERES				LR	LR	11 14 28.0	
	comp=Z,212nm,18.1s,baz=43,slow=38						
GERES	GERESS Array B	82.91	329	P	P	10 34 04.6	0.0
319A	Douglas	82.95	56	IAmb	IAmb	10 34 20.3	
	comp=Z,11nm,0.9s						
ALN	Alexandroupoli	83.11	318	IAmb	IAmb	10 34 07.3	
	comp=Z,18nm,1.4s						
FRGS	Fruska Gora	83.11	324	⇑P	P	10 34 06.9	+1.2
121A	Cookes Peak, D	83.17	54	P	P	10 34 07.4	+1.1
	baz=311						
121A	Cookes Peak, D	83.17	54	IAmb	IAmb	10 34 21.8	
	comp=Z,9.9nm,0.9s						
GRF	Grafenberg Arr	83.20	331	eP	P	10 34 07.0	+1.0
	comp=Z,16nm,1.1s,baz=40,slow=4.7						
GRF				epP	PcP	10 34 11.7	+1.2
	baz=39,slow=4.6						
PPT	Papeete	83.31	118	LR	LR	11 07 52.0	
	comp=Z,71nm,19.2s,baz=326,slow=33						
PPT2	Papeete2	83.32	118	eLR	LR	10 59 47.0	
	comp=Z,299nm,27.5s						
VTS	Vitosha	83.33	320	⇑P	P	10 34 08.0	+1.0
VTS	Vitosha	83.33	320	⇑P	P	10 34 08.0	+1.0
VTS	Vitosha	83.33	320	IAmb	IAmb	10 34 22.1	
	comp=Z,10.0nm,0.7s						
BOVS	Bovan	83.34	322	⇓P	P	10 34 04.8	-2.0
ARSA	Arzberg	83.41	327	i P	P	10 34 08.0	+0.8
	comp=Z,4.0nm,0.7s						
ARSA				eS	pwP	10 34 21.4	+1.5
	comp=Z,8.5nm,0.9s						
MOA	Molln	83.47	329	eP	P	10 34 06.9	-0.5
	comp=Z,11nm,1.4s						
MOA				eS	pwP	10 34 21.6	+1.4
	comp=Z,9.6nm,1.2s						
EZN	Ezine	83.72	317	P	P	10 34 10.1	+1.3
CBKS	Cedar Bluff	83.73	45	P	P	10 34 08.4	-0.6
	baz=315						
CBKS	Cedar Bluff	83.73	45	IAmb	IAmb	10 34 08.8	
	comp=Z,14nm,1.1s						
DIVS	Divibare	83.82	323	IAmb	IAmb	10 34 10.7	
	comp=Z,15nm,1.2s						
SCHQ	Schefferville	83.82	17	LR	LR	11 13 17.5	
	comp=Z,157nm,21.2s,baz=16,slow=37						
ELL	Elmali	83.85	312	P	P	10 34 11.6	+1.9
GROS	Grobnik	84.04	327	i P	P	10 34 10.3	-0.2
GROS				i PP	pwP	10 34 24.1	+0.9
PERS	Pernice	84.07	327	i P	P	10 34 10.7	+0.1
PERS				i PP	pwP	10 34 24.4	+1.1
SOKA	Soboth	84.07	327	eP	P	10 34 10.8	+0.2
	comp=Z,7.1nm,0.5s,SNR=11						
SOKA				eS	pwP	10 34 24.4	+1.1
	comp=Z,23nm,1.0s						
OBKA	Obir	84.41	328	eP	P	10 34 12.1	-0.3
	comp=Z,5.3nm,0.8s						
OBKA				eS	pwP	10 34 26.1	+1.0
	comp=Z,4.4nm,0.6s						
TAOE	Nuku Hiva Isla	84.48	106	eLR	LR	11 00 22.9	
	comp=Z,348nm,33.2s						
YER	Yerkesik	84.52	314	P	P	10 34 15.5	+2.4
CRES	Cresnjev	84.56	327	i P	P	10 34 12.0	-1.0
CRES				i PP	pwP	10 34 26.4	+0.7
MYKA	Terra Mystica	84.70	328	eP	P	10 34 13.4	-0.3
	comp=Z,5.7nm,0.8s						
MYKA				i S	pwP	10 34 27.0	+0.5
	comp=Z,7.9nm,0.8s						
WATA	Walderalm	84.97	330	i P	P	10 34 15.8	+0.6
	comp=Z,10nm,1.3s						
WATA				eS	pwP	10 34 28.8	+0.8
	comp=Z,16nm,1.3s						
WTTA	Wattenberg	85.00	330	i P	P	10 34 15.8	+0.3
	comp=Z,2.8nm,0.6s						
WTTA				eS	pwP	10 34 29.1	+1.0
	comp=Z,11nm,1.1s						
ABTA	Abfaltersbach	85.07	329	eP	P	10 34 15.2	-0.5
	comp=Z,4.4nm,0.8s						
ABTA				i S	pwP	10 34 28.5	+0.1
	comp=Z,13nm,1.0s						
MOTA	Moosalm	85.15	330	eP	P	10 34 16.0	-0.2
	comp=Z,13nm,1.1s						
MOTA				i S	pwP	10 34 30.1	+1.2
	comp=Z,19nm,1.2s						
RETA	Reutte	85.17	330	eP	P	10 34 16.8	+0.6
	comp=Z,16nm,1.0s,SNR=4.4						
RETA				i S	pwP	10 34 30.1	+1.3
	comp=Z,26nm,0.9s						
SQTA	Sankt Quirin	85.21	330	i P	P	10 34 16.5	+0.1
	comp=Z,3.8nm,0.6s						
SQTA				i S	pwP	10 34 30.1	+1.0
	comp=Z,9.0nm,0.8s						
KSU1	Kansas State U	85.24	43	P	P	10 34 16.3	-0.3
	baz=316						
MNTX	Cornudas Mount	85.25	53	P	P	10 34 16.7	0.0
	baz=312						
AMTX	Amarillo	85.35	49	P	P	10 34 18.1	+0.8
	baz=314						
AMTX	Amarillo	85.35	49	IAmb	IAmb	10 34 32.4	
	comp=Z,21nm,0.9s						
STAL	STALIGIAL	85.38	328	IAmb	IAmb	10 34 30.6	
	comp=Z,14nm,0.9s						
BFO	Black Forest	85.40	332	P	P	10 34 16.2	-1.0
BFO				pmax	pmax		
	comp=Z,45nm,1.3s						
BFO	Black Forest	85.40	332	P	P	10 34 16.2	-1.0
PDG	Podgorica	85.44	322	⇑P	P	10 34 17.2	-0.2
EIL	Elat	85.50	304	LR	LR	11 19 20.0	
	comp=Z,122nm,18.0s,baz=45,slow=40						
FETA	Feichten	85.56	330	eP	P	10 34 17.0	-1.2
	comp=Z,9.6nm,1.3s						
FETA				i S	pwP	10 34 32.0	+1.1
	comp=Z,13nm,0.9s						
FNA	Florina	85.62	320	IAmb	IAmb	10 34 42.7	
	comp=Z,13nm,1.1s						
DAVA	Damuels	85.68	331	i P	P	10 34 18.0	-0.8
	comp=Z,12nm,0.8s						
DAVA				i S	pwP	10 34 32.7	+1.3
	comp=Z,25nm,0.8s						
ECH	Echery	85.93	333	P	P	10 34 21.2	+1.4
ECH	Echery	85.93	333	IAmb	IAmb	10 34 34.7	
	comp=Z,22nm,1.1s						
OK032	Salt Plains WL	86.01	45	IAmb	IAmb	10 34 34.6	
	comp=Z,18nm,0.7s						
DAVOX	Davos/Dischmat	86.09	330	LR	LR	11 18 41.6	
	comp=Z,345nm,18.3s,baz=63,slow=40						
CROK	Carrier	86.35	45	IAmb	IAmb	10 34 36.2	
	comp=Z,16nm,0.8s						
TUE	Stuetta	86.56	330	P	P	10 34 23.0	-0.2
TUE				IAmb	IAmb	10 34 38.1	
	comp=Z,22nm,1.1s						
WMOK	Wichita Mounta	87.15	47	P	P	10 34 26.1	0.0
	baz=315						
OK029	Liberty Lake	87.15	46	IAmb	IAmb	10 34 40.4	
	comp=Z,17nm,0.8s						
P40A	Paris	87.30	40	IAmb	IAmb	10 34 40.7	
	comp=Z,13nm,0.8s						
TBI	Tubuai	87.33	122	eLR	LR	11 01 05.8	
	comp=Z,170nm,36.2s						
TBI	Tubuai	87.33	122	eT	T	12 10 10.6	
	comp=Z,12nm,0.3s						
X34A	Smith Ranch, M	87.80	47	IAmb	IAmb	10 34 55.5	
	comp=Z,14nm,1.1s						
TX31	Lajitas Ar. Si	87.93	54	IAmb	IAmb	10 34 50.0	
	comp=Z,28nm,1.4s						
TX32	Lajitas Array	87.93	54	IAmb	IAmb	10 34 50.0	
	comp=Z,9.6nm,1.4s						
TXAR	Lajitas Array	87.93	54	P	P	10 34 29.8	-0.2
	comp=Z,1.1nm,0.7s,baz=315,slow=3.1,SNR=16						
TXAR	Lajitas Array	87.93	54	P	P	10 34 29.8	-0.2
NRCA	Norcia	87.95	326	IAmb	IAmb	10 34 44.9	
	comp=Z,19nm,1.3s						
ITM	Ithomi	88.01	317	IAmb	IAmb	10 34 44.6	
	comp=Z,7.7nm,0.7s						
R40A	Maddies Statio	88.12	41	IAmb	IAmb	10 34 31.3	
	comp=Z,11nm,1.2s						
U38A	Gravette	88.38	43	IAmb	IAmb	10 34 47.1	
	comp=Z,16nm,1.5s						
CCM	Cathedral Cave	88.83	40	P	P	10 34 33.2	-0.8
CCM				pmax	pmax		
	comp=Z,28nm,1.4s						
CCM	Cathedral Cave	88.83	40	P	P	10 34 33.8	-0.1
	baz=320						
CCM	Cathedral Cave	88.83	40	P	P	10 34 33.2	-0.8
MGMO	Mountain Grove	88.98	42	IAmb	IAmb	10 34 48.7	
	comp=Z,10nm,1.0s						
U40A	Yellville	89.27	42	P	P	10 34 35.8	-0.3
	baz=319						
U40A	Yellville	89.27	42	IAmb	IAmb	10 34 50.2	
	comp=Z,14nm,0.9s						
FVM	French Village	89.30	40	IAmb	IAmb	10 34 50.8	
	comp=Z,9.8nm,0.9s						
T42A	Van Buren	89.69	41	IAmb	IAmb	10 34 39.4	
	comp=Z,22nm,1.4s						
OLIL	Olney	89.88	38	IAmb	IAmb	10 34 40.0	
	comp=Z,20nm,1.1s						
FCAR	Ozark Folk Cen	90.01	42	IAmb	IAmb	10 34 40.0	
	comp=Z,13nm,1.2s						
PBMO	Poplar Bluff	90.22	41	IAmb	IAmb	10 34 55.0	
	comp=Z,12nm,0.9s						
MIAR	Mount Ida	90.23	44	P	P	10 34 40.6	0.0
	baz=318						
MIAR	Mount Ida	90.23	44	IAmb	IAmb	10 34 54.7	
	comp=Z,10nm,0.8s						
WHAR	Wooly Hollow	90.37	43	IAmb	IAmb	10 34 55.4	
	comp=Z,14nm,0.9s						
X40A	Basin Creek Fa	90.68	44	IAmb	IAmb	10 34 47.7	
	comp=Z,15nm,1.4s						
KEST	Kesra	95.42	324	LR	LR	11 23 20.9	
	comp=Z,361nm,18.2s,baz=262,slow=39						
ESDC	Sonseca Array	97.26	336	P	P	10 35 13.0	+0.1
	comp=Z,0.8nm,0.9s,baz=19,slow=5.6,SNR=2.3						
ESDC				LR	LR	11 23 00.5	
	comp=Z,330nm,21.3s,baz=345,slow=38						
TORD	Torodi Ar. Bea	118.01	317	PKP	PKPdf	10 40 25.6	-1.6
	comp=Z,0.4nm,0.5s,baz=52,slow=1.4,SNR=3.6						
MAW	Mawson	121.30	206	PKP	PKPdf	10 40 29.8	-2.0
	comp=Z,1.3nm,0.8s,baz=75,slow=3.3,SNR=3.0						
MAW	Mawson	121.30	206	PKIKP	PKPdf	10 40 29.8	-2.0
SYO	Syowa Base	129.99	207	⇑ePdiff	Pdif	10 37 42.4	+5.0
SYO	Syowa Base	129.99	207	⇑epPdiff	pPdif	10 37 47.8	+6.2
MCPB	Macapa, AP	139.74	25	eP	PKiKP	10 41 11.1	+0.3
SNAA	Sanae	142.26	196	PKPdf	PKPdf	10 41 10.0	-1.2
VNA2	Neumayer--Watz	143.81	195	PKPdf	PKPdf	10 41 13.9	+0.1
VNA2	Neumayer--Watz	143.81	195	pPKiKP	PKiKP	10 41 24.3	+7.0
VNA3	Neumayer Olymp	144.02	194	PKPdf	PKPdf	10 41 14.7	+0.4
VNA3	Neumayer Olymp	144.02	194	pPKiKP	PKiKP	10 41 24.1	+6.3
VNA1	Neumayer--Stat	144.21	195	PKPdf	PKPdf	10 41 15.7	+1.1
VNA1	Neumayer--Stat	144.21	195	pPKiKP	PKiKP	10 41 25.6	+7.5
PRPB	Parauapebas	145.93	25	eP	PKPbc	10 41 20.7	+0.7
NBPS	Pedro II - PI	146.18	10	eP	PKPab	10 41 22.2	+0.8
NBCL	Cascavel-CE	146.31	4	eP	PKPbc	10 41 21.7	+0.7
VILB	Vilhena	147.07	47	eP	PKPbc	10 41 23.4	+0.2
VILB	Vilhena	147.07	47		PKPdf	10 41 21.1	-0.1
NBPB	Pedra_Branca-C	147.52	7	eP	PKPbc	10 41 24.5	0.0
CLDB	Colider	147.70	38	eP	PKPbc	10 41 25.0	0.0
PDRB	Porto dos Gac	147.86	41	eP	PKPbc	10 41 25.3	-0.1
NBPA	Parau_RN	147.87	2	eP	PKPbc	10 41 25.1	-0.3
LVC	Limon Verde	147.96	71	PKIKP	PKPdf	10 41 21.1	-1.8
LVC	Limon Verde	147.96	71	eP	PKPbc	10 41 26.1	+0.1
LVC	Limon Verde	147.96	71		PKPdf	10 41 21.1	-1.8
NBPV	Pedro Velho	148.54	359	eP	PKPbc	10 41 26.5	-0.7
SMTB	Santa Maria do	149.17	23	eP	PKPbc	10 41 28.1	-0.8
NBMA	Muriti-CE	149.39	5	eP	PKPdf	10 41 27.6	+2.5
NBLV	Livramento - P	149.47	2	eP	PKPbc	10 41 28.2	-1.5
PTLB	Pontes e Lacer	149.67	48	eP	PKPdf	10 41 27.9	+2.6
VA03	San Esteban	151.51	90	PKPdf	PKPdf	10 41 26.8	-1.1
VA03					PKPbc	10 41 34.0	0.0
NBAN	Anadia - AL	151.78	0	eP	PKPdf	10 41 31.6	+2.9
NBPN	Ponto Novo - B	152.69	9	eP	PKPdf	10 41 33.8	+3.7
NBLA	Lagarto - SE	153.05	4	eP	PKPdf	10 41 33.5	+2.9
PLCA	Paso Flores	153.31	107	PKPbc	PKPbc	10 41 37.6	-0.2
	comp=Z,1.9nm,0.9s,baz=6.1,slow=6.9,SNR=3.6						
PLCA				PKPab	PKPab	10 41 50.3	+0.4
	comp=Z,3.8nm,0.8s,baz=270,slow=3.2,SNR=8.3						
PLCA	Paso Flores	153.31	107	PKIKP	PKPbc	10 41 37.6	-0.2
PLCA						10 41 50.3	
SDBA	SAO DESIDERIO	153.31	20	eP	PKPdf	10 41 34.2	+3.2
NBIT	Itapeh - BA	156.81	8	eP	PKPdf	10 41 38.8	+3.2
CMC01	Camacan, BA	157.23	9	eP	PKPdf	10 41 38.8	+2.7
GUA01	Guaratinga, BA	158.40	10	eP	PKPdf	10 41 41.6	+4.0
ALF01	Guarapari-ES	162.20	14	eP	PKPdf	10 41 45.3	+3.6
PET01	Itanhaem-SP	163.31	38	eP	PKPdf	10 41 46.1	+3.4
CPSB	Cacapava Do Su	163.76	67	eP	PKPdf	10 41 47.0	+4.0

LJU 14 10:32:51.7,45°.99N×14°.17E,h13^{km},ML0.7, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRNS	Crni Vrh	0.11	34	i Pg	Pg	10 32 55.1	+0.2
CRNS				i Sg	Sg	10 32 57.2	0.0
CRNS				IAML		10 32 57.5	
	comp=Z,8.4nm,0.1s						
JAVS	Javornik	0.12	219	i Pg	Pg	10 32 55.1	+0.1
JAVS				i Sg	Sg	10 32 57.5	+0.1
JAVS				IAML		10 32 58.0	
	comp=Z,13nm,0.1s						
GBAS	Gorenja Brezov	0.20	105	i Sg	Sg	10 32 59.4	+0.3
VOJS	Vojsko	0.20	283	i Pg	Pg	10 32 56.3	0.0
VOJS				i Sg	Sg	10 32 59.8	+0.3
VOJS				IAML		10 33 00.6	
	comp=Z,1.6nm,0.1s						
CEY	Cerknica	0.31	144	i Sg	Sg	10 33 02.9	+0.7
CEY				IAML		10 33 04.1	
	comp=Z,2.2nm,0.1s						
SKDS	Skadanscina	0.45	194	i Pg	Pg	10 33 00.5	-0.2
SKDS				i Sg	Sb	10 33 07.6	-0.7
SKDS				IAML		10 33 08.2	
	comp=Z,2.9nm,0.1s						

*IDC **14** 10:57:50.3±8.6,31°.67S×179°.87E,h317^{km}±95^{km},mb2.9/2, mb1 3.3/3,mb1mx3.0/32,mbtmp3.8/3,Error ellipse: s-maj=99.6km s-min=41.7km az=2.0*

*WEL **14** 10:57:59.2±0.5,32°S±4°×17°9E±°,h33^{km},M4.2/33, mB4.8/18,ML4.8/43,MLv4.8/33,Mw(mB)4.1/18,Error ellipse: s-maj=0.0km s-min=0.0km az=113.4*

ISC 14 10:57:52.2±0.9,31°.70S±0°.08×179°.4E±0°.1,h300^{km},n60, σ2^{s}.40/83,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	3.38	45	P	Pn	10 58 52.0	+0.2
GLKZ				S	S	10 59 38.8	-0.7
RIZ	Raoul Island	3.38	44	S	S	10 59 42.2	+2.5
MXZ	Matakaoa Point	5.91	188	P	Pn	10 59 22.7	+2.4
MXZ				S	S	11 00 29.6	-1.8
WCZ	Waipu Caves	5.94	223	P	Pn	10 59 28.8	+8.1
WMGZ	Waiomatatini S	6.15	187	P	Pn	10 59 24.8	+1.6
WMGZ				S	S	11 00 36.7	0.0
HAZ	Te Kaha	6.18	192	P	Pn	10 59 26.2	+2.7
HAZ				S	S	11 00 37.8	+0.6
PKGZ	Pakihiroa	6.26	189	P	Pn	10 59 29.1	+4.5
RUGZ	Raukumara Rang	6.40	192	P	Pn	10 59 29.5	+3.2
RUGZ				S	S	11 00 41.3	-1.0
PUZ	Puketiti	6.42	188	P	Pn	10 59 29.3	+2.8
OPRZ	Ohinepanea	6.55	200	P	Pn	10 59 30.7	+2.8
TWGZ	Tauwhareparae	6.56	190	P	Pn	10 59 31.9	+3.7
TWGZ				S	S	11 00 46.6	+1.0
MWZ	Matawai	6.79	192	P	Pn	10 59 31.8	+0.9
MWZ				S	S	11 00 50.6	-0.1
URZ	Urewera	6.80	195	P	Pn	10 59 32.8	+1.8
	3.6nm,0.3s,baz=300,slow=23,SNR=97						
URZ				S	S	11 00 51.2	+0.4
	13nm,0.3s,baz=99,slow=24,SNR=7.1						
URZ	Urewera	6.80	195	P	Pn	10 59 31.8	+0.8
URZ				S	S	11 00 51.0	+0.2
TKGZ	Te Karaka	6.84	190	P	Pn	10 59 32.3	+0.9
RAGZ	Rawiri	6.96	193	P	Pn	10 59 36.8	+3.8
RIGZ	Rimuhau	7.11	190	P	Pn	10 59 36.6	+1.7
RIGZ				S	S	11 00 56.4	-1.4
HRRZ	Handcock Road	7.13	200	P	Pn	10 59 40.4	+5.2
RTZ	Ruatahuna	7.17	195	P	Pn	10 59 36.1	+0.6
RTZ				S	S	11 00 55.3	-3.8
PRRZ	Plateau Road	7.21	199	P	Pn	10 59 40.1	+4.2
SNGZ	Shannon Statio	7.26	193	P	Pn	10 59 39.3	+2.8
SNGZ				S	S	11 00 59.8	-1.2
ALRZ	Allen Road	7.28	199	P	Pn	10 59 40.8	+3.9
PRGZ	Paritu Road	7.31	189	P	Pn	10 59 40.2	+3.0
PRGZ				S	S	11 00 57.9	-4.3
TLZ	Tolley Road	7.32	204	P	Pn	10 59 44.0	+6.7
MTHZ	Maungataniwha	7.43	195	P	Pn	10 59 41.0	+2.3
MTHZ				S	S	11 01 02.9	-2.0
KNZ	Kokohu	7.43	190	P	Pn	10 59 40.3	+1.6
RAHZ	Arahi	7.43	194	P	Pn	10 59 41.0	+2.2
RAHZ				S	S	11 01 03.4	-1.7
MRHZ	Matea Rd	7.51	198	P	Pn	10 59 42.7	+2.9
MHGZ	Mahia Peninsul	7.53	189	P	Pn	10 59 42.4	+2.5
MHGZ				S	S	11 01 04.8	-2.4
WHHZ	Waihua	7.56	193	P	Pn	10 59 42.7	+2.4
WHHZ				S	S	11 01 06.2	-1.7
NMHZ	Naumai	7.67	195	P	Pn	10 59 44.1	+2.4
HIZ	Hauiti	7.73	207	P	Pn	10 59 49.8	+7.4
ARHZ	Aropaoanui	7.79	194	P	Pn	10 59 44.5	+1.5
ARHZ				S	S	11 01 11.2	-1.7
BKZ	Black Stump Fm	7.81	197	P	Pn	10 59 45.2	+1.9
BKZ				S	S	11 01 11.2	-2.2
TMVZ	Te Maari	7.98	201	P	Pn	10 59 48.7	+3.2
ETVZ	East Tongariro	7.99	201	P	Pn	10 59 48.2	+2.5
WTVZ	West Tongariro	8.01	202	P	Pn	10 59 48.9	+2.9
NNVZ	North Ngauruho	8.02	201	P	Pn	10 59 49.0	+3.0
TWVZ	Taurewa	8.02	202	P	Pn	10 59 49.4	+3.4
MCHZ	McNeill Hill	8.03	195	P	Pn	10 59 47.1	+1.1
MCHZ				S	S	11 01 16.7	-1.6
SNVZ	South Ngauruho	8.06	201	P	Pn	10 59 49.5	+2.9
NGZ	Ngauruhoe	8.06	201	P	Pn	10 59 49.8	+3.2
KWHZ	Kaweka Forest	8.07	196	P	Pn	10 59 48.2	+1.6
KWHZ				S	S	11 01 18.2	-1.1
FWVZ	Far West T-bar	8.15	201	P	Pn	10 59 50.2	+2.4
CKHZ	Cape Kidnapper	8.15	193	P	Pn	10 59 49.8	+2.3
CKHZ				S	S	11 01 19.4	-1.8
WHVZ	Whangaehu Hut	8.17	201	P	Pn	10 59 50.4	+2.5
TRVZ	Turoa	8.19	201	P	Pn	10 59 50.8	+2.5
WNVZ	Wahianoa	8.20	201	P	Pn	10 59 50.5	+2.2
MOVZ	Moawhango	8.23	200	P	Pn	10 59 50.1	+1.5
MOVZ				S	S	11 01 21.1	-1.9
PKVZ	Pokaka	8.25	202	P	Pn	10 59 51.3	+2.5
KRHZ	Kereru	8.29	196	P	Pn	10 59 50.5	+1.3
KRHZ				S	S	11 01 21.4	-2.9
KAHZ	Kahuranaki	8.32	193	P	Pn	10 59 50.6	+1.0
KAHZ				S	S	11 01 22.8	-2.3
WPHZ	Waipukurau	8.68	195	P	Pn	10 59 55.0	+1.0
WPHZ				S	S	11 01 29.2	-3.7
NEZ	North Egmont	8.69	208	P	P	11 00 01.1	+1.8
LREZ	Lake Rotokare	8.73	206	P	P	10 59 59.8	+0.2
TSZ	Takapari Road	8.78	197	S	S	11 01 30.8	-4.6
ANWZ	Angora Road	9.05	194	P	Pn	10 59 59.6	+1.2
ANWZ				S	S	11 01 39.0	-2.3
ASAR	Alice Springs	40.81	270	P	P	11 05 05.3	+0.1
	0.3nm,0.6s,baz=106,slow=7.4,SNR=10						
WRA	Warramunga Arr	41.92	275	P	P	11 05 14.2	-0.1
	0.7nm,0.3s,baz=112,slow=7.9,SNR=22						
FINES	FINESS Array B	145.53	338	PKPbc	PKPbc	11 16 50.1	-4.5
	2.5nm,0.9s,baz=69,slow=4.6,SNR=6.6						

*NIED **14** 11:01:59.2,31°.02N×128°.57E,h8^{km},MW4.0,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-4.65; M$_{\theta\theta}$3.46; M$_{\phi\phi}$1.19; M$_{r\theta}$-6.78; M$_{\theta\phi}$5.32; M$_{\phi r}$0.47; Fault plane solution: M$_{0}$9.59000×10^{14} NP1:ϕ_s83.00000°, δ73.00000°,λ-58.00000°. NP2:ϕ_s199.00000°,δ36.00000°, λ-149.00000°.*

*JMA **14** 11:01:59.2±0.5,31°.02N×128°.57E,h8^{km}±4^{km},M4.0*

*IDC **14** 11:02:00.5±0.8,31°.03N×128°.67E,h0^{km},mb3.7/10, mb1 4.0/15,mb1mx3.8/67,mbtmp3.8/15,ML3.6/5,MS2.8/5, Ms1 2.9/5,ms1mx2.6/50,Error ellipse: s-maj=20.8km s-min=14.4km az=104.0*

ISC 14 11:02:01.7±0.7,31°.06N±0°.05×128°.71E±0°.07,h10^{km},n26, σ1^{s}.02/26,mb3.7/10,1D,Northwest of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	Shimokoshiki	1.06	54	⇓P	Pb	11 02 20.9	-1.3
JSJ				eS	Sb	11 02 35.8	-0.3
JKC	Kuchinoerabu	1.41	114	P	Pb	11 02 27.0	-1.1
JKC				eS	Sb	11 02 46.7	+0.6
JSU	Suzuyama	1.56	73	P	Pb	11 02 29.6	-1.1
JFU	Fukue jima 2	1.59	1	P	Pb	11 02 28.8	-2.4
JYAK	Yakushimahirau	1.75	117	P	Pn	11 02 30.8	-1.3
JTN	Tanegashima 3	2.00	101	P	Pn	11 02 35.2	-0.3
JMTN	Minamitane	2.00	109	P	Pn	11 02 35.8	+0.3
JTZ	Takazaki	2.20	67	P	Pn	11 02 38.3	0.0
JNU	Nakatsue	2.76	41	Pn	Pn	11 02 47.2	+1.1
	65nm,0.3s,baz=305,slow=0.0,SNR=1.4						
JNU				Lg	Lg	11 03 28.1	
	57nm,0.3s,baz=171,slow=1.0,SNR=1.3						
JOW	Kunigami	4.23	185	Pn	Pn	11 03 05.7	-0.5
	2.2nm,0.3s,baz=6.0,slow=4.2,SNR=2.1						
KSRS	Korea Array	6.42	354	Pn	Pn	11 03 36.9	+0.7
	0.7nm,0.3s,baz=171,slow=14,SNR=9.2						
KSRS				Sn	Sn	11 04 48.5	-1.0
	3.3nm,0.3s,baz=174,slow=25,SNR=13						
KSRS				LR	LR	11 05 18.4	
	comp=Z,50nm,20.4s,baz=214,slow=31						
KSRS				Lg	Lg	11 05 19.7	
	2.1nm,0.3s,baz=170,slow=31,SNR=7.6						
MJAR	Matsushiro Arr	9.61	53	LR	LR	11 08 20.1	
	comp=Z,49nm,20.0s,baz=235,slow=39						
JCJ	Chichijima	12.43	105	LR	LR	11 09 12.2	
	comp=Z,66nm,18.4s,baz=110,slow=35						
ASAJ	Asahikawa	17.03	36	P	P	11 06 00.5	-1.2
	0.2nm,0.3s,baz=211,slow=13,SNR=4.6						
ASAJ				LR	LR	11 11 23.4	
	comp=Z,45nm,19.0s,baz=353,slow=33						
KLR	Kul'dur	18.30	6	P	P	11 06 17.8	+2.1
	0.2nm,0.3s,baz=208,slow=5.6,SNR=14						
SONM	Songino Array	23.90	321	P	P	11 07 15.9	+0.3
	0.3nm,0.3s,baz=134,slow=8.3,SNR=3.2						
CMAR	Chiang Mai Arr	29.70	252	LR	LR	11 20 31.0	
	comp=Z,21nm,18.2s,baz=250,slow=37						
MKAR	Makanchi Array	38.79	307	P	P	11 09 26.4	-0.1
	0.6nm,0.8s,baz=95,slow=11,SNR=3.5						
KURBB	Kurchatov Arra	41.77	313	P	P	11 09 50.6	-0.5
	0.3nm,0.3s,baz=98,slow=9.1,SNR=3.3						
BVAR	Borovoye Array	47.05	315	P	P	11 10 33.9	+0.6
	0.8nm,0.6s,baz=188,slow=9.0,SNR=5.1						
WRA	Warramunga Arr	50.99	173	P	P	11 11 03.6	-0.1
	0.4nm,0.5s,baz=353,slow=8.1,SNR=7.0						
ASAR	Alice Springs	54.64	174	P	P	11 11 31.1	+0.4
	0.6nm,0.5s,baz=2.8,slow=14,SNR=23						
ILAR	Eielson Array	60.02	29	P	P	11 12 08.4	+0.1
	0.5nm,0.8s,baz=285,slow=7.7,SNR=7.6						
FINES	FINESS Array B	68.90	330	P	P	11 13 06.3	0.0
	7.3nm,1.2s,baz=80,slow=7.8,SNR=1.5						
NVAR	Mina Array Bea	86.88	46	P	P	11 14 48.3	+1.2
	0.4nm,0.7s,baz=290,slow=6.5,SNR=3.7						
PDAR	Pinedale Array	89.15	39	P	P	11 14 58.5	+0.7
	0.7nm,0.8s,baz=57,slow=1.1,SNR=6.7						

TAP 14 11:08:19.2,22°.15N×120°.63E,h37^{km},ML3.6,5C-8D,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLIU	Shizi	0.17	67	⇑iP	Pn	11 08 26.4	-3.1
	baz=74						
SLIU				i S	Sn	11 08 31.6	-8.0
	baz=74						
HEN	Hengchun	0.17	146	⇓iP	Pn	11 08 26.4	-2.8
	baz=138						

HEN				iS	Sn	11 08 31.9	-7.2
	baz=138						
SCZT	Fangliau	0.22	357	⇑iP	Pn	11 08 26.8	-1.2
	baz=358						
SCZT				S	Sn	11 08 31.9	-4.6
	baz=358						
TWK1	Hengchun	0.26	142	⇓iP	Pn	11 08 27.4	-0.2
	baz=142						
TWK1				S	Sn	11 08 33.2	-1.9
	baz=142						
TWKBT	Hengchun	0.27	141	⇓iP	Pn	11 08 27.3	-0.2
	baz=142						
TWKBT				iS	Sn	11 08 33.0	-1.9
	baz=142						
EAST	Anshuo	0.31	41	⇑iP	Pn	11 08 28.1	+0.6
	baz=40						
EAST				S	Sn	11 08 34.2	-0.3
	baz=40						
WLCH	Liuqiu	0.31	310	eP	Pn	11 08 28.7	+1.3
	baz=310						
WLCH				S	Sn	11 08 36.2	+1.8
	baz=310						
TAW	Tawu	0.32	50	⇑iP	Pn	11 08 28.3	+0.8
	baz=50						
TAW				S	Sn	11 08 34.6	+0.3
	baz=50						
SSPT	Xinbi	0.34	350	⇓iP	Pn	11 08 28.6	+1.0
	baz=351						
SSPT				eS	Sn	11 08 36.4	+2.0
	baz=351						
TSEB	Hengchuen, Pin	0.35	135	⇓iP	Pn	11 08 28.2	+0.5
	baz=146						
TSEB				S	Sn	11 08 34.9	+0.5
	baz=146						
MASBT	Mashibuluo	0.46	0	⇓iP	Pn	11 08 29.8	+0.6
	baz=7.0						
MASBT				S	Sn	11 08 37.1	+0.9
	baz=7.0						
KAU	Kaohsiung	0.51	324	eP	Pn	11 08 31.0	+0.9
	baz=313						
KAU				eS	Sn	11 08 40.4	+2.8
	baz=313						
ECL	Taimali	0.54	34	⇑iP	Pn	11 08 31.1	+0.6
	baz=30						
ECL				S	Sn	11 08 38.5	+0.3
	baz=30						
TSMG	Majia	0.55	1	⇓iP	Pn	11 08 31.2	+0.4
	baz=360						
TSMG				S	Sn	11 08 39.2	+0.5
	baz=360						
SGLT	Jiouru	0.59	347	eP	Pn	11 08 32.5	+1.3
	baz=346						
SGLT				eS	Sn	11 08 43.4	+3.9
	baz=346						
SSD	Sandimen	0.59	0	⇓iP	Pn	11 08 31.7	+0.4
	baz=359						
SSD				S	Sn	11 08 40.5	+0.8
	baz=359						
SNJT	Kaohsiung City	0.66	335	eP	Pn	11 08 32.9	+0.7
	baz=321						
TWM1	Shoushan	0.70	344	P	Pn	11 08 34.0	+1.3
	baz=343						
TWM1				eS	Sn	11 08 46.1	+3.9
	baz=343						
SCST	Cishan	0.74	350	eP	Pn	11 08 35.4	+2.2
	baz=335						
SCST				eS	Sn	11 08 46.5	+3.3
	baz=335						
TTN	Taitung	0.77	38	eP	Pn	11 08 35.1	+1.6
	baz=47						
TTN				eS	Sn	11 08 46.5	+2.6
	baz=47						
TWG	Pinlang	0.78	31	eP	Pn	11 08 34.7	+0.9
	baz=29						
TWG				eS	Sn	11 08 45.9	+1.7
	baz=29						
TWGBT	Beinan	0.78	32	P	Pn	11 08 34.5	+0.8
	baz=29						
TWGBT				eS	Sn	11 08 45.8	+1.6
	baz=29						
SLGT	Liugui	0.84	1	eP	Pn	11 08 35.2	+0.6
	baz=358						
SLGT				eS	Sn	11 08 46.8	+1.1
	baz=358						
LAY	Lan-yu	0.86	97	P	Pn	11 08 34.5	-0.3
	baz=86						
LAY				eS	Sn	11 08 46.4	+0.1
	baz=86						
LONT	Longtian	0.88	31	eP	Pn	11 08 36.3	+1.2
	baz=29						
LONT				eS	Sn	11 08 48.4	+1.7
	baz=29						
SGST	Jiashian	0.93	357	P	Pn	11 08 35.6	-0.2
	baz=355						
SGST				eS	Sn	11 08 49.3	+1.4
	baz=355						
LDUT	Ludao	0.93	56	eP	Pn	11 08 36.3	+0.5
	baz=54						
LDUT				eS	Sn	11 08 49.6	+1.7
	baz=54						
CHN3	Shinhua	0.95	345	eP	Pn	11 08 38.0	+1.9
	baz=344						
STYH	Taoyuan	1.02	7	P	Pn	11 08 38.3	+1.2
	baz=354						
STYH				eS	Sn	11 08 51.7	+1.6
	baz=354						
EDH	Donghe	1.03	37	eP	Pn	11 08 38.2	+1.1
	baz=34						
EDH				eS	Sn	11 08 52.9	+2.7
	baz=34						
CHN1	Nanshi	1.03	355	iP	Pn	11 08 37.9	+0.6
	baz=339						
CHN1				eS	Sn	11 08 51.5	+1.0
	baz=339						
SNST	Tainan City	1.07	353	P	Pn	11 08 38.4	+0.6
	baz=339						
SNST				eS	Sn	11 08 52.4	+1.0
	baz=339						
WTP	Ta-pu	1.09	359	eP	Pn	11 08 38.5	+0.5
	baz=344						
ELDTW	Lidau	1.09	19	P	Pn	11 08 40.2	+2.1
	baz=6.0						
ELDTW				S	Sn	11 08 53.4	+1.4
	baz=6.0						
SCLT	Jiali	1.10	338	P	Pn	11 08 38.5	+0.5
	baz=324						
SCLT				eS	Sn	11 08 53.4	+1.5
	baz=324						
TWK	Hsinying	1.12	353	P	Pn	11 08 39.0	+0.6
	baz=339						
TWK				eS	Sn	11 08 53.2	+0.6
	baz=339						
TPUB	Ta-pu	1.14	360	P	Pn	11 08 39.1	+0.3
	baz=345						
TPUB				eS	Sn	11 08 53.7	+0.5
	baz=345						
CHKT	Chengkung	1.16	36	P	Pn	11 08 39.9	+1.0
	baz=32						
CHKT				eS	Sn	11 08 56.0	+2.5
	baz=32						
FULB	Fuli	1.21	30	P	Pn	11 08 41.3	+1.6
	baz=39						
ICHU	Yijhu	1.25	345	P	Pn	11 08 40.2	+0.1
	baz=330						
ICHU				eS	Sn	11 08 56.9	+1.2
	baz=330						
CHN8	Yiju	1.25	342	eP	Pn	11 08 40.6	+0.4
	baz=329						
CHN8				eS	Sn	11 08 56.5	+0.8
	baz=329						
EYUL	Yuli	1.35	28	P	Pn	11 08 43.3	+1.7
	baz=13						
EYUL				eS	Sn	11 09 00.7	+2.5
	baz=13						
CHY	Chiayi	1.35	352	P	Pn	11 08 41.9	+0.3
	baz=349						
CHY				eS	Sn	11 08 59.2	+0.9
	baz=349						
ALS	Alishan	1.36	7	P	Pn	11 08 42.9	+0.9
	baz=351						
ALS				eS	Sn	11 09 01.1	+2.1
	baz=351						
YUS	Yu-Shan	1.36	12	P	Pn	11 08 43.4	+1.2
	baz=358						
YUS				eS	Sn	11 09 02.1	+2.8
	baz=358						
YULB	Yu-li	1.38	26	P	Pn	11 08 43.0	+1.0
	baz=14						
YULB				eS	Sn	11 08 59.6	+0.6
	baz=14						
CHN2	Minshiung	1.38	354	eP	Pn	11 08 44.6	+2.6
	baz=352						
CHN5	Tsauling	1.44	2	P	Pn	11 08 43.5	+0.6
	baz=346						
CHN5				eS	Sn	11 09 01.4	+0.8
	baz=346						
EHY	Hungye	1.49	25	eP	Pn	11 08 44.8	+1.3
	baz=6.0						
EHY				eS	Sn	11 09 03.6	+1.9
	baz=6.0						
HGSD	Ruisui	1.52	29	P	Pn	11 08 45.6	+1.7
	baz=10.0						
HGSD				eS	Sn	11 09 04.0	+1.5
	baz=10.0						
WSF	Szhu	1.53	346	eP	Pn	11 08 43.8	-0.2
	baz=343						
WSF				eS	Sn	11 09 02.7	+0.2
	baz=343						
VCHM	Qimei	1.53	314	P	Pn	11 08 43.0	-1.0
	baz=313						
WDLH	Douliu	1.53	357	eP	Pn	11 08 44.4	+0.4
	baz=342						
WDLH				eS	Sn	11 09 04.0	+1.3
	baz=342						
WTK	Tuku	1.55	352	eP	Pn	11 08 44.3	+0.1
	baz=348						
WTK				eS	Sn	11 09 04.3	+1.2
	baz=348						
SSLB	Suanglung	1.66	10	P	Pn	11 08 46.7	+0.9
	baz=5.0						
SSLB				eS	Sn	11 09 07.0	+1.1
	baz=5.0						
VWDT	VWDT	1.66	16	eP	Pn	11 08 49.5	+3.7
WJS	Zhushan	1.67	3	P	Pn	11 08 46.2	+0.3
	baz=346						
WJS				eS	Sn	11 09 06.5	+0.5
	baz=346						
PHUB	P'eng-hu	1.67	324	eP	Pn	11 08 45.0	-0.9
	baz=323						
PHUB				eS	Sn	11 09 04.2	-1.9
	baz=323						
EGFH	Guangfu	1.68	26	eP	Pn	11 08 48.0	+1.9
	baz=20						
EGFH				eS	Sn	11 09 09.5	+3.2
	baz=20						
WNT	Mingjian	1.72	2	P	Pn	11 08 47.1	+0.4
	baz=357						
WNT				eS	Sn	11 09 08.0	+0.7
	baz=357						
PNG	Penghu	1.72	325	eP	Pn	11 08 45.7	-1.0
	baz=334						
PNG				eS	Sn	11 09 06.0	-1.4
	baz=334						
SMLT	Sun Moon Lake	1.74	8	P	Pn	11 08 48.1	+1.1
	baz=350						
SMLT				eS	Sn	11 09 09.6	+1.6
	baz=350						
TYC	Yuchr	1.76	7	P	Pn	11 08 48.3	+1.2
	baz=350						
TYC				eS	Sn	11 09 09.8	+1.5
	baz=350						
WRL	Guolierlin Hig	1.76	352	eP	Pn	11 08 46.9	-0.2
	baz=348						
WRL				eS	Sn	11 09 07.6	-0.7
	baz=348						
ESL	Shilin	1.81	24	eP	Pn	11 08 51.6	+3.7
	baz=6.0						
ESL				eS	Sn	11 09 09.9	+0.3
	baz=6.0						
OWD	Renai	1.86	15	eP	Pn	11 08 50.3	+1.6
	baz=359						
OWD				eS	Sn	11 09 13.4	+2.2
	baz=359						
WCS	Beigang Elemen	1.92	8	eP	Pn	11 08 50.4	+1.1
	baz=2.0						
WCS				eS	Sn	11 09 13.1	+0.9
	baz=2.0						
WCHH	Zhanghua	1.92	358	eP	Pn	11 08 49.5	+0.2
	baz=355						
CHGB	Renai	1.96	15	eP	Pn	11 08 51.7	+1.5
	baz=359						
TCU	Taichung	1.99	1	eP	Pn	11 08 49.8	-0.5
	baz=347						
WHP	Taichung City	2.14	8	eP	Pn	11 08 53.8	+1.3
	baz=2.0						
WHP				eS	Sn	11 09 19.7	+1.9
	baz=2.0						
TDCB	Techi	2.15	13	eP	Pn	11 08 53.6	+0.9
	baz=356						
TDCB				eS	Sn	11 09 20.3	+2.2
	baz=356						
TWT	Tachien	2.15	13	eP	Pn	11 08 53.9	+1.2
	baz=359						
FUSS	Fushou	2.16	15	eP	Pn	11 08 54.4	+1.4
	baz=1.0						
ETLH	Xiulin Townshi	2.19	21	eP	Pn	11 08 55.4	+2.2
	baz=3.0						
ETLH				eS	Sn	11 09 21.1	+2.0
	baz=3.0						
NACB	Ninganchiao	2.20	24	eP	Pn	11 08 54.0	+0.8
	baz=17						
NACB				eS	Sn	11 09 20.7	+1.5
	baz=17						
NSY	Sanyi	2.26	3	eP	Pn	11 08 55.3	+1.3
	baz=347						
NSY				eS	Sn	11 09 22.6	+1.9
	baz=347						
NNSB	Datong	2.37	17	P	Pn	11 08 57.7	+2.0
	baz=11						
NNSB				eS	Sn	11 09 25.8	+2.3
	baz=11						
NNS	Nan Shan	2.38	17	eP	Pn	11 08 58.0	+2.2
	baz=10.0						
NNS				eS	Sn	11 09 26.2	+2.4
	baz=10.0						
ENA	Nanau	2.48	24	eP	Pn	11 08 59.2	+2.1
	baz=21						
NSTT	Nanjuang	2.49	8	eP	Pn	11 08 58.1	+0.8
	baz=351						
LIOB	Emei	2.51	8	eP	Pn	11 08 58.0	+0.5
	baz=351						
EWUT	Wuta	2.52	25	eP	Pn	11 09 00.7	+3.2
	baz=21						
NDT	Datong Townshi	2.57	18	eP	Pn	11 09 01.6	+3.2
	baz=2.0						
YHNB	Yeheng	2.60	15	eP	Pn	11 09 00.4	+1.6
	baz=12						
NSK	Sanguang	2.60	15	eP	Pn	11 09 01.8	+3.0
	baz=8.0						
NSK				eS	Sn	11 09 32.5	+3.4
	baz=8.0						
ENTT	Nioudou	2.62	19	eP	Pn	11 09 02.1	+3.1
	baz=28						
NDS	Dongshan	2.66	22	eP	Pn	11 09 03.5	+3.9
	baz=32						
NWLT	Wulai	2.73	17	eP	Pn	11 09 03.6	+3.0
TIPB	Shuangxi	3.01	21	eP	Pn	11 09 06.4	+1.9
	baz=28						
KNM	Kinmen	3.03	319	eP	Pn	11 09 05.4	+0.8
	baz=315						
KNMB	Chin-men Tao	3.09	319	eP	Pn	11 09 04.5	-1.0
	baz=316						
ZPLA	Ao Xicun	3.19	304	eP	Pn	11 09 05.4	-1.4
	baz=303						
PTMZ	Houxiangcun	3.19	335	eP	Pn	11 09 06.1	-0.8
	baz=332						
AXDP	Jialang	3.67	319	eP	Pn	11 09 12.6	-0.9
	baz=316						
MATB	Ma-tsu	4.03	351	eP	Pn	11 09 17.3	-1.1
	baz=347						
MHZQ	Yeshan	4.20	340	eP	Pn	11 09 20.0	-0.7
	baz=336						
LYJJ	Jianjiangzhen	4.45	350	eP	Pn	11 09 23.6	-0.6
	baz=345						
XPSS	Dashiqiu	4.78	355	eP	Pn	11 09 28.0	-0.7
	baz=350						

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*IDC **14** 11:24:28.7±0.7, 8°.42N×71°.48W, h0^{km}, mb3.9/11, mb1 4.2/13, mb1mx4.0/40, mbtmp3.9/13, ML3.9/2, MS3.3/5, Ms1 3.3/5, ms1mx3.0/34, Error ellipse: s-maj=16.7km s-min=9.9km az=160.0*

*FUNV **14** 11:24:32.0, 8°.47N×71°.37W, h1^{km}, MW3.7*

*NEIC **14** 11:24:32.2±1.0, 8°.56N±0°.03×71°.39W±0°.06, h13^{km}±5^{km}, mb4.2/6, Error ellipse: s-maj=9.4km s-min=2.6km az=115.0*

ISC 14 11:24:30.6±0.9, **8°.52N**±0°.02×**71°.37W**±0°.02, **h12**^{km}±5^{km}, **n89**, **σ1^{s}.76**/125, **mb4.1**/16, **MS3.3**/3, **1C**, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.56	115	eP	Pg	11 24 41.9	+0.4
SOCV				eS	Sb	11 24 50.9	+0.5
SOCV	Socops	0.56	115	⇑eP	Pg	11 24 41.9	+0.4
SOCV				eS	Sg	11 24 50.1	+1.1
SDV	Santo Domingo	0.81	63	Pg	Pb	11 24 48.3	+1.5
	80nm,0.3s,baz=228,slow=15,SNR=75						
SDV				Lg	Lg	11 24 59.6	
	310nm,0.3s,baz=299,slow=8.3,SNR=19						
SDV				LR	LR	11 25 10.5	
	comp=Z,222nm,19.9s,baz=161,slow=44						
SDV	Santo Domingo	0.81	63	eP	Pb	11 24 47.7	+0.9
SDV				eS	Sb	11 24 59.6	+1.7
SDV	Santo Domingo	0.81	63		Pb	11 24 47.6	+0.9
PAMC	Pamplona, Colo	1.77	228	eP	Pn	11 25 02.9	+1.4
PAMC				eS	Sb	11 25 26.7	+1.1
MCQV	Machiques	1.91	323	eP	Pn	11 25 04.8	+1.8
MCQV				eS	Sb	11 25 30.6	+1.3
OCAC	Ocana	1.95	262	eP	Pn	11 25 04.0	+0.3
OCAC				eS	Sn	11 25 30.1	+1.8
OCAC	Ocana	1.95	262	Pn	Pn	11 25 04.1	+0.3
TAMC	Tame, Arauca	2.11	191	eP	Pb	11 25 09.5	+0.6
TAMC				eS	Sb	11 25 37.3	+2.1
LL1C	La Loma 1 Cana	2.39	295	eP	Pn	11 25 12.0	+2.4
LL1C				eS	Sb	11 25 43.3	+0.2
ELOV	Elorza	2.40	129	eP	Pb	11 25 13.4	-0.4
ELOV				eS	Sb	11 25 45.6	+2.2
ELOV	Elorza	2.40	129	eP	Pn	11 25 11.5	+1.6
ELOV				eS	Sn	11 25 40.1	+0.9
DABV	Dabajuro	2.49	17	iP	Pn	11 25 13.8	+2.7
DABV				eS	Sb	11 25 45.8	-0.4
DABV	Dabajuro	2.49	17	eP	Pb	11 25 13.9	-1.5
DABV				eS	Sb	11 25 45.0	-1.1
SIQV	Siquisique	2.62	36	eP	Pn	11 25 15.9	+3.1
SIQV				eS	Sn	11 25 47.6	+3.0
BARC	Barichara	2.63	223	eP	Pn	11 25 16.2	+3.0
BARC				eS	Sn	11 25 46.9	+1.7
SMLC	San Martn de	2.69	276	eP	Pn	11 25 13.7	-0.1
SMLC				eS	Sn	11 25 49.9	+3.6
BRRC	Barranca, Sant	2.71	239	eP	Pn	11 25 15.8	+1.7
BRRC				eS	Sb	11 25 52.7	+0.2
RUSC	La Rusia	3.12	213	eP	Pb	11 25 26.9	+0.5
RUSC				eS	Sn	11 25 59.5	+1.9
ARGC	Ariguani, Magd	3.14	295	eP	Pn	11 25 20.8	+0.8
ARGC				eS	Sn	11 25 58.1	+0.7
URIC	Uribia, Colomb	3.22	349	eP	Pb	11 25 26.7	-1.2
URIC				eS	Sn	11 25 57.9	-1.5
BAUV	El Baul	3.31	82	eP	Pn	11 25 24.7	+2.3
BAUV				eS	Sn	11 26 02.5	+0.7
JACV	Jacura	3.57	44	eP	Pn	11 25 27.8	+1.8
ZARC	Zaragoza, Cauc	3.60	254	eP	Pn	11 25 24.8	-1.6
ZARC				eS	Sn	11 26 07.2	-1.8
ZARC	Zaragoza, Cauc	3.60	254		Pn	11 25 26.5	+0.1
MONV	Montecano	3.68	22	eP	Pn	11 25 29.0	+1.5
MONV				eS	Sn	11 26 11.6	+0.8
SMRC	Santa Marta, M	3.85	313	eP	Pn	11 25 27.6	-2.2
SMRC				eS	Sn	11 26 14.1	-0.9
TURV	Turiamo	3.97	61	eP	Pn	11 25 32.9	+1.5
BENV	Beln	3.99	69	eP	Pn	11 25 33.7	+1.9
BENV				eS	Sn	11 26 18.4	-0.1
SJCC	San Jacinto, C	4.00	290	eP	Pn	11 25 33.4	+1.5
SJCC				eS	Sn	11 26 22.0	+3.1
SJCC	San Jacinto, C	4.00	290		Pn	11 25 33.1	+1.2
UREC	San Jos de Ur	4.19	260	eP	Pn	11 25 35.2	+0.7
UREC				eS	Sn	11 26 25.8	+2.2
MOTC	Monteria, Cord	4.26	274	eP	Pn	11 25 36.3	+0.9
MOTC				eS	Sn	11 26 26.5	+1.5
MOTC	Monteria, Cord	4.26	274		Pn	11 25 36.5	+1.1
PTGC	Puerto Gaitan,	4.36	190	eP	Pg	11 25 53.9	-0.3
PTGC				eS	Sg	11 26 47.4	-3.4
CHIC	Chingaza	4.52	211	eP	Pn	11 25 40.6	+1.2
CHIC				eS	Sn	11 26 34.6	+2.4
NORC	Norcasia	4.55	230	eP	Pn	11 25 42.4	+3.0
NORC				eS	Sn	11 26 32.9	+0.5
TACV	Tcata	4.58	69	eP	Pn	11 25 41.8	+2.0
ROSC	El Rosal	4.69	219	Pn	Pn	11 25 42.9	+1.2
	7.2nm,0.3s,baz=141,slow=21,SNR=7.2						
ROSC				Sn	Sn	11 26 39.0	+2.8
	3.5nm,0.3s,baz=169,slow=18,SNR=5.5						
ROSC				Lg	Lg	11 26 58.7	
	6.1nm,0.3s,baz=62,slow=24,SNR=4.0						
ROSC	El Rosal	4.69	219		Pn	11 25 44.7	+3.1
HELC	Santa Helena	4.73	241	eP	Pn	11 25 40.5	-1.7
HELC				eS	Sn	11 26 28.8	-8.5
CACV	CAICARA DEL OR	4.87	101	eP	Pb	11 25 52.8	-3.2
CACV				eS	Sb	11 26 51.1	-3.6
DBBC	Dabeiba	5.03	253	eP	Pn	11 25 49.7	+3.7
MERV	Las Mercedes	5.06	81	eP	Pn	11 25 47.8	+1.3
MERV				eS	Sn	11 26 43.0	-2.0
GUY2C	Guyana, Caldas	5.14	231	eP	Pn	11 25 49.1	+1.1
GUY2C				eS	Sn	11 26 48.8	+1.2
CBOC	Ciudad Bolivar	5.31	241	eP	Pn	11 25 52.9	+2.9
BIRV	Birongo	5.39	68	eP	Pn	11 25 52.5	+1.6
BIRV				eS	Sn	11 26 51.6	-1.5
PRAC	Prado	5.92	216	eP	Pn	11 25 59.0	+0.7
PRAC				eS	Sn	11 27 06.1	-0.1
ORTC	Ortega, Tolima	5.99	220	eP	Pn	11 26 00.3	+1.1
PLMC	San Jos del P	6.06	234	eP	Pn	11 26 03.2	+2.9
PRGV	PARIAGUAN	6.65	87	eP	Pn	11 26 09.4	+1.1
PCRV	Puerto La Cruz	6.84	76	Pn	Pn	11 26 14.9	+3.9
	2.2nm,0.3s,baz=195,slow=1.0,SNR=13						
PCRV				Sn	Sn	11 27 32.5	+3.5
	5.5nm,0.3s,baz=319,slow=20,SNR=9.1						
PCRV	Puerto La Cruz	6.84	76	eP	Pn	11 26 12.2	+1.2
DR12	Loma Pena Alta	10.39	10	Pn	Pn	11 26 59.8	+0.2
BOAV	Boa Vista	12.39	119	Pn	Pn	11 27 28.3	+1.3
PTGA	Pitinga	14.61	128	Pn	Pn	11 27 56.3	-1.2
	0.5nm,0.3s,baz=322,slow=19,SNR=3.9						
PTGA				Sn	Sn	11 30 33.4	-6.1
	0.4nm,0.3s,baz=6.8,slow=18,SNR=3.7						
PTGA				Lg	Lg	11 32 13.0	
	0.8nm,0.3s,baz=64,slow=22,SNR=4.4						
PTGA				LR	LR	11 34 10.5	
	comp=Z,74nm,19.6s,baz=323,slow=40						
PTGA	Pitinga	14.61	128	Pn	Pn	11 27 55.6	-1.8
ATAH	Atahualpa	17.06	204	LR	LR	11 36 33.1	
	comp=Z,89nm,19.5s,baz=346,slow=43						
NNA	Nana	21.09	195	LR	LR	11 38 34.5	
	comp=Z,66nm,21.0s,baz=339,slow=40						
SIV	San Ignacio	26.40	157	P	P	11 30 06.6	-0.8
	0.7nm,0.3s,baz=277,slow=8.1,SNR=2.9						
SIV				LR	LR	11 41 10.3	
	comp=Z,156nm,18.3s,baz=66,slow=38						
TKL	Tuckaleechee C	29.30	339	LR	LR	11 43 25.2	
	comp=Z,74nm,18.7s,baz=97,slow=39						
TXAR	Lajitas Array	36.70	309	P	P	11 31 37.7	-0.2
	0.3nm,0.8s,baz=117,slow=7.2,SNR=4.1						
TXAR	Lajitas Array	36.70	309	P	P	11 31 38.3	+0.3
SDCO	Great Sand Dun	42.38	319	P	P	11 32 26.7	+1.4
SDCO				IAmb	IAmb	11 32 28.5	
	comp=Z,4.4nm,1.2s						
ISCO	Idaho Springs	43.64	321	P	P	11 32 36.3	+0.8
ULM	Lac du Bonnet	46.32	338	P	P	11 32 56.7	+0.3
	comp=Z,5.9nm,0.9s,baz=189,slow=7.1,SNR=3.9						
BW06	Boulder Array	47.77	322	P	P	11 33 08.6	+0.4
BW06				IAmb	IAmb	11 33 13.4	
	comp=Z,3.0nm,0.9s						
PD31	Pinedale Array	47.77	322	P	P	11 33 08.6	+0.4
PD31				IAmb	IAmb	11 33 13.4	
	comp=Z,2.8nm,0.9s						
PDAR	Pinedale Array	47.77	322	P	P	11 33 08.9	+0.7
	comp=Z,1.2nm,0.5s,baz=127,slow=9.3,SNR=15						
PDAR	Pinedale Array	47.77	322	P	P	11 33 08.4	+0.2
PLCA	Paso Flores	49.01	179	P	P	11 33 17.5	0.0
	comp=Z,2.6nm,0.8s,baz=358,slow=8.2,SNR=9.6						
PLCA	Paso Flores	49.01	179	P	P	11 33 18.2	+0.8
NVAR	Mina Array Bea	51.57	313	P	P	11 33 35.9	-1.3
	comp=Z,0.2nm,0.6s,baz=98,slow=6.6,SNR=2.1						
YKA	Yellowknife Ar	62.29	339	P	P	11 34 52.4	-0.1
	comp=Z,2.4nm,0.8s,baz=131,slow=6.6,SNR=4.0						
ICESG	Greenland Ices	63.93	12	iP	P	11 35 04.2	+0.5
ICESG				IAmb	IAmb	11 35 06.0	
	comp=Z,4.3nm,0.8s						
SUMG	Summit	67.01	10	iP	P	11 35 23.8	+0.1
SUMG				IAmb	IAmb	11 35 26.0	
	comp=Z,4.3nm,0.8s						
ESDC	Sonseca Array	67.24	51	P	P	11 35 27.1	+1.8
	comp=Z,0.8nm,0.9s,baz=260,slow=5.1,SNR=3.5						

TORD	Torodi Ar. Bea comp=Z,1.1nm,0.9s,baz=284,slow=6.0,SNR=6.2	71.70	79	P	P	11 35 53.0	-0.3
INK	Inuvik	72.04	340	P	P	11 35 54.4	+0.2
INK	comp=Z,1.2nm,0.8s			IAmb	IAmb	11 35 58.1	
BMAR	Burnt Mountain	75.76	338	P	P	11 36 17.1	+0.9
ILAR	Eielson Array comp=Z,0.7nm,0.9s,baz=119,slow=5.2,SNR=5.6	76.17	335	P	P	11 36 18.8	+0.3
DAVOX	Davos/Dischmat comp=Z,0.9nm,0.4s,baz=303,slow=14,SNR=4.1	77.86	44	P	P	11 36 29.5	+0.9
ASAR	Alice Springs comp=Z,0.9nm,0.6s,baz=129,slow=2.6,SNR=10.0	151.50	235	PKPbc	PKPbc	11 44 24.8	-0.9
ASAR	Alice Springs	151.50	235		PKPdf	11 44 17.8	-1.8
CMAR	Chiang Mai Arr comp=Z,0.8nm,0.8s,baz=317,slow=3.8,SNR=6.9	151.54	20	PKPbc	PKPbc	11 44 25.7	-0.1
CMAR	Chiang Mai Arr	151.54	20		PKPdf	11 44 17.5	-2.1
CMAR				PKPbc	sPKPdf	11 44 25.4	-0.4
WRA	Warramunga Arr comp=Z,1.4nm,0.7s,baz=109,slow=2.7,SNR=17	152.66	243	PKPbc	PKPbc	11 44 27.6	-0.7
WRA	Warramunga Arr	152.66	243		PKPdf	11 44 20.6	-0.7

*TAP **14** 11:34:34.0, 24°.30N×121°.83E, h15^{km}, ML3.3, C*
*JMA **14** 11:34:34.1±0.1, 24°.25N×121°.78E, h23^{km}±2^{km}, M2.7*
ISC 14 11:34:33.4±0.8, **24°.28N**±0°.01×**121°.90E**±0°.02, **h12**^{km}±6^{km}, **n102**, σ**0**^{s}**.84**/172, **8D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EHP	Heping Village baz=275	0.15	283	P	Pg	11 34 37.2	+0.2
EHP	baz=275			*e*S	Sg	11 34 39.7	+0.1
EWUT	Wuta baz=341	0.20	326	⇓*i*P	Pg	11 34 38.1	+0.3
EWUT	baz=341			*e*S	Sg	11 34 41.1	+0.2
ENA	Nanau baz=329	0.21	316	⇓*i*P	Pg	11 34 38.0	0.0
ENA	baz=329			*e*S	Sg	11 34 40.8	-0.3
ETL	Fush Village baz=235	0.28	246	P	Pg	11 34 39.3	+0.1
ETL	baz=235			S	Sg	11 34 43.4	+0.2
NACB	Ninganchiao baz=237	0.30	250	*i* P	Pg	11 34 39.4	-0.1
NACB	baz=237			S	Sg	11 34 43.3	-0.4
TWC	Suao baz=9.0	0.34	351	⇓*i*P	Pb	11 34 40.6	-0.6
TWC	baz=9.0			*i* S	Sg	11 34 45.1	+0.4
TWD	Chiawan baz=229	0.34	235	P	Pg	11 34 40.5	+0.2
TWD	baz=229			S	Sg	11 34 45.1	+0.2
ETLH	Xiulin Townshi baz=255	0.39	260	P	Pg	11 34 41.1	-0.1
ETLH	baz=255			*e*S	Sg	11 34 46.5	+0.1
NDS	Dongshan baz=342	0.39	334	⇓*i*P	Pg	11 34 41.6	+0.3
NDS	baz=342			S	Sg	11 34 46.2	-0.4
ENTT	Nioudou baz=324	0.47	320	⇓*i*P	Pg	11 34 42.8	+0.1
ENTT	baz=324			S	Sg	11 34 48.6	-0.5
NDT	Datong Townshi baz=316	0.48	312	*i* P	Pg	11 34 42.9	+0.1
NDT	baz=316			S	Sg	11 34 48.8	-0.5
TWE	Neicheng baz=341	0.49	334	*i* P	Pb	11 34 43.4	-0.6
TWE	baz=341			*e*S	Sg	11 34 48.8	-0.9
NNSB	Datong baz=288	0.50	288	⇓*i*P	Pg	11 34 43.0	-0.2
NNSB	baz=288			*e*S	Sg	11 34 48.5	-1.3
ILA	Ilan baz=345	0.51	344	*e*P	Pb	11 34 44.0	-0.2
ILA	baz=345			*e*S	Sb	11 34 51.1	-0.4
NNS	Nan Shan baz=289	0.51	289	⇓*i*P	Pg	11 34 43.2	-0.2
NNS	baz=289			*e*S	Sg	11 34 49.1	-1.1
EGS	baz=14	0.57	3	*e*P	Pb	11 34 45.3	+0.1
EGS	baz=14			*e*S	Sb	11 34 53.4	+0.2
NTC	Toucheng baz=358	0.58	353	P	Pb	11 34 45.2	-0.3
NTC	baz=358			*e*S	Sg	11 34 52.0	-0.4
WHF	Hehuan Shan baz=255	0.60	257	*e*P	Pg	11 34 44.9	-0.3
WHF	baz=255			*e*S	Sg	11 34 51.5	-1.6
FUSS	Fushou baz=266	0.60	267	P	Pg	11 34 45.2	0.0
FUSS	baz=266			*e*S	Sg	11 34 52.3	-0.9
NWLT	Wulai baz=327	0.62	324	*e*P	Pg	11 34 45.5	+0.1
NWLT	baz=327			*e*S	Sg	11 34 53.0	-0.7
YHNB	Yeheng baz=311	0.62	309	⇓*i*P	Pg	11 34 45.5	0.0
YHNB	baz=311			S	Sg	11 34 52.8	-0.9
YHNB	Yeheng	0.62	309	P	Pg	11 34 45.5	0.0
ESL	Shilin baz=222	0.63	223	*e*P	Pb	11 34 46.1	-0.2
ESL	baz=222			*e*S	Sg	11 34 54.3	+0.4
NSK	Sanguang baz=311	0.64	309	P	Pg	11 34 45.7	-0.1
NSK	baz=311			*e*S	Sg	11 34 53.3	-0.9
TWT	Tachien baz=266	0.67	268	*e*P	Pg	11 34 46.6	+0.3
TWT	baz=266			*e*S	Sg	11 34 53.9	-1.2
TDCB	Techi baz=266	0.68	268	*e*P	Pg	11 34 46.6	0.0
TDCB	baz=266			*e*S	Sg	11 34 54.0	-1.7
TIPB	Shuangxi baz=358	0.70	354	P	Pb	11 34 47.4	0.0
TIPB	baz=358			S	Sg	11 34 55.3	-0.8
CHGB	Renai baz=245	0.70	252	*e*P	Pg	11 34 47.1	+0.1
CHGB	baz=245			*e*S	Sb	11 34 57.5	+0.2
TWB1	Santiao Chiao baz=11	0.73	6	*e*P	Pb	11 34 48.0	-0.1
TWB1	baz=11			*e*S	Sg	11 34 56.9	-0.4
OWD	Renai baz=241	0.74	244	*e*P	Pb	11 34 48.3	+0.1
OWD	baz=241			*e*S	Sg	11 34 57.5	+0.1
EGFH	Guangfu baz=228	0.74	216	*e*P	Pb	11 34 48.4	+0.1
EGFH	baz=228			*e*S	Sn	11 34 59.8	-1.1
TWA	Mucha baz=341	0.76	338	*e*P	Pb	11 34 48.1	-0.4
TWA	baz=341			*e*S	Sg	11 34 56.4	-1.7
NHDH	Xindian Distri baz=336	0.77	333	*e*P	Pb	11 34 48.7	+0.1
NHDH	baz=336			*e*S	Sg	11 34 57.5	-0.8
NWF	Wu-fen Shan baz=348	0.80	352	*e*P	Pb	11 34 49.5	+0.3
NWF	baz=348			*e*S	Sb	11 34 59.7	-0.3
VWDT	VWDT baz=237	0.87	233	*e*P	Pg	11 34 49.8	-0.4
VWDT	baz=237			*e*S	Sn	11 35 03.2	-0.7
WHP	Taichung City baz=270	0.87	270	*e*P	Pb	11 34 50.6	+0.1
WHP	baz=270			*e*S	Sg	11 35 00.9	-0.8
LIOB	Emei baz=295	0.89	295	*e*P	Pb	11 34 51.0	+0.3
LIOB	baz=295			*e*S	Sg	11 35 01.0	-1.2
NSTT	Nanjuang baz=294	0.90	293	*e*P	Pg	11 34 50.4	-0.2
NSTT	baz=294			*e*S	Sg	11 35 01.6	-0.8
HGSD	Ruisui baz=195	0.90	209	*e*P	Pn	11 34 51.7	-0.1
HGSD	baz=195			*e*S	Sn	11 35 05.5	+0.9
YM01	YM01 baz=344	0.92	341	*e*P	Pn	11 34 51.6	-0.5
TWS1	Kuangyinshan baz=334	0.93	332	*e*P	Pn	11 34 51.9	-0.3
TWS1	baz=334			*e*S	Sb	11 35 04.1	+0.3
WCS	Beigang Elemen baz=256	0.93	257	*e*P	Pg	11 34 51.2	-0.1
WCS	baz=256			*e*S	Sg	11 35 03.0	-0.5
EHY	Hungye baz=225	0.93	215	*e*P	Pg	11 34 50.5	-0.9
NCUH	Zhongli baz=318	0.95	317	*e*P	Pn	11 34 52.8	+0.3
NCUH	baz=318			*e*S	Sn	11 35 05.3	-0.6
JYNG	Yonagunijimaku	0.97	79	P	Pn	11 34 53.7	+1.0
JYNG				*e*S	Sn	11 35 06.9	+0.6
ANP	Anpu baz=342	0.97	339	*e*P	Pn	11 34 52.6	-0.2
NTST	Danshui baz=337	0.98	335	*e*P	Pn	11 34 52.4	-0.4
NTST	baz=337			*e*S	Sn	11 35 06.4	-0.2
SSLB	Suanglung baz=240	0.99	241	P	Pb	11 34 52.5	0.0
SSLB	baz=240			*e*S	Sg	11 35 06.2	+0.6
SSLB	Suanglung	0.99	241	P	Pb	11 34 52.6	+0.1
SMLT	Sun Moon Lake baz=239	1.00	247	*e*P	Pg	11 34 52.9	+0.3
SMLT	baz=239			*e*S	Sn	11 35 07.1	-0.2
TYC	Yuchr baz=248	1.03	249	*e*P	Pb	11 34 52.6	-0.4
TYC	baz=248			*e*S	Sb	11 35 06.6	+0.2
YOJ	Yonaguni jima baz=70	1.03	79	P	Pn	11 34 54.0	+0.4
YOJ	baz=70			S	Sn	11 35 12.1	+4.3
YOJ	Yonaguni jima	1.03	79	P	Pn	11 34 54.7	+1.2
YOJ				*e*S	Sn	11 35 09.8	+2.0
YOJ	Yonaguni jima	1.03	79	P	Pn	11 34 55.4	+1.9
TWY	Chenhua baz=347	1.03	345	*e*P	Pn	11 34 54.8	+1.2
TWY	baz=347			*e*S	Sg	11 35 06.9	+0.2
TWQ1	Liyutan baz=274	1.03	274	*e*P	Pg	11 34 53.3	0.0
TWQ1	baz=274			*e*S	Sn	11 35 07.9	-0.1
YULB	Yu-li baz=222	1.04	212	P	Pb	11 34 52.3	-1.0
YULB	baz=222			*e*S	Sb	11 35 06.2	-0.7
NMLH	Miaoli baz=292	1.05	285	*e*P	Pn	11 34 55.2	+1.4
NMLH	baz=292			*e*S	Sn	11 35 08.7	+0.4
NSY	Sanyi baz=278	1.05	278	*e*P	Pn	11 34 54.4	+0.5
NSY	baz=278			*e*S	Sb	11 35 06.8	-0.4
EYUL	Yuli baz=223	1.07	210	*e*P	Pn	11 34 55.2	+1.1
TCU	Taichung baz=264	1.13	264	*e*P	Pg	11 34 56.5	+1.4
TCU	baz=264			*e*S	Sn	11 35 13.1	+2.7
WJS	Zhushan baz=243	1.17	247	*e*P	Pg	11 34 56.8	+1.0
WJS	baz=243			*e*S	Sg	11 35 11.0	0.0
YUS	Yu-Shan baz=227	1.17	228	*e*P	Pb	11 34 55.8	-0.1
WNT	Mingjian baz=240	1.18	251	*e*P	Pg	11 34 57.0	+0.8
FULB	Fuli baz=224	1.21	208	*e*P	Pg	11 34 56.7	0.0
ALS	Alishan baz=233	1.26	233	*e*P	Pn	11 34 56.7	-0.4
ALS	baz=233			*e*S	Sb	11 35 13.4	-0.1
CHKT	Chengkung baz=185	1.27	203	*e*P	Pn	11 34 57.0	+0.1
CHN5	Tsauling baz=241	1.31	239	*e*P	Pb	11 34 58.3	+0.4
CHN5	baz=241			*e*S	Sg	11 35 16.4	+0.8
ELDTW	Lidau baz=203	1.35	217	*e*P	Pn	11 34 57.2	-1.0
ELDTW	baz=203			*e*S	Sb	11 35 15.8	-0.2
WDLH	Douliu baz=246	1.38	245	*e*P	Pn	11 34 58.3	-0.1
EDH	Donghe baz=185	1.41	203	*e*P	Pn	11 34 57.4	-1.4
EDH	baz=185			*e*S	Sn	11 35 16.4	-0.9
WRL	Guolierlin Hig baz=270	1.44	255	*e*P	Pb	11 35 00.1	-0.1
WRL	baz=270			*e*S	Sb	11 35 18.7	+0.2
WTK	Tuku baz=250	1.50	247	*e*P	Pb	11 35 01.8	+0.6
WTK	baz=250			*e*S	Sg	11 35 22.4	+0.6
STYH	Taoyuan baz=224	1.51	223	*e*P	Pn	11 35 00.7	+0.5
CHN4	Tsaushan baz=235	1.51	233	*e*P	Pn	11 35 00.2	0.0
CHN4	baz=235			*e*S	Sg	11 35 22.8	+0.7
TPUB	Ta-pu baz=233	1.52	230	*e*P	Pb	11 35 01.6	+0.1
TPUB	baz=233			*e*S	Sg	11 35 21.8	-0.5
TPUB	Ta-pu	1.52	230	P	Pg	11 35 02.1	-0.4
LONT	Longtian baz=208	1.54	208	*e*P	Pn	11 34 58.5	-2.1
CHY	Chiayi baz=228	1.56	241	*e*P	Pb	11 35 02.3	+0.1
WTP	Ta-pu baz=231	1.56	229	*e*P	Pb	11 35 02.5	+0.2
WTP	baz=231			*e*S	Sg	11 35 25.3	+1.5
TWK	Hsinying baz=236	1.64	233	*e*P	Pb	11 35 03.3	-0.2
TWK	baz=236			*e*S	Sb	11 35 25.3	+1.1
SNST	Tainan City baz=232	1.66	231	*e*P	Pg	11 35 04.8	-0.5
CHN1	Nanshi baz=233	1.66	230	*e*P	Pb	11 35 04.2	+0.2
CHN1	baz=233			*e*S	Sg	11 35 28.3	+1.3
IRIF	Iriomote-Funau	1.67	88	P	Pb	11 35 03.8	-0.2
IRIF				*e*S	Sg	11 35 26.4	-0.6
SGST	Jiashian baz=227	1.70	226	*e*P	Pn	11 35 03.5	+0.8
SLGT	Liugui baz=224	1.72	222	*e*P	Pb	11 35 04.9	0.0
ICHU	Yijhu baz=240	1.75	239	*e*P	Pb	11 35 04.5	-0.8
HATJ	Hateruma jima	1.75	97	*e*S	Sg	11 35 28.9	-0.8
SSD	Sandimen baz=219	1.92	218	*e*P	Pb	11 35 07.6	-0.7
JKRS	Kuro-shima	1.92	91	P	Pb	11 35 08.1	-0.2
JKRS				S	Sb	11 35 33.4	+1.1
TSMG	Majia baz=219	1.94	217	*e*P	Pn	11 35 06.7	+0.6
MASBT	Mashibuluo baz=217	2.03	215	*e*P	Pn	11 35 07.5	+0.2
JIJ	Ishigaki jima	2.04	87	P	Pb	11 35 09.1	-1.3
JIJ				S	Sb	11 35 35.6	-0.2
EAST	Anshuo baz=198	2.12	207	*e*P	Pb	11 35 10.6	-1.1
JISG	Ishigakijimahi	2.22	81	P	Pb	11 35 11.5	-1.8
JISG				*e*S	Sb	11 35 39.9	-0.8
SCZT	Fangliau baz=201	2.23	212	*e*P	Pn	11 35 11.6	+1.4
LAY	Lan-yu baz=190	2.25	188	*e*P	Pn	11 35 08.5	-1.9
PNG	Penghu baz=254	2.26	252	*e*P	Pn	11 35 10.7	+0.2
PHUB	P'eng-hu baz=252	2.27	251	*e*P	Pn	11 35 12.3	+1.7
SLIU	Shizi baz=198	2.29	207	*e*P	Pn	11 35 11.5	+0.6
JTJ	Tarama	2.58	81	S	Sb	11 35 49.2	-1.9
PTMZ	Houxiangcun baz=287	2.64	287	*e*P	Pn	11 35 15.6	-0.2

NNC 14 11:43:35.2±4.3, **36°.66N×70°.58E, h71**^{km}±138^{km}, **mb3.5, mpv3.8, 4C-1D, Error ellipse: s-maj=42.9km s-min=34.4km az=97.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu SNR=62	5.97	23	P	Pn	11 45 02.1	+0.8
UCH	Uchtor SNR=23	6.34	27	P	Pn	11 45 06.6	+0.2
KK31	Karatay Array 1.5nm,0.3s,baz=182,slow=12,SNR=21	6.44	360	⇑P	Pn	11 45 08.2	+0.9
KK31	5.5nm,0.5s,baz=339,slow=42,SNR=2.5			⇓S	Sn	11 46 19.4	+0.2
EKS2	Erkin-Say SNR=13	6.48	21	P	Pn	11 45 09.9	+1.9
AAK	Ala-Archa SNR=7.8	6.69	26	P	Pn	11 45 11.2	+0.3
AAK	Ala-Archa 3.4nm,0.5s	6.69	26	⇑P	Pn	11 45 10.8	0.0
AAK	5.7nm,0.7s			⇑S	Sn	11 46 26.9	+1.2
TKM2	Tokmak 2 SNR=15	7.35	30	P	Pn	11 45 19.9	-0.1
TKM2	Tokmak 2 5.2nm,0.5s	7.35	30	⇑P	Pn	11 45 18.9	-1.0
AB31	Akbulak array 0.1nm,0.3s,baz=48,slow=41,SNR=8.3	14.78	332	P	Pn	11 47 00.3	+0.1

*IDC **14** 12:20:20.4±0.5, 8°.49N×71°.46W, h0^{km}, mb4.5/20, mb1 4.7/25, mb1mx4.6/32, mbtmp4.6/25, ML4.7/4, MS4.0/28, Ms1 4.0/28, ms1mx4.0/35, Error ellipse: s-maj=11.9km s-min=8.9km az=162.0*
*NEIC **14** 12:20:22.9±1.5, 8°.52N±0°.06×71°.38W±0°.04, h9^{km}±4^{km}, mb4.9/78, Mwr4.8(CAR), Error ellipse: s-maj=9.1km s-min=5.1km az=150.0*
*VAO **14** 12:20:22.8±0.4, 8°.54N×71°.44W, h9^{km}, mb4.9*
*FUNV **14** 12:20:22.5, 8°.48N×71°.44W, h1^{km}, MW4.8*
*CAR **14** 12:20:23.3±1.6, 8°.49N±0°.06×71°.44W±0°.04, h5^{km}±4^{km}, Error ellipse: s-maj=8.8km s-min=5.1km az=151.0*
*GCMT **14** 12:20:23.9±0.3, 8°.54N±0°.01×71°.40W±0°.03, h12^{km}, MW4.7/71, Moment Tensor Solution. s13,c13; s71,c102; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.92±.07; $M_{\theta\theta}$2.06±.05; $M_{\phi\phi}$-1.14±.07; $M_{r\theta}$0.47±.19; $M_{\theta\phi}$0.06±.06; $M_{\phi r}$0.02±.23; Best double couple: $M_0$1.63800×10^{16} NP1:ϕ_s135.00000°, δ80.00000°, λ3.00000°. NP2: ϕ_s44.00000°, δ87.00000°, λ170.00000°. Principal axes: T 2.1350, Plg9.0000°, Azm359.0000°; N -0.9930, Plg80.0000°, Azm207.0000°; P -1.1420, Plg5.0000°, Azm90.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 14 12:20:22.2±1.0, **8°.50N**±0°.02×**71°.40W**±0°.02, **h10**^{km}±6^{km}, **n423**, σ**1**^{s}**.31**/460, **mb4.9**/83, **MS4.1**/24, **25C-29D, Fault plane solution: NP1:**ϕ_s322.80130°, δ68.93973°, λ1.03185°. **NP2:**ϕ_s232.43048°, δ89.03708°, λ158.93662°. **Principal axes:** T Plg15.4253°, Azm185.6282°; N Plg68.9156°, Azm49.9320°; P Plg14.0173°, Azm279.5781°; **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	Socops	0.58	111	*e*P	Pg	12 20 33.0	-0.4
SOCV				*e*S	Sg	12 20 42.2	+1.2
SOCV	Socops	0.58	111	⇓*e*P	Pg	12 20 33.1	-0.3
SOCV				*e*S	Sg	12 20 42.4	+1.4
SDV	Santo Domingo 688nm,0.3s,baz=238,slow=15,SNR=653	0.85	63	Pg	Pg	12 20 38.4	-0.2
SDV	2µm,0.3s,baz=38,slow=17,SNR=17			Lg	Lg	12 20 50.6	
SDV	comp=Z,8µm,18.6s,baz=14,slow=60			LR	LR	12 21 14.5	
SDV	Santo Domingo	0.85	63	*e*P	Pg	12 20 38.5	-0.1
SDV				*e*S	Sb	12 20 50.8	+0.1
SDV	Santo Domingo	0.85	63	*e*P	Pg	12 20 38.4	-0.2
SDV	Santo Domingo	0.85	63	Pg	Pg	12 20 38.5	-0.1
SDV				Sg	Sg	12 20 50.0	+0.3
CAPV	Capacho	1.10	235	*e*P	Pg	12 20 41.6	-1.8
CAPV				*e*S	Sg	12 20 57.1	-0.7
PAMC	Pamplona, Colo	1.73	228	*e*P	Pb	12 20 53.8	-0.5
PAMC				*e*S	Sg	12 21 17.8	0.0
MCQV	Machiques	1.91	324	⇑*i*P	Pn	12 20 54.9	+0.1
MCQV				*e*S	Sb	12 21 19.5	-1.5
OCAC	Ocana	1.92	262	*e*P	Pn	12 20 55.1	+0.1
OCAC				*e*S	Sb	12 21 20.5	-0.9
OCAC	Ocana	1.92	262		Pn	12 20 55.3	+0.3
TAMC	Tame, Arauca	2.08	191	*e*P	Pn	12 20 57.4	+0.1
TAMC				*e*S	Sg	12 21 29.5	+0.2
TAMC				*e*S	Sb	12 21 30.6	+4.5
LL6C	La Loma 6 Bece	2.22	304	*e*P	Pn	12 20 58.3	-0.8
LL6C				*e*S	Sn	12 21 26.8	+0.2
LL1C	La Loma 1 Cana	2.37	296	*e*P	Pb	12 21 03.1	-1.9
LL1C				*e*S	Sn	12 21 31.6	+1.3
ELOV	Elorza	2.41	128	*e*P	Pn	12 21 03.6	+1.9
ELOV				*e*S	Sb	12 21 35.1	-0.3
ELOV	Elorza	2.41	128	⇓*i*P	Pn	12 21 03.5	+1.8
ELOV				*e*S	Sn	12 21 32.6	+1.3
DABV	Dabajuro	2.52	17	*e*P	Pn	12 21 04.3	+1.0
DABV				*e*S	Sn	12 21 36.0	+1.9
DABV	Dabajuro	2.52	17	⇑*e*P	Pn	12 21 04.4	+1.1
DABV				*e*S	Sn	12 21 35.1	+0.9
BARC	Barichara	2.59	223	*e*P	Pb	12 21 06.8	-2.1
BARC				*e*S	Sb	12 21 39.0	-1.9
LL5C	La Loma 5 El P	2.61	299	*e*P	Pb	12 21 06.9	-2.2
LL5C				*e*S	Sn	12 21 37.3	+1.1
SIQV	Siquisique	2.65	36	*e*P	Pn	12 21 06.7	+1.7
SIQV				*e*S	Sn	12 21 38.3	+1.0
SMLC	San Martn de	2.66	277	*e*P	Pn	12 21 05.0	-0.2
SMLC				*e*S	Sb	12 21 41.1	-1.6
BRRC	Barranca, Sant	2.68	239	*e*P	Pn	12 21 07.0	+1.6
BRRC				*e*S	Sb	12 21 42.8	-0.4
RUSC	La Rusia	3.08	213	*e*P	Pn	12 21 12.6	+1.2
ARGC	Ariguani, Magd	3.12	296	*e*P	Pn	12 21 13.5	+2.1
URIC	Uribia, Colomb	3.24	350	*e*P	Pb	12 21 20.2	+0.4
URIC	Uribia, Colomb	3.24	350	Pn	Pn	12 21 12.7	-0.4
BAUV	El Baul	3.35	82	⇓*i*P	Pn	12 21 16.0	+1.4
BAUV				*e*S	Sn	12 21 53.0	-1.4
ZARC	Zaragoza, Cauc	3.57	254	*e*P	Pn	12 21 18.3	+0.6
ZARC				*e*S	Sn	12 22 00.5	+0.6
JACV	Jacura	3.61	44	*e*P	Pn	12 21 19.3	+1.1
MONV	Montecano	3.71	22	⇑*i*P	Pn	12 21 20.1	+0.5
MONV				*e*S	Sn	12 22 02.6	-0.9
SMRC	Santa Marta, M	3.84	314	*e*P	Pn	12 21 18.3	-3.2
SMRC				*e*S	Sn	12 22 02.0	-4.7
SPBC	San Pablo de B	3.88	223	*e*P	Pn	12 21 23.0	+1.1
SPBC				*e*S	Sn	12 22 11.0	+3.4
SJCC	San Jacinto, C	3.98	291	*e*P	Pn	12 21 24.0	+0.6
SJCC				*e*S	Sn	12 22 11.5	+1.3
TURV	Turiamo	4.01	61	*e*P	Pn	12 21 24.5	+0.8
BENV	Beln	4.02	68	*e*P	Pn	12 21 25.3	+1.4
BENV				*e*S	Sn	12 22 10.2	-1.0
UREC	San Jos de Ur	4.16	260	*e*P	Pn	12 21 25.9	+0.1
UREC				*e*S	Sn	12 22 15.8	+1.3
MOTC	Monteria, Cord	4.23	274	*i* P	Pn	12 21 28.8	+2.0
MOTC	Monteria, Cord	4.23	274		Pn	12 21 27.7	+1.0
PTGC	Puerto Gaitan,	4.33	190	*e*P	Pn	12 21 29.7	+1.6
PTGC				*e*S	Sn	12 22 16.3	-2.5

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CHIC  Chingaza           4.49 211  eP    Pn    12 21 32.1 +1.5
CHIC                               eS    Sn    12 22 23.9 +0.8
NORC  Norcasia           4.51 230  i P   Pn    12 21 30.6  0.0
NORC                               eS    Sn    12 22 21.0 -2.2
TACV  Tcata              4.61  69  eP    Pn    12 21 33.0 +1.0
ROSC  El Rosal           4.65 219   Pn   Pn    12 21 35.6 +2.7
      42nm,0.3s,baz=114,slow=2.5,SNR=77
ROSC                                Sn   Sn    12 22 29.6 +2.5
      56nm,0.3s,baz=270,slow=20,SNR=1.9
ROSC  El Rosal           4.65 219        Pn    12 21 35.0 +2.2
HELC  Santa Helena       4.69 241  eP    Pn    12 21 34.5 +1.0
CARV  Caracas            4.84  65  eP    Pn    12 21 35.7 +0.5
CACV  CAICARA DEL OR     4.90 101⇓eP     Pb    12 21 44.3 -3.9
VILC  Villavicencio,     4.92 208  eP    Pn    12 21 36.4  0.0
LCBC  Los crdobas,       4.93 275  eP    Pn    12 21 37.0 +0.7
LCBC                               eS    Sn    12 22 34.4 +0.9
MERV  Las Mercedes       5.10  81⇓iP     Pn    12 21 39.6 +1.0
MERV                               eS    Sn    12 22 35.4 -2.3
GUY2C Guyana, Caldas     5.11 231  eP    Pn    12 21 42.0 +2.7
CBOC  Ciudad Bolivar     5.27 241  eP    Pn    12 21 44.0 +2.7
BIRV  Birongo            5.43  68⇓eP     Pn    12 21 44.2 +1.0
BIRV                               eS    Sn    12 22 43.1 -2.7
ANIL  Santa Ana          5.63 225  eP    Pn    12 21 49.7 +3.4
ANIL                               eS    Sn    12 22 55.5 +4.4
PRAC  Prado              5.88 216  eP    Pn    12 21 49.7 +0.2
PRAC                               eS    Sn    12 22 58.1 +1.1
CAPC  Capurgana          5.89 272  eP    Pn    12 21 42.1 -7.5
CAPC                               eS    Sn    12 22 53.4 -3.8
PLMC  San Jos del P      6.02 234  i P   Pn    12 21 51.6 +0.1
GUVC  San Jose del G     6.04 192  eP    Pn    12 21 52.3 +0.7
GUVC                               eS    Sn    12 22 59.1 -1.8
GUVC                               eS    Sn    12 22 59.1 -1.8
YOTC  Yotoco, Valle      6.65 228  eP    Pn    12 22 00.1 -0.1
YOTC                               eS    Sn    12 23 16.2  0.0
PRGV  PARIAGUAN          6.68  87⇓iP     Pn    12 22 00.8 +0.3
PCRV  Puerto La Cruz     6.88  75   Pn   Pn    12 22 04.9 +1.7
      10.0nm,0.3s,baz=315,slow=3.1,SNR=58
PCRV  Puerto La Cruz     6.88  75  eP    Pn    12 22 03.5 +0.3
BETC  Betania            7.04 215  eP    Pn    12 22 04.9 -0.5
CUMV  Cumana_UDO         7.36  74  eP    Pn    12 22 08.8 -1.0
GARC  Garzon, Huila      7.48 213  eP    Pn    12 22 11.5 -0.1
GARC                               eS    Sn    12 23 34.3 -2.4
CRUV  Carupano           8.33  74  eP    Pn    12 22 23.0 -0.1
BCIP  Isla Barro Col     8.37 275   Pn   Pn    12 22 23.4 -0.2
RIOV  Rio Grande         9.49  92  eP    Pn    12 22 37.9 -1.2
LUEV  Luepa             10.21 104  eP    Pn    12 22 47.8 -1.2
GRGR  Grenville         10.24  69   Pn   Pn    12 22 49.8 +0.5
CRPR  Cabo Rojo, PR     10.33  23   Pn   Pn    12 22 49.4 -1.1
PCDR  Punta Cana, DR    10.38  16   Pn   Pn    12 22 50.3 -0.9
DR12  Loma Pena Alta    10.42  11        Pn    12 22 50.1 -1.6
SDDR  Presa de Saban    10.42   1        Pn    12 22 52.1 +0.3
OTAV  Otavalo           10.80 221  eP    Pn    12 22 58.8 +1.4
OTAV  Otavalo           10.80 221        Pn    12 22 59.5 +2.0
SJG   San Juan          10.83  28   Pn   Pn    12 22 56.5 -0.9
      15nm,0.3s,baz=201,slow=12,SNR=27
SJG                                 Sn   Sn    12 24 51.3 -7.5
      7.2nm,0.3s,baz=25,slow=14,SNR=6.3
SJG                                 LR   LR    12 27 24.9
      comp=Z,1µm,21.3s,baz=214,slow=39
EMPR  Esperanza - Ma    10.99  25   Pn   Pn    12 22 59.3 -0.3
SVB   Belmont           11.04  64        Pn    12 23 00.7 +0.5
GCPR  Guaynabo City     11.04  27   Pn   Pn    12 22 59.7 -0.5
CBYP  Canovanas         11.11  28        Pn    12 23 00.4 -0.8
CDVI  St. Croix         11.24  34   Pn   Pn    12 23 02.6 -0.3
MTDJ  Mount Denham      11.36 329        Pn    12 23 04.1 -0.7
CUPR  Culebra, Puert    11.42  31   Pn   Pn    12 23 04.9 -0.5
FDF   Fort de France    11.79  57        Pn    12 23 09.2 -1.4
SRBA  San Rafael, Bu    11.84 274        Pn    12 23 12.5 +1.1
GTBY  Guantanamo Bay    11.92 343   Pn   Pn    12 23 11.7 -0.5
RIMA  Rio Macho         12.37 277        Pn    12 23 21.0 +2.3
BOAV  Boa Vista         12.40 119  eP    Pn    12 23 19.9 +0.9
BOAV  Boa Vista         12.40 119   Pn   Pn    12 23 18.0 -1.0
TBTG  Tabatinga, AM     12.69 173   Pn   Pn    12 23 22.5 -0.3
JTS   Las Juntas de     13.49 279   LR   LR    12 29 34.1
      comp=Z,371nm,18.3s,baz=136,slow=41
PTGA  Pitinga           14.62 128   Pn   Pn    12 23 47.5 -1.8
      2.8nm,0.3s,baz=311,slow=14,SNR=34
PTGA                                Sn   Sn    12 26 24.2 -7.4
      2.2nm,0.3s,baz=42,slow=21,SNR=9.4
PTGA                                Lg   Lg    12 28 00.8
      6.6nm,0.3s,baz=28,slow=21,SNR=5.9
PTGA                                LR   LR    12 30 01.5
      comp=Z,617nm,20.0s,baz=304,slow=40
MACA  Manacapuru-AM     15.76 137   Pn   Pn    12 24 02.4 -1.9
MACA                                IAmb IAmb  12 24 12.9
      comp=Z,55nm,0.7s
CRIN  San Cristobal     15.94 287   P    P     12 24 10.6 +0.2
CRIN                                IAmb IAmb  12 24 14.9
      comp=Z,74nm,0.9s
CZSB  Cruzeiro do Su    16.17 185  eP    Pn    12 24 09.9 +0.2
CZSB  Cruzeiro do Su    16.17 185        Pn    12 24 07.4 -2.3
TGUH  Tegucigalpa,Un    16.52 291   P    P     12 24 17.1 +0.2
TGUH                                IAmb IAmb  12 24 20.1
      comp=Z,118nm,1.1s
ATAH  Atahualpa         17.02 204   Pn   Pn    12 24 19.9 -1.1
      comp=Z,0.1nm,0.3s,baz=34,slow=10,SNR=1.7
ATAH                                LR   LR    12 32 10.8
      comp=Z,2µm,18.6s,baz=0.6,slow=42
MTO3  Montecristo       18.55 290   P    Pn    12 24 40.1 +0.4
ETMB  Extrema           18.91 164  eP    Pn    12 24 44.2 +0.4
ETMB  Extrema           18.91 164   P    P     12 24 43.8 +0.6
MDP   Montagnes des     18.93  99   P    P     12 24 43.5 +0.1
      comp=Z,1.1nm,0.3s,baz=277,slow=15,SNR=6.6
MDP                                 S    Sn    12 28 11.5 -4.6
      comp=Z,0.7nm,0.3s,baz=198,slow=20,SNR=2.2
MDP                                 Lg   Lg    12 30 21.6
      comp=Z,0.8nm,0.3s,baz=8.6,slow=23,SNR=6.3
MDP                                 LR   LR    12 32 25.9
      comp=Z,343nm,20.9s,baz=296,slow=38
SAML  Samuel            19.16 155   P    P     12 24 45.9 -0.1
MALB  Monte Alegre      19.94 120  eP    P     12 24 54.8 +0.3
ITTB  Itaituba          20.18 129  eP    Pn    12 24 59.5 +0.4
NNA   Nana              21.06 195   P    P     12 25 06.2 -0.4
      comp=Z,9.5nm,0.7s,baz=14,slow=10,SNR=2.1
NNA                                 LR   LR    12 34 24.8
      comp=Z,677nm,21.1s,baz=5.0,slow=40
MCPB  Macapa, AP        21.19 114  eP    P     12 25 09.3 +1.3
CCIG  Comitan           21.67 293   P    P     12 25 13.8 +0.4
CCIG                                IAmb IAmb  12 25 15.7
      comp=Z,97nm,1.3s
DWPF  Disney Wildern    21.69 335   P    P     12 25 14.1 +0.9
      baz=152
DWPF  Disney Wildern    21.69 335   P    P     12 25 13.6 +0.3
NPGB  Novo Progresso    22.23 134  eP    P     12 25 20.8 +1.6
VILB  Vilhena           24.04 152  eP    P     12 25 39.4 +1.7
VILB  Vilhena           24.04 152   P    P     12 25 38.6 +1.0
VILB                                IAmb IAmb  12 25 52.7
      comp=Z,48nm,1.3s
CMIG  Matias Romero     24.42 293   LR   LR    12 37 36.3
      comp=Z,497nm,18.8s,baz=103,slow=42
CLDB  Colider           24.72 141  eP    P     12 25 44.6 +0.6
PDRB  Porto dos Gac     24.74 144  eP    P     12 25 44.2 +0.1
LPAZ  La Paz            24.84 173   P    P     12 25 46.1 +0.5
TMAB  Tom-Au,PA,Br      25.62 114  eP    P     12 25 54.1 +2.0
PRPB  Parauapebas       25.99 123  eP    P     12 25 57.6 +2.2
SIV   San Ignacio       26.39 157   P    P     12 25 59.7 +0.7
      comp=Z,62nm,1.2s,baz=329,slow=8.8,SNR=22
SIV                                 LR   LR    12 37 01.8
      comp=Z,1µm,20.5s,baz=354,slow=38
PTLB  Pontes e Lacer    26.71 153  eP    P     12 26 03.2 +1.3
PTLB  Pontes e Lacer    26.71 153   P    P     12 26 02.9 +1.0
PB12  IPOC Station P    26.96 178   P    P     12 26 05.1 +0.9
PB12                                IAmb IAmb  12 26 10.5
      comp=Z,23nm,1.1s
250A  Grady             27.15 331   P    P     12 26 06.4 +0.7
GOGA  Godfrey           27.19 337   P    P     12 26 10.3 +4.3
      baz=153
HODGE Hodges            27.49 340   P    P     12 26 08.4 -0.3
HODGE                               IAmb IAmb  12 26 11.9
      comp=Z,44nm,1.4s
Y52A  Lilburn           27.82 337   P    P     12 26 11.9 +0.2
Y52A                                IAmb IAmb  12 26 19.3
      comp=Z,26nm,1.4s
SNDB  Serra Nova Dou    28.52 135  eP    P     12 26 19.8 +1.7
SALV  Santo Antonio     28.80 147  eP    P     12 26 22.4 +1.8
344A  Westbrook Farm    29.08 324   P    P     12 26 24.2 +1.2
TKL   Tuckaleechee C    29.31 339   LR   LR    12 38 26.2
      comp=Z,393nm,21.6s,baz=154,slow=37
SMTB  Santa Maria do    29.32 125  eP    P     12 26 27.9 +2.6
PB01  IPOC Station P    29.41 176   P    P     12 26 26.0 -0.1
PB01                                IAmb IAmb  12 26 31.4
      comp=Z,33nm,1.3s
PLAL  Pickwick Lake     30.48 332   P    P     12 26 35.6 +0.3
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PLAL                                IAmb IAmb  12 26 37.0
      comp=Z,20nm,1.1s
PP1B  Ponte de Pedra    30.64 148  eP    P     12 26 37.6 +0.7
PEXB  Peixe             30.76 131  eP    P     12 26 38.4 +0.4
ARAG  Araguaiana, MT    30.90 141  eP    P     12 26 40.8 +1.6
LVC   Limon Verde       31.01 176  eP    P     12 26 41.2 +0.6
LVC   Limon Verde       31.01 176   P    P     12 26 40.8 +0.3
LVC                                 IAmb IAmb  12 26 49.7
      comp=Z,19nm,1.2s
W45A  Hickory Valley    31.14 331   P    P     12 26 40.8 -0.4
HKT   Hockley           31.29 316   P    P     12 26 43.2 +0.7
HKT                                 IAmb IAmb  12 26 45.5
      comp=Z,23nm,1.2s
WVT   Waverly           31.32 334   P    P     12 26 43.2 +0.4
      baz=148
WVT   Waverly           31.32 334   P    P     12 26 42.8  0.0
WVT                                 IAmb IAmb  12 26 44.0
      comp=Z,18nm,1.0s
CCAR  Cane Creek        31.50 326   P    P     12 26 44.9 +0.5
Z41A  Richland Creek    31.60 324   P    P     12 26 46.1 +0.9
      baz=137
NBPS  Pedro II - PI     32.50 112  eP    P     12 26 55.8 +2.3
X40A  Basin Creek Fa    32.51 326   P    P     12 26 53.6 +0.4
      baz=138
AQDB  Aquidauana        32.67 152  eP    P     12 26 56.6 +1.9
AQDB  Aquidauana        32.67 152   P    P     12 26 55.7 +1.0
W41B  Gary Mavity, V    32.71 327   P    P     12 26 55.2 +0.3
      baz=140,SNR=8.9
O53A  New Philadelph    32.81 346   P    P     12 26 57.0 +1.2
      baz=162
O53A  New Philadelph    32.81 346   P    P     12 26 56.1 +0.3
WHAR  Wooly Hollow      32.81 327   P    P     12 26 55.9  0.0
LCAR  Lake Charles      32.83 330   P    P     12 26 56.6 +0.6
LCAR                                IAmb IAmb  12 26 58.6
      comp=Z,27nm,1.3s
MIAR  Mount Ida         32.97 325   P    P     12 26 57.2  0.0
      baz=137,SNR=7.5
435B  Jarrell           33.00 316   P    P     12 26 57.7 +0.1
      baz=127,SNR=5.2
P49A  Miami Univ. Ec    33.13 341   P    P     12 26 59.0 +0.4
      baz=156
N54A  Moraine State     33.22 348   P    P     12 27 00.8 +1.4
      baz=164
BDFB  Brasilia          33.34 136   P    P     12 27 02.0 +1.2
      comp=Z,9.8nm,0.9s,baz=304,slow=9.9,SNR=9.6
BDFB                                LR   LR    12 41 14.8
      comp=Z,522nm,20.4s,baz=309,slow=38
BDFB  Brasilia          33.34 136   P    P     12 27 01.4 +0.6
BDFB                                IAmb IAmb  12 27 04.5
      comp=Z,25nm,1.2s
NBMO  Morrinhos-CE      33.40 109  eP    P     12 27 02.5 +1.3
SDBA  SAO DESIDERIO     33.54 128  eP    P     12 27 02.9 +0.5
T42A  Van Buren         33.56 331   P    P     12 27 02.6 +0.2
T42A                                IAmb IAmb  12 27 04.1
      comp=Z,24nm,1.2s
W39A  Magazine          33.56 326   P    P     12 27 03.1 +0.7
      baz=137,SNR=8.8
WHTX  Lake Whitney,     33.65 318   P    P     12 27 03.4 +0.1
      baz=129
U40A  Yellville         33.92 328   P    P     12 27 05.9 +0.4
      baz=140,SNR=18
JCT   Junction City     34.39 313   P    P     12 27 10.3 +0.6
      baz=124
CCM   Cathedral Cave    34.45 332   P    P     12 27 10.2 +0.1
      baz=144
CCM   Cathedral Cave    34.45 332   P    P     12 27 10.2 +0.1
CCM                                 IAmb IAmb  12 27 16.4
      comp=Z,26nm,1.2s
NBPB  Pedra_Branca-C    34.65 113  eP    P     12 27 13.6 +1.4
U38A  Gravette          34.80 327   P    P     12 27 12.6 -0.7
ITRB  Iturama           34.85 144  eP    P     12 27 15.1 +1.3
IPMB  Ipameri, GO       34.88 139  eP    P     12 27 15.1 +1.0
AC02  Maricunga         35.19 176   P    P     12 27 17.4 +0.3
AC02                                IAmb IAmb  12 27 19.6
      comp=Z,30nm,1.5s
TUL1  Leonard           35.21 324   P    P     12 27 16.1 -0.6
      baz=135,SNR=6.0
TUL1  Leonard           35.21 324   P    P     12 27 16.3 -0.4
ABTX  Abilene, Hawle    35.50 317   P    P     12 27 19.5 +0.1
      baz=126,SNR=10
JANB  Januaria          35.62 131  eP    P     12 27 21.3 +0.8
PCMB  Pacaembu          35.86 147  eP    P     12 27 23.6 +1.2
NBMA  Muriti-CE         36.14 115  eP    P     12 27 27.2 +2.2
WMOK  Wichita Mounta    36.23 320   P    P     12 27 24.6 -1.0
      baz=130,SNR=14
WMOK  Wichita Mounta    36.23 320   P    P     12 27 24.2 -1.4
WMOK                                IAmb IAmb  12 27 26.7
      comp=Z,13nm,0.9s
T35A  Sooner Cattle     36.33 325   P    P     12 27 25.8 -0.6
T35A                                IAmb IAmb  12 27 30.5
      comp=Z,11nm,0.8s
NBPN  Ponto Novo - B    36.51 121  eP    P     12 27 29.5 +1.4
TXAR  Lajitas Array     36.69 309   P    P     12 27 29.0 -0.7
      comp=Z,1.3nm,0.7s,baz=126,slow=8.8,SNR=14
TXAR                                PcP  PcP   12 29 52.7 +0.3
      comp=Z,2.3nm,0.8s,baz=134,slow=5.0,SNR=15
TXAR                                LR   LR    12 45 58.9
      comp=Z,50nm,18.2s,baz=0.0,slow=42
TXAR  Lajitas Array     36.69 309   P    P     12 27 29.2 -0.5
TX31  Lajitas Ar. Si    36.69 309   P    P     12 27 29.3 -0.4
MC01  Montes Claros     36.94 133  eP    P     12 27 33.5 +1.6
BB19B Bebedouro         36.99 143  eP    P     12 27 32.9 +0.8
NBPA  Parau_RN          37.00 111  eP    P     12 27 34.2 +1.9
CPUP  Villa Florida     37.22 159   P    P     12 27 33.7 -0.2
      comp=Z,1.9nm,0.7s,baz=330,slow=8.1,SNR=2.4
CPUP                                LR   LR    12 44 11.4
      comp=Z,465nm,20.9s,baz=344,slow=38
KAN08 Anthony NE Sta    37.39 324   P    P     12 27 34.9 -0.4
KAN08                               IAmb IAmb  12 27 37.0
      comp=Z,24nm,0.9s
NBLV  Livramento - P    37.80 114  eP    P     12 27 41.0 +1.8
KSU1  Kansas State U    37.95 327   P    P     12 27 39.1 -1.0
      baz=137,SNR=6.2
PTGB  Pitanga           38.02 151  eP    P     12 27 40.9 +0.1
JFWS  Jewell Farm       38.07 337   P    P     12 27 40.7 -0.3
      baz=149,SNR=5.6
FRTB  Fartura           38.18 146  eP    P     12 27 43.5 +1.3
DIAM  Diamantina, MG    38.18 134  eP    P     12 27 43.4 +1.0
AMTX  Amarillo          38.20 318   P    P     12 27 42.2 -0.2
      baz=126
AMTX  Amarillo          38.20 318   P    P     12 27 41.8 -0.6
AMTX                                IAmb IAmb  12 27 44.5
      comp=Z,22nm,1.0s
GDU01 Guandu, BA        38.54 125  eP    P     12 27 46.7 +1.5
RCLB  Rio Claro- Sao    38.61 143  eP    P     12 27 47.3 +1.5
NBLA  Lagarto - SE      38.64 119  eP    P     12 27 47.4 +1.3
NBPV  Pedro Velho       38.93 111  eP    P     12 27 50.1 +1.5
MNTX  Cornudas Mount    39.11 311   P    P     12 27 49.9 -0.1
      baz=119,SNR=16
MNTX  Cornudas Mount    39.11 311   P    P     12 27 49.9 -0.1
BSCB  Bom Sucesso       39.29 139  eP    P     12 27 51.9 +0.4
NBIT  Itapeh - BA       39.32 126  eP    P     12 27 53.2 +1.4
NBAN  Anadia - AL       39.35 117  eP    P     12 27 52.3 +0.1
CBKS  Cedar Bluff       39.49 324   P    P     12 27 52.6 -0.4
      baz=133,SNR=6.2
CMC01 Camacan, BA       39.49 127  eP    P     12 27 55.0 +1.7
GUA01 Guaratinga, BA    39.98 129  eP    P     12 27 58.8 +1.5
PET01 Itanhaem-SP       40.20 145  eP    P     12 28 00.3 +1.2
SJMB  Sao Joao De Ma    40.23 132  eP    P     12 27 59.7 +0.3
BSFB  Barra de Sao F    40.56 132  eP    P     12 28 02.5 +0.4
121A  Cookes Peak, D    41.30 311   P    P     12 28 09.3 +0.9
      baz=117
T25A  Trinidad          41.32 319   P    P     12 28 09.5 +1.1
      baz=126,SNR=11
ECSD  EROS Data Cent    41.43 332   P    P     12 28 07.9 -1.0
      baz=141
ECSD  EROS Data Cent    41.43 332   P    P     12 28 08.8 -0.1
ANMO  Albuquerque       41.51 315   P    P     12 28 10.4 +0.4
      baz=121
ANMO  Albuquerque       41.51 315   P    P     12 28 10.1 +0.1
CAM01 Campos-RJ         41.94 136  eP    P     12 28 14.2 +0.8
SDCO  Great Sand Dun    42.37 319   P    P     12 28 18.0 +0.9
      baz=125,SNR=25
SDCO  Great Sand Dun    42.37 319   P    P     12 28 18.6 +1.5
TER01 Tubaro-SC         42.63 151  eP    P     12 28 20.4 +1.4
BO01  Tunca             42.65 180   P    P     12 28 19.3 +0.3
BO01                                IAmb IAmb  12 28 21.1
      comp=Z,32nm,1.2s
Q24A  Divide            42.85 320   P    P     12 28 22.2 +1.1
      baz=126
F33A  5 Mile Ranch,     42.93 334   P    P     12 28 21.2 +0.1
BO02  Sierra Bellavi    43.06 179   P    P     12 28 22.8 +0.5
SUSD  Miller            43.07 331   P    P     12 28 21.7 -0.6
      baz=138
SUSD  Miller            43.07 331   P    P     12 28 21.6 -0.7
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S22A  4UR Ranch, Cre    43.25 318   P    P     12 28 25.4 +1.1
      baz=123,SNR=17
TUC   Tucson            43.49 309   P    P     12 28 25.5 -0.6
      baz=114
TUC   Tucson            43.49 309   P    P     12 28 25.6 -0.5
ISCO  Idaho Springs     43.64 321   P    P     12 28 27.8 +0.5
      baz=126,SNR=17
ISCO  Idaho Springs     43.64 321   P    P     12 28 26.9 -0.5
ISCO                                IAmb IAmb  12 28 32.5
      comp=Z,33nm,1.4s
X18A  Snowflake         43.82 312   P    P     12 28 29.8 +1.0
W18A  Petrified Fore    43.94 313   P    P     12 28 31.0 +1.2
      baz=118,SNR=7.3
W18A  Petrified Fore    43.94 313   P    P     12 28 30.1 +0.4
W18A                                IAmb IAmb  12 28 32.7
      comp=Z,33nm,1.2s
MVCO  Mesa Verde        44.09 316   P    P     12 28 31.6 +0.6
      baz=121,SNR=7.4
N23A  Red Feather La    44.49 322   P    P     12 28 34.6 +0.5
      baz=127
AGMN  Agassiz Nation    44.73 337   P    P     12 28 35.9 +0.4
      baz=144
WUAZ  Wupatki           45.31 313   P    P     12 28 41.2 +0.5
      baz=117,SNR=8.7
RSSD  Black Hills       45.43 327   P    P     12 28 40.9 -0.7
      baz=132
RSSD  Black Hills       45.43 327   P    P     12 28 41.4 -0.2
E28A  Huff              45.46 332   P    P     12 28 41.5 -0.1
O20A  White River Ci    45.48 320   P    P     12 28 42.8 +0.8
      baz=124,SNR=6.7
O20A  White River Ci    45.48 320   P    P     12 28 42.2 +0.3
O20A                                IAmb IAmb  12 29 05.5
      comp=Z,16nm,1.1s
Y14A  Wickenburg        45.86 310   P    P     12 28 45.3 +0.5
K22A  Casper            45.90 324   P    P     12 28 45.2  0.0
      baz=128,SNR=5.8
K22A  Casper            45.90 324   P    P     12 28 45.4 +0.2
K22A                                IAmb IAmb  12 28 47.5
      comp=Z,20nm,1.3s
MDND  Maddock           45.92 334   P    P     12 28 45.3 +0.2
      baz=140
ULM   Lac du Bonnet     46.33 338   P    P     12 28 47.5 -0.7
      comp=Z,12nm,0.9s,baz=146,slow=8.0,SNR=10
ULM                                 LR   LR    12 48 33.9
      comp=Z,412nm,21.3s,baz=136,slow=37
SCHQ  Schefferville     46.35   4   P    P     12 28 48.2 -0.2
      comp=Z,4.9nm,0.5s,baz=187,slow=7.2,SNR=7.9
SCHQ                                LR   LR    12 47 39.3
      comp=Z,285nm,20.0s,baz=218,slow=35
IRM   Iron Mountain     47.58 309   P    P     12 28 58.1 -0.3
      baz=112
BC3   Big Chuckawall    47.63 308   P    P     12 28 60.0 +1.1
      baz=112
SWSC  Sam W. Stewart    47.65 307   P    P     12 28 59.3 +0.5
      baz=111
BW06  Boulder Array     47.77 322   P    P     12 28 59.8 -0.1
      baz=124,SNR=19
BW06  Boulder Array     47.77 322   P    P     12 28 59.9 -0.1
BW06                                IAmb IAmb  12 29 02.2
      comp=Z,15nm,1.1s
PD31  Pinedale Array    47.77 322   P    P     12 28 59.9 -0.1
PD31                                IAmb IAmb  12 29 02.2
      comp=Z,14nm,1.1s
PDAR  Pinedale Array    47.77 322   P    P     12 28 59.8 -0.2
      comp=Z,3.8nm,0.4s,baz=125,slow=10.0,SNR=57
PDAR                                LR   LR    12 52 13.6
      comp=Z,105nm,18.3s,baz=118,slow=40
PDAR  Pinedale Array    47.77 322   P    P     12 28 59.7 -0.3
BELC  Belle Mtn. Jos    48.18 308   P    P     12 29 03.1 -0.1
      baz=111
LAO   LASA Array        48.28 328   P    P     12 29 03.5 -0.1
      baz=131
DGMT  Dagmar            48.48 331   P    P     12 29 05.5 +0.5
      baz=134,SNR=9.4
DUG   Dugway, Tooele    48.50 317   P    P     12 29 06.5 +0.9
      baz=119,SNR=7.2
SHPR  Sheep Range       48.51 312   P    P     12 29 06.3 +0.6
TUQ   Turquoise Moun    48.66 310   P    P     12 29 07.1 +0.4
      baz=113,SNR=5.9
AHID  Auburn Hatcher    48.72 321   P    P     12 29 06.8 -0.4
AHID                                IAmb IAmb  12 29 09.6
      comp=Z,16nm,1.1s
PRN   Pahroc Range      48.80 313   P    P     12 29 07.8 -0.1
RLMT  Red Lodge         48.97 325   P    P     12 29 09.3 +0.2
      baz=126,SNR=11
PLCA  Paso Flores       48.99 179   P    P     12 29 08.7 -0.4
      comp=Z,12nm,1.0s,baz=354,slow=10,SNR=16
PLCA  Paso Flores       48.99 179  eP    P     12 29 08.7 -0.4
SHOC  Shoshone, Teco    49.10 311   P    P     12 29 10.3 +0.3
      baz=113,SNR=6.1
LL04  Puerto Octay      49.17 181   P    P     12 29 09.5 -0.8
GSC   Goldstone, Bar    49.27 310   P    P     12 29 11.8 +0.3
      baz=112,SNR=6.8
GSC   Goldstone, Bar    49.27 310   P    P     12 29 10.3 -1.1
GSC                                 IAmb IAmb  12 29 13.8
      comp=Z,14nm,1.3s
H17A  Grant Village     49.31 323   P    P     12 29 12.5 +0.7
      baz=125
R11A  Troy Canyon, C    49.58 314   P    P     12 29 14.4 +0.5
      baz=115,SNR=5.7
FURC  Furnace Creek,    49.75 311   P    P     12 29 15.7 +0.8
      baz=113
LRMC  Laurel Mtn Rad    50.00 310   P    P     12 29 17.1  0.0
      baz=111
EDW2  Edwards Air Fo    50.03 309   P    P     12 29 17.1 -0.2
      baz=110
CWC   Cottonwood Cre    50.65 311   P    P     12 29 22.4 +0.4
      baz=112
ISA   Isabella, Lake    50.67 310   P    P     12 29 23.3 +1.2
      baz=111
EGMT  Eagleton          50.99 328   P    P     12 29 24.5 +0.2
      baz=128,SNR=7.6
VES   Vestal, Richgr    51.20 310   P    P     12 29 26.5 +0.6
      baz=110,SNR=8.0
HLID  Hailey            51.20 320   P    P     12 29 27.0 +0.9
      baz=120,SNR=10
NVAR  Mina Array Bea    51.56 313   P    P     12 29 28.7 -0.2
      comp=Z,1.6nm,0.7s,baz=118,slow=7.0,SNR=14
NVAR                                LR   LR    12 54 30.0
      comp=Z,212nm,18.5s,baz=118,slow=40
MSO   Missoula          52.62 324   P    P     12 29 36.9 +0.5
      baz=123
O03E  Paynes Creek      54.78 314   P    P     12 29 51.6 -0.8
      baz=111
NEW   Newport           55.21 324   P    P     12 29 55.1 -0.2
      baz=120
YKA   Yellowknife Ar    62.31 339   P    P     12 30 44.1 -0.3
      comp=Z,3.7nm,0.7s,baz=47,slow=3.2,SNR=14
YKA                                 LR   LR    12 59 07.1
      comp=Z,201nm,18.5s,baz=0.0,slow=37
YKA   Yellowknife Ar    62.31 339   P    P     12 30 43.7 -0.7
PNCL  Nicolau / Gran    63.51  52  eP    P     12 30 53.8 +0.9
PCVE  Castro Verde      63.81  52  eP    P     12 30 56.5 +1.6
      comp=Z,41nm,1.6s
PCAS  Casmilo, Conde    63.90  50  eP    P     12 30 56.4 +1.0
      comp=Z,45nm,1.6s
PMTG  Montargil         63.92  51  eP    P     12 30 56.0 +0.4
ICESG Greenland Ices    63.96  12  eP    P     12 30 56.6 +0.9
ICESG                               IAmb IAmb  12 30 57.6
      comp=Z,18nm,1.0s
PESTR Estremoz          64.37  51  eP    P     12 30 58.7 +0.1
      comp=Z,28nm,1.4s
PGAV  Gavieira, Arco    64.45  48  eP    P     12 31 00.7 +1.5
      comp=Z,34nm,2.1s
PVIS  Viseu             64.48  49  eP    P     12 30 59.5 +0.2
      comp=Z,27nm,1.7s
PMRV  Marv??o           64.62  50  eP    P     12 31 00.0 -0.2
PCBR  Castelo Branco    64.63  50  eP    P     12 31 01.3 +1.1
      comp=Z,24nm,1.8s
POLO  Lamas de Olo      64.68  48  eP    P     12 31 01.0 +0.3
      comp=Z,15nm,1.7s
MVO   Moncorvo          65.21  49  eP    P     12 31 03.8 -0.3
      comp=Z,22nm,1.5s
TIC   Toumodi           65.76  87  eP    P     12 31 07.1 -0.9
LIC   Lamto             65.80  87  eP    P     12 31 06.9 -1.3
      comp=Z,26nm,1.0s
DBIC  Dimbokro          65.92  86   P    P     12 31 08.7 -0.3
      comp=Z,2.4nm,0.4s,baz=293,slow=5.3,SNR=8.0
DBIC                                LR   LR    12 56 38.8
      comp=Z,55nm,20.2s,baz=288,slow=33
KIC   Kosan Boka        66.06  87  eP    P     12 31 09.3 -0.7
      comp=Z,11nm,0.6s
KOWA  Kowa              66.11  78   P    P     12 31 09.7 -0.5
KOWA                                IAmb IAmb  12 31 13.4
      comp=Z,10nm,0.8s
PAB   San Pablo         66.96  51   P    P     12 31 15.6 +0.2
SUMG  Summit            67.04  10  i P   P     12 31 14.8 -0.8
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SUMG				IAmb	IAmb	12 31 19.2	
	comp=Z,22nm,1.1s						
SUMG	Summit	67.04	10	P	P	12 31 16.7	+1.1
WRAK	Wrangell Islan	67.11	328	P	P	12 31 16.7	+0.8
ESDC	Sonseca Array	67.28	51	P	P	12 31 17.3	-0.1
	comp=Z,2.0nm,0.8s,baz=262,slow=7.7,SNR=12						
ESDC				LR	LR	12 55 39.4	
	comp=Z,94nm,21.8s,baz=290,slow=32						
ESDC	Sonseca Array	67.28	51	P	P	12 31 17.6	+0.2
ESDC				IAmb	IAmb	12 31 21.5	
	comp=Z,15nm,1.5s						
ESBB	Sonseca Array	67.28	51	P	P	12 31 18.1	+0.7
ESBB				IAmb	IAmb	12 31 22.2	
	comp=Z,13nm,1.4s						
FARO	Faro, Yukon	69.66	334	P	P	12 31 33.2	+1.4
	baz=112						
NEEM	North Greenlan	69.75	5	*e*P	P	12 31 33.5	+1.1
NEEM				IAmb	IAmb	12 31 34.8	
	comp=Z,18nm,0.8s						
M31M	Drury Creek, Y	70.11	334	P	P	12 31 35.3	+0.8
	baz=110						
N31M	Braeburn, Yuko	70.49	333	P	P	12 31 37.8	+0.9
	baz=109						
A36M	Sachs Harbour	71.28	345	P	P	12 31 40.9	-0.5
	baz=123,SNR=18						
A36M	Sachs Harbour	71.28	345	P	P	12 31 40.3	-1.1
M30M	Minto, Yukon	71.29	334	P	P	12 31 42.4	+0.6
	baz=108,SNR=9.8						
TOA0	Torodi Ar. Sit	71.73	79	P	P	12 31 44.0	-1.3
TORD	Torodi Ar. Bea	71.73	79	P	P	12 31 44.3	-1.0
	comp=Z,3.7nm,0.8s,baz=286,slow=5.3,SNR=20						
TORD				LR	LR	13 02 39.9	
	comp=Z,55nm,19.9s,baz=210,slow=35						
TORD	Torodi Ar. Bea	71.73	79	P	P	12 31 43.8	-1.5
INK	Inuvik	72.05	340	P	P	12 31 46.1	0.0
	baz=113						
INK	Inuvik	72.05	340	P	P	12 31 45.0	-1.1
INK				IAmb	IAmb	12 31 51.1	
	comp=Z,13nm,1.4s						
YUK3	Moose Creek	72.71	332	P	P	12 31 51.5	+1.0
	baz=105						
DAWY	Dawson	72.85	335	P	P	12 31 51.0	-0.1
	baz=106						
CTG	Chitna Glacier	72.92	331	P	P	12 31 54.7	+3.0
	baz=104						
M27K	Edge Creek, AK	73.50	333	P	P	12 31 56.0	+0.9
	baz=104,SNR=7.2						
BCAR	Beaver Creek A	73.63	333	P	P	12 31 56.5	+0.8
L27K	Beaver Creek,	73.65	333	P	P	12 31 56.8	+1.0
	baz=104						
DAG	Danmarks Havn	73.70	11	*e*P	P	12 31 56.3	+0.5
DAG				IAmb	IAmb	12 31 57.5	
	comp=Z,5.3nm,0.7s						
EGAK	Eagle	73.78	335	P	P	12 31 57.2	+0.7
	baz=105						
L26K	Log Cabin Wild	74.31	333	P	P	12 32 00.8	+1.1
	baz=102,SNR=8.4						
SCRK	Sand Creek	74.79	334	P	P	12 32 03.0	+0.4
	baz=102						
SCRK	Sand Creek	74.79	334	P	P	12 32 02.5	0.0
SCRK				IAmb	IAmb	12 32 05.4	
	comp=Z,9.3nm,1.1s						
RIDG	Independent Ri	75.12	334	P	P	12 32 05.1	+0.7
	baz=101						
PAX	Paxson	75.25	333	P	P	12 32 05.5	+0.3
	baz=100						
PRP	Porcupine Dome	75.75	336	P	P	12 32 08.0	0.0
	baz=101						
PRP	Porcupine Dome	75.75	336	P	P	12 32 08.2	+0.1
PRP				IAmb	IAmb	12 32 10.2	
	comp=Z,7.6nm,0.8s						
BMAR	Burnt Mountain	75.77	338	P	P	12 32 07.8	-0.2
ECH	Echery	76.09	42	P	P	12 32 10.6	+0.3
ECH				IAmb	IAmb	12 32 14.7	
	comp=Z,11nm,1.0s						
HDA	Harding Lake	76.15	334	P	P	12 32 10.2	0.0
	baz=100						
ILAR	Eielson Array	76.18	335	P	P	12 32 09.8	-0.5
	comp=Z,1.9nm,0.8s,baz=108,slow=4.5,SNR=23						
ILAR				LR	LR	13 08 02.5	
	comp=Z,257nm,18.7s,baz=106,slow=38						
ILAR	Eielson Array	76.18	335	P	P	12 32 09.6	-0.8
NOR	Nord	76.75	7	*i* P	P	12 32 14.4	+1.1
NOR				IAmb	IAmb	12 32 17.8	
	comp=Z,13nm,1.3s						
H24K	Noodor Dome	76.77	336	P	P	12 32 14.6	+0.9
	baz=99						
NEA2	Nenana	77.08	334	P	P	12 32 15.8	+0.4
	baz=98,SNR=5.8						
I23K	Minto, Yukon-K	77.28	335	P	P	12 32 16.5	0.0
	baz=97,SNR=5.9						
H23K	Yukon River	77.44	336	P	P	12 32 19.5	+2.0
	baz=97						
KEST	Kesra	77.60	55	P	P	12 32 19.3	+0.2
	comp=Z,7.1nm,0.9s,baz=253,slow=11,SNR=6.6						
MLY	Manley	77.84	335	P	P	12 32 19.8	+0.1
	baz=96						
BPAW	Bear Paw Mtn.	77.86	334	P	P	12 32 20.1	+0.3
	baz=96						
COLD	Coldfoot	77.88	337	P	P	12 32 21.8	+1.9
	baz=97						
DAVA	Damuels	77.90	43	*e*P	P	12 32 21.0	+0.4
	comp=Z,15nm,1.1s						
CAST	Castle Rocks	78.28	333	P	P	12 32 23.8	+1.6
	baz=94						
PPLA	Purkeypile	78.29	332	P	P	12 32 20.1	-2.4
	baz=94						
I21K	Tanana	78.38	335	P	P	12 32 23.1	+0.4
	baz=95						
CHUM	Lake Minchumin	78.42	334	P	P	12 32 22.9	0.0
	baz=94						
FETA	Feichten	78.48	44	*e*P	P	12 32 24.0	+0.2
	comp=Z,17nm,1.0s						
RETA	Reutte	78.50	43	*e*P	P	12 32 24.0	+0.2
	comp=Z,18nm,1.2s						
MOTA	Moosalm	78.73	43	*e*P	P	12 32 24.9	-0.3
	comp=Z,8.8nm,0.9s						
H21K	Melozitna Rive	78.77	335	P	P	12 32 25.1	+0.2
	baz=94						
SQTA	Sankt Quirin	78.80	44	*e*P	P	12 32 25.4	-0.1
	comp=Z,10nm,1.4s						
NB2	NORSAR Subarra	79.04	29	P	P	12 32 28.3	+1.9
	comp=Z,3.9nm,0.8s,baz=268,slow=5.6						
NOA	NORSAR Array B	79.04	29	P	P	12 32 26.9	+0.4
	comp=Z,3.6nm,0.9s,baz=270,slow=5.4,SNR=4.2						
NOA				LR	LR	13 03 30.6	
	comp=Z,48nm,22.0s,baz=355,slow=33						
WATA	Walderalm	79.05	43	*e*P	P	12 32 26.9	-0.1
	comp=Z,9.5nm,1.2s						
WTTA	Wattenberg	79.09	44	*e*P	P	12 32 28.1	+0.9
	comp=Z,8.9nm,1.0s						
IMAR	Indian Mountai	79.17	336	P	P	12 32 27.2	+0.2
J20K	Nowinta River	79.24	334	P	P	12 32 27.8	+0.3
	baz=93						
J20K	Nowinta River	79.24	334	P	P	12 32 27.9	+0.5
J20K				IAmb	IAmb	12 32 29.7	
	comp=Z,18nm,1.2s						
ABTA	Abfaltersbach	79.70	44	*e*P	P	12 32 30.3	-0.1
	comp=Z,8.4nm,1.0s						
KHC	Kasperske Hory	80.35	42	*e*P	P	12 32 34.2	+0.4
GERES	GERESS Array B	80.44	42	P	P	12 32 34.2	-0.2
	comp=Z,2.1nm,0.7s,baz=321,slow=1.7,SNR=11						
GERES	GERESS Array B	80.44	42	P	P	12 32 33.9	-0.5
MYKA	Terra Mystica	80.48	44	*e*P	P	12 32 34.5	-0.1
	comp=Z,4.0nm,0.5s						
BRG	Berggiesshubel	80.53	40	*e*P	P	12 32 36.4	+1.7
BRG				Amp		12 32 39.6	
	comp=Z,5.2nm,0.9s						
MOA	Molln	80.86	43	*i* P	P	12 32 37.4	+0.9
	comp=Z,12nm,1.4s						
PRU	Pruhonice	80.95	41	*e*P	P	12 32 38.6	+1.7
OBKA	Obir	81.12	44	*i* P	P	12 32 38.9	+0.9
	comp=Z,5.3nm,0.8s						
SPITS	Spitsbergen Ar	81.28	12	LR	LR	13 07 15.7	
	comp=Z,111nm,21.0s,baz=355,slow=35						
PPT	Papeete	81.42	251	LR	LR	13 01 15.4	
	comp=Z,88nm,18.4s,baz=120,slow=30						
SOKA	Soboth	81.44	44	*e*P	P	12 32 40.5	+0.7
	comp=Z,2.8nm,0.7s						
ARSA	Arzberg	81.74	43	*i* P	P	12 32 40.3	-1.0
	comp=Z,4.1nm,0.9s						
CONA	Conrad Observa	81.93	43	*e*P	P	12 32 42.5	+0.2
	comp=Z,12nm,1.5s						
OSTC	Ostas	81.99	40	*e*P	P	12 32 45.1	+2.6
DPC	Dobruska-Polom	82.07	40	*e*P	P	12 32 44.5	+1.5
MORC	Moravsky Berou	82.90	41	⇓P	P	12 32 48.8	+1.5
MORH	Mrgy, Hungar	83.97	44	⇑P	P	12 32 52.8	+0.1
ARCES	ARCESS Array B	84.52	21	P	P	12 32 54.9	-0.2
	comp=Z,5.6nm,0.9s,baz=282,slow=5.8,SNR=6.9						
PDG	Podgorica	84.82	48	⇑P	P	12 32 59.4	+2.2
SIRR	Siria	86.04	44	⇑P	P	12 33 13.5	+10
BZS	Buzias	86.10	45	⇓P	P	12 33 03.5	0.0
FINES	FINESS Array B	86.17	29	P	P	12 33 03.1	-0.4
	comp=Z,8.4nm,1.0s,baz=287,slow=5.7,SNR=6.1						
FINES				LR	LR	13 10 37.5	
	comp=Z,44nm,19.1s,baz=290,slow=35						
FINES	FINESS Array B	86.17	29	P	P	12 33 04.0	+0.5
MDVR	Moldovita	86.28	45	⇑P	P	12 33 05.1	+0.5
BOVS	Bovan	86.44	47	⇑P	P	12 33 04.6	-0.6
DRGR		86.68	43	⇑P	P	12 33 05.8	-0.7
VOIR		88.51	44	⇑P	P	12 33 17.6	+2.3
VNA3	Neumayer Olymp	89.27	163	P	P	12 33 21.4	+3.2
VNA1	Neumayer--Stat	89.39	163	P	P	12 33 22.4	+3.8
VNA2	Neumayer--Watz	89.78	163	P	P	12 33 23.7	+3.2
AKASG	Malin Array Be	90.15	39	LR	LR	13 12 19.5	
	comp=Z,55nm,20.2s,baz=290,slow=35						
SNAA	Sanae	91.42	163	P	P	12 33 31.3	+3.1
SNAA	Sanae	91.42	163	P	P	12 33 29.4	+1.2
SNAA				IAmb	IAmb	12 33 31.8	
	comp=Z,7.6nm,1.1s						
BRTR	Keskin Array B	96.00	48	LR	LR	13 14 28.2	
	comp=Z,38nm,21.1s,baz=304,slow=34						
BOSA	Boshof	99.83	118	LR	LR	13 16 09.8	
	comp=Z,73nm,19.8s,baz=240,slow=34						
MKAR	Makanchi Array	120.17	21	PKP	PKPdf	12 39 13.5	-0.2
	comp=Z,0.4nm,0.8s,baz=313,slow=2.5,SNR=3.8						
SONM	Songino Array	123.88	2	PKP	PKiKP	12 39 21.4	+0.2
	comp=Z,0.3nm,0.5s,baz=306,slow=3.4,SNR=1.7						
WMQ	Urumqi	124.58	18	*e*P	PKiKP	12 39 23.0	+0.4
WMQ				pmax	pmax		
	comp=Z,150nm,4.3s						
WMQ				LR	LR		
	comp=N,90nm,28.3s						
WMQ				LR	LR		
	comp=E,150nm,28.3s						
WMQ				LR	LR		
	comp=Z,77nm,29.3s						
HHC	Hu-ho-hao-te	130.82	357	*e*P	PKPdf	12 39 33.3	-1.1
XAN	Xi'an	137.70	360	P	PKiKP	12 39 57.8	+8.5
XAN				pP	sPKPdf	12 40 02.8	+10
XAN				pmax	pmax		
	comp=Z,6.0nm,1.4s						
GYA	Guiyang	145.20	3	⇑P	PKPab	12 40 01.0	+0.3
GYA				pmax	pmax		
	comp=Z,11nm,1.0s						
ASAR	Alice Springs	151.47	235	PKPbc	PKPbc	12 40 15.9	-1.5
	comp=Z,7.0nm,0.9s,baz=118,slow=2.9,SNR=29						
CMAR	Chiang Mai Arr	151.57	20	PKP	PKPdf	12 40 12.6	+1.1
	comp=Z,2.5nm,1.1s,baz=315,slow=3.4,SNR=8.3						
CMAR				PKPbc	PKiKP	12 40 18.6	+0.5
	comp=Z,2.4nm,0.7s,baz=328,slow=2.7,SNR=9.1						
CMAR	Chiang Mai Arr	151.57	20		PKPdf	12 40 09.7	-1.8
CMAR				PKPbc	PKiKP	12 40 19.1	+1.0
WRA	Warramunga Arr	152.63	243	PKPbc	PKPbc	12 40 19.1	-1.0
	comp=Z,11nm,0.8s,baz=108,slow=1.8,SNR=12						

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*KRSC **14** 12:42:42.1±2.2, 49°.79N×156°.01E, h81^{km}±21^{km}, ML5.2*

*MOS **14** 12:42:43.0±1.0, 49°.75N×155°.98E, h78^{km}, mb4.9/22, Error ellipse: s-maj=7.8km s-min=3.0km az=73.7*

MOS Felt (II-III) at Severo-Kuril'sk.

*NEIC **14** 12:42:44.0±1.3, 49°.78N±0°.10×155°.8E±0°.1, h63^{km}±7^{km}, mb4.6/86, Error ellipse: s-maj=16.3km s-min=10.6km az=137.0*

*IDC **14** 12:42:46.2±1.8, 49°.85N×155°.73E, h85^{km}±15^{km}, mb4.1/25, mb1 4.3/32, mb1mx4.2/52, mbtmp4.4/32, MS3.6/20, Ms1 3.6/20, ms1mx3.5/44, Error ellipse: s-maj=14.6km s-min=9.1km az=139.0*

ISC 14 12:42:43.3±0.6**, 49°.71N**±0°.05×**156°.03E**±0°.04**, h63**^{km}±4^{km}**, h63**^{km}**:pP-P, n393,** σ1^{s}**45**/432**, mb4.6**/93**, 9C-1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.97	3	⇓*i*PN	Pn	12 43 00.6	-0.5
SKR				*i* S	Sn	12 43 13.8	-0.5
SKR				pmax	pmax		
	comp=Z,1μm,0.4s						
SKR				smax	smax		
	comp=N,11μm,0.6s						
SKR				smax	smax		
	comp=E,8μm,0.5s						
SKR	Severo-Kuril's	0.97	3	*i* P	Pn	12 43 00.5	-0.5
SKR				*e*S	Sn	12 43 13.7	-0.5
PAU	Pauzhetka	1.83	15	PN	Pn	12 43 12.5	+0.1
PAU				S	Sn	12 43 34.6	+0.1
PAU	Pauzhetka	1.83	15	*e*P	Pn	12 43 12.5	+0.1
PAU				*e*S	Sn	12 43 34.6	+0.1
KDTR	Khodutka, Kamc	2.47	31	PN	Pn	12 43 20.4	-0.7
KDTR				S	Sn	12 43 48.5	-1.6
KDTR	Khodutka, Kamc	2.47	31	*e*P	Pn	12 43 20.4	-0.7
KDTR				*e*S	Sn	12 43 48.5	-1.6
MIPR	Malaya Ipel'ka	2.61	10	PN	Pn	12 43 23.4	+0.3
MIPR	Malaya Ipel'ka	2.61	10	*e*P	Pn	12 43 23.4	+0.3
ASAK	Asacha	2.92	23	PN	Pn	12 43 28.3	+0.9
ASAK	Asacha	2.92	23	*e*P	Pn	12 43 28.3	+0.9
MTVR	Mutnovka	3.09	25	PN	Pn	12 43 30.9	+1.2
MTVR				S	Sn	12 44 05.6	+0.1
MTVR	Mutnovka	3.09	25	*e*P	Pn	12 43 30.9	+1.2
MTVR				*e*S	Sn	12 44 05.6	+0.1
GRL	Gorelyy	3.12	24	PN	Pn	12 43 31.2	+1.1
GRL	Gorelyy	3.12	24	*e*P	Pn	12 43 31.2	+1.1
RUS	Russkaya	3.14	29	PN	Pn	12 43 29.3	-1.0
RUS				S	Sn	12 44 05.1	-1.5
RUS	Russkaya	3.14	29	*e*P	Pn	12 43 29.3	-1.0
RUS				*e*S	Sn	12 44 05.1	-1.5
APC	Apacha	3.29	12	PN	Pn	12 43 34.0	+1.6
APC	Apacha	3.29	12	*e*P	Pn	12 43 34.0	+1.6
KRMR	Karymshinskiy	3.39	22	PN	Pn	12 43 35.3	+1.6
KRMR				S	Sn	12 44 12.3	-0.3
KRMR	Karymshinskiy	3.39	22	*e*P	Pn	12 43 35.3	+1.6
KRMR				*e*S	Sn	12 44 12.3	-0.3
PEA0B	Petropavlovsk-	3.56	16	*ce*PN	Pn	12 43 37.6	+1.6
PEA0B	Petropavlovsk-	3.56	16	Pn	Pn	12 43 36.9	+0.9
PETK	Petropavlovsk-	3.56	16	P	Pn	12 43 38.0	+2.0
	comp=E,11nm,0.3s,baz=106,slow=21,SNR=171						
PETK				S	Sn	12 44 18.9	+2.1
	comp=E,11nm,0.3s,baz=195,slow=11,SNR=4.7						
PETK				LR	LR	12 45 11.3	
	comp=E,673nm,20.9s,baz=197,slow=42						
PETK	Petropavlovsk-	3.56	16	PN	Pn	12 43 35.8	-0.2
PETK	Petropavlovsk-	3.56	16		Pn	12 43 35.8	-0.2
PET	Petropavlovsk	3.70	25	*e*PN	Pn	12 43 38.7	+0.8
PET				*e*S	Sn	12 44 20.6	+0.4
PET				pmax	pmax		
	comp=Z,104nm,0.5s						
PET				smax	smax		
	comp=E,1μm,0.6s						
PET				smax	smax		
	comp=N,1μm,0.5s						
PET				MLR	MLR		
	comp=Z,500nm,18.0s						
PET	Petropavlovsk	3.70	25	*e*P	Pn	12 43 38.7	+0.8
PET				*e*S	Sn	12 44 19.7	-0.5
PET	Petropavlovsk	3.70	25		Pn	12 43 38.2	+0.3
DALK	Dalny	3.74	26	PN	Pn	12 43 38.7	+0.3
DALK				S	Sn	12 44 21.5	+0.4
DALK	Dalny	3.74	26	*e*P	Pn	12 43 38.7	+0.3
DALK				*e*S	Sn	12 44 21.5	+0.4
UGLR	Uglovaya	3.91	25	PN	Pn	12 43 42.4	+1.5
UGLR	Uglovaya	3.91	25	*e*P	Pn	12 43 42.4	+1.5
KOK	Koryaka	3.94	23	PN	Pn	12 43 43.4	+2.1
KOK	Koryaka	3.94	23	*e*P	Pn	12 43 43.4	+2.1
AVH	Avacha	3.94	24	PN	Pn	12 43 42.6	+1.3
AVH	Avacha	3.94	24	*e*P	Pn	12 43 42.6	+1.3
SMAR	Somma	3.96	25	PN	Pn	12 43 43.2	+1.6
SMAR	Somma	3.96	25	*e*P	Pn	12 43 43.2	+1.6
KRER	Koryakskii	3.98	24	PN	Pn	12 43 43.8	+1.9
KRER				S	Sn	12 44 27.9	+0.6
KRER	Koryakskii	3.98	24	*e*P	Pn	12 43 43.8	+1.9
KRER				*e*S	Sn	12 44 27.9	+0.6
SDLR	Sedlovina	3.99	25	PN	Pn	12 43 42.8	+0.8
SDLR	Sedlovina	3.99	25	*e*P	Pn	12 43 42.8	+0.8
NLC	Nalytchevo	4.04	30	PN	Pn	12 43 42.7	+0.2
NLC				S	Sn	12 44 27.0	-1.4
NLC	Nalytchevo	4.04	30	*e*P	Pn	12 43 42.7	+0.2
NLC				*e*S	Sn	12 44 27.0	-1.4
GNL	Ganaly	4.16	16	PN	Pn	12 43 45.9	+1.5
GNL	Ganaly	4.16	16	*e*P	Pn	12 43 45.9	+1.5
SPN	Mys Shipunski	4.21	35	PN	Pn	12 43 44.8	-0.1
SPN				S	Sn	12 44 31.5	-1.3
SPN	Mys Shipunski	4.21	35	*e*P	Pn	12 43 44.8	-0.1
SPN				*e*S	Sn	12 44 31.5	-1.3
KII	Karymskiy	4.82	25	PN	Pn	12 43 55.9	+2.6
KII				S	Sn	12 44 47.8	0.0
KII	Karymskiy	4.82	25	*e*P	Pn	12 43 55.9	+2.6
KII				*e*S	Sn	12 44 47.8	0.0
MKZ	Mys Kozlova	5.99	34	PN	Pn	12 44 08.4	-0.7
MKZ				S	Sn	12 45 15.2	-1.0
MKZ	Mys Kozlova	5.99	34	*e*P	Pn	12 44 08.4	-0.7
MKZ				*e*S	Sn	12 45 15.2	-1.0
TUMD	Tumrok D	6.11	24	*e*P	Pn	12 44 12.0	+1.1
TUMR	Tumrok	6.12	23	PN	Pn	12 44 12.0	+0.9
TUMR	Tumrok	6.12	23	*e*P	Pn	12 44 13.1	+2.0
ESO	Esso	6.43	14	PN	Pn	12 44 18.9	+3.6
ESO	Esso	6.43	14	*e*P	Pn	12 44 18.9	+3.6
KMNR	Kamenistaya	6.57	21	PN	Pn	12 44 19.7	+2.5
KMNR	Kamenistaya	6.57	21	*e*P	Pn	12 44 19.7	+2.5
KPT	Kopyto	6.76	20	PN	Pn	12 44 22.2	+2.4
KPT	Kopyto	6.76	20	*e*P	Pn	12 44 22.2	+2.4
KOZ	Kozyrevsk	6.77	19	PN	Pn	12 44 23.0	+3.1
KOZ	Kozyrevsk	6.77	19	*e*P	Pn	12 44 23.0	+3.1
KIRR	Kirishev	6.77	21	PN	Pn	12 44 22.9	+2.8
KIRR	Kirishev	6.77	21	*e*P	Pn	12 44 22.9	+2.8
BZWR	Bezymyannyi-We	6.82	22	PN	Pn	12 44 23.0	+2.3
BZWR	Bezymyannyi-We	6.82	22	*e*P	Pn	12 44 23.0	+2.3
BZGR	Bezymyannyi-Gr	6.85	23	PN	Pn	12 44 23.9	+2.8
BZGR	Bezymyannyi-Gr	6.85	23	*e*P	Pn	12 44 23.9	+2.8
KUR	Kuril'sk	7.12	234	*e*PN	Pn	12 44 25.7	+1.0
KUR				*e*S	Sn	12 45 46.3	+2.3
KUR				pmax	pmax		
	comp=Z,89nm,0.8s						
KUR				pmax	pmax		
	comp=E,34nm,0.7s						
KUR				pmax	pmax		
	comp=E,50nm,0.9s						
KUR				smax	smax		
	comp=E,106nm,0.5s						
KUR				smax	smax		
	comp=N,93nm,0.6s						
KLY	Klyuchi	7.17	21	PN	Pn	12 44 27.9	+2.5
KLY	Klyuchi	7.17	21	*e*P	Pn	12 44 27.9	+2.5
BDR	Baidarnaya	7.54	22	PN	Pn	12 44 31.9	+1.4
BDR	Baidarnaya	7.54	22	*e*P	Pn	12 44 31.9	+1.4
SRKR	Sorokina	7.61	22	PN	Pn	12 44 32.0	+0.6
SRKR	Sorokina	7.61	22	*e*P	Pn	12 44 32.0	+0.6
SMKR	Semkarok	7.62	23	PN	Pn	12 44 34.3	+2.8
SMKR	Semkarok	7.62	23	*e*P	Pn	12 44 34.3	+2.8
KBTR	Krutoberegovo	7.69	30	PN	Pn	12 44 33.4	+1.0
KBTR				S	Sn	12 45 58.5	+0.6
KBTR	Krutoberegovo	7.69	30	*e*P	Pn	12 44 33.4	+1.0
KBTR				*e*S	Sn	12 45 58.5	+0.6
KBG	Krutoberegovo	7.69	29	PN	Pn	12 44 32.3	-0.1
KBG	Krutoberegovo	7.69	29	*e*P	Pn	12 44 32.3	-0.1
BKI	Bering	8.19	44	PN	Pn	12 44 39.6	+0.4
BKI	Bering	8.19	44	*e*P	Pn	12 44 39.6	+0.4
BKI				*e*S	Sn	12 46 02.4	-7.7
TYV	Tymovskoe	8.64	283	*e*PN	Pn	12 44 48.9	+3.4
TYV				*e*S	Sn	12 46 23.0	+1.6
TYV				pmax	pmax		
	comp=Z,100nm,1.9s						
TYV				pmax	pmax		
	comp=Z,38nm,1.1s						
TYV				smax	smax		
	comp=N,200nm,3.4s						
UGL	Uglegorsk	9.13	271	*e*PN	Pn	12 44 54.9	+2.7
UGL				S	Sn	12 46 34.1	+0.8
UGL				pmax	pmax		
	comp=Z,255nm,0.6s						
UGL				pmax	pmax		
	comp=Z,300nm,1.2s						
YSS	Yuzh-Sakhalins	9.26	258	*e*PN	Pn	12 44 56.7	+2.7
YSS				*e*S	Sn	12 46 38.3	+1.7
YSS				pmax	pmax		
	comp=Z,40nm,0.5s						
YSS	Yuzh-Sakhalins	9.26	258	Pn	Pn	12 44 55.9	+1.9
MA2	Magadan	10.34	345	P	Pn	12 45 09.0	+0.4
	comp=Z,2.2nm,0.3s,baz=158,slow=9.7,SNR=20						
MA2	Magadan	10.34	345	*i* PN	Pn	12 45 08.7	+0.1
MA2	Magadan	10.34	345	Pn	Pn	12 45 10.8	+2.2
JKA	Kamikawa-asahi	10.75	244	Pn	Pn	12 45 16.2	+1.9
ASAJ	Asahikawa	10.75	244	P	Pn	12 45 16.0	+1.6
	comp=Z,4.5nm,0.3s,baz=71,slow=13,SNR=56						
ASAJ				LR	LR	12 48 59.4	
	comp=Z,140nm,18.7s,baz=16,slow=35						
ASAJ	Asahikawa	10.75	244	PN	Pn	12 45 16.2	+1.8
SMY	Shemya	11.72	68	PN	Pn	12 45 27.2	-0.3
SMY	Shemya	11.72	68	Pn	Pn	12 45 27.2	-0.3
ERM	Erimo	11.81	234	*i* PN	Pn	12 45 28.2	-0.6
ERM	Erimo	11.81	234	Pn	Pn	12 45 28.1	-0.6
SEY	Seymchan	13.40	353	P	Pn	12 45 52.0	+1.7
	comp=Z,0.5nm,0.3s,baz=156,slow=11,SNR=15						
SEY				LR	LR	12 51 58.2	
	comp=Z,132nm,18.0s,baz=164,slow=42						
SEY	Seymchan	13.40	353	PN	Pn	12 45 52.0	+1.7
JTM	Tenmabayashi	13.79	235	Pn	Pn	12 45 50.6	-5.1
KLR	Kul'dur	15.78	278	P	P	12 46 24.4	+0.3
	comp=Z,0.4nm,0.3s,baz=75,slow=11,SNR=24						
KLR				LR	LR	12 52 52.6	
	comp=Z,201nm,18.3s,baz=83,slow=39						
KLR	Kul'dur	15.78	278	*ce*P	P	12 46 23.5	-0.6
JSD	Sado	17.28	234	P	Pn	12 46 38.0	-2.1
JSD				IAmb	IAmb	12 46 43.5	
	comp=Z,28nm,0.7s						
USRK	Ussuriysk Ar.	17.28	261	P	Pn	12 46 39.8	-0.3
	baz=58,slow=13,SNR=7.8						
USRK				LR	LR	12 52 38.2	
	comp=Z,116nm,21.8s,baz=45,slow=35						
USRK	Ussuriysk Ar.	17.28	261		P	12 46 40.0	-0.7
ZEA	Zeya	18.22	294	*i* P	Pn	12 46 52.8	+1.4
MAJO	Matsushiro	18.44	231	P	P	12 46 52.9	-0.7
MAJO				pmax	pmax		
	comp=Z,25nm,1.2s						
MAJO	Matsushiro	18.44	231	P	P	12 46 52.9	-0.7
MAT	Matsushiro	18.44	231	P	P	12 46 51.8	-1.8
MAT				*e*S	S	12 50 21.8	+1.4
MJAR	Matsushiro Arr	18.44	231	P	P	12 46 53.5	-0.1
	comp=Z,0.1nm,0.3s,baz=39,slow=9.7,SNR=24						
MJAR				LR	LR	12 54 49.1	
	comp=Z,91nm,18.2s,baz=35,slow=39						
MJAR	Matsushiro Arr	18.44	231		P	12 46 53.3	-0.3
MDJ	Mudanjiang	18.64	264	P	P	12 46 54.9	-0.8
MDJ				pP	Pn	12 46 59.9	+3.3
MDJ				S	S	12 50 23.4	-0.9
MDJ				sS	Sn	12 50 29.0	+4.8
MDJ				ScP	ScP	12 54 58.0	+6.5
MDJ				pmax	pmax		
	comp=Z,7.0nm,2.7s						
MDJ				pmax	pmax		
	comp=Z,140nm,3.7s						
MDJ				LR	LR		
	comp=N,310nm,4.7s						
MDJ				LR	LR		
	comp=E,210nm,4.7s						
MDJ				LR	LR		
	comp=Z,280nm,10.4s						
BILL	Bilibino	19.08	12	*ce*P	P	12 46 59.9	-0.4
BILL				pmax	pmax		
	comp=Z,33nm,1.7s						
BILL				MLR	MLR		
	comp=Z,103nm,15.0s						
BILL	Bilibino	19.08	12	P	P	12 47 00.4	+0.1
YAK	Yakutsk	19.08	320	P	P	12 46 59.4	-0.9
	comp=Z,0.1nm,0.3s,baz=103,slow=1.8,SNR=12						
YAK	Yakutsk	19.08	320	*e*P	P	12 46 59.5	-0.9
YAK				pmax	pmax		
	comp=Z,46nm,0.8s						
YAK	Yakutsk	19.08	320	P	P	12 46 59.9	-0.4
INU	Inuyama	19.98	231	P	P	12 47 09.3	-1.0
INU				IAmb	IAmb	12 47 10.6	
	comp=Z,42nm,1.3s						
JWT	Wachi	20.86	234	P	P	12 47 19.0	-0.9
JWT				IAmb	IAmb	12 47 19.5	
	comp=Z,14nm,0.6s						
KSRS	Korea Array	23.61	249	P	P	12 47 48.4	0.0
	comp=Z,13nm,0.8s,baz=47,slow=9.7,SNR=28						
KSRS				LR	LR	12 56 24.0	
	comp=Z,60nm,20.4s,baz=51,slow=35						
KS19	Wonju Array Si	23.61	250	P	P	12 47 47.2	-1.3
KS19				IAmb	IAmb	12 47 50.0	
	comp=Z,22nm,0.9s						
KSAR	Wonju Array Be	23.64	249	P	P	12 47 48.4	-0.2

KSAR	Wonju Array Be	23.64	249	P	P	12 47 48.4	-0.2
TIXI	Tiksi	25.25	340	P	P	12 48 01.1	-1.8
	comp=Z,22nm,0.7s,baz=128,slow=10,SNR=61						
TIXI				LR	LR	12 58 45.2	
	comp=Z,80nm,19.9s,baz=184,slow=38						
TIXI	Tiksi	25.25	340	ceP	P	12 48 00.9	-2.0
TIXI				pmax	pmax		
	comp=Z,18nm,0.6s						
TIXI	Tiksi	25.25	340	P	P	12 48 01.2	-1.8
TIXI				IAmb	IAmb	12 48 03.2	
	comp=Z,21nm,0.6s						
BOD	Bodaibo	25.76	304	eP	P	12 48 01.6	-6.1
BOD				pmax	pmax		
	comp=Z,9.0nm,2.2s						
TTA	Tatalina	28.92	45	P	P	12 48 37.3	+1.2
TTA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
TTA	Tatalina	28.92	45	P	P	12 48 36.9	+0.9
	baz=266						
TTA	Tatalina	28.92	45	P	P	12 48 37.3	+1.2
K20K	Telida	29.83	44	P	P	12 48 45.3	+1.3
	baz=267						
J20K	Nowinta River	29.86	42	P	P	12 48 45.2	+1.0
	baz=265						
L20K	Farewell, AK	29.88	46	P	P	12 48 45.5	+1.0
	baz=268						
IMAR	Indian Mountai	30.23	39	P	P	12 48 48.7	+1.3
A21K	Barrow	30.48	28	P	P	12 48 50.1	+0.5
	baz=251,SNR=5.8						
A21K	Barrow	30.48	28	P	P	12 48 49.6	0.0
A21K				IAmb	IAmb	12 48 51.1	
	comp=Z,14nm,0.8s						
H21K	Melozitna Rive	30.57	39	P	P	12 48 51.4	+0.9
	baz=264						
H21K	Melozitna Rive	30.57	39	P	P	12 48 51.1	+0.5
CHUM	Lake Minchumin	30.64	43	P	P	12 48 52.3	+1.2
	baz=268						
CAST	Castle Rocks	30.73	44	P	P	12 48 53.2	+1.3
	baz=268						
CAST	Castle Rocks	30.73	44	P	P	12 48 53.6	+1.6
CAST				IAmb	IAmb	12 48 55.2	
	comp=Z,13nm,1.2s						
I21K	Tanana	30.87	40	P	P	12 48 54.3	+1.2
	baz=266						
I21K	Tanana	30.87	40	P	P	12 48 54.6	+1.5
I21K				IAmb	IAmb	12 48 55.9	
	comp=Z,8.6nm,0.9s						
SKT	Skwentna	30.98	47	P	P	12 48 55.7	+1.5
	baz=271						
H11N2	WAKE ISLAND Hy	31.15	160	T	T	13 21 45.0	
	baz=347,slow=76,SNR=387						
H11N1	WAKE ISLAND Hy	31.16	160	T	T	13 21 52.4	
	baz=347,slow=76,SNR=320						
H11N3	WAKE ISLAND Hy	31.16	160	T	T	13 21 46.8	
	baz=347,slow=76,SNR=698						
BPAW	Bear Paw Mtn.	31.24	43	P	P	12 48 57.7	+1.3
	baz=268,SNR=5.5						
BPAW	Bear Paw Mtn.	31.24	43	P	P	12 48 57.1	+0.7
BPAW				IAmb	IAmb	12 49 01.2	
	comp=Z,7.1nm,0.8s						
MLY	Manley	31.39	41	P	P	12 48 58.9	+1.1
	baz=267,SNR=6.4						
MLY	Manley	31.39	41	P	P	12 48 58.5	+0.8
TRF	Thorofare Moun	31.54	44	P	P	12 49 00.3	+1.1
	baz=270						
TRF	Thorofare Moun	31.54	44	P	P	12 49 00.5	+1.2
TRF				IAmb	IAmb	12 49 03.5	
	comp=Z,12nm,1.1s						
COLD	Coldfoot	31.79	37	P	P	12 49 02.0	+0.8
	baz=264,SNR=9.4						
COLD	Coldfoot	31.79	37	P	P	12 49 02.0	+0.8
COLD				IAmb	IAmb	12 49 03.7	
	comp=Z,9.5nm,0.9s						
ULN	Ulaanbaatar	31.87	286	i P	P	12 49 01.9	-0.4
ULN				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BWN	Browne	31.91	42	P	P	12 49 04.7	+2.4
H23K	Yukon River	31.93	39	P	P	12 49 03.8	+1.3
	baz=267						
H23K	Yukon River	31.93	39	P	P	12 49 04.2	+1.7
H23K				IAmb	IAmb	12 49 04.7	
	comp=Z,8.0nm,0.9s						
I23K	Minto, Yukon-K	31.98	41	P	P	12 49 04.0	+1.2
	baz=268,SNR=6.4						
I23K	Minto, Yukon-K	31.98	41	P	P	12 49 04.2	+1.4
I23K				IAmb	IAmb	12 49 05.7	
	comp=Z,5.3nm,0.8s						
NEA2	Nenana	32.09	42	P	P	12 49 04.7	+0.9
	baz=269,SNR=12						
NEA2	Nenana	32.09	42	P	P	12 49 05.0	+1.1
HHC	Hu-ho-hao-te	32.11	271	eP	P	12 49 03.9	-0.5
HHC				S	S	12 54 12.8	+0.6
HHC				pmax	pmax		
	comp=Z,12nm,0.9s						
HHC				pmax	pmax		
	comp=Z,110nm,4.6s						
HHC				LR	LR		
	comp=N,160nm,11.5s						
HHC				LR	LR		
	comp=E,190nm,12.1s						
HHC				LR	LR		
	comp=Z,200nm,16.6s						
MCK	McKinley	32.14	43	P	P	12 49 05.3	+0.9
MCK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MCK	McKinley	32.14	43	P	P	12 49 05.2	+0.9
	baz=271,SNR=6.1						
MCK	McKinley	32.14	43	P	P	12 49 05.3	+0.9
MCK				IAmb	IAmb	12 49 05.9	
	comp=Z,9.3nm,0.8s						
RND	Reindeer	32.18	44	P	P	12 49 05.4	+0.6
RND				pmax	pmax		
	comp=Z,11nm,0.8s						
RND	Reindeer	32.18	44	P	P	12 49 05.4	+0.6
RND				IAmb	IAmb	12 49 06.3	
	comp=Z,11nm,0.8s						
TOLK	Toolik Lake Re	32.20	34	P	P	12 49 05.7	+0.9
	baz=262,SNR=5.9						
TOLK	Toolik Lake Re	32.20	34	P	P	12 49 05.7	+0.9
TOLK				IAmb	IAmb	12 49 06.0	
	comp=Z,7.2nm,0.6s						
GHO	Glory Hole Cre	32.22	47	P	P	12 49 05.9	+0.8
H11S1	WAKE ISLAND Hy	32.29	161	T	T	13 23 15.6	
	baz=347,slow=76,SNR=4067						
SONM	Songino Array	32.29	286	P	P	12 49 04.8	-1.2
	comp=Z,0.4nm,0.6s,baz=72,slow=9.3,SNR=1.8						
SONM				PcP	PcP	12 51 52.3	-0.3
	comp=Z,1.7nm,0.7s,baz=100,slow=2.1,SNR=8.0						
SONM				LR	LR	13 02 36.3	
	comp=Z,76nm,19.3s,baz=32,slow=37						
H11S3	WAKE ISLAND Hy	32.30	161	T	T	13 23 12.3	
	baz=347,slow=76,SNR=5925						
H11S2	WAKE ISLAND Hy	32.31	161	T	T	13 23 13.0	
	baz=347,slow=76,SNR=3917						
WAT1	Susitna Watana	32.34	45	P	P	12 49 06.3	+0.2
	baz=273						
MDM	Murphy Dome	32.45	41	P	P	12 49 08.1	+1.1
MDM				IAmb	IAmb	12 49 09.8	
	comp=Z,8.2nm,0.7s						
KNK	Knik Glacier	32.47	48	P	P	12 49 07.9	+0.7
	baz=275						
SML	Sawmill	32.50	47	P	P	12 49 08.6	+1.1
SML				pmax	pmax		
	comp=Z,42nm,0.7s						
SML	Sawmill	32.50	47	P	P	12 49 08.3	+0.8
	baz=274,SNR=12						
SML	Sawmill	32.50	47	P	P	12 49 08.6	+1.1
WRH	Wood River Hil	32.51	42	P	P	12 49 08.6	+1.1
WRH				IAmb	IAmb	12 49 08.9	
	comp=Z,9.3nm,1.1s						
PWL	Port Wells	32.58	49	P	P	12 49 08.6	+0.5
TCOL	CIGO, UAF Yank	32.61	41	P	P	12 49 09.7	+1.3
	baz=270,SNR=12						
TCOL	CIGO, UAF Yank	32.61	41	P	P	12 49 09.8	+1.5
COLA	College	32.61	41	i P	P	12 49 09.4	+1.0
COLA				pmax	pmax		
	comp=Z,21nm,0.7s						
COLA	College	32.61	41	P	P	12 49 09.7	+1.3
	baz=270						
COLA	College	32.61	41	P	P	12 49 10.1	+1.8
H24K	Noodor Dome	32.62	39	P	P	12 49 09.8	+1.3
	baz=268						
H24K	Noodor Dome	32.62	39	P	P	12 49 09.8	+1.3
CCB	Clear Creek Bu	32.63	42	P	P	12 49 09.3	+0.8
CCB				IAmb	IAmb	12 49 10.3	
	comp=Z,6.7nm,0.7s						
TLY	Talaya	32.66	294	i P	P	12 49 11.9	+2.9
TLY				pmax	pmax		
	comp=Z,2.0nm,0.3s						
NJ2	Nanjing	32.76	251	eP	P	12 49 09.8	-0.2
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
POKR	Poker Plat Res	32.79	41	P	P	12 49 11.5	+1.5
	baz=270						
DHY	Denali Highway	32.86	44	P	P	12 49 11.0	+0.2
	baz=273						
SCM	Sheep Creek Mo	32.97	47	P	P	12 49 12.4	+0.7
SCM				pmax	pmax		
	comp=Z,24nm,0.9s						
SCM	Sheep Creek Mo	32.97	47	P	P	12 49 12.7	+1.0
	baz=275						
SCM	Sheep Creek Mo	32.97	47	P	P	12 49 12.4	+0.7
HDA	Harding Lake	33.00	42	P	P	12 49 12.1	+0.2
	baz=272,SNR=12						
HDA	Harding Lake	33.00	42	P	P	12 49 12.1	+0.2
IL31		33.02	41	P	P	12 49 12.6	+0.7
IL31				IAmb	IAmb	12 49 13.7	
	comp=Z,7.1nm,0.6s						
ILAR	Eielson Array	33.02	41	P	P	12 49 12.5	+0.5
	comp=Z,4.9nm,0.7s,baz=255,slow=5.9,SNR=74						
ILAR	Eielson Array	33.02	41	P	P	12 49 13.0	+1.0
M24K	Tolsona, Glenn	33.49	46	P	P	12 49 17.7	+1.5
	baz=276						
PRP	Porcupine Dome	33.59	40	P	P	12 49 18.0	+0.9
	baz=271,SNR=27						
HARP	HAARP	33.93	46	P	P	12 49 21.1	+1.1
	baz=276						
RIDG	Independent Ri	33.96	43	P	P	12 49 20.6	+0.4
	baz=274,SNR=5.1						
RIDG	Independent Ri	33.96	43	P	P	12 49 20.6	+0.4
BMAR	Burnt Mountain	33.97	36	P	P	12 49 21.6	+1.3
N25K	Chitina, Valde	34.29	47	P	P	12 49 24.3	+1.2
	baz=278						
N25K	Chitina, Valde	34.29	47	P	P	12 49 24.6	+1.5
DOT	Dot Lake	34.31	43	P	P	12 49 23.9	+0.6
DOT				IAmb	IAmb	12 49 24.3	
	comp=Z,7.7nm,0.6s						
SCRK	Sand Creek	34.32	43	P	P	12 49 23.3	-0.1
	baz=275,SNR=7.6						
SCRK	Sand Creek	34.32	43	P	P	12 49 23.7	+0.2
SCRK				IAmb	IAmb	12 49 24.9	
	comp=Z,10nm,1.0s						
J26L	Joseph Creek	34.47	42	P	P	12 49 24.3	-0.3
	baz=274						
L26K	Log Cabin Wild	34.70	44	P	P	12 49 27.8	+1.2
	baz=277						
M26K	Nabesna, AK	34.93	45	P	P	12 49 30.7	+2.0
	baz=278,SNR=8.8						
CRQE	Cirque	35.14	48	P	P	12 49 32.0	+1.5
	baz=280						
L27K	Beaver Creek,	35.38	44	P	P	12 49 34.3	+1.9
	baz=278,SNR=22						
BCAR	Beaver Creek A	35.40	44	P	P	12 49 34.6	+2.0
M27K	Edge Creek, AK	35.45	45	P	P	12 49 35.2	+2.0
	baz=279,SNR=5.9						
EGAK	Eagle	35.47	41	P	P	12 49 33.6	+0.4
	baz=276						
BVCY	Beaver Creek	35.91	45	P	P	12 49 39.0	+1.9
	baz=280,SNR=6.9						
CTG	Chitna Glacier	35.94	48	P	P	12 49 39.0	+1.6
	baz=281,SNR=5.4						
YUK3	Moose Creek	36.21	46	P	P	12 49 41.2	+1.4
	baz=281						
DAWY	Dawson	36.32	42	P	P	12 49 41.5	+1.0
	baz=278						
I29M	Ogilvie Camp,	36.61	40	P	P	12 49 44.1	+1.2
	baz=278,SNR=6.0						
HYT	Haines Junctio	37.81	47	P	P	12 49 55.3	+2.1
	baz=284						
HYT	Haines Junctio	37.81	47	P	P	12 49 55.1	+1.9
HYT				IAmb	IAmb	12 49 56.2	
	comp=Z,10nm,0.8s						
MAYO	Mayo, Yukon	37.93	42	P	P	12 49 56.2	+2.1
	baz=282,SNR=9.9						
INK	Inuvik	38.10	35	P	P	12 49 56.5	+1.1
	comp=Z,2.4nm,0.4s,baz=259,slow=7.6,SNR=23						
INK	Inuvik	38.10	35	P	P	12 49 56.1	+0.7
INK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
INK	Inuvik	38.10	35	P	P	12 49 56.7	+1.3
	baz=278,SNR=5.6						
INK	Inuvik	38.10	35	P	P	12 49 56.1	+0.7
N31M	Braeburn, Yuko	38.45	46	P	P	12 50 01.0	+2.4
	baz=284						
M31M	Drury Creek, Y	38.92	44	P	P	12 50 04.4	+2.0
	baz=285						
WHY	Whitehorse	39.09	47	P	P	12 50 06.3	+2.3
	baz=286						
FARO	Faro, Yukon	39.38	44	P	P	12 50 08.2	+2.0
	baz=285						
MMPY	Sheldon Lake,	40.21	43	P	P	12 50 15.4	+2.3
	baz=286						
A36M	Sachs Harbour	40.32	28	P	P	12 50 15.2	+1.4
	baz=281,SNR=27						
A36M	Sachs Harbour	40.32	28	P	P	12 50 15.3	+1.4
TGTN	Hyland Airport	41.89	44	P	P	12 50 29.7	+2.8
	baz=290						
ZALV	Zalesovo Beam	42.51	304	P	P	12 50 30.8	-1.3
	comp=Z,1.1nm,0.5s,baz=62,slow=7.4,SNR=8.6						
ZALV				PcP	PcP	12 52 23.4	-0.1
	comp=Z,2.9nm,0.7s,baz=51,slow=3.6,SNR=8.5						
ZALV	Zalesovo Beam	42.51	304	i P	P	12 50 30.9	-1.1
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZALV	Zalesovo Beam	42.51	304		P	12 50 30.5	-1.5
DGZ	Jazzator, Alta	42.92	297	i P	P	12 50 35.2	-0.4
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WMQ	Urumqi	45.71	290	eP	P	12 50 57.4	-0.4
WMQ				pP	pP	12 51 14.9	+1.1
WMQ				sP	sP	12 51 20.6	-0.5
WMQ				pmax	pmax		
	comp=Z,16nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,160nm,3.9s						
EUNU	Eureka	45.83	12	P	P	12 50 59.0	+0.7
MK31	Makanchi Array	47.35	296	P	P	12 51 09.5	-1.0
MK31				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MK31	Makanchi Array	47.35	296	P	P	12 51 09.5	-1.0
MKAR	Makanchi Array	47.35	296	P	P	12 51 09.4	-1.1
	comp=Z,2.3nm,0.7s,baz=62,slow=7.6,SNR=22						
MKAR				PcP	PcP	12 52 40.0	-0.4
	comp=Z,1.9nm,0.9s,baz=51,slow=4.8,SNR=4.0						
MKAR				LR	LR	13 12 22.6	
	comp=Z,187nm,18.6s,baz=22,slow=38						
MKAR	Makanchi Array	47.35	296	P	P	12 51 09.9	-0.7
MKAR	Makanchi Array	47.35	296	P	P	12 51 09.9	-0.7
KURK	Kurchatov	47.38	303	ceP	P	12 51 09.7	-1.0
KURK				pmax	pmax		
	comp=Z,14nm,0.8s						
KURK	Kurchatov	47.38	303	P	P	12 51 09.9	-0.8
YKA	Yellowknife Ar	47.39	39	P	P	12 51 11.2	+0.6
	comp=Z,4.3nm,0.8s,baz=305,slow=7.0,SNR=6.1						
MAKZ	Makanchi	47.52	296	P	P	12 51 11.2	-0.7
MAKZ				pmax	pmax		
	comp=Z,4.0nm,1.2s						
MAKZ	Makanchi	47.52	296	P	P	12 51 11.2	-0.7
SLVN	Son La	49.71	255	P	P	12 51 28.5	-0.5
SLVN				IAmb	IAmb	12 51 30.8	
	comp=Z,9.8nm,1.2s						
BRVK	Borovoye	50.54	309	ceP	P	12 51 34.3	-0.6
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BRVK	Borovoye	50.54	309	P	P	12 51 34.0	-0.9
BRVK				IAmb	IAmb	12 51 35.1	
	comp=Z,7.4nm,0.9s						
EDM	Edmonton	52.88	49	P	P	12 51 53.7	+1.4
EDM				pmax	pmax		
	comp=Z,13nm,0.7s						
EDM	Edmonton	52.88	49	P	P	12 51 53.7	+1.4
ARU	Arti	54.16	317	c iP	P	12 51 59.8	-1.7
ARU						12 53 03.9	
ARU				S	S	12 59 32.6	-0.7
ARU				pmax	pmax		
	comp=Z,27nm,2.4s						
ARU	Arti	54.16	317	P	P	12 51 59.9	-1.6
ARU				IAmb	IAmb	12 52 00.5	
	comp=Z,9.6nm,1.0s						
AAK	Ala-Archa	54.28	296	ceP	P	12 52 03.2	+0.3
AAK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
AAK	Ala-Archa	54.28	296	P	P	12 52 02.8	-0.1
CHTO	Chiang Mai	54.69	257	P	P	12 52 06.6	+0.6
CHTO				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CHTO	Chiang Mai	54.69	257	P	P	12 52 06.6	+0.6
SIJI	Sorong	54.70	211	P	P	12 52 05.2	-0.7
	comp=Z,4.3nm,0.6s,baz=4.6,slow=17,SNR=2.2						
CMAR	Chiang Mai Arr	54.96	257	P	P	12 52 08.7	+0.8
	comp=Z,4.4nm,0.8s,baz=29,slow=7.0,SNR=32						
CMAR				LR	LR	13 16 28.6	
	comp=Z,25nm,18.1s,baz=335,slow=37						
CMAR	Chiang Mai Arr	54.96	257	P	P	12 52 08.4	+0.5
CMAR	Chiang Mai Arr	54.96	257	P	P	12 52 08.4	+0.5
ARCES	ARCESS Array B	55.69	341	P	P	12 52 10.3	-2.1
	comp=Z,3.7nm,0.9s,baz=41,slow=8.4,SNR=1.5						
DBG	Daneborg	56.25	359	eP	P	12 52 13.6	-2.8
KKAR	Karatay Array	56.29	299	P	P	12 52 16.6	-0.5
KKAR	Karatay Array	56.29	299	P	P	12 52 16.6	-0.5
PLID	Pearl Lake	56.41	58	P	P	12 52 19.8	+1.6
PLID				IAmb	IAmb	12 52 20.5	
	comp=Z,7.2nm,0.8s						
JIRN	Jiri	56.65	275	eP	P	12 52 20.3	-0.1
	comp=Z,8.6nm,0.8s						
RAMN	Ramite	56.87	274	eP	P	12 52 21.2	-0.6
	comp=Z,11nm,0.5s						
KKN	Kakani	57.15	275	eP	P	12 52 24.0	+0.3
	comp=Z,7.4nm,0.5s						
DMN	Daman	57.39	275	eP	P	12 52 25.2	-0.2
	comp=Z,14nm,0.7s						
GKN	Gorkha	57.42	276	eP	P	12 52 25.2	-0.3
	comp=Z,8.9nm,0.5s						
SUMG	Summit	57.59	5	P	P	12 52 26.0	-0.3
SUMG				pmax	pmax		
	comp=Z,16nm,0.8s						
SUMG	Summit	57.59	5	i P	P	12 52 25.0	-1.4
SUMG				IAmb	IAmb	12 52 26.9	
	comp=Z,18nm,0.9s						
SUMG	Summit	57.59	5	P	P	12 52 26.0	-0.3
DANN	Dangsing	57.75	277	eP	P	12 52 27.9	-0.1
	comp=Z,12nm,0.8s						
ABKAR	Akbulak array	58.03	310	P	P	12 52 28.2	-1.1
ABKAR				IAmb	IAmb	12 52 29.4	
	comp=Z,4.9nm,0.8s						
ABKAR	Akbulak array	58.03	310	P	P	12 52 27.9	-1.4
PNTR	Pine Nut	58.18	66	P	P	12 52 31.4	+0.7
PNTR				IAmb	IAmb	12 52 33.5	
	comp=Z,4.1nm,0.8s						
KOLN	Koldanda	58.25	277	eP	P	12 52 30.5	-0.9
HLID	Hailey	58.26	59	P	P	12 52 33.2	+1.9
	baz=310						
HLID	Hailey	58.26	59	P	P	12 52 33.0	+1.8
HLID				IAmb	IAmb	12 52 49.7	
	comp=Z,4.8nm,1.4s						
GAR	Garm	59.03	295	P	P	12 52 36.3	-0.3
QLMT	Earthquake Lak	59.07	56	P	P	12 52 37.5	+0.6
YHL	Hebgen Lake	59.19	56	P	P	12 52 39.9	+2.1
YHL				IAmb	IAmb	12 52 40.1	
	comp=Z,3.7nm,0.8s						
NVAR	Mina Array Bea	59.38	66	P	P	12 52 40.7	+1.6
	comp=Z,1.5nm,0.7s,baz=290,slow=7.4,SNR=14						
NVAR	Mina Array Bea	59.38	66	P	P	12 52 39.9	+0.7
NVAR				pP	pP	12 52 54.9	-0.9
YHH	Holmes Hill	59.41	56	P	P	12 52 41.4	+2.1
YHH				IAmb	IAmb	12 52 42.3	
	comp=Z,4.3nm,0.7s						
YMR	Madison River	59.43	56	P	P	12 52 41.6	+2.2
YMR				IAmb	IAmb	12 52 56.1	
	comp=Z,4.6nm,0.7s						
ELK	Elko	59.64	62	P	P	12 52 42.9	+2.0
ELK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ELK	Elko	59.64	62	P	P	12 52 42.9	+2.0
H17A	Grant Village	59.82	56	P	P	12 52 45.6	+3.5
	baz=312						
H17A	Grant Village	59.82	56	P	P	12 52 44.1	+2.0
H17A				IAmb	IAmb	12 52 46.3	
	comp=Z,5.1nm,0.9s						
CHGR	Chuyangaron	59.94	295	P	P	12 52 42.4	-0.4
RLMT	Red Lodge	60.03	55	P	P	12 52 45.6	+2.2
	baz=312						
RLMT	Red Lodge	60.03	55	P	P	12 52 44.5	+1.1
RLMT				IAmb	IAmb	12 53 00.9	
	comp=Z,8.5nm,1.1s						
FXWY	Fox Creek	60.07	57	P	P	12 52 46.2	+2.4
LAO	LASA Array	60.56	52	P	P	12 52 49.0	+2.1
	baz=313						
NIL	Nilore	60.82	289	P	P	12 52 48.0	-0.8
NIL				pmax	pmax		
	comp=Z,8.0nm,1.0s						
NIL	Nilore	60.82	289	P	P	12 52 48.0	-0.8
NIL				IAmb	IAmb	12 52 50.0	
	comp=Z,8.0nm,0.9s						
ICESG	Greenland Ices	60.95	6	eP	P	12 52 48.5	-1.1
R11A	Troy Canyon, C	61.03	64	P	P	12 52 51.8	+1.5
	baz=312						
SPR3	Spring Creek 3	61.32	63	P	P	12 52 54.3	+1.9
SPR3				IAmb	IAmb	12 52 55.5	
	comp=Z,3.0nm,0.7s						
DUG	Dugway, Tooele	61.38	61	P	P	12 52 54.2	+1.5
DUG				pmax	pmax		
	comp=Z,6.0nm,1.1s						
DUG	Dugway, Tooele	61.38	61	P	P	12 52 54.4	+1.8
	baz=313						
DUG	Dugway, Tooele	61.38	61	P	P	12 52 54.2	+1.5
DUG				IAmb	IAmb	12 53 09.3	
	comp=Z,5.9nm,1.1s						
BW06	Boulder Array	61.45	57	P	P	12 52 54.9	+1.6
	baz=313,SNR=7.5						
PD31	Pinedale Array	61.45	57	P	P	12 52 55.0	+1.7
PD31				IAmb	IAmb	12 52 55.6	
	comp=Z,5.1nm,0.9s						
PDAR	Pinedale Array	61.45	57	P	P	12 52 54.5	+1.3
	comp=Z,3.5nm,0.7s,baz=319,slow=2.3,SNR=34						
PDAR	Pinedale Array	61.45	57	P	P	12 52 54.8	+1.5
PDAR				pP	pP	12 53 08.6	-1.4
FURC	Furnace Creek,	61.54	66	P	P	12 52 55.3	+1.7
	baz=313,SNR=5.1						
SFJD	Kangerlussuaq	61.87	12	eP	P	12 52 52.4	-2.9
FINES	FINESS Array B	62.17	335	P	P	12 52 56.0	-1.4
	comp=Z,2.2nm,0.7s,baz=38,slow=7.3,SNR=11						
FINES	FINESS Array B	62.17	335	P	P	12 52 56.0	-1.4
FINES	FINESS Array B	62.17	335	P	P	12 52 56.1	-1.3
RSSD	Black Hills	63.45	52	P	P	12 53 07.5	+1.0
RSSD				pmax	pmax		
	comp=Z,8.0nm,0.9s						
RSSD	Black Hills	63.45	52	P	P	12 53 07.4	+1.0
	baz=315						
RSSD	Black Hills	63.45	52	P	P	12 53 07.5	+1.0
RSSD				IAmb	IAmb	12 53 08.5	
	comp=Z,8.1nm,0.8s						
IRM	Iron Mountain	64.14	67	P	P	12 53 11.9	+1.0
	baz=314						
N23A	Red Feather La	64.70	56	P	P	12 53 16.4	+1.6
	baz=315						
ISCO	Idaho Springs	65.65	57	P	P	12 53 22.9	+1.9
ISCO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ISCO	Idaho Springs	65.65	57	P	P	12 53 22.9	+1.9
	baz=315,SNR=7.5						
ISCO	Idaho Springs	65.65	57	P	P	12 53 22.9	+1.9
ISCO				IAmb	IAmb	12 53 23.7	
	comp=Z,5.9nm,0.8s						
MVCO	Mesa Verde	65.88	61	P	P	12 53 23.9	+1.4
	baz=315						
NB2	NORSAR Subarra	66.03	342	P	P	12 53 21.8	-0.9
	comp=Z,0.7nm,0.5s,baz=24,slow=6.5						
NOA	NORSAR Array B	66.03	342	P	P	12 53 21.8	-0.9
	comp=Z,1.7nm,0.7s,baz=24,slow=6.3,SNR=4.6						
NOA				LR	LR	13 25 24.3	
	comp=Z,77nm,18.0s,baz=355,slow=39						
X16A	Lo Mia Camp, P	66.15	65	P	P	12 53 24.8	+0.6
S22A	4UR Ranch, Cre	66.44	59	P	P	12 53 28.0	+1.9
	baz=316,SNR=5.7						
GEYT	Alibeck	66.74	302	LR	LR	13 24 42.6	
	comp=Z,82nm,18.9s,baz=10.0,slow=38						
SDCO	Great Sand Dun	67.18	58	P	P	12 53 32.2	+1.4
	baz=316						
SDCO	Great Sand Dun	67.18	58	P	P	12 53 32.5	+1.7
MNK	Minsk	67.42	330	i P	P	12 53 29.7	-1.9
MNK				i *PP	pP	12 53 47.4	-1.2
MNK				i		12 55 57.7	
MNK				i PPP	PPP	12 57 33.5	
MNK				i S	S	13 02 20.5	-1.7
MNK				i *SS	sS	13 02 52.5	+1.5
MNK				i SS	SS	13 06 42.5	+0.3

MNK				pmax	pmax		
	comp=N,18nm,0.9s						
MNK				pmax	pmax		
	comp=E,1.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MNK				MLR	MLR		
	comp=N,359nm,25.0s						
MNK				MLR	MLR		
	comp=Z,204nm,17.0s						
MNK	Minsk	67.42	330	*i* P	P	12 53 29.8	-1.8
	comp=E,1.0nm,0.9s						
MNK				*i* P	P	12 53 29.8	-1.8
	comp=N,18nm,0.9s						
MNK				*i* P	P	12 53 29.8	-1.8
	comp=Z,7.0nm,0.7s,baz=34						
MNK				*i* pP	pP	12 53 47.4	-1.2
MNK				*i* PP	PP	12 55 57.8	-2.4
MNK				*i* PPP	PPP	12 57 33.6	
MNK				*i* S	S	13 02 20.5	-1.7
MNK				*i* sS	sS	13 02 52.6	+1.5
MNK				*i* SS	SS	13 06 42.5	+0.3
MNK				*i* SSS	SSS	13 09 56.8	
MNK				*i* LQ	LQ	13 18 22.3	
MNK				*i* LR	LR	13 23 42.0	
MNK				*i* LRM	MLR	13 25 39.6	
MNK				*i* LRM	MLR	13 26 55.0	
	comp=N,359nm,24.9s						
MNK				*i* LRM	MLR	13 27 02.6	
	comp=Z,204nm,16.6s						
ECSD	EROS Data Cent	67.44	49	P	P	12 53 32.3	+0.3
	baz=318						
ECSD	EROS Data Cent	67.44	49	P	P	12 53 32.8	+0.8
ECSD				IAmb	IAmb	12 53 33.2	
	comp=Z,7.1nm,0.8s						
IVI	Ivigtut	67.73	12	*e*P	P	12 53 33.3	-0.2
T25A	Trinidad	68.21	58	P	P	12 53 38.7	+1.5
	baz=317						
ANMO	Albuquerque	68.65	61	P	P	12 53 41.6	+1.7
	baz=317						
SCHQ	Schefferville	69.81	25	P	P	12 53 46.7	+0.2
	comp=Z,7.0nm,0.6s,baz=351,slow=5.9,SNR=16						
SCHQ				LR	LR	13 27 24.9	
	comp=Z,44nm,18.4s,baz=71,slow=38						
MSVF	Nonsavu	69.92	158	LR	LR	13 17 52.1	
	comp=Z,72nm,20.4s,baz=142,slow=30						
AKASG	Malin Array Be	70.14	327	P	P	12 53 46.7	-1.9
	comp=Z,2.1nm,0.5s,baz=33,slow=6.2,SNR=4.6						
AKASG				LR	LR	13 26 50.3	
	comp=Z,66nm,18.4s,baz=320,slow=38						
AKASG	Malin Array Be	70.14	327	P	P	12 53 47.4	-1.2
KBZ	Khabaz	70.18	315	P	P	12 53 48.6	-0.4
	comp=Z,3.3nm,0.8s,baz=71,slow=4.3,SNR=5.2						
KBZ				LR	LR	13 31 04.9	
	comp=Z,48nm,18.7s,baz=337,slow=41						
MNTX	Cornudas Mount	71.63	63	P	P	12 53 59.0	+1.0
	baz=318						
WRAB	Tennant Creek	71.96	201	*ce*P	P	12 54 00.6	+0.8
WRAB				pmax	pmax		
	comp=Z,16nm,2.5s						
WRA	Warramunga Arr	71.97	201	P	P	12 54 00.1	+0.2
	comp=Z,5.0nm,0.9s,baz=19,slow=6.8,SNR=4.9						
WRA	Warramunga Arr	71.97	201	P	P	12 53 59.5	-0.4
WRA	Warramunga Arr	71.97	201		P	12 53 59.5	-0.4
GNI	Garni	72.07	311	LR	LR	13 28 51.8	
	comp=Z,61nm,19.2s,baz=30,slow=38						
FITZ	Fitzroy Crossi	72.68	210	P	P	12 54 05.0	+0.9
	comp=Z,5.7nm,0.8s,baz=23,slow=7.7,SNR=4.7						
WMOK	Wichita Mounta	73.06	56	P	P	12 54 06.8	+0.4
	baz=319						
KOLS	Kolonicke sedl	73.99	330	*e*P	P	12 54 10.9	-0.8
KOLS	Kolonicke sedl	73.99	330	*e*P	P	12 54 10.9	-0.8
BUR08	Bucovina Ar. S	74.14	328	P	P	12 54 12.4	-0.2
BURAR	Bucovina Array	74.15	328	P	P	12 54 11.6	-1.2
TXAR	Lajitas Array	74.37	63	P	P	12 54 15.6	+1.3
	comp=Z,6.7nm,0.7s,baz=299,slow=4.3,SNR=102						
U40A	Yellville	74.92	51	P	P	12 54 17.3	0.0
	baz=321						
ASAR	Alice Springs	75.66	201	P	P	12 54 22.1	+0.7
	comp=Z,3.4nm,0.7s,baz=16,slow=5.2,SNR=9.0						
MIAR	Mount Ida	75.96	53	P	P	12 54 24.1	+0.9
MIAR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MIAR	Mount Ida	75.96	53	P	P	12 54 23.8	+0.5
	baz=321						
MIAR	Mount Ida	75.96	53	P	P	12 54 24.1	+0.9
MIAR				IAmb	IAmb	12 54 24.6	
	comp=Z,6.7nm,0.8s						
KHC	Kasperske Hory	76.38	336	*e*P	P	12 54 31.0	+5.6
KHC	Kasperske Hory	76.38	336	*e*P	P	12 54 31.0	+5.6
GERES	GERESS Array B	76.61	335	P	P	12 54 26.6	-0.2
	comp=Z,0.3nm,0.5s,baz=50,slow=5.2,SNR=1.9						
GERES				LR	LR	13 31 57.7	
	comp=Z,105nm,21.1s,baz=2.5,slow=39						
WCI	Wyandotte Cave	76.63	46	P	P	12 54 27.7	+0.8
	baz=324						
BRTR	Keskin Array B	77.53	318	P	P	12 54 31.2	-1.0
	comp=Z,0.9nm,0.5s,baz=33,slow=2.9,SNR=6.4						
BRTR	Keskin Array B	77.53	318	P	P	12 54 31.8	-0.4
PSA00	Pilbara Seismi	77.90	214	P	P	12 54 34.6	+0.6
PSA00				IAmb	IAmb	12 54 50.3	
	comp=Z,11nm,1.4s						
TAOE	Nuku Hiva Isla	80.40	116	*e*LR	LR	12 54 46.8	
	comp=Z,142nm,23.6s						
RAR	Rarotonga	80.76	139	LR	LR	13 28 13.7	
	comp=Z,80nm,18.2s,baz=282,slow=34						
RAO	Raoul Island	81.96	157	LR	LR	13 23 06.6	
	comp=Z,901nm,21.8s,baz=248,slow=30						
RAYN	Ar Rayn	84.67	300	P	P	12 55 10.2	0.0
RAYN				pmax	pmax		
	comp=Z,13nm,0.8s						
RAYN	Ar Rayn	84.67	300	P	P	12 55 10.2	0.0
ESDC	Sonseca Array	89.26	345	P	P	12 55 31.6	-0.7
	comp=Z,1.1nm,0.7s,baz=1.3,slow=4.0,SNR=7.5						
ESDC	Sonseca Array	89.26	345	P	P	12 55 31.5	-0.7
KEST	Kesra	89.95	333	P	P	12 55 35.0	-0.6
	comp=Z,4.6nm,0.8s,baz=333,slow=4.5,SNR=5.0						
PLCA	Paso Flores	146.46	93	PKPbc	PKPbc	13 02 17.2	+0.5
	comp=Z,3.1nm,0.7s,baz=279,slow=3.7,SNR=5.3						
SNAA	Sanae	155.94	196	PKPdf	PKPdf	13 02 34.8	+6.2
SNAA	Sanae	155.94	196	pPKPdf	PKPab	13 02 56.1	-0.1
VNA2	Neumayer--Watz	157.36	194	PKPdf	PKPdf	13 02 31.8	+1.4

MAN **14** *12:46:07.8, 5°.63N×125°.67E, h182^{km}, mb5.0, ML4.0, MS4.0*

NEIC **14** *12:46:08.4±1.8, 5°.63N±0°.07×125°.7E±0°.1, h200^{km}±7^{km}, mb4.5/32, Error ellipse: s-maj=16.9km s-min=10.5km az=84.0*

IDC **14** *12:46:08.2±0.5, 5°.65N×125°.68E, h206^{km}±4^{km}, mb4.0/14, mb1 4.1/18, mb1mx3.7/50, mbtmp4.6/18, Error ellipse: s-maj=14.8km s-min=7.5km az=78.0*

DJA **14** *12:46:09.1±0.4, 6°N±3°×12°6E±°, h191^{km}±3^{km}, M4.5/47, mB5.1/24, mb4.6/47, MLv5.0/11, Mw(mB)4.4/24*

KLM **14** *12:46:11, 5°.36N×125°.74E, h216^{km}, mb4.7*

ISC 14 12:46:07.6±0.5**, 5°.62N**±0°.04×**125°.69E**±0°.06**, h199**^{km}±5^{km}**, n125,** σ**1ˢ41**/136**, mb4.5**/36**, 2C-8D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	General Santos	0.87	303	⇓*e*P	Pn	12 46 35.9	-0.7
GSPH				*i* S	Sn	12 46 56.7	-2.3
DAV	Davao City (W)	1.45	356	P	Pn	12 46 41.4	+0.6
	84nm,0.3s,baz=108,slow=1.7,SNR=33						
DAV				S	Sn	12 47 07.9	+1.2
	518nm,0.3s,baz=298,slow=21,SNR=17						
DAV	Davao City (W)	1.45	356	Pn	Pn	12 46 41.9	+1.1
DAV	Davao City (W)	1.45	356	P	Pn	12 46 47.1	+6.3
DMPH	Davao City--Mi	1.47	353	⇑*e*P	Pn	12 46 41.5	+0.6
DMPH				*e*S	Sn	12 47 05.7	-1.3
KCP	Kidapawan	1.51	337	⇓*i*P	Pn	12 46 41.3	-0.1
KCP				*i* S	Sn	12 47 06.5	-1.2
BUKP	Musuan	2.33	345	⇓*i*P	Pn	12 46 49.9	+0.2
BUKP				*i* S	Sn	12 47 23.4	+0.8
BIPH	Bislig	2.64	15	⇓*e*P	Pn	12 46 54.7	+1.7
BIPH				*e*S	Sn	12 47 28.6	0.0
PAGZ	Pagadian	3.19	314	⇓*i*P	Pn	12 46 59.5	0.0
SCPH	Surigao	4.14	357	⇓*e*P	Pn	12 47 13.9	+2.8
SNPH	Sibulan	4.43	327	*e*P	Pn	12 47 15.7	+0.9
TBP	Tagbilaran	4.44	336	⇓*i*P	Pn	12 47 13.6	-1.3
TNTI	Ternate	5.09	161	Pn	Pn	12 47 22.8	-0.4
TNTI	Ternate	5.09	161	P	Pn	12 47 23.6	+0.4
KMSI	Cibinong	5.29	199	P	Pn	12 47 26.7	+1.0
	1.1nm3µm313nm,0.7s						
GTOI	Gorontalo	5.62	208	P	Pn	12 47 30.3	+0.3
	0.5nm1µm151nm,1.2s						
MRSI	Marisa	6.33	216	P	Pn	12 47 40.6	+1.4
	0.6nm2µm170nm,0.9s						
LBMI	Labuha	6.47	164	P	Pn	12 47 50.7	+10
RCP	Roxas	6.58	334	⇑*e*P	Pn	12 47 44.2	+1.7
TOLI2	Tolitoli	6.63	228	Pn	Pn	12 47 42.6	-0.6
LUWI	Luwuk	7.23	204	P	Pn	12 47 54.0	+3.2
	0.9nm2µm189nm,0.8s						
LUWI	Luwuk	7.23	204	Pn	Pn	12 47 52.5	+1.7
LUWI	Luwuk	7.23	204	P	Pn	12 47 53.7	+2.9
SANI	Sanana	7.62	178	P	Pn	12 47 53.4	-2.6
	2.7nm7µm293nm,1.0s						
APSI	Ampana	7.63	212	P	Pn	12 47 58.8	+2.6
	0.6nm2µm212nm,1.0s						
MPSI	Mapaga	7.80	228	P	Pn	12 48 01.1	+2.7
	0.1nm33nm,0.8s						
SIJI	Sorong	8.52	139	P	Pn	12 48 08.4	+0.8
	2.2nm,0.3s,baz=340,slow=12,SNR=9.9						
SIJI				S	Sn	12 49 40.9	-2.5
	1.4nm,0.3s,baz=176,slow=23,SNR=1.6						
SPMM	Sapulut	9.23	265	P	Pn	12 48 19.0	+2.0
LQP	Lukban	9.38	334	⇓*e*P	Pn	12 48 20.9	+1.8
SMKI	Samarinda	10.39	235	P	P	12 48 36.4	-3.1
	10µm401nm,0.8s						
TTSI	Tana Toraja	10.41	214	P	Pn	12 48 34.7	+2.5
	2µm160nm,1.0s						
FAKI	Fak Fak	10.71	142	P	Pn	12 48 38.2	+2.0
	691nm88nm,0.9s						
FAKI	Fak Fak	10.71	142	Pn	Pn	12 48 37.4	+1.2
SPSI	Sidrap Palu	11.20	212	P	Pn	12 48 44.7	+2.3
	2µm45nm,1.0s						
KAPI	Kappang	12.11	209	P	Pn	12 48 55.0	+1.0
	2.9nm,0.3s,baz=74,slow=7.5,SNR=20						
KAPI	Kappang	12.11	209	Pn	Pn	12 48 54.0	-0.1
BKSI	Bulukumba	12.20	207	P	Pn	12 48 56.0	+0.8
	29nm,1.0s						
MTKI	Muara Teweh, K	12.59	239	P	Pn	12 49 01.7	+1.6
	25nm,0.4s						
BSSI	Bau Bau, Buton	12.78	204	P	Pn	12 49 02.1	-0.4
	458nm17nm,1.0s						
KBKI	Kotabaru	12.99	227	P	P	12 49 08.6	+0.2
	60nm,0.6s						
SBUM	Sibu	13.80	257	P	P	12 49 18.0	+0.6
BBKI	Banjar Baru	14.10	230	P	P	12 49 21.0	+0.3
	3µm52nm,1.4s						
MMRI	Maumere	14.57	194	P	Pn	12 49 25.3	+0.6
	11µm99nm,0.7s						
EDFI	Ende, Flores	14.82	196	P	Pn	12 49 28.2	+0.3
	20nm,0.9s						
SMPI	Sarmi	15.04	120	P	Pn	12 49 30.4	-0.1
	4µm53nm,0.8s						
STKI	Sintang	15.22	249	P	P	12 49 34.7	+1.5
	7µm24nm,0.4s						
SOEI	Soe	15.33	185		Pn	12 49 33.4	-0.8
BATI	Baumata	15.85	187	P	Pn	12 49 41.7	+1.4
	20nm,0.3s,baz=289,slow=1.6,SNR=17						
BATI				S	Sn	12 52 37.7	-0.6
	2.8nm,0.3s,baz=113,slow=22,SNR=7.3						
BATI	Baumata	15.85	187	P	P	12 49 40.2	+0.1
	665nm86nm,0.7s						
KSM	Kuching	15.89	256	P	Pn	12 49 42.0	+1.2
PBKI	Pangkalan Bun	16.26	240	P	Pn	12 49 45.1	-0.2
	104nm,0.9s						
PLAI	Plampang	16.37	209	P	Pn	12 49 47.3	+0.7
	65nm,0.9s						
WBSI	Waikabubak, Su	16.40	203	P	P	12 49 46.5	+0.3
	44nm,0.7s						
TWSI	Taliwang, Sumb	16.75	212	P	P	12 49 50.2	+0.3
	38nm,0.7s						
JAY	Jayapura	17.03	118	P	Pn	12 49 55.0	+0.4
	7.4nm,0.3s,baz=269,slow=4.4,SNR=44						
KMMI	Kalianget	17.18	223	P	Pn	12 49 55.5	-0.7
	123nm,0.9s						
JAGI	Jajag, Banyuwa	18.11	220		P	12 50 04.5	-0.4
GMJI	Gumukmas	18.42	222	P	Pn	12 50 11.4	+0.6
	27nm,1.3s						
MTN	Manton Dam	19.12	164		P	12 50 16.2	+0.5
NGJI	Ngawi	19.18	228	P	Pn	12 50 19.7	0.0
	33nm,0.7s						
PPBI	Pangkal Pinang	21.00	249	P	P	12 50 35.5	-0.4
KPJI	Karang Pucung	21.09	233	P	P	12 50 38.4	+1.5
	21nm,0.8s						
KNRA	Kununurra	21.37	172	P	P	12 50 40.0	+0.3
LEM	Lembang	21.86	236	P	P	12 50 45.9	+0.9
	45nm,0.9s,baz=320,slow=12,SNR=9.0						
MYKOM	Kota Tinggi	22.12	261	P	P	12 50 48.0	+0.8
JRMM	Jerantut	23.19	267	P	P	12 50 58.0	+1.0
FITZ	Fitzroy Crossi	23.56	180	P	P	12 51 00.7	+0.4
	10nm,0.4s,baz=3.5,slow=8.1,SNR=110						
FITZ				S	S	12 54 59.8	+0.2
	4.1nm,0.9s,baz=62,slow=18,SNR=3.5						
FITZ	Fitzroy Crossi	23.56	180	P	P	12 51 01.0	+0.7
FITZ				IAmb	IAmb	12 51 01.5	
	comp=Z,20nm,1.1s						
MDSI	Maura Dua	23.71	245	P	P	12 51 05.5	+3.8
	comp=Z,11nm,1.1s						
IPM	Ipoh	24.59	269	P	P	12 51 10.0	+0.2
PDSI	Padang	26.01	256	P	P	12 51 23.2	+0.6
	comp=Z,1µmcomp=Z,10nm,1.0s						
COEN	Coen	26.06	138	P	P	12 51 23.4	+0.4
COEN				IAmb	IAmb	12 51 23.6	
	comp=Z,6.6nm,0.6s						
PMG	Port Moresby	26.09	125	P	P	12 51 23.6	+0.4
	comp=Z,12nm,0.8s,baz=293,slow=11,SNR=5.3						
WB0	Warramunga Arr	26.64	161	P	P	12 51 27.6	-0.5
WB0				IAmb	IAmb	12 51 28.5	
	comp=Z,18nm,1.1s						
WRAB	Tennant Creek	26.78	162	P	P	12 51 29.0	-0.3
WRAB				IAmb	IAmb	12 51 29.9	
	comp=Z,11nm,0.7s						
WRA	Warramunga Arr	26.79	162	P	P	12 51 29.2	-0.2
	comp=Z,8.3nm,0.6s,baz=329,slow=11,SNR=101						
WRA				S	S	12 55 50.7	0.0
	comp=Z,0.6nm,0.8s,baz=355,slow=18,SNR=2.1						
WRA	Warramunga Arr	26.79	162	P	P	12 51 28.0	-1.4
WB2	Warramunga Arr	26.79	162	P	P	12 51 29.1	-0.3
WR0	Warramunga Arr	26.86	161	P	P	12 51 29.7	-0.4
WR0				IAmb	IAmb	12 51 30.6	
	comp=Z,19nm,1.2s						
NJ2	Nanjing	27.07	347	*e*P	P	12 51 34.6	+2.9
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PSA00	Pilbara Seismi	27.62	192	P	P	12 51 37.6	+0.9
PSA00				IAmb	IAmb	12 52 03.0	
	comp=Z,13nm,1.1s						
PSA00	Pilbara Seismi	27.62	192	P	P	12 51 38.5	+1.7
PSA00				IAmb	IAmb	12 51 39.8	
	comp=Z,8.1nm,1.1s						
RABL	Rabaul	28.18	110	P	P	12 51 42.4	+0.5
CMAR	Chiang Mai Arr	29.05	298	P	P	12 51 49.8	+0.2
	comp=Z,0.8nm,0.9s,baz=116,slow=7.3,SNR=4.5						
CMAR				ScP	ScP	12 58 14.8	-0.8
	comp=Z,2.2nm,1.0s,baz=137,slow=1.8,SNR=16						
AS31	Alice Springs	30.19	165	P	P	12 51 59.7	+0.2
ASAR	Alice Springs	30.19	165	P	P	12 51 59.6	+0.1
	comp=Z,8.0nm,0.5s,baz=344,slow=7.3,SNR=229						
ASAR				S	S	12 56 43.0	-1.1
	comp=Z,0.5nm,0.5s,baz=351,slow=17,SNR=4.4						
ASAR				ScP	ScP	12 58 18.7	-0.5
	comp=Z,1.3nm,0.7s,baz=356,slow=2.6,SNR=7.6						
XAN	Xi'an	32.28	333	P	P	12 52 18.6	+0.9
XAN				pP	pP	12 52 56.3	-2.4
CTAO	Charters Tower	32.58	142	P	P	12 52 21.9	+1.5
CTAO				IAmb	IAmb	12 52 22.3	
	comp=Z,8.7nm,0.8s						
MORW	Morawa	35.71	195	P	P	12 52 47.3	0.0
MORW				IAmb	IAmb	12 52 47.9	
	comp=Z,16nm,1.2s						
FORT	Forrest	36.26	177	P	P	12 52 51.2	-0.7
LZH	Lanzhou	36.36	329	*e*P	P	12 52 55.8	+2.8
LZH				pP	pP	12 53 39.8	+5.3
LZH				pmax	pmax		
	comp=Z,23nm,1.2s						
LZH				LR	LR		
	comp=N,210nm,14.6s						
LZH				LR	LR		
	comp=E,200nm,14.6s						
LZH				LR	LR		
	comp=Z,120nm,17.9s						
HHC	Hu-ho-hao-te	37.30	342	*e*P	P	12 53 00.3	-0.4
HHC				pmax	pmax		
	comp=Z,14nm,0.8s						
HHC				pmax	pmax		
	comp=Z,54nm,4.3s						
BBOO	Buckleboo	39.46	166	P	P	12 53 19.6	+0.9
EIDS	Eidsvold	39.47	142	P	P	12 53 18.9	0.0
EIDS				IAmb	IAmb	12 53 44.5	
	comp=Z,15nm,1.2s						
STKA	Stephens Creek	40.25	159	P	P	12 53 26.1	+0.9
	comp=Z,23nm,0.7s,baz=332,slow=8.6,SNR=46						
STKA	Stephens Creek	40.25	159	P	P	12 53 25.6	+0.4
ASAJ	Asahikawa	41.12	19	P	P	12 53 33.0	+0.8
	comp=Z,5.1nm,0.7s,baz=238,slow=12,SNR=6.3						
ARMA	Armidale	43.60	147	P	P	12 53 53.0	+0.5
ARMA				IAmb	IAmb	12 53 54.6	
	comp=Z,17nm,0.9s						
SONM	Songino Array	45.19	342	pP	pP	12 54 49.1	+1.1
	comp=Z,0.8nm,0.6s,baz=170,slow=9.0,SNR=4.7						
CAN	Canberra	46.25	153	P	P	12 54 14.6	+1.4
CAN				IAmb	IAmb	12 54 15.7	
	comp=Z,12nm,0.7s						
TOO	Toolangi	46.76	158	P	P	12 54 18.2	+1.1
TOO				IAmb	IAmb	12 54 19.7	
	comp=Z,9.4nm,0.7s						
WMQ	Urumqi	50.59	325	*e*P	P	12 54 48.4	+2.1
PETK	Petropavlovsk-	54.10	23	P	P	12 55 11.7	-0.1
	comp=Z,3.1nm,0.7s,baz=131,slow=1.7,SNR=9.1						
PETK	Petropavlovsk-	54.10	23	P	P	12 55 12.1	+0.3
MK31	Makanchi Array	55.42	325	P	P	12 55 21.0	-0.4
MKAR	Makanchi Array	55.42	325	P	P	12 55 20.9	-0.5
	comp=Z,1.0nm,0.4s,baz=124,slow=6.2,SNR=14						
MKAR				pP	pP	12 56 06.9	+0.4
	comp=Z,2.7nm,0.8s,baz=128,slow=7.5,SNR=7.7						
MKAR	Makanchi Array	55.42	325	P	P	12 55 20.8	-0.7
MAKZ	Makanchi	55.61	325	P	P	12 55 23.7	+0.9
ZALV	Zalesovo Beam	58.45	333	pP	pP	12 56 28.2	+0.2
	comp=Z,0.7nm,0.5s,baz=142,slow=7.4,SNR=4.5						
KURK	Kurchatov	59.60	327	P	P	12 55 49.5	-1.0
TIXI	Tiksi	65.99	1	P	P	12 56 31.5	-0.7
	comp=Z,1.6nm,0.3s,baz=199,slow=4.0,SNR=5.6						
TIXI	Tiksi	65.99	1	P	P	12 56 31.9	-0.2
CASY	Casey	72.56	186	P	P	12 57 12.3	-0.3
CASY				IAmb	IAmb	12 57 19.4	
	comp=Z,7.5nm,0.9s						
IMAR	Indian Mountai	81.06	24	P	P	12 58 00.5	+0.3
I23K	Minto, Yukon-K	82.81	25	P	P	12 58 09.6	+0.3
I23K				IAmb	IAmb	12 58 11.3	
	comp=Z,7.4nm,0.9s						
KLMR	Klimovskoe	83.26	331	P	P	12 58 08.0	-3.7
KLMR				AMP		12 58 25.1	
	comp=Z,13nm,1.5s						
KLMR				*e*PP	PP	13 01 19.1	-6.8
H24K	Noodor Dome	83.45	24	P	P	12 58 13.9	+1.3
H24K				IAmb	IAmb	12 58 15.7	
	comp=Z,9.3nm,1.2s						
ILAR	Eielson Array	83.86	26	P	P	12 58 13.7	-1.0
	comp=Z,1.5nm,0.9s,baz=248,slow=5.3,SNR=20						
ILAR	Eielson Array	83.86	26	P	P	12 58 13.3	-1.4
BMAR	Burnt Mountain	84.75	23	P	P	12 58 20.3	+1.1
VNDA	Vanda	85.42	173	P	P	12 58 22.1	0.0
	comp=Z,0.8nm,0.8s,baz=323,slow=8.8,SNR=5.4						
VNDA	Vanda	85.42	173	P	P	12 58 21.6	-0.5
ARCES	ARCESS Array B	88.33	340	P	P	12 58 34.9	-1.5
	comp=Z,5.0nm,1.0s,baz=210,slow=4.2,SNR=11						
TORD	Torodi Ar. Bea	121.34	289	PKP	PKPdf	13 04 37.3	-0.8
	comp=Z,1.0nm,0.7s,baz=88,slow=1.0,SNR=6.1						
TORD	Torodi Ar. Bea	121.34	289		PKPdf	13 04 36.9	-1.3

IDC **14** *12:58:14.1±0.8, 30°.80S×71°.40W, h0^{km}, mb4.1/9, mb1 4.1/13, mb1mx4.0/30, mbtmp4.0/13, ML3.7/4, MS3.0/1, Ms1 3.0/1, ms1mx2.7/20, Error ellipse: s-maj=28.7km s-min=17.7km az=99.0*

GUC **14** *12:58:19.4±0.7, 30°.74S×71°.41W, h44^{km}±3^{km}, ML4.3*

NEIC **14** *12:58:20.3±2.5, 30°.75S±0°.05×71°.4W±0°.2, h47^{km}±7^{km}, Error ellipse: s-maj=21.5km s-min=7.6km az=88.0*

ISC 14 12:58:19.9±0.7**, 30°.75S**±0°.04×**71°.47W**±0°.07**, h47**^{km}±7^{km}**, n63,** σ**1ˢ38**/67**, mb4.2**/12**, 2C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.16	298	⇑*e*P	Pn	12 58 27.7	-0.1
CO06				*e*S	Sn	12 58 33.0	-0.2
CO06				IAML		12 58 34.8	
	comp=E,39µm,0.3s						
CO06	Fray Jorge	0.16	298	Pn	Pn	12 58 28.3	+0.5
GO04	Tololo Observa	0.82	45	*e*P	Pn	12 58 35.3	0.0
GO04				*e*S	Sn	12 58 46.5	-0.1
GO04				IAML		12 58 50.2	
	comp=E,30µm,0.5s						
GO04	Tololo Observa	0.82	45	Pn	Pn	12 58 36.0	+0.7
CO05	La Serena	0.85	14	*e*P	Pn	12 58 35.1	-0.5
CO05				*e*S	Sn	12 58 47.2	+0.2
VA06	Catapilco	1.81	175	*e*P	Pn	12 58 48.8	+0.1
VA06				*e*S	Sn	12 59 11.2	+0.8
VA06				IAML		12 59 17.9	
	comp=E,4µm,0.5s						
LCO	Las Campanas	1.86	21	*e*P	Pn	12 58 50.0	+0.4
LCO				*e*S	Sn	12 59 14.3	+2.3
VA03	San Esteban	2.16	159	⇑*e*P	Pn	12 58 54.0	+0.5
VA03				*e*S	Sn	12 59 20.4	+1.4
VA03				IAML		12 59 28.6	
	comp=E,3µm,0.2s						
VA03	San Esteban	2.16	159		Pn	12 58 54.7	+1.2
ROCH	El Roble	2.25	170	*e*P	Pn	12 58 55.3	+0.5
ROCH				*e*S	Sn	12 59 23.9	+2.3
ROCH				IAML		12 59 39.8	
	comp=N,2µm,0.4s						
VA01	Torpederas	2.27	184	*e*P	Pn	12 58 55.1	+0.2
VA01				⇓*e*S	Sn	12 59 23.1	+1.3
PEL	Peldehue	2.48	165	*e*P	Pn	12 58 58.2	+0.3
PEL				*e*S	Sn	12 59 27.9	+1.0
PEL				IAML		12 59 37.4	
	comp=N,1µm,0.5s						
PEL	Peldehue	2.48	165	Pn	Pn	12 58 58.8	+1.0
MT02	Curacav	2.52	174	*i* P	Pn	12 58 58.5	+0.1
MT02				*e*S	Sn	12 59 28.9	+1.1
MT02	Curacav	2.52	174		Pn	12 58 59.2	+0.9
AC04	Llanos de Chal	2.56	8	Pn	Pn	12 59 00.7	+1.8
VA05	Santo Domingo	2.90	182	*e*P	Pn	12 59 03.6	0.0
VA05				*e*S	Sn	12 59 38.6	+1.4
VA05				IAML		12 59 57.0	
	comp=N,1µm,0.4s						
MT01	Popeta	3.11	177	*e*P	Pn	12 59 06.7	+0.2
MT01				*e*S	Sn	12 59 43.3	+0.9
MT01				IAML		12 59 56.6	
	comp=E,501nm,0.2s						
BO01	Tunca	3.65	175	Pn	Pn	12 59 15.4	+1.6
ML02	Panimavida	5.00	180	Pn	Pn	12 59 32.9	+0.5
PB14	IPOC Station P	6.17	9	Pn	Pn	12 59 48.6	-0.2
H03N1	Juan Fernandez	6.86	245	T	T	13 06 56.0	
	baz=73,slow=72,SNR=2188						
H03N3	Juan Fernandez	6.88	245	T	T	13 06 50.1	
	baz=73,slow=72,SNR=2791						
H03N2	Juan Fernandez	6.88	245	T	T	13 06 48.8	
	baz=73,slow=72,SNR=2663						
LC01	Cunco	8.14	182	Pn	Pn	13 00 14.6	-0.8
LVC	Limon Verde	8.42	16	Pn	Pn	13 00 19.4	-0.3
	comp=E,0.5nm,0.3s,baz=243,slow=9.0,SNR=2.3						
LVC				Sn	Sn	13 01 57.3	+3.7
	comp=E,1.1nm,0.3s,baz=192,slow=17,SNR=1.4						
LVC	Limon Verde	8.42	16		Pn	13 00 18.1	-1.7
PLCA	Paso Flores	9.99	176	Pn	Pn	13 00 39.9	-0.9
	comp=E,0.1nm,0.3s,baz=332,slow=14,SNR=1.8						
PLCA	Paso Flores	9.99	176	Pn	Pn	13 00 39.1	-1.8
LL04	Puerto Octay	10.17	184	Pn	Pn	13 00 43.7	+0.6
ITQB	Itaqui	12.89	89	Pn	Pn	13 01 19.2	-1.2
CPUP	Villa Florida	13.19	74	Pn	Pn	13 01 23.3	-1.2
	comp=E,0.2nm,0.3s,baz=255,slow=15,SNR=1.7						
CPUP				LR	LR	13 06 28.8	
	comp=E,74nm,20.5s,baz=222,slow=38						
CPUP	Villa Florida	13.19	74	Pn	Pn	13 01 26.7	+2.2
PLTB	Pedras Altas	15.32	98	Pn	Pn	13 01 47.6	-5.4
SIV	San Ignacio	17.50	35	P	P	13 02 21.3	0.0
	comp=E,0.5nm,0.3s,baz=218,slow=10,SNR=8.8						
USHA	Ushuaia	24.17	176	P	P	13 03 31.9	+0.5
	comp=E,13nm,1.0s,baz=353,slow=11,SNR=2.4						
BDFB	Brasilia	26.21	60	P	P	13 03 50.5	0.0
	comp=E,3.3nm,0.6s,baz=307,slow=5.0,SNR=4.4						
OTAV	Otavalo	31.52	347	P	P	13 04 34.7	-3.4
BOAV	Boa Vista	34.57	20	P	P	13 05 01.3	-2.9
BOAV				IAmb	IAmb	13 05 07.6	
	comp=Z,5.1nm,1.2s						
CRPR	Cabo Rojo, PR	48.66	6	P	P	13 06 59.1	-0.1
SNAA	Sanae	54.42	159	P	P	13 07 42.0	+0.2
SNAA	Sanae	54.42	159	P	P	13 07 41.8	-0.1
SNAA				IAmb	IAmb	13 07 42.8	

	comp=Z,2.7nm,0.8s						
QSPA	South Pole Qui	59.48	180	P	P	13 08 18.7	+0.8
	comp=Z,1.5nm,0.8s,baz=188,slow=0.9,SNR=3.4						
QSPA	South Pole Qui	59.48	180	P	P	13 08 18.3	+0.5
QSPA				IAmb	IAmb	13 08 20.7	
	comp=Z,3.7nm,1.1s						
TKL	Tuckaleechee C	67.06	349	P	P	13 09 08.3	+0.2
TXAR	Lajitas Array	67.16	330	P	P	13 09 10.9	+1.9
	comp=Z,0.2nm,0.6s,baz=152,slow=7.7,SNR=4.2						
TXAR	Lajitas Array	67.16	330	P	P	13 09 08.6	-0.4
LCAR	Lake Charles	68.99	343	P	P	13 09 20.9	+0.7
LCAR				IAmb	IAmb	13 09 22.0	
	comp=Z,4.5nm,0.9s						
DBIC	Dimbokro	73.70	72	P	P	13 09 49.7	+0.6
	comp=Z,4.8nm,0.6s,baz=249,slow=3.9,SNR=10.0						
MAW	Mawson	76.15	164	P	P	13 10 03.0	+0.6
	comp=Z,1.2nm,0.5s,baz=192,slow=6.5,SNR=7.0						
BOSA	Boshof	81.16	118	P	P	13 10 31.4	+0.5
	comp=Z,2.3nm,1.0s,baz=276,slow=10,SNR=1.4						
NVAR	Mina Array Bea	81.51	325	P	P	13 10 34.0	+1.6
	comp=Z,0.3nm,0.7s,baz=161,slow=6.2,SNR=3.4						
TORD	Torodi Ar. Bea	82.65	70	P	P	13 10 39.5	+0.9
	comp=Z,0.8nm,0.5s,baz=281,slow=6.1,SNR=11						
TORD	Torodi Ar. Bea	82.65	70	P	P	13 10 39.1	+0.4
TORD				IAmb	IAmb	13 10 57.9	
	comp=Z,4.8nm,1.5s						
H11S2	WAKE ISLAND Hy	126.24	271	T	T	15 36 05.8	
	baz=116,slow=75,SNR=101						
H11S1	WAKE ISLAND Hy	126.25	271	T	T	15 36 07.2	
	baz=116,slow=75,SNR=137						
H11S3	WAKE ISLAND Hy	126.26	271	T	T	15 36 07.1	
	baz=116,slow=75,SNR=109						
H11N3	WAKE ISLAND Hy	126.57	273	T	T	15 36 31.2	
	baz=116,slow=75,SNR=22						
H11N1	WAKE ISLAND Hy	126.59	273	T	T	15 36 32.3	
	baz=116,slow=75,SNR=8.9						
H11N2	WAKE ISLAND Hy	126.59	273	T	T	15 36 33.1	
	baz=116,slow=75,SNR=25						
BVAR	Borovoye Array	144.53	40	PKP	PKPdf	13 17 50.6	0.0
	comp=Z,1.0nm,0.6s,baz=260,slow=8.2,SNR=6.5						
KURBB	Kurchatov Arra	150.12	40	PKPbc	PKPbc	13 18 05.5	+0.5
	comp=Z,0.5nm,0.6s,baz=292,slow=3.1,SNR=7.1						
ZALV	Zalesovo Beam	151.20	30	PKPbc	PKPbc	13 18 07.9	+0.4
	comp=Z,2.9nm,0.6s,baz=293,slow=2.9,SNR=15						

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*WEL **14** 13:05:00, 46°.12S×166°.15E, h16^{km}, ML4.6, Mw4.4, Moment Tensor Solution. s6 Moment tensor: Scale 10^{15} Nm; M_{rr}-1.55; $M_{\theta\theta}$1.53; $M_{\phi\phi}$0.03; $M_{r\theta}$-0.52; $M_{\theta\phi}$-2.83; $M_{\phi r}$-2.30; Fault plane solution: $M_0$3.99000×10^{15} NP1: ϕ_s91.00000°, δ52.00000°, λ-156.00000°. NP2: ϕ_s345.00000°, δ71.00000°, λ-41.00000°. Principal axes: T -407.3800, Plg12.0000°, Azm42.0000°; N 391.2100, Plg46.0000°, Azm144.0000°; P 16.1600, Plg42.0000°, Azm302.0000°;*

*IDC **14** 13:05:30.6±1.1, 46°.02S×166°.01E, h0^{km}, mb4.0/4, mb1 4.2/5, mb1mx3.6/31, mbtmp4.0/5, ML3.6/1, MS3.6/3, Ms1 3.5/3, ms1mx3.2/19 Error ellipse: s-maj=39.9km s-min=26.7km az=58.0*

*NEIC **14** 13:05:31.9±1.1, 46°.07S±0°.09×165°.98E±0°.07, h10^{km}±1^{km}, mb4.4/11, Error ellipse: s-maj=16.0km s-min=7.2km az=193.0*

*WEL **14** 13:05:33.0±1.1, 46°S±6°×16°6E±°, h12^{km}±4^{km}, M4.6/12, ML4.8/12, MLv4.6/12, Error ellipse: s-maj=0.0km s-min=0.0km az=49.7*

ISC 14 13:05:32.3±1.5, **46°.08S**±0°.06×**166°.09E**±0°.05, **h15**^{km}±9^{km}, **n87**, σ**1^{s}28**/86, **mb4.3**/9, **MS3.6**/3, **Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PYZ	Puysegur Point	0.42	103	P	Pb	13 05 41.9	+0.4
PYZ				S	Sg	13 05 48.3	+1.7
PYZ	Puysegur Point	0.42	103		Pb	13 05 41.9	+0.4
DCZ	Deep Cove	0.96	51	P	Pg	13 05 49.5	-1.4
DCZ	Deep Cove	0.96	51	Pn	Pg	13 05 49.4	-1.6
WHZ	Wether Hill Ro	1.31	83	P	Pn	13 05 55.7	-0.3
WHZ				S	Sb	13 06 12.6	-0.5
WHZ	Wether Hill Ro	1.31	83		Pn	13 05 55.6	-0.4
APZ	The Paps	1.52	121	P	Pn	13 05 58.4	-0.5
APZ				S	Sn	13 06 17.9	-0.5
MLZ	Mavora Lakes	1.59	64	P	Pn	13 06 00.9	+1.0
MLZ				S	Sn	13 06 21.2	+1.0
MLZ	Mavora Lakes	1.59	64	Pn	Pn	13 06 01.0	+1.1
MSZ	Milford Sound	1.91	43	P	Pn	13 06 04.6	+0.4
SYZ	Scrubby Hill	2.16	103	P	Pn	13 06 08.4	+0.7
SYZ				S	Sn	13 06 35.0	+0.7
EAZ	Earnscleugh	2.41	71	P	Pn	13 06 12.9	+1.7
EAZ				S	Sn	13 06 42.4	+2.0
WKZ	Wanaka	2.41	60	P	Pn	13 06 13.3	+2.1
WKZ				S	Sn	13 06 43.4	+2.9
WKZ	Wanaka	2.41	60		Pn	13 06 13.7	+2.5
TUZ	Tuapeka	2.47	88	P	Pn	13 06 13.3	+1.3
TUZ				S	Sn	13 06 42.7	+0.8
JCZ	Jackson Bay	2.77	45	P	Pn	13 06 18.7	+2.5
HHSZ	Highcliff Hill	3.15	88	P	Pn	13 06 22.6	+1.3
HHSZ				S	Sn	13 06 59.3	+0.7
LBZ	Lake Benmore	3.35	61	P	Pn	13 06 24.4	+0.3
LBZ	Lake Benmore	3.35	61	Pn	Pn	13 06 24.9	+0.8
ODZ	Otahua Downs	3.36	74	P	Pn	13 06 23.8	-0.4
ODZ	Otahua Downs	3.36	74		Pn	13 06 23.9	-0.4
FOZ	Fox Glacier	3.67	48	P	Pn	13 06 29.2	+0.7
FOZ	Fox Glacier	3.67	48	Pn	Pn	13 06 28.6	+0.1
TMZ	Timaru	3.87	66	P	Pn	13 06 31.3	+0.1
GCSZ	Gaunt Creek Bo	4.09	49	P	Pn	13 06 35.8	+1.6
ARCZ	Arundel	4.19	61	P	Pn	13 06 35.2	-0.4
RPZ	Rata Peaks	4.25	58	P	Pn	13 06 36.1	-0.2
RPZ	Rata Peaks	4.25	58	Pn	Pn	13 06 36.2	-0.2
WVZ	Waitaha Valley	4.48	50	P	Pn	13 06 40.1	+0.6
WACZ	Wakanui South	4.60	64	P	Pn	13 06 41.3	+0.1
MHCZ	Mount Hutt	4.66	59	P	Pn	13 06 41.7	-0.3
RACZ	Rakaia	4.90	64	P	Pn	13 06 47.0	+1.7
OXZ	Oxford	5.05	59	P	Pn	13 06 46.4	-1.1
OXZ	Oxford	5.05	59		Pn	13 06 45.9	-1.6
INZ	Inchbonnie	5.09	51	P	Pn	13 06 48.2	+0.2
MQZ	McQueen's Vall	5.23	65	P	Pn	13 06 49.5	-0.4
AKCZ	Akaroa Harbour	5.32	68	P	Pn	13 06 51.9	+0.8
OKCZ	Okains Bay	5.48	67	P	Pn	13 06 54.5	+1.1
LTZ	Lake Taylor	5.52	56	P	Pn	13 06 53.0	-0.9
LTZ	Lake Taylor	5.52	56	Pn	Pn	13 06 53.2	-0.7
GVZ	Greta Valley S	5.86	60	P	Pn	13 06 57.9	-0.6
DSZ	Denniston Nort	5.98	46	P	Pn	13 07 00.1	-0.1
KHZ	Kahutara	6.48	58	P	Pn	13 07 06.3	-0.8
THZ	Tophouse	6.54	51	P	Pn	13 07 07.6	-0.4
THZ	Tophouse	6.54	51	Pn	Pn	13 07 08.7	+0.7
QRZ	Quartz Range	7.04	44	P	Pn	13 07 14.5	-0.2
QRZ	Quartz Range	7.04	44		Pn	13 07 15.5	+0.8
NNZ	Nelson	7.18	50	P	Pn	13 07 17.8	+1.2
TUWZ	Tuamarina	7.34	54	P	Pn	13 07 21.8	+2.9
TCW	Tory Channel	7.67	54	P	Pn	13 07 27.3	+3.8
DUWZ	D'Urville Isla	7.76	50	P	Pn	13 07 27.8	+3.1
MSWZ	Moikau Station	8.10	58	P	Pn	13 07 31.7	+2.3
MSWZ	Moikau Station	8.10	58	Pn	Pn	13 07 29.1	-0.2
MRZ	Mangatainoka R	8.78	55	P	Pn	13 07 38.6	+0.1
LREZ	Lake Rotokare	9.00	46	P	Pn	13 07 48.1	+6.5
WAZ	Wanganui	9.08	49	P	Pn	13 07 49.0	+6.2
VRZ	Vera Road	9.44	46	P	Pn	13 07 49.5	+1.9
TMVZ	Te Maari	9.93	49	P	Pn	13 08 00.4	+5.9
HIZ	Hauiti	9.96	44	P	Pn	13 07 55.5	+0.8
HIZ	Hauiti	9.96	44	Pn	Pn	13 07 55.1	+0.3
URZ	Urewera	11.30	50	Pn	Pn	13 08 13.8	+0.7
	0.4nm,0.3s,baz=308,slow=20,SNR=1.8						
URZ				Sn	Sn	13 10 15.0	-4.1
	0.5nm,0.3s,baz=121,slow=20,SNR=1.8						
TOO	Toolangi	17.51	292		P	13 09 36.4	-0.5
TOO				IAmb	IAmb	13 09 45.1	
	comp=Z,11nm,1.1s						
STKA	Stephens Creek	23.62	298	LR	LR	13 18 58.6	
	comp=Z,98nm,19.8s,baz=189,slow=34						
EIDS	Eidsvold	23.91	325	P	P	13 10 45.0	-0.4
EIDS				IAmb	IAmb	13 10 56.0	
	comp=Z,25nm,1.5s						
ASAR	Alice Springs	34.23	300	P	P	13 12 17.5	0.0
	comp=Z,1.0nm,0.9s,baz=150,slow=8.5,SNR=8.3						
ASAR				LR	LR	13 26 11.5	
	comp=Z,97nm,18.1s,baz=106,slow=36						
WR0	Warramunga Arr	36.71	305	P	P	13 12 38.2	-0.6
WR0				IAmb	IAmb	13 12 52.2	
	comp=Z,11nm,1.5s						
WB2	Warramunga Arr	36.83	304	P	P	13 12 39.2	-0.6
WB2				IAmb	IAmb	13 12 40.5	
	comp=Z,6.7nm,1.2s						
WRA	Warramunga Arr	36.84	304	P	P	13 12 39.7	-0.2
	comp=Z,1.9nm,0.9s,baz=150,slow=10.0,SNR=20						
WRA				LR	LR	13 27 00.8	
	comp=Z,85nm,18.1s,baz=100,slow=35						
WRA	Warramunga Arr	36.84	304	P	P	13 12 39.0	-0.9
WB0	Warramunga Arr	36.95	305	P	P	13 12 39.9	-0.9
WB0				IAmb	IAmb	13 12 45.3	
	comp=Z,4.3nm,1.1s						
H01W1	Cape Leeuwin H	40.39	267	T	T	13 55 52.6	
	baz=122,slow=75,SNR=580						
H01W2	Cape Leeuwin H	40.40	267	T	T	13 55 54.6	
	baz=122,slow=75,SNR=803						
H01W3	Cape Leeuwin H	40.41	267	T	T	13 55 58.4	
	baz=122,slow=75,SNR=514						
KNRA	Kununurra	43.45	302	P	P	13 13 34.9	+0.3
QSPA	South Pole Qui	44.05	180	P	P	13 13 40.6	+1.5
	comp=Z,3.7nm,1.0s,baz=29,slow=2.0,SNR=10						
QSPA	South Pole Qui	44.05	180	P	P	13 13 39.0	-0.2
QSPA				IAmb	IAmb	13 13 41.4	
	comp=Z,6.4nm,1.1s						
MTN	Manton Dam	44.35	307	P	P	13 13 41.3	-0.6
MAW	Mawson	52.98	208	P	P	13 14 47.6	0.0
SNAA	Sanae	62.30	184	P	P	13 15 52.6	-0.6
SNAA				IAmb	IAmb	13 15 56.6	
	comp=Z,7.8nm,1.5s						
H08S2	Diego Garcia H	87.04	262	T	T	14 54 02.8	
	baz=136,slow=76,SNR=59						
H08S1	Diego Carcia H	87.05	262	T	T	14 54 03.0	
	baz=136,slow=76,SNR=16						
H08S3	Diego Garcia H	87.06	262	T	T	14 54 04.2	
	baz=136,slow=76,SNR=119						
CMAR	Chiang Mai Arr	88.24	299	P	P	13 18 23.9	+0.9
	comp=Z,0.9nm,0.7s,baz=148,slow=3.6,SNR=7.3						
TORD	Torodi Ar. Bea	144.62	207	PKP	PKPab	13 25 07.1	+0.1
	comp=Z,0.8nm,0.4s,baz=159,slow=0.7,SNR=6.4						
BRTR	Keskin Array B	145.02	277	PKP	PKPbc	13 25 08.5	+0.5
	comp=Z,2.4nm,0.9s,baz=126,slow=2.5,SNR=10						
ARCES	ARCESS Array B	149.45	334	PKPbc	PKPbc	13 25 19.8	+0.4
	comp=Z,4.4nm,0.8s,baz=60,slow=2.9,SNR=8.8						
FINES	FINESS Array B	152.36	318	PKPbc	PKPbc	13 25 26.8	+0.4
	comp=Z,4.0nm,1.0s,baz=72,slow=6.2,SNR=3.7						

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*GUC **14** 13:42:03.2±0.8, 23°.45S×67°.52W, h214^{km}±8^{km}, ML4.0*

ISC 14 13:42:03.4±1.5, **23°.59S**±0°.06×**67°.4W**±0°.2, **h202**^{km}±17^{km}, **n21**, σ**0^{s}93**/31, **8C**, **Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	1.71	304	eP	Pn	13 42 39.5	-0.2
LVC				eS	Sn	13 43 07.5	-0.3
PB15	IPOC Station P	1.96	281	⇑iP	Pn	13 42 42.4	+0.5
PB15				eS	Sn	13 43 12.7	+0.9
PB06	IPOC Station P	2.20	293	⇑iP	Pn	13 42 45.0	+0.6
PB06				eS	Sn	13 43 16.4	+0.2
PB06				IAML		13 43 18.3	
	comp=N,661nm,0.1s						
PB09	IPOC Station P	2.48	316	⇑iP	Pn	13 42 48.2	+0.8
PB09				eS	Sn	13 43 21.5	-0.2
PB09				IAML		13 43 27.0	
	comp=E,239nm,0.4s						
PB03	IPOC Station P	2.67	305	⇑iP	Pn	13 42 50.0	+0.4
PB03				eS	Sn	13 43 25.3	-0.3
PB03				IAML		13 43 27.3	
	comp=N,390nm,0.1s						
PB05	IPOC Station P	2.70	285	i P	Pn	13 42 50.1	+0.3
PB05				eS	Sn	13 43 24.8	-1.1
PB05				IAML		13 43 29.9	
	comp=E,332nm,0.2s						
PB04	IPOC Station P	2.84	296	⇑iP	Pn	13 42 51.9	+0.4
PB04				eS	Sn	13 43 28.4	-0.7
PB04				IAML		13 43 32.2	
	comp=N,507nm,0.1s						
PB10	IPOC Station P	2.91	271	⇑iP	Pn	13 42 52.7	+0.5
PB10				IAML		13 43 31.7	
	comp=N,206nm,0.2s						
PB14	IPOC Station P	2.95	249	eP	Pn	13 42 52.6	-0.3
PB14				eS	Sn	13 43 30.4	-1.1
PB14				IAML		13 43 33.2	
	comp=N,121nm,0.3s						
PB07	IPOC Station P	2.97	308	⇑iP	Pn	13 42 53.2	+0.2
PB07				eS	Sn	13 43 30.9	-0.8
PB07				IAML		13 43 33.2	
	comp=E,380nm,0.3s						
PB01	IPOC Station P	3.20	322	⇑iP	Pn	13 42 55.6	-0.1
PB01				eS	Sn	13 43 35.5	-1.0
PB01				IAML		13 43 38.9	
	comp=E,169nm,0.4s						
PB02	IPOC Station P	3.24	314	eP	Pn	13 42 56.1	-0.1
AC02	Maricunga	3.60	206	eP	Pn	13 42 59.6	-1.2
PB08	IPOC Station P	3.81	334	i P	Pn	13 43 03.6	+0.2
TA01	Diego Aracena	3.98	319	eP	Pn	13 43 04.9	-0.1
HMBC	Humberstone	4.04	324	eP	Pn	13 43 04.6	-1.3
PB11	IPOC Station P	4.36	331	eP	Pn	13 43 08.7	-1.3
VNA3	Neumayer Olymp	57.65	161	P	P	13 51 32.1	-0.1
VNA1	Neumayer--Stat	57.85	160	P	P	13 51 36.8	+3.3
VNA2	Neumayer--Watz	58.22	160	P	P	13 51 36.0	0.0
	baz=288,slow=6.8						
SNAA	Sanae	59.85	161	P	P	13 51 47.1	-0.2

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*WEL **14** 13:52:00, 46°.03S×166°.26E, h17^{km}, ML3.9, Mw3.8, Moment Tensor Solution. s6 Moment tensor: Scale 10^{14} Nm; M_{rr}-2.05; $M_{\theta\theta}$2.64; $M_{\phi\phi}$-0.60; $M_{r\theta}$1.50; $M_{\theta\phi}$-5.38; $M_{\phi r}$-2.90; Fault plane solution: $M_0$6.47000×10^{14} NP1: ϕ_s82.00000°, δ57.00000°, λ-171.00000°. NP2: ϕ_s347.00000°, δ83.00000°, λ-33.00000°. Principal axes: T 75.5900, Plg17.0000°, Azm39.0000°; N -21.8000, Plg56.0000°, Azm156.0000°; P -53.7900, Plg28.0000°, Azm300.0000°;*

WEL 14 13:52:17.5±1.3, **46°S**±5°×**16°6E**±°, **h10**^{km}±4^{km}, **M3.9**/9, **ML4.1**/10, **MLv3.9**/9 **Error ellipse: s-maj=0.0km s-min=0.0km az=69.0**, **Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PYZ	Puysegur Point	0.33	115	P	Pb	13 52 24.9	-0.5
PYZ				S	Sb	13 52 30.9	+0.2
DCZ	Deep Cove	0.85	48	P	Pg	13 52 32.8	-1.0
WHZ	Wether Hill Ro	1.19	84	P	Pb	13 52 38.7	-1.4
WHZ				S	Sb	13 52 55.3	-0.3
APZ	The Paps	1.44	124	P	Pn	13 52 41.4	-2.3
APZ				S	Sn	13 53 01.5	-1.3
MLZ	Mavora Lakes	1.46	64	P	Pn	13 52 44.1	+0.1
MLZ				S	Sb	13 53 03.7	+0.1
MSZ	Milford Sound	1.80	42	P	Pn	13 52 47.7	-0.9
MSZ				S	Sn	13 53 10.7	-0.8
SYZ	Scrubby Hill	2.06	105	P	Pn	13 52 51.6	-0.6
SYZ				S	Sb	13 53 19.5	-1.3
EAZ	Earnscleugh	2.29	71	P	Pn	13 52 56.5	+1.2
EAZ				S	Sn	13 53 23.5	-0.1
WKZ	Wanaka	2.29	59	P	Pn	13 52 56.6	+1.2
TUZ	Tuapeka	2.35	89	P	Pn	13 52 56.5	+0.3
TUZ				S	Sn	13 53 27.0	+1.7
JCZ	Jackson Bay	2.65	43	P	Pn	13 53 01.8	+1.3
HHSZ	Highcliff Hill	3.03	89	P	Pn	13 53 06.8	+1.2
LBZ	Lake Benmore	3.23	61	P	Pn	13 53 07.9	-0.4
ODZ	Otahua Downs	3.24	74	P	Pn	13 53 07.1	-1.3
FOZ	Fox Glacier	3.56	47	P	Pn	13 53 12.9	+0.1
TMZ	Timaru	3.74	66	P	Pn	13 53 14.5	-0.8
GCSZ	Gaunt Creek Bo	3.97	48	P	Pn	13 53 19.5	+0.9
ARCZ	Arundel	4.07	61	P	Pn	13 53 18.5	-1.3
RPZ	Rata Peaks	4.12	58	P	Pn	13 53 19.2	-1.4
WVZ	Waitaha Valley	4.36	49	P	Pn	13 53 24.5	+0.7
WACZ	Wakanui South	4.48	64	P	Pn	13 53 25.1	-0.3
MHCZ	Mount Hutt	4.53	58	P	Pn	13 53 25.3	-1.0
OXZ	Oxford	4.93	59	P	Pn	13 53 30.4	-1.3
INZ	Inchbonnie	4.97	50	P	Pn	13 53 32.1	-0.2
MQZ	McQueen's Vall	5.11	65	P	Pn	13 53 32.8	-1.2
AMCZ	Amberley	5.38	60	P	Pn	13 53 37.2	-0.7
LTZ	Lake Taylor	5.39	55	P	Pn	13 53 36.9	-1.2
DSZ	Denniston Nort	5.87	45	P	Pn	13 53 43.7	-0.9
THZ	Tophouse	6.42	51	P	Pn	13 53 52.8	+0.6
QRZ	Quartz Range	6.92	43	P	Pn	13 53 58.3	-0.7
TMWZ	Te Maipa	8.55	58	P	Pn	13 54 25.0	+3.6
KRVZ	Karewarewa	9.79	48	P	Pn	13 54 41.4	+2.9
RUGZ	Raukumara Rang	11.70	51	P	Pn	13 55 04.8	+0.2

IDC 14 13:57:23.3±2.4, **2°.47N**×**95°.97E**, **h0**^{km}, **mb3.6**/3, **mb1 3.6**/5, **mb1mx3.2**/50, **mbtmp3.5**/5, **ML4.2**/1, **MS3.1**/1, **Ms1 3.1**/1, **ms1mx2.4**/57, **Error ellipse: s-maj=55.2km s-min=25.8km az=38.0**, **Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	2.98	84	Pn	Pn	13 58 12.1	+0.2
	0.6nm,0.3s,baz=242,slow=14,SNR=4.0						
PSI				Sn	Sn	13 58 47.7	-0.7
	1.3nm,0.3s,baz=294,slow=18,SNR=1.6						
CMAR	Chiang Mai Arr	16.16	10	Pn	P	14 01 13.9	-1.3
	0.3nm,0.3s,baz=202,slow=11,SNR=4.3						
H08S2	Diego Garcia H	25.48	247	T	T	14 29 17.4	
	baz=68,slow=76,SNR=11						
H08S3	Diego Garcia H	25.48	247	T	T	14 29 18.2	
	baz=68,slow=76,SNR=14						
H08S1	Diego Carcia H	25.50	247	T	T	14 29 16.5	
	baz=68,slow=76,SNR=7.9						
H01W3	Cape Leeuwin H	40.88	157	T	T	14 48 38.6	
	baz=333,slow=76,SNR=27						
H01W2	Cape Leeuwin H	40.90	157	T	T	14 48 40.1	
	baz=333,slow=76,SNR=28						
H01W1	Cape Leeuwin H	40.90	157	T	T	14 48 42.6	
	baz=333,slow=76,SNR=27						
WRA	Warramunga Arr	43.75	122	P	P	14 05 30.9	0.0
	0.3nm,0.6s,baz=302,slow=8.9,SNR=2.1						
MKAR	Makanchi Array	45.73	347	P	P	14 05 46.1	-0.2
	0.5nm,0.5s,baz=152,slow=7.9,SNR=6.0						
GEYT	Alibeck	49.45	320	LR	LR	14 27 16.9	
	comp=Z,18nm,20.0s,baz=20,slow=36						
ZALV	Zalesovo Beam	52.12	352	P	P	14 06 34.7	-0.5
	0.7nm,0.5s,baz=176,slow=6.6,SNR=4.6						

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*IDC **14** 13:58:05.3±2.9, 2°.44N×95°.77E, h0^{km}, mb3.8/5, mb1 3.8/6, mb1mx3.4/50, mbtmp3.7/6, Error ellipse: s-maj=125.0km s-min=22.8km az=58.0*

ISC 14 13:58:09.2±2.4, **2°.5N**±0°.3×**95°.8E**±0°.5, **h25**^{km}, **n9**, σ**0^{s}23**/6, **mb3.9**/5, **Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	16.18	11	Pn	Pn	14 01 55.1	+0.1
	baz=197,slow=11,SNR=5.5						
H08S2	Diego Garcia H	25.35	246	T	T	14 30 03.6	
	baz=67						
H08S3	Diego Garcia H	25.35	247	T	T	14 30 03.0	
	baz=67						
H08S1	Diego Carcia H	25.36	246	T	T	14 30 06.0	
	baz=67						
WRA	Warramunga Arr	43.88	122	P	P	14 06 14.0	0.0
	0.2nm,0.4s,baz=300,slow=9.5,SNR=2.1						
ASAR	Alice Springs	45.26	127	P	P	14 06 25.1	0.0
	0.3nm,0.7s,baz=292,slow=7.3,SNR=4.7						
MKAR	Makanchi Array	45.69	347	P	P	14 06 28.1	+0.1
	1.3nm,0.8s,baz=162,slow=6.7,SNR=7.6						
KURBB	Kurchatov Arra	50.16	346	P	P	14 07 02.7	+0.1
	1.1nm,0.2s,baz=156,slow=7.1,SNR=1.2						
ZALV	Zalesovo Beam	52.10	352	P	P	14 07 16.7	-0.4
	2.3nm,0.6s,baz=176,slow=7.0,SNR=8.3						

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*IDC **14** 14:03:52.2±0.6, 8°.45N×71°.46W, h0^{km}, mb4.2/11, mb1 4.5/15, mb1mx4.3/31, mbtmp4.3/15, ML4.4/4, MS3.5/14, Ms1 3.5/14, ms1mx3.3/48, Error ellipse: s-maj=14.8km s-min=9.5km az=164.0*

*VAO **14** 14:03:53.1±1.3, 8°.75N×71°.57W, h15^{km}, mb4.5*

*NEIC **14** 14:03:53.7±1.7, 8°.59N±0°.05×71°.29W±0°.04, h10^{km}±1^{km}, mb4.6/29, Mwr4.3(CAR), Error ellipse: s-maj=9.5km s-min=6.5km az=211.0*

*FUNV **14** 14:03:54.1, 8°.46N×71°.43W, h5^{km}, MW4.3*

*CAR **14** 14:03:54.6±2.2, 8°.45N±0°.07×71°.43W±0°.05, h5^{km}±3^{km}, Error ellipse: s-maj=9.7km s-min=6.5km az=172.0*

ISC 14 14:03:52.1±1.1, **8°.56N**±0°.02×**71°.43W**±0°.02, **h3**^{km}±7^{km}, **n161**, σ**1^{s}89**/187, **mb4.6**/25, **MS3.7**/10, **3C-4D**, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.63	115	i P	Pg	14 04 04.0	-0.2
SOCV				eS	Sg	14 04 13.2	+0.8
SOCV	Socops	0.63	115	⇓iP	Pg	14 04 04.6	+0.4
SOCV				eS	Sg	14 04 13.7	+1.3
SDV	Santo Domingo	0.85	67	Pg	Pb	14 04 10.1	+0.4
	144nm,0.3s,baz=244,slow=16,SNR=296						
SDV				Lg	Lg	14 04 23.5	
	352nm,0.3s,baz=66,slow=20,SNR=11						
SDV				LR	LR	14 04 55.1	
	comp=Z,1µm,19.0s,baz=6.5,slow=68						
SDV	Santo Domingo	0.85	67	eP	Pb	14 04 10.2	+0.4
SDV				eS	Sb	14 04 22.3	+0.6
SDV	Santo Domingo	0.85	67	eP	Pb	14 04 10.2	+0.4
SDV	Santo Domingo	0.85	67		Pb	14 04 09.7	-0.1
CAPV	Capacho	1.11	232	eP	Pg	14 04 12.6	-0.9
CAPV				eS	Sg	14 04 27.7	-0.2
PAMC	Pamplona, Colo	1.74	226	eP	Pb	14 04 25.1	0.0
PAMC				eS	Sg	14 04 48.3	0.0
MCQV	Machiques	1.84	324	⇑iP	Pb	14 04 26.5	0.0
MCQV				eS	Sg	14 04 51.4	0.0
OCAC	Ocana	1.90	261	eP	Pn	14 04 26.7	+1.1
OCAC				eS	Sb	14 04 51.5	-0.2
TAMC	Tame, Arauca	2.14	190	eP	Pn	14 04 30.1	+1.3
TAMC				eS	Sb	14 04 57.8	-0.8
LL6C	La Loma 6 Bece	2.16	303	eP	Pn	14 04 28.6	-0.5
LL6C				eS	Sb	14 05 00.0	+0.8
LL1C	La Loma 1 Cana	2.32	295	eP	Pb	14 04 33.4	-1.2
LL1C				eS	Sb	14 05 02.9	-0.8
ELOV	Elorza	2.47	129	eP	Pn	14 04 34.9	+1.5
ELOV				eS	Sb	14 05 08.2	0.0
ELOV	Elorza	2.47	129	eP	Pn	14 04 33.7	+0.3
ELOV				eS	Sn	14 05 03.6	-0.5
DABV	Dabajuro	2.48	18	eP	Pb	14 04 36.3	-1.2
DABV				eS	Sb	14 05 07.8	-0.6
DABV	Dabajuro	2.48	18	⇑eP	Pb	14 04 36.0	-1.4
DABV				eS	Sb	14 05 07.0	-1.4
BARC	Barichara	2.61	222	eP	Pb	14 04 38.9	-0.9
BARC				eS	Sb	14 05 13.3	+0.9
SMLC	San Martn de	2.62	276	eP	Pn	14 04 36.2	+0.7
SMLC				eS	Sb	14 05 12.3	-0.3
SIQV	Siquisique	2.62	37	eP	Pn	14 04 37.8	+2.2
SIQV				eS	Sn	14 05 09.1	+1.1
BRRC	Barranca, Sant	2.68	238	eP	Pb	14 04 39.4	-1.4
BRRC				eS	Sb	14 05 14.5	+0.4
ARGC	Ariguani, Magd	3.07	295	eP	Pn	14 04 42.8	+1.2
ARGC				eS	Sn	14 05 21.2	+2.3
RUSC	La Rusia	3.11	212	eP	Pn	14 04 43.6	+1.0
RUSC				eS	Sn	14 05 23.0	+2.4
URIC	Uribia, Colomb	3.18	350	eP	Pb	14 04 51.5	+2.2
BAUV	El Baul	3.37	83	⇓eP	Pn	14 04 46.7	+0.9
BAUV				eS	Sn	14 05 25.9	-0.6
ZARC	Zaragoza, Cauc	3.55	253	eP	Pn	14 04 49.6	+1.2
ZARC	Zaragoza, Cauc	3.55	253		Pn	14 04 49.0	+0.6
JACV	Jacura	3.59	45	eP	Pn	14 04 50.4	+1.5
MONV	Montecano	3.67	23	⇑iP	Pn	14 04 51.8	+1.8
SMRC	Santa Marta, M	3.78	314	eP	Pn	14 04 51.0	-0.4
SMRC				eS	Sn	14 05 34.5	-2.0
SPBC	San Pablo de B	3.90	222	eP	Pn	14 04 55.3	+2.2
SJCC	San Jacinto, C	3.93	290	eP	Pn	14 04 56.1	+2.5
SJCC				eS	Sn	14 05 42.2	+1.9
SJCC				eS	Sb	14 05 42.9	-7.4
SJCC	San Jacinto, C	3.93	290	Pn	Pn	14 04 55.6	+2.0
TURV	Turiamo	4.01	62	eP	Pn	14 04 55.5	+0.9
BENV	Beln	4.03	69	eP	Pn	14 04 56.1	+1.1
UREC	San Jos de Ur	4.14	259	eP	Pn	14 04 57.2	+0.8
MOTC	Monteria, Cord	4.19	273	eP	Pn	14 04 58.0	+0.9
MOTC				eS	Sg	14 06 06.1	-0.9
PTGC	Puerto Gaitan,	4.38	189	eP	Pn	14 04 59.1	-0.7
PTGC				eS	Sb	14 06 07.6	+4.3
CHIC	Chingaza	4.52	211	eP	Pn	14 05 02.8	+0.8
NORC	Norcasia	4.53	229	eP	Pn	14 05 03.7	+2.0
NORC				eS	Sn	14 06 00.4	+5.4
TACV	Tcata	4.62	70	⇓eP	Pn	14 05 04.0	+1.0
ROSC	El Rosal	4.67	218	Pn	Pn	14 05 06.6	+2.5
	15nm,0.3s,baz=118,slow=2.5,SNR=23						
HELC	Santa Helena	4.69	240	eP	Pn	14 05 05.7	+1.4
HELC				eS	Sb	14 06 06.4	-6.2
CARV	Caracas	4.84	66	eP	Pn	14 05 06.7	+0.5
PAYV	Puerto Ayacuch	4.87	129	⇓eP	Pn	14 05 06.3	-0.2
LCBC	Los crdobas,	4.89	274	eP	Pn	14 05 07.6	+0.9
LCBC				eS	Sn	14 06 06.4	+2.5
CACV	CAICARA DEL OR	4.94	101	eP	Pb	14 05 14.2	-5.2
VILC	Villavicencio,	4.95	207	eP	Pn	14 05 06.7	-1.0
GUY2C	Guyana, Caldas	5.12	230	eP	Pn	14 05 13.3	+3.1

GUY2C				eS	Sn	14 06 15.5	+5.3
MERV	Las Mercedes	5.12	82	eP	Pn	14 05 10.6	+0.8
MERV				eS	Sn	14 06 06.6	-3.0
CBOC	Ciudad Bolivar	5.27	240	eP	Pn	14 05 15.9	+3.8
BIRV	Birongo	5.44	69	eP	Pn	14 05 14.8	+0.6
PRAC	Prado	5.91	216	eP	Pn	14 05 22.9	+2.1
PRAC				eS	Sn	14 06 21.8	-7.3
ORTC	Ortega, Tolima	5.97	220	eP	Pn	14 05 21.0	-0.7
PLMC	San Jos del P	6.03	233	eP	Pn	14 05 24.8	+2.3
PLMC				eS	Sn	14 06 36.1	+4.0
GUVC	San Jose del G	6.09	191	eP	Pn	14 05 21.0	-2.2
GUVC				eS	Sn	14 06 29.9	-3.6
YOTC	Yotoco, Valle	6.67	227	eP	Pn	14 05 31.4	+0.1
PRGV	PARIAGUAN	6.71	88	eP	Pn	14 05 30.9	-0.8
MACC	Macarena, Meta	6.81	201	eP	Pn	14 05 31.4	-1.7
PCRV	Puerto La Cruz	6.90	76	Pn	Pn	14 05 36.2	+1.8
	6.4nm,0.3s,baz=285,slow=2.4,SNR=20						
PCRV				Sn	Sn	14 06 56.9	+3.5
	9.1nm,0.3s,baz=109,slow=21,SNR=6.2						
PCRV	Puerto La Cruz	6.90	76	eP	Pn	14 05 34.4	+0.1
PCON	Cinco Dias	7.92	219	eP	Pn	14 05 50.4	+1.6
CRUV	Carupano	8.35	75	eP	Pn	14 05 54.1	-0.1
DR12	Loma Pena Alta	10.37	11		Pn	14 06 21.0	-1.0
PRSN	Puerto Rico Se	10.47	23	Pn	Pn	14 06 22.2	-1.1
CELP	Cerrillos	10.57	26		Pn	14 06 23.8	-1.0
PDPR	Patillas Dam,	10.78	29	Pn	Pn	14 06 25.3	-2.2
SJG	San Juan	10.80	28	Pn	Pn	14 06 28.1	+0.3
	3.9nm,0.3s,baz=209,slow=19,SNR=8.0						
SJG				Sn	Sn	14 08 22.9	-6.4
	1.5nm,0.3s,baz=45,slow=20,SNR=2.8						
SJG				LR	LR	14 10 56.0	
	comp=Z,198nm,21.1s,baz=224,slow=39						
SJG	San Juan	10.80	28	Pn	Pn	14 06 26.2	-1.6
OTAV	Otavalo	10.82	221	eP	Pn	14 06 28.8	+0.2
HUMP	Col San Antoni	10.97	29	Pn	Pn	14 06 29.3	-0.8
GCPR	Guaynabo City	11.00	28	Pn	Pn	14 06 29.0	-1.6
MTP	Monte Pirata	11.07	30	Pn	Pn	14 06 29.3	-2.3
MTDJ	Mount Denham	11.30	329	Pn	Pn	14 06 36.4	+1.6
FDF	Fort de France	11.79	58	Pn	Pn	14 06 40.9	-0.6
BOAV	Boa Vista	12.46	119	Pn	Pn	14 06 49.7	-0.9
JTS	Las Juntas de	13.45	278	LR	LR	14 13 55.0	
	comp=Z,78nm,19.7s,baz=112,slow=45						
PTGA	Pitinga	14.68	128	Pn	Pn	14 07 19.3	-1.7
	0.8nm,0.3s,baz=315,slow=14,SNR=13						
PTGA				Sn	Sn	14 09 56.1	-8.4
	0.4nm,0.3s,baz=32,slow=21,SNR=7.4						
PTGA				Lg	Lg	14 11 36.7	
	3.6nm,0.3s,baz=16,slow=20,SNR=7.6						
PTGA				LR	LR	14 13 57.5	
	comp=Z,56nm,18.6s,baz=62,slow=41						
PTGA	Pitinga	14.68	128		Pn	14 07 18.7	-2.4
ATAH	Atahualpa	17.06	204	LR	LR	14 15 07.0	
	comp=Z,250nm,20.9s,baz=2.6,slow=40						
MDP	Montagnes des	18.97	99	P	Pn	14 08 15.8	+0.3
	1.2nm,0.3s,baz=287,slow=12,SNR=4.9						
ETMB	Extrema	18.98	164	eP	Pn	14 08 16.4	+0.9
ETMB	Extrema	18.98	164	P	P	14 08 14.1	-0.9
SAML	Samuel	19.23	155		P	14 08 17.5	-0.3
MALB	Monte Alegre	19.99	120	eP	Pn	14 08 27.9	+0.1
ITTB	Itaituba	20.24	129	eP	Pn	14 08 31.7	+0.9
NNA	Nana	21.11	195	LR	LR	14 16 29.7	
	comp=Z,77nm,20.9s,baz=4.0,slow=36						
MCPB	Macapa, AP	21.24	114	eP	P	14 08 41.3	+1.6
NPGB	Novo Progresso	22.29	134	eP	P	14 08 52.3	+1.3
VILB	Vilhena	24.11	152	eP	P	14 09 09.4	0.0
CLDB	Colider	24.79	141	eP	P	14 09 16.2	+0.6
PDRB	Porto dos Gac	24.80	144	eP	P	14 09 16.7	+0.9
PRPB	Parauapebas	26.05	123	eP	P	14 09 28.4	+1.3
SIV	San Ignacio	26.46	157	P	P	14 09 31.5	+0.7
	13nm,1.1s,baz=321,slow=9.7,SNR=14						
SIV				LR	LR	14 20 22.9	
	comp=Z,243nm,18.1s,baz=331,slow=38						
PTLB	Pontes e Lacer	26.78	153	eP	P	14 09 34.8	+1.2
SNDB	Serra Nova Dou	28.58	135	eP	P	14 09 51.2	+1.4
TKL	Tuckaleechee C	29.24	339	LR	LR	14 21 35.6	
	comp=Z,104nm,22.0s,baz=154,slow=36						
SMTB	Santa Maria do	29.38	126	eP	P	14 09 58.1	+1.1
ROSB	Rosrio	29.51	112	eP	P	14 09 59.8	+1.7
PEXB	Peixe	30.82	131	eP	P	14 10 11.1	+1.4
ARAG	Araguaiana, MT	30.96	141	eP	P	14 10 12.0	+1.1
W45A	Hickory Valley	31.07	331	P	P	14 10 08.7	-3.0
WLAR	White Oak Lake	32.02	324	P	P	14 10 17.3	-2.7
AQDB	Aquidauana	32.74	152	eP	P	14 10 27.8	+1.4
WHAR	Wooly Hollow	32.75	327	P	P	14 10 24.3	-2.2
WHAR				IAmb	IAmb	14 10 30.1	
	comp=Z,9.1nm,0.8s						
LCAR	Lake Charles	32.77	330	P	P	14 10 28.4	+1.8
LCAR				IAmb	IAmb	14 10 30.8	
	comp=Z,5.6nm,0.8s						
MIAR	Mount Ida	32.90	325	P	P	14 10 27.6	-0.2
MIAR				IAmb	IAmb	14 10 30.9	
	comp=Z,8.8nm,1.0s						
W39A	Magazine	33.49	326	P	P	14 10 33.7	+0.8
SDBA	SAO DESIDERIO	33.60	128	eP	P	14 10 35.7	+1.5
S39A	Bolivar	35.12	329	P	P	14 10 47.8	+0.8
S39A				IAmb	IAmb	14 10 50.6	
	comp=Z,7.4nm,0.9s						
ABTX	Abilene, Hawle	35.44	317	P	P	14 10 49.7	-0.2
ABTX				IAmb	IAmb	14 10 53.2	
	comp=Z,14nm,1.1s						
WMOK	Wichita Mounta	36.17	320		P	14 10 56.2	+0.1
WMOK				IAmb	IAmb	14 10 58.8	
	comp=Z,7.2nm,0.9s						
NBPN	Ponto Novo - B	36.57	121	eP	P	14 11 00.8	+1.1
TXAR	Lajitas Array	36.63	309	P	P	14 11 01.0	+0.7
	comp=Z,0.9nm,0.8s,baz=132,slow=7.7,SNR=9.1						
TXAR				PcP	PcP	14 13 24.0	+0.5
	comp=Z,1.1nm,0.8s,baz=128,slow=5.6,SNR=8.6						
TXAR	Lajitas Array	36.63	309	P	P	14 11 00.6	+0.3
TX32	Lajitas Array	36.63	309	P	P	14 11 01.1	+0.9
BB19B	Bebedouro	37.05	143	eP	P	14 11 04.5	+0.7
CPUP	Villa Florida	37.28	159	LR	LR	14 25 46.3	
	comp=Z,106nm,18.2s,baz=321,slow=35						
GDU01	Guandu, BA	38.60	125	eP	P	14 11 18.3	+1.4
MNTX	Cornudas Mount	39.05	311	P	P	14 11 21.1	+0.5
CMC01	Camacan, BA	39.55	127	eP	P	14 11 25.9	+1.0
L34A	Svendsen Farm,	39.90	331	P	P	14 11 27.3	-0.2
VAS01	Vassouras-RJ	41.13	139	eP	P	14 11 37.3	-0.6
SDCO	Great Sand Dun	42.31	319	P	P	14 11 49.4	+1.6
BO02	Sierra Bellavi	43.12	179	P	P	14 11 53.2	-0.8
BO02				IAmb	IAmb	14 12 04.2	
	comp=Z,21nm,1.1s						
ISCO	Idaho Springs	43.57	321	P	P	14 11 57.5	-0.5
SMCO	Snowmass	44.07	319	P	P	14 12 02.9	+0.7
SMCO				IAmb	IAmb	14 12 06.3	
	comp=Z,11nm,1.2s						
AGMN	Agassiz Nation	44.66	337	P	P	14 12 06.2	0.0
AGMN				IAmb	IAmb	14 12 10.2	
	comp=Z,7.5nm,0.9s						
WUAZ	Wupatki	45.25	312	P	P	14 12 12.5	+1.2
WUAZ				IAmb	IAmb	14 12 15.7	
	comp=Z,5.3nm,0.9s						
ULM	Lac du Bonnet	46.27	338	P	P	14 12 20.3	+1.4
	comp=Z,8.1nm,0.8s,baz=151,slow=8.5,SNR=8.3						
ULM				LR	LR	14 32 14.8	
	comp=Z,77nm,19.9s,baz=134,slow=37						
SCHQ	Schefferville	46.30	4	LR	LR	14 30 06.4	
	comp=Z,52nm,19.2s,baz=222,slow=34						
LC01	Cunco	47.21	180	P	P	14 12 24.9	-1.5
BW06	Boulder Array	47.71	322	P	P	14 12 31.1	+0.5
BW06				IAmb	IAmb	14 12 33.9	
	comp=Z,7.4nm,0.9s						
PD31	Pinedale Array	47.71	322	P	P	14 12 30.7	+0.1
PD31				IAmb	IAmb	14 12 33.9	
	comp=Z,6.7nm,0.9s						
PDAR	Pinedale Array	47.71	322	P	P	14 12 31.8	+1.1
	comp=Z,4.4nm,0.8s,baz=119,slow=9.4,SNR=27						
PDAR	Pinedale Array	47.71	322	P	P	14 12 30.2	-0.5
TPAW	Teton Pass	48.96	322	P	P	14 12 41.6	+1.2
TPAW				IAmb	IAmb	14 12 44.2	
	comp=Z,5.6nm,0.9s						
PLCA	Paso Flores	49.05	179	P	P	14 12 40.2	-0.5
	comp=Z,4.9nm,0.8s,baz=5.9,slow=9.3,SNR=11						
PLCA	Paso Flores	49.05	179	eP	P	14 12 40.5	-0.2
FXWY	Fox Creek	49.09	322	P	P	14 12 42.1	+0.9
FXWY				IAmb	IAmb	14 12 45.5	
	comp=Z,4.1nm,1.0s						
GSC	Goldstone, Bar	49.21	310	P	P	14 12 42.2	0.0
MCMT	McKenzie Canyo	50.83	323	P	P	14 12 54.7	+0.2
NVAR	Mina Array Bea	51.50	313	P	P	14 13 00.8	+1.2
	comp=Z,0.6nm,0.7s,baz=114,slow=5.9,SNR=6.3						
YKA	Yellowknife Ar	62.24	339	P	P	14 14 15.8	+0.6
	comp=Z,4.1nm,0.8s,baz=122,slow=8.1,SNR=8.8						
ESDC	Sonseca Array	67.27	51	P	P	14 14 49.1	+0.6
	comp=Z,1.1nm,0.9s,baz=279,slow=6.1,SNR=5.1						
A36M	Sachs Harbour	71.21	345	P	P	14 15 12.3	+0.1
TORD	Torodi Ar. Bea	71.76	79	P	P	14 15 15.9	-0.7
	comp=Z,0.9nm,0.6s,baz=280,slow=5.7,SNR=5.4						
TORD	Torodi Ar. Bea	71.76	79	P	P	14 15 15.7	-0.9
SCRK	Sand Creek	74.73	334	P	P	14 15 34.2	+0.8
SCRK				IAmb	IAmb	14 15 38.0	
	comp=Z,7.3nm,1.0s						
ILAR	Eielson Array	76.12	335	P	P	14 15 41.9	+0.7
	comp=Z,1.8nm,0.9s,baz=113,slow=4.2,SNR=14						
DAVOX	Davos/Dischmat	77.88	44	LR	LR	14 46 53.7	
	comp=Z,40nm,18.8s,baz=324,slow=33						
NOA	NORSAR Array B	79.01	29	LR	LR	14 51 22.9	
	comp=Z,13nm,18.4s,baz=270,slow=36						
HFS	Hagfors	80.21	30	LR	LR	14 49 30.5	
	comp=Z,60nm,20.4s,baz=304,slow=34						
GERES	GERESS Array B	80.42	42	P	P	14 16 06.9	+1.4
	comp=Z,0.9nm,0.8s,baz=251,slow=4.1,SNR=4.8						
VNA3	Neumayer Olymp	89.34	163	P	P	14 16 50.4	+0.7
VNA2	Neumayer--Watz	89.84	163	P	P	14 16 53.5	+1.5
	baz=316,slow=4.6						
SNAA	Sanae	91.49	163	P	P	14 17 00.1	+0.3
RAR	Rarotonga	91.52	249	LR	LR	14 50 30.9	
	comp=Z,64nm,18.0s,baz=173,slow=31						
ASAR	Alice Springs	151.47	235	PKPbc	PKPbc	14 23 49.0	+0.4
	comp=Z,1.4nm,0.7s,baz=121,slow=2.7,SNR=13						
CMAR	Chiang Mai Arr	151.53	19	PKPbc	PKiKP	14 23 49.8	+0.4
	comp=Z,0.8nm,0.7s,baz=305,slow=3.4,SNR=6.4						
WRA	Warramunga Arr	152.62	243	PKPbc	PKPbc	14 23 50.7	-0.6
	comp=Z,1.4nm,0.7s,baz=112,slow=2.4,SNR=12						

IDC 14 14:15:28.5±23.0**, 19°.79S**×**177°.91W, h568**^{km}±203^{km}**, mb3.2**/4**, mb1 3.4**/4**, mb1mx2.9**/29**, mbtmp4.2**/4**, Error ellipse: s-maj=195.6km s-min=45.6km az=102.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.18	243	P	P	14 22 00.3	-0.1
	1.2nm,0.5s,baz=78,slow=9.3,SNR=4.2						
ASAR	Alice Springs	44.77	256	P	P	14 22 52.6	+0.1
	5.1nm,0.8s,baz=91,slow=7.6,SNR=96						
ASAR				PcP	PcP	14 24 21.9	-0.5
	0.5nm,0.5s,baz=112,slow=3.5,SNR=5.3						
WRA	Warramunga Arr	44.79	261	P	P	14 22 52.3	-0.4
	2.0nm,0.3s,baz=97,slow=8.0,SNR=99						
WRA				PcP	PcP	14 24 22.3	-0.1
	0.3nm,0.4s,baz=107,slow=2.7,SNR=0.9						
MJAR	Matsushiro Arr	69.69	323	P	P	14 25 41.8	-0.1
	0.7nm,0.5s,baz=125,slow=6.1,SNR=4.0						
BRTR	Keskin Array B	146.42	313	PKPbc	PKPbc	14 34 06.0	-0.8
	0.4nm,0.4s,baz=148,slow=1.4,SNR=2.2						

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*NEIC **14** 14:23:48.7±2.3, 14°.6S±0°.1×167°.31E±0°.09, h101^{km}±6^{km}, mb4.5/20, Error ellipse: s-maj=17.7km s-min=8.3km az=214.0*

*IDC **14** 14:23:50.1±0.8, 14°.70S×167°.16E, h104^{km}±5^{km}, mb4.0/12, mb1 4.2/14, mb1mx3.8/47, mbtmp4.5/14, MS3.3/8, Ms1 3.3/8, ms1mx3.0/35, Error ellipse: s-maj=18.3km s-min=11.7km az=80.0*

*NOU **14** 14:23:51.0, 14°.71S×167°.17E, h100^{km}, mb4.8/32, Vanuatu Islands*

ISC 14 14:23:49.5±0.5**, 14°.75S**±0°.06×**167°.27E**±0°.08**, h100**^{km}**, n86, σ1^{s}54**/91**, mb4.6**/35**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.69	186		Pn	14 24 07.4	+0.5
SANVU	Saraoutou	0.69	186	P	Pn	14 24 07.9	+1.1
DVP	Devils Point	3.08	164	P	Pn	14 24 39.9	+3.6
LIFNC	LIFOU	5.99	180		Pn	14 25 15.8	+0.1
KOUNC	Koumac, New Ca	6.43	206	P	Pn	14 25 22.7	+1.1
MARNC	Mare, Loyalty	6.73	174		Pn	14 25 25.8	+0.1
MARNC	Mare, Loyalty	6.73	174	P	Pn	14 25 26.3	+0.6
YATNC	Mamie plateau,	7.28	183	P	Pn	14 25 33.5	+0.4
DZM	Mont Dzumac	7.32	186	P	Pn	14 25 35.7	+1.9
	9.2nm,0.3s,baz=50,slow=21,SNR=21						
DZM				S	Sn	14 26 56.1	+0.7
	10nm,0.3s,baz=332,slow=22,SNR=9.6						
DZM	Mont Dzumac	7.32	186	ePn	Pn	14 25 35.5	+1.7
	34nm,0.2s						
DZM				eSn	Sn	14 26 50.6	-4.8
	35nm,0.3s						
DZM	Mont Dzumac	7.32	186	Pn	Pn	14 25 34.7	+0.9
DZM	Mont Dzumac	7.32	186	P	Pn	14 25 35.6	+1.7
NOUC	Port Laguerre	7.37	187	P	Pn	14 25 36.3	+2.0
ONTNC	Ouen Toro	7.55	186	Pn	Pn	14 25 39.1	+2.2
ONTNC	Ouen Toro	7.55	186	P	Pn	14 25 39.2	+2.3
OUENC	Ouen Island, N	7.63	183	Pn	Pn	14 25 39.5	+1.5
OUENC	Ouen Island, N	7.63	183	P	Pn	14 25 40.7	+2.7
PINNC	Pines Island,	7.82	179		Pn	14 25 43.0	+2.5
PINNC	Pines Island,	7.82	179	P	Pn	14 25 43.0	+2.5
HNR	Honiara	8.90	306	P	Pn	14 25 54.9	-0.4
	18nm,0.3s,baz=354,slow=4.7,SNR=9.8						
HNR				S	Sn	14 27 31.5	-2.4
	34nm,0.3s,baz=42,slow=23,SNR=11						
HNR	Honiara	8.90	306		Pn	14 25 55.7	+0.4
HNR	Honiara	8.90	306	P	Pn	14 25 56.3	+1.0
LKBA	Tubou, Lakemba	13.78	106	P	P	14 27 03.4	-2.3
EIDS	Eidsvold	18.50	233	P	P	14 27 57.7	-0.2
EIDS				IAmb	IAmb	14 28 00.8	
	comp=Z,18nm,0.6s						
EIDS	Eidsvold	18.50	233	P	Pn	14 28 00.5	+1.3
	comp=Z,24nm,0.7s						
AFI	Afiamalu	20.32	90	LR	LR	14 34 12.5	
	comp=Z,53nm,18.7s,baz=122,slow=30						
CTA	Charters Tower	20.74	252	P	P	14 28 23.8	+1.5
	comp=Z,20nm,0.9s						
CTAO	Charters Tower	20.74	252	P	P	14 28 20.8	-1.4
CTAO				IAmb	IAmb	14 28 24.0	
	comp=Z,11nm,0.8s						
CTAO	Charters Tower	20.74	252	P	P	14 28 23.5	+1.2
RMQ	Roma	20.86	233	P	P	14 28 25.1	+1.6
	comp=Z,29nm,1.2s						
OUZ	Omahuta	21.16	166	P	P	14 28 26.0	-0.5
OUZ				IAmb	IAmb	14 28 30.8	
	comp=Z,39nm,1.0s						
ARMA	Armidale	21.21	220	P	P	14 28 27.9	+0.5
ARMA				IAmb	IAmb	14 28 32.0	
	comp=Z,19nm,1.1s						
MTSU	Mount Surprise	22.27	258	P	P	14 28 39.0	+0.4
	comp=Z,18nm,0.9s						
QLP	Quilpie	24.51	238	P	P	14 29 00.0	+0.3
	comp=Z,38nm,0.7s						
URZ	Urewera	24.98	161	P	P	14 29 04.6	+0.9
	comp=Z,16nm,0.8s,baz=307,slow=20,SNR=9.8						
BKZ	Black Stump Fm	25.64	163	P	P	14 29 10.8	+1.0
BKZ				IAmb	IAmb	14 29 12.3	
	comp=Z,18nm,0.6s						
CMSA	Cobar Meteorol	25.86	226	P	P	14 29 12.9	+1.1
	comp=Z,19nm,1.2s						
INKA	Innaminka	27.82	238	P	P	14 29 30.1	+0.6
	comp=Z,42nm,1.1s						
LTZ	Lake Taylor	28.26	172	P	P	14 29 34.0	+0.8
STKA	Stephens Creek	28.98	230	P	P	14 29 40.6	+0.9
	comp=Z,23nm,0.6s,baz=48,slow=8.5,SNR=59						
STKA				LR	LR	14 39 37.0	
	comp=Z,39nm,20.7s,baz=29,slow=33						
STKA	Stephens Creek	28.98	230	P	P	14 29 40.3	+0.6
STKA	Stephens Creek	28.98	230	P	P	14 29 40.5	+0.8
	comp=Z,8.2nm,1.2s						
LCRK	Leigh Creek	30.92	235	P	P	14 29 57.4	+0.5
	comp=Z,20nm,0.9s						
WR0	Warramunga Arr	31.64	256	P	P	14 30 01.2	-2.2
HTT	Hallett	31.71	229	P	P	14 30 05.2	+1.4
	comp=Z,25nm,0.9s						
WB0	Warramunga Arr	31.76	256	P	P	14 30 02.6	-1.9
WB2	Warramunga Arr	31.81	256	P	P	14 30 02.8	-2.1
WB2				IAmb	IAmb	14 30 06.5	
	comp=Z,6.4nm,1.1s						
WRA	Warramunga Arr	31.82	256	P	P	14 30 03.0	-2.0
	comp=Z,2.1nm,0.7s,baz=86,slow=9.4,SNR=26						
WRA				LR	LR	14 41 52.4	
	comp=Z,24nm,18.1s,baz=95,slow=34						
WRA	Warramunga Arr	31.82	256	P	P	14 30 02.3	-2.7
OOD	Oodnadatta	32.06	241	P	P	14 30 07.6	+0.7
	comp=Z,17nm,1.0s						
AS31	Alice Springs	32.67	249	P	P	14 30 10.8	-1.6
ASAR	Alice Springs	32.67	249	P	P	14 30 10.9	-1.4
	comp=Z,4.5nm,0.5s,baz=76,slow=9.4,SNR=142						
ASAR				pP	pP	14 30 36.4	+1.4
	comp=Z,4.6nm,0.8s,baz=77,slow=9.5,SNR=7.2						
ASAR				ScP	ScP	14 36 30.9	-0.3
	comp=Z,0.8nm,1.0s,baz=67,slow=3.9,SNR=4.9						
ASAR				LR	LR	14 43 28.1	
	comp=Z,41nm,18.1s,baz=90,slow=36						
ASAR	Alice Springs	32.67	249	P	P	14 30 10.3	-2.1
BBOO	Buckleboo	33.57	232	P	P	14 30 20.3	+0.2
BBOO	Buckleboo	33.57	232	P	P	14 30 21.6	+1.6
	comp=Z,32nm,1.6s						
MULG	Mulgathing	34.20	237	P	P	14 30 25.4	-0.1
	comp=Z,23nm,0.9s						
GUMO	Guam	35.84	321	LR	LR	14 44 06.1	
	comp=Z,30nm,20.4s,baz=92,slow=34						
KNRA	Kununurra	37.14	263	P	P	14 30 48.8	-2.1
KNRA				IAmb	IAmb	14 30 50.3	
	comp=Z,12nm,0.9s						
WRKA	Warakurna	37.93	248	P	P	14 30 56.6	-0.9
	comp=Z,14nm,0.8s						
FORT	Forrest	39.29	239	P	P	14 31 08.5	-0.2
FITZ	Fitzroy Crossi	40.01	259	P	P	14 31 13.9	-1.0
	comp=Z,5.5nm,0.8s,baz=86,slow=8.4,SNR=14						
FITZ	Fitzroy Crossi	40.01	259	P	P	14 31 13.5	-1.4
FITZ				IAmb	IAmb	14 31 15.4	
	comp=Z,4.7nm,0.8s						
SOEI	Soe	42.27	272	P	P	14 31 35.3	+1.7
	comp=Z,9µmcomp=Z,19nm,1.3s						
EDFI	Ende, Flores	44.96	272	P	P	14 31 54.1	-1.1
	comp=Z,6.8nm,0.9s						
MORW	Morawa	49.26	244	P	P	14 32 27.1	-1.1
TWSI	Taliwang, Sumb	49.62	271	P	P	14 32 30.7	-0.5
	comp=Z,27nm,1.1s						
MJAR	Matsushiro Arr	57.93	333	P	P	14 33 30.5	-0.8
	comp=Z,1.2nm,0.8s,baz=170,slow=8.8,SNR=7.5						
MJAR				pP	pP	14 33 54.6	-0.8
	comp=Z,3.7nm,0.9s,baz=164,slow=9.6,SNR=4.3						
ASAJ	Asahikawa	62.77	340	P	P	14 34 04.6	+0.5
	comp=Z,5.1nm,0.9s,baz=212,slow=11,SNR=5.2						
VNDA	Vanda	62.84	181	P	P	14 34 04.9	+0.8
	comp=Z,3.6nm,0.8s,baz=359,slow=7.1,SNR=25						
VNDA				LR	LR	15 01 14.2	
	comp=Z,20nm,18.1s,baz=138,slow=36						
VNDA	Vanda	62.84	181	P	P	14 34 03.0	-1.2
VNDA				IAmb	IAmb	14 34 07.0	
	comp=Z,6.7nm,1.1s						
SBA	Scott Base	63.11	180	P	P	14 34 07.1	+1.1
NJ2	Nanjing	65.70	316	eP	P	14 34 23.3	-0.2
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
XAN	Xi'an	73.71	313	P	P	14 35 13.0	+0.2
XAN				pP	pP	14 35 38.1	+0.1
XAN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
CMAR	Chiang Mai Arr	74.96	294	P	P	14 35 20.7	+0.4
	comp=Z,1.0nm,0.8s,baz=127,slow=5.0,SNR=9.0						
CMAR				pP	pP	14 35 47.6	+2.1
	comp=Z,2.4nm,0.9s,baz=125,slow=4.9,SNR=7.9						
QSPA	South Pole Qui	75.27	180	P	P	14 35 20.6	-0.8
QSPA				IAmb	IAmb	14 35 22.5	
	comp=Z,17nm,0.8s						
HHC	Hu-ho-hao-te	75.61	320	eP	P	14 35 24.8	+1.1
HHC				pmax	pmax		
	comp=Z,12nm,1.2s						
HHC				pmax	pmax		
	comp=Z,91nm,6.6s						
MAW	Mawson	81.86	202	P	P	14 35 57.8	+0.4
	comp=Z,3.4nm,0.9s,baz=93,slow=4.4,SNR=5.9						
MAW				LR	LR	15 09 43.8	
	comp=Z,42nm,18.5s,baz=235,slow=34						
GTA	Gaotai	82.69	314	eP	P	14 36 12.6	+10
GTA				pP	pP	14 36 29.6	+1.7
GTA				sP	sP	14 36 40.3	+1.8
GTA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ILAR	Eielson Array	86.55	18	P	P	14 36 20.2	-0.8
	comp=Z,0.7nm,0.7s,baz=249,slow=4.6,SNR=8.5						
ILAR				pP	pP	14 36 47.7	+1.2
	comp=Z,0.9nm,0.6s,baz=245,slow=5.2,SNR=2.6						
ILAR				LR	LR	15 08 41.6	
	comp=Z,40nm,19.6s,baz=168,slow=31						
WMQ	Urumqi	92.75	315	eP	P	14 36 50.3	-0.4
WMQ				PP	PP	14 40 38.5	+4.3
WMQ				pmax	pmax		
	comp=Z,27nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,240nm,3.9s						
WMQ				LR	LR		
	comp=N,360nm,29.2s						
WMQ				LR	LR		
	comp=E,620nm,28.7s						
WMQ				LR	LR		
	comp=Z,8.0nm,29.0s						
SNAA	Sanae	93.52	183	P	P	14 36 52.9	-0.9
VNA3	Neumayer Olymp	94.19	181	P	P	14 36 55.7	-1.1
VNA2	Neumayer--Watz	94.45	182	P	P	14 36 57.1	-0.9
	baz=174,slow=4.9						
VNA1	Neumayer--Stat	94.75	181	P	P	14 36 57.8	-1.5
MKAR	Makanchi Array	97.22	316	P	Pdif	14 37 11.2	+0.2
	comp=Z,0.2nm,0.6s,baz=89,slow=6.6,SNR=3.2						
MKAR				pP	pwP	14 37 37.5	+0.4
	comp=Z,0.5nm,0.7s,baz=99,slow=5.9,SNR=4.7						
TORD	Torodi Ar. Bea	165.91	265	PKPab	PKPab	14 44 43.0	-1.0
	comp=Z,1.5nm,0.8s,baz=91,slow=3.9,SNR=7.8						

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*SJA **14** 14:26:18.0, 29°.49S×72°.43W, h10^{km}, ML4.3*

*GUC **14** 14:26:19.7±0.8, 29°.59S×72°.04W, h18^{km}±14^{km}, ML3.7*

*IDC **14** 14:26:19.6±2.1, 29°.57S×71°.71W, h0^{km}, mb4.4/2, mb1 4.1/3, mb1mx3.7/25, mbtmp4.1/3, ML3.8/1, MS3.3/1, Ms1 3.3/1, ms1mx2.8/18, Error ellipse: s-maj=82.7km s-min=47.2km az=99.0*

ISC 14 14:26:18.5±1.0**, 29°.55S**±0°.04×**72°.12W**±0°.06**, h10**^{km}**, n56, σ1^{s}73**/58**, 2C-3D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	La Serena	0.85	116	eP	Pg	14 26 34.0	-0.9
CO05				i S	Sg	14 26 44.7	-1.2
CO05				IAML		14 26 48.9	
	comp=E,5µm,0.5s						
CO06	Fray Jorge	1.20	160	eP	Pb	14 26 39.7	-1.6
CO06				eS	Sb	14 26 54.2	-2.6
CO06				IAML		14 26 58.6	
	comp=E,1µm,0.0s						
GO04	Tololo Observa	1.30	119	⇓eP	Pb	14 26 42.0	-1.2
GO04				i S	Sb	14 26 57.7	-2.4
LCO	Las Campanas	1.35	67	⇓eP	Pn	14 26 43.4	-0.3
LCO				eS	Sb	14 27 00.5	-0.9
LCO	Las Campanas	1.35	67	i P	Pn	14 26 43.0	-0.7
AC04	Llanos de Chal	1.62	35	⇑eP	Pn	14 26 46.9	-0.3
AC04				IAML		14 27 07.8	
	comp=E,630nm,0.4s						
AC04				⇓eS	Sn	14 27 08.1	-0.1
AC04	Llanos de Chal	1.62	35	i P	Pn	14 26 47.0	-0.2
AROD	Rodeo	2.38	106	i P	Pb	14 27 00.0	-1.6
GO03	Copiap	2.56	41	⇑eP	Pn	14 27 00.4	+0.3
GO03				eS	Sn	14 27 32.0	+0.6
GO03				IAML		14 27 47.4	
	comp=E,614nm,0.8s						
GO03	Copiap	2.56	41	i P	Pn	14 27 01.0	+0.9
ACDV	Cuesta del Vie	2.67	104	i P	Pb	14 27 05.0	-1.6
ACCO	Cerro Coronel	2.84	112	i P	Pb	14 27 07.0	-2.5
VA06	Catapilco	3.08	167	eP	Pn	14 27 06.8	-0.5
VA06				IAML		14 28 02.4	
	comp=E,372nm,0.8s						
RTLS	Leoncito	3.31	133	i P	Pn	14 27 14.0	+3.4
VA03	San Esteban	3.47	158	eP	Pn	14 27 13.4	+0.7
VA03				IAML		14 28 14.0	
	comp=N,377nm,0.3s						
VA03	San Esteban	3.47	158	i P	Pn	14 27 14.0	+1.3
VCA	Vinchina	3.52	78	i P	Pb	14 27 18.0	-3.0
ROCH	El Roble	3.54	165	eP	Pn	14 27 13.3	-0.4
ROC1	El Roble	3.54	165	i P	Pn	14 27 14.0	+0.2
AUSP	Uspallata	3.55	139	i P	Pn	14 27 17.0	+3.0
PEL	Peldehue	3.79	161	eP	Pn	14 27 17.2	+0.2
PEL	Peldehue	3.79	161	i P	Pn	14 27 19.0	+2.0
MT02	Curacav	3.79	167	eP	Pn	14 27 17.7	+0.7
MT02	Curacav	3.79	167	i P	Pn	14 27 18.0	+1.0
ASAL	Salagasta	4.14	138	i P	Pn	14 27 26.0	+4.1
AVFE	Valle Fertil	4.19	106	i P	Pn	14 27 25.0	+2.5
MT09	Talagante	4.32	167	eP	Pn	14 27 24.6	+0.1
MT01	Popeta	4.36	170	eP	Pn	14 27 24.4	-0.5
MT01	Popeta	4.36	170	i P	Pn	14 27 24.0	-0.9
ACLC	CERRO LA CRUZ	4.50	90	i P	Pn	14 27 29.0	+2.0
AAGR	Agrelo	4.51	142	i P	Pn	14 27 31.0	+4.0
LMEL	Las Melosas	4.58	160	eP	Pn	14 27 29.6	+1.5
BO04	La Punta	4.61	164	eP	Pn	14 27 28.5	+0.2

BO01	**Tunca**	**4.91**	**170**	*e*P	**Pn**	**14 27 31.5**	**-0.9**
BO01	**Tunca**	**4.91**	**170**	*i* P	**Pn**	**14 27 33.0**	**+0.7**
APLL	**PUNTA DE LOS L**	**4.92**	**101**	*i* P	**Pn**	**14 27 35.0**	**+2.4**
ACHE	**Chepes**	**4.98**	**110**	*i* P	**Pn**	**14 27 35.0**	**+1.5**
PB14	**IPOC Station P**	**5.14**	**18**	*i* P	**Pn**	**14 27 34.0**	**-1.8**
BO02	**Sierra Bellavi**	**5.35**	**168**	*i* P	**Pn**	**14 27 39.0**	**+0.5**
GO05	**Huala**	**5.45**	**178**	*i* P	**Pn**	**14 27 40.0**	**+0.2**
CYA	**Choya**	**5.64**	**80**	*i* P	**Pn**	**14 27 47.0**	**+4.5**
RFA	**San Rafael**	**6.05**	**150**	*i* P	**Pn**	**14 27 49.0**	**+0.8**
MRA	**San Martin**	**6.19**	**119**	*i* P	**Pn**	**14 27 51.0**	**+0.9**
PB15	**IPOC Station P**	**6.75**	**21**	*i* P	**Pn**	**14 27 58.0**	**+0.1**
PB05	**IPOC Station P**	**6.89**	**15**	*i* P	**Pn**	**14 27 58.0**	**-1.7**
H03N1	**Juan Fernandez**	**6.98**	**235**	T	T	14 35 29.0	
	baz=58,slow=74,SNR=250						
H03N2	**Juan Fernandez**	**6.99**	**235**	T	T	14 35 50.2	
	baz=58						
H03N3	**Juan Fernandez**	**7.00**	**234**	T	T	14 35 30.3	
	baz=58,slow=74,SNR=233						
LVC	**Limon Verde**	**7.49**	**23**	*i* P	**Pn**	**14 28 10.0**	**+1.8**
PB09	**IPOC Station P**	**8.14**	**19**	*i* P	**Pn**	**14 28 17.0**	**0.0**
PLCA	**Paso Flores**	**11.23**	**174**	Pn	**Pn**	**14 29 00.8**	**+1.6**
	comp=N,0.1nm,0.3s,baz=252,slow=12,SNR=1.6						
CPUP	**Villa Florida**	**13.46**	**80**	LR	LR	14 35 09.9	
	comp=N,119nm,19.1s,baz=275,slow=40						
DBIC	**Dimbokro**	**73.86**	**72**	P	**P**	**14 37 54.9**	**+0.9**
	comp=N,4.5nm,0.9s,baz=284,slow=4.2,SNR=3.8						
TORD	**Torodi Ar. Bea**	**82.78**	**71**	P	**P**	**14 38 44.3**	**+1.0**
	comp=N,1.9nm,0.8s,baz=257,slow=4.7,SNR=10						
KURBB	**Kurchatov Arra**	**149.54**	**38**	PKPbc	**PKiKP**	**14 46 09.7**	**+0.8**
	comp=N,1.0nm,0.8s,baz=305,slow=3.0,SNR=5.8						
ZALV	**Zalesovo Beam**	**150.42**	**28**	PKPbc	**PKiKP**	**14 46 11.8**	**+1.3**
	comp=N,3.7nm,0.7s,baz=312,slow=3.2,SNR=16						

WEL ***14*** *14:31:00, 46.°10S×166.°19E, h25^{km}, ML4.1, Mw3.9, Moment Tensor Solution. s4 Moment tensor: Scale 10^{14} Nm; M$_{rr}$-0.57; M$_{\theta\theta}$5.20; M$_{\phi\phi}$-4.63; M$_{r\theta}$1.84; M$_{\theta\phi}$-6.67; M$_{\phi r}$-4.09; Fault plane solution: M$_{0}$9.41000×10^{14} NP1: ϕ_s71.00000°, δ62.00000°, λ-180.00000°. NP2: ϕ_s341.00000°, δ90.00000°, λ-28.00000°. Principal axes: T 97.9000, Plg19.0000°, Azm30.0000°; N -7.6800, Plg62.0000°, Azm161.0000°; P -90.2200, Plg19.0000°, Azm293.0000°;*

WEL 14 14:31:40.9±1.2**, 46°S**±5°×**16°6E**±°**, h5**^{km}**, M4.1**/9**, ML4.3**/9**, MLv4.1**/9 **Error ellipse: s-maj=0.0km s-min=0.0km az=72.2, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYZ	**Puysegur Point**	**0.33**	**108**	P	Pb	14 31 49.3	0.0
PYZ				S	Sb	14 31 55.3	+0.3
DCZ	**Deep Cove**	**0.88**	**48**	P	Pg	14 31 57.1	-0.7
DCZ				S	Sg	14 32 09.1	-0.2
WHZ	**Wether Hill Ro**	**1.21**	**83**	P	Pg	14 32 03.1	-1.0
WHZ				S	Sg	14 32 20.1	+0.2
APZ	**The Paps**	**1.44**	**123**	P	Pn	14 32 05.7	-2.0
APZ				S	Sb	14 32 25.0	-2.0
MLZ	**Mavora Lakes**	**1.50**	**63**	P	Pn	14 32 08.4	-0.1
MLZ				S	Sg	14 32 28.9	-0.1
MSZ	**Milford Sound**	**1.83**	**41**	P	Pn	14 32 11.7	-1.4
SYZ	**Scrubby Hill**	**2.08**	**104**	P	Pn	14 32 15.8	-0.5
SYZ				S	Sn	14 32 42.5	-0.1
EAZ	**Earnscleugh**	**2.32**	**70**	P	Pn	14 32 20.6	+0.9
WKZ	**Wanaka**	**2.32**	**59**	P	Pn	14 32 20.8	+1.0
TUZ	**Tuapeka**	**2.38**	**89**	P	Pn	14 32 20.8	+0.3
TUZ				S	Sn	14 32 50.0	0.0
JCZ	**Jackson Bay**	**2.69**	**43**	P	Pn	14 32 26.4	+1.4
HHSZ	**Highcliff Hill**	**3.06**	**88**	P	Pn	14 32 30.1	+0.2
LBZ	**Lake Benmore**	**3.26**	**60**	P	Pn	14 32 31.9	-0.8
ODZ	**Otahua Downs**	**3.27**	**73**	P	Pn	14 32 31.6	-1.2
FOZ	**Fox Glacier**	**3.59**	**47**	P	Pn	14 32 36.7	-0.6
TMZ	**Timaru**	**3.77**	**65**	P	Pn	14 32 38.7	-1.0
GCSZ	**Gaunt Creek Bo**	**4.01**	**48**	P	Pn	14 32 43.1	+0.1
ARCZ	**Arundel**	**4.10**	**61**	P	Pn	14 32 42.9	-1.3
RPZ	**Rata Peaks**	**4.16**	**57**	P	Pn	14 32 43.5	-1.5
WVZ	**Waitaha Valley**	**4.39**	**49**	P	Pn	14 32 49.1	+0.9
WACZ	**Wakanui South**	**4.51**	**64**	P	Pn	14 32 50.9	+1.1
MHCZ	**Mount Hutt**	**4.57**	**58**	P	Pn	14 32 49.1	-1.6
OXZ	**Oxford**	**4.96**	**59**	P	Pn	14 32 53.9	-2.2
INZ	**Inchbonnie**	**5.01**	**50**	P	Pn	14 32 55.5	-1.3
MQZ	**McQueen's Vall**	**5.14**	**65**	P	Pn	14 32 57.0	-1.5
OKCZ	**Okains Bay**	**5.39**	**67**	P	Pn	14 33 01.9	0.0
AMCZ	**Amberley**	**5.42**	**60**	P	Pn	14 33 03.2	+0.9
LTZ	**Lake Taylor**	**5.43**	**55**	P	Pn	14 33 00.2	-2.3
GVZ	**Greta Valley S**	**5.77**	**60**	P	Pn	14 33 05.3	-1.9
DSZ	**Denniston Nort**	**5.90**	**45**	P	Pn	14 33 07.9	-1.2
KHZ	**Kahutara**	**6.39**	**58**	P	Pn	14 33 14.4	-1.3
THZ	**Tophouse**	**6.46**	**51**	P	Pn	14 33 17.1	+0.4
QRZ	**Quartz Range**	**6.96**	**43**	P	Pn	14 33 22.4	-1.1
NNZ	**Nelson**	**7.10**	**50**	P	Pn	14 33 26.2	+0.9
VRZ	**Vera Road**	**9.36**	**45**	P	Pn	14 33 58.8	+2.4
HIZ	**Hauiti**	**9.88**	**43**	P	Pn	14 34 04.2	+0.7
HRRZ	**Handcock Road**	**10.69**	**48**	P	Pn	14 34 16.5	+1.8

SKHL ***14*** *14:34:40.5±0.6, 46.°32N×136.°16E, h437^{km}±3^{km}, mb4.5/11, mbv4.5/1, msh4.5/3, msha4.3/8*

MOS ***14*** *14:34:40.6±0.8, 46.°40N×136.°07E, h438^{km}, mb4.2/21, Error ellipse: s-maj=9.7km s-min=6.4km az=89.8*

JMA ***14*** *14:34:40.2±0.1, 46.°29N×136.°13E, h449^{km}±2^{km}, M4.1*

NIED ***14*** *14:34:40.3, 46.°29N×136.°13E, h449^{km}, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.78; M$_{\theta\theta}$0.79; M$_{\phi\phi}$-2.57; M$_{r\theta}$-0.38; M$_{\theta\phi}$-0.37; M$_{\phi r}$-2.35; Fault plane solution: M$_{0}$3.24000×10^{15} NP1: ϕ_s189.00000°, δ69.00000°, λ93.00000°. NP2: ϕ_s1.00000°, δ21.00000°, λ83.00000°.*

IDC ***14*** *14:34:41.7±0.7, 46.°45N×136.°02E, h429^{km}±7^{km}, mb3.6/29, mb1 3.7/38, mb1mx3.5/83, mbtmp4.4/38 Error ellipse: s-maj=8.5km s-min=7.8km az=135.0*

NEIC ***14*** *14:34:41.5±1.5, 46.°46N±0.°10×136.°1E±0.°2, h431^{km}±7^{km}, mb4.2/63, Error ellipse: s-maj=15.5km s-min=13.7km az=121.0*

ISC 14 14:34:41.2±0.5**, 46.°36N**±0.°04×**136.°14E**±0.°04**, h432**^{km}±6^{km}**, n226,** σ1.^{s}**13**/264**, mb4.2**/77**, 8C-6D, Primorye**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEY	**Ternei**	**1.36**	**166**	⇑*i*P	**P**	**14 35 37.6**	**+0.6**
TEY				*i* S	**S**	**14 36 21.6**	**-0.4**
TEY				pmax	pmax		
	comp=Z,6μm,0.3s						
TEY				pmax	pmax		
	comp=N,160nm,0.3s						
TEY				pmax	pmax		
	comp=E,100nm,0.2s						
TEY				smax	smax		
	comp=E,240nm,0.5s						
TEY				smax	smax		
	comp=N,160nm,1.0s						
TEY	**Ternei**	**1.36**	**166**	⇓*i*P	**P**	**14 35 37.5**	**+0.6**
TEY				AMB	AMB	14 35 37.7	
	comp=N,182nm,0.3s						
TEY				*i* S	**S**	**14 36 21.6**	**-0.4**
TEY				A	A	14 36 22.3	
	comp=N,160nm,0.7s						
TEY				A	A	14 36 22.3	
	comp=N,179nm,0.7s						
KHBR	**Khabarovsk**	**2.24**	**341**	⇑*i*P	**P**	**14 35 42.6**	**+1.3**
KHBR				AMB	AMB	14 35 42.7	
	comp=N,82nm,0.3s						
JRBN	**Rebuntou**	**3.56**	**103**	P	**P**	**14 35 52.0**	**+0.7**
JRBN				*e*S	**S**	**14 36 48.6**	**+0.3**
USA0B	**Ussuriysk Arra**	**3.64**	**235**	P	**P**	**14 35 52.8**	**+0.8**
USA0B	**Ussuriysk Arra**	**3.64**	**235**		**P**	**14 35 52.8**	**+0.8**
USRK	**Ussuriysk Ar.**	**3.64**	**235**	P	**P**	**14 35 52.8**	**+0.8**
	baz=53,slow=10,SNR=178						
USRK				S	**S**	**14 36 49.5**	**-0.1**
	baz=44,slow=17,SNR=1.5						
USRK	**Ussuriysk Ar.**	**3.64**	**235**	P	**P**	**14 35 52.7**	**+0.7**
USRK	**Ussuriysk Ar.**	**3.64**	**235**		**P**	**14 35 52.7**	**+0.7**
GRTR	**Gornotajezhnoj**	**3.87**	**228**	⇑*i*P	**P**	**14 35 55.1**	**+1.0**
GRTR				AMB	AMB	14 35 55.3	
	comp=N,107nm,0.5s						
GRTR				*e*S	**S**	**14 36 53.1**	**-0.3**
GRTR				A	A	14 36 54.1	
	comp=N,25nm,1.0s						
GRTR				A	A	14 36 54.1	
	comp=N,47nm,1.0s						
KLR	**Kul'dur**	**4.13**	**316**	P	**P**	**14 35 57.0**	**+0.9**
	comp=N,6.2nm,0.3s,baz=131,slow=6.9,SNR=130						
KLR				S	**S**	**14 36 56.4**	**-1.0**
	baz=306,slow=16,SNR=14						
KLR	**Kul'dur**	**4.13**	**316**	*i* P	**P**	**14 35 56.4**	**+0.3**
KLR	**Kul'dur**	**4.13**	**316**	⇓*i*P	**P**	**14 35 57.0**	**+0.9**
KLR				*e*S	**S**	**14 36 57.0**	**-0.4**
JSK	**Shakotan**	**4.30**	**133**	P	**P**	**14 35 58.5**	**+0.6**
JSK				*e*S	**S**	**14 36 59.9**	**-0.5**
GRNR	**Gornyy**	**4.42**	**2**	⇑*i*P	**P**	**14 35 59.9**	**+1.1**
GRNR				*e*S	**S**	**14 37 02.4**	**+0.1**
GRNR				pmax	pmax		
	comp=Z,20nm,0.7s						
GRNR				smax	smax		
	comp=N,9.0nm,0.9s						
GRNR				MLR	MLR		
	comp=E,50nm,10.0s						
GRNR				MLR	MLR		
	comp=N,120nm,11.0s						
GRNR				MLR	MLR		
	comp=Z,70nm,14.0s						
GRNR	**Gornyy**	**4.42**	**2**	⇑*i*P	**P**	**14 35 59.8**	**+1.0**
GRNR				AMB	AMB	14 36 00.4	
	comp=Z,20nm,0.7s						
GRNR				*e*S	**S**	**14 37 02.4**	**+0.1**
GRNR				A	A	14 37 03.4	
	comp=Z,9.0nm,0.9s						
YSS	**Yuzh-Sakhalins**	**4.59**	**80**	⇓*i*P	**P**	**14 36 02.1**	**+1.6**
YSS				*e*S	**S**	**14 37 06.4**	**+1.1**
YSS				pmax	pmax		
	comp=Z,330nm,0.7s						
YSS				smax	smax		
	comp=N,30nm,1.1s						
YSS				smax	smax		
	comp=N,200nm,5.5s						
YSS	**Yuzh-Sakhalins**	**4.59**	**80**	*e*P	**P**	**14 36 02.1**	**+1.6**
YSS				*e*S	**S**	**14 37 06.2**	**+0.9**
YSS	**Yuzh-Sakhalins**	**4.59**	**80**		**P**	**14 36 01.9**	**+1.4**
JSH	**Shimam**	**4.64**	**142**	P	**P**	**14 36 01.1**	**-0.1**
JSH				*e*S	**S**	**14 37 05.3**	**-1.1**
JSE	**Soyaes**	**4.73**	**105**	P	**P**	**14 36 02.6**	**+0.7**
JSE				*e*S	**S**	**14 37 07.6**	**-0.1**
UGL	**Uglegorsk**	**4.83**	**54**	*e*P	**P**	**14 36 04.1**	**+1.2**
UGL				S	**S**	**14 37 07.2**	**-2.3**
UGL				pmax	pmax		
	comp=Z,127nm,0.9s						
UGL				smax	smax		
	comp=N,600nm,5.5s						
UGL				smax	smax		
	comp=E,400nm,3.9s						
UGL	**Uglegorsk**	**4.83**	**54**	*e*P	**P**	**14 36 04.0**	**+1.2**
UGL				AMB	AMB	14 36 05.0	
	comp=E,127nm,0.9s						
UGL				*e*S	**S**	**14 37 07.0**	**-2.5**
UGL				A	A	14 37 12.0	
	comp=E,600nm,4.5s						
UGL				A	A	14 37 12.0	
	comp=E,400nm,4.5s						
MDJ	**Mudanjiang**	**4.92**	**252**	Pg	**P**	**14 36 04.8**	**+0.9**
MDJ				Sg	**S**	**14 37 11.8**	**+0.5**
MDJ				smax	smax		
	comp=N,100nm,1.6s						
MDJ				smax	smax		
	comp=E,44nm,1.7s						
ASAJ	**Asahikawa**	**5.08**	**114**	P	**P**	**14 36 06.4**	**+1.0**
	comp=E,31nm,0.3s,baz=286,slow=9.1,SNR=713						
ASAJ	**Asahikawa**	**5.08**	**114**	P	**P**	**14 36 06.1**	**+0.7**
JKA	**Kamikawa-asahi**	**5.08**	**114**		**P**	**14 36 06.1**	**+0.7**
JEW	**Eniwo**	**5.17**	**131**	P	**P**	**14 36 07.1**	**+0.8**
JKK2	**Kamakawa 2**	**5.29**	**116**	P	**P**	**14 36 07.9**	**+0.4**
JKK2				*e*S	**S**	**14 37 17.3**	**-0.8**
JTKR	**Abashiri--Toko**	**5.99**	**111**	P	**P**	**14 36 15.0**	**+0.4**
JTKR				*e*S	**S**	**14 37 29.5**	**-1.5**
TYV	**Tymovskoe**	**6.24**	**41**	*e*P	**P**	**14 36 19.4**	**+2.3**
TYV				*e*S	**S**	**14 37 36.9**	**+1.2**
TYV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
TYV				pmax	pmax		
	comp=Z,200nm,2.7s						
TYV				smax	smax		
	comp=N,300nm,2.7s						
TYV				smax	smax		
	comp=E,200nm,2.7s						
TYV				smax	smax		
	comp=N,30nm,1.5s						
TYV				smax	smax		
	comp=E,22nm,1.5s						
TYV	**Tymovskoe**	**6.24**	**41**	*e*P	**P**	**14 36 19.0**	**+1.9**
TYV				AMB	AMB	14 36 19.0	
	comp=E,9.0nm,1.0s						
TYV				AMB	AMB	14 36 21.0	
	comp=E,200nm,2.7s						
TYV				*e*S	**S**	**14 37 36.0**	**+0.3**
TYV				A	A	14 37 39.0	
	comp=E,300nm,2.5s						
TYV				A	A	14 37 39.0	
	comp=E,200nm,2.5s						
TYV				A	A	14 37 39.0	
	comp=E,30nm,1.5s						
TYV				A	A	14 37 39.0	
	comp=E,22nm,1.5s						
JTM	**Tenmabayashi**	**6.62**	**146**		**P**	**14 36 20.4**	**-1.1**
ERM	**Erimo**	**6.65**	**128**	*i* P	**P**	**14 36 21.3**	**-0.6**
ERM	**Erimo**	**6.65**	**128**	P	**P**	**14 36 21.7**	**-0.2**
EKMR	**Ekimchan**	**7.03**	**344**	⇑*i*P	**P**	**14 36 26.0**	**+0.2**
EKMR				AMB	AMB	14 36 26.6	
	comp=E,11nm,0.7s						
EKMR				*e*S	**S**	**14 37 51.3**	**+0.1**
EKMR				A	A	14 37 52.9	
	comp=E,3.0nm,1.0s						
EKMR				A	A	14 37 52.9	
	comp=E,7.0nm,1.0s						
AKK	**Akkeshi**	**7.04**	**115**	*e*P	**P**	**14 36 25.2**	**-0.8**
NKL	**Nikolayevsk**	**7.41**	**22**	⇑*i*P	**P**	**14 36 31.2**	**+1.5**
NMR	**Nemuro--Hokkai**	**7.43**	**110**	*e*P	**P**	**14 36 29.8**	**-0.5**
NMR				*e*S	**S**	**14 37 54.7**	**-4.8**
JRG	**Rokugo**	**7.70**	**153**	P	**P**	**14 36 32.7**	**-0.5**
JSD	**Sado**	**8.46**	**169**	P	**P**	**14 36 41.7**	**+0.2**
JSD	**Sado**	**8.46**	**169**	P	**P**	**14 36 41.3**	**-0.2**
JMM	**Marumori**	**9.16**	**156**	P	**P**	**14 36 48.3**	**-0.8**
JMM	**Marumori**	**9.16**	**156**	P	**P**	**14 36 48.6**	**-0.5**
ZEA	**Zeya**	**9.34**	**326**	*e*P	**P**	**14 36 51.7**	**+0.9**
ZEA				*e*S	**S**	**14 38 34.7**	**-3.1**
ZEA				pmax	pmax		
	comp=N,30nm,0.6s						
ZEA				pmax	pmax		
	comp=E,10.0nm,0.6s						
ZEA				pmax	pmax		
	comp=Z,40nm,0.6s						
ZEA				smax	smax		
	comp=E,100nm,4.7s						
ZEA				smax	smax		
	comp=N,100nm,6.6s						
ZEA				smax	smax		
	comp=E,10.0nm,1.0s						
ZEA	**Zeya**	**9.34**	**326**	*e*P	**P**	**14 36 51.7**	**+0.9**
ZEA				AMB	AMB	14 36 52.3	
	comp=E,30nm,0.6s						
ZEA				AMB	AMB	14 36 52.3	
	comp=E,10.0nm,0.6s						
ZEA				AMB	AMB	14 36 52.3	
	comp=E,40nm,0.6s						
ZEA				*e*S	**S**	**14 38 34.7**	**-3.1**
ZEA				A	A	14 38 37.7	
	comp=E,100nm,5.5s						
ZEA				A	A	14 38 37.7	
	comp=E,100nm,5.5s						
ZEA				A	A	14 38 38.9	
	comp=E,10.0nm,1.0s						
MAJO	**Matsushiro**	**9.93**	**170**	P	**P**	**14 36 57.6**	**0.0**
MAJO	**Matsushiro**	**9.93**	**170**	P	**P**	**14 36 57.6**	**0.0**
MAT	**Matsushiro**	**9.93**	**170**	P	**P**	**14 36 57.3**	**-0.3**
MJAR	**Matsushiro Arr**	**9.93**	**170**	P	**P**	**14 36 59.2**	**+1.6**
	comp=E,0.7nm,0.3s,baz=357,slow=10,SNR=95						
MJAR	**Matsushiro Arr**	**9.93**	**170**	P	**P**	**14 36 57.8**	**+0.2**
JRY	**Ryogami san**	**10.54**	**168**	P	**P**	**14 37 04.6**	**+0.3**
JKY	**Yasaka**	**10.75**	**185**	P	**P**	**14 37 06.7**	**+0.1**
KSRS	**Korea Array**	**10.79**	**217**	P	**P**	**14 37 08.3**	**+1.2**
	comp=E,0.3nm,0.3s,baz=34,slow=11,SNR=14						
JKSM	**Kasumi**	**10.82**	**186**	P	**P**	**14 37 07.3**	**0.0**
INU	**Inuyama**	**11.02**	**176**	P	**P**	**14 37 09.2**	**-0.3**
JWT	**Wachi**	**11.08**	**183**	P	**P**	**14 37 10.1**	**-0.1**
JOD2	**Odawara 2**	**11.30**	**168**	*e*S	**S**	**14 39 13.5**	**-4.3**
HIA	**Hailar**	**11.41**	**291**	P	**P**	**14 37 13.9**	**+0.3**
HIA	**Hailar**	**11.41**	**291**	P	**P**	**14 37 13.9**	**+0.3**
JHS	**Saijyo**	**11.58**	**192**	P	**P**	**14 37 16.1**	**+0.4**
JHS	**Saijyo**	**11.58**	**192**	P	**P**	**14 37 16.2**	**+0.5**
JMN	**Monobe**	**12.73**	**189**	P	**P**	**14 37 28.9**	**+0.6**
JHJ	**Hachijo jima 2**	**13.51**	**167**	P	**P**	**14 37 38.7**	**+1.9**
	comp=E,21nm,0.3s,baz=340,slow=13,SNR=1.7						
JHJ2	**Mitsune**	**13.53**	**167**	P	**P**	**14 37 37.6**	**+0.7**
MA2	**Magadan**	**15.85**	**28**	P	**P**	**14 38 02.0**	**+0.6**
	comp=E,3.5nm,0.3s,baz=215,slow=12,SNR=27						
MA2	**Magadan**	**15.85**	**28**	P	**P**	**14 38 02.0**	**+0.6**
MA2	**Magadan**	**15.85**	**28**	P	**P**	**14 38 01.5**	**+0.1**
BJT	**Baijiatuau**	**15.87**	**254**	P	**P**	**14 38 01.4**	**-0.6**
BJT				pmax	pmax		
	comp=Z,20nm,0.8s						
BJT	**Baijiatuau**	**15.87**	**254**	P	**P**	**14 38 01.4**	**-0.6**
YAK	**Yakutsk**	**16.14**	**349**	P	**P**	**14 38 03.3**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=88,slow=1.3,SNR=8.5						
YAK	**Yakutsk**	**16.14**	**349**	*e*P	**P**	**14 38 03.0**	**-1.5**
YAK				*e*S	**S**	**14 40 49.1**	**-3.4**
YAK				pmax	pmax		
	comp=Z,14nm,0.8s						
YAK				pmax	pmax		
	comp=N,7.0nm,0.9s						
YAK				smax	smax		
	comp=E,68nm,1.9s						
YAK				smax	smax		
	comp=N,23nm,1.4s						
YAK	**Yakutsk**	**16.14**	**349**	P	**P**	**14 38 03.5**	**-1.0**
YAK	**Yakutsk**	**16.14**	**349**	P	**P**	**14 38 02.4**	**-2.0**
HHC	**Hu-ho-hao-te**	**18.60**	**262**	*e*P	**P**	**14 38 28.9**	**-1.7**
HHC				pmax	pmax		
	comp=Z,25nm,0.8s						
HHC				pmax	pmax		
	comp=Z,110nm,4.2s						
SEY	**Seymchan**	**18.98**	**23**	P	**P**	**14 38 33.7**	**-0.1**
	comp=Z,1.8nm,0.3s,baz=219,slow=7.9,SNR=16						
ULN	**Ulaanbaatar**	**19.81**	**285**	*i* P	**P**	**14 38 40.6**	**-1.3**
ULN				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ULN	**Ulaanbaatar**	**19.81**	**285**	P	**P**	**14 38 40.6**	**-1.3**
ULN	**Ulaanbaatar**	**19.81**	**285**	P	**P**	**14 38 41.3**	**-0.6**
ULN				IAmb	IAmb	14 38 42.4	
	comp=Z,12nm,0.8s						
SONM	**Songino Array**	**20.25**	**285**	P	**P**	**14 38 45.2**	**-0.7**
	comp=Z,14nm,0.5s,baz=84,slow=8.9,SNR=77						
SONM	**Songino Array**	**20.25**	**285**	P	**P**	**14 38 45.1**	**-0.8**
ZAK	**Zakamensk**	**22.09**	**293**	*e*P	**P**	**14 38 58.2**	**-4.3**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
TIXI	**Tiksi**	**25.60**	**355**	P	**P**	**14 39 31.9**	**-1.6**
	comp=Z,1.8nm,0.3s,baz=140,slow=8.5,SNR=9.1						
TIXI	**Tiksi**	**25.60**	**355**	*i* P	**P**	**14 39 31.5**	**-2.0**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.5s						
TIXI	**Tiksi**	**25.60**	**355**	P	**P**	**14 39 31.9**	**-1.6**
LZH	**Lanzhou**	**26.21**	**259**	⇑P	**P**	**14 39 40.4**	**+0.8**
LZH				pmax	pmax		
	comp=Z,20nm,1.1s						
BILL	**Bilibino**	**26.66**	**25**	*e*P	**P**	**14 39 42.5**	**-0.4**
BILL				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BILL	**Bilibino**	**26.66**	**25**	P	**P**	**14 39 42.5**	**-0.4**
GTA	**Gaotai**	**27.33**	**268**	⇓P	**P**	**14 39 49.6**	**+0.2**
GTA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CD2	**Chengdu**	**29.38**	**250**	P	**P**	**14 40 06.8**	**-0.6**
DGZ	**Jazzator, Alta**	**32.29**	**294**	*i* P	**P**	**14 40 33.0**	**+0.5**
DGZ				pmax	pmax		
	comp=Z,8.0nm,0.5s						
ZAA0	**Zalesovo Array**	**33.11**	**302**	P	**P**	**14 40 38.6**	**-0.6**
ZAA0				IAmb	IAmb	14 40 39.3	
	comp=Z,5.4nm,0.6s						
ZALV	**Zalesovo Beam**	**33.11**	**302**	P	**P**	**14 40 38.8**	**-0.4**
	comp=Z,6.3nm,0.5s,baz=89,slow=8.4,SNR=24						
ZALV				PcP	**PcP**	**14 43 10.8**	**+0.6**
	comp=Z,1.3nm,0.5s,baz=136,slow=2.1,SNR=6.7						
ZALV	**Zalesovo Beam**	**33.11**	**302**	P	**P**	**14 40 38.7**	**-0.4**
ZALV					**PcP**	**14 43 10.1**	**-0.1**
WMQ	**Urumqi**	**33.88**	**284**	*e*P	**P**	**14 40 45.3**	**-0.7**
WMQ				PP	**PP**	**14 42 21.9**	**+8.1**
WMQ				PcP	**PcP**	**14 43 11.4**	**-1.3**
WMQ				pmax	pmax		
	comp=Z,16nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,17nm,3.6s						
WMQ				LR	LR		
	comp=N,170nm,28.8s						
WMQ				LR	LR		
	comp=E,93nm,29.0s						
WMQ				LR	LR		
	comp=Z,50nm,28.9s						
MK31	**Makanchi Array**	**36.41**	**291**	P	**P**	**14 41 07.1**	**0.0**
MK31				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MK31	**Makanchi Array**	**36.41**	**291**	P	**P**	**14 41 07.1**	**0.0**
MK31				IAmb	IAmb	14 41 07.8	
	comp=Z,8.9nm,0.7s						
MKAR	**Makanchi Array**	**36.41**	**291**	P	**P**	**14 41 07.0**	**-0.2**
	comp=Z,7.2nm,0.7s,baz=83,slow=9.3,SNR=83						
MKAR	**Makanchi Array**	**36.41**	**291**	P	**P**	**14 41 06.9**	**-0.2**
MAKZ	**Makanchi**	**36.61**	**291**	P	**P**	**14 41 08.8**	**0.0**
MAKZ				pmax	pmax		
	comp=Z,17nm,1.1s						
MAKZ	**Makanchi**	**36.61**	**291**	P	**P**	**14 41 08.8**	**0.0**
MAKZ				IAmb	IAmb	14 41 09.5	
	comp=Z,17nm,1.1s						
KURK	**Kurchatov**	**37.51**	**298**	⇓*i*P	**P**	**14 41 15.6**	**-0.5**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.4s						
KURK	**Kurchatov**	**37.51**	**298**	P	**P**	**14 41 15.2**	**-0.9**
KURK				IAmb	IAmb	14 41 16.5	
	comp=Z,7.8nm,0.8s						
KURBB	**Kurchatov Arra**	**37.59**	**298**	P	**P**	**14 41 16.6**	**-0.2**
	comp=Z,8.9nm,0.5s,baz=73,slow=8.9,SNR=16						
A21K	**Barrow**	**39.72**	**28**	P	**P**	**14 41 33.2**	**-0.7**
UBPT	**Khong Chiam**	**40.20**	**230**	P	**P**	**14 41 38.7**	**+0.2**
TTA	**Tatalina**	**40.45**	**41**	P	**P**	**14 41 39.1**	**-0.9**
TTA	**Tatalina**	**40.45**	**41**	P	**P**	**14 41 39.1**	**-0.9**
IMAR	**Indian Mountai**	**41.01**	**36**	P	**P**	**14 41 43.9**	**-0.5**
IMAR				PcP	**PcP**	**14 43 36.0**	**+1.6**
J20K	**Nowinta River**	**41.09**	**39**	P	**P**	**14 41 45.1**	**+0.1**
J20K				IAmb	IAmb	14 41 46.0	
	comp=Z,8.6nm,1.0s						
J20K				PcP	**PcP**	**14 43 36.7**	**+2.0**
K20K	**Telida**	**41.26**	**40**	P	**P**	**14 41 46.1**	**-0.3**
CMAR	**Chiang Mai Arr**	**41.35**	**240**	P	**P**	**14 41 48.7**	**+0.9**
	comp=Z,0.6nm,0.4s,baz=30,slow=7.3,SNR=8.1						
CMAR	**Chiang Mai Arr**	**41.35**	**240**	*i* P	**P**	**14 41 49.0**	**+1.2**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BVAR	**Borovoye Array**	**41.70**	**304**	P	**P**	**14 41 50.1**	**0.0**
	comp=Z,5.9nm,0.4s,baz=158,slow=4.2,SNR=23						
BRVK	**Borovoye**	**41.75**	**304**	*i* P	**P**	**14 41 50.0**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.4s						
BRVK	**Borovoye**	**41.75**	**304**	P	**P**	**14 41 50.0**	**-0.4**
BRVK	**Borovoye**	**41.75**	**304**	P	**P**	**14 41 49.0**	**-1.5**
COLD	**Coldfoot**	**42.24**	**34**	P	**P**	**14 41 54.4**	**+0.2**
TOLK	**Toolik Lake Re**	**42.27**	**32**	P	**P**	**14 41 54.4**	**-0.1**
TOLK				IAmb	IAmb	14 41 55.1	
	comp=Z,7.3nm,0.8s						
TAPN	**Taplejung**	**42.41**	**261**	*e*P	**P**	**14 41 56.9**	**+0.5**
	comp=Z,16nm,0.5s						
TRF	**Thorofare Moun**	**42.91**	**39**	P	**P**	**14 41 59.6**	**-0.1**
ODAN	**Odare**	**42.94**	**260**	*e*P	**P**	**14 42 01.5**	**+1.0**
	comp=Z,15nm,0.7s						
I23K	**Minto, Yukon-K**	**42.95**	**37**	P	**P**	**14 41 60.0**	**+0.3**
AAK	**Ala-Archa**	**43.16**	**288**	*i* P	**P**	**14 42 01.5**	**-0.4**
AAK				pmax	pmax		
	comp=Z,6.0nm,0.4s						
AAK	**Ala-Archa**	**43.16**	**288**	P	**P**	**14 42 01.5**	**-0.4**
JIRN	**Jiri**	**43.25**	**262**	*e*P	**P**	**14 42 03.6**	**+0.5**
	comp=Z,30nm,0.6s						
KDAK	**Kodiak Island**	**43.26**	**48**	P	**P**	**14 42 01.7**	**-0.6**
	comp=Z,8.2nm,0.9s,baz=297,slow=9.0,SNR=13						
KDAK	**Kodiak Island**	**43.26**	**48**	P	**P**	**14 42 01.1**	**-1.2**
RAMN	**Ramite**	**43.42**	**261**	*e*P	**P**	**14 42 04.6**	**+0.3**
	comp=Z,27nm,0.4s						
MCK	**McKinley**	**43.43**	**39**	P	**P**	**14 42 03.5**	**-0.1**
MCK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MCK	**McKinley**	**43.43**	**39**	P	**P**	**14 42 03.5**	**-0.1**
MDM	**Murphy Dome**	**43.45**	**37**	P	**P**	**14 42 03.8**	**0.0**
COLA	**College**	**43.63**	**37**	*i* P	**P**	**14 42 05.3**	**+0.2**
COLA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CCB	**Clear Creek Bu**	**43.70**	**37**	P	**P**	**14 42 06.0**	**+0.3**
KKN	**Kakani**	**43.80**	**263**	*e*P	**P**	**14 42 07.4**	**+0.2**

	comp=Z,19nm,0.6s						
PKI	Pulchoki	43.84	263	eP	P	14 42 07.8	+0.1
GHO	Glory Hole Cre	43.93	41	P	P	14 42 07.6	0.0
DMN	Daman	44.03	263	eP	P	14 42 09.7	+0.6
IL31		44.06	37	P	P	14 42 08.3	-0.1
IL31				IAmb	IAmb	14 42 09.2	
	comp=Z,5.5nm,0.7s						
IL31				PcP	PcP	14 43 44.6	-0.1
ILAR	Eielson Array	44.06	37	P	P	14 42 08.4	-0.1
	comp=Z,4.7nm,0.7s,baz=283,slow=6.9,SNR=52						
ILAR				PcP	PcP	14 43 44.5	-0.2
	comp=Z,0.7nm,0.7s,baz=278,slow=5.2,SNR=4.1						
ILAR	Eielson Array	44.06	37	P	P	14 42 08.1	-0.4
GKN	Gorkha	44.10	264	eP	P	14 42 09.7	+0.1
	comp=Z,26nm,0.3s						
HDA	Harding Lake	44.12	37	P	P	14 42 08.2	-0.8
HDA				IAmb	IAmb	14 42 09.8	
	comp=Z,18nm,1.1s						
SML	Sawmill	44.19	41	P	P	14 42 09.2	-0.4
SML				pmax	pmax		
	comp=Z,14nm,1.1s						
SML	Sawmill	44.19	41	P	P	14 42 09.2	-0.4
SML				IAmb	IAmb	14 42 20.2	
	comp=Z,14nm,1.1s						
DHY	Denali Highway	44.28	39	P	P	14 42 10.1	-0.3
DHY				IAmb	IAmb	14 42 10.6	
	comp=Z,7.3nm,0.6s						
BMAR	Burnt Mountain	44.34	33	P	P	14 42 11.6	+0.8
BMAR				PcP	PcP	14 43 47.9	+2.1
PRP	Porcupine Dome	44.43	36	P	P	14 42 12.3	+0.8
DANN	Dangsing	44.49	265	eP	P	14 42 13.4	+0.7
	comp=Z,98nm,0.6s						
KOLN	Koldanda	44.96	265	eP	P	14 42 16.8	+0.5
M24K	Tolsona, Glenn	45.08	40	P	P	14 42 17.6	+1.0
PYUN	Piuthan	45.18	265	eP	P	14 42 18.4	+0.4
	comp=Z,25nm,0.4s						
KLU	Klutina	45.38	41	P	P	14 42 19.4	+0.5
SCRK	Sand Creek	45.48	38	P	P	14 42 19.3	-0.4
SCRK				IAmb	IAmb	14 42 20.4	
	comp=Z,16nm,1.1s						
KKAR	Karatay Array	45.54	291	P	P	14 42 20.3	0.0
KKAR	Karatay Array	45.54	291	P	P	14 42 20.3	0.0
DOT	Dot Lake	45.55	38	P	P	14 42 19.8	-0.3
DOT				IAmb	IAmb	14 42 20.6	
	comp=Z,10nm,0.6s						
N25K	Chitina, Valde	45.95	41	P	P	14 42 23.9	+0.7
L26K	Log Cabin Wild	46.05	39	P	P	14 42 23.9	0.0
GLB	Gilahina Butte	46.36	41	P	P	14 42 27.2	+0.9
GLB				IAmb	IAmb	14 42 38.4	
	comp=Z,11nm,1.2s						
VRDI	Verde Repeater	46.59	41	P	P	14 42 28.9	+0.6
VRDI				IAmb	IAmb	14 42 30.3	
	comp=Z,17nm,1.2s						
L27K	Beaver Creek,	46.69	38	P	P	14 42 29.7	+0.8
BCAR	Beaver Creek A	46.71	38	P	P	14 42 29.6	+0.6
MCARA	McCarthy VSAT	46.73	41	P	P	14 42 29.8	+0.7
MCARA				IAmb	IAmb	14 42 39.4	
	comp=Z,19nm,1.2s						
M27K	Edge Creek, AK	46.91	39	P	P	14 42 31.4	+0.7
ARU	Arti	46.96	312	d iP	P	14 42 30.7	-0.2
ARU						14 44 22.8	
ARU				S	S	14 48 48.8	-0.1
ARU				SS	SS	14 52 22.0	+0.3
ARU				pmax	pmax		
	comp=Z,7.0nm,1.7s						
ARU	Arti	46.96	312	P	P	14 42 30.5	-0.4
BARN	Barnard Glacie	47.47	41	P	P	14 42 35.5	+0.6
BARN				IAmb	IAmb	14 42 36.6	
	comp=Z,9.0nm,0.5s						
CTGM	Chitina Glacie	47.65	41	P	P	14 42 37.2	+0.9
GAR	Garm	47.69	286	P	P	14 42 36.5	-0.5
GAR				IAmb	IAmb	14 42 39.0	
	comp=Z,5.2nm,0.6s						
INK	Inuvik	48.08	30	P	P	14 42 39.5	+0.4
	comp=Z,12nm,0.4s,baz=292,slow=9.1,SNR=164						
INK	Inuvik	48.08	30	P	P	14 42 39.6	+0.4
INK				IAmb	IAmb	14 42 40.2	
	comp=Z,13nm,0.8s						
A36M	Sachs Harbour	49.21	24	P	P	14 42 48.2	+0.6
ABKAR	Akbulak array	49.22	303	P	P	14 42 48.2	+0.2
ABKAR				IAmb	IAmb	14 42 49.2	
	comp=Z,7.8nm,0.7s						
AKTO	Aktyubinsk	49.78	305	P	P	14 42 52.0	-0.2
	comp=Z,2.3nm,0.7s,baz=79,slow=7.9,SNR=8.6						
SPITS	Spitsbergen Ar	50.59	347	P	P	14 42 57.5	-0.2
	comp=Z,2.5nm,0.4s,baz=70,slow=8.1,SNR=9.5						
EUNU	Eureka	51.56	9	P	P	14 43 04.6	-0.3
EUNU				IAmb	IAmb	14 43 05.3	
	comp=Z,5.8nm,0.6s						
ARCES	ARCESS Array B	53.89	336	P	P	14 43 21.9	+0.1
	comp=Z,2.9nm,0.7s,baz=48,slow=8.7,SNR=1.9						
DLBC	Dease Lake	53.90	41	P	P	14 43 24.0	+1.9
	comp=Z,2.1nm,0.5s,baz=308,slow=8.4,SNR=7.5						
RES	Resolute Bay	54.57	15	P	P	14 43 26.5	+0.1
	comp=Z,8.1nm,0.5s,baz=324,slow=5.9,SNR=19						
RES	Resolute Bay	54.57	15	P	P	14 43 26.2	-0.3
RES				IAmb	IAmb	14 43 27.1	
	comp=Z,10nm,1.0s						
GEYT	Alibeck	56.28	292	P	P	14 43 39.4	+0.2
	comp=Z,1.7nm,0.4s,baz=124,slow=4.2,SNR=2.6						
TULEG	Thule	56.35	7	P	P	14 43 38.2	-0.7
TULEG				IAmb	IAmb	14 43 38.7	
	comp=Z,11nm,0.7s						
YKA	Yellowknife Ar	57.80	31	P	P	14 43 49.5	+0.4
	comp=Z,2.2nm,0.5s,baz=32,slow=8.5,SNR=12						
YKA	Yellowknife Ar	57.80	31	iP	P	14 43 49.5	+0.4
YKA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
YKA	Yellowknife Ar	57.80	31	P	P	14 43 48.9	-0.3
FIA1	FINESS Array S	58.77	328	P	P	14 43 54.8	-1.0
FIA1				IAmb	IAmb	14 44 00.4	
	comp=Z,13nm,1.1s						
FINES	FINESS Array B	58.77	328	P	P	14 43 55.3	-0.4
	comp=Z,2.1nm,0.4s,baz=54,slow=7.6,SNR=34						
FINES	FINESS Array B	58.77	328	iP	P	14 43 55.0	-0.7
FINES				pmax	pmax		
	comp=Z,2.0nm,0.4s						
FINES	FINESS Array B	58.77	328	P	P	14 43 55.2	-0.6
FINES				PcP	PcP	14 44 39.5	-0.5
SUMG	Summit	61.31	358	P	P	14 44 12.9	-0.1
SUMG				pmax	pmax		
	comp=Z,4.0nm,0.7s						
SUMG	Summit	61.31	358	iP	P	14 44 13.2	+0.1
SUMG				IAmb	IAmb	14 44 15.6	
	comp=Z,3.9nm,0.8s						
SUMG	Summit	61.31	358	P	P	14 44 12.9	-0.1
SUMG				IAmb	IAmb	14 44 13.5	
	comp=Z,4.3nm,0.7s						
KNRA	Kununurra	62.10	188	P	P	14 44 18.4	0.0
KNRA				IAmb	IAmb	14 44 21.7	
	comp=Z,14nm,1.1s						
HFS	Hagfors	63.99	332	P	P	14 44 29.6	-0.6
	comp=Z,1.8nm,0.4s,baz=36,slow=5.5,SNR=16						
NB2	NORSAR Subarra	64.08	334	P	P	14 44 30.1	-0.7
	comp=Z,0.9nm,0.5s,baz=38,slow=6.9						
NOA	NORSAR Array B	64.08	334	P	P	14 44 30.3	-0.5
	comp=Z,0.6nm,0.6s,baz=51,slow=4.9,SNR=4.3						
AKASG	Malin Array Be	64.63	318	P	P	14 44 33.9	-0.5
	comp=Z,0.4nm,0.3s,baz=40,slow=7.6,SNR=5.2						
AKASG	Malin Array Be	64.63	318	iP	P	14 44 33.9	-0.5
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
WRA	Warramunga Arr	66.00	182	P	P	14 44 44.1	+0.7
	comp=Z,0.6nm,0.4s,baz=359,slow=6.7,SNR=27						
WRA	Warramunga Arr	66.00	182	iP	P	14 44 44.0	+0.6
WRA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
WRA	Warramunga Arr	66.00	182	P	P	14 44 44.1	+0.7
YBH	Yreka Blue Hor	67.78	52	P	P	14 44 56.3	+1.9
	comp=Z,1.2nm,0.4s,baz=294,slow=5.8,SNR=3.5						
ASAR	Alice Springs	69.72	182	P	P	14 45 07.7	+1.4
	comp=Z,0.9nm,0.6s,baz=355,slow=5.9,SNR=34						
ASAR	Alice Springs	69.72	182	P	P	14 45 07.4	+1.2
DLMT	Dillon	70.46	44	P	P	14 45 11.7	+1.0
PNTR	Pine Nut	71.32	53	P	P	14 45 16.7	+0.7
PNTR				IAmb	IAmb	14 45 18.4	
	comp=Z,5.1nm,0.9s						
KVN	Kaiserville	72.17	52	P	P	14 45 22.0	+1.1
KVN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KVN	Kaiserville	72.17	52	P	P	14 45 22.0	+1.1
KVN				IAmb	IAmb	14 45 23.4	
	comp=Z,4.8nm,0.7s						
ELK	Elko	72.48	49	P	P	14 45 23.9	+1.1
ELK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ELK	Elko	72.48	49	P	P	14 45 23.9	+1.1
ELK				IAmb	IAmb	14 45 25.1	
	comp=Z,2.8nm,0.6s						
NVAR	Mina Array Bea	72.50	52	P	P	14 45 24.6	+1.7
	comp=Z,2.7nm,0.6s,baz=304,slow=5.7,SNR=30						
ULM	Lac du Bonnet	73.77	32	P	P	14 45 29.7	0.0
	comp=Z,2.6nm,0.5s,baz=334,slow=5.6,SNR=5.0						
BW06	Boulder Array	73.85	44	P	P	14 45 31.2	+0.6
BW06				IAmb	IAmb	14 45 32.4	
	comp=Z,4.5nm,0.9s						
PD31	Pinedale Array	73.85	44	P	P	14 45 31.5	+0.9
PDAR	Pinedale Array	73.85	44	P	P	14 45 31.4	+0.9
	comp=Z,3.6nm,0.7s,baz=9.3,slow=2.0,SNR=36						
PDAR	Pinedale Array	73.85	44	P	P	14 45 31.0	+0.4
RSSD	Black Hills	75.38	40	P	P	14 45 39.2	0.0
RSSD				pmax	pmax		
	comp=Z,6.0nm,0.6s						
RSSD	Black Hills	75.38	40	P	P	14 45 39.2	0.0
RSSD				IAmb	IAmb	14 45 40.5	
	comp=Z,5.5nm,0.6s						
ECSD	EROS Data Cent	78.87	36	P	P	14 45 58.0	0.0
ECSD				IAmb	IAmb	14 45 59.0	
	comp=Z,6.2nm,0.8s						
ESDC	Sonseca Array	87.22	330	P	P	14 46 40.5	+0.3
	comp=Z,0.2nm,0.4s,baz=16,slow=4.5,SNR=2.1						
TXAR	Lajitas Array	87.28	49	P	P	14 46 42.6	+1.7
	comp=Z,0.5nm,0.8s,baz=279,slow=2.4,SNR=6.0						
FCAR	Ozark Folk Cen	87.33	37	P	P	14 46 40.1	-0.6
FCAR				IAmb	IAmb	14 46 42.0	
	comp=Z,5.7nm,0.8s						
WHAR	Wooly Hollow	87.77	38	P	P	14 46 43.4	+0.5
SIV	San Ignacio	146.49	31	PKPbc	PKPbc	14 53 33.6	+0.5
	comp=Z,2.3nm,0.5s,baz=338,slow=4.1,SNR=11						
SNAA	Sanae	148.17	203	PKPbc	PKPbc	14 53 36.1	+0.2
	comp=Z,0.3nm,0.5s,baz=180,slow=5.1,SNR=1.7						

FUNV ***14*** *14:48:41.1, 8°.39N×71°.41W, h9km, MW3.1*

ISC 14 14:48:41.3±1.6**, 8°.47N**±0°.04×**71°.37W**±0°.03**, h14**km±13km,
n22, σ**1ˢ.35**/38**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	Socops	0.54	110	eP	Pb	14 48 51.9	-0.6
SOCV				eS	Sb	14 48 59.8	-0.4
SOCV	Socops	0.54	110	eP	Pb	14 48 51.8	-0.8
SOCV				eS	Sb	14 48 59.5	-0.6
SDV	Santo Domingo	0.83	60	eP	Pb	14 48 57.2	-0.5
SDV				eS	Sb	14 49 09.2	+0.3
CAPV	Capacho	1.11	237	eP	Pb	14 49 00.0	-2.5
CAPV				eS	Sb	14 49 14.1	-2.8
PAMC	Pamplona, Colo	1.73	230	eP	Pn	14 49 12.0	+0.5
PAMC				eS	Sb	14 49 35.6	+0.6
OCAC	Ocana	1.95	263	eP	Pn	14 49 13.8	-0.3
OCAC				eS	Sn	14 49 38.2	-0.2
MCQV	Machiques	1.95	324	eP	Pn	14 49 14.6	+0.7
TAMC	Tame, Arauca	2.06	192	eP	Pb	14 49 18.0	-0.6
TAMC				eS	Sg	14 49 47.9	+0.1
ELOV	Elorza	2.37	128	eP	Pg	14 49 28.1	+1.4
ELOV				eS	Sg	14 49 55.2	-2.3
ELOV	Elorza	2.37	128	eP	Pn	14 49 18.8	-0.9
DABV	Dabajuro	2.54	16	eP	Pn	14 49 23.4	+1.3
DABV				eS	Sn	14 49 54.0	+1.0
BARC	Barichara	2.59	224	eP	Pb	14 49 27.9	+0.1
BARC				eS	Sb	14 49 59.6	+0.1
SIQV	Siquisique	2.66	35	eP	Pn	14 49 24.7	+0.9
SIQV				eS	Sn	14 49 55.8	0.0
SMLC	San Martn de	2.69	277	eP	Pn	14 49 24.8	+0.6
SMLC				eS	Sn	14 49 54.4	-2.4
RUSC	La Rusia	3.08	214	eP	Pn	14 49 31.7	+1.8
RUSC				eS	Sn	14 50 08.0	+1.2
BAUV	El Baul	3.32	82	eP	Pn	14 49 33.6	+0.8
BAUV				eS	Sn	14 50 11.4	-0.8
ZARC	Zaragoza, Cauc	3.59	255	eS	Sn	14 50 22.6	+3.7
MONV	Montecano	3.73	22	eP	Pn	14 49 38.5	+0.1
BENV	Beln	4.00	68	eP	Pn	14 49 42.6	+0.3
SJCC	San Jacinto, C	4.02	291	eP	Pn	14 49 44.1	+1.5
SJCC				eS	Sn	14 50 27.8	-1.8
CHIC	Chingaza	4.48	212	eP	Pn	14 49 50.5	+1.3
CHIC				eS	Sn	14 50 41.9	+0.6
BIRV	Birongo	5.41	68	eP	Pn	14 50 01.1	-0.5

IDC ***14*** *14:53:51.2±1.5, 5°.00S×133°.86E, h0km, mb3.6/1,
mb1 3.7/6, mb1mx3.4/32, mbtmp3.6/6, ML3.5/5, MS2.8/1,
Ms1 2.8/1, ms1mx2.1/32, Error ellipse: s-maj=40.3km
s-min=15.1km az=85.0*

ISC 14 14:53:53.1±0.9**, 5°.06S**±0°.06×**133°.8E**±0°.1**, h25**km**, n7,**
σ**3ˢ.17**/10**, Aru Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	4.84	329	Pn	Pn	14 55 05.4	+1.0
	1.6nm,0.3s,baz=180,slow=18,SNR=3.1						
SIJI				Sn	Sn	14 55 55.4	-4.3
	2.9nm,0.3s,baz=330,slow=23,SNR=7.1						
JAY	Jayapura	7.39	70	Pn	Pn	14 55 38.4	-1.1
	0.3nm,0.3s,baz=161,slow=20,SNR=1.3						
WRA	Warramunga Arr	14.81	178	Pn	Pn	14 57 21.0	-0.1
	0.1nm,0.3s,baz=356,slow=14,SNR=8.2						
WRA				Sn	Sn	15 00 00.0	-4.5
	0.1nm,0.3s,baz=358,slow=24,SNR=2.3						
FITZ	Fitzroy Crossi	15.19	211	Pn	Pn	14 57 28.3	+2.1
	0.3nm,0.3s,baz=42,slow=10,SNR=17						
FITZ				Sn	Sn	15 00 10.4	-3.3
	0.3nm,0.3s,baz=163,slow=18,SNR=3.1						
ASAR	Alice Springs	18.50	180	P	Pn	14 58 10.4	+2.5
	0.2nm,0.3s,baz=6.5,slow=12,SNR=20						
ASAR				S	S	15 01 39.2	+1.6
	0.1nm,0.3s,baz=356,slow=27,SNR=2.0						
GUMO	Guam	21.56	31	LR	LR	15 06 32.8	
	comp=Z,25nm,19.1s,baz=108,slow=36						
MKAR	Makanchi Array	68.72	325	P	P	15 04 57.0	+2.3
	0.3nm,0.5s,baz=115,slow=7.2,SNR=5.2						

SJA ***14*** *14:54:49.5±0.7, 29°.27S×72°.25W, h20km±7km, ML4.4,
MW4.3*

IDC ***14*** *14:54:51.9±1.1, 29°.36S×71°.77W, h0km, mb3.9/2,
mb1 4.0/6, mb1mx3.8/29, mbtmp3.8/6, ML3.6/4, MS3.4/7,
Ms1 3.4/7, ms1mx3.2/21, Error ellipse: s-maj=38.2km
s-min=30.5km az=103.0*

GUC ***14*** *14:54:54.2±0.7, 29°.42S×71°.86W, h31km±7km, ML4.4*

NEIC ***14*** *14:54:54.0±2.5, 29°.37S±0°.04×71°.9W±0°.1, h35km±2km,
mb4.3/2, ML4.4(GUC), Error ellipse: s-maj=16.4km
s-min=7.3km az=91.0*

ISC 14 14:54:50.0±1.6**, 29°.36S**±0°.03×**71°.93W**±0°.05**, h1**km±10km,
n91, σ**2ˢ.00**/114**, mb4.3**/4**, MS3.3**/4**, 1C-4D, Near coast of
central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO05	La Serena	0.82	133	⇓iP	Pn	14 55 07.9	-0.7
CO05				eS	Sg	14 55 17.3	+1.1
CO05				IAML		14 55 21.0	
	comp=N,26μm,0.6s						
CO05	La Serena	0.82	133		Pb	14 55 07.7	+0.8
LCO	Las Campanas	1.13	72	⇓iP	Pn	14 55 13.3	+0.2
LCO				eS	Sn	14 55 28.9	-0.6
LCO	Las Campanas	1.13	72		Pn	14 55 13.5	+0.4
LCO	Las Campanas	1.13	72	eP	Pn	14 55 13.0	-0.1
GO04	Tololo Observa	1.27	130	⇓iP	Pn	14 55 15.5	+0.4
GO04				eS	Sb	14 55 31.5	-0.3
GO04	Tololo Observa	1.27	130		Pn	14 55 15.5	+0.4
GO04	Tololo Observa	1.27	130	eP	Sg	14 55 32.5	+1.7
CO06	Fray Jorge	1.33	169	⇓iP	Pb	14 55 16.2	+0.4
CO06				eS	Sb	14 55 33.2	-0.1
CO06	Fray Jorge	1.33	169		Pb	14 55 16.0	+0.3
AC04	Llanos de Chal	1.38	33	⇑iP	Pb	14 55 17.1	+0.5
AC04	Llanos de Chal	1.38	33		Pb	14 55 17.0	+0.5
AC04	Llanos de Chal	1.38	33	eP	Pb	14 55 17.0	+0.5
AROD	Rodeo	2.28	111	eP	Pg	14 55 33.4	-0.3
AROD				eS	Sg	14 56 03.7	+0.5
GO03	Copiap	2.31	41	eP	Pn	14 55 30.5	+1.3
GO03				eS	Sb	14 56 01.2	-0.2
GO03				IAML		14 56 10.9	
	comp=E,1μm,0.4s						
GO03	Copiap	2.31	41		Pn	14 55 30.7	+1.5
GO03	Copiap	2.31	41	eP	Pb	14 55 31.0	-1.4
GO03				eS	Sb	14 56 01.5	+0.1
ACDV	Cuesta del Vie	2.57	109	eP	Pb	14 55 37.5	+0.5
ACDV				eS	Sg	14 56 13.3	+0.7
ACDV				IAML		14 56 16.4	
	comp=Z,1μm,0.9s						
ACCO	Cerro Coronel	2.77	117	eP	Pb	14 55 40.6	+0.2
ACCO				eS	Sg	14 56 18.1	-0.8
VA06	Catapilco	3.23	171	eP	Pn	14 55 43.2	+1.3
VA06				IAML		14 56 37.5	
	comp=E,2μm,0.6s						
VCA	Vinchina	3.32	80	eP	Pb	14 55 50.0	+0.3
VCA				eS	Sb	14 56 30.0	-0.6
VCA				IAML		14 56 46.4	
	comp=Z,1μm,0.5s						
RTLS	Leoncito	3.32	138	eP	Pb	14 55 48.0	-1.9
RTLS				eS	Sb	14 56 29.7	-1.3
RTLS				IAML		14 56 45.9	
	comp=Z,962nm,0.8s						
AC02	Maricunga	3.53	45		Pn	14 55 47.6	+1.3
VA03	San Esteban	3.59	161	eP	Pn	14 55 49.6	+2.7
VA03	San Esteban	3.59	161		Pn	14 55 48.9	+2.0
VA03	San Esteban	3.59	161	eP	Pn	14 55 49.9	+3.1
VA03				eP	Pn	14 55 50.0	+3.1
VA03				eS	Sb	14 56 37.9	-0.5
VA03				IAML		14 56 54.1	
	comp=Z,952nm,0.6s						
AUSP	Uspallata	3.59	143	eP	Pb	14 55 52.0	-2.5
AUSP				eS	Sb	14 56 36.5	-2.2
ROCH	El Roble	3.68	168	eP	Pn	14 55 49.6	+1.3
ROC1	El Roble	3.69	168	eP	Pn	14 55 50.0	+1.7
ROC1				eP	Pn	14 55 50.1	+1.7
ROC1				eS	Sb	14 56 37.8	-3.6
PEL	Peldehue	3.92	165	eP	Pn	14 55 53.4	+2.1
PEL	Peldehue	3.92	165		Pn	14 55 53.5	+2.1
PEL	Peldehue	3.92	165	eP	Pn	14 55 54.0	+2.7
PEL				eS	Sg	14 56 55.9	+0.1
MT02	Curacav	3.94	170	eP	Pn	14 55 53.0	+1.4
MT02	Curacav	3.94	170		Pn	14 55 53.4	+1.7
MT02	Curacav	3.94	170	eP	Pn	14 55 53.1	+1.4
MT02				eP	Pn	14 55 54.0	+2.4
MT02				eS	Sn	14 56 42.5	+4.0
MT02				IAML		14 56 58.9	
	comp=Z,297nm,0.5s						
AVFE	Valle Fertil	4.09	110	eP	Pn	14 55 58.0	+4.3
AVFE				eS	Sb	14 56 53.0	+0.3
AVFE				IAML		14 57 03.5	
	comp=Z,381nm,0.7s						
MT05	Renca	4.14	166	eP	Pn	14 55 56.4	+1.9
MT05	Renca	4.14	166		Pn	14 55 56.1	+1.6
MT05	Renca	4.14	166	eP	Pn	14 55 53.0	-1.4
MT05				eP	Pn	14 55 58.0	+3.5
MT05				eS	Sb	14 56 55.5	+1.2
MT05				IAML		14 57 15.2	
	comp=Z,407nm,1.4s						
ASAL	Salagasta	4.17	141	eP	Pn	14 55 55.5	+0.7
ASAL				eP	Pb	14 56 00.0	-4.3
ASAL				eS	Sb	14 56 53.0	-2.2
ACLC	CERRO LA CRUZ	4.34	92	eP	Pn	14 55 55.5	-1.7
ACLC				eP	Pn	14 56 01.0	+3.7
ACLC				eP	Pn	14 56 01.0	+3.7
ACLC				eS	Sb	14 56 55.8	-4.3
ACLC				IAML		14 57 14.6	
	comp=Z,336nm,0.6s						
MT09	Talagante	4.47	170	eP	Pn	14 56 00.8	+1.8
MT09	Talagante	4.47	170		Pn	14 56 00.8	+1.8
MT01	Popeta	4.53	173	eP	Pn	14 56 00.8	+1.1
MT01	Popeta	4.53	173		Pn	14 56 00.7	+1.1
MT01	Popeta	4.53	173	eP	Pn	14 56 01.0	+1.4
MT01				eS	Sn	14 56 53.3	+0.4
MT01				IAML		14 57 25.6	
	comp=Z,168nm,0.5s						
LMEL	Las Melosas	4.71	162	eP	Pn	14 56 05.9	+3.6
BO04	La Punta	4.75	167	eP	Pn	14 56 04.5	+1.7
APLL	PUNTA DE LOS L	4.80	104	eP	Pn	14 56 07.0	+3.5
ACHE	Chepes	4.89	113	eP	Pn	14 56 09.0	+4.2
ACHE				eS	Sb	14 57 15.0	-1.0
PB14	IPOC Station P	4.91	16		Pn	14 56 04.4	-0.8
BO01	Tunca	5.07	172		Pn	14 56 07.3	+0.3
BO01	Tunca	5.07	172	eP	Pn	14 56 09.0	+1.9
BO01				eS	Sb	14 57 25.0	+4.2
BO01				IAML		14 57 37.5	
	comp=Z,125nm,0.5s						
BO02	Sierra Bellavi	5.50	170		Pn	14 56 14.8	+1.6
BO02	Sierra Bellavi	5.50	170	eP	Pn	14 56 15.0	+1.9
BO02				eS	Sb	14 57 31.0	-2.4
BO02				IAML		14 57 51.2	
	comp=Z,235nm,0.8s						
GO05	Huala	5.63	180		Pn	14 56 14.9	0.0
GO05	Huala	5.63	180	eP	Pn	14 56 15.0	+0.1
RFA	San Rafael	6.14	152	eP	Pn	14 56 25.0	+3.1
RFA				eP	Pn	14 56 25.0	+3.1
MRA	San Martin	6.14	121	eP	Pn	14 56 15.5	-6.5
MRA				eS	Sn	14 57 33.0	+0.1
MRA				IAML		14 58 17.4	
	comp=Z,165nm,0.8s						
PB15	IPOC Station P	6.51	20		Pn	14 56 27.8	+0.7
PB15	IPOC Station P	6.51	20	eP	Pn	14 56 28.0	+0.8
PB15				eS	Sn	14 57 39.9	-2.3
PB15				IAML		14 58 29.0	
	comp=Z,239nm,0.4s						
PB05	IPOC Station P	6.67	14	eP	Pn	14 56 28.0	-1.2
PB05				eS	Sn	14 57 40.0	-5.8
PB05				IAML		14 58 33.7	
	comp=Z,80nm,0.8s						
PB04	IPOC Station P	7.18	13	Pn	Pn	14 56 35.9	-0.4
H03N1	Juan Fernandez	7.22	234	T	T	15 04 23.5	
	baz=64,slow=72,SNR=4128						
H03N2	Juan Fernandez	7.24	234	T	T	15 04 23.9	
	baz=64,slow=72,SNR=3184						
H03N3	Juan Fernandez	7.24	234	T	T	15 04 22.7	
	baz=64,slow=72,SNR=4165						
LVC	Limon Verde	7.25	23	Pn	Pn	14 56 37.9	+0.5
	comp=Z,0.6nm,0.3s,baz=154,slow=9.0,SNR=10						
LVC				LR	LR	14 59 34.8	
	comp=Z,305nm,19.7s,baz=217,slow=39						
LVC	Limon Verde	7.25	23		Pn	14 56 37.6	+0.1
PB01	IPOC Station P	8.57	15	Pn	Pn	14 56 56.3	+0.9
LC01	Cunco	9.51	180	Pn	Pn	14 57 08.0	-0.1
PLCA	Paso Flores	11.40	175	Pn	Pn	14 57 36.5	+2.5
	comp=Z,0.1nm,0.3s,baz=338,slow=12,SNR=3.9						
PLCA	Paso Flores	11.40	175	Pn	Pn	14 57 31.5	-2.5
LL04	Puerto Octay	11.53	182	Pn	Pn	14 57 33.9	-1.8
CPUP	Villa Florida	13.26	80	Pn	Pn	14 57 60.0	+0.5
	comp=Z,0.1nm,0.3s,baz=260,slow=11,SNR=2.4						
CPUP				LR	LR	15 03 28.8	
	comp=Z,191nm,18.2s,baz=246,slow=39						
CPUP	Villa Florida	13.26	80	Pn	Pn	14 57 58.1	-1.4
SIV	San Ignacio	16.64	39	Pn	Pn	14 58 45.8	+1.2
	comp=Z,0.2nm,0.3s,baz=228,slow=13,SNR=10						
NNA	Nana	17.88	344	LR	LR	15 04 25.8	
	comp=Z,65nm,21.4s,baz=188,slow=32						
ATAH	Atahualpa	22.93	343	LR	LR	15 07 03.6	
	comp=Z,79nm,20.7s,baz=184,slow=32						
BDFB	Brasilia	25.90	63	LR	LR	15 11 52.4	
	comp=Z,129nm,19.0s,baz=168,slow=40						
RPN	Rapa Nui	32.94	265	LR	LR	15 10 54.8	
	comp=Z,49nm,21.1s,baz=188,slow=29						
SNAA	Sanae	55.85	159	P	P	15 04 26.8	-1.9
SNAA				IAmb	IAmb	15 04 56.0	
	comp=Z,4.2nm,1.3s						
QSPA	South Pole Qui	60.86	180	P	P	15 05 02.1	-1.8
QSPA				IAmb	IAmb	15 05 13.9	
	comp=Z,2.5nm,1.1s						
TXAR	Lajitas Array	65.77	330	P	P	15 05 39.5	+2.7
	comp=Z,0.5nm,0.8s,baz=140,slow=8.0,SNR=4.6						
TORD	Torodi Ar. Bea	82.56	70	P	P	15 07 16.3	+1.2
	comp=Z,2.3nm,0.8s,baz=256,slow=4.8,SNR=10						
ESDC	Sonseca Array	93.29	46	LR	LR	15 50 27.8	
	comp=Z,36nm,18.1s,baz=275,slow=36						
WRA	Warramunga Arr	124.82	210	PKP	PKiKP	15 13 53.4	+0.8
	comp=Z,0.2nm,0.6s,baz=183,slow=1.8,SNR=1.2						
H11S2	WAKE ISLAND Hy	125.80	272	T	T	17 32 50.9	
	baz=115,slow=74,SNR=10						
H11S1	WAKE ISLAND Hy	125.81	272	T	T	17 32 56.5	
	baz=115,slow=74,SNR=9.3						
H11S3	WAKE ISLAND Hy	125.82	272	T	T	17 32 53.2	
	baz=115,slow=74,SNR=7.8						
ZALV	Zalesovo Beam	150.18	28	PKPbc	PKiKP	15 14 44.4	+1.3
	comp=Z,5.0nm,0.8s,baz=301,slow=3.4,SNR=17						
MKAR	Makanchi Array	153.45	42	PKPbc	PKiKP	15 14 51.7	+1.6
	comp=Z,0.5nm,0.8s,baz=343,slow=1.5,SNR=4.3						

EAF 14 15:02:04.1±1.0**, 19°.66S**×**25°.42E, h10**km**, MD4.1,
Botswana**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATP	Matopo	2.99	105	*e*P	Pn	15 02 51.2	-0.6
MATP				*e*S	Sn	15 03 26.4	-1.3
MATP	Matopo	2.99	105	*e*P	Pn	15 02 51.2	-0.6
MATP				*e*S	Sn	15 03 26.4	-1.3
BLWY	Bulawayo	3.04	100	*e*P	Pn	15 02 52.8	+0.4
BLWY				*e*S	Sn	15 03 26.3	-2.6
BLWY	Bulawayo	3.04	100	*e*P	Pn	15 02 52.8	+0.4
BLWY				*e*S	Sn	15 03 26.3	-2.6
LBTB	Lobatse	5.33	178	*e*P	Pn	15 03 22.7	-1.1
LBTB				*e*S	Sn	15 04 21.1	-4.3
LBTB	Lobatse	5.33	178	*e*P	Pn	15 03 22.7	-1.1
LBTB				*e*S	Sn	15 04 21.1	-4.3

BJI **14** *15:19:07.8±0.0, 5°.04S×134°.21E, h5^{km}, mB5.0/31, mb4.8/56, Ms4.5/18, Ms7 4.1/17*

IDC **14** *15:19:11.3±0.5, 4°.83S×134°.01E, h0^{km}, mb4.6/16, mb1 4.6/22, mb1mx4.4/36, mbtmp4.6/22, ML3.3/4, MS3.9/22, Ms1 4.0/22, ms1mx3.9/32, Error ellipse: s-maj=19.2km s-min=13.0km az=73.0*

NEIC **14** *15:19:12.3±1.8, 4°.77S±0°.05×134°.1E±0°.1, h10^{km}±1^{km}, mb4.8/17, Error ellipse: s-maj=18.9km s-min=7.5km az=77.0*

GCMT **14** *15:19:14.3±0.2, 4°.67S±0°.03×134°.00E±0°.02, h13^{km}±1^{km}, MW4.8/99, Moment Tensor Solution. s22,c22; s99,c132; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.22±.15; $M_{\theta\theta}$0.40±.08; $M_{\phi\phi}$1.83±.10; $M_{r\theta}$0.81±.32; $M_{\theta\phi}$0.37±.06; $M_{\phi r}$0.42±.20; Best double couple: $M_0$2.23900×10^{16} NP1:ϕ_s2.00000°, δ38.00000°, λ-112.00000°. NP2: ϕ_s208.00000°, δ55.00000°, λ-74.00000°. Principal axes: T 2.0070, Plg9.0000°, Azm287.0000°; N 0.4700, Plg13.0000°, Azm19.0000°; P -2.4710, Plg74.0000°, Azm165.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA **14** *15:19:14.2±0.9, 5°S±2°×13°4E±°, h16^{km}±7^{km}, M4.6/31, mb4.7/31, mB5.2/20, MLv4.8/10, Mw(mB)4.6/20, MwMwp4.5/3, Mwp4.9/3*

ISC 14 15:19:15.0±0.3**, 4°.96S**±0°.04×**133°.99E**±0°.04**, h28**^{km}**, n142, σ2^s.10**/143**, mb4.9**/41**, MS4.1**/31**, 3C-2D, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	2.67	319	P	Pn	15 19 54.3	-1.8
FAKI				S	Sn	15 20 23.5	-4.1
FAKI	Fak Fak	2.67	319	Pn	Pn	15 19 53.7	-2.4
FAKI				Sn	Sn	15 20 22.9	-4.7
FAKI	Fak Fak	2.67	319	P	Pn	15 19 54.3	-1.8
SRPI	Serui, Papua	3.80	36	P	Pn	15 20 10.7	-1.0
SAUI	Saumlaki	4.02	222	P	Pn	15 20 16.9	+2.1
SAUI	Saumlaki	4.02	222	Pn	Pn	15 20 17.1	+2.3
SAUI	Saumlaki	4.02	222	P	Pn	15 20 17.3	+2.5
BNDI	Bandanaira	4.10	276	P	Pn	15 20 16.1	+0.3
BAKI	Biak	4.29	30	P	Pn	15 20 17.5	-1.0
SIJI	Sorong	4.89	326	Pn	Pn	15 20 24.1	-2.5
	3.9nm,0.3s,baz=324,slow=24,SNR=14						
SIJI				Sn	Sn	15 21 14.9	-7.5
	8.9nm,0.3s,baz=264,slow=23,SNR=3.9						
SWI	Sorong	4.90	326	P	Pn	15 20 25.2	-1.6
MSAI	Masohi	5.30	287	P	Pn	15 20 32.2	-0.1
	0.2nm424nm27nm,0.5s						
SMPI	Sarmi	5.55	58	P	Pn	15 20 35.5	-0.3
	0.6nm2μm1μm55nm,1.1s						
JAY	Jayapura	7.12	70	Pn	Pn	15 20 56.6	-0.9
	1.3nm,0.3s,baz=221,slow=10,SNR=11						
JAY				Sn	Sn	15 22 15.1	-2.4
	2.7nm,0.3s,baz=248,slow=22,SNR=2.0						
JAY				LR	LR	15 24 29.0	
	comp=Z,1μm,21.1s,baz=248,slow=45						
LBMI	Labuha	7.77	303	P	Pn	15 21 05.1	-1.2
	0.4nm943nm822nm73nm,0.9s						
DRS	Darwin Rock St	8.03	202	P	Pn	15 21 14.3	+4.4
	129nm,0.6s						
MTN	Manton Dam	8.33	200	Pn	Pn	15 21 15.0	+1.1
MTN	Manton Dam	8.33	200	P	Pn	15 21 19.1	+5.1
SANI	Sanana	8.49	290	P	Pn	15 21 13.4	-2.8
	639nm39nm,0.8s						
SANI	Sanana	8.49	290	P	Pn	15 21 13.3	-2.9
SOEI	Soe	10.76	243	P	Pn	15 21 50.5	+3.1
	2μm92nm,1.2s						
SOEI	Soe	10.76	243	Pn	Pn	15 21 48.0	+0.7
SOEI	Soe	10.76	243	P	Pn	15 21 50.1	+2.7
BATI	Baumata	11.49	242	Pn	Pn	15 21 57.4	+0.1
	8.3nm,0.3s,baz=138,slow=2.0,SNR=9.5						
BATI				Sn	Sn	15 24 00.0	-4.8
	4.5nm,0.3s,baz=128,slow=22,SNR=2.4						
BATI	Baumata	11.49	242	P	Pn	15 21 57.1	-0.2
	21nm,0.5s						
KNRA	Kununurra	11.83	205	Pn	Pn	15 22 01.3	-0.6
KNRA	Kununurra	11.83	205	P	Pn	15 22 02.1	+0.2
	186nm,1.0s						
COEN	Coen	12.72	135	Pn	Pn	15 22 12.8	-1.5
COEN	Coen	12.72	135	P	Pn	15 22 13.2	-1.0
	33nm,0.8s						
EDFI	Ende, Flores	12.78	252	P	Pn	15 22 12.8	-2.3
	6.0nm,1.2s						
APSI	Ampana	12.96	288	P	Pn	15 22 16.6	-0.9
	652nm57nm,1.2s						
BSSI	Bau Bau, Buton	13.49	264	P	P	15 22 37.5	+3.9
PMG	Port Moresby	13.79	109	Pn	Pn	15 22 28.4	-0.4
	0.7nm,0.3s,baz=295,slow=11,SNR=11						
PMG				Sn	Sn	15 24 49.4	-12
	1.2nm,0.3s,baz=201,slow=22,SNR=6.2						
PMG				Lg	Lg	15 26 36.8	
	0.5nm,0.3s,baz=98,slow=23,SNR=3.2						
PMG				LR	LR	15 29 11.1	
	comp=Z,1μm,18.6s,baz=328,slow=43						
PMG	Port Moresby	13.79	109	P	Pn	15 22 28.7	-0.1
PMG	Port Moresby	13.79	109	P	Pn	15 22 28.4	-0.4
BKSI	Bulukumba	13.82	268	P	Pn	15 22 30.1	+1.0
	658nm25nm,1.8s						
KAPI	Kappang	14.19	269	Pn	Pn	15 22 34.2	0.0
	0.2nm,0.3s,baz=111,slow=12,SNR=1.3						
KAPI				LR	LR	15 29 43.3	
	comp=Z,648nm,18.7s,baz=108,slow=44						
SPSI	Sidrap Palu	14.21	273	P	Pn	15 22 36.4	+1.9
	542nm27nm,1.3s						
TTSI	Tana Toraja	14.26	277	P	P	15 22 47.0	+4.8
WRAB	Tennant Creek	14.89	179	P	Pn	15 22 43.5	-0.2
WRA	Warramunga Arr	14.90	179	Pn	Pn	15 22 41.2	-2.7
	0.6nm,0.3s,baz=356,slow=13,SNR=59						
WRA				Sn	Sn	15 25 21.3	-6.8
	1.2nm,0.3s,baz=1.7,slow=23,SNR=4.8						
WRA				Lg	Lg	15 27 02.3	
	0.4nm,0.3s,baz=0.5,slow=30,SNR=2.0						
WR0	Warramunga Arr	14.92	178		P	15 22 49.4	-0.1
WR0				IAmb	IAmb	15 23 04.9	
	comp=Z,62nm,0.9s						
FITZ	Fitzroy Crossi	15.40	211	Pn	Pn	15 22 47.8	-2.8
	comp=Z,3.6nm,0.3s,baz=35,slow=12,SNR=92						
FITZ				Sn	Sn	15 25 29.6	-11
	comp=Z,3.7nm,0.3s,baz=121,slow=15,SNR=9.5						
FITZ	Fitzroy Crossi	15.40	211	Pn	Pn	15 22 48.5	-2.0
FITZ	Fitzroy Crossi	15.40	211	P	Pn	15 22 49.6	-0.9
	comp=Z,20nm,0.7s						
QIS	Mount Isa	16.44	161	P	Pn	15 23 02.8	-1.1
	comp=Z,29nm,1.1s						
MTSU	Mount Surprise	16.54	143	P	P	15 23 07.5	0.0
	comp=Z,23nm,0.8s						
AS31	Alice Springs	18.60	180	P	P	15 23 30.0	-0.3
ASAR	Alice Springs	18.60	180	P	Pn	15 23 31.2	+0.6
	comp=Z,1.6nm,0.3s,baz=4.4,slow=10,SNR=83						
ASAR				S	Sn	15 26 50.7	-7.3
	comp=Z,0.5nm,0.3s,baz=2.6,slow=22,SNR=3.1						
ASAR				Lg	Lg	15 28 54.8	
	baz=3.7,slow=30,SNR=1.8						
ASAR	Alice Springs	18.60	180	P	P	15 23 28.9	-1.3
BBKI	Banjar Baru	19.16	274	P	Pn	15 23 38.2	+0.8
	comp=Z,2μmcomp=Z,37nm,1.5s						
CTA	Charters Tower	19.20	143	P	Pn	15 23 40.4	+2.5
	comp=Z,26nm,1.0s						
CTAO	Charters Tower	19.20	143	P	Pn	15 23 40.1	+2.2
MTKI	Muara Teweh, K	19.48	281	P	Pn	15 23 46.7	+5.4
SPMM	Sapulut	19.96	298	P	P	15 23 46.0	+0.7
KMMI	Kalianget	20.02	263	P	Pn	15 23 48.0	+0.3
	comp=Z,59nm,1.1s						
WRKA	Warakurna	20.70	195	P	Pn	15 23 55.1	-0.5
	comp=Z,44nm,1.4s						
GUMO	Guam	21.36	30	LR	LR	15 32 30.2	
	comp=Z,222nm,18.6s,baz=210,slow=38						
LQP	Lukban	22.62	327	⇑*e*P	P	15 24 12.9	-1.1
OOD	Oodnadatta	22.77	176	P	P	15 24 17.2	+1.9
	comp=Z,59nm,0.9s						
SBUM	Sibu	22.96	288	P	P	15 24 18.0	+0.6
INKA	Innaminka	23.55	165	P	P	15 24 25.3	+2.1
	comp=Z,74nm,1.2s						
QLP	Quilpie	23.63	157	P	P	15 24 26.1	+2.2
	comp=Z,195nm,1.7s						
KSM	Kuching	24.51	285	P	P	15 24 33.0	+0.7
MULG	Mulgathing	25.19	180	P	P	15 24 40.9	+2.6
	comp=Z,45nm,1.0s						
LCRK	Leigh Creek	25.67	172	P	P	15 24 45.2	+2.6
	comp=Z,69nm,1.1s						
HNR	Honiara	26.12	101	P	P	15 24 47.7	+0.8
	comp=Z,38nm,0.4s,baz=229,slow=7.3,SNR=3.1						
HNR				LR	LR	15 35 58.3	
	comp=Z,500nm,18.6s,baz=278,slow=38						
FORT	Forrest	26.29	192	P	P	15 24 49.7	+1.5
FORT				IAmb	IAmb	15 25 06.9	
	comp=Z,33nm,0.8s						
LEM	Lembang	26.30	265	LR	LR	15 37 28.0	
	comp=Z,583nm,20.3s,baz=96,slow=42						
STKA	Stephens Creek	27.71	166	P	P	15 25 03.0	+1.9
	comp=Z,3.3nm,0.9s,baz=350,slow=12,SNR=3.4						
STKA				LR	LR	15 37 44.7	
	comp=Z,426nm,18.4s,baz=344,slow=40						
MYKOM	Kota Tinggi	30.85	282	P	P	15 25 31.0	+1.9
JOW	Kunigami	32.08	350	LR	LR	15 36 42.9	
	comp=Z,431nm,21.9s,baz=170,slow=33						
JRMM	Jerantut	32.69	285	P	P	15 25 46.0	+0.8
QIZ	Qiongzhong	33.67	316	P	P	15 25 52.8	-1.0
QIZ				S	S	15 31 16.4	+1.1
QIZ				LR	LR		
	comp=Z,140nm,14.9s						
QIZ				LR	LR		
	comp=Z,140nm,15.3s						
QIZ				LR	LR		
	comp=Z,200nm,23.0s						
DZM	Mont Dzumac	35.72	122	*e*S	S	15 31 45.2	-1.8
	comp=Z,160nm,27.8s						
DZM				*e*LR	LR	15 35 50.2	
	comp=Z,561nm,23.9s						
PSI	Prapat	35.87	282	LR	LR	15 44 26.7	
	comp=Z,119nm,18.2s,baz=133,slow=42						
JHJ	Hachijo jima 2	38.26	8	LR	LR	15 41 29.7	
	comp=Z,236nm,19.8s,baz=322,slow=35						
NJ2	Nanjing	39.52	340	*e*P	P	15 26 43.6	+0.1
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
WHN	Wuhan	39.99	333	⇑P	P	15 26 48.5	+1.1
GYA	Guiyang	40.94	321	⇓P	P	15 26 55.9	+0.5
GYA				pmax	pmax		
	comp=Z,14nm,0.8s						
CMAR	Chiang Mai Arr	41.65	305	P	P	15 27 01.5	+0.2
	comp=Z,3.4nm,1.0s,baz=131,slow=7.2,SNR=23						
CMAR				LR	LR	15 44 34.7	
	comp=Z,40nm,21.4s,baz=184,slow=37						
CMAR	Chiang Mai Arr	41.65	305	P	P	15 27 00.4	-0.9
CHTO	Chiang Mai	41.83	305	P	P	15 27 00.1	-2.6
KSAR	Wonju Array Be	42.56	353	P	P	15 27 06.2	-2.1
KSRS	Korea Array	42.57	353	P	P	15 27 08.0	-0.4
	comp=Z,5.0nm,0.9s,baz=172,slow=9.5,SNR=8.5						
KSRS				PcP	PcP	15 29 02.2	+1.7
	comp=Z,2.5nm,1.0s,baz=163,slow=4.1,SNR=4.3						
KSRS				LR	LR	15 44 34.0	
	comp=Z,135nm,19.8s,baz=174,slow=36						
KMI	Kunming	42.62	316	⇑P	P	15 27 10.0	+0.6
KMI				sP	pP	15 27 16.8	-0.1
KMI				pmax	pmax		
	comp=Z,20nm,1.3s						
KMI				LR	LR		
	comp=Z,120nm,18.5s						
KMI				LR	LR		
	comp=Z,170nm,18.5s						
KMI				LR	LR		
	comp=Z,200nm,28.2s						
XAN	Xi'an	45.45	330	P	P	15 27 31.1	-0.6
XAN				pP	pP	15 27 34.8	-4.4
XAN				PcS	PcS	15 33 03.3	-1.4
XAN				S	S	15 34 16.8	+5.2
XAN				pmax	pmax		
	comp=Z,17nm,1.1s						
XAN				LR	LR		
	comp=Z,170nm,17.2s						
XAN				LR	LR		
	comp=Z,100nm,17.9s						
XAN				LR	LR		
	comp=Z,240nm,20.6s						
CD2	Chengdu	45.90	323	P	P	15 27 34.9	-0.4
CD2				S	S	15 34 23.5	+5.3
CD2				pmax	pmax		
	comp=Z,20nm,0.9s						
CD2				pmax	pmax		
	comp=Z,130nm,4.9s						
CD2				LR	LR		
	comp=Z,270nm,14.7s						
CD2				LR	LR		
	comp=Z,150nm,10.6s						
CD2				LR	LR		
	comp=Z,190nm,14.3s						
BJI	Beijing	47.69	341	P	P	15 27 48.6	-0.4
BJI				pmax	pmax		
	comp=Z,17nm,1.2s						
BJI				LR	LR		
	comp=Z,150nm,13.9s						
BJI				LR	LR		
	comp=Z,160nm,14.0s						
USRK	Ussuriysk Ar.	48.96	358	P	P	15 27 59.2	+0.3
	comp=Z,5.7nm,0.8s,baz=175,slow=8.6,SNR=8.1						
USRK				LR	LR	15 47 29.6	
	comp=Z,115nm,19.3s,baz=156,slow=35						
USRK	Ussuriysk Ar.	48.96	358	P	P	15 27 57.3	-1.6
CN2	Changchun	49.14	352	*e*P	P	15 27 58.8	-1.4
CN2				pmax	pmax		
	comp=Z,10.0nm,1.8s						
MDJ	Mudanjiang	49.51	356	P	P	15 28 03.6	+0.6
MDJ				pP	pP	15 28 08.3	-2.2
MDJ				sP	sP	15 28 11.5	-2.0
MDJ				S	S	15 35 11.3	+2.4
MDJ				ScS	ScS	15 37 53.8	+0.9
MDJ				pmax	pmax		
	comp=Z,42nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,160nm,3.5s						
MDJ				LR	LR		
	comp=Z,270nm,4.4s						
MDJ				LR	LR		
	comp=Z,270nm,3.8s						
MDJ				LR	LR		
	comp=Z,200nm,4.7s						
LZH	Lanzhou	49.64	328	*e*P	P	15 28 05.5	+1.1
LZH				pP	pP	15 28 08.6	-3.4
LZH				pmax	pmax		
	comp=Z,34nm,1.3s						
LZH				LR	LR		
	comp=Z,240nm,14.6s						
LZH				LR	LR		
	comp=Z,170nm,15.0s						
LZH				LR	LR		
	comp=Z,150nm,17.3s						
HHC	Hu-ho-hao-te	50.01	338	*e*P	P	15 28 07.6	+0.6
HHC				pmax	pmax		
	comp=Z,22nm,1.1s						
HHC				pmax	pmax		
	comp=Z,88nm,4.4s						
KLR	Kul'dur	54.00	358	P	P	15 28 36.6	+0.1
	comp=Z,3.4nm,1.0s,baz=183,slow=2.0,SNR=7.7						
GTA	Gaotai	54.25	328	⇓P	P	15 28 39.3	+0.6
GTA				pP	pP	15 28 43.9	-2.4
GTA				sP	sP	15 28 47.3	-1.9
GTA				pmax	pmax		
	comp=Z,19nm,1.2s						
GTA				pmax	pmax		
	comp=Z,84nm,6.2s						
GTA				LR	LR		
	comp=Z,100nm,16.4s						
GTA				LR	LR		
	comp=Z,84nm,16.7s						
GTA				LR	LR		
	comp=Z,110nm,16.0s						
SONM	Songino Array	57.90	338	P	P	15 29 05.3	+0.7
	comp=Z,2.5nm,0.9s,baz=144,slow=7.7,SNR=13						
SONM	Songino Array	57.90	338	P	P	15 29 01.8	-2.8
SONM				IAmb	IAmb	15 29 06.3	
	comp=Z,8.3nm,1.3s						
PETK	Petropavlovsk-	61.22	16	P	P	15 29 27.1	-0.1
	comp=Z,3.6nm,0.9s,baz=203,slow=9.2,SNR=3.2						
PETK				LR	LR	15 54 04.1	
	comp=Z,30nm,21.3s,baz=185,slow=34						
WMQ	Urumqi	63.96	324	*e*P	P	15 29 46.8	+1.0
WMQ				sP	sP	15 29 57.0	+0.5
WMQ				PcP	PcP	15 30 22.3	+1.1
WMQ				pmax	pmax		
	comp=Z,53nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,120nm,3.7s						
WMQ				LR	LR		
	comp=Z,520nm,29.3s						
WMQ				LR	LR		
	comp=Z,560nm,29.2s						
YAK	Yakutsk	66.88	358	P	P	15 30 03.5	-0.7
	comp=Z,20nm,0.7s,baz=168,slow=2.3,SNR=22						
MK31	Makanchi Array	68.78	325	P	P	15 30 15.6	-1.1
MKAR	Makanchi Array	68.78	325	P	P	15 30 17.0	+0.4
	comp=Z,19nm,0.9s,baz=118,slow=7.9,SNR=105						
MKAR				LR	LR	16 01 17.5	
	comp=Z,53nm,20.3s,baz=127,slow=37						
MAKZ	Makanchi	68.97	325	P	P	15 30 17.1	-0.7
KSH	Kashi	69.28	315	P	P	15 30 21.5	+1.5
KSH				pP	pP	15 30 28.8	+1.0
KSH				pmax	pmax		
	comp=Z,12nm,1.1s						
KSH				pmax	pmax		
	comp=Z,240nm,5.0s						
UCH	Uchtor	71.44	318	P	P	15 30 35.1	+1.6
	SNR=13						
ZAA0	Zalesovo Array	71.59	332	P	P	15 30 32.6	-1.0
ZAA0				IAmb	IAmb	15 30 34.0	
	comp=Z,6.7nm,0.9s						
ZALV	Zalesovo Beam	71.59	332	P	P	15 30 32.4	-1.2
	comp=Z,4.4nm,0.8s,baz=92,slow=4.6,SNR=18						
ZALV				LR	LR	16 05 05.6	
	comp=Z,35nm,19.1s,baz=146,slow=38						
ZALV	Zalesovo Beam	71.59	332	P	P	15 30 31.6	-2.0
AAK	Ala-Archa	71.62	318	P	P	15 30 35.6	+1.4
	SNR=7.6						
USP	Ospenovka	71.89	319	P	P	15 30 36.7	+1.0
	SNR=5.5						
AML	Almayashu	71.95	317	P	P	15 30 37.4	+0.9
	SNR=16						
EKS2	Erkin-Say	72.11	318	P	P	15 30 38.3	+1.1
	SNR=11						
KURK	Kurchatov	72.92	327	P	P	15 30 39.3	-2.3
VNDA	Vanda	74.02	174	P	P	15 30 49.0	+1.4
	comp=Z,3.4nm,1.0s,baz=312,slow=6.1,SNR=11						
VNDA				LR	LR	16 03 01.1	
	comp=Z,134nm,18.7s,baz=356,slow=36						
VNDA	Vanda	74.02	174	P	P	15 30 48.2	+0.5
VNDA				IAmb	IAmb	15 31 02.0	
	comp=Z,7.6nm,1.3s						
KK31	Karatay Array	74.49	317	P	P	15 30 50.5	-0.6
KK31				IAmb	IAmb	15 30 52.6	
	comp=Z,10nm,1.0s						
KKAR	Karatay Array	74.49	317	P	P	15 30 51.0	0.0
PPT	Papeete	75.60	107	LR	LR	16 03 04.4	
	comp=Z,68nm,18.5s,baz=304,slow=35						
PPT2	Papeete2	75.60	107	*e*LR	LR	15 54 17.8	
	comp=Z,371nm,35.5s						
TBI	Tubuai	75.71	113	*e*LR	LR	15 54 22.8	
	comp=Z,228nm,23.8s						
TIXI	Tiksi	76.53	358	P	P	15 31 01.4	-0.7
TIXI				IAmb	IAmb	15 31 03.8	
	comp=Z,16nm,1.0s						
MAW	Mawson	78.30	202	P	P	15 31 13.7	+1.6
	comp=Z,7.5nm,1.1s,baz=99,slow=6.2,SNR=10						
MAW				LR	LR	16 05 28.6	
	comp=Z,127nm,18.2s,baz=60,slow=35						
MAW	Mawson	78.30	202	P	P	15 31 13.5	+1.3
BRVK	Borovoye	78.58	326	P	P	15 31 12.7	-1.2
BRVK				IAmb	IAmb	15 31 15.2	
	comp=Z,12nm,0.9s						
NRIK	Noril'sk	80.59	345	P	P	15 31 25.2	+0.7
	comp=Z,12nm,1.0s,baz=133,slow=5.9,SNR=14						
NRIK				LR	LR	16 08 17.2	
	comp=Z,142nm,20.2s,baz=148,slow=37						
GEYT	Alibeck	81.97	309	P	P	15 31 33.3	+0.7
	comp=Z,6.6nm,0.9s,baz=198,slow=4.2,SNR=8.6						
ABKAR	Akbulak array	83.42	321	P	P	15 31 39.4	-0.4
ABKAR	Akbulak array	83.42	321	P	P	15 31 39.4	-0.4
ABKAR				IAmb	IAmb	15 31 40.6	
	comp=Z,3.1nm,0.9s						
QSPA	South Pole Qui	85.01	180	P	P	15 31 48.4	+0.6
TAOE	Nuku Hiva Isla	85.17	98	*e*LR	LR	15 58 47.2	
	comp=Z,214nm,26.5s						
ILAR	Eielson Array	89.83	25	P	P	15 32 09.3	-1.6
	comp=Z,2.6nm,1.0s,baz=268,slow=4.8,SNR=16						
ILAR				LR	LR	16 09 58.6	
	comp=Z,69nm,21.8s,baz=224,slow=34						
INK	Inuvik	95.49	22	P	P	15 32 33.5	-3.4
	comp=Z,2.2nm,1.0s,baz=267,slow=7.8,SNR=5.2						
KMBO	Kilima Mbogo	96.62	268	LR	LR	16 13 22.7	
	comp=Z,69nm,20.7s,baz=96,slow=34						
SNAA	Sanae	98.54	193	Pdiff	Pdif	15 32 52.5	+1.7
VNA2	Neumayer--Watz	100.07	192	Pdiff	Pdif	15 32 58.9	+1.4
VNA3	Neumayer Olymp	100.28	191	Pdiff	Pdif	15 32 59.8	+1.3
TXAR	Lajitas Array	120.48	59	PKP	PKiKP	15 38 05.2	+0.3
	comp=Z,0.5nm,1.0s,baz=0.0,slow=0.3,SNR=4.5						
TORD	Torodi Ar. Bea	132.26	283	PKhKP	PKPpre	15 38 21.1	
	comp=Z,0.6nm,0.9s,baz=64,slow=3.3,SNR=2.5						
TORD				PKP	PKPdf	15 38 27.4	-0.1
	comp=Z,0.6nm,0.8s,baz=43,slow=3.0,SNR=3.9						
TORD				PP	PP	15 40 52.5	+2.3
	comp=Z,0.7nm,1.1s,baz=69,slow=7.9,SNR=3.7						
CPUP	Villa Florida	147.02	161	PKPbc	PKPab	15 38 57.1	-0.2
	comp=Z,7.3nm,0.9s,baz=236,slow=4.6,SNR=7.5						
ROSC	El Rosal	151.79	89	PKPbc	PKiKP	15 39 09.4	+0.2
	comp=Z,7.3nm,0.5s,baz=56,slow=4.9,SNR=4.2						

NIED **14** *15:21:39.0, 31°.23N×128°.73E, h8^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.89; $M_{\theta\theta}$3.28; $M_{\phi\phi}$-1.39; $M_{r\theta}$0.17; $M_{\theta\phi}$0.44; $M_{\phi r}$-2.17; Fault plane solution: $M_0$3.59000×10^{14} NP1:ϕ_s51.00000°, δ59.00000°, λ-142.00000°. NP2:ϕ_s298.00000°, δ58.00000°, λ-38.00000°.*

JMA **14** *15:21:39.0±0.6, 31°.23N×128°.73E, h8^{km}±5^{km}, M3.5*

IDC **14** *15:21:42.5±3.0, 31°.44N×128°.29E, h0^{km}, mb3.4/2, mb1 3.6/4, mb1mx3.4/40, mbtmp3.6/4, ML3.7/2, MS2.6/2, Ms1 2.6/2, ms1mx2.3/35, Error ellipse: s-maj=41.9km s-min=27.5km az=156.0*

ISC 14 15:21:39.7±1.2**, 31°.21N**±0°.07×**128°.82E**±0°.07**, h10**^{km}**, n10, σ0^s.85**/12**, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.90	59	P	Pg	15 21 56.7	-0.3
JSJ				S	Sg	15 22 09.1	+0.4
JKC	Kuchinoerabu	1.40	122	P	Pb	15 22 06.2	+0.3
JKC				*e*S	Sn	15 22 25.0	+1.2
JFU	Fukue jima 2	1.44	358	P	Pn	15 22 05.1	-0.7
JYAK	Yakushimahirau	1.75	123	P	Pn	15 22 09.1	-1.0
JTN	Tanegashima 3	1.94	106	P	Pn	15 22 13.0	+0.3
JNU	Nakatsue	2.58	42	Pn	Pg	15 22 28.4	-0.9
	51nm,0.3s,baz=75,slow=0.0,SNR=14						
JNU				Sn	Sg	15 23 02.4	-0.4
	70nm,0.3s,baz=84,slow=0.2,SNR=6.7						
KSRS	Korea Array	6.27	353	Pn	Pn	15 23 13.4	+1.3
	0.3nm,0.3s,baz=173,slow=14,SNR=6.8						
KSRS				Lg	Lg	15 24 52.0	
	0.4nm,0.3s,baz=221,slow=43,SNR=1.9						
KSRS				LR	LR	15 25 39.3	
	comp=Z,78nm,19.1s,baz=200,slow=40						
MJAR	Matsushiro Arr	9.44	53	LR	LR	15 27 53.3	
	comp=Z,21nm,18.8s,baz=150,slow=38						
SONM	Songino Array	23.84	321	P	P	15 26 53.6	+0.6
	0.7nm,0.7s,baz=132,slow=9.9,SNR=5.1						
MKAR	Makanchi Array	38.77	307	P	P	15 29 03.7	-0.6
	0.6nm,0.8s,baz=102,slow=9.3,SNR=5.4						

IDC 14 15:34:30.1±1.4**, 0°.77N**×**127°.19E, h0**^{km}**, mb3.2**/4**, mb1 3.3**/5**, mb1mx3.2**/32**, mbtmp3.2**/5**, ML3.1**/1**, Error ellipse: s-maj=60.7km s-min=22.8km az=62.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.39	112	Pn	Pn	15 35 37.5	-0.6
	0.9nm,0.3s,baz=336,slow=22,SNR=4.1						
SIJI				Sn	Sn	15 36 30.0	0.0
	baz=178,slow=23,SNR=1.4						

WRA	Warramunga Arr	21.75	162	P	P	15 39 24.6	+1.2
	0.6nm,0.5s,baz=340,slow=11,SNR=9.9						
ASAR	Alice Springs	25.15	165	P	P	15 39 56.3	-1.0
	0.1nm,0.7s,baz=346,slow=10,SNR=1.2						
SONM	Songino Array	50.23	342	P	P	15 43 28.4	+0.3
	0.1nm,0.3s,baz=149,slow=6.1,SNR=1.4						
MKAR	Makanchi Array	60.24	326	P	P	15 44 39.9	-0.4
	0.1nm,0.4s,baz=116,slow=7.6,SNR=2.2						

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*MOS **14** 15:34:39.4±1.0, 43°.68N×148°.33E, h63^{km}, mb4.2/9, Error ellipse: s-maj=9.8km s-min=8.1km az=129.7*
*IDC **14** 15:34:40.3±2.5, 43°.67N×148°.20E, h52^{km}±22^{km}, mb3.6/19, mb1 3.8/22, mb1mx3.7/44, mbtmp3.9/22, ML2.8/3, MS3.4/3, Ms1 3.4/3, ms1mx2.8/42, Error ellipse: s-maj=18.6km s-min=13.1km az=159.0*
*NEIC **14** 15:34:40.7±1.9, 43°.50N±0°.09×148°.3E±0°.1, h60^{km}±5^{km}, mb4.1/10, Error ellipse: s-maj=13.6km s-min=12.5km az=176.0*
*JMA **14** 15:34:40.5±0.2, 43°.47N×147°.88E, h0^{km}, M4.1*
*SKHL **14** 15:34:41.1±0.3, 43°.60N×148°.30E, h76^{km}±6^{km}, mb4.5/6*
ISC 14 15:34:40.4±0.8**, 43°.61N**±0°.06×**148°.24E**±0°.06**, h57**^{km}±7^{km}**, n103, σ1^s.21**/117**, mb4.0**/26**, 2D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.65	351	*d* *i*PN	Pn	15 35 07.5	+0.5
KUR				*i* S	Sn	15 35 27.0	0.0
KUR				pmax	pmax		
	comp=Z,897nm,0.4s						
KUR				pmax	pmax		
	comp=E,219nm,0.3s						
KUR				pmax	pmax		
	comp=N,157nm,0.5s						
KUR				smax	smax		
	comp=E,861nm,0.5s						
KUR				smax	smax		
	comp=N,576nm,0.3s						
KUR	Kuril'sk	1.65	351	*i* P	Pn	15 35 07.0	0.0
KUR				AMB	AMB	15 35 07.0	
	comp=N,897nm,0.5s						
KUR				*i* S	Sn	15 35 26.8	-0.2
KUR				A	A	15 35 28.0	
	comp=N,530nm,0.4s						
KUR				A	A	15 35 28.0	
	comp=N,861nm,0.4s						
YUK	Yuzh-Kuril'sk	1.78	285	*e*PN	Pn	15 35 09.8	+1.1
YUK				*e*S	Sn	15 35 29.7	-0.5
YUK				pmax	pmax		
	comp=Z,282nm,0.2s						
YUK				pmax	pmax		
	comp=N,21nm,0.1s						
YUK				pmax	pmax		
	comp=E,89nm,0.1s						
YUK				smax	smax		
	comp=E,2µm,0.4s						
YUK				smax	smax		
	comp=N,1µm,0.2s						
YUK	Yuzh-Kuril'sk	1.78	285	*e*P	Pn	15 35 09.0	+0.3
YUK				AMB	AMB	15 35 12.1	
	comp=N,230nm,0.6s						
YUK				*e*S	Sn	15 35 29.5	-0.7
YUK				A	A	15 35 30.0	
	comp=N,2µm,0.6s						
YUK				A	A	15 35 30.0	
	comp=N,3µm,0.6s						
GRPR	Tuman	1.83	283	*e*PN	Pn	15 35 10.0	+0.6
GRPR				*e*S	Sn	15 35 30.5	-1.0
GRPR				pmax	pmax		
	comp=N,96nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,212nm,0.3s						
GRPR				smax	smax		
	comp=N,956nm,0.3s						
GRPR				smax	smax		
	comp=E,1µm,0.5s						
GRPR	Tuman	1.83	283	*e*P	Pn	15 35 10.0	+0.6
GRPR				AMB	AMB	15 35 15.0	
	comp=E,96nm,0.3s						
GRPR				AMB	AMB	15 35 15.0	
	comp=E,212nm,0.3s						
GRPR				*e*S	Sn	15 35 30.0	-1.5
GRPR				A	A	15 35 33.0	
	comp=E,950nm,0.4s						
GRPR				A	A	15 35 33.0	
	comp=E,1µm,0.4s						
NEM2	Nemuro 2	1.84	263	P	Pn	15 35 09.8	+0.3
NEM2				*e*S	Sn	15 35 30.6	-1.0
NMR	Nemuro--Hokkai	1.85	263	⇓*i*PN	Pn	15 35 09.8	+0.1
NMR				*i* S	Sn	15 35 30.5	-1.4
NMR	Nemuro--Hokkai	1.85	263	*i* P	Pn	15 35 09.0	-0.7
NMR				*i* S	Sn	15 35 30.0	-1.9
GLVR	Golovnino	1.98	275	*e*PN	Pn	15 35 12.6	+1.1
GLVR				*e*S	Sn	15 35 35.2	0.0
GLVR				pmax	pmax		
	comp=Z,143nm,0.1s						
GLVR				smax	smax		
	comp=E,789nm,0.4s						
GLVR				smax	smax		
	comp=N,1µm,0.5s						
GLVR	Golovnino	1.98	275	*e*P	Pn	15 35 12.0	+0.5
GLVR				AMB	AMB	15 35 13.0	
	comp=N,143nm,0.4s						
GLVR				*e*S	Sn	15 35 35.0	-0.2
GLVR				A	A	15 35 35.0	
	comp=N,1µm,0.5s						
GLVR				A	A	15 35 35.0	
	comp=N,789nm,0.5s						
RUSJ	Misakicho	2.22	284	*e*PN	Pn	15 35 16.7	+1.9
RUSJ				*e*S	Sn	15 35 42.6	+1.5
JRA	Rausu	2.29	279	P	Pn	15 35 16.8	+1.2
JNSB	Nemuroshibetsu	2.35	275	P	Pn	15 35 17.7	+1.1
JNK	Nakash	2.56	271	P	Pn	15 35 20.1	+0.7
JNK				*e*S	Sn	15 35 49.9	+0.5
JAK	Akkeshi	2.66	258	P	Pn	15 35 21.3	+0.5
JAK				*e*S	Sn	15 35 51.3	-0.5
JTKR	Abashiri--Toko	3.16	278	P	Pn	15 35 29.5	+1.9
JTKR				*e*S	Sn	15 36 06.6	+2.5
JAR	Ashorobuto	3.27	266	P	Pn	15 35 30.9	+1.7
JAR				*e*S	Sn	15 36 07.2	+0.4
JMP	Maruseppu	3.56	278	P	Pn	15 35 35.5	+2.4
JCH	Churui	3.71	256	P	Pn	15 35 36.0	+0.9
JEM	Erimo	4.07	249	Pn	Pn	15 35 43.0	+3.0
ERM	Erimo	4.07	249	*i* PN	Pn	15 35 42.7	+2.7
ERM	Erimo	4.07	249	Pn	Pn	15 35 43.4	+3.4
JKA	Kamikawa-asahi	4.11	279	*e*P	Pn	15 35 41.9	+1.2
JKA	Kamikawa-asahi	4.11	279	Pn	Pn	15 35 41.9	+1.2
ASAJ	Asahikawa	4.12	279	P	Pn	15 35 41.9	+1.2
	comp=N,0.7nm,0.3s,baz=108,slow=12,SNR=16						
ASAJ				S	Sn	15 36 26.4	-1.1
	comp=N,1.8nm,0.3s,baz=298,slow=29,SNR=4.1						
JFR	Furan	4.14	266	P	Pn	15 35 43.4	+2.3
JNBK	Urakawa-nobuka	4.24	254	P	Pn	15 35 43.4	+0.9
JSE	Soyaes	4.28	290	P	Pn	15 35 44.8	+1.9
JWK2	Keihoku	4.85	293	P	Pn	15 35 54.2	+3.4
YSS	Yuzh-Sakhalins	5.12	313	*e*PN	Pn	15 35 55.8	+1.4
YSS				*e*S	Sn	15 36 50.1	-2.0
YSS				pmax	pmax		
	comp=Z,20nm,0.5s						
YSS				smax	smax		
	comp=E,20nm,1.2s						
YSS	Yuzh-Sakhalins	5.12	313	*e*P	Pn	15 35 55.8	+1.4
YSS				AMB	AMB	15 35 56.5	
	comp=E,20nm,0.5s						
YSS				*e*S	Sn	15 36 50.1	-2.0
YSS	Yuzh-Sakhalins	5.12	313		Pn	15 35 55.6	+1.2
JRBN	Rebuntou	5.45	292	P	Pn	15 36 01.1	+2.2
JKB	Kayabe	5.58	255	P	Pn	15 36 02.1	+1.3
JKB				*e*S	Sn	15 37 00.9	-2.6
JTM	Tenmabayashi	6.03	245	Pn	Pn	15 36 07.4	+0.5
JMM	Marumori	8.05	227	Pn	Pn	15 36 34.3	-0.4
TYV	Tymovskoe	8.19	334	*e*PN	Pn	15 36 48.6	+12
TYV				pmax	pmax		
	comp=Z,7.0nm,0.8s						
TYV				pmax	pmax		
	comp=Z,100nm,3.1s						
TYV	Tymovskoe	8.19	334	*e*P	Pn	15 36 38.5	+2.1
TYV				AMB	AMB	15 36 49.6	
	comp=Z,7.0nm,0.7s						
MJAR	Matsushiro Arr	10.43	231	P	Pn	15 37 06.2	-1.0
	comp=Z,0.0nm,0.3s,baz=28,slow=14,SNR=2.1						
MJAR	Matsushiro Arr	10.43	231		Pn	15 37 05.2	-1.9
PEA0B	Petropavlovsk-	11.39	30	*i* PN	Pn	15 37 20.1	0.0
PETK	Petropavlovsk-	11.39	30	P	Pn	15 37 18.0	-2.1
	comp=Z,0.3nm,0.3s,baz=207,slow=12,SNR=8.3						
PETK				LR	LR	15 41 39.9	
	comp=Z,39nm,20.1s,baz=137,slow=37						
KLR	Kul'dur	12.69	302	*i* PN	Pn	15 37 39.9	+2.1
KLR	Kul'dur	12.69	302	*i* P	Pn	15 37 37.9	+0.1
YAK	Yakutsk	21.45	336	P	P	15 39 23.9	+0.4
	comp=Z,2.1nm,0.3s,baz=89,slow=3.8,SNR=2.7						
YAK	Yakutsk	21.45	336	*i* P	P	15 39 23.8	+0.3
YAK				pmax	pmax		
	comp=Z,4.0nm,0.4s						
YAK	Yakutsk	21.45	336	*i* P	P	15 39 23.8	+0.3
H11N2	WAKE ISLAND Hy	28.48	141	T	T	16 11 25.3	
	baz=332,slow=76,SNR=35						
H11N1	WAKE ISLAND Hy	28.49	141	T	T	16 11 26.3	
	baz=332,slow=76,SNR=28						
H11N3	WAKE ISLAND Hy	28.50	141	T	T	16 11 29.4	
	baz=332,slow=76,SNR=29						
ULN	Ulaanbaatar	28.81	293	*i* P	P	15 40 33.2	+0.1
ULN				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ULN	Ulaanbaatar	28.81	293	*e*P	P	15 40 33.2	+0.1
SONM	Songino Array	29.26	293	P	P	15 40 37.8	+0.8
	comp=Z,0.8nm,0.6s,baz=85,slow=8.5,SNR=6.1						
SONM	Songino Array	29.26	293	P	P	15 40 36.3	-0.7
H11S1	WAKE ISLAND Hy	29.46	142	T	T	16 12 42.4	
	baz=332,slow=76,SNR=36						
H11S3	WAKE ISLAND Hy	29.47	142	T	T	16 12 40.2	
	baz=332,slow=76,SNR=32						
H11S2	WAKE ISLAND Hy	29.48	142	T	T	16 12 43.6	
	baz=332,slow=76,SNR=28						
TIK	Tiksi	29.65	348	*e*P	P	15 40 38.8	-1.2
TIXI	Tiksi	29.66	348	*i* P	P	15 40 38.8	-1.3
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.0s						
H21K	Melozitna Rive	38.67	35	P	P	15 41 58.8	+0.7
H21K				IAmb	IAmb	15 42 07.4	
	comp=Z,2.9nm,1.1s						
KDAK	Kodiak Island	38.76	47	P	P	15 41 58.6	-0.3
	comp=Z,11nm,0.9s,baz=248,slow=17,SNR=2.1						
ILAR	Eielson Array	41.13	36	P	P	15 42 18.3	-0.1
	comp=Z,0.5nm,0.6s,baz=266,slow=8.1,SNR=9.7						
ILAR	Eielson Array	41.13	36	P	P	15 42 18.9	+0.4
ILAR	Eielson Array	41.13	36	P	P	15 42 18.9	+0.4
DGZ	Jazzator, Alta	41.17	301	*i* P	P	15 42 19.8	+0.6
MK31	Makanchi Array	45.35	298	P	P	15 42 53.3	+0.5
MK31				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MK31	Makanchi Array	45.35	298	P	P	15 42 53.3	+0.5
MK31				IAmb	IAmb	15 42 53.9	
	comp=Z,2.0nm,0.8s						
MKAR	Makanchi Array	45.35	298	P	P	15 42 53.0	+0.2
	comp=Z,2.0nm,0.7s,baz=78,slow=8.8,SNR=19						
MKAR	Makanchi Array	45.35	298	*i* P	P	15 42 53.1	+0.3
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MKAR	Makanchi Array	45.35	298	*e*P	P	15 42 53.1	+0.3
MKAR	Makanchi Array	45.35	298	P	P	15 42 52.5	-0.3
MAKZ	Makanchi	45.55	298	P	P	15 42 54.4	+0.1
MAKZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MAKZ	Makanchi	45.55	298	P	P	15 42 54.4	+0.1
MAKZ				IAmb	IAmb	15 42 55.5	
	comp=Z,1.8nm,0.7s						
INK	Inuvik	46.12	30	P	P	15 42 59.6	+1.2
	comp=Z,0.9nm,0.4s,baz=286,slow=6.9,SNR=9.5						
INK	Inuvik	46.12	30	P	P	15 42 59.6	+1.2
INK				IAmb	IAmb	15 43 22.9	
	comp=Z,3.6nm,1.1s						
KURK	Kurchatov	46.27	304	P	P	15 42 58.9	-0.9
KURK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KURK	Kurchatov	46.27	304	*e*P	P	15 42 58.9	-0.9
KURK	Kurchatov	46.27	304	P	P	15 42 58.9	-0.9
KURK				IAmb	IAmb	15 43 00.7	
	comp=Z,2.2nm,0.6s						
CMAR	Chiang Mai Arr	48.25	255	P	P	15 43 15.8	+0.1
	comp=Z,0.2nm,0.5s,baz=42,slow=9.6,SNR=1.8						
ABKAR	Akbulak array	57.77	309	P	P	15 44 25.5	+0.2
ARCES	ARCESS Array B	59.65	340	P	P	15 44 38.0	-0.1
	comp=Z,2.9nm,0.8s,baz=23,slow=6.6,SNR=6.2						
WR0	Warramunga Arr	64.49	194	P	P	15 45 09.4	-1.6
WB2	Warramunga Arr	64.51	194	P	P	15 45 10.2	-1.0
WB2				IAmb	IAmb	15 45 31.8	
	comp=Z,4.3nm,1.4s						
WRA	Warramunga Arr	64.51	195	P	P	15 45 11.6	+0.4
	comp=Z,0.3nm,0.8s,baz=16,slow=6.5,SNR=1.5						
WRA				pP	pwP	15 45 32.5	+0.6
	comp=Z,0.4nm,0.9s,baz=12,slow=4.6,SNR=2.2						
WRA	Warramunga Arr	64.51	195	P	P	15 45 11.3	+0.1
FINES	FINESS Array B	65.36	333	P	P	15 45 15.8	-0.5
	comp=Z,2.7nm,0.6s,baz=47,slow=6.7,SNR=22						
FINES	FINESS Array B	65.36	333	*i* P	P	15 45 16.1	-0.1
FINES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
NVAR	Mina Array Bea	66.98	58	P	P	15 45 27.7	+0.4
	comp=Z,1.1nm,0.8s,baz=295,slow=6.4,SNR=6.3						
ASAR	Alice Springs	68.23	194	P	P	15 45 36.0	+1.1
	comp=Z,0.2nm,0.7s,baz=11,slow=7.7,SNR=5.5						
PDAR	Pinedale Array	69.39	50	P	P	15 45 43.0	+0.6
	comp=Z,0.7nm,0.5s,baz=293,slow=0.9,SNR=10						
NB2	NORSAR Subarra	70.02	339	P	P	15 45 45.7	0.0
	comp=Z,0.8nm,0.5s,baz=31,slow=6.5						
NOA	NORSAR Array B	70.02	339	P	P	15 45 44.8	-0.9
	comp=Z,1.1nm,0.5s,baz=35,slow=6.7,SNR=7.7						
KBZ	Khabaz	70.48	312	P	P	15 45 49.0	+0.3
	comp=Z,1.5nm,0.8s,baz=82,slow=3.4,SNR=1.9						
KBZ	Khabaz	70.48	312	P	P	15 45 49.0	+0.3
KBZ	Khabaz	70.48	312	*e*P	P	15 45 49.0	+0.3
AKASG	Malin Array Be	72.16	324	P	P	15 45 58.3	-0.4
	comp=Z,0.9nm,0.5s,baz=38,slow=5.6,SNR=7.1						
BRTR	Keskin Array B	78.21	314	P	P	15 46 34.1	+0.2
	comp=Z,0.4nm,0.6s,baz=57,slow=5.3,SNR=1.8						
BRTR				LR	LR	16 25 49.3	
	comp=Z,44nm,19.0s,baz=82,slow=39						
GERES	GERESS Array B	79.67	331	P	P	15 46 41.5	-0.2
	comp=Z,0.3nm,0.6s,baz=32,slow=5.8,SNR=2.5						
TXAR	Lajitas Array	82.06	57	P	P	15 46 54.9	+0.1
	comp=Z,1.0nm,0.7s,baz=301,slow=3.0,SNR=12						
TXAR				pP	pwP	15 47 14.5	+0.1
	comp=Z,0.5nm,0.6s,baz=288,slow=3.8,SNR=4.7						
TXAR				LR	LR	16 21 45.0	
	comp=Z,44nm,21.0s,baz=0.0,slow=34						
TXAR	Lajitas Array	82.06	57	P	P	15 46 55.1	+0.3
TXAR	Lajitas Array	82.06	57	P	P	15 46 55.1	+0.3
Z35A	Perchaven, San	82.90	50		pP	15 47 15.1	+1.4

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*IDC **14** 16:13:31.3±0.8, 33°.43N×39°.51W, h0^{km}, mb3.7/11, mb1 3.9/11, mb1mx3.7/39, mbtmp3.7/11, MS3.5/9, Ms1 3.5/9, ms1mx3.2/39, Error ellipse: s-maj=24.9km s-min=21.5km az=9.0*
ISC 14 16:13:32.9±0.7**, 33°.4N**±0°.1×**39°.5W**±0°.1**, h10**^{km}**, n20, σ0^s.52**/11**, mb3.8**/11**, MS3.6**/9**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SJG	San Juan	28.31	244	LR	LR	16 28 10.7	
	comp=Z,20nm,20.7s,baz=36,slow=31						
SCHQ	Schefferville	28.71	326	LR	LR	16 29 50.3	
	comp=Z,80nm,20.1s,baz=92,slow=34						
MDT	Midelt	29.16	81	LR	LR	16 28 05.7	
	comp=Z,84nm,18.6s,baz=322,slow=30						
PTGA	Pitinga	39.05	214	P	P	16 21 00.3	+0.2
	1.9nm,0.6s,baz=335,slow=23,SNR=1.5						
TORD	Torodi Ar. Bea	42.54	108	P	P	16 21 28.5	-0.4
	1.7nm,1.0s,baz=300,slow=5.4,SNR=4.7						
TORD				LR	LR	16 37 21.4	
	comp=Z,61nm,19.1s,baz=280,slow=34						
ULM	Lac du Bonnet	44.13	310	LR	LR	16 40 23.9	
	comp=Z,75nm,18.3s,baz=96,slow=36						
H10N2	ASCENSION HYDR	47.41	145	T	T	17 12 33.4	
	baz=331,slow=75,SNR=135						
H10N3	ASCENSION HYDR	47.42	145	T	T	17 12 33.7	
	baz=331,slow=75,SNR=156						
H10N1	ASCENSION HYDR	47.43	145	T	T	17 12 34.8	
	baz=331,slow=75,SNR=128						
H10S3	ASCENSION HYDR	48.32	146	T	T	17 13 34.9	
	baz=330,slow=74,SNR=32						
H10S2	ASCENSION HYDR	48.33	146	T	T	17 13 38.1	
	baz=250,slow=74,SNR=14						
BDFB	Brasilia	49.46	191	P	P	16 22 23.6	+0.1
	1.2nm,0.4s,baz=354,slow=5.0,SNR=3.6						
AKASG	Malin Array Be	51.98	49	P	P	16 22 42.3	+0.3
	0.3nm,0.5s,baz=274,slow=6.2,SNR=2.1						
TXAR	Lajitas Array	54.16	284	P	P	16 22 58.3	-0.3
	0.3nm,0.8s,baz=84,slow=9.2,SNR=2.7						
TXAR				LR	LR	16 43 02.9	
	comp=Z,72nm,21.7s,baz=0.0,slow=33						
YKA	Yellowknife Ar	54.17	326	P	P	16 22 59.0	+1.0
	2.0nm,0.9s,baz=76,slow=8.6,SNR=2.4						
YKA				LR	LR	16 44 42.7	
	comp=Z,70nm,18.6s,baz=0.0,slow=35						
PDAR	Pinedale Array	54.47	302	P	P	16 23 00.8	-0.1
	0.8nm,0.7s,baz=94,slow=8.0,SNR=7.3						
PDAR				LR	LR	16 45 49.0	
	comp=Z,49nm,18.1s,baz=37,slow=36						
BRTR	Keskin Array B	57.59	61	P	P	16 23 23.1	0.0
	0.4nm,0.8s,baz=274,slow=6.2,SNR=2.2						
INK	Inuvik	60.84	335	P	P	16 23 44.1	-0.9
	0.8nm,0.5s,baz=84,slow=9.2,SNR=1.8						
NVAR	Mina Array Bea	62.16	299	P	P	16 23 54.4	-0.3
	0.7nm,0.9s,baz=61,slow=7.3,SNR=3.8						
NVAR				LR	LR	16 53 02.3	
	comp=Z,57nm,18.0s,baz=46,slow=38						
MKAR	Makanchi Array	84.52	36	P	P	16 26 06.2	+0.1
	0.4nm,0.9s,baz=298,slow=6.4,SNR=1.8						

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*IDC **14** 16:24:00.0±2.2, 1°.23S×100°.99E, h0^{km}, mb3.7/7, mb1 3.8/9, mb1mx3.6/33, mbtmp3.6/9, ML3.4/2, Error ellipse: s-maj=105.7km s-min=14.7km az=56.0*
*DJA **14** 16:24:02.5±0.3, 2°S±2°×10°0E±°, h10^{km}, M4.2/12, mb4.1/2, MLv4.2/12*
*NEIC **14** 16:24:06.3±2.1, 1°.6S±0°.1×100°.4E±0°.1, h64^{km}±10^{km}, mb4.0/5, Error ellipse: s-maj=23.7km s-min=11.6km az=220.0*
ISC 14 16:24:03.9±0.7**, 1°.52S**±0°.05×**100°.45E**±0°.06**, h35**^{km}**, n36, σ1^s.71**/34**, mb3.5**/9**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDSI	Padang	0.61	1	P	Pn	16 24 14.4	-1.7
PDSI				S	Sn	16 24 23.2	-1.5
PPI	Padang Panjang	1.06	357	P	Pn	16 24 22.4	+0.1
PPSI	Pulau Pagai	1.31	200	P	Pn	16 24 25.8	+0.1
SISI	Saibi	1.37	278	P	Pn	16 24 26.7	+0.1
BKNI	Bangkinang	1.93	18	P	Pn	16 24 37.0	+2.7
BKNI	Bangkinang	1.93	18	Pn	Pn	16 24 36.6	+2.3
RGRI	Rengat	2.22	58	P	Pn	16 24 39.8	+1.6
MASI	Maura Aman, Be	2.41	132	P	Pn	16 24 41.4	+0.5
MNSI	Mandailing Nat	2.46	339	P	Pn	16 24 44.2	+2.6
MNAI	Manna	3.77	138	P	Pn	16 25 01.0	+1.4
MNAI	Manna	3.77	138	Pn	Pn	16 25 02.0	+2.3
GSI	Gunungsitoli	4.02	314	Pn	Pn	16 25 04.7	+1.6
DSRI	Dabo	4.26	76	P	Pn	16 25 07.2	+0.9
PSI	Prapat	4.56	340	Pn	Pn	16 25 08.2	-2.4
	0.5nm,0.3s,baz=153,slow=11,SNR=1.7						
PSI				Sn	Sn	16 26 02.5	+0.1
	1.5nm,0.3s,baz=127,slow=22,SNR=1.6						
PSI				Lg	Lg	16 26 20.3	
	1.1nm,0.3s,baz=312,slow=3.9,SNR=4.0						
KASI	Kota Agung	5.67	135	P	Pn	16 25 27.6	+1.9
	0.2nm40nm,1.0s						
TPTI		5.76	325	P	Pn	16 25 30.7	+3.6
KAPI	Kappang	19.58	101	P	P	16 28 26.9	-2.3
KAPI				IAmb	IAmb	16 29 09.7	
	comp=Z,12nm,1.4s						
CM31	Chiang Mai Arr	19.91	356	P	P	16 28 31.4	-1.3
CMAR	Chiang Mai Arr	19.91	356	P	P	16 28 31.4	-1.3
	comp=Z,0.1nm,0.3s,baz=184,slow=11,SNR=1.6						
SOEI	Soe	25.05	110	P	P	16 29 24.5	-0.9
H08S2	Diego Garcia H	28.51	257	T	T	16 58 47.0	
	baz=225						
H08S3	Diego Garcia H	28.51	257	T	T	16 58 48.5	
	baz=80						
FITZ	Fitzroy Crossi	29.71	125	P	P	16 30 05.1	-1.9
	comp=Z,2.8nm,1.1s,baz=309,slow=6.5,SNR=2.4						
H01W3	Cape Leeuwin H	35.56	160	T	T	17 07 44.8	
	baz=336						
H01W2	Cape Leeuwin H	35.57	160	T	T	17 07 57.9	
	baz=336						
H01W1	Cape Leeuwin H	35.57	160	T	T	17 07 34.4	
	baz=336						
WRA	Warramunga Arr	37.85	121	P	P	16 31 16.0	-1.7
	comp=Z,0.3nm,0.4s,baz=303,slow=9.0,SNR=8.1						
WR0	Warramunga Arr	38.03	121	P	P	16 31 18.9	-0.3
WR0				IAmb	IAmb	16 31 21.5	
	comp=Z,14nm,1.7s						
AS31	Alice Springs	39.17	127	P	P	16 31 28.2	-0.7
AS31				IAmb	IAmb	16 32 32.7	
	comp=Z,0.7nm,1.1s						
ASAR	Alice Springs	39.17	127	P	P	16 31 27.6	-1.2
	comp=Z,0.3nm,0.4s,baz=298,slow=7.7,SNR=17						
ASAR				PcP	PcP	16 33 40.3	+2.4
	comp=Z,0.3nm,0.8s,baz=306,slow=2.5,SNR=1.6						
ASAR	Alice Springs	39.17	127	P	P	16 31 28.6	-0.2
SONM	Songino Array	49.43	5	P	P	16 32 49.8	-0.8
	comp=Z,0.2nm,0.4s,baz=187,slow=9.9,SNR=1.5						
MKAR	Makanchi Array	50.70	344	P	P	16 33 00.2	+0.1
	comp=Z,0.2nm,0.4s,baz=155,slow=8.6,SNR=7.6						
ZALV	Zalesovo Beam	56.79	349	P	P	16 33 43.9	-0.6
	comp=Z,0.4nm,0.3s,baz=142,slow=7.3,SNR=1.8						
ARCES	ARCESS Array B	86.18	340	P	P	16 36 42.0	+0.7
	comp=Z,3.9nm,0.9s,baz=104,slow=7.5,SNR=2.1						
BRG	Berggiesshubel	88.96	321	*e*P	P	16 36 57.1	+2.0
BRG				Amp		16 37 00.7	
	comp=Z,3.6nm,0.9s						

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*NIED **14** 16:48:59.6, 31°.24N×128°.71E, h13^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-3.98; $M_{\theta\theta}$-0.03; $M_{\phi\phi}$4.00; $M_{r\theta}$-1.30; $M_{\theta\phi}$5.87; $M_{\phi r}$4.22; Fault plane solution: $M_0$8.32000×10^{14} NP1: ϕ_s181.00000°, δ70.00000°, λ-135.00000°. NP2: ϕ_s72.00000°, δ49.00000°, λ-28.00000°.*
JMA 14 16:48:59.6±0.3**, 31°.24N**×**128°.71E, h13**^{km}±3^{km}**, M3.6, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.96	63	P	Pb	16 49 17.4	-0.8
JSJ				*e*S	Sg	16 49 29.7	-1.1
JFU	Fukue jima 2	1.41	1	P	Pn	16 49 25.3	+0.3
JFU				*e*S	Sn	16 49 42.7	-0.8
JSU	Suzuyama	1.52	79	P	Pb	16 49 27.4	-0.2
JNN	Nakanoshima	1.72	144	P	Pn	16 49 29.3	+0.1
JYAK	Yakushimahirau	1.84	122	P	Pn	16 49 30.7	-0.2
JTN	Tanegashima 3	2.04	106	P	Pn	16 49 34.0	+0.4
JTZ	Takazaki	2.13	71	P	Pn	16 49 35.7	+0.8
JIU3	Izumi3	2.21	53	P	Pn	16 49 37.1	+1.0

IDC 14 16:50:31.8±12.0**, 31°.68N**×**101°.17E, h0**^{km}**, mb3.4**/2**, mb1 3.6**/3**, mb1mx3.0**/64**, mbtmp3.3**/3**, ML3.5**/1**, Error ellipse: s-maj=263.2km s-min=79.3km az=131.0, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	13.32	189	Pn	Pn	16 53 43.7	+1.5
	0.1nm,0.3s,baz=4.9,slow=17,SNR=5.7						
WRA	Warramunga Arr	60.38	144	P	P	17 00 43.2	+0.2
	0.3nm,0.6s,baz=328,slow=7.7,SNR=2.7						
ASAR	Alice Springs	63.32	146	P	P	17 01 02.4	-0.4
	0.2nm,0.5s,baz=326,slow=6.7,SNR=8.3						

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*NEIC **14** 16:53:31.3±1.8, 6°.83N±0°.05×94°.53E±0°.08, h10^{km}±1^{km}, mb5.3/58, Error ellipse: s-maj=15.4km s-min=4.1km az=242.0*
*MOS **14** 16:53:31.3±1.3, 6°.88N×94°.57E, h26^{km}, mb5.3/42, MS4.9/13, Error ellipse: s-maj=10.2km s-min=4.5km az=113.6*
*BJI **14** 16:53:32.7±0.0, 7°.00N×95°.00E, h5^{km}, mB5.1/56, mb4.8/55, Ms5.4/81, Ms7 5.1/74*
*KLM **14** 16:53:34, 6°.99N×94°.68E, h10^{km}, mb5.3*
*GCMT **14** 16:53:35.3±0.1, 7°.01N±0°.01×94°.63E±0°.01, h14^{km}±1^{km}, MW5.3/133, Moment Tensor Solution. s67,c100; s133,c227; Duration: 1^s.1 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.18±.02; $M_{\theta\theta}$-0.91±.02; $M_{\phi\phi}$1.10±.02; $M_{r\theta}$-0.29±.04; $M_{\theta\phi}$-0.09±.01; $M_{\phi r}$-0.33±.04; Best double couple: $M_0$1.10400×10^{17} NP1: ϕ_s133.00000°, δ66.00000°, λ-175.00000°. NP2: ϕ_s41.00000°, δ85.00000°, λ-24.00000°. Principal axes: T 1.1780, Plg13.0000°, Azm90.0000°; N -0.1450, Plg65.0000°, Azm210.0000°; P*

-1.0290, Plg21.0000°, Azm354.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

IDC ***14*** *16:53:35.7±2.1, 7°.00N×94°.67E, h42^{km}±19^{km}, mb4.2/44, mb1 4.2/48, mb1mx4.2/65, mbtmp4.4/48, ML4.4/4, MS4.6/51, Ms1 4.6/51, ms1mx4.6/63 Error ellipse: s-maj=11.9km s-min=8.2km az=52.0*

DJA ***14*** *16:53:36.3±0.3, 7°N±2°×9°5E±°, h27^{km}±2^{km}, M5.0/67, mB5.5/41, mb5.1/67, MLv5.3/8, Mw(mB)5.0/41, MwMwp4.9/8, Mwp5.2/8*

BGR ***14*** *16:53:41.7±0.0, 6°.53N×94°.35E, h28^{km}, mb5.4, Ms4.6*

ISC 14 16:53:33.6±0.4**, 6°.86N**±0°.03×**94°.49E**±0°.04**, h22**^{km}±3^{km}**,**
h22^{km}**:pP-P, n606,** σ**1**^{s}**.87**/558**, mb5.2**/197**, MS4.8**/81**,**
19C-17D, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LHMI	**Lhok Sumawe**	**2.93**	**123**	P	**Pn**	**16 54 18.4**	**-0.5**
LHMI	**Lhok Sumawe**	**2.93**	**123**	Pn	**Pn**	**16 54 18.9**	**-0.1**
MLSI	**Meulaboh, Aceh**	**3.20**	**143**	P	**Pn**	**16 54 24.8**	**+2.1**
TPTI		**4.47**	**143**	P	**Pn**	**16 54 41.6**	**+1.5**
PBA	**Port Blair**	**5.07**	**340**	*e*P	**Pn**	**16 54 48.2**	**-0.1**
PBA	**Port Blair**	**5.07**	**340**	Pn	**Pn**	**16 54 48.2**	**-0.1**
TSI	**Tuntungan**	**5.25**	**129**	P	**Pn**	**16 54 51.3**	**+0.4**
	5.3nm11µm7µm314nm,0.8s						
PSI	**Prapat**	**5.98**	**132**	P	**Pn**	**16 55 01.9**	**+1.0**
	7.6nm,0.3s,baz=326,slow=14,SNR=43						
PSI				S	**Sn**	**16 56 10.3**	**+1.4**
	6.3nm,0.3s,baz=280,slow=21,SNR=2.0						
PSI				LR	LR	16 58 11.6	
	comp=Z,6µm,18.8s,baz=270,slow=46						
GSI	**Gunungsitoli**	**6.32**	**151**	P	**Pn**	**16 55 07.3**	**+1.8**
	1.2nm9µm2µm82nm,0.6s						
GSI	**Gunungsitoli**	**6.32**	**151**	Pn	**Pn**	**16 55 02.3**	**-3.2**
KULM	**Kulim**	**6.32**	**104**	P	**Pn**	**16 55 03.0**	**-2.5**
DGPR	**DIGLIPUR**	**6.46**	**346**	*e*P	**Pn**	**16 55 06.6**	**-0.9**
IPM	**Ipoh**	**6.92**	**110**	P	**Pn**	**16 55 11.0**	**-2.8**
MNSI	**Mandailing Nat**	**7.88**	**140**	P	**Pn**	**16 55 29.1**	**+2.2**
JRMM	**Jerantut**	**8.48**	**110**	P	**Pn**	**16 55 33.0**	**-2.2**
BKNI	**Bangkinang**	**9.21**	**135**	P	**Pn**	**16 55 48.4**	**+3.2**
	2µm149nm,1.1s						
PPI	**Padang Panjang**	**9.36**	**141**	P	**Pn**	**16 55 50.3**	**+3.1**
	52nm,1.1s						
PDSI	**Padang**	**9.75**	**142**	P	**Pn**	**16 55 54.3**	**+1.6**
	1µm35nm,0.7s						
MYKOM	**Kota Tinggi**	**10.60**	**118**	P	**Pn**	**16 56 02.0**	**-2.3**
PBKT	**Sadao Pong**	**11.54**	**33**	Pn	**Pn**	**16 56 15.1**	**-2.1**
CM31	**Chiang Mai Arr**	**12.31**	**20**		**Pn**	**16 56 26.5**	**-1.3**
CMAR	**Chiang Mai Arr**	**12.31**	**20**	P	**Pn**	**16 56 27.2**	**-0.6**
	1.5nm,0.3s,baz=215,slow=15,SNR=58						
CMAR				Lg	Lg	16 59 57.2	
	0.1nm,0.3s,baz=183,slow=25,SNR=2.0						
CMAR				LR	LR	17 01 07.5	
	comp=Z,3µm,19.4s,baz=248,slow=37						
DSRI	**Dabo**	**12.43**	**126**	P	**Pn**	**16 56 29.6**	**+0.3**
	510nm20nm,0.7s						
JMBI	**JAMBI**	**12.43**	**132**	P	**Pn**	**16 56 31.2**	**+1.8**
	2µm108nm,0.9s						
MASI	**Maura Aman, Be**	**12.59**	**142**	P	**Pn**	**16 56 32.5**	**+0.9**
	118nm,1.1s						
CHTO	**Chiang Mai**	**12.65**	**20**	P	**Pn**	**16 56 32.0**	**-0.3**
CHTO	**Chiang Mai**	**12.65**	**20**	Pn	**Pn**	**16 56 32.0**	**-0.3**
KSI	**Kapahiang**	**13.21**	**142**	P	**Pn**	**16 56 40.6**	**+0.6**
	2µm102nm,0.8s						
UBPT	**Khong Chiam**	**13.63**	**51**	Pn	**Pn**	**16 56 45.1**	**-0.7**
PALK	**Pallekele**	**13.69**	**273**	P	**Pn**	**16 56 49.9**	**+3.2**
	0.8nm,0.3s,baz=179,slow=14,SNR=5.9						
PALK				S	Sn	16 59 05.9	-12
	0.9nm,0.3s,baz=228,slow=11,SNR=1.8						
PALK				LR	LR	17 02 09.9	
	comp=Z,5µm,18.2s,baz=176,slow=37						
LHSI	**Lahat**	**13.93**	**139**	P	**Pn**	**16 56 50.2**	**+0.4**
	3µm99nm,1.0s						
PPBI	**Pangkal Pinang**	**14.68**	**127**	P	**Pn**	**16 57 01.1**	**+1.0**
	3µm37nm,1.4s						
MDSI	**Maura Dua**	**14.85**	**139**	P	**Pn**	**16 57 00.9**	**-1.5**
	713nm29nm,0.9s						
LWLI	**Liwa**	**15.18**	**141**	P	**Pn**	**16 57 06.1**	**-0.8**
	2µm146nm,0.7s						
KSM	**Kuching**	**16.65**	**108**	P	**P**	**16 57 27.0**	**-1.1**
TRD	**Trivandrum**	**17.46**	**277**	*e*P	**Pn**	**16 57 32.6**	**-3.3**
SBUM	**Sibu**	**18.20**	**103**	P	**P**	**16 57 46.0**	**+0.8**
STKI	**Sintang**	**18.24**	**111**	P	**P**	**16 57 47.1**	**+1.5**
	40nm,1.7s						
BOK	**Bokaro**	**18.76**	**335**	*e*P	**Pn**	**16 57 53.9**	**+2.0**
KOHI	**KOHIMA**	**18.76**	**359**	*e*P	**P**	**16 57 50.1**	**-1.3**
HYB	**Hyderabad**	**18.77**	**305**	*i* P	**Pn**	**16 57 52.0**	**0.0**
HYB				*e*S	**Sn**	**17 01 22.5**	**+0.9**
SHL	**Shillong**	**18.77**	**353**	*e*P	**Pn**	**16 57 52.4**	**+0.2**
LEM	**Lembang**	**18.88**	**136**	P	**P**	**16 57 52.0**	**-0.8**
	1.0nm,0.3s,baz=287,slow=19,SNR=1.6						
LEM				LR	LR	17 06 21.3	
	comp=Z,4µm,18.8s,baz=299,slow=41						
QIZ	**Qiongzhong**	**19.21**	**50**	P	**P**	**16 57 55.9**	**-0.5**
QIZ				pmax	pmax		
	comp=Z,20nm,1.1s						
QIZ				pmax	pmax		
	comp=Z,490nm,5.3s						
QIZ				LR	LR		
	comp=N,13µm,15.9s						
QIZ				LR	LR		
	comp=E,5µm,20.4s						
QIZ				LR	LR		
	comp=Z,5µm,10.0s						
QIZ	**Qiongzhong**	**19.21**	**50**	P	**P**	**16 57 56.4**	**0.0**
MOKO	**MOKOCHONG**	**19.35**	**0**	*e*P	**Pn**	**16 57 59.5**	**+0.4**
PBKI	**Pangkalan Bun**	**19.60**	**118**	P	**Pn**	**16 58 03.4**	**+1.4**
	2µm143nm,1.2s						
KMI	**Kunming**	**19.80**	**23**	⇓P	**Pn**	**16 58 06.0**	**+1.5**
KMI				sP	pwP	16 58 13.0	+1.3
KMI				PP	**PnPn**	**16 58 24.8**	**+6.1**
KMI				S	**Sn**	**17 01 47.1**	**+0.4**
KMI				pmax	pmax		
	comp=Z,27nm,1.1s						
KMI				pmax	pmax		
	comp=Z,520nm,3.6s						
KMI				LR	LR		
	comp=N,2µm,13.4s						
KMI				LR	LR		
	comp=E,4µm,13.4s						
KMI				LR	LR		
	comp=Z,3µm,14.9s						
KPJI	**Karang Pucung**	**20.15**	**134**	P	**P**	**16 58 07.0**	**+0.4**
	23nm,0.6s						
LKP	**Lekhapani**	**20.40**	**3**	*e*P	**P**	**16 58 09.2**	**0.0**
LKP				IAmb	IAmb	16 58 19.9	
	comp=Z,190nm,0.4s						
ODAN	**Odare**	**21.01**	**342**	*e*P	**P**	**16 58 15.2**	**-0.9**
	comp=Z,210nm,1.3s						
UWJI	**Ujung Watu**	**21.06**	**128**	P	**P**	**16 58 17.1**	**+0.6**
	comp=Z,242nm,1.5s						
GTK	**Tadong**	**21.10**	**345**	*e*P	**P**	**16 58 19.6**	**+2.6**
RAMN	**Ramite**	**21.34**	**340**	*e*P	**P**	**16 58 18.4**	**-1.3**
TAPN	**Taplejung**	**21.37**	**343**	*e*P	**P**	**16 58 19.0**	**-1.0**
	comp=Z,209nm,1.0s						
MTKI	**Muara Teweh, K**	**21.78**	**110**	P	**P**	**16 58 25.9**	**+1.6**
	comp=Z,2µmcomp=Z,37nm,1.1s						
SPMM	**Sapulut**	**21.96**	**94**	P	**P**	**16 58 28.0**	**+1.8**
GOA	**Goa**	**22.00**	**295**	*e*P	**P**	**16 58 27.9**	**+1.4**
GOA				IAmb	IAmb	16 58 35.3	
	comp=Z,146nm,1.5s						
NGJI	**Ngawi**	**22.05**	**130**	P	**P**	**16 58 30.4**	**+3.3**
	comp=Z,925nmcomp=Z,92nm,1.3s						
JIRN	**Jiri**	**22.14**	**340**	*e*P	**P**	**16 58 26.0**	**-2.3**
PKI	**Pulchoki**	**22.33**	**338**	*e*P	**P**	**16 58 29.5**	**-0.9**
DMN	**Daman**	**22.48**	**338**	*e*P	**P**	**16 58 30.3**	**-1.6**
KKN	**Kakani**	**22.58**	**338**	*e*P	**P**	**16 58 30.7**	**-2.2**
GYA	**Guiyang**	**22.68**	**29**	⇑P	**P**	**16 58 35.9**	**+2.0**
GYA				pmax	pmax		
	comp=Z,16nm,1.0s						
GYA				pmax	pmax		
	comp=Z,410nm,4.6s						
GYA				LR	LR		
	comp=Z,3µm,10.4s						
GYA				LR	LR		
	comp=Z,3µm,11.1s						
GYA				LR	LR		
	comp=Z,4µm,15.9s						
BBKI	**Banjar Baru**	**22.75**	**116**	P	**P**	**16 58 35.0**	**+0.4**
	comp=Z,1µmcomp=Z,92nm,1.0s						
LSA	**Lhasa**	**22.94**	**353**	P	**P**	**16 58 36.0**	**-0.9**
LSA				pP	**pP**	**16 58 41.3**	**-1.2**
LSA				S	**S**	**17 02 43.3**	**-3.0**
LSA				pmax	pmax		
	comp=Z,42nm,1.6s						
LSA				pmax	pmax		
	comp=Z,160nm,2.6s						
LSA				LR	LR		
	comp=Z,3µm,17.1s						
LSA				LR	LR		
	comp=Z,5µm,14.2s						
LSA				LR	LR		
	comp=Z,3µm,11.4s						
LSA	**Lhasa**	**22.94**	**353**	P	**P**	**16 58 37.4**	**+0.5**
LSA	**Lhasa**	**22.94**	**353**	P	**P**	**16 58 35.7**	**-1.2**
LSA				pmax	pmax		
	comp=Z,45nm,0.8s						
LSA	**Lhasa**	**22.94**	**353**	P	**P**	**16 58 35.7**	**-1.2**
LSA				IAmb	IAmb	16 58 55.9	
	comp=Z,45nm,0.8s						
GKN	**Gorkha**	**23.01**	**337**	*e*P	**P**	**16 58 35.4**	**-2.0**
BHPL	**Bhopal**	**23.13**	**317**	*e*P	**P**	**16 58 38.8**	**+0.3**
BHPL				IAmb	IAmb	16 58 49.0	
	comp=Z,94nm,1.5s						
POO	**Poona**	**23.21**	**302**	*e*P	**P**	**16 58 40.5**	**+1.2**
POO				IAmb	IAmb	16 58 49.5	
	comp=Z,16nm,1.8s						
KOLN	**Koldanda**	**23.22**	**335**	*e*P	**P**	**16 58 37.7**	**-1.9**
DANN	**Dangsing**	**23.66**	**336**	*e*P	**P**	**16 58 42.5**	**-1.5**
PYUN	**Piuthan**	**23.77**	**334**	*e*P	**P**	**16 58 43.7**	**-1.3**
KMMI	**Kalianget**	**23.84**	**125**	P	**P**	**16 58 45.2**	**-0.3**
	comp=Z,137nm,0.8s						
KBKI	**Kotabaru**	**23.87**	**114**	P	**P**	**16 58 46.7**	**+0.9**
	comp=Z,28nm,0.7s						
BLJI	**Banyuglugur**	**23.95**	**127**	P	**P**	**16 58 47.6**	**+1.1**
	comp=Z,1µmcomp=Z,118nm,0.7s						
BLJI				pP	**pwP**	**16 58 57.6**	**+2.7**
	comp=Z,1µmcomp=Z,118nm,0.7s						
ABJI	**Asem Bagus**	**24.48**	**126**	P	**P**	**16 58 50.4**	**-1.1**
	comp=Z,299nm,0.9s						
JAGI	**Jajag, Banyuwa**	**24.82**	**128**	P	**P**	**16 58 54.9**	**+0.4**
	comp=Z,69nm,0.9s						
SRBI	**Singaraja**	**25.44**	**125**	P	**P**	**16 59 03.5**	**+3.4**
	comp=Z,3µmcomp=Z,239nm,0.9s						
CD2	**Chengdu**	**25.45**	**19**	P	**P**	**16 59 00.6**	**+0.5**
CD2				pP	pP	16 59 03.8	-2.1
CD2				sP	sP	16 59 06.5	-1.7
CD2				S	**S**	**17 03 30.8**	**+4.7**
CD2				pmax	pmax		
	comp=Z,40nm,1.2s						
CD2				pmax	pmax		
	comp=Z,510nm,7.0s						
CD2				LR	LR		
	comp=Z,3µm,15.1s						
CD2				LR	LR		
	comp=Z,4µm,10.2s						
CD2				LR	LR		
	comp=Z,4µm,15.1s						
MPSI	**Mapaga**	**26.16**	**103**	P	**P**	**16 59 08.6**	**+2.0**
	comp=Z,2µmcomp=Z,115nm,1.8s						
H08S3	**Diego Garcia H**	**26.25**	**237**	T	T	17 25 45.0	
	baz=56,slow=75,SNR=5803						
H08S2	**Diego Garcia H**	**26.25**	**237**	T	T	17 25 45.3	
	baz=56,slow=75,SNR=209						
H08S1	**Diego Carcia H**	**26.27**	**237**	T	T	17 25 46.4	
	baz=56,slow=75,SNR=85						
TOLI2	**Tolitoli**	**26.83**	**101**	P	**P**	**16 59 11.4**	**-1.3**
TOLI2				IAmb	IAmb	16 59 25.2	
	comp=Z,101nm,0.9s						
SONA	**Sohna**	**26.91**	**324**	*e*P	**P**	**16 59 15.7**	**+2.4**
TTSI	**Tana Toraja**	**27.13**	**110**	P	**P**	**16 59 14.9**	**-0.5**
	comp=Z,855nmcomp=Z,26nm,1.1s						
AJM	**Ajmer**	**27.16**	**318**	*e*x	**P**	**16 59 16.0**	**+0.3**
KUDL	**Kundal**	**27.18**	**323**	*e*P	**P**	**16 59 17.1**	**+1.4**
ENH	**Enshi**	**27.22**	**29**	P	**P**	**16 59 15.1**	**-1.0**
ENH				IAmb	IAmb	16 59 30.6	
	comp=Z,61nm,0.9s						
KAPI	**Kappang**	**27.83**	**114**	P	**P**	**16 59 20.6**	**-1.2**
	comp=Z,2.9nm,0.8s,baz=279,slow=9.9,SNR=8.1						
KAPI				LR	LR	17 11 05.7	
	comp=Z,1µm,18.7s,baz=308,slow=38						
KAPI	**Kappang**	**27.83**	**114**	P	**P**	**16 59 19.6**	**-2.2**
KAPI				pmax	pmax		
	comp=Z,67nm,1.5s						
KAPI	**Kappang**	**27.83**	**114**	P	**P**	**16 59 19.6**	**-2.2**
KAPI				IAmb	IAmb	16 59 30.7	
	comp=Z,67nm,1.4s						
MRSI	**Marisa**	**28.10**	**102**	P	**P**	**16 59 27.0**	**+2.9**
	comp=Z,1µmcomp=Z,75nm,0.9s						
APSI	**Ampana**	**28.18**	**105**	P	**P**	**16 59 29.4**	**+4.6**
	comp=Z,1µmcomp=Z,90nm,1.6s						
BKSI	**Bulukumba**	**28.30**	**115**	P	**P**	**16 59 26.1**	**+0.2**
	comp=Z,540nmcomp=Z,38nm,1.0s						
SMLA	**Simla**	**29.09**	**328**	*e*P	**P**	**16 59 33.2**	**+0.5**
SMLA				IAmb	IAmb	16 59 53.5	
	comp=Z,15nm,0.9s						
QZH	**Quanzhou**	**29.24**	**49**	*e*P	**P**	**16 59 34.4**	**+0.3**
QZH				S	**S**	**17 04 27.3**	**+1.4**
QZH				LR	LR		
	comp=Z,9µm,13.3s						
QZH				LR	LR		
	comp=Z,5µm,13.7s						
QZH				LR	LR		
	comp=Z,6µm,12.8s						
LUWI	**Luwuk**	**29.29**	**104**	P	**P**	**16 59 38.0**	**+3.3**
	comp=Z,161nm,0.8s						
XAN	**Xi'an**	**30.16**	**24**	P	**P**	**16 59 41.5**	**-0.8**
XAN				pP	pP	16 59 45.3	-2.7
XAN				PP	**PnPn**	**17 00 38.5**	**-1.5**
XAN				S	**S**	**17 04 38.1**	**-2.2**
XAN				sS	pS	17 04 46.0	-1.0
XAN				SS	**SnSn**	**17 06 11.3**	**-3.0**
XAN				pmax	pmax		
	comp=Z,84nm,0.8s						
XAN				pmax	pmax		
	comp=Z,190nm,4.8s						
XAN				LR	LR		
	comp=Z,4µm,14.5s						
XAN				LR	LR		
	comp=Z,5µm,14.9s						
XAN				LR	LR		
	comp=Z,5µm,13.8s						
LZH	**Lanzhou**	**30.32**	**15**	*e*P	**P**	**16 59 47.5**	**+3.7**
LZH				sP	sP	16 59 51.8	-0.2
LZH				sS	sS	17 04 51.3	-1.4
LZH				pmax	pmax		
	comp=Z,50nm,1.2s						
LZH				pmax	pmax		
	comp=Z,180nm,4.6s						
LZH				LR	LR		
	comp=Z,3µm,13.6s						
LZH				LR	LR		
	comp=Z,4µm,12.5s						
LZH				LR	LR		
	comp=Z,2µm,16.3s						
DHRM	**DHARAMSHALA**	**30.42**	**329**	*e*P	**P**	**16 59 44.3**	**-0.5**
DHRM				IAmb	IAmb	16 59 51.3	
	comp=Z,147nm,1.9s						
YULB	**Yu-li**	**30.56**	**55**	P	**P**	**16 59 46.5**	**+0.6**
YULB				IAmb	IAmb	16 59 56.1	
	comp=Z,137nm,1.9s						
DAV	**Davao City (W)**	**30.85**	**88**	P	**P**	**16 59 46.4**	**-2.2**
	comp=Z,53nm,0.4s,baz=34,slow=7.5,SNR=1.8						
SANI	**Sanana**	**32.66**	**105**	P	P	17 00 09.2	+4.8
	comp=Z,475nmcomp=Z,18nm,0.9s						
GTA	**Gaotai**	**32.76**	**8**	⇑P	**P**	**17 00 05.1**	**-0.1**
GTA				pP	pP	17 00 08.8	-2.1
GTA				sP	sP	17 00 12.5	-0.8
GTA				PcP	PcP	17 02 58.3	+8.0
GTA				S	**S**	**17 05 24.6**	**+3.6**
GTA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,100nm,6.2s						
GTA				LR	LR		
	comp=Z,1µm,16.4s						
GTA				LR	LR		
	comp=Z,2µm,14.2s						
GTA				LR	LR		
	comp=Z,900nm,18.2s						
NIL	**Nilore**	**33.13**	**326**	P	**P**	**17 00 06.6**	**-1.8**
NIL				pmax	pmax		
	comp=Z,110nm,1.0s						
NIL	**Nilore**	**33.13**	**326**	P	**P**	**17 00 06.5**	**-1.8**
BATI	**Baumata**	**33.63**	**120**	P	**P**	**17 00 11.1**	**-1.9**
	comp=Z,12nm,0.6s,baz=24,slow=1.4,SNR=4.8						
BATI	**Baumata**	**33.63**	**120**	P	**P**	**17 00 15.3**	**+2.3**
	comp=Z,16nm,0.8s						
NJ2	**Nanjing**	**33.82**	**39**	*e*P	**P**	**17 00 14.3**	**-0.1**
NJ2				sP	**sP**	**17 00 23.1**	**+0.4**
NJ2				S	**S**	**17 05 39.3**	**+2.0**
NJ2				pmax	pmax		
	comp=Z,12nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,94nm,4.7s						
NJ2				LR	LR		
	comp=Z,5µm,16.1s						
NJ2				LR	LR		
	comp=Z,4µm,16.1s						
NJ2				LR	LR		
	comp=Z,3µm,11.0s						
SOEI	**Soe**	**33.94**	**119**	P	**P**	**17 00 19.4**	**+3.6**
	comp=Z,7µmcomp=Z,1µmcomp=Z,35nm,0.8s						
SOEI	**Soe**	**33.94**	**119**	P	**P**	**17 00 12.9**	**-2.9**
SOEI				IAmb	IAmb	17 00 33.5	
	comp=Z,29nm,0.9s						
SSE	**Sheshan**	**34.72**	**43**	P	**P**	**17 00 25.0**	**+2.9**
SSE				S	**S**	**17 05 53.5**	**+2.3**
SSE				pmax	pmax		
	comp=Z,26nm,0.7s						
SSE				pmax	pmax		
	comp=Z,58nm,4.9s						
SSE				LR	LR		
	comp=Z,2µm,13.5s						
SSE				LR	LR		
	comp=Z,2µm,13.7s						
TIA	**Tai'an**	**35.81**	**32**	P	**P**	**17 00 32.8**	**+1.3**
TIA				pmax	pmax		
	comp=Z,63nm,3.6s						
TIA				LR	LR		
	comp=Z,2µm,14.9s						
TIA				LR	LR		
	comp=Z,2µm,15.9s						
TIA				LR	LR		
	comp=Z,2µm,14.7s						
KBL	**Kabul**	**36.19**	**323**	P	**P**	**17 00 34.6**	**-0.5**
KBL				pmax	pmax		
	comp=Z,19nm,1.1s						
KBL	**Kabul**	**36.19**	**323**	P	**P**	**17 00 34.5**	**-0.5**
BTO	**Baotou**	**36.36**	**20**	*e*P	**P**	**17 00 38.3**	**+2.0**
BTO				S	**S**	**17 06 23.9**	**+7.5**
BTO				LR	LR		
	comp=Z,10µm,13.1s						
BTO				LR	LR		
	comp=Z,11µm,13.6s						
KSH	**Kashi**	**36.53**	**336**	P	**P**	**17 00 35.3**	**-2.5**
KSH				sP	pP	17 00 42.3	-1.5
KSH				S	**S**	**17 06 11.1**	**-8.1**
KSH				sS	pS	17 06 19.8	-6.3
KSH				SS	**SnSn**	**17 08 41.3**	**-7.7**
KSH				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,280nm,5.5s						
KSH				LR	LR		
	comp=N,2µm,17.9s						
KSH				LR	LR		
	comp=E,1µm,17.9s						
KSH				LR	LR		
	comp=Z,930nm,14.3s						
HHC	**Hu-ho-hao-te**	**37.12**	**22**	*e*P	**P**	**17 00 46.4**	**+3.6**
HHC				PP	**PnPn**	**17 02 12.8**	**+4.8**
HHC				S	**S**	**17 06 32.3**	**+4.3**
HHC				SS	SS	17 08 55.3	-16
HHC				pmax	pmax		
	comp=Z,20nm,0.8s						
HHC				pmax	pmax		
	comp=Z,220nm,5.5s						
HHC				LR	LR		
	comp=Z,3µm,13.2s						
HHC				LR	LR		
	comp=Z,7µm,13.7s						
HHC				LR	LR		
	comp=Z,2µm,13.7s						
WMQ	**Urumqi**	**37.29**	**352**	*e*P	**P**	**17 00 44.3**	**+0.1**
WMQ				pP	pP	17 00 51.0	+0.8
WMQ				sP	pwP	17 00 58.8	+5.9
WMQ				pmax	pmax		
	comp=Z,40nm,2.3s						
WMQ				pmax	pmax		
	comp=Z,190nm,4.5s						
WMQ				LR	LR		
	comp=Z,380nm,10.9s						
WMQ				LR	LR		
	comp=Z,920nm,15.9s						
WMQ				LR	LR		
	comp=Z,400nm,14.3s						
SWI	**Sorong**	**37.48**	**100**	P	**P**	**17 00 45.9**	**-0.2**
	comp=Z,499nmcomp=Z,32nm,0.8s						
SIJI	**Sorong**	**37.49**	**100**	P	**P**	**17 00 43.3**	**-2.9**
	comp=Z,4.9nm,0.9s,baz=360,slow=14,SNR=2.3						
PSA00	**Pilbara Seismi**	**37.64**	**139**	P	**P**	**17 00 44.4**	**-2.9**
JOW	**Kunigami**	**37.75**	**54**	LR	LR	17 18 49.6	
	comp=Z,971nm,19.2s,baz=236,slow=40						
TARG	**Taragay, Kyrgy**	**37.76**	**339**	P	**P**	**17 00 47.0**	**-1.5**
WSAR	**Wadi Sarin**	**38.12**	**299**	P	**P**	**17 00 51.9**	**+0.5**
	comp=Z,4.2nm,0.7s,baz=170,slow=7.1,SNR=4.9						
WSAR				LR	LR	17 17 18.0	
	comp=Z,1µm,18.1s,baz=128,slow=37						
BJI	**Beijing**	**38.33**	**27**	P	**P**	**17 00 54.4**	**+1.5**
BJI				pP	**pP**	**17 00 57.8**	**-0.9**
BJI				PP	**PP**	**17 02 19.5**	**-1.3**
BJI				S	**S**	**17 06 50.4**	**+4.2**
BJI				sS	**sS**	**17 06 54.8**	**-1.2**
BJI				pmax	pmax		
	comp=Z,7.0nm,0.6s						
BJI				pmax	pmax		
	comp=Z,340nm,5.7s						
BJI				LR	LR		
	comp=Z,2µm,12.9s						
BJI				LR	LR		
	comp=Z,2µm,15.9s						
BJI				LR	LR		
	comp=Z,2µm,14.4s						
DRK	**Karamyk**	**38.36**	**331**	P	**P**	**17 00 52.2**	**-1.3**
SHLS	**Shalkode**	**38.50**	**342**	*e*P	**P**	**17 00 50.9**	**-3.5**
	baz=343						
SHLS	**Shalkode**	**38.50**	**342**	*e*P	**P**	**17 00 50.9**	**-3.5**
UZB	**Uzynbulak**	**38.62**	**342**	*e*P	**P**	**17 00 54.2**	**-1.3**
	baz=342						
UZB	**Uzynbulak**	**38.62**	**342**	*e*P	**P**	**17 00 54.2**	**-1.3**
PDGK	**Podgornoye**	**38.65**	**342**	P	**P**	**17 00 54.5**	**-1.2**
GAR	**Garm**	**38.72**	**329**	P	**P**	**17 00 54.5**	**-1.8**
GAR				IAmb	IAmb	17 01 04.0	
	comp=Z,142nm,1.2s						
SATY	**Saty**	**38.74**	**341**	*e*P	**P**	**17 00 54.1**	**-2.4**
	baz=341						
SATY	**Saty**	**38.74**	**341**	*e*P	**P**	**17 00 54.1**	**-2.4**
KPKS	**Kokpek**	**39.02**	**342**	*e*P	**P**	**17 00 57.1**	**-1.6**
	baz=342						
KPKS	**Kokpek**	**39.02**	**342**	*e*P	**P**	**17 00 57.1**	**-1.6**
CHGR	**Chuyangaron**	**39.06**	**328**	P	**P**	**17 00 57.0**	**-2.2**
CHGR				IAmb	IAmb	17 01 06.4	
	comp=Z,160nm,1.2s						
TNSS	**Tian-Shan**	**39.21**	**340**	*e*P	**P**	**17 00 58.8**	**-1.9**
	baz=340						
BTK	**Batken**	**39.28**	**331**	P	**P**	**17 01 01.5**	**+0.5**
BTK				pmax	pmax		
	comp=Z,76nm,1.1s						
BTK	**Batken**	**39.28**	**331**	P	**P**	**17 01 01.5**	**+0.5**
BTK				IAmb	IAmb	17 01 11.3	
	comp=Z,76nm,1.1s						
MDOK	**Medeo**	**39.29**	**340**	*e*P	**P**	**17 00 58.4**	**-2.7**
	baz=340						
MDOK	**Medeo**	**39.29**	**340**	*e*P	**P**	**17 00 58.3**	**-2.7**
FITZ	**Fitzroy Crossi**	**39.50**	**129**	P	**P**	**17 01 02.1**	**-0.8**
	comp=Z,4.7nm,0.6s,baz=318,slow=6.8,SNR=24						
FITZ				PcP	**PcP**	**17 03 09.8**	**-0.7**
	comp=Z,1.6nm,0.5s,baz=250,slow=3.4,SNR=1.6						
FITZ	**Fitzroy Crossi**	**39.50**	**129**	P	**P**	**17 01 04.2**	**+1.3**
	baz=40,SNR=21						
FITZ	**Fitzroy Crossi**	**39.50**	**129**	P	**P**	**17 01 00.1**	**-2.8**
TKM2	**Tokmak 2**	**39.59**	**338**	P	P	17 01 08.8	+5.1
AML	**Almayashu**	**39.67**	**336**	*i* P	**P**	**17 01 03.8**	**-0.7**
	SNR=9.1						
AAK	**Ala-Archa**	**39.77**	**337**	P	**P**	**17 01 04.2**	**-0.9**
	comp=Z,1.9nm,0.5s,baz=160,slow=6.6,SNR=5.1						
AAK				PcP	**PcP**	**17 03 11.2**	**-0.1**
	comp=Z,3.4nm,0.8s,baz=218,slow=14,SNR=1.4						
AAK	**Ala-Archa**	**39.77**	**337**	*i* P	**P**	**17 01 05.3**	**+0.1**
	SNR=6.6						
AAK	**Ala-Archa**	**39.77**	**337**	*i* P	**P**	**17 01 05.1**	**0.0**
AAK	**Ala-Archa**	**39.77**	**337**	P	**P**	**17 01 05.2**	**+0.1**
FRU1	**Bishkek**	**39.87**	**337**	P	**P**	**17 01 06.0**	**+0.2**
FRU1				pmax	pmax		
	comp=Z,67nm,1.7s						

FRU1	**Bishkek**	**39.87**	**337**	P	**P**	**17 01 06.0**	**+0.2**
FRU1				IAmb	IAmb	17 01 13.7	
	comp=Z,67nm,1.6s						
KUU	**Kurty**	**40.17**	**340**	*e*P	**P**	**17 01 05.2**	**-3.1**
	baz=340						
KUU	**Kurty**	**40.17**	**340**	*e*P	**P**	**17 01 05.2**	**-3.1**
SOHO	**SOHO**	**40.23**	**300**	P	**P**	**17 01 09.8**	**+0.8**
KNRA	**Kununurra**	**40.66**	**124**	P	**P**	**17 01 14.2**	**+1.6**
	baz=41,SNR=3.7						
ASHO	**Ashiyiah**	**40.82**	**300**	P	**P**	**17 01 17.9**	**+4.0**
MK31	**Makanchi Array**	**41.15**	**347**	*i* P	**P**	**17 01 14.1**	**-2.2**
MK31	**Makanchi Array**	**41.15**	**347**	P	**P**	**17 01 14.8**	**-1.5**
MKAR	**Makanchi Array**	**41.15**	**347**	P	**P**	**17 01 15.1**	**-1.2**
	comp=Z,6.3nm,0.8s,baz=167,slow=8.3,SNR=51						
MKAR				LR	LR	17 23 07.0	
	comp=Z,561nm,18.3s,baz=168,slow=43						
MKAR	**Makanchi Array**	**41.15**	**347**	P	**P**	**17 01 15.2**	**-1.1**
MAKZ	**Makanchi**	**41.23**	**347**	P	**P**	**17 01 15.5**	**-1.4**
MAKZ				pmax	pmax		
	comp=Z,17nm,0.7s						
MAKZ	**Makanchi**	**41.23**	**347**	P	**P**	**17 01 15.5**	**-1.4**
ZSN	**Zaisan**	**41.27**	**350**	*e*P	**P**	**17 01 14.6**	**-2.8**
	baz=350						
ZSN	**Zaisan**	**41.27**	**350**	*e*P	**P**	**17 01 14.5**	**-2.8**
IUG	**Iuzhnay**	**41.28**	**332**	*e*P	**P**	**17 01 15.9**	**-1.7**
	baz=332						
IUG	**Iuzhnay**	**41.28**	**332**	*e*P	**P**	**17 01 15.8**	**-1.7**
MORW	**Morawa**	**41.31**	**151**	P	P	17 01 22.8	+5.0
	baz=42,SNR=3.2						
MTN	**Manton Dam**	**41.34**	**118**	P	**P**	**17 01 17.0**	**-1.2**
	baz=41,SNR=10.0						
KK31	**Karatay Array**	**41.82**	**333**	*i* P	**P**	**17 01 20.5**	**-1.4**
KK31	**Karatay Array**	**41.82**	**333**	P	**P**	**17 01 20.8**	**-1.1**
KK31				IAmb	IAmb	17 01 29.7	
	comp=Z,77nm,1.6s						
KKAR	**Karatay Array**	**41.82**	**333**	P	**P**	**17 01 22.1**	**+0.2**
KKAR	**Karatay Array**	**41.82**	**333**	P	**P**	**17 01 22.1**	**+0.2**
KKAR	**Karatay Array**	**41.82**	**333**	P	**P**	**17 01 20.6**	**-1.2**
KKAR				IAmb	IAmb	17 01 29.7	
	comp=Z,77nm,1.6s						
BTLS	**Baital**	**41.99**	**338**	*e*P	**P**	**17 01 20.5**	**-2.6**
	baz=338						
BTLS	**Baital**	**41.99**	**338**	*e*P	**P**	**17 01 20.5**	**-2.6**
SONM	**Songino Array**	**42.07**	**12**	P	**P**	**17 01 23.0**	**-1.0**
	comp=Z,4.2nm,0.7s,baz=194,slow=8.8,SNR=18						
SONM				PcP	**PcP**	**17 03 17.4**	**-1.1**
	comp=Z,1.8nm,0.7s,baz=197,slow=3.5,SNR=2.2						
SONM				LR	LR	17 20 43.9	
	comp=Z,742nm,18.0s,baz=188,slow=39						
SONM	**Songino Array**	**42.07**	**12**	P	**P**	**17 01 23.8**	**-0.2**
SONM				pmax	pmax		
	comp=Z,93nm,1.8s						
SONM	**Songino Array**	**42.07**	**12**	P	**P**	**17 01 23.8**	**-0.2**
SONM				IAmb	IAmb	17 01 32.5	
	comp=Z,93nm,1.8s						
ULN	**Ulaanbaatar**	**42.24**	**13**	*i* P	**P**	**17 01 25.0**	**-0.4**
ULN				pmax	pmax		
	comp=Z,43nm,1.9s						
ULN	**Ulaanbaatar**	**42.24**	**13**	P	**P**	**17 01 25.1**	**-0.2**
KSRS	**Korea Array**	**43.00**	**40**	P	**P**	**17 01 29.1**	**-2.4**
	comp=Z,1.6nm,0.8s,baz=240,slow=8.1,SNR=4.3						
KSRS				LR	LR	17 22 11.5	
	comp=Z,943nm,20.3s,baz=236,slow=40						
DGZ	**Jazzator, Alta**	**43.11**	**353**	*i* P	**P**	**17 01 32.2**	**-0.2**
DGZ				pmax	pmax		
	comp=Z,24nm,1.7s						
MUN	**Mundaring**	**43.83**	**153**	P	**P**	**17 01 38.6**	**+0.4**
	baz=44,SNR=4.6						
ZAK	**Zakamensk**	**44.00**	**8**	*e*P	**P**	**17 01 41.8**	**+2.3**
ZAK				pmax	pmax		
	comp=Z,12nm,1.5s						
SEM	**Semipalatinsk**	**45.01**	**347**	*i* P	**P**	**17 01 44.8**	**-3.0**
	baz=347						
SEM	**Semipalatinsk**	**45.01**	**347**	*i* P	**P**	**17 01 44.7**	**-3.0**
GEYT	**Alibeck**	**45.19**	**319**	P	**P**	**17 01 48.3**	**-0.8**
	comp=Z,4.4nm,0.5s,baz=149,slow=9.8,SNR=5.6						
GEYT				LR	LR	17 23 44.7	
	comp=Z,739nm,19.2s,baz=85,slow=40						
TLY	**Talaya**	**45.32**	**8**	P	**P**	**17 01 47.7**	**-2.1**
	comp=Z,3.4nm,0.8s,baz=283,slow=20,SNR=2.1						
TLY				LR	LR	17 21 58.4	
	comp=Z,723nm,21.8s,baz=179,slow=38						
TLY	**Talaya**	**45.32**	**8**	*e*P	P	17 01 57.5	+7.6
TLY				*e*S	**S**	**17 08 35.5**	**+6.2**
TLY				pmax	pmax		
	comp=Z,41nm,1.2s						
TLY				MLR	MLR		
	comp=Z,2µm,13.0s						
OTUK	**Ortayu**	**45.34**	**339**	P	**P**	**17 01 48.4**	**-1.7**
H01W3	**Cape Leeuwin H**	**45.47**	**157**	T	T	17 51 07.6	
	baz=331,slow=76,SNR=15						
H01W2	**Cape Leeuwin H**	**45.48**	**157**	T	T	17 51 04.3	
	baz=331,slow=76,SNR=16						
H01W1	**Cape Leeuwin H**	**45.49**	**157**	T	T	17 51 05.7	
	baz=331,slow=76,SNR=13						
KURBB	**Kurchatov Arra**	**45.61**	**346**	P	**P**	**17 01 51.1**	**-1.1**
	comp=Z,11nm,1.0s,baz=169,slow=7.2,SNR=29						
KURBB				PcP	**PcP**	**17 03 29.0**	**-1.3**
	comp=Z,2.2nm,0.7s,baz=158,slow=2.9,SNR=1.8						
KURBB	**Kurchatov Arra**	**45.61**	**346**	P	**P**	**17 01 50.5**	**-1.7**
KURK	**Kurchatov**	**45.67**	**346**	*i* P	**P**	**17 01 51.2**	**-1.5**
KURK				pmax	pmax		
	comp=Z,17nm,1.4s						
KURK	**Kurchatov**	**45.67**	**346**	P	**P**	**17 01 51.9**	**-0.8**
WRKA	**Warakurna**	**45.69**	**135**	P	**P**	**17 01 53.6**	**+0.3**
	baz=46,SNR=12						
CN2	**Changchun**	**45.70**	**31**	*e*P	**P**	**17 01 50.9**	**-2.1**
CN2				S	**S**	**17 08 31.8**	**-3.2**
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,2µm,16.5s						
CN2				LR	LR		
	comp=Z,2µm,16.5s						
CN2				LR	LR		
	comp=Z,2µm,16.5s						
BRZS	**Berezniki**	**46.71**	**341**	*e*P	**P**	**17 01 58.8**	**-2.1**
	baz=341						
BRZS	**Berezniki**	**46.71**	**341**	*e*P	**P**	**17 01 58.7**	**-2.1**
WB0	**Warramunga Arr**	**47.35**	**125**	P	**P**	**17 02 04.6**	**-1.7**
WB0				IAmb	IAmb	17 02 27.7	
	comp=Z,16nm,0.9s						
WRA	**Warramunga Arr**	**47.39**	**125**	P	**P**	**17 02 05.2**	**-1.4**
	comp=Z,7.9nm,0.6s,baz=304,slow=9.1,SNR=41						
WRA				PcP	**PcP**	**17 03 36.6**	**-0.7**
	comp=Z,1.5nm,0.5s,baz=315,slow=3.1,SNR=0.9						
WRA				LR	LR	17 24 49.3	
	comp=Z,1µm,18.3s,baz=300,slow=40						
WRA	**Warramunga Arr**	**47.39**	**125**	*i* P	**P**	**17 02 05.1**	**-1.6**
WRA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
WRA	**Warramunga Arr**	**47.39**	**125**	P	**P**	**17 02 05.1**	**-1.6**
WRAB	**Tennant Creek**	**47.40**	**125**	*i* P	**P**	**17 02 04.7**	**-2.0**
WRAB				pmax	pmax		
	comp=Z,9.0nm,0.6s						
WB2	**Warramunga Arr**	**47.40**	**125**	P	**P**	**17 02 05.5**	**-1.2**
	baz=48						
WB2	**Warramunga Arr**	**47.40**	**125**	P	**P**	**17 02 05.5**	**-1.2**
WB2				IAmb	IAmb	17 02 28.4	
	comp=Z,20nm,1.0s						
WR0	**Warramunga Arr**	**47.56**	**125**	P	**P**	**17 02 05.9**	**-2.1**
WR0				IAmb	IAmb	17 02 30.2	
	comp=Z,15nm,0.8s						
ZAA0	**Zalesovo Array**	**47.60**	**352**	P	**P**	**17 02 06.8**	**-0.9**
ZALV	**Zalesovo Beam**	**47.60**	**352**	P	**P**	**17 02 06.8**	**-0.9**
	comp=Z,9.4nm,0.7s,baz=168,slow=7.6,SNR=36						
ZALV				LR	LR	17 26 52.7	
	comp=Z,714nm,18.4s,baz=180,slow=42						
ZALV	**Zalesovo Beam**	**47.60**	**352**	*i* P	**P**	**17 02 07.5**	**-0.2**
ZALV				pmax	pmax		
	comp=Z,9.0nm,0.7s						
ZALV	**Zalesovo Beam**	**47.60**	**352**	P	**P**	**17 02 07.4**	**-0.3**
MDJ	**Mudanjiang**	**48.45**	**33**	P	**P**	**17 02 16.0**	**+1.5**
MDJ				sP	pwP	17 02 23.5	-0.7
MDJ				PcS	**PcS**	**17 07 37.8**	**+1.4**
MDJ				S	**S**	**17 09 17.3**	**+3.1**
MDJ				sS	sS	17 09 24.8	+0.6
MDJ				ScS	**ScS**	**17 12 07.4**	**+1.2**
MDJ				pmax	pmax		
	comp=Z,190nm,3.5s						
MDJ				LR	LR		
	comp=Z,1µm,13.1s						
MDJ				LR	LR		
	comp=Z,1µm,12.5s						
MDJ				LR	LR		
	comp=Z,2µm,15.1s						
ASPA	**Alice Springs**	**49.00**	**130**	P	**P**	**17 02 18.1**	**-1.0**
	baz=49						
AS31	**Alice Springs**	**49.00**	**130**	P	**P**	**17 02 17.9**	**-1.2**
ASAR	**Alice Springs**	**49.00**	**130**	P	**P**	**17 02 17.7**	**-1.4**
	comp=Z,3.1nm,0.7s,baz=302,slow=7.4,SNR=44						
ASAR				LR	LR	17 25 01.1	
	comp=Z,1µm,19.8s,baz=302,slow=38						
ASAR	**Alice Springs**	**49.00**	**130**	P	**P**	**17 02 18.1**	**-1.0**
ASAR	**Alice Springs**	**49.00**	**130**	P	**P**	**17 02 18.1**	**-1.0**
FORT	**Forrest**	**49.33**	**141**	P	**P**	**17 02 18.7**	**-2.7**
JCJ	**Chichijima**	**49.49**	**60**	LR	LR	17 21 39.8	
	comp=Z,613nm,20.6s,baz=260,slow=34						
USRK	**Ussuriysk Ar.**	**49.53**	**35**	P	**P**	**17 02 21.4**	**-1.4**
	comp=Z,1.2nm,0.7s,baz=234,slow=8.1,SNR=2.9						
USRK				LR	LR	17 23 16.6	
	comp=Z,960nm,19.0s,baz=213,slow=36						
MAT	**Matsushiro**	**49.58**	**47**	P	**P**	**17 02 23.3**	**-0.1**
MAT				S	**S**	**17 09 32.2**	**+1.7**
MJAR	**Matsushiro Arr**	**49.59**	**47**	P	**P**	**17 02 22.2**	**-1.2**
	comp=Z,1.8nm,0.8s,baz=52,slow=1.5,SNR=7.2						
MJAR				LR	LR	17 23 07.6	
	comp=Z,1µm,21.8s,baz=255,slow=36						
RAYN	**Ar Rayn**	**49.83**	**295**	*i* P	**P**	**17 02 26.4**	**+0.9**
	SNR=6.0						
RAYN	**Ar Rayn**	**49.83**	**295**	P	**P**	**17 02 26.4**	**+0.9**
RAYN				pmax	pmax		
	comp=Z,41nm,0.9s						
RAYN	**Ar Rayn**	**49.83**	**295**	P	**P**	**17 02 26.4**	**+0.9**
RAYN				IAmb	IAmb	17 02 35.5	
	comp=Z,40nm,0.9s						
GUMO	**Guam**	**49.95**	**78**	LR	LR	17 20 31.2	
	comp=Z,280nm,21.2s,baz=271,slow=32						
BVAR	**Borovoye Array**	**50.06**	**341**	P	**P**	**17 02 25.2**	**-1.4**
	comp=Z,1.5nm,0.3s,baz=191,slow=15,SNR=16						
BRVK	**Borovoye**	**50.12**	**341**	*i* P	**P**	**17 02 26.6**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,61nm,1.5s						
BRVK	**Borovoye**	**50.12**	**341**	P	**P**	**17 02 26.1**	**-1.0**
BRVK				IAmb	IAmb	17 02 35.4	
	comp=Z,44nm,1.1s						
ATD	**Arta Tunnel**	**51.14**	**279**	P	**P**	**17 02 35.7**	**+0.2**
	comp=Z,2.4nm,0.3s,baz=254,slow=21,SNR=1.4						
ATD				LR	LR	17 20 42.7	
	comp=Z,412nm,21.9s,baz=94,slow=32						
AB31	**Akbulak array**	**51.28**	**332**	*i* P	**P**	**17 02 34.9**	**-1.0**
ABKAR	**Akbulak array**	**51.28**	**332**	P	**P**	**17 02 35.2**	**-0.7**
ABKAR				IAmb	IAmb	17 02 44.5	
	comp=Z,55nm,0.8s						
ABKAR	**Akbulak array**	**51.28**	**332**	P	**P**	**17 02 35.2**	**-0.7**
QIS	**Mount Isa**	**52.03**	**123**	P	**P**	**17 02 41.6**	**-0.4**
	baz=52,SNR=4.0						
KLR	**Kul'dur**	**52.58**	**30**	P	**P**	**17 02 42.5**	**-3.1**
	comp=Z,0.4nm,0.4s,baz=115,slow=14,SNR=1.8						
KLR	**Kul'dur**	**52.58**	**30**	*i* P	**P**	**17 02 46.1**	**+0.5**
KLR				pmax	pmax		
	comp=Z,21nm,1.5s						
AKTO	**Aktyubinsk**	**53.00**	**332**	P	**P**	**17 02 47.5**	**-1.2**
	comp=Z,7.0nm,0.5s,baz=115,slow=7.4,SNR=15						
AKTO	**Aktyubinsk**	**53.00**	**332**	P	**P**	**17 02 47.0**	**-1.7**
BOD	**Bodaibo**	**53.05**	**13**	*e*P	**P**	**17 02 48.0**	**-0.9**
BOD				pmax	pmax		
	comp=Z,75nm,1.3s						
OPO	**Ambohidratompo**	**53.05**	**241**	P	**P**	**17 02 51.8**	**+2.0**
	comp=Z,1.3nm,0.5s,baz=97,slow=14,SNR=3.1						
ZEA	**Zeya**	**53.73**	**23**	*e*P	P	17 03 02.6	+8.6
ZEA				*e*		17 10 35.1	
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ZEA				MLR	MLR		
	comp=E,800nm,15.0s						
ZEA				MLR	MLR		
	comp=Z,700nm,15.0s						
MAK	**Makhachkala**	**54.70**	**319**	*e*P	P	17 02 54.7	-6.6
MAK				pmax	pmax		
	comp=Z,188nm,1.2s						
PMG	**Port Moresby**	**54.91**	**106**	LR	LR	17 30 40.7	
	comp=Z,452nm,18.3s,baz=258,slow=41						
GNI	**Garni**	**55.39**	**315**	LR	LR	17 30 42.4	
	comp=Z,299nm,19.4s,baz=109,slow=40						
GNI	**Garni**	**55.39**	**315**	P	**P**	**17 03 05.2**	**-1.4**
BBOO	**Buckleboo**	**55.83**	**138**	P	**P**	**17 03 08.5**	**-1.0**
	baz=56,SNR=6.6						
GRNR	**Gornyy**	**55.89**	**31**	⇓*i*P	P	17 03 17.8	+8.1
GRNR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GRNR				MLR	MLR		
	comp=E,710nm,14.0s						
GRNR				MLR	MLR		
	comp=N,190nm,11.0s						
GRNR				MLR	MLR		
	comp=Z,710nm,13.0s						
ASAJ	**Asahikawa**	**55.95**	**40**	P	**P**	**17 03 08.7**	**-1.6**
	comp=Z,6.3nm,1.0s,baz=89,slow=31,SNR=2.0						
SVE	**Sverdlovsk**	**56.47**	**338**	*e*P	**P**	**17 03 13.3**	**-0.4**
SVE				pmax	pmax		
	comp=Z,198nm,1.6s						
SVE				MLR	MLR		
	comp=Z,2µm,21.0s						
ARU	**Arti**	**56.95**	**337**	*d i*P	**P**	**17 03 16.3**	**-0.9**
ARU						17 04 06.1	
ARU				S	**S**	**17 11 12.6**	**+2.6**
ARU				SS	**SS**	**17 14 58.4**	**-0.2**
ARU				pmax	pmax		
	comp=Z,20nm,1.3s						
ARU				MLR	MLR		
	comp=Z,826nm,20.0s						
ARU	**Arti**	**56.95**	**337**	P	**P**	**17 03 16.3**	**-0.9**
ZEI	**Tsey**	**57.02**	**317**	*e*P	**P**	**17 03 18.5**	**+0.3**
ZEI				pmax	pmax		
	comp=Z,2.0nm,0.5s						
YSS	**Yuzh-Sakhalins**	**57.37**	**37**	*e*P	**P**	**17 03 21.9**	**+1.7**
YSS				*e**SP	**pP**	**17 03 26.1**	**-0.1**
YSS				*e*		17 04 12.1	
YSS				*e*S	**S**	**17 11 17.1**	**+1.4**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YSS				MLR	MLR		
	comp=E,700nm,14.0s						
YSS				MLR	MLR		
	comp=Z,800nm,14.0s						
KMBO	**Kilima Mbogo**	**57.67**	**264**	P	**P**	**17 03 24.2**	**+0.9**
	comp=Z,3.1nm,0.5s,baz=62,slow=11,SNR=13						
KMBO				LR	LR	17 24 17.6	
	comp=Z,1µm,21.7s,baz=92,slow=32						
KMBO	**Kilima Mbogo**	**57.67**	**264**	*i* P	**P**	**17 03 26.0**	**+2.7**
	SNR=6.9						
KMBO	**Kilima Mbogo**	**57.67**	**264**	P	**P**	**17 03 21.7**	**-1.6**
KMBO				pmax	pmax		
	comp=Z,71nm,1.6s						
KMBO	**Kilima Mbogo**	**57.67**	**264**	P	**P**	**17 03 21.7**	**-1.6**
KMBO				IAmb	IAmb	17 03 34.4	
	comp=Z,71nm,1.6s						
KBZ	**Khabaz**	**58.07**	**318**	P	**P**	**17 03 24.8**	**-0.5**
	comp=Z,2.9nm,1.0s,baz=110,slow=2.0,SNR=2.7						
KBZ				LR	LR	17 33 15.0	
	comp=Z,243nm,18.8s,baz=126,slow=41						
KBZ	**Khabaz**	**58.07**	**318**	*i* P	**P**	**17 03 24.6**	**-0.7**
KBZ				pmax	pmax		
	comp=Z,16nm,1.3s						
HTT	**Hallett**	**58.14**	**136**	P	**P**	**17 03 25.9**	**-0.1**
	baz=58,SNR=8.9						
KVAR	**Kislovodsk Arr**	**58.30**	**318**	P	**P**	**17 03 27.4**	**+0.3**
	comp=Z,3.5nm,0.9s,baz=262,slow=19,SNR=1.2						
KVAR				LR	LR	17 30 27.5	
	comp=Z,305nm,20.5s,baz=144,slow=38						
KIV	**Kislovodsk**	**58.30**	**318**	⇓P	**P**	**17 03 26.4**	**-0.6**
KIV	**Kislovodsk**	**58.30**	**318**	P	**P**	**17 03 23.9**	**-3.2**
KIV	**Kislovodsk**	**58.30**	**318**	*e*P	**P**	**17 03 25.9**	**-1.1**
KIV				pmax	pmax		
	comp=Z,19nm,1.0s						
KIV				MLR	MLR		
	comp=Z,188nm,17.0s						
QLP	**Quilpie**	**58.55**	**127**	P	**P**	**17 03 29.0**	**+0.1**
	baz=59						
STKA	**Stephens Creek**	**59.16**	**133**	P	**P**	**17 03 32.3**	**-0.8**
	comp=Z,6.0nm,0.8s,baz=306,slow=6.7,SNR=12						
STKA				LR	LR	17 34 00.4	
	comp=Z,882nm,18.3s,baz=297,slow=41						
STKA	**Stephens Creek**	**59.16**	**133**	P	**P**	**17 03 32.6**	**-0.5**
	baz=59,SNR=7.6						
STKA	**Stephens Creek**	**59.16**	**133**	P	**P**	**17 03 31.7**	**-1.4**
STKA				pmax	pmax		
	comp=Z,9.0nm,1.7s						
STKA	**Stephens Creek**	**59.16**	**133**	P	**P**	**17 03 31.7**	**-1.4**
TYV	**Tymovskoe**	**59.23**	**33**	*e*P	P	17 03 39.9	+6.7
TYV				*e*		17 11 44.9	
TYV				pmax	pmax		
	comp=Z,8.0nm,1.8s						
TYV				pmax	pmax		
	comp=Z,300nm,3.7s						
TYV				MLR	MLR		
	comp=Z,1µm,14.0s						
BELG	**Belogornoye**	**59.35**	**329**	LR	LR	17 34 06.6	
	comp=Z,571nm,19.3s,baz=135,slow=41						
BELG	**Belogornoye**	**59.35**	**329**	*i* P	**P**	**17 03 34.1**	**+0.1**
BELG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MALT	**Malatya**	**59.38**	**311**	P	P	17 03 41.8	+7.1
SOC	**Sochi**	**60.15**	**317**	*e*P	**P**	**17 03 37.4**	**-2.3**
SOC				*e*		17 05 48.6	
SOC				*e*S	**S**	**17 11 53.1**	**+1.0**
SOC				*e*SS	**SS**	**17 15 47.0**	**-2.4**
SOC				pmax	pmax		
	comp=Z,21nm,0.8s						
SOC				MLR	MLR		
	comp=Z,431nm,21.0s						
YAK	**Yakutsk**	**60.84**	**18**	P	**P**	**17 03 42.0**	**-2.0**
	comp=Z,5.2nm,0.5s,baz=30,slow=1.6,SNR=2.2						
YAK				LR	LR	17 30 32.5	
	comp=Z,765nm,18.8s,baz=220,slow=36						
YAK	**Yakutsk**	**60.84**	**18**	*e*P	**P**	**17 03 43.5**	**-0.5**
YAK				*e*S	**S**	**17 12 00.9**	**+0.7**
YAK				*e**SS	**sS**	**17 12 13.2**	**+2.7**
YAK				*e*SS	**SS**	**17 16 03.1**	**+3.7**
YAK				pmax	pmax		
	comp=Z,29nm,0.9s						
YAK				pmax	pmax		
	comp=N,12nm,1.1s						
YAK				pmax	pmax		
	comp=E,15nm,1.0s						
YAK				smax	smax		
	comp=N,56nm,2.5s						
YAK				smax	smax		
	comp=E,28nm,2.0s						
YAK				MLR	MLR		
	comp=Z,1µm,16.0s						
YAK				MLR	MLR		
	comp=N,447nm,14.0s						
YAK				MLR	MLR		
	comp=E,433nm,14.0s						
YAK	**Yakutsk**	**60.84**	**18**	P	**P**	**17 03 43.2**	**-0.8**
VRH	**Novokhopyorsk**	**61.96**	**325**	*e*P	**P**	**17 03 51.5**	**-0.3**
VRH				pmax	pmax		
	comp=Z,20nm,0.8s						
ARPS	**Mount Arapiles**	**62.00**	**138**	P	**P**	**17 03 51.7**	**-0.6**
	baz=62,SNR=7.6						
CMSA	**Cobar Meteorol**	**62.00**	**131**	P	**P**	**17 03 52.3**	**-0.2**
	baz=62,SNR=13						
KIRV	**Kirov**	**62.07**	**335**	LR	LR	17 33 22.9	
	comp=Z,381nm,18.9s,baz=137,slow=38						
KIRV	**Kirov**	**62.07**	**335**	*i* P	**P**	**17 03 55.0**	**+2.6**
RMQ	**Roma**	**62.15**	**125**	P	**P**	**17 03 53.8**	**+0.2**
	baz=62,SNR=4.6						
NRIK	**Noril'sk**	**62.56**	**357**	P	**P**	**17 03 54.2**	**-1.4**
	comp=Z,1.2nm,0.4s,baz=106,slow=3.6,SNR=2.7						
NRIK				LR	LR	17 35 34.7	
	comp=Z,444nm,18.5s,baz=196,slow=40						
NRIK	**Noril'sk**	**62.56**	**357**	*ce*P	**P**	**17 03 54.2**	**-1.4**
NRIK				pmax	pmax		
	comp=Z,53nm,1.6s						
BR131	**Keskin Array S**	**63.35**	**311**	*i* P	**P**	**17 03 59.3**	**-2.3**
BR131	**Keskin Array S**	**63.35**	**311**	P	**P**	**17 03 58.8**	**-2.8**
BR131				IAmb	IAmb	17 04 07.9	
	comp=Z,66nm,1.8s						
BRTR	**Keskin Array B**	**63.35**	**311**	P	**P**	**17 03 59.5**	**-2.1**
	comp=Z,2.3nm,0.7s,baz=122,slow=6.6,SNR=15						
BRTR				LR	LR	17 34 14.2	
	comp=Z,424nm,21.2s,baz=116,slow=38						
BRTR	**Keskin Array B**	**63.35**	**311**	*i* P	**P**	**17 03 59.2**	**-2.3**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BRTR	**Keskin Array B**	**63.35**	**311**	P	**P**	**17 03 59.4**	**-2.2**
VSR	**Storozhevoye**	**63.41**	**325**	*e*P	**P**	**17 04 01.9**	**+0.3**
VSR				pmax	pmax		
	comp=Z,40nm,1.8s						
ANTO	**Ankara**	**64.02**	**311**	P	P	17 04 13.7	+7.8
MBAR	**Mbarara**	**64.04**	**266**	P	P	17 04 14.1	+7.5
LPSR	**Galich'ya Gora**	**64.12**	**326**	*e*P	**P**	**17 04 07.7**	**+1.5**
LPSR				pmax	pmax		
	comp=Z,60nm,1.8s						
TOO	**Toolangi**	**64.88**	**137**	P	**P**	**17 04 11.9**	**+0.5**
	baz=65,SNR=6.3						
TOO	**Toolangi**	**64.88**	**137**	P	**P**	**17 04 09.4**	**-2.0**
TOO				pmax	pmax		
	comp=Z,63nm,1.4s						
TOO	**Toolangi**	**64.88**	**137**	P	**P**	**17 04 09.4**	**-2.0**
PRGR	**Permogore**	**65.41**	**337**	*e*P	**P**	**17 04 17.6**	**+3.2**
PRGR				pmax	pmax		
	comp=Z,87nm,1.0s						
ELL	**Elmali**	**65.61**	**307**	P	**P**	**17 04 15.8**	**-0.6**
ELL				pmax	pmax		
	comp=Z,330nm,1.4s						
ELL	**Elmali**	**65.61**	**307**	P	**P**	**17 04 15.8**	**-0.6**
MOS	**Moscow**	**66.12**	**329**	*e*P	**P**	**17 04 18.3**	**-0.8**
MOS				*e*		17 04 23.8	
MOS				*e*		17 06 46.3	
MOS				*e*		17 13 33.6	
MOS				pmax	pmax		
	comp=Z,28nm,1.0s						
MOS				MLR	MLR		
	comp=Z,700nm,19.0s						
OBN	**Obninsk**	**66.42**	**328**	*e*P	**P**	**17 04 19.9**	**-1.1**
OBN				*e*		17 06 44.0	
OBN				pmax	pmax		
	comp=Z,43nm,1.2s						
OBN				MLR	MLR		
	comp=Z,517nm,19.0s						
HNR	**Honiara**	**67.19**	**103**	LR	LR	17 36 59.1	
	comp=Z,147nm,20.3s,baz=250,slow=39						
KLMR	**Klimovskoe**	**67.52**	**334**	*e*P	**P**	**17 04 25.2**	**-2.6**
KLMR				*e*		17 06 54.1	
KLMR				*e*S	**S**	**17 13 21.6**	**-1.4**
KLMR				pmax	pmax		
	comp=Z,65nm,1.4s						
KLMR	**Klimovskoe**	**67.52**	**334**	*e*P	**P**	**17 04 25.3**	**-2.6**
KLMR				AMP		17 04 35.7	
	comp=Z,65nm,1.4s						
KLMR				*e*PP	**PP**	**17 06 54.2**	**-2.6**
KLMR				*e*S	**S**	**17 13 21.6**	**-1.4**
KLMR				*e*S	**S**	**17 13 21.6**	**-1.4**
KLMR				LQ	LQ	17 28 09.2	
KLMR				LQ	LQ	17 28 09.2	
KLMR				LR	LR	17 34 23.3	
EDC	**Edincik**	**67.82**	**311**	P	P	17 04 37.0	+6.8
TIXI	**Tiksi**	**68.15**	**11**	P	**P**	**17 04 29.7**	**-2.0**
	comp=Z,9.6nm,0.5s,baz=222,slow=2.7,SNR=33						
TIXI				LR	LR	17 36 48.3	
	comp=Z,525nm,18.1s,baz=230,slow=38						
TIXI	**Tiksi**	**68.15**	**11**	*i* P	**P**	**17 04 29.8**	**-1.9**
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
TIXI	**Tiksi**	**68.15**	**11**	P	**P**	**17 04 29.7**	**-2.0**
CFR	**Carcaliu**	**68.56**	**316**	⇓P	**P**	**17 04 34.6**	**-0.1**
CFR	**Carcaliu**	**68.56**	**316**	⇓P	**P**	**17 04 34.6**	**-0.1**
PETK	**Petropavlovsk-**	**68.62**	**35**	P	**P**	**17 04 32.9**	**-2.1**
	comp=Z,2.8nm,0.9s,baz=298,slow=3.1,SNR=2.1						
PETK				LR	LR	17 35 25.7	
	comp=Z,469nm,20.3s,baz=230,slow=37						
PRK	**Paraskevi**	**68.85**	**309**	P	P	17 04 44.3	+7.6
CHOS	**Chios island**	**68.89**	**308**	P	P	17 04 43.5	+6.4
EZN	**Ezine**	**68.90**	**310**	P	P	17 04 44.0	+7.0
SORM	**Soroca**	**69.08**	**319**	⇓P	**P**	**17 04 36.8**	**-1.1**
SORM	**Soroca**	**69.08**	**319**	⇓P	**P**	**17 04 36.8**	**-1.1**
PET	**Petropavlovsk**	**69.14**	**36**	*e*P	**P**	**17 04 42.8**	**+4.6**
PET				*e*S	**S**	**17 13 45.1**	**+2.4**
PET				MLR	MLR		
	comp=Z,1µm,18.0s						
SNT5	**Nea Kammeni, S**	**69.15**	**306**	P	P	17 04 43.9	+5.3
AKASG	**Malin Array Be**	**69.16**	**322**	P	**P**	**17 04 35.5**	**-3.0**
	comp=Z,0.2nm,0.3s,baz=89,slow=4.7,SNR=3.5						
AKASG				PP	**PP**	**17 07 10.8**	**-0.4**
	comp=Z,0.8nm,0.6s,baz=92,slow=6.9,SNR=2.1						
AKASG				LR	LR	17 39 42.3	
	comp=Z,290nm,18.6s,baz=120,slow=40						
AKASG	**Malin Array Be**	**69.16**	**322**	*i* P	**P**	**17 04 40.5**	**+2.1**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
AKASG	**Malin Array Be**	**69.16**	**322**	P	**P**	**17 04 37.3**	**-1.1**
AKBB	**Malin Array Si**	**69.16**	**322**	*i* P	**P**	**17 04 38.0**	**-0.4**
LSZ	**Lusaka**	**69.27**	**251**	LR	LR	17 32 29.4	
	comp=Z,1µm,18.4s,baz=101,slow=34						

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ALN   Alexandroupoli    69.28 311   P      P        17 04 45.7 +6.4
ALN   Alexandroupoli    69.28 311   P      P        17 04 46.2 +6.9
SMTH  Samothraki Isl    69.60 311   P      P        17 04 47.0 +5.6
VRI   Vrincioaia        69.67 316  ⇓P      P        17 04 41.3 -0.4
VRI   Vrincioaia        69.67 316  ⇓P      P        17 04 41.3 -0.4
SEY   Seymchan          69.70  24   P      P        17 04 40.1 -1.4
      comp=Z,1.1nm,0.4s,baz=31,slow=23,SNR=2.0
PLOR  Plostina          69.72 316  ⇓P      P        17 04 41.8 -0.2
PLOR  Plostina          69.72 316  ⇓P      P        17 04 41.8 -0.2
LIA   Limnos Island     69.78 310   P      P        17 04 41.2 -1.2
TESR  Tescani           69.85 317  ⇓P      P        17 04 41.6 -1.2
VAM   Vamos             70.00 305   P      P        17 04 43.8 -0.1
MLR   Muntele Rosu      70.14 316  ⇑P      P        17 04 44.6 -0.2
MLR   Muntele Rosu      70.14 316  ⇑P      P        17 04 44.6 -0.2
IMMV  Iera Moni Meta    70.19 305   P      P        17 04 51.3 +6.2
MATP  Matopo            70.26 246   LR     LR       17 32 12.2
      comp=Z,407nm,20.0s,baz=67,slow=33
MATP  Matopo            70.26 246  eP      P        17 04 49.3 +3.4
MATP  Matopo            70.26 246  eP      P        17 04 49.3 +3.4
DION  Dionisos Attik    70.51 308   P      P        17 04 52.1 +5.1
OUR   Ouranopolis       70.75 310   P      P        17 04 56.1 +7.7
ANKY  Antikythira Is    70.78 305   P      P        17 04 47.6 -1.1
PAIG  Paliouri          70.93 310   P      P        17 04 48.1 -1.4
MNK   Minsk             70.96 326  i P     P        17 04 45.7 -3.6
MNK                                i                17 07 23.1
MNK                                i PPP   PPP      17 09 06.2
MNK                                i S     S        17 14 02.2 -1.7
MNK                                i                17 14 48.3
MNK                                i SS    SS       17 18 39.2 +2.4
MNK                                 pmax   pmax
      comp=N,23nm,1.1s
MNK                                 pmax   pmax
      comp=Z,12nm,1.0s
MNK                                 pmax   pmax
      comp=E,4.0nm,1.3s
MNK                                 MLR    MLR
      comp=N,480nm,23.0s
MNK   Minsk             70.96 326  i P     P        17 04 45.7 -3.6
      comp=E,4.0nm,1.3s
MNK                                i P     P        17 04 45.7 -3.6
      comp=N,23nm,1.1s
MNK                                i P     P        17 04 45.7 -3.6
      comp=Z,12nm,1.0s,baz=105
MNK                                i PP    PP       17 07 23.2 -3.5
MNK                                i PPP   PPP      17 09 06.2
MNK                                i S     S        17 14 02.3 -1.6
MNK                                i SS    SS       17 18 39.2 +2.4
MNK                                i SSS   SSS      17 21 56.1
MNK                                i LQ    LQ       17 31 02.7
MNK                                i LR    LR       17 36 26.9
MNK                                i LRM   MLR      17 40 58.7
      comp=N,480nm,22.9s
MNK                                i LRM   MLR      17 41 21.6
      comp=Z,638nm,21.6s
MNK                                i LRM   MLR      17 41 31.8
      comp=E,74nm,22.9s
KTHA  Kythira Island    71.01 306   P      P        17 04 48.5 -1.6
BURAR Bucovina Array    71.03 318  ⇑P      P        17 04 49.1 -1.0
BURAR Bucovina Array    71.03 318  ⇑P      P        17 04 49.1 -1.0
BURAR Bucovina Array    71.03 318   P      P        17 04 49.4 -0.7
BUR08 Bucovina Ar. S    71.05 318   P      P        17 04 49.6 -0.6
BUR08                               IAmb   IAmb     17 05 15.6
      comp=Z,55nm,2.0s
KRND  KRANIDI           71.05 307   P      P        17 04 55.2 +4.9
VTS   Vitosha           71.61 313   P      P        17 05 00.5 +6.7
VTS                                 pmax   pmax
      comp=Z,17nm,1.7s
LOT   Lotru             71.64 316  ⇑P      P        17 04 54.9 +1.0
KNT   Kendrikon         71.67 311   P      P        17 04 55.8 +1.8
NACGM Naroch            71.68 326  i P     P        17 04 55.5 +1.8
GUR   Goura             71.74 308   P      P        17 04 59.7 +5.1
KLV   Kalavryta, Ach    71.90 308   P      P        17 04 56.2 +0.7
VAY   Valandovo         71.93 311  i P     P        17 05 01.1 +5.5
ITM   Ithomi            72.00 307   P      P        17 04 53.5 -2.6
GRG   Griva             72.02 311   P      P        17 05 01.1 +5.0
LVV   L'vov             72.21 320  eP      P        17 05 02.6 +5.6
LVV                                e                17 14 23.2
LVV                                 pmax   pmax
      comp=Z,70nm,1.5s
DRO   Drossia           72.24 308   P      P        17 05 03.5 +6.0
DEV   Deva              72.31 316  ⇓P      P        17 04 58.2 +0.6
DEV   Deva              72.31 316  ⇓P      P        17 04 58.2 +0.6
GZR   Gura Zlata        72.32 315  ⇑P      P        17 04 57.4 -0.5
HERR  Herculane         72.50 315  ⇑P      P        17 05 01.1 +2.3
DRGR                    72.57 317  ⇑P      P        17 04 59.0 -0.4
DRGR                    72.57 317  ⇑P      P        17 04 59.0 -0.4
VSU   Vasula            72.63 329  eP      P        17 05 02.8 +3.5
FNA   Florina           72.77 310   P      P        17 05 05.8 +5.2
SKO   Skopje            72.85 312  i P     P        17 05 06.4 +5.3
TRPA  Tarpa             72.89 318  ⇑P      P        17 05 00.2 -0.9
TRPA  Tarpa             72.89 318  eP      P        17 05 00.6 -0.5
APA   Apatity           72.91 339⇓iP       P        17 05 07.0 +6.2
APA                                 pmax   pmax
      comp=Z,16nm,0.8s
UZH   Uzhgorod          73.13 319  eP      P        17 05 08.3 +5.8
UZH                                e                17 05 18.5
BZS   Buzias            73.16 316  ⇑P      P        17 05 03.2 +0.4
BZS   Buzias            73.16 316  ⇑P      P        17 05 03.2 +0.4
KOLS  Kolonicke sedl    73.19 319  eP      P        17 05 11.1 +8.2
KOLS  Kolonicke sedl    73.19 319  eP      P        17 05 11.1 +8.2
OHR   Ohrid             73.24 311  i P     P        17 05 04.6 +1.2
PABE  Paberze           73.39 326  eP      P        17 05 06.2 +2.4
PABE  Paberze           73.39 326   P      P        17 05 05.0 +1.2
SUW   Suwalki           73.53 324  eP      P        17 05 10.7 +5.9
CRVS  Cervenica-Dubn    73.72 319  eP      P        17 05 13.2 +7.2
CRVS                                pmax   pmax
      comp=Z,91nm,1.4s
CRVS  Cervenica-Dubn    73.72 319  eP      P        17 05 13.2 +7.2
FINES FINESS Array B    73.77 332   P      P        17 05 04.7 -1.3
      comp=Z,5.6nm,0.5s,baz=88,slow=5.8,SNR=25
FINES                               LR     LR       17 41 36.1
      comp=Z,356nm,19.2s,baz=116,slow=39
FINES FINESS Array B    73.77 332   P      P        17 05 05.2 -0.8
LBTB  Lobatse           74.07 242   LR     LR       17 33 09.1
      comp=Z,849nm,21.0s,baz=72,slow=32
NIE   Niedzica          74.55 319   P      P        17 05 19.3 +8.4
PSZ   Piszkesteto       74.62 318  eP      P        17 05 15.7 +4.3
PSZ   Piszkesteto       74.62 318   P      P        17 05 18.7 +7.3
PSZ                                 pmax   pmax
      comp=Z,16nm,1.9s
LANS  Liptovska Anna    75.05 319  eP      P        17 05 20.7 +6.9
LANS  Liptovska Anna    75.05 319  eP      P        17 05 20.7 +6.9
MORH  Mrgy, Hungar      75.29 316  ⇓P      P        17 05 14.6 -0.5
MORH  Mrgy, Hungar      75.29 316  eP      P        17 05 17.2 +2.1
BOSA  Boshof            75.35 238   P      P        17 05 17.1 +1.1
      comp=Z,2.3nm,0.5s,baz=75,slow=3.6,SNR=12
BOSA                                LR     LR       17 33 53.1
      comp=Z,472nm,20.6s,baz=71,slow=32
VYHS  Vyhne             75.39 318  eP      P        17 05 22.8 +7.1
VYHS                                pmax   pmax
      comp=Z,41nm,1.7s
VYHS  Vyhne             75.39 318  eP      P        17 05 22.8 +7.1
KOVH  Kovagotottos      75.65 316  eP      P        17 05 22.4 +5.1
SRO   Srobarova         75.67 318  eP      P        17 05 24.4 +7.1
SRO                                 pmax   pmax
      comp=Z,55nm,1.8s
SRO   Srobarova         75.67 318  eP      P        17 05 24.4 +7.1
OKC   Ostrava-Krasne    75.98 320  eP      P        17 05 25.9 +6.8
OKC   Ostrava-Krasne    75.98 320  eP      P        17 05 25.9 +6.8
DZM   Mont Dzumac       76.05 115  eLR     LR       17 28 45.5
      comp=Z,715nm,24.5s
MPLH  Magyarpolny       76.13 317  eP      P        17 05 21.9 +1.9
JAVC  Velka Javorina    76.20 319  eP      P        17 05 27.9 +7.5
SMOL  Smolenice         76.33 318  eP      P        17 05 28.1 +7.0
SMOL  Smolenice         76.33 318  eP      P        17 05 28.1 +7.0
ARA0  ARCESS Array S    76.33 340  eP      P        17 05 23.5 +2.8
ARCES ARCESS Array B    76.33 340   P      P        17 05 19.5 -1.2
      comp=Z,2.2nm,0.5s,baz=99,slow=6.6,SNR=19
ARCES                               LR     LR       17 41 50.3
      comp=Z,871nm,20.6s,baz=120,slow=38
MORC  Moravsky Berou    76.37 319  ⇑P      P        17 05 20.8 -0.5
MORC  Moravsky Berou    76.37 319  ⇑P      P        17 05 20.8 -0.5
MORC  Moravsky Berou    76.37 319  eP      P        17 05 28.2 +6.9
MODS  Modra-Piesok      76.41 318  eP      P        17 05 27.9 +6.3
MODS                                pmax   pmax
      comp=Z,84nm,1.8s
MODS  Modra-Piesok      76.41 318  eP      P        17 05 27.9 +6.3
ZST   Bratislava        76.51 318  eP      P        17 05 29.5 +7.4
ZST   Bratislava        76.51 318  eP      P        17 05 29.5 +7.4
BILL  Bilibino          76.89  22  eP      P        17 05 25.7 +1.8
BILL                                pmax   pmax
      comp=Z,7.0nm,1.4s
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VRAC  Vranov            76.94 319  eP      P        17 05 31.0 +6.5
KTK1  Kautokeino        76.96 340  eP      P        17 05 27.1 +2.9
KRUC  Moravsky          77.05 319  eP      P        17 05 31.4 +6.3
DPC   Dobruska-Polom    77.20 320  eP      P        17 05 24.1 -1.9
DPC                                e                17 05 30.3
DPC   Dobruska-Polom    77.20 320  eP      P        17 05 24.1 -1.9
DPC                                epP     pP       17 05 30.3 -2.2
HAMF  Hammerfest        77.25 341  eP      P        17 05 28.6 +2.8
KSP   Ksiaz             77.26 320   P      P        17 05 29.5 +3.2
OSTC  Ostas             77.29 320  eP      P        17 05 30.2 +3.7
OSTC                               ex      x        17 05 34.3
CONA  Conrad Observa    77.32 317  eP      P        17 05 26.6 -0.2
      comp=Z,3.0nm,1.2s,SNR=5.3
CONA                               i P     pP       17 05 33.6 +0.3
      comp=Z,12nm,1.2s
CHVC  Chvalec           77.39 320  eP      P        17 05 30.1 +3.0
CHVC                               ex      x        17 05 35.2
ARSA  Arzberg           77.51 317  eP      P        17 05 27.2 -0.6
      comp=Z,4.8nm,0.9s,SNR=6.8
ARSA                               i P     pP       17 05 33.8 -0.4
      comp=Z,33nm,1.5s
MAW   Mawson            77.62 192   P      P        17 05 28.5 +0.7
      comp=Z,1.4nm,0.6s,baz=49,slow=8.2,SNR=7.0
MAW                                 LR     LR       17 35 12.7
      comp=Z,389nm,19.0s,baz=48,slow=32
MAW   Mawson            77.62 192   P      P        17 05 30.3 +2.5
      baz=78,SNR=4.5
MAW   Mawson            77.62 192   P      P        17 05 27.8  0.0
MAW                                 pmax   pmax
      comp=Z,5.0nm,1.4s
MAW   Mawson            77.62 192   P      P        17 05 27.8  0.0
SOKA  Soboth            77.81 316  eP      P        17 05 29.7 +0.1
      comp=Z,5.9nm,1.1s,SNR=8.8
SOKA                               i P     pP       17 05 36.6 +0.6
      comp=Z,50nm,1.3s
JETT  Jettan, Norway    78.07 340  eP      P        17 05 33.4 +2.9
OBKA  Obir              78.14 316  eP      P        17 05 31.6 +0.2
      comp=Z,3.0nm,1.1s,SNR=7.8
OBKA                               i P     pP       17 05 38.4 +0.5
      comp=Z,32nm,1.4s
PRU   Pruhonice         78.32 320  eP      P        17 05 34.0 +1.8
PRU                                e                17 05 38.9
PRU                                e                17 05 38.9
PRU   Pruhonice         78.32 320  eP      P        17 05 34.0 +1.8
PRU                                ex      x        17 05 38.9
PVCC  Panska Ves        78.33 320  eP      P        17 05 39.6 +7.3
MOA   Molln             78.39 317  eP      P        17 05 32.5 -0.2
      comp=Z,2.9nm,1.1s,SNR=6.3
MOA                                i P     pP       17 05 39.3 +0.1
      comp=Z,19nm,1.3s
CKRC  Cesky Krumlov     78.41 318  eP      P        17 05 36.4 +3.7
TRO   Tromso            78.59 340  eP      P        17 05 35.5 +2.3
BRG   Berggiesshubel    78.75 320  eP      P        17 05 42.6 +8.0
      comp=Z,62nm,1.6s,baz=91,slow=5.3
BRG   Berggiesshubel    78.75 320  eP      P        17 05 37.4 +2.8
BRG                                 Amp             17 05 39.4
      comp=Z,4.4nm,1.0s
BRG   Berggiesshubel    78.75 320   P      P        17 05 41.6 +7.1
BRG                                 Amp             17 05 44.4
      comp=Z,47nm,1.5s
MYKA  Terra Mystica     78.77 316  eP      P        17 05 34.9  0.0
      comp=Z,0.9nm,0.4s,SNR=8.6
MYKA                               i P     pP       17 05 41.5 +0.2
      comp=Z,37nm,1.8s
GEC2  GERESS Array S    78.81 318  eP      P        17 05 43.0 +7.9
      comp=Z,61nm,1.3s,baz=91,slow=5.3
GERES GERESS Array B    78.81 318   P      P        17 05 33.9 -1.2
      comp=Z,3.3nm,0.8s,baz=73,slow=4.6,SNR=12
GERES                               LR     LR       17 44 50.8
      comp=Z,256nm,20.5s,baz=92,slow=39
GERES GERESS Array B    78.81 318   P      P        17 05 34.8 -0.3
GERES GERESS Array B    78.81 318   P      P        17 05 34.8 -0.3
KHC   Kasperske Hory    78.90 319  eP      P        17 05 38.2 +2.7
KHC                                e                17 05 42.1
KHC   Kasperske Hory    78.90 319  eP      P        17 05 38.2 +2.7
KHC                                ex      x        17 05 42.1
RUE   Ruedersdorf       78.94 322  eP      P        17 05 43.2 +7.7
RUE   Ruedersdorf       78.94 322  eP      P        17 05 43.3 +7.8
      comp=Z,151nm,1.5s,baz=91,slow=5.3
FBE   Freiberg          79.12 320  eP      P        17 05 44.8 +8.2
      comp=Z,143nm,1.8s,baz=91,slow=5.3
RJOB  Jochberg          79.38 317  eP      P        17 05 45.3 +7.1
      comp=Z,96nm,2.2s,baz=91,slow=5.3
STAL  STALIGIAL         79.40 316   P      P        17 05 37.8 -0.4
STAL                                IAmb   IAmb     17 05 46.5
      comp=Z,71nm,1.2s
ABTA  Abfaltersbach     79.55 316  eP      P        17 05 38.3 -0.8
      comp=Z,4.3nm,1.1s,SNR=7.5
ABTA                               i P     pP       17 05 45.3 -0.3
      comp=Z,20nm,1.3s
FAUS  Fauske            79.55 337  eP      P        17 05 41.7 +3.1
BJO1  Bjornoya          79.56 345  eP      P        17 05 39.5 +1.0
STEI  Steigen           79.64 338  eP      P        17 05 40.6 +1.6
TANN  Tannenbergstha    79.67 320  eP      P        17 05 47.5 +7.8
      comp=Z,491nm,3.8s,baz=91,slow=5.3
WERN  Wernitzgruen      79.72 320  eP      P        17 05 47.9 +7.9
      comp=Z,30nm,1.7s,baz=91,slow=5.3
WERN                               epP     pwP      17 05 55.9 +6.8
MOR8  Moi Rana          79.74 336  eP      P        17 05 41.7 +2.0
GUNZ  Gunzen            79.75 320  eP      P        17 05 48.0 +7.9
      comp=Z,52nm,1.6s,baz=91,slow=5.3
WERD  Werda             79.77 320  eP      P        17 05 47.9 +7.7
      comp=Z,54nm,1.6s,baz=91,slow=5.3
WERD                               epP     pwP      17 05 55.9 +6.6
ROTZ  Rotzenmuhle       79.82 319  eP      P        17 05 48.6 +8.2
      comp=Z,15nm,1.5s,baz=91,slow=5.3
MANZ  Manzenberg        79.89 319  eP      P        17 05 49.1 +8.2
      comp=Z,17nm,1.4s,baz=91,slow=5.3
SUR   Sutherland        80.05 236   LR     LR       17 36 30.4
      comp=Z,294nm,18.4s,baz=80,slow=32
NEUB  Neuenburg         80.13 321  eP      P        17 05 49.6 +7.5
      comp=Z,41nm,1.4s,baz=91,slow=5.3
CTI   Castel Tesino     80.14 315   P      P        17 05 41.7 -0.7
CTI                                 pmax   pmax
      comp=Z,69nm,1.2s
CTI   Castel Tesino     80.14 315   P      P        17 05 41.6 -0.7
CTI                                 IAmb   IAmb     17 05 51.1
      comp=Z,69nm,1.2s
WTTA  Wattenberg        80.16 317  eP      P        17 05 41.8 -0.8
      comp=Z,3.9nm,0.6s,SNR=8.1
WTTA                               i P     pP       17 05 48.7 -0.3
      comp=Z,35nm,0.9s
WATA  Walderalm         80.20 317  eP      P        17 05 41.8 -0.9
      comp=Z,1.7nm,0.8s,SNR=8.1
WATA                               i P     pP       17 05 49.0 -0.2
      comp=Z,39nm,1.4s
MOX   Moxa              80.22 320  eP      P        17 05 50.4 +7.8
      comp=Z,68nm,1.7s,baz=91,slow=5.3
MOX                                eL      L        17 47 25.2
      comp=Z,254nm,18.7s
LOF   Lofoten           80.30 338  eP      P        17 05 44.6 +2.1
KONS  Konsvik           80.30 336  eP      P        17 05 46.7 +4.0
STOK  Stokkvaagen       80.33 336  eP      P        17 05 46.9 +4.1
FUR   Furstenfeldbru    80.41 318  eP      P        17 05 51.0 +7.4
      comp=Z,71nm,1.4s,baz=91,slow=5.3
SQTA  Sankt Quirin      80.45 317  eP      P        17 05 43.6 -0.4
      comp=Z,2.9nm,0.6s,SNR=6.6
SQTA                               i P     pP       17 05 50.3 -0.2
      comp=Z,22nm,0.9s
GRF   Grafenberg Arr    80.46 319  eP      P        17 05 52.1 +8.2
      comp=Z,118nm,1.6s,baz=91,slow=5.3
GRF                                eL      L        17 47 40.8
      comp=Z,313nm,18.7s
FLTG  Flechtingen       80.49 322  eP      P        17 05 51.0 +7.1
      comp=Z,26nm,1.3s,baz=91,slow=5.3
MOTA  Moosalm           80.52 317  eP      P        17 05 43.6 -0.8
      comp=Z,5.1nm,0.8s
MOTA                               i P     pP       17 05 51.0 +0.1
      comp=Z,40nm,1.2s
NSS   Namsos            80.63 334  eP      P        17 05 49.1 +4.7
RETA  Reutte            80.75 317  eP      P        17 05 44.0 -1.6
      comp=Z,5.8nm,1.2s,SNR=8.1
RETA                               i P     pP       17 05 52.1  0.0
      comp=Z,47nm,1.1s
FETA  Feichten          80.77 316  i P     P        17 05 44.6 -1.3
      comp=Z,3.4nm,0.8s,SNR=7.3
FETA                               i P     pP       17 05 52.3  0.0
      comp=Z,32nm,1.5s
NB2   NORSAR Subarra    80.78 331   P      P        17 05 44.5 -0.9
      comp=Z,57nm,1.4s,baz=92,slow=5.6
NB2   NORSAR Subarra    80.78 331   P      P        17 05 44.5 -0.9
      baz=92,slow=5.6
NOA   NORSAR Array B    80.78 331   P      P        17 05 43.9 -1.5
      comp=Z,1.6nm,0.6s,baz=95,slow=5.5,SNR=7.1
NOA                                 LR     LR       17 46 35.1
      comp=Z,373nm,18.8s,baz=110,slow=39
```

```
ASSE  Asse, Remlinge    80.83 322  eP      P        17 05 53.4 +7.7
      comp=Z,34nm,1.3s,baz=91,slow=5.3
BSEG  Bad Segeberg      81.07 323  eP      P        17 05 55.0 +8.0
      comp=Z,92nm,1.4s,baz=91,slow=5.3
NRDL  Niedersach Rie    81.18 322  eP      P        17 05 55.8 +8.3
      comp=Z,126nm,1.5s,baz=91,slow=5.3
UBR   Ueberruh          81.19 317  eP      P        17 05 55.1 +7.1
      comp=Z,191nm,2.7s,baz=91,slow=5.3
UBBA  Unterbreizbach    81.25 320  eP      P        17 05 56.0 +8.1
      comp=Z,101nm,2.3s,baz=91,slow=5.3
GTTG  Gottingen         81.27 321  eP      P        17 05 55.9 +7.8
      comp=Z,62nm,1.4s,baz=91,slow=5.3
DAVA  Damuels           81.35 317  eP      P        17 05 48.0 -0.9
      comp=Z,4.4nm,1.1s,SNR=7.6
DAVA                               i P     pP       17 05 55.6 +0.2
      comp=Z,38nm,1.2s
MSSA  Maissana          81.66 314   P      P        17 05 51.3 +0.8
MSSA                                IAmb   IAmb     17 05 58.1
      comp=Z,67nm,1.3s
STU   Stuttgart         81.79 318  eP      P        17 05 58.6 +7.6
      comp=Z,191nm,1.8s,baz=91,slow=5.3
DOMB  Dombas            81.84 332  eP      P        17 05 56.6 +5.6
KBS   Kingsbay          81.88 349  eP      P        17 05 52.0 +1.1
KEST  Kesra             82.11 305   P      P        17 05 52.3 -0.7
      comp=Z,2.4nm,0.6s,baz=6.6,slow=4.8,SNR=4.2
KEST                                LR     LR       17 48 37.5
      comp=Z,204nm,18.1s,baz=10,slow=40
BFO   Black Forest      82.37 318  eP      P        17 06 01.3 +7.2
      comp=Z,31nm,1.3s,baz=91,slow=5.3
MOL   Molde             82.55 332  eP      P        17 05 58.0 +3.4
IBBN  Ibbenburen        82.62 322  eP      P        17 06 03.1 +7.8
      comp=Z,141nm,1.6s,baz=91,slow=5.3
BUG   Bochum--Univer    82.96 321  eP      P        17 06 04.8 +7.8
      comp=Z,80nm,1.4s,baz=91,slow=5.3
ODD1  Odda              83.04 330  eP      P        17 06 02.8 +5.5
AHRW  Bad Neuenahr-A    83.11 320  eP      P        17 06 06.0 +8.2
      comp=Z,61nm,1.6s,baz=91,slow=5.3
SBF   Sospel            83.18 313  eP      P        17 06 01.6 +3.2
SBF                                 pmax   pmax
      comp=Z,46nm,1.1s
MBDF  Montbardon        83.61 314  eP      P        17 06 03.2 +2.5
MBDF                                pmax   pmax
      comp=Z,9.0nm,0.8s
BNI   Bardonecchia      83.65 315   P      P        17 06 08.9 +8.0
BER   Bergen            83.67 330  eP      P        17 06 06.2 +5.8
WLF   Walferdange       83.75 319  eP      P        17 06 09.4 +8.2
      comp=Z,56nm,1.5s,baz=91,slow=5.3
FRF   La Foret Royal    83.77 313  eP      P        17 06 04.8 +3.4
FRF                                 pmax   pmax
      comp=Z,133nm,1.5s
LMR   La Mourre         83.88 313  eP      P        17 06 08.6 +6.7
LMR                                 pmax   pmax
      comp=Z,75nm,1.6s
SYO   Syowa Base        84.55 197⇑eP       P        17 06 05.2 +0.5
SYO   Syowa Base        84.55 197⇑esP      sP       17 06 10.6 -3.0
BAIF  Baives            84.98 320  eP      P        17 06 10.7 +3.4
BAIF                                pmax   pmax
      comp=Z,58nm,1.5s
AVF   Avril sur Loir    85.83 316  eP      P        17 06 14.6 +2.9
AVF                                 pmax   pmax
      comp=Z,48nm,1.5s
CAF   Calviac           86.93 315  eP      P        17 06 19.7 +2.5
CAF                                 pmax   pmax
      comp=Z,37nm,1.4s
RJF   Les Rejaudoux     87.27 315  eP      P        17 06 22.1 +3.3
RJF                                 pmax   pmax
      comp=Z,3.0nm,0.2s
FLN   La Foliniere      88.17 319  eP      P        17 06 25.9 +2.9
FLN                                 pmax   pmax
      comp=Z,75nm,1.4s
SJPF  Ste Jean          89.52 313  eP      P        17 06 33.8 +4.3
SJPF                                pmax   pmax
      comp=Z,26nm,1.2s
ROSF  Rostrenen         90.07 319  eP      P        17 06 39.1 +7.2
ROSF                                pmax   pmax
      comp=Z,174nm,1.8s
QUIF  Quistinic         90.07 318  eP      P        17 06 34.5 +2.6
QUIF                                pmax   pmax
      comp=Z,77nm,1.6s
TORD  Torodi Ar. Bea    91.17 283   P      P        17 06 38.2 +0.5
      comp=Z,1.3nm,0.6s,baz=93,slow=4.5,SNR=6.1
TORD                                PP     PP       17 10 15.6 +0.8
      comp=Z,0.2nm,0.4s,baz=68,slow=7.4,SNR=2.4
TORD                                LR     LR       17 46 13.3
      comp=Z,456nm,20.6s,baz=95,slow=35
TORD  Torodi Ar. Bea    91.17 283   P      P        17 06 37.9 +0.2
TORD                                IAmb   IAmb     17 06 47.4
      comp=Z,24nm,1.4s
VNDA  Vanda             91.87 168   P      P        17 06 39.8 +0.1
      comp=Z,0.9nm,0.7s,baz=306,slow=7.6,SNR=6.9
VNDA                                LR     LR       17 42 40.6
      comp=Z,288nm,20.8s,baz=312,slow=32
ESDC  Sonseca Array     92.14 310   P      P        17 06 41.5 -0.3
      comp=Z,2.6nm,0.7s,baz=65,slow=4.1,SNR=13
ESDC                                LR     LR       17 55 02.3
      comp=Z,124nm,18.2s,baz=320,slow=40
ESDC  Sonseca Array     92.14 310   P      P        17 06 41.4 -0.4
ESDC                                IAmb   IAmb     17 06 50.8
      comp=Z,36nm,1.6s
IMAR  Indian Mountai    92.43  22   P      P        17 06 42.0 -0.6
ILAR  Eielson Array     95.54  22   P      P        17 06 54.6 -2.3
      comp=Z,0.3nm,0.8s,baz=270,slow=4.5,SNR=1.1
ILAR                                PP     PP       17 10 44.9 -2.7
      comp=Z,0.4nm,0.8s,baz=288,slow=7.1,SNR=4.3
ILAR  Eielson Array     95.54  22   P      P        17 06 54.8 -2.1
ILAR  Eielson Array     95.54  22   P      P        17 06 54.8 -2.1
KDAK  Kodiak Island     96.14  30   LR     LR       17 55 30.0
      comp=Z,274nm,18.6s,baz=307,slow=39
QSPA  South Pole Qui    96.77 180   P      P        17 07 00.5 -2.0
QSPA                                IAmb   IAmb     17 10 46.0
      comp=Z,9.1nm,1.5s
A36M  Sachs Harbour     97.17  12   P      P        17 07 03.6 -0.5
DBIC  Dimbokro          98.43 278   LR     LR       17 51 18.2
      comp=Z,442nm,19.1s,baz=88,slow=35
TBI   Tubuai           116.58 113  eSS     SS       17 29 23.3 -6.1
      comp=Z,362nm,39.8s
TBI   Tubuai           116.58 113  eLR     LR       17 47 32.4
      comp=Z,356nm,29.5s
PPT2  Papeete2         116.73 106  eLR     LR       17 47 36.8
      comp=Z,306nm,22.8s
PMSA  Palmer Station   120.21 190  eP      PKPdf    17 12 21.6 -1.0
ULM   Lac du Bonnet    122.42   8   PKP    PKPdf    17 12 26.1 -1.2
      comp=Z,2.2nm,0.5s,baz=38,slow=3.0,SNR=4.6
NVAR  Mina Array Bea   125.60  32   PKP    PKPdf    17 12 31.9 -2.2
      comp=Z,0.7nm,0.6s,baz=297,slow=2.7,SNR=7.6
TAOE  Nuku Hiva Isla   125.87  96  eLR     LR       17 51 49.5
      comp=Z,296nm,26.1s
PDAR  Pinedale Array   125.97  22   PKP    PKPdf    17 12 33.3 -1.4
      comp=Z,0.7nm,0.7s,baz=180,slow=1.0,SNR=5.1
NBRF  Rio Formoso -    130.08 264  eP      PKPdf    17 12 42.4 -0.5
NBAN  Anadia - AL      131.23 263  eP      PKPdf    17 12 44.7 -0.5
NBLV  Livramento - P   131.80 266  eP      PKPdf    17 12 45.9 -0.5
NBPA  Parau_RN         131.90 268  eP      PKPdf    17 12 46.0 -0.5
NBCL  Cascavel-CE      132.95 271  eP      PKPdf    17 12 48.2 -0.2
NBMA  Muriti-CE        133.63 266  eP      PKPdf    17 12 49.3 -0.5
NBIT  Itapeh - BA      134.13 256  eP      PKPdf    17 12 49.9 -0.7
CMC01 Camacan, BA      134.17 255  eP      PKPdf    17 12 50.8 +0.2
GUA01 Guaratinga, BA   134.32 254  eP      PKPdf    17 12 50.5 -0.4
NBPB  Pedra_Branca-C   134.34 269  eP      PKPdf    17 12 50.8 -0.2
GDU01 Guandu, BA       134.36 258  eP      PKPdf    17 12 50.5 -0.5
RIB01 Linhares ES      134.49 250  eP      PKPdf    17 12 50.5 -0.6
ALF01 Guarapari-ES     134.57 248  eP      PKPdf    17 12 51.0 -0.2
BSFB  Barra de Sao F   134.99 250  eP      PKPdf    17 12 51.6 -0.4
NBPN  Ponto Novo - B   135.09 262  eP      PKPdf    17 12 52.3 -0.2
CAM01 Campos-RJ        135.17 246  eP      PKPdf    17 12 52.0 -0.3
SJMB  Sao Joao De Ma   135.33 250  eP      PKPdf    17 12 52.3 -0.5
DUB01 Friburgo-RJ      135.76 245  eP      PKPdf    17 12 53.0 -0.6
NBPS  Pedro II - PI    136.10 271  eP      PKPdf    17 12 54.1 -0.3
VAS01 Vassouras-RJ     136.68 245  eP      PKPdf    17 12 54.7 -0.5
DIAM  Diamantina, MG   137.72 250  eP      PKPdf    17 12 56.8 -0.6
BSCB  Bom Sucesso      138.19 246  eP      PKPdf    17 12 57.5 -0.6
ROSB  Rosrio           138.59 273  eP      PKPdf    17 12 58.8 -0.2
PET01 Itanhaem-SP      139.49 240  eP      PKPdf    17 12 59.9 -0.4
SDBA  SAO DESIDERIO    139.63 259  eP      PKPdf    17 13 00.6 -0.2
TXAR  Lajitas Array    139.99  25   PKP    PKPdf    17 12 59.6 -1.6
      comp=Z,0.5nm,0.5s,baz=330,slow=0.3,SNR=7.6
TXAR                                PP     PP       17 15 54.9 -1.6
      comp=Z,0.2nm,0.7s,baz=340,slow=5.1,SNR=2.8
RCLB  Rio Claro- Sao   140.29 243  eP      PKPdf    17 13 01.8 -0.1
BB19B Bebedouro        141.56 245  eP      PKPdf    17 13 03.6 -0.5
FRTB  Fartura          141.78 241  eP      PKPdf    17 13 04.2 -0.3
CPSB  Cacapava Do Su   141.88 228  eP      PKPdf    17 13 03.2 -1.2
IPMB  Ipameri, GO      142.02 250  eP      PKPdf    17 13 04.8 -0.3
SMTB  Santa Maria do   142.40 264  eP      PKPdf    17 13 05.4 -0.4
PEXB  Peixe            142.96 259  eP      PKPdf    17 13 04.8 -2.0
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Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
ITRB	**Iturama**	143.58	246	eP	PKPdf	17 13 07.5	-0.3
PLCA	**Paso Flores**	143.72	199	PKP	PKPbc	17 13 05.8	+0.8
	comp=Z,4.6nm,0.9s,baz=103,slow=1.5,SNR=8.1						
PLCA	**Paso Flores**	143.72	199	eP	PKPdf	17 13 06.9	-0.6
PCMB	**Pacaembu**	143.83	243	eP	PKPdf	17 13 07.8	-0.4
ITQB	**Itaqui**	144.60	227	eP	PKPab	17 13 05.5	-2.3
ARAG	**Araguaiana, MT**	145.85	252	eP	PKPdf	17 13 10.9	-0.9
SNDB	**Serra Nova Dou**	145.89	259	eP	PKPdf	17 13 11.3	-0.6
CPUP	**Villa Florida**	146.91	231	PKPbc	PKPdf	17 13 14.2	+0.9
	comp=Z,1.4nm,0.4s,baz=234,slow=5.8,SNR=4.0						
AQDB	**Aquidauana**	148.11	242	eP	PKPdf	17 13 15.2	-0.2
PP1B	**Ponte de Pedra**	148.28	248	eP	PKPdf	17 13 15.6	-0.2
VILB	**Vilhena**	154.36	254	eP	PKPdf	17 13 25.2	+0.1
MACA	**Manacapuru-AM**	155.01	277	eP	PKPdf	17 13 26.5	+0.4
LVC	**Limon Verde**	157.62	224	eP	PKPdf	17 13 29.5	-0.2
SDV	**Santo Domingo**	158.45	316	eP	PKPdf	17 13 31.0	+0.3
LPAZ	**La Paz**	160.59	240	eP	PKPdf	17 13 33.5	-0.1
ETMB	**Extrema**	160.69	260	eP	PKPdf	17 13 33.8	+0.8
TBTG	**Tabatinga, AM**	164.25	279	eP	PKPdf	17 13 37.6	+1.0

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*FUNV **14** 16:54:57.9, 8°.48N×71°.46W, h5^{km}, MW3.2*
ISC 14 16:54:56.6±1.4**, 8°.51N**±0°.03×**71°.41W**±0°.02**, h3**^{km}±11^{km}**,**
n25, σ1^{s}10/42**, 1D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOCV	**Socops**	0.59	113	⇓iP	Pg	16 55 09.0	+1.0
SOCV				eS	Sb	16 55 18.4	0.0
SDV	**Santo Domingo**	0.85	64	eP	Pb	16 55 14.6	+0.4
SDV				eS	Sb	16 55 27.0	+0.9
CAPV	**Capacho**	1.10	235	eP	Pg	16 55 17.0	-0.8
CAPV				eS	Sg	16 55 32.1	-0.1
PAMC	**Pamplona, Colo**	1.73	228	eP	Pb	16 55 29.5	+0.1
PAMC				eS	Sg	16 55 53.7	+1.3
OCAC	**Ocana**	1.91	262	eP	Pn	16 55 31.1	+0.8
OCAC				eS	Sn	16 55 55.7	+0.7
TAMC	**Tame, Arauca**	2.10	191	eP	Pg	16 55 36.7	-0.2
TAMC				eS	Sb	16 56 02.7	+0.8
LL6C	**La Loma 6 Bece**	2.21	304	eP	Pn	16 55 33.6	-0.6
LL6C				eS	Sn	16 56 01.7	-0.4
ELOV	**Elorza**	2.43	128	eP	Pb	16 55 40.0	-1.0
ELOV				eS	Sb	16 56 11.2	-0.1
ELOV	**Elorza**	2.43	128	eP	Pn	16 55 37.9	+0.7
ELOV				eS	Sn	16 56 07.5	+0.1
DABV	**Dabajuro**	2.51	18	eP	Pn	16 55 38.9	+0.4
DABV				eS	Sn	16 56 10.3	+0.7
BARC	**Barichara**	2.60	223	eP	Pb	16 55 44.7	+0.7
BARC				eS	Sb	16 56 15.7	-0.7
BARC				i		16 56 23.1	
	comp=Z,41nm,0.5s						
SIQV	**Siquisique**	2.64	36	eP	Pn	16 55 40.9	+0.6
SIQV				eS	Sn	16 56 13.1	+0.2
SMLC	**San Martn de**	2.65	276	eP	Pn	16 55 39.1	-1.2
SMLC				eS	Sb	16 56 15.5	-2.3
BRRC	**Barranca, Sant**	2.68	239	eP	Pb	16 55 45.2	-0.1
BRRC				eS	Sb	16 56 18.9	+0.3
RUSC	**La Rusia**	3.09	213	eP	Pn	16 55 48.0	+1.2
BAUV	**El Baul**	3.35	82	eP	Pn	16 55 51.4	+1.4
BAUV				eS	Sn	16 56 29.9	-0.4
ZARC	**Zaragoza, Cauc**	3.57	254	eS	Sn	16 56 36.3	+0.7
MONV	**Montecano**	3.70	22	eP	Pn	16 55 55.0	+0.3
SJCC	**San Jacinto, C**	3.97	291	eP	Pn	16 56 00.6	+2.0
SJCC				eS	Sn	16 56 46.6	+0.9
BENV	**Beln**	4.03	69	eP	Pn	16 55 60.0	+0.6
CHIC	**Chingaza**	4.50	211	eP	Pn	16 56 06.5	+0.4
CHIC				eS	Sn	16 56 57.8	-1.4
TACV	**Tcata**	4.61	69	eP	Pn	16 56 08.3	+0.9
PAYV	**Puerto Ayacuch**	4.83	129	eP	Pn	16 56 10.2	-0.1
CACV	**CAICARA DEL OR**	4.91	101	eP	Pb	16 56 19.2	-4.1
BIRV	**Birongo**	5.43	69	eP	Pn	16 56 18.6	0.0

JMA 14 16:58:50.7±0.4**, 31°.32N×128°.71E, h6**^{km}±3^{km}**, M2.9,**
Northwest of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSJ	**Shimokoshiki**	0.93	67	P	Pg	16 59 08.3	-0.3
JSJ				S	Sg	16 59 20.4	-0.3
JSU	**Suzuyama**	1.50	82	P	Pb	16 59 18.7	-0.3
JKC	**Kuchinoerabu**	1.54	123	P	Pn	16 59 18.9	+0.3

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*IDC **14** 17:07:22.6±13.0, 14°.89S×165°.59E, h0^{km}, mb4.0/3,*
mb1 4.1/4, mb1mx3.6/43, mbtmp3.9/4, ML3.5/1, Error
ellipse: s-maj=233.2km s-min=36.5km az=55.0
*NEIC **14** 17:07:22.7±0.2, 14°.7S±0°.2×166°.08E±0°.08, h25^{km}±14^{km},*
mb4.1/7, Error ellipse: s-maj=28.7km s-min=8.4km
az=194.0
ISC 14 17:07:22.6±1.6**, 14°.6S**±0°.1×**166°.09E**±0°.10**, h35**^{km}**, n13,**
σ0^{s}53/14**, mb4.0**/6**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	1.36	128		Pn	17 07 45.2	+0.1
SANVU				Sn	Sn	17 08 01.7	-0.2
DZM	**Mont Dzumac**	7.42	177	Pn	Pn	17 09 09.2	+0.6
	0.9nm,0.3s,baz=96,slow=23,SNR=18						
DZM				Sn	Sn	17 10 32.4	+0.7
	0.2nm,0.3s,baz=133,slow=23,SNR=1.5						
DZM	**Mont Dzumac**	7.42	177		Pn	17 09 07.7	-0.9
ONTNC	**Ouen Toro**	7.66	177	Pn	Pn	17 09 10.8	-0.9
STKA	**Stephens Creek**	28.21	228	P	P	17 13 12.1	0.0
	1.6nm,0.4s,baz=66,slow=6.7,SNR=6.0						
STKA	**Stephens Creek**	28.21	228	IAmb	IAmb	17 13 28.3	
	comp=Z,2.1nm,1.4s						
WB0	**Warramunga Arr**	30.68	256	P	P	17 13 34.6	+0.4
WB0				IAmb	IAmb	17 13 51.4	
	comp=Z,5.3nm,1.2s						
WB2	**Warramunga Arr**	30.73	256	P	P	17 13 34.9	+0.2
WB2				IAmb	IAmb	17 13 57.2	
	comp=Z,7.9nm,1.4s						
WRA	**Warramunga Arr**	30.74	256	P	P	17 13 35.1	+0.3
	comp=Z,0.6nm,0.8s,baz=85,slow=9.0,SNR=4.8						
ASAR	**Alice Springs**	31.65	249	P	P	17 13 43.1	+0.3
	comp=Z,0.7nm,0.4s,baz=78,slow=9.3,SNR=22						
BBOO	**Buckleboo**	32.75	231	P	P	17 13 52.1	-0.2
KNRA	**Kununurra**	36.01	263	P	P	17 14 20.3	-0.4
FITZ	**Fitzroy Crossi**	38.91	259	P	P	17 14 45.4	+0.1
FITZ				IAmb	IAmb	17 15 17.3	
	comp=Z,6.6nm,1.4s						

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*IDC **14** 17:09:33.0±1.1, 34°.97N×32°.11E, h0^{km}, mb3.6/5,*
mb1 3.6/12, mb1mx3.5/56, mbtmp3.5/12, ML3.6/7, MS4.5/1,
Ms1 4.5/1, ms1mx2.7/57, Error ellipse: s-maj=21.1km
s-min=16.2km az=47.0
*DDA **14** 17:09:34.7, 34°.86N×32°.08E, h25^{km}±3^{km}, MW3.5*
*NIC **14** 17:09:35.5±0.0, 34°.91N×32°.11E, h19^{km}, Ml3.8/7*
*GII **14** 17:09:35.0±0.0, 34°.85N×32°.14E, h10^{km}, MD2.8/3,*
Mm3.0/10
*ISK **14** 17:09:36.4, 35°.10N×32°.22E, h5^{km}, ML3.3/18*
ISC 14 17:09:34.9±1.0**, 34°.88N**±0°.02×**32°.11E**±0°.02**, h15**^{km}±6^{km}**,**
n115, σ1^{s}56/168**, mb3.5**/5**, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKMS	**Akamas**	0.23	53	P	Pg	17 09 41.2	+1.1
AKMS				S	Sg	17 09 44.5	+1.0
AKMS				AML	AML	17 09 45.0	
	167nm,0.2s						
AKMS				AML	AML	17 09 45.0	
	167nm,0.2s						
AKMS				AML	AML	17 09 45.2	
	132nm,0.3s						
AKMS				AML	AML	17 09 45.2	
	132nm,0.3s						
NATA	**Nata**	0.39	105	P	Pb	17 09 44.4	+0.9
NATA				S	Sb	17 09 50.5	+1.1
NATA				AML	AML	17 09 54.2	
	78nm,0.4s						
NATA				AML	AML	17 09 54.2	
	78nm,0.4s						
NATA				AML	AML	17 09 54.4	
	58nm,0.3s						
NATA				AML	AML	17 09 54.4	
	58nm,0.3s						
ALFC	**Alefka**	0.48	55	P	Pb	17 09 45.1	0.0
ALFC				S	Sb	17 09 52.4	+0.4
ALFC				AML	AML	17 09 53.4	
	41nm,0.4s						
ALFC				AML	AML	17 09 53.4	
	41nm,0.4s						
ALFC				AML	AML	17 09 54.8	
	30nm,0.4s						
ALFC				AML	AML	17 09 54.8	
	30nm,0.4s						
LEF	**Lefka**	0.68	69	iP	Pg	17 09 47.4	-0.8
LEF				iS	Sg	17 09 56.4	-0.9
LEF	**Lefka**	0.68	69	PG	Pg	17 09 47.5	-0.8
LEF				SG	Sg	17 09 55.8	-1.5
AKDN	**Akdeniz- Kıbrı**	0.81	59	PG	Pg	17 09 50.1	-0.7
AKDN				SG	Sg	17 10 00.1	-1.4
ASGA	**Asgata**	0.94	96	P	Pb	17 09 53.4	+0.5
ASGA				S	Sn	17 10 07.7	+1.1
ASGA				AML	AML	17 10 10.0	
	10nm,0.5s						
ASGA				AML	AML	17 10 10.0	
	10nm,0.5s						
ASGA				AML	AML	17 10 10.2	
	15nm,0.4s						
ASGA				AML	AML	17 10 10.2	
	15nm,0.4s						
CSS	**Mathiatis**	1.00	85	Pg	Pg	17 09 54.0	-0.3
CSS				Sg	Sb	17 10 07.7	+0.7
CSS	**Mathiatis**	1.00	85	PG	Pb	17 09 54.8	+0.8
CSS				SG	Sn	17 10 09.1	+0.8
CSS	**Mathiatis**	1.00	85	P	Pg	17 09 54.1	-0.3
CSS				S	Sb	17 10 08.5	+1.5
ATHAL	**Athalassa**	1.08	76	P	Pb	17 09 56.0	+0.6
ATHAL				S	Sn	17 10 11.6	+1.3
ATHAL				AML	AML	17 10 13.1	
	6.6nm,0.9s						
ATHAL				AML	AML	17 10 13.1	
	6.6nm,0.9s						
ATHAL				AML	AML	17 10 18.9	
	8.8nm,0.6s						
ATHAL				AML	AML	17 10 18.9	
	8.8nm,0.6s						
AKIN	**Akıncılar- Kıb**	1.12	83	PG	Pn	17 09 57.3	+1.3
AKIN				SG	Sn	17 10 12.4	+1.3
LFK	**Lefkose**	1.23	71	PN	Pg	17 09 58.5	-0.1
LFK				SN	Sn	17 10 14.7	+0.8
MVOU	**Mavrovouni**	1.25	83	P	Pn	17 09 58.3	+0.4
MVOU				S	Sg	17 10 15.3	-0.1
MVOU				AML	AML	17 10 21.6	
	1.9nm,0.6s						
MVOU				AML	AML	17 10 21.6	
	1.9nm,0.6s						
GAZI	**Gazipasa**	1.36	7	iP	Pn	17 09 58.1	-1.2
GAZI				iS	Sb	17 10 15.7	-1.5
GAZI	**Gazipasa**	1.36	7	PN	Pn	17 09 58.6	-0.7
GAZI				SN	Sb	17 10 16.0	-1.2
BOZY	**Bozyazi-Mersin**	1.41	30	PN	Pn	17 10 00.1	+0.1
TEKE	**Tekeli-Mersin**	1.50	33	PN	Pn	17 10 01.6	+0.4
OSC1	**CSNet OBS 1**	1.54	207	P	Pn	17 10 02.1	+0.3
OSC1				S	Sn	17 10 22.6	+1.0
PARAL	**Paralimni**	1.59	85	P	Pg	17 10 06.1	+0.6
PARAL				AML	AML	17 10 37.6	
	1.6nm,0.6s						
PARAL				AML	AML	17 10 39.3	
	2.6nm,1.1s						
BERE	**Bereket-Mersin**	1.72	31	PN	Pn	17 10 04.9	+0.5
BERE				SN	Sn	17 10 26.5	+0.4
AKKU	**Akkuyu-Mersin**	1.73	42	PN	Pn	17 10 05.7	+1.3
GULN	**MERSIN_Gulnar**	1.75	42	iP	Pn	17 10 04.0	-0.6
GULN				iS	Sn	17 10 25.8	-0.8
EREN	**Erenkoy**	1.80	68	PN	Pb	17 10 08.1	+0.5
TISA	**Tisan-Mersin**	1.81	45	PN	Pn	17 10 06.8	+1.4
OSC2	**CSNet OBS 4**	1.81	176	P	Pn	17 10 06.5	+1.0
OSC2				S	Sn	17 10 29.4	+1.3
KARG	**Kargicak-Mersi**	1.85	44	PN	Pn	17 10 07.4	+1.3
IKL	**Isikli**	1.86	43	PN	Pn	17 10 07.1	+0.9
ERMK	**Ermenek**	1.87	20	iP	Pn	17 10 07.5	+0.9
TEVE	**Tevekalti-Mers**	1.89	35	PN	Pn	17 10 07.8	+1.1
KEBE	**Keben-Mersin**	2.03	39	PN	Pn	17 10 10.1	+1.5
AKUM	**Antalya-Kumluc**	2.04	315	iP	Pb	17 10 12.4	+0.8
KEPZ	**Antalya-Kepez**	2.06	349	iP	Pn	17 10 09.0	0.0
KEPZ				iS	Sb	17 10 37.2	-0.2
SILI	**Silifke-Mersin**	2.09	44	PN	Pn	17 10 10.9	+1.6
HDMB	**Hadim**	2.10	8	PN	Pn	17 10 10.9	+1.2
KIZK	**Mersin**	2.30	45	iP	Pn	17 10 12.9	+0.8
KIZK				iS	Sb	17 10 43.0	-1.2
KIZK	**Mersin**	2.30	45	PN	Pn	17 10 13.9	+1.7
KSL	**Kastellorizon**	2.42	302	P	Pn	17 10 15.5	+1.6
KKBE	**Karaman, Kazim**	2.43	16	iP	Pb	17 10 16.5	-1.8
KKBE				iS	Sb	17 10 48.3	+0.2
AKAS	**Kas**	2.45	304	iP	Pn	17 10 16.4	+1.9
KRMN	**Karaman**	2.47	22	PN	Pn	17 10 16.3	+1.6
SEYD	**Seydisehir-KON**	2.53	355	PN	Pn	17 10 17.5	+2.0
KORT	**Korkueli**	2.55	326	iP	Pb	17 10 21.2	+0.7
SEDI	**Konya, Seydise**	2.58	354	iP	Pn	17 10 18.5	+2.3
SEDI				iS	Sb	17 10 53.7	+1.2
BUCA	**Burdur, Bucak-**	2.75	333	iP	Pb	17 10 23.3	-0.4
MERS	**Mersin**	2.78	44	PN	Pn	17 10 21.1	+2.1
KMER	**Konya-Meram**	2.89	4	iP	Pn	17 10 23.2	+2.8
KERG	**Konya-Eregli**	3.00	32	iP	Pn	17 10 24.4	+2.3
KERG				iS	Sn	17 11 00.7	+2.9
DED	**Mersin**	3.01	46	iP	Pn	17 10 22.1	+0.1
DED				iS	Sn	17 11 00.6	+2.8
FETY	**Fethiye**	3.02	306	P	Pn	17 10 23.7	+1.5
KONT	**Konya--Tatoy**	3.06	4	iP	Pn	17 10 25.4	+2.7
BHL	**Bhannes**	3.09	107	eP	Pb	17 10 27.5	-2.1
DQRL	**Deir Qamar**	3.09	111	eP	Pb	17 10 29.3	-0.4
HNTI	**Hanita**	3.11	124	Sn	Sn	17 11 00.9	+0.6
ISP	**Isparta**	3.20	337	Pn	Pb	17 10 30.0	-1.5
ISP				Sn	Sn	17 11 04.7	+2.0
DOGA	**KONYA_Doganhis**	3.24	354	iP	Pn	17 10 27.9	+2.6
BRDR	**BURDUR-Merkez**	3.26	330	iP	Pn	17 10 28.8	+3.3
BAGO	**Egridir - ISPA**	3.28	341	iP	Pb	17 10 29.9	-3.0
OFRI	**`Ofer**	3.29	133	Pn	Pn	17 10 26.1	+0.2
OFRI				Sn	Sn	17 11 04.3	-0.4
MMA0B	**Mount Meron ar**	3.31	123	Pn	Pn	17 10 26.9	+0.7
MMA0B				Sn	Sn	17 11 05.5	+0.2
MMAI	**Mount Meron Ar**	3.31	123	Pn	Pn	17 10 26.0	-0.2
	4.9nm,0.3s,baz=310,slow=11,SNR=29						
MMAI				Sn	Sn	17 11 07.2	+1.9
	15nm,0.3s,baz=292,slow=13,SNR=9.2						
BLGI	**Bet Lehem HaGe**	3.34	129	Pn	Pn	17 10 27.5	+0.9
BLGI				Sn	Sn	17 11 05.5	-0.4
SHBL	**Chebaa**	3.38	116	eP	Pn	17 10 28.9	+1.7
GEM	**Giv'at Ha'Em**	3.39	119	Pn	Pn	17 10 28.0	+0.8
GEM				Sn	Sn	17 11 07.8	+0.7
YURE	**YUREGIR**	3.45	55	iP	Pn	17 10 29.8	+1.6
YURE				iS	Sn	17 11 11.7	+2.9
YVAC	**Isparta, Yalva**	3.45	348	iP	Pb	17 10 32.7	-3.1
ALIN	**Konya, Altinte**	3.46	10	iP	Pn	17 10 27.4	-0.9
ARG	**Arkhangelos**	3.51	293	P	Pn	17 10 30.0	+1.1
SLTI	**Sal'it**	3.59	136	Pn	Pn	17 10 29.5	-0.5
SLTI				Sn	Sn	17 11 11.2	-1.0
TAVA	**DENIZLI_Tavas**	3.65	316	iP	Pn	17 10 31.7	+0.7
TURN	**Turunc**	3.67	302	iP	Pn	17 10 32.2	+1.2
MMLI	**Mount Malkishu**	3.68	131	Pn	Pn	17 10 32.1	+0.8
MMLI				Sn	Sn	17 11 14.0	-0.4
KZIL	**AFYON_Kizioren**	3.72	335	iP	Pn	17 10 34.2	+2.2
AKO	**Adana**	3.73	45	iP	Pn	17 10 34.3	+2.4
NIDE	**Nigde/Merkez-G**	3.78	34	iP	Pb	17 10 37.7	-3.7
NIDE				iS	Sb	17 11 23.3	-3.7
YER	**Yerkesik**	3.83	307	P	Pn	17 10 35.6	+2.2
HMDT	**Nahal Hemdat**	3.87	132	Pn	Pn	17 10 34.8	+0.9
HMDT				Sn	Sn	17 11 19.4	+0.3
MULA	**Mugla, Merkez-**	3.88	309	iP	Pn	17 10 36.3	+2.2
UJAP	**Al Uja**	4.05	135	Pn	Pn	17 10 36.8	+0.5
UJAP				Sn	Sn	17 11 23.2	-0.2
PASA	**Karahalli, USA**	4.05	329	iP	Pn	17 10 38.0	+1.6
PASA				iS	Sn	17 11 25.1	+1.5
AMAZ	**Amatzia**	4.08	144	Pn	Pn	17 10 37.6	+0.8
AMAZ				Sn	Sn	17 11 23.4	-0.9
DAT	**Datca**	4.12	298	P	Pn	17 10 38.9	+1.5
DAT	**Datca**	4.12	298	iP	Pn	17 10 38.8	+1.4
DSI	**Dead Sea**	4.29	139	Pn	Pn	17 10 40.7	+1.1
DSI				Sn	Sn	17 11 29.5	+0.1
YTIR	**Yattir**	4.32	144	Pn	Pn	17 10 40.9	+0.8
YTIR				Sn	Sn	17 11 30.4	+0.1
KKUL	**Konya-Kulu**	4.33	8	iP	Pn	17 10 43.2	+3.0
NIS1	**Nisyros Isl.**	4.37	295	P	Pn	17 10 41.9	+1.2
AYDN	**Tasoluk**	4.40	310	iP	Pn	17 10 42.6	+1.4
KZIT	**Kziot**	4.41	154	Pn	Pn	17 10 41.9	+0.7
KZIT				Sn	Sn	17 11 32.1	-0.1
BODT	**Bodrum**	4.46	301	P	Pn	17 10 43.1	+1.1
USAK	**Uak-Merkez**	4.56	328	iP	Pn	17 10 44.9	+1.5
USAK				iS	Sn	17 11 36.5	+0.4
HCB	**Kahramanmara**	4.59	56	iP	Pn	17 10 45.0	+1.2
HCB				iS	Sn	17 11 38.4	+1.5
GHAJ	**Ghor Haditha**	4.60	140	Pn	Pn	17 10 44.1	+0.3
SGAZ	**Eskisehir, Sey**	4.75	348	iP	Pn	17 10 48.9	+2.9
SGAZ				iS	Sn	17 11 44.9	+4.1
ASF	**Jabal al Asfar**	4.82	123	Pn	Pn	17 10 48.6	+1.6
	1.2nm,0.3s,baz=252,slow=4.3,SNR=11						
ASF				Sn	Sn	17 11 51.0	+8.4
	2.0nm,0.3s,baz=88,slow=14,SNR=2.9						
BRTR	**Keskin Array B**	4.98	14	Pn	Pn	17 10 51.3	+2.0
	0.3nm,0.3s,baz=189,slow=15,SNR=8.3						
BRTR				Sn	Sn	17 11 47.7	+1.1
	0.1nm,0.3s,baz=156,slow=16,SNR=4.0						
ZFRI	**Zfri**	5.03	148	Pn	Pn	17 10 50.2	+0.4
ZFRI				Sn	Sn	17 11 46.2	-1.4
SMG	**Samos**	5.11	305	P	Pn	17 10 51.3	+0.4
PRNI	**Paran**	5.13	151	Pn	Pn	17 10 51.9	+0.6
PRNI				Sn	Sn	17 11 49.9	-0.3
KRMI	**Paran Flat**	5.24	154	Pn	Pn	17 10 53.2	+0.5
ELBS	**KAHRAMANMARAS**	5.30	48	iP	Pn	17 10 54.6	+1.0
HRFI	**Mount Harif**	5.43	152	Pn	Pn	17 10 55.8	+0.5
HRFI				Sn	Sn	17 11 56.6	-0.9
MBRI	**Mt Berech**	5.60	154	Pn	Pn	17 10 58.4	+0.7
MBRI				Sn	Sn	17 12 01.6	-0.2
EIL	**Elat**	5.73	154	Pn	Pn	17 11 00.8	+1.5
	1.5nm,0.3s,baz=323,slow=2.1,SNR=26						
EIL				Sn	Sn	17 12 03.9	-0.9
	1.1nm,0.3s,baz=315,slow=21,SNR=5.9						
EIL				LR	LR	17 14 07.2	
	comp=Z,87nm,20.8s,baz=136,slow=47						
EIL	**Elat**	5.73	154	Pn	Pn	17 11 00.2	+0.8
IDI	**Anoyia**	5.94	276	Pn	Pn	17 11 03.5	+1.2
	1.2nm,0.3s,baz=77,slow=13,SNR=8.4						
IDI				Sn	Sn	17 12 10.0	-0.1
	2.3nm,0.3s,baz=184,slow=23,SNR=7.2						
AKASG	**Malin Array Be**	15.95	353	Pn	Pn	17 13 18.2	-0.4
	0.6nm,0.3s,baz=178,slow=8.6,SNR=3.7						
GERES	**GERESS Array B**	19.49	321	P	P	17 14 01.5	+0.1
	0.2nm,0.3s,baz=129,slow=10,SNR=8.1						
KHC	**Kasperske Hory**	19.73	322	eP	P	17 14 03.9	0.0
KHC				ex	x	17 14 12.3	
FINES	**FINESS Array B**	26.86	354	P	P	17 15 13.1	-1.5
	2.2nm,0.9s,baz=190,slow=9.5,SNR=5.1						
ARCES	**ARCESS Array B**	34.90	356	P	P	17 16 23.5	-2.0
	1.0nm,0.5s,baz=178,slow=8.5,SNR=8.8						
TORD	**Torodi Ar. Bea**	34.99	239	P	P	17 16 27.5	+0.8
	0.4nm,0.7s,baz=32,slow=8.7,SNR=2.6						
MKAR	**Makanchi Array**	39.16	57	P	P	17 17 01.9	0.0
	0.3nm,0.7s,baz=264,slow=3.5,SNR=3.6						
SONM	**Songino Array**	55.20	52	P	P	17 19 07.5	+0.4
	0.3nm,0.6s,baz=297,slow=6.3,SNR=2.1						
YKA	**Yellowknife Ar**	79.33	345	LR	LR	17 57 50.4	
	comp=Z,296nm,21.0s,baz=0.0,slow=37						

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*IDC **14** 17:19:09.8±1.4, 6°.70S×129°.00E, h170^{km}±15^{km}, mb3.4/2,*
mb1 3.7/7, mb1mx3.1/50, mbtmp4.1/7, Error ellipse:
s-maj=21.0km s-min=11.6km az=106.0
ISC 14 17:19:09.2±0.8**, 6°.83S**±0°.06×**129°.01E**±0°.07**, h156**^{km}**, n22,**
σ2^{s}43/26**, mb3.7**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	2.45	21	P	Pn	17 19 52.5	+2.4
FAKI	**Fak Fak**	5.04	40	P	Pn	17 20 25.5	+2.1
SOEI	**Soe**	5.53	238	P	Pn	17 20 32.0	+2.2
DRS	**Darwin Rock St**	5.87	162	P	Pn	17 20 38.6	+4.3
	37nm,0.6s						
BATI	**Baumata**	6.27	237	P	Pn	17 20 42.2	+2.6
	5.8nm,0.3s,baz=271,slow=2.3,SNR=20						
BATI				S	Sn	17 21 52.9	+2.5
	7.8nm,0.3s,baz=94,slow=4.8,SNR=11						
SIJI	**Sorong**	6.33	21	P	Pn	17 20 40.9	+0.5
	6.0nm,0.3s,baz=64,slow=4.8,SNR=50						
SIJI				S	Sn	17 21 48.9	-3.0
	2.1nm,0.3s,baz=245,slow=23,SNR=8.2						
MTN	**Manton Dam**	6.33	161	P	Pn	17 20 44.1	+3.7
KDU	**Kakadu**	6.75	150	P	Pn	17 20 49.4	+3.5
KNRA	**Kununurra**	8.80	182	P	Pn	17 21 15.7	+2.4
	22nm,1.4s						
FITZ	**Fitzroy Crossi**	11.68	196	P	Pn	17 21 52.6	+1.4
	0.3nm,0.3s,baz=11,slow=13,SNR=24						
FITZ				S	Sn	17 23 56.3	-4.1
	0.8nm,0.3s,baz=102,slow=15,SNR=7.7						
FITZ	**Fitzroy Crossi**	11.68	196	P	Pn	17 21 52.6	+1.4
	5.4nm,1.6s						
WRAB	**Tennant Creek**	14.02	159	P	P	17 22 22.3	-1.9
WRA	**Warramunga Arr**	14.03	159	P	P	17 22 21.8	-2.5
	0.7nm,0.3s,baz=334,slow=12,SNR=27						
WRA				S	Sn	17 24 52.9	-4.1
	0.6nm,0.3s,baz=328,slow=23,SNR=6.5						
COEN	**Coen**	15.62	118	P	P	17 22 44.2	+2.2
	6.3nm,2.3s						
QIS	**Mount Isa**	17.08	144	P	Pn	17 22 59.9	+1.1
	7.1nm,0.5s						
ASAR	**Alice Springs**	17.39	165	P	Pn	17 23 03.7	+1.1
	1.7nm,0.3s,baz=343,slow=10,SNR=98						
ASAR				S	Sn	17 26 15.4	-2.2
	0.3nm,0.3s,baz=327,slow=17,SNR=5.0						
WRKA	**Warakurna**	18.12	182	P	Pn	17 23 10.9	-0.3
	5.6nm,0.8s						
MTSU	**Mount Surprise**	18.68	128	P	Pn	17 23 17.4	-0.4
	5.2nm,0.7s						
OOD	**Oodnadatta**	21.80	164	P	P	17 23 48.8	-0.1
	8.9nm,2.9s						
MULG	**Mulgathing**	23.81	169	P	P	17 24 09.2	+1.4
	13nm,2.4s						
MKAR	**Makanchi Array**	67.55	327	P	P	17 29 47.2	-1.5
	0.5nm,0.4s,baz=121,slow=7.6,SNR=14						
KURBB	**Kurchatov Arra**	71.85	329	P	P	17 30 13.3	-1.6
	0.5nm,0.5s,baz=128,slow=5.1,SNR=11						

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*IDC **14** 17:21:58.1±724.0, 66°.07N×38°.17E, h0^{km}, Error ellipse:*
s-maj=348.4km s-min=176.2km az=141.0
*HEL **14** 17:22:55.6±0.2, 65°.97N×38°.76E, h0^{km}, ML1.8, Explosion*
*KOLA **14** 17:23:11.3, 65°.98N×38°.21E, h0^{km}, ML2.4, White sea*
ISC 14 17:22:53.2±2.9**, 65°.98N**±0°.07×**39°.0E**±0°.2**, h0**^{km}**, n17,**
σ1^{s}47/16**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVZ	**Lovozero**	2.57	321	ePB	Pb	17 23 39.4	-0.8
LVZ				ePG	Pg	17 23 41.1	-1.3
LVZ				eSG	Sb	17 24 13.0	+0.7
APA0	**Apatity Array**	2.88	307	P	Pg	17 23 54.4	+6.2
APA0				S	Sg	17 24 26.7	+1.2
KU6	**Riekki**	3.71	275	eP	Pn	17 23 53.2	+1.5
KU6				MSG		17 24 48.5	
	comp=Z,1.2nm,0.2s						
MSF	**Maaselka**	4.07	274	eP	Pn	17 23 58.3	+1.7
VRF	**Varrio**	4.10	300	ePB	Pb	17 24 04.4	-1.7
VRF				MSG		17 24 53.0	
	comp=Z,1.5nm,0.2s						
RMF	**Romuvaara**	4.21	249	eP	Pn	17 23 60.0	+1.4
JOF	**Joensuu**	4.52	231	eP	Pn	17 24 04.4	+1.6
JOF				eS	Sn	17 24 54.9	-1.1
JOF				MSG		17 25 10.2	
	comp=Z,1.1nm,0.2s						
SGF	**Sodankyl**	5.15	292	eP	Pn	17 24 12.9	+1.5
SGF				MSG		17 25 27.3	
	comp=Z,1.2nm,0.3s						
RNF	**Rovaniemi**	5.27	283	eP	Pn	17 24 14.6	+1.6
KEV	**Kevo**	5.89	315	eP	Pn	17 24 23.2	+1.6
KEV				MSG		17 25 54.9	
	comp=Z,1.1nm,0.2s						
OUF	**Merijarvi**	6.21	261	eP	Pn	17 24 26.7	+0.7
OUF				MSG		17 26 01.3	
	comp=Z,0.5nm,0.2s						
ARA0	**ARCESS Array S**	6.23	311	eP	Pn	17 24 27.5	+1.3
HEF	**Hetta**	6.43	299	eP	Pn	17 24 29.7	+0.7
I43RU	**DUBNA INFRASON**	9.33	186	i		18 19 20.0	
	baz=2.6,slow=335,SNR=0.5						
I31KZ	**AKTYUBINSK INF**	18.43	139	i		19 21 40.0	
	baz=336,slow=333,SNR=0.8						
I46RU	**ZALESOVO INFRA**	25.25	96	i		19 58 20.0	
	baz=317,slow=330,SNR=5.7						
I34MN	**SONGINO INFRAS**	38.76	84	i		21 21 30.0	
	baz=323,slow=328,SNR=0.5						

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*IDC **14** 17:24:07.1±2.0, 6°.50N×92°.99E, h0^{km}, mb3.5/7, mb1 3.6/8,*
mb1mx3.4/62, mbtmp3.5/8, ML3.4/1, MS3.6/2, Ms1 3.6/2,
ms1mx3.0/38, Error ellipse: s-maj=77.7km s-min=20.6km

az=61.0

ISC 14 17:24:09.4±1.8**, 6°.6N**±0°.2×**93°.2E**±0°.3**, h10^{km}, n10, σ1^{s}37**/8**, mb3.5**/7**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	**Pallekele**	**12.42**	**274**	LR	LR	17 31 00.6	
	comp=Z,136nm,20.1s,baz=169,slow=34						
CMAR	**Chiang Mai Arr**	**13.05**	**25**	Pn	**Pn**	**17 27 14.5**	**-0.5**
	0.1nm,0.3s,baz=218,slow=14,SNR=4.6						
MKAR	**Makanchi Array**	**41.13**	**349**	P	**P**	**17 31 53.2**	**-0.5**
	0.5nm,0.7s,baz=178,slow=8.5,SNR=5.4						
SONM	**Songino Array**	**42.60**	**13**	P	**P**	**17 32 07.7**	**+1.8**
	0.2nm,0.4s,baz=197,slow=7.7,SNR=2.1						
KURBB	**Kurchatov Arra**	**45.55**	**347**	P	**P**	**17 32 29.7**	**+0.4**
	0.9nm,0.8s,baz=167,slow=7.1,SNR=8.1						
ZALV	**Zalesovo Beam**	**47.69**	**353**	P	**P**	**17 32 45.2**	**-0.9**
	0.5nm,0.6s,baz=151,slow=6.3,SNR=1.9						
WRA	**Warramunga Arr**	**48.31**	**124**	P	**P**	**17 32 50.4**	**-1.0**
	0.3nm,0.7s,baz=304,slow=8.9,SNR=6.0						
ASAR	**Alice Springs**	**49.84**	**129**	P	**P**	**17 33 03.9**	**+0.8**
	0.2nm,0.6s,baz=303,slow=7.9,SNR=7.1						
BVAR	**Borovoye Array**	**49.90**	**342**	P	**P**	**17 33 01.2**	**-1.8**
	0.5nm,0.4s,baz=234,slow=50,SNR=2.3						
KBZ	**Khabaz**	**57.40**	**319**	LR	LR	18 00 38.9	
	comp=Z,107nm,20.6s,baz=71,slow=38						

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*IDC **14** 17:33:53.5±1.0, 0°.23S×131°.91E, h0^{km}, mb3.8/6, mb1 3.9/9, mb1mx3.8/39, mbtmp3.8/9, ML3.1/3, MS3.5/6, Ms1 3.5/6, ms1mx3.1/39, Error ellipse: s-maj=21.3km s-min=10.6km az=122.0*

*DJA **14** 17:33:57.2±0.3, 0°S±4°×13°2E±°, h10^{km}, M4.2/10, mb4.1/5, MLv4.2/10*

*NEIC **14** 17:33:59.7±2.6, 0°.39S±0°.08×131°.64E±0°.07, h41^{km}±6^{km}, mb4.1/22, Error ellipse: s-maj=11.7km s-min=9.8km az=143.0*

ISC 14 17:33:57.4±0.6**, 0°.34S**±0°.05×**131°.86E**±0°.05**, h31^{km}, n54, σ2^{s}90**/51**, mb4.1**/11**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**0.79**	**229**	Pg	**Pn**	**17 34 11.7**	**-0.8**
	49nm,0.3s,baz=173,slow=22,SNR=320						
SIJI				Lg	Lg	17 34 22.8	
	124nm,0.3s,baz=129,slow=23,SNR=11						
SWI	**Sorong**	**0.79**	**229**	P	**Pn**	**17 34 12.2**	**-0.3**
SWI				S	**Sn**	**17 34 25.0**	**+1.7**
FAKI	**Fak Fak**	**2.59**	**171**	P	**Pn**	**17 34 39.0**	**+1.8**
FAKI	**Fak Fak**	**2.59**	**171**		**Pn**	**17 34 39.0**	**+1.8**
FAKI	**Fak Fak**	**2.59**	**171**	P	**Pn**	**17 34 39.5**	**+2.3**
MSAI	**Masohi**	**4.18**	**224**	P	**Pn**	**17 35 01.8**	**+2.7**
BAKI	**Biak**	**4.33**	**101**	P	**Pn**	**17 35 02.6**	**+1.4**
LBMI	**Labuha**	**4.37**	**266**	P	**Pn**	**17 35 03.9**	**+2.2**
BNDI	**Bandanaira**	**4.59**	**205**	P	**Pn**	**17 35 08.6**	**+3.9**
SRPI	**Serui, Papua**	**4.63**	**109**	P	Pn	17 35 11.2	+5.8
JAY	**Jayapura**	**9.10**	**104**	LR	LR	17 39 36.2	
	comp=Z,396nm,18.9s,baz=146,slow=38						
MTN	**Manton Dam**	**12.44**	**183**	Pn	**Pn**	**17 36 52.2**	**-0.3**
MTN					**Sn**	**17 39 07.4**	**-2.8**
BATI	**Baumata**	**12.75**	**219**	Pn	Pn	17 37 02.0	+5.3
	0.9nm,0.3s,baz=179,slow=20,SNR=1.8						
BATI				LR	LR	17 42 32.1	
	comp=Z,357nm,19.6s,baz=42,slow=40						
KAPI	**Kappang**	**12.95**	**249**	Pn	P	17 37 04.8	-4.9
	0.3nm,0.3s,baz=129,slow=5.3,SNR=4.9						
KAPI				LR	LR	17 43 26.2	
	comp=Z,141nm,18.8s,baz=74,slow=44						
KAPI	**Kappang**	**12.95**	**249**	Pn	Pn	17 36 52.8	-6.7
KNRA	**Kununurra**	**15.54**	**191**	Pn	**Pn**	**17 37 32.1**	**-2.3**
MANU	**Manus Island**	**15.59**	**96**	Pn	**P**	**17 37 39.9**	**+0.8**
MANU				IAmb	IAmb	17 37 51.9	
	comp=Z,15nm,1.2s						
COEN	**Coen**	**17.56**	**141**	Pn	**P**	**17 38 00.8**	**-0.1**
PMG	**Port Moresby**	**17.69**	**121**	P	**P**	**17 38 03.2**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=284,slow=12,SNR=2.5						
PMG				LR	LR	17 45 39.6	
	comp=Z,206nm,20.0s,baz=277,slow=40						
PMG	**Port Moresby**	**17.69**	**121**	Pn	**P**	**17 38 03.1**	**+0.8**
PMG				IAmb	IAmb	17 38 18.7	
	comp=Z,18nm,1.2s						
FITZ	**Fitzroy Crossi**	**18.68**	**199**	P	**P**	**17 38 13.2**	**0.0**
	comp=Z,0.0nm,0.3s,baz=38,slow=14,SNR=1.3						
FITZ				S	**Sn**	**17 41 33.5**	**-8.2**
	comp=Z,0.1nm,0.3s,baz=153,slow=10.0,SNR=4.0						
FITZ	**Fitzroy Crossi**	**18.68**	**199**		**P**	**17 38 10.8**	**-2.4**
GUMO	**Guam**	**18.91**	**42**	S	**Sn**	**17 41 38.1**	**-9.5**
	comp=Z,13nm,0.3s,baz=186,slow=22,SNR=14						
GUMO				LR	LR	17 45 01.9	
	comp=Z,87nm,19.7s,baz=208,slow=36						
WB0	**Warramunga Arr**	**19.46**	**173**		**Pn**	**17 38 23.1**	**-0.1**
WRAB	**Tennant Creek**	**19.62**	**173**	P	**P**	**17 38 24.2**	**+0.7**
WRAB				IAmb	IAmb	17 38 60.0	
	comp=Z,7.3nm,0.9s						
WRA	**Warramunga Arr**	**19.63**	**173**	P	**Pn**	**17 38 24.9**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=352,slow=11,SNR=17						
WRA				S	**S**	**17 41 56.1**	**-7.5**
	comp=Z,0.1nm,0.3s,baz=359,slow=22,SNR=4.6						
WRA	**Warramunga Arr**	**19.63**	**173**	P	**P**	**17 38 24.4**	**+0.7**
WB2	**Warramunga Arr**	**19.63**	**173**	P	**Pn**	**17 38 25.0**	**-0.2**
WB2				IAmb	IAmb	17 39 04.9	
	comp=Z,18nm,1.4s						
WR0	**Warramunga Arr**	**19.67**	**172**	P	**Pn**	**17 38 25.2**	**-0.4**
WR0				IAmb	IAmb	17 39 05.3	
	comp=Z,10nm,1.1s						
RABL	**Rabaul**	**20.64**	**101**	P	Pn	17 38 39.4	+2.2
AS31	**Alice Springs**	**23.27**	**175**	P	**P**	**17 39 03.0**	**+0.5**
ASAR	**Alice Springs**	**23.27**	**175**	P	**P**	**17 39 04.1**	**+1.5**
	comp=Z,5.3nm,0.7s,baz=351,slow=6.9,SNR=92						
ASAR				S	**S**	**17 43 22.1**	**+9.0**
	comp=Z,0.9nm,1.0s,baz=6.6,slow=26,SNR=2.5						
ASAR	**Alice Springs**	**23.27**	**175**	P	**P**	**17 39 03.7**	**+1.1**
PSA00	**Pilbara Seismi**	**24.14**	**208**	P	**P**	**17 39 08.7**	**-2.2**
CTAO	**Charters Tower**	**24.16**	**145**	P	**P**	**17 39 13.7**	**+2.6**
CTAO				IAmb	IAmb	17 39 28.1	
	comp=Z,5.7nm,0.9s						
BLSI	**Bandar Lampung**	**27.04**	**259**	P	P	17 39 55.0	+18
ARMA	**Armidale**	**35.33**	**150**	P	**P**	**17 40 50.6**	**+0.5**
CMAR	**Chiang Mai Arr**	**37.35**	**302**	P	**P**	**17 41 08.4**	**+0.9**
	comp=Z,0.4nm,0.8s,baz=120,slow=6.5,SNR=5.7						
CMAR	**Chiang Mai Arr**	**37.35**	**302**	P	**P**	**17 41 06.9**	**-0.6**
TOO	**Toolangi**	**39.12**	**163**	P	**P**	**17 41 22.2**	**0.0**
HHC	**Hu-ho-hao-te**	**44.96**	**338**	*e*P	P	17 42 15.3	+5.4
HHC				pmax	pmax		
	comp=Z,27nm,1.1s						
HHC				pmax	pmax		
	comp=Z,200nm,5.6s						
ULN	**Ulaanbaatar**	**52.64**	**339**	P	**P**	**17 43 07.3**	**-1.5**
ULN				IAmb	IAmb	17 43 21.0	
	comp=Z,4.3nm,1.1s						
SONM	**Songino Array**	**52.85**	**339**	P	**P**	**17 43 10.3**	**-0.1**
	comp=Z,1.0nm,1.1s,baz=131,slow=5.9,SNR=3.4						
SONM				LR	LR	18 06 54.9	
	comp=Z,57nm,19.7s,baz=353,slow=38						
SONM	**Songino Array**	**52.85**	**339**	P	**P**	**17 43 08.8**	**-1.5**
SONM				IAmb	IAmb	17 43 23.1	
	comp=Z,5.2nm,1.4s						
WMQ	**Urumqi**	**58.99**	**324**	*e*P	**P**	**17 43 56.8**	**+2.5**
SMY	**Shemya**	**63.54**	**27**	P	**P**	**17 44 28.5**	**+3.7**
MK31	**Makanchi Array**	**63.81**	**324**	P	**P**	**17 44 26.6**	**-0.3**
MK31				IAmb	IAmb	17 44 38.7	
	comp=Z,2.2nm,1.0s						
MKAR	**Makanchi Array**	**63.81**	**324**	P	**P**	**17 44 27.1**	**+0.2**
	comp=Z,0.9nm,0.7s,baz=115,slow=7.5,SNR=7.8						
MKAR	**Makanchi Array**	**63.81**	**324**	P	**P**	**17 44 26.7**	**-0.1**
MAKZ	**Makanchi**	**64.01**	**324**	P	**P**	**17 44 27.8**	**-0.3**
ZALV	**Zalesovo Beam**	**66.55**	**332**	P	**P**	**17 44 44.8**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=139,slow=6.8,SNR=2.4						
ABKAR	**Akbulak array**	**78.53**	**321**	P	**P**	**17 45 54.9**	**-0.9**
ABKAR	**Akbulak array**	**78.53**	**321**	P	**P**	**17 45 56.1**	**+0.4**
ABKAR				IAmb	IAmb	17 46 09.9	
	comp=Z,2.4nm,1.0s						
ILAR	**Eielson Array**	**86.57**	**25**	P	**P**	**17 46 36.9**	**-0.5**
	comp=Z,0.8nm,1.0s,baz=266,slow=5.1,SNR=3.6						

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*NOU **14** 17:41:28.1, 12°.14S×169°.20E, h180^{km}, mb4.1/19, Santa Cruz Islands Region*

*NEIC **14** 17:41:51.7±1.8, 13°.98S±0°.10×167°.2E±0°.2, h188^{km}±7^{km}, mb4.3/23, Error ellipse: s-maj=24.3km s-min=13.4km az=78.0*

*IDC **14** 17:41:57.9±2.6, 14°.16S×167°.09E, h246^{km}±23^{km}, mb3.6/10, mb1 3.6/12, mb1mx3.4/45, mbtmp4.1/12, Error ellipse: s-maj=24.1km s-min=17.2km az=87.0*

ISC 14 17:41:52.2±0.8**, 13°.93S**±0°.07×**167°.2E**±0°.1**, h200^{km}, n62, σ1^{s}40**/57**, mb4.1**/28**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**1.50**	**179**		**Pn**	**17 42 23.4**	**-2.5**
SANVU				Sn	**Sn**	**17 42 48.4**	**-3.9**
SANVU	**Saraoutou**	**1.50**	**179**	P	**Pn**	**17 42 24.3**	**-1.6**
KOUNC	**Koumac, New Ca**	**7.14**	**202**	P	Pn	17 43 42.1	+7.9
	9.6nm,1.0s						
DZM	**Mont Dzumac**	**8.12**	**185**	P	**Pn**	**17 43 49.4**	**+2.3**
	0.4nm,0.3s,baz=72,slow=7.3,SNR=13						
DZM				S	**Sn**	**17 45 20.8**	**+2.0**
	0.2nm,0.3s,baz=115,slow=22,SNR=1.1						
DZM	**Mont Dzumac**	**8.12**	**185**		**Pn**	**17 43 46.7**	**-0.4**
DZM	**Mont Dzumac**	**8.12**	**185**	P	Pn	17 43 52.4	+5.3
	12nm,1.4s						
NOUC	**Port Laguerre**	**8.17**	**186**	P	Pn	17 43 52.6	+5.0
	16nm,2.5s						
HNR	**Honiara**	**8.38**	**301**	P	Pn	17 43 57.2	+6.7
	3.1nm,0.3s,baz=121,slow=22,SNR=1.5						
HNR	**Honiara**	**8.38**	**301**		**Pn**	**17 43 49.8**	**-0.7**
OUENC	**Ouen Island, N**	**8.45**	**182**	Pn	Pn	17 43 45.5	-5.7
EIDS	**Eidsvold**	**18.94**	**231**		**P**	**17 45 55.7**	**-2.5**
EIDS				IAmb	IAmb	17 46 34.5	
	comp=Z,18nm,1.3s						
CTAO	**Charters Tower**	**20.92**	**250**	P	**P**	**17 46 19.0**	**-0.6**
CTAO				IAmb	IAmb	17 46 33.6	
	comp=Z,18nm,1.5s						
CTAO	**Charters Tower**	**20.92**	**250**	P	**P**	**17 46 21.1**	**+1.6**
	comp=Z,6.7nm,1.3s						
RMQ	**Roma**	**21.30**	**231**	P	**P**	**17 46 24.5**	**+1.1**
	comp=Z,22nm,0.7s						
ARMA	**Armidale**	**21.79**	**219**	P	**P**	**17 46 29.2**	**+0.8**
ARMA				IAmb	IAmb	17 46 48.9	
	comp=Z,28nm,1.5s						
ARMA	**Armidale**	**21.79**	**219**	P	**P**	**17 46 31.0**	**+2.5**
	comp=Z,16nm,2.0s						
MTSU	**Mount Surprise**	**22.37**	**256**	P	**P**	**17 46 35.0**	**+1.0**
	comp=Z,4.0nm,0.7s						
QLP	**Quilpie**	**24.89**	**236**	P	**P**	**17 46 57.5**	**+0.7**
	comp=Z,11nm,0.5s						
HIZ	**Hauiti**	**25.41**	**166**	P	P	17 46 49.8	-11
	comp=Z,54nm,1.1s						
BKZ	**Black Stump Fm**	**26.44**	**164**	P	P	17 46 59.5	-11
	comp=Z,14nm,1.1s						
QIS	**Mount Isa**	**27.13**	**252**	P	**P**	**17 47 17.6**	**+0.6**
	comp=Z,2.5nm,1.1s						
STKA	**Stephens Creek**	**29.45**	**228**	P	**P**	**17 47 38.4**	**+0.9**
	comp=Z,5.4nm,0.5s,baz=44,slow=7.1,SNR=9.4						
STKA	**Stephens Creek**	**29.45**	**228**	IAmb	IAmb	17 47 38.9	
	comp=Z,1.3nm,0.6s						
FOZ	**Fox Glacier**	**29.58**	**176**	P	**P**	**17 47 38.0**	**-0.3**
RPZ	**Rata Peaks**	**29.86**	**174**	P	**P**	**17 47 43.4**	**+2.5**
LCRK	**Leigh Creek**	**31.33**	**234**	P	**P**	**17 47 53.7**	**-0.2**
	comp=Z,13nm,2.8s						
WR0	**Warramunga Arr**	**31.76**	**255**	P	**P**	**17 47 56.9**	**-1.0**
WR0				IAmb	IAmb	17 47 58.6	
	comp=Z,2.8nm,1.1s						
WB0	**Warramunga Arr**	**31.88**	**255**	P	**P**	**17 47 57.3**	**-1.6**
WB0				IAmb	IAmb	17 47 58.8	
	comp=Z,2.9nm,0.7s						
WB2	**Warramunga Arr**	**31.94**	**255**	P	**P**	**17 47 58.2**	**-1.2**
WB2				IAmb	IAmb	17 48 04.0	
	comp=Z,4.8nm,1.1s						
WRAB	**Tennant Creek**	**31.94**	**255**	P	**P**	**17 47 57.8**	**-1.6**
	comp=Z,5.7nm,2.3s						
WRA	**Warramunga Arr**	**31.95**	**255**	P	**P**	**17 47 58.7**	**-0.8**
	comp=Z,1.1nm,0.6s,baz=89,slow=8.6,SNR=15						
WRA	**Warramunga Arr**	**31.95**	**255**	P	**P**	**17 47 57.4**	**-2.1**
HTT	**Hallett**	**32.18**	**228**	P	**P**	**17 48 01.9**	**+0.5**
	comp=Z,10nm,1.9s						
AS31	**Alice Springs**	**32.89**	**248**	P	**P**	**17 48 06.8**	**-0.8**
ASAR	**Alice Springs**	**32.89**	**248**	P	**P**	**17 48 06.8**	**-0.8**
	comp=Z,2.2nm,0.3s,baz=76,slow=10.0,SNR=130						
ASAR				PcP	**PcP**	**17 50 47.0**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=56,slow=3.1,SNR=4.6						
ASAR	**Alice Springs**	**32.89**	**248**	P	**P**	**17 48 06.3**	**-1.4**
BBOO	**Buckleboo**	**34.01**	**231**	P	**P**	**17 48 17.3**	**+0.1**
BBOO				IAmb	IAmb	17 48 54.5	
	comp=Z,24nm,1.4s						
BBOO	**Buckleboo**	**34.01**	**231**	P	**P**	**17 48 16.9**	**-0.3**
	comp=Z,15nm,1.4s						
MULG	**Mulgathing**	**34.57**	**236**	P	**P**	**17 48 21.0**	**-1.0**
	comp=Z,10.0nm,1.9s						
KNRA	**Kununurra**	**37.16**	**262**	P	**P**	**17 48 44.1**	**-0.1**
FORT	**Forrest**	**39.64**	**238**	P	**P**	**17 49 04.6**	**-0.1**
FITZ	**Fitzroy Crossi**	**40.09**	**258**	P	**P**	**17 49 08.7**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=83,slow=4.4,SNR=7.2						
FITZ	**Fitzroy Crossi**	**40.09**	**258**	P	**P**	**17 49 05.7**	**-2.9**
FITZ				IAmb	IAmb	17 49 23.6	
	comp=Z,16nm,0.8s						
MORW	**Morawa**	**49.54**	**244**	P	**P**	**17 50 22.9**	**-0.1**
MORW				IAmb	IAmb	17 50 23.4	
	comp=Z,4.4nm,0.7s						
MJAR	**Matsushiro Arr**	**57.17**	**332**	P	**P**	**17 51 17.5**	**-0.8**
MJAR				IAmb	IAmb	17 51 33.4	
	comp=Z,7.5nm,1.5s						
MAJO	**Matsushiro**	**57.17**	**332**	P	**P**	**17 51 18.6**	**+0.3**
JHS	**Saijyo**	**58.42**	**327**	P	**P**	**17 51 27.9**	**+0.9**
TPUB	**Ta-pu**	**58.69**	**309**	P	**P**	**17 51 29.3**	**+0.3**
ASAJ	**Asahikawa**	**61.97**	**340**	P	**P**	**17 51 52.9**	**+2.0**
	comp=Z,4.7nm,0.9s,baz=222,slow=5.5,SNR=9.8						
VNDA	**Vanda**	**63.65**	**181**	P	**P**	**17 52 01.0**	**-0.5**
	comp=Z,0.6nm,0.8s,baz=349,slow=6.6,SNR=2.5						
CMAR	**Chiang Mai Arr**	**74.56**	**294**	P	**P**	**17 53 11.4**	**+1.9**
	comp=Z,1.0nm,0.7s,baz=135,slow=4.7,SNR=10.0						
CMAR	**Chiang Mai Arr**	**74.56**	**294**	P	**P**	**17 53 09.6**	**0.0**
QSPA	**South Pole Qui**	**76.09**	**180**	P	**P**	**17 53 17.0**	**-0.7**
QSPA				IAmb	IAmb	17 53 24.5	
	comp=Z,3.9nm,1.2s						
SONM	**Songino Array**	**81.81**	**324**	P	**P**	**17 53 51.6**	**+2.6**
	comp=Z,0.3nm,0.4s,baz=123,slow=5.3,SNR=2.4						
SONM	**Songino Array**	**81.81**	**324**	P	**P**	**17 53 49.8**	**+0.9**
MAW	**Mawson**	**82.59**	**202**	P	**P**	**17 53 52.8**	**+0.3**
MKAR	**Makanchi Array**	**96.58**	**316**	P	**P**	**17 54 59.8**	**+0.5**
	comp=Z,0.7nm,0.5s,baz=87,slow=6.2,SNR=10						
ZALV	**Zalesovo Beam**	**96.71**	**324**	P	**P**	**17 54 58.6**	**-1.0**
	comp=Z,1.7nm,1.0s,baz=115,slow=5.4,SNR=2.5						
ARCES	**ARCESS Array B**	**119.47**	**345**	PKP	**PKiKP**	**18 00 17.2**	**-0.2**
	comp=Z,3.8nm,1.0s,baz=58,slow=1.9,SNR=17						
ARCES	**ARCESS Array B**	**119.47**	**345**		**PKPdf**	**18 00 16.6**	**-0.7**
FINES	**FINESS Array B**	**124.96**	**338**	PKP	**PKiKP**	**18 00 27.9**	**-0.5**
	comp=Z,5.4nm,1.0s,baz=48,slow=2.8,SNR=7.8						
KEST	**Kesra**	**150.55**	**321**	PKPbc	**PKiKP**	**18 01 21.6**	**+0.2**
	comp=Z,2.9nm,0.6s,baz=195,slow=2.1,SNR=5.1						

IDC 14 17:51:31.4±2.0**, 6°.36S**×**128°.94E, h0^{km}, mb3.6**/1**, mb1 3.6**/3**, mb1mx3.4**/34**, mbtmp3.5**/3**, ML3.6**/2**, Error ellipse: s-maj=121.5km s-min=30.5km az=67.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.48**	**159**	Pn	Pn	17 54 56.6	-1.2
	0.3nm,0.3s,baz=338,slow=13,SNR=11						
WRA				Sn	Sn	17 57 24.5	-15
	0.5nm,0.3s,baz=333,slow=22,SNR=8.9						
ASAR	**Alice Springs**	**17.86**	**165**	P	P	17 55 42.0	-0.2
	0.2nm,0.3s,baz=350,slow=10,SNR=26						
ASAR				S	Sn	17 58 49.5	-12
	0.1nm,0.3s,baz=356,slow=28,SNR=1.9						
MKAR	**Makanchi Array**	**67.12**	**327**	P	P	18 02 27.0	0.0
	0.3nm,0.5s,baz=126,slow=8.3,SNR=7.9						

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*BJI **14** 18:26:49.4±0.0, 42°.92N×145°.80E, h42^{km}, mB5.0/21, mb4.4/36, Ms3.9/7, Ms7 3.7/7*

*SKHL **14** 18:26:50.2±0.2, 42°.90N×145°.90E, h50^{km}±9^{km}, mb5.1/11, mbv4.9/2*

*NEIC **14** 18:26:50.6±1.9, 42°.88N±0°.06×146°.0E±0°.1, h42^{km}±5^{km}, mb4.7/150, Error ellipse: s-maj=11.9km s-min=8.8km az=105.0*

*JMA **14** 18:26:50.5±0.1, 42°.98N×145°.80E, h47^{km}±1^{km}, M4.4*

JMA Felt III J1.

*NIED **14** 18:26:50.6, 42°.99N×145°.80E, h47^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$3.36; M$_{\theta\theta}$-1.13; M$_{\phi\phi}$-2.23; M$_{r\theta}$0.96; M$_{\theta\phi}$-2.28; M$_{\phi r}$-1.93; Fault plane solution: M$_0$4.31000×10^{15} NP1: ϕ_s193.00000°, δ58.00000°, λ58.00000°. NP2: ϕ_s62.00000°, δ44.00000°, λ130.00000°.*

*MOS **14** 18:26:50.3±1.1, 43°.02N×145°.90E, h53^{km}, mb4.5/11 Error ellipse: s-maj=8.0km s-min=5.0km az=99.0*

*IDC **14** 18:26:54.5±2.1, 43°.05N×145°.80E, h75^{km}±17^{km}, mb3.9/23, mb1 4.1/28, mb1mx4.0/44, mbtmp4.2/28, MS3.4/19, Ms1 3.4/19, ms1mx3.1/71, Error ellipse: s-maj=16.4km s-min=12.6km az=161.0*

ISC 14 18:26:50.2±0.6**, 42°.95N**±0°.05×**145°.91E**±0°.04**, h40^{km}**±5^{km}**, n410, σ1^{s}10**/422**, mb4.6**/120**, MS3.4**/14**, 4C-5D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.43**	**344**	P	**Pn**	**18 27 00.2**	**+0.2**
NEM2				*e*S	**Sn**	**18 27 06.9**	**0.0**
NMR	**Nemuro--Hokkai**	**0.44**	**343**	*d i*PN	**Pn**	**18 27 00.2**	**+0.1**
NMR				*i* S	**Sn**	**18 27 06.8**	**-0.2**
NMR	**Nemuro--Hokkai**	**0.44**	**343**	*i* P	**Pn**	**18 27 00.2**	**+0.1**
NMR				*i* S	**Sn**	**18 27 06.8**	**-0.2**
JKHN	**Kushirohamanak**	**0.56**	**284**	P	**Pn**	**18 27 01.4**	**-0.3**
JKHN				*e*S	**Sn**	**18 27 09.4**	**-0.5**
GLVR	**Golovnino**	**0.84**	**340**	*d i*PN	**Pn**	**18 27 05.3**	**-0.2**
GLVR				*e*S	**Sn**	**18 27 16.0**	**-0.6**
GLVR				pmax	pmax		
	comp=N,259nm,0.2s						
GLVR				pmax	pmax		
	comp=E,13μm,0.2s						
GLVR				pmax	pmax		
	comp=Z,5μm,0.2s						
GLVR				smax	smax		
	comp=N,26μm,0.4s						
GLVR				smax	smax		
	comp=E,13μm,0.2s						
GLVR	**Golovnino**	**0.84**	**340**	*i* P	**Pn**	**18 27 05.3**	**-0.2**
GLVR				AMB	AMB	18 27 06.0	
	comp=E,5μm,0.2s						
GLVR				*e*S	**Sn**	**18 27 16.0**	**-0.6**
GLVR				A	A	18 27 16.0	
	comp=E,26μm,0.4s						
GLVR				A	A	18 27 16.0	
	comp=E,13μm,0.4s						
JAK	**Akkeshi**	**0.89**	**273**	P	**Pn**	**18 27 05.7**	**-0.5**
JAK				*e*S	**Sn**	**18 27 16.8**	**-1.0**
GRPR	**Tuman**	**1.05**	**355**	*d i*PN	**Pn**	**18 27 08.1**	**-0.2**
GRPR				*i* S	**Sn**	**18 27 20.4**	**-1.3**
GRPR				pmax	pmax		
	comp=N,1μm,0.3s						
GRPR				pmax	pmax		
	comp=E,1μm,0.3s						
GRPR				pmax	pmax		
	comp=Z,8μm,0.3s						
GRPR				smax	smax		
	comp=N,25μm,0.6s						
GRPR				smax	smax		
	comp=E,35μm,0.6s						
GRPR	**Tuman**	**1.05**	**355**	AMB	AMB	18 27 08.0	
	comp=E,1μm,0.3s						
GRPR				AMB	AMB	18 27 08.0	
	comp=E,8μm,0.3s						
GRPR				*i* P	**Pn**	**18 27 08.1**	**-0.2**
GRPR				*i* S	**Sn**	**18 27 20.4**	**-1.3**
GRPR				A	A	18 27 21.0	
	comp=E,25μm,0.6s						
GRPR				A	A	18 27 21.0	
	comp=E,35μm,0.6s						
JNSB	**Nemuroshibetsu**	**1.05**	**322**	P	**Pn**	**18 27 08.1**	**-0.4**
JNSB				*e*S	**Sn**	**18 27 21.0**	**-0.9**
JNK	**Nakash**	**1.07**	**307**	P	**Pn**	**18 27 08.0**	**-0.7**
JNK				*e*S	**Sn**	**18 27 20.6**	**-1.8**
YUK	**Yuzh-Kuril'sk**	**1.08**	**358**	*d i*PN	**Pn**	**18 27 09.0**	**+0.1**
YUK				*i* S	**Sn**	**18 27 22.2**	**-0.4**
YUK				pmax	pmax		
	comp=Z,5μm,0.3s						
YUK				pmax	pmax		
	comp=E,2μm,0.2s						
YUK				smax	smax		
	comp=E,20μm,0.6s						
YUK				smax	smax		
	comp=N,6μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.08**	**358**	*i* P	**Pn**	**18 27 08.8**	**-0.1**
YUK				AMB	AMB	18 27 10.0	
	comp=N,5μm,0.3s						
YUK				*i* S	**Sn**	**18 27 22.6**	**0.0**
YUK				A	A	18 27 23.0	
	comp=N,14μm,0.5s						
YUK				A	A	18 27 23.0	
	comp=N,36μm,0.5s						
JRA	**Rausu**	**1.14**	**330**	P	**Pn**	**18 27 09.4**	**-0.2**
JRA				*e*S	**Sn**	**18 27 23.2**	**-0.8**
RUSJ	**Misakicho**	**1.25**	**338**	⇓*i*PN	**Pn**	**18 27 11.5**	**+0.4**
RUSJ				*i* S	**Sn**	**18 27 27.3**	**+0.6**
JOB	**Onbets**	**1.52**	**269**	P	**Pn**	**18 27 14.5**	**-0.4**
JOB				*e*S	**Sn**	**18 27 32.6**	**-0.8**
JAR	**Ashorobuto**	**1.60**	**283**	P	**Pn**	**18 27 15.8**	**-0.2**
JAR				*e*S	**Sn**	**18 27 34.6**	**-0.8**
JTKR	**Abashiri--Toko**	**1.78**	**306**	P	**Pn**	**18 27 18.6**	**+0.3**
JTKR				*e*S	**Sn**	**18 27 40.1**	**+0.4**
ERM	**Erimo**	**2.24**	**246**	*ce*PN	**Pn**	**18 27 26.9**	**+2.3**
ERM				pmax	pmax		
	comp=Z,2μm,1.0s						
ERM	**Erimo**	**2.24**	**246**	Pn	**Pn**	**18 27 27.0**	**+2.3**
JKA	**Kamikawa-asahi**	**2.67**	**297**	*e*P	**Pn**	**18 27 32.0**	**+1.3**
JKA	**Kamikawa-asahi**	**2.67**	**297**		**Pn**	**18 27 31.9**	**+1.2**
JKA	**Kamikawa-asahi**	**2.67**	**297**		**Sn**	**18 28 05.5**	**+3.8**
ASAJ	**Asahikawa**	**2.67**	**297**	P	**Pn**	**18 27 32.0**	**+1.3**
	comp=Z,56nm,0.3s,baz=157,slow=10,SNR=258						
ASAJ				S	**Sn**	**18 28 05.5**	**+3.7**
	comp=Z,60nm,0.3s,baz=28,slow=30,SNR=6.3						
ASAJ				LR	LR	18 28 45.7	
	comp=Z,829nm,18.5s,baz=48,slow=43						
KUR	**Kuril'sk**	**2.68**	**31**	*e*PN	**Pn**	**18 27 32.7**	**+1.9**
KUR				*e*S	**Sn**	**18 28 03.9**	**+1.9**
KUR				pmax	pmax		
	comp=Z,520nm,0.3s						
KUR				pmax	pmax		
	comp=E,233nm,0.2s						
KUR				pmax	pmax		
	comp=N,63nm,0.1s						
KUR				smax	smax		
	comp=E,2μm,0.4s						
KUR				smax	smax		
	comp=N,882nm,0.6s						
KUR	**Kuril'sk**	**2.68**	**31**	*e*P	**Pn**	**18 27 32.3**	**+1.5**
KUR				AMB	AMB	18 27 34.7	
	comp=N,520nm,0.4s						
KUR				*e*S	**Sn**	**18 28 01.9**	**-0.1**
KUR				A	A	18 28 09.0	
	comp=N,1μm,0.5s						
KUR				A	A	18 28 09.0	
	comp=N,2μm,0.5s						
JEW	**Eniwo**	**3.28**	**270**		**Pn**	**18 27 40.2**	**+1.2**
JTM	**Tenmabayashi**	**4.21**	**241**		**Pn**	**18 27 52.3**	**+0.5**
YSS	**Yuzh-Sakhalins**	**4.58**	**332**	*e*PN	**Pn**	**18 27 57.6**	**+0.7**
YSS				*e*S	**Sn**	**18 28 47.4**	**-1.5**
YSS				pmax	pmax		
	comp=Z,40nm,0.4s						
YSS				pmax	pmax		
	comp=Z,100nm,2.9s						
YSS				smax	smax		
	comp=E,60nm,0.7s						
YSS				MLR	MLR		
	comp=Z,400nm,13.0s						
YSS				MLR	MLR		
	comp=N,400nm,12.0s						
YSS	**Yuzh-Sakhalins**	**4.58**	**332**	*e*P	**Pn**	**18 27 57.0**	**+0.1**
YSS				AMB	AMB	18 27 58.0	
	comp=N,40nm,0.4s						
YSS				AMB	AMB	18 27 59.0	
	comp=N,100nm,2.9s						
YSS				*e*S	**Sn**	**18 28 46.8**	**-2.1**
YSS	**Yuzh-Sakhalins**	**4.58**	**332**	Pn	**Pn**	**18 27 58.0**	**+1.1**
JMM	**Marumori**	**6.40**	**219**	Pn	**Pn**	**18 28 20.6**	**-1.3**
UGL	**Uglegorsk**	**6.69**	**338**	*e*PN	**Pn**	**18 28 27.7**	**+2.0**
UGL				pmax	pmax		
	comp=Z,59nm,0.6s						
JSD	**Sado**	**7.62**	**232**		**Pn**	**18 28 38.2**	**-0.4**
JYT	**Yasato**	**8.03**	**215**	Pn	**Pn**	**18 28 42.5**	**-1.8**
TYV	**Tymovskoe**	**8.22**	**345**	*e*PN	**Pn**	**18 28 49.2**	**+2.4**
TYV				pmax	pmax		
	comp=Z,13nm,0.7s						
TYV				pmax	pmax		
	comp=Z,200nm,4.2s						
TYV	**Tymovskoe**	**8.22**	**345**	*e*P	**Pn**	**18 28 48.3**	**+1.5**
TYV				AMB	AMB	18 28 49.0	
	comp=Z,13nm,0.7s						
TYV				AMB	AMB	18 28 50.2	
	comp=Z,200nm,4.2s						

MJAR	Matsushiro Arr	8.72	225	P	Pn	18 28 53.0	-0.7
	comp=Z,0.1nm,0.3s,baz=35,slow=14,SNR=12						
MJAR				LR	LR	18 32 49.2	
	comp=Z,104nm,21.2s,baz=40,slow=41						
MJAR	Matsushiro Arr	8.72	225	PN	Pn	18 28 52.4	-1.3
MJAR	Matsushiro Arr	8.72	225	Pn	Pn	18 28 52.4	-1.3
MJB9	Matsu-Tunnel	8.72	225	Pn	Pn	18 28 53.5	-0.2
GRNR	Gornyy	10.16	324	⇑*i*PN	Pn	18 29 16.0	+2.7
GRNR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GRNR				MLR	MLR		
	comp=N,60nm,13.0s						
GRNR				MLR	MLR		
	comp=E,100nm,13.0s						
GRNR	Gornyy	10.16	324	*e*P	Pn	18 29 16.0	+2.7
GRNR				AMB	AMB	18 29 17.4	
	comp=E,4.0nm,0.7s						
USA0B	Ussuriysk Arra	10.18	282	PN	Pn	18 29 12.8	-0.8
USA0B	Ussuriysk Arra	10.18	282	Pn	Pn	18 29 12.8	-0.8
USRK	Ussuriysk Ar.	10.18	282	P	Pn	18 29 17.4	+3.7
	baz=86,slow=14,SNR=8.2						
USRK				LR	LR	18 33 06.0	
	comp=E,150nm,21.1s,baz=88,slow=37						
USRK	Ussuriysk Ar.	10.18	282	Pn	Pn	18 29 12.5	-1.1
INU	Inuyama	10.26	225	Pn	Pn	18 29 14.7	0.0
VLA	Vladivostok	10.27	276	*i* PN	Pn	18 29 17.0	+2.1
OKH	Okha	10.79	350	*e*P	Pn	18 29 24.7	+2.8
OKH				AMB	AMB	18 29 28.0	
	comp=E,90nm,0.7s						
JHJ2	Mitsune	10.93	208	Pn	Pn	18 29 23.0	-0.9
JWT	Wachi	11.18	230	Pn	Pn	18 29 26.8	-0.7
KLR	Kul'dur	11.65	307	P	Pn	18 29 35.2	+1.4
	comp=E,0.1nm,0.3s,baz=115,slow=16,SNR=8.2						
KLR				LR	LR	18 34 22.0	
	comp=E,157nm,19.4s,baz=116,slow=39						
KLR	Kul'dur	11.65	307	*ce*PN	Pn	18 29 37.4	+3.6
KLR				pmax	pmax		
	comp=Z,14nm,1.4s						
KLR	Kul'dur	11.65	307	*e*P	Pn	18 29 34.4	+0.6
MDJ	Mudanjiang	11.91	284	P	Pn	18 29 36.9	-0.4
MDJ				pmax	pmax		
	comp=Z,17nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,350nm,4.1s						
PEA0B	Petropavlovsk-	12.85	34	*i* PN	Pn	18 29 49.7	-0.4
PEA0B	Petropavlovsk-	12.85	34	Pn	Pn	18 29 48.5	-1.6
PETK	Petropavlovsk-	12.85	34	P	Pn	18 29 49.5	-0.6
	comp=Z,0.6nm,0.3s,baz=201,slow=12,SNR=15						
PETK				LR	LR	18 35 47.1	
	comp=Z,106nm,18.0s,baz=195,slow=42						
PETK	Petropavlovsk-	12.85	34	PN	Pn	18 29 48.4	-1.7
PETK	Petropavlovsk-	12.85	34	Pn	Pn	18 29 48.4	-1.7
PET	Petropavlovsk	13.19	36	*e*PN	Pn	18 29 52.4	-2.2
PET				pmax	pmax		
	comp=Z,21nm,1.4s						
PET				MLR	MLR		
	comp=Z,200nm,14.0s						
PET	Petropavlovsk	13.19	36	*e*P	Pn	18 29 55.1	+0.5
PET				AMB	AMB	18 30 08.4	
	comp=Z,20nm,1.0s						
PET	Petropavlovsk	13.19	36	Pn	Pn	18 29 52.0	-2.7
KSRS	Korea Array	14.79	254	P	Pn	18 30 18.6	+2.1
	comp=Z,0.2nm,0.3s,baz=54,slow=13,SNR=3.5						
KSRS				LR	LR	18 35 32.9	
	comp=Z,111nm,20.3s,baz=90,slow=35						
CN2	Changchun	14.90	280	*e*P	Pn	18 30 17.1	-0.9
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ZEA	Zeya	16.39	318	*e*P	P	18 30 38.5	-0.9
ZEA				pmax	pmax		
	comp=N,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ZEA	Zeya	16.39	318	*e*P	Pn	18 30 34.8	-2.2
ZEA				AMB	AMB	18 30 53.0	
	comp=Z,10.0nm,0.9s						
MA2	Magadan	16.91	9	P	P	18 30 45.3	+0.1
	comp=Z,1.2nm,0.3s,baz=188,slow=13,SNR=7.1						
MA2				LR	LR	18 36 26.1	
	comp=Z,80nm,20.9s,baz=222,slow=34						
MA2	Magadan	16.91	9	P	P	18 30 45.6	+0.4
MA2				pmax	pmax		
	comp=Z,35nm,1.2s						
MA2	Magadan	16.91	9	P	P	18 30 45.6	+0.4
SEY	Seymchan	20.37	9	P	P	18 31 22.1	-1.0
	comp=Z,2.0nm,0.7s,baz=5.4,slow=22,SNR=5.8						
SEY				LR	LR	18 38 49.1	
	comp=Z,62nm,21.4s,baz=176,slow=35						
YAK	Yakutsk	21.39	339	P	P	18 31 36.0	+2.0
	comp=Z,2.8nm,0.5s,baz=35,slow=0.5,SNR=2.6						
YAK				LR	LR	18 40 27.2	
	comp=Z,74nm,18.4s,baz=91,slow=38						
YAK	Yakutsk	21.39	339	*i* P	P	18 31 34.8	+0.7
YAK				pmax	pmax		
	comp=Z,26nm,2.2s						
YAK	Yakutsk	21.39	339	*e*P	P	18 31 34.8	+0.7
YAK	Yakutsk	21.39	339	P	P	18 31 35.1	+1.0
JOW	Kunigami	21.56	227	LR	LR	18 41 19.2	
	comp=Z,67nm,18.6s,baz=208,slow=40						
NJ2	Nanjing	23.96	252	*e*P	P	18 32 00.8	+0.1
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
HHC	Hu-ho-hao-te	25.55	277	*e*P	P	18 32 15.4	+0.2
HHC				pmax	pmax		
	comp=Z,20nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,4.7s						
ULN	Ulaanbaatar	27.51	294	*i* P	P	18 32 33.9	+1.0
ULN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ULN	Ulaanbaatar	27.51	294	*e*P	P	18 32 33.9	+1.0
ULN	Ulaanbaatar	27.51	294	P	P	18 32 31.7	-1.2
SONM	Songino Array	27.95	294	P	P	18 32 37.5	+0.7
	comp=Z,5.7nm,0.8s,baz=88,slow=7.1,SNR=30						
SONM				LR	LR	18 43 38.4	
	comp=Z,100nm,19.6s,baz=48,slow=36						
SONM	Songino Array	27.95	294	P	P	18 32 36.7	-0.1
H11N2	WAKE ISLAND Hy	29.12	136	T	T	19 03 43.5	
	baz=328,slow=76,SNR=359						
H11N1	WAKE ISLAND Hy	29.13	136	T	T	19 03 44.4	
	baz=328,slow=76,SNR=2136						
H11N3	WAKE ISLAND Hy	29.14	136	T	T	19 03 46.8	
	baz=328,slow=76,SNR=1433						
H11S1	WAKE ISLAND Hy	30.05	138	T	T	19 04 55.0	
	baz=329,slow=76,SNR=4592						
H11S3	WAKE ISLAND Hy	30.06	138	T	T	19 04 48.1	
	baz=329,slow=76,SNR=4242						
H11S2	WAKE ISLAND Hy	30.07	138	T	T	19 04 49.7	
	baz=329,slow=76,SNR=3449						
XAN	Xi'an	30.08	265	P	P	18 32 59.5	+3.7
XAN				pP	sP	18 33 12.8	+1.3
XAN				pmax	pmax		
	comp=Z,10.0nm,1.5s						
LZH	Lanzhou	32.90	272	*e*P	P	18 33 18.6	-2.0
LZH				pmax	pmax		
	comp=Z,25nm,1.2s						
GTA	Gaotai	34.54	280	*e*P	P	18 33 36.3	+1.5
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ANM	Nome	34.76	35	P	P	18 33 35.4	-0.9
ANM				pmax	pmax		
	comp=Z,113nm,1.7s						
ANM	Nome	34.76	35	P	P	18 33 35.4	-0.9
CD2	Chengdu	35.42	264	P	P	18 33 43.3	+0.9
CHGN	Chignik	37.40	49	P	P	18 33 58.6	-0.3
TTA	Tatalina	38.62	38	P	P	18 34 09.9	+0.7
TTA				pmax	pmax		
	comp=Z,15nm,1.6s						
TTA	Tatalina	38.62	38	P	P	18 34 09.9	+0.7
TTA				IAmb	IAmb	18 34 12.0	
	comp=Z,15nm,1.6s						
SVW2	Sparrevohn	38.77	41	P	P	18 34 12.2	+1.8
SVW2				IAmb	IAmb	18 34 26.9	
	comp=Z,34nm,1.7s						
O18K	Koktuh Hills	38.96	43	P	P	18 34 12.9	+0.8
O18K				IAmb	IAmb	18 34 14.4	
	comp=Z,25nm,1.1s						
P18K	Big Mountain,	38.96	44	P	P	18 34 12.6	+0.5
CHIR	Chirikof Islan	39.00	50	P	P	18 34 12.8	+0.4
N19K	Bonanza Creek	39.30	42	P	P	18 34 14.4	-0.5
N19K				IAmb	IAmb	18 34 16.9	
	comp=Z,13nm,1.1s						
M19K	Big River Lodg	39.34	40	P	P	18 34 17.0	+1.8
M19K				IAmb	IAmb	18 34 28.8	
	comp=Z,25nm,1.4s						
KMI	Kunming	39.46	257	⇑P	P	18 34 19.6	+2.8
KMI				pmax	pmax		
	comp=Z,14nm,0.8s						
NRIK	Noril'sk	39.52	332	P	P	18 34 17.0	+0.5
	comp=Z,1.1nm,0.4s,baz=227,slow=19,SNR=2.1						
NRIK	Noril'sk	39.52	332	P	P	18 34 17.1	+0.5
NRIK				pmax	pmax		
	comp=Z,5.0nm,1.4s						
NRIK	Noril'sk	39.52	332	P	P	18 34 17.1	+0.5
K20K	Telida	39.52	38	P	P	18 34 17.9	+1.2
	baz=268						
K20K	Telida	39.52	38	P	P	18 34 17.6	+0.9
K20K				IAmb	IAmb	18 34 32.4	
	comp=Z,18nm,1.6s						
J20K	Nowinta River	39.52	37	P	P	18 34 18.0	+1.3
	baz=267,SNR=5.1						
J20K	Nowinta River	39.52	37	P	P	18 34 17.1	+0.5
J20K				IAmb	IAmb	18 34 18.4	
	comp=Z,9.8nm,0.8s						
A21K	Barrow	39.66	25	P	P	18 34 17.3	-0.3
	baz=256,SNR=5.2						
A21K	Barrow	39.66	25	P	P	18 34 17.0	-0.6
Q19K	Cape Douglas,	39.80	45	P	P	18 34 19.5	+0.4
IMAR	Indian Mountai	39.81	34	P	P	18 34 19.6	+0.5
DGZ	Jazzator, Alta	40.04	301	*i* P	P	18 34 21.2	-0.1
DGZ				pmax	pmax		
	comp=Z,3.0nm,1.1s						
OHAK	Old Harbor	40.14	47	P	P	18 34 21.4	-0.5
RSO	Redoubt South	40.16	42	P	P	18 34 23.1	+0.8
H21K	Melozitna Rive	40.18	34	P	P	18 34 23.2	+1.0
	baz=266						
H21K	Melozitna Rive	40.18	34	P	P	18 34 22.4	+0.3
H21K				IAmb	IAmb	18 34 24.1	
	comp=Z,22nm,1.2s						
CHUM	Lake Minchumin	40.32	37	P	P	18 34 24.9	+1.7
	baz=269						
PPLA	Purkeypile	40.37	39	P	P	18 34 25.2	+1.3
SPCR	Spurr Chakacha	40.40	41	P	P	18 34 24.8	+0.7
	baz=272						
CAST	Castle Rocks	40.42	38	P	P	18 34 25.5	+1.4
	baz=270						
CAST	Castle Rocks	40.42	38	P	P	18 34 24.9	+0.7
CAST				IAmb	IAmb	18 34 26.1	
	comp=Z,7.9nm,0.7s						
KDAK	Kodiak Island	40.46	47	P	P	18 34 24.6	+0.1
	comp=Z,15nm,0.7s,baz=279,slow=4.8,SNR=15						
KDAK	Kodiak Island	40.46	47	P	P	18 34 24.5	+0.1
SPU	Mount Spurr	40.47	41	P	P	18 34 24.9	+0.2
I21K	Tanana	40.50	35	P	P	18 34 26.0	+1.3
	baz=268						
I21K	Tanana	40.50	35	P	P	18 34 25.9	+1.1
I21K				IAmb	IAmb	18 34 27.7	
	comp=Z,13nm,1.2s						
ZALV	Zalesovo Beam	40.76	308	P	P	18 34 26.2	-0.8
	comp=Z,0.4nm,0.3s,baz=69,slow=9.7,SNR=4.0						
ZALV				PcP	PcP	18 36 27.7	+0.1
	comp=Z,2.6nm,0.6s,baz=86,slow=2.9,SNR=9.9						
ZALV				LR	LR	18 51 38.3	
	comp=Z,46nm,20.3s,baz=140,slow=36						
ZALV	Zalesovo Beam	40.76	308	*i* P	P	18 34 28.4	+1.4
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZALV	Zalesovo Beam	40.76	308	PcP	PcP	18 36 27.4	-0.2
BPAW	Bear Paw Mtn.	40.91	37	P	P	18 34 29.1	+0.9
	baz=270						
BPAW	Bear Paw Mtn.	40.91	37	P	P	18 34 29.1	+0.9
KTH	Kantishna Hill	40.94	38	P	P	18 34 28.6	+0.1
KTH				IAmb	IAmb	18 34 30.8	
	comp=Z,22nm,1.0s						
CNPM	China Poot	40.99	44	P	P	18 34 28.1	-0.8
MLY	Manley	41.02	35	P	P	18 34 30.3	+1.2
	baz=269,SNR=6.9						
MLY	Manley	41.02	35	P	P	18 34 30.1	+1.0
MLY				IAmb	IAmb	18 34 32.1	
	comp=Z,12nm,1.1s						
BRLK	Bradley Lake	41.15	43	P	P	18 34 29.3	-0.8
BRLK				IAmb	IAmb	18 35 02.9	
	comp=Z,32nm,1.3s						
TRF	Thorofare Moun	41.22	38	P	P	18 34 31.9	+1.0
	baz=271						
TRF	Thorofare Moun	41.22	38	P	P	18 34 30.6	-0.4
TRF				IAmb	IAmb	18 34 48.2	
	comp=Z,22nm,1.5s						
COLD	Coldfoot	41.31	32	P	P	18 34 31.7	+0.3
H23K	Yukon River	41.53	34	P	P	18 34 34.8	+1.6
	baz=269						
H23K	Yukon River	41.53	34	P	P	18 34 34.5	+1.2
H23K				IAmb	IAmb	18 34 35.8	
	comp=Z,21nm,0.9s						
WMQ	Urumqi	41.55	292	*e*P	P	18 34 36.9	+3.2
WMQ				sP	sP	18 34 50.1	+0.5
WMQ				pmax	pmax		
	comp=Z,7.0nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,160nm,4.1s						
WMQ				LR	LR		
	comp=Z,260nm,28.3s						
WMQ				LR	LR		
	comp=Z,110nm,28.3s						
WMQ				LR	LR		
	comp=Z,94nm,24.9s						
BWN	Browne	41.57	37	P	P	18 34 33.6	0.0
RC01	Rabbit Creek A	41.60	41	P	P	18 34 34.2	+0.3
RC01				IAmb	IAmb	18 34 57.0	
	comp=Z,27nm,1.4s						
I23K	Minto, Yukon-K	41.60	35	P	P	18 34 35.1	+1.3
	baz=270,SNR=8.4						
I23K	Minto, Yukon-K	41.60	35	P	P	18 34 34.8	+0.9
I23K				IAmb	IAmb	18 34 36.2	
	comp=Z,9.2nm,0.8s						
TOLK	Toolik Lake Re	41.63	30	P	P	18 34 34.5	+0.4
	baz=266						
TOLK	Toolik Lake Re	41.63	30	P	P	18 34 33.9	-0.2
TOLK				IAmb	IAmb	18 34 35.3	
	comp=Z,18nm,1.6s						
NEA2	Nenana	41.73	36	P	P	18 34 35.8	+0.9
	baz=271,SNR=9.2						
NEA2	Nenana	41.73	36	P	P	18 34 35.2	+0.3
NEA2				IAmb	IAmb	18 34 37.2	
	comp=Z,11nm,0.6s						
MCK	McKinley	41.82	37	P	P	18 34 35.6	-0.1
MCK				pmax	pmax		
	comp=Z,11nm,1.2s						
MCK	McKinley	41.82	37	P	P	18 34 36.4	+0.7
	baz=272						
MCK	McKinley	41.82	37	P	P	18 34 35.6	-0.1
SEW	Seward	41.83	43	P	P	18 34 36.0	+0.2
RND	Reindeer	41.87	38	P	P	18 34 34.9	-1.2
RND				pmax	pmax		
	comp=Z,8.0nm,0.6s						
RND	Reindeer	41.87	38	P	P	18 34 34.9	-1.2
RND				IAmb	IAmb	18 34 37.2	
	comp=Z,7.5nm,0.6s						
GHO	Glory Hole Cre	41.94	40	P	P	18 34 36.5	-0.2
GHO				IAmb	IAmb	18 34 38.0	
	comp=Z,9.9nm,0.9s						
WAT1	Susitna Watana	42.04	39	P	P	18 34 37.3	-0.1
	baz=274						
MDM	Murphy Dome	42.09	35	P	P	18 34 38.0	+0.2
MDM				IAmb	IAmb	18 34 40.0	
	comp=Z,9.6nm,0.8s						
WRH	Wood River Hil	42.16	36	P	P	18 34 38.7	+0.3
KNK	Knik Glacier	42.19	41	P	P	18 34 38.2	-0.5
KNK				IAmb	IAmb	18 34 50.7	
	comp=Z,36nm,1.4s						
H24K	Noodor Dome	42.22	34	P	P	18 34 40.4	+1.5
	baz=271						
H24K	Noodor Dome	42.22	34	P	P	18 34 39.7	+0.9
H24K				IAmb	IAmb	18 34 42.0	
	comp=Z,27nm,1.2s						
SML	Sawmill	42.22	40	P	P	18 34 39.2	+0.2
SML				pmax	pmax		
	comp=Z,21nm,1.0s						
SML	Sawmill	42.22	40	P	P	18 34 39.5	+0.6
	baz=275						
SML	Sawmill	42.22	40	P	P	18 34 39.2	+0.2
SML				IAmb	IAmb	18 34 41.0	
	comp=Z,21nm,1.0s						
TCOL	CIGO, UAF Yank	42.25	36	P	P	18 34 39.8	+0.7
TCOL				IAmb	IAmb	18 34 41.8	
	comp=Z,17nm,0.8s						
COLA	College	42.25	36	*i* P	P	18 34 40.0	+0.9
COLA				pmax	pmax		
	comp=Z,15nm,0.8s						
COLA	College	42.25	36	P	P	18 34 39.8	+0.7
COLA				IAmb	IAmb	18 34 41.9	
	comp=Z,17nm,0.8s						
CCB	Clear Creek Bu	42.28	36	P	P	18 34 39.6	+0.3
POKR	Poker Plat Res	42.42	35	P	P	18 34 42.2	+1.7
	baz=272,SNR=5.7						
POKR	Poker Plat Res	42.42	35	P	P	18 34 40.6	+0.1
DHY	Denali Highway	42.56	38	P	P	18 34 42.2	+0.4
	baz=274						
DHY	Denali Highway	42.56	38	P	P	18 34 41.3	-0.6
HDA	Harding Lake	42.66	36	P	P	18 34 42.6	+0.1
	baz=273						
HDA	Harding Lake	42.66	36	P	P	18 34 42.0	-0.5
IL31		42.67	36	P	P	18 34 42.3	-0.1
IL31				IAmb	IAmb	18 34 44.7	
	comp=Z,16nm,1.2s						
ILAR	Eielson Array	42.67	36	P	P	18 34 42.5	0.0
	comp=Z,3.8nm,0.6s,baz=253,slow=4.4,SNR=52						
ILAR	Eielson Array	42.67	36	P	P	18 34 41.8	-0.7
SCM	Sheep Creek Mo	42.69	40	P	P	18 34 42.5	-0.3
SCM				pmax	pmax		
	comp=Z,54nm,1.5s						
SCM	Sheep Creek Mo	42.69	40	P	P	18 34 42.5	-0.3
M24K	Tolsona, Glenn	43.20	40	P	P	18 34 47.9	+1.0
PRP	Porcupine Dome	43.20	35	P	P	18 34 47.8	+0.8
	baz=273,SNR=11						
PRP	Porcupine Dome	43.20	35	P	P	18 34 46.3	-0.6
PRP				IAmb	IAmb	18 34 49.2	
	comp=Z,34nm,1.4s						
FID	Port Fidalgo	43.22	42	P	P	18 34 46.4	-0.6
FYU	Fort Yukon	43.27	33	P	P	18 34 46.6	-0.7
J25K	Salcha River,	43.33	36	P	P	18 34 47.1	-0.8
	baz=274						
KLU	Klutina	43.39	40	P	P	18 34 49.5	+0.9
	baz=277						
KLU	Klutina	43.39	40	P	P	18 34 48.9	+0.4
KLU				IAmb	IAmb	18 34 55.9	
	comp=Z,13nm,1.1s						
BMAR	Burnt Mountain	43.49	32	P	P	18 34 49.9	+0.8
RIDG	Independent Ri	43.63	37	P	P	18 34 50.3	-0.1
	baz=276						
RIDG	Independent Ri	43.63	37	P	P	18 34 50.0	-0.3
RIDG				IAmb	IAmb	18 35 18.8	
	comp=Z,24nm,1.6s						
HARP	HAARP	43.64	39	P	P	18 34 51.9	+1.4
	baz=277						
SCRK	Sand Creek	43.99	37	P	P	18 34 53.5	+0.2
	baz=276,SNR=6.2						
SCRK	Sand Creek	43.99	37	P	P	18 34 53.0	-0.3
DOT	Dot Lake	43.99	37	P	P	18 34 53.0	-0.2
DOT				IAmb	IAmb	18 34 54.3	
	comp=Z,19nm,1.6s						
N25K	Chitina, Valde	44.01	40	P	P	18 34 53.3	-0.2
N25K				IAmb	IAmb	18 35 05.4	
	comp=Z,20nm,1.4s						
J26L	Joseph Creek	44.12	36	P	P	18 34 54.2	-0.1
	baz=276						
MK31	Makanchi Array	44.15	298	P	P	18 34 53.7	-1.0
MK31				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MK31	Makanchi Array	44.15	298	P	P	18 34 53.7	-1.0
MKAR	Makanchi Array	44.15	298	P	P	18 34 54.5	-0.2
	comp=Z,2.8nm,0.7s,baz=82,slow=9.3,SNR=23						
MKAR				LR	LR	18 53 41.3	
	comp=Z,64nm,18.6s,baz=56,slow=36						
MKAR	Makanchi Array	44.15	298	P	P	18 34 53.8	-0.9
RAGM	Ragged Mountai	44.16	42	P	P	18 34 56.1	+1.5
MENT	Mentasta	44.23	38	P	P	18 34 54.8	-0.3
MAKZ	Makanchi	44.35	298	P	P	18 34 55.2	-1.2
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MAKZ	Makanchi	44.35	298	P	P	18 34 55.1	-1.2
HMT	Hamilton	44.37	42	P	P	18 34 57.6	+1.4
HMT				IAmb	IAmb	18 35 03.8	
	comp=Z,21nm,1.1s						
L26K	Log Cabin Wild	44.39	38	P	P	18 34 58.3	+1.9
	baz=278,SNR=6.4						
L26K	Log Cabin Wild	44.39	38	P	P	18 34 56.9	+0.5
L26K				IAmb	IAmb	18 34 58.8	
	comp=Z,11nm,0.7s						
GLB	Gilahina Butte	44.40	40	P	P	18 34 56.6	0.0
GLB				IAmb	IAmb	18 35 25.7	
	comp=Z,12nm,1.3s						
VRDI	Verde Repeater	44.61	41	P	P	18 34 58.9	+0.5
VRDI				IAmb	IAmb	18 35 12.7	
	comp=Z,11nm,1.1s						
M26K	Nabesna, AK	44.64	39	P	P	18 34 60.0	+1.5
	baz=279						
MCARA	McCarthy VSAT	44.79	40	P	P	18 35 00.5	+0.9
CRQM	Cirque	44.84	41	P	P	18 35 00.5	+0.2
CRQE	Cirque	44.86	41	P	P	18 35 01.9	+1.6
	baz=280						
L27K	Beaver Creek,	45.07	38	P	P	18 35 03.4	+1.6
	baz=279,SNR=14						
L27K	Beaver Creek,	45.07	38	P	P	18 35 01.8	-0.1
L27K				IAmb	IAmb	18 35 04.3	
	comp=Z,14nm,0.9s						
BCAR	Beaver Creek A	45.09	38	P	P	18 35 02.3	+0.3
EGAK	Eagle	45.11	35	P	P	18 35 02.4	+0.3
	baz=278						
EGAK	Eagle	45.11	35	P	P	18 35 02.1	0.0
EGAK				IAmb	IAmb	18 35 04.2	
	comp=Z,21nm,1.6s						
M27K	Edge Creek, AK	45.16	39	P	P	18 35 04.1	+1.4
	baz=280						
KURK	Kurchatov	45.23	304	*i* P	P	18 35 03.1	-0.1
KURK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KURK	Kurchatov	45.23	304	*e*P	P	18 35 03.1	-0.1
GRNC	Granite Creek	45.51	41	P	P	18 35 05.5	-0.1
GRNC				IAmb	IAmb	18 35 07.6	
	comp=Z,12nm,0.7s						
BVCY	Beaver Creek	45.62	39	P	P	18 35 07.7	+1.6
	baz=280						
CTG	Chitna Glacier	45.67	41	P	P	18 35 07.9	+1.2
	baz=281						
YUK3	Moose Creek	45.92	39	P	P	18 35 09.9	+1.1
	baz=281						
DAWY	Dawson	45.98	36	P	P	18 35 09.7	+0.6
	baz=280						
DAWY	Dawson	45.98	36	P	P	18 35 09.3	+0.2
I29M	Ogilvie Camp,	46.22	34	P	P	18 35 12.0	+1.2
	baz=280,SNR=12						
CMAR	Chiang Mai Arr	46.43	253	LR	LR	18 55 20.4	
	comp=Z,38nm,18.9s,baz=45,slow=37						
M30M	Minto, Yukon	47.43	38	P	P	18 35 21.9	+1.5
	baz=283						
HYT	Haines Junctio	47.52	40	P	P	18 35 23.4	+2.1
	baz=284,SNR=9.1						
HYT	Haines Junctio	47.52	40	P	P	18 35 22.3	+1.1
INK	Inuvik	47.55	30	P	P	18 35 21.8	+0.7
	comp=Z,4.2nm,0.5s,baz=288,slow=5.9,SNR=32						
INK	Inuvik	47.55	30	P	P	18 35 21.8	+0.7
	baz=281,SNR=7.1						
INK	Inuvik	47.55	30	P	P	18 35 21.6	+0.4
INK				IAmb	IAmb	18 35 22.8	
	comp=Z,12nm,1.2s						
M31M	Drury Creek, Y	48.61	38	P	P	18 35 31.2	+1.8
	baz=286						
FARO	Faro, Yukon	49.07	38	P	P	18 35 34.2	+1.1
	baz=286						
BRVK	Borovoye	49.36	310	*i* P	P	18 35 37.3	+2.0
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
A36M	Sachs Harbour	49.47	24	P	P	18 35 36.1	+0.3
	baz=285,SNR=7.7						
A36M	Sachs Harbour	49.47	24	P	P	18 35 36.2	+0.3
A36M				IAmb	IAmb	18 35 37.1	
	comp=Z,9.7nm,1.1s						
AAK	Ala-Archa	50.88	296	LR	LR	18 59 29.2	
	comp=Z,44nm,21.6s,baz=58,slow=38						
AAK	Ala-Archa	50.88	296	*i* P	P	18 35 48.1	+0.9
AAK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
AAK	Ala-Archa	50.88	296	*e*P	P	18 35 48.1	+0.9
DLBC	Dease Lake	51.88	42	P	P	18 35 56.4	+2.1
DLBC				IAmb	IAmb	18 36 02.7	
	comp=Z,17nm,1.4s						
KK31	Karatay Array	53.28	298	P	P	18 36 03.9	-1.0
KK31				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KK31	Karatay Array	53.28	298	P	P	18 36 03.9	-1.0
KKAR	Karatay Array	53.28	298	P	P	18 36 03.7	-1.2
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KKAR	Karatay Array	53.28	298	P	P	18 36 03.7	-1.2
KKAR	Karatay Array	53.28	298		P	18 36 03.6	-1.2
KKAR				IAmb	IAmb	18 36 21.3	

	comp=Z,3.0nm,0.8s						
HNR	Honiara	53.68	163	LR	LR	18 54 48.5	
	comp=Z,49nm,21.3s,baz=209,slow=31						
EUNU	Eureka	53.80	10	P	P	18 36 07.3	-0.9
RES	Resolute Bay	55.99	16	LR	LR	19 03 10.8	
	comp=Z,29nm,18.4s,baz=42,slow=39						
ABKAR	Akbulak array	56.85	309	P	P	18 36 30.0	-0.5
ABKAR				IAmb	IAmb	18 36 31.0	
	comp=Z,9.6nm,1.3s						
ABKAR	Akbulak array	56.85	309	P	P	18 36 30.1	-0.5
YKA	Yellowknife Ar	56.97	33	P	P	18 36 31.6	+0.6
	comp=Z,2.2nm,0.8s,baz=306,slow=5.9,SNR=6.2						
YKA	Yellowknife Ar	56.97	33	*i* P	P	18 36 31.7	+0.6
YKA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TULEG	Thule	58.76	9	P	P	18 36 42.3	-1.2
ARCES	ARCESS Array B	59.68	339	P	P	18 36 48.1	-1.8
	comp=Z,4.3nm,0.9s,baz=37,slow=8.2,SNR=7.3						
ARCES	ARCESS Array B	59.68	339	P	P	18 36 48.6	-1.4
ARCES				pmax	pmax		
	comp=Z,15nm,1.5s						
ARCES	ARCESS Array B	59.68	339	P	P	18 36 48.6	-1.4
WRA	Warramunga Arr	63.48	192	P	P	18 37 16.0	0.0
	comp=Z,0.5nm,0.8s,baz=7.5,slow=6.8,SNR=3.3						
GEYT	Alibeck	64.03	298	LR	LR	19 06 33.5	
	comp=Z,87nm,19.1s,baz=150,slow=37						
N02D	Trinity Center	64.53	57	P	P	18 37 25.1	+2.1
	baz=306						
M04C	Macdoel	64.59	56	P	P	18 37 25.1	+1.7
	baz=306						
SUMG	Summit	64.73	1	P	P	18 37 24.3	+0.1
SUMG				pmax	pmax		
	comp=Z,12nm,0.9s						
SUMG	Summit	64.73	1	*i* P	P	18 37 24.4	+0.2
SUMG				IAmb	IAmb	18 37 25.6	
	comp=Z,62nm,1.8s						
SUMG	Summit	64.73	1	P	P	18 37 24.3	+0.1
O02D	Mt. Diablo Mer	64.95	58	P	P	18 37 27.3	+1.6
	baz=306						
FIA1	FINESS Array S	65.17	333	P	P	18 37 25.4	-1.2
FINES	FINESS Array B	65.17	333	P	P	18 37 25.8	-0.9
	comp=Z,6.0nm,0.6s,baz=45,slow=7.8,SNR=43						
FINES				LR	LR	19 11 01.6	
	comp=Z,34nm,19.5s,baz=3.0,slow=41						
O03E	Paynes Creek	65.49	57	P	P	18 37 30.4	+1.2
	baz=306						
PLID	Pearl Lake	66.05	50	P	P	18 37 33.3	+0.3
PLID				IAmb	IAmb	18 37 34.6	
	comp=Z,9.4nm,1.3s						
ORV	Oroville	66.11	58	P	P	18 37 33.7	+0.5
ORV				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ORV	Oroville	66.11	58	P	P	18 37 33.7	+0.5
ORV				IAmb	IAmb	18 37 34.8	
	comp=Z,6.2nm,0.8s						
SCO	Scoresbysund	66.53	356	P	P	18 37 34.4	-0.9
SCO				pmax	pmax		
	comp=Z,13nm,1.2s						
SCO	Scoresbysund	66.53	356	P	P	18 37 34.4	-0.9
SCO				IAmb	IAmb	18 37 42.1	
	comp=Z,13nm,1.2s						
MPK	Martis Peak	67.18	57	P	P	18 37 41.1	+0.8
ASAR	Alice Springs	67.20	192	P	P	18 37 41.1	+1.0
	comp=Z,0.7nm,0.7s,baz=7.3,slow=5.6,SNR=8.6						
ASAR	Alice Springs	67.20	192	P	P	18 37 39.0	-1.1
PAHR	Pah Rah Range	67.33	56	P	P	18 37 41.7	+0.6
PAHR				IAmb	IAmb	18 37 43.3	
	comp=Z,11nm,1.0s						
EMB	Emerald Bay	67.33	57	P	P	18 37 42.0	+0.8
VCNR	Virginia City	67.41	57	P	P	18 37 42.6	+0.9
VCNR				IAmb	IAmb	18 37 44.1	
	comp=Z,7.8nm,0.8s						
PNTR	Pine Nut	67.57	57	P	P	18 37 43.4	+0.7
PNTR				IAmb	IAmb	18 37 45.2	
	comp=Z,7.9nm,0.9s						
YERR	Yerington	67.85	57	P	P	18 37 45.4	+0.9
HLID	Hailey	67.88	51	P	P	18 37 45.7	+1.1
	baz=309						
BOZ	Bozeman (W)	68.15	48	P	P	18 37 45.4	-0.8
BOZ				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BOZ	Bozeman (W)	68.15	48	P	P	18 37 45.4	-0.8
BOZ				IAmb	IAmb	18 37 48.0	
	comp=Z,4.1nm,0.7s						
ICESG	Greenland Ices	68.20	2	*e*P	P	18 37 46.7	+0.3
ICESG				IAmb	IAmb	18 37 47.6	
	comp=Z,20nm,1.1s						
KVN	Kaiserville	68.51	56	P	P	18 37 49.7	+1.1
KVN				pmax	pmax		
	comp=Z,11nm,0.8s						
KVN	Kaiserville	68.51	56	P	P	18 37 49.7	+1.1
RYN	Ryan	68.52	57	P	P	18 37 49.6	+1.0
RYN				IAmb	IAmb	18 37 50.9	
	comp=Z,6.2nm,0.8s						
LHV	Little Huntoon	68.76	57	P	P	18 37 51.2	+1.3
NVAR	Mina Array Bea	68.77	57	P	P	18 37 51.8	+1.5
	comp=Z,6.7nm,0.7s,baz=292,slow=6.6,SNR=57						
NVAR	Mina Array Bea	68.77	57	P	P	18 37 50.8	+0.5
NV11	Mina Array Sit	68.86	57	P	P	18 37 51.6	+0.9
NV11				IAmb	IAmb	18 37 53.1	
	comp=Z,4.7nm,0.8s						
YHH	Holmes Hill	69.09	48	P	P	18 37 52.7	+0.4
H17A	Grant Village	69.49	48	P	P	18 37 57.6	+2.9
	baz=310						
H17A	Grant Village	69.49	48	P	P	18 37 55.0	+0.2
H17A				IAmb	IAmb	18 37 58.5	
	comp=Z,7.5nm,1.1s						
KIV	Kislovodsk	69.61	311	*e*P	P	18 37 54.2	-1.1
KIV				pmax	pmax		
	comp=Z,11nm,1.1s						
KIV				MLR	MLR		
	comp=Z,47nm,17.0s						
KIV	Kislovodsk	69.61	311	P	P	18 37 54.5	-0.8
KIV				IAmb	IAmb	18 38 14.1	
	comp=Z,9.1nm,0.7s						
KBZ	Khabaz	69.64	311	P	P	18 37 55.9	+0.6
	comp=Z,2.5nm,0.7s,baz=101,slow=2.9,SNR=7.8						
TPH	Tonopah	69.66	57	P	P	18 37 56.6	+0.8
TPH				pmax	pmax		
	comp=Z,40nm,0.8s						
TPH	Tonopah	69.66	57	P	P	18 37 56.5	+0.8
FXWY	Fox Creek	69.74	49	P	P	18 37 56.9	+0.7
FXWY				IAmb	IAmb	18 37 59.5	
	comp=Z,7.5nm,1.4s						
MOOW	Moose Ponds	69.82	49	P	P	18 37 57.2	+0.5
MOOW				IAmb	IAmb	18 37 59.4	
	comp=Z,8.2nm,1.2s						
TPAW	Teton Pass	69.87	49	P	P	18 37 57.8	+0.7
LCH	Last Change Ra	69.93	58	P	P	18 37 57.1	-0.2
NC204	NORSAR Array S	69.94	339	P	P	18 37 56.4	-0.5
HVU	Hansel Valley	69.95	51	P	P	18 37 57.5	+0.1
HVU				pmax	pmax		
	comp=Z,6.0nm,1.6s						
HVU	Hansel Valley	69.95	51	P	P	18 37 57.5	+0.1
REDW	Red Top Meadow	70.01	49	P	P	18 37 58.4	+0.5
REDW				IAmb	IAmb	18 38 01.0	
	comp=Z,12nm,1.4s						
NB2	NORSAR Subarra	70.02	338	P	P	18 37 56.8	-0.6
	comp=Z,2.7nm,0.5s,baz=33,slow=6.5						
NOA	NORSAR Array B	70.02	338	P	P	18 37 56.7	-0.6
	comp=Z,4.4nm,0.6s,baz=35,slow=4.5,SNR=16						
CWC	Cottonwood Cre	70.16	58	P	P	18 37 59.7	+0.9
	baz=309						
PABE	Paberze	70.28	329	P	P	18 37 58.8	-0.2
R11A	Troy Canyon, C	70.48	56	P	P	18 38 01.9	+1.1
	baz=310,SNR=7.3						
R11A	Troy Canyon, C	70.48	56	P	P	18 38 01.1	+0.3
SPR3	Spring Creek 3	70.82	54	P	P	18 38 03.4	+0.4
FURC	Furnace Creek,	70.90	58	P	P	18 38 04.7	+1.6
	baz=310						
DUG	Dugway, Tooele	70.95	53	P	P	18 38 04.1	+0.6
DUG				pmax	pmax		
	comp=Z,7.0nm,1.1s						
DUG	Dugway, Tooele	70.95	53	P	P	18 38 04.8	+1.2
	baz=310,SNR=5.5						
DUG	Dugway, Tooele	70.95	53	P	P	18 38 04.1	+0.6
DUG				IAmb	IAmb	18 38 05.8	
	comp=Z,7.3nm,1.1s						
LRMC	Laurel Mtn Rad	71.01	59	P	P	18 38 04.8	+0.8
	baz=310						
BW06	Boulder Array	71.12	49	P	P	18 38 05.3	+0.7
	baz=311,SNR=5.3						
BW06	Boulder Array	71.12	49	P	P	18 38 04.3	-0.3
PD31	Pinedale Array	71.12	49	P	P	18 38 04.6	0.0
PDAR	Pinedale Array	71.12	49	P	P	18 38 05.2	+0.6
	comp=Z,2.4nm,0.7s,baz=252,slow=1.4,SNR=23						
PDAR	Pinedale Array	71.12	49	P	P	18 38 04.3	-0.3
EDW2	Edwards Air Fo	71.19	60	P	P	18 38 06.3	+1.3
	baz=310,SNR=6.2						
GWY	Greenwater Val	71.20	58	P	P	18 38 05.8	+0.7
GWY				IAmb	IAmb	18 38 07.1	
	comp=Z,7.3nm,0.7s						
QSM	Queen of Sheba	71.21	58	P	P	18 38 06.0	+1.0
QSM				IAmb	IAmb	18 38 07.2	
	comp=Z,10nm,0.9s						
PSUT	Pine Spring	71.41	55	P	P	18 38 06.1	-0.3
PRN	Pahroc Range	71.41	56	P	P	18 38 06.7	+0.3
NLU	North Lily Min	71.53	52	P	P	18 38 07.7	+0.5
GSC	Goldstone, Bar	71.68	59	P	P	18 38 08.3	+0.4
GSC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GSC	Goldstone, Bar	71.68	59	P	P	18 38 08.3	+0.4
GSC				IAmb	IAmb	18 38 09.4	
	comp=Z,4.2nm,0.7s						
AKASG	Malin Array Be	71.68	323	P	P	18 38 06.8	-0.8
	comp=Z,2.6nm,0.4s,baz=41,slow=6.0,SNR=16						
TUQ	Turquoise Moun	72.14	58	P	P	18 38 12.1	+1.3
	baz=310,SNR=7.6						
BORG	Borgarnes	72.17	354	P	P	18 38 11.7	+1.4
BORG				pmax	pmax		
	comp=Z,78nm,1.4s						
BORG	Borgarnes	72.17	354	P	P	18 38 11.7	+1.4
CCUT	Cedar City	72.34	55	P	P	18 38 12.5	+0.5
CCUT				IAmb	IAmb	18 38 15.1	
	comp=Z,12nm,1.6s						
RDMU	Red Mountain	72.57	51	P	P	18 38 13.4	+0.1
RDMU				IAmb	IAmb	18 38 15.5	
	comp=Z,12nm,1.0s						
P17A	Butcher Ranch,	72.63	52	P	P	18 38 14.3	+0.7
P17A				IAmb	IAmb	18 38 15.9	
	comp=Z,13nm,1.3s						
MTPU	Mount Pierson	72.72	54	P	P	18 38 15.2	+0.7
GMRC	Granite Mounta	72.73	59	P	P	18 38 15.4	+1.1
	baz=311						
LCMT	Little Creek M	72.76	55	P	P	18 38 15.1	+0.6
LCMT				IAmb	IAmb	18 38 16.9	
	comp=Z,6.5nm,0.9s						
PFO	Pinyon Flats O	72.98	60	P	P	18 38 17.3	+1.5
	baz=311						
SRU	San Rafael Swe	72.99	52	P	P	18 38 15.8	0.0
SRU				pmax	pmax		
	comp=Z,11nm,1.2s						
SRU	San Rafael Swe	72.99	52	P	P	18 38 15.8	0.0
SRU				IAmb	IAmb	18 38 17.8	
	comp=Z,10nm,1.2s						
KNB	Kanab	73.02	55	P	P	18 38 16.8	+0.8
KNB				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KNB	Kanab	73.02	55	P	P	18 38 16.8	+0.8
KNB				IAmb	IAmb	18 38 18.7	
	comp=Z,7.2nm,1.0s						
BELC	Belle Mtn. Jos	73.02	59	P	P	18 38 16.8	+0.7
	baz=311						
IRM	Iron Mountain	73.46	59	P	P	18 38 19.9	+1.4
	baz=311,SNR=5.0						
GURO	Guroymak-BITLI	73.54	307	P	P	18 38 18.9	-0.1
BC3	Big Chuckawall	73.59	59	P	P	18 38 20.6	+1.2
	baz=311						
W13A	Hualapai Mount	73.62	57	P	P	18 38 20.1	+0.4
U15A	North Rim	73.72	55	P	P	18 38 21.0	+0.6
U15A				IAmb	IAmb	18 38 22.9	
	comp=Z,7.3nm,0.8s						
PDMCI	Parker Dam,Lak	73.99	58	P	P	18 38 23.0	+1.4
	baz=311						
WUAZ	Wupatki	74.88	56	P	P	18 38 28.7	+1.7
	baz=312						
WUAZ	Wupatki	74.88	56	P	P	18 38 28.1	+1.2
Y14A	Wickenburg	74.94	58	P	P	18 38 27.1	0.0
Y14A				IAmb	IAmb	18 38 29.4	
	comp=Z,7.3nm,1.0s						
MVCO	Mesa Verde	75.45	53	P	P	18 38 31.4	+1.1
	baz=313						
X16A	Lo Mia Camp, P	75.58	56	P	P	18 38 30.9	-0.1
X16A				IAmb	IAmb	18 38 33.6	
	comp=Z,6.6nm,0.9s						
KOLS	Kolonicke sedl	75.98	326	*e*P	P	18 38 33.7	+0.9
KOLS	Kolonicke sedl	75.98	326	*e*P	P	18 38 33.7	+0.9
S22A	4UR Ranch, Cre	76.05	51	P	P	18 38 34.8	+1.1
	baz=314						
CRVS	Cervenica-Dubn	76.34	326	*e*P	P	18 38 36.9	+2.0
CRVS	Cervenica-Dubn	76.34	326	*e*P	P	18 38 36.8	+1.9
ECSD	EROS Data Cent	77.17	41	P	P	18 38 39.6	0.0
	baz=318						
TUC	Tucson	77.41	58	P	P	18 38 41.3	0.0
TUC				pmax	pmax		
	comp=Z,5.0nm,1.1s						
TUC	Tucson	77.41	58	P	P	18 38 42.8	+1.5
	baz=313						
TUC	Tucson	77.41	58	P	P	18 38 41.3	0.0
BRTR	Keskin Array B	77.43	313	P	P	18 38 40.8	-0.5
	comp=Z,1.1nm,0.8s,baz=40,slow=4.0,SNR=5.3						
BRTR	Keskin Array B	77.43	313	*i* P	P	18 38 41.2	-0.1
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
EKA	Eskdalemuir Ar	78.62	343	P	P	18 38 47.5	+0.1
319A	Douglas	78.98	57	P	P	18 38 48.9	-1.1
121A	Cookes Peak, D	79.09	56	P	P	18 38 52.5	+1.8
	baz=314						
121A	Cookes Peak, D	79.09	56	P	P	18 38 50.6	-0.1
121A				IAmb	IAmb	18 38 53.3	
	comp=Z,6.0nm,0.8s						
KHC	Kasperske Hory	79.21	330	*e*P	P	18 38 50.7	-0.2
KHC				*e*		18 39 02.6	
KHC	Kasperske Hory	79.21	330	*e*P	P	18 38 50.7	-0.2
KHC				*e*x	x	18 39 02.6	
GERES	GERESS Array B	79.41	330	P	P	18 38 51.5	-0.5
	comp=Z,0.4nm,0.6s,baz=23,slow=5.3,SNR=2.1						
MNTX	Cornudas Mount	81.13	55	P	P	18 39 02.6	+1.1
	baz=315,SNR=9.2						
MNTX	Cornudas Mount	81.13	55	P	P	18 39 01.6	+0.1
MNTX				IAmb	IAmb	18 39 03.6	
	comp=Z,6.0nm,0.9s						
TX31	Lajitas Ar. Si	83.85	55	P	P	18 39 15.7	-0.1
TX32	Lajitas Array	83.85	55	P	P	18 39 15.2	-0.6
TX32				IAmb	IAmb	18 39 17.8	
	comp=Z,5.7nm,0.9s						
TXAR	Lajitas Array	83.85	55	P	P	18 39 16.7	+0.9
	comp=Z,3.2nm,0.8s,baz=300,slow=3.6,SNR=34						
TXAR	Lajitas Array	83.85	55	P	P	18 39 15.1	-0.7
U40A	Yellville	84.64	44	P	P	18 39 19.9	+0.3
	baz=321						
MIAR	Mount Ida	85.67	45	P	P	18 39 25.2	+0.5
	baz=321						
ESDC	Sonseca Array	93.35	337	P	P	18 40 00.3	-0.7
	comp=Z,0.4nm,0.7s,baz=16,slow=3.9,SNR=4.4						
VNDA	Vanda	120.60	176	PKP	PKiKP	18 45 36.7	+0.5
	comp=Z,0.4nm,0.7s,baz=9.9,slow=4.6,SNR=2.2						
PTGA	Pitinga	132.00	36	PKP	PKiKP	18 45 59.8	-1.0
	comp=Z,2.0nm,0.3s,baz=329,slow=23,SNR=7.9						
SIV	San Ignacio	144.61	49	PKP	PKPdf	18 46 21.6	-1.1
	comp=Z,1.8nm,0.6s,baz=340,slow=4.2,SNR=9.7						
LVC	Limon Verde	144.74	66	PKP	PKPdf	18 46 23.0	-0.2
	comp=Z,6.2nm,0.7s,baz=270,slow=3.3,SNR=5.0						
SNAA	Sanae	147.42	198	PKPbc	PKiKP	18 46 29.5	-1.1
SNAA	Sanae	147.42	198	PKPdf	PKPbc	18 46 27.8	-0.7
VNA2	Neumayer--Watz	148.96	197	PKPbc	PKiKP	18 46 33.4	-0.3
VNA2	Neumayer--Watz	148.96	197	PKPdf	PKPbc	18 46 30.4	-2.0
VNA3	Neumayer Olymp	149.17	195	PKPbc	PKiKP	18 46 33.9	-0.3
VNA3	Neumayer Olymp	149.17	195	PKPdf	PKPbc	18 46 30.0	-3.0
VNA1	Neumayer--Stat	149.36	197	PKPbc	PKiKP	18 46 34.9	+0.4
PLCA	Paso Flores	152.88	98	PKPbc	PKiKP	18 46 42.8	-0.1
	comp=Z,1.4nm,0.6s,baz=185,slow=1.6,SNR=4.4						

*IDC **14** 18:58:44.8±3.2, 8°.60S×118°.37E, h135^{km}±25^{km}, mb3.0/3, mb1 3.2/7, mb1mx2.9/50, mbtmp3.6/7, Error ellipse: s-maj=40.9km s-min=12.1km az=66.0*

*DJA **14** 18:58:45.9±0.3, 9°S±4°×11°8E±°, h120^{km}±5^{km}, M4.1/18, mb4.3/4, mB4.8/1, MLv4.0/18, Mw(mB)4.1/1*

ISC 14 18:58:45.7±0.7, **8°.65S**±0°.05×**118°.40E**±0°.05, **h152**^{km}**, n33,** σ**2^{s}.09**/41, **mb3.2**/3, **Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	0.64	254	P	Pn	18 59 05.3	-2.7
PLAI				S	Sn	18 59 19.7	-5.3
PLAI	Plampang	0.64	254	P	Pn	18 59 05.3	-2.7
TWSI	Taliwang, Sumb	1.50	267	P	Pn	18 59 13.4	-2.0
TWSI				S	Sn	18 59 36.4	-1.7
WSI	Waingapu	2.13	118	P	Pn	18 59 23.0	+0.6
BASI	Baing, Sumba	2.66	126	P	Pn	18 59 28.5	-0.3
SRBI	Singaraja	3.20	280	P	Pn	18 59 35.2	-0.4
IGBI	Denpasar	3.22	267	P	Pn	18 59 34.8	-1.1
BSSI	Bau Bau, Buton	3.24	40	P	Pn	18 59 35.5	-0.7
BSSI				S	Sn	19 00 13.0	-2.4
EDFI	Ende, Flores	3.26	92	P	Pn	18 59 36.1	-0.4
EDFI				S	Sn	19 00 16.0	+0.2
BKSI	Bulukumba	3.73	27	P	Pn	18 59 41.9	-0.5
MMRI	Maumere	3.80	90	P	Pn	18 59 43.2	-0.1
KAPI	Kappang	3.86	20	P	Pn	18 59 43.8	-0.4
	3.1nm,0.3s,baz=223,slow=7.8,SNR=11						
KAPI				S	Sn	19 00 27.2	-2.4
	1.7nm,0.3s,baz=282,slow=23,SNR=8.4						
JAGI	Jajag, Banyuwa	4.20	272	P	Pn	18 59 46.4	-2.2
JAGI	Jajag, Banyuwa	4.20	272	P	Pn	18 59 46.4	-2.2
KMMI	Kalianget	4.67	290	P	Pn	18 59 55.2	+0.4
GMJI	Gumukmas	4.91	274	P	Pn	18 59 55.4	-2.6
BATI	Baumata	5.42	107	P	Pn	19 00 04.8	+0.1
	20nm,0.3s,baz=277,slow=6.9,SNR=40						
BATI				S	Sn	19 01 05.4	-1.1
	15nm,0.3s,baz=122,slow=23,SNR=6.8						
BATI	Baumata	5.42	107	P	Pn	19 00 04.8	+0.1
	0.2nm1μm24nm,1.0s						
SOEI	Soe	5.90	101	P	Pn	19 00 11.0	-0.2
	0.2nm34nm,0.6s						
PCJI	Pacitan	7.16	273	P	Pn	19 00 27.2	-0.7
	0.3nm43nm,1.3s						
UGM	Wanagama	7.83	275	P	Pn	19 00 36.5	-0.3
UGM	Wanagama	7.83	275	P	Pn	19 00 36.7	-0.1
FITZ	Fitzroy Crossi	11.74	144	P	Pn	19 01 27.3	-1.2
	0.3nm,0.3s,baz=55,slow=2.8,SNR=4.2						
FITZ				S	Sn	19 03 32.4	-5.9
	1.4nm,0.3s,baz=358,slow=23,SNR=9.2						
KNRA	Kununurra	12.30	126	P	Pn	19 01 26.1	-10
	25nm,1.6s						
MBWA	Marble Bar	12.50	174	P	Pn	19 01 40.1	+1.7
PSA00	Pilbara Seismi	12.92	174	P	Pn	19 01 44.2	+0.4
	11nm,0.7s						
GIRL	Giralia	14.47	196	P	P	19 02 08.4	+2.5
	210nm,1.6s						
MNAI	Manna	15.92	285	P	P	19 02 26.8	+4.7
WRKA	Warakurna	18.83	151	P	Pn	19 02 56.7	+0.5
	5.5nm,0.9s						
WRA	Warramunga Arr	19.07	128	P	Pn	19 02 57.8	-1.3
	0.2nm,0.3s,baz=302,slow=13,SNR=6.8						
WRA				S	S	19 06 24.7	-0.4
	0.3nm,0.3s,baz=304,slow=21,SNR=5.3						
ASAR	Alice Springs	21.05	137	P	P	19 03 19.9	+2.0
	0.3nm,0.3s,baz=313,slow=9.6,SNR=14						
ASAR				S	Sn	19 07 16.1	-5.1
	0.6nm,0.5s,baz=305,slow=22,SNR=5.2						
ASAR				ScP	ScP	19 10 44.5	+3.2
	0.4nm,0.7s,baz=329,slow=2.6,SNR=5.4						
SONM	Songino Array	57.24	350	P	P	19 08 17.5	+0.4
	0.2nm,0.4s,baz=178,slow=7.2,SNR=2.0						
MKAR	Makanchi Array	63.88	333	P	P	19 09 01.8	-0.3
	0.2nm,0.6s,baz=152,slow=6.5,SNR=2.6						

*IDC **14** 19:09:17.7±0.9, 55°.70S×30°.69W, h0^{km}, mb4.0/5, mb1 4.2/6, mb1mx3.9/23, mbtmp4.0/6, ML3.6/1, MS3.5/6, Ms1 3.5/6, ms1mx3.2/25, Error ellipse: s-maj=32.3km s-min=23.0km az=59.0*

*NEIC **14** 19:09:19.2±1.2, 55°.63S±0°.07×30°.6W±0°.2, h10^{km}±1^{km}, mb4.4/9, Error ellipse: s-maj=18.9km s-min=10.8km az=75.0*

ISC 14 19:09:19.4±0.7, **55°.7S**±0°.1×**30°.7W**±0°.1, **h10**^{km}**, n26,** σ**1^{s}.03**/22, **mb4.2**/6, **MS3.5**/5, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	3.62	290	Pn	Pn	19 10 16.1	+0.6
HOPE				Sn	Sn	19 10 59.0	+0.7
VNA1	Neumayer--Stat	17.93	156	P	P	19 13 28.1	-0.9
VNA3	Neumayer Olymp	18.05	158	P	P	19 13 30.5	0.0
VNA2	Neumayer--Watz	18.33	156	P	P	19 13 34.8	+1.3
	baz=318,slow=14						
PMSA	Palmer Station	18.70	227	LR	LR	19 19 34.4	
	comp=Z,112nm,19.8s,baz=87,slow=33						
SNAA	Sanae	19.92	154	P	P	19 13 50.8	-0.2
SNAA	Sanae	19.92	154	P	P	19 13 49.3	-1.7
	0.2nm,0.3s,baz=311,slow=9.7,SNR=8.1						
SNAA	Sanae	19.92	154	P	P	19 13 50.3	-0.7
USHA	Ushuaia	21.37	256	LR	LR	19 21 36.8	
	comp=Z,244nm,18.2s,baz=38,slow=35						
PLCA	Paso Flores	30.00	283	LR	LR	19 27 29.8	
	comp=Z,115nm,18.5s,baz=175,slow=36						
QSPA	South Pole Qui	34.59	180	P	P	19 16 07.2	-1.0
CPUP	Villa Florida	35.12	316	P	P	19 16 12.9	+0.1
	2.1nm,0.7s,baz=158,slow=9.7,SNR=3.3						
CPUP				LR	LR	19 31 06.6	
	comp=Z,15nm,18.9s,baz=206,slow=37						
MAW	Mawson	41.62	145	LR	LR	19 32 19.1	
	comp=Z,62nm,18.6s,baz=239,slow=33						
MAW	Mawson	41.62	145	P	P	19 17 09.1	+2.0
PB14	IPOC Station P	42.43	300	P	P	19 17 14.7	+0.1
VNDA	Vanda	46.86	184	P	P	19 17 48.6	-0.3
	1.2nm,0.7s,baz=174,slow=9.2,SNR=9.9						
VNDA	Vanda	46.86	184	P	P	19 17 48.6	-0.3
VNDA				IAmb	IAmb	19 18 12.5	
	comp=Z,6.2nm,1.4s						
LPAZ	La Paz	48.57	309	P	P	19 18 04.2	+0.6
	comp=Z,1.5nm,0.6s,baz=147,slow=7.1,SNR=7.0						
LPAZ	La Paz	48.57	309	P	P	19 18 03.0	-0.6
LPAZ				IAmb	IAmb	19 18 13.2	
	comp=Z,2.9nm,0.8s						
LBTB	Lobatse	50.80	77	P	P	19 18 21.2	+1.3
	comp=Z,5.2nm,0.7s,baz=212,slow=7.3,SNR=6.3						
LBTB	Lobatse	50.80	77	P	P	19 18 20.8	+0.8
LBTB				IAmb	IAmb	19 18 23.2	
	comp=Z,9.0nm,0.9s						
SAML	Samuel	53.17	318	P	P	19 18 36.9	-0.6
SAML				IAmb	IAmb	19 18 39.8	
	comp=Z,2.4nm,0.9s						
PTGA	Pitinga	59.69	325	LR	LR	19 44 33.9	
	comp=Z,86nm,19.1s,baz=152,slow=35						
TORD	Torodi Ar. Bea	73.73	33	P	P	19 20 52.5	-1.0
	comp=Z,0.6nm,0.8s,baz=204,slow=6.7,SNR=4.6						
TORD	Torodi Ar. Bea	73.73	33	P	P	19 20 52.4	-1.0
TORD				IAmb	IAmb	19 20 59.2	
	comp=Z,5.8nm,1.4s						
ILAR	Eielson Array	148.40	313	PKPbc	PKPbc	19 29 03.0	-1.6
	comp=Z,0.8nm,0.9s,baz=113,slow=2.1,SNR=6.5						

JMA 14 19:20:00.1±0.4, **31°.40N×128°.79E, h7**^{km}**, M2.2, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.84	70	P	Pg	19 20 15.8	-0.4
JSJ				*e*S	Sg	19 20 27.3	+0.2
JFU	Fukue jima 2	1.25	358	P	Pn	19 20 23.7	-0.3
JFU				*e*S	Sb	19 20 40.7	+0.3
JSU	Suzuyama	1.43	85	P	Pn	19 20 26.2	-0.3

*JMA **14** 19:20:18.2±0.2, 31°.33N×128°.72E, h9^{km}±2^{km}, M5.9*

JMA Felt III J1.

*NIED **14** 19:20:18.2, 31°.33N×128°.72E, h9^{km}, MW5.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.52; M$_{\theta\theta}$1.46; M$_{\phi\phi}$-0.95; M$_{r\theta}$0.66; M$_{\theta\phi}$3.98; M$_{\phi r}$2.40; Fault plane solution: M$_0$4.84000×10^{17} NP1: φ$_s$190.00000°, δ88.00000°, λ-149.00000°. NP2: φ$_s$99.00000°, δ59.00000°, λ-2.00000°.*

*IDC **14** 19:20:19.6±0.3, 31°.41N×128°.71E, h0^{km}, mb5.3/60, mb1 5.3/67, mb1mx5.3/70, mbtmp5.3/67, ML4.4/7, MS5.5/34, Ms1 5.5/34, ms1mx5.5/37 Error ellipse: s-maj=9.7km s-min=7.8km az=71.0*

*MOS **14** 19:20:19.9±0.9, 31°.42N×128°.73E, h17^{km}, mb5.7/75, MS6.0/76, Error ellipse: s-maj=5.5km s-min=3.4km az=111.0*

*BJI **14** 19:20:19.0±0.0, 31°.40N×128°.80E, h20^{km}, mB5.8/66, mb5.6/74, ML5.8/4, Ms6.2/94, Ms7 6.0/87*

*NEIC **14** 19:20:20.7, 31°.44N×128°.86E, h3^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-1.01; M$_{\theta\theta}$1.49; M$_{\phi\phi}$-0.48; M$_{r\theta}$1.56; M$_{\theta\phi}$3.28; M$_{\phi r}$-2.09; Fault plane solution: M$_0$4.39000×10^{17} NP1: φ$_s$272.70000°, δ66.18000°, λ-26.35000°. NP2: φ$_s$14.01000°, δ66.04000°, λ-153.77000°. Principal axes: T 3.9307, Plg0.0000°,* *Azm323.0000°; N 0.8098, Plg55.0000°, Azm54.0000°; P -4.7404, Plg35.0000°, Azm233.0000°;*

*NEIC **14** 19:20:21.4±1.5, 31°.44N±0°.05×128°.84E±0°.06, h10^{km}±1^{km}, mb5.8/303, Ms_20 5.6/330, Mwb5.7/45, Mww5.7, Mwc5.7(GCMT) Error ellipse: s-maj=9.4km s-min=8.2km az=327.0*

*KMA **14** 19:20:21.2, 30°.80N×128°.70E, h15^{km}*

*GCMT **14** 19:20:22.4±0.1, 31°.39N±0°.01×128°.69E±0°.01, h12^{km}, MW5.7/151, Moment Tensor Solution. s129,c263; s151,c323; Duration: $1^{s}8$ Moment tensor: Scale 10^{17} Nm; M_{rr}-0.90±.04; $M_{\theta\theta}$2.04±.04; $M_{\phi\phi}$-1.13±.05; $M_{r\theta}$2.00±.11; $M_{\theta\phi}$4.56±.04; $M_{\phi r}$0.60±.11; Best double couple: $M_0$5.18800×10^{17} NP1:ϕ_s8.00000°,δ70.00000°, λ177.00000°. NP2:ϕ_s99.00000°,δ87.00000°,λ20.00000°. Principal axes: T 5.8650, Plg16.0000°, Azm326.0000°; N -1.3470, Plg70.0000°, Azm108.0000°; P -4.5120, Plg12.0000°, Azm232.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **14** 19:20:23, 31°.40N×128°.71E, h12^{km}, Moment Tensor Solution. Duration: $3^{s}6$ Moment tensor: Scale 10^{17}Nm; M_{rr}-0.97; $M_{\theta\theta}$2.04; $M_{\phi\phi}$-1.07; $M_{r\theta}$0.99; $M_{\theta\phi}$4.84; $M_{\phi r}$-0.40; Fault plane solution: $M_0$5.26000×10^{17} NP1:ϕ_s9.00000°, δ77.00000°,λ-174.00000°. NP2:ϕ_s278.00000°, δ84.00000°,λ-13.00000°. Principal axes: T 5.6175, Plg5.0000°, Azm324.0000°; N -0.8063, Plg76.0000°, Azm74.0000°; P -4.8113, Plg13.0000°, Azm233.0000°;*

*BGR **14** 19:20:24.5±0.0, 31°.31N×128°.80E, h22^{km}, mb5.5, Ms6.2*

*NEIC **14** 19:20:24, 31°.43N×128°.96E, h20^{km}, Moment Tensor Solution. Duration: $6^{s}0$ Moment tensor: Scale 10^{17}Nm; M_{rr}-0.85; $M_{\theta\theta}$2.24; $M_{\phi\phi}$-1.40; $M_{r\theta}$0.64; $M_{\theta\phi}$4.04; $M_{\phi r}$-1.60; Fault plane solution: $M_0$4.81000×10^{17} NP1: ϕ_s280.00000°,δ71.00000°,λ-14.00000°. NP2:ϕ_s15.00000°, δ76.00000°,λ-160.00000°. Principal axes: T 4.8775, Plg4.0000°, Azm146.0000°; N -0.1324, Plg66.0000°, Azm48.0000°; P -4.7451, Plg24.0000°, Azm238.0000°;*

ISC 14 19:20:22.3±0.4, **31°.40N**±0°.03×**128°.83E**±0°.02, **h18**^{km}±2^{km}, **h18**^{km}**:pP-P, n1783,** $\sigma 1^{s}$**55**/1790, **mb5.7**/444, **MS5.7**/281, **99C-74D, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.81	70	⇓P	Pb	19 20 35.3	-2.5
JSJ				eS	Sb	19 20 46.9	-1.5
JFU	Fukue jima 2	1.25	357	⇑P	Pn	19 20 42.6	-2.4
JSU	Suzuyama	1.40	85	⇑P	Pn	19 20 45.3	-1.6
JSU	Suzuyama	1.40	85	Pn	Pn	19 20 44.9	-2.0
JSU				Sn	Sn	19 21 05.1	+0.1
JKC	Kuchinoerabu	1.50	128	⇑P	Pn	19 20 45.3	-3.0
JNN	Nakanoshima	1.80	150	P	Pn	19 20 49.5	-2.9
JTSR	Tashiro 2	1.81	97	⇑P	Pn	19 20 50.5	-2.1
JYAK	Yakushimahirau	1.85	128	⇑P	Pn	19 20 50.4	-2.8
JTN	Tanegashima 3	1.99	111	⇑P	Pn	19 20 53.1	-2.0
JTZ	Takazaki	1.99	75	⇑P	Pn	19 20 54.0	-1.1
JIU3	Izumi3	2.04	55	⇓P	Pn	19 20 54.8	-1.0
JMTN	Minamitane	2.04	119	⇑P	Pn	19 20 53.7	-2.1
JNAR	Kushima--Naru	2.09	86	⇑P	Pn	19 20 55.6	-0.9
JNKG	Nichinankitago	2.19	82	⇑P	Pn	19 20 57.3	-0.5
JTSN	Tsuno	2.43	69	⇑P	Pn	19 21 00.4	-0.7
JNU	Nakatsue 78nm,0.3s,baz=15,slow=23,SNR=4.2	2.44	45	Lg	Lg	19 21 38.3	
JNU	Nakatsue	2.44	45	P	Pb	19 21 06.1	+0.4
JII	Iki	2.51	17	P	Pn	19 21 01.6	-0.6
KSSGP	Seogwipo SNR=153	2.71	314	P	Pn	19 21 02.9	-2.1
KSJJU	Jeju SNR=81	2.80	317	P	Pn	19 21 04.1	-2.1
GOS1	Gosan-ri SNR=64	2.92	311	P	Pn	19 21 06.1	-1.7
GOS2	Gosang-Q330s SNR=91	2.92	311	P	Pn	19 21 06.0	-1.8
GMDB	Geomundo SNR=21	2.94	334	P	Pn	19 21 07.0	-1.1
GMDB	Geomundo SNR=70	2.94	334	P	Pn	19 21 08.0	-0.1
HALB	Hallimjungang- SNR=225	2.94	313	P	Pn	19 21 06.0	-2.2
YNDB	Yeoundo SNR=22	3.15	344	P	Pn	19 21 11.0	0.0
YNDB	Yeoundo SNR=31	3.15	344	P	Pb	19 21 17.1	-0.6
JTU	Tsushima	3.15	9	Pn	Pn	19 21 09.7	-1.4
YKDB	Yokjido SNR=16	3.25	352	P	Pn	19 21 12.0	-0.4
CJD	Chujado SNR=50	3.33	321	P	Pn	19 21 12.0	-1.5
KOHB	KOHEUNG SNR=35	3.46	338	P	Pn	19 21 13.8	-1.6
KOHB	KOHEUNG SNR=112	3.46	338	P	Pb	19 21 20.6	-2.6
KUJA	Jangpyeong SNR=13	3.48	357	P	Pn	19 21 16.0	+0.4
KSNAH	Namhae SNR=50	3.49	348	P	Pn	19 21 16.5	+0.8
BOSB	Boseong-gun SNR=30	3.62	338	P	Pn	19 21 17.0	-0.5
BOSB	Boseong-gun SNR=51	3.62	338	P	Pb	19 21 24.0	-1.8
GWYB	Gwangyang SNR=24	3.66	345	P	Pn	19 21 18.0	0.0
GWYB	Gwangyang SNR=28	3.66	345	P	Pn	19 21 21.0	+2.9
HANB	Haenam SNR=112	3.67	329	P	Pn	19 21 17.0	-1.2
HANB	Haenam SNR=61	3.67	329	P	Pn	19 21 18.0	-0.2
KSBSA	Busan_acc SNR=16	3.70	3	P	Pn	19 21 18.7	+0.1
KSBSA	Busan_acc SNR=32	3.70	3	P	Pb	19 21 25.2	-1.9
KSJDO	Jindo SNR=16	3.72	326	P	Pn	19 21 17.4	-1.5
KSMAS	Masan SNR=50	3.77	357	P	Pn	19 21 19.6	+0.1
KSMAS	Masan SNR=7.7	3.77	357	P	Pn	19 21 20.1	+0.6
KSHAD	HADONG SNR=9.6	3.77	347	P	Pn	19 21 20.1	+0.5
KSBUS	Busan SNR=16	3.85	3	P	Pn	19 21 21.0	+0.4
KSBUS	Busan SNR=22	3.85	3	P	Pb	19 21 28.1	-1.5
KSSCH	SUNCHEON SNR=14	3.89	340	P	Pn	19 21 20.8	-0.4
EURB	Uiryeong-eup SNR=36	3.94	354	P	Pn	19 21 22.0	+0.1
KSKWJ	Gwangju SNR=42	4.05	338	P	Pn	19 21 22.7	-0.7
KSKWJ	Gwangju SNR=31	4.05	338	P	Pn	19 21 23.5	+0.1
KSKWJ	Gwangju SNR=43	4.05	338	P	Pn	19 21 23.0	-0.5
KSKWJ	Gwangju SNR=30	4.05	338	P	Pn	19 21 23.2	-0.2
KSKWJ	Gwangju SNR=46	4.05	338	P	Pn	19 21 24.8	+1.4
KSKWJ	Gwangju SNR=46	4.05	338	P	Pn	19 21 26.1	+2.6
KSKWJ	Gwangju SNR=46	4.05	338	P	Pn	19 21 26.0	+2.6
MIYA	Miryang-si SNR=9.8	4.08	359	P	Pn	19 21 27.0	+3.2
GGDB	Gageodo SNR=26	4.09	311	P	Pn	19 21 22.0	-2.0
NAWB	Namwon SNR=46	4.18	344	P	Pn	19 21 25.0	-0.3
HAMB	Hamyang SNR=9.6	4.20	348	P	Pn	19 21 26.0	+0.5
SUCA	Sunchang SNR=18	4.21	341	P	Pn	19 21 26.0	+0.4
SUCA	Sunchang SNR=50	4.21	341	P	Pb	19 21 32.1	-3.7
KSKCH	Geochang SNR=6.2	4.27	350	P	Pn	19 21 27.4	+0.9
KSKCH	Geochang SNR=31	4.27	350	P	Pn	19 21 26.8	+0.3
KSUSN	Ulsan SNR=29	4.30	3	P	Pn	19 21 27.5	+0.7
KSUSN	Ulsan SNR=49	4.30	3	P	Pn	19 21 30.6	+3.8
HUK2	Heuksan-myeon SNR=162	4.33	320	P	Pn	19 21 26.0	-1.3
GOCB	Gochang-gun SNR=69	4.36	335	P	Pn	19 21 27.0	-0.6
GOCB	Gochang-gun SNR=27	4.36	335	P	Pb	19 21 34.0	-4.3
KSDAG	Daegu SNR=17	4.36	1	P	Pn	19 21 28.0	+0.3
KSDAG	Daegu SNR=14	4.36	1	P	Pb	19 21 35.0	-3.4
KSJEU	Jeongeup SNR=24	4.38	339	P	Pn	19 21 27.2	-0.8
KSJEU	Jeongeup SNR=48	4.38	339	P	Pn	19 21 28.5	+0.6
KSYOC	YEONGCHEON SNR=31	4.56	1	P	Pn	19 21 31.8	+1.4
KSYOC	YEONGCHEON SNR=14	4.56	1	P	Pb	19 21 38.8	-3.0
YOCB	Yeongcheon SNR=13	4.57	1	P	Pn	19 21 32.0	+1.5
YOCB	Yeongcheon SNR=9.9	4.57	1	P	Pb	19 21 38.0	-3.9
ANMD	Anmado SNR=37	4.58	330	P	Pn	19 21 29.4	-1.2
ANMD	Anmado SNR=17	4.58	330	P	Pn	19 21 30.0	-0.6
ANMD	Anmado SNR=45	4.58	330	P	Pb	19 21 37.0	-5.1
JOW	Kunigami 27nm,0.3s,baz=358,slow=11,SNR=36	4.58	186	Pn	Pn	19 21 30.4	-0.3
JOW	Kunigami	4.58	186	Pn	Pn	19 21 30.6	0.0
SMKB	Mukjeong-gil SNR=20	4.68	337	P	Pn	19 21 32.0	-0.1
SMKB	Mukjeong-gil SNR=29	4.68	337	P	Pn	19 21 35.0	+2.9
KSJEO	Jeonju SNR=88	4.70	345	P	Pn	19 21 31.2	-1.2
KSJEO	Jeonju SNR=24	4.70	345	P	Pn	19 21 33.0	+0.6
KSJEO	Jeonju SNR=17	4.70	345	P	Pb	19 21 40.0	-4.3
KSGIC	Gimchen SNR=27	4.71	353	P	Pn	19 21 32.3	-0.1
KSGIC	Gimchen SNR=27	4.71	353	P	Pn	19 21 32.8	+0.4
KSPHA	Pohang SNR=8.5	4.80	5	P	Pn	19 21 35.0	+1.3
KSPHA	Pohang SNR=22	4.80	5	P	Pb	19 21 43.0	-2.9
MNYD	Munyeodo SNR=78	4.83	336	P	Pn	19 21 34.0	-0.1
MNYD	Munyeodo SNR=20	4.83	336	P	Pb	19 21 42.0	-4.4
JMN	Monobe	4.86	60	Pn	Pn	19 21 34.0	-0.5
KSCPR	CHUPUNGNYEONG SNR=158	4.86	352	P	Pn	19 21 34.6	0.0
KSCPR	CHUPUNGNYEONG SNR=26	4.86	352	P	Pn	19 21 34.7	+0.1
KSGUS	GUNSAN SNR=28	4.93	340	P	Pn	19 21 38.2	+2.8
KSEUS	ULSEONG SNR=66	4.94	359	P	Pn	19 21 35.9	+0.2
KSEUS	ULSEONG SNR=26	4.94	359	P	Pn	19 21 36.4	+0.8
EUSB	Uiseong SNR=100	4.95	359	P	Pn	19 21 36.0	+0.3
EUSB	Uiseong SNR=10	4.95	359	P	Pb	19 21 43.0	-5.4
KSADO	Andong SNR=67	5.00	1	P	Pn	19 21 37.0	+0.5
OKCB	Cheongsan-myeo SNR=95	5.01	350	P	Pn	19 21 37.0	+0.4
KSSAJ	Sangju SNR=6.1	5.03	354	P	Pn	19 21 37.4	+0.6
JHS	Saijyo	5.08	44	Pn	Pn	19 21 34.6	-3.0
TJN	Taejon	5.11	347	ceP	Pn	19 21 38.3	+0.3
TJN	Taejon	5.11	347	P	Pn	19 21 38.5	+0.5
BUYB	Buyeo SNR=31	5.11	342	P	Pn	19 21 38.0	0.0
BUYB	Buyeo SNR=14	5.11	342	P	Pb	19 21 45.0	-6.2
YODB	Yeongdeok SNR=15	5.14	5	P	Pn	19 21 40.0	+1.6
KSBON	Boeun SNR=192	5.16	351	P	Pn	19 21 39.2	+0.6
KSBON	Boeun SNR=39	5.16	351	P	Pn	19 21 40.1	+1.5
KOJ2	Gongju-si SNR=51	5.25	345	P	Pn	19 21 40.1	+0.2
PORA	Boryeong SNR=20	5.26	340	P	Pn	19 21 41.0	+0.9
PORA	Boryeong SNR=18	5.26	340	P	Pn	19 21 43.0	+2.9
ECDB	Euchungdo SNR=8.6	5.27	334	P	Pn	19 21 47.0	+6.8
KSMGY	Mungyeong SNR=76	5.28	353	P	Pn	19 21 40.2	-0.1
KSMGY	Mungyeong SNR=66	5.28	353	P	Pn	19 21 40.5	+0.2
KSULJ	Uljin SNR=22	5.31	5	P	Pn	19 21 41.4	+0.7
OYDB	Oeyeondo SNR=18	5.33	335	P	Pn	19 21 41.0	-0.1
YOJB	Youngju SNR=52	5.46	357	P	Pn	19 21 43.1	+0.2
YOJB	Youngju SNR=14	5.46	357	P	Pn	19 21 50.0	+7.1
KSCHJ	Chungju SNR=14	5.50	353	P	Pn	19 21 44.0	+0.6
CHYB	Chungyang SNR=149	5.53	1	P	Pn	19 21 44.0	+0.3
CHYB	Chungyang SNR=33	5.53	1	P	Pn	19 21 44.1	+0.3
CHYB	Chungyang SNR=10	5.53	1	P	Pn	19 21 51.0	+7.2
KSCEA	Cheonan SNR=88	5.56	347	P	Pn	19 21 44.2	0.0
UJN	ULJIN SNR=30	5.60	5	P	Pn	19 21 45.7	+1.0
KSTBA	Taebaek SNR=25	5.71	1	P	Pn	19 21 47.2	+0.9
KSSES	Seosan SNR=16	5.72	341	P	Pn	19 21 47.0	+0.6
KSSES	Seosan SNR=21	5.72	341	P	Pn	19 21 48.0	+1.6
PYTK	Pyeongtaek SNR=44	5.75	346	P	Pn	19 21 46.7	-0.1
KSYOW	Yeongwol SNR=17	5.77	357	P	Pn	19 21 48.1	+1.1
KSYOW	Yeongwol SNR=124	5.77	357	P	Pn	19 21 47.6	+0.6
JECH	Jecheon SNR=35	5.77	355	P	Pn	19 21 48.0	+0.9
JECH	Jecheon SNR=9.1	5.77	355	P	Pb	19 21 55.0	-7.4
KSGWL	Sabuk SNR=31	5.79	360	P	Pn	19 21 48.2	+0.9
KSGWL	Sabuk SNR=8.1	5.79	360	P	Pb	19 21 55.6	-7.2
IMWB	Imwonan-gil SNR=63	5.84	4	P	Pn	19 21 49.0	+1.1
KSGBI	Gyogryolbido SNR=17	5.88	333	P	Pn	19 21 48.5	0.0
KSGBI	Gyogryolbido SNR=14	5.88	333	P	Pn	19 21 50.3	+1.8
HAWB	Hwaseong-si SNR=60	5.92	344	P	Pn	19 21 49.0	-0.1
JMZ	Minamidaito 2	5.95	159	Pn	Pn	19 21 48.2	-1.3
KSICN	Icheon SNR=17	5.99	349	P	Pn	19 21 50.0	-0.1
KSWJU	Wonju SNR=61	6.02	354	P	Pn	19 21 51.0	+0.4
KSSWO	Suwon SNR=60	6.05	346	P	Pn	19 21 51.1	+0.2
KSAR	Wonju Array Be	6.08	353	P	Pn	19 21 50.6	-0.6
KSAR	Wonju Array Be	6.08	353	Pn	Pn	19 21 50.6	-0.6
KSRS	Korea Array 26nm,0.3s,baz=174,slow=14,SNR=420	6.08	353	Pn	Pn	19 21 50.9	-0.5
KSRS	34nm,0.3s,baz=174,slow=28,SNR=4.4			Sn	Sn	19 23 00.0	-0.5
KSRS	31nm,0.3s,baz=178,slow=30,SNR=5.1			Lg	Lg	19 23 25.8	
KSRS	comp=Z,52µm,19.5s,baz=174,slow=41			LR	LR	19 24 25.9	
KS19	Wonju Array Si	6.14	353	Pn	Pn	19 21 51.1	-1.0
SHHB	Siheung-si SNR=36	6.19	344	P	Pn	19 21 53.2	+0.5
SHHB	Siheung-si SNR=13	6.19	344	P	Pn	19 21 55.0	+2.3
OKEB	Okgye-meyeon SNR=11	6.21	1	P	Pn	19 21 55.0	+2.0
KSDEI	Deokjeokdo SNR=30	6.26	340	P	Pn	19 21 53.3	-0.4
KSSEO	Seoul SNR=51	6.27	346	P	Pn	19 21 53.9	0.0
KSSEO	Seoul SNR=52	6.27	346	P	Pn	19 21 54.0	0.0
KSSEO	Seoul SNR=8.2	6.27	346	P	Pn	19 21 59.7	+5.8
KSSEO	Seoul SNR=8.2	6.27	346	P	Pn	19 22 01.0	+7.0
KSDGY	Daegwallycong SNR=13	6.28	359	P	Pn	19 21 55.0	+0.9
INCN	Inchon	6.33	344	P	Pn	19 21 53.8	-1.0
INCN	Inchon	6.33	344	Pn	Pn	19 21 53.8	-1.0
INCN	Inchon	6.33	344	P	Pn	19 21 55.4	+0.6
KSSOD	Songwoldong SNR=39	6.34	346	P	Pn	19 21 55.1	+0.2
KSCHC	Chuncheon SNR=53	6.42	353	P	Pn	19 21 56.2	+0.3
KSJMJ	Jumunjin SNR=14	6.47	359	P	Pn	19 21 57.7	+1.1
GAPB	Gapyeong SNR=85	6.52	351	P	Pn	19 21 58.0	+0.6
GAPB	Gapyeong SNR=6.0	6.52	351	P	Pn	19 22 05.1	+7.7
SSE	Sheshan	6.55	269	Pn	Pn	19 21 57.0	-0.7
SSE				Sn	Sn	19 23 16.8	+4.8
SSE	comp=N,6µm,1.0s			smax	smax		
SSE	comp=E,3µm,0.9s			smax	smax		
SSE	Sheshan	6.55	269		Pn	19 21 57.5	-0.3
KSGAH	Ganghwa SNR=90	6.59	343	P	Pn	19 21 58.0	-0.3
KSIJA	INJE SNR=40	6.60	355	P	Pn	19 21 59.3	+0.9
KSIJA	INJE SNR=15	6.60	355	P	Pn	19 22 00.8	+2.4
KSDDC	Dongducheon SNR=11	6.65	348	P	Pn	19 22 00.1	+1.0
KSMUS	Musan SNR=80	6.69	346	P	Pn	19 21 59.7	0.0
YPDB	Yeonpyeongdo SNR=44	6.71	338	P	Pn	19 22 00.1	+0.3
JWT	Wachi	6.73	53	Pn	Pn	19 22 01.1	+1.0
KSCWO	Cheorwon SNR=85	6.75	351	P	Pn	19 22 00.8	+0.2
YNCB	YEONCHEON SNR=21	6.81	347	P	Pn	19 22 01.4	+0.2
SEHB	SEOHWA SNR=54	6.87	356	P	Pn	19 22 03.3	+1.2
HWCB	Hwacheon SNR=48	6.87	352	P	Pn	19 22 03.0	+0.8
KSSKC	Sokcho SNR=12	6.88	358	P	Pn	19 22 04.0	+1.8
KSSKC	Sokcho SNR=13	6.88	358	P	Pn	19 22 10.4	+8.1
TSUJ	Tsu 2	7.18	61	P	Pn	19 22 06.5	+0.2
JFM	Mihama	7.26	54	P	Pn	19 22 10.0	+2.5
DACB	Daecheong-do R SNR=19	7.26	333	P	Pn	19 22 07.4	0.0
DACB	Daecheong-do R SNR=8.9	7.26	333	P	Pn	19 22 14.0	+6.5
JMJ	Miyako jima 2	7.26	206	P	Pn	19 22 11.5	+3.9
JIE	Ise	7.27	64	P	Pn	19 22 10.2	+2.6
KSBAR	Backryungdo SNR=24	7.38	334	P	Pn	19 22 08.8	-0.3
KSBAR	Backryungdo SNR=7.0	7.38	334	P	Pn	19 22 15.7	+6.5
JYTA	Yamagatataniai	7.82	56	P	Pn	19 22 17.1	+2.0
JISG	Ishigakijimahi	7.87	212	P	Pn	19 22 18.2	+2.3
INU	Inuyama	7.90	58	Pn	Pn	19 22 16.3	0.0
JKG	Kaga	7.91	50	P	Pn	19 22 19.8	+3.4
JIJ	Ishigaki jima	8.14	212	P	Pn	19 22 21.2	+1.6
JGF	Kuroka	8.26	57		Pn	19 22 20.8	-0.5
JSG	Sagara	8.51	65		Pn	19 22 23.5	-1.1
NJ2	Nanjing	8.52	277	⇑iP	Pn	19 22 23.6	-1.2
NJ2				pP		19 22 28.4	
NJ2				sP		19 22 31.9	
NJ2				S	Sn	19 24 02.6	+2.1
NJ2				sS		19 24 07.8	
NJ2	comp=Z,130nm,0.8s			pmax	pmax		
NJ2	comp=N,1µm,1.5s			smax	smax		
NJ2	comp=E,560nm,1.5s			smax	smax		
NJ2	comp=N,220µm,12.3s			LR	LR		
NJ2	comp=E,60µm,10.7s			LR	LR		
NJ2	comp=Z,77µm,13.2s			LR	LR		
JNY	Yasuok	8.52	60	P	Pn	19 22 25.9	+1.0
JGN	Niukaw	8.54	53	P	Pn	19 22 27.7	+2.5
YOJ	Yonaguni jima	8.61	218	P	Pn	19 22 27.4	+1.3
YOJ	Yonaguni jima	8.61	218	Pn	Pn	19 22 27.4	+1.3
YOJ	Yonaguni jima	8.61	218	P	Pn	19 22 30.1	+4.0
TATO	Taipei	9.10	227	Pn	Pn	19 22 34.2	+1.4
JNG	Nsakai	9.18	55	P	Pn	19 22 36.5	+2.6
JHTM	Izuhatsuma	9.24	65	P	Pn	19 22 36.8	+2.1
MAJO	Matsushiro	9.32	54	P	Pn	19 22 36.8	+0.9
MAJO	Matsushiro	9.32	54		Pn	19 22 36.8	+0.9
MAT	Matsushiro	9.32	54	P	Pn	19 22 37.4	+1.6
MAT				eS	Sn	19 24 24.3	+4.0
MAT	Matsushiro	9.32	54	P	Pn	19 22 38.2	+2.4
MJAR	Matsushiro Arr 0.7nm,0.3s,baz=240,slow=13,SNR=106	9.32	54	Pn	Pn	19 22 37.7	+1.8
MJAR	baz=250,slow=21,SNR=2.1			Lg	Lg	19 25 27.0	
MJAR	comp=Z,22µm,18.3s,baz=245,slow=40			LR	LR	19 26 36.5	
MJAR	Matsushiro Arr	9.32	54		Pn	19 22 35.7	-0.2
AJI	Ajiro2	9.33	64	P	Pn	19 22 38.6	+2.7
YHNB	Yeheng	9.39	226		Pn	19 22 36.8	-0.1
YHNB	Yeheng	9.39	226	P	Pn	19 22 41.4	+4.5
JHJ	Hachijo jima 2 15nm,0.3s,baz=90,slow=18,SNR=1.9	9.43	77	Pn	Pn	19 22 38.1	+0.8
JHJ	comp=Z,20µm,18.3s,baz=280,slow=38			LR	LR	19 26 19.0	
JHJ	Hachijo jima 2	9.43	77		Pn	19 22 38.1	+0.8
DL2	Dalian	9.53	324	P	Pn	19 22 38.8	+0.2
DL2				S	Sn	19 24 30.3	+5.1
DL2	comp=Z,190nm,1.2s			pmax	pmax		
DL2	comp=Z,1µm,3.5s			pmax	pmax		
DL2	comp=N,74µm,13.3s			LR	LR		
DL2	comp=E,63µm,11.8s			LR	LR		
DL2	comp=Z,81µm,17.7s			LR	LR		
JJN	Nakama	9.59	51	P	Pn	19 22 44.0	+4.5
NACB	Ninganchiao	9.63	223		Pn	19 22 39.1	-0.9
JSD	Sado	10.20	47		Pn	19 22 44.0	-3.8
SSLB	Suanglung	10.30	225		Pn	19 22 50.1	+0.8
SSLB	Suanglung	10.30	225	P	Pn	19 22 53.0	+3.7
YULB	Yu-li	10.41	222		Pn	19 22 50.8	+0.1
TIA	Tai'an	10.85	299	⇑P	Pn	19 22 55.3	-1.5
TIA	comp=Z,45nm,0.9s			pmax	pmax		
TIA	comp=Z,1µm,8.5s			pmax	pmax		
TIA	comp=N,74µm,12.3s			LR	LR		
TIA	comp=E,65µm,10.9s			LR	LR		
TIA	comp=Z,61µm,16.2s			LR	LR		
TPUB	Ta-pu	10.87	224		Pn	19 22 57.1	+0.1
TPUB	Ta-pu	10.87	224	P	Pn	19 23 01.0	+4.0
TWG	Pinlang	10.98	221		Pn	19 22 57.7	-0.9
QZH	Quanzhou	11.08	237	⇓iP	Pn	19 22 51.6	-8.3
QZH				eS	Sn	19 24 59.8	-3.7
QZH				SS	SnSn	19 25 22.8	+7.5
QZH	comp=Z,2µm,5.8s			pmax	pmax		
QZH	comp=N,67µm,12.3s			LR	LR		
QZH	comp=E,35µm,11.8s			LR	LR		
QZH				LR	LR		

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      comp=Z,53µm,11.4s
SNY   Shenyang        11.23 339 ⇓P      Pn        19 23 02.3 +0.5
SNY                             pmax    pmax
      comp=Z,38nm,1.2s
SNY                             pmax    pmax
      comp=Z,2µm,7.1s
SNY                             LR      LR
      comp=Z,118µm,16.3s
SNY                             LR      LR
      comp=Z,231µm,16.3s
SNY                             LR      LR
      comp=Z,173µm,10.7s
MSHR  Mys Shultsa     11.31   9 ceP     Pn        19 23 05.7 +2.7
MSHR                            pmax    pmax
      comp=Z,52nm,0.8s
KNMB  Chin-men Tao    11.53 236         Pn        19 23 05.2 -0.8
JCJ   Chichijima      12.43 107 Pn      Pn        19 23 18.2 -0.1
      comp=Z,3.7nm,0.3s,baz=292,slow=24,SNR=2.2
JCJ                             LR      LR        19 27 32.6
      comp=Z,13µm,21.8s,baz=289,slow=35
JCJ   Chichijima      12.43 107         Pn        19 23 18.2 -0.1
JCJ   Chichijima      12.43 107 P       P         19 23 27.5 -2.7
WHN   Wuhan           12.46 270 ⇓iP     Pn        19 23 17.8 -0.9
WHN                             pP      P         19 23 25.0 -5.5
WHN                             S       Sn        19 25 40.8 +3.8
WHN                             pmax    pmax
      comp=Z,48nm,0.5s
WHN                             LR      LR
      comp=Z,92µm,11.5s
WHN                             LR      LR
      comp=Z,68µm,10.8s
WHN                             LR      LR
      comp=Z,109µm,9.2s
CN2   Changchun       12.66 349 eP      Pn        19 23 23.3 +1.8
CN2                             S       Sn        19 25 48.3 +6.3
CN2                             pmax    pmax
      comp=Z,100nm,2.0s
CN2                             pmax    pmax
      comp=Z,2µm,7.6s
CN2                             LR      LR
      comp=Z,76µm,14.0s
CN2                             LR      LR
      comp=Z,257µm,14.0s
CN2                             LR      LR
      comp=Z,71µm,15.1s
USA0B Ussuriysk Arra  13.02  10 P       Pn        19 23 23.3 -3.0
USA0B Ussuriysk Arra  13.02  10         Pn        19 23 23.3 -3.0
USRK  Ussuriysk Ar.   13.02  10 Pn      Pn        19 23 30.5 +4.2
      baz=196,slow=13,SNR=13
USRK                            Lg      Lg        19 27 19.3
      baz=241,slow=30,SNR=2.4
USRK  Ussuriysk Ar.   13.02  10 P       Pn        19 23 25.1 -1.2
USRK  Ussuriysk Ar.   13.02  10         Pn        19 23 25.1 -1.2
MDJ   Mudanjiang      13.21   2 P       Pn        19 23 27.8 -1.1
MDJ                             pP      P         19 23 32.3 -6.5
MDJ                             S       Sn        19 25 51.9 -3.4
MDJ                             pmax    pmax
      comp=Z,40nm,2.3s
MDJ                             pmax    pmax
      comp=Z,2µm,6.3s
MDJ                             LR      LR
      comp=Z,35µm,13.2s
MDJ                             LR      LR
      comp=Z,97µm,12.3s
MDJ                             LR      LR
      comp=Z,54µm,9.6s
BJT   Baijiatuau      13.40 313 P       Pn        19 23 31.1 -0.4
BJT   Baijiatuau      13.40 313         Pn        19 23 31.1 -0.4
BJI   Beijing         13.40 314 P       Pn        19 23 31.1 -0.5
BJI                             S       Sn        19 26 03.0 +2.9
BJI                             pmax    pmax
      comp=Z,270nm,1.7s
BJI                             pmax    pmax
      comp=Z,4µm,7.2s
TIY   Taiyuan         14.90 299 ⇓P      Pn        19 23 54.3 +2.2
TIY                             pP      P         19 23 59.3 +1.6
TIY                             sP                19 24 03.1
TIY                             PP      PnPn      19 24 05.1 +5.1
TIY                             S       Sn        19 26 39.9 +3.2
TIY                             sS      S         19 26 48.1 -6.5
TIY                             SS      SnSn      19 26 55.4 +6.1
TIY                             pmax    pmax
      comp=Z,170nm,1.5s
TIY                             pmax    pmax
      comp=Z,770nm,4.0s
TIY                             LR      LR
      comp=Z,65µm,11.6s
TIY                             LR      LR
      comp=Z,30µm,12.6s
TIY                             LR      LR
      comp=Z,35µm,15.2s
TEY   Ternei          14.91  22 ⇓eP     P         19 24 00.4 +2.7
TEY                             eS      S         19 26 48.3 -6.3
TEY                             pmax    pmax
      comp=Z,90nm,1.4s
TEY                             pmax    pmax
      comp=E,40nm,1.4s
TEY                             pmax    pmax
      comp=N,60nm,1.3s
TEY                             pmax    pmax
      comp=Z,900nm,2.7s
TEY                             pmax    pmax
      comp=E,400nm,2.7s
TEY                             pmax    pmax
      comp=N,800nm,2.8s
TEY                             smax    smax
      comp=N,7µm,11.4s
TEY                             MLR     MLR
      comp=E,12µm,13.0s
TEY                             MLR     MLR
      comp=N,19µm,12.0s
TEY                             MLR     MLR
      comp=Z,17µm,12.0s
JEW   Eniwo           15.20  38         Pn        19 23 55.5 -0.6
ERM   Erimo           15.61  43 ceP     Pn        19 24 03.0 +1.7
ERM                             pmax    pmax
      comp=Z,365nm,1.7s
ERM   Erimo           15.61  43         Pn        19 24 00.1 -1.2
ERM   Erimo           15.61  43 P       P         19 24 06.6 +1.2
HKC   Hong Kong Obse  15.90 239 ⇑P      Pn        19 24 04.0 -1.2
GZH   Guangzhou       16.05 243 P       Pn        19 23 59.6 -7.6
GZH                             S       Sn        19 26 52.1  -13
GZH                             LR      LR
      comp=Z,40µm,12.6s
GZH                             LR      LR
      comp=Z,54µm,11.4s
MCO   Taipa Grande    16.46 240 P       Pn        19 24 13.0 +0.6
ENH   Enshi           16.65 271         Pn        19 24 14.1 -0.8
ASAJ  Asahikawa       16.69  37 Pn      Pn        19 24 16.3 +1.1
      comp=Z,2.7nm,0.3s,baz=223,slow=13,SNR=47
ASAJ                            LR      LR        19 30 18.8
      comp=Z,21µm,18.4s,baz=241,slow=36
JKA   Kamikawa-asahi  16.70  37 P       Pn        19 24 15.2 -0.1
JKA                             IAmb    IAmb      19 24 21.6
      comp=Z,1µm,1.8s
JAR   Ashorobuto      16.77  41 P       Pn        19 24 15.6 -0.6
HHC   Hu-ho-hao-te    16.81 309 eP      P         19 24 18.1 -0.9
HHC                             PP      PnPn      19 24 31.8 +5.4
HHC                             SS      S         19 27 42.9 +9.1
HHC                             pmax    pmax
      comp=Z,130nm,1.1s
HHC                             pmax    pmax
      comp=Z,4µm,5.0s
HHC                             LR      LR
      comp=Z,73µm,13.8s
HHC                             LR      LR
      comp=Z,63µm,14.1s
HHC                             LR      LR
      comp=Z,68µm,14.5s
XAN   Xi'an           16.96 284 P       Pn        19 24 17.5 -1.2
XAN                             pP      pP        19 24 25.0 -0.4
XAN                             S       Sn        19 27 28.3 +1.5
XAN                             pmax    pmax
      comp=Z,230nm,1.4s
XAN                             pmax    pmax
      comp=Z,4µm,11.9s
XAN                             LR      LR
      comp=Z,153µm,15.3s
XAN                             LR      LR
      comp=Z,66µm,14.7s
XAN                             LR      LR
      comp=Z,43µm,14.5s
BTO   Baotou          17.75 306 eP      P         19 24 31.3 +2.0
BTO                             LR      LR
      comp=Z,226µm,16.5s
BTO                             LR      LR
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      comp=Z,130µm,15.1s
KLR   Kul'dur         17.95   6 P       P         19 24 32.2 +0.9
      comp=Z,2.3nm,0.3s,baz=203,slow=7.7,SNR=168
KLR                             Lg      Lg        19 30 00.3
      comp=Z,0.1nm,0.3s,baz=72,slow=20,SNR=2.4
KLR                             LR      LR        19 30 47.5
      comp=Z,4µm,18.0s,baz=181,slow=35
KLR   Kul'dur         17.95   6c iP     P         19 24 33.2 +1.9
KLR                             pmax    pmax
      comp=Z,440nm,1.2s
YUK   Yuzh-Kuril'sk   18.41  42 eP      P         19 24 30.3 -6.1
YUK                             eS      S         19 28 05.2 -0.8
YUK                             pmax    pmax
      comp=Z,746nm,1.1s
YUK                             pmax    pmax
      comp=Z,665nm,1.1s
YUK                             pmax    pmax
      comp=E,378nm,1.3s
YUK                             pmax    pmax
      comp=N,112nm,0.7s
YUK                             MLR     MLR
      comp=Z,15µm,16.0s
LQP   Lukban          18.46 203 ⇓eP     Pn        19 24 38.1 +0.5
YSS   Yuzh-Sakhalins  18.87  31 deP     Pn        19 24 42.8 +0.7
YSS                             eS      Sn        19 28 09.1 -3.7
YSS                             pmax    pmax
      comp=Z,3µm,2.9s
YSS                             pmax    pmax
      comp=N,2µm,3.1s
YSS                             pmax    pmax
      comp=E,1µm,3.1s
YSS                             pmax    pmax
      comp=Z,190nm,1.6s
YSS                             smax    smax
      comp=N,2µm,7.0s
YSS                             MLR     MLR
      comp=E,22µm,14.0s
YSS                             MLR     MLR
      comp=Z,25µm,14.0s
YSS   Yuzh-Sakhalins  18.87  31 P       P         19 24 41.1 -0.4
YSS   Yuzh-Sakhalins  18.87  31 P       Pn        19 24 44.8 +2.7
HIA   Hailar          19.12 342 P       Pn        19 24 45.0 -0.1
HIA                             pmax    pmax
      comp=Z,526nm,1.4s
HIA   Hailar          19.12 342 P       Pn        19 24 45.0 -0.1
HIA                             IAmb    IAmb      19 24 54.2
      comp=Z,526nm,1.4s
PGP   Puerto Galera   19.23 204 ⇓eP     Pn        19 24 45.6 -0.1
LUBP  Lubang          19.27 206 ⇓iP     Pn        19 24 51.2 +4.1
GYA   Guiyang         20.00 261 ⇑P      P         19 24 54.6 +0.4
GYA                             pP      sP        19 25 03.1 +1.9
GYA                             sP      pP        19 25 07.4 +8.4
GYA                             S       Sn        19 28 39.9 -0.8
GYA                             PcP     PcP       19 29 07.9 -2.2
GYA                             pmax    pmax
      comp=Z,310nm,0.9s
GYA                             pmax    pmax
      comp=Z,3µm,9.0s
GYA                             LR      LR
      comp=Z,31µm,10.4s
GYA                             LR      LR
      comp=Z,24µm,12.8s
GYA                             LR      LR
      comp=Z,27µm,12.1s
GRNR  Gornyy          20.16  14 ⇑iP     P         19 24 55.6 +0.1
GRNR                            eS      Sn        19 28 43.3 -0.5
GRNR                            pmax    pmax
      comp=Z,20nm,1.0s
GRNR                            smax    smax
      comp=N,3.0nm,0.9s
GRNR                            MLR     MLR
      comp=E,15µm,11.0s
GRNR                            MLR     MLR
      comp=N,12µm,12.0s
GRNR                            MLR     MLR
      comp=Z,16µm,12.0s
KUR   Kuril'sk        20.28  42d iP     Pn        19 24 58.9 +0.1
KUR                             i                 19 25 13.9
KUR                             i PPP   PPP       19 25 28.6
KUR                             i S     Sn        19 28 47.1 +0.4
KUR                             i SS    SnSn      19 29 05.0 +3.7
KUR                             i SSS   SSS       19 29 15.8
KUR                             pmax    pmax
      comp=Z,7µm,3.3s
KUR                             pmax    pmax
      comp=N,3µm,3.2s
KUR                             pmax    pmax
      comp=E,5µm,3.9s
KUR                             pmax    pmax
      comp=Z,804nm,1.5s
KUR                             pmax    pmax
      comp=E,275nm,1.2s
KUR                             pmax    pmax
      comp=N,836nm,2.5s
KUR                             MLR     MLR
      comp=E,10µm,19.0s
KUR                             MLR     MLR
      comp=Z,17µm,19.0s
KUR                             MLR     MLR
      comp=N,11µm,15.0s
UGL   Uglegorsk       20.29  26 eP      P         19 24 56.5 -0.5
UGL                             eS      S         19 28 40.4 -3.3
UGL                             pmax    pmax
      comp=Z,2µm,3.0s
UGL                             pmax    pmax
      comp=Z,225nm,1.3s
UGL                             smax    smax
      comp=E,3µm,12.2s
UGL                             smax    smax
      comp=N,3µm,9.5s
UGL                             MLR     MLR
      comp=E,21µm,11.0s
UGL                             MLR     MLR
      comp=Z,21µm,11.0s
RCP   Roxas           20.53 197 ⇑eP     Pn        19 25 01.2 -0.8
QIZ   Qiongzhong      21.10 239 P       P         19 25 05.8 -0.1
QIZ                             S       S         19 29 01.8 +1.7
QIZ                             pmax    pmax
      comp=Z,39nm,1.2s
QIZ                             pmax    pmax
      comp=Z,980nm,3.5s
QIZ                             LR      LR
      comp=Z,35µm,13.1s
QIZ                             LR      LR
      comp=Z,29µm,14.1s
QIZ                             LR      LR
      comp=Z,32µm,13.1s
QIZ   Qiongzhong      21.10 239 P       P         19 25 05.3 -0.6
QIZ   Qiongzhong      21.10 239 IAMs_20 IAMs_20   19 34 21.6
      comp=Z,28µm,18.0s
QIZ   Qiongzhong      21.10 239 P       P         19 25 07.4 +1.5
LZH   Lanzhou         21.27 289 ⇓P      P         19 25 07.4 -0.5
LZH                             sP      sP        19 25 18.1 +3.1
LZH                             S       S         19 29 04.9 +1.1
LZH                             SS      SnSn      19 29 30.3 +4.2
LZH                             pmax    pmax
      comp=Z,310nm,1.0s
LZH                             pmax    pmax
      comp=Z,3µm,4.5s
LZH                             LR      LR
      comp=Z,99µm,12.3s
LZH                             LR      LR
      comp=Z,56µm,12.5s
LZH                             LR      LR
      comp=Z,62µm,14.6s
CD2   Chengdu         21.45 275 ⇓P      P         19 25 08.6 -1.1
CD2                             pP      pP        19 25 14.3 -0.3
CD2                             S       S         19 29 06.3 -0.9
CD2                             pmax    pmax
      comp=Z,910nm,1.4s
CD2                             pmax    pmax
      comp=Z,1µm,3.5s
CD2                             LR      LR
      comp=Z,113µm,12.8s
CD2                             LR      LR
      comp=Z,69µm,12.5s
CD2                             LR      LR
      comp=Z,76µm,14.5s
LLP   Lapu-Lapu       21.46 193 eP      P         19 25 09.5 -0.3
LLP                             eS      Sn        19 29 14.2 -1.4
MSLP  Maasin          21.48 191 ⇑iP     P         19 25 11.1 +1.1
TYV   Tymovskoe       21.99  24 eP      P         19 25 17.5 +2.3
TYV                             pmax    pmax
      comp=Z,1µm,2.5s
TYV                             pmax    pmax
      comp=Z,99nm,1.5s
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TYV                             MLR     MLR
      comp=N,16µm,11.0s
TYV                             MLR     MLR
      comp=Z,16µm,11.0s
TBP   Tagbilaran      22.09 193 ⇓iP     P         19 25 15.8 -0.8
TBP                             iS      S         19 29 17.1 -2.5
ZEA   Zeya            22.35 358 eP      P         19 25 18.8 -0.4
ZEA                             e                 19 25 40.9
ZEA                             eS      S         19 29 25.1 +1.1
ZEA                             pmax    pmax
      comp=N,800nm,4.0s
ZEA                             pmax    pmax
      comp=Z,1µm,3.8s
ZEA                             pmax    pmax
      comp=E,60nm,1.0s
ZEA                             pmax    pmax
      comp=N,80nm,1.2s
ZEA                             pmax    pmax
      comp=Z,160nm,1.2s
ZEA                             pmax    pmax
      comp=E,300nm,4.0s
ZEA                             pmax    pmax
      comp=N,1µm,5.4s
ZEA                             pmax    pmax
      comp=Z,900nm,4.8s
ZEA                             smax    smax
      comp=N,4µm,13.9s
ZEA                             MLR     MLR
      comp=E,43µm,11.0s
ZEA                             MLR     MLR
      comp=N,20µm,15.0s
ZEA                             MLR     MLR
      comp=Z,18µm,13.0s
SNPH  Sibulan         22.55 195 eP      P         19 25 21.8 +0.1
GUMO  Guam            23.05 137 P       P         19 25 27.6 +0.8
      comp=Z,229nm,0.9s,baz=191,slow=9.7,SNR=7.2
GUMO                            LR      LR        19 33 20.4
      comp=Z,10µm,19.0s,baz=316,slow=34
GUMO  Guam            23.05 137 P       P         19 25 25.5 -1.3
GUMO                            IAmb    IAmb      19 25 34.7
      comp=Z,502nm,1.2s
GUMO  Guam            23.05 137 P       P         19 25 30.5 +3.7
ULN   Ulaanbaatar     23.36 321 ceP     P         19 25 28.7 -1.2
ULN                             pmax    pmax
      comp=Z,162nm,1.0s
ULN                             MLR     MLR
      comp=Z,36µm,16.0s
ULN   Ulaanbaatar     23.36 321 P       P         19 25 28.3 -1.6
ULN                             IAmb    IAmb      19 25 44.1
      comp=Z,418nm,1.4s
NKL   Nikolayevsk     23.38  18 eP      P         19 25 27.9 -1.8
NKL                             MLR     MLR
      comp=N,13µm,11.0s
NKL                             MLR     MLR
      comp=E,75nm,11.0s
NKL                             MLR     MLR
      comp=Z,20µm,13.0s
CIT   Chita           23.46 336 eP      P         19 25 30.0 -0.7
CIT                             e                 19 25 57.0
CIT                             e                 19 26 13.2
CIT                             pmax    pmax
      comp=Z,1µm,1.7s
SONM  Songino Array   23.70 320 P       P         19 25 32.0 -1.2
      comp=Z,124nm,0.8s,baz=136,slow=6.4,SNR=260
SONM                            Lg      Lg        19 33 01.3
      comp=Z,2.5nm,1.1s,baz=125,slow=25,SNR=3.3
SONM                            LR      LR        19 35 45.5
      comp=Z,28µm,21.7s,baz=136,slow=39
SONM  Songino Array   23.70 320 P       P         19 25 32.0 -1.2
SONM  Songino Array   23.70 320 P       P         19 25 31.5 -1.7
KMI   Kunming         23.78 261 ⇓P      P         19 25 32.4 -1.9
KMI                             pP      pP        19 25 38.8 -0.6
KMI                             sP      sP        19 25 41.3 -0.2
KMI                             PP      PnPn      19 26 07.8 +5.7
KMI                             S       S         19 29 45.3 -4.0
KMI                             pmax    pmax
      comp=Z,270nm,0.8s
KMI                             pmax    pmax
      comp=Z,1µm,5.3s
KMI                             LR      LR
      comp=Z,60µm,17.4s
KMI                             LR      LR
      comp=Z,21µm,18.6s
KMI                             LR      LR
      comp=Z,18µm,13.6s
DMPH  Davao City--Mi  24.39 188 ⇑eP     P         19 25 38.7 -1.1
DAV   Davao City (W)  24.40 188 P       P         19 25 40.8 +1.1
      comp=Z,82nm,0.4s,baz=208,slow=7.1,SNR=4.8
DAV                             LR      LR        19 34 10.4
      comp=Z,7µm,21.7s,baz=352,slow=34
DAV   Davao City (W)  24.40 188 P       P         19 25 40.1 +0.3
DAV                             IAmb    IAmb      19 26 28.8
      comp=Z,411nm,1.4s
SLVN  Son La          24.43 252 P       P         19 25 38.8 -1.3
SLVN                            IAmb    IAmb      19 25 47.4
      comp=Z,563nm,2.0s
SLVN                            IAMs_20 IAMs_20   19 35 53.8
      comp=Z,17µm,18.0s
GTA   Gaotai          24.89 297 ⇓P      P         19 25 42.8 -1.4
GTA                             pP      pP        19 25 49.8 +0.4
GTA                             sP      sP        19 25 55.3 +3.8
GTA                             S       S         19 30 03.5 -3.1
GTA                             sS      pS        19 30 11.9 -0.3
GTA                             pmax    pmax
      comp=Z,51nm,1.3s
GTA                             pmax    pmax
      comp=Z,620nm,5.5s
GTA                             LR      LR
      comp=Z,50µm,14.9s
GTA                             LR      LR
      comp=Z,23µm,15.6s
GTA                             LR      LR
      comp=Z,43µm,14.9s
UBPT  Khong Chiam     26.70 238 P       P         19 25 59.9 -0.7
UBPT                            IAmb    IAmb      19 26 11.1
      comp=Z,306nm,1.8s
ZAK   Zakamensk       26.85 322 eP      P         19 26 00.3 -1.5
ZAK                             pmax    pmax
      comp=Z,109nm,1.2s
TLY   Talaya          27.44 325 P       P         19 26 07.3 +0.3
      comp=Z,21nm,0.9s,baz=139,slow=8.8,SNR=16
TLY                             LR      LR        19 38 03.2
      comp=Z,30µm,18.6s,baz=123,slow=39
TLY   Talaya          27.44 325c iP     P         19 26 07.2 +0.2
TLY                             e                 19 26 49.0
TLY                             ePPP    PPP       19 27 01.5
TLY                             eS      S         19 30 49.3 +2.7
TLY                             pmax    pmax
      comp=Z,374nm,1.6s
TLY                             MLR     MLR
      comp=Z,26µm,9.0s
TLY   Talaya          27.44 325 P       P         19 26 06.6 -0.4
TLY                             IAmb    IAmb      19 26 15.2
      comp=Z,228nm,1.6s
TLY                             IAMs_20 IAMs_20   19 37 17.4
      comp=Z,14µm,21.0s
IRK   Irkutsk         27.49 326 eP      P         19 26 06.8 -0.7
IRK                             pmax    pmax
      comp=Z,256nm,2.3s
SKR   Severo-Kuril's  27.94  39 eP      P         19 26 15.3 +3.9
SKR                             e                 19 26 25.5
SKR                             e                 19 29 20.3
SKR                             eS      S         19 30 58.3 +4.0
SKR                             pmax    pmax
      comp=Z,105nm,1.0s
SKR                             pmax    pmax
      comp=Z,800nm,3.1s
BOD   Bodaibo         28.32 343 eP      P         19 26 14.6 -0.1
BOD                             pmax    pmax
      comp=Z,135nm,1.6s
MOY   Mondy           28.77 323 eP      P         19 26 16.1 -2.9
MOY                             pmax    pmax
      comp=Z,211nm,2.8s
SPMM  Sapulut         28.98 206 P       P         19 26 21.0 -0.1
PBKT  Sadao Pong      29.31 246 P       P         19 26 23.1 -0.9
PBKT                            IAmb    IAmb      19 26 27.2
      comp=Z,100nm,0.8s
CHTO  Chiang Mai      29.72 252 P       P         19 26 26.1 -1.5
CHTO                            pmax    pmax
      comp=Z,49nm,1.1s
CHTO                            MLR     MLR
      comp=Z,13µm,18.0s
CHTO  Chiang Mai      29.72 252 P       P         19 26 26.1 -1.5
CHTO  Chiang Mai      29.72 252 IAMs_20 IAMs_20   19 39 22.9
      comp=Z,13µm,18.0s
CHTO  Chiang Mai      29.72 252 P       P         19 26 27.3 -0.3
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DIBR  DIBRUGARH          29.73 271  eP       P        19 26 25.9  -1.7
CM31  Chiang Mai Arr     29.90 252   P       P        19 26 28.0  -1.2
CMAR  Chiang Mai Arr     29.90 252   P       P        19 26 28.4  -0.8
      comp=Z,25nm,1.0s,baz=51,slow=6.8,SNR=96
CMAR                                 PcP     PcP      19 29 33.3  +1.3
      comp=Z,7.8nm,0.9s,baz=46,slow=1.5,SNR=7.8
CMAR                                 LR      LR       19 39 40.0
      comp=Z,9µm,19.4s,baz=94,slow=39
CMAR  Chiang Mai Arr     29.90 252   P       P        19 26 27.7  -1.5
PEA0B Petropavlovsk-     30.11  35   P       P        19 26 28.1  -2.6
PEA0B                                pmax    pmax
      comp=Z,110nm,1.4s
PEA0B Petropavlovsk-     30.11  35   P       P        19 26 28.1  -2.6
PETK  Petropavlovsk-     30.11  35   P       P        19 26 34.9  +4.2
      comp=Z,33nm,1.1s,baz=90,slow=1.5,SNR=12
PETK                                 LR      LR       19 38 12.5
      comp=Z,12µm,18.9s,baz=220,slow=36
PETK  Petropavlovsk-     30.11  35   P       P        19 26 28.8  -1.9
PETK  Petropavlovsk-     30.11  35   P       P        19 26 28.8  -1.9
TNTI  Ternate            30.49 183   P       P        19 26 33.5  -0.9
      comp=Z,1µmcomp=Z,922nmcomp=Z,56nm,1.3s
TNTI  Ternate            30.49 183   P       P        19 26 32.9  -1.5
TNTI  Ternate            30.49 183   P       P        19 26 37.7  +3.3
PET   Petropavlovsk      30.54  36  eP       P        19 26 34.2  -0.3
PET                                 e                 19 27 49.5
PET                                 eS       S        19 31 31.4  -3.7
PET                                                   19 33 35.3
PET                                  pmax    pmax
      comp=Z,200nm,1.4s
PET                                  pmax    pmax
      comp=Z,800nm,11.3s
PET                                  MLR     MLR
      comp=Z,10µm,14.0s
PET                                  MLR     MLR
      comp=Z,11µm,14.0s
PET   Petropavlovsk      30.54  36   IAMs_20 IAMs_20  19 38 35.1
      comp=Z,10µm,20.0s
PET   Petropavlovsk      30.54  36   P       P        19 26 37.0  +2.5
YAK   Yakutsk            30.65   1   P       P        19 26 34.6  -0.7
      comp=Z,13nm,0.7s,baz=151,slow=2.0,SNR=22
YAK   Yakutsk            30.65   1  eP       P        19 26 33.8  -1.5
YAK                                 eS       S        19 31 37.3  +0.6
YAK                                  pmax    pmax
      comp=Z,75nm,1.0s
YAK                                  pmax    pmax
      comp=N,29nm,1.0s
YAK                                  pmax    pmax
      comp=E,11nm,1.1s
YAK                                  smax    smax
      comp=N,439nm,4.4s
YAK                                  smax    smax
      comp=E,194nm,4.6s
YAK                                  MLR     MLR
      comp=Z,11µm,13.0s
YAK                                  MLR     MLR
      comp=N,6µm,12.0s
YAK   Yakutsk            30.65   1   P       P        19 26 33.2  -2.1
ITAN  ITANAGAR           30.83 271  eP       P        19 26 36.4  -1.0
KMSI  Cibinong           31.00 189   P       P        19 26 40.1  +1.2
      comp=N,48nm,0.9s
TOLI2 Tolitoli           31.07 196   P       P        19 26 38.2  -1.3
TOLI2 Tolitoli           31.07 196   P       P        19 26 39.3  -0.2
GTOI  Gorontalo          31.09 191   P       P        19 26 37.0  -2.7
      comp=N,263nmcomp=N,19nm,1.2s
MRSI  Marisa             31.44 193   P       P        19 26 37.8  -5.0
      comp=N,1µmcomp=N,56nm,1.4s
MA2   Magadan            31.79  21   P       P        19 26 46.7  +1.3
      comp=N,80nm,0.8s,baz=204,slow=7.5,SNR=16
MA2   Magadan            31.79  21ceP       P        19 26 45.7  +0.2
MA2                                  pmax    pmax
      comp=Z,72nm,0.8s
MA2                                  MLR     MLR
      comp=Z,9µm,15.0s
MA2   Magadan            31.79  21   P       P        19 26 44.4  -1.1
MA2                                  IAmb    IAmb     19 26 52.5
      comp=Z,87nm,0.8s
MA2   Magadan            31.79  21   P       P        19 26 47.4  +1.9
LBMI  Labuha             31.89 183   P       P        19 26 46.9  +0.2
      comp=Z,866nmcomp=Z,972nmcomp=Z,81nm,1.5s
MPSI  Mapaga             32.03 197   P       P        19 26 49.5  +1.5
      comp=Z,982nmcomp=Z,72nm,1.1s
SWI   Sorong             32.17 175   P       P        19 26 49.8  +0.6
SWI   Sorong             32.17 175   P       P        19 26 51.5  +2.3
      comp=Z,515nmcomp=Z,24nm,1.1s
SIJI  Sorong             32.18 175   P       P        19 26 49.4  +0.1
      comp=Z,8.7nm,0.6s,baz=347,slow=13,SNR=5.6
LSA   Lhasa              32.39 277   P       P        19 26 51.1  -0.5
LSA                                  pP      pP       19 26 57.5  +0.6
LSA                                  S       S        19 32 06.0  +0.4
LSA                                  pmax    pmax
      comp=Z,62nm,1.1s
LSA                                  LR      LR
      comp=Z,32µm,11.4s
LSA                                  LR      LR
      comp=Z,27µm,17.1s
LSA                                  LR      LR
      comp=Z,44µm,14.2s
LSA   Lhasa              32.39 277   P       P        19 26 50.9  -0.7
LSA   Lhasa              32.39 277   P       P        19 26 51.2  -0.4
LSA                                  pmax    pmax
      comp=Z,78nm,1.3s
LSA                                  MLR     MLR
      comp=Z,11µm,19.0s
LSA   Lhasa              32.39 277   P       P        19 26 51.2  -0.4
LSA                                  IAMs_20 IAMs_20  19 39 37.6
      comp=Z,11µm,19.0s
LUWI  Luwuk              32.77 191   P       P        19 26 54.1  -0.3
SBUM  Sibu               32.78 212   P       P        19 26 54.0  -0.6
SHL   Shillong           32.88 269   P       P        19 26 53.6  -2.0
SHL                                  pmax    pmax
      comp=Z,178nm,1.2s
SHL   Shillong           32.88 269  eP       P        19 26 52.4  -3.2
SHL                                  IAmb    IAmb     19 26 58.3
      comp=Z,36nm,0.8s
SHL   Shillong           32.88 269   P       P        19 26 53.6  -2.0
SHL                                  IAmb    IAmb     19 27 00.7
      comp=Z,178nm,1.2s
BAKI  Biak               33.14 167   P       P        19 27 00.4  +2.7
      comp=Z,2µmcomp=Z,171nm,1.1s
SANI  Sanana             33.37 185   P       P        19 26 59.6  -0.1
      comp=Z,855nmcomp=Z,49nm,1.2s
SANI  Sanana             33.37 185   P       P        19 26 59.4  -0.3
SRPI  Serui, Papua       33.83 167   P       P        19 27 02.0  -1.7
      comp=Z,1µmcomp=Z,1µmcomp=Z,104nm,1.1s
FAKI  Fak Fak            34.28 174   P       P        19 27 07.4  -0.3
      comp=Z,2µmcomp=Z,180nm,1.0s
FAKI  Fak Fak            34.28 174   P       P        19 27 07.4  -0.3
FAKI                                 IAmb    IAmb     19 27 13.1
      comp=Z,170nm,1.0s
FAKI  Fak Fak            34.28 174   P       P        19 27 09.4  +1.8
SMPI  Sarmi              34.51 162   P       P        19 27 10.6  +1.0
      comp=Z,995nmcomp=Z,59nm,1.2s
WMQ   Urumqi             34.52 303  eP       P        19 27 09.5  -0.1
WMQ                                  pP      pP       19 27 15.6  +0.7
WMQ                                  PcP     PcP      19 29 44.8  +0.5
WMQ                                  S       S        19 32 37.8  +0.2
WMQ                                  sS      sS       19 32 46.5  +0.3
WMQ                                  PcS     PcS      19 33 31.4  +0.7
WMQ                                  pmax    pmax
      comp=Z,190nm,1.7s
WMQ                                  pmax    pmax
      comp=Z,710nm,3.7s
WMQ                                  LR      LR
      comp=Z,30µm,14.1s
WMQ                                  LR      LR
      comp=Z,28µm,12.7s
WMQ                                  LR      LR
      comp=Z,14µm,18.5s
KSM   Kuching            34.53 214   P       P        19 27 10.0  +0.2
MSAI  Masohi             34.55 180   P       P        19 27 12.9  +2.9
      comp=Z,205nmcomp=Z,16nm,1.0s
MTKI  Muara Teweh, K     34.78 205   P       P        19 27 11.3  -0.6
      comp=Z,1µmcomp=Z,1µmcomp=Z,70nm,0.8s
SEY   Seymchan           34.95  19   P       P        19 27 13.7  +0.8
      comp=Z,28nm,0.9s,baz=218,slow=5.5,SNR=42
GTK   Tadong             35.16 274  eP       P        19 27 14.0  -1.3
STKI  Sintang            35.24 211   P       P        19 27 16.8  +0.9
      comp=Z,2µmcomp=Z,22nm,1.5s
TTSI  Tana Toraja        35.31 196   P       P        19 27 17.6  +1.1
      comp=Z,867nmcomp=Z,39nm,1.1s
JAY   Jayapura           35.57 159   P       P        19 27 19.8  +1.0
      comp=Z,14nm,0.8s,baz=168,slow=18,SNR=1.8
DGZ   Jazzator, Alta     35.83 313  i P      P        19 27 20.1  -0.8
DGZ                                  pmax    pmax
      comp=Z,57nm,2.2s
DGZ                                  MLR     MLR
      comp=Z,29µm,17.0s
TAPN  Taplejung          35.91 274  eP       P        19 27 20.9  -1.1
      comp=Z,481nm,1.4s
SPSI  Sidrap Palu        36.21 195   P       P        19 27 19.9  -4.3
      comp=Z,19nm,1.0s
ODAN  Odare              36.33 274  eP       P        19 27 24.0  -1.5
      comp=Z,391nm,1.2s
KBKI  Kotabaru           36.55 202   P       P        19 27 23.8  -3.3
      comp=Z,462nmcomp=Z,29nm,0.9s
JRMM  Jerantut           36.92 227   P       P        19 27 31.0  +0.6
RAMN  Ramite             36.97 274  eP       P        19 27 29.6  -1.4
      comp=Z,42nm,0.8s
ZSN   Zaisan             37.01 308  eP       P        19 27 28.6  -2.2
      baz=308
ZSN                                 eS       S        19 33 12.4  -3.2
      baz=308
ZSN   Zaisan             37.01 308  eP       P        19 27 28.6  -2.2
ZSN                                 eS       S        19 33 12.3  -3.2
KULM  Kulim              37.05 231   P       P        19 27 32.0  +0.5
JIRN  Jiri               37.12 275  eP       P        19 27 31.0  -1.4
      comp=Z,399nm,1.4s
BBKI  Banjar Baru        37.14 204   P       P        19 27 30.8  -1.4
      comp=Z,2µmcomp=Z,140nm,1.2s
KAPI  Kappang            37.23 195   P       P        19 27 31.5  -1.4
KAPI                                 pmax    pmax
      comp=Z,42nm,1.0s
KAPI                                 MLR     MLR
      comp=Z,4µm,20.0s
KAPI  Kappang            37.23 195   P       P        19 27 31.5  -1.4
KAPI  Kappang            37.23 195   P       P        19 27 32.1  -0.8
IPM   Ipoh               37.41 230   P       P        19 27 34.0  -0.5
BKSI  Bulukumba          37.45 194   P       P        19 27 33.2  -1.6
      comp=Z,520nmcomp=Z,20nm,0.8s
DGPR  DIGLIPUR           37.62 249  eP       P        19 27 35.7  -0.5
MANU  Manus Island       37.64 149   P       P        19 27 33.5  -3.0
PBKI  Pangkalan Bun      37.64 209   P       P        19 27 37.1  +0.7
      comp=Z,2µmcomp=Z,134nm,1.1s
MYKOM Kota Tinggi        37.74 224   P       P        19 27 40.0  +2.8
PKI   Pulchoki           37.81 276  eP       P        19 27 36.8  -1.4
      comp=Z,557nm,1.2s
KKN   Kakani             37.86 276  eP       P        19 27 37.3  -1.2
      comp=Z,622nm,1.2s
DMN   Daman              38.06 276  eP       P        19 27 39.0  -1.2
      comp=Z,860nm,1.4s
BSSI  Bau Bau, Buton     38.17 193   P       P        19 27 39.4  -1.5
      comp=Z,880nmcomp=Z,66nm,0.9s
GKN   Gorkha             38.34 277  eP       P        19 27 41.1  -1.4
      comp=Z,558nm,1.6s
ZAA0  Zalesovo Array     38.58 319   P       P        19 27 42.5  -1.5
ZALV  Zalesovo Beam      38.58 319   P       P        19 27 42.9  -1.1
      comp=Z,38nm,0.9s,baz=101,slow=7.7,SNR=105
ZALV                                 PcP     PcP      19 29 55.8  -0.3
      comp=Z,18nm,0.9s,baz=81,slow=4.5,SNR=7.5
ZALV                                 LR      LR       19 44 57.0
      comp=Z,22µm,18.0s,baz=112,slow=38
ZALV  Zalesovo Beam      38.58 319   P       P        19 27 42.5  -1.5
BOK   Bokaro             38.61 270  eP       P        19 27 43.4  -1.2
BOK                                  IAmb    IAmb     19 27 45.0
      comp=Z,52nm,0.8s
MK31  Makanchi Array     38.66 307  i P      P        19 27 43.5  -1.3
MK31  Makanchi Array     38.66 307   P       P        19 27 43.5  -1.3
MKAR  Makanchi Array     38.66 307   P       P        19 27 43.8  -1.1
      comp=Z,66nm,1.0s,baz=95,slow=9.9,SNR=234
MKAR                                 PcP     PcP      19 29 56.8  +0.1
      comp=Z,15nm,1.0s,baz=97,slow=5.0,SNR=4.0
MKAR                                 LR      LR       19 42 56.3
      comp=Z,8µm,19.8s,baz=94,slow=35
MKAR  Makanchi Array     38.66 307  i P      P        19 27 43.7  -1.1
MKAR                                 pmax    pmax
      comp=Z,67nm,1.0s
MKAR  Makanchi Array     38.66 307   P       P        19 27 43.8  -1.1
MAKZ  Makanchi           38.88 307   P       P        19 27 45.7  -0.9
MAKZ                                 pmax    pmax
      comp=Z,100nm,1.2s
MAKZ                                 MLR     MLR
      comp=Z,10µm,19.0s
MAKZ  Makanchi           38.88 307   P       P        19 27 45.7  -0.9
MAKZ                                 IAMs_20 IAMs_20  19 42 51.6
      comp=Z,10µm,19.0s
DANN  Dangsing           38.99 277  eP       P        19 27 47.3  -0.8
      comp=Z,940nm,1.4s
DSRI  Dabo               39.17 221   P       P        19 27 50.1  +0.8
      comp=Z,517nmcomp=Z,20nm,1.1s
SAUI  Saumlaki           39.23 176   P       P        19 27 49.2  -0.5
KOLN  Koldanda           39.29 277  eP       P        19 27 49.4  -1.1
      comp=Z,726nm,1.6s
LHMI  Lhok Sumawe        39.64 236   P       P        19 27 55.1  +1.9
      comp=Z,3µmcomp=Z,170nm,1.2s
LHMI  Lhok Sumawe        39.64 236   P       P        19 27 54.2  +1.0
PYUN  Piuthan            39.72 277  eP       P        19 27 53.1  -1.0
      comp=Z,1µm,1.4s
PPBI  Pangkal Pinang     39.74 217   P       P        19 27 54.6  +0.5
      comp=Z,5µmcomp=Z,60nm,0.9s
PSI   Prapat             40.04 231   P       P        19 27 56.8  +0.1
      comp=Z,15nm,1.0s,baz=355,slow=4.3,SNR=13
MMRI  Maumere            40.30 190   P       P        19 27 58.9  +0.2
      comp=Z,1µmcomp=Z,114nm,1.4s
MMRI  Maumere            40.30 190   P       P        19 27 57.0  -1.7
MMRI  Maumere            40.30 190   P       P        19 28 00.5  +1.8
TIXI  Tiksi              40.30   0   P       P        19 27 57.7  -0.5
      comp=Z,30nm,0.8s,baz=153,slow=8.4,SNR=41
TIXI  Tiksi              40.30   0  i P      P        19 27 57.6  -0.5
TIXI                                 pmax    pmax
      comp=Z,63nm,1.3s
TIXI                                 MLR     MLR
      comp=Z,13µm,16.0s
TIXI  Tiksi              40.30   0   P       P        19 27 57.2  -0.9
TIXI                                 IAmb    IAmb     19 28 05.9
      comp=Z,235nm,1.5s
PDGK  Podgornoye         40.44 301   P       P        19 27 58.2  -1.6
SHLS  Shalkode           40.46 301⇓iP       P        19 27 55.7  -4.3
      baz=301
SHLS  Shalkode           40.46 301d iP       P        19 27 55.6  -4.3
SEM   Semipalatinsk      40.50 312⇓iP       P        19 27 58.3  -2.0
      baz=312
SEM                                 eS       S        19 34 05.8  -2.6
      baz=312
SEM                                 eLR      LR       19 45 30.4
      comp=Z,12µm,14.9s,baz=312
SEM   Semipalatinsk      40.50 312d iP       P        19 27 58.3  -2.0
SEM                                 eS       S        19 34 05.8  -2.6
SEM                                  MLR     MLR
      comp=Z,12µm,15.0s
EDFI  Ende, Flores       40.50 191   P       P        19 27 57.4  -3.0
      comp=Z,552nmcomp=Z,30nm,1.3s
BKNI  Bangkinang         40.59 226   P       P        19 27 59.7  -1.4
      comp=Z,1µmcomp=Z,42nm,1.0s
BKNI  Bangkinang         40.59 226   P       P        19 28 00.1  -1.0
BKNI  Bangkinang         40.59 226   P       P        19 28 01.2  +0.1
JMBI  JAMBI              40.64 221   P       P        19 27 58.2  -3.3
      comp=Z,3µmcomp=Z,72nm,0.4s
MLSI  Meulaboh, Aceh     40.70 235   P       P        19 27 58.9  -3.1
      comp=Z,64nm,0.9s
UZB   Uzynbulak          40.78 301⇓iP       P        19 28 01.2  -1.5
      baz=301
UZB                                 eS       S        19 34 11.8  -0.9
      baz=301
UZB   Uzynbulak          40.78 301d iP       P        19 28 01.2  -1.5
UZB                                 eS       S        19 34 11.8  -0.9
KMMI  Kalianget          40.79 203   P       P        19 28 01.9  -0.8
      comp=Z,2µmcomp=Z,161nm,1.2s
KPKS  Kokpek             41.03 302⇓iP       P        19 28 03.2  -1.5
      comp=Z,56nm,0.9s,baz=301
KPKS  Kokpek             41.03 302d iP       P        19 28 03.1  -1.5
KPKS                                 pmax    pmax
      comp=Z,57nm,0.9s
PMBI  Palembang          41.10 218   P       P        19 28 05.2  -0.1
      comp=Z,130nm,0.6s
PMBI  Palembang          41.10 218   P       P        19 28 05.2  -0.1
PMBI                                 IAmb    IAmb     19 28 13.9
      comp=Z,210nm,1.1s
PMBI  Palembang          41.10 218   P       P        19 28 05.7  +0.4
MNSI  Mandailing Nat     41.13 228   P       P        19 28 02.1  -3.5
      comp=Z,2µmcomp=Z,65nm,0.4s
SOEI  Soe                41.15 187   P       P        19 28 03.6  -2.3
      comp=Z,1µmcomp=Z,87nm,1.2s
SOEI  Soe                41.15 187   P       P        19 28 03.5  -2.3
SOEI  Soe                41.15 187   P       P        19 28 06.9  +1.1
SATY  Saty               41.23 301⇓iP       P        19 28 04.9  -1.5
      comp=Z,50nm,1.0s,baz=300
SATY  Saty               41.23 301d iP       P        19 28 04.8  -1.6
SATY                                 pmax    pmax
      comp=Z,50nm,1.0s
TDK   Taldyqorghan       41.24 304  eP       P        19 28 04.0  -2.3
      baz=303
TDK                                 eS       S        19 34 16.9  -2.5
      baz=303
TDK                                 eLR      LR       19 46 02.8
      comp=Z,9µm,15.1s,baz=303
TDK   Taldyqorghan       41.24 304  eP       P        19 28 04.0  -2.3
TDK                                 eS       S        19 34 16.8  -2.5
TDK                                  MLR     MLR
      comp=Z,9µm,15.0s
PRZ   Przheval'sk        41.25 300   P       P        19 28 06.5  -0.1
PRZ                                  pmax    pmax
      comp=Z,242nm,1.0s
PRZ   Przheval'sk        41.25 300   P       P        19 28 06.5  -0.1
PRZ                                  IAmb    IAmb     19 28 08.6
      comp=Z,242nm,0.9s
UWJI  Ujung Watu         41.31 208   P       P        19 28 03.6  -3.4
      comp=Z,219nm,1.1s
SRBI  Singaraja          41.37 201   P       P        19 28 10.7  +3.2
      comp=Z,88nm,1.2s
PLAI  Plampang           41.38 197   P       P        19 28 07.4  -0.1
      comp=Z,2µmcomp=Z,176nm,0.9s
PLAI  Plampang           41.38 197   P       P        19 28 08.9  +1.4
TWSI  Taliwang, Sumb     41.52 198   P       P        19 28 09.8  +1.1
      comp=Z,1µmcomp=Z,63nm,0.8s
KURK  Kurchatov          41.57 313ceP       P        19 28 07.2  -1.7
KURK                                 pmax    pmax
      comp=Z,88nm,0.9s
KURK                                 MLR     MLR
      comp=Z,39µm,16.0s
KURK  Kurchatov          41.57 313   P       P        19 28 07.9  -0.9
KURK  Kurchatov          41.57 313   P       P        19 28 07.1  -1.7
KURBB Kurchatov Arra     41.62 312   P       P        19 28 08.1  -1.1
      comp=Z,47nm,0.9s,baz=99,slow=9.2,SNR=136
KURBB                                PP      PnPn     19 29 52.1  +1.9
      comp=Z,16nm,1.1s,baz=97,slow=9.2,SNR=5.0
KURBB Kurchatov Arra     41.62 312   P       P        19 28 07.7  -1.5
ARXS  Arharly            41.65 303  eP       P        19 28 09.0  -0.7
BATI  Baumata            41.66 188   P       P        19 28 07.6  -2.3
      comp=Z,48nm,0.8s
TARG  Taragay, Kyrgy     41.72 299   P       P        19 28 10.2  -0.5
TARG                                 IAmb    IAmb     19 28 12.5
      comp=Z,211nm,0.9s
WBSI  Waikabubak, Su     41.80 194   P       P        19 28 12.7  +1.7
      comp=Z,2µmcomp=Z,73nm,1.0s
RABL  Rabaul             41.80 144   P       P        19 28 10.2  -0.9
RABL                                 IAmb    IAmb     19 28 18.9
      comp=Z,136nm,1.0s
RABL  Rabaul             41.80 144   P       P        19 28 13.9  +2.8
AMKA  Amchitka           41.83  46   P       P        19 28 11.2  +0.3
NGJI  Ngawi              41.98 206   P       P        19 28 14.8  +2.4
      comp=Z,844nmcomp=Z,67nm,1.0s
GSI   Gunungsitoli       42.05 231   P       P        19 28 11.8  -1.3
GSI                                  IAMs_20 IAMs_20  19 45 49.0
      comp=Z,9µm,20.0s
JAGI  Jajag, Banyuwa     42.06 202   P       P        19 28 26.7  +14
JAGI  Jajag, Banyuwa     42.06 202   P       P        19 28 14.1  +0.9
SMRI  Semarang           42.08 208   P       P        19 28 11.7  -1.6
      comp=Z,90nm,1.5s
SMRI  Semarang           42.08 208   P       P        19 28 12.7  -0.6
SMRI                                 IAmb    IAmb     19 28 53.7
      comp=Z,182nm,1.3s
SMRI  Semarang           42.08 208   P       P        19 28 14.3  +1.0
GMJI  Gumukmas           42.11 203   P       P        19 28 14.1  +0.6
      comp=Z,47nm,1.2s
MDOK  Medeo              42.23 301  eP       P        19 28 12.8  -1.8
      baz=301
MDOK                                eS       S        19 34 34.0  -0.2
      baz=301
MDOK                                eLR      LR       19 46 43.3
      comp=Z,9µm,16.4s,baz=301
MDOK  Medeo              42.23 301  eP       P        19 28 12.7  -1.8
MDOK                                eS       S        19 34 34.0  -0.2
MDOK                                 MLR     MLR
      comp=Z,9µm,16.0s
KNDC  Almaty             42.28 301   P       P        19 28 14.4  -0.5
AAA   Alma-Ata           42.32 301  eP       P        19 28 12.5  -2.8
      baz=301
AAA                                 eLR      LR       19 46 55.5
      comp=Z,16µm,18.4s,baz=301
AAA   Alma-Ata           42.32 301  eP       P        19 28 12.4  -2.8
AAA                                  MLR     MLR
      comp=Z,16µm,18.0s
LHSI  Lahat              42.52 219   P       P        19 28 16.4  -0.6
      comp=Z,2µmcomp=Z,77nm,1.2s
BILL  Bilibino           42.63  20ceP       P        19 28 18.3  +1.1
BILL                                eS       S        19 34 47.8  +8.7
BILL                                 pmax    pmax
      comp=Z,152nm,1.3s
BILL                                 MLR     MLR
      comp=Z,6µm,15.0s
BILL  Bilibino           42.63  20   P       P        19 28 17.5  +0.3
BILL                                 IAmb    IAmb     19 28 31.8
      comp=Z,164nm,1.3s
BILL                                 IAMs_20 IAMs_20  19 47 06.9
      comp=Z,6µm,18.0s
MASI  Maura Aman, Be     42.67 221   P       P        19 28 20.6  +2.4
      comp=Z,3µmcomp=Z,139nm,1.0s
KLI   Kotabumi           42.70 217   P       P        19 28 19.7  +1.3
      comp=Z,210nm,0.8s
KUU   Kurty              42.72 302⇓iP       P        19 28 17.5  -1.0
      comp=Z,111nm,1.0s,baz=302
KUU                                 eS       S        19 34 38.9  -2.3
      baz=302
KUU   Kurty              42.72 302d iP       P        19 28 17.4  -1.0
KUU                                 eS       S        19 34 38.9  -2.3
KUU                                  pmax    pmax
      comp=Z,111nm,1.0s
MDSI  Maura Dua          42.73 218   P       P        19 28 19.3  +0.7
      comp=Z,984nmcomp=Z,50nm,1.1s
UGM   Wanagama           42.84 207   P       P        19 28 21.1  +1.6
      comp=Z,5µmcomp=Z,211nm,1.3s
UGM   Wanagama           42.84 207   P       P        19 28 19.1  -0.4
UGM                                  IAmb    IAmb     19 28 45.6
      comp=Z,280nm,1.2s
UGM   Wanagama           42.84 207   P       P        19 28 19.9  +0.4
ULHL  Ulahol             42.86 300   P       P        19 28 19.6  -0.1
      SNR=10
BLSI  Bandar Lampung     42.94 216   P       P        19 28 23.5  +3.2
LEM   Lembang            43.08 212   P       P        19 28 22.4  +0.7
      comp=Z,293nm,0.8s,baz=67,slow=7.3,SNR=63
SBJI  Serang             43.15 214   P       P        19 28 22.9  +0.9
      comp=Z,5µmcomp=Z,382nm,1.2s
DBJI  Dramaga            43.24 213   P       P        19 28 23.1  +0.3
      comp=Z,3µmcomp=Z,213nm,1.2s
DDI   Dehra Dun          43.28 282  eP       P        19 28 22.5  -0.6
DDI                                  IAmb    IAmb     19 28 24.8
      comp=Z,163nm,1.2s
KSH   Kashi              43.28 296⇓iP       P        19 28 25.8  +2.7
KSH                                  sP      sP       19 28 35.9  +5.4
KSH                                  PcP     PcP      19 30 14.8  +2.9
KSH                                  S       S        19 34 53.1  +3.4
KSH                                  sS      sS       19 35 07.1  +8.6
KSH                                  SS      SS       19 38 01.0  -2.0
KSH                                  pmax    pmax
      comp=Z,110nm,1.1s
KSH                                  LR      LR
      comp=Z,14µm,14.8s
KSH                                  LR      LR
      comp=Z,18µm,18.9s
KSH                                  LR      LR
      comp=Z,21µm,17.2s
TKM2  Tokmak 2           43.30 301   P       P        19 28 23.4  +0.1
      SNR=178
TKM2  Tokmak 2           43.30 301   P       P        19 28 23.0  -0.3
KASI  Kota Agung         43.45 217   P       P        19 28 22.3  -2.1
      comp=Z,77nm,1.3s
DRS   Darwin Rock St     43.62 177   P       P        19 28 28.4  +2.6
CNJI  Cibinong           43.73 212   P       P        19 28 25.1  -1.6
      comp=Z,2µmcomp=Z,141nm,1.3s
KBK   Karagaybulak       43.79 301   P       P        19 28 27.2   0.0
      SNR=97
SMLA  Simla              43.82 284  eP       P        19 28 26.3  -1.0
SMLA                                 IAmb    IAmb     19 28 28.7
      comp=Z,120nm,1.2s
CHMS  Chumysh            43.91 301   P       P        19 28 27.7  -0.3
      SNR=104
KDU   Kakadu             43.97 175   P       P        19 28 29.9  +1.3
      comp=Z,52nm,1.3s
SGDS  Sogindy            43.98 302⇓iP       P        19 28 27.7  -0.9
      baz=301
FRU1  Bishkek            44.02 301   P       P        19 28 28.4  -0.5
FRU1                                 pmax    pmax
      comp=Z,177nm,0.8s
FRU1  Bishkek            44.02 301   P       P        19 28 28.4  -0.5
FRU1                                 IAmb    IAmb     19 28 30.4
      comp=Z,177nm,0.8s
MTN   Manton Dam         44.05 177   P       P        19 28 27.6  -1.6
MTN                                  IAmb    IAmb     19 28 33.8
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               comp=Z,149nm,0.8s
MTN   Manton Dam         44.05 177    P          P          19 28 28.7 -0.5
               comp=Z,202nm,0.9s
USP   Ospenovka          44.08 301    P          P          19 28 28.8 -0.6
               SNR=128
AAK   Ala-Archa          44.12 301    P          P          19 28 29.5 -0.4
               comp=Z,72nm,0.8s,baz=99,slow=6.1,SNR=217
AAK   Ala-Archa          44.12 301    P          P          19 28 29.3 -0.6
               SNR=104
AAK   Ala-Archa          44.12 301  i P          P          19 28 29.1 -0.8
               SNR=125
AAK   Ala-Archa          44.12 301  i P          P          19 28 29.1 -0.8
AAK                                   pmax       pmax
               comp=Z,174nm,0.7s
AAK   Ala-Archa          44.12 301    P          P          19 28 29.7 -0.2
AAK                                   P          P          19 28 29.7 -0.2
AAK   Ala-Archa          44.12 301    P          P          19 28 29.0 -0.9
AAK                                   IAmb       IAmb       19 28 31.2
               comp=Z,76nm,0.8s
AAK   Ala-Archa          44.12 301    IAMs_20    IAMs_20    19 48 38.8
               comp=Z,12µm,22.0s
UCH   Uchtor             44.14 300    P          P          19 28 30.9 +0.5
               SNR=397
PMG   Port Moresby       44.21 154    P          P          19 28 31.1 +0.5
               comp=Z,33nm,1.0s,baz=354,slow=10,SNR=14
PMG   Port Moresby       44.21 154    P          P          19 28 29.5 -1.0
PMG   Port Moresby       44.21 154    P          P          19 28 31.0 +0.5
PMG   Port Moresby       44.21 154    P          P          19 28 31.2 +0.7
DHRM  DHARAMSHALA        44.26 286  eP           P          19 28 29.4 -1.8
DHRM                                  IAmb       IAmb       19 28 37.3
               comp=Z,127nm,1.2s
BTLS  Baital             44.34 304⇓iP            P          19 28 30.6 -0.8
               comp=Z,48nm,0.8s,baz=304
BTLS                                eS           S          19 35 03.6 -1.2
               baz=304
BTLS  Baital             44.34 304d iP           P          19 28 30.5 -0.8
BTLS                                eS           S          19 35 03.5 -1.2
BTLS                                  pmax       pmax
               comp=Z,48nm,0.8s
ADK   Adak               44.38  46    P          P          19 28 30.9 -0.7
ADK                                   pmax       pmax
               comp=Z,287nm,1.2s
ADK                                   MLR        MLR
               comp=Z,3µm,19.0s
ADK   Adak               44.38  46    P          P          19 28 30.9 -0.7
NRIK  Noril'sk           44.54 341    P          P          19 28 32.6  0.0
               comp=Z,235nm,1.0s,baz=118,slow=8.4,SNR=155
NRIK                                  LR         LR         19 48 27.3
               comp=Z,8µm,19.1s,baz=122,slow=38
NRIK  Noril'sk           44.54 341ceP            P          19 28 32.3 -0.3
NRIK                                  pmax       pmax
               comp=Z,326nm,1.0s
NRIK                                  MLR        MLR
               comp=Z,16µm,16.0s
NRIK  Noril'sk           44.54 341    P          P          19 28 32.1 -0.5
EKS2  Erkin-Say          44.65 301    P          P          19 28 34.1  0.0
               SNR=27
SONA  Sohna              44.67 280  eP           P          19 28 33.8 -0.4
AML   Almayashu          44.76 300    P          P          19 28 35.3 +0.1
               SNR=110
AML   Almayashu          44.76 300  i P          P          19 28 34.9 -0.3
               SNR=110
AML   Almayashu          44.76 300    P          P          19 28 35.7 +0.5
KUDL  Kundal             45.20 280  eP           P          19 28 37.4 -1.0
BRZS  Berezniki          45.30 311⇓iP            P          19 28 37.7 -1.2
               comp=Z,46nm,1.0s,baz=311
BRZS  Berezniki          45.30 311d iP           P          19 28 37.7 -1.2
BRZS                                  pmax       pmax
               comp=Z,46nm,1.0s
OTUK  Ortayu             45.48 309    P          P          19 28 39.1 -1.3
BHPL  Bhopal             46.05 273  eP           P          19 28 42.5 -2.7
BHPL                                  IAmb       IAmb       19 28 47.2
               comp=Z,20nm,1.0s
NIL   Nilore             46.44 288    P          P          19 28 47.5 -0.7
NIL                                   pmax       pmax
               comp=Z,121nm,1.0s
NIL                                   MLR        MLR
               comp=Z,11µm,18.0s
NIL   Nilore             46.44 288    P          P          19 28 47.5 -0.7
NIL                                   IAmb       IAmb       19 28 55.2
               comp=Z,121nm,1.0s
DRK   Karamyk            46.49 296    P          P          19 28 48.5 -0.4
DRK                                   IAmb       IAmb       19 28 50.4
               comp=Z,67nm,0.8s
KNRA  Kununurra          46.81 180    P          P          19 28 50.2 -0.8
KNRA                                  IAmb       IAmb       19 28 56.1
               comp=Z,110nm,0.8s
KNRA  Kununurra          46.81 180    P          P          19 28 52.0 +1.0
               comp=Z,156nm,0.8s
BVAR  Borovoye Array     46.88 315    P          P          19 28 50.7 -0.7
               comp=Z,99nm,0.8s,baz=168,slow=9.0,SNR=311
BRVK  Borovoye           46.95 315    P          P          19 28 51.3 -0.5
BRVK                                  pmax       pmax
               comp=Z,195nm,0.9s
BRVK                                  MLR        MLR
               comp=Z,28µm,20.0s
BRVK  Borovoye           46.95 315    P          P          19 28 51.3 -0.5
KK31  Karatay Array      47.00 302    P          P          19 28 51.8 -0.7
KK31  Karatay Array      47.00 302    P          P          19 28 51.8 -0.7
KKAR  Karatay Array      47.00 302    P          P          19 28 52.0 -0.5
KKAR                                  pmax       pmax
               comp=Z,262nm,0.9s
KKAR  Karatay Array      47.00 302    P          P          19 28 51.9 -0.6
KKAR  Karatay Array      47.00 302    P          P          19 28 52.0 -0.6
KKAR                                  IAmb       IAmb       19 28 53.8
               comp=Z,262nm,0.8s
BTK   Batken             47.15 297    P          P          19 28 52.7 -1.1
BTK                                   pmax       pmax
               comp=Z,74nm,1.0s
BTK   Batken             47.15 297    P          P          19 28 52.7 -1.1
BTK                                   IAmb       IAmb       19 29 03.4
               comp=Z,74nm,0.9s
COEN  Coen               47.16 161    P          P          19 28 53.2 -0.6
COEN                                  IAmb       IAmb       19 29 00.7
               comp=Z,77nm,1.4s
COEN  Coen               47.16 161    P          P          19 28 55.5 +1.7
               comp=Z,42nm,1.3s
AJM   Ajmer              47.28 278  eP           P          19 28 53.6 -1.3
IUG   Iuzhnay            47.46 300⇓iP            P          19 28 55.7 -0.6
               baz=300
IUG   Iuzhnay            47.46 300d iP           P          19 28 55.6 -0.6
HYB   Hyderabad          47.47 265  i P          P          19 28 55.0 -1.4
HYB                                 ePcP         PcP        19 30 26.0 -0.7
HYB                                 eS           S          19 35 53.0 +2.6
HYB   Hyderabad          47.47 265  eP           P          19 28 54.9 -1.6
GAR   Garm               47.70 296    P          P          19 28 57.3 -0.8
TAS   Tashkent           48.12 299    P          P          19 29 00.4 -0.8
TAS                                   pmax       pmax
               comp=Z,238nm,0.8s
TAS   Tashkent           48.12 299    P          P          19 29 00.4 -0.8
CHGR  Chuyangaron        48.65 296    P          P          19 29 04.7 -0.8
FITZ  Fitzroy Crossi     49.31 184    P          P          19 29 09.8 -0.6
FITZ  Fitzroy Crossi     49.31 184    P          P          19 29 10.5 +0.1
               comp=Z,69nm,0.8s
KBL   Kabul              49.62 291    P          P          19 29 12.0 -1.0
KBL                                   pmax       pmax
               comp=Z,229nm,1.6s
KBL   Kabul              49.62 291    P          P          19 29 13.1  0.0
KBL                                   P          P          19 29 13.1  0.0
KBL   Kabul              49.62 291    P          P          19 29 12.0 -1.0
KBL                                   IAmb       IAmb       19 29 20.9
               comp=Z,229nm,1.6s
HNR   Honiara            50.37 139    P          P          19 29 18.9 +0.4
HNR                                   pmax       pmax
               comp=Z,141nm,1.0s
HNR                                   MLR        MLR
               comp=Z,2µm,19.0s
HNR   Honiara            50.37 139    P          P          19 29 18.9 +0.4
HNR                                   IAmb       IAmb       19 29 31.8
               comp=Z,141nm,1.0s
HNR   Honiara            50.37 139    P          P          19 29 21.2 +2.7
PALK  Pallekele          50.84 252    P          P          19 29 22.7 +0.4
PALK                                  pmax       pmax
               comp=Z,55nm,0.9s
PALK  Pallekele          50.84 252    P          P          19 29 22.7 +0.4
WB0   Warramunga Arr     51.15 173    P          P          19 29 23.3 -1.1
WRAB  Tennant Creek      51.31 173ceP            P          19 29 24.3 -1.3
WRAB                                  pmax       pmax
               comp=Z,100nm,1.7s
WRAB  Tennant Creek      51.31 173    P          P          19 29 24.3 -1.3
WRAB  Tennant Creek      51.31 173    P          P          19 29 25.0 -0.6
WRA   Warramunga Arr     51.32 173    P          P          19 29 24.4 -1.1
               comp=Z,17nm,0.8s,baz=352,slow=7.9,SNR=68
WRA                                   LR         LR         19 50 49.3
               comp=Z,3µm,21.6s,baz=30,slow=36
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WRA                                   PKP2bc     P'P'bc     20 00 14.0 -1.4
               comp=Z,1.1nm,1.0s,baz=182,slow=1.9,SNR=4.5
WRA   Warramunga Arr     51.32 173    P          P          19 29 24.5 -1.1
WB2   Warramunga Arr     51.32 173    P          P          19 29 24.4 -1.2
WR0   Warramunga Arr     51.36 173    P          P          19 29 24.7 -1.2
MTSU  Mount Surprise     51.45 161    P          P          19 29 27.2 +0.6
               comp=Z,27nm,0.9s
GOA   Goa                52.38 266  eP           P          19 29 33.4 -0.3
SVE   Sverdlovsk         52.57 320ceP            P          19 29 34.6  0.0
SVE                                 eS           S          19 37 02.4 +1.8
SVE                                 e                       19 40 42.3
SVE                                   pmax       pmax
               comp=Z,384nm,1.1s
SVE                                   MLR        MLR
               comp=E,29µm,17.0s
SVE                                   MLR        MLR
               comp=Z,40µm,16.0s
BHUJ  Bhuj               52.66 277  eP           P          19 29 35.5 -0.3
BHUJ                                  IAmb       IAmb       19 29 37.3
               comp=Z,30nm,0.8s
QIS   Mount Isa          52.69 167    P          P          19 29 34.9 -0.9
               comp=Z,70nm,1.0s
MBWA  Marble Bar         52.98 191    P          P          19 29 38.8 +0.9
RDOG  Red Dog Mine       53.17  26    P          P          19 29 45.5 +6.6
               baz=263
RDOG  Red Dog Mine       53.17  26    IAMs_20    IAMs_20    19 52 55.7
               comp=Z,6µm,19.0s
TRD   Trivandrum         53.24 256  eP           P          19 29 40.1  0.0
PSA00 Pilbara Seismi     53.37 190    P          P          19 29 39.3 -1.5
PSA00                                 IAmb       IAmb       19 29 46.4
               comp=Z,59nm,0.7s
PSA00 Pilbara Seismi     53.37 190    P          P          19 29 40.1 -0.7
PSA00                                 IAmb       IAmb       19 29 42.5
               comp=Z,64nm,1.2s
PSA00 Pilbara Seismi     53.37 190    P          P          19 29 40.7 -0.1
               comp=Z,90nm,0.8s
AB31  Akbulak array      53.59 311  i P          P          19 29 41.2 -1.0
ABKAR Akbulak array      53.59 311    P          P          19 29 41.3 -0.9
ABKAR Akbulak array      53.59 311    P          P          19 29 41.6 -0.7
ABKAR                                 IAmb       IAmb       19 29 43.4
               comp=Z,137nm,0.9s
ARU   Arti               53.74 320    P          P          19 29 43.0 -0.2
               comp=Z,91nm,0.9s,baz=96,slow=3.0,SNR=234
ARU   Arti               53.74 320d iP           P          19 29 42.5 -0.7
ARU                                   *PP        pP         19 29 47.7 -0.9
ARU                                                         19 30 45.1
ARU                                                         19 31 38.9
ARU                                   S          S          19 37 15.9 -0.6
ARU                                   pmax       pmax
               comp=Z,402nm,1.0s
ARU                                   MLR        MLR
               comp=Z,27µm,16.0s
ARU   Arti               53.74 320    P          P          19 29 42.5 -0.7
CTAO  Charters Tower     53.86 160    P          P          19 29 43.7 -0.7
CTAO                                  pmax       pmax
               comp=Z,68nm,1.0s
CTAO                                  MLR        MLR
               comp=Z,3µm,19.0s
CTAO  Charters Tower     53.86 160    P          P          19 29 43.7 -0.7
CTAO                                  IAmb       IAmb       19 29 46.9
               comp=Z,68nm,0.9s
CTAO  Charters Tower     53.86 160    P          P          19 29 44.7 +0.3
CNBA  Chernabura Isl     54.61  42    P          P          19 29 48.9 -0.7
CNBA                                  IAmb       IAmb       19 29 54.8
               comp=Z,87nm,1.0s
CNBA                                  IAMs_20    IAMs_20    19 50 44.9
               comp=Z,4µm,22.0s
AKTO  Aktyubinsk         54.67 312    P          P          19 29 49.7 -0.3
               comp=Z,48nm,0.9s,baz=83,slow=7.5,SNR=55
AS31  Alice Springs      54.97 174    P          P          19 29 51.8 -0.7
ASAR  Alice Springs      54.97 174    P          P          19 29 52.0 -0.5
               comp=Z,21nm,0.9s,baz=352,slow=5.6,SNR=95
ASAR                                  LR         LR         19 53 05.4
               comp=Z,2µm,21.3s,baz=6.0,slow=36
ASAR                                  PKP2bc     P'P'bc     20 00 08.6 +1.0
               comp=Z,1.1nm,1.0s,baz=176,slow=2.1,SNR=4.4
ASAR  Alice Springs      54.97 174    P          P          19 29 52.0 -0.5
ASAR  Alice Springs      54.97 174    P          P          19 29 51.7 -0.7
HRA   Herat              55.07 292    P          P          19 29 52.9 -0.6
HRA                                   IAmb       IAmb       19 29 55.3
               comp=Z,86nm,0.8s
CHGN  Chignik            55.13  40    P          P          19 29 55.6 +2.4
               baz=275
GCSA  Galena City Sc     55.41  30    P          P          19 29 58.2 +3.1
               baz=271
A21K  Barrow             55.65  22    P          P          19 29 57.9 +1.1
               baz=266,SNR=11
A21K  Barrow             55.65  22    P          P          19 29 56.8 -0.1
A21K                                  IAMs_20    IAMs_20    19 53 08.5
               comp=Z,6µm,19.0s
TTA   Tatalina           55.86  32    P          P          19 29 58.9 +0.4
TTA                                   pmax       pmax
               comp=Z,61nm,1.2s
TTA   Tatalina           55.86  32    P          P          19 29 59.4 +0.8
               baz=273,SNR=21
TTA   Tatalina           55.86  32    P          P          19 29 58.9 +0.4
WRKA  Warakurna          56.12 181    P          P          19 30 00.7  0.0
               comp=Z,48nm,0.9s
O18K  Koktuh Hills       56.48  36    P          P          19 30 04.7 +1.7
               baz=276,SNR=14
P18K  Big Mountain,      56.52  37    P          P          19 30 04.1 +0.9
               baz=276
J20K  Nowinta River      56.62  31    P          P          19 30 05.2 +1.3
               baz=274,SNR=24
J20K  Nowinta River      56.62  31    P          P          19 30 04.3 +0.4
J20K                                  IAmb       IAmb       19 30 12.1
               comp=Z,233nm,1.7s
J20K                                  IAMs_20    IAMs_20    19 54 19.9
               comp=Z,6µm,20.0s
IMAR  Indian Mountai     56.68  29    P          P          19 30 04.6 +0.3
M19K  Big River Lodg     56.68  33    P          P          19 30 06.2 +1.8
               baz=275
K20K  Telida             56.71  32    P          P          19 30 06.0 +1.4
               baz=274,SNR=35
K20K  Telida             56.71  32    P          P          19 30 05.2 +0.7
K20K                                  IAmb       IAmb       19 30 11.1
               comp=Z,122nm,1.1s
K20K                                  IAMs_20    IAMs_20    19 54 12.3
               comp=Z,4µm,21.0s
CHIR  Chirikof Islan     56.74  41    IAMs_20    IAMs_20    19 52 00.2
               comp=Z,5µm,22.0s
N19K  Bonanza Creek      56.74  35    P          P          19 30 04.7 -0.2
L20K  Farewell, AK       56.87  33    P          P          19 30 07.5 +1.8
               baz=275,SNR=18
O19K  Port Alsworth      56.89  36    P          P          19 30 07.6 +1.9
               baz=276,SNR=5.7
O19K  Port Alsworth      56.89  36    IAMs_20    IAMs_20    19 55 41.1
               comp=Z,4µm,18.0s
H21K  Melozitna Rive     57.09  29    P          P          19 30 08.2 +1.0
               baz=274,SNR=24
H21K  Melozitna Rive     57.09  29    P          P          19 30 07.9 +0.7
H21K                                  IAMs_20    IAMs_20    19 54 47.4
               comp=Z,4µm,20.0s
GEYT  Alibeck            57.27 297    P          P          19 30 08.9  0.0
               comp=Z,31nm,0.8s,baz=85,slow=1.8,SNR=47
GEYT                                  LR         LR         19 58 11.9
               comp=Z,9µm,19.3s,baz=80,slow=40
GYA0  ALIBECK ARRAY      57.27 297    P          P          19 30 08.3 -0.6
GYA0B ALIBECK ARRAY      57.27 297    P          P          19 30 08.5 -0.4
CHUM  Lake Minchumin     57.45  31    P          P          19 30 11.1 +1.4
               baz=275,SNR=26
I21K  Tanana             57.47  29    P          P          19 30 11.1 +1.2
               baz=275,SNR=32
I21K  Tanana             57.47  29    P          P          19 30 10.4 +0.6
I21K                                  IAmb       IAmb       19 30 18.3
               comp=Z,108nm,1.2s
I21K                                  IAMs_20    IAMs_20    19 57 05.4
               comp=Z,3µm,18.0s
CAST  Castle Rocks       57.60  32    P          P          19 30 11.8 +0.9
               baz=276,SNR=23
CAST  Castle Rocks       57.60  32    P          P          19 30 10.8  0.0
CAST                                  IAmb       IAmb       19 30 17.1
               comp=Z,102nm,1.3s
CAST                                  IAMs_20    IAMs_20    19 54 50.7
               comp=Z,5µm,19.0s
PPLA  Purkeypile         57.61  32    P          P          19 30 11.8 +0.7
               baz=276,SNR=8.9
PPLA  Purkeypile         57.61  32    P          P          19 30 11.3 +0.3
PPLA                                  IAmb       IAmb       19 30 20.9
               comp=Z,193nm,1.4s
RSO   Redoubt South      57.63  35    P          P          19 30 11.8 +0.5
SPCR  Spurr Chakacha     57.80  34    P          P          19 30 13.8 +1.5
               baz=277,SNR=10
OHAK  Old Harbor         57.81  39    P          P          19 30 15.6 +3.3
               baz=279,SNR=5.4
BPAW  Bear Paw Mtn.      58.01  31    P          P          19 30 14.6 +0.8
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               baz=276,SNR=14
BPAW  Bear Paw Mtn.      58.01  31    P          P          19 30 14.5 +0.8
BPAW                                  IAMs_20    IAMs_20    19 55 03.6
               comp=Z,4µm,20.0s
COLD  Coldfoot           58.01  27    P          P          19 30 14.9 +1.3
               baz=275,SNR=12
COLD  Coldfoot           58.01  27    P          P          19 30 14.4 +0.8
MLY   Manley             58.01  30    P          P          19 30 14.7 +0.9
               baz=276,SNR=38
MLY   Manley             58.01  30    IAMs_20    IAMs_20    19 57 22.6
               comp=Z,4µm,18.0s
KDAK  Kodiak Island      58.10  38    P          P          19 30 14.3  0.0
               comp=Z,81nm,1.1s,baz=248,slow=2.0,SNR=7.5
KDAK                                  LR         LR         19 56 01.2
               comp=Z,3µm,20.4s,baz=284,slow=37
KDAK  Kodiak Island      58.10  38    P          P          19 30 14.4  0.0
KDAK                                  pmax       pmax
               comp=Z,184nm,1.3s
KDAK                                  MLR        MLR
               comp=Z,4µm,19.0s
KDAK  Kodiak Island      58.10  38    P          P          19 30 15.0 +0.6
               baz=279
KDAK  Kodiak Island      58.10  38    P          P          19 30 14.4  0.0
KDAK                                  IAmb       IAmb       19 30 19.5
               comp=Z,184nm,1.2s
KDAK  Kodiak Island      58.10  38    IAMs_20    IAMs_20    19 55 50.1
               comp=Z,4µm,19.0s
KTH   Kantishna Hill     58.10  31    P          P          19 30 15.3 +0.9
KTH                                   IAmb       IAmb       19 30 22.2
               comp=Z,152nm,1.4s
KTH                                   IAMs_20    IAMs_20    19 55 16.0
               comp=Z,5µm,20.0s
TOLK  Toolik Lake Re     58.12  25    P          P          19 30 15.1 +0.7
               baz=275,SNR=15
TOLK  Toolik Lake Re     58.12  25    P          P          19 30 15.4 +0.9
TOLK                                  IAMs_20    IAMs_20    19 54 32.5
               comp=Z,5µm,19.0s
RK1H  Rockhampton Ha     58.30 157    P          P          19 30 17.7 +1.6
               comp=Z,19nm,1.0s
TRF   Thorofare Moun     58.40  31    P          P          19 30 16.9 +0.3
               baz=278,SNR=6.3
TRF   Thorofare Moun     58.40  31    IAMs_20    IAMs_20    19 55 14.8
               comp=Z,6µm,20.0s
KIRV  Kirov              58.40 323    P          P          19 30 16.7 +0.2
               comp=Z,197nm,0.9s,baz=81,slow=3.8,SNR=73
H23K  Yukon River        58.42  29    P          P          19 30 18.2 +1.6
               baz=277,SNR=72
SUA   Susitna One        58.46  34    IAMs_20    IAMs_20    19 53 09.8
               comp=Z,4µm,22.0s
MEEK  Meekatharra        58.53 191    P          P          19 30 18.0 +0.3
               comp=Z,39nm,1.1s
CUT   Chulitna           58.55  33    P          P          19 30 18.4 +0.9
               baz=278,SNR=12
CUT   Chulitna           58.55  33    P          P          19 30 17.5  0.0
CUT                                   IAMs_20    IAMs_20    19 55 10.9
               comp=Z,3µm,19.0s
I23K  Minto, Yukon-K     58.58  29    P          P          19 30 19.1 +1.5
               baz=277,SNR=18
BWN   Browne             58.66  30    P          P          19 30 19.4 +1.1
BWN                                   IAmb       IAmb       19 30 24.9
               comp=Z,147nm,1.1s
BWN                                   IAMs_20    IAMs_20    19 55 54.7
               comp=Z,6µm,18.0s
M22K  Willow             58.71  33    P          P          19 30 19.3 +0.7
               baz=279,SNR=7.2
BRSE  Bradley Lake S     58.73  36    P          P          19 30 20.0 +1.2
               baz=279
NEA2  Nenana             58.77  30    P          P          19 30 19.9 +0.8
               baz=278,SNR=80
NEA2  Nenana             58.77  30    P          P          19 30 19.5 +0.5
NEA2                                  IAmb       IAmb       19 30 25.1
               comp=Z,117nm,1.0s
NEA2                                  IAMs_20    IAMs_20    19 55 54.8
               comp=Z,4µm,19.0s
MCK   McKinley           58.96  31    P          P          19 30 20.4 +0.1
               baz=278,SNR=18
MCK   McKinley           58.96  31    IAMs_20    IAMs_20    19 55 52.6
               comp=Z,5µm,20.0s
RC01  Rabbit Creek A     59.00  34    P          P          19 30 21.2 +0.6
               baz=279,SNR=14
RND   Reindeer           59.04  31    P          P          19 30 20.1 -0.9
RND                                   pmax       pmax
               comp=Z,78nm,0.9s
RND                                   MLR        MLR
               comp=Z,4µm,19.0s
RND   Reindeer           59.04  31    P          P          19 30 20.1 -0.9
RND                                   IAmb       IAmb       19 30 26.2
               comp=Z,78nm,0.9s
RND                                   IAMs_20    IAMs_20    19 55 56.8
               comp=Z,4µm,19.0s
H24K  Noodor Dome        59.10  28    P          P          19 30 22.6 +1.3
               baz=278
H24K  Noodor Dome        59.10  28    P          P          19 30 22.0 +0.7
H24K                                  IAmb       IAmb       19 30 26.7
               comp=Z,88nm,1.1s
H24K                                  IAMs_20    IAMs_20    19 57 05.4
               comp=Z,3µm,19.0s
PMR   Palmer             59.21  33    P          P          19 30 22.2 +0.2
PMR                                   pmax       pmax
               comp=Z,118nm,1.2s
PMR   Palmer             59.21  33    P          P          19 30 22.2 +0.2
               baz=280,SNR=12
PMR   Palmer             59.21  33    P          P          19 30 22.2 +0.2
PMR                                   IAmb       IAmb       19 30 27.1
               comp=Z,118nm,1.2s
WRH   Wood River Hil     59.21  30    P          P          19 30 22.6 +0.6
WRH                                   IAMs_20    IAMs_20    19 55 59.3
               comp=Z,4µm,20.0s
OOD   Oodnadatta         59.23 173    P          P          19 30 22.1 -0.4
               comp=Z,92nm,0.8s
TCOL  CIGO, UAF Yank     59.25  30    P          P          19 30 23.9 +1.6
               baz=279
TCOL  CIGO, UAF Yank     59.25  30    P          P          19 30 22.3 +0.1
TCOL                                  IAmb       IAmb       19 30 29.1
               comp=Z,153nm,1.5s
TCOL                                  IAMs_20    IAMs_20    19 58 11.3
               comp=Z,4µm,18.0s
COLA  College            59.25  30  i P          P          19 30 23.0 +0.7
COLA                                  pmax       pmax
               comp=Z,104nm,1.5s
COLA                                  MLR        MLR
               comp=Z,3µm,16.0s
COLA  College            59.25  30    IAMs_20    IAMs_20    19 58 11.3
               comp=Z,4µm,18.0s
WAT1  Susitna Watana     59.27  32    P          P          19 30 22.8 +0.2
               baz=279
CCB   Clear Creek Bu     59.30  30    P          P          19 30 22.6 -0.1
SEW   Seward             59.31  35    P          P          19 30 22.9 +0.1
               baz=280,SNR=9.6
SEW   Seward             59.31  35    P          P          19 30 22.0 -0.7
POKR  Poker Plat Res     59.39  29    P          P          19 30 24.6 +1.4
               baz=279,SNR=51
POKR  Poker Plat Res     59.39  29    IAMs_20    IAMs_20    19 57 23.1
               comp=Z,4µm,18.0s
SANVU Saraoutou          59.39 136    P          P          19 30 23.5 -0.3
SANVU Saraoutou          59.39 136    P          P          19 30 27.8 +4.0
QLP   Quilpie            59.51 164    P          P          19 30 24.1 -0.3
SML   Sawmill            59.54  33    P          P          19 30 25.0 +0.5
               baz=280,SNR=10
SML   Sawmill            59.54  33    P          P          19 30 24.6 +0.2
SML                                   IAmb       IAmb       19 30 29.9
               comp=Z,100nm,1.2s
SML                                   IAMs_20    IAMs_20    19 56 27.0
               comp=Z,3µm,18.0s
KNK   Knik Glacier       59.55  34    P          P          19 30 24.5  0.0
               baz=280,SNR=6.7
IL31                     59.67  30    P          P          19 30 24.9 -0.3
ILAR  Eielson Array      59.67  30    P          P          19 30 24.7 -0.6
               comp=Z,13nm,1.0s,baz=266,slow=5.6,SNR=43
ILAR                                  LR         LR         19 57 34.6
               comp=Z,2µm,19.1s,baz=296,slow=37
ILAR                                  PKP2bc     P'P'df     19 59 52.5 -7.4
               comp=Z,1.7nm,1.2s,baz=112,slow=1.0,SNR=5.1
ILAR  Eielson Array      59.67  30    P          P          19 30 24.6 -0.6
WAT6  Susitna Watana     59.68  32    P          P          19 30 25.1 -0.4
               baz=280,SNR=5.3
HDA   Harding Lake       59.71  30    P          P          19 30 25.0 -0.5
               baz=280,SNR=51
HDA   Harding Lake       59.71  30    P          P          19 30 24.9 -0.5
HDA                                   IAmb       IAmb       19 30 30.2
               comp=Z,104nm,1.1s
HDA                                   IAMs_20    IAMs_20    19 56 13.5
               comp=Z,4µm,19.0s
PWL   Port Wells         59.72  34    P          P          19 30 26.0 +0.4
               baz=281
PRGR  Permogore          59.74 327  eP           P          19 30 25.0 -0.7
PRGR                                e*PP         pP         19 30 30.6 -0.6
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PRGR				e		19 31 10.0	
PRGR				pmax	pmax		
	comp=Z,74nm,1.1s						
DHY	**Denali Highway**	**59.76**	**32**	P	**P**	**19 30 24.5**	**-1.5**
	baz=280						
DHY	**Denali Highway**	**59.76**	**32**	IAMs_20	IAMs_20	19 55 57.8	
	comp=Z,4µm,21.0s						
INKA	**Innaminka**	**59.90**	**168**	P	**P**	**19 30 28.4**	**+1.3**
	comp=Z,52nm,0.8s						
SCM	**Sheep Creek Mo**	**60.01**	**33**	P	**P**	**19 30 28.5**	**+0.9**
	baz=281,SNR=12						
FYU	**Fort Yukon**	**60.04**	**27**	IAMs_20	IAMs_20	19 57 30.3	
	comp=Z,3µm,18.0s						
PRP	**Porcupine Dome**	**60.11**	**29**	P	**P**	**19 30 28.8**	**+0.4**
	baz=280,SNR=37						
BMAR	**Burnt Mountain**	**60.14**	**26**	P	**P**	**19 30 29.5**	**+1.1**
GLI	**Glacier Island**	**60.31**	**34**	P	**P**	**19 30 31.1**	**+1.4**
	baz=282						
EIDS	**Eidsvold**	**60.33**	**157**	P	**P**	**19 30 30.6**	**+0.4**
EIDS	**Eidsvold**	**60.33**	**157**	P	**P**	**19 30 32.1**	**+2.0**
	comp=Z,34nm,1.2s						
J25K	**Salcha River,**	**60.34**	**30**	P	**P**	**19 30 29.1**	**-0.9**
	baz=281						
M24K	**Tolsona, Glenn**	**60.49**	**33**	P	**P**	**19 30 31.2**	**+0.3**
	baz=282,SNR=6.6						
RMQ	**Roma**	**60.63**	**159**	P	**P**	**19 30 33.6**	**+1.4**
	comp=Z,29nm,1.1s						
PAX	**Paxson**	**60.63**	**32**	P	**P**	**19 30 32.0**	**+0.1**
PAX				pmax	pmax		
	comp=Z,79nm,1.6s						
PAX	**Paxson**	**60.63**	**32**	P	**P**	**19 30 32.1**	**+0.1**
	baz=282,SNR=10.0						
PAX	**Paxson**	**60.63**	**32**	P	**P**	**19 30 32.0**	**+0.1**
PAX				IAmb	IAmb	19 30 39.3	
	comp=Z,79nm,1.6s						
BELG	**Belogornoye**	**60.67**	**316**	P	**P**	**19 30 31.9**	**-0.3**
	comp=Z,48nm,0.8s,baz=338,slow=2.3,SNR=19						
BELG	**Belogornoye**	**60.67**	**316**	*i* P	**P**	**19 30 30.8**	**-1.4**
BELG				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BELG				MLR	MLR		
	comp=Z,2µm,17.0s						
KLU	**Klutina**	**60.73**	**33**	P	**P**	**19 30 33.5**	**+0.8**
	baz=282,SNR=5.5						
KLU	**Klutina**	**60.73**	**33**	IAMs_20	IAMs_20	19 55 07.6	
	comp=Z,4µm,22.0s						
RIDG	**Independent Ri**	**60.74**	**31**	P	**P**	**19 30 33.1**	**+0.4**
	baz=282,SNR=19						
RIDG	**Independent Ri**	**60.74**	**31**	IAMs_20	IAMs_20	19 57 06.9	
	comp=Z,4µm,18.0s						
HARP	**HAARP**	**60.89**	**32**	P	**P**	**19 30 34.4**	**+0.7**
	baz=282,SNR=8.5						
Q23K	**Middleton Isla**	**60.98**	**36**	IAMs_20	IAMs_20	19 57 48.5	
	comp=Z,4µm,19.0s						
KAAM	**Kaadhehdhoo**	**61.01**	**251**	IAMs_20	IAMs_20	20 00 34.2	
	comp=Z,3µm,19.0s						
SCRK	**Sand Creek**	**61.07**	**30**	P	**P**	**19 30 34.9**	**-0.1**
	baz=282,SNR=63						
SCRK	**Sand Creek**	**61.07**	**30**	P	**P**	**19 30 34.6**	**-0.3**
SCRK				IAmb	IAmb	19 30 38.9	
	comp=Z,103nm,1.2s						
SCRK				IAMs_20	IAMs_20	19 57 15.3	
	comp=Z,5µm,19.0s						
DOT	**Dot Lake**	**61.10**	**31**	P	**P**	**19 30 34.7**	**-0.3**
DOT				IAmb	IAmb	19 30 38.9	
	comp=Z,69nm,1.2s						
J26L	**Joseph Creek**	**61.13**	**30**	P	**P**	**19 30 34.8**	**-0.5**
	baz=283,SNR=36						
N25K	**Chitina, Valde**	**61.33**	**33**	P	**P**	**19 30 37.5**	**+0.8**
	baz=283,SNR=13						
MORW	**Morawa**	**61.35**	**193**	P	**P**	**19 30 36.1**	**-0.9**
MORW				IAmb	IAmb	19 30 38.5	
	comp=Z,155nm,1.9s						
MORW	**Morawa**	**61.35**	**193**	P	**P**	**19 30 37.2**	**+0.2**
	comp=Z,47nm,0.9s						
MENT	**Mentasta**	**61.42**	**31**	P	**P**	**19 30 37.6**	**+0.4**
MENT				IAmb	IAmb	19 30 45.5	
	comp=Z,80nm,1.1s						
BMRM	**Bremner River**	**61.47**	**34**	P	**P**	**19 30 40.2**	**+2.5**
	baz=284,SNR=7.0						
BMRM	**Bremner River**	**61.47**	**34**	IAMs_20	IAMs_20	19 57 22.4	
	comp=Z,3µm,20.0s						
MULG	**Mulgathing**	**61.55**	**175**	P	**P**	**19 30 38.4**	**+0.1**
	comp=Z,45nm,0.9s						
L26K	**Log Cabin Wild**	**61.56**	**31**	P	**P**	**19 30 38.9**	**+0.7**
	baz=284,SNR=27						
L26K	**Log Cabin Wild**	**61.56**	**31**	IAMs_20	IAMs_20	19 57 06.5	
	comp=Z,6µm,20.0s						
JLN	**Jalan Bani Buh**	**61.77**	**280**	P	**P**	**19 30 39.9**	**-0.2**
JLN				P	**P**	**19 30 39.9**	**-0.2**
FORT	**Forrest**	**61.84**	**181**	P	**P**	**19 30 40.2**	**-0.1**
FORT				IAmb	IAmb	19 30 47.7	
	comp=Z,83nm,0.8s						
FORT	**Forrest**	**61.84**	**181**	P	**P**	**19 30 41.8**	**+1.5**
	comp=Z,116nm,0.8s						
KOUNC	**Koumac, New Ca**	**61.85**	**142**	P	**P**	**19 30 43.0**	**+2.5**
M26K	**Nabesna, AK**	**61.87**	**32**	P	**P**	**19 30 40.6**	**+0.3**
	baz=284						
M26K	**Nabesna, AK**	**61.87**	**32**	IAMs_20	IAMs_20	19 57 56.5	
	comp=Z,3µm,20.0s						
WBK	**Wadi Bani Khal**	**61.95**	**281**	P	**P**	**19 30 41.6**	**+0.2**
WBK				P	**P**	**19 30 41.6**	**+0.2**
WSAR	**Wadi Sarin**	**61.97**	**281**	P	**P**	**19 30 41.6**	**0.0**
	comp=Z,28nm,0.9s,baz=85,slow=7.9,SNR=12						
EGAK	**Eagle**	**62.07**	**29**	P	**P**	**19 30 41.9**	**+0.4**
	baz=284						
EGAK	**Eagle**	**62.07**	**29**	P	**P**	**19 30 41.8**	**+0.2**
EGAK				IAMs_20	IAMs_20	20 01 10.9	
	comp=Z,3µm,18.0s						
MCARA	**McCarthy VSAT**	**62.11**	**33**	P	**P**	**19 30 42.4**	**+0.5**
	baz=285,SNR=18						
LCRK	**Leigh Creek**	**62.15**	**171**	P	**P**	**19 30 43.0**	**+0.6**
	comp=Z,65nm,0.9s						
CRQM	**Cirque**	**62.22**	**34**	P	**P**	**19 30 42.9**	**+0.1**
CRQM				IAmb	IAmb	19 30 48.5	
	comp=Z,73nm,1.0s						
CRQM				IAMs_20	IAMs_20	19 56 49.8	
	comp=Z,4µm,20.0s						
L27K	**Beaver Creek,**	**62.22**	**31**	P	**P**	**19 30 43.6**	**+0.9**
	baz=285,SNR=34						
L27K	**Beaver Creek,**	**62.22**	**31**	P	**P**	**19 30 43.4**	**+0.7**
L27K				IAmb	IAmb	19 30 48.9	
	comp=Z,68nm,1.1s						
L27K				IAMs_20	IAMs_20	19 57 56.0	
	comp=Z,5µm,20.0s						
BCAR	**Beaver Creek A**	**62.24**	**31**	P	**P**	**19 30 43.2**	**+0.4**
CRQE	**Cirque**	**62.24**	**34**	P	**P**	**19 30 43.4**	**+0.5**
	baz=285						
TGL	**Tana Glacier**	**62.37**	**34**	P	**P**	**19 30 43.8**	**+0.1**
TGL				IAmb	IAmb	19 30 49.8	
	comp=Z,78nm,0.9s						
TGL				IAMs_20	IAMs_20	19 57 15.0	
	comp=Z,4µm,21.0s						
M27K	**Edge Creek, AK**	**62.38**	**32**	P	**P**	**19 30 44.3**	**+0.4**
	baz=285,SNR=18						
M27K	**Edge Creek, AK**	**62.38**	**32**	P	**P**	**19 30 44.2**	**+0.3**
M27K				IAmb	IAmb	19 30 49.7	
	comp=Z,51nm,1.1s						
M27K				IAMs_20	IAMs_20	19 57 33.2	
	comp=Z,5µm,20.0s						
WAX	**Waxell Ridge**	**62.44**	**34**	IAMs_20	IAMs_20	19 58 40.9	
	comp=Z,3µm,18.0s						
SMDO	**Samad**	**62.53**	**281**	P	**P**	**19 30 45.9**	**+0.5**
SMDO				P	**P**	**19 30 45.9**	**+0.5**
ISLE	**Juniper Island**	**62.64**	**34**	IAMs_20	IAMs_20	19 55 45.2	
	comp=Z,4µm,21.0s						
JMDO	**Jabal Madar**	**62.77**	**281**	P	**P**	**19 30 46.8**	**-0.1**
JMDO				P	**P**	**19 30 46.8**	**-0.1**
JMDO				S	**S**	**19 39 17.6**	**+2.1**
JMDO				S	**S**	**19 39 17.6**	**+2.1**
KLMR	**Klimovskoe**	**62.80**	**327**	*d i*P	**P**	**19 30 45.6**	**-0.8**
KLMR				*e*		19 33 02.3	
KLMR				*e*S	**S**	**19 39 14.5**	**0.0**
KLMR				*e*SS	**SS**	**19 43 21.4**	**+2.6**
KLMR				pmax	pmax		
	comp=Z,231nm,1.3s						
KLMR				MLR	MLR		
	comp=Z,10µm,16.0s						
KLMR	**Klimovskoe**	**62.80**	**327**	⇓*i*P	**P**	**19 30 45.7**	**-0.7**
KLMR				⇑*i*P	**P**	**19 30 45.7**	**-0.7**
KLMR				*i* P	**P**	**19 30 45.7**	**-0.7**
KLMR				AMP		19 30 47.6	
	comp=Z,231nm,1.3s						
KLMR				*e*PP	**PP**	**19 33 02.3**	**-1.9**
KLMR				*e*S	**S**	**19 39 14.5**	**0.0**
KLMR				*e*S	**S**	**19 39 14.5**	**0.0**
KLMR				*e*SS	**SS**	**19 43 21.4**	**+2.6**
KLMR				*e*SS	**SS**	**19 43 21.4**	**+2.6**
KLMR				LQ	LQ	19 53 54.5	
KLMR				LQ	LQ	19 53 54.5	
KLMR				LR	LR	19 57 17.4	
KLMR				AMP		20 01 10.7	
	comp=Z,10µm,16.2s						
BANOM	**Banah**	**62.83**	**285**	P	**P**	**19 30 46.6**	**-0.7**
BARN	**Barnard Glacie**	**62.84**	**33**	P	**P**	**19 30 47.0**	**+0.1**
BARN				IAMs_20	IAMs_20	19 55 52.1	
	comp=Z,4µm,22.0s						
LVZ	**Lovozero**	**62.85**	**335**	*ce*P	**P**	**19 30 46.8**	**+0.1**
LVZ				pmax	pmax		
	comp=Z,223nm,1.7s						
LVZ	**Lovozero**	**62.85**	**335**	P	**P**	**19 30 45.9**	**-0.8**
GRNC	**Granite Creek**	**62.88**	**34**	IAMs_20	IAMs_20	19 57 37.6	
	comp=Z,3µm,19.0s						
HOQ	**Hoqain**	**62.94**	**282**	P	**P**	**19 30 48.6**	**+0.6**
HOQ				P	**P**	**19 30 48.6**	**+0.6**
YAH	**Yahtse**	**62.99**	**34**	IAMs_20	IAMs_20	19 57 46.5	
	comp=Z,4µm,19.0s						
DAWY	**Dawson**	**63.00**	**30**	P	**P**	**19 30 48.7**	**+0.8**
	baz=286,SNR=18						
DAWY	**Dawson**	**63.00**	**30**	P	**P**	**19 30 48.1**	**+0.2**
CTG	**Chitna Glacier**	**63.01**	**33**	P	**P**	**19 30 48.5**	**+0.5**
	baz=286,SNR=8.1						
CTGM	**Chitina Glacie**	**63.02**	**33**	IAMs_20	IAMs_20	19 56 18.8	
	comp=Z,4µm,22.0s						
I29M	**Ogilvie Camp,**	**63.08**	**28**	P	**P**	**19 30 48.9**	**+0.6**
	baz=287,SNR=29						
MDH	**Madha**	**63.08**	**284**	P	**P**	**19 30 47.4**	**-1.5**
YUK3	**Moose Creek**	**63.19**	**32**	P	**P**	**19 30 50.1**	**+0.8**
	baz=287,SNR=17						
LOGN	**Logan Glacier**	**63.21**	**33**	P	**P**	**19 30 49.0**	**-0.4**
LOGN				IAMs_20	IAMs_20	19 55 52.0	
	comp=Z,3µm,22.0s						
TABL	**Table Mountain**	**63.26**	**34**	IAMs_20	IAMs_20	19 57 43.5	
	comp=Z,3µm,19.0s						
UOSS	**Minazif**	**63.30**	**284**	P	**P**	**19 30 50.8**	**+0.4**
UOSS				P	**P**	**19 30 50.8**	**+0.4**
UOSS	**Minazif**	**63.30**	**284**	P	**P**	**19 30 50.1**	**-0.3**
UOSS	**Minazif**	**63.30**	**284**	IAMs_20	IAMs_20	19 59 18.4	
	comp=Z,4µm,21.0s						
SOHO	**SOHO**	**63.36**	**283**	*i* P	**P**	**19 30 50.3**	**-0.4**
	SNR=9.8						
SOHO	**SOHO**	**63.36**	**283**	P	**P**	**19 30 51.6**	**+0.9**
SOHO				P	**P**	**19 30 51.6**	**+0.9**
SOHO				S	**S**	**19 39 24.6**	**+2.0**
SOHO				S	**S**	**19 39 24.6**	**+2.0**
BSY	**Bisya**	**63.38**	**281**	P	**P**	**19 30 52.0**	**+1.0**
BSY				P	**P**	**19 30 52.0**	**+1.0**
J29M	**Klondike Camp**	**63.38**	**29**	P	**P**	**19 30 52.3**	**+1.9**
	baz=287,SNR=13						
APA	**Apatity**	**63.40**	**335**	⇓*i*P	**P**	**19 30 49.0**	**-1.3**
APA				pmax	pmax		
	comp=Z,188nm,0.9s						
APA				MLR	MLR		
	comp=Z,8µm,14.0s						
HATD	**Hatta, Dubai**	**63.41**	**284**	*i* P	**P**	**19 30 50.0**	**-1.1**
	SNR=6.1						
HATD	**Hatta, Dubai**	**63.41**	**284**	P	**P**	**19 30 52.2**	**+1.0**
HATD				P	**P**	**19 30 52.2**	**+1.0**
HATD				S	**S**	**19 39 24.8**	**+1.5**
HATD				S	**S**	**19 39 24.8**	**+1.5**
MAK	**Makhachkala**	**63.46**	**306**	*e*P	**P**	**19 30 47.6**	**-3.5**
MAK				*e*		19 33 05.9	
MAK				*e*S	**S**	**19 39 19.6**	**-3.8**
MAK				*e*SSS	SSS	19 46 20.6	
MAK				pmax	pmax		
	comp=Z,135nm,1.0s						
MAK				MLR	MLR		
	comp=Z,8µm,17.0s						
UMQ	**Umm Al-Quwin**	**63.52**	**285**	P	**P**	**19 30 49.7**	**-2.1**
KLBR	**Kellerberrin**	**63.52**	**191**	P	**P**	**19 30 52.2**	**+0.7**
	comp=Z,84nm,0.8s						
ASHO	**Ashiyiah**	**63.53**	**284**	*i* P	**P**	**19 30 50.3**	**-1.7**
	SNR=12						
ASHO	**Ashiyiah**	**63.53**	**284**	P	**P**	**19 30 51.9**	**0.0**
ASHO				P	**P**	**19 30 51.9**	**0.0**
ASHO				S	**S**	**19 39 26.0**	**+1.1**
ASHO				S	**S**	**19 39 26.0**	**+1.1**
LIFNC	**LIFOU**	**63.63**	**140**	P	**P**	**19 30 51.0**	**-1.4**
LIFNC				IAmb	IAmb	19 31 02.3	
	comp=Z,87nm,0.9s						
ARQ	**Araqi**	**63.70**	**282**	P	**P**	**19 30 52.6**	**-0.4**
ARQ				P	**P**	**19 30 52.6**	**-0.4**
PINM	**Pinnacle**	**63.78**	**34**	P	**P**	**19 30 54.7**	**+1.7**
	baz=288						
FAQ	**Al Faqa, Dubai**	**63.89**	**284**	*i* P	**P**	**19 30 53.5**	**-0.7**
	SNR=14						
SPB2	**Spitsbergen Ar**	**63.90**	**348**	P	**P**	**19 30 53.1**	**-0.4**
SPA0	**Spitsbergen Ar**	**63.90**	**348**	*e*P	**P**	**19 30 53.6**	**+0.1**
SPITS	**Spitsbergen Ar**	**63.90**	**348**	P	**P**	**19 30 53.0**	**-0.5**
SPITS				pmax	pmax		
	comp=Z,105nm,1.3s						
INK	**Inuvik**	**63.96**	**24**	P	**P**	**19 30 54.4**	**+0.3**
	comp=Z,25nm,0.9s,baz=283,slow=8.0,SNR=44						
INK	**Inuvik**	**63.96**	**24**	P	**P**	**19 30 54.3**	**+0.3**
	baz=289,SNR=24						
INK	**Inuvik**	**63.96**	**24**	P	**P**	**19 30 53.9**	**-0.1**
STKA	**Stephens Creek**	**64.08**	**168**	P	**P**	**19 30 54.8**	**-0.4**
	comp=Z,28nm,1.2s,baz=349,slow=6.2,SNR=13						
STKA				LR	LR	19 58 10.8	
	comp=Z,1µm,21.9s,baz=346,slow=35						
STKA	**Stephens Creek**	**64.08**	**168**	P	**P**	**19 30 54.7**	**-0.4**
STKA	**Stephens Creek**	**64.08**	**168**	P	**P**	**19 30 55.4**	**+0.2**
	comp=Z,7.6nm,1.0s						
YUK4	**Talbot Arm**	**64.14**	**32**	P	**P**	**19 30 56.9**	**+1.3**
	baz=288,SNR=12						
ASUD	**Al Ashush, Dub**	**64.16**	**284**	P	**P**	**19 30 55.1**	**-0.9**
ASUD	**Al Ashush, Dub**	**64.16**	**284**	P	**P**	**19 30 54.5**	**-1.6**
ASUD				P	**P**	**19 30 54.5**	**-1.6**
NOUC	**Port Laguerre**	**64.19**	**141**	P	**P**	**19 30 58.2**	**+2.1**
BBOO	**Buckleboo**	**64.23**	**173**	P	**P**	**19 30 54.7**	**-1.4**
DZM	**Mont Dzumac**	**64.24**	**141**	*e*P	**P**	**19 30 56.5**	**0.0**
	comp=Z,215nm,1.1s						
DZM				*e*S	**S**	**19 39 29.1**	**-4.4**
	comp=Z,2µm,31.2s						
DZM	**Mont Dzumac**	**64.24**	**141**	*e*LR	LR	19 50 07.9	
	comp=Z,5µm,24.9s						
DZM	**Mont Dzumac**	**64.24**	**141**	P	**P**	**19 30 56.5**	**0.0**
DZM				IAmb	IAmb	19 31 04.0	
	comp=Z,74nm,0.9s						
DZM	**Mont Dzumac**	**64.24**	**141**	P	**P**	**19 30 58.5**	**+2.0**
KBS	**Kingsbay**	**64.28**	**349**	*e*P	**P**	**19 30 55.9**	**-0.1**
PNL	**Peninsula**	**64.32**	**34**	P	**P**	**19 31 00.1**	**+3.6**
	baz=288						
YUK6	**Outpost Mounta**	**64.40**	**33**	P	**P**	**19 30 58.3**	**+1.0**
	baz=289						
ONTNC	**Ouen Toro**	**64.44**	**141**	P	**P**	**19 30 55.5**	**-2.2**
ONTNC				IAmb	IAmb	19 31 05.6	
	comp=Z,85nm,1.4s						
ONTNC	**Ouen Toro**	**64.44**	**141**	P	**P**	**19 31 00.5**	**+2.8**
YATNC	**Mamie plateau,**	**64.47**	**141**	P	**P**	**19 31 00.2**	**+2.3**
VRH	**Novokhopyorsk**	**64.52**	**316**	*e*P	**P**	**19 30 56.6**	**-1.4**
VRH				pmax	pmax		
	comp=Z,50nm,0.8s						
VRH				MLR	MLR		
	comp=Z,13µm,13.0s						
GROC	**Groznyy**	**64.56**	**307**	*e*P	**P**	**19 30 57.9**	**-0.5**
GROC				*e*		19 31 32.6	
GROC				*e*S	**S**	**19 39 35.0**	**-2.1**
GROC				pmax	pmax		
	comp=Z,46nm,1.0s						
GROC				MLR	MLR		
	comp=Z,682nm,12.0s						
M30M	**Minto, Yukon**	**64.58**	**31**	P	**P**	**19 30 59.8**	**+1.6**
	baz=289,SNR=18						
CMSA	**Cobar Meteorol**	**64.60**	**164**	P	**P**	**19 31 00.5**	**+1.9**
	comp=Z,55nm,1.4s						
MAYO	**Mayo, Yukon**	**64.62**	**30**	P	**P**	**19 31 00.3**	**+1.9**
	baz=290						
LGD	**Lagodekhi**	**64.72**	**305**	P	**P**	**19 30 59.5**	**0.0**
OUENC	**Ouen Island, N**	**64.73**	**141**	P	**P**	**19 30 59.8**	**+0.2**
OUENC				IAmb	IAmb	19 31 07.9	
	comp=Z,89nm,1.1s						
OUENC	**Ouen Island, N**	**64.73**	**141**	P	**P**	**19 31 03.0**	**+3.4**
HYT	**Haines Junctio**	**64.84**	**33**	P	**P**	**19 31 01.4**	**+1.4**
	baz=289,SNR=18						
KEV	**Kevo**	**64.84**	**338**	P	**P**	**19 30 58.7**	**-1.1**
KEV				pmax	pmax		
	comp=Z,176nm,0.9s						
KEV				MLR	MLR		
	comp=Z,8µm,19.0s						
KEV	**Kevo**	**64.84**	**338**	P	**P**	**19 30 58.7**	**-1.1**
NWAO	**Narrogin (SRO)**	**64.91**	**191**	P	**P**	**19 31 02.2**	**+1.6**
NWAO	**Narrogin (SRO)**	**64.91**	**191**	P	**P**	**19 31 02.2**	**+1.6**
	comp=Z,62nm,3.0s						
DDFL	**Dedoflistskaro**	**64.95**	**305**	P	**P**	**19 31 04.0**	**+3.0**
A36M	**Sachs Harbour**	**65.18**	**19**	P	**P**	**19 31 03.1**	**+1.2**
	baz=295,SNR=117						
A36M	**Sachs Harbour**	**65.18**	**19**	P	**P**	**19 31 02.1**	**+0.2**
A36M				IAMs_20	IAMs_20	20 04 11.4	
	comp=Z,4µm,20.0s						
ARMA	**Armidale**	**65.18**	**158**	P	**P**	**19 31 02.2**	**-0.4**
ARMA				IAmb	IAmb	19 31 10.4	
	comp=Z,87nm,1.4s						
ARMA	**Armidale**	**65.18**	**158**	P	**P**	**19 31 05.1**	**+2.6**
	comp=Z,53nm,1.4s						
HTT	**Hallett**	**65.18**	**171**	P	**P**	**19 31 04.4**	**+2.0**
	comp=Z,23nm,1.6s						
MOS	**Moscow**	**65.33**	**322**	*e*P	**P**	**19 31 01.7**	**-1.4**
MOS				*e*S	**S**	**19 39 45.5**	**-0.5**
MOS				*e*SS	**SS**	**19 44 04.8**	**+6.4**
MOS				pmax	pmax		
	comp=Z,400nm,1.4s						
MOS				pmax	pmax		
	comp=Z,331nm,1.4s						
MOS				MLR	MLR		
	comp=N,9µm,18.0s						
MOS				MLR	MLR		
	comp=E,16µm,18.0s						
MOS				MLR	MLR		
	comp=Z,19µm,18.0s						
N31M	**Braeburn, Yuko**	**65.40**	**32**	P	**P**	**19 31 05.3**	**+1.7**
	baz=290,SNR=15						
ARA0	**ARCESS Array S**	**65.42**	**338**	*e*P	**P**	**19 31 03.1**	**-0.4**
ARCES	**ARCESS Array B**	**65.42**	**338**	P	**P**	**19 31 03.3**	**-0.2**
	comp=Z,78nm,0.9s,baz=60,slow=7.2,SNR=44						
ARCES				LR	LR	20 03 35.3	
	comp=Z,7µm,18.8s,baz=75,slow=40						
ARCES	**ARCESS Array B**	**65.42**	**338**	P	**P**	**19 31 03.0**	**-0.5**
ARCES				IAmb	IAmb	19 31 04.7	
	comp=Z,100nm,1.0s						
HAMF	**Hammerfest**	**65.53**	**339**	*e*P	**P**	**19 31 04.1**	**-0.1**
LPSR	**Galich'ya Gora**	**65.68**	**318**	*e*P	**P**	**19 31 04.9**	**-0.6**
LPSR				pmax	pmax		
	comp=Z,210nm,1.0s						
LPSR				MLR	MLR		
	comp=Z,9µm,14.0s						
GUDG	**Gudauri**	**65.73**	**306**	P	**P**	**19 31 08.0**	**+1.7**
M31M	**Drury Creek, Y**	**65.76**	**31**	P	**P**	**19 31 07.5**	**+1.6**
	baz=291,SNR=9.7						
GOF	**Gofitskoye**	**65.78**	**309**	⇑*i*P	**P**	**19 31 06.3**	**0.0**
GOF				pmax	pmax		
	comp=Z,186nm,0.9s						
VORR	**Voronezh**	**65.84**	**317**	*e*P	**P**	**19 31 05.0**	**-1.5**
VORR				pmax	pmax		
	comp=Z,350nm,1.2s						
NOR	**Nord**	**65.85**	**355**	*i* P	**P**	**19 31 05.9**	**-0.2**
NOR				IAmb	IAmb	19 31 11.6	
	comp=Z,85nm,1.7s						
KNTN	**Kanton**	**65.85**	**109**	P	**P**	**19 31 09.8**	**+2.7**
NCK	**Nalchik**	**65.96**	**307**	*i* P	**P**	**19 31 07.1**	**-0.4**
NCK				pmax	pmax		
	comp=Z,46nm,1.0s						
NCK				MLR	MLR		
	comp=Z,8µm,16.0s						
ZEI	**Tsey**	**66.01**	**307**	*e*P	**P**	**19 31 05.9**	**-2.2**
ZEI				pmax	pmax		
	comp=Z,58nm,1.4s						
VSR	**Storozhevoye**	**66.03**	**317**	*e*P	**P**	**19 31 07.0**	**-0.7**
VSR				pmax	pmax		
	comp=Z,140nm,1.0s						
VSR				MLR	MLR		
	comp=Z,16µm,17.0s						
VORD	**Divnogorie**	**66.04**	**316**	*e*P	**P**	**19 31 06.9**	**-0.9**
VORD				pmax	pmax		
	comp=Z,50nm,0.9s						
WHY	**Whitehorse**	**66.10**	**32**	P	**P**	**19 31 09.0**	**+0.8**
	baz=292,SNR=12						
WHY	**Whitehorse**	**66.10**	**32**	P	**P**	**19 31 08.4**	**+0.2**
WHY				IAmb	IAmb	19 31 15.3	
	comp=Z,147nm,1.6s						
OBN	**Obninsk**	**66.11**	**321**	⇓P	**P**	**19 31 08.1**	**0.0**
OBN	**Obninsk**	**66.11**	**321**	P	**P**	**19 31 07.6**	**-0.6**
	comp=Z,17nm,0.8s,baz=51,slow=12,SNR=21						
OBN	**Obninsk**	**66.11**	**321**	*c i*P	**P**	**19 31 07.9**	**-0.3**
OBN				*i*		19 31 15.1	
OBN				*i* S	**S**	**19 40 00.0**	**+4.4**
OBN				*i* SS	**SS**	**19 44 13.3**	**+2.7**
OBN				pmax	pmax		
	comp=Z,192nm,1.3s						
OBN				MLR	MLR		
	comp=Z,14µm,17.0s						
OBN	**Obninsk**	**66.11**	**321**	P	**P**	**19 31 07.2**	**-0.9**
KZRT	**Kazreti**	**66.17**	**305**	P	**P**	**19 31 09.5**	**+0.5**
ALE	**Alert**	**66.18**	**2**	IAMs_20	IAMs_20	19 58 35.1	
	comp=Z,4µm,19.0s						
FARO	**Faro, Yukon**	**66.20**	**30**	P	**P**	**19 31 09.4**	**+0.6**
	baz=292,SNR=31						
DGAR	**Diego Garcia**	**66.22**	**244**	IAMs_20	IAMs_20	20 01 56.5	
	comp=Z,3µm,18.0s						
SKAG	**Skagway**	**66.34**	**34**	P	**P**	**19 31 11.2**	**+1.6**
	baz=292,SNR=5.3						
KBZ	**Khabaz**	**66.35**	**308**	P	**P**	**19 31 09.8**	**-0.2**
	comp=Z,128nm,0.9s,baz=74,slow=4.5,SNR=115						
KBZ	**Khabaz**	**66.35**	**308**	*i* P	**P**	**19 31 09.8**	**-0.2**
KBZ				pmax	pmax		
	comp=Z,158nm,0.9s						
KBZ				MLR	MLR		
	comp=Z,5µm,15.2s						
KTK1	**Kautokeino**	**66.37**	**338**	*e*P	**P**	**19 31 09.8**	**+0.1**
GNI	**Garni**	**66.39**	**304**	P	**P**	**19 31 10.7**	**+0.2**
GNI	**Garni**	**66.39**	**304**	*ce*P	**P**	**19 31 11.2**	**+0.7**
GNI				pmax	pmax		
	comp=Z,144nm,1.3s						
GNI				MLR	MLR		
	comp=Z,4µm,21.0s						
GNI	**Garni**	**66.39**	**304**	P	**P**	**19 31 09.7**	**-0.8**
ONI	**Oni**	**66.39**	**307**	P	**P**	**19 31 09.7**	**-0.6**
ONI	**Oni**	**66.39**	**307**	P	**P**	**19 31 10.3**	**0.0**
ONI				IAmb	IAmb	19 31 12.7	
	comp=Z,82nm,0.9s						
KIV	**Kislovodsk**	**66.41**	**308**	⇑P	**P**	**19 31 10.7**	**+0.2**
KIV	**Kislovodsk**	**66.41**	**308**	*i* P	**P**	**19 31 10.5**	**0.0**
	SNR=76						
KIV	**Kislovodsk**	**66.41**	**308**	*e*P	**P**	**19 31 10.4**	**0.0**
KIV				*e*S	**S**	**19 39 59.2**	**-0.7**
KIV				pmax	pmax		
	comp=Z,227nm,1.0s						
KIV				pmax	pmax		
	comp=Z,72nm,3.0s						
KIV	**Kislovodsk**	**66.41**	**308**	P	**P**	**19 31 10.1**	**-0.3**
SHAO	**Shalim**	**66.76**	**278**	*i* P	**P**	**19 31 12.3**	**-0.6**
	SNR=6.1						
BGD	**Bogdanovka**	**66.78**	**305**	P	**P**	**19 31 15.3**	**+2.3**
AKH	**Akhalkalaki**	**66.80**	**305**	⇑P	**P**	**19 31 14.2**	**+1.1**
AKH	**Akhalkalaki**	**66.80**	**305**	P	**P**	**19 31 14.0**	**+0.9**
MMPY	**Sheldon Lake,**	**66.94**	**30**	P	**P**	**19 31 14.6**	**+1.1**
	baz=294,SNR=13						
JETT	**Jettan, Norway**	**67.02**	**339**	*e*P	**P**	**19 31 14.6**	**+0.7**
EUNU	**Eureka**	**67.10**	**6**	P	**P**	**19 31 13.3**	**-1.0**
EUNU				IAmb	IAmb	19 31 20.7	
	comp=Z,142nm,1.9s						
P33M	**Teslin, Yukon**	**67.22**	**32**	P	**P**	**19 31 16.2**	**+0.9**
	baz=293,SNR=24						
CHVG	**Ch'k'valeri**	**67.28**	**307**	⇓P	**P**	**19 31 16.7**	**+0.8**
KARS	**Kars**	**67.39**	**305**	P	**P**	**19 31 16.8**	**0.0**
KARS				pmax	pmax		
	comp=Z,331nm,1.2s						
KARS	**Kars**	**67.39**	**305**	P	**P**	**19 31 16.8**	**0.0**
SLWR	**Sila**	**67.40**	**285**	P	**P**	**19 31 16.8**	**-0.2**
TRO	**Tromso**	**67.43**	**339**	*e*P	**P**	**19 31 16.3**	**-0.1**
PUL	**Pulkovo**	**67.47**	**327**	*ce*P	**P**	**19 31 17.7**	**+1.0**
PUL				pmax	pmax		
	comp=Z,122nm,0.9s						
PUL				MLR	MLR		
	comp=Z,15µm,16.0s						
DOK	**Doka**	**67.76**	**279**	P	**P**	**19 31 18.2**	**-1.0**
DOK				P	**P**	**19 31 18.2**	**-1.0**
YNG	**Young**	**67.90**	**163**	P	**P**	**19 31 22.6**	**+2.9**
	comp=Z,35nm,1.4s						
MSVF	**Nonsavu**	**67.96**	**129**	P	**P**	**19 31 21.5**	**+1.0**
MSVF				pmax	pmax		
	comp=Z,101nm,1.1s						
MSVF	**Nonsavu**	**67.96**	**129**	P	**P**	**19 31 21.5**	**+1.0**
MSVF				IAmb	IAmb	19 31 29.0	
	comp=Z,101nm,1.1s						
MSVF	**Nonsavu**	**67.96**	**129**	P	**P**	**19 31 22.2**	**+1.7**

BCA	Borcka	68.09	306	⇑P	P	19 31 20.9	-0.1
DGTI	Dogotuki	68.09	127	P	P	19 31 23.1	+1.9
UMR	Umm Al-Rimmam	68.31	292	*e*P	P	19 31 20.7	-1.9
KBD	Kabd	68.49	292	*e*P	P	19 31 21.8	-1.9
QRN	Al-Qurain	68.49	291	*e*P	P	19 31 22.4	-1.4
MIB	Mutribah	68.51	293	*e*P	P	19 31 22.5	-1.4
SOC	Sochi	68.54	309	*e*P	P	19 31 21.5	-2.3
SOC				*e*		19 33 51.7	
SOC				*e*PPP	PPP	19 35 30.5	
SOC				*e*S	S	19 40 22.5	-2.8
SOC				*e*SS	SS	19 44 48.1	-0.7
SOC				pmax	pmax		
	comp=Z,63nm,0.8s						
SOC				MLR	MLR		
	comp=Z,10µm,21.0s						
FIA1	FINESS Array S	68.65	330	P	P	19 31 23.3	-0.9
FIA1				IAmb	IAmb	19 31 30.1	
	comp=Z,60nm,0.8s						
FINES	FINESS Array B	68.65	330	P	P	19 31 23.6	-0.5
	comp=Z,65nm,0.8s,baz=72,slow=6.1,SNR=234						
FINES				LR	LR	20 03 31.6	
	comp=Z,6µm,19.9s,baz=49,slow=38						
FINES	FINESS Array B	68.65	330	P	P	19 31 23.2	-1.0
TGTN	Hyland Airport	68.68	30	P	P	19 31 25.4	+1.0
	baz=296						
RDF	Al-Radifah	68.71	292	*e*P	P	19 31 23.4	-1.7
ARPS	Mount Arapiles	68.90	169	P	P	19 31 27.9	+2.0
	comp=Z,31nm,1.0s						
GURO	Guroymak-BITLI	68.94	303	P	P	19 31 26.5	-0.1
GURO				IAmb	IAmb	19 31 34.5	
	comp=Z,57nm,1.0s						
CAN	Canberra	69.03	162	P	P	19 31 27.2	+0.4
CAN				pmax	pmax		
	comp=Z,123nm,1.6s						
CAN				MLR	MLR		
	comp=Z,2µm,22.0s						
CAN	Canberra	69.03	162	P	P	19 31 27.2	+0.4
CAN				IAmb	IAmb	19 31 47.6	
	comp=Z,123nm,1.6s						
CAN	Canberra	69.03	162	P	P	19 31 28.5	+1.7
ABTO	Aybut	69.04	278	P	P	19 31 26.5	-0.9
ABTO				P	P	19 31 26.5	-0.9
SIRT	Sirnak	69.08	302	P	P	19 31 26.8	-0.6
DLBC	Dease Lake	69.27	33	P	P	19 31 29.7	+1.5
	comp=Z,32nm,1.1s,baz=320,slow=6.6,SNR=7.3						
DLBC	Dease Lake	69.27	33	P	P	19 31 28.7	+0.5
DLBC				IAmb	IAmb	19 31 34.8	
	comp=Z,61nm,1.2s						
STEI	Steigen	69.47	338	*e*P	P	19 31 29.1	-0.1
ANN	Anapa	69.56	311	*e*P	P	19 31 28.3	-1.8
ANN				*e*S	S	19 40 41.3	+4.1
ANN				pmax	pmax		
	comp=Z,207nm,1.0s						
VSU	Vasula	69.70	327	*e*P	P	19 31 31.3	+0.6
VSU	Vasula	69.70	327	*i* P	P	19 31 29.9	-0.8
VSU				pmax	pmax		
	comp=Z,312nm,1.0s						
VSU				MLR	MLR		
	comp=Z,43µm,15.0s						
FAUS	Fauske	69.76	338	*e*P	P	19 31 30.7	-0.2
LOF	Lofoten	69.89	339	*e*P	P	19 31 31.5	-0.2
BRAT	Ballarat	70.03	167	P	P	19 31 35.9	+3.1
	comp=Z,22nm,0.8s						
DAG	Danmarks Havn	70.22	352	P	P	19 31 33.6	0.0
DAG				pmax	pmax		
	comp=Z,52nm,1.6s						
DAG	Danmarks Havn	70.22	352	*i* P	P	19 31 33.2	-0.4
DAG				IAmb	IAmb	19 31 39.3	
	comp=Z,62nm,1.3s						
TOO	Toolangi	70.36	166	P	P	19 31 36.4	+1.5
TOO				pmax	pmax		
	comp=Z,66nm,1.5s						
TOO	Toolangi	70.36	166	P	P	19 31 36.4	+1.5
TOO	Toolangi	70.36	166	P	P	19 31 37.8	+2.9
	comp=Z,29nm,1.2s						
RES	Resolute Bay	70.39	11	P	P	19 31 34.9	+0.2
RES				pmax	pmax		
	comp=Z,57nm,1.0s						
RES	Resolute Bay	70.39	11	P	P	19 31 34.9	+0.2
RES				IAmb	IAmb	19 31 36.3	
	comp=Z,57nm,0.9s						
MOR8	Moi Rana	70.71	337	*e*P	P	19 31 35.6	-1.3
SOCY	Socotra	70.89	273	P	P	19 31 36.8	-2.0
SOCY				IAMs_20	IAMs_20	20 02 16.9	
	comp=Z,4µm,19.0s						
MTSE	Matsula	70.93	328	*e*P	P	19 31 38.7	+0.5
MNK	Minsk	70.95	323	*i* P	P	19 31 37.1	-1.3
MNK				*i* *PP	sP	19 31 45.1	-0.9
MNK				*i*		19 34 14.5	
MNK				*i* PPP	PPP	19 35 59.0	
MNK				*i* S	S	19 40 51.8	-1.3
MNK				*i*		19 41 39.0	
MNK				*i* SS	SS	19 45 26.0	+0.7
MNK				pmax	pmax		
	comp=Z,183nm,1.0s						
MNK				pmax	pmax		
	comp=E,24nm,1.4s						
MNK				pmax	pmax		
	comp=N,47nm,1.1s						
MNK				MLR	MLR		
	comp=N,6µm,12.0s						
MNK				MLR	MLR		
	comp=Z,13µm,15.0s						
MNK				MLR	MLR		
	comp=E,2µm,14.0s						
MNK	Minsk	70.95	323	*i* P	P	19 31 37.2	-1.2
	comp=E,24nm,1.4s						
MNK				*i* P	P	19 31 37.2	-1.2
	comp=N,47nm,1.1s						
MNK				*i* P	P	19 31 37.2	-1.2
	comp=Z,183nm,1.0s,baz=63						
MNK				*i* pP	sP	19 31 45.1	-0.9
MNK				*i* PP	PP	19 34 14.6	-0.7
MNK				*i* PPP	PPP	19 35 59.1	
MNK				*i* S	S	19 40 51.8	-1.3
MNK				*i* sS	sS	19 41 05.3	+3.0
MNK				*i* SS	SS	19 45 26.0	+0.7
MNK				*i* SSS	SSS	19 48 44.2	
MNK				*i* LQ	LQ	19 57 57.4	
MNK				*i* LR	LR	20 02 50.0	
MNK				*i* LRM	MLR	20 05 19.5	
	comp=N,6µm,12.2s						
MNK				*i* LRM	MLR	20 05 19.5	
	comp=Z,13µm,15.4s						
MNK				*i* LRM	MLR	20 05 32.4	
	comp=E,2µm,14.2s						
KONS	Konsvik	70.96	338	*e*P	P	19 31 38.2	-0.1
STOK	Stokkvaagen	71.09	337	*e*P	P	19 31 38.8	-0.2
NACGM	Naroch	71.33	323	*i* P	P	19 31 41.0	+0.3
NEEM	North Greenlan	71.41	360	*i* P	P	19 31 41.3	+0.1
NEEM				IAmb	IAmb	19 31 42.5	
	comp=Z,25nm,0.8s						
MALT	Malatya	71.61	304	P	P	19 31 43.5	+0.6
SIM	Simferopol'	71.63	312*c*	*i*P	P	19 31 41.5	-1.2
SIM				*e*		19 34 22.0	
SIM				pmax	pmax		
	comp=Z,88nm,0.9s						
SIM				MLR	MLR		
	comp=Z,3µm,25.0s						
TULEG	Thule	71.75	4	P	P	19 31 42.2	-0.8
TULEG				IAMs_20	IAMs_20	20 08 23.2	
	comp=Z,4µm,19.0s						
AKASG	Malin Array Be	71.98	319	P	P	19 31 44.0	-0.7
	comp=Z,52nm,0.9s,baz=52,slow=6.3,SNR=78						
AKASG				LR	LR	20 06 04.0	
	comp=Z,12µm,18.2s,baz=50,slow=38						
AKASG	Malin Array Be	71.98	319	P	P	19 31 43.6	-1.1
AKASG				IAmb	IAmb	19 31 45.4	
	comp=Z,94nm,1.1s						
AKBB	Malin Array Si	71.98	319*c*	*e*P	P	19 31 44.0	-0.7
AKBB	Malin Array Si	71.98	319	P	P	19 31 43.7	-1.0
AKBB				IAmb	IAmb	19 31 46.0	
	comp=Z,71nm,0.9s						
KIEV	Kiev	71.99	319	P	P	19 31 43.0	-1.8
KVT	Kavak	72.06	307	P	P	19 31 46.5	+1.0
SLIT	Slitere, Latvi	72.17	327	*e*P	P	19 31 45.8	+0.1
DIKM	Dikmen	72.34	308	⇑P	P	19 31 47.9	+0.8
PABE	Paberze	72.44	325	*e*P	P	19 31 48.2	+0.8
PABE	Paberze	72.44	325	P	P	19 31 46.8	-0.6
NSS	Namsos	72.52	336	*e*P	P	19 31 47.4	-0.3
RAYN	Ar Rayn	72.72	287	*i* P	P	19 31 49.2	-0.5
	SNR=29						
RAYN	Ar Rayn	72.72	287	P	P	19 31 48.7	-1.0
RAYN				pmax	pmax		
	comp=Z,201nm,1.4s						
RAYN				MLR	MLR		
	comp=Z,700nm,20.0s						
RAYN	Ar Rayn	72.72	287	P	P	19 31 48.7	-1.0
GAZ	Gaziantep	72.98	303	P	P	19 31 50.4	-0.7
GAZ				IAmb	IAmb	19 31 52.2	
	comp=Z,95nm,0.9s						
BZK	Bozkurt	73.04	309	⇓P	P	19 31 50.9	-0.3
UPP	Uppsala	73.05	331	*e*P	P	19 31 50.8	-0.1
PBUR	Paburge	73.17	326	*e*P	P	19 31 52.4	+0.7
BNN	Bunyan	73.19	305	P	P	19 31 52.1	-0.3
BNN				IAmb	IAmb	19 31 54.0	
	comp=Z,123nm,1.0s						
PURM	Purcari	73.55	315	⇓P	P	19 31 53.6	-0.5
SUW	Suwalki	73.59	324	*e*P	P	19 31 53.6	-0.6
SUW				*e*sP	sP	19 32 02.0	+0.1
SUW				*e*L	L	20 07 27.3	
	comp=Z,15µm,17.4s						
SUW	Suwalki	73.59	324	*e*P	P	19 31 54.6	+0.4
SUW	Suwalki	73.59	324	P	P	19 31 53.4	-0.9
SUW				pmax	pmax		
	comp=Z,305nm,1.0s						
SUW				MLR	MLR		
	comp=Z,12µm,18.0s						
SUW	Suwalki	73.59	324	P	P	19 31 53.4	-0.9
YKA	Yellowknife Ar	73.64	26	P	P	19 31 55.3	+0.9
	comp=Z,18nm,0.9s,baz=311,slow=4.9,SNR=35						
YKA	Yellowknife Ar	73.64	26	P	P	19 31 55.1	+0.8
SORM	Soroca	73.69	317	⇑P	P	19 31 54.3	-0.6
TBLU	Trondheim	73.90	336	*e*P	P	19 31 54.8	-1.1
KIS	Kishinev	73.96	315	*e*P	P	19 31 59.0	+2.4
	comp=Z,200nm,2.4s						
KIS	Kishinev	73.96	315	*e*PP	PP	19 34 48.0	+6.8
KIS				*e*L	L	20 00 52.0	
	comp=Z,4µm,15.0s						
KIS				*e*LR	LR	20 04 06.0	
	comp=Z,3µm,16.0s						
KIS	Kishinev	73.96	315	*e*P	P	19 31 59.0	+2.4
KIS				*e*		19 32 10.0	
KIS				*e*		19 34 48.0	
KIS				pmax	pmax		
	comp=Z,200nm,2.4s						
KIS				pmax	pmax		
	comp=N,4µm,15.0s						
KIS				MLR	MLR		
	comp=Z,3µm,16.0s						
MILM	Milestii Mici	74.00	315	⇓P	P	19 31 56.4	-0.4
MILM	Milestii Mici	74.00	315	*e*P	P	19 31 56.0	-0.8
MILM				*e*		19 32 06.0	
HORU	Horodok	74.28	318	P	P	19 31 58.0	-0.4
BR131	Keskin Array S	74.31	307*d*	*i*P	P	19 31 58.3	-0.6
BR131	Keskin Array S	74.31	307	P	P	19 31 58.3	-0.6
BR131				IAmb	IAmb	19 32 00.7	
	comp=Z,129nm,0.9s						
BRTR	Keskin Array B	74.31	307	P	P	19 31 58.8	-0.2
	comp=Z,67nm,0.9s,baz=96,slow=4.0,SNR=198						
BRTR				LR	LR	20 09 40.7	
	comp=Z,4µm,19.6s,baz=71,slow=40						
BRTR	Keskin Array B	74.31	307	*i* P	P	19 31 58.7	-0.2
BRTR				pmax	pmax		
	comp=Z,68nm,0.9s						
BRTR	Keskin Array B	74.31	307	P	P	19 31 58.6	-0.4
HFS	Hagfors	74.51	332	P	P	19 31 58.7	-0.8
	comp=Z,32nm,0.8s,baz=93,slow=6.4,SNR=30						
IAS	Iasi	74.62	316	⇓P	P	19 32 00.2	-0.1
IAS	Iasi	74.62	316	P	P	19 32 01.7	+1.3
NC405	NORSAR Array S	74.69	333	P	P	19 31 59.2	-1.4
VASR	Vaslui	74.75	315	⇑P	P	19 32 01.6	+0.4
ANTO	Ankara	74.82	308	P	P	19 32 01.3	-0.5
ANTO				pmax	pmax		
	comp=Z,53nm,1.0s						
ANTO				MLR	MLR		
	comp=Z,3µm,20.0s						
ANTO	Ankara	74.82	308	P	P	19 32 01.3	-0.5
ANTO				IAMs_20	IAMs_20	20 10 17.7	
	comp=Z,3µm,20.0s						
BR231	Keskin MP Arra	74.84	308	P	P	19 32 01.8	-0.2
BR231				IAmb	IAmb	19 32 17.3	
	comp=Z,214nm,1.8s						
TLCR		74.84	314	⇓P	P	19 32 02.1	+0.4
NB2	NORSAR Subarra	74.93	333	P	P	19 32 00.9	-1.1
	comp=Z,80nm,1.1s,baz=51,slow=5.9						
NB2	NORSAR Subarra	74.93	333	P	P	19 32 00.9	-1.1
	baz=51,slow=5.9						
NOA	NORSAR Array B	74.93	333	P	P	19 32 00.8	-1.2
	comp=Z,47nm,1.0s,baz=51,slow=5.8,SNR=55						
NOA				LR	LR	20 08 05.4	
	comp=Z,4µm,18.4s,baz=60,slow=38						
NC602	NORSAR Array S	74.99	333	*e*P	P	19 32 01.9	-0.3
NORES	NORESS Array B	74.99	333	P	P	19 32 01.7	-0.6
BIR	Birlad	75.04	315	⇑P	P	19 32 03.9	+1.1
XMAS	Kiritimati	75.06	97	P	P	19 32 03.2	-0.2
XMAS				IAmb	IAmb	19 32 11.8	
	comp=Z,164nm,1.2s						
VARL	Varlezi	75.08	315	⇓P	P	19 32 03.6	+0.5
DOMB	Dombas	75.09	335	*e*P	P	19 32 02.6	-0.3
TPGR	Topolog	75.25	314	⇑P	P	19 32 04.0	-0.1
CFR	Carcaliu	75.27	314	⇑P	P	19 32 03.6	-0.5
MOL	Molde	75.29	336	*e*P	P	19 32 04.1	+0.2
IZVR	Izvoarele	75.31	315	⇓P	P	19 32 05.3	+0.9
LVV	L'vov	75.31	320	*e*P	P	19 32 03.0	-1.3
LVV				*e*		19 32 18.1	
LVV				*e*		19 34 59.7	
LVV				*e*S	S	19 41 40.2	-2.7
LVV				*e*PS	PnS	19 42 08.1	-11
LVV				pmax	pmax		
	comp=Z,220nm,1.5s						
LVV				MLR	MLR		
	comp=N,6µm,17.0s						
LVV				MLR	MLR		
	comp=Z,14µm,17.0s						
PRAR	RASCA	75.32	317	⇑P	P	19 32 04.6	+0.1
TIRR	Tirgusor	75.45	313	⇓P	P	19 32 05.8	+0.6
TIRR	Tirgusor	75.45	313	P	P	19 32 05.3	+0.1
TIRR				pmax	pmax		
	comp=Z,616nm,1.8s						
TIRR				MLR	MLR		
	comp=Z,23µm,20.0s						
TIRR	Tirgusor	75.45	313	P	P	19 32 05.3	+0.1
TESR	Tescani	75.50	316	⇑P	P	19 32 05.2	-0.3
ASF	Jabal al Asfar	75.50	299	P	P	19 32 06.0	+0.1
	comp=Z,29nm,0.9s,baz=61,slow=1.5,SNR=38						
ASF	Jabal al Asfar	75.50	299	P	P	19 32 06.0	+0.1
KSV	Kosov	75.51	318	P	P	19 32 05.3	-0.2
MFTR	Murfatlar	75.58	313	⇑P	P	19 32 06.3	+0.3
MDUB	Mudurnu	75.61	309	P	P	19 32 05.7	-0.6
ODBI	Odobesti	75.63	315	⇓P	P	19 32 07.5	+1.2
TLBR	Topalu	75.64	314	⇓P	P	19 32 06.0	-0.3
AKN	Aaknes	75.74	336	*e*P	P	19 32 06.8	+0.2
MORS	Morshin	75.75	319	P	P	19 32 07.4	+0.6
BUR08	Bucovina Ar. S	75.78	317	P	P	19 32 06.9	-0.3
VRI	Vrincioaia	75.78	315	⇓P	P	19 32 07.8	+0.6
VRI	Vrincioaia	75.78	315	P	P	19 32 07.7	+0.6
BURAR	Bucovina Array	75.78	317	⇑P	P	19 32 07.2	0.0
BURAR	Bucovina Array	75.78	317	P	P	19 32 06.7	-0.5
BURAR				IAmb	IAmb	19 32 08.9	
	comp=Z,41nm,0.7s						
OSL	Oslo	75.81	333	*e*P	P	19 32 07.0	+0.1
PLOR	Plostina	75.83	315	⇑P	P	19 32 07.5	0.0
SUMG	Summit	75.93	356	P	P	19 32 08.3	+0.3
SUMG				pmax	pmax		
	comp=Z,93nm,1.0s						
SUMG				MLR	MLR		
	comp=Z,6µm,19.0s						
SUMG	Summit	75.93	356	*i* P	P	19 32 08.3	+0.3
SUMG				IAmb	IAmb	19 32 10.2	
	comp=Z,91nm,1.0s						
SUMG	Summit	75.93	356	P	P	19 32 08.3	+0.3
SUMG				IAmb	IAmb	19 32 10.5	
	comp=Z,93nm,1.0s						
BISRR	Bisoca	75.95	315	⇑P	P	19 32 08.8	+0.6
BEL	Belsk	75.98	323	*e*P	P	19 32 08.7	+0.6
BEL				*e*L	L	20 08 40.1	
	comp=Z,23µm,16.4s						
BEL	Belsk	75.98	323	P	P	19 32 09.2	+1.1
BEL				pmax	pmax		
	comp=Z,239nm,1.0s						
ICOR	Ion Corvin	76.00	313	⇑P	P	19 32 09.0	+0.6
COVR	Voineasa-Covas	76.11	315	⇓P	P	19 32 08.8	-0.2
KWP	Kalwaria Pacla	76.14	320	*e*P	P	19 32 09.1	0.0
KWP				*e*PcP	PcP	19 32 20.1	-1.1
KWP				*e*L	L	20 08 28.9	
	comp=Z,17µm,17.9s						
KWP	Kalwaria Pacla	76.14	320	P	P	19 32 09.1	0.0
KWP	Kalwaria Pacla	76.14	320	P	P	19 32 09.1	0.0
MMAI	Mount Meron Ar	76.22	300	P	P	19 32 09.5	-0.5
	comp=Z,17nm,0.8s,baz=92,slow=6.2,SNR=23						
OZUR		76.23	316	⇓P	P	19 32 10.1	+0.4
SKAR	Skarslia	76.26	334	*e*P	P	19 32 10.1	+0.5
SCO	Scoresbysund	76.26	350	P	P	19 32 09.5	+0.1
SCO				pmax	pmax		
	comp=Z,80nm,1.2s						
SCO				MLR	MLR		
	comp=Z,3µm,20.0s						
SCO	Scoresbysund	76.26	350	*i* P	P	19 32 10.3	+0.9
SCO				IAmb	IAmb	19 32 11.1	
	comp=Z,77nm,1.2s						
SCO	Scoresbysund	76.26	350	P	P	19 32 09.5	+0.1
SCO				IAmb	IAmb	19 32 12.0	
	comp=Z,80nm,1.2s						
SCO				IAMs_20	IAMs_20	20 04 45.7	
	comp=Z,3µm,20.0s						
KONO	Kongsberg	76.43	333	P	P	19 32 10.8	+0.3
KONO				pmax	pmax		
	comp=Z,33nm,1.0s						
KONO				MLR	MLR		
	comp=Z,11µm,19.0s						
KONO	Kongsberg	76.43	333	*e*P	P	19 32 10.3	-0.2
KONO	Kongsberg	76.43	333	P	P	19 32 10.8	+0.3
MLR	Muntele Rosu	76.44	315	⇑P	P	19 32 11.4	+0.4
MLR	Muntele Rosu	76.44	315	P	P	19 32 11.6	+0.6
	comp=Z,23nm,1.0s,baz=350,slow=3.9,SNR=14						
MLR	Muntele Rosu	76.44	315	P	P	19 32 11.1	+0.1
DOPR	Dopca	76.53	316	⇑P	P	19 32 11.9	+0.5
ARCR	ARCALIA	76.56	317	⇑P	P	19 32 12.2	+0.7
SECR		76.60	315	⇑P	P	19 32 12.3	+0.5
SULR		76.67	314	⇑P	P	19 32 13.1	+0.9
BMR	Baia Mare	76.74	318	⇑P	P	19 32 12.4	-0.1
KOLS	Kolonicke sedl	76.76	320	*e*P	P	19 32 12.8	+0.2
KOLS				pmax	pmax		
	comp=Z,56nm,1.5s						
KOLS	Kolonicke sedl	76.76	320	*e*P	P	19 32 12.8	+0.2
CSS	Mathiatis	76.79	303	P	P	19 32 13.0	-0.1
CSS				IAMs_20	IAMs_20	20 11 50.3	
	comp=Z,3µm,20.0s						
TRSU	Trosnyk	76.82	319	P	P	19 32 13.4	+0.4
UZH	Uzhgorod	76.91	319	*e*P	P	19 32 11.4	-2.0
UZH				*e*		19 32 19.1	
UZH				*e*		19 32 26.1	
UZH				*e*S	S	19 41 54.0	-6.5
UZH				MLR	MLR		
	comp=Z,1µm,16.0s						
GHAJ	Ghor Haditha	76.91	299	P	P	19 32 13.6	-0.2
GKP	Gorka Klasztor	76.97	325	*e*P	P	19 32 14.6	+1.0
BSD	Bornholm Skovb	76.98	327	*e*P	P	19 32 14.1	+0.4
BSD				IAmb	IAmb	19 32 14.5	
	comp=Z,113nm,0.8s						
VOIR		77.01	315	⇑P	P	19 32 14.7	+0.5
LEF	Lefka	77.03	303	⇑P	P	19 32 14.2	-0.2
TRPA	Tarpa	77.04	319	⇑P	P	19 32 14.6	+0.4
TRPA	Tarpa	77.04	319	*e*P	P	19 32 14.4	+0.2
CRVS	Cervenica-Dubn	77.22	320	*e*P	P	19 32 15.5	+0.3
CRVS				pmax	pmax		
	comp=Z,89nm,1.5s						
CRVS	Cervenica-Dubn	77.22	320	*e*P	P	19 32 15.5	+0.3
SUE	Sulen	77.29	336	*e*P	P	19 32 15.6	+0.2
ARR	Arges	77.30	316	⇑P	P	19 32 16.0	+0.2
LLLB	Lillooet	77.31	38	P	P	19 32 15.7	0.0
MESR	Meseseni	77.34	318	⇓P	P	19 32 16.7	+0.8
ISP	Isparta	77.36	307	P	P	19 32 15.4	-1.0
ISP				pmax	pmax		
	comp=Z,157nm,1.7s						
ISP				MLR	MLR		
	comp=Z,3µm,20.0s						
ISP	Isparta	77.36	307	P	P	19 32 15.4	-1.0
ISP				IAmb	IAmb	19 32 25.9	
	comp=Z,157nm,1.7s						
ISP	Isparta	77.36	307	IAMs_20	IAMs_20	20 11 40.0	
	comp=Z,3µm,20.0s						
ODD1	Odda	77.39	334	*e*P	P	19 32 15.9	-0.1
HUMR	Humele	77.53	315	⇑P	P	19 32 16.5	-0.5
ASK	Askoy	77.53	335	*e*P	P	19 32 16.7	+0.1
NIE	Niedzica	77.57	321	*e*P	P	19 32 17.8	+0.6
NIE				*e*PcP	sP	19 32 25.8	+1.0
NIE				*e*L	L	20 09 38.9	
	comp=Z,7µm,19.8s						
DRGR		77.67	317	⇑P	P	19 32 17.8	-0.1
DRGR		77.67	317	P	P	19 32 18.0	+0.2
HOMB	Homborsund	77.76	332	*e*P	P	19 32 17.9	-0.1
LOT	Lotru	77.77	316	⇑P	P	19 32 18.5	0.0
EDC	Edincik	77.88	310	P	P	19 32 19.1	+0.1
KECS	Kecovo	77.99	320	*e*P	P	19 32 19.5	0.0
KECS	Kecovo	77.99	320	*e*P	P	19 32 19.5	0.0
VLAD	Vladila	78.16	314	⇑P	P	19 32 20.8	+0.3
EIL	Elat	78.17	297	P	P	19 32 19.7	-1.1
	comp=Z,8.4nm,0.8s,baz=156,slow=3.8,SNR=10						
EIL				PP	PP	19 35 19.8	+2.6
	comp=Z,20nm,1.1s,baz=74,slow=4.3,SNR=5.4						
LANS	Liptovska Anna	78.17	321	*e*P	P	19 32 22.4	+1.8
LANS				pmax	pmax		
	comp=Z,11nm,0.9s						
LANS	Liptovska Anna	78.17	321	*e*P	P	19 32 22.4	+1.8
BALB	Balikesir	78.23	309	P	P	19 32 20.3	-0.7
SNART	Snartemo	78.23	333	*e*P	P	19 32 20.5	-0.1
GOET	G??ttrup	78.28	331	IAmb	IAmb	19 32 22.1	
	comp=Z,301nm,1.1s						
GOET				*e*P	P	19 32 22.4	+1.5
KULA	Kula-Manisa	78.28	308	P	P	19 32 20.6	-0.8
ELL	Elmali	78.32	306	P	P	19 32 20.9	-0.8
ELL				pmax	pmax		
	comp=Z,254nm,1.1s						
ELL	Elmali	78.32	306	P	P	19 32 20.9	-0.8
MSEY	Mahe Island	78.33	257	P	P	19 32 21.5	-0.5
MSEY	Mahe Island	78.33	257	P	P	19 32 21.5	-0.5
MSEY				pmax	pmax		
	comp=Z,51nm,1.1s						
MSEY				MLR	MLR		
	comp=Z,4µm,21.0s						
MSEY	Mahe Island	78.33	257	P	P	19 32 21.5	-0.5
MSEY	Mahe Island	78.33	257	IAMs_20	IAMs_20	20 03 40.1	
	comp=Z,4µm,21.0s						
PLVB	Pleven	78.35	314	⇑P	P	19 32 21.5	-0.1
D03D	Eldon	78.38	41	P	P	19 32 25.3	+3.6
	baz=304,SNR=9.7						
GZR	Gura Zlata	78.39	316	⇑P	P	19 32 22.1	+0.2
OKC	Ostrava-Krasne	78.49	322	*e*P	P	19 32 22.4	+0.2
OKC				MLR	MLR		
	comp=Z,7µm,14.6s						
OKC	Ostrava-Krasne	78.49	322	*e*P	P	19 32 22.4	+0.2
OKC				AMS	AMS	20 09 50.0	
	comp=Z,7µm,14.6s						
B05A	Bryant	78.52	40	P	P	19 32 26.0	+3.6
	baz=304,SNR=6.5						
SIRR	Siria	78.56	317	⇓P	P	19 32 23.1	+0.3
PSZ	Piszkesteto	78.64	320	⇑P	P	19 32 23.9	+0.6
PSZ	Piszkesteto	78.64	320	*e*P	P	19 32 23.8	+0.6
PSZ	Piszkesteto	78.64	320	P	P	19 32 22.8	-0.4
PSZ				pmax	pmax		
	comp=Z,92nm,1.4s						
PSZ				MLR	MLR		
	comp=Z,12µm,19.0s						
PSZ	Piszkesteto	78.64	320	P	P	19 32 22.8	-0.4
PSZ				IAmb	IAmb	19 32 35.1	
	comp=Z,92nm,1.4s						
MUD	Monsted U'grnd	78.68	331	*e*P	P	19 32 23.9	+0.8
MUD				IAmb	IAmb	19 32 24.1	
	comp=Z,105nm,0.9s						
ALN	Alexandroupoli	78.77	311	P	P	19 32 21.9	-2.0
ALN	Alexandroupoli	78.77	311	P	P	19 32 23.6	-0.3
ALN				pmax	pmax		
	comp=Z,72nm,1.4s						
ALN	Alexandroupoli	78.77	311	P	P	19 32 23.6	-0.3
MORC	Moravsky Berou	78.84	322	⇑P	P	19 32 24.7	+0.5
MORC	Moravsky Berou	78.84	322	P	P	19 32 24.4	+0.1
MORC				pmax	pmax		
	comp=Z,41nm,1.0s						
MORC	Moravsky Berou	78.84	322	*e*P	P	19 32 24.3	+0.1
MORC	Moravsky Berou	78.84	322	P	P	19 32 24.4	+0.1
KSP	Ksiaz	78.86	323	*e*P	P	19 32 24.4	+0.1
KSP				*e*PcP	sP	19 32 31.3	-0.7
KSP				*e*L	L	20 10 53.7	
	comp=Z,16µm,17.4s						
KSP	Ksiaz	78.86	323	P	P	19 32 24.8	+0.5
KSP				pmax	pmax		
	comp=Z,66nm,1.0s						
HERR	Herculane	78.88	316	⇑P	P	19 32 24.4	-0.1
VYHS	Vyhne	78.89	320	*e*P	P	19 32 25.2	+0.7

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VYHS                                 pmax    pmax
      comp=Z,74nm,1.2s
VYHS  Vyhne            78.89 320   eP      P        19 32 25.2 +0.7
PUNG  Punghina         78.90 315  ⇓P       P        19 32 25.2 +0.6
BZS   Buzias           78.95 317  ⇑P       P        19 32 24.5 -0.3
FETY  Fethiye          78.95 306   P       P        19 32 24.1 -1.0
RDO   Rodhopi          78.97 312   P       P        19 32 24.6 -0.4
KRLC  Kraliky          79.06 323   eP      P        19 32 25.6 +0.1
KRLC                                MLR     MLR
      comp=Z,13µm,14.5s
KRLC  Kraliky          79.06 323   eP      P        19 32 25.6 +0.1
KRLC                                AMS     AMS     20 10 10.0
      comp=Z,13µm,14.5s
OSTC  Ostas            79.07 323   eP      P        19 32 26.0 +0.5
OSTC                                AMS     AMS     20 10 20.0
      comp=Z,15µm,16.4s
RUE   Ruedersdorf      79.12 326   eP      P        19 32 26.8 +1.2
RUE   Ruedersdorf      79.12 326   eP      P        19 32 27.0 +1.4
      comp=Z,138nm,1.3s,baz=49,slow=5.2
CHVC  Chvalec          79.14 323   eP      P        19 32 26.7 +0.9
CHVC                                AMS     AMS     20 10 30.0
      comp=Z,15µm,16.6s
DPC   Dobruska-Polom   79.14 323   eP      P        19 32 26.5 +0.6
DPC                                eS      S        19 42 28.3 +3.7
DPC                                 MLR     MLR
      comp=Z,15µm,15.6s
DPC   Dobruska-Polom   79.14 323   eP      P        19 32 26.5 +0.6
DPC                                eS      S        19 42 28.3 +3.7
DPC                                 AMS     AMS     20 10 40.0
      comp=Z,15µm,15.6s
EZN   Ezine            79.15 310   P       P        19 32 26.0 -0.1
UPC   Upice            79.20 323   eP      P        19 32 26.4 +0.2
UPC                                 MLR     MLR
      comp=Z,16µm,15.9s
UPC   Upice            79.20 323   eP      P        19 32 26.4 +0.2
UPC                                 AMS     AMS     20 10 40.0
      comp=Z,16µm,15.9s
E04D  Cinebar          79.22  42   P       P        19 32 29.4 +3.1
      baz=304,SNR=5.4
GADA  Gvkgeada         79.24 311   P       P        19 32 25.4 -1.1
YER   Yerkesik         79.25 307   P       P        19 32 26.2 -0.5
YER   Yerkesik         79.25 307   P       P        19 32 27.1 +0.4
JAVC  Velka Javorina   79.31 321   eP      P        19 32 28.0 +1.1
SMTH  Samothraki Isl   79.33 311   P       P        19 32 26.7 -0.4
MDVR  Moldovita        79.35 316  ⇑P       P        19 32 26.7 -0.5
BLCB  Balcova          79.44 309   P       P        19 32 26.9 -0.7
ICESG Greenland Ices   79.45 356⇑iP        P        19 32 28.1 +0.5
ICESG                               IAmb    IAmb    19 32 29.1
      comp=Z,148nm,1.0s
PRK   Paraskevi        79.49 310   P       P        19 32 28.6 +0.7
SRO2  Moca             79.56 320   eP      P        19 32 27.7 -0.4
SRO2                                pmax    pmax
      comp=Z,22nm,0.9s
SRO2  Moca             79.56 320   eP      P        19 32 27.7 -0.4
SRO   Srobarova        79.57 320   eP      P        19 32 29.3 +1.1
SRO                                 pmax    pmax
      comp=Z,30nm,0.9s
SRO   Srobarova        79.57 320   eP      P        19 32 29.3 +1.1
VRAC  Vranov           79.62 322  ⇑P       P        19 32 29.2 +0.8
VRAC  Vranov           79.62 322   P       P        19 32 29.3 +0.8
      comp=Z,42nm,0.9s,baz=64,slow=5.5,SNR=60
VRAC  Vranov           79.62 322   eP      P        19 32 28.7 +0.2
VTS   Vitosha          79.62 314  ⇑P       P        19 32 29.3 +0.5
VTS   Vitosha          79.62 314   P       P        19 32 28.8  0.0
VTS                                 pmax    pmax
      comp=Z,206nm,1.8s
VTS   Vitosha          79.62 314   P       P        19 32 28.8  0.0
VTS                                 IAmb    IAmb    19 32 46.1
      comp=Z,206nm,1.8s
ILULI Ilulissat        79.69 360   P       P        19 32 28.5 +0.1
ILULI                               pmax    pmax
      comp=Z,79nm,1.3s
ILULI                               MLR     MLR
      comp=Z,4µm,21.0s
ILULI Ilulissat        79.69 360   P       P        19 32 28.5 +0.1
THAS  Thassos island   79.78 311   P       P        19 32 27.9 -1.6
SIGR  SIGRI            79.79 310   P       P        19 32 28.5 -1.0
MODS  Modra-Piesok     79.81 321   eP      P        19 32 29.5  0.0
MODS                                pmax    pmax
      comp=Z,185nm,1.6s
MODS  Modra-Piesok     79.81 321   eP      P        19 32 29.5  0.0
BSEG  Bad Segeberg     79.82 328   eP      P        19 32 30.4 +1.0
      comp=Z,94nm,1.0s,baz=49,slow=5.2
BSEG                               epP     PcP      19 32 36.9 -0.2
      baz=50,slow=5.3
ARG   Arkhangelos      79.83 306   P       P        19 32 30.2 +0.4
LIA   Limnos Island    79.86 311   P       P        19 32 29.7 -0.2
CSKK  Cskako           79.86 320   eP      P        19 32 30.7 +0.9
KRUC  Moravsky         79.87 322   eP      P        19 32 29.9 +0.1
PVCC  Panska Ves       79.93 324   eP      P        19 32 31.0 +0.9
PVCC                                MLR     MLR
      comp=Z,12µm,18.2s
PVCC  Panska Ves       79.93 324   eP      P        19 32 31.0 +0.9
PVCC                                AMS     AMS     20 11 20.0
      comp=Z,12µm,18.2s
SMG   Samos            79.93 308   P       P        19 32 29.6 -0.8
DAT   Datca            79.94 307   P       P        19 32 28.1 -2.5
BODT  Bodrum           79.95 307   P       P        19 32 29.3 -1.2
EDM   Edmonton         79.96  33   P       P        19 32 30.8 +0.5
EDM                                 pmax    pmax
      comp=Z,189nm,1.3s
EDM   Edmonton         79.96  33   P       P        19 32 30.8 +0.5
EDM                                 IAmb    IAmb    19 32 36.3
      comp=Z,189nm,1.3s
B08A  Colville Reser   79.97  39   P       P        19 32 30.4 -0.1
B08A                                IAmb    IAmb    19 32 36.3
      comp=Z,89nm,1.2s
LRW   Lerwick          79.99 337   IAmb    IAmb     19 32 31.5
      comp=Z,141nm,1.0s
LRW   Lerwick          79.99 337   eP      P        19 32 30.8 +0.5
BOVS  Bovan            80.00 315  ⇑P       P        19 32 29.6 -1.0
ZST   Bratislava       80.01 321   eP      P        19 32 31.8 +1.2
ZST   Bratislava       80.01 321   eP      P        19 32 31.8 +1.2
BRG   Berggiesshubel   80.03 324   eP      P        19 32 31.6 +1.0
      comp=Z,21nm,1.0s,baz=49,slow=5.2
BRG   Berggiesshubel   80.03 324   i P     P        19 32 31.0 +0.3
BRG                                 Amp             19 32 34.2
      comp=Z,18nm,0.9s
BRG   Berggiesshubel   80.03 324   P       P        19 32 38.9 +8.2
BRG                                 Amp             19 32 41.6
      comp=Z,40nm,1.2s
BRG   Berggiesshubel   80.03 324   S       S        19 42 39.0 +5.1
BRG   Berggiesshubel   80.03 324   SS      SS       19 48 02.0  +19
BRG                                 Amp             20 11 54.0
      comp=E,9.2nm,17.3s
BRG                                 Amp             20 11 54.0
      comp=N,9.7nm,15.4s
BRG                                 Amp             20 11 56.0
      comp=Z,17nm,14.6s
CHOS  Chios island     80.09 309   P       P        19 32 30.4 -0.9
TREC  Trest            80.21 322   AMS     AMS      20 12 50.0
      comp=Z,11µm,15.5s
SRS   Serrai           80.22 312   P       P        19 32 30.1 -1.8
FRGS  Fruska Gora      80.26 317  ⇓P       P        19 32 32.0 -0.1
FRGS  Fruska Gora      80.26 317⇑iP        P        19 32 31.8 -0.2
PRU   Pruhonice        80.27 323   eP      P        19 32 32.3 +0.3
PRU                                e                19 32 40.8
PRU                                eS      S        19 42 41.3 +4.8
PRU                                 MLR     MLR
      comp=Z,14µm,15.9s
PRU   Pruhonice        80.27 323   eP      P        19 32 32.3 +0.3
PRU                                ePCP    sP       19 32 40.8 +1.2
PRU                                eS      S        19 42 41.3 +4.8
PRU                                 AMS     AMS     20 10 50.0
      comp=Z,14µm,15.9s
PRA   Prague           80.28 323   AMS     AMS      20 11 10.0
      comp=Z,14µm,16.6s
FBE   Freiberg         80.29 325   eP      P        19 32 33.4 +1.3
      comp=Z,80nm,1.3s,baz=49,slow=5.2
FBE                                epP     sP       19 32 39.8 +0.1
      baz=50,slow=5.3
MORH  Mrgy, Hungar     80.32 319  ⇑P       P        19 32 32.0 -0.3
MORH  Mrgy, Hungar     80.32 319   eP      P        19 32 31.8 -0.5
MORH  Mrgy, Hungar     80.32 319⇑iP        P        19 32 31.9 -0.3
J01E  Myrtle Point     80.33  45   P       P        19 32 35.9 +3.5
      baz=304
EGYH  Egyhazaskeszo    80.34 320   eP      P        19 32 33.7 +1.3
MPLH  Magyarpolny      80.37 320   eP      P        19 32 32.9 +0.4
I03D  Drain, OR        80.38  44   P       P        19 32 37.5 +4.8
      baz=304
FLTG  Flechtingen      80.43 327   eP      P        19 32 33.3 +0.6
      comp=Z,98nm,1.0s,baz=49,slow=5.2
SOP   Sopron           80.61 321   eP      P        19 32 35.1 +1.3
KNT   Kendrikon        80.63 313   P       P        19 32 33.3 -0.8
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ATD   Arta Tunnel      80.69 278   P       P        19 32 34.9  0.0
ATD                                 IAmb    IAmb    19 32 44.1
      comp=Z,134nm,1.4s
KOVH  Kovagotottos     80.70 319   eP      P        19 32 34.0 -0.3
VAY   Valandovo        80.75 313   i P     P        19 32 34.5 -0.2
K02D  Willamette Mer   80.75  45   P       P        19 32 39.1 +4.2
      baz=304
DIVS  Divibare         80.76 316⇑iP        P        19 32 34.1 -0.7
DIVS  Divibare         80.76 316   P       P        19 32 34.2 -0.6
HORT  Hortiatis        80.82 312   P       P        19 32 34.5 -0.7
ASSE  Asse, Remlinge   80.82 327   eP      P        19 32 36.0 +1.2
      comp=Z,30nm,1.2s,baz=49,slow=5.2
CONA  Conrad Observa   80.83 321   i P     P        19 32 35.6 +0.5
      comp=Z,47nm,0.9s,SNR=22
NRDL  Niedersach Rie   80.85 327   eP      P        19 32 36.2 +1.3
      comp=Z,43nm,1.1s,baz=49,slow=5.2
NRDL                               epP     sP       19 32 42.6  0.0
      baz=50,slow=5.3
I04A  Tendick Farm,    80.89  44   P       P        19 32 38.4 +3.0
      baz=305,SNR=6.9
NEUB  Neuenburg        80.89 325   eP      P        19 32 36.2 +1.0
      comp=Z,118nm,1.2s,baz=49,slow=5.2
HAWA  Hanford          81.03  41   P       P        19 32 36.3 +0.2
TANN  Tannenbergstha   81.05 325   eP      P        19 32 37.3 +1.0
      comp=Z,21nm,1.1s,baz=49,slow=5.2
TANN                               epP     sP       19 32 43.7 -0.2
      baz=50,slow=5.3
GRG   Griva            81.06 313   P       P        19 32 35.7 -0.7
SKO   Skopje           81.09 314   i P     P        19 32 37.5 +0.9
L02E  Cave Junction    81.10  46   P       P        19 32 40.6 +4.0
      baz=304
WERD  Werda            81.11 325   eP      P        19 32 37.5 +1.0
      comp=Z,25nm,1.1s,baz=49,slow=5.2
CKRC  Cesky Krumlov    81.11 323   eP      P        19 32 36.8 +0.3
CKRC                                AMS     AMS     20 11 00.0
      comp=Z,7µm,16.3s
GUNZ  Gunzen           81.15 325   eP      P        19 32 37.8 +1.1
      comp=Z,26nm,1.0s,baz=49,slow=5.2
GUNZ                               epP     sP       19 32 44.0 -0.4
      baz=50,slow=5.3
NKC   Novy Kostel      81.17 324   AMS     AMS      20 12 10.0
      comp=Z,19µm,14.6s
WERN  Wernitzgruen     81.18 324   eP      P        19 32 38.0 +1.1
      comp=Z,44nm,1.2s,baz=49,slow=5.2
WERN                               epP     sP       19 32 44.4 -0.2
      baz=50,slow=5.3
I05D  Terrebonne, OR   81.20  43   P       P        19 32 38.9 +1.8
      baz=306,SNR=6.3
NEW   Newport          81.21  38   P       P        19 32 37.4 +0.3
NEW                                 pmax    pmax
      comp=Z,82nm,1.3s
NEW   Newport          81.21  38   P       P        19 32 37.7 +0.6
      baz=308,SNR=28
NEW   Newport          81.21  38   P       P        19 32 37.4 +0.3
NEW                                 IAmb    IAmb    19 32 43.0
      comp=Z,82nm,1.2s
BBLS  Lazi&#263;i      81.24 316⇑iP        P        19 32 37.3  0.0
KYMI  Kymi, Euboea I   81.25 310   P       P        19 32 36.8 -0.6
KHC   Kasperske Hory   81.30 323   eP      P        19 32 37.5  0.0
KHC                                e                19 32 46.4
KHC                                eS      S        19 42 51.9 +4.6
KHC                                 MLR     MLR
      comp=Z,10µm,14.6s
KHC   Kasperske Hory   81.30 323   eP      P        19 32 37.5  0.0
KHC                                ePCP    sP       19 32 46.4 +1.2
KHC                                eS      S        19 42 51.9 +4.6
KHC                                 AMS     AMS     20 11 30.0
      comp=Z,10µm,14.6s
MOX   Moxa             81.32 325   eP      P        19 32 38.7 +1.1
      comp=Z,16nm,1.1s,baz=49,slow=5.2
MOX                                epP     sP       19 32 44.8 -0.5
      baz=50,slow=5.3
MOX                                eL      L        20 12 16.3
      comp=Z,13µm,19.3s
KARY  Karystos         81.36 309   P       P        19 32 38.5 +0.5
HAPS  Han Pijesak,Bl   81.38 317⇑iP        P        19 32 38.1  0.0
J04D  Umpqua Nationa   81.38  44   P       P        19 32 43.0 +4.7
      baz=305,SNR=5.1
RUDO  Rudo             81.40 316⇑iP        P        19 32 36.8 -1.3
GEC2  GERESS Array S   81.41 323   eP      P        19 32 38.9 +0.7
      comp=Z,29nm,1.3s,baz=49,slow=5.2
GEC2                               epP     sP       19 32 45.2 -0.7
      baz=50,slow=5.3
GEC2  GERESS Array S   81.41 323   P       P        19 32 38.0 -0.2
GERES GERESS Array B   81.41 323   P       P        19 32 38.1 -0.1
      comp=Z,9.7nm,0.9s,baz=53,slow=5.2,SNR=46
GERES                              PP      PP       19 35 24.3  -19
      comp=Z,2.6nm,0.9s,baz=47,slow=8.6,SNR=4.0
GERES                              PKKPbc  PKKPbc   19 51 11.6 -0.6
      comp=Z,1.7nm,1.0s,baz=308,slow=6.6,SNR=3.7
GERES                              LR      LR       20 12 20.1
      comp=Z,8µm,18.1s,baz=56,slow=38
GERES GERESS Array B   81.41 323   P       P        19 32 37.9 -0.3
ARSA  Arzberg          81.43 321   i P     P        19 32 38.1 -0.2
      comp=Z,23nm,1.1s,SNR=8.2
MANZ  Manzenberg       81.50 324   eP      P        19 32 39.7 +1.1
      comp=Z,5.7nm,1.0s,baz=49,slow=5.2
GTTG  Gottingen        81.54 326   eP      P        19 32 39.9 +1.2
      comp=Z,65nm,0.9s,baz=49,slow=5.2
ROTZ  Rotzenmuhle      81.59 324   eP      P        19 32 40.4 +1.3
      comp=Z,10nm,1.1s,baz=49,slow=5.2
ROTZ                               epP     sP       19 32 46.6 -0.1
      baz=50,slow=5.3
KALN  Kalnik           81.59 319   i P     P        19 32 38.5 -0.6
STAX  Taxiarchis Har   81.59 308   P       P        19 32 38.4 -0.9
DION  Dionisos Attik   81.67 310   P       P        19 32 39.8 +0.1
MOA   Molln            81.73 322   i P     P        19 32 40.1 +0.3
      comp=Z,18nm,1.0s,SNR=12
MOSL  Moslavina        81.73 319   i P     P        19 32 39.7 -0.1
PINE  Pine Mountain    81.76  43   P       P        19 32 41.0 +0.7
PINE                                IAmb    IAmb    19 32 47.4
      comp=Z,114nm,1.1s
LOBO  Lobor            81.79 320   i P     P        19 32 39.6 -0.5
FNA   Florina          81.80 313   P       P        19 32 39.3 -1.1
FNA   Florina          81.80 313   P       P        19 32 39.5 -0.9
FNA                                 pmax    pmax
      comp=Z,15nm,1.0s
FNA   Florina          81.80 313   P       P        19 32 39.5 -0.9
KZN   Kozani           81.82 312   P       P        19 32 39.6 -0.9
L04D  Klamath Falls    81.86  45   P       P        19 32 43.7 +3.0
      baz=305,SNR=15
J05D  Fort Rock, OR    81.88  44   P       P        19 32 43.1 +2.2
      baz=306,SNR=8.5
YBH   Yreka Blue Hor   81.89  46   P       P        19 32 41.2 +0.4
YBH                                 pmax    pmax
      comp=Z,75nm,1.4s
YBH   Yreka Blue Hor   81.89  46   P       P        19 32 41.2 +0.4
YBH                                 IAmb    IAmb    19 32 47.2
      comp=Z,75nm,1.4s
SFJD  Kangerlussuaq    81.91 360   P       P        19 32 40.2 -0.1
SFJD                                pmax    pmax
      comp=Z,68nm,1.1s
SFJD                                MLR     MLR
      comp=Z,4µm,19.0s
SFJD  Kangerlussuaq    81.91 360   eP      P        19 32 40.3 -0.1
SFJD                                IAmb    IAmb    19 32 41.9
      comp=Z,42nm,1.1s
SFJD  Kangerlussuaq    81.91 360   P       P        19 32 40.2 -0.1
SFJD                                IAmb    IAmb    19 32 42.1
      comp=Z,68nm,1.1s
GROS  Grobnik          81.92 320   i P     P        19 32 40.2 -0.7
OHR   Ohrid            81.97 313   i P     P        19 32 41.0 -0.3
M02C  Callahan         81.99  46   P       P        19 32 44.4 +3.0
      baz=305,SNR=9.1
UBBA  Unterbreizbach   81.99 326   eP      P        19 32 42.3 +1.3
      comp=Z,34nm,1.1s,baz=49,slow=5.2
PTJ   Puntijarka       82.00 319   P       P        19 32 41.0 -0.3
BLY   Banja Luka       82.01 318⇑iP        P        19 32 41.4 +0.1
PERS  Pernice          82.02 320   i P     P        19 32 41.1 -0.3
SOKA  Soboth           82.04 320   i P     P        19 32 41.5  0.0
      comp=Z,52nm,1.2s,SNR=34
IBBN  Ibbenburen       82.05 328   eP      P        19 32 42.1 +0.7
      comp=Z,88nm,1.0s,baz=49,slow=5.2
NPS   Neapolis         82.07 306   P       P        19 32 40.1 -1.7
GRA1  Grafenberg Arr   82.13 324   P       P        19 32 42.5 +0.7
GRA1                                IAmb    IAmb    19 32 54.1
      comp=Z,101nm,1.3s
GRF   Grafenberg Arr   82.13 324   P       P        19 32 42.6 +0.7
GRF                                 pmax    pmax
      comp=Z,101nm,1.3s
GRF                                 MLR     MLR
      comp=Z,14µm,18.0s
GRF   Grafenberg Arr   82.13 324   eP      P        19 32 43.3 +1.4
      comp=Z,288nm,2.2s,baz=49,slow=5.2
GRF                                eL      L        20 12 40.4
      comp=Z,10µm,19.5s
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GRFO  Grafenberg       82.13 324   P       P        19 32 42.6 +0.7
GRFO                                pmax    pmax
      comp=Z,100nm,1.3s
GRFO                                MLR     MLR
      comp=Z,11µm,19.0s
GRFO  Grafenberg       82.13 324   P       P        19 32 42.6 +0.7
GRFO                                IAmb    IAmb    19 32 54.0
      comp=Z,100nm,1.3s
PDG   Podgorica        82.16 315  ⇑P       P        19 32 41.8 -0.3
PDG   Podgorica        82.16 315⇑iP        P        19 32 41.6 -0.5
AGG   Agios Georgios   82.19 311   P       P        19 32 39.0 -3.4
MGRS  Mrkonjic Grad    82.26 318   eP      P        19 32 43.6 +0.9
KPRO  Kipourio         82.28 312   P       P        19 32 43.6 +0.7
BRY   Bratogost        82.31 316   eP      P        19 32 42.1 -1.0
N02D  Trinity Center   82.32  46   P       P        19 32 45.5 +2.3
      baz=305,SNR=8.3
CRES  Cresnjev         82.33 320⇑iP        P        19 32 42.7 -0.3
CRES  Cresnjev         82.33 320   eP      P        19 32 42.5 -0.5
DRME  Dracevica, Mon   82.34 315⇑iP        P        19 32 42.7 -0.4
DY2G  Dye2             82.36 358   i P     P        19 32 43.1 +0.1
DY2G                                IAmb    IAmb    19 32 44.2
      comp=Z,127nm,1.1s
WALA  Waterton Lakes   82.36  36   P       P        19 32 43.8 +0.5
WALA                                IAmb    IAmb    19 32 49.5
      comp=Z,90nm,1.1s
M04C  Macdoel          82.39  45   P       P        19 32 45.6 +2.0
      baz=306,SNR=14
OBKA  Obir             82.41 321   i P     P        19 32 43.1 -0.4
      comp=Z,16nm,0.9s,SNR=10
TIR   Tirane           82.42 314   P       P        19 32 46.7 +3.2
TIR                                 pmax    pmax
      comp=Z,67nm,1.2s
OZLJ  Ozalj            82.45 319   i P     P        19 32 43.4 -0.2
IDI   Anoyia           82.55 307   P       P        19 32 43.2 -1.2
      comp=Z,32nm,1.1s,baz=33,slow=7.9,SNR=16
IDI   Anoyia           82.55 307   P       P        19 32 40.1 -4.3
RJOB  Jochberg         82.58 322   eP      P        19 32 45.7 +1.4
      comp=Z,27nm,1.1s,baz=49,slow=5.2
HCY   Herceg Novi      82.61 316   eP      P        19 32 44.1 -0.4
URZ   Urewera          82.63 144   P       P        19 32 43.4 -1.0
URZ                                 IAmb    IAmb    19 33 07.3
      comp=Z,166nm,1.9s
WDC   Whiskeytown Da   82.65  47   P       P        19 32 45.5 +0.8
WDC                                 pmax    pmax
      comp=Z,60nm,1.3s
WDC   Whiskeytown Da   82.65  47   P       P        19 32 45.5 +0.8
WDC                                 IAmb    IAmb    19 32 50.8
      comp=Z,60nm,1.2s
DBRK  Dubrovnik        82.68 316   i P     P        19 32 43.9 -1.0
ANX   Ano Chora        82.69 311   P       P        19 32 43.2 -1.9
KBA   Koelnbreinsper   82.70 322   eP      PP       19 35 51.6 -2.8
      comp=Z,22nm,0.8s
LJU   Ljubljana        82.71 320⇑iP        P        19 32 44.8 -0.2
O02D  Mt. Diablo Mer   82.73  47   P       P        19 32 47.7 +2.4
      baz=305,SNR=16
ANGG  Ammassalik, Gr   82.73 354   P       P        19 32 43.6 -1.1
ANGG                                IAmb    IAmb    19 32 45.7
      comp=Z,69nm,1.0s
GUR   Goura            82.79 310   P       P        19 32 43.8 -1.9
RICI  Ricice           82.79 317   i P     P        19 32 44.3 -1.2
PLIT  Plitvice         82.82 319   i P     P        19 32 45.4 -0.2
MYKA  Terra Mystica    82.82 321   i P     P        19 32 45.3 -0.3
      comp=Z,15nm,0.7s,SNR=7.4
MYKA                               eP      PP       19 35 53.2 -2.0
      comp=Z,32nm,1.4s
STON  Ston             82.83 316⇑iP        P        19 32 41.6 -4.0
KLV   Kalavryta, Ach   82.85 310   P       P        19 32 44.2 -1.7
LAKA  Lakka            82.85 311   P       P        19 32 44.6 -1.3
BUG   Bochum--Univer   82.86 327   eP      P        19 32 46.4 +0.8
      comp=Z,66nm,1.1s,baz=49,slow=5.2
KIJV  Kijevo           82.90 318   i P     P        19 32 45.4 -0.6
UDBI  Udbina           82.95 318   i P     P        19 32 45.9 -0.4
CEY   Cerknica         82.95 320⇑iP        P        19 32 45.8 -0.5
VAM   Vamos            82.96 307   P       P        19 32 46.4  0.0
BKZ   Black Stump Fm   83.02 145   P       P        19 32 46.2 -0.2
BKZ                                 IAmb    IAmb    19 33 25.2
      comp=Z,102nm,1.7s
JTMT  Jette            83.02  37   P       P        19 32 46.1 -0.6
JTMT                                IAmb    IAmb    19 32 53.0
      comp=Z,116nm,1.3s
IMMV  Iera Moni Meta   83.08 307   P       P        19 32 46.6 -0.4
FUR   Furstenfeldbru   83.09 323   eP      P        19 32 48.3 +1.4
      comp=Z,59nm,1.1s,baz=49,slow=5.2
IGT   Igoumenitsa      83.17 312   P       P        19 32 46.5 -1.0
RIY   Rijeka           83.18 320⇑iP        P        19 32 45.6 -1.8
DRO   Drossia          83.19 310   P       P        19 32 47.4 -0.2
BMO   Blue Mountains   83.20  41   P       P        19 32 47.5 -0.2
BMO                                 pmax    pmax
      comp=Z,146nm,1.6s
BMO   Blue Mountains   83.20  41   P       P        19 32 47.5 -0.2
BMO                                 IAmb    IAmb    19 32 54.5
      comp=Z,146nm,1.6s
ZOU   Zoufplan         83.23 321   P       P        19 32 46.9 -1.0
MOD   Modoc Plateau    83.25  45   P       P        19 32 48.2 +0.2
MOD                                 IAmb    IAmb    19 32 54.1
      comp=Z,93nm,1.2s
KTHA  Kythira Island   83.25 308   P       P        19 32 46.6 -1.4
O03E  Paynes Creek     83.28  47   P       P        19 32 50.7 +2.5
      baz=306,SNR=17
KTHR  Kythira          83.29 308   P       P        19 32 47.8 -0.4
ANKY  Antikythira Is   83.31 308   P       P        19 32 39.9 -8.3
ABTA  Abfaltersbach    83.35 322   i P     P        19 32 47.5 -0.9
      comp=Z,40nm,1.2s,SNR=22
RABC  Rab              83.37 319   i P     P        19 32 47.7 -0.6
MORI  Morici           83.39 318   i P     P        19 32 47.6 -0.8
KAC   Achnashellach    83.40 337   eP      P        19 32 48.0 -0.3
NVLJ  Novalja          83.43 319   i P     P        19 32 49.0 +0.4
WATA  Walderalm        83.47 323   eP      P        19 32 48.7 -0.3
      comp=Z,18nm,1.1s
WTTA  Wattenberg       83.48 322   i P     P        19 32 49.0 -0.2
      comp=Z,39nm,1.3s,SNR=11
ITM   Ithomi           83.49 310   P       P        19 32 47.5 -1.7
ITM   Ithomi           83.49 310   P       P        19 32 47.8 -1.4
SMRN  Sveta Marina     83.54 320   i P     P        19 32 48.4 -0.8
STAL  STALIGIAL        83.56 321   P       P        19 32 48.2 -1.2
STAL                                IAmb    IAmb    19 32 59.2
      comp=Z,52nm,1.0s
AHRW  Bad Neuenahr-A   83.56 327   eP      P        19 32 50.4 +1.1
      comp=Z,104nm,1.0s,baz=49,slow=5.2
TUWZ  Tuamarina        83.57 148   P       P        19 32 49.0 -0.1
KPL   Plockton         83.64 337   IAmb    IAmb     19 32 57.0
      comp=Z,919nm,2.6s
KPL   Plockton         83.64 337   eP      P        19 32 48.0 -1.5
DUGI  Dugi Otok        83.68 318   i P     P        19 32 44.9 -5.1
ESY   Stoneypath       83.69 335   eP      P        19 32 48.5 -1.3
MOTA  Moosalm          83.71 323   i P     P        19 32 49.8 -0.5
      comp=Z,21nm,0.8s,SNR=9.0
SQTA  Sankt Quirin     83.73 323   i P     P        19 32 50.0 -0.4
      comp=Z,19nm,0.8s,SNR=9.6
SQTA                                P       PP      19 35 57.0 -5.7
      comp=Z,19nm,1.2s
STU   Stuttgart        83.74 325   P       P        19 32 49.9 -0.3
STU                                 pmax    pmax
      comp=Z,45nm,1.0s
STU                                 MLR     MLR
      comp=Z,15µm,18.0s
STU   Stuttgart        83.74 325   eP      P        19 32 51.1 +0.8
      comp=Z,120nm,1.1s,baz=49,slow=5.2
STU   Stuttgart        83.74 325   P       P        19 32 49.9 -0.3
STU                                 IAmb    IAmb    19 32 51.8
      comp=Z,45nm,1.0s
FFC   Flin Flon        83.75  27   P       P        19 32 50.1 -0.1
FFC                                 pmax    pmax
      comp=Z,159nm,1.1s
FFC   Flin Flon        83.75  27   P       P        19 32 50.1 -0.1
PYL   PYLOS            83.77 310   P       P        19 32 49.3 -1.3
PLID  Pearl Lake       83.78  40   P       P        19 32 51.0 +0.2
PLID                                IAmb    IAmb    19 32 57.3
      comp=Z,138nm,1.9s
MSO   Missoula         83.78  38   P       P        19 32 51.0 +0.3
      baz=310,SNR=30
MSO   Missoula         83.78  38   P       P        19 32 50.4 -0.3
MSO                                 IAmb    IAmb    19 32 57.1
      comp=Z,124nm,1.4s
MSO                                 IAMs_20 IAMs_20 20 11 34.3
      comp=Z,2µm,20.0s
RETA  Reutte           83.79 323   i P     P        19 32 50.3 -0.4
      comp=Z,19nm,0.9s,SNR=7.2
SNZO  South Karori     83.83 147   IAMs_20 IAMs_20  20 03 26.4
      comp=Z,2µm,20.0s
BRJN  Brijuni          83.84 320   i P     P        19 32 51.0 +0.3
WVOR  Wild Horse Val   83.92  43   P       P        19 32 50.8 -0.6
WVOR                                pmax    pmax
      comp=Z,62nm,1.2s
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WVOR  Wild Horse Val    83.92  43  P        P        19 32 50.8  -0.6
WVOR                               IAmb     IAmb     19 32 57.6
      comp=Z,62nm,1.2s
EBL   Broad Law         83.96 335  eP       P        19 32 50.6  -0.6
BTNL  Ternell           83.97 327  dPcP     P        19 32 51.3  -0.1
UBR   Ueberruh          84.00 323  eP       P        19 32 52.6  +0.9
      comp=Z,60nm,1.4s,baz=49,slow=5.2
MEM   Membach           84.01 327  dPcP     P        19 32 51.3  -0.2
BEBN  Eben Emael        84.03 328  dPcP     P        19 32 51.8  +0.2
FETA  Feichten          84.11 323  i P      P        19 32 52.0  -0.4
      comp=Z,25nm,1.0s,SNR=8.2
KHZ   Kahutara          84.17 148  IAMs_20  IAMs_20  20 05 32.5
      comp=Z,2µm,21.0s
FRB   Frobisher Bay     84.18   8  P        P        19 32 50.6  -1.5
      comp=Z,17nm,1.0s,baz=126,slow=8.5,SNR=3.8
BHOU  Houvegnez         84.19 327  dPcP     P        19 32 52.6  +0.1
CTI   Castel Tesino     84.26 321  P        P        19 32 51.8  -1.3
CTI                                pmax     pmax
      comp=Z,146nm,1.6s
CTI   Castel Tesino     84.26 321  P        P        19 32 51.8  -1.3
CTI                                IAmb     IAmb     19 33 01.2
      comp=Z,146nm,1.6s
EDMD  Edmundbyers       84.28 334  IAmb     IAmb     19 32 53.5
      comp=Z,938nm,2.7s
EDMD  Edmundbyers       84.28 334  eP       P        19 32 51.5  -1.4
EKA   Eskdalemuir Ar    84.34 335  P        P        19 32 52.9  -0.3
      comp=Z,21nm,0.9s,baz=40,slow=5.4,SNR=21
ESK   Eskdalemuir       84.37 335  eP       P        19 32 52.0  -1.2
ESK   Eskdalemuir       84.37 335  P        P        19 32 52.8  -0.5
ESK                                pmax     pmax
      comp=Z,73nm,1.2s
ESK                                MLR      MLR
      comp=Z,6µm,19.0s
ESK   Eskdalemuir       84.37 335  P        P        19 32 52.8  -0.5
ESK                                IAmb     IAmb     19 32 59.1
      comp=Z,73nm,1.1s
DAVA  Damuels           84.38 323  i P      P        19 32 53.4  -0.3
      comp=Z,47nm,0.8s,SNR=16
LAWE  Loch Awe, Argy    84.41 336  IAmb     IAmb     19 32 53.8
      comp=Z,45nm,1.1s
LAWE  Loch Awe, Argy    84.41 336  eP       P        19 32 52.0  -1.4
PGBU  Glenifferbraes    84.44 336  IAmb     IAmb     19 32 53.7
      comp=Z,97nm,1.1s
PGBU  Glenifferbraes    84.44 336  eP       P        19 32 52.9  -0.7
BFO   Black Forest      84.46 325  P        P        19 32 53.1  -0.8
BFO                                pmax     pmax
      comp=Z,74nm,1.1s
BFO                                MLR      MLR
      comp=Z,16µm,20.0s
BFO   Black Forest      84.46 325  eP       P        19 32 54.7  +0.7
      comp=Z,85nm,1.2s,baz=49,slow=5.2
BFO   Black Forest      84.46 325  P        P        19 32 53.1  -0.8
BFO                                IAmb     IAmb     19 32 55.4
      comp=Z,74nm,1.1s
BCLA  Clavier           84.47 328  dPcP     P        19 32 53.6  -0.3
      comp=Z,22nm,1.2s
BGES  Gesves            84.59 328  dPcP     P        19 32 54.7  +0.2
WLF   Walferdange       84.60 327  dPcP     P        19 32 54.8  +0.2
WLF   Walferdange       84.60 327  P        P        19 32 54.5  -0.1
WLF                                pmax     pmax
      comp=Z,137nm,1.0s
WLF                                MLR      MLR
      comp=Z,5µm,18.0s
WLF   Walferdange       84.60 327  eP       P        19 32 55.9  +1.3
      comp=Z,156nm,1.1s,baz=49,slow=5.2
WLF   Walferdange       84.60 327  P        P        19 32 54.5  -0.1
UCC   Uccle             84.63 328  dPcP     P        19 32 54.6   0.0
SGRT  San Giovanni R    84.66 316  P        P        19 32 54.5  -0.7
SGRT                               IAmb     IAmb     19 32 57.0
      comp=Z,46nm,1.0s
RCHB  Rochefort         84.69 327  dPcP     P        19 32 54.6  -0.4
TEOL  Teolo             84.69 321  P        P        19 32 54.8  -0.3
DAVOX Davos/Dischmat    84.71 323  P        P        19 32 55.2  -0.2
      comp=Z,45nm,0.8s,baz=50,slow=2.4,SNR=91
BMRD  Maredsous         84.80 328  dPcP     P        19 32 54.3  -1.2
HPK   Haverah Park      84.81 333  IAmb     IAmb     19 32 56.6
      comp=Z,166nm,1.2s
HPK   Haverah Park      84.81 333  eP       P        19 32 53.7  -1.9
SNF   Seneffe           84.87 328  dPcP     P        19 32 56.1  +0.2
NEWG  New Galloway      84.89 335  IAmb     IAmb     19 32 57.7
      comp=Z,109nm,1.3s
NEWG  New Galloway      84.89 335  eP       P        19 32 55.0  -0.9
GIVF  Givet             84.91 328  eP       P        19 32 55.9  -0.2
GIVF                               pmax     pmax
      comp=Z,72nm,1.2s
CDF   Champ du Feu      84.92 325  eP       P        19 32 56.3   0.0
CDF                                pmax     pmax
      comp=Z,73nm,1.1s
MFID  Camas Ranch       84.93  41  P        P        19 32 56.7  +0.1
HRY   Holter Researc    84.96  37  P        P        19 32 56.4  -0.2
DOU   Dourbes           85.02 328  dPcP     P        19 32 56.5  -0.1
      comp=Z,28nm,1.2s
ECH   Echery            85.11 325  P        P        19 32 56.5  -0.7
ECH                                pmax     pmax
      comp=Z,51nm,1.1s
ECH                                MLR      MLR
      comp=Z,14µm,18.0s
ECH   Echery            85.11 325  P        P        19 32 56.5  -0.7
ECH                                IAmb     IAmb     19 32 58.5
      comp=Z,51nm,1.1s
EGMT  Eagleton          85.12  35  P        P        19 32 57.8  +0.4
      baz=313,SNR=63
EGMT  Eagleton          85.12  35  P        P        19 32 57.5  +0.2
EGMT                               IAMs_20  IAMs_20  20 12 32.8
      comp=Z,2µm,20.0s
BAIF  Baives            85.22 328  eP       P        19 32 57.4  -0.3
BAIF                               pmax     pmax
      comp=Z,20nm,1.0s
GAL1  Galloway          85.27 335  IAmb     IAmb     19 32 58.5
      comp=Z,100nm,0.9s
GAL1  Galloway          85.27 335  eP       P        19 32 56.6  -1.2
LBWR  Ladybower, Pea    85.28 333  IAmb     IAmb     19 32 58.9
      comp=Z,138nm,1.0s
LBWR  Ladybower, Pea    85.28 333  eP       P        19 32 56.1  -1.8
NRCA  Norcia            85.51 318  P        P        19 32 59.5  +0.1
NRCA                               IAmb     IAmb     19 33 01.4
      comp=Z,98nm,1.0s
HINF  Hinteralfeld      85.54 325  eP       P        19 32 58.8  -0.6
HINF                               pmax     pmax
      comp=Z,40nm,1.4s
FURI  Furi              85.56 278  P        P        19 33 00.2  -0.1
MURB  Monte Urbino      85.57 319  P        P        19 32 60.0  +0.3
CLGH  Cloghs, Cushen    85.59 336  eP       P        19 32 58.5  -0.9
CWF   Charnwood Fore    85.61 332  IAmb     IAmb     19 32 59.6
      comp=Z,73nm,1.1s
CWF   Charnwood Fore    85.61 332  eP       P        19 32 58.4  -1.2
HLID  Hailey            85.63  41  P        P        19 33 01.0  +0.9
      baz=310,SNR=62
HLID  Hailey            85.63  41  P        P        19 33 00.8  +0.7
HLID                               IAmb     IAmb     19 33 06.8
      comp=Z,104nm,1.4s
YERR  Yerington         85.64  46  P        P        19 33 00.4  +0.1
AQU   L'Aquila          85.65 318  P        P        19 33 00.7  +0.7
AQU   L'Aquila          85.65 318⇑iP       P        19 33 00.5  +0.5
HAU   Haudompre         85.65 325  eP       P        19 32 59.5  -0.4
HAU                                pmax     pmax
      comp=Z,81nm,1.6s
BCYI  Bear Canyon       85.70  40  P        P        19 33 01.5  +0.9
BOZ   Bozeman (W)       85.80  38  P        P        19 33 01.5  +0.6
BOZ                                pmax     pmax
      comp=Z,86nm,1.2s
BOZ                                MLR      MLR
      comp=Z,3µm,20.0s
BOZ   Bozeman (W)       85.80  38  P        P        19 33 01.8  +0.9
      baz=312,SNR=20
BOZ   Bozeman (W)       85.80  38  P        P        19 33 01.5  +0.6
BOZ                                IAmb     IAmb     19 33 07.0
      comp=Z,86nm,1.2s
BOZ                                IAMs_20  IAMs_20  20 12 49.8
      comp=Z,3µm,20.0s
PRMA  PARMA             85.81 321  P        P        19 33 01.1  +0.4
WIM   Isle of Man       85.81 335  eP       P        19 33 00.0  -0.5
BMN   Battle Mountai    85.99  44  P        P        19 33 02.4  +0.5
BMN                                pmax     pmax
      comp=Z,139nm,1.3s
BMN   Battle Mountai    85.99  44  P        P        19 33 02.4  +0.5
BMN                                IAmb     IAmb     19 33 08.6
      comp=Z,139nm,1.3s
OSSC  Osservatorio P    86.11 320  P        P        19 33 02.0  -0.3
OSSC                               IAmb     IAmb     19 33 11.8
      comp=Z,94nm,1.3s
VLC   Villacollemand    86.17 321  P        P        19 33 02.7  +0.2
VLC                                IAmb     IAmb     19 33 19.1
      comp=Z,114nm,1.2s
RYN   Ryan              86.31  46  P        P        19 33 03.9  +0.4
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RYN                                IAmb     IAmb     19 33 09.8
      comp=Z,108nm,1.3s
SENIN Lac Senin/Sane    86.31 324  P        P        19 33 03.2  -0.2
SENIN                              IAmb     IAmb     19 33 18.9
      comp=Z,95nm,1.9s
WLF1  Llynfaes          86.39 334  IAmb     IAmb     19 33 04.2
      comp=Z,161nm,1.1s
WLF1  Llynfaes          86.39 334  eP       P        19 33 02.5  -0.9
YLL   Llanberis         86.42 334  eP       P        19 33 02.4  -1.2
MSSA  Maissana          86.53 321  P        P        19 33 04.1  -0.3
MSSA                               IAmb     IAmb     19 33 49.4
      comp=Z,70nm,1.4s
YHL   Hebgen Lake       86.54  38  P        P        19 33 05.1  +0.4
YHL                                IAmb     IAmb     19 33 11.3
      comp=Z,124nm,1.2s
NVAR  Mina Array Bea    86.56  46  P        P        19 33 05.6  +0.7
      comp=Z,29nm,1.1s,baz=302,slow=4.9,SNR=25
NVAR                               LR       LR       20 10 01.8
      comp=Z,1µm,19.9s,baz=308,slow=34
NVAR  Mina Array Bea    86.56  46  P        P        19 33 04.9   0.0
MDPB  Devils Postpil    86.57  47  P        P        19 33 05.2  +0.3
MDPB                               IAmb     IAmb     19 33 11.0
      comp=Z,57nm,1.3s
NV11  Mina Array Sit    86.66  46  P        P        19 33 05.2   0.0
NV11                               IAmb     IAmb     19 33 11.5
      comp=Z,92nm,1.4s
CEL   Celeste           86.71 313  P        P        19 33 04.8  -0.6
CEL                                IAmb     IAmb     19 33 14.0
      comp=Z,72nm,1.1s
MLAC  Mammoth, Mammo86.72  47  P        P        19 33 08.1  +2.4
      baz=308
CASP  Castiglione de    86.80 319  P        P        19 33 04.7  -1.0
CASP                               IAmb     IAmb     19 33 14.1
      comp=Z,66nm,1.5s
MCH1  Michaelchurch     86.85 333  eP       P        19 33 04.3  -1.4
PAGB  Antelope Grade    86.96  50  P        P        19 33 07.0  +0.4
ELK   Elko              86.96  43  P        P        19 33 07.4  +0.6
ELK                                pmax     pmax
      comp=Z,73nm,1.5s
ELK                                MLR      MLR
      comp=Z,1µm,21.0s
ELK   Elko              86.96  43  P        P        19 33 07.4  +0.6
ELK                                IAmb     IAmb     19 33 13.5
      comp=Z,73nm,1.4s
DSB   Dublin            87.15 335  P        P        19 33 07.1   0.0
H17A  Grant Village     87.17  38  P        P        19 33 10.4  +2.7
      baz=313,SNR=76
H17A  Grant Village     87.17  38  P        P        19 33 08.8  +1.1
LPL   La Plagne         87.18 323  eP       P        19 33 09.7  +2.0
LPL                                pmax     pmax
      comp=Z,42nm,1.5s
LPG   La Plagne         87.18 323  eP       P        19 33 07.2  -0.6
LPG                                pmax     pmax
      comp=Z,11nm,0.8s
FLWY  Flagg Ranch       87.31  38  IAMs_20  IAMs_20  20 13 31.7
      comp=Z,2µm,19.0s
RER   Riviere de l'E    87.35 243  P        P        19 33 08.4  -0.2
RLMT  Red Lodge         87.35  37  P        P        19 33 09.4  +0.8
      baz=313,SNR=87
RLMT  Red Lodge         87.35  37  P        P        19 33 08.8  +0.2
RLMT                               IAMs_20  IAMs_20  20 13 11.8
      comp=Z,2µm,22.0s
LOR   Lormes            87.37 326  eP       P        19 33 09.0  +0.6
LOR                                pmax     pmax
      comp=Z,39nm,1.4s
SMMC  Simmler           87.38  50  P        P        19 33 11.4  +2.7
      baz=307
FXWY  Fox Creek         87.44  39  IAMs_20  IAMs_20  20 13 47.0
      comp=Z,2µm,19.0s
DGMT  Dagmar            87.44  32  P        P        19 33 09.7  +1.0
      baz=317,SNR=54
DGMT  Dagmar            87.44  32  P        P        19 33 09.2  +0.5
DGMT  Dagmar            87.44  32  IAMs_20  IAMs_20  20 14 57.8
      comp=Z,2µm,19.0s
TPH   Tonopah           87.45  46  P        P        19 33 09.4  +0.2
TPH   Tonopah           87.45  46  P        P        19 33 09.4  +0.2
TIN   Tinemaha, Big     87.45  48  P        P        19 33 14.0  +4.9
      baz=308,SNR=6.6
SSF   Saint Saulge      87.69 326  eP       P        19 33 10.6  +0.7
SSF                                pmax     pmax
      comp=Z,22nm,1.2s
IVI   Ivigtut           87.69 359  P        P        19 33 09.5   0.0
IVI                                IAmb     IAmb     19 33 11.3
      comp=Z,40nm,1.0s
MBDF  Montbardon        87.70 323  eP       P        19 33 09.7  -0.5
MBDF                               pmax     pmax
      comp=Z,16nm,0.8s
HVU   Hansel Valley     87.71  41  P        P        19 33 10.6  +0.3
HVU                                pmax     pmax
      comp=Z,102nm,1.4s
HVU   Hansel Valley     87.71  41  P        P        19 33 10.6  +0.3
HVU                                IAmb     IAmb     19 33 16.9
      comp=Z,102nm,1.4s
PKM   Mcpherson Peak    87.75  50  P        P        19 33 14.3  +3.6
      baz=307,SNR=15
LAO   LASA Array        87.77  34  P        P        19 33 11.7  +1.3
      baz=316,SNR=35
LAO   LASA Array        87.77  34  P        P        19 33 11.0  +0.6
LAO                                IAMs_20  IAMs_20  20 13 10.9
      comp=Z,2µm,18.0s
SMF   Signal de Mont    87.82 326  eP       P        19 33 09.6  -0.9
SMF                                pmax     pmax
      comp=Z,24nm,1.2s
CWC   Cottonwood Cre    87.93  48  P        P        19 33 14.1  +2.7
      baz=308
AVF   Avril sur Loir    87.95 326  eP       P        19 33 10.2  -0.9
AVF                                pmax     pmax
      comp=Z,19nm,1.1s
AHID  Auburn Hatcher    87.98  40  P        P        19 33 12.0  +0.4
AHID                               IAmb     IAmb     19 33 17.8
      comp=Z,77nm,1.4s
VAE   Valguarnera       88.11 314  P        P        19 33 12.7  +0.6
      comp=Z,7.8nm,0.9s,baz=346,slow=19,SNR=2.0
VAE   Valguarnera       88.11 314  P        P        19 33 12.7  +0.6
ISA   Isabella, Lake    88.15  49  P        P        19 33 13.5  +1.1
ISA                                pmax     pmax
      comp=Z,64nm,2.0s
ISA   Isabella, Lake    88.15  49  P        P        19 33 16.3  +3.9
      baz=308,SNR=6.8
ISA   Isabella, Lake    88.15  49  P        P        19 33 13.5  +1.1
ISA                                IAmb     IAmb     19 33 18.3
      comp=Z,64nm,2.0s
R11A  Troy Canyon, C    88.28  45  P        P        19 33 14.5  +1.4
      baz=310,SNR=53
R11A  Troy Canyon, C    88.28  45  P        P        19 33 13.4  +0.3
R11A                               IAmb     IAmb     19 33 20.4
      comp=Z,118nm,1.6s
RAFF  Raffo Rosso       88.30 313  P        P        19 33 13.4  +0.4
HWUT  Hardware Ranch    88.50  41  P        P        19 33 14.4  +0.3
HWUT                               IAMs_20  IAMs_20  20 17 06.0
      comp=Z,2µm,18.0s
FURC  Furnace Creek,    88.68  47  P        P        19 33 15.8  +1.1
      baz=309,SNR=7.1
VIVF  Saint-Julien-l    88.68 324  eP       P        19 33 15.3  +0.6
VIVF                               pmax     pmax
      comp=Z,24nm,1.5s
DUG   Dugway, Tooele    88.73  42  P        P        19 33 15.5  +0.4
DUG                                pmax     pmax
      comp=Z,271nm,1.8s
DUG                                MLR      MLR
      comp=Z,1µm,21.0s
DUG   Dugway, Tooele    88.73  42  P        P        19 33 16.4  +1.3
      baz=311,SNR=64
DUG   Dugway, Tooele    88.73  42  P        P        19 33 15.5  +0.4
LRMC  Laurel Mtn Rad    88.77  48  P        P        19 33 16.5  +1.1
      baz=308,SNR=8.6
LMR   La Mourre         88.80 322  eP       P        19 33 16.2  +1.0
LMR                                pmax     pmax
      comp=Z,20nm,1.0s
BW06  Boulder Array     88.81  39  P        P        19 33 15.9  +0.3
      baz=313,SNR=70
PD31  Pinedale Array    88.81  39  P        P        19 33 14.8  -0.8
PD31                               IAmb     IAmb     19 33 22.0
      comp=Z,81nm,1.1s
PDAR  Pinedale Array    88.81  39  P        P        19 33 15.8  +0.1
      comp=Z,20nm,1.0s,baz=318,slow=2.0,SNR=62
PDAR  Pinedale Array    88.81  39  P        P        19 33 15.4  -0.2
EDW2  Edwards Air Fo    88.94  49  P        P        19 33 16.4  +0.3
      baz=308,SNR=8.0
GSC   Goldstone, Bar    89.44  48  P        P        19 33 19.2  +0.7
GSC                                pmax     pmax
      comp=Z,60nm,1.4s
GSC   Goldstone, Bar    89.44  48  P        P        19 33 19.7  +1.2
      baz=309,SNR=24
GSC   Goldstone, Bar    89.44  48  P        P        19 33 19.2  +0.7
GSC                                IAmb     IAmb     19 33 25.3
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      comp=Z,60nm,1.4s
ULM   Lac du Bonnet     89.58  27  P        P        19 33 19.1  +0.4
      comp=Z,133nm,1.1s,baz=321,slow=5.6,SNR=28
ULM                                LR       LR       20 16 40.0
      comp=Z,2µm,18.3s,baz=334,slow=38
ULM   Lac du Bonnet     89.58  27  P        P        19 33 18.6  -0.1
TUQ   Turquoise Moun    89.92  48  P        P        19 33 21.5  +0.7
      baz=309,SNR=24
MDND  Maddock           89.94  30  P        P        19 33 21.9  +1.4
      baz=320
MDND  Maddock           89.94  30  P        P        19 33 20.8  +0.3
HEC   Hector,Ludlow     90.04  48  P        P        19 33 21.9  +0.6
      baz=309,SNR=5.9
K22A  Casper            90.50  37  P        P        19 33 23.9  +0.6
      baz=315,SNR=22
K22A  Casper            90.50  37  P        P        19 33 23.3  -0.1
GMRC  Granite Mounta    90.50  48  P        P        19 33 24.4  +0.9
      baz=310,SNR=9.6
RSSD  Black Hills       90.69  35  P        P        19 33 24.4  +0.1
RSSD                               pmax     pmax
      comp=Z,264nm,1.4s
RSSD                               MLR      MLR
      comp=Z,2µm,21.0s
RSSD  Black Hills       90.69  35  P        P        19 33 25.2  +0.9
      baz=317
RSSD  Black Hills       90.69  35  P        P        19 33 24.4  +0.1
RSSD  Black Hills       90.69  35  IAMs_20  IAMs_20  20 15 49.3
      comp=Z,2µm,21.0s
PFO   Pinyon Flats O    90.73  49  P        P        19 33 24.9  +0.3
PFO                                pmax     pmax
      comp=Z,157nm,2.0s
PFO   Pinyon Flats O    90.73  49  P        P        19 33 24.9  +0.3
      baz=309,SNR=10
PFO   Pinyon Flats O    90.73  49  P        P        19 33 24.9  +0.3
PFO                                IAmb     IAmb     19 33 31.3
      comp=Z,157nm,1.9s
BELC  Belle Mtn. Jos    90.78  49  P        P        19 33 26.5  +1.6
      baz=309,SNR=8.7
RWWY  Rawlins           90.82  38  P        P        19 33 24.7  -0.4
AGMN  Agassiz Nation    91.15  28  P        P        19 33 26.3  +0.3
      baz=323,SNR=7.1
AGMN  Agassiz Nation    91.15  28  P        P        19 33 25.5  -0.6
AGMN                               IAMs_20  IAMs_20  20 15 25.8
      comp=Z,3µm,20.0s
LODK  Lodwar            91.20 275  IAMs_20  IAMs_20  20 16 27.2
      comp=Z,2µm,20.0s
MONP2 Monument Peak     91.20  50  P        P        19 33 29.2  +2.3
      baz=309,SNR=8.8
IRM   Iron Mountain     91.22  48  P        P        19 33 28.3  +1.5
      baz=310,SNR=27
O20A  White River Ci    91.35  40  P        P        19 33 28.5  +1.1
      baz=314,SNR=34
O20A  White River Ci    91.35  40  P        P        19 33 27.9  +0.5
O20A                               IAmb     IAmb     19 33 33.6
      comp=Z,94nm,1.2s
BC3   Big Chuckawall    91.35  49  P        P        19 33 28.9  +1.5
      baz=310,SNR=21
W13A  Hualapai Mount    91.41  47  P        P        19 33 28.4  +0.5
W13A                               IAmb     IAmb     19 33 35.0
      comp=Z,134nm,1.9s
IKP   In-Ko-Pah, Jac    91.56  50  P        P        19 33 30.4  +2.0
      baz=309,SNR=9.5
SWSC  Sam W. Stewart    91.57  49  P        P        19 33 30.2  +1.8
      baz=310,SNR=6.2
RMX   La Rumorosa       91.61  50           P        19 33 29.7  +1.0
CCX   Cicese            91.69  51  P        P        19 33 29.6  +0.7
CCX                                IAmb     IAmb     19 33 35.6
      comp=Z,99nm,1.8s
PDMCI Parker Dam,Lak    91.77  48  P        P        19 33 29.8  +0.6
      baz=310
KIBK  Kibwezi           91.87 268  P        P        19 33 29.5  -0.6
KIBK                               IAMs_20  IAMs_20  20 20 53.9
      comp=Z,1µm,18.0s
KMBO  Kilima Mbogo      91.93 270  P        P        19 33 29.4  -1.1
      comp=Z,1.5nm,0.6s,baz=34,slow=7.1,SNR=9.6
KMBO                               LR       LR       20 14 28.3
      comp=Z,1µm,21.3s,baz=68,slow=35
KMBO  Kilima Mbogo      91.93 270  i P      P        19 33 32.0  +1.4
KMBO                               pmax     pmax
      comp=Z,2.0nm,0.6s
KMBO  Kilima Mbogo      91.93 270  P        P        19 33 29.9  -0.7
N23A  Red Feather La    92.05  38  P        P        19 33 31.9  +1.1
      baz=316,SNR=38
PPT   Papeete           92.08 109  LR       LR       20 09 32.9
      comp=Z,689nm,19.6s,baz=301,slow=32
PPT2  Papeete2          92.09 109  eS       S        19 44 25.4  -7.4
      comp=Z,807nm,29.0s
PPT2  Papeete2          92.09 109  eLR      LR       20 02 56.3
      comp=Z,3µm,26.2s
GLA   Glamis            92.14  49  P        P        19 33 32.1  +1.1
      baz=310,SNR=6.2
KEST  Kesra             92.35 315  P        P        19 33 32.5  +0.5
      comp=Z,18nm,0.9s,baz=319,slow=2.9,SNR=15
KEST                               LR       LR       20 18 55.4
      comp=Z,5µm,18.9s,baz=336,slow=38
KEST  Kesra             92.35 315  P        P        19 33 32.0  +0.1
WUAZ  Wupatki           92.68  45  P        P        19 33 35.0  +1.3
      baz=312,SNR=51
WUAZ  Wupatki           92.68  45  P        P        19 33 33.5  -0.1
SMCO  Snowmass          92.72  40  P        P        19 33 34.2  +0.1
SMCO                               IAmb     IAmb     19 33 40.7
      comp=Z,80nm,1.2s
SMCO                               IAMs_20  IAMs_20  20 17 54.8
      comp=Z,2µm,20.0s
Y14A  Wickenburg        92.72  47  P        P        19 33 34.3  +0.6
Y14A                               IAmb     IAmb     19 33 40.0
      comp=Z,55nm,1.3s
SUSD  Miller            92.85  32  P        P        19 33 34.5  +0.4
      baz=321,SNR=15
SUSD  Miller            92.85  32  P        P        19 33 34.2  +0.1
F33A  5 Mile Ranch,     92.93  30  P        P        19 33 34.6  +0.3
ISCO  Idaho Springs     93.01  39  P        P        19 33 35.7  +0.4
ISCO                               pmax     pmax
      comp=Z,32nm,1.3s
ISCO                               MLR      MLR
      comp=Z,3µm,19.0s
ISCO  Idaho Springs     93.01  39  P        P        19 33 36.3  +1.0
      baz=316,SNR=12
ISCO  Idaho Springs     93.01  39  P        P        19 33 35.7  +0.4
ISCO                               IAmb     IAmb     19 33 41.8
      comp=Z,32nm,1.3s
ISCO                               IAMs_20  IAMs_20  20 17 06.6
      comp=Z,3µm,19.0s
SCHQ  Schefferville     93.07   9  P        P        19 33 34.7  -0.1
      comp=Z,7.9nm,0.9s,baz=217,slow=7.6,SNR=4.2
SCHQ                               LR       LR       20 17 40.0
      comp=Z,2µm,20.0s,baz=350,slow=37
EYMN  Ely               93.12  26  P        P        19 33 36.3  +1.1
      baz=326
EYMN  Ely               93.12  26  P        P        19 33 36.0  +0.7
EYMN  Ely               93.12  26  IAMs_20  IAMs_20  20 15 55.1
      comp=Z,2µm,20.0s
MVCO  Mesa Verde        93.23  42  P        P        19 33 37.1  +0.9
      baz=314,SNR=45
MVCO  Mesa Verde        93.23  42  P        P        19 33 36.7  +0.5
SFX   San Felipe        93.41  50  P        P        19 33 37.1  +0.3
S22A  4UR Ranch, Cre    93.81  41  P        P        19 33 40.4  +1.4
      baz=315,SNR=31
Q24A  Divide            93.86  39  P        P        19 33 39.7  +0.5
      baz=316,SNR=6.2
OGNE  Ogallala          94.04  36  P        P        19 33 40.0  +0.3
      baz=318
OGNE  Ogallala          94.04  36  P        P        19 33 39.5  -0.2
OGNE                               IAMs_20  IAMs_20  20 19 52.7
      comp=Z,2µm,20.0s
214A  Organ Pipe Nat    94.14  49  P        P        19 33 42.0  +1.8
      baz=311,SNR=23
ECSD  EROS Data Cent    94.46  31  P        P        19 33 42.2  +0.8
      baz=322,SNR=17
ECSD  EROS Data Cent    94.46  31  P        P        19 33 41.6  +0.1
ECSD                               IAmb     IAmb     19 33 47.1
      comp=Z,60nm,1.3s
ECSD  EROS Data Cent    94.46  31  IAMs_20  IAMs_20  20 23 15.5
      comp=Z,2µm,20.0s
SDCO  Great Sand Dun    94.54  40  P        P        19 33 43.6  +1.2
      baz=316,SNR=17
SDCO  Great Sand Dun    94.54  40  P        P        19 33 43.0  +0.7
SDCO                               IAmb     IAmb     19 33 49.6
      comp=Z,93nm,1.9s
SDCO                               IAMs_20  IAMs_20  20 18 02.3
      comp=Z,2µm,21.0s
VOI   Vohitsoka         94.72 247  IAMs_20  IAMs_20  20 16 19.0
      comp=Z,2µm,18.0s
SPMN  Marine on St.     94.87  28  P        P        19 33 43.4  +0.1
SPMN                               IAmb     IAmb     19 33 49.4
      comp=Z,30nm,1.0s
KSCO  Kaye Shedlock'    95.17  38  P        P        19 33 45.9  +0.9
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	baz=318						
KSCO	**Kaye Shedlock'**	**95.17**	**38**	P	**P**	**19 33 44.8**	**-0.2**
TUC	**Tucson**	**95.19**	**47**	P	**P**	**19 33 45.6**	**+0.5**
TUC				pmax	pmax		
	comp=Z,33nm,1.3s						
TUC				MLR	MLR		
	comp=Z,2µm,21.0s						
TUC	**Tucson**	**95.19**	**47**	P	**P**	**19 33 46.2**	**+1.1**
	baz=312						
TUC	**Tucson**	**95.19**	**47**	P	**P**	**19 33 45.6**	**+0.5**
TUC				IAmb	IAmb	19 33 51.5	
	comp=Z,33nm,1.3s						
TUC	**Tucson**	**95.19**	**47**	IAMs_20	IAMs_20	20 14 50.7	
	comp=Z,2µm,21.0s						
TAOE	**Nuku Hiva Isla**	**95.42**	**97**	*e*LR	LR	20 04 33.9	
	comp=Z,2µm,26.5s						
COWI	**Conover**	**95.55**	**25**	IAMs_20	IAMs_20	20 21 48.2	
	comp=Z,2µm,18.0s						
T25A	**Trinidad**	**95.58**	**40**	IAMs_20	IAMs_20	20 18 59.8	
	comp=Z,2µm,20.0s						
G40A	**Rib Lake**	**95.85**	**27**	P	**P**	**19 33 47.8**	**-0.1**
G40A				IAmb	IAmb	19 33 54.1	
	comp=Z,28nm,1.1s						
ANMO	**Albuquerque**	**95.99**	**43**	*i* P	**P**	**19 33 50.2**	**+1.3**
ANMO				pmax	pmax		
	comp=Z,41nm,1.8s						
ANMO	**Albuquerque**	**95.99**	**43**	P	**P**	**19 33 50.7**	**+1.8**
	baz=315						
ANMO	**Albuquerque**	**95.99**	**43**	P	**P**	**19 33 48.7**	**-0.2**
ANMO				IAmb	IAmb	19 33 56.5	
	comp=Z,92nm,2.0s						
BNM	**Barren Site**	**96.45**	**43**	P	**P**	**19 33 51.2**	**+0.2**
CBKS	**Cedar Bluff**	**96.80**	**36**	IAMs_20	IAMs_20	20 25 37.9	
	comp=Z,2µm,21.0s						
ESDC	**Sonseca Array**	**96.81**	**325**	P	**P**	**19 33 50.9**	**-1.4**
	comp=Z,1.5nm,1.0s,baz=27,slow=4.5,SNR=8.9						
ESDC				PP	**PP**	**19 37 46.9**	**+0.3**
	comp=Z,9.9nm,1.1s,baz=37,slow=7.3,SNR=16						
ESDC				PKKPbc	**PKKPdf**	**19 50 36.6**	**+2.3**
	comp=Z,0.7nm,0.9s,baz=256,slow=2.1,SNR=5.1						
ESDC				LR	LR	20 22 22.5	
	comp=Z,6µm,18.0s,baz=350,slow=38						
ESDC	**Sonseca Array**	**96.81**	**325**	P	**P**	**19 33 51.7**	**-0.6**
121A	**Cookes Peak, D**	**96.89**	**45**	P	**P**	**19 33 55.0**	**+2.1**
	baz=314						
MBAR	**Mbarara**	**97.22**	**274**	IAMs_20	IAMs_20	20 20 38.0	
	comp=Z,2µm,20.0s						
SCIA	**State Center**	**97.41**	**30**	IAMs_20	IAMs_20	20 24 08.6	
	comp=Z,3µm,19.0s						
JFWS	**Jewell Farm**	**97.81**	**28**	IAMs_20	IAMs_20	20 19 34.1	
	comp=Z,3µm,20.0s						
KSU1	**Kansas State U**	**98.12**	**34**	IAMs_20	IAMs_20	20 20 27.7	
	comp=Z,2µm,19.0s						
GLMI	**Grayling**	**98.25**	**23**	IAMs_20	IAMs_20	20 17 38.7	
	comp=Z,2µm,18.0s						
MNTX	**Cornudas Mount**	**98.93**	**44**	Pdiff	Pdif	19 34 04.2	+2.3
	baz=316,SNR=7.8						
MNTX	**Cornudas Mount**	**98.93**	**44**		Pdif	19 34 02.7	+0.8
MNTX				IAMs_20	IAMs_20	20 26 59.3	
	comp=Z,2µm,18.0s						
U32A	**Winter Ranch,**	**99.04**	**37**	IAMs_20	IAMs_20	20 16 10.1	
	comp=Z,2µm,20.0s						
OK032	**Salt Plains WL**	**99.12**	**37**	IAMs_20	IAMs_20	20 21 39.2	
	comp=Z,2µm,20.0s						
KS20	**Mayfield South**	**99.12**	**36**	IAMs_20	IAMs_20	20 16 57.2	
	comp=Z,2µm,19.0s						
L44A	**Lake County Fo**	**99.35**	**27**	IAMs_20	IAMs_20	20 20 30.9	
	comp=Z,3µm,20.0s						
HDIL	**Hopedale**	**100.18**	**29**	IAMs_20	IAMs_20	20 21 06.9	
	comp=Z,3µm,21.0s						
OK029	**Liberty Lake**	**100.28**	**37**	IAMs_20	IAMs_20	20 22 27.1	
	comp=Z,2µm,18.0s						
WMOK	**Wichita Mounta**	**100.41**	**38**	Pdiff	**Pdif**	**19 34 10.3**	**+1.8**
	baz=320,SNR=5.6						
WMOK	**Wichita Mounta**	**100.41**	**38**	IAMs_20	IAMs_20	20 27 27.4	
	comp=Z,2µm,19.0s						
OK030	**Cody Creek RV**	**100.52**	**36**	IAMs_20	IAMs_20	20 21 43.4	
	comp=Z,2µm,19.0s						
AAM	**Ann Arbor**	**100.80**	**24**	IAMs_20	IAMs_20	20 26 00.3	
	comp=Z,2µm,20.0s						
TUL1	**Leonard**	**101.03**	**36**	IAMs_20	IAMs_20	20 22 02.8	
	comp=Z,2µm,21.0s						
CCM	**Cathedral Cave**	**101.44**	**31**	IAMs_20	IAMs_20	20 21 57.2	
	comp=Z,2µm,20.0s						
TXAR	**Lajitas Array**	**101.65**	**45**	P	**Pdif**	**19 34 14.6**	**+0.4**
	comp=Z,5.7nm,1.1s,baz=285,slow=2.5,SNR=13						
TXAR				PP	**PP**	**19 38 25.1**	**+1.3**
	comp=Z,1.9nm,1.1s,baz=298,slow=3.8,SNR=4.9						
TXAR				PKKPbc	**PKKPbc**	**19 50 20.6**	**+0.2**
	comp=Z,0.2nm,0.6s,baz=145,slow=6.6,SNR=3.8						
TXAR	**Lajitas Array**	**101.65**	**45**	Pdif	**Pdif**	**19 34 14.3**	**+0.1**
U40A	**Yellville**	**102.09**	**33**	IAMs_20	IAMs_20	20 27 01.7	
	comp=Z,2µm,18.0s						
ERPA	**Erie**	**102.18**	**22**	IAMs_20	IAMs_20	20 26 04.7	
	comp=Z,2µm,18.0s						
M53A	**WI Miller and**	**102.58**	**22**	IAMs_20	IAMs_20	20 21 04.1	
	comp=Z,2µm,21.0s						
W39A	**Magazine**	**102.59**	**35**	IAMs_20	IAMs_20	20 23 14.0	
	comp=Z,2µm,20.0s						
M54A	**Oil Creek Stat**	**102.83**	**22**	IAMs_20	IAMs_20	20 23 29.0	
	comp=Z,2µm,20.0s						
ACSO	**Alum Creek Sta**	**102.87**	**24**	IAMs_20	IAMs_20	20 25 08.0	
	comp=Z,2µm,19.0s						
JCT	**Junction City**	**103.08**	**42**	IAMs_20	IAMs_20	20 27 32.3	
	comp=Z,2µm,20.0s						
MIAR	**Mount Ida**	**103.21**	**35**	IAMs_20	IAMs_20	20 23 36.6	
	comp=Z,2µm,18.0s						
N54A	**Moraine State**	**103.23**	**22**	IAMs_20	IAMs_20	20 26 30.4	
	comp=Z,2µm,20.0s						
WCI	**Wyandotte Cave**	**103.38**	**28**	IAMs_20	IAMs_20	20 20 59.4	
	comp=Z,2µm,22.0s						
TRY	**Troy**	**103.39**	**17**	IAMs_20	IAMs_20	20 25 18.7	
	comp=Z,3µm,20.0s						
O53A	**New Philadelph**	**103.47**	**23**	IAMs_20	IAMs_20	20 22 18.7	
	comp=Z,2µm,18.0s						
X40A	**Basin Creek Fa**	**103.62**	**34**	IAMs_20	IAMs_20	20 28 46.3	
	comp=Z,2µm,18.0s						
P52A	**Corning**	**103.70**	**24**	IAMs_20	IAMs_20	20 22 32.9	
	comp=Z,2µm,19.0s						
CRZF	**Crozet Islands**	**103.95**	**224**	IAMs_20	IAMs_20	20 15 05.4	
	comp=Z,1µm,19.0s						
435B	**Jarrell**	**104.08**	**40**	IAMs_20	IAMs_20	20 24 18.9	
	comp=Z,2µm,19.0s						
SSPA	**Standing Stone**	**104.18**	**21**	IAMs_20	IAMs_20	20 22 56.5	
	comp=Z,3µm,19.0s						
NATX	**Nacogdoches**	**104.89**	**37**	IAMs_20	IAMs_20	20 29 13.9	
	comp=Z,2µm,19.0s						
PAL	**Palisades**	**104.95**	**18**	IAMs_20	IAMs_20	20 26 19.0	
	comp=Z,3µm,19.0s						
PLAL	**Pickwick Lake**	**105.40**	**31**	IAMs_20	IAMs_20	20 25 38.1	
	comp=Z,2µm,20.0s						
HKT	**Hockley**	**105.68**	**39**	IAMs_20	IAMs_20	20 27 21.8	
	comp=Z,2µm,18.0s						
BLA	**Blacksburg**	**106.47**	**24**	IAMs_20	IAMs_20	20 24 08.1	
	comp=Z,2µm,19.0s						
VBMS	**Vicksburg**	**106.58**	**34**	IAMs_20	IAMs_20	20 26 53.8	
	comp=Z,2µm,20.0s						
LSZ	**Lusaka**	**106.75**	**262**	IAMs_20	IAMs_20	20 22 45.6	
	comp=Z,2µm,19.0s						
GOGA	**Godfrey**	**108.69**	**28**	IAMs_20	IAMs_20	20 27 48.1	
	comp=Z,2µm,20.0s						
BRAL	**Brewton**	**109.08**	**32**	IAMs_20	IAMs_20	20 28 05.6	
	comp=Z,2µm,19.0s						
MAW	**Mawson**	**110.20**	**202**	PKiKP	**PKiKP**	**19 38 52.2**	**+0.2**
	comp=Z,1.7nm,0.8s,baz=357,slow=6.5,SNR=3.5						
NHSC	**New Hope**	**110.23**	**26**	IAMs_20	IAMs_20	20 25 31.9	
	comp=Z,2µm,20.0s						
VNDA	**Vanda**	**110.49**	**173**	PKiKP	**PKiKP**	**19 38 53.6**	**+1.2**
	comp=Z,0.4nm,0.7s,baz=326,slow=8.0,SNR=2.0						
UNM	**Universidad Na**	**111.70**	**49**	IAMs_20	IAMs_20	20 31 14.0	
	comp=Z,1µm,19.0s						
TORD	**Torodi Ar. Bea**	**112.69**	**303**	PKiKP	**PKiKP**	**19 38 57.9**	**-0.6**
	comp=Z,2.9nm,0.8s,baz=21,slow=2.7,SNR=11						
TORD				PP	PP	19 39 36.7	-8.5
	comp=Z,3.0nm,0.9s,baz=42,slow=5.4,SNR=3.8						
TORD				PKKPbc	**PKKPbc**	**19 49 46.7**	**+0.9**
	comp=Z,1.6nm,0.9s,baz=242,slow=3.9,SNR=4.5						
DWPF	**Disney Wildern**	**114.17**	**29**	IAMs_20	IAMs_20	20 31 08.2	
	comp=Z,2µm,20.0s						
BBSR	**BB Station**	**115.30**	**13**	IAMs_20	IAMs_20	20 29 56.8	
	comp=Z,1µm,20.0s						
KOWA	**Kowa**	**115.74**	**308**		**PKiKP**	**19 39 03.7**	**-0.6**
TSUM	**Tsumeb**	**117.54**	**263**	IAMs_20	IAMs_20	20 30 29.8	
	comp=Z,2µm,19.0s						
SYO	**Syowa Base**	**118.65**	**204**	⇑*e*Pdiff	**Pdif**	**19 35 31.4**	**+2.9**
SYO	**Syowa Base**	**118.65**	**204**	⇓*e*pPdiff	pPdif	19 35 33.8	-0.4
SYO	**Syowa Base**	**118.65**	**204**	⇑*e*sPdiff	**Pdif**	**19 35 36.2**	**+7.7**
QSPA	**South Pole Qui**	**121.16**	**180**		**PKPdf**	**19 39 12.6**	**-0.7**
DBIC	**Dimbokro**	**121.79**	**302**	PKP	**PKPdf**	**19 39 15.8**	**-0.2**
	comp=Z,13nm,0.8s,baz=90,slow=2.9,SNR=9.0						
DBIC	**Dimbokro**	**121.79**	**302**		**PKPdf**	**19 39 15.5**	**-0.5**
KIC	**Kosan Boka**	**121.92**	**302**	*e*PKIKP	**PKPdf**	**19 39 15.9**	**-0.4**
	comp=Z,24nm,0.8s						
TIC	**Toumodi**	**121.93**	**302**	*e*PKIKP	**PKPdf**	**19 39 15.9**	**-0.4**
LIC	**Lamto**	**122.22**	**302**	*e*PKIKP	**PKPdf**	**19 39 16.2**	**-0.6**
	comp=Z,70nm,0.9s						
TGUH	**Tegucigalpa,Un**	**123.05**	**43**	IAMs_20	IAMs_20	20 42 43.2	
	comp=Z,1µm,20.0s						
GTBY	**Guantanamo Bay**	**124.03**	**27**	IAMs_20	IAMs_20	20 36 04.5	
	comp=Z,2µm,20.0s						
MTDJ	**Mount Denham**	**124.54**	**31**	IAMs_20	IAMs_20	20 36 50.1	
	comp=Z,1µm,20.0s						
JTS	**Las Juntas de**	**127.40**	**44**	PKP	**PKiKP**	**19 39 28.2**	**+0.9**
	comp=Z,1.6nm,0.3s,baz=310,slow=12,SNR=3.6						
JTS	**Las Juntas de**	**127.40**	**44**	IAMs_20	IAMs_20	20 44 51.6	
	comp=Z,868nm,18.0s						
HDC	**Heredia**	**128.13**	**43**	IAMs_20	IAMs_20	20 41 41.1	
	comp=Z,1µm,20.0s						
SJG	**San Juan**	**128.71**	**18**	IAMs_20	IAMs_20	20 36 52.3	
	comp=Z,1µm,22.0s						
SMRT	**St. Maarten**	**129.52**	**15**	IAMs_20	IAMs_20	20 31 46.7	
	comp=Z,1µm,22.0s						
SABA	**Saba**	**129.90**	**15**	IAMs_20	IAMs_20	20 35 42.7	
	comp=Z,1µm,22.0s						
ANWB	**Willy Bob**	**130.16**	**13**	IAMs_20	IAMs_20	20 38 12.5	
	comp=Z,923nm,20.0s						
BCIP	**Isla Barro Col**	**131.21**	**39**	IAMs_20	IAMs_20	20 43 29.3	
	comp=Z,1µm,21.0s						
SNAA	**Sanae**	**132.20**	**199**	PKiKP	**PKiKP**	**19 39 35.1**	**-0.2**
SNAA	**Sanae**	**132.20**	**199**	PKIKP	**PKiKP**	**19 39 34.8**	**-0.5**
SNAA	**Sanae**	**132.20**	**199**	PKPdf	**PKiKP**	**19 39 34.8**	**-0.5**
SVN	**Savane Anatole**	**133.03**	**13**	IAMs_20	IAMs_20	20 36 50.7	
	comp=Z,1µm,21.0s						
FDF	**Fort de France**	**133.14**	**13**	IAMs_20	IAMs_20	20 37 04.5	
	comp=Z,1µm,21.0s						
HATO	**Hato, Curacao**	**133.43**	**24**	IAMs_20	IAMs_20	20 39 48.3	
	comp=Z,1µm,21.0s						
VNA2	**Neumayer--Watz**	**133.84**	**198**	PKPdf	**PKiKP**	**19 39 37.9**	**-0.6**
VNA1	**Neumayer--Stat**	**134.23**	**198**	PKPdf	**PKPdf**	**19 39 38.2**	**+0.2**
VNA3	**Neumayer Olymp**	**134.25**	**197**	PKPdf	**PKPdf**	**19 39 36.6**	**-1.4**
GRGR	**Grenville**	**135.56**	**15**	IAMs_20	IAMs_20	20 39 25.8	
	comp=Z,1µm,22.0s						
SDV	**Santo Domingo**	**135.82**	**28**	PKP	**PKPdf**	**19 39 42.5**	**-0.4**
	comp=Z,6.3nm,0.3s,baz=48,slow=1.5,SNR=7.3						
SDV	**Santo Domingo**	**135.82**	**28**	*e*P	**PKiKP**	**19 39 47.1**	**+2.6**
SDV	**Santo Domingo**	**135.82**	**28**	PKPdf	**PKPdf**	**19 39 42.1**	**-0.9**
SDV	**Santo Domingo**	**135.82**	**28**	IAMs_20	IAMs_20	20 44 55.8	
	comp=Z,1µm,20.0s						
ROSC	**El Rosal**	**137.74**	**36**	PKP	**PKiKP**	**19 39 48.0**	**-0.7**
	comp=Z,6.8nm,0.4s,baz=322,slow=13,SNR=5.4						
ROSC	**El Rosal**	**137.74**	**36**	PKIKP	**PKiKP**	**19 39 48.0**	**-0.7**
ROSC	**El Rosal**	**137.74**	**36**		**PKPdf**	**19 39 44.1**	**-2.7**
OTAV	**Otavalo**	**139.28**	**45**	IAMs_20	IAMs_20	20 46 29.4	
	comp=Z,921nm,22.0s						
ATAH	**Atahualpa**	**144.94**	**52**	PKPbc	**PKPdf**	**19 39 59.6**	**-0.1**
	comp=Z,87nm,1.1s,baz=304,slow=3.5,SNR=16						
BOAV	**Boa Vista**	**145.23**	**17**		**PKPbc**	**19 39 57.7**	**-1.5**
PMSA	**Palmer Station**	**145.66**	**170**	*e*P	**PKiKP**	**19 40 01.2**	**-1.5**
PMSA	**Palmer Station**	**145.66**	**170**		**PKPbc**	**19 39 58.9**	**-0.2**
TBTG	**Tabatinga, AM**	**147.70**	**37**	*e*P	**PKiKP**	**19 40 08.0**	**-0.6**
TBTG	**Tabatinga, AM**	**147.70**	**37**		**PKPbc**	**19 40 05.8**	**-0.7**
PTGA	**Pitinga**	**148.38**	**17**	PKPbc	**PKPbc**	**19 40 08.0**	**-0.4**
	comp=Z,41nm,0.9s,baz=349,slow=3.1,SNR=34						
PTGA	**Pitinga**	**148.38**	**17**		**PKPbc**	**19 40 06.7**	**-1.7**
PTGA				IAMs_20	IAMs_20	20 52 20.1	
	comp=Z,1µm,20.0s						
CZSB	**Cruzeiro do Su**	**149.04**	**45**	*e*P	**PKPbc**	**19 40 10.7**	**+0.6**
CZSB	**Cruzeiro do Su**	**149.04**	**45**	PKPdf	**PKPdf**	**19 40 04.8**	**-1.2**
MCPB	**Macapa, AP**	**149.12**	**2**	*e*P	**PKPbc**	**19 40 08.9**	**-1.4**
NNA	**Nana**	**149.44**	**56**	PKPbc	**PKPbc**	**19 40 10.4**	**-0.7**
	comp=Z,66nm,0.9s,baz=328,slow=6.7,SNR=9.5						
NNA	**Nana**	**149.44**	**56**	PKIKP	**PKPbc**	**19 40 10.0**	**-1.1**
NNA	**Nana**	**149.44**	**56**		**PKPbc**	**19 40 10.0**	**-1.1**
NBMO	**Morrinhos-CE**	**150.16**	**337**	*e*P	**PKPbc**	**19 40 10.7**	**-2.2**
NBCL	**Cascavel-CE**	**150.38**	**333**	*e*P	**PKPdf**	**19 40 09.2**	**+1.1**
MALB	**Monte Alegre**	**150.47**	**6**	*e*P	**PKPbc**	**19 40 11.5**	**-2.0**
MACA	**Manacapuru-AM**	**150.51**	**20**	*e*P	**PKPbc**	**19 40 12.1**	**-1.6**
MACA	**Manacapuru-AM**	**150.51**	**20**	PKPbc	**PKPbc**	**19 40 12.6**	**-1.1**
ROSB	**Rosrio**	**150.88**	**345**	*e*P	**PKPbc**	**19 40 12.4**	**-2.1**
TMAB	**Tom-Au,PA,Br**	**150.98**	**354**	*e*P	**PKPdf**	**19 40 10.9**	**+1.9**
NBPV	**Pedro Velho**	**151.04**	**326**	*e*P	**PKPbc**	**19 40 12.4**	**-2.5**
NBPB	**Pedra_Branca-C**	**152.07**	**335**	*e*P	**PKPdf**	**19 40 13.9**	**+3.1**
NBLV	**Livramento - P**	**152.62**	**328**	*e*P	**PKPdf**	**19 40 12.7**	**+1.1**
ITTB	**Itaituba**	**152.77**	**10**	*e*P	**PKPbc**	**19 40 15.7**	**-3.2**
ETMB	**Extrema**	**154.38**	**36**	*e*P	**PKPdf**	**19 40 17.7**	**+3.7**
ETMB	**Extrema**	**154.38**	**36**	PKPdf	**PKPdf**	**19 40 13.1**	**-0.9**
PRPB	**Parauapebas**	**154.87**	**357**	*e*P	**PKPdf**	**19 40 17.4**	**+2.7**
SAML	**Samuel**	**155.02**	**29**	PKIKP	**PKPdf**	**19 40 14.5**	**-0.4**
SAML				MLR	MLR		
	comp=Z,1µm,22.0s						
SAML	**Samuel**	**155.02**	**29**	PKPdf	**PKPdf**	**19 40 14.5**	**-0.4**
SAML				IAMs_20	IAMs_20	20 50 14.7	
	comp=Z,1µm,22.0s						
NPGB	**Novo Progresso**	**155.46**	**10**	*e*P	**PKPdf**	**19 40 19.5**	**+3.9**
NBLA	**Lagarto - SE**	**156.21**	**326**	*e*P	**PKPdf**	**19 40 20.1**	**+3.6**
LPAZ	**La Paz**	**158.44**	**50**	PKP	**PKPdf**	**19 40 19.9**	**-0.1**
	comp=Z,12nm,1.2s,baz=360,slow=4.6,SNR=9.7						
LPAZ				PKPab	**PKPab**	**19 40 53.7**	**-0.9**
	comp=Z,17nm,1.1s,baz=346,slow=4.7,SNR=7.9						
LPAZ	**La Paz**	**158.44**	**50**	*e*P	**PKPdf**	**19 40 23.3**	**+3.3**
LPAZ	**La Paz**	**158.44**	**50**	PKPdf	**PKPdf**	**19 40 19.4**	**-0.6**
PB16	**IPOC Station P**	**158.92**	**56**	IAMs_20	IAMs_20	20 42 40.4	
	comp=Z,1µm,21.0s						
PDRB	**Porto dos Gac**	**159.65**	**16**	*e*P	**PKPdf**	**19 40 23.3**	**+2.6**
VILB	**Vilhena**	**159.85**	**26**	*e*P	**PKPdf**	**19 40 25.4**	**+4.4**
PLCA	**Paso Flores**	**161.81**	**126**	PKPab	**PKPab**	**19 41 10.0**	**+2.0**
	comp=Z,8.3nm,1.3s,baz=335,slow=5.7,SNR=3.1						
LVC	**Limon Verde**	**161.95**	**65**	PKPab	**PKPab**	**19 41 11.1**	**+1.6**
	comp=Z,31nm,1.1s,baz=246,slow=1.5,SNR=12						
SIV	**San Ignacio**	**162.20**	**33**	PKP	**PKPdf**	**19 40 22.2**	**-1.2**
	comp=Z,7.1nm,1.1s,baz=25,slow=3.8,SNR=7.5						
SIV				PKPab	**PKPab**	**19 41 10.0**	**-0.1**
	comp=Z,26nm,1.1s,baz=334,slow=3.9,SNR=6.1						
SIV				PP	**PP**	**19 44 52.2**	**-1.1**
	comp=Z,21nm,1.2s,baz=342,slow=5.2,SNR=9.3						
BDFB	**Brasilia**	**164.05**	**349**	PKP	**PKPdf**	**19 40 25.1**	**-0.2**
	comp=Z,6.5nm,1.0s,baz=248,slow=2.2,SNR=4.9						
BDFB				PKPab	**PKPab**	**19 41 16.6**	**-1.7**
	comp=Z,9.8nm,0.8s,baz=87,slow=2.3,SNR=9.0						
CPUP	**Villa Florida**	**172.61**	**48**	PKP	**PKPdf**	**19 40 30.4**	**-0.2**
	comp=Z,7.7nm,1.2s,baz=45,slow=15,SNR=2.9						
CPUP				PKPab	**PKPab**	**19 41 56.7**	**+0.8**
	comp=Z,8.3nm,1.1s,baz=333,slow=6.7,SNR=4.7						
CPUP				PP	**PP**	**19 45 48.3**	**+1.2**
	comp=Z,7.3nm,1.1s,baz=67,slow=0.4,SNR=4.0						

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*IDC **14** 19:22:34.7±0.9, 43°.58N×39°.14E, $h0^{km}$, mb4.3/1, mb1 3.6/6, mb1mx3.3/53, mbtmp3.4/6, ML2.9/5, MS4.8/3, Ms1 4.8/3, ms1mx3.2/56, Error ellipse: s-maj=16.7km s-min=8.6km az=165.0*

*NEIC **14** 19:22:36.2±1.6, 43°.69N±0°.06×38°.94E±0°.06, $h10^{km}$±2^{km}, mb4.2/3, Error ellipse: s-maj=12.1km s-min=4.6km az=27.0*

*CFUSG **14** 19:22:36.2, 43°.39N×39°.15E, $h26^{km}$, mb2.3/3, MD3.1/3, Black Sea Magtype MSH 2.9 from 4 stations*

ISC 14 19:22:38.8±1.1**, 43°.62N**±0°.07×**39°.03E**±0°.07**, $h35^{km}$, n29,** σ**$2^{s}.16$**/33**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIV	**Kislovodsk**	**2.67**	**81**		**Pn**	**19 23 20.1**	**+0.7**
KVAR	**Kislovodsk Arr**	**2.68**	**81**	Pn	**Pn**	**19 23 21.2**	**+1.7**
	baz=216,slow=17,SNR=3.9						
KVAR				Lg	Lg	19 23 56.3	
	baz=188,slow=15,SNR=6.2						
KBZ	**Khabaz**	**2.81**	**86**	Pn	**Pn**	**19 23 22.1**	**+0.9**
	0.7nm,0.3s,baz=290,slow=11,SNR=16						
KBZ				Lg	Lg	19 24 01.6	
	2.5nm,0.3s,baz=117,slow=10,SNR=7.7						
SUDU	**Sudak**	**3.16**	**295**	*e*P	**Pn**	**19 23 27.6**	**+1.6**
SUDU				Pm		19 23 29.0	
	comp=Z,4.0nm,0.2s						
SUDU				*e*S	**Sn**	**19 24 07.5**	**+5.0**
SUDU				Sm		19 24 07.7	
	comp=E,8.0nm,0.3s						
SUDU				Sm		19 24 09.9	
	comp=N,10.0nm,0.3s						
SNOP	**Sinop**	**3.23**	**242**	Pn	**Pn**	**19 23 27.1**	**+0.1**
SNOP				Sn	**Sn**	**19 24 05.9**	**+1.7**
ONI	**Oni**	**3.40**	**106**	Pn	**Pn**	**19 23 28.9**	**-0.5**
ALU	**Alushta**	**3.50**	**289**	Sm		19 24 03.2	
	comp=N,39nm,0.2s						
YAL	**Yalta**	**3.62**	**286**	*e*P	**Pn**	**19 23 32.9**	**+0.6**
YAL				Pm		19 23 33.3	
	comp=Z,11nm,0.2s						
YAL				*e*S	**Sn**	**19 24 16.6**	**+2.9**
YAL				Sm		19 24 17.2	
	comp=N,23nm,0.2s						
YAL				Sm		19 24 18.6	
	comp=E,23nm,0.3s						
SIM	**Simferopol'**	**3.77**	**292**	*e*P	**Pn**	**19 23 35.7**	**+1.3**
SIM				*e*S	**Sn**	**19 24 21.9**	**+4.4**
SIM				Sm		19 24 26.9	
	comp=E,7.0nm,0.1s						
SIM				Sm		19 24 29.0	
	comp=N,6.0nm,0.2s						
SEV	**Sevastopol'**	**3.97**	**285**	*e*P	**Pn**	**19 23 37.8**	**+0.7**
SEV				Pm		19 23 38.8	
	comp=Z,2.0nm,0.2s						
SEV				*i* S	**Sn**	**19 24 24.9**	**+2.5**
SEV				Sm		19 24 25.2	
	comp=E,3.0nm,0.3s						
SEV				Sm		19 24 25.9	
	comp=N,6.0nm,0.3s						
BZK	**Bozkurt**	**4.05**	**248**	Pn	**Pn**	**19 23 37.5**	**-0.7**
BR131	**Keskin Array S**	**5.60**	**228**	Pn	**Pn**	**19 23 59.1**	**-0.6**
BR131				Sn	**Sn**	**19 25 05.4**	**+2.5**
BRTR	**Keskin Array B**	**5.60**	**228**	Pn	**Pn**	**19 24 00.9**	**+1.2**
	comp=N,0.2nm,0.3s,baz=50,slow=9.9,SNR=7.0						
BRTR				Sn	**Sn**	**19 25 07.0**	**+4.1**
	comp=N,0.4nm,0.3s,baz=50,slow=18,SNR=10						
BRTR	**Keskin Array B**	**5.60**	**228**		**Pn**	**19 23 59.6**	**-0.1**
TIRR	**Tirgusor**	**7.70**	**280**	Pn	**Pn**	**19 24 27.0**	**-1.3**
AKASG	**Malin Array Be**	**9.73**	**320**	Pn	**Pn**	**19 24 55.5**	**-0.6**
	comp=N,1.0nm,0.3s,baz=129,slow=13,SNR=3.4						
AKASG				Sn	**Sn**	**19 26 39.9**	**-4.2**
	comp=N,0.7nm,0.3s,baz=128,slow=24,SNR=3.5						
AKASG	**Malin Array Be**	**9.73**	**320**	Pn	**Pn**	**19 24 54.0**	**-2.1**
AKBB	**Malin Array Si**	**9.73**	**320**	Pn	**Pn**	**19 24 55.1**	**-1.0**
BURAR	**Bucovina Array**	**10.47**	**297**	Pn	**Pn**	**19 25 04.8**	**-1.6**
BUR08	**Bucovina Ar. S**	**10.49**	**297**	Pn	**Pn**	**19 25 04.9**	**-1.7**
FINES	**FINESS Array B**	**19.45**	**341**	P	**Pn**	**19 27 03.4**	**0.0**
	comp=N,0.1nm,0.3s,baz=147,slow=11,SNR=9.1						
FINES	**FINESS Array B**	**19.45**	**341**	P	**Pn**	**19 27 02.8**	**-0.6**
FIA1	**FINESS Array S**	**19.45**	**341**	P	**P**	**19 27 02.1**	**+0.1**
FIA1				IAmb	IAmb	19 27 30.0	
	comp=Z,26nm,1.4s						
RAFF	**Raffo Rosso**	**19.80**	**260**	P	**P**	**19 27 03.7**	**-2.3**
RAFF				IAmb	IAmb	19 27 04.7	
	comp=Z,29nm,1.0s						
OSSC	**Osservatorio P**	**20.10**	**279**	P	**P**	**19 27 06.8**	**-2.5**
OSSC				IAmb	IAmb	19 27 09.0	
	comp=Z,6.0nm,1.3s						
HFS	**Hagfors**	**22.53**	**326**	P	**P**	**19 27 36.1**	**+0.8**
	comp=Z,16nm,1.3s,baz=125,slow=14,SNR=1.8						
AAK	**Ala-Archa**	**25.79**	**80**	LR	LR	19 38 54.1	
	comp=Z,364nm,19.2s,baz=319,slow=38						
ANMO	**Albuquerque**	**95.72**	**332**	LR	LR	20 22 05.3	
	comp=Z,705nm,18.1s,baz=346,slow=37						
TXAR	**Lajitas Array**	**99.75**	**328**	LR	LR	20 22 59.8	
	comp=Z,851nm,18.0s,baz=0.0,slow=36						

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*NEIC **14** 19:33:04.5±1.9, 15°.44S±0°.05×71°.7W±0°.1, $h132^{km}$±9^{km}, mb4.3/14, Error ellipse: s-maj=15.5km s-min=2.1km az=63.0*

*IDC **14** 19:33:05.2±1.8, 15°.46S×71°.74W, $h151^{km}$±17^{km}, mb3.3/2, mb1 3.7/8, mb1mx3.5/34, mbtmp4.2/8, Error ellipse: s-maj=29.4km s-min=17.0km az=24.0*

*VAO **14** 19:33:09.7±0.5, 15°.50S×71°.15W, $h128^{km}$, mb4.1*

ISC 14 19:33:03.8±0.6**, 15°.49S**±0°.05×**71°.80W**±0°.06**, $h132^{km}$, n87,** σ**$1^{s}.65$**/92**, mb4.2**/6**, 3C, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AP01	**Chacalluta**	**3.19**	**154**	*e*S	**Sn**	**19 34 31.3**	**+0.4**
AP01	**Chacalluta**	**3.19**	**154**	Pn	**Pn**	**19 33 55.3**	**+2.4**
AP01				Sn	**Sn**	**19 34 31.2**	**+0.4**
PB12	**IPOC Station P**	**3.41**	**156**	⇑*i*P	**Pn**	**19 33 57.5**	**+1.6**
PB12	**IPOC Station P**	**3.41**	**156**	Pn	**Pn**	**19 33 57.4**	**+1.4**
PB12				Sn	**Sn**	**19 34 35.5**	**-0.8**
PB16	**IPOC Station P**	**3.58**	**142**		**Pn**	**19 34 00.9**	**+2.3**
LPAZ	**La Paz**	**3.62**	**103**	P	**Pn**	**19 34 01.5**	**+2.3**
	10nm,0.3s,baz=296,slow=11,SNR=198						
LPAZ				S	**Sn**	**19 34 43.9**	**+1.9**
	1.9nm,0.3s,baz=32,slow=21,SNR=6.6						
LPAZ	**La Paz**	**3.62**	**103**	⇑*i*P	**Pn**	**19 34 01.5**	**+2.3**
PB11	**IPOC Station P**	**4.71**	**155**	*e*P	**Pn**	**19 34 14.1**	**+0.8**
PB11	**IPOC Station P**	**4.71**	**155**	Pn	**Pn**	**19 34 13.9**	**+0.7**
TA02	**Huaiquique**	**5.01**	**162**	*e*P	**Pn**	**19 34 17.5**	**+0.4**
TA02				*e*S	**Sn**	**19 35 10.7**	**-3.5**
TA02	**Huaiquique**	**5.01**	**162**		**Pn**	**19 34 17.7**	**+0.6**
HMBC	**Humberstone**	**5.10**	**159**	*i* P	**Pn**	**19 34 18.4**	**+0.1**
PB08	**IPOC Station P**	**5.27**	**152**	⇑*i*P	**Pn**	**19 34 22.3**	**+1.5**
PB08				*e*S	**Sn**	**19 35 18.7**	**-2.2**
PB08	**IPOC Station P**	**5.27**	**152**		**Pn**	**19 34 21.9**	**+1.0**
TA01	**Diego Aracena**	**5.28**	**163**	*e*P	**Pn**	**19 34 21.2**	**+0.6**
TA01				*e*S	**Sn**	**19 35 16.3**	**-4.3**
TA01	**Diego Aracena**	**5.28**	**163**		**Pn**	**19 34 21.3**	**+0.6**
PB01	**IPOC Station P**	**5.94**	**159**	Pn	**Pn**	**19 34 29.9**	**+0.2**
NNA	**Nana**	**6.01**	**305**	P	**Pn**	**19 34 32.6**	**+2.1**
	36nm,0.3s,baz=126,slow=10,SNR=48						
NNA				S	**Sn**	**19 35 36.8**	**-1.5**
	5.9nm,0.3s,baz=210,slow=18,SNR=2.0						
NNA	**Nana**	**6.01**	**305**	Pn	**Pn**	**19 34 32.3**	**+1.8**
PB07	**IPOC Station P**	**6.46**	**164**		**Pn**	**19 34 37.4**	**+0.7**
PB09	**IPOC Station P**	**6.72**	**159**		**Pn**	**19 34 41.1**	**+0.9**
PB04	**IPOC Station P**	**6.98**	**167**	Pn	**Pn**	**19 34 44.1**	**+0.3**
PB06	**IPOC Station P**	**7.48**	**164**		**Pn**	**19 34 50.6**	**+0.2**
LVC	**Limon Verde**	**7.59**	**159**	P	**Pn**	**19 34 53.1**	**+1.0**
	6.4nm,0.3s,baz=336,slow=10,SNR=49						
LVC				S	**Sn**	**19 36 12.9**	**-3.9**
	11nm,0.3s,baz=168,slow=20,SNR=23						
LVC	**Limon Verde**	**7.59**	**159**	*e*P	**Pn**	**19 34 53.3**	**+1.2**
LVC	**Limon Verde**	**7.59**	**159**	Pn	**Pn**	**19 34 52.8**	**+0.8**
ETMB	**Extrema**	**7.84**	**45**	*e*P	**Pn**	**19 34 53.9**	**-1.3**
ETMB	**Extrema**	**7.84**	**45**	Pn	**Pn**	**19 34 53.5**	**-1.7**
PB15	**IPOC Station P**	**7.99**	**164**		**Pn**	**19 34 57.8**	**+0.6**
PB10	**IPOC Station P**	**8.07**	**172**	Pn	**Pn**	**19 34 58.2**	**0.0**
SIV	**San Ignacio**	**10.34**	**94**	P	**Pn**	**19 35 27.3**	**-1.5**
	0.4nm,0.3s,baz=272,slow=11,SNR=6.2						
SIV				S	**Sn**	**19 37 20.7**	**-2.3**
	0.3nm,0.3s,baz=121,slow=23,SNR=1.7						
SAML	**Samuel**	**10.64**	**53**	Pn	**Pn**	**19 35 29.9**	**-2.8**
TBTG	**Tabatinga, AM**	**11.39**	**10**	*e*P	**P**	**19 35 48.4**	**-2.7**
AC02	**Maricunga**	**11.56**	**168**	Pn	**Pn**	**19 35 46.1**	**+0.8**
PTLB	**Pontes e Lacer**	**12.21**	**91**	*e*P	**Pn**	**19 35 52.8**	**-0.6**
PTLB	**Pontes e Lacer**	**12.21**	**91**		**Pn**	**19 35 53.3**	**-0.2**
PDRB	**Porto dos Gac**	**15.15**	**77**	*e*P	**Pn**	**19 36 28.8**	**-2.3**
AQDB	**Aquidauana**	**16.10**	**110**	*e*P	**P**	**19 36 42.7**	**-0.8**
AQDB	**Aquidauana**	**16.10**	**110**		**P**	**19 36 42.5**	**-1.0**
AQDB				IAmb	IAmb	19 36 43.3	
	comp=Z,15nm,1.2s						
CLDB	**Colider**	**16.24**	**76**	*e*P	**Pn**	**19 36 43.4**	**-1.2**
MACA	**Manacapuru-AM**	**16.43**	**43**	*e*P	**P**	**19 36 47.4**	**+0.1**
MACA	**Manacapuru-AM**	**16.43**	**43**		**P**	**19 36 46.6**	**-0.6**
OTAV	**Otavalo**	**16.95**	**337**	*e*P	Pn	19 37 02.9	+9.3
CPUP	**Villa Florida**	**17.28**	**131**	P	**P**	**19 36 55.9**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=301,slow=8.8,SNR=5.3						
CPUP	**Villa Florida**	**17.28**	**131**	*e*P	**Pn**	**19 36 56.6**	**-0.4**
CPUP	**Villa Florida**	**17.28**	**131**	P	**Pn**	**19 36 57.5**	**+0.4**
CPUP				IAmb	IAmb	19 36 60.0	
	comp=Z,15nm,1.5s						
NPGB	**Novo Progresso**	**18.17**	**64**	*e*P	**P**	**19 37 06.0**	**-0.4**
MT01	**Popeta**	**18.30**	**179**	P	**P**	**19 37 05.6**	**-2.0**
MT01				IAmb	IAmb	19 37 19.9	
	comp=Z,30nm,1.4s						
PTGA	**Pitinga**	**18.75**	**40**	P	**P**	**19 37 11.7**	**-1.0**
	comp=Z,2.8nm,0.3s,baz=329,slow=22,SNR=21						
PTGA	**Pitinga**	**18.75**	**40**	P	**P**	**19 37 11.7**	**-1.0**
PTGA				IAmb	IAmb	19 37 14.4	
	comp=Z,11nm,0.7s						
H03N1	**Juan Fernandez**	**19.00**	**199**	T	T	19 55 50.0	
	baz=23,slow=73,SNR=14						
H03N2	**Juan Fernandez**	**19.00**	**199**	T	T	19 55 37.5	
	baz=23,slow=73,SNR=13						
H03N3	**Juan Fernandez**	**19.01**	**199**	T	T	19 55 53.2	
	baz=23,slow=73,SNR=12						
ARAG	**Araguaiana, MT**	**19.26**	**93**	*e*P	**P**	**19 37 18.5**	**+0.3**
ITTB	**Itaituba**	**19.29**	**57**	*e*P	**P**	**19 37 17.8**	**-0.7**
ITQB	**Itaqui**	**19.86**	**138**	*e*P	**Pn**	**19 37 26.7**	**-0.7**
ITQB	**Itaqui**	**19.86**	**138**	P	**Pn**	**19 37 26.2**	**-1.2**
SNDB	**Serra Nova Dou**	**20.22**	**83**	*e*P	**P**	**19 37 28.9**	**+0.2**
PCMB	**Pacaembu**	**20.39**	**110**	*e*P	**P**	**19 37 30.7**	**+0.3**

PTGB	Pitanga	20.66	119	*e*P	P	19 37 34.0	+0.6
ITRB	Iturama	20.86	105	*e*P	P	19 37 34.9	-0.6
BOAV	Boa Vista	20.98	33	P	P	19 37 34.3	-2.4
ITAB	Concordia	21.69	126	P	P	19 37 43.2	-1.0
ITAB				IAmb	IAmb	19 37 48.2	
	comp=Z,18nm,0.8s						
CPSB	Cacapava Do Su	22.45	135	*e*P	P	19 37 54.2	+2.2
IPMB	Ipameri, GO	22.72	100	*e*P	P	19 37 53.5	-1.3
BB19B	Bebedouro	22.77	108	*e*P	P	19 37 54.5	-0.8
BDFB	Brasilia	22.91	94	P	P	19 37 56.0	-0.7
	comp=Z,1.4nm,0.3s,baz=267,slow=15,SNR=3.4						
BDFB	Brasilia	22.91	94	P	P	19 37 55.2	-1.5
PEXB	Peixe	23.07	85	*e*P	P	19 37 57.3	-0.7
PLTB	Pedras Altas	23.19	137	*e*P	P	19 38 01.8	+2.8
PLTB	Pedras Altas	23.19	137	P	P	19 37 59.0	0.0
PLTB				IAmb	IAmb	19 38 16.3	
	comp=Z,29nm,1.4s						
CNLB	Canela	23.70	129	*e*P	P	19 38 04.8	+1.0
SDV	Santo Domingo	24.25	3	*e*P	P	19 38 14.5	+5.6
BAUV	El Baul	24.56	9	P	P	19 38 11.7	+0.1
MCPB	Macapa, AP	24.62	54	*e*P	P	19 38 12.9	+0.8
PET01	Itanhaem-SP	24.64	115	*e*P	P	19 38 12.7	+0.5
TER01	Tubaro-SC	24.65	126	*e*P	P	19 38 13.5	+1.2
JANB	Januaria	26.52	93	*e*P	P	19 38 28.5	-0.8
MC01	Montes Claros	26.79	96	*e*P	P	19 38 33.3	+1.5
DIAM	Diamantina, MG	27.05	100	*e*P	P	19 38 35.8	+1.6
DUB01	Friburgo-RJ	28.59	108	*e*P	P	19 38 49.0	+1.3
BSFB	Barra de Sao F	29.74	101	*e*P	P	19 38 59.3	+1.3
ROSB	Rosrio	30.00	68	*e*P	P	19 39 02.4	+2.1
GUA01	Guaratinga, BA	30.75	96	*e*P	P	19 39 06.6	-0.3
SNAA	Sanae	68.82	162	P	P	19 43 56.0	+2.4
SNAA				IAmb	IAmb	19 44 00.9	
	comp=Z,3.6nm,1.2s						
QSPA	South Pole Qui	74.67	180	P	P	19 44 32.3	+3.6
QSPA				IAmb	IAmb	19 44 45.0	
	comp=Z,6.9nm,1.4s						
TORD	Torodi Ar. Bea	78.06	73	P	P	19 44 47.8	-0.8
	comp=Z,0.2nm,0.3s,baz=251,slow=5.3,SNR=5.5						

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*NOU **14** 19:36:31.8,41°.80S×175°.61E,h3km,MLv3.9/5,North Island, New Zealand*

WEL 14 19:36:45.0,42°S±3°×**17°4E**±°,**h34**km±5km,**M2.8**/18,**ML3.2**/19,**MLv2.8**/18,**Error ellipse: s-maj=0.0km s-min=0.0km az=121.3,Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	Cape Campbell	0.11	265	P	Pb	19 36 51.0	0.0
CMWZ				S	Sb	19 36 55.3	+0.2
BSWZ	Blackbirch Sta	0.36	274	P	Pn	19 36 53.8	0.0
BSWZ				S	Sb	19 37 00.3	+0.7
TUWZ	Tuamarina	0.44	315	P	Pn	19 36 55.1	+0.2
TUWZ				S	Sn	19 37 02.2	+0.7
BHW	Baring Head	0.51	50	P	Pn	19 36 56.7	+1.0
BHW				S	Sn	19 37 05.1	+1.8
TCW	Tory Channel	0.53	353	P	Pb	19 36 56.7	+0.6
TCW				S	Sn	19 37 04.6	+0.7
WEL	Wellington	0.55	34	P	Pb	19 36 57.4	+1.0
PLWZ	Palliser	0.69	76	P	Pb	19 36 59.2	+0.4
MSWZ	Moikau Station	0.74	65	P	Pb	19 37 00.1	+0.5
MSWZ				S	Sb	19 37 10.8	+1.3
CAW	Cannon Point	0.83	40	P	Pb	19 37 01.7	+0.7
CAW				S	Sb	19 37 13.2	+1.3
PAWZ	Paruwai Farm	0.88	66	P	Pb	19 37 01.7	-0.1
NNZ	Nelson	0.90	305	P	Pb	19 37 02.1	-0.1
KHZ	Kahutara	0.91	222	P	Pn	19 37 01.7	+0.4
KHZ				S	Sn	19 37 13.0	-0.2
KHZ	Kahutara	0.91	222	P	Pn	19 37 01.5	+0.2
KIW	Kapiti Island	0.97	26	P	Pb	19 37 04.0	+0.6
KIW				S	Sb	19 37 17.1	+1.1
DUWZ	D'Urville Isla	0.99	341	P	Pb	19 37 04.0	+0.2
DUWZ				S	Sb	19 37 17.2	+0.6
MTW	Mount Morrison	1.04	56	P	Pb	19 37 03.9	-0.6
MTW				S	Sb	19 37 18.3	+0.4
TRWZ	Traveller	1.05	72	P	Pn	19 37 03.8	+0.5
THZ	Tophouse	1.09	268	P	Pb	19 37 04.7	-0.7
THZ				S	Sb	19 37 19.4	+0.1
OGWZ	Otaki Gorge	1.11	34	P	Pb	19 37 05.5	-0.1
TMWZ	Te Maipa	1.31	62	P	Pn	19 37 06.6	-0.4
MRZ	Mangatainoka R	1.42	41	P	Pb	19 37 09.7	-1.2
TIWZ	Tintock	1.50	51	P	Pb	19 37 14.0	+1.7
GVZ	Greta Valley S	1.57	218	P	Pn	19 37 10.4	0.0
QRZ	Quartz Range	1.65	303	P	Pb	19 37 13.8	-1.0
QRZ	Quartz Range	1.65	303	P	Pb	19 37 13.7	-1.1
POWZ	Post Office Ro	1.72	39	P	Pn	19 37 14.0	+1.6
LTZ	Lake Taylor	1.87	235	P	Pn	19 37 14.8	+0.3
DSZ	Denniston Nort	1.91	269	P	Pn	19 37 16.7	+1.6
WAZ	Wanganui	2.04	14	P	Pb	19 37 23.1	+1.7
OKCZ	Okains Bay	2.20	205	P	Pn	19 37 18.2	-0.9
MQZ	McQueen's Vall	2.33	212	P	Pn	19 37 19.4	-1.5
OXZ	Oxford	2.33	226	P	Pn	19 37 19.9	-1.0
INZ	Inchbonnie	2.38	245	P	Pn	19 37 22.2	+0.7
AKCZ	Akaroa Harbour	2.38	206	P	Pn	19 37 20.6	-1.0
MOVZ	Moawhango	2.56	25	P	Pb	19 37 29.8	-0.5
RACZ	Rakaia	2.57	219	P	Pn	19 37 22.8	-1.4
TRVZ	Turoa	2.60	21	P	Pb	19 37 30.8	-0.2
FWVZ	Far West T-bar	2.64	21	P	Pb	19 37 31.4	-0.4
MHCZ	Mount Hutt	2.73	228	P	Pn	19 37 24.9	-1.4
NNVZ	North Ngauruho	2.78	21	P	Pn	19 37 30.2	+3.0
WTVZ	West Tongariro	2.79	20	P	Pb	19 37 34.8	+0.6
TMVZ	Te Maari	2.82	22	P	Pn	19 37 29.9	+2.2
WACZ	Wakanui South	2.88	219	P	Pn	19 37 27.4	-0.9
RPZ	Rata Peaks	3.13	230	P	Pn	19 37 31.3	-0.6
RPZ	Rata Peaks	3.13	230	P	Pn	19 37 31.4	-0.5
ARCZ	Arundel	3.21	226	P	Pn	19 37 32.2	-0.8
TMZ	Timaru	3.61	222	P	Pn	19 37 37.3	-1.1
ODZ	Otahua Downs	4.27	218	P	Pn	19 37 46.0	-1.5
ODZ	Otahua Downs	4.27	218	P	Pn	19 37 46.1	-1.4

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*JMA **14** 20:04:04.8±0.4,31°.37N×128°.74E,h12km±3km,M3.2*

*IDC **14** 20:04:05.9±1.1,31°.36N×128°.91E,h0km,mb3.3/4,mb1 3.6/6,mb1mx3.4/46,mbtmp3.4/6,ML3.5/2,Error ellipse: s-maj=24.0km s-min=13.7km az=118.0*

ISC 14 20:04:06.7±0.9,**31°.40N**±0°.05×**128°.90E**±0°.06,**h10**km,**n14,** σ**1s.19**/17,**mb3.5**/4,**Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.75	68	P	Pg	20 04 21.2	-0.1
JSJ				S	Sb	20 04 32.7	+0.4
JFU	Fukue jima 2	1.26	354	P	Pn	20 04 28.3	-2.1
JSU	Suzuyama	1.34	85	P	Pb	20 04 31.8	-0.1
JNN	Nakanoshima	1.77	151	P	Pn	20 04 35.7	-1.7
JYAK	Yakushimahirau	1.81	129	P	Pn	20 04 36.5	-1.4
JTZ	Takazaki	1.94	74	P	Pn	20 04 40.0	+0.3
JTN	Tanegashima 3	1.94	112	P	Pn	20 04 39.2	-0.5
JIU3	Izumi3	1.99	54	P	Pn	20 04 40.9	+0.4
JNU	Nakatsue	2.40	44	Pn	Pn	20 04 45.4	-0.8
	35nm,0.3s,baz=228,slow=5.7,SNR=2.5						
JNU				Pg	Pg	20 04 51.8	-1.0
	67nm,0.3s,baz=210,slow=0.0,SNR=16						
JNU				Lg	Lg	20 05 23.4	
	63nm,0.3s,baz=231,slow=0.6,SNR=6.3						
KSRS	Korea Array	6.09	353	Pn	Pn	20 05 36.9	0.0
	0.4nm,0.3s,baz=173,slow=14,SNR=6.4						
KSRS				Sn	Sn	20 06 45.5	-1.1
	0.3nm,0.3s,baz=174,slow=24,SNR=1.0						
KSRS				Lg	Lg	20 07 19.2	
	0.7nm,0.3s,baz=172,slow=29,SNR=7.4						
SONM	Songino Array	23.74	320	P	P	20 09 19.8	+0.7
	0.3nm,0.6s,baz=110,slow=6.5,SNR=2.1						
CMAR	Chiang Mai Arr	29.96	252	P	P	20 10 17.6	+2.3
	0.3nm,0.3s,baz=57,slow=6.7,SNR=1.6						
WRA	Warramunga Arr	51.31	173	P	P	20 13 10.2	-1.0
	0.8nm,1.1s,baz=354,slow=8.3,SNR=2.4						
ASAR	Alice Springs	54.96	174	P	P	20 13 38.7	+0.6
	0.3nm,0.6s,baz=2.5,slow=14,SNR=8.1						

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*IDC **14** 20:07:05.1±1.3,31°.42N×128°.75E,h0km,mb3.3/3,mb1 3.4/5,mb1mx3.3/45,mbtmp3.2/5,ML2.0/1,Error ellipse: s-maj=42.7km s-min=18.3km az=82.0*

*JMA **14** 20:07:05.8±0.5,31°.43N×128°.77E,h18km,M3.0*

ISC 14 20:07:06.1±1.1,**31°.38N**±0°.07×**128°.84E**±0°.07,**h10**km,**n10,** σ**1s.10**/12,**mb3.4**/3,**Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.81	68	P	Pg	20 07 21.0	-0.6
JSJ				*e*S	Sg	20 07 32.4	+0.2
JFU	Fukue jima 2	1.28	357	P	Pn	20 07 28.0	-2.0
JYAK	Yakushimahirau	1.83	128	P	Pn	20 07 36.0	-1.6
JTN	Tanegashima 3	1.97	111	P	Pn	20 07 38.9	-0.7
JTZ	Takazaki	1.99	74	P	Pn	20 07 39.8	0.0
KSRS	Korea Array	6.11	353	Pn	Pn	20 08 36.5	+0.1
	baz=175,slow=14,SNR=1.3						
KSRS				Sn	Sn	20 09 46.8	+0.5
	0.3nm,0.3s,baz=172,slow=25,SNR=1.3						
KSRS				Lg	Lg	20 10 14.9	
	0.5nm,0.3s,baz=180,slow=29,SNR=4.5						
MJAR	Matsushiro Arr	9.33	54	Pn	Pn	20 09 20.9	+0.2
	0.0nm,0.3s,baz=241,slow=14,SNR=1.5						
ZALV	Zalesovo Beam	38.60	319	P	P	20 14 30.0	+0.8
	0.3nm,0.3s,baz=96,slow=6.7,SNR=1.7						
WRA	Warramunga Arr	51.30	173	P	P	20 16 09.8	-0.7
	0.3nm,0.7s,baz=354,slow=7.4,SNR=2.3						
ASAR	Alice Springs	54.95	174	P	P	20 16 38.8	+1.4
	0.4nm,1.0s,baz=1.7,slow=14,SNR=8.2						

IDC 14 20:10:20.3±1.5,**22°.89S**×**177°.38W,h0**km,**mb3.7**/3,**mb1 4.1**/3,**mb1mx3.6**/35,**mbtmp3.7**/3,**Error ellipse: s-maj=70.5km s-min=34.0km az=165.0,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	44.58	259	P	P	20 18 34.5	0.0
	0.7nm,0.7s,baz=93,slow=8.0,SNR=11						
WRA	Warramunga Arr	44.89	264	P	P	20 18 36.9	-0.1
	1.0nm,0.3s,baz=97,slow=8.4,SNR=24						
NVAR	Mina Array Bea	82.37	43	P	P	20 22 44.9	+0.4
	0.2nm,0.5s,baz=225,slow=5.0,SNR=1.8						
TORD	Torodi Ar. Bea	170.27	175	PKPab	PKPab	20 31 45.8	-1.0
	0.1nm,0.4s,baz=178,slow=3.7,SNR=4.2						

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*IDC **14** 20:13:26.1±1.9,43°.76N×105°.53W,h0km,mb1 3.6/4,mb1mx3.3/50,mbtmp3.3/4,ML2.6/3,Error ellipse: s-maj=52.8km s-min=9.9km az=150.0*

*NEIC **14** 20:13:26.4±1.7,43°.53N±0°.05×105°.27W±0°.08,h0km±2km,ML3.4/36,Error ellipse: s-maj=10.5km s-min=8.4km az=119.0*

ISC 14 20:13:25.1±1.0,**43°.56N**±0°.05×**105°.34W**±0°.05,**h0**km,**n29,** σ**1s.71**/28,**Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	1.10	59		Pg	20 13 45.7	-0.4
K22A	Casper	1.26	224		Pg	20 13 48.5	-0.7
K22A				IAML		20 14 15.1	
	comp=E,556nm,0.3s						
RWWY	Rawlins	2.33	217		Pn	20 14 06.3	+1.5
RWWY				IAML		20 14 40.5	
	comp=E,266nm,0.9s						
BW06	Boulder Array	3.19	257	Pn	Pn	20 14 18.6	+2.0
LAO	LASA Array	3.19	349	Pn	Pn	20 14 18.8	+2.3
PD31	Pinedale Array	3.19	257	Pn	Pn	20 14 18.4	+1.8
PDAR	Pinedale Array	3.19	257	Pn	Pb	20 14 20.7	-2.0
	comp=E,7.1nm,0.3s,baz=76,slow=16,SNR=5.8						
PDAR				Lg	Lg	20 15 02.6	
	comp=E,11nm,0.3s,baz=69,slow=36,SNR=7.9						
RLMT	Red Lodge	3.22	300	Pn	Pn	20 14 19.0	+1.9
RLMT				IAML		20 15 17.0	
	comp=E,93nm,0.8s						
RLMT				IAML		20 16 14.2	
	comp=E,75nm,4.5s						
OGNE	Ogallala	3.59	136	Pn	Pn	20 14 22.8	+0.7
ISCO	Idaho Springs	3.77	183		Pn	20 14 27.1	+2.4
ISCO				IAML		20 15 34.4	
	comp=E,54nm,1.3s						
H17A	Grant Village	3.87	284		Pn	20 14 28.4	+2.3
H17A				IAML		20 15 31.3	
	comp=E,42nm,1.6s						
H17A				IAML		20 15 32.9	
	comp=N,58nm,1.8s						
SNOW	Snow King Moun	3.94	270	Pn	Pn	20 14 27.5	+0.5
SNOW				IAML		20 15 46.4	
	comp=N,85nm,1.4s						
SNOW				IAML		20 16 08.5	
	comp=N,77nm,1.6s						
O20A	White River Ci	4.05	213		Pn	20 14 28.5	0.0
TPAW	Teton Pass	4.08	271		Pn	20 14 28.7	-0.2
TPAW				IAML		20 15 56.6	
	comp=N,46nm,1.3s						
YHH	Holmes Hill	4.15	289	Pn	Pn	20 14 32.1	+2.2
AHID	Auburn Hatcher	4.29	261		Pn	20 14 32.2	+0.5
AHID				IAML		20 15 46.8	
	comp=N,42nm,0.6s						
AHID				IAML		20 15 58.2	
	comp=N,52nm,1.4s						
RDMU	Red Mountain	4.34	228	Pn	Pn	20 14 34.0	+1.5
RDMU				IAML		20 15 48.4	
	comp=N,59nm,1.2s						
E28A	Huff	4.46	46	Pn	Pn	20 14 33.9	0.0
SMCO	Snowmass	4.55	196	Pn	Pn	20 14 36.1	+0.6
SMCO				IAML		20 15 57.5	
	comp=N,56nm,1.0s						
SMCO				IAML		20 16 22.0	
	comp=N,50nm,1.5s						
KSCO	Kaye Shedlock'	4.99	155	Pn	Pn	20 14 41.4	+0.1
MCMT	McKenzie Canyo	5.54	286	Pn	Pn	20 14 50.9	+1.9
HVU	Hansel Valley	5.76	255	Pn	Pn	20 14 52.9	+0.9
SDCO	Great Sand Dun	5.81	181	Pn	Pn	20 14 55.1	+2.3
ECSD	EROS Data Cent	6.33	85	Pn	Pn	20 15 01.4	+1.8
DUG	Dugway, Tooele	6.51	241		Pn	20 15 03.0	+0.7
ELK	Elko	7.87	252	Pn	Pn	20 15 22.6	+1.6
	comp=N,0.1nm,0.3s,baz=347,slow=19,SNR=1.4						
ELK				Lg	Lg	20 17 30.5	
	comp=N,0.1nm,0.3s,baz=62,slow=17,SNR=1.6						
I10CA	LAC DU BONNET	9.20	41	*i*		21 03 45.0	
	baz=222,slow=318,SNR=11						
ULM	Lac du Bonnet	9.31	41	Pn	Pn	20 15 38.0	-2.3
	comp=N,0.6nm,0.3s,baz=222,slow=13,SNR=2.1						
ULM				Lg	Lg	20 18 13.5	
	comp=N,0.5nm,0.3s,baz=297,slow=4.5,SNR=3.9						
NVAR	Mina Array Bea	11.05	247	Pn	Pn	20 16 07.7	+3.2
	comp=N,0.1nm,0.3s,baz=66,slow=11,SNR=2.1						

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*IDC **14** 20:19:10.3±0.8,31°.32N×128°.71E,h0km,mb3.5/7,mb1 3.7/11,mb1mx3.5/51,mbtmp3.5/11,ML3.0/4,Error ellipse: s-maj=18.5km s-min=12.1km az=111.0*

*JMA **14** 20:19:11.4±0.2,31°.35N×128°.77E,h15km±2km,M4.0*

*KMA **14** 20:19:15.7,31°.60N×128°.70E,h15km*

ISC 14 20:19:12.0±3.4,**31°.34N**±0°.04×**128°.81E**±0°.05,**h13**km±22km,**n34,** σ**0s.78**/42,**mb3.5**/8,**2D,Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.84	66	⇓P	Pb	20 19 27.5	-1.1
JSJ				*e*S	Sb	20 19 38.7	-1.1
JFU	Fukue jima 2	1.31	358	P	Pn	20 19 35.1	-1.0
JFU				*e*S	Sn	20 19 51.2	-2.2
JSU	Suzuyama	1.42	83	⇓P	Pn	20 19 37.7	+0.2
JNN	Nakanoshima	1.75	148	P	Pn	20 19 41.7	-0.4
JYAK	Yakushimahirau	1.83	126	P	Pn	20 19 42.4	-0.8
JTN	Tanegashima 3	1.98	110	P	Pn	20 19 45.2	-0.1
JTZ	Takazaki	2.02	73	P	Pn	20 19 46.3	+0.5
JTZ				*e*S	Sn	20 20 11.7	+0.7
JMTN	Minamitane	2.03	117	P	Pn	20 19 46.1	+0.2
JMTN				*e*S	Sn	20 20 10.9	-0.2
JIU3	Izumi3	2.09	54	P	Pn	20 19 47.0	+0.3
JIU3				*e*S	Sn	20 20 13.1	+0.5
JNU	Nakatsue	2.50	44	Pn	Pn	20 19 53.0	+0.6
	8.6nm,0.3s,baz=238,slow=0.2,SNR=0.9						
JNU				Pg	Pb	20 19 58.3	+1.5
	4.3nm,0.3s,baz=192,slow=19,SNR=38						
JNU				Sn	Sb	20 20 25.9	-1.5
	24nm,0.3s,baz=221,slow=19,SNR=1.8						
JNU				Lg	Lg	20 20 32.1	
	22nm,0.3s,baz=252,slow=20,SNR=1.8						
KSSGP	Seogwipo	2.74	315	P	Pn	20 19 55.3	-0.3
	SNR=21						
KSJJU	Jeju	2.83	318	P	Pn	20 19 56.7	-0.3
	SNR=8.8						
GOS1	Gosan-ri	2.94	312	P	Pn	20 19 59.1	+0.6
	SNR=8.1						
GOS2	Gosang-Q330s	2.94	312	P	Pn	20 19 59.0	+0.5
	SNR=8.2						
HALB	Hallimjungang-	2.97	314	P	Pn	20 19 58.6	-0.3
	SNR=14						
GMDB	Geomundo	2.98	335	P	Pn	20 19 59.1	+0.1
	SNR=12						
CJD	Chujado	3.37	322	P	Pn	20 20 04.0	-0.2
	SNR=16						
KOHB	KOHEUNG	3.51	339	P	Pn	20 20 05.9	-0.4
	SNR=16						
BOSB	Boseong-gun	3.67	339	P	Pn	20 20 08.0	-0.4
	SNR=19						
HANB	Haenam	3.72	330	P	Pn	20 20 09.4	+0.3
	SNR=14						
KSJDO	Jindo	3.76	327	P	Pn	20 20 09.9	+0.2
	SNR=8.7						
GGDB	Gageodo	4.12	312	P	Pn	20 20 15.0	+0.4
	SNR=9.9						
HUK2	Heuksan-myeon	4.37	321	P	Pn	20 20 18.2	+0.1
	SNR=11						
JOW	Kunigami	4.52	186	Pn	Pn	20 20 20.2	0.0
	1.0nm,0.3s,baz=347,slow=5.3,SNR=2.5						
KSRS	Korea Array	6.14	353	Pn	Pn	20 20 42.6	+0.2
	0.6nm,0.3s,baz=174,slow=14,SNR=10						
KSRS				Sn	Sn	20 21 52.5	0.0
	1.5nm,0.3s,baz=172,slow=25,SNR=6.2						
KSRS				Lg	Lg	20 22 25.1	
	2.6nm,0.3s,baz=173,slow=30,SNR=8.8						
MJAR	Matsushiro Arr	9.37	54	Pn	Pn	20 21 28.0	+1.2
	0.1nm,0.3s,baz=236,slow=13,SNR=8.6						
SONM	Songino Array	23.74	320	P	P	20 24 22.8	-1.2
	0.6nm,0.7s,baz=149,slow=9.0,SNR=4.8						
CMAR	Chiang Mai Arr	29.87	252	P	P	20 25 19.6	+0.2
	0.2nm,0.3s,baz=316,slow=13,SNR=1.5						
ZALV	Zalesovo Beam	38.62	319	P	P	20 26 34.4	-0.3
	0.2nm,0.3s,baz=83,slow=4.5,SNR=1.3						
HNR	Honiara	50.33	138	P	P	20 28 08.1	-0.6
	47nm,0.5s,baz=259,slow=16,SNR=2.4						
WRA	Warramunga Arr	51.27	173	P	P	20 28 15.2	-0.5
	0.6nm,0.8s,baz=352,slow=8.2,SNR=4.5						
ASAR	Alice Springs	54.91	174	P	P	20 28 43.2	+0.7
	0.6nm,0.8s,baz=3.3,slow=14,SNR=14						
ILAR	Eielson Array	59.73	30	P	P	20 29 17.2	+1.1
	0.2nm,0.9s,baz=237,slow=6.3,SNR=2.4						
FINES	FINESS Array B	68.70	330	P	P	20 30 15.9	+1.0
	2.3nm,0.9s,baz=145,slow=7.0,SNR=1.3						

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*JMA **14** 20:33:27.9±0.4,33°.97N×136°.89E,h364km±4km,M2.7*

*IDC **14** 20:33:37.2±11.0,36°.44N×136°.37E,h301km±154km,mb3.1/4,mb1 3.3/4,mb1mx2.7/69,mbtmp3.8/4,Error ellipse: s-maj=577.2km s-min=63.4km az=168.0*

ISC 14 20:33:29.8±1.3,**34°.3N**±0°.2×**136°.87E**±0°.10,**h350**km,**n16,** σ**2s.02**/19,**mb3.3**/4,**Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIE	Ise	0.14	291	P	Pn	20 34 13.8	+0.3
TK02	Tokai 2	0.84	118	P	Pn	20 34 14.6	-0.1
HMMJ	Hamamatsu 2	0.87	54	P	Pn	20 34 15.7	+0.7
JWY	Kouya	1.06	264	P	Pn	20 34 15.9	0.0
JTNC	Tanabenakahech	1.16	244	P	Pn	20 34 15.7	-0.6
JYTA	Yamagatataniai	1.25	355	P	Pn	20 34 18.5	+2.0
JWT	Wachi	1.53	308	P	Pn	20 34 19.4	+1.4
JWT				*e*S	S	20 34 58.8	+2.1
JRY	Ryogami san	2.36	44	P	Pn	20 34 26.0	+2.3
JRY				*e*S	S	20 35 11.3	+4.2
MJAR	Matsushiro Arr	2.45	26	P	Pn	20 34 20.6	-3.8
	0.0nm,0.3s,baz=283,slow=38,SNR=1.8						
MJAR				S	S	20 34 50.3	-18
	0.0nm,0.3s,baz=198,slow=6.8,SNR=4.1						
JHU	Hanno	2.49	52	P	Pn	20 34 25.9	+1.2
JHU				*e*S	S	20 35 10.9	+2.0
JYT	Yasato	3.31	54	S	S	20 35 19.6	-2.3
JHO	Hitachi	3.78	52	P	Pn	20 34 36.3	-0.1
MKAR	Makanchi Array	42.48	304	P	P	20 40 51.8	+0.2
	0.2nm,0.5s,baz=84,slow=10,SNR=4.7						
KURBB	Kurchatov Arra	44.80	310	P	P	20 41 07.7	-2.1
	0.1nm,0.3s,baz=83,slow=7.9,SNR=1.5						
ARCES	ARCESS Array B	65.19	339	P	P	20 43 33.3	-0.7
	3.0nm,0.9s,baz=51,slow=8.6,SNR=1.6						
FINES	FINESS Array B	69.43	331	P	P	20 43 59.7	-0.7
	3.1nm,1.0s,baz=72,slow=6.2,SNR=3.8						

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*NIED **14** 20:34:25.5,31°.22N×128°.65E,h9km,MW5.0,Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.21; $M_{\theta\theta}$2.41; $M_{\phi\phi}$0.80; $M_{r\theta}$0.16; $M_{\theta\phi}$2.21; $M_{\phi r}$-1.69; Fault plane solution: $M_0$4.02000×10^{16} NP1:ϕ_s32.00000°, δ56.00000°,λ-119.00000°. NP2:ϕ_s258.00000°, δ43.00000°,λ-54.00000°.*

*JMA **14** 20:34:25.5±0.3,31°.22N×128°.65E,h9km±3km,M5.1*

JMA Felt II J1.

*IDC **14** 20:34:26.5±0.3,31°.31N×128°.82E,h0km,mb4.7/46,mb1 4.8/51,mb1mx4.7/64,mbtmp4.6/51,ML3.8/6,MS4.5/32,Ms1 4.5/32,ms1mx4.4/48,Error ellipse: s-maj=10.3km s-min=8.4km az=103.0*

*KMA **14** 20:34:26.4,31°.00N×128°.70E,h15km*

*BJI **14** 20:34:27.5±0.0,31°.22N×128°.72E,h10km,mB5.2/46,mb4.7/63,ML5.4/3,Ms5.3/81,Ms7 5.0/74*

*MOS **14** 20:34:28.4±1.1,31°.28N×128°.76E,h18km,mb5.2/33,MS4.9/18,Error ellipse: s-maj=6.7km s-min=4.0km az=100.8*

*NEIC **14** 20:34:29.3±1.7,31°.33N±0°.06×128°.85E±0°.07,h10km±1km,mb5.3/201,Mww5.1,Error ellipse: s-maj=11.2km s-min=8.9km az=114.0*

*GCMT **14** 20:34:30.3±0.2,31°.26N±0°.01×128°.71E±0°.02,h12km,MW5.1/102,Moment Tensor Solution. s55,c79; s102,c182; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-5.44±.12; $M_{\theta\theta}$4.10±.11; $M_{\phi\phi}$1.34±.12; $M_{r\theta}$0.97±.37; $M_{\theta\phi}$3.78±.09; $M_{\phi r}$2.04±.39; Best double couple: $M_0$6.53200×10^{16} NP1:ϕ_s69.00000°,δ38.00000°, λ-69.00000°. NP2:ϕ_s223.00000°,δ55.00000°, λ-106.00000°. Principal axes: T 7.0570, Plg9.0000°, Azm324.0000°; N -1.0500, Plg13.0000°, Azm232.0000°; P -6.0070, Plg74.0000°, Azm88.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **14** 20:34:33,31°.30N×128°.88E,h12km,Moment Tensor Solution. Duration: 10s.4 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.06; $M_{\theta\theta}$3.42; $M_{\phi\phi}$0.63; $M_{r\theta}$1.98; $M_{\theta\phi}$3.84; $M_{\phi r}$-2.63; Fault plane solution: $M_0$6.32000×10^{16} NP1:ϕ_s24.00000°, δ55.00000°,λ-136.00000°. NP2:ϕ_s266.00000°, δ56.00000°,λ-44.00000°. Principal axes: T 6.1182, Plg1.0000°, Azm325.0000°; N 0.3845, Plg37.0000°, Azm56.0000°; P -6.5026, Plg53.0000°, Azm234.0000°;*

ISC 14 20:34:28.1±0.7,**31°.24N**±0°.03×**128°.83E**±0°.03,**h8**km±4km,**n802,** σ**1s.30**/845,**mb5.1**/232,**MS4.8**/54,**23C-9D, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.87	60	⇓P	Pg	20 34 44.3	-0.6
JSJ				*e*S	Sb	20 34 57.5	+0.2
JKC	Kuchinoerabu	1.41	123	*e*S	Sg	20 35 14.3	+0.9
JFU	Fukue jima 2	1.41	357	P	Pn	20 34 51.8	-2.3
JSU	Suzuyama	1.41	79	P	Pn	20 34 53.9	-0.3
JSU	Suzuyama	1.41	79		Pn	20 34 53.4	-0.8
JNN	Nakanoshima	1.66	147	P	Pn	20 34 56.1	-1.5
JYAK	Yakushimahirau	1.76	124	P	Pn	20 34 57.7	-1.2
JTN	Tanegashima 3	1.94	107	⇓P	Pn	20 35 00.7	-0.7
JTZ	Takazaki	2.04	71	P	Pn	20 35 02.4	-0.3
JIU3	Izumi3	2.13	52	P	Pn	20 35 04.0	0.0
JNU	Nakatsue	2.55	42	Pn	Pn	20 35 08.5	-1.4
	17nm,0.3s,baz=174,slow=0.0,SNR=1.2						
JNU				Lg	Lg	20 35 47.7	
	39nm,0.3s,baz=174,slow=23,SNR=2.2						
KSSGP	Seogwipo	2.82	316	P	Pn	20 35 12.7	-0.8
	SNR=42						
KSJJU	Jeju	2.92	319	P	Pb	20 35 20.6	+0.2
	SNR=53						
KSJJU	Jeju	2.92	319	P	Pn	20 35 13.9	-1.0
	SNR=28						
GOS1	Gosan-ri	3.02	313	P	Pn	20 35 14.3	-2.0
	SNR=37						
GOS1	Gosan-ri	3.02	313	P	Pn	20 35 15.3	-0.9
	SNR=11						
GOS2	Gosang-Q330s	3.02	313	P	Pn	20 35 14.3	-2.0
	SNR=36						
GOS2	Gosang-Q330s	3.02	313	P	Pn	20 35 15.3	-1.0
	SNR=11						
HALB	Hallimjungang-	3.05	315	P	Pn	20 35 16.0	-0.7
	SNR=16						
HALB	Hallimjungang-	3.05	315	P	Pb	20 35 23.0	+0.3

	SNR=19						
HALB	Hallimjungang-	3.05	315	P	Pn	20 35 15.0	-1.7
	SNR=108						
GMDB	Geomundo	3.08	335	P	Pb	20 35 24.0	+0.8
	SNR=30						
GMDB	Geomundo	3.08	335	P	Pn	20 35 17.1	0.0
	SNR=14						
YNDB	Yeoundo	3.30	345	P	Pb	20 35 28.0	+1.1
	SNR=28						
YNDB	Yeoundo	3.30	345	P	Pn	20 35 19.0	-1.0
	SNR=31						
JTU	Tsushima	3.31	8		Pn	20 35 20.4	+0.3
YKDB	Yokjido	3.40	352	P	Pb	20 35 29.0	+0.3
	SNR=15						
YKDB	Yokjido	3.40	352	P	Pn	20 35 21.0	-0.5
	SNR=40						
CJD	Chujado	3.45	322	P	Pn	20 35 21.0	-1.2
	SNR=16						
KOHB	KOHEUNG	3.61	339	P	Pn	20 35 24.8	+0.5
	SNR=12						
KSNAH	Namhae	3.64	348	P	Pn	20 35 24.4	-0.4
	SNR=25						
BOSB	Boseong-gun	3.76	339	P	Pn	20 35 27.1	+0.6
	SNR=8.1						
HANB	Haenam	3.81	331	P	Pn	20 35 26.0	-1.1
	SNR=28						
HANB	Haenam	3.81	331	P	Pn	20 35 26.0	-1.1
	SNR=49						
GWYB	Gwangyang	3.81	346	P	Pn	20 35 27.0	-0.1
	SNR=7.9						
KSJDO	Jindo	3.85	327	P	Pb	20 35 34.2	-2.2
	SNR=22						
KSJDO	Jindo	3.85	327	P	Pn	20 35 27.3	-0.5
	SNR=9.4						
KSMAS	Masan	3.92	357	P	Pn	20 35 28.9	+0.2
	SNR=19						
KSBUS	Busan	4.00	3	P	Pn	20 35 31.0	+1.3
	SNR=7.6						
KSSCH	SUNCHEON	4.04	341	P	Pn	20 35 29.8	-0.4
	SNR=21						
GGDB	Gageodo	4.20	313	P	Pn	20 35 30.1	-2.3
	SNR=42						
GGDB	Gageodo	4.20	313	P	Pn	20 35 31.0	-1.4
	SNR=18						
KSKWJ	Gwangju	4.20	339	P	Pn	20 35 32.1	-0.4
	SNR=20						
KSKWJ	Gwangju	4.20	339	P	Pn	20 35 32.0	-0.4
	SNR=20						
NAWB	Namwon	4.34	344	P	Pn	20 35 34.3	0.0
	SNR=16						
HAMB	Hamyang	4.35	348	P	Pn	20 35 35.0	+0.4
	SNR=11						
SUCA	Sunchang	4.36	341	P	Pn	20 35 35.0	+0.4
	SNR=11						
JOW	Kunigami	4.42	186	Pn	Pn	20 35 36.8	+1.2
	12nm,0.3s,baz=360,slow=12,SNR=21						
JOW				LR	LR	20 37 09.3	
	comp=Z,4µm,21.5s,baz=106,slow=36						
JOW	Kunigami	4.42	186	Pn	Pn	20 35 37.0	+1.5
KSKCH	Geochang	4.42	350	P	Pb	20 35 42.9	-3.2
	SNR=6.4						
KSKCH	Geochang	4.42	350	P	Pn	20 35 35.6	0.0
	SNR=25						
KSUSN	Ulsan	4.45	3	P	Pn	20 35 37.0	+1.0
	SNR=12						
HUK2	Heuksan-myeon	4.46	321	P	Pn	20 35 34.1	-1.9
	SNR=85						
HUK2	Heuksan-myeon	4.46	321	P	Pb	20 35 43.0	-3.7
	SNR=17						
HUK2	Heuksan-myeon	4.46	321	P	Pn	20 35 35.0	-1.0
	SNR=39						
GOCB	Gochang-gun	4.50	336	P	Pn	20 35 36.0	-0.5
	SNR=24						
KSDAG	Daegu	4.51	1	P	Pn	20 35 38.0	+1.2
	SNR=7.8						
KSJEU	Jeongeup	4.53	340	P	Pn	20 35 36.7	-0.3
	SNR=14						
ANMD	Anmado	4.71	331	P	Pn	20 35 39.0	-0.6
	SNR=15						
KSYOC	YEONGCHEON	4.72	1	P	Pn	20 35 40.9	+1.4
	SNR=8.8						
YOCB	Yeongcheon	4.72	1	P	Pn	20 35 41.3	+1.6
	SNR=8.5						
SMKB	Mukjeong-gil	4.82	337	P	Pn	20 35 42.0	+1.0
	SNR=7.9						
KSJEO	Jeonju	4.86	345	P	Pn	20 35 41.0	-0.5
	SNR=40						
KSJEO	Jeonju	4.86	345	P	Pn	20 35 42.0	+0.5
	SNR=14						
KSGIC	Gimchen	4.86	353	P	Pn	20 35 42.1	+0.5
	SNR=10						
JMN	Monobe	4.93	59	Pn	Pn	20 35 43.7	+1.1
MNYD	Munyeodo	4.97	337	P	Pn	20 35 43.1	0.0
	SNR=14						
KSCPR	CHUPUNGNYEONG	5.02	352	P	Pb	20 35 50.3	-5.9
	SNR=11						
KSCPR	CHUPUNGNYEONG	5.02	352	P	Pn	20 35 43.9	+0.2
	SNR=43						
KSEUS	ULSEONG	5.10	359	P	Pn	20 35 45.2	+0.4
	SNR=26						
EUSB	Uiseong	5.10	359	P	Pn	20 35 45.4	+0.5
	SNR=46						
KSADO	Andong	5.16	1	P	Pn	20 35 47.0	+1.4
	SNR=5.8						
OKCB	Cheongsan-myeo	5.16	351	P	Pn	20 35 46.0	+0.4
	SNR=34						
KSSAJ	Sangju	5.18	354	P	Pn	20 35 46.5	+0.6
	SNR=28						
JHS	Saijyo	5.19	43	Pn	Pn	20 35 48.5	+2.4
TJN	Taejon	5.26	347	ceP	Pn	20 35 47.6	+0.5
KSBON	Boeun	5.31	351	P	Pb	20 35 55.6	-5.6
	SNR=9.9						
KSBON	Boeun	5.31	351	P	Pn	20 35 48.5	+0.7
	SNR=64						
KOJ2	Gongju-si	5.40	345	P	Pb	20 35 57.0	-5.7
	SNR=9.4						
KOJ2	Gongju-si	5.40	345	P	Pn	20 35 50.0	+1.1
	SNR=15						
KSMGY	Mungyeong	5.44	353	P	Pn	20 35 50.3	+0.8
	SNR=28						
KSMGY	Mungyeong	5.44	353	P	Pb	20 35 57.3	-6.0
	SNR=6.9						
KSMGY	Mungyeong	5.44	353	P	Pn	20 35 49.6	+0.1
	SNR=18						
OYDB	Oeyeondo	5.48	336	P	Pn	20 35 50.0	0.0
	SNR=12						
YOJB	Youngju	5.62	357	P	Pn	20 35 53.0	+1.0
	SNR=19						
KSCHJ	Chungju	5.66	353	P	Pn	20 35 53.0	+0.4
	SNR=8.9						
CHYB	Chungyang	5.69	1	P	Pn	20 35 54.0	+1.0
	SNR=58						
KSCEA	Cheonan	5.72	347	P	Pn	20 35 54.2	+0.9
	SNR=9.7						
UJN	ULJIN	5.75	5	P	Pn	20 35 55.3	+1.4
	SNR=14						
JMZ	Minamidaito 2	5.80	158	Pn	Pn	20 35 55.4	+0.9
KSTBA	Taebaek	5.87	1	P	Pn	20 35 56.8	+1.4
	SNR=13						
KSSES	Seosan	5.87	341	P	Pn	20 35 57.0	+1.5
	SNR=5.5						
PYTK	Pyeongtaek	5.90	346	P	Pn	20 36 03.3	+7.4
	SNR=5.8						
PYTK	Pyeongtaek	5.90	346	P	Pn	20 35 56.4	+0.5
	SNR=11						
KSYOW	Yeongwol	5.92	357	P	Pn	20 36 02.4	+6.2
	SNR=7.9						
KSYOW	Yeongwol	5.92	357	P	Pn	20 35 57.2	+1.0
	SNR=6.5						
JECH	Jecheon	5.92	355	P	Pn	20 35 57.0	+0.8
	SNR=12						
KSGWL	Sabuk	5.95	360	P	Pn	20 35 57.8	+1.3
	SNR=8.6						
IMWB	Imwonan-gil	6.00	4	P	Pn	20 35 59.0	+1.9
	SNR=26						
HAWB	Hwaseong-si	6.07	344	P	Pn	20 35 59.0	+0.8
	SNR=8.1						
KSICN	Icheon	6.14	349	P	Pn	20 36 06.9	+7.7
	SNR=7.1						
KSICN	Icheon	6.14	349	P	Pn	20 36 00.1	+0.9
	SNR=18						
KSWJU	Wonju	6.18	354	P	Pb	20 36 08.0	-8.0
	SNR=8.6						
KSWJU	Wonju	6.18	354	P	Pn	20 36 01.0	+1.3
	SNR=20						
KSSWO	Suwon	6.20	346	P	Pb	20 36 08.8	-7.6
	SNR=6.0						
KSSWO	Suwon	6.20	346	P	Pn	20 36 00.6	+0.7
	SNR=13						
KSAR	Wonju Array Be	6.23	353	P	Pn	20 36 00.2	-0.2
KSAR	Wonju Array Be	6.23	353	Pn	Pn	20 36 00.2	-0.2
KSRS	Korea Array	6.24	353	Pn	Pn	20 35 59.6	-0.9
	8.5nm,0.3s,baz=175,slow=14,SNR=203						
KSRS				Sn	Sn	20 37 09.9	-2.1
	20nm,0.3s,baz=174,slow=25,SNR=9.2						
KSRS				Lg	Lg	20 37 41.3	
	9.3nm,0.3s,baz=173,slow=30,SNR=5.5						
KSRS				LR	LR	20 38 25.8	
	comp=Z,5µm,20.4s,baz=174,slow=39						
KS19	Wonju Array Si	6.29	353	Pn	Pn	20 36 00.8	-0.5
SHHB	Siheung-si	6.34	344	P	Pn	20 36 03.0	+1.1
	SNR=9.9						
KSSEO	Seoul	6.43	346	P	Pn	20 36 03.2	+0.2
	SNR=10						
KSSEO	Seoul	6.43	346	P	Pn	20 36 04.0	+0.9
	SNR=10						
KSDGY	Daegwallycong	6.43	359	P	Pn	20 36 05.0	+1.8
	SNR=6.9						
INCN	Inchon	6.48	344	P	Pn	20 36 02.1	-1.8
INCN	Inchon	6.48	344	Pn	Pn	20 36 02.0	-1.8
KSSOD	Songwoldong	6.50	347	P	Pn	20 36 04.9	+0.9
	SNR=9.0						
SSE	Sheshan	6.55	271	Pg	Pb	20 36 19.3	-3.1
SSE				smax	smax		
	comp=N,740nm,0.9s						
SSE				smax	smax		
	comp=E,380nm,1.0s						
SSE				LR	LR		
	comp=N,10µm,15.4s						
SSE				LR	LR		
	comp=E,3µm,15.2s						
KSCHC	Chuncheon	6.57	353	P	Pn	20 36 06.0	+0.9
	SNR=34						
GAPB	Gapyeong	6.68	351	P	Pn	20 36 07.1	+0.6
	SNR=25						
KSGAH	Ganghwa	6.74	344	P	Pn	20 36 07.6	+0.3
	SNR=19						
KSGAH	Ganghwa	6.74	344	P	Pn	20 36 07.4	0.0
	SNR=20						
KSIJA	INJE	6.75	355	P	Pn	20 36 15.3	+7.8
	SNR=5.6						
JWT	Wachi	6.82	52	Pn	Pn	20 36 09.9	+1.5
KSMUS	Musan	6.84	346	P	Pn	20 36 09.5	+0.7
	SNR=13						
YPDB	Yeonpyeongdo	6.85	339	P	Pn	20 36 09.4	+0.5
	SNR=13						
KSCWO	Cheorwon	6.91	351	P	Pn	20 36 16.5	+6.7
	SNR=7.3						
KSCWO	Cheorwon	6.91	351	P	Pn	20 36 09.9	+0.2
	SNR=34						
YNCB	YEONCHEON	6.96	347	P	Pn	20 36 10.9	+0.5
	SNR=7.8						
SEHB	SEOHWA	7.03	356	P	Pn	20 36 17.5	+6.2
	SNR=6.3						
SEHB	SEOHWA	7.03	356	P	Pn	20 36 12.6	+1.3
	SNR=24						
HWCB	Hwacheon	7.03	353	P	Pn	20 36 12.0	+0.7
	SNR=12						
DACB	Daecheong-do R	7.40	334	P	Pn	20 36 17.0	+0.6
	SNR=11						
KSBAR	Backryungdo	7.53	334	P	Pn	20 36 18.8	+0.7
	SNR=7.9						
INU	Inuyama	7.98	57	Pn	Pn	20 36 24.0	-0.4
JGF	Kuroka	8.35	56	Pn	Pn	20 36 27.3	-2.1
YOJ	Yonaguni jima	8.49	219	P	Pn	20 36 33.8	+2.3
YOJ	Yonaguni jima	8.49	219	Pn	Pn	20 36 33.8	+2.3
NJ2	Nanjing	8.54	278	eP	Pn	20 36 33.3	+1.2
NJ2				S	Sn	20 38 09.5	+0.8
NJ2				pmax	pmax		
	comp=Z,24nm,0.8s						
NJ2				LR	LR		
	comp=N,5µm,11.8s						
NJ2				LR	LR		
	comp=E,6µm,9.2s						
NJ2				LR	LR		
	comp=Z,6µm,9.7s						
JSG	Sagara	8.57	64	Pn	Pn	20 36 31.4	-1.1
YHNB	Yeheng	9.29	227	Pn	Pn	20 36 42.7	+0.3
MAT	Matsushiro	9.41	53	P	Pn	20 36 46.6	+2.5
MAT				eS	Sn	20 38 35.7	+5.6
MJAR	Matsushiro Arr	9.41	53	Pn	Pn	20 36 45.3	+1.2
	0.2nm,0.3s,baz=235,slow=13,SNR=19						
MJAR	Matsushiro Arr	9.41	53	Pn	Pn	20 36 43.7	-0.4
JHJ	Hachijo jima 2	9.47	76	Lg	Lg	20 39 25.3	
	11nm,0.3s,baz=288,slow=20,SNR=2.6						
JHJ2	Mitsune	9.49	76	Pn	Pn	20 36 44.8	-0.4
NACB	Ninganchiao	9.52	224		Pn	20 36 47.0	+1.5
SSLB	Suanglung	10.20	225	Pn	Pn	20 36 57.4	+2.5
YULB	Yu-li	10.29	222		Pn	20 36 58.6	+2.4
TPUB	Ta-pu	10.76	225	Pn	Pn	20 37 03.3	+0.7
TIA	Tai'an	10.93	300	⇓P	Pn	20 37 04.4	-0.5
TIA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
TIA				LR	LR		
	comp=N,3µm,8.3s						
TIA				LR	LR		
	comp=E,5µm,10.1s						
TIA				LR	LR		
	comp=Z,4µm,8.2s						
QZH	Quanzhou	11.00	238	⇑iP	Pn	20 37 13.6	+7.8
QZH				S	Sn	20 39 27.4	+18
QZH				LR	LR		
	comp=N,4µm,12.8s						
QZH				LR	LR		
	comp=E,3µm,13.7s						
QZH				LR	LR		
	comp=Z,4µm,11.1s						
SNY	Shenyang	11.37	340	⇓P	Pn	20 37 14.3	+3.5
SNY				pmax	pmax		
	comp=Z,11nm,1.3s						
SNY				pmax	pmax		
	comp=Z,570nm,10.6s						
SNY				LR	LR		
	comp=Z,13µm,8.0s						
SNY				LR	LR		
	comp=Z,13µm,8.8s						
SNY				LR	LR		
	comp=Z,22µm,9.2s						
KNMB	Chin-men Tao	11.44	236	Pn	Pn	20 37 12.8	+0.9
CN2	Changchun	12.82	349	eP	Pn	20 37 33.3	+2.7
CN2				eS	Sn	20 39 57.8	+4.3
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CN2				pmax	pmax		
	comp=Z,1µm,12.0s						
CN2				LR	LR		
	comp=Z,9µm,13.0s						
CN2				LR	LR		
	comp=Z,16µm,13.0s						
CN2				LR	LR		
	comp=Z,9µm,12.4s						
USA0B	Ussuriysk Arra	13.17	10	P	Pn	20 37 32.0	-3.4
USA0B	Ussuriysk Arra	13.17	10	Pn	Pn	20 37 32.0	-3.4
USRK	Ussuriysk Ar.	13.17	10	Pn	Pn	20 37 36.7	+1.2
	baz=286,slow=26,SNR=3.5						
USRK				Sn	Sn	20 40 00.4	-1.7
	baz=201,slow=19,SNR=1.6						
USRK				LR	LR	20 42 13.8	
	comp=Z,1µm,18.7s,baz=174,slow=36						
USRK	Ussuriysk Ar.	13.17	10	P	Pn	20 37 35.6	+0.2
USRK	Ussuriysk Ar.	13.17	10	Pn	Pn	20 37 35.6	+0.2
MDJ	Mudanjiang	13.36	2	P	Pn	20 37 37.0	-1.1
MDJ				sP	P	20 37 44.3	-3.4
MDJ				S	Sn	20 40 05.4	-1.4
MDJ				ScP	ScP	20 46 39.8	-0.7
MDJ				PcS	PcS	20 46 41.4	+0.1
MDJ				pmax	pmax		
	comp=Z,10.0nm,2.7s						
MDJ				pmax	pmax		
	comp=Z,380nm,3.8s						
MDJ				LR	LR		
	comp=Z,9µm,10.0s						
MDJ				LR	LR		
	comp=Z,2µm,8.4s						
MDJ				LR	LR		
	comp=Z,10µm,9.8s						
BJT	Baijiatuau	13.51	314	P	Pn	20 37 41.2	+1.2
BJT	Baijiatuau	13.51	314	Pn	Pn	20 37 41.2	+1.2
BJI	Beijing	13.51	314	P	Pn	20 37 40.5	+0.4
BJI				S	Sn	20 40 14.0	+3.5
BJI				pmax	pmax		
	comp=Z,34nm,1.7s						
TEY	Ternei	15.05	22	⇑eP	P	20 38 07.2	+0.7
TEY				pmax	pmax		
	comp=N,20nm,1.3s						
TEY				pmax	pmax		
	comp=Z,10.0nm,1.4s						
TEY				pmax	pmax		
	comp=N,800nm,6.9s						
TEY				MLR	MLR		
	comp=E,1µm,10.0s						
TEY				MLR	MLR		
	comp=N,1µm,14.0s						
TEY				MLR	MLR		
	comp=Z,2µm,10.0s						
ENH	Enshi	16.66	272	P	P	20 38 24.4	0.0
ASAJ	Asahikawa	16.82	36	Pn	Pn	20 38 23.6	-0.3
	comp=Z,1.4nm,0.3s,baz=181,slow=7.5,SNR=26						
JKA	Kamikawa-asahi	16.82	36	P	Pn	20 38 23.5	-0.4
HHC	Hu-ho-hao-te	16.91	309	eP	P	20 38 27.6	+0.3
HHC				SS	S	20 41 48.8	+4.9
HHC				pmax	pmax		
	comp=Z,17nm,1.0s						
HHC				pmax	pmax		
	comp=Z,580nm,4.9s						
HHC				LR	LR		
	comp=Z,5µm,12.7s						
HHC				LR	LR		
	comp=Z,4µm,12.2s						
HHC				LR	LR		
	comp=Z,5µm,13.1s						
XAN	Xi'an	17.00	285	P	P	20 38 28.6	+0.4
XAN				pP	sP	20 38 33.0	+1.7
XAN				S	S	20 41 41.8	-3.8
XAN				pmax	pmax		
	comp=Z,53nm,1.3s						
XAN				LR	LR		
	comp=Z,10µm,12.9s						
XAN				LR	LR		
	comp=Z,6µm,13.5s						
XAN				LR	LR		
	comp=Z,7µm,11.4s						
BTO	Baotou	17.84	307	eP	P	20 38 39.8	+2.2
BTO				LR	LR		
	comp=Z,16µm,17.2s						
BTO				LR	LR		
	comp=Z,10µm,17.2s						
KLR	Kul'dur	18.10	6	P	Pn	20 38 38.2	-1.6
	comp=Z,0.1nm,0.3s,baz=110,slow=18,SNR=2.5						
KLR				Lg	Lg	20 43 59.4	
	comp=Z,0.1nm,0.3s,baz=143,slow=20,SNR=1.8						
KLR				LR	LR	20 44 57.6	
	comp=Z,574nm,19.1s,baz=182,slow=35						
KLR	Kul'dur	18.10	6	i P	P	20 38 42.9	+2.7
KLR				pmax	pmax		
	comp=Z,53nm,0.9s						
YSS	Yuzh-Sakhalins	19.00	30	eP	Pn	20 38 50.7	-0.1
YSS				eS	Sn	20 42 22.2	-1.5
YSS				pmax	pmax		
	comp=Z,300nm,2.3s						
YSS				pmax	pmax		
	comp=Z,50nm,1.6s						
YSS				smax	smax		
	comp=N,300nm,5.8s						
YSS				MLR	MLR		
	comp=Z,2µm,14.0s						
YSS	Yuzh-Sakhalins	19.00	30	P	P	20 38 47.5	-2.6
HIA	Hailar	19.27	342	P	P	20 38 52.3	-0.8
HIA				pmax	pmax		
	comp=Z,38nm,1.0s						
HIA	Hailar	19.27	342		P	20 38 52.3	-0.8
GYA	Guiyang	19.98	262	⇑iP	Pn	20 39 02.6	-0.3
GYA				S	Sn	20 42 48.3	+0.4
GYA				pmax	pmax		
	comp=Z,61nm,1.0s						
GYA				pmax	pmax		
	comp=Z,640nm,5.1s						
GYA				LR	LR		
	comp=Z,2µm,8.6s						
GYA				LR	LR		
	comp=Z,2µm,11.3s						
GYA				LR	LR		
	comp=Z,2µm,12.3s						
GRNR	Gornyy	20.31	14	⇑iP	P	20 39 04.8	+0.4
GRNR				eS	Sn	20 42 55.9	+0.7
GRNR				pmax	pmax		
	comp=N,4.0nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GRNR				smax	smax		
	comp=N,3.0nm,0.6s						
GRNR				MLR	MLR		
	comp=N,2µm,11.0s						
GRNR				MLR	MLR		
	comp=E,1µm,11.0s						
GRNR				MLR	MLR		
	comp=Z,2µm,10.0s						
KUR	Kuril'sk	20.39	41	i P	Pn	20 39 07.1	-0.3
UGL	Uglegorsk	20.43	26	eP	Pn	20 39 10.8	+3.0
UGL				S	S	20 42 54.2	-0.3
UGL				pmax	pmax		
	comp=Z,500nm,3.5s						
UGL				pmax	pmax		
	comp=Z,71nm,0.9s						
UGL				MLR	MLR		
	comp=N,1µm,11.0s						
UGL				MLR	MLR		
	comp=E,2µm,11.0s						
UGL				MLR	MLR		
	comp=Z,2µm,11.0s						
QIZ	Qiongzhong	21.02	239	P	P	20 39 12.8	+0.5
QIZ				S	Sn	20 43 10.6	-2.0
QIZ				LR	LR		
	comp=Z,3µm,14.2s						
QIZ				LR	LR		
	comp=Z,3µm,12.3s						
QIZ				LR	LR		
	comp=Z,2µm,10.4s						
LZH	Lanzhou	21.33	290	eP	P	20 39 16.6	+0.9
LZH				sP	sP	20 39 23.6	+4.8
LZH				S	S	20 43 05.9	-7.0
LZH				SS	SnSn	20 43 40.6	+5.5
LZH				pmax	pmax		
	comp=Z,59nm,1.0s						
LZH				pmax	pmax		
	comp=Z,580nm,4.7s						
LZH				LR	LR		
	comp=Z,7µm,11.9s						
LZH				LR	LR		
	comp=Z,5µm,13.0s						
LZH				LR	LR		
	comp=Z,4µm,15.2s						
CD2	Chengdu	21.47	276	P	P	20 39 16.8	-0.4
CD2				S	S	20 43 15.8	+0.3
CD2				pmax	pmax		
	comp=Z,90nm,1.3s						
CD2				pmax	pmax		
	comp=Z,340nm,6.4s						
CD2				LR	LR		
	comp=Z,8µm,14.5s						
CD2				LR	LR		
	comp=Z,6µm,12.6s						
CD2				LR	LR		
	comp=Z,9µm,9.8s						
TYV	Tymovskoe	22.13	24	eP	P	20 39 25.4	+1.4
TYV				eS	S	20 43 32.6	+4.7
TYV				pmax	pmax		
	comp=Z,500nm,5.7s						
TYV				pmax	pmax		
	comp=Z,14nm,1.2s						
TYV				smax	smax		
	comp=N,8.0nm,1.3s						
TYV				smax	smax		
	comp=E,10.0nm,1.3s						
TYV				smax	smax		
	comp=N,900nm,7.5s						
TYV				smax	smax		
	comp=E,900nm,7.5s						
TYV				MLR	MLR		
	comp=Z,2µm,13.0s						
ZEA	Zeya	22.51	358	eP	P	20 39 30.4	+2.3
ZEA				eS	S	20 43 30.7	-4.3
ZEA				pmax	pmax		
	comp=E,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=N,30nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,50nm,1.4s						
ZEA				smax	smax		
	comp=E,500nm,6.5s						
ZEA				smax	smax		

	comp=N,900nm,13.3s						
ZEA				MLR	MLR		
	comp=N,3µm,8.0s						
ZEA				MLR	MLR		
	comp=Z,3µm,9.0s						
GUMO	**Guam**	**22.94**	**136**	LR	LR	20 47 26.7	
	comp=Z,955nm,18.6s,baz=325,slow=34						
ULN	**Ulaanbaatar**	**23.49**	**321**	*ce*P	**P**	**20 39 38.7**	**+0.3**
ULN				pmax	pmax		
	comp=Z,16nm,0.8s						
ULN	**Ulaanbaatar**	**23.49**	**321**	P	**P**	**20 39 37.1**	**-1.3**
CIT	**Chita**	**23.60**	**336**	*e*P	**P**	**20 39 40.5**	**+1.1**
CIT				*e*		20 39 46.5	
CIT				*e*		20 39 49.9	
CIT				*e*		20 40 16.1	
CIT				*e*		20 40 24.6	
CIT				pmax	pmax		
	comp=Z,131nm,1.7s						
KMI	**Kunming**	**23.76**	**262**	⇓P	**P**	**20 39 40.0**	**-1.4**
KMI				pP	sP	20 39 45.3	+0.7
KMI				sP	pP	20 39 46.5	+2.9
KMI				PP	**PnPn**	**20 40 14.6**	**+5.8**
KMI				pmax	pmax		
	comp=Z,37nm,1.1s						
KMI				pmax	pmax		
	comp=Z,270nm,4.2s						
KMI				LR	LR		
	comp=Z,4µm,15.1s						
KMI				LR	LR		
	comp=Z,2µm,14.5s						
KMI				LR	LR		
	comp=Z,2µm,9.9s						
SONM	**Songino Array**	**23.82**	**320**	P	**P**	**20 39 39.7**	**-2.0**
	comp=Z,16nm,0.9s,baz=137,slow=8.8,SNR=66						
SONM				PcP	**PcP**	**20 43 25.8**	**+1.0**
	comp=Z,0.9nm,0.7s,baz=107,slow=2.0,SNR=1.5						
SONM				Lg	Lg	20 46 59.4	
	comp=Z,0.2nm,0.4s,baz=93,slow=30,SNR=1.7						
SONM				LR	LR	20 49 54.4	
	comp=Z,3µm,18.7s,baz=146,slow=39						
SONM	**Songino Array**	**23.82**	**320**	P	**P**	**20 39 40.9**	**-0.8**
SONM				pmax	pmax		
	comp=Z,17nm,0.8s						
SONM	**Songino Array**	**23.82**	**320**	P	**P**	**20 39 40.9**	**-0.8**
DAV	**Davao City (W)**	**24.24**	**188**	P	**P**	**20 39 44.9**	**-0.7**
	comp=Z,118nm,0.4s,baz=341,slow=3.8,SNR=1.8						
DAV				LR	LR	20 48 46.9	
	comp=Z,474nm,21.5s,baz=4.5,slow=35						
SLVN	**Son La**	**24.38**	**252**	P	**P**	**20 39 46.2**	**-0.8**
GTA	**Gaotai**	**24.96**	**297**	⇑P	**P**	**20 39 51.5**	**-0.7**
GTA				pP	sP	20 39 56.8	+1.4
GTA				sP	pP	20 40 00.3	+5.9
GTA				S	**S**	**20 44 17.3**	**+1.2**
GTA				pmax	pmax		
	comp=Z,240nm,5.5s						
GTA				LR	LR		
	comp=Z,3µm,15.6s						
GTA				LR	LR		
	comp=Z,2µm,14.9s						
GTA				LR	LR		
	comp=Z,3µm,15.3s						
UBPT	**Khong Chiam**	**26.62**	**239**	P	**P**	**20 40 07.0**	**-0.2**
ZAK	**Zakamensk**	**26.97**	**322**	*e*P	**P**	**20 40 11.8**	**+1.5**
ZAK				pmax	pmax		
	comp=Z,17nm,1.2s						
TLY	**Talaya**	**27.57**	**325**	P	**P**	**20 40 14.6**	**-0.9**
	comp=Z,4.0nm,0.7s,baz=198,slow=20,SNR=2.3						
TLY				LR	LR	20 52 31.7	
	comp=Z,2µm,18.4s,baz=110,slow=39						
TLY	**Talaya**	**27.57**	**325**	*e*P	**P**	**20 40 19.0**	**+3.5**
TLY				*e*S	**S**	**20 44 57.3**	**+0.4**
TLY				pmax	pmax		
	comp=Z,72nm,1.8s						
TLY				MLR	MLR		
	comp=Z,5µm,10.0s						
BOD	**Bodaibo**	**28.46**	**343**	*e*P	**P**	**20 40 23.4**	**0.0**
BOD				pmax	pmax		
	comp=Z,27nm,1.7s						
SPMM	**Sapulut**	**28.84**	**206**	P	**P**	**20 40 29.0**	**+1.8**
CHTO	**Chiang Mai**	**29.67**	**252**	P	**P**	**20 40 34.4**	**-0.1**
CHTO				pmax	pmax		
	comp=Z,8.0nm,1.1s						
CHTO	**Chiang Mai**	**29.67**	**252**	P	**P**	**20 40 34.4**	**-0.1**
CM31	**Chiang Mai Arr**	**29.86**	**252**	P	**P**	**20 40 35.2**	**-0.9**
CMAR	**Chiang Mai Arr**	**29.86**	**252**	P	**P**	**20 40 35.5**	**-0.7**
	comp=Z,1.7nm,0.8s,baz=55,slow=6.2,SNR=20						
CMAR				PcP	**PcP**	**20 43 40.4**	**+1.0**
	comp=Z,2.5nm,1.0s,baz=23,slow=1.3,SNR=8.7						
CMAR				LR	LR	20 51 14.0	
	comp=Z,268nm,21.6s,baz=82,slow=34						
CMAR	**Chiang Mai Arr**	**29.86**	**252**	*ce*P	**P**	**20 40 36.5**	**+0.4**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**29.86**	**252**	P	**P**	**20 40 35.5**	**-0.7**
CMAR				PcP	**PcP**	**20 43 39.8**	**+0.4**
PETK	**Petropavlovsk-**	**30.23**	**35**	P	**P**	**20 40 36.5**	**-2.6**
	comp=Z,3.2nm,0.8s,baz=248,slow=15,SNR=1.9						
PETK				LR	LR	20 52 03.5	
	comp=Z,727nm,20.1s,baz=170,slow=35						
PETK	**Petropavlovsk-**	**30.23**	**35**	P	**P**	**20 40 38.7**	**-0.4**
PETK	**Petropavlovsk-**	**30.23**	**35**	P	**P**	**20 40 38.7**	**-0.4**
PET	**Petropavlovsk**	**30.66**	**36**	*e*P	**P**	**20 40 44.1**	**+1.2**
PET						20 47 54.9	
PET				pmax	pmax		
	comp=Z,57nm,1.5s						
PET				MLR	MLR		
	comp=Z,1µm,17.0s						
PET	**Petropavlovsk**	**30.66**	**36**	P	**P**	**20 40 41.8**	**-1.1**
PET				IAmb	IAmb	20 40 46.2	
	comp=Z,59nm,1.2s						
YAK	**Yakutsk**	**30.80**	**1**	P	**P**	**20 40 43.0**	**-1.1**
	comp=Z,1.8nm,0.5s,baz=176,slow=16,SNR=4.4						
YAK				LR	LR	20 52 36.0	
	comp=Z,524nm,18.5s,baz=164,slow=35						
YAK	**Yakutsk**	**30.80**	**1**	*e*P	**P**	**20 40 41.9**	**-2.1**
YAK				*e*S	**S**	**20 45 42.0**	**-5.4**
YAK				*e*SS	**ScP**	**20 47 23.7**	**-0.3**
YAK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
YAK				pmax	pmax		
	comp=N,5.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.0s						
YAK				smax	smax		
	comp=E,114nm,5.3s						
YAK				smax	smax		
	comp=N,166nm,4.5s						
YAK				MLR	MLR		
	comp=Z,1µm,12.0s						
YAK				MLR	MLR		
	comp=N,807nm,11.0s						
YAK	**Yakutsk**	**30.80**	**1**	P	**P**	**20 40 42.7**	**-1.3**
TOLI2	**Tolitoli**	**30.92**	**196**	P	**P**	**20 40 45.9**	**+0.4**
LBMI	**Labuha**	**31.73**	**183**	P	**P**	**20 40 52.2**	**-0.5**
	comp=N,22nm,0.8s						
MPSI	**Mapaga**	**31.88**	**197**	P	**P**	**20 40 53.9**	**-0.1**
	comp=N,401nmcomp=N,27nm,1.4s						
MPSI				pP	**sP**	**20 40 57.8**	**+0.6**
	comp=N,401nmcomp=N,27nm,1.4s						
MA2	**Magadan**	**31.94**	**21**	P	**P**	**20 40 53.2**	**-0.8**
	comp=N,24nm,1.0s,baz=195,slow=10,SNR=5.6						
MA2	**Magadan**	**31.94**	**21**	*ce*P	**P**	**20 40 53.6**	**-0.5**
MA2				pmax	pmax		
	comp=Z,22nm,1.0s						
MA2	**Magadan**	**31.94**	**21**	P	**P**	**20 40 53.0**	**-1.1**
MA2				IAmb	IAmb	20 40 56.1	
	comp=Z,53nm,1.1s						
SIJI	**Sorong**	**32.02**	**175**	P	**P**	**20 40 54.1**	**-1.1**
	comp=Z,4.4nm,0.6s,baz=324,slow=3.5,SNR=4.3						
SIJI				PcP	**PcP**	**20 43 44.7**	**-0.4**
	comp=Z,5.6nm,0.9s,baz=10,slow=5.4,SNR=3.8						
LSA	**Lhasa**	**32.41**	**277**	P	**P**	**20 40 59.8**	**+0.6**
LSA				pmax	pmax		
	comp=Z,16nm,1.3s						
LSA	**Lhasa**	**32.41**	**277**	P	**P**	**20 40 57.3**	**-1.9**
LSA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
LSA	**Lhasa**	**32.41**	**277**	P	**P**	**20 40 57.3**	**-1.9**
SBUM	**Sibu**	**32.65**	**212**	P	**P**	**20 41 02.0**	**+1.2**
SHL	**Shillong**	**32.88**	**269**	P	**P**	**20 41 01.6**	**-1.4**
SHL				pmax	pmax		
	comp=Z,14nm,0.8s						
SHL	**Shillong**	**32.88**	**269**	P	**P**	**20 41 01.6**	**-1.4**
SANI	**Sanana**	**33.22**	**185**	P	**P**	**20 41 04.5**	**-1.2**
	comp=Z,22nm,1.1s						
KSM	**Kuching**	**34.41**	**214**	P	**P**	**20 41 18.0**	**+1.9**
WMQ	**Urumqi**	**34.61**	**303**	P	**P**	**20 41 18.3**	**+0.6**
WMQ				pP	sP	20 41 25.9	+5.0
WMQ				sP	pP	20 41 28.8	+8.8
WMQ				pmax	pmax		
	comp=Z,30nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,290nm,3.7s						
WMQ				LR	LR		
	comp=Z,2µm,14.5s						
WMQ				LR	LR		
	comp=Z,2µm,12.5s						
WMQ				LR	LR		
	comp=Z,1µm,16.7s						
MTKI	**Muara Teweh, K**	**34.64**	**205**	P	**P**	**20 41 20.1**	**+2.0**
SEY	**Seymchan**	**35.10**	**19**	P	**P**	**20 41 22.0**	**+0.4**
	comp=Z,11nm,0.9s,baz=214,slow=6.4,SNR=13						
SEY	**Seymchan**	**35.10**	**19**	P	**P**	**20 41 22.0**	**+0.4**
STKI	**Sintang**	**35.10**	**211**	P	**P**	**20 41 23.4**	**+1.3**
JAY	**Jayapura**	**35.42**	**159**	LR	LR	20 52 58.6	
	comp=Z,576nm,21.9s,baz=352,slow=31						
TAPN	**Taplejung**	**35.93**	**274**	*e*P	**P**	**20 41 29.1**	**-0.4**
DGZ	**Jazzator, Alta**	**35.93**	**313**	*i* P	**P**	**20 41 29.6**	**+0.5**
ODAN	**Odare**	**36.34**	**274**	*e*P	**P**	**20 41 32.4**	**-0.5**
	comp=Z,35nm,0.8s						
BBKI	**Banjar Baru**	**37.00**	**204**	P	**P**	**20 41 38.9**	**+0.6**
	comp=Z,972nmcomp=Z,48nm,1.5s						
JIRN	**Jiri**	**37.14**	**276**	*e*P	**P**	**20 41 39.8**	**-0.1**
	comp=Z,48nm,1.1s						
BKSI	**Bulukumba**	**37.30**	**194**	P	**P**	**20 41 40.1**	**-0.7**
	comp=Z,9.8nm,1.1s						
PBKI	**Pangkalan Bun**	**37.51**	**209**	P	**P**	**20 41 44.1**	**+1.5**
	comp=Z,59nm,1.1s						
MYKOM	**Kota Tinggi**	**37.62**	**224**	P	**P**	**20 41 45.0**	**+1.4**
PKI	**Pulchoki**	**37.83**	**276**	*e*P	**P**	**20 41 45.2**	**-0.5**
	comp=Z,58nm,0.8s						
KKN	**Kakani**	**37.88**	**276**	*e*P	**P**	**20 41 45.6**	**-0.4**
	comp=Z,66nm,0.8s						
BSSI	**Bau Bau, Buton**	**38.02**	**194**	P	**P**	**20 41 47.5**	**+0.6**
	comp=Z,26nm,1.4s						
DMN	**Daman**	**38.08**	**276**	*e*P	**P**	**20 41 47.8**	**+0.1**
GKN	**Gorkha**	**38.37**	**277**	*e*P	**P**	**20 41 49.4**	**-0.6**
ZAA0	**Zalesovo Array**	**38.70**	**319**	P	**P**	**20 41 51.5**	**-0.9**
ZAA0				PcP	**PcP**	**20 44 03.3**	**-0.7**
ZALV	**Zalesovo Beam**	**38.70**	**319**	P	**P**	**20 41 51.5**	**-0.8**
	comp=Z,5.4nm,1.0s,baz=106,slow=7.9,SNR=14						
ZALV				PcP	**PcP**	**20 44 02.7**	**-1.3**
	comp=Z,6.5nm,0.8s,baz=96,slow=4.5,SNR=9.8						
ZALV				LR	LR	20 59 07.4	
	comp=Z,2µm,19.1s,baz=114,slow=38						
ZALV	**Zalesovo Beam**	**38.70**	**319**	P	**P**	**20 41 51.0**	**-1.3**
ZALV				PcP	**PcP**	**20 44 03.4**	**-0.6**
MK31	**Makanchi Array**	**38.76**	**307**	P	**P**	**20 41 52.6**	**-0.4**
MK31				pmax	pmax		
	comp=Z,12nm,1.1s						
MK31	**Makanchi Array**	**38.76**	**307**	P	**P**	**20 41 52.6**	**-0.4**
MKAR	**Makanchi Array**	**38.76**	**307**	P	**P**	**20 41 51.7**	**-1.3**
	comp=Z,6.6nm,0.8s,baz=96,slow=10.0,SNR=50						
MKAR				PcP	**PcP**	**20 44 02.9**	**-1.5**
	comp=Z,8.0nm,1.0s,baz=80,slow=4.1,SNR=9.9						
MKAR				LR	LR	20 58 16.8	
	comp=Z,568nm,21.1s,baz=87,slow=37						
MKAR	**Makanchi Array**	**38.76**	**307**	P	**P**	**20 41 52.5**	**-0.5**
MKAR	**Makanchi Array**	**38.76**	**307**	P	**P**	**20 41 52.5**	**-0.5**
MAKZ	**Makanchi**	**38.97**	**307**	P	**P**	**20 41 54.5**	**-0.2**
MAKZ				pmax	pmax		
	comp=Z,12nm,1.1s						
MAKZ	**Makanchi**	**38.97**	**307**	P	**P**	**20 41 54.5**	**-0.2**
DANN	**Dangsing**	**39.02**	**278**	*e*P	**P**	**20 41 55.4**	**-0.3**
	comp=Z,71nm,1.0s						
KOLN	**Koldanda**	**39.31**	**277**	*e*P	**P**	**20 41 57.5**	**-0.5**
	comp=Z,60nm,1.3s						
PPBI	**Pangkal Pinang**	**39.62**	**217**	P	**P**	**20 42 01.4**	**+1.0**
	comp=Z,5µmcomp=Z,14nm,0.5s						
PYUN	**Piuthan**	**39.74**	**278**	*e*P	**P**	**20 42 01.4**	**-0.2**
	comp=Z,56nm,1.0s						
MMRI	**Maumere**	**40.15**	**190**	P	**P**	**20 42 03.2**	**-1.6**
	comp=Z,32nm,0.9s						
MMRI	**Maumere**	**40.15**	**190**	P	**P**	**20 42 03.9**	**-0.9**
EDFI	**Ende, Flores**	**40.35**	**191**	P	**P**	**20 42 05.4**	**-1.1**
	comp=Z,6.9nm,1.2s						
TIXI	**Tiksi**	**40.46**	**0**	P	**P**	**20 42 05.3**	**-1.5**
	comp=Z,7.8nm,1.0s,baz=184,slow=5.2,SNR=12						
TIXI				S	S	20 47 57.1	-18
	comp=Z,0.7nm,0.4s,baz=113,slow=14,SNR=1.8						
TIXI	**Tiksi**	**40.46**	**0**	*ce*P	**P**	**20 42 07.5**	**+0.8**
TIXI				pmax	pmax		
	comp=Z,11nm,0.7s						
TIXI	**Tiksi**	**40.46**	**0**	P	**P**	**20 42 06.3**	**-0.4**
SOEI	**Soe**	**41.00**	**187**	P	**P**	**20 42 10.2**	**-1.7**
	comp=Z,23nm,1.0s						
SOEI	**Soe**	**41.00**	**187**	P	**P**	**20 42 10.6**	**-1.3**
PLAI	**Plampang**	**41.23**	**197**	P	**P**	**20 42 13.8**	**+0.1**
	comp=Z,66nm,0.8s						
TWSI	**Taliwang, Sumb**	**41.37**	**198**	P	**P**	**20 42 15.0**	**+0.2**
	comp=Z,24nm,1.4s						
BATI	**Baumata**	**41.51**	**188**	P	**P**	**20 42 14.4**	**-1.6**
	comp=Z,23nm,0.9s						
KURK	**Kurchatov**	**41.68**	**313**	*ce*P	**P**	**20 42 17.4**	**+0.3**
KURK				pmax	pmax		
	comp=Z,20nm,1.3s						
KURK	**Kurchatov**	**41.68**	**313**	P	**P**	**20 42 17.0**	**0.0**
KURBB	**Kurchatov Arra**	**41.72**	**313**	P	**P**	**20 42 16.5**	**-0.9**
	comp=Z,9.1nm,1.1s,baz=98,slow=9.0,SNR=27						
KURBB				PcP	**PcP**	**20 44 12.7**	**-1.2**
	comp=Z,0.5nm,0.4s,baz=88,slow=2.9,SNR=4.2						
NGJI	**Ngawi**	**41.84**	**206**	P	**P**	**20 42 21.3**	**+2.6**
	comp=Z,24nm,1.0s						
AMKA	**Amchitka**	**41.94**	**46**	P	**P**	**20 42 17.9**	**-1.3**
MDSI	**Maura Dua**	**42.61**	**218**	P	**P**	**20 42 26.1**	**+1.1**
	comp=Z,488nmcomp=Z,27nm,1.8s						
BILL	**Bilibino**	**42.77**	**20**	*ce*P	**P**	**20 42 26.4**	**+0.6**
BILL				*e*S	S	20 48 39.9	-10
BILL				*e*SS	**SS**	**20 51 57.5**	**-2.6**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,514nm,14.0s						
BILL	**Bilibino**	**42.77**	**20**	P	**P**	**20 42 25.8**	**0.0**
TNG	**Tangerang**	**42.82**	**214**	P	**P**	**20 42 27.8**	**+1.1**
	comp=Z,20µmcomp=Z,1µm,0.4s						
TNG				P	**pP**	**20 42 29.3**	**+0.3**
	comp=Z,13µmcomp=Z,910nm,0.5s						
LEM	**Lembang**	**42.95**	**212**	P	**P**	**20 42 29.4**	**+1.4**
	comp=Z,106nm,0.8s,baz=42,slow=5.8,SNR=30						
DBJI	**Dramaga**	**43.11**	**213**	P	**P**	**20 42 30.3**	**+1.2**
	comp=Z,3µmcomp=Z,92nm,1.1s						
KSH	**Kashi**	**43.35**	**296**	P	**P**	**20 42 34.8**	**+3.8**
KSH				pP	sP	20 42 40.1	+5.8
KSH				PcP	**PcP**	**20 44 22.0**	**+2.3**
KSH				S	**S**	**20 49 04.9**	**+5.8**
KSH				SS	**SS**	**20 52 09.1**	**-3.4**
KSH				pmax	pmax		
	comp=Z,14nm,1.4s						
KSH				pmax	pmax		
	comp=Z,560nm,9.5s						
KSH				LR	LR		
	comp=Z,780nm,14.1s						
KSH				LR	LR		
	comp=Z,1µm,12.0s						
KSH				LR	LR		
	comp=Z,1µm,12.0s						
TKM2	**Tokmak 2**	**43.38**	**301**	P	**P**	**20 42 32.1**	**+0.8**
	SNR=14						
KBK	**Karagaybulak**	**43.87**	**301**	P	**P**	**20 42 35.3**	**+0.1**
	SNR=9.2						
MTN	**Manton Dam**	**43.89**	**177**	P	**P**	**20 42 34.6**	**-0.6**
MTN				IAmb	IAmb	20 42 36.6	
	comp=Z,63nm,0.9s						
CHMS	**Chumysh**	**44.00**	**301**	P	**P**	**20 42 36.8**	**+0.8**
	SNR=12						
PMG	**Port Moresby**	**44.07**	**154**	PcP	**PcP**	**20 44 23.4**	**+1.2**
	comp=Z,1.9nm,0.3s,baz=245,slow=4.9,SNR=4.1						
FRU1	**Bishkek**	**44.10**	**301**	P	**P**	**20 42 36.7**	**-0.2**
FRU1				IAmb	IAmb	20 42 43.7	
	comp=Z,20nm,0.7s						
FRU1				PcP	**PcP**	**20 44 21.8**	**-0.2**
USP	**Ospenovka**	**44.17**	**302**	P	**P**	**20 42 37.9**	**+0.5**
	SNR=12						
AAK	**Ala-Archa**	**44.21**	**301**	P	**P**	**20 42 37.0**	**-0.9**
	comp=Z,6.8nm,1.1s,baz=114,slow=5.8,SNR=11						
AAK				PcP	**PcP**	**20 44 22.5**	**-0.1**
	comp=Z,5.0nm,0.9s,baz=157,slow=7.3,SNR=4.2						
AAK	**Ala-Archa**	**44.21**	**301**	P	**P**	**20 42 38.2**	**+0.3**
	SNR=8.3						
AAK	**Ala-Archa**	**44.21**	**301**	*ce*P	**P**	**20 42 38.5**	**+0.6**
AAK				pmax	pmax		
	comp=Z,26nm,0.8s						
AAK	**Ala-Archa**	**44.21**	**301**	P	**P**	**20 42 37.8**	**-0.1**
AAK				PcP	**PcP**	**20 44 22.0**	**-0.6**
UCH	**Uchtor**	**44.22**	**300**	P	**P**	**20 42 39.6**	**+1.2**
	SNR=32						
NRIK	**Noril'sk**	**44.69**	**341**	P	**P**	**20 42 39.9**	**-1.2**
	comp=Z,21nm,1.0s,baz=118,slow=8.7,SNR=19						
NRIK				LR	LR	21 00 45.9	
	comp=Z,656nm,20.2s,baz=132,slow=35						
NRIK	**Noril'sk**	**44.69**	**341**	*ce*P	**P**	**20 42 41.4**	**+0.3**
NRIK				pmax	pmax		
	comp=Z,51nm,0.9s						
NRIK	**Noril'sk**	**44.69**	**341**	P	**P**	**20 42 41.0**	**-0.1**
NRIK				IAmb	IAmb	20 42 47.2	
	comp=Z,46nm,0.8s						
EKS2	**Erkin-Say**	**44.73**	**301**	P	**P**	**20 42 42.3**	**+0.2**
	SNR=7.1						
AML	**Almayashu**	**44.84**	**300**	P	**P**	**20 42 44.1**	**+0.9**
	SNR=12						
NIL	**Nilore**	**46.49**	**288**	P	**P**	**20 42 55.4**	**-0.5**
NIL				pmax	pmax		
	comp=Z,17nm,0.9s						
NIL	**Nilore**	**46.49**	**288**	P	**P**	**20 42 55.4**	**-0.5**
NIL				IAmb	IAmb	20 43 05.2	
	comp=Z,17nm,0.8s						
DRK	**Karamyk**	**46.56**	**297**	P	**P**	**20 42 55.6**	**-1.2**
DRK				PcP	**PcP**	**20 44 31.2**	**+0.3**
KNRA	**Kununurra**	**46.65**	**180**	P	**P**	**20 42 56.7**	**-0.4**
BVAR	**Borovoye Array**	**46.99**	**315**	P	**P**	**20 42 58.6**	**-1.0**
	comp=Z,7.9nm,0.8s,baz=168,slow=7.6,SNR=33						
BVAR				PcP	**PcP**	**20 44 31.5**	**-0.3**
	comp=Z,4.5nm,0.8s,baz=216,slow=9.0,SNR=2.6						
COEN	**Coen**	**47.01**	**161**	P	**P**	**20 42 59.4**	**-0.6**
COEN				IAmb	IAmb	20 43 02.6	
	comp=Z,60nm,1.8s						
BRVK	**Borovoye**	**47.06**	**315**	*ce*P	**P**	**20 43 00.4**	**+0.3**
BRVK				pmax	pmax		
	comp=Z,23nm,0.8s						
BRVK	**Borovoye**	**47.06**	**315**	P	**P**	**20 42 59.1**	**-1.0**
BRVK				PcP	**PcP**	**20 44 32.3**	**+0.2**
KK31	**Karatay Array**	**47.09**	**302**	P	**P**	**20 43 00.5**	**0.0**
KK31						20 44 32.1	
KK31				pmax	pmax		
	comp=Z,34nm,0.8s						
KK31	**Karatay Array**	**47.09**	**302**	P	**P**	**20 43 00.5**	**0.0**
KK31				PcP	**PcP**	**20 44 32.1**	**-0.3**
KKAR	**Karatay Array**	**47.09**	**302**	P	**P**	**20 43 00.5**	**0.0**
KKAR				pmax	pmax		
	comp=Z,34nm,0.8s						
KKAR	**Karatay Array**	**47.09**	**302**	P	**P**	**20 43 00.4**	**0.0**
KKAR	**Karatay Array**	**47.09**	**302**	P	**P**	**20 43 00.5**	**0.0**
KKAR				IAmb	IAmb	20 43 07.1	
	comp=Z,34nm,0.8s						
BTK	**Batken**	**47.23**	**298**	P	**P**	**20 43 01.3**	**-0.5**
BTK				PcP	**PcP**	**20 44 32.4**	**-0.6**
GAR	**Garm**	**47.77**	**296**	P	**P**	**20 43 05.5**	**-0.5**
GAR				IAmb	IAmb	20 43 28.4	
	comp=Z,35nm,1.3s						
GAR				PcP	**PcP**	**20 44 34.8**	**-0.3**
CHGR	**Chuyangaron**	**48.72**	**296**	P	**P**	**20 43 12.3**	**-1.0**
CHGR				IAmb	IAmb	20 43 21.1	
	comp=Z,25nm,0.8s						
CHGR				PcP	**PcP**	**20 44 37.9**	**-0.5**
FITZ	**Fitzroy Crossi**	**49.15**	**184**	P	**P**	**20 43 16.7**	**+0.2**
FITZ				IAmb	IAmb	20 43 18.4	
	comp=Z,29nm,0.9s						
KBL	**Kabul**	**49.68**	**291**	P	**P**	**20 43 21.0**	**+0.2**
KBL				pmax	pmax		
	comp=Z,13nm,1.0s						
KBL	**Kabul**	**49.68**	**291**	P	**P**	**20 43 21.0**	**+0.2**
KBL				PcP	**PcP**	**20 44 41.9**	**-0.2**
PALK	**Pallekele**	**50.80**	**252**	LR	LR	21 04 37.7	
	comp=Z,244nm,20.6s,baz=140,slow=36						
WB0	**Warramunga Arr**	**51.00**	**173**	P	**P**	**20 43 29.9**	**-0.6**
WB0				IAmb	IAmb	20 43 31.8	
	comp=Z,22nm,0.8s						
WRAB	**Tennant Creek**	**51.16**	**173**	*ce*P	**P**	**20 43 31.3**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,30nm,0.9s						
WRA	**Warramunga Arr**	**51.17**	**173**	P	**P**	**20 43 30.8**	**-1.0**
	comp=Z,23nm,0.9s,baz=349,slow=8.2,SNR=88						
WRA				PcP	**PcP**	**20 44 48.1**	**+0.8**
	comp=Z,1.5nm,0.6s,baz=349,slow=4.2,SNR=1.5						
WRA				LR	LR	21 05 58.5	
	comp=Z,170nm,20.3s,baz=295,slow=37						
WRA	**Warramunga Arr**	**51.17**	**173**	*i* P	**P**	**20 43 32.4**	**+0.6**
WRA				pmax	pmax		
	comp=Z,20nm,0.8s						
WRA	**Warramunga Arr**	**51.17**	**173**	P	**P**	**20 43 30.9**	**-1.0**
WB2	**Warramunga Arr**	**51.17**	**173**	P	**P**	**20 43 31.1**	**-0.8**
WB2				IAmb	IAmb	20 43 33.2	
	comp=Z,29nm,0.8s						
WB2				PcP	**PcP**	**20 44 46.7**	**-0.6**
WR0	**Warramunga Arr**	**51.20**	**173**	P	**P**	**20 43 31.6**	**-0.5**
WR0				IAmb	IAmb	20 43 33.5	
	comp=Z,34nm,1.0s						
SVE	**Sverdlovsk**	**52.70**	**320**	⇓*e*P	**P**	**20 43 43.8**	**+0.9**
SVE				pmax	pmax		
	comp=Z,38nm,1.4s						
SVE				MLR	MLR		
	comp=Z,3µm,19.0s						
PSA00	**Pilbara Seismi**	**53.22**	**190**	P	**P**	**20 43 47.4**	**+0.4**
PSA00				PcP	**PcP**	**20 44 51.9**	**-3.1**
PSA00	**Pilbara Seismi**	**53.22**	**190**	P	**P**	**20 43 47.0**	**0.0**
PSA00				IAmb	IAmb	20 43 48.8	
	comp=Z,28nm,1.0s						
ABKAR	**Akbulak array**	**53.70**	**311**	P	**P**	**20 43 50.2**	**-0.2**
ABKAR	**Akbulak array**	**53.70**	**311**	P	**P**	**20 43 49.9**	**-0.5**
ABKAR				IAmb	IAmb	20 43 57.4	
	comp=Z,11nm,0.8s						
CTAO	**Charters Tower**	**53.71**	**160**	P	**P**	**20 43 50.6**	**-0.1**
CTAO				pmax	pmax		
	comp=Z,31nm,0.9s						
CTAO	**Charters Tower**	**53.71**	**160**	P	**P**	**20 43 50.6**	**-0.1**
CTAO				IAmb	IAmb	20 43 53.0	
	comp=Z,31nm,0.8s						
ARU	**Arti**	**53.86**	**320**	P	**P**	**20 43 50.3**	**-1.2**
	comp=Z,3.8nm,0.8s,baz=70,slow=5.3,SNR=13						
ARU	**Arti**	**53.86**	**320**	*c i*P	**P**	**20 43 51.7**	**+0.3**
ARU				S	**S**	**20 51 30.1**	**+3.6**
ARU				SS	**SS**	**20 55 06.6**	**-0.4**
ARU				pmax	pmax		
	comp=Z,41nm,1.5s						
ARU				MLR	MLR		
	comp=Z,2µm,17.0s						
ARU	**Arti**	**53.86**	**320**	P	**P**	**20 43 51.0**	**-0.4**
ARU				IAmb	IAmb	20 43 57.4	
	comp=Z,19nm,0.8s						
AKTO	**Aktyubinsk**	**54.77**	**312**	P	**P**	**20 43 57.5**	**-0.8**
	comp=Z,5.3nm,1.1s,baz=75,slow=11,SNR=4.0						
AS31	**Alice Springs**	**54.81**	**174**	P	**P**	**20 43 57.9**	**-0.9**
ASAR	**Alice Springs**	**54.81**	**174**	P	**P**	**20 43 58.4**	**-0.3**
	comp=Z,19nm,0.9s,baz=1.6,slow=7.5,SNR=129						
ASAR				PcP	**PcP**	**20 45 01.3**	**+0.2**
	comp=Z,1.4nm,0.6s,baz=5.5,slow=3.9,SNR=1.0						
ASAR				LR	LR	21 08 06.4	
	comp=Z,140nm,20.3s,baz=356,slow=37						
ASAR	**Alice Springs**	**54.81**	**174**	P	**P**	**20 43 57.9**	**-0.9**
HRA	**Herat**	**55.14**	**292**	P	**P**	**20 44 01.2**	**-0.2**
A21K	**Barrow**	**55.80**	**22**	P	**P**	**20 44 06.5**	**+1.2**
	baz=266,SNR=5.2						
A21K	**Barrow**	**55.80**	**22**	P	**P**	**20 44 02.0**	**-3.2**
A21K				IAmb	IAmb	20 44 07.0	
	comp=Z,32nm,0.9s						
TTA	**Tatalina**	**55.99**	**32**	P	**P**	**20 44 05.6**	**-1.3**
TTA				pmax	pmax		
	comp=Z,26nm,1.5s						
TTA	**Tatalina**	**55.99**	**32**	P	**P**	**20 44 07.8**	**+0.9**
	baz=273						
TTA	**Tatalina**	**55.99**	**32**	P	**P**	**20 44 05.6**	**-1.3**
TTA				IAmb	IAmb	20 44 10.1	
	comp=Z,26nm,1.5s						
P18K	**Big Mountain,**	**56.64**	**36**	P	**P**	**20 44 12.8**	**+1.2**
	baz=276						
J20K	**Nowinta River**	**56.75**	**31**	P	**P**	**20 44 13.8**	**+1.6**
	baz=274,SNR=11						
J20K	**Nowinta River**	**56.75**	**31**	P	**P**	**20 44 12.1**	**-0.1**
J20K				IAmb	IAmb	20 44 14.8	
	comp=Z,23nm,0.8s						
M19K	**Big River Lodg**	**56.81**	**33**	P	**P**	**20 44 14.8**	**+2.1**
	baz=275						
IMAR	**Indian Mountai**	**56.82**	**29**	P	**P**	**20 44 12.6**	**0.0**
K20K	**Telida**	**56.84**	**32**	P	**P**	**20 44 14.7**	**+1.8**
	baz=274,SNR=11						
N19K	**Bonanza Creek**	**56.87**	**35**	P	**P**	**20 44 15.1**	**+1.9**

	baz=276						
L20K	**Farewell, AK**	**57.00**	**33**	P	**P**	**20 44 15.7**	**+1.6**
	baz=275,SNR=5.6						
O19K	**Port Alsworth**	**57.01**	**35**	P	**P**	**20 44 15.7**	**+1.7**
	baz=276						
H21K	**Melozitna Rive**	**57.23**	**29**	P	**P**	**20 44 16.9**	**+1.3**
	baz=274						
H21K	**Melozitna Rive**	**57.23**	**29**	P	**P**	**20 44 16.3**	**+0.8**
H21K				IAmb	IAmb	20 44 17.8	
	comp=Z,23nm,1.1s						
GEYT	**Alibeck**	**57.34**	**298**	P	**P**	**20 44 17.3**	**+0.5**
	comp=Z,6.1nm,0.7s,baz=52,slow=19,SNR=6.5						
GEYT				LR	LR	21 12 28.8	
	comp=Z,716nm,18.2s,baz=235,slow=40						
GYA0B	**ALIBECK ARRAY**	**57.34**	**298**	P	**P**	**20 44 16.9**	**0.0**
CHUM	**Lake Minchumin**	**57.58**	**31**	P	**P**	**20 44 19.9**	**+1.8**
	baz=275,SNR=9.7						
I21K	**Tanana**	**57.61**	**29**	P	**P**	**20 44 19.2**	**+1.0**
	baz=275,SNR=18						
I21K	**Tanana**	**57.61**	**29**	P	**P**	**20 44 18.9**	**+0.7**
I21K				IAmb	IAmb	20 44 20.8	
	comp=Z,38nm,0.9s						
CAST	**Castle Rocks**	**57.73**	**31**	P	**P**	**20 44 20.0**	**+0.8**
	baz=276,SNR=11						
CAST	**Castle Rocks**	**57.73**	**31**	P	**P**	**20 44 19.6**	**+0.5**
CAST				IAmb	IAmb	20 44 21.5	
	comp=Z,20nm,0.9s						
PPLA	**Purkeypile**	**57.74**	**32**	P	**P**	**20 44 20.2**	**+0.9**
	baz=276						
PPLA	**Purkeypile**	**57.74**	**32**	P	**P**	**20 44 20.1**	**+0.7**
OHAK	**Old Harbor**	**57.93**	**39**	P	**P**	**20 44 19.8**	**-0.8**
	baz=279						
BPAW	**Bear Paw Mtn.**	**58.14**	**31**	P	**P**	**20 44 23.3**	**+1.3**
	baz=276,SNR=7.8						
BPAW	**Bear Paw Mtn.**	**58.14**	**31**	P	**P**	**20 44 22.9**	**+0.9**
BPAW				IAmb	IAmb	20 44 24.3	
	comp=Z,16nm,0.9s						
MLY	**Manley**	**58.15**	**30**	P	**P**	**20 44 23.0**	**+0.9**
	baz=276,SNR=22						
MLY	**Manley**	**58.15**	**30**	P	**P**	**20 44 22.5**	**+0.5**
MLY				IAmb	IAmb	20 44 24.4	
	comp=Z,18nm,0.8s						
COLD	**Coldfoot**	**58.15**	**27**	P	**P**	**20 44 23.0**	**+1.0**
	baz=275						
SKT	**Skwentna**	**58.15**	**33**	P	**P**	**20 44 22.5**	**+0.4**
	baz=277						
KDAK	**Kodiak Island**	**58.22**	**38**	P	**P**	**20 44 21.0**	**-1.7**
	comp=Z,26nm,0.9s,baz=330,slow=5.9,SNR=8.1						
KDAK	**Kodiak Island**	**58.22**	**38**	P	**P**	**20 44 21.4**	**-1.2**
KDAK				pmax	pmax		
	comp=Z,231nm,1.9s						
KDAK	**Kodiak Island**	**58.22**	**38**	P	**P**	**20 44 23.6**	**+0.9**
	baz=279						
KDAK	**Kodiak Island**	**58.22**	**38**	P	**P**	**20 44 21.4**	**-1.2**
KTH	**Kantishna Hill**	**58.23**	**31**	P	**P**	**20 44 23.1**	**+0.4**
KTH				IAmb	IAmb	20 44 27.1	
	comp=Z,32nm,1.3s						
TOLK	**Toolik Lake Re**	**58.26**	**25**	P	**P**	**20 44 23.7**	**+0.9**
	baz=275,SNR=12						
TRF	**Thorofare Moun**	**58.53**	**31**	P	**P**	**20 44 25.2**	**+0.3**
	baz=278						
TRF	**Thorofare Moun**	**58.53**	**31**	P	**P**	**20 44 25.4**	**+0.5**
TRF				IAmb	IAmb	20 44 27.0	
	comp=Z,28nm,1.4s						
KIRV	**Kirov**	**58.53**	**323**	P	**P**	**20 44 24.4**	**-0.4**
	comp=Z,21nm,0.9s,baz=85,slow=13,SNR=9.9						
KIRV	**Kirov**	**58.53**	**323**	*ce*P	**P**	**20 44 24.2**	**-0.5**
H23K	**Yukon River**	**58.55**	**29**	P	**P**	**20 44 26.2**	**+1.3**
	baz=277						
H23K	**Yukon River**	**58.55**	**29**	P	**P**	**20 44 26.1**	**+1.2**
CUT	**Chulitna**	**58.68**	**33**	P	**P**	**20 44 26.8**	**+1.0**
	baz=278						
I23K	**Minto, Yukon-K**	**58.71**	**29**	P	**P**	**20 44 27.2**	**+1.3**
	baz=277,SNR=9.2						
I23K	**Minto, Yukon-K**	**58.71**	**29**	P	**P**	**20 44 25.9**	**-0.1**
I23K				IAmb	IAmb	20 44 28.3	
	comp=Z,41nm,1.6s						
M22K	**Willow**	**58.84**	**33**	P	**P**	**20 44 25.4**	**-1.4**
	baz=279,SNR=6.1						
NEA2	**Nenana**	**58.91**	**30**	P	**P**	**20 44 28.2**	**+0.8**
	baz=278,SNR=33						
NEA2	**Nenana**	**58.91**	**30**	P	**P**	**20 44 27.9**	**+0.5**
MCK	**McKinley**	**59.09**	**31**	P	**P**	**20 44 29.1**	**+0.4**
	baz=278,SNR=6.2						
RC01	**Rabbit Creek A**	**59.13**	**34**	P	**P**	**20 44 29.6**	**+0.7**
	baz=279						
MDM	**Murphy Dome**	**59.21**	**29**	P	**P**	**20 44 29.9**	**+0.5**
H24K	**Noodor Dome**	**59.23**	**28**	P	**P**	**20 44 30.8**	**+1.2**
	baz=278						
H24K	**Noodor Dome**	**59.23**	**28**	P	**P**	**20 44 30.2**	**+0.5**
H24K				IAmb	IAmb	20 44 32.3	
	comp=Z,24nm,1.0s						
PMR	**Palmer**	**59.34**	**33**	P	**P**	**20 44 30.6**	**+0.3**
	baz=280,SNR=5.4						
WRH	**Wood River Hil**	**59.34**	**30**	P	**P**	**20 44 29.6**	**-0.8**
TCOL	**CIGO, UAF Yank**	**59.38**	**30**	P	**P**	**20 44 31.7**	**+1.1**
	baz=279						
TCOL	**CIGO, UAF Yank**	**59.38**	**30**	P	**P**	**20 44 31.1**	**+0.5**
TCOL				IAmb	IAmb	20 44 34.9	
	comp=Z,49nm,1.4s						
COLA	**College**	**59.38**	**30**	*i* P	**P**	**20 44 31.9**	**+1.3**
COLA	**College**	**59.38**	**30**	P	**P**	**20 44 31.0**	**+0.4**
WAT1	**Susitna Watana**	**59.40**	**32**	P	**P**	**20 44 31.1**	**+0.3**
	baz=279						
GHO	**Glory Hole Cre**	**59.40**	**33**	P	**P**	**20 44 31.0**	**+0.1**
GHO				IAmb	IAmb	20 44 33.4	
	comp=Z,21nm,0.9s						
SEW	**Seward**	**59.44**	**35**	P	**P**	**20 44 31.6**	**+0.6**
	baz=280,SNR=5.6						
SEW	**Seward**	**59.44**	**35**	P	**P**	**20 44 30.4**	**-0.6**
CCB	**Clear Creek Bu**	**59.44**	**30**	P	**P**	**20 44 30.5**	**-0.5**
POKR	**Poker Plat Res**	**59.52**	**29**	P	**P**	**20 44 32.8**	**+1.2**
	baz=279,SNR=19						
SML	**Sawmill**	**59.67**	**33**	P	**P**	**20 44 32.5**	**-0.3**
	baz=280						
KNK	**Knik Glacier**	**59.68**	**34**	P	**P**	**20 44 33.3**	**+0.5**
	baz=280,SNR=5.7						
IL31		**59.81**	**30**	P	**P**	**20 44 33.3**	**-0.2**
IL31				IAmb	IAmb	20 44 41.4	
	comp=Z,13nm,0.8s						
ILAR	**Eielson Array**	**59.81**	**30**	P	**P**	**20 44 31.5**	**-2.1**
	comp=Z,7.3nm,0.8s,baz=260,slow=4.7,SNR=50						
ILAR	**Eielson Array**	**59.81**	**30**	P	**P**	**20 44 33.0**	**-0.6**
ILAR	**Eielson Array**	**59.81**	**30**	P	**P**	**20 44 33.0**	**-0.6**
WAT6	**Susitna Watana**	**59.81**	**32**	P	**P**	**20 44 34.2**	**+0.4**
	baz=280						
HDA	**Harding Lake**	**59.84**	**30**	P	**P**	**20 44 33.4**	**-0.3**
	baz=280,SNR=14						
HDA	**Harding Lake**	**59.84**	**30**	P	**P**	**20 44 33.5**	**-0.3**
HDA				IAmb	IAmb	20 44 34.7	
	comp=Z,24nm,0.9s						
PRGR	**Permogore**	**59.88**	**327**	*e*P	**P**	**20 44 34.4**	**+0.4**
PRGR				pmax	pmax		
	comp=Z,88nm,1.1s						
DHY	**Denali Highway**	**59.89**	**32**	P	**P**	**20 44 34.9**	**+0.5**
	baz=280						
DHY	**Denali Highway**	**59.89**	**32**	P	**P**	**20 44 34.4**	**+0.1**
SCM	**Sheep Creek Mo**	**60.14**	**33**	P	**P**	**20 44 36.7**	**+0.7**
	baz=281,SNR=5.3						
PRP	**Porcupine Dome**	**60.24**	**29**	P	**P**	**20 44 37.0**	**+0.3**
	baz=280,SNR=12						
BMAR	**Burnt Mountain**	**60.28**	**26**	P	**P**	**20 44 38.0**	**+1.2**
J25K	**Salcha River,**	**60.48**	**30**	P	**P**	**20 44 38.5**	**+0.2**
	baz=281						
M24K	**Tolsona, Glenn**	**60.62**	**33**	P	**P**	**20 44 40.9**	**+1.7**
	baz=282						
M24K	**Tolsona, Glenn**	**60.62**	**33**	P	**P**	**20 44 40.0**	**+0.8**
PAX	**Paxson**	**60.76**	**31**	P	**P**	**20 44 41.0**	**+0.7**
	baz=282						
BELG	**Belogornoye**	**60.78**	**316**	P	**P**	**20 44 40.8**	**+0.4**
	comp=Z,9.5nm,0.9s,baz=111,slow=4.0,SNR=8.6						
BELG	**Belogornoye**	**60.78**	**316**	*i* P	**P**	**20 44 40.9**	**+0.5**
BELG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KLU	**Klutina**	**60.86**	**33**	P	**P**	**20 44 41.7**	**+0.8**
	baz=282						
RIDG	**Independent Ri**	**60.88**	**31**	P	**P**	**20 44 41.3**	**+0.3**
	baz=282,SNR=6.4						
RIDG	**Independent Ri**	**60.88**	**31**	P	**P**	**20 44 41.3**	**+0.3**
RIDG				IAmb	IAmb	20 44 53.4	
	comp=Z,25nm,1.1s						
HARP	**HAARP**	**61.02**	**32**	P	**P**	**20 44 43.5**	**+1.6**
	baz=282						
SCRK	**Sand Creek**	**61.20**	**30**	P	**P**	**20 44 43.2**	**-0.1**
	baz=282,SNR=24						
SCRK	**Sand Creek**	**61.20**	**30**	P	**P**	**20 44 42.8**	**-0.5**
SCRK				IAmb	IAmb	20 44 44.5	
	comp=Z,30nm,1.0s						
MORW	**Morawa**	**61.20**	**193**	P	**P**	**20 44 43.6**	**+0.2**
MORW				IAmb	IAmb	20 44 44.8	
	comp=Z,26nm,1.0s						
J26L	**Joseph Creek**	**61.27**	**30**	P	**P**	**20 44 43.1**	**-0.5**
	baz=283,SNR=13						
N25K	**Chitina, Valde**	**61.46**	**33**	P	**P**	**20 44 46.6**	**+1.6**
	baz=283						
BMRM	**Bremner River**	**61.60**	**34**	P	**P**	**20 44 47.1**	**+1.2**
	baz=284						
FORT	**Forrest**	**61.69**	**181**		**P**	**20 44 47.2**	**+0.5**
L26K	**Log Cabin Wild**	**61.69**	**31**	P	**P**	**20 44 47.5**	**+1.0**
	baz=284,SNR=12						
M26K	**Nabesna, AK**	**62.00**	**32**	P	**P**	**20 44 49.2**	**+0.6**
	baz=284						
EGAK	**Eagle**	**62.21**	**29**	P	**P**	**20 44 50.4**	**+0.5**
	baz=284						
EGAK	**Eagle**	**62.21**	**29**	P	**P**	**20 44 50.6**	**+0.7**
EGAK				IAmb	IAmb	20 44 56.1	
	comp=Z,11nm,0.9s						
MCARA	**McCarthy VSAT**	**62.24**	**33**	P	**P**	**20 44 51.3**	**+1.2**
	baz=285,SNR=5.9						
CRQM	**Cirque**	**62.35**	**34**	P	**P**	**20 44 51.2**	**+0.1**
L27K	**Beaver Creek,**	**62.36**	**31**	P	**P**	**20 44 51.9**	**+1.0**
	baz=285,SNR=24						
L27K	**Beaver Creek,**	**62.36**	**31**	P	**P**	**20 44 51.3**	**+0.3**
L27K				IAmb	IAmb	20 44 58.2	
	comp=Z,22nm,0.8s						
CRQE	**Cirque**	**62.37**	**34**	P	**P**	**20 44 51.8**	**+0.6**
	baz=285,SNR=5.5						
BCAR	**Beaver Creek A**	**62.37**	**31**	P	**P**	**20 44 51.6**	**+0.6**
M27K	**Edge Creek, AK**	**62.52**	**32**	P	**P**	**20 44 52.9**	**+0.8**
	baz=285,SNR=10						
KLMR	**Klimovskoe**	**62.93**	**327**	*e*P	**P**	**20 44 53.6**	**-1.1**
KLMR				*e*S	**S**	**20 53 23.7**	**-0.8**
KLMR				pmax	pmax		
	comp=Z,29nm,1.3s						
KLMR	**Klimovskoe**	**62.93**	**327**	*e*P	**P**	**20 44 53.6**	**-1.1**
KLMR				AMP		20 44 57.9	
	comp=Z,29nm,1.3s						
KLMR				*e*S	**S**	**20 53 23.8**	**-0.8**
KLMR				*e*S	**S**	**20 53 23.8**	**-0.8**
KLMR				LQ	LQ	21 08 00.6	
KLMR				LQ	LQ	21 08 00.6	
KLMR				LR	LR	21 13 10.2	
BARN	**Barnard Glacie**	**62.97**	**33**	P	**P**	**20 44 55.8**	**+0.5**
BARN				IAmb	IAmb	20 45 02.4	
	comp=Z,21nm,0.7s						
LVZ	**Lovozero**	**62.99**	**335**	P	**P**	**20 44 56.3**	**+1.2**
LVZ				pmax	pmax		
	comp=Z,93nm,1.4s						
LVZ	**Lovozero**	**62.99**	**335**	P	**P**	**20 44 56.3**	**+1.2**
DAWY	**Dawson**	**63.14**	**30**	P	**P**	**20 44 56.5**	**+0.3**
	baz=286,SNR=8.7						
DAWY	**Dawson**	**63.14**	**30**	P	**P**	**20 44 56.4**	**+0.2**
DAWY				IAmb	IAmb	20 44 59.0	
	comp=Z,20nm,1.4s						
CTG	**Chitna Glacier**	**63.14**	**33**	P	**P**	**20 44 57.5**	**+1.2**
	baz=286,SNR=6.5						
CTGM	**Chitina Glacie**	**63.14**	**33**	P	**P**	**20 44 56.9**	**+0.5**
I29M	**Ogilvie Camp,**	**63.21**	**28**	P	**P**	**20 44 57.3**	**+0.7**
	baz=287,SNR=17						
YUK3	**Moose Creek**	**63.32**	**32**	P	**P**	**20 44 59.1**	**+1.5**
	baz=287,SNR=5.1						
J29M	**Klondike Camp**	**63.52**	**29**	P	**P**	**20 45 00.5**	**+1.8**
	baz=287,SNR=8.2						
APA	**Apatity**	**63.54**	**335**	⇓*i*P	**P**	**20 45 01.5**	**+2.8**
APA				pmax	pmax		
	comp=Z,19nm,0.8s						
PINM	**Pinnacle**	**63.91**	**34**	P	**P**	**20 45 03.1**	**+1.7**
	baz=288						
STKA	**Stephens Creek**	**63.93**	**168**	P	**P**	**20 45 01.2**	**-0.4**
	comp=Z,16nm,0.9s,baz=347,slow=8.0,SNR=24						
STKA				LR	LR	21 15 41.8	
	comp=Z,75nm,18.8s,baz=353,slow=39						
STKA	**Stephens Creek**	**63.93**	**168**	P	**P**	**20 45 01.7**	**+0.1**
STKA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
STKA	**Stephens Creek**	**63.93**	**168**	P	**P**	**20 45 01.7**	**+0.1**
SPITS	**Spitsbergen Ar**	**64.05**	**348**	P	**P**	**20 45 02.4**	**+0.5**
SPITS				pmax	pmax		
	comp=Z,171nm,1.7s						
BBOO	**Buckleboo**	**64.07**	**173**	P	**P**	**20 45 02.6**	**+0.1**
BBOO				IAmb	IAmb	20 45 03.8	
	comp=Z,21nm,1.0s						
INK	**Inuvik**	**64.10**	**24**	P	**P**	**20 45 01.8**	**-0.5**
	comp=Z,9.0nm,1.0s,baz=276,slow=6.5,SNR=14						
INK	**Inuvik**	**64.10**	**24**	P	**P**	**20 45 02.8**	**+0.5**
INK				pmax	pmax		
	comp=Z,19nm,1.0s						
INK	**Inuvik**	**64.10**	**24**	P	**P**	**20 45 03.5**	**+1.1**
	baz=289,SNR=13						
INK	**Inuvik**	**64.10**	**24**	P	**P**	**20 45 02.8**	**+0.5**
INK				IAmb	IAmb	20 45 08.8	
	comp=Z,19nm,1.0s						
DZM	**Mont Dzumac**	**64.12**	**141**	LR	LR	21 09 26.8	
	comp=Z,167nm,21.1s,baz=264,slow=33						
DZM	**Mont Dzumac**	**64.12**	**141**	P	**P**	**20 45 04.4**	**+1.2**
DZM				IAmb	IAmb	20 45 05.9	
	comp=Z,16nm,0.9s						
YUK4	**Talbot Arm**	**64.28**	**32**	P	**P**	**20 45 05.3**	**+1.4**
	baz=288,SNR=7.6						
YUK6	**Outpost Mounta**	**64.53**	**33**	P	**P**	**20 45 06.9**	**+1.3**
	baz=289						
VRH	**Novokhopyorsk**	**64.64**	**316**	*e*P	**P**	**20 45 02.9**	**-3.2**
VRH				pmax	pmax		
	comp=Z,20nm,1.4s						
M30M	**Minto, Yukon**	**64.71**	**31**	P	**P**	**20 45 08.6**	**+2.1**
	baz=289						
HYT	**Haines Junctio**	**64.97**	**33**	P	**P**	**20 45 09.6**	**+1.3**
	baz=289,SNR=11						
HYT	**Haines Junctio**	**64.97**	**33**	P	**P**	**20 45 09.0**	**+0.7**
HYT				IAmb	IAmb	20 45 16.2	
	comp=Z,26nm,0.9s						
KEV	**Kevo**	**64.99**	**338**	P	**P**	**20 45 09.0**	**+0.9**
KEV				pmax	pmax		
	comp=Z,38nm,1.0s						
KEV	**Kevo**	**64.99**	**338**	P	**P**	**20 45 09.0**	**+0.9**
DDFL	**Dedoflistskaro**	**65.04**	**305**	P	**P**	**20 45 13.8**	**+4.8**
A36M	**Sachs Harbour**	**65.33**	**19**	P	**P**	**20 45 11.1**	**+0.8**
	baz=295,SNR=35						
A36M	**Sachs Harbour**	**65.33**	**19**	P	**P**	**20 45 10.8**	**+0.6**
MOS	**Moscow**	**65.45**	**322**	*e*P	**P**	**20 45 09.1**	**-2.2**
MOS				pmax	pmax		
	comp=Z,61nm,1.4s						
MOS				MLR	MLR		
	comp=Z,2µm,20.0s						
N31M	**Braeburn, Yuko**	**65.53**	**32**	P	**P**	**20 45 13.3**	**+1.5**
	baz=290,SNR=7.4						
ARCES	**ARCESS Array B**	**65.56**	**338**	P	**P**	**20 45 10.3**	**-1.6**
	comp=Z,12nm,1.1s,baz=67,slow=4.2,SNR=7.0						
ARCES				LR	LR	21 18 27.0	
	comp=Z,519nm,18.7s,baz=140,slow=40						
LPSR	**Galich'ya Gora**	**65.80**	**318**	*e*P	P	20 45 06.1	-7.6
LPSR				pmax	pmax		
	comp=Z,30nm,1.2s						
GOF	**Gofitskoye**	**65.88**	**309**	⇑*e*P	**P**	**20 45 15.2**	**+0.9**
GOF				pmax	pmax		
	comp=Z,40nm,1.3s						
M31M	**Drury Creek, Y**	**65.89**	**31**	P	**P**	**20 45 15.6**	**+1.5**
	baz=291						
ZEI	**Tsey**	**66.11**	**307**	*e*P	**P**	**20 45 15.1**	**-1.0**
ZEI				pmax	pmax		
	comp=Z,9.0nm,1.4s						
VSR	**Storozhevoye**	**66.14**	**317**	*e*P	P	20 45 07.9	-8.0
VSR				pmax	pmax		
	comp=Z,20nm,1.8s						
OBN	**Obninsk**	**66.23**	**321**	⇓*e*P	**P**	**20 45 16.3**	**-0.1**
OBN				*i*		20 45 23.6	
OBN				*e*		20 45 45.1	
OBN				*e*		20 47 42.2	
OBN				*e*S	**S**	**20 54 07.3**	**+1.8**
OBN				pmax	pmax		
	comp=Z,40nm,1.4s						
OBN				MLR	MLR		
	comp=Z,1µm,17.0s						
OBN	**Obninsk**	**66.23**	**321**	P	**P**	**20 45 16.5**	**+0.2**
WHY	**Whitehorse**	**66.23**	**32**	P	**P**	**20 45 17.8**	**+1.3**
	baz=292,SNR=8.0						
WHY	**Whitehorse**	**66.23**	**32**	P	**P**	**20 45 17.2**	**+0.7**
WHY				IAmb	IAmb	20 45 18.9	
	comp=Z,28nm,1.1s						
FARO	**Faro, Yukon**	**66.33**	**30**	P	**P**	**20 45 18.0**	**+1.0**
	baz=292,SNR=22						
KBZ	**Khabaz**	**66.45**	**308**	P	**P**	**20 45 17.3**	**-0.7**
	comp=Z,14nm,1.0s,baz=67,slow=6.3,SNR=13						
KBZ				LR	LR	21 15 52.0	
	comp=Z,376nm,19.9s,baz=60,slow=37						
KBZ	**Khabaz**	**66.45**	**308**	*ce*P	**P**	**20 45 18.8**	**+0.8**
KBZ				pmax	pmax		
	comp=Z,19nm,1.1s						
SKAG	**Skagway**	**66.47**	**34**	P	**P**	**20 45 19.8**	**+2.0**
	baz=292						
GNI	**Garni**	**66.48**	**304**	*i* P	**P**	**20 45 20.6**	**+2.1**
GNI				pmax	pmax		
	comp=Z,12nm,1.1s						
GNI	**Garni**	**66.48**	**304**	P	**P**	**20 45 19.5**	**+1.1**
GNI				IAmb	IAmb	20 46 10.7	
	comp=Z,41nm,1.5s						
ONI	**Oni**	**66.48**	**307**	P	**P**	**20 45 18.9**	**+0.5**
ONI				pmax	pmax		
	comp=Z,12nm,1.1s						
ONI	**Oni**	**66.48**	**307**	P	**P**	**20 45 18.9**	**+0.5**
KVAR	**Kislovodsk Arr**	**66.50**	**308**	P	**P**	**20 45 19.4**	**+0.8**
	comp=Z,14nm,1.1s,baz=58,slow=6.3,SNR=4.1						
KIV	**Kislovodsk**	**66.51**	**308**	P	**P**	**20 45 19.1**	**+0.6**
KIV				IAmb	IAmb	20 45 33.2	
	comp=Z,29nm,1.0s						
BGD	**Bogdanovka**	**66.87**	**305**	P	**P**	**20 45 25.2**	**+4.2**
AKH	**Akhalkalaki**	**66.89**	**305**	P	**P**	**20 45 23.4**	**+2.3**
MMPY	**Sheldon Lake,**	**67.08**	**30**	P	**P**	**20 45 23.2**	**+1.4**
	baz=294,SNR=11						
P33M	**Teslin, Yukon**	**67.35**	**32**	P	**P**	**20 45 25.0**	**+1.4**
	baz=293,SNR=7.8						
MSVF	**Nonsavu**	**67.86**	**129**	LR	LR	21 13 04.2	
	comp=Z,185nm,20.5s,baz=40,slow=34						
SOC	**Sochi**	**68.64**	**309**	*e*P	**P**	**20 45 29.3**	**-2.6**
SOC				*e*		20 47 58.6	
SOC				*e*PPP	PPP	20 49 40.4	
SOC				*e*S	**S**	**20 54 32.4**	**-2.5**
SOC				*e*SS	**SS**	**20 59 03.6**	**+4.9**
SOC				pmax	pmax		
	comp=Z,34nm,0.8s						
FIA1	**FINESS Array S**	**68.79**	**330**	P	**P**	**20 45 32.3**	**-0.1**
FINES	**FINESS Array B**	**68.79**	**330**	P	**P**	**20 45 32.0**	**-0.4**
	comp=Z,4.9nm,0.5s,baz=69,slow=5.8,SNR=27						
FINES				LR	LR	21 18 06.2	
	comp=Z,593nm,21.3s,baz=54,slow=38						
FINES	**FINESS Array B**	**68.79**	**330**	*i* P	**P**	**20 45 32.2**	**-0.2**
FINES				pmax	pmax		
	comp=Z,5.0nm,0.5s						
FINES	**FINESS Array B**	**68.79**	**330**	P	**P**	**20 45 32.3**	**-0.2**
TGTN	**Hyland Airport**	**68.81**	**30**	P	**P**	**20 45 33.9**	**+1.1**
	baz=296,SNR=16						
GURO	**Guroymak-BITLI**	**69.03**	**303**	P	**P**	**20 45 35.6**	**+1.0**
SIRT	**Sirnak**	**69.16**	**302**	P	**P**	**20 45 36.0**	**+0.6**
DLBC	**Dease Lake**	**69.40**	**33**	P	**P**	**20 45 37.2**	**+0.8**
	comp=Z,9.2nm,1.0s,baz=313,slow=7.0,SNR=7.9						
TOO	**Toolangi**	**70.21**	**166**	P	**P**	**20 45 42.9**	**+1.5**
TOO				pmax	pmax		
	comp=Z,19nm,1.1s						
TOO	**Toolangi**	**70.21**	**166**	P	**P**	**20 45 42.9**	**+1.5**
TOO				IAmb	IAmb	20 45 44.0	
	comp=Z,19nm,1.1s						
DAG	**Danmarks Havn**	**70.37**	**352**	P	**P**	**20 45 44.4**	**+2.4**
DAG	**Danmarks Havn**	**70.37**	**352**	*e*P	**P**	**20 45 40.7**	**-1.3**
DAG				IAmb	IAmb	20 45 43.0	
	comp=Z,10nm,0.9s						
RES	**Resolute Bay**	**70.54**	**11**	P	**P**	**20 45 43.7**	**+0.6**
RES				pmax	pmax		
	comp=Z,30nm,1.1s						
RES	**Resolute Bay**	**70.54**	**11**	P	**P**	**20 45 43.7**	**+0.6**
RES				IAmb	IAmb	20 45 44.7	
	comp=Z,30nm,1.1s						
SOCY	**Socotra**	**70.90**	**273**	P	**P**	**20 45 45.8**	**-0.6**
NACGM	**Naroch**	**71.45**	**323**	*i* P	**P**	**20 45 49.4**	**+0.5**
NEEM	**North Greenlan**	**71.56**	**360**	*e*P	**P**	**20 45 47.6**	**-2.0**
NEEM				IAmb	IAmb	20 45 50.5	
	comp=Z,11nm,1.1s						
SIM	**Simferopol'**	**71.73**	**312**	*e*P	**P**	**20 45 54.0**	**+3.2**
SIM				pmax	pmax		
	comp=Z,19nm,0.1s						
AKASG	**Malin Array Be**	**72.09**	**319**	P	**P**	**20 45 51.5**	**-1.3**
	comp=Z,1.1nm,0.5s,baz=48,slow=6.4,SNR=14						
AKASG				LR	LR	21 20 06.3	
	comp=Z,890nm,18.6s,baz=50,slow=38						
AKASG	**Malin Array Be**	**72.09**	**319**	*i* P	**P**	**20 45 52.7**	**-0.1**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AKASG	**Malin Array Be**	**72.09**	**319**	P	**P**	**20 45 53.0**	**+0.1**
AKBB	**Malin Array Si**	**72.09**	**319**	*ce*P	**P**	**20 45 52.0**	**-0.8**
AKBB	**Malin Array Si**	**72.09**	**319**	P	**P**	**20 45 53.0**	**+0.2**
AKBB				IAmb	IAmb	20 46 05.7	
	comp=Z,60nm,1.9s						
PABE	**Paberze**	**72.57**	**325**	P	**P**	**20 45 55.7**	**+0.1**
PABE				IAmb	IAmb	20 46 02.4	
	comp=Z,25nm,0.8s						
RAYN	**Ar Rayn**	**72.77**	**287**	P	**P**	**20 45 56.8**	**-0.7**
RAYN				pmax	pmax		
	comp=Z,23nm,1.3s						
RAYN	**Ar Rayn**	**72.77**	**287**	P	**P**	**20 45 56.8**	**-0.7**
RAYN				IAmb	IAmb	20 45 58.8	
	comp=Z,23nm,1.3s						
GAZ	**Gaziantep**	**73.07**	**303**	P	**P**	**20 45 59.0**	**0.0**
GAZ				IAmb	IAmb	20 46 07.3	
	comp=Z,13nm,0.8s						
BNN	**Bunyan**	**73.28**	**305**	P	**P**	**20 46 00.4**	**+0.1**
BNN				IAmb	IAmb	20 46 02.0	
	comp=Z,38nm,1.3s						
SUW	**Suwalki**	**73.72**	**324**	P	**P**	**20 46 02.8**	**+0.4**
SUW				pmax	pmax		
	comp=Z,54nm,1.3s						
SUW	**Suwalki**	**73.72**	**324**	P	**P**	**20 46 02.8**	**+0.4**
SUW				IAmb	IAmb	20 46 04.5	
	comp=Z,54nm,1.3s						
YKA	**Yellowknife Ar**	**73.78**	**26**	P	**P**	**20 46 02.5**	**-0.1**
	comp=Z,15nm,1.1s,baz=311,slow=4.7,SNR=21						
YKA	**Yellowknife Ar**	**73.78**	**26**	*i* P	**P**	**20 46 03.7**	**+1.1**
YKA				pmax	pmax		
	comp=Z,16nm,1.1s						
YKA	**Yellowknife Ar**	**73.78**	**26**	P	**P**	**20 46 03.0**	**+0.3**
BR131	**Keskin Array S**	**74.41**	**307**	⇓*e*P	**P**	**20 46 07.3**	**+0.4**
BR131	**Keskin Array S**	**74.41**	**307**	P	**P**	**20 46 07.2**	**+0.2**
BRTR	**Keskin Array B**	**74.41**	**307**	P	**P**	**20 46 07.3**	**+0.4**
	comp=Z,4.8nm,0.8s,baz=86,slow=5.6,SNR=20						
BRTR				PP	**PP**	**20 48 51.4**	**-1.4**
	comp=Z,0.8nm,0.8s,baz=335,slow=7.4,SNR=2.5						
BRTR				LR	LR	21 23 49.0	
	comp=Z,340nm,19.6s,baz=71,slow=40						
BRTR	**Keskin Array B**	**74.41**	**307**	P	**P**	**20 46 07.0**	**+0.1**
NC405	**NORSAR Array S**	**74.83**	**333**	P	**P**	**20 46 07.7**	**-1.1**
NB2	**NORSAR Subarra**	**75.07**	**333**	P	**P**	**20 46 09.3**	**-0.9**
	comp=Z,5.2nm,0.8s,baz=50,slow=6.2						
NOA	**NORSAR Array B**	**75.07**	**333**	P	**P**	**20 46 08.8**	**-1.4**
	comp=Z,4.1nm,0.8s,baz=51,slow=5.8,SNR=9.2						
NOA				LR	LR	21 22 06.9	
	comp=Z,389nm,18.9s,baz=70,slow=38						
LVV	**L'vov**	**75.43**	**320**	*e*P	**P**	**20 46 11.6**	**-0.9**
LVV				MLR	MLR		
	comp=E,900nm,18.0s						
LVV				MLR	MLR		
	comp=Z,900nm,20.0s						
ASF	**Jabal al Asfar**	**75.58**	**299**	P	**P**	**20 46 12.7**	**-1.1**
	comp=Z,4.9nm,1.1s,baz=37,slow=3.4,SNR=4.0						
BUR08	**Bucovina Ar. S**	**75.89**	**317**	P	**P**	**20 46 15.4**	**+0.2**
BUR08				IAmb	IAmb	20 46 43.6	
	comp=Z,22nm,1.4s						
BURAR	**Bucovina Array**	**75.90**	**317**	P	**P**	**20 46 15.3**	**0.0**
SUMG	**Summit**	**76.09**	**356**	P	**P**	**20 46 16.8**	**+0.5**
SUMG				pmax	pmax		
	comp=Z,30nm,1.0s						
SUMG	**Summit**	**76.09**	**356**	*i* P	**P**	**20 46 14.6**	**-1.8**
SUMG				IAmb	IAmb	20 46 17.8	
	comp=Z,31nm,1.0s						
SUMG	**Summit**	**76.09**	**356**	P	**P**	**20 46 16.8**	**+0.5**
SUMG				IAmb	IAmb	20 46 18.0	
	comp=Z,30nm,1.0s						
KWP	**Kalwaria Pacla**	**76.26**	**320**	P	**P**	**20 46 18.1**	**+0.9**
KWP				pmax	pmax		
	comp=Z,268nm,1.3s						
KWP	**Kalwaria Pacla**	**76.26**	**320**	P	**P**	**20 46 18.1**	**+0.9**
MMAI	**Mount Meron Ar**	**76.30**	**300**	P	**P**	**20 46 16.8**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=62,slow=9.9,SNR=3.3						
UZH	**Uzhgorod**	**77.03**	**319**	*e*P	**P**	**20 46 22.5**	**+1.0**
UZH				*e*		20 46 30.7	
CRVS	**Cervenica-Dubn**	**77.34**	**320**	*e*P	**P**	**20 46 24.9**	**+1.5**
CRVS	**Cervenica-Dubn**	**77.34**	**320**	*e*P	**P**	**20 46 24.9**	**+1.5**
DRGR		**77.78**	**318**	P	**P**	**20 46 27.2**	**+1.3**
EIL	**Elat**	**78.24**	**298**	P	**P**	**20 46 27.8**	**-1.0**
	comp=Z,2.2nm,1.0s,baz=96,slow=6.4,SNR=3.9						

LANS	Liptovska Anna	78.30	321	*e*P	P	20 46 30.0	+1.3
LANS	Liptovska Anna	78.30	321	*e*P	P	20 46 30.0	+1.3
BALB	Balikesir	78.33	309	P	P	20 46 28.7	-0.2
BALB				IAmb	IAmb	20 46 57.7	
	comp=Z,13nm,0.7s						
ELL	Elmali	78.42	306	P	P	20 46 29.7	0.0
ELL				pmax	pmax		
	comp=Z,33nm,1.0s						
ELL	Elmali	78.42	306	P	P	20 46 29.7	0.0
ELL				IAmb	IAmb	20 46 47.0	
	comp=Z,33nm,1.0s						
PSZ	Piszkesteto	78.76	320	P	P	20 46 31.7	+0.4
PSZ				pmax	pmax		
	comp=Z,8.0nm,1.1s						
PSZ	Piszkesteto	78.76	320	P	P	20 46 31.7	+0.4
MORC	Moravsky Berou	78.97	322	P	P	20 46 32.2	-0.2
MORC				pmax	pmax		
	comp=Z,12nm,1.3s						
MORC	Moravsky Berou	78.97	322	*e*P	P	20 46 31.4	-1.0
MORC	Moravsky Berou	78.97	322	P	P	20 46 32.2	-0.2
VYHS	Vyhne	79.01	320	*e*P	P	20 46 33.8	+1.2
VYHS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
VYHS	Vyhne	79.01	320	*e*P	P	20 46 33.8	+1.2
KRLC	Kraliky	79.19	323	AMS	AMS	21 24 10.0	
	comp=Z,1µm,18.3s						
OSTC	Ostas	79.20	323	AMS	AMS	21 24 40.0	
	comp=Z,1µm,18.5s						
CHVC	Chvalec	79.26	323	AMS	AMS	21 24 50.0	
	comp=Z,1µm,17.6s						
DPC	Dobruska-Polom	79.27	323	*e*P	P	20 46 34.3	+0.3
DPC				*e*		20 46 39.9	
DPC				MLR	MLR		
	comp=Z,1µm,17.8s						
DPC	Dobruska-Polom	79.27	323	*e*P	P	20 46 34.3	+0.3
DPC				*e*pP	PcP	20 46 39.9	-2.4
DPC				AMS	AMS	21 24 30.0	
	comp=Z,1µm,17.8s						
UPC	Upice	79.33	323	AMS	AMS	21 24 50.0	
	comp=Z,1µm,16.2s						
JAVC	Velka Javorina	79.43	321	*e*P	P	20 46 37.1	+2.1
ICESG	Greenland Ices	79.61	356	*e*P	P	20 46 35.5	-0.4
ICESG				IAmb	IAmb	20 46 37.6	
	comp=Z,24nm,0.9s						
VRAC	Vranov	79.74	322	*e*P	P	20 46 35.8	-0.8
MODS	Modra-Piesok	79.93	321	*e*P	P	20 46 38.0	+0.4
MODS				pmax	pmax		
	comp=Z,21nm,1.5s						
MODS	Modra-Piesok	79.93	321	*e*P	P	20 46 38.0	+0.4
KRUC	Moravsky	79.99	322	*e*P	P	20 46 37.5	-0.4
PVCC	Panska Ves	80.06	324	AMS	AMS	21 25 20.0	
	comp=Z,1µm,17.7s						
B08A	Colville Reser	80.09	39	P	P	20 46 38.6	+0.1
B08A				IAmb	IAmb	20 46 40.6	
	comp=Z,68nm,1.7s						
EDM	Edmonton	80.09	33	P	P	20 46 39.1	+0.6
EDM				pmax	pmax		
	comp=Z,70nm,1.3s						
EDM	Edmonton	80.09	33	P	P	20 46 39.1	+0.6
BRG	Berggiesshubel	80.16	324	*e*P	P	20 46 39.5	+0.7
BRG				Amp		20 46 40.7	
	comp=Z,5.5nm,1.2s						
BRG				Amp		21 25 47.0	
	comp=E,0.8nm,16.1s						
BRG				Amp		21 25 55.0	
	comp=N,0.8nm,16.5s						
BRG				Amp		21 25 59.0	
	comp=Z,1.3nm,15.8s						
PRU	Pruhonice	80.40	323	*e*P	P	20 46 40.8	+0.7
PRU				MLR	MLR		
	comp=Z,1µm,16.1s						
PRU	Pruhonice	80.40	323	*e*P	P	20 46 40.8	+0.7
PRU				AMS	AMS	21 25 10.0	
	comp=Z,1µm,16.1s						
ATD	Arta Tunnel	80.72	278	P	P	20 46 43.3	+0.8
ATD				IAmb	IAmb	20 46 45.2	
	comp=Z,24nm,1.2s						
DIVS	Divibare	80.87	316	P	P	20 46 42.6	-0.3
CONA	Conrad Observa	80.96	321	*e*P	P	20 46 44.7	+1.5
	comp=Z,6.4nm,0.9s						
C09A	Chrisman Ranch	80.99	39	P	P	20 46 44.4	+1.1
C09A				IAmb	IAmb	20 46 45.5	
	comp=Z,23nm,1.1s						
CKRC	Cesky Krumlov	81.23	323	*e*P	P	20 46 45.1	+0.5
CKRC				*e*x	PcP	20 46 50.5	-0.4
CKRC				AMS	AMS	21 25 30.0	
	comp=Z,800nm,19.8s						
NEW	Newport	81.33	38	P	P	20 46 44.7	-0.5
	comp=Z,12nm,1.1s,baz=308,slow=2.6,SNR=9.7						
NEW	Newport	81.33	38	P	P	20 46 45.7	+0.5
NEW				pmax	pmax		
	comp=Z,18nm,1.1s						
NEW	Newport	81.33	38	P	P	20 46 46.6	+1.4
	baz=308,SNR=8.5						
NEW	Newport	81.33	38	P	P	20 46 45.7	+0.5
KHC	Kasperske Hory	81.42	323	*e*P	P	20 46 46.2	+0.6
KHC				*e*		20 46 51.3	
KHC				MLR	MLR		
	comp=Z,1µm,17.6s						
KHC	Kasperske Hory	81.42	323	*e*P	P	20 46 46.2	+0.6
KHC				*e*pP	PcP	20 46 51.3	-0.4
KHC				AMS	AMS	21 25 30.0	
	comp=Z,1µm,17.6s						
GERES	GERESS Array B	81.53	323	P	P	20 46 45.1	-1.2
	comp=Z,1.6nm,1.0s,baz=31,slow=2.3,SNR=5.0						
GERES				PKKP	PKKPdf	21 05 07.9	-0.2
	comp=Z,1.2nm,0.8s,baz=231,slow=17,SNR=7.4						
GERES				LR	LR	21 26 31.4	
	comp=Z,659nm,19.2s,baz=66,slow=38						
GERES	GERESS Array B	81.53	323	P	P	20 46 46.1	-0.2
GERES	GERESS Array B	81.53	323	P	P	20 46 46.1	-0.2
ARSA	Arzberg	81.55	321	*e*P	P	20 46 47.1	+0.7
	comp=Z,8.5nm,1.1s						
E09A	Wood Farm, Sta	81.84	40	P	P	20 46 48.4	+0.6
E09A				IAmb	IAmb	20 46 51.0	
	comp=Z,20nm,1.2s						
MOA	Molln	81.86	322	*e*P	P	20 46 49.0	+1.1
	comp=Z,9.1nm,1.3s						
PINE	Pine Mountain	81.87	43	P	P	20 46 49.4	+1.1
PINE				IAmb	IAmb	20 46 51.0	
	comp=Z,33nm,1.1s						
L04D	Klamath Falls	81.96	45	P	P	20 46 49.6	+0.8
	baz=305						
J05D	Fort Rock, OR	81.99	44	P	P	20 46 50.4	+1.5
	baz=306						
YBH	Yreka Blue Hor	81.99	46	P	P	20 46 47.9	-0.9
	comp=Z,3.8nm,1.0s,baz=259,slow=8.8,SNR=4.7						
SOKA	Soboth	82.16	321	*e*P	P	20 46 50.3	+0.6
	comp=Z,12nm,1.2s						
PDG	Podgorica	82.27	315	P	P	20 46 50.3	+0.1
KBN	Korca	82.37	313	P	P	20 46 50.4	-0.4
KBN				pmax	pmax		
	comp=Z,12nm,1.0s						
KBN	Korca	82.37	313	P	P	20 46 50.4	-0.4
WALA	Waterton Lakes	82.49	36	P	P	20 46 51.9	+0.6
WALA				IAmb	IAmb	20 46 53.7	
	comp=Z,33nm,1.2s						
DY2G	Dye2	82.52	358	*e*P	P	20 46 48.5	-2.9
DY2G				IAmb	IAmb	20 46 53.0	
	comp=Z,142nm,2.1s						
O02D	Mt. Diablo Mer	82.83	47	P	P	20 46 54.8	+1.6
	baz=305						
BKZ	Black Stump Fm	82.89	145	P	P	20 46 54.4	+1.1
JTMT	Jette	83.14	37	P	P	20 46 55.8	+1.0
BMO	Blue Mountains	83.32	41	P	P	20 46 56.4	+0.7
BMO				pmax	pmax		
	comp=Z,34nm,1.6s						
BMO	Blue Mountains	83.32	41	P	P	20 46 56.4	+0.7
BMO				IAmb	IAmb	20 46 58.0	
	comp=Z,34nm,1.6s						
ZOU	Zoufplan	83.35	321	P	P	20 46 56.1	+0.1
MOD	Modoc Plateau	83.36	45	P	P	20 46 56.8	+0.7
MOD				IAmb	IAmb	20 46 58.4	
	comp=Z,19nm,1.1s						
O03E	Paynes Creek	83.38	47	P	P	20 46 56.8	+0.7
	baz=306,SNR=5.7						
ABTA	Abfaltersbach	83.48	322	*e*P	P	20 46 56.2	-0.2
	comp=Z,9.1nm,1.1s						
J08A	Circle Bar Ran	83.57	43	P	P	20 46 58.1	+1.0
J08A				IAmb	IAmb	20 46 59.6	
	comp=Z,17nm,1.0s						
ITM	Ithomi	83.59	310	P	P	20 46 57.0	-0.2
WATA	Walderalm	83.59	323	*i* P	P	20 46 57.5	+0.3
	comp=Z,7.8nm,1.5s						
WTTA	Wattenberg	83.61	322	*e*P	P	20 46 56.8	-0.4
	comp=Z,8.3nm,1.3s						
STAL	STALIGIAL	83.68	321	P	P	20 46 57.5	0.0
MOTA	Moosalm	83.83	323	*i* P	P	20 46 58.8	+0.4
	comp=Z,5.0nm,0.9s						
SQTA	Sankt Quirin	83.86	323	*i* P	P	20 46 58.8	+0.4
	comp=Z,7.8nm,1.3s						
STU	Stuttgart	83.87	325	P	P	20 46 58.6	+0.3
STU				pmax	pmax		
	comp=Z,22nm,1.3s						
STU	Stuttgart	83.87	325	P	P	20 46 58.6	+0.3
STU				IAmb	IAmb	20 47 11.7	
	comp=Z,22nm,1.3s						
FFC	Flin Flon	83.89	27	P	P	20 46 58.7	+0.4
FFC				pmax	pmax		
	comp=Z,44nm,1.0s						
FFC	Flin Flon	83.89	27	P	P	20 46 58.7	+0.4
PLID	Pearl Lake	83.90	40	P	P	20 46 58.8	-0.1
MSO	Missoula	83.91	38	P	P	20 46 59.6	+0.9
	baz=310,SNR=10						
MSO	Missoula	83.91	38	P	P	20 46 58.9	+0.2
MSO				IAmb	IAmb	20 47 01.2	
	comp=Z,32nm,1.4s						
RETA	Reutte	83.92	323	*e*P	P	20 46 57.9	-0.8
	comp=Z,12nm,2.0s						
ORV	Oroville	84.00	47	P	P	20 46 59.3	+0.1
ORV				pmax	pmax		
	comp=Z,25nm,1.6s						
ORV	Oroville	84.00	47	P	P	20 46 59.3	+0.1
ORV				IAmb	IAmb	20 47 00.8	
	comp=Z,25nm,1.6s						
WVOR	Wild Horse Val	84.03	43	P	P	20 46 59.6	+0.1
WVOR				pmax	pmax		
	comp=Z,57nm,2.0s						
WVOR	Wild Horse Val	84.03	43	P	P	20 46 59.6	+0.1
FETA	Feichten	84.24	323	*e*P	P	20 47 01.0	+0.5
	comp=Z,6.2nm,1.2s						
CTI	Castel Tesino	84.38	321	P	P	20 47 00.7	-0.4
CTI				pmax	pmax		
	comp=Z,18nm,1.3s						
CTI	Castel Tesino	84.38	321	P	P	20 47 00.7	-0.4
CTI				IAmb	IAmb	20 47 01.7	
	comp=Z,18nm,1.3s						
DAVA	Damuels	84.50	323	*e*P	P	20 47 00.8	-1.0
	comp=Z,11nm,1.3s						
BFO	Black Forest	84.59	325	P	P	20 47 02.2	+0.2
BFO				pmax	pmax		
	comp=Z,17nm,1.2s						
BFO	Black Forest	84.59	325	P	P	20 47 02.2	+0.2
BFO				IAmb	IAmb	20 47 03.5	
	comp=Z,17nm,1.2s						
WLF	Walferdange	84.73	327	P	P	20 47 03.3	+0.6
WLF				pmax	pmax		
	comp=Z,28nm,1.1s						
WLF	Walferdange	84.73	327	P	P	20 47 03.3	+0.6
WLF				IAmb	IAmb	20 47 04.7	
	comp=Z,28nm,1.1s						
TEOL	Teolo	84.81	321	P	P	20 47 03.3	+0.1
TEOL				IAmb	IAmb	20 47 04.7	
	comp=Z,17nm,1.1s						
MFID	Camas Ranch	85.05	41	P	P	20 47 05.3	+0.7
MFID				IAmb	IAmb	20 47 07.1	
	comp=Z,39nm,1.4s						
HRY	Holter Researc	85.08	37	P	P	20 47 05.6	+0.9
EMB	Emerald Bay	85.22	47	P	P	20 47 05.4	-0.2
EGMT	Eagleton	85.25	35	P	P	20 47 06.5	+1.1
	baz=313,SNR=16						
EGMT	Eagleton	85.25	35	P	P	20 47 05.9	+0.5
SALO	Salr	85.26	322	P	P	20 47 05.5	0.0
SALO				IAmb	IAmb	20 47 06.6	
	comp=Z,20nm,1.0s						
TUE	Stuetta	85.31	323	P	P	20 47 05.9	-0.1
LRM	Limekiln Ridge	85.34	38	P	P	20 47 06.7	+0.5
DLMT	Dillon	85.57	38	P	P	20 47 08.2	+1.0
NRCA	Norcia	85.63	318	P	P	20 47 08.0	+0.6
NRCA				IAmb	IAmb	20 47 09.4	
	comp=Z,34nm,1.2s						
MURB	Monte Urbino	85.69	319	P	P	20 47 09.2	+1.5
HLID	Hailey	85.75	41	P	P	20 47 09.5	+1.3
	baz=310,SNR=17						
HLID	Hailey	85.75	41	P	P	20 47 09.3	+1.1
HLID				IAmb	IAmb	20 47 10.9	
	comp=Z,22nm,1.2s						
AQU	L'Aquila	85.77	318	P	P	20 47 08.4	+0.3
AQU				pmax	pmax		
	comp=Z,23nm,1.0s						
AQU	L'Aquila	85.77	318	P	P	20 47 08.4	+0.3
AQU				IAmb	IAmb	20 47 10.1	
	comp=Z,22nm,1.0s						
MCMT	McKenzie Canyo	85.78	39	P	P	20 47 09.1	+0.7
ZCCA	Zocca	85.84	321	P	P	20 47 09.7	+1.3
ZCCA				IAmb	IAmb	20 47 27.8	
	comp=Z,28nm,1.0s						
BOZ	Bozeman (W)	85.93	38	P	P	20 47 09.5	+0.5
BOZ				pmax	pmax		
	comp=Z,21nm,1.2s						
BOZ	Bozeman (W)	85.93	38	P	P	20 47 10.1	+1.1
	baz=312,SNR=15						
BOZ	Bozeman (W)	85.93	38	P	P	20 47 09.5	+0.5
BOZ				IAmb	IAmb	20 47 11.2	
	comp=Z,21nm,1.1s						
BMN	Battle Mountai	86.10	44	P	P	20 47 10.8	+0.9
BMN				pmax	pmax		
	comp=Z,27nm,1.3s						
BMN	Battle Mountai	86.10	44	P	P	20 47 10.8	+0.9
BMN				IAmb	IAmb	20 47 12.7	
	comp=Z,27nm,1.3s						
OSSC	Osservatorio P	86.23	320	P	P	20 47 10.8	+0.4
QLMT	Earthquake Lak	86.54	38	P	P	20 47 12.8	+0.7
MDPB	Devils Postpil	86.67	47	P	P	20 47 13.4	+0.5
MDPB				IAmb	IAmb	20 47 15.1	
	comp=Z,15nm,1.3s						
NVAR	Mina Array Bea	86.67	46	P	P	20 47 12.5	-0.3
	comp=Z,6.7nm,0.9s,baz=288,slow=4.5,SNR=36						
NVAR	Mina Array Bea	86.67	46	P	P	20 47 13.2	+0.4
NV11	Mina Array Sit	86.76	46	P	P	20 47 13.9	+0.7
NV11				IAmb	IAmb	20 47 15.7	
	comp=Z,26nm,1.5s						
ELK	Elko	87.08	43	P	P	20 47 14.9	+0.1
	comp=Z,3.0nm,0.8s,baz=331,slow=2.0,SNR=9.2						
ELK	Elko	87.08	43	P	P	20 47 15.9	+1.1
ELK				pmax	pmax		
	comp=Z,51nm,2.0s						
ELK	Elko	87.08	43	P	P	20 47 15.8	+1.1
ELK				IAmb	IAmb	20 47 17.8	
	comp=Z,51nm,2.0s						
H17A	Grant Village	87.29	38	P	P	20 47 19.0	+3.2
	baz=312,SNR=9.9						
FLWY	Flagg Ranch	87.43	38	P	P	20 47 17.7	+1.3
RLMT	Red Lodge	87.47	37	P	P	20 47 18.1	+1.4
	baz=313,SNR=19						
RLMT	Red Lodge	87.47	37	P	P	20 47 17.4	+0.8
TPH	Tonopah	87.56	46	P	P	20 47 18.1	+0.9
TPH				pmax	pmax		
	comp=Z,102nm,1.0s						
TPH	Tonopah	87.56	46	P	P	20 47 18.1	+0.9
DGMT	Dagmar	87.57	32	P	P	20 47 18.2	+1.4
	baz=317,SNR=11						
DGMT	Dagmar	87.57	32	P	P	20 47 17.5	+0.7
MOOW	Moose Ponds	87.63	39	P	P	20 47 18.4	+1.0
TPAW	Teton Pass	87.69	39	P	P	20 47 17.9	+0.1
TPAW				IAmb	IAmb	20 47 20.7	
	comp=Z,18nm,1.1s						
HVU	Hansel Valley	87.82	41	P	P	20 47 19.1	+0.8
HVU				pmax	pmax		
	comp=Z,18nm,1.2s						
HVU	Hansel Valley	87.82	41	P	P	20 47 19.1	+0.8
HVU				IAmb	IAmb	20 47 21.1	
	comp=Z,18nm,1.2s						
LAO	LASA Array	87.90	34	P	P	20 47 19.7	+1.3
	baz=316,SNR=10						
LAO	LASA Array	87.90	34	P	P	20 47 19.1	+0.7
CWC	Cottonwood Cre	88.03	48	P	P	20 47 20.4	+1.1
	baz=308						
SPUT	South Promonto	88.32	41	P	P	20 47 21.2	+0.5
SPUT				IAmb	IAmb	20 47 23.4	
	comp=Z,22nm,1.4s						
R11A	Troy Canyon, C	88.39	45	P	P	20 47 22.6	+1.6
	baz=310,SNR=11						
FURC	Furnace Creek,	88.78	47	P	P	20 47 24.2	+1.6
	baz=309						
DUG	Dugway, Tooele	88.84	42	P	P	20 47 24.6	+1.4
DUG				pmax	pmax		
	comp=Z,19nm,1.2s						
DUG	Dugway, Tooele	88.84	42	P	P	20 47 25.0	+1.9
	baz=311,SNR=11						
DUG	Dugway, Tooele	88.84	42	P	P	20 47 24.6	+1.4
DUG				IAmb	IAmb	20 47 26.0	
	comp=Z,19nm,1.1s						
LRMC	Laurel Mtn Rad	88.88	48	P	P	20 47 24.9	+1.6
	baz=308,SNR=6.4						
BW06	Boulder Array	88.93	39	P	P	20 47 24.4	+0.8
	baz=313,SNR=14						
PD31	Pinedale Array	88.94	39	P	P	20 47 23.8	+0.2
PD31				IAmb	IAmb	20 47 25.4	
	comp=Z,15nm,1.1s						
PDAR	Pinedale Array	88.94	39	P	P	20 47 22.8	-0.8
	comp=Z,9.2nm,0.9s,baz=318,slow=2.0,SNR=37						
PDAR				PP	PP	20 50 55.5	+3.1
	comp=Z,1.2nm,0.9s,baz=330,slow=5.6,SNR=4.4						
PDAR	Pinedale Array	88.94	39	P	P	20 47 23.7	0.0
EDW2	Edwards Air Fo	89.04	49	P	P	20 47 25.8	+1.7
	baz=308,SNR=5.9						
GSC	Goldstone, Bar	89.55	48	P	P	20 47 27.1	+0.6
GSC				pmax	pmax		
	comp=Z,18nm,1.3s						
GSC	Goldstone, Bar	89.55	48	P	P	20 47 27.8	+1.4
	baz=309,SNR=7.2						
GSC	Goldstone, Bar	89.55	48	P	P	20 47 27.1	+0.6
GSC				IAmb	IAmb	20 47 28.6	
	comp=Z,18nm,1.3s						
ULM	Lac du Bonnet	89.72	27	P	P	20 47 25.8	-1.0
	comp=Z,17nm,0.9s,baz=312,slow=5.0,SNR=15						
ULM	Lac du Bonnet	89.72	27	P	P	20 47 27.1	+0.3
ULM				pmax	pmax		
	comp=Z,36nm,1.1s						
ULM	Lac du Bonnet	89.72	27	P	P	20 47 27.1	+0.3
TUQ	Turquoise Moun	90.02	48	P	P	20 47 30.1	+1.3
	baz=309,SNR=6.8						
RDMU	Red Mountain	90.43	40	P	P	20 47 31.6	+0.9
RDMU				IAmb	IAmb	20 47 33.2	
	comp=Z,21nm,1.2s						
GMRC	Granite Mounta	90.60	48	P	P	20 47 32.9	+1.5
	baz=310						
K22A	Casper	90.62	37	P	P	20 47 32.8	+1.3
	baz=315						
RSSD	Black Hills	90.82	35	P	P	20 47 33.0	+0.6
RSSD				pmax	pmax		
	comp=Z,29nm,0.9s						
RSSD	Black Hills	90.82	35	P	P	20 47 34.0	+1.6
	baz=317						
RSSD	Black Hills	90.82	35	P	P	20 47 33.0	+0.6
PFO	Pinyon Flats O	90.83	49	P	P	20 47 31.5	-1.0
	comp=Z,5.3nm,0.9s,baz=341,slow=5.1,SNR=8.9						
PFO	Pinyon Flats O	90.83	49	P	P	20 47 33.2	+0.7
PFO				pmax	pmax		
	comp=Z,12nm,1.1s						
PFO	Pinyon Flats O	90.83	49	P	P	20 47 33.7	+1.2
	baz=309,SNR=6.6						
PFO	Pinyon Flats O	90.83	49	P	P	20 47 33.2	+0.7
PFO				IAmb	IAmb	20 47 34.5	
	comp=Z,12nm,1.1s						
BELC	Belle Mtn. Jos	90.88	49	P	P	20 47 33.6	+0.9
	baz=309						
AGMN	Agassiz Nation	91.28	28	P	P	20 47 34.4	+0.2
	baz=323						
IRM	Iron Mountain	91.33	48	P	P	20 47 36.4	+1.7
	baz=310,SNR=7.5						
BC3	Big Chuckawall	91.45	49	P	P	20 47 37.3	+1.9
	baz=310,SNR=5.8						
O20A	White River Ci	91.46	40	P	P	20 47 36.7	+1.2
	baz=314,SNR=6.0						
W13A	Hualapai Mount	91.52	47	P	P	20 47 36.8	+1.0
U15A	North Rim	91.63	45	P	P	20 47 37.5	+1.1
IKP	In-Ko-Pah, Jac	91.66	50	P	P	20 47 37.5	+1.1
	baz=309						
SWSC	Sam W. Stewart	91.67	49	P	P	20 47 38.1	+1.8
	baz=309						
PDMCI	Parker Dam,Lak	91.87	48	P	P	20 47 38.8	+1.6
	baz=310						
N23A	Red Feather La	92.17	38	P	P	20 47 40.7	+1.9
	baz=316,SNR=8.7						
KEST	Kesra	92.46	315	LR	LR	21 33 14.3	
	comp=Z,428nm,18.4s,baz=215,slow=38						
WUAZ	Wupatki	92.79	45	P	P	20 47 43.1	+1.5
	baz=312,SNR=18						
WUAZ	Wupatki	92.79	45	P	P	20 47 42.6	+1.0
SMCO	Snowmass	92.83	40	P	P	20 47 42.6	+0.5
SMCO				IAmb	IAmb	20 47 44.6	
	comp=Z,14nm,0.9s						
113A	Mohawk Valley,	93.10	49	P	P	20 47 43.8	+0.9
113A				IAmb	IAmb	20 47 45.1	
	comp=Z,12nm,1.1s						
ISCO	Idaho Springs	93.13	39	P	P	20 47 43.4	+0.1
ISCO				pmax	pmax		
	comp=Z,30nm,2.0s						
ISCO	Idaho Springs	93.13	39	P	P	20 47 44.8	+1.5
	baz=316,SNR=5.6						
ISCO	Idaho Springs	93.13	39	P	P	20 47 43.4	+0.1
ISCO				IAmb	IAmb	20 47 51.6	
	comp=Z,30nm,1.9s						
SCHQ	Schefferville	93.22	9	LR	LR	21 31 40.6	
	comp=Z,182nm,19.8s,baz=356,slow=37						
MVCO	Mesa Verde	93.34	42	P	P	20 47 45.9	+1.6
	baz=314,SNR=9.0						
MVCO	Mesa Verde	93.34	42	P	P	20 47 44.7	+0.5
X16A	Lo Mia Camp, P	93.48	46	P	P	20 47 45.7	+0.8
X16A				IAmb	IAmb	20 47 47.7	
	comp=Z,13nm,1.1s						
S22A	4UR Ranch, Cre	93.92	41	P	P	20 47 48.7	+1.8
	baz=315,SNR=5.6						
OGNE	Ogallala	94.16	36	P	P	20 47 48.8	+1.0
	baz=318						
214A	Organ Pipe Nat	94.24	49	P	P	20 47 49.8	+1.6
	baz=311,SNR=5.2						
214A	Organ Pipe Nat	94.24	49	P	P	20 47 49.5	+1.3
214A				IAmb	IAmb	20 47 50.7	
	comp=Z,17nm,1.2s						
ECSD	EROS Data Cent	94.59	31	P	P	20 47 50.2	+0.7
	baz=322						
SDCO	Great Sand Dun	94.66	40	P	P	20 47 51.5	+1.2
	baz=316						
TUC	Tucson	95.30	47	P	P	20 47 53.5	+0.4
TUC				pmax	pmax		
	comp=Z,13nm,1.5s						
TUC	Tucson	95.30	47	P	P	20 47 54.6	+1.5
	baz=312						
TUC	Tucson	95.30	47	P	P	20 47 53.5	+0.4
TUC				IAmb	IAmb	20 47 55.5	
	comp=Z,13nm,1.4s						
ANMO	Albuquerque	96.11	43	P	P	20 47 56.3	-0.6
	comp=Z,0.7nm,0.5s,baz=266,slow=1.8,SNR=6.1						
ANMO	Albuquerque	96.11	43	*ce*P	P	20 47 59.1	+2.2
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ANMO	Albuquerque	96.11	43	P	P	20 47 59.0	+2.2
	baz=315						
ANMO	Albuquerque	96.11	43	P	P	20 47 57.5	+0.7
ANMO				IAmb	IAmb	20 47 59.6	
	comp=Z,9.2nm,1.4s						
ESDC	Sonseca Array	96.94	325	PP	PP	20 51 55.6	+0.7
	comp=Z,1.0nm,0.8s,baz=33,slow=8.1,SNR=7.6						
ESDC				LR	LR	21 36 50.9	
	comp=Z,452nm,18.2s,baz=355,slow=39						
TXAR	Lajitas Array	101.76	45	P	Pdif	20 48 21.9	-0.2
	comp=Z,1.4nm,1.1s,baz=228,slow=1.1,SNR=5.7						
TXAR				PP	PP	20 52 28.4	-3.6
	comp=Z,1.1nm,1.1s,baz=210,slow=4.3,SNR=4.8						
TXAR				PKiKP	PKiKP	20 52 39.5	-5.9
	comp=Z,1.2nm,1.1s,baz=298,slow=2.7,SNR=4.9						
TXAR				PKKPbc	PKKPbc	21 04 27.0	-0.6
	comp=Z,0.2nm,0.5s,baz=170,slow=7.6,SNR=4.0						
TORD	Torodi Ar. Bea	112.77	303	PKiKP	PKiKP	20 53 04.1	-2.0
	comp=Z,1.5nm,1.1s,baz=33,slow=3.5,SNR=5.5						
SYO	Syowa Base	118.51	204	⇑*e*Pdiff	Pdif	20 49 36.7	+1.4
QSPA	South Pole Qui	121.00	180	PKPdf	PKPdf	20 53 20.4	-0.1
DBIC	Dimbokro	121.88	302	PKP	PKPdf	20 53 23.1	-0.5
	comp=Z,5.9nm,1.0s,baz=74,slow=2.2,SNR=2.4						
SNAA	Sanae	132.05	199	P	PKPdf	20 53 41.2	-0.2
VNA2	Neumayer--Watz	133.69	198	P	PKPdf	20 53 44.9	+0.5
VNA1	Neumayer--Stat	134.09	198	P	PKiKP	20 53 46.8	+0.4
VNA3	Neumayer Olymp	134.10	197	P	PKPdf	20 53 45.3	0.0
ATAH	Atahualpa	145.03	52	PKPbc	PKPbc	20 54 06.2	-0.5
	comp=Z,25nm,0.9s,baz=314,slow=3.6,SNR=15						
CZSB	Cruzeiro do Su	149.15	45	PKPdf	PKPdf	20 54 13.3	-0.3
NNA	Nana	149.53	57	PKP2	PKPbc	20 54 18.3	-0.5
NNA	Nana	149.53	57		PKPbc	20 54 18.3	-0.5
ETMB	Extrema	154.50	36	PKPdf	PKPdf	20 54 21.6	-0.1
ETMB					PKPab	20 54 43.0	-1.4
SAML	Samuel	155.16	29	PKP2	PKPab	20 54 46.5	-0.6
LPAZ	La Paz	158.54	50	PKP	PKPdf	20 54 28.6	+1.0
	comp=Z,2.8nm,1.2s,baz=10,slow=5.2,SNR=6.4						

LPAZ	La Paz	158.54	50	PKIKP	PKPdf	20 54 27.4	-0.2
LPAZ	La Paz	158.54	50	PKPdf	PKPdf	20 54 27.4	-0.2
CPUP	Villa Florida	172.71	49	PKP	PKPdf	20 54 38.3	+0.1
	comp=Z,0.9nm,0.3s,baz=45,slow=1.4,SNR=2.8						

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*TRN **14** 20:39:36.7, 10°.64N×62°.78W, h65^{km}, MD3.7*
*FUNV **14** 20:39:37.8, 10°.63N×62°.72W, h78^{km}, MW4.2*
ISC 14 20:39:35.7±1.3, **10°.61N**±0°.05×**62°.75W**±0°.03, **h91**^{km}±12^{km},
n22, σ**1^{s}21**/35, **2C, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRUV	Carupano	0.49	278	⇑iP	Pn	20 39 50.5	+0.1
CRUV				eS	Sn	20 40 00.5	-1.0
TRN	Trinidad (W)	1.32	88	eP	Pn	20 40 00.4	+1.2
TRN				eS	Sn	20 40 16.5	-0.6
CUMV	Cumana_UDO	1.44	263	eP	Pn	20 40 02.4	+1.8
CUMV				eS	Sn	20 40 19.4	-0.2
TBH	Brigand Hill	1.66	94	eP	Pn	20 40 05.0	+1.6
TBH				eS	Sn	20 40 24.4	-0.2
GRFF	Grenada Fort F	1.74	34	eP	Pn	20 40 05.0	+0.4
GRFF				eS	Sn	20 40 25.6	-1.0
GRGR	Grenville	1.86	35	eP	Pn	20 40 06.4	+0.2
GRGR				eS	Sn	20 40 27.9	-1.4
PCRV	Puerto La Cruz	1.91	257	eP	Pn	20 40 07.9	+1.1
PCRV				eS	Sn	20 40 30.0	-0.5
GCMP	Grenada, Carri	2.27	35	eP	Pn	20 40 11.9	+0.4
GCMP				eS	Sn	20 40 38.3	-0.7
TOSP	Speyside	2.28	72	eP	Pn	20 40 12.3	+0.7
TOSP				eS	Sn	20 40 38.9	-0.2
PRGV	PARIAGUAN	2.62	226	⇑iP	Pn	20 40 17.4	+1.2
PRGV				eS	Sn	20 40 47.7	+0.4
RIOV	Rio Grande	2.68	160	eP	Pn	20 40 18.4	+1.4
RIOV				eS	Sn	20 40 47.7	-1.1
SVB	Belmont	3.03	29	eP	Pn	20 40 23.1	+1.5
BIRV	Birongo	3.47	268	eP	Pn	20 40 29.4	+1.8
BIRV				eS	Sn	20 41 07.2	-0.5
MERV	Las Mercedes	3.75	249	eP	Pn	20 40 32.4	+1.0
MERV				eS	Sn	20 41 14.1	-0.4
TACV	Tcata	4.24	264	eP	Pn	20 40 39.1	+1.0
CACV	CAICARA DEL OR	4.81	231	eP	Pn	20 40 41.3	-4.5
BENV	Beln	4.82	263	eP	Pn	20 40 46.6	+0.6
LUEV	Luepa	4.90	165	eS	Sn	20 41 39.3	-3.5
TURV	Turiamo	5.01	269	eP	Pn	20 40 48.5	0.0
BAUV	El Baul	5.47	253	eP	Pn	20 40 55.1	+0.3
BAUV	El Baul	5.47	253	eP	Pn	20 40 55.1	+0.3
BAUV				eS	Sn	20 41 54.1	-2.5
PAYV	Puerto Ayacuch	7.08	224	eP	Pn	20 41 17.3	+0.5

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*PRU **14** 20:43:01.2±0.0, 51°.48N×16°.19E, h0^{km}*
ISC 14 20:43:01.0±2.1, **51°.48N**±0°.10×**16°.17E**±0°.05, **h0**^{km}, **n15**,
σ**0^{s}78**/29, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.64	173	ePg	Pg	20 43 13.9	+0.5
KSP				eSg	Sg	20 43 22.1	+0.5
CHVC	Chvalec	0.90	185	ePG	Pg	20 43 18.6	+0.4
CHVC				eSG	Sg	20 43 30.7	+0.9
	comp=Z,7.6nm,0.4s						
OSTC	Ostas	0.93	178	ePG	Pg	20 43 19.3	+0.6
OSTC				eSG	Sg	20 43 31.6	+0.9
	comp=Z,9.4nm,0.5s						
UPC	Upice	0.98	186	ePG	Pg	20 43 20.4	+0.7
UPC				eSG	Sg	20 43 33.1	+0.7
	comp=Z,20nm,0.3s						
DPC	Dobruska-Polom	1.14	175	ePG	Pg	20 43 22.6	-0.2
DPC				eSG	Sg	20 43 37.1	-0.4
	comp=Z,7.6nm,0.3s						
PVCC	Panska Ves	1.39	227	ePG	Pb	20 43 28.2	+0.4
PVCC				eSG	Sn	20 43 47.2	+0.6
	comp=Z,17nm,0.2s						
KRLC	Kraliky	1.46	164	ePG	Pn	20 43 28.9	+0.2
KRLC				eSG	Sg	20 43 47.5	-0.4
	comp=Z,7.0nm,0.5s						
BRG	Berggiesshubel	1.53	247	Pg	Pg	20 43 30.7	+0.4
BRG				Sg	Sg	20 43 51.1	+1.1
BRG				Amp		20 43 51.7	
	comp=Z,5.8nm,0.3s						
PRU	Pruhonice	1.82	215	ePG	Pb	20 43 35.1	0.0
PRU				eSG	Sb	20 43 58.7	+0.3
MORC	Moravsky Berou	1.92	152	ePN	Pn	20 43 33.7	-1.2
MORC				eSG	Sn	20 44 00.4	+0.6
OKC	Ostrava-Krasne	2.07	142	eSG	Sb	20 44 05.7	-0.1
VRAC	Vranov	2.19	173	ePN	Pn	20 43 37.5	-1.2
VRAC				eSG	Sb	20 44 09.2	0.0
KRUC	Moravsky	2.43	176	eSG	Sb	20 44 16.4	+0.5
KHC	Kasperske Hory	2.88	216	ePN	Pn	20 43 47.0	-1.1
KHC				ePG	Pb	20 43 53.7	+0.5
KHC				eSN	Sn	20 44 22.2	-1.3
KHC				eSG	Sg	20 44 32.4	-1.0
CKRC	Cesky Krumlov	2.92	205	eSG	Sg	20 44 33.3	-1.4

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*BEO **14** 20:43:55.5±1.2, 43°.34N×28°.71E, h0^{km}, ML3.4/12*
*SOF **14** 20:44:10.9, 43°.40N×27°.27E, h21^{km}, MD3.2*
*ISK **14** 20:44:12.5, 43°.08N×27°.35E, h5^{km}, ML2.9/13*
*CFUSG **14** 20:44:15.4, 43°.49N×27°.59E, h35^{km}, mb2.7/2, MD3.2/2,*
Bulgaria Magtype MSH 3.1 from 3 stations
ISC 14 20:44:11.9±1.0, **43°.39N**±0°.02×**27°.30E**±0°.02, **h26**^{km}±9^{km},
n92, σ**1^{s}29**/123, **54C-16D, Bulgaria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRD	Provadia	0.20	159	iP	Pb	20 44 17.3	-0.4
ROIA	ROIAK	0.30	169	iP	Pb	20 44 18.2	-0.8
RAZG	Razgrad	0.61	288	⇓P	Pb	20 44 22.5	-1.5
RAZG				⇑S	Sb	20 44 30.7	-1.4
PSN	Preselentsi	0.71	65	iP	Pb	20 44 24.4	-1.2
KALB	Balgarevo	0.81	88	⇑P	Pn	20 44 27.4	-0.2
KALB				⇑S	Sn	20 44 39.4	+0.5
ICOR	Ion Corvin	0.81	26	⇓P	Pn	20 44 27.1	-0.6
ICOR				⇑S	Sn	20 44 38.4	-0.6
RASA	Rasa	0.84	352	⇓P	Pn	20 44 27.4	-0.6
SZH	Strazhica	1.01	264	iP	Pb	20 44 28.9	-1.8
TSMN	Mangalia Port-	1.03	66	⇑P	Pn	20 44 30.6	0.0
TSMN				⇓S	Sn	20 44 44.1	-0.1
MANR	Mangalia	1.03	65	⇑P	Pn	20 44 30.7	0.0
MANR				⇑S	Sn	20 44 45.3	+1.1
JMB	Yambol	1.06	210	P	Pn	20 44 30.1	-1.0
CVDA	Cernavoda	1.09	29	⇑P	Pb	20 44 31.5	-0.6
CVDA				⇑S	Sn	20 44 46.3	+0.6
MFTR	Murfatlar	1.13	45	⇓P	Pb	20 44 32.5	-0.4
MFTR				⇑S	Sn	20 44 48.4	+1.6
LEHL	Lehliu	1.14	342	⇑P	Pb	20 44 32.7	-0.3
LEHL				⇑S	Sn	20 44 49.4	+2.4
EFOR	EFORIE	1.19	54	⇑P	Pb	20 44 33.2	-0.6
EFOR				⇓S	Sn	20 44 49.8	+1.7
AMRR	Amara	1.23	1	⇓P	Pb	20 44 33.7	-0.8
AMRR				⇓S	Sn	20 44 51.2	+2.1
TSCT	Constanta Port	1.25	51	⇑P	Pb	20 44 34.5	-0.4
TSCT				⇑S	Sb	20 44 52.3	+1.8
SGRR	Singureni	1.27	311	⇑P	Pb	20 44 34.4	-0.9
SGRR				⇑S	Sb	20 44 51.9	+0.7
TLBR	Topalu	1.28	25	⇑P	Pb	20 44 34.5	-0.8
TLBR				⇑S	Sb	20 44 52.1	+0.8
BUC1	Bucharest	1.33	317	⇑P	Pb	20 44 35.4	-0.9
BUC1				⇑S	Sb	20 44 53.9	+1.0
INCR	INCERC-Sediu C	1.34	322	⇑P	Pb	20 44 35.2	-1.1
INCR				⇑S	Sb	20 44 54.8	+1.7
TIRR	Tirgusor	1.34	36	⇑P	Pb	20 44 35.2	-1.2
TIRR				⇑S	Sb	20 44 53.7	+0.7
HARR	Harsova	1.38	19	⇑P	Pb	20 44 36.0	-1.1
PVL	Pavlikeni	1.45	264	P	Pb	20 44 39.1	+0.9
SULR		1.50	330	⇑P	Pb	20 44 38.5	-0.6
SULR				⇑S	Sb	20 44 60.0	+2.4
PGOR	Pogoanele	1.54	352	⇑S	Sb	20 45 00.9	+2.0
EDRB	Edirne	1.59	195	PN	Pn	20 44 37.7	-0.7
EDRB				SN	Sn	20 44 57.9	-0.2
TPGR	Topolog	1.68	28	⇑P	Pb	20 44 41.4	-0.7
TPGR				⇑S	Sb	20 45 03.4	+0.6
COPA	Copaceanca	1.69	297	⇑P	Pb	20 44 41.3	-1.0
COPA				⇑S	Sb	20 45 05.0	+2.0
ISR	Istrita	1.82	343	⇓P	Pb	20 44 44.1	-0.4
ISR				⇑S	Sb	20 45 06.1	-0.7
DIM	Dimitrovgrad	1.87	225	P	Pn	20 44 41.4	-0.8
CFR	Carcaliu	1.89	18	⇑P	Pb	20 44 45.0	-0.7
CFR				⇑S	Sb	20 45 09.3	+0.4
PLVB	Pleven	1.96	271	⇓P	Pb	20 44 45.9	-1.0
PLVB				⇑S	Sb	20 45 11.3	+0.5
GRER		2.01	353	⇓S	Sb	20 45 12.9	+0.6
HUMR	Humele	2.03	305	⇑P	Pb	20 44 46.9	-1.2
HUMR				⇓S	Sb	20 45 13.8	+0.9
CTYL	Yalikoy Yolu	2.04	159	PN	Pn	20 44 45.1	+0.5
CTYL				SN	Sn	20 45 08.6	-0.7
TLCR		2.10	31	⇑P	Pn	20 44 46.0	+0.6
NEHR	Nehoiu	2.17	341	⇑P	Pb	20 44 47.7	-2.7
NEHR				⇑S	Sb	20 45 16.5	-0.3
VLAD	Vladila	2.19	287	⇑S	Sb	20 45 17.5	-0.1
BISRR	Bisoca	2.20	349	⇑P	Pb	20 44 47.9	-3.2
BISRR				⇓S	Sb	20 45 16.0	-2.0
KDZ	Kurdzhali	2.23	219	P	Pn	20 44 47.0	-0.2
SLVT	Silivri	2.26	162	PN	Pn	20 44 47.7	+0.1
PLD	Plovdiv	2.30	237	PN	Pb	20 44 51.2	-1.6
PLD	Plovdiv	2.30	237	P	Pb	20 44 50.6	-2.2
MLR	Muntele Rosu	2.32	336	⇓P	Pb	20 44 50.6	-2.5
CTKS	Kestanelik-??a	2.33	157	PN	Pn	20 44 48.2	-0.3
CTKS				SN	Sn	20 45 15.4	-0.8
ODBI	Odobesti	2.38	356	⇓P	Pn	20 44 50.6	+1.3
KLYT	Kilyos	2.49	148	PN	Pn	20 44 51.9	+1.1
PLOR	Plostina	2.51	350	⇑P	Pb	20 44 53.0	-3.3
VRI	Vrincioaia	2.51	351	⇑P	Pb	20 44 52.7	-3.6
VLDR	Vladesti	2.52	12	⇑P	Pn	20 44 52.4	+1.2
VARL	Varlezi	2.54	9	⇑S	Sb	20 45 24.4	-3.3
MAR4	Marsite Statio	2.60	180	PN	Pn	20 44 52.5	+0.2
VOIR		2.61	323	⇑P	Pn	20 44 53.4	+0.9
MAR3	Marsite Statio	2.64	180	PN	Pn	20 44 53.3	+0.4
ISK	Istanbul-Kandi	2.66	150	PN	Pn	20 44 54.1	+1.0
KAVV	Kandilli-Istan	2.66	150	PN	Pn	20 44 54.1	+1.0
MAR6	Marsite Statio	2.68	181	PN	Pn	20 44 53.8	+0.4
RKY	Sarkoy-Tekirda	2.70	182	PN	Pn	20 44 54.2	+0.5
ERIK	Erikli-Kesan	2.78	192	PN	Pn	20 44 55.7	+1.0
ENEZ	Enez	2.78	198	PN	Pn	20 44 55.3	+0.5
OZUR		2.92	339	⇑P	Pn	20 44 57.5	+0.8
DOPR	Dopca	2.92	333	⇑P	Pn	20 44 57.4	+0.6
KRBG	Karabiga-Canak	2.99	180	PN	Pn	20 44 58.2	+0.6
LPK	Lapseki	3.04	188	PN	Pn	20 44 59.2	+0.9
ARMT	Armutlu	3.05	157	PN	Pn	20 44 59.5	+1.0
GELI	Tayfur-Gelibol	3.05	192	PN	Pn	20 44 58.8	+0.3
VTS	Vitosha	3.08	257	⇓P	Pn	20 44 59.9	+0.9
VTS	Vitosha	3.08	257	ePn	Pn	20 45 00.2	+1.2
VTS				eSn	Sb	20 45 46.1	+2.8
VTS	Vitosha	3.08	257	P	Pn	20 45 00.4	+1.4
TESR	Tescani	3.16	352	⇑P	Pn	20 45 00.7	+0.7
MMB	Musomiste	3.20	237	P	Pn	20 45 01.2	+0.7
KCTX	Karacabey (Bur	3.22	165	PN	Pn	20 45 01.6	+0.8
LOT	Lotru	3.27	310	⇑P	Pn	20 45 02.1	+0.6
ZAPS	Zavoj	3.41	270	ePn	Pn	20 45 02.7	-0.7
ZAPS				eSn	Sb	20 45 55.6	+3.0
MDB	Medias	3.45	324	⇑P	Pn	20 45 05.0	+1.0
KKB	Krupnik	3.46	245	P	Pn	20 45 04.8	+0.6
BOSS	Bosilegrad	3.65	258	ePn	Pn	20 45 06.9	+0.1
ZAGS	Zajecar	3.71	278	ePn	Pn	20 45 06.5	-1.0
PRVS	Prvonek	3.94	259	ePn	Pn	20 45 11.1	+0.4
BARS	Barje	4.06	264	ePn	Pn	20 45 09.4	-2.9
BARS	Barje	4.06	264	ePn	Pn	20 45 13.1	+0.8
BOVS	Bovan	4.08	275	ePn	Pn	20 45 12.0	-0.6
BURAR	Bucovina Array	4.48	342	⇑P	Pn	20 45 19.9	+1.7
SVIS	Svilajnac	4.49	283	ePn	Pn	20 45 18.6	+0.3
SELS	Selova	4.52	270	ePn	Pn	20 45 18.0	-0.7
BZS	Buzias	4.64	301	ePn	Pn	20 45 19.1	-1.2
BZS	Buzias	4.64	301	ePn	Pn	20 45 19.6	-0.7
GRUS	Gruza	4.81	278	ePn	Pn	20 45 22.0	-0.6
DIVS	Divibare	5.34	280	ePn	Pn	20 45 29.1	-1.0
SUDU	Sudak	5.74	72	eP	Pn	20 45 35.2	-0.2
SUDU				Pm		20 45 35.5	
	comp=Z,3.0nm,0.3s						
SUDU				eS	Sn	20 46 38.5	-1.9
SUDU				Sm		20 46 39.4	
	comp=E,5.0nm,0.3s						
SUDU				Sm		20 46 40.2	
	comp=N,12nm,0.4s						
BBLS	Lazići	5.75	277	ePn	Pn	20 45 35.3	-0.4

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*JMA **14** 20:54:55.9±0.1, 24°.77N×122°.39E, h37^{km}±3^{km}, M2.3*
*TAP **14** 20:54:56.4, 24°.80N×122°.30E, h11^{km}, ML2.9, C*
ISC 14 20:54:54.3±1.1, **24°.80N**±0°.03×**122°.46E**±0°.02, **h13**^{km}±9^{km},
n86, σ**0^{s}84**/144, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWB1	Santiao Chiao	0.48	296	P	Pg	20 55 04.1	+0.3
	baz=307						
TWB1				S	Sg	20 55 09.2	-0.9
	baz=307						
EGS		0.48	276	P	Pg	20 55 04.1	+0.2
	baz=277						
EGS				eS	Sg	20 55 09.2	-1.1
	baz=277						
JYNG	Yonagunijimaku	0.56	128	P	Pn	20 55 07.7	-0.4
JYNG				S	Sn	20 55 15.9	-1.4
NTC	Toucheng	0.57	276	P	Pg	20 55 05.7	+0.1
	baz=277						
TWC	Suao	0.59	251	iP	Pg	20 55 05.3	-0.5
	baz=253						
TWC				eS	Sg	20 55 12.0	-1.6
	baz=253						
TIPB	Shuangxi	0.60	287	P	Pg	20 55 06.4	+0.3
	baz=291						
TIPB				eS	Sg	20 55 13.6	-0.5
	baz=291						
YOJ	Yonaguni jima	0.60	124	eP	Pn	20 55 08.9	+0.2
	baz=117						
YOJ	Yonaguni jima	0.60	124	P	Pn	20 55 08.6	-0.1
YOJ				S	Sn	20 55 17.0	-1.3
ILA	Ilan	0.65	267	eP	Pg	20 55 07.3	+0.4
	baz=265						
ILA				eS	Sb	20 55 16.4	0.0
	baz=265						
NWF	Wu-fen Shan	0.67	294	eP	Pb	20 55 08.5	+0.5
	baz=299						
NWF				S	Sb	20 55 16.8	-0.5
	baz=299						
WFSB	Wu-fen Shan	0.67	294	P	Pb	20 55 08.5	+0.5
	baz=299						
WFSB				eS	Sg	20 55 16.5	+0.2
	baz=299						
NDS	Dongshan	0.70	256	P	Pb	20 55 07.5	-0.9
	baz=245						
NDS				eS	Sg	20 55 16.8	-0.2
	baz=245						
EWUT	Wuta	0.71	241	P	Pb	20 55 08.0	-0.7
	baz=233						
EWUT				eS	Sb	20 55 16.6	-1.7
	baz=233						
TWE	Neicheng	0.72	264	P	Pb	20 55 07.9	-0.9
	baz=253						
TWE				eS	Sb	20 55 17.5	-1.2
	baz=253						
ENA	Nanau	0.75	241	P	Pb	20 55 08.7	-0.6
	baz=233						
ENA				eS	Sb	20 55 17.8	-1.7
	baz=233						
TWA	Mucha	0.82	283	eP	Pg	20 55 10.6	+0.5
	baz=274						
TWA				eS	Sg	20 55 21.2	+0.4
	baz=274						
ENTT	Nioudou	0.83	259	P	Pb	20 55 10.1	-0.5
	baz=256						
ENTT				eS	Sb	20 55 21.1	-0.6
	baz=256						
NWRT	Kuosheng	0.83	299	eS	Sb	20 55 21.2	-0.5
	baz=304						
NHDH	Xindian Distri	0.86	281	eP	Pn	20 55 11.9	-0.3
	baz=272						
NHDH				eS	Sb	20 55 22.3	-0.4
	baz=272						
NWLT	Wulai	0.87	269	eP	Pb	20 55 11.3	-0.1
	baz=268						
NWLT				eS	Sb	20 55 22.4	-0.6
	baz=268						
YM01	YM01	0.88	293	eP	Pg	20 55 11.7	+0.4
	baz=297						
YM01				eS	Sb	20 55 22.6	-0.6
	baz=297						
YM08	YM08	0.88	296	eP	Pg	20 55 11.7	+0.4
	baz=301						
YM08				eS	Sb	20 55 21.8	-1.4
	baz=301						
NDT	Datong Townshi	0.88	257	eP	Pb	20 55 11.3	-0.3
	baz=262						
NDT				eS	Sb	20 55 23.1	-0.2
	baz=262						
PCYT	Pengchaiyu	0.90	337	P	Pn	20 55 13.6	+0.9
	baz=347						
TATO	Taipei	0.90	281	eP	Pb	20 55 11.8	0.0
	baz=283						
TATO				eS	Sb	20 55 22.4	-1.3
	baz=283						
TWY	Chenhua	0.91	301	eP	Pn	20 55 13.3	+0.4
	baz=307						
TWY				S	Sg	20 55 24.1	+0.1
	baz=307						
ANP	Anpu	0.94	295	eP	Pb	20 55 12.5	0.0
	baz=298						
ANP				eS	Sb	20 55 24.3	-0.6
	baz=298						
NTST	Danshui	0.99	292	eS	Sg	20 55 26.2	-0.1
	baz=307						
TWS1	Kuangyinshan	0.99	288	eP	Pg	20 55 13.8	+0.3
	baz=290						
TWS1				eS	Sb	20 55 25.5	-0.9
	baz=290						
ETL	Fush Village	0.99	230	eP	Pb	20 55 13.8	+0.3
	baz=233						
ETL				eS	Sb	20 55 25.7	-0.8
	baz=233						
YHNB	Yeheng	0.99	263	eP	Pb	20 55 13.3	-0.2
	baz=255						
YHNB				eS	Sb	20 55 25.5	-1.1
	baz=255						
NACB	Ninganchiao	1.00	232	eP	Pb	20 55 13.3	-0.3
	baz=233						
NACB				S	Sb	20 55 25.2	-1.5
	baz=233						
NSK	Sanguang	1.01	263	P	Pb	20 55 13.3	-0.5
	baz=261						
NSK				eS	Sb	20 55 25.8	-1.2
	baz=261						
NNSB	Datong	1.05	250	eP	Pb	20 55 13.9	-0.6
	baz=245						
NNSB				eS	Sb	20 55 27.5	-0.6
	baz=245						
NNS	Nan Shan	1.05	250	P	Pb	20 55 14.4	-0.1
	baz=246						
NNS				eS	Sb	20 55 27.4	-0.9
	baz=246						
TWD	Chiawan	1.06	228	P	Pb	20 55 14.8	+0.2
	baz=230						
TWD				eS	Sb	20 55 27.5	-1.0
	baz=230						
ETLH	Xiulin Townshi	1.07	237	eP	Pb	20 55 14.6	-0.2
	baz=239						
ETLH				eS	Sb	20 55 27.8	-1.0
	baz=239						
ETM	Tongmen	1.21	227	eP	Pb	20 55 17.6	+0.4
	baz=236						
ETM				eS	Sb	20 55 32.3	-0.4
	baz=236						
FUSS	Fushou	1.24	244	eP	Pn	20 55 17.7	+0.1
	baz=239						
FUSS				eS	Sb	20 55 32.9	-0.8
	baz=239						
IRIF	Iriomote-Funau	1.25	112	P	Pn	20 55 17.7	+0.2
IRIF				eS	Sn	20 55 34.4	+0.2
NJD	Zhudong	1.25	267	eP	Pg	20 55 20.1	+1.7
	baz=281						
WHF	Hehuan Shan	1.27	239	P	Pn	20 55 18.4	+0.2
	baz=234						
WHF				eS	Sb	20 55 33.5	-1.3
	baz=234						
TWT	Tachien	1.29	245	eP	Pg	20 55 19.5	+0.3
	baz=242						
TWT				eS	Sn	20 55 35.4	-0.1
	baz=242						
TDCB	Techi	1.30	246	eP	Pb	20 55 19.2	+0.4
	baz=242						
TDCB				eS	Sn	20 55 35.1	-0.8
	baz=242						
LIOB	Emei	1.32	264	eP	Pg	20 55 20.0	+0.2
	baz=284						
NSTT	Nanjuang	1.34	263	eP	Pg	20 55 20.4	+0.4
	baz=262						
NSTT				eS	Sg	20 55 37.9	+0.4
	baz=262						
ESL	Shilin	1.36	224	eP	Pb	20 55 20.2	+0.6
	baz=198						
CHGB	Renai	1.38	238	eP	Pb	20 55 20.4	+0.2
	baz=233						
CHGB				eS	Sn	20 55 37.6	-0.3
	baz=233						
HATJ	Hateruma jima	1.43	121	S	Sb	20 55 39.6	+0.5
OWD	Renai	1.44	235	eP	Pb	20 55 21.8	+0.6
	baz=229						
EGFH	Guangfu	1.47	220	eS	Sb	20 55 40.7	+0.6
	baz=195						
WHP	Taichung City	1.47	250	eP	Pb	20 55 22.3	+0.6
	baz=247						
WHP				eS	Sb	20 55 40.1	-0.3
	baz=247						
JKRS	Kuro-shima	1.52	111	P	Pb	20 55 22.1	-0.3
JKRS				S	Sb	20 55 41.4	-0.2
NMLH	Miaoli	1.54	261	eP	Pg	20 55 24.2	+0.3
	baz=278						
WPL	Puli Township	1.58	241	eP	Pg	20 55 24.6	0.0
	baz=237						
WPL				eS	Sn	20 55 42.1	-0.3
	baz=237						
DPDB	Guoxing	1.59	242	eP	Pb	20 55 24.5	+0.8
	baz=238						
DPDB				eS	Sb	20 55 44.2	+0.4
	baz=238						
JIJ	Ishigaki jima	1.59	105	P	Pn	20 55 23.0	+0.7
JIJ				eS	Sn	20 55 43.2	+0.5
NSY	Sanyi	1.59	256	eP	Pg	20 55 25.9	+1.0
	baz=274						
WCS	Beigang Elemen	1.59	243	eP	Pb	20 55 24.4	+0.8
	baz=239						
WCS				eS	Sb	20 55 43.9	+0.1
	baz=239						
TWQ1	Liyutan	1.60	254	eP	Pg	20 55 26.3	+1.2
	baz=252						
TWQ1				eS	Sg	20 55 45.5	-0.4
	baz=252						
HGSD	Ruisui	1.61	216	eP	Pb	20 55 24.4	+0.4
	baz=194						
HGSD				eS	Sb	20 55 44.7	+0.5
	baz=194						
EHY	Hungye	1.66	219	eP	Pb	20 55 24.8	+0.1
	baz=212						
SMLT	Sun Moon Lake	1.69	238	eP	Pb	20 55 26.6	+1.2
	baz=234						
SMLT				eS	Sb	20 55 47.8	+1.2
	baz=234						
JISG	Ishigakijimahi	1.70	97	P	Pb	20 55 25.2	-0.2
SSLB	Suanglung	1.70	234	eP	Pb	20 55 26.2	+0.6
	baz=239						
SSLB				eS	Sb	20 55 47.9	+0.9
	baz=239						
TYC	Yuchr	1.71	239	eP	Pb	20 55 26.8	+1.1
	baz=235						
YULB	Yu-li	1.76	217	eP	Pn	20 55 25.5	+0.9
	baz=211						
YULB				eS	Sn	20 55 46.1	-0.7
	baz=211						
WJS	Zhushan	1.86	239	eP	Pg	20 55 30.3	+0.4
	baz=236						
WJS				eS	Sg	20 55 54.0	0.0
	baz=236						
FULB	Fuli	1.92	214	eP	Pn	20 55 28.2	+1.4
	baz=191						
FULB				eS	Sb	20 55 52.5	-0.6
	baz=191						
CHKT	Chengkung	1.97	211	eS	Sn	20 55 50.8	-1.1
	baz=189						
ALS	Alishan	1.98	230	eP	Pb	20 55 31.5	+1.0
	baz=207						
CHN5	Tsauling	2.02	234	eP	Pb	20 55 31.9	+0.9
	baz=231						
CHN5				eS	Sg	20 55 58.8	-0.5
	baz=231						
WDLH	Douliu	2.07	238	eP	Pb	20 55 33.0	+1.1
	baz=234						
ELDTW	Lidau	2.08	220	eS	Sn	20 55 55.4	+0.6
	baz=199						
EDH	Donghe	2.10	210	eS	Sn	20 55 54.0	-1.3
	baz=190						
CHN4	Tsaushan	2.23	230	eP	Pb	20 55 33.3	-1.3
	baz=208						
CHN4				eS	Sb	20 56 02.9	+0.7

	baz=208						
STYH	Taoyuan	2.24	224	*e*S	Sb	20 56 01.8	-0.4
	baz=202						
TPUB	Ta-pu	2.24	229	*e*P	Pb	20 55 33.3	-1.4
	baz=206						
TPUB				*e*S	Sb	20 56 03.0	+0.6
	baz=206						
WTP	Ta-pu	2.29	228	*e*S	Sb	20 56 04.8	+1.0
	baz=206						
TWK	Hsinying	2.36	230	*e*P	Pb	20 55 36.3	-0.5
	baz=208						
TWK				*e*S	Sb	20 56 06.4	+0.5
	baz=208						
CHN1	Nanshi	2.39	228	*e*S	Sb	20 56 05.7	-0.9
	baz=224						
SGST	Jiashian	2.42	226	*e*S	Sb	20 56 06.3	-1.4
	baz=203						
SLGT	Liugui	2.45	223	*e*S	Sb	20 56 08.0	-0.3
	baz=201						
SSD	Sandimen	2.64	220	*e*P	Pb	20 55 40.1	-1.5
	baz=199						
MASBT	Mashibuluo	2.75	218	*e*P	Pn	20 55 40.6	+2.4
	baz=198						
MASBT				*e*S	Sb	20 56 14.8	-2.2
	baz=198						
EAST	Anshuo	2.82	212	*e*P	Pn	20 55 42.1	+2.9
	baz=194						

MAN 14 20:56:45.3, 13°.77N×120°.62E, h92km, mb3.9, ML2.7, MS2.2, 2C-1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PGP	Puerto Galera	0.42	130	⇑*e*P	Pn	20 57 01.1	+1.4
PGP				*i* S	Sn	20 57 12.4	+2.0
TGY	Tagaytay City	0.45	43	⇑*e*P	Pn	20 57 02.2	+2.3
LQP	Lukban	0.95	69	⇓*i*P	Pn	20 57 06.8	+2.0

IDC 14 20:58:22.9±2.9, 5°.88N×93°.10E, h0km, mb3.1/3, mb1 3.4/5, mb1mx3.2/52, mbtmp3.2/5, ML3.4/2, Error ellipse: s-maj=90.7km s-min=28.3km az=61.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	Prapat	6.56	117	Pn	Pn	21 00 03.4	+2.5
	0.5nm,0.3s,baz=252,slow=20,SNR=2.4						
CMAR	Chiang Mai Arr	13.74	24	Pn	Pn	21 01 38.8	-0.5
	0.1nm,0.3s,baz=226,slow=16,SNR=5.2						
MKAR	Makanchi Array	41.82	349	P	P	21 06 14.7	+0.2
	0.2nm,0.7s,baz=170,slow=7.4,SNR=2.7						
WRA	Warramunga Arr	47.99	123	P	P	21 07 03.8	-0.2
	0.1nm,0.4s,baz=307,slow=8.7,SNR=1.5						
ASAR	Alice Springs	49.47	128	P	P	21 07 14.6	-0.9
	0.2nm,0.7s,baz=295,slow=8.2,SNR=1.9						

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*IDC **14** 20:59:04.8±1.7, 31°.68N×128°.81E, h0km, mb3.3/3, mb1 3.7/4, mb1mx3.3/55, mbtmp3.4/4, ML3.8/1, Error ellipse: s-maj=50.4km s-min=16.9km az=136.0*

*JMA **14** 20:59:05.8±0.3, 31°.32N×128°.76E, h4km±3km, M3.3*

ISC 14 20:59:07.2±1.1, 31°.42N±0°.10×128°.96E±0°.08, h10km, n7, σ2s.19/8, mb3.5/3, Northwest of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	Shimokoshiki	0.69	68	P	Pb	20 59 22.9	+1.5
JSJ				*e*S	Sn	20 59 34.7	+0.8
JFU	Fukue jima 2	1.25	352	P	Pn	20 59 30.9	+0.2
JFU				*e*S	Sn	20 59 48.2	+0.6
JNU	Nakatsue	2.35	43	Pn	Pn	20 59 42.6	-3.3
	41nm,0.3s,baz=266,slow=0.0,SNR=1.8						
JNU				Lg	Lg	21 00 17.1	
	22nm,0.3s,baz=133,slow=0.2,SNR=1.4						
KSRS	Korea Array	6.08	352	Lg	Lg	21 02 13.0	
	0.2nm,0.3s,baz=171,slow=28,SNR=2.4						
CMAR	Chiang Mai Arr	30.02	252	P	P	21 05 14.5	-1.9
	0.5nm,0.4s,baz=56,slow=9.0,SNR=2.2						
WRA	Warramunga Arr	51.33	174	P	P	21 08 11.9	+0.1
	0.1nm,0.6s,baz=354,slow=8.1,SNR=1.1						
ASAR	Alice Springs	54.98	174	P	P	21 08 41.2	+2.5
	0.4nm,0.8s,baz=1.0,slow=15,SNR=4.7						

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*IDC **14** 20:59:51.9±1.6, 44°.00N×105°.69W, h0km, mb1 3.6/4, mb1mx3.3/53, mbtmp3.3/4, ML3.3/3, Error ellipse: s-maj=51.4km s-min=8.8km az=148.0*

*NEIC **14** 20:59:51.8±1.1, 43°.85N±0°.06×105°.29W±0°.04, h0km±1km, ML3.0/56, Error ellipse: s-maj=9.9km s-min=4.7km az=167.0*

ISC 14 20:59:51.0±1.0, 43°.84N±0°.06×105°.30W±0°.06, h0km, n45, σ0s.99/46, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	0.95	72	Pg	Pb	21 00 09.8	-0.7
K22A	Casper	1.49	217		Pn	21 00 17.5	-1.7
K22A				IAML		21 00 40.7	
	comp=E,259nm,0.3s						
RWWY	Rawlins	2.57	214		Pn	21 00 34.9	+0.8
LAO	LASA Array	2.92	347		Pn	21 00 38.5	-0.3
RLMT	Red Lodge	3.12	296		Pn	21 00 39.9	-1.8
RLMT				IAML		21 01 35.9	
	comp=E,56nm,0.3s						
RLMT				IAML		21 01 38.3	
	comp=E,49nm,0.6s						
BW06	Boulder Array	3.29	252		Pn	21 00 44.3	+0.2
BW06				IAML		21 01 35.4	
	comp=E,28nm,0.3s						
BW06				IAML		21 01 36.6	
	comp=E,26nm,0.3s						
PD31	Pinedale Array	3.29	252		Pn	21 00 43.5	-0.6
PDAR	Pinedale Array	3.29	252	Pn	Pn	21 00 44.2	+0.2
	comp=E,3.2nm,0.3s,baz=73,slow=16,SNR=67						
PDAR				Sn	Sn	21 01 22.3	-1.7
	comp=E,0.5nm,0.3s,baz=77,slow=17,SNR=1.8						
PDAR				Lg	Lg	21 01 28.2	
	comp=E,14nm,0.3s,baz=71,slow=31,SNR=14						
YMP	Mirror Lake Pl	3.60	286		Pn	21 00 49.2	+0.8
GCMT	Greycliff	3.67	304	Pn	Pn	21 00 50.2	+1.0
OGNE	Ogallala	3.77	139		Pn	21 00 51.0	+0.5
H17A	Grant Village	3.84	280		Pn	21 00 52.7	+1.1
H17A				IAML		21 01 44.5	
	comp=E,16nm,4.0s						
H17A				IAML		21 01 56.0	
	comp=N,16nm,1.5s						
LOHW	Long Hollow	3.85	268		Pn	21 00 52.6	+0.8
FLWY	Flagg Ranch	3.91	275		Pn	21 00 53.2	+0.7
FLWY				IAML		21 02 01.2	
	comp=N,24nm,2.2s						
FLWY				IAML		21 02 50.2	
	comp=N,24nm,4.6s						
MOOW	Moose Ponds	3.94	271		Pn	21 00 53.5	+0.5
ISCO	Idaho Springs	4.04	183	Pn	Pn	21 00 54.9	+0.4
REDW	Red Top Meadow	4.06	265		Pn	21 00 55.2	+0.5
REDW				IAML		21 02 13.5	
	comp=N,27nm,1.4s						
REDW				IAML		21 02 13.6	
	comp=N,21nm,1.0s						
YHH	Holmes Hill	4.10	285		Pn	21 00 55.2	0.0
TPAW	Teton Pass	4.12	267		Pn	21 00 56.1	+0.7
TPAW				IAML		21 02 05.1	
	comp=N,14nm,4.6s						
TPAW				IAML		21 02 21.9	
	comp=N,23nm,0.9s						
FXWY	Fox Creek	4.16	269		Pn	21 00 56.6	+0.7
E28A	Huff	4.25	48		Pn	21 00 58.6	+1.6
O20A	White River Ci	4.30	212		Pn	21 00 57.5	-0.4
O20A				IAML		21 02 12.5	
	comp=E,22nm,0.8s						
O20A				IAML		21 02 34.1	
	comp=N,21nm,2.2s						
YHL	Hebgen Lake	4.34	285		Pn	21 00 58.5	0.0
YHL				IAML		21 02 03.8	
	comp=E,20nm,4.6s						
YHL				IAML		21 02 41.7	
	comp=N,18nm,2.7s						
AHID	Auburn Hatcher	4.37	258		Pn	21 00 59.5	+0.7
AHID				IAML		21 02 31.3	
	comp=N,16nm,1.2s						
ECR	Eagle Creek	4.49	262		Pn	21 01 01.0	+0.5
RDMU	Red Mountain	4.55	226		Pn	21 01 02.9	+1.4
RDMU				IAML		21 02 15.9	
	comp=E,17nm,3.4s						
RDMU				IAML		21 02 27.7	
	comp=N,14nm,1.7s						
DGMT	Dagmar	4.69	9		Pn	21 01 04.7	+1.6
SMCO	Snowmass	4.83	196		Pn	21 01 06.2	+0.9
SMCO				IAML		21 02 53.0	
	comp=N,14nm,4.7s						
BOZ	Bozeman (W)	4.84	293		Pn	21 01 05.8	+0.5
BOZ				IAML		21 02 30.6	
	comp=N,11nm,4.3s						
BOZ				IAML		21 03 38.1	
	comp=N,15nm,4.9s						
HWUT	Hardware Ranch	5.13	246		Pn	21 01 10.2	+0.9
HWUT				IAML		21 02 55.1	
	comp=N,13nm,4.5s						
EGMT	Eagleton	5.21	325		Pn	21 01 10.3	0.0
LRM	Limekiln Ridge	5.46	294	Pn	Pn	21 01 15.2	+1.3
P18A	Preston Nutter	5.61	223		Pn	21 01 16.2	+0.3
SPUT	South Promonto	5.86	247		Pn	21 01 20.1	+0.9
P17A	Butcher Ranch,	5.97	225		Pn	21 01 22.0	+1.2
SDCO	Great Sand Dun	6.09	182	Pn	Pn	21 01 24.7	+2.1
SRU	San Rafael Swe	6.14	221		Pn	21 01 23.5	+0.3
ECSD	EROS Data Cent	6.29	88	Pn	Pn	21 01 25.6	+0.6
DUG	Dugway, Tooele	6.68	240	Pn	Pn	21 01 30.8	+0.3
F33A	5 Mile Ranch,	6.71	70	Pn	Pn	21 01 30.7	-0.1
T25A	Trinidad	6.73	174	Pn	Pn	21 01 30.8	-0.5
JTMT	Jette	7.39	305	Pn	Pn	21 01 41.9	+1.6
ELK	Elko	7.99	251	Pn	Pn	21 01 50.2	+1.5
	comp=N,0.4nm,0.3s,baz=68,slow=11,SNR=5.8						
ULM	Lac du Bonnet	9.08	42	Pn	Pn	21 02 03.4	+0.2
	comp=N,0.8nm,0.3s,baz=236,slow=11,SNR=5.6						
ULM				Pg		21 02 35.4	
	comp=N,0.8nm,0.3s,baz=221,slow=15,SNR=2.4						
ULM				Lg	Lg	21 04 31.2	
	comp=N,0.3nm,0.3s,baz=255,slow=19,SNR=1.9						
NVAR	Mina Array Bea	11.20	246	Pn	Pn	21 02 33.9	+1.4
	baz=64,slow=14,SNR=1.5						

IDC 14 21:01:39.9±7.1, 16°.09S×173°.44W, h0km, mb3.8/2, mb1 3.9/3, mb1mx3.6/45, mbtmp3.7/3, ML2.9/1, Error ellipse: s-maj=305.9km s-min=24.4km az=138.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	2.70	37	Pn	Pn	21 02 22.9	-1.7
	1.9nm,0.3s,baz=197,slow=21,SNR=1.7						
AFI				Sn	Sn	21 02 58.8	+0.7
	12nm,0.3s,baz=157,slow=16,SNR=7.6						
WRA	Warramunga Arr	49.66	257	P	P	21 10 33.1	-0.7
	0.5nm,0.5s,baz=96,slow=6.7,SNR=7.4						
ASAR	Alice Springs	49.87	252	P	P	21 10 34.9	-0.5
	2.1nm,0.7s,baz=87,slow=8.7,SNR=34						
BRTR	Keskin Array B	146.67	320	PKPbc	PKPab	21 21 25.7	+0.5
	0.5nm,0.6s,baz=50,slow=4.5,SNR=1.7						

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*NEIC **14** 21:15:19.2±1.6, 25°.0S±0°.2×179°.7E±0°.1, h495km±21km, mb4.1/11, Error ellipse: s-maj=28.5km s-min=13.4km az=202.0*

*IDC **14** 21:15:20.2±1.6, 24°.95S×179°.49E, h500km±20km, mb3.1/6, mb1 3.3/9, mb1mx3.2/30, mbtmp4.0/9, Error ellipse: s-maj=24.1km s-min=19.9km az=41.0*

ISC 14 21:15:20.4±0.8, 25°.01S±0°.09×179°.5E±0°.1, h507km, n28, σ0s.90/29, mb3.8/13, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	4.80	152	P	P	21 16 46.5	+0.7
	48nm,0.3s,baz=74,slow=23,SNR=1.8						
MSVF	Nonsavu	7.37	349	P	P	21 17 09.6	-1.1
	1.6nm,0.3s,baz=152,slow=12,SNR=4.6						
MSVF	Nonsavu	7.37	349	P	P	21 17 09.0	-1.8
MARNC	Mare, Loyalty	11.14	286	P	P	21 17 50.8	+0.9
DZM	Mont Dzumac	12.36	281	P	P	21 18 02.9	+0.1
	0.2nm,0.3s,baz=93,slow=17,SNR=2.6						
DZM	Mont Dzumac	12.36	281	P	P	21 18 02.5	-0.4
URZ	Urewera	13.37	188	P	P	21 18 12.4	-0.8
	2.6nm,0.3s,baz=308,slow=20,SNR=17						
URZ				S	S	21 20 34.0	-1.6
	0.4nm,0.3s,baz=304,slow=23,SNR=2.4						
URZ	Urewera	13.37	188	P	P	21 18 12.1	-1.1
BKZ	Black Stump Fm	14.35	190	P	P	21 18 22.6	-0.9
RPZ	Rata Peaks	19.91	198	P	P	21 19 17.0	-0.6
EIDS	Eidsvold	25.73	263	P	P	21 20 11.4	+1.4
EIDS				IAmb	IAmb	21 20 29.4	
	comp=Z,19nm,1.5s						
CTA	Charters Tower	31.07	272	P	P	21 20 57.0	+0.3
	baz=90,slow=20						
CTAO	Charters Tower	31.07	272	P	P	21 20 57.5	+0.8
CTAO				IAmb	IAmb	21 20 58.2	
	comp=Z,6.4nm,0.6s						
COEN	Coen	35.89	281	P	P	21 21 37.6	+0.1
COEN				IAmb	IAmb	21 22 01.4	
	comp=Z,10.0nm,1.4s						
BBOO	Buckleboo	38.63	248	P	P	21 21 59.4	-0.4
AS31	Alice Springs	41.45	262	P	P	21 22 22.1	-0.5
AS31				IAmb	IAmb	21 22 25.0	
	comp=Z,2.7nm,1.5s						
ASAR	Alice Springs	41.45	262	P	P	21 22 22.6	0.0
	comp=Z,1.5nm,0.7s,baz=86,slow=8.7,SNR=18						
ASAR	Alice Springs	41.45	262	P	P	21 22 23.1	+0.5
WB0	Warramunga Arr	41.92	268	P	P	21 22 25.6	-0.7
WB0				IAmb	IAmb	21 22 27.2	
	comp=Z,15nm,1.4s						
WRA	Warramunga Arr	41.92	268	P	P	21 22 25.6	-0.8
	comp=Z,1.4nm,0.5s,baz=104,slow=7.8,SNR=19						
WRA	Warramunga Arr	41.92	268	P	P	21 22 25.7	-0.7
FITZ	Fitzroy Crossi	50.33	267	P	P	21 23 30.6	+0.2
	comp=Z,2.4nm,0.7s,baz=112,slow=7.6,SNR=5.1						
VNDA	Vanda	53.25	185	P	P	21 23 51.8	+1.3
	comp=Z,0.6nm,0.7s,baz=4.7,slow=4.8,SNR=2.3						
VNDA	Vanda	53.25	185	P	P	21 23 51.6	+1.1
CASY	Casey	58.93	206	P	P	21 24 29.6	-0.5
CASY				IAmb	IAmb	21 24 54.8	
	comp=Z,6.3nm,1.1s						
QSPA	South Pole Qui	65.08	180	P	P	21 25 10.9	+0.7
QSPA				IAmb	IAmb	21 25 11.6	
	comp=Z,2.7nm,0.7s						
CMAR	Chiang Mai Arr	89.51	291	P	P	21 27 24.9	+1.2
	comp=Z,0.4nm,0.7s,baz=116,slow=4.1,SNR=2.5						
TXAR	Lajitas Array	91.37	58	P	P	21 27 32.0	-0.1
	comp=Z,0.4nm,0.7s,baz=208,slow=5.1,SNR=5.1						

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*FUNV **14** 21:17:16.6, 8°.42N×71°.40W, h1km, MW3.0*

ISC 14 21:17:16.7±1.2, 8°.44N±0°.04×71°.40W±0°.03, h8km±10km, n18, σ1s.04/31, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	Socops	0.56	106	*e*P	Pg	21 17 27.2	-0.4
SOCV				*e*S	Sg	21 17 35.8	+0.7
SDV	Santo Domingo	0.88	60	*e*P	Pg	21 17 34.1	+0.4
SDV				*e*S	Sg	21 17 45.8	+0.6
SDV				*i*		21 17 47.7	
	comp=Z,33nm,0.2s						
CAPV	Capacho	1.07	238	*e*P	Pg	21 17 36.7	-0.6
CAPV				*e*S	Sb	21 17 51.8	0.0
PAMC	Pamplona, Colo	1.69	230	*e*P	Pb	21 17 48.3	0.0
PAMC				*e*S	Sg	21 18 11.2	+0.1
PAMC				*i*		21 18 13.6	
	comp=Z,99nm,0.3s						
OCAC	Ocana	1.91	264	*e*P	Pn	21 17 49.1	-0.6
OCAC				*e*S	Sn	21 18 14.2	+0.3
TAMC	Tame, Arauca	2.03	191	*e*P	Pg	21 17 54.9	-0.8
TAMC				*e*S	Sg	21 18 22.9	+0.9
TAMC				*i*		21 18 27.7	
	comp=Z,44nm,0.3s						
ELOV	Elorza	2.38	127	*e*P	Pn	21 17 56.0	0.0
ELOV				*e*S	Sn	21 18 25.3	-0.1
BARC	Barichara	2.55	224	*e*P	Pb	21 18 03.1	+0.3
BARC				*e*S	Sg	21 18 38.2	-0.5
BARC				*i*		21 18 39.5	
	comp=Z,49nm,0.4s						
SMLC	San Martn de	2.66	278	*e*P	Pn	21 17 58.6	-1.4
SMLC				*e*S	Sn	21 18 35.4	+3.0
SIQV	Siquisique	2.70	36	*e*P	Pn	21 18 01.0	+0.5
SIQV				*e*S	Sn	21 18 33.1	-0.3
RUSC	La Rusia	3.03	213	*e*P	Pn	21 18 06.6	+1.2
RUSC				*e*S	Sn	21 18 42.6	+0.4
BAUV	El Baul	3.36	81	*e*P	Pn	21 18 10.0	+0.5
BAUV				*e*S	Sn	21 18 47.7	-1.9
ZARC	Zaragoza, Cauc	3.55	255	*e*P	Pn	21 18 11.5	-0.6
ZARC				*e*S	Sb	21 19 01.2	-1.9
BENV	Beln	4.05	68	*e*P	Pn	21 18 19.2	+0.1
CHIC	Chingaza	4.44	212	*e*P	Pn	21 18 26.1	+1.3
CHIC				*e*S	Sn	21 19 17.5	+0.7
CHIC				*i*		21 19 22.0	
	comp=Z,3.6nm,0.3s						
PAYV	Puerto Ayacuch	4.78	129	*e*P	Pn	21 18 28.2	-0.8
CACV	CAICARA DEL OR	4.89	100	*e*P	Pn	21 18 36.6	+6.0
GUY2C	Guyana, Caldas	5.07	231	*e*P	Pn	21 18 35.0	+1.5

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*DJA **14** 21:19:10.7±0.4, 4°S±4°×13°6E±°, h10km, M4.2/7, mb4.4/6, mB5.0/3, MLv4.2/7, Mw(mB)4.3/3*

*IDC **14** 21:19:12.3±5.6, 3°.55S×135°.59E, h31km±45km, mb3.6/7, mb1 3.9/12, mb1mx3.8/30, mbtmp3.9/12, ML3.4/4, Error ellipse: s-maj=23.0km s-min=19.7km az=49.0*

*NEIC **14** 21:19:13.4±2.0, 3°.54S±0°.09×135°.60E±0°.06, h32km±4km, mb4.0/13, Error ellipse: s-maj=12.5km s-min=8.1km az=176.0*

ISC 14 21:19:11.1±0.5, 3°.65S±0°.06×135°.57E±0°.05, h22km, n56, σ1s.88/62, mb4.1/15, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRPI	Serui, Papua	1.89	21	P	Pn	21 19 40.9	-1.2
BAKI	Biak	2.50	12	P	Pn	21 19 49.1	-1.3
FAKI	Fak Fak	3.39	282	P	Pn	21 20 03.9	+1.2
FAKI				S	Sn	21 20 41.6	-0.7
FAKI	Fak Fak	3.39	282		Pn	21 20 04.0	+1.2
FAKI				Sn	Sn	21 20 43.9	+1.6
FAKI	Fak Fak	3.39	282	P	Pn	21 20 03.9	+1.2
SMPI	Sarmi	3.54	62	P	Pn	21 20 07.3	+2.5
SIJI	Sorong	5.11	303	Pn	Pn	21 20 25.2	-1.1
	baz=68,slow=18						
SIJI				Sn	Sn	21 21 20.3	-4.4
	13nm,0.3s,baz=107,slow=20,SNR=8.6						
SWI	Sorong	5.12	303	P	Pn	21 20 27.4	+0.9
	0.5nm1μm44nm,0.6s						
JAY	Jayapura	5.25	78	Pn	Pn	21 20 28.6	+0.2
	0.8nm,0.3s,baz=184,slow=18,SNR=4.3						
JAY				Sn	Sn	21 21 27.4	-0.9
	0.8nm,0.3s,baz=167,slow=19,SNR=1.3						
KDU	Kakadu	9.49	199	P	Pn	21 21 30.2	+3.7
	22nm,1.4s						
SANI	Sanana	9.70	279	P	Pn	21 21 30.5	+1.1
	16nm,0.8s						
SANI	Sanana	9.70	279	P	Pn	21 21 31.4	+2.0
DRS	Darwin Rock St	9.88	208	P	Pn	21 21 35.2	+3.4
	8.8nm,0.9s						
MTN	Manton Dam	10.13	205	Pn	Pn	21 21 37.7	+2.3
COEN	Coen	12.70	144		Pn	21 22 10.9	+0.4
SOEI	Soe	12.76	241	P	Pn	21 22 14.4	+3.0
SOEI	Soe	12.76	241		Pn	21 22 13.8	+2.4
PMG	Port Moresby	12.86	117	Pn	Pn	21 22 13.3	+0.7
	1.5nm,0.3s,baz=291,slow=16,SNR=2.1						
BATI	Baumata	13.49	241	Pn	Pn	21 22 23.6	+2.2
	10nm,0.3s,baz=22,slow=4.0,SNR=3.6						
KNRA	Kununurra	13.70	209	Pn	Pn	21 22 24.1	-0.1
TOLI2	Tolitoli	15.52	287		P	21 22 54.0	+1.1
TOLI2				IAmb	IAmb	21 22 55.2	
	comp=Z,7.5nm,0.6s						
WB0	Warramunga Arr	16.06	184		Pn	21 22 55.6	-0.1
WB0				IAmb	IAmb	21 23 11.8	
	comp=Z,8.2nm,0.8s						
WRA	Warramunga Arr	16.24	184	Pn	Pn	21 22 58.8	+0.7
	comp=Z,0.6nm,0.3s,baz=6.7,slow=12,SNR=12						
WRA				Sn	Sn	21 25 49.0	-8.8
	comp=Z,0.3nm,0.3s,baz=3.5,slow=22,SNR=5.7						
WRA	Warramunga Arr	16.24	184		Pn	21 22 58.7	+0.7
FITZ	Fitzroy Crossi	17.34	213	P	P	21 23 12.9	-0.2
	comp=Z,0.1nm,0.3s,baz=348,slow=16,SNR=2.1						
FITZ				S	Sn	21 26 12.0	-12
	comp=Z,0.1nm,0.3s,baz=346,slow=17,SNR=1.8						
FITZ	Fitzroy Crossi	17.34	213	P	P	21 23 13.7	+0.6
CTAO	Charters Tower	19.38	148	P	Pn	21 23 36.9	0.0
CTAO				IAmb	IAmb	21 24 00.0	
	comp=Z,10.0nm,1.2s						
AS31	Alice Springs	19.97	184	P	Pn	21 23 44.2	+0.4
AS31				IAmb	IAmb	21 23 45.9	
	comp=Z,3.4nm,0.6s						
ASAR	Alice Springs	19.97	184	P	Pn	21 23 44.3	+0.5
	comp=Z,7.1nm,0.7s,baz=8.6,slow=11,SNR=76						
ASAR				S	S	21 27 21.4	-4.4
	comp=Z,0.7nm,0.8s,baz=12,slow=24,SNR=4.5						
ASAR	Alice Springs	19.97	184	P	Pn	21 23 44.5	+0.7
PSA00	Pilbara Seismi	23.47	219	P	P	21 24 21.3	+2.0
PSA00	Pilbara Seismi	23.47	219	P	P	21 24 21.4	+2.1
PSA00				IAmb	IAmb	21 24 31.8	
	comp=Z,7.2nm,1.4s						
STKA	Stephens Creek	28.65	169	P	P	21 25 06.3	+0.1
	comp=Z,1.5nm,0.7s,baz=348,slow=12,SNR=3.1						
STKA	Stephens Creek	28.65	169	P	P	21 25 06.6	+0.3
CMAR	Chiang Mai Arr	42.24	303	P	P	21 27 02.0	-1.0
	comp=Z,0.9nm,0.8s,baz=131,slow=6.6,SNR=8.5						
CMAR	Chiang Mai Arr	42.24	303	P	P	21 27 02.7	-0.3
SHL	Shillong	51.34	307	P	P	21 28 13.8	-0.6
TAPN	Taplejung	55.48	307	*e*P	P	21 28 45.3	+0.3
ODAN	Odare	55.52	306	*e*P	P	21 28 45.4	+0.2
	comp=Z,11nm,0.7s						
RAMN	Ramite	56.20	306	*e*P	P	21 28 50.7	+0.6
	comp=Z,7.2nm,0.5s						
JIRN	Jiri	56.83	306	*e*P	P	21 28 55.0	+0.3
	comp=Z,8.1nm,0.8s						
SONM	Songino Array	57.29	337	P	P	21 28 56.9	-0.4
	comp=Z,0.2nm,0.6s,baz=157,slow=4.8,SNR=1.9						
KKN	Kakani	57.61	306	*e*P	P	21 29 00.4	+0.3
DMN	Daman	57.68	306	*e*P	P	21 29 01.0	+0.4
GKN	Gorkha	58.22	306	*e*P	P	21 29 04.7	+0.4
KOLN	Koldanda	58.97	305	*e*P	P	21 29 10.3	+0.8
	comp=Z,11nm,0.8s						
DANN	Dangsing	59.07	306	*e*P	P	21 29 10.0	-0.3
	comp=Z,12nm,1.0s						
PYUN	Piuthan	59.59	306	*e*P	P	21 29 14.1	+0.3
	comp=Z,37nm,0.9s						
MK31	Makanchi Array	68.65	324	P	P	21 30 12.8	0.0
MK31				IAmb	IAmb	21 30 13.7	
	comp=Z,2.3nm,1.4s						
MKAR	Makanchi Array	68.65	324	P	P	21 30 12.7	-0.1
	comp=Z,0.9nm,0.5s,baz=114,slow=8.2,SNR=17						
MKAR	Makanchi Array	68.65	324	P	P	21 30 12.9	+0.2
MAKZ	Makanchi	68.84	324	P	P	21 30 13.7	-0.3
MAKZ				IAmb	IAmb	21 30 14.5	
	comp=Z,1.4nm,0.8s						
ZALV	Zalesovo Beam	71.20	331	P	P	21 30 27.7	-0.5
	comp=Z,0.4nm,0.4s,baz=92,slow=4.6,SNR=2.1						
ABKAR	Akbulak array	83.42	320	P	P	21 31 37.6	+0.8
I23K	Minto, Yukon-K	87.06	24	P	P	21 31 54.7	0.0
ILAR	Eielson Array	87.98	25	P	P	21 31 57.9	-1.3
	comp=Z,0.2nm,0.5s,baz=276,slow=5.1,SNR=1.5						

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*IDC **14** 21:20:34.5±2.3, 1°.37S×14°.95W, h0km, mb4.1/5, mb1 4.2/7, mb1mx3.8/41, mbtmp4.1/7, ML4.2/2, MS3.1/1, Ms1 3.1/1, ms1mx2.9/35, Error ellipse: s-maj=60.1km s-min=32.4km az=91.0*

*NEIC **14** 21:20:36.5±1.5, 1°.2S±0°.1×14°.9W±0°.1, h10km±1km, mb4.2/8, Error ellipse: s-maj=23.8km s-min=14.3km az=307.0*

ISC 14 21:20:36.6±0.8, 1°.3S±0°.1×14°.8W±0°.1, h11km, n19, σ1s.21/18, mb4.3/8, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASCN	Ascension	6.61	176	Pn	Pn	21 22 14.1	+0.3
DBIC	Dimbokro	12.67	51	Pn	Pn	21 23 37.8	+1.0
	1.1nm,0.3s,baz=250,slow=13,SNR=15						
DBIC				Sn	Sn	21 25 56.4	-1.6
	0.2nm,0.3s,baz=180,slow=20,SNR=1.5						
DBIC				LR	LR	21 27 10.9	
	comp=Z,86nm,18.2s,baz=230,slow=31						
DBIC	Dimbokro	12.67	51		Pn	21 23 36.9	0.0
DBIC				Sn	Sn	21 25 55.5	-2.6
KOWA	Kowa	18.96	34	P	P	21 24 59.3	+1.2
	0.8nm,0.3s,baz=212,slow=12,SNR=16						
KOWA				S	Sn	21 28 21.6	-10
	0.2nm,0.3s,baz=240,slow=14,SNR=1.8						
KOWA	Kowa	18.96	34		P	21 24 57.9	-0.1
TORD	Torodi Ar. Bea	21.74	48	P	P	21 25 30.3	+2.0
	5.5nm,0.8s,baz=234,slow=11,SNR=20						
TORD	Torodi Ar. Bea	21.74	48	P	P	21 25 27.9	-0.4
BDFB	Brasilia	35.75	245	P	P	21 27 34.3	-1.7
BDFB				IAmb	IAmb	21 28 02.4	

	comp=Z,6.3nm,1.1s						
ITAB	Concordia	44.13	231	P	P	21 28 45.3	-0.2
LSZ	Lusaka	44.60	111	P	P	21 28 49.1	-0.4
LSZ				IAmb	IAmb	21 28 57.1	
	comp=Z,2.8nm,0.9s						
BOAV	Boa Vista	45.89	275	P	P	21 28 55.7	-3.9
BOAV				IAmb	IAmb	21 29 02.4	
	comp=Z,5.5nm,1.2s						
BOSA	Boshof	46.86	129	P	P	21 29 07.5	+0.3
	comp=Z,7.3nm,1.1s,baz=300,slow=11,SNR=4.6						
BOSA	Boshof	46.86	129	P	P	21 29 07.7	+0.5
GERES	GERESS Array B	55.69	22	P	P	21 30 14.2	+1.2
	comp=Z,0.4nm,0.5s,baz=200,slow=7.8,SNR=2.2						
AKASG	Malin Array Be	63.89	29	P	P	21 31 09.1	-0.3
	comp=Z,0.3nm,0.3s,baz=234,slow=5.6,SNR=2.3						
AKASG	Malin Array Be	63.89	29	IAmb	IAmb	21 31 29.6	
	comp=Z,1.6nm,1.4s						
FINES	FINESS Array B	69.89	20	P	P	21 31 48.3	+0.9
	comp=Z,6.8nm,1.1s,baz=200,slow=7.4,SNR=2.7						
ASAR	Alice Springs	140.72	131	PKP	PKPdf	21 40 07.3	-0.2
	comp=Z,0.1nm,0.6s,baz=253,slow=2.8,SNR=4.3						
WRA	Warramunga Arr	143.09	126	PKP	PKPbc	21 40 10.4	+1.9
	comp=Z,0.3nm,0.6s,baz=241,slow=2.5,SNR=1.6						

*IDC **14** 21:28:11.8±3.1, 35°.29N×28°.77E, h0^{km}, mb3.5/4, mb1 3.5/6, mb1mx3.3/44, mbtmp3.4/6, ML3.4/2, Error ellipse: s-maj=64.3km s-min=26.3km az=177.0*

*NIC **14** 21:28:17.6±0.0, 35°.43N×28°.83E, h34^{km}±22^{km}, Ml3.6/4*

*THE **14** 21:28:17.4, 35°.48N×28°.79E, h9^{km}±3^{km}, ML2.6/2, Error ellipse: s-maj=3.8km s-min=1.0km az=167.0*

*DDA **14** 21:28:17.1, 35°.59N×28°.68E, h38^{km}±1^{km}, ML2.9*

*ISK **14** 21:28:18.5, 35°.67N×28°.76E, h11^{km}, ML2.8/18*

ISC 14 21:28:16.5±1.2, **35°.48N**±0°.04×**28°.78E**±0°.02, **h28**^{km}±10^{km}, **n87**, σ**1^{s}.49**/118, **mb3.3**/4, **3C-1D, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARG	Arkhangelos	0.91	324	P	Pb	21 28 34.9	+1.3
ARG				S	Sn	21 28 47.8	+2.2
	705nm,0.8s						
ARG	Arkhangelos	0.91	324	PG	Pn	21 28 33.4	0.0
ARG				SG	Sn	21 28 44.3	-1.3
ARG	Arkhangelos	0.91	324	P	Pb	21 28 34.5	+0.8
ARG				S	Sn	21 28 48.4	+2.9
KSL	Kastellorizon	0.94	44	P	Pb	21 28 34.8	+0.7
KSL				S	Sb	21 28 48.4	+2.2
	190nm,0.3s						
KSL	Kastellorizon	0.94	44	⇓*i*P	Pb	21 28 34.7	+0.5
KSL				S	Sb	21 28 47.4	+1.2
AKAS	Kas	1.01	42	*i*P	Pb	21 28 36.1	+0.7
AKAS				*i*S	Sb	21 28 50.4	+2.0
AKAS				IAML		21 28 52.0	
	comp=E,450nm,0.3s						
AKAS				IAML		21 28 52.0	
	comp=N,385nm,0.4s						
AKAS	Kas	1.01	42	PG	Pb	21 28 36.0	+0.5
AKAS				SG	Sb	21 28 48.6	+0.2
FETY	Fethiye	1.18	12	P	Pb	21 28 37.6	-0.7
FETY	Fethiye	1.18	12	*i*P	Pb	21 28 37.6	-0.7
FETY				*i*S	Sb	21 28 52.1	-1.1
FETY	Fethiye	1.18	12	PG	Pb	21 28 37.7	-0.6
FETY				SG	Sb	21 28 52.3	-0.9
DALY	Dalyan (Mula)	1.34	356	*i*P	Pb	21 28 39.7	-1.2
DALY	Dalyan (Mula)	1.34	356	PN	Pb	21 28 40.7	-0.2
DALY				SN	Sb	21 28 57.1	-0.6
TURN	Turunc	1.36	342	*i*P	Pb	21 28 40.4	-0.9
TURN				*i*S	Sb	21 28 57.6	-0.8
TURN	Turunc	1.36	342	PN	Pb	21 28 41.4	0.0
TURN				SN	Sb	21 28 58.2	-0.2
CAME	Cameli-Denizli	1.52	16	PN	Pb	21 28 43.2	-1.0
AKUM	Antalya-Kumluc	1.52	56	*i*P	Pn	21 28 42.8	+0.9
AKUM				*i*S	Sn	21 29 00.8	0.0
ELL	Elmali	1.56	36	PN	Pb	21 28 44.9	+0.1
ELL	Elmali	1.56	36	P	Pn	21 28 43.3	+0.7
DAT	Datca	1.58	322	P	Pn	21 28 43.6	+0.8
DAT	Datca	1.58	322	*i*P	Pn	21 28 43.0	+0.2
DAT				*i*S	Sb	21 29 02.5	-2.3
DAT				IAML		21 29 04.0	
	comp=E,127nm,0.5s						
DAT				IAML		21 29 06.0	
	comp=N,114nm,0.5s						
DAT	Datca	1.58	322	PN	Pb	21 28 44.6	-0.6
CAEL	Denizli, Camel	1.70	15	*i*P	Pb	21 28 46.3	-0.9
YER	Yerkesik	1.70	347	P	Pb	21 28 45.9	-1.2
YER	Yerkesik	1.70	347	PN	Pb	21 28 46.9	-0.2
NIS1	Nisyros Isl.	1.71	311	P	Pn	21 28 45.5	+1.0
NIS1	Nisyros Isl.	1.71	311	PN	Pb	21 28 47.4	0.0
MULA	Mugla, Merkez-	1.81	348	*i*P	Pb	21 28 48.6	-0.5
MULA				*i*S	Sb	21 29 08.9	-2.4
BDRM	Kayabasi	1.91	326	*i*P	Pn	21 28 47.9	+0.6
BDRM				*i*S	Sn	21 29 08.5	-2.0
BODT	Bodrum	1.97	324	P	Pn	21 28 49.3	+1.2
BODT	Bodrum	1.97	324	PN	Pb	21 28 50.2	-1.6
KORT	Korkueli	1.98	39	*i*P	Pn	21 28 50.2	+1.9
KORT	Korkueli	1.98	39	PN	Pb	21 28 50.8	-1.2
MLSB	Milas	1.98	336	PN	Pb	21 28 50.7	-1.3
TAVA	DENIZLI_Tavas	1.98	3	*i*P	Pb	21 28 49.8	-2.2
TAVA				*i*S	Sb	21 29 13.6	-2.7
ANTB	Antalya	2.08	46	PN	Pb	21 28 52.9	-0.6
STIA	Sitia Lasithi	2.21	264	P	Pn	21 28 53.3	+1.9
STIA				S	Sn	21 29 20.0	+2.2
AYDN	Tasoluk	2.29	342	*i*P	Pn	21 28 53.8	+1.2
AYDN				*i*S	Sb	21 29 20.8	-4.4
AYDN				IAML		21 29 23.0	
	comp=E,77nm,0.4s						
BUCA	Burdur, Bucak-	2.34	37	*i*P	Pb	21 28 55.8	-2.2
BUCA				*i*S	Sb	21 29 23.7	-2.8
BRDR	BURDUR-Merkez	2.44	25	*i*P	Pn	21 28 56.9	+2.2
BRDR				*i*S	Sb	21 29 26.1	-3.4
BCK	Bucak	2.46	36	PN	Pb	21 28 57.6	-2.5
GCAM	G?zelcaml?	2.54	331	PN	Pb	21 28 58.8	-2.6
AYDB	Zeytinkoy-Aydi	2.56	344	PN	Pn	21 28 58.5	+2.2
NPS	Neapolis	2.60	266	P	Pn	21 28 58.7	+2.0
BASM	Basmaki-Afyon	2.64	22	PN	Pn	21 28 59.8	+2.5
KEPZ	Antalya-Kepez	2.69	57	*i*P	Pn	21 28 59.9	+1.9
KEPZ				*i*S	Sn	21 29 29.9	+0.2
OSC1	CSNet OBS 1	2.86	133	P	Pn	21 29 00.1	-0.1
OSC1				S	Sn	21 29 33.1	-0.5
PASA	Karahalli, USA	2.92	11	*i*P	Pn	21 29 01.4	+0.2
AKMS	Akamas	2.95	98	⇑*i*P	Pn	21 29 01.8	+0.3
AKMS				AML	AML	21 29 35.8	
	comp=E,0.2nm,0.3s						
AKMS				AML	AML	21 29 35.8	
	comp=E,0.2nm,0.3s						
AKMS				S	Sn	21 29 36.1	+0.1
AKMS				AML	AML	21 29 38.2	
	comp=E,0.4nm,0.5s						
AKMS				AML	AML	21 29 38.2	
	comp=E,0.4nm,0.5s						
GAZI	Gazipasa	2.97	74	*i*P	Pn	21 29 01.9	+0.1
GAZI				*i*S	Sn	21 29 34.3	-2.2
GAZI				IAML		21 29 37.0	
	comp=E,44nm,0.2s						
GAZI				IAML		21 29 39.0	
	comp=N,48nm,0.3s						
KZIL	AFYON_Kizioren	2.98	21	*i*P	Pn	21 29 01.7	-0.3
BAGO	Egridir - ISPA	2.98	32	*i*P	Pn	21 29 03.6	+1.6
MANT	Manisa	3.01	357	*i*P	Pn	21 29 03.4	+0.8
KULA	Kula-Manisa	3.03	358	PN	Pn	21 29 04.6	+1.9
SEDI	Konya, Seydise	3.10	50	*i*P	Pn	21 29 06.8	+3.1
SEDI				*i*S	Sn	21 29 42.6	+2.6
SEDI				IAML		21 29 47.0	
	comp=N,42nm,0.6s						
ALFC	Alefka	3.14	95	P	Pn	21 29 04.7	+0.5
ALFC				AML	AML	21 29 41.9	
	comp=N,0.4nm,0.3s						
ALFC				AML	AML	21 29 42.0	
	comp=N,0.5nm,0.2s						
NATA	Nata	3.19	102	⇑*e*P	Pn	21 29 05.3	+0.5
NATA				AML	AML	21 29 40.3	
	comp=N,0.7nm,0.2s						
NATA				AML	AML	21 29 41.6	
	comp=N,0.7nm,0.2s						
USAK	Uak-Merkez	3.23	3	*i*P	Pn	21 29 05.8	+0.3
LEF	Lefka	3.38	95	*i*P	Pn	21 29 06.8	-0.7
LEF				*i*S	Sn	21 29 43.4	-3.3
LEF				IAML		21 29 46.0	
	comp=E,25nm,0.5s						
YVAC	Isparta, Yalva	3.41	35	*i*P	Pn	21 29 08.5	+0.5
DOGA	KONYA_Doganhis	3.50	41	*i*P	Pn	21 29 09.7	+0.4
DOGA				*i*S	Sn	21 29 51.7	+1.9
DOGA				IAML		21 29 56.0	
	comp=E,17nm,0.4s						
ERMK	Ermenek	3.54	70	*i*P	Pn	21 29 11.8	+1.9
ERMK				*i*S	Sn	21 29 52.8	+1.8
ERMK				IAML		21 29 54.0	
	comp=N,38nm,0.4s						
ERMK				IAML		21 29 55.0	
	comp=E,56nm,0.3s						
KMER	Konya-Meram	3.68	51	*i*P	Pn	21 29 13.2	+1.5
ASGA	Asgata	3.73	99	P	Pn	21 29 12.2	-0.1
ASGA				AML	AML	21 29 55.1	
	comp=E,0.3nm,0.2s						
ASGA				AML	AML	21 29 55.5	
	comp=E,0.2nm,0.2s						
OSC2	CSNet OBS 4	3.75	129	P	Pn	21 29 13.2	+0.6
OSC2				S	Sn	21 29 54.9	-0.9
CSS	Mathiatis	3.76	97	⇑P	Pn	21 29 12.9	+0.1
KKBE	Karaman, Kazim	3.78	61	*i*P	Pn	21 29 14.9	+1.8
KONT	Konya--Tatoy	3.79	48	*i*P	Pn	21 29 15.7	+2.6
ATHAL	Athalassa	3.79	94	P	Pn	21 29 14.0	+0.9
GULN	MERSIN_Gulnar	3.94	78	*i*P	Pn	21 29 16.2	+1.1
MVOU	Mavrovouni	4.00	95	P	Pn	21 29 16.5	+0.5
KDHN	Kadinhani	4.04	40	*i*P	Pn	21 29 18.0	+1.3
BRTR	Keskin Array B	5.73	41	Pn	Pn	21 29 41.8	+1.9
	comp=E,0.3nm,0.3s,baz=224,slow=15,SNR=9.1						
BRTR				Sn	Sn	21 30 44.5	-0.2
	comp=E,0.5nm,0.3s,baz=211,slow=26,SNR=12						
DBRK	Dubrovnik	10.94	314	*e*Pn	Pn	21 30 51.2	+0.1
STON	Ston	11.32	314	*e*Pn	Pn	21 30 56.1	-0.2
MAKA	Makarska	11.97	314	*e*Pn	Pn	21 31 04.7	-0.5
RICI	Ricice	12.03	315	*e*Pn	Pn	21 31 06.6	+0.5
HVAR	Hvar	12.25	313	*e*Pn	Pn	21 31 08.1	-0.9
ZIRJ	Zirje	13.00	313	*e*Pn	Pn	21 31 18.8	-0.4
MORI	Morici	13.08	314	*e*Pn	Pn	21 31 20.7	+0.3
UDBI	Udbina	13.45	316	*e*Pn	Pn	21 31 26.6	+1.1
DUGI	Dugi Otok	13.54	313	*e*Pn	Pn	21 31 26.0	-0.6
NVLJ	Novalja	13.98	315	*e*Pn	Pn	21 31 31.5	-1.1
GERES	GERESS Array B	17.37	325	P	Pn	21 32 16.3	-0.6
	comp=E,0.1nm,0.3s,baz=128,slow=6.4,SNR=1.5						
ESDC	Sonseca Array	26.20	289	P	P	21 33 48.5	-0.4
	comp=E,0.1nm,0.3s,baz=84,slow=11,SNR=4.1						
HFS	Hagfors	26.53	343	P	P	21 33 53.4	+1.8
	comp=E,1.4nm,0.3s,baz=191,slow=5.9,SNR=20						
MKAR	Makanchi Array	41.12	57	P	P	21 35 58.4	+0.4
	comp=E,0.3nm,0.5s,baz=279,slow=7.2,SNR=5.3						
ZALV	Zalesovo Beam	42.65	46	P	P	21 36 10.6	+0.3
	comp=E,0.3nm,0.4s,baz=273,slow=7.9,SNR=1.9						

IDC 14 21:35:31.0±2.0, **4°.17S**×**129°.28E, h0**^{km}, **mb1 3.5**/3, **mb1mx3.0**/45, **mbtmp3.3**/3, **ML3.3**/3, **Error ellipse: s-maj=70.7km s-min=31.1km az=97.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.83	31	Pn	Pn	21 36 30.1	-1.1
	0.7nm,0.3s,baz=210,slow=20,SNR=11						
SIJI				Sn	Sn	21 37 11.5	-5.6
	1.1nm,0.3s,baz=185,slow=22,SNR=6.5						
WRA	Warramunga Arr	16.43	163	Pn	Pn	21 39 24.1	+1.0
	0.1nm,0.3s,baz=339,slow=12,SNR=4.8						
ASAR	Alice Springs	19.89	167	P	P	21 40 03.2	-0.9
	0.1nm,0.3s,baz=347,slow=13,SNR=11						
TORD	Torodi Ar. Bea	127.51	283	PKP	PKiKP	21 54 39.7	0.0
	0.2nm,0.7s,baz=113,slow=2.6,SNR=1.3						

*KMA **14** 21:41:45.0, 30°.80N×128°.93E, h35^{km}*

*IDC **14** 21:41:47.6±0.6, 31°.28N×128°.66E, h0^{km}, mb4.0/18, mb1 4.1/24, mb1mx4.0/51, mbtmp4.0/24, ML3.4/5, MS3.7/16, Ms1 3.7/16, ms1mx3.5/45, Error ellipse: s-maj=15.5km s-min=11.0km az=113.0*

*NIED **14** 21:41:47.8, 31°.28N×128°.72E, h8^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-1.93; M$_{\theta\theta}$4.16; M$_{\phi\phi}$-2.23; M$_{r\theta}$1.23; M$_{\theta\phi}$1.99; M$_{\phi r}$-2.38; Fault plane solution: M$_0$4.91000×10^{15} NP1: φ$_s$292.00000°, δ67.00000°, λ-35.00000°. NP2: φ$_s$37.00000°, δ59.00000°, λ-152.00000°.*

*JMA **14** 21:41:47.8±0.3, 31°.27N×128°.72E, h8^{km}±3^{km}, M4.3*

*BJI **14** 21:41:48.0±0.0, 31°.14N×128°.82E, h15^{km}, mB4.5/28, mb4.3/48, ML4.2/1, Ms4.3/41, Ms7 4.1/39*

*NEIC **14** 21:41:50.5±1.4, 31°.30N±0°.06×128°.81E±0°.06, h10^{km}±1^{km}, mb4.5/45, Error ellipse: s-maj=10.2km s-min=8.5km az=158.0*

ISC 14 21:41:48.6±1.5, **31°.25N**±0°.04×**128°.79E**±0°.03, **h3**^{km}±9^{km}, **n160**, σ**1^{s}.41**/171, **mb4.4**/42, **MS3.9**/18, **3C-1D, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.90	61	⇓P	Pg	21 42 05.2	-0.5
JSJ				*e*S	Sg	21 42 17.7	+0.4
JFU	Fukue jima 2	1.40	358	⇑P	Pn	21 42 13.2	-1.8
JFU				*e*S	Sg	21 42 31.8	-1.8
JKC	Kuchinoerabu	1.44	123	P	Pb	21 42 15.8	-0.2
JKC				*e*S	Sn	21 42 35.1	+0.2
JSU	Suzuyama	1.44	79	P	Pn	21 42 15.2	-0.4
JSU				*e*S	Sb	21 42 34.3	-0.6
JSU	Suzuyama	1.44	79	Pn	Pn	21 42 15.1	-0.6
JSU				Sn	Sn	21 42 35.2	+0.1
JNN	Nakanoshima	1.69	146	P	Pn	21 42 17.3	-1.6
JYAK	Yakushimahirau	1.79	124	P	Pn	21 42 18.7	-1.6
JTN	Tanegashima 3	1.97	107	P	Pn	21 42 22.2	-0.6
JMTN	Minamitane	2.00	115	P	Pn	21 42 23.3	0.0
JMTN				*e*S	Sn	21 42 49.1	+0.3
JTZ	Takazaki	2.06	71	P	Pn	21 42 23.7	-0.4
JIU3	Izumi3	2.15	52	P	Pn	21 42 25.4	+0.1
JIU3				*e*S	Sn	21 42 52.3	-0.2
JNU	Nakatsue	2.57	43	Pn	Pn	21 42 33.0	+1.9
	38nm,0.3s,baz=316,slow=0.2,SNR=67						
JNU				Lg	Lg	21 43 09.1	
	baz=270,slow=20,SNR=9.4						
KSJJU	Jeju	2.89	319	P	Pn	21 42 34.5	-1.0
	SNR=10						
GOS1	Gosan-ri	2.99	314	P	Pn	21 42 36.0	-0.9
	SNR=11						
GOS2	Gosang-Q330s	3.00	314	P	Pn	21 42 36.0	-1.0
	SNR=12						
HALB	Hallimjungang-	3.02	316	P	Pn	21 42 36.0	-1.4
	SNR=28						
GMDB	Geomundo	3.06	336	P	Pn	21 42 38.0	+0.2
	SNR=14						
YNDB	Yeoundo	3.28	345	P	Pn	21 42 41.0	+0.2
	SNR=8.3						
JTU	Tsushima	3.30	9	Pn	Pn	21 42 41.3	+0.2
YKDB	Yokjido	3.39	353	P	Pn	21 42 42.0	-0.4
	SNR=12						
CJD	Chujado	3.43	323	P	Pn	21 42 41.4	-1.5
	SNR=24						
KOHB	KOHEUNG	3.59	340	P	Pn	21 42 44.1	-1.1
	SNR=12						
KSNAH	Namhae	3.63	349	P	Pn	21 42 47.3	+1.6
	SNR=9.5						
BOSB	Boseong-gun	3.75	340	P	Pn	21 42 46.4	-0.8
	SNR=15						
HANB	Haenam	3.79	331	P	Pn	21 42 47.1	-0.7
	SNR=11						
KSJDO	Jindo	3.83	328	P	Pn	21 42 47.3	-1.1
	SNR=14						
KSSCH	SUNCHEON	4.02	342	P	Pn	21 42 51.1	+0.1
	SNR=5.4						
GGDB	Gageodo	4.17	313	P	Pn	21 42 51.5	-1.6
	SNR=16						
KSKCH	Geochang	4.41	351	P	Pn	21 42 56.7	+0.3
	SNR=8.5						
JOW	Kunigami	4.43	186	Pn	Pn	21 42 56.3	-0.3
	1.0nm,0.3s,baz=100,slow=18,SNR=1.5						
JOW	Kunigami	4.43	186	Pn	Pn	21 42 58.1	+1.5
HUK2	Heuksan-myeon	4.43	322	P	Pn	21 42 56.0	-0.7
	SNR=19						
JMN	Monobe	4.96	59	Pn	Pn	21 43 05.5	+1.6
KSCPR	CHUPUNGNYEONG	5.00	352	P	Pn	21 43 04.9	+0.3
	SNR=13						
KSADO	Andong	5.15	1	P	Pn	21 43 07.3	+0.8
	SNR=8.8						
OKCB	Cheongsan-myeo	5.15	351	P	Pn	21 43 07.5	+1.0
	SNR=11						
KSSAJ	Sangju	5.17	354	P	Pn	21 43 07.2	+0.4
	SNR=8.2						
JHS	Saijyo	5.21	43	Pn	Pn	21 43 08.8	+1.4
KSBON	Boeun	5.30	351	P	Pn	21 43 10.0	+1.4
	SNR=27						
KSMGY	Mungyeong	5.42	354	P	Pn	21 43 10.7	+0.4
	SNR=6.5						
KSCEA	Cheonan	5.70	347	P	Pn	21 43 14.4	+0.3
	SNR=9.6						
KSYOW	Yeongwol	5.91	357	P	Pn	21 43 18.2	+1.1
	SNR=12						
IMWB	Imwonan-gil	5.99	4	P	Pn	21 43 19.2	+1.1
	SNR=13						
KSICN	Icheon	6.13	350	P	Pn	21 43 20.6	+0.5
	SNR=6.8						
KSAR	Wonju Array Be	6.22	353	Pn	Pn	21 43 21.5	+0.2
KSRS	Korea Array	6.23	354	Pn	Pn	21 43 21.3	-0.1
	3.2nm,0.3s,baz=175,slow=14,SNR=97						
KSRS				Sn	Sn	21 44 30.9	-2.1
	3.4nm,0.3s,baz=172,slow=26,SNR=4.5						
KSRS				Lg	Lg	21 45 02.0	
	3.5nm,0.3s,baz=179,slow=30,SNR=2.7						
KSRS				LR	LR	21 45 46.6	
	comp=Z,644nm,21.8s,baz=176,slow=39						
KS19	Wonju Array Si	6.28	353	Pn	Pn	21 43 21.7	-0.4
INCN	Inchon	6.47	345		Pn	21 43 25.4	+0.7
SSE	Sheshan	6.52	271	Pn	Pn	21 43 25.3	-0.1
SSE				Sn	Sn	21 44 41.4	+1.1
SSE				smax	smax		
	comp=N,140nm,0.8s						
SSE				smax	smax		
	comp=E,99nm,0.9s						
SSE				LR	LR		
	comp=N,1µm,13.1s						
SSE				LR	LR		
	comp=E,310nm,15.6s						
KSCHC	Chuncheon	6.56	353	P	Pn	21 43 27.0	+1.0
	SNR=7.9						
GAPB	Gapyeong	6.66	351	P	Pn	21 43 28.0	+0.7
	SNR=9.9						
JWT	Wachi	6.84	52	Pn	Pn	21 43 31.8	+2.0
INU	Inuyama	8.00	57	Pn	Pn	21 43 47.6	+1.8
NJ2	Nanjing	8.51	278	*e*P	Pn	21 44 00.4	+7.7
NJ2				pmax	pmax		
	comp=Z,17nm,0.5s						
NJ2				LR	LR		
	comp=N,760nm,10.9s						
NJ2				LR	LR		
	comp=E,960nm,11.4s						
NJ2				LR	LR		
	comp=Z,1µm,10.9s						
NJ2	Nanjing	8.51	278	*e*P	Pn	21 43 54.1	+1.4
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
MAJO	Matsushiro	9.43	53	Pn	Pn	21 44 06.7	+1.3
MJAR	Matsushiro Arr	9.44	53	Pn	Pn	21 44 05.4	0.0
	comp=Z,0.0nm,0.3s,baz=234,slow=14,SNR=1.8						
MJAR				Lg	Lg	21 46 53.0	
	comp=Z,0.0nm,0.3s,baz=183,slow=22,SNR=3.3						
MJAR				LR	LR	21 47 38.9	
	comp=Z,321nm,19.7s,baz=235,slow=37						
MJAR	Matsushiro Arr	9.44	53	Pn	Pn	21 44 07.4	+2.0
SSLB	Suanglung	10.18	225		Pn	21 44 18.2	+2.6
TIA	Tai'an	10.90	300	*e*P	Pn	21 44 27.8	+2.3
TIA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
TIA				LR	LR		
	comp=Z,1µm,14.5s						
TIA				LR	LR		
	comp=Z,870nm,14.8s						
TIA				LR	LR		
	comp=Z,730nm,12.3s						
WHN	Wuhan	12.43	270	P	Pn	21 44 46.8	+0.4
WHN				LR	LR		
	comp=Z,1µm,9.5s						
WHN				LR	LR		
	comp=Z,1µm,11.9s						
WHN				LR	LR		
	comp=Z,1µm,11.9s						
CN2	Changchun	12.80	349	*e*P	Pn	21 44 56.3	+4.8
CN2				*e*S	Sn	21 47 21.4	+6.9
CN2				pmax	pmax		
	comp=Z,10.0nm,1.4s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,900nm,10.0s						
CN2				LR	LR		
	comp=Z,1µm,10.0s						
CN2				LR	LR		
	comp=Z,800nm,10.3s						
USRK	Ussuriysk Ar.	13.17	10	Pn	Pn	21 44 56.5	+0.1
	baz=128,slow=20,SNR=2.0						
USRK				LR	LR	21 49 34.7	
	comp=Z,123nm,20.4s,baz=189,slow=36						
MDJ	Mudanjiang	13.36	2	P	Pn	21 44 59.0	0.0
MDJ				pmax	pmax		
	comp=Z,10.0nm,2.9s						
MDJ				pmax	pmax		
	comp=Z,190nm,4.8s						
BJT	Baijiatuau	13.48	314	Pn	Pn	21 45 03.2	+2.6
BJI	Beijing	13.49	314	P	Pn	21 45 02.9	+2.1
BJI				S	Sn	21 47 35.6	+4.5
BJI				pmax	pmax		
	comp=Z,4.0nm,0.5s						
ENH	Enshi	16.63	272	Pn	Pn	21 45 43.3	+0.6
ASAJ	Asahikawa	16.83	36	Pn	Pn	21 45 44.4	-0.7
	comp=Z,0.2nm,0.3s,baz=198,slow=31,SNR=2.7						
JKA	Kamikawa-asahi	16.83	36		P	21 45 46.8	-0.6
HHC	Hu-ho-hao-te	16.88	309	*e*P	Pn	21 45 46.0	+0.1
HHC				S	Sn	21 48 48.8	-5.2
HHC				SS	SnSn	21 49 11.8	+4.6
HHC				pmax	pmax		
	comp=Z,23nm,0.8s						
HHC				pmax	pmax		
	comp=Z,100nm,4.9s						
HHC				LR	LR		
	comp=Z,940nm,13.3s						
HHC				LR	LR		
	comp=Z,670nm,13.3s						
HHC				LR	LR		
	comp=Z,590nm,12.6s						
XAN	Xi'an	16.97	285	P	Pn	21 45 43.3	-3.7
XAN				S	Sn	21 48 59.6	+3.5
XAN				pmax	pmax		
	comp=Z,12nm,1.3s						
XAN				LR	LR		
	comp=Z,1µm,12.9s						
XAN				LR	LR		
	comp=Z,650nm,13.7s						
XAN				LR	LR		
	comp=Z,970nm,11.1s						
XAN	Xi'an	16.97	285	P	P	21 45 50.8	+1.8
KLR	Kul'dur	18.10	6	P	Pn	21 45 59.8	-1.1
	comp=Z,0.2nm,0.3s,baz=214,slow=6.4,SNR=8.9						
KLR				LR	LR	21 52 29.9	
	comp=Z,110nm,18.8s,baz=176,slow=36						
YSS	Yuzh-Sakhalins	19.01	30		P	21 46 11.6	+0.2
HIA	Hailar	19.25	342	Pn	Pn	21 46 15.9	+1.0
GYA	Guiyang	19.95	262	⇑*i*P	Pn	21 46 23.3	-0.3
GYA				pmax	pmax		
	comp=Z,31nm,1.0s						
QIZ	Qiongzhong	21.00	239	P	P	21 46 34.4	+1.2
QIZ				S	S	21 50 29.6	+1.8
QIZ				LR	LR		
	comp=Z,460nm,13.9s						
QIZ				LR	LR		
	comp=Z,380nm,12.6s						
QIZ				LR	LR		
	comp=Z,410nm,13.7s						
LZH	Lanzhou	21.30	290	*e*P	P	21 46 38.5	+2.0
LZH				sP	sP	21 46 48.6	+11
LZH				S	S	21 50 29.9	-3.9
LZH				pmax	pmax		
	comp=Z,23nm,1.0s						
LZH				pmax	pmax		
	comp=Z,140nm,4.6s						
LZH				LR	LR		
	comp=Z,1µm,12.6s						
LZH				LR	LR		
	comp=Z,430nm,12.3s						
LZH				LR	LR		
	comp=Z,570nm,15.2s						
CD2	Chengdu	21.44	276	P	P	21 46 38.4	+0.4
CD2				pmax	pmax		
	comp=Z,40nm,1.4s						
CD2				LR	LR		
	comp=Z,1µm,12.5s						
CD2				LR	LR		
	comp=Z,920nm,11.1s						
CD2				LR	LR		

	comp=Z,990nm,9.5s						
GUMO	Guam	22.96	136	LR	LR	21 54 55.7	
	comp=Z,86nm,18.3s,baz=20,slow=34						
ULN	Ulaanbaatar	23.46	321	P	P	21 46 59.6	+0.3
KMI	Kunming	23.73	262	⇑P	P	21 47 02.0	-0.3
KMI				pP	sP	21 47 05.3	+2.0
KMI				S	S	21 51 17.6	-0.8
KMI				sS	sS	21 51 26.4	+6.8
KMI				pmax	pmax		
	comp=Z,14nm,1.0s						
KMI				LR	LR		
	comp=Z,420nm,11.5s						
KMI				LR	LR		
	comp=Z,170nm,15.1s						
KMI				LR	LR		
	comp=Z,270nm,12.9s						
SONM	Songino Array	23.80	320	P	P	21 47 00.1	-2.5
	comp=Z,2.6nm,0.8s,baz=130,slow=8.6,SNR=11						
SONM				PcP	PcP	21 50 43.4	-2.7
	comp=Z,0.6nm,1.0s,baz=28,slow=3.5,SNR=3.1						
SONM				LR	LR	21 56 50.4	
	comp=Z,340nm,18.4s,baz=134,slow=38						
SONM	Songino Array	23.80	320	P	P	21 47 02.3	-0.3
DAV	Davao City (W)	24.25	188	LR	LR	21 55 48.1	
	comp=Z,95nm,21.4s,baz=328,slow=35						
GTA	Gaotai	24.93	297	*e*P	P	21 47 12.8	-0.3
GTA				pP	sP	21 47 17.3	+3.2
GTA				sP	pP	21 47 20.3	+6.5
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,100nm,5.8s						
GTA				LR	LR		
	comp=Z,570nm,15.3s						
GTA				LR	LR		
	comp=Z,280nm,14.9s						
GTA				LR	LR		
	comp=Z,420nm,14.5s						
TLY	Talaya	27.54	325	LR	LR	21 59 43.1	
	comp=Z,257nm,19.7s,baz=132,slow=39						
CMAR	Chiang Mai Arr	29.83	252	P	P	21 47 54.8	-2.3
	comp=Z,0.5nm,0.3s,baz=40,slow=5.6,SNR=7.3						
CMAR				LR	LR	22 00 35.8	
	comp=Z,88nm,18.9s,baz=72,slow=38						
CMAR	Chiang Mai Arr	29.83	252	P	P	21 47 57.1	0.0
YAK	Yakutsk	30.80	1	LR	LR	21 59 32.5	
	comp=Z,105nm,19.1s,baz=272,slow=35						
SHL	Shillong	32.85	269	P	P	21 48 22.5	-1.4
SHL				IAmb	IAmb	21 48 22.9	
	comp=Z,5.6nm,1.0s						
WMQ	Urumqi	34.58	303	*e*P	P	21 48 38.8	+0.2
WMQ				pP	sP	21 48 41.8	+2.1
WMQ				sP	pP	21 48 46.3	+6.9
WMQ				pmax	pmax		
	comp=Z,14nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,160nm,4.7s						
WMQ				LR	LR		
	comp=Z,450nm,6.3s						
WMQ				LR	LR		
	comp=Z,500nm,8.7s						
WMQ				LR	LR		
	comp=Z,150nm,21.1s						
ZALV	Zalesovo Beam	38.67	319	P	P	21 49 13.3	0.0
	comp=Z,0.3nm,0.3s,baz=110,slow=12,SNR=1.6						
ZALV				PcP	PcP	21 51 24.9	-0.4
	comp=Z,0.4nm,0.4s,baz=115,slow=8.6,SNR=2.1						
ZALV	Zalesovo Beam	38.67	319	P	P	21 49 12.8	-0.5
MK31	Makanchi Array	38.73	307	P	P	21 49 13.3	-0.7
MKAR	Makanchi Array	38.73	307	P	P	21 49 12.3	-1.6
	comp=Z,2.3nm,0.9s,baz=97,slow=9.9,SNR=21						
MKAR				PcP	PcP	21 51 25.0	-0.7
	comp=Z,0.7nm,0.9s,baz=112,slow=1.6,SNR=3.4						
MKAR	Makanchi Array	38.73	307	P	P	21 49 13.1	-0.8
MAKZ	Makanchi	38.94	307	P	P	21 49 15.4	-0.4
TIXI	Tiksi	40.45	0	P	P	21 49 26.6	-1.3
	comp=Z,0.7nm,0.4s,baz=172,slow=8.3						
TIXI				LR	LR	22 06 14.4	
	comp=Z,106nm,20.7s,baz=300,slow=36						
TIXI	Tiksi	40.45	0	P	P	21 49 28.3	+0.4
PRZ	Przheval'sk	41.30	300	P	P	21 49 34.9	-0.6
PRZ				IAmb	IAmb	21 49 44.0	
	comp=Z,15nm,1.1s						
TARG	Taragay, Kyrgy	41.77	299	P	P	21 49 39.2	-0.5
TARG				IAmb	IAmb	21 49 41.2	
	comp=Z,7.0nm,0.9s						
LEM	Lembang	42.94	212	P	P	21 49 49.5	+0.5
	comp=Z,11nm,0.4s,baz=45,slow=19,SNR=4.3						
KSH	Kashi	43.32	296	P	P	21 49 55.5	+3.5
KSH				pmax	pmax		
	comp=Z,7.0nm,1.5s						
KSH				pmax	pmax		
	comp=Z,240nm,6.4s						
FRU1	Bishkek	44.07	301	P	P	21 49 57.4	-0.4
FRU1				IAmb	IAmb	21 49 59.1	
	comp=Z,9.4nm,1.0s						
AAK	Ala-Archa	44.18	301	P	P	21 49 58.4	-0.4
NRIK	Noril'sk	44.67	341	P	P	21 50 01.4	-0.8
	comp=Z,6.1nm,1.0s,baz=145,slow=11,SNR=5.1						
NRIK	Noril'sk	44.67	341	P	P	21 50 02.6	+0.4
NRIK				IAmb	IAmb	21 50 07.7	
	comp=Z,8.4nm,0.9s						
NIL	Nilore	46.45	288	P	P	21 50 16.8	-0.1
NIL				IAmb	IAmb	21 50 17.8	
	comp=Z,5.5nm,0.9s						
DRK	Karamyk	46.53	297	P	P	21 50 17.6	-0.1
DRK				IAmb	IAmb	21 50 18.4	
	comp=Z,5.7nm,1.1s						
BVAR	Borovoye Array	46.96	315	P	P	21 50 20.1	-0.5
	comp=Z,2.5nm,0.8s,baz=170,slow=9.0,SNR=17						
BRVK	Borovoye	47.03	315	P	P	21 50 21.1	0.0
BRVK				IAmb	IAmb	21 50 21.8	
	comp=Z,6.0nm,1.0s						
KK31	Karatay Array	47.06	302	P	P	21 50 21.5	0.0
KKAR	Karatay Array	47.06	302	P	P	21 50 21.3	-0.2
KKAR	Karatay Array	47.06	302	P	P	21 50 21.6	+0.1
KKAR				IAmb	IAmb	21 50 22.4	
	comp=Z,8.2nm,0.9s						
CHGR	Chuyangaron	48.69	296	P	P	21 50 34.1	-0.2
CHGR				IAmb	IAmb	21 50 41.6	
	comp=Z,6.7nm,0.8s						
FITZ	Fitzroy Crossi	49.16	184	P	P	21 50 37.9	+0.1
FITZ				IAmb	IAmb	21 50 39.0	
	comp=Z,7.2nm,1.1s						
WB0	Warramunga Arr	51.01	173	P	P	21 50 51.2	-0.7
WB0				IAmb	IAmb	21 51 07.0	
	comp=Z,5.2nm,1.1s						
WRA	Warramunga Arr	51.18	173	P	P	21 50 52.2	-0.9
	comp=Z,2.3nm,0.9s,baz=352,slow=8.2,SNR=7.7						
WRA	Warramunga Arr	51.18	173	P	P	21 50 52.7	-0.5
WB2	Warramunga Arr	51.18	173	P	P	21 50 52.6	-0.5
WB2				IAmb	IAmb	21 50 59.4	
	comp=Z,4.5nm,0.9s						
PSA00	Pilbara Seismi	53.22	190	P	P	21 51 08.3	0.0
PSA00				IAmb	IAmb	21 51 26.9	
	comp=Z,6.4nm,1.4s						
PSA00	Pilbara Seismi	53.22	190	P	P	21 51 08.3	0.0
PSA00				IAmb	IAmb	21 51 12.6	
	comp=Z,20nm,1.3s						
ABKAR	Akbulak array	53.67	311	P	P	21 51 11.4	0.0
ABKAR				IAmb	IAmb	21 51 12.1	
	comp=Z,4.7nm,1.1s						
ABKAR	Akbulak array	53.67	311	P	P	21 51 11.1	-0.3
ARU	Arti	53.83	320	P	P	21 51 10.5	-2.0
	comp=Z,0.9nm,0.7s,baz=65,slow=3.4,SNR=5.7						
ARU	Arti	53.83	320	P	P	21 51 12.5	0.0
ARU				IAmb	IAmb	21 51 13.2	
	comp=Z,4.7nm,0.9s						
ASAR	Alice Springs	54.83	174	P	P	21 51 19.2	-0.8
	comp=Z,1.1nm,0.8s,baz=2.9,slow=14,SNR=21						
ASAR	Alice Springs	54.83	174	P	P	21 51 19.7	-0.3
HRA	Herat	55.10	292	P	P	21 51 22.9	+0.5
HRA				IAmb	IAmb	21 51 23.3	
	comp=Z,3.0nm,0.8s						
J20K	Nowinta River	56.76	31	P	P	21 51 34.3	+0.8
IMAR	Indian Mountai	56.83	29	P	P	21 51 35.2	+1.3
K20K	Telida	56.85	32	P	P	21 51 35.0	+0.8
PPLA	Purkeypile	57.75	32	P	P	21 51 41.0	+0.4
MLY	Manley	58.15	30	P	P	21 51 44.1	+0.7
MLY				IAmb	IAmb	21 51 49.2	
	comp=Z,11nm,1.3s						
NEA2	Nenana	58.92	30	P	P	21 51 49.6	+1.0
MDM	Murphy Dome	59.22	29	P	P	21 51 51.0	+0.3
IL31		59.82	30	P	P	21 51 55.5	+0.7
IL31				IAmb	IAmb	21 52 01.2	
	comp=Z,3.0nm,0.8s						
ILAR	Eielson Array	59.82	30	P	P	21 51 54.5	-0.3
	comp=Z,0.9nm,0.7s,baz=276,slow=7.1,SNR=4.0						
ILAR	Eielson Array	59.82	30	P	P	21 51 55.5	+0.7
BMAR	Burnt Mountain	60.28	26	P	P	21 51 59.0	+0.9
M26K	Nabesna, AK	62.01	32	P	P	21 52 10.4	+0.6
BCAR	Beaver Creek A	62.38	31	P	P	21 52 13.1	+0.7
M27K	Edge Creek, AK	62.53	32	P	P	21 52 13.8	+0.4
A36M	Sachs Harbour	65.33	19	P	P	21 52 32.4	+0.9
ARCES	ARCESS Array B	65.54	338	P	P	21 52 32.9	-0.1
	comp=Z,5.1nm,1.1s,baz=64,slow=11,SNR=1.0						
ARCES				LR	LR	22 26 06.5	
	comp=Z,87nm,18.6s,baz=295,slow=41						
KBZ	Khabaz	66.42	308	P	P	21 52 38.2	-0.8
	comp=Z,3.5nm,0.9s,baz=97,slow=5.2,SNR=4.7						
FIA1	FINESS Array S	68.77	330	P	P	21 52 54.0	+0.5
FINES	FINESS Array B	68.77	330	P	P	21 52 52.5	-1.1
	comp=Z,3.3nm,1.0s,baz=116,slow=3.2,SNR=4.1						
FINES	FINESS Array B	68.77	330	P	P	21 52 54.0	+0.4
AKASG	Malin Array Be	72.07	319	P	P	21 53 12.7	-1.2
	comp=Z,0.3nm,0.4s,baz=56,slow=6.7,SNR=2.0						
AKASG				LR	LR	22 26 32.1	
	comp=Z,121nm,18.5s,baz=40,slow=37						
YKA	Yellowknife Ar	73.79	26	P	P	21 53 23.9	0.0
	comp=Z,1.0nm,0.8s,baz=308,slow=5.2,SNR=1.8						
BR131	Keskin Array S	74.38	307	P	P	21 53 28.2	+0.2
BR131				IAmb	IAmb	21 53 42.6	
	comp=Z,4.7nm,0.9s						
BRTR	Keskin Array B	74.38	307	P	P	21 53 26.8	-1.2
	comp=Z,2.0nm,0.9s,baz=85,slow=6.4,SNR=9.5						
BRTR	Keskin Array B	74.38	307	P	P	21 53 27.8	-0.2
NOA	NORSAR Array B	75.05	333	LR	LR	22 31 57.9	
	comp=Z,40nm,18.0s,baz=325,slow=40						
GERES	GERESS Array B	81.51	323	LR	LR	22 34 29.3	
	comp=Z,66nm,18.6s,baz=3.0,slow=39						
NVAR	Mina Array Bea	86.69	46	P	P	21 54 35.2	+1.0
	comp=Z,0.5nm,0.8s,baz=291,slow=3.6,SNR=1.9						
NVAR	Mina Array Bea	86.69	46	P	P	21 54 34.6	+0.4
ESDC	Sonseca Array	96.92	325	LR	LR	22 42 52.1	
	comp=Z,54nm,19.4s,baz=250,slow=38						

KRNET 14 21:46:03.9±0.1**, 41°.10N**×**71°.60E, h27**km**, mb1.8, 13C-1D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRKS	Terek-Say	0.55	322	⇑*i*P	Pb	21 46 13.8	-1.4
	baz=19						
OHH	Osh	1.07	122	⇑*i*P	Pb	21 46 23.8	0.0
	baz=22						
OHH				⇑*i*S	Sb	21 46 38.2	+0.8
	baz=22						
BTK	Batken	1.20	210	⇑*e*P	Pb	21 46 26.1	+0.1
	baz=10.0						
BTK				⇑*i*S	Sb	21 46 42.0	+0.9
	baz=10.0						
MNAS	Manas	1.54	26	⇑*i*P	Pb	21 46 31.9	-0.1
	baz=26						
MNAS				⇑*i*S	Sb	21 46 52.2	+1.0
	baz=26						
DRK	Karamyk	1.62	174	⇑*i*P	Pb	21 46 33.2	-0.2
	baz=74						
DRK				⇑*i*S	Sb	21 46 54.0	+0.4
	baz=74						
SALK	Salom-Alik	1.70	97	⇑*e*P	Pb	21 46 34.1	-0.5
	baz=97						
SALK				⇑*e*S	Sb	21 46 55.6	+0.1
	baz=97						
AML	Almayashu	1.88	56	⇑*i*P	Pb	21 46 37.1	-0.7
	baz=56						
AML				⇑*e*S	Sb	21 47 00.9	-0.2
	baz=56						
KK31	Karatay Array	2.16	338	P	Pb	21 46 43.6	+1.2
	0.4nm,0.3s,baz=152,slow=17,SNR=11						
KK31				⇓S	Sb	21 47 12.1	+3.4
	0.4nm,0.3s,baz=158,slow=31,SNR=6.7						

KRNET 14 21:46:12.5±0.1**, 41°.20N**×**71°.67E, h12**km**, mb1.7, 7C-6D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRKS	Terek-Say	0.52	310	⇓*i*P	Pg	21 46 21.4	-1.3
	baz=5.0						
TRKS				⇓*i*S	Sg	21 46 27.8	-1.9
	baz=5.0						
TRKS	Terek-Say	0.52	310	⇑*i*S	Pg	21 46 21.2	-1.5
	baz=19						
OHH	Osh	1.08	128	⇓*i*P	Pb	21 46 32.9	-0.2
	baz=28						
OHH				⇓*i*S	Sg	21 46 47.6	+0.3
	baz=28						
BTK	Batken	1.31	210	⇑*i*P	Pb	21 46 37.3	+0.2
	baz=10.0						
BTK				⇑*i*S	Sg	21 46 55.2	+0.5
	baz=10.0						
MNAS	Manas	1.43	25	⇓*i*P	Pb	21 46 39.4	+0.2
	baz=25						
MNAS				⇓*i*S	Sg	21 46 58.9	+0.3
	baz=25						
SALK	Salom-Alik	1.66	100	⇑*e*P	Pb	21 46 43.6	+0.6
	baz=0.0						
SALK				⇑*e*S	Sg	21 47 06.0	+0.2
	baz=0.0						
DRK	Karamyk	1.72	177	⇑*e*P	Pb	21 46 44.4	+0.2
	baz=77						
DRK				⇑*e*S	Sg	21 47 07.5	-0.3
	baz=77						

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*IDC **14** 21:49:08.8±2.8, 29°.75S×71°.56W, h0km, mb4.0/1, mb1 4.0/2, mb1mx3.6/29, mbtmp3.9/2, ML3.6/1, Error ellipse: s-maj=118.4km s-min=73.0km az=93.0*

*GUC **14** 21:49:09.7±0.7, 29°.49S×71°.98W, h20km, ML3.7*

*NEIC **14** 21:49:09.8±1.5, 29°.49S±0°.03×71°.97W±0°.05, h17km±5km, mb4.3/4, ML3.8(GUC), Error ellipse: s-maj=7.0km s-min=4.7km az=98.0*

ISC 14 21:49:10.1±1.9**, 29°.49S**±0°.04×**71°.94W**±0°.08**, h17**km±11km**, n29, σ1ˢ.02**/39**, 2C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO05	La Serena	0.74	125	*e*P	Pg	21 49 24.2	-0.5
CO05				*e*S	Sg	21 49 34.7	+0.3
CO05				IAML		21 49 36.2	
	comp=N,7µm,0.4s						
CO05	La Serena	0.74	125	Pg	Pg	21 49 24.6	0.0
CO05				Sg	Sg	21 49 34.8	+0.3
LCO	Las Campanas	1.18	66	⇓*e*P	Pn	21 49 31.4	-0.7
LCO				*e*S	Sb	21 49 47.9	+0.5
LCO	Las Campanas	1.18	66	Pn	Pn	21 49 31.3	-0.8
LCO				Sn	Sb	21 49 47.6	+0.2
GO04	Tololo Observa	1.20	125	⇑*e*P	Pn	21 49 32.0	-0.3
GO04				*e*S	Sb	21 49 47.8	0.0
GO04				IAML		21 49 54.7	
	comp=N,14µm,0.4s						
GO04	Tololo Observa	1.20	125		Pn	21 49 32.1	-0.3
GO04				Sn	Sb	21 49 48.0	+0.2
CO06	Fray Jorge	1.21	167	⇑*e*P	Pn	21 49 31.4	-0.8
CO06				*e*S	Sb	21 49 47.0	-0.8
CO06				IAML		21 49 52.5	
	comp=E,3µm,0.3s						
CO06	Fray Jorge	1.21	167		Pn	21 49 32.0	-0.2
CO06				Sn	Sb	21 49 47.3	-0.5
AC04	Llanos de Chal	1.49	31	⇓*e*P	Pn	21 49 35.2	-0.9
AC04				*e*S	Sn	21 49 52.5	-2.7
AC04				IAML		21 50 08.0	
	comp=N,576nm,0.5s						
AC04	Llanos de Chal	1.49	31	Pn	Pn	21 49 35.1	-0.9
GO03	Copiap	2.42	39	*e*P	Pn	21 49 48.9	0.0
GO03				*e*S	Sn	21 50 18.6	+0.6
GO03				IAML		21 50 31.9	
	comp=E,404nm,0.6s						
GO03	Copiap	2.42	39		Pn	21 49 48.9	0.0
ZON	Zonda	3.48	127	Pn	Pn	21 50 03.5	0.0
AC02	Maricunga	3.63	44	Pn	Pn	21 50 06.9	+0.9
MT09	Talagante	4.35	169		Pn	21 50 15.4	-0.1
MT01	Popeta	4.40	173		Pn	21 50 16.2	+0.2
PB14	IPOC Station P	5.04	16	Pn	Pn	21 50 22.6	-2.6
BO02	Sierra Bellavi	5.37	170		Pn	21 50 29.4	-0.2
GO05	Huala	5.50	180	Pn	Pn	21 50 30.6	-0.6
PB15	IPOC Station P	6.64	20	Pn	Pn	21 50 45.9	-1.2
LPAZ	La Paz	13.60	16	Pn	Pn	21 52 25.9	+3.0
	comp=E,0.1nm,0.3s,baz=190,slow=11,SNR=6.2						
LPAZ	La Paz	13.60	16	Pn	Pn	21 52 23.1	+0.2
VILB	Vilhena	19.74	36	P	P	21 53 38.3	-0.8
GO09	Cerro Castillo	21.75	181	P	P	21 53 59.3	-1.4
SNAA	Sanae	55.73	159	P	P	21 58 45.7	+0.2
SNAA				IAmb	IAmb	21 58 53.9	
	comp=Z,6.5nm,1.5s						
TORD	Torodi Ar. Bea	82.61	70	P	P	22 01 33.1	+0.4
	comp=Z,1.2nm,0.8s,baz=247,slow=4.5,SNR=5.0						
TORD	Torodi Ar. Bea	82.61	70	P	P	22 01 33.2	+0.4
TORD				IAmb	IAmb	22 01 34.4	
	comp=Z,2.3nm,1.1s						
ZALV	Zalesovo Beam	150.30	28	PKPbc	PKiKP	22 09 01.4	+0.7
	comp=Z,1.2nm,0.6s,baz=321,slow=3.7,SNR=6.9						
MKAR	Makanchi Array	153.55	42	PKPbc	PKiKP	22 09 09.0	+1.3
	comp=Z,0.2nm,0.8s,baz=290,slow=4.2,SNR=2.0						

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*IDC **14** 21:53:07.3±1.3, 0°.67N×28°.72W, h0km, mb3.9/10, mb1 4.0/10, mb1mx3.8/43, mbtmp3.9/10, MS3.7/2, Ms1 3.8/2, ms1mx3.0/34, Error ellipse: s-maj=49.1km s-min=23.0km az=153.0*

ISC 14 21:53:09.3±0.6**, 0°.9N**±0°.1×**28°.9W**±0°.1**, h10**km**, n44, σ2ˢ.36**/36**, mb3.9**/10**, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NBPV	Pedro Velho	9.64	221	*e*P	Pn	21 55 25.7	-2.7
NBPA	Parau_RN	10.50	231	*e*P	Pn	21 55 35.6	-4.5
NBCL	Cascavel-CE	10.65	241	*e*P	Pn	21 55 38.0	-4.1
NBRF	Rio Formoso -	11.34	213	*e*P	Pn	21 55 49.3	-2.2
NBLV	Livramento - P	11.43	224	*e*P	Pn	21 55 49.9	-3.0
NBMO	Morrinhos-CE	11.87	249	*e*P	Pn	21 55 54.5	-4.4
NBPB	Pedra_Branca-C	12.42	239	*e*P	Pn	21 56 02.8	-3.6
NBAN	Anadia - AL	12.79	215	*e*P	Pn	21 56 10.2	-1.2
NBMA	Muriti-CE	12.79	230	*e*P	Pn	21 56 06.5	-5.0
NBLA	Lagarto - SE	14.73	217	*e*P	Pn	21 56 35.5	-2.4
ROSB	Rosrio	15.66	256	*e*P	Pn	21 56 46.4	-3.9
NBPN	Ponto Novo - B	16.17	224	*e*P	Pn	21 56 54.8	-2.2
H10N3	ASCENSION HYDR	16.79	121	T	T	22 14 38.9	
	baz=300,slow=75,SNR=495						
H10N2	ASCENSION HYDR	16.79	121	T	T	22 14 38.5	
	baz=300,slow=75,SNR=504						
H10N1	ASCENSION HYDR	16.81	121	T	T	22 14 40.5	
	baz=300,slow=75,SNR=643						
H10S3	ASCENSION HYDR	17.24	125	T	T	22 15 12.6	
	baz=298,slow=74						
H10S2	ASCENSION HYDR	17.26	125	T	T	22 15 13.7	
	baz=282,slow=74						
SDBA	SAO DESIDERIO	20.64	230	*e*P	Pn	21 57 49.1	-2.6
SMTB	Santa Maria do	20.97	242	*e*P	P	21 57 51.7	-1.2
JANB	Januaria	21.97	223	*e*P	P	21 58 02.0	-1.7
PRPB	Parauapebas	22.01	251	*e*P	P	21 58 03.5	-0.6
BSFB	Barra de Sao F	22.83	210	*e*P	P	21 58 14.8	+2.1
SJMB	Sao Joao De Ma	22.89	211	*e*P	P	21 58 15.3	+1.9
MC01	Montes Claros	22.91	220	*e*P	P	21 58 14.8	+1.1
RIB01	Linhares ES	23.02	209	*e*P	P	21 58 17.2	+2.5
MCPB	Macapa, AP	23.17	267	*e*P	P	21 58 17.5	+1.1
PEXB	Peixe	23.17	236	*e*P	P	21 58 16.2	-0.2
DIAM	Diamantina, MG	23.95	217	*e*P	P	21 58 25.8	+1.6
ALF01	Guarapari-ES	24.29	208	*e*P	P	21 58 30.5	+3.4
DBIC	Dimbokro	24.68	76	P	P	21 58 30.0	-0.7
	8.4nm,1.0s,baz=252,slow=11,SNR=3.9						
BDFB	Brasilia	25.01	228	P	P	21 58 33.3	-0.5
	1.3nm,0.4s,baz=111,slow=8.6,SNR=2.0						
KOWA	Kowa	28.09	60	P	P	21 59 00.3	-1.2
	3.0nm,0.7s,baz=247,slow=7.8,SNR=9.8						
CLDB	Colider	29.17	246	*e*P	P	21 59 13.3	+2.1
PDRB	Porto dos Gac	30.29	245	*e*P	P	21 59 22.2	+1.1
TORD	Torodi Ar. Bea	32.68	67	P	P	21 59 41.4	-0.8
	2.1nm,1.1s,baz=250,slow=8.7,SNR=5.1						
TORD				LR	LR	22 10 48.6	
	comp=Z,88nm,19.8s,baz=220,slow=33						
LPAZ	La Paz	42.29	244	LR	LR	22 18 14.5	
	comp=Z,132nm,19.4s,baz=76,slow=36						
CZSB	Cruzeiro do Su	44.49	258	*e*P	P	22 01 24.6	+3.2
ESDC	Sonseca Array	44.82	28	P	P	22 01 24.6	+0.9
	1.6nm,1.2s,baz=220,slow=8.2,SNR=6.3						
GERES	GERESS Array B	60.16	31	P	P	22 03 16.8	-0.6
	0.8nm,0.8s,baz=241,slow=10,SNR=3.5						
BRTR	Keskin Array B	68.59	47	P	P	22 04 10.7	-2.1
	0.4nm,0.8s,baz=347,slow=5.9,SNR=1.5						
AKASG	Malin Array Be	69.67	35	P	P	22 04 18.3	-0.8
	0.3nm,0.4s,baz=244,slow=6.1,SNR=2.6						
FINES	FINESS Array B	73.20	24	P	P	22 04 41.5	+1.3
	3.8nm,0.9s,baz=235,slow=6.6,SNR=2.4						
TXAR	Lajitas Array	76.28	300	P	P	22 05 00.8	+1.9
	0.1nm,0.8s,baz=91,slow=10.0,SNR=2.3						
MJAR	Matsushiro Arr	140.89	17	PKP	PKPdf	22 12 39.7	-0.6
	0.5nm,0.4s,baz=31,slow=4.5,SNR=5.1						

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*IDC **14** 21:58:10.9±1.3, 31°.26N×128°.70E, h0km, mb3.7/3, mb1 3.9/6, mb1mx3.5/43, mbtmp3.7/6, ML3.8/2, MS3.5/2, Ms1 3.5/2, ms1mx2.8/44, Error ellipse: s-maj=31.0km s-min=17.8km az=109.0*

*JMA **14** 21:58:10.7±0.3, 31°.27N×128°.71E, h14km±3km, M4.0*

ISC 14 21:58:10.7±2.1**, 31°.25N**±0°.05×**128°.77E**±0°.06**, h4**km±13km**, n17, σ1ˢ.21**/27**, mb3.6**/3**, 1D, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	Shimokoshiki	0.92	62	⇓P	Pg	21 58 28.1	-0.2
JSJ				*e*S	Sg	21 58 40.2	0.0
JFU	Fukue jima 2	1.40	359	P	Pn	21 58 35.8	-1.3
JFU				*e*S	Sb	21 58 53.7	-2.0
JKC	Kuchinoerabu	1.46	122	P	Pn	21 58 38.3	+0.5
JKC				*e*S	Sn	21 58 58.1	+0.8
JSU	Suzuyama	1.47	80	P	Pn	21 58 37.8	-0.1
JSU				*e*S	Sn	21 58 57.3	-0.3
JNN	Nakanoshima	1.70	146	P	Pn	21 58 39.7	-1.4
JNN				*e*S	Sn	21 59 02.6	-0.7
JYAK	Yakushimahirau	1.81	123	P	Pn	21 58 41.4	-1.2
JTN	Tanegashima 3	1.99	107	P	Pn	21 58 44.4	-0.8
JTN				*e*S	Sn	21 59 09.7	-0.8
JMTN	Minamitane	2.02	114	P	Pn	21 58 45.2	-0.4
JMTN				*e*S	Sn	21 59 10.4	-0.9
JTZ	Takazaki	2.08	71	P	Pn	21 58 46.4	0.0
JTZ				*e*S	Sn	21 59 12.7	-0.1
JIU3	Izumi3	2.17	53	P	Pn	21 58 47.5	-0.1
JIU3				*e*S	Sn	21 59 13.8	-1.1
JNU	Nakatsue	2.58	43	Pn	Pn	21 58 55.1	+1.7
	65nm,0.3s,baz=208,slow=4.5,SNR=10						
JNU				Sn	Sb	21 59 29.3	-0.5
	35nm,0.3s,baz=197,slow=4.0,SNR=1.4						
KSRS	Korea Array	6.23	354	Pn	Pn	21 59 44.8	+1.4
	0.5nm,0.3s,baz=175,slow=14,SNR=7.6						
KSRS				Sn	Sn	22 00 53.0	-2.1
	1.5nm,0.3s,baz=174,slow=24,SNR=6.8						
KSRS				Lg	Lg	22 01 23.8	
	0.8nm,0.3s,baz=171,slow=26,SNR=4.1						
MJAR	Matsushiro Arr	9.45	54	Pn	Pn	22 00 30.5	+2.8
	0.0nm,0.3s,baz=234,slow=13,SNR=2.3						
MJAR				LR	LR	22 04 31.4	
	comp=Z,74nm,18.2s,baz=200,slow=40						
CMAR	Chiang Mai Arr	29.81	252	P	P	22 04 20.3	+1.4
	1.1nm,0.3s,baz=42,slow=8.7,SNR=1.1						
PALK	Pallekele	50.75	252	LR	LR	22 31 06.4	
	comp=Z,139nm,19.4s,baz=251,slow=39						
WRA	Warramunga Arr	51.18	173	P	P	22 07 14.9	-0.3
	0.1nm,0.5s,baz=354,slow=7.8,SNR=2.6						
ASAR	Alice Springs	54.83	174	P	P	22 07 42.7	+0.7
	0.4nm,0.6s,baz=2.4,slow=14,SNR=6.6						

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*IDC **14** 22:03:02.2±0.7, 52°.66N×169°.54W, h0km, mb3.8/12, mb1 4.1/15, mb1mx3.9/48, mbtmp3.9/15, ML3.4/3, Error ellipse: s-maj=23.6km s-min=14.4km az=176.0*

*AEIC **14** 22:03:04.9±2.2, 52°.60N±0°.04×169°.32W±0°.05, h16km±3km, ML3.9/38, mb4.0/35(NEIC), Error ellipse: s-maj=7.0km s-min=2.7km az=152.0*

*NEIC **14** 22:03:07.2±1.8, 52°.75N±0°.08×169°.39W±0°.07, h30km±5km, Error ellipse: s-maj=12.8km s-min=4.6km az=161.0*

ISC 14 22:03:06.8±1.3**, 52°.7N**±0°.1×**169°.37W**±0°.05**, h30**km±8km**, n111, σ1ˢ.01**/114**, mb4.0**/24**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIKH	Nikolski High	0.39	52		Pb	22 03 14.6	-1.0
NIKH					Sb	22 03 22.1	+0.6
OKTU	Okmok Mt. Tuli	1.03	50		Pn	22 03 24.5	-0.8
OKFG	Magazine Ridge	1.11	52		Pn	22 03 25.7	-0.6
OKFG					Sn	22 03 41.5	+0.9
MAPS	Pakushin South	1.81	53		Pn	22 03 35.7	-0.2

MREP	Makushin Rep't	1.91	55		Pn	22 03 37.2	-0.1
MSW	Makushin Switc	1.95	52		Pn	22 03 38.1	+0.3
MNAT	Makushin Natee	1.98	53		Pn	22 03 38.2	-0.1
MNAT					Sn	22 04 03.4	+1.4
MTBL	Makushin Table	2.04	51		Pn	22 03 39.2	+0.1
UNV	Unalaska Valle	2.05	56		Pn	22 03 38.8	-0.4
UNV				Sn	Sn	22 04 04.6	+0.9
AKRB	Akutan Reef Bi	2.42	53		Pn	22 03 44.9	+0.6
AKMO	Akutan Morgan	2.43	55		Pn	22 03 44.6	+0.2
AKBBA	Akutan Broad B	2.47	55		Pn	22 03 45.2	+0.3
AKGG	Akutan Green G	2.50	53		Pn	22 03 45.8	+0.5
AKUT	Akutan	2.57	55		Pn	22 03 46.6	+0.3
AKUT				Sn	Sn	22 04 18.1	+1.6
AKSA	Akutan Strait	2.61	56		Pn	22 03 47.4	+0.6
KOSE	Korovin Southe	2.88	264		Pn	22 03 50.7	0.0
KOFP	Korovin Flat P	2.92	263		Pn	22 03 51.3	+0.1
KOKL	Mount Kliuchef	2.98	264		Pn	22 03 52.0	0.0
WECS	Westdahl Cape	3.27	55		Pn	22 03 56.5	+0.5
WESP	Westdahl Peak	3.28	56		Pn	22 03 56.3	+0.1
SSBA	Shishaldin	3.73	55		Pn	22 04 02.3	+0.1
ISLZ	Isanotski Laza	3.91	57		Pn	22 04 05.2	+0.4
GSIG	Igitkin Island	4.09	262		Pn	22 04 06.7	-0.5
FALS	False Pass	4.12	57		Pn	22 04 09.1	+1.5
GSTR	Great Sitkin T	4.14	264	Pn	Pn	22 04 07.9	-0.1
GSTD	Great Sitkin T	4.20	263		Pn	22 04 08.4	-0.4
SPIA	Saint Paul Isl	4.48	354		Pn	22 04 14.8	+2.2
ADK	Adak	4.57	262		Pn	22 04 13.3	-0.4
KIWB	Kanaga Island	4.86	263	Pn	Pn	22 04 18.5	+0.7
SDPT	Sand Point	5.86	60	Pn	Pn	22 04 33.4	+1.9
CEPE	Semis' Perret	6.77	268		Pn	22 04 44.6	+0.6
AMKA	Amchitka	7.12	264		Pn	22 04 49.5	+0.8
CHGN	Chignik	7.31	56	Pn	Pn	22 04 52.8	+1.4
CHIR	Chirikof Islan	8.62	64	Pn	Pn	22 05 09.7	+0.4
OHAK	Old Harbor	10.27	58	Pn	Pn	22 05 31.2	-0.7
Q19K	Cape Douglas,	10.79	49	Pn	Pn	22 05 41.2	+2.2
KDAK	Kodiak Island	10.82	55	Pn	Pn	22 05 41.3	+1.8
	1.2nm,0.3s,baz=218,slow=6.9,SNR=21						
KDAK				Sn	Sn	22 07 34.6	-4.7
	0.1nm,0.3s,baz=343,slow=19,SNR=0.9						
KDAK	Kodiak Island	10.82	55		Pn	22 05 40.5	+1.1
M19K	Big River Lodg	12.21	35	Pn	Pn	22 06 01.7	+3.2
CAST	Castle Rocks	14.02	33	P	P	22 06 29.5	-1.2
KTH	Kantishna Hill	14.51	34		P	22 06 35.3	-0.8
BPAW	Bear Paw Mtn.	14.84	33		P	22 06 38.8	-1.0
I21K	Tanana	15.29	29	P	P	22 06 45.1	+0.4
I21K				IAmb	IAmb	22 06 54.5	
	comp=Z,8.0nm,0.9s						
KLU	Klutina	15.38	46	Pn	Pn	22 06 40.8	-0.7
KLU				IAmb	IAmb	22 06 48.2	
	comp=Z,10.0nm,0.7s						
H21K	Melozitna Rive	15.41	26		P	22 06 46.2	+0.2
H21K				IAmb	IAmb	22 06 55.5	
	comp=Z,9.5nm,1.4s						
IMAR	Indian Mountai	15.42	24		P	22 06 46.5	+0.4
RAGM	Ragged Mountai	15.54	51	Pn	Pn	22 06 45.5	+1.9
MLY	Manley	15.55	30		P	22 06 48.6	+1.0
MLY				IAmb	IAmb	22 06 49.5	
	comp=Z,8.3nm,1.0s						
NEA2	Nenana	15.80	33	Pn	Pn	22 06 48.5	+1.7
I23K	Minto, Yukon-K	16.06	32	P	P	22 06 52.7	-0.5
I23K				IAmb	IAmb	22 06 58.9	
	comp=Z,19nm,1.4s						
MDM	Murphy Dome	16.31	33	Pn	Pn	22 06 54.0	+0.7
VRDI	Verde Repeater	16.39	49	Pn	Pn	22 06 54.5	0.0
VRDI				IAmb	IAmb	22 07 05.8	
	comp=Z,13nm,1.2s						
IL31		16.65	35	Pn	Pn	22 06 57.9	+0.3
ILAR	Eielson Array	16.65	35	Pn	Pn	22 06 57.4	-0.2
	comp=Z,0.2nm,0.3s,baz=226,slow=12,SNR=8.8						
H24K	Noodor Dome	16.98	31		Pn	22 07 02.7	+0.8
M27K	Edge Creek, AK	17.48	46		P	22 07 09.9	+0.7
BMAR	Burnt Mountain	19.02	30	P	P	22 07 26.3	+0.5
HYT	Haines Junctio	19.08	52	P	Pn	22 07 28.8	+1.1
HYT				IAmb	IAmb	22 07 36.8	
	comp=Z,8.5nm,0.7s						
DAWY	Dawson	19.16	42	P	P	22 07 27.3	-0.2
PETK	Petropavlovsk-	19.77	284	P	P	22 07 33.7	-0.5
	comp=Z,0.1nm,0.3s,baz=42,slow=15,SNR=2.9						
SEY	Seymchan	22.42	312	P	P	22 08 02.6	-0.1
	comp=Z,1.3nm,0.6s,baz=40,slow=6.1,SNR=2.1						
YKA	Yellowknife Ar	30.00	49	P	P	22 09 13.3	+1.0
	comp=Z,0.6nm,0.7s,baz=279,slow=17,SNR=5.0						
YKA	Yellowknife Ar	30.00	49	P	P	22 09 12.3	0.0
B08A	Colville Reser	31.57	78	P	P	22 09 27.3	+1.0
B08A				IAmb	IAmb	22 09 43.1	
	comp=Z,5.3nm,1.3s						
TIXI	Tiksi	32.42	329	P	P	22 09 32.7	-0.8
	comp=Z,0.7nm,0.3s,baz=109,slow=9.5,SNR=2.8						
TIXI				PcP	PcP	22 12 20.1	+0.1
	comp=Z,1.6nm,0.7s,baz=63,slow=1.3,SNR=6.2						
NEW	Newport	32.92	76	P	P	22 09 39.4	+1.1
NEW				IAmb	IAmb	22 09 46.8	
	comp=Z,2.8nm,0.8s						
MCMT	McKenzie Canyo	37.21	79	P	P	22 10 16.4	+1.0
NVAR	Mina Array Bea	37.67	91	P	P	22 10 21.0	+1.6
	comp=Z,0.6nm,0.6s,baz=295,slow=9.7,SNR=4.0						
NVAR				PcP	PcP	22 12 36.6	+0.4
	comp=Z,0.3nm,0.5s,baz=356,slow=2.7,SNR=2.4						
H11N2	WAKE ISLAND Hy	37.74	218	T	T	22 50 19.7	
	baz=24,slow=76,SNR=218						
H11N3	WAKE ISLAND Hy	37.74	218	T	T	22 50 16.7	
	baz=24,slow=76,SNR=277						
H11N1	WAKE ISLAND Hy	37.76	218	T	T	22 50 21.0	
	baz=24,slow=76,SNR=231						
ELK	Elko	38.11	86	P	P	22 10 24.4	+1.3
ELK				IAmb	IAmb	22 10 25.8	
	comp=Z,1.8nm,0.9s						
YHH	Holmes Hill	38.42	78	P	P	22 10 26.7	+1.0
YHH				IAmb	IAmb	22 10 27.4	
	comp=Z,2.7nm,0.6s						
H11S1	WAKE ISLAND Hy	38.93	218	T	T	22 51 46.6	
	baz=23,slow=76,SNR=1631						
H11S2	WAKE ISLAND Hy	38.94	218	T	T	22 51 50.0	
	baz=23,slow=76,SNR=1438						
H11S3	WAKE ISLAND Hy	38.95	218	T	T	22 51 47.8	
	baz=23,slow=76,SNR=1225						
DUG	Dugway, Tooele	39.91	85	P	P	22 10 38.8	+0.8
DUG				IAmb	IAmb	22 10 40.5	
	comp=Z,4.6nm,1.2s						
PSUT	Pine Spring	40.31	88	P	P	22 10 42.3	+0.8
PSUT				IAmb	IAmb	22 10 43.5	
	comp=Z,2.7nm,1.0s						
BW06	Boulder Array	40.34	80	P	P	22 10 42.0	+0.4
BW06				IAmb	IAmb	22 10 49.1	
	comp=Z,2.5nm,0.8s						
PD31	Pinedale Array	40.34	80	P	P	22 10 41.9	+0.2
PD31				IAmb	IAmb	22 10 49.1	
	comp=Z,2.4nm,0.8s						
PDAR	Pinedale Array	40.34	80	P	P	22 10 42.2	+0.6
	comp=Z,1.1nm,0.6s,baz=305,slow=4.2,SNR=10						
PDAR	Pinedale Array	40.34	80	P	P	22 10 41.7	+0.1
TMUT	Trail Mountain	41.44	85	P	P	22 10 51.9	+1.1
TMUT				IAmb	IAmb	22 10 53.2	
	comp=Z,3.9nm,1.0s						
U15A	North Rim	42.62	89	P	P	22 11 01.5	+1.0
U15A				IAmb	IAmb	22 11 08.9	
	comp=Z,1.7nm,0.8s						
O20A	White River Ci	42.71	82	P	P	22 11 02.0	+0.9
WUAZ	Wupatki	43.78	89	P	P	22 11 11.1	+1.5
WUAZ				IAmb	IAmb	22 11 12.0	
	comp=Z,4.9nm,0.8s						
MNTX	Cornudas Mount	50.03	88	P	P	22 11 59.8	+1.4
SONM	Songino Array	51.11	301	P	P	22 12 06.2	-0.3
	comp=Z,0.3nm,0.7s,baz=51,slow=5.3,SNR=2.1						
SONM				PcP	PcP	22 13 22.0	+0.2
	comp=Z,1.6nm,0.7s,baz=73,slow=2.6,SNR=12						
SONM	Songino Array	51.11	301	P	P	22 12 07.3	+0.8
TX31	Lajitas Ar. Si	52.74	89	P	P	22 12 19.6	+0.8
TXAR	Lajitas Array	52.74	89	P	P	22 12 19.6	+0.7
	comp=Z,3.2nm,0.6s,baz=301,slow=5.4,SNR=56						
TXAR				PcP	PcP	22 13 28.9	+0.7
	comp=Z,0.3nm,0.5s,baz=318,slow=1.2,SNR=1.7						
H06N1	SOCORRO T-PHAS	56.15	104	T	T	23 13 25.7	
	SNR=6.7						
ZALV	Zalesovo Beam	57.15	317	PcP	PcP	22 13 44.5	-0.1
	comp=Z,0.3nm,0.3s,baz=20,slow=4.6,SNR=2.3						
ARCES	ARCESS Array B	57.56	354	PcP	PcP	22 13 46.1	+0.1
	comp=Z,4.5nm,0.9s,baz=10,slow=5.5,SNR=3.9						
SSPA	Standing Stone	59.80	62	P	P	22 13 09.0	+0.1
T59A	Double "B" Far	62.62	64	P	P	22 13 27.8	-0.2
MKAR	Makanchi Array	63.55	313	P	P	22 13 33.8	-0.3
	comp=Z,0.5nm,0.7s,baz=53,slow=6.3,SNR=5.1						
MKAR	Makanchi Array	63.55	313	P	P	22 13 33.9	-0.2
FINES	FINESS Array B	65.51	352	P	P	22 13 46.5	-0.1
	comp=Z,2.3nm,0.8s,baz=9.8,slow=9.0,SNR=4.5						
ABKAR	Akbulak array	70.12	328	P	P	22 14 15.9	+0.1
ABKAR	Akbulak array	70.12	328	P	P	22 14 15.7	-0.1
ABKAR				IAmb	IAmb	22 14 34.3	
	comp=Z,2.6nm,1.4s						
KKAR	Karatay Array	71.52	318	P	P	22 14 22.7	-1.8
AKBB	Malin Array Si	75.75	348	P	P	22 14 48.5	-0.6
BUR08	Bucovina Ar. S	79.23	350	P	P	22 15 08.5	-0.3
WB0	Warramunga Arr	87.05	232	P	P	22 15 47.9	-1.4
ESDC	Sonseca Array	87.10	11	P	P	22 15 49.3	-0.1
	comp=Z,0.4nm,0.6s,baz=351,slow=4.5,SNR=11						
ESDC	Sonseca Array	87.10	11	P	P	22 15 49.1	-0.4
WRA	Warramunga Arr	87.23	232	P	P	22 15 49.0	-1.1
	comp=Z,0.5nm,0.7s,baz=32,slow=5.8,SNR=5.0						
PSI	Prapat	88.83	273	P	P	22 15 58.3	+0.2
	comp=Z,5.6nm,0.7s,baz=18,slow=6.4,SNR=3.5						
RPSI	Rantau Prapat	88.91	273	P	P	22 15 58.3	0.0
ASAR	Alice Springs	90.63	230	P	P	22 16 05.7	-0.4
	comp=Z,0.8nm,0.6s,baz=27,slow=4.7,SNR=16						

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*NEIC **14** 22:09:53.6±1.4, 7°.0N±0°.1×94°.4E±0°.1, h10^{km}±1^{km}, mb4.3/16, Error ellipse: s-maj=28.7km s-min=13.7km az=219.0*

*IDC **14** 22:09:58.6±3.6, 7°.02N×94°.42E, h48^{km}±36^{km}, mb3.3/10, mb1 3.6/12, mb1mx3.4/33, mbtmp3.6/12, ML4.0/2, Error ellipse: s-maj=46.3km s-min=16.1km az=63.0*

ISC 14 22:09:55.5±0.6, **7°.0N**±0°.1×**94°.4E**±0°.1, **h26**^{km}, **n35**, σ**1ˢ.12**/35, **mb3.9**/15, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	3.11	124	Pn	Pn	22 10 41.2	-1.7
LHMI				Sn	Sn	22 11 20.4	+1.1
PSI	Prapat	6.17	132	P	Pn	22 11 28.0	+2.9
	0.7nm,0.3s,baz=329,slow=17,SNR=1.5						
PSI				S	Sn	22 12 38.5	+3.6
	baz=322,slow=18,SNR=1.2						
RPSI	Rantau Prapat	6.24	133		Pn	22 11 28.0	+2.0
GSI	Gunungsitoli	6.50	150	Pn	Pn	22 11 28.3	-1.2
CMAR	Chiang Mai Arr	12.24	21	P	Pn	22 12 50.6	+2.4
	0.7nm,0.3s,baz=219,slow=13,SNR=4.1						
MNAI	Manna	14.17	143	Pn	Pn	22 13 12.2	-2.5
ENH	Enshi	27.17	30	P	P	22 15 37.7	+0.7
ENH				IAmb	IAmb	22 15 44.1	
	comp=Z,12nm,1.5s						
NIL	Nilore	32.95	326	P	P	22 16 27.3	-0.9
DRK	Karamyk	38.18	331	P	P	22 17 13.2	-0.1
DRK				IAmb	IAmb	22 17 22.9	
	comp=Z,5.3nm,0.7s						
GAR	Garm	38.54	329	P	P	22 17 16.1	-0.1
GAR				IAmb	IAmb	22 17 23.4	
	comp=Z,8.8nm,1.1s						
CHGR	Chuyangaron	38.88	328	P	P	22 17 18.4	-0.6
BTK	Batken	39.10	331	P	P	22 17 20.0	-0.8
MK31	Makanchi Array	40.99	347	P	P	22 17 36.1	-0.3
MKAR	Makanchi Array	40.99	347	P	P	22 17 36.1	-0.2
	comp=Z,0.6nm,0.7s,baz=166,slow=8.5,SNR=9.6						
MKAR	Makanchi Array	40.99	347	P	P	22 17 35.8	-0.5
MAKZ	Makanchi	41.07	347	P	P	22 17 36.2	-0.8
SONM	Songino Array	41.97	12	P	P	22 17 45.4	+0.9
	comp=Z,0.5nm,0.8s,baz=191,slow=6.8,SNR=2.8						
ZALV	Zalesovo Beam	47.45	352	P	P	22 18 27.8	-0.1
	comp=Z,0.3nm,0.3s,baz=142,slow=4.9,SNR=1.7						
ZALV	Zalesovo Beam	47.45	352	P	P	22 18 27.5	-0.4
WB0	Warramunga Arr	47.53	125	P	P	22 18 29.2	+0.1
WRA	Warramunga Arr	47.58	125	P	P	22 18 28.7	-0.8
	comp=Z,0.6nm,0.9s,baz=304,slow=9.0,SNR=3.2						
WRA	Warramunga Arr	47.58	125	P	P	22 18 28.8	-0.6
ASAR	Alice Springs	49.19	130	P	P	22 18 42.1	+0.3
	comp=Z,0.4nm,0.6s,baz=300,slow=7.8,SNR=5.5						
ASAR	Alice Springs	49.19	130	P	P	22 18 41.9	0.0
RAYN	Ar Rayn	49.65	295	P	P	22 18 46.0	+0.5
RAYN				IAmb	IAmb	22 19 03.0	
	comp=Z,2.7nm,1.1s						
ABKAR	Akbulak array	51.10	332	P	P	22 18 56.2	+0.3
ABKAR	Akbulak array	51.10	332	P	P	22 18 55.6	-0.3
ABKAR				IAmb	IAmb	22 19 05.5	
	comp=Z,3.9nm,0.9s						
BRTR	Keskin Array B	63.17	311	P	P	22 20 20.9	-0.7
	comp=Z,0.5nm,0.8s,baz=102,slow=7.4,SNR=2.4						
BRTR	Keskin Array B	63.17	311	P	P	22 20 21.2	-0.5
GERES	GERESS Array B	78.62	318	P	P	22 21 55.9	+0.6
	comp=Z,0.2nm,0.5s,baz=111,slow=5.6,SNR=2.2						
GERES	GERESS Array B	78.62	318	P	P	22 21 54.7	-0.7
TORD	Torodi Ar. Bea	91.01	283	P	P	22 22 59.6	+1.3
	comp=Z,0.2nm,0.7s,baz=86,slow=2.0,SNR=1.6						
TORD	Torodi Ar. Bea	91.01	283	P	P	22 22 58.5	+0.2
TORD				IAmb	IAmb	22 23 07.0	
	comp=Z,1.3nm,1.1s						
ESDC	Sonseca Array	91.95	310	P	P	22 23 03.1	+0.8
	comp=Z,0.5nm,0.9s,baz=72,slow=4.1,SNR=3.1						
VNDA	Vanda	92.03	168	P	P	22 23 02.5	+0.9
	comp=Z,0.9nm,1.0s,baz=340,slow=2.4,SNR=2.4						

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*IDC **14** 22:11:26.2±1.1, 7°.63N×95°.07E, h0^{km}, mb3.7/8, mb1 3.9/10, mb1mx3.7/33, mbtmp3.7/10, ML3.8/2, Error ellipse: s-maj=47.7km s-min=19.8km az=55.0*

*NEIC **14** 22:11:28.7±1.3, 7°.4N±0°.2×94°.8E±0°.2, h10^{km}±1^{km}, mb4.4/20, Error ellipse: s-maj=37.7km s-min=12.1km az=226.0*

ISC 14 22:11:27.9±0.7, **7°.4N**±0°.1×**94°.8E**±0°.2, **h10**^{km}, **n31**, σ**1ˢ.01**/32, **mb4.1**/16, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	3.03	136	Pn	Pn	22 12 16.1	+0.2
LHMI				Sn	Sn	22 12 54.3	+2.0
PSI	Prapat	6.14	138	Pn	Pn	22 12 59.3	+0.4
	0.4nm,0.3s,baz=341,slow=15,SNR=2.1						
PSI				Sn	Sn	22 14 08.9	-0.4
	0.2nm,0.3s,baz=336,slow=20,SNR=1.6						
RPSI	Rantau Prapat	6.22	139		Pn	22 12 59.3	-0.5
CMAR	Chiang Mai Arr	11.68	20	Pn	Pn	22 14 10.2	-4.5
	0.8nm,0.3s,baz=232,slow=10,SNR=1.6						
LSA	Lhasa	22.43	352	P	P	22 16 28.5	+1.0
NIL	Nilore	32.85	326	P	P	22 18 01.5	-0.5
TNTI	Ternate	33.11	100	P	P	22 18 03.4	-1.0
KBL	Kabul	35.94	322	P	P	22 18 30.6	+1.6
KBL				IAmb	IAmb	22 18 35.6	
	comp=Z,2.2nm,0.8s						
TARG	Taragay, Kyrgy	37.35	339	P	P	22 18 41.5	+0.3
TARG				IAmb	IAmb	22 19 07.9	
	comp=Z,4.6nm,1.5s						
DRK	Karamyk	38.03	331	P	P	22 18 47.5	+0.7
DRK				IAmb	IAmb	22 18 56.7	
	comp=Z,7.9nm,0.6s						
CHGR	Chuyangaron	38.77	327	P	P	22 18 52.3	-0.5
CHGR				IAmb	IAmb	22 19 01.1	
	comp=Z,10nm,0.8s						
BTK	Batken	38.96	330	P	P	22 18 54.1	-0.3
AAK	Ala-Archa	39.39	336	P	P	22 18 59.3	+1.3
MK31	Makanchi Array	40.68	347	P	P	22 19 09.1	+0.6
MKAR	Makanchi Array	40.68	347	P	P	22 19 06.3	-2.2
	comp=Z,0.5nm,0.7s,baz=174,slow=7.2,SNR=4.2						
MKAR	Makanchi Array	40.68	347	P	P	22 19 09.0	+0.5
MAKZ	Makanchi	40.77	346		P	22 19 10.1	+0.9
SONM	Songino Array	41.46	12	P	P	22 19 13.2	-1.8
	comp=Z,0.2nm,0.7s,baz=190,slow=7.3,SNR=1.6						
GEYT	Alibeck	44.99	318	P	P	22 19 45.3	+1.7
	comp=Z,1.2nm,0.5s,baz=145,slow=5.3,SNR=1.9						
WB0	Warramunga Arr	47.40	125	P	P	22 20 02.5	-0.3
WB0				IAmb	IAmb	22 20 14.2	
	comp=Z,3.6nm,1.1s						
WRA	Warramunga Arr	47.45	126	P	P	22 20 03.0	-0.2
	comp=Z,0.4nm,0.6s,baz=307,slow=8.5,SNR=2.4						
WR0	Warramunga Arr	47.62	126	P	P	22 20 05.1	+0.6
ASAR	Alice Springs	49.11	130	P	P	22 20 15.2	-0.7
	comp=Z,0.5nm,0.6s,baz=300,slow=7.9,SNR=4.8						
FORT	Forrest	49.56	142	P	P	22 20 19.5	+0.3
RAYN	Ar Rayn	49.89	294	P	P	22 20 21.5	-0.5
RAYN				IAmb	IAmb	22 20 32.9	
	comp=Z,2.7nm,1.1s						
ABKAR	Akbulak array	50.95	331	P	P	22 20 29.9	+0.4
ABKAR	Akbulak array	50.95	331	P	P	22 20 29.8	+0.2
ABKAR				IAmb	IAmb	22 20 45.2	
	comp=Z,7.4nm,1.4s						
TIXI	Tiksi	67.55	11	P	P	22 22 25.7	+1.7
TIXI				IAmb	IAmb	22 22 40.0	
	comp=Z,5.3nm,1.4s						
FINES	FINESS Array B	73.43	332	P	P	22 22 59.7	-0.5
	comp=Z,3.5nm,1.0s,baz=97,slow=9.9,SNR=2.3						
GERES	GERESS Array B	78.61	318	P	P	22 23 29.4	-0.8
	comp=Z,0.8nm,0.9s,baz=76,slow=4.1,SNR=2.0						
ESDC	Sonseca Array	92.03	310	P	P	22 24 37.0	-0.5
	comp=Z,0.3nm,0.9s,baz=61,slow=3.8,SNR=2.0						

NOU 14 22:14:13.2, 15°.57S×**172°.87W, h0**^{km}**, MLv3.9**/4**, Samoa Islands Region, Samoa Islands region**

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*IDC **14** 22:31:01.9±4.3, 35°.61N×54°.99E, h0^{km}, mb2.8/1, mb1 3.6/6, mb1mx3.2/49, mbtmp3.5/6, ML3.4/4, Error ellipse: s-maj=64.8km s-min=22.6km az=2.0*

*TEH **14** 22:31:08.5, 36°.75N×55°.01E, h9^{km}, ML3.5*

*THR **14** 22:31:09.6±0.9, 36°.75N×55°.04E, h16^{km}±9^{km}, ML3.3*

ISC 14 22:31:09.1±0.8, **36°.76N**±0°.04×**55°.02E**±0°.04, **h10**^{km}, **n62**, σ**1ˢ.61**/63, **Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IMND	Minoodasht	0.59	31	*e*Pg	Pg	22 31 19.9	-0.7
IMND				*e*Sg	Sg	22 31 28.7	+0.4
SHRO	Shahrood	1.10	133	*e*Pg	Pn	22 31 30.1	-0.7
SHRO				IAML		22 31 49.3	
	comp=E,338nm,0.4s						
SHRO	Shahrood	1.10	133	*e*Pg	Pn	22 31 30.1	-0.7
MRVT	Maraveh tapeh	1.24	43	*e*Pg	Pn	22 31 32.3	-0.4
MRVT				IAML		22 31 52.2	
	comp=N,467nm,0.6s						
MRVT				IAML		22 31 54.5	
	comp=E,450nm,0.4s						
MRVT	Maraveh tapeh	1.24	43	*e*Pg	Pn	22 31 32.3	-0.4
IANJ	Anjilo	1.57	215	*e*Pn	Pb	22 31 37.1	-1.3
IANJ				*e*		22 32 00.6	
	comp=Z,5µm,0.2s						
SBZV	Sabzevar	2.12	99	*e*Pn	Pb	22 31 46.2	-1.5
BJRD	Bojnurd	2.12	63	*e*Pn	Pb	22 31 46.5	-1.3
BJRD	Bojnurd	2.12	63	*e*Pn	Pb	22 31 46.5	-1.3
IFIR	Firoozkooh	2.15	239	*e*Pn	Pb	22 31 47.0	-1.2
IFIR				*e*		22 31 49.3	
	comp=Z,4µm,0.4s						
ILAS	Lasjerd	2.16	231	*e*Pn	Pb	22 31 46.6	-1.9
ILAS				*e*		22 31 50.6	
	comp=Z,3µm,0.2s						
IDMV	Damavand	2.69	245	*e*Pn	Pn	22 31 54.1	+1.4
IDMV				*e*		22 31 58.5	
	comp=Z,3µm,0.4s						
DAMV	Damavand	2.71	246	*e*Pn	Pb	22 31 55.5	-2.4
DAMV	Damavand	2.71	246	*e*Pn	Pb	22 31 55.5	-2.4
GEYT	Alibeck	2.73	64	Pn	Pn	22 31 55.1	+2.0
	comp=Z,5.5nm,0.3s,baz=230,slow=11,SNR=78						
GEYT				Sn	Sg	22 32 37.0	+0.1
	comp=Z,3.7nm,0.3s,baz=151,slow=3.4,SNR=1.8						
IEMG	Emamgholi	2.98	76	*e*Pn	Pn	22 31 58.5	+1.8
IAKL	Akhelmad	3.01	92	*e*Pn	Pn	22 31 58.7	+1.6
IAKL				*e*		22 32 20.8	
	comp=Z,689nm,0.4s						
TNSJ	Nastanj	3.07	155	*e*Pn	Pn	22 31 58.8	+1.0
IVRN	Varamin	3.20	238	*e*Pn	Pn	22 32 00.5	+0.9
CHTH	Charan	3.26	256	*e*Pn	Pn	22 32 02.7	+2.2
CHTH	Charan	3.26	256	*e*Pn	Pn	22 32 02.7	+2.2
ISFB	Sefidab	3.30	224	*e*Pn	Pn	22 32 01.6	+0.6
ISFB				*e*		22 32 57.5	
	comp=Z,562nm,0.3s						
QALM	Alamut, Qazvin	3.54	266	*e*Pn	Pn	22 32 05.5	+1.2
IMOG	Moghan	3.54	99	*e*		22 32 14.8	
	comp=Z,588nm,0.5s						
IMOG				*e*Pn	Pn	22 32 06.5	+2.1
TABS	Tabas	3.54	150	*e*Pn	Pn	22 32 06.1	+1.8
TABS				IAML		22 32 51.1	
	comp=N,42nm,0.3s						
TABS	Tabas	3.54	150	*e*Pn	Pn	22 32 06.1	+1.8
TKDS	Koohdasht(Taba	3.58	151	*e*Pn	Pn	22 32 06.1	+1.3
IKRD	Kardeh	3.61	88	*e*Pn	Pn	22 32 07.1	+1.8
IKRD				*e*		22 33 26.8	
	comp=Z,424nm,0.6s						
KRSH	Karshahi	3.65	221	*e*Pn	Pn	22 32 06.5	+0.7
KRSH				*e*		22 33 11.8	
	comp=Z,973nm,0.8s						
ANAR	Anarak	3.71	197	*e*Pn	Pn	22 32 07.2	+0.5
IQOM	Qom	3.74	240	*e*Pn	Pn	22 32 08.6	+1.5
GHVR	GHOM	3.79	234	*e*Pn	Pn	22 32 09.5	+1.8
GHVR	GHOM	3.79	234	*e*Pn	Pn	22 32 09.5	+1.8
TPRV	Parvadeh(Tabas	3.96	159	*e*Pn	Pn	22 32 11.5	+1.4
IMYA	Miami	4.11	94	*e*Pn	Pn	22 32 13.8	+1.6
JIR1	Jirandeh	4.19	271	*e*Pn	Pn	22 32 13.6	+0.3
QAMS	Qamsar	4.23	226	*e*Pn	Pn	22 32 14.4	+0.5
IRAZ	Razeghan	4.34	253	*e*Pn	Pn	22 32 17.3	+1.9
YZKH	Yazd	4.37	185	*e*Pn	Pn	22 32 16.9	+1.2
YZKH				IAML		22 33 09.2	
	comp=E,39nm,0.6s						
YZKH				IAML		22 33 10.3	
	comp=N,26nm,0.6s						
YZKH	Yazd	4.37	185	*e*Pn	Pn	22 32 16.9	+1.2
IKLH	Kolahrood	4.44	220	*e*Pn	Pn	22 32 18.3	+1.5
IZEF	Zefreh	4.44	211	*e*Pn	Pn	22 32 18.2	+1.4
QABG	Abgarm-Qazvin	4.52	258	*e*Pn	Pn	22 32 20.6	+2.7
ICHK	Chekchek	4.53	187	*e*Pn	Pn	22 32 19.0	+1.0
TBJM	Torbat-e-JAM	4.55	107	*e*Pn	Pn	22 32 19.6	+1.4
ASAO	Ashtian	4.63	243	*e*Pn	Pn	22 32 21.6	+2.3
ASAO	Ashtian	4.63	243	*e*Pn	Pn	22 32 21.6	+2.3
QSDN	Sirdan	4.71	269	*e*Pn	Pn	22 32 22.2	+1.7
ISAD	Sadrabad	4.95	193	*e*Pn	Pn	22 32 24.3	+0.4
IGAR	Gharneh	4.99	210	*e*Pn	Pn	22 32 25.7	+1.4
SHRT	Shahrakht	5.31	124	*e*Pn	Pn	22 32 30.8	+2.2
SHRT	Shahrakht	5.31	124	*e*Pn	Pn	22 32 30.8	+2.2
IMEH	Mehriz	5.36	184	*e*Pn	Pn	22 32 30.3	+0.9
IRAM	Ramesheh	5.40	205	*e*Pn	Pn	22 32 31.6	+1.7
BSRN	Basiran	5.86	143	*e*Pn	Pn	22 32 37.8	+1.6
BSRN	Basiran	5.86	143	*e*Pn	Pn	22 32 37.8	+1.6
KLNJ	Kolanjah	6.40	207	*e*Pn	Pn	22 32 45.5	+1.7
GNI	Garni	8.75	296	Pn	Pn	22 33 17.9	+2.1
	comp=N,0.3nm,0.3s,baz=127,slow=15,SNR=1.7						
KBZ	Khabaz	11.58	311	Pn	Pn	22 34 00.7	+6.2
	comp=N,0.1nm,0.3s,baz=138,slow=19,SNR=1.1						
AKTO	Aktyubinsk	13.84	8	Pn	P	22 34 32.9	-0.8
	comp=N,0.2nm,0.3s,baz=262,slow=7.3,SNR=2.4						
AAK	Ala-Archa	16.09	63	Pn	Pn	22 34 53.7	-1.8
	comp=N,0.2nm,0.3s,baz=224,slow=9.8,SNR=7.2						
MKAR	Makanchi Array	22.57	55	P	P	22 36 12.5	+3.0
	comp=N,0.2nm,0.5s,baz=248,slow=12,SNR=2.6						

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*NIED **14** 22:34:58.8, 30°.91N×128°.58E, h17^{km}, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-3.26; $M_{\theta\theta}$4.30; $M_{\phi\phi}$-1.04; $M_{r\theta}$2.33; $M_{\theta\phi}$2.62; $M_{\phi r}$-2.46; Fault plane solution: $M_0$5.77000×10^{15} NP1: ϕ_s281.00000°, δ64.00000°, λ-47.00000°. NP2: ϕ_s36.00000°, δ49.00000°, λ-145.00000°.*

*JMA **14** 22:34:58.7±0.3, 30°.91N×128°.58E, h17^{km}, M4.3*

*IDC **14** 22:34:59.8±0.6, 30°.87N×128°.55E, h0^{km}, mb4.1/15, mb1 4.2/21, mb1mx4.0/53, mbtmp4.1/21, ML3.4/6, MS3.7/23, Ms1 3.7/23, ms1mx3.6/40, Error ellipse: s-maj=17.1km s-min=13.5km az=85.0*

*NEIC **14** 22:35:00.9±1.4, 30°.89N±0°.06×128°.71E±0°.07, h10^{km}±1^{km}, mb4.3/17, Error ellipse: s-maj=11.7km s-min=8.7km az=136.0*

*KMA **14** 22:35:45.3±1.4, 33°.47N×125°.97E, h0^{km}±998^{km}, Error ellipse: s-maj=17.6km s-min=1.5km az=275.0*

ISC 14 22:34:59.8±3.0, **30°.91N**±0°.04×**128°.71E**±0°.04, **h3**^{km}±19^{km}, **n85**, σ**1ˢ.24**/86, **mb4.2**/24, **MS3.8**/17, **Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	1.15	48	P	Pb	22 35 20.7	-1.6
JSJ				*e*S	Sb	22 35 36.5	-1.2
JKC	Kuchinoerabu	1.36	109	P	Pn	22 35 24.4	-1.2
JKC				*e*S	Sn	22 35 43.9	-0.3
JNN	Nakanoshima	1.47	136	P	Pn	22 35 25.7	-1.5
JNN				*e*S	Sn	22 35 46.0	-1.0
JSU	Suzuyama	1.61	68	P	Pn	22 35 28.7	-0.4
JSU				*e*S	Sn	22 35 49.9	-0.5
JSU	Suzuyama	1.61	68	Pn	Pn	22 35 28.8	-0.4
JSU				Sn	Sn	22 35 50.5	0.0
JYAK	Yakushimahirau	1.70	113	P	Pn	22 35 28.7	-1.6
JYAK				*e*S	Sn	22 35 50.6	-1.9
JFU	Fukue jima 2	1.74	1	P	Pn	22 35 29.1	-1.7
JFU				*e*S	Sn	22 35 51.0	-2.5
JMTN	Minamitane	1.96	105	P	Pn	22 35 32.4	-1.5
JMTN				*e*S	Sn	22 35 57.0	-2.0

JTN	**Tanegashima 3**	**1.98**	**97**	P	**Pn**	**22 35 33.0**	**-1.1**
JTN				*e*S	**Sn**	**22 35 57.5**	**-1.9**
JTZ	**Takazaki**	**2.26**	**64**	P	**Pn**	**22 35 37.9**	**-0.2**
JNU	**Nakatsue**	**2.87**	**39**	Pn	**Pn**	**22 35 47.5**	**+0.9**
	48nm,0.3s,baz=261,slow=0.0,SNR=1.4						
JNU				Sn	**Sb**	**22 36 25.3**	**-2.0**
	baz=236,slow=22,SNR=5.9						
GOS1	**Gosan-ri**	**3.18**	**319**	P	**Pn**	**22 35 50.0**	**-0.7**
	SNR=11						
GOS2	**Gosang-Q330s**	**3.19**	**319**	P	**Pn**	**22 35 50.0**	**-0.8**
	SNR=11						
HALB	**Hallimjungang-**	**3.23**	**321**	P	**Pn**	**22 35 51.0**	**-0.3**
	SNR=6.6						
JTU	**Tsushima**	**3.65**	**9**	Pn	**Pn**	**22 35 57.5**	**+0.4**
CJD	**Chujado**	**3.66**	**327**	P	**Pn**	**22 35 56.0**	**-1.3**
	SNR=13						
JOW	**Kunigami**	**4.08**	**185**	Pn	**Pn**	**22 36 03.1**	**0.0**
	3.3nm,0.3s,baz=26,slow=8.1,SNR=3.2						
JOW				Sn	**Sn**	**22 36 51.5**	**0.0**
	baz=6.0,slow=19,SNR=1.2						
JOW				LR	LR	22 37 52.9	
	comp=Z,1µm,19.9s,baz=78,slow=43						
HUK2	**Heuksan-myeon**	**4.65**	**325**	P	**Pn**	**22 36 10.0**	**-1.0**
	SNR=23						
JMN	**Monobe**	**5.20**	**56**	Pn	**Pn**	**22 36 20.1**	**+1.6**
JHS	**Saijyo**	**5.51**	**41**	Pn	**Pn**	**22 36 23.1**	**+0.3**
KSAR	**Wonju Array Be**	**6.55**	**354**	Pn	**Pn**	**22 36 37.6**	**+0.7**
KSRS	**Korea Array**	**6.55**	**355**	Pn	**Pn**	**22 36 37.1**	**+0.1**
	0.6nm,0.3s,baz=176,slow=15,SNR=20						
KSRS				Pg	Pg	22 37 01.9	-3.4
	1.0nm,0.3s,baz=179,slow=15,SNR=6.2						
KSRS				Sn	**Sn**	**22 37 50.6**	**-1.7**
	1.4nm,0.3s,baz=175,slow=22,SNR=4.7						
KSRS				Lg	Lg	22 38 20.9	
	2.1nm,0.3s,baz=177,slow=28,SNR=6.7						
KSRS				LR	LR	22 39 18.1	
	comp=Z,1µm,18.4s,baz=170,slow=39						
KS19	**Wonju Array Si**	**6.61**	**354**	Pn	**Pn**	**22 36 38.5**	**+0.7**
JWT	**Wachi**	**7.11**	**50**	Pn	**Pn**	**22 36 46.3**	**+1.7**
INU	**Inuyama**	**8.25**	**55**	Pn	**Pn**	**22 37 02.2**	**+1.8**
JGF	**Kuroka**	**8.62**	**55**	Pn	**Pn**	**22 37 08.1**	**+2.6**
YHNB	**Yeheng**	**8.99**	**228**	Pn	**Pn**	**22 37 11.6**	**+1.0**
MAJO	**Matsushiro**	**9.70**	**52**	Pn	**Pn**	**22 37 22.0**	**+1.7**
MJAR	**Matsushiro Arr**	**9.70**	**52**	Pn	**Pn**	**22 37 23.1**	**+2.9**
	0.0nm,0.3s,baz=235,slow=13,SNR=2.7						
MJAR				LR	LR	22 40 57.6	
	comp=Z,221nm,20.9s,baz=255,slow=36						
MJAR	**Matsushiro Arr**	**9.70**	**52**		**Pn**	**22 37 22.1**	**+1.8**
SSLB	**Suanglung**	**9.89**	**226**	Pn	**Pn**	**22 37 24.5**	**+1.6**
YULB	**Yu-li**	**9.98**	**223**	Pn	**Pn**	**22 37 25.0**	**+0.9**
JCJ	**Chichijima**	**12.40**	**105**	LR	LR	22 42 09.7	
	comp=Z,187nm,19.4s,baz=90,slow=34						
USRK	**Ussuriysk Ar.**	**13.51**	**10**	LR	LR	22 42 56.2	
	comp=Z,214nm,20.7s,baz=173,slow=35						
ENH	**Enshi**	**16.56**	**273**	P	**P**	**22 38 55.0**	**-0.8**
ENH				IAmb	IAmb	22 38 58.1	
	comp=Z,33nm,1.4s						
XAN	**Xi'an**	**16.98**	**286**	P	**P**	**22 39 01.8**	**+1.4**
ASAJ	**Asahikawa**	**17.15**	**36**	P	**P**	**22 39 02.0**	**0.0**
	comp=Z,0.1nm,0.3s,baz=229,slow=19,SNR=2.0						
KLR	**Kul'dur**	**18.44**	**6**	P	**Pn**	**22 39 18.5**	**+2.2**
	comp=Z,0.2nm,0.3s,baz=197,slow=9.6,SNR=7.6						
KLR				LR	LR	22 46 03.6	
	comp=Z,104nm,18.9s,baz=184,slow=36						
HIA	**Hailar**	**19.55**	**342**	P	**P**	**22 39 28.6**	**+0.1**
GUMO	**Guam**	**22.78**	**136**	P	**P**	**22 40 05.1**	**+1.6**
	comp=Z,122nm,1.1s,baz=28,slow=6.0,SNR=2.8						
SONM	**Songino Array**	**24.01**	**321**	P	**P**	**22 40 15.4**	**-0.5**
	comp=Z,1.7nm,0.9s,baz=137,slow=9.3,SNR=10						
SONM				LR	LR	22 50 08.2	
	comp=Z,358nm,20.1s,baz=146,slow=38						
SONM	**Songino Array**	**24.01**	**321**	P	**P**	**22 40 15.3**	**-0.5**
CMAR	**Chiang Mai Arr**	**29.65**	**252**	P	**P**	**22 41 07.0**	**+0.3**
	comp=Z,0.9nm,0.3s,baz=45,slow=9.0,SNR=4.3						
CMAR				LR	LR	22 53 39.7	
	comp=Z,87nm,18.2s,baz=82,slow=38						
PETK	**Petropavlovsk-**	**30.56**	**35**	LR	LR	22 53 36.7	
	comp=Z,132nm,18.1s,baz=222,slow=36						
LSA	**Lhasa**	**32.35**	**278**	P	**P**	**22 41 30.2**	**-0.8**
SHL	**Shillong**	**32.77**	**270**	P	**P**	**22 41 33.2**	**-1.2**
SHL				IAmb	IAmb	22 41 34.2	
	comp=Z,4.6nm,1.0s						
MK31	**Makanchi Array**	**38.87**	**308**	P	**P**	**22 42 25.3**	**-1.0**
MKAR	**Makanchi Array**	**38.87**	**308**	P	**P**	**22 42 25.8**	**-0.6**
	comp=Z,3.2nm,0.9s,baz=98,slow=10,SNR=16						
MKAR				PcP	**PcP**	**22 44 37.0**	**-0.3**
	comp=Z,1.5nm,0.8s,baz=78,slow=6.6,SNR=5.7						
MKAR				LR	LR	22 59 30.9	
	comp=Z,109nm,19.4s,baz=86,slow=38						
ZALV	**Zalesovo Beam**	**38.88**	**319**	PcP	**PcP**	**22 44 36.8**	**-0.3**
	comp=Z,0.5nm,0.4s,baz=129,slow=2.0,SNR=2.1						
ZALV				LR	LR	22 58 59.5	
	comp=Z,127nm,18.9s,baz=128,slow=37						
TIXI	**Tiksi**	**40.79**	**0**	P	**P**	**22 42 42.0**	**+0.1**
TIXI				IAmb	IAmb	22 42 49.5	
	comp=Z,8.2nm,1.5s						
KURK	**Kurchatov**	**41.82**	**313**	P	**P**	**22 42 49.4**	**-1.3**
KURK				IAmb	IAmb	22 42 50.9	
	comp=Z,5.0nm,0.9s						
KURBB	**Kurchatov Arra**	**41.87**	**313**	P	**P**	**22 42 50.2**	**-0.8**
	comp=Z,2.2nm,0.8s,baz=96,slow=8.7,SNR=8.6						
NRIK	**Noril'sk**	**44.96**	**341**	LR	LR	23 03 28.2	
	comp=Z,157nm,19.9s,baz=92,slow=38						
BVAR	**Borovoye Array**	**47.15**	**315**	P	**P**	**22 43 32.8**	**-0.4**
	comp=Z,2.7nm,0.9s,baz=164,slow=7.1,SNR=9.1						
KK31	**Karatay Array**	**47.17**	**302**	P	**P**	**22 43 32.9**	**-0.7**
KK31				IAmb	IAmb	22 43 34.3	
	comp=Z,4.6nm,0.9s						
KKAR	**Karatay Array**	**47.17**	**302**	P	**P**	**22 43 32.7**	**-0.8**
BRVK	**Borovoye**	**47.22**	**316**	P	**P**	**22 43 33.4**	**-0.4**
CHGR	**Chuyangaron**	**48.77**	**296**	P	**P**	**22 43 45.2**	**-0.9**
WB0	**Warramunga Arr**	**50.69**	**173**	P	**P**	**22 43 59.2**	**-1.4**
WB0				IAmb	IAmb	22 44 01.0	
	comp=Z,5.4nm,1.3s						
WRA	**Warramunga Arr**	**50.85**	**173**	P	**P**	**22 44 01.4**	**-0.5**
	comp=Z,2.2nm,1.1s,baz=352,slow=8.2,SNR=6.8						
WRA				LR	LR	23 04 40.3	
	comp=Z,46nm,20.8s,baz=285,slow=35						
WRA	**Warramunga Arr**	**50.85**	**173**	P	**P**	**22 44 01.6**	**-0.3**
ABKAR	**Akbulak array**	**53.83**	**311**	P	**P**	**22 44 23.1**	**-0.6**
ABKAR	**Akbulak array**	**53.83**	**311**	P	**P**	**22 44 23.0**	**-0.8**
ABKAR				IAmb	IAmb	22 44 24.2	
	comp=Z,2.2nm,0.8s						
ASAR	**Alice Springs**	**54.50**	**174**	P	**P**	**22 44 28.9**	**0.0**
	comp=Z,0.8nm,0.5s,baz=2.6,slow=14,SNR=17						
ASAR				LR	LR	23 09 14.8	
	comp=Z,20nm,19.2s,baz=3.5,slow=38						
ASAR	**Alice Springs**	**54.50**	**174**	P	**P**	**22 44 27.9**	**-1.0**
GEYT	**Alibeck**	**57.40**	**298**	LR	LR	23 13 18.3	
	comp=Z,64nm,18.1s,baz=25,slow=40						
CAST	**Castle Rocks**	**58.07**	**31**	P	**P**	**22 44 55.0**	**+1.0**
CAST				IAmb	IAmb	22 45 00.5	
	comp=Z,3.4nm,1.2s						
ILAR	**Eielson Array**	**60.15**	**29**	P	**P**	**22 45 09.4**	**+1.1**
	comp=Z,0.2nm,0.5s,baz=258,slow=6.9,SNR=1.9						
STKA	**Stephens Creek**	**63.63**	**168**	LR	LR	23 13 53.9	
	comp=Z,40nm,20.1s,baz=26,slow=37						
ARCES	**ARCESS Array B**	**65.82**	**338**	P	**P**	**22 45 48.2**	**+2.2**
	comp=Z,6.4nm,1.0s,baz=46,slow=7.7,SNR=2.5						
ARCES				LR	LR	23 21 30.9	
	comp=Z,55nm,20.2s,baz=140,slow=42						
KBZ	**Khabaz**	**66.57**	**308**	P	**P**	**22 45 51.3**	**+0.2**
	comp=Z,5.0nm,1.0s,baz=117,slow=4.5,SNR=5.2						
FINES	**FINESS Array B**	**69.02**	**330**	LR	LR	23 19 37.6	
	comp=Z,170nm,19.0s,baz=31,slow=39						
GURO	**Guroymak-BITLI**	**69.12**	**303**	P	**P**	**22 46 05.6**	**-2.0**
GURO				IAmb	IAmb	22 46 09.1	
	comp=Z,3.6nm,1.0s						
AKASG	**Malin Array Be**	**72.27**	**319**	LR	LR	23 19 49.3	
	comp=Z,86nm,20.0s,baz=55,slow=37						
YKA	**Yellowknife Ar**	**74.12**	**26**	P	**P**	**22 46 38.2**	**+1.2**
	comp=Z,2.9nm,1.0s,baz=332,slow=5.2,SNR=5.8						
BRTR	**Keskin Array B**	**74.52**	**307**	P	**P**	**22 46 39.9**	**-0.1**
	comp=Z,1.8nm,0.9s,baz=52,slow=5.6,SNR=6.6						
NOA	**NORSAR Array B**	**75.31**	**333**	LR	LR	23 22 46.7	
	comp=Z,98nm,19.8s,baz=40,slow=38						
GERES	**GERESS Array B**	**81.73**	**323**	LR	LR	23 26 37.9	
	comp=Z,145nm,19.5s,baz=48,slow=38						
NVAR	**Mina Array Bea**	**86.97**	**46**	P	**P**	**22 47 48.1**	**+1.3**
	comp=Z,0.3nm,0.5s,baz=282,slow=4.5,SNR=2.9						
NVAR	**Mina Array Bea**	**86.97**	**46**	P	**P**	**22 47 45.4**	**-1.4**
PDAR	**Pinedale Array**	**89.26**	**39**	P	**P**	**22 47 58.2**	**+0.6**
	comp=Z,1.1nm,1.0s,baz=291,slow=2.5,SNR=4.5						
PDAR	**Pinedale Array**	**89.26**	**39**	P	**P**	**22 47 56.7**	**-0.9**
ULM	**Lac du Bonnet**	**90.06**	**27**	P	**P**	**22 48 02.5**	**+1.7**
	comp=Z,3.2nm,1.1s,baz=353,slow=8.1,SNR=1.7						
SCHQ	**Schefferville**	**93.56**	**9**	LR	LR	23 32 54.0	
	comp=Z,26nm,18.1s,baz=354,slow=37						
ESDC	**Sonseca Array**	**97.15**	**325**	LR	LR	23 35 46.2	
	comp=Z,83nm,18.1s,baz=30,slow=38						

IDC ***14*** *22:38:32.2±3.4, 38°.11N×75°.58E, h121^{km}±26^{km}, mb3.5/13, mb1 3.6/20, mb1mx3.3/55, mbtmp3.8/20, Error ellipse: s-maj=28.1km s-min=16.2km az=174.0*

NEIC ***14*** *22:38:35.5±2.2, 38°.37N±0°.06×75°.49E±0°.09, h142^{km}±9^{km}, mb4.0/16, Error ellipse: s-maj=10.8km s-min=8.9km az=115.0*

NNC ***14*** *22:38:37.1±5.5, 38°.52N×75°.47E, h132^{km}±49^{km}, mb3.1, mpv4.0, Error ellipse: s-maj=62.3km s-min=16.4km az=11.0*

ISC 14 22:38:34.2±0.5**, 38°.22N**±0°.05×**75°.49E**±0°.05**, h150^{km}, n97,** σ**1^{s}.94**/96**, mb3.8**/17**, 1C-6D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	**Karamyk**	**3.14**	**295**		**Pn**	**22 39 23.7**	**+0.1**
DRK				Sn	**Sn**	**22 40 01.9**	**+0.1**
TARG	**Taragay, Kyrgy**	**3.93**	**26**		**Pn**	**22 39 33.0**	**-0.8**
ULHL	**Ulahol**	**4.06**	**8**	P	**Pn**	**22 39 34.6**	**-0.8**
	SNR=7.0						
BTK	**Batken**	**4.07**	**298**		**Pn**	**22 39 35.6**	**+0.2**
BTK				Sn	**Sn**	**22 40 22.7**	**-0.2**
UCH	**Uchtor**	**4.07**	**350**	P	**Pn**	**22 39 34.9**	**-0.8**
	SNR=137						
GAR	**Garm**	**4.12**	**282**		**Pn**	**22 39 35.6**	**-0.6**
AML	**Almayashu**	**4.14**	**341**	P	**Pn**	**22 39 36.0**	**-0.6**
	SNR=37						
KBK	**Karagaybulak**	**4.45**	**355**	P	**Pn**	**22 39 40.2**	**-0.3**
	SNR=55						
AAK	**Ala-Archa**	**4.48**	**351**	P	**Pn**	**22 39 40.3**	**-0.4**
	4.3nm,0.3s,baz=170,slow=7.4,SNR=92						
AAK				S	Sn	22 40 18.9	-14
	2.4nm,0.3s,baz=162,slow=14,SNR=4.6						
AAK	**Ala-Archa**	**4.48**	**351**	P	**Pn**	**22 39 40.6**	**-0.2**
	SNR=42						
AAK	**Ala-Archa**	**4.48**	**351**	⇑P	**Pn**	**22 39 40.1**	**-0.7**
	13nm,0.4s						
AAK	**Ala-Archa**	**4.48**	**351**		**Pn**	**22 39 40.1**	**-0.7**
EKS2	**Erkin-Say**	**4.63**	**344**	P	**Pn**	**22 39 42.8**	**+0.1**
	SNR=42						
FRU1	**Bishkek**	**4.63**	**352**		**Pn**	**22 39 42.2**	**-0.5**
TKM2	**Tokmak 2**	**4.70**	**1**	P	**Pn**	**22 39 43.1**	**-0.6**
	SNR=25						
TKM2	**Tokmak 2**	**4.70**	**1**	⇓P	**Pn**	**22 39 43.0**	**-0.6**
	17nm,0.5s						
PRZ	**Przheval'sk**	**4.80**	**27**	Pn	**Pn**	**22 39 44.1**	**-1.0**
CHMS	**Chumysh**	**4.81**	**354**	P	**Pn**	**22 39 44.8**	**-0.2**
	SNR=16						
CHCP	**Chirah Chowk**	**4.89**	**202**	P	**Pn**	**22 39 49.1**	**+2.9**
NIL	**Nilore**	**4.91**	**202**		**Pn**	**22 39 48.3**	**+1.9**
CHGR	**Chuyangaron**	**4.99**	**277**		**Pn**	**22 39 46.2**	**-1.3**
MDOK	**Medeo**	**5.08**	**13**	P	**Pn**	**22 39 47.2**	**-1.5**
	13nm,0.8s						
USP	**Ospenovka**	**5.10**	**352**	P	**Pn**	**22 39 48.2**	**-0.7**
	SNR=10.0						
CEP	**Cherat**	**5.26**	**215**	P	**Pn**	**22 39 53.4**	**+2.3**
TAS	**Tashkent**	**5.69**	**305**	Pn	**Pn**	**22 39 55.3**	**-1.4**
PDGK	**Podgornoye**	**5.94**	**29**	⇓P	**Pn**	**22 39 58.7**	**-1.4**
	7.6nm,0.7s						
DHRM	**DHARAMSHALA**	**5.99**	**173**	*e*P	**Pn**	**22 40 01.4**	**+0.4**
DHRM				*e*S	**Sn**	**22 41 04.9**	**-4.0**
DHRM				IAML		22 41 17.1	
	comp=E,297nm,0.3s						
DHRM				IAML		22 41 17.2	
	comp=N,253nm,0.7s						
KK31	**Karatay Array**	**6.17**	**324**	P	**Pn**	**22 40 02.3**	**-0.8**
	comp=N,6.9nm,0.3s,baz=128,slow=12,SNR=175						
KK31				⇓S	**Sn**	**22 41 09.2**	**-3.5**
	comp=N,6.7nm,0.4s,baz=135,slow=24,SNR=3.9						
KK31	**Karatay Array**	**6.17**	**324**		**Pn**	**22 40 02.5**	**-0.6**
KKAR	**Karatay Array**	**6.17**	**324**		**Pn**	**22 40 02.2**	**-0.9**
KKAR	**Karatay Array**	**6.17**	**324**		**Pn**	**22 40 02.4**	**-0.8**
THW	**Thamme Wali**	**6.21**	**211**	P	**Pn**	**22 40 05.5**	**+1.7**
THW				S	**Sn**	**22 41 11.0**	**-2.9**
KBL	**Kabul**	**6.36**	**237**		**Pn**	**22 40 07.0**	**+1.1**
SMLA	**Simla**	**7.21**	**168**	*e*P	**Pn**	**22 40 16.6**	**-0.4**
SMLA				*e*S	Sn	22 41 30.8	-6.8
SMLA				IAML		22 41 38.8	
	comp=E,140nm,0.5s						
SMLA				IAML		22 41 39.1	
	comp=N,127nm,0.5s						
AYAN	**Aya Nagar**	**9.81**	**171**	*e*P	**Pn**	**22 40 50.7**	**-0.9**
MAKZ	**Makanchi**	**9.83**	**27**	⇓P	**Pn**	**22 40 50.5**	**-1.2**
	comp=N,1.0nm,0.8s						
MAKZ	**Makanchi**	**9.83**	**27**	Pn	**Pn**	**22 40 50.6**	**-1.2**
MK31	**Makanchi Array**	**9.93**	**28**	⇓P	**Pn**	**22 40 51.9**	**-1.2**
	comp=N,0.7nm,0.6s,baz=200,slow=13,SNR=7.5						
MK31	**Makanchi Array**	**9.93**	**28**		**Pn**	**22 40 51.9**	**-1.2**
MKAR	**Makanchi Array**	**9.93**	**28**	P	**Pn**	**22 40 52.0**	**-1.1**
	comp=N,0.1nm,0.3s,baz=204,slow=15,SNR=7.6						
MKAR	**Makanchi Array**	**9.93**	**28**	Pn	**Pn**	**22 40 51.7**	**-1.4**
SONA	**Sohna**	**10.03**	**172**	*e*P	**Pn**	**22 40 53.4**	**-1.2**
SONA				*e*S	Sn	22 42 38.9	-6.8
KUDL	**Kundal**	**10.08**	**175**	*e*P	**Pn**	**22 40 53.9**	**-1.4**
KUDL				*e*S	Sn	22 42 41.1	-5.8
AJM	**Ajmer**	**11.73**	**184**	*e*P	**Pn**	**22 41 15.8**	**-1.2**
AJM				*e*S	Sn	22 43 14.7	-12
PYUN	**Piuthan**	**11.88**	**146**	*e*P	Pn	22 41 15.9	-3.2
	comp=N,99nm,0.4s						
DANN	**Dangsing**	**12.03**	**143**	*e*P	Pn	22 41 17.3	-3.7
	comp=N,16nm,0.4s						
KOLN	**Koldanda**	**12.44**	**145**	*e*P	Pn	22 41 23.0	-3.3
	comp=N,33nm,0.6s						
KURBB	**Kurchatov Arra**	**12.59**	**9**	P	**Pn**	**22 41 28.6**	**+0.7**
	comp=N,0.0nm,0.3s,baz=197,slow=10,SNR=1.8						
KURBB				S	**Sn**	**22 43 39.8**	**-7.1**
	comp=N,0.1nm,0.3s,baz=100,slow=9.9,SNR=5.5						
KURBB	**Kurchatov Arra**	**12.59**	**9**	⇓P	**P**	**22 41 30.5**	**-2.8**
	comp=N,1.9nm,0.5s						
KURK	**Kurchatov**	**12.69**	**9**	P	**P**	**22 41 32.4**	**-2.1**
GKN	**Gorkha**	**12.74**	**140**	*e*P	Pn	22 41 26.8	-3.4
	comp=N,32nm,0.4s						
KKN	**Kakani**	**13.24**	**139**	*e*P	Pn	22 41 32.8	-3.9
	comp=N,19nm,0.5s						
DMN	**Daman**	**13.30**	**140**	*e*P	Pn	22 41 34.3	-3.2
	comp=N,18nm,0.5s						
PKI	**Pulchoki**	**13.49**	**139**	*e*P	Pn	22 41 36.7	-3.2
GEYT	**Alibeck**	**13.69**	**274**	P	**Pn**	**22 41 40.5**	**-1.6**
	comp=N,0.8nm,0.3s,baz=110,slow=13,SNR=5.9						
GEYT				S	**Sn**	**22 44 05.9**	**-7.8**
	comp=N,0.8nm,0.3s,baz=223,slow=55,SNR=1.8						
JIRN	**Jiri**	**13.83**	**136**	*e*P	Pn	22 41 41.3	-3.0
	comp=N,45nm,0.4s						
RAMN	**Ramite**	**14.61**	**137**	*e*P	Pn	22 41 50.4	-3.6
	comp=N,19nm,0.4s						
ODAN	**Odare**	**15.12**	**135**	*e*P	**Pn**	**22 41 56.9**	**-3.4**
	comp=N,20nm,0.6s						
BVAR	**Borovoye Array**	**15.22**	**348**	P	**P**	**22 42 02.6**	**0.0**
	comp=N,0.3nm,0.3s,baz=186,slow=23,SNR=6.6						
BRVK	**Borovoye**	**15.27**	**348**		**P**	**22 42 04.0**	**+0.8**
AB31	**Akbulak array**	**15.71**	**320**	P	**Pn**	**22 42 07.0**	**-0.2**
	comp=N,1.2nm,0.5s,baz=129,slow=12,SNR=56						
ABKAR	**Akbulak array**	**15.71**	**320**		**Pn**	**22 42 06.6**	**-0.5**
ABKAR	**Akbulak array**	**15.71**	**320**	Pn	**Pn**	**22 42 06.3**	**-0.9**
ABKAR				IAmb	IAmb	22 42 09.8	
	comp=Z,6.4nm,0.8s						
ZAA0	**Zalesovo Array**	**16.99**	**19**	P	**Pn**	**22 42 22.1**	**-0.5**
ZALV	**Zalesovo Beam**	**16.99**	**19**	P	**P**	**22 42 21.9**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=222,slow=11,SNR=10						
ZALV	**Zalesovo Beam**	**16.99**	**19**	P	**Pn**	**22 42 22.1**	**-0.5**
AKTO	**Aktyubinsk**	**17.42**	**320**	P	**Pn**	**22 42 27.6**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=124,slow=13,SNR=2.7						
AKTO				S	**S**	**22 45 35.1**	**-5.3**
	comp=Z,0.2nm,0.3s,baz=144,slow=18,SNR=1.7						
SHL	**Shillong**	**18.75**	**128**	P	**P**	**22 42 41.4**	**-0.4**
SHL				IAmb	IAmb	22 42 44.5	
	comp=Z,7.3nm,1.1s						
BELG	**Belogornoye**	**23.99**	**315**	P	**P**	**22 43 37.0**	**+2.4**
	comp=Z,7.1nm,0.9s,baz=126,slow=19,SNR=2.8						
SONM	**Songino Array**	**24.41**	**57**	P	**P**	**22 43 39.9**	**+1.2**
	comp=Z,1.7nm,0.9s,baz=256,slow=10.0,SNR=7.7						
SONM	**Songino Array**	**24.41**	**57**	P	**P**	**22 43 40.1**	**+1.5**
AKASG	**Malin Array Be**	**34.74**	**306**	P	**P**	**22 45 11.8**	**+2.1**
	comp=Z,0.5nm,0.3s,baz=79,slow=7.5,SNR=4.6						
FIA1	**FINESS Array S**	**38.13**	**324**	P	**P**	**22 45 40.1**	**+1.8**
FINES	**FINESS Array B**	**38.13**	**324**	P	**P**	**22 45 40.6**	**+2.3**
	comp=Z,1.9nm,0.3s,baz=113,slow=9.5,SNR=31						
FINES	**FINESS Array B**	**38.13**	**324**	P	**P**	**22 45 40.2**	**+1.9**
ARCES	**ARCESS Array B**	**40.99**	**336**	P	**P**	**22 46 04.0**	**+2.2**
	comp=Z,1.8nm,0.6s,baz=113,slow=8.0,SNR=12						
GERES	**GERESS Array B**	**44.88**	**304**	P	**P**	**22 46 35.8**	**+2.2**
	comp=Z,0.2nm,0.4s,baz=46,slow=12,SNR=1.8						
NC303	**NORSAR Array S**	**45.13**	**322**	P	**P**	**22 46 37.2**	**+2.0**
NB2	**NORSAR Subarra**	**45.20**	**322**	P	**P**	**22 46 36.8**	**+1.0**
	comp=Z,0.6nm,0.4s,baz=91,slow=7.9						
NOA	**NORSAR Array B**	**45.20**	**322**	P	**P**	**22 46 36.7**	**+0.9**
	comp=Z,0.3nm,0.4s,baz=92,slow=6.9,SNR=1.6						
BNI	**Bardonecchia**	**50.48**	**301**	P	**P**	**22 47 18.8**	**+2.0**
BNI				IAmb	IAmb	22 47 33.5	
	comp=Z,8.4nm,1.3s						
ESBB	**Sonseca Array**	**59.80**	**299**	P	**P**	**22 48 25.6**	**+2.1**
ESDC	**Sonseca Array**	**59.80**	**299**	P	**P**	**22 48 25.6**	**+2.0**
	comp=Z,0.5nm,0.5s,baz=55,slow=7.3,SNR=15						
ESDC	**Sonseca Array**	**59.80**	**299**	P	**P**	**22 48 25.2**	**+1.7**
ESDC				IAmb	IAmb	22 48 35.4	
	comp=Z,2.0nm,1.4s						
A36M	**Sachs Harbour**	**69.12**	**7**	P	**P**	**22 49 25.3**	**+1.8**
A36M				IAmb	IAmb	22 49 28.1	
	comp=Z,3.8nm,1.2s						
TORD	**Torodi Ar. Bea**	**69.30**	**271**	P	**P**	**22 49 27.1**	**+1.6**
	comp=Z,1.8nm,0.5s,baz=46,slow=5.7,SNR=57						
TORD	**Torodi Ar. Bea**	**69.30**	**271**	P	**P**	**22 49 26.7**	**+1.2**
TORD				IAmb	IAmb	22 49 27.4	
	comp=Z,1.3nm,0.7s						
IMAR	**Indian Mountai**	**69.41**	**19**	P	**P**	**22 49 26.6**	**+1.2**
BMAR	**Burnt Mountain**	**70.39**	**15**	P	**P**	**22 49 33.5**	**+2.1**
K20K	**Telida**	**71.36**	**21**	P	**P**	**22 49 39.2**	**+1.9**
INK	**Inuvik**	**71.59**	**11**	P	**P**	**22 49 40.2**	**+1.8**
	comp=Z,0.6nm,0.3s,baz=143,slow=5.1,SNR=1.8						
MDM	**Murphy Dome**	**71.63**	**18**	P	**P**	**22 49 40.6**	**+1.7**
MDM				IAmb	IAmb	22 49 55.4	
	comp=Z,4.2nm,1.3s						
ILAR	**Eielson Array**	**72.11**	**18**	P	**P**	**22 49 43.0**	**+1.3**
	comp=Z,0.4nm,0.8s,baz=310,slow=5.8,SNR=5.7						
KOWA	**Kowa**	**73.01**	**275**	P	**P**	**22 49 49.8**	**+2.0**
KOWA				IAmb	IAmb	22 49 50.7	
	comp=Z,2.9nm,0.7s						
BCAR	**Beaver Creek A**	**74.75**	**17**	P	**P**	**22 49 59.1**	**+1.9**
YKA	**Yellowknife Ar**	**79.30**	**5**	P	**P**	**22 50 23.8**	**+1.3**
	comp=Z,0.9nm,0.6s,baz=6.7,slow=4.9,SNR=7.2						
WRA	**Warramunga Arr**	**79.96**	**125**	P	**P**	**22 50 27.8**	**+1.1**
	comp=Z,0.4nm,0.9s,baz=35,slow=4.1,SNR=2.0						

IDC ***14*** *22:58:35.0±2.9, 12°.19N×144°.11E, h51^{km}±28^{km}, mb3.3/7, mb1 3.5/7, mb1mx3.3/40, mbtmp3.6/7, Error ellipse: s-maj=41.5km s-min=18.0km az=107.0*

ISC 14 22:58:32.1±1.0**, 12°.2N**±0°.1×**144°.1E**±0°.2**, h26^{km}, n8,** σ**1^{s}.16**/9**, mb3.6**/7**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.58**	**29**	P	**Pn**	**22 58 59.2**	**+0.6**
GUMO				S	**Sb**	**22 59 20.1**	**-0.2**
WRA	**Warramunga Arr**	**33.34**	**197**	P	**P**	**23 05 08.2**	**0.0**
	0.3nm,0.6s,baz=21,slow=9.6,SNR=1.8						
ASAR	**Alice Springs**	**37.00**	**196**	P	**P**	**23 05 40.1**	**+0.3**
	0.2nm,0.6s,baz=23,slow=9.2,SNR=4.3						
SONM	**Songino Array**	**47.44**	**326**	P	**P**	**23 07 06.1**	**+1.3**
	0.3nm,0.5s,baz=140,slow=6.5,SNR=2.6						
MKAR	**Makanchi Array**	**61.97**	**317**	P	**P**	**23 08 49.9**	**-0.1**
	0.3nm,0.7s,baz=91,slow=8.9,SNR=2.7						
ILAR	**Eielson Array**	**70.15**	**25**	P	**P**	**23 09 40.7**	**-1.5**
	0.2nm,0.4s,baz=243,slow=5.6,SNR=5.3						
NVAR	**Mina Array Bea**	**88.38**	**51**	P	**P**	**23 11 23.5**	**+1.1**
	0.5nm,0.6s,baz=260,slow=4.5,SNR=3.7						
FINES	**FINESS Array B**	**92.10**	**335**	P	**P**	**23 11 37.4**	**-1.5**
	0.8nm,0.4s,baz=69,slow=6.0,SNR=15						

IDC 14 23:01:44.3±3.1**, 4°.89S**×**133°.48E, h0^{km}, mb3.6**/2**, mb1 3.7**/4**, mb1mx3.5**/27**, mbtmp3.6**/4**, ML3.4**/2**, Error ellipse: s-maj=140.3km s-min=31.0km az=85.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.99**	**177**	Pn	Pn	23 05 13.6	-4.1
	0.1nm,0.3s,baz=354,slow=13,SNR=1.0						
WRA				Sn	Sn	23 07 52.3	-12
	0.0nm,0.3s,baz=0.6,slow=23,SNR=1.6						
FITZ	**Fitzroy Crossi**	**15.20**	**210**	Pn	Pn	23 05 19.1	-1.3
	0.2nm,0.3s,baz=41,slow=8.3,SNR=12						
FITZ				Sn	Sn	23 08 02.9	-6.8
	0.1nm,0.3s,baz=166,slow=19,SNR=2.3						
ASAR	**Alice Springs**	**18.68**	**179**	P	Pn	23 06 04.7	+0.2
	0.1nm,0.3s,baz=9.0,slow=12,SNR=9.8						
MKAR	**Makanchi Array**	**68.43**	**325**	P	P	23 12 48.9	+0.7
	0.4nm,0.7s,baz=115,slow=5.6,SNR=4.7						
ZALV	**Zalesovo Beam**	**71.29**	**332**	P	P	23 13 04.8	-0.8
	0.3nm,0.4s,baz=116,slow=9.8,SNR=2.2						

IDC ***14*** *23:09:52.4±1.5, 44°.22N×145°.90E, h0^{km}, mb3.4/3, mb1 3.6/5, mb1mx3.4/45, mbtmp3.5/5, ML3.0/2, MS2.9/3, Ms1 2.9/3, ms1mx2.5/44, Error ellipse: s-maj=36.6km s-min=24.2km az=154.0*

MOS ***14*** *23:09:53.9±1.3, 44°.30N×145°.76E, h16^{km}, mb4.1/2, Error ellipse: s-maj=15.3km s-min=8.6km az=79.4*

NIED ***14*** *23:09:54.1, 44°.35N×145°.79E, h20^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$3.47; M$_{\theta\theta}$-0.46; M$_{\phi\phi}$-3.01; M$_{r\theta}$-1.07; M$_{\theta\phi}$-1.04; M$_{\phi r}$-3.27; Fault plane solution: M$_{0}$4.85000×10^{14} NP1: ϕ_s199.00000°, δ68.00000°, λ89.00000°. NP2: ϕ_s20.00000°, δ22.00000°, λ92.00000°.*

JMA ***14*** *23:09:54.0±0.1, 44°.35N×145°.79E, h20^{km}±1^{km}, M4.1*

JMA Felt I J1.

SKHL ***14*** *23:09:55.4±0.2, 44°.30N×145°.70E, h17^{km}±4^{km}, mb4.9/6*

ISC 14 23:09:54.3±1.3**, 44°.30N**±0°.03×**145°.76E**±0°.03**, h12^{km}**±9^{km}**, n40,** σ**0^{s}.89**/51**, mb3.4**/5**, 3C-6D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YUK	**Yuzh-Kuril'sk**	**0.28**	**164**	*d* *i*PN	**Pb**	**23 10 01.3**	**+0.1**
YUK				*i* S	**Sb**	**23 10 05.7**	**-0.1**
YUK				pmax	pmax		
	comp=N,1µm,0.1s						
YUK				pmax	pmax		
	comp=E,1µm,0.1s						
YUK				pmax	pmax		
	comp=Z,9µm,0.1s						
YUK				smax	smax		
	comp=N,22µm,0.2s						
YUK				smax	smax		
	comp=E,24µm,0.2s						
YUK	**Yuzh-Kuril'sk**	**0.28**	**164**	*i* P	**Pb**	**23 10 00.9**	**-0.3**
YUK				AMB	AMB	23 10 01.6	
	comp=E,6µm,0.3s						
YUK				*i* S	**Sb**	**23 10 05.2**	**-0.6**
YUK				A	A	23 10 06.5	
	comp=E,23µm,0.5s						
YUK				A	A	23 10 06.5	
	comp=E,17µm,0.5s						
GRPR	**Tuman**	**0.31**	**178**	*d* *i*PN	**Pb**	**23 10 01.4**	**-0.3**
GRPR				*i* S	**Sb**	**23 10 05.9**	**-0.8**
GRPR				pmax	pmax		
	comp=N,1µm,0.2s						
GRPR				pmax	pmax		
	comp=Z,3µm,0.2s						
GRPR				pmax	pmax		
	comp=E,612nm,0.1s						
GRPR				smax	smax		
	comp=N,25µm,0.3s						
GRPR				smax	smax		
	comp=E,7µm,0.3s						
GRPR	**Tuman**	**0.31**	**178**	*i* P	**Pb**	**23 10 01.0**	**-0.7**
GRPR				AMB	AMB	23 10 01.0	
	comp=E,3µm,0.4s						
GRPR				*i* S	**Sg**	**23 10 05.0**	**+0.3**
GRPR				A	A	23 10 06.0	
	comp=E,25µm,0.3s						
GRPR				A	A	23 10 06.0	
	comp=E,7µm,0.3s						
RUSJ	**Misakicho**	**0.42**	**242**	⇓*i*PN	**Pb**	**23 10 03.2**	**-0.4**
RUSJ				*i* S	**Sb**	**23 10 09.3**	**-0.5**
JRA	**Rausu**	**0.58**	**232**	⇓P	**Pb**	**23 10 06.2**	**-0.2**
JRA				*e*S	**Sb**	**23 10 14.6**	**-0.1**
GLVR	**Golovnino**	**0.59**	**197**	*e*PN	**Pb**	**23 10 06.5**	**0.0**
GLVR				*i* S	**Sb**	**23 10 15.3**	**+0.5**
GLVR				pmax	pmax		
	comp=N,216nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,1µm,0.1s						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLVR				smax	smax		
	comp=N,7μm,0.2s						
GLVR				smax	smax		
	comp=E,12μm,0.3s						
GLVR	Golovnino	0.59	197	eP	Pb	23 10 06.0	-0.5
GLVR				AMB	AMB	23 10 08.0	
	comp=E,216nm,0.3s						
GLVR				AMB	AMB	23 10 08.0	
	comp=E,1μm,0.3s						
GLVR				i S	Sb	23 10 15.0	+0.2
GLVR				A	A	23 10 15.0	
	comp=E,7μm,0.3s						
GLVR				A	A	23 10 15.0	
	comp=E,12μm,0.3s						
JNSB	Nemuroshibetsu	0.76	226	P	Pg	23 10 09.1	+0.2
JNSB				eS	Sg	23 10 20.0	+1.3
NMR	Nemuro--Hokkai	0.93	181	⇑iPN	Pb	23 10 11.6	-0.7
NMR				eS	Sg	23 10 24.3	0.0
NMR	Nemuro--Hokkai	0.93	181	i P	Pb	23 10 11.0	-1.3
NMR				eS	Sb	23 10 24.0	-0.7
NEM2	Nemuro 2	0.94	181	⇑P	Pb	23 10 11.6	-0.8
NEM2				eS	Sg	23 10 24.3	-0.2
JNK	Nakash	1.04	227	P	Pb	23 10 13.6	-0.6
JNK				eS	Sb	23 10 26.9	-0.8
JKHN	Kushirohamanak	1.29	200	⇑P	Pn	23 10 17.6	-0.5
JTKR	Abashiri--Toko	1.37	257	⇓P	Pn	23 10 18.3	-0.9
JTKR				eS	Sb	23 10 36.9	-0.4
AKK	Akkeshi	1.45	208	eP	Pn	23 10 19.7	-0.6
AKK				eS	Sb	23 10 39.0	-0.5
JAK	Akkeshi	1.52	211	P	Pn	23 10 20.8	-0.4
JAK				eS	Sb	23 10 40.6	-0.8
KUR	Kuril'sk	1.77	57	⇓iPN	Pb	23 10 25.7	-0.9
KUR				eS	Sb	23 10 48.8	0.0
KUR				pmax	pmax		
	comp=Z,121nm,0.4s						
KUR				pmax	pmax		
	comp=N,47nm,0.3s						
KUR				pmax	pmax		
	comp=E,88nm,0.3s						
KUR				smax	smax		
	comp=N,229nm,0.5s						
KUR				smax	smax		
	comp=E,396nm,0.5s						
KUR	Kuril'sk	1.77	57	i P	Pb	23 10 25.6	-1.0
KUR				AMB	AMB	23 10 30.0	
	comp=E,121nm,0.4s						
KUR				eS	Sb	23 10 48.6	-0.2
KUR				A	A	23 11 00.0	
	comp=E,430nm,0.6s						
KUR				A	A	23 11 00.0	
	comp=E,396nm,0.6s						
JKA	Kamikawa-asahi	2.28	266	eP	Pn	23 10 31.2	-0.5
ASAJ	Asahikawa	2.28	266	Pn	Pn	23 10 31.2	-0.6
	comp=E,4.1nm,0.3s,baz=48,slow=7.9,SNR=6.7						
ASAJ				Sn	Sb	23 11 02.2	-1.3
	comp=E,29nm,0.3s,baz=229,slow=32,SNR=8.8						
ERM	Erimo	2.97	221	ePN	Pb	23 10 44.9	-2.3
YSS	Yuzh-Sakhalins	3.39	323	ePN	Pn	23 10 46.7	-0.3
YSS				pmax	pmax		
	comp=Z,50nm,0.3s						
YSS				MLR	MLR		
	comp=Z,300nm,15.0s						
YSS				MLR	MLR		
	comp=E,100nm,16.0s						
YSS	Yuzh-Sakhalins	3.39	323	eP	Pn	23 10 47.7	+0.7
YSS				AMB	AMB	23 10 53.4	
	comp=E,50nm,0.3s						
YSS				eS	Sn	23 11 26.1	-1.0
MJAR	Matsushiro Arr	9.65	219	Pn	Pn	23 12 14.1	+1.1
	comp=E,0.0nm,0.3s,baz=37,slow=12,SNR=9.5						
PETK	Petropavlovsk-	11.81	38	LR	LR	23 16 57.8	
	comp=E,31nm,21.7s,baz=106,slow=36						
KSRS	Korea Array	15.11	249	LR	LR	23 18 37.4	
	comp=E,25nm,19.0s,baz=10.0,slow=34						
SONM	Songino Array	27.33	291	P	P	23 15 41.4	+2.3
	comp=E,0.6nm,0.8s,baz=81,slow=9.3,SNR=3.0						
H11N2	WAKE ISLAND Hy	30.18	137	T	T	23 47 03.2	
	baz=329,slow=74,SNR=122						
H11N1	WAKE ISLAND Hy	30.19	138	T	T	23 47 05.4	
	baz=329,slow=74,SNR=89						
H11N3	WAKE ISLAND Hy	30.20	137	T	T	23 47 05.9	
	baz=329,slow=74,SNR=97						
H11S1	WAKE ISLAND Hy	31.14	139	T	T	23 48 10.7	
	baz=330,slow=75,SNR=234						
H11S3	WAKE ISLAND Hy	31.14	139	T	T	23 48 13.8	
	baz=330,slow=75,SNR=146						
H11S2	WAKE ISLAND Hy	31.15	139	T	T	23 48 11.9	
	baz=330,slow=75,SNR=159						
DGZ	Jazzator, Alta	39.27	299	i P	P	23 17 23.3	+0.5
DGZ				pmax	pmax		
	comp=Z,1.0nm,1.1s						
ILAR	Eielson Array	41.64	37	P	P	23 17 41.7	-0.3
	comp=Z,0.4nm,0.8s,baz=268,slow=6.9,SNR=5.5						
KURK	Kurchatov	44.39	303	i P	P	23 18 06.3	+1.9
KURK				pmax	pmax		
	comp=Z,5.0nm,1.6s						
KURK	Kurchatov	44.39	303	eP	P	23 18 06.3	+1.9
ARU	Arti	53.26	316	LR	LR	23 43 48.2	
	comp=Z,39nm,18.8s,baz=58,slow=38						
ASAR	Alice Springs	68.50	192	P	P	23 20 55.7	-0.7
	comp=Z,0.3nm,0.8s,baz=0.8,slow=6.5,SNR=2.0						

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*FUNV **14** 23:11:59.7, 8°.43N×71°.43W, h1km, MW3.0*

ISC 14 23:12:00.1±1.3**, 8°.45N**±0°.05×**71°.41W**±0°.03**, h13**km±12km**,**
n17, σ**1ˢ.13**/28**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.57	107	eP	Pb	23 12 11.2	-0.7
SOCV				eS	Sg	23 12 19.1	+0.2
SDV	Santo Domingo	0.88	60	eP	Pb	23 12 17.0	-0.3
SDV				i		23 12 28.8	
	comp=Z,51nm,0.4s						
SDV				eS	Sb	23 12 29.2	+0.2
CAPV	Capacho	1.07	237	eP	Pg	23 12 19.6	-1.1
CAPV				eS	Sb	23 12 33.7	-0.9
PAMC	Pamplona, Colo	1.69	229	eP	Pg	23 12 32.6	0.0
PAMC				eS	Sg	23 12 56.6	+2.0
PAMC				i		23 12 57.6	
	comp=Z,36nm,0.4s						
OCAC	Ocana	1.90	264	eP	Pb	23 12 33.6	-1.1
OCAC				eS	Sb	23 12 58.5	-0.1
OCAC				i		23 13 00.6	
	comp=Z,187nm,0.4s						
TAMC	Tame, Arauca	2.04	191	eP	Pg	23 12 39.7	+0.5
TAMC				eS	Sg	23 13 06.3	+0.6
TAMC				i		23 13 09.2	
	comp=Z,36nm,0.2s						
DABV	Dabajuro	2.57	17	eP	Pn	23 12 41.4	0.0
DABV				eS	Sn	23 13 13.5	+0.9
SMLC	San Martn de	2.66	278	eP	Pb	23 12 46.1	-1.4
SMLC				eS	Sb	23 13 20.3	+0.2
SMLC				i		23 13 23.2	
	comp=Z,26nm,0.2s						
SIQV	Siquisique	2.69	36	eP	Pn	23 12 44.3	+1.2
SIQV				eS	Sn	23 13 15.4	-0.2
RUSC	La Rusia	3.04	213	eP	Pn	23 12 50.9	+2.6
RUSC				eS	Sb	23 13 28.7	-2.8
RUSC				i		23 13 39.8	
	comp=Z,34nm,1.0s						
BAUV	El Baul	3.36	81	eP	Pn	23 12 53.5	+1.1
BAUV				eS	Sn	23 13 31.9	-0.2
ZARC	Zaragoza, Cauc	3.55	255	eS	Sb	23 13 45.7	0.0
ZARC				i		23 13 52.1	
	comp=Z,8.0nm,0.4s						
MONV	Montecano	3.76	22	eP	Pn	23 12 58.8	+1.0
BENV	Beln	4.05	68	eP	Pn	23 13 02.5	+0.7
TACV	Tcata	4.64	68	eP	Pn	23 13 10.1	+0.2
PAYV	Puerto Ayacuch	4.79	129	eP	Pn	23 13 11.7	-0.3
BIRV	Birongo	5.45	68	eP	Pn	23 13 20.5	-0.6

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*IDC **14** 23:18:30.6±1.8, 23°.97S×179°.97W, h496km±17km, mb3.1/5, mb1 3.4/7, mb1mx3.1/34, mbtmp4.1/7, Error ellipse: s-maj=25.0km s-min=20.0km az=138.0*

*NOU **14** 23:18:31.8, 24°.14S×179°.80E, h482km, mb4.1/13, South of Fiji Islands*

*NEIC **14** 23:18:32.8±1.5, 24°.0S±0°.1×180°.0E±0°.1, h520km±13km, mb4.3/16, Error ellipse: s-maj=21.9km s-min=18.9km az=160.0*

ISC 14 23:18:31.8±0.6**, 24°.10S**±0°.07×**179°.96E**±0°.09**, h500**km**, n58,**
σ**1ˢ.34**/63**, mb4.0**/13**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	5.47	160	P	P	23 20 05.5	+2.5
GLKZ				S	S	23 21 12.3	-5.4
LKBA	Tubou, Lakemba	5.95	11	P	P	23 20 06.6	-1.2
MSVF	Nonsavu	6.59	344	P	P	23 20 12.8	-1.3
	2.7nm,0.3s,baz=173,slow=7.0,SNR=8.2						
MSVF	Nonsavu	6.59	344	P	P	23 20 13.7	-0.4
TAVE	Taveuni	7.36	1	P	P	23 20 21.5	-0.3
NIUE	Niue	10.65	64	P	P	23 20 56.4	+0.2
NIUE	Niue	10.65	64	P	P	23 20 58.6	+2.4
MARNC	Mare, Loyalty	11.31	281	P	P	23 21 04.0	+0.8
OUZ	Omahuta	12.38	205	P	P	23 21 16.4	+2.2
OUZ	Omahuta	12.38	205	P	P	23 21 16.7	+2.5
OUZ	Omahuta	12.38	205	P	P	23 21 14.4	+0.1
WCZ	Waipu Caves	12.76	201	P	P	23 21 20.6	+2.4
HAZ	Te Kaha	13.74	187	P	P	23 21 29.2	+0.6
HAZ				S	S	23 23 55.7	+1.3
RUGZ	Raukumara Rang	13.96	188	P	P	23 21 32.2	+1.2
RUGZ				S	S	23 23 60.0	+1.2
TWGZ	Tauwhareparae	14.13	186	P	P	23 21 34.4	+1.6
TWGZ				S	S	23 24 02.1	+0.1
URZ	Urewera	14.32	189	P	P	23 21 34.2	-0.5
	4.7nm,0.3s,baz=121,slow=23,SNR=22						
URZ				S	S	23 24 05.1	-0.4
	0.8nm,0.3s,baz=303,slow=23,SNR=1.7						
URZ	Urewera	14.32	189	P	P	23 21 30.9	-3.8
URZ				S	S	23 24 04.9	-0.6
URZ	Urewera	14.32	189	P	P	23 21 34.6	-0.2
URZ	Urewera	14.32	189	P	P	23 21 34.5	-0.2
MWZ	Matawai	14.34	188	P	P	23 21 31.5	-3.5
HIZ	Hauiti	15.01	196	P	P	23 21 41.6	-0.3
BKZ	Black Stump Fm	15.30	190	P	P	23 21 44.1	-1.0
BKZ	Black Stump Fm	15.30	190	P	P	23 21 44.1	-1.0
FWVZ	Far West T-bar	15.56	193	P	P	23 21 47.8	-0.2
WNVZ	Wahianoa	15.62	193	P	P	23 21 48.6	+0.1
MOVZ	Moawhango	15.67	192	P	P	23 21 49.8	+0.9
BHHZ	Black Hill Sta	15.69	191	P	P	23 21 47.7	-1.5
KAHZ	Kahuranaki	15.86	189	P	P	23 21 50.7	-0.2
PXZ	Pawanui	16.09	189	P	P	23 21 53.0	-0.3
BFZ	Birch Farm	16.82	190	P	P	23 21 59.2	-1.6
QRZ	Quartz Range	17.80	199	P	P	23 22 09.9	-0.3
KHZ	Kahutara	19.02	195	P	P	23 22 20.8	-0.5
RPZ	Rata Peaks	20.89	198	P	P	23 22 38.9	+0.6
RPZ	Rata Peaks	20.89	198	P	P	23 22 39.1	+0.8
EIDS	Eidsvold	26.24	261	P	P	23 23 27.1	+0.7
EIDS				IAmb	IAmb	23 23 52.7	
	comp=Z,9.3nm,1.1s						
CTAO	Charters Tower	31.44	271	P	P	23 24 12.1	+0.3
CTAO				IAmb	IAmb	23 24 13.3	
	comp=Z,14nm,1.5s						
TOO	Toolangi	32.31	237	P	P	23 24 19.6	+0.5
TOO				IAmb	IAmb	23 24 24.1	
	comp=Z,4.5nm,0.9s						
TAU	Tasmania Unive	32.77	227	P	P	23 24 22.9	+0.1
STKA	Stephens Creek	34.62	248	P	P	23 24 39.1	+0.5
	comp=Z,0.6nm,0.3s,baz=33,slow=15,SNR=1.8						
STKA	Stephens Creek	34.62	248	P	P	23 24 39.1	+0.5
BBOO	Buckleboo	39.33	247	P	P	23 25 16.5	-0.9
BBOO				IAmb	IAmb	23 25 26.3	
	comp=Z,11nm,1.1s						
AS31	Alice Springs	41.97	261	P	P	23 25 37.0	-1.7
ASAR	Alice Springs	41.97	261	P	P	23 25 38.1	-0.6
	comp=Z,1.1nm,0.5s,baz=95,slow=6.9,SNR=19						
ASAR				ScP	ScP	23 30 25.1	0.0
	comp=Z,0.9nm,0.8s,baz=101,slow=4.2,SNR=8.3						
ASAR	Alice Springs	41.97	261	P	P	23 25 37.6	-1.0
WR0	Warramunga Arr	42.17	266	P	P	23 25 39.1	-1.2
WR0				IAmb	IAmb	23 26 05.4	
	comp=Z,10nm,1.5s						
WRA	Warramunga Arr	42.36	266	P	P	23 25 40.8	-1.0
	comp=Z,2.9nm,0.6s,baz=103,slow=8.0,SNR=28						
WRA				ScP	ScP	23 30 27.3	+0.6
	comp=Z,0.8nm,0.9s,baz=100,slow=3.8,SNR=5.9						
WRA	Warramunga Arr	42.36	266	P	P	23 25 40.5	-1.3
FORT	Forrest	46.21	250	P	P	23 26 10.0	-1.4
MTN	Manton Dam	47.44	275	P	P	23 26 19.2	-1.7
KNRA	Kununurra	48.65	270	P	P	23 26 29.0	-1.0
KNRA				IAmb	IAmb	23 26 34.4	
	comp=Z,31nm,1.4s						
FITZ	Fitzroy Crossi	50.78	266	P	P	23 26 45.1	-0.5
FITZ				IAmb	IAmb	23 27 08.0	
	comp=Z,8.2nm,1.3s						
VNDA	Vanda	54.17	185	P	P	23 27 09.9	+0.8
	comp=Z,0.5nm,0.8s,baz=20,slow=5.9,SNR=2.4						
MORW	Morawa	56.77	250	P	P	23 27 26.8	-1.2
MORW				IAmb	IAmb	23 27 41.4	
	comp=Z,37nm,1.5s						
QSPA	South Pole Qui	65.98	180	P	P	23 28 27.9	-0.1
TXAR	Lajitas Array	90.57	58	P	P	23 30 39.3	-1.3
	comp=Z,0.6nm,0.7s,baz=206,slow=5.9,SNR=8.4						
HFS	Hagfors	142.74	349	PKhKP	PKPpre	23 37 01.4	
	comp=Z,2.5nm,0.7s,baz=56,slow=3.7,SNR=11						
MMAI	Mount Meron Ar	147.75	294	PKPbc	PKPdf	23 37 19.5	+2.7
	comp=Z,0.3nm,0.3s,baz=72,slow=9.3,SNR=5.8						
EKA	Eskdalemuir Ar	148.72	3	PKPbc	PKPdf	23 37 18.8	+1.2
	comp=Z,0.3nm,0.3s,baz=344,slow=2.6,SNR=4.6						

ATH 14 23:41:11.1, 39°.05N×21°.82E, h14km±2km**, ML1.5**/5**, Error ellipse: s-maj=3.2km s-min=1.5km az=129.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EVR	Evrytania	0.14	183	P	Pg	23 41 14.1	-0.7
EVR				S	Sg	23 41 16.8	-0.5
EVR				AML	AML	23 41 16.9	
	comp=N,1128μm,0.3s						
EVR				AML	AML	23 41 17.4	
	comp=E,522μm,0.2s						
MAKR	Makrakomi, Fth	0.25	99	P	Pg	23 41 16.7	+0.2
MAKR				AML	AML	23 41 21.9	
	comp=E,128μm,0.2s						
MAKR				AML	AML	23 41 22.0	
	comp=N,133μm,0.3s						
AGG	Agios Georgios	0.40	94	P	Pg	23 41 19.1	0.0
AGG				S	Sb	23 41 25.5	-0.5
AGG				AML	AML	23 41 26.4	
	comp=N,118μm,0.3s						
AGG				AML	AML	23 41 26.6	
	comp=E,95μm,0.3s						
ANX	Ano Chora	0.47	170	P	Pg	23 41 19.8	-0.6
ANX				AML	AML	23 41 28.9	
	comp=N,226μm,0.3s						
ANX				AML	AML	23 41 30.7	
	comp=E,210μm,0.3s						
PVO	Paravola	0.49	208	P	Pg	23 41 20.8	0.0
PVO				S	Sb	23 41 28.4	-0.1
THL	Klokotos Trika	0.53	16	P	Pg	23 41 21.3	-0.3
EFP	Efpalio	0.63	174	P	Pg	23 41 22.7	-0.7
EFP				AML	AML	23 41 34.0	
	comp=N,237μm,0.4s						
EFP				AML	AML	23 41 34.7	
	comp=E,208μm,0.2s						
TRIZ	Trizonia	0.71	164	P	Pg	23 41 24.1	-0.9
LAKA	Lakka	0.82	171	P	Pg	23 41 25.8	-1.2
KLV	Kalavryta, Ach	1.04	165	P	Pb	23 41 30.5	-0.4
DRO	Drossia	1.10	184	P	Pb	23 41 31.6	-0.4

THE 14 23:41:26.1, 38°.33N×20°.47E, h14km±1km**, ML0.9**/2**, Error ellipse: s-maj=1.6km s-min=0.6km az=275.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.08	208	P	Pg	23 41 29.0	-0.1
KEF4				S	Sg	23 41 31.4	+0.4
DMLN	Damoulianata-K	0.12	220	P	Pg	23 41 29.6	0.0
DMLN				S	Sg	23 41 32.1	+0.3
	95nm,0.1s						
FSK	Fiskardo	0.15	29	P	Pg	23 41 29.9	0.0
FSK				S	Sg	23 41 32.5	0.0
KEF3	Kipouria, Keph	0.16	218	P	Pg	23 41 29.6	-0.5
KEF3				S	Sg	23 41 32.6	-0.1
VLS	Valsamata	0.18	149	P	Pg	23 41 30.1	-0.3
VLS				S	Sg	23 41 33.2	0.0
	55nm,0.1s						
PSDA	Pessada-Kefalo	0.23	158	P	Pg	23 41 31.3	+0.1
PSDA				S	Sg	23 41 35.2	+0.6

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*IDC **14** 23:42:02.1±1.0, 27°.03S×176°.39W, h0km, mb4.0/8, mb1 4.2/10, mb1mx3.9/39, mbtmp4.0/10, ML4.1/2, MS3.6/9, Ms1 3.6/9, ms1mx3.2/36, Error ellipse: s-maj=29.5km s-min=22.1km az=101.0*

*NEIC **14** 23:42:02.7±2.8, 26°.91S±0°.09×176°.12W±0°.06, h10km±1km, mb4.3/9, Error ellipse: s-maj=15.0km s-min=9.0km az=161.0*

ISC 14 23:42:02.7±0.7**, 26°.98S**±0°.09×**176°.2W**±0°.1**, h10**km**, n30,**
σ**1ˢ.27**/27**, mb4.2**/12**, MS3.6**/7**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.72	213	Pn	Pn	23 42 46.9	+0.5
	144nm,0.3s,baz=28,slow=22,SNR=6.5						
RAO				Sn	Sn	23 43 18.9	-0.5
	101nm,0.3s,baz=92,slow=22,SNR=9.4						
RAO	Raoul Island	2.72	213		Pn	23 42 47.3	+0.9
RAO				Sn	Sn	23 43 20.0	+0.6
NIUE	Niue	9.76	38	Pn	Pn	23 44 20.5	-2.7
MXZ	Matakaoa Point	11.52	202	Pn	Pn	23 44 48.7	+1.5
URZ	Urewera	12.57	205	Pn	Pn	23 44 59.1	-2.5
	0.3nm,0.3s,baz=303,slow=23,SNR=1.7						
URZ				Sn	Sn	23 47 10.7	-11
	0.8nm,0.3s,baz=122,slow=23,SNR=2.6						
RAR	Rarotonga	16.06	73	LR	LR	23 50 09.1	
	comp=Z,132nm,20.2s,baz=300,slow=30						
DZM	Mont Dzumac	16.52	283	LR	LR	23 50 38.1	
	comp=Z,200nm,20.6s,baz=56,slow=32						
PPT	Papeete	26.32	75	LR	LR	23 56 03.0	
	comp=Z,68nm,18.4s,baz=210,slow=32						
CTAO	Charters Tower	35.00	273		P	23 48 56.4	+0.8
CTAO				IAmb	IAmb	23 49 01.6	
	comp=Z,6.9nm,1.1s						
STKA	Stephens Creek	36.91	252	LR	LR	00 03 16.9	
	comp=Z,97nm,18.5s,baz=29,slow=35						
COEN	Coen	40.02	281	P	P	23 49 37.6	-0.5
COEN				IAmb	IAmb	23 49 40.5	
	comp=Z,4.5nm,1.1s						
AS31	Alice Springs	44.99	263	P	P	23 50 18.4	-0.1
ASAR	Alice Springs	44.99	263	P	P	23 50 17.1	-1.4
	comp=Z,0.4nm,0.4s,baz=102,slow=7.1,SNR=7.7						
ASAR				LR	LR	00 07 17.8	
	comp=Z,70nm,20.2s,baz=152,slow=34						
WR0	Warramunga Arr	45.49	268	P	P	23 50 21.9	-0.6
WR0				IAmb	IAmb	23 50 29.1	
	comp=Z,3.6nm,1.1s						
WRA	Warramunga Arr	45.67	268	P	P	23 50 22.5	-1.4
	comp=Z,0.6nm,0.3s,baz=106,slow=7.5,SNR=9.2						
WRA				LR	LR	00 07 32.8	
	comp=Z,53nm,20.2s,baz=255,slow=34						
WRA	Warramunga Arr	45.67	268	P	P	23 50 22.6	-1.4
FITZ	Fitzroy Crossi	54.04	267	P	P	23 51 28.8	+1.1
	comp=Z,2.8nm,0.9s,baz=95,slow=12,SNR=2.7						
FITZ	Fitzroy Crossi	54.04	267	P	P	23 51 28.3	+0.6
FITZ				IAmb	IAmb	23 51 29.6	
	comp=Z,8.5nm,1.2s						
CASY	Casey	58.89	207	P	P	23 52 00.5	-0.9
QSPA	South Pole Qui	63.12	180	P	P	23 52 31.2	+0.8
	comp=Z,4.4nm,1.0s,baz=250,slow=0.9,SNR=8.2						
QSPA	South Pole Qui	63.12	180	P	P	23 52 31.2	+0.8
MAW	Mawson	76.05	200	P	P	23 53 50.2	+0.3
	comp=Z,0.9nm,0.6s,baz=119,slow=8.1,SNR=3.8						
MAW				LR	LR	00 25 32.9	
	comp=Z,32nm,18.1s,baz=241,slow=34						
MJAR	Matsushiro Arr	76.38	324	P	P	23 53 52.6	+0.4
	comp=Z,2.2nm,0.9s,baz=154,slow=5.0,SNR=4.5						
SNAA	Sanae	81.51	178	P	P	23 54 20.6	+0.6
SNAA				IAmb	IAmb	23 54 34.7	
	comp=Z,4.2nm,1.2s						
PFO	Pinyon Flats O	82.73	47	LR	LR	00 26 05.1	
	comp=Z,52nm,19.5s,baz=243,slow=32						
NVAR	Mina Array Bea	84.66	42	P	P	23 54 39.0	+2.1
	comp=Z,0.2nm,0.3s,baz=210,slow=5.2,SNR=2.2						
NVAR				LR	LR	00 29 53.4	
	comp=Z,53nm,19.1s,baz=275,slow=34						
CMAR	Chiang Mai Arr	93.78	289	P	P	23 55 22.6	+2.1
	comp=Z,0.5nm,0.3s,baz=108,slow=3.1,SNR=4.3						
CMAR	Chiang Mai Arr	93.78	289	P	P	23 55 21.4	+0.9
AKASG	Malin Array Be	149.40	328	PKPbc	PKPbc	00 01 51.9	+0.2
	comp=Z,0.3nm,0.4s,baz=48,slow=3.0,SNR=2.3						
TORD	Torodi Ar. Bea	166.10	171	PKPab	PKPab	00 03 08.7	-0.2
	comp=Z,0.5nm,0.8s,baz=202,slow=3.2,SNR=4.3						

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*IDC **14** 23:42:54.4±5.3, 36°.16N×71°.09E, h170km±48km, mb3.4/7, mb1 3.4/11, mb1mx3.0/59, mbtmp3.8/11, Error ellipse: s-maj=38.0km s-min=20.2km az=29.0*

*NNC **14** 23:43:04.2±1.7, 36°.82N×71°.28E, h217km±19km, mb2.9, mpv4.0, Error ellipse: s-maj=17.0km s-min=9.0km az=28.0*

*SOME **14** 23:43:05.3, 37°.13N×71°.35E, h0km*

ISC 14 23:43:00.3±0.9**, 36°.57N**±0°.06×**71°.24E**±0°.10**, h200**km**, n40,**
σ**1ˢ.17**/37**, mb3.4**/6**, 7C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	2.79	169	P	Pn	23 43 48.8	+1.1
CEP				S	Sn	23 44 25.0	+0.3
CHCP	Chirah Chowk	3.35	150	P	Pn	23 43 55.4	+1.3
THW	Thamme Wali	3.79	174	P	Pn	23 43 59.9	+0.3
IUG	Iuzhnay	5.65	351	eP	Pn	23 44 23.4	+0.4
	625nm,0.1s						
IUG				eS	Sn	23 45 26.6	-1.9
	92nm,0.5s						
AML	Almayashu	5.87	18	P	Pn	23 44 27.4	+1.2
	SNR=115						
UCH	Uchtor	6.19	23	P	Pn	23 44 31.7	+1.3
	SNR=29						
MRKS	Merke	6.35	13	eP	Pn	23 44 33.2	+1.1
	15nm,0.3s						
MRKS				eS	Sn	23 45 43.7	-1.3
	27nm,0.5s						
EKS2	Erkin-Say	6.39	17	P	Pn	23 44 34.0	+1.4
	SNR=13						
KK31	Karatay Array	6.55	355	P	Pn	23 44 35.3	+0.7
	8.4nm,0.6s,baz=178,slow=12,SNR=48						
KK31				S	Sn	23 45 48.2	-1.2
	5.1nm,0.3s,baz=187,slow=22,SNR=7.2						
AAK	Ala-Archa	6.56	22	P	Pn	23 44 36.3	+1.4
	3.0nm,0.3s,baz=193,slow=6.5,SNR=62						
AAK				S	Sn	23 45 50.3	+0.5
	0.9nm,0.3s,baz=333,slow=23,SNR=27						
AAK	Ala-Archa	6.56	22	P	Pn	23 44 36.5	+1.7
	SNR=8.7						
AAK	Ala-Archa	6.56	22	⇑P	Pn	23 44 36.2	+1.4
	8.1nm,0.5s						
AAK				⇑S	Sn	23 45 49.3	-0.6
	26nm,0.8s						
KBK	Karagaybulak	6.72	24	P	Pn	23 44 38.6	+1.7
	SNR=17						
CHMS	Chumysh	6.96	22	P	Pn	23 44 41.8	+1.8
	SNR=7.3						
USP	Ospenovka	7.14	20	P	Pn	23 44 43.4	+1.1
	SNR=5.7						
TKM2	Tokmak 2	7.17	27	P	Pn	23 44 44.1	+1.2
	SNR=17						
TKM2	Tokmak 2	7.17	27	⇓P	Pn	23 44 43.8	+0.9
	14nm,1.0s						
DGS	Degeres	7.52	26	eP	Pn	23 44 47.9	+0.7
	4.4nm,0.8s						
DGS				eS	Sn	23 46 10.8	-1.5
	3.0nm,0.6s						
MDOK	Medeo	7.95	32	⇑P	Pn	23 44 53.9	+0.9
	4.3nm,0.6s						
MAKZ	Makanchi	12.99	35	⇓P	Pn	23 45 56.9	-0.6
	1.2nm,0.6s						
PYUN	Piuthan	13.03	127	eP	Pn	23 45 56.4	-2.0
MK31	Makanchi Array	13.12	35	⇑P	Pn	23 45 59.9	+0.7
	0.2nm,0.4s,baz=216,slow=12,SNR=9.6						
MKAR	Makanchi Array	13.12	35	P	Pn	23 45 59.1	-0.1
	0.1nm,0.3s,baz=201,slow=10,SNR=6.8						
DANN	Dangsing	13.37	124	eP	Pn	23 46 01.6	-1.1
	12nm,0.3s						
KOLN	Koldanda	13.65	127	eP	Pn	23 46 04.3	-1.8
	5.2nm,0.2s						
GKN	Gorkha	14.18	123	eP	Pn	23 46 11.8	-0.8
	11nm,0.4s						
KKN	Kakani	14.75	122	eP	Pn	23 46 18.1	-1.6
	12nm,0.4s						
KURBB	Kurchatov Arra	14.99	18	P	Pn	23 46 21.5	-0.7
	0.1nm,0.3s,baz=202,slow=11,SNR=4.7						
AB31	Akbulak array	15.12	331	⇑P	Pn	23 46 24.7	+1.0
	1.3nm,0.5s,baz=148,slow=12,SNR=28						
AB31				⇑S	S	23 49 11.1	-0.4
	1.0nm,0.7s,baz=155,slow=24,SNR=4.1						
JIRN	Jiri	15.46	121	eP	Pn	23 46 27.1	-1.4
	14nm,0.5s						
RAMN	Ramite	16.19	122	eP	P	23 46 35.6	-1.0

AKTO	**Aktyubinsk**	**16.82**	**330**	P	**P**	**23 46 43.3**	**+0.3**
	0.5nm,0.3s,baz=133,slow=9.9,SNR=8.6						
AKTO	**Aktyubinsk**	**16.82**	**330**	⇑P	**P**	**23 46 43.5**	**+0.6**
	3.8nm,0.9s						
ZALV	**Zalesovo Beam**	**19.77**	**24**	P	**P**	**23 47 17.0**	**+2.0**
	1.3nm,0.3s,baz=220,slow=9.8,SNR=8.8						
FINES	**FINESS Array B**	**37.53**	**326**	P	**P**	**23 49 53.9**	**-0.8**
	3.4nm,1.1s,baz=79,slow=9.9,SNR=4.3						
ARCES	**ARCESS Array B**	**41.15**	**337**	P	**P**	**23 50 24.1**	**-0.5**
	3.8nm,1.0s,baz=125,slow=10,SNR=5.3						
NOA	**NORSAR Array B**	**44.44**	**323**	P	**P**	**23 50 49.6**	**-1.5**
	0.9nm,0.8s,baz=97,slow=7.7,SNR=1.6						
TORD	**Torodi Ar. Bea**	**65.91**	**269**	P	P	23 53 21.1	-4.0
	0.5nm,0.7s,baz=49,slow=5.7,SNR=7.6						
WRA	**Warramunga Arr**	**81.86**	**122**	P	P	23 54 54.0	-3.4
	0.4nm,0.7s,baz=328,slow=5.0,SNR=3.0						
ASAR	**Alice Springs**	**84.14**	**125**	P	P	23 55 05.7	-3.3
	0.4nm,0.6s,baz=311,slow=5.2,SNR=8.2						

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*TUL **14** 23:43:12.2±0.9, 36°.80N±0°.02×98°.68W±0°.02, h3^{km}±7^{km}, ML2.8, mb_Lg2.4/9(NEIC), Error ellipse: s-maj=3.4km s-min=2.2km az=143.0*

NEIC 14 23:43:12.7±0.8**, 36°.80N**±0°.02×**98°.67W**±0°.02**, h2**^{km}±7^{km}**, Error ellipse: s-maj=3.5km s-min=2.2km az=143.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK032	**Salt Plains WL**	**0.37**	**89**		Pg	23 43 20.0	+0.2
OK032				Sg	Sb	23 43 26.4	-1.8
U32A	**Winter Ranch,**	**0.49**	**213**		Pg	23 43 22.2	0.0
U32A				Sg	Sg	23 43 29.2	+0.6
KAN10	**Anthony SW Sta**	**0.56**	**54**	Pg	Pg	23 43 23.5	-0.1
KAN10					Sg	23 43 31.4	+0.6
KAN14	**Manchester OK**	**0.59**	**74**		Pg	23 43 23.8	-0.2
KAN14				Sg	Sg	23 43 32.3	+0.7
CROK	**Carrier**	**0.62**	**118**	Pg	Pg	23 43 24.6	-0.1
CROK					Sg	23 43 33.3	+0.6
KAN16	**Harper SW Stat**	**0.65**	**48**	Pg	Pg	23 43 24.9	-0.2
KAN16				Sg	Sg	23 43 34.1	+0.6
GC02	**Grant County #**	**0.65**	**85**	Pg	Pg	23 43 25.1	-0.1
GC02				Sg	Sg	23 43 34.2	+0.5
KAN08	**Anthony NE Sta**	**0.70**	**52**	Pg	Pg	23 43 26.0	-0.3
KAN05	**Bluff City Nor**	**0.71**	**64**	Pg	Pg	23 43 26.0	-0.3
KAN05				Sg	Sg	23 43 36.3	+0.7
KAN12	**Harper NE Stat**	**0.73**	**47**		Pg	23 43 26.7	-0.1
KAN17	**Caldwell West**	**0.77**	**71**		Pg	23 43 27.1	-0.3
KAN06	**Argonia West S**	**0.79**	**55**	Pg	Pg	23 43 27.6	-0.2
KAN01	**Argonia South**	**0.81**	**64**	Pg	Pg	23 43 28.0	-0.3
KAN09	**Caldwell North**	**0.91**	**68**	Pg	Pg	23 43 29.8	-0.4
KAN13	**South Haven SW**	**0.98**	**77**		Pg	23 43 31.0	-0.5
KS20	**Mayfield South**	**0.99**	**64**	Pg	Pg	23 43 31.2	-0.5
BLOK	**Blackwell**	**1.17**	**91**		Pg	23 43 34.3	-0.9
OK029	**Liberty Lake**	**1.40**	**135**	Pn	Pn	23 43 38.8	-0.5
BCOK	**Bluff Creek, N**	**1.43**	**143**	Pn	Pn	23 43 38.8	-0.8
R32A	**Long Quarter,**	**1.62**	**359**		Pn	23 43 42.1	-0.4
OKCFA	**Oklahoma City**	**1.69**	**144**	Pn	Pn	23 43 43.1	-0.3
OK031	**S. Brethren Rd**	**1.70**	**119**	Pn	Pn	23 43 43.4	-0.1
QUOK	**Quay**	**1.70**	**111**	Pn	Pn	23 43 43.5	+0.1
T35A	**Sooner Cattle**	**1.73**	**85**		Pn	23 43 44.2	+0.3
OK030	**Cody Creek RV**	**1.75**	**119**	Pn	Pn	23 43 44.4	+0.2
FNO	**Franklin**	**1.85**	**146**	Pn	Pn	23 43 45.5	0.0
WMOK	**Wichita Mounta**	**2.06**	**183**	Pn	Pn	23 43 48.3	0.0
X34A	**Smith Ranch, M**	**2.29**	**162**	Pn	Pn	23 43 52.0	+0.4
TUL1	**Leonard**	**2.49**	**110**	Pn	Pn	23 43 54.8	+0.5
KSU1	**Kansas State U**	**2.82**	**35**	Pn	Pn	23 43 59.0	+0.2
LOOK	**Love County**	**3.05**	**156**	Pn	Pn	23 44 02.2	+0.2
AMTX	**Amarillo**	**3.10**	**233**	IAmb_Lg		23 44 56.5	
	comp=Z,11nm,0.9s						
U38A	**Gravette**	**3.46**	**95**	Pn	Pn	23 44 08.3	+0.6
U38A				IAmb_Lg		23 45 01.2	
	comp=Z,6.8nm,0.8s						
X37A	**Clayton**	**3.47**	**128**	Pn	Pn	23 44 07.7	-0.1
HHAR	**Hobbs**	**3.84**	**96**	IAmb_Lg		23 45 19.3	
	comp=Z,6.7nm,0.8s						
S39A	**Bolivar**	**4.36**	**77**	Pn	Pn	23 44 19.6	-0.4
T25A	**Trinidad**	**4.61**	**276**	Pn	Pn	23 44 24.0	+0.4
U40A	**Yellville**	**4.70**	**94**	Pn	Pn	23 44 24.6	-0.1
U40A				IAmb_Lg		23 45 40.1	
	comp=Z,12nm,0.7s						
MIAR	**Mount Ida**	**4.71**	**117**	Pn	Pn	23 44 24.5	-0.4
R40A	**Maddies Statio**	**5.30**	**72**	Pn	Pn	23 44 33.5	+0.6
LCAR	**Lake Charles**	**6.10**	**95**	Pn	Pn	23 44 43.7	-0.2

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*IDC **14** 23:46:55.7±2.1, 1°.06N×126°.45E, h0^{km}, mb3.4/3, mb1 3.7/3, mb1mx3.2/35, mbtmp3.5/3, Error ellipse: s-maj=173.5km s-min=26.6km az=65.0*

*DJA **14** 23:47:01.7±1.9, 1°N±16°×12°6E±°, h18^{km}±24^{km}, M3.4/7, MLv3.4/7*

ISC 14 23:47:03.0±1.2**, 0°.9N**±0°.2×**125°.99E**±0°.06**, h44**^{km}**, n8, σ1^s.86**/9**, mb3.5**/3**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.38**	**96**	P	**Pn**	**23 47 26.9**	**+1.0**
KMSI	**Cibinong**	**2.04**	**260**	P	**Pn**	**23 47 34.6**	**-0.3**
KMSI				S	**Sn**	**23 48 00.5**	**+1.4**
LBMI	**Labuha**	**2.16**	**136**	P	**Pn**	**23 47 38.2**	**+1.6**
GTOI	**Gorontalo**	**2.99**	**265**	P	**Pn**	**23 47 49.2**	**+1.2**
APSI	**Ampana**	**4.71**	**247**	P	**Pn**	**23 48 12.7**	**+1.2**
WRA	**Warramunga Arr**	**22.29**	**159**	P	**P**	**23 51 53.4**	**-3.4**
	1.1nm,0.6s,baz=338,slow=11,SNR=9.0						
ASAR	**Alice Springs**	**25.62**	**163**	P	**P**	**23 52 27.9**	**-0.7**
	0.4nm,0.3s,baz=344,slow=11,SNR=11						
MKAR	**Makanchi Array**	**59.45**	**327**	P	**P**	**23 57 01.2**	**-0.2**
	0.2nm,0.4s,baz=124,slow=6.9,SNR=4.3						

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*IDC **14** 23:53:50.2±1.3, 22°.67N×143°.90E, h0^{km}, mb3.8/8, mb1 3.9/9, mb1mx3.7/37, mbtmp3.8/9, ML3.8/1, Error ellipse: s-maj=45.9km s-min=24.3km az=75.0*

ISC 14 23:53:55.8±1.1**, 22°.7N**±0°.1×**143°.8E**±0°.3**, h35**^{km}**, n15, σ0^s.92**/10**, mb3.7**/7**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**4.59**	**342**	Pn	**Pn**	**23 55 03.5**	**+0.8**
	4.4nm,0.3s,baz=102,slow=21,SNR=2.1						
JCJ				Sn	**Sn**	**23 55 53.5**	**-1.3**
	4.4nm,0.3s,baz=277,slow=24,SNR=1.2						
KSRS	**Korea Array**	**20.05**	**321**	P	**Pn**	**23 58 27.7**	**-0.1**
	1.7nm,0.5s,baz=147,slow=9.3,SNR=2.3						
H11N1	**WAKE ISLAND Hy**	**21.76**	**94**	T	T	00 21 10.8	
	baz=274						
H11N2	**WAKE ISLAND Hy**	**21.76**	**94**	T	T	00 21 12.4	
	baz=274						
H11N3	**WAKE ISLAND Hy**	**21.77**	**94**	T	T	00 21 07.5	
	baz=274						
H11S3	**WAKE ISLAND Hy**	**21.85**	**97**	T	T	00 22 11.3	
	baz=290						
H11S1	**WAKE ISLAND Hy**	**21.86**	**97**	T	T	00 22 13.7	
	baz=290						
H11S2	**WAKE ISLAND Hy**	**21.87**	**97**	T	T	00 22 14.1	
	baz=290						
KLR	**Kul'dur**	**28.11**	**343**	P	**P**	**23 59 45.4**	**+1.1**
	0.7nm,0.4s,baz=164,slow=6.2,SNR=6.5						
SONM	**Songino Array**	**38.91**	**319**	P	**P**	**00 01 18.6**	**+0.4**
	0.4nm,0.6s,baz=134,slow=7.3,SNR=5.5						
WRA	**Warramunga Arr**	**43.39**	**193**	P	**P**	**00 01 55.0**	**-0.1**
	0.2nm,0.3s,baz=18,slow=9.3,SNR=6.0						
ZALV	**Zalesovo Beam**	**53.76**	**321**	P	**P**	**00 03 14.6**	**+0.1**
	0.3nm,0.4s,baz=109,slow=11,SNR=1.9						
MKAR	**Makanchi Array**	**54.41**	**312**	P	**P**	**00 03 19.6**	**+0.1**
	0.7nm,0.4s,baz=88,slow=9.2,SNR=21						
NVAR	**Mina Array Bea**	**82.08**	**52**	P	**P**	**00 06 13.1**	**-0.1**
	0.6nm,0.8s,baz=284,slow=7.3,SNR=2.3						
FINES	**FINESS Array B**	**82.50**	**335**	P	**P**	**00 06 13.1**	**-1.4**
	3.1nm,0.9s,baz=94,slow=5.7,SNR=4.6						

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*JMA **15** 00:10:33.9±0.3, 31°.35N×128°.78E, h7^{km}±3^{km}, M3.8*

*NIED **15** 00:10:34.0, 31°.35N×128°.78E, h7^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.23; $M_{\theta\theta}$1.88; $M_{\phi\phi}$-0.66; $M_{r\theta}$0.53; $M_{\theta\phi}$3.12; $M_{\phi r}$-2.90; Fault plane solution: $M_0$4.58000×10^{14} NP1:ϕ_s16.00000°, δ75.00000°, λ-141.00000°. NP2:ϕ_s274.00000°, δ52.00000°, λ-19.00000°.*

*IDC **15** 00:10:35.5±1.1, 31°.57N×128°.30E, h0^{km}, mb3.3/5, mb1 3.5/8, mb1mx3.4/47, mbtmp3.4/8, ML3.5/2, MS2.6/1, Ms1 2.6/1, ms1mx2.2/31 Error ellipse: s-maj=25.3km s-min=17.0km az=89.0*

ISC 15 00:10:34.9±0.9**, 31°.45N**±0°.06×**128°.89E**±0°.06**, h10**^{km}**, n16, σ1^s.89**/20**, mb3.4**/5**, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	**Shimokoshiki**	**0.74**	**72**	P	**Pb**	**00 10 50.2**	**+0.3**
JSJ				S	**Sn**	**00 11 01.2**	**-1.6**
JFU	**Fukue jima 2**	**1.21**	**354**	P	**Pn**	**00 10 58.1**	**+0.2**
JFU				S	**Sn**	**00 11 15.2**	**+0.8**
JSU	**Suzuyama**	**1.34**	**87**	P	**Pg**	**00 11 00.6**	**0.0**
JSU				S	**Sg**	**00 11 19.7**	**+1.7**
JYAK	**Yakushimahirau**	**1.84**	**130**	P	**Pn**	**00 11 05.4**	**-1.2**
JTZ	**Takazaki**	**1.93**	**76**	P	**Pb**	**00 11 09.0**	**-1.2**
JTN	**Tanegashima 3**	**1.96**	**113**	P	**Pn**	**00 11 08.1**	**-0.1**
JIU3	**Izumi3**	**1.97**	**56**	P	**Pb**	**00 11 09.7**	**-1.2**
JMTN	**Minamitane**	**2.02**	**121**	P	**Pn**	**00 11 08.8**	**-0.3**
JNU	**Nakatsue**	**2.37**	**45**	Pn	**Pg**	**00 11 19.1**	**-1.3**
	25nm,0.3s,baz=280,slow=5.0,SNR=38						
JNU				Sn	**Sg**	**00 11 53.6**	**+2.5**
	8.9nm,0.3s,baz=232,slow=12,SNR=6.1						
KSRS	**Korea Array**	**6.04**	**353**	Pn	**Pn**	**00 12 05.3**	**+1.0**
	0.3nm,0.3s,baz=175,slow=15,SNR=4.6						
KSRS				Sn	**Sn**	**00 13 14.0**	**+0.5**
	0.6nm,0.3s,baz=175,slow=16,SNR=1.2						
KSRS				Lg	Lg	00 13 43.6	
	1.1nm,0.3s,baz=173,slow=30,SNR=6.0						
KSRS				LR	LR	00 14 29.6	
	comp=Z,57nm,20.9s,baz=182,slow=40						
MJAR	**Matsushiro Arr**	**9.25**	**54**	Pn	Pn	00 12 55.2	+6.7
	0.0nm,0.3s,baz=248,slow=16,SNR=1.9						
SONM	**Songino Array**	**23.70**	**320**	P	**P**	**00 15 43.4**	**-3.6**
	0.2nm,0.4s,baz=101,slow=6.0,SNR=2.0						
MKAR	**Makanchi Array**	**38.67**	**307**	P	**P**	**00 17 56.9**	**-1.9**
	0.3nm,0.8s,baz=111,slow=12,SNR=2.2						
WRA	**Warramunga Arr**	**51.36**	**173**	P	**P**	**00 19 42.7**	**+2.9**
	0.7nm,1.1s,baz=354,slow=8.1,SNR=1.6						
ASAR	**Alice Springs**	**55.01**	**174**	P	**P**	**00 20 10.7**	**+4.1**
	0.2nm,0.6s,baz=1.6,slow=15,SNR=7.0						
FINES	**FINESS Array B**	**68.64**	**330**	P	**P**	**00 21 37.9**	**-0.1**
	1.9nm,0.9s,baz=82,slow=11,SNR=3.7						

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*NIED **15** 00:15:28.6, 45°.04N×142°.06E, h267^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-2.81; $M_{\theta\theta}$2.83; $M_{\phi\phi}$-0.02; $M_{r\theta}$3.14; $M_{\theta\phi}$-2.16; $M_{\phi r}$-2.30; Fault plane solution: $M_0$5.18000×10^{14} NP1: ϕ_s306.00000°, δ70.00000°, λ-83.00000°. NP2: ϕ_s106.00000°, δ21.00000°, λ-108.00000°.*

*JMA **15** 00:15:28.6±0.2, 45°.04N×142°.06E, h267^{km}±2^{km}, M3.5*

*IDC **15** 00:15:29.2±0.5, 45°.03N×142°.04E, h259^{km}±5^{km}, mb3.1/9, mb1 3.4/13, mb1mx3.2/46, mbtmp3.8/13, Error ellipse: s-maj=16.7km s-min=12.2km az=136.0*

*SKHL **15** 00:15:29.4±0.5, 45°.10N×142°.00E, h257^{km}±52^{km}, mb4.5/5, msha4.5/4*

ISC 15 00:15:29.3±0.6**, 44°.97N**±0°.05×**142°.09E**±0°.06**, h263**^{km}±5^{km}**, n40, σ1^s.13**/55**, mb3.5**/13**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSE	**Soyaes**	**0.35**	**91**	P	**Pn**	**00 16 03.1**	**-0.1**
JSE				*e*S	**S**	**00 16 30.0**	**0.0**
JWK2	**Keihoku**	**0.38**	**339**	P	**Pn**	**00 16 03.0**	**-0.2**
JWK2				*e*S	**S**	**00 16 29.6**	**-0.5**
JRR	**Rishiri**	**0.58**	**287**	P	**Pn**	**00 16 03.8**	**0.0**
JSS	**Shosan**	**0.59**	**197**	P	**Pn**	**00 16 04.3**	**+0.3**
JSS				*e*S	**S**	**00 16 32.0**	**+0.7**
JRBN	**Rebuntou**	**0.86**	**303**	P	**Pn**	**00 16 04.2**	**-0.7**
JRBN				*e*S	**S**	**00 16 31.2**	**-1.8**
ASAJ	**Asahikawa**	**0.92**	**157**	P	**Pn**	**00 16 05.5**	**+0.2**
	12nm,0.3s,baz=298,slow=5.7,SNR=38						
ASAJ				S	**S**	**00 16 33.9**	**+0.1**
	2.8nm,0.3s,baz=72,slow=20,SNR=23						
ASAJ	**Asahikawa**	**0.92**	**157**	P	**Pn**	**00 16 05.6**	**+0.2**
ASAJ				*e*S	**S**	**00 16 34.0**	**+0.2**
JKK2	**Kamakawa 2**	**1.19**	**157**	P	**Pn**	**00 16 07.3**	**+0.5**
JKK2				S	**S**	**00 16 36.9**	**+0.4**
JMP	**Maruseppu**	**1.32**	**136**	P	**Pn**	**00 16 07.9**	**+0.3**
JMP				*e*S	**S**	**00 16 38.0**	**+0.1**
JAB	**Ashibetsu**	**1.47**	**176**	P	**Pn**	**00 16 08.9**	**+0.3**
JTKR	**Abashiri--Toko**	**1.64**	**127**	P	**Pn**	**00 16 10.3**	**+0.5**
JTKR				*e*S	**S**	**00 16 42.4**	**+0.5**
JFR	**Furan**	**1.84**	**168**	P	**Pn**	**00 16 11.5**	**0.0**
YSS	**Yuzh-Sakhalins**	**2.04**	**13**	*e*P	**Pn**	**00 16 12.4**	**-0.6**
YSS				AMB	AMB	00 16 12.8	
	270nm,0.3s						
YSS				*e*S	**S**	**00 16 45.4**	**-2.4**
YSS				A	A	00 16 46.6	
	110nm,0.5s						
YSS				A	A	00 16 46.6	
	120nm,0.5s						
JAR	**Ashorobuto**	**2.06**	**144**	P	**Pn**	**00 16 14.0**	**+0.6**
JAR				*e*S	**S**	**00 16 49.3**	**+1.0**
JEW	**Eniwo**	**2.18**	**193**	P	**Pn**	**00 16 15.2**	**+0.8**
JCH	**Churui**	**2.52**	**158**	P	**Pn**	**00 16 16.3**	**-1.4**
JCH				*e*S	**S**	**00 16 53.0**	**-3.1**
JAK	**Akkeshi**	**2.72**	**135**	*e*S	**S**	**00 16 57.0**	**-2.7**
JNBK	**Urakawa-nobuka**	**2.73**	**170**	P	**Pn**	**00 16 19.5**	**-0.3**
JNBK				*e*S	**S**	**00 16 59.6**	**-0.2**
NMR	**Nemuro--Hokkai**	**3.06**	**120**	*e*P	**Pn**	**00 16 24.6**	**+1.4**
NMR				*e*S	**S**	**00 17 04.3**	**-1.7**
NEM2	**Nemuro 2**	**3.08**	**120**	*e*S	**S**	**00 17 03.0**	**-3.3**
JKB	**Kayabe**	**3.17**	**194**	P	**Pn**	**00 16 23.6**	**-0.8**
JKB				*e*S	**S**	**00 17 06.5**	**-1.7**
USRK	**Ussuriysk Ar.**	**7.25**	**267**	P	**Pn**	**00 17 12.3**	**-0.9**
	baz=72,slow=11,SNR=5.7						
MJAR	**Matsushiro Arr**	**8.92**	**201**	P	**Pn**	**00 17 33.5**	**-0.7**
	0.2nm,0.3s,baz=23,slow=12,SNR=17						
PETK	**Petropavlovsk-**	**13.06**	**46**	P	**P**	**00 18 26.7**	**0.0**
	0.6nm,0.3s,baz=222,slow=9.3,SNR=8.2						
SEY	**Seymchan**	**18.95**	**15**	P	**P**	**00 19 29.9**	**-0.9**
	0.8nm,0.3s,baz=205,slow=6.3,SNR=11						
SONM	**Songino Array**	**24.65**	**289**	P	**P**	**00 20 26.4**	**+0.2**
	1.1nm,0.4s,baz=86,slow=8.8,SNR=12						
MKAR	**Makanchi Array**	**40.79**	**295**	P	**P**	**00 22 44.8**	**-0.2**
	0.9nm,0.7s,baz=80,slow=9.0,SNR=11						
ILAR	**Eielson Array**	**42.67**	**37**	P	**P**	**00 22 58.5**	**-1.3**
	0.6nm,0.6s,baz=274,slow=9.4,SNR=16						
INK	**Inuvik**	**47.18**	**30**	P	**P**	**00 23 34.1**	**-1.0**
	1.2nm,0.4s,baz=292,slow=5.1,SNR=5.6						
JIRN	**Jiri**	**47.29**	**268**	*e*P	**P**	**00 23 37.4**	**+0.3**
	2.3nm,0.3s						
RAMN	**Ramite**	**47.43**	**267**	*e*P	**P**	**00 23 38.1**	**+0.1**
	7.3nm,0.5s						
GKN	**Gorkha**	**48.19**	**270**	*e*P	**P**	**00 23 43.7**	**0.0**
	5.2nm,0.4s						
DANN	**Dangsing**	**48.61**	**271**	*e*P	**P**	**00 23 48.0**	**+1.0**
	19nm,0.6s						
KOLN	**Koldanda**	**49.07**	**270**	*e*P	**P**	**00 23 50.8**	**+0.4**
PYUN	**Piuthan**	**49.30**	**271**	*e*P	**P**	**00 23 52.6**	**+0.4**
YKA	**Yellowknife Ar**	**56.77**	**33**	P	**P**	**00 24 47.2**	**+1.6**
	1.2nm,0.8s,baz=313,slow=5.7,SNR=6.6						
WRA	**Warramunga Arr**	**64.98**	**188**	P	**P**	**00 25 41.1**	**0.0**
	0.2nm,0.5s,baz=4.2,slow=6.6,SNR=1.8						
ASAR	**Alice Springs**	**68.71**	**188**	P	**P**	**00 26 05.7**	**+1.2**
	0.7nm,0.7s,baz=2.2,slow=4.9,SNR=9.5						
NVAR	**Mina Array Bea**	**69.94**	**56**	P	**P**	**00 26 13.9**	**+1.5**
	0.1nm,0.3s,baz=287,slow=7.3,SNR=2.3						
PDAR	**Pinedale Array**	**71.82**	**47**	P	**P**	**00 26 23.9**	**+0.4**
	0.4nm,0.6s,baz=280,slow=2.2,SNR=4.8						

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*IDC **15** 00:15:38.8±19.0, 24°.03S×177°.42W, h614^{km}±90^{km}, mb2.9/3, mb1 3.1/4, mb1mx2.8/27, mbtmp4.0/4, Error ellipse: s-maj=389.4km s-min=97.3km az=95.0*

*NEIC **15** 00:15:55.8±2.1, 23°.4S±0°.2×179°.7E±0°.1, h562^{km}±19^{km}, mb4.1/12, Error ellipse: s-maj=23.5km s-min=18.0km az=154.0*

ISC 15 00:15:55.1±0.7**, 23°.6S**±0°.1×**179°.69E**±0°.09**, h548**^{km}**, n20, σ1^s.47**/21**, mb4.0**/9**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**6.01**	**345**	P	**P**	**00 17 34.6**	**+0.6**
	1.8nm,0.3s,baz=145,slow=23,SNR=4.8						
MSVF	**Nonsavu**	**6.01**	**345**	P	**P**	**00 17 34.2**	**+0.2**
NIUE	**Niue**	**10.66**	**67**	P	**P**	**00 18 20.5**	**+0.6**
NIUE				S	**S**	**00 20 17.2**	**-1.7**
OUENC	**Ouen Island, N**	**11.89**	**273**	P	**P**	**00 18 35.0**	**+2.5**
CTAO	**Charters Tower**	**31.19**	**270**	P	**P**	**00 21 30.9**	**+0.9**
STKA	**Stephens Creek**	**34.58**	**248**	P	**P**	**00 21 56.8**	**-1.7**
	1.0nm,0.4s,baz=89,slow=11,SNR=5.2						
STKA	**Stephens Creek**	**34.58**	**248**	P	**P**	**00 21 56.8**	**-1.7**
BBOO	**Buckleboo**	**39.31**	**247**	P	**P**	**00 22 34.5**	**-2.8**
AS31	**Alice Springs**	**41.80**	**260**	P	**P**	**00 22 56.5**	**-0.8**
ASAR	**Alice Springs**	**41.81**	**260**	P	**P**	**00 22 56.7**	**-0.6**
	0.5nm,0.4s,baz=96,slow=7.3,SNR=11						
ASAR	**Alice Springs**	**41.81**	**260**	P	**P**	**00 22 56.8**	**-0.6**
WR0	**Warramunga Arr**	**41.95**	**266**	P	**P**	**00 22 58.0**	**-0.5**
WR0				IAmb	IAmb	00 23 12.5	
	comp=Z,8.9nm,1.5s						
WB0	**Warramunga Arr**	**42.13**	**266**	P	**P**	**00 22 59.2**	**-0.8**
WB0				IAmb	IAmb	00 23 18.8	
	comp=Z,5.7nm,1.3s						
WRA	**Warramunga Arr**	**42.14**	**266**	P	**P**	**00 22 59.3**	**-0.8**
	comp=Z,1.8nm,0.3s,baz=104,slow=8.1,SNR=46						
WRA	**Warramunga Arr**	**42.14**	**266**	P	**P**	**00 22 58.6**	**-1.4**
KNRA	**Kununurra**	**48.40**	**270**	P	**P**	**00 23 47.7**	**-0.2**
FITZ	**Fitzroy Crossi**	**50.57**	**265**	P	**P**	**00 24 03.6**	**-0.2**
FITZ				IAmb	IAmb	00 24 08.8	
	comp=Z,9.0nm,1.4s						
SBA	**Scott Base**	**54.68**	**183**	P	**P**	**00 24 32.6**	**+0.4**
SBA				IAmb	IAmb	00 24 34.3	
	comp=Z,13nm,0.7s						
MORW	**Morawa**	**56.72**	**250**	P	**P**	**00 24 45.3**	**-1.9**
MORW				IAmb	IAmb	00 24 58.5	
	comp=Z,14nm,1.3s						
QSPA	**South Pole Qui**	**66.50**	**180**	P	**P**	**00 25 52.7**	**+2.3**
QSPA				IAmb	IAmb	00 26 08.5	
	comp=Z,5.0nm,1.4s						

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*IDC **15** 00:19:23.6±9.4, 18°.50S×175°.09W, h117^{km}±46^{km}, mb3.5/3, mb1 3.7/4, mb1mx3.3/33, mbtmp3.9/4, MS2.5/1, Ms1 2.5/1, ms1mx2.3/22, Error ellipse: s-maj=317.7km s-min=31.6km az=142.0*

*NEIC **15** 00:19:29.2±1.3, 18°.4S±0°.2×175°.0W±0°.1, h169^{km}±10^{km}, mb4.1/5, Error ellipse: s-maj=22.6km s-min=16.2km az=199.0*

ISC 15 00:19:27.6±0.9**, 18°.3S**±0°.1×**175°.02W**±0°.09**, h150**^{km}**, n12, σ1^s.47**/13**, mb4.0**/6**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**4.89**	**100**	Pn	**Pn**	**00 20 40.3**	**+0.8**
NIUE				Sn	**Sn**	**00 21 35.0**	**-0.6**
AFI	**Afiamalu**	**5.37**	**36**	P	**Pn**	**00 20 44.3**	**-1.7**
	0.6nm,0.3s,baz=202,slow=11,SNR=1.2						
AFI				S	Sn	00 21 41.0	-6.2
	2.2nm,0.3s,baz=282,slow=19,SNR=6.1						
AFI				LR	LR	00 22 44.1	
	comp=Z,49nm,20.7s,baz=88,slow=36						
FUNA	**Funafuti**	**11.23**	**329**	Pn	**Pn**	**00 22 06.1**	**+2.2**
URZ	**Urewera**	**21.04**	**197**	P	**P**	**00 23 59.6**	**+0.1**
URZ				IAmb	IAmb	00 24 09.7	
	comp=Z,18nm,1.2s						
WB0	**Warramunga Arr**	**47.70**	**260**	P	**P**	**00 27 48.5**	**-1.0**
WB0				IAmb	IAmb	00 27 48.7	
	comp=Z,8.2nm,1.4s						
WRA	**Warramunga Arr**	**47.73**	**259**	P	**P**	**00 27 47.7**	**-2.0**
	comp=Z,0.4nm,0.4s,baz=97,slow=8.3,SNR=10						
WRA	**Warramunga Arr**	**47.73**	**259**	P	**P**	**00 27 48.0**	**-1.7**
AS31	**Alice Springs**	**47.79**	**254**	P	**P**	**00 27 49.1**	**-1.0**
AS31				IAmb	IAmb	00 27 50.4	
	comp=Z,1.0nm,0.6s						
ASAR	**Alice Springs**	**47.79**	**254**	P	**P**	**00 27 49.0**	**-1.2**
	comp=Z,3.3nm,0.6s,baz=90,slow=8.5,SNR=52						
ASAR	**Alice Springs**	**47.79**	**254**	P	**P**	**00 27 49.0**	**-1.2**
FITZ	**Fitzroy Crossi**	**56.14**	**260**	P	**P**	**00 28 51.6**	**-0.3**
ILAR	**Eielson Array**	**85.58**	**12**	P	**P**	**00 31 49.4**	**+0.8**
	comp=Z,0.4nm,1.0s,baz=206,slow=6.0,SNR=2.3						

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*IDC **15** 00:26:58.2±2.5, 17°.69S×168°.03E, h0^{km}, mb3.7/3, mb1 3.9/4, mb1mx3.6/35, mbtmp3.7/4, ML3.5/1, Error ellipse: s-maj=61.0km s-min=41.9km az=122.0*

*NOU **15** 00:27:02.8, 18°.06S×167°.94E, h0^{km}, MLv4.3/11, Vanuatu Islands*

ISC 15 00:27:03.5±1.0**, 17°.96S**±0°.09×**168°.1E**±0°.1**, h32**^{km}**, n14, σ0^s.88**/15**, mb3.6**/3**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**0.25**	**21**	P	**Pb**	**00 27 10.7**	**+0.1**
RTV	**Rentapao**	**0.36**	**62**	P	**Pn**	**00 27 13.1**	**+0.6**
LIFNC	**LIFOU**	**2.92**	**196**	P	**Pn**	**00 27 47.0**	**-0.7**
MARNC	**Mare, Loyalty**	**3.50**	**181**	P	**Pn**	**00 27 55.4**	**-0.4**
YATNC	**Mamie plateau,**	**4.23**	**195**	P	**Pn**	**00 28 06.3**	**+0.5**
DZM	**Mont Dzumac**	**4.37**	**201**	Pn	**Pn**	**00 28 08.6**	**+0.7**
	2.1nm,0.3s,baz=69,slow=12,SNR=60						
DZM				Sn	**Sn**	**00 28 58.0**	**+0.2**
	8.1nm,0.3s,baz=332,slow=22,SNR=18						
DZM	**Mont Dzumac**	**4.37**	**201**	P	**Pn**	**00 28 09.0**	**+1.1**
KOUNC	**Koumac, New Ca**	**4.42**	**234**	P	**Pn**	**00 28 09.2**	**+0.7**
NOUC	**Port Laguerre**	**4.45**	**202**	P	**Pn**	**00 28 09.7**	**+0.9**
OUENC	**Ouen Island, N**	**4.59**	**195**	P	**Pn**	**00 28 12.2**	**+1.5**
STKA	**Stephens Creek**	**27.65**	**235**	P	**P**	**00 32 49.1**	**+0.6**
	0.4nm,0.3s,baz=74,slow=9.2,SNR=3.4						
WRA	**Warramunga Arr**	**31.96**	**261**	P	**P**	**00 33 25.6**	**-1.2**
	0.3nm,0.4s,baz=81,slow=6.4,SNR=8.0						
ASAR	**Alice Springs**	**32.41**	**254**	P	**P**	**00 33 30.3**	**-0.5**
	1.2nm,0.6s,baz=79,slow=8.9,SNR=24						
ARCES	**ARCESS Array B**	**123.56**	**345**	PKP	**PKPdf**	**00 45 56.3**	**-0.8**
	6.0nm,1.0s,baz=48,slow=1.3,SNR=5.1						

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*SOME **15** 00:42:33.7, 42°.38N×81°.53E, h10^{km}*

*NNC **15** 00:42:36.2±4.1, 42°.27N×81°.32E, h0^{km}, mb2.5, mpv2.2, Error ellipse: s-maj=30.1km s-min=14.7km az=163.0*

ISC 15 00:42:38.4±3.5**, 42°.4N**±0°.1×**81°.22E**±0°.09**, h16**^{km}±16^{km}**, n9, σ2^s.98**/17**, 5C-2D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**1.25**	**330**	*e*P	**Pn**	**00 43 00.8**	**-0.5**
	3.4nm,0.3s						
KTMS				*e*S	**Sn**	**00 43 20.3**	**+2.4**
	8.6nm,0.2s						
SHLS	**Shalkode**	**1.51**	**302**	*e*P	**Pn**	**00 43 01.8**	**-3.1**
	17nm,0.2s						
SHLS				*e*S	**Sn**	**00 43 22.0**	**-2.3**
	20nm,0.4s						
PDGK	**Podgornoye**	**1.59**	**308**	⇑Pg	**Pn**	**00 43 06.7**	**+0.7**
	0.8nm,0.3s						
PDGK				⇑Lg	Lg	00 43 31.6	
	20nm,0.8s						
UZB	**Uzynbulak**	**1.79**	**296**	*e*P	**Pb**	**00 43 10.7**	**-0.2**
	6.0nm,0.4s						
UZB				*e*S	**Sg**	**00 43 37.8**	**+1.6**
	6.2nm,0.3s						
SATY	**Saty**	**2.18**	**289**	*e*P	**Pb**	**00 43 18.3**	**+0.7**
	1.0nm,0.2s						
SATY				*e*S	**Sg**	**00 43 50.1**	**+1.4**
	5.7nm,0.4s						
DJR	**Jarkent**	**2.22**	**333**	*e*P	**Pb**	**00 43 17.8**	**-0.4**
	1.5nm,0.2s						
DJR				*e*S	**Sg**	**00 43 49.3**	**-0.5**
	14nm,0.3s						
KAPS	**Kapalarasan**	**3.21**	**336**	*e*P	**Pb**	**00 43 33.4**	**-1.6**
	1.4nm,0.4s						
KAPS				*e*S	**Sb**	**00 44 16.2**	**+2.3**
	5.0nm,0.3s						
MAKZ	**Makanchi**	**4.47**	**7**	⇓Pn	**Pn**	**00 43 47.0**	**+1.5**
	0.2nm,0.5s						
MAKZ				⇑Sn	**Sn**	**00 44 42.0**	**+4.8**
	0.1nm,0.3s						
MAKZ				⇓Lg	Lg	00 44 58.5	
	0.3nm,0.5s						
MK31	**Makanchi Array**	**4.49**	**9**	Pn	**Pn**	**00 43 47.1**	**+1.4**
	0.1nm,0.3s,baz=198,slow=13,SNR=7.4						
MK31				⇑Sn	**Sb**	**00 44 43.4**	**-7.2**
	0.5nm,0.6s,baz=183,slow=26,SNR=4.5						
MK31				⇑Lg	Lg	00 44 57.6	
	0.7nm,0.5s						

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*IDC **15** 00:50:19.8±1.2, 67°.81N×20°.28E, h0^{km}, mb1 3.1/3, mb1mx2.9/34, mbtmp3.0/3, ML1.8/3, Error ellipse: s-maj=18.7km s-min=8.7km az=118.0*

*UPP **15** 00:50:19.3±0.0, 67°.85N×20°.20E, h0^{km}, ML2.3, Explosion*

*HEL **15** 00:50:20.0±0.0, 67°.84N×20°.19E, h0^{km}, ML2.0, ML2.3(UPP), Explosion*

ISC 15 00:50:18.8±0.8**, 67°.84N**±0°.03×**20°.22E**±0°.02**, h0**^{km}**, n28, σ0^s.77**/37**, Sweden**

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

RATU	Laukkuluspa	0.24	268	P	Pg	00 50 23.9	+0.6
RATU				S	Sg	00 50 27.3	+1.0
RATU	Laukkuluspa	0.24	268	*i* P	Pg	00 50 23.9	+0.6
RATU				*i* S	Sg	00 50 27.3	+1.0
KOVU	Salmi	0.39	357	P	Pg	00 50 26.5	+0.3
KOVU	Salmi	0.39	357	*i* P	Pg	00 50 26.5	+0.3
NIKU	Nikkaluokta	0.45	275	P	Pg	00 50 27.7	+0.3
NIKU	Nikkaluokta	0.45	275	*i* P	Pg	00 50 27.7	+0.3
LANU	Lannavaara	0.70	71	P	Pg	00 50 32.6	+0.4
LANU	Lannavaara	0.70	71	*e*P	Pg	00 50 32.8	+0.6
LANU				*e*S	Sg	00 50 42.0	+0.7
DUNU	Dundret	0.73	169	P	Pg	00 50 33.1	+0.4
DUNU	Dundret	0.73	169	*i* P	Pg	00 50 33.1	+0.4
MASU	Masugnsbyn	0.78	118	P	Pg	00 50 34.2	+0.5
MASU	Masugnsbyn	0.78	118	*i* P	Pg	00 50 34.2	+0.5
SALU	Saltoluokta	0.80	236	P	Pg	00 50 34.4	+0.3
SALU	Saltoluokta	0.80	236	*i* P	Pg	00 50 34.4	+0.3
KIF	Kilpisjarvi	1.20	10	*e*P	Pg	00 50 41.8	+0.2
KIF	Kilpisjarvi	1.20	10	*e*P	Pb	00 50 42.2	0.0
KIF				*e*S	Sb	00 50 58.0	-0.2
KIF				MSG		00 51 03.2	
	comp=Z,19nm,0.2s						
HEF	Hetta	1.41	64	*e*P	Pn	00 50 45.0	-0.8
HEF	Hetta	1.41	64	*e*P	Pn	00 50 45.4	-0.4
HEF				*e*S	Sg	00 51 03.7	-0.4
HEF				MSG		00 51 10.5	
	comp=Z,11nm,0.2s						
ERTU	Ertsjaerv	1.50	148	P	Pn	00 50 46.9	0.0
ERTU	Ertsjaerv	1.50	148	*e*P	Pn	00 50 46.7	-0.1
KLF	Kolari	1.56	111	*e*P	Pn	00 50 48.1	+0.4
HARU	Harads	1.71	170	P	Pn	00 50 50.5	+0.8
HARU	Harads	1.71	170	*e*P	Pn	00 50 50.5	+0.8
STEI	Steigen	1.89	275	*e*PG	Pb	00 50 53.8	-0.2
STEI				*e*SG	Sg	00 51 19.2	-0.1
TOF	Tornio	2.39	136	*e*SB	Sb	00 51 32.5	0.0
TOF				MSG		00 51 36.7	
	comp=Z,6.3nm,0.2s						
ARCES	ARCESS Array B	2.58	46	Pn	Pn	00 51 02.6	+0.8
	baz=226,slow=13,SNR=25						
ARCES				Sn	Sb	00 51 37.3	-0.7
	baz=226,slow=25,SNR=16						
FINES	FINESS Array B	6.89	156	Pn	Pn	00 52 01.9	+1.1
	comp=Z,0.0nm,0.3s,baz=341,slow=12,SNR=2.0						
FINES				Sn	Sn	00 53 20.1	+0.3
	comp=Z,0.2nm,0.3s,baz=346,slow=24,SNR=1.8						
FINES				Lg	Lg	00 53 53.0	
	comp=Z,0.3nm,0.3s,baz=346,slow=25,SNR=1.6						
NOA	NORSAR Array B	7.84	214	Pn	Pn	00 52 12.0	-2.0
	comp=Z,0.0nm,0.3s,baz=22,slow=10,SNR=1.5						
NOA				Sn	Sn	00 53 41.0	-2.4
	comp=Z,0.0nm,0.3s,baz=25,slow=21,SNR=1.6						
NOA				Lg	Lg	00 54 24.9	
	comp=Z,0.0nm,0.3s,baz=30,slow=21,SNR=1.6						

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*IDC **15** 01:09:23.6±1.2, 12°.19N×143°.61E, h0^{km}, mb3.9/6, mb1 4.2/6, mb1mx3.8/38, mbtmp3.9/6, Error ellipse: s-maj=56.8km s-min=23.6km az=125.0*

ISC 15 01:09:27.5±1.0**, 12°.2N**±0°.2×**143°.6E**±0°.3**, h25^{km}, n13, σ1^{s}.14**/8**, mb3.8**/6**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.88	41	Pn	Pn	01 09 57.6	-0.5
	56nm,0.3s,baz=238,slow=14,SNR=16						
GUMO				Sn	Sn	01 10 21.3	+0.4
	86nm,0.3s,baz=192,slow=22,SNR=5.6						
H11S3	WAKE ISLAND Hy	23.13	71	T	T	01 38 30.4	
	baz=252						
H11S1	WAKE ISLAND Hy	23.14	71	T	T	01 38 32.7	
	baz=252						
H11S2	WAKE ISLAND Hy	23.14	71	T	T	01 38 46.6	
	baz=252						
H11N1	WAKE ISLAND Hy	23.60	69	T	T	01 39 09.8	
	baz=249						
H11N2	WAKE ISLAND Hy	23.61	68	T	T	01 39 02.2	
	baz=249						
H11N3	WAKE ISLAND Hy	23.62	69	T	T	01 39 02.9	
	baz=249						
WRA	Warramunga Arr	33.19	196	P	P	01 16 02.2	-0.2
	0.3nm,0.7s,baz=19,slow=9.2,SNR=2.2						
ILAR	Eielson Array	70.37	25	P	P	01 20 38.0	-1.0
	0.3nm,0.5s,baz=254,slow=5.2,SNR=8.2						
YKA	Yellowknife Ar	84.68	27	P	P	01 21 58.1	-0.9
	0.5nm,0.8s,baz=290,slow=11,SNR=1.9						
ARCES	ARCESS Array B	88.04	342	P	P	01 22 16.6	+1.2
	6.6nm,0.9s,baz=73,slow=6.3,SNR=6.8						
NVAR	Mina Array Bea	88.77	51	P	P	01 22 21.4	+1.6
	0.3nm,0.6s,baz=286,slow=7.4,SNR=2.5						
FINES	FINESS Array B	91.91	335	P	P	01 22 33.5	-0.1
	0.8nm,0.4s,baz=65,slow=3.7,SNR=11						

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*BJI **15** 01:12:20.3±0.0, 30°.81N×129°.11E, h5^{km}, mB4.5/33, mb4.3/48, ML4.7/3, Ms4.4/47, Ms7 4.1/45*

*JMA **15** 01:12:22.2±0.3, 31°.33N×128°.64E, h6^{km}±3^{km}, M4.3*

*NIED **15** 01:12:22.2, 31°.33N×128°.64E, h6^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.15; $M_{\theta\theta}$2.56; $M_{\phi\phi}$-1.41; $M_{r\theta}$-0.56; $M_{\theta\phi}$3.80; $M_{\phi r}$-2.83; Fault plane solution: $M_0$5.25000×10^{15} NP1:ϕ_s18.00000°, δ81.00000°, λ-144.00000°. NP2:ϕ_s281.00000°, δ55.00000°, λ-11.00000°.*

*IDC **15** 01:12:24.0±0.7, 31°.28N×128°.63E, h0^{km}, mb3.9/17, mb1 4.1/24, mb1mx4.0/42, mbtmp3.9/24, ML3.6/5, MS3.7/25, Ms1 3.7/25, ms1mx3.6/32 Error ellipse: s-maj=18.1km s-min=14.2km az=100.0*

*NEIC **15** 01:12:23.9±1.9, 30°.98N±0°.06×128°.88E±0°.08, h10^{km}±1^{km}, mb4.4/24, Error ellipse: s-maj=12.0km s-min=9.8km az=133.0*

ISC 15 01:12:25.0±0.4**, 31°.25N**±0°.04×**128°.86E**±0°.03**, h10^{km}, n106, σ2^{s}.36**/109**, mb4.2**/29**, MS3.9**/28**, 1C-4D, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.85	59	⇓P	Pg	01 12 40.7	-0.7
JSJ				*e*S	Sb	01 12 54.0	+0.7
JSU	Suzuyama	1.39	79	⇓P	Pn	01 12 50.7	+0.2
JSU				*e*S	Sg	01 13 12.4	+2.6
JSU	Suzuyama	1.39	79	Pn	Pn	01 12 50.3	-0.2
JFU	Fukue jima 2	1.41	356	P	Pn	01 12 47.4	-3.3
JFU				S	Sn	01 13 05.7	-3.6
JNN	Nakanoshima	1.65	148	P	Pn	01 12 54.6	+0.6
JYAK	Yakushimahirau	1.74	125	P	Pn	01 12 55.6	+0.3
JTN	Tanegashima 3	1.92	107	P	Pn	01 12 58.6	+0.9
JMTN	Minamitane	1.95	115	P	Pb	01 12 59.9	-0.7
JTZ	Takazaki	2.01	71	⇓P	Pn	01 12 59.3	+0.3
JIU3	Izumi3	2.11	52	P	Pn	01 13 00.0	-0.3
JNU	Nakatsue	2.54	42	Pn	Pn	01 13 07.1	+0.9
	38nm,0.3s,baz=189,slow=6.9,SNR=44						
JNU				Sn	Sb	01 13 42.9	+1.0
	7.2nm,0.3s,baz=262,slow=22,SNR=7.8						
KSJJU	Jeju	2.93	319	P	Pb	01 13 18.2	+0.9
	SNR=17						
JTU	Tsushima	3.30	8		Pn	01 13 19.8	+3.2
CJD	Chujado	3.46	322	P	Pb	01 13 27.0	+0.6
	SNR=9.6						
KSNAH	Namhae	3.65	348	P	Pg	01 13 35.0	+0.2
	SNR=5.6						
GWYB	Gwangyang	3.81	345	P	Pg	01 13 36.0	-2.0
	SNR=5.9						
KSJDO	Jindo	3.86	327	P	Pb	01 13 32.9	-0.3
	SNR=22						
EURB	Uiryeong-eup	4.09	353	P	Pg	01 13 41.0	-2.4
	SNR=7.5						
KSKWJ	Gwangju	4.20	339	P	Pb	01 13 39.6	+0.6
	SNR=21						
KSKWJ	Gwangju	4.20	339	P	Pb	01 13 40.0	+1.0
	SNR=21						
JOW	Kunigami	4.43	187	Pn	Pn	01 13 31.4	-0.8
	4.1nm,0.3s,baz=50,slow=17,SNR=6.5						
JOW				LR	LR	01 15 32.5	
	comp=Z,547nm,19.4s,baz=96,slow=42						
JOW	Kunigami	4.43	187	Pn	Pn	01 13 26.7	-5.5
KSUSN	Ulsan	4.45	3	P	Pg	01 13 47.0	-3.2
	SNR=13						
GOCB	Gochang-gun	4.51	336	P	Pb	01 13 44.0	-0.1
	SNR=28						
KSJEU	Jeongeup	4.53	340	P	Pb	01 13 43.4	-1.2
	SNR=13						
JMN	Monobe	4.91	58	Pn	Pn	01 13 38.1	-0.8
JHS	Saijyo	5.17	43	Pn	Pn	01 13 43.6	+1.1
KSAR	Wonju Array Be	6.23	353	Pn	Pn	01 13 58.6	+1.6
KSRS	Korea Array	6.24	353	Pn	Pn	01 13 55.7	-1.4
	3.7nm,0.3s,baz=176,slow=15,SNR=22						
KSRS				Sn	Sn	01 15 05.2	-3.2
	7.8nm,0.3s,baz=174,slow=25,SNR=10.0						
KSRS				Lg	Lg	01 15 33.6	
	8.8nm,0.3s,baz=182,slow=27,SNR=1.9						
KSRS				LR	LR	01 16 36.2	
	comp=Z,591nm,18.2s,baz=175,slow=41						
KS19	Wonju Array Si	6.29	353	Pn	Pn	01 13 58.6	+0.7
INCN	Inchon	6.49	344	Pn	Pn	01 14 02.4	+1.9
SSE	Sheshan	6.58	271	Pn	Pn	01 14 04.6	+2.9
SSE				Sn	Sn	01 15 24.3	+7.6
SSE				smax	smax		
	comp=N,210nm,0.8s						
SSE				smax	smax		
	comp=E,120nm,0.7s						
SSE				LR	LR		
	comp=N,2μm,14.3s						
SSE				LR	LR		
	comp=E,520nm,13.9s						
INU	Inuyama	7.96	57	Pn	Pn	01 14 21.1	+0.4
NJ2	Nanjing	8.56	278	*e*P	Pn	01 14 30.4	+1.4
NJ2				S	Sn	01 16 06.5	+0.8
NJ2				pmax	pmax		
	comp=Z,34nm,1.0s						
NJ2				smax	smax		
	comp=N,240nm,0.8s						
NJ2				smax	smax		
	comp=E,220nm,1.3s						
NJ2				LR	LR		
	comp=N,2μm,10.6s						
NJ2				LR	LR		
	comp=E,810nm,6.6s						
NJ2				LR	LR		
	comp=Z,630nm,10.2s						
MJAR	Matsushiro Arr	9.39	53	Pn	Pn	01 14 42.6	+2.2
	0.0nm,0.3s,baz=240,slow=14,SNR=5.3						
TIA	Tai'an	10.95	300	P	Pn	01 15 05.5	+3.8
TIA				S	Sn	01 17 08.9	+4.6
TIA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
TIA				pmax	pmax		
	comp=Z,41nm,4.5s						
TIA				LR	LR		
	comp=N,880nm,10.7s						
TIA				LR	LR		
	comp=E,770nm,7.1s						
TIA				LR	LR		
	comp=Z,640nm,8.5s						
JCJ	Chichijima	12.36	106	LR	LR	01 19 16.6	
	comp=Z,149nm,18.9s,baz=116,slow=33						
CN2	Changchun	12.82	349	*e*P	Pn	01 15 27.8	+0.6
CN2				*e*PP	PnPn	01 15 38.3	+3.2
CN2				*e*S	Sn	01 17 54.5	+4.6
CN2				LR	LR		
	comp=N,520nm,11.0s						
CN2				LR	LR		
	comp=E,2μm,11.0s						
CN2				LR	LR		
	comp=Z,1μm,13.0s						
USRK	Ussuriysk Ar.	13.16	10	Pn	Pn	01 15 32.9	+1.0
	baz=200,slow=15,SNR=1.8						
BJI	Beijing	13.53	314	P	P	01 15 43.5	-2.6
BJI				S	S	01 18 23.3	-7.5
BJI				pmax	pmax		
	comp=Z,15nm,1.1s						
BJI				pmax	pmax		
	comp=Z,140nm,4.0s						
BJI				LR	LR		
	comp=N,960nm,13.9s						
BJI				LR	LR		
	comp=E,470nm,13.9s						
BJI				LR	LR		
	comp=Z,1μm,14.4s						
ASAJ	Asahikawa	16.80	36	Pn	Pn	01 16 20.1	-0.2
	0.2nm,0.3s,baz=245,slow=16,SNR=7.8						
JKA	Kamikawa-asahi	16.80	36		Pn	01 16 20.1	-0.2
JKA	Kamikawa-asahi	16.80	36	IAmb	IAmb	01 16 21.5	
	comp=Z,32nm,1.1s						
HHC	Hu-ho-hao-te	16.93	309	*e*P	Pn	01 16 21.9	-0.1
HHC				pmax	pmax		
	comp=Z,20nm,0.7s						
HHC				pmax	pmax		
	comp=Z,120nm,5.7s						
HHC				LR	LR		
	comp=Z,870nm,14.6s						
HHC				LR	LR		
	comp=Z,720nm,13.6s						
HHC				LR	LR		
	comp=Z,790nm,14.7s						
XAN	Xi'an	17.02	285	P	P	01 16 25.9	+0.9
XAN				pP	sP	01 16 29.3	+0.5
XAN				S	S	01 19 40.3	-2.1
XAN				pmax	pmax		
	comp=Z,16nm,1.5s						
XAN				LR	LR		
	comp=Z,2μm,14.9s						
XAN				LR	LR		
	comp=Z,860nm,12.7s						
XAN				LR	LR		
	comp=Z,370nm,12.2s						
BTO	Baotou	17.86	307	*e*P	P	01 16 41.4	+7.1
KLR	Kul'dur	18.10	6	P	Pn	01 16 35.3	-1.0
	comp=Z,0.1nm,0.3s,baz=222,slow=8.5,SNR=3.0						
GYA	Guiyang	20.01	262	⇑P	P	01 16 56.8	-1.2
GYA				S	Sn	01 20 47.8	+3.0
GYA				pmax	pmax		
	comp=Z,15nm,0.9s						
GYA				LR	LR		
	comp=Z,460nm,11.7s						
GYA				LR	LR		
	comp=Z,350nm,13.9s						
GYA				LR	LR		
	comp=Z,350nm,11.6s						
QIZ	Qiongzhong	21.04	239	P	P	01 17 05.6	-3.5
QIZ				S	S	01 20 59.9	-3.5
QIZ				LR	LR		
	comp=Z,280nm,16.5s						
QIZ				LR	LR		
	comp=Z,210nm,13.9s						
QIZ				LR	LR		
	comp=Z,380nm,13.7s						
CD2	Chengdu	21.49	276	P	P	01 17 13.1	-0.8
CD2				S	S	01 21 07.8	-4.5
CD2				pmax	pmax		
	comp=Z,50nm,1.3s						
CD2				pmax	pmax		
	comp=Z,100nm,4.7s						
CD2				LR	LR		
	comp=Z,1μm,12.1s						
CD2				LR	LR		
	comp=Z,1μm,14.3s						
CD2				LR	LR		
	comp=Z,910nm,15.7s						
ULN	Ulaanbaatar	23.50	321	P	P	01 17 35.5	+0.4
ULN				IAmb	IAmb	01 17 47.1	
	comp=Z,12nm,1.4s						
KMI	Kunming	23.79	262	⇓P	P	01 17 42.5	+4.4
KMI				S	S	01 22 01.0	+7.1
KMI				pmax	pmax		
	comp=Z,28nm,0.5s						
KMI				LR	LR		
	comp=N,410nm,12.5s						
KMI				LR	LR		
	comp=E,380nm,15.6s						
KMI				LR	LR		
	comp=Z,410nm,14.6s						
SONM	Songino Array	23.84	320	P	P	01 17 37.2	-1.1
	comp=Z,3.8nm,0.8s,baz=137,slow=9.2,SNR=13						
SONM				LR	LR	01 27 24.9	
	comp=Z,375nm,19.3s,baz=140,slow=38						
SONM	Songino Array	23.84	320	P	P	01 17 38.0	-0.3
GTA	Gaotai	24.98	297	*e*P	P	01 17 55.1	+6.2
GTA				pP	sP	01 18 00.0	+7.1
GTA				sP	pP	01 18 03.5	+12
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,37nm,5.5s						
GTA				LR	LR		
	comp=Z,610nm,14.5s						
GTA				LR	LR		
	comp=Z,230nm,13.5s						
GTA				LR	LR		
	comp=Z,470nm,13.8s						
CMAR	Chiang Mai Arr	29.88	252	P	P	01 18 31.5	-1.4
	comp=Z,0.4nm,0.4s,baz=51,slow=7.4,SNR=1.5						
CMAR				LR	LR	01 31 42.9	
	comp=Z,130nm,20.6s,baz=91,slow=39						
PETK	Petropavlovsk-	30.22	35	LR	LR	01 30 16.5	
	comp=Z,125nm,19.4s,baz=219,slow=35						
WMQ	Urumqi	34.63	303	*e*P	P	01 19 16.9	+2.5
WMQ				LR	LR		
	comp=Z,410nm,17.7s						
WMQ				LR	LR		
	comp=Z,210nm,16.1s						
ZALV	Zalesovo Beam	38.71	319	P	P	01 19 46.8	-2.1
	comp=Z,0.3nm,0.3s,baz=72,slow=9.4,SNR=2.4						
ZALV				LR	LR	01 37 26.3	
	comp=Z,174nm,18.3s,baz=112,slow=39						
ZALV	Zalesovo Beam	38.71	319	P	P	01 19 47.3	-1.6
MK31	Makanchi Array	38.77	307	P	P	01 19 48.0	-1.6
MKAR	Makanchi Array	38.77	307	P	P	01 19 48.0	-1.7
	comp=Z,0.4nm,0.6s,baz=90,slow=14,SNR=4.4						
MKAR				LR	LR	01 36 09.4	
	comp=Z,89nm,18.1s,baz=98,slow=37						
MKAR	Makanchi Array	38.77	307	P	P	01 19 50.1	+0.5
MAKZ	Makanchi	38.99	307	P	P	01 19 51.6	+0.2
TIXI	Tiksi	40.46	0	P	P	01 20 03.9	+0.6
TIXI				IAmb	IAmb	01 20 11.4	
	comp=Z,5.7nm,1.3s						
KURK	Kurchatov	41.69	313	P	P	01 20 13.7	0.0
AAK	Ala-Archa	44.23	301	P	P	01 20 34.0	-0.6
AAK				IAmb	IAmb	01 20 40.4	
	comp=Z,6.1nm,1.3s						
NRIK	Noril'sk	44.69	341	P	P	01 20 35.9	-1.8
	comp=Z,1.2nm,0.6s,baz=63,slow=2.3,SNR=2.2						
NRIK				LR	LR	01 41 13.9	
	comp=Z,68nm,21.4s,baz=130,slow=39						
NRIK	Noril'sk	44.69	341	P	P	01 20 39.0	+1.3
BRVK	Borovoye	47.07	315	P	P	01 20 56.2	-0.5
BRVK				IAmb	IAmb	01 21 02.0	
	comp=Z,3.8nm,0.6s						
KK31	Karatay Array	47.10	302	P	P	01 20 57.1	-0.1
KKAR	Karatay Array	47.10	302	P	P	01 20 56.9	-0.2
BTK	Batken	47.24	298	P	P	01 20 58.0	-0.4
BTK				IAmb	IAmb	01 21 05.0	
	comp=Z,3.5nm,1.1s						
GAR	Garm	47.79	296	P	P	01 21 01.9	-0.8
KBL	Kabul	49.70	291	P	P	01 21 16.9	-0.6
KBL				IAmb	IAmb	01 21 24.9	
	comp=Z,5.3nm,1.1s						
WRA	Warramunga Arr	51.17	173	P	P	01 21 29.1	+0.7
	comp=Z,1.7nm,0.8s,baz=352,slow=8.0,SNR=10						
WRA				LR	LR	01 43 04.0	
	comp=Z,35nm,20.7s,baz=40,slow=36						
ABKAR	Akbulak array	53.71	311	P	P	01 21 46.2	-0.8
ARU	Arti	53.87	320	P	P	01 21 46.4	-1.6
ASAR	Alice Springs	54.81	174	P	P	01 21 56.3	+1.0
	comp=Z,1.4nm,0.7s,baz=6.1,slow=10,SNR=19						
ASAR				LR	LR	01 44 17.2	
	comp=Z,22nm,21.3s,baz=30,slow=35						
ASAR	Alice Springs	54.81	174	P	P	01 21 53.5	-1.8
HRA	Herat	55.16	292	P	P	01 21 56.9	-1.2
HRA				IAmb	IAmb	01 22 04.5	
	comp=Z,4.2nm,0.8s						
GEYT	Alibeck	57.36	298	LR	LR	01 48 22.7	
	comp=Z,71nm,19.9s,baz=95,slow=38						
ILAR	Eielson Array	59.80	30	P	P	01 22 31.2	+1.2
	comp=Z,0.6nm,0.8s,baz=281,slow=6.8,SNR=7.1						
ILAR				LR	LR	01 48 06.3	
	comp=Z,25nm,20.0s,baz=200,slow=36						
KLMR	Klimovskoe	62.94	327	*e*P	P	01 22 47.7	-3.6
KLMR				AMP		01 22 58.7	
	comp=Z,22nm,1.5s						
STKA	Stephens Creek	63.93	168	LR	LR	01 50 15.0	
	comp=Z,20nm,22.0s,baz=24,slow=36						
A36M	Sachs Harbour	65.32	19	P	P	01 23 09.3	+2.6
ARCES	ARCESS Array B	65.57	338	LR	LR	01 55 28.8	
	comp=Z,109nm,18.1s,baz=355,slow=40						
KBZ	Khabaz	66.47	308	P	P	01 23 14.5	-0.1
	comp=Z,1.8nm,1.0s,baz=153,slow=9.0,SNR=2.0						
KBZ				LR	LR	01 53 46.9	
	comp=Z,75nm,19.4s,baz=76,slow=38						
FINES	FINESS Array B	68.80	330	P	P	01 23 28.0	-1.0
	comp=Z,1.7nm,0.8s,baz=132,slow=2.8,SNR=3.6						
FINES				LR	LR	01 58 29.9	
	comp=Z,89nm,19.5s,baz=30,slow=40						
GURO	Guroymak-BITLI	69.05	303	P	P	01 23 31.6	+0.5
GURO				IAmb	IAmb	01 23 38.0	
	comp=Z,4.1nm,1.1s						
AKASG	Malin Array Be	72.11	319	P	P	01 23 50.6	+1.2
	comp=Z,2.8nm,0.7s,baz=52,slow=6.3,SNR=7.5						
AKASG				LR	LR	01 57 15.0	
	comp=Z,150nm,18.4s,baz=40,slow=37						
AKASG	Malin Array Be	72.11	319	P	P	01 23 50.4	+0.9
RAYN	Ar Rayn	72.79	287	P	P	01 23 52.4	-1.7
RAYN				IAmb	IAmb	01 24 00.4	
	comp=Z,6.3nm,1.0s						
YKA	Yellowknife Ar	73.77	26	P	P	01 24 01.8	+2.7
	comp=Z,2.1nm,1.1s,baz=320,slow=4.4,SNR=4.2						
YKA				LR	LR	02 00 34.0	
	comp=Z,21nm,19.8s,baz=0.0,slow=39						
BR131	Keskin Array S	74.42	307	P	P	01 24 04.3	+0.8
BR131				IAmb	IAmb	01 24 09.6	
	comp=Z,5.4nm,0.9s						
BRTR	Keskin Array B	74.42	307	P	P	01 24 03.9	+0.3
	comp=Z,1.5nm,0.8s,baz=104,slow=6.1,SNR=2.2						
BRTR				LR	LR	02 01 44.9	
	comp=Z,42nm,19.5s,baz=55,slow=40						
BRTR	Keskin Array B	74.42	307	P	P	01 24 04.3	+0.8
NOA	NORSAR Array B	75.08	334	P	P	01 24 08.6	+1.8
	comp=Z,1.3nm,0.9s,baz=51,slow=5.6,SNR=3.6						
NOA				LR	LR	01 59 58.9	
	comp=Z,47nm,19.4s,baz=350,slow=38						
GERES	GERESS Array B	81.55	323	LR	LR	02 04 15.3	
	comp=Z,74nm,21.9s,baz=322,slow=38						
NVAR	Mina Array Bea	86.65	46	P	P	01 25 10.5	+1.2
	comp=Z,0.2nm,0.6s,baz=308,slow=4.4,SNR=2.3						
PDAR	Pinedale Array	88.92	39	P	P	01 25 20.2	+0.1
	comp=Z,0.6nm,0.8s,baz=311,slow=4.9,SNR=4.0						
ULM	Lac du Bonnet	89.70	27	P	P	01 25 23.7	+0.4
	comp=Z,3.4nm,0.9s,baz=307,slow=10,SNR=2.2						
ULM	Lac du Bonnet	89.70	27	IAmb	IAmb	01 25 29.9	
	comp=Z,27nm,1.5s						
KEST	Kesra	92.47	315	LR	LR	02 10 58.5	
	comp=Z,65nm,18.1s,baz=300,slow=38						
SCHQ	Schefferville	93.21	9	LR	LR	02 10 04.2	
	comp=Z,45nm,18.9s,baz=69,slow=37						
ESDC	Sonseca Array	96.95	325	LR	LR	02 15 33.9	
	comp=Z,81nm,18.4s,baz=30,slow=39						

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*JMA **15** 01:33:43.2±0.4, 31°.32N×128°.75E, h3^{km}±4^{km}, M3.9*

*NIED **15** 01:33:43.2, 31°.32N×128°.75E, h3^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.20; $M_{\theta\theta}$-0.03; $M_{\phi\phi}$1.23; $M_{r\theta}$-0.59; $M_{\theta\phi}$3.39; $M_{\phi r}$2.23; Fault plane solution: $M_0$4.27000×10^{14} NP1: ϕ_s180.00000°, δ77.00000°, λ-144.00000°. NP2: ϕ_s81.00000°, δ55.00000°, λ-16.00000°.*

*IDC **15** 01:33:46.5±1.1, 31°.43N×128°.72E, h0^{km}, mb3.4/6, mb1 3.6/9, mb1mx3.5/42, mbtmp3.5/9, ML3.6/3, MS2.9/1, Ms1 2.9/1, ms1mx2.2/28 Error ellipse: s-maj=28.0km s-min=16.7km az=89.0*

ISC 15 01:33:46.3±1.0**, 31°.36N**±0°.06×**128°.89E**±0°.06**, h10^{km}, n14, σ1^{s}.23**/15**, mb3.3**/6**, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.77	66	P	Pg	01 34 00.2	-1.0
JFU	Fukue jima 2	1.29	355	P	Pn	01 34 08.3	-2.1
JSU	Suzuyama	1.35	84	P	Pn	01 34 10.3	-0.9
JSU				*e*S	Sg	01 34 30.8	+1.1
JKC	Kuchinoerabu	1.44	128	P	Pn	01 34 11.3	-1.1
JKC				S	Sn	01 34 30.3	-1.1
JNU	Nakatsue	2.43	43	Pn	Pb	01 34 29.4	-0.8
	48nm,0.3s,baz=155,slow=1.8,SNR=30						
JNU				Sn	Sb	01 35 02.4	+2.1
	41nm,0.3s,baz=217,slow=10,SNR=1.4						
KSRS	Korea Array	6.13	353	Pn	Pn	01 35 16.9	0.0
	0.6nm,0.3s,baz=174,slow=14,SNR=7.4						
KSRS				Sn	Sn	01 36 26.1	-0.9
	0.8nm,0.3s,baz=173,slow=25,SNR=5.5						
KSRS				Lg	Lg	01 36 56.0	
	1.0nm,0.3s,baz=180,slow=29,SNR=5.7						
ASAJ	Asahikawa	16.69	36	LR	LR	01 43 27.0	
	comp=Z,40nm,18.9s,baz=313,slow=35						
KLR	Kul'dur	17.98	6	P	P	01 37 57.6	+0.9
	0.1nm,0.3s,baz=147,slow=11,SNR=3.7						
SONM	Songino Array	23.76	320	P	P	01 38 59.4	+0.5

	0.4nm,0.7s,baz=140,slow=9.1,SNR=1.5						
MKAR	Makanchi Array	38.72	307	P	P	01 41 10.9	+0.4
	0.2nm,0.7s,baz=101,slow=7.5,SNR=2.3						
WRA	Warramunga Arr	51.28	173	P	P	01 42 51.5	+0.9
	0.4nm,0.9s,baz=348,slow=5.1,SNR=1.5						
ASAR	Alice Springs	54.93	174	P	P	01 43 20.4	+3.0
	0.4nm,0.8s,baz=9.5,slow=9.1,SNR=5.1						
ILAR	Eielson Array	59.68	30	P	P	01 43 50.9	+0.3
	0.1nm,0.5s,baz=293,slow=7.5,SNR=3.2						
FINES	FINESS Array B	68.71	330	P	P	01 44 52.3	+2.5
	2.5nm,1.0s,baz=46,slow=5.5,SNR=1.7						

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*NEIC **15** 01:44:24.1±1.5, 24°.13S±0°.07×66°.77W±0°.05, h191^{km}±8^{km}, mb4.0/8, Md3.5(SJA), Mwr4.1(GUC), Error ellipse: s-maj=11.7km s-min=4.0km az=212.0*

*SJA **15** 01:44:24±1.6, 24°.18S±0°.08×66°.8W±0°.1, h222^{km}±6^{km}, Error ellipse: s-maj=15.7km s-min=10.7km az=95.0*

*IDC **15** 01:44:25.2±1.1, 23°.99S×66°.75W, h204^{km}±13^{km}, mb3.6/6, mb1 3.5/12, mb1mx3.3/28, mbtmp4.0/12, MS2.6/1, Ms1 2.6/1, ms1mx2.3/19, Error ellipse: s-maj=18.0km s-min=16.2km az=150.0*

*VAO **15** 01:44:25.1±0.7, 24°.16S×67°.26W, h260^{km}, mb4.1*

*GUC **15** 01:44:26.1±0.6, 24°.15S×67°.15W, h233^{km}±11^{km}, MW4.5*

ISC 15 01:44:24.7±0.7, **24°.08S**±0°.05×**66°.88W**±0°.07, **h210**^{km}±9^{km}, **n101**, σ1^{s}.**02**/112, **mb4.0**/8, **11C-2D, Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	2.37	308	P	Pn	01 45 09.4	+1.2
	17nm,0.3s,baz=144,slow=6.4,SNR=99						
LVC				S	S	01 45 42.6	+0.9
	31nm,0.3s,baz=53,slow=20,SNR=59						
LVC	Limon Verde	2.37	308	⇑*i*P	Pn	01 45 09.6	+1.3
LVC				*e*S	S	01 45 42.6	+0.9
LVC	Limon Verde	2.37	308	*e*P	Pn	01 45 09.7	+1.5
LVC	Limon Verde	2.37	308		Pn	01 45 08.6	+0.4
PB15	IPOC Station P	2.53	290	⇑*i*P	Pn	01 45 11.1	+1.3
PB15				*i* S	S	01 45 44.9	+0.4
PB15	IPOC Station P	2.53	290		Pn	01 45 10.5	+0.7
PB15				Sn	S	01 45 44.2	-0.3
PB06	IPOC Station P	2.83	298	⇑*i*P	Pn	01 45 14.3	+1.3
PB06				*i* S	S	01 45 50.3	0.0
PB06	IPOC Station P	2.83	298		Pn	01 45 13.2	+0.1
PB09	IPOC Station P	3.15	316	⇑*i*P	Pn	01 45 18.4	+1.6
PB09				*i* S	S	01 45 58.4	+1.3
PB09	IPOC Station P	3.15	316		Pn	01 45 17.3	+0.5
PB14	IPOC Station P	3.26	260	⇑*i*P	Pn	01 45 18.3	+0.1
PB14				*i* S	S	01 45 57.9	-1.8
PB14	IPOC Station P	3.26	260		Pn	01 45 17.7	-0.5
PB05	IPOC Station P	3.29	291	⇑*i*P	Pn	01 45 19.0	+0.7
PB05				*i* S	S	01 45 58.6	-1.3
PB03	IPOC Station P	3.33	307	⇑*i*P	Pn	01 45 19.9	+0.9
PB03				*i* S	S	01 46 00.7	-0.3
PB10	IPOC Station P	3.41	279	⇑*i*P	Pn	01 45 20.5	+0.7
PB10				*i* S	S	01 46 01.1	-1.4
PB10	IPOC Station P	3.41	279		Pn	01 45 19.4	-0.3
AC02	Maricunga	3.42	216	⇑*i*P	Pn	01 45 20.4	+0.2
AC02	Maricunga	3.42	216		Pn	01 45 18.9	-1.3
PB04	IPOC Station P	3.47	299	⇑*i*P	Pn	01 45 21.2	+0.6
PB04				*i* S	S	01 46 03.0	-1.0
PB04	IPOC Station P	3.47	299		Pn	01 45 20.8	+0.1
PB07	IPOC Station P	3.63	310	*i* P	Pn	01 45 23.3	+0.8
PB07				*e*S	S	01 46 06.4	-1.1
PB07	IPOC Station P	3.63	310		Pn	01 45 22.7	+0.2
PB01	IPOC Station P	3.87	321	⇓*i*P	Pn	01 45 26.1	+0.7
PB01	IPOC Station P	3.87	321	Pn	Pn	01 45 24.3	-1.0
PB02	IPOC Station P	3.91	314	⇑*i*P	Pn	01 45 26.3	+0.4
PB02				*i* S	S	01 46 11.8	-1.8
PB08	IPOC Station P	4.45	331	*e*P	Pn	01 45 34.5	+1.7
PB08				*e*S	S	01 46 26.0	-0.2
PB08	IPOC Station P	4.45	331		Pn	01 45 32.1	-0.7
GO03	Copiap	4.62	220	*e*P	Pn	01 45 33.2	-1.5
GO03	Copiap	4.62	220	Pn	Pn	01 45 33.1	-1.5
TA01	Diego Aracena	4.64	318	Pn	Pn	01 45 35.5	+0.6
HMBC	Humberstone	4.70	323	*e*P	Pn	01 45 35.2	-0.5
TA02	Huaiquique	4.84	321	Pn	Pn	01 45 37.5	+0.1
PB11	IPOC Station P	5.01	329	⇓*i*P	Pn	01 45 39.6	-0.1
PB11				*i* S	S	01 46 36.8	-1.8
PB11	IPOC Station P	5.01	329	Pn	Pn	01 45 39.4	-0.3
AC04	Llanos de Chal	5.58	222	*e*P	Pn	01 45 44.4	-2.2
AC04	Llanos de Chal	5.58	222	Pn	Pn	01 45 45.6	-1.0
LCO	Las Campanas	5.99	214	Pn	Pn	01 45 50.3	-1.8
PB16	IPOC Station P	6.22	336		Pn	01 45 54.7	-0.9
LPAZ	La Paz	7.84	351	P	Pn	01 46 17.5	+1.0
	0.7nm,0.3s,baz=141,slow=5.9,SNR=19						
LPAZ				S	S	01 47 44.9	-0.7
	0.2nm,0.3s,baz=112,slow=18,SNR=5.3						
LPAZ	La Paz	7.84	351	*e*P	Pn	01 46 17.5	+1.0
LPAZ	La Paz	7.84	351	Pn	Pn	01 46 16.3	-0.2
CPUP	Villa Florida	8.93	107	P	Pn	01 46 29.9	-0.1
	0.1nm,0.3s,baz=287,slow=15,SNR=1.6						
CPUP	Villa Florida	8.93	107	*e*P	Pn	01 46 34.5	+4.5
SIV	San Ignacio	9.72	35	P	Pn	01 46 38.7	-1.6
	0.6nm,0.3s,baz=229,slow=8.0,SNR=8.8						
AQDB	Aquidauana	10.95	73	*e*P	P	01 46 60.0	-2.1
PTLB	Pontes e Lacer	11.26	42	*e*P	P	01 47 03.4	-2.0
GO05	Huala	11.74	201	Pn	Pn	01 47 05.0	-1.0
VILB	Vilhena	12.75	31	*e*P	P	01 47 21.5	-0.6
TRCB	Terra Rica	13.14	87		Pn	01 47 23.8	+0.1
SALV	Santo Antonio	13.29	54	*e*P	P	01 47 29.2	+1.1
CPSB	Cacapava Do Su	13.51	121	*e*P	P	01 47 29.7	-0.7
PTGB	Pitanga	13.52	96	*e*P	P	01 47 31.6	+1.0
ETMB	Extrema	14.20	3	*e*P	Pn	01 47 36.3	-0.5
NNA	Nana	15.30	320	LR	LR	01 53 19.6	
	comp=Z,24nm,19.7s,baz=168,slow=35						
SAML	Samuel	15.46	14	P	P	01 47 50.5	-1.5
PDRB	Porto dos Gac	15.71	40	*e*P	P	01 47 54.7	-0.1
FRTB	Fartura	15.88	91	*e*P	Pn	01 47 58.5	+1.3
ITRB	Iturama	15.94	77	*e*P	Pn	01 47 59.1	+1.2
ARAG	Araguaiana, MT	16.43	62	*e*P	Pn	01 48 04.6	+0.9
CLDB	Colider	16.84	41	*e*P	P	01 48 07.3	0.0
PLCA	Paso Flores	16.89	190	P	Pn	01 48 11.5	+2.4
	0.1nm,0.3s,baz=285,slow=17,SNR=1.6						
BB19B	Bebedouro	17.21	84	*e*P	Pn	01 48 12.9	-0.1
RCLB	Rio Claro- Sao	17.86	89	*e*P	Pn	01 48 19.6	-1.0
IPMB	Ipameri, GO	18.44	74	*e*P	P	01 48 25.1	+0.2
SNDB	Serra Nova Dou	19.07	54	*e*P	P	01 48 31.5	-0.1
PARB	Paraibuna	19.48	92	*e*P	P	01 48 36.2	+0.2
BDFB	Brasilia	19.61	68	P	P	01 48 37.1	-0.4
	1.0nm,0.3s,baz=237,slow=9.0,SNR=16						
BDFB	Brasilia	19.61	68	P	P	01 48 36.9	-0.6
NPGB	Novo Progresso	20.23	35	*e*P	P	01 48 42.4	-1.5
PEXB	Peixe	21.27	59	*e*P	P	01 48 54.7	-0.2
VAS01	Vassouras-RJ	21.62	90	*e*P	P	01 48 58.1	-0.3
MACA	Manacapuru-AM	21.64	17	*e*P	P	01 48 57.4	-1.3
ITTB	Itaituba	22.35	30	*e*P	P	01 49 04.6	-0.8
DUB01	Friburgo-RJ	22.63	90	*e*P	P	01 49 07.6	-0.4
JANB	Januaria	23.05	71	*e*P	P	01 49 11.2	-0.6
SDBA	SAO DESIDERIO	23.84	65	*e*P	P	01 49 18.5	-0.5
SMTB	Santa Maria do	23.85	54	*e*P	P	01 49 18.3	-0.7
PTGA	Pitinga	24.16	17	P	P	01 49 22.0	+0.2
	1.1nm,0.2s,baz=162,slow=19,SNR=1.8						
PTGA	Pitinga	24.16	17	IAmb	IAmb	01 49 35.2	
	comp=Z,6.0nm,1.4s						
PRPB	Parauapebas	24.20	45	*e*P	P	01 49 22.0	-0.2
ALF01	Guarapari-ES	24.42	87	*e*P	P	01 49 24.2	0.0
RIB01	Linhares ES	25.04	84	*e*P	P	01 49 29.4	-0.5
NAN01	Guarapari, ES	25.72	81	*e*P	P	01 49 34.9	-1.0
GUA01	Guaratinga, BA	26.43	79	*e*P	P	01 49 41.8	-0.4
BOAV	Boa Vista	27.03	14	P	P	01 49 48.0	+0.4
BOAV				IAmb	IAmb	01 49 59.5	
	comp=Z,7.9nm,1.4s						
GDU01	Guandu, BA	27.76	73	*e*P	P	01 49 52.9	-1.3
NBLA	Lagarto - SE	30.56	70	*e*P	P	01 50 17.5	-1.4
NBPB	Pedra_Branca-C	32.07	59	*e*P	P	01 50 31.0	-1.1
NBPV	Pedro Velho	35.03	65	*e*P	P	01 50 57.1	-0.6
SNAA	Sanae	59.24	161	P	P	01 54 04.6	+1.0
SNAA				IAmb	IAmb	01 54 10.8	
	comp=Z,2.3nm,1.3s						
DBIC	Dimbokro	67.72	71	P	P	01 54 58.9	-1.0
	comp=Z,1.6nm,0.7s,baz=324,slow=11,SNR=1.6						
TORD	Torodi Ar. Bea	76.49	69	P	P	01 55 51.8	-0.1
	comp=Z,1.1nm,0.5s,baz=260,slow=5.6,SNR=18						
TORD	Torodi Ar. Bea	76.49	69	P	P	01 55 51.7	-0.2
TORD				IAmb	IAmb	01 55 52.4	
	comp=Z,1.0nm,0.7s						
BOSA	Boshof	80.60	117	P	P	01 56 15.3	+0.9
	comp=Z,2.4nm,1.0s,baz=244,slow=4.8,SNR=5.2						
BOSA	Boshof	80.60	117	IAmb	IAmb	01 56 24.3	
	comp=Z,14nm,1.4s						
MAW	Mawson	81.33	163	P	P	01 56 19.0	+1.8
	comp=Z,1.1nm,0.3s,baz=185,slow=11,SNR=6.4						
MAW	Mawson	81.33	163	IAmb	IAmb	01 56 22.9	
	comp=Z,0.5nm,0.9s						
ESDC	Sonseca Array	86.38	44	P	P	01 56 45.2	+1.9
	comp=Z,0.6nm,1.0s,baz=223,slow=6.7,SNR=3.2						
WRA	Warramunga Arr	131.61	207	PKP	PKiKP	02 03 14.8	+0.6
	comp=Z,0.4nm,1.1s,baz=153,slow=1.8,SNR=1.8						
ZALV	Zalesovo Beam	143.41	28	PKP	PKPdf	02 03 33.0	-0.6
	comp=Z,1.0nm,0.5s,baz=332,slow=5.0,SNR=5.6						
MKAR	Makanchi Array	146.51	40	PKPbc	PKPbc	02 03 41.6	+0.4
	comp=Z,1.2nm,0.6s,baz=304,slow=3.3,SNR=13						

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*IDC **15** 01:46:15.0±1.3, 23°.94S×66°.91W, h171^{km}±14^{km}, mb3.7/6, mb1 3.8/12, mb1mx3.6/28, mbtmp4.2/12, Error ellipse: s-maj=19.1km s-min=16.2km az=131.0*

*SJA **15** 01:46:14±2.0, 24°.08S±0°.07×67°.1W±0°.1, h204^{km}±6^{km}, Error ellipse: s-maj=13.2km s-min=9.5km az=94.0*

*NEIC **15** 01:46:15.1±1.9, 24°.09S±0°.06×67°.3W±0°.1, h203^{km}±7^{km}, mb4.2/7, Md3.7(SJA), Error ellipse: s-maj=14.2km s-min=8.9km az=99.0*

*GUC **15** 01:46:17.2±0.5, 23°.92S×67°.46W, h218^{km}±7^{km}, ML4.5*

*VAO **15** 01:46:17.0±0.9, 24°.11S×67°.42W, h253^{km}, mb4.2*

ISC 15 01:46:15.0±0.6, **24°.04S**±0°.05×**67°.29W**±0°.07, **h203**^{km}±8^{km}, **n114**, σ1^{s}.**11**/124, **mb4.0**/6, **9C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	2.06	313	P	Pn	01 46 55.4	+0.7
	112nm,0.3s,baz=127,slow=7.7,SNR=33						
LVC				S	S	01 47 25.5	+0.4
	83nm,0.3s,baz=73,slow=19,SNR=21						
LVC	Limon Verde	2.06	313	⇑*i*P	Pn	01 46 55.7	+0.9
LVC				*i* S	S	01 47 25.0	-0.1
LVC	Limon Verde	2.06	313	Sn	S	01 47 24.7	-0.4
PB15	IPOC Station P	2.17	292	⇑*i*P	Pn	01 46 56.9	+1.2
PB15				*i* S	S	01 47 27.1	+0.3
PB15	IPOC Station P	2.17	292	Pn	Pn	01 46 56.4	+0.7
PB06	IPOC Station P	2.48	302	⇑*i*P	Pn	01 47 00.3	+1.2
PB06				*i* S	S	01 47 33.1	+0.3
PB06				IAML		01 47 35.7	
	comp=E,2μm,0.3s						
PB06	IPOC Station P	2.48	302	Pn	Pn	01 46 59.7	+0.6
PB06				Sn	S	01 47 32.6	-0.2
PB09	IPOC Station P	2.87	321	⇑*i*P	Pn	01 47 04.7	+1.3
PB09				*i* S	S	01 47 40.9	+0.2
PB09				IAML		01 47 43.4	
	comp=N,854nm,0.3s						
PB09	IPOC Station P	2.87	321	Pn	Pn	01 47 03.8	+0.3
PB14	IPOC Station P	2.90	258	⇑*i*P	Pn	01 47 04.6	+0.6
PB14				*i* S	S	01 47 40.6	-1.0
PB14				IAML		01 47 46.0	
	comp=E,364nm,0.4s						
PB14	IPOC Station P	2.90	258	Pn	Pn	01 47 03.6	-0.4
PB05	IPOC Station P	2.93	293	⇑*i*P	Pn	01 47 05.0	+1.0
PB05				*i* S	S	01 47 40.6	-1.1
PB05				IAML		01 47 45.6	
	comp=E,483nm,0.2s						
PB03	IPOC Station P	3.01	311	⇑*i*P	Pn	01 47 06.0	+0.8
PB03				*i* S	S	01 47 43.0	-0.7
PB03				IAML		01 47 45.5	
	comp=E,1μm,0.3s						
PB10	IPOC Station P	3.04	279	⇑*i*P	Pn	01 47 06.4	+1.2
PB10	IPOC Station P	3.04	279		Pn	01 47 06.0	+0.7
PB04	IPOC Station P	3.13	302	⇑*i*P	Pn	01 47 07.4	+0.8
PB04				*i* S	S	01 47 45.4	-0.8
PB04				IAML		01 47 52.1	
	comp=N,1μm,0.3s						
PB04	IPOC Station P	3.13	302	Pn	Pn	01 47 06.9	+0.3
AC02	Maricunga	3.25	211	Pn	Pn	01 47 06.9	-1.3
PB07	IPOC Station P	3.32	313	*e*P	Pn	01 47 09.6	+0.8
PB07				*i* S	S	01 47 49.4	-1.0
PB07	IPOC Station P	3.32	313	Pn	Pn	01 47 08.8	0.0
PB01	IPOC Station P	3.61	325	*e*P	Pn	01 47 12.5	+0.3
PB01				*i* S	S	01 47 55.5	-1.0
PB01	IPOC Station P	3.61	325	Pn	Pn	01 47 12.3	+0.1
PB08	IPOC Station P	4.25	336	Pn	Pn	01 47 20.9	+0.5
TA01	Diego Aracena	4.37	322	*e*P	Pn	01 47 21.7	+0.1
TA01				*i* S	S	01 48 11.7	-1.8
GO03	Copiap	4.43	216	Pn	Pn	01 47 21.2	-1.1
TA02	Huaiquique	4.58	324		Pn	01 47 24.2	0.0
AC04	Llanos de Chal	5.37	219	Pn	Pn	01 47 32.9	-1.3
LCO	Las Campanas	5.82	211	Pn	Pn	01 47 38.7	-1.6
PB16	IPOC Station P	6.04	340	Pn	Pn	01 47 43.7	+0.2
PB12	IPOC Station P	6.10	332	Pn	Pn	01 47 44.8	+1.1
LPAZ	La Paz	7.75	354	P	Pn	01 48 06.7	+1.0
	comp=N,3.3nm,0.3s,baz=150,slow=6.2,SNR=34						
LPAZ				S	S	01 49 31.9	-1.7
	comp=N,0.2nm,0.3s,baz=146,slow=21,SNR=2.5						
LPAZ	La Paz	7.75	354	*e*P	Pn	01 48 06.9	+1.2
LPAZ	La Paz	7.75	354		Pn	01 48 06.8	+1.2
VA03	San Esteban	9.16	198	Pn	Pn	01 48 23.6	+0.3
CPUP	Villa Florida	9.30	106	P	Pn	01 48 21.4	-3.7
	comp=N,0.1nm,0.3s,baz=336,slow=18,SNR=2.4						
CPUP	Villa Florida	9.30	106	*e*P	Pn	01 48 26.9	+1.7
SIV	San Ignacio	9.91	37	P	Pn	01 48 30.3	-2.9
	comp=N,3.0nm,0.3s,baz=222,slow=9.2,SNR=35						
SIV				S	S	01 50 08.0	-16
	baz=217,slow=11,SNR=2.0						
AQDB	Aquidauana	11.30	74	*e*P	Pn	01 48 53.8	+2.9
AQDB	Aquidauana	11.30	74	Pn	Pn	01 48 51.6	+0.7
VILB	Vilhena	12.91	33	*e*P	Pn	01 49 12.7	+1.3
VILB	Vilhena	12.91	33	Pn	Pn	01 49 11.2	-0.1
PP1B	Ponte de Pedra	13.25	63	*e*P	P	01 49 18.4	0.0
TRCB	Terra Rica	13.51	88	Pn	Pn	01 49 18.5	-0.3
SALV	Santo Antonio	13.57	56	*e*P	P	01 49 22.2	+0.2
CPSB	Cacapava Do Su	13.85	120	*e*P	Pn	01 49 23.9	+1.0
PTGB	Pitanga	13.89	96	*e*P	P	01 49 25.8	+0.2
ETMB	Extrema	14.18	4	*e*P	P	01 49 29.0	+0.2
PCMB	Pacaembu	14.97	84	*e*P	P	01 49 38.5	+1.0
CNLB	Canela	15.60	113	*e*P	P	01 49 44.0	-0.4
PDRB	Porto dos Gac	15.91	41	*e*P	P	01 49 47.4	-0.5
LR03	Panguipulli	16.13	194	P	P	01 49 48.1	-1.9
LR03				IAmb	IAmb	01 49 59.7	
	comp=Z,22nm,1.3s						
FRTB	Fartura	16.25	91	*e*P	P	01 49 52.2	+0.6
ITRB	Iturama	16.29	78	*e*P	Pn	01 49 53.0	+0.1
ARAG	Araguaiana, MT	16.74	63	*e*P	Pn	01 49 58.2	0.0
PLCA	Paso Flores	16.87	189	P	Pn	01 50 01.9	+2.3
	comp=Z,0.2nm,0.3s,baz=16,slow=10,SNR=4.6						
PLCA	Paso Flores	16.87	189	P	P	01 49 58.0	-0.3
TER01	Tubaro-SC	16.88	109	*e*P	P	01 49 57.7	-0.8
CLDB	Colider	17.06	42	*e*P	P	01 50 00.1	-0.4
LL04	Puerto Octay	17.36	193	P	P	01 50 01.5	-2.1
LL04				IAmb	IAmb	01 50 06.9	
	comp=Z,12nm,1.1s						
BB19B	Bebedouro	17.58	84	*e*P	P	01 50 06.7	+0.5
RCLB	Rio Claro- Sao	18.23	89	*e*P	P	01 50 12.2	-1.1
PET01	Itanhaem-SP	18.26	95	*e*P	P	01 50 13.0	-0.6
VAO	Valinhos	18.66	91	*e*P	P	01 50 18.0	-0.1
IPMB	Ipameri, GO	18.79	75	*e*P	P	01 50 18.7	-0.7
SNDB	Serra Nova Dou	19.35	54	*e*P	P	01 50 24.7	-0.7
PARB	Paraibuna	19.85	92	*e*P	P	01 50 30.1	-0.7
BDFB	Brasilia	19.94	69	P	P	01 50 31.1	-0.8
	comp=Z,4.3nm,0.3s,baz=243,slow=11,SNR=55						
BDFB	Brasilia	19.94	69	P	P	01 50 30.7	-1.1
NPGB	Novo Progresso	20.41	36	*e*P	P	01 50 35.0	-1.7
BSCB	Bom Sucesso	21.01	86	*e*P	P	01 50 42.0	-1.2
MAN01	Angra dos Reis	21.43	92	*e*P	P	01 50 45.8	-1.7
PEXB	Peixe	21.57	60	*e*P	P	01 50 47.5	-1.4
VAS01	Vassouras-RJ	21.99	90	*e*P	P	01 50 52.2	-0.8
ITTB	Itaituba	22.50	31	*e*P	P	01 50 57.1	-0.7
DIAM	Diamantina, MG	22.73	80	*e*P	P	01 50 59.3	-0.7
DUB01	Friburgo-RJ	23.00	90	*e*P	P	01 51 01.9	-0.4
MC01	Montes Claros	23.05	76	*e*P	P	01 51 01.0	-1.8
JANB	Januaria	23.39	72	*e*P	P	01 51 04.9	-1.0
CAM01	Campos-RJ	23.70	90	*e*P	P	01 51 07.1	-1.4
SMTB	Santa Maria do	24.13	55	*e*P	P	01 51 12.1	-0.5
SDBA	SAO DESIDERIO	24.16	65	*e*P	P	01 51 11.1	-1.8
PTGA	Pitinga	24.23	18	P	P	01 51 14.2	+0.8
	comp=Z,0.8nm,0.3s,baz=139,slow=20,SNR=1.3						
PRPB	Parauapebas	24.44	46	*e*P	P	01 51 15.0	-0.4
BSFB	Barra de Sao F	25.13	83	*e*P	P	01 51 20.9	-0.7
MALB	Monte Alegre	25.40	32	*e*P	P	01 51 23.4	-0.6
RIB01	Linhares ES	25.41	85	*e*P	P	01 51 23.6	-0.6
NAN01	Guarapari, ES	26.08	82	*e*P	P	01 51 29.3	-0.9
GUA01	Guaratinga, BA	26.78	79	*e*P	P	01 51 35.9	-0.6
CMC01	Camacan, BA	27.49	77	*e*P	P	01 51 41.8	-1.0
NBIT	Itapeh - BA	27.73	76	*e*P	P	01 51 44.7	-0.1
MCPB	Macapa, AP	27.79	34	*e*P	P	01 51 44.3	-1.0
GDU01	Guandu, BA	28.10	74	*e*P	P	01 51 47.1	-1.1
NBPN	Ponto Novo - B	28.91	68	*e*P	P	01 51 54.9	-0.5
NBLA	Lagarto - SE	30.89	70	*e*P	P	01 52 11.4	-1.4
NBMA	Muriti-CE	31.96	63	*e*P	P	01 52 21.5	-0.7
NBPB	Pedra_Branca-C	32.37	60	*e*P	P	01 52 24.9	-0.9
NBAN	Anadia - AL	32.84	70	*e*P	P	01 52 27.9	-1.9
NBLV	Livramento - P	33.49	65	*e*P	P	01 52 34.4	-1.1
NBPA	Parau_RN	34.23	63	*e*P	P	01 52 41.1	-0.7
NBRF	Rio Formoso -	34.31	69	*e*P	P	01 52 41.5	-1.0
NBPV	Pedro Velho	35.35	66	*e*P	P	01 52 49.9	-1.5
VNA3	Neumayer Olymp	57.20	161	P	P	01 55 45.1	+4.6
VNA2	Neumayer--Watz	57.77	160	P	P	01 55 55.4	+11
SNAA	Sanae	59.40	161	P	P	01 56 00.5	+4.6
735A	Kenedy	60.24	329	P	P	01 56 00.4	-1.5
DBIC	Dimbokro	68.06	72	P	P	01 56 53.9	+0.8
	comp=Z,3.8nm,0.9s,baz=335,slow=2.8,SNR=2.4						
VNDA	Vanda	74.62	190	P	P	01 57 36.6	+5.3
	comp=Z,0.4nm,0.3s,baz=135,slow=1.4,SNR=6.4						
VNDA	Vanda	74.62	190	P	P	01 57 30.6	-0.8
VNDA				IAmb	IAmb	01 57 47.6	
	comp=Z,6.2nm,1.5s						
TORD	Torodi Ar. Bea	76.83	69	P	P	01 57 45.8	+0.9
	comp=Z,2.4nm,0.5s,baz=261,slow=5.4,SNR=30						
TORD	Torodi Ar. Bea	76.83	69	P	P	01 57 45.8	+0.9
TORD				IAmb	IAmb	01 57 46.7	
	comp=Z,2.8nm,0.6s						
BOSA	Boshof	80.95	117	P	P	01 58 08.9	+1.6
	comp=Z,1.9nm,0.4s,baz=242,slow=4.2,SNR=14						
ESDC	Sonseca Array	86.60	44	P	P	01 58 37.8	+2.3
	comp=Z,0.5nm,0.7s,baz=272,slow=4.1,SNR=3.6						
ZALV	Zalesovo Beam	143.55	28	PKP	PKPdf	02 05 26.3	+1.1
	comp=Z,1.1nm,0.6s,baz=270,slow=3.7,SNR=7.2						
MKAR	Makanchi Array	146.72	39	PKPbc	PKiKP	02 05 35.8	+0.4
	comp=Z,2.2nm,0.7s,baz=300,slow=3.3,SNR=19						

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*GCG **15** 02:17:00.4±0.6, 13°.62N×90°.67W, h34^{km}±47^{km}, MD3.9*

*SNET **15** 02:17:00.5±0.9, 13°.68N×90°.59W, h44^{km}±14^{km}, ML3.5*

ISC 15 02:16:58.7±2.1, **13°.62N**±0°.08×**90°.59W**±0°.07, **h15**^{km}±12^{km}, **n34**, σ0^{s}.**49**/49, **2D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCG	Pacaya	0.77	359	*e*P	Pn	02 17 15.3	+0.1
FUG	Fuego 3	0.86	343	*e*P	Pn	02 17 16.4	0.0
RTR	El Retiro	0.96	73	*e*P	Pn	02 17 17.9	+0.1
RTR				*e*S	Sn	02 17 31.1	-0.1
CEVE	Cerro Verde	0.96	78	⇓*e*P	Pg	02 17 17.7	+0.4
CEVE				*e*S	Sn	02 17 31.4	-0.1
SNJE	San Jose	0.99	76	*e*P	Pg	02 17 18.1	+0.3
SNJE				*e*S	Sn	02 17 32.2	+0.2
NBG	Las Nubes	0.99	14	*e*P	Pn	02 17 19.6	+1.3
NBG				*e*S	Sn	02 17 33.7	+1.5
UNIC	Universidad Ca	1.07	70	*e*P	Pb	02 17 19.2	+0.1
UNIC				*e*S	Sn	02 17 33.6	-0.3
JAYA	Jayaque - finc	1.11	88	*e*P	Pb	02 17 19.3	-0.4
JAYA				*e*S	Sb	02 17 34.0	0.0
CEDA	San Andres	1.17	81	*e*P	Pn	02 17 20.4	-0.3
CEDA				IAML		02 17 45.0	
	comp=Z,2μm,0.4s						
LALI	Alcalda de L	1.24	96	*e*P	Pn	02 17 21.2	-0.3
LALI				IAML		02 17 40.5	
	comp=Z,321nm,0.3s						
PMON	Piamonte	1.24	86	*e*P	Pn	02 17 21.6	0.0
PMON				*e*S	Sb	02 17 37.8	-0.1
TACO	Tacachico	1.25	74	*e*P	Pn	02 17 21.3	-0.4
BOQS	Boqueron	1.28	85	*e*P	Pn	02 17 22.3	0.0
BOQS				*e*S	Sn	02 17 39.4	+0.1
UEES	Universidad Ev	1.31	86	*e*P	Pn	02 17 22.7	0.0
SNET	Serv Nac Est T	1.32	87	*e*P	Pn	02 17 22.7	0.0
SNET				*e*S	Sb	02 17 39.6	-0.5
SNET				IAML		02 17 42.7	
	comp=Z,2μm,0.2s						
SEMO	Seminario San	1.33	86	*e*P	Pn	02 17 23.0	+0.1
UESS	Universidad de	1.35	86	*e*P	Pn	02 17 23.6	+0.5
UESS				IAML		02 17 44.1	
	comp=Z,1μm,0.2s						
OPAM	Oficina de Pla	1.35	86	*e*P	Pn	02 17 23.5	+0.3
OPAM				IAML		02 17 42.3	
	comp=Z,1μm,0.3s						
IGN	Direccin Gen	1.38	86	*e*P	Pn	02 17 23.7	+0.1
MTO3	Montecristo	1.42	57	⇓*e*P	Pn	02 17 23.9	-0.3
LFU	La Fuente	1.44	85	*e*P	Pn	02 17 24.5	+0.2
STG3	Santiaguito 3,	1.44	319	*e*P	Pn	02 17 24.0	-0.4
LFRS	El Faro	1.48	90	*e*P	Pn	02 17 25.3	+0.3
LFRS				*e*S	Sn	02 17 44.1	-0.2
LBRS	Las Brisas	1.51	85	*e*P	Pn	02 17 25.4	+0.1
ESQI	Esquipulas	1.53	52	*e*P	Pn	02 17 25.5	-0.1
ESQI				*e*S	Sb	02 17 44.9	-1.1
SJTE	Alcalda de S	1.54	90	*e*P	Pn	02 17 25.6	-0.1
SJTE				IAML		02 17 48.3	
	comp=Z,343nm,0.2s						
PAVA	Las Pavas	1.61	87	*e*P	Pn	02 17 26.6	-0.1
PAVA				*e*S	Sn	02 17 47.2	0.0
PAVA				IAML		02 17 58.0	
	comp=Z,301nm,0.3s						
COEG	Centro de Oper	1.66	90	*e*P	Pn	02 17 27.5	+0.1
COEG				IAML		02 17 54.1	
	comp=Z,669nm,0.4s						
MRL	Marmol	1.69	31	*e*P	Pb	02 17 28.9	-0.8
SNVI	San Vicente	1.70	90	*e*P	Pn	02 17 28.7	+0.7
SNVI				*e*S	Sn	02 17 50.5	+0.8
SCLA	Alcaldia de Sa	1.81	87	*e*P	Pn	02 17 29.4	0.0
COEB	Comit de Eme	2.01	93	*e*P	Pn	02 17 32.0	-0.2
LCND	La Caada	2.64	96	*e*P	Pn	02 17 41.2	+0.4
LCND				*e*S	Sn	02 18 13.3	+0.6
LCND				IAML		02 18 24.4	
	comp=Z,324nm,0.4s						
CNCH	Conchagua	2.70	97	*e*P	Pn	02 17 42.0	+0.2
CNCH				*e*S	Sn	02 18 15.3	+1.0

IDC 15 02:28:06.6±1.2, **2°.34S**×**139°.94E**, **h0**^{km}, **mb3.6**/3, **mb1 4.0**/4, **mb1mx3.6**/37, **mbtmp3.8**/4, **ML4.2**/1, **MS2.9**/5, **Ms1 2.9**/5, **ms1mx2.6**/29, **Error ellipse: s-maj=26.9km s-min=10.7km az=13.0, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	0.78	103	Pg	Pb	02 28 22.6	-0.4
	191nm,0.3s,baz=242,slow=9.9,SNR=490						
JAY				Lg	Lg	02 28 31.7	
	239nm,0.3s,baz=106,slow=18,SNR=15						
JAY				LR	LR	02 28 57.2	
	comp=Z,104nm,18.5s,baz=332,slow=65						
SIJI	Sorong	8.79	279	LR	LR	02 33 56.9	
	comp=Z,49nm,19.8s,baz=182,slow=40						
GUMO	Guam	16.57	17	LR	LR	02 38 08.6	
	comp=Z,45nm,18.2s,baz=103,slow=36						
WRA	Warramunga Arr	18.33	197	P	Pn	02 32 21.4	-1.1
	0.8nm,0.3s,baz=19,slow=12,SNR=30						
WRA				LR	LR	02 40 09.4	
	comp=Z,34nm,18.7s,baz=265,slow=39						
ASAR	Alice Springs	21.99	195	P	P	02 33 01.9	-0.6
	0.9nm,0.5s,baz=14,slow=8.5,SNR=6.6						
ASAR				LR	LR	02 41 12.1	
	comp=Z,32nm,18.6s,baz=15,slow=36						
KLR	Kul'dur	51.85	353	LR	LR	02 59 26.1	
	comp=Z,16nm,18.0s,baz=123,slow=36						
MKAR	Makanchi Array	70.25	322	P	P	02 39 22.8	+1.1
	0.5nm,0.7s,baz=120,slow=8.0,SNR=5.6						
ILAR	Eielson Array	84.99	24	P	P	02 40 42.3	-1.3
	0.6nm,0.8s,baz=258,slow=5.2,SNR=5.0						

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*FUNV **15** 02:29:39.2, 8°.48N×71°.40W, h5^{km}, MW3.0*

ISC 15 02:29:37.3±1.5, **8°.48N**±0°.03×**71°.37W**±0°.02, **h8**^{km}±12^{km}, **n25**, σ1^{s}.**44**/44, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.55	111	*e*P	Pg	02 29 48.5	+0.6
SOCV				*e*S	Sb	02 29 57.6	+0.4
SDV	Santo Domingo	0.84	61	*e*P	Pg	02 29 53.8	+0.4
SDV				*e*S	Sb	02 30 07.1	+1.3
PAMC	Pamplona, Colo	1.73	229	*e*P	Pn	02 30 08.2	0.0
PAMC				*e*S	Sb	02 30 32.5	+0.7
MCQV	Machiques	1.94	324	*e*P	Pn	02 30 11.2	+0.6
MCQV				*e*S	Sn	02 30 36.0	+0.8
OCAC	Ocana	1.94	263	*e*P	Pn	02 30 10.1	-0.7
OCAC				*e*S	Sn	02 30 34.6	-0.9
TAMC	Tame, Arauca	2.07	192	*e*P	Pn	02 30 13.9	+1.5
TAMC				*e*S	Sb	02 30 41.2	0.0

LL6C	**La Loma 6 Bece**	**2.25**	**304**	*e*P	**Pn**	**02 30 14.3**	**-0.6**
LL6C				*e*S	**Sn**	**02 30 43.7**	**+0.7**
ELOV	**Elorza**	**2.38**	**128**	*e*P	**Pb**	**02 30 19.1**	**-1.3**
ELOV				*e*S	**Sn**	**02 30 47.9**	**+1.9**
SIQV	**Siquisique**	**2.65**	**35**	*e*P	**Pn**	**02 30 22.1**	**+1.6**
SIQV				*e*S	**Sn**	**02 30 53.9**	**+1.0**
BRRC	**Barranca, Sant**	**2.69**	**240**	*e*P	**Pb**	**02 30 24.2**	**-1.5**
BRRC				*e*S	**Sb**	**02 30 58.1**	**-0.8**
SMLC	**San Martn de**	**2.69**	**277**	*e*P	**Pn**	**02 30 19.6**	**-1.4**
SMLC				*e*S	**Sn**	**02 30 56.3**	**+2.6**
RUSC	**La Rusia**	**3.08**	**214**	*e*P	**Pn**	**02 30 27.6**	**+0.9**
RUSC				*e*S	**Sn**	**02 31 04.7**	**+0.7**
BAUV	**El Baul**	**3.33**	**82**	*e*P	**Pn**	**02 30 31.3**	**+1.6**
BAUV				*e*S	**Sn**	**02 31 10.3**	**+0.9**
MONV	**Montecano**	**3.72**	**22**	*e*P	**Pn**	**02 30 35.4**	**+0.3**
MONV				*e*S	**Sn**	**02 31 18.6**	**-0.6**
SPBC	**San Pablo de B**	**3.88**	**224**	*e*P	**Pn**	**02 30 38.9**	**+1.5**
SPBC				*e*S	**Sn**	**02 31 23.4**	**+0.2**
BENV	**Beln**	**4.01**	**68**	*e*P	**Pn**	**02 30 40.8**	**+1.7**
BENV				*e*S	**Sn**	**02 31 25.8**	**-0.6**
SJCC	**San Jacinto, C**	**4.01**	**291**	*e*P	**Pn**	**02 30 39.9**	**+0.6**
UREC	**San Jos de Ur**	**4.18**	**260**	*e*P	**Pb**	**02 30 52.2**	**+1.0**
CHIC	**Chingaza**	**4.48**	**212**	*e*P	**Pn**	**02 30 46.5**	**+0.5**
CHIC				*e*S	**Sn**	**02 31 34.8**	**-3.8**
TACV	**Tcata**	**4.60**	**69**	*e*P	**Pn**	**02 30 48.6**	**+1.4**
PAYV	**Puerto Ayacuch**	**4.78**	**129**	*e*P	**Pn**	**02 30 50.4**	**+0.7**
CACV	**CAICARA DEL OR**	**4.87**	**100**	*e*P	**Pb**	**02 30 59.2**	**-3.7**
MERV	**Las Mercedes**	**5.07**	**81**	*e*P	**Pn**	**02 30 55.2**	**+1.5**
MERV				*e*S	**Sn**	**02 31 51.0**	**-1.6**
BIRV	**Birongo**	**5.41**	**68**	*e*P	**Pn**	**02 30 59.6**	**+1.2**
BIRV				*e*S	**Sn**	**02 31 58.7**	**-2.2**
MACC	**Macarena, Meta**	**6.75**	**202**	*e*P	**Pn**	**02 31 16.8**	**-0.1**

IDC ***15*** *02:29:49.6±1.7, 7°.55S×128°.65E, h127km±19km, mb3.3/3, mb1 3.3/9, mb1mx3.2/40, mbtmp3.7/9, Error ellipse: s-maj=23.5km s-min=14.3km az=121.0*

ISC 15 02:29:47.5±0.8**, 7°.68S**±0°.06×**128°.77E**±0°.09**, h100km, n9, σ2ˢ.80**/14**, mb3.6**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.64**	**243**	P	**Pn**	**02 31 12.0**	**+3.0**
	9.4nm,0.3s,baz=56,slow=3.6,SNR=10.0						
BATI				S	**Sn**	**02 32 13.4**	**+1.0**
	13nm,0.3s,baz=73,slow=23,SNR=24						
SIJI	**Sorong**	**7.20**	**20**	P	**Pn**	**02 31 32.3**	**+2.1**
	0.7nm,0.3s,baz=217,slow=20,SNR=1.5						
SIJI				S	**Sn**	**02 32 50.8**	**+0.2**
	0.5nm,0.3s,baz=198,slow=20,SNR=1.5						
KAPI	**Kappang**	**9.35**	**286**	P	**Pn**	**02 31 59.0**	**-0.4**
	0.6nm,0.3s,baz=107,slow=11,SNR=2.2						
FITZ	**Fitzroy Crossi**	**10.80**	**196**	P	**Pn**	**02 32 20.9**	**+1.8**
	0.4nm,0.3s,baz=34,slow=11,SNR=12						
FITZ				S	**Sn**	**02 34 14.7**	**-3.4**
	1.6nm,0.3s,baz=298,slow=19,SNR=8.6						
WRA	**Warramunga Arr**	**13.33**	**157**	P	**Pn**	**02 32 55.8**	**+3.0**
	0.4nm,0.3s,baz=342,slow=14,SNR=8.6						
WRA				S	**Sn**	**02 35 16.8**	**-2.9**
	0.9nm,0.3s,baz=324,slow=24,SNR=11						
ASAR	**Alice Springs**	**16.64**	**163**	P	**Pn**	**02 33 39.0**	**+4.2**
	baz=334,slow=9.6,SNR=1.5						
ASAR				S	**Sn**	**02 36 36.6**	**-3.0**
	0.2nm,0.3s,baz=329,slow=17,SNR=2.9						
SONM	**Songino Array**	**58.70**	**343**	P	**P**	**02 39 32.3**	**-2.5**
	0.4nm,0.7s,baz=159,slow=8.5,SNR=2.7						
MKAR	**Makanchi Array**	**68.13**	**328**	P	**P**	**02 40 34.8**	**-2.0**
	0.3nm,0.4s,baz=118,slow=8.2,SNR=3.8						
ZALV	**Zalesovo Beam**	**71.66**	**334**	P	**P**	**02 40 56.4**	**-1.8**
	0.4nm,0.4s,baz=121,slow=7.2,SNR=2.4						

IDC ***15*** *02:43:27.5±0.9, 7°.22N×94°.52E, h0km, mb3.7/11, mb1 3.8/12, mb1mx3.6/39, mbtmp3.7/12, ML3.7/1, MS3.4/12, Ms1 3.4/12, ms1mx3.1/42, Error ellipse: s-maj=37.7km s-min=18.1km az=55.0*

ISC 15 02:43:31.0±0.8**, 7°.2N**±0°.2×**94°.6E**±0°.2**, h26km, n20, σ1ˢ.37**/13**, mb3.8**/11**, MS3.4**/9**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	**Prapat**	**6.08**	**135**	Pn	**Pn**	**02 45 00.0**	**+0.6**
	1.6nm,0.3s,baz=324,slow=12,SNR=6.8						
PSI				Sn	**Sn**	**02 46 06.0**	**-2.3**
	0.9nm,0.3s,baz=297,slow=18,SNR=2.0						
PSI				LR	LR	02 47 58.8	
	comp=Z,297nm,18.9s,baz=286,slow=43						
CMAR	**Chiang Mai Arr**	**11.99**	**20**	Pn	Pn	02 46 29.3	+9.1
	0.4nm,0.3s,baz=321,slow=22,SNR=5.2						
CMAR				LR	LR	02 51 02.4	
	comp=Z,116nm,18.8s,baz=253,slow=38						
PALK	**Pallekele**	**13.82**	**271**	LR	LR	02 52 05.8	
	comp=Z,147nm,18.2s,baz=180,slow=38						
JOW	**Kunigami**	**37.46**	**54**	LR	LR	03 08 45.7	
	comp=Z,37nm,18.9s,baz=115,slow=40						
MKAR	**Makanchi Array**	**40.89**	**347**	P	**P**	**02 51 10.9**	**-0.1**
	0.6nm,0.6s,baz=128,slow=9.3,SNR=6.2						
SONM	**Songino Array**	**41.75**	**12**	P	**P**	**02 51 18.3**	**+0.2**
	0.4nm,0.7s,baz=201,slow=7.7,SNR=2.7						
SONM				LR	LR	03 09 02.1	
	comp=Z,24nm,21.9s,baz=188,slow=37						
KSRS	**Korea Array**	**42.69**	**40**	LR	LR	03 11 57.8	
	comp=Z,39nm,18.2s,baz=265,slow=40						
KURBB	**Kurchatov Arra**	**45.35**	**346**	P	**P**	**02 51 46.8**	**-0.1**
	1.5nm,0.9s,baz=163,slow=7.3,SNR=5.0						
ZALV	**Zalesovo Beam**	**47.32**	**352**	P	**P**	**02 52 02.4**	**0.0**
	0.4nm,0.3s,baz=152,slow=11,SNR=5.1						
WRA	**Warramunga Arr**	**47.45**	**125**	P	**P**	**02 52 07.1**	**+3.2**
	0.6nm,0.6s,baz=307,slow=8.8,SNR=7.6						
WRA				LR	LR	03 15 30.8	
	comp=Z,45nm,18.2s,baz=290,slow=40						
ASAR	**Alice Springs**	**49.09**	**130**	P	**P**	**02 52 16.2**	**-0.3**
	0.3nm,0.8s,baz=304,slow=8.0,SNR=2.0						
ASAR				LR	LR	03 15 16.0	
	comp=Z,36nm,19.0s,baz=322,slow=39						
BVAR	**Borovoye Array**	**49.82**	**341**	P	**P**	**02 52 21.5**	**-0.1**
	0.3nm,0.4s,baz=186,slow=12,SNR=3.3						
AKTO	**Aktyubinsk**	**52.80**	**331**	P	**P**	**02 52 44.0**	**-0.1**
	1.1nm,0.9s,baz=150,slow=8.1,SNR=2.0						
KMBO	**Kilima Mbogo**	**57.83**	**264**	P	**P**	**02 53 21.6**	**+0.3**
	1.0nm,0.5s,baz=72,slow=5.2,SNR=3.8						
STKA	**Stephens Creek**	**59.26**	**134**	LR	LR	03 23 57.3	
	comp=Z,23nm,18.8s,baz=296,slow=41						
LSZ	**Lusaka**	**69.49**	**251**	LR	LR	03 22 34.8	
	comp=Z,60nm,18.2s,baz=116,slow=34						
FINES	**FINESS Array B**	**73.56**	**332**	P	**P**	**02 54 59.9**	**-1.6**
	2.8nm,1.1s,baz=106,slow=10,SNR=3.8						
NOA	**NORSAR Array B**	**80.59**	**331**	LR	LR	03 36 30.8	
	comp=Z,16nm,19.1s,baz=335,slow=40						
TORD	**Torodi Ar. Bea**	**91.23**	**283**	LR	LR	03 36 07.3	
	comp=Z,35nm,18.8s,baz=340,slow=35						
ESDC	**Sonseca Array**	**92.05**	**310**	P	**P**	**02 56 38.2**	**0.0**
	0.2nm,0.6s,baz=46,slow=5.5,SNR=2.2						

HEL ***15*** *02:54:08.5±0.1, 67°.64N×33°.71E, h0km, ML2.0, Explosion*
NAO ***15*** *02:54:08.6±1.4, 67°.65N×33°.73E, ML2.6*

ISC 15 02:54:06.6±0.9**, 67°.64N**±0°.04×**33°.92E**±0°.04**, h0km, n22, σ1ˢ.61**/43**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APZ9	**Apatity**	**0.21**	**251**	Pg	**Pg**	**02 54 11.8**	**+1.2**
APZ9				Lg	Lg	02 54 14.1	
APZ9	**Apatity**	**0.21**	**251**	Pg	**Pg**	**02 54 11.8**	**+1.2**
APZ9				Sg	**Sg**	**02 54 14.1**	**+0.8**
APA0	**Apatity Array**	**0.36**	**265**	Pg	**Pg**	**02 54 14.2**	**+0.8**
	baz=84,slow=16						
APA0				Lg	Lg	02 54 17.8	
	baz=80,slow=37						
APA0				Rg	Rg	02 54 19.3	
APA0	**Apatity Array**	**0.36**	**265**	Pg	**Pg**	**02 54 14.2**	**+0.8**
	baz=84,slow=16						
APA0				Sg	**Sg**	**02 54 17.8**	**-0.3**
	baz=80,slow=37						
LVZ	**Lovozero**	**0.38**	**47**	*e*P	**Pb**	**02 54 16.4**	**+0.2**
LVZ				*e*S	**Sb**	**02 54 22.3**	**-0.4**
VRF	**Varrio**	**1.65**	**276**	*e*P	**Pn**	**02 54 37.0**	**+0.2**
VRF				*e*S	**Sn**	**02 54 56.8**	**-1.9**
VRF				MSG		02 55 01.0	
	comp=Z,20nm,0.2s						
KU6	**Riekki**	**2.27**	**226**	*e*PG	**Pb**	**02 54 48.2**	**-0.3**
KU6				*e*SG	**Sb**	**02 55 17.7**	**+0.6**
KU6				MSG		02 55 22.6	
	comp=Z,4.2nm,0.2s						
MSF	**Maaselka**	**2.60**	**230**	*e*PB	**Pb**	**02 54 53.1**	**-0.9**
MSF				*e*SG	**Sb**	**02 55 26.6**	**+0.1**
SGF	**Sodankyl**	**2.85**	**269**	*e*P	**Pn**	**02 54 53.8**	**+0.6**
SGF				*e*SB	**Sn**	**02 55 31.2**	**+3.1**
SGF				MSG		02 55 39.1	
	comp=Z,5.9nm,0.2s						
RNF	**Rovaniemi**	**3.26**	**255**	*e*P	**Pn**	**02 55 00.1**	**+1.3**
KEV	**Kevo**	**3.30**	**313**	*e*P	**Pn**	**02 55 00.9**	**+1.5**
KEV				*e*S	**Sn**	**02 55 39.0**	**-0.3**
ARA0	**ARCESS Array S**	**3.63**	**306**	Pn	**Pn**	**02 55 04.8**	**+0.9**
	baz=122,slow=16						
ARA0				Pg	**Pb**	**02 55 13.1**	**+1.6**
	baz=114,slow=16						
ARA0				Sn	**Sn**	**02 55 44.9**	**-2.4**
	baz=122,slow=22						
ARA0				Lg	Lg	02 55 55.7	
	baz=107,slow=37						
ARA0	**ARCESS Array S**	**3.63**	**306**	Pn	**Pn**	**02 55 04.8**	**+0.9**
	baz=122,slow=16						
ARA0				Pg	**Pb**	**02 55 13.1**	**+1.6**
	baz=114,slow=16						
ARA0				Sn	**Sn**	**02 55 44.9**	**-2.4**
	baz=122,slow=22						
ARA0				Sg	**Sb**	**02 55 55.7**	**-0.3**
	baz=107,slow=37						
ARA0	**ARCESS Array S**	**3.63**	**306**	*e*P	**Pn**	**02 55 04.7**	**+0.8**
ARA0				*e*S	**Sn**	**02 55 46.2**	**-1.2**
RMF	**Romuvaara**	**3.81**	**207**	*e*P	**Pn**	**02 55 07.7**	**+1.3**
KLF	**Kolari**	**3.86**	**269**	*e*P	**Pn**	**02 55 07.3**	**+0.1**
HEF	**Hetta**	**3.93**	**286**	*e*P	**Pn**	**02 55 08.8**	**+0.6**
HEF				*e*S	**Sn**	**02 55 53.3**	**-1.6**
HEF				MSG		02 56 10.4	
	comp=Z,4.8nm,0.2s						
TOF	**Tornio**	**4.10**	**252**	*e*P	**Pn**	**02 55 10.6**	**+0.2**
KTK1	**Kautokeino**	**4.20**	**294**	Pn	**Pn**	**02 55 11.0**	**-0.8**
KTK1				Sn	**Sn**	**02 55 59.5**	**-1.9**
KTK1				Lg	Lg	02 56 13.3	
KTK1	**Kautokeino**	**4.20**	**294**	*e*P	**Pn**	**02 55 11.2**	**-0.5**
KTK1				*e*S	**Sn**	**02 55 57.2**	**-4.2**
KTK1				IAML		02 56 20.7	
	comp=Z,13nm,0.9s						
HAMF	**Hammerfest**	**4.74**	**314**	*e*P	**Pn**	**02 55 19.2**	**0.0**
HAMF				*e*S	**Sn**	**02 56 09.7**	**-5.0**
HAMF				IAML		02 56 43.5	
	comp=Z,15nm,0.5s						
KLMR	**Klimovskoe**	**7.23**	**158**	P	**Pn**	**02 55 53.5**	**+0.1**
KLMR				*e*S	**Sn**	**02 57 14.4**	**-1.7**
KLMR				*e*S	**Sn**	**02 57 14.4**	**-1.7**
KLMR				*e*S	**Sn**	**02 57 14.4**	**-1.7**
KLMR				AMP		02 57 16.5	
	comp=N,8.0nm,1.4s						

MIRAS ***15*** *03:00:09.0±0.0, 58°.28N×59°.69E, h0km, ML3.1/6*
NNC ***15*** *03:00:16.4±3.0, 57°.78N×60°.36E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=24.6km s-min=11.5km az=153.0*

ISC 15 03:00:07.7±1.6**, 58°.37N**±0°.08×**59°.93E**±0°.06**, h8km**±14km**, n9, σ1ˢ.34**/17**, 4C-3D, Ural Mountains region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PR7R	**Sarany**	**0.64**	**287**	*i* P	**Pb**	**03 00 20.8**	**-0.4**
	3μm,0.8s,baz=296						
PR7R				*e*S	**Sg**	**03 00 28.6**	**+0.1**
	baz=296						
PR3R	**Kungur**	**1.82**	**241**	*i* P	**Pb**	**03 00 40.5**	**-0.6**
	412nm,0.5s,baz=242						
PR3R				*e*S	**Sn**	**03 01 03.0**	**+0.6**
	baz=242						
PR1R	**Pomanovo**	**1.85**	**298**	*e*P	**Pg**	**03 00 42.9**	**-0.3**
	35nm,0.5s,baz=301						
PR1R				*e*S	**Sg**	**03 01 06.8**	**-0.3**
	baz=301						
ARU	**Arti**	**2.08**	**201**	*i* P	**Pn**	**03 00 43.7**	**+0.8**
	211nm,0.5s,baz=201						
ARU				*e*S	**Sn**	**03 01 09.9**	**+1.0**
	baz=201						
KAUR	**Kamensk Uralsk**	**2.12**	**156**	*e*P	**Pb**	**03 00 45.5**	**-0.9**
	268nm,0.9s,baz=153						
KAUR				*e*S	**Sb**	**03 01 13.3**	**+0.5**
	baz=153						
PR4R	**Vlasy**	**2.30**	**260**	*i* P	**Pn**	**03 00 45.3**	**-0.6**
	376nm,0.3s,baz=262						
PR4R				*e*S	**Sn**	**03 01 13.7**	**-0.6**
	baz=262						
BRVK	**Borovoye**	**7.90**	**128**	⇑Pn	**Pn**	**03 02 04.9**	**+2.1**
	2.0nm,0.6s						
BRVK				⇓Sn	**Sn**	**03 03 30.3**	**-1.9**
	3.6nm,0.6s						
BRVK				⇑Lg	Lg	03 04 10.1	
	5.6nm,0.8s						
AKTO	**Aktyubinsk**	**8.03**	**189**	⇓Sn	**Sn**	**03 03 32.7**	**-2.7**
	5.0nm,1.1s						
AKTO				⇑Lg	Lg	03 04 11.3	
	7.0nm,0.8s						
AB31	**Akbulak array**	**9.13**	**180**	Pn	**Pn**	**03 02 21.4**	**+1.8**
	0.3nm,0.3s,baz=10.0,slow=12,SNR=11						
AB31				⇑Sn	**Sn**	**03 04 02.0**	**-0.4**
	1.1nm,0.6s						
AB31				⇓Lg	Lg	03 04 48.5	
	7.5nm,0.8s,baz=358,slow=26,SNR=9.6						

NEIC ***15*** *03:10:41.8±0.7, 37°.023N±0°.005×97°.95W±0°.02, h9km±3km, Error ellipse: s-maj=2.0km s-min=0.5km az=106.0*

NEIC 15 03:10:41.6±0.6**, 37°.022N**±0°.005×**97°.95W**±0°.02**, h6km**±4km**, ML2.0**/23**, ML2.2**/41**, Error ellipse: s-maj=1.9km s-min=0.6km az=104.0, Kansas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN14	**Manchester OK**	**0.07**	**193**	Pg	Pg	03 10 43.5	+0.2
KAN14					Sg	03 10 44.8	+0.3
KAN05	**Bluff City Nor**	**0.10**	**34**	Pg	Pg	03 10 43.8	-0.1
KAN05					Sg	03 10 45.8	+0.3
KAN17	**Caldwell West**	**0.15**	**81**		Pg	03 10 44.9	+0.3
KAN17					Sg	03 10 47.1	+0.5
KAN10	**Anthony SW Sta**	**0.16**	**310**		Pg	03 10 45.1	+0.3
KAN10					Sg	03 10 47.5	+0.5
GC02	**Grant County #**	**0.18**	**158**	Pg	Pg	03 10 45.6	+0.3
KAN01	**Argonia South**	**0.20**	**49**		Pg	03 10 45.8	+0.3
KAN01					Sg	03 10 48.8	+0.6
KAN01				IAML		03 10 48.9	
	comp=E,431nm,0.4s						
KAN01				IAML		03 10 48.9	
	comp=N,641nm,0.2s						
KAN08	**Anthony NE Sta**	**0.20**	**354**		Pg	03 10 45.9	+0.2
KAN08					Sg	03 10 49.0	+0.6
KAN16	**Harper SW Stat**	**0.22**	**335**		Pg	03 10 46.3	+0.2
KAN16					Sg	03 10 49.6	+0.5
KAN16				IAML		03 10 49.8	
	comp=E,444nm,0.3s						
KAN16				IAML		03 10 50.0	
	comp=N,384nm,0.1s						
KAN06	**Argonia West S**	**0.24**	**17**		Pg	03 10 46.5	+0.3
KAN06					Sg	03 10 50.0	+0.6
KAN12	**Harper NE Stat**	**0.28**	**351**		Pg	03 10 47.3	+0.2
KAN12					Sg	03 10 51.3	+0.5
KAN12				IAML		03 10 56.4	
	comp=E,344nm,0.3s						
KAN09	**Caldwell North**	**0.28**	**66**		Pg	03 10 47.5	+0.3
KAN09					Sg	03 10 51.6	+0.6
KAN09				IAML		03 10 54.5	
	comp=N,444nm,0.3s						
KAN09				IAML		03 10 55.2	
	comp=E,333nm,0.2s						
OK032	**Salt Plains WL**	**0.30**	**224**		Pg	03 10 47.8	+0.3
OK032					Sg	03 10 52.2	+0.6
OK032				IAML		03 10 56.0	
	comp=E,416nm,0.2s						
OK032				IAML		03 10 56.4	
	comp=E,338nm,0.2s						
KS21	**Milan North St**	**0.35**	**40**		Pg	03 10 48.5	+0.2
KS21					Sg	03 10 53.5	+0.5
KS21				IAML		03 10 53.8	
	comp=E,201nm,0.2s						
KAN13	**South Haven SW**	**0.37**	**91**		Pg	03 10 49.1	+0.2
KAN13					Sg	03 10 54.2	+0.4
KAN13				IAML		03 10 56.3	
	comp=N,175nm,0.3s						
KAN13				IAML		03 10 57.0	
	comp=E,246nm,0.3s						
KS20	**Mayfield South**	**0.38**	**56**		Pg	03 10 49.1	+0.2
KS20					Sg	03 10 54.4	+0.5
KS20				IAML		03 10 54.8	
	comp=E,223nm,0.1s						
CROK	**Carrier**	**0.52**	**183**	Pg	Pg	03 10 51.1	-0.4
CROK				IAML		03 11 08.1	
	comp=E,126nm,0.3s						
BLOK	**Blackwell**	**0.64**	**114**	Pg	Pg	03 10 53.8	-0.2
BLOK				IAML		03 11 05.8	
	comp=E,126nm,0.2s						
BLOK				IAML		03 11 10.3	
	comp=N,102nm,0.2s						
U32A	**Winter Ranch,**	**1.06**	**233**	Pg	Pg	03 11 02.1	+0.1
U32A				IAML		03 11 20.8	
	comp=N,50nm,0.1s						
T35A	**Sooner Cattle**	**1.15**	**95**	Pg	Pg	03 11 03.3	-0.4
T35A				IAML		03 11 20.0	
	comp=E,34nm,0.3s						
OK029	**Liberty Lake**	**1.29**	**162**		Pn	03 11 05.1	-1.0
OK029				IAML		03 11 25.0	
	comp=E,51nm,0.2s						
OK029				IAML		03 11 27.3	
	comp=E,49nm,0.3s						
OK031	**S. Brethren Rd**	**1.39**	**140**	Pn	Pn	03 11 07.3	-0.2
OK030	**Cody Creek RV**	**1.44**	**139**	Pn	Pn	03 11 08.0	-0.2
R32A	**Long Quarter,**	**1.52**	**337**		Pn	03 11 09.4	0.0
OKCSW	**OKLAHOMA CITY**	**1.67**	**166**	Pn	Pn	03 11 11.9	+0.6
FNO	**Franklin**	**1.82**	**166**	Pn	Pn	03 11 13.5	0.0
TUL1	**Leonard**	**2.06**	**122**	Pn	Pn	03 11 16.3	-0.5
KSU1	**Kansas State U**	**2.33**	**27**	Pn	Pn	03 11 20.8	+0.3
WMOK	**Wichita Mounta**	**2.38**	**197**	Pn	Pn	03 11 20.9	-0.2
U38A	**Gravette**	**2.92**	**100**	Pn	Pn	03 11 29.4	+0.8
X37A	**Clayton**	**3.21**	**138**	Pn	Pn	03 11 32.6	+0.1
U40A	**Yellville**	**4.15**	**98**	Pn	Pn	03 11 45.8	+0.3

NOU 15 03:11:57.7, 17°.91S×167°.17E, h0km, MLv3.7/4**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**2.45**	**1**	P	Pn	03 12 39.0	+0.1

IDC ***15*** *03:15:04.1±1.0, 53°.60S×25°.80E, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.6/32, mbtmp3.9/5, MS3.4/4, Ms1 3.3/4, ms1mx3.0/25, Error ellipse: s-maj=63.7km s-min=24.9km az=53.0*

ISC 15 03:15:08.0±1.3**, 53°.1S**±0°.3×**27°.3E**±0°.5**, h10km, n13, σ1ˢ.05**/7**, mb4.0**/5**, MS3.1**/4**, South of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUR	**Sutherland**	**21.19**	**345**	P	**P**	**03 19 53.0**	**-0.7**
	7.4nm,0.9s,baz=191,slow=16,SNR=1.7						
MAW	**Mawson**	**22.39**	**144**	P	**P**	**03 20 04.9**	**-1.2**
	1.8nm,1.0s,baz=281,slow=15,SNR=2.5						
MAW				LR	LR	03 27 10.7	
	comp=Z,48nm,20.3s,baz=233,slow=32						
BOSA	**Boshof**	**24.46**	**356**	LR	LR	03 28 16.8	
	comp=Z,46nm,19.6s,baz=184,slow=32						
PMSA	**Palmer Station**	**44.42**	**218**	LR	LR	03 36 25.4	
	comp=Z,183nm,21.9s,baz=48,slow=30						
VNDA	**Vanda**	**46.68**	**168**	LR	LR	03 42 24.7	
	comp=Z,34nm,21.8s,baz=222,slow=35						
H01W2	**Cape Leeuwin H**	**61.21**	**111**	T	T	04 33 13.3	
	baz=223						
H01W3	**Cape Leeuwin H**	**61.22**	**111**	T	T	04 33 04.5	
	baz=223						
H01W1	**Cape Leeuwin H**	**61.23**	**111**	T	T	04 33 12.4	
	baz=223						
TORD	**Torodi Ar. Bea**	**69.51**	**333**	P	**P**	**03 26 16.7**	**+0.1**
	1.2nm,1.1s,baz=171,slow=5.3,SNR=3.4						
ASAR	**Alice Springs**	**80.78**	**117**	P	**P**	**03 27 22.4**	**+0.7**
	0.8nm,0.7s,baz=213,slow=5.4,SNR=11						
WRA	**Warramunga Arr**	**84.03**	**115**	P	**P**	**03 27 39.5**	**+0.7**
	1.2nm,1.0s,baz=210,slow=4.1,SNR=6.1						
PDAR	**Pinedale Array**	**149.75**	**268**	PKPbc	**PKPdf**	**03 34 52.4**	**-0.5**
	0.6nm,0.9s,baz=114,slow=4.4,SNR=4.5						
NVAR	**Mina Array Bea**	**152.22**	**252**	PKPbc	**PKPdf**	**03 34 57.9**	**+1.1**
	0.5nm,0.5s,baz=138,slow=3.1,SNR=4.3						

IDC ***15*** *03:36:06.4±0.8, 31°.23N×128°.70E, h0km, mb3.6/8, mb1 3.9/14, mb1mx3.6/52, mbtmp3.7/14, ML3.5/5, MS3.3/21, Ms1 3.3/21, ms1mx3.1/44, Error ellipse: s-maj=22.9km s-min=15.5km az=90.0*
NIED ***15*** *03:36:06.0, 31°.22N×128°.68E, h10km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.78; $M_{\theta\theta}$0.61; $M_{\phi\phi}$0.17; $M_{r\theta}$-0.44; $M_{\theta\phi}$1.74; $M_{\phi r}$0.81; Fault plane solution: $M_0$2.09000×10^{15} NP1: ϕ_s190.00000°, δ69.00000°, λ-150.00000°. NP2: ϕ_s88.00000°, δ62.00000°, λ-24.00000°.*
JMA ***15*** *03:36:06.0±0.4, 31°.22N×128°.68E, h10km±4km, M4.3*
JMA Felt I J1.

ISC 15 03:36:11.2±0.7**, 31°.24N**±0°.05×**128°.76E**±0°.07**, h35km, n35, σ1ˢ.51**/24**, mb3.7**/8**, MS3.3**/17**, 1C-1D, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	**Shimokoshiki**	**0.93**	**62**	⇓P	**Pn**	**03 36 24.4**	**-3.3**
JSJ				S	**Sn**	**03 36 37.1**	**-2.7**
JFU	**Fukue jima 2**	**1.41**	**360**	P	**Pn**	**03 36 32.4**	**-2.0**
JKC	**Kuchinoerabu**	**1.46**	**122**	S	**Sn**	**03 36 54.1**	**+1.2**
JSU	**Suzuyama**	**1.47**	**79**	P	**Pn**	**03 36 34.0**	**-1.3**
JSU				S	**Sn**	**03 36 54.8**	**+1.5**
JNN	**Nakanoshima**	**1.69**	**145**	P	**Pn**	**03 36 35.6**	**-2.7**
JYAK	**Yakushimahirau**	**1.81**	**123**	⇑P	**Pn**	**03 36 37.4**	**-2.4**
JTN	**Tanegashima 3**	**1.99**	**106**	P	**Pn**	**03 36 41.0**	**-1.4**
JNU	**Nakatsue**	**2.60**	**43**	Pn	**Pn**	**03 36 50.6**	**-0.1**
	31nm,0.3s,baz=106,slow=0.1,SNR=99						
JNU				Sn	Sn	03 37 29.8	+8.7
	30nm,0.3s,baz=11,slow=18,SNR=1.2						
JOW	**Kunigami**	**4.41**	**186**	Pn	**Pn**	**03 37 16.2**	**+0.6**
	1.3nm,0.3s,baz=352,slow=15,SNR=1.8						
JOW				LR	LR	03 38 49.4	
	comp=Z,159nm,21.5s,baz=8.0,slow=37						
KSRS	**Korea Array**	**6.24**	**354**	Pn	**Pn**	**03 37 40.8**	**+0.1**
	0.9nm,0.3s,baz=176,slow=14,SNR=25						
KSRS				Sn	**Sn**	**03 38 50.3**	**-0.5**
	2.0nm,0.3s,baz=298,slow=39,SNR=2.8						
KSRS				Lg	Lg	03 39 20.4	
	2.1nm,0.3s,baz=177,slow=29,SNR=6.2						
KSRS				LR	LR	03 39 29.4	
	comp=Z,40nm,19.7s,baz=176,slow=33						
MJAR	**Matsushiro Arr**	**9.46**	**53**	Pn	**Pn**	**03 38 26.1**	**+1.1**
	0.1nm,0.3s,baz=239,slow=13,SNR=8.9						
MJAR				LR	LR	03 42 27.7	
	comp=Z,131nm,18.3s,baz=255,slow=40						
JCJ	**Chichijima**	**12.43**	**106**	LR	LR	03 43 18.3	
	comp=Z,40nm,21.0s,baz=112,slow=35						
ASAJ	**Asahikawa**	**16.86**	**36**	Pn	**Pn**	**03 40 04.5**	**+0.2**
	1.0nm,0.3s,baz=214,slow=8.9,SNR=8.6						
KLR	**Kul'dur**	**18.11**	**6**	P	**P**	**03 40 20.6**	**+0.6**
	baz=194,slow=9.6,SNR=1.8						
GUMO	**Guam**	**22.98**	**136**	LR	LR	03 48 56.1	
	comp=Z,40nm,21.6s,baz=102,slow=34						
SONM	**Songino Array**	**23.79**	**321**	P	**P**	**03 41 21.0**	**+0.3**
	1.2nm,0.8s,baz=145,slow=9.5,SNR=7.2						
SONM				LR	LR	03 51 33.8	
	comp=Z,163nm,19.5s,baz=146,slow=39						
CMAR	**Chiang Mai Arr**	**29.80**	**252**	LR	LR	03 55 34.6	
	comp=Z,30nm,21.2s,baz=20,slow=39						
PETK	**Petropavlovsk-**	**30.27**	**35**	LR	LR	03 54 01.8	
	comp=Z,59nm,18.5s,baz=201,slow=36						
SEY	**Seymchan**	**35.12**	**19**	LR	LR	03 57 56.3	
	comp=Z,53nm,19.0s,baz=196,slow=37						
ZALV	**Zalesovo Beam**	**38.66**	**319**	LR	LR	04 00 45.0	
	comp=Z,73nm,19.1s,baz=102,slow=38						
MKAR	**Makanchi Array**	**38.71**	**307**	P	**P**	**03 43 31.7**	**-0.1**
	0.6nm,0.8s,baz=107,slow=8.3,SNR=4.0						
MKAR				LR	LR	04 01 45.6	
	comp=Z,47nm,19.1s,baz=48,slow=40						
KURBB	**Kurchatov Arra**	**41.68**	**313**	P	**P**	**03 43 55.5**	**-0.8**
	0.5nm,0.7s,baz=96,slow=8.5,SNR=4.1						
AAK	**Ala-Archa**	**44.16**	**301**	LR	LR	04 04 56.4	
	comp=Z,62nm,19.3s,baz=104,slow=39						
WRA	**Warramunga Arr**	**51.17**	**173**	P	**P**	**03 45 10.7**	**-0.3**
	0.8nm,0.8s,baz=354,slow=7.6,SNR=8.9						
WRA				LR	LR	04 10 04.0	
	comp=Z,11nm,18.0s,baz=290,slow=40						
AKTO	**Aktyubinsk**	**54.73**	**312**	LR	LR	04 10 38.1	
	comp=Z,126nm,18.9s,baz=90,slow=38						
ASAR	**Alice Springs**	**54.81**	**174**	P	**P**	**03 45 38.2**	**+0.3**
	0.8nm,0.9s,baz=2.8,slow=14,SNR=14						
GEYT	**Alibeck**	**57.29**	**298**	LR	LR	04 14 35.2	
	comp=Z,38nm,20.6s,baz=50,slow=40						

ILAR	Eielson Array	59.84	30	P	P	03 46 12.6	-0.2
	0.8nm,0.6s,baz=282,slow=7.9,SNR=14						
ILAR				LR	LR	04 12 18.3	
	comp=Z,20nm,18.0s,baz=186,slow=36						
FINES	FINESS Array B	68.76	330	LR	LR	04 21 02.3	
	comp=Z,79nm,19.9s,baz=46,slow=39						
AKASG	Malin Array Be	72.06	319	LR	LR	04 19 46.3	
	comp=Z,41nm,18.5s,baz=280,slow=36						
BRTR	Keskin Array B	74.36	307	P	P	03 47 46.6	+1.0
	0.9nm,1.1s,baz=65,slow=8.1,SNR=1.3						
MMAI	Mount Meron Ar	76.25	300	LR	LR	04 25 36.9	
	comp=Z,14nm,21.4s,baz=15,slow=39						
EIL	Elat	78.19	297	LR	LR	04 27 39.5	
	comp=Z,26nm,18.7s,baz=72,slow=40						
IDI	Anoyia	82.60	307	LR	LR	04 31 25.1	
	comp=Z,13nm,21.1s,baz=142,slow=40						
NVAR	Mina Array Bea	86.72	46	P	P	03 48 53.0	+1.1
	0.3nm,0.6s,baz=308,slow=4.4,SNR=2.3						

BJI ***15*** *04:16:17.7±0.0, 4°.47N×127°.62E, h110^{km}, mB4.8/26, mb4.9/47*

MAN ***15*** *04:16:21.4, 5°.36N×127°.47E, h1^{km}, mb5.5, ML4.5, MS4.7*

DJA ***15*** *04:16:24.7±0.4, 5°N±3°×12°7E±°, h107^{km}±3^{km}, M4.8/37, mB5.2/15, mb4.9/37, MLv5.0/12, Mw(mB)4.6/15*

IDC ***15*** *04:16:24.3±1.2, 5°.08N×127°.32E, h109^{km}±10^{km}, mb4.3/26, mb1 4.4/31, mb1mx4.3/41, mbtmp4.7/31, MS3.1/10, Ms1 3.1/10, ms1mx2.9/39, Error ellipse: s-maj=12.8km s-min=8.0km az=75.0*

NEIC ***15*** *04:16:24.7±1.4, 5°.11N±0°.06×127°.31E±0°.07, h108^{km}±6^{km}, mb4.8/96, Error ellipse: s-maj=12.6km s-min=4.7km az=46.0*

KLM ***15*** *04:16:25, 5°.21N×127°.40E, h122^{km}, mb5.0*

ISC 15 04:16:24.1±0.3, **5°.08N**±0°.04×**127°.34E**±0°.05, **h108^{km}, n321, σ1^{s}25**/300, **mb4.8**/108, **5C-3D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	Sangihe	2.27	233	P	Pn	04 17 00.2	-0.3
SGSI				S	Sn	04 17 27.4	-1.0
GSPH	General Santos	2.58	293	⇑eP	Pn	04 17 02.1	-2.5
GSPH				eS	Sn	04 17 32.9	-2.9
DAV	Davao City (W)	2.64	319	P	Pn	04 17 06.0	+0.7
	194nm,0.3s,baz=205,slow=0.5,SNR=15						
DAV				S	Sn	04 17 37.3	+0.3
	293nm,0.3s,baz=100,slow=23,SNR=15						
DAV				LR	LR	04 18 10.1	
	comp=Z,619nm,19.9s,baz=152,slow=40						
DAV	Davao City (W)	2.64	319	Pn	Pn	04 17 05.3	0.0
DAV	Davao City (W)	2.64	319	P	Pn	04 17 07.1	+1.8
KCP	Kidapawan	2.94	311	⇑eP	Pn	04 17 08.0	-1.4
KCP				i S	Sn	04 17 45.0	+0.7
BIPH	Bislig	3.23	343	⇓eP	Pn	04 17 13.3	+0.1
BIPH				eS	Sn	04 17 44.5	-6.5
TNTI	Ternate	4.28	180	P	Pn	04 17 29.3	+2.1
TNTI	Ternate	4.28	180	Pn	Pn	04 17 28.6	+1.5
TNTI	Ternate	4.28	180	P	Pn	04 17 30.2	+3.0
PAGZ	Pagadian	4.80	305	⇓eP	Pn	04 17 33.4	-0.7
KMSI	Cibinong	5.59	217	P	Pn	04 17 45.5	+0.6
	2.6nm5µm361nm,0.6s						
LBMI	Labuha	5.68	178	P	Pn	04 17 47.9	+1.7
	0.9nm2µm141nm,0.8s						
TBP	Tagbilaran	5.73	323	eP	Pn	04 17 46.1	-0.7
TBP				i S	Sn	04 18 43.8	-7.6
GTOI	Gorontalo	6.18	225	P	Pn	04 17 52.8	-0.1
	0.4nm1µm92nm,0.8s						
LLP	Lapu-Lapu	6.18	327	eP	Pn	04 17 52.5	-0.5
LLP				eS	Sn	04 19 04.7	+2.4
MRSI	Marisa	7.07	230	P	Pn	04 18 05.5	+0.5
	1.6nm4µm413nm,0.5s						
SWI	Sorong	7.08	146	P	Pn	04 18 06.3	+1.1
	0.7nm1µm94nm,0.6s						
SIJI	Sorong	7.09	146	P	Pn	04 18 05.5	+0.2
SIJI				S	Sn	04 19 20.0	-4.5
	24nm,0.3s,baz=204,slow=23,SNR=15						
SANI	Sanana	7.21	191	P	Pn	04 18 05.5	-1.4
	0.5nm2µm58nm,0.5s						
LUWI	Luwuk	7.60	217	P	Pn	04 18 16.1	+3.9
LUWI	Luwuk	7.60	217	Pn	Pn	04 18 13.6	+1.3
LUWI	Luwuk	7.60	217	P	Pn	04 18 14.5	+2.3
TOLI2	Tolitoli	7.64	239	Pn	Pn	04 18 12.8	+0.1
RCP	Roxas	7.88	325	⇑eP	Pn	04 18 16.3	+0.3
MPSI	Mapaga	8.80	238	P	Pn	04 18 29.1	+0.7
	28nm,0.6s						
FAKI	Fak Fak	9.34	148	Pn	Pn	04 18 36.3	+0.5
LQP	Lukban	10.64	328	⇑eP	Pn	04 18 55.6	+1.9
SPMM	Sapulut	10.84	269	P	Pn	04 18 58.0	+1.8
TTSI	Tana Toraja	11.03	223	P	Pn	04 18 58.0	-0.7
	47nm,0.9s						
SMKI	Samarinda	11.51	242	P	Pn	04 19 05.3	+0.1
	208nm,1.0s						
SPSI	Sidrap Palu	11.74	220	P	Pn	04 19 07.5	-0.8
	934nm56nm,0.6s						
KAPI	Kappang	12.57	217	P	Pn	04 19 18.8	-0.3
	1.1nm,0.3s,baz=28,slow=6.7,SNR=17						
KAPI				LR	LR	04 24 38.5	
	comp=Z,55nm,20.4s,baz=40,slow=39						
KAPI	Kappang	12.57	217	Pn	Pn	04 19 19.1	-0.1
BKSI	Bulukumba	12.60	215	P	Pn	04 19 18.6	-0.9
	14nm,0.6s						
MTKI	Muara Teweh, K	13.79	245	P	Pn	04 19 35.5	+0.3
	40nm,0.5s						
EDFI	Ende, Flores	14.85	202	P	P	04 19 57.5	+5.7
SOEI	Soe	15.05	192	P	Pn	04 19 52.4	+1.1
	46nm,0.9s						
BBKI	Banjar Baru	15.10	236	P	Pn	04 19 52.4	+0.6
	3µm92nm,0.8s						
JAY	Jayapura	15.34	119	P	Pn	04 19 55.4	+0.6
	0.4nm,0.3s,baz=356,slow=16,SNR=1.9						
STKI	Sintang	16.61	253	P	P	04 20 11.2	0.0
WBSI	Waikabubak, Su	16.63	208	P	P	04 20 11.6	+0.1
	56nm,0.7s						
PLAI	Plampang	16.79	215	P	P	04 20 13.2	+0.1
	73nm,0.8s						
PLAI	Plampang	16.79	215	P	P	04 20 15.6	+2.5
TWSI	Taliwang, Sumb	17.24	217	P	Pn	04 20 18.9	+0.6
	55nm,0.9s						
DRS	Darwin Rock St	17.75	169	P	Pn	04 20 24.7	+0.2
	70nm,1.1s						
MTN	Manton Dam	18.20	168	P	P	04 20 27.8	-0.9
KDU	Kakadu	18.37	164	P	Pn	04 20 31.3	-0.6
	40nm,0.8s						
JAGI	Jajag, Banyuwa	18.82	224	P	P	04 20 35.8	+0.3
JAGI				IAmb	IAmb	04 20 39.5	
	comp=Z,41nm,1.0s						
JAGI	Jajag, Banyuwa	18.82	224	P	Pn	04 20 39.3	+2.1
YULB	Yu-li	19.12	343	P	P	04 20 36.9	-1.7
TPUB	Ta-pu	19.24	341		P	04 20 38.5	-1.5
TPUB				IAmb	IAmb	04 20 52.4	
	comp=Z,35nm,0.9s						
TPUB	Ta-pu	19.24	341	P	P	04 20 40.6	+0.6
GUMO	Guam	19.24	63	P	P	04 20 40.0	0.0
	comp=Z,5.6nm,0.3s,baz=295,slow=15,SNR=1.7						
GUMO				LR	LR	04 28 18.0	
	comp=Z,36nm,18.7s,baz=214,slow=37						
YHNB	Yeheng	20.30	344	P	P	04 20 49.5	-2.1
KNRA	Kununurra	20.67	176	P	P	04 20 55.8	+0.3
KNRA	Kununurra	20.67	176	P	P	04 20 56.7	+1.2
	comp=Z,312nm,0.6s						
SMRI	Semarang	20.73	235	P	P	04 20 55.5	-0.6
SMRI				IAmb	IAmb	04 20 59.2	
	comp=Z,50nm,0.8s						
JOW	Kunigami	21.65	2	P	P	04 21 07.8	+1.9
	comp=Z,8.2nm,0.7s,baz=202,slow=11,SNR=4.3						
JOW	Kunigami	21.65	2	IAmb	IAmb	04 21 08.3	
	comp=Z,47nm,1.3s						
LEM	Lembang	22.96	239	P	P	04 21 20.2	+0.5
	comp=Z,96nm,0.8s,baz=68,slow=20,SNR=9.8						
FITZ	Fitzroy Crossi	23.09	184	P	P	04 21 21.7	+1.0
	comp=Z,30nm,0.7s,baz=10,slow=8.2,SNR=127						
FITZ				S	S	04 25 15.2	-8.3
	comp=Z,12nm,0.5s,baz=215,slow=17,SNR=6.4						
FITZ	Fitzroy Crossi	23.09	184	P	P	04 21 21.2	+0.6
FITZ				IAmb	IAmb	04 21 23.8	
	comp=Z,45nm,0.9s						
FITZ	Fitzroy Crossi	23.09	184	P	P	04 21 21.1	+0.5
CBJI	Citeko	23.43	241	P	P	04 21 24.8	+1.0
	comp=Z,110nm,0.7s						
DBJI	Dramaga	23.58	241	P	P	04 21 25.8	+0.6
	comp=Z,12µmcomp=Z,61nm,0.4s						
MYKOM	Kota Tinggi	23.67	263	P	P	04 21 26.0	0.0
UBPT	Khong Chiam	23.76	297	P	P	04 21 25.9	-0.9
KLSI		24.58	247	P	P	04 21 34.2	-0.1
	comp=Z,7.7nm,0.8s						
COEN	Coen	24.59	140	P	P	04 21 33.4	-0.9
JRMM	Jerantut	24.81	268	P	P	04 21 36.0	-0.4
MDSI	Maura Dua	25.01	248	P	P	04 21 38.0	-0.2
	comp=Z,11nm,1.0s						
WB0	Warramunga Arr	25.65	165	P	P	04 21 43.7	-0.2
WRAB	Tennant Creek	25.80	165	P	P	04 21 45.3	+0.1
WRAB				IAmb	IAmb	04 21 49.1	
	comp=Z,31nm,0.7s						
WRAB	Tennant Creek	25.80	165	P	P	04 21 45.3	+0.1
WRA	Warramunga Arr	25.80	165	P	P	04 21 45.1	-0.1
	comp=Z,23nm,0.6s,baz=342,slow=10,SNR=80						
WRA				LR	LR	04 32 33.8	
	comp=Z,47nm,18.8s,baz=315,slow=38						
WB2	Warramunga Arr	25.80	165	P	P	04 21 44.6	-0.6
WB2				IAmb	IAmb	04 21 49.1	
	comp=Z,31nm,0.7s						
WR0	Warramunga Arr	25.87	164	IAmb	IAmb	04 21 49.8	
	comp=Z,26nm,0.7s						
JCJ	Chichijima	26.07	31	P	P	04 21 46.1	-1.5
	comp=Z,59nm,0.4s,baz=280,slow=22,SNR=10						
JCJ	Chichijima	26.07	31	P	P	04 21 47.2	-0.5
KULM	Kulim	26.58	272	P	P	04 21 52.0	-0.4
MBWA	Marble Bar	27.12	196	P	P	04 21 58.7	+1.6
PSA00	Pilbara Seismi	27.49	195	P	P	04 22 01.2	+0.8
PSA00	Pilbara Seismi	27.49	195	P	P	04 22 01.2	+0.8
	comp=Z,21nm,0.7s						
NJ2	Nanjing	27.98	345	eP	P	04 22 07.1	+2.4
NJ2				pmax	pmax		
	comp=Z,14nm,0.6s						
JNU	Nakatsue	28.09	6	P	P	04 22 03.6	-2.1
QIS	Mount Isa	28.18	155	P	P	04 22 06.4	-0.2
	comp=Z,26nm,0.6s						
PSI	Prapat	28.44	267	P	P	04 22 07.7	-1.5
	comp=Z,8.2nm,0.6s,baz=96,slow=4.5,SNR=12						
RPSI	Rantau Prapat	28.45	266	P	P	04 22 07.7	-1.4
GYA	Guiyang	29.02	319	⇓P	P	04 22 17.4	+3.2
GYA				pmax	pmax		
	comp=Z,11nm,0.6s						
AS31	Alice Springs	29.28	168	P	P	04 22 16.8	+0.5
ASAR	Alice Springs	29.28	168	P	P	04 22 16.2	-0.1
	comp=Z,2.6nm,0.4s,baz=348,slow=7.1,SNR=91						
ASAR	Alice Springs	29.28	168	P	P	04 22 16.4	+0.1
GSI	Gunungsitoli	29.95	264	P	P	04 22 20.4	-1.9
ENH	Enshi	30.19	328	P	P	04 22 23.3	-1.1
ENH				IAmb	IAmb	04 22 25.4	
	comp=Z,21nm,0.9s						
CMAR	Chiang Mai Arr	30.75	298	P	P	04 22 28.4	-1.0
	comp=Z,3.8nm,0.6s,baz=105,slow=6.9,SNR=15						
CMAR				LR	LR	04 35 07.7	
	comp=Z,37nm,20.1s,baz=178,slow=37						
CHTO	Chiang Mai	30.88	299	P	P	04 22 29.2	-1.3
JWT	Wachi	30.96	13	P	P	04 22 31.4	+0.4
CTAO	Charters Tower	31.17	144	P	P	04 22 33.4	+0.4
INU	Inuyama	31.42	15	P	P	04 22 34.9	-0.1
INU				IAmb	IAmb	04 22 36.2	
	comp=Z,14nm,0.6s						
INU	Inuyama	31.42	15	P	P	04 22 36.0	+1.0
KSRS	Korea Array	32.23	1	P	P	04 22 42.8	+0.7
	comp=Z,2.7nm,0.8s,baz=178,slow=9.6,SNR=12						
KSRS				LR	LR	04 37 35.3	
	comp=Z,14nm,19.8s,baz=212,slow=40						
MJAR	Matsushiro Arr	32.86	16	P	P	04 22 46.8	-0.9
	comp=Z,1.7nm,0.4s,baz=185,slow=9.2,SNR=14						
MJAR				LR	LR	04 36 44.6	
	comp=Z,21nm,19.2s,baz=30,slow=37						
MJAR	Matsushiro Arr	32.86	16	P	P	04 22 47.0	-0.7
MAT	Matsushiro	32.87	16	P	P	04 22 47.1	-0.6
XAN	Xi'an	33.51	332	P	P	04 22 53.5	+0.1
XAN				pP	pP	04 23 17.6	+1.3
XAN				pmax	pmax		
	comp=Z,32nm,0.7s						
OOD	Oodnadatta	33.66	167	P	P	04 22 54.6	-0.1
	comp=Z,8.0nm,0.7s						
CD2	Chengdu	33.94	322	P	P	04 22 57.1	-0.1
CD2				pmax	pmax		
	comp=Z,30nm,0.8s						
QLP	Quilpie	35.48	153	P	P	04 23 11.6	+1.3
	comp=Z,17nm,0.7s						
MORW	Morawa	35.65	197	P	P	04 23 12.4	+0.6
MORW				IAmb	IAmb	04 23 13.6	
	comp=Z,9.5nm,0.7s						
MORW	Morawa	35.65	197	P	P	04 23 12.4	+0.6
	comp=Z,17nm,1.0s						
FORT	Forrest	35.66	179	P	P	04 23 12.2	+0.3
FORT	Forrest	35.66	179	P	P	04 23 12.3	+0.4
	comp=Z,67nm,0.8s						
MULG	Mulgathing	35.74	170	P	P	04 23 12.8	+0.2
	comp=Z,13nm,1.8s						
BJT	Baijiatuau	36.21	345	P	P	04 23 16.6	+0.1
BJI	Beijing	36.23	345	P	P	04 23 17.8	+1.2
BJI				pmax	pmax		
	comp=Z,21nm,0.6s						
BJI				pmax	pmax		
	comp=Z,160nm,4.4s						
LCRK	Leigh Creek	36.83	164	P	P	04 23 22.4	+0.6
	comp=Z,33nm,0.8s						
BLDU	Ballidu	36.92	195	P	P	04 23 23.0	+0.4
	comp=Z,34nm,0.8s						
KLBR	Kellerberrin	37.59	193	P	P	04 23 29.1	+0.8
	comp=Z,60nm,1.1s						
LZH	Lanzhou	37.67	328	⇑P	P	04 23 30.5	+1.4
LZH				pP	pP	04 23 53.8	+1.5
LZH				pmax	pmax		
	comp=Z,34nm,1.1s						
LZH				pmax	pmax		
	comp=Z,81nm,4.3s						
HHC	Hu-ho-hao-te	38.33	341	eP	P	04 23 36.1	+1.6
HHC				pmax	pmax		
	comp=Z,23nm,0.8s						
HHC				pmax	pmax		
	comp=Z,66nm,5.7s						
MUN	Mundaring	38.35	195	P	P	04 23 35.4	+0.8
	comp=Z,40nm,0.6s						
BBOO	Buckleboo	38.58	168	P	P	04 23 36.5	-0.1
BBOO	Buckleboo	38.58	168	P	P	04 23 36.5	-0.1
	comp=Z,17nm,1.2s						
NWAO	Narrogin (SRO)	39.00	194	P	P	04 23 41.7	+1.7
USRK	Ussuriysk Ar.	39.18	5	P	P	04 23 42.3	+1.0
	comp=Z,2.8nm,0.6s,baz=157,slow=4.7,SNR=5.0						
STKA	Stephens Creek	39.18	161	P	P	04 23 42.1	+0.5
	comp=Z,10nm,0.4s,baz=340,slow=8.5,SNR=40						
STKA				LR	LR	04 40 47.2	
	comp=Z,37nm,19.0s,baz=24,slow=37						
STKA	Stephens Creek	39.18	161	P	P	04 23 41.6	0.0
	comp=Z,4.6nm,1.0s						
HTT	Hallett	39.84	165	P	P	04 23 49.5	+2.4
	comp=Z,11nm,2.7s						
H11S3	WAKE ISLAND Hy	40.65	67	T	T	05 07 47.9	
	baz=248,slow=74,SNR=7.4						
H11S1	WAKE ISLAND Hy	40.66	67	T	T	05 08 11.7	
	baz=248						
H11S2	WAKE ISLAND Hy	40.66	67	T	T	05 07 59.9	
	baz=248,slow=74,SNR=7.1						
JKA	Kamikawa-asahi	41.13	17	P	P	04 23 58.0	+0.4
JKA				IAmb	IAmb	04 24 00.2	
	comp=Z,17nm,0.9s						
H11N1	WAKE ISLAND Hy	41.14	66	T	T	05 09 16.7	
	baz=249						
H11N2	WAKE ISLAND Hy	41.15	66	T	T	05 09 15.7	
	baz=249						
H11N3	WAKE ISLAND Hy	41.16	66	T	T	05 09 28.3	
	baz=249						
LSA	Lhasa	42.03	310	P	P	04 24 06.1	+0.4
LSA				IAmb	IAmb	04 24 08.5	
	comp=Z,13nm,0.6s						
ARMA	Armidale	42.27	148	P	P	04 24 07.3	+0.1
ARMA				IAmb	IAmb	04 24 26.1	
	comp=Z,23nm,1.4s						
ARMA	Armidale	42.27	148	P	P	04 24 07.8	+0.7
	comp=Z,23nm,1.8s						
GTA	Gaotai	42.27	328	eP	P	04 24 07.8	+0.7
GTA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,65nm,4.7s						
GTA				LR	LR		
	comp=Z,94nm,14.9s						
GTA				LR	LR		
	comp=Z,280nm,16.4s						
GTA				LR	LR		
	comp=Z,96nm,17.1s						
TAPN	Taplejung	43.73	305	eP	P	04 24 18.7	-0.5
	comp=Z,33nm,0.5s						
ARPS	Mount Arapiles	43.78	163	P	P	04 24 19.8	+0.7
	comp=Z,27nm,0.7s						
YSS	Yuzh-Sakhalins	43.79	15	P	P	04 24 18.4	-0.6
ODAN	Odare	43.80	304	eP	P	04 24 19.3	-0.5
	comp=Z,50nm,0.5s						
YNG	Young	43.92	155	P	P	04 24 21.0	+0.7
	comp=Z,20nm,2.7s						
RAMN	Ramite	44.49	304	eP	P	04 24 25.0	-0.3
	comp=Z,38nm,0.6s						
JIRN	Jiri	45.09	305	eP	P	04 24 29.8	-0.4
	comp=Z,77nm,0.5s						
CNB	Canberra Magne	45.20	154	P	P	04 24 31.5	+1.0
GUN	Gumba	45.44	305	eP	P	04 24 32.5	-0.4
	comp=Z,102nm,0.5s						
PKI	Pulchoki	45.70	304	eP	P	04 24 34.0	-1.0
	comp=Z,21nm,0.5s						
KKN	Kakani	45.89	304	eP	P	04 24 35.4	-0.9
	comp=Z,24nm,0.5s						
DMN	Daman	45.97	304	eP	P	04 24 36.5	-0.4
	comp=Z,26nm,0.6s						
ULN	Ulaanbaatar	46.04	341	P	P	04 24 37.4	+0.4
SONM	Songino Array	46.23	341	P	P	04 24 39.4	+0.9
	comp=Z,2.6nm,0.6s,baz=156,slow=8.1,SNR=18						
SONM				LR	LR	04 47 35.2	
	comp=Z,29nm,18.2s,baz=248,slow=40						
SONM	Songino Array	46.23	341	P	P	04 24 39.3	+0.9
GKN	Gorkha	46.50	304	eP	P	04 24 40.1	-0.9
	comp=Z,30nm,0.5s						
DZM	Mont Dzumac	46.83	127	P	P	04 24 42.3	-1.2
DZM	Mont Dzumac	46.83	127	P	P	04 24 42.8	-0.7
KOLN	Koldanda	47.27	303	eP	P	04 24 46.7	-0.4
	comp=Z,117nm,0.6s						
DANN	Dangsing	47.34	304	eP	P	04 24 47.1	-0.6
	comp=Z,151nm,0.5s						
PYUN	Piuthan	47.89	304	eP	P	04 24 51.7	-0.2
	comp=Z,66nm,0.5s						
WMQ	Urumqi	51.98	324	eP	P	04 25 23.9	+1.5
WMQ				pmax	pmax		
	comp=Z,18nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,84nm,4.3s						
PEA0B	Petropavlovsk-	53.96	22	P	P	04 25 37.2	+0.6
PETK	Petropavlovsk-	53.96	22	P	P	04 25 37.8	+1.2
	comp=Z,13nm,0.7s,baz=193,slow=6.1,SNR=21						
PETK	Petropavlovsk-	53.96	22	P	P	04 25 37.5	+0.8
MK31	Makanchi Array	56.81	324	P	P	04 25 57.4	+0.2
MK31				IAmb	IAmb	04 25 58.7	
	comp=Z,8.4nm,0.7s						
MKAR	Makanchi Array	56.81	324	P	P	04 25 57.9	+0.7
	comp=Z,10nm,0.5s,baz=122,slow=8.1,SNR=144						
MKAR	Makanchi Array	56.81	324	P	P	04 25 57.7	+0.5
YAK	Yakutsk	56.85	1	P	P	04 25 57.0	-0.1
MAKZ	Makanchi	57.00	324	P	P	04 25 58.7	+0.2
MAKZ				IAmb	IAmb	04 26 00.0	
	comp=Z,11nm,0.8s						
KSH	Kashi	57.53	314	P	P	04 26 03.5	+0.9
KSH				pmax	pmax		
	comp=Z,12nm,0.4s						
KSH				pmax	pmax		
	comp=Z,190nm,5.2s						
NIL	Nilore	57.60	307	P	P	04 26 02.5	-0.5
TKM2	Tokmak 2	59.15	318	P	P	04 26 14.6	+0.7
	SNR=5.2						
KBK	Karagaybulak	59.48	317	P	P	04 26 17.1	+1.0
	SNR=5.6						
UCH	Uchtor	59.61	317	P	P	04 26 18.6	+1.3
	SNR=12						
ZAA0	Zalesovo Array	59.67	332	P	P	04 26 16.2	-0.7
ZAA0				IAmb	IAmb	04 26 18.4	
	comp=Z,5.9nm,0.8s						
ZALV	Zalesovo Beam	59.67	332	P	P	04 26 16.7	-0.3
	comp=Z,3.7nm,0.3s,baz=119,slow=7.1,SNR=19						
ZALV				LR	LR	04 53 14.1	
	comp=Z,23nm,19.4s,baz=136,slow=37						
ZALV	Zalesovo Beam	59.67	332	P	P	04 26 16.2	-0.8
AAK	Ala-Archa	59.78	317	P	P	04 26 19.0	+0.9
	SNR=6.4						
AAK	Ala-Archa	59.78	317	P	P	04 26 18.3	+0.2
AAK				IAmb	IAmb	04 26 20.1	
	comp=Z,4.1nm,0.7s						
USP	Ospenovka	60.03	318	P	P	04 26 20.6	+0.9
	SNR=9.7						
AML	Almayashu	60.13	316	P	P	04 26 21.7	+0.8
	SNR=12						
EKS2	Erkin-Say	60.28	317	P	P	04 26 22.3	+0.8
	SNR=8.8						
KURK	Kurchatov	60.94	327	P	P	04 26 26.2	+0.6
KBL	Kabul	61.20	307	P	P	04 26 27.0	-1.0
KBL				IAmb	IAmb	04 26 28.5	
	comp=Z,10nm,0.7s						
KK31	Karatay Array	62.67	316	P	P	04 26 37.2	-0.3
KK31				IAmb	IAmb	04 26 38.5	
	comp=Z,8.7nm,0.8s						
KKAR	Karatay Array	62.67	316	P	P	04 26 37.4	0.0
KKAR				IAmb	IAmb	04 26 38.5	
	comp=Z,8.7nm,0.8s						
TIXI	Tiksi	66.50	1	P	P	04 27 01.4	-0.3
TIXI				IAmb	IAmb	04 27 02.5	
	comp=Z,16nm,1.1s						
BRVK	Borovoye	66.60	327	P	P	04 27 03.2	+0.5
BRVK				IAmb	IAmb	04 27 05.0	
	comp=Z,8.3nm,0.8s						
HRA	Herat	66.65	305	P	P	04 27 03.0	-0.8
NRIK	Noril'sk	69.27	346	P	P	04 27 19.3	+0.1
	comp=Z,5.5nm,0.7s,baz=133,slow=6.2,SNR=7.9						
GEYT	Alibeck	70.53	308	P	P	04 27 28.1	+0.5
	comp=Z,4.3nm,0.7s,baz=184,slow=14,SNR=5.2						
GYA0B	ALIBECK ARRAY	70.53	308	P	P	04 27 28.6	+1.0
ABKAR	Akbulak array	71.50	320	P	P	04 27 33.3	+0.2
CASY	Casey	72.22	187	P	P	04 27 38.0	+1.0
CASY				IAmb	IAmb	04 27 39.4	
	comp=Z,16nm,1.0s						
AKUT	Akutan	72.47	35	P	P	04 27 39.1	+0.3
HON	Honolulu	73.89	69	P	P	04 27 48.1	+0.3
ARU	Arti	74.13	327	P	P	04 27 48.4	-0.2
ARU				IAmb	IAmb	04 27 49.5	
	comp=Z,7.7nm,0.6s						
O18K	Koktuh Hills	79.33	30	P	P	04 28 18.2	+0.5
	baz=262						
O18K	Koktuh Hills	79.33	30	IAmb	IAmb	04 28 19.7	
	comp=Z,28nm,1.2s						
TTA	Tatalina	79.43	27	P	P	04 28 19.2	+0.9
	baz=260						
N19K	Bonanza Creek	79.82	29	P	P	04 28 21.6	+1.1
	baz=262						
OHAK	Old Harbor	80.00	33	P	P	04 28 22.0	+0.7
	baz=264						
Q19K	Cape Douglas,	80.00	31	P	P	04 28 21.1	-0.3
	baz=263						
M19K	Big River Lodg	80.02	28	P	P	04 28 22.7	+1.3
	baz=262						
L20K	Farewell, AK	80.33	28	P	P	04 28 24.5	+1.3
	baz=262						
K20K	Telida	80.37	27	P	P	04 28 24.6	+1.3
	baz=262						
KDAK	Kodiak Island	80.43	32	P	P	04 28 24.0	+0.3
	baz=264						
J20K	Nowinta River	80.45	26	P	P	04 28 24.9	+1.3
	baz=262						
J20K	Nowinta River	80.45	26	IAmb	IAmb	04 28 25.6	
	comp=Z,33nm,1.5s						
RAYN	Ar Rayn	80.52	293	P	P	04 28 24.3	-0.6
RAYN				IAmb	IAmb	04 28 25.8	
	comp=Z,15nm,0.7s						
A21K	Barrow	80.75	18	P	P	04 28 25.6	+0.4
	baz=258						
A21K	Barrow	80.75	18	IAmb	IAmb	04 28 26.8	
	comp=Z,16nm,0.8s						
PPLA	Purkeypile	81.16	27	P	P	04 28 28.2	+0.6
	baz=264						
CHUM	Lake Minchumin	81.21	26	P	P	04 28 28.5	+0.8
	baz=264						
H21K	Melozitna Rive	81.21	24	P	P	04 28 28.5	+0.8
	baz=263						
CAST	Castle Rocks	81.26	27	P	P	04 28 28.7	+0.6
	baz=264,SNR=8.2						
CAST	Castle Rocks	81.26	27	IAmb	IAmb	04 28 29.7	
	comp=Z,12nm,0.9s						
SKT	Skwentna	81.37	28	P	P	04 28 28.4	-0.2
	baz=265						
I21K	Tanana	81.50	25	P	P	04 28 30.5	+1.3
	baz=264,SNR=6.9						
I21K	Tanana	81.50	25	IAmb	IAmb	04 28 31.6	
	comp=Z,13nm,0.9s						
SUA	Susitna One	81.70	29	P	P	04 28 30.4	-0.1
	baz=265						
KTH	Kantishna Hill	81.79	27	P	P	04 28 30.7	-0.2
KTH				IAmb	IAmb	04 28 33.6	
	comp=Z,12nm,1.0s						
BPAW	Bear Paw Mtn.	81.81	26	P	P	04 28 31.7	+0.7

	baz=265,SNR=9.0						
BPAW	Bear Paw Mtn.	81.81	26	IAmb	IAmb	04 28 32.3	
	comp=Z,12nm,0.7s						
MLY	Manley	82.01	25	P	P	04 28 32.9	+0.9
	baz=265,SNR=13						
M22K	Willow	82.02	28	P	P	04 28 32.0	0.0
	baz=266						
TRF	Thorofare Moun	82.07	27	P	P	04 28 32.2	-0.3
	baz=266						
RC01	Rabbit Creek A	82.16	29	P	P	04 28 32.4	-0.3
	baz=266						
SEW	Seward	82.23	30	P	P	04 28 33.1	-0.1
	baz=267						
COLD	Coldfoot	82.42	23	P	P	04 28 35.2	+1.2
	baz=265						
COLD	Coldfoot	82.42	23	IAmb	IAmb	04 28 36.0	
	comp=Z,11nm,0.6s						
PMR	Palmer	82.48	29	P	P	04 28 34.2	-0.1
	baz=267						
H23K	Yukon River	82.57	24	P	P	04 28 35.9	+1.1
	baz=266,SNR=11						
H23K	Yukon River	82.57	24	IAmb	IAmb	04 28 36.8	
	comp=Z,14nm,0.8s						
I23K	Minto, Yukon-K	82.60	25	P	P	04 28 35.7	+0.8
	baz=266,SNR=11						
I23K	Minto, Yukon-K	82.60	25	IAmb	IAmb	04 28 36.7	
	comp=Z,21nm,1.2s						
NEA2	Nenana	82.69	26	P	P	04 28 35.9	+0.5
	baz=266						
NEA2	Nenana	82.69	26	IAmb	IAmb	04 28 37.4	
	comp=Z,10.0nm,0.8s						
MCK	McKinley	82.69	26	P	P	04 28 35.6	+0.1
	baz=267						
RND	Reindeer	82.71	27	P	P	04 28 34.3	-1.3
TOLK	Toolik Lake Re	82.78	22	P	P	04 28 37.0	+1.1
	baz=265						
KNK	Knik Glacier	82.79	29	P	P	04 28 36.5	+0.4
	baz=267						
WAT1	Susitna Watana	82.82	27	P	P	04 28 36.0	-0.2
	baz=267						
PWL	Port Wells	82.83	29	P	P	04 28 36.6	+0.4
	baz=268						
SML	Sawmill	82.87	28	P	P	04 28 36.7	+0.1
	baz=267						
WRH	Wood River Hil	83.10	26	IAmb	IAmb	04 28 38.2	
	comp=Z,10.0nm,1.0s						
WAT6	Susitna Watana	83.18	28	P	P	04 28 38.8	+0.6
	baz=268,SNR=5.2						
CCB	Clear Creek Bu	83.23	26	IAmb	IAmb	04 28 39.1	
	comp=Z,20nm,1.4s						
H24K	Noodor Dome	83.26	24	P	P	04 28 39.5	+1.1
	baz=267,SNR=11						
H24K	Noodor Dome	83.26	24	IAmb	IAmb	04 28 40.7	
	comp=Z,10nm,0.7s						
SCM	Sheep Creek Mo	83.35	28	P	P	04 28 38.9	-0.1
	baz=268						
DHY	Denali Highway	83.36	27	P	P	04 28 39.4	+0.3
	baz=268						
POKR	Poker Plat Res	83.41	25	P	P	04 28 40.3	+1.1
	baz=268						
POKR	Poker Plat Res	83.41	25	IAmb	IAmb	04 28 41.1	
	comp=Z,7.9nm,0.8s						
HDA	Harding Lake	83.59	26	P	P	04 28 39.4	-0.7
	baz=268,SNR=9.2						
HDA	Harding Lake	83.59	26	IAmb	IAmb	04 28 40.0	
	comp=Z,10nm,0.7s						
ILAR	Eielson Array	83.63	25	P	P	04 28 39.1	-1.2
	comp=Z,4.1nm,0.5s,baz=244,slow=5.3,SNR=76						
M24K	Tolsona, Glenn	83.90	28	P	P	04 28 42.7	+0.9
	baz=269						
KLU	Klutina	84.01	29	P	P	04 28 43.1	+0.7
	baz=270						
PRP	Porcupine Dome	84.22	25	P	P	04 28 42.9	-0.6
	baz=270						
PAX	Paxson	84.23	27	P	P	04 28 43.8	+0.3
	baz=270,SNR=5.3						
PAX	Paxson	84.23	27	IAmb	IAmb	04 28 44.7	
	comp=Z,21nm,1.4s						
J25K	Salcha River,	84.28	26	P	P	04 28 43.0	-0.7
	baz=270						
FYU	Fort Yukon	84.35	24	P	P	04 28 44.7	+0.8
HARP	HAARP	84.37	28	P	P	04 28 45.3	+1.2
	baz=270						
RIDG	Independent Ri	84.51	27	P	P	04 28 45.3	+0.4
	baz=270						
RIDG	Independent Ri	84.51	27	IAmb	IAmb	04 28 45.7	
	comp=Z,8.8nm,0.9s						
KLMR	Klimovskoe	84.53	331	*e*P	P	04 28 43.5	-1.4
KLMR				AMP		04 28 52.3	
	comp=Z,10.0nm,0.9s						
N25K	Chitina, Valde	84.64	29	P	P	04 28 46.5	+0.9
	baz=271						
N25K	Chitina, Valde	84.64	29	IAmb	IAmb	04 28 47.1	
	comp=Z,8.0nm,0.8s						
BMRM	Bremner River	84.65	29	P	P	04 28 45.8	+0.2
	baz=271						
VNDA	Vanda	84.68	173	P	P	04 28 45.2	-0.1
	comp=Z,2.9nm,1.0s,baz=306,slow=6.4,SNR=8.0						
SCRK	Sand Creek	84.89	26	P	P	04 28 48.6	+1.7
	baz=271						
SCRK	Sand Creek	84.89	26	P	P	04 28 47.6	+0.7
GLB	Gilahina Butte	85.02	29	IAmb	IAmb	04 28 48.8	
	comp=Z,12nm,0.8s						
J26L	Joseph Creek	85.06	26	P	P	04 28 47.7	0.0
	baz=271,SNR=7.1						
L26K	Log Cabin Wild	85.20	27	P	P	04 28 49.2	+1.0
	baz=272						
MAW	Mawson	85.22	200	P	P	04 28 49.0	+0.9
	comp=Z,3.9nm,0.7s,baz=59,slow=3.8,SNR=9.2						
MAW	Mawson	85.22	200	P	P	04 28 48.5	+0.3
CRQE	Cirque	85.39	30	P	P	04 28 50.4	+0.9
	baz=272						
MCARA	McCarthy VSAT	85.40	29	P	P	04 28 50.6	+1.3
	baz=272						
L27K	Beaver Creek,	85.89	27	P	P	04 28 52.5	+0.8
	baz=273						
BCAR	Beaver Creek A	85.91	27	P	P	04 28 51.8	0.0
EGAK	Eagle	86.08	25	P	P	04 28 53.2	+0.7
	baz=274						
CTG	Chitna Glacier	86.24	29	P	P	04 28 54.8	+1.2
	baz=274						
BVCY	Beaver Creek	86.37	28	P	P	04 28 55.0	+0.9
	baz=274						
DAWY	Dawson	86.90	26	P	P	04 28 56.9	+0.2
	baz=275						
ASF	Jabal al Asfar	87.70	302	P	P	04 29 02.7	+1.4
	comp=Z,6.3nm,0.8s,baz=61,slow=3.9,SNR=8.2						
HYT	Haines Junctio	88.12	29	P	P	04 29 03.1	+0.4
	baz=277						
M30M	Minto, Yukon	88.23	27	P	P	04 29 03.4	+0.3
	baz=278						
ARA0	ARCESS Array S	89.40	340	*e*P	P	04 29 07.4	-0.9
ARCES	ARCESS Array B	89.40	340	P	P	04 29 07.0	-1.3
	comp=Z,5.5nm,0.8s,baz=55,slow=6.4,SNR=18						
ARCES	ARCESS Array B	89.40	340	IAmb	IAmb	04 29 25.8	
	comp=Z,15nm,1.4s						
EIL	Elat	89.59	300	P	P	04 29 09.9	-0.1
	comp=Z,1.1nm,0.4s,baz=67,slow=13,SNR=3.5						
BRTR	Keskin Array B	89.63	310	P	P	04 29 09.6	-0.7
	comp=Z,1.6nm,0.6s,baz=128,slow=3.7,SNR=8.9						
BRTR	Keskin Array B	89.63	310	P	P	04 29 10.1	-0.2
FARO	Faro, Yukon	89.87	28	P	P	04 29 11.1	+0.4
	baz=281						
KTK1	Kautokeino	90.31	340	*e*P	P	04 29 12.0	-0.6
MMPY	Sheldon Lake,	90.75	27	P	P	04 29 15.3	+0.5
	baz=282						
FINES	FINESS Array B	90.94	332	P	P	04 29 15.3	-0.3
	comp=Z,1.7nm,0.6s,baz=69,slow=5.7,SNR=14						
JETT	Jettan, Norway	91.12	340	*e*P	P	04 29 15.9	-0.4
AKASG	Malin Array Be	91.23	321	P	P	04 29 16.2	-1.0
	comp=Z,0.6nm,0.4s,baz=65,slow=4.3,SNR=4.0						
TRO	Tromso	91.59	341	*e*P	P	04 29 18.6	+0.2
STEI	Steigen	93.45	339	*e*P	P	04 29 26.6	-0.5
FAUS	Fauske	93.64	339	*e*P	P	04 29 27.6	-0.3
KONS	Konsvik	94.78	338	*e*P	P	04 29 32.4	-0.8
NSS	Namsos	96.04	337	*e*P	P	04 29 36.2	-2.8
AKN	Aaknes	99.11	336	*e*Pdif	Pdif	04 29 52.3	-0.7
HYA	Hoyanger	99.95	335	*e*Pdif	Pdif	04 29 57.0	+0.4
PDAR	Pinedale Array	109.94	41	PKKPbc	PKKPbc	04 45 56.2	+8.7
	comp=Z,0.3nm,0.5s,baz=121,slow=6.4,SNR=3.8						
SCHQ	Schefferville	119.15	9	PKP	PKiKP	04 35 01.1	+0.7
	comp=Z,2.3nm,0.9s,baz=45,slow=14,SNR=1.1						
TXAR	Lajitas Array	120.29	52	PKP	PKiKP	04 35 04.1	+0.6
	comp=Z,0.5nm,0.7s,baz=235,slow=0.7,SNR=6.7						
TXAR	Lajitas Array	120.29	52		PKPdf	04 35 03.2	-0.3
JCT	Junction City	122.72	49	P	PKiKP	04 35 09.1	+0.8
	baz=300						
TORD	Torodi Ar. Bea	123.06	289	PKP	PKPdf	04 35 08.6	-0.3
	comp=Z,1.3nm,0.7s,baz=70,slow=1.5,SNR=9.2						
TORD	Torodi Ar. Bea	123.06	289		PKPdf	04 35 08.4	-0.6
U40A	Yellville	124.22	39	P	PKPdf	04 35 10.5	-0.2
	baz=309						
MIAR	Mount Ida	124.87	41	P	PKiKP	04 35 13.5	+1.3
	baz=308						
JTS	Las Juntas de	144.40	65	PKP	PKPdf	04 35 48.7	-0.1
	comp=Z,7.8nm,0.7s,baz=32,slow=6.0,SNR=6.5						
JTS	Las Juntas de	144.40	65		PKPab	04 35 46.9	-0.2

IDC ***15*** *04:21:12.8±1.0, 8°.10S×124°.90E, h0^{km}, mb4.2/7, mb1 4.3/8, mb1mx3.9/27, mbtmp4.1/8, ML4.1/1, MS3.2/2, Ms1 3.2/2, ms1mx2.6/35, Error ellipse: s-maj=38.7km s-min=19.3km az=97.0*

DJA ***15*** *04:21:15.5±0.6, 9°S±4°×12°5E±°, h10^{km}, M4.1/6, mb4.6/3, mB4.8/1, MLv3.9/6, Mw(mB)4.0/1*

NEIC ***15*** *04:21:18.4±1.3, 8°.4S±0°.1×125°.1E±0°.1, h58^{km}±5^{km}, mb4.3/5, Error ellipse: s-maj=17.9km s-min=12.7km az=214.0*

ISC 15 04:21:14.8±0.7**, 8°.38S**±0°.06×**125°.17E**±0°.08**, h24**^{km}**, n35, σ2ˢ.21**/31**, mb4.3**/10**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	Soe	1.63	213	P	Pn	04 21 43.7	+1.6
SOEI	Soe	1.63	213		Pn	04 21 43.7	+1.6
BATI	Baumata	2.35	219	Pn	Pn	04 21 53.6	+1.7
	39nm,0.3s,baz=190,slow=1.7,SNR=10						
BATI				Sn	Sb	04 22 24.4	-0.5
	23nm,0.3s,baz=124,slow=21,SNR=3.7						
BATI				LR	LR	04 23 10.5	
	comp=Z,354nm,20.0s,baz=47,slow=48						
BATI	Baumata	2.35	219	P	Pn	04 21 53.4	+1.5
MMRI	Maumere	2.91	265	P	Pn	04 22 01.4	+1.7
MMRI	Maumere	2.91	265	Pn	Pn	04 22 00.4	+0.7
EDFI	Ende, Flores	3.46	264	P	Pn	04 22 08.4	+1.1
BSSI	Bau Bau, Buton	5.15	295	P	Pn	04 22 31.3	+0.9
	0.1nm25nm,0.8s						
MTN	Manton Dam	7.35	128		Pn	04 23 03.2	+2.5
KNRA	Kununurra	8.06	154	Pn	Pn	04 23 10.9	+0.6
FITZ	Fitzroy Crossi	9.67	177	Pn	Pn	04 23 31.8	-0.7
	2.0nm,0.3s,baz=359,slow=9.7,SNR=12						
WRA	Warramunga Arr	14.52	143	Pn	Pn	04 24 37.0	-1.9
	0.5nm,0.3s,baz=317,slow=13,SNR=6.5						
WRA				Sn	Sn	04 27 10.8	-8.4
	0.4nm,0.3s,baz=317,slow=23,SNR=3.6						
WB2	Warramunga Arr	14.53	143	Pn	Pn	04 24 36.1	-2.9
WR0	Warramunga Arr	14.65	143	Pn	Pn	04 24 39.3	-1.4
ASAR	Alice Springs	17.35	152	P	Pn	04 25 17.1	+1.5
	0.4nm,0.3s,baz=322,slow=11,SNR=4.2						
ASAR				S	Sn	04 28 20.6	-7.4
	0.2nm,0.3s,baz=325,slow=22,SNR=4.8						
CMAR	Chiang Mai Arr	37.16	316	P	P	04 28 23.6	-0.5
	3.0nm,0.8s,baz=148,slow=7.0,SNR=7.2						
CHTO	Chiang Mai	37.41	316	P	P	04 28 25.0	-1.2
CHTO				IAmb	IAmb	04 28 27.2	
	comp=Z,3.6nm,0.8s						
JHJ	Hachijo jima 2	43.55	18	LR	LR	04 46 20.0	
	comp=Z,42nm,19.8s,baz=88,slow=35						
MJAR	Matsushiro Arr	46.33	15	P	P	04 29 38.4	-0.5
	comp=Z,0.9nm,0.5s,baz=193,slow=8.8,SNR=3.2						
H08S2	Diego Garcia H	52.14	267	T	T	05 26 31.1	
	baz=95,slow=75,SNR=57						
H08S3	Diego Garcia H	52.15	267	T	T	05 26 31.8	
	baz=95,slow=75,SNR=102						
H08S1	Diego Carcia H	52.16	267	T	T	05 26 33.4	
	baz=95,slow=75,SNR=40						
ULN	Ulaanbaatar	58.25	346	P	P	04 31 05.3	-2.2
SONM	Songino Array	58.39	345	P	P	04 31 07.7	-0.6
	comp=Z,0.8nm,0.7s,baz=154,slow=11,SNR=4.6						
SONM	Songino Array	58.39	345	IAmb	IAmb	04 31 15.0	
	comp=Z,2.2nm,1.2s						
MK31	Makanchi Array	66.86	329	P	P	04 32 03.9	-1.0
MK31				IAmb	IAmb	04 32 05.3	
	comp=Z,2.8nm,0.8s						
MKAR	Makanchi Array	66.86	329	P	P	04 32 04.4	-0.4
	comp=Z,2.8nm,0.6s,baz=131,slow=7.7,SNR=24						
MKAR	Makanchi Array	66.86	329	P	P	04 32 04.1	-0.8
PETK	Petropavlovsk-	67.20	21	P	P	04 32 08.1	+1.2
	comp=Z,4.1nm,0.9s,baz=190,slow=7.3,SNR=3.6						
ZAA0	Zalesovo Array	70.80	336	P	P	04 32 27.1	-2.0
ZAA0				IAmb	IAmb	04 32 28.6	
	comp=Z,2.3nm,0.8s						
ZALV	Zalesovo Beam	70.80	336	P	P	04 32 27.6	-1.5
	comp=Z,1.7nm,0.6s,baz=111,slow=3.3,SNR=7.3						
ZALV	Zalesovo Beam	70.80	336	P	P	04 32 26.6	-2.5
VNDA	Vanda	71.70	172	P	P	04 32 38.0	+3.7
	comp=Z,1.7nm,1.1s,baz=318,slow=8.8,SNR=1.8						
TORD	Torodi Ar. Bea	124.36	280	PKP	PKPdf	04 40 13.1	+0.3
	comp=Z,0.3nm,0.8s,baz=89,slow=1.3,SNR=2.0						
LPAZ	La Paz	152.18	152	PKPbc	PKiKP	04 41 14.3	+3.8
	comp=Z,0.4nm,0.4s,baz=315,slow=6.8,SNR=2.4						

IDC ***15*** *04:41:58.5±6.2, 13°.77N×120°.99E, h152^{km}±58^{km}, mb3.6/11, mb1 3.8/12, mb1mx3.5/44, mbtmp4.1/12, MS2.8/2, Ms1 2.8/2, ms1mx2.4/50, Error ellipse: s-maj=43.0km s-min=11.1km az=64.0*

NEIC ***15*** *04:41:59.4±1.1, 13°.75N±0°.09×120°.9E±0°.2, h159^{km}±7^{km}, mb4.2/22, Error ellipse: s-maj=23.1km s-min=12.6km az=76.0*

MAN ***15*** *04:42:00.1, 13°.72N×120°.64E, h136^{km}, mb4.4, ML3.3, MS3.0*

ISC 15 04:41:58.3±0.5**, 13°.68N**±0°.07×**120°.7E**±0°.1**, h150**^{km}**, n50, σ1ˢ.40**/47**, mb4.2**/22**, 1C-3D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PGP	Puerto Galera	0.32	124	⇑*i*P	Pn	04 42 20.4	+1.4
PGP				*i* S	Sn	04 42 35.7	+1.0
TGY	Tagaytay City	0.49	31	⇓*i*P	Pn	04 42 22.4	+2.7
TGY				*e*S	Sn	04 42 32.8	-3.2
LQP	Lukban	0.94	63	⇓*e*P	Pn	04 42 25.3	+2.5
LQP				*e*S	Sn	04 42 44.3	+2.8
RCP	Roxas	2.92	136	⇓*e*P	Pn	04 42 47.5	+2.9
DAV	Davao City (W)	8.15	143	LR	LR	04 47 42.9	
	comp=Z,28nm,20.9s,baz=3.0,slow=43						
KAPI	Kappang	18.60	183	P	Pn	04 46 07.2	+1.0
	0.9nm,0.3s,baz=26,slow=6.0,SNR=6.5						
KAPI	Kappang	18.60	183	IAmb	IAmb	04 46 08.6	
	comp=Z,8.8nm,0.7s						
CMAR	Chiang Mai Arr	21.41	286	P	P	04 46 37.5	+2.9
	comp=Z,0.8nm,0.3s,baz=96,slow=7.6,SNR=5.9						
BATI	Baumata	23.92	173	P	P	04 46 59.8	+1.2
	comp=Z,28nm,0.5s,baz=124,slow=1.2,SNR=4.7						
FITZ	Fitzroy Crossi	31.96	171	P	P	04 48 09.2	-0.9
FITZ				IAmb	IAmb	04 48 20.7	
	comp=Z,5.0nm,1.1s						
MBWA	Marble Bar	34.64	182	P	P	04 48 33.0	-0.4
PSA00	Pilbara Seismi	35.05	181	P	P	04 48 36.8	-0.1
COEN	Coen	35.36	140	P	P	04 48 37.6	-2.1
COEN				IAmb	IAmb	04 48 53.4	
	comp=Z,5.6nm,1.2s						
WB0	Warramunga Arr	35.88	158	P	P	04 48 42.3	-1.8
WB0				IAmb	IAmb	04 48 43.8	
	comp=Z,6.6nm,1.2s						
WRA	Warramunga Arr	36.02	158	P	P	04 48 43.8	-1.5
	comp=Z,1.9nm,0.4s,baz=332,slow=9.9,SNR=35						
WRA	Warramunga Arr	36.02	158	IAmb	IAmb	04 48 49.8	
	comp=Z,0.3nm,1.2s						
SONM	Songino Array	36.07	344	P	P	04 48 45.5	0.0
	comp=Z,0.9nm,0.6s,baz=161,slow=7.9,SNR=8.3						
SONM	Songino Array	36.07	344	IAmb	IAmb	04 48 48.2	
	comp=Z,0.7nm,0.7s						
WR0	Warramunga Arr	36.11	158	P	P	04 48 45.0	-1.0
AS31	Alice Springs	39.31	161	P	P	04 49 12.2	-0.7
AS31				IAmb	IAmb	04 49 14.6	
	comp=Z,1.5nm,0.3s						
ASAR	Alice Springs	39.31	161	P	P	04 49 12.0	-0.9
	comp=Z,1.3nm,0.6s,baz=337,slow=6.7,SNR=30						
CTAO	Charters Tower	41.94	143	P	P	04 49 34.3	-0.2
CTAO				IAmb	IAmb	04 49 43.1	
	comp=Z,14nm,1.4s						
FORT	Forrest	44.77	171	P	P	04 49 56.6	-0.4
MK31	Makanchi Array	46.03	324	P	P	04 50 07.5	+0.6
MKAR	Makanchi Array	46.03	324	P	P	04 50 08.0	+1.1
	comp=Z,2.0nm,0.7s,baz=125,slow=9.1,SNR=19						
MKAR	Makanchi Array	46.03	324	P	P	04 50 07.8	+0.9
MAKZ	Makanchi	46.22	324	P	P	04 50 09.2	+0.9
MAKZ				IAmb	IAmb	04 50 10.2	
	comp=Z,2.8nm,0.6s						
BBOO	Buckleboo	48.51	163	P	P	04 50 25.6	-0.6
ZAA0	Zalesovo Array	49.06	333	P	P	04 50 29.7	-0.3
ZALV	Zalesovo Beam	49.06	333	P	P	04 50 30.1	+0.1
	comp=Z,2.4nm,0.4s,baz=115,slow=6.8,SNR=6.7						
ZALV	Zalesovo Beam	49.06	333	P	P	04 50 28.7	-1.4
STKA	Stephens Creek	49.54	156	P	P	04 50 33.9	-0.1
	comp=Z,1.0nm,0.4s,baz=321,slow=6.5,SNR=2.2						
KURK	Kurchatov	50.19	326	P	P	04 50 39.6	+0.9
KBL	Kabul	50.90	303	P	P	04 50 44.8	+0.2
KBL				IAmb	IAmb	04 50 46.3	
	comp=Z,4.7nm,0.7s						
MA2	Magadan	50.92	19	LR	LR	05 13 28.9	
	comp=Z,21nm,18.1s,baz=98,slow=37						
KKAR	Karatay Array	51.97	314	P	P	04 50 51.6	-0.5
BRVK	Borovoye	55.85	326	P	P	04 51 20.1	+0.1
BRVK				IAmb	IAmb	04 51 21.6	
	comp=Z,2.9nm,0.9s						
TIXI	Tiksi	58.15	3	P	P	04 51 34.9	-1.0
TIXI				IAmb	IAmb	04 51 36.0	
	comp=Z,4.1nm,0.7s						
ABKAR	Akbulak array	60.73	319	P	P	04 51 54.5	+0.5
RAYN	Ar Rayn	71.24	290	P	P	04 53 01.8	+0.1
RAYN				IAmb	IAmb	04 53 03.3	
	comp=Z,4.1nm,0.9s						
ILAR	Eielson Array	78.78	26	P	P	04 53 43.7	-0.4
	comp=Z,0.5nm,0.8s,baz=299,slow=5.0,SNR=5.0						
ARCES	ARCESS Array B	79.09	339	P	P	04 53 45.9	+0.1
	comp=Z,4.1nm,0.8s,baz=79,slow=7.2,SNR=16						
ARCES	ARCESS Array B	79.09	339	IAmb	IAmb	04 53 54.3	
	comp=Z,13nm,1.1s						
BMAR	Burnt Mountain	79.29	23	P	P	04 53 46.4	-0.6
FINES	FINESS Array B	80.29	331	P	P	04 53 52.0	-0.2
	comp=Z,2.3nm,0.8s,baz=58,slow=4.7,SNR=10						
NOA	NORSAR Array B	87.27	333	P	P	04 54 26.5	-1.4
	comp=Z,0.6nm,0.7s,baz=70,slow=4.6,SNR=1.7						
TXAR	Lajitas Array	119.50	45	PKP	PKPdf	05 00 31.2	+0.3
	comp=Z,0.4nm,0.5s,baz=194,slow=1.1,SNR=13						
TXAR	Lajitas Array	119.50	45		PKPdf	05 00 28.6	-2.3
PLCA	Paso Flores	151.31	162	PKPbc	PKPbc	05 01 34.6	+0.1
	comp=Z,0.8nm,0.6s,baz=260,slow=2.8,SNR=6.5						
PLCA	Paso Flores	151.31	162		PKPbc	05 01 32.7	-1.9

IDC ***15*** *04:51:08.8±1.1, 10°.36S×123°.98E, h0^{km}, mb4.2/10, mb1 4.3/13, mb1mx4.0/46, mbtmp4.2/13, ML4.1/3, MS3.2/9, Ms1 3.2/9, ms1mx3.1/45, Error ellipse: s-maj=25.4km s-min=11.6km az=16.0*

DJA ***15*** *04:51:12.5±0.2, 11°S±3°×12°4E±°, h10^{km}, M4.5/16, mB5.1/6, mb4.7/16, MLv4.5/13, Mw(mB)4.5/6*

NEIC ***15*** *04:51:13.6±1.2, 10°.37S±0°.07×124°.06E±0°.08, h29^{km}±1^{km}, mb4.5/20, Error ellipse: s-maj=12.6km s-min=8.6km az=63.0*

ISC 15 04:51:12.4±0.5**, 10°.47S**±0°.05×**124°.08E**±0°.05**, h27**^{km}**, n80, σ1ˢ.42**/76**, mb4.5**/21**, MS3.3**/3**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	0.49	302	Pn	Pb	04 51 21.1	-1.4
	2μm,0.3s,baz=132,slow=2.3,SNR=360						
BATI				Sn	Sn	04 51 29.6	-1.6
	2μm,0.3s,baz=37,slow=22,SNR=16						
BATI	Baumata	0.49	302	P	Pb	04 51 21.8	-0.7
SOEI	Soe	0.73	15	P	Pn	04 51 27.2	+0.1
SOEI	Soe	0.73	15		Pb	04 51 26.4	-0.2
MMRI	Maumere	2.57	315	P	Pn	04 51 54.0	+1.7
MMRI	Maumere	2.57	315		Pn	04 51 53.5	+1.2
EDFI	Ende, Flores	2.91	306	P	Pn	04 51 58.0	+1.0
BSSI	Bau Bau, Buton	5.58	320	P	Pn	04 52 36.8	+3.2
	0.2nm497nm61nm,0.9s						
PLAI	Plampang	6.43	284	P	Pn	04 52 46.9	+1.6
	0.6nm2μm132nm,0.6s						
BKSI	Bulukumba	6.44	322	P	Pn	04 52 47.5	+2.0
	0.3nm87nm,0.9s						
KNRA	Kununurra	6.90	139		Pn	04 52 53.9	+2.1
KAPI	Kappang	6.91	321	Pn	Pn	04 52 54.7	+2.8
	1.4nm,0.3s,baz=172,slow=10,SNR=13						
KAPI				LR	LR	04 55 48.3	
	comp=Z,159nm,18.8s,baz=152,slow=41						
KAPI	Kappang	6.91	321		Pn	04 52 54.0	+2.0
MTN	Manton Dam	7.30	110		Pn	04 52 58.9	+1.6
TWSI	Taliwang, Sumb	7.30	283	P	Pn	04 52 58.8	+1.4
	0.2nm45nm,1.1s						
FITZ	Fitzroy Crossi	7.73	169	Pn	Pn	04 53 05.7	+2.4
	2.6nm,0.3s,baz=1.7,slow=9.4,SNR=57						
FITZ				Sn	Sn	04 54 30.5	+0.5
	8.4nm,0.3s,baz=105,slow=12,SNR=9.8						
FITZ				LR	LR	04 56 33.7	
	comp=Z,131nm,18.6s,baz=330,slow=41						
FITZ	Fitzroy Crossi	7.73	169		Pn	04 53 05.5	+2.3
SPSI	Sidrap Palu	7.75	326	P	Pn	04 53 05.6	+2.1
	0.1nm14nm,1.0s						
TTSI	Tana Toraja	8.50	330	P	Pn	04 53 16.4	+2.6
SANI	Sanana	8.58	13	P	Pn	04 53 18.1	+3.3
	18nm,0.5s						
MBWA	Marble Bar	11.42	201	Pn	Pn	04 53 55.2	+1.4
PSA00	Pilbara Seismi	11.77	200	Pn	Pn	04 53 59.1	+0.6
SIJI	Sorong	11.91	37	LR	LR	04 59 34.1	
	comp=Z,87nm,18.1s,baz=264,slow=42						
TOLI2	Tolitoli	11.96	344		Pn	04 53 59.0	-2.2
WB0	Warramunga Arr	13.58	134		Pn	04 54 23.9	+0.6
WRA	Warramunga Arr	13.66	135	Pn	Pn	04 54 24.6	+0.1
	0.6nm,0.3s,baz=301,slow=13,SNR=27						
WRA				Sn	Sn	04 56 50.5	-4.8
	4.8nm,0.3s,baz=42,slow=15,SNR=13						
WRA				LR	LR	04 59 53.7	
	comp=Z,140nm,21.5s,baz=315,slow=38						
WRA	Warramunga Arr	13.66	135		Pn	04 54 24.8	+0.4
WB2	Warramunga Arr	13.66	135		Pn	04 54 24.6	+0.1
WR0	Warramunga Arr	13.81	134		Pn	04 54 26.6	+0.1
GIRL	Giralia	15.34	217	Pn	Pn	04 54 46.4	-0.7
AS31	Alice Springs	16.12	146		Pn	04 54 57.7	+0.4
ASAR	Alice Springs	16.12	146	Pn	Pn	04 54 58.1	+0.8
	0.9nm,0.3s,baz=318,slow=12,SNR=55						
ASAR				Sn	Sn	04 57 52.5	-3.0
	2.0nm,0.3s,baz=316,slow=21,SNR=8.5						
ASAR				LR	LR	05 01 49.7	
	comp=Z,180nm,19.9s,baz=328,slow=39						
ASAR	Alice Springs	16.12	146		Pn	04 54 58.3	+1.0
LEM	Lembang	16.67	281	Pn	P	04 55 06.5	-0.1
	6.0nm,0.3s,baz=359,slow=16,SNR=4.3						
DAV	Davao City (W)	17.49	5	LR	LR	05 02 40.5	
	comp=Z,53nm,19.0s,baz=280,slow=40						
CBJI	Citeko	17.51	282	P	P	04 55 15.7	0.0
	11μm119nm,0.4s						
COEN	Coen	18.98	102	P	P	04 55 30.8	-1.1
MORW	Morawa	19.98	201	P	Pn	04 55 44.2	-0.3
KASI	Kota Agung	20.00	283	P	Pn	04 55 44.4	-0.5
	2μm198nm,0.9s						
KLSI		20.02	285	P	Pn	04 55 44.7	-0.4
	13nm,1.1s						
FORT	Forrest	20.55	170	P	Pn	04 55 50.7	-0.5
FORT				IAmb	IAmb	04 56 18.1	
	comp=Z,26nm,1.0s						
MDSI	Maura Dua	20.60	285	P	Pn	04 55 51.4	-0.6
	comp=Z,719nmcomp=Z,14nm,0.9s						
PMG	Port Moresby	22.76	89	LR	LR	05 07 42.7	
	comp=Z,107nm,18.3s,baz=44,slow=44						
BBOO	Buckleboo	24.82	155	P	P	04 56 35.8	+3.3
BBOO				IAmb	IAmb	04 57 01.6	
	comp=Z,15nm,1.3s						
BKNI	Bangkinang	25.30	294	P	P	04 56 36.9	0.0
STKA	Stephens Creek	26.76	145	LR	LR	05 09 31.4	
	comp=Z,31nm,18.4s,baz=2.2,slow=41						
PSI	Prapat	28.30	296	LR	LR	05 08 50.0	
	comp=Z,80nm,19.0s,baz=144,slow=38						
CMAR	Chiang Mai Arr	37.97	319	P	P	04 58 27.7	-0.4
	comp=Z,0.8nm,0.4s,baz=141,slow=6.3,SNR=8.7						
CHTO	Chiang Mai	38.23	319	P	P	04 58 29.2	-1.1
KSRS	Korea Array	47.80	4	P	P	04 59 47.2	-0.3
	comp=Z,0.6nm,0.6s,baz=175,slow=9.8,SNR=4.4						
MJAR	Matsushiro Arr	48.62	15	P	P	04 59 53.3	-0.5
	comp=Z,1.8nm,0.7s,baz=179,slow=9.8,SNR=7.0						
LSA	Lhasa	51.00	323	P	P	05 00 12.4	-0.2
ODAN	Odare	51.43	317	*e*P	P	05 00 15.2	-0.5
TAPN	Taplejung	51.54	318	*e*P	P	05 00 16.4	-0.2
RAMN	Ramite	52.02	316	*e*P	P	05 00 20.4	+0.3
	comp=Z,12nm,0.5s						
JIRN	Jiri	52.76	317	*e*P	P	05 00 25.4	-0.3
	comp=Z,12nm,0.7s						
GUN	Gumba	53.13	317	*e*P	P	05 00 28.0	-0.4
KKN	Kakani	53.46	316	*e*P	P	05 00 30.2	-0.5
DMN	Daman	53.46	316	*e*P	P	05 00 30.2	-0.6
KOLN	Koldanda	54.60	315	*e*P	P	05 00 38.4	-0.6
	comp=Z,11nm,0.8s						

DANN	Dangsing	54.85	316	eP	P	05 00 40.2	-0.7
	comp=Z,24nm,0.5s						
USRK	Ussuriysk Ar.	54.88	7	P	P	05 00 40.6	+0.1
	comp=Z,1.6nm,0.5s,baz=212,slow=6.8,SNR=5.6						
PYUN	Piuthan	55.23	315	eP	P	05 00 43.1	-0.5
SONM	Songino Array	60.14	346	P	P	05 01 16.2	-1.3
	comp=Z,0.5nm,0.4s,baz=161,slow=9.2,SNR=3.8						
MK31	Makanchi Array	68.12	330	P	P	05 02 10.2	+0.3
MK31				IAmb	IAmb	05 02 11.1	
	comp=Z,6.2nm,0.8s						
MKAR	Makanchi Array	68.12	330	P	P	05 02 10.2	+0.2
	comp=Z,6.5nm,0.8s,baz=137,slow=7.8,SNR=59						
MKAR	Makanchi Array	68.12	330	P	P	05 02 10.0	0.0
MAKZ	Makanchi	68.28	330	P	P	05 02 10.2	-0.7
MAKZ				IAmb	IAmb	05 02 11.8	
	comp=Z,3.8nm,0.8s						
KBL	Kabul	68.69	313	P	P	05 02 13.5	-0.5
PETK	Petropavlovsk-	69.53	21	P	P	05 02 19.1	+0.6
	comp=Z,1.7nm,0.4s,baz=212,slow=5.1,SNR=1.6						
AAK	Ala-Archa	69.59	323	P	P	05 02 19.9	+0.6
AAK				IAmb	IAmb	05 02 26.2	
	comp=Z,4.3nm,1.2s						
ZAA0	Zalesovo Array	72.27	337	P	P	05 02 34.7	-0.4
ZAA0				IAmb	IAmb	05 02 35.2	
	comp=Z,4.9nm,0.9s						
ZALV	Zalesovo Beam	72.27	337	P	P	05 02 34.0	-1.1
	comp=Z,1.5nm,0.4s,baz=134,slow=4.3,SNR=8.6						
ZALV	Zalesovo Beam	72.27	337	P	P	05 02 34.6	-0.6
KURK	Kurchatov	72.59	332	P	P	05 02 36.8	-0.3
KURK				IAmb	IAmb	05 02 38.6	
	comp=Z,7.7nm,0.9s						
SEY	Seymchan	76.37	13	P	P	05 02 59.9	+1.0
	comp=Z,4.0nm,0.6s,baz=222,slow=3.4,SNR=8.4						
BRVK	Borovoye	78.07	330	P	P	05 03 08.3	-0.3
BRVK				IAmb	IAmb	05 03 13.9	
	comp=Z,3.7nm,0.8s						
ABKAR	Akbulak array	81.68	323	P	P	05 03 28.7	+0.5
TIXI	Tiksi	82.00	2	P	P	05 03 29.8	+0.4
	comp=Z,1.9nm,0.5s,baz=141,slow=2.8,SNR=4.4						
TIXI	Tiksi	82.00	2	IAmb	IAmb	05 03 30.5	
	comp=Z,2.7nm,0.8s						

INET ***15*** *04:56:06.8, 12°.68N×89°.92W, h28^{km}, MW4.1*
UCR ***15*** *04:56:18.7±0.9, 13°.12N×89°.56W, h33^{km}±1^{km}, ML4.4, mb4.5(NEIC)*
SNET ***15*** *04:56:18.6±1.0, 13°.12N×89°.56W, h35^{km}±3^{km}, ML4.5*
NEIC ***15*** *04:56:18.8±1.7, 13°.08N±0°.05×89°.51W±0°.06, h48^{km}±7^{km}, mb4.5/20, Md4.5(SNET), Error ellipse: s-maj=8.3km s-min=6.4km az=124.0*
IDC ***15*** *04:56:21.2±2.1, 13°.38N×89°.19W, h72^{km}±20^{km}, mb3.7/12, mb1 4.0/15, mb1mx3.7/62, mbtmp4.1/15, MS3.3/8, Ms1 3.3/8, ms1mx3.0/43, Error ellipse: s-maj=30.4km s-min=13.6km az=41.0*
GCG ***15*** *04:56:23.3±0.6, 13°.44N×89°.86W, h80^{km}±27^{km}, MD4.2*
ISC 15 04:56:18.4±0.9**, 13°.15N**±0°.06×**89°.56W**±0°.05**, h54**^{km}±7^{km}**, n141, σ1^s.06**/164**, mb4.2**/13**, MS3.1**/7**, 2C-34D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	Alcalda de L	0.41	34	⇓eP	Pn	04 56 28.6	-0.3
LALI				eS	Sn	04 56 35.3	-1.1
LALI	Alcalda de L	0.41	34	⇓eP	Pn	04 56 28.6	-0.3
LALI				eS	Sn	04 56 35.3	-1.1
JAYA	Jayaque - finc	0.51	12	⇓eP	Pn	04 56 30.0	-0.2
JAYA				eS	Sn	04 56 38.4	-0.3
JAYA				IAML		04 56 39.8	
	comp=Z,35μm,0.3s						
JAYA	Jayaque - finc	0.51	12	⇓eP	Pn	04 56 30.0	-0.2
JAYA				eS	Sn	04 56 38.4	-0.3
JAYA				IAML		04 56 39.8	
	comp=Z,35μm,0.3s						
ITCA	Escuela Especi	0.59	28	⇓eP	Pn	04 56 31.1	+0.1
ITCA				eS	Sn	04 56 40.9	+0.7
ITCA	Escuela Especi	0.59	28	⇓eP	Pn	04 56 31.1	+0.1
ITCA				eS	Sn	04 56 40.9	+0.7
PMON	Piamonte	0.61	23	⇓iP	Pn	04 56 31.4	+0.1
PMON	Piamonte	0.61	23	⇓iP	Pn	04 56 31.4	+0.1
SNET	Serv Nac Est T	0.62	31	⇓iP	Pn	04 56 31.6	+0.2
SNET				IAML		04 56 32.0	
	comp=Z,32μm,0.3s						
SNET				eS	Sn	04 56 41.6	+0.8
SNET	Serv Nac Est T	0.62	31	⇓iP	Pn	04 56 31.6	+0.2
SNET				IAML		04 56 32.0	
	comp=Z,32μm,0.3s						
SNET				eS	Sn	04 56 41.6	+0.8
SNET	Serv Nac Est T	0.62	31		Pn	04 56 31.6	+0.2
SEMO	Seminario San	0.64	30	eP	Pn	04 56 31.7	+0.1
BOQS	Boqueron	0.64	25	⇓eP	Pn	04 56 32.1	+0.3
BOQS	Boqueron	0.64	25	⇓eP	Pn	04 56 32.1	+0.3
UEES	Universidad Ev	0.64	29	⇓iP	Pn	04 56 32.0	+0.3
UEES				eS	Sn	04 56 41.9	+0.5
UEES				IAML		04 56 43.6	
	comp=Z,21μm,0.4s						
UEES	Universidad Ev	0.64	29	⇓iP	Pn	04 56 32.0	+0.3
UEES				eS	Sn	04 56 41.9	+0.5
UEES				IAML		04 56 43.6	
	comp=Z,21μm,0.4s						
OPAM	Oficina de Pla	0.66	32	⇓iP	Pn	04 56 32.3	+0.4
OPAM				eS	Sn	04 56 42.8	+1.1
OPAM	Oficina de Pla	0.66	32	⇓iP	Pn	04 56 32.3	+0.4
OPAM				eS	Sn	04 56 42.8	+1.1
UESS	Universidad de	0.67	31	⇓eP	Pn	04 56 32.4	+0.4
UESS				IAML		04 56 32.7	
	comp=Z,31μm,0.2s						
UESS				eS	Sn	04 56 42.8	+1.0
UESS	Universidad de	0.67	31	⇓eP	Pn	04 56 32.4	+0.4
UESS				IAML		04 56 32.7	
	comp=Z,31μm,0.2s						
UESS				eS	Sn	04 56 42.8	+1.0
CEDA	San Andres	0.67	14	⇓eP	Pn	04 56 32.2	+0.3
CEDA	San Andres	0.67	14	⇓eP	Pn	04 56 32.2	+0.3
LFRS	El Faro	0.68	46	eP	Pn	04 56 32.4	+0.3
LFRS	El Faro	0.68	46	eP	Pn	04 56 32.4	+0.3
IGN	Direccin Gen	0.68	34	⇓eP	Pn	04 56 32.4	+0.4
IGN	Direccin Gen	0.68	34	⇓eP	Pn	04 56 32.4	+0.4
CEVE	Cerro Verde	0.68	355	⇓eP	Pn	04 56 32.4	+0.1
CEVE				IAML		04 56 45.4	
	comp=Z,37μm,0.3s						
CEVE	Cerro Verde	0.68	355	⇓eP	Pn	04 56 32.4	+0.1
CEVE				IAML		04 56 45.4	
	comp=Z,37μm,0.3s						
UDBS	Universidad Do	0.69	35	⇓iP	Pn	04 56 32.7	+0.5
UDBS				IAML		04 56 33.0	
	comp=Z,36μm,0.3s						
UDBS	Universidad Do	0.69	35	⇓iP	Pn	04 56 32.7	+0.5
UDBS				IAML		04 56 33.0	
	comp=Z,36μm,0.3s						
SJTE	Alcalda de S	0.71	49	⇓iP	Pn	04 56 32.9	+0.4
SJTE				eS	Sn	04 56 43.8	+1.0
SJTE				IAML		04 56 45.0	
	comp=Z,8μm,0.3s						
SJTE	Alcalda de S	0.71	49	⇓iP	Pn	04 56 32.9	+0.4
SJTE				eS	Sn	04 56 43.8	+1.0
SJTE				IAML		04 56 45.0	
	comp=Z,8μm,0.3s						
SNJE	San Jose	0.72	356	eP	Pn	04 56 32.8	0.0
SNJE	San Jose	0.72	356	eP	Pn	04 56 32.8	0.0
LFU	La Fuente	0.74	36	⇑eP	Pn	04 56 33.6	+0.7
LFU				eS	Sn	04 56 43.8	+0.5
LFU	La Fuente	0.74	36	⇑eP	Pn	04 56 33.6	+0.7
LFU				eS	Sn	04 56 43.8	+0.5
RTR	El Retiro	0.75	353	eP	Pn	04 56 33.2	+0.1
RTR	El Retiro	0.75	353	eP	Pn	04 56 33.2	+0.1
LBRS	Las Brisas	0.77	40	eS	Sn	04 56 46.0	+1.8
LBRS	Las Brisas	0.77	40	eS	Sn	04 56 46.0	+1.8
COEG	Centro de Oper	0.81	55	⇓eP	Pn	04 56 34.1	+0.3
COEG				IAML		04 56 47.5	
	comp=Z,14μm,0.4s						
COEG	Centro de Oper	0.81	55	⇓eP	Pn	04 56 34.1	+0.3
COEG				IAML		04 56 47.5	
	comp=Z,14μm,0.4s						
PAVA	Las Pavas	0.82	47	⇓iP	Pn	04 56 35.0	+1.0
PAVA				IAML		04 56 35.4	
	comp=Z,42μm,0.3s						
PAVA				eS	Sn	04 56 47.7	+2.2
PAVA	Las Pavas	0.82	47	⇓iP	Pn	04 56 35.0	+1.0
PAVA				IAML		04 56 35.4	
	comp=Z,42μm,0.3s						
PAVA				eS	Sn	04 56 47.7	+2.2
UNIC	Universidad Ca	0.83	1	eP	Pn	04 56 34.4	+0.4
UNIC	Universidad Ca	0.83	1	eP	Pn	04 56 34.4	+0.4
SNVI	San Vicente	0.84	57	eP	Pn	04 56 34.7	+0.5
SNVI	San Vicente	0.84	57	eP	Pn	04 56 34.7	+0.5
TACO	Tacachico	0.84	14	eP	Pn	04 56 34.6	+0.5
TACO				IAML		04 56 35.6	
	comp=Z,4μm,0.2s						
TACO	Tacachico	0.84	14	eP	Pn	04 56 34.6	+0.5
TACO				IAML		04 56 35.6	
	comp=Z,4μm,0.2s						
UESV	Universidad de	0.89	57	eP	Pn	04 56 35.3	+0.5
UESV				IAML		04 56 35.7	
	comp=Z,5μm,0.3s						
UESV				eS	Sn	04 56 47.5	+0.6
UESV	Universidad de	0.89	57	eP	Pn	04 56 35.3	+0.5
UESV				IAML		04 56 35.7	
	comp=Z,5μm,0.3s						
UESV				eS	Sn	04 56 47.5	+0.6
SCLA	Alcaldia de Sa	0.98	56	eP	Pn	04 56 36.9	+1.0
SCLA	Alcaldia de Sa	0.98	56	eP	Pn	04 56 36.9	+1.0
COEB	Comit de Eme	1.06	71	⇓eP	Pn	04 56 37.2	+0.1
COEB				IAML		04 56 54.6	
	comp=Z,5μm,0.5s						
COEB	Comit de Eme	1.06	71	⇓eP	Pn	04 56 37.2	+0.1
COEB				IAML		04 56 54.6	
	comp=Z,5μm,0.5s						
TECA	Tecapa	1.08	71	eP	Pn	04 56 37.6	+0.1
TECA	Tecapa	1.08	71	eP	Pn	04 56 37.6	+0.1
LLGN	La Laguna	1.17	31	eP	Pn	04 56 39.7	+1.1
LLGN	La Laguna	1.17	31	eP	Pn	04 56 39.7	+1.1
MTO3	Montecristo	1.26	9	eP	Pn	04 56 41.0	+1.1
MTO3	Montecristo	1.26	9	eP	Pn	04 56 41.0	+1.1
MTO3	Montecristo	1.26	9		Pn	04 56 40.8	+0.9
LCY	Lacayo	1.26	77	eP	Pn	04 56 40.4	+0.6
LCY	Lacayo	1.26	77	eP	Pn	04 56 40.4	+0.6
VSM	San Miguel	1.28	77	eP	Pn	04 56 40.7	+0.5
VSM	San Miguel	1.28	77	eP	Pn	04 56 40.7	+0.5
CNRM	Centro Naciona	1.39	76	eP	Pn	04 56 42.3	+0.9
CNRM	Centro Naciona	1.39	76	eP	Pn	04 56 42.3	+0.9
ESQI	Esquipulas	1.42	9	eP	Pn	04 56 43.4	+1.4
ESQI	Esquipulas	1.42	9		Pn	04 56 43.3	+1.4
PCG	Pacaya	1.60	321	eP	Pn	04 56 45.5	+0.9
NBG	Las Nubes	1.62	332	eP	Pn	04 56 46.8	+2.0
NBG				eS	Sn	04 57 04.2	-0.6
LCND	La Caada	1.63	84	eP	Pn	04 56 45.3	+0.6
LCND				eS	Sn	04 57 05.6	+1.0
LCND	La Caada	1.63	84	eP	Pn	04 56 45.3	+0.6
LCND				eS	Sn	04 57 05.6	+1.0
CNCH	Conchagua	1.68	85	eP	Pn	04 56 45.8	+0.3
CNCH				eS	Sn	04 57 07.0	+0.9
CNCH	Conchagua	1.68	85	eP	Pn	04 56 45.8	+0.3
CNCH				eS	Sn	04 57 07.0	+0.9
FUG	Fuego 3	1.80	316	eP	Pn	04 56 47.7	+0.6
MRL	Marmol	1.93	356	eP	Pn	04 56 51.3	+2.3
MRL				eS	Sn	04 57 13.3	+1.1
TGUH	Tegucigalpa,Un	2.40	68	Pn	Pn	04 56 55.6	+0.2
RTAL	Retalhuleu	2.49	304		Pn	04 56 57.3	+0.9
STG3	Santiaguito 3,	2.50	309	eP	Pn	04 56 57.3	+0.5
CNGN	Cerro Negro	2.86	103		Pn	04 57 00.6	-1.0
HUEH	Huehuetenango	2.87	319		Pn	04 57 03.7	+1.9
BOAB	BOACO BROADBAN	3.86	100	Pn	Pn	04 57 14.2	-1.1
CCIG	Comitan	3.99	322		Pn	04 57 18.1	+0.9
ACON	Acoyapa	4.44	105		Pn	04 57 22.0	-1.2
HZTE	Horizontes, Gu	4.57	122		Pn	04 57 24.8	-0.3
ORTG	Ortega, Santa	4.88	124	Pn	Pn	04 57 31.1	+1.8
DUNO	Dulce Nombre,	5.02	127		Pn	04 57 32.5	+1.4
JTS	Las Juntas de	5.33	122	P	Pn	04 57 36.7	+1.3
	comp=Z,2.0nm,0.3s,baz=12,slow=22,SNR=14						
JTS				S	Sn	04 58 34.7	-0.9
	comp=Z,4.8nm,0.3s,baz=346,slow=19,SNR=1.6						
JTS	Las Juntas de	5.33	122	Pn	Pn	04 57 37.2	+1.8
CAO2	Cobano, Puntar	5.56	128	Pn	Pn	04 57 39.7	+1.1
CMIG	Matias Romero	6.47	308	P	Pn	04 57 54.0	+3.0
	comp=Z,4.6nm,0.3s,baz=109,slow=9.1,SNR=54						
CMIG				S	Sn	04 59 02.2	-1.3
	comp=Z,4.8nm,0.3s,baz=83,slow=21,SNR=5.6						
CMIG				LR	LR	05 00 51.2	
	comp=Z,241nm,19.9s,baz=100,slow=41						
CVTR	Volcan Turrial	6.48	118	Pn	Pn	04 57 52.9	+1.3
RIMA	Rio Macho	6.51	120	Pn	Pn	04 57 54.0	+2.1
PEZE	Perez Zeledon,	6.88	122		Pn	04 57 57.2	+0.5
SRBA	San Rafael, Bu	7.22	122		Pn	04 58 02.1	+0.6
RIOS	Rincon, Osa	7.40	126		Pn	04 58 05.1	+1.3
BRU2	Volcan	8.01	122		Pn	04 58 15.4	+3.0
TLIG	Tlapa	9.73	298	Pn	Pn	04 58 36.4	+0.5
ZARC	Zaragoza, Cauc	15.51	110	Pn	Pn	04 59 51.8	-2.0
VBMS	Vicksburg	19.00	358	P	P	05 00 36.5	+0.8
VBMS				IAmb	IAmb	05 00 42.2	
	comp=Z,19nm,0.8s						
SDV	Santo Domingo	19.05	101	P	P	05 00 36.2	-0.4
	comp=Z,1.3nm,0.3s,baz=300,slow=7.8,SNR=6.0						
SDV	Santo Domingo	19.05	101	P	P	05 00 36.1	-0.4
143A	Socs Landing,	19.54	355	P	P	05 00 42.9	+1.4
143A				IAmb	IAmb	05 00 55.3	
	comp=Z,13nm,0.3s						
JCT	Junction City	19.67	333	P	P	05 00 44.5	+1.5
Y45A	Yeager Farm, C	20.62	0	P	P	05 00 54.2	+0.9
Y45A				IAmb	IAmb	05 01 13.1	
	comp=Z,14nm,0.8s						
TXAR	Lajitas Array	20.76	323	P	P	05 00 56.9	+2.0
	comp=Z,2.8nm,0.6s,baz=142,slow=11,SNR=52						
TXAR				PcP	PcP	05 05 04.3	+1.6
	comp=Z,0.2nm,0.6s,baz=143,slow=4.7,SNR=4.4						
TXAR				LR	LR	05 11 07.8	
	comp=Z,32nm,20.6s,baz=0.0,slow=43						
TX31	Lajitas Ar. Si	20.76	323	P	P	05 00 56.1	+1.2
TX31				IAmb	IAmb	05 00 58.9	
	comp=Z,9.2nm,0.6s						
TX32	Lajitas Array	20.76	323	P	P	05 00 56.6	+1.7
TKL	Tuckaleechee C	23.01	12	P	P	05 01 19.1	+0.3
	comp=Z,2.5nm,0.7s,baz=165,slow=11,SNR=5.5						
TKL				LR	LR	05 10 06.8	
	comp=Z,97nm,19.8s,baz=193,slow=36						
TKL	Tuckaleechee C	23.01	12	IAmb	IAmb	05 01 43.2	
	comp=Z,18nm,1.4s						
SJG	San Juan	23.07	75	LR	LR	05 10 54.7	
	comp=Z,60nm,18.4s,baz=266,slow=38						
FNO	Franklin	23.13	343	P	P	05 01 20.0	+0.1
OKCFA	Oklahoma City	23.29	344	P	P	05 01 23.9	+2.4
OKCFA				IAmb	IAmb	05 01 34.5	
	comp=Z,34nm,1.5s						
PBMO	Poplar Bluff	23.54	358	P	P	05 01 23.7	-0.2
PBMO				IAmb	IAmb	05 01 26.9	
	comp=Z,6.0nm,0.6s						
ETMB	Extrema	32.52	133	P	P	05 02 44.4	0.0
MACA	Manacapuru-AM	32.93	118	P	P	05 02 47.3	-0.7
SAML	Samuel	34.18	129	P	P	05 02 58.7	-0.1
PDAR	Pinedale Array	34.21	333	P	P	05 03 01.1	+2.0
	comp=Z,0.2nm,0.5s,baz=133,slow=11,SNR=2.1						
PDAR				PcP	PcP	05 05 34.4	-0.6
	comp=Z,0.3nm,0.5s,baz=134,slow=4.3,SNR=4.2						
PDAR				LR	LR	05 17 52.4	
	comp=Z,33nm,20.0s,baz=128,slow=38						
ELK	Elko	35.51	325	LR	LR	05 20 22.6	
	comp=Z,39nm,21.3s,baz=126,slow=41						
NVAR	Mina Array Bea	35.84	320	P	P	05 03 15.9	+2.8
	comp=Z,1.5nm,0.7s,baz=132,slow=9.2,SNR=14						
NVAR				PcP	PcP	05 05 41.1	+1.3
	comp=Z,0.9nm,0.7s,baz=158,slow=4.2,SNR=6.3						
NVAR				pPcP		05 05 55.2	
	comp=Z,1.2nm,0.7s,baz=137,slow=4.2,SNR=7.1						
NVAR	Mina Array Bea	35.84	320	P	P	05 03 14.9	+1.7
ULM	Lac du Bonnet	37.36	353	P	P	05 03 24.6	-1.0
	comp=Z,1.7nm,0.5s,baz=148,slow=5.2,SNR=3.6						
ULM	Lac du Bonnet	37.36	353	IAmb	IAmb	05 03 51.1	
	comp=Z,14nm,1.5s						
YBH	Yreka Blue Hor	40.51	321	LR	LR	05 23 00.1	
	comp=Z,66nm,18.6s,baz=144,slow=39						
LVC	Limon Verde	40.89	150	LR	LR	05 20 12.8	
	comp=Z,70nm,20.7s,baz=218,slow=35						
SCHQ	Schefferville	45.23	18	P	P	05 04 28.9	-1.4
	comp=Z,3.6nm,0.5s,baz=222,slow=6.5,SNR=14						
H03N2	Juan Fernandez	47.42	168	T	T	05 55 31.8	
	baz=346,slow=76,SNR=6.4						
H03N1	Juan Fernandez	47.43	168	T	T	05 55 31.3	
	baz=346,slow=76,SNR=7.9						
H03N3	Juan Fernandez	47.44	168	T	T	05 55 29.9	
	baz=346,slow=76,SNR=5.3						
YKA	Yellowknife Ar	52.41	346	P	P	05 05 24.6	-0.5
	comp=Z,1.2nm,0.5s,baz=101,slow=14,SNR=20						
FRB	Frobisher Bay	52.64	12	P	P	05 05 25.1	-1.6
	comp=Z,9.1nm,0.9s,baz=211,slow=7.9,SNR=13						
RES	Resolute Bay	61.60	358	P	P	05 06 28.1	-1.7
	comp=Z,2.8nm,0.7s,baz=163,slow=5.8,SNR=10						
RES	Resolute Bay	61.60	358	IAmb	IAmb	05 06 56.4	
	comp=Z,6.6nm,1.2s						
ILAR	Eielson Array	64.56	336	P	P	05 06 49.0	-0.6
	comp=Z,0.2nm,0.5s,baz=159,slow=4.3,SNR=10						
ARCES	ARCESS Array B	86.19	19	P	P	05 08 52.6	-1.0
	comp=Z,2.8nm,0.9s,baz=260,slow=5.4,SNR=1.8						
TORD	Torodi Ar. Bea	88.26	77	P	P	05 09 01.6	-3.1
	comp=Z,0.3nm,0.7s,baz=287,slow=5.8,SNR=2.6						
WRA	Warramunga Arr	137.48	255	PKP	PKPdf	05 15 37.6	+0.6
	comp=Z,0.6nm,0.6s,baz=90,slow=2.4,SNR=10						
CMAR	Chiang Mai Arr	147.50	345	PKPbc	PKPbc	05 15 57.5	+0.1
	comp=Z,2.5nm,0.5s,baz=339,slow=3.6,SNR=10.0						

NEIC ***15*** *04:59:34.5±0.8, 51°.40N±0°.09×178°.05W±0°.05, h35^{km}±12^{km}, ML3.6(AEIC), Error ellipse: s-maj=12.9km s-min=4.7km az=173.0*
AEIC 15 04:59:33±1.0**, 51°.31N**±0°.09×**178°.01W**±0°.07**, h38**^{km}±10^{km}**, Error ellipse: s-maj=13.1km s-min=5.1km az=164.0, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAFL	Tanaga Flats	0.46	8		Pn	04 59 43.5	+0.6
TAPA	Tanaga Point A	0.53	13		Pn	04 59 44.5	+0.4
TASE	Tanaga Southea	0.53	358		Pn	04 59 44.9	+0.7
TAFP	Tanaga Falls P	0.60	1		Pn	04 59 45.5	+0.4
GALAA	Gareloi Lava P	0.66	314		Pn	04 59 46.6	+0.6
KIMD	Kanaga Island	0.66	46		Pn	04 59 46.1	+0.1
GAEA	Gareloi East	0.67	316		Pn	04 59 46.5	+0.5
GASW	Gareloi Southw	0.71	312		Pn	04 59 46.9	+0.4
KIWB	Kanaga Island	0.77	44		Pn	04 59 47.6	+0.4
KIKV	Kanaga Island	0.78	42		Pn	04 59 47.9	+0.4
KICM	Kanaga Island	0.80	39		Pn	04 59 48.5	+0.8
ADK	Adak	1.01	54		Pn	04 59 50.9	+0.3
ADK	Adak	1.01	54	Sn	Sn	05 00 03.8	+0.4
ADAG	Mount Adagdak	1.10	52		Pn	04 59 53.0	+1.1
GSTD	Great Sitkin T	1.38	56		Pn	04 59 56.6	+0.9
GSMY	Great Sitkin M	1.42	58		Pn	04 59 57.3	+1.0
GSTR	Great Sitkin T	1.45	56		Pn	04 59 57.9	+1.3
CERAA	Semis' Rag'd T	1.56	294		Pn	04 59 59.0	+0.8
CERB	Semis' Cerberu	1.60	294		Pn	04 59 59.6	+0.8
CESW	Semis' Southwe	1.63	292		Pn	04 59 59.9	+0.8
AMKA	Amchitka	1.69	274		Pn	04 59 59.1	-0.8
LSPA	Little Sitkin	2.23	288		Pn	05 00 08.1	+0.8
ATKA	Atka Island	2.53	68		Pn	05 00 12.8	+1.4
KOKL	Mount Kliuchef	2.57	65		Pn	05 00 14.0	+1.9
KOFP	Korovin Flat P	2.61	67		Pn	05 00 14.0	+1.3
MNAT	Makushin Natee	7.36	65		Pn	05 01 20.6	+2.7
UNV	Unalaska Valle	7.46	66		Pn	05 01 22.2	+3.2

IDC ***15*** *05:03:28.9±2.7, 11°.34S×122°.74E, h0^{km}, mb3.9/1, mb1 3.7/3, mb1mx3.4/39, mbtmp3.5/3, ML3.4/2, Error ellipse: s-maj=242.6km s-min=32.9km az=50.0*
DJA ***15*** *05:03:34.4±0.5, 10°S±4°×12°4E±°, h10^{km}, M3.9/10, mb4.2/4, mB4.6/1, MLv3.8/10, Mw(mB)3.8/1*
ISC 15 05:03:33.5±0.8**, 10°.51S**±0°.07×**124°.11E**±0°.07**, h27**^{km}**, n12, σ1^s.84**/15**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	0.53	304	P	Pb	05 03 42.3	-2.1
SOEI	Soe	0.76	12	P	Pb	05 03 47.9	-0.4
SOEI				S	Sn	05 03 58.4	-0.9
MMRI	Maumere	2.62	315	P	Pn	05 04 15.5	+1.4
EDFI	Ende, Flores	2.95	306	P	Pn	05 04 19.4	+0.6
BASI	Baing, Sumba	3.48	274	P	Pn	05 04 27.8	+1.8
WBSI	Waikabubak, Su	4.72	280	P	Pn	05 04 43.9	+0.8
PLAI	Plampang	6.46	284	P	Pn	05 05 08.0	+1.0
	0.1nm33nm,0.5s						
BKSI	Bulukumba	6.49	322	P	Pn	05 05 08.0	+0.7
	0.1nm413nm14nm,0.9s						
TWSI	Taliwang, Sumb	7.34	283	P	Pn	05 05 20.7	+1.7
WRA	Warramunga Arr	13.61	135	Pn	Pn	05 06 47.9	+2.9
	0.1nm,0.3s,baz=302,slow=14,SNR=6.3						
WRA				Sn	Sn	05 09 13.0	-2.5
	0.6nm,0.3s,baz=300,slow=23,SNR=11						
ASAR	Alice Springs	16.08	146	Pn	P	05 07 20.0	-1.1
	0.2nm,0.3s,baz=317,slow=12,SNR=12						
ASAR				Sn	Sn	05 10 12.5	-3.0
	0.2nm,0.3s,baz=316,slow=23,SNR=6.2						
MKAR	Makanchi Array	68.16	330	P	P	05 14 31.4	0.0
	0.9nm,0.8s,baz=139,slow=7.6,SNR=8.4						

NOU ***15*** *05:11:45.9, 24°.86S×175°.15W, h0^{km}, mb5.0/15, South of Tonga Islands*
IDC ***15*** *05:11:48.6±0.6, 24°.65S×176°.07W, h0^{km}, mb4.7/21, mb1 4.8/21, mb1mx4.7/46, mbtmp4.7/21, MS4.8/23, Ms1 4.8/23, ms1mx4.6/34, Error ellipse: s-maj=20.1km s-min=16.6km az=139.0*
GCMT ***15*** *05:11:54.1±0.1, 24°.76S±0°.01×175°.43W±0°.01, h21^{km}, MW5.3/125, Moment Tensor Solution. s93,c140; s125,c204; Duration: 1^s.1 Moment tensor: Scale 10^{17} Nm; M$_{rr}$0.95±.02; M$_{\theta\theta}$-0.04±.01; M$_{\phi\phi}$-0.91±.01; M$_{r\theta}$0.18±.03; M$_{\theta\phi}$-0.17±.01; M$_{\phi r}$0.62±.02; Best double couple: M$_0$1.14800×10^{17} NP1:φ$_s$188.00000°, δ28.00000°, λ85.00000°. NP2:φ$_s$14.00000°, δ62.00000°, λ93.00000°. Principal axes: T 1.1540, Plg73.0000°, Azm291.0000°; N -0.0110, Plg3.0000°, Azm192.0000°; P -1.1430, Plg17.0000°, Azm102.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
BJI ***15*** *05:11:54.0±0.0, 24°.80S×175°.80W, h35^{km}, mB5.7/17, mb5.3/30, Ms5.2/23, Ms7 4.9/23*
NEIC ***15*** *05:11:55.1±1.7, 24°.8S±0°.1×175°.8W±0°.1, h35^{km}±1^{km}, mb5.0/92, Error ellipse: s-maj=19.9km s-min=17.7km az=56.0*
ISC 15 05:11:52.1±0.3**, 24°.98S**±0°.06×**175°.74W**±0°.06**, h27**^{km}**, n272, σ1^s.90**/268**, mb4.9**/72**, MS4.8**/28**, 16C-10D, South of Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	7.97	44		Pn	05 13 37.6	-8.6
NIUE	Niue	7.97	44	P	Pn	05 13 37.2	-9.0
MSVF	Nonsavu	9.24	320	Pn	Pn	05 14 02.8	-1.0
	5.3nm,0.3s,baz=136,slow=13,SNR=31						
MSVF				LR	LR	05 17 10.2	
	comp=Z,14μm,19.1s,baz=123,slow=37						
MSVF	Nonsavu	9.24	320		Pn	05 14 03.5	-0.2
MSVF	Nonsavu	9.24	320	P	Pn	05 14 03.2	-0.6
DGTI	Dogotuki	9.61	333	P	Pn	05 14 08.5	-0.3
AFI	Afiamalu	11.62	19	Pn	Pn	05 14 27.1	-9.3
	9.2nm,0.3s,baz=135,slow=3.0,SNR=10						
AFI				Sn	Sn	05 16 26.4	-19
	14nm,0.3s,baz=76,slow=22,SNR=5.8						
URZ	Urewera	14.57	203	Pn	Pn	05 15 12.4	-4.0
	0.6nm,0.3s,baz=307,slow=23,SNR=1.5						
URZ				Sn	Sn	05 17 50.0	-7.0
	0.4nm,0.3s,baz=299,slow=23,SNR=1.2						
URZ	Urewera	14.57	203	Pn	Pn	05 15 12.7	-3.8
URZ	Urewera	14.57	203	P	Pn	05 15 17.3	+0.9
RAR	Rarotonga	15.16	79	Pn	Pn	05 15 18.4	-6.1
	12nm,0.3s,baz=239,slow=5.3,SNR=22						
RAR				Sn	Sn	05 17 51.3	-20
	2.7nm,0.3s,baz=44,slow=16,SNR=2.5						
RAR				LR	LR	05 20 20.6	
	comp=Z,2μm,19.2s,baz=248,slow=33						
RAR	Rarotonga	15.16	79		Pn	05 15 18.6	-5.9
RAR	Rarotonga	15.16	79	P	Pn	05 15 14.3	-10
PINNC	Pines Island,	15.57	275	P	P	05 15 37.1	+3.2
PINNC				IAmb	IAmb	05 15 42.6	
	comp=Z,103nm,1.0s						
BKZ	Black Stump Fm	15.59	203	P	Pn	05 15 31.1	+1.0
YATNC	Mamie plateau,	16.19	277	P	P	05 15 41.9	+1.1
DZM	Mont Dzumac	16.59	276	Pn	Pn	05 15 42.7	-0.4
	comp=Z,0.6nm,0.3s,baz=90,slow=16,SNR=21						
DZM				LR	LR	05 19 43.6	
	comp=Z,1μm,20.6s,baz=108,slow=29						
DZM	Mont Dzumac	16.59	276	ePn	P	05 15 46.5	+1.1
	comp=Z,146nm,1.4s						
DZM				eLQ	LQ	05 18 58.5	
	comp=Z,4μm,27.6s						
DZM				eLR	LR	05 19 42.2	
	comp=Z,7μm,23.9s						
DZM	Mont Dzumac	16.59	276	P	P	05 15 45.0	-0.4
DZM	Mont Dzumac	16.59	276	P	P	05 15 46.7	+1.3
BFZ	Birch Farm	17.03	201	P	Pn	05 15 49.1	+0.7
SANVU	Saraoutou	18.59	297	P	Pn	05 16 09.5	+1.8
KHZ	Kahutara	19.52	204	P	P	05 16 17.9	+0.6

KNTN	Kanton	22.41	11	P	P	05 16 46.3	-2.4
KNTN				IAmb	IAmb	05 16 49.2	
	comp=Z,70nm,0.8s						
PAE	Paea	25.40	78	*e*T	T	05 43 05.2	
	comp=Z,4.1nm,0.3s						
PPT2	Papeete2	25.43	78	*e*S	S	05 21 39.0	-4.4
	comp=Z,748nm,29.0s						
PPT2				*e*LQ	LQ	05 22 20.6	
	comp=Z,3µm,22.8s						
PPT2				*e*LR	LR	05 23 25.3	
	comp=Z,5µm,27.2s,baz=249						
PPT2	Papeete2	25.43	78	*e*T	T	05 43 08.5	
	comp=Z,3.1nm,0.4s						
PPT	Papeete	25.44	78	LR	LR	05 25 52.6	
	comp=Z,1µm,18.0s,baz=254,slow=33						
MEH	Mehetia	26.68	80	*e*T	T	05 44 41.6	
	comp=Z,9.9nm,0.3s						
HNR	Honiara	27.82	299	LR	LR	05 27 07.3	
	comp=Z,3µm,19.7s,baz=162,slow=34						
TOO	Toolangi	35.19	240	P	P	05 18 44.5	+0.5
CTAO	Charters Tower	35.36	270		P	05 18 44.7	-1.0
CTAO				IAmb	IAmb	05 19 02.0	
	comp=Z,16nm,0.9s						
TAOE	Nuku Hiva Isla	37.48	71	*e*S	S	05 24 50.2	-1.1
	comp=Z,347nm,23.9s						
TAOE				*e*LR	LR	05 28 55.8	
	comp=Z,2µm,28.4s						
STKA	Stephens Creek	37.96	250	P	P	05 19 05.8	-1.8
	comp=Z,2.1nm,0.5s,baz=98,slow=9.4,SNR=5.8						
STKA				LR	LR	05 33 46.2	
	comp=Z,4µm,18.3s,baz=82,slow=35						
STKA	Stephens Creek	37.96	250	P	P	05 19 06.1	-1.6
PMG	Port Moresby	38.52	287	P	P	05 19 09.4	-3.0
	comp=Z,44nm,0.8s,baz=111,slow=7.3,SNR=16						
PMG				LR	LR	05 32 08.9	
	comp=Z,1µm,20.8s,baz=128,slow=32						
PMG	Port Moresby	38.52	287	P	P	05 19 10.4	-2.1
COEN	Coen	40.11	278	P	P	05 19 24.5	-1.4
MANU	Manus Island	42.25	297	P	P	05 19 40.5	-2.9
BBOO	Buckleboo	42.62	248	P	P	05 19 45.1	-1.1
AS31	Alice Springs	45.69	261	P	P	05 20 09.8	-1.2
ASAR	Alice Springs	45.69	261	P	P	05 20 09.1	-1.9
	comp=Z,8.1nm,0.9s,baz=98,slow=7.8,SNR=30						
ASAR				PcP	PcP	05 21 47.8	-1.1
	comp=Z,0.4nm,0.5s,baz=94,slow=5.0,SNR=1.3						
ASAR				LR	LR	05 38 44.9	
	comp=Z,3µm,18.8s,baz=118,slow=36						
ASAR	Alice Springs	45.69	261	P	P	05 20 09.4	-1.7
WR0	Warramunga Arr	46.02	266	P	P	05 20 11.3	-2.3
WB2	Warramunga Arr	46.19	266	P	P	05 20 12.9	-2.1
WB0	Warramunga Arr	46.20	266	P	P	05 20 12.9	-2.2
WRA	Warramunga Arr	46.20	266	P	P	05 20 12.5	-2.6
	comp=Z,4.4nm,0.7s,baz=102,slow=8.1,SNR=49						
WRA				PcP	PcP	05 21 51.1	+0.4
	comp=Z,5.2nm,1.0s,baz=100,slow=3.9,SNR=6.2						
WRA	Warramunga Arr	46.20	266	P	P	05 20 12.8	-2.3
JAY	Jayapura	47.52	291	LR	LR	05 39 51.6	
	comp=Z,2µm,18.6s,baz=182,slow=36						
FORT	Forrest	49.58	250	P	P	05 20 40.3	-0.8
KNRA	Kununurra	52.56	269	P	P	05 21 01.8	-1.8
KNRA				IAmb	IAmb	05 21 09.4	
	comp=Z,17nm,0.7s						
VNDA	Vanda	53.67	186	P	P	05 21 14.6	+3.6
	comp=Z,2.3nm,0.9s,baz=26,slow=6.5,SNR=7.3						
VNDA				LR	LR	05 40 12.9	
	comp=Z,541nm,21.3s,baz=18,slow=32						
GUMO	Guam	54.27	311	LR	LR	05 41 42.7	
	comp=Z,795nm,21.8s,baz=140,slow=33						
FITZ	Fitzroy Crossi	54.61	265	P	P	05 21 17.6	-1.0
	comp=Z,5.8nm,0.9s,baz=104,slow=7.0,SNR=10						
FITZ	Fitzroy Crossi	54.61	265	P	P	05 21 18.7	+0.1
FITZ				IAmb	IAmb	05 21 33.6	
	comp=Z,18nm,1.2s						
SIJI	Sorong	56.46	287	P	P	05 21 28.6	-3.4
	comp=Z,16nm,0.8s,baz=80,slow=11,SNR=4.6						
MORW	Morawa	60.15	250	P	P	05 21 57.9	+0.2
MORW				IAmb	IAmb	05 22 06.0	
	comp=Z,12nm,1.1s						
CASY	Casey	60.86	206	P	P	05 22 04.4	+2.6
EDFI	Ende, Flores	61.53	274	P	P	05 22 07.0	-0.3
	comp=Z,9.6nm,0.8s						
GIRL	Giralia	63.44	256	P	P	05 22 20.8	+1.0
DAV	Davao City (W)	65.36	291	P	P	05 22 31.3	-1.2
MJAR	Matsushiro Arr	75.03	323	P	P	05 23 28.8	-2.5
	comp=Z,4.5nm,0.8s,baz=164,slow=5.1,SNR=9.9						
MJAR				LR	LR	05 51 20.3	
	comp=Z,439nm,22.0s,baz=150,slow=32						
MJAR	Matsushiro Arr	75.03	323	P	P	05 23 29.9	-1.4
MAT	Matsushiro	75.03	323	P	P	05 23 30.0	-1.3
MAT				*e*S	S	05 33 13.0	+5.4
JMN	Monobe	75.51	318	P	P	05 23 33.9	-0.3
TNG	Tangerang	76.21	270	P	P	05 23 36.7	-1.9
	comp=Z,14µmcomp=Z,850nm,0.4s						
TNG				P	pP	05 23 38.8	-7.0
	comp=Z,20µmcomp=Z,1µm,0.4s						
JHS	Saijyo	76.84	319	P	P	05 23 41.1	-0.5
MAW	Mawson	78.07	200	P	P	05 23 50.8	+2.8
	comp=Z,4.1nm,0.7s,baz=117,slow=7.8,SNR=11						
MAW				LR	LR	05 59 09.9	
	comp=Z,752nm,18.4s,baz=112,slow=36						
MAW	Mawson	78.07	200	P	P	05 23 50.9	+2.8
JKA	Kamikawa-asahi	78.63	331	P	P	05 23 51.7	+0.3
ASAJ	Asahikawa	78.64	331	P	P	05 23 50.9	-0.6
	comp=Z,32nm,1.0s,baz=224,slow=12,SNR=15						
MDSI	Maura Dua	79.14	270	P	P	05 23 54.1	-0.8
	comp=Z,6.5nm,0.7s						
109C	Camp Elliot, M	80.18	47	P	P	05 23 59.9	-0.2
MWC	Mount Wilson	80.39	45	P	P	05 24 01.8	+0.3
MWC				IAmb	IAmb	05 24 06.9	
	comp=Z,18nm,1.5s						
MURC	Murrieta	80.56	46	P	P	05 24 03.9	+1.7
	baz=232						
MONP2	Monument Peak	80.64	47	P	P	05 24 04.3	+1.5
	baz=232						
RMX	La Rumorosa	80.69	48	P	P	05 24 03.6	+0.5
IKP	In-Ko-Pah, Jac	80.70	48	P	P	05 24 04.5	+1.5
	baz=233						
VES	Vestal, Richgr	80.76	43	P	P	05 24 04.5	+1.3
	baz=230						
YSS	Yuzh-Sakhalins	80.81	333	P	P	05 24 01.9	-1.3
EDW2	Edwards Air Fo	80.84	45	P	P	05 24 04.8	+1.1
	baz=231						
ISA	Isabella, Lake	81.03	44	P	P	05 24 06.0	+1.2
	baz=231						
ISA	Isabella, Lake	81.03	44	P	P	05 24 05.6	+0.9
ISA				IAmb	IAmb	05 24 07.6	
	comp=Z,15nm,1.3s						
PFO	Pinyon Flats O	81.05	47	P	P	05 24 07.3	+2.4
	baz=232						
PFO	Pinyon Flats O	81.05	47	P	P	05 24 06.2	+1.2
TPFO	Pinon Flats	81.05	47	P	P	05 24 06.7	+1.7
	baz=232						
PEA0B	Petropavlovsk-	81.12	344	P	P	05 24 04.5	-0.1
PEA0B				IAmb	IAmb	05 24 06.1	
	comp=Z,25nm,0.9s						
PETK	Petropavlovsk-	81.12	344	P	P	05 24 03.8	-0.9
	comp=Z,20nm,0.9s,baz=145,slow=5.4,SNR=14						
PETK	Petropavlovsk-	81.12	344	P	P	05 24 04.0	-0.7
CMB	Columbia Colle	81.39	41	P	P	05 24 07.6	+1.1
CMB				IAmb	IAmb	05 24 22.4	
	comp=Z,18nm,1.4s						
LRMC	Laurel Mtn Rad	81.42	44	P	P	05 24 09.1	+2.2
	baz=231						
BELC	Belle Mtn. Jos	81.59	46	P	P	05 24 09.3	+1.5
	baz=232						
KSRS	Korea Array	81.60	318	P	P	05 24 06.0	-1.5
	comp=Z,9.4nm,1.0s,baz=137,slow=5.6,SNR=14						
KSRS				LR	LR	05 59 15.7	
	comp=Z,380nm,18.4s,baz=156,slow=35						
KSAR	Wonju Array Be	81.62	318	P	P	05 24 08.3	+0.6
ORV	Oroville	81.74	39	P	P	05 24 08.8	+0.5
BC3	Big Chuckawall	81.75	47	P	P	05 24 10.6	+2.0
	baz=233						
CWC	Cottonwood Cre	81.77	44	P	P	05 24 09.9	+1.1
	baz=231						
GSC	Goldstone, Bar	81.87	45	P	P	05 24 10.7	+1.5
	baz=232						
GSC	Goldstone, Bar	81.87	45	P	P	05 24 10.1	+0.9
GSC				IAmb	IAmb	05 24 14.4	
	comp=Z,18nm,1.5s						
N02D	Trinity Center	82.01	38	P	P	05 24 13.4	+3.6
	baz=227						
M02C	Callahan	82.22	37	P	P	05 24 12.9	+2.0
	baz=227						
QSM	Queen of Sheba	82.24	44	P	P	05 24 11.7	+0.7
QSM				IAmb	IAmb	05 24 29.3	
	comp=Z,15nm,1.4s						
IRM	Iron Mountain	82.25	47	P	P	05 24 12.5	+1.4
	baz=233						
113A	Mohawk Valley,	82.35	49	P	P	05 24 12.7	+1.0
GWY	Greenwater Val	82.50	44	P	P	05 24 13.7	+1.1
GWY				IAmb	IAmb	05 24 21.9	
	comp=Z,14nm,1.4s						
TUQ	Turquoise Moun	82.52	45	P	P	05 24 14.2	+1.6
	baz=232						
SHOC	Shoshone, Teco	82.58	45	P	P	05 24 14.3	+1.5
	baz=232						
LHV	Little Huntoon	82.66	42	P	P	05 24 13.8	+0.7
LHV				IAmb	IAmb	05 24 19.6	
	comp=Z,26nm,1.4s						
SYO	Syowa Base	82.82	192	⇑*e*P	P	05 24 14.2	+0.6
SYO	Syowa Base	82.82	192	⇑*e*PcP	PcP	05 24 20.0	+1.6
SYO	Syowa Base	82.82	192	⇓*e*pP	pP	05 24 25.8	+4.8
RYN	Ryan	82.89	42	P	P	05 24 15.2	+0.7
RYN				IAmb	IAmb	05 24 19.9	
	comp=Z,15nm,1.5s						
NVAR	Mina Array Bea	82.89	42	P	P	05 24 14.8	+0.1
	comp=Z,2.8nm,0.8s,baz=222,slow=8.5,SNR=11						
NVAR				LR	LR	06 01 56.1	
	comp=Z,517nm,18.0s,baz=270,slow=36						
NVAR	Mina Array Bea	82.89	42	P	P	05 24 15.1	+0.5
NV11	Mina Array Sit	82.98	42	P	P	05 24 15.9	+0.9
NV11				IAmb	IAmb	05 24 27.0	
	comp=Z,13nm,1.2s						
PDMCI	Parker Dam,Lak	83.00	47	P	P	05 24 16.9	+1.9
	baz=234						
PAHR	Pah Rah Range	83.07	40	P	P	05 24 16.2	+0.8
TPH	Tonopah	83.33	43	P	P	05 24 18.2	+1.3
KVN	Kaiserville	83.41	41	P	P	05 24 18.3	+1.1
KVN				IAmb	IAmb	05 24 18.9	
	comp=Z,15nm,1.4s						
SNAA	Sanae	83.49	178	P	P	05 24 18.5	+1.4
SNAA	Sanae	83.49	178	PcP	PcP	05 24 23.2	+1.8
SNAA	Sanae	83.49	178	P	P	05 24 18.8	+1.7
SNAA				IAmb	IAmb	05 24 31.1	
	comp=Z,15nm,1.0s						
VNA3	Neumayer Olymp	83.55	176	P	P	05 24 19.2	+1.9
VNA3	Neumayer Olymp	83.55	176	PcP	PcP	05 24 24.0	+2.4
VNA3	Neumayer Olymp	83.55	176	pP	pP	05 24 29.7	+5.1
Y14A	Wickenburg	83.55	48	P	P	05 24 19.0	+1.1
W13A	Hualapai Mount	83.65	47	P	P	05 24 19.6	+1.0
SHPR	Sheep Range	83.66	45	P	P	05 24 19.4	+0.8
SHPR				IAmb	IAmb	05 24 37.6	
	comp=Z,13nm,1.5s						
USA0B	Ussuriysk Arra	83.82	325	P	P	05 24 18.3	-0.6
USRK	Ussuriysk Ar.	83.82	325	P	P	05 24 17.9	-1.0
	comp=Z,36nm,0.9s,baz=123,slow=4.2,SNR=30						
USRK				LR	LR	06 00 02.4	
	comp=Z,531nm,18.9s,baz=136,slow=35						
USRK	Ussuriysk Ar.	83.82	325	P	P	05 24 18.9	-0.1
VNA2	Neumayer--Watz	84.01	176	P	P	05 24 21.9	+2.2
VNA2	Neumayer--Watz	84.01	176	PcP	PcP	05 24 25.1	+1.5
VNA2	Neumayer--Watz	84.01	176	pP	pP	05 24 31.9	+5.0
TUC	Tucson	84.15	50	P	P	05 24 23.2	+2.2
	baz=236						
TUC	Tucson	84.15	50	P	P	05 24 21.8	+0.7
TUC				IAmb	IAmb	05 24 39.6	
	comp=Z,8.2nm,1.1s						
VNA1	Neumayer--Stat	84.23	176	P	P	05 24 22.8	+2.0
VNA1	Neumayer--Stat	84.23	176	PcP	PcP	05 24 26.7	+2.2
VNA1	Neumayer--Stat	84.23	176	pP	pP	05 24 33.6	+5.6
PRN	Pahroc Range	84.27	44	P	P	05 24 22.4	+0.7
PRN				IAmb	IAmb	05 24 25.0	
	comp=Z,18nm,1.3s						
NJ2	Nanjing	84.32	309	*e*P	P	05 24 22.6	+0.8
NJ2				pmax	pmax		
	comp=Z,22nm,1.0s						
J05D	Fort Rock, OR	84.38	37	P	P	05 24 23.2	+1.1
	baz=228						
QIZ	Qiongzhong	84.58	294	P	P	05 24 25.8	+2.4
QIZ				S	S	05 34 50.5	+1.5
QIZ				pmax	pmax		
	comp=Z,160nm,4.5s						
QIZ				LR	LR		
	comp=Z,120nm,12.2s						
QIZ				LR	LR		
	comp=Z,190nm,19.5s						
QIZ				LR	LR		
	comp=Z,320nm,22.4s						
KDAK	Kodiak Island	84.70	12	LR	LR	05 55 24.0	
	comp=Z,449nm,21.8s,baz=214,slow=31						
PLCA	Paso Flores	84.71	133	LR	LR	05 53 33.6	
	comp=Z,244nm,21.7s,baz=251,slow=29						
BMN	Battle Mountai	84.81	41	P	P	05 24 25.4	+1.1
X16A	Lo Mia Camp, P	84.89	48	P	P	05 24 26.8	+1.9
X16A				IAmb	IAmb	05 24 44.1	
	comp=Z,8.2nm,1.1s						
LCMT	Little Creek M	85.19	45	P	P	05 24 27.1	+0.8
LCMT				IAmb	IAmb	05 24 32.6	
	comp=Z,16nm,1.5s						
CCUT	Cedar City	85.44	45	P	P	05 24 29.4	+1.8
CCUT				IAmb	IAmb	05 24 30.2	
	comp=Z,14nm,1.4s						
KNB	Kanab	85.47	46	P	P	05 24 29.5	+1.8
U15A	North Rim	85.47	46	P	P	05 24 29.8	+1.9
U15A				IAmb	IAmb	05 24 37.5	
	comp=Z,15nm,1.2s						
WUAZ	Wupatki	85.56	48	P	P	05 24 29.7	+1.5
	baz=235						
WUAZ	Wupatki	85.56	48	P	P	05 24 29.9	+1.8
WUAZ				IAmb	IAmb	05 24 39.1	
	comp=Z,15nm,1.4s						
SZCU	Shurtz Canyon	85.64	45	P	P	05 24 31.0	+2.4
SZCU				IAmb	IAmb	05 24 38.0	
	comp=Z,12nm,1.4s						
SPR3	Spring Creek 3	85.69	43	P	P	05 24 30.1	+1.2
SPR3				IAmb	IAmb	05 24 36.2	
	comp=Z,12nm,1.5s						
J08A	Circle Bar Ran	85.95	38	P	P	05 24 31.4	+1.5
J08A				IAmb	IAmb	05 24 57.8	
	comp=Z,10nm,1.3s						
X18A	Snowflake	85.97	49	P	P	05 24 33.5	+3.2
X18A				IAmb	IAmb	05 24 36.7	
	comp=Z,8.9nm,1.3s						
PKCU	Pink Cliffs	86.05	46	P	P	05 24 33.2	+2.4
MTPU	Mount Pierson	86.48	45	P	P	05 24 35.1	+2.2
MTPU				IAmb	IAmb	05 24 55.0	
	comp=Z,12nm,1.3s						
O19K	Port Alsworth	86.66	11	P	P	05 24 32.1	-0.6
MVU	Marysvale	86.73	45	P	P	05 24 36.5	+2.5
PSI	Prapat	86.94	274	P	P	05 24 35.1	-0.4
	comp=Z,4.3nm,0.4s,baz=196,slow=5.4,SNR=9.8						
CN2	Changchun	87.10	322	*e*P	P	05 24 34.0	-1.3
CN2				*e*PP	PP	05 27 59.9	+0.5
CN2				SKS	S	05 34 56.0	-17
CN2				pmax	pmax		
	comp=Z,30nm,1.1s						
CN2				pmax	pmax		
	comp=Z,310nm,4.0s						
CN2				LR	LR		
	comp=Z,220nm,18.0s						
CN2				LR	LR		
	comp=Z,350nm,18.0s						
CN2				LR	LR		
	comp=Z,640nm,20.0s						
KLR	Kul'dur	87.42	329	P	P	05 24 37.0	+0.3
	comp=Z,5.6nm,0.8s,baz=122,slow=5.4,SNR=7.2						
MNTX	Cornudas Mount	87.68	53	P	P	05 24 40.2	+1.7
MNTX				IAmb	IAmb	05 24 57.2	
	comp=Z,8.1nm,1.1s						
TX31	Lajitas Ar. Si	87.75	56	P	P	05 24 40.1	+1.2
TX32	Lajitas Array	87.75	56	P	P	05 24 40.2	+1.2
TX32				IAmb	IAmb	05 25 04.1	
	comp=Z,9.6nm,1.4s						
TXAR	Lajitas Array	87.75	56	P	P	05 24 39.5	+0.5
	comp=Z,1.3nm,0.8s,baz=234,slow=4.3,SNR=14						
TXAR				LR	LR	05 55 45.7	
	comp=Z,366nm,21.2s,baz=0.0,slow=30						
TMUT	Trail Mountain	87.83	45	P	P	05 24 41.0	+1.6
TMUT				IAmb	IAmb	05 24 48.4	
	comp=Z,20nm,1.4s						
SRU	San Rafael Swe	88.16	45	P	P	05 24 42.2	+1.4
SRU				IAmb	IAmb	05 24 42.6	
	comp=Z,12nm,1.4s						
P17A	Butcher Ranch,	88.22	45	P	P	05 24 43.0	+1.9
P17A				IAmb	IAmb	05 25 05.8	
	comp=Z,8.2nm,1.2s						
HLID	Hailey	88.39	40	P	P	05 24 43.0	+1.3
	baz=233						
PLID	Pearl Lake	88.42	38	P	P	05 24 43.0	+1.1
ANMO	Albuquerque	88.61	50	P	P	05 24 44.6	+1.6
	baz=238						
ANMO	Albuquerque	88.61	50	P	P	05 24 44.4	+1.3
ANMO				IAmb	IAmb	05 24 49.3	
	comp=Z,11nm,1.3s						
GLB	Gilahina Butte	89.89	15	P	P	05 24 49.5	+1.3
GLB				IAmb	IAmb	05 25 09.5	
	comp=Z,15nm,1.2s						
MCMT	McKenzie Canyo	90.04	39	P	P	05 24 51.2	+1.6
WAT6	Susitna Watana	90.07	13	P	P	05 24 50.0	+0.9
	baz=205						
ENH	Enshi	90.25	303	P	P	05 24 51.4	+0.7
TRF	Thorofare Moun	90.39	11	P	P	05 24 52.0	+1.3
	baz=203						
TRF	Thorofare Moun	90.39	11	P	P	05 24 50.6	-0.1
TRF				IAmb	IAmb	05 24 52.8	
	comp=Z,13nm,0.9s						
SMCO	Snowmass	90.50	46	P	P	05 24 54.1	+2.1
SMCO				IAmb	IAmb	05 25 01.5	
	comp=Z,6.8nm,1.3s						
DHY	Denali Highway	90.59	12	P	P	05 24 53.7	+2.1
	baz=206						
RND	Reindeer	90.61	12	P	P	05 24 52.2	+0.6
RND				IAmb	IAmb	05 24 59.5	
	comp=Z,14nm,1.0s						
LOHW	Long Hollow	90.66	41	P	P	05 24 56.2	+3.8
LOHW				IAmb	IAmb	05 25 04.1	
	comp=Z,7.4nm,1.4s						
SDCO	Great Sand Dun	90.73	48	P	P	05 24 55.4	+2.4
	baz=239						
SDCO	Great Sand Dun	90.73	48	P	P	05 24 54.4	+1.4
SDCO				IAmb	IAmb	05 24 55.4	
	comp=Z,7.3nm,1.4s						
PDAR	Pinedale Array	90.81	42	P	P	05 24 53.5	+0.3
	comp=Z,0.9nm,1.0s,baz=208,slow=5.0,SNR=5.0						
PDAR				LR	LR	06 07 00.4	
	comp=Z,388nm,18.3s,baz=254,slow=36						
M27K	Edge Creek, AK	91.14	15	P	P	05 24 55.6	+1.4
	baz=210						
YHH	Holmes Hill	91.18	40	P	P	05 24 57.8	+2.8
YHH				IAmb	IAmb	05 25 08.1	
	comp=Z,9.8nm,1.5s						
BOZ	Bozeman (W)	91.19	39	P	P	05 24 56.0	+1.2
BOZ				IAmb	IAmb	05 25 03.5	
	comp=Z,6.4nm,1.1s						
SEY	Seymchan	91.19	346	P	P	05 24 53.9	-0.2
	comp=Z,4.5nm,0.7s,baz=154,slow=4.1,SNR=8.0						
DLBC	Dease Lake	91.36	22	LR	LR	05 58 54.7	
	comp=Z,171nm,19.1s,baz=186,slow=31						
RIDG	Independent Ri	91.70	13	P	P	05 24 56.1	-0.5
	baz=208						
WRH	Wood River Hil	91.72	12	P	P	05 24 57.0	+0.4
DOT	Dot Lake	91.78	14	P	P	05 24 57.8	+0.9
TIY	Taiyuan	91.79	311	*e*P	P	05 25 00.0	+2.3
TIY				pmax	pmax		
	comp=Z,27nm,0.6s						
TIY				pmax	pmax		
	comp=Z,290nm,7.0s						
ILAR	Eielson Array	92.22	12	P	P	05 24 57.9	-1.0
	comp=Z,1.8nm,1.1s,baz=239,slow=3.8,SNR=6.1						
ILAR				LR	LR	05 59 41.2	
	comp=Z,232nm,20.8s,baz=208,slow=31						
XAN	Xi'an	92.48	306	P	P	05 25 00.5	-0.4
XAN				pP	pP	05 25 09.8	+1.5
XAN				S	S	05 36 08.0	+4.7
XAN				pmax	pmax		
	comp=Z,13nm,0.8s						
XAN				LR	LR		
	comp=Z,440nm,19.2s						
XAN				LR	LR		
	comp=Z,290nm,18.6s						
XAN				LR	LR		
	comp=Z,560nm,22.0s						
J26L	Joseph Creek	92.64	13	P	P	05 25 01.5	+0.5
	baz=209						
KMI	Kunming	93.21	296	⇑P	P	05 25 07.9	+3.2
KMI				pP	pwP	05 25 17.9	+0.3
KMI				pmax	pmax		
	comp=Z,14nm,0.8s						
KMI				pmax	pmax		
	comp=Z,190nm,6.0s						
CMAR	Chiang Mai Arr	93.54	289	P	P	05 25 06.5	+0.4
	comp=Z,10nm,0.9s,baz=135,slow=3.3,SNR=36						
CMAR				LR	LR	06 06 29.7	
	comp=Z,118nm,19.5s,baz=166,slow=35						
CHTO	Chiang Mai	93.69	289	P	P	05 25 07.5	+0.8
HHC	Hu-ho-hao-te	93.95	313	*e*P	P	05 25 09.3	+1.7
I29M	Ogilvie Camp,	94.54	15	P	P	05 25 10.6	+1.0
	baz=214						
CD2	Chengdu	94.93	302	P	P	05 25 13.5	+1.2
CD2				LR	LR		
	comp=Z,470nm,17.7s						
CD2				LR	LR		
	comp=Z,390nm,19.4s						
CD2				LR	LR		
	comp=Z,530nm,24.5s						
KS20	Mayfield South	96.01	52	P	P	05 25 19.3	+2.3
LZH	Lanzhou	97.11	306	⇓P	Pdif	05 25 31.9	+10
LZH				pP	pwP	05 25 41.0	+5.9
LZH	Lanzhou	97.11	306	S	S	05 36 51.3	+7.4
LZH	Lanzhou	97.11	306	sS	sS	05 36 58.8	+2.6
SONM	Songino Array	100.47	318	P	Pdif	05 25 37.1	+0.2
	comp=Z,0.9nm,0.8s,baz=121,slow=5.5,SNR=4.9						
WMQ	Urumqi	111.40	309	*e*PKP	PKiKP	05 30 24.9	+1.1
WMQ				LR	LR		
	comp=Z,440nm,20.5s						
WMQ				LR	LR		
	comp=Z,220nm,22.9s						
ZALV	Zalesovo Beam	115.26	320	PKP	PKiKP	05 30 30.3	-0.4
	comp=Z,0.8nm,0.3s,baz=134,slow=4.2,SNR=1.8						
MKAR	Makanchi Array	115.75	312	PKP	PKPdf	05 30 30.5	-1.4
	comp=Z,1.2nm,0.8s,baz=72,slow=4.0,SNR=8.3						
MAKZ	Makanchi	115.96	312		PKiKP	05 30 32.9	+0.5
ARCES	ARCESS Array B	133.68	350	PKP	PKiKP	05 31 07.5	+0.7
	comp=Z,3.4nm,0.9s,baz=11,slow=1.2,SNR=5.2						
FINES	FINESS Array B	140.63	344	PKhKP	PKPpre	05 31 13.5	
	comp=Z,6.8nm,1.1s,baz=116,slow=13,SNR=3.5						
NOA	NORSAR Array B	143.64	354	PKP	PKPdf	05 31 24.9	+0.9
	comp=Z,1.4nm,0.8s,baz=5.6,slow=3.7,SNR=3.3						
MNK	Minsk	145.70	335	*i* PKP	PKPdf	05 31 27.2	-0.5
	comp=E,2.0nm,0.8s						
MNK				*i* PKP	PKPdf	05 31 27.2	-0.5
	comp=N,11nm,0.8s,baz=40						
MNK				*i* PKP	PKPdf	05 31 27.2	-0.5
	comp=Z,29nm,1.0s						
MNK				*i* PP	PP	05 34 47.4	-1.2
MNK				*i* SKP		05 34 58.5	
MNK				*i* PKS	PKSdf	05 35 03.1	+0.2
MNK				*i* PPP	PPP	05 38 01.3	
MNK				*i* SKS	SKSdf	05 38 33.7	-1.1
MNK				*i* SKKS	SKKSdf	05 47 32.6	-11
MNK				*i* SS	SS	05 53 33.4	-6.4
MNK				*i* SSS	SSS	05 59 03.3	
MNK				*i* LR	LR	06 34 43.0	
MNK				*i* LRM	MLR	06 40 57.8	
	comp=Z,231nm,20.4s						
MNK				*i* LRM	MLR	06 41 19.9	
	comp=E,68nm,17.0s						
MNK				*i* LRM	MLR	06 41 30.9	
	comp=N,629nm,20.4s						
NACGM	Naroch	145.79	337	*i* PKP	PKPdf	05 31 27.8	0.0
PABE	Paberze	146.25	340	*e*P	PKPbc	05 31 29.7	0.0
SUW	Suwalki	147.75	339	*e*P	PKiKP	05 31 36.3	+0.3
AKASG	Malin Array Be	147.92	330	PKPbc	PKPdf	05 31 33.2	+1.7
	comp=N,7.9nm,0.7s,baz=38,slow=3.8,SNR=15						
SORM	Soroca	150.09	327	⇓P	PKPbc	05 31 40.1	-0.1
MILM	Milestii Mici	150.65	324	⇓P	PKPbc	05 31 41.2	-0.3
BRTR	Keskin Array B	151.31	308	PKPbc	PKPbc	05 31 42.6	-0.9
	comp=N,5.0nm,0.8s,baz=133,slow=1.9,SNR=22						
RUE	Ruedersdorf	151.60	348	*e*P	PKiKP	05 31 45.2	+1.2
BURAR	Bucovina Array	151.96	329	⇑P	PKiKP	05 31 46.5	+1.5
TESR	Tescani	152.03	326	⇑P	PKPbc	05 31 44.3	-0.5
CFR	Carcaliu	152.11	322	⇓P	PKPbc	05 31 43.4	-1.5
TPGR	Topolog	152.15	321	⇑P	PKPbc	05 31 45.2	+0.1
KOLS	Kolonicke sedl	152.23	334	*e*PKP	PKiKP	05 31 45.9	+0.4
VRI	Vrincioaia	152.43	325	⇑P	PKiKP	05 31 46.5	+0.6
PLOR	Plostina	152.48	325	⇓P	PKPbc	05 31 45.8	-0.1
HARR	Harsova	152.52	322	⇑P	PKiKP	05 31 46.7	+0.6
CRVS	Cervenica-Dubn	152.57	335	*e*PKP	PKiKP	05 31 48.1	+1.9
CRVS				*e*		05 31 53.2	
OSTC	Ostas	152.84	343	⇑*e*PKP	PKPbc	05 31 44.2	-2.3
OSTC				*e*x	x	05 31 47.8	
CHVC	Chvalec	152.85	343	⇑*e*PKP	PKiKP	05 31 47.0	+0.3
OKC	Ostrava-Krasne	152.93	340	⇑*e*PKP	PKiKP	05 31 50.2	+3.4
OKC				*e*pPKP	sPKPab	05 32 07.1	-0.9
DPC	Dobruska-Polom	153.00	343	⇑*e*PKP	PKPbc	05 31 46.9	0.0

DOPR	Dopca	153.04	326	⇑P	PKPbc	05 31 46.9	-0.2
MLR	Muntele Rosu	153.09	325	⇓P	PKPbc	05 31 47.6	+0.3
BRG	Berggiesshubel	153.09	346	*e*P	PKPbc	05 31 47.1	+0.2
BRG				Amp		05 31 51.6	
	comp=Z,7.0nm,0.9s						
LANS	Liptovska Anna	153.09	338	*e*PKP	PKiKP	05 31 49.8	+2.5
LANS				*e*		05 31 55.8	
VOIR		153.58	326	⇑P	PKiKP	05 31 49.3	+0.9
DRGR		153.72	331	⇓P	PKPbc	05 31 47.8	-0.8
PRU	Pruhonice	153.78	345	⇑*e*PKP	PKiKP	05 31 52.3	+3.7
PRU				*e*x	x	05 32 00.3	
ARR	Arges	153.84	326	⇓P	PKiKP	05 31 49.4	+0.4
VYHS	Vyhne	153.87	338	*e*PKP	PKiKP	05 31 50.0	+1.1
PSZ	Piszkesteto	153.98	336	⇑P	PKPab	05 31 57.0	-5.4
SIRR	Siria	154.59	331	⇓P	PKPbc	05 31 50.7	+0.3
KHC	Kasperske Hory	154.81	346	*e*PKPDF	PKPdf	05 31 41.8	-0.4
KHC				*e*PKPAB	PKPab	05 32 06.1	+0.2
CKRC	Cesky Krumlov	154.93	344	*e*PKPDF	PKPdf	05 31 41.6	-0.7
CONA	Conrad Observa	155.32	341	*e*P	PKPab	05 32 07.9	-0.3
	comp=Z,9.0nm,1.7s						
MOA	Molln	155.84	343	*e*P	PKPab	05 32 10.8	+0.6
	comp=Z,5.0nm,1.2s						
ARSA	Arzberg	156.03	341	*e*P	PKPab	05 32 11.1	0.0
	comp=Z,2.9nm,1.0s						
SOKA	Soboth	156.69	341	*e*P	PKPab	05 32 14.6	+0.5
	comp=Z,2.6nm,0.9s						
WATA	Walderalm	156.94	347	*e*P	PKPab	05 32 14.5	-0.7
	comp=Z,5.3nm,1.4s						
RETA	Reutte	156.95	349	*e*P	PKPab	05 32 15.2	+0.1
	comp=Z,7.7nm,1.5s						
OBKA	Obir	156.99	342	P	PKPab	05 32 14.8	-0.6
	comp=Z,5.5nm,1.1s						
WTTA	Wattenberg	157.00	347	*e*P	PKPab	05 32 15.2	-0.3
	comp=Z,16nm,1.6s						
MOTA	Moosalm	157.02	348	*e*P	PKPdf	05 31 46.8	+1.5
	comp=Z,6.7nm,1.3s						
SQTA	Sankt Quirin	157.12	348	*e*P	PKPdf	05 31 46.2	+0.8
	comp=Z,3.4nm,1.3s						
DAVA	Damuels	157.29	350	*e*P	PKPab	05 32 15.6	-1.1
	comp=Z,5.6nm,1.0s						
ABTA	Abfaltersbach	157.29	345	*e*P	PKPdf	05 31 47.7	+2.1
	comp=Z,4.1nm,1.0s						
FETA	Feichten	157.40	348	*e*P	PKPdf	05 31 46.7	+0.9
	comp=Z,3.6nm,1.1s						
MVO	Moncorvo	161.32	27	*e*PKPdf	PKPdf	05 31 52.3	+1.9
MTE	Manteigas	161.72	30	*e*PKPdf	PKPdf	05 31 53.4	+2.6
PCBR	Castelo Branco	162.20	31	*e*PKPdf	PKPdf	05 31 52.9	+1.7
PMRV	Marv??o	162.56	31	*e*PKPdf	PKPdf	05 31 52.8	+1.1
ESDC	Sonseca Array	163.79	23	PKP	PKPdf	05 31 53.0	+0.1
	comp=Z,1.3nm,1.0s,baz=346,slow=1.8,SNR=7.0						
TORD	Torodi Ar. Bea	167.99	168	PKP	PKPdf	05 31 56.1	-0.8
	comp=Z,1.0nm,1.0s,baz=332,slow=2.8,SNR=4.6						
TORD				PKPab	PKPab	05 33 05.7	+1.7
	comp=Z,1.5nm,0.8s,baz=192,slow=2.6,SNR=6.9						

IDC ***15*** *05:13:54.5±0.7, 31°.84N×128°.92E, h0^{km}, mb4.1/22, mb1 4.3/25, mb1mx4.2/49, mbtmp4.1/25, ML3.6/2, MS3.9/14, Ms1 3.9/14, ms1mx3.6/48, Error ellipse: s-maj=15.9km s-min=15.2km az=105.0*

KMA ***15*** *05:13:54.2, 31°.60N×128°.94E, h15^{km}*

NIED ***15*** *05:13:55.9, 31°.82N×128°.95E, h18^{km}, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-5.71; $M_{\theta\theta}$4.19; $M_{\phi\phi}$1.52; $M_{r\theta}$-1.30; $M_{\theta\phi}$2.23; $M_{\phi r}$-1.39; Fault plane solution: $M_0$5.90000×10^{15} NP1:ϕ_s55.00000°, δ54.00000°, λ-96.00000°. NP2:ϕ_s245.00000°, δ36.00000°, λ-82.00000°.*

JMA ***15*** *05:13:55.8±0.1, 31°.82N×128°.95E, h18^{km}±2^{km}, M4.3*

BJI ***15*** *05:13:56.2±0.0, 31°.76N×128°.98E, h15^{km}, mB4.7/33, mb4.3/51, ML4.4/3, Ms4.4/51, Ms7 4.1/46*

MOS ***15*** *05:13:56.8±2.2, 31°.93N×129°.00E, h16^{km}, mb4.9/24, Error ellipse: s-maj=10.2km s-min=5.2km az=109.1*

NEIC ***15*** *05:13:57.8±1.4, 31°.92N±0°.04×128°.85E±0°.06, h10^{km}±1^{km}, mb4.8/58, Error ellipse: s-maj=9.5km s-min=4.8km az=128.0*

ISC 15 05:13:57.1±0.3, **31°.89N**±0°.03×**128°.97E**±0°.03, **h11^{km}, n285,** σ**2^s.06**/262, **mb4.7**/80, **MS4.1**/20, **15C-4D, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.67	108	⇑P	Pg	05 14 08.2	-1.9
JSJ				*e*S	Sg	05 14 17.6	-1.2
JFU	Fukue jima 2	0.79	346	⇑P	Pg	05 14 11.9	-0.5
JFU				S	Sg	05 14 22.8	0.0
NGSJ	Nagasakinomoza	1.02	43	P	Pg	05 14 15.4	-1.4
NGSJ				*e*S	Sb	05 14 30.4	+0.1
JHD	Hondo	1.15	59	P	Pb	05 14 17.5	-1.4
JSU	Suzuyama	1.32	106	Pn	Pn	05 14 20.0	-1.5
JIU3	Izumi3	1.70	67	P	Pn	05 14 25.4	-1.3
JTZ	Takazaki	1.80	89	P	Pn	05 14 26.5	-1.6
JII	Iki	2.01	18	P	Pn	05 14 30.3	-0.7
JNU	Nakatsue	2.03	52	Pn	Pn	05 14 31.3	0.0
	38nm,0.3s,baz=41,slow=0.0,SNR=93						
JNU				Sn	Sb	05 14 59.0	-0.4
	baz=334,slow=22,SNR=5.7						
JTN	Tanegashima 3	2.11	125	P	Pn	05 14 30.3	-2.1
KSJJU	Jeju	2.56	308	P	Pn	05 14 38.8	+0.2
	SNR=16						
KSJJU	Jeju	2.56	308	P	Pg	05 14 44.8	-1.4
	SNR=22						
GMDB	Geomundo	2.57	327	P	Pn	05 14 38.0	-0.8
	SNR=20						
GMDB	Geomundo	2.57	327	P	Pb	05 14 44.0	+0.7
	SNR=22						
JTU	Tsushima	2.66	8	Pn	Pn	05 14 40.5	+0.7
YNDB	Yeoundo	2.72	339	P	Pn	05 14 41.0	+0.2
	SNR=11						
HALB	Hallimjungang-	2.73	304	P	Pb	05 14 47.0	+1.0
	SNR=16						
YKDB	Yokjido	2.79	348	P	Pn	05 14 41.0	-0.8
	SNR=25						
YKDB	Yokjido	2.79	348	P	Pb	05 14 47.0	0.0
	SNR=20						
KUJA	Jangpyeong	3.01	354	P	Pb	05 14 49.0	-1.8
	SNR=19						
KSNAH	Namhae	3.05	344	P	Pn	05 14 45.2	-0.1
	SNR=34						
CJD	Chujado	3.06	313	P	Pn	05 14 45.0	-0.4
	SNR=14						
WAN2	Wando-Q330s	3.15	323	P	Pg	05 14 57.0	-0.4
	SNR=19						
BOSB	Boseong-gun	3.23	333	P	Pn	05 14 48.0	+0.3
	SNR=21						
GWYB	Gwangyang	3.23	341	P	Pn	05 14 48.0	+0.2
	SNR=22						
KSBUS	Busan	3.36	2	P	Pb	05 14 54.0	-2.7
	SNR=8.0						
KSJDO	Jindo	3.41	320	P	Pn	05 14 49.1	-1.1
	SNR=14						
EURB	Uiryeong-eup	3.48	351	P	Pb	05 14 56.0	-2.7
	SNR=6.5						
KSSCH	SUNCHEON	3.48	336	P	Pn	05 14 51.5	+0.2
	SNR=50						
HAMB	Hamyang	3.76	345	P	Pn	05 14 55.0	0.0
	SNR=27						
NAWB	Namwon	3.76	340	P	Pn	05 14 56.0	+0.9
	SNR=19						
KSUSN	Ulsan	3.81	2	P	Pb	05 15 00.9	-3.5
	SNR=10						
KSKCH	Geochang	3.82	347	P	Pn	05 14 56.4	+0.5
	SNR=29						
KSJEU	Jeongeup	3.98	335	P	Pn	05 14 58.7	+0.6
	SNR=26						
KSYOC	YEONGCHEON	4.08	360	P	Pb	05 15 05.2	-3.7
	SNR=7.4						
YOCB	Yeongcheon	4.08	360	P	Pb	05 15 05.0	-4.0
	SNR=7.0						
KSJEO	Jeonju	4.28	341	P	Pn	05 15 07.0	+4.8
	SNR=10.0						
KSJEO	Jeonju	4.28	341	P	Pn	05 15 02.0	-0.2
	SNR=17						
SMKB	Mukjeong-gil	4.29	333	P	Pn	05 15 07.1	+4.7
	SNR=5.8						
KSCPR	CHUPUNGNYEONG	4.40	349	P	Pn	05 15 08.2	+4.3
	SNR=13						
KSCPR	CHUPUNGNYEONG	4.40	349	P	Pn	05 15 04.7	+0.8
	SNR=40						
MNYD	Munyeodo	4.45	332	P	Pb	05 15 11.0	-4.2
	SNR=5.8						
KSEUS	ULSEONG	4.46	357	P	Pn	05 15 10.0	+5.3
	SNR=11						
EUSB	Uiseong	4.47	357	P	Pn	05 15 10.0	+5.3
	SNR=9.7						
KSADO	Andong	4.51	360	P	Pb	05 15 11.0	-5.4
	SNR=12						
JMN	Monobe	4.52	65		Pn	05 15 08.8	+3.2
OKCB	Cheongsan-myeo	4.55	348	P	Pn	05 15 07.0	+1.0
	SNR=30						
KSSAJ	Sangju	4.56	352	P	Pn	05 15 11.2	+5.2
	SNR=11						
JHS	Saijyo	4.65	47		Pn	05 15 08.9	+1.5
TJN	Taejon	4.67	344	*ce*P	Pn	05 15 08.0	+0.4
BUYB	Buyeo	4.70	339	P	Pn	05 15 12.2	+4.3
	SNR=9.9						
KSBON	Boeun	4.70	348	P	Pn	05 15 09.5	+1.5
	SNR=57						
KSMGY	Mungyeong	4.82	351	P	Pn	05 15 13.4	+3.8
	SNR=11						
KOJ2	Gongju-si	4.82	342	P	Pn	05 15 11.0	+1.4
	SNR=49						
KSULJ	Uljin	4.82	4	P	Pn	05 15 15.0	+5.4
	SNR=9.5						
YOJB	Youngju	4.99	356	P	Pn	05 15 17.0	+5.0
	SNR=12						
KSCHJ	Chungju	5.04	351	P	Pn	05 15 17.0	+4.4
	SNR=7.4						
CHYB	Chungyang	5.05	359	P	Pn	05 15 18.0	+5.3
	SNR=7.6						
JOW	Kunigami	5.07	187	Pn	Pn	05 15 13.9	+0.7
	1.0nm,0.3s,baz=324,slow=12,SNR=4.0						
JOW				LR	LR	05 17 30.9	
	comp=Z,506nm,21.7s,baz=5.5,slow=43						
JOW	Kunigami	5.07	187	Pn	Pn	05 15 14.4	+1.3
UJN	ULJIN	5.11	4	P	Pn	05 15 17.6	+4.0
	SNR=13						
KSCEA	Cheonan	5.12	344	P	Pn	05 15 14.2	+0.3
	SNR=68						
KSTBA	Taebaek	5.22	360	P	Pn	05 15 20.3	+5.1
	SNR=7.2						
KSYOW	Yeongwol	5.29	356	P	Pn	05 15 16.7	+0.5
	SNR=66						
JECH	Jecheon	5.30	353	P	Pn	05 15 21.3	+5.1
	SNR=8.4						
KSSES	Seosan	5.32	338	P	Pn	05 15 22.0	+5.6
	SNR=9.1						
PYTK	Pyeongtaek	5.32	344	P	Pn	05 15 21.5	+5.1
	SNR=12						
IMWB	Imwonan-gil	5.35	3	P	Pn	05 15 22.0	+5.1
	SNR=17						
HAWB	Hwaseong-si	5.49	341	P	Pn	05 15 20.0	+1.1
	SNR=31						
KSICN	Icheon	5.54	347	P	Pn	05 15 20.2	+0.6
	SNR=32						
KSAR	Wonju Array Be	5.62	351	P	Pn	05 15 22.1	+1.6
KSAR	Wonju Array Be	5.62	351		Pn	05 15 22.1	+1.6
KSSWO	Suwon	5.62	343	P	Pn	05 15 25.8	+5.3
	SNR=6.7						
KSSWO	Suwon	5.62	343	P	Pn	05 15 21.0	+0.4
	SNR=50						
KSRS	Korea Array	5.62	351	Pn	Pn	05 15 20.9	+0.3
	1.7nm,0.3s,baz=176,slow=15,SNR=35						
KSRS				Sn	Sn	05 16 25.5	+0.3
	2.8nm,0.3s,baz=174,slow=25,SNR=4.1						
KSRS				Lg	Lg	05 16 49.7	
	3.8nm,0.3s,baz=172,slow=29,SNR=9.1						
KSRS				LR	LR	05 17 44.7	
	comp=Z,780nm,21.1s,baz=176,slow=41						
KS19	Wonju Array Si	5.68	351		Pn	05 15 20.9	-0.5
SHHB	Siheung-si	5.76	342	P	Pn	05 15 28.0	+5.4
	SNR=7.3						
KSSEO	Seoul	5.84	344	P	Pn	05 15 24.0	+0.4
	SNR=28						
KSSEO	Seoul	5.84	344	P	Pn	05 15 24.0	+0.4
	SNR=28						
KSDEI	Deokjeokdo	5.86	337	P	Pn	05 15 29.2	+5.4
	SNR=8.8						
KSDEI	Deokjeokdo	5.86	337	P	Pn	05 15 24.6	+0.8
	SNR=28						
INCN	Inchon	5.91	342	P	Pn	05 15 24.7	+0.1
INCN	Inchon	5.91	342		Pn	05 15 24.6	+0.1
KSSOD	Songwoldong	5.91	344	P	Pn	05 15 30.0	+5.4
	SNR=6.5						
KSCHC	Chuncheon	5.96	351	P	Pn	05 15 30.1	+4.9
	SNR=8.9						
GAPB	Gapyeong	6.07	349	P	Pn	05 15 27.2	+0.4
	SNR=35						
KSIJA	INJE	6.13	354	P	Pn	05 15 32.6	+5.0
	SNR=6.6						
KSGAH	Ganghwa	6.17	341	P	Pn	05 15 28.4	+0.3
	SNR=58						
KSDDC	Dongducheon	6.20	346	P	Pn	05 15 33.8	+5.2
	SNR=6.2						
KSMUS	Musan	6.26	344	P	Pn	05 15 34.3	+4.9
	SNR=7.4						
KSCWO	Cheorwon	6.30	349	P	Pn	05 15 35.0	+5.0
	SNR=10						
YPDB	Yeonpyeongdo	6.31	336	P	Pn	05 15 30.0	0.0
	SNR=12						
JWT	Wachi	6.35	56	Pn	Pn	05 15 31.7	+1.1
YNCB	YEONCHEON	6.37	345	P	Pn	05 15 36.2	+5.4
	SNR=11						
YNCB	YEONCHEON	6.37	345	P	Pn	05 15 31.6	+0.8
	SNR=7.7						
HWCB	Hwacheon	6.41	351	P	Pn	05 15 37.0	+5.5
	SNR=11						
SSE	Sheshan	6.70	265	Pn	Pn	05 15 39.0	+3.6
SSE				smax	smax		
	comp=N,170nm,0.8s						
SSE				smax	smax		
	comp=E,100nm,0.9s						
SSE				LR	LR		
	comp=N,1μm,13.2s						
SSE				LR	LR		
	comp=E,410nm,13.1s						
INU	Inuyama	7.55	61	Pn	Pn	05 15 48.2	+1.1
NJ2	Nanjing	8.60	274	*e*P	Pn	05 16 00.6	-0.9
NJ2				S	Sn	05 17 35.6	-2.9
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
NJ2				smax	smax		
	comp=N,150nm,1.0s						
NJ2				smax	smax		
	comp=E,110nm,1.0s						
NJ2				LR	LR		
	comp=N,1μm,9.8s						
NJ2				LR	LR		
	comp=E,870nm,7.7s						
NJ2				LR	LR		
	comp=Z,930nm,11.5s						
MJAR	Matsushiro Arr	8.95	56	Pn	Pn	05 16 08.3	+1.9
	0.0nm,0.3s,baz=245,slow=12,SNR=2.0						
TIA	Tai'an	10.73	297	P	Pn	05 16 34.3	+3.5
TIA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
TIA				pmax	pmax		
	comp=Z,65nm,4.4s						
TIA				LR	LR		
	comp=N,690nm,10.7s						
TIA				LR	LR		
	comp=E,530nm,7.1s						
TIA				LR	LR		
	comp=Z,780nm,7.8s						
JCJ	Chichijima	12.46	109	LR	LR	05 21 52.9	
	comp=Z,209nm,18.1s,baz=140,slow=38						
JCJ	Chichijima	12.46	109	Pn	Pn	05 16 54.0	-0.5
USA0B	Ussuriysk Arra	12.52	10	P	Pn	05 16 54.2	-1.0
USA0B	Ussuriysk Arra	12.52	10	Pn	Pn	05 16 54.2	-1.0
USRK	Ussuriysk Ar.	12.52	10	Pn	Pn	05 16 58.6	+3.5
	baz=204,slow=12,SNR=3.2						
USRK	Ussuriysk Ar.	12.52	10	P	Pn	05 16 54.2	-1.0
USRK	Ussuriysk Ar.	12.52	10		Pn	05 16 54.1	-1.0
WHN	Wuhan	12.59	268	⇓P	P	05 17 14.3	+6.6
WHN				S	Sn	05 19 36.6	+20
WHN				LR	LR		
	comp=N,1μm,12.4s						
WHN				LR	LR		
	comp=E,2μm,11.5s						
WHN				LR	LR		
	comp=Z,1μm,10.5s						
BJT	Baijiatuau	13.16	312	P	Pn	05 17 02.5	-1.4
BJT	Baijiatuau	13.16	312	Pn	Pn	05 17 02.5	-1.4
BJI	Beijing	13.17	312	P	Pn	05 17 06.4	+2.4
BJI				sP	P	05 17 10.3	-3.8
BJI				pmax	pmax		
	comp=Z,14nm,1.1s						
BJI				pmax	pmax		
	comp=Z,260nm,6.4s						
BJI				LR	LR		
	comp=Z,740nm,17.5s						
BJI				LR	LR		
	comp=Z,570nm,19.4s						
BJI				LR	LR		
	comp=Z,1μm,15.5s						
JTM	Tenmabayashi	13.18	44	Pn	Pn	05 17 01.3	-2.9
ASAJ	Asahikawa	16.23	37	Pn	P	05 17 47.5	-0.7
	comp=Z,0.6nm,0.3s,baz=266,slow=13,SNR=2.5						
ASAJ				LR	LR	05 23 53.9	
	comp=Z,76nm,18.3s,baz=218,slow=37						
HHC	Hu-ho-hao-te	16.61	307	*e*P	Pn	05 17 49.3	-0.7
HHC				sP	sP	05 17 58.8	+2.1
HHC				pmax	pmax		
	comp=Z,14nm,0.7s						
HHC				pmax	pmax		
	comp=Z,220nm,6.6s						
HHC				LR	LR		
	comp=Z,540nm,13.1s						
HHC				LR	LR		
	comp=Z,570nm,12.8s						
HHC				LR	LR		
	comp=Z,1μm,15.2s						
ENH	Enshi	16.77	270	Pn	Pn	05 17 50.9	-1.2
XAN	Xi'an	16.96	283	P	P	05 18 02.0	+5.6
XAN				pP	sP	05 18 05.1	+4.5
XAN				S	S	05 21 09.3	-3.9
XAN				pmax	pmax		
	comp=Z,13nm,1.4s						
XAN				LR	LR		
	comp=N,2μm,15.3s						
XAN				LR	LR		
	comp=E,380nm,13.1s						
XAN				LR	LR		
	comp=Z,800nm,15.3s						
KLR	Kul'dur	17.45	6	P	P	05 18 03.0	+1.3
	comp=Z,0.3nm,0.3s,baz=184,slow=7.7,SNR=10						
KLR				LR	LR	05 24 58.9	
	comp=Z,176nm,18.6s,baz=216,slow=38						
KLR	Kul'dur	17.45	6	*ce*P	P	05 18 02.3	+0.7
BTO	Baotou	17.56	305	*e*P	P	05 18 05.0	+1.9
BTO				S	S	05 21 22.9	-2.6
BTO				LR	LR		
	comp=Z,3μm,16.3s						
BTO				LR	LR		
	comp=Z,2μm,13.7s						
YSS	Yuzh-Sakhalins	18.39	31	*e*P	Pn	05 18 12.1	+0.1
YSS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
YSS				MLR	MLR		
	comp=Z,300nm,12.0s						
YSS	Yuzh-Sakhalins	18.39	31	P	Pn	05 18 13.2	+1.2
HIA	Hailar	18.70	341	P	P	05 18 14.1	-1.3
HIA				pmax	pmax		
	comp=Z,44nm,1.2s						
HIA	Hailar	18.70	341		P	05 18 14.1	-1.3
HIA				IAmb	IAmb	05 18 22.0	
	comp=Z,44nm,1.2s						
GYA	Guiyang	20.20	260	⇑P	Pn	05 18 34.5	+0.5
GYA				pP	sP	05 18 41.1	+4.7
GYA				S	S	05 22 14.3	-4.6
GYA				sS	pS	05 22 28.9	-1.2
GYA				pmax	pmax		
	comp=Z,11nm,1.2s						
GYA				pmax	pmax		
	comp=Z,190nm,8.3s						
GYA				LR	LR		
	comp=Z,400nm,13.6s						
GYA				LR	LR		
	comp=Z,310nm,11.1s						
GYA				LR	LR		
	comp=Z,190nm,12.4s						
LZH	Lanzhou	21.23	288	⇓P	P	05 18 47.8	+4.5
LZH				pP	sP	05 18 53.3	+5.8
LZH				sP	pP	05 18 55.8	+10
LZH				S	Sn	05 22 44.6	-1.7
LZH				sS	pS	05 22 52.0	+5.1
LZH				pmax	pmax		
	comp=Z,21nm,1.2s						
LZH				pmax	pmax		
	comp=Z,140nm,4.3s						
LZH				LR	LR		
	comp=Z,570nm,13.6s						
LZH				LR	LR		
	comp=Z,610nm,13.6s						
LZH				LR	LR		
	comp=Z,560nm,14.6s						
QIZ	Qiongzhong	21.45	238	P	P	05 18 47.3	+1.7
QIZ				S	S	05 22 44.4	+0.8
QIZ				LR	LR		
	comp=Z,350nm,12.5s						
QIZ				LR	LR		
	comp=Z,280nm,11.9s						
QIZ				LR	LR		
	comp=Z,300nm,10.3s						
TYV	Tymovskoe	21.50	24	*e*P	P	05 18 54.8	+9.0
TYV				pmax	pmax		
	comp=Z,100nm,3.7s						
TYV				pmax	pmax		
	comp=Z,12nm,1.1s						
CD2	Chengdu	21.53	274	P	P	05 18 45.3	-1.1
CD2				S	S	05 22 40.6	-4.5
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
CD2				pmax	pmax		
	comp=Z,180nm,7.1s						
CD2				LR	LR		
	comp=Z,1μm,13.9s						
CD2				LR	LR		
	comp=Z,1μm,12.4s						
CD2				LR	LR		
	comp=Z,800nm,10.0s						
ZEA	Zeya	21.88	357	*e*P	P	05 18 51.5	+1.7
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,100nm,3.3s						
ZEA				MLR	MLR		
	comp=N,300nm,11.0s						
ZEA				MLR	MLR		
	comp=Z,300nm,10.0s						
ULN	Ulaanbaatar	23.07	320	*ce*P	P	05 19 03.1	+0.4
ULN				pmax	pmax		
	comp=Z,34nm,1.7s						
ULN	Ulaanbaatar	23.07	320	P	P	05 19 01.4	-1.3
SONM	Songino Array	23.41	319	P	P	05 19 06.2	0.0
	comp=Z,22nm,1.1s,baz=137,slow=8.5,SNR=26						
SONM				LR	LR	05 29 09.6	
	comp=Z,472nm,19.1s,baz=142,slow=39						
SONM	Songino Array	23.41	319	P	P	05 19 05.8	-0.3
SONM				IAmb	IAmb	05 19 12.0	
	comp=Z,16nm,0.9s						
KMI	Kunming	23.98	260	⇑P	P	05 19 11.5	-0.5
KMI				pP	pP	05 19 15.0	-0.1
KMI				sS	sS	05 23 35.3	+1.2
KMI				pmax	pmax		
	comp=Z,11nm,0.5s						
KMI				LR	LR		
	comp=Z,220nm,9.4s						
KMI				LR	LR		
	comp=Z,430nm,8.7s						
KMI				LR	LR		
	comp=Z,360nm,9.0s						
SLVN	Son La	24.70	251	P	P	05 19 17.7	-0.7
GTA	Gaotai	24.78	296	*e*P	P	05 19 21.6	+2.5
GTA				pP	sP	05 19 28.6	+5.1
GTA				sP	pP	05 19 32.1	+10
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,120nm,4.7s						
GTA				LR	LR		
	comp=Z,380nm,16.0s						
GTA				LR	LR		
	comp=Z,290nm,15.6s						
GTA				LR	LR		
	comp=Z,450nm,16.0s						
ZAK	Zakamensk	26.54	322	*e*P	P	05 19 33.9	-1.0
ZAK				pmax	pmax		
	comp=Z,14nm,1.1s						
TLY	Talaya	27.12	324	LR	LR	05 31 25.9	
	comp=Z,216nm,18.1s,baz=152,slow=39						
TLY	Talaya	27.12	324	P	P	05 19 37.8	-2.2
CHTO	Chiang Mai	29.98	252	P	P	05 20 05.7	-0.1
CHTO				pmax	pmax		
	comp=Z,8.0nm,1.3s						
CHTO	Chiang Mai	29.98	252	P	P	05 20 05.7	-0.1
YAK	Yakutsk	30.16	1	LR	LR	05 32 07.5	

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      comp=Z,130nm,18.6s,baz=120,slow=36
CMAR  Chiang Mai Arr     30.17 251   P      P       05 20 06.0 -1.4
      comp=Z,0.6nm,0.3s,baz=220,slow=33,SNR=4.6
CMAR  Chiang Mai Arr     30.17 251ceP      P       05 20 11.8 +4.3
CMAR                                 pmax   pmax
      comp=Z,1.0nm,0.3s
CMAR  Chiang Mai Arr     30.17 251   P      P       05 20 05.7 -1.8
WMQ   Urumqi             34.36 302 eP      P       05 20 47.5 +3.4
WMQ                                  sP     sP      05 20 56.0 +7.5
WMQ                                  pmax   pmax
      comp=Z,13nm,1.1s
WMQ                                  pmax   pmax
      comp=Z,96nm,4.1s
WMQ                                  LR     LR
      comp=Z,310nm,15.5s
WMQ                                  LR     LR
      comp=Z,410nm,16.9s
WMQ                                  LR     LR
      comp=Z,220nm,20.9s
SEY   Seymchan           34.46  19   P      P       05 20 44.0 -0.5
      comp=Z,6.8nm,0.8s,baz=195,slow=8.4,SNR=6.0
FAKI  Fak Fak            34.75 174   P      P       05 20 48.0 +0.4
ODAN  Odare              36.42 273 eP      P       05 21 01.4 -0.8
JIRN  Jiri               37.20 275 eP      P       05 21 08.8 -0.1
GUN   Gumba              37.39 275 eP      P       05 21 10.6 +0.1
      comp=Z,107nm,1.0s
PKI   Pulchoki           37.89 275 eP      P       05 21 14.2 -0.5
      comp=Z,98nm,1.2s
KKN   Kakani             37.93 275 eP      P       05 21 14.8 -0.2
      comp=Z,88nm,1.1s
DMN   Daman              38.13 275 eP      P       05 21 15.7 -1.0
ZAA0  Zalesovo Array     38.30 318   P      P       05 21 16.3 -1.2
ZALV  Zalesovo Beam      38.30 318   P      P       05 21 15.5 -2.0
      comp=Z,0.6nm,0.5s,baz=27,slow=27,SNR=1.8
ZALV                                 PcP    PcP     05 23 29.2 -2.1
      comp=Z,0.3nm,0.3s,baz=100,slow=6.0,SNR=1.5
ZALV  Zalesovo Beam      38.30 318   P      P       05 21 16.6 -0.9
ZALV  Zalesovo Beam      38.30 318   P      P       05 21 16.6 -0.9
GKN   Gorkha             38.41 276 eP      P       05 21 18.1 -0.9
MK31  Makanchi Array     38.47 307   P      P       05 21 19.1  0.0
MK31                                 pmax   pmax
      comp=Z,2.0nm,1.0s
MK31  Makanchi Array     38.47 307   P      P       05 21 19.1  0.0
MKAR  Makanchi Array     38.47 307   P      P       05 21 17.4 -1.7
      comp=Z,0.5nm,0.7s,baz=104,slow=9.0,SNR=8.6
MKAR                                 LR     LR      05 36 26.5
      comp=Z,123nm,20.0s,baz=75,slow=35
MAKZ  Makanchi           38.69 307   P      P       05 21 20.1 -0.8
MAKZ                                 pmax   pmax
      comp=Z,3.0nm,1.1s
MAKZ  Makanchi           38.69 307   P      P       05 21 20.1 -0.8
DANN  Dangsing           39.05 277 eP      P       05 21 24.2 -0.3
      comp=Z,116nm,1.2s
KOLN  Koldanda           39.36 276 eP      P       05 21 26.3 -0.7
      comp=Z,70nm,1.3s
PYUN  Piuthan            39.78 277 eP      P       05 21 30.1 -0.4
      comp=Z,191nm,1.2s
TIXI  Tiksi              39.82 360   P      P       05 21 28.4 -1.5
      comp=Z,0.8nm,0.3s,baz=108,slow=0.7,SNR=2.5
TIXI  Tiksi              39.82 360 i P      P       05 21 31.6 +1.6
TIXI                                 pmax   pmax
      comp=Z,3.0nm,0.5s
TIXI  Tiksi              39.82 360   P      P       05 21 31.1 +1.1
TIXI                                 IAmb   IAmb    05 21 36.8
      comp=Z,21nm,1.4s
KURK  Kurchatov          41.34 312ceP      P       05 21 45.8 +3.0
KURK                                 pmax   pmax
      comp=Z,5.0nm,1.0s
KURBB Kurchatov Arra     41.38 312   P      P       05 21 41.9 -1.2
      comp=Z,1.7nm,0.6s,baz=352,slow=32,SNR=3.4
KURBB                                PP     PnPn    05 23 22.5 -0.7
      comp=Z,0.4nm,0.3s,baz=96,slow=10,SNR=4.9
TARG  Taragay, Kyrgy     41.59 299   P      P       05 21 44.5 -1.1
SOEI  Soe                41.65 187   P      P       05 21 47.2 +1.5
SOEI                                 IAmb   IAmb    05 22 10.7
      comp=Z,29nm,1.0s
BILL  Bilibino           42.13  20d iP      P       05 21 54.7 +5.6
BILL                               e*PP     sP      05 21 58.1 +4.6
BILL                                 *SP    pP      05 22 02.0  +10
BILL                                 pmax   pmax
      comp=Z,34nm,1.7s
BILL                                 MLR    MLR
      comp=Z,125nm,15.0s
BILL  Bilibino           42.13  20   P      P       05 21 52.8 +3.7
BILL                                 IAmb   IAmb    05 21 56.3
      comp=Z,32nm,1.4s
KSH   Kashi              43.18 295   P      P       05 22 05.8 +7.6
KSH                                  pmax   pmax
      comp=Z,6.0nm,0.6s
AAK   Ala-Archa          43.99 300   P      P       05 22 03.8 -0.9
      comp=Z,0.4nm,0.3s,baz=124,slow=9.1,SNR=2.0
AAK   Ala-Archa          43.99 300ceP      P       05 22 08.0 +3.3
AAK                                  pmax   pmax
      comp=Z,9.0nm,1.1s
NRIK  Noril'sk           44.12 340   P      P       05 22 07.2 +2.0
      comp=Z,5.1nm,0.8s,baz=124,slow=8.0,SNR=5.3
NRIK                                 LR     LR      05 41 47.4
      comp=Z,266nm,18.9s,baz=118,slow=38
NRIK  Noril'sk           44.12 340ceP      P       05 22 08.4 +3.3
NRIK                                 pmax   pmax
      comp=Z,6.0nm,0.9s
NRIK  Noril'sk           44.12 340   P      P       05 22 06.6 +1.5
NRIK                                 IAmb   IAmb    05 22 10.9
      comp=Z,14nm,1.4s
NIL   Nilore             46.40 288   P      P       05 22 23.3 -0.5
NIL                                  pmax   pmax
      comp=Z,10.0nm,0.8s
NIL   Nilore             46.40 288   P      P       05 22 23.3 -0.5
NIL                                  IAmb   IAmb    05 22 29.0
      comp=Z,9.9nm,0.8s
BVAR  Borovoye Array     46.62 315   P      P       05 22 24.3 -0.9
      comp=Z,2.7nm,0.9s,baz=170,slow=11,SNR=4.7
BRVK  Borovoye           46.69 315ceP      P       05 22 29.3 +3.6
BRVK                                 pmax   pmax
      comp=Z,13nm,1.7s
BRVK  Borovoye           46.69 315   P      P       05 22 25.2 -0.6
BRVK                                 IAmb   IAmb    05 22 32.4
      comp=Z,7.8nm,1.1s
KK31  Karatay Array      46.86 301   P      P       05 22 26.9 -0.3
KK31                                 pmax   pmax
      comp=Z,12nm,1.1s
KK31  Karatay Array      46.86 301   P      P       05 22 26.9 -0.3
KK31                                 IAmb   IAmb    05 22 32.3
      comp=Z,12nm,1.1s
KKAR  Karatay Array      46.86 301   P      P       05 22 26.9 -0.3
KKAR                                 pmax   pmax
      comp=Z,12nm,1.1s
KKAR  Karatay Array      46.86 301   P      P       05 22 27.1 -0.1
KKAR  Karatay Array      46.86 301   P      P       05 22 26.9 -0.3
KKAR                                 IAmb   IAmb    05 22 32.3
      comp=Z,12nm,1.1s
GAR   Garm               47.60 296   P      P       05 22 32.6 -0.6
GAR                                  IAmb   IAmb    05 22 37.9
      comp=Z,11nm,0.8s
CHGR  Chuyangaron        48.55 295   P      P       05 22 40.1 -0.5
KBL   Kabul              49.56 290   P      P       05 22 48.1 -0.4
KBL                                  pmax   pmax
      comp=Z,13nm,1.3s
KBL   Kabul              49.56 290   P      P       05 22 48.1 -0.4
KBL                                  IAmb   IAmb    05 22 56.8
      comp=Z,13nm,1.2s
WRA   Warramunga Arr     51.79 174   P      P       05 23 02.4 -2.6
      comp=Z,1.3nm,0.9s,baz=353,slow=8.0,SNR=3.5
SVE   Sverdlovsk         52.28 320 eP      P       05 23 08.5 +0.2
ABKAR Akbulak array      53.37 310   P      P       05 23 16.0 -0.6
ABKAR Akbulak array      53.37 310   P      P       05 23 16.2 -0.3
ABKAR                                IAmb   IAmb    05 23 21.3
      comp=Z,7.4nm,0.8s
ARU   Arti               53.45 319c iP      P       05 23 16.1 -0.9
ARU                                                 05 25 14.4
ARU                                  S      S       05 30 45.7 -3.4
ARU                                  SS     SS      05 34 22.4 -6.4
ARU                                  pmax   pmax
      comp=Z,25nm,3.1s
ARU                                  MLR    MLR
      comp=Z,494nm,18.0s
ARU   Arti               53.45 319   P      P       05 23 15.5 -1.4
ARU                                  IAmb   IAmb    05 23 21.7
      comp=Z,12nm,0.9s
HRA   Herat              55.01 292   P      P       05 23 27.9 -1.1
HRA                                  IAmb   IAmb    05 23 34.7
      comp=Z,12nm,1.2s
ASAR  Alice Springs      55.44 175   P      P       05 23 31.0 -0.8
      comp=Z,1.7nm,1.0s,baz=350,slow=6.5,SNR=5.2
I21K  Tanana             56.99  30   P      P       05 23 46.4 +4.0
I21K                                 IAmb   IAmb    05 23 48.8
      comp=Z,8.2nm,0.9s
MLY   Manley             57.53  30   P      P       05 23 48.6 +2.3
HOM   Homer              57.83  36   P      P       05 23 51.2 +2.8
KIRV  Kirov              58.09 323ceP      P       05 23 52.8 +2.6
NEA2  Nenana             58.29  30   P      P       05 23 51.9 +0.3
NEA2                                 IAmb   IAmb    05 23 58.9
      comp=Z,6.3nm,0.8s
MDM   Murphy Dome        58.60  30   P      P       05 23 54.4 +0.7
MDM                                  IAmb   IAmb    05 23 59.7
      comp=Z,9.3nm,0.9s
ILAR  Eielson Array      59.19  30   P      P       05 23 56.5 -1.3
      comp=Z,0.9nm,0.7s,baz=282,slow=8.0,SNR=11
KLMR  Klimovskoe         62.46 326 eP      P       05 24 17.6 -2.5
KLMR                               e                05 25 00.1
KLMR                                 pmax   pmax
      comp=Z,26nm,1.3s
KLMR  Klimovskoe         62.46 326 eP      P       05 24 17.6 -2.5
KLMR                                 AMP            05 24 25.3
      comp=Z,26nm,1.3s
KLMR                               ePcP    PcP     05 25 00.1 +0.7
STKA  Stephens Creek     64.53 168   P      P       05 24 33.9 -0.1
      comp=Z,2.1nm,0.8s,baz=156,slow=19,SNR=2.8
STKA  Stephens Creek     64.53 168   P      P       05 24 37.3 +3.3
STKA                                 pmax   pmax
      comp=Z,1.0nm,1.2s
STKA  Stephens Creek     64.53 168   P      P       05 24 37.3 +3.3
ARCES ARCESS Array B     65.01 338   LR     LR      05 57 27.5
      comp=Z,181nm,18.7s,baz=55,slow=40
OBN   Obninsk            65.81 321⇓eP      P       05 24 46.7 +4.5
OBN                                e*PP     sP      05 24 49.6 +2.9
OBN                                  *SP    pP      05 24 54.0 +8.5
OBN                                  pmax   pmax
      comp=Z,26nm,1.7s
OBN                                  MLR    MLR
      comp=Z,180nm,18.0s
KBZ   Khabaz             66.15 308   P      P       05 24 44.8 +0.2
      comp=Z,8.3nm,1.0s,baz=268,slow=3.7,SNR=6.4
KIV   Kislovodsk         66.21 308 eP      P       05 24 49.8 +4.7
KIV                                  pmax   pmax
      comp=Z,23nm,1.1s
KIV                                  MLR    MLR
      comp=Z,64nm,17.0s
FINES FINESS Array B     68.30 330   P      P       05 24 56.2 -1.7
      comp=Z,10.0nm,0.9s,baz=44,slow=11,SNR=11
FINES                                LR     LR      05 55 42.6
      comp=Z,135nm,18.1s,baz=32,slow=37
GURO  Guroymak-BITLI     68.78 303   P      P       05 25 02.1 +0.5
GURO                                 IAmb   IAmb    05 25 07.7
      comp=Z,12nm,1.1s
AKASG Malin Array Be     71.69 319   P      P       05 25 17.4 -1.6
      comp=Z,2.9nm,0.9s,baz=53,slow=5.7,SNR=6.8
AKASG                                LR     LR      05 59 02.6
      comp=Z,148nm,18.1s,baz=25,slow=38
AKASG Malin Array Be     71.69 319   P      P       05 25 17.1 -1.9
AKASG                                IAmb   IAmb    05 25 23.9
      comp=Z,6.7nm,1.2s
AKBB  Malin Array Si     71.69 319ceP      P       05 25 23.3 +4.4
RAYN  Ar Rayn            72.70 287   P      P       05 25 24.9 -0.6
RAYN                                 pmax   pmax
      comp=Z,8.0nm,1.1s
RAYN  Ar Rayn            72.70 287   P      P       05 25 24.9 -0.6
RAYN                                 IAmb   IAmb    05 25 30.7
      comp=Z,8.1nm,1.1s
GAZ   Gaziantep          72.82 303   P      P       05 25 25.5 -0.6
BR131 Keskin Array S     74.12 307   P      P       05 25 33.2 -0.6
BR131                                pmax   pmax
      comp=Z,17nm,1.0s
BR131 Keskin Array S     74.12 307   P      P       05 25 33.2 -0.6
BR131                                IAmb   IAmb    05 25 39.0
      comp=Z,17nm,1.0s
BRTR  Keskin Array B     74.12 307   P      P       05 25 33.0 -0.8
      comp=Z,4.8nm,0.9s,baz=96,slow=5.7,SNR=20
BRTR  Keskin Array B     74.12 307   P      P       05 25 33.7  0.0
BRTR  Keskin Array B     74.12 307   P      P       05 25 33.7  0.0
NB2   NORSAR Subarra     74.55 333   P      P       05 25 38.7 +3.0
      comp=Z,16nm,1.4s,baz=51,slow=6.2
NOA   NORSAR Array B     74.55 333   P      P       05 25 37.0 +1.3
      comp=Z,4.1nm,1.0s,baz=50,slow=6.0,SNR=5.4
NOA   NORSAR Array B     74.55 333   P      P       05 25 37.0 +1.3
BUR08 Bucovina Ar. S     75.50 317   P      P       05 25 41.1 -0.4
BUR08                                IAmb   IAmb    05 25 46.9
      comp=Z,8.2nm,1.2s
BURAR Bucovina Array     75.51 317   P      P       05 25 41.6  0.0
BURAR                                IAmb   IAmb    05 25 47.3
      comp=Z,5.6nm,0.9s
KWP   Kalwaria Pacla     75.85 320   P      P       05 25 47.5 +4.1
CSS   Mathiatis          76.63 303   P      P       05 25 48.4 +0.3
CSS                                  IAmb   IAmb    05 25 49.6
      comp=Z,14nm,1.1s
CRVS  Cervenica-Dubn     76.93 320 eP      P       05 25 53.3 +3.8
CRVS  Cervenica-Dubn     76.93 320 eP      P       05 25 53.3 +3.8
ELL   Elmali             78.14 306   P      P       05 25 56.0 -0.7
ELL                                  pmax   pmax
      comp=Z,36nm,1.1s
ELL   Elmali             78.14 306   P      P       05 25 56.0 -0.7
VYHS  Vyhne              78.60 320 eP      P       05 26 04.0 +5.2
VYHS  Vyhne              78.60 320 eP      P       05 26 04.0 +5.2
DPC   Dobruska-Polom     78.83 323 eP      P       05 26 04.8 +4.7
DPC   Dobruska-Polom     78.83 323 eP      P       05 26 04.8 +4.7
VTS   Vitosha            79.38 314   P      P       05 26 03.2 -0.2
VTS                                  pmax   pmax
      comp=Z,9.0nm,1.2s
VTS   Vitosha            79.38 314   P      P       05 26 03.2 -0.2
VTS                                  IAmb   IAmb    05 26 09.3
      comp=Z,9.3nm,1.2s
MODS  Modra-Piesok       79.51 321 eP      P       05 26 09.1 +5.3
MODS  Modra-Piesok       79.51 321 eP      P       05 26 09.1 +5.3
PRU   Pruhonice          79.96 323 eP      P       05 26 10.7 +4.5
PRU   Pruhonice          79.96 323 eP      P       05 26 10.7 +4.5
DIVS  Divibare           80.49 316   P      P       05 26 08.9 -0.5
CONA  Conrad Observa     80.53 321 eP      P       05 26 10.2 +0.7
      comp=Z,5.4nm,1.4s
CKRC  Cesky Krumlov      80.80 323 eP      P       05 26 10.8  0.0
KHC   Kasperske Hory     80.98 323 eP      P       05 26 16.2 +4.4
KHC   Kasperske Hory     80.98 323 eP      P       05 26 16.2 +4.4
GERES GERESS Array B     81.10 323   P      P       05 26 12.4 -0.1
      comp=Z,0.4nm,0.7s,baz=66,slow=3.3,SNR=2.9
ARSA  Arzberg            81.13 321 eP      P       05 26 17.7 +5.1
      comp=Z,4.2nm,1.4s
MOA   Molln              81.43 322 eP      P       05 26 19.6 +5.4
      comp=Z,4.0nm,1.4s
SOKA  Soboth             81.75 321   P      P       05 26 16.1 +0.1
      comp=Z,10.0nm,1.2s
ABTA  Abfaltersbach      83.05 322   P      P       05 26 26.6 +3.8
      comp=Z,2.9nm,0.8s
WATA  Walderalm          83.16 323 eP      P       05 26 28.9 +5.5
      comp=Z,3.2nm,1.3s
SQTA  Sankt Quirin       83.42 323 eP      P       05 26 30.3 +5.6
      comp=Z,9.9nm,1.9s
RETA  Reutte             83.48 323 eP      P       05 26 28.3 +3.4
      comp=Z,5.7nm,1.2s
CTI   Castel Tesino      83.96 322   P      P       05 26 27.1 -0.4
CTI                                  pmax   pmax
      comp=Z,13nm,1.3s
CTI   Castel Tesino      83.96 322   P      P       05 26 27.1 -0.4
CTI                                  IAmb   IAmb    05 26 31.9
      comp=Z,13nm,1.3s
DAVA  Damuels            84.06 323 eP      P       05 26 32.5 +4.4
      comp=Z,3.5nm,0.9s
BFO   Black Forest       84.14 325   P      P       05 26 31.0 +2.7
BFO                                  pmax   pmax
      comp=Z,11nm,1.1s
BFO   Black Forest       84.14 325   P      P       05 26 31.0 +2.7
BFO                                  IAmb   IAmb    05 26 33.9
      comp=Z,11nm,1.1s
TEOL  Teolo              84.39 321   P      P       05 26 29.8 +0.2
TEOL                                 IAmb   IAmb    05 26 34.9
      comp=Z,6.9nm,0.8s
SALO  Salr               84.83 322   P      P       05 26 31.9  0.0
TUE   Stuetta            84.88 323   P      P       05 26 31.7 -0.5
NRCA  Norcia             85.23 318   P      P       05 26 34.2 +0.3
MURB  Monte Urbino       85.28 319   P      P       05 26 35.3 +1.1
AQU   L'Aquila           85.37 318   P      P       05 26 34.4 -0.2
AQU                                  pmax   pmax
      comp=Z,22nm,1.1s
AQU   L'Aquila           85.37 318   P      P       05 26 34.4 -0.2
NVAR  Mina Array Bea     86.14  47   P      P       05 26 37.7 -1.0
      comp=Z,0.5nm,0.7s,baz=282,slow=4.5,SNR=2.6
ELK   Elko               86.53  43   P      P       05 26 43.0 +2.4
ELK                                  pmax   pmax
      comp=Z,2.0nm,1.1s
ELK   Elko               86.53  43   P      P       05 26 43.0 +2.4
PDAR  Pinedale Array     88.36  39   P      P       05 26 49.0 -0.5
      comp=Z,0.5nm,0.8s,baz=289,slow=2.8,SNR=3.3
ULM   Lac du Bonnet      89.09  27   P      P       05 26 51.1 -1.3
      comp=Z,9.7nm,1.1s,baz=323,slow=3.5,SNR=4.9
ULM                                  LR     LR      06 11 09.3
      comp=Z,428nm,18.0s,baz=248,slow=38
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*GUC **15** 05:18:30.1±0.7, 30°.71S×71°.38W, h50^{km}±2^{km}, ML4.0*
*IDC **15** 05:19:01.6±4.0, 22°.05S×69°.77W, h121^{km}±12^{km}, mb3.7/2, mb1 3.4/3, mb1mx3.1/23, mbtmp3.8/3, Error ellipse: s-maj=83.3km s-min=31.0km az=69.0*
ISC 15 05:18:30.6±1.0, **30°.70S**±0°.03×**71°.47W**±0°.10, **h47**^{km}±9^{km}, **n22,** σ**1^{s}57**/41, **10C-7D, Near coast of central Chile**

```
Code  Station Name        Δ°   AZ°    Phase ID           Time      Res
                                     Op     ISC       h  m  s     ISC
CO06  Fray Jorge          0.14 279⇑iP      Pn      05 18 38.4 +0.2
CO06                               i S      Sn      05 18 43.7 +0.1
CO06                                 IAML           05 18 45.9
      comp=E,13µm,0.2s
GO04  Tololo Observa      0.78  48⇓iP      Pn      05 18 44.8 -0.7
GO04                               i S      Sn      05 18 55.1 -1.2
CO05  La Serena           0.80  15⇓iP      Pn      05 18 45.4 -0.2
CO05                               i S      Sn      05 18 56.5  0.0
LCO   Las Campanas        1.81  22⇓iP      Pn      05 18 59.6  0.0
LCO                                eS       Sn      05 19 22.3 +0.8
VA06  Catapilco           1.86 175⇑iP      Pn      05 19 00.1 +0.1
VA06                               i S      Sn      05 19 23.5 +1.1
VA06                                 IAML           05 19 31.8
      comp=E,2µm,0.6s
VA03  San Esteban         2.21 159⇑iP      Pn      05 19 05.2 +0.4
VA03                               i S      Sn      05 19 31.3 +0.4
VA03                                 IAML           05 19 40.5
      comp=E,2µm,0.2s
ROCH  El Roble            2.30 170⇑iP      Pn      05 19 06.4 +0.1
ROCH                               i S      Sn      05 19 34.8 +1.2
ROCH                                 IAML           05 19 41.0
      comp=N,1µm,0.4s
AC04  Llanos de Chal      2.51    8⇓iP      Pn      05 19 09.4 +0.5
AC04                               eS       Sn      05 19 39.4 +1.1
AC04                                 IAML           05 19 51.3
      comp=N,475nm,0.2s
PEL   Peldehue            2.53 165⇑iP      Pn      05 19 09.7 +0.4
PEL                                eS       Sn      05 19 41.6 +2.7
PEL                                  IAML           05 19 54.6
      comp=N,625nm,0.4s
MT02  Curacav             2.57 174⇑iP      Pn      05 19 09.4 -0.3
MT02                               i S      Sn      05 19 40.0 +0.2
MT02                                 IAML           05 19 51.7
      comp=E,372nm,0.2s
MT05  Renca               2.76 167 eP      Pn      05 19 12.8 +0.4
MT05                               eS       Sn      05 19 46.8 +2.3
MT05                                 IAML           05 19 56.8
      comp=E,1µm,0.3s
VA05  Santo Domingo       2.95 182⇑iP      Pn      05 19 14.1 -0.9
VA05                               eS       Sn      05 19 55.5 +6.3
VA05                                 IAML           05 20 07.1
      comp=E,831nm,0.3s
MT09  Talagante           3.10 173⇓iP      Pn      05 19 17.5 +0.3
MT09                               eS       Sn      05 19 53.1 +0.2
MT09                                 IAML           05 20 08.0
      comp=N,482nm,0.2s
MT01  Popeta              3.16 177⇑iP      Pn      05 19 17.6 -0.3
MT01                               eS       Sn      05 19 53.4 -1.0
MT01                                 IAML           05 20 06.2
      comp=E,324nm,0.3s
LMEL  Las Melosas         3.32 161 eP      Pn      05 19 21.5 +1.3
LMEL                               i S      Sn      05 19 58.7 +0.2
LMEL                                 IAML           05 20 10.3
      comp=N,610nm,0.2s
BO04  La Punta            3.36 168⇓iP      Pn      05 19 21.1 +0.4
BO04                               i S      Sn      05 19 59.4 +0.1
BO01  Tunca               3.70 175⇓iP      Pn      05 19 24.9 -0.3
BO01                               i S      Sn      05 20 06.3 -1.3
BO01                                 IAML           05 20 21.4
      comp=E,154nm,0.4s
BO02  Sierra Bellavi      4.12 172⇑iP      Pn      05 19 31.3 +0.1
BO02                               eS       Sn      05 20 17.9 -0.3
AC02  Maricunga           4.36  29⇑iP      Pn      05 19 35.7 +0.9
AC02                               i S      Sn      05 20 29.4 +4.8
DBIC  Dimbokro           73.68  72   P      P       05 29 59.0 -0.9
      comp=E,1.8nm,0.5s,baz=226,slow=7.1,SNR=5.4
TORD  Torodi Ar. Bea     82.64  70   P      P       05 30 48.7 -0.7
      comp=E,0.4nm,0.4s,baz=266,slow=5.6,SNR=13
ZALV  Zalesovo Beam     151.15  30   PKP    PKPbc   05 38 17.5 -0.7
      comp=E,1.7nm,0.4s,baz=319,slow=2.6,SNR=8.1
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*IDC **15** 05:21:38.7±0.9, 2°.42N×126°.70E, h0^{km}, mb3.9/9, mb1 4.0/9, mb1mx3.8/45, mbtmp3.9/9, MS4.3/1, Ms1 4.3/1, ms1mx2.8/37, Error ellipse: s-maj=57.4km s-min=15.2km az=70.0*
*DJA **15** 05:21:43.8±0.4, 3°N±4°×12°7E±°, h10^{km}, M3.6/6, MLv3.6/6*
*NEIC **15** 05:21:44.2±2.1, 2°.37N±0°.10×126°.80E±0°.07, h35^{km}±2^{km}, mb4.2/18, Error ellipse: s-maj=19.2km s-min=5.8km az=32.0*
ISC 15 05:21:43.9±0.6, **2°.36N**±0°.06×**126°.74E**±0°.10, **h35**^{km}**, n38,** σ**1^{s}10**/36, **mb4.1**/16, **Northern Molucca Sea**

```
Code  Station Name        Δ°   AZ°    Phase ID           Time      Res
                                     Op     ISC       h  m  s     ISC
TNTI  Ternate             1.69 158   Pn     Pn      05 22 09.9 -1.1
SGSI  Sangihe             1.79 318   P      Pn      05 22 13.7 +1.4
SGSI  Sangihe             1.79 318   P      Pn      05 22 13.9 +1.6
GTOI  Gorontalo           4.10 245   P      Pn      05 22 50.9 +6.8
SANI  Sanana              4.44 190   P      Pn      05 22 52.3 +3.5
LUWI  Luwuk               5.21 230   Pn     Pn      05 22 58.3 -1.0
TOLI2 Tolitoli            6.08 258   Pn     Pn      05 23 11.5 +0.1
CNOP  Candoni, Negro      8.47 331 eP      Pn      05 23 46.0 +1.9
JAGI  Jajag, Banyuwa     16.53 229   Pn     Pn      05 25 32.8 -0.4
JAGI                                 IAmb   IAmb    05 26 02.0
      comp=Z,36nm,1.4s
KNRA  Kununurra          18.03 174   P      Pn      05 25 50.6 -1.2
KNRA                                 IAmb   IAmb    05 25 51.9
      comp=Z,50nm,1.4s
FITZ  Fitzroy Crossi     20.35 183   P      P       05 26 18.5 +1.1
      comp=Z,1.2nm,0.5s,baz=24,slow=14,SNR=10
FITZ  Fitzroy Crossi     20.35 183   P      P       05 26 19.0 +1.6
COEN  Coen               22.98 135   P      P       05 26 45.7  0.0
COEN                                 IAmb   IAmb    05 26 48.2
      comp=Z,8.3nm,1.4s
WB0   Warramunga Arr     23.23 161   P      P       05 26 48.4 +0.2
WB0                                  IAmb   IAmb    05 26 56.8
      comp=Z,8.1nm,0.9s
WRAB  Tennant Creek      23.38 162   P      P       05 26 49.9 +0.3
WRAB                                 IAmb   IAmb    05 26 57.1
      comp=Z,8.9nm,1.1s
WRA   Warramunga Arr     23.38 162   P      P       05 26 49.5 -0.1
      comp=Z,2.3nm,0.4s,baz=345,slow=11,SNR=46
WRA   Warramunga Arr     23.38 162   P      P       05 26 48.6 -1.1
WB2   Warramunga Arr     23.39 162   P      P       05 26 50.0 +0.3
WB2                                  IAmb   IAmb    05 26 57.7
      comp=Z,6.7nm,0.7s
WR0   Warramunga Arr     23.46 161   P      P       05 26 50.7 +0.3
BKNI  Bangkinang         25.77 266   P      P       05 27 11.6 -0.1
ASAR  Alice Springs      26.79 165   P      P       05 27 21.2 +0.4
      comp=Z,0.7nm,0.6s,baz=346,slow=7.1,SNR=13
CMAR  Chiang Mai Arr     31.59 302   P      P       05 28 02.8 -0.8
      comp=Z,1.2nm,0.4s,baz=125,slow=7.0,SNR=4.1
MORW  Morawa             32.89 197   P      P       05 28 15.0 +0.2
FORT  Forrest            32.97 178   P      P       05 28 16.9 +1.4
KSRS  Korea Array        34.95   2   P      P       05 28 32.0 -0.5
      comp=Z,0.5nm,0.4s,baz=172,slow=9.5,SNR=1.9
BBOO  Buckleboo          36.07 167   P      P       05 28 41.9 -0.4
STKA  Stephens Creek     36.85 159   P      P       05 28 49.4 +0.5
      comp=Z,2.7nm,0.6s,baz=340,slow=6.0,SNR=7.8
STKA  Stephens Creek     36.85 159   P      P       05 28 49.9 +0.9
SONM  Songino Array      48.60 342   P      P       05 30 24.3 +0.2
      comp=Z,0.8nm,0.9s,baz=133,slow=6.3,SNR=2.6
MK31  Makanchi Array     58.69 326   P      P       05 31 37.5 -0.5
MK31                                 IAmb   IAmb    05 31 48.9
      comp=Z,2.2nm,1.4s
MKAR  Makanchi Array     58.69 326   P      P       05 31 37.2 -0.8
      comp=Z,0.5nm,0.4s,baz=120,slow=7.6,SNR=7.7
MKAR  Makanchi Array     58.69 326   P      P       05 31 37.5 -0.5
MA2   Magadan            60.03  14   LR     LR      05 58 33.0
      comp=Z,250nm,20.4s,baz=152,slow=37
ZALV  Zalesovo Beam      61.81 333   P      P       05 31 58.2 -1.0
      comp=Z,0.7nm,0.3s,baz=149,slow=8.7,SNR=2.3
KURK  Kurchatov          62.90 328          P       05 32 05.7 -0.8
KURK                                 IAmb   IAmb    05 32 07.1
      comp=Z,2.9nm,0.7s
ABKAR Akbulak array      73.22 321   P      P       05 33 10.9 -0.5
ABKAR                                IAmb   IAmb    05 33 29.9
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         comp=Z,3.5nm,1.5s
VNDA  Vanda             82.07 173  P      P      05 34 01.2 +1.1
VNDA                               IAmb   IAmb   05 34 07.3
         comp=Z,2.8nm,1.2s
MAW   Mawson            82.48 200  P      P      05 34 01.0 -1.4
```

MAN ***15*** *05:27:49.7, 6°.27N×127°.65E, h300km, mb4.6, ML3.5, MS3.4*

IDC ***15*** *05:27:59.0±1.8, 4°.51N×126°.13E, h0km, mb4.1/4, mb1 4.2/5, mb1mx3.7/48, mbtmp4.1/5, ML4.4/1, MS4.9/1, Ms1 4.9/1, ms1mx3.1/34, Error ellipse: s-maj=107.7km s-min=26.2km az=79.0*

NEIC ***15*** *05:28:04.7±0.9, 4°.62N±0°.04×126°.2E±0°.1, h42km±15km, mb4.4/12, Error ellipse: s-maj=19.6km s-min=5.9km az=84.0*

DJA ***15*** *05:28:07.6±0.6, 5°N±4°×12°6E±°, h136km±6km, M4.2/8, mb4.6/6, mB4.8/7, MLv4.3/8, Mw(mB)4.0/7*

ISC 15 05:28:06.9±0.9**, 4°.96N**±0°.05×**125°.6E**±0°.1**, h100**km**, n31,** σ**2s.30**/31**, mb4.1**/9**, 1C-2D, Talaud Islands**

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Code  Station Name       Δ°   AZ°  Phase ID        Time       Res
                                   Op     ISC     h  m  s     ISC
SGSI  Sangihe            1.27 184  P      Pn     05 28 33.9 +3.4
SGSI                               S      Sn     05 28 53.8 +5.5
GSPH  General Santos     1.30 329⇑eP     Pn     05 28 32.3 +1.3
GSPH                              eS      Sn     05 28 50.2 +1.1
DAV   Davao City (W)     2.09 359  Pn     Pn     05 28 42.6 +1.9
         79nm,0.3s,baz=216,slow=0.2,SNR=5.1
DAV                                Sn     Sn     05 29 10.6 +4.1
         53nm,0.3s,baz=54,slow=13,SNR=4.5
DAV   Davao City (W)     2.09 359  Pn     Pn     05 28 42.7 +2.0
KCP   Kidapawan          2.10 345⇓iP     Pn     05 28 42.5 +1.6
BUKP  Musuan             2.95 349⇓iP     Pn     05 28 53.1 +1.0
BUKP                              eS      Sn     05 29 36.9  +10
PAGZ  Pagadian           3.63 322 eP      Pn     05 29 01.8 +0.7
TNTI  Ternate            4.51 157  Pn     Pn     05 29 03.1  -10
GTOI  Gorontalo          5.03 211  P      Pn     05 29 21.7 +1.6
         0.2nm571nm64nm,0.7s
MRSI  Marisa             5.78 220  P      Pn     05 29 32.9 +2.6
         0.3nm1μm25nm,0.5s
LBMI  Labuha             5.87 161  P      Pn     05 29 32.7 +1.2
         0.3nm870nm44nm,0.5s
TOLI2 Tolitoli           6.17 232         Pn     05 29 36.5 +0.9
SANI  Sanana             6.98 177  P      Pn     05 29 45.5 -1.0
         0.2nm2μm46nm,0.6s
MTN   Manton Dam        18.52 163  P      P      05 32 14.6 -1.0
MTN                                IAmb   IAmb   05 32 16.5
         comp=Z,43nm,1.4s
KNRA  Kununurra         20.74 171  P      P      05 32 38.5 -1.2
KNRA                               IAmb   IAmb   05 33 32.3
         comp=Z,79nm,1.8s
FITZ  Fitzroy Crossi    22.92 180  P      P      05 33 01.0 -1.5
         comp=Z,3.5nm,0.4s,baz=7.7,slow=8.1,SNR=31
FITZ                               LR     LR     05 44 14.2
         comp=Z,3μm,18.4s,baz=104,slow=43
FITZ  Fitzroy Crossi    22.92 180  P      P      05 33 01.0 -1.5
WB0   Warramunga Arr    26.05 161  P      P      05 33 28.8 -2.3
WB0                                IAmb   IAmb   05 33 31.8
         comp=Z,7.5nm,0.3s
WRAB  Tennant Creek     26.19 161  P      P      05 33 30.4 -2.0
WRAB                               IAmb   IAmb   05 33 33.2
         comp=Z,8.4nm,1.1s
WRA   Warramunga Arr    26.19 161  P      P      05 33 30.1 -2.2
         comp=Z,2.2nm,0.3s,baz=339,slow=10,SNR=37
WRA   Warramunga Arr    26.19 161  P      P      05 33 29.0 -3.4
WB2   Warramunga Arr    26.20 161  P      P      05 33 30.0 -2.4
WB2                                IAmb   IAmb   05 33 34.1
         comp=Z,8.5nm,1.2s
WR0   Warramunga Arr    26.27 161  P      P      05 33 30.6 -2.5
WR0                                IAmb   IAmb   05 33 32.2
         comp=Z,7.6nm,1.3s
ASAR  Alice Springs     29.58 164  P      P      05 34 00.8 -1.8
         comp=Z,1.1nm,0.5s,baz=343,slow=7.1,SNR=31
ASAR  Alice Springs     29.58 164  P      P      05 34 00.9 -1.7
JHJ2  Mitsune           30.97  24  P      P      05 34 19.9 +5.2
FORT  Forrest           35.62 176  P      P      05 34 53.4 -1.7
LZH   Lanzhou           36.89 330  SS     SS     05 43 49.1  +21
LZH                                pmax   pmax
         comp=Z,22nm,1.2s
LZH                                pmax   pmax
         comp=Z,160nm,6.0s
LZH                                LR     LR
         comp=N,180nm,19.5s
LZH                                LR     LR
         comp=E,380nm,19.7s
LZH                                LR     LR
         comp=Z,330nm,20.1s
BBOO  Buckleboo         38.85 166  P      P      05 35 21.0 -1.4
STKA  Stephens Creek    39.67 158  P      P      05 35 27.2 -2.1
         comp=Z,1.4nm,0.5s,baz=350,slow=8.6,SNR=5.3
STKA  Stephens Creek    39.67 158  P      P      05 35 28.0 -1.2
```

IDC ***15*** *05:42:45.7±2.2, 51°.84N×173°.70W, h0km, mb3.5/5, mb1 3.8/6, mb1mx3.5/36, mbtmp3.5/6, ML3.9/1, Error ellipse: s-maj=64.9km s-min=26.8km az=9.0*

AEIC ***15*** *05:42:48±1.3, 51°.5N±0°.1×173°.51W±0°.04, h26km±9km, ML3.2, Error ellipse: s-maj=15.9km s-min=2.6km az=171.0*

NEIC ***15*** *05:42:50.6±0.9, 51°.7N±0°.1×173°.56W±0°.09, h35km±63km, Error ellipse: s-maj=15.6km s-min=7.8km az=172.0*

ISC 15 05:42:50.2±1.1**, 51°.6N**±0°.2×**173°.54W**±0°.06**, h37**km**, n31,** σ**0s.92**/25**, mb3.7**/5**, Andreanof Islands**

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Code  Station Name       Δ°   AZ°  Phase ID        Time       Res
                                   Op     ISC     h  m  s     ISC
ATKA  Atka Island        0.70 325         Pn     05 43 03.6  0.0
KOFP  Korovin Flat P     0.73 332         Pn     05 43 04.7 +0.7
KOKL  Mount Kliuchef     0.80 330         Pn     05 43 05.6 +0.6
KONE  Korovin Northe     0.84 335         Pn     05 43 06.3 +0.8
GSIG  Igitkin Island     1.52 284         Pn     05 43 14.3 -0.5
GSMY  Great Sitkin M     1.61 286         Pn     05 43 16.4 +0.2
GSTR  Great Sitkin T     1.63 287         Pn     05 43 15.6 -0.7
GSTD  Great Sitkin T     1.67 286         Pn     05 43 16.7 -0.3
GSCK  Great Sitkin C     1.67 284         Pn     05 43 16.8 -0.1
ADK   Adak               1.97 279  Pn     Pn     05 43 20.4 -0.6
KIWB  Kanaga Island      2.26 277         Pn     05 43 24.9 -0.1
TAPA  Tanaga Point A     2.66 276         Pn     05 43 30.7 +0.1
TAFP  Tanaga Falls P     2.77 277         Pn     05 43 32.5 +0.5
TASE  Tanaga Southea     2.80 276         Pn     05 43 32.8 +0.3
NIKH  Nikolski High      3.17  63         Pn     05 43 36.8 -0.7
AMKA  Amchitka           4.48 270  Pn     Pn     05 43 54.8 -0.6
MAPS  Pakushin South     4.56  59         Pn     05 43 56.9 +0.3
UNV   Unalaska Valle     4.81  60         Pn     05 43 59.6 -0.4
SDPT  Sand Point         8.63  59  Pn     Pn     05 44 52.7 +0.4
ILAR  Eielson Array     19.04  36  P      Pn     05 47 08.3 -1.4
         0.4nm,0.3s,baz=225,slow=9.1,SNR=30
H11N2 WAKE ISLAND Hy    35.35 213  T      T      06 27 38.0
         baz=21,slow=76,SNR=6.0
H11N3 WAKE ISLAND Hy    35.35 213  T      T      06 27 38.6
         baz=21,slow=76,SNR=8.1
H11N1 WAKE ISLAND Hy    35.37 213  T      T      06 27 39.4
         baz=21,slow=76,SNR=6.0
H11S1 WAKE ISLAND Hy    36.55 213  T      T      06 29 07.6
         baz=19,slow=76,SNR=12
H11S2 WAKE ISLAND Hy    36.56 213  T      T      06 29 03.8
         baz=19,slow=76,SNR=11
H11S3 WAKE ISLAND Hy    36.57 213  T      T      06 29 04.7
         baz=19,slow=76,SNR=4.0
PDAR  Pinedale Array    43.08  76  P      P      05 50 45.8 -0.8
         0.2nm,0.4s,baz=308,slow=3.2,SNR=4.0
SONM  Songino Array     49.44 299  P      P      05 51 35.6 -0.7
         0.3nm,0.4s,baz=54,slow=7.3,SNR=2.7
TXAR  Lajitas Array     55.36  85  P      P      05 52 23.7 +3.3
         0.1nm,0.3s,baz=286,slow=6.4,SNR=1.8
ARCES ARCESS Array B    58.34 352  P      P      05 52 40.5 -0.4
         2.5nm,0.8s,baz=11,slow=7.6,SNR=1.2
MKAR  Makanchi Array    62.40 311  P      P      05 53 08.4 -0.5
         0.2nm,0.3s,baz=49,slow=7.0,SNR=3.1
```

SJA ***15*** *06:03:43±2.4, 23°.80S±0°.07×66°.61W±0°.09, h253km±5km, Error ellipse: s-maj=11.6km s-min=9.4km az=85.0*

IDC ***15*** *06:03:45.7±0.9, 23°.71S×66°.47W, h196km±8km, mb4.0/12, mb1 4.2/19, mb1mx4.1/28, mbtmp4.6/19, MS3.1/1, Ms1 3.1/1, ms1mx2.8/20, Error ellipse: s-maj=12.3km s-min=10.7km az=41.0*

NEIC ***15*** *06:03:45.9±1.3, 23°.79S±0°.05×66°.55W±0°.08, h193km±4km, mb4.5/123, Md4.7(SJA), Error ellipse: s-maj=11.1km s-min=7.0km az=96.0*

VAO ***15*** *06:03:46.0±0.3, 23°.70S×66°.50W, h198km, mb4.6*

GUC ***15*** *06:03:47.8±0.7, 23°.61S×67°.29W, h258km±8km, ML4.9, MW4.9*

ISC 15 06:03:46.4±0.5**, 23°.77S**±0°.04×**66°.67W**±0°.04**, h208**km±5km**, n284,** σ**1s.43**/314**, mb4.5**/66**, 13C-3D, Jujuy Province**

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Code  Station Name       Δ°   AZ°  Phase ID        Time       Res
                                   Op     ISC     h  m  s     ISC
HJA   Humahuaca          1.28  65 eP      Pn     06 04 20.1 +0.6
SLA   San Lorenzo        1.43 132 eP      Pn     06 04 21.1 +0.7
SLA                               eS      S      06 04 49.0 +2.4
AZAP  Zapla              1.54 108 eP      Pn     06 04 21.6 +0.2
AZAP                              eS      S      06 04 50.9 +2.6
AZAP                               IAML          06 04 52.5
         comp=Z,1μm,1.1s
YJA   Yavi               1.91  34 eP      Pn     06 04 26.1 +0.9
YJA                               eS      S      06 04 58.2 +3.4
ASTB  Santa Barbara      2.04  96 eP      Pn     06 04 26.2 +0.1
ASTB                              eS      S      06 04 39.2  -17
LVC   Limon Verde        2.36 299  P      Pn     06 04 30.6 +0.9
         comp=Z,340nm,0.3s,baz=128,slow=7.4,SNR=1375
LVC                                S      S      06 05 03.5 +0.6
         comp=Z,591nm,0.3s,baz=272,slow=21,SNR=8.6
LVC                                LR     LR     06 05 25.4
         comp=Z,378nm,20.8s,baz=129,slow=40
LVC   Limon Verde        2.36 299⇑iP     Pn     06 04 30.6 +0.9
LVC                               eS      S      06 05 04.2 +1.3
LVC   Limon Verde        2.36 299 eP      Pn     06 04 30.8 +1.1
LVC                               eS      S      06 05 04.1 +1.3
LVC   Limon Verde        2.36 299  Pn     Pn     06 04 30.6 +0.9
LVC                                Sn     S      06 05 04.0 +1.1
LVC   Limon Verde        2.36 299 eP      Pn     06 04 30.6 +0.9
LVC                               eS      S      06 05 04.6 +1.7
LVC                                IAML          06 05 07.2
         comp=Z,862nm,0.2s
PB15  IPOC Station P     2.63 282⇑iP     Pn     06 04 33.3 +0.8
PB15                              i S     S      06 05 08.3 +0.5
PB15  IPOC Station P     2.63 282         Pn     06 04 33.3 +0.8
PB15                               Sn     S      06 05 08.8 +0.9
PB06  IPOC Station P     2.87 291⇑iP     Pn     06 04 35.9 +0.8
PB06                              i S     S      06 05 12.2 -0.4
PB06  IPOC Station P     2.87 291         Pn     06 04 35.8 +0.7
PB06                               Sn     S      06 05 12.1 -0.6
PB06  IPOC Station P     2.87 291 eP      Pn     06 04 35.4 +0.2
PB06                              eS      S      06 05 13.8 +1.1
PB06                               IAML          06 05 17.3
         comp=Z,2μm,0.4s
PB09  IPOC Station P     3.08 309⇑iP     Pn     06 04 38.7 +1.1
PB09                              i S     S      06 05 17.3 +0.2
PB09                               IAML          06 05 23.4
         comp=N,2μm,0.4s
PB03  IPOC Station P     3.31 300⇓iP     Pn     06 04 40.8 +0.5
PB03                              i S     S      06 05 20.8 -1.4
PB05  IPOC Station P     3.37 285⇑iP     Pn     06 04 41.0 +0.1
PB05                              i S     S      06 05 21.1 -2.1
PB05                               IAML          06 05 27.8
         comp=E,2μm,0.4s
PB05  IPOC Station P     3.37 285 eP      Pn     06 04 41.0 +0.1
PB05                              eS      S      06 05 23.0 -0.2
PB05                               IAML          06 05 28.9
         comp=Z,997nm,0.5s
PB04  IPOC Station P     3.51 293⇑iP     Pn     06 04 43.0 +0.3
PB04                              i S     S      06 05 24.4 -1.8
PB14  IPOC Station P     3.51 255⇑iP     Pn     06 04 42.8 -0.1
PB14                              eS      S      06 05 25.3 -1.3
PB14  IPOC Station P     3.51 255 eP      Pn     06 04 42.8 -0.1
PB14                              eS      S      06 05 26.4 -0.2
PB14                               IAML          06 05 28.6
         comp=Z,538nm,0.4s
PB10  IPOC Station P     3.57 273⇓iP     Pn     06 04 43.1 -0.1
PB10                              i S     S      06 05 24.5 -2.9
PB10                               IAML          06 05 29.0
         comp=E,1μm,0.4s
PB07  IPOC Station P     3.59 304⇑iP     Pn     06 04 44.0 +0.3
PB07                              i S     S      06 05 26.1 -2.1
PB01  IPOC Station P     3.76 316⇑iP     Pn     06 04 45.7  0.0
PB01                              i S     S      06 05 30.6 -1.1
AC02  Maricunga          3.78 216⇑iP     Pn     06 04 46.5 +0.2
AC02                              i S     S      06 05 30.9 -1.9
AC02  Maricunga          3.78 216  Pn     Pn     06 04 46.5 +0.2
PB02  IPOC Station P     3.85 309⇑iP     Pn     06 04 46.6 -0.2
PB02                              i S     S      06 05 31.3 -2.4
PB08  IPOC Station P     4.28 327⇑iP     Pn     06 04 53.2 +0.8
PB08                              eS      S      06 05 43.4 -0.4
TA01  Diego Aracena      4.55 314         Pn     06 04 55.3 -0.1
HMBC  Humberstone        4.58 319⇑iP     Pn     06 04 54.6 -1.3
HMBC                              eS      S      06 05 45.9 -4.2
GO03  Copiap             4.99 219⇓iP     Pn     06 04 58.3 -2.6
GO03                              eS      S      06 05 54.5 -4.9
GO03  Copiap             4.99 219  Pn     Pn     06 04 59.5 -1.4
AC04  Llanos de Chal     5.94 221  Pn     Pn     06 05 10.8 -2.2
PB16  IPOC Station P     6.02 333         Pn     06 05 15.0 +0.4
PB12  IPOC Station P     6.16 326  Pn     Pn     06 05 14.3 -1.6
LPAZ  La Paz             7.56 349  P      Pn     06 05 35.2 +0.5
         comp=E,6.5nm,0.3s,baz=148,slow=5.6,SNR=165
LPAZ                               S      S      06 06 58.8 -1.9
         comp=E,3.1nm,0.3s,baz=34,slow=17,SNR=6.4
LPAZ  La Paz             7.56 349 eP      Pn     06 05 35.1 +0.4
CPUP  Villa Florida      8.85 109  P      Pn     06 05 48.6 -2.0
         comp=E,0.2nm,0.3s,baz=292,slow=12,SNR=30
CPUP  Villa Florida      8.85 109 eP      Pn     06 05 48.8 -1.8
CPUP  Villa Florida      8.85 109         Pn     06 05 48.8 -1.8
SIV   San Ignacio        9.36  35  P      Pn     06 05 55.4 -2.0
         comp=E,5.3nm,0.3s,baz=216,slow=13,SNR=149
SIV                                S      S      06 07 28.4  -14
         baz=225,slow=19,SNR=0.8
VA03  San Esteban        9.59 200  Pn     Pn     06 05 59.9 -0.4
MT05  Renca             10.23 200         Pn     06 06 07.3 -1.3
AQDB  Aquidauana        10.68  74 eP      Pn     06 06 12.5 -1.9
AQDB  Aquidauana        10.68  74         Pn     06 06 12.3 -2.1
ITQB  Itaqui            10.73 125 eP      Pn     06 06 12.8 -2.1
ITQB  Itaqui            10.73 125         Pn     06 06 12.9 -2.1
PTLB  Pontes e Lacer    10.90  42 eP      Pn     06 06 15.2 -2.0
PTLB  Pontes e Lacer    10.90  42         Pn     06 06 15.6 -1.5
BO02  Sierra Bellavi    11.56 197         Pn     06 06 25.2 -0.3
VILB  Vilhena           12.38  31 eP      Pn     06 06 35.1 -0.9
VILB  Vilhena           12.38  31         Pn     06 06 36.7 +0.6
PP1B  Ponte de Pedra    12.62  63 eP      Pn     06 06 36.8 -2.2
ML02  Panimavida        12.64 198         Pn     06 06 37.8 -1.4
TRCB  Terra Rica        12.94  89 eP      Pn     06 06 41.9 -1.1
TRCB  Terra Rica        12.94  89         Pn     06 06 40.7 -2.3
SALV  Santo Antonio     12.95  55 eP      Pn     06 06 41.2 -1.9
PTGB  Pitanga           13.36  97 eP      P      06 06 50.4 -0.4
CPSB  Cacapava Do Su    13.51 122 eP      Pn     06 06 47.5 -2.5
ETMB  Extrema           13.88   2 eP      Pn     06 06 53.4 -1.3
ETMB  Extrema           13.88   2  Pn     Pn     06 06 53.0 -1.7
PLTB  Pedras Altas      14.04 127 eP      Pn     06 06 55.5 -1.0
PLTB  Pedras Altas      14.04 127         Pn     06 06 54.4 -2.1
PCMB  Pacaembu          14.39  84 eP      Pn     06 06 59.0 -1.9
SAML  Samuel            15.11  13         Pn     06 07 08.4 -1.3
NNA   Nana              15.19 319  P      P      06 07 12.8 +1.8
         comp=E,1.0nm,0.3s,baz=170,slow=7.7,SNR=5.6
CNLB  Canela            15.19 115 eP      Pn     06 07 09.1 -1.6
PDRB  Porto dos Gac     15.34  40 eP      Pn     06 07 11.2 -1.4
ITRB  Iturama           15.69  78 eP      P      06 07 15.4 -1.0
FRTB  Fartura           15.70  92 eP      Pn     06 07 15.7 -1.2
LC01  Cunco             15.72 195  P      P      06 07 16.3 -0.4
LC01                               IAmb   IAmb   06 07 26.8
         comp=Z,16nm,1.1s
ARAG  Araguaiana, MT    16.11  63 eP      Pn     06 07 21.3 -0.6
TIJ01 Guaruva-PR        16.15  99 eP      P      06 07 20.6 -1.1
TER01 Tubaro-SC         16.45 111 eP      Pn     06 07 24.5 -1.3
CLDB  Colider           16.48  41 eP      P      06 07 24.4 -0.9
LR03  Panguipulli       16.53 196  P      P      06 07 24.6 -1.0
LR03                               IAmb   IAmb   06 07 26.3
         comp=Z,37nm,1.1s
CZSB  Cruzeiro do Su    16.96 339 eP      P      06 07 29.9 -0.7
CZSB  Cruzeiro do Su    16.96 339  P      P      06 07 29.5 -1.1
CZSB                               IAmb   IAmb   06 07 35.9
         comp=Z,25nm,1.2s
BB19B Bebedouro         16.99  84 eP      P      06 07 30.3 -0.5
PLCA  Paso Flores       17.23 190  P      P      06 07 33.8 +0.5
         comp=Z,0.2nm,0.3s,baz=23,slow=12,SNR=10
PLCA  Paso Flores       17.23 190 eP      P      06 07 33.1 -0.2
PLCA  Paso Flores       17.23 190  P      P      06 07 32.8 -0.6
PLCA                               IAmb   IAmb   06 07 40.4
         comp=Z,18nm,0.8s
RCLB  Rio Claro- Sao    17.66  89 eP      P      06 07 37.2 -0.9
PET01 Itanhaem-SP       17.73  96 eP      P      06 07 38.0 -0.9
LL04  Puerto Octay      17.76 194  P      P      06 07 38.9 -0.1
LL04                               IAmb   IAmb   06 07 40.1
         comp=Z,26nm,0.9s
LL03  Petrohue          17.98 194  P      P      06 07 41.3 -0.1
VAO   Valinhos          18.11  92 eP      Pn     06 07 43.4 -2.1
IPMB  Ipameri, GO       18.18  75 eP      P      06 07 43.6 -0.3
SNDB  Serra Nova Dou    18.73  54 eP      P      06 07 49.0 -0.8
PARB  Paraibuna         19.30  93 eP      P      06 07 55.5 -0.4
BDFB  Brasilia          19.32  69  P      P      06 07 55.1 -1.1
         comp=Z,2.2nm,0.3s,baz=242,slow=12,SNR=63
BDFB  Brasilia          19.32  69  P      P      06 07 55.2 -1.0
TBTG  Tabatinga, AM     19.71 350 eP      P      06 07 59.7 -0.6
TBTG  Tabatinga, AM     19.71 350  P      P      06 08 01.1 +0.8
ATAH  Atahualpa         20.00 324  P      P      06 08 05.9 +2.0
         comp=Z,6.2nm,0.8s,baz=156,slow=9.1,SNR=4.2
BSCB  Bom Sucesso       20.43  87 eP      P      06 08 07.2 -0.9
MAN01 Angra dos Reis    20.87  92 eP      P      06 08 11.1 -1.6
PEXB  Peixe             20.95  60 eP      P      06 08 12.1 -1.4
MACA  Manacapuru-AM     21.29  17 eP      P      06 08 14.9 -2.0
MACA  Manacapuru-AM     21.29  17  P      P      06 08 14.5 -2.5
VAS01 Vassouras-RJ      21.43  91 eP      P      06 08 17.6 -0.9
ITTB  Itaituba          21.98  30 eP      P      06 08 21.9 -2.1
DIAM  Diamantina, MG    22.14  80 eP      P      06 08 24.6 -0.9
COYC  Coyhaique         22.20 190  P      P      06 08 25.9 +0.2
MC01  Montes Claros     22.43  76 eP      P      06 08 26.0 -2.2
DUB01 Friburgo-RJ       22.44  91 eP      P      06 08 27.2 -1.0
JANB  Januaria          22.77  72 eP      P      06 08 29.3 -2.0
CAM01 Campos-RJ         23.14  90 eP      P      06 08 32.1 -2.3
SMTB  Santa Maria do    23.51  54 eP      P      06 08 36.3 -1.6
SDBA  SAO DESIDERIO     23.54  65 eP      P      06 08 36.6 -1.6
PTGA  Pitinga           23.80  17  P      P      06 08 39.3 -1.2
         comp=Z,21nm,0.7s,baz=196,slow=10,SNR=36
PTGA  Pitinga           23.80  17  P      P      06 08 39.3 -1.2
PRPB  Parauapebas       23.85  45 eP      P      06 08 38.6 -2.4
SJMB  Sao Joao De Ma    24.27  83 eP      P      06 08 43.2 -1.5
BSFB  Barra de Sao F    24.54  83 eP      P      06 08 45.6 -1.6
RIB01 Linhares ES       24.82  85 eP      P      06 08 48.1 -1.7
MALB  Monte Alegre      24.88  31 eP      P      06 08 48.3 -2.0
NAN01 Guarapari, ES     25.48  82 eP      P      06 08 53.8 -1.9
GUA01 Guaratinga, BA    26.18  79 eP      P      06 09 00.7 -1.3
OTAV  Otavalo           26.46 333 eP      P      06 09 06.7 +1.7
OTAV  Otavalo           26.46 333  P      P      06 09 06.3 +1.3
OTAV                               IAmb   IAmb   06 09 08.8
         comp=Z,4.7nm,0.8s
BOAV  Boa Vista         26.68  14 eP      P      06 09 06.0 -0.5
BOAV  Boa Vista         26.68  14  P      P      06 09 05.5 -1.0
NBIT  Itapeh - BA       27.12  76 eP      P      06 09 09.1 -1.3
MCPB  Macapa, AP        27.25  33 eP      P      06 09 09.6 -1.9
GDU01 Guandu, BA        27.49  74 eP      P      06 09 11.3 -2.4
TMAB  Tom-Au,PA,Br      27.85  43 eP      P      06 09 15.6 -1.2
NBPN  Ponto Novo - B    28.29  68 eP      P      06 09 18.8 -2.0
NBLA  Lagarto - SE      30.27  70 eP      P      06 09 36.0 -2.3
NBPS  Pedro II - PI     31.03  56 eP      P      06 09 43.3 -1.8
NBMA  Muriti-CE         31.34  63 eP      P      06 09 46.2 -1.5
NBPB  Pedra_Branca-C    31.75  59 eP      P      06 09 50.0 -1.3
NBAN  Anadia - AL       32.22  69 eP      P      06 09 53.1 -2.2
BAUV  El Baul           32.53 357  P      P      06 09 58.5 +0.4
NBMO  Morrinhos-CE      32.79  56 eP      P      06 09 58.3 -2.0
NBLV  Livramento - P    32.87  65 eP      P      06 09 59.2 -1.8
NBCL  Cascavel-CE       33.57  59 eP      P      06 10 05.7 -1.4
NBPA  Parau_RN          33.60  62 eP      P      06 10 05.6 -1.8
NBRF  Rio Formoso -     33.69  69 eP      P      06 10 05.9 -2.2
NBPV  Pedro Velho       34.73  65 eP      P      06 10 15.8 -1.3
JTS   Las Juntas de     38.28 330  P      P      06 10 50.1 +3.2
JTS                                IAmb   IAmb   06 10 50.8
         comp=Z,13nm,1.1s
BIM   Bigot             38.44   9  P      P      06 10 48.4 +0.1
ORTG  Ortega, Santa     38.57 329  P      P      06 10 52.6 +3.1
ORTG                               IAmb   IAmb   06 10 53.3
         comp=Z,17nm,0.9s
SVN   Savane Anatole    38.74   9  P      P      06 10 51.0 +0.1
HZTE  Horizontes, Gu    38.94 330  P      P      06 10 56.4 +3.9
MTO3  Montecristo       43.94 327  P      P      06 11 34.6 +1.3
MTO3                               IAmb   IAmb   06 11 35.3
         comp=Z,8.3nm,0.8s
CCIG  Comitan           46.94 326  P      P      06 11 57.9 +1.2
TLIG  Tlapa             51.55 320  P      P      06 12 33.0 +1.5
TLIG                               IAmb   IAmb   06 12 34.1
         comp=Z,6.7nm,0.6s
VNA3  Neumayer Olymp    57.28 161  P      P      06 13 13.0 +1.1
VNA1  Neumayer--Stat    57.47 160  P      P      06 13 14.5 +1.2
VNA2  Neumayer--Watz    57.84 160  P      P      06 13 17.0 +1.2
         baz=290,slow=6.5
ZAIG  Zacatecas         57.94 320  P      P      06 13 18.3 +0.8
ZAIG                               IAmb   IAmb   06 13 20.8
         comp=Z,14nm,1.0s
SNAA  Sanae             59.47 161  P      P      06 13 27.6 +0.4
HODGE Hodges            59.55 345  P      P      06 13 28.6 +0.6
HODGE                              IAmb   IAmb   06 13 51.6
         comp=Z,16nm,1.5s
NATX  Nacogdoches       61.36 333  P      P      06 13 41.4 +1.1
WLAR  White Oak Lake    62.43 335  P      P      06 13 48.0 +0.5
JCT   Junction City     62.60 328  P      P      06 13 49.0 +0.3
Z38A  Mt. Pleasant      62.80 333  P      P      06 13 50.8 +0.9
WVT   Waverly           62.84 341  P      P      06 13 49.8 -0.2
WVT                                IAmb   IAmb   06 13 50.4
         comp=Z,6.6nm,0.8s
HPIG                    62.92 321  P      P      06 13 52.3 +1.2
HPIG                               IAmb   IAmb   06 13 53.1
         comp=Z,5.5nm,0.6s
MIAR  Mount Ida         63.37 335  P      P      06 13 54.0 +0.4
MIAR                               IAmb   IAmb   06 13 54.3
         comp=Z,3.8nm,0.7s
TXAR  Lajitas Array     63.66 324  P      P      06 13 56.6 +0.8
         comp=Z,1.8nm,0.8s,baz=152,slow=8.6,SNR=23
TXAR  Lajitas Array     63.66 324  P      P      06 13 57.0 +1.2
TX31  Lajitas Ar. Si    63.66 324  P      P      06 13 56.8 +1.0
TX31                               IAmb   IAmb   06 13 57.3
         comp=Z,5.9nm,0.8s
TX32  Lajitas Array     63.66 324  P      P      06 13 57.0 +1.2
Z35A  Perchaven, San    63.82 332  P      P      06 13 57.6 +1.1
PARMO Parma             63.93 339  P      P      06 13 58.3 +1.1
FCAR  Ozark Folk Cen    64.03 337  P      P      06 13 57.9  0.0
HHAR  Hobbs             65.04 336  P      P      06 14 05.0 +0.5
HHAR                               IAmb   IAmb   06 14 05.5
         comp=Z,6.4nm,0.8s
MGMO  Mountain Grove    65.22 338  P      P      06 14 05.4 -0.2
MGMO                               IAmb   IAmb   06 14 06.6
         comp=Z,4.3nm,0.7s
CCM   Cathedral Cave    65.68 339  P      P      06 14 08.7 +0.2
CCM                                IAmb   IAmb   06 14 09.2
         comp=Z,8.6nm,0.7s
QUOK  Quay              66.03 334  P      P      06 14 10.9 +0.1
QUOK                               IAmb   IAmb   06 14 11.7
         comp=Z,7.6nm,0.6s
S39A  Bolivar           66.07 337  P      P      06 14 11.3 +0.3
MNTX  Cornudas Mount    66.43 324  P      P      06 14 13.6 +0.1
MNTX                               IAmb   IAmb   06 14 14.6
         comp=Z,5.5nm,0.9s
QSPA  South Pole Qui    66.44 180  P      P      06 14 14.3 +1.1
         comp=Z,10nm,0.8s,baz=160,slow=1.5,SNR=30
QSPA  South Pole Qui    66.44 180  P      P      06 14 13.9 +0.7
QSPA                               IAmb   IAmb   06 14 15.4
         comp=Z,12nm,0.9s
DBIC  Dimbokro          67.44  71  P      P      06 14 18.8 -1.3
         comp=Z,8.6nm,0.7s,baz=241,slow=6.2,SNR=13
DBIC  Dimbokro          67.44  71  P      P      06 14 19.0 -1.2
DBIC                               IAmb   IAmb   06 14 19.6
         comp=Z,9.9nm,0.8s
319A  Douglas           68.34 321  P      P      06 14 26.8 +1.2
319A                               IAmb   IAmb   06 14 28.3
         comp=Z,8.7nm,0.7s
121A  Cookes Peak, D    68.37 323  P      P      06 14 26.8 +1.0
121A                               IAmb   IAmb   06 14 28.8
         comp=Z,6.0nm,0.8s
ANMO  Albuquerque       69.52 326  P      P      06 14 34.6 +1.7
ANMO                               IAmb   IAmb   06 14 35.6
         comp=Z,5.9nm,0.8s
CBKS  Cedar Bluff       69.53 333  P      P      06 14 33.8 +1.1
TUC   Tucson            69.89 321  P      P      06 14 36.8 +1.8
T25A  Trinidad          70.24 329  P      P      06 14 37.8 +0.6
T25A                               IAmb   IAmb   06 14 39.8
         comp=Z,6.0nm,0.8s
KSCO  Kaye Shedlock'    70.94 331  P      P      06 14 42.5 +1.3
KSCO                               IAmb   IAmb   06 14 43.2
         comp=Z,7.4nm,0.8s
X18A  Snowflake         71.06 323  P      P      06 14 43.5 +1.3
BGNE  Belgrade          71.11 335  P      P      06 14 42.7 +0.6
SDCO  Great Sand Dun    71.25 328  P      P      06 14 44.5 +1.2
SFX   San Felipe        71.41 318  P      P      06 14 45.2 +1.1
SFX                                IAmb   IAmb   06 14 46.8
         comp=Z,6.3nm,0.7s
X16A  Lo Mia Camp, P    71.80 322  P      P      06 14 48.3 +1.7
KOWA  Kowa              72.06  65  P      P      06 14 47.5 -0.8
KOWA                               IAmb   IAmb   06 14 49.0
         comp=Z,8.0nm,0.8s
KOWA  Kowa              72.06  65  P      P      06 14 47.3 -1.1
```

MVCO	Mesa Verde	72.32	326	P	P	06 14 51.2	+1.5
MVCO				IAmb	IAmb	06 14 52.5	
	comp=Z,5.6nm,0.8s						
K31A	O'Neill	72.39	336	P	P	06 14 50.6	+0.9
WUAZ	Wupatki	72.57	323	P	P	06 14 52.5	+1.3
WUAZ				IAmb	IAmb	06 14 54.4	
	comp=Z,7.0nm,1.0s						
ECSD	EROS Data Cent	72.58	338	P	P	06 14 51.4	+0.6
ECSD				IAmb	IAmb	06 14 52.0	
	comp=Z,8.5nm,1.1s						
ISCO	Idaho Springs	72.93	330	P	P	06 14 54.8	+1.5
SMCO	Snowmass	73.08	328	P	P	06 14 56.2	+1.9
SMCO				IAmb	IAmb	06 14 57.3	
	comp=Z,5.0nm,0.8s						
BAR	Barrett	73.66	318	P	P	06 14 59.4	+2.0
BAR				IAmb	IAmb	06 15 00.2	
	comp=Z,5.6nm,0.8s						
U15A	North Rim	73.75	323	P	P	06 15 00.3	+2.2
PFO	Pinyon Flats O	74.17	319	P	P	06 15 02.1	+1.6
O20A	White River Ci	74.44	328	P	P	06 15 03.2	+1.2
O20A				IAmb	IAmb	06 15 04.8	
	comp=Z,11nm,0.8s						
KNB	Kanab	74.47	323	P	P	06 15 03.9	+1.8
KNB				IAmb	IAmb	06 15 05.7	
	comp=Z,12nm,1.0s						
LCMT	Little Creek M	74.69	323	P	P	06 15 05.0	+1.5
SRU	San Rafael Swe	74.80	326	P	P	06 15 05.1	+1.1
SRU				IAmb	IAmb	06 15 06.5	
	comp=Z,6.8nm,0.8s						
P18A	Preston Nutter	75.04	327	P	P	06 15 07.2	+1.6
P18A				IAmb	IAmb	06 15 08.5	
	comp=Z,9.9nm,0.8s						
CCUT	Cedar City	75.15	323	P	P	06 15 08.1	+2.0
CCUT				IAmb	IAmb	06 15 09.8	
	comp=Z,6.9nm,0.9s						
RWWY	Rawlins	75.17	330	P	P	06 15 07.5	+1.3
RWWY				IAmb	IAmb	06 15 08.8	
	comp=Z,8.8nm,0.8s						
P17A	Butcher Ranch,	75.18	326	P	P	06 15 07.7	+1.5
P17A				IAmb	IAmb	06 15 08.9	
	comp=Z,5.9nm,0.9s						
MSU	Marysvale	75.21	325	P	P	06 15 08.6	+2.1
MVU	Marysvale	75.22	325	P	P	06 15 08.6	+2.1
RDMU	Red Mountain	75.42	328	P	P	06 15 09.1	+1.5
RDMU				IAmb	IAmb	06 15 10.0	
	comp=Z,8.1nm,0.8s						
GSC	Goldstone, Bar	75.53	320	P	P	06 15 09.5	+1.3
K22A	Casper	75.62	331	P	P	06 15 10.5	+1.9
K22A				IAmb	IAmb	06 15 11.2	
	comp=Z,8.3nm,1.1s						
RSSD	Black Hills	75.73	333	P	P	06 15 10.4	+1.1
PRN	Pahroc Range	75.98	322	P	P	06 15 12.6	+1.8
MPU	Maple Canyon	76.04	326	P	P	06 15 12.6	+1.5
GWY	Greenwater Val	76.06	320	P	P	06 15 13.0	+1.8
PSUT	Pine Spring	76.13	324	P	P	06 15 13.2	+1.6
TORD	Torodi Ar. Bea	76.20	69	P	P	06 15 11.0	-1.3
	comp=Z,6.1nm,0.5s,baz=257,slow=5.3,SNR=63						
TORD				pP	pP	06 16 02.6	-0.4
	comp=Z,4.5nm,1.0s,baz=254,slow=5.8,SNR=2.8						
TORD	Torodi Ar. Bea	76.20	69	P	P	06 15 10.7	-1.5
TORD				IAmb	IAmb	06 15 12.8	
	comp=Z,9.7nm,1.2s						
NLU	North Lily Min	76.22	326	P	P	06 15 13.6	+1.5
JLU	Jordanelle	76.39	327	P	P	06 15 14.4	+1.3
E28A	Huff	76.48	337	P	P	06 15 14.0	+0.8
E28A				IAmb	IAmb	06 15 15.1	
	comp=Z,12nm,0.8s						
SPR3	Spring Creek 3	76.72	324	P	P	06 15 16.3	+1.2
DUG	Dugway, Tooele	76.78	325	P	P	06 15 17.0	+1.8
BW06	Boulder Array	77.10	329	P	P	06 15 18.1	+1.1
PD31	Pinedale Array	77.10	329	P	P	06 15 18.1	+1.1
PDAR	Pinedale Array	77.10	329	P	P	06 15 18.1	+1.1
	comp=Z,1.5nm,0.6s,baz=130,slow=7.7,SNR=19						
PDAR	Pinedale Array	77.10	329	P	P	06 15 17.8	+0.8
MDND	Maddock	77.19	338	P	P	06 15 17.6	+0.6
HWUT	Hardware Ranch	77.19	327	P	P	06 15 18.7	+1.3
HWUT				IAmb	IAmb	06 15 19.8	
	comp=Z,4.9nm,0.8s						
TPH	Tonopah	77.68	321	P	P	06 15 21.8	+1.5
AHID	Auburn Hatcher	77.84	328	P	P	06 15 22.1	+1.1
AHID				IAmb	IAmb	06 15 23.4	
	comp=Z,13nm,0.8s						
HVU	Hansel Valley	77.93	327	P	P	06 15 22.4	+0.9
HVU				IAmb	IAmb	06 15 23.8	
	comp=Z,5.1nm,0.8s						
REDW	Red Top Meadow	78.17	329	P	P	06 15 24.5	+1.6
REDW				IAmb	IAmb	06 15 25.4	
	comp=Z,8.3nm,0.9s						
SNOW	Snow King Moun	78.20	329	P	P	06 15 24.3	+1.2
SNOW				IAmb	IAmb	06 15 26.2	
	comp=Z,7.2nm,0.8s						
LOHW	Long Hollow	78.24	329	P	P	06 15 24.4	+1.1
LOHW				IAmb	IAmb	06 15 25.8	
	comp=Z,6.7nm,0.8s						
TPAW	Teton Pass	78.31	329	P	P	06 15 25.2	+1.5
TPAW				IAmb	IAmb	06 15 26.8	
	comp=Z,4.4nm,0.8s						
MOOW	Moose Ponds	78.41	329	P	P	06 15 25.2	+1.0
ELK	Elko	78.46	324	P	P	06 15 25.9	+1.3
FXWY	Fox Creek	78.46	329	P	P	06 15 26.3	+1.8
NVAR	Mina Array Bea	78.54	321	P	P	06 15 26.8	+1.8
	comp=Z,1.1nm,0.7s,baz=149,slow=6.2,SNR=10						
NVAR	Mina Array Bea	78.54	321	P	P	06 15 26.2	+1.2
LAO	LASA Array	78.72	333	P	P	06 15 26.8	+1.2
LAO				IAmb	IAmb	06 15 27.8	
	comp=Z,8.2nm,0.9s						
KVN	Kaiserville	78.85	322	P	P	06 15 27.3	+0.7
KVN				IAmb	IAmb	06 15 29.1	
	comp=Z,9.0nm,1.1s						
OUZM	OUZ	79.05	49	P	P	06 15 28.6	+0.7
DGMT	Dagmar	79.37	336	P	P	06 15 30.0	+1.0
ZGR	Zagora	79.39	50	P	P	06 15 30.0	+0.3
GCMT	Greycliff	79.48	331	P	P	06 15 31.2	+1.4
PNTR	Pine Nut	79.74	321	P	P	06 15 33.6	+2.1
PNTR				IAmb	IAmb	06 15 34.5	
	comp=Z,7.0nm,0.7s						
TZRR	Tazzarine	79.81	50	P	P	06 15 33.0	+1.1
PAHR	Pah Rah Range	80.03	321	P	P	06 15 34.7	+1.7
PAHR				IAmb	IAmb	06 15 35.9	
	comp=Z,9.6nm,0.9s						
HLID	Hailey	80.06	327	P	P	06 15 35.0	+2.0
HLID				IAmb	IAmb	06 15 36.2	
	comp=Z,11nm,0.8s						
BOSA	Boshof	80.57	117	P	P	06 15 36.6	+0.4
	comp=Z,4.5nm,0.9s,baz=328,slow=5.9,SNR=3.7						
ORV	Oroville	81.15	320	P	P	06 15 40.3	+1.6
ORV				IAmb	IAmb	06 15 41.5	
	comp=Z,11nm,1.2s						
CZD	Col de Zad	81.47	48	P	P	06 15 42.4	+1.5
MAW	Mawson	81.57	163	P	P	06 15 41.7	+1.2
	comp=Z,3.8nm,0.8s,baz=232,slow=7.0,SNR=9.3						
MAW	Mawson	81.57	163	P	P	06 15 42.0	+1.5
MDT	Midelt	81.64	49	P	P	06 15 42.4	+0.8
PLID	Pearl Lake	81.94	327	P	P	06 15 44.8	+1.8
J08A	Circle Bar Ran	82.00	325	P	P	06 15 45.3	+2.1
J08A				IAmb	IAmb	06 15 45.5	
	comp=Z,7.8nm,0.8s						
BMO	Blue Mountains	82.43	326	P	P	06 15 47.0	+1.6
K05A	Summer Lake	82.89	323	P	P	06 15 49.9	+2.0
JTMT	Jette	83.04	330	P	P	06 15 49.9	+1.4
JTMT				IAmb	IAmb	06 15 51.1	
	comp=Z,5.5nm,0.9s						
I07A	Izee	83.04	325	P	P	06 15 50.1	+1.5
F10A	Beach Ranch, E	83.18	327	P	P	06 15 50.7	+1.5
F10A				IAmb	IAmb	06 15 52.3	
	comp=Z,6.7nm,0.7s						
FIGM	Figuig	83.61	51	P	P	06 15 53.0	+1.2
C09A	Chrisman Ranch	84.97	328	P	P	06 15 59.1	+1.0
PAB	San Pablo	85.70	43	P	P	06 16 02.9	+1.0
PAB	San Pablo	85.70	43	P	P	06 16 03.0	+1.0
ESDC	Sonseca Array	86.02	43	P	P	06 16 03.9	+0.4
	comp=Z,4.4nm,1.1s,baz=229,slow=4.5,SNR=15						
ESDC				pP	pP	06 16 56.0	+0.3
	comp=Z,1.1nm,1.0s,baz=244,slow=4.9,SNR=3.6						
ESBB	Sonseca Array	86.02	43	P	P	06 16 04.5	+0.9
ESBB				IAmb	IAmb	06 16 05.9	
	comp=Z,13nm,1.4s						
YKA	Yellowknife Ar	94.01	340	P	P	06 16 40.7	+0.5
	comp=Z,0.9nm,0.7s,baz=124,slow=5.4,SNR=4.2						
ASAR	Alice Springs	128.79	204	PKP	PKPdf	06 22 30.1	+0.3
	comp=Z,2.7nm,0.8s,baz=150,slow=2.2,SNR=29						
WRA	Warramunga Arr	131.97	207	PKP	PKPdf	06 22 36.4	+0.5
	comp=Z,1.5nm,0.7s,baz=173,slow=1.7,SNR=14						
WRA	Warramunga Arr	131.97	207		PKPdf	06 22 36.2	+0.3
ZALV	Zalesovo Beam	143.05	28	PKP	PKPbc	06 22 53.3	+0.8
	comp=Z,1.0nm,0.5s,baz=302,slow=8.5,SNR=3.6						
KSH	Kashi	144.82	55	PKP	PKPab	06 22 58.5	0.0
MKAR	Makanchi Array	146.15	39	PKPbc	PKPbc	06 23 01.9	-0.2
	comp=Z,6.7nm,1.0s,baz=311,slow=2.4,SNR=25						
MKAR				pPKPbc	pPKPab	06 23 57.9	+1.2
	comp=Z,2.9nm,0.8s,baz=300,slow=2.7,SNR=5.8						
KLR	Kul'dur	150.74	335	PKPbc	PKPbc	06 23 14.1	+0.2
	comp=Z,3.2nm,0.7s,baz=41,slow=3.3,SNR=11						
CMAR	Chiang Mai Arr	165.58	109	PKPab	PKPab	06 24 26.1	-0.6
	comp=Z,1.3nm,0.3s,baz=263,slow=5.5,SNR=5.3						
CMAR	Chiang Mai Arr	165.58	109	PKPab	PKPab	06 24 26.9	+0.2

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*JMA **15** 06:07:26.8±0.4, 31°.33N×128°.69E, h8^{km}±3^{km}, M4.3*

*NIED **15** 06:07:26.9, 31°.33N×128°.69E, h8^{km}, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.49; $M_{\theta\theta}$-0.92; $M_{\phi\phi}$1.41; $M_{r\theta}$0.08; $M_{\theta\phi}$2.85; $M_{\phi r}$0.50; Fault plane solution: $M_0$3.12000×10^{15} NP1: ϕ_s349.00000°, δ89.00000°, λ171.00000°. NP2: ϕ_s79.00000°, δ81.00000°, λ1.00000°.*

*IDC **15** 06:07:28.4±0.9, 31°.20N×128°.40E, h0^{km}, mb3.6/6, mb1 3.9/11, mb1mx3.8/42, mbtmp3.8/11, ML3.6/5, MS3.5/5, Ms1 3.5/5, ms1mx3.1/45 Error ellipse: s-maj=26.5km s-min=17.9km az=90.0*

*NEIC **15** 06:07:28.3±1.3, 31°.14N±0°.06×128°.75E±0°.09, h10^{km}±1^{km}, mb4.2/14, Error ellipse: s-maj=12.9km s-min=9.7km az=256.0*

ISC 15 06:07:28.0±0.6**, 31°.23N**±0°.04×**128°.73E**±0°.05**, h10^{km}, n49, σ1^{s}.50**/51**, mb3.8**/10**, 1D, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.95	61	⇓P	Pg	06 07 44.5	-1.9
JSJ				S	Sg	06 07 56.6	-2.2
JFU	Fukue jima 2	1.43	1	P	Pn	06 07 51.8	-2.2
JFU				*e*S	Sn	06 08 09.4	-3.4
JSU	Suzuyama	1.50	79	P	Pn	06 07 54.8	-0.2
JSU				S	Sb	06 08 15.9	+0.8
JSU	Suzuyama	1.50	79		Pn	06 07 54.6	-0.4
JNN	Nakanoshima	1.69	144	P	Pb	06 07 58.4	-0.9
JYAK	Yakushimahirau	1.82	122	P	Pn	06 07 58.7	-0.7
JTN	Tanegashima 3	2.01	106	P	Pn	06 08 01.8	-0.2
JTZ	Takazaki	2.12	71	P	Pn	06 08 03.1	-0.4
JIU3	Izumi3	2.21	53	P	Pn	06 08 03.8	-0.9
JNU	Nakatsue	2.62	43	Pn	Pb	06 08 15.8	+0.7
	29nm,0.3s,baz=231,slow=0.9,SNR=35						
JNU				Sn	Sb	06 08 48.3	+0.8
	41nm,0.3s,baz=109,slow=23,SNR=7.5						
JNU	Nakatsue	2.62	43	Pn	Pn	06 08 11.2	+0.7
JTU	Tsushima	3.34	9		Pn	06 08 21.6	+1.4
JOW	Kunigami	4.39	185	Pn	Pn	06 08 38.6	+3.8
	3.1nm,0.3s,baz=357,slow=18,SNR=6.1						
JOW	Kunigami	4.39	185		Pn	06 08 33.4	-1.5
JHS	Saijyo	5.26	43	Pn	Pn	06 08 47.8	+1.1
KSAR	Wonju Array Be	6.24	354	Pn	Pn	06 09 01.5	+1.4
KSRS	Korea Array	6.25	354	Pn	Pn	06 09 00.3	0.0
	0.8nm,0.3s,baz=175,slow=14,SNR=8.7						
KSRS				Sn	Sn	06 10 09.7	-2.0
	2.0nm,0.3s,baz=173,slow=19,SNR=5.3						
KSRS				Lg	Lg	06 10 37.1	
	2.5nm,0.3s,baz=178,slow=30,SNR=5.4						
KS19	Wonju Array Si	6.30	354		Pn	06 09 03.5	+2.5
JWT	Wachi	6.90	52	Pn	Pn	06 09 10.9	+1.8
MJAR	Matsushiro Arr	9.49	54	Pn	Pn	06 09 50.5	+5.7
	0.1nm,0.3s,baz=234,slow=13,SNR=4.0						
MJAR				LR	LR	06 13 13.5	
	comp=Z,187nm,20.5s,baz=260,slow=35						
JCJ	Chichijima	12.45	106	LR	LR	06 15 33.2	
	comp=Z,51nm,18.0s,baz=126,slow=38						
ASAJ	Asahikawa	16.88	36	P	P	06 11 27.6	+1.3
	0.7nm,0.3s,baz=240,slow=19,SNR=11						
ASAJ				LR	LR	06 17 50.3	
	comp=Z,296nm,18.1s,baz=212,slow=36						
JKA	Kamikawa-asahi	16.88	36	P	Pn	06 11 25.8	+1.4
JKA				IAmb	IAmb	06 11 29.4	
	comp=Z,25nm,0.9s						
KLR	Kul'dur	18.13	6	P	P	06 11 42.2	+2.1
	comp=Z,0.1nm,0.3s,baz=215,slow=1.1,SNR=7.0						
YSS	Yuzh-Sakhalins	19.06	31	P	P	06 11 51.3	+0.9
YSS				IAmb	IAmb	06 12 00.2	
	comp=Z,22nm,1.2s						
HIA	Hailar	19.26	342	P	P	06 11 52.9	+0.3
HIA				IAmb	IAmb	06 12 21.0	
	comp=Z,7.0nm,0.4s						
GUMO	Guam	22.98	136	P	P	06 12 32.9	0.0
ULN	Ulaanbaatar	23.45	321	P	P	06 12 37.8	+0.1
ULN				IAmb	IAmb	06 13 00.4	
	comp=Z,2.9nm,0.9s						
SONM	Songino Array	23.79	321	P	P	06 12 40.7	-0.1
	comp=Z,0.9nm,0.7s,baz=148,slow=8.7,SNR=5.4						
SONM				LR	LR	06 21 48.6	
	comp=Z,273nm,18.8s,baz=134,slow=36						
SONM	Songino Array	23.79	321	P	P	06 12 40.8	-0.1
PETK	Petropavlovsk-	30.30	35	LR	LR	06 25 04.3	
	comp=Z,157nm,18.1s,baz=216,slow=35						
ZAA0	Zalesovo Array	38.66	319	P	P	06 14 52.0	+0.5
ZAA0				IAmb	IAmb	06 15 10.1	
	comp=Z,1.4nm,0.8s						
ZALV	Zalesovo Beam	38.66	319	P	P	06 14 52.2	+0.6
MK31	Makanchi Array	38.70	307	P	P	06 14 51.9	-0.2
MKAR	Makanchi Array	38.70	307	P	P	06 14 52.5	+0.4
	comp=Z,0.6nm,0.9s,baz=81,slow=7.5,SNR=4.1						
MKAR	Makanchi Array	38.70	307	P	P	06 14 51.3	-0.8
KKAR	Karatay Array	47.03	302	P	P	06 15 57.0	-2.6
WB0	Warramunga Arr	50.99	173	P	P	06 16 31.4	+1.3
WB0				IAmb	IAmb	06 16 37.5	
	comp=Z,7.1nm,1.3s						
WRA	Warramunga Arr	51.16	173	P	P	06 16 32.5	+1.1
	comp=Z,0.7nm,0.8s,baz=355,slow=8.1,SNR=6.1						
ARU	Arti	53.82	320	P	P	06 16 50.2	-0.5
ARU				IAmb	IAmb	06 16 57.4	
	comp=Z,3.9nm,0.8s						
AS31	Alice Springs	54.80	174	P	P	06 16 57.4	-0.8
ASAR	Alice Springs	54.80	174	P	P	06 17 00.7	+2.4
	comp=Z,0.8nm,0.8s,baz=2.6,slow=14,SNR=16						
A21K	Barrow	55.85	22	P	P	06 17 05.6	+0.4
I21K	Tanana	57.66	29	P	P	06 17 18.9	+0.7
ILAR	Eielson Array	59.87	30	P	P	06 17 36.6	+3.1
	comp=Z,0.6nm,1.0s,baz=278,slow=6.1,SNR=3.4						
ILAR	Eielson Array	59.87	30	P	P	06 17 34.5	+0.9
BMAR	Burnt Mountain	60.33	26	P	P	06 17 37.2	+0.5
FINES	FINESS Array B	68.76	330	P	P	06 18 33.8	+1.9
	comp=Z,3.9nm,1.1s,baz=72,slow=4.5,SNR=4.3						
CTI	Castel Tesino	84.35	321	P	P	06 19 59.2	-1.3

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*HEL **15** 06:24:06.7±0.1, 67°.67N×33°.67E, h0^{km}, ML2.2, Explosion*

*NAO **15** 06:24:07.1±1.1, 67°.67N×33°.66E, ML2.6*

*IDC **15** 06:24:09.6±2.0, 67°.76N×33°.41E, h0^{km}, mb1 3.7/4, mb1mx3.2/57, mbtmp3.6/4, ML2.3/3, Error ellipse: s-maj=20.6km s-min=10.5km az=80.0*

ISC 15 06:24:05.9±0.9**, 67°.64N**±0°.04×**33°.76E**±0°.04**, h0^{km}, n34, σ1^{s}.49**/60**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APZ9	Apatity	0.15	243	Pg	Pg	06 24 09.6	+0.8
APZ9				Lg	Lg	06 24 11.8	
APZ9				Rg	Rg	06 24 12.6	
APZ9	Apatity	0.15	243	Pg	Pg	06 24 09.6	+0.8
APZ9				Sg	Sg	06 24 11.8	+1.1
APA0	Apatity Array	0.30	264	Pg	Pg	06 24 11.9	+0.4
	baz=86,slow=16						
APA0				Lg	Lg	06 24 16.0	
	baz=72,slow=28						
APA0				Rg	Rg	06 24 17.4	
	baz=80,slow=56						
APA0	Apatity Array	0.30	264	Pg	Pg	06 24 11.9	+0.4
	baz=86,slow=16						
APA0				Sg	Sg	06 24 16.0	+0.6
	baz=72,slow=28						
LVZ	Lovozero	0.43	52	*e*P	Pg	06 24 14.5	+0.5
LVZ				*e*S	Sg	06 24 20.1	+0.6
VRF	Varrio	1.59	276	*e*P	Pn	06 24 34.7	-0.5
VRF				MSG		06 24 53.9	
	comp=Z,18nm,0.2s						
VRF				*e*S	Sn	06 24 54.2	-2.2
KU6	Riekki	2.23	225	*e*P	Pn	06 24 44.6	+0.6
KU6				*e*SG	Sb	06 25 14.9	-0.1
KU6				MSG		06 25 17.0	
	comp=Z,11nm,0.2s						
MSF	Maaselka	2.55	229	*e*PB	Pn	06 24 50.9	+2.5
MSF				*e*SB	Sb	06 25 23.9	-0.4
SGF	Sodankyl	2.79	269	*e*P	Pn	06 24 52.0	+0.4
SGF				*e*SB	Sn	06 25 28.4	+2.5
RNF	Rovaniemi	3.20	255	*e*P	Pn	06 24 57.9	+0.6
KEV	Kevo	3.25	314	Pn	Pn	06 24 59.0	+0.9
KEV				Sn	Sn	06 25 37.1	-0.4
KEV	Kevo	3.25	314	*e*P	Pn	06 24 58.9	+0.8
KEV				*e*S	Sn	06 25 36.8	-0.6
KEV	Kevo	3.25	314	*e*P	Pn	06 24 58.6	+0.5
KEV				*e*S	Sn	06 25 37.2	-0.2
KEV				MSG		06 25 37.4	
	comp=Z,7.6nm,0.2s						
ARA0	ARCESS Array S	3.58	306	Pn	Pn	06 25 02.8	+0.2
	baz=122,slow=16						
ARA0				Pg	Pb	06 25 11.4	+1.5
	baz=118,slow=16						
ARA0				Sn	Sn	06 25 44.0	-1.4
	baz=122,slow=28						
ARA0				Lg	Lg	06 25 54.9	
	baz=112,slow=37						
ARA0	ARCESS Array S	3.58	306	Pn	Pn	06 25 02.8	+0.2
	baz=122,slow=16						
ARA0				Pg	Pb	06 25 11.4	+1.5
	baz=118,slow=16						
ARA0				Sn	Sn	06 25 44.0	-1.4
	baz=122,slow=28						
ARA0				Sg	Sb	06 25 54.9	+1.1
	baz=112,slow=37						
ARA0	ARCESS Array S	3.58	306	*e*P	Pn	06 25 02.7	+0.2
ARCES	ARCESS Array B	3.58	306	Pn	Pn	06 25 02.7	+0.2
	baz=123,slow=15,SNR=8.2						
ARCES				Pg	Pb	06 25 11.0	+1.1
	baz=122,slow=15,SNR=6.2						
ARCES				Sn	Sn	06 25 44.1	-1.3
	baz=122,slow=24,SNR=5.4						
ARCES				Lg	Lg	06 25 54.5	
	baz=114,slow=32,SNR=6.7						
KLF	Kolari	3.80	268	*e*P	Pn	06 25 05.0	-0.6
HEF	Hetta	3.88	286	Pn	Pn	06 25 06.6	0.0
HEF				Pg	Pb	06 25 15.5	+0.5
HEF				Sn	Sn	06 25 51.1	-1.7
HEF				Lg	Lg	06 26 05.0	
HEF	Hetta	3.88	286	*e*P	Pn	06 25 07.0	+0.4
HEF				*e*S	Sn	06 25 51.1	-1.7
HEF	Hetta	3.88	286	*e*P	Pn	06 25 06.6	0.0
KTK1	Kautokeino	4.14	294	Pn	Pn	06 25 10.3	0.0
KTK1				Pg	Pb	06 25 20.2	+0.7
KTK1				Sn	Sn	06 25 56.6	-2.6
KTK1				Lg	Lg	06 26 12.6	
KTK1	Kautokeino	4.14	294	*e*P	Pn	06 25 10.6	+0.4
KTK1				*e*S	Sn	06 25 57.3	-2.0
KTK1				IAML		06 26 20.9	
	comp=Z,11nm,0.4s						
HAMF	Hammerfest	4.70	315	*e*P	Pn	06 25 19.3	+1.5
HAMF				IAML		06 26 34.5	
	comp=Z,13nm,0.5s						
KIF	Kilpisjarvi	5.00	292	*e*P	Pn	06 25 21.0	-0.9
JETT	Jettan, Norway	5.25	298	*e*P	Pn	06 25 26.3	+0.7
JETT				*e*S	Sn	06 26 23.1	-3.6
FIA0	FINESS Array S	7.04	212	Pn	Pn	06 25 51.0	+0.9
	baz=22,slow=14						
FIA0				Sn	Sn	06 27 06.6	-4.0
	baz=38,slow=28						
FIA0				Lg	Lg	06 27 42.6	
	baz=27,slow=22						
FIA0	FINESS Array S	7.04	212	Pn	Pn	06 25 51.0	+0.9
	baz=22,slow=14						
FIA0				Sn	Sn	06 27 06.6	-4.0
	baz=38,slow=28						
FINES	FINESS Array B	7.04	212	Pn	Pn	06 25 51.7	+1.7
	comp=Z,0.1nm,0.3s,baz=24,slow=12,SNR=1.5						
FINES				Sn	Sn	06 27 09.9	-0.7
	comp=Z,0.2nm,0.3s,baz=38,slow=23,SNR=1.7						
FINES				Lg	Lg	06 27 42.1	
	comp=Z,0.5nm,0.3s,baz=36,slow=26,SNR=4.8						
KLMR	Klimovskoe	7.26	157	P	Pn	06 25 44.9	-8.1
KLMR				*e*S	Sn	06 27 03.1	-13
KLMR				*e*S	Sn	06 27 03.1	-13
KLMR				*e*S	Sn	06 27 03.1	-13
KLMR				AMP		06 27 05.0	
SPA0	Spitsbergen Ar	11.67	342	Pn	Pn	06 26 50.9	-2.4
	baz=141,slow=12						
SPA0	Spitsbergen Ar	11.67	342	Pn	Pn	06 26 50.9	-2.4
	baz=141,slow=12						
SPITS	Spitsbergen Ar	11.67	342	Pn	Pn	06 26 51.0	-2.4
	baz=134,slow=16,SNR=1.6						
NOA	NORSAR Array B	11.74	247	Pn	Pn	06 26 54.4	0.0
	comp=Z,0.0nm,0.3s,baz=51,slow=9.9,SNR=2.8						
NOA				Lg	Lg	06 30 15.5	
	comp=Z,0.0nm,0.3s,baz=50,slow=21,SNR=2.3						

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*IDC **15** 06:27:52.2±2.2, 6°.62S×129°.91E, h133^{km}±24^{km}, mb3.7/2, mb1 3.9/7, mb1mx3.3/48, mbtmp4.3/7, Error ellipse: s-maj=25.0km s-min=17.6km az=90.0*

ISC 15 06:27:52.0±0.9**, 6°.65S**±0°.06×**129°.97E**±0°.09**, h146^{km}, n13, σ2^{s}.83**/14**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.87	135	P	Pn	06 28 30.7	+5.3
BNDI	Bandanaira	2.12	358	P	Pn	06 28 34.0	+5.7
DRS	Darwin Rock St	5.82	171	P	Pn	06 29 18.8	+2.5
	95nm,0.6s						
SIJI	Sorong	5.89	13	P	Pn	06 29 17.6	+0.3
SIJI				S	Sn	06 30 20.1	-3.8
	5.9nm,0.3s,baz=231,slow=22,SNR=12						
MTN	Manton Dam	6.26	170	P	Pn	06 29 25.1	+2.9
KDU	Kakadu	6.49	158	P	Pn	06 29 27.5	+2.3
BATI	Baumata	7.17	240	P	Pn	06 29 34.5	+0.2
	4.7nm,0.3s,baz=257,slow=22,SNR=2.4						
BATI				S	Sn	06 30 53.6	-1.0
	8.5nm,0.3s,baz=84,slow=4.4,SNR=2.5						
KNRA	Kununurra	9.05	187	P	Pn	06 30 00.0	+0.5
	30nm,0.6s						
FITZ	Fitzroy Crossi	12.13	200	P	Pn	06 30 40.2	0.0
	1.4nm,0.3s,baz=22,slow=9.3,SNR=42						
WRA	Warramunga Arr	13.88	163	P	Pn	06 31 01.9	-0.7
	0.7nm,0.3s,baz=349,slow=13,SNR=36						
WRA				S	Sn	06 33 30.0	-6.4
	1.8nm,0.3s,baz=334,slow=22,SNR=12						
ASAR	Alice Springs	17.34	168	P	Pn	06 31 47.6	+2.3
	0.9nm,0.3s,baz=340,slow=9.3,SNR=56						
STKA	Stephens Creek	27.35	158	P	P	06 33 25.5	+2.1
	0.9nm,0.3s,baz=337,slow=7.6,SNR=4.1						
MKAR	Makanchi Array	67.92	327	P	P	06 38 36.0	+1.1
	0.9nm,0.5s,baz=132,slow=7.9,SNR=12						

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*NIED **15** 06:33:35.5, 31°.24N×128°.69E, h4^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.19; $M_{\theta\theta}$-0.02; $M_{\phi\phi}$0.21; $M_{r\theta}$-0.16; $M_{\theta\phi}$0.94; $M_{\phi r}$0.45; Fault plane solution: $M_0$1.07000×10^{15} NP1: ϕ_s179.00000°, δ80.00000°, λ-153.00000°. NP2: ϕ_s84.00000°, δ64.00000°, λ-11.00000°.*

*JMA **15** 06:33:35.5±0.5, 31°.24N×128°.69E, h4^{km}±4^{km}, M4.0*

*IDC **15** 06:33:39.1±3.9, 31°.14N×128°.40E, h0^{km}, mb3.3/3, mb1 3.6/6, mb1mx3.3/51, mbtmp3.5/6, ML3.8/3, MS3.2/8, Ms1 3.2/8, ms1mx3.0/31, Error ellipse: s-maj=69.2km s-min=28.9km az=165.0*

ISC 15 06:33:38.8±1.3**, 31°.06N**±0°.07×**128°.92E**±0°.08**, h6^{km}, n17, σ2^{s}.51**/11**, mb3.2**/3**, MS3.1**/5**, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.92	48	P	Pg	06 33 53.9	-2.5
JSJ				S	Sg	06 34 06.8	-1.5
JSU	Suzuyama	1.39	71	S	Sn	06 34 24.8	+1.5
JNN	Nakanoshima	1.47	146	P	Pn	06 34 06.9	+1.2
JYAK	Yakushimahirau	1.59	120	P	Pn	06 34 06.6	-0.9
JFU	Fukue jima 2	1.60	355	P	Pn	06 34 02.1	-5.5
JNU	Nakatsue	2.64	38	Pn	Pn	06 34 25.4	+3.4
	41nm,0.3s,baz=213,slow=0.1,SNR=28						
JNU				Sn	Sg	06 35 02.3	-1.4
	34nm,0.3s,baz=319,slow=0.1,SNR=6.0						
KSRS	Korea Array	6.43	353	Pn	Pn	06 35 13.6	-0.4
	0.7nm,0.3s,baz=175,slow=15,SNR=10						
KSRS				Lg	Lg	06 36 52.6	
	0.5nm,0.3s,baz=184,slow=29,SNR=7.6						
KSRS				LR	LR	06 37 25.6	
	comp=Z,61nm,18.1s,baz=20,slow=36						

MJAR	Matsushiro Arr	9.46	52	LR	LR	06 39 46.9	
	comp=Z,152nm,18.2s,baz=170,slow=38						
ASAJ	Asahikawa	16.92	36	LR	LR	06 43 19.0	
	comp=Z,104nm,19.6s,baz=227,slow=34						
KLR	Kul'dur	18.28	6	P	P	06 37 55.0	+1.9
	0.1nm,0.3s,baz=183,slow=8.9,SNR=5.9						
GUMO	Guam	22.75	136	LR	LR	06 47 02.5	
	comp=Z,59nm,18.7s,baz=118,slow=35						
SONM	Songino Array	24.02	321	P	P	06 38 50.9	-3.5
	0.6nm,0.8s,baz=132,slow=8.3,SNR=2.8						
SONM				LR	LR	06 48 40.3	
	comp=Z,128nm,18.1s,baz=236,slow=38						
DAV	Davao City (W)	24.07	188	LR	LR	06 49 28.8	
	comp=Z,38nm,19.1s,baz=340,slow=39						
CMAR	Chiang Mai Arr	29.87	252	LR	LR	06 53 02.2	
	comp=Z,38nm,18.4s,baz=60,slow=40						
PETK	Petropavlovsk-	30.34	35	LR	LR	06 50 56.3	
	comp=Z,63nm,20.0s,baz=231,slow=34						
MKAR	Makanchi Array	38.93	307	P	P	06 41 03.6	-1.8
	0.1nm,0.4s,baz=103,slow=6.2,SNR=1.6						
ILAR	Eielson Array	59.93	30	P	P	06 43 48.1	+2.8
	0.3nm,0.7s,baz=286,slow=7.2,SNR=4.1						

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*THE **15** 06:34:22.3, 38°.68N×20°.57E, h4^{km}±1^{km}, ML2.5/7, Error ellipse: s-maj=1.3km s-min=0.4km az=70.0*

*ATH **15** 06:34:22.4, 38°.68N×20°.57E, h3^{km}±1^{km}, ML2.6/2, Error ellipse: s-maj=2.3km s-min=0.7km az=298.0*

ISC 15 06:34:20.9±0.8, **38°.69N**±0°.02×**20°.53E**±0°.05, **h11**^{km}±5^{km}, **n30**, σ**0^{s}.91**/51, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRAG	Dragano-Lefkad	0.04	92	P	Pg	06 34 23.0	+0.1
DRAG				S	Sg	06 34 23.6	-0.8
	31μm,0.1s						
DRAG	Dragano-Lefkad	0.04	92	P	Pg	06 34 22.9	+0.1
DRAG				S	Sg	06 34 23.5	-0.8
EVGI	Lefkada island	0.12	123	P	Pg	06 34 24.1	+0.3
EVGI				S	Sg	06 34 25.8	-0.1
	10μm,0.1s						
EVGI	Lefkada island	0.12	123	P	Pg	06 34 24.1	+0.3
NYDR	Nydri-Lefkada	0.13	78	P	Pg	06 34 24.2	+0.2
NYDR				S	Sg	06 34 26.1	-0.2
NYDR	Nydri-Lefkada	0.13	78	P	Pg	06 34 24.2	+0.2
NYDR				S	Sg	06 34 26.0	-0.2
LKD2	Lefkada island	0.14	44	P	Pg	06 34 24.8	+0.6
LKD2				S	Sg	06 34 27.0	+0.4
	3μm,0.3s						
LKD2	Lefkada island	0.14	44	P	Pg	06 34 24.8	+0.6
LKD2				S	Sg	06 34 27.1	+0.5
TSLK	Tsoukalades, L	0.17	35	P	Pg	06 34 25.6	+1.0
TSLK				S	Sg	06 34 28.4	+1.1
	3μm,0.4s						
TSLK	Tsoukalades, L	0.17	35	P	Pg	06 34 25.6	+1.0
TSLK				S	Sg	06 34 28.3	+1.1
FSK	Fiskardo	0.23	174	P	Pg	06 34 26.8	+1.2
FSK				S	Sg	06 34 30.4	+1.6
	3μm,0.3s						
FSK	Fiskardo	0.23	174	P	Pg	06 34 26.8	+1.2
FSK				S	Sg	06 34 29.7	+0.9
FSK				AML	AML	06 34 31.0	
	comp=N,4125μm,0.4s						
FSK				AML	AML	06 34 32.2	
	comp=E,7015μm,0.2s						
KEF4	Livadi, Kephal	0.43	191	P	Pb	06 34 30.5	0.0
KEF4				S	Sb	06 34 37.7	+0.6
KEF4	Livadi, Kephal	0.43	191	P	Pb	06 34 30.5	0.0
DMLN	Damoulianata-K	0.46	195	P	Pb	06 34 31.0	0.0
DMLN				S	Sb	06 34 38.5	+0.6
	comp=E,748nm,0.4s						
DMLN	Damoulianata-K	0.46	195	P	Pb	06 34 31.1	0.0
KEF3	Kipouria, Keph	0.50	197	P	Pb	06 34 31.2	-0.5
KEF3				S	Sb	06 34 39.0	0.0
KEF3	Kipouria, Keph	0.50	197	P	Pb	06 34 31.2	-0.5
VLS	Valsamata	0.51	175	P	Pb	06 34 31.4	-0.5
VLS				S	Sb	06 34 39.0	-0.3
	comp=E,835nm,0.2s						
VLS	Valsamata	0.51	175	P	Pb	06 34 31.3	-0.6
VLS				S	Sb	06 34 39.2	-0.1
VLS				AML	AML	06 34 40.0	
	comp=E,1910μm,0.3s						
VLS				AML	AML	06 34 40.2	
	comp=N,1412μm,0.2s						
PSDA	Pessada-Kefalo	0.57	176	P	Pb	06 34 32.4	-0.5
PSDA				S	Sb	06 34 41.3	+0.3
PSDA	Pessada-Kefalo	0.57	176	P	Pb	06 34 32.6	-0.3
PVO	Paravola	0.78	95	P	Pb	06 34 36.9	+0.4
PVO	Paravola	0.78	95	P	Pb	06 34 36.8	+0.3
IGT	Igoumenitsa	0.86	350	P	Pb	06 34 38.7	+0.9
STON	Ston	4.70	334	*e*Pn	Pn	06 35 31.2	-0.5
STON				Sn	Sn	06 36 23.2	-3.0
RICI	Ricice	5.45	333	*e*Pn	Pn	06 35 42.6	+0.6
RICI				Sn	Sn	06 36 43.2	-1.5
KIJV	Kijevo	6.15	331	*e*Pn	Pn	06 35 52.3	+0.6
KIJV				Sn	Sn	06 37 01.0	-1.1
ZIRJ	Zirje	6.18	325	*e*Pn	Pn	06 35 52.4	+0.4
ZIRJ				Sn	Sn	06 36 60.0	-2.8
MORI	Morici	6.32	326	*e*Pn	Pn	06 35 55.1	+1.1

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*IDC **15** 06:37:19.7±2.4, 6°.23S×133°.20E, h0^{km}, mb4.1/1, mb1 4.0/5, mb1mx3.5/35, mbtmp3.9/5, ML3.8/4, Error ellipse: s-maj=83.8km s-min=28.7km az=78.0*

ISC 15 06:37:22.3±1.1, **6°.26S**±0°.06×**133°.1E**±0°.2, **h35**^{km}, **n9**, σ**3^{s}.81**/9, **Aru Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	Fak Fak	3.41	346	P	Pn	06 38 14.5	+1.5
BNDI	Bandanaira	3.57	299	P	Pn	06 38 22.1	+6.8
SIJI	Sorong	5.64	342	Pn	Pn	06 38 45.2	+1.5
	5.5nm,0.3s,baz=22,slow=22,SNR=10						
SIJI				Sn	Sn	06 39 42.0	-5.3
	6.2nm,0.3s,baz=279,slow=23,SNR=12						
KDU	Kakadu	6.42	185	P	Pn	06 38 59.9	+5.5
SANI	Sanana	8.19	300	P	Pn	06 39 24.5	+5.8
WRA	Warramunga Arr	13.66	175	Pn	Pn	06 40 34.4	+0.6
	0.3nm,0.3s,baz=356,slow=13,SNR=15						
WRA				Sn	Sn	06 42 58.7	-5.7
	0.7nm,0.3s,baz=356,slow=23,SNR=7.1						
FITZ	Fitzroy Crossi	13.81	211	Pn	Pn	06 40 38.6	+2.8
	0.3nm,0.3s,baz=31,slow=12,SNR=19						
FITZ				Sn	Sn	06 43 05.2	-2.8
	0.7nm,0.3s,baz=208,slow=21,SNR=6.1						
ASAR	Alice Springs	17.33	177	P	P	06 41 23.3	+0.6
	0.6nm,0.3s,baz=356,slow=13,SNR=11						
STKA	Stephens Creek	26.71	164	P	P	06 43 00.9	+2.5
	1.1nm,0.3s,baz=341,slow=9.8,SNR=5.6						

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*IDC **15** 06:58:35.1±0.7, 1°.41N×101°.24W, h0^{km}, mb4.3/12, mb1 4.5/12, mb1mx4.3/27, mbtmp4.3/12, MS3.8/18, Ms1 3.8/18, ms1mx3.7/33, Error ellipse: s-maj=33.3km s-min=13.6km az=53.0*

*NEIC **15** 06:58:38.5±1.4, 1°.4N±0°.1×101°.2W±0°.1, h10^{km}±1^{km}, mb4.5/110, Error ellipse: s-maj=23.8km s-min=15.1km az=227.0*

ISC 15 06:58:37.5±0.6, **1°.39N**±0°.09×**101°.3W**±0°.1, **h14**^{km}, **n174**, σ**0^{s}.99**/150, **mb4.5**/64, **MS3.9**/16, **Galapagos Triple Junction region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAYG	Puerto Ayora	11.15	101	Pn	Pn	07 01 16.9	+0.2
TLIG	Tlapa	16.29	9	Pn	Pn	07 02 25.9	-0.2
CMIG	Matias Romero	16.81	21	LR	LR	07 07 28.2	
	comp=Z,154nm,19.0s,baz=187,slow=32						
HUEH	Huehuetenango	16.86	34	Pn	Pn	07 02 33.3	-0.1
HUEH				IAmb	IAmb	07 02 44.6	
	comp=Z,53nm,1.4s						
MTO3	Montecristo	17.47	42	P	P	07 02 41.9	-0.4
JTS	Las Juntas de	18.45	61	LR	LR	07 07 37.3	
	comp=Z,164nm,21.8s,baz=300,slow=29						
TGUH	Tegucigalpa,Un	18.69	47	P	P	07 02 55.1	-0.6
ZAIG	Zacatecas	21.29	357	P	P	07 03 23.1	-1.0
OTAV	Otavalo	22.82	93	*e*P	P	07 03 42.3	+1.4
OTAV	Otavalo	22.82	93	P	P	07 03 40.0	-0.9
LPIG	La Paz	24.22	339	LR	LR	07 11 08.7	
	comp=Z,314nm,21.4s,baz=168,slow=31						
HPIG		25.75	351	P	P	07 04 08.0	-0.1
HPIG				IAmb	IAmb	07 04 09.8	
	comp=Z,8.8nm,1.1s						
ZARC	Zaragoza, Cauc	26.99	76	P	P	07 04 19.3	+0.1
ROSC	El Rosal	27.10	82	LR	LR	07 13 10.8	
	comp=Z,164nm,21.7s,baz=220,slow=32						
NNA	Nana	27.65	119	LR	LR	07 12 44.0	
	comp=Z,210nm,21.6s,baz=284,slow=31						
TX31	Lajitas Ar. Si	27.89	355	P	P	07 04 27.9	+0.7
TX31				IAmb	IAmb	07 04 30.7	
	comp=Z,15nm,1.1s						
TX32	Lajitas Array	27.89	355	P	P	07 04 28.3	+1.1
TXAR	Lajitas Array	27.89	355	P	P	07 04 27.4	+0.1
	comp=Z,2.6nm,0.9s,baz=172,slow=11,SNR=24						
TXAR				PcP	PcP	07 07 42.4	-0.6
	comp=Z,0.5nm,0.6s,baz=192,slow=4.1,SNR=5.7						
TXAR				LR	LR	07 14 32.5	
	comp=Z,282nm,19.7s,baz=0.0,slow=34						
TXAR	Lajitas Array	27.89	355	P	P	07 04 27.5	+0.3
JCT	Junction City	28.96	3	P	P	07 04 37.1	+0.4
JCT				IAmb	IAmb	07 04 39.7	
	comp=Z,7.8nm,0.9s						
CZSB	Cruzeiro do Su	29.88	108	*e*P	P	07 04 44.3	-0.7
CZSB	Cruzeiro do Su	29.88	108	P	P	07 04 45.9	+0.9
MNTX	Cornudas Mount	30.40	353	P	P	07 04 49.5	+0.1
MNTX				IAmb	IAmb	07 04 50.5	
	comp=Z,5.6nm,1.2s						
WHTX	Lake Whitney,	30.65	6	P	P	07 04 51.2	-0.4
319A	Douglas	30.78	346	P	P	07 04 53.6	+0.7
319A				IAmb	IAmb	07 04 54.5	
	comp=Z,8.1nm,0.9s						
NATX	Nacogdoches	30.84	11	P	P	07 04 52.8	-0.5
342A	Flagon Creek P	31.00	15	P	P	07 04 55.6	+1.0
ABTX	Abilene, Hawle	31.11	3	P	P	07 04 56.1	+0.4
ABTX				IAmb	IAmb	07 04 58.2	
	comp=Z,6.8nm,0.8s						
SDV	Santo Domingo	31.36	75	*e*P	P	07 05 06.7	+8.3
121A	Cookes Peak, D	31.59	349	P	P	07 05 00.8	+0.8
121A				IAmb	IAmb	07 05 02.5	
	comp=Z,6.3nm,0.9s						
TBTG	Tabatinga, AM	31.80	100	*e*P	P	07 05 01.4	-0.6
TBTG	Tabatinga, AM	31.80	100	P	P	07 05 02.5	+0.5
TUC	Tucson	32.04	345	P	P	07 05 04.5	+0.5
TUC				IAmb	IAmb	07 05 05.7	
	comp=Z,4.5nm,1.0s						
113A	Mohawk Valley,	33.36	341	P	P	07 05 16.2	+0.8
113A				IAmb	IAmb	07 05 19.2	
	comp=Z,3.7nm,0.9s						
X37A	Clayton	33.48	9	P	P	07 05 17.0	+0.6
X37A				IAmb	IAmb	07 05 18.9	
	comp=Z,11nm,1.1s						
ANMO	Albuquerque	33.74	352	P	P	07 05 19.5	+0.6
MIAR	Mount Ida	33.76	11	P	P	07 05 19.1	+0.3
GLA	Glamis	33.98	339	P	P	07 05 21.5	+0.6
GLA				IAmb	IAmb	07 05 30.7	
	comp=Z,12nm,1.2s						
BCOK	Bluff Creek, N	34.26	5	P	P	07 05 24.1	+0.9
BAR	Barrett	34.34	337	P	P	07 05 25.6	+1.6
BAR				IAmb	IAmb	07 05 28.0	
	comp=Z,6.4nm,1.1s						
TUL1	Leonard	34.72	8	P	P	07 05 27.4	+0.2
PFO	Pinyon Flats O	35.08	338	P	P	07 05 31.7	+1.2
PFO				IAmb	IAmb	07 05 34.6	
	comp=Z,6.6nm,1.2s						
WUAZ	Wupatki	35.24	346	P	P	07 05 33.1	+1.2
WUAZ				IAmb	IAmb	07 05 36.0	
	comp=Z,7.4nm,1.0s						
HHAR	Hobbs	35.37	10	P	P	07 05 33.1	+0.3
HHAR				IAmb	IAmb	07 05 48.9	
	comp=Z,7.9nm,1.1s						
T25A	Trinidad	35.69	356	P	P	07 05 36.1	+0.3
T25A				IAmb	IAmb	07 05 40.8	
	comp=Z,11nm,1.2s						
MVCO	Mesa Verde	36.27	350	P	P	07 05 41.6	+0.9
MVCO				IAmb	IAmb	07 05 44.6	
	comp=Z,7.8nm,1.1s						
SDCO	Great Sand Dun	36.39	354	P	P	07 05 42.4	+0.5
ETMB	Extrema	36.61	108	*e*P	P	07 05 42.8	-0.9
ETMB	Extrema	36.61	108	IAmb	IAmb	07 05 45.9	
	comp=Z,11nm,0.9s						
T42A	Van Buren	36.69	14	P	P	07 05 44.0	-0.1
T42A				IAmb	IAmb	07 05 46.3	
	comp=Z,5.4nm,0.9s						
GSC	Goldstone, Bar	36.72	338	P	P	07 05 45.5	+1.0
GSC				IAmb	IAmb	07 05 49.4	
	comp=Z,5.9nm,1.1s						
WVT	Waverly	36.74	18	P	P	07 05 46.1	+1.6
WVT				IAmb	IAmb	07 05 46.5	
	comp=Z,12nm,1.1s						
S39A	Bolivar	36.86	11	IAmb	IAmb	07 05 47.8	
	comp=Z,11nm,1.1s						
KNB	Kanab	37.03	345	IAmb	IAmb	07 05 51.4	
	comp=Z,11nm,1.2s						
LPAZ	La Paz	37.12	120	P	P	07 05 49.7	+1.0
	comp=Z,5.5nm,0.8s,baz=284,slow=10.0,SNR=18						
LPAZ	La Paz	37.12	120	*e*P	P	07 05 49.1	+0.4
LPAZ	La Paz	37.12	120	P	P	07 05 49.3	+0.6
LPAZ				IAmb	IAmb	07 05 52.2	
	comp=Z,5.2nm,0.7s						
LCMT	Little Creek M	37.14	344	P	P	07 05 48.6	+0.5
QSM	Queen of Sheba	37.33	339	P	P	07 05 50.7	+1.1
PB11	IPOC Station P	37.45	126	P	P	07 05 51.6	+0.7
GWY	Greenwater Val	37.46	339	P	P	07 05 51.6	+0.8
GWY				IAmb	IAmb	07 05 52.9	
	comp=Z,8.2nm,1.2s						
CCM	Cathedral Cave	37.63	13	P	P	07 05 53.1	+1.0
CCM				IAmb	IAmb	07 05 54.8	
	comp=Z,8.3nm,0.9s						
R40A	Maddies Statio	37.64	12	P	P	07 05 53.2	+1.0
R40A				IAmb	IAmb	07 05 54.6	
	comp=Z,12nm,0.9s						
FVM	French Village	37.75	14	P	P	07 05 54.5	+1.4
FVM				IAmb	IAmb	07 05 55.2	
	comp=Z,9.9nm,0.9s						
T47A	Sharon Grove	37.76	19	P	P	07 05 53.9	+0.7
T47A				IAmb	IAmb	07 05 56.0	
	comp=Z,20nm,1.4s						
PB01	IPOC Station P	38.24	127	P	P	07 05 58.8	+1.2
PB01				IAmb	IAmb	07 06 02.2	
	comp=Z,12nm,1.0s						
MSU	Marysvale	38.28	346	P	P	07 05 58.9	+1.1
MVU	Marysvale	38.28	346	P	P	07 05 59.3	+1.5
MVU				IAmb	IAmb	07 06 02.7	
	comp=Z,16nm,1.1s						
PB07	IPOC Station P	38.29	129	P	P	07 05 58.6	+0.6
SRU	San Rafael Swe	38.49	348	P	P	07 06 00.2	+0.7
PSUT	Pine Spring	38.73	344	P	P	07 06 02.2	+0.6
TMUT	Trail Mountain	38.81	348	P	P	07 06 03.2	+0.8
TMUT				IAmb	IAmb	07 06 06.5	
	comp=Z,15nm,1.2s						
P40A	Paris	38.88	11	IAmb	IAmb	07 06 05.3	
	comp=Z,16nm,1.0s						
P17A	Butcher Ranch,	38.88	348	P	P	07 06 03.5	+0.7
P18A	Preston Nutter	38.93	349	P	P	07 06 04.0	+0.6
V55A	Taylorsville	39.01	26	P	P	07 06 05.3	+1.6
V55A				IAmb	IAmb	07 06 06.4	
	comp=Z,14nm,1.1s						
O20A	White River Ci	39.09	351	P	P	07 06 05.2	+0.7
SAML	Samuel	39.29	106	P	P	07 06 05.9	-0.5
LVC	Limon Verde	39.53	129	*e*P	P	07 06 13.1	+4.4
MPU	Maple Canyon	39.59	347	P	P	07 06 09.6	+0.8
MPU				IAmb	IAmb	07 06 11.1	
	comp=Z,10nm,1.1s						
DUG	Dugway, Tooele	40.03	346	P	P	07 06 13.6	+1.2
NVAR	Mina Array Bea	40.05	339	P	P	07 06 13.9	+1.3
	comp=Z,1.2nm,0.8s,baz=156,slow=7.9,SNR=8.6						
NVAR				LR	LR	07 21 06.1	
	comp=Z,70nm,18.5s,baz=88,slow=34						
JLU	Jordanelle	40.12	348	P	P	07 06 14.5	+1.3
JLU				IAmb	IAmb	07 06 28.7	
	comp=Z,12nm,1.4s						
O44A	Mansfield	40.30	15	P	P	07 06 16.1	+1.7
O44A				IAmb	IAmb	07 06 16.6	
	comp=Z,25nm,1.3s						
HDIL	Hopedale	40.47	14	P	P	07 06 17.5	+1.8
H03N2	Juan Fernandez	40.53	151	T	T	07 49 37.9	
	baz=326,slow=77,SNR=11						
KVN	Kaiserville	40.53	340	P	P	07 06 18.0	+1.4
H03N1	Juan Fernandez	40.54	151	T	T	07 49 40.3	
	baz=326,slow=77,SNR=15						
H03N3	Juan Fernandez	40.54	151	T	T	07 49 40.4	
	baz=326,slow=77,SNR=10.0						
BOAV	Boa Vista	40.71	88	*e*P	P	07 06 17.8	-0.5
BGU	Big Grassy Mou	40.78	346	P	P	07 06 19.7	+1.1
MACA	Manacapuru-AM	40.80	96	*e*P	P	07 06 17.5	-1.4
MACA	Manacapuru-AM	40.80	96	P	P	07 06 17.9	-1.1
P49A	Miami Univ. Ec	40.85	20	P	P	07 06 19.2	+0.2
P49A				IAmb	IAmb	07 06 20.9	
	comp=Z,10nm,1.1s						
HWUT	Hardware Ranch	41.10	348	IAmb	IAmb	07 06 25.6	
	comp=Z,8.9nm,1.0s						
PTGA	Pitinga	41.33	93	P	P	07 06 22.8	-0.5
	comp=Z,15nm,0.9s,baz=274,slow=8.4,SNR=22						
BW06	Boulder Array	41.86	351	IAmb	IAmb	07 06 30.6	
	comp=Z,8.1nm,1.1s						
PD31	Pinedale Array	41.86	351	P	P	07 06 27.4	-0.1
PD31				IAmb	IAmb	07 06 30.6	
	comp=Z,7.4nm,1.1s						
PDAR	Pinedale Array	41.86	351	P	P	07 06 27.6	0.0
	comp=Z,2.6nm,0.7s,baz=150,slow=8.0,SNR=25						
PDAR				PcP	PcP	07 08 22.6	-0.7
	comp=Z,0.5nm,0.7s,baz=157,slow=4.9,SNR=3.8						
PDAR				LR	LR	07 22 33.0	
	comp=Z,109nm,18.7s,baz=114,slow=34						
PDAR	Pinedale Array	41.86	351	P	P	07 06 27.1	-0.4
ORV	Oroville	42.24	337	P	P	07 06 31.6	+1.3
ORV				IAmb	IAmb	07 06 32.9	
	comp=Z,6.2nm,0.9s						
RSSD	Black Hills	42.62	357	P	P	07 06 34.1	+0.4
FXWY	Fox Creek	42.96	350	IAmb	IAmb	07 06 39.5	
	comp=Z,8.3nm,1.2s						
MOOW	Moose Ponds	43.02	350	P	P	07 06 36.6	-0.2
VILB	Vilhena	43.14	111	*e*P	P	07 06 38.5	+0.4
VILB	Vilhena	43.14	111	P	P	07 06 38.0	-0.1
VILB				IAmb	IAmb	07 06 41.3	
	comp=Z,21nm,1.2s						
SIV	San Ignacio	43.27	115	P	P	07 06 38.5	-0.6
	comp=Z,1.4nm,0.9s,baz=269,slow=12,SNR=6.9						
SIV				PcP	PcP	07 08 27.8	-0.4
	comp=Z,1.5nm,0.9s,baz=339,slow=1.3,SNR=3.9						
FLWY	Flagg Ranch	43.33	350	P	P	07 06 39.5	+0.1
FLWY				IAmb	IAmb	07 06 42.8	
	comp=Z,8.9nm,1.1s						
BCYI	Bear Canyon	44.08	347	P	P	07 06 46.8	+1.3
YHL	Hebgen Lake	44.16	350	IAmb	IAmb	07 06 50.2	
	comp=Z,8.7nm,1.3s						
QLMT	Earthquake Lak	44.19	350	P	P	07 06 47.5	+1.2
SSPA	Standing Stone	44.43	26	P	P	07 06 48.5	+0.5
PTLB	Pontes e Lacer	44.86	114	*e*P	P	07 06 51.5	-0.3
PTLB	Pontes e Lacer	44.86	114	P	P	07 06 50.8	-1.1
PTLB				IAmb	IAmb	07 06 54.4	
	comp=Z,9.9nm,0.9s						
ITTB	Itaituba	45.84	97	*e*P	P	07 06 57.7	-1.9
PDRB	Porto dos Gac	46.08	108	*e*P	P	07 06 59.6	-2.0
NPGB	Novo Progresso	46.55	101	*e*P	P	07 07 03.4	-1.9
CLDB	Colider	46.81	106	*e*P	P	07 07 06.0	-1.4
MALB	Monte Alegre	47.09	94	*e*P	P	07 07 10.2	+0.7
SALV	Santo Antonio	48.16	113	*e*P	P	07 07 17.2	-0.6
NEW	Newport	48.67	346	P	P	07 07 21.3	0.0
ULM	Lac du Bonnet	48.90	5	P	P	07 07 21.3	-1.5
	comp=Z,2.8nm,0.5s,baz=189,slow=11,SNR=4.8						
ULM				LR	LR	07 28 12.0	
	comp=Z,116nm,18.4s,baz=92,slow=36						
ULM	Lac du Bonnet	48.90	5	P	P	07 07 22.1	-0.8
MCPB	Macapa, AP	49.22	92	*e*P	P	07 07 24.2	-1.7
PP1B	Ponte de Pedra	49.41	115	*e*P	P	07 07 27.4	0.0
AQDB	Aquidauana	49.61	119	*e*P	P	07 07 29.1	+0.2
AQDB	Aquidauana	49.61	119	P	P	07 07 28.9	0.0
AQDB				IAmb	IAmb	07 07 30.7	
	comp=Z,4.9nm,1.0s						
PLCA	Paso Flores	50.39	150	P	P	07 07 35.0	+0.5
	comp=Z,3.2nm,1.1s,baz=290,slow=13,SNR=3.1						
PLCA				LR	LR	07 24 00.8	
	comp=Z,135nm,19.8s,baz=334,slow=30						
CPUP	Villa Florida	50.53	126	P	P	07 07 36.2	+0.4
	comp=Z,4.2nm,0.9s,baz=300,slow=8.9,SNR=7.0						
CPUP	Villa Florida	50.53	126	*e*P	P	07 07 36.4	+0.7
CPUP	Villa Florida	50.53	126	P	P	07 07 36.1	+0.4
PPT	Papeete	51.18	246	LR	LR	07 24 19.3	
	comp=Z,61nm,19.8s,baz=113,slow=30						
SNDB	Serra Nova Dou	51.36	106	*e*P	P	07 07 41.0	-1.2
EDM	Edmonton	52.63	351	P	P	07 07 51.0	0.0
TMAB	Tom-Au,PA,Br	53.27	94	*e*P	P	07 07 57.5	+1.1
SMTB	Santa Maria do	54.43	102	*e*P	P	07 08 04.8	-0.1
BDFB	Brasilia	55.25	110	P	P	07 08 09.9	-1.0
	comp=Z,6.5nm,1.0s,baz=270,slow=3.2,SNR=6.7						
BDFB				LR	LR	07 30 15.7	
	comp=Z,221nm,19.3s,baz=284,slow=34						
BDFB	Brasilia	55.25	110	P	P	07 08 10.2	-0.7
IPMB	Ipameri, GO	55.62	113	*e*P	P	07 08 12.4	-1.0
FRTB	Fartura	55.93	119	*e*P	P	07 08 17.5	+1.9
YKA	Yellowknife Ar	61.78	353	P	P	07 08 54.7	-0.8
	comp=Z,3.8nm,0.9s,baz=153,slow=6.7,SNR=6.0						
USHA	Ushuaia	62.20	159	LR	LR	07 30 42.6	
	comp=Z,112nm,20.6s,baz=338,slow=31						
KDAK	Kodiak Island	69.21	333	LR	LR	07 32 39.4	
	comp=Z,68nm,20.8s,baz=133,slow=30						
RND	Reindeer	71.04	339	P	P	07 09 54.9	0.0
IL31		71.26	341	P	P	07 09 56.5	+0.4
ILAR	Eielson Array	71.26	341	P	P	07 09 55.7	-0.4
	comp=Z,2.2nm,0.6s,baz=148,slow=5.6,SNR=29						
ILAR	Eielson Array	71.26	341	P	P	07 09 56.1	-0.1
PRP	Porcupine Dome	71.33	342	P	P	07 09 58.0	+1.3
PMSA	Palmer Station	71.37	164	LR	LR	07 33 20.6	
	comp=Z,78nm,18.3s,baz=324,slow=29						
AFI	Afiamalu	71.47	255	LR	LR	07 35 05.8	
	comp=Z,76nm,18.6s,baz=92,slow=31						
MDM	Murphy Dome	71.82	341	P	P	07 10 01.6	+2.1
MDM				IAmb	IAmb	07 10 02.9	
	comp=Z,7.1nm,1.2s						
PPLA	Purkeypile	71.94	338	P	P	07 10 00.9	+0.4
A36M	Sachs Harbour	72.12	352	P	P	07 10 02.3	+1.2
A36M				IAmb	IAmb	07 10 03.8	
	comp=Z,4.3nm,0.8s						
BMAR	Burnt Mountain	72.37	344	P	P	07 10 04.1	+1.3
MLY	Manley	72.70	340	P	P	07 10 05.0	+0.2
MLY				IAmb	IAmb	07 10 07.7	
	comp=Z,6.8nm,1.0s						
J20K	Nowinta River	73.40	339	P	P	07 10 09.1	+0.2
J20K				IAmb	IAmb	07 10 31.2	
	comp=Z,7.5nm,1.4s						
H21K	Melozitna Rive	73.77	340	IAmb	IAmb	07 10 13.6	
	comp=Z,9.5nm,1.2s						
COLD	Coldfoot	73.88	342	IAmb	IAmb	07 10 15.4	
	comp=Z,11nm,1.2s						
H11S2	WAKE ISLAND Hy	91.51	288	T	T	08 53 29.6	
	baz=244,slow=74,SNR=6.7						
H11S1	WAKE ISLAND Hy	91.51	288	T	T	08 53 28.5	
	baz=85,slow=74,SNR=5.1						
H11S3	WAKE ISLAND Hy	91.52	288	T	T	08 53 29.6	
	SNR=4.7						
PETK	Petropavlovsk-	95.53	324	LR	LR	07 45 12.1	
	comp=Z,43nm,21.8s,baz=336,slow=29						
NOA	NORSAR Array B	99.49	27	LR	LR	07 58 00.8	
	comp=Z,12nm,18.3s,baz=5.0,slow=36						
BRTR	Keskin Array B	121.92	40	PKP	PKPdf	07 17 31.6	-0.5
	comp=Z,0.4nm,0.5s,baz=12,slow=8.1,SNR=3.5						
ASAR	Alice Springs	122.23	243	PKP	PKPdf	07 17 32.4	-0.7
	comp=Z,0.8nm,0.8s,baz=106,slow=1.9,SNR=9.8						
ASAR	Alice Springs	122.23	243		PKPdf	07 17 32.2	-0.8
BOSA	Boshof	122.30	123	PKP	PKPdf	07 17 32.6	-0.5
	comp=Z,4.4nm,0.9s,baz=218,slow=2.3,SNR=3.8						
WRA	Warramunga Arr	122.66	247	PKP	PKPdf	07 17 33.1	-0.8
	comp=Z,1.3nm,0.8s,baz=99,slow=1.9,SNR=13						
ZALV	Zalesovo Beam	124.62	356	PKP	PKPdf	07 17 34.5	-2.2
	comp=Z,0.6nm,0.4s,baz=94,slow=2.1,SNR=3.9						
KURBB	Kurchatov Arra	128.19	0	PKP	PKPdf	07 17 42.8	-0.7
	comp=Z,1.2nm,0.9s,baz=0.6,slow=1.4,SNR=6.9						
MKAR	Makanchi Array	131.92	357	PKP	PKPdf	07 17 50.9	+0.1
	comp=Z,0.4nm,0.7s,baz=3.8,slow=4.3,SNR=3.8						
MKAR	Makanchi Array	131.92	357		PKPdf	07 17 50.5	-0.3
CMAR	Chiang Mai Arr	152.01	316	PKPbc	PKiKP	07 18 34.6	+0.9
	comp=Z,1.1nm,0.4s,baz=335,slow=1.7,SNR=13						
CMAR	Chiang Mai Arr	152.01	316	PKPdf	PKPdf	07 18 25.2	-1.7
CMAR					PKiKP	07 18 34.8	+1.0
CMAR				PKPab	PKPab	07 18 42.7	0.0

TRN 15 07:04:21.8, 15°.32N×61°.11W, h145^{km}, MD3.6, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DLPL	La Plaine	0.13	274	*e*P	Pn	07 04 42.4	+1.1
MDN	Morne-Daniel	0.27	269	*e*P	Pn	07 04 43.0	+1.4
MDN				*e*S	Sn	07 04 57.6	+1.0
DSLB	Salisbury	0.32	291	*e*P	Pn	07 04 43.3	+1.6
DSLB				*e*S	Sn	07 04 58.3	+1.3
MDVC	Dominica, Viel	0.40	316	*e*P	Pn	07 04 44.4	+2.3
MDVC				*e*S	Sn	07 04 58.8	+1.2
MDPV	Dominica, Penn	0.42	315	*e*P	Pn	07 04 43.9	+1.7
SVN	Savane Anatole	0.48	186	*e*P	Pn	07 04 43.8	+1.2

BAMF	Morne Balai	0.51	184	*e*P	Pn	07 04 44.0	+1.3
CXM	Morne La Croix	0.51	186	*e*P	Pn	07 04 44.2	+1.4
PCM	Pelee Case Pet	0.51	190	*e*P	Pn	07 04 43.8	+1.1
GBMF	Grand Be	0.53	185	*e*P	Pn	07 04 44.0	+1.2
PML	Morne Lenard	0.54	187	*e*P	Pn	07 04 44.1	+1.3
FDF	Fort de France	0.59	183	*e*P	Pn	07 04 44.4	+1.2
FDF				*e*S	Sn	07 05 00.3	+1.0
ILAM	Ilet Lapin Mar	0.59	157	*e*P	Pn	07 04 44.3	+1.2
ILAM				*e*S	Sn	07 05 00.2	+1.0
MAGL	Barre de l'ile	0.64	345	*e*P	Pn	07 04 44.9	+1.5
MAGL				*e*S	Sn	07 05 01.1	+1.2
TDBA	Terre de Bas,	0.72	316	*e*P	Pn	07 04 45.3	+1.4
TDBA				*e*S	Sn	07 05 01.5	+0.8
ZAM	Aeronautique	0.75	174	*e*P	Pn	07 04 45.1	+1.0
TRMF	Trois Ilets	0.79	176	*e*P	Pn	07 04 45.5	+1.2
MVM	Montagne Vaucl	0.79	165	*e*P	Pn	07 04 45.5	+1.0
BIM	Bigot	0.80	177	*e*P	Pn	07 04 45.8	+1.2
BIM				*e*S	Sn	07 05 03.2	+1.4
MPOM	Morne Pois Mar	0.91	164	*e*P	Pn	07 04 46.3	+1.0
MPOM				*e*S	Sn	07 05 03.6	+0.4
SLBI	Saint Lucia, B	1.30	174	*e*P	Pn	07 04 49.7	+0.8
SLBI				*e*S	Sn	07 05 10.1	+0.4
SLCP	Castries, St.	1.31	175	*e*P	Pn	07 04 50.5	+1.4
SLCP				*e*S	Sn	07 05 10.0	+0.2
MCLT	Moule a Chique	1.61	174	*e*P	Pn	07 04 54.0	+1.8
MCLT				*e*S	Sn	07 05 15.6	+0.1
ANBD	Bethesda, Anti	1.82	340	*e*P	Pn	07 04 55.4	+0.8
ANBD				*e*S	Sn	07 05 19.5	-0.2
ANDO	Antigua, Disas	1.91	339	*e*P	Pn	07 04 56.3	+0.8
ANDO				*e*S	Sn	07 05 21.1	-0.3
SVB	Belmont	2.04	184	*e*P	Pn	07 04 57.0	-0.1
ANWB	Willy Bob	2.42	345	*e*P	Pn	07 05 01.9	+0.3
ANWB				*e*S	Sn	07 05 32.1	-0.3
SKI	Saint Kitts	2.54	322	*e*P	Pn	07 05 04.8	+1.7

IDC 15 07:09:02.2±5.9**,6°.61N×94°.41E,h71**^{km}±52^{km}**,mb3.3**/4**, mb1 3.4**/5**,mb1mx3.1**/32**,mbtmp3.6**/5**,ML3.1**/1**,MS3.4**/7**, Ms1 3.4**/7**,ms1mx3.2**/25**,Error ellipse: s-maj=114.0km s-min=26.8km az=59.0,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	5.88	130	P	Pn	07 10 27.8	+0.9
	0.5nm,0.3s,baz=313,slow=11,SNR=3.9						
PSI				LR	LR	07 13 23.2	
	comp=Z,121nm,19.4s,baz=290,slow=44						
CMAR	Chiang Mai Arr	12.58	20	LR	LR	07 16 35.7	
	comp=Z,92nm,18.6s,baz=236,slow=36						
LEM	Lembang	18.75	135	LR	LR	07 22 16.3	
	comp=Z,142nm,18.7s,baz=170,slow=42						
KAPI	Kappang	27.80	114	LR	LR	07 25 46.9	
	comp=Z,64nm,18.8s,baz=308,slow=36						
MKAR	Makanchi Array	41.37	347	P	P	07 16 41.2	-0.1
	0.7nm,0.9s,baz=163,slow=8.6,SNR=6.0						
SONM	Songino Array	42.33	12	P	P	07 16 49.2	-0.1
	0.6nm,0.7s,baz=210,slow=8.3,SNR=2.9						
KURBB	Kurchatov Arra	45.83	346	P	P	07 17 16.9	-0.2
	0.8nm,0.8s,baz=168,slow=7.2,SNR=4.6						
WRA	Warramunga Arr	47.32	125	P	P	07 17 29.1	-0.1
	0.8nm,1.0s,baz=303,slow=9.1,SNR=4.3						
WRA				LR	LR	07 38 50.1	
	comp=Z,35nm,18.8s,baz=350,slow=38						
USRK	Ussuriysk Ar.	49.78	35	LR	LR	07 43 14.0	
	comp=Z,38nm,18.7s,baz=357,slow=41						
ARCES	ARCESS Array B	76.54	340	LR	LR	07 56 37.2	
	comp=Z,63nm,18.3s,baz=355,slow=37						

NOU 15 07:29:24.5, 19°.28S×169°.67E, h252^{km}, MLv4.3/10, Vanuatu Islands

NEIC 15 07:29:26.0±1.5, 19°.15S±0°.08×169°.4E±0°.1, h247^{km}±3^{km}, mb4.5/24, Error ellipse: s-maj=14.2km s-min=11.2km az=111.0

IDC 15 07:29:26.6±1.8, 19°.17S×169°.41E, h259^{km}±19^{km}, mb3.8/8, mb1 4.0/11, mb1mx3.6/32, mbtmp4.5/11, Error ellipse: s-maj=31.3km s-min=14.5km az=160.0

ISC 15 07:29:25.6±0.5**,19°.17S**±0°.07×**169°.38E**±0°.08**,h246**^{km}**,n65,** σ**0**^{s}**.77**/64**,mb4.4**/18**,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LIFNC	LIFOU	2.57	231		Pn	07 30 13.2	0.0
LIFNC	LIFOU	2.57	231	P	Pn	07 30 13.2	0.0
MARNC	Mare, Loyalty	2.62	209		Pn	07 30 13.5	-0.2
MARNC	Mare, Loyalty	2.62	209	P	Pn	07 30 13.5	-0.2
YATNC	Mamie plateau,	3.70	219	P	Pn	07 30 25.1	-0.5
PINNC	Pines Island,	3.87	207		Pn	07 30 28.3	+0.7
PINNC	Pines Island,	3.87	207	P	Pn	07 30 27.8	+0.2
DZM	Mont Dzumac	3.98	223	P	Pn	07 30 30.1	+1.0
	6.8nm,0.3s,baz=59,slow=16,SNR=110						
DZM	Mont Dzumac	3.98	223	*e*P	Pn	07 30 30.2	+1.1
	237nm,1.2s						
DZM	Mont Dzumac	3.98	223		Pn	07 30 29.9	+0.8
OUENC	Ouen Island, N	4.01	216		Pn	07 30 30.1	+0.9
OUENC	Ouen Island, N	4.01	216	P	Pn	07 30 29.9	+0.7
NOUC	Port Laguerre	4.10	224	P	Pn	07 30 31.3	+1.0
ONTNC	Ouen Toro	4.15	221		Pn	07 30 32.0	+1.1
ONTNC	Ouen Toro	4.15	221	P	Pn	07 30 31.8	+0.9
SANVU	Saraoutou	4.24	330	Pn	Pn	07 30 32.2	0.0
MSVF	Nonsavu	8.36	82	P	Pn	07 31 24.6	+1.1
	0.8nm,0.3s,baz=254,slow=12,SNR=6.2						
MSVF	Nonsavu	8.36	82	Pn	Pn	07 31 25.1	+1.6
HNR	Honiara	13.30	315	P	P	07 32 27.1	+0.1
	4.5nm,0.3s,baz=26,slow=1.5,SNR=6.0						
OUZ	Omahuta	16.42	168	P	Pn	07 33 02.1	-0.6
OUZ				IAmb	IAmb	07 33 22.1	
	comp=Z,39nm,1.4s						
EIDS	Eidsvold	18.01	247	P	Pn	07 33 20.8	-0.7
EIDS				IAmb	IAmb	07 33 33.0	
	comp=Z,29nm,1.5s						
CTAO	Charters Tower	21.80	264	P	P	07 33 59.3	+1.1
PMG	Port Moresby	23.59	291	P	P	07 34 15.7	+1.2
	comp=Z,14nm,0.6s,baz=108,slow=6.0,SNR=8.7						
KNTN	Kanton	24.65	51	P	P	07 34 23.2	-0.9
STKA	Stephens Creek	27.99	238	P	P	07 34 55.0	+1.2
	comp=Z,3.7nm,0.6s,baz=70,slow=9.3,SNR=11						
STKA	Stephens Creek	27.99	238	P	P	07 34 55.3	+1.5
BBOO	Buckleboo	32.73	239	P	P	07 35 34.6	-0.9
BBOO				IAmb	IAmb	07 35 43.6	
	comp=Z,14nm,1.4s						
WR0	Warramunga Arr	32.80	263	P	P	07 35 35.7	-0.5
WR0				IAmb	IAmb	07 35 36.5	
	comp=Z,11nm,1.2s						
WB0	Warramunga Arr	32.95	263	P	P	07 35 36.9	-0.6
WB0				IAmb	IAmb	07 35 37.6	
	comp=Z,7.7nm,0.6s						
WB2	Warramunga Arr	32.98	263	P	P	07 35 37.0	-0.8
WB2				IAmb	IAmb	07 35 40.2	
	comp=Z,7.9nm,1.2s						
WRAB	Tennant Creek	32.98	263	P	P	07 35 37.2	-0.6
WRAB				IAmb	IAmb	07 35 37.3	
	comp=Z,3.6nm,0.6s						
WRA	Warramunga Arr	32.99	263	P	P	07 35 37.0	-0.8
	comp=Z,3.6nm,0.5s,baz=98,slow=8.3,SNR=78						
WRA	Warramunga Arr	32.99	263	P	P	07 35 37.1	-0.8
AS31	Alice Springs	33.27	256	P	P	07 35 40.3	+0.1
ASAR	Alice Springs	33.27	256	P	P	07 35 40.1	-0.1
	comp=Z,24nm,0.5s,baz=83,slow=9.0,SNR=572						
ASAR	Alice Springs	33.27	256	P	P	07 35 40.3	+0.1
MTN	Manton Dam	37.24	274	P	P	07 36 14.3	+0.2
MTN				IAmb	IAmb	07 36 14.7	
	comp=Z,15nm,0.6s						
KNRA	Kununurra	38.84	269	P	P	07 36 27.1	-0.3
FAKI	Fak Fak	39.72	289	P	P	07 36 34.3	-0.4
FAKI				IAmb	IAmb	07 36 45.2	
	comp=Z,22nm,1.1s						
FITZ	Fitzroy Crossi	41.38	264	P	P	07 36 48.2	0.0
FITZ				IAmb	IAmb	07 36 49.5	
	comp=Z,8.7nm,0.6s						
PSA00	Pilbara Seismi	46.34	258	P	P	07 37 27.6	0.0
PSA00				IAmb	IAmb	07 37 52.1	
	comp=Z,31nm,1.4s						
QSPA	South Pole Qui	70.88	180	P	P	07 40 15.4	-0.3
KIWB	Kanaga Island	71.69	9	P	P	07 40 21.6	+1.1
PETK	Petropavlovsk-	72.68	353	P	P	07 40 26.4	+0.1
OHAK	Old Harbor	82.25	19	P	P	07 41 19.8	+0.8
KDAK	Kodiak Island	82.93	19	P	P	07 41 23.1	+0.6
Q19K	Cape Douglas,	83.54	18	P	P	07 41 26.0	+0.3
O18K	Koktuh Hills	83.86	17	P	P	07 41 27.0	-0.2
O18K				IAmb	IAmb	07 41 27.8	
	comp=Z,8.4nm,0.7s						
SONM	Songino Array	87.24	323	P	P	07 41 44.6	+0.2
	comp=Z,0.4nm,0.5s,baz=128,slow=4.4,SNR=2.3						
NVAR	Mina Array Bea	88.66	48	P	P	07 41 51.3	-0.1
	comp=Z,1.2nm,0.8s,baz=229,slow=7.3,SNR=6.4						
NVAR	Mina Array Bea	88.66	48	P	P	07 41 50.7	-0.6
SNAA	Sanae	89.23	182	P	P	07 41 52.7	-0.6
MLY	Manley	89.30	16	P	P	07 41 52.6	-0.9
IMAR	Indian Mountai	89.33	14	P	P	07 41 52.9	-0.6
ILAR	Eielson Array	90.13	17	P	P	07 41 55.0	-2.2
	comp=Z,1.0nm,0.8s,baz=233,slow=4.9,SNR=11						
TXAR	Lajitas Array	96.62	61	P	P	07 42 28.0	0.0
	comp=Z,0.2nm,0.6s,baz=224,slow=5.0,SNR=2.6						
ARCES	ARCESS Array B	125.03	345	PKP	PKPdf	07 47 55.0	-0.9
	comp=Z,5.4nm,0.9s,baz=92,slow=2.7,SNR=14						
GERES	GERESS Array B	144.49	332	PKP	PKPab	07 48 31.4	-0.3
	comp=Z,1.0nm,0.5s,baz=56,slow=5.2,SNR=5.7						
GERES	GERESS Array B	144.49	332		PKPab	07 48 31.6	-0.1
MOA	Molln	144.96	330	*e*P	PKPbc	07 48 32.5	-0.7
	comp=Z,1.8nm,0.5s						
SOKA	Soboth	145.42	328	*e*P	PKPdf	07 48 34.2	-0.1
	comp=Z,0.2nm,0.3s						
ABTA	Abfaltersbach	146.58	331	*e*P	PKPdf	07 48 37.0	+0.8
	comp=Z,1.2nm,0.6s						
MOTA	Moosalm	146.77	333	*e*P	PKPbc	07 48 38.0	-0.7
	comp=Z,2.6nm,0.6s						
SQTA	Sankt Quirin	146.82	332	*e*P	PKPbc	07 48 38.2	-0.6
	comp=Z,2.6nm,0.5s						
FETA	Feichten	147.18	333	*e*P	PKPbc	07 48 39.3	-0.6
	comp=Z,1.3nm,0.5s						

NEIC 15 07:51:50.9±1.9, 44°.01N±0°.07×142°.1E±0°.1, h214^{km}±6^{km}, mb4.3/34, Error ellipse: s-maj=13.6km s-min=9.8km az=108.0

NIED 15 07:51:50.4, 44°.01N×142°.14E, h211^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.61; $M_{\theta\theta}$0.21; $M_{\phi\phi}$0.40; $M_{r\theta}$1.12; $M_{\theta\phi}$-0.24; $M_{\phi r}$-0.72; Fault plane solution: $M_0$1.45000×10^{15} NP1: ϕ_s305.00000°, δ79.00000°, λ-97.00000°. NP2: ϕ_s157.00000°, δ13.00000°, λ-59.00000°.

JMA 15 07:51:50.4±0.1, 44°.01N×142°.14E, h211^{km}±2^{km}, M3.7

IDC 15 07:51:50.1±0.3, 44°.05N×142°.17E, h206^{km}±2^{km}, mb3.6/19, mb1 3.8/25, mb1mx3.6/47, mbtmp4.1/25, Error ellipse: s-maj=11.4km s-min=9.1km az=110.0

ISC 15 07:51:50.5±0.5**,44°.00N**±0°.05×**142°.18E**±0°.05**,h212**^{km}±4^{km}**, n109,** σ**0**^{s}**.90**/133**,mb4.1**/35**,7C-12D,Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAJ	Asahikawa	0.32	68	P	Pn	07 52 18.4	-0.1
	83nm,0.3s,baz=256,slow=5.3,SNR=1065						
ASAJ				S	S	07 52 39.5	-0.8
	22nm,0.3s,baz=192,slow=33,SNR=10						
ASAJ	Asahikawa	0.32	68	⇓P	Pn	07 52 18.3	-0.1
ASAJ				S	S	07 52 39.6	-0.6
JKA	Kamikawa-asahi	0.33	69	Pn	Pn	07 52 18.4	0.0
JHR	Hokuryu	0.42	232	⇓P	Pn	07 52 19.0	+0.3
JHR				*e*S	S	07 52 41.0	+0.4
JKK2	Kamakawa 2	0.43	107	⇓P	Pn	07 52 19.0	+0.3
JKK2				*e*S	S	07 52 40.7	0.0
JSS	Shosan	0.47	330	⇓P	Pn	07 52 18.9	+0.2
JSS				S	S	07 52 40.4	-0.6
JAB	Ashibetsu	0.49	176	⇓P	Pn	07 52 19.2	+0.2
JAB				*e*S	S	07 52 41.3	+0.2
JYG	Yagishiri	0.69	309	⇓P	Pn	07 52 19.5	-0.1
JYG				*e*S	S	07 52 41.9	-0.5
JFR	Furan	0.89	160	⇑P	Pn	07 52 20.7	-0.1
JFR				*e*S	S	07 52 44.5	+0.2
JSE	Soyaes	1.00	17	⇓P	Pn	07 52 21.4	0.0
JTKR	Abashiri--Toko	1.25	91	⇓P	Pn	07 52 24.0	+0.9
JTKR				*e*S	S	07 52 49.6	+1.3
JEW	Eniwo	1.27	205	⇑P	Pn	07 52 23.9	+0.5
JEW				*e*S	S	07 52 49.4	+0.6
JEW	Eniwo	1.27	205	Pn	Pn	07 52 23.9	+0.5
JEW				Sn	S	07 52 49.0	+0.2
JWK2	Keihoku	1.33	351	⇓P	Pn	07 52 23.6	-0.1
JAR	Ashorobuto	1.35	121	⇓P	Pn	07 52 24.7	+0.7
JAR				S	S	07 52 50.8	+1.0
JSK	Shakotan	1.40	243	⇑P	Pn	07 52 24.2	-0.1
JSK				*e*S	S	07 52 50.4	0.0
JCH	Churui	1.63	148	⇑P	Pn	07 52 25.5	-0.9
JCH				S	S	07 52 52.1	-1.9
JRBN	Rebuntou	1.63	331	⇓P	Pn	07 52 25.5	-0.8
JRBN				*e*S	S	07 52 52.9	-1.1
JNBK	Urakawa-nobuka	1.77	166	⇑P	Pn	07 52 27.8	+0.2
JNBK				*e*S	S	07 52 56.4	+0.2
JAK	Akkeshi	2.09	118	P	Pn	07 52 30.0	-0.7
JAK				*e*S	S	07 53 00.7	-1.0
ERM	Erimo	2.11	160	Pn	Pn	07 52 31.4	+0.5
JRA	Rausu	2.12	91	⇓P	Pn	07 52 32.2	+1.1
JKB	Kayabe	2.27	202	⇑P	Pn	07 52 32.1	-0.6
JKB				*e*S	S	07 53 04.5	-0.7
NEM2	Nemuro 2	2.66	103	P	Pn	07 52 35.7	-1.1
NEM2				*e*S	S	07 53 10.0	-2.6
JOT	Ohata	2.75	198	⇑P	Pn	07 52 36.9	-0.9
JOT				*e*S	S	07 53 12.0	-2.4
JOSM	Okushiri--Mats	2.76	227	P	Pn	07 52 37.4	-0.5
YSS	Yuzh-Sakhalins	2.98	8	Pn	Pn	07 52 40.0	-0.4
JTM	Tenmabayashi	3.31	195	Pn	Pn	07 52 43.4	-1.1
JMM	Marumori	6.22	190	Pn	Pn	07 53 18.9	-1.8
JSD	Sado	6.65	208		Pn	07 53 25.6	-0.7
USRK	Ussuriysk Ar.	7.34	275	P	Pn	07 53 36.5	+1.4
	baz=82,slow=14,SNR=4.5						
JYT	Yasato	7.91	192	Pn	Pn	07 53 40.0	-2.5
MAJO	Matsushiro	8.04	204		Pn	07 53 43.2	-1.1
MAT	Matsushiro	8.04	204	P	Pn	07 53 42.8	-1.5
MJAR	Matsushiro Arr	8.04	203	P	Pn	07 53 42.6	-1.7
	0.4nm,0.3s,baz=12,slow=13,SNR=34						
MJAR	Matsushiro Arr	8.04	203	Pn	Pn	07 53 42.2	-2.1
KLR	Kul'dur	8.88	310	P	Pn	07 53 53.7	-1.2
	0.2nm,0.3s,baz=127,slow=16,SNR=4.7						
JGF	Kuroka	9.17	205	Pn	Pn	07 53 57.9	-1.0
INU	Inuyama	9.51	206	Pn	Pn	07 54 01.9	-1.4
JWT	Wachi	10.15	213	Pn	Pn	07 54 10.7	-0.8
JHJ	Hachijo jima 2	11.02	191	P	Pn	07 54 21.1	-1.6
	15nm,0.3s,baz=280,slow=23,SNR=7.3						
JHJ2	Mitsune	11.03	190	Pn	Pn	07 54 21.7	-1.0
JHS	Saijyo	11.38	221	Pn	Pn	07 54 28.3	+1.0
KSRS	Korea Array	12.63	244	P	Pn	07 54 42.5	-0.3
	0.1nm,0.3s,baz=53,slow=12,SNR=7.2						
PEA0B	Petropavlovsk-	13.71	43		Pn	07 54 57.1	+0.9
PETK	Petropavlovsk-	13.71	43	P	Pn	07 54 56.0	-0.2
	0.9nm,0.3s,baz=219,slow=6.7,SNR=23						
MA2	Magadan	16.45	16	P	P	07 55 27.5	-0.8
	1.1nm,0.3s,baz=195,slow=14,SNR=5.6						
MA2	Magadan	16.45	16	P	P	07 55 28.5	+0.1
MA2				IAmb	IAmb	07 55 29.6	
	comp=Z,15nm,0.7s						
SEY	Seymchan	19.87	14	P	P	07 56 04.2	-1.1
	comp=Z,3.2nm,0.3s,baz=183,slow=10.0,SNR=29						
SONM	Songino Array	25.05	291	P	P	07 56 55.8	+0.5
	comp=Z,2.8nm,0.5s,baz=83,slow=8.1,SNR=16						
SONM	Songino Array	25.05	291	P	P	07 56 55.2	-0.1
ZALV	Zalesovo Beam	37.96	306	P	P	07 58 47.8	+0.3
	comp=Z,0.6nm,0.3s,baz=93,slow=9.2,SNR=2.2						
ZALV				ScP	ScP	08 04 26.1	+0.5
	comp=Z,1.1nm,0.5s,baz=72,slow=1.9,SNR=6.3						
SVW2	Sparrevohn	39.79	42	P	P	07 59 04.1	+1.5
SVW2				IAmb	IAmb	07 59 18.3	
	comp=Z,12nm,1.2s						
P18K	Big Mountain,	40.12	45	P	P	07 59 05.6	+0.3
J20K	Nowinta River	40.32	37	P	P	07 59 07.4	+0.5
K20K	Telida	40.38	39	P	P	07 59 08.1	+0.8
IMAR	Indian Mountai	40.47	35	P	P	07 59 07.8	-0.3
H21K	Melozitna Rive	40.86	35	P	P	07 59 11.5	+0.2
MK31	Makanchi Array	41.26	296	P	P	07 59 14.7	-0.1
MKAR	Makanchi Array	41.26	296	P	P	07 59 14.8	0.0
	comp=Z,0.9nm,0.5s,baz=83,slow=9.6,SNR=14						
MKAR				PcP	PcP	08 01 09.1	-0.1
	comp=Z,0.4nm,0.5s,baz=95,slow=1.9,SNR=2.9						
MKAR				ScP	ScP	08 04 39.0	+0.3
	comp=Z,0.4nm,0.5s,baz=68,slow=4.6,SNR=5.0						
MKAR	Makanchi Array	41.26	296	P	P	07 59 14.4	-0.4
MAKZ	Makanchi	41.46	296	P	P	07 59 16.3	-0.1
KDAK	Kodiak Island	41.72	47	P	P	07 59 18.4	+0.2
KDAK				IAmb	IAmb	07 59 18.6	
	comp=Z,19nm,1.1s						
KURK	Kurchatov	42.38	302	P	P	07 59 23.5	-0.2
KURBB	Kurchatov Arra	42.47	302	P	P	07 59 24.2	-0.2
	comp=Z,1.7nm,0.4s,baz=75,slow=8.8,SNR=4.6						
NEA2	Nenana	42.49	37	P	P	07 59 24.7	+0.2
NEA2				IAmb	IAmb	07 59 25.9	
	comp=Z,5.6nm,0.9s						
RC01	Rabbit Creek A	42.62	42	P	P	07 59 25.4	-0.1
GHO	Glory Hole Cre	42.90	41	P	P	07 59 28.6	+0.7
KNK	Knik Glacier	43.18	41	P	P	07 59 30.8	+0.8
ILAR	Eielson Array	43.41	36	P	P	07 59 31.5	-0.3
	comp=Z,2.4nm,0.9s,baz=277,slow=7.2,SNR=25						
ILAR	Eielson Array	43.41	36	P	P	07 59 32.0	+0.2
PRP	Porcupine Dome	43.89	35	P	P	07 59 35.7	-0.1
PRP				IAmb	IAmb	07 59 37.0	
	comp=Z,5.8nm,0.7s						
BMAR	Burnt Mountain	44.04	32	P	P	07 59 37.4	+0.6
M24K	Tolsona, Glenn	44.13	40	P	P	07 59 39.1	+1.4
EYAK	Cordova Ski Ar	44.64	42	P	P	07 59 42.9	+1.3
EYAK				IAmb	IAmb	07 59 49.0	
	comp=Z,21nm,1.2s						
SCRK	Sand Creek	44.78	37	P	P	07 59 42.6	-0.2
SCRK				IAmb	IAmb	07 59 43.0	
	comp=Z,5.8nm,0.6s						
VRDI	Verde Repeater	45.58	41	P	P	07 59 50.3	+1.0
VRDI				IAmb	IAmb	08 00 14.7	
	comp=Z,20nm,1.5s						
BCAR	Beaver Creek A	45.93	38	P	P	07 59 53.4	+1.7
AAK	Ala-Archa	47.98	293	P	P	08 00 07.3	-0.7
	comp=Z,1.2nm,0.5s,baz=113,slow=13,SNR=3.6						
INK	Inuvik	47.99	30	P	P	08 00 07.5	0.0
INK				IAmb	IAmb	08 00 09.9	
	comp=Z,4.6nm,0.5s						
HYT	Haines Junctio	48.48	40	P	P	08 00 13.6	+2.0
HYT				IAmb	IAmb	08 00 14.5	
	comp=Z,14nm,0.7s						
A36M	Sachs Harbour	49.62	24	P	P	08 00 20.6	+0.7
A36M				IAmb	IAmb	08 00 21.7	
	comp=Z,9.3nm,0.7s						
ABKAR	Akbulak array	54.07	307	P	P	08 00 53.0	0.0
RES	Resolute Bay	55.73	16	P	P	08 01 04.0	-0.4
RES				IAmb	IAmb	08 01 04.8	
	comp=Z,8.5nm,0.7s						
YKA	Yellowknife Ar	57.55	32	P	P	08 01 17.7	+0.3
	comp=Z,0.8nm,0.5s,baz=41,slow=9.9,SNR=10						
COEN	Coen	57.68	179	P	P	08 01 20.2	+1.3
COEN				IAmb	IAmb	08 01 20.7	
	comp=Z,3.8nm,0.8s						
ARCES	ARCESS Array B	57.72	338	P	P	08 01 16.9	-1.7
	comp=Z,4.6nm,0.8s,baz=50,slow=7.4,SNR=6.0						
TULEG	Thule	58.13	8	P	P	08 01 20.8	-0.4
KNRA	Kununurra	60.64	195	P	P	08 01 39.5	+0.4
FINES	FINESS Array B	62.97	331	P	P	08 01 53.5	-0.6
	comp=Z,3.0nm,0.7s,baz=57,slow=6.9,SNR=11						
FINES	FINESS Array B	62.97	331	P	P	08 01 53.3	-0.8
FITZ	Fitzroy Crossi	63.62	198	P	P	08 01 59.4	+0.5
	comp=Z,2.6nm,0.9s,baz=305,slow=9.7,SNR=4.2						
SUMG	Summit	63.73	0	P	P	08 01 59.8	+0.4
SUMG				IAmb	IAmb	08 02 00.5	
	comp=Z,6.3nm,0.7s						
WB0	Warramunga Arr	63.85	188	P	P	08 02 00.3	-0.1
WB0				IAmb	IAmb	08 02 01.7	
	comp=Z,6.8nm,1.2s						
WR0	Warramunga Arr	64.03	188	P	P	08 02 01.2	-0.3
WR0				IAmb	IAmb	08 02 03.0	
	comp=Z,7.9nm,1.2s						
WB2	Warramunga Arr	64.03	188	P	P	08 02 01.3	-0.3
WB2				IAmb	IAmb	08 02 02.4	
	comp=Z,2.9nm,0.7s						
WRA	Warramunga Arr	64.03	188	P	P	08 02 01.5	-0.1
	comp=Z,2.3nm,0.4s,baz=5.7,slow=6.8,SNR=78						
WRA	Warramunga Arr	64.03	188	P	P	08 02 01.0	-0.5
KBZ	Khabaz	66.89	309	P	P	08 02 20.6	+1.0
	comp=Z,1.8nm,0.9s,baz=180,slow=6.1,SNR=2.0						
ASAR	Alice Springs	67.76	188	P	P	08 02 26.4	+1.1
	comp=Z,1.5nm,0.5s,baz=7.7,slow=6.3,SNR=39						
NC405	NORSAR Array S	67.81	336	P	P	08 02 23.7	-1.5
NB2	NORSAR Subarra	68.01	337	P	P	08 02 26.2	-0.3
	comp=Z,0.5nm,0.4s,baz=35,slow=6.5						
NOA	NORSAR Array B	68.01	337	P	P	08 02 26.4	-0.1
	comp=Z,1.0nm,0.6s,baz=39,slow=4.2,SNR=5.0						
AKASG	Malin Array Be	69.19	321	P	P	08 02 33.6	-0.2
	comp=Z,0.6nm,0.4s,baz=40,slow=8.3,SNR=3.7						
PDAR	Pinedale Array	72.44	47	P	P	08 02 54.2	+0.4
	comp=Z,1.4nm,0.7s,baz=269,slow=2.7,SNR=13						
ULM	Lac du Bonnet	73.41	35	P	P	08 02 58.0	-1.1
	comp=Z,1.1nm,0.4s,baz=338,slow=4.7,SNR=2.9						
STKA	Stephens Creek	75.51	181	P	P	08 03 12.4	+1.1
	comp=Z,1.1nm,0.5s,baz=21,slow=8.6,SNR=2.0						
TXAR	Lajitas Array	85.44	53	P	P	08 04 05.3	+0.9
	comp=Z,0.3nm,0.8s,baz=297,slow=4.8,SNR=5.2						
TXAR				pP	pP	08 04 56.6	+0.7
	comp=Z,0.4nm,0.8s,baz=318,slow=1.7,SNR=4.5						
TXAR	Lajitas Array	85.44	53	P	P	08 04 03.0	-1.4

IDC 15 07:59:54.5±1.4, 24°.26N×122°.85E, h0^{km}, mb3.6/4, mb1 3.9/5, mb1mx3.5/46, mbtmp3.8/5, ML4.0/1, Error ellipse: s-maj=33.7km s-min=26.6km az=93.0

TAP 15 08:00:01.4, 24°.55N×122°.78E, h84^{km}, ML4.3, B

JMA 15 08:00:01.7±0.1, 24°.57N×122°.78E, h83^{km}±1^{km}, M3.3

ISC 15 08:00:01.8±0.9**,24°.57N**±0°.04×**122°.77E**±0°.02**,h84**^{km}±6^{km}**, n77,** σ**0**^{s}**.93**/139**,mb3.8**/4**,2C-4D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.20	126	P	Pn	08 00 13.9	-0.1
JYNG				S	Sn	08 00 22.9	-0.2
YOJ	Yonaguni jima	0.24	116	⇑P	Pn	08 00 13.8	-0.5
	baz=110						
YOJ				S	Sn	08 00 23.1	-0.3
	baz=110						
YOJ	Yonaguni jima	0.24	116	P	Pn	08 00 14.1	-0.1
YOJ				S	Sn	08 00 23.0	-0.5
TWB1	Santiao Chiao	0.83	302	⇓P	Pn	08 00 19.1	-0.1
	baz=302						
TWB1				*e*S	Sn	08 00 32.3	+0.1
	baz=302						
TWC	Suao	0.84	273	⇓*i*P	Pn	08 00 19.1	-0.1
	baz=274						
TWC				*e*S	Sn	08 00 31.4	-0.8
	baz=274						
NTC	Toucheng	0.90	289	*i* P	Pn	08 00 20.0	+0.1
	baz=289						
NTC				S	Sn	08 00 34.3	+0.8
	baz=289						
IRIF	Iriomote-Funau	0.91	105	P	Pn	08 00 19.8	-0.2
IRIF				S	Sn	08 00 33.5	-0.1
EWUT	Wuta	0.91	262	⇓P	Pn	08 00 20.2	+0.2
	baz=263						
EWUT				S	Sn	08 00 34.2	+0.6
	baz=263						
TIPB	Shuangxi	0.95	295	*i* P	Pn	08 00 20.7	+0.2
	baz=296						
TIPB				S	Sn	08 00 34.9	+0.4
	baz=296						
ENA	Nanau	0.95	262	⇑P	Pn	08 00 20.8	+0.4
	baz=262						
ENA				S	Sn	08 00 35.4	+1.0
	baz=262						
ILA	Ilan	0.95	282	P	Pn	08 00 20.9	+0.4
	baz=283						
ILA				*e*S	Sn	08 00 35.1	+0.6
	baz=283						
HATJ	Hateruma jima	1.07	118	P	Pn	08 00 22.6	+0.7
HATJ				S	Sn	08 00 38.3	+1.2
NACB	Ninganchiao	1.14	250	P	Pn	08 00 22.7	0.0
	baz=251						
NACB				S	Sn	08 00 38.0	-0.5
	baz=251						
TWD	Chiawan	1.18	246	*i* P	Pn	08 00 23.1	-0.1
	baz=246						
TWD				S	Sn	08 00 38.7	-0.5
	baz=246						
JKRS	Kuro-shima	1.18	106	P	Pn	08 00 23.4	+0.2
JKRS				S	Sn	08 00 39.9	+0.6
HWA	Hwalien	1.22	241	S	Sn	08 00 40.5	+0.3
	baz=241						
ETLH	Xiulin Townshi	1.23	253	P	Pn	08 00 24.3	+0.4
	baz=254						
ETLH				S	Sn	08 00 40.5	-0.1
	baz=254						
PCYT	Pengchaiyu	1.23	329	*i* P	Pn	08 00 24.5	+0.7
	baz=329						
PCYT				S	Sn	08 00 40.8	+0.3
	baz=329						
JIJ	Ishigaki jima	1.27	99	P	Pn	08 00 24.0	-0.3
JIJ				S	Sn	08 00 40.7	-0.6
NNSB	Datong	1.27	264	P	Pn	08 00 25.0	+0.5
	baz=264						
NNSB				S	Sn	08 00 41.1	-0.5
	baz=264						

TEYL	Yanliau Villag	1.28	237	P	Pn	08 00 24.6	+0.2
	baz=239						
TEYL				S	Sn	08 00 41.3	-0.2
	baz=239						
NNS	Nan Shan	1.28	264	S	Sn	08 00 41.9	+0.2
	baz=265						
ETM	Tongmen	1.31	243	P	Pn	08 00 24.8	-0.1
	baz=243						
ETM				S	Sn	08 00 42.0	-0.3
	baz=243						
JISG	Ishigakijimahi	1.40	89	P	Pn	08 00 25.7	-0.3
JISG				S	Sn	08 00 43.9	-0.4
TEGC	Jichi Village	1.41	233	P	Pn	08 00 25.7	-0.5
	baz=233						
TEGC				S	Sn	08 00 44.5	0.0
	baz=233						
FUSS	Fushou	1.43	257	P	Pn	08 00 27.4	+0.8
	baz=257						
FUSS				S	Sn	08 00 45.1	-0.1
	baz=257						
ESL	Shilin	1.43	239	*i* P	Pn	08 00 26.1	-0.3
	baz=239						
ESL				S	Sn	08 00 44.8	-0.2
	baz=239						
WHF	Hehuan Shan	1.44	253	P	Pn	08 00 27.2	+0.4
	baz=253						
WHF				S	Sn	08 00 45.1	-0.6
	baz=253						
TWT	Tachien	1.49	258	P	Pn	08 00 28.4	+1.2
	baz=258						
TWT				S	Sn	08 00 46.3	-0.2
	baz=258						
TDCB	Techi	1.50	258	P	Pn	08 00 28.5	+1.1
	baz=258						
TDCB				S	Sn	08 00 46.9	+0.1
	baz=258						
EGFH	Guangfu	1.52	234	P	Pn	08 00 27.6	+0.1
	baz=234						
EGFH				S	Sn	08 00 46.7	-0.3
	baz=234						
CHGB	Renai	1.54	251	P	Pn	08 00 28.8	+0.8
	baz=251						
CHGB				S	Sn	08 00 47.6	-0.2
	baz=251						
OWD	Renai	1.58	247	*i* P	Pn	08 00 29.1	+0.7
	baz=248						
OWD				S	Sn	08 00 48.0	-0.5
	baz=248						
HGSD	Ruisui	1.63	229	P	Pn	08 00 28.9	-0.1
	baz=229						
HGSD				S	Sn	08 00 50.3	+0.7
	baz=229						
WHP	Taichung City	1.69	260	*e*P	Pn	08 00 31.4	+1.6
	baz=260						
WHP				*e*S	Sn	08 00 52.6	+1.6
	baz=260						
EHY	Hungye	1.69	232	P	Pn	08 00 29.7	-0.1
	baz=231						
EHY				S	Sn	08 00 50.0	-1.1
	baz=231						
VWDT	VWDT	1.69	242	P	Pn	08 00 30.4	+0.6
	baz=242						
VWDT				S	Sn	08 00 51.8	+0.8
	baz=242						
WPL	Puli Township	1.75	252	P	Pn	08 00 31.8	+1.4
	baz=252						
WPL				S	Sn	08 00 52.3	+0.1
	baz=252						
JTJ	Tarama	1.76	87	P	Pn	08 00 30.7	+0.1
JTJ				S	Sn	08 00 52.4	-0.1
DPDB	Guoxing	1.76	253	P	Pn	08 00 31.9	+1.1
	baz=253						
DPDB				S	Sn	08 00 53.8	+1.0
	baz=253						
WCS	Beigang Elemen	1.77	254	*e*P	Pn	08 00 32.2	+1.4
	baz=254						
YULB	Yu-li	1.79	229	P	Pn	08 00 31.0	0.0
	baz=229						
YULB				S	Sn	08 00 52.4	-0.8
	baz=229						
SSLB	Suanglung	1.83	245	P	Pn	08 00 32.3	+0.7
	baz=245						
SSLB				S	Sn	08 00 54.2	-0.1
	baz=245						
SMLT	Sun Moon Lake	1.84	249	*e*P	Pn	08 00 33.3	+1.5
	baz=248						
SMLT				*e*S	Sn	08 00 57.1	+2.5
	baz=248						
TYC	Yuchr	1.87	250	*e*P	Pn	08 00 33.5	+1.4
	baz=249						
TYC				*e*S	Sn	08 00 56.8	+1.7
	baz=249						
CHKT	Chengkung	1.95	222	P	Pn	08 00 32.7	-0.4
	baz=221						
CHKT				*e*S	Sn	08 00 55.3	-1.7
	baz=221						
YUS	Yu-Shan	1.98	237	*e*P	Pn	08 00 34.7	+0.7
	baz=237						
YUS				S	Sn	08 00 58.1	-0.4
	baz=237						
ALS	Alishan	2.08	240	*e*P	Pn	08 00 36.8	+1.7
	baz=240						
ALS				*e*S	Sn	08 01 02.1	+1.4
	baz=240						
ELDTW	Lidau	2.11	230	P	Pn	08 00 35.7	+0.3
	baz=229						
ELDTW				S	Sn	08 01 00.7	-0.3
	baz=229						
CHN5	Tsauling	2.14	244	*e*P	Pn	08 00 38.0	+2.2
	baz=243						
CHN5				*e*S	Sn	08 01 03.9	+2.1
	baz=243						
JIRB	Irabujima	2.20	83	P	Pn	08 00 36.5	+0.1
JIRB				*e*S	Sn	08 01 03.0	0.0
LDUT	Ludao	2.23	213	P	Pn	08 00 36.8	-0.1
	baz=212						
LDUT				*e*S	Sn	08 01 01.9	-1.8
	baz=212						
JIKM	Ikemajima	2.28	81	P	Pn	08 00 37.9	+0.4
JIKM				S	Sn	08 01 05.8	+0.9
STYH	Taoyuan	2.30	233	P	Pn	08 00 37.2	-0.5
	baz=233						
STYH				*e*S	Sn	08 01 06.3	+1.1
	baz=233						
JMJ	Miyako jima 2	2.31	83	⇓P	Pn	08 00 38.3	+0.4
	baz=83						
JMJ				*e*S	Sn	08 01 06.2	+0.7
	baz=83						
STYT	Tauyuan	2.31	233	*e*P	Pn	08 00 39.3	+1.3
	baz=233						
STYT				*e*S	Sn	08 01 07.3	+1.5
	baz=233						
JMJ2	Miyako jima3	2.33	85	P	Pn	08 00 38.7	+0.5
JMJ2				*e*S	Sn	08 01 06.3	+0.2
LAY	Lan-yu	2.76	204	P	Pn	08 00 43.1	-0.9
	baz=204						
TAW	Tawu	2.79	218	*e*P	Pn	08 00 45.1	+0.7
	baz=218						
TAW				*e*S	Sn	08 01 16.6	-0.6
	baz=218						
MATB	Ma-tsu	3.00	302	P	Pn	08 00 47.5	+0.3
	baz=301						
MSUT	Lienchiang	3.03	302	*e*P	Pn	08 00 48.0	+0.4
	baz=302						
PNG	Penghu	3.10	252	*e*P	Pn	08 00 48.5	-0.1
	baz=251						
PNG				*e*S	Sn	08 01 23.6	-1.1
	baz=251						
PHUB	P'eng-hu	3.11	251	*e*P	Pn	08 00 48.5	-0.1
	baz=250						
PHUB				*e*S	Sn	08 01 23.9	-0.9
	baz=250						
XPSS	Dashiqiu	3.31	316	*e*P	Pn	08 00 50.6	-0.7
	baz=315						
VCHM	Qimei	3.34	247	*e*S	Sn	08 01 29.3	-1.2
	baz=246						
PTMZ	Houxiangcun	3.35	279	*e*P	Pn	08 00 52.1	+0.2
	baz=278						
PTMZ				*e*S	Sn	08 01 29.0	-1.6
	baz=278						
LYJJ	Jianjiangzhen	3.36	307	*e*P	Pn	08 00 49.8	-2.2
	baz=306						
MHZQ	Yeshan	3.71	295	*e*P	Pn	08 00 56.5	-0.3
	baz=294						
KNM	Kinmen	3.95	269	P	Pn	08 01 01.6	+1.5
	baz=268						
KNM				*e*S	Sn	08 01 45.0	-0.3
	baz=268						
KNMB	Chin-men Tao	3.99	269	P	Pn	08 01 00.4	-0.2
	baz=268						
KNMB				*e*S	Sn	08 01 43.2	-3.1
	baz=268						
AXDP	Jialang	4.38	275	P	Pn	08 01 06.1	+0.2
	baz=274						
AXDP				S	Sn	08 01 53.0	-2.6
	baz=274						
ZPLA	Ao Xicun	4.63	263	P	Pn	08 01 09.7	+0.4
	baz=262						
ZPLA				*e*S	Sn	08 01 58.7	-3.0
	baz=262						
JOW	Kunigami	5.45	64	Pn	Pn	08 01 19.1	-1.4
	9.1nm,0.3s,baz=198,slow=6.4,SNR=22						
JOW				Sn	Sn	08 02 20.9	-1.1
	baz=126,slow=18,SNR=1.3						
MKAR	Makanchi Array	39.08	315	P	P	08 07 25.4	+4.8
	0.1nm,0.5s,baz=118,slow=7.2,SNR=2.0						
FITZ	Fitzroy Crossi	42.50	176	P	P	08 07 48.5	-0.4
	1.8nm,0.8s,baz=351,slow=9.0,SNR=5.1						
WRA	Warramunga Arr	45.66	165	P	P	08 08 14.6	+0.4
	1.9nm,0.7s,baz=348,slow=8.4,SNR=9.1						
ASAR	Alice Springs	49.15	166	P	P	08 08 42.0	+0.7
	0.5nm,0.7s,baz=345,slow=9.7,SNR=5.1						

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*IDC **15** 08:00:24.2±2.1, 2°.04N×126°.50E, h0^{km}, mb3.4/4, mb1 3.7/4, mb1mx3.4/41, mbtmp3.5/4, Error ellipse: s-maj=126.6km s-min=20.8km az=67.0*

*DJA **15** 08:00:34.8±0.5, 2°N±4°×12°6E±°, h92^{km}±11^{km}, M4.0/8, mb4.3/1, MLv3.9/8*

ISC 15 08:00:36.2±1.1, **1°.92N**±0°.07×**126°.05E**±0°.09, **h100^{km}, n10, σ2ˢ.34**/11, **mb3.2**/3, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	1.83	343	P	Pn	08 01 04.9	-1.8
LBMI	Labuha	2.92	150	P	Pn	08 01 19.6	-1.4
GTOI	Gorontalo	3.30	247	P	Pn	08 01 26.0	0.0
SANI	Sanana	3.94	181	P	Pn	08 01 31.8	-2.9
MRSI	Marisa	4.35	251	P	Pn	08 01 38.9	-1.3
APSI	Ampana	5.22	237	P	Pn	08 01 49.9	-2.1
FITZ	Fitzroy Crossi	19.89	181	P	P	08 04 59.4	-0.5
	1.4nm,0.5s,baz=3.2,slow=10.0,SNR=9.5						
WRA	Warramunga Arr	23.20	160	P	P	08 05 34.5	-0.1
	0.6nm,0.4s,baz=335,slow=9.1,SNR=16						
WRA				S	S	08 09 43.5	+4.8
	0.6nm,0.9s,baz=344,slow=18,SNR=5.2						
ASAR	Alice Springs	26.55	164	P	P	08 06 05.5	+0.6
	0.3nm,0.5s,baz=346,slow=9.9,SNR=7.0						
MKAR	Makanchi Array	58.66	326	P	P	08 10 24.0	+0.8
	0.1nm,0.4s,baz=130,slow=8.1,SNR=1.8						

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*NIED **15** 08:03:58.5, 31°.32N×128°.60E, h10^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.96; $M_{\theta\theta}$1.21; $M_{\phi\phi}$-0.24; $M_{r\theta}$0.16; $M_{\theta\phi}$1.79; $M_{\phi r}$-1.28; Fault plane solution: $M_0$2.46000×10^{14} NP1:ϕ_s18.00000°, δ71.00000°, λ-142.00000°. NP2:ϕ_s274.00000°, δ55.00000°, λ-23.00000°.*

JMA 15 08:03:58.5±0.2, **31°.32N**×**128°.60E, h10^{km}**±2^{km}**, M3.6, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	1.02	69	P	Pg	08 04 17.4	-0.7
JSJ				*e*S	Sg	08 04 30.8	-0.5
JFU	Fukue jima 2	1.34	5	P	Pn	08 04 23.1	-0.1
JFU				*e*S	Sb	08 04 40.7	-0.2
JSU	Suzuyama	1.60	83	P	Pn	08 04 27.3	+0.5
JYAK	Yakushimahirau	1.97	123	P	Pn	08 04 32.1	+0.2
JTN	Tanegashima 3	2.15	107	P	Pn	08 04 35.5	+1.1
JMTN	Minamitane	2.18	114	P	Pn	08 04 36.0	+1.1
JTZ	Takazaki	2.20	74	P	Pn	08 04 35.8	+0.7

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*IDC **15** 08:06:09.5±1.8, 31°.43N×128°.27E, h0^{km}, mb3.3/3, mb1 3.8/5, mb1mx3.5/47, mbtmp3.6/5, ML4.0/2, MS2.9/5, Ms1 2.9/5, ms1mx2.7/33, Error ellipse: s-maj=63.9km s-min=22.4km az=110.0*

*NIED **15** 08:06:11.8, 31°.34N×128°.76E, h13^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-2.36; $M_{\theta\theta}$-0.01; $M_{\phi\phi}$2.37; $M_{r\theta}$-1.23; $M_{\theta\phi}$5.61; $M_{\phi r}$2.06; Fault plane solution: $M_0$6.48000×10^{14} NP1: ϕ_s179.00000°, δ72.00000°, λ-152.00000°. NP2: ϕ_s80.00000°, δ64.00000°, λ-20.00000°.*

*JMA **15** 08:06:11.8±0.4, 31°.34N×128°.76E, h13^{km}±3^{km}, M3.8*

ISC 15 08:06:11.7±1.2, **31°.31N**±0°.05×**128°.78E**±0°.07, **h10^{km}, n19, σ0ˢ.87**/18, **mb3.4**/3, **MS3.1**/3, **Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.88	65	P	Pg	08 06 28.2	-0.5
JSJ				S	Sg	08 06 39.9	-0.3
JFU	Fukue jima 2	1.34	359	P	Pn	08 06 36.0	-0.5
JSU	Suzuyama	1.45	82	P	Pn	08 06 38.4	+0.4
JSU				S	Sb	08 06 57.8	+0.5
JKC	Kuchinoerabu	1.48	124	P	Pn	08 06 38.9	+0.5
JKC				S	Sn	08 06 58.5	+0.7
JNN	Nakanoshima	1.74	147	P	Pn	08 06 42.4	+0.4
JYAK	Yakushimahirau	1.83	125	P	Pn	08 06 41.4	-1.8
JTN	Tanegashima 3	2.00	108	P	Pn	08 06 44.8	-0.7
JMTN	Minamitane	2.04	116	P	Pn	08 06 45.8	-0.3
JTZ	Takazaki	2.06	73	P	Pn	08 06 46.4	+0.1
JNU	Nakatsue	2.54	44	Pn	Pn	08 06 54.6	+1.7
	29nm,0.3s,baz=185,slow=0.1,SNR=1.5						
JNU				Sn	Sg	08 07 32.5	-0.8
	7.2nm,0.3s,baz=188,slow=1.6,SNR=1.2						
KSRS	Korea Array	6.17	354	LR	LR	08 10 08.5	
	comp=Z,43nm,20.5s,baz=180,slow=40						
MJAR	Matsushiro Arr	9.41	54	LR	LR	08 12 50.9	
	comp=Z,55nm,18.1s,baz=240,slow=41						
KLR	Kul'dur	18.04	6	P	Pn	08 10 22.1	-0.3
	0.9nm,0.3s,baz=206,slow=16,SNR=12						
SONM	Songino Array	23.75	320	LR	LR	08 21 18.0	
	comp=Z,55nm,18.4s,baz=232,slow=39						
PETK	Petropavlovsk-	30.21	35	LR	LR	08 23 29.9	
	comp=Z,22nm,20.9s,baz=93,slow=34						
PALK	Pallekele	50.77	252	LR	LR	08 38 07.7	
	comp=Z,29nm,19.5s,baz=295,slow=38						
WRA	Warramunga Arr	51.24	173	P	P	08 15 15.7	+0.1
	0.3nm,0.8s,baz=356,slow=8.4,SNR=2.4						
ASAR	Alice Springs	54.88	174	P	P	08 15 43.8	+1.3
	0.5nm,0.8s,baz=3.7,slow=14,SNR=4.1						
ILAR	Eielson Array	59.78	30	P	P	08 16 16.0	-0.6
	0.2nm,0.7s,baz=288,slow=8.0,SNR=4.3						

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*NEIC **15** 08:20:32.5±1.2, 18°.8N±0°.2×68°.81W±0°.05, h41^{km}±24^{km}, Error ellipse: s-maj=30.1km s-min=2.7km az=191.0*

*RSPR **15** 08:20:32.5, 18°.88N×68°.82W, h50^{km}±7^{km}, MD3.4/13*

*OSPL **15** 08:20:34.1±0.7, 18°.93N×68°.64W, h28^{km}±24^{km}, ML2.8*

ISC 15 08:20:31.5±1.4, **18°.8N**±0°.1×**68°.83W**±0°.05, **h50^{km}, n54, σ0ˢ.82**/57, **13C-1D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DR12	Loma Pena Alta	0.52	264		Pn	08 20 52.1	+9.0
PCDR	Punta Cana, DR	0.54	128	⇓*e*P	Pn	08 20 43.7	+0.5
PCDR	Punta Cana, DR	0.54	128	*e*S	Sn	08 20 50.1	-1.6
PCDR	Punta Cana, DR	0.54	128		Pn	08 20 43.8	+0.5
PCDR				Sn	Sn	08 20 50.3	-1.4
PCDR	Punta Cana, DR	0.54	128	*i* P	Pn	08 20 43.7	+0.5
PCDR				*e*S	Sn	08 20 50.0	-1.7
PCDR				IAML		08 20 50.2	
	comp=Z,888nm,0.2s						
SDD	Santo Domingo	1.09	250	Pn	Pn	08 20 51.8	+1.2
AGPR	Aguadilla, PR	1.67	103	⇑*e*P	Pn	08 20 57.7	-0.8
AGPR	Aguadilla, PR	1.67	103	*e*S	Sn	08 21 18.4	-0.3
AGPR	Aguadilla, PR	1.67	103		Pn	08 20 57.6	-0.8
AGPR					Sn	08 21 19.1	+0.3
AGPR	Aguadilla, PR	1.67	103	*i* P	Pn	08 20 57.7	-0.8
AGPR				*e*S	Sn	08 21 16.0	-2.7
AGPR				IAML		08 21 22.0	
	comp=Z,131nm,0.2s						
PRSN	Puerto Rico Se	1.72	111	Pn	Pn	08 20 58.3	-0.7
LSP	Las Mesas	1.79	112	⇑*e*P	Pn	08 20 59.4	-0.6
LSP	Las Mesas	1.79	112	*e*S	Sn	08 21 21.7	+0.1
CRPR	Cabo Rojo, PR	1.84	117	⇑*e*P	Pn	08 21 00.3	-0.3
CRPR	Cabo Rojo, PR	1.84	117	*e*S	Sn	08 21 22.5	-0.2
CRPR	Cabo Rojo, PR	1.84	117		Pn	08 21 00.2	-0.4
CRPR	Cabo Rojo, PR	1.84	117	*i* P	Pn	08 21 00.8	+0.2
CRPR				IAML		08 21 30.4	
	comp=Z,61nm,0.6s						
SC01	Santiago de lo	1.88	288		Pn	08 21 01.1	-0.2
SC01				IAML		08 21 55.2	
	comp=N,105nm,0.7s						
MLPR	Magueyes Islan	1.91	117	⇑*e*P	Pn	08 21 01.6	0.0
MLPR	Magueyes Islan	1.91	117	*e*S	Sn	08 21 25.2	+0.7
MLPR	Magueyes Islan	1.91	117		Pn	08 21 01.3	-0.3
AOPR	Arecibo Observ	2.03	104	⇑*e*P	Pn	08 21 04.4	+1.0
AOPR	Arecibo Observ	2.03	104	*e*S	Sn	08 21 28.1	+0.5
AOPR	Arecibo Observ	2.03	104		Pn	08 21 03.8	+0.4
EMPR	Esperanza - Ma	2.21	99	⇑*e*P	Pn	08 21 06.5	+0.7
EMPR	Esperanza - Ma	2.21	99	*e*S	Sn	08 21 31.8	-0.2
EMPR	Esperanza - Ma	2.21	99		Pn	08 21 06.3	+0.5
OBIP	Obispado Ponce	2.26	110	⇑*e*P	Pn	08 21 07.1	+0.6
OBIP	Obispado Ponce	2.26	110	*e*S	Sn	08 21 33.9	+0.8
OBIP	Obispado Ponce	2.26	110		Pn	08 21 06.8	+0.3
OBIP				IAML		08 21 37.6	
	comp=N,75nm,0.8s						
CELP	Cerrillos	2.27	109	⇑*e*P	Pn	08 21 06.6	0.0
CELP	Cerrillos	2.27	109	*e*S	Sn	08 21 33.6	+0.1
CELP	Cerrillos	2.27	109		Pn	08 21 06.4	-0.2
SDDR	Presa de Saban	2.33	274	Pn	Pn	08 21 07.2	-0.2
SDDR				IAML		08 22 03.9	
	comp=N,46nm,0.7s						
SDDR				IAML		08 22 05.5	
	comp=N,49nm,0.7s						
SJG	San Juan	2.65	106		Pn	08 21 12.6	+0.9
SJG				IAML		08 21 45.3	
	comp=N,64nm,0.3s						
SJG				IAML		08 21 45.4	
	comp=N,67nm,0.4s						
GCPR	Guaynabo City	2.66	101	⇑*e*P	Pn	08 21 12.6	+0.6
GCPR	Guaynabo City	2.66	101	*e*S	Sn	08 21 43.2	+0.2
GCPR	Guaynabo City	2.66	101		Pn	08 21 12.9	+0.9
IGPR	InterUniversit	2.73	108	⇑*e*P	Pn	08 21 13.3	+0.4
IGPR	InterUniversit	2.73	108	*e*S	Sn	08 21 44.1	-0.6
IGPR	InterUniversit	2.73	108		Sn	08 21 44.1	-0.6
PDPR	Patillas Dam,	2.79	107		Pn	08 21 14.4	+0.7
CBYP	Canovanas	2.88	101	⇑*e*P	Pn	08 21 15.7	+0.6
CBYP	Canovanas	2.88	101	*e*S	Sn	08 21 48.5	0.0
CBYP	Canovanas	2.88	101		Pn	08 21 15.2	+0.2
HUMP	Col San Antoni	2.92	103	⇑*e*P	Pn	08 21 16.3	+0.8
HUMP	Col San Antoni	2.92	103	*e*S	Sn	08 21 47.8	-1.5
HUMP	Col San Antoni	2.92	103		Pn	08 21 16.1	+0.7
MTP	Monte Pirata	3.20	103	⇑*e*P	Pn	08 21 20.4	+1.0
MTP	Monte Pirata	3.20	103	*e*S	Sn	08 21 56.6	+0.4
MTP	Monte Pirata	3.20	103		Pn	08 21 19.9	+0.5
MTP				IAML		08 22 04.0	
	comp=N,19nm,0.7s						
MTP				IAML		08 22 04.0	
	comp=E,28nm,0.5s						
CUPR	Culebra, Puert	3.41	98	Pn	Pn	08 21 22.3	+0.1
STVI	Saint Thomas	3.71	97	Pn	Pn	08 21 26.9	+0.5
STVI				IAML		08 22 35.0	
	comp=N,21nm,1.9s						
CDVI	St. Croix	4.01	105	Pn	Pn	08 21 32.3	+1.8

IDC 15 08:25:33.1±7.0, **11°.76N**×**144°.34E, h48^{km}**±49^{km}**, mb4.1**/3, **mb1 4.2**/3, **mb1mx3.3**/52, **mbtmp4.3**/3, **Error ellipse: s-maj=101.5km s-min=49.3km az=112.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.89	16	P	Pn	08 26 02.9	0.0
	40nm,0.3s,baz=205,slow=5.2,SNR=19						
GUMO				S	Sn	08 26 26.0	+0.4
	41nm,0.3s,baz=9.7,slow=23,SNR=21						
GUMO				LR	LR	08 26 57.2	
	comp=Z,79nm,20.4s,baz=126,slow=44						
ILAR	Eielson Array	70.43	25	P	P	08 36 42.1	-0.1
	0.3nm,0.6s,baz=252,slow=5.4,SNR=6.4						
ARCES	ARCESS Array B	88.66	342	P	P	08 38 21.9	+0.9
	9.2nm,1.1s,baz=70,slow=7.9,SNR=5.3						
FINES	FINESS Array B	92.59	335	P	P	08 38 38.5	-1.0
	4.7nm,1.1s,baz=64,slow=3.2,SNR=7.5						

IDC 15 08:25:40.5±15.0, **0°.26N**×**126°.76E, h0^{km}, mb3.7**/3, **mb1 3.9**/4, **mb1mx3.5**/48, **mbtmp3.7**/4, **ML3.4**/1, **MS3.0**/1, **Ms1 3.0**/1, **ms1mx2.2**/33, **Error ellipse: s-maj=241.1km s-min=109.5km az=146.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	10.85	196	LR	LR	08 34 30.9	
	comp=Z,64nm,18.1s,baz=142,slow=49						
FITZ	Fitzroy Crossi	18.28	183	P	P	08 29 56.7	+0.7
	0.1nm,0.3s,baz=6.3,slow=9.2,SNR=1.4						
WRA	Warramunga Arr	21.41	160	P	P	08 30 29.3	-0.9
	0.9nm,0.4s,baz=337,slow=11,SNR=23						
ASAR	Alice Springs	24.78	164	P	P	08 31 04.8	+0.5
	1.4nm,0.5s,baz=345,slow=11,SNR=47						
STKA	Stephens Creek	34.92	158	P	P	08 32 33.6	-0.4
	0.9nm,0.6s,baz=335,slow=13,SNR=4.5						

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*IDC **15** 08:30:32.2±1.8, 10°.03S×124°.44E, h0^{km}, mb3.6/1, mb1 3.5/4, mb1mx3.3/39, mbtmp3.3/4, ML3.1/3, Error ellipse: s-maj=30.3km s-min=20.2km az=5.0*

*DJA **15** 08:30:37.4±1.6, 11°S±13°×12°4E±°, h10^{km}, M3.0/4, MLv3.0/4*

ISC 15 08:30:35.9±0.9, **10°.45S**±0°.09×**124°.23E**±0°.09, **h27^{km}, n8, σ2ˢ.39**/11, **Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	0.60	293	Pg	Pb	08 30 47.2	-0.8
	166nm,0.3s,baz=306,slow=2.7,SNR=50						
BATI				Lg	Lg	08 30 54.9	
	447nm,0.3s,baz=229,slow=20,SNR=18						
BATI	Baumata	0.60	293	P	Pb	08 30 46.8	-1.1
BATI				S	Sb	08 30 55.0	-1.1
SOEI	Soe	0.69	3	P	Pn	08 30 52.3	+2.3
EDFI	Ende, Flores	3.02	304	P	Pn	08 31 23.9	+1.9
FITZ	Fitzroy Crossi	7.73	170	Pn	Pn	08 32 31.8	+5.1
	0.4nm,0.3s,baz=359,slow=12,SNR=14						
FITZ				Sn	Sn	08 33 57.4	+4.0
	0.5nm,0.3s,baz=135,slow=20,SNR=8.0						
WRA	Warramunga Arr	13.57	135	Pn	Pn	08 33 46.7	0.0
	0.1nm,0.3s,baz=308,slow=15,SNR=5.1						
WRA				Sn	Sn	08 36 13.4	-3.4
	0.2nm,0.3s,baz=305,slow=22,SNR=3.5						
ASAR	Alice Springs	16.06	146	Pn	P	08 34 23.4	+0.1
	0.1nm,0.3s,baz=319,slow=12,SNR=7.2						
ASAR				Sn	Sn	08 37 15.3	-2.2
	0.0nm,0.3s,baz=316,slow=22,SNR=3.2						
MKAR	Makanchi Array	68.17	330	P	P	08 41 32.7	-1.0
	0.4nm,0.7s,baz=152,slow=6.5,SNR=4.4						

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*IDC **15** 08:32:39.5±17.0, 35°.98N×70°.25E, h88^{km}±161^{km}, mb3.3/4, mb1 3.4/5, mb1mx3.1/42, mbtmp3.7/5, ML3.6/1, Error ellipse: s-maj=92.7km s-min=35.3km az=7.0*

*NNC **15** 08:32:57.4±1.6, 36°.93N×70°.44E, h227^{km}±19^{km}, mb2.9, mpv4.2, Error ellipse: s-maj=15.7km s-min=9.8km az=179.0*

ISC 15 08:32:51.5±1.2, **36°.6N**±0°.1×**70°.4E**±0°.1, **h204^{km}, n18, σ1ˢ.51**/21, **mb3.3**/3, **5C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	6.11	24	P	Pn	08 34 22.3	+1.8
	SNR=138						
UCH	Uchtor	6.48	28	P	Pn	08 34 27.3	+2.0
	SNR=52						
KK31	Karatay Array	6.53	1	⇑P	Pn	08 34 27.1	+1.5
	2.5nm,0.2s,baz=180,slow=13,SNR=47						
KK31				S	S	08 35 39.2	-0.8
	10nm,0.5s,baz=190,slow=27,SNR=5.9						
EKS2	Erkin-Say	6.61	22	P	Pn	08 34 29.0	+2.2
	SNR=11						
AAK	Ala-Archa	6.83	26	P	Pn	08 34 31.6	+2.0
	SNR=15						
AAK	Ala-Archa	6.83	26	⇑P	Pn	08 34 31.4	+1.8
	7.5nm,0.5s						
AAK				⇑S	S	08 35 47.1	-0.2
	29nm,0.6s						
CHMS	Chumysh	7.24	26	P	Pn	08 34 36.4	+1.6
	SNR=7.9						
ULHL	Ulahol	7.24	37	P	Pn	08 34 36.0	+1.0

	SNR=6.1						
TKM2	**Tokmak 2**	**7.49**	**31**	P	**Pn**	**08 34 40.1**	**+1.9**
	SNR=47						
TKM2	**Tokmak 2**	**7.49**	**31**	⇑P	**Pn**	**08 34 40.2**	**+1.9**
	18nm,0.5s						
TKM2				⇑S	**S**	**08 36 02.4**	**-0.8**
	11nm,0.8s						
MK31	**Makanchi Array**	**13.52**	**37**	P	**P**	**08 35 56.7**	**-0.9**
	1.7nm,0.7s,baz=217,slow=14,SNR=15						
MKAR	**Makanchi Array**	**13.52**	**37**	P	**Pn**	**08 35 55.6**	**+0.5**
	0.3nm,0.3s,baz=221,slow=15,SNR=10						
AB31	**Akbulak array**	**14.80**	**332**	P	**P**	**08 36 11.2**	**-0.5**
	0.7nm,0.4s,baz=146,slow=12,SNR=37						
AKTO	**Aktyubinsk**	**16.49**	**331**	⇓P	**Pn**	**08 36 32.1**	**+0.9**
ZALV	**Zalesovo Beam**	**20.05**	**25**	P	**Pn**	**08 37 11.2**	**-2.2**
	2.0nm,0.3s,baz=211,slow=10,SNR=11						
TORD	**Torodi Ar. Bea**	**65.25**	**268**	P	**P**	**08 43 11.1**	**-0.4**
	0.2nm,0.4s,baz=40,slow=6.1,SNR=2.3						
WRA	**Warramunga Arr**	**82.43**	**122**	P	**P**	**08 44 51.0**	**-0.1**
	0.3nm,0.5s,baz=312,slow=5.4,SNR=4.3						
ASAR	**Alice Springs**	**84.68**	**125**	P	**P**	**08 45 03.2**	**+0.7**
	0.3nm,0.5s,baz=307,slow=5.2,SNR=4.7						

*NEIC **15** 08:36:11.2±0.8, 17°.6S±0°.1×178°.4W±0°.2, h598^{km}±20^{km}, mb4.1/16, Error ellipse: s-maj=34.4km s-min=8.8km az=65.0*

*IDC **15** 08:36:13.5±1.9, 17°.27S×178°.98W, h594^{km}±19^{km}, mb3.0/7, mb1 3.3/9, mb1mx3.1/29, mbtmp3.9/9, Error ellipse: s-maj=83.2km s-min=17.1km az=149.0*

ISC 15 08:36:08.6±0.8**, 17°.7S**±0°.2×**178°.6W**±0°.1**, h547^{km}, n30, σ1^{s}23**/28**, mb4.0**/15**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.23**	**268**	P	P	08 37 31.4	+6.4
	3.9nm,0.3s,baz=77,slow=2.7,SNR=17						
MSVF	**Nonsavu**	**3.23**	**268**	P	P	08 37 31.1	+6.2
OUENC	**Ouen Island, N**	**14.51**	**249**	P	**P**	**08 39 16.0**	**+2.9**
DZM	**Mont Dzumac**	**14.77**	**250**	P	**P**	**08 39 18.8**	**+2.9**
	0.3nm,0.3s,baz=94,slow=16,SNR=6.0						
BSWZ	**Blackbirch Sta**	**24.85**	**194**	P	**P**	**08 40 48.1**	**+0.1**
CTAO	**Charters Tower**	**33.34**	**260**	P	**P**	**08 42 01.5**	**-0.5**
CTAO				IAmb	IAmb	08 42 06.4	
	comp=Z,7.4nm,1.1s						
CAN	**Canberra**	**33.74**	**232**	P	**P**	**08 42 05.6**	**+0.4**
TOO	**Toolangi**	**37.22**	**230**	P	**P**	**08 42 34.2**	**+0.3**
TOO				IAmb	IAmb	08 42 48.7	
	comp=Z,7.6nm,1.2s						
STKA	**Stephens Creek**	**38.63**	**241**	P	**P**	**08 42 45.7**	**+0.3**
	comp=Z,3.0nm,0.5s,baz=87,slow=9.8,SNR=21						
STKA	**Stephens Creek**	**38.63**	**241**	P	**P**	**08 42 45.6**	**+0.2**
BBOO	**Buckleboo**	**43.40**	**241**	P	**P**	**08 43 22.8**	**-0.5**
WR0	**Warramunga Arr**	**44.34**	**259**	P	**P**	**08 43 30.0**	**-0.8**
WR0				IAmb	IAmb	08 43 34.4	
	comp=Z,4.2nm,1.2s						
WB0	**Warramunga Arr**	**44.50**	**260**	P	**P**	**08 43 31.6**	**-0.4**
WB0				IAmb	IAmb	08 43 52.2	
	comp=Z,6.7nm,1.4s						
WB2	**Warramunga Arr**	**44.52**	**259**	P	**P**	**08 43 31.5**	**-0.7**
WRA	**Warramunga Arr**	**44.53**	**259**	P	**P**	**08 43 31.3**	**-1.0**
	comp=Z,1.3nm,0.4s,baz=97,slow=7.1,SNR=42						
WRA	**Warramunga Arr**	**44.53**	**259**	P	**P**	**08 43 31.3**	**-1.0**
AS31	**Alice Springs**	**44.72**	**254**	P	**P**	**08 43 33.4**	**-0.2**
AS31				IAmb	IAmb	08 43 33.8	
	comp=Z,3.8nm,0.8s						
ASAR	**Alice Springs**	**44.72**	**254**	P	**P**	**08 43 33.2**	**-0.4**
	comp=Z,12nm,0.6s,baz=88,slow=8.4,SNR=261						
ASAR	**Alice Springs**	**44.72**	**254**	P	**P**	**08 43 33.6**	**-0.1**
MTN	**Manton Dam**	**48.66**	**268**	P	**P**	**08 44 02.3**	**-1.2**
MTN				IAmb	IAmb	08 44 15.2	
	comp=Z,20nm,1.3s						
FORT	**Forrest**	**49.98**	**244**	P	**P**	**08 44 11.7**	**-1.3**
KNRA	**Kununurra**	**50.37**	**264**	P	**P**	**08 44 15.9**	**-0.1**
FITZ	**Fitzroy Crossi**	**52.92**	**260**	P	**P**	**08 44 31.9**	**-2.5**
MBWA	**Marble Bar**	**57.99**	**256**	P	**P**	**08 45 08.4**	**-1.2**
MBWA				IAmb	IAmb	08 45 16.3	
	comp=Z,19nm,1.3s						
MORW	**Morawa**	**60.45**	**246**	P	**P**	**08 45 25.1**	**-0.8**
MORW				IAmb	IAmb	08 45 50.8	
	comp=Z,19nm,1.5s						
QSPA	**South Pole Qui**	**72.40**	**180**	P	**P**	**08 46 38.3**	**-1.1**
NVAR	**Mina Array Bea**	**79.34**	**44**	P	**P**	**08 47 19.4**	**+1.1**
	comp=Z,0.3nm,0.6s,baz=226,slow=7.3,SNR=2.9						
ILAR	**Eielson Array**	**85.67**	**13**	P	**P**	**08 47 48.2**	**-1.0**
	comp=Z,0.2nm,0.4s,baz=214,slow=5.1,SNR=4.3						
TXAR	**Lajitas Array**	**85.98**	**58**	P	**P**	**08 47 52.9**	**+1.2**
	comp=Z,0.3nm,0.7s,baz=223,slow=6.1,SNR=4.2						
PDAR	**Pinedale Array**	**87.27**	**43**	P	**P**	**08 47 58.1**	**+0.5**
	comp=Z,0.2nm,0.5s,baz=213,slow=4.8,SNR=3.0						

*JMA **15** 09:12:33.0±0.3, 31°.24N×128°.74E, h12^{km}±2^{km}, M3.8*

*NIED **15** 09:12:33.1, 31°.24N×128°.74E, h12^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.30; $M_{\theta\theta}$1.64; $M_{\phi\phi}$-0.34; $M_{r\theta}$-0.59; $M_{\theta\phi}$5.53; $M_{\phi r}$-2.21; Fault plane solution: $M_0$6.07000×10^{14} NP1:ϕ_s7.00000°, δ86.00000°, λ-157.00000°. NP2:ϕ_s275.00000°, δ67.00000°, λ-4.00000°.*

*IDC **15** 09:12:34.5±1.5, 31°.34N×128°.41E, h0^{km}, mb3.3/3, mb1 3.6/5, mb1mx3.4/47, mbtmp3.4/5, ML3.8/2, MS3.0/5, Ms1 3.0/5, ms1mx2.6/29 Error ellipse: s-maj=48.0km s-min=19.7km az=104.0*

ISC 15 09:12:35.7±1.1**, 31°.34N**±0°.05×**128°.93E**±0°.07**, h10^{km}, n18, σ1^{s}06**/18**, mb3.4**/3**, MS2.9**/3**, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	**Shimokoshiki**	**0.75**	**63**	P	**Pb**	**09 12 50.4**	**-0.5**
JSJ				*e*S	**Sn**	**09 13 02.7**	**-1.1**
JSU	**Suzuyama**	**1.31**	**82**	P	**Pb**	**09 12 59.9**	**-0.6**
JSU				S	**Sn**	**09 13 19.3**	**+1.6**
JFU	**Fukue jima 2**	**1.32**	**353**	P	**Pn**	**09 12 59.0**	**-1.3**
JFU				*e*S	**Sb**	**09 13 17.1**	**-0.6**
JYAK	**Yakushimahirau**	**1.74**	**129**	P	**Pn**	**09 13 04.1**	**-1.9**
JTN	**Tanegashima 3**	**1.89**	**111**	P	**Pn**	**09 13 07.3**	**-0.7**
JTZ	**Takazaki**	**1.92**	**72**	P	**Pn**	**09 13 08.8**	**+0.3**
JMTN	**Minamitane**	**1.93**	**118**	P	**Pn**	**09 13 08.4**	**-0.3**
JIU3	**Izumi3**	**2.00**	**52**	P	**Pn**	**09 13 09.7**	**+0.1**
JNU	**Nakatsue**	**2.43**	**42**	Pn	**Pg**	**09 13 21.4**	**-0.9**
	62nm,0.3s,baz=73,slow=0.1,SNR=47						
JNU				Sn	**Sg**	**09 13 54.2**	**+0.5**
	52nm,0.3s,baz=205,slow=2.1,SNR=1.8						
KSRS	**Korea Array**	**6.16**	**352**	Pn	**Pn**	**09 14 07.0**	**+0.3**
	0.4nm,0.3s,baz=176,slow=14,SNR=13						
KSRS				Sn	**Sn**	**09 15 17.2**	**0.0**
	0.8nm,0.3s,baz=174,slow=24,SNR=5.7						
MJAR	**Matsushiro Arr**	**9.29**	**54**	LR	LR	09 18 52.3	
	comp=Z,48nm,18.5s,baz=210,slow=39						
ASAJ	**Asahikawa**	**16.69**	**36**	LR	LR	09 22 15.5	
	comp=Z,30nm,20.3s,baz=170,slow=34						
TLY	**Talaya**	**27.54**	**325**	LR	LR	09 28 55.1	
	comp=Z,30nm,18.1s,baz=172,slow=36						
JAY	**Jayapura**	**35.48**	**159**	LR	LR	09 33 12.5	
	comp=Z,18nm,19.1s,baz=287,slow=35						
BATI	**Baumata**	**41.61**	**188**	LR	LR	09 40 04.3	
	comp=Z,51nm,18.0s,baz=274,slow=40						
WRA	**Warramunga Arr**	**51.25**	**173**	P	**P**	**09 21 41.8**	**+2.1**
	0.4nm,0.8s,baz=355,slow=11,SNR=2.4						
ASAR	**Alice Springs**	**54.90**	**174**	P	**P**	**09 22 06.5**	**-0.2**
	0.3nm,0.6s,baz=4.7,slow=13,SNR=6.5						
ILAR	**Eielson Array**	**59.68**	**30**	P	**P**	**09 22 40.9**	**+0.9**
	0.2nm,0.6s,baz=279,slow=6.0,SNR=2.5						

*IDC **15** 09:18:49.8±2.8, 13°.58N×93°.32E, h0^{km}, mb4.2/3, mb1 4.4/4, mb1mx3.6/48, mbtmp4.2/4, ML4.8/1, Error ellipse: s-maj=69.0km s-min=40.1km az=90.0*

*NEIC **15** 09:18:57.8±0.8, 13°.7N±0°.1×93°.5E±0°.2, h48^{km}±6^{km}, mb4.5/9, Error ellipse: s-maj=24.2km s-min=16.5km az=87.0*

*NDI **15** 09:19:07.0±3.6, 13°.54N×93°.49E, h29^{km}, ML3.5, mb4.5(NEIC)*

ISC 15 09:18:57.5±0.8**, 13°.76N**±0°.08×**93°.72E**±0°.10**, h35^{km}, n27, σ1^{s}82**/29**, mb4.3**/8**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DGPR	**DIGLIPUR**	**0.96**	**233**	*e*P	Pn	09 19 17.8	+3.3
DGPR				*e*S	**Sn**	**09 19 29.1**	**+2.1**
DGPR				IAML		09 19 38.2	
	comp=E,2μm,0.3s						
PBA	**Port Blair**	**2.30**	**205**	*e*P	Pn	09 19 40.4	+7.5
PBA				*e*S	**Sn**	**09 20 04.6**	**+4.6**
PBA				IAML		09 20 06.9	
	comp=E,580nm,0.5s						
PBA				IAML		09 20 07.3	
	comp=N,480nm,0.0s						
CM31	**Chiang Mai Arr**	**6.86**	**46**	Pn	**Pn**	**09 20 37.7**	**+2.1**
CMAR	**Chiang Mai Arr**	**6.86**	**46**	Pn	**Pn**	**09 20 36.4**	**+0.8**
	comp=N,4.0nm,0.3s,baz=237,slow=18,SNR=47						
CMAR				Sn	**Sn**	**09 21 55.0**	**+2.6**
	comp=N,0.5nm,0.3s,baz=239,slow=28,SNR=4.7						
CMAR	**Chiang Mai Arr**	**6.86**	**46**		**Pn**	**09 20 36.6**	**+1.1**
CHTO	**Chiang Mai**	**7.10**	**44**		**Pn**	**09 20 42.3**	**+3.4**
ODAN	**Odare**	**14.32**	**337**	*e*P	**Pn**	**09 22 17.1**	**-0.9**
	comp=N,8.3nm,0.2s						
RAMN	**Ramite**	**14.72**	**334**	*e*P	**Pn**	**09 22 22.7**	**-0.7**
	comp=N,8.3nm,0.2s						
JIRN	**Jiri**	**15.51**	**334**	*e*P	**Pn**	**09 22 33.2**	**-0.8**
	comp=N,4.5nm,0.3s						
GKN	**Gorkha**	**16.51**	**331**	*e*P	**Pn**	**09 22 46.4**	**-0.1**
	comp=N,8.8nm,0.2s						
DANN	**Dangsing**	**17.23**	**329**	*e*P	**Pn**	**09 22 54.6**	**-1.1**
	comp=N,4.9nm,0.2s						
FITZ	**Fitzroy Crossi**	**44.64**	**134**	P	**P**	**09 27 05.8**	**-1.2**
	comp=N,1.7nm,0.4s,baz=338,slow=9.3,SNR=12						
FITZ	**Fitzroy Crossi**	**44.64**	**134**	P	**P**	**09 27 05.3**	**-1.6**
KNRA	**Kununurra**	**45.34**	**129**	P	**P**	**09 27 11.6**	**-0.9**
MTN	**Manton Dam**	**45.53**	**124**	P	**P**	**09 27 13.0**	**-1.1**
MORW	**Morawa**	**47.73**	**153**	P	**P**	**09 27 30.0**	**-1.1**
MORW				IAmb	IAmb	09 27 53.0	
	comp=Z,16nm,1.4s						
WB0	**Warramunga Arr**	**52.08**	**129**	P	**P**	**09 28 02.8**	**-1.5**
WB0				IAmb	IAmb	09 28 21.7	
	comp=Z,7.9nm,1.4s						
WRA	**Warramunga Arr**	**52.14**	**129**	P	**P**	**09 28 03.3**	**-1.5**
	comp=Z,0.6nm,0.3s,baz=302,slow=9.5,SNR=44						
WRA				PcP	**PcP**	**09 29 14.6**	**-1.8**
	comp=Z,0.6nm,0.6s,baz=318,slow=3.3,SNR=7.3						
WRA	**Warramunga Arr**	**52.14**	**129**	P	**P**	**09 28 02.5**	**-2.3**
WRAB	**Tennant Creek**	**52.14**	**129**	P	**P**	**09 28 03.0**	**-1.8**
WRAB				IAmb	IAmb	09 28 14.4	
	comp=Z,9.0nm,1.4s						
WB2	**Warramunga Arr**	**52.15**	**129**	P	**P**	**09 28 03.8**	**-1.0**
WB2				IAmb	IAmb	09 28 26.3	
	comp=Z,4.9nm,1.3s						
WR0	**Warramunga Arr**	**52.30**	**129**	P	**P**	**09 28 04.5**	**-1.4**
WR0				IAmb	IAmb	09 28 13.3	
	comp=Z,4.2nm,1.4s						
AS31	**Alice Springs**	**54.10**	**133**	P	**P**	**09 28 18.3**	**-0.9**
ASAR	**Alice Springs**	**54.10**	**133**	P	**P**	**09 28 18.0**	**-1.2**
	comp=Z,1.2nm,0.3s,baz=310,slow=7.1,SNR=28						
ASAR	**Alice Springs**	**54.10**	**133**	P	**P**	**09 28 17.7**	**-1.5**
IMAR	**Indian Mountai**	**86.37**	**22**	P	**P**	**09 31 35.2**	**-0.6**
TXAR	**Lajitas Array**	**133.99**	**21**	PKP	**PKPdf**	**09 38 11.5**	**-0.4**
	comp=Z,0.1nm,0.5s,baz=323,slow=1.4,SNR=1.7						

*IDC **15** 09:26:34.8±0.9, 20°.70S×173°.07W, h0^{km}, mb4.4/13, mb1 4.6/15, mb1mx4.3/42, mbtmp4.5/15, ML4.2/1, MS3.4/11, Ms1 3.3/11, ms1mx3.2/29, Error ellipse: s-maj=44.2km s-min=15.2km az=160.0*

*NOU **15** 09:26:41.5, 19°.90S×172°.67W, h0^{km}, mb4.7/8, Tonga Islands Region*

*NEIC **15** 09:26:41.2±2.0, 20°.1S±0°.1×173°.1W±0°.1, h24^{km}±4^{km}, mb4.7/32, Error ellipse: s-maj=20.8km s-min=14.0km az=152.0*

ISC 15 09:26:42.4±0.4**, 20°.18S**±0°.07×**172°.94W**±0°.06**, h47^{km}, n87, σ2^{s}15**/77**, mb4.6**/30**, MS3.5**/11**, 1D, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**3.04**	**69**		**Pn**	**09 27 27.2**	**-0.9**
NIUE	**Niue**	**3.04**	**69**	P	**Pn**	**09 27 27.0**	**-1.1**
AFI	**Afiamalu**	**6.33**	**10**	Pn	**Pn**	**09 28 13.1**	**-0.1**
	4.4nm,0.3s,baz=308,slow=3.7,SNR=13						
AFI				Sn	**Sn**	**09 29 19.1**	**-5.2**
	25nm,0.3s,baz=168,slow=18,SNR=9.3						
AFI				LR	LR	09 31 53.9	
	comp=Z,56nm,18.9s,baz=173,slow=46						
MSVF	**Nonsavu**	**8.86**	**284**	Pn	**Pn**	**09 28 50.9**	**+2.9**
	1.4nm,0.3s,baz=131,slow=16,SNR=10.0						
MSVF				LR	LR	09 31 53.0	
	comp=Z,601nm,20.7s,baz=128,slow=36						
MSVF	**Nonsavu**	**8.86**	**284**	P	**Pn**	**09 28 52.3**	**+4.3**
RAO	**Raoul Island**	**10.10**	**206**	Sn	Sn	09 30 38.9	-18
	28nm,0.3s,baz=75,slow=20,SNR=1.3						
RAR	**Rarotonga**	**12.37**	**97**	Pn	**Pn**	**09 29 32.3**	**-3.6**
	14nm,0.3s,baz=269,slow=8.3,SNR=71						
RAR				LR	LR	09 33 20.9	
	comp=Z,188nm,19.4s,baz=270,slow=33						
RAR	**Rarotonga**	**12.37**	**97**	Pn	**Pn**	**09 29 33.0**	**-2.9**
RAR	**Rarotonga**	**12.37**	**97**	P	**Pn**	**09 29 34.6**	**-1.3**
DZM	**Mont Dzumac**	**19.32**	**261**	P	**P**	**09 30 58.8**	**-5.2**
	baz=202,slow=17,SNR=3.4						
DZM	**Mont Dzumac**	**19.32**	**261**	*e*P	**P**	**09 31 03.0**	**-0.9**
	53nm,1.2s						
DZM				*e*LR	LR	09 35 27.2	
	comp=Z,300nm,27.6s						
URZ	**Urewera**	**19.98**	**203**	P	**Pn**	**09 31 12.1**	**-0.8**
BKZ	**Black Stump Fm**	**21.00**	**203**	P	P	09 31 31.4	+9.4
TBI	**Tubuai**	**22.03**	**102**	*e*S	**S**	**09 35 30.1**	**-3.4**
	172nm,26.5s						
TBI				*e*LR	LR	09 36 47.0	
	comp=Z,307nm,25.8s						
TBI	**Tubuai**	**22.03**	**102**	*e*T	T	09 54 01.3	
	2.3nm,0.2s						
PAE	**Paea**	**22.24**	**87**	*e*T	T	09 54 42.8	
	1.2nm,0.3s						
PPT2	**Papeete2**	**22.25**	**87**	*e*S	**S**	**09 35 42.7**	**+4.8**
	193nm,26.0s						
PPT2				*e*LR	LR	09 36 52.0	
	comp=Z,337nm,24.8s						
PPT	**Papeete**	**22.26**	**87**	LR	LR	09 39 38.4	
	comp=Z,125nm,18.1s,baz=302,slow=35						
BFZ	**Birch Farm**	**22.43**	**202**	P	P	09 31 45.2	+8.0
QRZ	**Quartz Range**	**24.03**	**208**	P	P	09 32 00.2	+7.3
KHZ	**Kahutara**	**24.94**	**204**	P	P	09 32 10.8	+10
TAOE	**Nuku Hiva Isla**	**33.61**	**75**	*e*LR	LR	09 42 04.9	
	comp=Z,230nm,26.2s						
CAN	**Canberra**	**36.66**	**238**	P	**P**	**09 33 44.4**	**-0.3**
CAN				IAmb	IAmb	09 34 12.2	
	comp=Z,15nm,1.2s						
RABL	**Rabaul**	**37.50**	**290**	P	**P**	**09 33 48.8**	**-3.3**
CTAO	**Charters Tower**	**38.24**	**263**	P	**P**	**09 33 56.7**	**-1.5**
CTAO				IAmb	IAmb	09 33 57.5	
	comp=Z,8.2nm,1.0s						
PMG	**Port Moresby**	**39.94**	**280**	P	**P**	**09 34 10.0**	**-2.4**
	comp=Z,16nm,0.8s,baz=100,slow=9.5,SNR=6.0						
PMG	**Port Moresby**	**39.94**	**280**	P	**P**	**09 34 11.4**	**-1.1**
PMG				IAmb	IAmb	09 34 12.5	
	comp=Z,21nm,1.0s						
TOO	**Toolangi**	**39.95**	**235**	P	**P**	**09 34 12.3**	**0.0**
TAU	**Tasmania Unive**	**40.24**	**227**	P	**P**	**09 34 13.7**	**-1.0**
STKA	**Stephens Creek**	**42.21**	**245**	P	**P**	**09 34 26.4**	**-4.5**
	comp=Z,3.7nm,0.8s,baz=74,slow=8.4,SNR=8.7						
STKA				LR	LR	09 50 36.9	
	comp=Z,48nm,18.7s,baz=28,slow=34						
STKA	**Stephens Creek**	**42.21**	**245**	P	**P**	**09 34 29.8**	**-1.1**
COEN	**Coen**	**42.31**	**271**	P	**P**	**09 34 30.8**	**-1.2**
JAY	**Jayapura**	**48.49**	**285**	P	**P**	**09 35 20.8**	**-0.2**
	comp=Z,12nm,0.7s,baz=357,slow=17,SNR=5.1						
WR0	**Warramunga Arr**	**49.15**	**261**	P	**P**	**09 35 24.6**	**-1.4**
WR0				IAmb	IAmb	09 35 36.2	
	comp=Z,6.3nm,1.4s						
AS31	**Alice Springs**	**49.20**	**256**	P	**P**	**09 35 26.5**	**+0.2**
ASAR	**Alice Springs**	**49.21**	**256**	P	**P**	**09 35 24.3**	**-2.1**
	comp=Z,3.5nm,0.9s,baz=87,slow=8.3,SNR=35						
ASAR				LR	LR	09 55 50.0	
	comp=Z,54nm,18.2s,baz=94,slow=36						
ASAR	**Alice Springs**	**49.21**	**256**	P	**P**	**09 35 26.1**	**-0.3**
WB0	**Warramunga Arr**	**49.32**	**261**	P	**P**	**09 35 25.6**	**-1.6**
WB0				IAmb	IAmb	09 35 25.9	
	comp=Z,14nm,1.2s						
WB2	**Warramunga Arr**	**49.33**	**261**	P	**P**	**09 35 25.6**	**-1.8**
WB2				IAmb	IAmb	09 35 44.8	
	comp=Z,6.5nm,1.1s						
WRAB	**Tennant Creek**	**49.33**	**261**	P	**P**	**09 35 25.9**	**-1.5**
WRAB				IAmb	IAmb	09 35 26.5	
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**49.34**	**261**	P	**P**	**09 35 25.1**	**-2.4**
	comp=Z,0.9nm,0.3s,baz=96,slow=7.6,SNR=55						
WRA				LR	LR	09 56 14.5	
	comp=Z,25nm,18.8s,baz=60,slow=36						
WRA	**Warramunga Arr**	**49.34**	**261**	P	**P**	**09 35 25.6**	**-1.8**
FORT	**Forrest**	**53.77**	**246**	P	**P**	**09 36 00.4**	**+0.1**
MTN	**Manton Dam**	**53.91**	**269**	P	**P**	**09 36 00.8**	**-0.8**
MTN				IAmb	IAmb	09 36 12.3	
	comp=Z,15nm,1.1s						
FITZ	**Fitzroy Crossi**	**57.77**	**261**	P	**P**	**09 36 26.8**	**-2.4**
	comp=Z,2.5nm,1.0s,baz=108,slow=3.2,SNR=2.1						
FITZ				LR	LR	10 01 50.6	
	comp=Z,33nm,19.2s,baz=88,slow=37						
FITZ	**Fitzroy Crossi**	**57.77**	**261**	P	**P**	**09 36 29.4**	**+0.2**
FITZ				IAmb	IAmb	09 36 57.2	
	comp=Z,8.0nm,1.1s						
SIJI	**Sorong**	**57.78**	**282**	P	**P**	**09 36 28.0**	**-1.3**
	comp=Z,5.4nm,0.6s,baz=143,slow=15,SNR=2.8						
VNDA	**Vanda**	**58.70**	**186**	LR	LR	09 57 35.4	
	comp=Z,19nm,20.0s,baz=20,slow=32						
VNDA	**Vanda**	**58.70**	**186**	P	**P**	**09 36 37.6**	**+2.8**
VNDA				IAmb	IAmb	09 37 04.6	
	comp=Z,8.3nm,1.5s						
CASY	**Casey**	**66.29**	**205**	P	**P**	**09 37 26.3**	**+0.8**
QSPA	**South Pole Qui**	**69.89**	**180**	P	**P**	**09 37 49.2**	**+0.8**
QSPA				IAmb	IAmb	09 37 60.0	
	comp=Z,7.3nm,1.0s						
MJAR	**Matsushiro Arr**	**72.87**	**321**	P	**P**	**09 38 07.6**	**+1.1**
	comp=Z,1.3nm,0.8s,baz=123,slow=5.3,SNR=2.7						
NVAR	**Mina Array Bea**	**77.60**	**41**	P	**P**	**09 38 36.4**	**+2.4**
	comp=Z,4.9nm,0.9s,baz=225,slow=9.5,SNR=23						
NVAR	**Mina Array Bea**	**77.60**	**41**	P	**P**	**09 38 36.5**	**+2.6**
NV11	**Mina Array Sit**	**77.69**	**41**	P	**P**	**09 38 36.6**	**+2.2**
NV11				IAmb	IAmb	09 38 38.1	
	comp=Z,11nm,1.1s						
TPH	**Tonopah**	**78.05**	**42**	P	**P**	**09 38 38.6**	**+2.1**
R11A	**Troy Canyon, C**	**79.25**	**42**	P	**P**	**09 38 45.8**	**+2.8**
U15A	**North Rim**	**80.29**	**45**	P	**P**	**09 38 50.5**	**+1.6**
U15A				IAmb	IAmb	09 38 53.3	
	comp=Z,12nm,1.5s						
TXAR	**Lajitas Array**	**82.92**	**55**	P	**P**	**09 39 04.6**	**+1.9**
	comp=Z,1.1nm,1.0s,baz=207,slow=7.8,SNR=9.0						
TXAR				LR	LR	10 07 13.0	
	comp=Z,38nm,21.9s,baz=0.0,slow=29						
TXAR	**Lajitas Array**	**82.92**	**55**	P	**P**	**09 39 04.4**	**+1.7**
SRU	**San Rafael Swe**	**82.94**	**44**	P	**P**	**09 39 05.5**	**+2.8**
SRU				IAmb	IAmb	09 39 06.5	
	comp=Z,8.5nm,1.1s						
HLID	**Hailey**	**83.05**	**39**	P	**P**	**09 39 06.0**	**+2.9**
HLID				IAmb	IAmb	09 39 06.8	
	comp=Z,10nm,1.1s						
PLID	**Pearl Lake**	**83.05**	**37**	P	**P**	**09 39 05.3**	**+2.2**
PLID				IAmb	IAmb	09 39 05.5	
	comp=Z,4.6nm,1.1s						
NJ2	**Nanjing**	**83.39**	**307**	*e*P	**P**	**09 39 06.0**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MAW	**Mawson**	**83.43**	**199**	LR	LR	10 15 00.6	
	comp=Z,11nm,20.6s,baz=62,slow=35						
ANMO	**Albuquerque**	**83.55**	**49**	P	**P**	**09 39 08.3**	**+2.5**
AHID	**Auburn Hatcher**	**84.58**	**41**	P	**P**	**09 39 13.2**	**+2.2**
MCMT	**McKenzie Canyo**	**84.70**	**38**	P	**P**	**09 39 13.5**	**+1.9**
PDAR	**Pinedale Array**	**85.53**	**41**	P	**P**	**09 39 17.6**	**+1.8**
	comp=Z,1.0nm,0.9s,baz=225,slow=4.0,SNR=7.0						
ILAR	**Eielson Array**	**87.02**	**11**	P	**P**	**09 39 23.4**	**+1.1**
	comp=Z,0.8nm,0.7s,baz=225,slow=5.0,SNR=9.2						
ILAR	**Eielson Array**	**87.02**	**11**	P	**P**	**09 39 21.3**	**-1.0**
SEY	**Seymchan**	**87.22**	**345**	P	**P**	**09 39 25.0**	**+1.8**
	comp=Z,6.4nm,0.9s,baz=166,slow=5.8,SNR=7.5						
DAWY	**Dawson**	**87.92**	**14**	P	**P**	**09 39 29.0**	**+2.3**
EDM	**Edmonton**	**89.31**	**31**	P	**P**	**09 39 35.4**	**+1.9**
GYA	**Guiyang**	**90.65**	**298**	⇓P	P	09 39 46.5	+6.0
GYA				pmax	pmax		
	comp=Z,13nm,1.1s						
HHC	**Hu-ho-hao-te**	**92.57**	**313**	*e*P	**P**	**09 39 51.6**	**+2.5**
HHC				pmax	pmax		
	comp=Z,14nm,0.7s						
HHC				pmax	pmax		
	comp=Z,59nm,5.7s						
MKAR	**Makanchi Array**	**114.43**	**313**	PKP	PKPdf	09 45 16.9	-0.2
	comp=Z,0.8nm,0.7s,baz=46,slow=3.5,SNR=6.0						
ARCES	**ARCESS Array B**	**129.37**	**352**	PKP	**PKPdf**	**09 45 44.9**	**-0.2**
	comp=Z,1.9nm,0.7s,baz=3.4,slow=4.1,SNR=5.5						
ARCES	**ARCESS Array B**	**129.37**	**352**		**PKPdf**	**09 45 45.3**	**+0.2**
AKASG	**Malin Array Be**	**144.87**	**335**	PKPbc	**PKPdf**	**09 46 13.8**	**-0.3**
	comp=Z,7.3nm,0.8s,baz=37,slow=4.1,SNR=23						
BRG	**Berggiesshubel**	**148.89**	**352**	*e*PKP	**PKiKP**	**09 46 26.5**	**+0.3**
BRG				Amp		09 46 27.2	
	comp=Z,5.1nm,0.7s						
BRTR	**Keskin Array B**	**150.01**	**316**	PKPbc	**PKPbc**	**09 46 28.4**	**+0.2**
	comp=Z,2.5nm,0.8s,baz=106,slow=2.3,SNR=12						
MODS	**Modra-Piesok**	**150.68**	**346**	*e*PKP	**PKPab**	**09 46 36.3**	**0.0**
GERES	**GERESS Array B**	**150.90**	**351**	PKPbc	**PKPbc**	**09 46 29.1**	**-0.9**
	comp=Z,2.4nm,0.8s,baz=54,slow=5.7,SNR=8.5						
GERES	**GERESS Array B**	**150.90**	**351**	PKPdf	**PKPdf**	**09 46 21.8**	**-2.4**
GERES					**PKPbc**	**09 46 29.3**	**-0.6**
ESDC	**Sonseca Array**	**158.38**	**24**	PKPab	**PKPab**	**09 47 11.0**	**+1.7**
	comp=Z,0.3nm,0.7s,baz=331,slow=4.5,SNR=4.4						
ESDC	**Sonseca Array**	**158.38**	**24**	PKPdf	**PKPdf**	**09 46 32.5**	**-2.3**
ESDC					**PKPab**	**09 47 09.2**	**-0.2**

*SOME **15** 09:31:54.3, 44°.68N×82°.15E, h5^{km}*

*NNC **15** 09:31:56.8±1.5, 44°.67N×82°.16E, h0^{km}, mb3.6, mpv3.3, Error ellipse: s-maj=16.2km s-min=5.6km az=119.0*

ISC 15 09:31:54.6±2.2**, 44°.67N**±0°.05×**82°.21E**±0°.06**, h1^{km}**±17^{km}**, n20, σ1^{s}20**/31**, 5C-3D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DJR	**Jarkent**	**1.77**	**260**	*e*P	**Pb**	**09 32 28.2**	**+0.3**
	5.8nm,0.1s						
DJR				*e*S	**Sg**	**09 32 52.6**	**+1.3**
	9.6nm,0.4s						
DJR	**Jarkent**	**1.77**	**260**	P	**Pb**	**09 32 28.2**	**+0.3**
	5.8nm,0.1s						
DJR				S	**Sg**	**09 32 52.6**	**+1.3**
	9.6nm,0.4s						
KTMS	**Ketmen**	**1.82**	**228**	*e*P	**Pb**	**09 32 29.1**	**+0.3**
	7.3nm,0.2s						
KTMS				*e*S	**Sg**	**09 32 54.2**	**+1.2**
	36nm,0.4s						
KTMS	**Ketmen**	**1.82**	**228**	P	**Pb**	**09 32 29.1**	**+0.3**
	7.3nm,0.2s						
KTMS				S	**Sg**	**09 32 54.2**	**+1.2**
	36nm,0.4s						
KAPS	**Kapalarasan**	**2.12**	**288**	*e*P	**Pb**	**09 32 33.5**	**-0.3**
	5.6nm,0.2s						
KAPS				*e*S	**Sg**	**09 33 02.1**	**-0.5**
	19nm,0.3s						
KAPS	**Kapalarasan**	**2.12**	**288**	Pg	**Pb**	**09 32 34.3**	**+0.5**
	5.6nm,0.2s						
KAPS				Lg	Lg	09 33 02.1	
	19nm,0.3s						
MK31	**Makanchi Array**	**2.12**	**1**	⇑Pn	**Pb**	**09 32 34.1**	**+0.2**
	7.6nm,0.3s,baz=182,slow=13,SNR=166						
MK31				⇓Sn	**Sb**	**09 33 01.7**	**+0.9**
	5.3nm,0.3s,baz=183,slow=28,SNR=16						
MAKZ	**Makanchi**	**2.14**	**356**	⇑Pn	**Pb**	**09 32 33.7**	**-0.5**
	1.2nm,0.2s						
MAKZ				⇑Sn	**Sb**	**09 33 02.2**	**+0.8**
	5.4nm,0.3s						
PDGK	**Podgornoye**	**2.38**	**237**	Pg	**Pb**	**09 32 37.9**	**-0.4**
	3.5nm,0.1s						
PDGK				Lg	Lg	09 33 09.3	
	12nm,0.5s						
PDGK	**Podgornoye**	**2.38**	**237**	⇓Pn	**Pb**	**09 32 37.9**	**-0.4**
	2.0nm,0.3s						
PDGK				⇑Sn	**Sg**	**09 33 09.6**	**-1.4**
	18nm,0.6s						
SHLS	**Shalkode**	**2.50**	**234**	*e*P	**Pn**	**09 32 36.2**	**-0.4**
	7.3nm,0.2s						
SHLS				*e*S	**Sn**	**09 33 06.6**	**-1.1**
	42nm,0.5s						
SHLS	**Shalkode**	**2.50**	**234**	Pg	**Pn**	**09 32 36.2**	**-0.4**
	7.3nm,0.2s						
SHLS				Lg	Lg	09 33 06.6	
	42nm,0.5s						
UZB	**Uzynbulak**	**2.77**	**238**	*e*P	**Pb**	**09 32 44.3**	**-0.6**
	4.2nm,0.2s						
UZB				*e*S	**Sb**	**09 33 20.3**	**+0.9**
	6.8nm,0.2s						
UZB	**Uzynbulak**	**2.77**	**238**	Pg	**Pb**	**09 32 44.3**	**-0.6**
	4.2nm,0.2s						
UZB				Lg	Lg	09 33 20.3	
	6.8nm,0.2s						
SATY	**Saty**	**3.19**	**241**	*e*P	**Pb**	**09 32 51.7**	**-0.4**
	3.7nm,0.3s						
SATY				*e*S	**Sb**	**09 33 33.1**	**+1.5**
	19nm,0.3s						
SATY	**Saty**	**3.19**	**241**	Pg	**Pb**	**09 32 51.7**	**-0.4**

	3.7nm,0.3s						
SATY				Lg	Lg	09 33 33.1	
	19nm,0.3s						
ZSN	Zaisan	3.34	33	*e*P	Pb	09 32 54.0	-0.6
	2.4nm,0.3s						
ZSN				*e*S	Sb	09 33 37.3	+1.7
	5.1nm,0.4s						
KTBS	Karatobe	4.09	258	*e*P	Pb	09 33 08.7	+1.2
	1.9nm,0.3s						
KTBS				*e*S	Sg	09 34 01.9	-4.1
	3.8nm,0.5s						
KURBB	Kurchatov Arra	6.45	339	⇑Lg	Lg	09 35 18.3	
	2.2nm,0.7s						
KURK	Kurchatov	6.51	339	⇓Lg	Lg	09 35 20.8	
	0.8nm,0.6s						

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*NEIC **15** 09:32:13.5±2.6, 14°.49S±0°.10×167°.8E±0°.1, h120^{km}±5^{km}, mb4.6/24, Error ellipse: s-maj=19.3km s-min=14.4km az=83.0*

*IDC **15** 09:32:18.1±2.4, 14°.87S×167°.34E, h132^{km}±18^{km}, mb3.9/8, mb1 4.1/10, mb1mx3.6/48, mbtmp4.4/10, Error ellipse: s-maj=22.7km s-min=13.9km az=63.0*

*NOU **15** 09:32:20.3, 15°.01S×167°.09E, h101^{km}, MLv5.0/22, Vanuatu Islands*

ISC 15 09:32:12.7±0.6**, 14°.61S**±0°.07×**167°.62E**±0°.10**, h100**^{km}**, n89,** σ**2^{s}.20**/87**, mb4.4**/22**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	0.92	206	Pn	Pn	09 32 36.8	+4.4
SANVU	Saraoutou	0.92	206	P	Pn	09 32 36.6	+4.2
DVP	Devils Point	3.15	170	P	Pn	09 33 04.5	+4.0
LIFNC	LIFOU	6.14	183	Pn	Pn	09 33 41.4	+0.4
LIFNC	LIFOU	6.14	183	P	Pn	09 33 41.4	+0.4
KOUNC	Koumac, New Ca	6.71	208	P	Pn	09 33 50.1	+1.4
MARNC	Mare, Loyalty	6.85	177		Pn	09 33 50.8	+0.2
MARNC	Mare, Loyalty	6.85	177	P	Pn	09 33 52.9	+2.4
YATNC	Mamie plateau,	7.44	185	P	Pn	09 33 59.3	+0.6
DZM	Mont Dzumac	7.50	188	P	Pn	09 34 01.3	+1.7
	15nm,0.3s,baz=13,slow=12,SNR=44						
DZM				S	Sn	09 35 19.1	-4.1
	4.5nm,0.3s,baz=328,slow=23,SNR=6.5						
DZM	Mont Dzumac	7.50	188	*e*Pn	Pn	09 34 01.5	+1.9
	38nm,0.2s						
DZM				*e*Sn	Sn	09 35 15.0	-8.2
	36nm,0.3s						
DZM	Mont Dzumac	7.50	188	Pn	Pn	09 34 01.5	+1.9
DZM	Mont Dzumac	7.50	188	P	Pn	09 34 01.7	+2.1
NOUC	Port Laguerre	7.55	189	P	Pn	09 34 02.6	+2.4
ONTNC	Ouen Toro	7.74	188	Pn	Pn	09 34 05.7	+3.1
ONTNC	Ouen Toro	7.74	188	P	Pn	09 34 05.0	+2.4
OUENC	Ouen Island, N	7.80	185	Pn	Pn	09 34 06.1	+2.5
OUENC	Ouen Island, N	7.80	185	P	Pn	09 34 06.3	+2.8
PINNC	Pines Island,	7.96	181		Pn	09 34 08.7	+3.0
HNR	Honiara	9.10	304	P	Pn	09 34 27.1	+5.9
	45nm,0.3s,baz=169,slow=5.3,SNR=11						
HNR				S	Sn	09 36 05.5	+3.6
	14nm,0.3s,baz=109,slow=14,SNR=6.3						
HNR	Honiara	9.10	304		Pn	09 34 28.2	+7.0
HNR	Honiara	9.10	304	P	Pn	09 34 27.9	+6.7
MSVF	Nonsavu	10.49	109	P	Pn	09 34 54.5	+14
LHI	Lord Howe Isla	18.57	204	P	P	09 36 21.9	+0.1
EIDS	Eidsvold	18.85	233	P	P	09 36 26.6	+1.6
EIDS				IAmb	IAmb	09 36 27.1	
	comp=Z,30nm,0.7s						
EIDS	Eidsvold	18.85	233	P	P	09 36 25.9	+0.9
	comp=Z,44nm,1.5s						
CTAO	Charters Tower	21.10	252	P	P	09 36 50.1	+0.7
CTAO				IAmb	IAmb	09 36 50.9	
	comp=Z,10nm,0.7s						
CTAO	Charters Tower	21.10	252	P	P	09 36 50.6	+1.2
RMQ	Roma	21.21	233	P	P	09 36 51.0	+0.4
	comp=Z,30nm,0.9s						
OUZ	Omahuta	21.22	166	P	P	09 36 53.4	+3.0
OUZ				IAmb	IAmb	09 36 54.7	
	comp=Z,37nm,0.8s						
ARMA	Armidale	21.54	220	P	P	09 36 54.8	+0.8
ARMA				IAmb	IAmb	09 37 20.7	
	comp=Z,41nm,1.3s						
MTSU	Mount Surprise	22.62	258	P	P	09 37 05.7	+0.2
	comp=Z,8.2nm,0.7s						
KUZ	Kuaotunu	23.20	163	P	P	09 37 12.8	+1.9
AWAZ	Awhitu Peninsu	23.22	166	P	P	09 37 14.2	+3.1
TOZ	Tahuroa Road	24.07	165	P	P	09 37 14.0	-4.7
TLZ	Tolley Road	24.64	165	P	P	09 37 20.0	-4.0
HIZ	Hauiti	24.66	166	P	P	09 37 24.6	+0.6
HIZ	Hauiti	24.66	166	P	P	09 37 29.3	+5.2
OMRZ	Omania	24.66	163	P	P	09 37 28.1	+3.9
HAZ	Te Kaha	24.76	160	P	P	09 37 27.3	+2.3
QLP	Quilpie	24.87	238	P	P	09 37 26.2	0.0
RUGZ	Raukumara Rang	24.91	161	P	P	09 37 28.7	+2.1
URZ	Urewera	25.01	162	P	P	09 37 28.5	+1.3
	comp=Z,5.9nm,0.3s,baz=121,slow=24,SNR=15						
URZ	Urewera	25.01	162	P	P	09 37 28.6	+1.3
PRRZ	Plateau Road	25.03	164	P	P	09 37 30.3	+2.8
PUZ	Puketiti	25.20	160	P	P	09 37 29.8	+0.7
TWGZ	Tauwhareparae	25.20	161	P	P	09 37 30.3	+1.1
MTHZ	Maungataniwha	25.48	163	P	P	09 37 33.2	+1.6
BKZ	Black Stump Fm	25.68	164	P	P	09 37 35.0	+1.6
CMSA	Cobar Meteorol	26.20	226	P	P	09 37 39.7	+1.6
	comp=Z,6.6nm,1.2s						
LTZ	Lake Taylor	28.36	173	P	P	09 37 58.4	+1.0
STKA	Stephens Creek	29.33	230	P	P	09 38 06.5	+0.5
	comp=Z,7.4nm,0.6s,baz=41,slow=8.4,SNR=23						
STKA	Stephens Creek	29.33	230	P	P	09 38 06.5	+0.5
TOO	Toolangi	30.15	217	P	P	09 38 13.3	0.0
TOO				IAmb	IAmb	09 38 26.7	
	comp=Z,9.6nm,1.3s						
WR0	Warramunga Arr	31.99	256	P	P	09 38 28.3	-1.4
WB0	Warramunga Arr	32.12	256	P	P	09 38 29.2	-1.6
WB0				IAmb	IAmb	09 38 30.4	
	comp=Z,8.5nm,1.4s						
WB2	Warramunga Arr	32.17	256	P	P	09 38 30.0	-1.3
WRAB	Tennant Creek	32.17	256	P	P	09 38 29.6	-1.7
WRA	Warramunga Arr	32.18	256	P	P	09 38 29.8	-1.5
	comp=Z,0.9nm,0.5s,baz=85,slow=9.2,SNR=8.3						
WRA	Warramunga Arr	32.18	256	P	P	09 38 29.4	-2.0
AS31	Alice Springs	33.03	249	P	P	09 38 37.5	-1.3
ASAR	Alice Springs	33.03	249	P	P	09 38 37.3	-1.5
	comp=Z,3.4nm,0.6s,baz=79,slow=8.9,SNR=36						
ASAR				ScP	ScP	09 44 52.1	-3.6
	comp=Z,0.7nm,0.9s,baz=91,slow=3.9,SNR=4.1						
ASAR	Alice Springs	33.03	249	P	P	09 38 36.8	-2.0
BBOO	Buckleboo	33.92	232	P	P	09 38 46.7	+0.4
BBOO				IAmb	IAmb	09 38 46.8	
	comp=Z,10nm,0.9s						
KNRA	Kununurra	37.48	263	P	P	09 39 17.5	+0.5
FORT	Forrest	39.65	239	P	P	09 39 34.4	-0.5
FITZ	Fitzroy Crossi	40.37	259	P	P	09 39 40.4	-0.7
	comp=Z,2.1nm,0.5s,baz=76,slow=9.5,SNR=8.9						
FITZ	Fitzroy Crossi	40.37	259	P	P	09 39 40.3	-0.7
FITZ				IAmb	IAmb	09 39 53.7	
	comp=Z,7.9nm,1.2s						
VNDA	Vanda	62.99	181	P	P	09 42 29.0	+0.6
	comp=Z,2.6nm,0.5s,baz=355,slow=8.1,SNR=27						
VNDA	Vanda	62.99	181	P	P	09 42 29.2	+0.7
VNDA				IAmb	IAmb	09 42 30.8	
	comp=Z,4.0nm,0.8s						
CASY	Casey	63.77	202	P	P	09 42 32.3	-1.4
CASY				IAmb	IAmb	09 42 41.3	
	comp=Z,16nm,1.2s						
KSAR	Wonju Array Be	63.84	325	P	P	09 42 31.6	-3.0
KS19	Wonju Array Si	63.90	326	P	P	09 42 31.7	-3.3
NJ2	Nanjing	65.83	316	*e*P	P	09 42 47.0	-0.6
NJ2				pmax	pmax		
	comp=Z,13nm,0.6s						
PPI	Padang Panjang	67.86	276	P	P	09 43 11.8	+11
QSPA	South Pole Qui	75.42	180	P	P	09 43 46.0	+0.5
QSPA				IAmb	IAmb	09 43 46.8	
	comp=Z,9.0nm,0.8s						
HHC	Hu-ho-hao-te	75.71	320	*e*P	P	09 43 47.8	+0.3
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,50nm,6.6s						
SONM	Songino Array	82.60	323	P	P	09 44 27.6	+2.7
	comp=Z,0.5nm,0.6s,baz=168,slow=7.6,SNR=3.9						
ILAR	Eielson Array	86.31	18	P	P	09 44 45.1	+2.0
	comp=Z,0.5nm,0.9s,baz=234,slow=5.5,SNR=4.3						
WMQ	Urumqi	92.88	314	*e*P	P	09 45 10.8	-3.8
WMQ				pmax	pmax		
	comp=Z,67nm,4.9s						
SNAA	Sanae	93.69	183	P	P	09 45 17.4	-0.5
SNAA	Sanae	93.69	183	P	P	09 45 16.1	-1.7
SNAA				IAmb	IAmb	09 45 17.8	
	comp=Z,7.3nm,1.4s						
VNA3	Neumayer Olymp	94.34	181	P	P	09 45 20.0	-0.7
VNA2	Neumayer--Watz	94.61	182	P	P	09 45 21.7	-0.3
	baz=177,slow=5.0						
VNA1	Neumayer--Stat	94.91	181	P	P	09 45 22.7	-0.6
ARCES	ARCESS Array B	120.22	346	PKP	PKiKP	09 50 53.0	+1.4
	comp=Z,3.5nm,1.0s,baz=81,slow=2.3,SNR=18						
FINES	FINESS Array B	125.74	338	PKP	PKPdf	09 51 02.3	0.0
	comp=Z,2.8nm,0.9s,baz=57,slow=7.0,SNR=3.9						
TORD	Torodi Ar. Bea	166.25	266	PKP	PKPdf	09 52 09.4	+2.3
	comp=Z,0.3nm,0.5s,baz=69,slow=2.3,SNR=2.5						
TORD	Torodi Ar. Bea	166.25	266		PKPdf	09 52 03.2	-3.9

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*IDC **15** 09:36:21.0±1.4, 56°.14N×163°.84E, h0^{km}, mb3.6/6, mb1 3.8/7, mb1mx3.5/51, mbtmp3.6/7, ML2.2/1, MS2.8/3, Ms1 2.8/3, ms1mx2.4/46, Error ellipse: s-maj=41.4km s-min=23.5km az=168.0*

*KRSC **15** 09:36:20.5±1.5, 56°.02N×163°.73E, h6^{km}±32^{km}, ML4.0*

ISC 15 09:36:20.4±1.5**, 56°.12N**±0°.05×**163°.74E**±0°.04**, h0**^{km}±10^{km}**, n39,** σ**1^{s}.84**/47**, mb3.6**/6**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	0.52	280	*e*P	Pg	09 36 30.1	-0.3
KBG	Krutoberegovo	0.59	284	*e*P	Pg	09 36 31.6	-0.2
SMKR	Semkarok	1.34	291	*e*P	Pn	09 36 44.9	-1.6
SMKR				*e*S	Sg	09 37 04.3	+0.7
BDR	Baidarnaya	1.48	289	*e*P	Pn	09 36 47.3	-1.0
BDR				*e*S	Sn	09 37 08.3	-0.1
SRKR	Sorokina	1.53	292	*e*P	Pn	09 36 48.0	-1.0
BKI	Bering	1.56	125	*e*P	Pn	09 36 49.1	-0.3
BKI				*e*S	Sg	09 37 09.8	-0.8
CIRR	Tsirk	1.67	271	*e*P	Pn	09 36 51.4	+0.3
CIRR				*e*S	Sb	09 37 14.3	+0.5
LGNR	Loginova	1.71	270	*e*P	Pn	09 36 51.9	+0.2
BZGR	Bezymyannyi-Gr	1.72	265	*e*P	Pn	09 36 52.0	+0.4
KLY	Klyuchi	1.73	278	*e*P	Pn	09 36 49.6	-2.1
KLY				*e*S	Sn	09 37 11.1	-3.4
BZWR	Bezymyannyi-We	1.83	266	*e*P	Pn	09 36 53.4	+0.2
KIRR	Kirishev	1.91	266	*e*P	Pn	09 36 54.7	+0.3
KIRR				*e*S	Sn	09 37 20.1	+0.9
MKZ	Mys Kozlova	1.94	217	*e*P	Pn	09 36 54.1	-0.5
KPT	Kopyto	1.98	267	*e*P	Pn	09 36 55.6	+0.4
KMNR	Kamenistaya	2.00	261	*e*P	Pn	09 36 56.5	+0.9
TUMD	Tumrok D	2.10	245	*e*P	Pn	09 36 57.4	+0.5
TUMD				*e*S	Sn	09 37 24.8	+1.1
TUMR	Tumrok	2.20	249	*e*P	Pn	09 36 59.2	+0.9
ESO	Esso	2.83	268	*e*P	Pb	09 37 12.3	+0.5
SPN	Mys Shipunski	3.72	217	*e*P	Pn	09 37 19.5	+0.5
SPN				*e*S	Sn	09 38 00.9	-2.6
NLC	Nalytchevo	3.90	223	*e*S	Sn	09 38 07.7	-0.3
SDLR	Sedlovina	4.00	227	*e*P	Pn	09 37 24.0	+0.9
KRER	Koryakskii	4.04	228	*e*P	Pn	09 37 27.9	+4.3
SMAR	Somma	4.05	227	*e*P	Pn	09 37 25.7	+1.9
AVH	Avacha	4.07	227	*e*P	Pn	09 37 26.8	+2.8
UGLR	Uglovaya	4.08	226	*e*P	Pn	09 37 25.3	+1.2
KOK	Koryaka	4.10	228	*e*P	Pn	09 37 27.7	+3.4
GNL	Ganaly	4.13	236	*e*P	Pn	09 37 26.6	+1.8
DALK	Dalny	4.24	225	*e*P	Pn	09 37 27.1	+0.9
PET	Petropavlovsk	4.29	226	*e*P	Pn	09 37 29.6	+2.8
PETK	Petropavlovsk-	4.63	232	Pn	Pn	09 37 34.5	+2.9
	0.6nm,0.3s,baz=54,slow=13,SNR=3.7						
PETK				Sn	Sb	09 38 32.4	-6.2
	0.2nm,0.3s,baz=67,slow=15,SNR=1.9						
RUS	Russkaya	4.80	222	*e*P	Pn	09 37 34.4	+0.6
MA2	Magadan	7.74	302	LR	LR	09 41 15.6	
	comp=Z,49nm,18.7s,baz=108,slow=38						
SEY	Seymchan	8.93	325	LR	LR	09 41 52.5	
	comp=Z,39nm,19.9s,baz=146,slow=37						
TIXI	Tiksi	21.35	330	P	P	09 41 11.1	+2.4
	0.5nm,0.3s,baz=117,slow=14,SNR=3.8						
TIXI				LR	LR	09 50 17.3	
	comp=Z,37nm,18.1s,baz=265,slow=39						
ILAR	Eielson Array	25.20	50	P	P	09 41 46.5	-0.7
	0.8nm,0.8s,baz=253,slow=7.0,SNR=8.9						
ILAR				PcP	PcP	09 45 20.9	+0.3
	1.0nm,0.7s,baz=257,slow=4.7,SNR=8.6						
INK	Inuvik	30.18	41	P	P	09 42 32.5	+0.7
	0.9nm,0.6s,baz=283,slow=5.1,SNR=4.3						
MKAR	Makanchi Array	48.76	295	P	P	09 45 05.5	-1.1
	0.4nm,0.6s,baz=62,slow=6.8,SNR=3.3						
TXAR	Lajitas Array	67.56	71	P	P	09 47 19.1	+0.5
	0.2nm,0.5s,baz=294,slow=5.8,SNR=7.0						
BRTR	Keskin Array B	75.57	322	P	P	09 48 07.4	+0.6
	0.8nm,0.8s,baz=38,slow=7.3,SNR=2.2						

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*ANF **15** 09:45:30.4±0.3, 36°.50N×98°.67W, h0^{km}, ML5.8/16, Error ellipse: s-maj=3.8km s-min=3.1km az=16.0*

*IDC **15** 09:45:31.2±0.6, 36°.52N×98°.78W, h0^{km}, mb4.1/11, mb1 4.3/20, mb1mx4.1/48, mbtmp4.1/20, ML4.3/10, MS3.6/21, Ms1 3.6/21, ms1mx3.5/43, Error ellipse: s-maj=11.3km s-min=9.4km az=151.0*

*TUL **15** 09:45:31.3±1.6, 36°.47N±0°.02×98°.76W±0°.04, h5^{km}±5^{km}, ML4.6, mb4.4/40(NEIC), mb_Lg4.8/109(NEIC), Mwr4.3/55(NEIC), Error ellipse: s-maj=4.6km s-min=2.7km az=93.0*

*NEIC **15** 09:45:32.3±1.5, 36°.47N±0°.02×98°.73W±0°.04, h5^{km}±5^{km}, Error ellipse: s-maj=4.6km s-min=2.6km az=95.0*

*NEIC **15** 09:45:32.6, 36°.48N×98°.70W, h7^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.95; M$_{\theta\theta}$3.88; M$_{\phi\phi}$-2.93; M$_{r\theta}$-0.46; M$_{\theta\phi}$1.18; M$_{\phi r}$-0.59; Fault plane solution: M$_0$3.77000×10^{15} NP1:φ$_s$305.19000°, δ76.60000°, λ-4.66000°. NP2:φ$_s$36.27000°, δ85.46000°, λ-166.55000°. Principal axes: T 4.1392, Plg6.0000°, Azm170.0000°; N -0.8978, Plg76.0000°, Azm55.0000°; P -3.2414, Plg13.0000°, Azm261.0000°;*

ISC 15 09:45:30.8±1.0**, 36°.45N**±0°.02×**98°.70W**±0°.02**, h7**^{km}±7^{km}**, n483,** σ**1^{s}.21**/520**, mb4.0**/11**, MS3.8**/13**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
U32A	Winter Ranch,	0.25	255	Pg	Pg	09 45 35.9	0.0
U32A	Winter Ranch,	0.25	255	P	Pg	09 45 35.6	-0.3
	baz=66,SNR=1000						
U32A				S	Sg	09 45 39.2	-0.1
	baz=66						
OK032	Salt Plains WL	0.53	48		Pb	09 45 42.1	-0.4
OK032				Sg	Sb	09 45 49.7	-0.6
CROK	Carrier	0.58	84	Pg	Pb	09 45 43.4	+0.1
CROK				Sg	Sb	09 45 52.1	+0.3
KAN14	Manchester OK	0.78	49		Pb	09 45 46.6	-0.1
KAN14				Sg	Sb	09 45 58.2	+0.7
GC02	Grant County #	0.79	59	Pg	Pb	09 45 46.8	0.0
GC02				Sg	Sb	09 45 58.1	+0.4
KAN10	Anthony SW Sta	0.83	35	Pg	Pg	09 45 47.4	+0.6
KAN10				Sg	Sg	09 45 58.6	+1.0
KAN16	Harper SW Stat	0.93	33	Pg	Pg	09 45 49.1	+0.4
KAN16				Sg	Sg	09 46 01.6	+0.8
KAN05	Bluff City Nor	0.94	45		Pb	09 45 49.4	0.0
KAN05				Sg	Sb	09 46 02.2	+0.1
KAN17	Caldwell West	0.96	51		Pg	09 45 49.8	+0.5
KAN17				Sg	Sb	09 46 02.9	+0.2
KAN08	Anthony NE Sta	0.97	37		Pg	09 45 49.9	+0.4
KAN08				Sg	Sb	09 46 03.1	0.0
KAN12	Harper NE Stat	1.02	33		Pg	09 45 50.8	+0.4
KAN12				Sg	Sg	09 46 04.4	+0.8
KAN01	Argonia South	1.03	47		Pb	09 45 51.1	+0.1
KAN01				Sg	Sg	09 46 04.5	+0.4
KAN06	Argonia West S	1.05	40		Pg	09 45 51.3	+0.3
KAN06				Sg	Sg	09 46 05.2	+0.6
KAN09	Caldwell North	1.11	51		Pb	09 45 52.5	+0.2
KAN09				Sg	Sg	09 46 06.8	+0.3
KAN13	South Haven SW	1.13	60		Pg	09 45 53.0	+0.4
KAN13				Sg	Sb	09 46 07.9	+0.3
KS21	Milan North St	1.18	44		Pb	09 45 53.7	+0.1
BCOK	Bluff Creek, N	1.18	131	Pg	Pn	09 45 54.0	+0.2
BCOK				Sg	Sn	09 46 10.1	-0.1
OK029	Liberty Lake	1.20	122	Pg	Pg	09 45 54.2	+0.4
OK029				Sg	Sn	09 46 11.0	+0.5
KS20	Mayfield South	1.21	49		Pn	09 45 54.2	+0.1
KS20				Sg	Sn	09 46 10.6	-0.1
BLOK	Blackwell	1.23	75		Pg	09 45 54.9	+0.3
BLOK				Sg	Sn	09 46 11.8	+0.4
OK009	Oakdale Elemen	1.35	129		Pg	09 45 57.0	+0.3
OKCFA	Oklahoma City	1.44	135		Pg	09 45 58.5	0.0
OKCFA	Oklahoma City	1.44	135	P	Pg	09 45 58.5	0.0
	baz=315,SNR=403						
OKCFA				S	Sg	09 46 18.7	+1.5
	baz=315						
OK005	Luther M Schoo	1.45	122	Pg	Pg	09 45 59.2	+0.5
OKCSW	OKLAHOMA CITY	1.46	135		Pg	09 45 58.6	-0.2
OK031	S. Brethren Rd	1.58	108		Pb	09 46 00.6	+0.2
FNO	Franklin	1.59	138		Pg	09 46 00.9	-0.4
QUOK	Quay	1.63	99		Pb	09 46 01.6	+0.3
OK030	Cody Creek RV	1.63	108		Pb	09 46 01.4	+0.1
WMOK	Wichita Mounta	1.71	182	P	Pn	09 46 01.5	+0.5
	baz=0.7,SNR=1000						
WMOK				S	Sg	09 46 24.6	-1.0
	baz=0.7						
WMOK	Wichita Mounta	1.71	182	Pn	Pn	09 46 01.4	+0.4
WMOK	Wichita Mounta	1.71	182	P	Pn	09 46 01.4	+0.4
	baz=0.7,SNR=1000						
WMOK				S	Sg	09 46 24.8	-0.9
	baz=0.7						
T35A	Sooner Cattle	1.82	74	Pn	Pb	09 46 03.7	-0.7
T35A				IAmb_Lg		09 46 31.1	
	comp=Z,5µm,0.9s						
T35B	Sooner Cattle	1.82	74	P	Pb	09 46 04.1	-0.3
	baz=257,SNR=1000						
T35B				S	Sg	09 46 29.3	0.0
	baz=257						
OK011	Prague	1.89	120		Pb	09 46 05.3	-0.4
X34A	Smith Ranch, M	1.97	159	Pn	Pb	09 46 06.5	-0.5
R32A	Long Quarter,	1.97	360		Pn	09 46 05.8	+1.1
R32A	Long Quarter,	1.97	360	P	Pn	09 46 05.8	+1.1
	baz=181,SNR=623						
R32A				S	Sb	09 46 32.7	+0.8
	baz=181						
TUL1	Leonard	2.41	102	P	Pn	09 46 12.1	+1.4
	baz=284,SNR=582						
TUL1				S	Sb	09 46 43.6	-0.9
	baz=284						
TUL1	Leonard	2.41	102		Pn	09 46 11.6	+0.9
TUL1				IAmb_Lg		09 46 49.7	
	comp=Z,3µm,0.8s						
TUL1	Leonard	2.41	102	P	Pn	09 46 12.1	+1.4
	baz=284,SNR=453						
TUL1				S	Sb	09 46 43.5	-0.9
	baz=284						
CBKS	Cedar Bluff	2.50	341	P	Pn	09 46 12.8	+0.7
	baz=161,SNR=400						
CBKS				S	Sb	09 46 47.0	-0.2
	baz=161						
CBKS	Cedar Bluff	2.50	341	Pn	Pn	09 46 12.7	+0.7
CBKS	Cedar Bluff	2.50	341	P	Pn	09 46 12.8	+0.7
	baz=161,SNR=353						
CBKS				S	Sb	09 46 47.1	-0.2
	baz=161						
LOOK	Love County	2.75	153	Pn	Pn	09 46 16.7	+1.4
LOOK				IAmb_Lg		09 47 05.1	
	comp=Z,3µm,0.8s						
AMTX	Amarillo	2.89	238	P	Pn	09 46 18.7	+1.4
	baz=55						
AMTX	Amarillo	2.89	238	Pn	Pn	09 46 18.6	+1.3
AMTX	Amarillo	2.89	238	P	Pn	09 46 18.8	+1.4
	baz=55,SNR=197						
KSU1	Kansas State U	3.12	31	P	Pn	09 46 22.2	+1.7
	baz=214,SNR=258						
KSU1	Kansas State U	3.12	31	Pn	Pn	09 46 21.9	+1.4
KSU1	Kansas State U	3.12	31	P	Pn	09 46 22.1	+1.6
	baz=214,SNR=362						
X37A	Clayton	3.29	123	Pn	Pn	09 46 23.7	+1.0
X37A	Clayton	3.29	123	P	Pn	09 46 24.1	+1.4
	baz=305,SNR=366						
Z35A	Perchaven, San	3.33	159	Pn	Pn	09 46 24.3	+1.0
Z35A	Perchaven, San	3.33	159	P	Pn	09 46 24.9	+1.7
	baz=339,SNR=319						
U38A	Gravette	3.48	89		Pn	09 46 26.3	+0.9
U38A				IAmb_Lg		09 47 26.0	
	comp=Z,2µm,0.7s						
U38A	Gravette	3.48	89	P	Pn	09 46 26.8	+1.4
	baz=272,SNR=115						
HHAR	Hobbs	3.84	91		Pn	09 46 31.3	+0.9
HHAR				IAmb_Lg		09 47 39.2	
	comp=Z,2µm,0.9s						
HHAR	Hobbs	3.84	91	P	Pn	09 46 31.6	+1.2
	baz=274						
ABTX	Abilene, Hawle	3.89	192	Pn	Pn	09 46 32.0	+0.9
	baz=10,SNR=61						
ABTX	Abilene, Hawle	3.89	192		Pn	09 46 32.2	+1.1
ABTX				IAmb_Lg		09 47 38.0	
	comp=Z,1µm,0.7s						
ABTX	Abilene, Hawle	3.89	192	P	Pn	09 46 32.0	+0.9
	baz=10,SNR=45						
KSCO	Kaye Shedlock'	4.03	311	P	Pn	09 46 33.9	+0.7
	baz=128,SNR=39						
KSCO				Sn	Sn	09 47 19.8	-0.9
	baz=128						
KSCO	Kaye Shedlock'	4.03	311		Pn	09 46 33.5	+0.3
KSCO				IAmb_Lg		09 47 48.5	
	comp=Z,3µm,1.0s						
KSCO	Kaye Shedlock'	4.03	311	P	Pn	09 46 33.8	+0.7
	baz=128,SNR=100						
W39A	Magazine	4.18	106	P	Pn	09 46 36.3	+1.3
	baz=289,SNR=38						
W39A	Magazine	4.18	106		Pn	09 46 36.0	+0.9
W39A				IAmb_Lg		09 47 49.1	
	comp=Z,2µm,0.7s						
W39A	Magazine	4.18	106	P	Pn	09 46 36.3	+1.3
	baz=289,SNR=41						
W39A				S	Sn	09 47 25.9	+1.7
	baz=289						
N33B	J Bar K, Exete	4.39	12	P	Pn	09 46 37.8	-0.2
	baz=194						
N33B				S	Sn	09 47 30.1	+0.6
	baz=194						
N33A	J Bar K, Exete	4.40	12		Pn	09 46 37.5	-0.5
N33A				IAmb_Lg		09 48 01.8	
	comp=Z,2µm,0.7s						
Z38A	Mt. Pleasant	4.41	135		Pn	09 46 38.8	+0.7
Z38A				IAmb_Lg		09 47 54.7	
	comp=Z,2µm,0.9s						
Z38A	Mt. Pleasant	4.41	135	P	Pn	09 46 39.2	+1.1
	baz=317,SNR=35						
S39A	Bolivar	4.47	72		Pn	09 46 39.4	+0.3
S39A				IAmb_Lg		09 47 51.8	
	comp=Z,2µm,1.2s						
S39A	Bolivar	4.47	72	P	Pn	09 46 40.0	+0.9
	baz=256,SNR=193						
WHTX	Lake Whitney,	4.56	167	Pn	Pn	09 46 41.1	+0.8
	baz=347,SNR=63						
WHTX	Lake Whitney,	4.56	167		Pn	09 46 40.9	+0.7
WHTX				IAmb_Lg		09 48 07.7	
	comp=Z,2µm,1.2s						
WHTX	Lake Whitney,	4.56	167	P	Pn	09 46 41.1	+0.8
	baz=347,SNR=199						
MIAR	Mount Ida	4.59	113	P	Pn	09 46 41.7	+1.1
	baz=296,SNR=96						
MIAR				S	Sn	09 47 35.6	+1.4
	baz=296						
MIAR	Mount Ida	4.59	113	Pn	Pn	09 46 41.4	+0.8
MIAR				IAmb_Lg		09 48 10.4	
	comp=Z,2µm,0.8s						
MIAR	Mount Ida	4.59	113	P	Pn	09 46 41.7	+1.1
	baz=296,SNR=261						
T25A	Trinidad	4.64	280	P	Pn	09 46 41.9	+0.4
	baz=97,SNR=168						
T25A	Trinidad	4.64	280		Pn	09 46 41.4	-0.1
U40A	Yellville	4.71	89	Pn	Pn	09 46 43.0	+0.6
	baz=273,SNR=114						
U40A				Sn	Sn	09 47 36.9	-0.4
	baz=273						
U40A	Yellville	4.71	89		Pn	09 46 42.4	0.0
U40A				IAmb_Lg		09 48 01.8	
	comp=Z,2µm,0.9s						
U40A	Yellville	4.71	89	P	Pn	09 46 42.9	+0.5
	baz=273,SNR=119						
U40A				P	Pn	09 46 42.9	+0.5
	baz=273,SNR=119						
BGNE	Belgrade	4.97	5	P	Pn	09 46 46.2	+0.3
	baz=186,SNR=24						
BGNE	Belgrade	4.97	5		Pn	09 46 45.8	-0.2
BGNE	Belgrade	4.97	5	P	Pn	09 46 46.3	+0.4
	baz=186,SNR=55						
N35A	Tabor	5.01	28		Pn	09 46 46.9	+0.3
N35A	Tabor	5.01	28	P	Pn	09 46 47.1	+0.6
	baz=210,SNR=46						
237A	Washetta, Mont	5.04	151		Pn	09 46 47.3	+0.5
237A				IAmb_Lg		09 48 26.7	

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      comp=Z,2µm,0.7s
237A  Washetta, Mont    5.04 151  P        Pn       09 46 47.1 +0.3
      baz=332,SNR=50
P38A  Dawn              5.17  51           Pn       09 46 49.4 +0.8
P38A  Dawn              5.17  51  P        Pn       09 46 49.5 +1.0
      baz=234,SNR=118
X40A  Basin Creek Fa    5.17 110  P        Pn       09 46 49.9 +1.2
      baz=294,SNR=29
X40A  Basin Creek Fa    5.17 110           Pn       09 46 49.8 +1.2
X40A                              IAmb_Lg           09 48 23.7
      comp=Z,2µm,0.9s
X40A  Basin Creek Fa    5.17 110  P        Pn       09 46 49.4 +0.8
      baz=294,SNR=62
X40A                              P        Pn       09 46 49.4 +0.8
      baz=294,SNR=62
OGNE  Ogallala          5.20 331  P        Pn       09 46 50.4 +1.4
      baz=149,SNR=36
OGNE  Ogallala          5.20 331  Pn       Pn       09 46 49.6 +0.5
OGNE                              IAmb_Lg           09 48 27.1
      comp=Z,2µm,0.8s
OGNE  Ogallala          5.20 331  P        Pn       09 46 50.5 +1.4
      baz=149,SNR=32
MGMO  Mountain Grove    5.21  80           Pn       09 46 50.2 +1.0
MGMO                              IAmb_Lg           09 48 19.4
      comp=Z,1µm,0.7s
WHAR  Wooly Hollow      5.33 101           Pn       09 46 51.9 +1.1
WHAR                              IAmb_Lg           09 48 29.4
      comp=Z,2µm,0.8s
WLAR  White Oak Lake    5.34 119           Pn       09 46 51.7 +0.7
WLAR                              IAmb_Lg           09 48 35.5
      comp=Z,2µm,0.7s
FCAR  Ozark Folk Cen    5.35  94           Pn       09 46 51.8 +0.8
FCAR                              IAmb_Lg           09 48 32.0
      comp=Z,1µm,0.9s
W41B  Gary Mavity, V    5.39 102  P        Pn       09 46 52.4 +0.7
      baz=286,SNR=52
W41B                              S        Sn       09 47 53.3 -0.7
      baz=286
W41B  Gary Mavity, V    5.39 102  P        Pn       09 46 52.2 +0.5
      baz=286,SNR=111
R40A  Maddies Statio    5.44  68           Pn       09 46 52.6 +0.3
R40A  Maddies Statio    5.44  68  P        Pn       09 46 52.9 +0.6
      baz=252,SNR=148
SDCO  Great Sand Dun    5.59 285  P        Pn       09 46 55.6 +0.9
      baz=101,SNR=345
SDCO  Great Sand Dun    5.59 285           Pn       09 46 55.0 +0.4
SDCO                              IAmb_Lg           09 48 35.6
      comp=Z,2µm,1.1s
SDCO  Great Sand Dun    5.59 285  P        Pn       09 46 55.6 +0.9
      baz=101,SNR=180
Q24A  Divide            5.70 298  P        Pn       09 46 56.1 -0.1
      baz=114,SNR=22
Q24A                              Sn       Sn       09 48 01.3 -0.7
      baz=114
435B  Jarrell           5.72 170  P        Pn       09 46 56.5 +0.3
      baz=351,SNR=20
435B  Jarrell           5.72 170           Pn       09 46 56.5 +0.3
435B                              IAmb_Lg           09 48 46.8
      comp=Z,1µm,0.7s
435B  Jarrell           5.72 170  P        Pn       09 46 56.6 +0.3
      baz=351,SNR=75
NATX  Nacogdoches       5.75 143  P        Pn       09 46 56.4 -0.2
      baz=325,SNR=11
NATX  Nacogdoches       5.75 143           Pn       09 46 56.5  0.0
NATX                              IAmb_Lg           09 48 49.7
      comp=Z,1µm,1.1s
Z41A  Richland Creek    5.80 122  P        Pn       09 46 58.0 +0.8
      baz=305,SNR=14
Z41A  Richland Creek    5.80 122  P        Pn       09 46 57.9 +0.7
      baz=305,SNR=13
Z41A                              P        Pn       09 46 57.9 +0.7
      baz=305,SNR=13
L34A  Svendsen Farm,    5.80  17           Pn       09 46 56.2 -1.1
L34A  Svendsen Farm,    5.80  17  P        Pn       09 46 56.7 -0.6
      baz=199,SNR=14
JCT   Junction City     6.02 189  P        Pn       09 47 00.5 +0.1
      baz=8.0,SNR=48
JCT   Junction City     6.02 189           Pn       09 47 01.2 +0.8
JCT   Junction City     6.02 189  P        Pn       09 46 59.9 -0.5
      baz=8.0,SNR=146
P40A  Paris             6.09  58           Pn       09 47 00.8 -0.4
P40A                              IAmb_Lg           09 48 45.2
      comp=Z,1µm,0.8s
P40A  Paris             6.09  58  P        Pn       09 47 01.4 +0.2
      baz=242,SNR=53
N38A  Joes South For    6.09  43           Pn       09 47 01.2 -0.1
N38A  Joes South For    6.09  43  P        Pn       09 47 01.6 +0.3
      baz=227,SNR=63
LCAR  Lake Charles      6.11  91           Pn       09 47 02.9 +1.4
LCAR                              IAmb_Lg           09 48 48.0
      comp=Z,1µm,0.7s
LCAR  Lake Charles      6.11  91  P        Pn       09 47 02.2 +0.7
      baz=276,SNR=40
T42A  Van Buren         6.13  82           Pn       09 47 02.9 +1.1
T42A  Van Buren         6.13  82  P        Pn       09 47 03.4 +1.5
      baz=267,SNR=56
CCM   Cathedral Cave    6.16  73  P        Pn       09 47 02.6 +0.3
      baz=257
CCM   Cathedral Cave    6.16  73           Pn       09 47 02.3 +0.1
CCM                               IAmb_Lg           09 48 51.2
      comp=Z,1µm,0.8s
CCM   Cathedral Cave    6.16  73  P        Pn       09 47 02.5 +0.3
      baz=257,SNR=31
K31A  O'Neill           6.17 360           Pn       09 47 02.2 -0.2
K31A                              IAmb_Lg           09 49 00.6
      comp=Z,1µm,0.8s
K31A  O'Neill           6.17 360  P        Pn       09 47 02.7 +0.4
      baz=180,SNR=28
CCAR  Cane Creek        6.21 112           Pn       09 47 04.1 +1.2
CCAR                              IAmb_Lg           09 48 58.4
      comp=Z,2µm,0.9s
CCAR  Cane Creek        6.21 112  P        Pn       09 47 03.6 +0.8
      baz=296,SNR=26
ISCO  Idaho Springs     6.40 304  P        Pn       09 47 06.0 +0.3
      baz=120,SNR=48
ISCO  Idaho Springs     6.40 304           Pn       09 47 05.6 -0.1
ISCO                              IAmb_Lg           09 48 58.8
      comp=Z,802nm,0.7s
ISCO  Idaho Springs     6.40 304  P        Pn       09 47 05.7 -0.1
      baz=120,SNR=110
ANMO  Albuquerque       6.49 259  Pn       Pn       09 47 08.0 +1.1
      comp=Z,5.8nm,0.3s,baz=86,slow=14,SNR=120
ANMO                              Pg       Pb       09 47 26.9 +2.8
      comp=Z,12nm,0.3s,baz=78,slow=17,SNR=24
ANMO                              Lg       Lg       09 48 51.1
      comp=Z,23nm,0.3s,baz=344,slow=17,SNR=2.9
ANMO                              LR       LR       09 49 42.3
      comp=Z,825nm,18.2s,baz=76,slow=39
ANMO  Albuquerque       6.49 259  P        Pn       09 47 07.8 +0.8
      baz=74
ANMO  Albuquerque       6.49 259           Pn       09 47 06.8 -0.1
ANMO  Albuquerque       6.49 259  P        Pn       09 47 07.7 +0.8
      baz=74,SNR=95
HBAR  Harrisburg        6.58  95           Pn       09 47 07.7 -0.3
S22A  4UR Ranch, Cre    6.63 284  P        Pn       09 47 10.1 +1.1
      baz=99,SNR=47
PBMO  Poplar Bluff      6.66  85           Pn       09 47 09.5 +0.4
PBMO                              IAmb_Lg           09 49 08.2
      comp=Z,1µm,0.7s
PBMO  Poplar Bluff      6.66  85  P        Pn       09 47 10.8 +1.7
      baz=270,SNR=8.9
FVM   French Village    6.78  74           Pn       09 47 10.8 +0.1
FVM                               IAmb_Lg           09 49 03.6
      comp=Z,1µm,1.1s
FVM   French Village    6.78  74  P        Pn       09 47 10.8 +0.1
      baz=260,SNR=12
BNM   Barren Site       6.88 253           Pn       09 47 12.4 +0.1
HKT   Hockley           6.91 159           Pn       09 47 13.1 +0.7
SCIA  State Center      6.92  36  P        Pn       09 47 14.2 +1.6
      baz=220
SCIA  State Center      6.92  36           Pn       09 47 13.0 +0.3
SCIA                              IAmb_Lg           09 49 18.4
      comp=Z,1µm,0.8s
GNAR  Gosnell           7.03  91           Pn       09 47 16.0 +1.8
SLM   Saint Louis       7.07  69           Pn       09 47 15.6 +0.9
SLM                               IAmb_Lg           09 49 12.2
      comp=Z,1µm,0.8s
143A  Socs Landing,     7.08 120           Pn       09 47 16.8 +2.0
143A                              IAmb_Lg           09 49 27.3
      comp=Z,1µm,0.8s
SMCO  Snowmass          7.10 295           Pn       09 47 16.0 +0.6
Y22D  IRIS PASSCAL I    7.13 253  P        Pn       09 47 16.8 +1.1
      baz=68,SNR=15
Y22D  IRIS PASSCAL I    7.13 253           Pn       09 47 16.1 +0.4
HDBT  Hernando Brdge    7.14  98  IAmb_Lg           09 49 40.0
      comp=Z,1µm,0.7s
PEBM  Pemiscott Bayo    7.14  90           Pn       09 47 16.4 +0.7
PHWY  Pilot Hill        7.16 315  IAmb_Lg           09 49 17.9
      comp=Z,1µm,0.9s
N23A  Red Feather La    7.20 310  P        Pn       09 47 17.6 +0.8
      baz=126,SNR=34
PARMO Parma             7.20  86           Pn       09 47 18.9 +2.4
MET   Memphis--Engin    7.25  98           Pn       09 47 18.8 +1.7
MET                               IAmb_Lg           09 49 42.2
      comp=Z,1µm,0.9s
MNTX  Cornudas Mount    7.29 231  P        Pn       09 47 17.8  0.0
      baz=47,SNR=90
MNTX  Cornudas Mount    7.29 231           Pn       09 47 18.3 +0.5
MNTX                              IAmb_Lg           09 49 21.0
      comp=Z,876nm,0.7s
MNTX  Cornudas Mount    7.29 231  P        Pn       09 47 17.9 +0.1
      baz=47,SNR=115
441A  DeRidder          7.30 139           Pn       09 47 18.3 +0.3
441A  DeRidder          7.30 139  P        Pn       09 47 18.5 +0.6
      baz=322,SNR=12
PENMO Penman            7.31  87  IAmb_Lg           09 49 32.4
      comp=Z,1µm,0.7s
342A  Flagon Creek P    7.32 132           Pn       09 47 18.5 +0.4
HENM  Henderson Moun    7.43  85           Pn       09 47 21.4 +1.7
LNXT  Lenox             7.45  90           Pn       09 47 21.2 +1.4
ECSD  EROS Data Cent    7.45  12  P        Pn       09 47 18.5 -1.5
      baz=193,SNR=73
ECSD                              S        Sn       09 48 41.4 -3.3
      baz=193
ECSD  EROS Data Cent    7.45  12           Pn       09 47 18.7 -1.3
ECSD  EROS Data Cent    7.45  12  P        Pn       09 47 18.5 -1.5
      baz=193,SNR=100
N41A  Harden Midland    7.47  53           Pn       09 47 20.4 +0.2
HALT  Halls             7.59  91  IAmb_Lg           09 49 30.7
      comp=Z,1µm,0.8s
735A  Kenedy            7.61 174           Pn       09 47 22.4 +0.3
735A                              IAmb_Lg           09 49 55.1
      comp=Z,851nm,0.9s
HICK  Hickman           7.63  86           Pn       09 47 22.8 +0.4
S44A  Carbondale        7.65  78           Pn       09 47 23.3 +0.6
S44A                              IAmb_Lg           09 49 40.0
      comp=Z,887nm,0.8s
S44A  Carbondale        7.65  78  P        Pn       09 47 23.3 +0.6
      baz=264,SNR=36
SIUC  Southern Illin    7.68  78           Pn       09 47 23.8 +0.7
SIUC                              IAmb_Lg           09 49 37.6
      comp=Z,779nm,0.7s
K38A  Parkersburg       7.70  35           Pn       09 47 23.4  0.0
W45A  Hickory Valley    7.83  97           Pn       09 47 26.3 +1.0
W45A                              IAmb_Lg           09 49 48.1
      comp=Z,1µm,0.7s
W45A  Hickory Valley    7.83  97  P        Pn       09 47 25.4 +0.2
      baz=282,SNR=12
MVCO  Mesa Verde        7.90 278  P        Pn       09 47 28.6 +2.3
      baz=92,SNR=21
MVCO  Mesa Verde        7.90 278           Pn       09 47 27.2 +0.9
P43A  Skaggs, Pawnee    7.91  63  Pn       Pn       09 47 26.5 +0.3
P43A  Skaggs, Pawnee    7.91  63  P        Pn       09 47 26.3 +0.1
      baz=249,SNR=48
Y45A  Yeager Farm, C    7.93 106           Pn       09 47 26.4 -0.1
Y45A                              IAmb_Lg           09 49 51.1
      comp=Z,820nm,0.8s
Y45A  Yeager Farm, C    7.93 106  P        Pn       09 47 26.8 +0.3
      baz=292,SNR=11
UTMT  University of     7.93  88           Pn       09 47 26.6  0.0
VBMS  Vicksburg         7.97 120  P        Pn       09 47 28.6 +1.6
      baz=304
SUSD  Miller            7.99 359  P        Pn       09 47 26.8 -0.6
      baz=179,SNR=12
SUSD                              S        Sn       09 48 54.8 -3.2
      baz=179
SUSD  Miller            7.99 359           Pn       09 47 25.9 -1.5
SUSD  Miller            7.99 359  P        Pn       09 47 26.7 -0.7
      baz=179,SNR=19
Q44A  Meyer Farm, Va    8.06  69           Pn       09 47 28.1 -0.2
Q44A                              IAmb_Lg           09 49 57.9
      comp=Z,1µm,0.8s
L40A  Anamosa           8.07  44           Pn       09 47 28.4 +0.1
L40A  Anamosa           8.07  44  P        Pn       09 47 28.4 +0.1
      baz=229,SNR=13
T45A  Paducah           8.09  83           Pn       09 47 29.6 +0.8
833A  Chaparral WMA,    8.12 184  P        Pn       09 47 29.5 +0.3
      baz=3.6,SNR=14
833A  Chaparral WMA,    8.12 184  P        Pn       09 47 29.0 -0.2
      baz=3.6,SNR=15
TXAR  Lajitas Array     8.23 212  Pn       Pn       09 47 31.0 +0.2
      comp=Z,7.3nm,0.3s,baz=37,slow=11,SNR=470
TXAR                              Lg       Lg       09 49 45.9
      comp=Z,33nm,0.3s,baz=36,slow=25,SNR=2.6
TXAR                              LR       LR       09 51 23.6
      comp=Z,147nm,21.7s,baz=0.0,slow=43
TXAR  Lajitas Array     8.23 212           Pn       09 47 30.3 -0.5
TX31  Lajitas Ar. Si    8.23 212  Pn       Pn       09 47 30.6 -0.2
TX31  Lajitas Ar. Si    8.23 212  P        Pn       09 47 30.2 -0.5
      baz=29,SNR=178
TX32  Lajitas Array     8.23 212           Pn       09 47 30.6 -0.2
O20A  White River Ci    8.36 299  P        Pn       09 47 34.0 +1.4
      baz=113,SNR=7.5
O20A  White River Ci    8.36 299           Pn       09 47 32.3 -0.3
O20A                              IAmb_Lg           09 50 15.3
      comp=Z,678nm,1.3s
HDIL  Hopedale          8.44  58  P        Pn       09 47 33.6 +0.1
      baz=244,SNR=145
HDIL                              S        Sn       09 49 06.3 -2.6
      baz=244
HDIL  Hopedale          8.44  58  Pn       Pn       09 47 33.5 +0.1
RWWY  Rawlins           8.44 311           Pn       09 47 34.2 +0.4
121A  Cookes Peak, D    8.46 245  P        Pn       09 47 33.9  0.0
      baz=60,SNR=17
121A  Cookes Peak, D    8.46 245  Pn       Pn       09 47 33.8 -0.1
I37A  Lemond, Waseca    8.57  27           Pn       09 47 34.5 -0.8
I37A                              IAmb_Lg           09 50 22.2
      comp=Z,769nm,0.8s
K22A  Casper            8.65 318  P        Pn       09 47 37.1 +0.5
      baz=133,SNR=19
K22A  Casper            8.65 318           Pn       09 47 36.9 +0.3
K22A                              IAmb_Lg           09 50 17.8
      comp=Z,662nm,0.8s
RSSD  Black Hills       8.68 334  P        Pn       09 47 37.6 +0.6
      baz=150
RSSD  Black Hills       8.68 334           Pn       09 47 36.7 -0.3
RSSD                              IAmb_Lg           09 50 26.8
      comp=Z,539nm,0.8s
RSSD  Black Hills       8.68 334  P        Pn       09 47 38.0 +1.0
      baz=150,SNR=13
OLIL  Olney             8.72  72           Pn       09 47 37.4 +0.1
PLAL  Pickwick Lake     8.76  96           Pn       09 47 38.9 +0.9
WVT   Waverly           8.78  89  P        Pn       09 47 38.5 +0.3
      baz=275
WVT   Waverly           8.78  89           Pn       09 47 38.2  0.0
WVT   Waverly           8.78  89  P        Pn       09 47 38.5 +0.3
      baz=275,SNR=19
146A  Union             8.81 113           Pn       09 47 39.0 +0.4
146A                              IAmb_Lg           09 50 36.0
      comp=Z,569nm,1.0s
O44A  Mansfield         8.85  62           Pn       09 47 39.4 +0.3
O44A  Mansfield         8.85  62  P        Pn       09 47 39.2  0.0
      baz=249,SNR=23
L42A  Oliver, Polo      8.94  49           Pn       09 47 40.5 +0.2
L42A                              IAmb_Lg           09 50 29.8
      comp=Z,730nm,0.8s
W18A  Petrified Fore    9.07 265  P        Pn       09 47 44.2 +1.9
      baz=78,SNR=8.8
W18A  Petrified Fore    9.07 265           Pn       09 47 43.6 +1.3
JFWS  Jewell Farm       9.17  43  P        Pn       09 47 44.0 +0.5
      baz=228,SNR=22
JFWS                              S        Sn       09 49 22.0 -5.0
      baz=228
JFWS  Jewell Farm       9.17  43  Pn       Pn       09 47 43.9 +0.3
JFWS                              IAmb_Lg           09 50 32.7
      comp=Z,779nm,0.8s
JFWS  Jewell Farm       9.17  43  P        Pn       09 47 43.3 -0.3
      baz=228,SNR=48
346A  Big Creek Wild    9.18 121           Pn       09 47 45.0 +1.4
Z47A  Carrollton        9.32 107  Pn       Pn       09 47 46.9 +1.4
T47A  Sharon Grove      9.32  83           Pn       09 47 46.2 +0.6
T47A  Sharon Grove      9.32  83  P        Pn       09 47 45.8 +0.2
      baz=270,SNR=27
RDMU  Red Mountain      9.46 299           Pn       09 47 48.8 +1.0
F33A  5 Mile Ranch,     9.56  10  IAmb_Lg           09 50 39.9
      comp=Z,640nm,1.2s
F33A  5 Mile Ranch,     9.56  10  P        Pn       09 47 47.8 -1.0
      baz=192,SNR=11
P46A  Rosedale          9.60  67           Pn       09 47 50.2 +0.7
V48A  Smith Brothers    9.64  91           Pn       09 47 50.6 +0.7
P18A  Preston Nutter    9.65 293           Pn       09 47 51.8 +1.5
M44A  Midewin, Midew    9.66  56           Pn       09 47 49.8 -0.4
I40A  Norwalk           9.67  37           Pn       09 47 49.7 -0.7
I40A  Norwalk           9.67  37  P        Pn       09 47 50.8 +0.5
      baz=223,SNR=22
X48A  Hartselle         9.71  98  Pn       Pn       09 47 50.9 -0.1
SPMN  Marine on St.     9.84  25  P        Pn       09 47 51.3 -1.3
      baz=209,SNR=25
SPMN                              S        Sn       09 49 39.2 -4.1
      baz=209
SPMN  Marine on St.     9.84  25  Pn       Pn       09 47 51.0 -1.7
SFIN  Lafayette         9.91  63  P        Pn       09 47 55.3 +1.6
      baz=250,SNR=5.5
P17A  Butcher Ranch,    9.98 291           Pn       09 47 55.2 +0.5
CLTN  Cedars of Leba    9.99  88  Pn       Pn       09 47 55.3 +0.5
WCI   Wyandotte Cave   10.04  76  P        Pn       09 47 56.3 +0.9
      baz=264
WCI   Wyandotte Cave   10.04  76           Pn       09 47 55.9 +0.5
WCI   Wyandotte Cave   10.04  76  P        Pn       09 47 55.4  0.0
      baz=264,SNR=29
L44A  Lake County Fo   10.13  52  P        Pn       09 47 56.6  0.0
      baz=239,SNR=10
L44A                              S        Sn       09 49 45.8 -4.6
      baz=239
L44A  Lake County Fo   10.13  52           Pn       09 47 56.1 -0.4
319A  Douglas          10.14 243           Pn       09 47 57.4 +0.4
K43A  Burlington       10.15  49           Pn       09 47 57.1 +0.2
E28A  Huff             10.23 352  Pn       Pn       09 47 56.4 -1.7
E28A  Huff             10.23 352  P        Pn       09 47 57.0 -1.1
      baz=171,SNR=11
WUAZ  Wupatki          10.31 269  P        Pn       09 48 01.6 +2.3
      baz=81,SNR=29
WUAZ  Wupatki          10.31 269  Pn       Pn       09 48 01.4 +2.0
Y49A  Blount Mountai   10.38 101           Pn       09 48 01.6 +1.4
U49A  Red Boiling Sp   10.40  86           Pn       09 48 01.5 +1.0
SWET  Sewanee          10.44  93           Pn       09 48 02.0 +1.1
BW06  Boulder Array    10.48 310  P        Pn       09 48 02.6 +0.9
      baz=124,SNR=19
BW06  Boulder Array    10.48 310           Pn       09 48 01.4 -0.4
PD31  Pinedale Array   10.48 310           Pn       09 48 01.5 -0.3
PDAR  Pinedale Array   10.48 310  Pn       Pn       09 48 01.4 -0.4
      comp=Z,1.9nm,0.3s,baz=118,slow=14,SNR=50
PDAR                              Pg                09 48 44.6
      comp=Z,4.9nm,0.3s,baz=103,slow=16,SNR=5.3
PDAR                              Lg       Lg       09 50 57.8
      comp=Z,19nm,0.3s,baz=126,slow=30,SNR=12
PDAR  Pinedale Array   10.48 310           Pn       09 48 01.1 -0.6
I42A  Draeger Farm,    10.55  42           Pn       09 48 02.0 -0.4
I42A  Draeger Farm,    10.55  42  P        Pn       09 48 02.2 -0.1
      baz=229,SNR=39
MPU   Maple Canyon     10.78 293           Pn       09 48 05.3 -0.5
TUC   Tucson           10.80 251           Pn       09 48 07.0 +1.0
JLU   Jordanelle       10.82 296           Pn       09 48 07.7 +1.4
FPAL  Fort Paine       10.84  96           Pn       09 48 07.5 +1.1
P48A  Milroy           10.90  70           Pn       09 48 05.6 -1.6
G40A  Rib Lake         10.91  33           Pn       09 48 05.5 -1.8
G40A  Rib Lake         10.91  33  P        Pn       09 48 06.7 -0.6
      baz=219,SNR=14
R49A  Shelbyville      10.92  76           Pn       09 48 07.5  0.0
R49A  Shelbyville      10.92  76  P        Pn       09 48 08.1 +0.6
      baz=265,SNR=10
R49A                              P        Pn       09 48 08.1 +0.6
      baz=265,SNR=10
PKCU  Pink Cliffs      10.94 279           Pn       09 48 09.5 +1.4
U15A  North Rim        10.95 274           Pn       09 48 09.8 +1.5
L46A  Eue Claire       11.11  56           Pn       09 48 10.0  0.0
HPIG                   11.18 214           Pn       09 48 10.4 -0.9
250A  Grady            11.21 110           Pn       09 48 11.5 -0.1
250A  Grady            11.21 110  P        Pn       09 48 10.7 -0.8
      baz=297,SNR=16
X51A  Calhoun          11.44  95           Pn       09 48 14.8 +0.3
AHID  Auburn Hatcher   11.46 307           Pn       09 48 15.0  0.0
P49A  Miami Univ. Ec   11.46  70  P        Pn       09 48 13.4 -1.5
      baz=259,SNR=18
P49A  Miami Univ. Ec   11.46  70  Pn       Pn       09 48 13.3 -1.5
P49A  Miami Univ. Ec   11.46  70  P        Pn       09 48 13.3 -1.5
      baz=259,SNR=11
E38A  The Farm, Brul   11.47  26           Pn       09 48 13.2 -1.8
CPCT  Cooper Cave      11.54  91           Pn       09 48 16.6 +0.6
Z51A  Franklin         11.54 102           Pn       09 48 15.2 -0.8
H43A  Windswept, Lux   11.55  43           Pn       09 48 14.4 -1.6
H43A  Windswept, Lux   11.55  43  P        Pn       09 48 14.4 -1.6
      baz=230,SNR=20
R50A  Paris            11.58  77           Pn       09 48 15.8 -0.7
LOHW  Long Hollow      11.59 312           Pn       09 48 16.9  0.0
SNOW  Snow King Moun   11.60 311           Pn       09 48 17.7 +0.7
REDW  Red Top Meadow   11.61 310           Pn       09 48 16.0 -1.1
V51A  Loudon           11.62  89           Pn       09 48 17.9 +0.8
V51A  Loudon           11.62  89  P        Pn       09 48 18.0 +0.8
      baz=278,SNR=46
LAO   LASA Array       11.68 334  P        Pn       09 48 16.9 -0.9
      baz=149,SNR=22
LAO   LASA Array       11.68 334           Pn       09 48 16.5 -1.4
LAO   LASA Array       11.68 334  P        Pn       09 48 16.9 -0.9
      baz=149,SNR=7.7
LCMT  Little Creek M   11.69 277           Pn       09 48 19.1 +1.0
TPAW  Teton Pass       11.73 311           Pn       09 48 18.7 -0.2
MOOW  Moose Ponds      11.75 312           Pn       09 48 18.2 -0.8
RLMT  Red Lodge        11.79 321  P        Pn       09 48 19.6  0.0
      baz=134,SNR=5.7
RLMT  Red Lodge        11.79 321           Pn       09 48 19.1 -0.5
FXWY  Fox Creek        11.86 311  Pn       Pn       09 48 20.3 -0.2
O49A  Covington        11.88  67           Pn       09 48 19.2 -1.5
O49A  Covington        11.88  67  P        Pn       09 48 19.1 -1.5
      baz=256,SNR=27
O49A                              P        Pn       09 48 19.1 -1.5
      baz=256,SNR=27
FLWY  Flagg Ranch      11.92 313           Pn       09 48 21.6 +0.3
Y14A  Wickenburg       11.97 262           Pn       09 48 23.8 +1.8
COWI  Conover          12.02  34           Pn       09 48 22.0 -0.5
AGMN  Agassiz Nation   12.03   9  P        Pn       09 48 19.0 -3.6
      baz=191,SNR=13
W52A  Murphy           12.07  92           Pn       09 48 24.2 +0.8
TKL   Tuckaleechee C   12.11  89  Pn       Pn       09 48 23.9 +0.1
      comp=Z,7.0nm,0.3s,baz=230,slow=9.7,SNR=69
TKL                               Lg       Lg       09 51 45.2
      comp=Z,13nm,0.3s,baz=354,slow=14,SNR=9.1
TKL   Tuckaleechee C   12.11  89           Pn       09 48 24.1 +0.3
TKL   Tuckaleechee C   12.11  89  P        Pn       09 48 23.8  0.0
      baz=278,SNR=17
S51A  Beattyville      12.13  80           Pn       09 48 23.6 -0.5
S51A  Beattyville      12.13  80  P        Pn       09 48 23.9 -0.1
      baz=269,SNR=37
S51A                              P        Pn       09 48 23.9 -0.1
      baz=269,SNR=37
I45A  Fountain         12.16  48           Pn       09 48 24.0 -0.5
N49A  Columbus Grove   12.19  64           Pn       09 48 22.9 -2.0
TZTN  Tazewell         12.20  85  P        Pn       09 48 26.2 +1.2
      baz=274,SNR=11
TZTN  Tazewell         12.20  85           Pn       09 48 25.7 +0.8
V52A  Sevierville      12.23  88  Pn       Pn       09 48 25.1 -0.2
V52A  Sevierville      12.23  88  P        Pn       09 48 25.3 -0.1
      baz=277,SNR=9.7
F42A  Maple Grove Fa   12.24  37           Pn       09 48 23.6 -1.9
Y52A  Lilburn          12.25  98           Pn       09 48 25.2 -0.5
L48A  N Adams          12.35  59  Pn       Pn       09 48 26.1 -1.0
L48A  N Adams          12.35  59  P        Pn       09 48 26.1 -1.0
      baz=248,SNR=11
L48A                              P        Pn       09 48 26.1 -1.0
      baz=248,SNR=11
Q51A  Peebles          12.43  73           Pn       09 48 26.7 -1.4
352A  Blakely          12.46 109           Pn       09 48 27.6 -1.0
GCMT  Greycliff        12.46 322  Pn       Pn       09 48 28.7  0.0
J47A  Sunmer           12.63  53           Pn       09 48 29.8 -1.1
SPR3  Spring Creek 3   12.64 286           Pn       09 48 29.9 -1.4
EYMN  Ely              12.66  23  P        Pn       09 48 27.5 -3.9
      baz=208,SNR=15
EYMN                              S        Sn       09 50 44.5 -8.1
      baz=208
DGMT  Dagmar           12.68 343  P        Pn       09 48 29.7 -1.8
      baz=160,SNR=28
DGMT  Dagmar           12.68 343           Pn       09 48 29.3 -2.3
DGMT  Dagmar           12.68 343  P        Pn       09 48 30.0 -1.6
      baz=160,SNR=14
P51A  Williamsport     12.71  71           Pn       09 48 30.3 -1.6
GOGA  Godfrey          12.86  99  P        Pn       09 48 34.4 +0.4
      baz=288
GOGA  Godfrey          12.86  99           Pn       09 48 33.7 -0.3
V53A  Saluda           12.88  89           Pn       09 48 34.2 -0.2
ACSO  Alum Creek Sta   12.90  68  P        Pn       09 48 33.9 -0.7
      baz=258,SNR=19
ACSO  Alum Creek Sta   12.90  68           Pn       09 48 32.4 -2.2
D41A  Chassel          13.01  32           Pn       09 48 34.0 -2.0
AAM   Ann Arbor        13.02  59  P        Pn       09 48 34.9 -1.3
      baz=248,SNR=19
AAM   Ann Arbor        13.02  59  Pn       Pn       09 48 34.4 -1.8
G45A  Suttons Bay      13.08  45  Pn       Pn       09 48 35.3 -1.7
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M50A	Fremont	13.15	63		Pn	09 48 36.5	-1.5
E43A	Lone Tree Farm	13.23	38		Pn	09 48 37.4	-1.7
E43A	Lone Tree Farm	13.23	38	P	Pn	09 48 37.0	-2.1
	baz=226,SNR=21						
Q52A	Bidwell	13.25	74		Pn	09 48 37.8	-1.6
Q52A	Bidwell	13.25	74	P	Pn	09 48 38.1	-1.2
	baz=264,SNR=13						
Q52A				P	Pn	09 48 38.1	-1.2
	baz=264,SNR=13						
154A	Montrose	13.41	102		Pn	09 48 41.0	-0.5
P52A	Corning	13.44	71	P	Pn	09 48 40.7	-1.2
	baz=262,SNR=18						
P52A	Corning	13.44	71		Pn	09 48 40.6	-1.4
R53A	Hurricane	13.45	77		Pn	09 48 41.8	-0.3
R53A	Hurricane	13.45	77	P	Pn	09 48 41.4	-0.7
	baz=267,SNR=7.2						
R53A				P	Pn	09 48 41.4	-0.7
	baz=267,SNR=7.2						
N51A	Ashland	13.51	66		Pn	09 48 41.5	-1.4
GLMI	Grayling	13.56	48	P	Pn	09 48 41.4	-2.2
	baz=237,SNR=18						
GLMI	Grayling	13.56	48		Pn	09 48 40.6	-3.0
U54A	Nelsons Funny	13.59	85		Pn	09 48 43.3	-0.7
HODGE	Hodges	13.60	95		Pn	09 48 44.9	+0.7
ELK	Elko	13.63	293	Lg	Lg	09 52 38.7	
	comp=Z,0.1nm,0.3s,baz=185,slow=12,SNR=2.3						
ELK				LR	LR	09 53 59.5	
	comp=Z,256nm,18.8s,baz=96,slow=38						
O52A	Adamsville	13.74	69		Pn	09 48 45.9	-0.2
DLMT	Dillon	13.76	315		Pn	09 48 48.6	+2.1
K50A	Casco	13.90	58		Pn	09 48 46.4	-1.8
S54A	Dingess, Beckl	13.94	79	Pn	Pn	09 48 47.3	-1.6
S54A	Dingess, Beckl	13.94	79	P	Pn	09 48 47.6	-1.3
	baz=270,SNR=15						
S54A				P	Pn	09 48 47.6	-1.3
	baz=270,SNR=15						
ULM	Lac du Bonnet	13.95	8	Pn	Pn	09 48 43.4	-5.5
	comp=Z,2.3nm,0.3s,baz=188,slow=12,SNR=18						
ULM				Lg	Lg	09 52 43.9	
	comp=Z,3.1nm,0.3s,baz=99,slow=19,SNR=2.1						
ULM				LR	LR	09 53 50.1	
	comp=Z,151nm,19.7s,baz=194,slow=36						
HLID	Hailey	13.97	305		Pn	09 48 50.0	+0.6
P53A	Whipple	13.99	72		Pn	09 48 47.6	-1.8
V55A	Taylorsville	14.14	87		Pn	09 48 49.9	-1.6
EGMT	Eagleton	14.16	328	P	Pn	09 48 51.6	-0.1
	baz=141						
EGMT	Eagleton	14.16	328		Pn	09 48 50.1	-1.7
KMSC	Kings Mountain	14.16	90	P	Pn	09 48 51.6	-0.2
	baz=280,SNR=11						
KMSC	Kings Mountain	14.16	90		Pn	09 48 51.6	-0.2
O53A	New Philadelph	14.24	69	P	Pn	09 48 51.3	-1.5
	baz=260,SNR=6.2						
O53A	New Philadelph	14.24	69		Pn	09 48 51.9	-0.9
JSC	Jenkinsville	14.39	93		Pn	09 48 54.7	-0.3
M52A	Chesterland	14.41	64		Pn	09 48 53.1	-2.1
N53A	Lisbon	14.62	67		Pn	09 48 54.9	-3.1
FURC	Furnace Creek,	14.62	275	P	P	09 49 01.8	-2.7
	baz=85,SNR=5.3						
BLA	Blacksburg	14.66	82	P	Pn	09 48 58.4	-0.3
	baz=273,SNR=12						
BLA	Blacksburg	14.66	82		Pn	09 48 58.4	-0.3
U56A	King	14.76	85		Pn	09 49 00.2	+0.3
PFO	Pinyon Flats O	14.83	264	Lg	Lg	09 53 18.1	
	comp=Z,0.1nm,0.3s,baz=190,slow=16,SNR=3.8						
O54A	Avella	14.86	70		Pn	09 48 59.8	-1.5
M53A	WI Miller and	14.88	65	P	Pn	09 49 00.3	-1.2
	baz=256						
M53A	WI Miller and	14.88	65		Pn	09 49 00.4	-1.2
R55A	Marlinton	14.89	77		Pn	09 49 00.1	-1.7
R55A	Marlinton	14.89	77	P	Pn	09 48 59.7	-2.1
	baz=269,SNR=9.6						
R55A				P	Pn	09 48 59.7	-2.1
	baz=269,SNR=9.6						
LCH	Last Change Ra	15.20	279		Pn	09 49 04.8	-1.2
LCH				IAmb	IAmb	09 49 14.3	
	comp=Z,12nm,1.1s						
W57A	Gilead	15.24	89		Pn	09 49 06.4	0.0
BAR	Barrett	15.28	261		Pn	09 49 07.2	+0.2
BAR				IAmb	IAmb	09 49 16.4	
	comp=Z,20nm,1.1s						
N54A	Moraine State	15.28	67	P	Pn	09 49 03.4	-3.6
	baz=259,SNR=6.9						
MSO	Missoula	15.38	317	P	P	09 49 15.4	+2.3
	baz=127						
MSO	Missoula	15.38	317		Pn	09 49 07.4	-1.0
M54A	Oil Creek Stat	15.63	65	P	Pn	09 49 11.5	-0.1
	baz=258						
M54A	Oil Creek Stat	15.63	65		Pn	09 49 10.7	-0.9
NVAR	Mina Array Bea	15.70	283	Pn	P	09 49 15.4	-1.4
	comp=Z,0.1nm,0.3s,baz=106,slow=9.8,SNR=9.5						
NVAR				LR	LR	09 55 49.6	
	comp=Z,224nm,19.2s,baz=88,slow=40						
ISA	Isabella, Lake	16.02	273		Pn	09 49 14.7	-1.9
BMO	Blue Mountains	16.40	307		Pn	09 49 19.8	-1.8
SSPA	Standing Stone	16.80	69	P	Pn	09 49 24.2	-2.3
	baz=262						
SSPA	Standing Stone	16.80	69	Pn	Pn	09 49 24.4	-2.2
SSPA				IAmb	IAmb	09 49 25.7	
	comp=Z,38nm,1.4s						
SADO	Sadowa	16.99	55	Pn	Pn	09 49 26.4	-2.5
	comp=Z,1.1nm,0.3s,baz=269,slow=14,SNR=3.9						
SADO				Lg	Lg	09 54 15.9	
	comp=Z,1.9nm,0.3s,baz=315,slow=1.4,SNR=3.1						
SADO				LR	LR	09 55 16.0	
	comp=Z,116nm,19.8s,baz=224,slow=34						
SADO	Sadowa	16.99	55		Pn	09 49 25.3	-3.6
SADO				IAmb	IAmb	09 49 48.6	
	comp=Z,24nm,0.8s						
L56A	Greenwood	17.31	64	Pn	Pn	09 49 31.4	-1.6
L56A				IAmb	IAmb	09 49 58.5	
	comp=Z,24nm,0.7s						
CMB	Columbia Colle	17.34	282		Pn	09 49 31.6	-1.8
M57A	Sunshine Farm,	17.48	67		Pn	09 49 34.5	-0.5
M57A				IAmb	IAmb	09 49 58.8	
	comp=Z,20nm,0.6s						
MVL	Millersville	17.91	72	P	Pn	09 49 39.1	-1.2
DELO	Deloro Mine	17.91	57	P	Pn	09 49 39.3	-1.1
NEW	Newport	17.97	317	P	P	09 49 42.5	+0.8
	comp=Z,0.2nm,0.3s,baz=145,slow=9.5,SNR=7.9						
NEW				Lg	Lg	09 54 51.6	
	comp=Z,0.2nm,0.3s,baz=217,slow=20,SNR=1.7						
NEW				LR	LR	09 56 50.9	
	comp=Z,196nm,20.5s,baz=118,slow=38						
NEW	Newport	17.97	317		Pn	09 49 39.1	-2.1
J56A	Wolcott	18.07	61	P	Pn	09 49 39.4	-3.0
J56A				IAmb	IAmb	09 49 54.9	
	comp=Z,19nm,0.8s						
K57A	Scipio Center	18.19	63	P	Pn	09 49 42.2	-1.5
K57A				IAmb	IAmb	09 50 08.2	
	comp=Z,18nm,0.6s						
FFC	Flin Flon	18.42	354	P	P	09 49 43.4	-3.1
FFC				IAmb	IAmb	09 50 11.4	
	comp=Z,25nm,1.4s						
N59A	State Game Lan	18.43	69	P	Pn	09 49 46.8	0.0
	baz=264						
N59A	State Game Lan	18.43	69	P	P	09 49 46.0	-0.8
N59A				IAmb	IAmb	09 49 50.5	
	comp=Z,24nm,1.1s						
PLVO	Plevna	18.46	56	P	P	09 49 45.0	-1.9
PLVO				IAmb	IAmb	09 49 59.0	
	comp=Z,21nm,1.1s						
BINY	Binghamton	18.46	65	P	P	09 49 46.4	-0.7
	baz=260						
BINY	Binghamton	18.46	65	P	P	09 49 46.3	-0.8
BINY				IAmb	IAmb	09 49 49.8	
	comp=Z,18nm,0.6s						
WUPA	West Chester U	18.47	72	P	P	09 49 46.4	-0.7
KSPA	Keystone Colle	18.52	67	P	P	09 49 46.3	-1.4
KSPA				IAmb	IAmb	09 50 10.3	
	comp=Z,47nm,1.5s						
LUPA	Lehigh Univers	18.70	70	P	P	09 49 49.4	-0.4
LUPA				IAmb	IAmb	09 49 53.3	
	comp=Z,12nm,0.6s						
J57A	Williamstown	18.72	61	P	P	09 49 48.8	-1.0
TLIG	Tlapa	18.81	180	P	P	09 49 50.9	-0.3
L59A	Walton	19.15	65	P	P	09 49 54.2	-0.5
L59A				IAmb	IAmb	09 49 58.6	
	comp=Z,29nm,1.0s						
J58A	Remsen	19.21	62	P	P	09 49 54.8	-0.5
N02D	Trinity Center	19.25	291	P	Pn	09 49 56.3	-0.5
	baz=96						
ODNJ	Ogdensburg	19.33	69	P	P	09 49 56.8	+0.2
YBH	Yreka Blue Hor	19.35	293	P	Pn	09 49 58.0	+0.1
	comp=Z,0.7nm,0.3s,baz=66,slow=6.1,SNR=21						
YBH	Yreka Blue Hor	19.35	293	P	Pn	09 49 57.4	-0.6
CMIG	Matias Romero	19.57	169	P	Pn	09 50 00.6	-0.1
	comp=Z,0.4nm,0.3s,baz=0.6,slow=7.3,SNR=4.8						
CMIG				LR	LR	10 00 39.0	
	comp=Z,98nm,18.5s,baz=344,slow=46						
J59A	Piesco	19.79	62	P	Pn	09 50 02.6	-0.5
J59A				IAmb	IAmb	09 50 22.4	
	comp=Z,14nm,0.8s						
PAL	Palisades	19.85	69	P	Pn	09 50 03.5	-0.3
LONY	Lake Ozonia	20.01	58	P	Pn	09 50 06.1	+0.3
	baz=254						
LONY	Lake Ozonia	20.01	58	P	P	09 50 04.5	+0.4
LONY				IAmb	IAmb	09 50 26.2	
	comp=Z,32nm,1.5s						
NCB	Newcomb	20.10	61	P	P	09 50 05.9	+0.9
NCB				IAmb	IAmb	09 50 08.6	
	comp=Z,15nm,0.7s						
TRY	Troy	20.25	64	P	P	09 50 07.3	+0.7
TRY				IAmb	IAmb	09 50 21.4	
	comp=Z,17nm,0.7s						
ACCN	Adirondack Com	20.37	62	P	P	09 50 07.2	-0.7
ACCN				IAmb	IAmb	09 50 10.3	
	comp=Z,14nm,0.7s						
TRQ	Mont Tremblant	20.52	54	P	P	09 50 10.2	+0.5
FRNY	Flat Rock	20.75	58	P	P	09 50 11.7	-0.4
BBB	Bella Bella	26.04	316	LR	LR	10 01 16.8	
	comp=Z,204nm,18.2s,baz=118,slow=36						
YKA	Yellowknife Ar	27.88	344	P	P	09 51 21.2	+0.3
	comp=Z,0.7nm,0.6s,baz=143,slow=10,SNR=5.3						
YKA				LR	LR	10 02 44.6	
	comp=Z,400nm,19.8s,baz=0.0,slow=37						
YKA	Yellowknife Ar	27.88	344	P	P	09 51 20.2	-0.8
SCHQ	Schefferville	28.52	40	P	P	09 51 28.4	+1.6
	comp=Z,4.9nm,0.6s,baz=241,slow=9.0,SNR=10.0						
SCHQ				LR	LR	10 02 04.8	
	comp=Z,111nm,20.0s,baz=9.0,slow=35						
SCHQ	Schefferville	28.52	40	P	P	09 51 26.9	+0.1
JTS	Las Juntas de	28.86	151	LR	LR	10 05 02.8	
	comp=Z,78nm,19.9s,baz=25,slow=40						
DLBC	Dease Lake	30.08	327	LR	LR	10 04 31.3	
	comp=Z,234nm,21.2s,baz=158,slow=38						
INK	Inuvik	37.33	340	P	P	09 52 44.7	+1.4
	comp=Z,1.6nm,0.7s,baz=118,slow=9.2,SNR=4.6						
BCAR	Beaver Creek A	37.37	329	P	P	09 52 44.5	+0.6
IL31		40.11	330	P	P	09 53 06.4	-0.4
ILAR	Eielson Array	40.11	330	P	P	09 53 08.2	+1.4
	comp=Z,2.6nm,0.9s,baz=107,slow=7.1,SNR=22						
ILAR	Eielson Array	40.11	330	P	P	09 53 05.8	-1.0
ARCES	ARCESS Array B	66.78	18	P	P	09 56 22.6	+0.1
	comp=Z,0.9nm,0.4s,baz=313,slow=6.5,SNR=9.4						
ARCES				LR	LR	10 25 50.5	
	comp=Z,55nm,18.2s,baz=35,slow=36						
PETK	Petropavlovsk-	69.05	321	LR	LR	10 27 55.5	
	comp=Z,51nm,18.4s,baz=74,slow=37						
ESDC	Sonseca Array	71.05	54	P	P	09 56 52.7	+3.0
	comp=Z,0.6nm,1.0s,baz=312,slow=5.5,SNR=2.3						
FINES	FINESS Array B	72.68	24	P	P	09 57 01.7	+2.8
	comp=Z,3.3nm,0.6s,baz=311,slow=4.1,SNR=16						
FINES				LR	LR	10 26 08.9	
	comp=Z,63nm,18.5s,baz=342,slow=34						
GERES	GERESS Array B	76.05	39	P	P	09 57 21.0	+2.0
	comp=Z,0.3nm,0.4s,baz=26,slow=4.7,SNR=1.7						
PLCA	Paso Flores	81.04	159	LR	LR	10 32 26.0	
	comp=Z,45nm,18.1s,baz=250,slow=35						
AKASG	Malin Array Be	81.87	30	P	P	09 57 53.1	+2.4
	comp=Z,1.8nm,0.6s,baz=308,slow=4.2,SNR=8.1						
DBIC	Dimbokro	89.16	82	LR	LR	10 37 43.2	
	comp=Z,28nm,18.1s,baz=330,slow=35						
TORD	Torodi Ar. Bea	90.46	73	P	P	09 58 35.6	+1.9
	comp=Z,0.9nm,0.9s,baz=311,slow=3.3,SNR=3.8						
TORD				LR	LR	10 35 53.1	
	comp=Z,42nm,21.4s,baz=190,slow=33						
BRTR	Keskin Array B	92.42	35	LR	LR	10 39 58.3	
	comp=Z,20nm,21.9s,baz=342,slow=35						
SONM	Songino Array	93.15	343	P	P	09 58 47.3	+1.6
	comp=Z,0.4nm,0.6s,baz=57,slow=5.3,SNR=2.1						
KSRS	Korea Array	94.73	325	LR	LR	10 46 37.4	
	comp=Z,30nm,18.4s,baz=20,slow=39						
WRA	Warramunga Arr	131.05	275	PKP	PKiKP	10 04 44.7	+0.1
	comp=Z,0.3nm,0.7s,baz=62,slow=1.9,SNR=1.8						
ASAR	Alice Springs	133.24	271	PKP	PKPdf	10 04 47.5	-0.4
	comp=Z,0.3nm,0.6s,baz=82,slow=1.6,SNR=4.5						
ASAR	Alice Springs	133.24	271		PKiKP	10 04 49.0	-0.1

IDC 15 09:50:33.2±3.1, 32°.66S×178°.19W, h0^{km}, mb3.5/2, mb1 3.8/3, mb1mx3.3/24, mbtmp3.5/3, ML3.3/1, Error ellipse: s-maj=71.6km s-min=37.0km az=118.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	6.78	213	Pn	Pn	09 52 14.3	+0.5
	0.5nm,0.3s,baz=127,slow=20,SNR=1.3						
URZ				Sn	Sn	09 53 30.4	-1.3
	2.0nm,0.3s,baz=278,slow=23,SNR=7.1						
ASAR	Alice Springs	42.88	269	P	P	09 58 33.6	+0.1
	0.3nm,0.5s,baz=109,slow=7.7,SNR=8.7						
WRA	Warramunga Arr	44.07	275	P	P	09 58 43.0	-0.2
	0.4nm,0.3s,baz=112,slow=8.0,SNR=17						
FINES	FINESS Array B	147.20	339	PKPbc	PKPbc	10 10 16.6	-1.0
	3.5nm,1.1s,baz=63,slow=0.9,SNR=6.5						

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*IGIL **15** 10:07:19.9, 35°.18N×11°.28W, h30^{km}, ML1.9*

*MDD **15** 10:07:20.4±2.4, 35°.47N×11°.14W, h0^{km}, mb3.7/9, Error ellipse: s-maj=22.5km s-min=18.4km az=97.0, PRXIMO*

*INMG **15** 10:07:21.3±1.1, 35°.35N×11°.24W, h17^{km}±22^{km}, ML2.2, Error ellipse: s-maj=19.5km s-min=5.2km az=52.0*

*CNRM **15** 10:07:24.6, 35°.18N×10°.32W, h108^{km}, ml2.9*

ISC 15 10:07:16.6±2.1, 35°.24N±0°.06×11°.4W±0°.1, h35^{km}, n46, σ2.^{s}38/74, 1C, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	2.79	47	ePn	Pn	10 08 01.2	+2.4
PFVI				eSn	Sn	10 08 31.1	-0.2
PFVI				A	A	10 08 32.6	
	9.7nm,0.8s						
PFVI	Vila Bisbo	2.79	47	P	Pn	10 08 01.2	+2.4
	3.2nm,0.1s,SNR=6.1						
PFVI				S	Sn	10 08 30.7	-0.6
	8.5nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	2.79	47	P	Pn	10 07 59.9	+1.1
PFVI				S	Sn	10 08 29.5	-1.7
MORF	Marmelete	3.01	46	eP	Pn	10 08 04.3	+2.4
MORF				eS	Sn	10 08 36.5	-0.2
MORF				IAML		10 08 38.3	
	comp=N,5.1nm,0.1s						
MORF	Marmelete	3.01	46	ePn	Pn	10 08 04.3	+2.4
MORF				eSn	Sn	10 08 36.6	-0.2
MORF				A	A	10 08 37.8	
	comp=N,5.4nm,0.1s						
MORF	Marmelete	3.01	46	P	Pn	10 08 04.3	+2.4
MORF				S	Sn	10 08 36.5	-0.2
PTEO	Sao Teotonio	3.14	42	ePn	Pn	10 08 06.2	+2.6
PTEO				eSn	Sn	10 08 39.3	-0.5
PTEO				A	A	10 08 45.2	
	comp=N,9.4nm,0.6s						
PBDV	Barranco-do-Ve	3.42	53	eSn	Sn	10 08 46.7	-0.1
PCVE	Castro Verde	3.59	47	ePn	Pn	10 08 12.5	+2.7
PCVE				eSn	Sn	10 08 50.6	-0.4
PCVE				A	A	10 08 54.5	
	comp=N,5.5nm,0.6s						
MESJ	Messejana	3.63	43	eP	Pn	10 08 12.8	+2.5
MESJ				eS	Sn	10 08 51.2	-0.6
MESJ				IAML		10 08 52.2	
	comp=N,2.4nm,0.1s						
MESJ	Messejana	3.63	43	ePn	Pn	10 08 12.9	+2.5
MESJ				eSn	Sn	10 08 51.6	-0.3
MESJ				A	A	10 08 58.1	
	comp=N,2.7nm,0.8s						
MESJ	Messejana	3.63	43	P	Pn	10 08 12.8	+2.5
MESJ				S	Sn	10 08 51.2	-0.6
PVAQ	Vaqueiros	3.65	53	ePn	Pn	10 08 13.2	+2.5
PVAQ				eSn	Sn	10 08 51.8	-0.7
PVAQ				A	A	10 08 57.9	
	comp=N,8.4nm,0.7s						
PVAQ	Vaqueiros	3.65	53	P	Pn	10 08 13.1	+2.4
PVAQ				S	Sn	10 08 49.2	-3.3
PNCL	Nicolau / Gran	3.66	38	ePn	Pn	10 08 13.1	+2.3
PNCL				eSn	Sn	10 08 51.9	-0.9
PNCL				A	A	10 08 55.4	
	comp=N,3.5nm,0.2s						
EGRO	El Granado	3.88	53	P	Pn	10 08 16.6	+2.9
	comp=N,0.6nm,0.1s,SNR=11						
EGRO				S	Sn	10 08 57.0	-1.1
	comp=N,0.8nm,0.0s,SNR=7.9						
PBEJ	Beja	3.96	44	eSn	Sn	10 08 59.1	-0.9
PBEJ				A	A	10 09 03.2	
	comp=N,1.9nm,0.4s						
PMAFR	Mafra	4.07	23	ePn	Pn	10 08 18.1	+1.7
PMAFR				eSn	Sn	10 09 01.8	-1.0
PMAFR	Mafra	4.07	23	P	Pn	10 08 18.5	+2.1
	comp=N,0.2nm,0.1s,SNR=7.9						
PMAFR				S	Sn	10 09 01.5	-1.3
	comp=N,1.7nm,0.1s,SNR=6.1						
ZHG	ZHG	4.29	113	P	Pn	10 08 16.8	-2.7
ZHG				S	Sn	10 09 00.1	-8.3
EMIN	Mina Concepcio	4.54	55	P	Pn	10 08 25.4	+2.5
	comp=N,0.3nm,0.1s,SNR=7.9						
EMIN				S	Sn	10 09 12.6	-1.9
	comp=N,2.9nm,0.3s,SNR=7.9						
PMTG	Montargil	4.57	32	ePn	Pn	10 08 25.7	+2.4
PMTG				eSn	Sn	10 09 13.6	-1.6
PMTG				A	A	10 09 18.0	
	comp=N,1.9nm,0.8s						
PESTR	Estremoz	4.71	39	ePn	Pn	10 08 27.5	+2.2
PESTR				eSn	Sn	10 09 17.3	-1.4
PESTR				A	A	10 09 22.3	
	comp=N,3.4nm,0.6s						
PESTR	Estremoz	4.71	39	P	Pn	10 08 26.5	+1.2
PESTR				S	Sn	10 09 16.2	-2.5
PSBE	So Bento	4.74	25	eSn	Sn	10 09 18.4	-0.8
PSBE				A	A	10 09 22.9	
	comp=N,7.3nm,0.7s						
ESPR	Espera	4.75	68	P	Pn	10 08 28.4	+2.7
	comp=N,2.1nm,0.1s,SNR=7.9						
EBAD	Badajoz	4.95	43	P	Pn	10 08 30.1	+1.7
	comp=N,0.2nm,0.0s,SNR=7.9						
EBAD				S	Sn	10 09 22.6	-1.8
	comp=N,1.0nm,0.1s,SNR=7.9						
OUK	Oukaimeden	4.97	143	P	Pn	10 08 31.3	+2.2
OUK				S	Sn	10 09 20.8	-4.7
PMRV	Marv??o	5.25	36	ePn	Pn	10 08 34.8	+2.2
PMRV				eSn	Sn	10 09 29.4	-2.4
PMRV				A	A	10 09 36.4	
	comp=N,5.3nm,0.7s						
TTIG	Tnine Tigouga,	5.28	151	P	Pn	10 08 35.6	+2.5
TTIG				S	Sn	10 09 30.2	-2.6
PCAS	Casmilo, Conde	5.32	24	eSn	Sn	10 09 32.4	-1.2
PCAS				A	A	10 09 38.2	
	comp=N,2.1nm,0.7s						
ECAB	El Cabril	5.55	58	P	Pn	10 08 39.0	+2.2
	comp=N,0.7nm,0.1s,SNR=12						
ECAB				S	Sn	10 09 36.9	-2.5
	comp=N,0.3nm,0.1s,SNR=7.9						
OUZM	OUZ	5.79	137	P	Pn	10 08 41.8	+1.7
OUZM				S	Sn	10 09 41.8	-3.6
MD31	MD31	5.97	111	P	Pn	10 08 42.1	-0.5
MD31				S	Sn	10 09 38.0	-12
MDT	Midelt	6.11	111	P	Pn	10 08 41.8	-2.6
MDT				S	Sn	10 09 38.8	-14
EGOR	Sierra Gorda,	6.16	70	P	Pn	10 08 48.5	+3.3
	comp=N,0.2nm,0.0s,SNR=7.9						
EGOR				S	Sn	10 09 52.5	-1.9
	comp=N,1.0nm,0.3s,SNR=7.9						
EADA	Adamuz	6.18	60	⇑P	Pn	10 08 47.7	+2.2
	comp=N,0.1nm,0.0s,SNR=18						
EADA				S	Sn	10 09 52.0	-3.0
	comp=N,0.6nm,0.1s,SNR=7.9						
EPLA	Plasencia	6.39	39	S	Sn	10 09 58.0	-1.9
	comp=N,0.2nm,0.0s,SNR=4.0						
MVO	Moncorvo	6.83	29	ePn	Pn	10 08 56.6	+2.2
MVO				eSn	Sn	10 10 04.2	-6.7
MVO	Moncorvo	6.83	29	S	Sn	10 10 09.0	-1.9
	comp=N,0.6nm,0.1s,SNR=7.9						
PAB	San Pablo	7.05	50	P	Pn	10 08 59.4	+2.1
	comp=N,0.2nm,0.1s,SNR=7.9						
PAB				S	Sn	10 10 13.5	-2.8
	comp=N,0.2nm,0.2s,SNR=7.9						
ELOB	Lobios	7.11	20	S	Sn	10 10 14.4	-3.4
	comp=N,0.5nm,0.1s,SNR=7.9						
PGAV	Gavieira, Arco	7.14	19	eSn	Sn	10 10 15.5	-3.1
EZAM	Zamans	7.21	16	S	Sn	10 10 16.5	-3.7
	comp=N,1.6nm,0.0s,SNR=7.9						
ECAL	Calabor	7.61	27	S	Sn	10 10 26.7	-3.4
	comp=N,0.6nm,0.2s,SNR=7.9						
EMAZ	Mazaricos	7.92	13	S	Sn	10 10 31.7	-6.0
	comp=N,0.6nm,0.1s,SNR=7.9						

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*NIED **15** 10:10:24.7, 31°.75N×128°.85E, h2^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-8.80; $M_{\theta\theta}$6.34; $M_{\phi\phi}$2.46; $M_{r\theta}$-3.14; $M_{\theta\phi}$3.47; $M_{\phi r}$-2.87; Fault plane solution: $M_0$9.58000×10^{14} NP1:ϕ_s54.00000°, δ58.00000°, λ-95.00000°. NP2:ϕ_s244.00000°, δ32.00000°, λ-82.00000°.*

*JMA **15** 10:10:24.7±0.1, 31°.75N×128°.85E, h2^{km}, M3.9*

*IDC **15** 10:10:26.4±1.1, 31°.65N×129°.00E, h0^{km}, mb3.7/6, mb1 3.9/8, mb1mx3.6/42, mbtmp3.8/8, ML3.4/1, MS3.1/4, Ms1 3.1/4, ms1mx2.6/53, Error ellipse: s-maj=26.9km s-min=23.0km az=112.0*

*KMA **15** 10:10:48.0±2.1, 33°.16N×127°.92E, h1^{km}±3^{km}, Error ellipse: s-maj=35.1km s-min=1.3km az=321.0*

ISC 15 10:10:28.1±0.8, 31°.82N±0°.05×129°.01E±0°.04, h10^{km}, n25, σ1.^{s}35/29, mb3.9/6, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.62	103	P	Pg	10 10 38.7	-1.4
JSJ				eS	Sb	10 10 48.8	-0.9
JFU	Fukue jima 2	0.87	345	P	Pg	10 10 42.2	-2.6
JFU				eS	Sg	10 10 54.6	-1.5
NGSJ	Nagasakinomoza	1.06	39	P	Pg	10 10 47.7	-0.7
NGSJ				eS	Sn	10 11 03.0	-0.7
JHD	Hondo	1.16	56	P	Pg	10 10 49.8	-0.5
JHD				eS	Sn	10 11 07.2	+1.0
JSU	Suzuyama	1.27	104	P	Pg	10 10 51.3	-1.2
JZO	Okuchi	1.39	76	P	Pb	10 10 53.2	-1.0
JIU3	Izumi3	1.70	64	P	Pb	10 10 57.7	-1.7
JTZ	Takazaki	1.77	87	P	Pn	10 10 58.7	-0.1
JTN	Tanegashima 3	2.05	124	P	Pn	10 11 02.4	-0.2
JNU	Nakatsue	2.05	50	Pn	Pb	10 11 04.9	-0.5
	baz=231,slow=0.1						
JNU				Sn	Sg	10 11 34.0	0.0
	59nm,0.3s,baz=67,slow=3.4,SNR=9.1						
KSJJU	Jeju	2.63	308	P	Pn	10 11 10.6	0.0
	SNR=11						
YNDB	Yeoundo	2.80	339	P	Pn	10 11 12.4	-0.5
	SNR=21						
CJD	Chujado	3.13	314	P	Pn	10 11 17.0	-0.4
	SNR=5.2						
BOSB	Boseong-gun	3.30	333	P	Pn	10 11 20.0	+0.1
	SNR=8.7						
KSJEO	Jeonju	4.35	341	P	Pn	10 11 34.3	0.0
	SNR=9.0						
KSRS	Korea Array	5.70	351	Pn	Pn	10 11 53.1	+0.4
	1.0nm,0.3s,baz=169,slow=14,SNR=6.7						
KSRS				Sn	Sn	10 12 57.6	-0.5
	1.5nm,0.3s,baz=172,slow=26,SNR=5.3						
KSRS				LR	LR	10 14 16.9	
	comp=Z,162nm,21.4s,baz=176,slow=39						
KLR	Kul'dur	17.52	6	P	P	10 14 37.6	+4.1
	0.1nm,0.3s,baz=197,slow=10,SNR=5.2						
KLR				LR	LR	10 20 50.1	
	comp=Z,41nm,20.2s,baz=215,slow=35						
SONM	Songino Array	23.48	319	P	P	10 15 38.8	+0.8
	2.9nm,0.9s,baz=134,slow=8.6,SNR=7.5						
TLY	Talaya	27.19	324	LR	LR	10 27 03.8	
	comp=Z,31nm,18.0s,baz=164,slow=36						
WRA	Warramunga Arr	51.72	174	P	P	10 19 34.1	-1.5
	0.2nm,0.7s,baz=355,slow=7.9,SNR=3.1						
ILAR	Eielson Array	59.24	30	P	P	10 20 29.2	-0.1
	0.4nm,0.8s,baz=265,slow=6.2,SNR=3.4						
DZM	Mont Dzumac	64.47	141	LR	LR	10 44 23.5	
	comp=Z,26nm,20.1s,baz=56,slow=32						
FINES	FINESS Array B	68.37	330	P	P	10 21 29.2	-0.3
	3.4nm,0.9s,baz=48,slow=4.5,SNR=3.6						
AKASG	Malin Array Be	71.77	319	P	P	10 21 53.1	+2.6
	0.5nm,0.5s,baz=51,slow=6.5,SNR=4.4						
BRTR	Keskin Array B	74.19	307	P	P	10 22 05.9	+0.6
	1.6nm,0.8s,baz=90,slow=3.7,SNR=5.8						

IDC 15 10:11:56.2±6.1, 12°.40S×167°.84E, h0^{km}, mb3.5/3, mb1 3.8/3, mb1mx3.5/31, mbtmp3.5/3, Error ellipse: s-maj=303.6km s-min=35.1km az=141.0, Santa Cruz

Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**32.99**	**252**	P	P	10 18 33.0	-0.2
	0.4nm,0.7s,baz=84,slow=8.7,SNR=3.9						
ASAR	**Alice Springs**	**34.07**	**246**	P	P	10 18 42.8	+0.1
	0.2nm,0.6s,baz=74,slow=9.4,SNR=4.9						
ILAR	**Eielson Array**	**84.15**	**18**	P	P	10 24 28.9	0.0
	0.5nm,0.8s,baz=228,slow=5.8,SNR=4.5						

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*NOU **15** 10:12:00.4, 37°.26S×178°.65E, h0^{km}, MLv3.8/4, Off E. Coast of N. Island, N.Z.*
*WEL **15** 10:12:16.0±0.4, 38°S±3°×17°8E±°, h27^{km}±4^{km}, M2.6/26, ML2.9/30, MLv2.6/26, Error ellipse: s-maj=0.0km s-min=0.0km az=179.2*
ISC 15 10:12:17.0±1.1, **37°.75S**±0°.04×**177°.53E**±0°.03, **h35**^{km}±4^{km}, **n64**, σ**1^{s}.09**/75, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HAZ	**Te Kaha**	**0.20**	**91**	P	**Pb**	**10 12 23.9**	**+0.1**
HAZ				S	**Sb**	**10 12 30.0**	**+1.6**
RUGZ	**Raukumara Rang**	**0.24**	**151**	P	**Pn**	**10 12 24.1**	**+0.2**
RUGZ				S	**Sb**	**10 12 30.3**	**+0.9**
WHRZ	**Whale Island**	**0.45**	**257**	P	**Pn**	**10 12 27.7**	**+0.7**
PKGZ	**Pakihiroa**	**0.46**	**107**	P	**Pb**	**10 12 26.2**	**-0.9**
TWGZ	**Tauwhareparae**	**0.55**	**140**	P	**Pn**	**10 12 28.7**	**+0.3**
MWZ	**Matawai**	**0.58**	**180**	P	**Pn**	**10 12 28.4**	**-0.4**
MWZ				S	**Sb**	**10 12 37.6**	**+0.4**
URZ	**Urewera**	**0.60**	**213**	P	**Pn**	**10 12 28.9**	**-0.1**
URZ				S	**Sb**	**10 12 38.6**	**+0.8**
URZ	**Urewera**	**0.60**	**213**	P	**Pn**	**10 12 28.8**	**-0.2**
URZ	**Urewera**	**0.60**	**213**	P	**Pn**	**10 12 28.8**	**-0.2**
MXZ	**Matakaoa Point**	**0.65**	**73**	P	**Pn**	**10 12 28.9**	**-0.7**
PUZ	**Puketiti**	**0.66**	**119**	P	**Pn**	**10 12 29.4**	**-0.4**
PUZ				S	**Sb**	**10 12 39.9**	**+0.6**
WMGZ	**Waiomatatini S**	**0.71**	**96**	P	**Pn**	**10 12 30.2**	**-0.3**
WMGZ				S	**Sb**	**10 12 41.9**	**+1.3**
MARZ	**Manawahe**	**0.71**	**251**	P	**Pn**	**10 12 30.0**	**-0.7**
EDRZ	**Edgecumbe**	**0.72**	**240**	P	**Pn**	**10 12 30.9**	**+0.2**
TKGZ	**Te Karaka**	**0.73**	**160**	P	**Pn**	**10 12 31.2**	**+0.4**
TKGZ				S	**Sb**	**10 12 43.9**	**+2.8**
RAGZ	**Rawiri**	**0.74**	**187**	P	**Pn**	**10 12 31.6**	**+0.5**
RAGZ				S	**Sb**	**10 12 42.4**	**+0.6**
OPRZ	**Ohinepanea**	**0.78**	**263**	P	**Pn**	**10 12 31.2**	**-0.2**
CNGZ	**Carnagh Statio**	**0.90**	**144**	P	**Pn**	**10 12 33.2**	**-0.1**
MUGZ	**Murupara**	**0.94**	**219**	P	**Pn**	**10 12 33.4**	**-0.3**
MUGZ				S	**Sn**	**10 12 45.8**	**-0.1**
TARZ	**Mount Tarawera**	**0.94**	**239**	P	**Pn**	**10 12 34.1**	**+0.3**
RTZ	**Ruatahuna**	**0.96**	**206**	P	**Pn**	**10 12 33.6**	**-0.5**
RTZ				S	**Sn**	**10 12 46.7**	**0.0**
RIGZ	**Rimuhau**	**0.97**	**169**	P	**Pn**	**10 12 33.9**	**-0.3**
RRRZ	**Republican Roa**	**0.99**	**234**	P	**Pn**	**10 12 33.2**	**-1.2**
TGRZ	**Tauranga**	**1.00**	**271**	P	**Pn**	**10 12 34.2**	**-0.4**
SNGZ	**Shannon Statio**	**1.04**	**188**	P	**Pn**	**10 12 35.7**	**+0.6**
KARZ	**Kaharoa**	**1.05**	**255**	P	**Pn**	**10 12 34.9**	**-0.4**
PRRZ	**Plateau Road**	**1.16**	**230**	P	**Pn**	**10 12 36.6**	**-0.2**
RAHZ	**Arahi**	**1.21**	**197**	P	**Pn**	**10 12 38.6**	**+1.1**
MTHZ	**Maungataniwha**	**1.22**	**206**	P	**Pn**	**10 12 37.2**	**-0.5**
ALRZ	**Allen Road**	**1.23**	**229**	P	**Pn**	**10 12 37.1**	**-0.7**
MRHZ	**Matea Rd**	**1.39**	**219**	P	**Pn**	**10 12 39.5**	**-0.4**
NMHZ	**Naumai**	**1.46**	**203**	P	**Pn**	**10 12 40.9**	**0.0**
ARHZ	**Aropaoanui**	**1.56**	**195**	P	**Pn**	**10 12 42.7**	**+0.4**
BKZ	**Black Stump Fm**	**1.63**	**210**	P	**Pn**	**10 12 42.9**	**-0.4**
BKZ	**Black Stump Fm**	**1.63**	**210**	P	**Pn**	**10 12 43.5**	**+0.3**
KUZ	**Kuaotunu**	**1.76**	**304**	P	**Pn**	**10 12 44.1**	**-0.9**
KUZ				S	**Sn**	**10 13 05.2**	**-0.9**
MCHZ	**McNeill Hill**	**1.81**	**201**	P	**Pn**	**10 12 45.9**	**+0.2**
KWHZ	**Kaweka Forest**	**1.88**	**207**	P	**Pn**	**10 12 47.2**	**+0.5**
KWHZ				S	**Sn**	**10 13 10.9**	**+1.7**
TMVZ	**Te Maari**	**1.97**	**226**	P	**Pn**	**10 12 48.4**	**+0.3**
BHHZ	**Black Hill Sta**	**2.08**	**213**	P	**Pn**	**10 12 49.4**	**0.0**
KRHZ	**Kereru**	**2.09**	**205**	P	**Pn**	**10 12 49.0**	**-0.6**
KAHZ	**Kahuranaki**	**2.10**	**194**	P	**Pn**	**10 12 48.8**	**-0.9**
TUVZ	**Tukino**	**2.11**	**224**	P	**Pn**	**10 12 51.2**	**+1.3**
MOVZ	**Moawhango**	**2.16**	**220**	P	**Pn**	**10 12 51.0**	**+0.4**
WNVZ	**Wahianoa**	**2.18**	**223**	P	**Pn**	**10 12 52.6**	**+1.7**
ETAZ	**East Tamaki Re**	**2.22**	**290**	P	**Pn**	**10 12 51.6**	**+0.3**
HIZ	**Hauiti**	**2.24**	**249**	P	**Pn**	**10 12 52.2**	**+0.7**
HIZ	**Hauiti**	**2.24**	**249**	P	**Pn**	**10 12 52.5**	**+0.9**
HIZ	**Hauiti**	**2.24**	**249**	P	**Pn**	**10 12 52.3**	**+0.7**
MBAZ	**Motutapu North**	**2.32**	**294**	P	**Pn**	**10 12 52.8**	**+0.2**
PNHZ	**Pukenui**	**2.39**	**205**	P	**Pn**	**10 12 53.0**	**-0.8**
RVAZ	**Riverhead Bore**	**2.55**	**292**	P	**Pn**	**10 12 56.4**	**+0.5**
TSZ	**Takapari Road**	**2.60**	**207**	P	**Pn**	**10 12 55.5**	**-1.2**
WAZ	**Wanganui**	**2.82**	**224**	P	**Pn**	**10 13 00.6**	**+1.1**
BFZ	**Birch Farm**	**3.09**	**198**	P	**Pn**	**10 13 01.1**	**-2.2**
BFZ	**Birch Farm**	**3.09**	**198**	P	**Pn**	**10 13 01.1**	**-2.2**
WCZ	**Waipu Caves**	**3.13**	**304**	P	**Pn**	**10 13 04.0**	**+0.1**
MRZ	**Mangatainoka R**	**3.27**	**207**	P	**Pn**	**10 13 03.3**	**-2.5**
TMWZ	**Te Maipa**	**3.58**	**200**	P	**Pn**	**10 13 07.3**	**-2.7**
KIW	**Kapiti Island**	**3.71**	**212**	P	**Pn**	**10 13 09.6**	**-2.2**
QRZ	**Quartz Range**	**4.94**	**230**	P	**Pn**	**10 13 27.9**	**-0.9**
KHZ	**Kahutara**	**5.57**	**212**	P	**Pn**	**10 13 34.7**	**-2.6**
RPZ	**Rata Peaks**	**7.72**	**218**	P	**Pn**	**10 14 03.7**	**-3.2**
ODZ	**Otahua Downs**	**8.93**	**213**	P	Pn	10 14 18.4	-5.0

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*ISK **15** 10:14:15.7, 39°.60N×26°.06E, h8^{km}, ML2.5/22*
*DDA **15** 10:14:16.5, 39°.61N×26°.08E, h7^{km}±1^{km}, ML2.3*
*THE **15** 10:14:16.6, 39°.62N×26°.04E, h7^{km}±1^{km}, ML2.1/8, Error ellipse: s-maj=1.2km s-min=0.5km az=93.0*
*ATH **15** 10:14:17.0, 39°.59N×25°.98E, h14^{km}±3^{km}, ML2.5/2, Error ellipse: s-maj=4.0km s-min=1.2km az=187.0*
ISC 15 10:14:16.4±0.8, **39°.60N**±0°.02×**26°.05E**±0°.03, **h11**^{km}±6^{km}, **n51**, σ**0^{s}.47**/70, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOCA	**Canakkale, Ayv**	**0.12**	**146**	*i* P	**Pg**	**10 14 19.3**	**0.0**
KOCA				IAML		10 14 21.0	
	comp=E,1μm,0.4s						
KOCA				IAML		10 14 21.0	
	comp=N,1μm,0.3s						
KOCA				*i* S	**Sg**	**10 14 21.5**	**0.0**
GPNR	**Gulpinar-Canak**	**0.15**	**157**	PG	**Pg**	**10 14 19.6**	**-0.3**
GPNR				SG	**Sg**	**10 14 22.1**	**-0.3**
BOZC	**Bozcaada**	**0.24**	**360**	*i* P	**Pg**	**10 14 21.4**	**-0.1**
BOZC				IAML		10 14 25.0	
	comp=N,714nm,0.3s						
BOZC				IAML		10 14 25.0	
	comp=E,595nm,0.5s						
BOZC				*i* S	**Sg**	**10 14 25.2**	**+0.3**
BOZC	**Bozcaada**	**0.24**	**360**	PG	**Pg**	**10 14 21.4**	**-0.1**
BOZC				SG	**Sg**	**10 14 25.1**	**+0.3**
EZN	**Ezine**	**0.31**	**43**	P	**Pg**	**10 14 22.5**	**-0.1**
EZN				S	**Sg**	**10 14 27.1**	**+0.2**
	comp=E,362nm,0.3s						
EZN	**Ezine**	**0.31**	**43**	PG	**Pg**	**10 14 22.5**	**-0.1**
EZN				SG	**Sg**	**10 14 27.0**	**+0.2**
PRK	**Paraskevi**	**0.39**	**154**	P	**Pb**	**10 14 25.1**	**-0.2**
PRK				S	**Sb**	**10 14 31.2**	**-0.1**
	comp=E,1μm,0.5s						
PRK	**Paraskevi**	**0.39**	**154**	P	**Pb**	**10 14 25.4**	**+0.1**
PRK				S	**Sb**	**10 14 31.0**	**-0.3**
PRK				AML	AML	10 14 31.7	
	comp=N,2414μm,0.5s						
PRK				AML	AML	10 14 32.8	
	comp=E,2418μm,0.6s						
SIGR	**SIGRI**	**0.42**	**202**	P	**Pg**	**10 14 24.4**	**-0.1**
SIGR				S	**Sg**	**10 14 30.9**	**+0.8**
	comp=E,655nm,0.2s						
SIGR	**SIGRI**	**0.42**	**202**	P	**Pg**	**10 14 24.5**	**-0.1**
SIGR				S	**Sg**	**10 14 30.0**	**-0.1**
SIGR				AML	AML	10 14 31.2	
	comp=E,1224μm,0.2s						
SIGR				AML	AML	10 14 31.3	
	comp=N,1361μm,0.3s						
SIGR	**SIGRI**	**0.42**	**202**	PG	**Pg**	**10 14 24.5**	**-0.1**
SIGR				SG	**Sg**	**10 14 30.8**	**+0.7**
ECEA	**Canakkale, Ece**	**0.46**	**12**	*i* P	**Pg**	**10 14 25.5**	**+0.2**
ECEA				*i* S	**Sb**	**10 14 32.6**	**-0.5**
ECEA				IAML		10 14 35.0	
	comp=E,207nm,0.4s						
ECEA				IAML		10 14 38.0	
	comp=N,153nm,0.3s						
AYVA	**Ayvalik**	**0.57**	**120**	*i* P	**Pb**	**10 14 29.0**	**+0.7**
GADA	**Gvkgeada**	**0.60**	**349**	P	**Pg**	**10 14 27.8**	**-0.4**
GADA	**Gvkgeada**	**0.60**	**349**	PG	**Pg**	**10 14 27.7**	**-0.4**
LIA	**Limnos Island**	**0.73**	**294**	P	**Pg**	**10 14 30.6**	**0.0**
LIA				S	**Sg**	**10 14 41.1**	**+0.9**
	comp=N,72nm,0.3s						
LIA	**Limnos Island**	**0.73**	**294**	P	**Pg**	**10 14 30.6**	**0.0**
BUHA	**Balikesir, Bur**	**0.80**	**97**	*i* P	**Pg**	**10 14 31.9**	**+0.1**
BUHA				*i* S	**Sg**	**10 14 42.6**	**+0.4**
BUHA				IAML		10 14 46.0	
	comp=N,109nm,0.3s						
BUHA				IAML		10 14 46.0	
	comp=E,113nm,0.2s						
DKL	**Dikili**	**0.84**	**128**	PG	**Pb**	**10 14 33.4**	**+0.4**
GELI	**Tayfur-Gelibol**	**0.86**	**22**	PG	**Pg**	**10 14 32.6**	**-0.4**
CAND	**Candarli**	**0.87**	**138**	PG	**Pg**	**10 14 32.5**	**-0.6**
LPK	**Lapseki**	**0.94**	**35**	PG	**Pg**	**10 14 34.0**	**-0.6**
SMTH	**Samothraki Isl**	**0.96**	**335**	P	**Pg**	**10 14 34.4**	**-0.5**
SMTH				S	**Sg**	**10 14 47.6**	**+0.2**
	comp=E,50nm,0.2s						
SMTH	**Samothraki Isl**	**0.96**	**335**	P	**Pg**	**10 14 34.4**	**-0.5**
SMTH				S	**Sg**	**10 14 47.5**	**+0.2**
FOCM	**Foa**	**1.03**	**149**	PG	**Pg**	**10 14 35.9**	**-0.3**
PSRA	**Psara**	**1.12**	**200**	P	**Pg**	**10 14 37.7**	**-0.3**
ERIK	**Erikli-Kesan**	**1.13**	**18**	PN	**Pg**	**10 14 36.9**	**-1.2**
ENEZ	**Enez**	**1.14**	**4**	P	**Pg**	**10 14 37.1**	**-1.2**
ENEZ				S	**Sb**	**10 14 53.6**	**+0.8**
	comp=E,120nm,0.5s						
ENEZ	**Enez**	**1.14**	**4**	PN	**Pg**	**10 14 37.4**	**-0.9**
CHOS	**Chios island**	**1.21**	**180**	P	**Pb**	**10 14 39.3**	**0.0**
CHOS				S	**Sn**	**10 14 56.4**	**+0.7**
	comp=E,190nm,0.2s						
CHOS	**Chios island**	**1.21**	**180**	P	**Pb**	**10 14 38.4**	**-0.9**
CHOS	**Chios island**	**1.21**	**180**	PN	**Pb**	**10 14 38.4**	**-0.9**
KRBG	**Karabiga-Canak**	**1.24**	**50**	PN	**Pn**	**10 14 39.1**	**-0.5**
ALN	**Alexandroupoli**	**1.30**	**360**	P	**Pn**	**10 14 40.1**	**-0.3**
ALN				S	**Sb**	**10 14 57.4**	**0.0**
	comp=E,58nm,0.5s						
ALN	**Alexandroupoli**	**1.30**	**360**	P	**Pn**	**10 14 39.6**	**-0.8**
ALN	**Alexandroupoli**	**1.30**	**360**	PN	**Pn**	**10 14 40.2**	**-0.2**
URLA	**Izmir**	**1.31**	**161**	PN	**Pn**	**10 14 39.8**	**-0.8**
GONE	**Gonen-Balikesi**	**1.33**	**70**	PN	**Pn**	**10 14 41.1**	**+0.2**
RKY	**Sarkoy-Tekirda**	**1.39**	**38**	PN	**Pn**	**10 14 41.1**	**-0.6**
BALB	**Balikesir**	**1.41**	**88**	PN	**Pn**	**10 14 41.9**	**-0.1**
BLCB	**Balcova**	**1.44**	**147**	PN	**Pn**	**10 14 42.3**	**0.0**
MAR6	**Marsite Statio**	**1.44**	**40**	PN	**Pn**	**10 14 42.8**	**+0.4**
MAR2	**Marsite Statio**	**1.48**	**40**	PN	**Pn**	**10 14 43.2**	**+0.4**
MAR3	**Marsite Statio**	**1.49**	**39**	PN	**Pn**	**10 14 43.4**	**+0.4**
MAR4	**Marsite Statio**	**1.52**	**38**	PN	**Pn**	**10 14 43.9**	**+0.3**
MRMT	**Marmara Adasi**	**1.55**	**49**	PN	**Pn**	**10 14 44.2**	**+0.2**
UKOP	**Uzunkopru-Edir**	**1.59**	**16**	PN	**Pn**	**10 14 44.7**	**+0.3**
RDO	**Rodhopi**	**1.59**	**346**	PN	**Pn**	**10 14 44.6**	**+0.1**
MAR9	**Marsite Statio**	**1.62**	**51**	PN	**Pn**	**10 14 45.3**	**+0.4**
OUR	**Ouranopolis**	**1.75**	**295**	PN	**Pn**	**10 14 46.9**	**+0.2**
KCTX	**Karacabey (Bur**	**1.89**	**69**	PN	**Pn**	**10 14 48.7**	**+0.1**

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*INET **15** 10:19:06.1, 12°.95N×86°.61W, h14^{km}, MW3.5*
SNET 15 10:19:12.9±1.0, **13°.00N**×**86°.79W**, **h12**^{km}±12^{km}, **ML2.6**, **Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**1.06**	**285**	*e*P	Pb	10 19 32.2	-1.0
CNCH				*e*S	Sg	10 19 47.6	+0.5
LCND	**La Caada**	**1.12**	**286**	*e*P	Pb	10 19 33.0	-1.1
LCND				*e*S	Sb	10 19 47.8	-0.9
LCND				IAML		10 19 54.1	
	comp=Z,338nm,0.5s						
TGUH	**Tegucigalpa,Un**	**1.15**	**336**	*e*P	Pb	10 19 33.6	-1.3
TGUH				*e*S	Sb	10 19 49.1	-0.8
COEB	**Comit de Eme**	**1.77**	**287**	*e*P	Pn	10 19 42.8	-0.6
COEB				IAML		10 20 20.0	
	comp=Z,65nm,0.5s						
SCLA	**Alcaldia de Sa**	**2.01**	**291**	*e*P	Pn	10 19 47.3	+0.6
SCLA				*e*S	Sb	10 20 13.7	-0.8
SCLA				IAML		10 20 32.3	
	comp=Z,12nm,0.5s						
PAVA	**Las Pavas**	**2.21**	**289**	*e*P	Pn	10 19 48.9	-0.6

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*IDC **15** 10:33:17.7±1.1, 6°.95N×125°.10E, h0^{km}, mb3.7/6, mb1 3.8/6, mb1mx3.4/61, mbtmp3.7/6, Error ellipse: s-maj=20.3km s-min=8.8km az=159.0*
*MAN **15** 10:33:18.5, 7°.42N×125°.57E, h1^{km}, mb4.7, ML3.6, MS3.5*
ISC 15 10:33:18.0±0.9, **7°.38N**±0°.05×**125°.58E**±0°.08, **h10**^{km}, **n12**, σ**1^{s}.50**/15, **mb3.6**/6, **3D**, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**0.31**	**180**	Pg	**Pb**	**10 33 26.4**	**+0.7**
	270nm,0.3s,baz=10,slow=3.5,SNR=63						
DAV				Lg	Lg	10 33 34.7	
	398nm,0.3s,baz=270,slow=20,SNR=13						
KCP	**Kidapawan**	**0.61**	**233**	⇓*i*P	**Pg**	**10 33 30.0**	**+0.1**
KCP				*i* S	**Sg**	**10 33 39.5**	**+1.6**
BUKP	**Musuan**	**0.71**	**314**	⇓*e*P	**Pg**	**10 33 32.0**	**+0.1**
BUKP				*i* S	**Sn**	**10 33 43.6**	**-1.7**
GSPH	**General Santos**	**1.43**	**206**	⇓*i*P	**Pn**	**10 33 44.6**	**+0.4**
PAGZ	**Pagadian**	**2.23**	**282**	*e*P	**Pb**	**10 33 57.1**	**-1.3**
TBP	**Tagbilaran**	**2.85**	**324**	*e*P	**Pn**	**10 34 05.2**	**+1.5**
TBP				*e*S	**Sb**	**10 34 44.2**	**0.0**
FITZ	**Fitzroy Crossi**	**25.32**	**180**	P	**P**	**10 38 43.7**	**-1.4**
	2.6nm,0.6s,baz=17,slow=12,SNR=8.5						
WRA	**Warramunga Arr**	**28.49**	**163**	P	**P**	**10 39 11.9**	**-1.7**
	0.5nm,0.6s,baz=342,slow=9.8,SNR=7.6						
ASAR	**Alice Springs**	**31.91**	**165**	P	**P**	**10 39 42.5**	**-1.5**
	0.4nm,0.6s,baz=345,slow=7.2,SNR=7.4						
STKA	**Stephens Creek**	**41.93**	**159**	P	**P**	**10 41 08.0**	**-1.1**
	2.5nm,1.0s,baz=331,slow=13,SNR=3.7						
MKAR	**Makanchi Array**	**53.93**	**324**	P	**P**	**10 42 43.6**	**+1.7**
	0.6nm,0.8s,baz=125,slow=7.2,SNR=3.2						
KURBB	**Kurchatov Arra**	**58.07**	**327**	P	**P**	**10 43 13.8**	**+2.4**
	0.2nm,0.3s,baz=121,slow=7.1,SNR=4.3						

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*JMA **15** 10:38:23.5±0.1, 30°.95N×130°.30E, h157^{km}±1^{km}, M3.0*
*IDC **15** 10:38:24.5±6.3, 31°.54N×131°.89E, h206^{km}±26^{km}, mb3.4/3, mb1 3.4/3, mb1mx2.7/59, mbtmp3.9/3, Error ellipse: s-maj=88.9km s-min=83.9km az=116.0*
ISC 15 10:38:22.4±0.9, **30°.95N**±0°.05×**130°.26E**±0°.10, **h163**^{km}±7^{km}, **n15**, σ**0^{s}.58**/27, **mb3.5**/3, **Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKC	**Kuchinoerabu**	**0.48**	**186**	P	**Pn**	**10 38 45.9**	**+0.7**
JKC				S	**Sn**	**10 39 02.8**	**+0.3**
JSU	**Suzuyama**	**0.58**	**17**	P	**Pn**	**10 38 46.2**	**+0.5**
JSU				*e*S	**Sn**	**10 39 03.4**	**-0.2**
JTSR	**Tashiro 2**	**0.61**	**69**	P	**Pn**	**10 38 45.9**	**+0.1**
JTSR				S	**Sn**	**10 39 02.9**	**-0.9**
JTN	**Tanegashima 3**	**0.69**	**115**	P	**Pn**	**10 38 46.6**	**+0.4**
JTN				S	**Sn**	**10 39 04.2**	**-0.2**
JYAK	**Yakushimahirau**	**0.74**	**163**	P	**Pn**	**10 38 46.9**	**+0.4**
JYAK				S	**Sn**	**10 39 04.3**	**-0.7**
JMTN	**Minamitane**	**0.78**	**134**	P	**Pn**	**10 38 47.2**	**+0.4**
JMTN				S	**Sn**	**10 39 05.4**	**-0.1**
JSJ	**Shimokoshiki**	**0.86**	**328**	P	**Pn**	**10 38 47.5**	**+0.1**
JSJ				S	**Sn**	**10 39 06.2**	**-0.4**
JNAR	**Kushima--Naru**	**1.05**	**56**	P	**Pn**	**10 38 49.5**	**+0.8**
JNAR				S	**Sn**	**10 39 08.8**	**-0.2**
JNN	**Nakanoshima**	**1.15**	**197**	P	**Pn**	**10 38 50.1**	**+0.4**
JNN				*e*S	**Sn**	**10 39 10.6**	**0.0**
JTZ	**Takazaki**	**1.19**	**37**	P	**Pn**	**10 38 50.6**	**+0.6**
JTZ				S	**Sn**	**10 39 10.4**	**-0.9**
JIU3	**Izumi3**	**1.67**	**16**	P	**Pn**	**10 38 55.6**	**+0.9**
JIU3				S	**Sn**	**10 39 19.7**	**0.0**
JNU	**Nakatsue**	**2.23**	**14**	P	**Pn**	**10 39 01.8**	**+0.8**
	28nm,0.3s,baz=139,slow=0.0,SNR=34						
JNU				S	**Sn**	**10 39 30.5**	**-0.5**
	30nm,0.3s,baz=188,slow=0.8,SNR=1.5						
FINES	**FINESS Array B**	**69.66**	**330**	P	**P**	**10 49 13.4**	**-0.4**
	0.7nm,0.5s,baz=64,slow=6.3,SNR=10.0						
AKASG	**Malin Array Be**	**73.12**	**319**	P	**P**	**10 49 34.1**	**-0.6**
	0.4nm,0.4s,baz=56,slow=6.6,SNR=5.0						
BRTR	**Keskin Array B**	**75.56**	**308**	P	**P**	**10 49 49.9**	**+0.6**
	0.9nm,0.8s,baz=79,slow=7.8,SNR=3.9						

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*NNC **15** 10:47:28.2±8.7, 35°.00N×69°.64E, h0^{km}, mb4.3, mpv4.1, Error ellipse: s-maj=100.6km s-min=54.6km az=143.0*
*IDC **15** 10:47:55.6±1.0, 37°.34N×70°.18E, h0^{km}, mb3.8/5, mb1 3.9/12, mb1mx3.7/59, mbtmp3.9/12, ML3.5/7, MS2.9/3, Ms1 2.9/3, ms1mx2.4/60, Error ellipse: s-maj=19.4km s-min=14.1km az=118.0*
ISC 15 10:48:00.6±0.7, **37°.49N**±0°.06×**70°.02E**±0°.08, **h30**^{km}, **n38**, σ**2^{s}.41**/37, **mb4.0**/4, **2C-3D**, **Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.97**	**157**	P	Pn	10 49 04.5	+5.0
CEP				S	**Sb**	**10 49 57.0**	**-0.5**
CHCP	**Chirah Chowk**	**4.65**	**144**	P	**Pn**	**10 49 13.4**	**+4.6**
THW	**Thamme Wali**	**4.89**	**163**	P	**Pn**	**10 49 16.0**	**+3.9**
AML	**Almayashu**	**5.43**	**30**	P	**Pn**	**10 49 21.3**	**+1.5**
	SNR=26						
KK31	**Karatay Array**	**5.62**	**4**	Pn	**Pn**	**10 49 23.2**	**+1.1**
	2.8nm,0.4s,baz=189,slow=13,SNR=18						
KK31				⇑Sn	Sb	10 50 56.4	+12
	36nm,0.8s,baz=188,slow=29,SNR=5.0						
UCH	**Uchtor**	**5.86**	**35**	P	**Pn**	**10 49 27.5**	**+1.8**
	SNR=14						
EKS2	**Erkin-Say**	**5.92**	**28**	P	**Pn**	**10 49 28.9**	**+2.6**
	SNR=8.5						
AAK	**Ala-Archa**	**6.18**	**32**	Pn	**Pn**	**10 49 32.1**	**+2.1**
	2.9nm,0.3s,baz=214,slow=6.2,SNR=22						
AAK				Sn	**Sn**	**10 50 43.0**	**+3.3**
	baz=0.0,slow=20,SNR=1.0						
AAK				Lg	Lg	10 51 11.9	
	0.2nm,0.3s,baz=27,slow=9.0,SNR=13						
AAK				LR	LR	10 51 29.2	
	comp=Z,48nm,19.6s,baz=226,slow=34						
AAK	**Ala-Archa**	**6.18**	**32**	P	**Pn**	**10 49 31.8**	**+1.9**
	SNR=22						
AAK	**Ala-Archa**	**6.18**	**32**	Pn	**Pn**	**10 49 31.7**	**+1.7**
	8.3nm,0.6s						
AAK				⇓Sn	Sb	10 51 11.3	+10
	23nm,0.8s						
CHMS	**Chumysh**	**6.59**	**32**	P	**Pn**	**10 49 36.8**	**+1.5**
	SNR=5.5						
USP	**Ospenovka**	**6.71**	**29**	P	**Pn**	**10 49 38.8**	**+1.8**
	SNR=16						
TKM2	**Tokmak 2**	**6.90**	**36**	P	**Pn**	**10 49 41.6**	**+1.8**
	SNR=6.7						
TKM2	**Tokmak 2**	**6.90**	**36**	⇓Pn	**Pn**	**10 49 41.5**	**+1.7**
	5.4nm,0.5s						
TKM2				⇓Sn	Sb	10 51 32.0	+10
	25nm,1.1s						
GEYT	**Alibeck**	**9.44**	**276**	Pn	**Pn**	**10 50 14.1**	**-0.5**
	0.4nm,0.3s,baz=110,slow=12,SNR=1.4						
MK31	**Makanchi Array**	**13.00**	**40**	P	**Pn**	**10 51 03.2**	**+0.1**
	3.6nm,0.9s,baz=229,slow=11,SNR=10						
MKAR	**Makanchi Array**	**13.00**	**40**	Pn	**Pn**	**10 51 03.3**	**+0.2**
	0.1nm,0.3s,baz=233,slow=12,SNR=11						
AB31	**Akbulak array**	**13.84**	**331**	P	**Pn**	**10 51 13.2**	**-1.3**
	1.0nm,0.5s,baz=156,slow=12,SNR=29						
KURBB	**Kurchatov Arra**	**14.47**	**22**	Pn	**Pn**	**10 51 19.8**	**-3.4**
	0.1nm,0.3s,baz=209,slow=12,SNR=7.9						
DANN	**Dangsing**	**14.69**	**124**	*e*P	**Pn**	**10 51 24.4**	**-2.2**
KOLN	**Koldanda**	**14.98**	**126**	*e*P	**Pn**	**10 51 27.8**	**-2.6**
GKN	**Gorkha**	**15.50**	**123**	*e*P	**Pn**	**10 51 34.9**	**-2.2**
AKTO	**Aktyubinsk**	**15.53**	**330**	Pn	**Pn**	**10 51 35.8**	**-1.5**
	0.3nm,0.3s,baz=156,slow=11,SNR=4.5						
AKTO	**Aktyubinsk**	**15.53**	**330**	⇑P	**P**	**10 51 41.6**	**+0.2**
	8.6nm,0.8s						
BVAR	**Borovoye Array**	**15.54**	**1**	Pn	**Pn**	**10 51 34.2**	**-3.1**
	0.2nm,0.3s,baz=198,slow=19,SNR=6.1						
DMN	**Daman**	**16.07**	**123**	*e*P	**Pn**	**10 51 42.5**	**-2.1**
PKIN	**Phulchoki**	**16.29**	**123**	*e*P	**Pn**	**10 51 45.5**	**-1.8**
PKI	**Pulchoki**	**16.30**	**123**	*e*P	**Pn**	**10 51 45.9**	**-1.7**
JIRN	**Jiri**	**16.77**	**121**	*e*P	**Pn**	**10 51 50.5**	**-3.0**
RAMN	**Ramite**	**17.50**	**122**	*e*P	**Pn**	**10 51 58.4**	**-4.2**
ODAN	**Odare**	**18.10**	**121**	*e*P	**Pn**	**10 52 04.6**	**-5.3**
ZALV	**Zalesovo Beam**	**19.37**	**27**	P	**P**	**10 52 22.7**	**-0.9**
	0.5nm,0.3s,baz=215,slow=10,SNR=15						
ARU	**Arti**	**20.45**	**342**	P	Pn	10 52 36.6	-0.9
	1.0nm,0.6s,baz=164,slow=8.7,SNR=4.3						
ARU				LR	LR	11 01 34.9	
	comp=Z,70nm,19.8s,baz=108,slow=40						
BELG	**Belogornoye**	**21.63**	**321**	P	**P**	**10 52 47.4**	**-0.7**
	23nm,1.0s,baz=310,slow=3.1,SNR=4.6						
TLY	**Talaya**	**27.55**	**48**	LR	LR	11 04 41.1	
	comp=Z,22nm,18.2s,baz=333,slow=36						
TORD	**Torodi Ar. Bea**	**64.96**	**268**	P	**P**	**10 58 39.2**	**+1.4**
	0.3nm,0.6s,baz=47,slow=4.7,SNR=1.3						
WRA	**Warramunga Arr**	**83.18**	**121**	P	**P**	**11 00 22.6**	**-1.4**
	0.6nm,0.7s,baz=321,slow=4.9,SNR=13						
ASAR	**Alice Springs**	**85.46**	**124**	P	**P**	**11 00 34.4**	**-1.2**
	0.7nm,0.6s,baz=309,slow=4.9,SNR=21						

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*IDC **15** 11:02:08.4±4.0, 22°.87N×144°.08E, h101^{km}±33^{km}, mb3.6/9, mb1 3.7/10, mb1mx3.4/56, mbtmp4.0/10, Error ellipse: s-maj=84.7km s-min=15.6km az=80.0*
ISC 15 11:02:09.6±2.2, **22°.9N**±0°.1×**143°.6E**±0°.6, **h100**^{km}, **n10**, σ**1^{s}.24**/10, **mb4.0**/8, **Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**4.38**	**344**	P	**Pn**	**11 03 13.7**	**-0.1**
	16nm,0.3s,baz=323,slow=21,SNR=21						
JCJ				S	**Sn**	**11 04 01.7**	**-2.1**
	36nm,0.3s,baz=270,slow=21,SNR=16						
KSRS	**Korea Array**	**19.80**	**321**	P	Pn	11 06 36.1	+1.6
	1.3nm,0.6s,baz=146,slow=9.0,SNR=14						
KLR	**Kul'dur**	**27.90**	**343**	P	**P**	**11 07 51.9**	**+1.9**
	0.9nm,0.6s,baz=141,slow=14,SNR=2.4						
SONM	**Songino Array**	**38.66**	**319**	P	**P**	**11 09 24.4**	**+0.8**
	0.8nm,0.6s,baz=131,slow=8.7,SNR=3.6						
WRA	**Warramunga Arr**	**43.51**	**193**	P	**P**	**11 10 03.0**	**-0.3**
	0.5nm,0.3s,baz=16,slow=9.3,SNR=38						
FITZ	**Fitzroy Crossi**	**44.34**	**205**	P	**P**	**11 10 09.9**	**-0.1**
	3.0nm,1.1s,baz=32,slow=7.1,SNR=2.3						
ASAR	**Alice Springs**	**47.22**	**192**	P	**P**	**11 10 31.6**	**-1.1**
	0.2nm,0.3s,baz=12,slow=7.0,SNR=10						
ZALV	**Zalesovo Beam**	**53.51**	**321**	P	**P**	**11 11 19.7**	**+0.1**
	0.7nm,0.3s,baz=97,slow=11,SNR=1.2						
MKAR	**Makanchi Array**	**54.16**	**312**	P	**P**	**11 11 25.2**	**+0.6**
	0.9nm,0.4s,baz=87,slow=9.7,SNR=8.1						
FINES	**FINESS Array B**	**82.27**	**335**	P	**P**	**11 14 18.8**	**-0.8**
	8.8nm,1.2s,baz=73,slow=6.6,SNR=4.2						

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*IDC **15** 11:16:16.2±15.0, 36°.22N×70°.60E, h107^{km}±146^{km}, mb3.3/3, mb1 3.3/5, mb1mx3.1/45, mbtmp3.7/5, ML3.5/2, Error ellipse: s-maj=89.8km s-min=34.8km az=4.0*
*NNC **15** 11:16:18.4±8.4, 36°.81N×70°.11E, h0^{km}, mb3.9, mpv3.6, Error ellipse: s-maj=79.8km s-min=46.2km az=159.0*
ISC 15 11:16:17.4±3.1, **36°.3N**±0°.2×**70°.6E**±0°.2, **h100**^{km}, **n10**, σ**1^{s}.96**/10, **2C-3D**, **Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.81**	**359**	P	**Pn**	**11 17 53.4**	**-1.2**
	0.6nm,0.2s,baz=182,slow=12,SNR=23						
KK31				S	**Sn**	**11 19 10.4**	**-0.2**
	3.2nm,0.5s,baz=187,slow=29,SNR=9.0						
AAK	**Ala-Archa**	**7.02**	**24**	⇑P	**Pn**	**11 17 59.2**	**+1.5**
	2.3nm,0.4s						
AAK				⇓S	**Sn**	**11 19 13.2**	**-2.8**
	8.4nm,0.7s						
TKM2	**Tokmak 2**	**7.67**	**29**	⇓P	**Pn**	**11 18 07.3**	**+0.8**
	3.4nm,0.7s						
TKM2				S	**Sn**	**11 19 35.0**	**+3.2**
MKAR	**Makanchi Array**	**13.66**	**36**	P	**Pn**	**11 19 25.5**	**-1.2**
	0.2nm,0.3s,baz=221,slow=15,SNR=2.8						
AB31	**Akbulak array**	**15.12**	**332**	⇑P	Pn	11 19 43.5	-2.0
	0.5nm,0.3s,baz=155,slow=12,SNR=50						
AKTO	**Aktyubinsk**	**16.81**	**331**	P	**Pn**	**11 20 06.3**	**-0.2**
	0.3nm,0.3s,baz=138,slow=10,SNR=6.2						
AKTO	**Aktyubinsk**	**16.81**	**331**	⇓P	**Pn**	**11 20 07.6**	**+1.2**
	2.2nm,0.7s						
ZALV	**Zalesovo Beam**	**20.25**	**25**	P	**P**	**11 20 43.3**	**-1.1**
	5.2nm,0.4s,baz=219,slow=11,SNR=22						
TORD	**Torodi Ar. Bea**	**65.39**	**268**	P	P	11 26 47.4	-2.1
	0.2nm,0.5s,baz=61,slow=6.3,SNR=1.9						
WRA	**Warramunga Arr**	**82.15**	**122**	P	P	11 28 25.4	-1.8
	0.1nm,0.4s,baz=322,slow=5.1,SNR=1.6						

IDC 15 11:21:05.9±7.0, **17°.39S**×**173°.86W**, **h0**^{km}, **mb3.6**/3, **mb1 3.9**/3, **mb1mx3.4**/36, **mbtmp3.6**/3, **Error ellipse: s-maj=315.2km s-min=35.2km az=141.0**, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**48.98**	**258**	P	P	11 29 53.7	-1.0
	0.1nm,0.3s,baz=96,slow=6.7,SNR=11						
ASAR	**Alice Springs**	**49.10**	**254**	P	P	11 29 56.4	+0.8
	1.1nm,0.5s,baz=88,slow=8.2,SNR=13						
ILAR	**Eielson Array**	**84.47**	**11**	P	P	11 33 40.4	+0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	0.2nm,0.4s,baz=220,slow=5.7,SNR=7.1						
BRTR	**Keskin Array B**	**147.38**	**319**	PKPbc	PKPbc	11 40 51.0	-1.1
	0.4nm,0.3s,baz=58,slow=3.0,SNR=2.5						

NOU 15 11:27:33.4, 18°.64S×168°.96E, h0^{km}, MLv4.0/8, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTV	**Rentapao**	**0.98**	**329**	P	Pb	11 27 53.9	+0.6
DVP	**Devils Point**	**1.17**	**321**	P	Pg	11 27 54.3	-1.5
LIFNC	**LIFOU**	**2.67**	**217**	P	Pn	11 28 17.0	-0.7
MARNC	**Mare, Loyalty**	**2.96**	**197**	P	Pn	11 28 20.7	-1.0
YATNC	**Mamie plateau,**	**3.92**	**209**	P	Pn	11 28 35.1	+0.2
DZM	**Mont Dzumac**	**4.15**	**214**	P	Pn	11 28 38.6	+0.5
PINNC	**Pines Island,**	**4.20**	**199**	P	Pn	11 28 39.0	+0.3

IDC 15 11:49:54.3±3.7**, 4°.94S×152°.53E, h0^{km}, mb3.5**/3**, mb1 3.8**/3**, mb1mx3.5**/27**, mbtmp3.5**/3**, Error ellipse: s-maj=150.2km s-min=48.6km az=123.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.16**	**228**	P	P	11 55 03.1	+0.5
	1.2nm,0.9s,baz=53,slow=9.8,SNR=7.6						
ASAR	**Alice Springs**	**25.87**	**222**	P	P	11 55 28.0	+0.1
	0.5nm,0.8s,baz=62,slow=8.7,SNR=4.9						
FITZ	**Fitzroy Crossi**	**29.36**	**241**	P	P	11 55 58.0	-1.2
	1.1nm,0.7s,baz=63,slow=6.8,SNR=1.4						
TORD	**Torodi Ar. Bea**	**150.10**	**288**	PKPbc	PKPbc	12 09 48.1	0.0
	0.8nm,0.9s,baz=74,slow=2.8,SNR=5.4						

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*ISK **15** 12:07:50.7, 37°.25N×31°.18E, h122^{km}±1^{km}, ML2.5/16*

*DDA **15** 12:07:54.3, 37°.28N×30°.73E, h7^{km}±6^{km}, ML1.6*

ISC 15 12:07:51.4±1.9**, 37°.26N**±0°.05×**31°.20E**±0°.04**, h122**^{km}±12^{km}**, n26, σ1^{s}.00**/34**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEPZ	**Antalya-Kepez**	**0.48**	**138**	*i* P	**Pn**	**12 08 09.0**	**-0.5**
KEPZ				*i* S	**Sn**	**12 08 22.0**	**-1.1**
KEPZ				IAML		12 08 22.0	
	comp=E,20nm,0.5s						
KEPZ				IAML		12 08 24.0	
	comp=N,31nm,0.3s						
SEDI	**Konya, Seydise**	**0.48**	**66**	*i* P	**Pn**	**12 08 09.5**	**-0.1**
SEDI				*i* S	**Sn**	**12 08 22.8**	**-0.5**
SEDI				IAML		12 08 23.0	
	comp=E,31nm,0.6s						
SEDI				IAML		12 08 25.0	
	comp=N,23nm,0.4s						
SEYD	**Seydisehir-KON**	**0.53**	**74**	PG	**Pn**	**12 08 09.9**	**+0.1**
SEYD				SG	**Sn**	**12 08 23.1**	**-0.7**
ANTB	**Antalya**	**0.56**	**231**	PG	**Pn**	**12 08 09.9**	**0.0**
KORT	**Korkueli**	**0.73**	**250**	PG	**Pn**	**12 08 10.9**	**-0.4**
ISP	**Isparta**	**0.78**	**316**	PG	**Pn**	**12 08 11.2**	**-0.5**
BAGO	**Egridir - ISPA**	**0.80**	**336**	*i* P	**Pn**	**12 08 12.0**	**+0.2**
BAGO				*i* S	**Sn**	**12 08 28.0**	**+0.6**
YVAC	**Isparta, Yalva**	**1.01**	**2**	*i* P	**Pn**	**12 08 14.2**	**+0.4**
YVAC				IAML		12 08 31.0	
	comp=E,9.6nm,0.9s						
YVAC				*i* S	**Sn**	**12 08 31.1**	**+0.2**
HDMB	**Hadim**	**1.07**	**106**	PN	**Pn**	**12 08 14.4**	**-0.1**
KONT	**Konya--Tatoy**	**1.15**	**53**	PN	**Pn**	**12 08 15.6**	**+0.5**
ELL	**Elmali**	**1.15**	**244**	PN	**Pn**	**12 08 14.9**	**-0.3**
AKUM	**Antalya-Kumluc**	**1.16**	**217**	*i* P	**Pn**	**12 08 16.3**	**+1.1**
AKUM				*i* S	**Sn**	**12 08 37.6**	**+4.5**
AKUM				IAML		12 08 38.0	
	comp=N,43nm,0.4s						
AKUM				IAML		12 08 43.0	
	comp=E,24nm,0.6s						
GAZI	**Gazipasa**	**1.36**	**138**	*i* P	**Pn**	**12 08 17.4**	**0.0**
GAZI				*i* S	**Sn**	**12 08 36.2**	**-0.8**
GAZI	**Gazipasa**	**1.36**	**138**	PN	**Pn**	**12 08 17.3**	**0.0**
CAME	**Cameli-Denizli**	**1.55**	**259**	PN	**Pn**	**12 08 19.6**	**0.0**
AKAS	**Kas**	**1.64**	**232**	*i* P	**Pn**	**12 08 19.9**	**-0.8**
AKAS				*i* S	**Sn**	**12 08 41.5**	**-1.5**
AKAS				IAML		12 08 46.0	
	comp=E,34nm,0.3s						
AKAS	**Kas**	**1.64**	**232**	PN	**Pn**	**12 08 20.1**	**-0.6**
FETY	**Fethiye**	**1.81**	**251**	PN	**Pn**	**12 08 22.6**	**0.0**
BERE	**Bereket-Mersin**	**1.86**	**119**	PN	**Pn**	**12 08 23.5**	**+0.2**
TEKE	**Tekeli-Mersin**	**1.90**	**125**	PN	**Pn**	**12 08 23.6**	**0.0**
TEVE	**Tevekalti-Mers**	**1.98**	**114**	PN	**Pn**	**12 08 24.7**	**0.0**
DALY	**Dalyan (Mula)**	**2.09**	**259**	PN	**Pn**	**12 08 25.1**	**-0.8**
KEBE	**Keben-Mersin**	**2.17**	**111**	PN	**Pn**	**12 08 27.2**	**+0.1**
IKL	**Isikli**	**2.24**	**116**	PN	**Pn**	**12 08 28.0**	**+0.1**
YER	**Yerkesik**	**2.33**	**268**	PN	**Pn**	**12 08 28.9**	**-0.2**
TURN	**Turunc**	**2.42**	**259**	PN	**Pn**	**12 08 29.5**	**-0.6**

KRSC 15 12:15:53.5±1.9**, 50°.40N×157°.02E, h47**^{km}±20^{km}**, ML4.2, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.64**	**297**	*e*P	Pn	12 16 06.9	+0.5
SKR				*e*S	Sn	12 16 15.6	0.0
PAU	**Pauzhetka**	**1.08**	**353**	*e*P	Pn	12 16 14.2	+2.0
PAU				*e*S	Sn	12 16 28.6	+2.5
KDTR	**Khodutka, Kamc**	**1.56**	**25**	*e*P	Pn	12 16 21.0	+2.2
KDTR				*e*S	Sn	12 16 40.7	+2.8
MIPR	**Malaya Ipel'ka**	**1.89**	**355**	*e*P	Pn	12 16 25.4	+2.1
ASAK	**Asacha**	**2.06**	**15**	*e*P	Pn	12 16 28.5	+2.7
MTVR	**Mutnovka**	**2.21**	**19**	*e*P	Pn	12 16 30.8	+2.9
MTVR				*e*S	Sn	12 16 57.5	+3.5
RUS	**Russkaya**	**2.24**	**24**	*e*P	Pn	12 16 30.7	+2.6
RUS				*e*S	Sn	12 16 56.6	+2.0
GRL	**Gorelyy**	**2.26**	**17**	*e*P	Pn	12 16 31.5	+3.1
APC	**Apacha**	**2.53**	**2**	*e*P	Pn	12 16 33.1	+1.0
PET	**Petropavlovsk**	**2.82**	**20**	*e*P	Pn	12 16 39.4	+3.4
PET				*e*S	Sn	12 17 13.0	+4.3
DALK	**Dalny**	**2.85**	**22**	*e*P	Pn	12 16 39.4	+3.0
DALK				*e*S	Sn	12 17 14.2	+4.7
UGLR	**Uglovaya**	**3.03**	**21**	*e*P	Pn	12 16 42.9	+3.9
AVH	**Avacha**	**3.06**	**20**	*e*P	Pn	12 16 43.8	+4.3
KOK	**Koryaka**	**3.07**	**18**	*e*P	Pn	12 16 44.0	+4.5
SMAR	**Somma**	**3.08**	**20**	*e*P	Pn	12 16 44.1	+4.3
KRER	**Koryakskii**	**3.10**	**20**	*e*P	Pn	12 16 44.0	+3.9
KRER				*e*S	Sn	12 17 20.2	+4.2
SDLR	**Sedlovina**	**3.11**	**21**	*e*P	Pn	12 16 43.1	+3.0
NLC	**Nalytchevo**	**3.13**	**27**	*e*P	Pn	12 16 42.0	+1.7
NLC				*e*S	Sn	12 17 17.0	+0.6
SPN	**Mys Shipunski**	**3.29**	**33**	*e*P	Pn	12 16 45.2	+2.8
GNL	**Ganaly**	**3.35**	**9**	*e*P	Pn	12 16 47.2	+3.8
MKZ	**Mys Kozlova**	**5.06**	**33**	*e*P	Pn	12 17 09.3	+2.5
TUMR	**Tumrok**	**5.25**	**20**	*e*P	Pn	12 17 15.2	+5.8

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*IDC **15** 12:17:26.6±0.9, 31°.17N×141°.83E, h0^{km}, mb3.7/8, mb1 3.8/10, mb1mx3.6/50, mbtmp3.7/10, ML3.2/2, MS3.2/2, Ms1 3.3/2, ms1mx2.4/37, Error ellipse: s-maj=37.7km s-min=17.7km az=78.0*

*NIED **15** 12:17:29.5, 31°.23N×142°.18E, h33^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}4.43; $M_{\theta\theta}$-0.23; $M_{\phi\phi}$-4.19; $M_{r\theta}$-2.65; $M_{\theta\phi}$1.58; $M_{\phi r}$8.30; Fault plane solution: $M_0$9.85000×10^{14} NP1: ϕ_s342.00000°, δ76.00000°, λ91.00000°. NP2: ϕ_s159.00000°, δ14.00000°, λ87.00000°.*

*JMA **15** 12:17:29.4±0.2, 31°.23N×142°.18E, h33^{km}, M3.7*

ISC 15 12:17:29.9±0.8**, 31°.11N**±0°.06×**142°.0E**±0°.2**, h24**^{km}**, n22, σ1^{s}.31**/23**, mb3.8**/8**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHCJ	**Hachijojimakas**	**2.68**	**318**	P	**Pn**	**12 18 12.5**	**+0.9**
BSO1	**Boso 1**	**3.63**	**347**	P	**Pn**	**12 18 24.2**	**+0.1**
BSO1				*e*S	**Sn**	**12 19 05.7**	**-0.3**
CBIJ	**Chichi jima**	**4.00**	**177**	P	**Pn**	**12 18 32.2**	**+2.5**
JCJ	**Chichijima**	**4.00**	**177**	Pn	**Pn**	**12 18 31.4**	**+1.6**
	6.1nm,0.3s,baz=274,slow=23,SNR=7.8						
JCJ				Sn	**Sn**	**12 19 13.1**	**-2.8**
	4.7nm,0.3s,baz=310,slow=18,SNR=2.0						
JOD2	**Odawara 2**	**4.79**	**331**	P	**Pn**	**12 18 42.5**	**+1.9**
JHU	**Hanno**	**5.23**	**335**	P	**Pn**	**12 18 47.9**	**+1.2**
JYT	**Yasato**	**5.32**	**344**	*e*S	**Sn**	**12 19 47.7**	**-0.5**
JRY	**Ryogami san**	**5.52**	**333**	P	**Pn**	**12 18 52.3**	**+1.7**
JHO	**Hitachi**	**5.61**	**349**	P	**Pn**	**12 18 51.1**	**-0.7**
JAG	**Ashikaga**	**5.70**	**339**	P	**Pn**	**12 18 53.8**	**+0.7**
JAG				*e*S	**Sn**	**12 19 56.8**	**-0.9**
MJAR	**Matsushiro Arr**	**6.25**	**331**	Pn	**Pn**	**12 19 00.4**	**-0.2**
	0.2nm,0.3s,baz=162,slow=11,SNR=13						
SONM	**Songino Array**	**31.79**	**312**	P	**P**	**12 23 52.7**	**+0.2**
	0.7nm,0.6s,baz=122,slow=11,SNR=3.6						
CMAR	**Chiang Mai Arr**	**40.79**	**262**	LR	LR	12 42 19.3	
	comp=Z,15nm,18.1s,baz=205,slow=37						
ZALV	**Zalesovo Beam**	**46.39**	**317**	P	**P**	**12 25 53.2**	**-1.0**
	0.6nm,0.5s,baz=79,slow=7.5,SNR=2.1						
MKAR	**Makanchi Array**	**47.84**	**307**	P	**P**	**12 26 03.7**	**-2.0**
	0.5nm,0.5s,baz=90,slow=12,SNR=4.0						
WRA	**Warramunga Arr**	**51.28**	**189**	P	**P**	**12 26 32.3**	**+0.3**
	0.4nm,0.5s,baz=5.8,slow=7.6,SNR=20						
ILAR	**Eielson Array**	**54.33**	**30**	P	**P**	**12 26 54.3**	**+0.2**
	0.2nm,1.0s,baz=267,slow=6.3,SNR=1.3						
ASAR	**Alice Springs**	**55.00**	**189**	P	**P**	**12 27 00.2**	**+0.8**
	0.4nm,0.4s,baz=2.3,slow=5.0,SNR=32						
FINES	**FINESS Array B**	**74.28**	**333**	P	**P**	**12 29 04.5**	**-0.3**
	3.1nm,1.0s,baz=73,slow=4.8,SNR=1.7						
BRTR	**Keskin Array B**	**83.14**	**312**	LR	LR	13 11 44.1	
	comp=Z,21nm,18.3s,baz=283,slow=39						
TXAR	**Lajitas Array**	**93.36**	**53**	P	**P**	**12 30 44.2**	**+0.8**
	0.1nm,0.8s,baz=323,slow=3.9,SNR=1.5						
DBIC	**Dimbokro**	**130.82**	**314**	PKP	**PKPdf**	**12 36 40.1**	**+0.2**
	4.0nm,0.7s,baz=9.0,slow=8.6,SNR=4.3						

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*IDC **15** 12:21:44.2±1.6, 27°.02S×176°.30W, h0^{km}, mb3.4/4, mb1 3.8/4, mb1mx3.6/20, mbtmp3.4/4, ML4.9/1, Error ellipse: s-maj=52.6km s-min=25.8km az=135.0*

ISC 15 12:21:49.4±1.3**, 27°.0S**±0°.2×**176°.3W**±0°.3**, h35**^{km}**, n6, σ1^{s}.22**/6**, mb3.4**/4**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.62**	**212**	Pn	**Pn**	**12 22 27.9**	**-1.3**
	242nm,0.3s,baz=72,slow=20,SNR=8.0						
RAO				Sn	**Sn**	**12 23 01.3**	**+1.6**
	69nm,0.3s,baz=80,slow=23,SNR=1.5						
URZ	**Urewera**	**12.48**	**205**	Sn	Sn	12 26 50.0	-12
	0.5nm,0.3s,baz=300,slow=24,SNR=1.5						
ASAR	**Alice Springs**	**44.89**	**263**	P	**P**	**12 30 00.6**	**-0.3**
	0.2nm,0.4s,baz=100,slow=6.8,SNR=14						
WRA	**Warramunga Arr**	**45.58**	**268**	P	**P**	**12 30 06.6**	**+0.3**
	0.3nm,0.4s,baz=106,slow=7.8,SNR=9.1						
TXAR	**Lajitas Array**	**89.32**	**56**	P	**P**	**12 34 42.7**	**+0.3**
	0.2nm,0.9s,baz=211,slow=6.3,SNR=2.6						
ILAR	**Eielson Array**	**94.34**	**12**	P	**P**	**12 35 04.9**	**+0.2**
	0.1nm,0.8s,baz=193,slow=3.7,SNR=1.1						

NNC 15 12:40:39.2±11.0**, 36°.95N×69°.93E, h0**^{km}**, mb3.7, mpv3.0, 4C-1D, Error ellipse: s-maj=123.1km s-min=66.5km az=150.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.17**	**4**	⇑Pn	Pn	12 42 15.9	+4.3
	0.4nm,0.3s,baz=179,slow=12,SNR=17						
KK31				⇑Sn	Sn	12 43 25.5	+2.7
	2.1nm,0.5s,baz=183,slow=21,SNR=7.3						
AAK	**Ala-Archa**	**6.68**	**30**	⇑Pn	Pn	12 42 18.7	-0.1
	0.7nm,0.5s						
AAK				⇑Sn	Sn	12 43 35.1	-0.6
	6.0nm,0.6s						
AB31	**Akbulak array**	**14.29**	**333**	P	Pn	12 43 59.8	-2.8
	1.0nm,0.5s,baz=144,slow=11,SNR=20						
AKTO	**Aktyubinsk**	**15.97**	**331**	⇓P	Pn	12 44 20.5	-4.7
	2.6nm,0.8s						

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*IDC **15** 13:07:43.1±0.6, 6°.65N×94°.31E, h0^{km}, mb4.0/19, mb1 4.1/21, mb1mx3.9/45, mbtmp4.0/21, ML4.1/2, MS3.4/17, Ms1 3.4/17, ms1mx3.2/37, Error ellipse: s-maj=23.1km s-min=14.1km az=48.0*

*NEIC **15** 13:07:45.2±0.9, 6°.67N±0°.06×94°.35E±0°.10, h10^{km}±1^{km}, mb4.6/32, Error ellipse: s-maj=18.6km s-min=4.6km az=237.0*

ISC 15 13:07:44.6±0.5**, 6°.61N**±0°.08×**94°.29E**±0°.08**, h10**^{km}**, n89, σ1^{s}.47**/77**, mb4.4**/39**, MS3.5**/16**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	**Prapat**	**5.97**	**129**	Pn	**Pn**	**13 09 14.4**	**+1.1**
	0.9nm,0.3s,baz=314,slow=17,SNR=2.9						
RPSI	**Rantau Prapat**	**6.04**	**130**		**Pn**	**13 09 14.4**	**+0.3**
PBKT	**Sadao Pong**	**11.87**	**33**	Pn	**Pn**	**13 10 32.9**	**-1.1**
CMAR	**Chiang Mai Arr**	**12.62**	**21**	Pn	**Pn**	**13 10 43.1**	**-1.2**
	1.0nm,0.3s,baz=212,slow=14,SNR=7.8						
CMAR				LR	LR	13 15 04.4	
	comp=Z,121nm,19.6s,baz=226,slow=35						
CHTO	**Chiang Mai**	**12.95**	**20**		**Pn**	**13 10 48.0**	**-0.9**
PALK	**Pallekele**	**13.50**	**274**	Sn	**Sn**	**13 13 23.2**	**-3.6**
	0.4nm,0.3s,baz=131,slow=20,SNR=1.7						
BOK	**Bokaro**	**18.90**	**336**	*e*P	**Pn**	**13 12 11.0**	**+4.9**
KOHI	**KOHIMA**	**19.01**	**360**	*e*P	**P**	**13 12 05.4**	**-1.4**
ODAN	**Odare**	**21.18**	**343**	*e*P	**P**	**13 12 32.4**	**+1.8**
RAMN	**Ramite**	**21.51**	**341**	*e*P	**P**	**13 12 34.1**	**0.0**
TAPN	**Taplejung**	**21.55**	**344**	*e*P	**P**	**13 12 37.6**	**+2.9**
JIRN	**Jiri**	**22.30**	**341**	*e*P	**P**	**13 12 44.0**	**+1.2**
PKIN	**Phulchoki**	**22.50**	**339**	*e*P	**P**	**13 12 45.2**	**+0.4**
GKN	**Gorkha**	**23.16**	**338**	*e*P	**P**	**13 12 51.7**	**+0.1**
DANN	**Dangsing**	**23.81**	**336**	*e*P	**P**	**13 12 59.2**	**+1.0**
H08S3	**Diego Garcia H**	**25.94**	**237**	T	T	13 40 04.7	
	baz=56,slow=75,SNR=25						
H08S2	**Diego Garcia H**	**25.94**	**237**	T	T	13 40 03.2	
	baz=56,slow=75,SNR=26						
H08S1	**Diego Carcia H**	**25.96**	**237**	T	T	13 40 02.3	
	baz=56,slow=75,SNR=6.1						
TOLI2	**Tolitoli**	**26.98**	**101**	P	**P**	**13 13 27.0**	**+0.1**
TOLI2				IAmb	IAmb	13 13 30.9	
	comp=Z,10nm,0.8s						
NIL	**Nilore**	**33.23**	**327**	P	**P**	**13 14 21.9**	**-0.2**
SIJI	**Sorong**	**37.64**	**100**	LR	LR	13 31 03.0	
	comp=Z,25nm,20.0s,baz=258,slow=37						
JOW	**Kunigami**	**38.06**	**54**	LR	LR	13 32 14.8	
	comp=Z,25nm,18.3s,baz=155,slow=39						
DRK	**Karamyk**	**38.48**	**332**	P	**P**	**13 15 07.1**	**-0.2**
DRK				IAmb	IAmb	13 15 24.5	
	comp=Z,12nm,0.8s						
GAR	**Garm**	**38.83**	**330**	P	**P**	**13 15 10.0**	**-0.1**
GAR				IAmb	IAmb	13 15 17.3	
	comp=Z,6.9nm,0.7s						
CHGR	**Chuyangaron**	**39.17**	**328**	P	**P**	**13 15 12.3**	**-0.6**
CHGR				IAmb	IAmb	13 15 33.6	
	comp=Z,10nm,0.7s						
BTK	**Batken**	**39.41**	**331**	P	**P**	**13 15 15.1**	**+0.3**
MK31	**Makanchi Array**	**41.35**	**348**	P	**P**	**13 15 29.9**	**-0.8**
MKAR	**Makanchi Array**	**41.35**	**348**	P	**P**	**13 15 29.8**	**-0.9**
	comp=Z,5.0nm,0.9s,baz=172,slow=8.1,SNR=18						
MKAR				PcP	**PcP**	**13 17 29.0**	**0.0**
	comp=Z,0.6nm,0.8s,baz=166,slow=4.7,SNR=2.2						
MKAR				LR	LR	13 35 57.8	
	comp=Z,24nm,18.8s,baz=149,slow=41						
MAKZ	**Makanchi**	**41.43**	**347**	P	**P**	**13 15 30.7**	**-0.7**
SONM	**Songino Array**	**42.36**	**12**	P	**P**	**13 15 38.7**	**-0.5**
	comp=Z,0.7nm,0.6s,baz=264,slow=2.9,SNR=2.3						
SONM				PcP	**PcP**	**13 17 31.8**	**-0.7**
	comp=Z,0.4nm,0.5s,baz=212,slow=5.1,SNR=1.4						
JNU	**Nakatsue**	**42.98**	**47**	P	**P**	**13 15 44.6**	**+0.3**
	comp=Z,172nm,0.4s,baz=197,slow=1.6,SNR=1.4						
KSRS	**Korea Array**	**43.33**	**40**	P	**P**	**13 15 45.8**	**-1.2**
	comp=Z,0.5nm,0.7s,baz=205,slow=5.4,SNR=2.4						
KSRS				LR	LR	13 34 21.3	
	comp=Z,39nm,18.9s,baz=260,slow=37						
GEYT	**Alibeck**	**45.24**	**319**	P	**P**	**13 16 03.5**	**+1.1**
	comp=Z,2.0nm,0.4s,baz=96,slow=4.5,SNR=2.6						
GEYT				LR	LR	13 35 47.9	
	comp=Z,39nm,19.5s,baz=95,slow=37						
H01W3	**Cape Leeuwin H**	**45.32**	**157**	T	T	14 04 57.9	
	baz=329						
H01W2	**Cape Leeuwin H**	**45.33**	**157**	T	T	14 05 03.5	
	baz=329						
H01W1	**Cape Leeuwin H**	**45.34**	**157**	T	T	14 05 06.6	
	baz=329						
KURBB	**Kurchatov Arra**	**45.80**	**346**	P	**P**	**13 16 06.7**	**+0.2**
	comp=Z,1.5nm,0.5s,baz=168,slow=7.0,SNR=18						
KURBB				PcP	**PcP**	**13 17 43.2**	**-0.7**
	comp=Z,0.9nm,0.5s,baz=164,slow=3.0,SNR=2.6						
WB0	**Warramunga Arr**	**47.38**	**124**	P	**P**	**13 16 18.6**	**-0.8**
WB0				IAmb	IAmb	13 16 27.6	
	comp=Z,2.2nm,0.7s						
WRA	**Warramunga Arr**	**47.42**	**125**	P	**P**	**13 16 19.2**	**-0.4**
	comp=Z,1.2nm,0.7s,baz=306,slow=8.6,SNR=18						
WRA				PcP	**PcP**	**13 17 50.8**	**+0.5**
	comp=Z,0.4nm,0.4s,baz=313,slow=3.0,SNR=5.6						
WRA				LR	LR	13 38 11.7	
	comp=Z,48nm,18.3s,baz=300,slow=39						
WRA	**Warramunga Arr**	**47.42**	**125**	P	**P**	**13 16 18.8**	**-0.9**
WB2	**Warramunga Arr**	**47.43**	**125**	P	**P**	**13 16 19.1**	**-0.6**
WB2				IAmb	IAmb	13 16 28.3	
	comp=Z,3.2nm,0.8s						
WR0	**Warramunga Arr**	**47.59**	**125**	P	**P**	**13 16 20.6**	**-0.5**
WR0				IAmb	IAmb	13 16 42.7	
	comp=Z,8.4nm,1.4s						
ZAA0	**Zalesovo Array**	**47.82**	**352**	P	**P**	**13 16 22.4**	**+0.1**
ZAA0				IAmb	IAmb	13 16 29.2	
	comp=Z,9.4nm,1.0s						
ZALV	**Zalesovo Beam**	**47.82**	**352**	P	**P**	**13 16 22.2**	**-0.1**
	comp=Z,1.3nm,0.4s,baz=182,slow=6.8,SNR=9.3						
ZALV	**Zalesovo Beam**	**47.82**	**352**	P	**P**	**13 16 22.0**	**-0.2**
AS31	**Alice Springs**	**49.00**	**129**	P	**P**	**13 16 31.1**	**-0.8**
ASAR	**Alice Springs**	**49.00**	**129**	P	**P**	**13 16 31.9**	**0.0**
	comp=Z,1.1nm,0.6s,baz=302,slow=7.8,SNR=21						
ASAR				PcP	**PcP**	**13 17 56.8**	**+0.8**
	comp=Z,1.0nm,0.7s,baz=301,slow=4.1,SNR=5.1						
ASAR				LR	LR	13 39 33.0	
	comp=Z,40nm,19.5s,baz=304,slow=39						
MJAR	**Matsushiro Arr**	**49.91**	**47**	P	**P**	**13 16 38.5**	**-0.2**
	comp=Z,0.6nm,0.4s,baz=238,slow=9.9,SNR=2.1						
MJAR	**Matsushiro Arr**	**49.91**	**47**	IAmb	IAmb	13 16 53.5	
	comp=Z,8.1nm,1.4s						
BVAR	**Borovoye Array**	**50.23**	**341**	P	**P**	**13 16 40.7**	**-0.1**
	comp=Z,1.5nm,0.6s,baz=168,slow=8.8,SNR=10						
BRVK	**Borovoye**	**50.29**	**341**	P	**P**	**13 16 39.9**	**-1.3**
BRVK				IAmb	IAmb	13 16 49.6	
	comp=Z,3.1nm,0.7s						
JSD	**Sado**	**50.60**	**45**	P	**P**	**13 16 43.6**	**-0.3**
ABKAR	**Akbulak array**	**51.41**	**332**	P	**P**	**13 16 50.1**	**+0.4**
ABKAR				IAmb	IAmb	13 16 53.3	
	comp=Z,5.5nm,0.7s						
KLR	**Kul'dur**	**52.90**	**30**	LR	LR	13 41 34.1	
	comp=Z,47nm,18.1s,baz=286,slow=38						
AKTO	**Aktyubinsk**	**53.12**	**332**	P	**P**	**13 17 02.0**	**-0.5**
	comp=Z,2.8nm,0.6s,baz=129,slow=4.2,SNR=7.8						
BBOO	**Buckleboo**	**55.78**	**137**	P	**P**	**13 17 22.3**	**+0.2**
KMBO	**Kilima Mbogo**	**57.44**	**264**	P	**P**	**13 17 34.6**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=24,slow=20,SNR=1.3						
KMBO				LR	LR	13 39 55.7	
	comp=Z,37nm,19.3s,baz=92,slow=34						
KMBO	**Kilima Mbogo**	**57.44**	**264**	IAmb	IAmb	13 17 47.3	
	comp=Z,3.7nm,0.8s						
STKA	**Stephens Creek**	**59.13**	**133**	LR	LR	13 47 43.3	
	comp=Z,31nm,18.0s,baz=282,slow=41						
BR131	**Keskin Array S**	**63.37**	**311**	P	**P**	**13 18 14.4**	**-0.2**
BR131				IAmb	IAmb	13 18 22.9	
	comp=Z,3.4nm,0.7s						
BRTR	**Keskin Array B**	**63.37**	**311**	P	**P**	**13 18 14.3**	**-0.2**
	comp=Z,1.0nm,0.7s,baz=121,slow=5.9,SNR=6.1						
BRTR				LR	LR	13 48 06.7	
	comp=Z,30nm,18.9s,baz=101,slow=38						
TIXI	**Tiksi**	**68.44**	**11**	P	**P**	**13 18 44.6**	**-1.7**
AKASG	**Malin Array Be**	**69.23**	**322**	LR	LR	13 53 06.5	
	comp=Z,11nm,18.2s,baz=20,slow=39						
BURAR	**Bucovina Array**	**71.08**	**318**	P	**P**	**13 19 02.0**	**-1.3**
FIA1	**FINESS Array S**	**73.89**	**332**	P	**P**	**13 19 19.2**	**-0.4**
FIA1				IAmb	IAmb	13 19 47.5	
	comp=Z,11nm,1.2s						
FINES	**FINESS Array B**	**73.89**	**332**	P	**P**	**13 19 19.8**	**+0.2**
	comp=Z,1.2nm,0.5s,baz=101,slow=6.1,SNR=13						
KEV	**Kevo**	**76.07**	**341**	P	**P**	**13 19 32.2**	**+0.2**
ONTNC	**Ouen Toro**	**76.19**	**115**	P	**P**	**13 19 33.6**	**0.0**
ARCES	**ARCESS Array B**	**76.50**	**340**	P	**P**	**13 19 34.1**	**-0.4**
	comp=Z,1.4nm,0.5s,baz=83,slow=5.3,SNR=9.9						
ARCES				LR	LR	13 55 23.6	
	comp=Z,64nm,18.2s,baz=355,slow=37						
MAW	**Mawson**	**77.33**	**192**	LR	LR	13 50 27.6	
	comp=Z,24nm,18.3s,baz=258,slow=33						
OBKA	**Obir**	**78.18**	**316**	*e*P	**P**	**13 19 49.3**	**+4.8**
	comp=Z,5.3nm,1.3s						
GERES	**GERESS Array B**	**78.86**	**318**	P	**P**	**13 19 48.3**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=113,slow=8.7,SNR=1.9						
ABTA	**Abfaltersbach**	**79.59**	**316**	*e*P	**P**	**13 19 56.1**	**+3.8**
	comp=Z,0.5nm,0.4s						
WTTA	**Wattenberg**	**80.20**	**317**	*e*P	**P**	**13 19 57.9**	**+2.2**
	comp=Z,2.2nm,0.7s						
SQTA	**Sankt Quirin**	**80.49**	**317**	*e*P	**P**	**13 19 60.0**	**+2.8**
	comp=Z,2.7nm,0.6s						
MOTA	**Moosalm**	**80.56**	**317**	*e*P	**P**	**13 19 59.6**	**+2.0**
	comp=Z,3.7nm,0.9s						
RETA	**Reutte**	**80.79**	**317**	*e*P	**P**	**13 20 03.0**	**+4.3**
	comp=Z,4.1nm,0.8s						
FETA	**Feichten**	**80.81**	**316**	*e*P	**P**	**13 20 01.2**	**+2.2**
	comp=Z,1.9nm,0.7s						
NB2	**NORSAR Subarra**	**80.90**	**331**	P	**P**	**13 19 58.7**	**-0.3**
	comp=Z,1.7nm,0.7s,baz=91,slow=5.6						
NOA	**NORSAR Array B**	**80.90**	**331**	P	**P**	**13 19 58.5**	**-0.4**
	comp=Z,1.4nm,0.8s,baz=94,slow=5.6,SNR=4.3						
NOA				LR	LR	14 00 17.3	
	comp=Z,15nm,18.2s,baz=250,slow=39						
DAVA	**Damuels**	**81.39**	**317**	*e*P	**P**	**13 20 04.1**	**+2.1**
	comp=Z,10nm,1.3s						
TORD	**Torodi Ar. Bea**	**91.03**	**283**	P	**P**	**13 20 49.8**	**-0.2**
	comp=Z,0.2nm,0.8s,baz=81,slow=4.1,SNR=1.6						
TORD	**Torodi Ar. Bea**	**91.03**	**283**	IAmb	IAmb	13 20 52.6	
	comp=Z,1.4nm,1.4s						
VNDA	**Vanda**	**91.67**	**168**	LR	LR	13 57 41.5	
	comp=Z,22nm,18.2s,baz=311,slow=33						
ESDC	**Sonseca Array**	**92.14**	**310**	P	**P**	**13 20 55.6**	**+0.8**
	comp=Z,1.0nm,0.8s,baz=53,slow=4.0,SNR=7.0						
ESDC	**Sonseca Array**	**92.14**	**310**	IAmb	IAmb	13 20 59.4	
	comp=Z,0.9nm,0.8s						
NVAR	**Mina Array Bea**	**125.92**	**31**	PKP	**PKPdf**	**13 26 47.9**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=347,slow=3.7,SNR=2.7						
PDAR	**Pinedale Array**	**126.28**	**22**	PKP	**PKPdf**	**13 26 47.0**	**-1.3**
	comp=Z,0.5nm,0.8s,baz=27,slow=0.4,SNR=3.5						
TXAR	**Lajitas Array**	**140.31**	**25**	PKP	**PKPdf**	**13 27 13.9**	**-0.9**
	comp=Z,0.1nm,0.5s,baz=346,slow=0.6,SNR=2.4						

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*IDC **15** 13:26:21.9±1.7, 33°.50N×137°.48E, h345^{km}±22^{km}, mb3.0/6, mb1 3.1/9, mb1mx2.9/36, mbtmp3.7/9, Error ellipse: s-maj=35.5km s-min=14.7km az=74.0*

*JMA **15** 13:26:21.1±0.4, 33°.43N×137°.63E, h361^{km}, M3.4*

ISC 15 13:26:21.2±0.8**, 33°.38N**±0°.08×**137°.66E**±0°.09**, h352**^{km}**, n20, σ1^{s}.38**/22**, mb3.2**/6**, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIE	**Ise**	**1.28**	**322**	P	**Pn**	**13 27 09.4**	**+1.1**
JTNC	**Tanabenakahech**	**1.76**	**285**	P	**Pn**	**13 27 11.6**	**+0.5**
JWY	**Kouya**	**1.91**	**296**	P	**Pn**	**13 27 12.7**	**+0.6**
JYTA	**Yamagatataniai**	**2.34**	**341**	P	**Pn**	**13 27 15.6**	**+0.6**
JWT	**Wachi**	**2.66**	**316**	P	**Pn**	**13 27 17.6**	**0.0**
JRY	**Ryogami san**	**2.82**	**21**	P	**Pn**	**13 27 20.6**	**+1.6**
BSO1	**Boso 1**	**3.04**	**64**	P	**Pn**	**13 27 21.6**	**+1.3**
BSO1				*e*S	**S**	**13 28 08.0**	**0.0**
MJAR	**Matsushiro Arr**	**3.19**	**8**	P	**Pn**	**13 27 21.8**	**-0.5**
	1.0nm,0.3s,baz=190,slow=9.8,SNR=102						
MAT	**Matsushiro**	**3.19**	**8**	P	**Pn**	**13 27 22.7**	**+0.4**
MAT				S	**S**	**13 28 10.0**	**-1.6**
MAT	**Matsushiro**	**3.19**	**8**	P	**Pn**	**13 27 22.7**	**+0.4**
JAG	**Ashikaga**	**3.38**	**25**	P	**Pn**	**13 27 23.9**	**-0.1**
JCJ	**Chichijima**	**7.39**	**147**	S	**S**	**13 29 31.3**	**-4.0**
	10nm,0.3s,baz=287,slow=21,SNR=10						
ASAJ	**Asahikawa**	**11.39**	**18**	P	**Pn**	**13 28 54.6**	**-0.8**
	0.5nm,0.3s,baz=232,slow=8.0,SNR=9.7						
KLR	**Kul'dur**	**16.44**	**346**	P	**P**	**13 29 50.1**	**-0.9**
	0.1nm,0.3s,baz=153,slow=11,SNR=1.9						
SONM	**Songino Array**	**27.56**	**311**	P	**P**	**13 31 37.7**	**+0.7**
	0.4nm,0.3s,baz=99,slow=8.9,SNR=2.2						
CMAR	**Chiang Mai Arr**	**37.62**	**257**	P	**P**	**13 33 03.3**	**-0.4**
	0.4nm,0.4s,baz=63,slow=8.5,SNR=2.0						
MKAR	**Makanchi Array**	**43.56**	**305**	P	**P**	**13 33 50.8**	**-0.7**
	0.3nm,0.4s,baz=86,slow=9.3,SNR=5.3						
WRA	**Warramunga Arr**	**53.12**	**184**	P	**P**	**13 35 05.8**	**+1.9**
	0.5nm,0.3s,baz=359,slow=7.6,SNR=20						
ASAR	**Alice Springs**	**56.84**	**184**	P	**P**	**13 35 32.3**	**+2.1**
	0.2nm,0.3s,baz=16,slow=12,SNR=8.3						
FINES	**FINESS Array B**	**70.59**	**332**	P	**P**	**13 36 58.9**	**+0.3**
	1.4nm,0.6s,baz=45,slow=5.5,SNR=12						

RSNC 15 13:33:42.2±0.9**, 6°.80N×73°.16W, h142**^{km}±4^{km}**, ML3.4, Mw3.8, 4C-2D, Fault plane solution: NP1:**ϕ_s5.00000°**,** δ78.00000°**,** λ18.00000°.**, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.21**	**187**	*i* P	Pn	13 34 01.5	-0.4
BARC				*e*S	Sn	13 34 16.2	-0.5

BARC				i		13 34 19.4	
	comp=Z,593nm,0.5s						
BRRC	Barranca, Sant	0.63	299	⇓iP	Pn	13 34 03.3	0.0
BRRC				eS	Sn	13 34 19.4	0.0
BRRC				i		13 34 22.9	
	comp=Z,247nm,0.2s						
PAMC	Pamplona, Colo	0.70	40	⇑eP	Pn	13 34 04.2	-0.2
PAMC				eS	Sn	13 34 21.4	+0.1
PAMC				i		13 34 23.7	
	comp=Z,435nm,0.6s						
RUSC	La Rusia	0.90	175	eP	Pn	13 34 05.4	-0.6
RUSC				eS	Sn	13 34 23.0	-1.0
RUSC				i		13 34 25.4	
	comp=Z,264nm,0.3s						
TAMC	Tame, Arauca	1.40	105	⇑eP	Pn	13 34 09.8	-0.4
TAMC				i		13 34 30.6	
	comp=Z,156nm,0.4s						
TAMC				eS	Sn	13 34 31.2	-0.3
OCAC	Ocana	1.44	354	eP	Pn	13 34 09.5	-1.2
OCAC				eS	Sn	13 34 31.4	-1.1
OCAC				i		13 34 37.1	
	comp=Z,668nm,0.3s						
SPBC	San Pablo de B	1.46	219	iP	Pn	13 34 10.4	-0.5
SPBC				eS	Sn	13 34 31.5	-1.2
SPBC				i		13 34 38.6	
	comp=Z,420nm,0.2s						
ZARC	Zaragoza, Cauc	1.82	292	eP	Pn	13 34 14.2	-0.5
ZARC				eS	Sn	13 34 40.0	+0.3
ZARC				i		13 34 45.5	
	comp=Z,216nm,0.5s						
NORC	Norcasia	2.10	234	eP	Pn	13 34 17.4	-0.7
NORC				eS	Sn	13 34 44.9	-0.7
NORC				i		13 34 50.6	
	comp=Z,226nm,0.3s						
SMLC	San Martn de	2.19	336	eP	Pn	13 34 16.9	-2.2
SMLC				eS	Sn	13 34 46.2	-1.2
SMLC				i		13 34 48.1	
	comp=Z,231nm,0.3s						
CHIC	Chingaza	2.23	195	⇑eP	Pn	13 34 19.9	-0.2
CHIC				i		13 34 39.4	
	comp=Z,98nm,0.5s						
CHIC				eS	Sn	13 34 49.3	+0.2
HELC	Santa Helena	2.43	256	eP	Pn	13 34 22.1	-0.4
HELC				eS	Sn	13 34 53.4	0.0
HELC				i		13 35 01.5	
	comp=Z,149nm,0.4s						
UREC	San Jos de Ur	2.54	292	eP	Pn	13 34 21.6	-1.8
UREC				eS	Sn	13 34 52.6	-2.6
UREC				i		13 35 02.2	
	comp=Z,120nm,0.3s						
GUY2C	Guyana, Caldas	2.70	235	eP	Pn	13 34 25.8	-0.1
GUY2C				eS	Sn	13 34 59.7	+0.3
GUY2C				i		13 35 08.1	
	comp=Z,162nm,0.3s						
VILC	Villavicencio,	2.72	191	eP	Pn	13 34 25.0	-0.9
CBOC	Ciudad Bolivar	2.99	252	eP	Pn	13 34 29.4	+0.1
CBOC				eS	Sn	13 35 04.6	-0.9
CBOC				i		13 35 15.2	
	comp=Z,52nm,0.5s						
DBBC	Dabeiba	3.04	274	⇓iP	Pn	13 34 29.2	-0.6
DBBC				eS	Sn	13 35 05.5	-1.1
ANIL	Santa Ana	3.20	224	eP	Pn	13 34 32.4	+0.2
ANIL				eS	Sn	13 35 10.6	-0.1
ORTC	Ortega, Tolima	3.55	216	eP	Pn	13 34 35.8	-0.6
ORTC				eS	Sn	13 35 17.6	-0.7
PLMC	San Jos del P	3.63	239	⇑eP	Pn	13 34 37.1	-0.4
PLMC				eS	Sn	13 35 19.7	-0.8
YOTC	Yotoco, Valle	4.23	229	eP	Pn	13 34 44.6	-0.8
MARP	Paez Belalcaza	4.82	215	eP	Pn	13 34 52.2	-1.1

IDC ***15*** *13:53:07.2±2.3, 9°.37S×123°.49E, h0^{km}, mb3.3/1, mb1 3.8/3, mb1mx3.4/32, mbtmp3.6/3, ML3.8/2, Error ellipse: s-maj=218.7km s-min=33.2km az=55.0*
NEIC ***15*** *13:53:17.9±2.6, 9°.3S±0°.1×124°.2E±0°.2, h81^{km}±12^{km}, mb4.4/5, Error ellipse: s-maj=26.4km s-min=16.6km az=55.0*
ISC 15 13:53:09.6±0.8**, 9°.02S**±0°.10×**124°.0E**±0°.1**, h10**^{km}**, n25, **σ**1ˢ.84**/25**, mb4.6**/3**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	Kappang	5.76	313	P	Pn	13 54 32.3	-2.9
DRS	Darwin Rock St	7.62	117	P	Pn	13 55 02.6	+1.8
	13nm,1.1s						
MTN	Manton Dam	8.01	119		Pn	13 55 07.0	+0.9
MTN	Manton Dam	8.01	119	P	Pn	13 55 06.8	+0.7
	16nm,1.6s						
KNRA	Kununurra	8.11	145		Pn	13 55 08.8	+1.3
KNRA	Kununurra	8.11	145	P	Pn	13 55 08.4	+0.9
KDU	Kakadu	9.13	114	P	Pn	13 55 22.1	+0.6
	7.4nm,1.3s						
FITZ	Fitzroy Crossi	9.17	170	Pn	Pn	13 55 23.8	+1.8
WB0	Warramunga Arr	14.70	138	Pn	Pn	13 56 35.2	-2.6
WRA	Warramunga Arr	14.79	138	Pn	Pn	13 56 36.9	-2.1
	0.4nm,0.3s,baz=318,slow=14,SNR=27						
WRA				Sn	Sn	13 59 07.4	-16
	0.4nm,0.3s,baz=313,slow=23,SNR=2.7						
WRA	Warramunga Arr	14.79	138		Pn	13 56 36.4	-2.6
WRAB	Tennant Creek	14.79	138	Pn	Pn	13 56 36.4	-2.6
WRAB	Tennant Creek	14.79	138	P	Pn	13 56 36.9	-2.1
WB2	Warramunga Arr	14.80	138	Pn	Pn	13 56 36.4	-2.7
WR0	Warramunga Arr	14.94	138	Pn	Pn	13 56 38.1	-2.8
WRKA	Warakurna	16.45	166	P	Pn	13 57 00.9	+0.2
AS31	Alice Springs	17.40	148	P	Pn	13 57 11.2	-1.4
ASAR	Alice Springs	17.40	148	P	Pn	13 57 11.7	-0.9
	0.3nm,0.3s,baz=318,slow=11,SNR=33						
ASAR				S	Sn	14 00 10.6	-16
	0.1nm,0.3s,baz=321,slow=18,SNR=3.5						
QIS	Mount Isa	18.97	129	P	P	13 57 31.7	+0.4
	3.3nm,0.5s						
COEN	Coen	19.46	106	Pn	P	13 57 36.6	-0.1
COEN				IAmb	IAmb	13 57 54.9	
	comp=Z,13nm,1.5s						
COEN	Coen	19.46	106	P	P	13 57 37.4	+0.7
	comp=Z,5.0nm,1.9s						
BBOO	Buckleboo	26.19	156	P	P	13 58 44.2	-0.3
BBOO				IAmb	IAmb	13 58 47.2	
	comp=Z,19nm,1.4s						
YULB	Yu-li	32.32	355	P	P	13 59 41.2	+2.1
USA0B	Ussuriysk Arra	53.47	7	P	P	14 02 31.6	+1.7
USA0B				IAmb	IAmb	14 02 43.7	
	comp=Z,6.0nm,0.7s						
MKAR	Makanchi Array	66.81	330	P	P	14 04 01.4	-0.1
	comp=Z,0.1nm,0.5s,baz=126,slow=5.9,SNR=1.6						

JMA ***15*** *14:09:48.7±0.1, 24°.37N×123°.01E, h56^{km}±1^{km}, M2.7*
TAP ***15*** *14:09:49.2, 24°.31N×122°.98E, h47^{km}, ML3.2, B*
ISC 15 14:09:49.1±1.2**, 24°.29N**±0°.04×**123°.01E**±0°.02**, h50**^{km}±7^{km}**, n113, **σ**1ˢ.01**/181**, 1C, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.17	340	P	Pn	14 09 57.3	0.0
JYNG				S	Sn	14 10 03.2	+0.2
YOJ	Yonaguni jima	0.17	0	⇑iP	Pn	14 09 57.4	+0.1
	baz=8.0						
YOJ				iS	Sn	14 10 03.0	0.0
	baz=8.0						
YOJ	Yonaguni jima	0.17	0	P	Pn	14 09 57.2	-0.1
YOJ				S	Sn	14 10 03.3	+0.3
YOJ	Yonaguni jima	0.17	0	P	Pn	14 09 57.1	-0.2
IRIF	Iriomote-Funau	0.66	86	P	Pn	14 10 02.1	-0.2
IRIF				S	Sn	14 10 12.2	+0.3
HATJ	Hateruma jima	0.76	108	P	Pn	14 10 04.0	+0.3
HATJ				eS	Sn	14 10 15.4	+1.1
JKRS	Kuro-shima	0.91	93	P	Pn	14 10 06.0	+0.3
JKRS				S	Sn	14 10 18.8	+1.0
JIJ	Ishigaki jima	1.04	86	P	Pn	14 10 07.0	-0.3
JIJ				eS	Sn	14 10 20.1	-0.7
TWC	Suao	1.10	287	P	Pn	14 10 07.5	-0.8
	baz=295						
TWC				S	Sn	14 10 21.4	-1.0
	baz=295						
EGS		1.12	300	eP	Pn	14 10 07.6	-1.0
	baz=299						
EWUT	Wuta	1.13	278	eP	Pn	14 10 08.8	+0.1
	baz=287						
ENA	Nanau	1.17	277	P	Pn	14 10 09.0	-0.1
	baz=285						
ENA				eS	Sn	14 10 24.0	+0.1
	baz=285						
TWB1	Santiao Chiao	1.17	308	eP	Pn	14 10 09.3	+0.2
	baz=315						
NTC	Toucheng	1.21	298	eP	Pn	14 10 08.4	-1.3
	baz=297						
NTC				eS	Sn	14 10 24.0	-1.0
	baz=297						
JISG	Ishigakijimahi	1.22	76	P	Pn	14 10 09.4	-0.4
JISG				S	Sn	14 10 24.7	-0.6
NDS	Dongshan	1.23	286	P	Pn	14 10 10.0	0.0
	baz=294						
NDS				eS	Sn	14 10 25.1	-0.3
	baz=294						
ILA	Ilan	1.24	293	eP	Pn	14 10 09.7	-0.4
	baz=292						
TIPB	Shuangxi	1.27	302	iP	Pn	14 10 10.2	-0.4
	baz=311						
TIPB				S	Sn	14 10 25.3	-1.3
	baz=311						
ETL	Fush Village	1.27	264	eP	Pn	14 10 10.8	+0.3
	baz=264						
TWE	Neicheng	1.29	290	P	Pn	14 10 10.7	-0.2
	baz=298						
TWE				S	Sn	14 10 26.7	-0.4
	baz=298						
NACB	Ninganchiao	1.30	265	P	Pn	14 10 10.7	-0.2
	baz=251						
NACB				eS	Sn	14 10 27.0	-0.1
	baz=251						
TWD	Chiawan	1.31	261	P	Pn	14 10 10.5	-0.5
	baz=247						
TWD				S	Sn	14 10 26.6	-0.7
	baz=247						
ENTT	Nioudou	1.36	285	P	Pn	14 10 12.3	+0.5
	baz=292						
NWF	Wu-fen Shan	1.36	305	iP	Pn	14 10 11.5	-0.3
	baz=305						
NWF				S	Sn	14 10 28.9	+0.1
	baz=305						
WFSB	Wu-fen Shan	1.36	305	P	Pn	14 10 11.6	-0.2
	baz=305						
WFSB				S	Sn	14 10 28.7	0.0
	baz=305						
ETLH	Xiulin Townshi	1.40	267	P	Pn	14 10 12.3	0.0
	baz=266						
ETLH				eS	Sn	14 10 30.0	+0.3
	baz=266						
NDT	Datong Townshi	1.40	283	eP	Pn	14 10 13.0	+0.8
	baz=289						
NDT				eS	Sn	14 10 30.7	+1.1
	baz=289						
ETM	Tongmen	1.42	257	P	Pn	14 10 12.0	-0.6
	baz=247						
ETM				eS	Sn	14 10 29.4	-0.8
	baz=247						
NWLT	Wulai	1.46	290	P	Pn	14 10 13.1	0.0
	baz=299						
NWLT				eS	Sn	14 10 30.6	-0.5
	baz=299						
TWA	Mucha	1.47	298	eP	Pn	14 10 12.6	-0.7
	baz=298						
NNSB	Datong	1.49	276	P	Pn	14 10 13.7	+0.1
	baz=263						
NNSB				eS	Sn	14 10 32.1	+0.1
	baz=263						
NNS	Nan Shan	1.50	276	P	Pn	14 10 14.0	+0.3
	baz=264						
NNS				S	Sn	14 10 32.9	+0.6
	baz=264						
NHDH	Xindian Distri	1.51	297	eP	Pn	14 10 13.6	-0.1
	baz=296						
NHDH				eS	Sn	14 10 31.9	-0.3
	baz=296						
ESL	Shilin	1.52	252	P	Pn	14 10 13.5	-0.4
	baz=251						
ESL				eS	Sn	14 10 31.2	-1.3
	baz=251						
YHNB	Yeheng	1.54	285	P	Pn	14 10 15.0	+0.8
TATO	Taipei	1.54	296	P	Pn	14 10 14.3	+0.1
	baz=296						
TATO				S	Sn	14 10 32.7	-0.4
	baz=296						
NSK	Sanguang	1.55	285	P	Pn	14 10 15.0	+0.6
	baz=292						
NSK				eS	Sn	14 10 33.8	+0.3
	baz=292						
YM01	YM01	1.56	303	eP	Pn	14 10 14.3	-0.2
	baz=303						
YM01				eS	Sn	14 10 32.6	-1.1
	baz=303						
EGFH	Guangfu	1.57	247	eP	Pn	14 10 14.6	-0.1
	baz=246						
EGFH				eS	Sn	14 10 33.0	-0.9
	baz=246						
JTJ	Tarama	1.58	77	P	Pn	14 10 14.9	+0.2
JTJ				eS	Sn	14 10 34.0	0.0
WHF	Hehuan Shan	1.60	265	eP	Pn	14 10 15.5	+0.1
	baz=265						
FUSS	Fushou	1.61	269	P	Pn	14 10 15.7	+0.3
	baz=268						
FUSS				eS	Sn	14 10 36.0	+0.8
	baz=268						
TWY	Chenhua	1.61	308	eP	Pn	14 10 15.9	+0.7
	baz=307						
HGSD	Ruisui	1.66	242	P	Pn	14 10 14.9	-0.8
	baz=240						
HGSD				S	Sn	14 10 34.6	-1.3
	baz=240						
TWS1	Kuangyinshan	1.66	299	eP	Pn	14 10 16.1	+0.4
	baz=299						
TWT	Tachien	1.67	269	eP	Pn	14 10 17.4	+1.2
	baz=259						
TDCB	Techi	1.69	269	eP	Pn	14 10 17.1	+0.7
	baz=268						
TDCB				eS	Sn	14 10 37.4	+0.4
	baz=268						
CHGB	Renai	1.69	263	P	Pn	14 10 16.7	+0.2
	baz=251						
CHGB				eS	Sn	14 10 37.1	+0.1
	baz=251						
OWD	Renai	1.71	259	eP	Pn	14 10 16.6	-0.1
	baz=258						
OWD				eS	Sn	14 10 36.6	-0.8
	baz=258						
EHY	Hungye	1.73	243	P	Pn	14 10 16.5	-0.3
	baz=254						
EHY				eS	Sn	14 10 37.6	-0.2
	baz=254						
YULB	Yu-li	1.81	241	P	Pn	14 10 17.5	-0.3
	baz=230						
YULB				eS	Sn	14 10 39.0	-0.6
	baz=230						
EYUL	Yuli	1.81	239	eP	Pn	14 10 17.6	-0.3
	baz=238						
EYUL				eS	Sn	14 10 39.6	-0.1
	baz=238						
TWF1	Yuli	1.83	240	P	Pn	14 10 18.0	-0.2
	baz=238						
TWF1				S	Sn	14 10 39.6	-0.5
	baz=238						
LIOB	Emei	1.85	281	eP	Pn	14 10 19.2	+0.7
	baz=292						
LIOB				eS	Sn	14 10 42.0	+1.3
	baz=292						
NSTT	Nanjuang	1.86	281	eP	Pn	14 10 19.6	+1.0
	baz=292						
NSTT				eS	Sn	14 10 42.2	+1.3
	baz=292						
WHP	Taichung City	1.88	270	P	Pn	14 10 20.4	+1.5
	baz=259						
WHP				S	Sn	14 10 42.6	+1.0
	baz=259						
WPL	Puli Township	1.90	262	P	Pn	14 10 19.6	+0.5
	baz=261						
SBCB	Hsinchu	1.91	286	eP	Pn	14 10 19.0	-0.3
	baz=285						
FULB	Fuli	1.91	236	eP	Pn	14 10 19.1	-0.2
	baz=224						
FULB				eS	Sn	14 10 41.7	-0.5
	baz=224						
CHKT	Chengkung	1.92	232	eP	Pn	14 10 20.7	+1.3
	baz=221						
CHKT				eS	Sn	14 10 39.8	-2.6
	baz=221						
DPDB	Guoxing	1.92	263	P	Pn	14 10 19.9	+0.4
	baz=253						
DPDB				eS	Sn	14 10 43.8	+1.3
	baz=253						
WCS	Beigang Elemen	1.93	263	eP	Pn	14 10 20.2	+0.7
	baz=254						
WCS				eS	Sn	14 10 43.4	+0.8
	baz=254						
SSLB	Suanglung	1.94	255	P	Pn	14 10 20.1	+0.3
	baz=255						
SSLB	Suanglung	1.94	255	P	Pn	14 10 20.1	+0.3
SMLT	Sun Moon Lake	1.97	258	P	Pn	14 10 20.6	+0.4
	baz=249						
SMLT				S	Sn	14 10 44.1	+0.3
	baz=249						
TYC	Yuchr	2.00	259	P	Pn	14 10 21.0	+0.5
	baz=250						
TYC				eS	Sn	14 10 44.8	+0.3
	baz=250						
ECS	Chishang	2.03	234	eP	Pn	14 10 20.9	0.0
	baz=226						
JIRB	Irabujima	2.04	74	P	Pn	14 10 21.2	+0.2
JIRB				eS	Sn	14 10 45.1	-0.2
TWQ1	Liyutan	2.04	272	eP	Pn	14 10 23.5	+2.5
	baz=272						
EDH	Donghe	2.04	230	eP	Pn	14 10 20.1	-0.9
	baz=221						
EDH				eS	Sn	14 10 43.1	-2.3
	baz=221						
YUS	Yu-Shan	2.05	247	eP	Pn	14 10 22.1	+0.5
	baz=247						
ELDTW	Lidau	2.13	239	eP	Pn	14 10 22.0	-0.4
	baz=238						
ELDTW				eS	Sn	14 10 46.1	-1.6
	baz=238						
WJS	Zhushan	2.14	258	eP	Pn	14 10 24.0	+1.6
	baz=257						
WJS				eS	Sn	14 10 50.4	+2.6
	baz=257						
JMJ	Miyako jima 2	2.14	75	eP	Pn	14 10 23.0	+0.5
	baz=77						
JMJ				eS	Sn	14 10 48.0	+0.1
	baz=77						
LDUT	Ludao	2.14	222	eP	Pn	14 10 21.9	-0.6
	baz=220						
LDUT				eS	Sn	14 10 44.9	-3.0
	baz=220						
ALS	Alishan	2.16	249	eP	Pn	14 10 23.9	+0.9
	baz=249						
WNT	Mingjian	2.17	259	eP	Pn	14 10 24.2	+1.5
	baz=248						
WNT				eS	Sn	14 10 50.2	+1.8
	baz=248						
LONT	Longtian	2.21	232	eP	Pn	14 10 24.6	+1.3
	baz=223						
LONT				eS	Sn	14 10 48.8	-0.7
	baz=223						
CHN5	Tsauling	2.24	252	eP	Pn	14 10 25.5	+1.6
	baz=253						
TWGBT	Beinan	2.30	231	eP	Pn	14 10 24.2	-0.4
	baz=241						
TWGBT				eS	Sn	14 10 50.2	-1.6
	baz=241						
TWG	Pinlang	2.30	231	eP	Pn	14 10 24.6	-0.1
	baz=241						
TWG				eS	Sn	14 10 51.0	-0.8
	baz=241						
STYH	Taoyuan	2.33	242	eP	Pn	14 10 25.6	+0.6
	baz=234						
STYH				eS	Sn	14 10 52.5	+0.1
	baz=234						
WDLH	Douliu	2.34	256	eP	Pn	14 10 27.0	+1.9
	baz=256						
STYT	Tauyuan	2.35	242	eP	Pn	14 10 25.8	+0.5
	baz=233						
TPUB	Ta-pu	2.39	246	P	Pn	14 10 27.0	+1.1
	baz=245						
TPUB				S	Sn	14 10 55.5	+1.4
	baz=245						
TPUB	Ta-pu	2.39	246	P	Pn	14 10 27.7	+1.8
CHN4	Tsaushan	2.40	248	eP	Pn	14 10 26.4	+0.4
	baz=246						
CHN4				eS	Sn	14 10 55.5	+1.3
	baz=246						
WTP	Ta-pu	2.43	245	eP	Pn	14 10 28.0	+1.6
	baz=244						
WTP				eS	Sn	14 10 57.0	+2.0
	baz=244						
WRL	Guolierlin Hig	2.44	261	eP	Pn	14 10 27.6	+1.2
	baz=262						
WTK	Tuku	2.47	256	eP	Pn	14 10 28.8	+1.9
	baz=246						
WTK				eS	Sn	14 10 58.4	+2.5
	baz=246						
SLGT	Liugui	2.52	240	eP	Pn	14 10 29.1	+1.5
	baz=233						
TWK	Hsinying	2.52	247	eP	Pn	14 10 29.6	+1.8
	baz=246						
TWK				eS	Sn	14 10 59.5	+2.2
	baz=246						
CHN1	Nanshi	2.53	245	eP	Pn	14 10 29.4	+1.6
	baz=244						
CHN1				eS	Sn	14 10 59.4	+2.0
	baz=244						
SGST	Jiashian	2.53	242	eP	Pn	14 10 29.0	+1.2
	baz=241						
SGST				eS	Sn	14 10 59.5	+2.1
	baz=241						
ECL	Taimali	2.53	229	eP	Pn	14 10 27.6	-0.2
	baz=238						
SNST	Tainan City	2.54	246	eP	Pn	14 10 29.1	+1.3
	baz=246						
LAY	Lan-yu	2.61	211	eP	Pn	14 10 27.4	-1.6
	baz=211						
SSD	Sandimen	2.67	235	eP	Pn	14 10 31.3	+1.6
	baz=229						
TSMG	Majia	2.69	234	eP	Pn	14 10 31.2	+1.3
	baz=228						
TAW	Tawu	2.73	226	eP	Pn	14 10 32.6	+2.1
	baz=234						
EAST	Anshuo	2.75	227	eP	Pn	14 10 31.3	+0.5
	baz=235						
MASBT	Mashibuluo	2.75	233	eP	Pn	14 10 31.4	+0.6
	baz=226						
TWM1	Shoushan	2.79	239	eP	Pn	14 10 34.0	+2.6
	baz=239						
SLIU	Shizi	2.90	225	eP	Pn	14 10 32.4	-0.4
	baz=217						
SCZT	Fangliau	2.91	229	eP	Pn	14 10 34.4	+1.4
	baz=224						
TWKBT	Hengchun	3.09	221	eP	Pn	14 10 34.9	-0.6
	baz=221						
PHUB	P'eng-hu	3.24	257	eP	Pn	14 10 37.7	+0.2
	baz=258						
PNG	Penghu	3.24	258	eP	Pn	14 10 37.6	+0.2
	baz=259						
MATB	Ma-tsu	3.34	304	eP	Pn	14 10 38.3	-0.4
	baz=304						
PTMZ	Houxiangcun	3.62	283	eP	Pn	14 10 42.0	-0.7
	baz=282						
PTMZ				eS	Sn	14 11 21.7	-2.4
	baz=282						
LYJJ	Jianjiangzhen	3.70	308	eP	Pn	14 10 42.8	-0.9
	baz=299						
KNMB	Chin-men Tao	4.22	273	eP	Pn	14 10 50.4	-0.5
	baz=274						
AXDP	Jialang	4.63	279	eP	Pn	14 10 56.0	-0.5
	baz=279						

IDC ***15*** *14:24:43.5±3.4, 36°.34S×179°.44E, h0^{km}, mb4.0/2, mb1 4.3/3, mb1mx3.8/22, mbtmp4.0/3, ML4.0/1, Error ellipse: s-maj=75.6km s-min=44.5km az=124.0*
NEIC ***15*** *14:24:45.4±0.8, 36°.8S±0°.1×179°.5E±0°.1, h10^{km}±2^{km}, mb4.1/9, Error ellipse: s-maj=26.3km s-min=6.0km az=143.0*
WEL ***15*** *14:24:50.2±1.2, 37°S±11°×18°0E±1°1, h33^{km}, M3.8/12, ML4.1/12, MLv3.8/12, Error ellipse: s-maj=0.0km s-min=0.0km az=134.0*
NOU ***15*** *14:24:51.3, 37°.12S×179°.56E, h100^{km}, mb4.4/6, Off E. Coast of N. Island, N.Z.*
ISC 15 14:24:44.8±2.2**, 36°.83S**±0°.06×**179°.88E**±0°.09**, h25**^{km}±14^{km}**, n149, **σ**1ˢ.55**/159**, mb4.2**/7**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.45	239	P	Pn	14 25 09.8	+0.4
MXZ				S	Sn	14 25 26.0	-1.6
MXZ	Matakaoa Point	1.45	239	Pn	Pn	14 25 09.4	0.0
MXZ				Sn	Sn	14 25 23.9	-3.8
WMGZ	Waiomatatini S	1.53	229	P	Pb	14 25 13.0	+0.6

WMGZ				S	Sb	14 25 33.5	+2.1
PKGZ	Pakihiroa	1.78	233	P	Pb	14 25 16.0	-0.8
PKGZ				S	Sn	14 25 36.3	+0.4
PUZ	Puketiti	1.79	226	P	Pb	14 25 16.4	-0.5
HAZ	Te Kaha	1.91	240	P	Pn	14 25 16.0	+0.3
TWGZ	Tauwhareparae	2.02	228	P	Pb	14 25 19.8	-1.1
RUGZ	Raukumara Rang	2.08	236	P	Pb	14 25 20.4	-1.6
CNGZ	Carnagh Statio	2.12	218	P	Pb	14 25 21.7	-0.7
TKGZ	Te Karaka	2.27	224	P	Pn	14 25 22.8	+2.1
TKGZ				S	Sn	14 25 48.6	+0.7
MWZ	Matawai	2.39	230	P	Pn	14 25 24.3	+1.8
MWZ				S	Sn	14 25 50.5	-0.5
RIGZ	Rimuhau	2.51	221	P	Pn	14 25 26.1	+2.0
RIGZ				S	Sn	14 25 54.8	+0.9
WHRZ	Whale Island	2.53	245	P	Pn	14 25 25.5	+1.2
WHRZ				S	Sn	14 25 53.7	-0.6
RAGZ	Rawiri	2.56	229	P	Pn	14 25 26.7	+1.9
RAGZ				S	Sn	14 25 54.9	-0.4
PRGZ	Paritu Road	2.62	216	P	Pn	14 25 27.8	+2.3
URZ	Urewera	2.62	236	Pn	Pn	14 25 27.0	+1.5
	26nm,0.3s,baz=121,slow=24,SNR=306						
URZ				Sn	Sn	14 25 54.0	-2.5
	17nm,0.3s,baz=351,slow=22,SNR=5.6						
URZ	Urewera	2.62	236	P	Pn	14 25 26.9	+1.4
URZ				S	Sn	14 25 55.4	-1.1
URZ	Urewera	2.62	236		Pn	14 25 26.6	+1.1
URZ	Urewera	2.62	236	P	Pn	14 25 27.2	+1.7
MHGZ	Mahia Peninsul	2.79	213	P	Pn	14 25 30.1	+2.2
KNZ	Kokohu	2.80	218	P	Pn	14 25 29.5	+1.5
KNZ				S	Sn	14 26 00.4	-0.4
SNGZ	Shannon Statio	2.80	225	P	Pn	14 25 29.7	+1.7
SNGZ				S	Sn	14 26 02.1	+1.1
EDRZ	Edgecumbe	2.80	242	P	Pn	14 25 29.7	+1.6
OPRZ	Ohinepanea	2.83	248	P	Pn	14 25 29.0	+0.6
RTZ	Ruatahuna	2.91	231	P	Pn	14 25 30.9	+1.4
MYRZ	Mayor Island	2.94	260	P	Pn	14 25 29.7	-0.2
MUGZ	Murupara	2.96	235	P	Pn	14 25 31.4	+1.1
TGRZ	Tauranga	3.02	252	P	Pn	14 25 32.1	+1.1
TARZ	Mount Tarawera	3.02	241	P	Pn	14 25 32.7	+1.6
RAHZ	Arahi	3.04	226	P	Pn	14 25 33.0	+1.8
WHHZ	Waihua	3.06	222	P	Pn	14 25 33.4	+1.8
OMRZ	Omania	3.06	244	P	Pn	14 25 33.2	+1.5
RRRZ	Republican Roa	3.06	240	P	Pn	14 25 33.0	+1.3
KARZ	Kaharoa	3.12	247	P	Pn	14 25 33.7	+1.2
MTHZ	Maungataniwha	3.14	229	P	Pn	14 25 34.1	+1.4
HLRZ	Highlands Stat	3.14	242	P	Pn	14 25 34.0	+1.3
NGRZ	Ngongotaha	3.20	245	P	Pn	14 25 35.5	+2.0
UTU	Utuhina	3.22	244	P	Pn	14 25 36.4	+2.6
HSRZ	Hossack Road	3.24	242	P	Pn	14 25 36.0	+1.9
ALRZ	Allen Road	3.29	237	P	Pn	14 25 35.9	+1.1
NMHZ	Naumai	3.32	226	P	Pn	14 25 36.9	+1.7
ARHZ	Aropaoanui	3.33	222	P	Pn	14 25 36.9	+1.7
KUZ	Kuaotunu	3.33	270	P	Pn	14 25 34.0	-1.4
MRHZ	Matea Rd	3.39	233	P	Pn	14 25 37.4	+1.2
WPRZ	Whakapapatarin	3.39	239	P	Pn	14 25 37.5	+1.4
BKZ	Black Stump Fm	3.55	228		Pn	14 25 39.3	+0.9
BKZ	Black Stump Fm	3.55	228	P	Pn	14 25 39.3	+1.0
CKHZ	Cape Kidnapper	3.58	217	P	Pn	14 25 40.0	+1.3
TOZ	Tahuroa Road	3.60	254	P	Pn	14 25 38.2	-0.8
KUTZ	Kaahu Road	3.62	242	P	Pn	14 25 40.5	+1.2
MCHZ	McNeill Hill	3.62	223	P	Pn	14 25 40.4	+1.2
KWHZ	Kaweka Forest	3.76	225	P	Pn	14 25 41.8	+0.6
KAHZ	Kahuranaki	3.78	218	P	Pn	14 25 42.3	+0.7
WIAZ	Waiheke Island	3.80	269	P	Pn	14 25 42.0	+0.2
RATZ	Rangitukua	3.83	237	P	Pn	14 25 45.4	+3.2
RITZ	Rihia Road	3.83	235	P	Pn	14 25 43.9	+1.7
KRHZ	Kereru	3.94	223	P	Pn	14 25 44.5	+0.9
ETAZ	East Tamaki Re	3.97	267	P	Pn	14 25 43.7	-0.4
PXZ	Pawanui	3.98	216	P	Pn	14 25 44.3	+0.1
MBAZ	Motutapu North	4.00	269	P	Pn	14 25 44.3	-0.1
TMVZ	Te Maari	4.01	234	P	Pn	14 25 45.4	+0.6
BHHZ	Black Hill Sta	4.01	227	P	Pn	14 25 45.7	+1.0
BHHZ	Black Hill Sta	4.01	227	P	Pb	14 26 07.4	+13
ETVZ	East Tongariro	4.01	234	P	Pn	14 25 45.5	+0.7
NTVZ	North Tongarir	4.02	234	P	Pn	14 25 45.6	+0.7
KRVZ	Karewarewa	4.04	235	P	Pn	14 25 45.8	+0.7
ABAZ	Army Bay	4.06	272	P	Pn	14 25 45.1	-0.2
OTVZ	Oturere	4.06	234	P	Pn	14 25 46.0	+0.6
NNVZ	North Ngauruho	4.08	234	P	Pn	14 25 47.0	+1.3
SNVZ	South Ngauruho	4.09	234	P	Pn	14 25 46.4	+0.5
NGZ	Ngauruhoe	4.11	234	P	Pn	14 25 46.7	+0.5
EPAZ	Eden Park BICE	4.12	268	P	Pn	14 25 47.1	+1.1
TUVZ	Tukino	4.13	233	P	Pn	14 25 47.8	+1.4
HBAZ	Herne Bay Bore	4.13	268	P	Pn	14 25 47.3	+1.1
MOVZ	Moawhango	4.14	230	P	Pn	14 25 47.0	+0.4
TWVZ	Taurewa	4.16	236	P	Pn	14 25 47.8	+1.1
WNVZ	Wahianoa	4.20	232	P	Pn	14 25 47.8	+0.5
AWAZ	Awhitu Peninsu	4.20	265	P	Pn	14 25 47.1	-0.1
WPHZ	Waipukurau	4.21	219	P	Pn	14 25 47.6	+0.2
TRVZ	Turoa	4.21	233	P	Pn	14 25 48.8	+1.2
PNHZ	Pukenui	4.22	222	P	Pn	14 25 47.4	-0.2
RVAZ	Riverhead Bore	4.25	269	P	Pn	14 25 48.2	+0.3
WTAZ	Waiatarua	4.25	267	P	Pn	14 25 48.5	+0.5
HIZ	Hauiti	4.32	246	P	Pn	14 25 50.4	+1.5
HIZ	Hauiti	4.32	246	Pn	Pn	14 25 49.3	+0.4
HIZ	Hauiti	4.32	246	P	Pn	14 25 50.2	+1.3
PKVZ	Pokaka	4.34	234	P	Pn	14 25 51.1	+1.9
TSZ	Takapari Road	4.45	222	P	Pn	14 25 50.7	0.0
ANWZ	Angora Road	4.50	215	P	Pn	14 25 51.5	+0.2
DVHZ	Dannevirke	4.52	219	P	Pn	14 25 51.8	+0.1
WCZ	Waipu Caves	4.55	280	P	Pn	14 25 51.7	-0.3
VRZ	Vera Road	4.65	239	P	Pn	14 25 55.0	+1.6
BFZ	Birch Farm	4.78	215	P	Pn	14 25 54.4	-0.8
BFZ	Birch Farm	4.78	215	Pn	Pn	14 25 54.4	-0.8
BFZ	Birch Farm	4.78	215	P	Pn	14 25 55.4	+0.2
POWZ	Post Office Ro	4.79	221	P	Pn	14 25 55.4	-0.1
PRWZ	Pori Road	4.81	218	P	Pn	14 25 55.6	-0.1
WAZ	Wanganui	4.83	231	P	Pn	14 25 56.6	+0.7
TIWZ	Tintock	5.02	217	P	Pn	14 25 58.3	-0.3
LREZ	Lake Rotokare	5.05	237	P	Pn	14 26 00.7	+1.8
MRZ	Mangatainoka R	5.09	220	P	Pn	14 25 58.5	-1.0
NEZ	North Egmont	5.17	240	P	Pn	14 26 03.9	+3.2
PKE	Pukeiti	5.21	241	P	Pn	14 26 04.7	+3.4
KHEZ	Kahui Hut	5.24	240	P	Pn	14 26 04.7	+3.1
TMWZ	Te Maipa	5.28	215	P	Pn	14 26 00.9	-1.2
HOWZ	Holdsworth Sta	5.30	219	P	Pn	14 26 01.2	-1.1
OUZ	Omahuta	5.34	286	P	Pn	14 26 02.4	-0.4
OGWZ	Otaki Gorge	5.42	221	P	Pn	14 26 03.4	-0.6
MTW	Mount Morrison	5.50	217	P	Pn	14 26 03.4	-1.7
KIW	Kapiti Island	5.59	222	P	Pn	14 26 05.1	-1.2
CAW	Cannon Point	5.68	220	P	Pn	14 26 05.7	-1.9
PAWZ	Paruwai Farm	5.71	216	P	Pn	14 26 06.5	-1.5
MSWZ	Moikau Station	5.82	217	P	Pn	14 26 07.9	-1.7
MSWZ	Moikau Station	5.82	217	Pn	Pn	14 26 07.2	-2.4
PLWZ	Palliser	5.94	216	P	Pn	14 26 08.9	-2.3
TCW	Tory Channel	6.17	223	P	Pn	14 26 12.3	-2.0
TUWZ	Tuamarina	6.51	223	P	Pn	14 26 16.8	-2.1
TUWZ	Tuamarina	6.51	223	Pn	Pn	14 26 16.2	-2.7
BSWZ	Blackbirch Sta	6.74	222	P	Pn	14 26 20.3	-1.8
QRZ	Quartz Range	6.99	233	P	Pn	14 26 25.5	0.0
	102nm,2.1s						
THZ	Tophouse	7.31	226	P	Pn	14 26 27.7	-2.3
THZ	Tophouse	7.31	226	Pn	Pn	14 26 27.1	-2.9
CTZ	Chatham Island	7.40	160	P	Pn	14 26 37.6	+6.5
KHZ	Kahutara	7.42	219	P	Pn	14 26 29.6	-1.8
KHZ	Kahutara	7.42	219	P	Pn	14 26 32.1	+0.7
GVZ	Greta Valley S	8.07	218	P	Pn	14 26 38.6	-1.8
LTZ	Lake Taylor	8.34	222	P	Pn	14 26 42.1	-2.0
OKCZ	Okains Bay	8.63	215	P	Pn	14 26 45.6	-2.4
INZ	Inchbonnie	8.76	225	P	Pn	14 26 48.2	-1.6
MQZ	McQueen's Vall	8.81	217	P	Pn	14 26 47.8	-2.6
MQZ	McQueen's Vall	8.81	217	Pn	Pn	14 26 47.2	-3.3
OXZ	Oxford	8.84	220	P	Pn	14 26 48.9	-2.0
OXZ	Oxford	8.84	220	Pn	Pn	14 26 48.5	-2.4
RPZ	Rata Peaks	9.62	222	P	Pn	14 26 59.4	-2.3
TMZ	Timaru	10.11	219	P	Pn	14 27 05.2	-3.2
ODZ	Otahua Downs	10.77	217	P	Pn	14 27 14.3	-3.1
ODZ	Otahua Downs	10.77	217	Pn	Pn	14 27 14.1	-3.3
MSVF	Nonsavu	19.09	355	P	Pn	14 29 07.5	+0.9
AS31	Alice Springs	41.45	275	P	P	14 32 28.9	-0.7
AS31				IAmb	IAmb	14 32 30.0	
	comp=Z,0.9nm,0.6s						
ASAR	Alice Springs	41.45	275	P	P	14 32 28.8	-0.9
	comp=Z,1.7nm,0.6s,baz=121,slow=7.7,SNR=6.9						
VNDA	Vanda	41.54	186	P	P	14 32 32.5	+2.8
WR0	Warramunga Arr	42.85	280	P	P	14 32 39.9	-1.2
WR0				IAmb	IAmb	14 32 57.8	
	comp=Z,8.4nm,1.5s						
WB2	Warramunga Arr	43.01	280	P	P	14 32 41.5	-0.9
WB2				IAmb	IAmb	14 32 56.1	
	comp=Z,8.6nm,1.5s						
WRAB	Tennant Creek	43.02	280	P	P	14 32 41.5	-1.0
WRAB				IAmb	IAmb	14 32 56.1	
	comp=Z,6.5nm,1.3s						
WRA	Warramunga Arr	43.02	280	P	P	14 32 41.7	-0.7
	comp=Z,0.8nm,0.4s,baz=120,slow=7.7,SNR=22						
WRA	Warramunga Arr	43.02	280	IAmb	IAmb	14 32 48.5	
	comp=Z,0.3nm,1.4s						
WB0	Warramunga Arr	43.07	280	P	P	14 32 41.9	-1.0
WB0				IAmb	IAmb	14 32 53.8	
	comp=Z,6.1nm,1.4s						
KNRA	Kununurra	49.80	281	P	P	14 33 34.4	-1.3
FINES	FINESS Array B	150.38	335	PKPbc	PKiKP	14 44 34.1	+0.3
	comp=Z,1.8nm,0.8s,baz=48,slow=2.8,SNR=3.4						

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*KRNET **15** 14:25:59.7±0.1, 42°.87N×77°.17E, h12^{km}, mb2.4*
*SOME **15** 14:26:00.5, 42°.83N×77°.20E, h10^{km}*
*NNC **15** 14:26:00.2±0.4, 42°.85N×77°.21E, h0^{km}, mb3.0, mpv3.2, Error ellipse: s-maj=3.4km s-min=1.7km az=7.0*
ISC 15 14:26:00.3±0.9**, 42°.84N**±0°.02×**77°.19E**±0°.01**, h15**^{km}±7^{km}**,**
n54, σ0^{s}.74/112**, 24C-4D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNSS	Tian-Shan	0.27	319	P	Pg	14 26 06.4	+0.1
	44nm,0.1s						
TNSS				S	Sg	14 26 10.4	+0.1
	99nm,0.1s						
MDOK	Medeo	0.34	343	*e*P	Pg	14 26 07.3	-0.1
	7.5nm,0.1s						
MDOK				*e*S	Sg	14 26 12.2	-0.1
	45nm,0.1s						
MDOK	Medeo	0.34	343	P	Pg	14 26 07.3	-0.1
	1.6nm,0.3s						
MDOK				S	Sg	14 26 11.9	-0.3
	18nm,0.4s						
MDOK	Medeo	0.34	343	Pg	Pg	14 26 07.3	-0.1
	7.5nm,0.1s						
MDOK				Lg	Lg	14 26 12.2	
	45nm,0.1s						
ANVS	Anan'yevo	0.36	99	⇑*i*P	Pg	14 26 07.1	-0.6
	baz=3.0						
ANVS				⇑*i*S	Sg	14 26 12.4	-0.4
	baz=3.0						
KOTS	Kotyrbulak	0.40	352	*e*P	Pg	14 26 08.6	+0.1
	11nm,0.1s						
KOTS				*e*S	Sg	14 26 14.2	+0.2
	82nm,0.2s						
KOTS	Kotyrbulak	0.40	352	P	Pg	14 26 08.5	+0.1
	11nm,0.1s						
KOTS				P	Pg	14 26 08.6	+0.1
	11nm,0.1s						
KOTS				S	Sg	14 26 14.2	+0.2
	83nm,0.2s						
KOTS				S	Sg	14 26 14.2	+0.2
	82nm,0.2s						
AAA	Alma-Ata	0.42	332	*e*P	Pb	14 26 09.2	-0.3
	20nm,0.1s						
AAA				*e*S	Sb	14 26 15.4	-0.5
	90nm,0.2s						
AAA	Alma-Ata	0.42	332	P	Pb	14 26 09.2	-0.3
	20nm,0.1s						
AAA				S	Sb	14 26 15.4	-0.5
	90nm,0.2s						
IZV	Izvestkoviy	0.47	295	*e*P	Pg	14 26 09.8	+0.1
	11nm,0.1s						
IZV				*e*S	Sg	14 26 16.5	+0.5
	37nm,0.1s						
IZV	Izvestkoviy	0.47	295	P	Pg	14 26 09.8	+0.1
	11nm,0.1s						
IZV				P	Pg	14 26 09.8	+0.1
	11nm,0.1s						
IZV				S	Sg	14 26 16.0	+0.1
	38nm,0.2s						
IZV				S	Sg	14 26 16.5	+0.5
	37nm,0.1s						
MTBS	Maitube	0.63	298	*e*P	Pg	14 26 12.8	+0.1
	4.7nm,0.1s						
MTBS				*e*S	Sg	14 26 21.3	+0.3
	26nm,0.1s						
MTBS	Maitube	0.63	298	P	Pg	14 26 12.8	+0.1
	4.7nm,0.1s						
MTBS				S	Sg	14 26 21.3	+0.3
	26nm,0.1s						
ULHL	Ulahol	0.92	230	⇑*i*P	Pg	14 26 17.8	-0.3
	baz=28						
ULHL				⇑*i*S	Sb	14 26 30.8	+0.6
	baz=28						
KST	Kastek	0.92	283	*e*P	Pg	14 26 18.1	-0.1
	4.2nm,0.2s						
KST				*e*S	Sb	14 26 30.7	+0.5
	14nm,0.2s						
KST	Kastek	0.92	283	P	Pg	14 26 18.1	-0.1
	4.2nm,0.2s						
KST				S	Sb	14 26 30.7	+0.5
	14nm,0.2s						
SATY	Saty	0.92	76	*e*P	Pg	14 26 17.9	-0.3
	3.6nm,0.1s						
SATY				*e*S	Sb	14 26 30.2	-0.1
	42nm,0.1s						
SATY	Saty	0.92	76	P	Pg	14 26 17.9	-0.3
	3.6nm,0.1s						
SATY				S	Sb	14 26 30.2	-0.1
	42nm,0.1s						
KTBS	Karatobe	0.95	337	*e*P	Pg	14 26 18.5	-0.2
	1.9nm,0.1s						
KTBS				*e*S	Sb	14 26 31.0	+0.1
	15nm,0.2s						
KTBS	Karatobe	0.95	337	P	Pg	14 26 18.5	-0.2
KTBS				P	Pg	14 26 18.5	-0.2
	1.9nm,0.1s						
KTBS				S	Sb	14 26 31.0	+0.1
	15nm,0.2s						
KTBS				S	Sb	14 26 31.1	+0.1
PRZ	Przheval'sk	0.96	111	⇑*i*P	Pg	14 26 18.6	-0.4
	baz=12						
PRZ				⇑*i*S	Sb	14 26 32.4	+0.9
	baz=12						
KURS	Kuram	0.97	48	*e*P	Pg	14 26 18.5	-0.6
	1.3nm,0.1s						
KURS				*e*S	Sg	14 26 30.6	-1.2
	4.4nm,0.3s						
KURS	Kuram	0.97	48	P	Pg	14 26 18.5	-0.6
	1.3nm,0.1s						
KURS				S	Sg	14 26 30.6	-1.2
	4.4nm,0.3s						
BOOM	Boomskoye usch	0.98	250	⇓*i*P	Pg	14 26 18.6	-0.8
	baz=48						
BOOM				⇓*i*S	Sg	14 26 32.4	+0.2
	baz=48						
CHKK	Chushkaly	1.02	352	*e*P	Pg	14 26 19.9	-0.3
	6.0nm,0.1s						
CHKK				*e*S	Sb	14 26 33.4	+0.2
	64nm,0.2s						
CHKK	Chushkaly	1.02	352	P	Pg	14 26 19.9	-0.3
	6.0nm,0.1s						
CHKK				S	Sb	14 26 33.4	+0.2
	64nm,0.2s						
DGS	Degeres	1.11	292	*e*P	Pg	14 26 21.5	-0.3
	4.3nm,0.1s						
DGS				*e*S	Sb	14 26 36.4	+0.6
	8.8nm,0.1s						
DGS	Degeres	1.11	292	P	Pg	14 26 21.5	-0.3
	4.3nm,0.1s						
DGS				P	Pg	14 26 21.5	-0.3
	4.5nm,0.2s						
DGS				S	Sg	14 26 36.1	-0.2
	7.4nm,0.2s						
DGS				S	Sb	14 26 36.4	+0.6
	8.8nm,0.1s						
TKM2	Tokmak 2	1.17	275	⇑*i*P	Pb	14 26 21.9	-0.6
	baz=73						
TKM2				⇑*i*S	Sg	14 26 38.3	+0.1
	baz=73						
KUU	Kurty	1.22	330	*e*P	Pn	14 26 23.3	+0.3
	1.4nm,0.1s						
KUU				*e*S	Sb	14 26 39.4	+0.5
	4.6nm,0.1s						
KUU	Kurty	1.22	330	P	Pn	14 26 23.3	+0.3
	1.4nm,0.1s						
KUU				S	Sb	14 26 39.3	+0.5
	4.6nm,0.1s						
KPKS	Kokpek	1.26	60	*e*P	Pb	14 26 23.9	-0.1
	7.6nm,0.1s						
KPKS				*e*S	Sg	14 26 40.4	-0.8
	37nm,0.3s						
UZB	Uzynbulak	1.38	76	*e*P	Pn	14 26 25.7	+0.4
	7.1nm,0.1s						
UZB				*e*S	Sn	14 26 43.7	+0.3
	12nm,0.1s						
UZB	Uzynbulak	1.38	76	P	Pn	14 26 25.7	+0.4
	7.1nm,0.1s						
UZB				P	Pn	14 26 25.7	+0.4
UZB				S	Sb	14 26 43.5	0.0
UZB				S	Sn	14 26 43.7	+0.3
	12nm,0.1s						
ARXS	Arharly	1.45	19	*e*P	Pb	14 26 27.2	+0.1
	3.8nm,0.1s						
ARXS				*e*S	Sg	14 26 46.3	-0.8
	20nm,0.1s						
ARXS	Arharly	1.45	19	P	Pb	14 26 27.2	+0.1
	3.9nm,0.1s						
ARXS				P	Pb	14 26 27.3	+0.1
	3.8nm,0.1s						
ARXS				S	Sb	14 26 46.0	+0.5
	18nm,0.2s						
ARXS				S	Sg	14 26 46.3	-0.8
	20nm,0.1s						
BLB	Baldybastay	1.57	36	P	Pb	14 26 29.1	-0.1
	9.5nm,0.2s						
BLB				P	Pb	14 26 29.1	-0.1
	9.5nm,0.2s						
BLB				S	Sb	14 26 49.4	+0.4
	45nm,0.2s						
BLB				S	Sg	14 26 49.7	-1.3
	45nm,0.3s						
KBK	Karagaybulak	1.66	264	⇑*i*P	Pb	14 26 31.0	+0.3
	baz=63						
KBK				⇑*i*S	Sg	14 26 53.5	-0.3
	baz=63						
SHLS	Shalkode	1.70	78	*e*P	Pg	14 26 37.7	+4.7
	5.7nm,0.1s						
SHLS				*e*S	Sg	14 27 04.2	+9.1
	33nm,0.4s						
SHLS	Shalkode	1.70	78	Pg	Pg	14 26 37.3	+4.3
	8.6nm,0.2s						
SHLS				Pg	Pb	14 26 37.7	+6.3
	5.7nm,0.1s						
SHLS				Lg	Lg	14 27 03.4	
	33nm,0.4s						
SHLS				Lg	Lg	14 27 04.2	
	33nm,0.4s						
PDGK	Podgornoye	1.76	73	P	Pb	14 26 32.1	-0.3
	2.3nm,0.2s						
PDGK				S	Sb	14 26 54.7	+0.4
	3.8nm,0.4s						
PDGK	Podgornoye	1.76	73	⇑P	Pb	14 26 32.2	-0.3
	1.6nm,0.3s						
PDGK				⇑S	Sb	14 26 54.8	+0.4
	3.6nm,0.5s						
CHMS	Chumysh	1.79	276	⇑*e*P	Pb	14 26 33.0	0.0
	baz=75						
CHMS				⇑*i*S	Sg	14 26 57.3	-0.8
	baz=75						
AAK	Ala-Archa	1.99	265	⇓*i*P	Pb	14 26 36.8	+0.4
	baz=64						
AAK				⇓*i*S	Sg	14 27 03.9	-0.6
	baz=64						
USP	Ospenovka	2.02	283	⇑*i*P	Pb	14 26 36.8	+0.1
	baz=82						
USP				⇑*i*S	Sg	14 27 03.9	-1.2
	baz=82						
UCH	Uchtor	2.07	254	⇑*i*P	Pb	14 26 38.2	+0.3
	baz=53						
UCH				⇑*i*S	Sg	14 27 06.1	-0.8
	baz=53						
DJR	Jarkent	2.41	51	*e*P	Pb	14 26 44.1	+0.6
	2.5nm,0.2s						
DJR				*e*S	Sg	14 27 15.5	-2.3
	14nm,0.2s						
DJR	Jarkent	2.41	51	Pg	Pb	14 26 43.2	-0.3
	2.0nm,0.3s						
DJR				Lg	Lg	14 27 14.1	
	14nm,0.2s						
EKS2	Erkin-Say	2.52	267	⇑*i*P	Pb	14 26 43.9	-1.4
	baz=66						
EKS2				⇑*i*S	Sb	14 27 16.1	-0.1
	baz=66						
AML	Almayashu	2.68	256	⇑*e*P	Pb	14 26 46.5	-1.7
	baz=55						
AML				⇑*i*S	Sb	14 27 20.7	-0.4
	baz=55						
KAPS	Kapalarasan	2.90	32	*e*P	Pb	14 26 53.2	+1.3
	1.8nm,0.5s						
KAPS				*e*S	Sg	14 27 30.9	-2.7
	9.4nm,0.3s						
KAPS	Kapalarasan	2.90	32	Pg	Pb	14 26 52.3	+0.4
	1.2nm,0.1s						
KAPS				Lg	Lg	14 27 29.6	
	9.4nm,0.3s						
KK31	Karatay Array	4.91	275	⇑Lg	Lg	14 28 36.6	
	0.6nm,0.5s,baz=83,slow=27,SNR=4.0						
MK31	Makanchi Array	5.37	41	⇑Lg	Lg	14 28 44.4	
	0.5nm,0.7s,baz=218,slow=26,SNR=3.5						

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*NIED **15** 14:40:38.1, 31°.25N×128°.73E, h11^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-1.18; M$_{\theta\theta}$2.71; M$_{\phi\phi}$-1.53; M$_{r\theta}$0.50; M$_{\theta\phi}$6.39; M$_{\phi r}$-1.04; Fault plane solution: M$_0$6.86000×10^{14} NP1:ϕ_s10.00000°, δ82.00000°, λ-170.00000°. NP2:ϕ_s279.00000°, δ80.00000°, λ-8.00000°.*
JMA 15 14:40:38.1±0.3**, 31°.25N×128°.73E, h11**^{km}±3^{km}**, M3.7,**
Northwest of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.94	63	P	Pg	14 40 55.6	-0.7
JSJ				S	Sg	14 41 07.9	-0.7
JFU	Fukue jima 2	1.40	1	P	Pn	14 41 03.7	+0.1
JKC	Kuchinoerabu	1.48	122	P	Pn	14 41 05.0	+0.3
JSU	Suzuyama	1.50	80	P	Pb	14 41 05.5	-0.4
JNN	Nakanoshima	1.72	145	P	Pn	14 41 08.1	+0.2
JYAK	Yakushimahirau	1.83	123	P	Pn	14 41 09.2	-0.3
JTN	Tanegashima 3	2.02	107	P	Pn	14 41 12.6	+0.5
JMTN	Minamitane	2.05	114	P	Pn	14 41 13.5	+1.0
JTZ	Takazaki	2.12	72	P	Pn	14 41 14.1	+0.7
JIU3	Izumi3	2.19	53	P	Pn	14 41 15.6	+1.1

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*ANF **15** 14:42:07.6±0.2, 39°.60N×98°.58W, h5^{km}, ML3.8/15, Error ellipse: s-maj=2.7km s-min=1.7km az=115.0*
*NEIC **15** 14:42:07.4±1.7, 39°.60N±0°.03×98°.58W±0°.05, h5^{km}±2^{km}, mb_Lg2.9/71, Error ellipse: s-maj=6.5km s-min=4.9km az=63.0*
ISC 15 14:42:07.1±1.3**, 39°.60N**±0°.03×**98°.59W**±0°.04**, h8**^{km}±11^{km}**,**
n82, σ0^{s}.95/72**, Kansas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
R32A	Long Quarter,	1.18	185	Pn	Pg	14 42 30.5	+0.7
R32A				Sn	Sn	14 42 45.8	-0.5
R32A	Long Quarter,	1.18	185	P	Pg	14 42 30.6	+0.7
	baz=5.1,SNR=22						
R32A				S	Sn	14 42 46.3	+0.1
	baz=5.1						
CBKS	Cedar Bluff	1.19	229	Pn	Pg	14 42 30.4	+0.5
CBKS				Sn	Sn	14 42 46.4	-0.2
CBKS	Cedar Bluff	1.19	229	P	Pg	14 42 30.5	+0.5
	baz=49,SNR=210						
CBKS				S	Sn	14 42 46.7	+0.2
	baz=49						
N33B	J Bar K, Exete	1.43	37	P	Pn	14 42 33.1	-0.2
	baz=217						
N33B				S	Sg	14 42 53.1	+0.1
	baz=217						
N33A	J Bar K, Exete	1.43	37	Pn	Pn	14 42 33.1	-0.2
KSU1	Kansas State U	1.61	108	Pn	Pb	14 42 36.7	-0.4
KSU1	Kansas State U	1.61	108	P	Pb	14 42 37.0	-0.1
	baz=289,SNR=7.3						
KSU1				S	Sg	14 42 58.3	-0.7
	baz=289						
BGNE	Belgrade	1.83	10	Pn	Pb	14 42 39.7	-1.2
BGNE	Belgrade	1.83	10	P	Pb	14 42 39.9	-1.0
	baz=190,SNR=14						
BGNE				S	Sb	14 43 04.3	+0.3
	baz=190						
KAN16	Harper SW Stat	2.41	170	IAmb_Lg		14 43 29.9	
	comp=Z,51nm,1.1s						
KAN06	Argonia West S	2.42	166	Pn	Pn	14 42 47.0	0.0
KAN06				IAmb_Lg		14 43 25.0	
	comp=Z,30nm,1.0s						
KAN08	Anthony NE Sta	2.42	168	IAmb_Lg		14 43 27.3	

	comp=Z,52nm,1.0s						
N35A	Tabor	2.58	60	Pn	Pn	14 42 50.4	+1.3
N35A	Tabor	2.58	60	P	Pn	14 42 50.6	+1.5
	baz=241,SNR=8.8						
N35A				S	Sb	14 43 22.6	-2.8
	baz=241						
KAN17	Caldwell West	2.64	166	Pn	Pn	14 42 50.4	+0.4
KAN14	Manchester OK	2.69	169	Pn	Pn	14 42 51.1	+0.4
OK032	Salt Plains WL	2.81	174	Pn	Pn	14 42 51.4	-0.9
L34A	Svendsen Farm,	2.90	35		Pn	14 42 54.2	+0.7
L34A	Svendsen Farm,	2.90	35	P	Pn	14 42 54.4	+0.9
	baz=216						
OGNE	Ogallala	2.96	298		Pn	14 42 54.6	+0.1
OGNE				IAmb_Lg		14 43 43.0	
	comp=Z,60nm,0.7s						
OGNE	Ogallala	2.96	298	P	Pn	14 42 55.9	+1.4
	baz=116,SNR=6.7						
K31A	O'Neill	3.02	358	S	Sn	14 43 33.4	+1.9
	baz=177						
BLOK	Blackwell	3.04	159	Pn	Pn	14 42 56.8	+1.4
T35A	Sooner Cattle	3.14	148		Pn	14 42 58.4	+1.5
T35B	Sooner Cattle	3.14	148	S	Sn	14 43 35.9	+1.3
	baz=330						
KSCO	Kaye Shedlock’	3.19	261		Pn	14 42 59.3	+1.6
KSCO				IAmb_Lg		14 43 47.0	
	comp=Z,29nm,0.8s						
KSCO	Kaye Shedlock’	3.19	261	P	Pn	14 42 59.1	+1.4
	baz=78,SNR=35						
U32A	Winter Ranch,	3.24	186	IAmb_Lg		14 43 56.7	
	comp=Z,35nm,0.9s						
QUOK	Quay	3.73	156	Pn	Pn	14 43 06.3	+1.2
OK031	S. Brethren Rd	3.90	159	Pn	Pn	14 43 07.7	+0.4
P38A	Dawn	3.90	88	Pn	Pn	14 43 07.8	+0.4
P38A				IAmb_Lg		14 44 18.9	
	comp=Z,30nm,0.8s						
P38A	Dawn	3.90	88	P	Pn	14 43 08.8	+1.5
	baz=271,SNR=6.5						
OK029	Liberty Lake	3.91	166	Pn	Pn	14 43 07.2	-0.2
OK030	Cody Creek RV	3.94	158	Pn	Pn	14 43 07.5	-0.3
BCOK	Bluff Creek, N	4.02	169	Pn	Pn	14 43 09.2	+0.3
N38A	Joes South For	4.27	72	Pn	Pn	14 43 12.8	+0.4
TUL1	Leonard	4.30	148	Pn	Pn	14 43 13.2	+0.4
TUL1				IAmb_Lg		14 44 34.7	
	comp=Z,26nm,0.8s						
ECSD	EROS Data Cent	4.38	19		Pn	14 43 14.8	+0.9
ECSD				IAmb_Lg		14 44 24.2	
	comp=Z,36nm,0.7s						
ECSD	EROS Data Cent	4.38	19	P	Pn	14 43 15.8	+1.9
	baz=200,SNR=40						
FNO	Franklin	4.44	167	Pn	Pn	14 43 14.5	-0.2
FNO				IAmb_Lg		14 44 32.6	
	comp=Z,13nm,0.7s						
S39A	Bolivar	4.54	113	Pn	Pn	14 43 16.3	+0.2
S39A				IAmb_Lg		14 44 40.9	
	comp=Z,18nm,0.9s						
SCIA	State Center	4.68	59	IAmb_Lg		14 44 39.9	
	comp=Z,21nm,0.7s						
SUSD	Miller	4.84	357	IAmb_Lg		14 44 42.8	
	comp=Z,31nm,0.7s						
WMOK	Wichita Mounta	4.86	182		Pn	14 43 21.5	+1.0
WMOK	Wichita Mounta	4.86	182	P	Pn	14 43 21.5	+1.0
	baz=1.9,SNR=8.3						
X34A	Smith Ranch, M	5.03	173	Pn	Pn	14 43 24.3	+1.4
X34A				IAmb_Lg		14 44 55.5	
	comp=Z,17nm,0.7s						
P40A	Paris	5.05	89		Pn	14 43 23.9	+0.8
P40A	Paris	5.05	89	P	Pn	14 43 24.2	+1.1
	baz=273,SNR=10						
R40A	Maddies Statio	5.10	103	Pn	Pn	14 43 24.0	+0.3
R40A				IAmb_Lg		14 44 56.9	
	comp=Z,25nm,0.8s						
T25A	Trinidad	5.20	244		Pn	14 43 24.7	-0.6
AMTX	Amarillo	5.32	209	Pn	Pn	14 43 26.9	0.0
ISCO	Idaho Springs	5.42	274		Pn	14 43 29.3	+0.8
MGMO	Mountain Grove	5.53	114	IAmb_Lg		14 45 06.0	
	comp=Z,17nm,0.8s						
U40A	Yellville	5.57	124	IAmb_Lg		14 45 06.1	
	comp=Z,20nm,0.7s						
X37A	Clayton	5.63	152	Pn	Pn	14 43 32.0	+1.0
X37A				IAmb_Lg		14 45 16.8	
	comp=Z,14nm,0.7s						
SDCO	Great Sand Dun	5.72	253	IAmb_Lg		14 45 05.2	
	comp=Z,25nm,1.1s						
W39A	Magazine	5.83	138	Pn	Pn	14 43 34.0	+0.2
W39A				IAmb_Lg		14 45 20.7	
	comp=Z,19nm,0.9s						
CCM	Cathedral Cave	5.94	103	Pn	Pn	14 43 35.5	+0.2
RSSD	Black Hills	6.08	320	Pn	Pn	14 43 36.8	-0.6
L40A	Anamosa	6.10	64	Pn	Pn	14 43 37.6	+0.1
L40A				IAmb_Lg		14 45 28.3	
	comp=Z,14nm,0.9s						
FCAR	Ozark Folk Cen	6.32	124	IAmb_Lg		14 45 38.0	
	comp=Z,14nm,1.0s						
T42A	Van Buren	6.43	111	IAmb_Lg		14 45 32.0	
	comp=Z,22nm,0.8s						
MIAR	Mount Ida	6.44	140	Pn	Pn	14 43 43.6	+1.4
F33A	5 Mile Ranch,	6.46	14	Pn	Pn	14 43 43.2	+0.8
F33A				IAmb_Lg		14 45 44.5	
	comp=Z,23nm,1.3s						
SMCO	Snowmass	6.51	269	Pn	Pn	14 43 44.0	+0.5
FVM	French Village	6.58	102	Pn	Pn	14 43 45.4	+1.3
WHAR	Wooly Hollow	6.60	129	Pn	Pn	14 43 45.8	+1.3
K22A	Casper	6.72	299	IAmb_Lg		14 45 48.7	
	comp=Z,13nm,0.9s						
LCAR	Lake Charles	6.86	119	IAmb_Lg		14 45 42.5	
	comp=Z,17nm,1.2s						
X40A	Basin Creek Fa	6.87	136	Pn	Pn	14 43 48.2	+0.1
X40A				IAmb_Lg		14 45 45.5	
	comp=Z,9.1nm,0.7s						
PBMO	Poplar Bluff	7.01	111	IAmb_Lg		14 46 00.2	
	comp=Z,13nm,0.8s						
ABTX	Abilene, Hawle	7.02	187	IAmb_Lg		14 45 56.2	
	comp=Z,13nm,1.1s						
SPMN	Marine on St.	7.06	35	Pn	Pn	14 43 50.0	-0.7
SPMN				IAmb_Lg		14 45 51.6	
	comp=Z,13nm,0.8s						
JFWS	Jewell Farm	7.10	60	Pn	Pn	14 43 50.3	-1.0
JFWS				IAmb_Lg		14 45 52.5	
	comp=Z,12nm,0.8s						
E28A	Huff	7.14	348	IAmb_Lg		14 46 13.8	
	comp=Z,17nm,0.8s						
L42A	Oliver, Polo	7.18	68	Pn	Pn	14 43 51.9	-0.4
F36A	Milaca	7.28	29	Pn	Pn	14 43 53.3	-0.4
O20A	White River Ci	7.45	277	IAmb_Lg		14 46 18.1	
	comp=Z,11nm,1.1s						
S44A	Carbondale	7.55	102	Pn	Pn	14 43 58.2	+0.9
JCT	Junction City	9.16	187	IAmb_Lg		14 47 22.9	
	comp=Z,15nm,0.8s						
MNTX	Cornudas Mount	9.63	217	IAmb_Lg		14 47 27.7	
	comp=Z,5.2nm,0.9s						

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*IDC **15** 14:49:36.5±1.4, 7°.00N×94°.16E, h0^{km}, mb3.9/6, mb1 4.0/8, mb1mx3.7/31, mbtmp3.8/8, ML4.0/2, MS3.2/6, Ms1 3.2/6, ms1mx2.9/34, Error ellipse: s-maj=58.7km s-min=22.5km az=55.0*

*NEIC **15** 14:49:39.2±0.9, 7°.0N±0°.1×94°.3E±0°.2, h9^{km}±7^{km}, mb4.5/8, Error ellipse: s-maj=34.3km s-min=14.4km az=59.0*

ISC 15 14:49:42.2±0.9**, 7°.0N**±0°.1×**94°.3E**±0°.2**, h35^{km}, n27, σ0^{s}85**/20**, mb4.3**/10**, MS3.2**/5**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	Prapat	6.21	132	Pn	Pn	14 51 11.6	0.0
	1.2nm,0.3s,baz=319,slow=16,SNR=5.3						
RPSI	Rantau Prapat	6.28	133		Pn	14 51 11.6	-0.8
CMAR	Chiang Mai Arr	12.23	21	Pn	Pn	14 52 34.0	0.0
	0.5nm,0.3s,baz=217,slow=15,SNR=15						
CMAR				LR	LR	14 57 11.9	
	comp=Z,85nm,19.0s,baz=278,slow=37						
CHTO	Chiang Mai	12.56	21		Pn	14 52 38.0	-0.5
H08S3	Diego Garcia H	26.18	237	T	T	15 21 56.6	
	baz=54,slow=74,SNR=36						
H08S2	Diego Garcia H	26.19	237	T	T	15 21 56.6	
	baz=54,slow=74,SNR=9.2						
H08S1	Diego Carcia H	26.20	237	T	T	15 22 02.3	
	baz=54						
NIL	Nilore	32.91	327	P	P	14 56 13.1	-0.1
MKAR	Makanchi Array	40.96	347	P	P	14 57 19.2	-2.3
	0.8nm,0.9s,baz=165,slow=8.2,SNR=4.3						
KSRS	Korea Array	43.00	40	LR	LR	15 16 43.3	
	comp=Z,18nm,18.6s,baz=170,slow=38						
ZAA0	Zalesovo Array	47.43	352	P	P	14 58 13.0	-0.1
ZAA0				IAmb	IAmb	14 58 23.1	
	comp=Z,4.0nm,1.1s						
ZALV	Zalesovo Beam	47.43	352	P	P	14 58 12.9	-0.2
	comp=Z,1.2nm,0.7s,baz=179,slow=8.9,SNR=6.8						
WB0	Warramunga Arr	47.58	125	P	P	14 58 14.9	+0.1
WB0				IAmb	IAmb	14 58 22.6	
	comp=Z,4.0nm,1.1s						
WRA	Warramunga Arr	47.62	125	P	P	14 58 15.6	+0.4
	comp=Z,0.2nm,0.4s,baz=306,slow=8.3,SNR=6.8						
WRA	Warramunga Arr	47.62	125	P	P	14 58 14.9	-0.3
WB2	Warramunga Arr	47.63	125	P	P	14 58 15.2	0.0
WB2				IAmb	IAmb	14 58 27.9	
	comp=Z,4.4nm,0.9s						
WR0	Warramunga Arr	47.80	125	P	P	14 58 16.9	+0.3
WR0				IAmb	IAmb	14 58 24.8	
	comp=Z,5.5nm,1.2s						
MJAR	Matsushiro Arr	49.61	47	LR	LR	15 22 03.8	
	comp=Z,12nm,18.9s,baz=220,slow=39						
BRVK	Borovoye	49.92	341	P	P	14 58 33.3	+1.0
ABKAR	Akbulak array	51.06	332	P	P	14 58 41.8	+0.8
BRTR	Keskin Array B	63.12	311	LR	LR	15 31 03.0	
	comp=Z,16nm,18.0s,baz=45,slow=40						
MBAR	Mbarara	63.87	266	LR	LR	15 24 53.1	
	comp=Z,28nm,18.1s,baz=32,slow=33						
FINES	FINESS Array B	73.55	332	P	P	15 01 10.4	-0.9
	comp=Z,4.7nm,1.1s,baz=143,slow=3.5,SNR=6.0						
FINES	FINESS Array B	73.55	332	P	P	15 01 11.4	+0.1
ARCES	ARCESS Array B	76.13	340	P	P	15 01 26.6	+0.4
	comp=Z,3.7nm,1.0s,baz=92,slow=8.4,SNR=2.0						
ARCES				LR	LR	15 37 42.8	
	comp=Z,25nm,19.4s,baz=55,slow=38						
BILL	Bilibino	76.82	22	P	P	15 01 31.8	+1.7
ESDC	Sonseca Array	91.90	310	P	P	15 02 47.3	0.0
	comp=Z,0.2nm,0.6s,baz=76,slow=5.4,SNR=2.3						

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*RHSSO **15** 15:21:55.2±0.8, 42°.27N×19°.63E, h6^{km}±4^{km}, ML2.1/6*

*PDG **15** 15:21:55.2±0.1, 42°.29N×19°.51E, h23^{km}, MD2.6/1, ML1.8/13, Error ellipse: s-maj=0.1km s-min=0.1km az=0.0*

*BEO **15** 15:21:57.6±0.3, 42°.33N×19°.52E, h7^{km}±5^{km}, ML1.9/7*

ISC 15 15:21:56.2±0.9**, 42°.30N**±0°.02×**19°.52E**±0°.02**, h17^{km}**±6^{km}**, n36, σ1^{s}04**/68**, 9C-2D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PDG	Podgorica	0.24	304	ePg	Pg	15 22 01.2	-0.4
PDG				eSg	Sg	15 22 06.2	+0.9
PDG	Podgorica	0.24	304	⇑iPg	Pg	15 22 01.3	-0.4
PDG				eSg	Sg	15 22 06.4	+1.1
TTG	Podgorica	0.24	304	⇑iPg	Pg	15 22 00.9	-0.7
TTG				eSg	Sg	15 22 05.7	+0.4
DRME	Dracevica, Mon	0.27	246	ePg	Pg	15 22 01.5	-0.7
DRME				eSg	Sb	15 22 06.8	-0.3
DRME	Dracevica, Mon	0.27	246	⇑iPg	Pg	15 22 01.3	-0.9
DRME				eSg	Sb	15 22 06.5	-0.6
ULC	Ulcinj	0.39	212	⇓iPg	Pg	15 22 03.0	-1.3
ULC				i Sg	Sb	15 22 09.8	-0.7
PVY	Plav	0.44	47	⇓iPg	Pg	15 22 04.4	-0.8
PVY				i Sg	Sb	15 22 12.1	+0.1
BUM	Brajici-Budva	0.47	271	⇑iPg	Pg	15 22 04.5	-1.1
BUM				i Sg	Sb	15 22 12.2	-0.5
CEME	Cevo	0.51	299	ePg	Pg	15 22 05.3	-1.2
CEME				eSg	Sb	15 22 13.9	-0.1
KOME	Kolasin	0.55	360	⇑iPg	Pg	15 22 06.2	-1.1
KOME				eSg	Sb	15 22 15.4	+0.1
NKME	Niksic	0.63	318	⇑iPg	Pg	15 22 07.3	-1.4
NKME				i Sg	Sb	15 22 17.6	+0.2
IVA	Berane	0.64	26	⇑iPg	Pg	15 22 07.7	-1.1
IVA				eSg	Sb	15 22 18.3	+0.6
NKY	Niksic	0.65	323	⇑iPg	Pg	15 22 07.7	-1.3
NKY				i Sg	Sb	15 22 18.2	+0.3
HCY	Herceg Novi	0.78	281	ePg	Pg	15 22 10.2	-1.2
HCY				eSg	Sb	15 22 22.3	+0.7
HCY	Herceg Novi	0.78	281	ePg	Pg	15 22 09.9	-1.5
HCY				eSg	Sb	15 22 22.2	+0.7
BRY	Bratogost	0.94	310	ePg	Pg	15 22 12.8	-1.8
BRY				eSg	Sn	15 22 28.4	+0.3
BRY	Bratogost	0.94	310	⇑iPg	Pg	15 22 12.9	-1.7
BRY				i Sg	Sb	15 22 27.9	+1.4
TREB	Trebinje	0.96	296	ePg	Pn	15 22 14.8	-0.2
TREB				eSg	Sn	15 22 28.8	+0.5
TREB	Trebinje	0.96	296	ePg	Pg	15 22 13.8	-1.1
TREB				eSg	Sn	15 22 29.1	+0.8
TIR	Tirane	0.98	165	ePg	Pn	15 22 14.9	-0.4
TIR				eSg	Sn	15 22 30.1	+1.3
UPM	Unac-Piva	1.01	334	ePg	Pg	15 22 14.6	-1.3
UPM				eSg	Sb	15 22 29.5	+0.9
UPM	Unac-Piva	1.01	334	ePg	Pg	15 22 14.3	-1.6
UPM				i Sg	Sn	15 22 30.4	+0.6
SJES	Sjenica	1.02	19	ePg	Pn	15 22 15.9	0.0
SJES				eSg	Sb	15 22 29.6	+0.9
DBRK	Dubrovnik	1.08	291	ePg	Pg	15 22 15.6	-1.6
DBRK				Sg	Sn	15 22 32.5	+1.2
RUDO	Rudo	1.32	355	ePg	Pb	15 22 20.4	-0.3
RUDO				eSg	Sn	15 22 38.1	+0.8
STON	Ston	1.46	294	ePg	Pb	15 22 22.4	-0.5
STON				eSg	Sg	15 22 44.5	+1.1
STON	Ston	1.46	294	ePg	Pb	15 22 22.5	-0.5
STON				eSg	Sg	15 22 43.6	+0.2
STON	Ston	1.46	294	ePn	Pn	15 22 21.7	-0.1
STON				Sn	Sg	15 22 43.2	-0.2
OHR	Ohrid	1.52	141	eSg	Sg	15 22 47.0	+1.6
BBLS	Lazići	1.57	357	ePg	Pg	15 22 25.5	-0.9
BBLS				eSg	Sg	15 22 45.9	-1.0
BBLS	Lazići	1.57	357	ePg	Pb	15 22 24.2	-0.7
BBLS				eSg	Sg	15 22 45.6	-1.3
HAPS	Han Pijesak,Bl	1.83	347	eSg	Sg	15 22 54.2	-1.2
RICI	Ricice	2.12	305	ePn	Pn	15 22 32.1	+1.1
RICI				Sn	Sb	15 23 00.3	0.0
KIJV	Kijevo	2.85	308	ePn	Pn	15 22 42.5	+1.6
KIJV				Sn	Sn	15 23 18.2	+3.4
ZIRJ	Zirje	3.15	297	ePn	Pn	15 22 45.0	0.0
DUGI	Dugi Otok	3.68	299	ePn	Pn	15 22 52.6	+0.3

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*MOS **15** 15:47:48.7±1.0, 36°.48N×70°.46E, h203^{km}, mb4.6/45, Error ellipse: s-maj=5.7km s-min=3.7km az=81.6*

*IDC **15** 15:47:50.8±0.5, 36°.41N×70°.39E, h213^{km}±4^{km}, mb3.9/30, mb1 4.0/36, mb1mx3.9/42, mbtmp4.5/36, Error ellipse: s-maj=9.2km s-min=7.2km az=1.0*

*BJI **15** 15:47:50.0±0.0, 36°.60N×70°.51E, h203^{km}, mB4.6/22, mb4.6/46*

*NEIC **15** 15:47:50.7±1.8, 36°.51N±0°.06×70°.34E±0°.08, h209^{km}±5^{km}, mb4.6/120, Error ellipse: s-maj=9.4km s-min=8.3km az=79.0*

*NNC **15** 15:47:58.5±5.7, 37°.20N×70°.76E, h239^{km}±62^{km}, mb3.8, mpv4.8, Error ellipse: s-maj=55.0km s-min=26.2km az=4.0*

ISC 15 15:47:49.2±0.3**, 36°.47N**±0°.03×**70°.42E**±0°.03**, h197^{km}**±3^{km}**, h196^{km}:pP-P, n484, σ1^{s}45**/539**, mb4.5**/117**, 22C-17D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	Kabul	2.22	211	PN	Pn	15 48 31.5	+1.3
KBL	Kabul	2.22	211	P	Pn	15 48 31.6	+1.5
	SNR=2294						
KBL				S	Sn	15 49 02.5	+0.6
KBL	Kabul	2.22	211	Pn	Pn	15 48 31.4	+1.3
CHGR	Chuyangaron	2.40	336	Pn	Pn	15 48 32.2	+0.3
GAR	Garm	2.53	358		Pn	15 48 34.1	+0.7
CEP	Cherat	2.91	155	P	Pn	15 48 39.9	+2.1
CHCP	Chirah Chowk	3.65	139	P	Pn	15 48 48.9	+2.3
NIL	Nilore	3.65	140	PN	Pn	15 48 48.9	+2.3
NIL	Nilore	3.65	140	P	Pn	15 48 49.0	+2.3
NIL	Nilore	3.65	140	Pn	Pn	15 48 48.9	+2.3
THW	Thamme Wali	3.82	163	P	Pn	15 48 50.9	+2.1
SARP	Sargodha	4.90	157	P	Pn	15 49 03.4	+1.0
TAS	Tashkent	4.93	350	PN	Pn	15 49 03.2	+0.6
TAS	Tashkent	4.93	350	Pn	Pn	15 49 03.2	+0.6
KSH	Kashi	5.34	54	P	Pn	15 49 04.1	-3.9
KSH	Kashi	5.34	54	S	Sn	15 49 55.8	-14
IUG	Iuzhnay	5.68	357	⇓iP	Pn	15 49 12.8	+0.4
	baz=355						
IUG				eS	Sn	15 50 15.2	-2.9
	baz=355						
IUG	Iuzhnay	5.68	357	d iPN	Pn	15 49 12.7	+0.4
IUG				eS	Sn	15 50 15.1	-2.9
AML	Almayashu	6.20	23	P	Pn	15 49 19.8	+0.4
	SNR=706						
AML	Almayashu	6.20	23	i P	Pn	15 49 19.8	+0.4
	SNR=709						
AML	Almayashu	6.20	23	P	Pn	15 49 19.9	+0.6
DHRM	DHARAMSHALA	6.43	129	eP	Pn	15 49 22.9	+0.6
DHRM				eS	Sn	15 50 34.1	-1.7
DHRM				IAML		15 50 35.9	
	comp=E,2µm,0.5s						
DHRM				IAML		15 50 37.2	
	comp=N,869nm,0.6s						
DZA	Taraz	6.46	6	eP	Pn	15 49 22.3	0.0
	baz=4.6						
DZA				eS	Sn	15 50 33.0	-3.0
	baz=4.6						
DZA	Taraz	6.46	6	ePN	Pn	15 49 22.3	0.0
UCH	Uchtor	6.57	28	P	Pn	15 49 24.7	+0.5
	SNR=232						
KK31	Karatay Array	6.63	1	PN	Pn	15 49 24.5	-0.1
KK31	Karatay Array	6.63	1	⇑P	Pn	15 49 24.4	-0.1
	comp=N,6.1nm,0.2s,baz=182,slow=13,SNR=272						
KK31				⇓S	Sn	15 50 36.0	-4.1
	comp=N,19nm,0.3s,baz=190,slow=26,SNR=6.4						
KK31	Karatay Array	6.63	1	Pn	Pn	15 49 24.5	-0.1
KKAR	Karatay Array	6.63	1	PN	Pn	15 49 24.1	-0.4
KKAR	Karatay Array	6.63	1	Pn	Pn	15 49 24.1	-0.4
EKS2	Erkin-Say	6.71	22	P	Pn	15 49 26.1	+0.4
	SNR=69						
AAK	Ala-Archa	6.92	26	P	Pn	15 49 29.5	+1.0
	comp=N,30nm,0.3s,baz=206,slow=7.5,SNR=248						
AAK				S	Sn	15 50 43.9	-3.3
	comp=N,21nm,0.3s,baz=199,slow=22,SNR=9.6						
AAK	Ala-Archa	6.92	26	P	Pn	15 49 29.2	+0.7
	SNR=76						
AAK	Ala-Archa	6.92	26	i P	Pn	15 49 29.2	+0.7
	SNR=162						
AAK	Ala-Archa	6.92	26	i PN	Pn	15 49 29.0	+0.6
AAK				pmax	pmax		
	comp=Z,123nm,0.4s						
AAK	Ala-Archa	6.92	26	P	Pn	15 49 29.1	+0.6
AAK				S	Sn	15 50 44.4	-2.8
AAK	Ala-Archa	6.92	26	Pn	Pn	15 49 28.9	+0.4
HRA	Herat	6.99	255	Pn	Pn	15 49 28.3	-1.1
BHK	Bhakra	7.09	134	eP	Pn	15 49 29.0	-1.6
BHK				eS	Sn	15 50 48.2	-2.8
KBK	Karagaybulak	7.10	28	P	Pn	15 49 32.0	+1.1
	SNR=71						
ULHL	Ulahol	7.33	36	P	Pn	15 49 33.9	+0.1
	SNR=32						
CHMS	Chumysh	7.33	26	P	Pn	15 49 34.1	+0.4
	SNR=25						
USP	Ospenovka	7.48	24	P	Pn	15 49 35.9	+0.2
	SNR=42						
TKM2	Tokmak 2	7.58	30	P	Pn	15 49 37.6	+0.4
	SNR=125						
SGDS	Sogindy	7.69	24	⇓iP	Pn	15 49 37.9	-0.5
	baz=23						
SGDS				eS	Sn	15 51 01.6	-3.6
	baz=23						
SMLA	Simla	7.74	132	eP	Pn	15 49 39.2	+0.2
SMLA				eS	Sn	15 51 02.7	-3.7
SMLA				IAML		15 51 04.8	
	comp=N,833nm,0.7s						
AAA	Alma-Ata	8.38	35	eP	Pn	15 49 47.1	-0.4
	baz=35						
AAA	Alma-Ata	8.38	35	ePN	Pn	15 49 47.0	-0.4
MDOK	Medeo	8.41	35	eP	Pn	15 49 48.0	+0.1
	baz=36						
MDOK	Medeo	8.41	35	ePN	Pn	15 49 48.0	+0.1
MDOK	Medeo	8.41	35	⇑P	Pn	15 49 48.2	+0.4
	comp=N,48nm,0.7s						
MDOK				⇓S	Sn	15 51 14.0	-8.4
	comp=N,27nm,0.8s						
KNDC	Almaty	8.41	35	PN	Pn	15 49 48.6	+0.8
KNDC	Almaty	8.41	35	⇑P	Pn	15 49 48.7	+0.8
	comp=N,155nm,0.7s						
KNDC				⇑S	Sn	15 51 11.2	-11
	comp=N,39nm,0.6s						
KUU	Kurty	8.69	30	⇓iP	Pn	15 49 50.3	-1.1
	baz=30						
KUU	Kurty	8.69	30	d iPN	Pn	15 49 50.3	-1.1
DDI	Dehra Dun	8.85	132	eP	Pn	15 49 54.4	+0.8
DDI				eS	Sn	15 51 28.5	-4.4
CHKK	Chushkaly	8.93	32	eP	Pn	15 49 53.6	-0.8
	baz=33						
BTLS	Baital	9.00	17	eP	Pn	15 49 54.7	-0.6
	baz=16						
BTLS	Baital	9.00	17	ePN	Pn	15 49 54.7	-0.6
SATY	Saty	9.01	41	eP	Pn	15 49 54.4	-1.3
	baz=41						
SATY	Saty	9.01	41	ePN	Pn	15 49 54.3	-1.3
UZB	Uzynbulak	9.40	42	eP	Pn	15 49 59.6	-1.2
	baz=43						
UZB	Uzynbulak	9.40	42	eP	Pn	15 49 59.5	-1.2
KPKS	Kokpek	9.44	40	eP	Pn	15 50 00.2	-1.0
	baz=40						
KPKS	Kokpek	9.44	40	eP	Pn	15 50 00.2	-1.0
ARXS	Arharly	9.58	34	eP	Pn	15 50 03.2	+0.2
SHLS	Shalkode	9.64	43	eP	Pn	15 50 05.0	+1.0
	baz=45						
SHLS	Shalkode	9.64	43	eP	Pn	15 50 04.9	+1.0
NDI	New Delhi	9.65	142	eP	Pn	15 50 03.0	-1.0
NDI				eP	Pn	15 50 03.6	-0.4
NDI				eS	Sn	15 51 44.9	-6.9
NDI				eS	Sn	15 51 45.0	-6.9
KUDL	Kundal	9.76	147	eP	Pn	15 50 04.8	-0.6
AYAN	Aya Nagar	9.77	143	eP	Pn	15 50 05.5	0.0
PDGK	Podgornoye	9.77	43	P	Pn	15 50 04.3	-1.3
PDGK	Podgornoye	9.77	43	⇓P	Pn	15 50 04.6	-1.0
	comp=N,24nm,0.8s						
PDGK				⇑S	Sn	15 51 50.8	-4.0
	comp=N,15nm,0.8s						
GEYT	Alibeck	9.92	282	P	Pn	15 50 06.0	-1.4
	comp=N,5.6nm,0.3s,baz=118,slow=11,SNR=60						
GEYT				S	Sn	15 51 54.2	-4.1
	comp=N,6.5nm,0.3s,baz=70,slow=18,SNR=2.8						
GEYT	Alibeck	9.92	282		Pn	15 50 05.2	-2.3
GYA0B	ALIBECK ARRAY	9.92	282	Pn	Pn	15 50 05.1	-2.3
SONA	Sohna	9.94	144	eP	Pn	15 50 09.3	+1.5
SONA				eS	Sn	15 51 52.2	-6.6
AJM	Ajmer	10.59	159	eP	Pn	15 50 16.3	0.0
MAKZ	Makanchi	13.46	36	P	Pn	15 50 51.3	-1.1
MAKZ	Makanchi	13.46	36	⇓P	Pn	15 50 51.4	-1.1
	comp=N,54nm,0.9s						
MAKZ	Makanchi	13.46	36	Pn	Pn	15 50 51.3	-1.1
PYUN	Piuthan	13.51	125	eP	Pn	15 50 52.4	-1.0
	comp=N,144nm,0.3s						
MK31	Makanchi Array	13.60	37	c iP	Pn	15 50 53.9	-0.3
MK31	Makanchi Array	13.60	37	Pn	Pn	15 50 53.2	-1.0
MKAR	Makanchi Array	13.60	37	P	Pn	15 50 54.5	+0.3
	comp=N,0.9nm,0.3s,baz=220,slow=14,SNR=38						
MKAR				S	S	15 53 29.7	+3.6
	baz=228,slow=19,SNR=1.2						
MKAR	Makanchi Array	13.60	37	i P	Pn	15 50 53.9	-0.3
MKAR				pmax	pmax		
	comp=Z,15nm,0.8s						
MKAR	Makanchi Array	13.60	37	Pn	Pn	15 50 53.0	-1.1
BRZS	Berezniki	13.61	6	eP	Pn	15 50 53.6	-0.6
	baz=5.7						
BRZS	Berezniki	13.61	6	eP	Pn	15 50 53.6	-0.6
DANN	Dangsing	13.87	122	eP	Pn	15 50 56.9	-1.1
	comp=Z,116nm,0.4s						
KOLN	Koldanda	14.13	124	eP	Pn	15 51 00.2	-0.9
	comp=Z,56nm,0.3s						
BHPL	Bhopal	14.51	153	eP	Pn	15 51 05.9	+0.2
GKN	Gorkha	14.69	121	eP	Pn	15 51 07.8	-0.1
	comp=Z,192nm,0.4s						
AB31	Akbulak array	14.89	332	i P	Pn	15 51 08.7	-1.3
AB31	Akbulak array	14.89	332	⇑P	Pn	15 51 08.7	-1.3
	comp=Z,21nm,0.6s,baz=144,slow=11,SNR=264						
ABKAR	Akbulak array	14.89	332	Pn	Pn	15 51 08.6	-1.5
WMQ	Urumqi	15.10	56	eP	P	15 51 13.5	+0.1
WMQ				sP	sP	15 52 09.8	-2.2
WMQ				S	Sn	15 54 02.5	+0.7
WMQ				pmax	pmax		
	comp=Z,21nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,100nm,3.7s						
DMN	Daman	15.26	121	eP	P	15 51 15.3	-0.2
	comp=Z,100nm,0.4s						
KKN	Kakani	15.26	120	eP	Pn	15 51 15.1	0.0
	comp=Z,273nm,0.6s						
KURBB	Kurchatov Arra	15.31	20	P	Pn	15 51 15.0	-0.1
	comp=Z,0.7nm,0.3s,baz=210,slow=10,SNR=26						
ZSN	Zaisan	15.33	40	eP	Pn	15 51 13.9	-1.6
	baz=40						
ZSN	Zaisan	15.33	40	eP	Pn	15 51 13.9	-1.6
KURK	Kurchatov	15.42	20	⇑iP	Pn	15 51 16.1	-0.4
KURK				pmax	pmax		
	comp=Z,11nm,0.7s						

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KURK  Kurchatov         15.42  20    P      P      15 51 16.8 +0.1
KURK  Kurchatov         15.42  20   ⇑P      Pn     15 51 15.8 -0.6
      comp=Z,11nm,0.8s
KURK  Kurchatov         15.42  20           Pn     15 51 15.8 -0.6
KURK                                 IAmb   IAmb   15 51 19.7
      comp=Z,11nm,0.7s
PKIN  Phulchoki         15.48 121   eP      Pn     15 51 17.7  0.0
      comp=Z,218nm,0.4s
PKI   Pulchoki          15.49 121   eP      P      15 51 18.5 +0.4
      comp=Z,136nm,0.6s
GUN   Gumba             15.61 119   eP      Pn     15 51 16.2 -3.2
JIRN  Jiri              15.98 119   eP      Pn     15 51 24.1 +0.2
      comp=Z,276nm,0.6s
BANOM Banah             15.99 233    P      P      15 51 23.3 -0.1
BANOM Banah             15.99 233    P      P      15 51 23.4 +0.1
SHME  Shamm             16.01 234    P      Pn     15 51 24.3 +0.5
SHME  Shamm             16.01 234    P      Pn     15 51 24.3 +0.5
MDH   Madha             16.43 231    P      P      15 51 28.0 -0.2
MDH   Madha             16.43 231    P      P      15 51 28.0 -0.2
MSFE  Esma-Masafi       16.48 232    P      Pn     15 51 29.9 +0.3
BVAR  Borovoye Array    16.56 360    P      Pn     15 51 30.6 +0.4
      comp=Z,3.2nm,0.3s,baz=182,slow=17,SNR=25
AKTO  Aktyubinsk        16.58 331    P      Pn     15 51 30.4 -0.1
      comp=Z,1.8nm,0.3s,baz=140,slow=10,SNR=111
AKTO                                 S      S      15 54 28.2 -4.5
      comp=Z,0.2nm,0.3s,baz=267,slow=16,SNR=2.0
AKTO  Aktyubinsk        16.58 331   ⇓P      P      15 51 29.3 -0.2
      comp=Z,55nm,0.8s
BRVK  Borovoye          16.59 360c iP      Pn     15 51 30.7 +0.2
BRVK                                 pmax   pmax
      comp=Z,17nm,1.3s
BRVK  Borovoye          16.59 360    P      Pn     15 51 30.7 +0.2
BRVK  Borovoye          16.59 360   ⇓P      Pn     15 51 30.6  0.0
      comp=Z,5.1nm,0.4s
BRVK  Borovoye          16.59 360           P      15 51 30.0 +0.4
BRVK                                 IAmb   IAmb   15 51 34.5
      comp=Z,10nm,0.5s
WSAR  Wadi Sarin        16.66 221    P      Pn     15 51 32.5 +0.7
      comp=Z,1.0nm,0.3s,baz=38,slow=9.2,SNR=8.7
WSAR  Wadi Sarin        16.66 221    P      Pn     15 51 31.8  0.0
RAMN  Ramite            16.70 120   eP      Pn     15 51 32.7 +0.3
      comp=Z,85nm,0.4s
UOSS  Minazif           16.75 231    P      Pn     15 51 32.5 -0.3
UOSS  Minazif           16.75 231    P      Pn     15 51 32.4 -0.3
UOSS  Minazif           16.75 231    P      P      15 51 32.1 +0.5
UOSS                                 IAmb   IAmb   15 51 35.6
      comp=Z,26nm,0.8s
HATD  Hatta, Dubai      16.88 231   i P     Pn     15 51 34.6 +0.3
      SNR=8.8
HATD  Hatta, Dubai      16.88 231    P      Pn     15 51 34.2 -0.1
      SNR=8.9
WBK   Wadi Bani Khal    17.00 219    P      Pn     15 51 36.1 +0.3
ASHO  Ashiyiah          17.03 230   i P     Pn     15 51 36.4 +0.3
      SNR=7.2
ASHO  Ashiyiah          17.03 230    P      Pn     15 51 35.8 -0.3
      SNR=12
HOQ   Hoqain            17.11 225    P      P      15 51 36.3 +0.6
SMDO  Samad             17.12 222    P      Pn     15 51 38.2 +1.0
SOHO  SOHO              17.14 228    P      Pn     15 51 37.0 -0.4
JLN   Jalan Bani Buh    17.17 217    P      Pn     15 51 37.7 -0.1
TAPN  Taplejung         17.25 117   eP      Pn     15 51 40.1 +1.2
      comp=Z,111nm,0.4s
FAQ   Al Faqa, Dubai    17.27 232    P      P      15 51 37.9 +0.5
FAQ   Al Faqa, Dubai    17.27 232    P      Pn     15 51 38.5 -0.5
LKRN  Lenkeran, Azer    17.29 284    P      P      15 51 37.4  0.0
ODAN  Odare             17.31 119   eP      Pn     15 51 40.7 +1.1
      comp=Z,102nm,0.4s
ASUD  Al Ashush, Dub    17.53 232    P      Pn     15 51 41.3 -0.6
JMDO  Jabal Madar       17.65 221    P      Pn     15 51 43.7 +0.3
ARQ   Araqi             17.76 226    P      Pn     15 51 44.3 -0.3
      SNR=13
BSY   Bisya             17.84 224    P      Pn     15 51 45.5 -0.1
DGZ   Jazzator, Alta    18.09  38c iP      Pn     15 51 47.8 -0.7
DGZ                                  pmax   pmax
      comp=Z,37nm,0.7s
LSA   Lhasa             18.62 105    P      Pn     15 51 56.0 +0.8
LSA                                  pmax   pmax
      comp=Z,56nm,0.9s
LSA   Lhasa             18.62 105   i P     Pn     15 51 56.4 +1.2
      SNR=11
LSA   Lhasa             18.62 105    P      P      15 51 51.9 -0.6
LSA                                  pmax   pmax
      comp=Z,22nm,0.7s
LSA   Lhasa             18.62 105    P      P      15 51 51.9 -0.6
LSA                                  IAmb   IAmb   15 52 00.6
      comp=Z,22nm,0.7s
SEKA  Sheki             18.68 292    P      P      15 51 53.2 +0.6
MNGR  Mingechevir, A    18.71 290    P      P      15 51 53.9 +1.0
UMZA  Um Al Zommool     19.04 228    P      P      15 51 57.0 +0.5
MZWR  Madinat Zayed     19.07 233    P      P      15 51 57.4 +0.6
GANJ  Ganja             19.28 290    P      P      15 51 59.4 +0.3
KHOR  Al-Khor Airpor    19.44 242    P      P      15 52 00.7 -0.1
LGD   Lagodekhi         19.47 293    P      P      15 52 02.4 +1.3
DDFL  Dedoflistskaro    19.51 292    P      Pn     15 52 05.4 +0.1
GHWR  Ruwais            19.58 235    P      P      15 52 03.0 +0.6
SHMA  Al-Shehemyia      19.69 243    P      P      15 52 03.6 +0.1
NAX   Nakhchivan        19.86 285    P      P      15 52 06.9 +1.6
SAKB  Bahrain           19.92 244    P      P      15 52 06.3 +0.3
ZAA0  Zalesovo Array    20.14  25    P      P      15 52 08.1  0.0
ZALV  Zalesovo Beam     20.14  25    P      P      15 52 08.5 +0.4
      comp=Z,24nm,0.3s,baz=215,slow=10,SNR=172
ZALV  Zalesovo Beam     20.14  25    P      P      15 52 08.1  0.0
TRNA  Turayna           20.20 240    P      P      15 52 08.2 -0.9
UMR   Umm Al-Rimmam     20.22 257   eP      P      15 52 08.8 -0.3
HYB   Hyderabad         20.30 157   i P     Pn     15 52 13.0 -2.0
HYB                                 esP     sP     15 53 15.0 +6.8
HYB                                 eS      S      15 55 54.0 +7.1
SLWR  Sila              20.31 238    P      P      15 52 10.6 +0.5
KBD   Kabd              20.41 256   eP      P      15 52 10.4 -0.8
MIB   Mutribah          20.41 258   eP      P      15 52 11.1 -0.1
QRN   Al-Qurain         20.43 254   eP      P      15 52 10.9 -0.5
GNI   Garni             20.46 288    P      P      15 52 12.9 +1.1
      comp=Z,55nm,0.7s,baz=13,slow=1.9,SNR=28
GNI   Garni             20.46 288    P      P      15 52 12.9 +1.1
GNI   Garni             20.46 288deP      P      15 52 14.2 +2.4
GNI                                  pmax   pmax
      comp=Z,103nm,1.3s
GNI   Garni             20.46 288    P      P      15 52 14.2 +2.4
RDF   Al-Radifah        20.63 255   eP      P      15 52 12.8 -0.7
ZEI   Tsey              21.33 295   eP      P      15 52 24.0 +3.0
ZEI                                  pmax   pmax
      comp=Z,5.0nm,1.0s
BGD   Bogdanovka        21.39 291    P      P      15 52 26.0 +4.3
SVE   Sverdlovsk        21.40 345   eP      P      15 52 21.8 +0.4
SVE                                 eS      S      15 56 09.4 +3.3
SVE                                  pmax   pmax
      comp=Z,11nm,0.9s
AKH   Akhalkalaki       21.48 292    P      P      15 52 25.9 +3.4
ARU   Arti              21.51 342    P      P      15 52 23.1 +0.5
      comp=Z,2.1nm,0.5s,baz=23,slow=2.7,SNR=12
ARU   Arti              21.51 342d iP      P      15 52 23.6 +1.1
ARU                                  *PP    pP     15 52 51.8 -4.6
ARU                                  S      S      15 56 11.3 +3.4
ARU                                  pmax   pmax
      comp=Z,26nm,1.4s
ARU   Arti              21.51 342    P      P      15 52 22.8 +0.2
ARU                                  IAmb   IAmb   15 52 25.9
      comp=Z,38nm,1.4s
ONI   Oni               21.63 295    P      P      15 52 25.2 +1.2
ONI                                  pmax   pmax
      comp=Z,12nm,0.8s
ONI   Oni               21.63 295    P      P      15 52 25.2 +1.2
ONI                                  IAmb   IAmb   15 52 31.7
      comp=Z,12nm,0.8s
NCK   Nalchik           21.66 297⇓eP      P      15 52 23.1 -1.1
NCK                                  pmax   pmax
      comp=Z,15nm,0.6s
KBZ   Khabaz            22.20 298    P      P      15 52 29.4  0.0
      comp=Z,3.6nm,0.7s,baz=95,slow=14,SNR=8.3
KBZ   Khabaz            22.20 298ceP      P      15 52 30.7 +1.3
NEY   Neytrino          22.25 296⇑eP      P      15 52 31.9 +1.8
NEY                                  pmax   pmax
      comp=Z,4.0nm,1.0s
SIRT  Sirnak            22.34 281    P      P      15 52 27.9 -3.1
GOF   Gofitskoye        22.36 301⇑eP      P      15 52 32.1 +1.2
GOF                                  pmax   pmax
      comp=Z,33nm,0.9s
KVAR  Kislovodsk Arr    22.38 298    P      P      15 52 32.0 +0.7
      comp=Z,4.5nm,0.7s,baz=76,slow=22,SNR=2.1
KIV   Kislovodsk        22.39 298   eP      P      15 52 33.9 +2.6
KIV                                 e              15 56 20.8
KIV                                 eS      S      15 56 27.3 +4.9
KIV                                  pmax   pmax
      comp=Z,13nm,1.0s
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BELG  Belogornoye       22.62 322    P      P      15 52 33.9 +0.7
      comp=Z,18nm,0.6s,baz=16,slow=1.2,SNR=11
DOK   Doka              22.84 223    P      P      15 52 36.1 +0.5
      SNR=8.0
GTA   Gaotai            23.33  74   eP      P      15 52 41.6 +1.7
GTA                                  pP     pP     15 53 20.8 +3.5
GTA                                  PP     PnPn   15 53 24.3 +4.2
GTA                                  sP     sP     15 53 48.0 +5.4
GTA                                  pmax   pmax
      comp=Z,13nm,0.9s
WHFO  Wadi Hawf         23.61 223    P      P      15 52 42.5  0.0
      SNR=81
RBK   Rabkut            23.71 221    P      P      15 52 43.6 +0.1
ABTO  Aybut             24.33 223    P      P      15 52 50.5 +1.4
RAYN  Ar Rayn           25.05 246    P      P      15 52 54.3 -1.3
RAYN                                 pmax   pmax
      comp=Z,8.0nm,0.9s
RAYN  Ar Rayn           25.05 246    P      P      15 52 55.9 +0.3
RAYN  Ar Rayn           25.05 246    P      P      15 52 54.2 -1.3
VRH   Novokhopyorsk     25.20 315   eP      P      15 52 57.4 +0.9
VRH                                  pmax   pmax
      comp=Z,6.0nm,0.7s
KIRV  Kirov             26.07 335    P      P      15 53 05.0 +0.8
      comp=Z,6.4nm,0.5s,baz=215,slow=5.4,SNR=3.7
KIRV  Kirov             26.07 335⇓iP      P      15 53 05.6 +1.4
ANN   Anapa             26.24 299   eP      P      15 53 06.2 +0.3
ANN                                 e*PP    pP     15 53 44.6 -1.0
ANN                                 e              15 53 58.0
ANN                                 e              15 56 25.7
ANN                                 eS      S      15 57 25.8 +2.4
ANN                                 e*SS    sS     15 58 34.9 -1.1
ANN                                  pmax   pmax
      comp=Z,76nm,1.1s
VSR   Storozhevoye      26.68 313   eP      P      15 53 13.8 +3.9
VSR                                  pmax   pmax
      comp=Z,6.0nm,0.5s
LPSR  Galich'ya Gora    27.35 316   eP      P      15 53 15.5 -0.3
LPSR                                 pmax   pmax
      comp=Z,5.0nm,0.6s
ZAK   Zakamensk         27.37  49   eP      P      15 53 17.2 +1.1
ZAK                                 e              15 54 02.0
ZAK                                  pmax   pmax
      comp=Z,10.0nm,1.1s
ZAK                                  pmax   pmax
      comp=Z,7.0nm,1.3s
TLY   Talaya            28.00  47    P      P      15 53 24.0 +2.3
      comp=Z,9.2nm,0.5s,baz=229,slow=8.6,SNR=6.3
TLY   Talaya            28.00  47c iP      P      15 53 23.9 +2.3
TLY                                  pmax   pmax
      comp=Z,6.0nm,0.5s
TLY   Talaya            28.00  47    P      P      15 53 23.6 +1.9
TLY                                  IAmb   IAmb   15 53 24.8
      comp=Z,10nm,0.6s
SONM  Songino Array     28.74  55    P      P      15 53 30.2 +1.8
      comp=Z,7.6nm,0.7s,baz=260,slow=9.3,SNR=35
SONM  Songino Array     28.74  55    P      P      15 53 29.7 +1.3
BR131 Keskin Array S    29.00 288    P      P      15 53 31.6 +0.9
BR131                                pmax   pmax
      comp=Z,3.0nm,0.7s
BR131 Keskin Array S    29.00 288    P      P      15 53 31.6 +0.9
BRTR  Keskin Array B    29.00 288    P      P      15 53 32.2 +1.5
      comp=Z,1.8nm,0.6s,baz=105,slow=9.3,SNR=13
BRTR                                 pP     pP     15 54 14.4 +3.6
      comp=Z,1.7nm,0.7s,baz=93,slow=8.5,SNR=5.2
BRTR  Keskin Array B    29.00 288    P      P      15 53 31.6 +0.9
ULN   Ulaanbaatar       29.18  55c iP      P      15 53 33.6 +1.3
ULN                                  pmax   pmax
      comp=Z,8.0nm,0.8s
ULN   Ulaanbaatar       29.18  55    P      P      15 53 33.5 +1.2
ULN                                  IAmb   IAmb   15 53 34.6
      comp=Z,8.1nm,0.7s
PRGR  Permogore         29.61 336   eP      P      15 53 34.6 -1.0
PRGR                                 pmax   pmax
      comp=Z,8.0nm,0.9s
KMI   Kunming           29.85 103   ⇑P      P      15 53 41.5 +3.0
KMI                                  pmax   pmax
      comp=Z,19nm,0.6s
CHTO  Chiang Mai        30.62 117    P      P      15 53 45.8 +0.7
CHTO                                 pmax   pmax
      comp=Z,3.0nm,0.9s
CHTO  Chiang Mai        30.62 117    P      P      15 53 45.8 +0.7
CM31  Chiang Mai Arr    30.85 118    P      P      15 53 48.0 +0.9
CM31                                 IAmb   IAmb   15 53 49.9
      comp=Z,9.1nm,1.2s
CMAR  Chiang Mai Arr    30.85 118    P      P      15 53 47.6 +0.4
      comp=Z,3.9nm,0.9s,baz=298,slow=8.0,SNR=41
CMAR                                 pP     pP     15 54 31.3 +2.8
      comp=Z,2.2nm,0.7s,baz=304,slow=9.2,SNR=3.7
CMAR                                 PcP    PcP    15 56 38.5 -0.6
      comp=Z,1.7nm,0.9s,baz=297,slow=4.3,SNR=5.1
CMAR                                 ScP    ScP    16 00 00.2 -2.8
      comp=Z,0.4nm,0.4s,baz=302,slow=5.8,SNR=4.2
CMAR  Chiang Mai Arr    30.85 118   i P     P      15 53 48.2 +1.1
CMAR                                 pmax   pmax
      comp=Z,4.0nm,0.8s
CMAR  Chiang Mai Arr    30.85 118    P      P      15 53 48.0 +0.9
KLMR  Klimovskoe        31.28 331   eP      P      15 53 49.9 -0.4
KLMR                                 pmax   pmax
      comp=Z,8.0nm,0.9s
KLMR  Klimovskoe        31.28 331   eP      P      15 53 50.0 -0.4
KLMR                                 AMP           15 53 51.1
      comp=Z,8.0nm,0.9s
XAN   Xi'an             31.40  83    P      P      15 53 52.0 +0.2
XAN                                  pP     pP     15 54 34.8 +1.1
XAN                                  pmax   pmax
      comp=Z,11nm,0.7s
HHC   Hu-ho-hao-te      32.22  69   eP      P      15 54 00.8 +1.8
HHC                                  pmax   pmax
      comp=Z,6.0nm,0.6s
HHC                                  pmax   pmax
      comp=Z,93nm,6.6s
ELL   Elmali            32.35 283    P      P      15 53 59.7 -0.5
ELL                                  pmax   pmax
      comp=Z,18nm,0.6s
ELL   Elmali            32.35 283    P      P      15 53 59.7 -0.5
AKASG Malin Array Be    32.60 309    P      P      15 54 02.3 +0.3
      comp=Z,0.7nm,0.4s,baz=82,slow=7.1,SNR=2.7
AKASG                                pP     pP     15 54 46.5 +3.9
      comp=Z,2.9nm,0.7s,baz=90,slow=7.9,SNR=4.4
AKASG                                ScP    ScP    16 00 04.6 -3.8
      comp=Z,0.4nm,0.4s,baz=84,slow=2.6,SNR=1.9
SLVN  Son La            32.77 108    P      P      15 54 05.2 +1.3
ENH   Enshi             33.05  89    P      P      15 54 06.9 +0.7
MNK   Minsk             34.19 315   i P     P      15 54 15.2 -0.5
MNK                                 i *PP   pP     15 54 54.6 -2.0
MNK                                 i              15 55 35.9
MNK                                 i              15 56 45.9
MNK                                 i S     S      15 59 29.0 +1.7
MNK                                 i              16 04 16.4
MNK                                  pmax   pmax
      comp=E,3.0nm,1.3s
MNK                                  pmax   pmax
      comp=Z,6.0nm,0.8s
MNK                                  pmax   pmax
      comp=N,16nm,1.1s
MNK                                  MLR    MLR
      comp=N,119nm,18.0s
MNK                                  MLR    MLR
      comp=Z,72nm,14.0s
MNK                                  MLR    MLR
      comp=E,12nm,13.0s
MNK   Minsk             34.19 315   i P     P      15 54 15.3 -0.4
      comp=E,3.0nm,1.3s
MNK                                 i P     P      15 54 15.3 -0.4
      comp=N,16nm,1.1s
MNK                                 i P     P      15 54 15.3 -0.4
      comp=Z,6.0nm,0.8s,baz=104
MNK                                 i pP    pP     15 54 54.6 -2.0
MNK                                 i PP    PP     15 55 36.0 -1.3
MNK                                 i PcP   PcP    15 56 46.0 -1.8
MNK                                 i S     S      15 59 29.1 +1.8
MNK                                 i sS    sS     16 00 38.3 -2.8
MNK                                 i SS    SnSn   16 02 03.4 +2.1
MNK                                 i LRM   MLR    16 10 37.4
      comp=N,119nm,18.1s
MNK                                 i LRM   MLR    16 10 40.9
      comp=Z,72nm,14.0s
MNK                                 i LRM   MLR    16 10 42.5
      comp=E,12nm,13.1s
NRIK  Noril'sk          34.25  11    P      P      15 54 17.4 +1.5
      comp=E,21nm,0.5s,baz=200,slow=6.3,SNR=47
NRIK  Noril'sk          34.25  11c iP      P      15 54 17.2 +1.2
NRIK                                 pmax   pmax
      comp=Z,31nm,0.9s
NRIK  Noril'sk          34.25  11    P      P      15 54 17.0 +1.0
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BURAR Bucovina Array    34.91 303    P      P      15 54 22.3 +0.2
BURAR                                pmax   pmax
      comp=Z,2.0nm,1.2s
BURAR Bucovina Array    34.91 303    P      P      15 54 22.3 +0.2
BUR08 Bucovina Ar. S    34.92 303    P      P      15 54 21.6 -0.7
FIA1  FINESS Array S    37.25 326    P      P      15 54 41.8 +0.3
FIA1                                 IAmb   IAmb   15 54 49.0
      comp=Z,25nm,1.4s
FINES FINESS Array B    37.25 326    P      P      15 54 42.1 +0.5
      comp=Z,1.5nm,0.4s,baz=116,slow=9.4,SNR=19
FINES FINESS Array B    37.25 326    P      P      15 54 41.6  0.0
LVZ   Lovozero          37.32 339    P      P      15 54 42.2  0.0
LVZ                                  pmax   pmax
      comp=Z,20nm,1.1s
LVZ   Lovozero          37.32 339    P      P      15 54 42.2  0.0
LVZ                                  IAmb   IAmb   15 55 05.4
      comp=Z,20nm,1.1s
UBPT  Khong Chiam       37.64 115    P      P      15 54 45.2 -0.2
QIZ   Qiongzhong        38.66 106    P      P      15 54 54.2 +0.3
QIZ                                  IAmb   IAmb   15 55 16.6
      comp=Z,26nm,1.4s
NJ2   Nanjing           39.95  82   eP      P      15 55 05.0 +0.6
NJ2                                  pmax   pmax
      comp=Z,11nm,0.5s
KEV   Kevo              40.66 338    P      P      15 55 10.1 +0.4
KEV                                  pmax   pmax
      comp=Z,69nm,1.5s
KEV   Kevo              40.66 338    P      P      15 55 10.1 +0.4
ARA0  ARCESS Array S    41.00 338   eP      P      15 55 12.8 +0.3
ARCES ARCESS Array B    41.00 338    P      P      15 55 13.3 +0.8
      comp=Z,8.8nm,0.6s,baz=111,slow=7.6,SNR=43
ARCES ARCESS Array B    41.00 338   eP      P      15 55 13.1 +0.6
ARCES ARCESS Array B    41.00 338    P      P      15 55 13.3 +0.8
KTK1  Kautokeino        41.46 336   eP      P      15 55 16.6 +0.3
HAMF  Hammerfest        42.09 339   eP      P      15 55 22.4 +1.1
ZEA   Zeya              42.44  47   eP      P      15 55 26.5 +2.1
ZEA                                  pmax   pmax
      comp=E,10.0nm,0.9s
ZEA                                  pmax   pmax
      comp=N,10.0nm,0.5s
ZEA                                  pmax   pmax
      comp=Z,10.0nm,0.8s
JETT  Jettan, Norway    42.60 337   eP      P      15 55 27.4 +1.8
TRO   Tromso            43.11 336   eP      P      15 55 30.1 +0.6
MOR8  Moi Rana          43.62 331   eP      P      15 55 33.5 -0.2
FAUS  Fauske            43.62 333   eP      P      15 55 33.7 +0.1
STEI  Steigen           43.79 333   eP      P      15 55 34.9 -0.1
NC405 NORSAR Array S    43.89 323    P      P      15 55 35.7 -0.3
NC405                                IAmb   IAmb   15 56 02.2
      comp=Z,36nm,1.4s
NC602 NORSAR Array S    43.93 323    P      P      15 55 36.1 -0.1
NC602                                IAmb   IAmb   15 55 53.3
      comp=Z,31nm,1.4s
NORES NORESS Array B    43.93 323    P      P      15 55 38.6 +2.3
NC303 NORSAR Array S    44.07 323    P      P      15 55 36.8 -0.6
NB201 NORSAR Array S    44.09 323    P      P      15 55 37.1 -0.5
NB2   NORSAR Subarra    44.12 323    P      P      15 55 37.5 -0.4
      comp=Z,4.7nm,0.9s,baz=98,slow=7.9
NB2   NORSAR Subarra    44.12 323    P      P      15 55 37.5 -0.4
      baz=98,slow=7.9
NOA   NORSAR Array B    44.12 323    P      P      15 55 37.4 -0.4
      comp=Z,1.1nm,0.5s,baz=97,slow=7.8,SNR=9.7
NOA                                  pP     pP     15 56 22.5 +2.2
      comp=Z,1.8nm,0.7s,baz=98,slow=8.1,SNR=3.2
KONS  Konsvik           44.21 331   eP      P      15 55 38.9 +0.6
NAO01 NORSAR Array S    44.26 323    P      P      15 55 37.2 -1.7
NAO01                                IAmb   IAmb   15 55 40.3
      comp=Z,24nm,1.1s
YAK   Yakutsk           44.27  35   eP      P      15 55 39.4 +0.5
YAK                                 e*PP    pP     15 56 22.7 +0.3
YAK                                 e              15 57 14.7
YAK                                 e              15 57 34.1
YAK                                 ePPP    PPP    15 58 07.7
YAK                                 eS      S      16 01 57.3 +0.1
YAK                                 e*SS    sS     16 03 12.6 -0.8
YAK                                  pmax   pmax
      comp=Z,48nm,0.9s
YAK                                  pmax   pmax
      comp=N,10.0nm,1.1s
YAK                                  pmax   pmax
      comp=E,13nm,1.4s
YAK                                  pmax   pmax
      comp=Z,323nm,3.2s
YAK                                  pmax   pmax
      comp=N,241nm,4.1s
YAK                                  pmax   pmax
      comp=E,235nm,3.7s
YAK                                  smax   smax
      comp=E,389nm,3.4s
YAK                                  smax   smax
      comp=N,609nm,3.8s
YAK   Yakutsk           44.27  35    P      P      15 55 39.3 +0.5
NBO00 NORSAR Array S    44.33 323    P      P      15 55 38.4 -1.0
NC204 NORSAR Array S    44.37 323    P      P      15 55 39.4 -0.4
NC204                                IAmb   IAmb   15 56 00.2
      comp=Z,39nm,1.4s
LOF   Lofoten           44.46 333   eP      P      15 55 40.0 -0.3
TJN   Taejon            45.23  72⇓eP      P      15 55 45.7 -1.2
KS19  Wonju Array Si    45.28  71    P      P      15 55 48.0 +0.8
KSAR  Wonju Array Be    45.31  71    P      P      15 55 48.1 +0.6
KSAR  Wonju Array Be    45.31  71    P      P      15 55 48.1 +0.6
HOMB  Homborsund        45.33 319   eP      P      15 55 45.8 -1.5
KSRS  Korea Array       45.34  71    P      P      15 55 47.9 +0.2
      comp=Z,2.9nm,0.7s,baz=275,slow=6.8,SNR=23
KSRS                                 PcP    PcP    15 57 23.6 -0.2
      comp=Z,2.2nm,0.8s,baz=288,slow=3.8,SNR=8.0
KLR   Kul'dur           45.54  54⇑iP      P      15 55 49.8 +0.7
KLR                                  pmax   pmax
      comp=Z,18nm,1.6s
TIXI  Tiksi             45.98  22   i P     P      15 55 52.7 +0.5
TIXI                                 pmax   pmax
      comp=Z,10.0nm,0.5s
TIXI  Tiksi             45.98  22    P      P      15 55 52.6 +0.3
TIXI                                 IAmb   IAmb   15 55 53.6
      comp=Z,17nm,0.5s
MYKOM Kota Tinggi       46.31 130    P      P      15 55 56.0 +0.5
USRK  Ussuriysk Ar.     46.60  61    P      P      15 55 57.1 -0.3
      comp=Z,2.0nm,0.7s,baz=266,slow=8.7,SNR=3.3
BER   Bergen            46.98 322   eP      P      15 55 58.6 -1.5
SPB2  Spitsbergen Ar    47.41 347    P      P      15 56 04.2 +0.9
SPA0  Spitsbergen Ar    47.42 347   eP      P      15 56 04.0 +0.6
SPITS Spitsbergen Ar    47.42 347    P      P      15 56 04.0 +0.6
SPITS                                pmax   pmax
      comp=Z,113nm,1.5s
KMBO  Kilima Mbogo      48.46 227    P      P      15 56 12.6 +0.2
      comp=Z,0.5nm,0.3s,baz=50,slow=15,SNR=5.0
KMBO  Kilima Mbogo      48.46 227    P      P      15 56 12.6 +0.2
KMBO                                 pmax   pmax
      comp=Z,4.0nm,1.5s
KMBO  Kilima Mbogo      48.46 227    P      P      15 56 12.6 +0.2
JHS   Saijyo            50.10  72    P      P      15 56 24.0 -0.4
JHS                                  IAmb   IAmb   15 56 24.8
      comp=Z,25nm,1.3s
KSM   Kuching           50.70 124    P      P      15 56 28.0 -1.0
SBUM  Sibu              51.28 121    P      P      15 56 32.0 -1.3
JWT   Wachi             51.75  71    P      P      15 56 37.5 +0.9
SPMM  Sapulut           52.71 116    P      P      15 56 45.0 +1.1
YSS   Yuzh-Sakhalins    53.23  55   eP      P      15 56 49.9 +2.7
YSS                                  pmax   pmax
      comp=Z,30nm,0.6s
YSS   Yuzh-Sakhalins    53.23  55    P      P      15 56 47.5 +0.2
MAT   Matsushiro        53.40  68    P      P      15 56 47.9 -0.8
MJAR  Matsushiro Arr    53.40  68    P      P      15 56 48.8 +0.1
      comp=Z,5.2nm,0.9s,baz=293,slow=8.1,SNR=13
MJAR  Matsushiro Arr    53.40  68    P      P      15 56 48.0 -0.8
MJAR                                 pmax   pmax
      comp=Z,4.0nm,1.1s
MJAR  Matsushiro Arr    53.40  68    P      P      15 56 48.0 -0.8
JEW   Eniwo             53.59  60    P      P      15 56 49.8 -0.1
ASAJ  Asahikawa         53.97  58    P      P      15 56 52.8 +0.1
ASAJ                                 pmax   pmax
      comp=Z,36nm,1.5s
JKA   Kamikawa-asahi    53.97  58    P      P      15 56 52.8 +0.1
JKA                                  IAmb   IAmb   15 57 09.6
      comp=Z,36nm,1.5s
DAG   Danmarks Havn     54.63 344    P      P      15 56 58.1 +1.2
DAG                                  pmax   pmax
      comp=Z,12nm,0.8s
DAG   Danmarks Havn     54.63 344⇑iP      P      15 56 57.5 +0.6
DAG                                  IAmb   IAmb   15 56 58.3
      comp=Z,7.6nm,0.8s
ESDC  Sonseca Array     57.05 298    P      P      15 57 14.3 -0.5
      comp=Z,0.4nm,0.6s,baz=49,slow=7.3,SNR=4.6
ESDC                                 pP     pP     15 58 02.0 +2.5
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      comp=Z,2.2nm,0.9s,baz=62,slow=6.6,SNR=8.6
BILL  Bilibino          58.84  26⇑iP    P       15 57 27.9 +1.2
BILL                                            15 58 17.0
BILL                             ePPP   PPP     16 01 04.8
BILL                              pmax  pmax
      comp=Z,25nm,1.9s
BILL  Bilibino          58.84  26   P   P       15 57 27.3 +0.6
BILL                              IAmb  IAmb    15 57 28.7
      comp=Z,12nm,1.0s
PETK  Petropavlovsk-    60.32  44   P   P       15 57 36.9 -0.1
      comp=Z,1.6nm,0.7s,baz=352,slow=6.9,SNR=5.7
PETK  Petropavlovsk-    60.32  44   P   P       15 57 35.9 -1.1
SUMG  Summit            60.94 341   P   P       15 57 41.4  0.0
SUMG                              pmax  pmax
      comp=Z,10.0nm,0.9s
SUMG  Summit            60.94 341 i P   P       15 57 42.0 +0.6
SUMG                              IAmb  IAmb    15 57 44.2
      comp=Z,10nm,0.9s
SUMG  Summit            60.94 341   P   P       15 57 41.4  0.0
SUMG                              IAmb  IAmb    15 57 44.0
      comp=Z,9.7nm,0.9s
NEEM  North Greenlan    60.97 348 i P   P       15 57 42.2 +0.8
NEEM                              IAmb  IAmb    15 57 44.2
      comp=Z,5.4nm,0.7s
ICESG Greenland Ices    63.06 338  eP   P       15 57 56.3 +0.8
TORD  Torodi Ar. Bea    65.25 268   P   P       15 58 08.6 -1.6
      comp=Z,3.4nm,0.5s,baz=47,slow=5.9,SNR=40
TORD                                pP  pP      15 58 57.6 +1.4
      comp=Z,3.4nm,0.8s,baz=40,slow=6.1,SNR=5.6
TORD  Torodi Ar. Bea    65.25 268   P   P       15 58 08.5 -1.6
A21K  Barrow            67.47  15   P   P       15 58 23.3  0.0
A21K                              IAmb  IAmb    15 58 24.3
      comp=Z,5.3nm,0.6s
KOWA  Kowa              69.10 273   P   P       15 58 32.4 -1.9
TOLK  Toolik Lake Re    71.07  14   P   P       15 58 46.3 +0.8
      baz=327
TOLK  Toolik Lake Re    71.07  14   P   P       15 58 46.1 +0.6
A36M  Sachs Harbour     71.28   5   P   P       15 58 47.4 +0.8
      baz=347,SNR=12
A36M  Sachs Harbour     71.28   5   P   P       15 58 47.0 +0.4
A36M                              IAmb  IAmb    15 58 48.1
      comp=Z,12nm,0.9s
COLD  Coldfoot          72.13  15   P   P       15 58 52.4 +0.7
      baz=327,SNR=9.6
COLD  Coldfoot          72.13  15   P   P       15 58 51.7 -0.1
COLD                              IAmb  IAmb    15 58 53.9
      comp=Z,14nm,1.1s
COLD                                pP  pP      15 59 42.3 +3.0
IMAR  Indian Mountai    72.35  17   P   P       15 58 52.6 -0.4
H21K  Melozitna Rive    72.84  17   P   P       15 58 56.3 +0.3
      baz=325
H21K  Melozitna Rive    72.84  17   P   P       15 58 55.6 -0.4
BMAR  Burnt Mountain    73.08  13   P   P       15 58 58.1 +0.7
I21K  Tanana            73.43  17   P   P       15 59 00.2 +0.8
      baz=326
H23K  Yukon River       73.45  16   P   P       15 59 00.4 +0.8
      baz=327
H23K  Yukon River       73.45  16   P   P       15 59 00.4 +0.8
H23K                              IAmb  IAmb    15 59 01.6
      comp=Z,12nm,1.1s
J20K  Nowinta River     73.71  19   P   P       15 59 02.0 +0.9
      baz=324,SNR=5.2
J20K  Nowinta River     73.71  19   P   P       15 59 01.7 +0.6
J20K                              IAmb  IAmb    15 59 02.8
      comp=Z,18nm,1.2s
FYU   Fort Yukon        73.72  14   P   P       15 59 01.4 +0.3
FYU                               IAmb  IAmb    15 59 03.4
      comp=Z,15nm,1.0s
H24K  Noodor Dome       73.81  15   P   P       15 59 02.3 +0.6
      baz=329
H24K  Noodor Dome       73.81  15   P   P       15 59 02.0 +0.3
MLY   Manley            73.85  17   P   P       15 59 02.3 +0.3
      baz=327
MLY   Manley            73.85  17   P   P       15 59 02.2 +0.2
INK   Inuvik            74.01   9   P   P       15 59 03.2 +0.5
INK                               pmax  pmax
      comp=Z,12nm,1.1s
INK   Inuvik            74.01   9   P   P       15 59 03.5 +0.8
      baz=340,SNR=10
INK   Inuvik            74.01   9   P   P       15 59 03.2 +0.5
INK                               IAmb  IAmb    15 59 04.9
      comp=Z,12nm,1.1s
I23K  Minto, Yukon-K    74.07  16   P   P       15 59 04.0 +0.9
      baz=328,SNR=5.3
I23K  Minto, Yukon-K    74.07  16   P   P       15 59 04.3 +1.2
I23K                              IAmb  IAmb    15 59 04.9
      comp=Z,10nm,1.1s
TTA   Tatalina          74.22  20   P   P       15 59 04.6 +0.4
TTA                               pmax  pmax
      comp=Z,18nm,1.4s
TTA   Tatalina          74.22  20   P   P       15 59 04.4 +0.3
      baz=323
TTA   Tatalina          74.22  20   P   P       15 59 04.6 +0.4
TTA                               IAmb  IAmb    15 59 05.7
      comp=Z,18nm,1.4s
DBIC  Dimbokro          74.22 267   P   P       15 59 03.8 -1.1
      comp=Z,2.4nm,0.5s,baz=50,slow=5.9,SNR=7.6
DBIC  Dimbokro          74.22 267   P   P       15 59 04.6 -0.3
DBIC                              pmax  pmax
      comp=Z,15nm,1.4s
DBIC  Dimbokro          74.22 267   P   P       15 59 04.6 -0.3
DBIC                              IAmb  IAmb    15 59 31.5
      comp=Z,15nm,1.4s
PSA00 Pilbara Seismi    74.24 133   P   P       15 59 03.8 -0.9
KIC   Kosan Boka        74.31 266  eP   P       15 59 05.5 +0.1
      comp=Z,8.2nm,0.5s
LBTB  Lobatse           74.34 222   P   P       15 59 05.6 +0.3
LBTB                              pmax  pmax
      comp=Z,11nm,1.2s
LBTB  Lobatse           74.34 222   P   P       15 59 05.6 +0.3
LBTB                              IAmb  IAmb    15 59 09.3
      comp=Z,11nm,1.1s
TIC   Toumodi           74.37 267  eP   P       15 59 05.7 -0.1
K20K  Telida            74.40  19   P   P       15 59 05.7 +0.6
      baz=324
K20K  Telida            74.40  19   P   P       15 59 05.6 +0.5
K20K                              IAmb  IAmb    15 59 06.8
      comp=Z,11nm,0.9s
CHUM  Lake Minchumin    74.42  18   P   P       15 59 06.0 +0.8
      baz=326,SNR=6.3
MDM   Murphy Dome       74.48  16   P   P       15 59 05.8 +0.2
MDM                               IAmb  IAmb    15 59 07.5
      comp=Z,10nm,0.9s
POKR  Poker Plat Res    74.52  16   P   P       15 59 06.6 +0.8
      baz=329,SNR=9.3
POKR  Poker Plat Res    74.52  16   P   P       15 59 06.3 +0.5
POKR                              IAmb  IAmb    15 59 07.5
      comp=Z,14nm,0.9s
TSUM  Tsumeb            74.53 231   P   P       15 59 06.5 -0.1
TSUM                              IAmb  IAmb    15 59 22.0
      comp=Z,9.0nm,1.1s
BPAW  Bear Paw Mtn.     74.57  18   P   P       15 59 05.4 -0.7
      baz=326
BPAW  Bear Paw Mtn.     74.57  18   P   P       15 59 06.0 -0.1
PRP   Porcupine Dome    74.58  15   P   P       15 59 07.3 +1.0
      baz=331
NEA2  Nenana            74.61  17   P   P       15 59 06.6 +0.3
      baz=328,SNR=13
NEA2  Nenana            74.61  17   P   P       15 59 06.3  0.0
NEA2                              IAmb  IAmb    15 59 07.8
      comp=Z,12nm,0.8s
LIC   Lamto             74.62 266  eP   P       15 59 07.1 -0.1
      comp=Z,49nm,1.7s
TCOL  CIGO, UAF Yank    74.64  16   P   P       15 59 07.0 +0.6
      baz=329,SNR=7.2
TCOL  CIGO, UAF Yank    74.64  16   P   P       15 59 06.6 +0.2
COLA  College           74.64  16deP   P       15 59 07.1 +0.7
COLA                              pmax  pmax
      comp=Z,17nm,0.9s
COLA  College           74.64  16   P   P       15 59 07.1 +0.7
      baz=329
COLA  College           74.64  16   P   P       15 59 06.6 +0.2
CCB   Clear Creek Bu    74.84  16   P   P       15 59 07.3 -0.3
CAST  Castle Rocks      74.86  18   P   P       15 59 08.4 +0.6
      baz=326,SNR=8.3
CAST  Castle Rocks      74.86  18   P   P       15 59 06.7 -1.2
CAST                              IAmb  IAmb    15 59 09.7
      comp=Z,18nm,1.0s
WRH   Wood River Hil    74.93  16   P   P       15 59 07.7 -0.4
IL31                    74.94  16   P   P       15 59 07.8 -0.3
IL31                              IAmb  IAmb    15 59 09.3
      comp=Z,9.3nm,1.1s
ILAR  Eielson Array     74.94  16   P   P       15 59 07.8 -0.3
      comp=Z,4.9nm,1.0s,baz=316,slow=4.5,SNR=31
ILAR                                pP  pP      15 59 58.6 +2.6
      comp=Z,1.2nm,0.9s,baz=320,slow=4.9,SNR=4.3
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ILAR  Eielson Array     74.94  16   P   P       15 59 07.4 -0.7
KTH   Kantishna Hill    75.04  18   P   P       15 59 08.9  0.0
KTH                               IAmb  IAmb    15 59 10.4
      comp=Z,11nm,0.9s
HDA   Harding Lake      75.24  16   P   P       15 59 09.0 -0.9
      baz=330
HDA   Harding Lake      75.24  16   P   P       15 59 09.3 -0.7
FITZ  Fitzroy Crossi    75.25 126   P   P       15 59 10.0 -0.6
FITZ                              IAmb  IAmb    15 59 34.7
      comp=Z,8.1nm,1.1s
PPLA  Purkeypile        75.27  19   P   P       15 59 10.3 +0.1
PPLA                              IAmb  IAmb    15 59 28.6
      comp=Z,22nm,1.4s
TRF   Thorofare Moun    75.28  18   P   P       15 59 10.8 +0.5
TRF                               IAmb  IAmb    15 59 37.2
      comp=Z,11nm,1.4s
MCK   McKinley          75.37  17   P   P       15 59 10.7  0.0
MCK                               pmax  pmax
      comp=Z,10.0nm,1.2s
MCK   McKinley          75.37  17   P   P       15 59 11.2 +0.5
      baz=328
MCK   McKinley          75.37  17   P   P       15 59 10.7  0.0
MCK                               IAmb  IAmb    15 59 11.5
      comp=Z,10nm,1.2s
J25K  Salcha River,     75.40  15   P   P       15 59 10.8 -0.1
      baz=331,SNR=6.4
KNRA  Kununurra         75.61 122   P   P       15 59 12.1 -0.6
J26L  Joseph Creek      75.87  14   P   P       15 59 13.5 -0.1
      baz=332,SNR=9.5
I29M  Ogilvie Camp,     76.06  12   P   P       15 59 14.7 +0.1
      baz=337
CUT   Chulitna          76.17  18   P   P       15 59 14.1 -1.1
SKT   Skwentna          76.20  19   P   P       15 59 15.1 -0.3
      baz=326
WAT1  Susitna Watana    76.23  17   P   P       15 59 14.7 -0.9
      baz=329
SCRK  Sand Creek        76.25  15   P   P       15 59 16.2 +0.4
      baz=332
SCRK  Sand Creek        76.25  15   P   P       15 59 15.9 +0.1
SCRK                              IAmb  IAmb    15 59 17.0
      comp=Z,5.8nm,0.8s
RIDG  Independent Ri    76.28  15   P   P       15 59 15.5 -0.4
      baz=332
DHY   Denali Highway    76.30  17   P   P       15 59 16.5 +0.4
      baz=330
DHY   Denali Highway    76.30  17   P   P       15 59 15.6 -0.5
DHY                               IAmb  IAmb    15 59 17.3
      comp=Z,7.0nm,0.8s
N19K  Bonanza Creek     76.35  21   P   P       15 59 17.8 +1.4
N19K                              IAmb  IAmb    15 59 40.8
      comp=Z,16nm,1.4s
DOT   Dot Lake          76.53  15   P   P       15 59 17.2  0.0
WAT6  Susitna Watana    76.64  17   P   P       15 59 17.9 -0.1
      baz=329
PAX   Paxson            76.82  16   P   P       15 59 17.5 -1.5
PAX                               pmax  pmax
      comp=Z,9.0nm,0.9s
PAX   Paxson            76.82  16   P   P       15 59 19.1 +0.1
      baz=331,SNR=5.6
PAX   Paxson            76.82  16   P   P       15 59 17.5 -1.5
PAX                               IAmb  IAmb    15 59 19.8
      comp=Z,8.6nm,0.9s
GHO   Glory Hole Cre    77.05  18   P   P       15 59 19.9 -0.3
DAWY  Dawson            77.06  13   P   P       15 59 20.1 -0.2
      baz=336
DAWY  Dawson            77.06  13   P   P       15 59 19.9 -0.4
DAWY                              IAmb  IAmb    15 59 21.4
      comp=Z,9.1nm,1.1s
RSO   Redoubt South     77.13  20   P   P       15 59 19.4 -1.5
PMR   Palmer            77.15  18   P   P       15 59 20.3 -0.4
PMR                               pmax  pmax
      comp=Z,10.0nm,1.0s
PMR   Palmer            77.15  18   P   P       15 59 20.5 -0.2
      baz=328
PMR   Palmer            77.15  18   P   P       15 59 20.3 -0.4
PMR                               IAmb  IAmb    15 59 21.3
      comp=Z,10nm,1.0s
SML   Sawmill           77.16  18   P   P       15 59 20.5 -0.4
SML   Sawmill           77.16  18   P   P       15 59 21.0 +0.2
      baz=329,SNR=6.3
SML   Sawmill           77.16  18   P   P       15 59 20.5 -0.4
L26K  Log Cabin Wild    77.23  15   P   P       15 59 22.0 +0.9
      baz=333
SCM   Sheep Creek Mo    77.38  17   P   P       15 59 21.1 -1.0
SCM                               pmax  pmax
      comp=Z,14nm,0.9s
SCM   Sheep Creek Mo    77.38  17   P   P       15 59 22.3 +0.2
      baz=330
SCM   Sheep Creek Mo    77.38  17   P   P       15 59 21.1 -1.0
SCM                               IAmb  IAmb    15 59 23.3
      comp=Z,14nm,0.9s
HARP  HAARP             77.39  16   P   P       15 59 23.3 +1.2
      baz=331,SNR=6.9
M24K  Tolsona, Glenn    77.42  17   P   P       15 59 23.5 +1.2
      baz=331
M24K  Tolsona, Glenn    77.42  17   P   P       15 59 23.1 +0.8
BOSA  Boshof            77.42 220   P   P       15 59 22.2 -0.6
      comp=Z,3.0nm,0.7s,baz=19,slow=3.7,SNR=7.8
BOSA  Boshof            77.42 220   P   P       15 59 22.0 -0.7
BOSA                              IAmb  IAmb    15 59 25.8
      comp=Z,17nm,1.4s
RC01  Rabbit Creek A    77.42  19   P   P       15 59 21.9 -0.3
RC01                              IAmb  IAmb    15 59 33.8
      comp=Z,11nm,0.9s
KNK   Knik Glacier      77.47  18   P   P       15 59 23.3 +0.8
      baz=329
KNK   Knik Glacier      77.47  18   P   P       15 59 22.6 +0.1
L27K  Beaver Creek,     77.51  14   P   P       15 59 23.4 +0.7
      baz=334
L27K  Beaver Creek,     77.51  14   P   P       15 59 23.0 +0.3
BCAR  Beaver Creek A    77.51  14   P   P       15 59 22.7  0.0
UNV   Unalaska Valle    77.53  31   P   P       15 59 21.7 -1.2
MORW  Morawa            78.03 140   P   P       15 59 24.8 -1.1
MORW                              IAmb  IAmb    15 59 37.8
      comp=Z,17nm,1.4s
M27K  Edge Creek, AK    78.13  15   P   P       15 59 27.0 +0.7
M27K                              IAmb  IAmb    15 59 28.1
      comp=Z,14nm,0.9s
BRLK  Bradley Lake      78.23  20   P   P       15 59 26.0 -0.8
GLI   Glacier Island    78.27  18   P   P       15 59 27.2 +0.3
SEW   Seward            78.33  19   P   P       15 59 26.6 -0.6
SEW                               IAmb  IAmb    15 59 32.5
      comp=Z,20nm,1.1s
EYAK  Cordova Ski Ar    78.88  17   P   P       15 59 30.3 +0.1
KDAK  Kodiak Island     79.41  22   P   P       15 59 33.2 +0.1
KDAK                              pmax  pmax
      comp=Z,14nm,0.8s
KDAK  Kodiak Island     79.41  22   P   P       15 59 33.4 +0.3
      baz=326
KDAK  Kodiak Island     79.41  22   P   P       15 59 33.1 +0.1
CNBA  Chernabura Isl    79.47  27   P   P       15 59 33.3 -0.2
M31M  Drury Creek, Y    79.65  12   P   P       15 59 35.0 +0.6
      baz=340
OHAK  Old Harbor        79.66  22   P   P       15 59 35.2 +0.7
      baz=326
OHAK  Old Harbor        79.66  22   P   P       15 59 34.8 +0.3
WHY   Whitehorse        81.02  12   P   P       15 59 41.4 -0.5
      baz=340
YKA   Yellowknife Ar    81.30   2   P   P       15 59 43.2 +0.1
      comp=Z,3.7nm,0.7s,baz=2.3,slow=5.1,SNR=9.1
P33M  Teslin, Yukon     81.79  11   P   P       15 59 46.0 +0.1
      baz=341
SCHQ  Schefferville     81.94 337   P   P       15 59 46.3 -0.4
      comp=Z,3.4nm,0.7s,baz=68,slow=9.1,SNR=3.5
WB0   Warramunga Arr    82.29 121   P   P       15 59 47.4 -1.6
WB0                               IAmb  IAmb    15 59 48.1
      comp=Z,6.1nm,0.8s
WRA   Warramunga Arr    82.37 122   P   P       15 59 47.8 -1.5
      comp=Z,8.0nm,0.7s,baz=322,slow=4.9,SNR=60
WRA                                 pP  pP      16 00 40.6 +2.0
      comp=Z,1.0nm,0.8s,baz=323,slow=6.1,SNR=2.5
WRA   Warramunga Arr    82.37 122 i P   P       15 59 47.7 -1.7
WRA                               pmax  pmax
      comp=Z,8.0nm,0.7s
WRA   Warramunga Arr    82.37 122   P   P       15 59 47.6 -1.8
WRAB  Tennant Creek     82.38 121c iP   P       15 59 47.9 -1.5
WRAB                              pmax  pmax
      comp=Z,9.0nm,0.7s
WB2   Warramunga Arr    82.38 122   P   P       15 59 47.8 -1.6
WB2                               IAmb  IAmb    15 59 48.7
      comp=Z,9.9nm,0.8s
WR0   Warramunga Arr    82.52 121   P   P       15 59 48.3 -1.8
WR0                               IAmb  IAmb    15 59 49.2
      comp=Z,6.6nm,0.8s
DLBC  Dease Lake        83.92  11   P   P       15 59 55.8 -1.0
DLBC                              IAmb  IAmb    16 00 13.9
```

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      comp=Z,11nm,1.5s
COEN  Coen              84.83 111   P      P        16 00 00.6 -1.4
FORT  Forrest           85.99 133   P      P        16 00 06.5 -0.8
FFC   Flin Flon         88.94 356   P      P        16 00 21.1 -0.1
FFC   Flin Flon         88.94 356   P      P        16 00 21.1 -0.1
ULM   Lac du Bonnet     92.81 351   P      P        16 00 38.5 -0.7
      comp=Z,1.4nm,0.5s,baz=352,slow=18,SNR=3.1
STKA  Stephens Creek    95.15 126   P      P        16 00 50.0 -0.1
      comp=Z,0.9nm,0.7s,baz=30,slow=5.3,SNR=3.9
VNA2  Neumayer--Watz   120.19 202   PKPdf  PKiKP    16 06 17.3 +1.6
VNA3  Neumayer Olymp   121.00 202   PKPdf  PKPdf    16 06 16.9 -0.2
VNDA  Vanda            125.59 164   PKP    PKPdf    16 06 24.1 -1.6
      comp=Z,0.5nm,0.6s,baz=259,slow=4.8,SNR=2.3
CPUP  Villa Florida    134.74 268   PKP    PKPdf    16 06 43.0 -1.6
      comp=Z,0.9nm,0.5s,baz=39,slow=6.5,SNR=2.1
PLCA  Paso Flores      149.37 250   PKPbc  PKPbc    16 07 14.5 -0.2
      comp=Z,3.2nm,0.9s,baz=98,slow=1.2,SNR=8.6
```

NEIC ***15*** *15:54:04.8±1.4, 0°.65N±0°.07×80°.05W±0°.09, h10^{km}±1^{km}, mb4.2/15, Error ellipse: s-maj=16.5km s-min=10.2km az=244.0*

IGQ ***15*** *15:54:05±1.1, 1°N±5°×8°0W±°, h17^{km}*

VAO ***15*** *15:54:05.9±0.5, 0°.71N×79°.89W, h10^{km}, mb4.4*

IDC ***15*** *15:54:13.1±2.5, 0°.45N×80°.16W, h91^{km}±24^{km}, mb3.3/10, mb1 3.6/13, mb1mx3.6/30, mbtmp3.8/13, MS3.4/2, Ms1 3.4/2, ms1mx2.9/13, Error ellipse: s-maj=20.7km s-min=14.1km az=81.0*

ISC 15 15:54:05.5±0.5**, 0°.61N**±0°.04×**80°.14W**±0°.05**, h17^{km}, n122, σ1^{s}45**/122**, mb4.0**/14**, 1D, Near coast of Ecuador**

```
Code  Station Name        Δ°   AZ°    Phase ID          Time       Res
                                     Op     ISC       h  m  s     ISC
APR2  Miler              1.29 114    P      Pn       15 54 27.0 -1.8
PAC1  Pacto, Paraso      1.39 104   eP      Pn       15 54 28.0 -2.3
PAC1                                eS      Sb       15 54 47.8 -0.9
PAC1  Pacto, Paraso      1.39 104    P      Pn       15 54 28.0 -2.3
HPAL  Hacienda Las P     1.70 119    P      Pn       15 54 32.0 -2.7
PINO  Pino               1.71 116    P      Pn       15 54 33.0 -2.1
TERV  Terraza Guagua     1.72 117    P      Pn       15 54 33.0 -2.2
YANA  Yana               1.73 115    P      Pn       15 54 33.0 -2.2
OTAV  Otavalo            1.73 102   eP      Pn       15 54 33.9 -1.4
OTAV                                eS      Sn       15 54 57.5 +0.3
OTAV  Otavalo            1.73 102   eP      Pn       15 54 34.4 -0.8
OTAV  Otavalo            1.73 102           Pn       15 54 33.7 -1.5
GGPC  Guagua Pichinc     1.73 117    P      Pn       15 54 34.0 -1.3
GGPT  Toaza - Volcan     1.73 118    P      Pn       15 54 33.0 -2.2
JUA2  San Juan 2         1.74 118    P      Pn       15 54 34.0 -1.4
CUSE  Cuicocha Este      1.77 100   eP      Pn       15 54 34.4 -1.3
CUSE                                eS      Sb       15 55 00.2 +0.4
CUSE  Cuicocha Este      1.77 100    P      Pn       15 54 34.0 -1.7
CUIC  Cuicocha-Domo      1.81 100    P      Pn       15 54 35.0 -1.2
CUSW  Cuicocha Oeste     1.82 100    P      Pn       15 54 36.0 -0.4
COTA  Cotacachi          1.82  98    P      Pn       15 54 35.0 -1.6
TUMC  Tumaco             1.86  49   eP      Pn       15 54 35.3 -1.3
TUMC                                eS      Sg       15 55 08.4 +3.0
TUMC  Tumaco             1.86  49    P      Pn       15 54 35.0 -1.6
TUMC  Tumaco             1.86  49           Pn       15 54 34.8 -1.8
URCU  Urcuqui            1.89  95    P      Pn       15 54 36.0 -1.4
IMBA  Imbabura, San      1.97 100    P      Pn       15 54 38.0 -0.5
TOMA  Boca Toma-Volc     2.03 123    P      Pn       15 54 39.0 -0.3
SUCR  Mariscal Sucre     2.06 127    P      Pn       15 54 39.0 -0.8
PITA  Cotopaxi Volc      2.06 124    P      Pn       15 54 39.0 -0.8
SRAM  San Ramn-Vol       2.07 131    P      Pn       15 54 39.0 -0.9
CAMI  Rancho Maria       2.08 128    P      Pn       15 54 40.0  0.0
YAHU  Yahuarcocha        2.08  96    P      Pn       15 54 40.0  0.0
BNAS  Cotopaxi Volca     2.09 127    P      Pn       15 54 40.0 -0.2
CHMA  Chilma             2.10  83    P      Pn       15 54 37.0 -3.1
SLOR  San Lorenzo -      2.11 129    P      Pn       15 54 41.0 +0.5
BREF  Cotopaxi Volca     2.12 127    P      Pn       15 54 40.0 -0.8
VC1   Cotopaxi 1         2.14 125    P      Pn       15 54 41.0 +0.1
BVC2  Cotopaxi Volca     2.14 126    P      Pn       15 54 41.0 +0.1
LNGL  El Angel-Carch     2.14  86    P      Pn       15 54 39.0 -1.9
BMOR  Cotopaxi Volca     2.14 128    P      Pn       15 54 41.0  0.0
BTAM  Cotopaxi Volca     2.16 126    P      Pn       15 54 41.0 -0.2
ECEN  Cerro Negro        2.18  84    P      Pn       15 54 40.0 -1.5
ANTG  Antisana-Guama     2.19 120    P      Pn       15 54 42.0 +0.4
CHL1  Volc¡n Chiles      2.20  85    P      Pn       15 54 41.0 -0.8
CAYR  Refugio Cayamb     2.21 105    P      Pn       15 54 43.0 +1.0
CHL2  Volc¡n Chiles      2.23  85    P      Pn       15 54 41.0 -1.2
ANTI  Antisana           2.24 118    P      Pn       15 54 43.0 +0.6
ANTS  Antisana-Sarah     2.26 119    P      Pn       15 54 43.0 +0.4
TULM  Tulcn-Chalpat      2.36  87   eP      Pn       15 54 45.4 +1.5
CHSH  Refugio Sur-Vo     2.44 149    P      Pn       15 54 45.0 -0.1
PIAT  Ana Tenorio        2.46 130    P      Pn       15 54 45.0 -0.3
PORT  Chimborazo Vol     2.47 146    P      Pn       15 54 44.0 -1.5
REVS  Reventador Sur     2.62 106    P      Pn       15 54 49.0 +1.7
GCUF  Volcan Galeras     2.86  78   eP      Pn       15 54 51.3 +0.4
COHC  Cochancay          3.18 164    P      Pn       15 54 53.0 -1.7
SOTA  Rioblanco          3.84  67   eP      Pn       15 55 04.8 +0.5
SOTA                                eS      Sn       15 55 49.6 +0.1
PCON  Cinco Dias         4.12  65   eP      Pn       15 55 08.8 +0.7
ARNL  Arenillas          4.13 179    P      Pn       15 55 10.0 +2.2
MARP  Paez Belalcaza     4.74  62   eP      Pn       15 55 17.4 +0.9
GARC  Garzon, Huila      4.91  71   eP      Pn       15 55 19.3 +0.5
YOTC  Yotoco, Valle      5.06  48   eP      Pn       15 55 24.0 +3.2
PTLC  Puerto Leguiza     5.36  95⇓iP      Pn       15 55 26.4 +1.6
PTLC                                eS      Sn       15 56 15.5  -11
PLMC  San Jos del P      5.75  42   eP      Pn       15 55 31.6 +1.4
ORTC  Ortega, Tolima     5.89  56   eP      Pn       15 55 32.6 +0.5
PRAC  Prado              6.09  59   eP      Pn       15 55 36.4 +1.5
ANIL  Santa Ana          6.11  51   eP      Pn       15 55 41.2 +5.9
MACC  Macarena, Meta     6.47  76   eP      Pn       15 55 42.1 +2.0
GUY2C Guyana, Caldas     6.62  46   eP      Pn       15 55 48.8 +6.3
CBOC  Ciudad Bolivar     6.65  38   eP      Pn       15 55 45.9 +3.2
ROSC  El Rosal           7.18  54    P      Pn       15 55 55.5 +5.5
      4.8nm,0.3s,baz=241,slow=19,SNR=1.3
ROSC                                 S      Sn       15 57 20.9  +10
      1.3nm,0.3s,baz=94,slow=20,SNR=1.4
ROSC  El Rosal           7.18  54           Pn       15 55 50.7 +0.6
VILC  Villavicencio,     7.32  62   eP      Pn       15 55 51.6 -0.2
CHIC  Chingaza           7.55  58   eP      Pn       15 55 59.2 +4.1
ATAH  Atahualpa          7.88 167    P      Pn       15 56 02.4 +2.6
      0.4nm,0.3s,baz=16,slow=15,SNR=2.6
ATAH                                 S      Sn       15 57 32.7 +3.8
      0.5nm,0.3s,baz=54,slow=16,SNR=1.8
ZARC  Zaragoza, Cauc     8.63  37           Pn       15 56 08.7 -1.0
SRBA  San Rafael, Bu     9.15 340           Pn       15 56 17.3 +0.4
JTS   Las Juntas de     10.74 334    LR     LR       16 00 07.6
      comp=Z,119nm,18.8s,baz=236,slow=33
CZSB  Cruzeiro do Su    11.12 138   eP      Pn       15 56 44.4 +0.6
CZSB  Cruzeiro do Su    11.12 138           Pn       15 56 44.3 +0.6
ACON  Acoyapa           12.34 336    Pn     Pn       15 57 02.2 +1.7
NNA   Nana              12.93 165    P      Pn       15 57 11.3 +2.6
      0.8nm,0.3s,baz=300,slow=16,SNR=1.9
BAUV  El Baul           14.62  55    Pn     Pn       15 57 30.4 -1.3
BIRV  Birongo           16.92  54           Pn       15 58 01.9 +0.2
BIRV                                 IAmb   IAmb     15 58 08.1
      comp=Z,24nm,1.3s
ETMB  Extrema           17.30 127   eP      Pn       15 58 05.9 -0.6
ETMB  Extrema           17.30 127    P      Pn       15 58 06.6 +0.1
SAML  Samuel            19.38 120    P      P        15 58 29.5 -1.2
BOAV  Boa Vista         19.69  85   eP      P        15 58 32.4 -1.7
MACA  Manacapuru-AM     19.81 101   eP      P        15 58 35.0 -0.3
PTGA  Pitinga           20.22  94    P      P        15 58 41.1 +1.2
      comp=Z,3.8nm,0.9s,baz=275,slow=7.2,SNR=4.2
LPAZ  La Paz            20.55 145    P      P        15 58 44.1  0.0
      comp=Z,2.2nm,0.6s,baz=327,slow=12,SNR=6.9
LPAZ  La Paz            20.55 145   eP      P        15 58 44.2 +0.1
LPAZ  La Paz            20.55 145    P      P        15 58 43.3 -0.8
PB16  IPOC Station P    21.53 151    P      P        15 58 53.9 -0.7
PB16                                 IAmb   IAmb     15 59 03.4
      comp=Z,6.1nm,1.0s
VILB  Vilhena           23.93 125   eP      P        15 59 19.2 +0.3
ITTB  Itaituba          24.88 102   eP      P        15 59 26.1 -1.6
SIV   San Ignacio       25.03 132    P      P        15 59 27.8 -1.2
      comp=Z,2.0nm,0.6s,baz=310,slow=12,SNR=6.9
MALB  Monte Alegre      25.99  95   eP      P        15 59 37.2 -0.5
PTLB  Pontes e Lacer    26.18 128   eP      P        15 59 39.2 -0.2
PTLB  Pontes e Lacer    26.18 128    P      P        15 59 38.3 -1.0
PTLB                                 IAmb   IAmb     15 59 39.6
      comp=Z,4.3nm,0.8s
PDRB  Porto dos Gac     26.24 118   eP      P        15 59 39.3 -0.7
CLDB  Colider           26.76 116   eP      P        15 59 43.3 -1.4
AC04  Llanos de Chal    29.94 164    P      P        16 00 12.5 -0.3
SNDB  Serra Nova Dou    31.25 114   eP      P        16 00 23.7 -0.9
ARAG  Araguaiana, MT    32.34 121   eP      P        16 00 34.0 -0.2
CPUP  Villa Florida     34.66 142    LR     LR       16 18 01.9
      comp=Z,81nm,18.1s,baz=18,slow=41
TXAR  Lajitas Array     36.32 324    P      P        16 01 09.4 +0.7
      comp=Z,0.2nm,0.9s,baz=101,slow=4.9,SNR=1.4
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S51A	Beattyville	36.99	355	P	P	16 01 14.8	+0.7
S51A				IAmb	IAmb	16 01 24.8	
	comp=Z,8.4nm,1.1s						
S54A	Dingess, Beckl	37.03	358	P	P	16 01 15.1	+0.6
S54A				IAmb	IAmb	16 01 24.7	
	comp=Z,8.0nm,1.1s						
CPSB	Cacapava Do Su	39.96	143	*e*P	P	16 01 40.4	+1.2
PARB	Paraibuna	41.14	128	*e*P	P	16 01 50.5	+1.3
PLCA	Paso Flores	42.06	169	P	P	16 01 54.5	-2.0
	comp=Z,2.6nm,0.9s,baz=354,slow=8.9,SNR=4.5						
PLCA	Paso Flores	42.06	169	P	P	16 01 56.3	-0.2
PLCA				IAmb	IAmb	16 01 57.9	
	comp=Z,6.3nm,1.1s						
ANMO	Albuquerque	42.07	327	P	P	16 01 56.8	0.0
ANMO				IAmb	IAmb	16 02 03.3	
	comp=Z,2.7nm,0.9s						
MEDO	Medina	42.40	2	P	P	16 01 59.8	+0.7
NBPA	Parau_RN	43.42	99	*e*P	P	16 02 06.2	-1.7
PDAR	Pinedale Array	49.57	332	P	P	16 02 56.1	+0.2
	comp=Z,0.5nm,0.9s,baz=141,slow=5.8,SNR=1.9						
NVAR	Mina Array Bea	51.39	322	P	P	16 03 09.9	+0.1
	comp=Z,2.0nm,1.0s,baz=128,slow=7.3,SNR=6.5						
RES	Resolute Bay	74.51	356	P	P	16 05 42.3	-0.3
RES				IAmb	IAmb	16 05 43.9	
	comp=Z,3.2nm,1.0s						
ESDC	Sonseca Array	78.99	50	P	P	16 06 08.2	-0.6
	comp=Z,0.5nm,0.9s,baz=264,slow=6.0,SNR=4.3						
ESDC	Sonseca Array	78.99	50	IAmb	IAmb	16 06 15.3	
	comp=Z,1.7nm,1.3s						
ILAR	Eielson Array	79.71	336	P	P	16 06 11.9	-0.2
	comp=Z,0.4nm,0.8s,baz=129,slow=4.2,SNR=4.9						
BMAR	Burnt Mountain	79.85	339	P	P	16 06 12.6	-0.2
TORD	Torodi Ar. Bea	81.91	77	P	P	16 06 23.5	-1.4
	comp=Z,0.8nm,0.5s,baz=282,slow=6.5,SNR=10						
TORD	Torodi Ar. Bea	81.91	77	P	P	16 06 23.1	-1.8
TORD				IAmb	IAmb	16 06 29.4	
	comp=Z,3.2nm,1.4s						
WRA	Warramunga Arr	141.17	238	PKP	PKPdf	16 13 32.1	-4.1
	comp=Z,0.2nm,0.5s,baz=115,slow=2.0,SNR=5.0						

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*GII **15** 16:01:31.8±0.7, 29°.64N×35°.04E, h14^{km}, MD2.0/4, Mm2.1/3*
*HLW **15** 16:01:31.6, 29°.57N×35°.10E, h22^{km}±1^{km}, Md2.2, Ml2.9*
ISC 15 16:01:31.6±1.1**, 29°.62N**±0°.03×**35°.03E**±0°.08**, h18**^{km}±3^{km}**,**
n15, σ0^{s}.68/25**, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EIL	Elat	0.09	310	Pg	Pg	16 01 35.2	+0.1
EIL				Sg	Sg	16 01 38.1	+0.5
MBRI	Mt Berech	0.20	331	Pg	Pg	16 01 36.6	-0.1
MBRI				Sg	Sb	16 01 40.3	+0.6
HRFI	Mount Harif	0.42	1	Pg	Pg	16 01 39.9	-0.3
HRFI				Sg	Sg	16 01 46.4	+0.3
HBST	Basata	0.47	213	P	Pg	16 01 41.2	0.0
	baz=223						
HBST				AMP		16 01 01.2	
	baz=223						
KRMI	Paran Flat	0.56	332	Pg	Pb	16 01 41.9	-1.0
KRMI				Sg	Sb	16 01 51.7	+1.1
NUB	Nuweibaa	0.67	210	P	Pb	16 01 44.9	+0.1
	baz=215						
NUB				S	Sg	16 01 54.8	+1.0
	baz=215						
PRNI	Paran	0.73	358	Pg	Pb	16 01 45.3	-0.5
PRNI				Sg	Sb	16 01 55.7	+0.1
ZFRI	Zfri	0.94	8	Pg	Pb	16 01 49.2	-0.2
ZFRI				Sg	Sb	16 02 02.3	+0.7
HDHB	Dhahab	0.96	202	P	Pb	16 01 49.0	-0.6
	baz=207						
KZIT	Kziot	1.40	337	Pn	Pn	16 01 55.5	-0.7
KZIT				Sn	Sn	16 02 14.1	-0.1
HKAT	Jabal Katrina	1.42	220	P	Pn	16 01 55.3	-1.3
	baz=224						
HKAT				AMP		16 02 00.0	
	baz=224						
YTIR	Yattir	1.74	3	Pn	Pb	16 02 02.5	-0.6
YTIR				Sn	Sb	16 02 24.4	-0.3
HRDS	Abu Rudays	1.76	240	P	Pn	16 02 00.3	-0.8
	baz=243						
DSI	Dead Sea	1.97	9	Pn	Pn	16 02 04.4	+0.3
DSI				Sn	Sn	16 02 29.3	+1.0
ZAF	Zafarana	2.19	262	P	Pn	16 02 07.2	+0.1
	baz=264						
ZAF				AMP		16 02 00.0	
	baz=264						

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*JMA **15** 16:24:31.1±0.6, 31°.01N×128°.57E, h0^{km}±4^{km}, M3.6*
*NIED **15** 16:24:31.2, 31°.01N×128°.57E, h0^{km}, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.24; $M_{\theta\theta}$-0.24; $M_{\phi\phi}$0.48; $M_{r\theta}$-0.13; $M_{\theta\phi}$2.15; $M_{\phi r}$0.70; Fault plane solution: $M_0$2.30000×10^{14} NP1: ϕ_s176.00000°, δ86.00000°, λ-161.00000°. NP2: ϕ_s85.00000°, δ72.00000°, λ-4.00000°.*
*IDC **15** 16:24:34.6±1.0, 30°.93N×128°.49E, h0^{km}, mb3.3/5, mb1 3.6/9, mb1mx3.5/36, mbtmp3.5/9, ML3.4/4, MS2.2/1, Ms1 2.2/1, ms1mx2.0/19 Error ellipse: s-maj=30.4km s-min=17.6km az=93.0*
ISC 15 16:24:34.6±0.9**, 31°.06N**±0°.05×**128°.75E**±0°.07**, h10**^{km}**, n18,**
σ1^{s}.70/18**, mb3.4**/5**, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	Shimokoshiki	1.03	53	P	Pn	16 24 53.8	-1.3
JSU	Suzuyama	1.52	72	P	Pb	16 25 02.2	-0.7
JSU				*e*S	Sg	16 25 25.1	+1.5
JNN	Nakanoshima	1.55	141	P	Pb	16 25 01.1	-2.3
JFU	Fukue jima 2	1.59	360	P	Pb	16 25 01.9	-2.2
JTN	Tanegashima 3	1.96	101	P	Pn	16 25 07.8	0.0
JMTN	Minamitane	1.96	109	P	Pn	16 25 07.6	-0.3
JTZ	Takazaki	2.16	67	P	Pn	16 25 11.3	+0.6
JNU	Nakatsue	2.74	41	Pn	Pg	16 25 24.9	-2.1
	55nm,0.3s,baz=304,slow=0.1,SNR=22						
JNU				Sn	Sg	16 26 01.8	-0.8
	28nm,0.3s,baz=6.9,slow=0.2,SNR=1.1						
JOW	Kunigami	4.23	186	Pn	Pn	16 25 39.6	+0.5
	0.8nm,0.3s,baz=37,slow=10,SNR=2.3						
KSRS	Korea Array	6.42	354	Pn	Pn	16 26 10.3	+1.2
	0.4nm,0.3s,baz=172,slow=14,SNR=10						
KSRS				Sn	Sn	16 27 21.1	-1.3
	0.6nm,0.3s,baz=174,slow=25,SNR=6.5						
MJAR	Matsushiro Arr	9.58	53	LR	LR	16 31 15.2	
	comp=Z,15nm,19.9s,baz=195,slow=41						
KLR	Kul'dur	18.29	6	P	P	16 28 52.0	+3.4
	0.1nm,0.3s,baz=217,slow=10,SNR=4.8						
SONM	Songino Array	23.93	321	P	P	16 29 50.3	+1.4
	0.5nm,0.6s,baz=133,slow=10.0,SNR=2.5						
MKAR	Makanchi Array	38.82	307	P	P	16 32 00.6	+0.9
	0.4nm,0.8s,baz=91,slow=8.9,SNR=5.1						
WRA	Warramunga Arr	50.99	173	P	P	16 33 35.7	-1.0
	0.6nm,1.0s,baz=356,slow=8.8,SNR=2.6						
ASAR	Alice Springs	54.63	174	P	P	16 34 05.2	+1.7
	0.3nm,0.5s,baz=4.4,slow=12,SNR=6.2						
ILAR	Eielson Array	60.00	30	P	P	16 34 42.9	+1.9
	0.2nm,0.7s,baz=267,slow=7.2,SNR=1.4						
PLCA	Paso Flores	161.65	127	PKP	PKPdf	16 44 37.0	+1.1
	1.6nm,0.8s,baz=259,slow=5.2,SNR=2.2						

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*PDG **15** 16:34:36.8±0.1, 42°.48N×20°.17E, h0^{km}±11^{km}, MD2.5/1, ML2.1/13, Error ellipse: s-maj=0.2km s-min=0.2km az=0.0*
*RHSSO **15** 16:34:36.1±0.7, 42°.48N×20°.30E, h4^{km}±3^{km}, ML2.3/7*
*BEO **15** 16:34:38.4±0.2, 42°.52N×20°.22E, h0^{km}, ML1.9/11*
ISC 15 16:34:36.6±1.1**, 42°.48N**±0°.02×**20°.19E**±0°.02**, h6**^{km}±9^{km}**,**
n54, σ1^{s}.23/95**, 11C-1D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PVY	Plav	0.21	304	⇑*i*Pg	Pg	16 34 40.6	-0.2
PVY				*i* Sg	Sg	16 34 43.4	-0.2
IVA	Berane	0.45	331	⇑*i*Pg	Pg	16 34 44.9	-0.4
IVA				*e*Sg	Sg	16 34 52.0	+0.8
KOME	Kolasin	0.62	307	*e*Pg	Pg	16 34 48.1	-0.5
KOME				*i* Sg	Sg	16 34 57.6	+0.9
PDG	Podgorica	0.69	266	*e*Pg	Pg	16 34 49.5	-0.5
PDG				*e*Sg	Sb	16 34 59.5	-1.4
PDG	Podgorica	0.69	266	⇑*i*Pg	Pg	16 34 49.1	-0.9
PDG				*e*Sg	Sb	16 35 00.9	0.0
TTG	Podgorica	0.69	266	⇑*i*Pg	Pg	16 34 49.3	-0.7
TTG				*i* Sg	Sb	16 34 59.9	-1.0
SJES	Sjenica	0.80	349	*e*Pg	Pg	16 34 51.6	-0.4
SJES				*e*Sg	Sg	16 35 02.3	0.0
DRME	Dracevica, Mon	0.80	249	⇑*i*Pg	Pg	16 34 51.4	-0.6
DRME				*e*Sg	Sn	16 35 04.3	-2.4
DRME	Dracevica, Mon	0.80	249	⇑*i*Pg	Pg	16 34 51.2	-0.8
DRME				*i* Sg	Sb	16 35 03.7	-0.3
ULC	Ulcinj	0.87	234	⇓*i*Pg	Pb	16 34 52.7	-1.4
ULC				*i* Sg	Sn	16 35 06.2	-2.2
CEME	Cevo	0.94	275	*e*Pg	Pg	16 34 53.7	-1.0
CEME				*i* Sg	Sb	16 35 08.5	+0.3
NKY	Niksic	0.94	291	⇑*i*Pg	Pg	16 34 54.0	-0.8
NKY				*i* Sg	Sb	16 35 08.5	+0.3
NKME	Niksic	0.96	288	*e*Pg	Pg	16 34 54.2	-0.8
NKME				*i* Sg	Sb	16 35 09.0	+0.4
BUM	Brajici-Budva	0.98	260	*e*Pg	Pg	16 34 54.4	-1.0
BUM				*i* Sg	Sn	16 35 09.7	-1.4
SELS	Selova	1.01	42	*e*Pg	Pg	16 34 55.6	-0.3
SELS				*e*Sg	Sg	16 35 08.9	-0.1
PLE	Pljevlja	1.03	326	*e*Pg	Pg	16 34 56.3	-0.2
PLE				*e*Sg	Sg	16 35 09.5	-0.4
SKO	Skopje	1.06	118	*i* Pn	Pg	16 34 48.4	-8.5
SKO				*i* Sn	Sn	16 35 14.7	+1.7
UPM	Unac-Piva	1.19	308	*e*Pg	Pb	16 34 58.6	-1.1
UPM				*e*Sg	Sg	16 35 16.0	+1.1
UPM	Unac-Piva	1.19	308	⇑*i*Pg	Pb	16 34 58.5	-1.1
UPM				*e*Sg	Sn	16 35 16.9	+0.3
BARS	Barje	1.25	74	*e*Pg	Pg	16 35 00.5	0.0
BARS	Barje	1.25	74	*e*Pg	Pg	16 35 15.1	+15
BARS				*e*Sg	Sn	16 35 17.5	-0.1
BARS				*e*Sg	Sg	16 35 43.3	+27
HCY	Herceg Novi	1.26	269	*e*Pg	Pg	16 35 00.4	-0.3
HCY				*e*Sg	Sn	16 35 18.5	+0.6
HCY	Herceg Novi	1.26	269	*e*Pg	Pn	16 34 59.6	-1.1
HCY				*e*Sg	Sn	16 35 19.2	+1.3
RUDO	Rudo	1.29	332	*e*Pg	Pn	16 34 59.2	-1.9
RUDO				*e*Sg	Sb	16 35 18.7	+0.7
BRY	Bratogost	1.29	290	*e*Pg	Pn	16 35 00.4	-0.9
BRY				*e*Sg	Sn	16 35 19.7	+0.8
BRY	Bratogost	1.29	290	⇑*i*Pg	Pn	16 35 00.3	-1.0
BRY				*e*Sg	Sn	16 35 20.2	+1.3
TREB	Trebinje	1.38	281	*e*Pg	Pg	16 35 04.9	+1.8
TREB				*e*Sg	Sg	16 35 24.9	+3.9
TREB	Trebinje	1.38	281	*e*Pg	Pb	16 35 02.4	-0.4
TREB				*e*Sg	Sg	16 35 22.6	+1.6
PRVS	Prvonek	1.39	88	*e*Pg	Pg	16 35 03.1	-0.2
PRVS				*e*Sg	Sg	16 35 22.1	+0.7
OHR	Ohrid	1.44	161	*e*Sg	Sb	16 35 04.8	-18
OHR	Ohrid	1.44	161	*e*Pn	Pg	16 35 26.3	+22
OHR	Ohrid	1.44	161	*i* Pn	Pg	16 35 05.2	+0.9
OHR				*i* Sn	Sg	16 35 26.3	+3.4
GRUS	Gruza	1.46	15	*e*Pg	Pb	16 35 03.7	-0.5
GRUS				*e*Sg	Sb	16 35 23.4	+0.4
BBLS	Lazići	1.50	338	*e*Pg	Pb	16 35 04.5	-0.4
BBLS				*e*Sg	Sg	16 35 26.5	+1.6
BBLS	Lazići	1.50	338	*e*Pn	Pn	16 35 03.8	-0.3
BBLS				*e*Sn	Sn	16 35 24.5	+0.5
DBRK	Dubrovnik	1.52	278	*e*Pn	Pg	16 35 05.1	-0.6
DBRK				Sn	Sg	16 35 27.7	+2.2
BOVS	Bovan	1.60	43	*e*Pg	Pb	16 35 05.6	-1.0
DIVS	Divibare	1.62	355	*e*Pg	Pn	16 35 06.3	+0.5
DIVS				*e*Sg	Sb	16 35 28.7	+0.9
DIVS	Divibare	1.62	355	⇑*i*Pn	Pn	16 35 05.9	+0.1
DIVS				*e*Sn	Sn	16 35 27.2	+0.1
BOSS	Bosilegrad	1.69	89	*e*Pg	Pg	16 35 08.1	-1.0
BOSS				*e*Sg	Sg	16 35 29.4	-1.6
TRUS	Trudelj	1.75	5	*e*Pg	Pb	16 35 09.0	-0.1
HAPS	Han Pijesak,Bl	1.84	331	*e*Pn	Pn	16 35 08.9	0.0
HAPS				*e*Sn	Sn	16 35 33.4	+0.8
STON	Ston	1.88	283	*e*Pg	Pg	16 35 12.2	-0.4
STON				*e*Sg	Sg	16 35 38.8	+1.8
STON	Ston	1.88	283	⇑*i*Pn	Pb	16 35 10.6	-0.7
STON				*e*Sn	Sb	16 35 34.8	-0.2
STON	Ston	1.88	283	*e*Pn	Pb	16 35 11.4	+0.1
STON				Sn	Sg	16 35 38.4	+1.5
ZAPS	Zavoj	1.96	65	*e*Pg	Pg	16 35 13.4	-0.8
ZAGS	Zajecar	2.00	48	*e*Pg	Pb	16 35 13.9	+0.5
TEKS	Tekeris	2.12	347	*e*Pn	Pn	16 35 13.4	+0.7
TEKS				*e*Sn	Sn	16 35 39.5	+0.1
VTS	Vitosha	2.25	85	*e*Pg	Pg	16 35 19.1	-0.7
VTS				*e*Sg	Sg	16 35 48.7	-0.3
RICI	Ricice	2.46	295	*e*Pn	Pb	16 35 21.0	-0.2
FRGS	Fruska Gora	2.69	354	*e*Pn	Pn	16 35 20.7	+0.3
FRGS				*e*Sn	Sn	16 35 53.0	-0.3
KIJV	Kijevo	3.16	300	*e*Pn	Pb	16 35 30.4	-2.7
KIJV				Sn	Sb	16 36 12.9	+1.1
ZIRJ	Zirje	3.53	291	*e*Pn	Pn	16 35 34.3	+2.3
ZIRJ				Sn	Sb	16 36 18.8	-3.7
DUGI	Dugi Otok	4.04	294	*e*Pn	Pn	16 35 41.6	+2.6

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*IDC **15** 16:36:52.2±1.3, 7°.20N×82°.07W, h0^{km}, mb3.6/6, mb1 4.0/8, mb1mx3.8/34, mbtmp3.7/8, ML4.3/2, Error ellipse: s-maj=53.2km s-min=23.0km az=52.0*
*NEIC **15** 16:36:53.6±1.7, 7°.21N±0°.09×82°.37W±0°.08, h10^{km}±1^{km}, mb4.1/6, Error ellipse: s-maj=19.7km s-min=3.0km az=218.0*
*UPA **15** 16:36:54.9±1.8, 7°.21N×82°.32W, h24^{km}±22^{km}, MW4.5*
*UCR **15** 16:37:03.9±1.2, 7°.73N×82°.89W, h14^{km}±8^{km}, MW3.9, mb4.1(NEIC)*
ISC 15 16:36:51.8±1.7**, 7°.21N**±0°.06×**82°.32W**±0°.03**, h1**^{km}±9^{km}**, n87,**
σ1^{s}.11/106**, mb3.8**/8**, 4C-4D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LIMO3	Limones	1.03	329	*e*P	Pg	16 37 12.2	+0.6
LIMO3				*e*S	Sn	16 37 28.4	-0.1
PTPM	Petroterminale	1.13	331	⇑*i*P	Pg	16 37 13.6	+0.2
PTPM				*e*S	Sg	16 37 28.5	+0.4
CHIR3	Chiriqui UPA,	1.18	360	*e*P	Pg	16 37 14.9	+0.6
CHIR3				*e*S	Sg	16 37 30.3	+0.7
LOCO3	Loma Colorada,	1.19	356	*e*P	Pg	16 37 15.2	+0.5
LOCO3				*e*S	Sg	16 37 30.8	+0.6
GMAL	Guarumal, Vera	1.21	63	⇓*e*P	Pg	16 37 14.9	-0.1
GMAL				*e*S	Sg	16 37 31.3	+0.5
LOMA3	Las Lomas, Chi	1.21	357	*e*P	Pg	16 37 15.2	+0.1
DVD	David	1.22	354	*e*P	Pg	16 37 15.5	+0.2
DVD				*e*S	Sg	16 37 31.4	+0.3
SBAR3	San Bartolo, C	1.23	333	*e*P	Pg	16 37 15.2	-0.2
BAGA3	Bagala, Chiriq	1.26	351	⇑*i*P	Pg	16 37 16.4	+0.3
BAGA3				*e*S	Sb	16 37 33.7	+0.6
LESP3	La Esperanza,	1.27	339	*e*P	Pg	16 37 15.6	-0.6
MARI3	Mariato, Verag	1.39	72	*e*P	Pn	16 37 17.9	-0.4
MARI3				*e*S	Sg	16 37 35.5	-1.1
CACAO	El Cacao, Vera	1.46	85	*e*S	Sg	16 37 37.1	-1.5
CDITO	Canoas	1.46	338	Pn	Pn	16 37 18.1	-1.1
CDITO	Canoas	1.46	338	*e*P	Pn	16 37 18.5	-0.7
CDITO				*e*S	Sg	16 37 37.9	-0.8
BCO2	Palmira	1.51	352	*e*P	Pn	16 37 19.9	-0.2
BCO2				*e*S	Sg	16 37 39.6	-0.8
LNBQ3	Los Naranjos,	1.57	356	*e*P	Pn	16 37 21.1	+0.1
LNBQ3				*e*S	Sn	16 37 40.8	-1.3
STIA3	Santiago, Vera	1.60	57	*e*P	Pn	16 37 21.6	+0.3
STIA3				*e*S	Sn	16 37 39.7	-2.9
BRU2	Volcan	1.61	347	Pn	Pn	16 37 20.8	-0.7
BRU2	Volcan	1.61	347	⇑*e*P	Pn	16 37 21.1	-0.4
BRU2				*e*S	Sn	16 37 41.5	-1.6
PTJ1	Puerto Jimnez	1.63	324	*e*P	Pn	16 37 21.1	-0.6
PTJ1	Puerto Jimnez	1.63	324	⇓*e*P	Pn	16 37 21.2	-0.4
PTJ1				*e*S	Sn	16 37 41.1	-2.2
MLIR3	Monte Lirio, C	1.65	343	*e*P	Pn	16 37 22.1	+0.2
EDSV	San Vito	1.72	338	*e*P	Pn	16 37 23.2	+0.2
CHGR2	Aguacate	1.72	6	*e*P	Pn	16 37 22.7	-0.2
CHGR2				*e*S	Sn	16 37 43.9	-1.7
PESE3	Pese, Herrera	1.83	68	*e*P	Pn	16 37 24.5	+0.1
PESE3				*e*S	Sn	16 37 46.3	-1.9
CALO3	Calobre, Verag	1.84	53	*e*P	Pn	16 37 24.8	+0.4
TOSI3	Tonosi	1.88	84	*e*P	Pn	16 37 24.9	-0.1
RIOS	Rincon, Osa	1.89	322	Pn	Pn	16 37 23.6	-1.6
POTG	Potrero Grande	1.99	337	*e*P	Pn	16 37 27.0	+0.3
CHIT3	Chitre	2.03	68	*e*P	Pn	16 37 26.8	-0.3
CHIT3				*e*S	Sn	16 37 51.5	-1.6
EDPN	Palmar Norte	2.07	327	*e*P	Pn	16 37 27.3	-0.4
AZU	Azuero	2.11	74	⇓*i*P	Pn	16 37 28.2	0.0
AZU				*e*S	Sn	16 37 52.8	-2.3
EDBA	Buenos Aires	2.15	334	⇓*i*P	Pn	16 37 29.6	+0.8
CNI2	El Empalme, Bo	2.20	356	*e*P	Pb	16 37 31.4	-1.0
SRBA	San Rafael, Bu	2.25	333		Pn	16 37 30.2	-0.1
PNME	Penonome	2.35	57	*e*P	Pn	16 37 32.9	+1.4
PNME				*e*S	Sn	16 37 58.6	-2.4
EDDO	Dominical	2.54	323	*e*P	Pn	16 37 33.7	-0.4
PEZE	Perez Zeledon,	2.54	328	*e*P	Pn	16 37 34.5	+0.3
PEZE	Perez Zeledon,	2.54	328	Pn	Pn	16 37 34.0	-0.2
VTON	El Valle, Cocl	2.59	57	*e*P	Pn	16 37 37.2	+2.3
RIMA	Rio Macho	2.96	329	*e*P	Pn	16 37 40.4	+0.3
RIMA	Rio Macho	2.96	329		Pn	16 37 39.9	-0.2
ZANG	Zanguenga, Cho	2.99	54	*e*P	Pn	16 37 41.6	+1.3
LCR2	La Lucha 2	3.01	327	*e*P	Pn	16 37 41.0	+0.2
CHOR3	La Chorrera	3.04	56	*e*P	Pn	16 37 42.9	+1.9
BATAN	Batan	3.05	340	Pn	Pn	16 37 42.2	+1.1
BATAN	Batan	3.05	340	*e*P	Pn	16 37 43.2	+2.0
RAFA	San Farael, Vo	3.10	332	*e*P	Pn	16 37 43.0	+0.9
CVTR	Volcan Turrial	3.13	333	Pn	Pn	16 37 42.9	+0.3
BCIP	Isla Barro Col	3.13	52		Pn	16 37 42.7	+0.4
BCIP	Isla Barro Col	3.13	52	*e*P	Pn	16 37 43.3	+1.0
MLIR	Monte Lirio	3.17	50	*e*P	Pn	16 37 41.7	-1.0
HDC	Heredia	3.29	328	*e*P	Pn	16 37 45.3	+0.7
HDC	Heredia	3.29	328		Pn	16 37 45.1	+0.6
HDC	Heredia	3.29	328	⇑*e*P	Pn	16 37 45.6	+1.1
HDC				*e*S	Sn	16 38 21.8	-2.6
LAFE	Finca La Fe, P	3.63	315	*e*P	Pn	16 37 48.4	-0.8
CAO2	Cobano, Puntar	3.69	312	Pn	Pn	16 37 49.7	-0.3
CHPO	Chepo, Panama	3.73	58	*e*P	Pn	16 37 51.5	+1.1
ARE1	Arenal 1	4.00	324	*e*P	Pn	16 37 53.9	-0.4
JTS	Las Juntas de	4.01	320	Pn	Pn	16 37 55.4	+1.0
	76nm,0.3s,baz=190,slow=5.9,SNR=239						
JTS				Sn	Sb	16 38 48.5	-3.9
	baz=6.4,slow=23,SNR=1.0						
JTS	Las Juntas de	4.01	320	*e*P	Pn	16 37 55.4	+1.0
JTS	Las Juntas de	4.01	320		Pn	16 37 53.8	-0.6
JTS	Las Juntas de	4.01	320	*e*P	Pn	16 37 55.5	+1.0
INDI	Punta indio, G	4.10	310	*e*P	Pn	16 37 55.3	-0.3
DUNO	Dulce Nombre,	4.24	312	Pn	Pn	16 37 56.7	-0.8
SAJU	San Juanillo,	4.39	311	*e*P	Pn	16 37 59.2	-0.4
ORTG	Ortega, Santa	4.41	316		Pn	16 37 60.0	+0.1
HZTE	Horizontes, Gu	4.75	317		Pn	16 38 05.2	+0.7
BOAB	BOACO BROADBAN	6.16	328		Pn	16 38 24.6	+0.7
ZARC	Zaragoza, Cauc	7.41	87	Pn	Pn	16 38 41.1	-0.1
CMIG	Matias Romero	15.71	310	Pn	P	16 40 38.9	+0.3
	0.2nm,0.3s,baz=131,slow=11,SNR=2.3						
TXAR	Lajitas Array	29.80	320	P	P	16 43 02.5	+2.0
	0.2nm,0.8s,baz=138,slow=11,SNR=2.5						
PD31	Pinedale Array	42.77	330	P	P	16 44 50.9	-0.4
PDAR	Pinedale Array	42.77	330	P	P	16 44 52.2	+1.0
	0.2nm,0.5s,baz=120,slow=8.9,SNR=2.2						
PDAR	Pinedale Array	42.77	330	P	P	16 44 51.3	+0.1
BW06	Boulder Array	42.78	330	P	P	16 44 50.9	-0.4
BW06				IAmb	IAmb	16 45 14.2	
	comp=Z,3.1nm,1.4s						
NVAR	Mina Array Bea	44.94	319	P	P	16 45 11.8	+3.1
	comp=Z,1.4nm,0.6s,baz=130,slow=6.6,SNR=8.9						
GCMT	Greycliff	45.11	333	P	P	16 45 10.7	+0.8
BMN	Battle Mountai	45.43	322	P	P	16 45 13.3	+0.8
BCYI	Bear Canyon	45.83	329	P	P	16 45 17.0	+1.4
PLCA	Paso Flores	48.92	168	P	P	16 45 39.5	-0.1
	comp=Z,1.6nm,0.8s,baz=355,slow=3.6,SNR=3.8						
PLCA	Paso Flores	48.92	168	IAmb	IAmb	16 45 48.5	
	comp=Z,3.0nm,1.1s						
A36M	Sachs Harbour	69.84	347	P	P	16 48 03.6	0.0
A36M				IAmb	IAmb	16 48 30.4	
	comp=Z,5.4nm,1.2s						
BCAR	Beaver Creek A	70.09	335	P	P	16 48 06.0	+0.6
ILAR	Eielson Array	72.82	336	P	P	16 48 22.9	+1.0
	comp=Z,0.3nm,0.7s,baz=99,slow=5.1,SNR=4.6						
ESDC	Sonseca Array	76.48	51	P	P	16 48 43.5	-0.2
	comp=Z,0.3nm,0.8s,baz=255,slow=5.7,SNR=1.9						
ESDC	Sonseca Array	76.48	51	IAmb	IAmb	16 49 11.5	
	comp=Z,1.6nm,1.4s						

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*ANF **15** 17:00:21.9±0.5, 43°.70N×105°.28W, h1^{km}, ML3.6/12, Error ellipse: s-maj=7.5km s-min=6.0km az=118.0*
*NEIC **15** 17:00:21.7±1.0, 43°.79N±0°.02×105°.28W±0°.06, h0^{km}±2^{km}, ML3.3/40, Error ellipse: s-maj=7.6km s-min=3.1km az=82.0*
*IDC **15** 17:00:22.2±1.1, 44°.05N×105°.74W, h0^{km}, mb1 3.7/4, mb1mx3.4/62, mbtmp3.3/4, ML2.9/3, Error ellipse: s-maj=27.6km s-min=10.1km az=149.0*
ISC 15 17:00:21.4±1.0**, 43°.77N**±0°.05×**105°.33W**±0°.06**, h0**^{km}**, n50,**
σ0^{s}.80/51**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	1.00	69	P	Pg	17 00 40.2	-0.4
	baz=245						
RSSD	Black Hills	1.00	69	Pg	Pg	17 00 39.9	-0.7
K22A	Casper	1.42	218	P	Pn	17 00 46.9	-1.7
	baz=40,SNR=127						
K22A	Casper	1.42	218		Pn	17 00 46.9	-1.7
K22A				IAML		17 01 11.5	
	comp=E,411nm,0.3s						
RWWY	Rawlins	2.50	214		Pn	17 01 04.5	+0.9
RWWY				IAML		17 01 40.4	
	comp=E,207nm,0.7s						
RWWY				IAML		17 01 43.7	
	comp=E,223nm,0.9s						
N23A	Red Feather La	2.91	189	P	Pn	17 01 09.8	+0.6
	baz=9.7,SNR=38						
LAO	LASA Array	2.99	348	P	Pn	17 01 10.1	-0.1
	baz=167						
LAO				S	Sb	17 01 53.2	+0.6
	baz=167						
LAO	LASA Array	2.99	348	Pn	Pn	17 01 09.5	-0.6
LAO				IAML		17 02 03.7	
	comp=E,135nm,0.6s						
RLMT	Red Lodge	3.13	297	P	Pn	17 01 12.4	+0.2
	baz=115,SNR=33						
RLMT	Red Lodge	3.13	297		Pn	17 01 12.3	+0.2
RLMT				IAML		17 02 08.2	
	comp=E,78nm,0.3s						
RLMT				IAML		17 02 09.6	
	comp=E,68nm,0.7s						
BW06	Boulder Array	3.25	254	P	Pn	17 01 14.3	+0.4
	baz=72,SNR=57						
BW06	Boulder Array	3.25	254		Pn	17 01 14.0	+0.2
BW06				IAML		17 02 02.2	
	comp=E,53nm,0.3s						
PD31	Pinedale Array	3.25	254		Pn	17 01 13.8	0.0
PDAR	Pinedale Array	3.25	254	Pn	Pn	17 01 14.3	+0.5
	comp=E,6.3nm,0.3s,baz=71,slow=16,SNR=35						
PDAR				Lg	Lg	17 01 59.6	
	comp=E,22nm,0.3s,baz=72,slow=30,SNR=3.9						
PDAR	Pinedale Array	3.25	254	Pn	Pn	17 01 14.0	+0.1
YMP	Mirror Lake Pl	3.60	287	Pn	Pn	17 01 19.1	+0.3
YMP				IAML		17 02 15.5	
	comp=E,93nm,0.4s						
GCMT	Greycliff	3.69	305	Pn	Pn	17 01 20.6	+0.7
OGNE	Ogallala	3.73	138	P	Pn	17 01 20.8	+0.4
	baz=320,SNR=6.0						
OGNE	Ogallala	3.73	138	Pn	Pn	17 01 20.7	+0.4
H17A	Grant Village	3.83	281	P	Pn	17 01 23.7	+1.8
	baz=98,SNR=21						
FLWY	Flagg Ranch	3.89	276		Pn	17 01 23.0	+0.2
FLWY				IAML		17 02 31.7	
	comp=E,38nm,1.4s						
MOOW	Moose Ponds	3.92	272	Pn	Pn	17 01 24.6	+1.4
SNOW	Snow King Moun	3.95	267		Pn	17 01 24.9	+1.4
SNOW				IAML		17 02 31.4	
	comp=E,45nm,1.0s						
SNOW				IAML		17 02 45.2	
	comp=E,41nm,1.1s						
ISCO	Idaho Springs	3.97	183	P	Pn	17 01 24.3	+0.4
	baz=3.5,SNR=18						
ISCO	Idaho Springs	3.97	183	Pn	Pn	17 01 24.5	+0.6
REDW	Red Top Meadow	4.04	266		Pn	17 01 25.1	+0.5
REDW				IAML		17 02 37.2	
	comp=E,40nm,1.0s						
REDW				IAML		17 03 08.7	
	comp=E,35nm,1.0s						
TPAW	Teton Pass	4.09	268		Pn	17 01 26.6	+1.1
TPAW				IAML		17 02 47.5	
	comp=E,33nm,1.1s						
TPAW				IAML		17 02 53.6	
	comp=E,51nm,1.0s						
FXWY	Fox Creek	4.13	270	Pn	Pn	17 01 27.1	+1.0
O20A	White River Ci	4.23	212	P	Pn	17 01 27.9	+0.6
	baz=31,SNR=11						
O20A	White River Ci	4.23	212		Pn	17 01 28.3	+0.9
O20A				IAML		17 02 41.4	
	comp=E,45nm,0.6s						
O20A				IAML		17 02 52.0	
	comp=N,38nm,1.2s						
E28A	Huff	4.31	48	Pn	Pn	17 01 28.7	+0.4
AHID	Auburn Hatcher	4.33	259		Pn	17 01 30.2	+1.4
AHID				IAML		17 02 45.5	

	comp=N,28nm,0.9s						
AHID				IAML		17 02 48.4	
	comp=N,36nm,0.9s						
DGMT	**Dagmar**	**4.77**	**9**	P	**Pn**	**17 01 35.4**	**+0.8**
	baz=189						
DGMT	**Dagmar**	**4.77**	**9**	Pn	**Pn**	**17 01 35.5**	**+1.0**
Q24A	**Divide**	**4.80**	**178**	P	**Pn**	**17 01 35.4**	**+0.1**
	baz=359,SNR=5.3						
HWUT	**Hardware Ranch**	**5.08**	**247**		**Pn**	**17 01 39.2**	**+0.3**
HWUT				IAML		17 03 06.7	
	comp=N,28nm,0.9s						
HRY	**Holter Researc**	**5.45**	**305**		**Pn**	**17 01 43.1**	**-1.0**
P18A	**Preston Nutter**	**5.54**	**223**		**Pn**	**17 01 45.9**	**+0.5**
SPUT	**South Promonto**	**5.81**	**247**		**Pn**	**17 01 49.8**	**+0.9**
HVU	**Hansel Valley**	**5.83**	**253**	Pn	**Pn**	**17 01 49.8**	**+0.5**
P17A	**Butcher Ranch,**	**5.90**	**225**		**Pn**	**17 01 50.8**	**+0.5**
SRU	**San Rafael Swe**	**6.07**	**222**		**Pn**	**17 01 52.9**	**+0.2**
TMUT	**Trail Mountain**	**6.28**	**227**		**Pn**	**17 01 56.1**	**+0.6**
ECSD	**EROS Data Cent**	**6.31**	**87**	P	**Pn**	**17 01 55.4**	**-0.4**
	baz=273						
ECSD	**EROS Data Cent**	**6.31**	**87**		**Pn**	**17 01 55.1**	**-0.6**
NLU	**North Lily Min**	**6.32**	**235**		**Pn**	**17 01 56.3**	**+0.3**
DUG	**Dugway, Tooele**	**6.62**	**240**		**Pn**	**17 02 00.3**	**+0.2**
ULM	**Lac du Bonnet**	**9.14**	**42**	Pn	**Pn**	**17 02 33.5**	**-1.0**
	comp=N,1.2nm,0.3s,baz=238,slow=12,SNR=6.7						
ULM				Lg	Lg	17 04 59.4	
	comp=N,0.3nm,0.3s,baz=319,slow=17,SNR=1.3						
NVAR	**Mina Array Bea**	**11.15**	**246**	Pn	**Pn**	**17 03 03.2**	**+1.0**
	comp=N,0.2nm,0.3s,baz=50,slow=9.9,SNR=3.7						
TXAR	**Lajitas Array**	**14.47**	**174**	Pn	**P**	**17 03 54.4**	**-0.1**
	comp=N,0.0nm,0.3s,baz=360,slow=9.9,SNR=2.1						

VAO ***15*** *17:02:52.8±0.5, 29°.83S×72°.11W, h10^{km}, mb4.5*
IDC ***15*** *17:02:53.4±0.8, 29°.86S×71°.81W, h0^{km}, mb4.3/10, mb1 4.3/14, mb1mx4.1/36, mbtmp4.2/14, ML4.1/4, MS3.8/13, Ms1 3.7/13, ms1mx3.6/27, Error ellipse: s-maj=28.9km s-min=16.4km az=97.0*
NEIC ***15*** *17:02:53.7±2.0, 29°.78S±0°.04×72°.05W±0°.06, h10^{km}±1^{km}, mb4.3/7, ML4.8(GUC), Error ellipse: s-maj=8.8km s-min=6.8km az=240.0*
GUC ***15*** *17:02:56.3±0.7, 29°.87S×71°.92W, h26^{km}±5^{km}, ML4.8*
ISC 15 17:02:52.0±1.2**, 29°.77S**±0°.03×**72°.14W**±0°.05**, h3**^{km}±7^{km}**, n163,** σ1^s**42**/166**, mb4.5**/11**, MS3.8**/8**, 2C-2D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO05	**La Serena**	**0.80**	**101**	⇓*i*P	**Pg**	**17 03 08.1**	**+0.9**
CO05				*i* S	**Sg**	**17 03 16.3**	**-1.3**
CO05				IAML		17 03 20.4	
	comp=N,61µm,0.3s						
CO05	**La Serena**	**0.80**	**101**		**Pg**	**17 03 08.0**	**+0.7**
CO05				Sg	**Sg**	**17 03 18.3**	**+0.7**
CO06	**Fray Jorge**	**1.00**	**154**	⇓*i*P	**Pb**	**17 03 11.7**	**-0.3**
CO06				*i* S	**Sg**	**17 03 22.7**	**-1.5**
CO06	**Fray Jorge**	**1.00**	**154**		**Pb**	**17 03 11.7**	**-0.3**
CO06				Sg	**Sb**	**17 03 24.8**	**-0.8**
GO04	**Tololo Observa**	**1.23**	**109**	*e*P	**Pb**	**17 03 15.4**	**-0.7**
GO04				*e*S	**Sb**	**17 03 28.4**	**-4.0**
GO04				IAML		17 03 37.0	
	comp=N,85µm,0.5s						
GO04	**Tololo Observa**	**1.23**	**109**		**Pb**	**17 03 15.5**	**-0.5**
GO04	**Tololo Observa**	**1.23**	**109**	*i* P	**Pb**	**17 03 16.0**	**-0.1**
LCO	**Las Campanas**	**1.47**	**59**	⇑*i*P	**Pn**	**17 03 19.5**	**-0.1**
LCO				*i* S	**Sn**	**17 03 38.1**	**-1.4**
LCO	**Las Campanas**	**1.47**	**59**	Pn	**Pn**	**17 03 19.6**	**-0.1**
LCO				Sn	**Sn**	**17 03 36.5**	**-3.0**
LCO	**Las Campanas**	**1.47**	**59**	*i* P	**Pn**	**17 03 19.0**	**-0.7**
AC04	**Llanos de Chal**	**1.82**	**31**	⇑*i*P	**Pn**	**17 03 23.8**	**-0.5**
AC04				*i* S	**Sn**	**17 03 45.9**	**-2.0**
AC04	**Llanos de Chal**	**1.82**	**31**	Pn	**Pn**	**17 03 23.9**	**-0.4**
AC04	**Llanos de Chal**	**1.82**	**31**	*i* P	**Pn**	**17 03 24.0**	**-0.3**
AROD	**Rodeo**	**2.34**	**100**	*i* P	**Pb**	**17 03 34.0**	**-1.2**
ACDV	**Cuesta del Vie**	**2.65**	**99**	*i* P	**Pb**	**17 03 41.0**	**+0.8**
GO03	**Copiap**	**2.74**	**38**	*e*P	**Pn**	**17 03 37.3**	**+0.3**
GO03				*e*S	**Sn**	**17 04 13.4**	**+2.7**
GO03				IAML		17 04 30.1	
	comp=N,2µm,0.5s						
GO03	**Copiap**	**2.74**	**38**	Pn	**Pn**	**17 03 37.4**	**+0.3**
GO03	**Copiap**	**2.74**	**38**	*i* P	**Pn**	**17 03 38.0**	**+1.0**
ACCO	**Cerro Coronel**	**2.78**	**108**	*i* P	**Pb**	**17 03 41.0**	**-1.6**
VA06	**Catapilco**	**2.87**	**166**	*e*P	**Pn**	**17 03 38.6**	**-0.1**
VA06				*e*S	**Sb**	**17 04 16.0**	**-3.5**
VA06				IAML		17 04 34.6	
	comp=E,4µm,0.7s						
VA01	**Torpederas**	**3.27**	**173**	*e*P	**Pn**	**17 03 47.2**	**+3.0**
VA03	**San Esteban**	**3.28**	**156**	*e*P	**Pn**	**17 03 45.7**	**+1.3**
VA03				*e*S	**Sn**	**17 04 23.6**	**-0.4**
VA03				IAML		17 04 44.0	
	comp=N,4µm,0.3s						
VA03	**San Esteban**	**3.28**	**156**		**Pn**	**17 03 46.0**	**+1.6**
VA03	**San Esteban**	**3.28**	**156**	*i* P	**Pn**	**17 03 46.0**	**+1.6**
ROCH	**El Roble**	**3.33**	**163**	*e*P	**Pn**	**17 03 45.4**	**+0.1**
ROCH				IAML		17 04 52.4	
	comp=E,3µm,0.8s						
ROC1	**El Roble**	**3.33**	**164**	*i* P	**Pn**	**17 03 45.0**	**-0.4**
AUSP	**Uspallata**	**3.40**	**137**	*i* P	**Pn**	**17 03 49.0**	**+2.7**
MT02	**Curacav**	**3.58**	**166**		**Pn**	**17 03 48.9**	**+0.4**
PEL	**Peldehue**	**3.58**	**160**	*e*P	**Pn**	**17 03 49.5**	**+0.9**
PEL				IAML		17 04 58.3	
	comp=N,2µm,0.6s						
PEL	**Peldehue**	**3.58**	**160**		**Pn**	**17 03 49.3**	**+0.7**
PEL	**Peldehue**	**3.58**	**160**	*i* P	**Pn**	**17 03 49.0**	**+0.4**
VCA	**Vinchina**	**3.59**	**74**	*i* P	**Pb**	**17 03 53.0**	**-3.3**
RTCV	**Cerro Valdivia**	**3.73**	**125**	*i* P	**Pn**	**17 03 54.0**	**+3.4**
MT05	**Renca**	**3.80**	**162**	*e*P	**Pn**	**17 03 52.3**	**+0.7**
MT05	**Renca**	**3.80**	**162**		**Pn**	**17 03 52.4**	**+0.8**
MT05	**Renca**	**3.80**	**162**	*i* P	**Pn**	**17 03 52.0**	**+0.4**
FCH	**Farellones**	**3.88**	**156**	*e*P	**Pn**	**17 03 54.3**	**+1.4**
FCH				*e*S	**Sn**	**17 04 41.0**	**+1.8**
VA05	**Santo Domingo**	**3.90**	**174**	*e*P	**Pn**	**17 03 52.7**	**-0.2**
VA05	**Santo Domingo**	**3.90**	**174**	Pn	**Pn**	**17 03 52.5**	**-0.4**
AC02	**Maricunga**	**3.95**	**43**		**Pn**	**17 03 55.1**	**+1.1**
ASAL	**Salagasta**	**3.99**	**136**	*i* P	**Pn**	**17 03 58.0**	**+3.8**
ARCO	**CERRO ARCO**	**4.11**	**139**	*i* P	**Pb**	**17 04 01.0**	**-4.2**
MT09	**Talagante**	**4.11**	**167**	*e*P	**Pn**	**17 03 56.6**	**+0.7**
MT09	**Talagante**	**4.11**	**167**		**Pn**	**17 03 56.4**	**+0.5**
AVFE	**Valle Fertil**	**4.15**	**103**	*i* P	**Pn**	**17 03 59.0**	**+2.6**
MT01	**Popeta**	**4.15**	**170**	*e*P	**Pn**	**17 03 56.1**	**-0.3**
MT01	**Popeta**	**4.15**	**170**		**Pn**	**17 03 56.1**	**-0.3**
MT01	**Popeta**	**4.15**	**170**	*i* P	**Pn**	**17 03 56.0**	**-0.3**
AAGR	**Agrelo**	**4.35**	**140**	*i* P	**Pn**	**17 04 03.0**	**+3.8**
LMEL	**Las Melosas**	**4.38**	**158**	*e*P	**Pn**	**17 04 01.5**	**+1.7**
BO04	**La Punta**	**4.40**	**163**	*e*P	**Pn**	**17 04 00.4**	**+0.5**
ACLC	**CERRO LA CRUZ**	**4.53**	**87**	*i* P	**Pn**	**17 04 04.0**	**+2.3**
BO01	**Tunca**	**4.69**	**169**	*e*P	**Pn**	**17 04 03.6**	**-0.2**
BO01	**Tunca**	**4.69**	**169**	Pn	**Pn**	**17 04 03.6**	**-0.2**
BO01	**Tunca**	**4.69**	**169**	*i* P	**Pn**	**17 04 04.0**	**+0.2**
APLL	**PUNTA DE LOS L**	**4.90**	**99**	*i* P	**Pn**	**17 04 09.0**	**+2.3**
ACHE	**Chepes**	**4.92**	**108**	*i* P	**Pn**	**17 04 10.0**	**+2.9**
BO02	**Sierra Bellavi**	**5.14**	**167**		**Pn**	**17 04 10.2**	**+0.2**
BO02	**Sierra Bellavi**	**5.14**	**167**	*i* P	**Pn**	**17 04 10.0**	**0.0**
GO05	**Huala**	**5.23**	**178**		**Pn**	**17 04 09.7**	**-1.4**
GO05	**Huala**	**5.23**	**178**	*i* P	**Pn**	**17 04 10.0**	**-1.2**
CYA	**Choya**	**5.70**	**78**	*e*P	**Pn**	**17 04 19.0**	**+1.3**
CYA	**Choya**	**5.70**	**78**	*i* P	**Pn**	**17 04 19.0**	**+1.3**
RFA	**San Rafael**	**5.87**	**149**	*i* P	**Pn**	**17 04 22.0**	**+1.9**
ML02	**Panimavida**	**6.00**	**174**	Pn	**Pn**	**17 04 20.6**	**-1.2**
MRA	**San Martin**	**6.11**	**117**	*i* P	**Pn**	**17 04 24.0**	**+0.7**
H03N1	**Juan Fernandez**	**6.84**	**236**	T	T	17 12 06.8	
	baz=65,slow=71,SNR=3319						
H03N2	**Juan Fernandez**	**6.85**	**236**	T	T	17 12 05.1	
	baz=65,slow=71,SNR=3200						
H03N3	**Juan Fernandez**	**6.85**	**236**	T	T	17 12 05.1	
	baz=65,slow=71,SNR=2791						
VA04	**Juan Fernndez**	**6.88**	**234**	*e*P	**Pn**	**17 04 32.8**	**-1.1**
VA04	**Juan Fernndez**	**6.88**	**234**	Pn	**Pn**	**17 04 32.7**	**-1.2**
PB15	**IPOC Station P**	**6.96**	**21**	Pn	**Pn**	**17 04 34.4**	**-0.8**
PB05	**IPOC Station P**	**7.11**	**15**	*i* P	**Pn**	**17 04 35.0**	**-2.1**
PB06	**IPOC Station P**	**7.40**	**19**	*i* P	**Pn**	**17 04 40.0**	**-1.2**
LVC	**Limon Verde**	**7.70**	**23**	Pn	**Pn**	**17 04 44.6**	**-0.9**
	comp=N,1.6nm,0.3s,baz=229,slow=12,SNR=7.9						
LVC				LR	LR	17 08 03.8	
	comp=N,803nm,19.6s,baz=218,slow=40						
LVC	**Limon Verde**	**7.70**	**23**	*e*P	**Pn**	**17 04 44.1**	**-1.3**
LVC	**Limon Verde**	**7.70**	**23**	Pn	**Pn**	**17 04 44.1**	**-1.3**
LC01	**Cunco**	**9.11**	**179**	Pn	**Pn**	**17 05 03.4**	**-1.0**
LC01	**Cunco**	**9.11**	**179**	*i* P	**Pn**	**17 05 07.0**	**+2.6**
PLCA	**Paso Flores**	**11.01**	**174**	Pn	**Pn**	**17 05 30.4**	**-0.1**
	comp=N,0.5nm,0.3s,baz=339,slow=12,SNR=12						
PLCA				LR	LR	17 10 01.3	
	comp=N,357nm,18.5s,baz=354,slow=39						
PLCA	**Paso Flores**	**11.01**	**174**	Pn	**Pn**	**17 05 29.4**	**-1.2**
PLCA	**Paso Flores**	**11.01**	**174**	*i* P	**Pn**	**17 05 31.0**	**+0.4**
LL04	**Puerto Octay**	**11.12**	**181**	Pn	**Pn**	**17 05 30.7**	**-1.2**
TRQA	**Tornquist**	**11.80**	**137**		**Pn**	**17 05 41.1**	**-0.2**
ITQB	**Itaqui**	**13.48**	**93**	*e*P	**Pn**	**17 06 02.6**	**-1.7**
ITQB	**Itaqui**	**13.48**	**93**	Pn	**Pn**	**17 06 02.7**	**-1.7**
CPUP	**Villa Florida**	**13.52**	**79**	Pn	**Pn**	**17 06 04.2**	**-0.6**
	comp=N,0.3nm,0.3s,baz=278,slow=11,SNR=4.7						
CPUP				LR	LR	17 11 36.8	
	comp=N,475nm,20.6s,baz=255,slow=40						
CPUP	**Villa Florida**	**13.52**	**79**	Pn	**Pn**	**17 06 06.0**	**+1.2**
PLTB	**Pedras Altas**	**16.06**	**102**	*e*P	**Pn**	**17 06 39.0**	**+0.1**
PLTB	**Pedras Altas**	**16.06**	**102**	Pn	**Pn**	**17 06 36.1**	**-2.8**
SIV	**San Ignacio**	**17.07**	**39**	Pn	**Pn**	**17 06 52.4**	**+0.5**
	comp=N,0.5nm,0.3s,baz=227,slow=11,SNR=37						
SIV				LR	LR	17 14 40.9	
	comp=N,342nm,18.1s,baz=254,slow=42						
NNA	**Nana**	**18.23**	**345**	LR	LR	17 12 45.8	
	comp=N,73nm,19.3s,baz=170,slow=32						
CNLB	**Canela**	**18.53**	**94**	*e*P	**P**	**17 07 08.1**	**-1.7**
PTGB	**Pitanga**	**18.54**	**79**	*e*P	**Pn**	**17 07 10.5**	**+0.5**
PTLB	**Pontes e Lacer**	**18.61**	**43**	*e*P	**Pn**	**17 07 11.1**	**+0.2**
PTLB	**Pontes e Lacer**	**18.61**	**43**		**P**	**17 07 10.8**	**+0.2**
PTLB				IAmb	IAmb	17 07 19.9	
	comp=Z,22nm,1.4s						
PP1B	**Ponte de Pedra**	**19.88**	**56**	*e*P	**P**	**17 07 25.0**	**+0.3**
VILB	**Vilhena**	**20.07**	**36**	*e*P	**P**	**17 07 27.0**	**+0.3**
VILB	**Vilhena**	**20.07**	**36**	P	**P**	**17 07 26.6**	**-0.1**
VILB				IAmb	IAmb	17 07 39.3	
	comp=Z,18nm,0.9s						
TER01	**Tubaro-SC**	**20.13**	**92**	*e*P	**P**	**17 07 25.8**	**-1.6**
SALV	**Santo Antonio**	**20.46**	**51**	*e*P	**P**	**17 07 31.0**	**0.0**
PCMB	**Pacaembu**	**20.47**	**71**	*e*P	**P**	**17 07 31.1**	**0.0**
ETMB	**Extrema**	**20.61**	**17**	*e*P	**P**	**17 07 32.4**	**-0.2**
ETMB	**Extrema**	**20.61**	**17**		**P**	**17 07 32.9**	**+0.3**
ETMB				IAmb	IAmb	17 07 51.6	
	comp=Z,12nm,1.1s						
FRTB	**Fartura**	**21.17**	**78**	*e*P	**P**	**17 07 37.9**	**-0.7**
CZSB	**Cruzeiro do Su**	**21.93**	**358**	*e*P	**P**	**17 07 47.8**	**+1.0**
ITRB	**Iturama**	**22.14**	**68**	*e*P	**P**	**17 07 48.0**	**-1.1**
PET01	**Itanhaem-SP**	**22.79**	**82**	*e*P	**P**	**17 07 55.5**	**-0.5**
PDRB	**Porto dos Gac**	**23.07**	**42**	*e*P	**P**	**17 07 59.8**	**+0.9**
RCLB	**Rio Claro- Sao**	**23.25**	**77**	*e*P	**P**	**17 07 59.9**	**-0.9**
ATAH	**Atahualpa**	**23.27**	**344**	LR	LR	17 15 00.8	
	comp=Z,83nm,22.0s,baz=198,slow=31						
ARAG	**Araguaiana, MT**	**23.34**	**58**	*e*P	**P**	**17 08 00.1**	**-1.6**
CLDB	**Colider**	**24.20**	**42**	*e*P	**P**	**17 08 08.0**	**-2.0**
IPMB	**Ipameri, GO**	**24.77**	**67**	*e*P	**P**	**17 08 15.2**	**-0.1**
USHA	**Ushuaia**	**25.19**	**175**	P	**P**	**17 08 18.6**	**0.0**
	comp=Z,8.3nm,0.9s,baz=324,slow=8.7,SNR=2.4						
USHA				LR	LR	17 19 59.3	
	comp=Z,250nm,19.7s,baz=10.0,slow=41						
BSCB	**Bom Sucesso**	**26.17**	**77**	*e*P	**P**	**17 08 27.0**	**-1.0**
SNDB	**Serra Nova Dou**	**26.24**	**52**	*e*P	**P**	**17 08 27.9**	**-0.7**
BDFB	**Brasilia**	**26.25**	**63**	P	**P**	**17 08 28.4**	**-0.4**
	comp=Z,3.3nm,0.5s,baz=224,slow=11,SNR=5.6						
BDFB	**Brasilia**	**26.25**	**63**	P	**P**	**17 08 27.9**	**-0.9**
BDFB				IAmb	IAmb	17 08 45.5	
	comp=Z,16nm,1.1s						
VAS01	**Vassouras-RJ**	**26.79**	**81**	*e*P	**P**	**17 08 32.0**	**-1.6**
NPGB	**Novo Progresso**	**27.57**	**38**	*e*P	**P**	**17 08 41.2**	**+0.7**
DUB01	**Friburgo-RJ**	**27.79**	**81**	*e*P	**P**	**17 08 41.0**	**-1.4**
PEXB	**Peixe**	**28.27**	**57**	*e*P	**P**	**17 08 47.1**	**+0.3**
DIAM	**Diamantina, MG**	**28.32**	**73**	*e*P	**P**	**17 08 47.6**	**+0.3**
CAM01	**Campos-RJ**	**28.50**	**81**	*e*P	**P**	**17 08 49.4**	**+0.7**
MC01	**Montes Claros**	**28.90**	**70**	*e*P	**P**	**17 08 52.4**	**0.0**
JANB	**Januaria**	**29.50**	**66**	*e*P	**P**	**17 08 57.2**	**-0.5**
ITTB	**Itaituba**	**29.65**	**35**	*e*P	**P**	**17 08 58.9**	**-0.2**
ALF01	**Guarapari-ES**	**29.77**	**79**	*e*P	**P**	**17 08 59.3**	**-0.8**
BSFB	**Barra de Sao F**	**30.43**	**76**	*e*P	**P**	**17 09 05.4**	**-0.6**
SDBA	**SAO DESIDERIO**	**30.60**	**61**	*e*P	**P**	**17 09 07.5**	**-0.1**
RIB01	**Linhares ES**	**30.60**	**77**	*e*P	**P**	**17 09 08.6**	**+1.2**
SMTB	**Santa Maria do**	**31.00**	**53**	*e*P	**P**	**17 09 10.3**	**-0.7**
PTGA	**Pitinga**	**31.12**	**24**	P	**P**	**17 09 12.3**	**+0.3**
	comp=Z,3.4nm,0.3s,baz=262,slow=22,SNR=5.6						
GUA01	**Guaratinga, BA**	**32.37**	**73**	*e*P	**P**	**17 09 22.2**	**-0.9**
RPN	**Rapa Nui**	**32.72**	**265**	LR	LR	17 20 03.7	
	comp=Z,106nm,18.5s,baz=104,slow=31						
GDU01	**Guandu, BA**	**34.05**	**69**	*e*P	**P**	**17 09 36.5**	**-1.3**
NBPN	**Ponto Novo - B**	**35.20**	**64**	*e*P	**P**	**17 09 47.6**	**-0.1**
PMSA	**Palmer Station**	**35.39**	**174**	*e*P	**P**	**17 09 47.8**	**-0.9**
TMAB	**Tom-Au,PA,Br**	**35.55**	**44**	*e*P	**P**	**17 09 49.8**	**-0.9**
ZARC	**Zaragoza, Cauc**	**37.14**	**356**	P	**P**	**17 10 04.4**	**+0.2**
ZARC				IAmb	IAmb	17 10 10.6	
	comp=Z,5.2nm,1.1s						
NBPS	**Pedro II - PI**	**38.46**	**55**	*e*P	**P**	**17 10 15.4**	**-0.1**
NBMA	**Muriti-CE**	**38.46**	**61**	*e*P	**P**	**17 10 15.7**	**+0.2**
NBPB	**Pedra_Branca-C**	**39.03**	**58**	*e*P	**P**	**17 10 20.6**	**+0.3**
NBPA	**Parau_RN**	**40.74**	**61**	*e*P	**P**	**17 10 34.8**	**+0.3**
VNA3	**Neumayer Olymp**	**53.31**	**159**	P	**P**	**17 12 14.1**	**+2.1**
VNA2	**Neumayer--Watz**	**53.95**	**158**	P	**P**	**17 12 16.8**	**+0.1**
SNAA	**Sanae**	**55.54**	**159**	P	**P**	**17 12 29.3**	**+1.0**
SNAA	**Sanae**	**55.54**	**159**	P	**P**	**17 12 28.5**	**+0.2**
	comp=Z,3.6nm,0.7s,baz=281,slow=7.5,SNR=12						
QSPA	**South Pole Qui**	**60.45**	**180**	P	**P**	**17 13 04.0**	**+1.1**
	comp=Z,2.7nm,0.9s,baz=123,slow=2.3,SNR=8.0						
QSPA	**South Pole Qui**	**60.45**	**180**	P	**P**	**17 13 03.7**	**+0.8**
TXAR	**Lajitas Array**	**66.03**	**330**	P	**P**	**17 13 42.3**	**+2.1**
	comp=Z,0.2nm,0.5s,baz=150,slow=7.1,SNR=4.4						
TXAR	**Lajitas Array**	**66.03**	**330**	P	**P**	**17 13 41.5**	**+1.2**
DBIC	**Dimbokro**	**73.95**	**72**	P	**P**	**17 14 29.8**	**+0.6**
	comp=Z,1.7nm,0.5s,baz=240,slow=7.8,SNR=1.5						
DBIC				LR	LR	17 45 27.0	
	comp=Z,77nm,18.1s,baz=208,slow=35						
MAW	**Mawson**	**77.25**	**164**	LR	LR	17 50 16.7	
	comp=Z,88nm,18.2s,baz=233,slow=37						
PDAR	**Pinedale Array**	**79.97**	**333**	P	**P**	**17 15 07.3**	**+4.6**
	comp=Z,0.3nm,0.3s,baz=134,slow=3.9,SNR=1.8						
PDAR				LR	LR	17 47 37.9	
	comp=Z,28nm,18.0s,baz=232,slow=34						
BOSA	**Boshof**	**82.12**	**118**	P	**P**	**17 15 15.0**	**+0.3**
	comp=Z,3.9nm,0.9s,baz=227,slow=3.8,SNR=2.4						
BOSA				LR	LR	17 49 29.9	
	comp=Z,53nm,18.1s,baz=191,slow=34						
TORD	**Torodi Ar. Bea**	**82.87**	**71**	P	**P**	**17 15 18.8**	**+0.4**
	comp=Z,5.0nm,1.0s,baz=258,slow=5.3,SNR=14						
TORD				LR	LR	17 52 19.1	
	comp=Z,85nm,18.2s,baz=200,slow=36						
H11S2	**WAKE ISLAND Hy**	**125.64**	**272**	T	T	19 41 01.0	
	baz=115,slow=74,SNR=24						
H11S1	**WAKE ISLAND Hy**	**125.65**	**272**	T	T	19 41 00.7	
	baz=115,slow=74,SNR=17						
H11S3	**WAKE ISLAND Hy**	**125.65**	**272**	T	T	19 41 02.4	
	baz=115,slow=74,SNR=16						
ZALV	**Zalesovo Beam**	**150.62**	**28**	PKPbc	**PKiKP**	**17 22 46.5**	**+0.8**
	comp=Z,9.3nm,0.7s,baz=295,slow=3.7,SNR=16						
ZALV				PKPab	**pPKPab**	**17 22 55.1**	**+3.6**
	comp=Z,7.7nm,0.7s,baz=310,slow=3.9,SNR=6.1						
KSH	**Kashi**	**152.15**	**61**	PKPbc	**PKiKP**	**17 22 50.4**	**+0.8**

BGR ***15*** *17:11:34.1±0.0, 42°.91N×145°.35E, h33^{km}, mb4.9*
BJI ***15*** *17:11:40.7±0.0, 42°.64N×143°.27E, h110^{km}, mB4.8/33, mb4.8/65*
MOS ***15*** *17:11:41.8±0.9, 42°.51N×143°.10E, h107^{km}, mb5.0/48, Error ellipse: s-maj=6.1km s-min=4.1km az=106.8*
IDC ***15*** *17:11:42.6±1.3, 42°.51N×143°.13E, h102^{km}±9^{km}, mb4.2/25, mb1 4.3/31, mb1mx4.2/49, mbtmp4.5/31, MS3.1/10, Ms1 3.2/10, ms1mx2.9/36, Error ellipse: s-maj=13.6km s-min=10.2km az=121.0*
SKHL ***15*** *17:11:42.5±0.9, 42°.40N×143°.20E, h106^{km}±1^{km}, mb5.2/9, mbv5.2/2, msh4.7/2, msha5.8/7*
NEIC ***15*** *17:11:42.5±1.9, 42°.44N±0°.06×143°.2E±0°.1, h102^{km}±6^{km}, mb4.8/77, Error ellipse: s-maj=13.5km s-min=8.1km az=109.0*
NIED ***15*** *17:11:43.7, 42°.54N×143°.14E, h93^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}2.22; $M_{\theta\theta}$0.95; $M_{\phi\phi}$-3.17; $M_{r\theta}$2.26; $M_{\theta\phi}$1.50; $M_{\phi r}$3.20; Fault plane solution: $M_0$5.02000×10^{15} NP1:ϕ_s19.00000°, δ75.00000°, λ122.00000°. NP2:ϕ_s131.00000°, δ35.00000°, λ27.00000°.*
JMA ***15*** *17:11:43.7±0.1, 42°.54N×143°.14E, h93^{km}±1^{km}, M4.4*
JMA Felt III J1.
ISC 15 17:11:42.5±0.4**, 42°.49N**±0°.03×**143°.16E**±0°.03**, h105**^{km}±3^{km}**, h105**^{km}**:pP-P, n551,** σ1^s**22**/614**, mb4.8**/163**, 128C-56D,**
Fault plane solution: NP1:ϕ_s146.85593°**,** δ30.17263°**,** λ19.53999°. **NP2:**ϕ_s39.79887°**,** δ80.32238°**,** λ118.71800°.
Principal axes: T Plg46.9008°, Azm339.6182°**;** N Plg28.2722°, Azm214.5366°**;** P Plg29.5009°, Azm106.8209°**; Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCH	**Churui**	**0.19**	**50**	⇑P	**Pn**	**17 11 56.9**	**-0.3**
JCH				*e*S	**Sn**	**17 12 07.1**	**-1.2**
JTHR	**Tokachihiroo**	**0.22**	**153**	⇑P	**Pn**	**17 11 57.4**	**+0.1**
JTHR				*e*S	**Sn**	**17 12 07.7**	**-0.7**
JNBK	**Urakawa-nobuka**	**0.37**	**236**	⇑P	**Pn**	**17 11 58.1**	**+0.1**
JNBK				*e*S	**Sn**	**17 12 09.6**	**+0.1**
JEM	**Erimo**	**0.47**	**181**	⇑P	**Pn**	**17 11 59.2**	**+0.6**
ERM	**Erimo**	**0.47**	**181**	*c i*PN	**Pn**	**17 11 59.0**	**+0.4**
ERM	**Erimo**	**0.47**	**181**	Pn	**Pn**	**17 11 59.3**	**+0.7**
JOB	**Onbets**	**0.64**	**50**	⇑P	**Pn**	**17 12 00.4**	**+0.6**
JOB				*e*S	**Sn**	**17 12 13.3**	**+0.4**
JBT2	**Biratori 2**	**0.66**	**296**	⇓P	**Pn**	**17 11 59.9**	**-0.1**
JBT2				*e*S	**Sn**	**17 12 13.0**	**-0.1**
JFR	**Furan**	**0.79**	**328**	⇓P	**Pn**	**17 12 00.5**	**-0.7**
JFR				*e*S	**Sn**	**17 12 13.3**	**-2.0**
JAR	**Ashorobuto**	**0.92**	**29**	⇓P	**Pn**	**17 12 02.5**	**+0.1**
JAR				*e*S	**Sn**	**17 12 16.7**	**-0.8**
JIAM	**Iburiatsuma**	**0.93**	**279**	⇓P	**Pn**	**17 12 03.6**	**+1.1**
JAB	**Ashibetsu**	**1.23**	**326**	⇓P	**Pn**	**17 12 05.6**	**-0.1**
JAB				*e*S	**Sn**	**17 12 22.8**	**-0.6**
JAK	**Akkeshi**	**1.24**	**65**	⇑P	**Pn**	**17 12 06.2**	**+0.4**
JAK				*e*S	**Sn**	**17 12 23.4**	**-0.1**
JEW	**Eniwo**	**1.31**	**286**	⇓P	**Pn**	**17 12 07.0**	**+0.3**
JEW				*e*S	**Sn**	**17 12 25.3**	**+0.2**
JEW	**Eniwo**	**1.31**	**286**	Pn	**Pn**	**17 12 07.0**	**+0.3**
JKK2	**Kamakawa 2**	**1.42**	**348**	⇓P	**Pn**	**17 12 08.0**	**0.0**
JKK2				*e*S	**Sn**	**17 12 26.8**	**-0.5**
JISS	**Ishikarishitsu**	**1.50**	**302**	⇓P	**Pn**	**17 12 09.1**	**+0.1**
JISS				*e*S	**Sn**	**17 12 28.9**	**-0.2**
JMP	**Maruseppu**	**1.52**	**5**	⇓P	**Pn**	**17 12 09.6**	**+0.3**
JMP				*e*S	**Sn**	**17 12 29.6**	**0.0**
JNB	**Noboribetsu**	**1.57**	**270**	⇓P	**Pn**	**17 12 09.0**	**-0.8**
JNB				*e*S	**Sn**	**17 12 28.9**	**-1.7**
JTKR	**Abashiri--Toko**	**1.58**	**20**	⇓P	**Pn**	**17 12 10.3**	**+0.4**
JTKR				*e*S	**Sn**	**17 12 30.4**	**-0.3**
JNK	**Nakash**	**1.58**	**46**	⇓P	**Pn**	**17 12 10.2**	**+0.3**
JNK				*e*S	**Sn**	**17 12 30.3**	**-0.5**
JHR	**Hokuryu**	**1.64**	**320**	⇓P	**Pn**	**17 12 10.8**	**+0.2**
JHR				*e*S	**Sn**	**17 12 32.0**	**-0.1**
JKA	**Kamikawa-asahi**	**1.68**	**346**	*e*P	**Pn**	**17 12 11.6**	**+0.5**
JKA	**Kamikawa-asahi**	**1.68**	**346**	Pn	**Pn**	**17 12 11.6**	**+0.5**
ASAJ	**Asahikawa**	**1.68**	**346**	P	**Pn**	**17 12 11.7**	**+0.5**
	145nm,0.3s,baz=187,slow=17,SNR=1012						
ASAJ				S	**Sn**	**17 12 32.5**	**-0.5**
	61nm,0.3s,baz=319,slow=14,SNR=7.6						
ASAJ				LR	LR	17 12 50.0	
	comp=Z,469nm,18.4s,baz=162,slow=41						
JKB	**Kayabe**	**1.69**	**250**	⇓P	**Pn**	**17 12 10.6**	**-0.7**
JKB				*e*S	**Sn**	**17 12 31.0**	**-2.3**
NMR	**Nemuro--Hokkai**	**2.08**	**64**	⇓*i*PN	**Pn**	**17 12 16.1**	**-0.1**
NMR				*i* S	**Sn**	**17 12 40.3**	**-1.7**
NMR	**Nemuro--Hokkai**	**2.08**	**64**	*i* P	**Pn**	**17 12 16.0**	**-0.1**
NMR				*i* S	**Sn**	**17 12 40.0**	**-2.0**
GLVR	**Golovnino**	**2.13**	**53**	*e*PN	**Pn**	**17 12 17.7**	**+0.9**
GLVR				*e*S	**Sn**	**17 12 43.3**	**+0.2**
GLVR				pmax	pmax		
	comp=N,647nm,0.4s						
GLVR				pmax	pmax		
	comp=Z,1µm,0.4s						
GLVR				smax	smax		
	comp=N,8µm,0.4s						
GLVR				smax	smax		
	comp=E,4µm,0.2s						
GLVR	**Golovnino**	**2.13**	**53**	*e*P	**Pn**	**17 12 17.0**	**+0.2**
GLVR				AMB	AMB	17 12 19.0	
	comp=E,1µm,0.4s						
GLVR				*e*S	**Sn**	**17 12 43.0**	**-0.1**
GLVR				A	A	17 12 49.0	
	comp=E,8µm,0.4s						
GLVR				A	A	17 12 49.0	
	comp=E,4µm,0.4s						
RUSJ	**Misakicho**	**2.22**	**43**	*e*PN	**Pn**	**17 12 19.3**	**+1.3**
RUSJ				*e*S	**Sn**	**17 12 49.0**	**+3.8**
JTM	**Tenmabayashi**	**2.32**	**223**	Pn	**Pn**	**17 12 18.4**	**-1.0**
GRPR	**Tuman**	**2.43**	**51**	*e*PN	**Pn**	**17 12 21.1**	**+0.3**
GRPR				*e*S	**Sn**	**17 12 50.3**	**+0.2**
GRPR				pmax	pmax		
	comp=N,566nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,2µm,0.3s						
GRPR				pmax	pmax		
	comp=E,256nm,0.2s						
GRPR				smax	smax		
	comp=N,6µm,0.5s						
GRPR				smax	smax		
	comp=E,2µm,0.4s						
GRPR	**Tuman**	**2.43**	**51**	*e*P	**Pn**	**17 12 21.0**	**+0.3**
GRPR				AMB	AMB	17 12 22.0	
	comp=E,566nm,0.3s						
GRPR				AMB	AMB	17 12 22.0	
	comp=E,2µm,0.3s						
GRPR				*e*S	**Sn**	**17 12 50.0**	**-0.1**
GRPR				A	A	17 12 57.0	
	comp=E,6µm,0.5s						
GRPR				A	A	17 12 57.0	
	comp=E,2µm,0.5s						
YUK	**Yuzh-Kuril'sk**	**2.50**	**51**	*e*PN	**Pn**	**17 12 23.2**	**+1.5**
YUK				*e*S	**Sn**	**17 12 53.2**	**+1.4**
YUK				pmax	pmax		
	comp=Z,3µm,0.4s						
YUK				pmax	pmax		
	comp=N,370nm,0.3s						
YUK				pmax	pmax		
	comp=E,392nm,0.3s						
YUK				smax	smax		
	comp=E,10µm,0.5s						
YUK				smax	smax		
	comp=N,6µm,0.6s						
YUK	**Yuzh-Kuril'sk**	**2.50**	**51**	*e*P	**Pn**	**17 12 23.0**	**+1.3**
YUK				AMB	AMB	17 12 24.0	
	comp=N,3µm,0.4s						
YUK				*e*S	**Sn**	**17 12 53.0**	**+1.2**
YUK				A	A	17 12 54.0	
	comp=N,6µm,0.6s						
YUK				A	A	17 12 54.0	
	comp=N,10µm,0.6s						
KUR	**Kuril'sk**	**4.37**	**50**	*d i*PN	**Pn**	**17 12 47.7**	**+1.1**
KUR				*e*S	**Sn**	**17 13 39.6**	**+3.2**
KUR				pmax	pmax		
	comp=Z,525nm,0.7s						
KUR				pmax	pmax		
	comp=N,73nm,0.3s						
KUR				pmax	pmax		
	comp=E,70nm,0.3s						
KUR				smax	smax		
	comp=E,371nm,0.4s						
KUR				smax	smax		
	comp=N,139nm,0.5s						
KUR	**Kuril'sk**	**4.37**	**50**	*i* P	**Pn**	**17 12 47.9**	**+1.3**
KUR				AMB	AMB	17 12 49.0	
	comp=N,525nm,0.7s						
KUR				*e*S	**Sn**	**17 13 37.5**	**+1.1**
KUR				A	A	17 13 42.0	
	comp=N,139nm,0.5s						
KUR				A	A	17 13 42.0	
	comp=N,371nm,0.5s						
YSS	**Yuzh-Sakhalins**	**4.47**	**356**	α*e*PN	**Pn**	**17 12 49.2**	**+1.2**
YSS				*e*S	**Sn**	**17 13 40.1**	**+1.2**
YSS				pmax	pmax		
	comp=Z,200nm,2.0s						
YSS				pmax	pmax		
	comp=Z,90nm,0.8s						
YSS				smax	smax		
	comp=E,400nm,3.8s						
YSS				smax	smax		
	comp=N,250nm,0.8s						
YSS				MLR	MLR		
	comp=Z,300nm,12.0s						
YSS	**Yuzh-Sakhalins**	**4.47**	**356**	*e*P	**Pn**	**17 12 50.3**	**+2.3**
YSS				AMB	AMB	17 12 57.3	
	comp=Z,60nm,0.6s						
YSS				AMB	AMB	17 12 57.5	
	comp=Z,200nm,2.0s						
YSS				*e*S	**Sn**	**17 13 40.9**	**+2.0**
YSS				A	A	17 13 45.9	
	comp=Z,200nm,4.0s						
YSS				A	A	17 13 45.9	
	comp=Z,400nm,4.0s						
YSS				A	A	17 13 46.2	
	comp=Z,100nm,0.7s						

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YSS                                  A      A       17 13 46.2
          comp=Z,200nm,0.7s
YSS   Yuzh-Sakhalins    4.47 356   Pn     Pn      17 12 49.4 +1.4
JMM   Marumori          4.96 202   Pn     Pn      17 12 53.4  -1.4
TEY   Ternei            5.39 300⇓ePN    Pn      17 13 01.3 +0.9
TEY                                  pmax   pmax
          comp=E,20nm,1.1s
TEY                                  pmax   pmax
          comp=Z,20nm,0.6s
TEY                                  pmax   pmax
          comp=N,20nm,1.1s
TEY   Ternei            5.39 300  eP     Pn      17 13 01.3 +0.9
TEY                                  AMB    AMB     17 13 01.9
          comp=N,20nm,0.7s
JSD   Sado              5.82 222   Pn     Pn      17 13 06.1  -0.2
UGL   Uglegorsk         6.63 354  ePN    Pn      17 13 16.6  -0.7
UGL                                  pmax   pmax
          comp=Z,43nm,1.2s
UGL   Uglegorsk         6.63 354  eP     Pn      17 13 19.9 +2.6
UGL                                  AMB    AMB     17 13 28.4
          comp=Z,60nm,0.8s
UGL                                 eS     Sn      17 14 32.1 +0.8
UGL                                  A      A       17 14 41.6
          comp=Z,20nm,0.7s
UGL                                  A      A       17 14 41.6
          comp=Z,30nm,0.7s
JYT   Yasato            6.66 201   Pn     Pn      17 13 14.9  -2.8
MAT   Matsushiro        7.07 214   P      Pn      17 13 22.6  -0.7
MAT                                  S      Sn      17 14 40.3  -1.8
MJAR  Matsushiro Arr    7.07 214   P      Pn      17 13 22.3  -1.0
          comp=Z,0.8nm,0.3s,baz=23,slow=16,SNR=64
MJAR  Matsushiro Arr    7.07 214   Pn     Pn      17 13 20.4  -2.9
JGF   Kuroka            8.23 215          Pn      17 13 38.8  -0.3
VLA   Vladivostok       8.32 278dePN    Pn      17 13 40.9 +0.7
VLA                                  pmax   pmax
          comp=Z,60nm,0.7s
VLA   Vladivostok       8.32 278  eP     Pn      17 13 40.9 +0.7
USA0B Ussuriysk Arra    8.32 286   PN     Pn      17 13 41.5 +1.2
USA0B Ussuriysk Arra    8.32 286   Pn     Pn      17 13 41.5 +1.2
USRK  Ussuriysk Ar.     8.32 286   P      Pn      17 13 41.2 +1.0
          baz=85,slow=15,SNR=16
USRK                                 LR     LR      17 16 34.2
          comp=Z,152nm,21.7s,baz=140,slow=35
TYV   Tymovskoe         8.38 358  ePN    Pn      17 13 42.7 +1.7
TYV                                 eS     Sn      17 15 18.2 +4.4
TYV                                  pmax   pmax
          comp=Z,18nm,0.8s
TYV                                  pmax   pmax
          comp=Z,300nm,3.1s
TYV                                  smax   smax
          comp=N,6.0nm,1.6s
TYV                                  smax   smax
          comp=E,10.0nm,1.6s
TYV                                  smax   smax
          comp=N,200nm,4.4s
TYV                                  smax   smax
          comp=E,300nm,4.4s
TYV   Tymovskoe         8.38 358  eP     Pn      17 13 42.0 +1.0
TYV                                  AMB    AMB     17 13 43.6
          comp=E,18nm,0.7s
TYV                                  AMB    AMB     17 13 46.0
          comp=E,300nm,3.0s
TYV                                 eS     Sn      17 15 13.8   0.0
TYV                                  A      A       17 15 18.0
          comp=E,200nm,4.4s
TYV                                  A      A       17 15 18.0
          comp=E,300nm,4.4s
TYV                                  A      A       17 15 20.4
          comp=E,6.0nm,0.8s
TYV                                  A      A       17 15 20.4
          comp=E,10.0nm,0.8s
INU   Inuyama           8.59 216   Pn     Pn      17 13 43.3  -0.6
JSG   Sagara            8.72 208   Pn     Pn      17 13 44.6  -1.1
MSHR  Mys Shultsa       8.87 275⇑ePN    Pn      17 13 48.5 +0.9
MSHR                                 pmax   pmax
          comp=Z,37nm,0.9s
JWT   Wachi             9.40 223   Pn     Pn      17 13 56.0 +1.1
GRNR  Gornyy            9.49 333⇑iPN    Pn      17 13 56.6 +0.6
GRNR                                 pmax   pmax
          comp=E,9.0nm,1.1s
GRNR                                 pmax   pmax
          comp=N,20nm,1.0s
GRNR                                 pmax   pmax
          comp=Z,20nm,1.0s
GRNR                                 MLR    MLR
          comp=E,1µm,12.0s
GRNR                                 MLR    MLR
          comp=Z,80nm,11.0s
GRNR  Gornyy            9.49 333  eP     Pn      17 13 56.6 +0.6
GRNR                                 AMB    AMB     17 13 57.3
          comp=Z,20nm,1.0s
JHJ   Hachijo jima 2    9.73 197   P      Pn      17 13 56.2  -3.2
          comp=Z,26nm,0.3s,baz=69,slow=22,SNR=6.9
JHJ                                  S      Sn      17 15 37.6  -9.2
          comp=Z,59nm,0.3s,baz=79,slow=23,SNR=10
KLR   Kul'dur          10.42 314   P      Pn      17 14 08.9 +0.2
          comp=Z,0.7nm,0.3s,baz=120,slow=14,SNR=20
KLR                                  LR     LR      17 18 19.4
          comp=Z,48nm,20.5s,baz=117,slow=38
KLR   Kul'dur          10.42 314⇓iPN    Pn      17 14 08.7   0.0
KLR                                  pmax   pmax
          comp=Z,15nm,0.9s
KLR   Kul'dur          10.42 314  eP     Pn      17 14 08.7   0.0
ULDB  Ullung-do Bore   10.65 246   P      Pn      17 14 15.9 +3.9
          SNR=18
JHS   Saijyo           10.83 230          Pn      17 14 14.3  -0.1
JMN   Monobe           11.39 223   Pn     Pn      17 14 20.9  -1.1
KSULJ Uljin            12.08 246   P      P       17 14 37.0  -2.3
          SNR=9.1
SKR   Severo-Kuril's   12.09  43⇓ePN    Pn      17 14 31.5 +0.5
SKR   Severo-Kuril's   12.09  43  eP     Pn      17 14 31.5 +0.5
SEHB  SEOHWA           12.13 255   P      P       17 14 38.4  -1.5
          SNR=7.7
KSTBA Taebaek          12.17 249   P      P       17 14 39.5  -1.0
          SNR=8.1
YODB  Yeongdeok        12.17 245   P      P       17 14 38.3  -2.0
          SNR=18
KSGWL Sabuk            12.21 249   P      P       17 14 39.9  -0.9
          SNR=6.6
KSIJA INJE             12.35 254   P      P       17 14 42.2  -0.1
          SNR=13
KSYOW Yeongwol         12.49 250   P      P       17 14 42.9  -1.0
          SNR=18
KSADO Andong           12.55 246   P      P       17 14 44.0  -0.5
          SNR=16
YOJB  Youngju          12.60 248   P      P       17 14 45.0  -0.1
          SNR=20
KSCHC Chuncheon        12.65 253   P      P       17 14 45.0  -0.7
          SNR=7.0
JECH  Jecheon          12.68 250   P      P       17 14 46.0   0.0
          SNR=16
KSRS  Korea Array      12.72 252   P      Pn      17 14 39.9 +0.5
          comp=Z,0.1nm,0.3s,baz=66,slow=13,SNR=19
KSRS                                 S      Sn      17 17 07.1 +7.8
          comp=Z,0.9nm,0.3s,baz=66,slow=24,SNR=18
KSRS                                 LR     LR      17 19 06.2
          comp=Z,44nm,21.1s,baz=61,slow=35
EUSB  Uiseong          12.75 246   P      P       17 14 47.0 +0.2
          SNR=20
KSEUS ULSEONG          12.76 246   P      P       17 14 47.7 +0.9
          SNR=10.0
KSAR  Wonju Array Be   12.76 252   PN     P       17 14 43.9  -2.9
KSAR  Wonju Array Be   12.76 252   Pn     P       17 14 43.9  -2.9
YOCB  Yeongcheon       12.79 244   P      P       17 14 47.2   0.0
          SNR=9.6
KSYOC YEONGCHEON       12.79 244   P      P       17 14 46.7  -0.5
          SNR=12
KSUSN Ulsan            12.83 243   P      P       17 14 47.8 +0.1
          SNR=5.2
KSDAG Daegu            12.94 243   P      P       17 14 50.0 +1.0
          SNR=5.3
KSCHJ Chungju          12.97 249   P      P       17 14 50.0 +0.8
          SNR=26
CN2   Changchun        13.01 282  eP     Pn      17 14 41.8  -1.4
CN2                                 esP    P       17 15 12.3  +23
CN2                                 eS     Sn      17 17 04.3  -1.9
CN2                                  pmax   pmax
          comp=Z,10.0nm,0.8s
CN2                                  LR     LR
          comp=Z,150nm,10.0s
CN2                                  LR     LR
          comp=Z,100nm,10.0s
CN2                                  LR     LR
          comp=Z,110nm,11.0s
KSMGY Mungyeong        13.02 248   P      P       17 14 50.7 +0.9
          SNR=11
KSSAJ Sangju           13.09 247   P      P       17 14 52.5 +2.0
          SNR=7.9
KSICN Icheon           13.16 252   P      P       17 14 53.2 +1.9
          SNR=7.4
KSBON Boeun            13.28 248   P      P       17 14 54.8 +2.1
          SNR=21
OKCB  Cheongsan-myeo   13.37 248   P      P       17 14 56.0 +2.4
          SNR=17
KSCEA Cheonan          13.49 250   P      P       17 14 57.1 +2.1
          SNR=17
TJN   Taejon           13.64 249ceP     P       17 14 56.8 +0.1
KSJEO Jeonju           13.93 247   P      P       17 15 04.1 +4.2
          SNR=5.4
PEA0B Petropavlovsk-   14.40  37⇑eP     Pn      17 14 59.8  -1.3
PEA0B Petropavlovsk-   14.40  37   Pn     Pn      17 14 59.3  -1.8
PETK  Petropavlovsk-   14.40  37   P      Pn      17 14 57.7  -3.5
          comp=Z,1.1nm,0.3s,baz=201,slow=7.7,SNR=27
PETK  Petropavlovsk-   14.40  37   P      Pn      17 14 58.7  -2.5
PETK  Petropavlovsk-   14.40  37   Pn     Pn      17 14 58.6  -2.5
PET   Petropavlovsk    14.78  39  eP     Pn      17 15 05.4  -0.6
PET                                 eS     Sn      17 17 42.2  -6.7
PET                                  pmax   pmax
          comp=Z,19nm,1.2s
PET                                  MLR    MLR
          comp=Z,100nm,19.0s
JCJ   Chichijima       15.38 183   P      Pn      17 15 12.3  -1.4
          comp=Z,7.7nm,0.3s,baz=276,slow=22,SNR=11
JCJ                                  S      Sn      17 17 49.0   -15
          comp=Z,15nm,0.3s,baz=272,slow=22,SNR=9.6
JCJ   Chichijima       15.38 183   Pn     Pn      17 15 12.9  -0.8
JCJ                                  IAmb   IAmb    17 15 24.5
          comp=Z,149nm,1.3s
ZEA   Zeya             15.44 322  eP     Pn      17 15 13.4  -0.8
ZEA                                 e               17 17 59.9
ZEA                                  pmax   pmax
          comp=E,30nm,0.9s
ZEA                                  pmax   pmax
          comp=N,30nm,0.7s
ZEA                                  pmax   pmax
          comp=Z,70nm,0.8s
ZEA   Zeya             15.44 322  eP     Pn      17 15 13.4  -0.8
ZEA                                  AMB    AMB     17 15 16.4
          comp=Z,70nm,0.8s
HIA   Hailar           17.62 301   P      P       17 15 39.9  -0.8
HIA                                  pmax   pmax
          comp=Z,59nm,0.7s
HIA   Hailar           17.62 301   P      P       17 15 39.9  -0.8
HIA                                  IAmb   IAmb    17 15 41.3
          comp=Z,59nm,0.7s
MA2   Magadan          17.74  13   P      P       17 15 40.5  -1.4
          comp=Z,1.3nm,0.3s,baz=192,slow=10,SNR=9.1
MA2   Magadan          17.74  13⇓eP     P       17 15 41.6  -0.3
MA2                                  pmax   pmax
          comp=Z,50nm,1.7s
MA2   Magadan          17.74  13  eP     P       17 15 41.6  -0.3
BJI   Beijing          20.41 272   P      P       17 16 10.8  -0.2
BJI                                  pmax   pmax
          comp=Z,12nm,0.6s
TIA   Tai'an           21.05 261   P      P       17 16 16.6  -1.3
TIA                                  pmax   pmax
          comp=Z,4.0nm,0.5s
YAK   Yakutsk          21.16 342   P      P       17 16 15.6  -3.1
          comp=Z,19nm,0.4s,baz=142,slow=1.4,SNR=32
YAK   Yakutsk          21.16 342  eP     P       17 16 15.7  -3.1
YAK                                 eS     S       17 20 06.2  -1.7
YAK                                 e*SS   sS      17 20 40.6  -0.7
YAK                                 e               17 27 23.8
YAK                                  pmax   pmax
          comp=Z,95nm,1.0s
YAK                                  pmax   pmax
          comp=N,13nm,1.1s
YAK                                  pmax   pmax
          comp=E,9.0nm,1.1s
YAK                                  smax   smax
          comp=E,303nm,3.8s
YAK                                  smax   smax
          comp=N,480nm,4.1s
YAK   Yakutsk          21.16 342   P      P       17 16 15.2  -3.6
SEY   Seymchan         21.18  12   P      P       17 16 17.5  -1.6
          comp=N,19nm,0.8s,baz=186,slow=9.0,SNR=42
NJ2   Nanjing          21.90 250  eP     P       17 16 27.9 +0.8
NJ2                                  pmax   pmax
          comp=N,7.0nm,1.0s
HHC   Hu-ho-hao-te     23.60 277  eP     P       17 16 45.1 +1.3
HHC                                  pmax   pmax
          comp=N,39nm,0.6s
HHC                                  pmax   pmax
          comp=N,72nm,5.7s
BOD   Bodaibo          23.91 320  eP     P       17 16 43.0  -3.3
BOD                                  pmax   pmax
          comp=Z,18nm,0.9s
NACB  Ninganchiao      25.54 231   P      P       17 17 00.0  -1.4
NACB                                 IAmb   IAmb    17 17 17.1
          comp=Z,24nm,1.2s
ULN   Ulaanbaatar      25.85 294c iP     P       17 17 04.3 +0.1
ULN                                  pmax   pmax
          comp=Z,19nm,1.7s
ULN   Ulaanbaatar      25.85 294  eP     P       17 17 04.3 +0.1
ULN   Ulaanbaatar      25.85 294   P      P       17 17 05.1 +0.9
WHN   Wuhan            25.92 252 ⇑P     P       17 17 04.9 +0.1
SONM  Songino Array    26.30 294   P      P       17 17 08.4 +0.2
          comp=Z,9.4nm,0.5s,baz=89,slow=8.5,SNR=64
SONM                                 LR     LR      17 27 48.2
          comp=Z,59nm,19.4s,baz=160,slow=37
SONM  Songino Array    26.30 294   P      P       17 17 08.6 +0.4
SONM                                 pmax   pmax
          comp=Z,16nm,1.0s
SONM  Songino Array    26.30 294   P      P       17 17 08.6 +0.4
XAN   Xi'an            28.03 264   P      P       17 17 23.8 +0.1
XAN                                  pP     pP      17 17 48.3 +1.4
XAN                                  pmax   pmax
          comp=Z,13nm,0.6s
TLY   Talaya           28.13 303   P      P       17 17 25.0 +0.6
          comp=Z,14nm,0.6s,baz=76,slow=2.9,SNR=13
TLY   Talaya           28.13 303c iP     P       17 17 25.1 +0.6
TLY                                  pmax   pmax
          comp=Z,71nm,1.0s
TLY   Talaya           28.13 303   P      P       17 17 24.7 +0.3
TLY                                  IAmb   IAmb    17 17 26.4
          comp=Z,18nm,0.7s
ZAK   Zakamensk        28.32 300  eP     P       17 17 25.7  -0.5
ZAK                                  pmax   pmax
          comp=Z,16nm,1.2s
ZAK   Zakamensk        28.32 300  eP     P       17 17 25.7  -0.5
BILL  Bilibino         28.42  18⇓eP     P       17 17 27.1 +0.3
BILL                                 *PP    pP      17 17 54.0 +3.9
BILL                                 *SP    sP      17 18 02.0  -0.3
BILL                                                17 18 20.0
BILL                                 pmax   pmax
          comp=Z,20nm,2.6s
BILL                                 MLR    MLR
          comp=Z,32nm,15.0s
BILL  Bilibino         28.42  18  eP     P       17 17 27.1 +0.3
MOY   Mondy            29.78 303  eP     P       17 17 40.2 +1.1
TIXI  Tiksi            30.08 351   P      P       17 17 38.5  -2.8
          comp=Z,3.1nm,0.7s,baz=140,slow=5.8,SNR=11
TIXI  Tiksi            30.08 351⇑eP     P       17 17 38.4  -2.9
TIXI                                 pmax   pmax
          comp=Z,14nm,2.2s
TIXI  Tiksi            30.08 351   P      P       17 17 39.0  -2.3
H11N2 WAKE ISLAND Hy   30.27 131   T      T       17 49 17.4
          baz=327,slow=75
H11N1 WAKE ISLAND Hy   30.28 131   T      T       17 49 24.9
          baz=327,slow=75
H11N3 WAKE ISLAND Hy   30.28 131   T      T       17 49 23.7
          baz=327,slow=75
LZH   Lanzhou          30.89 271 ⇓P     P       17 17 50.1 +0.9
LZH                                  sP     sP      17 18 31.0 +6.3
LZH                                  S      S       17 22 47.3 +1.7
LZH                                  pmax   pmax
          comp=Z,45nm,1.2s
LZH                                  pmax   pmax
          comp=Z,84nm,6.0s
H11S1 WAKE ISLAND Hy   31.15 133   T      T       17 50 31.3
          baz=328,slow=76
H11S3 WAKE ISLAND Hy   31.15 133   T      T       17 50 33.3
          baz=328,slow=76
H11S2 WAKE ISLAND Hy   31.17 133   T      T       17 50 36.0
          baz=328,slow=76
GTA   Gaotai           32.62 279 ⇑P     P       17 18 04.9 +0.6
GTA                                  pP     pP      17 18 29.3 +1.6
GTA                                  sP     sP      17 18 41.8 +1.9
GTA                                  PcP    PcP     17 20 49.9 +1.9
GTA                                  pmax   pmax
          comp=Z,22nm,0.8s
GTA                                  pmax   pmax
          comp=Z,62nm,4.7s
GTA                                  LR     LR
          comp=Z,63nm,14.9s
GTA                                  LR     LR
          comp=Z,110nm,14.2s
GTA                                  LR     LR
          comp=Z,76nm,16.4s
CD2   Chengdu          33.36 263   P      P       17 18 11.0 +0.3
CD2                                  pmax   pmax
          comp=Z,20nm,0.5s
GYA   Guiyang          33.77 254 ⇓P     P       17 18 15.8 +1.4
GYA                                  pmax   pmax
          comp=Z,7.0nm,0.6s
KRAR  Krasnoyarsk      34.69 311⇓iP     P       17 18 22.1 +0.3
KMI   Kunming          37.38 255 ⇑P     P       17 18 47.3 +1.9
KMI                                  pmax   pmax
          comp=Z,19nm,0.6s
DGZ   Jazzator, Alta   38.53 301c iP     P       17 18 56.1 +1.4
DGZ                                  pmax   pmax
          comp=Z,69nm,0.7s
NRIK  Noril'sk         38.97 332   P      P       17 18 56.7  -1.2
          comp=Z,6.2nm,0.6s,baz=105,slow=9.3,SNR=18
NRIK                                 LR     LR      17 35 39.2
          comp=Z,50nm,20.4s,baz=36,slow=37
NRIK  Noril'sk         38.97 332d iP     P       17 18 56.6  -1.3
NRIK                                 pmax   pmax
          comp=Z,11nm,0.8s
NRIK  Noril'sk         38.97 332   P      P       17 18 56.4  -1.5
NRIK                                 IAmb   IAmb    17 18 57.9
          comp=Z,26nm,1.4s
ZAA0  Zalesovo Array   39.44 308   P      P       17 19 02.8 +0.8
ZAA0                                        PcP     17 21 08.8 +1.0
ZALV  Zalesovo Beam    39.44 308   P      P       17 19 02.1 +0.2
          comp=Z,19nm,0.6s,baz=86,slow=7.7,SNR=108
ZALV                                 PcP    PcP     17 21 08.8 +1.0
          comp=Z,7.7nm,0.6s,baz=80,slow=2.9,SNR=11
ZALV                                 LR     LR      17 35 07.7
          comp=Z,8.5nm,19.2s,baz=78,slow=36
ZALV  Zalesovo Beam    39.44 308   P      P       17 19 02.6 +0.6
ZALV                                        PcP     17 21 09.0 +1.2
WMQ   Urumqi           39.84 291  eP     P       17 19 06.8 +1.2
WMQ                                  pP     pP      17 19 31.0 +1.3
WMQ                                  pmax   pmax
          comp=Z,29nm,0.7s
WMQ                                  pmax   pmax
          comp=Z,100nm,4.3s
A21K  Barrow           40.93  25   P      P       17 19 13.5  -0.5
A21K                                 IAmb   IAmb    17 19 16.1
          comp=Z,9.4nm,0.6s
K20K  Telida           41.12  38   P      P       17 19 17.7 +1.9
IMAR  Indian Mountai   41.32  34   P      P       17 19 18.6 +1.3
IMAR                                 PcP    PcP     17 21 15.8 +2.1
H21K  Melozitna Rive   41.69  34   P      P       17 19 21.9 +1.4
KDAK  Kodiak Island    42.23  46   P      P       17 19 25.9 +1.0
KDAK                                 pmax   pmax
          comp=Z,29nm,1.5s
KDAK  Kodiak Island    42.23  46   P      P       17 19 25.9 +1.0
KDAK                                 IAmb   IAmb    17 19 38.7
          comp=Z,29nm,1.5s
MK31  Makanchi Array   42.58 297c iP     P       17 19 28.0 +0.1
MK31  Makanchi Array   42.58 297   P      P       17 19 27.9   0.0
MK31                                 IAmb   IAmb    17 19 33.0
          comp=Z,19nm,0.8s
MKAR  Makanchi Array   42.58 297   P      P       17 19 28.1 +0.2
          comp=Z,15nm,0.7s,baz=82,slow=10,SNR=101
MKAR                                 PcP    PcP     17 21 19.1 +0.8
          comp=Z,1.3nm,0.4s,baz=72,slow=5.6,SNR=5.7
MKAR  Makanchi Array   42.58 297   P      P       17 19 27.8  -0.1
MAKZ  Makanchi         42.78 298   P      P       17 19 30.0 +0.5
MAKZ                                 pmax   pmax
          comp=Z,28nm,1.1s
MAKZ  Makanchi         42.78 298   P      P       17 19 30.0 +0.5
MAKZ                                 IAmb   IAmb    17 19 34.7
          comp=Z,28nm,1.1s
TOLK  Toolik Lake Re   43.03  30   P      P       17 19 32.5 +1.2
H23K  Yukon River      43.04  34   P      P       17 19 32.5 +1.2
I23K  Minto, Yukon-K   43.14  35   P      P       17 19 34.3 +2.2
NEA2  Nenana           43.29  36   P      P       17 19 34.7 +1.4
LSA   Lhasa            43.30 270  i P     P       17 19 36.0 +1.6
          SNR=5.1
GHO   Glory Hole Cre   43.59  40   P      P       17 19 37.1 +1.2
GHO                                  IAmb   IAmb    17 20 04.6
          comp=Z,22nm,1.4s
H24K  Noodor Dome      43.73  34   P      P       17 19 37.7 +0.8
COLA  College          43.80  35⇓eP     P       17 19 39.1 +1.8
COLA                                 pmax   pmax
          comp=Z,34nm,3.1s
KURK  Kurchatov        43.81 304c iP     P       17 19 37.8 +0.1
KURK                                 pmax   pmax
          comp=Z,79nm,1.3s
KURK  Kurchatov        43.81 304  eP     P       17 19 37.8 +0.1
KURK  Kurchatov        43.81 304   P      P       17 19 37.7   0.0
KNK   Knik Glacier     43.85  40   P      P       17 19 40.3 +2.4
KNK                                  IAmb   IAmb    17 19 44.5
          comp=Z,13nm,1.2s
SML   Sawmill          43.87  40   P      P       17 19 39.8 +1.8
SML                                  IAmb   IAmb    17 19 51.8
          comp=Z,9.9nm,1.1s
KURBB Kurchatov Arra   43.89 304   P      P       17 19 38.3   0.0
CHTO  Chiang Mai       44.12 252   P      P       17 19 40.7 +0.1
CHTO                                 pmax   pmax
          comp=Z,7.0nm,0.7s
CHTO  Chiang Mai       44.12 252   P      P       17 19 40.7 +0.1
CHTO                                 IAmb   IAmb    17 19 42.6
          comp=Z,6.6nm,0.7s
DHY   Denali Highway   44.16  38   P      P       17 19 42.1 +1.6
ILAR  Eielson Array    44.21  35   P      P       17 19 41.8 +1.1
          comp=Z,3.9nm,1.1s,baz=273,slow=6.9,SNR=18
ILAR  Eielson Array    44.21  35   P      P       17 19 40.4  -0.3
CMAR  Chiang Mai Arr   44.36 251   P      P       17 19 43.2 +0.7
          comp=Z,2.3nm,0.6s,baz=40,slow=7.5,SNR=25
CMAR                                 PcP    PcP     17 21 25.8 +1.1
          comp=Z,0.8nm,0.6s,baz=7.5,slow=1.5,SNR=4.3
CMAR                                 LR     LR      17 41 01.7
          comp=Z,18nm,18.1s,baz=42,slow=40
CMAR  Chiang Mai Arr   44.36 251  i P     P       17 19 43.7 +1.2
CMAR                                 pmax   pmax
          comp=Z,2.0nm,0.6s
SMPI  Sarmi            44.46 186   P      P       17 19 39.4  -3.7
          comp=Z,9.8nm,1.9s
M24K  Tolsona, Glenn   44.84  39   P      P       17 19 47.4 +1.7
M24K                                 IAmb   IAmb    17 19 57.6
          comp=Z,17nm,1.1s
BMAR  Burnt Mountain   44.94  31   P      P       17 19 48.0 +1.5
RIDG  Independent Ri   45.21  37   P      P       17 19 48.4  -0.4
SCRK  Sand Creek       45.56  36   P      P       17 19 51.4  -0.1
DOT   Dot Lake         45.57  37   P      P       17 19 51.4  -0.1
PDGK  Podgornoye       45.61 294   P      P       17 19 51.6  -0.6
L27K  Beaver Creek,    46.66  37   P      P       17 20 02.3 +2.2
BCAR  Beaver Creek A   46.68  37   P      P       17 20 01.5 +1.2
ISLE  Juniper Island   46.93  41   P      P       17 20 03.1 +0.8
ISLE                                 IAmb   IAmb    17 20 18.6
          comp=Z,37nm,1.4s
TAPN  Taplejung        47.11 270  eP     P       17 20 05.2 +0.9
          comp=Z,13nm,0.3s
MDOK  Medeo            47.32 294   P      P       17 20 06.0 +0.3
ODAN  Odare            47.62 270  eP     P       17 20 08.9 +0.7
          comp=Z,38nm,0.8s
JIRN  Jiri             48.06 271  eP     P       17 20 12.4 +0.6
          comp=Z,26nm,0.9s
BRVK  Borovoye         48.09 309c iP     P       17 20 11.5 +0.3
BRVK                                 pmax   pmax
          comp=Z,36nm,1.0s
BRVK  Borovoye         48.09 309  eP     P       17 20 11.5 +0.3
BRVK  Borovoye         48.09 309   P      P       17 20 12.2 +1.0
RAMN  Ramite           48.15 270  eP     P       17 20 12.8 +0.5
          comp=Z,43nm,0.7s
TKM2  Tokmak 2         48.40 295   P      P       17 20 14.8 +0.8
          SNR=44
KKN   Kakani           48.66 272  eP     P       17 20 16.7 +0.5
          comp=Z,40nm,0.8s
PKI   Pulchoki         48.69 272  eP     P       17 20 16.8 +0.3
PKIN  Phulchoki        48.69 272  eP     P       17 20 16.8 +0.3
          comp=Z,15nm,0.5s
DMN   Daman            48.89 272  eP     P       17 20 18.5 +0.5
          comp=Z,38nm,0.8s
KBK   Karagaybulak     48.94 295   P      P       17 20 18.7 +0.6
          SNR=31
INK   Inuvik           48.95  29   P      P       17 20 18.3 +0.8
          comp=Z,2.2nm,0.4s,baz=308,slow=6.1,SNR=23
INK   Inuvik           48.95  29   P      P       17 20 18.6 +1.1
INK                                  pmax   pmax
          comp=Z,8.0nm,1.4s
INK   Inuvik           48.95  29   P      P       17 20 18.6 +1.1
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USP    Ospenovka         48.99 296   P      P      17 20 18.8 +0.5
       SNR=9.7
GKN    Gorkha            49.02 273  eP      P      17 20 19.1 +0.2
       comp=Z,22nm,0.5s
AAK    Ala-Archa         49.25 295   P      P      17 20 20.9 +0.4
       SNR=10
AAK    Ala-Archa         49.25 295 i P      P      17 20 20.8 +0.4
       SNR=12
AAK    Ala-Archa         49.25 295c iP      P      17 20 20.6 +0.1
AAK                                  pmax   pmax
       comp=Z,46nm,1.7s
AAK    Ala-Archa         49.25 295  eP      P      17 20 20.6 +0.1
AAK    Ala-Archa         49.25 295   P      P      17 20 20.9 +0.4
AAK                                  IAmb   IAmb   17 20 21.2
       comp=Z,7.5nm,0.5s
DANN   Dangsing          49.48 274  eP      P      17 20 23.4 +0.9
       comp=Z,160nm,0.7s
KSH    Kashi             49.59 291   P      P      17 20 27.3 +4.3
KSH                                  pmax   pmax
       comp=Z,13nm,0.6s
KSH                                  pmax   pmax
       comp=Z,110nm,4.5s
EKS2   Erkin-Say         49.72 295   P      P      17 20 24.4 +0.4
       SNR=15
KOLN   Koldanda          49.91 273  eP      P      17 20 26.4 +0.7
       comp=Z,41nm,0.6s
AML    Almayashu         50.00 295   P      P      17 20 27.2 +0.8
       SNR=7.8
AML    Almayashu         50.00 295 i P      P      17 20 27.3 +0.9
       SNR=7.9
PYUN   Piuthan           50.18 274  eP      P      17 20 28.5 +0.7
       comp=Z,46nm,0.6s
WHY    Whitehorse        50.45  39   P      P      17 20 30.5 +1.3
WHY                                  IAmb   IAmb   17 20 32.0
       comp=Z,5.2nm,0.9s
KK31   Karatay Array     51.70 297 i P      P      17 20 38.5 -0.2
KK31   Karatay Array     51.70 297   P      P      17 20 38.9 +0.2
KK31                                 IAmb   IAmb   17 20 39.6
       comp=Z,15nm,0.7s
KKAR   Karatay Array     51.70 297   P      P      17 20 39.0 +0.3
KKAR                                 pmax   pmax
       comp=Z,15nm,0.7s
KKAR   Karatay Array     51.70 297   P      P      17 20 38.4 -0.4
KKAR   Karatay Array     51.70 297   P      P      17 20 39.0 +0.3
KKAR                                 IAmb   IAmb   17 20 39.6
       comp=Z,15nm,0.7s
SVE    Sverdlovsk        52.04 316⇓eP      P      17 20 41.4 +0.4
SVE                                  pmax   pmax
       comp=Z,28nm,0.7s
ARU    Arti              53.26 316c iP      P      17 20 50.0  0.0
ARU                                  *PP    pP     17 21 14.3 -1.0
ARU                                                17 21 56.3
ARU                                  S      S      17 28 15.9 +3.0
ARU                                  pmax   pmax
       comp=Z,21nm,0.7s
ARU    Arti              53.26 316  eP      P      17 20 50.0  0.0
ARU    Arti              53.26 316   P      P      17 20 49.9  0.0
CHGR   Chuyangaron       54.67 293   P      P      17 21 00.6  0.0
HOPEN  Hopen             55.09 345  eP      P      17 21 03.5 +0.5
SPA0   Spitsbergen Ar    55.45 348  eP      P      17 21 05.6  0.0
SPITS  Spitsbergen Ar    55.45 348   P      P      17 21 05.5  0.0
SPITS                                pmax   pmax
       comp=Z,48nm,1.2s
KBS    Kingsbay          55.52 350  eP      P      17 21 06.6 +0.6
AB31   Akbulak array     55.55 308   P      P      17 21 07.0 +0.3
ABKAR  Akbulak array     55.55 308   P      P      17 21 07.0 +0.4
ABKAR  Akbulak array     55.55 308   P      P      17 21 07.2 +0.5
ABKAR                                IAmb   IAmb   17 21 08.0
       comp=Z,22nm,0.7s
NOR    Nord              55.70 356 i P      P      17 21 06.5 -0.7
NOR                                  IAmb   IAmb   17 21 07.6
       comp=Z,3.6nm,0.9s
KIRV   Kirov             56.77 321c iP      P      17 21 15.1  0.0
KBL    Kabul             56.85 288   P      P      17 21 15.9 -0.5
KBL                                  pmax   pmax
       comp=Z,14nm,0.9s
PRGR   Permogore         56.98 326  eP      P      17 21 15.6 -1.0
PRGR                                 pmax   pmax
       comp=Z,6.0nm,0.6s
RES    Resolute Bay      56.99  16   P      P      17 21 16.7 +0.3
RES                                  pmax   pmax
       comp=Z,11nm,0.6s
RES    Resolute Bay      56.99  16   P      P      17 21 16.7 +0.3
RES                                  IAmb   IAmb   17 21 17.3
       comp=Z,11nm,0.6s
BJO1   Bjornoya          57.55 345  eP      P      17 21 20.7 +0.3
YKA    Yellowknife Ar    58.45  32   P      P      17 21 27.2 +0.4
       comp=Z,0.6nm,0.4s,baz=316,slow=5.2,SNR=4.4
KEV    Kevo              58.84 339   P      P      17 21 29.5  0.0
KEV                                  pmax   pmax
       comp=Z,63nm,1.5s
KEV    Kevo              58.84 339   P      P      17 21 29.4  0.0
HAMF   Hammerfest        59.13 340  eP      P      17 21 31.3 -0.1
ARA0   ARCESS Array S    59.39 339  eP      P      17 21 33.7 +0.4
ARCES  ARCESS Array B    59.39 339   P      P      17 21 33.4 +0.1
       comp=Z,1.5nm,0.4s,baz=45,slow=7.9,SNR=19
ARCES                                LR     LR     17 53 33.4
       comp=Z,26nm,19.6s,baz=35,slow=42
ARCES  ARCESS Array B    59.39 339   P      P      17 21 33.3 +0.1
ARCES                                pmax   pmax
       comp=Z,11nm,1.3s
ARCES  ARCESS Array B    59.39 339   P      P      17 21 33.3  0.0
ARCES                                IAmb   IAmb   17 21 43.5
       comp=Z,11nm,1.3s
TULEG  Thule             59.52   8   P      P      17 21 33.4 -0.7
KLMR   Klimovskoe        59.91 327  eP      P      17 21 35.5 -1.4
KLMR                                 pmax   pmax
       comp=Z,16nm,1.1s
KLMR   Klimovskoe        59.91 327  eP      P      17 21 35.6 -1.4
KLMR                                 AMP           17 21 39.3
       comp=Z,16nm,1.1s
NEEM   North Greenlan    60.01   4 i P      P      17 21 37.7 -0.1
NEEM                                 IAmb   IAmb   17 21 38.2
       comp=Z,12nm,0.5s
KTK1   Kautokeino        60.34 339  eP      P      17 21 40.0 +0.2
DAG    Danmarks Havn     60.46 355   P      P      17 21 40.3 -0.1
DAG                                  pmax   pmax
       comp=Z,19nm,0.8s
DAG    Danmarks Havn     60.46 355 i P      P      17 21 40.3 -0.1
DAG                                  IAmb   IAmb   17 21 42.4
       comp=Z,13nm,0.9s
JETT   Jettan, Norway    60.69 340  eP      P      17 21 42.8 +0.6
TRO    Tromso            61.01 341  eP      P      17 21 44.4 +0.1
GEYT   Alibeck           62.45 297   P      P      17 21 55.0 +0.4
       comp=Z,13nm,0.5s,baz=36,slow=5.4,SNR=20
GYA0B  ALIBECK ARRAY     62.45 297   P      P      17 21 54.3 -0.3
WB0    Warramunga Arr    62.47 189   P      P      17 21 53.6 -1.0
WB0                                  IAmb   IAmb   17 22 21.2
       comp=Z,7.2nm,0.8s
WRAB   Tennant Creek     62.64 189⇑eP      P      17 21 56.2 +0.4
WRAB                                 pmax   pmax
       comp=Z,12nm,1.8s
WR0    Warramunga Arr    62.64 189   P      P      17 21 54.8 -1.0
WR0                                  IAmb   IAmb   17 22 21.9
       comp=Z,7.5nm,0.8s
WRA    Warramunga Arr    62.65 189   P      P      17 21 56.3 +0.4
       comp=Z,1.5nm,0.5s,baz=7.6,slow=6.7,SNR=11
WRA    Warramunga Arr    62.65 189   P      P      17 21 55.8  0.0
DBG    Daneborg          62.96 355  eP      P      17 21 57.1 -0.2
DBG                                  IAmb   IAmb   17 21 59.3
       comp=Z,4.3nm,0.8s
STEI   Steigen           63.17 340  eP      P      17 21 58.8 +0.1
LOF    Lofoten           63.43 341  eP      P      17 22 00.6 +0.1
FAUS   Fauske            63.58 340  eP      P      17 22 01.6 +0.1
VRH    Novokhopyorsk     64.48 317  eP      P      17 22 06.2 -1.4
VRH                                  pmax   pmax
       comp=Z,10.0nm,1.0s
OBN    Obninsk           64.57 322⇓eP      P      17 22 06.2 -1.9
OBN                                                17 22 41.0
OBN                                  *SP    sP     17 22 49.0 +3.1
OBN                                                17 24 30.0
OBN                                  pmax   pmax
       comp=Z,24nm,1.0s
FIA1   FINESS Array S    64.63 332   P      P      17 22 08.5 +0.1
FINES  FINESS Array B    64.64 332   P      P      17 22 08.2 -0.2
       comp=Z,12nm,0.5s,baz=50,slow=7.2,SNR=163
MOR8   Moi Rana          64.72 339  eP      P      17 22 07.8 -1.2
KONS   Konsvik           64.81 340  eP      P      17 22 09.1 -0.4
STOK   Stokkvaagen       64.96 340  eP      P      17 22 10.1 -0.4
LPSR   Galich'ya Gora    65.02 319  eP      P      17 22 10.1 -0.9
LPSR                                 pmax   pmax
       comp=Z,20nm,1.1s
SUMG   Summit            65.23   1   P      P      17 22 13.7 +1.1
SUMG                                 pmax   pmax
       comp=Z,18nm,0.9s
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SUMG   Summit            65.23   1 i P      P      17 22 13.6 +1.0
SUMG                                 IAmb   IAmb   17 22 14.2
       comp=Z,18nm,0.9s
SUMG   Summit            65.23   1   P      P      17 22 13.7 +1.1
SUMG                                 IAmb   IAmb   17 22 14.4
       comp=Z,18nm,0.9s
VSR    Storozhevoye      65.75 318  eP      P      17 22 15.3 -0.5
VSR                                  pmax   pmax
       comp=Z,20nm,1.0s
ASAR   Alice Springs     66.38 189   P      P      17 22 19.9 -0.2
       comp=Z,0.7nm,0.7s,baz=5.2,slow=6.7,SNR=3.7
VSU    Vasula            66.45 329  eP      P      17 22 20.5 +0.3
NSS    Namsos            66.66 339  eP      P      17 22 22.0 +0.6
MTSE   Matsula           67.36 330  eP      P      17 22 26.6 +0.7
SEKA   Sheki             67.44 306   P      P      17 22 26.7 -0.1
GOF    Gofitskoye        67.50 311⇑eP      P      17 22 27.9 +0.8
GOF                                  pmax   pmax
       comp=Z,48nm,0.6s
ZKTA   Zakatala          67.52 306   P      P      17 22 27.3  0.0
AAL    Aland             67.63 333  eP      P      17 22 27.3 -0.2
MNGR   Mingechevir, A    67.77 305   P      P      17 22 29.1 +0.3
LKRN   Lenkeran, Azer    67.98 303   P      P      17 22 30.5 +0.3
MSVF   Nonsavu           68.00 144   LR     LR     17 50 14.8
       comp=Z,35nm,19.0s,baz=188,slow=34
TBLU   Trondheim         68.14 339  eP      P      17 22 29.2 -1.5
NCK    Nalchik           68.16 309⇑iP      P      17 22 33.0 +1.8
NCK                                  pmax   pmax
       comp=Z,6.0nm,0.3s
GANJ   Ganja             68.31 306   P      P      17 22 32.9 +0.7
KIV    Kislovodsk        68.39 310  ⇓P      P      17 22 34.1 +1.4
KIV    Kislovodsk        68.39 310 i P      P      17 22 33.9 +1.2
       SNR=13
KIV    Kislovodsk        68.39 310  eP      P      17 22 34.1 +1.4
KIV                                  pmax   pmax
       comp=Z,37nm,1.0s
KIV    Kislovodsk        68.39 310  eP      P      17 22 34.1 +1.4
KIV    Kislovodsk        68.39 310   P      P      17 22 33.8 +1.0
KBZ    Khabaz            68.41 310   P      P      17 22 33.6 +0.9
       comp=Z,14nm,0.8s,baz=77,slow=3.3,SNR=31
KBZ    Khabaz            68.41 310ceP      P      17 22 34.1 +1.4
ZEI    Tsey              68.42 309  eP      P      17 22 31.8 -1.3
ZEI                                  pmax   pmax
       comp=Z,4.0nm,0.9s
UPP    Uppsala           68.65 334  eP      P      17 22 34.1 +0.2
ISAL   Salakas           68.72 327  eP      P      17 22 35.0 +0.6
ICESG  Greenland Ices    68.72   1 i P      P      17 22 35.6 +0.9
ICESG                                IAmb   IAmb   17 22 36.3
       comp=Z,20nm,1.0s
MNK    Minsk             68.75 326 i P      P      17 22 32.7 -2.0
MNK                                i *PP    pP     17 23 00.1 -1.2
MNK                                i               17 25 05.6
MNK                                i PPP    PPP    17 26 46.5
MNK                                i S      S      17 31 27.7 -1.7
MNK                                i *SS    SKiKP  17 32 15.9 -0.1
MNK                                i               17 32 22.3
MNK                                i SS     SS     17 35 55.6 +0.5
MNK                                  pmax   pmax
       comp=Z,35nm,0.9s
MNK                                  pmax   pmax
       comp=E,4.0nm,1.2s
MNK                                  pmax   pmax
       comp=N,21nm,1.2s
MNK                                  MLR    MLR
       comp=N,102nm,14.0s
MNK                                  MLR    MLR
       comp=E,7.0nm,10.0s
MNK                                  MLR    MLR
       comp=Z,145nm,15.0s
MNK    Minsk             68.75 326 i P      P      17 22 32.8 -1.9
       comp=E,4.0nm,1.2s
MNK                                i P      P      17 22 32.8 -1.9
       comp=N,21nm,1.2s
MNK                                i P      P      17 22 32.8 -1.9
       comp=Z,35nm,0.9s,baz=46
MNK                                i pP     pP     17 23 00.2 -1.1
MNK                                i PP     PP     17 25 05.6 -1.5
MNK                                i PPP    PPP    17 26 46.5
MNK                                i S      S      17 31 27.8 -1.7
MNK                                i sS     SKiKP  17 32 16.0  0.0
MNK                                i SS     SS     17 35 55.6 +0.5
MNK                                i SSS    SSS    17 39 14.7
MNK                                i LRM    MLR    17 55 18.2
       comp=N,102nm,14.4s
MNK                                i LRM    MLR    17 55 19.9
       comp=E,7.0nm,9.8s
MNK                                i LRM    MLR    17 55 23.9
       comp=Z,145nm,15.3s
NEY    Neytrino          68.81 310⇑eP      P      17 22 37.0 +1.5
NEY                                  pmax   pmax
       comp=Z,2.0nm,0.8s
NACGM  Naroch            68.92 326 i P      P      17 22 36.4 +0.6
DOMB   Dombas            69.45 339  eP      P      17 22 39.1 +0.1
NC405  NORSAR Array S    69.48 337   P      P      17 22 38.3 -0.8
NC405                                IAmb   IAmb   17 22 52.9
       comp=Z,25nm,1.3s
NC204  NORSAR Array S    69.62 338   P      P      17 22 40.3 +0.3
NC204                                IAmb   IAmb   17 22 40.8
       comp=Z,19nm,0.7s
PABE   Paberze           69.62 328  eP      P      17 22 40.6 +0.6
PABE   Paberze           69.62 328   P      P      17 22 40.2 +0.2
NB201  NORSAR Array S    69.65 337   P      P      17 22 40.2 +0.1
NB2    NORSAR Subarra    69.68 337   P      P      17 22 40.5 +0.1
       comp=Z,4.0nm,0.6s,baz=35,slow=6.5
NB2    NORSAR Subarra    69.68 337   P      P      17 22 40.5 +0.1
       baz=35,slow=6.5
NOA    NORSAR Array B    69.68 337   P      P      17 22 40.3 -0.1
       comp=Z,6.3nm,0.6s,baz=36,slow=6.1,SNR=34
NOA                                  LR     LR     17 58 38.7
       comp=Z,17nm,19.0s,baz=10.0,slow=40
NAX    Nakhchivan        69.72 305   P      P      17 22 41.3 +0.3
NBO00  NORSAR Array S    69.81 337   P      P      17 22 40.1 -1.0
NBO00                                IAmb   IAmb   17 22 41.0
       comp=Z,29nm,1.0s
NC602  NORSAR Array S    69.83 337  eP      P      17 22 40.5 -0.8
NORES  NORESS Array B    69.83 337   P      P      17 22 44.5 +3.2
OSL    Oslo              70.72 337  eP      P      17 22 47.4 +0.7
ANN    Anapa             70.74 313  eP      P      17 22 44.9 -2.1
ANN                                 e*PP    pP     17 23 12.9 -0.9
ANN                                 eS      S      17 31 50.8 -2.2
ANN                                 e*SS    SKSac  17 32 39.0 -0.4
ANN                                  pmax   pmax
       comp=Z,52nm,0.7s
BANOM  Banah             70.79 288   P      P      17 22 48.3 +0.5
SKAR   Skarslia          70.79 338  eP      P      17 22 48.0 +0.8
AKASG  Malin Array Be    70.82 322   P      P      17 22 47.3 -0.1
       comp=Z,8.7nm,0.6s,baz=42,slow=6.2,SNR=42
AKASG  Malin Array Be    70.82 322 i P      P      17 22 47.2 -0.2
AKASG                                pmax   pmax
       comp=Z,4.0nm,0.4s
AKBB   Malin Array Si    70.82 322ceP      P      17 22 47.5 +0.1
AKBB   Malin Array Si    70.82 322   P      P      17 22 47.2 -0.2
AKBB                                 IAmb   IAmb   17 22 48.2
       comp=Z,13nm,0.8s
SHME   Shamm             70.82 288   P      P      17 22 48.0 +0.1
DY2G   Dye2              71.13   4 i P      P      17 22 50.0 +0.6
DY2G                                 IAmb   IAmb   17 22 50.5
       comp=Z,14nm,0.8s
MDH    Madha             71.18 287   P      P      17 22 50.3 +0.3
MSFE   Esma-Masafi       71.24 287   P      P      17 22 51.0 +0.6
KONO   Kongsberg         71.28 337  eP      P      17 22 50.0 -0.1
UOSS   Minazif           71.47 287   P      P      17 22 51.9 +0.1
UOSS   Minazif           71.47 287   P      P      17 22 52.4 +0.6
UOSS                                 IAmb   IAmb   17 22 52.8
       comp=Z,19nm,0.6s
HATD   Hatta, Dubai      71.59 287 i P      P      17 22 53.3 +0.8
       SNR=8.0
ASHO   Ashiyiah          71.73 287   P      P      17 22 53.8 +0.4
SOHO   SOHO              71.74 286 i P      P      17 22 53.8 +0.4
       SNR=7.8
ODD1   Odda              71.89 339  eP      P      17 22 54.0 +0.2
FAQ    Al Faqa, Dubai    72.02 287   P      P      17 22 55.3 +0.2
ASUD   Al Ashush, Dub    72.28 287   P      P      17 22 57.3 +0.6
ALNE   Al Ain            72.34 287   P      P      17 22 57.3 +0.3
PDAR   Pinedale Array    72.93  47   P      P      17 23 02.0 +1.4
       comp=Z,0.4nm,0.4s,baz=236,slow=1.6,SNR=4.2
SORM   Soroca            73.04 321  ⇑P      P      17 23 00.8 +0.1
HORU   Horodok           73.15 322   P      P      17 23 01.2 -0.2
MILM   Milestii Mici     73.68 319  ⇑P      P      17 23 04.9 +0.3
LVV    L'vov             73.77 324  eP      P      17 23 06.0 +1.0
ULM    Lac du Bonnet     74.23  35   P      P      17 23 08.1 +0.4
       comp=Z,2.0nm,0.5s,baz=320,slow=6.2,SNR=4.2
MORS   Morshin           74.34 323   P      P      17 23 08.9 +0.6
KSV    Kosov             74.42 322   P      P      17 23 08.1 -0.7
PRAR   RASCA             74.59 321   P      P      17 23 09.7 -0.1
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GIRR   Girov             74.76 321   P      P      17 23 11.5 +0.7
BUR08  Bucovina Ar. S    74.86 322   P      P      17 23 12.2 +0.8
BUR08                                IAmb   IAmb   17 23 12.9
       comp=Z,9.3nm,0.7s
BURAR  Bucovina Array    74.87 322  ⇑P      P      17 23 12.3 +0.7
BURAR  Bucovina Array    74.87 322   P      P      17 23 12.3 +0.7
BURAR                                pmax   pmax
       comp=Z,12nm,0.7s
BURAR  Bucovina Array    74.87 322   P      P      17 23 12.3 +0.7
BURAR                                IAmb   IAmb   17 23 13.3
       comp=Z,12nm,0.7s
TLCR                     74.92 318   P      P      17 23 12.3 +0.5
TESR   Tescani           75.01 320  ⇑P      P      17 23 12.9 +0.6
KOLS   Kolonicke sedl    75.20 324  eP      P      17 23 13.8 +0.5
KOLS                                 pmax   pmax
       comp=Z,11nm,1.0s
KOLS   Kolonicke sedl    75.20 324  eP      P      17 23 13.8 +0.5
CFR    Carcaliu          75.26 318  ⇓P      P      17 23 14.4 +0.7
TPGR   Topolog           75.35 318  ⇓P      P      17 23 15.1 +0.9
VRI    Vrincioaia        75.44 320  ⇑P      P      17 23 15.7 +0.9
VRI    Vrincioaia        75.44 320   P      P      17 23 16.0 +1.2
VRI                                  pmax   pmax
       comp=Z,9.0nm,1.8s
PLOR   Plostina          75.49 320  ⇑P      P      17 23 14.8 -0.2
TRSU   Trosnyk           75.53 323   P      P      17 23 16.3 +1.1
TRPA   Tarpa             75.69 323  ⇑P      P      17 23 17.3 +1.2
COVR   Voineasa-Covas    75.71 320  ⇑P      P      17 23 16.9 +0.6
HARR   Harsova           75.71 318  ⇑P      P      17 23 16.9 +0.7
NEHR   Nehoiu            75.97 320  ⇓P      P      17 23 18.8 +1.0
DOPR   Dopca             76.00 321  ⇑P      P      17 23 19.4 +1.5
ISR    Istrita           76.08 319  ⇑P      P      17 23 19.7 +1.3
MLR    Muntele Rosu      76.09 320  ⇑P      P      17 23 19.8 +1.1
LANS   Liptovska Anna    76.22 326  eP      P      17 23 20.6 +1.4
LANS                                 pmax   pmax
       comp=Z,3.0nm,0.8s
LANS   Liptovska Anna    76.22 326  eP      P      17 23 20.6 +1.4
MESR   Meseseni          76.24 323  ⇑P      P      17 23 20.7 +1.4
BR131  Keskin Array S    76.25 312   P      P      17 23 20.2 +0.6
BR131                                pmax   pmax
       comp=Z,6.0nm,0.8s
BR131  Keskin Array S    76.25 312   P      P      17 23 20.2 +0.6
BR131                                IAmb   IAmb   17 23 21.0
       comp=Z,6.2nm,0.8s
BRTR   Keskin Array B    76.25 312   P      P      17 23 20.4 +0.7
       comp=Z,3.0nm,0.7s,baz=85,slow=3.8,SNR=18
BRTR                                 PP     PP     17 26 12.2 +0.6
       comp=Z,1.9nm,1.0s,baz=69,slow=8.0,SNR=4.2
BRTR   Keskin Array B    76.25 312   P      P      17 23 19.7 +0.1
OSTC   Ostas             76.43 328  eP      P      17 23 21.0 +0.7
CHVC   Chvalec           76.46 328  eP      P      17 23 21.0 +0.5
MORC   Moravsky Berou    76.52 327  ⇑P      P      17 23 22.1 +1.2
MORC   Moravsky Berou    76.52 327  eP      P      17 23 21.7 +0.9
UPC    Upice             76.54 328  eP      P      17 23 21.9 +1.0
UPC    Upice             76.54 328  eP      P      17 23 21.9 +1.0
DPC    Dobruska-Polom    76.55 328  eP      P      17 23 21.9 +0.9
DPC    Dobruska-Polom    76.55 328  eP      P      17 23 21.9 +0.9
VOIR                     76.56 320  ⇑P      P      17 23 21.9 +0.7
ANTO   Ankara            76.61 312   P      P      17 23 24.6 +3.0
ARR    Arges             76.80 320  ⇑P      P      17 23 24.2 +1.6
PSZ    Piszkesteto       77.00 325  ⇑P      P      17 23 24.7 +1.1
BRG    Berggiesshubel    77.04 330  eP      P      17 23 24.1 +0.4
BRG                                  Amp           17 23 25.2
       comp=Z,5.2nm,0.9s
PVCC   Panska Ves        77.08 329  eP      P      17 23 25.0 +1.1
PVCC   Panska Ves        77.08 329  eP      P      17 23 25.0 +1.1
JAVC   Velka Javorina    77.19 327  eP      P      17 23 26.6 +2.0
DEV    Deva              77.22 322   P      P      17 23 25.5 +0.7
RAZG   Razgrad           77.23 318   P      P      17 23 25.6 +0.7
VRAC   Vranov            77.27 327  ⇑P      P      17 23 26.2 +1.2
VRAC   Vranov            77.27 327  eP      P      17 23 26.0 +1.0
COPA   Copaceanca        77.44 319   P      P      17 23 26.9 +0.8
PRU    Pruhonice         77.53 329  eP      P      17 23 26.9 +0.5
PRU    Pruhonice         77.53 329  eP      P      17 23 26.9 +0.5
KRUC   Moravsky          77.54 327  eP      P      17 23 27.4 +0.9
GZR    Gura Zlata        77.65 322  ⇑P      P      17 23 27.8 +0.5
MODS   Modra-Piesok      77.73 326  eP      P      17 23 27.1 -0.5
MODS                                 pmax   pmax
       comp=Z,14nm,1.3s
MODS   Modra-Piesok      77.73 326  eP      P      17 23 27.1 -0.5
SRO    Srobarova         77.75 326  eP      P      17 23 29.3 +1.7
SRO    Srobarova         77.75 326  eP      P      17 23 29.3 +1.7
EYMN   Ely               77.84  34   P      P      17 23 28.6 +0.4
EYMN                                 IAmb   IAmb   17 23 29.6
       comp=Z,8.1nm,0.8s
VLAD   Vladila           77.94 320   P      P      17 23 29.5 +0.8
BZS    Buzias            78.01 322  ⇑P      P      17 23 29.5 +0.4
HERR   Herculane         78.20 321  ⇑P      P      17 23 30.5 +0.2
PLVB   Pleven            78.29 319  ⇓P      P      17 23 31.5 +0.8
EKA    Eskdalemuir Ar    78.43 341   P      P      17 23 31.7 +0.4
CKRC   Cesky Krumlov     78.56 328  eP      P      17 23 32.5 +0.3
KHC    Kasperske Hory    78.59 329  eP      P      17 23 33.0 +0.6
KHC                                 e              17 23 36.5
KHC                                 e              17 24 04.0
KHC    Kasperske Hory    78.59 329  eP      P      17 23 33.0 +0.6
KHC                                 ex      x      17 23 36.5
KHC                                 epP     pP     17 24 04.0 +4.6
MDVR   Moldovita         78.60 322  ⇑P      P      17 23 32.8 +0.3
CONA   Conrad Observa    78.66 327  eP      P      17 23 33.9 +1.1
       comp=Z,3.4nm,0.6s
GEC2   GERESS Array S    78.77 329   P      P      17 23 33.8 +0.3
GERES  GERESS Array B    78.77 329   P      P      17 23 33.8 +0.3
       comp=Z,2.4nm,0.5s,baz=37,slow=7.4,SNR=11
MORH   Mrgy, Hungar      78.86 324  ⇓P      P      17 23 33.9 +0.1
GRF    Grafenberg Arr    79.01 331  eP      P      17 23 35.6 +1.0
       comp=Z,14nm,1.0s,baz=33,slow=4.6
ARSA   Arzberg           79.34 327  eP      P      17 23 37.3 +0.8
       comp=Z,1.3nm,0.5s
MOA    Molln             79.36 328 i P      P      17 23 37.6 +1.0
       comp=Z,3.0nm,0.7s
BOVS   Bovan             79.48 321  ⇑P      P      17 23 37.0 -0.3
VTS    Vitosha           79.54 319  ⇑P      P      17 23 39.0 +1.2
SCHQ   Schefferville     79.73  17   P      P      17 23 38.8 +0.3
       comp=Z,4.0nm,0.7s,baz=310,slow=7.9,SNR=5.9
RAYN   Ar Rayn           79.83 292 i P      P      17 23 40.0 +0.4
       SNR=13
RAYN   Ar Rayn           79.83 292   P      P      17 23 39.9 +0.4
RAYN                                 pmax   pmax
       comp=Z,9.0nm,0.8s
RAYN   Ar Rayn           79.83 292   P      P      17 23 39.9 +0.3
RAYN                                 IAmb   IAmb   17 23 40.9
       comp=Z,8.7nm,0.8s
GROS   Grobnik           79.99 326 i P      P      17 23 40.4 +0.3
       comp=Z,12nm,0.6s
SOKA   Soboth            80.00 327  eP      P      17 23 40.6 +0.4
       comp=Z,8.2nm,0.7s,SNR=6.1
MEM    Membach           80.03 334  dP      P      17 23 39.5 -0.6
       comp=Z,8.6nm,0.9s
ANMO   Albuquerque       80.09  51⇑eP      P      17 23 43.2 +2.2
ANMO                                 pmax   pmax
       comp=Z,8.0nm,2.5s
OBKA   Obir              80.34 327  eP      P      17 23 42.3 +0.3
       comp=Z,5.1nm,0.7s
KBA    Koelnbreinsper    80.35 328  eP      P      17 23 43.1 +0.9
       comp=Z,11nm,0.6s
MYKA   Terra Mystica     80.60 327 i P      P      17 23 43.3 -0.1
       comp=Z,2.8nm,0.6s
BMRD   Maredsous         80.69 334  dP      P      17 23 43.7  0.0
       comp=Z,7.5nm,0.8s
CRNS   Crni Vrh          80.80 327 i P      P      17 23 44.0 -0.4
WATA   Walderalm         80.83 329  eP      P      17 23 45.1 +0.5
       comp=Z,4.8nm,0.6s,SNR=5.5
WTTA   Wattenberg        80.86 329 i P      P      17 23 45.6 +0.7
       comp=Z,9.9nm,0.7s,SNR=5.6
ZOU    Zoufplan          80.93 328   P      P      17 23 45.2 -0.1
MOTA   Moosalm           81.00 329  eP      P      17 23 46.1 +0.5
       comp=Z,8.1nm,0.6s,SNR=6.2
RETA   Reutte            81.01 330 i P      P      17 23 46.1 +0.6
       comp=Z,9.1nm,0.9s,SNR=5.2
CEY    Cerknica          81.01 326 i P      P      17 23 45.3 -0.2
SQTA   Sankt Quirin      81.06 329  eP      P      17 23 46.4 +0.6
       comp=Z,5.0nm,0.6s
BAIF   Baives            81.08 335  eP      P      17 23 45.8 +0.1
BAIF                                 pmax   pmax
       comp=Z,104nm,2.1s
STAL   STALIGIAL         81.28 328   P      P      17 23 46.2 -0.6
STAL                                 IAmb   IAmb   17 23 48.8
       comp=Z,8.9nm,0.7s
FETA   Feichten          81.41 329 i P      P      17 23 48.3 +0.6
       comp=Z,7.5nm,0.9s
CDF    Champ du Feu      81.49 332  eP      P      17 23 44.4 -3.6
CDF                                  pmax   pmax
       comp=Z,8.0nm,0.9s
DAVA   Damuels           81.51 330 i P      P      17 23 48.7 +0.4
       comp=Z,5.3nm,0.7s
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PDG	Podgorica	81.55	322	⇑P	P	17 23 48.7	+0.4
PDG	Podgorica	81.55	322	P	P	17 23 48.8	+0.4
PDG				IAmb	IAmb	17 23 49.4	
	comp=Z,19nm,0.7s						
KIJV	Kijevo	81.58	324	*i* P	P	17 23 48.6	+0.1
RABC	Rab	81.67	326	*i* P	P	17 23 48.3	-0.5
RICI	Ricice	81.67	324	*i* P	P	17 23 48.5	-0.4
SMRN	Sveta Marina	81.69	326	*i* P	P	17 23 48.4	-0.6
CTI	Castel Tesino	81.87	328	P	P	17 23 49.7	-0.4
CTI				pmax	pmax		
	comp=Z,7.0nm,0.7s						
CTI	Castel Tesino	81.87	328	P	P	17 23 49.7	-0.4
CTI				IAmb	IAmb	17 23 50.3	
	comp=Z,7.5nm,0.7s						
MAKA	Makarska	81.88	323	*i* P	P	17 23 49.2	-0.8
HINF	Hinteralfeld	82.14	332	*e*P	P	17 23 51.4	0.0
HINF				pmax	pmax		
	comp=Z,39nm,2.1s						
HAU	Haudompre	82.16	332	*e*P	P	17 23 51.0	-0.5
HAU				pmax	pmax		
	comp=Z,35nm,1.9s						
DUGI	Dugi Otok	82.16	325	*i* P	P	17 23 50.8	-0.8
ZIRJ	Zirje	82.19	324	*i* P	P	17 23 51.0	-0.6
TUE	Stuetta	82.39	330	P	P	17 23 53.0	+0.1
TUE				IAmb	IAmb	17 23 56.9	
	comp=Z,8.6nm,0.8s						
SENIN	Lac Senin/Sane	83.23	331	P	P	17 23 57.1	-0.2
SENIN				IAmb	IAmb	17 23 58.4	
	comp=Z,6.0nm,0.8s						
LOR	Lormes	83.63	333	*e*P	P	17 23 58.7	-0.4
LOR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
FLN	La Foliniere	83.66	337	*e*P	P	17 23 58.6	-0.6
FLN				pmax	pmax		
	comp=Z,65nm,1.5s						
LDF	La Druitiere	83.71	336	*e*P	P	17 23 58.8	-0.6
LDF				pmax	pmax		
	comp=Z,46nm,1.6s						
NRCA	Norcia	83.93	326	P	P	17 24 01.5	+0.7
NRCA				IAmb	IAmb	17 24 02.4	
	comp=Z,18nm,0.8s						
SSF	Saint Saulge	83.93	334	*e*P	P	17 24 00.3	-0.3
SSF				pmax	pmax		
	comp=Z,32nm,1.4s						
GRR	Gorron	84.11	337	*e*P	P	17 24 01.9	+0.5
GRR				pmax	pmax		
	comp=Z,19nm,1.1s						
LPL	La Plagne	84.16	331	*e*P	P	17 24 02.6	+0.5
LPL				pmax	pmax		
	comp=Z,5.0nm,0.6s						
LPG	La Plagne	84.17	331	*e*P	P	17 24 02.5	+0.3
LPG				pmax	pmax		
	comp=Z,6.0nm,0.6s						
SMF	Signal de Mont	84.19	333	*e*P	P	17 24 01.7	-0.2
SMF				pmax	pmax		
	comp=Z,15nm,0.9s						
AVF	Avril sur Loir	84.22	334	*e*P	P	17 24 02.0	0.0
AVF				pmax	pmax		
	comp=Z,13nm,0.7s						
ITM	Ithomi	84.34	317	P	P	17 24 02.8	-0.1
MBDF	Montbardon	84.82	330	*e*P	P	17 24 05.5	+0.2
MBDF				pmax	pmax		
	comp=Z,4.0nm,0.5s						
ORIF	Oris-en-Rattie	84.98	331	*e*P	P	17 24 06.1	+0.1
ORIF				pmax	pmax		
	comp=Z,11nm,1.1s						
TCF	Toulx Ste Croi	85.04	334	*e*P	P	17 24 06.4	+0.2
TCF				pmax	pmax		
	comp=Z,14nm,1.2s						
VIVF	Saint-Julien-l	85.46	332	*e*P	P	17 24 08.5	+0.1
VIVF				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TXAR	Lajitas Array	85.76	54	P	P	17 24 12.0	+1.8
	comp=Z,1.4nm,0.6s,baz=290,slow=3.5,SNR=22						
FRF	La Foret Royal	85.87	330	*e*P	P	17 24 09.8	-0.6
FRF				pmax	pmax		
	comp=Z,15nm,1.2s						
LMR	La Mourre	86.12	330	*e*P	P	17 24 11.1	-0.5
LMR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
RJF	Les Rejaudoux	86.13	334	*e*P	P	17 24 12.0	+0.4
RJF				pmax	pmax		
	comp=Z,11nm,1.0s						
CAF	Calviac	86.29	333	*e*P	P	17 24 13.2	+0.8
CAF				pmax	pmax		
	comp=Z,15nm,0.8s						
LFF	La Frestale	86.71	334	*e*P	P	17 24 15.2	+0.8
LFF				pmax	pmax		
	comp=Z,21nm,0.9s						
MTLF	Montolieu	87.64	333	*e*P	P	17 24 19.6	+0.6
MTLF				pmax	pmax		
	comp=Z,33nm,1.7s						
ETSF	Etsaut	88.95	334	*e*P	P	17 24 26.5	+1.2
ETSF				pmax	pmax		
	comp=Z,8.0nm,0.6s						
SJPF	Ste Jean	88.97	335	*e*P	P	17 24 26.6	+1.3
SJPF				pmax	pmax		
	comp=Z,32nm,1.8s						
PBRG	Braganca	91.81	338	*e*P	P	17 24 38.5	0.0
PGAV	Gavieira, Arco	92.07	339	*e*P	P	17 24 41.7	+1.9
POLO	Lamas de Olo	92.50	339	*e*P	P	17 24 41.8	0.0
ESDC	Sonseca Array	92.95	335	P	P	17 24 44.2	+0.3
	comp=Z,1.5nm,0.8s,baz=29,slow=3.6,SNR=9.9						
TORD	Torodi Ar. Bea	114.30	318	PKiKP	PKPdf	17 30 10.4	+0.3
	comp=Z,0.4nm,0.6s,baz=98,slow=0.3,SNR=6.0						
TORD				PP	PP	17 31 02.1	-4.2
	comp=Z,0.9nm,0.8s,baz=19,slow=8.7,SNR=5.9						
DBIC	Dimbokro	123.06	321	PKP	PKiKP	17 30 27.3	+0.1
	comp=Z,2.6nm,0.5s,baz=48,slow=3.1,SNR=4.5						
OTAV	Otavalo	123.38	53	*e*P	PKPdf	17 30 27.4	-0.8
MACA	Manacapuru-AM	135.43	35	*e*P	PKPdf	17 30 50.4	-0.1
MALB	Monte Alegre	136.63	26	*e*P	PKPdf	17 30 53.1	+0.3
ITTB	Itaituba	138.48	29	*e*P	PKPdf	17 30 56.2	+0.1
TMAB	Tom-Au,PA,Br	138.80	17	*e*P	PKPdf	17 30 56.9	+0.2
NBMO	Morrinhos-CE	140.88	5	*e*P	PKPdf	17 31 00.5	-0.1
NBPS	Pedro II - PI	141.84	7	*e*P	PKPdf	17 31 01.6	-0.7
PRPB	Parauapebas	142.05	21	*e*P	PKPdf	17 31 02.9	+0.3
LPAZ	La Paz	142.62	55	*e*P	PKPdf	17 31 03.6	-0.7
SNAA	Sanae	146.35	199	PKPdf	PKPab	17 31 10.7	-0.2
SNAA	Sanae	146.35	199	⇓*e*PKP2	PKPbc	17 31 09.7	-0.1
SNDB	Serra Nova Dou	147.09	27	*e*P	PKPdf	17 31 11.1	-0.2
VNA2	Neumayer--Watz	147.92	198	PKPdf	PKiKP	17 31 15.6	-0.3
VNA3	Neumayer Olymp	148.18	196	PKPdf	PKPbc	17 31 15.6	+0.8
BDFB	Brasilia	151.57	23	PKPbc	PKPbc	17 31 23.4	-1.4
	comp=Z,6.4nm,0.8s,baz=270,slow=3.0,SNR=6.8						
JANB	Januaria	151.91	15	*e*P	PKPdf	17 31 19.2	+0.2
NBIT	Itapeh - BA	152.45	5	*e*P	PKPdf	17 31 20.2	+0.6
PMSA	Palmer Station	152.87	155	*e*P	PKPdf	17 31 19.2	+0.4
PLCA	Paso Flores	154.82	97	*e*P	PKPdf	17 31 23.2	+0.8
VAO	Valinhos	158.81	27	*e*P	PKPdf	17 31 28.6	+0.5
VAS01	Vassouras-RJ	159.10	17	*e*P	PKPdf	17 31 29.3	+0.9
MAN01	Angra dos Reis	159.55	19	*e*P	PKPdf	17 31 29.8	+0.9
PET01	Itanhaem-SP	159.89	29	*e*P	PKPdf	17 31 30.3	+1.1
CNLB	Canela	162.66	45	*e*P	PKPdf	17 31 33.0	+0.9

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*IDC **15** 17:16:16.9±1.9, 4°.39S×129°.83E, h149^{km}±22^{km}, mb3.2/3, mb1 3.7/8, mb1mx3.4/30, mbtmp4.0/8 Error ellipse: s-maj=34.9km s-min=16.3km az=95.0*

*DJA **15** 17:16:18.5±0.4, 4˚S±4˚×13˚0E±˚, h134^{km}±7^{km}, M4.2/12, mb4.3/3, MLv4.1/12*

ISC 15 17:16:16.3±0.8**, 4°.38S**±0°.06×**129°.76E**±0°.07**, h150^{km}, n15, σ1ˢ.82**/19**, mb3.4**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	1.32	321	P	Pn	17 16 44.3	+0.3
MSAI				S	Sn	17 17 04.6	-0.6
FAKI	Fak Fak	2.87	60	P	Pn	17 17 03.8	+1.7
FAKI				S	Sn	17 17 37.2	-0.3
SIJI	Sorong	3.79	23	P	Pn	17 17 13.8	-0.1
	37nm,0.3s,baz=222,slow=22,SNR=160						
SIJI				S	Sn	17 17 55.3	-3.4
	26nm,0.3s,baz=75,slow=23,SNR=25						
SWI	Sorong	3.80	23	P	Pn	17 17 14.5	+0.6
SAUI	Saumlaki	3.90	157	P	Pn	17 17 16.3	+1.1
LBMI	Labuha	4.34	329	P	Pn	17 17 22.0	+0.9
SANI	Sanana	4.42	301	P	Pn	17 17 22.0	-0.1
SRPI	Serui, Papua	6.93	69	P	Pn	17 17 56.9	+1.4
BATI	Baumata	8.37	226	P	Pn	17 18 15.4	+0.7
	3.4nm,0.3s,baz=55,slow=15,SNR=8.0						
FITZ	Fitzroy Crossi	14.22	196	P	Pn	17 19 29.8	-1.3
	0.1nm,0.3s,baz=352,slow=20,SNR=1.2						
FITZ				S	Sn	17 22 02.0	-6.8
	0.1nm,0.3s,baz=15,slow=18,SNR=2.0						
WRA	Warramunga Arr	16.10	164	P	Pn	17 19 52.9	-1.5
	0.5nm,0.3s,baz=343,slow=12,SNR=22						
WRA				S	S	17 22 39.4	-14
	0.2nm,0.3s,baz=82,slow=25,SNR=1.7						
ASAR	Alice Springs	19.59	169	P	P	17 20 34.2	+1.3
	1.2nm,0.3s,baz=349,slow=11,SNR=76						
ASAR				S	S	17 24 01.3	-4.8
	0.1nm,0.3s,baz=347,slow=19,SNR=7.1						
MJAR	Matsushiro Arr	41.46	10	P	P	17 23 47.8	-0.6
	0.5nm,0.5s,baz=186,slow=8.6,SNR=2.0						
SONM	Songino Array	55.90	341	P	P	17 25 40.1	+1.5
	0.3nm,0.6s,baz=163,slow=8.5,SNR=2.1						
MKAR	Makanchi Array	65.92	326	P	P	17 26 47.8	+1.6
	0.6nm,0.4s,baz=111,slow=7.9,SNR=11						

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*NOU **15** 17:33:28.9, 29°.03S×177°.18W, h258^{km}, mb4.1/8, Kermadec Islands, New Zealand*

*IDC **15** 17:33:33.6±0.5, 28°.74S×178°.34W, h210^{km}±4^{km}, mb3.7/11, mb1 3.9/13, mb1mx3.7/24, mbtmp4.3/13, Error ellipse: s-maj=16.6km s-min=15.0km az=73.0*

ISC 15 17:33:34.2±0.5**, 29°.23S**±0°.06×**178°.3W**±0°.1**, h231^{km}, n58, σ2ˢ.18**/74**, mb4.0**/11**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	Raoul Island	0.31	92	P	Pn	17 34 03.8	-0.6
GLKZ	Green Lake	0.32	95	P	Pn	17 34 03.1	-1.3
RAO	Raoul Island	0.32	94	P	Pn	17 34 03.6	-0.7
	595nm,0.3s,baz=102,slow=6.9,SNR=46						
RAO				S	S	17 34 25.2	-2.8
	560nm,0.3s,baz=88,slow=23,SNR=6.7						
RAO	Raoul Island	0.32	94	P	Pn	17 34 03.7	-0.7
MXZ	Matakaoa Point	8.78	198	S	S	17 37 17.0	+0.5
WMGZ	Waiomatatini S	9.00	197	P	Pn	17 35 39.5	-0.5
WMGZ				S	S	17 37 21.2	-0.3
KUZ	Kuaotunu	9.03	212	P	P	17 35 48.1	-0.5
HAZ	Te Kaha	9.11	200	P	Pn	17 35 40.4	-1.2
HAZ				S	S	17 37 26.0	+1.7
PKGZ	Pakihiroa	9.15	198	P	Pn	17 35 40.2	-1.9
PKGZ				S	S	17 37 24.7	-0.5
PUZ	Puketiti	9.28	197	P	Pn	17 35 42.8	-0.9
PUZ				S	S	17 37 25.6	-2.5
RUGZ	Raukumara Rang	9.34	200	P	Pn	17 35 44.5	0.0
TWGZ	Tauwhareparae	9.45	198	P	P	17 35 51.3	-2.0
TWGZ				S	S	17 37 32.5	+0.3
MWZ	Matawai	9.72	200	P	P	17 35 53.4	-3.0
MWZ				S	S	17 37 35.1	-3.6
TKGZ	Te Karaka	9.73	198	P	Pn	17 35 49.3	-0.1
TKGZ				S	S	17 37 35.1	-3.6
URZ	Urewera	9.78	202	P	Pn	17 35 48.8	-1.3
	0.2nm,0.3s,baz=298,slow=24,SNR=1.8						
URZ				S	S	17 37 39.8	-0.2
	6.5nm,0.3s,baz=31,slow=23,SNR=9.8						
URZ	Urewera	9.78	202	P	Pn	17 35 52.1	+2.0
RAGZ	Rawiri	9.91	200	P	Pn	17 35 54.2	+2.5
RAGZ				S	S	17 37 41.7	-1.3
RIGZ	Rimuhau	10.00	198	S	S	17 37 41.7	-3.6
SNGZ	Shannon Statio	10.19	200	P	Pn	17 35 55.9	+0.5
SNGZ				S	S	17 37 44.2	-5.6
RAHZ	Arahi	10.39	200	S	S	17 37 50.0	-4.4
MTHZ	Maungataniwha	10.41	202	P	P	17 36 01.6	-2.5
MTHZ				S	S	17 37 50.0	-4.9
WHHZ	Waihua	10.50	200	P	Pn	17 36 00.0	+0.8
WHHZ				S	S	17 37 52.5	-4.3
BKZ	Black Stump Fm	10.81	202	P	Pn	17 36 05.5	+2.3
MSVF	Nonsavu	11.93	343	P	Pn	17 36 13.1	-4.5
	2.0nm,0.3s,baz=195,slow=21,SNR=20						
MSVF	Nonsavu	11.93	343	P	Pn	17 36 13.5	-4.0
BFZ	Birch Farm	12.27	200	P	Pn	17 36 21.9	+0.4
KHZ	Kahutara	14.72	204	P	Pn	17 36 50.8	-0.8
DZM	Mont Dzumac	15.50	294	P	P	17 37 00.2	-0.6
	0.5nm,0.3s,baz=106,slow=10.0,SNR=10.0						
DZM	Mont Dzumac	15.50	294	P	Pn	17 37 02.5	+1.2
NOUC	Port Laguerre	15.60	294	P	Pn	17 37 04.1	+1.7
STKA	Stephens Creek	34.52	255	P	P	17 40 02.7	+2.0
	0.9nm,0.5s,baz=89,slow=9.6,SNR=4.8						
ASAR	Alice Springs	42.94	266	P	P	17 41 11.7	+1.0
	1.4nm,0.5s,baz=93,slow=6.3,SNR=33						
ASAR				PcP	PcP	17 42 57.9	+1.0
	0.7nm,0.5s,baz=115,slow=3.7,SNR=6.1						
WRA	Warramunga Arr	43.82	271	P	P	17 41 17.4	-0.3
	0.8nm,0.3s,baz=109,slow=6.2,SNR=21						
WRA				PcP	PcP	17 43 00.3	+0.4
	3.0nm,0.9s,baz=112,slow=3.1,SNR=10						
QSPA	South Pole Qui	60.87	180	P	P	17 43 28.1	+5.9
	3.1nm,0.7s,baz=39,slow=2.6,SNR=19						
MJAR	Matsushiro Arr	77.15	325	P	P	17 45 01.4	-0.9
	5.1nm,0.8s,baz=166,slow=5.1,SNR=13						
SNAA	Sanae	79.33	179	P	P	17 45 17.9	+4.1
VNA3	Neumayer Olymp	79.48	176	P	P	17 45 18.4	+3.8
VNA2	Neumayer--Watz	79.91	177	P	P	17 45 21.3	+4.3
VNA1	Neumayer--Stat	80.14	177	P	P	17 45 22.3	+4.2
KSRS	Korea Array	83.30	320	P	P	17 45 35.6	+0.6
	3.2nm,0.9s,baz=134,slow=5.4,SNR=14						
PETK	Petropavlovsk-	84.62	346	P	P	17 45 41.0	-0.3
	2.1nm,0.6s,baz=110,slow=7.1,SNR=9.6						
USRK	Ussuriysk Ar.	86.06	327	P	P	17 45 48.2	-0.4
	4.9nm,0.8s,baz=163,slow=5.6,SNR=5.1						
NVAR	Mina Array Bea	87.55	43	P	P	17 45 55.7	-0.5
	0.8nm,0.7s,baz=231,slow=8.0,SNR=5.2						
CMAR	Chiang Mai Arr	92.78	289	P	P	17 46 22.8	+2.1
	0.6nm,0.8s,baz=95,slow=2.3,SNR=6.1						
ILAR	Eielson Array	96.85	13	P	P	17 46 37.2	-1.0
	0.8nm,1.0s,baz=207,slow=4.7,SNR=2.4						
MKAR	Makanchi Array	116.83	311	PKP	PKiKP	17 51 50.9	-0.1
	0.6nm,0.6s,baz=198,slow=1.1,SNR=10						
ZALV	Zalesovo Beam	117.00	319	PKP	PKiKP	17 51 50.8	-0.1
	0.6nm,0.5s,baz=118,slow=6.1,SNR=2.8						
BOSA	Boshof	118.23	203	PKP	PKiKP	17 51 56.8	+2.4
	2.6nm,0.9s,baz=117,slow=4.5,SNR=1.4						
ARCES	ARCESS Array B	137.40	348	PKP	PKiKP	17 52 30.8	-0.4
	2.7nm,0.7s,baz=55,slow=1.4,SNR=12						
FINES	FINESS Array B	143.97	340	PKP	PKPbc	17 52 39.4	-0.4
	7.5nm,0.7s,baz=53,slow=3.1,SNR=39						
KBZ	Khabaz	144.25	305	PKP	PKPdf	17 52 42.1	-0.2
	1.8nm,0.8s,baz=119,slow=6.3,SNR=5.2						
NB2	NORSAR Subarra	147.56	351	PKP	PKPbc	17 52 50.7	+0.2
	comp=Z,3.2nm,0.5s,baz=12,slow=2.9						
NOA	NORSAR Array B	147.56	351	PKPbc	PKPbc	17 52 50.1	-0.4
	comp=Z,7.8nm,0.8s,baz=14,slow=4.5,SNR=27						
AKASG	Malin Array Be	150.22	324	PKPbc	PKiKP	17 52 57.9	-0.2
	comp=Z,6.9nm,0.4s,baz=45,slow=2.7,SNR=16						
BRTR	Keskin Array B	151.82	300	PKPbc	PKiKP	17 53 02.2	+0.2
	comp=Z,1.4nm,0.5s,baz=147,slow=5.5,SNR=10.0						
BRTR				PKPab	PKPab	17 53 11.9	+0.3
	comp=Z,2.1nm,0.7s,baz=129,slow=3.6,SNR=8.3						
GERES	GERESS Array B	158.37	338	PKPab	PKPab	17 53 39.3	0.0
	comp=Z,0.5nm,0.4s,baz=36,slow=5.1,SNR=2.1						
TORD	Torodi Ar. Bea	163.99	180	PKP	PKPdf	17 53 12.9	+2.5
	comp=Z,1.2nm,0.9s,baz=267,slow=0.5,SNR=6.4						
TORD				PKPab	pPKPdf	17 54 08.2	-1.3
	comp=Z,1.5nm,0.6s,baz=175,slow=3.6,SNR=9.1						
ESDC	Sonseca Array	168.58	23	PKP	PKPdf	17 53 15.1	+1.8
	comp=Z,0.3nm,0.3s,baz=276,slow=2.3,SNR=3.9						
ESDC				PKPab	PKPab	17 54 23.6	-0.7
	comp=Z,0.2nm,0.7s,baz=316,slow=3.5,SNR=1.9						

SJA 15 17:37:58.0, 23°.05S×69°.26W, h10^{km}, ML4.1, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB06	IPOC Station P	0.45	320	*i* P	Pg	17 38 06.0	-0.8
LVC	Limon Verde	0.54	36	*i* P	Pg	17 38 08.0	-0.7
PB05	IPOC Station P	0.89	283	*i* P	Pn	17 38 17.0	+0.3
PB04	IPOC Station P	1.09	311	*i* P	Pg	17 38 18.0	-0.9
PB03	IPOC Station P	1.10	335	*i* P	Pg	17 38 17.0	-2.1
PB09	IPOC Station P	1.25	1	*i* P	Pn	17 38 20.0	-1.7
PB07	IPOC Station P	1.44	336	*i* P	Pn	17 38 23.0	-1.3
PB02	IPOC Station P	1.82	341	*i* P	Pn	17 38 30.0	+0.5
PB01	IPOC Station P	2.01	354	*i* P	Pn	17 38 33.0	+0.9
PB08	IPOC Station P	2.90	2	*i* P	Pb	17 38 48.0	-2.0
VCA	Vinchina	5.74	171	*i* P	Pn	17 39 23.0	-0.5
RFA	San Rafael	11.70	177	*i* P	Pn	17 40 46.0	+0.9

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*ISK **15** 17:40:54.1, 38°.61N×43°.62E, h5^{km}, ML3.0/10*

*DDA **15** 17:40:55.1, 38°.68N×43°.71E, h7^{km}±4^{km}, ML2.8*

ISC 15 17:40:55.4±1.1**, 38°.64N**±0°.03×**43°.67E**±0°.03**, h9^{km}**±10^{km}**, n22, σ1ˢ.46**/31**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	Van	0.23	258	PG	Pg	17 40 58.9	-1.2
OZAP	Van, Ozalp-Mer	0.25	86	*i* P	Pg	17 40 59.8	-0.9
OZAP				IAML		17 41 12.0	
	comp=E,3µm,0.9s						
OZAP				IAML		17 41 13.0	
	comp=N,2µm,0.7s						
VMUR	Van-Muradiye	0.36	347	*i* P	Pg	17 41 02.1	-0.4
VMUR				IAML		17 41 11.0	
	comp=N,1µm,0.5s						
VMUR				IAML		17 41 17.0	
	comp=E,1µm,0.5s						
AKDM	Akdamar-Van	0.63	240	PG	Pg	17 41 06.5	-1.1
ADCV	BITLIS_Adilcev	0.76	283	*i* P	Pg	17 41 09.5	-0.6
ADCV				*i* S	Sb	17 41 22.2	+0.8
ADCV				IAML		17 41 23.0	
	comp=N,454nm,0.6s						
ADCV				IAML		17 41 24.0	
	comp=E,496nm,0.4s						
MLAZ	Malazgirt-MUS	1.01	300	PG	Pb	17 41 14.3	-0.9
AGRB	Hanur-Agry	1.07	331	PG	Pb	17 41 15.6	-0.7
AGRB				SG	Sn	17 41 32.3	+0.4
HAKT	HAKKARI	1.08	179	*i* P	Pg	17 41 14.4	-1.9
HAKT				*i* S	Sn	17 41 33.4	+1.2
HAKT				IAML		17 41 35.0	
	comp=N,154nm,0.4s						
HAKT				IAML		17 41 36.0	
	comp=E,192nm,0.5s						
YOVA	Hakkari_Yksek	1.16	155	*i* P	Pg	17 41 16.0	-1.8
YOVA				*i* S	Sn	17 41 34.7	+0.7
BLIS	Bitlis-Merkez	1.24	260	*i* P	Pg	17 41 17.5	-1.8
BLIS				*i* S	Sb	17 41 34.9	-0.4
BLIS				IAML		17 41 36.0	
	comp=N,218nm,0.6s						
BLIS				IAML		17 41 37.0	
	comp=E,159nm,0.6s						
GURO	Guroymak-BITLI	1.29	266	PN	Pn	17 41 18.1	-1.6
TASB	TASBURUN-IGDIR	1.41	18	PN	Pg	17 41 22.4	-0.1
SIRT	Sirnak	1.50	221	PN	Pb	17 41 22.8	-0.7
SIRN	Sırnak	1.52	221	*i* P	Pg	17 41 24.4	-0.1
SIRN				*i* S	Sg	17 41 48.6	+4.5
SIRN				IAML		17 41 49.0	
	comp=N,138nm,0.5s						
SIRN				IAML		17 41 52.0	
	comp=E,182nm,0.7s						
SRTM	Siirt_Merkez	1.52	245	*i* P	Pg	17 41 23.9	-0.7
SRTM				*i* S	Sg	17 41 47.1	+2.6
SRTM				IAML		17 41 48.0	
	comp=E,138nm,1.0s						
SRTM				IAML		17 41 59.0	
	comp=N,159nm,0.6s						
MUSM	Mu-Merkez	1.69	273	*i* P	Pb	17 41 25.6	-1.2
MUSM				*i* S	Sg	17 41 50.3	+0.4
GNI	Garni	1.72	28	PN	Pb	17 41 27.0	-0.2
VRTB	Varto-Mus	1.81	287	PN	Pn	17 41 26.8	0.0
SVAN	Silvan-Diyarba	2.01	257	PN	Pn	17 41 29.9	+0.4
SVAN				SN	Sb	17 41 55.9	-1.2
SENK	Senkaya-Erzuru	2.17	332	PN	Pb	17 41 32.9	-2.1
YEDI	Yedisu-Bingol	2.56	289	PN	Pn	17 41 38.4	+1.1
MAZI	Mazidag	2.81	246	PN	Pn	17 41 41.2	+0.6

IDC 15 17:51:24.4±49.0**, 12°.62S**×**168°.29E, h0^{km}, mb4.3**/3**, mb1 4.5**/3**, mb1mx3.6**/35**, mbtmp4.3**/3**, Error ellipse: s-maj=840.5km s-min=110.6km az=64.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	31.12	228	P	P	17 57 45.0	+0.2
	0.9nm,0.4s,baz=49,slow=11,SNR=7.6						
WRA	Warramunga Arr	33.34	253	P	P	17 58 04.6	+0.1
	2.0nm,0.4s,baz=84,slow=8.5,SNR=52						
ASAR	Alice Springs	34.38	246	P	P	17 58 13.2	-0.4
	3.6nm,0.5s,baz=76,slow=9.8,SNR=103						

IDC 15 17:54:10.7±2.5**, 14°.89S**×**173°.65W, h0^{km}, mb3.8**/2**, mb1 4.1**/3**, mb1mx3.6**/34**, mbtmp3.9**/3**, ML4.3**/1**, MS3.0**/2**, Ms1 3.0**/2**, ms1mx2.6**/27**, Error ellipse: s-maj=194.7km s-min=25.4km az=155.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.06	62	Pn	Pn	17 54 46.6	-0.1
	98nm,0.3s,baz=191,slow=1.9,SNR=62						
AFI				Sn	Sn	17 55 06.6	-6.5
	338nm,0.3s,baz=162,slow=3.9,SNR=35						
AFI				LR	LR	17 55 29.3	
	comp=Z,205nm,19.1s,baz=232,slow=38						
MSVF	Nonsavu	8.45	249	LR	LR	17 59 08.1	
	comp=Z,127nm,19.1s,baz=122,slow=35						
WRA	Warramunga Arr	49.72	256	P	P	18 03 05.2	+0.1
	0.4nm,0.3s,baz=92,slow=7.1,SNR=26						
ASAR	Alice Springs	50.04	252	P	P	18 03 07.0	-0.5
	1.0nm,0.5s,baz=81,slow=6.9,SNR=18						
BRTR	Keskin Array B	145.61	321	PKPbc	PKPdf	18 13 51.1	-0.4
	0.9nm,0.9s,baz=28,slow=3.4,SNR=3.8						

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*DRS **15** 18:08:33.2±0.0, 43°.13N×43°.82E, h9^{km}, ML3.4/5*

*MOS **15** 18:08:39.8±0.0, 43°.65N×43°.97E, h6^{km}, MPVA4.1, FELT I=II-III MSK at Mayskiy*

*IDC **15** 18:08:39.2±0.9, 43°.58N×44°.06E, h0^{km}, mb3.4/4, mb1 3.6/5, mb1mx3.3/48, mbtmp3.6/5, ML3.8/1, MS3.9/2, Ms1 3.9/2, ms1mx2.6/30, Error ellipse: s-maj=15.5km s-min=7.0km az=11.0*

*NORS **15** 18:08:40.1±0.0, 43°.67N×44°.00E, h11^{km}, MPVA4.3*

*TIF **15** 18:08:40.8, 43°.67N×44°.04E, h9^{km}±2^{km}*

*NNC **15** 18:08:52.7±7.8, 43°.88N×45°.48E, h0^{km}, mb3.6, Error ellipse: s-maj=156.6km s-min=64.6km az=129.0*

ISC 15 18:08:41.4±0.8**, 43°.65N**±0°.02×**44°.04E**±0°.01**, h15^{km}**±6^{km}**, n127, σ1ˢ.45**/193**, mb3.3**/3**, 15C-3D, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRTR	Priterechnaya	0.20	61	*i* PG	Pg	18 08 45.7	-0.4
PRTR				pmax	pmax		
	comp=Z,4µm,0.4s						
PRTR	Priterechnaya	0.20	61	*e*Pg	Pg	18 08 45.5	-0.6
PRTR				*e*Sg	Sg	18 08 50.6	+1.4
STDR	Stavd-Durt	0.28	176	*e*PG	Pg	18 08 47.0	-0.5
STDR				*e*S	Sb	18 08 53.0	+0.2
STDR	Stavd-Durt	0.28	176	*e*Pg	Pg	18 08 47.0	-0.5
STDR				*e*Sg	Sb	18 08 52.4	-0.4
NCK	Nalchik	0.36	244	⇑*i*PG	Pb	18 08 49.3	-0.2
NCK	Nalchik	0.36	244	*e*Pg	Pb	18 08 49.1	-0.3
NCK				*e*Sg	Sg	18 08 53.8	0.0
LSNR	Lesken	0.41	203	*ce*PG	Pb	18 08 49.9	-0.4
LSNR	Lesken	0.41	203	*e*Pg	Pg	18 08 49.6	0.0
LSNR				*e*Sg	Sb	18 08 55.7	-0.6
ARNR	Ardon	0.51	159	*e*PG	Pb	18 08 52.0	0.0
ARNR				*e*S	Sn	18 09 03.0	+0.5
ARNR	Ardon	0.51	159	*e*Pg	Pg	18 08 51.3	-0.1
ARNR				*e*Sg	Sn	18 09 03.2	+0.7
TRKR	Terskaya	0.51	82	*e*PG	Pb	18 08 51.7	-0.3
TRKR				pmax	pmax		
	comp=Z,525nm,0.5s						
TRKR	Terskaya	0.51	82	*e*Pg	Pb	18 08 51.8	-0.3
TRKR				*e*Sg	Sb	18 09 00.6	+1.5
KORR	Kora	0.57	178	*e*PG	Pb	18 08 53.4	+0.4
KORR				*e*S	Sn	18 09 03.4	-0.6
KORR	Kora	0.57	178	*e*Pg	Pb	18 08 53.4	+0.4
KORR				*e*Sg	Sn	18 09 03.4	-0.6
VLKR	Vladikavkaz	0.77	142	⇑*i*PG	Pn	18 08 58.0	+0.3
VLKR				*e*S	Sn	18 09 11.0	+2.1
VLKR	Vladikavkaz	0.77	142	*i* Pg	Pn	18 08 58.0	+0.3
VLKR				*e*Sg	Sn	18 09 11.0	+2.1
PYA1	Pyatigorsk	0.80	301	⇑*e*PG	Pb	18 08 56.9	0.0
PYA1				*e*S	Sb	18 09 08.2	+0.7
PYA1				pmax	pmax		
	comp=Z,12nm,0.1s						
PYA1	Pyatigorsk	0.80	301	*e*Pg	Pg	18 08 56.5	-0.4
PYA1				*e*Sg	Sb	18 09 07.7	+0.2
DIGR	Digorskoe uzhe	0.82	204	⇑*i*PG	Pg	18 08 57.3	-0.2
DIGR				*e*S	Sb	18 09 09.6	+1.1
DIGR	Digorskoe uzhe	0.82	204	*e*Pg	Pg	18 08 57.3	-0.2
DIGR				*e*Sg	Sb	18 09 08.9	+0.4
KBZ	Khabaz	0.83	276	Pg	Pb	18 08 57.3	-0.2
	comp=Z,11nm,0.3s,baz=111,slow=4.9,SNR=497						
KBZ				Lg	Lg	18 09 09.2	

	comp=Z,22nm,0.3s,baz=288,slow=18,SNR=16						
KBZ	Khabaz	0.83	276	*ce*PG	Pg	18 08 57.1	-0.4
KBZ	Khabaz	0.83	276	*e*Pg	Pb	18 08 57.8	+0.3
KBZ				*e*Sg	Sb	18 09 09.0	+0.5
LACR	Lac	0.85	167	*e*PG	Pb	18 08 58.1	+0.3
LACR				pmax	pmax		
	comp=Z,342nm,0.3s						
LACR	Lac	0.85	167	*e*Pg	Pb	18 08 58.2	+0.3
LACR				*e*Sg	Sn	18 09 11.1	+0.1
KMGR	Komgaron	0.85	134	⇓*i*PG	Pn	18 08 59.4	+0.6
KMGR				*e*S	Sn	18 09 13.3	+2.3
KMGR	Komgaron	0.85	134	*i* Pg	Pn	18 08 59.4	+0.6
KMGR				*e*Sg	Sn	18 09 13.3	+2.3
ZEI	Tsey	0.87	187	*e*PG	Pg	18 08 58.1	-0.2
ZEI				*e*S	Sb	18 09 11.6	+1.8
ZEI	Tsey	0.87	187	*e*Pg	Pg	18 08 57.9	-0.4
ZEI				*e*Sg	Sb	18 09 11.6	+1.8
BEYR	Belyy Ugol+	0.95	293	*e*PG	Pb	18 08 59.8	+0.2
BEYR				*e*S	Sb	18 09 12.8	+0.7
BEYR	Belyy Ugol+	0.95	293	*e*Pg	Pb	18 08 59.8	+0.2
BEYR				*e*Sg	Sb	18 09 12.8	+0.7
SHA1	Shidzhatmaz	1.01	275	*ce*PG	Pg	18 09 00.2	-0.7
SHA1				pmax	pmax		
	comp=Z,93nm,0.3s						
SHA1	Shidzhatmaz	1.01	275	*e*Pg	Pb	18 09 01.1	+0.5
SHA1				*e*Sg	Sn	18 09 15.8	+0.7
KIV0	Kislovodsk Arr	1.02	288	*e*Pg	Pb	18 09 00.9	+0.1
KIV0				*e*Sg	Sb	18 09 14.6	+0.6
KVAR	Kislovodsk Arr	1.02	288	Pg	Pg	18 09 00.3	-0.8
	baz=131,slow=20,SNR=20						
KVAR				Lg	Lg	18 09 14.8	
	baz=180,slow=16,SNR=40						
KIV	Kislovodsk	1.02	288	*e*PG	Pg	18 09 00.6	-0.6
KIV				pmax	pmax		
	comp=Z,93nm,1.1s						
KIV	Kislovodsk	1.02	288	*e*Pg	Pg	18 09 00.4	-0.9
KIV				*e*Sg	Sb	18 09 14.4	+0.2
MTEO	Meteo	1.04	159	P	Pb	18 09 01.7	+0.4
MTEO				S	Sb	18 09 16.2	+1.4
NEY	Neytrino	1.04	248	⇑*e*PG	Pb	18 09 01.3	+0.1
NEY				*i* S	Sn	18 09 16.0	+0.1
NEY	Neytrino	1.04	248	*e*Pg	Pb	18 09 01.4	+0.1
NEY				*e*Sg	Sn	18 09 16.1	+0.1
PNSH	Pansheti	1.10	157	P	Pg	18 08 54.4	-8.3
PNSH				S	Sg	18 09 09.2	-7.9
PNSH	Pansheti	1.10	157	PG	Pg	18 08 54.4	-8.3
ONI	Oni	1.15	202	P	Pg	18 09 03.1	-0.5
ONI				S	Sn	18 09 19.9	+1.5
ONI	Oni	1.15	202	⇑*i*PG	Pn	18 09 03.5	+0.6
ONI				*e*S	Sn	18 09 20.3	+1.9
GUDG	Gudauri	1.23	165	P	Pg	18 09 05.2	0.0
GUDG				S	Sn	18 09 22.5	+1.8
GUDG	Gudauri	1.23	165	PG	Pg	18 09 05.2	0.0
GUDG				S	Sn	18 09 22.5	+1.8
GROC	Groznyy	1.36	109	*e*PG	Pb	18 09 06.7	+0.2
GROC				*e*		18 09 27.0	
GROC				pmax	pmax		
	comp=Z,99nm,0.5s						
GROC				smax	smax		
	comp=E,176nm,0.4s						
GROC				smax	smax		
	comp=N,392nm,0.5s						
GROC				smax	smax		
	comp=N,454nm,0.4s						
GROC	Groznyy	1.36	109	*e*Pg	Pg	18 09 07.4	-0.1
GROC				*e*Sg	Sg	18 09 27.2	+2.0
ALER	Alexandrovskoy	1.37	324	*e*PG	Pg	18 09 07.3	-0.6
ALER				*e*S	Sg	18 09 27.6	+1.8
ALER	Alexandrovskoy	1.37	324	*e*Pg	Pg	18 09 07.3	-0.6
ALER				*e*Sg	Sg	18 09 27.6	+1.8
GOF	Gofitskoye	1.58	333	⇑*e*PG	Pb	18 09 10.6	+0.4
GOF				*e*S	Sg	18 09 32.3	+0.1
GOF				pmax	pmax		
	comp=Z,59nm,0.6s						
GOF				smax	smax		
	comp=N,836nm,0.9s						
GOF				smax	smax		
	comp=E,678nm,1.0s						
GOF	Gofitskoye	1.58	333	*e*Pg	Pb	18 09 10.0	-0.2
GOF				*e*Sg	Sg	18 09 32.6	+0.4
BKRG	Bakuriani	1.93	192	P	Pb	18 09 17.2	+0.9
BKRG				S	Sg	18 09 44.4	+0.9
BKRG	Bakuriani	1.93	192	PN	Pb	18 09 17.3	+0.9
BKRG				S	Sg	18 09 44.4	+0.9
DLMR	Dylym	1.98	106	⇓*e*PN	Pb	18 09 17.2	+0.1
DLMR				pmax	pmax		
	comp=Z,148nm,0.6s						
DLMR	Dylym	1.98	106	*e*Pg	Pb	18 09 17.2	+0.1
	comp=Z,148nm,0.6s						
DLMR				*e*Sg	Sb	18 09 41.8	+0.3
	comp=Z,735nm,0.4s						
BRNG	Burnasheti	2.04	184	P	Pb	18 09 18.5	+0.4
ABS	Abastumani	2.10	206	P	Pn	18 09 17.8	+1.7
ABS	Abastumani	2.10	206	PN	Pn	18 09 17.8	+1.7
TRLG	Trialeti	2.11	179	P	Pn	18 09 18.0	+1.7
TRLG				S	Sg	18 09 49.1	-0.3
TRLG	Trialeti	2.11	179	PN	Pn	18 09 18.0	+1.7
TRLG				S	Sg	18 09 49.1	-0.3
DBC	Dubki	2.13	106	⇑*i*PN	Pb	18 09 20.1	+0.4
DBC				*i*		18 09 47.7	
DBC				pmax	pmax		
	comp=Z,63nm,0.6s						
DBC				smax	smax		
	comp=N,192nm,0.8s						
DBC				smax	smax		
	comp=E,196nm,0.6s						
DBC	Dubki	2.13	106	*e*Pg	Pb	18 09 20.2	+0.5
	comp=E,196nm,0.6s						
DBC				*i* Sg	Sb	18 09 47.9	+1.8
	comp=E,192nm,0.8s						
AHMR	Akhmetovskaya	2.22	284	*e*PN	Pg	18 09 22.6	-1.4
AHMR				*e*S	Sb	18 09 47.5	-1.1
AHMR	Akhmetovskaya	2.22	284	*e*Pg	Pg	18 09 22.6	-1.4
AHMR				*e*Sg	Sb	18 09 47.5	-1.1
UNCR	Uncukul	2.22	114	*e*PN	Pb	18 09 21.5	+0.2
UNCR				*e*		18 09 50.5	
UNCR				*i*		18 09 51.1	
UNCR				pmax	pmax		
	comp=Z,73nm,0.6s						
UNCR				smax	smax		
	comp=N,415nm,0.5s						
UNCR				smax	smax		
	comp=E,411nm,0.5s						
UNCR				smax	smax		
	comp=E,370nm,0.6s						
UNCR	Uncukul	2.22	114	*e*Pn	Pb	18 09 21.7	+0.4
	comp=E,73nm,0.6s						
UNCR				*i* Sn	Sb	18 09 50.3	+1.7
	comp=E,419nm,0.5s						
XNZR	Khunzakh	2.25	119	*e*PN	Pb	18 09 21.5	-0.3
XNZR				*i*		18 09 51.1	
XNZR				pmax	pmax		
	comp=Z,40nm,0.4s						
XNZR				smax	smax		
	comp=E,159nm,0.2s						
KRNR	Karanay	2.25	111	*e*PN	Pb	18 09 22.6	+0.7
KRNR				*e*		18 09 52.0	
KRNR				*i*		18 09 52.6	
KRNR				pmax	pmax		
	comp=Z,23nm,0.4s						
KRNR				smax	smax		
	comp=N,177nm,0.5s						
KRNR				smax	smax		
	comp=E,145nm,0.6s						
KRNR				smax	smax		
	comp=N,121nm,0.4s						
KRNR	Karanay	2.25	111	*e*Pn	Pb	18 09 22.5	+0.7
	comp=N,27nm,0.6s						
KRNR				*i* Sn	Sb	18 09 51.5	+1.9
	comp=N,148nm,0.8s						
AKH	Akhalkalaki	2.28	190	P	Pg	18 09 24.8	-0.3
AKH	Akhalkalaki	2.28	190	PN	Pg	18 09 24.8	-0.3
DMNI	Dmanisi	2.33	177	P	Pb	18 09 22.4	-0.7
DMNI	Dmanisi	2.33	177	PN	Pb	18 09 22.4	-0.7
BUJR	Buynaksk	2.39	109	*e*PN	Pb	18 09 23.7	-0.4
BUJR				*e*S	Sb	18 09 56.2	+2.8
BUJR	Buynaksk	2.39	109	*e*Pn	Pb	18 09 23.7	-0.4
BUJR				*e*Sn	Sb	18 09 56.2	+2.8
ARKR	Arakani	2.41	115	*e*PN	Pb	18 09 25.0	+0.6
ARKR				*i*		18 09 56.3	
ARKR				pmax	pmax		
	comp=Z,31nm,0.6s						
ARKR				smax	smax		
	comp=E,95nm,0.3s						
ARKR	Arakani	2.41	115	*e*Pn	Pb	18 09 24.1	-0.2
	comp=E,32nm,0.6s						
ARKR				*i* Sn	Sb	18 09 55.4	+1.6
	comp=E,100nm,1.5s						
BGD	Bogdanovka	2.41	188	P	Pg	18 09 27.2	-0.4
BGD	Bogdanovka	2.41	188	PN	Pg	18 09 27.2	-0.4
LGD	Lagodekhi	2.44	137	P	Pb	18 09 23.4	-1.5
LGD	Lagodekhi	2.44	137	PN	Pb	18 09 23.4	-1.5
GNBR	Gunib	2.49	119	*e*PN	Pb	18 09 25.3	-0.5
GNBR				*i*		18 09 56.9	
GNBR				pmax	pmax		
	comp=Z,33nm,0.3s						
GNBR				smax	smax		
	comp=E,227nm,0.4s						
GNBR	Gunib	2.49	119	*e*Pn	Pb	18 09 25.3	-0.5
GNBR				*e*Sn	Sb	18 09 54.9	-1.4
KANR	Karaman	2.56	99	*e*PN	Pb	18 09 26.5	-0.4
KANR				*e*S	Sb	18 10 00.1	+2.1
KANR	Karaman	2.56	99	*e*Pn	Pb	18 09 26.5	-0.4
KANR				*e*Sn	Sb	18 10 00.1	+2.1
LABN	Labinsk	2.58	294	*e*PN	Pg	18 09 31.7	+0.8
LABN				*e*S	Sn	18 09 54.0	+0.3
LABN	Labinsk	2.58	294	*e*Pn	Pg	18 09 31.7	+0.8
LABN				*e*Sn	Sn	18 09 54.0	+0.3
MAK	Makhachkala	2.62	104	*e*PN	Pg	18 09 32.0	+0.3
MAK				*e*		18 10 07.4	
DDFL	Dedoflistskaro	2.69	144	P	Pg	18 09 31.2	-1.7
DDFL	Dedoflistskaro	2.69	144	PN	Pg	18 09 31.2	-1.7
KMKR	Kumukh	2.71	123	*e*PN	Pb	18 09 29.2	-0.6
KMKR				*i*		18 10 03.1	
KMKR				pmax	pmax		
	comp=Z,37nm,0.4s						
KMKR				smax	smax		
	comp=E,164nm,0.6s						
KMKR	Kumukh	2.71	123	*e*Pn	Pn	18 09 27.3	+2.6
KMKR				*e*Sn	Sn	18 09 59.0	+1.7
ZKTA	Zakatala	2.77	136	PN	Pn	18 09 25.2	-0.1
GUZR	Guzeripl'	2.86	278	*e*PN	Pb	18 09 33.3	+1.2
GUZR				*e*S	Sb	18 10 08.4	+1.5
GUZR	Guzeripl'	2.86	278	*e*Pn	Pb	18 09 33.3	+1.2
GUZR				*e*Sn	Sb	18 10 08.4	+1.5
SGKR	Sergokala	2.91	113	*e*PN	Pb	18 09 32.1	-0.9
SGKR	Sergokala	2.91	113	*e*Pn	Pb	18 09 32.1	-0.9
SGKR				*e*Sn	Sn	18 10 02.8	+1.0
URKR	Urkarakh	3.03	118	*e*PN	Pb	18 09 33.5	-1.6
URKR	Urkarakh	3.03	118	*e*Pn	Pb	18 09 33.5	-1.6
URKR				*i* Sn	Sn	18 10 05.8	+0.8
SOC	Sochi	3.14	270	*e*PN	Pn	18 09 31.2	+0.9
SOC				*e*PPP	PPP	18 09 39.6	
SOC				*e*		18 10 09.5	
SOC						18 10 21.7	
SOC				MLR	MLR		
	comp=Z,18nm,7.0s						
ERBR	Yeremizino-Bor	3.27	310	*e*PN	Pn	18 09 31.6	-0.4
ERBR				*e*S	Sn	18 10 12.4	+1.8
ERBR	Yeremizino-Bor	3.27	310	*e*Pn	Pn	18 09 31.6	-0.4
ERBR				*e*Sn	Sn	18 10 12.4	+1.8
SEKA	Sheki	3.38	135	PN	Pn	18 09 33.4	-0.3
GANJ	Ganja	3.45	150	PN	Pn	18 09 35.6	+1.0
AKT	Akhty	3.48	127	*e*PN	Pb	18 09 39.5	-3.3
AKT				*e*S	Sn	18 10 16.9	+0.7
AKT	Akhty	3.48	127	*e*Pn	Pb	18 09 39.5	-3.3
AKT				*e*Sn	Sn	18 10 16.9	+0.7
GNI	Garni	3.54	171	Pg	Pb	18 09 44.1	+0.3
	comp=Z,1.2nm,0.3s,baz=346,slow=8.3,SNR=2.8						
GNI	Garni	3.54	171	*e*PN	Pn	18 09 38.6	+2.7
GNI				*e*S	Sn	18 10 22.1	+4.5
GNI	Garni	3.54	171	*e*Pn	Pn	18 09 38.6	+2.7
GNI				*e*Sn	Sn	18 10 22.1	+4.5
AKTO	Aktyubinsk	11.69	50	Pn	Pn	18 11 25.6	-2.0
	comp=Z,0.6nm,0.3s,baz=237,slow=11,SNR=8.0						
AKTO	Aktyubinsk	11.69	50	⇑Pn	Pn	18 11 25.3	-2.2
	comp=Z,2.1nm,0.7s						
AKTO				⇓Sn	Sn	18 13 29.5	-8.2
	comp=Z,3.4nm,0.7s						
AB31	Akbulak array	12.31	57	P	Pn	18 11 35.6	-0.3
AB31	Akbulak array	12.31	57	⇑Pn	Pn	18 11 35.7	-0.3
	comp=Z,0.6nm,0.5s,baz=246,slow=10,SNR=19						
AB31				⇑Sn	Sn	18 13 46.6	-6.2
	comp=Z,0.8nm,0.5s,baz=253,slow=20,SNR=3.6						
KIRV	Kirov	15.32	11	LR	LR	18 17 43.2	
	comp=Z,1µm,21.7s,baz=254,slow=35						
KK31	Karatay Array	19.23	82	P	P	18 13 04.7	-0.2
KK31	Karatay Array	19.23	82	P	P	18 13 04.7	-0.2
	comp=Z,0.7nm,0.6s,baz=287,slow=11,SNR=7.4						
BVA4	Borovoye Array	19.77	52	P	Pn	18 13 15.9	+3.7
BVA4	Borovoye Array	19.77	52	⇑P	Pn	18 13 15.9	+3.7
	comp=Z,1.5nm,0.6s						
FINES	FINESS Array B	20.77	335	P	P	18 13 21.6	+0.2
	comp=Z,3.7nm,1.0s,baz=141,slow=16,SNR=2.1						
KURBB	Kurchatov Arra	24.31	61	P	P	18 13 58.8	+0.7
	comp=Z,0.6nm,0.6s,baz=270,slow=11,SNR=5.4						
KURK	Kurchatov	24.37	61	P	P	18 13 58.8	+0.1
MKAR	Makanchi Array	26.95	70	P	P	18 14 22.4	+0.3
	comp=Z,0.4nm,0.6s,baz=279,slow=7.3,SNR=4.4						
MKAR	Makanchi Array	26.95	70	*i* P	P	18 14 23.0	+0.9
KMBO	Kilima Mbogo	44.99	190	*i* P	P	18 16 55.0	-1.4
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CMAR	Chiang Mai Arr	52.22	101	P	P	18 17 51.1	-0.8
	comp=Z,0.2nm,0.5s,baz=302,slow=8.4,SNR=2.8						
PETK	Petropavlovsk-	68.09	37	LR	LR	18 52 13.2	
	comp=Z,24nm,18.6s,baz=40,slow=38						

*IDC **15** 18:16:29.3±5.3, 5°.71S×151°.09E, h49^{km}±44^{km}, mb3.6/4, mb1 3.9/5, mb1mx3.3/42, mbtmp3.9/5, ML2.1/1, Error ellipse: s-maj=89.6km s-min=33.1km az=129.0*

ISC 15 18:16:29.0±1.9, **5°.8S**±0°.7×**151°.2E**±0°.7, **h50**^{km}, **n6**, σ**0^{s}.70**/8, **mb3.8**/4, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	5.40	227	P	Pn	18 17 47.3	+0.3
	4.5nm,0.3s,baz=49,slow=10,SNR=26						
PMG				S	Sn	18 18 48.2	+0.3
	1.5nm,0.3s,baz=331,slow=19,SNR=1.5						
WRA	Warramunga Arr	21.62	228	P	P	18 21 14.2	-0.9
	1.3nm,0.6s,baz=53,slow=10,SNR=24						
WRA				PcP	PcP	18 25 16.4	+0.8
	0.7nm,1.0s,baz=50,slow=3.4,SNR=4.3						
ASAR	Alice Springs	24.38	221	P	P	18 21 42.0	-0.8
	4.3nm,0.9s,baz=59,slow=6.5,SNR=22						
FITZ	Fitzroy Crossi	27.80	242	P	P	18 22 13.3	-0.3
	2.5nm,0.6s,baz=60,slow=8.2,SNR=10						
ILAR	Eielson Array	83.64	22	P	P	18 28 51.9	-0.1
	0.3nm,0.7s,baz=245,slow=5.9,SNR=5.6						
TORD	Torodi Ar. Bea	149.05	286	PKPbc	PKPbc	18 36 12.9	+0.2
	1.1nm,0.6s,baz=93,slow=3.7,SNR=7.9						

*IDC **15** 18:17:01.0±4.7, 18°.60S×176°.24W, h263^{km}±34^{km}, mb2.9/3, mb1 3.2/4, mb1mx2.9/37, mbtmp3.6/4, Error ellipse: s-maj=174.0km s-min=27.4km az=145.0*

ISC 15 18:17:01.4±2.8, **18°.0S**±0°.9×**176°.6W**±0°.6, **h250**^{km}, **n5**, σ**1^{s}.84**/7, **mb3.1**/3, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	6.17	50	P	Pn	18 18 33.6	+1.7
	1.5nm,0.3s,baz=233,slow=10,SNR=1.1						
AFI				S	S	18 19 41.7	-2.5
	2.1nm,0.3s,baz=43,slow=23,SNR=1.7						
WRA	Warramunga Arr	46.30	259	P	P	18 25 02.4	-0.4
	0.3nm,0.6s,baz=96,slow=7.5,SNR=6.1						
ASAR	Alice Springs	46.42	254	P	P	18 25 03.6	0.0
	0.7nm,0.5s,baz=96,slow=7.5,SNR=5.7						
ASAR				PcP	PcP	18 26 32.3	-1.8
	0.1nm,0.6s,baz=109,slow=4.7,SNR=1.5						
ILAR	Eielson Array	85.60	12	P	P	18 29 12.1	+0.9
	0.2nm,0.7s,baz=214,slow=6.1,SNR=1.8						
BRTR	Keskin Array B	146.05	316	PKPbc	PKPdf	18 36 11.4	+0.3
	0.5nm,0.7s,baz=106,slow=3.1,SNR=2.1						

*NOU **15** 18:21:11.9, 14°.69S×167°.43E, h135^{km}, mb4.5/35, Vanuatu Islands*

*NEIC **15** 18:21:12.8±2.1, 14°.9S±0°.1×167°.5E±0°.2, h137^{km}±7^{km}, mb4.3/19, Error ellipse: s-maj=24.0km s-min=14.3km az=62.0*

*IDC **15** 18:21:12.7±2.6, 14°.83S×167°.43E, h136^{km}±20^{km}, mb3.9/14, mb1 4.0/15, mb1mx3.8/34, mbtmp4.3/15, MS2.7/1, Ms1 2.7/1, ms1mx2.3/30, Error ellipse: s-maj=22.4km s-min=18.1km az=52.0*

ISC 15 18:21:11.7±0.8, **14°.86S**±0°.07×**167°.49E**±0°.10, **h129**^{km}, **n78**, σ**1^{s}.50**/83, **mb4.4**/34, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	0.65	206	Pn	Pn	18 21 33.0	+1.4
SANVU	Saraoutou	0.65	206	P	Pn	18 21 34.0	+2.4
DVP	Devils Point	2.93	167	P	Pn	18 22 00.5	+3.1
LIFNC	LIFOU	5.89	182	Pn	Pn	18 22 37.1	+0.4
LIFNC	LIFOU	5.89	182	P	Pn	18 22 37.5	+0.8
KOUNC	Koumac, New Ca	6.43	208	P	Pn	18 22 46.1	+2.1
MARNC	Mare, Loyalty	6.61	176	Pn	Pn	18 22 46.4	0.0
MARNC	Mare, Loyalty	6.61	176	P	Pn	18 22 48.8	+2.4
	0.8nm,0.8s						
YATNC	Mamie plateau,	7.18	184	P	Pn	18 22 54.8	+0.6
DZM	Mont Dzumac	7.24	188	P	Pn	18 22 56.7	+1.7
	2.9nm,0.3s,baz=27,slow=4.8,SNR=69						
DZM				S	Sn	18 24 13.3	-2.6
	baz=135,slow=19,SNR=1.1						
DZM	Mont Dzumac	7.24	188	*e*Pn	Pn	18 22 56.7	+1.7
	9.3nm,0.2s						
DZM				*e*Sn	Sn	18 24 17.1	+1.2
	12nm,0.3s						
DZM	Mont Dzumac	7.24	188		Pn	18 22 57.3	+2.2
NOUC	Port Laguerre	7.29	189	P	Pn	18 22 58.3	+2.7
ONTNC	Ouen Toro	7.47	187	Pn	Pn	18 23 01.0	+2.9
ONTNC	Ouen Toro	7.47	187	P	Pn	18 23 01.0	+2.9
OUENC	Ouen Island, N	7.54	185	Pn	Pn	18 23 01.4	+2.4
OUENC	Ouen Island, N	7.54	185	P	Pn	18 23 01.6	+2.6
PINNC	Pines Island,	7.71	180	Pn	Pn	18 23 03.9	+2.6
PINNC	Pines Island,	7.71	180	P	Pn	18 23 03.4	+2.1
HNR	Honiara	9.14	305	P	Pn	18 23 24.0	+3.4
	14nm,0.3s,baz=173,slow=8.5,SNR=6.7						
HNR				S	Sn	18 25 03.0	+1.2
	10nm,0.3s,baz=13,slow=20,SNR=7.1						
HNR				LR	LR	18 26 25.4	
	comp=Z,46nm,18.5s,baz=198,slow=34						
HNR	Honiara	9.14	305		Pn	18 23 20.8	+0.2
EIDS	Eidsvold	18.60	233	P	P	18 25 18.7	-0.4
EIDS				IAmb	IAmb	18 25 22.1	
	comp=Z,24nm,0.7s						
EIDS	Eidsvold	18.60	233	P	Pn	18 25 21.0	+0.1
	comp=Z,36nm,0.8s						
PMG	Port Moresby	20.60	283	P	P	18 25 41.5	+0.7
	comp=Z,6.8nm,0.9s,baz=99,slow=5.2,SNR=8.7						
PMG	Port Moresby	20.60	283	P	P	18 25 41.5	+0.7
PMG				IAmb	IAmb	18 25 43.9	
	comp=Z,7.9nm,0.9s						
RMQ	Roma	20.97	234	P	P	18 25 45.9	+1.2
	comp=Z,31nm,0.7s						
ARMA	Armidale	21.27	221	P	P	18 25 48.3	+0.3
ARMA				IAmb	IAmb	18 25 50.7	
	comp=Z,20nm,1.1s						
ARMA	Armidale	21.27	221	P	P	18 25 49.6	+1.6
	comp=Z,21nm,1.5s						
MTSU	Mount Surprise	22.45	258	P	P	18 26 00.4	0.0
	comp=Z,5.4nm,0.6s						
MGCD	Mangrove Creek	23.55	216	P	P	18 26 12.3	+1.8
	comp=Z,34nm,0.6s						
COEN	Coen	23.57	269	P	P	18 26 10.7	-0.2
COEN	Coen	23.57	269	P	P	18 26 10.6	-0.2
	comp=Z,5.1nm,1.2s						
QLP	Quilpie	24.63	238	P	P	18 26 20.6	+0.2
	comp=Z,38nm,0.9s						
URZ	Urewera	24.81	162	P	P	18 26 23.2	+1.4
	comp=Z,7.1nm,0.8s,baz=307,slow=20,SNR=2.2						
BKZ	Black Stump Fm	25.47	164	P	P	18 26 26.2	-1.7
BKZ				IAmb	IAmb	18 26 30.2	
	comp=Z,8.5nm,0.5s						
BKZ	Black Stump Fm	25.47	164	P	P	18 26 29.8	+1.9
CMSA	Cobar Meteorol	25.94	226	P	P	18 26 32.3	+0.2
	comp=Z,12nm,1.1s						
INKA	Innaminka	27.95	238	P	P	18 26 50.1	0.0
	comp=Z,22nm,0.8s						
STKA	Stephens Creek	29.07	230	P	P	18 27 01.1	+1.0
	comp=Z,13nm,0.5s,baz=55,slow=9.1,SNR=53						
STKA	Stephens Creek	29.07	230	P	P	18 27 01.0	+1.0
STKA				IAmb	IAmb	18 27 01.8	
	comp=Z,4.1nm,1.1s						
STKA	Stephens Creek	29.07	230	P	P	18 27 00.5	+0.4
	comp=Z,4.7nm,0.8s						
TOO	Toolangi	29.87	217	P	P	18 27 05.1	-2.0
LCRK	Leigh Creek	31.03	235	P	P	18 27 17.2	-0.2
	comp=Z,12nm,1.0s						
HTT	Hallett	31.80	229	P	P	18 27 24.4	+0.2
	comp=Z,8.7nm,0.8s						
WR0	Warramunga Arr	31.82	256	P	P	18 27 22.5	-1.9
WR0				IAmb	IAmb	18 27 24.8	
	comp=Z,2.9nm,0.9s						
WB0	Warramunga Arr	31.94	256	P	P	18 27 24.1	-1.5
WB0				IAmb	IAmb	18 27 25.2	
	comp=Z,3.9nm,0.7s						
WB2	Warramunga Arr	31.99	256	P	P	18 27 24.0	-2.0
WB2				IAmb	IAmb	18 27 24.7	
	comp=Z,4.2nm,1.1s						
WRAB	Tennant Creek	31.99	256	P	P	18 27 25.1	-0.9
WRA	Warramunga Arr	32.00	256	P	P	18 27 23.9	-2.1
	comp=Z,2.3nm,0.7s,baz=86,slow=8.4,SNR=17						
WRA				ScP	ScP	18 33 43.0	-1.8
	comp=Z,0.6nm,0.9s,baz=80,slow=3.6,SNR=2.6						
WRA	Warramunga Arr	32.00	256	P	P	18 27 24.1	-2.1
OOD	Oodnadatta	32.19	241	P	P	18 27 27.1	-0.5
	comp=Z,6.4nm,0.8s						
ASAR	Alice Springs	32.83	249	P	P	18 27 32.1	-1.2
	comp=Z,5.4nm,0.5s,baz=76,slow=9.9,SNR=54						
ASAR				PcP	PcP	18 30 15.0	-0.4
	comp=Z,0.2nm,0.7s,baz=86,slow=2.9,SNR=1.8						
ASAR				ScP	ScP	18 33 47.0	-0.6
	comp=Z,0.6nm,0.9s,baz=86,slow=4.0,SNR=4.6						
BBOO	Buckleboo	33.67	232	P	P	18 27 40.7	+0.2
BBOO	Buckleboo	33.67	232	P	P	18 27 40.3	-0.1
	comp=Z,23nm,0.8s						
MULG	Mulgathing	34.32	238	P	P	18 27 45.1	-1.0
	comp=Z,12nm,0.9s						
MTN	Manton Dam	35.34	269	P	P	18 27 54.1	-0.8
MTN				IAmb	IAmb	18 28 07.9	
	comp=Z,4.9nm,0.9s						
KNRA	Kununurra	37.34	264	P	P	18 28 10.8	-1.2
KNRA	Kununurra	37.34	264	P	P	18 28 10.3	-1.7
	comp=Z,19nm,0.8s						
WRKA	Warakurna	38.09	248	P	P	18 28 16.7	-1.6
	comp=Z,18nm,0.6s						
SIJI	Sorong	38.39	288	P	P	18 28 19.9	-0.9
	comp=Z,3.8nm,0.7s,baz=105,slow=12,SNR=2.5						
FORT	Forrest	39.42	239	P	P	18 28 27.7	-1.5
FORT	Forrest	39.42	239	P	P	18 28 28.5	-0.7
	comp=Z,21nm,0.7s						
FITZ	Fitzroy Crossi	40.20	259	P	P	18 28 35.0	-0.9
	comp=Z,6.8nm,0.5s,baz=72,slow=9.0,SNR=34						
FITZ	Fitzroy Crossi	40.20	259	P	P	18 28 35.1	-0.7
FITZ	Fitzroy Crossi	40.20	259	P	P	18 28 34.9	-0.9
	comp=Z,12nm,1.4s						
BATI	Baumata	42.98	271	P	P	18 28 59.5	+0.8
	comp=Z,14nm,0.5s,baz=67,slow=1.1,SNR=9.8						
PSA00	Pilbara Seismi	45.61	254	P	P	18 29 18.8	-0.7
PSA00				IAmb	IAmb	18 29 19.8	
	comp=Z,4.2nm,0.9s						
MORW	Morawa	49.41	244	P	P	18 29 47.4	-1.3
MORW				IAmb	IAmb	18 30 06.5	
	comp=Z,8.6nm,1.1s						
VNDA	Vanda	62.74	181	P	P	18 31 22.9	+0.3
	comp=Z,0.4nm,0.6s,baz=357,slow=7.6,SNR=2.6						
QSPA	South Pole Qui	75.17	180	P	P	18 32 40.2	+0.4
CMAR	Chiang Mai Arr	75.20	294	P	P	18 32 41.5	+0.9
	comp=Z,0.3nm,0.7s,baz=131,slow=4.2,SNR=4.6						
MAW	Mawson	81.84	202	P	P	18 33 16.8	+0.6
	comp=Z,0.7nm,0.5s,baz=117,slow=4.5,SNR=1.7						
SONM	Songino Array	82.73	324	P	P	18 33 22.3	+1.1
	comp=Z,0.6nm,0.7s,baz=145,slow=4.1,SNR=5.3						
SONM	Songino Array	82.73	324	P	P	18 33 21.4	+0.2
ILAR	Eielson Array	86.58	18	P	P	18 33 38.5	-1.6
	comp=Z,0.8nm,0.9s,baz=226,slow=5.7,SNR=6.1						
MKAR	Makanchi Array	97.45	316	P	Pdif	18 34 32.2	+1.3
	comp=Z,0.3nm,0.5s,baz=92,slow=4.8,SNR=2.8						
ARCES	ARCESS Array B	120.43	345	PKP	PKPdf	18 39 46.5	-0.8
	comp=Z,8.9nm,1.2s,baz=46,slow=2.6,SNR=5.6						
TORD	Torodi Ar. Bea	166.11	265	PKPab	PKPab	18 42 02.6	-1.2
	comp=Z,0.6nm,1.1s,baz=106,slow=2.7,SNR=1.7						

*ISU **15** 19:05:53, 39°.53N×70°.18E, h5^{km}*

*IDC **15** 19:05:56.6±1.0, 39°.63N×70°.27E, h0^{km}, mb3.7/6, mb1 3.8/11, mb1mx3.5/41, mbtmp3.6/11, ML3.3/5, Error*

ellipse: s-maj=21.7km s-min=12.4km az=153.0
*KRNET **15** 19:05:58.4±0.1, 39°.76N×70°.23E, h24^{km}, mb3.8*
*NNC **15** 19:06:02.3±1.7, 40°.00N×69°.82E, h0^{km}, mb4.1, mpv3.9, Error ellipse: s-maj=12.8km s-min=11.7km az=4.0*
ISC 15 19:05:59.0±1.0**, 39°.74N**±0°.03×**70°.22E**±0°.02**, h16**^{km}±7^{km}**, n59, σ1^{s}.77**/91**, mb3.7**/6**, 10C-29D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	Batken	0.56	55	⇓iP	Pg	19 06 09.0	-1.1
	baz=56						
BTK				⇓iS	Sg	19 06 16.7	-0.9
	baz=56						
GAR	Garm	0.74	174	⇑iP	Pg	19 06 12.9	-0.6
	baz=75						
GAR				⇑iS	Sg	19 06 23.3	-0.1
	baz=75						
DRK	Karamyk	1.25	102	⇑iP	Pg	19 06 21.4	-1.7
	baz=2.0						
DRK				⇑iS	Sg	19 06 38.2	-1.3
	baz=2.0						
FRG	Fergana	1.36	62	eP	Pg	19 06 25.0	-0.2
FRG				eS	Sn	19 06 46.0	+5.0
CHGR	Chuyangaron	1.36	218	⇓iP	Pn	19 06 23.7	+0.3
	baz=18						
CHGR				⇓iS	Sb	19 06 41.9	+0.6
	baz=18						
KUMR	Kumaryk	1.62	335	eP	Pg	19 06 30.0	0.0
KUMR				eS	Sg	19 06 53.0	+1.9
YBZ	Yangibazar	1.63	343	eP	Pg	19 06 30.0	-0.3
YBZ				eS	Sg	19 06 53.0	+1.4
YNGY	Yangiyul	1.64	327	eP	Pb	19 06 29.0	+0.2
YNGY				eS	Sg	19 06 54.0	+2.3
TAS	Tashkent	1.73	336	eP	Pg	19 06 31.0	-1.2
TAS				eS	Sg	19 06 55.0	+0.3
TAS	Tashkent	1.73	336	⇓iP	Pn	19 06 29.2	+0.8
	baz=36						
TAS				⇓iS	Sn	19 06 51.6	+1.4
	baz=36						
TGS	TashGRES	1.76	343	eP	Pb	19 06 31.0	+0.1
TGS				eS	Sg	19 06 55.0	-0.7
CHMG	Chimgan	1.81	355	eP	Pb	19 06 32.0	+0.1
CHMG				eS	Sg	19 06 58.0	+0.6
CHRV	Charvak	1.91	354	eP	Pb	19 06 33.0	-0.4
CHRV				eS	Sg	19 07 00.0	-0.4
TRKS	Terek-Say	1.92	21	⇓iP	Pn	19 06 31.1	0.0
	baz=23						
TRKS				⇓iS	Sn	19 06 54.9	-0.2
	baz=23						
ANR	Andizhan	1.93	58	eP	Pg	19 06 38.0	+2.0
ANR				eS	Sg	19 07 03.0	+2.0
OHH	Osh	2.12	68	eP	Pn	19 06 35.0	+1.2
OHH				eS	Sg	19 07 06.0	-1.1
OHH	Osh	2.12	68	⇑iP	Pn	19 06 34.5	+0.7
	baz=68						
OHH				⇑iS	Sn	19 07 00.7	+0.9
	baz=68						
IUG	Iuzhnay	2.41	357	Pg	Pb	19 06 41.6	-0.4
IUG				Lg	Lg	19 07 10.6	
SAM	Samarkand	2.49	269	eP	Pb	19 06 44.0	+0.7
SAM				eS	Sb	19 07 15.0	+1.2
SFK	Sufi-Kurgan	2.54	83	⇓iP	Pn	19 06 40.1	+0.3
	baz=83						
SFK				⇓iS	Sn	19 07 11.2	+0.7
	baz=83						
SALK	Salom-Alik	2.98	66	⇑eP	Pn	19 06 46.8	+1.1
	baz=67						
SALK				⇑eS	Sn	19 07 21.6	+0.4
	baz=67						
MNAS	Manas	3.24	31	⇓iP	Pn	19 06 50.2	+0.9
	baz=31						
MNAS				⇓iS	Sn	19 07 27.8	+0.2
	baz=31						
KK31	Karatay Array	3.37	4	Pn	Pn	19 06 53.9	+3.0
	10nm,0.5s,baz=176,slow=9.1,SNR=381						
KK31				Lg	Lg	19 07 43.4	
	15nm,0.3s,baz=184,slow=28,SNR=9.9						
AML	Almayashu	3.56	47	P	Pn	19 06 56.4	+2.6
	SNR=18						
AML	Almayashu	3.56	47	⇓iP	Pn	19 06 54.8	+1.0
	baz=47						
AML				⇓iS	Sn	19 07 35.8	+0.1
	baz=47						
NUT	Nurota	3.57	285	eP	Pn	19 06 54.0	+0.3
NUT				eS	Sn	19 07 36.0	+0.4
EKS2	Erkin-Say	3.97	41	P	Pn	19 07 02.7	+3.4
	SNR=6.3						
EKS2	Erkin-Say	3.97	41	⇓iP	Pn	19 07 00.3	+1.1
	baz=42						
EKS2				⇓iS	Sn	19 07 45.3	-0.1
	baz=42						
UCH	Uchtor	4.09	51	P	Pn	19 07 03.8	+2.5
	SNR=24						
UCH	Uchtor	4.09	51	⇓iP	Pn	19 07 02.3	+1.0
	baz=51						
UCH				⇓iS	Sn	19 07 48.7	-0.3
	baz=51						
AAK	Ala-Archa	4.33	47	Pn	Pn	19 07 06.9	+2.6
	2.9nm,0.3s,baz=215,slow=7.9,SNR=21						
AAK				Sn	Sn	19 07 59.1	+4.5
	3.1nm,0.3s,baz=173,slow=16,SNR=1.8						
AAK				Lg	Lg	19 08 13.4	
	1.4nm,0.3s,baz=31,slow=19,SNR=1.4						
AAK	Ala-Archa	4.33	47	P	Pn	19 07 07.3	+3.0
	SNR=7.4						
AAK	Ala-Archa	4.33	47	⇓iP	Pn	19 07 05.4	+1.1
	baz=47						
AAK				⇓iS	Sn	19 07 54.2	-0.4
	baz=47						
FRU1	Bishkek	4.52	46	⇓iP	Pn	19 07 08.0	+1.2
	baz=46						
FRU1				⇓iS	Sn	19 07 58.7	-0.4
	baz=46						
KBK	Karagaybulak	4.61	49	P	Pn	19 07 11.5	+3.4
	SNR=18						
KBK	Karagaybulak	4.61	49	⇑iP	Pn	19 07 09.1	+1.0
	baz=49						
KBK				⇑iS	Sn	19 08 00.8	-0.5
	baz=49						
CHMS	Chumysh	4.71	45	P	Pn	19 07 12.2	+2.8
	SNR=11						
CHMS	Chumysh	4.71	45	⇓iP	Pn	19 07 10.4	+1.0
	baz=45						
CHMS				⇓iS	Sn	19 08 02.9	-0.9
	baz=45						
USP	Ospenovka	4.77	41	P	Pn	19 07 12.9	+2.7
	SNR=10.0						
USP	Ospenovka	4.77	41	⇓iP	Pn	19 07 11.4	+1.2
	baz=41						
USP				⇓iS	Sn	19 08 04.3	-0.8
	baz=41						
TKM2	Tokmak 2	5.15	50	P	Pn	19 07 18.1	+2.6
	SNR=12						
TKM2	Tokmak 2	5.15	50	⇓iP	Pn	19 07 16.6	+1.1
	baz=50						
TKM2				⇓iS	Sn	19 08 13.5	-1.2
	baz=50						
BTLS	Baital	6.01	27	Pg	Pg	19 07 50.1	-3.8
	5.2nm,0.3s						
BTLS				Lg	Lg	19 09 08.0	
	8.7nm,0.3s						
TNSS	Tian-Shan	6.04	55	Pg	Pg	19 07 54.4	-0.1
	5.4nm,0.4s						
TNSS				Lg	Lg	19 09 15.4	
	24nm,0.8s						
KOTS	Kotyrbulak	6.24	54	Pg	Pg	19 07 58.9	+0.5
	6.9nm,0.4s						
KOTS				Lg	Lg	19 09 23.3	
	19nm,1.4s						
GEYT	Alibeck	9.61	263	Pn	Pn	19 08 15.9	-0.8
	0.4nm,0.3s,baz=95,slow=10,SNR=2.5						
GEYT				Sn	Sn	19 09 56.6	-7.7
	0.2nm,0.3s,baz=56,slow=30,SNR=1.0						
MKAR	Makanchi Array	11.27	47	Pn	Pn	19 08 41.2	+2.0
	0.1nm,0.3s,baz=233,slow=14,SNR=7.6						
MKAR				Lg	Lg	19 11 45.3	
	0.1nm,0.3s,baz=244,slow=30,SNR=2.8						
AB31	Akbulak array	12.00	326	P	Pn	19 08 47.8	-1.4
	1.3nm,0.4s,baz=130,slow=15,SNR=72						
KURBB	Kurchatov Arra	12.35	26	Lg	Lg	19 12 25.9	
	0.0nm,0.3s,baz=216,slow=29,SNR=2.7						
AKTO	Aktyubinsk	13.71	325	Pn	Pn	19 09 12.8	+0.2
	0.2nm,0.3s,baz=122,slow=13,SNR=2.6						
AKTO				Sn	Sn	19 11 36.8	-7.7
	0.2nm,0.3s,baz=334,slow=20,SNR=1.5						
AKTO	Aktyubinsk	13.71	325	⇓P	Pn	19 09 11.7	-0.9
	1.3nm,0.7s						
ZALV	Zalesovo Beam	17.32	30	P	P	19 10 01.6	+0.4
	0.1nm,0.3s,baz=226,slow=12,SNR=2.2						
BRTR	Keskin Array B	28.01	282	P	P	19 11 50.2	+1.0
	0.6nm,0.8s,baz=80,slow=7.6,SNR=2.3						
ARCES	ARCESS Array B	37.92	336	P	P	19 13 17.1	+1.9
	2.1nm,0.9s,baz=117,slow=9.2,SNR=1.5						
NB2	NORSAR Subarra	41.45	321	P	P	19 13 43.6	-1.0
	comp=Z,0.4nm,0.5s,baz=93,slow=8.6						
NOA	NORSAR Array B	41.45	321	P	P	19 13 43.9	-0.8
	comp=Z,0.5nm,0.5s,baz=107,slow=7.8,SNR=3.9						
TORD	Torodi Ar. Bea	65.23	267	P	P	19 16 39.5	-0.4
	comp=Z,0.5nm,0.7s,baz=51,slow=5.3,SNR=3.9						
WRA	Warramunga Arr	84.22	122	P	P	19 18 30.0	+0.2
	comp=Z,0.4nm,0.6s,baz=323,slow=5.0,SNR=6.9						
ASAR	Alice Springs	86.61	125	P	P	19 18 41.9	+0.3
	comp=Z,0.3nm,0.8s,baz=315,slow=4.4,SNR=6.9						

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*IDC **15** 19:06:25.7±1.0, 34°.73S×72°.57W, h0^{km}, mb3.8/4, mb1 4.0/6, mb1mx3.8/26, mbtmp3.8/6, ML3.9/2, MS3.5/4, Ms1 3.5/4, ms1mx3.0/21, Error ellipse: s-maj=56.7km s-min=21.6km az=89.0*
*NEIC **15** 19:06:27.0±1.3, 34°.68S±0°.02×72°.55W±0°.07, h10^{km}±2^{km}, mb4.3/3, ML4.3(GUC), Error ellipse: s-maj=9.5km s-min=3.0km az=278.0*
*GUC **15** 19:06:30.6±0.7, 34°.70S×72°.36W, h22^{km}±4^{km}, ML4.3*
ISC 15 19:06:28.0±1.8**, 34°.73S**±0°.03×**72°.46W**±0°.05**, h16**^{km}±11^{km}**, n59, σ0^{s}.92**/60**, mb3.8**/5**, 5C-4D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO05	Huala	0.52	122	⇓iP	Pb	19 06 39.7	+1.0
GO05				i S	Sg	19 06 46.0	+0.7
GO05				IAML		19 06 47.3	
	comp=E,46μm,0.3s						
GO05	Huala	0.52	122		Pb	19 06 39.4	+0.7
BO01	Tunca	1.19	74	⇓iP	Pn	19 06 49.2	-0.7
BO01				i S	Sb	19 07 03.4	-1.8
BO01	Tunca	1.19	74		Pn	19 06 49.2	-0.7
VA05	Santo Domingo	1.28	33	eP	Pb	19 06 51.6	-0.1
VA05				i S	Sb	19 07 08.0	0.0
VA05	Santo Domingo	1.28	33		Pn	19 06 50.9	-0.3
MT01	Popeta	1.33	49	⇑eP	Pn	19 06 51.0	-0.8
MT01				i S	Sb	19 07 07.4	-1.8
MT01	Popeta	1.33	49		Pn	19 06 51.1	-0.8
ML02	Panimavida	1.33	141	⇓eP	Pn	19 06 52.5	+0.6
ML02				i S	Sn	19 07 09.4	0.0
ML02				IAML		19 07 16.3	
	comp=N,10μm,0.6s						
ML02	Panimavida	1.33	141		Pn	19 06 52.5	+0.6
BO02	Sierra Bellavi	1.39	93	⇓iP	Pn	19 06 52.7	0.0
BO02				i S	Sn	19 07 09.4	-1.3
BO02				IAML		19 07 11.4	
	comp=N,35μm,0.2s						
BO02	Sierra Bellavi	1.39	93		Pn	19 06 52.6	-0.1
MT09	Talagante	1.55	52	⇑iP	Pn	19 06 54.7	-0.3
MT09				i S	Sn	19 07 14.1	-0.7
MT09				IAML		19 07 17.4	
	comp=N,4μm,0.4s						
MT09	Talagante	1.55	52		Pn	19 06 54.6	-0.3
BO04	La Punta	1.70	65	⇑eP	Pn	19 06 57.6	+0.6
BO04				i S	Sn	19 07 17.7	-0.8
VA01	Torpederas	1.84	22		Pn	19 06 58.6	-0.3
MT02	Curacav	1.84	37	Pn	Pn	19 06 58.3	-0.5
MT05	Renca	1.96	47	eP	Pn	19 07 01.7	+1.1
MT05				i S	Sn	19 07 25.0	+0.1
MT05				IAML		19 07 29.0	
	comp=E,3μm,0.4s						
MT05	Renca	1.96	47		Pn	19 07 00.8	+0.2
LMEL	Las Melosas	2.07	65	⇑eP	Pn	19 07 03.7	+1.5
LMEL				i S	Sn	19 07 28.2	+0.5
LMEL				IAML		19 07 30.1	
	comp=N,4μm,0.2s						
ROCH	El Roble	2.13	35	eP	Pn	19 07 04.4	+1.2
ROCH				i S	Sn	19 07 30.5	+1.1
ROCH				IAML		19 07 37.5	
	comp=E,2μm,0.5s						
PEL	Peldehue	2.17	43	⇑eP	Pn	19 07 04.0	+0.6
PEL				i S	Sn	19 07 30.9	+0.9
PEL	Peldehue	2.17	43		Pn	19 07 04.2	+0.7
CCSP	San Pedro de C	2.17	194	i S	Sg	19 07 36.8	-1.0
CCSP				IAML		19 07 41.1	
	comp=E,5μm,0.4s						
VA06	Catapilco	2.38	24	eP	Pn	19 07 06.2	-0.1
VA06				i S	Sn	19 07 36.3	+1.3
VA06				IAML		19 07 51.1	
	comp=E,1μm,0.6s						
VA03	San Esteban	2.53	40	eP	Pn	19 07 09.5	+1.0
VA03				i S	Sn	19 07 40.2	+1.2
VA03				IAML		19 07 52.2	
	comp=E,1μm,0.5s						
VA03	San Esteban	2.53	40		Pn	19 07 08.7	+0.2
LC01	Cunco	4.18	174	Pn	Pn	19 07 29.9	-1.2
GO04	Tololo Observa	4.76	18		Pn	19 07 39.4	+0.1
LR03	Panguipulli	4.89	179		Pn	19 07 41.2	+0.4
H03S1	Juan Fernandez	5.41	278	T	T	19 13 47.8	
	baz=98,slow=75,SNR=2757						
H03S3	Juan Fernandez	5.41	278	T	T	19 13 49.2	
	baz=98,slow=75,SNR=3151						
H03S2	Juan Fernandez	5.43	278	T	T	19 13 44.8	
	baz=98,slow=75,SNR=2201						
H03N1	Juan Fernandez	5.50	282	T	T	19 13 53.4	
	baz=108,slow=76,SNR=110						
H03N3	Juan Fernandez	5.51	282	T	T	19 13 44.2	
	baz=108,slow=76,SNR=126						
H03N2	Juan Fernandez	5.52	282	T	T	19 13 58.3	
	baz=108,slow=76,SNR=147						
LCO	Las Campanas	5.90	15	Pn	Pn	19 07 56.0	+1.0
LL04	Puerto Octay	6.17	180		Pn	19 07 58.2	-0.1
PLCA	Paso Flores	6.18	166	Pn	Pn	19 08 00.1	+1.5
	comp=E,0.8nm,0.3s,baz=334,slow=15,SNR=20						
PLCA				Lg	Lg	19 09 37.7	
	comp=E,1.0nm,0.3s,baz=59,slow=19,SNR=2.3						
PLCA	Paso Flores	6.18	166		Pn	19 08 00.4	+1.9
TRQA	Tornquist	9.08	114		Pn	19 08 39.0	+0.6
PB10	IPOC Station P	11.30	9	Pn	Pn	19 09 07.2	-1.6
LVC	Limon Verde	12.47	15	LR	LR	19 14 25.1	
	comp=E,140nm,18.7s,baz=205,slow=38						
CPUP	Villa Florida	15.48	61	LR	LR	19 16 35.2	
	comp=E,122nm,19.2s,baz=222,slow=39						
PB12	IPOC Station P	16.17	7	Pn	Pn	19 10 13.8	-0.8
PB12				IAmb	IAmb	19 10 28.0	
	comp=Z,22nm,1.1s						
LPAZ	La Paz	18.78	13	P	Pn	19 10 48.6	+1.0
	comp=Z,0.1nm,0.3s,baz=187,slow=12,SNR=4.4						
SIV	San Ignacio	21.28	32	P	P	19 11 13.5	-0.3
	comp=Z,0.9nm,0.6s,baz=219,slow=14,SNR=2.4						
SNAA	Sanae	51.04	158	P	P	19 15 28.7	-0.2
SNAA				IAmb	IAmb	19 15 32.3	
	comp=Z,4.6nm,1.3s						
QSPA	South Pole Qui	55.50	180	P	P	19 16 03.0	+1.1
	comp=Z,1.9nm,0.5s,baz=139,slow=2.4,SNR=7.5						
QSPA	South Pole Qui	55.50	180	P	P	19 16 02.1	+0.2
QSPA				IAmb	IAmb	19 16 05.0	
	comp=Z,8.1nm,1.3s						
TXAR	Lajitas Array	70.20	331	P	P	19 17 40.9	+0.8
	comp=Z,0.4nm,0.6s,baz=156,slow=8.7,SNR=7.6						
DBIC	Dimbokro	75.75	71	LR	LR	19 50 09.1	
	comp=Z,24nm,18.0s,baz=113,slow=35						
PDAR	Pinedale Array	84.26	333	P	P	19 18 59.4	+0.5
	comp=Z,0.2nm,0.3s,baz=157,slow=5.8,SNR=2.1						
MSVF	Nonsavu	95.17	244	LR	LR	19 54 30.4	
	comp=Z,46nm,19.6s,baz=183,slow=30						
ASAR	Alice Springs	116.76	207	PKP	PKPdf	19 25 10.8	-1.3
	comp=Z,0.1nm,0.5s,baz=158,slow=2.7,SNR=1.3						
WRA	Warramunga Arr	119.95	209	PKP	PKPdf	19 25 17.1	-1.1
	comp=Z,0.3nm,0.4s,baz=166,slow=1.6,SNR=12						
H11N3	WAKE ISLAND Hy	125.84	270	T	T	21 44 10.9	
	baz=122						
H11N1	WAKE ISLAND Hy	125.85	270	T	T	21 44 10.2	
	baz=122,slow=74						
H11N2	WAKE ISLAND Hy	125.86	270	T	T	21 44 14.5	
	baz=122,slow=74						

IDC 15 19:19:33.7±4.1**, 28°.47S**×**177°.94W, h0**^{km}**, mb3.5**/2**, mb1 3.8**/2**, mb1mx3.2**/32**, mbtmp3.5**/2**, Error ellipse: s-maj=84.7km s-min=21.2km az=67.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.78	179	Pn	Pn	19 19 52.1	+0.1
	133nm,0.3s,baz=330,slow=20,SNR=1.4						
RAO				Sn	Sn	19 20 05.4	+0.9
	529nm,0.3s,baz=90,slow=19,SNR=4.0						
ASAR	Alice Springs	43.30	265	P	P	19 27 37.1	-0.4
	0.1nm,0.3s,baz=105,slow=7.3,SNR=7.1						
WRA	Warramunga Arr	44.11	270	P	P	19 27 44.3	+0.2
	0.6nm,0.4s,baz=110,slow=7.9,SNR=10						
FINES	FINESS Array B	143.35	341	PKP	PKPdf	19 39 08.4	-1.0
	2.6nm,1.0s,baz=72,slow=4.5,SNR=4.7						

IDC 15 19:31:24.3±34.0**, 13°.11S**×**169°.65E, h0**^{km}**, mb4.0**/4**, mb1 4.1**/4**, mb1mx3.6**/37**, mbtmp4.0**/4**, Error ellipse: s-maj=597.3km s-min=109.6km az=69.0, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	31.79	229	P	P	19 37 50.0	-0.7
	0.7nm,0.6s,baz=80,slow=6.1,SNR=3.5						
WRA	Warramunga Arr	34.47	254	P	P	19 38 15.0	+0.8
	1.0nm,0.6s,baz=86,slow=8.8,SNR=14						
ASAR	Alice Springs	35.41	248	P	P	19 38 22.2	-0.1
	1.2nm,0.4s,baz=73,slow=9.7,SNR=26						
FITZ	Fitzroy Crossi	42.60	257	P	P	19 39 21.8	-0.8
	3.1nm,1.1s,baz=112,slow=5.4,SNR=1.9						

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*IDC **15** 19:52:21.1±1.4, 9°.23S×153°.32E, h0^{km}, mb4.0/10, mb1 4.1/11, mb1mx4.0/26, mbtmp4.0/11, ML1.4/1, MS3.2/13, Ms1 3.2/13, ms1mx3.1/30, Error ellipse: s-maj=34.8km s-min=22.1km az=122.0*
*DJA **15** 19:52:41.9±0.6, 10°S±4°×15°2E±°, h52^{km}±9^{km}, M4.2/12, mB5.0/3, mb4.2/12, MLv4.2/2, Mw(mB)4.3/3*
ISC 15 19:52:25.8±1.1**, 9°.5S**±0°.1×**153°.5E**±0°.1**, h35**^{km}**, n26, σ2^{s}.36**/18**, mb4.1**/11**, MS3.3**/11**, D'Entrecasteaux Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	5.47	346	P	Pn	19 53 46.1	+1.2
PMG	Port Moresby	6.25	271	Pn	Pn	19 53 51.8	-3.8
	0.6nm,0.3s,baz=74,slow=12,SNR=5.5						
PMG				Sn	Sn	19 55 05.6	-0.2
	0.5nm,0.3s,baz=12,slow=19,SNR=3.0						
PMG	Port Moresby	6.25	271	P	Pn	19 53 57.3	+1.8
PMG	Port Moresby	6.25	271	P	Pn	19 53 57.5	+2.0
HNR	Honiara	6.37	90	LR	LR	19 56 29.9	
	comp=Z,308nm,20.7s,baz=325,slow=38						
SMPI	Sarmi	16.50	296	P	P	19 56 19.7	+2.7
	21nm,1.2s						
DZM	Mont Dzumac	17.61	137	LR	LR	20 02 15.3	
	comp=Z,97nm,20.5s,baz=84,slow=33						
WRA	Warramunga Arr	21.19	239	P	P	19 57 08.2	-0.3
	13nm,0.8s,baz=62,slow=10,SNR=20						
ASAR	Alice Springs	23.40	231	P	P	19 57 32.8	+1.0
	3.0nm,0.6s,baz=59,slow=9.7,SNR=30						
SIJI	Sorong	23.73	290	P	P	19 57 32.7	-2.2
	7.7nm,0.9s,baz=94,slow=15,SNR=4.6						
SWI	Sorong	23.74	290	P	P	19 57 40.1	+5.1
	17nm,1.0s						
STKA	Stephens Creek	24.82	205	P	P	19 57 47.9	+3.1
	1.3nm,0.8s,baz=4.7,slow=10,SNR=4.2						
STKA				LR	LR	20 07 37.2	
	comp=Z,60nm,18.6s,baz=27,slow=37						
FITZ	Fitzroy Crossi	28.32	249	P	P	19 58 14.8	-1.7
	1.7nm,0.9s,baz=61,slow=12,SNR=2.1						
FITZ				LR	LR	20 09 02.1	
	comp=Z,58nm,18.4s,baz=81,slow=35						
BATI	Baumata	29.39	266	LR	LR	20 10 36.3	
	comp=Z,59nm,20.8s,baz=113,slow=38						
MJAR	Matsushiro Arr	48.03	343	LR	LR	20 21 54.3	
	comp=Z,5.3nm,18.2s,baz=215,slow=37						
PPT	Papeete	55.75	105	LR	LR	20 22 25.2	
	comp=Z,27nm,18.6s,baz=52,slow=32						
CMAR	Chiang Mai Arr	60.58	297	P	P	20 02 32.1	-1.2
	0.4nm,0.6s,baz=135,slow=5.0,SNR=6.8						
PETK	Petropavlovsk-	62.50	3	LR	LR	20 23 02.6	
	comp=Z,25nm,21.3s,baz=123,slow=30						
MA2	Magadan	68.91	359	LR	LR	20 30 22.1	
	comp=Z,18nm,20.4s,baz=116,slow=33						
SONM	Songino Array	70.68	328	P	P	20 03 38.5	+0.3
	0.8nm,0.9s,baz=144,slow=5.2,SNR=3.8						
SONM				LR	LR	20 33 40.4	
	comp=Z,18nm,19.5s,baz=27,slow=35						
SEY	Seymchan	72.25	359	LR	LR	20 30 28.2	
	comp=Z,12nm,21.3s,baz=205,slow=32						
MAW	Mawson	81.50	203	LR	LR	20 38 33.3	
	comp=Z,22nm,18.2s,baz=234,slow=34						
MKAR	Makanchi Array	84.33	319	P	P	20 04 53.2	-1.1
	1.8nm,0.8s,baz=106,slow=6.5,SNR=3.5						
ZALV	Zalesovo Beam	85.45	326	P	P	20 04 57.5	-2.2
	2.7nm,0.9s,baz=112,slow=6.4,SNR=3.3						
ILAR	Eielson Array	86.27	22	P	P	20 05 02.6	-1.0
	1.5nm,1.2s,baz=241,slow=5.0,SNR=2.8						
ILAR				LR	LR	20 37 53.2	
	comp=Z,26nm,20.5s,baz=184,slow=32						
TORD	Torodi Ar. Bea	152.12	280	PKPbc	PKiKP	20 12 19.0	+0.1
	0.9nm,0.8s,baz=67,slow=2.7,SNR=3.1						

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*JMA **15** 19:59:29.9±0.1, 24°.19N×121°.79E, h25^{km}±2^{km}, M2.5*
*TAP **15** 19:59:30.0, 24°.27N×121°.82E, h18^{km}, ML3.1, B*
ISC 15 19:59:29.8±0.8**, 24°.24N**±0°.01×**121°.85E**±0°.02**, h15**^{km}±6^{km}**, n138, σ0^{s}.61**/206**, 1C-15D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	Heping Village	0.12	305	P	Pg	19 59 33.4	+0.1
	baz=300						
EHP				i S	Sb	19 59 36.4	-0.2
	baz=300						
ENA	Nanau	0.21	332	⇓iP	Pg	19 59 34.6	0.0
	baz=336						
ENA				i S	Sg	19 59 38.0	+0.1
	baz=336						
EWUT	Wuta	0.22	342	⇓iP	Pg	19 59 34.8	+0.1
	baz=345						
EWUT				i S	Sg	19 59 38.4	+0.4
	baz=345						
ETL	Fush Village	0.22	249	i P	Pb	19 59 35.2	-0.4
	baz=243						
ETL				S	Sb	19 59 39.4	-0.1
	baz=243						
NACB	Ninganchiao	0.24	255	⇓iP	Pg	19 59 35.2	+0.1
	baz=249						
NACB				S	Sb	19 59 39.5	-0.6
	baz=249						
TWD	Chiawan	0.28	236	⇓iP	Pb	19 59 36.3	-0.3
	baz=234						
TWD				i S	Sb	19 59 41.2	0.0
	baz=234						
ETLH	Xiulin Townshi	0.34	265	⇓eP	Pg	19 59 36.9	0.0
	baz=260						
ETLH				S	Sg	19 59 42.1	+0.4
	baz=260						
HWA	Hwalien	0.34	221	P	Pb	19 59 38.4	+0.8
	baz=223						
HWA				S	Sn	19 59 45.0	-1.9
	baz=223						
TWC	Suao	0.37	360	i P	Pg	19 59 37.3	0.0
	baz=10.0						
TWC				S	Sg	19 59 42.4	0.0
	baz=10.0						
NDS	Dongshan	0.41	342	⇓iP	Pg	19 59 38.2	+0.1
	baz=343						
NDS				i S	Sg	19 59 43.9	+0.1
	baz=343						
TEYL	Yanliau Villag	0.44	212	P	Pb	19 59 39.4	+0.2
	baz=197						
TEYL				S	Sb	19 59 47.1	+1.6
	baz=197						
NNSB	Datong	0.47	294	⇓iP	Pg	19 59 39.2	0.0
	baz=292						
NNSB				i S	Sg	19 59 45.4	-0.1
	baz=292						
NDT	Datong Townshi	0.48	320	P	Pg	19 59 39.3	0.0
	baz=319						
NDT				S	Sg	19 59 46.1	+0.4
	baz=319						
ENTT	Nioudou	0.48	327	⇓iP	Pg	19 59 39.4	+0.1
	baz=327						
ENTT				i S	Sg	19 59 45.7	0.0
	baz=327						
NNS	Nan Shan	0.48	295	⇓iP	Pg	19 59 39.4	-0.1
	baz=293						
NNS				i S	Sg	19 59 45.9	-0.1

	baz=293						
TWE	**Neicheng**	0.51	341	⇓*i*P	Pg	19 59 39.8	-0.1
	baz=342						
TWE				*i*S	Sg	19 59 46.4	-0.3
	baz=342						
ILA	**Ilan**	0.53	350	P	Pb	19 59 40.8	-0.1
	baz=345						
ILA				S	Sb	19 59 48.1	-0.3
	baz=345						
WHF	**Hehuan Shan**	0.55	260	⇓*i*P	Pg	19 59 40.6	-0.1
	baz=259						
WHF				*i*S	Sg	19 59 48.1	+0.1
	baz=259						
FUSS	**Fushou**	0.56	271	⇓P	Pg	19 59 40.9	+0.1
	baz=269						
FUSS				*i*S	Sg	19 59 48.5	+0.2
	baz=269						
ESL	**Shilin**	0.57	222	P	Pg	19 59 41.2	+0.1
	baz=224						
ESL				*i*S	Sb	19 59 50.2	+0.7
	baz=224						
TEGC	**Jichi Village**	0.60	208	*e*P	Pb	19 59 42.3	+0.3
	baz=205						
EGS		0.61	7	*e*P	Pb	19 59 42.4	+0.2
	baz=15						
YHNB	**Yeheng**	0.61	315	P	Pg	19 59 41.9	+0.1
NTC	**Toucheng**	0.61	358	*e*P	Pb	19 59 42.8	+0.5
	baz=7.0						
TWT	**Tachien**	0.62	271	*i*P	Pb	19 59 42.5	0.0
	baz=269						
TWT				*i*S	Sb	19 59 50.7	-0.3
	baz=269						
NWLT	**Wulai**	0.62	329	⇓P	Pg	19 59 41.9	-0.2
	baz=324						
NWLT				S	Sg	19 59 49.7	-0.6
	baz=324						
NSK	**Sanguang**	0.63	314	⇓P	Pg	19 59 41.7	-0.4
	baz=314						
NSK				*i*S	Sg	19 59 50.0	-0.5
	baz=314						
TDCB	**Techi**	0.63	271	⇓*i*P	Pb	19 59 42.5	-0.2
	baz=270						
TDCB				*i*S	Sg	19 59 50.5	-0.2
	baz=270						
CHGB	**Renai**	0.65	254	⇑P	Pg	19 59 42.6	+0.1
	baz=252						
CHGB				S	Sb	19 59 51.5	-0.3
	baz=252						
OWD	**Renai**	0.68	246	*e*P	Pg	19 59 43.2	+0.1
	baz=243						
EGFH	**Guangfu**	0.69	214	*e*P	Pb	19 59 43.6	+0.1
	baz=225						
TIPB	**Shuangxi**	0.73	358	P	Pg	19 59 44.0	-0.1
	baz=359						
TIPB				S	Sg	19 59 53.1	-0.6
	baz=359						
TWB1	**Santiao Chiao**	0.78	9	*e*P	Pg	19 59 44.8	-0.1
	baz=11						
TWA	**Mucha**	0.78	342	P	Pb	19 59 45.2	+0.2
	baz=342						
TWA				*e*S	Sg	19 59 55.2	0.0
	baz=342						
NHDH	**Xindian Distri**	0.78	338	*e*P	Pb	19 59 45.6	+0.5
	baz=332						
TATO	**Taipei**	0.80	336	*e*P	Pg	19 59 45.2	-0.3
	baz=335						
TATO				*e*S	Sg	19 59 55.5	-0.6
	baz=335						
VWDT	**VWDT**	0.81	234	*e*P	Pb	19 59 45.6	0.0
	baz=239						
WHP	**Taichung City**	0.83	273	*e*P	Pb	19 59 46.0	0.0
	baz=272						
WHP				S	Sb	19 59 57.0	0.0
	baz=272						
NWF	**Wu-fen Shan**	0.83	356	P	Pb	19 59 46.1	0.0
	baz=348						
NWF				S	Sg	19 59 56.9	-0.1
	baz=348						
WFSB	**Wu-fen Shan**	0.83	356	P	Pg	19 59 46.2	+0.3
	baz=348						
WFSB				S	Sg	19 59 56.9	0.0
	baz=348						
NHY	**Taipei**	0.84	342	*e*P	Pb	19 59 44.8	-1.3
	baz=341						
HGSD	**Ruisui**	0.84	208	*e*P	Pn	19 59 47.0	-0.1
	baz=195						
HGSD				*e*S	Sn	20 00 00.6	+1.3
	baz=195						
BACT	**New Taipei Cit**	0.84	334	*e*P	Pb	19 59 45.7	-0.4
	baz=333						
WPL	**Puli Township**	0.85	255	*e*P	Pb	19 59 45.5	-0.8
	baz=254						
WPL				*e*S	Sg	19 59 57.7	+0.2
	baz=254						
TAP1	**Taipei**	0.85	339	*e*P	Pg	19 59 46.5	+0.2
	baz=339						
NJD	**Zhudong**	0.85	306	*e*P	Pg	19 59 46.5	+0.1
	baz=309						
TAP	**Taipei**	0.86	338	*e*P	Pg	19 59 46.5	0.0
	baz=339						
LIOB	**Emei**	0.86	298	*e*P	Pg	19 59 46.9	+0.3
	baz=297						
NSTT	**Nanjuang**	0.87	297	P	Pb	19 59 46.5	-0.1
	baz=296						
NSTT				S	Sb	19 59 57.4	-0.7
	baz=296						
DPDB	**Guoxing**	0.87	257	P	Pb	19 59 46.3	-0.4
	baz=255						
EHY	**Hungye**	0.88	214	*e*P	Pb	19 59 45.9	-0.9
	baz=212						
WCS	**Beigang Elemen**	0.88	258	*e*P	Pb	19 59 46.6	-0.2
	baz=257						
NTY	**Taoyuan**	0.91	326	*e*P	Pb	19 59 47.0	-0.3
	baz=331						
NTY				*e*S	Sn	20 00 01.6	+0.6
	baz=331						
HSN1	**Hsinchu**	0.93	305	*e*P	Pb	19 59 47.5	-0.1
	baz=295						
SSLB	**Suanglung**	0.94	241	*e*P	Pb	19 59 47.2	-0.6
	baz=241						
SSLB				*e*S	Sb	19 59 59.7	-0.3
	baz=241						
SSLB	**Suanglung**	0.94	241	P	Pb	19 59 47.4	-0.4
YM01	**YM01**	0.94	344	*e*P	Pg	19 59 48.0	0.0
	baz=328						
YM01				*e*S	Sb	20 00 00.2	0.0
	baz=328						
SMLT	**Sun Moon Lake**	0.94	248	*e*P	Pb	19 59 47.4	-0.5
	baz=241						
SMLT				S	Sn	20 00 01.1	-0.8
	baz=241						
TWS1	**Kuangyinshan**	0.94	335	*e*P	Pg	19 59 48.2	+0.1
	baz=335						
TWS1				*e*S	Sn	20 00 01.7	-0.1
	baz=335						
NCUH	**Zhongli**	0.95	320	P	Pn	19 59 48.5	-0.1
	baz=319						
NCUH				S	Sn	20 00 01.9	+0.1
	baz=319						
NCU	**National Centr**	0.95	320	*e*P	Pn	19 59 48.5	-0.1
	baz=319						
NCU				*e*S	Sn	20 00 01.8	-0.1
	baz=319						
SBCB	**Hsinchu**	0.96	305	*e*P	Pn	19 59 49.0	+0.2
	baz=303						
TYC	**Yuchr**	0.97	250	*e*P	Pb	19 59 48.1	-0.2
	baz=243						
TYC				*e*S	Sb	20 00 00.8	-0.1
	baz=243						
YM08	**YM08**	0.97	346	P	Pb	19 59 47.8	-0.7
	baz=329						
HSN	**Hsinchu**	0.98	305	*e*P	Pg	19 59 48.8	0.0
	baz=306						
YULB	**Yu-li**	0.98	211	*e*P	Pb	19 59 46.8	-1.8
	baz=210						
ANP	**Anpu**	0.99	342	*e*P	Pn	19 59 49.2	-0.1
	baz=342						
ECBN	**Changbin**	0.99	202	*e*P	Pn	19 59 49.2	0.0
	baz=202						
NTST	**Danshui**	0.99	338	*e*P	Pn	19 59 49.0	-0.2
	baz=337						
TWQ1	**Liyutan**	0.99	276	P	Pn	19 59 49.8	+0.6
	baz=275						
NJN	**Zhunan**	1.00	297	*e*P	Pb	19 59 48.7	-0.1
	baz=296						
NSY	**Sanyi**	1.01	280	*e*P	Pn	19 59 50.4	+0.9
	baz=279						
NSY				*e*S	Sn	20 00 04.2	+0.7
	baz=279						
NMLH	**Miaoli**	1.01	287	*e*P	Pn	19 59 50.2	+0.7
	baz=286						
EYUL	**Yuli**	1.01	209	*e*P	Pb	19 59 48.4	-0.7
	baz=222						
JYNG	**Yonagunijimaku**	1.02	78	P	Pn	19 59 49.5	-0.1
JYNG				S	Sg	20 00 02.6	-0.2
TWF1	**Yuli**	1.02	210	*e*P	Pb	19 59 47.6	-1.6
	baz=223						
TWY	**Chenhua**	1.06	347	*e*P	Pg	19 59 50.6	+0.4
	baz=331						
WWF	**Wufeng**	1.07	260	*e*P	Pg	19 59 51.3	+0.8
	baz=255						
TCU	**Taichung**	1.08	265	*e*P	Pg	19 59 51.4	+0.7
	baz=264						
TCU				*e*S	Sn	20 00 07.4	+2.3
	baz=264						
YOJ	**Yonaguni jima**	1.08	78	P	Pn	19 59 50.2	-0.2
	baz=69						
YOJ				S	Sn	20 00 06.3	+1.2
	baz=69						
YOJ	**Yonaguni jima**	1.08	78	P	Pg	19 59 50.5	-0.2
YOJ				S	Sn	20 00 06.5	+1.4
YOJ	**Yonaguni jima**	1.08	78	P	Pg	19 59 50.6	-0.1
WJS	**Zhushan**	1.11	248	*e*P	Pg	19 59 51.7	+0.5
	baz=241						
YUS	**Yu-Shan**	1.11	228	*e*P	Pb	19 59 50.2	-0.8
	baz=227						
WNT1	**Nantou City**	1.12	253	*e*P	Pg	19 59 51.4	-0.1
	baz=251						
WNT	**Mingjian**	1.13	252	*e*P	Pg	19 59 52.0	+0.4
	baz=249						
WNT				*e*S	Sg	20 00 08.1	+1.8
	baz=249						
FULB	**Fuli**	1.16	206	*e*P	Pn	19 59 51.2	-0.3
	baz=222						
WCHH	**Zhanghua**	1.19	263	*e*P	Pg	19 59 52.4	-0.4
	baz=261						
WYL	**Yuanlin Townsh**	1.20	257	*e*P	Pb	19 59 52.4	+0.3
	baz=255						
ALS	**Alishan**	1.20	233	*e*P	Pn	19 59 52.2	-0.2
	baz=232						
CHKT	**Chengkung**	1.22	202	*e*P	Pn	19 59 52.2	-0.1
	baz=187						
CHN5	**Tsauling**	1.25	239	*e*P	Pb	19 59 53.4	+0.2
	baz=238						
ELDTW	**Lidau**	1.30	216	*e*P	Pn	19 59 52.2	-1.3
	baz=204						
WGK	**Gukeng**	1.30	245	*e*P	Pb	19 59 54.1	+0.1
	baz=243						
WDLH	**Douliu**	1.32	246	*e*P	Pg	19 59 54.9	-0.3
	baz=244						
EDH	**Donghe**	1.36	202	*e*P	Pn	19 59 53.3	-0.9
	baz=190						
WRL	**Guolierlin Hig**	1.39	256	*e*P	Pb	19 59 55.9	+0.4
	baz=255						
WRL				S	Sg	20 00 15.8	+1.1
	baz=255						
CHN2	**Minshiung**	1.44	241	*e*P	Pb	19 59 56.0	-0.4
	baz=241						
CHN2				*e*S	Sg	20 00 17.6	+1.2
	baz=241						
WTK	**Tuku**	1.45	248	*e*P	Pb	19 59 56.2	-0.3
	baz=246						
STYH	**Taoyuan**	1.45	223	*e*P	Pb	19 59 56.5	-0.1
	baz=224						
STYH				*e*S	Sb	20 00 15.6	+0.8
	baz=224						
TPUB	**Ta-pu**	1.46	230	P	Pn	19 59 55.9	+0.3
	baz=231						
TPUB				S	Sg	20 00 16.3	-0.5
	baz=231						
TPUB	**Ta-pu**	1.46	230	P	Pb	19 59 56.7	0.0
STYT	**Tauyuan**	1.47	223	*e*P	Pb	19 59 56.5	-0.4
	baz=223						
LONT	**Longtian**	1.48	207	*e*P	Pn	19 59 54.8	-1.1
	baz=207						
CHY	**Chiayi**	1.50	241	*e*P	Pb	19 59 57.8	+0.4
	baz=241						
CHY				*e*S	Sg	20 00 18.8	+0.6
	baz=241						
WTP	**Ta-pu**	1.50	229	*e*P	Pb	19 59 57.3	-0.2
	baz=229						
WTP				*e*S	Sg	20 00 17.9	-0.5
	baz=229						
TWK	**Hsinying**	1.58	233	*e*P	Pb	19 59 58.4	-0.4
	baz=232						
TWK				*e*S	Sg	20 00 20.2	-0.6
	baz=232						
TWGBT	**Beinan**	1.58	207	*e*P	Pn	19 59 57.4	0.0
	baz=207						
LDUT	**Ludao**	1.60	193	*e*P	Pn	19 59 56.6	-1.0
	baz=185						
SNST	**Tainan City**	1.60	231	*e*P	Pb	19 59 59.4	+0.3
	baz=229						
CHN1	**Nanshi**	1.60	229	*e*P	Pb	19 59 59.4	+0.2
	baz=230						
CHN1				*e*S	Sg	20 00 20.5	-1.0
	baz=230						
WSF	**Szhu**	1.61	248	P	Pb	19 59 58.5	-0.7
	baz=248						
WSF				S	Sg	20 00 21.0	-0.6
	baz=248						
SGST	**Jiashian**	1.64	226	*e*P	Pn	19 59 58.6	+0.5
	baz=210						
SGST				*e*S	Sg	20 00 21.3	-1.3
	baz=210						
SLGT	**Liugui**	1.66	222	*e*P	Pb	19 59 59.6	-0.5
	baz=221						
ICHU	**Yijhu**	1.69	239	*e*P	Pb	20 00 00.0	-0.5
	baz=223						
ICHU				*e*S	Sg	20 00 23.7	-0.4
	baz=223						
IRIF	**Iriomote-Funau**	1.72	86	P	Pn	19 59 59.2	0.0
IRIF				S	Sb	20 00 21.7	-0.7
CHN8	**Yiju**	1.75	240	*e*P	Pn	19 59 59.4	-0.2
	baz=237						
HATJ	**Hateruma jima**	1.79	95	P	Pb	20 00 01.9	-0.5
HATJ				*e*S	Sb	20 00 24.8	+0.1
ECL	**Taimali**	1.83	207	*e*P	Pb	20 00 02.0	-1.0
	baz=199						
SSD	**Sandimen**	1.86	217	*e*P	Pb	20 00 02.7	-0.8
	baz=216						
TSMG	**Majia**	1.89	216	*e*P	Pb	20 00 02.7	-1.3
	baz=216						
TSMG				*e*S	Sb	20 00 27.7	+0.3
	baz=216						
JKRS	**Kuro-shima**	1.97	90	P	Pn	20 00 03.8	+1.2
JKRS				S	Sb	20 00 28.9	-0.8
MASBT	**Mashibuluo**	1.97	215	*e*P	Pn	20 00 03.8	+1.1
	baz=215						
MASBT				*e*S	Sb	20 00 29.3	-0.4
	baz=215						
JIJ	**Ishigaki jima**	2.09	86	P	Pn	20 00 04.5	+0.1
JIJ				S	Sn	20 00 30.6	+0.4
SCZT	**Fangliau**	2.18	212	*e*P	Pn	20 00 06.7	+1.2
	baz=202						
PNG	**Penghu**	2.21	253	*e*P	Pn	20 00 05.7	-0.2
	baz=250						
LAY	**Lan-yu**	2.21	187	*e*P	Pn	20 00 05.8	-0.2
	baz=193						
PHUB	**P'eng-hu**	2.21	251	*e*P	Pn	20 00 05.4	-0.5
	baz=249						
PHUB				*e*S	Sn	20 00 33.2	+0.2
	baz=249						
SLIU	**Shizi**	2.23	206	*e*P	Pn	20 00 07.9	+1.6
	baz=201						
JISG	**Ishigakijimahi**	2.27	81	P	Pn	20 00 08.0	+1.2
JISG				S	Sn	20 00 35.5	+1.0
VCHM	**Qimei**	2.45	246	*e*P	Pn	20 00 09.3	+0.1
	baz=244						
VCHM				*e*S	Sn	20 00 39.3	+0.4
	baz=244						
MATB	**Ma-tsu**	2.57	318	*e*P	Pn	20 00 10.5	-0.4
	baz=312						
PTMZ	**Houxiangcun**	2.61	288	*e*P	Pn	20 00 11.0	-0.5
	baz=284						
LYJJ	**Jianjiangzhen**	2.98	321	*e*P	Pn	20 00 16.0	-0.5
	baz=315						
XPSS	**Dashiqiu**	3.07	331	*e*P	Pn	20 00 17.1	-0.7
	baz=325						
KNMB	**Chin-men Tao**	3.17	275	*e*P	Pn	20 00 18.4	-0.7
	baz=270						
AXDP	**Jialang**	3.59	281	*e*P	Pn	20 00 24.7	-0.3
	baz=276						
ZPLA	**Ao Xicun**	3.76	266	*e*P	Pn	20 00 26.9	-0.4
	baz=262						

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*IDC **15** 20:15:31.8±1.1, 8°.60N×71°.51W, h0^{km}, mb3.7/3, mb1 4.1/7, mb1mx3.7/40, mbtmp4.0/7, ML3.8/4, MS2.8/2, Ms1 2.8/2, ms1mx2.4/31, Error ellipse: s-maj=23.8km s-min=9.5km az=152.0*
*FUNV **15** 20:15:33.0, 8°.45N×71°.45W, h1^{km}, MW3.5*
ISC 15 20:15:31.7±1.2**, 8°.55N**±0°.02×**71°.39W**±0°.02**, h3**^{km}±9^{km}**, n58,** σ**2^s.04**/101**, mb3.9**/3**, 1D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOCV	**Socops**	0.59	116	*e*P	Pg	20 15 44.4	+1.3
SOCV	**Socops**	0.59	116	*e*P	Pg	20 15 44.4	+1.3
SOCV				*e*S	Sb	20 15 53.4	-0.2
SDV	**Santo Domingo**	0.82	66	Pg	Pb	20 15 49.7	+0.9
	301nm,0.3s,baz=239,slow=5.9,SNR=202						
SDV				Lg	Lg	20 16 01.7	
	784nm,0.3s,baz=58,slow=14,SNR=29						
SDV	**Santo Domingo**	0.82	66	⇓*e*P	Pb	20 15 49.9	+1.1
SDV				*e*S	Sb	20 16 01.9	+1.5
CAPV	**Capacho**	1.14	233	*e*P	Pg	20 15 52.5	-1.0
CAPV				*e*S	Sg	20 16 06.7	-1.6
PAMC	**Pamplona, Colo**	1.76	227	*e*P	Pn	20 16 04.6	+1.0
PAMC				*e*S	Sn	20 16 27.6	+0.7
MCQV	**Machiques**	1.87	323	*e*P	Pb	20 16 06.1	-0.4
MCQV				*e*S	Sb	20 16 31.0	+0.6
OCAC	**Ocana**	1.93	261	*e*P	Pn	20 16 06.2	+0.6
OCAC				*e*S	Sn	20 16 31.3	+0.8
TAMC	**Tame, Arauca**	2.13	191	*e*P	Pn	20 16 09.5	+1.2
TAMC				*e*S	Sb	20 16 40.3	+2.3
LL6C	**La Loma 6 Bece**	2.20	303	*e*P	Pn	20 16 10.3	+1.2
LL6C				*e*S	Sn	20 16 37.3	+0.4
LL1C	**La Loma 1 Cana**	2.35	295	*e*P	Pg	20 16 16.7	-0.1
LL1C				*e*S	Sb	20 16 45.6	+1.4
ELOV	**Elorza**	2.44	129	*e*P	Pn	20 16 15.0	+2.6
ELOV				*e*S	Sb	20 16 46.9	+0.2
ELOV	**Elorza**	2.44	129	*e*P	Pn	20 16 13.9	+1.4
ELOV				*e*S	Sn	20 16 41.8	-1.0
SIQV	**Siquisique**	2.61	37	*e*P	Pb	20 16 17.9	-1.3
SIQV				*e*S	Sb	20 16 49.8	-1.9
BARC	**Barichara**	2.63	223	*e*P	Pn	20 16 17.2	+1.9
BARC				*e*S	Sb	20 16 54.2	+1.7
BARC				*i*		20 16 55.8	
	comp=Z,945nm,0.4s						
SMLC	**San Martn de**	2.66	276	*e*P	Pn	20 16 15.7	+0.2
SMLC				*e*S	Sb	20 16 52.8	-0.3
BRRC	**Barranca, Sant**	2.71	238	*e*P	Pb	20 16 21.2	+0.4
BRRC				*e*S	Sb	20 16 55.8	+1.3
BRRC				*i*		20 16 59.7	
	comp=Z,232nm,0.4s						
ARGC	**Ariguani, Magd**	3.10	295	*e*S	Sb	20 17 09.0	+3.2
ARGC				*i*		20 17 25.4	
	comp=Z,88nm,0.6s						
RUSC	**La Rusia**	3.12	213	*e*P	Pn	20 16 23.0	+0.7
RUSC				*e*S	Sb	20 17 08.3	+1.4
URIC	**Uribia, Colomb**	3.19	349	*e*P	Pb	20 16 30.6	+1.5
BAUV	**El Baul**	3.34	83	*e*P	Pn	20 16 26.9	+2.1
BAUV				*e*S	Sn	20 17 06.3	+1.3
JACV	**Jacura**	3.57	45	*e*P	Pn	20 16 29.6	+1.5
JACV				*e*S	Sn	20 17 11.6	+0.8
ZARC	**Zaragoza, Cauc**	3.59	253	*e*P	Pn	20 16 28.7	+0.4
SMRC	**Santa Marta, M**	3.81	313	*e*P	Pb	20 16 36.4	-3.3
SMRC				*e*S	Sn	20 17 18.7	+1.9
SPBC	**San Pablo de B**	3.92	223	*e*P	Pn	20 16 34.2	+1.4
SPBC				*e*S	Sn	20 17 21.3	+1.9
SJCC	**San Jacinto, C**	3.97	290	*e*P	Pn	20 16 36.0	+2.5
SJCC				*e*S	Sn	20 17 22.4	+1.7
TURV	**Turiamo**	3.98	61	*e*P	Pn	20 16 36.1	+2.4
TURV				*e*S	Sn	20 17 21.0	+0.1
BENV	**Beln**	4.00	69	*e*P	Pn	20 16 36.2	+2.2
BENV				*e*S	Sn	20 17 22.3	+0.8
UREC	**San Jos de Ur**	4.17	259	*e*P	Pn	20 16 38.8	+2.4
MOTC	**Monteria, Cord**	4.23	273	*e*P	Pn	20 16 38.4	+1.3
MOTC				*e*S	Sg	20 17 46.0	-1.7
PTGC	**Puerto Gaitan,**	4.38	190	*e*P	Pn	20 16 39.5	+0.3
PTGC				*e*S	Sb	20 17 48.4	+5.7
CHIC	**Chingaza**	4.53	211	*e*P	Pn	20 16 42.9	+1.3
CHIC				*e*S	Sn	20 17 33.7	-1.3
CHIC				*i*		20 17 37.5	
	comp=Z,52nm,0.3s						
NORC	**Norcasia**	4.55	230	*e*P	Pn	20 16 43.3	+1.8
NORC				*e*S	Sn	20 17 36.9	+1.9
ROSC	**El Rosal**	4.69	218	Pn	Pn	20 16 45.8	+2.0
	comp=Z,19nm,0.3s,baz=18,slow=6.4,SNR=16						
ROSC				Sn	Sn	20 17 42.1	+3.1
	comp=Z,14nm,0.3s,baz=7.4,slow=22,SNR=5.8						
ROSC				Lg	Lg	20 18 01.9	
	comp=Z,12nm,0.3s,baz=53,slow=21,SNR=2.5						
ROSC	**El Rosal**	4.69	218	*e*P	Pn	20 16 46.5	+2.7
ROSC				*e*S	Sn	20 17 42.0	+3.0
HELC	**Santa Helena**	4.72	241	*e*P	Pn	20 16 47.9	+3.7
HELC				*e*S	Sb	20 17 55.8	+2.9
VILC	**Villavicencio,**	4.96	208	*e*P	Pn	20 16 47.9	+0.6
VILC				*e*S	Sn	20 17 46.8	+1.5
DBBC	**Dabeiba**	5.01	253	*e*P	Pn	20 16 53.5	+5.6
DBBC				*e*S	Sg	20 18 09.3	-3.4
MERV	**Las Mercedes**	5.08	82	*e*P	Pn	20 16 50.1	+1.3
MERV				*e*S	Sn	20 17 46.2	-2.0
GUY2C	**Guyana, Caldas**	5.14	230	*e*P	Pn	20 16 52.5	+2.5
GUY2C				*e*S	Sn	20 17 54.0	+3.7
CBOC	**Ciudad Bolivar**	5.30	240	*e*P	Pn	20 16 54.9	+2.9
CBOC				*e*S	Sn	20 17 17.1	-37
BIRV	**Birongo**	5.41	69	*e*P	Pn	20 16 55.3	+2.0
BIRV				*e*S	Sn	20 17 53.7	-2.4
ANIL	**Santa Ana**	5.67	225	*e*P	Pn	20 16 59.1	+2.0
ANIL				*e*S	Sn	20 18 03.4	+0.5
ANIL				*i*		20 18 21.5	
	comp=Z,93nm,0.4s						
PRAC	**Prado**	5.92	216	*e*P	Pn	20 17 01.0	+0.5
PRAC				*e*S	Sn	20 18 06.0	-3.0
ORTC	**Ortega, Tolima**	5.99	220	*e*P	Pn	20 17 02.0	+0.6
ORTC				*e*S	Sn	20 18 09.3	-1.2
PLMC	**San Jos del P**	6.05	234	*e*P	Pn	20 17 04.7	+2.4
PLMC				*e*S	Sn	20 18 13.3	+1.1
GUVC	**San Jose del G**	6.09	192	*e*P	Pn	20 17 02.9	+0.2
GUVC				*e*S	Sn	20 18 11.0	-1.9
GUVC				*i*		20 18 16.6	
	comp=Z,172nm,0.3s						
MACC	**Macarena, Meta**	6.81	201	*e*P	Pn	20 17 11.1	-1.5
MACC				*e*S	Sn	20 18 26.0	-4.8
PCRV	**Puerto La Cruz**	6.86	76	Pn	Pn	20 17 16.5	+3.2
	comp=Z,3.6nm,0.3s,baz=335,slow=1.6,SNR=33						
PCRV				Sn	Sn	20 18 33.4	+1.4
	comp=Z,3.2nm,0.3s,baz=295,slow=16,SNR=1.6						
GARC	**Garzon, Huila**	7.52	213	*e*P	Pn	20 17 22.8	+0.2
GARC				*i*		20 18 05.5	
	comp=Z,29nm,0.3s						
GARC				*e*S	Sn	20 18 47.2	-1.4
SOTA	**Rioblanco**	8.22	219	*e*P	Pn	20 17 32.6	+0.2
SJG	**San Juan**	10.79	28	Pn	Pn	20 18 07.4	+0.2
	comp=Z,2.1nm,0.3s,baz=228,slow=16,SNR=2.4						
SJG				LR	LR	20 22 35.3	
	comp=Z,33nm,19.0s,baz=101,slow=39						
PTGA	**Pitinga**	14.65	128	Pn	Pn	20 18 58.2	-1.8
	comp=Z,0.4nm,0.3s,baz=319,slow=11,SNR=5.3						
PTGA				Sn	Sn	20 21 36.2	-6.9
	comp=Z,1.0nm,0.3s,baz=332,slow=22,SNR=1.9						
PTGA				Lg	Lg	20 23 13.4	
	comp=Z,1.3nm,0.3s,baz=334,slow=22,SNR=2.7						
MDP	**Montagnes des**	18.93	99	P	Pn	20 19 57.6	+3.1
	comp=Z,0.5nm,0.3s,baz=274,slow=14,SNR=5.8						
MDP				LR	LR	20 28 43.6	
	comp=Z,36nm,21.5s,baz=270,slow=42						
LPAZ	**La Paz**	24.89	173	P	P	20 20 58.2	+1.6
	comp=Z,0.7nm,0.5s,baz=355,slow=7.0,SNR=3.0						
PDAR	**Pinedale Array**	47.74	322	P	P	20 24 10.8	+0.5
	comp=Z,0.4nm,0.4s,baz=129,slow=9.4,SNR=5.9						
PLCA	**Paso Flores**	49.04	179	P	P	20 24 19.2	-0.9
	comp=Z,1.0nm,0.6s,baz=21,slow=8.6,SNR=4.6						
WRA	**Warramunga Arr**	152.65	243	PKPbc	PKPbc	20 35 29.7	-1.1
	comp=Z,0.6nm,0.6s,baz=108,slow=2.6,SNR=11						

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*JMA **15** 20:23:55.7±0.1, 24°.70N×122°.52E, h109^{km}±2^{km}, M3.0*
*TAP **15** 20:23:56.2, 24°.73N×122°.57E, h106^{km}, ML4.0, B*
*IDC **15** 20:23:57.1±8.6, 24°.92N×122°.76E, h126^{km}±95^{km}, mb2.9/5, mb1 3.1/6, mb1mx2.9/44, mbtmp3.4/6, ML3.8/1, Error ellipse: s-maj=75.7km s-min=18.9km az=61.0*
ISC 15 20:23:55.8±0.8**, 24°.72N**±0°.03×**122°.56E**±0°.02**, h110**^{km}±5^{km}**, n160,** σ**1^s.06**/296**, mb3.2**/5**, 26C-1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.45	127	P	Pn	20 24 12.5	+0.2
JYNG				S	Sn	20 24 24.6	-0.1
YOJ	Yonaguni jima baz=129	0.49	122	⇑*i*P	Pn	20 24 12.8	+0.2
YOJ	baz=129			*i* S	Sn	20 24 24.9	-0.3
YOJ	Yonaguni jima	0.49	122	P	Pn	20 24 12.8	+0.2
YOJ				S	Sn	20 24 25.2	0.0
YOJ	Yonaguni jima	0.49	122	P	Pn	20 24 12.7	+0.1
EGS	baz=273	0.58	282	P	Pn	20 24 13.9	+0.7
TWB1	Santiao Chiao baz=298	0.59	299	*i* P	Pn	20 24 13.8	+0.5
TWB1	baz=298			*i* S	Sn	20 24 26.4	-0.1
TWC	Suao baz=256	0.65	260	⇑*i*P	Pn	20 24 13.8	+0.1
TWC	baz=256			S	Sn	20 24 26.7	-0.6
NTC	Toucheng baz=278	0.67	282	P	Pn	20 24 14.4	+0.5
NTC	baz=278			S	Sn	20 24 27.7	+0.1
TIPB	Shuangxi baz=284	0.71	291	⇑*i*P	Pn	20 24 14.8	+0.6
TIPB	baz=284			*i* S	Sn	20 24 28.1	-0.1
ILA	Ilan baz=271	0.73	274	⇑*i*P	Pn	20 24 15.0	+0.6
ILA	baz=271			*i* S	Sn	20 24 28.8	+0.3
EWUT	Wuta baz=249	0.76	249	P	Pn	20 24 15.1	+0.4
EWUT	baz=249			*e*S	Sn	20 24 29.4	+0.5
NDS	Dongshan baz=261	0.77	264	⇑*i*P	Pn	20 24 15.2	+0.5
NDS	baz=261			S	Sn	20 24 29.0	-0.1
NWF	Wu-fen Shan baz=290	0.79	297	⇑*i*P	Pn	20 24 15.6	+0.5
NWF	baz=290			*i* S	Sn	20 24 29.5	0.0
WFSB	Wu-fen Shan baz=290	0.79	297	⇑*i*P	Pn	20 24 15.6	+0.7
WFSB	baz=290			*i* S	Sn	20 24 29.6	+0.2
ENA	Nanau baz=248	0.80	249	P	Pn	20 24 15.4	+0.4
ENA	baz=248			S	Sn	20 24 29.2	-0.3
TWE	Neicheng baz=267	0.81	270	⇑*i*P	Pn	20 24 15.7	+0.6
TWE	baz=267			S	Sn	20 24 29.5	-0.2
EHP	Heping Village baz=237	0.85	241	P	Pn	20 24 15.6	+0.1
ENTT	Nioudou baz=268	0.90	265	⇑*i*P	Pn	20 24 16.9	+0.8
ENTT	baz=268			S	Sn	20 24 31.4	0.0
TWA	Mucha baz=278	0.92	287	⇑*i*P	Pn	20 24 16.7	+0.5
TWA	baz=278			*i* S	Sn	20 24 31.2	-0.4
NHY	Taipei baz=280	0.95	290	P	Pn	20 24 17.2	+0.7
NHY	baz=280			S	Sn	20 24 32.3	+0.2
NDT	Datong Townshi baz=266	0.95	263	⇑P	Pn	20 24 17.6	+1.0
NDT	baz=266			S	Sn	20 24 32.8	+0.5
NWLT	Wulai baz=278	0.96	274	P	Pn	20 24 17.0	+0.3
NWLT	baz=278			*e*S	Sn	20 24 31.5	-0.8
NHDH	Xindian Distri baz=276	0.97	285	⇑*i*P	Pn	20 24 17.2	+0.6
NHDH	baz=276			*e*S	Sn	20 24 31.6	-0.8
TAP1	Taipei baz=280	0.99	289	*e*P	Pn	20 24 17.6	+0.7
YM01	YM01 baz=286	0.99	296	⇑*i*P	Pn	20 24 17.6	+0.6
YM01	baz=286			S	Sn	20 24 32.8	-0.1
YM08	YM08 baz=289	0.99	298	⇑P	Pn	20 24 17.3	+0.4
YM08	baz=289			S	Sn	20 24 32.5	-0.4
TATO	Taipei baz=276	1.00	285	*e*P	Pn	20 24 17.0	0.0
TATO	baz=276			S	Sn	20 24 31.8	-1.2
TAP	Taipei baz=279	1.00	289	⇑*i*P	Pn	20 24 17.5	+0.5
TAP	baz=279			S	Sn	20 24 32.7	-0.4
PCYT	Pengchaiyu baz=326	1.00	334	⇓P	Pn	20 24 17.9	+0.8
PCYT	baz=326			S	Sn	20 24 33.2	+0.1
ETL	Fush Village baz=237	1.02	237	P	Pn	20 24 17.1	-0.1
ETL	baz=237			S	Sn	20 24 32.8	-0.6
TWY	Chenhua baz=301	1.03	303	P	Pn	20 24 18.0	+0.7
NACB	Ninganchiao baz=238	1.03	238	⇑*i*P	Pn	20 24 17.1	-0.2
NACB	baz=238			S	Sn	20 24 33.4	-0.2
NSM	Shimen baz=294	1.04	303	P	Pn	20 24 18.2	+0.7
NSM	baz=294			*e*S	Sn	20 24 34.5	+0.6
ANP	Anpu baz=287	1.05	296	P	Pn	20 24 18.2	+0.6
ANP	baz=287			S	Sn	20 24 34.1	+0.1
BACT	New Taipei Cit baz=278	1.05	285	P	Pn	20 24 18.0	+0.5
YHNB	Yeheng baz=273	1.07	268	⇑*i*P	Pn	20 24 18.7	+0.8
YHNB	baz=273			*i* S	Sn	20 24 34.8	+0.2
YHNB	Yeheng	1.07	268	P	Pn	20 24 18.6	+0.7
TWD	Chiawan baz=229	1.08	234	⇑*i*P	Pn	20 24 17.9	0.0
TWD	baz=229			S	Sn	20 24 34.0	-0.5
NSK	Sanguang baz=273	1.09	268	⇑*i*P	Pn	20 24 18.8	+0.8
NSK	baz=273			S	Sn	20 24 34.7	-0.1
NTST	Danshui baz=286	1.10	294	⇑P	Pn	20 24 18.9	+0.8
NTST	baz=286			*e*S	Sn	20 24 35.3	+0.5
TWS1	Kuangyinshan baz=282	1.10	290	⇑*i*P	Pn	20 24 18.6	+0.5
TWS1	baz=282			S	Sn	20 24 34.8	-0.1
ETLH	Xiulin Townshi baz=238	1.10	243	⇑*i*P	Pn	20 24 18.4	+0.2
ETLH	baz=238			S	Sn	20 24 34.9	-0.3
NNSB	Datong baz=250	1.11	255	⇑P	Pn	20 24 18.8	+0.5
NNSB	baz=250			S	Sn	20 24 34.8	-0.5
NNS	Nan Shan baz=250	1.11	256	⇑*i*P	Pn	20 24 18.9	+0.6
NNS	baz=250			S	Sn	20 24 35.6	+0.3
IRIF	Iriomote-Funau	1.14	110	P	Pn	20 24 18.7	+0.2
IRIF				S	Sn	20 24 36.0	+0.4
HWA	Hwalien baz=225	1.14	230	⇑*i*P	Pn	20 24 18.9	+0.4
HWA	baz=225			*e*S	Sn	20 24 36.3	+0.7
NTY	Taoyuan baz=279	1.18	284	P	Pn	20 24 19.3	+0.4
NTY	baz=279			S	Sn	20 24 36.6	+0.3
TEYL	Yanliau Villag baz=224	1.22	226	⇑*i*P	Pn	20 24 19.4	0.0
TEYL	baz=224			S	Sn	20 24 36.8	-0.4
NCU	National Centr baz=288	1.27	282	P	Pn	20 24 21.0	+1.1
NCU	baz=288			S	Sn	20 24 39.5	+1.3
NCUH	Zhongli baz=288	1.27	281	P	Pn	20 24 21.1	+1.1
NCUH	baz=288			S	Sn	20 24 39.2	+1.0
FUSS	Fushou baz=244	1.28	249	P	Pn	20 24 21.3	+0.9
FUSS	baz=244			S	Sn	20 24 38.7	-0.2
WHF	Hehuan Shan baz=240	1.31	244	*i* P	Pn	20 24 21.3	+0.5
WHF	baz=240			*i* S	Sn	20 24 38.8	-1.0
HATJ	Hateruma jima	1.32	120	P	Pn	20 24 21.6	+1.1
HATJ				S	Sn	20 24 40.2	+1.0
NJD	Zhudong baz=270	1.33	271	P	Pn	20 24 21.9	+1.2
NJD	baz=270			S	Sn	20 24 40.2	+0.7
TWT	Tachien baz=243	1.34	250	P	Pn	20 24 22.4	+1.4
TWT	baz=243			S	Sn	20 24 40.9	+0.9
TDCB	Techi baz=244	1.35	250	P	Pn	20 24 22.1	+1.0
TDCB	baz=244			*e*S	Sn	20 24 39.2	-1.0
ESL	Shilin baz=237	1.36	229	*i* P	Pn	20 24 20.7	-0.3
ESL	baz=237			*e*S	Sn	20 24 39.1	-1.1
TEGC	Jichi Village baz=223	1.37	223	P	Pn	20 24 21.4	+0.3
TEGC	baz=223			S	Sn	20 24 40.5	+0.3
HSN1	Hsinchu baz=272	1.40	273	P	Pn	20 24 22.4	+1.0
HSN1	baz=272			S	Sn	20 24 41.7	+0.9
LIOB	Emei baz=267	1.40	267	*i* P	Pn	20 24 22.3	+0.8
LIOB	baz=267			*i* S	Sn	20 24 41.4	+0.4
JKRS	Kuro-shima	1.41	110	P	Pn	20 24 22.3	+0.8
JKRS				S	Sn	20 24 42.0	+0.9
NSTT	Nanjuang baz=266	1.42	267	*i* P	Pn	20 24 22.3	+0.6
NSTT	baz=266			*i* S	Sn	20 24 41.2	0.0
CHGB	Renai baz=237	1.42	243	P	Pn	20 24 22.8	+0.9
CHGB	baz=237			S	Sn	20 24 42.1	+0.4
SBCB	Hsinchu baz=272	1.43	273	P	Pn	20 24 22.7	+0.9
SBCB	baz=272			S	Sn	20 24 42.7	+1.2
HSN	Hsinchu baz=274	1.44	274	P	Pn	20 24 22.4	+0.4
HSN	baz=274			S	Sn	20 24 41.6	-0.2
EGFH	Guangfu baz=221	1.47	225	P	Pn	20 24 22.3	0.0
EGFH	baz=221			S	Sn	20 24 41.0	-1.4
OWD	Renai baz=234	1.47	239	*i* P	Pn	20 24 23.1	+0.6
OWD	baz=234			*i* S	Sn	20 24 42.4	-0.3
JIJ	Ishigaki jima	1.49	103	P	Pn	20 24 22.8	+0.3
JIJ				S	Sn	20 24 42.3	-0.5
WHP	Taichung City baz=253	1.53	254	P	Pn	20 24 24.7	+1.6
WHP	baz=253			*e*S	Sn	20 24 45.0	+1.2
NJN	Zhunan baz=268	1.53	269	P	Pn	20 24 23.7	+0.7
NJN	baz=268			S	Sn	20 24 44.9	+1.2
HGSD	Ruisui baz=221	1.60	220	*e*P	Pn	20 24 23.9	+0.1
HGSD	baz=221			*e*S	Sn	20 24 44.5	-0.7
JISG	Ishigakijimahi	1.60	94	P	Pn	20 24 24.4	+0.5
JISG				S	Sn	20 24 44.9	-0.3
VWDT	VWDT baz=229	1.61	234	P	Pn	20 24 24.8	+0.8
VWDT	baz=229			*e*S	Sn	20 24 45.7	+0.3
NMLH	Miaoli baz=263	1.62	264	P	Pn	20 24 24.8	+0.7
NMLH	baz=263			*e*S	Sn	20 24 45.4	-0.1
WPL	Puli Township baz=243	1.62	244	P	Pn	20 24 25.4	+1.4
WPL	baz=243			S	Sn	20 24 46.9	+1.3
DPDB	Guoxing baz=246	1.64	246	P	Pn	20 24 26.0	+1.7
DPDB	baz=246			*e*S	Sn	20 24 47.6	+1.6
WCS	Beigang Elemen baz=246	1.64	247	*e*P	Pn	20 24 26.0	+1.7
WCS	baz=246			*e*S	Sn	20 24 47.2	+1.2
EHY	Hungye baz=223	1.65	223	*e*P	Pn	20 24 24.0	-0.5
EHY	baz=223			*e*S	Sn	20 24 44.4	-1.9
NSY	Sanyi baz=259	1.66	260	P	Pn	20 24 25.8	+1.2
NSY	baz=259			S	Sn	20 24 47.3	+0.8
TWQ1	Liyutan baz=257	1.67	257	P	Pn	20 24 25.6	+1.0
TWQ1	baz=257			S	Sn	20 24 47.5	+0.9
ECBN	Changbin baz=212	1.72	216	P	Pn	20 24 25.4	0.0
ECBN	baz=212			S	Sn	20 24 47.1	-0.8
SMLT	Sun Moon Lake baz=236	1.73	241	*i* P	Pn	20 24 26.8	+1.3
SMLT	baz=236			*e*S	Sn	20 24 50.5	+2.4
SSLB	Suanglung baz=235	1.73	238	P	Pn	20 24 26.2	+0.7
SSLB	baz=235			*e*S	Sn	20 24 49.7	+1.6
SSLB	Suanglung	1.73	238	P	Pn	20 24 26.2	+0.7
TYC	Yuchr baz=246	1.75	243	P	Pn	20 24 27.4	+1.7
TYC	baz=246			*e*S	Sn	20 24 50.3	+1.9
YULB	Yu-li baz=229	1.75	221	*e*P	Pn	20 24 25.4	-0.3
YULB	baz=229			S	Sn	20 24 46.7	-1.8
EYUL	Yuli baz=228	1.77	220	P	Pn	20 24 26.4	+0.4
EYUL	baz=228			S	Sn	20 24 48.4	-0.6
TWF1	Yuli baz=228	1.78	220	P	Pn	20 24 25.9	-0.2
TWF1	baz=228			*e*S	Sn	20 24 48.0	-1.2
TCU	Taichung baz=252	1.81	252	P	Pn	20 24 27.5	+1.2
TCU	baz=252			S	Sn	20 24 50.8	+1.1
WWF	Wufeng baz=258	1.82	249	P	Pn	20 24 27.8	+1.2
WWF	baz=258			S	Sn	20 24 51.0	+0.9
WJS	Zhushan baz=252	1.89	242	P	Pn	20 24 29.2	+1.7
WJS	baz=252			*e*S	Sn	20 24 54.0	+2.3
FULB	Fuli baz=213	1.91	218	*i* P	Pn	20 24 27.9	+0.2
FULB	baz=213			*i* S	Sn	20 24 51.6	-0.3
YUS	Yu-Shan baz=225	1.91	230	P	Pn	20 24 29.0	+0.9
YUS	baz=225			*e*S	Sn	20 24 53.0	+0.2
WCHH	Zhanghua baz=251	1.93	251	*i* P	Pn	20 24 28.8	+0.9
WCHH	baz=251			*i* S	Sn	20 24 53.6	+1.2
CHKT	Chengkung baz=209	1.95	214	*e*P	Pn	20 24 27.8	-0.3
CHKT	baz=209			*e*S	Sn	20 24 50.7	-2.2
JTJ	Tarama	1.96	92	P	Pn	20 24 28.9	+0.7
JTJ				S	Sn	20 24 52.4	-0.6
ALS	Alishan baz=228	2.00	233	*e*P	Pn	20 24 30.7	+1.6
ALS	baz=228			*e*S	Sn	20 24 55.2	+0.7
ECS	Chishang baz=226	2.03	217	P	Pn	20 24 29.9	+0.7
ECS	baz=226			S	Sn	20 24 54.4	-0.3
ELDTW	Lidau baz=222	2.08	223	*i* P	Pn	20 24 29.8	-0.1
ELDTW	baz=222			*i* S	Sn	20 24 54.9	-1.0
EDH	Donghe baz=209	2.08	214	P	Pn	20 24 29.8	-0.1
EDH	baz=209			*e*S	Sn	20 24 54.3	-1.6
WGK	Gukeng baz=251	2.09	241	*i* P	Pn	20 24 31.6	+1.6
WGK	baz=251			*e*S	Sn	20 24 58.7	+2.6
WRL	Guolierlin Hig baz=255	2.15	248	*e*P	Pn	20 24 31.1	+0.4
WRL	baz=255			*e*S	Sn	20 24 56.8	-0.6
WTK	Tuku baz=243	2.23	243	P	Pn	20 24 32.8	+1.0
WTK	baz=243			S	Sn	20 25 00.0	+0.8
CHN2	Minshiung baz=249	2.24	239	*i* P	Pn	20 24 33.7	+1.9
CHN2	baz=249			*e*S	Sn	20 25 01.6	+2.2
STYH	Taoyuan baz=227	2.24	227	*e*P	Pn	20 24 33.5	+1.6
STYH	baz=227			*e*S	Sn	20 25 00.4	+0.9
WTCT	Ta-ch'eng baz=255	2.24	248	P	Pn	20 24 32.5	+0.6
WTCT	baz=255			S	Sn	20 24 59.1	-0.4
CHN4	Tsaushan baz=233	2.25	233	*e*P	Pn	20 24 32.0	-0.1
TPUB	Ta-pu baz=226	2.26	232	P	Pn	20 24 33.6	+1.4
TPUB	baz=226			*e*S	Sn	20 25 02.4	+2.4
TPUB	Ta-pu	2.26	232	P	Pn	20 24 33.6	+1.4
STYT	Tauyuan baz=227	2.26	227	P	Pn	20 24 33.9	+1.7
STYT	baz=227			*e*S	Sn	20 25 02.0	+1.9
LDUT	Ludao baz=211	2.27	206	P	Pn	20 24 32.2	0.0
LDUT	baz=211			*e*S	Sn	20 24 58.4	-1.7
CHY	Chiayi baz=248	2.30	238	P	Pn	20 24 34.0	+1.4
CHY	baz=248			*e*S	Sn	20 25 01.8	+1.0
WTP	Ta-pu baz=231	2.30	231	*i* P	Pn	20 24 34.3	+1.5
WTP	baz=231			*e*S	Sn	20 25 03.6	+2.5
TWGBT	Beinan baz=221	2.33	216	P	Pn	20 24 32.9	-0.1
TWGBT	baz=221			*e*S	Sn	20 25 00.2	-1.4
TTN	Taitung baz=221	2.34	214	P	Pn	20 24 34.0	+0.8
TWK	Hsinying baz=233	2.38	233	P	Pn	20 24 35.4	+1.7
TWK	baz=233			*e*S	Sn	20 25 04.2	+1.3
JIRB	Irabujima	2.38	87	P	Pn	20 24 34.4	+0.7
JIRB				S	Sn	20 25 02.9	+0.1
WSF	Szhu baz=244	2.39	244	*i* P	Pn	20 24 34.5	+0.8
WSF	baz=244			*i* S	Sn	20 25 03.6	+0.7
CHN1	Nanshi baz=231	2.40	231	*i* P	Pn	20 24 35.5	+1.5
CHN1	baz=231			*e*S	Sn	20 25 04.5	+1.2
SNST	Tainan City baz=232	2.40	232	P	Pn	20 24 36.0	+1.9
SNST	baz=232			*e*S	Sn	20 25 04.6	+1.3
SGST	Jiashian baz=229	2.43	228	P	Pn	20 24 35.1	+0.7
SGST	baz=229			*e*S	Sn	20 25 05.5	+1.5
SLGT	Liugui baz=226	2.45	226	P	Pn	20 24 36.5	+1.9
SLGT	baz=226			*e*S	Sn	20 25 06.9	+2.5
JIKM	Ikemajima	2.46	85	P	Pn	20 24 35.9	+1.3
JIKM				*e*S	Sn	20 25 05.7	+1.2
ICHU	Yijhu baz=238	2.48	237	P	Pn	20 24 35.7	+0.7
ICHU	baz=238			*e*S	Sn	20 25 04.8	-0.3
JMJ	Miyako jima 2 baz=87	2.49	87	*e*P	Pn	20 24 37.4	+2.3
JMJ	baz=87			*e*S	Sn	20 25 06.9	+1.6
JMJ	Miyako jima 2	2.49	87	P	Pn	20 24 36.0	+0.9
JMJ2	Miyako jima3	2.52	89	P	Pn	20 24 36.7	+1.2
JMJ2				S	Sn	20 25 06.8	+0.8
CHN8	Yiju baz=238	2.54	238	P	Pn	20 24 36.6	+0.8
CHN8	baz=238			*e*S	Sn	20 25 08.0	+1.5
ECL	Taimali baz=210	2.57	215	*e*P	Pn	20 24 35.9	-0.3
ECL	baz=210			*e*S	Sn	20 25 05.0	-2.3
JOGS	Gusukube	2.59	89	P	Pn	20 24 37.6	+1.2
JOGS				S	Sn	20 25 08.3	+0.6
SSD	Sandimen baz=223	2.64	222	*i* P	Pn	20 24 38.8	+1.7
SSD	baz=223			*e*S	Sn	20 25 10.1	+1.3
SCLT	Jiali baz=228	2.65	235	*i* P	Pn	20 24 38.7	+1.4
SCLT	baz=228			*e*S	Sn	20 25 11.0	+1.9
TSMG	Majia baz=222	2.66	221	*e*P	Pn	20 24 39.5	+2.1
TSMG	baz=222			*e*S	Sn	20 25 10.1	+0.8
MASBT	Mashibuluo baz=221	2.74	220	P	Pn	20 24 40.2	+1.8
MASBT	baz=221			*e*S	Sn	20 25 12.0	+0.8
MATB	Ma-tsu baz=300	2.76	302	*e*P	Pn	20 24 38.4	-0.1
MATB	baz=300			*e*S	Sn	20 25 10.8	-0.7
TAW	Tawu baz=214	2.80	213	S	Sn	20 25 11.2	-1.4
EAST	Anshuo baz=211	2.81	214	P	Pn	20 24 39.7	+0.4
EAST	baz=211			S	Sn	20 25 11.5	-1.2
LAY	Lan-yu baz=200	2.83	199	P	Pn	20 24 39.1	-0.5
SCZT	Fangliau baz=229	2.94	218	P	Pn	20 24 42.6	+1.6
SCZT	baz=229			S	Sn	20 25 16.0	+0.2
SLIU	Shizi baz=211	2.97	213	P	Pn	20 24 41.8	+0.3
SLIU				S	Sn	20 25 15.7	-0.9

	baz=211						
PNG	**Penghu**	**2.97**	**248**	P	**Pn**	**20 24 41.3**	**-0.1**
	baz=248						
PNG				S	**Sn**	**20 25 14.2**	**-2.4**
	baz=248						
PHUB	**P'eng-hu**	**2.98**	**247**	P	**Pn**	**20 24 41.2**	**-0.3**
	baz=247						
PHUB				S	**Sn**	**20 25 14.6**	**-2.1**
	baz=247						
XPSS	**Dashiqiu**	**3.06**	**316**	*e*P	**Pn**	**20 24 42.5**	**-0.2**
	baz=306						
XPSS				*e*S	**Sn**	**20 25 18.9**	**+0.2**
	baz=306						
LYJJ	**Jianjiangzhen**	**3.11**	**306**	*e*P	**Pn**	**20 24 43.0**	**-0.3**
	baz=304						
PTMZ	**Houxiangcun**	**3.14**	**277**	*e*P	**Pn**	**20 24 43.3**	**-0.3**
	baz=275						
PTMZ				*e*S	**Sn**	**20 25 18.4**	**-2.1**
	baz=275						
HEN	**Hengchun**	**3.18**	**212**	S	**Sn**	**20 25 22.5**	**+1.0**
	baz=224						
TWKBT	**Hengchun**	**3.20**	**210**	P	**Pn**	**20 24 45.2**	**+0.7**
	baz=206						
TWKBT				*e*S	**Sn**	**20 25 21.2**	**-0.8**
	baz=206						
VCHM	**Qimei**	**3.23**	**243**	P	**Pn**	**20 24 45.0**	**+0.1**
	baz=236						
VCHM				S	**Sn**	**20 25 21.3**	**-1.4**
	baz=236						
KNM	**Kinmen**	**3.77**	**266**	*e*P	**Pn**	**20 24 53.5**	**+1.5**
	baz=258						
KNM				*e*S	**Sn**	**20 25 35.6**	**+0.1**
	baz=258						
KNMB	**Chin-men Tao**	**3.80**	**267**	*e*P	**Pn**	**20 24 52.2**	**-0.2**
	baz=258						
KNMB				*e*S	**Sn**	**20 25 34.6**	**-1.8**
	baz=258						
AXDP	**Jialang**	**4.17**	**273**	*e*P	**Pn**	**20 24 57.8**	**+0.3**
	baz=271						
ZPLA	**Ao Xicun**	**4.45**	**261**	*e*P	**Pn**	**20 25 01.2**	**0.0**
	baz=260						
ZPLA				*e*S	**Sn**	**20 25 49.9**	**-2.2**
	baz=260						
JOW	**Kunigami**	**5.57**	**67**	P	**Pn**	**20 25 15.1**	**-1.2**
	6.2nm,0.3s,baz=174,slow=10,SNR=64						
JOW				S	**Sn**	**20 26 14.5**	**-4.6**
	1.5nm,0.3s,baz=108,slow=19,SNR=1.5						
JOW	**Kunigami**	**5.57**	**67**	*e*P	**Pn**	**20 25 15.2**	**-1.1**
	baz=68						
JOW	**Kunigami**	**5.57**	**67**	P	**Pn**	**20 25 15.4**	**-0.9**
SONM	**Songino Array**	**26.39**	**335**	P	**P**	**20 29 21.4**	**-0.5**
	0.2nm,0.3s,baz=138,slow=8.9,SNR=5.4						
MKAR	**Makanchi Array**	**38.83**	**315**	P	**P**	**20 31 09.2**	**-0.8**
	0.6nm,0.9s,baz=109,slow=8.0,SNR=1.9						
KURBB	**Kurchatov Arra**	**42.51**	**319**	P	**P**	**20 31 39.1**	**-1.0**
	0.1nm,0.3s,baz=107,slow=9.6,SNR=2.3						
WRA	**Warramunga Arr**	**45.85**	**164**	P	**P**	**20 32 07.4**	**+0.3**
	0.3nm,0.7s,baz=346,slow=8.8,SNR=5.0						
ASAR	**Alice Springs**	**49.34**	**166**	P	**P**	**20 32 35.2**	**+1.2**
	0.2nm,0.8s,baz=348,slow=8.7,SNR=2.1						

IDC 15 20:37:54.3±2.9**,29°.74S**×**71°.96W,h0**^{km}**,mb4.0**/1**,**
mb1 3.8/2**,mb1mx3.5**/16**,mbtmp3.7**/2**,ML3.2**/1**,MS3.1**/2**,**
Ms1 3.1/2**,ms1mx2.6**/22**,Error ellipse: s-maj=125.3km**
s-min=48.6km az=96.0,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H03N1	**Juan Fernandez**	**6.98**	**236**	T	T	20 47 29.7	
	baz=64,slow=71,SNR=64						
H03N2	**Juan Fernandez**	**7.00**	**236**	T	T	20 47 04.7	
	baz=64,slow=71,SNR=74						
H03N3	**Juan Fernandez**	**7.00**	**236**	T	T	20 47 26.6	
	baz=64,slow=71,SNR=64						
PLCA	**Paso Flores**	**11.03**	**174**	Pn	Pn	20 40 33.4	0.0
	0.0nm,0.3s,baz=348,slow=16,SNR=1.6						
CPUP	**Villa Florida**	**13.36**	**79**	LR	LR	20 47 15.1	
	comp=Z,57nm,20.3s,baz=118,slow=42						
TSUM	**Tsumeb**	**80.33**	**107**	LR	LR	21 21 15.2	
	comp=Z,16nm,20.7s,baz=150,slow=32						
TORD	**Torodi Ar. Bea**	**82.71**	**70**	P	P	20 50 20.3	0.0
	0.9nm,0.7s,baz=244,slow=4.6,SNR=5.5						
ZALV	**Zalesovo Beam**	**150.52**	**28**	PKPbc	PKPbc	20 57 47.2	-0.3
	1.5nm,0.7s,baz=315,slow=1.7,SNR=7.3						

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*NIC **15** 21:01:18.5±0.0,34°.10N×33°.75E,h10^{km}±2^{km},Ml2.9/6*
*GII **15** 21:01:19.5±0.0,34°.07N×33°.94E,h2^{km},Mm2.4/2*
ISC 15 21:01:18.3±1.4**,34°.12N**±0°.03×**33°.83E**±0°.04**,h12**^{km}±12^{km}**,**
n17,σ**0^{s}.91**/28**,2D,Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASGA	**Asgata**	**0.81**	**324**	P	**Pb**	**21 01 33.3**	**-1.1**
ASGA				AML	AML	21 01 44.6	
	0.9nm,0.7s						
ASGA				AML	AML	21 01 44.6	
	0.9nm,0.7s						
ASGA				AML	AML	21 01 44.7	
	1.8nm,0.9s						
ASGA				AML	AML	21 01 44.7	
	1.8nm,0.9s						
ASGA				S	**Sb**	**21 01 45.7**	**+0.4**
PARAL	**Paralimni**	**0.89**	**11**	P	**Pg**	**21 01 36.4**	**+1.0**
PARAL				S	**Sn**	**21 01 49.7**	**+0.4**
PARAL				AML	AML	21 01 51.6	
	0.8nm,1.3s						
PARAL				AML	AML	21 01 51.6	
	0.8nm,1.3s						
PARAL				AML	AML	21 01 54.0	
	1.6nm,0.8s						
PARAL				AML	AML	21 01 54.0	
	1.6nm,0.8s						
MVOU	**Mavrovouni**	**0.90**	**350**	P	**Pb**	**21 01 35.2**	**-0.7**
MVOU				S	**Sn**	**21 01 50.0**	**+0.3**
MVOU				AML	AML	21 01 54.3	
	0.8nm,0.8s						
MVOU				AML	AML	21 01 54.3	
	0.8nm,0.9s						
MVOU				AML	AML	21 01 54.3	
	0.8nm,0.8s						
MVOU				AML	AML	21 01 54.3	
	0.8nm,0.9s						
CSS	**Mathiatis**	**0.93**	**334**	P	**Pb**	**21 01 36.0**	**-0.4**
CSS				S	**Sb**	**21 01 49.6**	**+0.9**
ATHAL	**Athalassa**	**1.07**	**341**	S	**Sn**	**21 01 54.3**	**+0.3**
NATA	**Nata**	**1.23**	**303**	⇓*e*P	**Pn**	**21 01 40.2**	**-1.0**
NATA				S	**Sn**	**21 01 58.3**	**+0.6**
NATA				AML	AML	21 02 00.5	
	1.1nm,0.8s						
NATA				AML	AML	21 02 00.5	
	1.1nm,0.8s						
NATA				AML	AML	21 02 01.9	
	0.8nm,0.7s						
NATA				AML	AML	21 02 01.9	
	0.8nm,0.7s						
ALFC	**Alefka**	**1.44**	**316**	P	**Pn**	**21 01 43.7**	**-0.6**
ALFC				AML	AML	21 02 05.9	
	0.8nm,0.8s						
ALFC				AML	AML	21 02 06.3	
	0.7nm,0.7s						
AKMS	**Akamas**	**1.52**	**306**	⇓P	**Pn**	**21 01 44.8**	**-0.5**
AKMS				S	**Sn**	**21 02 05.4**	**+0.4**
AKMS				AML	AML	21 02 06.7	
	0.4nm,0.3s						
AKMS				AML	AML	21 02 06.7	
	0.4nm,0.3s						
AKMS				AML	AML	21 02 07.4	
	0.5nm,1.0s						
AKMS				AML	AML	21 02 07.4	
	0.5nm,1.0s						
OSC2	**CSNet OBS 4**	**1.67**	**232**	P	**Pb**	**21 01 48.6**	**-0.3**
OSC2				S	**Sg**	**21 02 11.4**	**-0.6**
MMC7	**Mount Meron ar**	**1.71**	**130**	Pn	**Pb**	**21 01 49.3**	**-0.4**
MMC7				Sn	**Sb**	**21 02 10.3**	**-0.8**
MMA0B	**Mount Meron ar**	**1.72**	**130**	Pn	**Pb**	**21 01 49.1**	**-0.8**
MMA0B				Sn	**Sb**	**21 02 09.8**	**-1.7**
GEM	**Giv'at Ha'Em**	**1.78**	**120**	Pn	**Pb**	**21 01 49.7**	**-1.2**
GEM				Sn	**Sb**	**21 02 12.1**	**-1.1**
OFRI	**`Ofer**	**1.79**	**147**	Pn	**Pb**	**21 01 49.8**	**-1.2**
OSC1	**CSNet OBS 1**	**2.21**	**254**	P	**Pn**	**21 01 54.9**	**+0.1**
HMDT	**Nahal Hemdat**	**2.35**	**142**	Pn	**Pn**	**21 01 57.9**	**+1.2**
DSI	**Dead Sea**	**2.86**	**152**	Pn	**Pn**	**21 02 04.4**	**+0.6**
DSI				Sn	**Sn**	**21 02 39.6**	**+1.5**
HRFI	**Mount Harif**	**4.20**	**166**	Pn	**Pn**	**21 02 23.1**	**+0.9**

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*NIC **15** 21:02:59.9±0.0,34°.19N×33°.85E,h15^{km}±1^{km},Ml3.0/5*
*GII **15** 21:03:04.6±0.3,34°.04N×33°.66E,h31^{km},Mm2.5/2*
ISC 15 21:02:59.4±1.3**,34°.12N**±0°.04×**33°.78E**±0°.04**,h11**^{km}±11^{km}**,**
n20,σ**0^{s}.96**/36**,2C,Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASGA	**Asgata**	**0.80**	**326**	⇑*e*P	**Pg**	**21 03 14.9**	**0.0**
ASGA				S	**Sb**	**21 03 26.6**	**+0.5**
ASGA				AML	AML	21 03 27.4	
	1.6nm,0.3s						
ASGA				AML	AML	21 03 27.4	
	1.6nm,0.3s						
ASGA				AML	AML	21 03 27.8	
	2.9nm,0.4s						
ASGA				AML	AML	21 03 27.8	
	2.9nm,0.4s						
PARAL	**Paralimni**	**0.90**	**14**	S	**Sg**	**21 03 27.8**	**-0.6**
MVOU	**Mavrovouni**	**0.90**	**352**	P	**Pg**	**21 03 16.6**	**-0.3**
MVOU				S	**Sg**	**21 03 28.9**	**+0.3**
MVOU				AML	AML	21 03 33.9	
	0.9nm,0.5s						
MVOU				AML	AML	21 03 33.9	
	0.9nm,0.5s						
MVOU				AML	AML	21 03 33.9	
	0.7nm,0.3s						
MVOU				AML	AML	21 03 33.9	
	0.7nm,0.3s						
CSS	**Mathiatis**	**0.92**	**336**	⇑*e*P	**Pg**	**21 03 16.4**	**-0.7**
CSS				S	**Sg**	**21 03 29.4**	**+0.2**
ATHAL	**Athalassa**	**1.07**	**343**	S	**Sg**	**21 03 34.2**	**+0.3**
NATA	**Nata**	**1.20**	**304**	P	**Pb**	**21 03 21.7**	**-0.5**
NATA				S	**Sn**	**21 03 39.3**	**+0.9**
NATA				AML	AML	21 03 43.3	
	2.2nm,0.4s						
NATA				AML	AML	21 03 43.3	
	2.2nm,0.4s						
NATA				AML	AML	21 03 43.6	
	1.3nm,0.4s						
NATA				AML	AML	21 03 43.6	
	1.3nm,0.4s						
ALFC	**Alefka**	**1.42**	**317**	P	**Pn**	**21 03 24.8**	**-0.4**
ALFC				S	**Sn**	**21 03 44.3**	**+0.3**
ALFC				AML	AML	21 03 47.3	
	1.2nm,0.4s						
ALFC				AML	AML	21 03 47.3	
	1.2nm,0.4s						
ALFC				AML	AML	21 03 47.7	
	1.2nm,0.6s						
ALFC				AML	AML	21 03 47.7	
	1.2nm,0.6s						
AKMS	**Akamas**	**1.49**	**307**	P	**Pn**	**21 03 25.8**	**-0.5**
AKMS				S	**Sb**	**21 03 46.8**	**+0.6**
AKMS				AML	AML	21 03 47.4	
	0.6nm,0.2s						
AKMS				AML	AML	21 03 47.4	
	0.6nm,0.2s						
AKMS				AML	AML	21 03 47.5	
	0.7nm,0.3s						
AKMS				AML	AML	21 03 47.5	
	0.7nm,0.3s						
OSC2	**CSNet OBS 4**	**1.64**	**231**	P	**Pn**	**21 03 29.1**	**+0.9**
OSC2				S	**Sg**	**21 03 52.5**	**+0.3**
MMA0B	**Mount Meron ar**	**1.75**	**129**	Pn	**Pn**	**21 03 31.2**	**+1.4**
MMA0B				Sn	**Sn**	**21 03 52.1**	**+0.1**
OFRI	**`Ofer**	**1.80**	**146**	Pn	**Pn**	**21 03 31.5**	**+1.0**
OFRI				Sn	**Sn**	**21 03 53.1**	**-0.3**
GEM	**Giv'at Ha'Em**	**1.81**	**120**	Pn	**Pn**	**21 03 31.8**	**+1.2**
GEM				Sn	**Sn**	**21 03 53.3**	**-0.3**
SLTI	**Sal'it**	**2.15**	**150**	Pn	**Pn**	**21 03 36.5**	**+1.2**
SLTI				Sn	**Sn**	**21 04 01.1**	**-0.9**
MMLI	**Mount Malkishu**	**2.17**	**140**	Pn	**Pn**	**21 03 36.4**	**+0.9**
OSC1	**CSNet OBS 1**	**2.18**	**254**	P	**Pn**	**21 03 37.1**	**+1.5**
HMDT	**Nahal Hemdat**	**2.37**	**141**	Pn	**Pn**	**21 03 39.5**	**+1.3**
HMDT				Sn	**Sn**	**21 04 06.9**	**-0.4**
YTIR	**Yattir**	**2.97**	**157**	Pn	**Pn**	**21 03 47.5**	**+0.9**
YTIR				Sn	**Sn**	**21 04 21.3**	**-1.0**
KZIT	**Kziot**	**3.25**	**171**	Pn	**Pn**	**21 03 51.1**	**+0.7**
KZIT				Sn	**Sn**	**21 04 26.9**	**-2.1**
HRFI	**Mount Harif**	**4.21**	**165**	Pn	**Pn**	**21 04 04.1**	**+0.5**
HRFI				Sn	**Sn**	**21 04 51.1**	**-1.7**
MBRI	**Mt Berech**	**4.42**	**167**	Pn	**Pn**	**21 04 07.3**	**+0.8**
MBRI				Sn	**Sn**	**21 04 56.4**	**-1.7**

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*IDC **15** 21:03:47.6±2.5,9°.32S×113°.48E,h0^{km},mb3.4/5,*
mb1 3.6/6,mb1mx3.3/40,mbtmp3.5/6,ML3.0/1,MS2.4/2,
Ms1 2.4/2,ms1mx2.2/18,Error ellipse: s-maj=122.4km
s-min=19.9km az=49.0
ISC 15 21:03:49.4±3.8**,10°S**±1°×**11°3E**±°**,h35**^{km}**,n7,**σ**4^{s}.82**/4**,**
mb3.4/5**,South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**14.64**	**124**	Pn	**P**	**21 07 17.4**	**-2.6**
	0.1nm,0.3s,baz=311,slow=9.3,SNR=1.8						
FITZ				Sn	Sn	21 09 44.1	-11
	0.0nm,0.3s,baz=187,slow=23,SNR=2.0						
FITZ				LR	LR	21 12 39.3	
	comp=Z,11nm,21.6s,baz=314,slow=36						
DAV	**Davao City (W)**	**21.15**	**37**	LR	LR	21 17 06.3	
	comp=Z,17nm,19.1s,baz=234,slow=39						
WRA	**Warramunga Arr**	**22.83**	**118**	P	**P**	**21 08 51.3**	**+1.7**
	0.5nm,0.7s,baz=296,slow=11,SNR=5.9						
ASAR	**Alice Springs**	**24.12**	**127**	P	**P**	**21 09 05.9**	**+3.7**
	0.5nm,0.7s,baz=302,slow=8.2,SNR=8.1						
CMAR	**Chiang Mai Arr**	**31.54**	**334**	P	P	21 10 09.7	+1.1
	0.3nm,0.6s,baz=173,slow=8.0,SNR=4.5						
SONM	**Songino Array**	**57.94**	**355**	P	P	21 13 36.6	-1.7
	0.6nm,0.6s,baz=175,slow=8.8,SNR=5.3						
MKAR	**Makanchi Array**	**62.89**	**337**	P	**P**	**21 14 11.7**	**-0.3**
	0.7nm,0.7s,baz=154,slow=7.9,SNR=5.1						

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*JMA **15** 21:05:25.4±0.1,24°.21N×121°.77E,h28^{km}±2^{km},M2.6*
*TAP **15** 21:05:25.7,24°.26N×121°.83E,h18^{km},ML3.4,B*
ISC 15 21:05:24.9±0.8**,24°.22N**±0°.01×**121°.89E**±0°.01**,h16**^{km}±6^{km}**,**
n121,σ**0^{s}.76**/209**,15D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.16**	**305**	P	**Pb**	**21 05 29.4**	**-0.2**
	baz=303						
EHP				*e*S	**Sg**	**21 05 32.3**	**+0.3**
	baz=303						
ETL	**Fush Village**	**0.25**	**257**	P	**Pb**	**21 05 31.1**	**+0.1**
	baz=243						
ETL				S	**Sb**	**21 05 35.3**	**+0.2**
	baz=243						
EWUT	**Wuta**	**0.25**	**337**	⇓*i*P	**Pb**	**21 05 30.8**	**-0.2**
	baz=346						
EWUT				*i* S	**Sg**	**21 05 34.4**	**+0.2**
	baz=346						
ENA	**Nanau**	**0.25**	**328**	⇓*i*P	**Pg**	**21 05 30.6**	**+0.1**
	baz=336						
ENA				S	**Sg**	**21 05 34.0**	**-0.2**
	baz=336						
NACB	**Ninganchiao**	**0.27**	**261**	⇓*i*P	**Pb**	**21 05 31.1**	**-0.2**
	baz=250						
NACB				S	**Sg**	**21 05 35.3**	**+0.5**
	baz=250						
TWD	**Chiawan**	**0.30**	**243**	⇓*i*P	**Pb**	**21 05 32.2**	**+0.4**
	baz=234						
TWD				S	**Sb**	**21 05 36.7**	**+0.2**
	baz=234						
HWA	**Hwalien**	**0.35**	**227**	*e*P	**Pn**	**21 05 34.2**	**-1.1**
	baz=225						
HWA				*e*S	**Sn**	**21 05 40.6**	**-1.3**
	baz=225						
ETLH	**Xiulin Townshi**	**0.37**	**269**	⇓*i*P	**Pg**	**21 05 32.7**	**+0.1**
	baz=261						
ETLH				*e*S	**Sg**	**21 05 37.7**	**-0.1**
	baz=261						
TWC	**Suao**	**0.39**	**355**	*i* P	**Pb**	**21 05 33.3**	**-0.2**
	baz=9.0						
TWC				S	**Sg**	**21 05 38.4**	**-0.1**
	baz=9.0						
TEYL	**Yanliau Villag**	**0.43**	**217**	P	**Pn**	**21 05 35.2**	**-1.3**
	baz=199						
TEYL				*e*S	**Sn**	**21 05 43.1**	**-0.9**
	baz=199						
NDS	**Dongshan**	**0.44**	**340**	⇓*i*P	**Pb**	**21 05 34.1**	**-0.2**
	baz=344						
NDS				*e*S	**Sg**	**21 05 39.5**	**-0.4**
	baz=344						
NNSB	**Datong**	**0.51**	**295**	⇓*i*P	**Pg**	**21 05 35.1**	**+0.1**
	baz=292						
NNSB				*e*S	**Sg**	**21 05 41.3**	**-0.6**
	baz=292						
ENTT	**Nioudou**	**0.51**	**325**	⇓*i*P	**Pg**	**21 05 35.1**	**-0.1**
	baz=327						
ENTT				*e*S	**Sg**	**21 05 41.6**	**-0.5**
	baz=327						
NDT	**Datong Townshi**	**0.51**	**319**	P	**Pg**	**21 05 35.2**	**0.0**
	baz=319						
NDT				*e*S	**Sg**	**21 05 41.5**	**-0.6**
	baz=319						
NNS	**Nan Shan**	**0.52**	**296**	⇓*i*P	**Pg**	**21 05 35.3**	**0.0**
	baz=293						
NNS				S	**Sg**	**21 05 41.6**	**-0.7**
	baz=293						
TWE	**Neicheng**	**0.54**	**338**	⇓*i*P	**Pb**	**21 05 35.8**	**-0.2**
	baz=342						
TWE				*e*S	**Sg**	**21 05 42.2**	**-0.8**
	baz=342						
ILA	**Ilan**	**0.56**	**347**	P	**Pb**	**21 05 36.4**	**+0.1**
	baz=346						
ILA				*e*S	**Sb**	**21 05 44.0**	**-0.1**
	baz=346						
WHF	**Hehuan Shan**	**0.57**	**263**	P	**Pg**	**21 05 36.5**	**+0.2**
	baz=258						
WHF				*e*S	**Sg**	**21 05 44.6**	**+0.5**
	baz=258						
ESL	**Shilin**	**0.58**	**226**	P	**Pb**	**21 05 37.1**	**+0.6**
	baz=224						
ESL				*e*S	**Sn**	**21 05 46.1**	**-1.4**
	baz=224						
FUSS	**Fushou**	**0.59**	**273**	⇓*i*P	**Pb**	**21 05 36.9**	**0.0**
	baz=269						
FUSS				*e*S	**Sg**	**21 05 44.4**	**-0.1**
	baz=269						
TEGC	**Jichi Village**	**0.60**	**212**	*e*P	**Pn**	**21 05 38.0**	**-0.6**
	baz=198						
TEGC				*e*S	**Sn**	**21 05 48.3**	**+0.3**
	baz=198						
EGS		**0.63**	**4**	*e*P	**Pb**	**21 05 37.9**	**+0.4**
	baz=15						
EGS				*e*S	**Sb**	**21 05 46.8**	**+0.7**
	baz=15						
NTC	**Toucheng**	**0.64**	**355**	*e*P	**Pb**	**21 05 38.0**	**+0.4**
	baz=360						
NTC				*e*S	**Sg**	**21 05 45.6**	**-0.4**
	baz=360						
YHNB	**Yeheng**	**0.65**	**314**	⇓*i*P	**Pg**	**21 05 37.5**	**-0.2**
	baz=314						
YHNB				*e*S	**Sg**	**21 05 45.8**	**-0.6**
	baz=314						
YHNB	**Yeheng**	**0.65**	**314**	P	**Pg**	**21 05 37.7**	**0.0**
TWT	**Tachien**	**0.65**	**273**	*e*P	**Pb**	**21 05 38.4**	**+0.5**
	baz=269						
TWT				*e*S	**Sb**	**21 05 47.1**	**+0.2**
	baz=269						
NWLT	**Wulai**	**0.66**	**328**	⇓*i*P	**Pg**	**21 05 37.6**	**-0.2**
	baz=325						
NWLT				*e*S	**Sg**	**21 05 45.6**	**-1.0**
	baz=325						
NSK	**Sanguang**	**0.67**	**314**	⇓*i*P	**Pg**	**21 05 37.7**	**-0.3**
	baz=314						
NSK				S	**Sg**	**21 05 46.2**	**-0.7**
	baz=314						
TDCB	**Techi**	**0.67**	**273**	⇓*i*P	**Pb**	**21 05 38.3**	**+0.1**
	baz=270						
TDCB				S	**Sg**	**21 05 46.5**	**-0.4**
	baz=270						
CHGB	**Renai**	**0.67**	**257**	*i* P	**Pb**	**21 05 38.6**	**+0.3**
	baz=252						
CHGB				S	**Sg**	**21 05 47.3**	**+0.2**
	baz=252						
EGFH	**Guangfu**	**0.69**	**218**	P	**Pb**	**21 05 39.0**	**+0.5**
	baz=226						
EGFH				*e*S	**Sn**	**21 05 50.1**	**-0.1**
	baz=226						
OWD	**Renai**	**0.70**	**248**	*e*P	**Pb**	**21 05 39.0**	**+0.3**
	baz=244						
OWD				*e*S	**Sb**	**21 05 48.8**	**+0.6**
	baz=244						
TIPB	**Shuangxi**	**0.76**	**356**	P	**Pg**	**21 05 40.0**	**+0.3**
	baz=360						
TIPB				*e*S	**Sb**	**21 05 49.2**	**-0.6**
	baz=360						
TWB1	**Santiao Chiao**	**0.80**	**7**	P	**Pn**	**21 05 40.7**	**-0.7**
	baz=3.0						
TWB1				*e*S	**Sg**	**21 05 50.7**	**-0.3**
	baz=3.0						
TWA	**Mucha**	**0.81**	**340**	P	**Pg**	**21 05 40.8**	**+0.1**
	baz=343						
TWA				*e*S	**Sg**	**21 05 51.5**	**+0.1**
	baz=343						
NHDH	**Xindian Distri**	**0.81**	**336**	P	**Pg**	**21 05 40.8**	**+0.1**
	baz=338						
NHDH				*e*S	**Sb**	**21 05 50.8**	**-0.5**
	baz=338						
VWDT	**VWDT**	**0.82**	**236**	P	**Pn**	**21 05 41.4**	**-0.3**
	baz=240						
VWDT				*e*S	**Sn**	**21 05 53.3**	**-0.2**
	baz=240						
HGSD	**Ruisui**	**0.84**	**211**	P	**Pn**	**21 05 42.2**	**+0.3**
	baz=196						
HGSD				*e*S	**Sn**	**21 05 57.0**	**+3.1**
	baz=196						
NWF	**Wu-fen Shan**	**0.86**	**354**	P	**Pn**	**21 05 41.9**	**-0.4**
	baz=349						
NWF				*e*S	**Sb**	**21 05 52.5**	**-0.2**
	baz=349						
WHP	**Taichung City**	**0.86**	**274**	*e*P	**Pg**	**21 05 41.8**	**+0.1**
	baz=272						
WHP				*e*S	**Sb**	**21 05 53.1**	**+0.2**
	baz=272						
WPL	**Puli Township**	**0.87**	**257**	P	**Pg**	**21 05 42.0**	**+0.1**
	baz=254						
WPL				*e*S	**Sn**	**21 05 54.5**	**-0.3**
	baz=254						
EHY	**Hungye**	**0.88**	**216**	*e*P	**Pb**	**21 05 41.1**	**-0.6**
	baz=222						
EHY				*e*S	**Sn**	**21 05 55.0**	**+0.1**
	baz=222						
TAP	**Taipei**	**0.89**	**337**	*e*P	**Pn**	**21 05 42.8**	**0.0**
	baz=339						
TAP				*e*S	**Sb**	**21 05 52.5**	**-1.1**
	baz=339						
LIOB	**Emei**	**0.90**	**299**	P	**Pn**	**21 05 42.6**	**-0.2**
	baz=297						
LIOB				*e*S	**Sb**	**21 05 53.4**	**-0.6**
	baz=297						
WCS	**Beigang Elemen**	**0.91**	**260**	*e*P	**Pg**	**21 05 42.5**	**0.0**
	baz=257						
WCS				*e*S	**Sn**	**21 05 55.3**	**-0.3**
	baz=257						
NSTT	**Nanjuang**	**0.91**	**297**	P	**Pg**	**21 05 42.6**	**+0.1**
	baz=296						
NSTT				*e*S	**Sb**	**21 05 53.6**	**-0.5**
	baz=296						
SSLB	**Suanglung**	**0.95**	**244**	P	**Pb**	**21 05 42.9**	**-0.1**
	baz=241						
SSLB				*e*S	**Sb**	**21 05 55.8**	**+0.4**
	baz=241						
SSLB	**Suanglung**	**0.95**	**244**	P	**Pb**	**21 05 43.1**	**+0.1**
SMLT	**Sun Moon Lake**	**0.96**	**250**	P	**Pg**	**21 05 43.4**	**-0.2**
	baz=246						
YM01	**YM01**	**0.97**	**343**	P	**Pn**	**21 05 43.8**	**-0.1**
	baz=344						
YM01				*e*S	**Sn**	**21 05 57.6**	**+0.3**
	baz=344						
TWS1	**Kuangyinshan**	**0.98**	**334**	*e*P	**Pg**	**21 05 44.0**	**+0.1**
	baz=335						
TWS1				*e*S	**Sn**	**21 05 58.3**	**+0.8**
	baz=335						
YULB	**Yu-li**	**0.98**	**213**	*e*P	**Pb**	**21 05 42.5**	**-1.0**
	baz=219						
YULB				*e*S	**Sg**	**21 05 56.6**	**-0.2**
	baz=219						
NCUH	**Zhongli**	**0.98**	**320**	*e*P	**Pg**	**21 05 44.0**	**+0.1**
	baz=316						
NCUH				*e*S	**Sn**	**21 05 58.6**	**+1.0**
	baz=316						
NCU	**National Centr**	**0.98**	**320**	*e*P	**Pg**	**21 05 44.5**	**+0.4**
	baz=317						
NCU				*e*S	**Sn**	**21 05 57.9**	**+0.3**
	baz=317						
TYC	**Yuchr**	**0.99**	**252**	P	**Pn**	**21 05 43.8**	**-0.3**
	baz=243						
TYC				*e*S	**Sg**	**21 05 57.3**	**+0.2**
	baz=243						

JYNG	**Yonagunijimaku**	0.99	76	P	Pg	21 05 45.6	+1.4
JYNG				S	Sn	21 06 00.0	+2.2
SBCB	**Hsinchu** baz=296	1.00	305	eP	Pb	21 05 43.5	-0.4
EYUL	**Yuli** baz=209	1.01	211	eP	Pg	21 05 45.2	+0.8
EYUL	baz=209			eS	Sn	21 06 00.6	+2.4
HSN	**Hsinchu** baz=300	1.02	305	eP	Pg	21 05 45.0	+0.3
HSN	baz=300			eS	Sn	21 05 58.8	+0.3
ANP	**Anpu** baz=342	1.02	341	eP	Pb	21 05 44.2	-0.1
ANP	baz=342			eS	Sn	21 05 58.5	-0.2
NTST	**Danshui** baz=344	1.02	337	eP	Pg	21 05 45.5	+0.8
NTST	baz=344			eS	Sn	21 05 59.6	+1.1
TWQ1	**Liyutan** baz=275	1.02	278	eP	Pg	21 05 45.2	+0.4
TWQ1	baz=275			eS	Sn	21 05 58.6	0.0
NSY	**Sanyi** baz=279	1.05	281	eP	Pg	21 05 45.5	+0.4
NSY	baz=279			eS	Sn	21 06 00.5	+1.4
NMLH	**Miaoli** baz=292	1.05	288	eP	Pg	21 05 45.9	+0.7
NMLH	baz=292			eS	Sg	21 05 59.6	+0.6
YOJ	**Yonaguni jima** baz=69	1.05	76	eP	Pg	21 05 45.9	+0.6
YOJ	baz=69			eS	Sn	21 06 02.3	+3.0
YOJ	**Yonaguni jima**	1.05	76	P	Pg	21 05 46.4	+1.1
YOJ				S	Sn	21 06 00.6	+1.3
YOJ	**Yonaguni jima**	1.05	76	P	Pg	21 05 46.5	+1.2
TWY	**Chenhua** baz=342	1.09	346	eP	Pg	21 05 46.5	+0.6
TWY	baz=342			eS	Sg	21 06 01.4	+1.1
TCU	**Taichung** baz=263	1.11	267	eP	Pg	21 05 47.1	+0.7
YUS	**Yu-Shan** baz=227	1.12	230	eP	Pn	21 05 46.2	-0.1
YUS	baz=227			eS	Sg	21 06 02.2	+0.8
WJS	**Zhushan** baz=245	1.13	250	eP	Pg	21 05 47.2	+0.4
WJS	baz=245			eS	Sg	21 06 03.4	+1.9
FULB	**Fuli** baz=222	1.15	208	eP	Pg	21 05 47.1	0.0
WNT	**Mingjian** baz=240	1.15	253	eP	Pg	21 05 47.4	+0.3
WNT	baz=240			eS	Sg	21 06 02.5	+0.4
CHKT	**Chengkung** baz=189	1.21	203	eP	Pn	21 05 46.8	-0.3
ALS	**Alishan** baz=233	1.21	235	eP	Pg	21 05 48.1	-0.3
ALS	baz=233			eS	Sg	21 06 05.0	+0.7
WCHH	**Zhanghua** baz=261	1.22	264	eP	Pg	21 05 48.3	-0.2
WYL	**Yuanlin Townsh** baz=255	1.22	258	eP	Pg	21 05 48.4	-0.1
WYL	baz=255			eS	Sg	21 06 04.7	+0.3
CHN5	**Tsauling** baz=238	1.27	241	eP	Pg	21 05 49.3	0.0
CHN5	baz=238			eS	Sg	21 06 07.4	+1.5
ELDTW	**Lidau** baz=206	1.30	218	eP	Pn	21 05 47.8	-0.6
WDLH	**Douliu** baz=244	1.34	247	eP	Pg	21 05 50.3	-0.4
WDLH	baz=244			eS	Sg	21 06 09.8	+1.5
EDH	**Donghe** baz=191	1.35	203	eP	Pn	21 05 48.8	-0.2
WRL	**Guolierlin Hig** baz=256	1.42	258	eP	Pb	21 05 50.9	0.0
WRL	baz=256			eS	Sg	21 06 11.3	+0.7
PCYT	**Pengchaiyu** baz=7.0	1.42	7	eP	Pb	21 05 50.2	-0.7
STYH	**Taoyuan** baz=223	1.46	225	eP	Pb	21 05 51.1	-0.4
STYH	baz=223			eS	Sb	21 06 10.3	+0.5
CHN2	**Minshiung** baz=226	1.46	243	eP	Pn	21 05 50.9	+0.3
CHN4	**Tsaushan** baz=232	1.47	234	eP	Pn	21 05 50.8	+0.1
CHN4	baz=232			eS	Sg	21 06 11.7	-0.5
TPUB	**Ta-pu** baz=230	1.47	232	eP	Pb	21 05 52.4	+0.6
TPUB	baz=230			eS	Sg	21 06 12.1	-0.2
TPUB	**Ta-pu**	1.47	232	P	Pg	21 05 52.5	-0.7
WTK	**Tuku** baz=246	1.47	249	eP	Pb	21 05 52.1	+0.3
WTK	baz=246			eS	Sg	21 06 11.8	-0.5
LONT	**Longtian** baz=210	1.48	208	eP	Pn	21 05 50.9	+0.1
WTP	**Ta-pu** baz=228	1.51	231	eP	Pb	21 05 53.0	+0.4
WTP	baz=228			eS	Sg	21 06 13.1	-0.7
CHY	**Chiayi** baz=240	1.52	242	eP	Pg	21 05 53.6	-0.5
CHY	baz=240			eS	Sg	21 06 13.8	-0.1
TWGBT	**Beinan** baz=210	1.58	208	eP	Pn	21 05 51.2	-1.0
TWG	**Pinlang** baz=210	1.58	208	eP	Pn	21 05 51.3	-0.9
LDUT	**Ludao** baz=186	1.58	194	eP	Pn	21 05 51.5	-0.7
TWK	**Hsinying** baz=231	1.59	234	eP	Pb	21 05 54.3	+0.4
TWK	baz=231			eS	Sg	21 06 15.7	-0.6
CHN1	**Nanshi** baz=228	1.61	231	P	Pb	21 05 54.9	+0.6
SNST	**Tainan City** baz=230	1.61	232	eP	Pb	21 05 54.5	+0.2
SNST	baz=230			eS	Sg	21 06 16.2	-0.8
SGST	**Jiashian** baz=226	1.64	227	eP	Pb	21 05 54.4	-0.4
SGST	baz=226			eS	Sg	21 06 16.8	-1.1
SLGT	**Liugui** baz=221	1.67	223	eP	Pb	21 05 55.6	+0.5
IRIF	**Iriomote-Funau**	1.69	86	P	Pb	21 05 55.1	-0.4
IRIF				eS	Sg	21 06 17.4	-1.9
ICHU	**Yijhu** baz=237	1.70	240	eP	Pb	21 05 55.7	-0.1
HATJ	**Hateruma jima**	1.76	95	P	Pb	21 05 56.3	-0.5
HATJ				eS	Sg	21 06 19.5	-2.1
CHN8	**Yiju** baz=237	1.76	241	eP	Pb	21 05 56.5	-0.3
ECL	**Taimali** baz=199	1.82	208	eP	Pn	21 05 55.6	+0.1
SSD	**Sandimen** baz=217	1.86	218	eP	Pb	21 05 58.2	-0.3
SSD	baz=217			eS	Sg	21 06 23.3	-1.6
TSMG	**Majia** baz=216	1.89	217	eP	Pb	21 05 58.5	-0.4
TSMG	baz=216			eS	Sb	21 06 23.4	+1.1
JKRS	**Kuro-shima**	1.94	89	P	Pb	21 05 59.6	-0.2
JKRS				eS	Sb	21 06 24.4	+0.7
MASBT	**Mashibuluo** baz=215	1.97	216	eP	Pb	21 05 59.2	-1.2
JIJ	**Ishigaki jima**	2.06	85	P	Pb	21 06 00.5	-1.5
JIJ				S	Sb	21 06 26.4	-1.0
SCZT	**Fangliau** baz=212	2.17	213	eP	Pn	21 06 01.4	+1.0
PNG	**Penghu** baz=249	2.23	254	eP	Pn	21 06 01.3	+0.1
PHUB	**P'eng-hu** baz=249	2.23	252	eP	Pn	21 06 00.7	-0.4
PHUB	baz=249			eS	Sn	21 06 28.6	+0.3
JISG	**Ishigakijimahi**	2.24	80	P	Pn	21 06 02.6	+1.3
JISG				S	Sb	21 06 30.4	-2.0
VCHM	**Qimei** baz=228	2.46	247	eP	Pn	21 06 04.8	+0.4
TWKBT	**Hengchun** baz=199	2.47	204	eP	Pb	21 06 06.8	-2.1
MATB	**Ma-tsu** baz=312	2.61	318	eP	Pn	21 06 05.6	-0.7
PTMZ	**Houxiangcun** baz=283	2.65	289	eP	Pn	21 06 06.5	-0.4
XPSS	**Dashiqiu** baz=324	3.11	331	eP	Pn	21 06 12.4	-0.8
KNMB	**Chin-men Tao** baz=269	3.20	275	eP	Pn	21 06 14.1	-0.4
ZPLA	**Ao Xicun** baz=261	3.79	267	eP	Pn	21 06 22.6	0.0

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*ATH **15** 21:46:25.0, 35°.79N×28°.47E, h18km±3km, ML3.1/3, Error ellipse: s-maj=4.9km s-min=1.7km az=13.0*
*ISK **15** 21:46:25.6, 36°.02N×28°.52E, h14km, ML3.0/15*
*DDA **15** 21:46:25.8, 36°.01N×28°.51E, h7km±3km, ML2.6*
*NIC **15** 21:46:25.5±0.0, 35°.88N×28°.52E, h32km±28km, Ml3.3/5*
*THE **15** 21:46:27.2, 36°.03N×28°.56E, h12km±1km, ML3.0/3, Error ellipse: s-maj=2.0km s-min=0.8km az=184.0*
ISC 15 21:46:25.1±1.2, **35°.95N**±0°.04×**28°.52E**±0°.03, **h16**km±10km, **n49, σ0s.89**/69, **2D, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	0.41	309	P	Pn	21 46 35.5	-1.0
ARG	2µm,0.4s			S	Sn	21 46 42.1	-1.8
ARG	**Arkhangelos**	0.41	309	P	Pn	21 46 35.4	-1.0
ARG				S	Sb	21 46 41.5	+1.4
ARG	comp=N,4018µm,0.3s			AML	AML	21 46 43.9	
ARG	comp=E,5615µm,0.2s			AML	AML	21 46 45.6	
ARG	**Arkhangelos**	0.41	309	⇓iP	Pn	21 46 35.5	-1.0
ARG				S	Sn	21 46 42.0	-1.8
FETY	**Fethiye**	0.82	33	P	Pg	21 46 40.6	-0.5
FETY				S	Sn	21 46 52.7	-1.2
FETY	**Fethiye**	0.82	33	iP	Pg	21 46 40.7	-0.3
FETY				iS	Sb	21 46 52.2	+0.3
FETY	comp=E,510nm,0.6s			IAML		21 46 54.0	
FETY	comp=N,369nm,1.0s			IAML		21 46 56.0	
FETY	**Fethiye**	0.82	33	PG	Pg	21 46 40.6	-0.5
FETY				SG	Sb	21 46 52.3	+0.5
TURN	**Turunc**	0.85	345	PG	Pb	21 46 41.6	+0.1
TURN				SG	Sn	21 46 53.1	-1.5
DALY	**Dalyan (Mula)**	0.87	7	iP	Pb	21 46 41.5	-0.3
DALY				iS	Sb	21 46 52.9	-0.4
DALY	comp=E,236nm,0.9s			IAML		21 46 55.0	
DALY	comp=N,402nm,0.4s			IAML		21 46 56.0	
DALY	**Dalyan (Mula)**	0.87	7	PG	Pb	21 46 41.6	-0.3
DALY				SG	Sb	21 46 52.6	-0.6
KSL	**Kastellorizon**	0.88	77	P	Pb	21 46 42.9	+0.9
KSL	comp=N,468nm,0.5s			S	Sn	21 46 55.3	0.0
KSL	**Kastellorizon**	0.88	77	P	Pb	21 46 42.7	+0.6
KSL	comp=N,703µm,0.3s			AML	AML	21 46 57.0	
KSL	comp=E,1024µm,0.5s			AML	AML	21 46 58.3	
KSL	**Kastellorizon**	0.88	77	P	Pg	21 46 42.4	+0.2
KSL				S	Sb	21 46 54.4	+0.8
KSL	comp=E,1.2nm,0.7s			AML	AML	21 46 57.4	
KSL	comp=E,1.2nm,0.7s			AML	AML	21 46 57.4	
KSL	comp=E,0.8nm,0.6s			AML	AML	21 46 59.7	
KSL	comp=E,0.8nm,0.6s			AML	AML	21 46 59.7	
AKAS	**Kas**	0.92	72	iP	Pg	21 46 43.0	0.0
AKAS				iS	Sn	21 46 56.9	+0.3
AKAS	comp=N,498nm,0.5s			IAML		21 47 00.0	
AKAS	comp=E,271nm,0.5s			IAML		21 47 01.0	
AKAS	**Kas**	0.92	72	PG	Pb	21 46 43.3	+0.5
AKAS				SG	Sn	21 46 56.7	+0.2
DAT	**Datca**	1.09	316	P	Pn	21 46 46.1	+0.3
DAT				S	Sn	21 47 01.1	+0.5
DAT	**Datca**	1.09	316	iP	Pn	21 46 46.0	+0.2
DAT	comp=N,414nm,0.4s			IAML		21 47 03.0	
DAT	comp=E,221nm,0.2s			IAML		21 47 03.0	
DAT	**Datca**	1.09	316	PG	Pn	21 46 46.1	+0.3
DAT				SG	Sn	21 47 01.3	+0.7
YER	**Yerkesik**	1.20	351	P	Pn	21 46 47.3	0.0
YER	**Yerkesik**	1.20	351	PN	Pn	21 46 47.3	0.0
YER				SN	Sn	21 47 03.7	+0.5
NIS1	**Nisyros Isl.**	1.27	301	P	Pn	21 46 48.6	+0.4
NIS1	comp=E,2µm,0.5s			S	Sg	21 47 06.2	+0.1
NIS1	**Nisyros Isl.**	1.27	301	P	Pn	21 46 48.6	+0.4
NIS1				S	Sg	21 47 06.1	+0.1
NIS1	comp=N,2824µm,0.7s			AML	AML	21 47 09.9	
NIS1	comp=E,4904µm,0.5s			AML	AML	21 47 13.4	
MULA	**Mugla, Merkez-**	1.31	353	iP	Pg	21 46 49.5	-1.0
MULA	comp=N,84nm,0.5s			IAML		21 47 09.0	
MULA	comp=E,163nm,0.7s			IAML		21 47 10.0	
ELL	**Elmali**	1.37	54	PN	Pn	21 46 50.1	+0.4
ELL	**Elmali**	1.37	54	P	Pn	21 46 49.1	-0.6
MLSB	**Milas**	1.47	336	PN	Pb	21 46 52.2	+0.1
BODT	**Bodrum**	1.48	319	P	Pn	21 46 51.0	0.0
BODT				S	Sn	21 47 09.3	-0.8
BODT	**Bodrum**	1.48	319	PN	Pn	21 46 51.1	0.0
AKUM	**Antalya-Kumluc**	1.52	75	iP	Pn	21 46 51.8	+0.2
AKUM	comp=N,56nm,0.4s			IAML		21 47 18.0	
AKUM	comp=E,46nm,0.5s			IAML		21 47 23.0	
TAVA	**DENIZLI_Tavas**	1.54	12	iP	Pn	21 46 51.8	-0.2
TAVA				iS	Sn	21 47 11.2	-0.6
TAVA	comp=N,80nm,0.2s			IAML		21 47 14.0	
TAVA	comp=E,85nm,0.2s			IAML		21 47 14.0	
KORT	**Korkueli**	1.81	54	iP	Pn	21 46 56.6	+0.9
KORT	comp=E,87nm,0.6s			IAML		21 47 28.0	
KORT	comp=N,54nm,0.9s			IAML		21 47 34.0	
KORT	**Korkueli**	1.81	54	PN	Pn	21 46 56.4	+0.7
ANTB	**Antalya**	1.96	61	PN	Pn	21 46 59.3	+1.6
GCAM	**G?zelcaml?**	2.03	330	PN	Pn	21 46 59.1	+0.5
AYDB	**Zeytinkoy-Aydi**	2.05	346	PN	Pn	21 46 59.1	0.0
SMG	**Samos**	2.21	323	P	Pn	21 47 01.6	+0.4
NPS	**Neapolis**	2.47	255	P	Pn	21 47 06.3	+1.6
NPS	**Neapolis**	2.47	255	P	Pn	21 47 06.3	+1.6
KULA	**Kula-Manisa**	2.56	2	PN	Pn	21 47 07.6	+1.6
URLA	**Izmir**	2.85	328	PN	Pn	21 47 11.7	+1.7
IDI	**Anoyia**	3.03	258	P	Pn	21 47 13.7	+1.2
SHUT	**Suhut-Afyon**	3.06	31	PN	Pn	21 47 14.9	+2.0
AKMS	**Akamas**	3.25	106	⇓iP	Pn	21 47 14.6	-0.8
AKMS	comp=N,0.4nm,0.5s			AML	AML	21 47 51.5	
AKMS	comp=N,0.2nm,0.3s			AML	AML	21 47 52.0	
OSC1	**CSNet OBS 1**	3.34	136	P	Pn	21 47 15.1	-1.5
ALFC	**Alefka**	3.42	102	P	Pn	21 47 16.4	-1.4
ALFC	comp=N,0.2nm,0.2s			AML	AML	21 47 60.0	
ALFC	comp=N,0.2nm,0.3s			AML	AML	21 48 00.4	
NATA	**Nata**	3.51	108	P	Pn	21 47 18.5	-0.6
NATA	comp=N,0.3nm,0.2s			AML	AML	21 47 59.7	
NATA	comp=N,0.3nm,0.3s			AML	AML	21 47 59.9	
ASGA	**Asgata**	4.03	105	P	Pn	21 47 25.1	-1.1
ASGA	comp=N,0.1nm,0.2s			AML	AML	21 48 11.8	
ASGA	comp=N,0.1nm,0.3s			AML	AML	21 48 12.2	
CSS	**Mathiatis**	4.05	103	P	Pn	21 47 25.1	-1.3
OSC2	**CSNet OBS 4**	4.22	132	P	Pn	21 47 27.8	-0.9
MVOU	**Mavrovouni**	4.27	101	P	Pn	21 47 28.6	-0.9

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*IDC **15** 21:54:58.4±1.3, 3°.87S×129°.62E, h0km, mb3.9/8, mb1 4.0/12, mb1mx3.8/48, mbtmp4.0/12, ML3.9/4, MS2.9/3, Ms1 2.9/3, ms1mx2.5/34, Error ellipse: s-maj=33.7km s-min=19.9km az=107.0*
*DJA **15** 21:55:01.0±1.4, 4°S±8°×13°0E±°, h22km±10km, M4.1/7, mb4.6/1, MLv3.9/7*
ISC 15 21:55:03.2±0.6, **3°.99S**±0°.06×**129°.54E**±0°.06, **h36km, n31, σ2s.00**/33, **mb4.1**/8, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	**Masohi**	0.89	316	P	Pn	21 55 16.7	-2.5
MSAI				S	Sn	21 55 27.9	-2.9
FAKI	**Fak Fak**	2.91	69	P	Pn	21 55 46.5	-0.4
FAKI				S	Sn	21 56 21.0	+0.3
FAKI	**Fak Fak**	2.91	69	P	Pn	21 55 47.4	+0.5
SIJI	**Sorong** 8.8nm,0.3s,baz=251,slow=23,SNR=71	3.55	29	Pn	Pn	21 55 54.4	-1.5
SIJI	12nm,0.3s,baz=46,slow=21,SNR=11			Sn	Sn	21 56 34.6	-2.0
SIJI	comp=Z,138nm,18.1s,baz=216,slow=49			LR	LR	21 57 45.5	
SWI	**Sorong**	3.55	29	P	Pn	21 55 55.6	-0.2
LBMI	**Labuha**	3.91	329	P	Pn	21 55 59.6	-1.1
SANI	**Sanana**	4.04	298	P	Pn	21 56 01.7	-0.8
SANI	**Sanana**	4.04	298	P	Pn	21 56 01.7	-0.8
GTOI	**Gorontalo**	7.98	305	P	Pn	21 57 00.5	+3.8
BATI	**Baumata** 4.0nm,0.3s,baz=170,slow=0.7,SNR=3.6	8.49	223	Pn	Pn	21 57 06.0	+2.2
KDU	**Kakadu** 6.1nm,0.7s	9.11	162	P	Pn	21 57 12.2	0.0
KAPI	**Kappang** 1.6nm,0.3s,baz=112,slow=10,SNR=1.7	9.81	264	Pn	Pn	21 57 24.3	+2.5
JAY	**Jayapura** comp=Z,59nm,20.5s,baz=332,slow=38	11.24	83	LR	LR	22 02 05.3	
KNRA	**Kununurra** 22nm,1.0s	11.64	184	P	Pn	21 57 49.1	+2.3
FITZ	**Fitzroy Crossi** 0.2nm,0.3s,baz=32,slow=9.5,SNR=1.9	14.53	195	Pn	Pn	21 58 25.3	-1.0
FITZ	**Fitzroy Crossi** 7.2nm,0.9s	14.53	195	P	Pn	21 58 26.0	-0.3
WRAB	**Tennant Creek**	16.52	164	P	P	21 58 53.6	-1.0
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=344,slow=13,SNR=4.7	16.53	164	Pn	Pn	21 58 48.1	-4.3
WRA	0.1nm,0.3s,baz=342,slow=21,SNR=3.3			Sn	Sn	22 01 48.5	-6.4
COEN	**Coen** 8.3nm,0.8s	16.70	127	P	P	21 58 57.4	+0.8
QIS	**Mount Isa** 5.8nm,2.9s	19.16	150	P	Pn	21 59 25.9	+1.1
ASAR	**Alice Springs** 1.0nm,0.6s,baz=355,slow=12,SNR=8.0	20.01	168	P	Pn	21 59 34.3	-0.6
WRKA	**Warakurna** 6.4nm,0.6s	20.96	183	P	P	21 59 43.7	+0.5
OOD	**Oodnadatta** 9.0nm,1.1s	24.39	167	P	P	22 00 19.1	+0.9
CMAR	**Chiang Mai Arr** 0.4nm,0.3s,baz=124,slow=7.9,SNR=4.0	37.50	307	P	P	22 02 14.6	+0.6
USRK	**Ussuriysk Ar.** 2.4nm,0.6s,baz=175,slow=5.9,SNR=4.1	48.02	2	P	P	22 03 39.4	+0.6
SONM	**Songino Array** 0.9nm,0.9s,baz=160,slow=9.0,SNR=4.4	55.46	341	P	P	22 04 34.5	0.0
MKAR	**Makanchi Array** 0.9nm,0.5s,baz=116,slow=8.0,SNR=22	65.48	326	P	P	22 05 42.7	0.0
ZALV	**Zalesovo Beam** 0.5nm,0.5s,baz=99,slow=4.5,SNR=2.3	68.70	333	P	P	22 06 02.7	-0.3
KURBB	**Kurchatov Arra** 0.9nm,0.4s,baz=130,slow=5.6,SNR=5.4	69.73	328	P	P	22 06 09.2	-0.2
AKTO	**Aktyubinsk** 1.4nm,0.7s,baz=102,slow=9.2,SNR=3.9	81.43	322	P	P	22 07 16.8	+0.3
BRTR	**Keskin Array B** comp=Z,8.2nm,20.2s,baz=324,slow=40	97.07	309	LR	LR	22 59 40.5	

IDC 15 21:59:48.4±1.9, **8°.17S**×**125°.00E, h0km, mb3.5**/1, **mb1 3.8**/4, **mb1mx3.4**/46, **mbtmp3.6**/4, **ML3.4**/3, **Error ellipse: s-maj=105.5km s-min=27.7km az=66.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi** 0.2nm,0.3s,baz=356,slow=11,SNR=8.2	9.89	176	Pn	Pn	22 02 11.6	-0.4
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=318,slow=13,SNR=4.6	14.79	143	Pn	Pn	22 03 17.8	-1.2
WRA	0.1nm,0.3s,baz=321,slow=22,SNR=3.5			Sn	Sn	22 05 52.2	-12
ASAR	**Alice Springs** 0.2nm,0.3s,baz=323,slow=10,SNR=5.9	17.61	152	P	P	22 03 56.4	-0.2
ASAR	0.0nm,0.3s,baz=312,slow=20,SNR=3.9			S	Sn	22 07 02.3	-10
MKAR	**Makanchi Array** 0.4nm,0.8s,baz=139,slow=7.1,SNR=4.6	66.59	329	P	P	22 10 40.7	+0.1

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*SJA **15** 22:06:40.0, 21°.76S×70°.63W, h10km, ML4.1*
*GUC **15** 22:06:43.0±0.9, 21°.74S×70°.49W, h37km±3km, ML3.2*
ISC 15 22:06:42.2±1.4, **21°.74S**±0°.03×**70°.61W**±0°.06, **h37km, n41, σ1s.19**/57, **2C-6D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB07	**IPOC Station P**	0.67	89	⇓iP	Pn	22 06 54.0	-1.5
PB07				iS	Sn	22 07 01.9	-2.9
PB07	**IPOC Station P**	0.67	89	iP	Pn	22 06 54.0	-1.5
PB04	**IPOC Station P**	0.73	145	⇓iP	Pn	22 06 55.2	-1.0
PB04				iS	Sn	22 07 05.0	-1.2
PB04	comp=N,3µm,0.2s			IAML		22 07 07.0	
PB04	**IPOC Station P**	0.73	145	iP	Pn	22 06 55.0	-1.2
PB02	**IPOC Station P**	0.78	58	⇓iP	Pn	22 06 55.6	-1.2
PB02				iS	Sn	22 07 05.6	-1.7
PB02	comp=E,2µm,0.3s			IAML		22 07 10.4	
PB02	**IPOC Station P**	0.78	58	iP	Pn	22 06 55.0	-1.8
PB03	**IPOC Station P**	0.85	112	iP	Pn	22 06 56.8	-1.0
PB03				eS	Sn	22 07 07.5	-1.7
PB03	comp=E,892nm,0.2s			IAML		22 07 08.4	
PB03	**IPOC Station P**	0.85	112	iP	Pn	22 06 56.0	-1.9
PATCX	**Punta Patache**	1.00	25	⇓iP	Pn	22 06 59.4	-0.5
PATCX				eS	Sn	22 07 12.9	+0.1
PATCX	comp=E,2µm,0.3s			IAML		22 07 16.5	
PATCX	**Punta Patache**	1.00	25	iP	Pn	22 06 59.0	-0.9
PB05	**IPOC Station P**	1.17	161	⇑iP	Pn	22 07 01.9	-0.2
PB05				iS	Sn	22 07 16.9	-0.1
PB05	comp=N,648nm,0.4s			IAML		22 07 20.8	
PB05	**IPOC Station P**	1.17	161	iP	Pn	22 07 02.0	-0.2
TA01	**Diego Aracena**	1.23	19	eP	Pn	22 07 02.8	-0.1
TA01				iS	Sn	22 07 18.2	0.0
TA01	comp=E,822nm,0.4s			IAML		22 07 23.3	
TA01	**Diego Aracena**	1.23	19	iP	Pn	22 07 03.0	+0.1
PB01	**IPOC Station P**	1.25	57	⇓iP	Pn	22 07 03.2	-0.1
PB01				eS	Sn	22 07 18.2	-0.7
PB01	comp=N,2µm,0.3s			IAML		22 07 21.6	
PB01	**IPOC Station P**	1.25	57	iP	Pn	22 07 03.0	-0.3
PB09	**IPOC Station P**	1.27	93	⇓iP	Pn	22 07 04.1	+0.5
PB09				iS	Sn	22 07 18.7	-0.8
PB09	comp=E,627nm,0.2s			IAML		22 07 22.2	
PB09	**IPOC Station P**	1.27	93	iP	Pn	22 07 04.0	+0.4
PB06	**IPOC Station P**	1.36	135	iP	Pn	22 07 05.0	+0.2
PB06				iS	Sn	22 07 21.7	+0.1
PB06	comp=E,868nm,0.3s			IAML		22 07 23.6	
PB06	**IPOC Station P**	1.36	135	iP	Pn	22 07 05.0	+0.2
TA02	**Huaiquique**	1.52	17	eP	Pn	22 07 07.7	+0.7
TA02				eS	Sn	22 07 25.8	+0.2

TA02	Huaiquique	1.52	17	*i* P	Pn	22 07 08.0	+1.1
HMBC	Humberstone	1.60	25	*e*P	Pn	22 07 08.4	+0.3
HMBC				*e*S	Sn	22 07 28.2	+0.6
HMBC				IAML		22 07 37.5	
	comp=N,746nm,0.5s						
PB10	IPOC Station P	1.77	178	*e*P	Pn	22 07 09.8	-0.5
PB10	IPOC Station P	1.77	178	*i* P	Pn	22 07 10.0	-0.3
LVC	Limon Verde	1.80	119	*e*P	Pn	22 07 12.3	+1.3
LVC				*e*S	Sn	22 07 35.3	+2.6
LVC	Limon Verde	1.80	119	*i* P	Pn	22 07 13.0	+2.0
PB15	IPOC Station P	1.80	145	⇑*e*P	Pn	22 07 11.4	+0.5
PB15				*i* S	Sn	22 07 34.1	+1.4
PB15	IPOC Station P	1.80	145	*i* P	Pn	22 07 11.0	0.0
PB08	IPOC Station P	2.09	41	*e*P	Pn	22 07 16.8	+1.7
PB08				*e*S	Sn	22 07 43.1	+3.1
PB08				IAML		22 07 49.5	
	comp=N,452nm,0.6s						
PB08	IPOC Station P	2.09	41	*i* P	Pn	22 07 17.0	+1.9
PB11	IPOC Station P	2.16	24	*e*P	Pn	22 07 16.7	+0.9
PB11				*i* S	Sn	22 07 41.7	+0.3
PB11				IAML		22 07 54.8	
	comp=N,426nm,0.4s						
PB11	IPOC Station P	2.16	24	*i* P	Pn	22 07 17.0	+1.2
PB14	IPOC Station P	2.88	176	*e*P	Pn	22 07 24.8	-1.1
PB14	IPOC Station P	2.88	176	*i* P	Pn	22 07 25.0	-0.9
PB12	IPOC Station P	3.12	5	*e*P	Pn	22 07 29.4	+0.5
PB12				IAML		22 08 18.1	
	comp=N,78nm,0.5s						
PB12	IPOC Station P	3.12	5	*i* P	Pn	22 07 29.0	0.0
PB16	IPOC Station P	3.54	17	*e*P	Pn	22 07 36.1	+1.0
PB16	IPOC Station P	3.54	17	*i* P	Pn	22 07 36.0	+0.8
ACLC	CERRO LA CRUZ	8.34	157	*i* P	Pn	22 08 42.0	+1.3
AROD	Rodeo	8.46	173	*i* P	Pn	22 08 43.0	+0.5

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*IDC **15** 22:09:46.4±1.6, 1°.50N×96°.39E, h0^{km}, mb3.6/6, mb1 3.9/7, mb1mx3.5/42, mbtmp3.7/7, ML3.6/2, MS2.9/1, Ms1 2.9/1, ms1mx2.3/40, Error ellipse: s-maj=38.0km s-min=21.8km az=50.0*

*DJA **15** 22:09:47.5±0.6, 1°N±4°×9°6E±°, h54^{km}±14^{km}, M4.0/9, MLv4.0/9*

ISC 15 22:09:51.4±1.2**, 1°.61N**±0°.08×**96°.43E**±0°.09**, h35^{km}, n24,** σ1^{s}**22**/19**, mb3.6**/6**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNSI	Sinabang, Aceh	0.80	352	P	Pn	22 10 04.1	-2.1
SNSI				S	Sn	22 10 18.1	+1.2
GSI	Gunungsitoli	1.18	105	P	Pn	22 10 11.0	-0.5
GSI				S	Sn	22 10 24.3	-2.1
TPTI		1.80	24	P	Pn	22 10 19.1	-0.9
TPTI				S	Sn	22 10 41.8	+0.2
MLSI	Meulaboh, Aceh	2.64	359	P	Pn	22 10 31.0	-0.5
PSI	Prapat	2.75	65	Pn	Pn	22 10 33.4	+0.2
	2.2nm,0.3s,baz=270,slow=14,SNR=13						
PSI				Sn	Sn	22 11 07.0	+1.6
	2.9nm,0.3s,baz=158,slow=18,SNR=6.4						
TSI	Tuntungan	2.84	49	P	Pn	22 10 32.2	-2.1
MNSI	Mandailing Nat	3.25	104	P	Pn	22 10 40.2	+0.3
LHMI	Lhok Sumawe	3.63	8	P	Pn	22 10 45.0	-0.2
SISI	Saibi	3.95	138	P	Pn	22 10 42.1	-7.5
BKNI	Bangkinang	4.78	105	P	Pn	22 10 55.0	-6.0
CMAR	Chiang Mai Arr	16.92	8	P	P	22 13 46.0	-1.3
	0.2nm,0.3s,baz=195,slow=10,SNR=1.5						
KAPI	Kappang	24.21	106	LR	LR	22 26 33.4	
	comp=Z,24nm,18.6s,baz=162,slow=42						
H08S2	Diego Garcia H	25.59	249	T	T	22 41 44.2	
	baz=69,slow=74,SNR=58						
H08S3	Diego Garcia H	25.59	249	T	T	22 41 44.4	
	baz=69,slow=74,SNR=80						
H08S1	Diego Carcia H	25.61	249	T	T	22 41 43.3	
	baz=69,slow=74,SNR=15						
H01W3	Cape Leeuwin H	39.92	157	T	T	22 59 47.8	
	baz=334,slow=76,SNR=80						
H01W2	Cape Leeuwin H	39.93	157	T	T	22 59 48.8	
	baz=334,slow=76,SNR=68						
H01W1	Cape Leeuwin H	39.93	157	T	T	22 59 47.2	
	baz=334,slow=76,SNR=64						
WRA	Warramunga Arr	42.90	122	P	P	22 17 46.8	-0.3
	0.2nm,0.4s,baz=301,slow=9.1,SNR=4.7						
ASAR	Alice Springs	44.25	127	P	P	22 17 57.7	-0.2
	0.3nm,0.6s,baz=306,slow=7.9,SNR=2.7						
MKAR	Makanchi Array	46.66	347	P	P	22 18 17.6	+1.0
	1.2nm,0.8s,baz=167,slow=8.7,SNR=7.2						
SONM	Songino Array	46.84	9	P	P	22 18 18.8	+0.7
	0.6nm,0.8s,baz=187,slow=7.9,SNR=4.5						
KURBB	Kurchatov Arra	51.14	345	P	P	22 18 51.8	+1.0
	0.4nm,0.6s,baz=162,slow=7.0,SNR=2.4						
ZALV	Zalesovo Beam	53.03	351	P	P	22 19 05.7	+0.8
	0.8nm,0.5s,baz=177,slow=9.2,SNR=6.7						

IDC 15 22:36:01.8±4.2**, 5°.11S**×**152°.04E, h0^{km}, mb3.5**/2**, mb1 3.8**/2**, mb1mx3.4**/39**, mbtmp3.5**/2**, Error ellipse: s-maj=175.4km s-min=53.2km az=120.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.67	228	P	P	22 41 04.8	-0.3
	1.1nm,0.7s,baz=53,slow=9.9,SNR=9.1						
ASAR	Alice Springs	25.41	222	P	P	22 41 31.3	0.0
	0.9nm,0.8s,baz=53,slow=9.1,SNR=6.2						
TORD	Torodi Ar. Bea	149.68	287	PKPbc	PKPbc	22 55 54.5	-0.2
	0.3nm,0.7s,baz=83,slow=3.2,SNR=2.0						

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*KRSC **15** 23:17:12.3±1.7, 52°.40N×159°.36E, h50^{km}±18^{km}, ML5.1*

*MOS **15** 23:17:13.5±1.2, 52°.46N×159°.02E, h72^{km}, mb4.4/7, Error ellipse: s-maj=8.9km s-min=3.8km az=84.6*

MOS Felt (III-IV) at Rybachiy; (III) at Vilyuchinsk; (II-III) at Dal'niy, Petropavlovsk-Kamchatskiy.

*NEIC **15** 23:17:16.4±1.4, 52°.73N±0°.08×158°.8E±0°.1, h73^{km}±5^{km}, mb4.5/116, Error ellipse: s-maj=13.0km s-min=12.2km az=92.0*

*IDC **15** 23:17:17.1±0.9, 52°.66N×158°.82E, h86^{km}±6^{km}, mb3.8/25, mb1 4.0/27, mb1mx3.9/48, mbtmp4.2/27, MS3.1/11, Ms1 3.1/11, ms1mx2.9/46, Error ellipse: s-maj=14.6km s-min=11.3km az=150.0*

ISC 15 23:17:14.1±0.6**, 52°.50N**±0°.04×**159°.16E**±0°.03**, h64^{km}**±4^{km}**, n317,** σ1^{s}**62**/321**, mb4.4**/101**, 4C-14D, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUS	Russkaya	0.40	261	PN	Pn	23 17 25.1	-0.3
RUS				S	Sn	23 17 32.9	-0.8
RUS	Russkaya	0.40	261	*e*P	Pn	23 17 25.1	-0.3
RUS				*e*S	Sn	23 17 32.9	-0.8
DALK	Dalny	0.59	335	PN	Pn	23 17 27.2	-0.1
DALK				S	Sn	23 17 36.2	-0.8
DALK	Dalny	0.59	335	*e*P	Pn	23 17 27.2	-0.1
DALK				*e*S	Sn	23 17 36.2	-0.8
MTVR	Mutnovka	0.60	269	PN	Pn	23 17 27.6	0.0
MTVR	Mutnovka	0.60	269	*e*P	Pn	23 17 27.6	0.0
PET	Petropavlovsk	0.61	330	⇓*i*PN	Pn	23 17 27.4	-0.2
PET				*e*S	Sn	23 17 36.1	-1.3
PET				pmax	pmax		
	comp=Z,6μm,0.4s						
PET				smax	smax		
	comp=E,17μm,0.3s						
PET				smax	smax		
	comp=N,18μm,0.4s						
PET	Petropavlovsk	0.61	330	*e*P	Pn	23 17 27.3	-0.2
PET	Petropavlovsk	0.61	330		Pn	23 17 27.3	-0.2
PET				Sn	Sn	23 17 36.4	-1.1
GRL	Gorelyy	0.67	275	PN	Pn	23 17 29.1	+0.7
GRL				S	Sn	23 17 40.0	+1.2
GRL	Gorelyy	0.67	275	*e*P	Pn	23 17 29.1	+0.7
GRL				*e*S	Sn	23 17 40.0	+1.2
NLC	Nalytchevo	0.69	9	PN	Pn	23 17 27.7	-0.7
NLC				S	Sn	23 17 37.7	-1.2
NLC	Nalytchevo	0.69	9	*e*P	Pn	23 17 27.7	-0.7
NLC				*e*S	Sn	23 17 37.7	-1.2
UGLR	Uglovaya	0.74	344	PN	Pn	23 17 29.4	+0.2
UGLR	Uglovaya	0.74	344	*e*P	Pn	23 17 29.4	+0.2
ASAK	Asacha	0.78	262	PN	Pn	23 17 30.2	+0.6
ASAK	Asacha	0.78	262	*e*P	Pn	23 17 30.2	+0.6
SPN	Mys Shipunski	0.80	41	PN	Pn	23 17 29.5	-0.3
SPN				S	Sn	23 17 42.3	+1.0
SPN	Mys Shipunski	0.80	41	*e*P	Pn	23 17 29.5	-0.3
SPN				*e*S	Sn	23 17 42.3	+1.0
SMAR	Somma	0.80	344	PN	Pn	23 17 29.9	-0.1
SMAR	Somma	0.80	344	*e*P	Pn	23 17 29.9	-0.1
SDLR	Sedlovina	0.80	348	PN	Pn	23 17 29.9	-0.1
SDLR	Sedlovina	0.80	348	*e*P	Pn	23 17 29.9	-0.1
AVH	Avacha	0.81	342	PN	Pn	23 17 30.5	+0.5
AVH	Avacha	0.81	342	*e*P	Pn	23 17 30.5	+0.5
KRER	Koryakskii	0.85	343	PN	Pn	23 17 30.9	+0.3
KRER	Koryakskii	0.85	343	*e*P	Pn	23 17 30.9	+0.3
KOK	Koryaka	0.86	338	PN	Pn	23 17 31.2	+0.6
KOK	Koryaka	0.86	338	*e*P	Pn	23 17 31.2	+0.6
KDTR	Khodutka, Kamc	0.96	225	PN	Pn	23 17 31.6	-0.1
KDTR				S	Sn	23 17 44.2	-0.6
KDTR	Khodutka, Kamc	0.96	225	*e*P	Pn	23 17 31.6	-0.1
KDTR				*e*S	Sn	23 17 44.2	-0.6
I44RU	PETROPAVLOVSK-	1.07	305	P	Pn	23 17 33.8	+0.6
	baz=104,slow=18,SNR=4.1						
PEA0B	Petropavlovsk-	1.08	305	*d i*PN	Pn	23 17 34.0	+0.7
PEA0B	Petropavlovsk-	1.08	305	Pn	Pn	23 17 34.1	+0.7
PETK	Petropavlovsk-	1.08	305	P	Pn	23 17 33.0	-0.4
	comp=N,964nm,0.3s,baz=110,slow=19,SNR=7957						
PETK				LR	LR	23 17 41.0	
	comp=N,97nm,19.0s,baz=120,slow=29						
PETK				S	Sn	23 17 48.9	+1.2
	comp=N,237nm,0.3s,baz=123,slow=22,SNR=9.5						
PETK	Petropavlovsk-	1.08	305	PN	Pn	23 17 33.1	-0.3
PETK	Petropavlovsk-	1.08	305	Pn	Pn	23 17 33.0	-0.3
APC	Apacha	1.29	290	PN	Pn	23 17 37.1	+1.0
APC	Apacha	1.29	290	*e*P	Pn	23 17 37.1	+1.0
GNL	Ganaly	1.41	329	PN	Pn	23 17 38.8	+1.0
GNL				S	Sn	23 17 57.6	+2.1
GNL	Ganaly	1.41	329	*e*P	Pn	23 17 38.8	+1.0
GNL				*e*S	Sn	23 17 57.6	+2.1
MIPR	Malaya Ipel'ka	1.49	262	PN	Pn	23 17 39.9	+1.2
MIPR	Malaya Ipel'ka	1.49	262	*e*P	Pn	23 17 39.9	+1.2
KII	Karymskiy	1.55	6	*e*S	Sn	23 18 03.0	+4.1
PAU	Pauzhetka	1.78	236	PN	Pn	23 17 43.6	+1.0
PAU	Pauzhetka	1.78	236	*e*P	Pn	23 17 43.6	+1.0
MKZ	Mys Kozlova	2.57	36	PN	Pn	23 17 54.0	+0.7
MKZ	Mys Kozlova	2.57	36	*e*P	Pn	23 17 54.0	+0.7
SKR	Severo-Kuril's	2.63	228	*de*PN	Pn	23 17 55.3	+1.2
SKR	Severo-Kuril's	2.63	228	*e*P	Pn	23 17 55.4	+1.3
TUMR	Tumrok	2.85	11	PN	Pn	23 18 00.2	+2.9
TUMR	Tumrok	2.85	11	*e*P	Pn	23 18 00.2	+2.9
KMNR	Kamenistaya	3.33	11	PN	Pn	23 18 07.0	+3.2
KMNR	Kamenistaya	3.33	11	*e*P	Pn	23 18 07.0	+3.2
ESO	Esso	3.45	356	PN	Pn	23 18 11.9	+6.6
ESO	Esso	3.45	356	*e*P	Pn	23 18 11.9	+6.6
KIRR	Kirishev	3.53	11	PN	Pn	23 18 09.5	+2.9
KIRR	Kirishev	3.53	11	*e*P	Pn	23 18 09.5	+2.9
KPT	Kopyto	3.53	10	PN	Pn	23 18 08.9	+2.3
KPT	Kopyto	3.53	10	*e*P	Pn	23 18 08.9	+2.3
BZWR	Bezymyannyi-We	3.56	12	PN	Pn	23 18 09.9	+2.9
BZWR	Bezymyannyi-We	3.56	12	*e*P	Pn	23 18 09.9	+2.9
BZGR	Bezymyannyi-Gr	3.57	14	PN	Pn	23 18 10.6	+3.6
BZGR	Bezymyannyi-Gr	3.57	14	*e*P	Pn	23 18 10.6	+3.6
ZLN	Zelenaya	3.66	15	PN	Pn	23 18 11.5	+3.2
ZLN	Zelenaya	3.66	15	*e*P	Pn	23 18 11.5	+3.2
LGNR	Loginova	3.71	13	PN	Pn	23 18 12.9	+3.8
LGNR	Loginova	3.71	13	*e*P	Pn	23 18 12.9	+3.8
CIRR	Tsirk	3.74	14	PN	Pn	23 18 13.0	+3.5
CIRR	Tsirk	3.74	14	*e*P	Pn	23 18 13.0	+3.5
KRSR	Krestovskiy	3.82	12	PN	Pn	23 18 12.9	+2.4
KRSR	Krestovskiy	3.82	12	*e*P	Pn	23 18 12.9	+2.4
KLY	Klyuchi	3.92	12	PN	Pn	23 18 15.9	+4.1
KLY	Klyuchi	3.92	12	*e*P	Pn	23 18 15.9	+4.1
BDR	Baidarnaya	4.25	15	PN	Pn	23 18 20.4	+4.0
BDR	Baidarnaya	4.25	15	*e*P	Pn	23 18 20.4	+4.0
KBTR	Krutoberegovo	4.29	28	PN	Pn	23 18 18.9	+2.1
KBTR	Krutoberegovo	4.29	28	*e*P	Pn	23 18 18.9	+2.1
SMKR	Semkarok	4.31	17	PN	Pn	23 18 19.6	+2.5
SMKR	Semkarok	4.31	17	*e*P	Pn	23 18 19.6	+2.5
SRKR	Sorokina	4.33	15	PN	Pn	23 18 21.0	+3.6
SRKR	Sorokina	4.33	15	*e*P	Pn	23 18 21.0	+3.6
BKI	Bering	4.86	53	PN	Pn	23 18 24.3	-0.2
BKI	Bering	4.86	53	*e*P	Pn	23 18 24.3	-0.2
BKI				*e*S	Sn	23 19 13.1	-6.3
MA2	Magadan	8.51	330	LR	LR	23 22 49.3	
	comp=N,92nm,19.6s,baz=350,slow=40						
SEY	Seymchan	11.07	344	P	Pn	23 19 53.4	+4.1
	comp=N,0.4nm,0.3s,baz=154,slow=15,SNR=3.6						
SEY				LR	LR	23 24 33.4	
	comp=N,73nm,20.4s,baz=188,slow=40						
JKA	Kamikawa-asahi	13.82	239	Pn	Pn	23 20 29.4	+2.6
ASAJ	Asahikawa	13.82	239	P	Pn	23 20 29.7	+2.8
	comp=N,1.0nm,0.3s,baz=59,slow=12,SNR=3.9						
ASAJ	Asahikawa	13.82	239	P	Pn	23 20 29.4	+2.5
ERM	Erimo	15.06	232	P	Pn	23 20 44.7	+1.7
ERM				pmax	pmax		
	comp=Z,56nm,1.2s						
ERM	Erimo	15.06	232	Pn	Pn	23 20 44.7	+1.7
ERM				IAmb	IAmb	23 20 51.2	
	comp=Z,56nm,1.2s						
BILL	Bilibino	15.97	10	⇓*e*P	Pn	23 20 55.6	+1.2
BILL				pmax	pmax		
	comp=Z,28nm,2.4s						
BILL				MLR	MLR		
	comp=Z,45nm,16.0s						
KLR	Kul'dur	17.57	270	P	P	23 21 15.4	+0.8
	comp=Z,0.3nm,0.3s,baz=67,slow=13,SNR=2.7						
KLR				LR	LR	23 28 18.5	
	comp=Z,60nm,18.8s,baz=56,slow=38						
KLR	Kul'dur	17.57	270	⇓*e*P	P	23 21 15.6	+1.0
KLR				pmax	pmax		
	comp=Z,20nm,2.3s						
YAK	Yakutsk	18.42	313	⇓*e*P	P	23 21 23.0	-0.8
YAK				pmax	pmax		
	comp=Z,17nm,1.0s						
JSD	Sado	20.52	233	P	P	23 21 47.9	+0.9
JSD				IAmb	IAmb	23 21 48.5	
	comp=Z,28nm,0.8s						
MAJO	Matsushiro	21.73	231	P	P	23 22 01.2	+1.3
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MAJO	Matsushiro	21.73	231	P	P	23 22 01.2	+1.3
MAJO				IAmb	IAmb	23 22 04.8	
	comp=Z,9.7nm,0.6s						
MJAR	Matsushiro Arr	21.73	231	P	P	23 21 60.0	0.0
	comp=Z,3.2nm,0.5s,baz=17,slow=10,SNR=8.6						
MJAR	Matsushiro Arr	21.73	231	P	P	23 22 03.4	+3.4
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MJAR	Matsushiro Arr	21.73	231	P	P	23 22 03.4	+3.4
JGF	Kuroka	22.90	231	P	P	23 22 12.8	+0.4
TIXI	Tiksi	23.39	336	P	P	23 22 15.8	-1.1
	comp=Z,3.3nm,0.4s,baz=124,slow=7.5,SNR=7.1						
TIXI	Tiksi	23.39	336	⇓*e*P	P	23 22 16.0	-0.8
TIXI				pmax	pmax		
	comp=Z,10.0nm,1.7s						
JWT	Wachi	24.10	234	P	P	23 22 24.4	+0.8
JWT				IAmb	IAmb	23 22 31.8	
	comp=Z,46nm,1.5s						
TTA	Tatalina	25.57	48	P	P	23 22 37.6	+0.8
TTA				pmax	pmax		
	comp=Z,8.0nm,1.5s						
TTA	Tatalina	25.57	48	P	P	23 22 37.6	+0.8
SVW2	Sparrevohn	25.74	53	P	P	23 22 39.7	+1.4
JMN	Monobe	26.09	234	P	P	23 22 44.7	+2.9
JMN				IAmb	IAmb	23 23 00.5	
	comp=Z,18nm,0.9s						
N19K	Bonanza Creek	26.29	53	P	P	23 22 45.2	+1.9
M19K	Big River Lodg	26.30	51	P	P	23 22 44.6	+1.3
M19K				IAmb	IAmb	23 22 57.5	
	comp=Z,20nm,1.4s						
CHIR	Chirikof Islan	26.32	65	P	P	23 22 44.0	+0.5
KSRS	Korea Array	26.47	248	P	P	23 22 45.2	+0.2
	comp=Z,0.8nm,0.5s,baz=43,slow=8.0,SNR=2.8						
KSRS				LR	LR	23 32 32.9	
	comp=Z,27nm,18.1s,baz=42,slow=35						
J20K	Nowinta River	26.48	46	P	P	23 22 44.9	0.0
IMAR	Indian Mountai	26.82	42	P	P	23 22 48.4	+0.4
A21K	Barrow	27.09	30	P	P	23 22 50.6	+0.4
A21K				IAmb	IAmb	23 23 02.0	
	comp=Z,20nm,1.4s						
H21K	Melozitna Rive	27.18	42	P	P	23 22 51.7	+0.6
OHAK	Old Harbor	27.32	61	P	P	23 22 52.3	-0.2
OHAK				IAmb	IAmb	23 23 06.4	
	comp=Z,34nm,1.5s						
PPLA	Purkeypile	27.32	49	P	P	23 22 53.8	+1.2
PPLA				IAmb	IAmb	23 22 58.3	
	comp=Z,20nm,1.5s						
TRF	Thorofare Moun	28.18	47	P	P	23 23 01.0	+0.7
NEA2	Nenana	28.70	45	P	P	23 23 05.4	+0.6
TOLK	Toolik Lake Re	28.78	36	P	P	23 23 06.2	+0.7
GHO	Glory Hole Cre	28.90	51	P	P	23 23 07.7	+1.0
MDM	Murphy Dome	29.06	44	P	P	23 23 09.1	+1.1
WRH	Wood River Hil	29.13	45	P	P	23 23 09.6	+1.1
KNK	Knik Glacier	29.16	51	P	P	23 23 09.9	+1.1
KNK				IAmb	IAmb	23 23 10.0	
	comp=Z,7.6nm,0.8s						
SML	Sawmill	29.18	51	P	P	23 23 10.1	+1.1
SML	Sawmill	29.18	51	P	P	23 23 10.1	+1.1
SML				IAmb	IAmb	23 23 10.7	
	comp=Z,8.9nm,0.7s						
COLA	College	29.22	44	⇓*e*P	P	23 23 08.8	-0.5
COLA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
PWL	Port Wells	29.28	53	P	P	23 23 11.1	+1.1
DHY	Denali Highway	29.51	48	P	P	23 23 12.6	+0.5
HDA	Harding Lake	29.62	45	P	P	23 23 13.5	+0.6
IL31		29.64	44	P	P	23 23 13.2	+0.3
ILAR	Eielson Array	29.64	44	P	P	23 23 13.3	+0.3
	comp=Z,3.0nm,0.8s,baz=260,slow=7.8,SNR=26						
ILAR	Eielson Array	29.64	44	P	P	23 23 13.6	+0.6
ILAR	Eielson Array	29.64	44	P	P	23 23 13.6	+0.6
SCM	Sheep Creek Mo	29.65	50	P	P	23 23 13.9	+0.7
SCM				pmax	pmax		
	comp=Z,6.0nm,0.7s						
SCM	Sheep Creek Mo	29.65	50	P	P	23 23 13.9	+0.7
SCM				IAmb	IAmb	23 23 15.0	
	comp=Z,6.2nm,0.7s						
M24K	Tolsona, Glenn	30.16	50	P	P	23 23 19.5	+1.8
M24K				IAmb	IAmb	23 23 27.3	
	comp=Z,17nm,1.4s						
PRP	Porcupine Dome	30.19	43	P	P	23 23 19.1	+1.0
PRP				IAmb	IAmb	23 23 20.1	
	comp=Z,6.3nm,0.9s						
BMAR	Burnt Mountain	30.56	39	P	P	23 23 22.8	+1.6
RIDG	Independent Ri	30.59	46	P	P	23 23 21.0	-0.5
RIDG				IAmb	IAmb	23 23 23.5	
	comp=Z,8.5nm,1.2s						
DOT	Dot Lake	30.95	47	P	P	23 23 24.1	-0.5
SCRK	Sand Creek	30.95	46	P	P	23 23 24.9	+0.2
SCRK				IAmb	IAmb	23 23 25.6	
	comp=Z,8.2nm,1.2s						
RAGM	Ragged Mountai	31.14	53	P	P	23 23 26.2	-0.2
L26K	Log Cabin Wild	31.34	48	P	P	23 23 28.9	+0.9
GLB	Gilahina Butte	31.36	51	P	P	23 23 29.4	+1.1
GLB				IAmb	IAmb	23 23 39.1	
	comp=Z,15nm,1.4s						
VRDI	Verde Repeater	31.57	51	P	P	23 23 30.4	+0.1
VRDI				IAmb	IAmb	23 23 33.8	
	comp=Z,9.3nm,1.2s						
TGL	Tana Glacier	31.96	52	P	P	23 23 35.0	+1.3
TGL				IAmb	IAmb	23 23 46.4	
	comp=Z,15nm,1.2s						
WAX	Waxell Ridge	32.01	52	P	P	23 23 35.0	+0.9
L27K	Beaver Creek,	32.02	47	P	P	23 23 35.6	+1.5
L27K				IAmb	IAmb	23 23 36.3	
	comp=Z,9.7nm,0.8s						
BCAR	Beaver Creek A	32.04	47	P	P	23 23 35.8	+1.5
EGAK	Eagle	32.09	44	IAmb	IAmb	23 23 35.1	
	comp=Z,4.7nm,0.6s						
M27K	Edge Creek, AK	32.11	49	P	P	23 23 36.6	+1.6
M27K				IAmb	IAmb	23 23 41.6	
	comp=Z,13nm,1.2s						
ISLE	Juniper Island	32.23	52	P	P	23 23 36.9	+0.8
BARN	Barnard Glacie	32.46	51	P	P	23 23 39.7	+1.6
BARN				IAmb	IAmb	23 23 40.2	
	comp=Z,6.7nm,0.6s						
GRNC	Granite Creek	32.48	52	P	P	23 23 39.7	+1.3
YAH	Yahtse	32.57	52	P	P	23 23 40.9	+1.7
CTGM	Chitina Glacie	32.63	51	P	P	23 23 41.1	+1.6
CTGM				IAmb	IAmb	23 23 46.2	
	comp=Z,14nm,1.2s						
TABL	Table Mountain	32.84	52	P	P	23 23 42.7	+1.2
DAWY	Dawson	32.94	45	P	P	23 23 43.3	+1.2
H11N2	WAKE ISLAND Hy	33.25	167	T	T	23 58 52.5	
	baz=351,slow=76,SNR=566						
H11N3	WAKE ISLAND Hy	33.27	167	T	T	23 58 53.7	
	baz=351,slow=76,SNR=726						
H11N1	WAKE ISLAND Hy	33.27	167	T	T	23 58 54.9	
	baz=351,slow=76,SNR=754						
PCA	Pinnacle	33.35	53	P	P	23 23 46.5	+0.7
TLY	Talaya	33.41	291	LR	LR	23 38 25.5	
	comp=Z,20nm,19.2s,baz=3.5,slow=38						
SONM	Songino Array	33.49	284	P	P	23 23 46.3	-0.9
	comp=Z,0.3nm,0.3s,baz=62,slow=9.3,SNR=4.9						
SONM				PcP	PcP	23 26 27.0	+0.3
	comp=Z,0.9nm,0.6s,baz=73,slow=1.6,SNR=7.1						
SONM				LR	LR	23 37 42.2	
	comp=Z,60nm,19.3s,baz=354,slow=37						
BCPM	Bancas Point	33.69	53	P	P	23 23 49.9	+1.2
HHC	Hu-ho-hao-te	34.07	269	*e*P	P	23 23 52.8	+0.5
HHC				pmax	pmax		
	comp=Z,12nm,0.7s						
HHC				pmax	pmax		
	comp=Z,82nm,6.6s						
H11S1	WAKE ISLAND Hy	34.43	167	T	T	00 00 21.0	
	baz=352,slow=76,SNR=136						
H11S3	WAKE ISLAND Hy	34.44	167	T	T	00 00 18.8	
	baz=352,slow=76,SNR=254						
H11S2	WAKE ISLAND Hy	34.45	167	T	T	00 00 22.4	
	baz=352,slow=76,SNR=69						
HYT	Haines Junctio	34.48	51	P	P	23 23 57.3	+1.6
HYT				IAmb	IAmb	23 23 58.2	
	comp=Z,5.2nm,0.9s						
INK	Inuvik	34.69	37	P	P	23 23 57.6	+0.5
	comp=Z,3.1nm,0.7s,baz=286,slow=7.8,SNR=9.3						
INK	Inuvik	34.69	37	IAmb	IAmb	23 23 59.4	
	comp=Z,4.5nm,0.9s						
NJ2	Nanjing	35.53	251	*e*P	P	23 24 04.8	+0.1
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
WHY	Whitehorse	35.77	50	P	P	23 24 08.7	+2.1
WHY				IAmb	IAmb	23 24 09.5	
	comp=Z,4.9nm,0.8s						
NRIK	Noril'sk	36.07	325	⇑*e*P	P	23 24 08.1	-0.9
NRIK				pmax	pmax		
	comp=Z,9.0nm,2.0s						
NRIK	Noril'sk	36.07	325	P	P	23 24 08.5	-0.5
BESE	Bessie Mountai	36.45	54	P	P	23 24 13.4	+1.1
A36M	Sachs Harbour	36.93	30	P	P	23 24 17.4	+1.2
A36M				IAmb	IAmb	23 24 17.8	
	comp=Z,3.6nm,0.8s						
DLBC	Dease Lake	38.86	52	P	P	23 24 34.9	+2.2
DLBC				IAmb	IAmb	23 24 36.3	
	comp=Z,7.1nm,1.1s						
DIB	Dawson Inlet,	39.85	61	P	P	23 24 43.2	+2.3
XAN	Xi'an	40.04	263	P	P	23 24 40.4	-2.4
XAN				pP	pP	23 24 58.9	+0.1
XAN				pmax	pmax		
	comp=Z,5.0nm,1.8s						
ZALV	Zalesovo Beam	42.62	303	P	P	23 25 03.6	-0.1
	comp=Z,0.3nm,0.3s,baz=76,slow=6.1,SNR=1.8						
ZALV				PcP	PcP	23 26 53.9	-0.7
	comp=Z,0.6nm,0.4s,baz=86,slow=2.8,SNR=4.4						
ZALV				LR	LR	23 43 35.8	
	comp=Z,38nm,18.8s,baz=78,slow=37						
EUNU	Eureka	42.66	14	P	P	23 25 04.9	+1.1
DGZ	Jazzator, Alta	43.43	296	⇓*i*P	P	23 25 09.4	-1.0
DGZ				pmax	pmax		
	comp=Z,6.0nm,2.9s						
YKA	Yellowknife Ar	43.98	42	LR	LR	23 44 23.2	
	comp=Z,15nm,18.1s,baz=0.0,slow=37						
RES	Resolute Bay	44.09	22	P	P	23 25 16.3	+1.1
RES				pmax	pmax		
	comp=Z,6.0nm,0.7s						
RES	Resolute Bay	44.09	22	P	P	23 25 16.3	+1.1
RES				IAmb	IAmb	23 25 16.8	
	comp=Z,6.3nm,0.7s						
WMQ	Urumqi	46.63	289	*e*P	P	23 25 36.9	+1.1
KURK	Kurchatov	47.57	302	*de*P	P	23 25 40.9	-2.0
KURK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KURK	Kurchatov	47.57	302	P	P	23 25 41.0	-2.0
SPITS	Spitsbergen Ar	47.63	350	P	P	23 25 42.8	-0.3
SPB2	Spitsbergen Ar	47.63	350	P	P	23 25 42.6	-0.5
TULEG	Thule	47.67	14	P	P	23 25 43.4	+0.1
KURBB	Kurchatov Arra	47.67	302	P	P	23 25 40.8	-2.9
	comp=Z,1.2nm,0.7s,baz=62,slow=7.4,SNR=8.0						
KURBB				PcP	PcP	23 27 09.2	-3.0
	comp=Z,0.4nm,0.7s,baz=50,slow=3.1,SNR=5.4						
MK31	Makanchi Array	47.90	296	⇑*e*P	P	23 25 43.1	-2.5
MK31	Makanchi Array	47.90	296	P	P	23 25 43.8	-1.9
MKAR	Makanchi Array	47.90	296	P	P	23 25 43.4	-2.2
	comp=Z,0.5nm,0.4s,baz=54,slow=6.1,SNR=18						
MKAR	Makanchi Array	47.90	296	P	P	23 25 43.7	-1.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MKAR	Makanchi Array	47.90	296	P	P	23 25 43.7	-1.9
NEEM	North Greenlan	48.96	8	*i* P	P	23 25 53.3	-0.4
EDM	Edmonton	49.58	52	P	P	23 25 59.6	+1.2
EDM				pmax	pmax		
	comp=Z,8.0nm,0.7s						
EDM	Edmonton	49.58	52	P	P	23 25 59.6	+1.2
BRVK	Borovoye	50.35	308⇑	*e*P	P	23 26 02.4	-1.7
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BRVK	Borovoye	50.35	308	P	P	23 26 02.5	-1.7
BRVK				IAmb	IAmb	23 26 03.6	
	comp=Z,2.6nm,0.6s						
YBH	Yreka Blue Hor	51.76	69	P	P	23 26 17.6	+2.6
YBH				pmax	pmax		
	comp=Z,3.0nm,1.3s						
YBH	Yreka Blue Hor	51.76	69	P	P	23 26 17.6	+2.6
WALA	Waterton Lakes	51.86	57	P	P	23 26 17.1	+1.4
WALA				IAmb	IAmb	23 26 17.6	
	comp=Z,3.2nm,0.7s						
PLID	Pearl Lake	53.31	62	P	P	23 26 28.3	+1.7
PLID				IAmb	IAmb	23 26 29.2	
	comp=Z,2.6nm,0.8s						
ARU	Arti	53.45	317	P	P	23 26 25.2	-2.0
	comp=Z,0.6nm,0.3s,baz=54,slow=8.7						
ARU	Arti	53.45	317*c*	*i*P	P	23 26 26.2	-1.0
ARU				*PP	pP	23 26 43.0	-0.6
ARU				S	S	23 33 54.0	-0.5
ARU				SS	SS	23 37 28.2	-6.3
ARU				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ARU	Arti	53.45	317	P	P	23 26 26.6	-0.5
ARCES	ARCESS Array B	53.68	342	P	P	23 26 27.2	-1.4
	comp=Z,5.0nm,1.0s,baz=44,slow=6.6,SNR=9.6						
SUMG	Summit	54.62	6	P	P	23 26 36.3	+0.4
SUMG				pmax	pmax		
	comp=Z,7.0nm,0.8s						
SUMG	Summit	54.62	6	*i* P	P	23 26 36.0	+0.1
SUMG	Summit	54.62	6	P	P	23 26 36.3	+0.4
SUMG				IAmb	IAmb	23 26 37.6	
	comp=Z,6.8nm,0.8s						
BOZ	Bozeman (W)	55.29	59	P	P	23 26 42.5	+1.6
BOZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BOZ	Bozeman (W)	55.29	59	P	P	23 26 42.5	+1.6
KIRV	Kirov	55.54	323	LR	LR	23 52 50.5	
	comp=Z,38nm,18.3s,baz=39,slow=39						
GCMT	Greycliff	56.18	57	P	P	23 26 49.3	+2.1
YHH	Holmes Hill	56.24	59	P	P	23 26 49.9	+2.0
YHH				IAmb	IAmb	23 26 50.4	
	comp=Z,2.6nm,0.7s						
NVAR	Mina Array Bea	56.48	69	P	P	23 26 51.6	+2.0
	comp=Z,1.1nm,0.7s,baz=292,slow=7.1,SNR=7.4						
RLMT	Red Lodge	56.84	58	P	P	23 26 54.0	+2.0
RLMT				IAmb	IAmb	23 26 55.3	
	comp=Z,4.6nm,0.9s						
FXWY	Fox Creek	56.93	60	P	P	23 26 55.1	+2.4
REDW	Red Top Meadow	57.21	60	P	P	23 26 56.6	+1.9
REDW				IAmb	IAmb	23 27 05.0	
	comp=Z,4.9nm,1.4s						
ABKAR	Akbulak array	57.75	310	P	P	23 26 56.4	-1.7
ABKAR	Akbulak array	57.75	310	P	P	23 26 56.5	-1.5
SPUT	South Promonto	57.77	63	P	P	23 27 00.1	+1.6
SPUT				IAmb	IAmb	23 27 01.6	
	comp=Z,2.9nm,0.9s						
BW06	Boulder Array	58.31	60	IAmb	IAmb	23 27 05.0	
	comp=Z,3.6nm,0.8s						
PD31	Pinedale Array	58.31	60	IAmb	IAmb	23 27 05.0	
	comp=Z,3.4nm,0.8s						
PDAR	Pinedale Array	58.31	60	P	P	23 27 04.2	+1.8
	comp=Z,3.0nm,0.6s,baz=313,slow=3.4,SNR=20						
PDAR	Pinedale Array	58.31	60	P	P	23 27 03.9	+1.5
SPR3	Spring Creek 3	58.33	66	P	P	23 27 05.5	+2.8
SPR3				IAmb	IAmb	23 27 06.0	
	comp=Z,2.8nm,0.9s						
BTK	Batken	58.61	296	P	P	23 27 02.6	-1.7
BTK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
BTK	Batken	58.61	296	P	P	23 27 02.6	-1.7
BTK				IAmb	IAmb	23 27 20.8	
	comp=Z,3.3nm,1.2s						
SFJD	Kangerlussuaq	58.73	13	P	P	23 27 04.2	-0.4
SFJD				pmax	pmax		
	comp=Z,19nm,1.4s						
SFJD	Kangerlussuaq	58.73	13	P	P	23 27 04.2	-0.4
ULM	Lac du Bonnet	59.64	46	P	P	23 27 11.9	+0.8
	comp=Z,2.1nm,0.5s,baz=297,slow=4.5,SNR=3.0						
ULM	Lac du Bonnet	59.64	46	P	P	23 27 12.0	+0.8
ULM	Lac du Bonnet	59.64	46	P	P	23 27 11.3	+0.1
ULM				IAmb	IAmb	23 27 18.3	
	comp=Z,4.9nm,1.1s						
RDMU	Red Mountain	59.84	62	P	P	23 27 15.4	+2.4
RDMU				IAmb	IAmb	23 27 16.0	
	comp=Z,4.2nm,0.7s						
TMUT	Trail Mountain	59.85	64	P	P	23 27 14.6	+1.4
TMUT				IAmb	IAmb	23 27 16.1	
	comp=Z,2.2nm,0.7s						
RSSD	Black Hills	60.21	55	P	P	23 27 17.2	+1.8
RSSD				pmax	pmax		
	comp=Z,12nm,0.7s						
RSSD	Black Hills	60.21	55	P	P	23 27 17.2	+1.8
SRU	San Rafael Swe	60.36	64	P	P	23 27 18.2	+1.7
SRU				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SRU	San Rafael Swe	60.36	64	P	P	23 27 18.2	+1.7
SRU				IAmb	IAmb	23 27 19.2	
	comp=Z,4.5nm,0.9s						
FIA1	FINESS Array S	60.44	336	P	P	23 27 15.7	-0.7
FIA1				IAmb	IAmb	23 27 34.0	
	comp=Z,4.6nm,1.0s						
FINES	FINESS Array B	60.44	336	P	P	23 27 15.5	-0.9
	comp=Z,0.9nm,0.4s,baz=37,slow=8.0,SNR=17						
FINES	FINESS Array B	60.44	336	P	P	23 27 15.8	-0.7
FINES	FINESS Array B	60.44	336	P	P	23 27 15.8	-0.7
ISCO	Idaho Springs	62.51	60	P	P	23 27 33.2	+2.1
ISCO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ISCO	Idaho Springs	62.51	60	P	P	23 27 33.2	+2.1
ISCO				IAmb	IAmb	23 27 33.8	
	comp=Z,2.9nm,0.8s						
NC303	NORSAR Array S	63.76	343	P	P	23 27 38.2	-0.5
NC303				IAmb	IAmb	23 27 56.3	
	comp=Z,8.3nm,1.3s						
NC405	NORSAR Array S	63.80	343	P	P	23 27 37.6	-1.4
NC204	NORSAR Array S	63.81	344	P	P	23 27 38.5	-0.7
NB201	NORSAR Array S	63.93	343	P	P	23 27 39.4	-0.5
NB2	NORSAR Subarra	63.96	343	P	P	23 27 39.2	-0.8
	comp=Z,0.6nm,0.4s,baz=22,slow=6.9						
NOA	NORSAR Array B	63.96	343	P	P	23 27 39.3	-0.7
	comp=Z,0.9nm,0.5s,baz=26,slow=6.5,SNR=12						
NOA				LR	LR	23 58 46.3	
	comp=Z,14nm,18.5s,baz=10.0,slow=39						
NBO00	NORSAR Array S	64.04	344	P	P	23 27 39.2	-1.3
NBO00				IAmb	IAmb	23 27 55.8	
	comp=Z,7.6nm,1.1s						
NC602	NORSAR Array S	64.18	343	P	P	23 27 41.0	-0.5
NORES	NORESS Array B	64.18	343	P	P	23 27 41.1	-0.4
SCHQ	Schefferville	66.44	27	P	P	23 27 56.0	-0.2
	comp=Z,2.8nm,0.8s,baz=306,slow=8.7,SNR=1.9						
AKASG	Malin Array Be	68.83	328	P	P	23 28 09.8	-1.4
	comp=Z,1.5nm,0.4s,baz=31,slow=6.0,SNR=13						
R40A	Maddies Statio	70.42	52	P	P	23 28 21.2	0.0
R40A				IAmb	IAmb	23 28 22.6	
	comp=Z,4.7nm,0.9s						
HYB	Hyderabad	70.69	274	*i* P	P	23 28 32.0	+8.8
HHAR	Hobbs	71.18	55	P	P	23 28 26.2	+0.3
TX31	Lajitas Ar. Si	71.39	66	P	P	23 28 29.4	+2.0
TX32	Lajitas Array	71.39	66	IAmb	IAmb	23 28 29.4	
	comp=Z,3.2nm,0.7s						
TXAR	Lajitas Array	71.39	66	P	P	23 28 28.9	+1.6
	comp=Z,3.2nm,0.6s,baz=299,slow=4.7,SNR=58						
TXAR	Lajitas Array	71.39	66	P	P	23 28 29.0	+1.6
EKA	Eskdalemuir Ar	71.54	349	P	P	23 28 27.5	-0.3
U40A	Yellville	71.66	54	IAmb	IAmb	23 28 29.6	
	comp=Z,7.9nm,0.9s						
MSVF	Nonsavu	71.83	161	LR	LR	23 54 59.8	
	comp=Z,26nm,21.7s,baz=190,slow=31						
FCAR	Ozark Folk Cen	72.39	54	IAmb	IAmb	23 28 33.8	
	comp=Z,5.2nm,0.8s						
BUR08	Bucovina Ar. S	72.78	329	P	P	23 28 35.1	-0.4
DPC	Dobruska-Polom	72.81	336	*e*P	P	23 28 35.9	+0.4
DPC	Dobruska-Polom	72.81	336	*e*P	P	23 28 35.9	+0.4
LANS	Liptovska Anna	73.10	334	*e*P	P	23 28 37.8	+0.6
LANS	Liptovska Anna	73.10	334	*e*P	P	23 28 37.8	+0.6
VYHS	Vyhne	73.87	334	*e*P	P	23 28 41.8	+0.1
VYHS	Vyhne	73.87	334	*e*P	P	23 28 41.8	+0.1
KHC	Kasperske Hory	74.61	337	*e*P	P	23 28 46.0	0.0
KHC				*e*		23 29 05.0	
KHC	Kasperske Hory	74.61	337	*e*P	P	23 28 46.0	0.0
KHC				*e*pP	pwP	23 29 05.0	+0.1
BTNL	Ternell	74.79	343	*d*P	P	23 28 47.0	0.0
	comp=Z,8.0nm,0.6s						
MEM	Membach	74.79	343	*d*P	P	23 28 47.1	+0.2
	comp=Z,14nm,0.7s						
GERES	GERESS Array B	74.85	337	P	P	23 28 47.5	0.0
	comp=Z,1.1nm,0.6s,baz=24,slow=7.5,SNR=5.8						
WB0	Warramunga Arr	75.12	204	P	P	23 28 49.9	+0.8
WB0				IAmb	IAmb	23 28 50.2	
	comp=Z,5.1nm,1.0s						
BGES	Gesves	75.17	343	*d*P	P	23 28 47.8	-1.4
	comp=Z,4.5nm,1.0s						
WRA	Warramunga Arr	75.30	204	P	P	23 28 50.4	+0.2
	comp=Z,2.4nm,0.7s,baz=18,slow=6.0,SNR=17						
DOU	Dourbes	75.54	343	*d*P	P	23 28 50.8	-0.5
SOKA	Soboth	76.54	335	*e*P	P	23 28 57.6	+0.4
	comp=Z,1.4nm,0.5s						
BRTR	Keskin Array B	76.72	320	P	P	23 28 57.5	-0.9
	comp=Z,0.9nm,0.7s,baz=37,slow=4.9,SNR=5.4						
WATA	Walderalm	76.76	338	*i* P	P	23 28 58.7	+0.2
	comp=Z,2.0nm,0.5s						
RETA	Reutte	76.80	339	*i* P	P	23 28 58.6	0.0
	comp=Z,1.8nm,0.6s						
WTTA	Wattenberg	76.81	338	*i* P	P	23 28 58.9	+0.1
	comp=Z,4.2nm,0.8s						
OBKA	Obir	76.82	336	*i* P	P	23 28 59.2	+0.4
	comp=Z,2.3nm,0.7s						
MOTA	Moosalm	76.86	338	*e*P	P	23 28 59.2	+0.2
	comp=Z,3.8nm,0.7s						
SQTA	Sankt Quirin	76.95	338	*e*P	P	23 29 00.2	+0.7
	comp=Z,6.7nm,0.8s						
ABTA	Abfaltersbach	77.09	337	*e*P	P	23 29 00.7	+0.4
	comp=Z,3.4nm,0.6s,SNR=5.1						
FETA	Feichten	77.25	338	*e*P	P	23 29 01.6	+0.4
	comp=Z,1.9nm,0.5s,SNR=6.9						
CTI	Castel Tesino	77.96	338	P	P	23 29 04.6	-0.5
CTI				pmax	pmax		
	comp=Z,6.0nm,0.5s						
CTI	Castel Tesino	77.96	338	P	P	23 29 04.6	-0.5
CTI				IAmb	IAmb	23 29 05.3	
	comp=Z,5.5nm,0.5s						
TUE	Stuetta	78.07	339	P	P	23 29 06.1	+0.2
ASAR	Alice Springs	78.98	203	P	P	23 29 12.3	+1.5
	comp=Z,2.7nm,0.7s,baz=16,slow=5.4,SNR=18						
MURB	Monte Urbino	80.37	336	P	P	23 29 19.3	+1.1
RAYN	Ar Rayn	84.90	302	P	P	23 29 41.0	-1.1
RAYN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
RAYN	Ar Rayn	84.90	302	P	P	23 29 41.0	-1.1
RAYN				IAmb	IAmb	23 29 41.9	
	comp=Z,3.6nm,0.7s						
ESDC	Sonseca Array	87.04	347	P	P	23 29 51.8	-0.7
	comp=Z,0.7nm,0.7s,baz=2.3,slow=4.2,SNR=12						
ESDC	Sonseca Array	87.04	347	P	P	23 29 52.4	-0.1
KEST	Kesra	88.28	336	P	P	23 29 58.4	-0.1
	comp=Z,2.0nm,0.6s,baz=7.2,slow=4.4,SNR=6.1						
TORD	Torodi Ar. Bea	111.79	336	PKiKP	PKiKP	23 35 40.4	-1.4
	comp=Z,0.4nm,0.6s,baz=356,slow=2.9,SNR=4.4						
DBIC	Dimbokro	119.51	342	PKP	PKPdf	23 35 56.6	0.0
	comp=Z,1.2nm,0.4s,baz=359,slow=2.5,SNR=6.1						
DBIC	Dimbokro	119.51	342	PKIKP	PKiKP	23 35 56.8	+0.2
DBIC	Dimbokro	119.51	342		PKiKP	23 35 56.8	+0.2
PLCA	Paso Flores	144.57	91	PKP	PKPdf	23 36 42.5	-0.2
	comp=Z,4.3nm,0.8s,baz=309,slow=4.7,SNR=7.0						

BJI ***15*** *23:24:38.4±0.0, 24°.90N×94°.74E, h70^{km}, mB4.5/17, mb4.3/32, Ms4.2/2, Ms7 3.7/2*

IDC ***15*** *23:24:39.7±0.6, 24°.66N×94°.88E, h94^{km}±4^{km}, mb3.7/21, mb1 3.8/22, mb1mx3.7/47, mbtmp4.1/22, MS3.0/5, Ms1 3.0/5, ms1mx2.7/37, Error ellipse: s-maj=10.4km s-min=8.7km az=108.0*

NDI ***15*** *23:24:39.7±1.7, 24°.72N×94°.73E, h92^{km}±27^{km}, ML4.3, mb4.4(NEIC)*

NEIC ***15*** *23:24:40.0±2.2, 24°.74N±0°.08×94°.82E±0°.09, h90^{km}±7^{km}, mb4.4/38, Error ellipse: s-maj=13.1km s-min=9.4km az=223.0*

ISC 15 23:24:39.6±0.5**, 24°.71N**±0°.04×**94°.75E**±0°.04**, h93**^{km}±4^{km}**, n101,** σ1^{s}**51**/131**, mb4.3**/38**, 2C, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOHI	KOHIMA	1.16	330	*e*P	Pn	23 25 01.7	+0.3
KOHI				*e*S	Sn	23 25 17.7	-0.1
KOHI				IAML		23 25 25.5	
	comp=E,4µm,0.3s						
MOKO	MOKOCHONG	1.61	353	*e*P	Pn	23 25 07.0	-0.1
MOKO				*e*S	Sn	23 25 27.0	-0.8
MOKO				IAML		23 25 28.3	
	comp=E,9µm,0.4s						
MOKO				IAML		23 25 29.4	
	comp=N,4µm,0.4s						
ITAN	ITANAGAR	2.59	339	*e*P	Pn	23 25 19.4	-0.3
ITAN				*e*S	Sn	23 25 48.6	-1.9
ITAN				IAML		23 25 50.3	
	comp=N,4µm,0.4s						
ITAN				IAML		23 25 50.6	
	comp=E,3µm,0.2s						
SHL	Shillong	2.73	289⇑	*i*P	Pn	23 25 21.4	-0.3
SHL				*e*S	Sn	23 25 52.1	-2.0
SHL				IAML		23 25 53.9	
	comp=N,1µm,0.5s						
SHL				IAML		23 25 54.2	
	comp=E,927nm,0.6s						
SHL	Shillong	2.73	289	Pn	Pn	23 25 21.6	-0.1
SHL				Sn	Sn	23 25 52.8	-1.3
LKP	Lekhapani	2.79	21	*e*P	Pn	23 25 21.7	-0.6
LKP				*e*S	Sn	23 25 54.1	-1.0
BRDH	Bariadhala	3.49	235	P	Pn	23 25 32.7	+0.9
	comp=E,0.6nm,0.3s,baz=73,slow=19,SNR=3.3						
BRDH				S	Sn	23 26 13.2	+1.0
	comp=E,2.0nm,0.3s,baz=43,slow=24,SNR=35						
LSA	Lhasa	5.91	328	P	Pn	23 26 06.5	+1.5
LSA				S	Sn	23 27 10.5	-1.1
LSA				smax	smax		
	comp=E,640nm,1.1s						
LSA				smax	smax		
	comp=E,770nm,0.8s						
LSA	Lhasa	5.91	328	Pn	Pn	23 26 06.2	+1.2
GTK	Tadong	6.11	296	*e*P	Pn	23 26 08.7	+1.3
GTK				*e*S	Sn	23 27 15.4	-0.5
TAPN	Taplejung	6.85	294	*e*Pn	Pn	23 26 18.4	+0.7
TAPN				*e*Sn	Sn	23 27 35.2	+0.8
	comp=E,454nm,0.8s						
ODAN	Odare	6.97	289	*e*Pn	Pn	23 26 19.2	0.0
ODAN				*e*Sn	Sn	23 27 34.0	-3.1
	comp=E,529nm,0.5s						
CHTO	Chiang Mai	7.05	146	Pn	Pn	23 26 20.3	+0.1
KMI	Kunming	7.27	85	⇑P	Pn	23 26 25.8	+2.5
KMI				pmax	pmax		
	comp=E,22nm,0.9s						
KMI				pmax	pmax		
	comp=E,100nm,5.4s						
CM31	Chiang Mai Arr	7.35	147		Pn	23 26 23.9	-0.3
CMAR	Chiang Mai Arr	7.35	147	P	Pn	23 26 24.3	+0.1
	comp=E,1.3nm,0.3s,baz=322,slow=13,SNR=97						
CMAR				LR	LR	23 29 45.4	
	comp=E,70nm,19.1s,baz=14,slow=42						
CMAR	Chiang Mai Arr	7.35	147	Pn	Pn	23 26 23.7	-0.5
RAMN	Ramite	7.67	289	*e*Pn	Pn	23 26 28.7	-0.1
RAMN				*e*Sn	Sn	23 27 49.9	-4.4
	comp=E,222nm,0.5s						
JIRN	Jiri	8.23	293	*e*Pn	Pn	23 26 36.3	-0.2
JIRN				*e*Sn	Sn	23 28 06.0	-2.0
	comp=E,142nm,0.3s						
PKI	Pulchoki	8.86	291	*e*Pn	Pn	23 26 44.6	-0.5
PKIN	Phulchoki	8.87	291	*e*Pn	Pn	23 26 44.6	-0.6
PKIN				*e*Sn	Sn	23 28 21.3	-2.3
	comp=E,128nm,0.4s						
KKN	Kakani	9.03	292	*e*Pn	Pn	23 26 46.5	-0.8
KKN				*e*Sn	Sn	23 28 25.2	-2.2
	comp=E,210nm,0.8s						
SLVN	Son La	9.08	110	Pn	Pn	23 26 47.4	-0.5
DMN	Daman	9.13	290	*e*Pn	Pn	23 26 47.8	-0.9
DMN				*e*Sn	Sn	23 28 26.4	-3.4
	comp=E,112nm,0.6s						
GKN	Gorkha	9.64	292	*e*Pn	Pn	23 26 54.4	-1.2
GKN				*e*Sn	Sn	23 28 38.1	-4.0
	comp=E,263nm,0.6s						
PBKT	Sadao Pong	9.98	143	Pn	Pn	23 26 59.3	-0.7
KOLN	Koldanda	10.46	289	*e*Pn	Pn	23 27 05.4	-1.4
KOLN				*e*Sn	Sn	23 28 56.7	-5.5
	comp=E,84nm,0.5s						
DANN	Dangsing	10.48	293	*e*Pn	Pn	23 27 04.4	-2.8
PYUN	Piuthan	11.06	290	*e*Pn	Pn	23 27 12.5	-2.5
PYUN				*e*Sn	Sn	23 29 12.0	-4.9
	comp=E,190nm,0.6s						
PBA	Port Blair	13.13	189	Pn	Pn	23 27 43.2	+0.8
UBPT	Khong Chiam	13.76	131		Pn	23 27 50.4	-0.3
LZH	Lanzhou	13.78	33	*e*P	Pn	23 27 49.1	-1.9
LZH				pP	P	23 27 58.1	+1.7
LZH				pmax	pmax		
	comp=E,12nm,1.3s						
ENH	Enshi	14.20	64	Pn	Pn	23 27 56.0	-0.4
GTA	Gaotai	15.27	15	*e*P	P	23 28 12.9	+0.1
GTA				pP	pP	23 28 23.3	-7.4
GTA				sP	sP	23 28 28.0	-15
GTA				pmax	pmax		
	comp=E,5.0nm,1.0s						
GTA				pmax	pmax		
	comp=E,46nm,5.1s						
XAN	Xi'an	15.45	50	P	P	23 28 15.0	+0.2
XAN				pmax	pmax		
	comp=E,10.0nm,1.1s						
WMQ	Urumqi	19.92	345	*e*P	Pn	23 29 05.3	-1.0
WMQ				pP	pP	23 29 24.4	+2.3
WMQ				pmax	pmax		
	comp=E,23nm,0.7s						
WMQ				pmax	pmax		
	comp=E,96nm,4.9s						
NIL	Nilore	20.74	300	P	P	23 29 13.6	+0.7
NIL				IAmb	IAmb	23 29 32.6	
	comp=Z,8.8nm,0.8s						
HHC	Hu-ho-hao-te	21.36	37	*e*P	P	23 29 21.3	+1.9
HHC				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,47nm,6.6s						
PALK	Pallekele	21.94	220	P	P	23 29 27.9	+2.1
	comp=Z,11nm,0.9s,baz=91,slow=17,SNR=3.0						
PALK				S	S	23 33 24.8	+2.1
	comp=Z,6.8nm,1.0s,baz=322,slow=11,SNR=1.9						
TARG	Taragay, Kyrgy	22.04	324	P	P	23 29 27.8	+0.8
PSI	Prapat	22.16	169	P	P	23 29 29.9	+1.8
	comp=Z,2.9nm,0.5s,baz=339,slow=14,SNR=2.4						
RPSI	Rantau Prapat	22.26	169	P	P	23 29 29.9	+0.8
NJ2	Nanjing	22.40	66	*e*P	P	23 29 31.5	+1.0
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
TWG	Pinlang	24.16	89	P	P	23 29 46.5	-0.7
TWG				IAmb	IAmb	23 29 49.2	
	comp=Z,19nm,0.8s						
MK31	Makanchi Array	24.18	339	P	P	23 29 48.2	+1.0
MK31				IAmb	IAmb	23 29 49.5	
	comp=Z,6.4nm,0.6s						
MKAR	Makanchi Array	24.18	339	P	P	23 29 48.7	+1.5
	comp=Z,7.5nm,0.6s,baz=151,slow=8.9,SNR=77						
MKAR				PcP	PcP	23 33 25.6	+0.1
	comp=Z,0.5nm,0.6s,baz=138,slow=1.8,SNR=4.6						
MKAR	Makanchi Array	24.18	339	P	P	23 29 48.4	+1.2
YULB	Yu-li	24.27	88	P	P	23 29 47.5	-0.8
YULB				IAmb	IAmb	23 30 05.8	
	comp=Z,26nm,1.4s						
MAKZ	Makanchi	24.30	338	P	P	23 29 49.2	+0.9
KBL	Kabul	24.34	300	P	P	23 29 51.7	+2.8
NACB	Ninganchiao	24.44	86	P	P	23 29 49.0	-0.7
NACB				IAmb	IAmb	23 29 52.4	
	comp=Z,29nm,1.2s						
AAK	Ala-Archa	24.46	322	P	P	23 29 52.8	+2.8
	comp=Z,2.9nm,0.8s,baz=148,slow=9.6,SNR=6.2						
AAK	Ala-Archa	24.46	322	IAmb	IAmb	23 30 08.5	
	comp=Z,14nm,1.4s						
SONM	Songino Array	24.86	19	P	P	23 29 53.6	+0.1
	comp=Z,1.6nm,0.5s,baz=196,slow=9.9,SNR=18						
SONM				pP	pP	23 30 15.2	+0.7
	comp=Z,1.6nm,0.6s,baz=205,slow=10,SNR=4.5						
SONM				ScP	ScP	23 36 56.4	-1.4
	comp=Z,1.0nm,1.1s,baz=204,slow=3.2,SNR=3.6						
GAR	Garm	25.07	310	P	P	23 29 58.0	+2.5
GAR				IAmb	IAmb	23 30 09.1	
	comp=Z,9.9nm,0.9s						
ULN	Ulaanbaatar	25.08	20	P	P	23 29 55.7	+0.1
CHGR	Chuyangaron	25.73	309	P	P	23 30 03.2	+1.8
KURBB	Kurchatov Arra	28.75	338	P	P	23 30 28.9	+0.7
	comp=Z,1.7nm,0.8s,baz=150,slow=8.6,SNR=11						
KURBB				PcP	PcP	23 33 36.3	+0.2
	comp=Z,4.6nm,0.9s,baz=160,slow=2.3,SNR=17						
KURBB				ScP	ScP	23 37 09.1	-0.1
	comp=Z,0.4nm,0.8s,baz=140,slow=2.0,SNR=4.0						
KURK	Kurchatov	28.79	338	P	P	23 30 29.3	+0.7
ZALV	Zalesovo Beam	30.13	348	P	P	23 30 40.8	+0.5
	comp=Z,0.6nm,0.4s,baz=168,slow=7.4,SNR=3.6						
ZALV				PcP	PcP	23 33 38.0	-1.6
	comp=Z,0.6nm,0.5s,baz=140,slow=3.4,SNR=2.5						
JOW	Kunigami	30.22	79	P	P	23 30 39.4	-2.2
	comp=Z,6.1nm,0.5s,baz=261,slow=13,SNR=1.8						
JOW	Kunigami	30.22	79	P	P	23 30 39.5	-2.0
KSRS	Korea Array	30.96	58	LR	LR	23 45 05.0	
	comp=Z,19nm,18.0s,baz=58,slow=40						
BVAR	Borovoye Array	33.72	333	P	P	23 31 12.3	+0.5
	comp=Z,1.0nm,0.8s,baz=181,slow=18,SNR=3.6						
BVAR				PcP	PcP	23 33 50.2	+0.8
	comp=Z,1.3nm,0.6s,baz=218,slow=9.1,SNR=6.0						
BVAR				ScP	ScP	23 37 25.1	-0.7
	comp=Z,1.3nm,0.8s,baz=213,slow=9.9,SNR=5.7						
ABKAR	Akbulak array	36.55	321	P	P	23 31 38.2	+2.1
ABKAR	Akbulak array	36.55	321	P	P	23 31 37.9	+1.8
ABKAR				IAmb	IAmb	23 31 45.6	
	comp=Z,2.5nm,0.8s						
AKTO	Aktyubinsk	38.21	322	ScP	ScP	23 37 41.9	-0.4
	comp=Z,2.1nm,0.8s,baz=124,slow=7.3,SNR=6.5						
AKTO				LR	LR	23 47 38.5	
	comp=Z,15nm,18.2s,baz=94,slow=36						
ARU	Arti	41.11	330	P	P	23 32 16.0	+1.9
	comp=Z,0.6nm,0.5s,baz=100,slow=11,SNR=3.9						
ARU				LR	LR	23 51 42.0	
	comp=Z,34nm,19.0s,baz=89,slow=39						
FAKI	Fak Fak	45.61	122	P	P	23 32 49.2	-1.6
TIXI	Tiksi	50.74	13	P	P	23 33 28.6	-1.0
	comp=Z,2.6nm,0.3s,baz=193,slow=4.2,SNR=12						
TIXI	Tiksi	50.74	13	P	P	23 33 28.9	-0.6
TIXI				IAmb	IAmb	23 33 29.4	
	comp=Z,4.7nm,0.6s						
PSA00	Pilbara Seismi	52.08	150	P	P	23 33 38.6	-1.5
PSA00	Pilbara Seismi	52.08	150	P	P	23 33 39.1	-1.1
PSA00				IAmb	IAmb	23 33 39.6	
	comp=Z,5.1nm,0.9s						
KNRA	Kununurra	52.08	137	P	P	23 33 39.2	-1.1
FITZ	Fitzroy Crossi	52.13	142	P	P	23 33 39.5	-1.1
FITZ				IAmb	IAmb	23 33 53.1	
	comp=Z,8.4nm,1.4s						
BZK	Bozkurt	52.52	305	P	P	23 33 44.5	+1.2
AKASG	Malin Array Be	55.91	316	P	P	23 34 07.6	-0.1
	comp=Z,0.7nm,0.3s,baz=78,slow=6.3,SNR=5.1						
AKASG				pP	pP	23 34 31.6	+0.6
	comp=Z,0.8nm,0.4s,baz=82,slow=6.1,SNR=3.4						
AKASG				LR	LR	00 01 51.1	
	comp=Z,15nm,20.9s,baz=355,slow=40						
MANU	Manus Island	57.52	110	P	P	23 34 18.5	-1.1
MANU				IAmb	IAmb	23 34 37.7	
	comp=Z,7.6nm,0.9s						
FIA1	FINESS Array S	58.43	328	P	P	23 34 25.5	+0.2
FINES	FINESS Array B	58.43	328	P	P	23 34 25.9	+0.6
	comp=Z,2.2nm,0.7s,baz=110,slow=10,SNR=9.1						
WB0	Warramunga Arr	58.68	135	P	P	23 34 26.4	-1.2
WB0				IAmb	IAmb	23 34 27.0	
	comp=Z,7.6nm,1.0s						
WRA	Warramunga Arr	58.78	135	P	P	23 34 27.1	-1.2
	comp=Z,4.6nm,0.5s,baz=322,slow=7.5,SNR=48						
WRA				pP	pP	23 34 51.5	+0.1
	comp=Z,3.3nm,0.8s,baz=325,slow=7.5,SNR=6.2						
WB2	Warramunga Arr	58.79	135	P	P	23 34 27.1	-1.2
WR0	Warramunga Arr	58.92	135	P	P	23 34 28.2	-1.1
ARCES	ARCESS Array B	59.83	338	P	P	23 34 37.0	+2.1
	comp=Z,6.7nm,1.2s,baz=103,slow=7.5,SNR=6.0						
COEN	Coen	60.91	124	P	P	23 34 41.3	-1.6
COEN				IAmb	IAmb	23 34 59.4	
	comp=Z,3.3nm,1.1s						
AS31	Alice Springs	61.27	139	P	P	23 34 44.5	-0.9
AS31				IAmb	IAmb	23 34 44.9	
	comp=Z,1.7nm,0.7s						
ASAR	Alice Springs	61.27	139	P	P	23 34 44.2	-1.1
	comp=Z,3.9nm,0.6s,baz=320,slow=6.8,SNR=41						
ASAR				pP	pP	23 35 08.1	-0.5
	comp=Z,1.8nm,0.9s,baz=321,slow=6.7,SNR=4.2						
FORT	Forrest	63.74	148	P	P	23 35 02.0	+0.4

NB2	**NORSAR Subarra**	**65.60**	**328**	P	**P**	**23 35 13.5**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=82,slow=6.5						
NOA	**NORSAR Array B**	**65.60**	**328**	P	**P**	**23 35 13.6**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=83,slow=6.3,SNR=4.3						
NOA				pP	**pP**	**23 35 37.0**	**-0.2**
	comp=Z,0.9nm,0.7s,baz=83,slow=6.3,SNR=3.5						
GERES	**GERESS Array B**	**66.07**	**314**	P	**P**	**23 35 17.3**	**+0.6**
	comp=Z,0.5nm,0.6s,baz=77,slow=9.2,SNR=2.4						
GERES				pP	**pP**	**23 35 41.2**	**+0.6**
	comp=Z,1.1nm,0.7s,baz=46,slow=5.7,SNR=3.6						
EUNU	**Eureka**	**75.44**	**0**	P	**P**	**23 36 14.1**	**+1.1**
EUNU				IAmb	IAmb	23 36 14.6	
	comp=Z,5.4nm,0.8s						
SUMG	**Summit**	**77.94**	**347**	*i* P	**P**	**23 36 27.9**	**+0.3**
SUMG				IAmb	IAmb	23 36 28.3	
	comp=Z,40nm,0.5s						
ILAR	**Eielson Array**	**79.02**	**23**	P	**P**	**23 36 31.1**	**-2.0**
	comp=Z,0.3nm,0.7s,baz=281,slow=4.5,SNR=5.9						
A36M	**Sachs Harbour**	**79.72**	**12**	P	**P**	**23 36 37.0**	**+0.2**
A36M				IAmb	IAmb	23 36 37.8	
	comp=Z,8.7nm,0.8s						
ESDC	**Sonseca Array**	**80.91**	**309**	P	**P**	**23 36 43.9**	**0.0**
	comp=Z,0.4nm,0.9s,baz=47,slow=4.2,SNR=5.4						
ESDC	**Sonseca Array**	**80.91**	**309**	P	**P**	**23 36 44.3**	**+0.5**
TORD	**Torodi Ar. Bea**	**87.32**	**283**	P	**P**	**23 37 17.4**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=46,slow=2.4,SNR=2.8						
BDFB	**Brasilia**	**144.00**	**277**	PKP	PKPbc	23 44 03.8	+0.5
	comp=Z,2.4nm,0.7s,baz=88,slow=5.3,SNR=4.6						
ROSC	**El Rosal**	**148.76**	**339**	PKPbc	**PKPbc**	**23 44 18.4**	**+0.8**
	comp=Z,23nm,0.5s,baz=250,slow=7.6,SNR=8.5						

SKO ***15*** *23:26:49.9, 42°.01N×20°.34E, h24^{km}*
THE ***15*** *23:26:50.7, 41°.93N×20°.37E, h1^{km}±2^{km}, ML2.4/3, Error ellipse: s-maj=3.7km s-min=1.4km az=336.0*
TIR ***15*** *23:26:50.5, 41°.90N×20°.33E, h4^{km}±3^{km}, Md2.8, Ml2.6*
RHSSO ***15*** *23:26:50.5±0.7, 41°.90N×20°.33E, h4^{km}±3^{km}, ML2.7/9*
PDG ***15*** *23:26:51.2±0.3, 41°.93N×20°.22E, h11^{km}, ML2.5/14, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
BEO ***15*** *23:26:52.1±0.2, 41°.91N×20°.33E, h8^{km}±3^{km}, ML2.4/15*
ISC 15 23:26:50.4±1.1**, 41°.93N**±0°.02×**20°.30E**±0°.02**, h0**^{km}±10^{km}**, n81, σ0^{s}.80**/135**, 4C-7D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PHP	**Peshkopia**	**0.27**	**157**	P	**Pg**	**23 26 55.7**	**+0.3**
PHP				S	**Sg**	**23 26 59.2**	**+0.3**
PHP	**Peshkopia**	**0.27**	**157**	P	**Pg**	**23 26 55.8**	**+0.3**
	baz=159						
PHP				S	**Sg**	**23 26 59.3**	**+0.3**
	baz=159						
PHP				AMP			
	comp=N,5.6nm,0.3s,baz=159						
BCI	**Bajram Curri**	**0.47**	**338**	P	**Pg**	**23 26 59.9**	**+0.5**
	baz=338						
BCI				S	**Sb**	**23 27 08.5**	**-0.6**
	baz=338						
BCI				AMP			
	comp=N,2.0nm,0.2s,baz=338						
TIR	**Tirane**	**0.67**	**210**	*e*Pg	**Pb**	**23 27 04.4**	**-0.5**
TIR				*e*Sg	**Sb**	**23 27 14.3**	**-0.4**
TIR	**Tirane**	**0.67**	**210**	P	**Pg**	**23 27 03.3**	**+0.1**
TIR				S	**Sb**	**23 27 14.1**	**-0.6**
	comp=N,228nm,0.3s						
TIR	**Tirane**	**0.67**	**210**	*i* Pg	**Pb**	**23 27 04.5**	**-0.5**
TIR	**Tirane**	**0.67**	**210**	P	**Pg**	**23 27 03.5**	**+0.3**
	baz=213						
TIR				S	**Sb**	**23 27 13.6**	**-1.1**
	baz=213						
TIR				AMP			
	comp=N,1.1nm,0.2s,baz=213						
PVY	**Plav**	**0.71**	**339**	⇑*i*Pg	**Pg**	**23 27 04.0**	**-0.1**
PVY				*i* Sg	**Sg**	**23 27 14.8**	**+1.5**
ULC	**Ulcinj**	**0.79**	**273**	*i* Pg	**Pg**	**23 27 05.1**	**-0.5**
ULC	**Ulcinj**	**0.79**	**273**	⇓*i*Pg	**Pg**	**23 27 04.7**	**-0.9**
ULC				*i* Sg	**Sg**	**23 27 16.2**	**+0.4**
SKO	**Skopje**	**0.85**	**87**	*i* Pg	**Pg**	**23 27 05.0**	**-1.6**
SKO				*i* Sg	**Sg**	**23 27 17.5**	**-0.1**
SKO				*e*Lg	Lg	23 27 21.5	
	comp=N,24nm,0.3s						
DRME	**Dracevica, Mon**	**0.87**	**288**	*e*Pg	**Pg**	**23 27 06.2**	**-0.9**
DRME				*e*Sg	**Sg**	**23 27 19.2**	**+0.8**
DRME	**Dracevica, Mon**	**0.87**	**288**	*e*Pg	**Pg**	**23 27 06.1**	**-1.0**
DRME				*i* Sg	**Sg**	**23 27 18.9**	**+0.5**
OHR	**Ohrid**	**0.90**	**155**	*e*Pg	**Pg**	**23 27 07.3**	**-0.3**
OHR				*e*Sg	**Sb**	**23 27 21.1**	**-0.3**
OHR	**Ohrid**	**0.90**	**155**	*i* Pg	**Pg**	**23 27 07.0**	**-0.6**
OHR				*i* Sg	**Sg**	**23 27 20.1**	**+0.8**
OHR				*e*Lg	Lg	23 27 21.5	
	comp=N,103nm,0.4s						
PDG	**Podgorica**	**0.93**	**303**	*e*Pg	**Pg**	**23 27 08.0**	**-0.2**
PDG				*e*Sg	**Sb**	**23 27 21.9**	**-0.3**
PDG	**Podgorica**	**0.93**	**303**	*e*Pg	**Pg**	**23 27 07.3**	**-0.9**
PDG				*e*Sg	**Sg**	**23 27 20.9**	**+0.7**
PDG	**Podgorica**	**0.93**	**303**	*i* Pg	**Pg**	**23 27 06.6**	**-1.6**
PDG				*i* Sg	**Sb**	**23 27 22.5**	**+0.3**
TTG	**Podgorica**	**0.93**	**303**	⇓*i*Pg	**Pg**	**23 27 07.1**	**-1.1**
TTG				*i* Sg	**Sg**	**23 27 21.2**	**+1.0**
IVA	**Berane**	**0.99**	**342**	⇓*i*Pg	**Pg**	**23 27 09.2**	**-0.2**
IVA				*i* Sg	**Sb**	**23 27 24.4**	**+0.3**
KOME	**Kolasin**	**1.09**	**328**	⇓*i*Pg	**Pg**	**23 27 10.8**	**-0.5**
KOME				*i* Sg	**Sb**	**23 27 27.3**	**+0.3**
BUM	**Brajici-Budva**	**1.11**	**290**	⇑*i*Pg	**Pg**	**23 27 10.7**	**-1.0**
BUM				*i* Sg	**Sb**	**23 27 27.2**	**-0.5**
CEME	**Cevo**	**1.20**	**301**	⇓*i*Pg	**Pg**	**23 27 12.1**	**-1.3**
CEME				*i* Sg	**Sb**	**23 27 30.3**	**+0.1**
NKME	**Niksic**	**1.30**	**310**	*e*Pg	**Pg**	**23 27 14.4**	**-1.0**
NKME				*i* Sg	**Sn**	**23 27 33.8**	**-0.3**
NKY	**Niksic**	**1.31**	**313**	*e*Pg	**Pg**	**23 27 14.9**	**-0.7**
NKY				*i* Sg	**Sn**	**23 27 34.2**	**-0.2**
SJES	**Sjenica**	**1.35**	**350**	*e*Pg	**Pg**	**23 27 16.5**	**+0.1**
SJES				*e*Sg	**Sn**	**23 27 37.5**	**+2.1**
KBN	**Korca**	**1.35**	**164**	P	**Pg**	**23 27 15.9**	**-0.5**
KBN				S	**Sb**	**23 27 34.8**	**+0.2**
	comp=N,88nm,0.6s						
KBN	**Korca**	**1.35**	**164**	P	**Pg**	**23 27 16.1**	**-0.3**
	baz=164						
KBN				S	**Sn**	**23 27 36.5**	**+1.1**
	baz=164						
KBN				AMP			
	comp=E,0.5nm,0.5s,baz=164						
FNA	**Florina**	**1.40**	**144**	P	**Pn**	**23 27 15.7**	**-1.6**
FNA				S	**Sb**	**23 27 36.1**	**+0.2**
	comp=E,262nm,0.5s						
FNA	**Florina**	**1.40**	**144**	*i* Pg	**Pn**	**23 27 15.8**	**-1.4**
FNA				*i* Sg	**Sn**	**23 27 37.1**	**+0.6**
FNA	**Florina**	**1.40**	**144**	S	**Sn**	**23 27 37.1**	**+0.6**
	baz=144						
SELS	**Selova**	**1.42**	**25**	*e*Pg	**Pn**	**23 27 17.7**	**+0.1**
BARS	**Barje**	**1.43**	**51**	*e*Pg	**Pb**	**23 27 18.1**	**+0.2**
BARS	**Barje**	**1.43**	**51**	*e*Pn	**Sg**	**23 27 34.6**	**-1.7**
BARS				*e*Sg	**Sn**	**23 27 37.2**	**+0.1**
PRVS	**Prvonek**	**1.44**	**66**	*e*Pg	**Pg**	**23 27 18.1**	**+0.1**
PRVS				*e*Sg	**Sn**	**23 27 38.4**	**+1.0**
HCY	**Herceg Novi**	**1.44**	**292**	⇑*i*Pg	**Pn**	**23 27 16.2**	**-1.5**
HCY				*e*Sg	**Sn**	**23 27 37.4**	**0.0**
HCY	**Herceg Novi**	**1.44**	**292**	*e*Pg	**Pn**	**23 27 16.3**	**-1.5**
HCY				*i* Sg	**Sn**	**23 27 38.0**	**+0.6**
PLE	**Pljevlja**	**1.55**	**335**	⇓*i*Pg	**Pn**	**23 27 19.2**	**-0.2**
PLE				*i* Sg	**Sg**	**23 27 42.1**	**+1.7**
NEST	**Nestorio**	**1.61**	**159**	P	**Pn**	**23 27 20.0**	**-0.2**
BRY	**Bratogost**	**1.63**	**307**	⇑*i*Pn	**Pn**	**23 27 20.8**	**+0.3**
BRY				*e*Sn	**Sn**	**23 27 41.7**	**-0.5**
BRY	**Bratogost**	**1.63**	**307**	⇓*i*Pn	**Pn**	**23 27 20.4**	**-0.1**
BRY				*i* Sn	**Sg**	**23 27 43.3**	**+0.6**
UPM	**Unac-Piva**	**1.64**	**321**	*e*Pn	**Pn**	**23 27 20.5**	**-0.2**
UPM				*e*Sn	**Sn**	**23 27 41.9**	**-0.7**
UPM	**Unac-Piva**	**1.64**	**321**	*e*Pn	**Pn**	**23 27 20.5**	**-0.2**
UPM				*i* Sn	**Sg**	**23 27 44.2**	**+1.1**
TREB	**Trebinje**	**1.65**	**299**	*e*Pg	**Pn**	**23 27 21.1**	**+0.5**
TREB				*e*Sg	**Sg**	**23 27 46.5**	**+3.1**
TREB	**Trebinje**	**1.65**	**299**	*e*Pn	**Pn**	**23 27 20.0**	**-0.6**
TREB				*e*Sn	**Sn**	**23 27 42.3**	**-0.2**
BOSS	**Bosilegrad**	**1.71**	**70**	*e*Pg	**Pb**	**23 27 22.6**	**-0.2**
BOSS				*e*Sg	**Sb**	**23 27 44.6**	**-0.3**
DBRK	**Dubrovnik**	**1.76**	**296**	*e*Pn	**Pn**	**23 27 22.0**	**-0.2**
DBRK				Sn	**Sb**	**23 27 46.0**	**-0.3**
LSK	**Leskovik**	**1.79**	**173**	P	**Pg**	**23 27 25.3**	**+0.5**
	baz=173						
LSK				S	**Sg**	**23 27 50.0**	**+2.0**
	baz=173						
VAY	**Valandovo**	**1.80**	**109**	*e*Pg	**Pb**	**23 27 24.0**	**-0.3**
VAY				*e*Sg	**Sb**	**23 27 47.9**	**+0.4**
VAY	**Valandovo**	**1.80**	**109**	*i* Pn	**Pn**	**23 27 22.9**	**+0.2**
VAY				*i* Sn	**Sg**	**23 27 48.1**	**-0.3**
VAY				*e*Lg	Lg	23 27 50.9	
	comp=N,35nm,0.8s						
RUDO	**Rudo**	**1.82**	**338**	*e*Pn	**Pn**	**23 27 22.5**	**-0.5**
RUDO				*e*Sn	**Sn**	**23 27 47.3**	**+0.5**
GRG	**Griva**	**1.85**	**121**	*i* Pn	**Pn**	**23 27 23.7**	**+0.3**
GRG				*i* Sn	**Sg**	**23 27 50.5**	**+0.6**
GRUS	**Gruza**	**1.98**	**9**	*e*Pg	**Pb**	**23 27 26.7**	**-0.6**
BBLS	**Lazići**	**2.04**	**341**	*e*Pn	**Pn**	**23 27 26.4**	**+0.2**
BBLS	**Lazići**	**2.04**	**341**	*e*Pn	**Pn**	**23 27 25.6**	**-0.6**
BBLS				*e*Sn	**Sn**	**23 27 51.9**	**-0.5**
SRN	**Sarande**	**2.06**	**187**	P	**Pg**	**23 27 29.5**	**-0.4**
	baz=188						
SRN				S	**Sg**	**23 27 56.7**	**+0.1**
	baz=188						
KNT	**Kendrikon**	**2.09**	**111**	*i* Pn	**Pn**	**23 27 27.0**	**+0.2**
STON	**Ston**	**2.15**	**297**	*e*Pn	**Pn**	**23 27 27.9**	**+0.5**
STON	**Ston**	**2.15**	**297**	*e*Pn	**Pn**	**23 27 27.6**	**+0.2**
STON				*e*Sn	**Sn**	**23 27 54.9**	**+0.2**
STON	**Ston**	**2.15**	**297**	*e*Pn	**Pn**	**23 27 27.8**	**+0.3**
STON				Sn	**Sb**	**23 27 56.9**	**-0.4**
DIVS	**Divibare**	**2.18**	**354**	*e*Pn	**Pn**	**23 27 28.5**	**+0.5**
DIVS	**Divibare**	**2.18**	**354**	*e*Pn	**Pn**	**23 27 28.0**	**0.0**
DIVS				*e*Sn	**Sn**	**23 27 55.9**	**+0.1**
VTS	**Vitosha**	**2.28**	**71**	*e*Pn	**Pn**	**23 27 30.1**	**+0.6**
ZAGS	**Zajecar**	**2.36**	**36**	*e*Pn	**Pb**	**23 27 32.5**	**-1.2**
HAPS	**Han Pijesak,Bl**	**2.37**	**336**	*e*Pn	**Pn**	**23 27 31.4**	**+0.7**
HAPS				*e*Sn	**Sn**	**23 28 00.5**	**-0.1**
MAKA	**Makarska**	**2.78**	**300**	*e*Pn	**Pn**	**23 27 37.3**	**+1.1**
RICI	**Ricice**	**2.81**	**305**	*e*Pn	**Pn**	**23 27 38.0**	**+1.4**
HVAR	**Hvar**	**3.11**	**295**	*e*Pn	**Pn**	**23 27 40.7**	**0.0**
FRGS	**Fruska Gora**	**3.25**	**354**	*e*Pn	**Pn**	**23 27 43.0**	**+0.4**
FRGS	**Fruska Gora**	**3.25**	**354**	*e*Pn	**Pn**	**23 27 42.4**	**-0.2**
FRGS				*e*Sn	**Sn**	**23 28 21.5**	**-0.5**
KIJV	**Kijevo**	**3.53**	**307**	*e*Pn	**Pn**	**23 27 48.0**	**+1.5**
BLY	**Banja Luka**	**3.62**	**322**	*e*Pn	**Pn**	**23 27 47.5**	**-0.2**
BLY				*e*Sn	**Sn**	**23 28 31.0**	**-0.2**
BZS	**Buzias**	**3.81**	**14**	*e*Pn	**Pn**	**23 27 50.2**	**-0.1**
ZIRJ	**Zirje**	**3.84**	**298**	*e*Pn	**Pn**	**23 27 51.0**	**+0.3**
MORI	**Morici**	**3.89**	**301**	*e*Pn	**Pn**	**23 27 52.8**	**+1.3**
UDBI	**Udbina**	**4.21**	**310**	*e*Pn	**Pn**	**23 27 58.0**	**+2.1**
DUGI	**Dugi Otok**	**4.37**	**300**	*e*Pn	**Pn**	**23 27 58.4**	**+0.4**
NVLJ	**Novalja**	**4.76**	**305**	*e*Pn	**Pn**	**23 28 03.7**	**+0.3**
CRES	**Cresnjev**	**5.24**	**320**	*e*Pn	**Pn**	**23 28 10.0**	**0.0**
BRJN	**Brijuni**	**5.62**	**304**	*e*Pn	**Pn**	**23 28 16.0**	**+0.7**
CEY	**Cerknica**	**5.71**	**314**	*e*Pn	**Pn**	**23 28 16.2**	**-0.2**

GUC ***15*** *23:29:44.0±0.6, 29°.58S×72°.03W, h23^{km}±6^{km}, ML4.3*
NEIC ***15*** *23:29:44.6±2.0, 29°.54S±0°.04×71°.98W±0°.03, h14^{km}±5^{km}, mb4.2/4, Mwr3.9/20, ML4.3(GUC), Error ellipse: s-maj=6.0km s-min=2.1km az=206.0*
NEIC ***15*** *23:29:46.4, 29°.57S×71°.94W, h16^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}8.23; $M_{\theta\theta}$-1.26; $M_{\phi\phi}$-6.96; $M_{r\theta}$-0.48; $M_{\theta\phi}$3.21; $M_{\phi r}$-4.36; Fault plane solution: $M_0$9.40000×10^{14} NP1:ϕ_s169.09000°, δ58.65000°, λ104.23000°. NP2:ϕ_s323.11000°, δ34.12000°, λ68.03000°. Principal axes: T 9.5525, Plg72.0000°, Azm114.0000°; N -0.3050, Plg12.0000°, Azm342.0000°; P -9.2475, Plg13.0000°, Azm249.0000°;*
IDC ***15*** *23:29:46.8±2.0, 29°.71S×70°.62W, h0^{km}, mb3.8/2, mb1 3.8/5, mb1mx3.6/24, mbtmp3.6/5, ML3.4/3 Error ellipse: s-maj=52.0km s-min=45.0km az=74.0*
ISC 15 23:29:43.5±1.7**, 29°.54S**±0°.04×**71°.98W**±0°.06**, h9**^{km}±10^{km}**, n60, σ1^{s}.17**/62**, mb4.2**/3**, 1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	**La Serena**	**0.74**	**120**	*e*P	**Pb**	**23 29 57.9**	**-0.7**
CO05				*i* S	**Sb**	**23 30 08.7**	**-0.3**
CO05				IAML		23 30 10.5	
	comp=N,17µm,0.3s						
CO05	**La Serena**	**0.74**	**120**		**Pb**	**23 29 58.5**	**-0.2**
CO05					**Sb**	**23 30 08.6**	**-0.3**
CO06	**Fray Jorge**	**1.17**	**165**		**Pb**	**23 30 05.2**	**-0.6**
GO04	**Tololo Observa**	**1.20**	**122**	*e*P	**Pg**	**23 30 05.8**	**-0.8**
GO04				*i* S	**Sb**	**23 30 22.5**	**+0.2**
GO04				IAML		23 30 28.8	
	comp=N,24µm,0.5s						
GO04	**Tololo Observa**	**1.20**	**122**		**Pb**	**23 30 06.5**	**-0.1**
GO04				Sn	**Sb**	**23 30 22.6**	**+0.2**
LCO	**Las Campanas**	**1.24**	**65**	⇓*i*P	**Pg**	**23 30 07.0**	**-0.3**
LCO				*i* S	**Sg**	**23 30 23.7**	**+0.4**
LCO	**Las Campanas**	**1.24**	**65**	Pn	**Pg**	**23 30 07.0**	**-0.3**
LCO					**Sg**	**23 30 23.9**	**+0.6**
AC04	**Llanos de Chal**	**1.55**	**31**	Pn	**Pn**	**23 30 11.3**	**-0.1**
GO03	**Copiap**	**2.48**	**39**	*e*P	**Pn**	**23 30 25.6**	**+1.5**
GO03				*i* S	**Sn**	**23 30 57.5**	**+3.1**
GO03				IAML		23 31 06.0	
	comp=E,886nm,0.3s						
GO03	**Copiap**	**2.48**	**39**	Pn	**Pn**	**23 30 24.8**	**+0.7**
VA06	**Catapilco**	**3.06**	**169**	*e*P	**Pn**	**23 30 32.1**	**-0.1**
VA06				IAML		23 31 30.2	
	comp=E,1µm,0.3s						
VA03	**San Esteban**	**3.44**	**159**	*e*P	**Pn**	**23 30 38.5**	**+1.1**
VA03				*e*S	**Sn**	**23 31 18.6**	**+0.3**
VA03	**San Esteban**	**3.44**	**159**		**Pn**	**23 30 38.8**	**+1.4**
ZON	**Zonda**	**3.48**	**126**		**Pb**	**23 30 44.2**	**-1.1**
VA01	**Torpederas**	**3.48**	**175**		**Pg**	**23 30 51.7**	**+1.4**
ROCH	**El Roble**	**3.52**	**167**	*e*P	**Pn**	**23 30 38.7**	**+0.1**
ROCH				IAML		23 31 39.9	
	comp=E,519nm,0.5s						
AC02	**Maricunga**	**3.69**	**44**		**Pn**	**23 30 42.6**	**+1.5**
PEL	**Peldehue**	**3.76**	**163**	*i* P	**Pn**	**23 30 42.5**	**+0.8**
PEL				*e*S	**Sn**	**23 31 26.1**	**+0.1**
PEL	**Peldehue**	**3.76**	**163**		**Pn**	**23 30 42.5**	**+0.8**
MT02	**Curacav**	**3.77**	**169**	Pn	**Pn**	**23 30 42.9**	**+0.9**
MT05	**Renca**	**3.98**	**165**	*e*P	**Pn**	**23 30 43.9**	**-0.9**
MT05	**Renca**	**3.98**	**165**		**Pn**	**23 30 45.4**	**+0.6**
FCH	**Farellones**	**4.04**	**160**	*e*P	**Pn**	**23 30 47.5**	**+1.7**
VA05	**Santo Domingo**	**4.11**	**176**	*e*P	**Pn**	**23 30 45.8**	**-0.8**
VA05	**Santo Domingo**	**4.11**	**176**	Pn	**Pn**	**23 30 46.5**	**-0.1**
MT09	**Talagante**	**4.30**	**169**	*e*P	**Pn**	**23 30 49.8**	**+0.4**
MT09	**Talagante**	**4.30**	**169**		**Pn**	**23 30 49.7**	**+0.4**
MT01	**Popeta**	**4.35**	**172**	*e*P	**Pn**	**23 30 49.5**	**-0.4**
MT01	**Popeta**	**4.35**	**172**		**Pn**	**23 30 49.8**	**0.0**
BO04	**La Punta**	**4.58**	**166**	*e*P	**Pn**	**23 30 53.5**	**+0.5**
BO01	**Tunca**	**4.89**	**171**	Pn	**Pn**	**23 30 57.6**	**+0.3**
PB14	**IPOC Station P**	**5.09**	**16**	Pn	**Pn**	**23 31 01.9**	**+1.5**
BO02	**Sierra Bellavi**	**5.33**	**169**		**Pn**	**23 31 03.9**	**+0.5**
GO05	**Huala**	**5.45**	**180**	Pn	**Pn**	**23 31 04.0**	**-1.0**
PB15	**IPOC Station P**	**6.70**	**20**		**Pn**	**23 31 22.9**	**+0.6**
H03N1	**Juan Fernandez**	**7.08**	**235**	T	T	23 39 15.1	
	baz=64,slow=72,SNR=2739						
H03N2	**Juan Fernandez**	**7.09**	**235**	T	T	23 39 15.4	
	baz=64,slow=72,SNR=2174						
H03N3	**Juan Fernandez**	**7.10**	**235**	T	T	23 39 12.5	
	baz=64,slow=72,SNR=2458						
PB06	**IPOC Station P**	**7.14**	**18**	Pn	**Pn**	**23 31 30.6**	**+2.3**
LVC	**Limon Verde**	**7.43**	**22**	Pn	**Pn**	**23 31 32.1**	**-0.4**
	comp=E,0.5nm,0.3s,baz=140,slow=4.0,SNR=2.3						
LVC				Sn	Sn	23 33 09.0	+12
	comp=E,1.4nm,0.3s,baz=273,slow=14,SNR=3.8						
LC01	**Cunco**	**9.33**	**180**	Pn	**Pn**	**23 31 57.0**	**-1.2**
PLCA	**Paso Flores**	**11.22**	**174**	Pn	**Pn**	**23 32 22.6**	**-1.6**
	comp=E,0.1nm,0.3s,baz=335,slow=14,SNR=0.9						
TRQA	**Tornquist**	**11.88**	**138**	Pn	**Pn**	**23 32 34.2**	**+1.1**
LL07	**Hotel Espejo d**	**13.32**	**185**	Pn	**Pn**	**23 32 53.6**	**+0.9**
ITQB	**Itaqui**	**13.36**	**94**	Pn	**Pn**	**23 32 55.0**	**+1.7**
LPAZ	**La Paz**	**13.66**	**16**	Pn	**Pn**	**23 33 01.6**	**+3.6**
	comp=E,0.1nm,0.3s,baz=206,slow=6.2,SNR=6.6						
LPAZ	**La Paz**	**13.66**	**16**	Pn	**Pn**	**23 33 00.1**	**+2.0**
SIV	**San Ignacio**	**16.81**	**39**	Pn	**Pn**	**23 33 37.1**	**-2.2**
	comp=E,0.1nm,0.3s,baz=215,slow=12,SNR=1.9						
SIV	**San Ignacio**	**16.81**	**39**		**Pn**	**23 33 37.1**	**-2.2**
AQDB	**Aquidauana**	**17.28**	**62**		**P**	**23 33 46.8**	**+0.1**
AQDB				IAmb	IAmb	23 34 01.8	
	comp=Z,12nm,1.4s						
ETMB	**Extrema**	**20.35**	**17**	P	**P**	**23 34 19.0**	**-1.4**
MG02	**Cerro Sombrero**	**23.31**	**176**	P	**P**	**23 34 51.5**	**-0.1**
BDFB	**Brasilia**	**26.02**	**63**	P	**P**	**23 35 16.9**	**-0.3**
BDFB				IAmb	IAmb	23 36 12.0	
	comp=Z,19nm,1.5s						
URIC	**Uribia, Colomb**	**41.00**	**360**	P	**P**	**23 37 25.5**	**-1.5**
TXAR	**Lajitas Array**	**65.90**	**330**	P	P	23 40 40.6	+11
	comp=Z,0.5nm,0.9s,baz=146,slow=6.6,SNR=4.1						
TORD	**Torodi Ar. Bea**	**82.66**	**70**	P	**P**	**23 42 08.3**	**+0.5**
	comp=Z,1.7nm,0.9s,baz=256,slow=4.8,SNR=7.0						
H11S2	**WAKE ISLAND Hy**	**125.77**	**272**	T	T	02 07 48.8	
	baz=115,slow=75,SNR=8.0						
H11S1	**WAKE ISLAND Hy**	**125.78**	**272**	T	T	02 07 47.4	
	baz=115,slow=75,SNR=7.5						
H11S3	**WAKE ISLAND Hy**	**125.78**	**272**	T	T	02 07 43.0	
	baz=115,slow=75,SNR=7.3						
ZALV	**Zalesovo Beam**	**150.36**	**28**	PKPbc	**PKiKP**	**23 49 36.3**	**+0.7**
	comp=Z,3.6nm,0.9s,baz=298,slow=3.2,SNR=13						

NEIC ***15*** *23:53:39.2±1.4, 19°.7S±0°.1×178°.0W±0°.1, h587^{km}±12^{km}, mb4.5/32, Error ellipse: s-maj=21.0km s-min=16.5km az=159.0*
IDC ***15*** *23:53:40.6±1.7, 19°.88S×178°.05W, h612^{km}±18^{km}, mb3.4/6, mb1 3.6/9, mb1mx3.3/25, mbtmp4.4/9, Error ellipse: s-maj=28.2km s-min=17.3km az=148.0*
ISC 15 23:53:39.5±0.6**, 19°.7S**±0°.1×**177°.98W**±0°.09**, h600**^{km}**, n77, σ0^{s}.98**/78**, mb4.4**/18**, 13C-9D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.24**	**297**	P	**P**	**23 55 08.4**	**+1.6**
	1.2nm,0.3s,baz=113,slow=7.7,SNR=6.0						
MSVF	**Nonsavu**	**4.24**	**297**	P	**P**	**23 55 06.9**	**+0.1**
NIUE	**Niue**	**7.63**	**87**	P	**P**	**23 55 34.9**	**-0.4**
MARNC	**Mare, Loyalty**	**13.22**	**260**		**P**	**23 56 29.8**	**-0.7**
PINNC	**Pines Island,**	**13.90**	**255**	P	**P**	**23 56 36.9**	**-0.5**
LIFNC	**LIFOU**	**13.91**	**263**	P	**P**	**23 56 35.7**	**-1.8**
SANVU	**Saraoutou**	**14.74**	**284**	P	**P**	**23 56 46.1**	**+0.7**
DZM	**Mont Dzumac**	**14.75**	**258**	P	**P**	**23 56 47.4**	**+1.9**
	1.3nm,0.3s,baz=96,slow=19,SNR=18						
DZM	**Mont Dzumac**	**14.75**	**258**	P	**P**	**23 56 47.1**	**+1.6**
OUZ	**Omahuta**	**17.16**	**204**	P	**P**	**23 57 10.1**	**+2.8**
OUZ				IAmb	IAmb	23 57 15.5	
	comp=Z,18nm,1.1s						
KNTN	**Kanton**	**17.90**	**21**	P	**P**	**23 57 13.5**	**-0.8**
KNTN				IAmb	IAmb	23 57 32.9	
	comp=Z,17nm,0.8s						
URZ	**Urewera**	**18.98**	**192**	P	**P**	**23 57 21.4**	**-2.4**
	comp=Z,1.9nm,0.3s,baz=302,slow=23,SNR=14						
URZ	**Urewera**	**18.98**	**192**	P	**P**	**23 57 22.0**	**-1.8**
URZ				IAmb	IAmb	23 57 31.9	
	comp=Z,17nm,0.8s						
BKZ	**Black Stump Fm**	**19.98**	**193**	P	**P**	**23 57 31.2**	**-1.8**
BKZ				IAmb	IAmb	23 57 36.6	
	comp=Z,8.6nm,1.0s						
BFZ	**Birch Farm**	**21.49**	**192**	P	**P**	**23 57 45.7**	**-0.7**
SNZO	**South Karori**	**22.43**	**195**	P	**P**	**23 57 53.8**	**-0.9**
PLWZ	**Palliser**	**22.55**	**193**	P	**P**	**23 57 54.7**	**-1.2**
QRZ	**Quartz Range**	**22.57**	**199**	P	**P**	**23 57 56.1**	**+0.1**
NNZ	**Nelson**	**22.68**	**197**	P	**P**	**23 57 56.0**	**-1.0**
TUWZ	**Tuamarina**	**22.73**	**196**	P	**P**	**23 57 57.6**	**+0.2**
LTZ	**Lake Taylor**	**24.44**	**198**	P	**P**	**23 58 11.0**	**-1.6**
LTZ				IAmb	IAmb	23 58 13.8	
	comp=Z,12nm,1.0s						
FOZ	**Fox Glacier**	**25.88**	**201**	P	**P**	**23 58 25.3**	**+0.1**
MLZ	**Mavora Lakes**	**28.07**	**201**	P	**P**	**23 58 45.2**	**+0.9**
MLZ				IAmb	IAmb	23 59 01.8	
	comp=Z,23nm,1.2s						
EIDS	**Eidsvold**	**29.09**	**253**	P	**P**	**23 58 53.1**	**-0.3**
EIDS				IAmb	IAmb	23 59 11.0	
	comp=Z,10.0nm,1.1s						
CTAO	**Charters Tower**	**33.59**	**263**	P	**P**	**23 59 32.3**	**+0.4**
TOO	**Toolangi**	**36.39**	**233**	P	**P**	**23 59 55.7**	**+0.9**
TOO				IAmb	IAmb	23 59 56.1	
	comp=Z,6.6nm,0.7s						
COEN	**Coen**	**37.55**	**273**	P	**P**	**00 00 05.0**	**+0.5**
COEN				IAmb	IAmb	00 00 05.8	
	comp=Z,12nm,0.8s						
STKA	**Stephens Creek**	**38.16**	**243**	P	**P**	**00 00 09.7**	**+0.5**
	comp=Z,3.1nm,0.6s,baz=79,slow=8.1,SNR=8.8						
STKA	**Stephens Creek**	**38.16**	**243**	P	**P**	**00 00 09.9**	**+0.7**
BBOO	**Buckleboo**	**42.92**	**243**	P	**P**	**00 00 47.1**	**+0.1**
BBOO				IAmb	IAmb	00 00 47.9	
	comp=Z,11nm,0.6s						
WR0	**Warramunga Arr**	**44.54**	**261**	P	**P**	**00 00 59.2**	**-0.5**
WR0				IAmb	IAmb	00 01 00.1	
	comp=Z,5.5nm,0.4s						
WB0	**Warramunga Arr**	**44.71**	**261**	P	**P**	**00 01 00.2**	**-0.8**
WB0				IAmb	IAmb	00 01 00.7	
	comp=Z,8.0nm,0.7s						
WB2	**Warramunga Arr**	**44.72**	**261**	P	**P**	**00 01 00.5**	**-0.6**
WB2				IAmb	IAmb	00 01 01.9	
	comp=Z,8.0nm,0.7s						
AS31	**Alice Springs**	**44.72**	**256**	P	**P**	**00 01 00.8**	**-0.2**
AS31				IAmb	IAmb	00 01 02.5	
	comp=Z,5.4nm,0.4s						
ASAR	**Alice Springs**	**44.72**	**256**	P	**P**	**00 01 00.6**	**-0.5**
	comp=Z,8.2nm,0.4s,baz=87,slow=8.3,SNR=85						
ASAR				PcP	**PcP**	**00 02 29.7**	**-0.4**
	comp=Z,0.7nm,0.4s,baz=105,slow=3.8,SNR=3.0						
ASAR				S	**S**	**00 06 53.3**	**-2.2**
	comp=Z,0.6nm,0.7s,baz=92,slow=16,SNR=6.6						
WRA	**Warramunga Arr**	**44.73**	**261**	P	**P**	**00 01 00.5**	**-0.6**
	comp=Z,5.7nm,0.4s,baz=96,slow=5.1,SNR=122						
WRA	**Warramunga Arr**	**44.73**	**261**	P	**P**	**00 01 00.6**	**-0.6**
FORT	**Forrest**	**49.63**	**246**	P	**P**	**00 01 37.2**	**-0.4**
FORT				IAmb	IAmb	00 01 37.8	
	comp=Z,21nm,0.8s						
KNRA	**Kununurra**	**50.73**	**266**	P	**P**	**00 01 45.5**	**-0.2**
KNRA				IAmb	IAmb	00 01 46.0	
	comp=Z,11nm,0.7s						
FITZ	**Fitzroy Crossi**	**53.15**	**262**	P	**P**	**00 02 03.2**	**+0.1**
SOEI	**Soe**	**56.49**	**271**	P	**P**	**00 02 27.7**	**+1.1**
PSA00	**Pilbara Seismi**	**57.87**	**256**	P	**P**	**00 02 35.4**	**-0.3**
PSA00	**Pilbara Seismi**	**57.87**	**256**	P	**P**	**00 02 35.3**	**-0.3**
PSA00				IAmb	IAmb	00 02 35.9	
	comp=Z,9.9nm,0.7s						
VNDA	**Vanda**	**58.71**	**185**	P	**P**	**00 02 42.1**	**+1.8**
MORW	**Morawa**	**60.15**	**247**	P	**P**	**00 02 50.5**	**-0.3**
TOLI2	**Tolitoli**	**63.46**	**282**	P	**P**	**00 03 12.8**	**+0.4**
MJAR	**Matsushiro Arr**	**69.58**	**323**	P	**P**	**00 03 48.8**	**-0.7**
	comp=Z,1.4nm,0.3s,baz=152,slow=6.1,SNR=2.1						
TXAR	**Lajitas Array**	**86.61**	**57**	P	**P**	**00 05 22.4**	**+1.7**
	comp=Z,0.2nm,0.6s,baz=223,slow=6.1,SNR=2.6						
TXAR	**Lajitas Array**	**86.61**	**57**	P	**P**	**00 05 21.5**	**+0.7**
CMAR	**Chiang Mai Arr**	**89.86**	**290**	P	**P**	**00 05 37.2**	**+1.2**
	comp=Z,0.7nm,0.4s,baz=125,slow=2.9,SNR=8.8						
ARCES	**ARCESS Array B**	**128.14**	**350**	PKP	**PKPdf**	**00 11 37.0**	**-0.8**
	comp=Z,6.1nm,1.1s,baz=29,slow=2.1,SNR=7.8						
FINES	**FINESS Array B**	**135.01**	**344**	PKP	**PKiKP**	**00 11 52.8**	**+0.3**
	comp=Z,1.2nm,0.9s,baz=27,slow=0.3,SNR=6.1						
AKASG	**Malin Array Be**	**142.32**	**332**	PKhKP	PKPpre	00 12 00.2	
	comp=Z,1.0nm,0.4s,baz=41,slow=3.9,SNR=3.5						
SORM	**Soroca**	**144.53**	**329**	⇓P	**PKPab**	**00 12 09.4**	**0.0**
BRTR	**Keskin Array B**	**146.31**	**313**	PKPbc	**PKPbc**	**00 12 13.9**	**-0.5**
	comp=Z,1.2nm,0.5s,baz=127,slow=2.9,SNR=11						
BURAR	**Bucovina Array**	**146.37**	**331**	⇓P	**PKiKP**	**00 12 15.7**	**-0.7**
TRPA	**Tarpa**	**147.13**	**334**	⇓P	**PKPbc**	**00 12 15.7**	**-0.3**
BISRR	**Bisoca**	**147.13**	**327**	⇑P	**PKPdf**	**00 12 11.4**	**-1.7**
OSTC	**Ostas**	**147.21**	**343**	⇑*e*PKP	**PKiKP**	**00 12 17.2**	**-0.7**
DPC	**Dobruska-Polom**	**147.37**	**343**	⇑*e*PKP	**PKiKP**	**00 12 17.3**	**-1.0**
NEHR	**Nehoiu**	**147.43**	**327**	⇑P	**PKPbc**	**00 12 17.1**	**+0.1**
DOPR	**Dopca**	**147.49**	**329**	⇓P	**PKiKP**	**00 12 17.9**	**-0.8**
MORC	**Moravsky Berou**	**147.53**	**341**	⇑P	**PKPbc**	**00 12 16.7**	**-0.5**
MLR	**Muntele Rosu**	**147.56**	**328**	⇑P	**PKiKP**	**00 12 18.4**	**-0.5**
SECR		**147.81**	**327**	⇓P	**PKPbc**	**00 12 17.6**	**-0.4**
VOIR		**148.04**	**329**	⇑P	**PKPbc**	**00 12 18.1**	**-0.5**
VRAC	**Vranov**	**148.22**	**342**	⇑P	**PKPbc**	**00 12 18.1**	**-0.8**
ARR	**Arges**	**148.29**	**329**	⇑P	**PKiKP**	**00 12 20.0**	**-0.4**
SGRR	**Singureni**	**148.42**	**326**	⇓P	**PKPdf**	**00 12 16.1**	**+1.0**
LEF	**Lefka**	**148.74**	**306**	⇓P	**PKPbc**	**00 12 19.6**	**-0.9**
GZR	**Gura Zlata**	**149.15**	**331**	⇓P	**PKPbc**	**00 12 21.5**	**+0.1**
KHC	**Kasperske Hory**	**149.20**	**345**	⇑*e*PKP	**PKiKP**	**00 12 21.6**	**-0.5**
CKRC	**Cesky Krumlov**	**149.30**	**344**	⇑*e*PKP	**PKiKP**	**00 12 21.9**	**-0.4**
GERES	**GERESS Array B**	**149.43**	**345**	PKPbc	**PKPbc**	**00 12 21.8**	**-0.2**
	comp=Z,1.0nm,0.6s,baz=38,slow=8.9,SNR=4.0						
BZS	**Buzias**	**149.50**	**332**	⇑P	**PKPbc**	**00 12 21.6**	**-0.4**
HERR	**Herculane**	**149.71**	**331**	⇑P	**PKPbc**	**00 12 22.6**	**0.0**
PLVB	**Pleven**	**149.71**	**326**	⇓P	**PKPbc**	**00 12 22.3**	**-0.3**

WEL 16 00:02:57.3, 42°S±4°×**17°2E**±°**, h15**^{km}±7^{km}**, M3.0**/10**, ML3.1**/11**, MLv3.0**/10**, Error ellipse: s-maj=0.0km s-min=0.0km az=102.6, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THZ	**Tophouse**	**0.44**	**115**	P	Pg	00 03 05.9	-0.2
THZ				S	Sg	00 03 11.7	-0.3
DSZ	**Denniston Nort**	**0.46**	**248**	P	Pb	00 03 07.1	0.0
DSZ				S	Sg	00 03 13.1	+0.4
QRZ	**Quartz Range**	**0.76**	**9**	P	Pn	00 03 12.8	-0.6
QRZ				S	Sb	00 03 23.3	+1.0

NNZ	Nelson	0.84	65	P	Pb	00 03 13.5	0.0
NNZ				S	Sb	00 03 25.3	+0.8
BSWZ	Blackbirch Sta	1.13	98	P	Pg	00 03 19.2	+0.1
BSWZ				S	Sg	00 03 34.8	+0.8
LTZ	Lake Taylor	1.21	184	P	Pg	00 03 20.7	+0.1
KHZ	Kahutara	1.21	134	P	Pg	00 03 20.9	+0.3
KHZ				S	Sg	00 03 36.9	+0.6
INZ	Inchbonnie	1.34	211	P	Pb	00 03 22.2	+0.1
INZ				S	Sb	00 03 39.7	+0.7
CMWZ	Cape Campbell	1.39	98	P	Pg	00 03 25.0	+1.0
CMWZ				S	Sg	00 03 44.9	+2.8
DUWZ	D'Urville Isla	1.40	57	P	Pb	00 03 23.3	+0.2
DUWZ				S	Sg	00 03 42.9	+0.4
GVZ	Greta Valley S	1.47	161	P	Pg	00 03 25.3	-0.3
GVZ				S	Sg	00 03 45.5	+0.7
TCW	Tory Channel	1.48	76	P	Pb	00 03 24.6	+0.2
TCW				S	Sg	00 03 44.4	-0.5
AMCZ	Amberley	1.61	173	P	Pb	00 03 26.7	0.0
AMCZ				S	Sg	00 03 48.2	-1.0
OXZ	Oxford	1.77	188	P	Pb	00 03 28.6	-0.8
BHW	Baring Head	1.88	86	P	Pb	00 03 31.2	-0.1
WVZ	Waitaha Valley	1.93	218	P	Pn	00 03 30.5	+1.1
KIW	Kapiti Island	2.04	70	P	Pb	00 03 34.5	+0.4
MHCZ	Mount Hutt	2.04	197	P	Pn	00 03 32.1	+1.0
CAW	Cannon Point	2.08	78	P	Pb	00 03 34.5	-0.2
MQZ	McQueen's Vall	2.14	175	P	Pn	00 03 33.1	+0.7
RACZ	Rakaia	2.16	185	P	Pn	00 03 33.5	+0.9
PLWZ	Palliser	2.16	91	P	Pn	00 03 34.2	+1.4
MSWZ	Moikau Station	2.17	87	P	Pn	00 03 34.3	+1.5
OKCZ	Okains Bay	2.21	167	P	Pn	00 03 34.5	+1.2
OGWZ	Otaki Gorge	2.24	71	P	Pb	00 03 38.1	+0.7
GCSZ	Gaunt Creek Bo	2.31	220	P	Pb	00 03 37.8	-0.7
AKCZ	Akaroa Harbour	2.33	170	P	Pn	00 03 36.1	+1.1
RPZ	Rata Peaks	2.35	204	P	Pn	00 03 36.8	+1.5
WACZ	Wakanui South	2.40	189	P	Pn	00 03 37.1	+1.1
HOWZ	Holdsworth Sta	2.46	75	P	Pb	00 03 39.1	-2.1
ARCZ	Arundel	2.53	200	P	Pn	00 03 38.4	+0.7
MRZ	Mangatainoka R	2.59	70	P	Pb	00 03 41.1	-2.3
KHEZ	Kahui Hut	2.60	29	P	Pb	00 03 42.0	-1.6
NEZ	North Egmont	2.65	30	P	Pb	00 03 42.9	-1.5
PKE	Pukeiti	2.68	28	P	Pb	00 03 43.2	-1.7
FOZ	Fox Glacier	2.72	223	P	Pn	00 03 41.2	+0.9
TMZ	Timaru	2.98	199	P	Pn	00 03 44.5	+0.5
ANWZ	Angora Road	3.30	72	P	Pb	00 03 54.3	-1.1
TUVZ	Tukino	3.40	48	P	Pb	00 03 58.2	+0.9
NGZ	Ngauruhoe	3.44	47	P	Pb	00 03 56.9	-1.0
SNVZ	South Ngauruho	3.45	47	P	Pb	00 03 56.6	-1.6
NNVZ	North Ngauruho	3.48	46	P	Pb	00 03 55.0	-3.6
BHHZ	Black Hill Sta	3.50	55	P	Pb	00 04 00.3	+1.4
JCZ	Jackson Bay	3.63	225	P	Pn	00 03 53.6	+0.6
ODZ	Otahua Downs	3.69	199	P	Pn	00 03 54.2	+0.5
TLZ	Tolley Road	4.05	38	P	Pn	00 04 02.0	+3.3

WEL 16 00:03:33.7±0.8,**35°S**±9°×**18°0E**±1°4,**h247**^{km}±11^{km}, **M4.0**/18,**mB4.3**/4,**ML4.4**/19,**MLv4.1**/18,**Mw(mB)3.5**/4, **Error ellipse: s-maj=0.0km s-min=0.0km az=114.8, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.97	202	P	Pn	00 04 24.1	-1.5
MXZ				S	S	00 05 05.0	-1.7
WMGZ	Waiomatatini S	3.18	199	P	Pn	00 04 27.7	-0.1
WMGZ	Waiomatatini S	3.18	199	P	Pn	00 04 27.3	-0.6
WMGZ				S	S	00 05 11.2	+0.4
HAZ	Te Kaha	3.32	207	P	Pn	00 04 29.1	-0.3
HAZ	Te Kaha	3.32	207	P	Pn	00 04 29.2	-0.2
HAZ				S	S	00 05 14.0	+0.3
PKGZ	Pakihiroa	3.34	203	P	Pn	00 04 29.2	-0.6
PKGZ	Pakihiroa	3.34	203	P	Pn	00 04 29.0	-0.7
PKGZ				S	S	00 05 14.6	+0.4
PUZ	Puketiti	3.46	199	P	Pn	00 04 29.9	-1.1
PUZ				S	S	00 05 16.1	-0.4
RUGZ	Raukumara Rang	3.55	207	P	Pn	00 04 32.1	-0.1
TWGZ	Tauwhareparae	3.63	202	P	Pn	00 04 33.7	+0.6
TWGZ				S	S	00 05 21.6	+1.4
GRZ	Great Barrier	3.75	246	P	Pn	00 04 29.0	-5.3
WHRZ	Whale Island	3.75	215	P	Pn	00 04 36.0	+1.6
WHRZ				S	S	00 05 25.2	+2.5
KUZ	Kuaotunu	3.77	238	P	Pn	00 04 32.6	-1.9
CNGZ	Carnagh Statio	3.86	198	P	Pn	00 04 35.8	+0.2
CNGZ				S	S	00 05 27.0	+2.1
TKGZ	Te Karaka	3.92	202	P	Pn	00 04 38.1	+1.8
TKGZ				S	S	00 05 27.3	+1.2
MWZ	Matawai	3.93	206	P	Pn	00 04 36.1	-0.4
MWZ				S	S	00 05 26.0	-0.4
URZ	Urewera	4.02	210	P	Pn	00 04 37.3	-0.2
URZ				S	S	00 05 28.0	-0.3
RAGZ	Rawiri	4.11	206	P	Pn	00 04 38.4	-0.3
RAGZ				S	S	00 05 31.5	+1.1
RIGZ	Rimuhau	4.19	201	P	Pn	00 04 40.9	+1.3
RIGZ				S	S	00 05 32.8	+0.9
MUGZ	Murupara	4.35	212	P	Pn	00 04 42.1	+0.6
RTZ	Ruatahuna	4.38	209	P	Pn	00 04 40.7	-1.2
RTZ				S	S	00 05 34.4	-1.8
SNGZ	Shannon Statio	4.39	205	P	Pn	00 04 41.5	-0.5
SNGZ				S	S	00 05 36.3	0.0
KNZ	Kokohu	4.51	200	P	Pn	00 04 44.3	+1.0
KNZ				S	S	00 05 39.0	+0.3
ALRZ	Allen Road	4.61	215	P	Pn	00 04 45.3	+0.6
NMHZ	Naumai	4.87	208	P	Pn	00 04 48.4	+0.7
NMHZ				S	S	00 05 48.7	+2.0
ARHZ	Aropaoanui	4.94	205	P	Pn	00 04 49.1	+0.5
ARHZ				S	S	00 05 49.8	+1.5
BKZ	Black Stump Fm	5.05	210	P	Pn	00 04 50.2	+0.3
BKZ				S	S	00 05 51.6	+0.8
KWHZ	Kaweka Forest	5.30	209	P	Pn	00 04 53.1	+0.1
KWHZ				S	S	00 05 56.2	-0.2
HIZ	Hauiti	5.37	225	P	Pn	00 04 56.4	+2.5
SNVZ	South Ngauruho	5.44	215	P	Pn	00 04 54.7	-0.3
KAHZ	Kahuranaki	5.46	203	P	Pn	00 04 55.2	+0.2
KAHZ				S	S	00 06 01.3	+1.3
KRHZ	Kereru	5.51	208	P	Pn	00 04 55.0	-0.5
KRHZ				S	S	00 06 00.5	-0.5
PXZ	Pawanui	5.68	203	P	Pn	00 04 57.3	-0.4
PXZ				S	S	00 06 04.4	-0.4
PNHZ	Pukenui	5.81	208	P	Pn	00 04 58.7	-0.6
PNHZ				S	S	00 06 05.0	-2.7
PRHZ	Porangahau	5.96	203	P	Pn	00 04 60.0	-1.3
PRHZ				S	S	00 06 12.0	+0.7
BFZ	Birch Farm	6.47	204	P	Pn	00 05 07.0	-0.5
BFZ				S	S	00 06 22.2	-0.5
TIWZ	Tintock	6.68	206	P	Pn	00 05 10.0	-0.2

*UCR **16** 00:38:55.7±2.1, 20°.37N×80°.83W, h259^{km}±667^{km}, ML5.2, mb5.9(NEIC)*

*INET **16** 00:39:20.7, 17°.88N×81°.87W, h10^{km}, MW5.8*

*JSN **16** 00:39:30.6±0.8, 17°.40N×82°.06W, h15^{km}±999^{km}*

*IDC **16** 00:39:30.8±0.4, 17°.72N×81°.97W, h0^{km}, mb5.2/27, mb1 5.3/33, mb1mx5.3/36, mbtmp5.2/33, ML4.8/5, MS5.3/34, Ms1 5.3/34, ms1mx5.1/41, Error ellipse: s-maj=14.0km s-min=9.4km az=60.0*

*MOS **16** 00:39:31.1±1.0, 17°.71N×82°.01W, h10^{km}, mb5.8/83, MS5.3/42, Error ellipse: s-maj=5.9km s-min=3.9km az=83.7*

*NEIC **16** 00:39:33.5±2.2, 17°.84N±0°.04×81°.82W±0°.05, h7^{km}±3^{km}, mb5.7/718, Ms_20 5.4/311, Mwb5.8/25, Mww5.8, Mwc5.9(GCMT), Error ellipse: s-maj=7.6km s-min=6.3km az=117.0*

*NEIC **16** 00:39:34, 17°.82N×81°.87W, h4^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.61; $M_{\theta\theta}$-2.23; $M_{\phi\phi}$1.61; $M_{r\theta}$1.14; $M_{\theta\phi}$5.93; $M_{\phi r}$2.21; Fault plane solution: $M_0$6.73000×10^{17} NP1:ϕ_s83.07000°, δ72.69000°, λ13.19000°. NP2:ϕ_s349.08000°, δ77.41000°, λ162.25000°. Principal axes: T 6.8890, Plg21.0000°, Azm305.0000°; N -0.3281, Plg68.0000°, Azm135.0000°; P -6.5609, Plg3.0000°, Azm37.0000°;*

*GCMT **16** 00:39:36.5±0.1, 17°.89N×81°.97W, h19^{km}, MW5.9/157, Moment Tensor Solution. s140,c271; s157,c467; Duration: 2^{s}1 Moment tensor: Scale 10^{17}Nm; M_{rr}0.04±.06; $M_{\theta\theta}$-2.72±.06; $M_{\phi\phi}$2.68±.06; $M_{r\theta}$1.87±.14; $M_{\theta\phi}$7.87±.05; $M_{\phi r}$-0.95±.14; Best double couple: $M_0$8.57000×10^{17} NP1:ϕ_s351.00000°, δ79.00000°, λ-172.00000°. NP2:ϕ_s260.00000°, δ82.00000°, λ-11.00000°. Principal axes: T 8.3120, Plg2.0000°, Azm306.0000°; N 0.5150, Plg77.0000°, Azm45.0000°; P -8.8270, Plg13.0000°, Azm215.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*BGR **16** 00:39:37.8±0.0, 18°.12N×81°.61W, h18^{km}±2^{km}, mb5.6, mB_BB5.8, Ms5.3*

*NEIC **16** 00:39:37, 17°.84N×81°.73W, h18^{km}, Moment Tensor Solution. Duration: 8^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}1.00; $M_{\theta\theta}$-2.69; $M_{\phi\phi}$1.69; $M_{r\theta}$0.61; $M_{\theta\phi}$6.57; $M_{\phi r}$2.07; Fault plane solution: $M_0$7.30000×10^{17} NP1:ϕ_s82.00000°, δ73.00000°, λ10.00000°. NP2:ϕ_s349.00000°, δ81.00000°, λ163.00000°. Principal axes: T 7.1077, Plg19.0000°, Azm305.0000°; N 0.3788, Plg71.0000°, Azm141.0000°; P -7.4866, Plg5.0000°, Azm37.0000°;*

*NEIC **16** 00:39:37, 17°.88N×81°.98W, h16^{km}, Moment Tensor Solution. Duration: 4^{s}4 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.27; $M_{\theta\theta}$-2.67; $M_{\phi\phi}$2.94; $M_{r\theta}$2.35; $M_{\theta\phi}$7.96; $M_{\phi r}$-0.55; Fault plane solution: $M_0$8.78000×10^{17} NP1: ϕ_s351.00000°, δ75.00000°, λ-174.00000°. NP2: ϕ_s260.00000°, δ84.00000°, λ-15.00000°. Principal axes: T 8.6707, Plg6.0000°, Azm306.0000°; N 0.2165, Plg74.0000°, Azm58.0000°; P -8.8872, Plg15.0000°, Azm215.0000°;*

ISC 16 00:39:31.4±0.6,**17°.69N**±0°.03×**81°.93W**±0°.03,**h2**^{km}±3^{km}, **h3**^{km}**:pP-P,n1712,**σ**1^{s}65**/1543,**mb5.7**/463,**MS5.4**/243, **378C-271D,Fault plane solution: NP1:**ϕ_s108.63347°, δ68.08077°,λ-4.17666°. **NP2:**ϕ_s200.19499°,δ86.12575°, λ-158.02795°. **Principal axes:** T Plg12.4851°, Azm332.3880°; N Plg67.7057°, Azm209.7021°; P Plg18.1641°, Azm66.5539°; **North of Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FSCY	Frank Sound, G	1.77	24	Pn	Pn	00 40 00.1	-2.9
FSCY				Sn	Sn	00 40 20.8	-5.3
LCCY	Blossom Villag	2.63	41		Pn	00 40 11.9	-3.1
LCCY				Sn	Sn	00 40 41.3	-6.3
MCJ	Malvern	4.05	86	*e*	Pn	00 40 32.9	-1.6
MCJ				*e*P	Pn	00 40 33.0	-1.6
MCJ				*i* P	Pn	00 40 33.0	-1.6
MTDJ	Mount Denham	4.22	82	*e*P	Pn	00 40 33.9	-3.0
MTDJ	Mount Denham	4.22	82	Pn	Pn	00 40 33.9	-3.0
MTDJ				Sn	Sn	00 41 22.4	-4.4
PRVC	Isla de Provid	4.32	173	*e*P	Pn	00 40 38.7	+0.5
PRVC	Isla de Provid	4.32	173	Pn	Pn	00 40 38.7	+0.5
STH	Stony Hill	4.89	85	*e*P	Pn	00 40 44.5	-1.5
STH				*i* S	Sn	00 41 40.3	-3.0
HOJ	Hope	4.94	86	*e*P	Pn	00 40 45.8	-1.0
GWJ	Greenwich	4.97	85	*e*P	Pn	00 40 45.4	-1.9
SOR	Soroa	5.18	349	P	Pn	00 40 49.7	-0.3
SOR	Soroa	5.18	349	Pn	Pn	00 40 49.7	-0.3
CMJ	Castle Mountai	5.31	84	*e*P	Pn	00 40 51.0	-0.8
ESPN	Las Esperanzas	5.92	203		Pn	00 41 01.8	+1.5
TGUH	Tegucigalpa,Un	6.28	236⇓	*e*P	Pn	00 41 05.1	-0.2
TGUH	Tegucigalpa,Un	6.28	236	Pn	Pn	00 41 05.4	+0.1
BOAB	BOACO BROADBAN	6.34	215	Pn	Pn	00 41 07.2	+1.3
ACON	Acoyapa	6.49	209		Pn	00 41 10.0	+1.9
GTBY	Guantanamo Bay	6.83	70	*e*P	Pn	00 41 11.8	-0.9
GTBY	Guantanamo Bay	6.83	70	Pn	Pn	00 41 10.8	-2.0
CNGN	Cerro Negro	6.91	222		Pn	00 41 16.6	+2.7
CNCH	Conchagua	7.18	233	*e*P	Pn	00 41 20.0	+2.3
CNCH	Conchagua	7.18	233	*e*P	Pn	00 41 20.0	+2.3
COVE	Coope Vega, Sa	7.33	199	Pn	Pn	00 41 22.1	+2.5
VMAR	Armenia, Volca	7.50	205	*e*P	Pn	00 41 23.1	+1.1
COEB	Comit de Eme	7.60	238	IAML		00 41 48.2	
	comp=Z,800nm,0.6s						
COEB	Comit de Eme	7.60	238	IAML		00 41 48.2	
	comp=Z,800nm,0.6s						
PETF	Flores	7.62	265	Pn	Pn	00 41 23.3	-0.2
BATAN	Batan	7.67	191		Pn	00 41 25.2	+0.9
ARE1	Arenal 1	7.68	201	*e*P	Pn	00 41 27.1	+2.8
ESQI	Esquipulas	7.77	247		Pn	00 41 26.9	+1.1
HZTE	Horizontes, Gu	7.79	208		Pn	00 41 28.3	+2.4
PAVA	Las Pavas	7.82	241	*e*P	Pn	00 41 25.8	-0.6
PAVA				*e*S	Sb	00 43 16.8	-4.8
PAVA	Las Pavas	7.82	241	*e*P	Pn	00 41 25.8	-0.6
PAVA				*e*S	Sb	00 43 16.8	-4.8
COEG	Centro de Oper	7.82	240	IAML		00 41 52.6	
	comp=Z,881nm,0.6s						
COEG	Centro de Oper	7.82	240	IAML		00 41 52.6	
	comp=Z,881nm,0.6s						
CVTR	Volcan Turrial	7.83	193		Pn	00 41 28.1	+1.3
MTO3	Montecristo	7.86	246		Pn	00 41 27.1	0.0
MRL	Marmol	7.88	252	*e*P	Pn	00 41 28.4	+1.0
JTS	Las Juntas de	7.92	202	Pn	Pn	00 41 28.0	+0.4
	comp=Z,25nm,0.3s,baz=96,slow=14,SNR=100						
JTS				Sn	Sn	00 42 55.7	-2.2
	baz=235,slow=6.2,SNR=1.2						
JTS				LR	LR	00 44 35.1	
	comp=Z,40µm,19.8s,baz=92,slow=38						
JTS	Las Juntas de	7.92	202	*d i*P	Pn	00 41 28.6	+0.9
JTS	Las Juntas de	7.92	202	*e*P	Pn	00 41 28.9	+1.3
JTS	Las Juntas de	7.92	202	*e*P	Pn	00 41 28.8	+1.1
JTS	Las Juntas de	7.92	202	Pn	Pn	00 41 29.4	+1.8
HDC	Heredia	7.93	196	*e*P	Pn	00 41 29.6	+1.7
HDC	Heredia	7.93	196		Pn	00 41 30.0	+2.1
SRA1	San Ramn	7.95	198	*e*P	Pn	00 41 34.4	+6.2
ORTG	Ortega, Santa	8.05	206	Pn	Pn	00 41 32.1	+2.6
BOQS	Boqueron	8.10	242	*e*P	Pn	00 41 23.4	-6.9
BOQS	Boqueron	8.10	242	*e*P	Pn	00 41 23.4	-6.9
LCR2	La Lucha 2	8.15	195	*e*P	Pn	00 41 32.0	+0.9
CEDA	San Andres	8.16	243	*e*P	Pn	00 41 23.6	-7.4
CEDA	San Andres	8.16	243	*e*P	Pn	00 41 23.6	-7.4
061Z	Ochoppi	8.19	6		Pn	00 41 30.6	-0.8
CEVE	Cerro Verde	8.34	244	IAML		00 41 58.8	
	comp=Z,660nm,0.5s						
CEVE	Cerro Verde	8.34	244	IAML		00 41 58.8	
	comp=Z,660nm,0.5s						
LAFE	Finca La Fe, P	8.35	201	*e*P	Pn	00 41 36.3	+2.7
SAJU	San Juanillo,	8.42	206	*e*P	Pn	00 41 36.5	+2.0
PEZE	Perez Zeledon,	8.43	192	*e*P	Pn	00 41 35.6	+0.9
INDI	Punta indio, G	8.51	205	*e*P	Pn	00 41 36.8	+1.0
SRBA	San Rafael, Bu	8.52	190	*e*P	Pn	00 41 35.9	-0.2
EDBA	Buenos Aires	8.57	189	*e*P	Pn	00 41 38.5	+1.8
EDDO	Dominical	8.59	193	*e*P	Pn	00 41 40.1	+3.2
NBG	Las Nubes	8.65	250	*e*P	Pn	00 41 40.0	+2.0
NBG				*e*S		00 41 48.6	
BCIP	Isla Barro Col	8.71	166	P	Pn	00 41 38.6	0.0
BCIP	Isla Barro Col	8.71	166	*e*P	Pn	00 41 36.9	-1.6
BCIP	Isla Barro Col	8.71	166	Pn	Pn	00 41 38.6	0.0
EDPN	Palmar Norte	8.80	190	*e*P	Pn	00 41 42.0	+2.3
BRU2	Volcan	8.87	185	*e*P	Pn	00 41 41.0	+0.1
LGNH	Logne	8.90	83		Pn	00 41 40.5	-0.7
JAKH	Jacmel	8.97	85		Pn	00 41 41.5	-0.6
FUG	Fuego 3	9.15	251	*e*P	Pn	00 41 47.7	+2.9
060A	Indiantown	9.42	9		Pn	00 41 47.2	-1.0
HUEH	Huehuetenango	9.48	257		Pn	00 41 49.5	+0.2
CCIG	Comitan	9.87	263		Pn	00 41 55.0	+0.4
SMRC	Santa Marta, M	9.88	130⇑	*e*P	Pn	00 41 52.0	-2.6
RTAL	Retalhuleu	9.90	253		Pn	00 41 56.4	+1.5
CAP2	Capurgana	10.02	153		Pn	00 41 56.1	-0.4
CAPC	Capurgana	10.04	153	*e*P	Pn	00 41 55.0	-1.8
SJCC	San Jacinto, C	10.14	139	*e*P	Pn	00 41 55.9	-2.4
SJCC	San Jacinto, C	10.14	139	Pn	Pn	00 41 59.4	+1.1
SDDR	Presa de Saban	10.19	81	*e*P	Pn	00 41 58.9	0.0
SDDR	Presa de Saban	10.19	81		Pn	00 41 58.0	-0.8
LCBC	Los crdobas,	10.31	148	*e*P	Pn	00 42 01.0	+0.5
DWPF	Disney Wildern	10.38	2	P	Pn	00 42 00.6	-0.8
	baz=182						
DWPF	Disney Wildern	10.38	2	Pn	Pn	00 42 00.4	-1.1
MOTC	Monteria, Cord	10.75	145	*e*P	Pn	00 42 03.7	-2.8
MOTC	Monteria, Cord	10.75	145	Pn	Pn	00 42 05.6	-0.9
SC01	Santiago de lo	10.76	79		Pn	00 42 06.4	-0.3
ARGC	Ariguani, Magd	10.78	135	*e*P	Pn	00 42 05.9	-1.0
GRTK	Grand Turk	10.86	68	Pn	Pn	00 42 06.7	-1.3
LL5C	La Loma 5 El P	11.21	134	*e*P	Pn	00 42 12.6	-0.2
PTAC	Punta Ardita,	11.22	159	*e*P	Pn	00 42 09.8	-3.2
URIC	Uribia, Colomb	11.30	120⇑	*e*P	Pn	00 42 12.1	-2.0
URIC	Uribia, Colomb	11.30	120		Pn	00 42 12.5	-1.6
SDD	Santo Domingo	11.45	84	Pn	Pn	00 42 13.9	-2.2
LL1C	La Loma 1 Cana	11.48	134	*e*P	Pn	00 42 14.6	-1.9
LL6C	La Loma 6 Bece	11.54	132⇑	*e*P	Pn	00 42 15.1	-2.2
656A	Willston	11.64	357		Pn	00 42 17.2	-1.5
UREC	San Jos de Ur	11.68	147⇑	*e*P	Pn	00 42 16.5	-2.8
SMLC	San Martn de	11.68	138⇑	*e*P	Pn	00 42 17.3	-1.9
DBBC	Dabeiba	11.98	152	*e*P	Pn	00 42 21.6	-1.9
ZARC	Zaragoza, Cauc	12.26	145⇑	*e*P	Pn	00 42 24.9	-2.3
ZARC	Zaragoza, Cauc	12.26	145	Pn	Pn	00 42 25.5	-1.7
CMIG	Matias Romero	12.38	269	Pn	Pn	00 42 27.0	-1.8
	comp=Z,4.6nm,0.3s,baz=62,slow=12,SNR=23						
CMIG				Sn	Sn	00 44 39.7	-7.8
	comp=Z,6.1nm,0.3s,baz=8.4,slow=20,SNR=5.3						
OCAC	Ocana	12.59	137⇑	*e*P	Pn	00 42 28.9	-2.9
OCAC	Ocana	12.59	137	Pn	Pn	00 42 29.4	-2.4
553A	Crawfordville	12.65	350		Pn	00 42 30.5	-2.0
PCDR	Punta Cana, DR	12.91	84	Pn	Pn	00 42 36.1	0.0
456A	Hilliard	12.98	360		Pn	00 42 34.7	-2.2
HELC	Santa Helena	13.03	151	*e*P	Pn	00 42 35.2	-2.7
CBOC	Ciudad Bolivar	13.10	153	*e*P	Pn	00 42 37.3	-1.5
BRRC	Barranca, Sant	13.22	142⇑	*e*P	Pn	00 42 37.7	-2.7
PAMC	Pamplona, Colo	13.67	138	*e*P	Pn	00 42 46.1	-0.7
HATO	Hato, Curacao	13.68	112	Pn	Pn	00 42 43.5	-3.0
TIGA	Tifton	13.77	354	P	Pn	00 42 46.0	-1.8
	baz=173,SNR=19						
PLMC	San Jos del P	13.85	156	*e*P	Pn	00 42 47.5	-1.6
NORC	Norcasia	13.89	149	*e*P	Pn	00 42 46.8	-2.7
BARC	Barichara	13.95	141	*e*P	Pn	00 42 48.6	-1.9
GUY2C	Guyana, Caldas	13.95	152⇑	*e*P	Pn	00 42 49.0	-1.7
SDV	Santo Domingo	14.04	127	Pn	Pn	00 42 49.3	-2.4
	comp=Z,4.2nm,0.3s,baz=324,slow=7.0,SNR=39						
SDV				LR	LR	00 48 47.0	
	comp=Z,25µm,20.2s,baz=316,slow=40						
SDV	Santo Domingo	14.04	127⇑	*e*P	Pn	00 42 47.9	-3.9
SDV	Santo Domingo	14.04	127	*e*P	Pn	00 42 49.1	-2.6
SDV	Santo Domingo	14.04	127		Pn	00 42 48.8	-2.9
AGPR	Aguadilla, PR	14.11	85	Pn	Pn	00 42 52.0	-0.5
CRPR	Cabo Rojo, PR	14.12	86	Pn	Pn	00 42 51.2	-1.3
MLPR	Magueyes Islan	14.18	87		Pn	00 42 52.6	-0.7
BRAL	Brewton	14.20	342	P	Pn	00 42 51.9	-1.8
	baz=159						
BRAL	Brewton	14.20	342		Pn	00 42 51.3	-2.4
SPBC	San Pablo de B	14.22	146⇑	*e*P	Pn	00 42 52.6	-1.5
257A	Skidaway Islan	14.25	3		Pn	00 42 49.7	-4.6
SOCV	Socops	14.27	130⇑	*e*P	Pn	00 42 51.4	-3.3
RUSC	La Rusia	14.57	143⇑	*e*P	Pn	00 42 56.5	-2.7
545A	Edgard	14.57	329	Pn	Pn	00 42 56.5	-2.2
ANIL	Santa Ana	14.59	153	*e*P	Pn	00 43 00.2	+0.9
OBIP	Obispado Ponce	14.59	86	Pn	Pn	00 42 58.4	-0.7
EMPR	Esperanza - Ma	14.67	85	Pn	Pn	00 42 58.4	-1.7
YOTC	Yotoco, Valle	14.68	157	*e*P	Pn	00 42 59.2	-1.2
ROSC	El Rosal	14.78	149	Pn	Pn	00 43 01.2	-0.8
	comp=Z,2.3nm,0.3s,baz=157,slow=2.6,SNR=19						
ROSC				Sn	Sn	00 45 45.3	-1.4
	comp=Z,9.4nm,0.3s,baz=197,slow=22,SNR=6.6						
ROSC				LR	LR	00 49 03.1	
	comp=Z,28µm,20.6s,baz=350,slow=39						
ROSC	El Rosal	14.78	149	*e*P	Pn	00 42 59.0	-3.0
TAMC	Tame, Arauca	14.94	137⇑	*e*P	Pn	00 43 00.6	-3.2
SJG	San Juan	15.03	86	Pn	Pn	00 43 03.3	-1.7
	comp=Z,6.9nm,0.3s,baz=277,slow=11,SNR=15						
SJG				LR	LR	00 48 43.6	
	comp=Z,24µm,20.8s,baz=280,slow=37						
SJG	San Juan	15.03	86	P	Pn	00 43 04.6	-0.4
SJG	San Juan	15.03	86⇑	*e*P	Pn	00 43 02.5	-2.5
SJG	San Juan	15.03	86		Pn	00 43 04.5	-0.4
GCPR	Guaynabo City	15.09	85	Pn	Pn	00 43 05.6	-0.2
152A	Waverly Hall	15.13	351		Pn	00 43 03.7	-2.6
PDPR	Patillas Dam,	15.15	86	Pn	Pn	00 43 05.5	-1.1
ORTC	Ortega, Tolima	15.18	154⇑	*e*P	Pn	00 43 07.2	+0.2
RGRS	Roger Stewart	15.24	6	Pn	Pn	00 43 03.9	-3.8
346A	Big Creek Wild	15.26	335		Pn	00 43 06.3	-1.7
346A				IAmb	IAmb	00 43 09.6	
	comp=Z,301nm,0.8s						
CHIC	Chingaza	15.26	147	*e*P	Pn	00 43 05.3	-3.2
HUMP	Col San Antoni	15.31	86	Pn	Pn	00 43 06.9	-1.9
NHSC	New Hope	15.44	6	P	Pn	00 43 07.2	-3.1
	baz=186,SNR=12						
NHSC				S	S	00 46 17.5	-0.7
	baz=186						
NHSC	New Hope	15.44	6		Pn	00 43 06.7	-3.6
PRAC	Prado	15.51	153⇑	*e*P	Pn	00 43 11.2	-0.2
MTP	Monte Pirata	15.60	86	Pn	Pn	00 43 11.3	-1.2
MTP				IAmb	IAmb	00 43 29.8	
	comp=Z,901nm,1.5s						
GOGA	Godfrey	15.72	355	P	Pn	00 43 11.9	-2.1
GOGA				pmax	pmax		
	comp=Z,463nm,1.1s						
GOGA	Godfrey	15.72	355	P	Pn	00 43 13.0	-1.0
	baz=174,SNR=28						
GOGA				S	S	00 46 23.0	-1.1
	baz=174						
GOGA	Godfrey	15.72	355		Pn	00 43 11.9	-2.1
GOGA				IAmb	IAmb	00 43 24.2	
	comp=Z,463nm,1.1s						
VILC	Villavicencio,	15.72	148	*e*P	Pn	00 43 14.2	0.0
Z51A	Franklin	15.83	350		Pn	00 43 12.9	-2.7
CUPR	Culebra, Puert	15.85	85	Pn	Pn	00 43 15.3	-0.5
344A	Westbrook Farm	15.86	331	Pn	Pn	00 43 14.4	-1.4
344A				IAmb	IAmb	00 43 28.3	
	comp=Z,316nm,0.8s						
TLIG	Tlapa	15.86	272	Pn	Pn	00 43 14.1	-1.9
TLIG				IAmb	IAmb	00 43 17.4	
	comp=Z,581nm,1.2s						
MARP	Paez Belalcaza	15.88	158	*e*P	Pn	00 43 16.7	+0.3
BAUV	El Baul	16.06	121	*e*P	Pn	00 43 11.1	-7.4
ELOV	Elorza	16.13	130⇑	*e*P	Pn	00 43 14.5	-5.0
STVI	Saint Thomas	16.16	85	Pn	Pn	00 43 18.1	-1.7
PCON	Cinco Dias	16.20	160⇑	*e*P	P	00 43 22.7	-1.5
146A	Union	16.21	338		Pn	00 43 18.8	-1.6
146A				IAmb	IAmb	00 43 31.8	
	comp=Z,318nm,0.7s						
BETC	Betania	16.22	156	*e*P	P	00 43 23.1	-0.7
Y52A	Lilburn	16.22	354		Pn	00 43 19.2	-1.3
Y58A	Scranton	16.28	7	Pn	Pn	00 43 18.7	-2.6
Y58A				IAmb	IAmb	00 43 30.1	
	comp=Z,641nm,1.1s						
SOTA	Rioblanco	16.32	161⇑	*e*P	P	00 43 23.9	-1.5
Y57A	Sumter	16.32	5	IAmb	IAmb	00 43 29.2	
	comp=Z,743nm,1.4s						
CDVI	St. Croix	16.35	87		Pn	00 43 21.0	-1.3
Z47A	Carrollton	16.40	341	IAmb	IAmb	00 43 27.1	
	comp=Z,678nm,1.6s						
VBMS	Vicksburg	16.42	333	P	Pn	00 43 21.7	-1.4
	baz=149,SNR=23						
VBMS				S	S	00 46 38.1	-0.2
	baz=149						
VBMS	Vicksburg	16.42	333	IAmb	IAmb	00 43 23.8	
	comp=Z,467nm,1.1s						
UNM	Universidad Na	16.44	278	P	Pn	00 43 24.3	+0.6
UNM				pmax	pmax		
	comp=Z,1µm,1.5s						
UNM	Universidad Na	16.44	278	Pn	Pn	00 43 24.3	+0.6
UNM				IAmb	IAmb	00 43 38.6	
	comp=Z,1µm,1.5s						
Y59A	Loris	16.46	9	Pn	Pn	00 43 19.0	-4.6
Y59A				IAmb	IAmb	00 43 29.0	
	comp=Z,432nm,0.9s						
PTGC	Puerto Gaitan,	16.49	143⇑	*e*P	Pn	00 43 19.4	-4.6
JSC	Jenkinsville	16.54	2	IAmb	IAmb	00 43 32.9	
	comp=Z,652nm,1.1s						
441A	DeRidder	16.55	324	IAmb	IAmb	00 43 58.4	
	comp=Z,2µm,1.6s						
Y60A	Bolivia	16.59	11	IAmb	IAmb	00 43 31.0	
	comp=Z,701nm,1.0s						
GCUF	Volcan Galeras	16.97	164⇑	*e*P	Pn	00 43 29.4	-1.2
PAULI	Pauline	17.06	0	IAmb	IAmb	00 43 38.9	
	comp=Z,459nm,1.1s						
PGA4	Puerto Gaitan	17.17	142⇑	*e*P	Pn	00 43 31.5	-1.2
143A	Socs Landing,	17.22	332	IAmb	IAmb	00 43 33.6	
	comp=Z,2µm,1.8s						
BG3	Lake Jocassee	17.26	357	IAmb	IAmb	00 43 41.2	
	comp=Z,691nm,1.3s						
TULM	Tulcn-Chalpat	17.35	166⇑	*e*P	P	00 43 38.4	+1.5
MACC	Macarena, Meta	17.37	152⇑	*e*P	Pn	00 43 34.1	-1.0
KMSC	Kings Mountain	17.39	2	P	Pn	00 43 34.1	-1.2
	baz=182,SNR=92						
KMSC				S	S	00 46 57.2	-1.1
	baz=182						
KMSC	Kings Mountain	17.39	2	IAmb	IAmb	00 43 41.9	
	comp=Z,674nm,1.2s						
W52A	Murphy	17.43	355		Pn	00 43 34.7	-1.1
W57A	Gilead	17.48	5	Pn	Pn	00 43 32.7	-3.7
Y45A	Yeager Farm, C	17.50	338	Pn	Pn	00 43 35.9	-0.7
PAC1	Pacto, Paraso	17.59	170	*e*P	P	00 43 41.6	+2.4
GUVC	San Jose del G	17.60	148	*e*P	P	00 43 41.8	+2.6
HKT	Hockley	17.61	316	P	Pn	00 43 35.9	-2.0
HKT				pmax	pmax		
	comp=Z,767nm,1.0s						
HKT	Hockley	17.61	316	P	Pn	00 43 35.9	-2.0
HKT				IAmb	IAmb	00 43 41.4	
	comp=Z,767nm,0.9s						

CUSE	Cuicocha Este	17.62	168	*e*P	P	00 43 41.7	+1.9
OTAV	Otavalo	17.68	168	P	P	00 43 41.2	+0.8
OTAV				pmax	pmax		
	comp=Z,316nm,1.2s						
OTAV	Otavalo	17.68	168	*e*P	P	00 43 41.6	+1.2
OTAV	Otavalo	17.68	168	*e*P	P	00 43 41.9	+1.4
OTAV	Otavalo	17.68	168		P	00 43 41.2	+0.8
KVTX	Kingsville	17.69	307	Pn	Pn	00 43 38.0	-1.0
W50A	Signal Mountai	17.70	351	P	Pn	00 43 36.3	-2.9
W50A				IAmb	IAmb	00 43 46.8	
	comp=Z,353nm,0.8s						
SABA	Saba	17.81	87		Pn	00 43 40.0	-0.7
CNNC	Cliffs of the	17.85	11	P	Pn	00 43 40.9	0.0
	baz=192,SNR=7.1						
CNNC				S	S	00 47 07.5	0.0
	baz=192						
CNNC	Cliffs of the	17.85	11		Pn	00 43 39.4	-1.5
V53A	Saluda	17.93	358		Pn	00 43 40.6	-1.4
V53A				IAmb	IAmb	00 43 49.3	
	comp=Z,518nm,1.1s						
SMRT	St. Maarten	17.95	86	*e*P	Pn	00 43 37.1	-5.3
SMRT	St. Maarten	17.95	86	Pn	Pn	00 43 40.3	-2.1
SMRT				IAmb	IAmb	00 43 52.6	
	comp=Z,1µm,1.4s						
TKL	Tuckaleechee C	17.97	355	P	Pn	00 43 41.1	-1.4
	comp=Z,2.3nm,0.3s,baz=171,slow=13,SNR=50						
TKL				S	Sn	00 46 49.7	-14
	comp=Z,2.6nm,0.3s,baz=324,slow=8.0,SNR=4.5						
TKL				LR	LR	00 50 14.8	
	comp=Z,11µm,18.2s,baz=178,slow=36						
TKL	Tuckaleechee C	17.97	355	Pn	Pn	00 43 41.0	-1.5
TKL				IAmb	IAmb	00 43 49.1	
	comp=Z,797nm,1.2s						
SEUS	St. Eustatius	18.07	88	*e*P	Pn	00 43 40.4	-3.3
SEUS	St. Eustatius	18.07	88		P	00 43 44.3	0.0
PLAL	Pickwick Lake	18.07	344		Pn	00 43 42.8	-0.9
PLAL				IAmb	IAmb	00 43 48.2	
	comp=Z,839nm,1.6s						
V55A	Taylorsville	18.10	2	P	Pn	00 43 42.9	-1.3
V55A				IAmb	IAmb	00 43 46.2	
	comp=Z,593nm,1.4s						
NATX	Nacogdoches	18.14	323	P	Pn	00 43 42.8	-1.8
	baz=137,SNR=121						
NATX				S	S	00 47 13.5	-0.1
	baz=137						
V52A	Sevierville	18.14	356	IAmb	IAmb	00 43 51.1	
	comp=Z,695nm,1.3s						
V51A	Loudon	18.17	354	IAmb	IAmb	00 43 51.1	
	comp=Z,425nm,1.1s						
SKI	Saint Kitts	18.31	88	*e*P	Pn	00 43 46.4	-0.4
735A	Kenedy	18.32	310		Pn	00 43 45.3	-1.5
Z41A	Richland Creek	18.33	330	P	Pn	00 43 46.3	-0.6
	baz=145,SNR=32						
Z41A				S	S	00 47 17.3	0.0
	baz=145						
MOIG	Morelia	18.35	279		P	00 43 49.0	+1.3
MOIG				IAmb	IAmb	00 43 50.8	
	comp=Z,466nm,1.2s						
PCRV	Puerto La Cruz	18.36	112	P	Pn	00 43 47.3	-0.2
	comp=Z,1.8nm,0.3s,baz=252,slow=5.4,SNR=13						
PCRV				LR	LR	00 51 28.5	
	comp=Z,14µm,18.3s,slow=39						
V48A	Smith Brothers	18.50	347	IAmb	IAmb	00 43 51.5	
	comp=Z,460nm,1.2s						
W45A	Hickory Valley	18.56	341	P	P	00 43 49.0	-0.6
U56A	King	18.64	4	IAmb	IAmb	00 43 52.5	
	comp=Z,666nm,1.6s						
V61A	Roper	18.65	14	P	P	00 43 50.2	-0.3
V61A				IAmb	IAmb	00 43 54.7	
	comp=Z,945nm,1.2s						
PTLC	Puerto Leguiza	18.77	157	⇑*i*P	Pn	00 43 57.5	+5.0
TZTN	Tazewell	18.84	356	P	Pn	00 43 53.4	+0.3
	baz=175,SNR=54						
TZTN				S	S	00 47 27.7	+0.1
	baz=175						
TZTN	Tazewell	18.84	356	P	Pn	00 43 52.9	-0.2
HDBT	Hernando Brdge	18.84	339	P	Pn	00 43 53.2	+0.1
U59A	Littleton	18.95	10	IAmb	IAmb	00 43 57.9	
	comp=Z,590nm,1.2s						
U49A	Red Boiling Sp	19.06	350	P	P	00 43 54.9	-0.1
WVT	Waverly	19.10	345	P	P	00 43 55.3	-0.2
WVT				pmax	pmax		
	comp=Z,1µm,1.5s						
WVT	Waverly	19.10	345	P	P	00 43 55.3	-0.2
	baz=162						
WVT				S	Sn	00 47 30.5	-0.2
	baz=162						
WVT	Waverly	19.10	345	P	P	00 43 55.3	-0.2
WVT				IAmb	IAmb	00 43 59.7	
	comp=Z,1µm,1.4s						
ANWB	Willy Bob	19.20	87	*e*P	P	00 43 50.6	-6.1
ANWB	Willy Bob	19.20	87		P	00 43 56.1	-0.6
833A	Chaparral WMA,	19.22	307	P	P	00 43 55.5	-1.4
	baz=119,SNR=508						
833A				S	S	00 47 37.1	+1.6
	baz=119						
ANBD	Bethesda, Anti	19.26	89	*e*P	P	00 43 53.6	-3.8
435B	Jarrell	19.30	315	P	P	00 43 57.5	-0.3
	baz=128,SNR=133						
435B				S	S	00 47 37.6	+0.6
	baz=128						
X40A	Basin Creek Fa	19.36	332	P	P	00 43 58.4	0.0
	baz=147,SNR=132						
X40A				S	S	00 47 39.7	+1.6
	baz=147						
T57A	Hurt	19.38	6	P	P	00 43 58.0	-0.6
T50A	Nancy	19.43	353	IAmb	IAmb	00 44 04.7	
	comp=Z,1µm,1.7s						
BLA	Blacksburg	19.50	4	P	Pn	00 44 00.5	-0.6
BLA				pmax	pmax		
	comp=Z,595nm,1.3s						
BLA	Blacksburg	19.50	4	P	P	00 44 00.3	+0.4
	baz=184,SNR=75						
BLA				S	S	00 47 41.8	+0.9
	baz=184						
BLA	Blacksburg	19.50	4	P	Pn	00 44 00.5	-0.6
BLA				IAmb	IAmb	00 44 05.8	
	comp=Z,595nm,1.3s						
CBE	Ff, Capester	19.52	92	*e*P	P	00 43 59.6	-0.6
TDBA	Terre de Bas,	19.52	92	*e*P	P	00 43 58.4	-1.8
GNAR	Gosnell	19.57	340	P	P	00 44 00.9	+0.3
GNAR				IAmb	IAmb	00 44 32.9	
	comp=Z,420nm,1.1s						
UTMT	University of	19.57	343	P	Pn	00 44 01.3	-0.6
T59A	Double "B" Far	19.59	10	P	P	00 44 00.7	-0.2
T59A				IAmb	IAmb	00 44 03.5	
	comp=Z,811nm,1.4s						
PEBM	Pemiscott Bayo	19.65	341	P	Pn	00 44 02.6	-0.2
W41B	Gary Mavity, V	19.69	334	P	P	00 44 01.9	-0.1
	baz=149,SNR=212						
W41B				S	Sn	00 47 45.4	+0.4
	baz=149						
MIAR	Mount Ida	19.75	330	P	P	00 44 02.8	+0.1
MIAR				pmax	pmax		
	comp=Z,473nm,2.3s						
MIAR	Mount Ida	19.75	330	P	P	00 44 02.7	0.0
	baz=145,SNR=109						
MIAR				S	Sn	00 47 47.0	+0.5
	baz=145						
T47A	Sharon Grove	19.76	348	P	P	00 44 02.5	-0.2
DSLB	Salisbury	19.79	93	*e*P	P	00 43 59.3	-3.9
MDN	Morne-Daniel	19.83	94	*e*P	P	00 44 02.0	-1.7
MAGL	Barre de l'ile	19.84	92	*e*P	Pn	00 44 06.1	+0.8
PVMO	Portageville	19.88	341	P	Pn	00 44 05.1	-0.5
T60A	Surry	19.91	12	P	P	00 44 04.9	+0.5
S51A	Beattyville	19.93	356		P	00 44 04.9	+0.3
DLPL	La Plaine	19.97	94	*e*P	P	00 44 02.5	-2.7
DLPL	La Plaine	19.97	94	P	Pn	00 44 06.2	-0.7
WHTX	Lake Whitney,	20.00	318	P	Pn	00 44 06.5	-0.6
	baz=131,SNR=473						
WHTX				S	Sn	00 47 56.7	+4.2
	baz=131						
WHTX	Lake Whitney,	20.00	318	P	Pn	00 44 06.5	-0.6
PAYG	Puerto Ayora	20.02	205	*e*P	Pn	00 44 07.5	+0.1
PAYG	Puerto Ayora	20.02	205		Pn	00 44 09.1	+1.7
S54A	Dingess, Beckl	20.04	1		P	00 44 06.3	+0.5
SVN	Savane Anatole	20.13	95	IAMs_20	IAMs_20	00 50 15.7	
	comp=Z,15µm,21.0s						
T45A	Paducah	20.15	344	IAmb	IAmb	00 44 16.0	
	comp=Z,338nm,0.7s						
FDF	Fort de France	20.17	95	P	P	00 44 07.8	+0.4
FDF				pmax	pmax		
	comp=Z,1µm,1.1s						
FDF	Fort de France	20.17	95	*e*P	P	00 44 05.2	-2.1
FDF	Fort de France	20.17	95	IAMs_20	IAMs_20	00 50 16.8	
	comp=Z,18µm,20.0s						
S57A	Dark Hollow, R	20.17	7	IAmb	IAmb	00 44 11.7	
	comp=Z,1µm,1.8s						
BIM	Bigot	20.29	96	*e*P	P	00 44 06.1	-2.6
BIM	Bigot	20.29	96	P	P	00 44 08.2	-0.5
GRFF	Grenada Fort F	20.30	103	*e*P	P	00 44 07.1	-1.7
GRGR	Grenville	20.35	103	*e*P	P	00 44 08.5	-0.8
GRGR	Grenville	20.35	103	P	P	00 44 09.1	-0.3
W39A	Magazine	20.38	331	P	P	00 44 09.7	+0.2
	baz=146,SNR=64						
W39A				S	S	00 47 58.8	+0.3
	baz=146						
W39A	Magazine	20.38	331	IAmb	IAmb	00 44 59.3	
	comp=Z,349nm,1.4s						
SVB	Belmont	20.40	100	*e*P	P	00 44 08.8	-1.1
SVB	Belmont	20.40	100	P	P	00 44 10.6	+0.7
ILAM	Ilet Lapin Mar	20.42	95	*e*P	P	00 44 08.6	-1.5
ILAM	Ilet Lapin Mar	20.42	95	P	P	00 44 10.2	0.0
SVV	Soufriere Volc	20.42	99	*e*P	P	00 44 09.9	-0.3
PBMO	Poplar Bluff	20.44	340	P	P	00 44 10.3	+0.1
PBMO				IAmb	IAmb	00 44 15.5	
	comp=Z,790nm,1.4s						
GCMP	Grenada, Carri	20.45	102	*e*P	P	00 44 09.4	-1.1
SLBI	Saint Lucia, B	20.48	97	*e*P	P	00 44 07.8	-3.0
MPOM	Morne Pois Mar	20.50	96	*e*P	P	00 44 09.2	-1.7
MPOM	Morne Pois Mar	20.50	96	P	P	00 44 11.0	+0.1
R58B	Mineral	20.51	9	IAmb	IAmb	00 44 15.8	
	comp=Z,420nm,1.2s						
R53A	Hurricane	20.57	360	P	P	00 44 11.9	+0.4
R53A				IAmb	IAmb	00 44 16.6	
	comp=Z,306nm,0.9s						
R55A	Marlinton	20.58	4	P	P	00 44 12.5	+0.8
MCLT	Moule a Chique	20.59	98	*e*P	P	00 44 09.0	-2.9
R50A	Paris	20.62	355	P	P	00 44 11.9	-0.2
R50A				IAmb	IAmb	00 44 24.0	
	comp=Z,376nm,1.3s						
JCT	Junction City	20.66	311	P	P	00 44 13.2	+0.6
JCT				pmax	pmax		
	comp=Z,2µm,1.6s						
JCT				MLR	MLR		
	comp=Z,3µm,21.0s						
JCT	Junction City	20.66	311	P	P	00 44 13.3	+0.6
	baz=124,SNR=109						
JCT	Junction City	20.66	311	P	P	00 44 13.2	+0.6
S61A	Accomac	20.66	14	P	P	00 44 11.2	-1.3
S61A				IAmb	IAmb	00 44 19.9	
	comp=Z,676nm,1.3s						
R49A	Shelbyville	20.72	353	P	P	00 44 13.2	0.0
R49A				IAmb	IAmb	00 44 17.6	
	comp=Z,330nm,1.1s						
WCI	Wyandotte Cave	20.82	350	P	P	00 44 14.4	+0.2
WCI				pmax	pmax		
	comp=Z,279nm,0.9s						
WCI				MLR	MLR		
	comp=Z,11µm,22.0s						
WCI	Wyandotte Cave	20.82	350	P	P	00 44 14.5	+0.2
	baz=168						
WCI				S	S	00 48 07.6	+0.4
	baz=168						
WCI	Wyandotte Cave	20.82	350	P	P	00 44 14.4	+0.2
WCI				IAmb	IAmb	00 44 28.3	
	comp=Z,279nm,0.8s						
CBN	Corbin Frederi	20.83	10	P	P	00 44 15.0	+0.7
	baz=192,SNR=21						
CBN				S	S	00 48 07.3	0.0
	baz=192						
CBN	Corbin Frederi	20.83	10	P	P	00 44 15.1	+0.8
CBN				IAmb	IAmb	00 44 19.8	
	comp=Z,416nm,1.1s						
CBN				IAMs_20	IAMs_20	00 52 30.1	
	comp=Z,12µm,20.0s						
T42A	Van Buren	20.89	339	IAmb	IAmb	00 44 28.7	
	comp=Z,279nm,1.1s						
S44A	Carbondale	20.94	344	IAmb	IAmb	00 44 21.5	
	comp=Z,516nm,1.1s						
SIUC	Southern Illin	20.95	344	IAmb	IAmb	00 44 21.6	
	comp=Z,572nm,1.2s						
U40A	Yellville	20.96	335	P	P	00 44 15.7	0.0
	baz=149,SNR=105						
U40A				S	S	00 48 08.7	-1.3
	baz=149						
U40A	Yellville	20.96	335	IAmb	IAmb	00 44 25.1	
	comp=Z,366nm,1.2s						
TRN	Trinidad (W)	21.08	107	*e*P	P	00 44 15.9	-1.3
TPP	Pointe-a-Pierr	21.16	108	*e*P	P	00 44 19.9	+1.8
Q52A	Bidwell	21.20	359	IAmb	IAmb	00 44 23.8	
	comp=Z,355nm,1.0s						
LOOK	Love County	21.22	323		P	00 44 19.4	+0.9
Q54A	Coxs Mills	21.24	2	IAmb	IAmb	00 44 24.0	
	comp=Z,318nm,0.9s						
Q51A	Peebles	21.30	357	P	P	00 44 19.9	+0.5
Q51A				IAmb	IAmb	00 44 24.5	
	comp=Z,449nm,0.9s						
BBSR	BB Station	21.35	44	P	P	00 44 19.2	-0.8
HHAR	Hobbs	21.36	333	P	P	00 44 19.8	-0.3
R61A	Willards	21.36	14	P	P	00 44 19.9	-0.2
Q56A	Snyder Ridge,	21.41	6	P	P	00 44 21.2	+0.6
Q56A				IAmb	IAmb	00 44 28.0	
	comp=Z,878nm,1.6s						
MGMO	Mountain Grove	21.42	337	IAmb	IAmb	00 44 30.3	
	comp=Z,677nm,1.4s						
BOT	Bacolet	21.53	105	*e*	P	00 44 21.4	-0.7
FVM	French Village	21.55	341	P	P	00 44 21.8	-0.3
FVM				pmax	pmax		
	comp=Z,1µm,1.9s						
FVM	French Village	21.55	341	P	P	00 44 21.8	-0.3
TOSP	Speyside	21.65	104	*e*P	P	00 44 21.6	-1.8
TOSP	Speyside	21.65	104	P	P	00 44 26.3	+2.9
U38A	Gravette	21.68	332	IAmb	IAmb	00 44 32.2	
	comp=Z,315nm,1.1s						
ABTX	Abilene, Hawle	21.82	316	P	P	00 44 26.1	+1.0
	baz=128,SNR=212						
ABTX				S	S	00 48 28.8	+1.7
	baz=128						
P52A	Corning	21.87	360	P	P	00 44 26.0	+0.5
	baz=179,SNR=182						
P52A				S	S	00 48 27.9	0.0
	baz=179						
CCM	Cathedral Cave	21.87	340	P	P	00 44 24.9	-0.7
CCM				pmax	pmax		
	comp=Z,243nm,1.0s						
CCM				MLR	MLR		
	comp=Z,9µm,20.0s						
CCM	Cathedral Cave	21.87	340	P	P	00 44 25.1	-0.5
	baz=155						
CCM				S	S	00 48 26.3	-1.6
	baz=155						
CCM	Cathedral Cave	21.87	340	P	P	00 44 24.9	-0.7
CCM				IAmb	IAmb	00 44 40.1	
	comp=Z,242nm,1.0s						
Q61A	Milford	21.89	14	P	P	00 44 26.8	+1.1
	baz=197						
Q61A				S	S	00 48 31.6	+3.4
	baz=197						
P49A	Miami Univ. Ec	21.90	354	P	P	00 44 25.8	-0.1
	baz=173,SNR=126						
P49A				S	S	00 48 28.7	+0.1
	baz=173						
P49A	Miami Univ. Ec	21.90	354	IAmb	IAmb	00 44 30.0	
	comp=Z,398nm,0.8s						
P48A	Milroy	21.91	353	IAmb	IAmb	00 44 32.4	
	comp=Z,380nm,0.9s						
TUL1	Leonard	21.92	329	P	P	00 44 25.6	-0.6
	baz=142,SNR=64						
TUL1				S	S	00 48 28.2	-0.8
	baz=142						
MCWV	Mont Chateau	21.97	4	P	P	00 44 28.3	+1.7
	baz=185,SNR=78						
MCWV				S	S	00 48 32.6	+2.8
	baz=185						
MCWV	Mont Chateau	21.97	4	P	P	00 44 27.8	+1.2
P57A	Homestead Farm	21.98	8	IAmb	IAmb	00 44 33.2	
	comp=Z,441nm,1.2s						
SDMD	Soldier's Deli	22.09	11	P	P	00 44 28.4	+0.4
SLM	Saint Louis	22.10	342	P	P	00 44 27.7	-0.3
SLM				pmax	pmax		
	comp=Z,243nm,0.9s						
SLM	Saint Louis	22.10	342	P	P	00 44 27.6	-0.3
SLM				IAmb	IAmb	00 44 34.4	
	comp=Z,243nm,0.9s						
S39A	Bolivar	22.30	336	IAmb	IAmb	00 44 36.2	
	comp=Z,460nm,1.4s						
P46A	Rosedale	22.33	349	IAmb	IAmb	00 44 36.4	
	comp=Z,232nm,0.8s						
O52A	Adamsville	22.35	0	P	P	00 44 30.8	+0.1
OKCSW	OKLAHOMA CITY	22.39	325	P	P	00 44 31.9	+0.6
R40A	Maddies Statio	22.43	338	IAmb	IAmb	00 44 39.5	
	comp=Z,195nm,0.8s						
O54A	Avella	22.46	3	P	P	00 44 32.5	+0.6
O54A				IAmb	IAmb	00 44 37.8	
	comp=Z,560nm,1.2s						
ACSO	Alum Creek Sta	22.48	358	P	P	00 44 33.1	+1.0
	baz=177,SNR=77						
ACSO				S	S	00 48 40.5	+0.8
	baz=177						
ACSO	Alum Creek Sta	22.48	358	IAmb	IAmb	00 44 38.5	
	comp=Z,235nm,0.9s						
ACSO				IAMs_20	IAMs_20	00 53 45.2	
	comp=Z,12µm,19.0s						
O53A	New Philadelph	22.49	1	P	P	00 44 33.3	+1.1
	baz=182,SNR=207						
O53A				S	S	00 48 41.2	+1.4
	baz=182						
O53A	New Philadelph	22.49	1	IAMs_20	IAMs_20	00 53 12.3	
	comp=Z,9µm,19.0s						
O49A	Covington	22.52	355	P	P	00 44 33.1	+0.6
BCOK	Bluff Creek, N	22.67	325	IAmb	IAmb	00 44 40.8	
	comp=Z,586nm,1.5s						
WMOK	Wichita Mounta	22.68	322	P	P	00 44 34.1	-0.1
	baz=134,SNR=229						
WMOK				S	S	00 48 44.8	+1.4
	baz=134						
O56A	Blue Knob Stat	22.69	7	P	P	00 44 35.8	+1.5
	baz=188,SNR=93						
O56A				S	S	00 48 46.4	+2.9
	baz=188						
O56A	Blue Knob Stat	22.69	7	P	P	00 44 35.2	+0.8
O56A				IAmb	IAmb	00 44 41.6	
	comp=Z,438nm,1.1s						
P60A	Greenville	22.71	13	P	P	00 44 35.0	+0.5
	baz=196,SNR=16						
P60A				S	S	00 48 46.4	+2.6
	baz=196						
P60A	Greenville	22.71	13	P	P	00 44 34.5	0.0
P60A				IAMs_20	IAMs_20	00 52 44.9	
	comp=Z,17µm,18.0s						
MVL	Millersville	22.75	11	IAmb	IAmb	00 44 43.0	
	comp=Z,298nm,1.3s						
P61A	Hammonton	22.77	14	P	P	00 44 35.7	+0.6
PAGS	Pennsylvania G	22.91	10	IAmb	IAmb	00 44 40.1	
	comp=Z,279nm,1.2s						
TXAR	Lajitas Array	23.01	304	P	P	00 44 37.4	-0.6
	comp=Z,124nm,0.8s,baz=120,slow=7.4,SNR=271						
TXAR				S	S	00 48 47.5	-2.1
	comp=Z,2.3nm,0.5s,baz=313,slow=34,SNR=2.0						
TXAR				LR	LR	00 56 30.7	
	comp=Z,2µm,18.2s,baz=0.0,slow=44						
SFIN	Lafayette	23.05	350	P	P	00 44 37.8	-0.3
	baz=167,SNR=74						
SFIN				S	S	00 48 49.0	-0.7
	baz=167						
SFIN	Lafayette	23.05	350	IAmb	IAmb	00 44 51.9	
	comp=Z,360nm,1.1s						
N53A	Lisbon	23.06	2	IAmb	IAmb	00 44 41.7	
	comp=Z,171nm,0.9s						
T35A	Sooner Cattle	23.07	329	IAmb	IAmb	00 44 40.5	
	comp=Z,352nm,1.4s						
SSPA	Standing Stone	23.13	8	P	P	00 44 39.7	+0.8
	baz=190						
SSPA				S	S	00 48 53.6	+2.4
	baz=190						
SSPA	Standing Stone	23.13	8	P	P	00 44 38.1	-0.8
SSPA				IAmb	IAmb	00 44 42.3	
	comp=Z,309nm,1.4s						
SSPA	Standing Stone	23.13	8	IAMs_20	IAMs_20	00 54 08.2	
	comp=Z,11µm,18.0s						
N51A	Ashland	23.15	359	P	P	00 44 38.7	-0.4
N51A				IAmb	IAmb	00 45 08.0	
	comp=Z,295nm,1.1s						
N49A	Columbus Grove	23.24	356	IAmb	IAmb	00 44 44.9	
	comp=Z,410nm,1.2s						
N54A	Moraine State	23.25	4	P	P	00 44 40.7	+0.5
	baz=184,SNR=42						
N54A				S	S	00 48 55.6	+2.3
	baz=184						
N54A	Moraine State	23.25	4	P	P	00 44 40.3	+0.1
N54A				IAmb	IAmb	00 44 49.9	
	comp=Z,217nm,1.1s						
BLOK	Blackwell	23.30	328	IAmb	IAmb	00 45 14.2	
	comp=Z,370nm,1.3s						
N58A	Sunbury	23.51	10	P	P	00 44 43.4	+0.7
N58A				IAmb	IAmb	00 44 52.8	
	comp=Z,312nm,1.4s						
CROK	Carrier	23.51	326		P	00 44 42.5	-0.3
LUPA	Lehigh Univers	23.52	13	P	P	00 44 43.8	+0.9
LUPA				IAmb	IAmb	00 44 52.0	
	comp=Z,310nm,1.4s						
KAN13	South Haven SW	23.63	328	P	P	00 44 44.3	+0.3
M50A	Fremont	23.66	358	P	P	00 44 45.1	+1.0
M50A				IAmb	IAmb	00 45 03.3	
	comp=Z,207nm,1.1s						
HDIL	Hopedale	23.66	346	P	P	00 44 43.7	-0.6
	baz=162,SNR=32						
HDIL				S	S	00 48 57.4	-2.4
	baz=162						
HDIL	Hopedale	23.66	346	IAmb	IAmb	00 44 48.8	
	comp=Z,159nm,0.8s						
M53A	WI Miller and	23.70	2	P	P	00 44 45.2	+0.7
	baz=183,SNR=63						
M53A				S	S	00 49 01.5	+1.2
	baz=183						
M53A	WI Miller and	23.70	2	P	P	00 44 45.1	+0.5
GC02	Grant County #	23.70	327		P	00 44 44.2	-0.5
N59A	State Game Lan	23.75	12	P	P	00 44 46.6	+1.4
	baz=194,SNR=14						
N59A				S	S	00 49 08.1	+6.8
	baz=194						
N59A	State Game Lan	23.75	12	P	P	00 44 45.4	+0.2
N59A				IAmb	IAmb	00 45 02.4	
	comp=Z,237nm,1.3s						
N59A				IAMs_20	IAMs_20	00 53 57.4	
	comp=Z,13µm,20.0s						
M52A	Chesterland	23.78	1	P	P	00 44 45.9	+0.5
M52A				IAmb	IAmb	00 45 25.6	
	comp=Z,156nm,1.0s						
BRNJ	Basking Ridge	23.78	14	P	P	00 44 45.2	-0.2
BRNJ				IAmb	IAmb	00 45 03.4	
	comp=Z,273nm,1.1s						
KAN09	Caldwell North	23.80	328	P	P	00 44 44.9	-0.8
KAN17	Caldwell West	23.80	327	P	P	00 44 45.1	-0.6
M54A	Oil Creek Stat	23.82	4	P	P	00 44 47.1	+1.3
	baz=185,SNR=67						
M54A				S	S	00 49 05.9	+3.5
	baz=185						
M54A	Oil Creek Stat	23.82	4	P	P	00 44 46.4	+0.6
M54A				IAmb	IAmb	00 44 49.0	
	comp=Z,248nm,0.8s						
KS20	Mayfield South	23.84	328	P	P	00 44 45.6	-0.4
KAN14	Manchester OK	23.84	327	P	P	00 44 45.7	-0.3
M55A	Ridgway	23.86	6	P	P	00 44 47.1	+1.0
M55A				IAmb	IAmb	00 44 48.7	
	comp=Z,183nm,0.9s						
KAN01	Argonia South	23.88	327	P	P	00 44 46.1	-0.4
KAN05	Bluff City Nor	23.91	327	P	P	00 44 45.9	-0.8
M57A	Sunshine Farm,	23.93	9	P	P	00 44 46.9	+0.1
M57A				IAmb	IAmb	00 45 05.6	
	comp=Z,220nm,1.2s						
U32A	Winter Ranch,	23.97	324		P	00 44 46.8	-0.5
KAN06	Argonia West S	24.00	327	P	P	00 44 46.6	-1.0
CPNY	Central Park	24.03	15	P	P	00 44 46.4	-1.4
KAN10	Anthony SW Sta	24.03	327		P	00 44 47.3	-0.6
P38A	Dawn	24.07	338	IAmb	IAmb	00 44 59.8	
	comp=Z,276nm,1.1s						
ODNJ	Ogdensburg	24.15	14	P	P	00 44 48.9	0.0
ODNJ				IAmb	IAmb	00 45 22.5	
	comp=Z,196nm,1.3s						
M44A	Midewin, Midew	24.20	349	IAmb	IAmb	00 44 54.5	
	comp=Z,187nm,0.9s						
N41A	Harden Midland	24.20	343	IAmb	IAmb	00 44 53.1	
	comp=Z,159nm,0.8s						
PAL	Palisades	24.24	15	P	P	00 44 49.7	0.0
PAL				pmax	pmax		
	comp=Z,405nm,1.8s						
PAL				MLR	MLR		
	comp=Z,12µm,20.0s						
PAL	Palisades	24.24	15	P	P	00 44 50.4	+0.6
	baz=199,SNR=11						
PAL				S	S	00 49 13.0	+4.0
	baz=199						
PAL	Palisades	24.24	15	P	P	00 44 49.7	0.0
PAL				IAmb	IAmb	00 44 55.8	
	comp=Z,405nm,1.8s						

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PAL                                 IAMs_20 IAMs_20  00 53 26.5
      comp=Z,12µm,20.0s
L48A  N Adams          24.27 355    IAmb    IAmb     00 44 54.5
      comp=Z,204nm,0.9s
N62A  Caumsett State   24.28  16    P       P        00 44 50.4 +0.3
TRNY  Table Rock, Ra   24.30  14    P       P        00 44 50.4 +0.1
TRNY                                IAmb    IAmb     00 45 03.2
      comp=Z,244nm,1.4s
KSPA  Keystone Colle   24.37  11    P       P        00 44 51.2 +0.2
KSPA                                IAmb    IAmb     00 44 59.3
      comp=Z,178nm,1.1s
ERPA  Erie             24.41   3    P       P        00 44 52.2 +1.0
      baz=184,SNR=13
ERPA                                S       S        00 49 17.9 +6.2
      baz=184
ERPA  Erie             24.41   3    P       P        00 44 51.5 +0.2
ERPA                                IAmb    IAmb     00 44 58.8
      comp=Z,257nm,1.1s
ERPA                                IAMs_20 IAMs_20  00 54 07.9
      comp=Z,11µm,20.0s
WSPT  Westport, CT     24.54  16    P       P        00 44 53.0 +0.5
WSPT                                IAmb    IAmb     00 45 09.2
      comp=Z,410nm,1.5s
WSPT                                IAMs_20 IAMs_20  00 53 41.5
      comp=Z,8µm,18.0s
AMTX  Amarillo         24.56 318    P       P        00 44 52.6 -0.2
      baz=129
AMTX                                S       S        00 49 20.7 +6.2
      baz=129
AAM   Ann Arbor        24.58 357    P       P        00 44 53.1 +0.3
AAM                                 pmax    pmax
      comp=Z,222nm,1.0s
AAM                                 MLR     MLR
      comp=Z,9µm,20.0s
AAM   Ann Arbor        24.58 357    P       P        00 44 53.5 +0.7
      baz=176,SNR=22
AAM                                 S       S        00 49 20.5 +6.0
      baz=176
AAM   Ann Arbor        24.58 357    P       P        00 44 53.1 +0.3
AAM                                 IAmb    IAmb     00 44 58.0
      comp=Z,222nm,0.9s
AAM                                 IAMs_20 IAMs_20  00 53 55.1
      comp=Z,9µm,20.0s
L56A  Greenwood        24.65   8    IAmb    IAmb     00 45 01.4
      comp=Z,146nm,1.1s
TBTG  Tabatinga, AM    24.76 150⇑iP P        00 44 55.1 +0.4
TBTG  Tabatinga, AM    24.76 150   eP       P        00 44 55.8 +1.1
TBTG  Tabatinga, AM    24.76 150    P       P        00 44 55.7 +1.1
TBTG                                IAmb    IAmb     00 45 26.8
      comp=Z,315nm,1.2s
YLE   Yale             24.78  16    IAmb    IAmb     00 44 57.6
      comp=Z,146nm,1.1s
YLE                                 IAMs_20 IAMs_20  00 55 12.2
      comp=Z,10µm,19.0s
WVNY  West Valley, N   24.80   6    P       P        00 44 55.5 +0.6
WVNY                                IAmb    IAmb     00 45 12.4
      comp=Z,211nm,1.1s
KSU1  Kansas State U   24.87 332    P       P        00 44 55.0 -0.5
      baz=145,SNR=32
KSU1                                S       S        00 49 21.6 +2.3
      baz=145
ATAH  Atahualpa        24.91 172    P       P        00 44 58.0 +1.5
      comp=Z,42nm,0.9s,baz=11,slow=8.1,SNR=25
ATAH                                LR      LR       00 54 22.1
      comp=Z,10µm,21.1s,baz=353,slow=36
L44A  Lake County Fo   24.94 349    P       P        00 44 55.7 -0.4
      baz=166,SNR=25
L44A                                S       S        00 49 25.5 +5.2
      baz=166
L44A  Lake County Fo   24.94 349    IAmb    IAmb     00 45 00.9
      comp=Z,212nm,1.0s
L44A                                IAMs_20 IAMs_20  00 54 43.0
      comp=Z,12µm,18.0s
BINY  Binghamton       24.95  11    P       P        00 44 57.5 +1.2
      baz=193,SNR=22
BINY  Binghamton       24.95  11    IAmb    IAmb     00 45 04.5
      comp=Z,153nm,1.1s
BINY                                IAMs_20 IAMs_20  00 54 34.3
      comp=Z,10µm,18.0s
N38A  Joes South For   25.00 339    IAmb    IAmb     00 45 38.9
      comp=Z,270nm,1.2s
K50A  Casco            25.01 359    IAmb    IAmb     00 44 59.6
      comp=Z,133nm,0.8s
M63A  Gales Ferry      25.11  18    P       P        00 44 56.7 -0.9
L59A  Walton           25.12  12    P       P        00 44 57.6 -0.2
L59A                                IAmb    IAmb     00 45 06.0
      comp=Z,160nm,1.1s
MMNY  Mt. Morris Dam   25.20   7    P       P        00 44 58.5 +0.1
MMNY                                IAmb    IAmb     00 45 00.5
      comp=Z,179nm,0.9s
R32A  Long Quarter,    25.34 328    IAmb    IAmb     00 45 11.5
      comp=Z,271nm,1.1s
K57A  Scipio Center    25.39   9    P       P        00 45 00.3 +0.2
MNTX  Cornudas Mount   25.39 308    P       P        00 44 59.9 -0.5
      baz=118,SNR=375
MNTX                                S       S        00 49 31.6 +3.8
      baz=118
MNTX  Cornudas Mount   25.39 308    P       P        00 44 59.8 -0.5
UCCT  U. Connecticut   25.42  17    P       P        00 44 59.8 -0.7
K43A  Burlington       25.52 349    P       P        00 45 00.1 -1.2
K43A                                IAmb    IAmb     00 45 17.9
      comp=Z,184nm,1.1s
MEDO  Medina           25.57   6    P       P        00 45 01.2 -0.6
J47A  Sunmer           25.59 355    IAmb    IAmb     00 45 08.2
      comp=Z,188nm,0.9s
J54A  Appleton         25.66   6    P       P        00 45 03.3 +0.8
J54A                                IAmb    IAmb     00 45 04.9
      comp=Z,219nm,0.9s
M65A  Busby, Falmout   25.69  20    P       P        00 45 03.5 +0.7
M65A                                IAmb    IAmb     00 45 06.9
      comp=Z,195nm,0.9s
M65A                                IAMs_20 IAMs_20  00 54 40.1
      comp=Z,9µm,20.0s
J55A  Hilton           25.73   7    P       P        00 45 03.2  0.0
J55A                                IAmb    IAmb     00 45 05.4
      comp=Z,130nm,1.1s
BRYW  Bryant College   25.73  18    P       P        00 45 03.0 -0.3
BRYW                                IAmb    IAmb     00 45 29.6
      comp=Z,195nm,1.6s
BRYW                                IAMs_20 IAMs_20  00 55 39.4
      comp=Z,13µm,18.0s
QUA2  Belchertown      25.84  16    P       P        00 45 04.1 -0.1
QUA2                                IAmb    IAmb     00 45 08.2
      comp=Z,144nm,1.1s
QUA2                                IAMs_20 IAMs_20  00 56 01.2
      comp=Z,12µm,19.0s
J56A  Wolcott          25.87   9    P       P        00 45 04.8 +0.4
J56A                                IAmb    IAmb     00 45 06.5
      comp=Z,119nm,0.9s
L61B  Northampton      25.91  16    P       P        00 45 05.6 +0.7
      baz=200
L61B                                S       S        00 49 36.7 +0.9
      baz=200
BOAV  Boa Vista        25.93 123   eP       P        00 45 05.9 +0.5
BOAV  Boa Vista        25.93 123    P       P        00 45 06.1 +0.7
TRY   Troy             25.93  14    P       P        00 45 05.8 +0.7
TRY                                 IAMs_20 IAMs_20  00 54 30.2
      comp=Z,11µm,21.0s
N35A  Tabor            25.94 336    P       P        00 45 04.2 -1.0
N35A                                IAmb    IAmb     00 45 09.0
      comp=Z,126nm,0.7s
L64A  Middleborough    25.96  19    P       P        00 45 05.2 -0.1
SCIA  State Center     26.00 341    P       P        00 45 05.7  0.0
      baz=155,SNR=11
JFWS  Jewell Farm      26.12 346    P       P        00 45 06.4 -0.4
      baz=162,SNR=79
JFWS                                S       S        00 49 40.4 +1.3
      baz=162
JFWS  Jewell Farm      26.12 346    IAMs_20 IAMs_20  00 54 19.5
      comp=Z,9µm,22.0s
J57A  Williamstown     26.13  10    P       P        00 45 06.8 -0.1
J57A                                IAmb    IAmb     00 45 30.7
      comp=Z,388nm,1.6s
CBKS  Cedar Bluff      26.16 327    P       P        00 45 07.4 +0.2
      baz=138,SNR=25
CBKS                                S       S        00 49 42.0 +2.2
      baz=138
I49A  Point Hope       26.18 359    P       P        00 45 07.1 -0.3
J58A  Remsen           26.20  11    P       P        00 45 07.9 +0.3
BCX   Boston College   26.23  18    P       P        00 45 06.8 -0.9
BCX                                 IAmb    IAmb     00 45 14.8
      comp=Z,189nm,1.4s
BCX                                 IAMs_20 IAMs_20  00 55 53.4
      comp=Z,9µm,18.0s
WES   Weston           26.23  18    P       P        00 45 06.8 -0.9
WES                                 pmax    pmax
```

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      comp=Z,227nm,1.4s
WES                                 MLR     MLR
      comp=Z,12µm,19.0s
WES   Weston           26.23  18    P       P        00 45 06.8 -0.9
WES                                 IAmb    IAmb     00 45 29.1
      comp=Z,227nm,1.4s
WES                                 IAMs_20 IAMs_20  00 55 52.4
      comp=Z,12µm,19.0s
K62A  Royalston        26.23  16    P       P        00 45 07.7 -0.1
K62A                                IAmb    IAmb     00 45 15.6
      comp=Z,205nm,1.6s
HRV   Adam Dziewonsk   26.27  18    P       P        00 45 08.0 -0.1
HRV                                 pmax    pmax
      comp=Z,89nm,1.2s
HRV                                 MLR     MLR
      comp=Z,13µm,19.0s
HRV   Adam Dziewonsk   26.27  18    P       P        00 45 08.4 +0.2
      baz=203
HRV                                 S       S        00 49 43.4 +1.9
      baz=203
HRV   Adam Dziewonsk   26.27  18    P       P        00 45 08.0 -0.1
HRV   Adam Dziewonsk   26.27  18    IAMs_20 IAMs_20  00 56 12.6
      comp=Z,13µm,19.0s
J59A  Piesco           26.45  12    P       P        00 45 09.8  0.0
J59A                                IAmb    IAmb     00 45 19.1
      comp=Z,154nm,1.2s
PECO  Prince Edward    26.50   8    P       P        00 45 09.8 -0.3
PECO                                IAmb    IAmb     00 45 18.3
      comp=Z,141nm,1.0s
K38A  Parkersburg      26.54 342    IAmb    IAmb     00 45 15.1
      comp=Z,240nm,1.1s
ACCN  Adirondack Com   26.55  14    P       P        00 45 10.8  0.0
ACCN                                IAmb    IAmb     00 45 36.9
      comp=Z,191nm,1.5s
N33A  J Bar K, Exete   26.58 333    P       P        00 45 10.4 -0.7
I42A  Draeger Farm,    26.78 349    IAmb    IAmb     00 45 16.6
      comp=Z,219nm,0.9s
J61A  Chester          26.78  15    P       P        00 45 12.0 -0.8
CZSB  Cruzeiro do Su   26.85 159   eP       P        00 45 15.1 +1.5
CZSB  Cruzeiro do Su   26.85 159    IAmb    IAmb     00 45 29.8
      comp=Z,231nm,1.2s
SLBS  Sierra La Lagu   26.85 288    P       P        00 45 15.3 +1.6
DELO  Deloro Mine      26.99   7    P       P        00 45 14.5 -0.1
NCB   Newcomb          27.00  12    P       P        00 45 15.0 +0.3
SADO  Sadowa           27.10   4    P       P        00 45 15.5 -0.1
      comp=Z,89nm,0.8s,baz=239,slow=4.6,SNR=63
SADO                                LR      LR       00 57 04.8
      comp=Z,6µm,18.6s,baz=185,slow=39
SADO  Sadowa           27.10   4    P       P        00 45 15.6 -0.1
SADO                                IAmb    IAmb     00 45 17.4
      comp=Z,111nm,0.9s
I40A  Norwalk          27.13 346    IAmb    IAmb     00 45 22.8
      comp=Z,137nm,0.9s
FFD   Franklin Falls   27.14  17    P       P        00 45 15.4 -0.5
FFD                                 IAMs_20 IAMs_20  00 55 41.5
      comp=Z,9µm,19.0s
GLMI  Grayling         27.15 356    P       P        00 45 16.2 +0.1
      baz=174
GLMI  Grayling         27.15 356    IAmb    IAmb     00 45 26.0
      comp=Z,218nm,0.9s
GLMI                                IAMs_20 IAMs_20  00 56 08.8
      comp=Z,12µm,18.0s
H43A  Windswept, Lux   27.15 351    IAmb    IAmb     00 45 23.0
      comp=Z,194nm,0.8s
L34A  Svendsen Farm,   27.17 336    P       P        00 45 15.4 -0.9
L34A                                IAmb    IAmb     00 45 44.0
      comp=Z,146nm,1.1s
HNH   Hanover          27.19  15    P       P        00 45 15.8 -0.6
HNH                                 IAMs_20 IAMs_20  00 57 08.4
      comp=Z,8µm,18.0s
LPIG  La Paz           27.24 288    P       P        00 45 16.7 -0.3
      comp=Z,226nm,1.1s,baz=34,slow=2.1,SNR=24
LPIG                                LR      LR       00 57 07.6
      comp=Z,4µm,19.1s,baz=106,slow=39
BGNE  Belgrade         27.43 333    P       P        00 45 18.6 -0.1
      baz=144
BGNE  Belgrade         27.43 333    IAmb    IAmb     00 46 03.4
      comp=Z,121nm,0.8s
LONY  Lake Ozonia      27.55  11    P       P        00 45 20.4 +0.7
      baz=195,SNR=12
LONY                                S       S        00 50 04.2 +2.5
      baz=195
LONY  Lake Ozonia      27.55  11    P       P        00 45 20.0 +0.3
LONY                                IAMs_20 IAMs_20  00 55 33.0
      comp=Z,12µm,20.0s
PLVO  Plevna           27.57   7    IAmb    IAmb     00 45 21.9
      comp=Z,117nm,1.1s
121A  Cookes Peak, D   27.59 307    P       P        00 45 20.9 +0.5
      baz=116,SNR=53
121A                                S       S        00 50 05.7 +2.8
      baz=116
I62A  Tamworth         27.60  17    P       P        00 45 20.4 +0.3
I62A                                IAmb    IAmb     00 45 50.1
      comp=Z,122nm,1.2s
VT1   Waterbury        27.66  14    P       P        00 45 20.4 -0.3
VT1                                 IAMs_20 IAMs_20  00 57 16.7
      comp=Z,10µm,18.0s
Y22D  IRIS PASSCAL I   27.67 311    P       P        00 45 22.2 +1.2
      baz=120
Y22D  IRIS PASSCAL I   27.67 311    P       P        00 45 21.9 +0.9
T25A  Trinidad         27.69 319    P       P        00 45 22.1 +0.8
      baz=128,SNR=138
T25A                                S       S        00 50 07.6 +3.2
      baz=128
T25A  Trinidad         27.69 319    IAmb    IAmb     00 45 24.9
      comp=Z,237nm,1.1s
T25A                                IAMs_20 IAMs_20  00 57 43.0
      comp=Z,8µm,22.0s
LBNH  Lisbon           27.78  16    P       P        00 45 21.6 -0.1
LBNH                                pmax    pmax
      comp=Z,134nm,1.5s
LBNH                                MLR     MLR
      comp=Z,5µm,18.0s
LBNH  Lisbon           27.78  16    P       P        00 45 23.4 +1.6
      baz=201,SNR=8.2
LBNH                                S       S        00 50 08.2 +3.0
      baz=201
LBNH  Lisbon           27.78  16    P       P        00 45 21.6 -0.1
ANMO  Albuquerque      27.79 313    P       P        00 45 22.3 +0.1
      comp=Z,64nm,1.1s,baz=130,slow=11,SNR=86
ANMO                                LR      LR       00 59 07.3
      comp=Z,2µm,18.9s,baz=112,slow=42
ANMO  Albuquerque      27.79 313c iP        P        00 45 22.3 +0.1
ANMO                                pmax    pmax
      comp=Z,167nm,1.7s
ANMO                                MLR     MLR
      comp=Z,6µm,24.0s
ANMO  Albuquerque      27.79 313    P       P        00 45 22.4 +0.2
      baz=122
ANMO                                S       S        00 50 11.1 +5.1
      baz=122
ANMO  Albuquerque      27.79 313    P       P        00 45 22.2 +0.1
ANMO                                IAmb    IAmb     00 45 35.5
      comp=Z,125nm,1.2s
KSCO  Kaye Shedlock'   27.86 324    P       P        00 45 23.2 +0.5
      baz=134,SNR=23
KSCO                                S       S        00 50 11.9 +4.9
      baz=134
FRNY  Flat Rock        27.96  13    P       P        00 45 22.5 -0.8
I63A  Otisfield        27.97  18    P       P        00 45 23.6 +0.2
I63A                                IAmb    IAmb     00 45 55.4
      comp=Z,362nm,1.7s
319A  Douglas          28.27 304    IAmb    IAmb     00 46 18.1
      comp=Z,153nm,1.1s
H62A  Milan            28.29  16    P       P        00 45 26.6 +0.3
H62A                                IAmb    IAmb     00 45 58.4
      comp=Z,184nm,1.4s
PTGA  Pitinga          28.33 128    P       P        00 45 27.7 +0.8
      comp=Z,25nm,0.8s,baz=313,slow=10,SNR=43
PTGA                                LR      LR       00 57 48.9
      comp=Z,7µm,19.2s,baz=322,slow=39
PTGA  Pitinga          28.33 128    P       P        00 45 27.9 +0.9
PTGA                                IAmb    IAmb     00 45 29.8
      comp=Z,240nm,1.6s
PTGA                                IAMs_20 IAMs_20  00 57 37.7
      comp=Z,7µm,19.0s
F42A  Maple Grove Fa   28.46 351    IAmb    IAmb     00 46 04.7
      comp=Z,239nm,1.9s
MNTQ  Montreal, Queb   28.59  12    P       P        00 45 29.2 +0.4
E46A  Sault Ste Mari   28.66 357    IAmb    IAmb     00 45 56.1
      comp=Z,103nm,1.1s
K31A  O'Neill          28.69 334    IAmb    IAmb     00 45 34.4
      comp=Z,183nm,1.0s
MOQ   Mont Orford      28.71  14    P       P        00 45 30.4 +0.4
WVL   Waterville       28.71  18    P       P        00 45 30.5 +0.5
WVL                                 IAMs_20 IAMs_20  00 57 26.1
      comp=Z,9µm,19.0s
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SDCO  Great Sand Dun   28.75 319    P       P        00 45 31.8 +1.0
      baz=127,SNR=199
SDCO                                S       S        00 50 24.9 +3.6
      baz=127
SDCO  Great Sand Dun   28.75 319    P       P        00 45 31.0 +0.2
SDCO                                IAmb    IAmb     00 45 33.6
      comp=Z,289nm,1.4s
SDCO                                IAMs_20 IAMs_20  00 58 06.0
      comp=Z,9µm,22.0s
ECSD  EROS Data Cent   28.78 338    P       P        00 45 29.6 -1.0
      baz=150,SNR=34
ECSD                                S       S        00 50 16.9 -4.1
      baz=150
ECSD  EROS Data Cent   28.78 338    IAmb    IAmb     00 46 18.6
      comp=Z,213nm,1.5s
ECSD  EROS Data Cent   28.78 338    IAMs_20 IAMs_20  00 56 33.3
      comp=Z,8µm,20.0s
HSIG                   28.85 298    IAmb    IAmb     00 45 32.8
      comp=Z,139nm,1.0s
OGNE  Ogallala         28.92 327    P       P        00 45 32.1 +0.1
      baz=137
OGNE  Ogallala         28.92 327    P       P        00 45 32.2 +0.1
SPMN  Marine on St.    28.92 344    P       P        00 45 30.9 -1.0
      baz=158,SNR=14
COWI  Conover          28.96 350    IAMs_20 IAMs_20  00 57 32.3
      comp=Z,12µm,18.0s
G62A  West of Eustis   29.06  17    P       P        00 45 32.9 -0.2
TRQ   Mont Tremblant   29.11  11    P       P        00 45 33.4 -0.2
Q24A  Divide           29.29 321    P       P        00 45 36.2 +0.5
      baz=130,SNR=16
Q24A                                S       S        00 50 32.5 +2.6
      baz=130
PKME  Peaks-Kenny Pk   29.45  18    P       P        00 45 38.1 +1.5
      baz=205,SNR=7.5
PKME                                S       S        00 50 34.2 +2.6
      baz=205
PKME  Peaks-Kenny Pk   29.45  18    P       P        00 45 37.0 +0.4
PKME                                IAMs_20 IAMs_20  00 57 22.8
      comp=Z,9µm,19.0s
MACA  Manacapuru-AM    29.47 133   eP       P        00 45 38.7 +1.7
MACA  Manacapuru-AM    29.47 133    P       P        00 45 37.4 +0.4
MACA                                IAmb    IAmb     00 45 39.6
      comp=Z,285nm,1.4s
SRIG  Santa Rosalia    29.53 294    P       P        00 45 37.3 -0.2
EMMW  East Machias     29.55  21    IAMs_20 IAMs_20  00 57 35.3
      comp=Z,7µm,18.0s
S22A  4UR Ranch, Cre   29.59 317    P       P        00 45 39.5 +1.1
      baz=125,SNR=92
S22A                                S       S        00 50 43.7 +9.1
      baz=125
F36A  Milaca           29.70 344    IAmb    IAmb     00 45 41.6
      comp=Z,89nm,0.8s
D41A  Chassel          29.80 351    P       P        00 45 39.1 -0.6
TUC   Tucson           29.81 305    P       P        00 45 40.2 +0.1
TUC                                 pmax    pmax
      comp=Z,109nm,1.3s
TUC                                 MLR     MLR
      comp=Z,2µm,20.0s
TUC   Tucson           29.81 305    P       P        00 45 40.1 +0.1
      baz=112
TUC                                 S       S        00 50 42.7 +5.1
      baz=112
TUC   Tucson           29.81 305    P       P        00 45 40.2 +0.1
TUC                                 IAmb    IAmb     00 46 45.5
      comp=Z,109nm,1.3s
F62A  Pittston Farm,   29.84  17    P       P        00 45 40.8 +0.8
F63A  Nahmakanta, Br   29.91  18    P       P        00 45 40.9 +0.2
NNA   Nana             29.91 170    P       P        00 45 41.0 +0.1
      comp=Z,7.2nm,0.7s,baz=317,slow=8.2,SNR=4.1
NNA                                 LR      LR       01 00 11.4
      comp=Z,4µm,19.2s,baz=351,slow=41
NNA   Nana             29.91 170    P       P        00 45 42.1 +1.2
NNA                                 pmax    pmax
      comp=Z,66nm,1.4s
NNA                                 MLR     MLR
      comp=Z,4µm,18.0s
NNA   Nana             29.91 170    P       P        00 45 42.1 +1.2
E38A  The Farm, Brul   29.92 347    IAmb    IAmb     00 45 44.2
      comp=Z,112nm,0.9s
G65A  Princeton        29.95  21    P       P        00 45 41.3 +0.4
X18A  Snowflake        30.09 309    P       P        00 45 43.1 +0.4
X18A                                IAmb    IAmb     00 45 45.0
      comp=Z,157nm,1.2s
ISCO  Idaho Springs    30.11 322    P       P        00 45 43.5 +0.7
      baz=130,SNR=80
ISCO                                S       S        00 50 43.3 +0.7
      baz=130
ISCO  Idaho Springs    30.11 322    IAmb    IAmb     00 45 45.4
      comp=Z,211nm,1.4s
GGN   Saint George     30.12  22    P       P        00 45 43.3 +0.8
GGN                                 IAmb    IAmb     00 46 22.7
      comp=Z,283nm,2.0s
W18A  Petrified Fore   30.21 311    P       P        00 45 44.3 +0.6
      baz=118,SNR=21
W18A  Petrified Fore   30.21 311    IAmb    IAmb     00 45 45.8
      comp=Z,107nm,1.1s
SUSD  Miller           30.27 335    P       P        00 45 42.6 -1.3
      baz=146
SUSD  Miller           30.27 335    IAmb    IAmb     00 46 39.4
      comp=Z,198nm,1.4s
F64A  Sherman          30.28  19    P       P        00 45 43.9 -0.1
F64A                                IAmb    IAmb     00 46 39.3
      comp=Z,124nm,1.6s
MVCO  Mesa Verde       30.39 315    P       P        00 45 45.5 +0.1
      baz=122,SNR=41
MVCO                                S       S        00 50 55.2 +8.2
      baz=122
MVCO  Mesa Verde       30.39 315    IAmb    IAmb     00 46 14.9
      comp=Z,223nm,1.6s
SMCO  Snowmass         30.54 320    IAmb    IAmb     00 45 57.0
      comp=Z,201nm,1.7s
VLDQ  Val d'Or         30.56   6    IAmb    IAmb     00 45 48.5
      comp=Z,111nm,0.8s
E62A  Clayton Lake     30.62  17    P       P        00 45 47.6 +0.7
N23A  Red Feather La   31.01 323    P       P        00 45 51.6 +0.8
      baz=131,SNR=19
N23A                                S       S        00 50 58.0 +1.3
      baz=131
PQI   Presque Isle     31.11  19    P       P        00 45 51.3 +0.1
PQI                                 IAmb    IAmb     00 45 53.9
      comp=Z,110nm,1.3s
PQI                                 IAMs_20 IAMs_20  00 57 17.6
      comp=Z,7µm,19.0s
X16A  Lo Mia Camp, P   31.16 308    IAmb    IAmb     00 46 54.9
      comp=Z,236nm,1.9s
D62A  Allapoint, All   31.18  17    P       P        00 45 52.4 +0.5
EYMN  Ely              31.18 348    P       P        00 45 50.6 -1.2
      baz=162,SNR=8.8
EYMN  Ely              31.18 348    IAMs_20 IAMs_20  00 57 26.2
      comp=Z,11µm,20.0s
LMQ   La Malbaie       31.27  15    P       P        00 45 52.8 +0.1
LMQ                                 IAmb    IAmb     00 45 55.0
      comp=Z,110nm,1.0s
214A  Organ Pipe Nat   31.29 303    P       P        00 45 53.2 +0.1
      baz=109,SNR=16
214A                                S       S        00 51 05.5 +4.6
      baz=109
214A  Organ Pipe Nat   31.29 303    IAmb    IAmb     00 46 48.9
      comp=Z,128nm,1.4s
ETMB  Extrema          31.43 149   eP       P        00 45 53.2 -1.2
LMN   Caledonia Moun   31.49  23    P       P        00 45 53.9 -0.8
LMN                                 IAmb    IAmb     00 46 43.8
      comp=Z,175nm,1.7s
WUAZ  Wupatki          31.58 310    P       P        00 45 56.7 +1.0
      baz=116,SNR=118
WUAZ                                S       S        00 51 10.9 +5.4
      baz=116
D32A  Dogwood Acres,   31.89 340    P       P        00 45 56.6 -1.5
D32A                                IAmb    IAmb     00 46 14.2
      comp=Z,82nm,1.1s
O20A  White River Ci   31.89 320    P       P        00 45 59.7 +1.2
      baz=127,SNR=57
O20A                                S       S        00 51 11.7 +1.4
      baz=127
Y14A  Wickenburg       32.15 306    IAmb    IAmb     00 46 02.5
      comp=Z,99nm,1.4s
RWWY  Rawlins          32.25 323    P       P        00 46 01.4 -0.3
RSSD  Black Hills      32.26 329    P       P        00 46 01.6 -0.1
RSSD                                pmax    pmax
      comp=Z,190nm,1.6s
RSSD                                MLR     MLR
      comp=Z,4µm,19.0s
RSSD  Black Hills      32.26 329    P       P        00 46 01.8 +0.1
      baz=138
RSSD                                S       S        00 51 14.9 -1.2
      baz=138
RSSD  Black Hills      32.26 329    P       P        00 46 01.6 -0.1
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RSSD				IAmb	IAmb	00 46 03.4	
	comp=Z,190nm,1.6s						
BATG	**Bathurst New B**	**32.27**	**20**	P	**P**	**00 46 00.4**	**-1.0**
BATG				IAmb	IAmb	00 46 19.9	
	comp=Z,111nm,1.4s						
SAML	**Samuel**	**32.30**	**144**	P	**P**	**00 46 01.5**	**-0.5**
SAML	**Samuel**	**32.30**	**144**	P	**P**	**00 46 01.5**	**-0.5**
113A	**Mohawk Valley,**	**32.33**	**304**	P	**P**	**00 46 01.8**	**-0.4**
K22A	**Casper**	**32.50**	**325**	P	**P**	**00 46 03.9**	**+0.2**
	baz=132,SNR=12						
K22A				S	**S**	**00 51 21.8**	**+2.1**
	baz=132						
AGMN	**Agassiz Nation**	**32.58**	**343**	P	**P**	**00 46 03.0**	**-1.2**
	baz=155,SNR=21						
AGMN	**Agassiz Nation**	**32.58**	**343**	IAMs_20	IAMs_20	00 58 50.6	
	comp=Z,5µm,20.0s						
U15A	**North Rim**	**32.65**	**311**	IAmb	IAmb	00 46 07.9	
	comp=Z,95nm,1.2s						
SFX	**San Felipe**	**32.67**	**300**	P	**P**	**00 46 04.4**	**-0.7**
P18A	**Preston Nutter**	**32.86**	**318**	IAmb	IAmb	00 46 09.5	
	comp=Z,142nm,1.2s						
Q16A	**Castle Valley**	**33.09**	**316**	IAmb	IAmb	00 46 11.0	
	comp=Z,68nm,1.0s						
P17A	**Butcher Ranch,**	**33.10**	**317**	IAmb	IAmb	00 46 11.3	
	comp=Z,152nm,1.1s						
PKCU	**Pink Cliffs**	**33.13**	**313**	IAmb	IAmb	00 46 12.0	
	comp=Z,143nm,1.0s						
PDMCI	**Parker Dam,Lak**	**33.16**	**306**	P	**P**	**00 46 09.7**	**+0.3**
	baz=112,SNR=28						
GLA	**Glamis**	**33.26**	**304**	P	**P**	**00 46 11.1**	**+0.7**
	baz=109,SNR=20						
GLA	**Glamis**	**33.26**	**304**	IAmb	IAmb	00 46 12.3	
	comp=Z,88nm,0.9s						
W13A	**Hualapai Mount**	**33.27**	**308**	IAmb	IAmb	00 46 13.1	
	comp=Z,227nm,1.9s						
TMUT	**Trail Mountain**	**33.31**	**316**	IAmb	IAmb	00 46 13.2	
	comp=Z,128nm,1.5s						
MTPU	**Mount Pierson**	**33.33**	**314**	IAmb	IAmb	00 46 13.7	
	comp=Z,124nm,1.2s						
MDND	**Maddock**	**33.38**	**338**	P	**P**	**00 46 10.4**	**-0.8**
	baz=148						
MALB	**Monte Alegre**	**33.47**	**123**	*e*P	**P**	**00 46 12.6**	**+0.4**
LCMT	**Little Creek M**	**33.60**	**311**	IAmb	IAmb	00 46 15.9	
	comp=Z,131nm,1.2s						
NEE2	**Needles Airpor**	**33.70**	**307**	P	**P**	**00 46 14.5**	**+0.4**
	baz=112						
NEE2				S	**S**	**00 51 45.8**	**+7.5**
	baz=112						
IRM	**Iron Mountain**	**33.89**	**305**	P	**P**	**00 46 16.4**	**+0.5**
	baz=110,SNR=10						
IRM				S	**S**	**00 51 49.5**	**+8.3**
	baz=110						
ITTB	**Itaituba**	**33.89**	**128**	*e*P	**P**	**00 46 15.9**	**-0.1**
BC3	**Big Chuckawall**	**33.96**	**304**	P	**P**	**00 46 16.9**	**+0.4**
	baz=109,SNR=9.1						
BC3				S	**S**	**00 51 47.3**	**+4.9**
	baz=109						
MPU	**Maple Canyon**	**33.97**	**317**	IAmb	IAmb	00 46 18.7	
	comp=Z,158nm,1.4s						
SWSC	**Sam W. Stewart**	**34.00**	**303**	P	**P**	**00 46 17.8**	**+1.0**
	baz=108						
IKP	**In-Ko-Pah, Jac**	**34.16**	**302**	P	**P**	**00 46 19.4**	**+1.1**
	baz=107,SNR=7.9						
JLU	**Jordanelle**	**34.17**	**318**	IAmb	IAmb	00 46 20.6	
	comp=Z,102nm,1.4s						
NLU	**North Lily Min**	**34.23**	**317**	IAmb	IAmb	00 46 21.1	
	comp=Z,107nm,1.3s						
BW06	**Boulder Array**	**34.28**	**323**	P	**P**	**00 46 19.5**	**+0.1**
	baz=128,SNR=133						
BW06				S	**S**	**00 51 47.4**	**-0.1**
	baz=128						
BW06	**Boulder Array**	**34.28**	**323**	IAmb	IAmb	00 46 21.1	
	comp=Z,177nm,1.2s						
PD31	**Pinedale Array**	**34.28**	**323**	IAmb	IAmb	00 46 21.1	
	comp=Z,160nm,1.2s						
PDAR	**Pinedale Array**	**34.28**	**323**	P	**P**	**00 46 19.2**	**-0.1**
	comp=Z,40nm,0.9s,baz=128,slow=9.6,SNR=163						
PDAR				LR	LR	01 02 12.8	
	comp=Z,3µm,20.6s,baz=126,slow=40						
ULM	**Lac du Bonnet**	**34.36**	**344**	P	**P**	**00 46 18.0**	**-1.6**
	comp=Z,56nm,1.2s,baz=163,slow=9.0,SNR=17						
ULM				LR	LR	00 59 33.5	
	comp=Z,5µm,19.6s,baz=160,slow=35						
ULM	**Lac du Bonnet**	**34.36**	**344**	P	**P**	**00 46 18.0**	**-1.6**
ULM	**Lac du Bonnet**	**34.36**	**344**	IAmb	IAmb	00 46 22.0	
	comp=Z,148nm,1.4s						
CCX	**Cicese**	**34.39**	**301**	IAmb	IAmb	00 46 22.2	
	comp=Z,111nm,1.2s						
CTU	**Camp Tracy**	**34.41**	**318**	IAmb	IAmb	00 46 22.5	
	comp=Z,80nm,1.1s						
MCPB	**Macapa, AP**	**34.44**	**118**	*e*P	**P**	**00 46 20.5**	**-0.2**
MONP2	**Monument Peak**	**34.48**	**303**	P	**P**	**00 46 21.7**	**+0.5**
	baz=107,SNR=5.1						
MONP2				S	**S**	**00 51 52.8**	**+2.0**
	baz=107						
BELC	**Belle Mtn. Jos**	**34.50**	**305**	P	**P**	**00 46 21.8**	**+0.6**
	baz=109,SNR=13						
GMRC	**Granite Mounta**	**34.51**	**306**	P	**P**	**00 46 21.8**	**+0.5**
	baz=111,SNR=26						
GMRC				S	**S**	**00 51 56.2**	**+5.2**
	baz=111						
PSUT	**Pine Spring**	**34.72**	**313**	IAmb	IAmb	00 46 25.7	
	comp=Z,141nm,1.1s						
TPFO	**Pinon Flats**	**34.73**	**304**	P	**P**	**00 46 23.8**	**+0.5**
	baz=108,SNR=9.3						
PFO	**Pinyon Flats O**	**34.73**	**304**	P	**P**	**00 46 23.7**	**+0.4**
PFO				pmax	pmax		
	comp=Z,128nm,1.6s						
PFO				MLR	MLR		
	comp=Z,3µm,19.0s						
PFO	**Pinyon Flats O**	**34.73**	**304**	P	**P**	**00 46 23.7**	**+0.4**
	baz=108,SNR=6.0						
PFO	**Pinyon Flats O**	**34.73**	**304**	P	**P**	**00 46 23.7**	**+0.4**
PFO				IAmb	IAmb	00 46 24.5	
	comp=Z,128nm,1.6s						
SHPR	**Sheep Range**	**34.78**	**309**	IAmb	IAmb	00 46 26.2	
	comp=Z,166nm,1.3s						
HWUT	**Hardware Ranch**	**34.80**	**319**	IAmb	IAmb	00 46 32.0	
	comp=Z,212nm,1.6s						
DUG	**Dugway, Tooele**	**34.83**	**316**	P	**P**	**00 46 24.8**	**+0.7**
	baz=121,SNR=74						
DUG				S	**S**	**00 52 03.6**	**+7.8**
	baz=121						
DUG	**Dugway, Tooele**	**34.83**	**316**	IAmb	IAmb	00 46 26.5	
	comp=Z,129nm,1.1s						
TUQ	**Turquoise Moun**	**34.94**	**307**	P	**P**	**00 46 25.5**	**+0.4**
	baz=111						
109C	**Camp Elliot, M**	**35.03**	**302**	P	**P**	**00 46 25.8**	**+0.1**
	baz=107,SNR=7.8						
109C				S	**S**	**00 52 03.0**	**+4.2**
	baz=107						
109C	**Camp Elliot, M**	**35.03**	**302**	IAmb	IAmb	00 46 27.4	
	comp=Z,158nm,1.4s						
HEC	**Hector,Ludlow**	**35.04**	**306**	P	**P**	**00 46 26.8**	**+1.0**
	baz=110,SNR=16						
PRN	**Pahroc Range**	**35.07**	**311**	IAmb	IAmb	00 46 28.8	
	comp=Z,116nm,1.3s						
LAO	**LASA Array**	**35.20**	**331**	P	**P**	**00 46 25.9**	**-1.1**
	baz=137,SNR=18						
LAO	**LASA Array**	**35.20**	**331**	IAmb	IAmb	00 46 27.6	
	comp=Z,145nm,1.6s						
SPR3	**Spring Creek 3**	**35.27**	**314**	IAmb	IAmb	00 46 30.3	
	comp=Z,146nm,1.1s						
BBRC	**Big Bear Solar**	**35.31**	**305**	P	**P**	**00 46 29.3**	**+0.9**
	baz=109						
MURC	**Murrieta**	**35.31**	**304**	P	**P**	**00 46 28.6**	**+0.4**
	baz=108,SNR=18						
MURC				S	**S**	**00 52 11.5**	**+8.3**
	baz=108						
SHOC	**Shoshone, Teco**	**35.38**	**308**	P	**P**	**00 46 29.3**	**+0.6**
	baz=112						
TPAW	**Teton Pass**	**35.53**	**323**	IAmb	IAmb	00 46 40.4	
	comp=Z,156nm,1.3s						
GSC	**Goldstone, Bar**	**35.57**	**306**	P	**P**	**00 46 31.5**	**+1.1**
	baz=110,SNR=16						
GSC	**Goldstone, Bar**	**35.57**	**306**	IAmb	IAmb	00 46 32.7	
	comp=Z,260nm,1.9s						
RRX	**Edison Barstow**	**35.57**	**306**	P	**P**	**00 46 32.0**	**+1.6**
	baz=110						
MOOW	**Moose Ponds**	**35.57**	**323**	IAmb	IAmb	00 46 32.5	
	comp=Z,264nm,1.5s						
RLMT	**Red Lodge**	**35.63**	**326**	P	**P**	**00 46 30.9**	**0.0**
	baz=131,SNR=16						
RLMT				S	**S**	**00 52 07.2**	**-0.9**
	baz=131						
RLMT	**Red Lodge**	**35.63**	**326**	P	**P**	**00 46 30.5**	**-0.4**
DGMT	**Dagmar**	**35.66**	**334**	P	**P**	**00 46 30.1**	**-0.8**
	baz=142,SNR=20						
DGMT	**Dagmar**	**35.66**	**334**	IAmb	IAmb	00 46 47.3	
	comp=Z,88nm,1.0s						
DGMT	**Dagmar**	**35.66**	**334**	IAMs_20	IAMs_20	01 00 51.6	
	comp=Z,5µm,21.0s						
FXWY	**Fox Creek**	**35.66**	**323**	IAmb	IAmb	00 46 37.3	
	comp=Z,227nm,1.6s						
FLWY	**Flagg Ranch**	**35.75**	**324**	IAmb	IAmb	00 46 34.3	
	comp=Z,289nm,1.6s						
QSM	**Queen of Sheba**	**35.85**	**308**	P	**P**	**00 46 32.5**	**-0.3**
QSM				IAmb	IAmb	00 46 34.9	
	comp=Z,156nm,1.6s						
R11A	**Troy Canyon, C**	**35.85**	**312**	P	**P**	**00 46 33.8**	**+0.9**
	baz=115,SNR=22						
R11A				S	**S**	**00 52 19.4**	**+7.7**
	baz=115						
YMP	**Mirror Lake Pl**	**35.86**	**325**	IAmb	IAmb	00 47 01.4	
	comp=Z,137nm,1.2s						
H17A	**Grant Village**	**35.88**	**324**	P	**P**	**00 46 34.2**	**+1.1**
	baz=129,SNR=32						
H17A				S	**S**	**00 52 19.5**	**+7.5**
	baz=129						
H17A	**Grant Village**	**35.88**	**324**	IAmb	IAmb	00 46 45.2	
	comp=Z,273nm,1.8s						
LKWY	**Lake**	**35.88**	**324**	IAmb	IAmb	00 46 44.7	
	comp=Z,148nm,1.4s						
LKWY				IAMs_20	IAMs_20	01 02 33.4	
	comp=Z,5µm,21.0s						
NPGB	**Novo Progresso**	**35.96**	**131**	*e*P	**P**	**00 46 33.3**	**-0.5**
FURC	**Furnace Creek,**	**36.03**	**308**	P	**P**	**00 46 35.5**	**+1.3**
	baz=112						
YUF	**Upper Falls**	**36.04**	**325**	P	**P**	**00 46 35.3**	**+0.8**
YUF				IAmb	IAmb	00 46 45.5	
	comp=Z,236nm,1.9s						
MWC	**Mount Wilson**	**36.19**	**304**	P	**P**	**00 46 36.5**	**+0.7**
MWC				pmax	pmax		
	comp=Z,161nm,2.0s						
MWC	**Mount Wilson**	**36.19**	**304**	P	**P**	**00 46 36.5**	**+0.7**
MWC				IAmb	IAmb	00 46 39.3	
	comp=Z,161nm,1.9s						
CIS	**Catalina Islan**	**36.23**	**303**	P	**P**	**00 46 36.3**	**+0.2**
	baz=106,SNR=6.3						
YMR	**Madison River**	**36.26**	**324**	IAmb	IAmb	00 46 42.9	
	comp=Z,345nm,1.9s						
PASC	**Pasadena Art C**	**36.27**	**304**	P	**P**	**00 46 36.6**	**+0.2**
LRMC	**Laurel Mtn Rad**	**36.30**	**306**	P	**P**	**00 46 37.2**	**+0.4**
	baz=110,SNR=16						
EDW2	**Edwards Air Fo**	**36.34**	**305**	P	**P**	**00 46 37.4**	**+0.3**
	baz=108,SNR=23						
LPAZ	**La Paz**	**36.40**	**157**	P	**P**	**00 46 37.7**	**-0.4**
	comp=Z,2.5nm,0.8s,baz=338,slow=10,SNR=13						
LPAZ				LR	LR	01 04 02.6	
	comp=Z,3µm,18.9s,baz=318,slow=40						
LPAZ	**La Paz**	**36.40**	**157**	*e*P	**P**	**00 46 37.6**	**-0.6**
LPAZ	**La Paz**	**36.40**	**157**	*e*P	**P**	**00 46 35.5**	**-2.7**
DECC	**Green Verdugo**	**36.42**	**304**	P	**P**	**00 46 38.0**	**+0.3**
	baz=107						
OSI	**Osito Audit: C**	**36.83**	**305**	P	**P**	**00 46 41.1**	**0.0**
	baz=108,SNR=11						
OSI	**Osito Audit: C**	**36.83**	**305**	IAmb	IAmb	00 46 42.7	
	comp=Z,142nm,1.1s						
CWC	**Cottonwood Cre**	**36.94**	**308**	P	**P**	**00 46 42.8**	**+0.6**
	baz=110						
ISA	**Isabella, Lake**	**36.97**	**306**	P	**P**	**00 46 43.1**	**+0.7**
	baz=109,SNR=20						
ARVC	**Arvin**	**37.07**	**305**	P	**P**	**00 46 44.2**	**+1.0**
	baz=108,SNR=20						
SNCC	**San Nicolas Is**	**37.08**	**302**	P	**P**	**00 46 44.2**	**+0.9**
	baz=105						
SNCC	**San Nicolas Is**	**37.08**	**302**	P	**P**	**00 46 43.5**	**+0.2**
DRLN	**Deer Lake**	**37.17**	**27**	P	**P**	**00 46 43.9**	**+0.1**
DRLN				IAmb	IAmb	00 47 09.5	
	comp=Z,222nm,1.6s						
BOZ	**Bozeman (W)**	**37.21**	**325**	P	**P**	**00 46 44.8**	**+0.4**
	baz=128,SNR=89						
BOZ				S	**S**	**00 52 34.6**	**+2.4**
	baz=128						
BOZ	**Bozeman (W)**	**37.21**	**325**	IAmb	IAmb	00 46 47.5	
	comp=Z,142nm,1.3s						
VILB	**Vilhena**	**37.24**	**143**	*e*P	**P**	**00 46 44.5**	**-0.3**
VILB	**Vilhena**	**37.24**	**143**	IAmb	IAmb	00 46 46.2	
	comp=Z,118nm,1.2s						
TIN	**Tinemaha, Big**	**37.27**	**309**	P	**P**	**00 46 46.0**	**+1.1**
	baz=111,SNR=20						
SCZ2	**Santa Cruz Isl**	**37.37**	**303**	P	**P**	**00 46 46.8**	**+1.0**
	baz=106						
VES	**Vestal, Richgr**	**37.50**	**306**	P	**P**	**00 46 47.7**	**+1.0**
	baz=109,SNR=56						
SBC	**Santa Barbara**	**37.56**	**304**	P	**P**	**00 46 47.8**	**+0.5**
	baz=106						
DLMT	**Dillon**	**37.60**	**324**	IAmb	IAmb	00 46 50.3	
	comp=Z,336nm,1.7s						
HLID	**Hailey**	**37.63**	**320**	P	**P**	**00 46 48.8**	**+0.7**
	baz=123,SNR=106						
HLID				S	**S**	**00 52 41.8**	**+3.1**
	baz=123						
HLID	**Hailey**	**37.63**	**320**	IAmb	IAmb	00 46 50.4	
	comp=Z,144nm,1.3s						
PKM	**Mcpherson Peak**	**37.77**	**304**	P	**P**	**00 46 49.5**	**+0.2**
	baz=107,SNR=6.8						
PB16	**IPOC Station P**	**37.83**	**161**	P	**P**	**00 46 50.2**	**0.0**
PB16				IAMs_20	IAMs_20	01 04 23.9	
	comp=Z,5µm,19.0s						
EGMT	**Eagleton**	**37.83**	**329**	P	**P**	**00 46 49.4**	**-0.2**
	baz=133,SNR=37						
EGMT	**Eagleton**	**37.83**	**329**	IAmb	IAmb	00 46 50.9	
	comp=Z,102nm,0.9s						
NVAR	**Mina Array Bea**	**37.84**	**311**	P	**P**	**00 46 49.6**	**-0.2**
	comp=Z,52nm,1.1s,baz=114,slow=8.2,SNR=102						
NVAR				LR	LR	01 06 32.7	
	comp=Z,3µm,18.1s,baz=118,slow=43						
PB12	**IPOC Station P**	**37.84**	**162**	P	**P**	**00 46 51.6**	**+1.8**
BMN	**Battle Mountai**	**37.90**	**314**	IAmb	IAmb	00 46 52.5	
	comp=Z,206nm,1.6s						
LHV	**Little Huntoon**	**37.91**	**310**	P	**P**	**00 46 51.2**	**+1.0**
LHV				IAmb	IAmb	00 46 53.1	
	comp=Z,134nm,1.2s						
MLAC	**Mammoth, Mammo**	**37.92**	**309**	P	**P**	**00 46 51.6**	**+1.0**
	baz=111						
SMMC	**Simmler**	**38.04**	**305**	P	**P**	**00 46 52.2**	**+0.8**
	baz=107,SNR=6.4						
MDPB	**Devils Postpil**	**38.11**	**309**	P	**P**	**00 46 52.4**	**+0.2**
PDRB	**Porto dos Gac**	**38.30**	**138**	*e*P	**P**	**00 46 53.1**	**-0.6**
PAGB	**Antelope Grade**	**38.36**	**306**	IAmb	IAmb	00 46 55.9	
	comp=Z,147nm,1.2s						
CLDB	**Colider**	**38.36**	**136**	*e*P	**P**	**00 46 53.9**	**-0.4**
MFID	**Camas Ranch**	**38.43**	**319**	IAmb	IAmb	00 46 56.7	
	comp=Z,202nm,1.4s						
SCHQ	**Schefferville**	**38.85**	**14**	P	**P**	**00 46 58.1**	**+0.2**
	comp=Z,130nm,0.9s,baz=205,slow=6.4,SNR=75						
SCHQ				LR	LR	01 03 17.8	
	comp=Z,5µm,19.0s,baz=206,slow=37						
SCHQ	**Schefferville**	**38.85**	**14**	IAmb	IAmb	00 46 59.7	
	comp=Z,147nm,0.9s						
TMAB	**Tom-Au,PA,Br**	**38.85**	**118**	*e*P	**P**	**00 46 59.0**	**+0.7**
PMPB	**Monarch Peak**	**38.94**	**306**	P	**P**	**00 46 58.8**	**-0.2**
PB11	**IPOC Station P**	**39.12**	**161**	P	**P**	**00 47 02.2**	**+1.6**
PB11				IAmb	IAmb	00 47 16.1	
	comp=Z,174nm,0.8s						
MSO	**Missoula**	**39.23**	**325**	P	**P**	**00 47 01.4**	**0.0**
	baz=127,SNR=17						
MSO				S	**S**	**00 53 03.3**	**+0.6**
	baz=127						
EMB	**Emerald Bay**	**39.34**	**311**	P	**P**	**00 47 03.1**	**+0.5**
MPK	**Martis Peak**	**39.41**	**311**	P	**P**	**00 47 03.8**	**+0.6**
MPK				IAmb	IAmb	00 47 05.8	
	comp=Z,160nm,1.1s						
RUBR	**Rubicon Trail**	**39.41**	**311**	P	**P**	**00 47 04.0**	**+0.9**
PLID	**Pearl Lake**	**39.42**	**321**	IAmb	IAmb	00 47 04.6	
	comp=Z,197nm,1.4s						
PRPB	**Parauapebas**	**39.59**	**124**	*e*P	**P**	**00 47 05.3**	**+0.7**
SAO	**San Andreas Ge**	**39.60**	**307**	P	**P**	**00 47 04.6**	**+0.2**
SAO				pmax	pmax		
	comp=Z,130nm,1.4s						
SAO				MLR	MLR		
	comp=Z,3µm,20.0s						
SAO	**San Andreas Ge**	**39.60**	**307**	P	**P**	**00 47 04.6**	**+0.2**
PB08	**IPOC Station P**	**39.63**	**161**	P	**P**	**00 47 06.8**	**+1.6**
PB08				IAMs_20	IAMs_20	01 03 20.8	
	comp=Z,4µm,20.0s						
TA01	**Diego Aracena**	**39.73**	**163**	P	**P**	**00 47 06.3**	**+0.8**
TA01				IAmb	IAmb	00 47 20.0	
	comp=Z,298nm,1.9s						
WVOR	**Wild Horse Val**	**39.75**	**316**	IAMs_20	IAMs_20	01 05 36.5	
	comp=Z,4µm,19.0s						
PTLB	**Pontes e Lacer**	**39.86**	**144**	*e*P	**P**	**00 47 05.1**	**-1.6**
PATCX	**Punta Patache**	**39.98**	**163**	P	**P**	**00 47 09.3**	**+1.7**
FFC	**Flin Flon**	**40.05**	**342**	P	**P**	**00 47 07.2**	**-0.7**
FFC				pmax	pmax		
	comp=Z,29nm,1.3s						
FFC				MLR	MLR		
	comp=Z,4µm,19.0s						
FFC	**Flin Flon**	**40.05**	**342**	P	**P**	**00 47 07.2**	**-0.7**
FFC	**Flin Flon**	**40.05**	**342**	IAMs_20	IAMs_20	01 04 04.2	
	comp=Z,4µm,19.0s						
PB01	**IPOC Station P**	**40.38**	**162**	P	**P**	**00 47 12.3**	**+1.2**
ORV	**Oroville**	**40.57**	**311**	IAmb	IAmb	00 47 14.7	
	comp=Z,181nm,1.6s						
F10A	**Beach Ranch, E**	**40.62**	**322**	IAmb	IAmb	00 47 14.2	
	comp=Z,118nm,0.9s						
MOD	**Modoc Plateau**	**40.64**	**315**	IAmb	IAmb	00 47 14.3	
	comp=Z,191nm,1.4s						
O03E	**Paynes Creek**	**41.05**	**312**	P	**P**	**00 47 16.1**	**-0.4**
	baz=111,SNR=12						
PB09	**IPOC Station P**	**41.16**	**162**	IAmb	IAmb	00 47 32.5	
	comp=Z,116nm,1.1s						
E09A	**Wood Farm, Sta**	**41.45**	**322**	IAmb	IAmb	00 47 21.0	
	comp=Z,319nm,1.5s						
WDC	**Whiskeytown Da**	**41.68**	**312**	P	**P**	**00 47 20.2**	**-1.4**
WDC				pmax	pmax		
	comp=Z,56nm,1.7s						
WDC				MLR	MLR		
	comp=Z,2µm,22.0s						
WDC	**Whiskeytown Da**	**41.68**	**312**	P	**P**	**00 47 20.2**	**-1.4**
NEW	**Newport**	**41.82**	**325**	P	**P**	**00 47 22.3**	**-0.4**
NEW				pmax	pmax		
	comp=Z,327nm,1.8s						
NEW				MLR	MLR		
	comp=Z,4µm,18.0s						
NEW	**Newport**	**41.82**	**325**	P	**P**	**00 47 22.4**	**-0.3**
	baz=124,SNR=47						
NEW				S	**S**	**00 53 40.2**	**-0.9**
	baz=124						
NEW	**Newport**	**41.82**	**325**	P	**P**	**00 47 22.3**	**-0.3**
NEW				IAmb	IAmb	00 47 24.1	
	comp=Z,327nm,1.8s						
NEW	**Newport**	**41.82**	**325**	IAMs_20	IAMs_20	01 07 45.5	
	comp=Z,4µm,18.0s						
J05D	**Fort Rock, OR**	**41.84**	**316**	P	**P**	**00 47 22.3**	**-0.7**
	baz=115,SNR=18						
K04D	**Chiloquin, OR**	**41.91**	**315**	P	**P**	**00 47 23.3**	**-0.4**
	baz=114						
PB06	**IPOC Station P**	**41.93**	**163**	IAMs_20	IAMs_20	01 06 35.7	
	comp=Z,3µm,20.0s						
N02D	**Trinity Center**	**41.94**	**312**	P	**P**	**00 47 21.3**	**-2.4**
	baz=111						
E08A	**Dider Farm, El**	**41.98**	**321**	IAmb	IAmb	00 47 25.1	
	comp=Z,320nm,1.9s						
FCC	**Fort Churchill**	**41.98**	**351**	P	**P**	**00 47 23.4**	**-0.3**
FCC				pmax	pmax		
	comp=Z,77nm,1.2s						
FCC	**Fort Churchill**	**41.98**	**351**	P	**P**	**00 47 23.4**	**-0.3**
LVC	**Limon Verde**	**42.03**	**162**	P	**P**	**00 47 23.8**	**-1.2**
LVC				pmax	pmax		
	comp=Z,73nm,1.1s						
LVC	**Limon Verde**	**42.03**	**162**	*e*P	**P**	**00 47 26.2**	**+1.3**
LVC	**Limon Verde**	**42.03**	**162**	P	**P**	**00 47 23.8**	**-1.2**
KCPM	**Cahto Peak**	**42.12**	**310**	P	**P**	**00 47 26.0**	**+0.7**
KCPM				IAmb	IAmb	00 47 35.2	
	comp=Z,356nm,1.8s						
D08A	**Wollman Farm,**	**42.19**	**322**	P	**P**	**00 47 25.7**	**+0.1**
D08A				IAmb	IAmb	00 47 27.4	
	comp=Z,237nm,1.5s						
F07A	**Phinny Hill Vi**	**42.20**	**320**	IAmb	IAmb	00 47 27.3	
	comp=Z,91nm,0.9s						
C09A	**Chrisman Ranch**	**42.21**	**324**	IAmb	IAmb	00 47 27.6	
	comp=Z,199nm,1.2s						
HAWA	**Hanford**	**42.21**	**321**	P	**P**	**00 47 25.6**	**-0.2**
SALV	**Santo Antonio**	**42.22**	**141**	*e*P	**P**	**00 47 25.8**	**-0.4**
SNDB	**Serra Nova Dou**	**42.24**	**132**	*e*P	**P**	**00 47 26.9**	**+0.6**
KMRM	**Mail Ridge**	**42.39**	**311**	IAmb	IAmb	00 47 29.3	
	comp=Z,152nm,1.4s						
J04D	**Umpqua Nationa**	**42.40**	**316**	P	**P**	**00 47 27.1**	**-0.6**
	baz=114						
PB15	**IPOC Station P**	**42.43**	**163**	P	**P**	**00 47 29.4**	**+1.4**
E07A	**Sunnyside**	**42.48**	**321**	IAmb	IAmb	00 47 29.7	
	comp=Z,133nm,1.3s						
ROSB	**Rosrio**	**42.52**	**115**	*e*P	**P**	**00 47 28.6**	**-0.1**
G05D	**Wamic, OR**	**42.76**	**319**	P	**P**	**00 47 31.5**	**+1.2**
	baz=117						
I04A	**Tendick Farm,**	**42.83**	**316**	P	**P**	**00 47 31.5**	**+0.5**
	baz=114,SNR=5.6						
SMTB	**Santa Maria do**	**42.98**	**125**	*e*P	**P**	**00 47 33.0**	**+0.6**
H04A	**Detroit Lake**	**43.06**	**318**	P	**P**	**00 47 33.3**	**+0.5**
H04A				IAmb	IAmb	00 47 34.4	
	comp=Z,174nm,1.2s						
EDM	**Edmonton**	**43.08**	**333**	IAmb	IAmb	00 47 52.7	
	comp=Z,116nm,1.1s						
B08A	**Colville Reser**	**43.11**	**324**	IAmb	IAmb	00 47 34.6	
	comp=Z,209nm,1.4s						
F05D	**White Salmon**	**43.14**	**319**	P	**P**	**00 47 34.7**	**+1.3**
	baz=117,SNR=15						
H04D	**Lebanon**	**43.35**	**317**	P	**P**	**00 47 35.0**	**-0.1**
	baz=115,SNR=5.3						
I03D	**Drain, OR**	**43.41**	**316**	P	**P**	**00 47 36.1**	**+0.4**
	baz=113						
PB14	**IPOC Station P**	**43.53**	**165**	P	**P**	**00 47 38.5**	**+1.4**
COR	**Corvallis**	**43.74**	**317**	P	**P**	**00 47 39.5**	**+1.3**
COR				pmax	pmax		
	comp=Z,367nm,1.5s						
COR				MLR	MLR		
	comp=Z,4µm,21.0s						
COR	**Corvallis**	**43.74**	**317**	P	**P**	**00 47 39.5**	**+1.3**
COR	**Corvallis**	**43.74**	**317**	IAMs_20	IAMs_20	01 07 23.1	
	comp=Z,4µm,21.0s						
C06D	**Leavenworth**	**43.78**	**322**	P	**P**	**00 47 39.2**	**+0.6**
	baz=120						
PP1B	**Ponte de Pedra**	**44.03**	**141**	*e*P	**P**	**00 47 40.7**	**-0.1**
D05A	**Enumclaw**	**44.07**	**321**	P	**P**	**00 47 41.3**	**+0.4**
D05A				IAmb	IAmb	00 47 56.3	
	comp=Z,109nm,1.3s						
HEBO	**Mount Hebo**	**44.30**	**318**	P	**P**	**00 47 42.7**	**-0.1**
B06A	**Marblemount**	**44.42**	**323**	P	**P**	**00 47 43.0**	**-0.6**
PEXB	**Peixe**	**44.49**	**129**	*e*P	**P**	**00 47 44.7**	**+0.2**
ARAG	**Araguaiana, MT**	**44.52**	**136**	*e*P	**P**	**00 47 44.7**	**-0.1**
D04E	**Lakebay**	**44.54**	**321**	P	**P**	**00 47 44.5**	**0.0**
	baz=117						
B05A	**Bryant**	**44.65**	**322**	P	**P**	**00 47 44.5**	**-1.0**
	baz=119,SNR=13						
E03A	**Lebam**	**44.74**	**319**	P	**P**	**00 47 45.9**	**-0.3**
E03A				IAmb	IAmb	00 48 48.9	
	comp=Z,192nm,1.6s						
RADR	**Rader Ridge**	**44.83**	**319**	P	**P**	**00 47 46.1**	**-0.9**
D03D	**Eldon**	**44.89**	**321**	P	**P**	**00 47 46.9**	**-0.5**
	baz=117,SNR=7.1						
WISH	**Wishkah**	**45.12**	**320**	IAmb	IAmb	00 47 57.1	
	comp=Z,168nm,1.1s						
A04D	**Lummi Island**	**45.22**	**322**	P	**P**	**00 47 49.2**	**-0.8**
	baz=118						
NLWA	**Neilton Lookou**	**45.30**	**320**	IAMs_20	IAMs_20	01 08 23.9	
	comp=Z,4µm,18.0s						
B04A	**Port Angeles**	**45.38**	**321**	IAmb	IAmb	00 47 53.0	
	comp=Z,141nm,1.1s						
NBPS	**Pedro II - PI**	**45.57**	**115**	*e*P	**P**	**00 47 53.6**	**+0.3**
PGC	**Sidney**	**45.62**	**322**	IAmb	IAmb	00 47 54.5	
	comp=Z,84nm,0.9s						
LLLB	**Lillooet**	**45.70**	**325**	IAmb	IAmb	00 47 56.5	
	comp=Z,158nm,1.5s						
AQDB	**Aquidauana**	**45.83**	**145**	*e*P	**P**	**00 47 54.7**	**-0.5**
AQDB	**Aquidauana**	**45.83**	**145**	P	**P**	**00 47 54.3**	**-0.8**
AC02	**Maricunga**	**45.97**	**164**	P	**P**	**00 47 58.2**	**+1.5**
AC02				IAmb	IAmb	00 48 11.2	
	comp=Z,79nm,0.8s						
NBMO	**Morrinhos-CE**	**46.27**	**113**	*e*P	**P**	**00 47 59.7**	**+0.9**
AC04	**Llanos de Chal**	**46.82**	**167**	P	**P**	**00 48 03.0**	**+0.2**
AC04				IAmb	IAmb	00 48 36.2	
	comp=Z,105nm,1.6s						
OZB	**Mount Ozzard**	**46.97**	**322**	P	**P**	**00 48 04.3**	**+0.5**
BDFB	**Brasilia**	**47.06**	**133**	P	**P**	**00 48 05.7**	**+0.7**
	comp=Z,112nm,1.0s,baz=301,slow=8.4,SNR=74						
BDFB				LR	LR	01 09 32.0	
	comp=Z,7µm,19.4s,baz=308,slow=38						
BDFB	**Brasilia**	**47.06**	**133**	P	**P**	**00 48 05.8**	**+0.8**
BDFB				pmax	pmax		
	comp=Z,192nm,1.1s						
BDFB	**Brasilia**	**47.06**	**133**	P	**P**	**00 48 05.8**	**+0.8**
SDBA	**SAO DESIDERIO**	**47.23**	**127**	*e*P	**P**	**00 48 05.5**	**-0.8**
CBB	**Campbell River**	**47.37**	**323**	P	**P**	**00 48 07.7**	**+0.8**
LCO	**Las Campanas**	**47.68**	**167**	P	**P**	**00 48 10.5**	**+0.7**
LCO	**Las Campanas**	**47.68**	**167**	P	**P**	**00 48 10.5**	**+0.7**
LCO				IAmb	IAmb	00 49 52.5	
	comp=Z,52nm,1.0s						
NBPB	**Pedra_Branca-C**	**47.75**	**115**	*e*P	**P**	**00 48 10.4**	**0.0**
NBCL	**Cascavel-CE**	**48.24**	**113**	*e*P	**P**	**00 48 14.7**	**+0.5**

ITRB	Iturama	48.39	139	*e*P	P	00 48 16.0	+0.8
TLCB	Telegraph Cove	48.45	323	P	P	00 48 16.0	+0.8
IPMB	Ipameri, GO	48.55	135	*e*P	P	00 48 16.3	-0.1
HOLB	Holberg	49.23	323	P	P	00 48 21.5	+0.1
PCMB	Pacaembu	49.27	141	*e*P	P	00 48 21.8	-0.1
JANB	Januaria	49.34	129	*e*P	P	00 48 22.7	+0.1
NBMA	Muriti-CE	49.37	117	*e*P	P	00 48 23.9	+1.0
IVI	Ivigtut	49.61	21	*i* P	P	00 48 19.7	-4.2
IVI				IAmb	IAmb	00 48 25.3	
	comp=Z,72nm,1.0s						
IVI	Ivigtut	49.61	21	P	P	00 48 23.8	-0.2
IVI				IAmb	IAmb	00 48 25.5	
	comp=Z,86nm,1.1s						
IVI				IAMs_20	IAMs_20	01 09 18.9	
	comp=Z,4µm,18.0s						
CPUP	Villa Florida	49.86	151	P	P	00 48 24.4	-1.9
	comp=Z,7.9nm,0.9s,baz=323,slow=7.7,SNR=11						
CPUP				LR	LR	01 12 45.6	
	comp=Z,4µm,18.3s,baz=333,slow=40						
CPUP	Villa Florida	49.86	151	*e*P	P	00 48 24.5	-1.8
CPUP	Villa Florida	49.86	151	P	P	00 48 24.3	-2.0
NBPA	Parau_RN	50.00	114	*e*P	P	00 48 28.8	+1.2
NBPN	Ponto Novo - B	50.03	121	*e*P	P	00 48 27.7	-0.1
YKA	Yellowknife Ar	50.21	341	P	P	00 48 26.4	-2.1
	comp=Z,6.6nm,0.9s,baz=132,slow=8.9,SNR=11						
YKA				LR	LR	01 09 20.3	
	comp=Z,3µm,20.8s,baz=0.0,slow=36						
NRS	Narsarsuaq	50.53	22	P	P	00 48 30.6	-0.4
NRS				pmax	pmax		
	comp=Z,57nm,0.9s						
NRS	Narsarsuaq	50.53	22	*i* P	P	00 48 30.7	-0.3
NRS				IAmb	IAmb	00 48 32.7	
	comp=Z,63nm,1.0s						
NRS	Narsarsuaq	50.53	22	P	P	00 48 30.6	-0.3
NRS				IAmb	IAmb	00 48 35.8	
	comp=Z,57nm,0.9s						
BB19B	Bebedouro	50.55	138	*e*P	P	00 48 31.4	-0.3
MC01	Montes Claros	50.67	130	*e*P	P	00 48 33.4	+0.7
NBLV	Livramento - P	50.94	115	*e*P	P	00 48 35.8	+0.9
PTGB	Pitanga	51.22	144	*e*P	P	00 48 38.3	+1.5
VA03	San Esteban	51.33	168	IAmb	IAmb	00 48 57.8	
	comp=Z,115nm,1.6s						
FRTB	Fartura	51.60	141	*e*P	P	00 48 39.5	-0.1
PEL	Peldehue	51.67	168	IAMs_20	IAMs_20	01 10 41.3	
	comp=Z,3µm,22.0s						
DIAM	Diamantina, MG	51.91	132	*e*P	P	00 48 42.3	+0.2
MT05	Renca	51.91	168	IAmb	IAmb	00 48 56.7	
	comp=Z,140nm,1.2s						
NBPV	Pedro Velho	51.91	113	*e*P	P	00 48 42.9	+0.9
VA02	Isla de Pascua	51.96	211	P	P	00 48 44.0	+1.9
NBLA	Lagarto - SE	52.08	120	*e*P	P	00 48 43.0	-0.3
GDU01	Guandu, BA	52.16	124	*e*P	P	00 48 43.2	-0.7
RCLB	Rio Claro- Sao	52.17	139	*e*P	P	00 48 44.8	+1.0
MT09	Talagante	52.23	168	IAmb	IAmb	00 48 57.1	
	comp=Z,216nm,1.9s						
NBAN	Anadia - AL	52.66	118	*e*P	P	00 48 47.9	+0.3
DIB	Dawson Inlet,	52.72	324	P	P	00 48 48.0	+0.5
VAO	Valinhos	52.95	139	*e*P	P	00 48 51.2	+1.5
BSCB	Bom Sucesso	52.96	135	*e*P	P	00 48 50.6	+0.8
NBIT	Itapeh - BA	52.98	125	*e*P	P	00 48 50.7	+0.9
ITQB	Itaqui	53.03	152	*e*P	P	00 48 48.7	-1.3
NBRF	Rio Formoso -	53.14	116	*e*P	P	00 48 51.3	+0.2
CMC01	Camacan, BA	53.16	126	*e*P	P	00 48 51.5	+0.3
ITAB	Concordia	53.19	146	P	P	00 48 50.1	-1.2
SFJD	Kangerlussuaq	53.29	15	P	P	00 48 50.9	-0.5
SFJD				pmax	pmax		
	comp=Z,47nm,1.3s						
SFJD	Kangerlussuaq	53.29	15	P	P	00 48 50.9	-0.5
TIJ01	Guaruva-PR	53.44	142	*e*P	P	00 48 52.7	-0.5
WRGLY	Wrigley	53.67	338	P	P	00 48 53.6	-0.7
	baz=128,SNR=6.3						
GUA01	Guaratinga, BA	53.67	127	*e*P	P	00 48 55.5	+0.5
PET01	Itanhaem-SP	53.70	140	*e*P	P	00 48 55.7	+0.7
DLBC	Dease Lake	53.72	331	IAmb	IAmb	00 49 22.8	
	comp=Z,132nm,1.4s						
WRAK	Wrangell Islan	53.94	328	IAMs_20	IAMs_20	01 13 39.7	
	comp=Z,2µm,19.0s						
CRAG	Craig	53.95	327	P	P	00 48 57.8	+1.3
	baz=113						
SJMB	Sao Joao De Ma	53.96	130	*e*P	P	00 48 58.4	+1.3
WTLY	Watson Lake, Y	54.00	333	P	P	00 48 57.1	+0.3
	baz=120						
DY2G	Dye2	54.02	17	*i* P	P	00 48 54.6	-2.5
DY2G				IAmb	IAmb	00 48 58.0	
	comp=Z,136nm,1.7s						
PARB	Paraibuna	54.05	138	*e*P	P	00 48 58.5	+0.8
ML02	Panimavida	54.08	169	P	P	00 49 00.5	+2.8
ML02				IAmb	IAmb	00 49 09.9	
	comp=Z,93nm,1.4s						
NAN01	Guarapari, ES	54.20	128	*e*P	P	00 48 59.7	+0.8
BSFB	Barra de Sao F	54.29	130	*e*P	P	00 49 00.3	+0.8
TGTN	Hyland Airport	54.52	335	P	P	00 49 01.1	+0.4
	baz=122,SNR=20						
VAS01	Vassouras-RJ	54.74	135	*e*P	P	00 49 03.5	+0.8
MAN01	Angra dos Reis	54.79	136	*e*P	P	00 49 03.8	+0.7
RIB01	Linhares ES	54.92	130	*e*P	P	00 49 04.7	+0.7
CPSB	Cacapava Do Su	55.12	150	*e*P	P	00 49 06.1	+0.7
DUB01	Friburgo-RJ	55.33	134	*e*P	P	00 49 07.8	+0.8
ALF01	Guarapari-ES	55.52	132	*e*P	P	00 49 09.0	+0.7
CNLB	Canela	55.53	147	*e*P	P	00 49 07.7	-0.7
CAM01	Campos-RJ	55.65	133	*e*P	P	00 49 09.8	+0.5
JIS	Juneau Island	55.71	330	P	P	00 49 09.4	+0.2
P33M	Teslin, Yukon	55.81	332	P	P	00 49 10.4	+0.3
	baz=116,SNR=8.0						
TER01	Tubaro-SC	55.84	145	*e*P	P	00 49 11.6	+1.1
SACV	Santiago Islan	55.85	84	IAMs_20	IAMs_20	01 07 58.3	
	comp=Z,3µm,21.0s						
PLTB	Pedras Altas	56.18	151	*e*P	P	00 49 12.1	-0.8
MMPY	Sheldon Lake,	56.29	335	P	P	00 49 13.2	-0.2
	baz=120,SNR=26						
WHY	Whitehorse	56.93	332	P	P	00 49 17.6	-0.5
	baz=115						
WHY	Whitehorse	56.93	332	P	P	00 49 17.4	-0.7
FARO	Faro, Yukon	56.96	334	P	P	00 49 18.7	+0.6
	baz=117,SNR=6.2						
LC01	Cunco	57.07	171	IAmb	IAmb	00 49 30.9	
	comp=Z,63nm,0.9s						
M31M	Drury Creek, Y	57.38	334	P	P	00 49 21.2	+0.1
	baz=116,SNR=8.2						
ICESG	Greenland Ices	57.65	17	*i* P	P	00 49 20.5	-2.7
ICESG				IAmb	IAmb	00 49 23.0	
	comp=Z,71nm,1.0s						
N31M	Braeburn, Yuko	57.67	333	P	P	00 49 23.4	+0.2
	baz=114,SNR=7.7						
HYT	Haines Junctio	58.17	332	P	P	00 49 27.5	+0.6
	baz=112						
TRQA	Tornquist	58.53	162	IAMs_20	IAMs_20	01 19 03.9	
	comp=Z,2µm,19.0s						
MAYO	Mayo, Yukon	58.61	335	P	P	00 49 30.9	+1.3
	baz=115						
YUK6	Outpost Mounta	58.61	332	P	P	00 49 31.1	+1.1
	baz=111						
BCPM	Bancas Point	58.85	330	IAMs_20	IAMs_20	01 15 18.5	
	comp=Z,4µm,21.0s						
YUK4	Talbot Arm	58.88	332	P	P	00 49 32.2	+0.3
	baz=111						
LL04	Puerto Octay	58.96	172	IAmb	IAmb	00 49 44.2	
	comp=Z,54nm,1.2s						
PLCA	Paso Flores	59.08	170	P	P	00 49 32.8	-0.4
	comp=Z,26nm,0.8s,baz=345,slow=7.7,SNR=77						
PLCA	Paso Flores	59.08	170	*e*P	P	00 49 32.6	-0.6
PLCA	Paso Flores	59.08	170	IAmb	IAmb	00 49 45.5	
	comp=Z,61nm,0.8s						
PMOZ	Porto Moniz, M	59.63	62	*e*S	S	00 57 55.7	+6.8
PMOZ				*e*LQ	LQ	01 04 44.9	
PMOZ				*e*LR	LR	01 07 15.3	
	comp=Z,1µm,20.0s						
LOGN	Logan Glacier	59.78	331	IAMs_20	IAMs_20	01 16 13.0	
	comp=Z,3µm,20.0s						
A36M	Sachs Harbour	59.82	346	P	P	00 49 36.2	-1.6
	baz=131,SNR=34						
A36M				S	S	00 57 45.8	-3.9
	baz=131						
A36M	Sachs Harbour	59.82	346	IAmb	IAmb	00 50 00.9	
	comp=Z,70nm,1.1s						
YUK3	Moose Creek	59.85	332	P	P	00 49 38.6	0.0
	baz=110						
PMAR	Madeira	59.88	62	*e*P	P	00 49 41.7	+2.5
J29M	Klondike Camp	59.90	335	P	P	00 49 38.8	+0.2
	baz=113						
INK	Inuvik	59.97	340	LR	LR	01 15 04.9	
	comp=Z,4µm,20.6s,baz=106,slow=36						
INK	Inuvik	59.97	340	P	P	00 49 38.7	-0.3
	baz=120,SNR=23						
INK	Inuvik	59.97	340	IAmb	IAmb	00 50 01.4	
	comp=Z,86nm,1.2s						
CTGM	Chitina Glacie	59.98	331	IAMs_20	IAMs_20	01 18 31.3	
	comp=Z,3µm,21.0s						
CTG	Chitna Glacier	59.98	331	P	P	00 49 40.0	+0.6
	baz=108						
EPYK	Eagle Plains	60.14	338	P	P	00 49 40.8	+0.6
	baz=116,SNR=8.2						
EPYK	Eagle Plains	60.14	338	IAmb	IAmb	00 50 07.1	
	comp=Z,95nm,1.5s						
EPYK				IAMs_20	IAMs_20	01 14 39.7	
	comp=Z,2µm,21.0s						
BARN	Barnard Glacie	60.16	331	IAMs_20	IAMs_20	01 19 21.0	
	comp=Z,2µm,19.0s						
DAWY	Dawson	60.22	335	P	P	00 49 40.4	-0.4
	baz=112,SNR=7.3						
SUMG	Summit	60.24	14	P	P	00 49 40.7	-0.6
SUMG				pmax	pmax		
	comp=Z,73nm,1.2s						
SUMG	Summit	60.24	14	*i* P	P	00 49 40.0	-1.3
SUMG				IAmb	IAmb	00 49 41.8	
	comp=Z,54nm,1.1s						
SUMG	Summit	60.24	14	P	P	00 49 40.7	-0.6
SUMG				IAmb	IAmb	00 50 00.4	
	comp=Z,73nm,1.2s						
BVCY	Beaver Creek	60.24	333	P	P	00 49 41.2	+0.2
	baz=110						
I29M	Ogilvie Camp,	60.30	336	P	P	00 49 41.5	+0.2
	baz=114						
TGL	Tana Glacier	60.61	330	IAMs_20	IAMs_20	01 16 53.0	
	comp=Z,3µm,20.0s						
M27K	Edge Creek, AK	60.67	332	P	P	00 49 44.3	+0.2
	baz=109						
M27K	Edge Creek, AK	60.67	332	IAMs_20	IAMs_20	01 17 08.9	
	comp=Z,3µm,19.0s						
CRQM	Cirque	60.76	330	IAMs_20	IAMs_20	01 16 45.2	
	comp=Z,3µm,22.0s						
MCARA	McCarthy VSAT	60.89	331	IAMs_20	IAMs_20	01 19 22.2	
	comp=Z,2µm,20.0s						
BERG	Berg Lake	60.92	330	P	P	00 49 45.7	+0.1
BERG				IAmb	IAmb	00 50 12.7	
	comp=Z,140nm,1.7s						
VRDI	Verde Repeater	61.04	331	IAmb	IAmb	00 50 06.3	
	comp=Z,78nm,1.6s						
VRDI				IAMs_20	IAMs_20	01 18 45.3	
	comp=Z,3µm,18.0s						
EGAK	Eagle	61.19	335	P	P	00 49 47.9	+0.5
	baz=111,SNR=7.3						
EGAK	Eagle	61.19	335	IAMs_20	IAMs_20	01 20 21.9	
	comp=Z,3µm,21.0s						
GLB	Gilahina Butte	61.27	331	P	P	00 49 48.3	+0.3
GLB				IAmb	IAmb	00 50 14.8	
	comp=Z,92nm,1.7s						
GLB				IAMs_20	IAMs_20	01 17 03.3	
	comp=Z,3µm,20.0s						
RAGM	Ragged Mountai	61.38	330	P	P	00 49 48.9	0.0
RAGM				IAmb	IAmb	00 50 16.5	
	comp=Z,130nm,1.6s						
BMRM	Bremner River	61.51	330	P	P	00 49 50.7	+1.0
	baz=105						
BMRM	Bremner River	61.51	330	IAMs_20	IAMs_20	01 17 09.6	
	comp=Z,3µm,19.0s						
L26K	Log Cabin Wild	61.53	333	P	P	00 49 49.8	+0.1
	baz=108,SNR=12						
L26K	Log Cabin Wild	61.53	333	IAmb	IAmb	00 50 17.1	
	comp=Z,89nm,1.4s						
N25K	Chitina, Valde	61.67	331	P	P	00 49 51.3	+0.4
	baz=106,SNR=8.5						
N25K	Chitina, Valde	61.67	331	IAmb	IAmb	00 50 18.6	
	comp=Z,48nm,1.3s						
N25K				IAMs_20	IAMs_20	01 17 06.0	
	comp=Z,3µm,19.0s						
NEEM	North Greenlan	61.73	7	*i* P	P	00 49 50.4	-0.7
NEEM				IAmb	IAmb	00 49 51.5	
	comp=Z,53nm,1.2s						
EYAK	Cordova Ski Ar	61.94	330	P	P	00 49 53.3	+0.8
	baz=104						
Q23K	Middleton Isla	61.97	329	IAMs_20	IAMs_20	01 15 31.0	
	comp=Z,3µm,19.0s						
DOT	Dot Lake	62.02	333	IAmb	IAmb	00 50 30.7	
	comp=Z,74nm,1.2s						
J26L	Joseph Creek	62.08	334	P	P	00 49 53.2	-0.3
	baz=108,SNR=15						
SCRK	Sand Creek	62.09	334	P	P	00 49 53.6	0.0
	baz=108,SNR=13						
SCRK	Sand Creek	62.09	334	IAmb	IAmb	00 50 20.3	
	comp=Z,80nm,1.6s						
DIV	Divide	62.09	330	IAmb	IAmb	00 49 55.2	
	comp=Z,39nm,0.8s						
KLU	Klutina	62.26	331	P	P	00 49 55.0	+0.3
	baz=104,SNR=14						
KLU	Klutina	62.26	331	IAmb	IAmb	00 50 09.8	
	comp=Z,50nm,1.0s						
KLU				IAMs_20	IAMs_20	01 18 12.5	
	comp=Z,3µm,20.0s						
HIN	Hinchinbrook I	62.27	330	IAmb	IAmb	00 50 14.4	
	comp=Z,78nm,1.0s						
MBO	M'Bour	62.27	83	IAMs_20	IAMs_20	01 11 13.2	
	comp=Z,3µm,22.0s						
RIDG	Independent Ri	62.38	333	P	P	00 49 55.8	+0.2
	baz=106,SNR=35						
PAX	Paxson	62.44	333	P	P	00 49 55.7	-0.3
	baz=106,SNR=24						
PAX	Paxson	62.44	333	IAmb	IAmb	00 49 57.3	
	comp=Z,32nm,0.8s						
EUNU	Eureka	62.44	359	IAmb	IAmb	00 50 18.7	
	comp=Z,116nm,1.8s						
M24K	Tolsona, Glenn	62.53	331	P	P	00 49 56.8	+0.3
	baz=104,SNR=12						
GLI	Glacier Island	62.66	330	P	P	00 49 57.8	+0.4
	baz=103						
GLI	Glacier Island	62.66	330	P	P	00 49 57.7	+0.4
GLI				IAmb	IAmb	00 50 10.5	
	comp=Z,46nm,0.8s						
SCM	Sheep Creek Mo	62.99	331	P	P	00 49 59.9	+0.3
	baz=103,SNR=7.7						
SCM	Sheep Creek Mo	62.99	331	IAmb	IAmb	00 50 18.5	
	comp=Z,64nm,1.0s						
PRP	Porcupine Dome	63.18	335	P	P	00 50 00.3	-0.6
	baz=107,SNR=10						
PRP	Porcupine Dome	63.18	335	IAmb	IAmb	00 50 28.6	
	comp=Z,53nm,1.4s						
PRP				IAMs_20	IAMs_20	01 14 25.4	
	comp=Z,3µm,18.0s						
TAOE	Nuku Hiva Isla	63.26	250	*e*LQ	LQ	01 06 16.8	
	comp=Z,10µm,29.6s						
TAOE				*e*LR	LR	01 08 55.7	
	comp=Z,1µm,23.6s						
DHY	Denali Highway	63.31	332	P	P	00 50 02.0	+0.2
	baz=104						
DHY	Denali Highway	63.31	332	IAMs_20	IAMs_20	01 16 14.0	
	comp=Z,3µm,19.0s						
WAT6	Susitna Watana	63.35	332	P	P	00 50 02.2	+0.1
	baz=103,SNR=22						
FYU	Fort Yukon	63.38	336	P	P	00 50 02.0	0.0
FYU				IAMs_20	IAMs_20	01 22 26.6	
	comp=Z,3µm,22.0s						
KNK	Knik Glacier	63.42	330	P	P	00 50 02.2	-0.2
	baz=102,SNR=8.6						
KNK	Knik Glacier	63.42	330	IAmb	IAmb	00 50 55.5	
	comp=Z,53nm,1.2s						
SML	Sawmill	63.45	331	P	P	00 50 02.3	-0.3
	baz=102,SNR=7.5						
SML	Sawmill	63.45	331	P	P	00 50 03.0	+0.3
HDA	Harding Lake	63.46	334	P	P	00 50 02.2	-0.4
	baz=105,SNR=50						
IL31		63.53	334	IAmb	IAmb	00 50 30.1	
	comp=Z,69nm,1.2s						
ILAR	Eielson Array	63.53	334	P	P	00 50 02.2	-0.8
	comp=Z,19nm,0.9s,baz=106,slow=4.4,SNR=144						
ILAR				PKPPKP	P'P'df	01 19 10.8	+6.9
	comp=Z,1.0nm,1.1s,baz=279,slow=3.8,SNR=4.7						
ILAR				LR	LR	01 20 32.6	
	comp=Z,2µm,18.1s,baz=106,slow=39						
SEW	Seward	63.65	329	P	P	00 50 05.3	+1.4
SEW				IAmb	IAmb	00 50 18.8	
	comp=Z,35nm,1.0s						
GHO	Glory Hole Cre	63.72	331	IAmb	IAmb	00 50 36.8	
	comp=Z,66nm,1.1s						
WAT1	Susitna Watana	63.77	332	P	P	00 50 03.9	-0.8
	baz=103						
PMR	Palmer	63.78	331	P	P	00 50 04.4	-0.3
	baz=101,SNR=9.7						
POKR	Poker Plat Res	63.84	335	P	P	00 50 04.8	-0.3
	baz=105,SNR=6.5						
POKR	Poker Plat Res	63.84	335		P	00 50 04.9	-0.2
POKR	Poker Plat Res	63.84	335	IAmb	IAmb	00 50 32.3	
	comp=Z,83nm,1.4s						
O22K	Cooper Landing	63.85	329	P	P	00 50 05.0	-0.2
	baz=100						
CCB	Clear Creek Bu	63.88	334	IAmb	IAmb	00 50 32.1	
	comp=Z,92nm,1.2s						
CCB				IAMs_20	IAMs_20	01 19 55.9	
	comp=Z,2µm,19.0s						
COLA	College	63.95	334	*c i*P	P	00 50 04.6	-1.2
COLA				pmax	pmax		
	comp=Z,33nm,1.0s						
COLA				MLR	MLR		
	comp=Z,2µm,16.0s						
COLA	College	63.95	334	P	P	00 50 05.6	-0.2
	baz=104						
COLA	College	63.95	334	P	P	00 50 05.5	-0.2
COLA				IAmb	IAmb	00 50 32.6	
	comp=Z,43nm,1.0s						
COLA	College	63.95	334	IAMs_20	IAMs_20	01 19 11.0	
	comp=Z,2µm,21.0s						
WRH	Wood River Hil	63.95	334	IAmb	IAmb	00 50 32.5	
	comp=Z,42nm,1.2s						
TCOL	CIGO, UAF Yank	63.96	334	P	P	00 50 05.5	-0.3
	baz=104,SNR=5.7						
TCOL	CIGO, UAF Yank	63.96	334	IAmb	IAmb	00 50 32.6	
	comp=Z,44nm,1.0s						
TCOL				IAMs_20	IAMs_20	01 19 11.0	
	comp=Z,2µm,21.0s						
RC01	Rabbit Creek A	63.97	330	P	P	00 50 05.8	-0.2
	baz=101,SNR=13						
RC01	Rabbit Creek A	63.97	330	IAmb	IAmb	00 50 36.6	
	comp=Z,86nm,1.3s						
MDM	Murphy Dome	64.13	334	IAmb	IAmb	00 50 33.9	
	comp=Z,58nm,1.4s						
MDM				IAMs_20	IAMs_20	01 18 25.6	
	comp=Z,3µm,19.0s						
MCK	McKinley	64.14	333	P	P	00 50 07.3	+0.1
	baz=103,SNR=18						
MCK	McKinley	64.14	333	IAMs_20	IAMs_20	01 21 17.1	
	comp=Z,3µm,19.0s						
H24K	Noodor Dome	64.21	335	P	P	00 50 07.6	0.0
	baz=105						
BRSE	Bradley Lake S	64.22	328	P	P	00 50 07.2	-0.5
	baz=99,SNR=8.5						
M22K	Willow	64.27	331	P	P	00 50 07.9	0.0
	baz=101,SNR=13						
BRLK	Bradley Lake	64.30	328	IAmb	IAmb	00 50 20.5	
	comp=Z,50nm,0.8s						
BRLK				IAMs_20	IAMs_20	01 17 14.9	
	comp=Z,2µm,20.0s						
NEA2	Nenana	64.39	334	P	P	00 50 08.1	-0.6
	baz=103,SNR=25						
NEA2	Nenana	64.39	334	IAmb	IAmb	00 50 29.6	
	comp=Z,43nm,1.1s						
CNPM	China Poot	64.44	328	IAmb	IAmb	00 50 21.4	
	comp=Z,33nm,0.8s						
CNPM				IAMs_20	IAMs_20	01 16 30.4	
	comp=Z,2µm,20.0s						
CUT	Chulitna	64.46	331	P	P	00 50 09.2	0.0
	baz=101,SNR=24						
CUT	Chulitna	64.46	331	IAMs_20	IAMs_20	01 19 43.6	
	comp=Z,3µm,20.0s						
BWN	Browne	64.47	333	IAMs_20	IAMs_20	01 21 03.7	
	comp=Z,2µm,19.0s						
SUA	Susitna One	64.51	330	P	P	00 50 09.8	+0.1
	baz=100						
I23K	Minto, Yukon-K	64.64	334	P	P	00 50 10.5	+0.2
	baz=103,SNR=40						
I23K	Minto, Yukon-K	64.64	334	IAMs_20	IAMs_20	01 19 39.1	
	comp=Z,3µm,18.0s						
HOM	Homer	64.66	328	IAMs_20	IAMs_20	01 21 01.4	
	comp=Z,2µm,19.0s						
TRF	Thorofare Moun	64.67	332	P	P	00 50 10.9	+0.1
	baz=101,SNR=39						
SKT	Skwentna	64.97	331	P	P	00 50 12.2	-0.4
	baz=99						
SKT	Skwentna	64.97	331	IAMs_20	IAMs_20	01 21 22.6	
	comp=Z,3µm,21.0s						
KTH	Kantishna Hill	64.97	333	IAmb	IAmb	00 50 22.9	
	comp=Z,61nm,1.0s						
KTH				IAMs_20	IAMs_20	01 19 42.1	
	comp=Z,3µm,20.0s						
BPAW	Bear Paw Mtn.	65.11	333	P	P	00 50 13.4	0.0
	baz=101,SNR=36						
BPAW				S	S	00 58 57.5	+0.8
	baz=101						
BPAW	Bear Paw Mtn.	65.11	333	IAMs_20	IAMs_20	01 21 53.5	
	comp=Z,3µm,20.0s						
SPCR	Spurr Chakacha	65.17	330	P	P	00 50 13.6	-0.4
	baz=98,SNR=6.8						
MLY	Manley	65.18	334	P	P	00 50 13.7	-0.2
	baz=102,SNR=21						
MLY				S	S	00 58 56.1	-1.6
	baz=102						
MLY	Manley	65.18	334	IAMs_20	IAMs_20	01 18 38.5	
	comp=Z,2µm,18.0s						
O20K	Slope Mountain	65.21	329	P	P	00 50 14.2	-0.1
	baz=98						
OHAK	Old Harbor	65.22	325	P	P	00 50 14.0	-0.2
	baz=96						
OHAK	Old Harbor	65.22	325	P	P	00 50 13.5	-0.7
OHAK				IAmb	IAmb	00 50 26.4	
	comp=Z,47nm,1.0s						
PPLA	Purkeypile	65.42	332	P	P	00 50 15.0	-0.6
	baz=99,SNR=12						
COLD	Coldfoot	65.45	337	P	P	00 50 16.2	+0.6
	baz=103,SNR=5.3						
COLD	Coldfoot	65.45	337	P	P	00 50 15.8	+0.3
COLD				IAmb	IAmb	00 50 43.5	
	comp=Z,57nm,1.3s						
P19K	Oil Pt	65.46	328	P	P	00 50 14.9	-0.9
	baz=97						
P19K	Oil Pt	65.46	328	IAmb	IAmb	00 50 16.8	
	comp=Z,38nm,0.8s						
P19K				IAMs_20	IAMs_20	01 22 04.4	
	comp=Z,2µm,19.0s						
CAST	Castle Rocks	65.46	332	P	P	00 50 15.0	-0.7
	baz=100,SNR=11						
CAST	Castle Rocks	65.46	332	IAmb	IAmb	00 50 50.9	
	comp=Z,35nm,0.8s						
TOLK	Toolik Lake Re	65.55	338	P	P	00 50 15.8	-0.5
	baz=104,SNR=14						
TOLK				S	S	00 59 01.2	-0.9
	baz=104						
TOLK	Toolik Lake Re	65.55	338	IAMs_20	IAMs_20	01 23 41.9	
	comp=Z,2µm,22.0s						
Q19K	Cape Douglas,	65.59	327	P	P	00 50 16.3	-0.3
	baz=96						
Q19K	Cape Douglas,	65.59	327	IAMs_20	IAMs_20	01 22 35.9	
	comp=Z,2µm,18.0s						
CHUM	Lake Minchumin	65.64	333	P	P	00 50 16.2	-0.6
	baz=100,SNR=11						
I21K	Tanana	65.73	334	P	P	00 50 17.0	-0.4
	baz=100,SNR=42						
I21K	Tanana	65.73	334	IAMs_20	IAMs_20	01 19 01.9	
	comp=Z,3µm,19.0s						
PMAFR	Mafra	65.75	55	*e*P	P	00 50 18.7	+0.7
	comp=Z,99nm,1.6s						
PMST	Lisbon--Monsan	65.84	55	*e*P	P	00 50 19.4	+0.8
	comp=Z,81nm,1.2s						
LIS	Lisbon	65.86	55	*e*S	S	00 59 06.1	-0.7
LIS				IAMs_20	IAMs_20	01 16 15.9	
	comp=Z,3µm,23.3s						
PSBE	So Bento	66.09	54	*e*P	P	00 50 20.8	+0.6
	comp=Z,60nm,1.6s						
L20K	Farewell, AK	66.13	331	P	P	00 50 19.5	-0.6
	baz=98,SNR=29						
H21K	Melozitna Rive	66.15	335	P	P	00 50 19.9	-0.3
	baz=100						
H21K	Melozitna Rive	66.15	335	IAMs_20	IAMs_20	01 16 17.6	
	comp=Z,3µm,19.0s						
N19K	Bonanza Creek	66.22	329	P	P	00 50 20.1	-0.6
	baz=96						
N19K	Bonanza Creek	66.22	329	IAMs_20	IAMs_20	01 20 53.7	
	comp=Z,2µm,21.0s						
PCAS	Casmilo, Conde	66.28	53	*e*P	P	00 50 22.0	+0.5
	comp=Z,85nm,2.1s						
PTEO	Sao Teotonio	66.28	56	*e*P	P	00 50 22.6	+1.1
	comp=Z,123nm,1.6s						
M19K	Big River Lodg	66.30	330	P	P	00 50 20.9	-0.3
	baz=97,SNR=10						
M19K	Big River Lodg	66.30	330	IAmb	IAmb	00 50 33.5	
	comp=Z,37nm,0.8s						
COI	Coimbra	66.34	53	P	P	00 50 21.6	-0.2
COI				pmax	pmax		
	comp=Z,84nm,1.2s						
COI	Coimbra	66.34	53	*e*P	P	00 50 22.7	+0.9
	comp=Z,107nm,1.4s						
COI	Coimbra	66.34	53	P	P	00 50 21.6	-0.2
COI				IAmb	IAmb	00 50 23.9	
	comp=Z,84nm,1.2s						

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COI                                    IAMs_20  IAMs_20  01 16 33.6
      comp=Z,2µm,20.0s
PGAV  Gavieira, Arco   66.35  51 eP       P        00 50 22.6 +0.7
      comp=Z,111nm,1.7s
PGAV                             eS       S        00 59 17.8 +5.0
PGAV                             eLQ      LQ       01 06 42.7
PGAV                             eLR      LR       01 10 36.7
      comp=Z,2µm,18.0s
MORF  Marmelete        66.36  56 eP       P        00 50 22.3 +0.2
MORF                             eS       S        00 59 12.4 -0.6
MORF                              IAMs_20 IAMs_20  01 11 04.8
      comp=Z,4µm,40.3s
MORF  Marmelete        66.36  56 eP       P        00 50 22.2 +0.2
MORF                             eS       S        00 59 12.4 -0.6
MORF  Marmelete        66.36  56 eP       P        00 50 22.8 +0.7
      comp=Z,71nm,1.9s
PNCL  Nicolau / Gran   66.39  56 eP       P        00 50 22.9 +0.7
      comp=Z,42nm,1.3s
CHIR  Chirikof Islan   66.40 324  IAMs_20 IAMs_20  01 21 11.8
      comp=Z,2µm,19.0s
P18K  Big Mountain,    66.44 328  IAMs_20 IAMs_20  01 18 19.5
      comp=Z,2µm,18.0s
J20K  Nowinta River    66.48 333  P       P        00 50 22.0 -0.3
      baz=98
J20K                              S       S        00 59 13.0 -0.5
      baz=98
J20K  Nowinta River    66.48 333  IAMs_20 IAMs_20  01 18 09.5
      comp=Z,3µm,22.0s
PCAB  Cabril           66.54  52 eP       P        00 50 23.7 +0.6
      comp=Z,73nm,1.4s
PMTG  Montargil        66.56  55 eP       P        00 50 23.7 +0.5
      comp=Z,95nm,1.1s
MESJ  Messejana        66.66  56 eP       P        00 50 24.1 +0.2
MESJ                             eS       S        00 59 15.9 -0.6
MESJ                              IAMs_20 IAMs_20  01 14 36.4
      comp=Z,2µm,15.6s
MESJ  Messejana        66.66  56 eP       P        00 50 24.1 +0.2
MESJ                             eS       S        00 59 15.9 -0.6
MESJ  Messejana        66.66  56 eP       P        00 50 24.7 +0.8
      comp=Z,60nm,1.5s
PVIS  Viseu            66.70  53 eP       P        00 50 24.5 +0.3
      comp=Z,71nm,1.7s
POLO  Lamas de Olo     66.73  52 eP       P        00 50 24.5 +0.1
      comp=Z,30nm,1.6s
EVO   Evora            66.77  55  P       P        00 50 30.1 +5.5
EVO                               S       S        00 59 24.8 +7.1
PVRL  Vila Real        66.80  52 eP       P        00 50 25.0 +0.2
      comp=Z,66nm,1.2s
PCVE  Castro Verde     66.82  56 eP       P        00 50 25.7 +0.8
      comp=Z,53nm,1.8s
DAG   Danmarks Havn    66.88  13  P       P        00 50 23.6 -1.0
DAG   Danmarks Havn    66.88  13 i P      P        00 50 23.0 -1.6
DAG                               IAmb    IAmb     00 50 24.2
      comp=Z,161nm,2.5s
PBEJ  Beja             66.92  56 eP       P        00 50 26.2 +0.6
      comp=Z,26nm,1.4s
PBDV  Barranco-do-Ve   66.94  56 eP       P        00 50 27.3 +1.6
      comp=Z,90nm,1.6s
MTE   Manteigas        66.99  53 eP       P        00 50 26.3 +0.3
      comp=Z,91nm,1.2s
MTE                              eS       S        00 59 21.4 +0.8
MTE                              eLQ      LQ       01 07 02.3
MTE                              eLR      LR       01 11 03.3
      comp=Z,2µm,20.0s
MTE   Manteigas        66.99  53  P       P        00 50 26.1 +0.1
MTE                               IAmb    IAmb     00 50 27.8
      comp=Z,66nm,1.0s
MTE                               IAMs_20 IAMs_20  01 16 54.7
      comp=Z,2µm,20.0s
PESTR Estremoz         67.07  55 eP       P        00 50 27.2 +0.7
      comp=Z,76nm,1.2s
PESTR Estremoz         67.07  55  P       P        00 50 27.1 +0.7
PESTR                             IAmb    IAmb     00 50 28.4
      comp=Z,39nm,1.1s
PESTR Estremoz         67.07  55  P       P        00 50 28.0 +1.5
PCBR  Castelo Branco   67.08  54 eP       P        00 50 26.6 +0.1
      comp=Z,65nm,1.8s
PVAQ  Vaqueiros        67.09  56 eP       P        00 50 27.7 +1.0
      comp=Z,46nm,1.7s
PVAQ                             eS       S        00 59 28.3 +6.5
PVAQ                             eLQ      LQ       01 07 00.5
PVAQ                             eLR      LR       01 10 02.6
      comp=Z,2µm,18.0s
TTA   Tatalina         67.16 331  P       P        00 50 25.7 -1.0
TTA                               pmax    pmax
      comp=Z,36nm,0.9s
TTA   Tatalina         67.16 331  P       P        00 50 25.8 -1.0
      baz=96,SNR=16
TTA   Tatalina         67.16 331  P       P        00 50 25.6 -1.0
TTA                               IAmb    IAmb     00 50 43.5
      comp=Z,36nm,0.9s
PMRV  Marv??o          67.18  54 eP       P        00 50 27.3 +0.1
      comp=Z,67nm,1.7s
PMRV                             eS       S        00 59 25.5 +2.7
PMRV                             eLQ      LQ       01 06 58.2
PMRV                             eLR      LR       01 11 00.2
      comp=Z,1µm,18.0s
MVO   Moncorvo         67.33  52 eP       P        00 50 28.7 +0.5
      comp=Z,66nm,1.2s
MVO                              eS       S        00 59 35.9  +11
MVO                              eLQ      LQ       01 07 09.9
MVO                              eLR      LR       01 11 08.3
      comp=Z,1µm,18.0s
PBRG  Braganca         67.50  51 eP       P        00 50 30.1 +0.9
      comp=Z,89nm,1.3s
PBAR  Barrancos        67.56  55 eP       P        00 50 30.0 +0.4
      comp=Z,62nm,1.3s
CLGH  Cloghs, Cushen   67.58  37 eP       P        00 50 30.4 +1.0
CLGH                              IAmb    IAmb     00 50 31.4
      comp=Z,128nm,1.1s
GCSA  Galena City Sc   67.73 333  P       P        00 50 29.5 -0.6
      baz=96,SNR=6.6
AVE   Averroes         67.78  61  P       P        00 50 38.8 +7.7
AVE                               S       S        00 59 32.1 +1.9
AVE   Averroes         67.78  61  P       P        00 50 32.7 +1.6
ARNO  Arenosillo       67.91  57  P       P        00 50 40.6 +8.8
ARNO                              S       S        00 59 36.0 +4.5
CHGN  Chignik          67.98 324  P       P        00 50 30.8 -1.0
      baz=91
KAC   Achnashellach    68.09  34 eP       P        00 50 32.0 -0.6
SFS   San Fernando     68.39  57  P       P        00 50 42.9 +8.0
SFS                               S       S        00 59 40.0 +2.7
ZHG   ZHG              68.40  60  P       P        00 50 37.0 +1.9
A21K  Barrow           68.47 340  P       P        00 50 34.1 -0.6
      baz=99
A21K  Barrow           68.47 340  IAmb    IAmb     00 51 02.4
      comp=Z,50nm,1.4s
A21K                              IAMs_20 IAMs_20  01 21 27.7
      comp=Z,2µm,20.0s
CNBA  Chernabura Isl   68.64 323  IAMs_20 IAMs_20  01 20 40.2
      comp=Z,2µm,19.0s
OUZM  OUZ              68.65  63  P       P        00 50 38.0 +1.2
NEWG  New Galloway     68.66  37 eP       P        00 50 36.3 +0.2
NEWG                              IAmb    IAmb     00 50 37.6
      comp=Z,98nm,1.0s
INVG  Invergeldie, C   68.76  36 eP       P        00 50 36.4 -0.4
ELO   Logie Almond     68.95  36 eP       P        00 50 37.9 -0.1
LLW   Llanuwychllyn    69.04  39 eP       P        00 50 39.1 +0.5
NOR   Nord             69.06   8 i P      P        00 50 36.3 -2.0
NOR                               IAmb    IAmb     00 50 39.1
      comp=Z,18nm,1.1s
CEU   Ceuta            69.13  58  P       P        00 50 48.3 +8.9
CEU                               S       S        00 59 50.0 +3.8
SDPT  Sand Point       69.14 323  P       P        00 50 38.1 -1.1
      baz=89
MCD   Coleburn Disti   69.19  34 eP       P        00 50 38.5 -0.9
ESK   Eskdalemuir      69.25  37 eP       P        00 50 38.9 -1.0
ESK                               IAmb    IAmb     00 50 40.6
      comp=Z,113nm,1.2s
ESK   Eskdalemuir      69.25  37  P       P        00 50 39.5 -0.3
ESK                               pmax    pmax
      comp=Z,106nm,1.2s
ESK   Eskdalemuir      69.25  37  P       P        00 50 39.5 -0.3
CHEFC Chefchaouen      69.26  59  P       P        00 50 42.0 +1.5
EKA   Eskdalemuir Ar   69.27  37  P       P        00 50 43.1 +3.1
MCH1  Michaelchurch    69.48  40 eP       P        00 50 41.2 -0.1
ROSF  Rostrenen        69.51  44 eP       P        00 50 41.8 +0.2
ROSF                              pmax    pmax
      comp=Z,106nm,1.1s
PAB   San Pablo        69.51  54  P       P        00 50 42.6 +0.7
PAB                               pmax    pmax
      comp=Z,84nm,1.4s
PAB   San Pablo        69.51  54  P       P        00 50 42.6 +0.7
PAB                               IAmb    IAmb     00 50 44.1
      comp=Z,84nm,1.4s
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PAB   San Pablo        69.51  54  IAMs_20 IAMs_20  01 17 40.5
      comp=Z,1µm,20.0s
PAB   San Pablo        69.51  54  P       P        00 50 43.2 +1.3
HLM1  Long Mynd        69.53  40 eP       P        00 50 42.1 +0.5
HLM1                              IAmb    IAmb     00 50 42.9
      comp=Z,160nm,1.1s
ESY   Stoneypath       69.57  36 eP       P        00 50 41.6 -0.2
QUIF  Quistinic        69.61  45 eP       P        00 50 42.4 +0.2
QUIF                              pmax    pmax
      comp=Z,115nm,1.2s
DRUM  Mains of Drumt   69.62  35 eP       P        00 50 41.3 -0.8
DRUM                              IAmb    IAmb     00 50 42.8
      comp=Z,93nm,1.0s
IFR   Ifrane           69.65  60  P       P        00 50 49.2 +6.2
IFR                               S       S        00 59 56.6 +3.8
TZRR  Tazzarine        69.68  63  P       P        00 50 45.0 +1.8
ZGR   Zagora           69.74  64  P       P        00 50 45.1 +1.5
EMAL  Malaga-Limoner   69.78  57  P       P        00 50 51.5 +8.0
EMAL                              S       S        00 59 57.7 +3.9
CZD   Col de Zad       69.79  61  P       P        00 50 46.0 +2.0
ESDC  Sonseca Array    69.79  54  P       P        00 50 43.9 +0.3
      comp=Z,45nm,0.9s,baz=285,slow=6.1,SNR=242
ESDC                              LR      LR       01 18 09.9
      comp=Z,1µm,18.7s,baz=270,slow=33
ESDC                              PKPPKP  P'P'df   01 18 55.2 +1.7
      comp=Z,1.0nm,0.8s,baz=71,slow=3.1,SNR=8.3
ESDC  Sonseca Array    69.79  54  IAmb    IAmb     00 50 45.8
      comp=Z,55nm,1.1s
ESBB  Sonseca Array    69.79  54  IAmb    IAmb     00 50 45.7
      comp=Z,59nm,0.9s
LCRM  LCR              69.84  60  P       P        00 50 46.0 +1.8
EDMD  Edmundbyers      69.98  37 eP       P        00 50 43.7 -0.6
EDMD                              IAmb    IAmb     00 50 45.9
      comp=Z,56nm,1.0s
SGMF  Saint Gilles     69.99  44 eP       P        00 50 44.5 -0.1
SGMF                              pmax    pmax
      comp=Z,81nm,1.1s
GOLM  Goulmima         70.06  62  P       P        00 50 48.0 +2.5
PVLZ  Peæn de          70.09  58  P       P        00 50 48.6 +3.2
PVLZ                              S       S        00 59 58.7 +1.2
JSA   Saint Aubin      70.18  43 eP       P        00 50 46.5 +0.8
MDT   Midelt           70.18  61  P       P        00 50 47.9 +1.7
LBWR  Ladybower, Pea   70.19  39 eP       P        00 50 46.4 +0.7
LBWR                              IAmb    IAmb     00 50 47.2
      comp=Z,165nm,1.0s
UCM   Universidad Co   70.27  53  P       P        00 50 57.5  +11
UCM                               S       S        01 00 03.8 +4.3
PALE  Palemas          70.38  58  P       P        00 50 49.0 +1.7
CWF   Charnwood Fore   70.48  40 eP       P        00 50 47.1 -0.3
CWF                               IAmb    IAmb     00 50 48.7
      comp=Z,170nm,1.4s
AKLM  AKL              70.54  59  P       P        00 50 50.0 +1.6
WOL   Wolverton        70.63  41 eP       P        00 50 48.5 +0.1
GDLE  Glaisdale, N Y   70.66  38 eP       P        00 50 49.2 +0.6
GDLE                              IAmb    IAmb     00 50 50.0
      comp=Z,183nm,0.9s
GRR   Gorron           71.11  44 eP       P        00 50 51.5 +0.1
GRR                               pmax    pmax
      comp=Z,135nm,1.1s
FLN   La Foliniere     71.32  44 eP       P        00 50 53.0 +0.3
FLN                               pmax    pmax
      comp=Z,141nm,1.0s
ANM   Nome             71.37 333  IAMs_20 IAMs_20  01 24 33.2
      comp=Z,3µm,19.0s
SJPF  Ste Jean         71.43  50 eP       P        00 50 54.1 +0.6
SJPF                              pmax    pmax
      comp=Z,126nm,1.1s
LDF   La Druitiere     71.58  44 eP       P        00 50 54.4 +0.2
LDF                               pmax    pmax
      comp=Z,147nm,1.0s
CHAS  Isla Isabel II   71.61  58  P       P        00 51 02.5 +7.8
CHAS                              S       S        01 00 17.1 +2.0
JBK   JBK              71.63  59  P       P        00 50 56.0 +0.9
TAF   Taforalt         71.68  58  P       P        00 50 57.0 +1.8
MFF   Saint Martin d   71.78  46 eP       P        00 50 55.6 +0.1
MFF                               pmax    pmax
      comp=Z,58nm,1.0s
ETSF  Etsaut           71.94  50 eP       P        00 50 57.2 +0.5
ETSF                              pmax    pmax
      comp=Z,45nm,1.1s
EFI   East Falkland    72.15 165  IAMs_20 IAMs_20  01 24 12.2
      comp=Z,3µm,21.0s
TDRA  Tendrara         72.28  60  P       P        00 51 00.1 +1.1
CART  Cartagena        72.37  55  S       S        01 00 28.1 +4.2
EPF   Esparros         72.58  50 eP       P        00 51 00.9 +0.5
EPF                               pmax    pmax
      comp=Z,102nm,1.2s
FIGM  Figuig           73.08  61  P       P        00 51 05.0 +1.3
RJF   Les Rejaudoux    73.10  47 eP       P        00 51 03.4  0.0
RJF                               pmax    pmax
      comp=Z,80nm,1.0s
TCF   Toulx Ste Croi   73.44  46 eP       P        00 51 05.2 -0.2
TCF                               pmax    pmax
      comp=Z,74nm,1.0s
KBS   Kingsbay         73.51  12⇑eP       P        00 51 05.8 +0.6
KBS                               MLR     MLR
      comp=Z,3µm,16.0s
CAF   Calviac          73.54  47 eP       P        00 51 06.1 +0.1
CAF                               pmax    pmax
      comp=Z,103nm,1.0s
BGF   Bois d'Agland    73.83  46 eP       P        00 51 07.4 -0.3
BGF                               pmax    pmax
      comp=Z,71nm,1.0s
MEH   Mehetia          74.03 245 eP       P        00 51 09.9 +0.6
      comp=Z,54nm,1.3s
SNF   Seneffe          74.18  41 dpP      P        00 51 10.2 +0.6
UCC   Uccle            74.18  41 dP       P        00 51 08.3 -1.3
UCC                              dpP      pP       00 51 09.6 +0.7
BAIF  Baives           74.20  42 eP       P        00 51 09.5 -0.3
BAIF                              pmax    pmax
      comp=Z,63nm,1.3s
GAMB  Gambell          74.20 333  IAMs_20 IAMs_20  01 25 17.1
      comp=Z,3µm,21.0s
LOR   Lormes           74.41  45 eP       P        00 51 10.5 -0.6
LOR                               pmax    pmax
      comp=Z,70nm,1.2s
KOWA  Kowa             74.43  79  P       P        00 51 13.1 +1.4
KOWA  Kowa             74.43  79  P       P        00 51 13.7 +2.0
DOU   Dourbes          74.44  42 κP       P        00 51 11.0 -0.2
      comp=Z,44nm,1.1s
BMRD  Maredsous        74.52  42 dpP      P        00 51 12.0 +0.4
BGES  Gesves           74.71  42 dP       P        00 51 11.2 -1.6
BGES                             dpP      pP       00 51 13.5 +1.5
BCLA  Clavier          74.84  41 dP       P        00 51 13.3 -0.2
      comp=Z,49nm,1.0s
BCLA                             dpP      pP       00 51 14.4 +1.6
TIAR  Tiarei           75.01 246 eP       P        00 51 15.5 +0.5
      comp=Z,14nm,1.2s
BEBN  Eben Emael       75.01  41 dP       P        00 51 12.5 -1.9
BEBN                             dpP      pP       00 51 14.7 +1.0
BEBN                             dPcP     PcP      00 51 27.4 -0.8
PPT   Papeete          75.21 246  LR      LR       01 17 34.2
      comp=Z,1µm,18.2s,baz=60,slow=30
PPT2  Papeete2         75.22 246 eP       P        00 51 16.8 +0.5
      comp=Z,83nm,1.3s
PPT2                             eS       S        01 00 53.4 -3.2
      comp=Z,1µm,27.8s
PPT2  Papeete2         75.22 246 eLQ      LQ       01 11 16.3
      comp=Z,3µm,26.2s
PPT2                             eLQ      LQ       01 11 18.4
      comp=Z,5µm,28.5s
PPT2                             eLR      LR       01 14 28.0
      comp=Z,2µm,26.5s,baz=60
MEM   Membach          75.25  41 dP       P        00 51 15.5 -0.3
PAE   Paea             75.25 246 eP       P        00 51 16.9 +0.6
      comp=Z,29nm,1.2s
BHOU  Houvegnez        75.29  41 dpP      P        00 51 16.8 +0.7
BHOU                             dPcP     PcP      00 51 27.3 -2.2
BTNL  Ternell          75.33  41 dP       P        00 51 13.8 -2.6
BTNL                             dpP      pP       00 51 16.9 +1.3
BTNL                             dPcP     PcP      00 51 27.2 -2.5
VIVF  Saint-Julien-l   75.38  47 eP       P        00 51 17.4 +0.6
VIVF                              pmax    pmax
      comp=Z,149nm,1.0s
WLF   Walferdange      75.51  42 dpP      P        00 51 17.7 +0.3
WLF   Walferdange      75.51  42 eP       P        00 51 18.5 +1.1
      comp=Z,101nm,1.1s,baz=284,slow=5.6
WLF   Walferdange      75.51  42  IAmb    IAmb     00 51 19.4
      comp=Z,97nm,1.1s
WLF                               IAMs_20 IAMs_20  01 17 36.5
      comp=Z,2µm,21.0s
TIC   Toumodi          75.57  88 eP       P        00 51 18.7 +0.3
XMAS  Kiritimati       75.58 268  P       P        00 51 20.0 +1.6
LIC   Lamto            75.68  88 eP       P        00 51 19.5 +0.5
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      comp=Z,243nm,1.4s
KONO  Kongsberg        75.69  32⇑eP       P        00 51 19.1 +0.9
KONO                              pmax    pmax
      comp=Z,41nm,1.7s
KONO                              MLR     MLR
      comp=Z,1µm,17.0s
KONO  Kongsberg        75.69  32  P       P        00 51 19.0 +0.9
KONO                              IAmb    IAmb     00 51 19.7
      comp=Z,57nm,1.1s
KONO  Kongsberg        75.69  32  IAMs_20 IAMs_20  01 26 29.5
      comp=Z,2µm,18.0s
DBIC  Dimbokro         75.72  87  P       P        00 51 19.8 +0.6
      comp=Z,7.8nm,0.8s,baz=316,slow=4.0,SNR=9.8
DBIC                              LR      LR       01 21 02.6
      comp=Z,1µm,20.1s,baz=288,slow=33
DBIC  Dimbokro         75.72  87  P       P        00 51 19.8 +0.6
DBIC                              pmax    pmax
      comp=Z,142nm,1.7s
DBIC  Dimbokro         75.72  87  P       P        00 51 19.8 +0.6
DBIC                              IAmb    IAmb     00 51 31.1
      comp=Z,142nm,1.6s
HLG   Helgoland        75.75  37 eP       P        00 51 19.6 +1.0
      comp=Z,314nm,1.2s,baz=284,slow=5.6
BUG   Bochum--Univer   75.89  40 eP       P        00 51 20.2 +0.7
      comp=Z,71nm,1.1s,baz=284,slow=5.6
KIC   Kosan Boka       75.92  88 eP       P        00 51 20.8 +0.5
      comp=Z,51nm,0.8s
AHRW  Bad Neuenahr-A   75.93  41 eP       P        00 51 21.0 +1.2
      comp=Z,102nm,1.1s,baz=284,slow=5.6
HAU   Haudompre        75.94  44 eP       P        00 51 19.6 -0.3
HAU                               pmax    pmax
      comp=Z,74nm,1.1s
NC204 NORSAR Array S   75.95  30  P       P        00 51 19.6 -0.2
MAHO  Mahon            76.02  52  P       P        00 51 32.2  +12
MAHO                              S       S        01 01 06.6 +1.9
IBBN  Ibbenburen       76.02  39 eP       P        00 51 21.1 +0.9
      comp=Z,118nm,1.0s,baz=284,slow=5.6
CABF  La Chapelle      76.03  45 eP       P        00 51 20.4 -0.1
CABF                              pmax    pmax
      comp=Z,98nm,1.0s
MUD   Monsted U'grnd   76.06  35 i P      P        00 51 20.1 -0.1
MUD                               IAmb    IAmb     00 51 22.0
      comp=Z,72nm,1.0s
NAO01 NORSAR Array S   76.09  30  IAmb    IAmb     00 51 22.1
      comp=Z,92nm,1.1s
ORIF  Oris-en-Rattie   76.21  47 eP       P        00 51 22.0 +0.4
ORIF                              pmax    pmax
      comp=Z,41nm,1.0s
NB2   NORSAR Subarra   76.21  30  P       P        00 51 21.3 +0.1
      comp=Z,62nm,1.2s,baz=283,slow=5.9
NB2   NORSAR Subarra   76.21  30  P       P        00 51 21.3 +0.1
      baz=283,slow=5.9
NOA   NORSAR Array B   76.21  30  P       P        00 51 21.4 +0.2
      comp=Z,19nm,0.9s,baz=282,slow=5.6,SNR=38
NOA                               LR      LR       01 20 00.0
      comp=Z,1µm,21.5s,baz=270,slow=32
NB201 NORSAR Array S   76.25  30  P       P        00 51 20.8 -0.5
NB201                             IAmb    IAmb     00 51 23.0
      comp=Z,113nm,1.2s
NC303 NORSAR Array S   76.25  30  IAmb    IAmb     00 51 53.8
      comp=Z,80nm,1.8s
HINF  Hinteralfeld     76.31  44 eP       P        00 51 21.5 -0.5
HINF                              pmax    pmax
      comp=Z,44nm,1.1s
NC602 NORSAR Array S   76.43  30  P       P        00 51 22.4 +0.1
NC602                             IAmb    IAmb     00 51 24.4
      comp=Z,116nm,1.2s
ECH   Echery           76.43  43  P       P        00 51 23.1 +0.4
ECH   Echery           76.43  43  IAmb    IAmb     00 51 24.3
      comp=Z,80nm,1.2s
ECH                               IAMs_20 IAMs_20  01 28 02.1
      comp=Z,2µm,18.0s
NC405 NORSAR Array S   76.43  30  IAmb    IAmb     00 51 37.0
      comp=Z,107nm,1.4s
LPL   La Plagne        76.68  46 eP       P        00 51 24.8 +0.4
LPL                               pmax    pmax
      comp=Z,52nm,1.2s
LPG   La Plagne        76.70  46 eP       P        00 51 25.1 +0.5
LPG                               pmax    pmax
      comp=Z,61nm,1.2s
BNI   Bardonecchia     76.74  47  P       P        00 51 26.1 +1.5
BNI   Bardonecchia     76.74  47  IAMs_20 IAMs_20  01 19 11.1
      comp=Z,2µm,20.0s
SENIN Lac Senin/Sane   76.89  45  IAmb    IAmb     00 51 27.8
      comp=Z,94nm,0.9s
SENIN                             IAMs_20 IAMs_20  01 28 00.2
      comp=Z,2µm,18.0s
LMR   La Mourre        76.97  48 eP       P        00 51 25.7 -0.1
LMR                               pmax    pmax
      comp=Z,53nm,1.1s
FRF   La Foret Royal   77.02  48 eP       P        00 51 26.0 -0.1
FRF                               pmax    pmax
      comp=Z,51nm,1.0s
BFO   Black Forest     77.17  43  P       P        00 51 26.4 -0.5
BFO                               pmax    pmax
      comp=Z,26nm,1.1s
BFO   Black Forest     77.17  43 eP       P        00 51 27.2 +0.3
      comp=Z,24nm,1.0s,baz=284,slow=5.6
BFO                              epP      pwP      00 51 32.4 +0.6
BFO   Black Forest     77.17  43  P       P        00 51 26.4 -0.5
BFO                               IAMs_20 IAMs_20  01 19 57.7
      comp=Z,2µm,19.0s
BSEG  Bad Segeberg     77.21  37 eP       P        00 51 27.8 +0.9
      comp=Z,60nm,1.1s,baz=284,slow=5.6
BSEG                             epP      pwP      00 51 33.4 +1.6
NRDL  Niedersach Rie   77.39  39 eP       P        00 51 29.1 +1.3
      comp=Z,74nm,1.1s,baz=284,slow=5.6
GTTG  Gottingen        77.52  40 eP       P        00 51 29.7 +1.1
      comp=Z,100nm,1.1s,baz=284,slow=5.6
TBI   Tubuai           77.53 240 eS       S        01 01 18.6 -3.1
      comp=Z,1µm,30.5s
TBI   Tubuai           77.53 240 eLQ      LQ       01 12 18.8
      comp=Z,3µm,34.8s
TBI                              eLR      LR       01 15 36.5
      comp=Z,2µm,26.8s
TBI                              eLR      LR       01 15 36.6
      comp=Z,3µm,26.8s,baz=61
STU   Stuttgart        77.64  43  P       P        00 51 30.2 +0.8
STU   Stuttgart        77.64  43 eP       P        00 51 30.0 +0.6
      comp=Z,79nm,0.9s,baz=284,slow=5.6
STU   Stuttgart        77.64  43  IAMs_20 IAMs_20  01 26 28.0
      comp=Z,2µm,20.0s
UBBA  Unterbreizbach   77.70  40 eP       P        00 51 30.7 +1.1
      comp=Z,39nm,1.4s,baz=284,slow=5.6
UBBA                             epP      pwP      00 51 35.0 +0.6
ASSE  Asse, Remlinge   77.81  39 eP       P        00 51 31.5 +1.2
      comp=Z,60nm,1.2s,baz=284,slow=5.6
ASSE                             epP      pwP      00 51 36.6 +1.5
DFRA  Djebel Bou Aff   77.97  55  P       P        00 51 31.0 -0.7
FLTG  Flechtingen      78.11  39 eP       P        00 51 32.4 +0.5
      comp=Z,66nm,1.1s,baz=284,slow=5.6
TUE   Stuetta          78.25  45  P       P        00 51 33.3 +0.1
TUE                               IAmb    IAmb     00 51 35.5
      comp=Z,68nm,1.1s
DAVA  Damuels          78.42  44 i P      P        00 51 34.4 +0.4
      comp=Z,32nm,1.2s,SNR=9.1
UBR   Ueberruh         78.48  44 eP       P        00 51 35.2 +0.9
      comp=Z,68nm,1.5s,baz=284,slow=5.6
CTEI  Djebel Teioual   78.50  56  P       P        00 51 34.5 -0.1
CKFL  Kef-Lekhel       78.67  55  P       P        00 51 34.7 -0.8
NEUB  Neuenburg        78.70  40 eP       P        00 51 36.2 +0.9
      comp=Z,90nm,1.1s,baz=284,slow=5.6
GRFO  Grafenberg       78.72  41  IAMs_20 IAMs_20  01 21 15.5
      comp=Z,2µm,19.0s
GRA1  Grafenberg Arr   78.72  41  P       P        00 51 35.7 +0.3
GRA1                              IAMs_20 IAMs_20  01 21 14.5
      comp=Z,2µm,20.0s
GRF   Grafenberg Arr   78.72  41  P       P        00 51 35.7 +0.3
GRF                               pmax    pmax
      comp=Z,43nm,1.0s
GRF   Grafenberg Arr   78.72  41 eP       P        00 51 36.4 +0.9
      comp=Z,51nm,1.1s,baz=284,slow=5.6
GRF                              eS       S        01 01 40.9 +7.1
GRF                              eL       L        01 20 53.6
      comp=Z,2µm,21.9s
MOX   Moxa             78.73  40 eP       P        00 51 36.3 +0.8
      comp=Z,67nm,1.3s,baz=284,slow=5.6
MOX                              eS       S        01 01 40.8 +6.8
MOX                              eL       L        01 20 43.8
      comp=Z,1µm,22.0s
RGN   Rugen            78.78  36 eP       P        00 51 36.1 +0.5
RGN   Rugen            78.78  36 eP       P        00 51 36.8 +1.2
      comp=Z,90nm,1.0s,baz=284,slow=5.6
RGN                              epP      pwP      00 51 41.7 +1.2
RGN   Rugen            78.78  36  IAMs_20 IAMs_20  01 28 48.6
      comp=Z,2µm,18.0s
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RETA  Reutte            78.96  44 i P      P        00 51 37.1 +0.2
      comp=Z,76nm,1.1s,SNR=29
FETA  Feichten          79.05  44 i P      P        00 51 38.1 +0.6
      comp=Z,35nm,0.9s,SNR=18
FUR   Furstenfeldbru    79.13  43 eP       P        00 51 38.6 +0.9
      comp=Z,71nm,1.2s,baz=284,slow=5.6
CMAH  Djebel Manchou    79.16  55   P      P        00 51 36.7 -1.5
MANZ  Manzenberg        79.20  41 eP       P        00 51 39.1 +1.0
      comp=Z,8.1nm,1.2s,baz=284,slow=5.6
WERD  Werda             79.21  40 eP       P        00 51 39.0 +0.8
      comp=Z,66nm,1.3s,baz=284,slow=5.6
MOTA  Moosalm           79.22  44 i P      P        00 51 38.7 +0.3
      comp=Z,46nm,1.0s,SNR=23
GUNZ  Gunzen            79.25  41 eP       P        00 51 39.3 +0.9
      comp=Z,64nm,1.3s,baz=284,slow=5.6
SALO  Salr              79.25  46   IAmb   IAmb     00 51 39.9
      comp=Z,96nm,0.9s
ABSA  Djebel Ababsia    79.29  55   P      P        00 51 37.9 -1.0
WERN  Wernitzgruen      79.30  41 eP       P        00 51 39.7 +1.1
      comp=Z,84nm,1.3s,baz=284,slow=5.6
SQTA  Sankt Quirin      79.32  44 i P      P        00 51 39.3 +0.4
      comp=Z,28nm,1.0s,SNR=16
TANN  Tannenbergstha    79.32  40 eP       P        00 51 39.7 +0.9
      comp=Z,82nm,1.2s,baz=284,slow=5.6
PRMA  PARMA             79.32  46   P      P        00 51 39.0 +0.3
PRMA                                IAmb   IAmb     00 51 40.2
      comp=Z,73nm,1.2s
ROTZ  Rotzenmuhle       79.32  41 eP       P        00 51 39.9 +1.2
      comp=Z,13nm,1.2s,baz=284,slow=5.6
ARCES ARCESS Array B    79.50  20   P      P        00 51 37.8 -1.6
      comp=Z,12nm,0.9s,baz=287,slow=4.0,SNR=12
ARCES ARCESS Array B    79.50  20   IAmb   IAmb     00 52 06.6
      comp=Z,123nm,1.8s
VLC   Villacollemand    79.52  47   IAmb   IAmb     00 51 40.7
      comp=Z,63nm,0.9s
WATA  Walderalm         79.53  44 i P      P        00 51 40.2 +0.1
      comp=Z,47nm,1.3s,SNR=16
RUE   Ruedersdorf       79.58  38 eP       P        00 51 40.4 +0.4
RUE   Ruedersdorf       79.58  38 eP       P        00 51 40.8 +0.8
      comp=Z,100nm,1.5s,baz=284,slow=5.6
UPP   Uppsala           79.58  30 eP       P        00 51 40.3 +0.4
WTTA  Wattenberg        79.59  44 i P      P        00 51 40.7 +0.3
      comp=Z,60nm,2.1s,SNR=11
FBE   Freiberg          79.73  40 eP       P        00 51 42.2 +1.3
      comp=Z,87nm,1.1s,baz=284,slow=5.6
ZCCA  Zocca             79.88  47   IAmb   IAmb     00 51 43.9
      comp=Z,74nm,0.8s
VSL   Villasalto        79.95  52   IAmb   IAmb     00 51 44.5
      comp=Z,79nm,1.0s
VSL                                 IAMs_20 IAMs_20 01 19 53.7
      comp=Z,1µm,21.0s
TEOL  Teolo             80.10  46   IAmb   IAmb     00 51 44.6
      comp=Z,126nm,0.9s
BRG   Berggiesshubel    80.11  40 eP       P        00 51 44.0 +1.1
      comp=Z,66nm,1.2s,baz=284,slow=5.6
BRG   Berggiesshubel    80.11  40 eP       P        00 51 43.4 +0.4
BRG                                 Amp             00 51 44.9
      comp=Z,55nm,1.1s
BRG   Berggiesshubel    80.11  40   P      P        00 51 52.2 +9.2
BRG                                 Amp             00 51 54.6
      comp=Z,19nm,1.1s
BRG   Berggiesshubel    80.11  40   SKS    S        01 01 47.0 -1.4
BRG   Berggiesshubel    80.11  40   SS     SS       01 06 55.0 -3.0
BRG                                 Amp             01 28 16.0
      comp=Z,1.3nm,17.1s
BRG                                 Amp             01 28 23.0
      comp=E,0.9nm,15.9s
BRG                                 Amp             01 28 26.0
      comp=N,0.9nm,19.0s
TORD  Torodi Ar. Bea    80.13  79   P      P        00 51 43.6 -0.1
      comp=N,5.2nm,0.9s,baz=292,slow=4.8,SNR=28
TORD                                PKPPKP P'P'df   01 18 45.0  +11
      comp=N,1.5nm,1.2s,baz=62,slow=3.7,SNR=4.6
TORD                                LR     LR       01 23 36.1
      comp=N,2µm,21.9s,baz=300,slow=33
CASP  Castiglione de    80.20  48   P      P        00 51 43.9 +0.2
RJOB  Jochberg          80.22  43 eP       P        00 51 44.6 +0.8
      comp=N,43nm,1.2s,baz=284,slow=5.6
ABTA  Abfaltersbach     80.30  44 i P      P        00 51 44.7 +0.5
      comp=N,53nm,1.1s,SNR=33
KHC   Kasperske Hory    80.35  42 eP       P        00 51 45.3 +0.9
KHC                               eS       S        01 01 53.2 +2.0
KHC                                 MLR    MLR
      comp=Z,2µm,20.3s
KHC   Kasperske Hory    80.35  42 eP       P        00 51 45.3 +0.9
KHC                               eS       S        01 01 53.2 +2.0
KHC                                 AMS    AMS      01 21 50.0
      comp=Z,2µm,20.3s
GEC2  GERESS Array S    80.51  42 eP       P        00 51 46.3 +1.0
      comp=Z,78nm,1.2s,baz=284,slow=5.6
GERES GERESS Array B    80.51  42   P      P        00 51 45.2 -0.1
      comp=Z,22nm,0.9s,baz=266,slow=3.6,SNR=41
GERES                               LR     LR       01 22 17.3
      comp=Z,2µm,21.5s,baz=286,slow=32
STAL  STALIGIAL         80.56  45   IAmb   IAmb     00 51 46.8
      comp=Z,58nm,1.0s
PVCC  Panska Ves        80.58  40 eP       P        00 51 46.5 +1.0
PVCC                                MLR    MLR
      comp=Z,1µm,17.7s
PVCC  Panska Ves        80.58  40 eP       P        00 51 46.5 +1.0
PVCC                                AMS    AMS      01 26 30.0
      comp=Z,1µm,17.7s
AAL   Aland             80.61  30 eP       P        00 51 45.3 -0.1
PRU   Pruhonice         80.72  41 eP       P        00 51 46.8 +0.5
PRU                               eS       S        01 01 50.4 -4.5
PRU                                 MLR    MLR
      comp=Z,2µm,17.1s
PRU   Pruhonice         80.72  41 eP       P        00 51 46.8 +0.5
PRU                               ex       x        00 51 57.3
PRU                               eS       S        01 01 50.4 -4.5
PRU                                 AMS    AMS      01 30 00.0
      comp=Z,2µm,17.1s
KBA   Koelnbreinsper    80.76  44 i P      P        00 51 47.5 +0.8
      comp=Z,76nm,1.6s,SNR=6.0
KEST  Kesra             80.89  55   P      P        00 51 48.0 +0.4
      comp=Z,35nm,0.9s,baz=267,slow=2.7,SNR=27
CKRC  Cesky Krumlov     80.90  42 ex       x        00 51 53.1
CKRC                              eS       S        01 01 55.7 -1.2
CKRC                                AMS    AMS      01 22 10.0
      comp=Z,2µm,17.0s
MYKA  Terra Mystica     81.08  44 i P      P        00 51 48.6 +0.2
      comp=Z,60nm,1.6s,SNR=16
MOA   Molln             81.15  43 i P      P        00 51 48.9 +0.2
      comp=Z,39nm,1.1s,SNR=14
CADS  Cadrg             81.26  44 i P      P        00 51 49.8 +0.5
CADS                              eS       S        01 02 00.9 +0.1
GKP   Gorka Klasztor    81.36  37 eP       P        00 51 50.3 +0.8
GKP                               eL       L        01 29 49.1
      comp=Z,2µm,19.0s
GKP   Gorka Klasztor    81.36  37 eP       P        00 51 50.5 +1.0
GKP   Gorka Klasztor    81.36  37   P      P        00 51 50.6 +1.0
VOJS  Vojsko            81.41  45 i P      P        00 51 50.8 +0.6
VOJS                              eS       S        01 02 02.4 -0.1
UPC   Upice             81.47  40 eP       P        00 51 51.1 +0.8
UPC                                 MLR    MLR
      comp=Z,2µm,18.0s
UPC   Upice             81.47  40 eP       P        00 51 51.1 +0.8
UPC                                 AMS    AMS      01 32 50.0
      comp=Z,2µm,18.0s
CHVC  Chvalec           81.47  40 eP       P        00 51 50.9 +0.6
CHVC                                AMS    AMS      01 30 20.0
      comp=Z,1µm,16.3s
KSP   Ksiaz             81.54  39 eP       P        00 51 51.4 +0.7
KSP                               eL       L        01 31 10.3
      comp=Z,2µm,18.3s
KSP   Ksiaz             81.54  39   P      P        00 51 51.3 +0.7
BILL  Bilibino          81.57 339c iP      P        00 51 47.6 -2.8
BILL                              i                 00 51 56.1
BILL                                pmax   pmax
      comp=Z,19nm,1.2s
BILL  Bilibino          81.57 339   P      P        00 51 49.8 -0.7
BILL                                IAmb   IAmb     00 52 16.0
      comp=Z,116nm,1.7s
BILL                                IAMs_20 IAMs_20 01 33 22.0
      comp=Z,2µm,18.0s
JAVS  Javornik          81.57  45 eP       P        00 51 51.2 +0.2
OSTC  Ostas             81.58  40 eP       P        00 51 51.4 +0.5
OSTC                                AMS    AMS      01 30 20.0
      comp=Z,1µm,17.4s
SKDS  Skadanscina       81.64  45 i P      P        00 51 52.0 +0.7
BRJN  Brijuni           81.64  46 i P      P        00 51 50.9 -0.4
DPC   Dobruska-Polom    81.71  40 eP       P        00 51 52.2 +0.6
DPC                                 MLR    MLR
      comp=Z,2µm,18.1s
DPC   Dobruska-Polom    81.71  40 eP       P        00 51 52.2 +0.6
DPC                                 AMS    AMS      01 31 10.0
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      comp=Z,2µm,18.1s
OBKA  Obir              81.72  44 i P      P        00 51 52.2 +0.4
      comp=Z,49nm,1.0s,SNR=22
LJU   Ljubljana         81.84  44⇓iP       P        00 51 52.5 +0.2
LJU   Ljubljana         81.84  44 eP       P        00 51 53.0 +0.7
CEY   Cerknica          81.86  45⇓iP       P        00 51 51.2 -1.3
SMRN  Sveta Marina      81.88  45 i P      P        00 51 51.8 -0.7
SOKA  Soboth            81.98  44 i P      P        00 51 53.0 -0.2
      comp=Z,58nm,1.1s,SNR=38
RIY   Rijeka            82.02  45⇓iP       P        00 51 53.9 +0.7
RIY   Rijeka            82.02  45   P      P        00 51 53.7 +0.5
AQU   L'Aquila          82.12  48   P      P        00 51 54.8 +0.8
AQU   L'Aquila          82.12  48⇓iP       P        00 51 52.3 -1.7
AQU   L'Aquila          82.12  48   IAMs_20 IAMs_20 01 22 47.9
      comp=Z,2µm,22.0s
ARSA  Arzberg           82.14  43 i P      P        00 51 54.4 +0.5
      comp=Z,19nm,1.0s,SNR=10.0
KRUC  Moravsky          82.14  41 eP       P        00 51 54.3 +0.4
CONA  Conrad Observa    82.15  42 i P      P        00 51 54.2 +0.2
      comp=Z,38nm,0.9s,SNR=21
VRAC  Vranov            82.19  41 ⇑P       P        00 51 54.9 +0.8
VRAC  Vranov            82.19  41 eP       P        00 51 54.9 +0.8
RABC  Rab               82.39  46 i P      P        00 51 55.4 +0.2
NVLJ  Novalja           82.50  46 i P      P        00 51 56.0 +0.3
CRES  Cresnjev          82.52  44⇓iP       P        00 51 56.1 +0.2
KLNR  Kaliningrad       82.59  35⇓eP       P        00 51 56.0  0.0
KLNR                                pmax   pmax
      comp=Z,144nm,1.3s
KLNR                                MLR    MLR
      comp=Z,1µm,18.0s
OZLJ  Ozalj             82.59  45 i P      P        00 51 56.8 +0.6
MORC  Moravsky Berou    82.63  40   P      P        00 51 57.4 +0.9
MORC  Moravsky Berou    82.63  40 eP       P        00 51 57.4 +0.9
MORC  Moravsky Berou    82.63  40   IAmb   IAmb     00 51 58.7
      comp=Z,54nm,1.1s
SOP   Sopron            82.67  42 eP       P        00 51 57.4 +0.7
SOP   Sopron            82.67  42   P      P        00 51 57.7 +1.1
DUGI  Dugi Otok         82.80  46 i P      P        00 51 58.4 +1.0
LOBO  Lobor             82.83  44 i P      P        00 51 57.7 +0.2
PTJ   Puntijarka        82.83  44   P      P        00 51 58.3 +0.6
ZST   Bratislava        82.86  42 eP       P        00 51 58.8 +1.2
ZST   Bratislava        82.86  42 eP       P        00 51 58.8 +1.2
ZAG   Zagreb            82.87  44⇓iP       P        00 51 58.8 +1.1
MODS  Modra-Piesok      82.91  42 eP       P        00 51 58.1 +0.2
MODS                                pmax   pmax
      comp=Z,130nm,1.2s
MODS  Modra-Piesok      82.91  42 eP       P        00 51 58.1 +0.2
PLIT  Plitvice          82.92  45 i P      P        00 51 58.5 +0.4
FINES FINESS Array B    82.92  27   P      P        00 51 57.6  0.0
      comp=Z,20nm,0.8s,baz=298,slow=4.1,SNR=38
FINES                               LR     LR       01 25 21.0
      comp=Z,1µm,20.9s,baz=284,slow=33
FIA1  FINESS Array S    82.92  27   P      P        00 51 57.4 -0.3
FIA1                                IAmb   IAmb     00 51 58.8
      comp=Z,42nm,1.1s
MTSE  Matsula           82.96  30 eP       P        00 51 58.3 +0.5
SMOL  Smolenice         82.97  41 eP       P        00 52 00.0 +1.8
SMOL                                pmax   pmax
      comp=Z,50nm,1.1s
SMOL  Smolenice         82.97  41 eP       P        00 52 00.0 +1.8
APA   Apatity           82.97  20⇓iP       P        00 51 57.0 -0.8
APA                                 pmax   pmax
      comp=Z,12nm,0.9s
APA                                 MLR    MLR
      comp=Z,2µm,15.0s
OKC   Ostrava-Krasne    82.98  40 eP       P        00 51 59.2 +1.0
OKC                                 MLR    MLR
      comp=Z,2µm,18.5s
OKC   Ostrava-Krasne    82.98  40 eP       P        00 51 59.2 +1.0
OKC                                 AMS    AMS      01 31 40.0
      comp=Z,2µm,18.5s
JAVC  Velka Javorina    83.01  41 eP       P        00 52 00.2 +1.8
KALN  Kalnik            83.09  44 i P      P        00 51 59.3 +0.4
UDBI  Udbina            83.12  46 i P      P        00 52 00.1 +1.0
LVZ   Lovozero          83.22  20ceP       P        00 51 57.7 -1.4
LVZ                                 pmax   pmax
      comp=Z,95nm,1.4s
LVZ                                 MLR    MLR
      comp=Z,793nm,15.0s
EGYH  Egyhazaskeszo     83.25  42 eP       P        00 52 00.2 +0.6
MORI  Morici            83.29  46 i P      P        00 51 59.6 -0.3
ZIRJ  Zirje             83.31  46 i P      P        00 51 59.6 -0.4
PMSA  Palmer Station    83.34 172 eP       P        00 52 00.3 +0.9
CORL  Corleone          83.34  52   P      P        00 52 00.6 +0.2
CORL                                IAmb   IAmb     00 52 02.2
      comp=Z,59nm,1.1s
PAOL  Paolisi           83.35  49   P      P        00 52 00.6 +0.3
CLTB  Caltabellotta     83.37  53   IAmb   IAmb     00 52 20.4
      comp=Z,42nm,1.2s
MPLH  Magyarpolny       83.47  43 eP       P        00 52 00.4 -0.4
PRIJ  Prijedor          83.63  45⇓iP       P        00 52 03.0 +1.4
KIJV  Kijevo            83.72  46 i P      P        00 52 02.8 +0.7
SRO   Srobarova         83.75  42 eP       P        00 52 03.3 +1.1
SRO                                 pmax   pmax
      comp=Z,58nm,1.1s
SRO   Srobarova         83.75  42 eP       P        00 52 03.3 +1.1
TIH   Tihany            83.78  43 eP       P        00 52 03.2 +0.8
VYHS  Vyhne             83.86  41 eP       P        00 52 04.0 +1.2
VYHS                                pmax   pmax
      comp=Z,60nm,1.2s
VYHS  Vyhne             83.86  41 eP       P        00 52 04.0 +1.2
CSKK  Cskako            83.87  42 eP       P        00 52 03.3 +0.4
BEL   Belsk             83.88  37 eP       P        00 52 03.9 +1.1
BEL                               eL       L        01 33 37.4
      comp=Z,2µm,18.6s
BEL   Belsk             83.88  37   P      P        00 52 04.1 +1.3
SGRT  San Giovanni R    83.97  48   IAmb   IAmb     00 52 04.3
      comp=Z,40nm,0.9s
BLY   Banja Luka        84.01  45⇓iP       P        00 52 04.6 +1.0
LANS  Liptovska Anna    84.03  40 eP       P        00 52 05.5 +1.8
LANS                                pmax   pmax
      comp=Z,32nm,0.9s
LANS  Liptovska Anna    84.03  40 eP       P        00 52 05.5 +1.8
MGRS  Mrkonjic Grad     84.05  45⇓iP       P        00 52 04.8 +0.9
KOVH  Kovagotottos      84.19  44 eP       P        00 52 04.6 +0.2
PABE  Paberze           84.27  33 eP       P        00 52 05.0 +0.4
PABE  Paberze           84.27  33   IAMs_20 IAMs_20 01 31 33.7
      comp=Z,2µm,18.0s
MAKA  Makarska          84.37  46 i P      P        00 52 05.7 +0.2
RICI  Ricice            84.39  46 i P      P        00 52 05.3 -0.2
SUW   Suwalki           84.43  35 eP       P        00 52 05.5  0.0
SUW                               eL       L        01 32 23.4
      comp=Z,1µm,17.4s
SUW   Suwalki           84.43  35 eP       P        00 52 06.0 +0.5
SUW   Suwalki           84.43  35   IAMs_20 IAMs_20 01 25 00.9
      comp=Z,2µm,21.0s
NIE   Niedzica          84.44  40 eP       P        00 52 08.2 +2.4
NIE                               eL       L        01 33 03.4
      comp=Z,1µm,19.1s
NIE   Niedzica          84.44  40   P      P        00 52 08.1 +2.4
VSU   Vasula            84.46  30 eP       P        00 52 05.5 -0.1
VSU   Vasula            84.46  30d iP      P        00 52 05.0 -0.6
VSU                                 pmax   pmax
      comp=Z,242nm,1.2s
VSU                                 MLR    MLR
      comp=Z,4µm,18.0s
MORH  Mrgy, Hungar      84.50  43⇓iP       P        00 52 06.0  0.0
DOB   Doboj             84.64  45 eP       P        00 52 07.6 +0.8
PSZ   Piszkesteto       84.72  41 ⇑P       P        00 52 08.8 +1.6
PSZ   Piszkesteto       84.72  41 eP       P        00 52 08.0 +0.8
PSZ   Piszkesteto       84.72  41   P      P        00 52 08.8 +1.6
PSZ   Piszkesteto       84.72  41   IAMs_20 IAMs_20 01 30 52.2
      comp=Z,2µm,20.0s
KECS  Kecovo            84.89  41 eP       P        00 52 09.3 +1.3
KECS                                pmax   pmax
      comp=Z,15nm,0.9s
KECS  Kecovo            84.89  41 eP       P        00 52 09.3 +1.3
STON  Ston              84.98  47⇓iP       P        00 52 08.0 -0.5
STON  Ston              84.98  47 i P      P        00 52 09.0 +0.5
MATE  Matera            85.00  49 ⇑P       P        00 52 08.7  0.0
STHS  Stebnicka Huta    85.02  40 eP       P        00 52 09.7 +1.0
STHS  Stebnicka Huta    85.02  40 eP       P        00 52 09.6 +0.9
CEL   Celeste           85.18  52   IAMs_20 IAMs_20 01 30 16.0
      comp=Z,1µm,21.0s
CRVS  Cervenica-Dubn    85.34  40 eP       P        00 52 11.7 +1.4
CRVS                                pmax   pmax
      comp=Z,65nm,1.1s
CRVS  Cervenica-Dubn    85.34  40 eP       P        00 52 11.7 +1.4
ISAL  Salakas           85.37  33 eP       P        00 52 10.5 +0.3
HAPS  Han Pijesak,BI    85.43  45⇓iP       P        00 52 11.8 +0.9
TREB  Trebinje          85.48  47 eP       P        00 52 11.3 +0.2
TIP   Timpagrande       85.52  50 ⇑P       P        00 52 11.3 -0.1
TIP   Timpagrande       85.52  50   IAmb   IAmb     00 52 13.6
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      comp=Z,48nm,1.1s
TIP                                 IAMs_20 IAMs_20 01 26 12.0
      comp=Z,1µm,20.0s
PUL   Pulkovo           85.54  28 eP       P        00 52 11.9 +0.9
PUL   Pulkovo           85.54  28ceP       P        00 52 11.4 +0.5
PUL                                 pmax   pmax
      comp=Z,179nm,1.3s
PUL                                 MLR    MLR
      comp=Z,1µm,18.0s
BRY   Bratogost         85.55  46⇓iP       P        00 52 12.3 +0.7
FRGS  Fruska Gora       85.63  44 ⇓P       P        00 52 12.6 +0.8
FRGS  Fruska Gora       85.63  44⇓iP       P        00 52 11.8  0.0
TEKS  Tekeris           85.66  45⇓iP       P        00 52 12.2 +0.3
HCY   Herceg Novi       85.67  47⇓iP       P        00 52 12.9 +0.9
UPM   Unac-Piva         85.70  46⇓iP       P        00 52 13.3 +0.9
AMBH  Ambrzfalva        85.81  43 eP       P        00 52 13.4 +0.9
BBLS  Lazi&#263;i       85.81  45⇓iP       P        00 52 13.1 +0.3
KWP   Kalwaria Pacla    85.83  39 eP       P        00 52 14.0 +1.3
KWP                               eL       L        01 31 14.7
      comp=Z,794nm,22.4s
KWP   Kalwaria Pacla    85.83  39   P      P        00 52 14.5 +1.8
KOLS  Kolonicke sedl    85.83  40 eP       P        00 52 14.4 +1.7
KOLS                                pmax   pmax
      comp=Z,65nm,1.3s
KOLS  Kolonicke sedl    85.83  40 eP       P        00 52 14.4 +1.7
RUDO  Rudo              85.88  46⇓iP       P        00 52 13.1 +0.1
UZH   Uzhgorod          85.95  40⇓iP       P        00 52 14.5 +1.2
UZH                               e                 00 52 22.0
UZH                               eS       S        01 02 47.6 -0.3
UZH                               ePS               01 03 46.2
NACGM Naroch            85.99  33 i P      P        00 52 13.6 +0.3
DIVS  Divibare          86.13  45⇓iP       P        00 52 13.7 -0.7
DIVS  Divibare          86.13  45   IAmb   IAmb     00 52 16.8
      comp=Z,66nm,1.0s
DIVS                                IAMs_20 IAMs_20 01 25 10.5
      comp=Z,1µm,20.0s
BEO   Beograd           86.19  44   P      P        00 52 14.7 +0.2
PDG   Podgorica         86.21  47 ⇓P       P        00 52 16.0 +1.3
PDG   Podgorica         86.21  47⇓iP       P        00 52 15.7 +1.0
PDG   Podgorica         86.21  47   IAmb   IAmb     00 52 17.0
      comp=Z,76nm,1.1s
PDG                                 IAMs_20 IAMs_20 01 30 19.9
      comp=Z,1µm,20.0s
DRME  Dracevica, Mon    86.25  47⇓iP       P        00 52 16.2 +1.3
TRPA  Tarpa             86.29  41 ⇑P       P        00 52 15.8 +0.9
TRPA  Tarpa             86.29  41 eP       P        00 52 15.0 +0.1
TIM   Timisoara         86.35  43 ⇑P       P        00 52 16.4 +1.1
BANR  Banloc            86.42  43 ⇑P       P        00 52 17.5 +1.9
SIRR  Siria             86.44  43 ⇓P       P        00 52 15.9 +0.1
LVV   L'vov             86.54  39 eP       P        00 52 16.8 +0.6
BZS   Buzias            86.65  43 ⇑P       P        00 52 17.8 +1.0
BZS   Buzias            86.65  43   P      P        00 52 17.5 +0.7
MNK   Minsk             86.74  33 i P      P        00 52 16.6 -0.4
MNK                               i                 00 55 38.7
MNK                               i PPP    PPP      00 57 35.6
MNK                               i S      S        01 02 42.6  -13
MNK                               i SS     SS       01 08 42.8 +6.9
MNK                               i SSS    SSS      01 12 09.9
MNK                                 pmax   pmax
      comp=Z,64nm,1.0s
MNK                                 pmax   pmax
      comp=E,5.0nm,1.2s
MNK                                 pmax   pmax
      comp=N,29nm,1.1s
MNK                                 MLR    MLR
      comp=N,667nm,20.0s
MNK                                 MLR    MLR
      comp=Z,607nm,19.0s
MNK   Minsk             86.74  33 i P      P        00 52 16.7 -0.4
      comp=E,5.0nm,1.2s
MNK                               i P      P        00 52 16.7 -0.4
      comp=N,29nm,1.1s
MNK                               i P      P        00 52 16.7 -0.4
      comp=Z,64nm,1.0s,baz=117
MNK                               i PP     PP       00 55 38.8  0.0
MNK                               i PPP    PPP      00 57 35.6
MNK                               i S      S        01 02 42.6  -13
MNK                               i SS     SS       01 08 42.8 +6.9
MNK                               i SSS    SSS      01 12 09.9
MNK                               i LQ     LQ       01 21 40.8
MNK                               i LR     LR       01 28 44.9
MNK                               i LRM    MLR      01 32 19.1
      comp=N,667nm,19.5s
MNK                               i LRM    MLR      01 32 21.2
      comp=E,67nm,16.6s
MNK                               i LRM    MLR      01 32 22.8
      comp=Z,607nm,18.8s
DRGR                    86.91  42 ⇑P       P        00 52 18.9 +0.7
DRGR                    86.91  42   P      P        00 52 18.7 +0.5
TIR   Tirane            87.02  48   P      P        00 52 19.7 +1.0
TIR                                 pmax   pmax
      comp=Z,55nm,1.0s
TIR                                 MLR    MLR
      comp=Z,1µm,21.0s
TIR   Tirane            87.02  48   P      P        00 52 19.7 +1.0
TIR                                 IAmb   IAmb     00 52 21.4
      comp=Z,55nm,1.0s
MDVR  Moldovita         87.03  44 ⇑P       P        00 52 20.2 +1.4
BMR   Baia Mare         87.06  41 ⇑P       P        00 52 20.1 +1.3
BMR   Baia Mare         87.06  41   P      P        00 52 19.5 +0.7
PHP   Peshkopia         87.30  47   P      P        00 52 21.6 +1.5
DEV   Deva              87.39  43 ⇑P       P        00 52 21.7 +1.3
DEV   Deva              87.39  43   P      P        00 52 21.6 +1.3
BOVS  Bovan             87.45  45 ⇑P       P        00 52 21.7 +1.0
CBBR  Cluj-Babes-Bol    87.45  42 ⇑P       P        00 52 21.9 +1.2
HERR  Herculane         87.45  44 ⇑P       P        00 52 21.5 +0.8
GZR   Gura Zlata        87.49  43 ⇑P       P        00 52 21.9 +0.9
CJR   Cluj-Napoca       87.50  42 ⇑P       P        00 52 22.6 +1.6
CJR   Cluj-Napoca       87.50  42   P      P        00 52 22.1 +1.1
DJES  Djerdap           87.60  44 ⇓P       P        00 52 23.3 +1.9
OHR   Ohrid             87.76  48 i P      P        00 52 24.3 +2.0
ARCR  ARCALIA           87.83  41 ⇓P       P        00 52 23.6 +1.1
SKO   Skopje            87.89  47 i P      P        00 52 24.4 +1.5
KBN   Korca             87.93  48   P      P        00 52 25.0 +1.8
KBN   Korca             87.93  48   P      P        00 52 24.7 +1.5
KBN                                 pmax   pmax
      comp=Z,82nm,1.1s
KBN   Korca             87.93  48   P      P        00 52 24.7 +1.5
PUNG  Punghina          88.03  44 ⇓P       P        00 52 24.9 +1.5
LOT   Lotru             88.11  43 ⇑P       P        00 52 24.6 +0.5
BURAR Bucovina Array    88.15  40 ⇓P       P        00 52 24.7 +0.6
MDB   Medias            88.23  42 ⇓P       P        00 52 26.2 +1.8
FNA   Florina           88.29  48   P      P        00 52 25.8 +0.9
FNA   Florina           88.29  48   P      P        00 52 25.5 +0.6
FNA                                 pmax   pmax
      comp=Z,56nm,1.1s
FNA   Florina           88.29  48   P      P        00 52 25.5 +0.6
FNA                                 IAmb   IAmb     00 52 27.1
      comp=Z,56nm,1.1s
JAN   Janina            88.33  49   P      P        00 52 26.0 +0.9
BAIL  Bailesti          88.40  44 ⇓P       P        00 52 26.9 +1.7
TIXI  Tiksi             88.45 351⇑eP       P        00 52 23.8 -1.1
TIXI                                pmax   pmax
      comp=Z,21nm,0.6s
TIXI                                MLR    MLR
      comp=Z,3µm,17.0s
TIXI  Tiksi             88.45 351   P      P        00 52 23.6 -1.3
TIXI                                IAmb   IAmb     00 52 28.5
      comp=Z,26nm,0.7s
KPRO  Kipourio          88.59  48   P      P        00 52 27.8 +1.5
ARR   Arges             88.70  43 ⇑P       P        00 52 28.3 +1.6
JOSR  Joseni            88.72  41 ⇓P       P        00 52 28.2 +1.5
KZN   Kozani            88.74  48   P      P        00 52 28.0 +0.9
KLMR  Klimovskoe        88.86  25 eP       P        00 52 25.6 -1.4
KLMR                              e                 00 55 54.3
KLMR                              eS       SKSac    01 02 54.5 -3.0
KLMR                              eSS      SS       01 09 06.5 +0.1
KLMR                              eSSS     SSS      01 12 41.2
KLMR                                pmax   pmax
      comp=Z,19nm,1.2s
KLMR  Klimovskoe        88.86  25 eP       P        00 52 25.7 -1.3
KLMR                                AMP             00 52 27.7
      comp=Z,19nm,1.2s
KLMR                              ePP      PP       00 55 54.3 -1.3
KLMR                              eS       SKSac    01 02 54.5 -3.0
KLMR                              eS       SKSac    01 02 54.5 -3.0
KLMR                              eSS      SS       01 09 06.6 +0.1
KLMR                              eSS      SS       01 09 06.6 +0.1
KLMR                              eSSS     SSS      01 12 41.3
KLMR                              eSSS     SSS      01 12 41.3
KLMR                                LQ     LQ       01 23 38.7
KLMR                                LQ     LQ       01 23 38.7
KLMR                                LR     LR       01 25 39.6
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VTS	Vitosha	88.87	45	⇑P	P	00 52 29.3	+1.6
VTS	Vitosha	88.87	45	IAmb	IAmb	00 52 30.1	
	comp=Z,43nm,1.1s						
VAY	Valandovo	88.92	47	i P	P	00 52 29.2	+1.5
DOPR	Dopca	88.94	42	⇑P	P	00 52 29.2	+1.4
GRG	Griva	88.94	47	P	P	00 52 29.2	+1.3
VOIR		88.94	42	⇑P	P	00 52 29.1	+1.2
VLAD	Vladila	89.11	44	⇑P	P	00 52 29.9	+1.3
STFAR	Stefanesti-Arg	89.12	43	⇑P	P	00 52 30.2	+1.6
OZUR		89.14	42	⇑P	P	00 52 30.1	+1.4
AKASG	Malin Array Be	89.18	36	P	P	00 52 27.9	-0.8
	comp=Z,6.2nm,0.8s,baz=294,slow=3.6,SNR=20						
AKASG				LR	LR	01 27 42.4	
	comp=Z,1µm,21.6s,baz=295,slow=32						
AKASG	Malin Array Be	89.18	36	i P	P	00 52 27.8	-1.0
AKASG				pmax	pmax		
	comp=Z,6.0nm,0.8s						
AKBB	Malin Array Si	89.18	36	ceP	P	00 52 28.3	-0.5
AKBB	Malin Array Si	89.18	36	P	P	00 52 27.9	-0.8
THL	Klokotos Trika	89.20	49	P	P	00 52 29.4	+0.3
KNT	Kendrikon	89.21	47	P	P	00 52 30.0	+0.9
HUMR	Humele	89.27	43	⇑P	P	00 52 30.0	+0.7
EVR	Evrytania	89.29	49	P	P	00 52 31.3	+1.6
THE	Thessaloniki	89.46	47	P	P	00 52 31.2	+0.9
MAKR	Makrakomi, Fth	89.49	49	P	P	00 52 32.4	+1.9
MLR	Muntele Rosu	89.50	42	⇑P	P	00 52 32.0	+1.4
MLR	Muntele Rosu	89.50	42	P	P	00 52 31.7	+1.2
MLR	Muntele Rosu	89.50	42	IAMs_20	IAMs_20	01 36 31.6	
	comp=Z,2µm,18.0s						
ANX	Ano Chora	89.50	50	P	P	00 52 32.5	+1.8
PLVB	Pleven	89.50	44	⇑P	P	00 52 31.9	+1.5
TESR	Tescani	89.51	41	⇑P	P	00 52 30.6	+0.2
COVR	Voineasa-Covas	89.51	42	⇑P	P	00 52 31.9	+1.4
EFP	Efpalio	89.55	50	P	P	00 52 32.8	+2.0
HORT	Hortiatis	89.57	47	P	P	00 52 32.0	+1.1
DRO	Drossia	89.59	50	P	P	00 52 33.1	+2.1
AGG	Agios Georgios	89.63	49	P	P	00 52 32.4	+1.2
AGG	Agios Georgios	89.63	49	P	P	00 52 32.2	+1.0
AGG				pmax	pmax		
	comp=Z,99nm,1.0s						
AGG	Agios Georgios	89.63	49	P	P	00 52 32.2	+1.0
SOH	Sokhos	89.66	47	P	P	00 52 32.4	+1.1
LAKA	Lakka	89.67	50	P	P	00 52 33.1	+1.7
TRIZ	Trizonia	89.69	50	P	P	00 52 33.2	+1.8
SRS	Serrai	89.71	47	P	P	00 52 31.2	-0.3
NEHR	Nehoiu	89.75	42	⇑P	P	00 52 32.2	+0.7
SECR		89.77	42	⇓P	P	00 52 32.6	+0.9
PLOR	Plostina	89.79	41	⇑P	P	00 52 32.3	+0.5
NVR	Nevrokopi	89.80	46	P	P	00 52 32.5	+0.5
VRI	Vrincioaia	89.83	41	⇑P	P	00 52 32.6	+0.6
VRI	Vrincioaia	89.83	41	P	P	00 52 34.4	+2.4
SORM	Soroca	89.84	39	⇑P	P	00 52 31.9	+0.1
KLV	Kalavryta, Ach	89.87	50	P	P	00 52 33.5	+1.1
ZIMR		89.88	44	⇑P	P	00 52 33.4	+1.2
PLG	Polygyros	89.90	47	P	P	00 52 33.5	+1.1
ITM	Ithomi	90.04	51	P	P	00 52 34.1	+1.0
ITM	Ithomi	90.04	51	P	P	00 52 33.4	+0.3
ITM				IAmb	IAmb	00 52 35.4	
	comp=Z,48nm,1.0s						
SULR		90.04	43	⇑P	P	00 52 33.6	+0.7
GUR	Goura	90.05	50	P	P	00 52 34.0	+0.7
NEO	Neokhori	90.16	48	P	P	00 52 34.2	+0.5
PAIG	Paliouri	90.24	48	P	P	00 52 34.5	+0.5
LTK	Loutraki	90.48	50	P	P	00 52 35.0	-0.1
KIS	Kishinev	90.63	40	eP	P	00 52 36.0	+0.4
KIS				eS	S	01 03 31.0	-1.4
KIS	Kishinev	90.63	40	eP	P	00 52 36.0	+0.4
KIS				eS	S	01 03 31.0	-1.4
MILM	Milestii Mici	90.66	40	⇑P	P	00 52 36.0	+0.3
MILM	Milestii Mici	90.66	40	d iP	P	00 52 35.5	-0.3
MILM				e		00 52 40.0	
MILM				eS	S	01 03 28.0	-4.7
MILM				pmax	pmax		
	comp=Z,100nm,1.0s						
VILL	Villia	90.67	50	P	P	00 52 36.8	+0.7
RAZG	Razgrad	90.67	44	⇑P	P	00 52 37.0	+1.1
PRGR	Permogore	90.70	22	eP	P	00 52 35.0	-0.6
PRGR				pmax	pmax		
	comp=Z,41nm,1.0s						
THAS	Thassos island	90.70	47	P	P	00 52 35.8	-0.3
EPID	Epidavros	90.75	50	P	P	00 52 37.7	+1.3
OBN	Obninsk	90.81	30	⇑P	P	00 52 36.1	-0.1
OBN	Obninsk	90.81	30	d iP	P	00 52 34.7	-1.5
OBN				i		00 52 42.0	
OBN				i		00 56 19.1	
OBN				i S	SKSac	01 03 06.2	-2.8
OBN				i SS	SS	01 09 45.4	+11
OBN				pmax	pmax		
	comp=Z,51nm,1.2s						
OBN				MLR	MLR		
	comp=Z,1µm,17.0s						
OBN	Obninsk	90.81	30	P	P	00 52 35.0	-1.2
OBN				IAmb	IAmb	00 52 36.7	
	comp=Z,51nm,1.2s						
OBN				IAMs_20	IAMs_20	01 27 57.2	
	comp=Z,1µm,20.0s						
KRND	KRANIDI	90.86	50	P	P	00 52 37.3	+0.4
MOS	Moscow	90.97	29	eP	P	00 52 35.3	-1.7
MOS				e		01 03 21.7	
MOS				pmax	pmax		
	comp=Z,49nm,1.5s						
MOS				MLR	MLR		
	comp=Z,1µm,19.0s						
CFR	Carcaliu	91.02	42	⇑P	P	00 52 37.4	0.0
RDO	Rodhopi	91.04	46	P	P	00 52 38.3	+0.7
HARR	Harsova	91.11	42	⇑P	P	00 52 38.7	+0.8
PTL	Penteli	91.12	49	P	P	00 52 39.0	+0.9
VLY	Voula,Athens	91.14	50	P	P	00 52 38.6	+0.4
KTHA	Kythira Island	91.23	51	P	P	00 52 40.1	+1.4
TLBR	Topalu	91.25	42	⇓P	P	00 52 39.3	+0.8
ICOR	Ion Corvin	91.28	43	⇓P	P	00 52 40.0	+1.3
LIA	Limnos Island	91.31	47	P	P	00 52 38.6	-0.3
SMTH	Samothraki Isl	91.32	47	P	P	00 52 36.6	-2.4
TLCR		91.45	41	⇑P	P	00 52 40.1	+0.6
PURM	Purcari	91.49	40	⇑P	P	00 52 40.2	+0.6
ALN	Alexandroupoli	91.49	46	P	P	00 52 40.2	+0.4
ALN	Alexandroupoli	91.49	46	P	P	00 52 40.0	+0.3
ALN				pmax	pmax		
	comp=Z,50nm,1.0s						
ALN	Alexandroupoli	91.49	46	P	P	00 52 40.0	+0.3
ALN				IAmb	IAmb	00 52 41.6	
	comp=Z,50nm,1.0s						
TIRR	Tirgusor	91.52	42	⇑P	P	00 52 40.8	+1.0
EDRB	Edirne	91.57	45	P	P	00 52 40.1	0.0
ENEZ	Enez	91.64	46	P	P	00 52 39.5	-0.9
MFTR	Murfatlar	91.65	42	⇑P	P	00 52 41.8	+1.4
GADA	Gvkgeada	91.69	47	P	P	00 52 41.0	+0.3
EZN	Ezine	92.14	47	P	P	00 52 43.3	+0.5
PET	Petropavlovsk	92.42	328	eP	P	00 52 37.8	-5.9
PET				eS	SKKSac	01 03 35.6	-0.1
PET				pmax	pmax		
	comp=Z,200nm,9.3s						
PET				MLR	MLR		
	comp=Z,2µm,18.0s						
PET	Petropavlovsk	92.42	328	IAMs_20	IAMs_20	01 33 57.2	
	comp=Z,1µm,21.0s						
PETK	Petropavlovsk-	92.85	329	P	P	00 52 44.6	-1.1
	comp=Z,4.2nm,0.8s,baz=75,slow=12,SNR=3.3						
PETK				LR	LR	01 38 47.7	
	comp=Z,1µm,19.2s,baz=44,slow=38						
NRIK	Noril'sk	92.89	4	LR	LR	01 34 12.1	
	comp=Z,1µm,21.8s,baz=9.0,slow=35						
EDC	Edincik	92.98	46	P	P	00 52 47.6	+0.9
LPSR	Galich'ya Gora	93.38	32	eP	P	00 52 47.5	-0.7
LPSR				pmax	pmax		
	comp=Z,60nm,1.0s						
KIRV	Kirov	94.16	23	⇓eP	P	00 52 50.8	-0.9
VSR	Storozhevoye	94.30	33	eP	P	00 52 51.0	-1.4
VSR				pmax	pmax		
	comp=Z,20nm,1.3s						
VRH	Novokhopyorsk	95.60	32	eP	P	00 52 57.6	-0.8
VRH				pmax	pmax		
	comp=Z,20nm,0.8s						
ANN	Anapa	96.93	39	eP	P	00 53 03.2	-1.4
ANN				e		00 56 57.5	
ANN				eSS	SS	01 10 56.0	-6.8
ANN				pmax	pmax		
	comp=Z,50nm,1.0s						
BR131	Keskin Array S	97.19	45	P	P	00 53 05.7	-0.4
BR131				pmax	pmax		
	comp=Z,11nm,1.1s						
BR131	Keskin Array S	97.19	45	P	P	00 53 05.7	-0.4
BRTR	Keskin Array B	97.19	45	P	P	00 53 05.5	-0.6
	comp=Z,3.9nm,0.9s,baz=261,slow=3.2,SNR=17						
BRTR				PP	PP	00 57 05.7	+4.0
	comp=Z,1.9nm,1.1s,baz=327,slow=6.1,SNR=3.8						
BRTR				PKKPbc	PKKPdf	01 09 54.4	+7.0
	comp=Z,0.8nm,0.7s,baz=117,slow=3.7,SNR=6.0						
BRTR				LR	LR	01 36 19.9	
	comp=Z,435nm,18.5s,baz=308,slow=35						
BRTR	Keskin Array B	97.19	45	i P	P	00 53 06.1	0.0
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BRTR	Keskin Array B	97.19	45	P	P	00 53 05.0	-1.1
SOC	Sochi	98.98	39	eP	P	00 53 13.2	-0.6
SOC				e		00 57 14.6	
SOC				ePPP	PPP	00 59 20.3	
SOC				eS	SKSac	01 03 51.4	-2.0
SOC				eSS	SS	01 11 32.8	+1.2
SOC				MLR	MLR		
	comp=Z,775nm,17.0s						
ARU	Arti	99.06	21	d iP	Pdif	00 53 13.8	-0.2
ARU						00 57 16.1	
ARU				S	SKSac	01 03 52.3	-1.0
ARU				SP	SP	01 06 06.8	-3.7
ARU				SS	SS	01 11 29.8	-2.1
ARU				pmax	pmax		
	comp=Z,12nm,1.1s						
ARU				MLR	MLR		
	comp=Z,1µm,17.0s						
ARU	Arti	99.06	21		Pdif	00 53 13.8	-0.2
ARU				IAmb	IAmb	00 53 42.1	
	comp=Z,48nm,1.8s						
ARU				IAMs_20	IAMs_20	01 40 11.9	
	comp=Z,1µm,18.0s						
BNN	Bunyan	99.10	44	IAmb	IAmb	00 53 16.1	
	comp=Z,27nm,1.1s						
SVE	Sverdlovsk	99.43	20	eP	Pdif	00 53 15.3	-0.3
SVE				MLR	MLR		
	comp=Z,2µm,23.0s						
KIV	Kislovodsk	100.50	37	eP	Pdif	00 53 20.7	-0.1
KIV				e		01 03 59.6	
KIV				eSS	SS	01 11 50.1	-2.9
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,528nm,20.0s						
KBZ	Khabaz	100.76	37	P	Pdif	00 53 22.1	+0.3
	comp=Z,4.0nm,0.9s,baz=341,slow=2.7,SNR=4.9						
KBZ	Khabaz	100.76	37	⇓eP	Pdif	00 53 21.7	0.0
KBZ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KBZ				MLR	MLR		
	comp=Z,634nm,17.0s						
VNA2	Neumayer--Watz	101.63	161	Pdiff	Pdif	00 53 27.0	+2.1
SNAA	Sanae	103.26	161	IAMs_20	IAMs_20	01 42 01.3	
	comp=Z,1µm,20.0s						
MAK	Makhachkala	103.86	36	eP	Pdif	00 53 33.2	-2.3
MAK				i		00 57 47.5	
MAK				pmax	pmax		
	comp=Z,429nm,1.8s						
MAK				MLR	MLR		
	comp=Z,1µm,18.0s						
TSUM	Tsumeb	104.34	106	IAMs_20	IAMs_20	01 32 09.3	
	comp=Z,1µm,20.0s						
QSPA	South Pole Qui	107.63	180	IAMs_20	IAMs_20	01 44 45.7	
	comp=Z,1µm,21.0s						
ZALV	Zalesovo Beam	107.75	8	PKiKP	PKiKP	00 58 00.6	+0.3
	comp=Z,0.4nm,0.4s,baz=343,slow=4.6,SNR=4.1						
ZALV				PP	PP	00 58 16.8	-3.2
	comp=Z,1.6nm,0.8s,baz=342,slow=3.8,SNR=4.3						
NVL	N'lazarevskaya	107.80	160	eP	Pdif	00 53 50.6	-1.7
NVL				pmax	pmax		
	comp=Z,13nm,1.0s						
URZ	Urewera	109.20	235	IAMs_20	IAMs_20	01 33 28.5	
	comp=Z,1µm,20.0s						
KURBB	Kurchatov Arra	109.84	13	PKKPbc	PKKPbc	01 09 07.5	-1.3
	comp=Z,1.1nm,0.8s,baz=176,slow=2.4,SNR=8.4						
TLY	Talaya	110.76	356	⇓iPKIKP	PKiKP	00 58 03.6	-2.5
TLY				MLR	MLR		
	comp=Z,1µm,20.0s						
MBAR	Mbarara	111.75	83	IAMs_20	IAMs_20	01 45 11.7	
	comp=Z,1µm,20.0s						
LSZ	Lusaka	113.30	99	IAMs_20	IAMs_20	01 53 40.2	
	comp=Z,1µm,20.0s						
MAJO	Matsushiro	114.07	325	IAMs_20	IAMs_20	01 50 46.3	
	comp=Z,1µm,20.0s						
MKAR	Makanchi Array	114.26	12	PKP	PKiKP	00 58 10.8	-2.1
	comp=Z,0.6nm,0.7s,baz=38,slow=6.1,SNR=3.7						
MKAR				PKKPbc	PKKPbc	01 08 50.4	-3.8
	comp=Z,0.7nm,0.7s,baz=140,slow=4.0,SNR=4.1						
RAYN	Ar Rayn	114.33	53	IAMs_20	IAMs_20	01 46 20.3	
	comp=Z,1µm,22.0s						
LODK	Lodwar	114.74	78	IAMs_20	IAMs_20	01 41 58.7	
	comp=Z,1µm,22.0s						
INU	Inuyama	115.61	325	IAMs_20	IAMs_20	01 53 18.2	
	comp=Z,952nm,19.0s						
FURI	Furi	115.67	71	IAMs_20	IAMs_20	01 51 32.2	
	comp=Z,1µm,19.0s						
DZM	Mont Dzumac	116.02	254	ePS	PS	01 09 03.0	-0.2
	comp=Z,395nm,24.1s						
DZM	Mont Dzumac	116.02	254	eLR	LR	01 33 16.4	
	comp=Z,1µm,25.1s						
WMQ	Urumqi	118.06	8	ePKP	PKiKP	00 58 20.4	0.0
WMQ				LR	LR		
	comp=Z,2µm,20.7s						
WMQ				LR	LR		
	comp=Z,2µm,20.7s						
KMBO	Kilima Mbogo	118.08	82	IAMs_20	IAMs_20	01 51 37.2	
	comp=Z,1µm,19.0s						
ATD	Arta Tunnel	118.23	66	IAMs_20	IAMs_20	01 51 56.7	
	comp=Z,902nm,19.0s						
KSRS	Korea Array	118.37	333	PKP	PKPdf	00 58 19.9	-1.1
	comp=Z,2.8nm,0.7s,baz=47,slow=1.2,SNR=9.6						
KSAR	Wonju Array Be	118.39	333	PKIKP	PKPdf	00 58 19.4	-1.6
KSAR	Wonju Array Be	118.39	333	PKPdf	PKPdf	00 58 19.4	-1.6
KIBK	Kibwezi	119.22	83	IAMs_20	IAMs_20	01 50 04.7	
	comp=Z,1µm,21.0s						
HNR	Honiara	119.51	269	IAMs_20	IAMs_20	01 42 07.9	
	comp=Z,729nm,20.0s						
HHC	Hu-ho-hao-te	120.43	348	ePKP	PKPdf	00 58 21.4	-3.6
HHC				LR	LR		
	comp=Z,1µm,16.1s						
HHC				LR	LR		
	comp=Z,2µm,19.0s						
BTO	Baotou	120.95	349	SS	SS	01 16 08.3	-17
BTO				LR	LR		
	comp=N,7µm,21.2s						
BTO				LR	LR		
	comp=E,4µm,15.5s						
UOSS	Minazif	121.19	45	IAMs_20	IAMs_20	02 00 57.7	
	comp=Z,594nm,20.0s						
GTA	Gaotai	123.18	358	PKP	PKPdf	00 58 29.1	-1.3
GTA				PP	PP	01 00 15.0	+6.4
GTA				SS	SS	01 16 53.4	-0.3
GTA				AMB	AMB		
	comp=Z,130nm,6.0s						
GTA				LR	LR		
	comp=Z,710nm,22.3s						
GTA				LR	LR		
	comp=Z,1µm,20.3s						
NIL	Nilore	123.72	25	IAMs_20	IAMs_20	01 58 03.3	
	comp=Z,1µm,18.0s						
MAW	Mawson	125.27	164	PKP	PKPdf	00 58 33.0	-0.2
	comp=Z,3.8nm,0.9s,baz=281,slow=5.8,SNR=6.2						
MAW	Mawson	125.27	164	PKIKP	PKiKP	00 58 33.8	+0.3
MAW	Mawson	125.27	164	PKPdf	PKiKP	00 58 33.8	+0.3
LZH	Lanzhou	126.24	354	ePKP	PKPdf	00 58 34.3	-2.1
LZH				LR	LR		
	comp=Z,1µm,20.0s						
LZH				LR	LR		
	comp=Z,1µm,20.7s						
SSE	Sheshan	126.65	335	PKP	PKiKP	00 58 38.9	+1.4
SSE				PP	PP	01 00 37.5	+5.5
SSE				SS	SS	01 17 39.6	+1.8
SSE				AMB	AMB		
	comp=Z,74nm,4.6s						
SSE				LR	LR		
	comp=Z,140nm,23.9s						
SSE				LR	LR		
	comp=Z,770nm,23.1s						
NJ2	Nanjing	126.68	338	ePKP	PKiKP	00 58 38.0	+0.4
NJ2				LR	LR		
	comp=Z,1µm,20.1s						
NJ2				LR	LR		
	comp=Z,2µm,22.9s						
XAN	Xi'an	127.53	349	PKP	PKPdf	00 58 36.5	-2.3
XAN				PP	PP	01 00 40.3	+2.6
XAN				SS	SS	01 17 50.4	+2.0
XAN				AMB	AMB		
	comp=Z,180nm,5.5s						
XAN				LR	LR		
	comp=Z,1µm,19.6s						
XAN				LR	LR		
	comp=Z,2µm,22.8s						
WHN	Wuhan	129.55	342	⇓PKP	PKiKP	00 58 44.9	+1.6
CD2	Chengdu	131.37	353	PKP	PKPdf	00 58 45.8	-0.4
CD2				SKS	SKSdf	01 05 55.3	-3.8
CD2				AMB	AMB		
	comp=Z,160nm,7.1s						
CD2				LR	LR		
	comp=Z,2µm,22.6s						
CAN	Canberra	131.69	238	IAMs_20	IAMs_20	01 49 19.6	
	comp=Z,980nm,19.0s						
VOI	Vohitsoka	131.75	104	IAMs_20	IAMs_20	01 54 46.2	
	comp=Z,985nm,20.0s						
LSA	Lhasa	132.42	8	IAMs_20	IAMs_20	02 00 07.6	
	comp=Z,1µm,22.0s						
YULB	Yu-li	133.29	330	IAMs_20	IAMs_20	02 09 55.4	
	comp=Z,882nm,20.0s						
GYA	Guiyang	135.33	349	⇑PKP	PKiKP	00 58 54.8	-0.5
GYA				PP	PP	01 01 32.0	+3.9
GYA				LR	LR		
	comp=Z,1µm,19.3s						
GYA				LR	LR		
	comp=Z,1µm,20.6s						
MSEY	Mahe Island	136.38	78	IAMs_20	IAMs_20	01 53 06.0	
	comp=Z,1µm,22.0s						
COEN	Coen	136.52	268	PKPdf	PKPdf	00 58 56.5	+0.4
KMI	Kunming	137.21	354	PKP	PKiKP	00 58 58.6	-0.7
KMI				LR	LR		
	comp=Z,730nm,23.4s						
KMI				LR	LR		
	comp=Z,1µm,23.4s						
KMI				LR	LR		
	comp=Z,1µm,28.1s						
STKA	Stephens Creek	138.31	242	PKP	PKPdf	00 58 58.1	-0.9
	comp=Z,2.3nm,0.5s,baz=115,slow=7.8,SNR=6.2						
STKA	Stephens Creek	138.31	242	PKIKP	PKPdf	00 58 58.7	-0.2
STKA	Stephens Creek	138.31	242	PKPdf	PKPdf	00 58 58.7	-0.2
QIZ	Qiongzhong	141.72	342	PKP	PKPdf	00 59 04.6	-0.9
QIZ				PP	PP	01 02 07.8	0.0
QIZ				SS	SS	01 20 38.9	-0.6
QIZ				LR	LR		
	comp=Z,740nm,21.0s						
QIZ				LR	LR		
	comp=Z,580nm,18.6s						
QIZ				LR	LR		
	comp=Z,840nm,19.2s						
BBOO	Buckleboo	142.71	239	PKPdf	PKPdf	00 59 07.6	+0.7
DAV	Davao City (W)	143.35	310	IAMs_20	IAMs_20	01 52 58.6	
	comp=Z,782nm,22.0s						
FAKI	Fak Fak	143.41	290	IAMs_20	IAMs_20	01 55 34.1	
	comp=Z,712nm,21.0s						
CMAR	Chiang Mai Arr	144.07	359	PKP	PKPab	00 59 06.9	-0.2
	comp=Z,2.8nm,0.7s,baz=327,slow=4.0,SNR=13						
CMAR	Chiang Mai Arr	144.07	359	PKIKP	PKPbc	00 59 07.5	0.0
CMAR	Chiang Mai Arr	144.07	359	PKPdf	PKPbc	00 59 07.5	0.0
WRAB	Tennant Creek	145.63	260	c iPKIKP	PKPdf	00 59 11.8	-0.5
WRAB	Tennant Creek	145.63	260		PKPbc	00 59 12.5	0.0
WRAB	Tennant Creek	145.63	260	IAMs_20	IAMs_20	02 07 06.7	
	comp=Z,638nm,20.0s						
WRA	Warramunga Arr	145.64	260	PKPbc	PKPdf	00 59 11.8	-0.5
	comp=Z,53nm,1.0s,baz=82,slow=3.2,SNR=84						
AS31	Alice Springs	146.01	254		PKPdf	00 59 12.6	-0.4
ASAR	Alice Springs	146.01	254	PKPbc	PKPdf	00 59 12.6	-0.4
	comp=Z,9.2nm,0.5s,baz=94,slow=3.0,SNR=63						
UBPT	Khong Chiam	146.44	347		PKPdf	00 59 14.4	+0.6
KNRA	Kununurra	150.55	269		PKPbc	00 59 24.9	-0.9
TOLI2	Tolitoli	150.86	308		PKPbc	00 59 24.0	-2.7
FITZ	Fitzroy Crossi	153.77	265		PKPdf	00 59 28.5	+3.3
MMRI	Maumere	154.83	288	IAMs_20	IAMs_20	02 24 14.1	
	comp=Z,568nm,21.0s						
KAPI	Kappang	155.33	298	IAMs_20	IAMs_20	02 21 44.5	
	comp=Z,567nm,22.0s						

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*JMA **16** 01:46:59.6±0.1, 24°.43N×122°.99E, h50km±1km, M2.2*
*TAP **16** 01:46:59.4, 24°.34N×122°.96E, h45km, ML2.6, C*
ISC 16 01:46:59.9±1.2, **24°.34N**±0°.06×**122°.98E**±0°.03, **h46**km±7km,
n38, σ0ˢ.**68**/52, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	Yonagunijimaku	0.11	346	P	Pn	01 47 07.2	-0.1
JYNG				S	Sn	01 47 12.6	+0.2
YOJ	Yonaguni jima	0.12	15	i P	Pn	01 47 07.2	-0.1
	baz=17						
YOJ				i S	Sn	01 47 12.7	+0.1
	baz=17						
YOJ	Yonaguni jima	0.12	15	P	Pn	01 47 07.3	-0.1
YOJ				S	Sn	01 47 12.6	+0.1
IRIF	Iriomote-Funau	0.69	90	P	Pn	01 47 13.0	-0.3
IRIF				S	Sn	01 47 22.8	-0.2
HATJ	Hateruma jima	0.81	110	P	Pn	01 47 15.5	+0.6
HATJ				eS	Sn	01 47 26.7	+0.8
JKRS	Kuro-shima	0.95	96	P	Pn	01 47 17.0	+0.2
JKRS				S	Sn	01 47 29.6	+0.4
TWC	Suao	1.06	285	eP	Pn	01 47 17.9	-0.4
	baz=292						
JIJ	Ishigaki jima	1.07	89	P	Pn	01 47 18.1	-0.3
JIJ				S	Sn	01 47 31.1	-1.0
EGS		1.07	298	eP	Pn	01 47 19.3	+0.8
	baz=299						
TWB1	Santiao Chiao	1.12	307	eP	Pn	01 47 18.9	-0.2
	baz=316						
ENA	Nanau	1.13	275	i P	Pn	01 47 19.0	-0.3
	baz=284						
ENA				eS	Sn	01 47 33.8	+0.2
	baz=284						
NDS	Dongshan	1.18	285	P	Pn	01 47 19.8	-0.2
	baz=293						
NDS				S	Sn	01 47 34.2	-0.7
	baz=293						
TIPB	Shuangxi	1.22	301	P	Pn	01 47 20.3	-0.3
	baz=311						
TIPB				S	Sn	01 47 34.7	-1.2
	baz=311						
JISG	Ishigakijimahi	1.24	78	P	Pn	01 47 20.7	-0.1
JISG				S	Sn	01 47 36.4	0.0
TWE	Neicheng	1.25	288	eP	Pn	01 47 20.8	-0.1
	baz=288						
NACB	Ninganchiao	1.27	263	eP	Pn	01 47 21.1	-0.1
	baz=263						
TWD	Chiawan	1.28	259	eP	Pn	01 47 21.4	0.0
	baz=259						
NWF	Wu-fen Shan	1.31	304	i P	Pn	01 47 21.8	0.0
	baz=293						
WFSB	Wu-fen Shan	1.31	304	eP	Pn	01 47 21.8	+0.1
	baz=293						
ENTT	Nioudou	1.32	283	eP	Pn	01 47 22.2	+0.3
	baz=291						
ETLH	Xiulin Townshi	1.37	265	eP	Pn	01 47 23.2	+0.6
	baz=265						
NWLT	Wulai	1.41	288	eP	Pn	01 47 23.5	+0.4
	baz=289						
NWLT				S	Sn	01 47 40.0	-0.6
	baz=289						
NNSB	Datong	1.45	274	eP	Pn	01 47 24.9	+1.1
	baz=274						
YHNB	Yeheng	1.49	283	eP	Pn	01 47 26.2	+1.9
	baz=292						
ESL	Shilin	1.50	250	eP	Pn	01 47 24.6	+0.2
	baz=250						
NSK	Sanguang	1.51	283	eP	Pn	01 47 25.9	+1.3
	baz=292						
TWY	Chenhua	1.56	307	eP	Pn	01 47 25.4	+0.3
	baz=307						
WHF	Hehuan Shan	1.57	263	eP	Pn	01 47 25.9	+0.2
	baz=263						
JTJ	Tarama	1.60	79	P	Pn	01 47 25.9	+0.2
JTJ				S	Sn	01 47 45.0	-0.2
HGSD	Ruisui	1.65	240	eP	Pn	01 47 26.5	+0.1
	baz=240						
CHGB	Renai	1.67	261	eP	Pn	01 47 27.1	+0.3
	baz=250						
YULB	Yu-li	1.80	239	eP	Pn	01 47 27.8	-0.8
	baz=239						
TWF1	Yuli	1.82	238	eP	Pn	01 47 28.9	+0.1
	baz=237						
TWF1				eS	Sn	01 47 49.9	-0.8
	baz=237						
WHP	Taichung City	1.85	268	eP	Pn	01 47 31.1	+1.8
	baz=259						

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SSLB	Suanglung	1.93	254	eP	Pn	01 47 30.8	+0.6
	baz=254						
SMLT	Sun Moon Lake	1.95	257	eP	Pn	01 47 32.3	+1.7
	baz=257						
EDH	Donghe	2.05	229	eP	Pn	01 47 31.0	-0.9
	baz=220						
ALS	Alishan	2.15	248	eP	Pn	01 47 34.3	+0.8
	baz=248						

IDC 16 01:49:01.5±10.0, 20°.22S×176°.92W, h0^{km}, mb3.8/3, mb1 4.1/3, mb1mx3.7/42, mbtmp3.8/3, Error ellipse: s-maj=459.1km s-min=40.5km az=144.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	45.57	256	P	P	01 57 23.9	+0.3
	0.7nm,0.5s,baz=99,slow=7.6,SNR=14						
WRA	Warramunga Arr	45.64	262	P	P	01 57 23.4	-0.7
	0.5nm,0.7s,baz=97,slow=7.5,SNR=5.0						
ILAR	Eielson Array	87.82	12	P	P	02 01 52.1	0.0
	0.3nm,0.6s,baz=202,slow=6.3,SNR=4.4						

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*IDC **16** 01:57:03.9±0.9, 31°.63S×71°.45W, h0^{km}, mb4.1/5, mb1 4.0/9, mb1mx3.9/28, mbtmp3.9/9, ML3.5/4, Error ellipse: s-maj=33.7km s-min=23.8km az=111.0*

*GUC **16** 01:57:10.0±0.7, 31°.60S×71°.42W, h27^{km}±4^{km}, ML4.0*

*NEIC **16** 01:57:10.7±1.9, 31°.58S±0°.04×71°.48W±0°.10, h38^{km}±1^{km}, mb4.3/4, ML4.0(GUC), Error ellipse: s-maj=11.9km s-min=5.6km az=88.0*

ISC 16 01:57:09.1±1.2, 31°.59S±0°.03×71°.47W±0°.06, h32^{km}±9^{km}, n77, σ1^{s}.42/77, mb4.2/6, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	Fray Jorge	0.92	351	eP	Pn	01 57 27.1	+1.3
CO06				i S	Sb	01 57 39.5	+1.0
CO06				IAML		01 57 45.5	
	comp=N,5μm,0.1s						
CO06	Fray Jorge	0.92	351	Pn	Pn	01 57 26.9	+1.0
CO06				Sn	Sb	01 57 38.1	-0.5
VA06	Catapilco	0.98	171	eP	Pn	01 57 27.8	+1.2
VA06				i S	Sb	01 57 40.3	0.0
VA06				IAML		01 57 43.3	
	comp=E,11μm,0.3s						
VA03	San Esteban	1.41	147	eP	Pn	01 57 34.3	+1.7
VA03				i S	Sb	01 57 52.1	-0.5
VA03				IAML		01 57 54.5	
	comp=E,7μm,0.2s						
VA03	San Esteban	1.41	147	Pn	Pb	01 57 34.5	-0.4
ROCH	El Roble	1.43	164	eP	Pn	01 57 34.7	+1.6
ROCH				i S	Sb	01 57 53.5	+0.1
ROCH				IAML		01 57 56.5	
	comp=E,6μm,0.4s						
VA01	Torpederas	1.44	186	eP	Pn	01 57 34.4	+1.5
VA01				i S	Sb	01 57 53.5	+0.3
VA01				IAML		01 57 57.5	
	comp=E,3μm,0.4s						
VA01	Torpederas	1.44	186		Pn	01 57 34.3	+1.4
GO04	Tololo Observa	1.52	23	eP	Pn	01 57 36.3	+1.9
GO04				i S	Sb	01 57 56.3	+0.3
GO04	Tololo Observa	1.52	23		Pn	01 57 36.0	+1.7
CO05	La Serena	1.68	7	eP	Pn	01 57 38.4	+2.2
CO05				i S	Sb	01 58 00.6	+0.5
CO05	La Serena	1.68	7	Pn	Pn	01 57 38.0	+1.8
PEL	Peldehue	1.69	157	eP	Pn	01 57 38.3	+1.9
PEL				i S	Sb	01 58 00.0	-0.4
PEL				IAML		01 58 02.8	
	comp=N,3μm,0.3s						
PEL	Peldehue	1.69	157		Pn	01 57 38.1	+1.7
MT02	Curacav	1.69	170		Pn	01 57 38.5	+2.1
MT05	Renca	1.90	161	Pn	Pn	01 57 41.3	+2.0
FCH	Farellones	2.00	150	eP	Pn	01 57 43.6	+2.6
FCH				i S	Sb	01 58 09.9	+0.2
VA05	Santo Domingo	2.07	183	Pn	Pn	01 57 42.8	+1.2
MT09	Talagante	2.22	170	eP	Pn	01 57 46.3	+2.4
MT09	Talagante	2.22	170	Pn	Pn	01 57 45.4	+1.6
MT01	Popeta	2.28	175	Pn	Pn	01 57 46.6	+2.1
ZON	Zonda	2.39	90	Pn	Pb	01 57 50.3	-1.1
LMEL	Las Melosas	2.50	155	eP	Pn	01 57 50.5	+2.9
LMEL				i S	Sb	01 58 21.6	-2.1
LCO	Las Campanas	2.65	15	Pn	Pn	01 57 51.8	+1.9
BO01	Tunca	2.81	173	i S	Sn	01 58 29.2	+4.5
BO01	Tunca	2.81	173		Pn	01 57 53.7	+1.8
BO02	Sierra Bellavi	3.25	170		Pn	01 58 00.3	+2.4
AC04	Llanos de Chal	3.39	6	Pn	Pn	01 58 01.0	+1.3
GO05	Huala	3.43	186		Pn	01 58 00.8	+0.4
GO03	Copiap	4.12	15	Pn	Pn	01 58 11.7	+1.7
ML02	Panimavida	4.16	179	Pn	Pn	01 58 11.8	+1.4
AC02	Maricunga	5.16	24		Pn	01 58 26.5	+2.0
VA04	Juan Fernndez	6.54	250	Pn	Pn	01 58 43.4	+0.4
H03N1	Juan Fernandez	6.55	252	T	T	02 05 28.3	
	baz=81,slow=72,SNR=1459						
H03N3	Juan Fernandez	6.56	252	T	T	02 05 24.7	
	baz=81,slow=72,SNR=1092						
H03N2	Juan Fernandez	6.56	252	T	T	02 05 26.0	
	baz=81,slow=72,SNR=1078						
H03S3	Juan Fernandez	6.65	248	T	T	02 05 38.2	
	baz=242,slow=75,SNR=5.8						
H03S1	Juan Fernandez	6.65	248	T	T	02 05 25.0	
	baz=242,slow=75,SNR=7.3						
H03S2	Juan Fernandez	6.67	248	T	T	02 05 37.7	
	baz=242,slow=75,SNR=12						
LC01	Cunco	7.30	182	Pn	Pn	01 58 53.5	+0.1
PLCA	Paso Flores	9.16	176	Pn	Pn	01 59 18.4	-0.6
	comp=N,0.1nm,0.3s,baz=222,slow=16,SNR=2.3						
PLCA	Paso Flores	9.16	176	Pn	Pn	01 59 19.2	+0.2
LVC	Limon Verde	9.23	15	Pn	Pn	01 59 20.2	-0.1
	comp=N,0.3nm,0.3s,baz=297,slow=22,SNR=1.8						
LVC	Limon Verde	9.23	15	Pn	Pn	01 59 20.8	+0.4
LL04	Puerto Octay	9.33	184	Pn	Pn	01 59 21.1	-0.2
TRQA	Tornquist	10.12	132	Pn	Pn	01 59 33.3	+1.1
PB11	IPOC Station P	11.89	8	Pn	Pn	01 59 59.4	+2.8
CPUP	Villa Florida	13.44	71	Pn	Pn	02 00 17.9	+0.3
	comp=N,0.1nm,0.3s,baz=218,slow=15,SNR=1.6						
PLTB	Pedras Altas	15.22	95	Pn	Pn	02 00 40.0	-1.7
LPAZ	La Paz	15.53	12	Pn	Pn	02 00 47.9	+1.5
SIV	San Ignacio	18.19	34	P	Pn	02 01 19.3	0.0
	comp=N,0.2nm,0.3s,baz=199,slow=8.3,SNR=12						
PTLB	Pontes e Lacer	19.62	38	P	P	02 01 35.0	0.0
ETMB	Extrema	22.21	14	P	P	02 02 02.0	-0.9
SAML	Samuel	23.81	21	P	P	02 02 19.3	+0.1
BDFB	Brasilia	26.63	59	P	P	02 02 44.0	-1.1
	comp=N,3.8nm,0.9s,baz=187,slow=11,SNR=4.8						
BOAV	Boa Vista	35.36	19	P	P	02 04 01.7	-0.1
SNAA	Sanae	53.64	159	P	P	02 06 26.9	-0.2
SNAA				IAmb	IAmb	02 06 40.3	
	comp=Z,2.6nm,0.8s						
TXAR	Lajitas Array	67.88	330	P	P	02 08 04.5	0.0
	comp=Z,0.3nm,0.7s,baz=147,slow=7.4,SNR=4.1						
TXAR	Lajitas Array	67.88	330	P	P	02 08 05.5	+1.0
DBIC	Dimbokro	73.96	72	P	P	02 08 40.9	-0.8
	comp=Z,3.3nm,0.6s,baz=232,slow=4.5,SNR=7.8						
DBIC	Dimbokro	73.96	72	P	P	02 08 41.3	-0.3
MAW	Mawson	75.35	164	P	P	02 08 49.1	+0.2
	comp=Z,1.3nm,0.5s,baz=241,slow=13,SNR=2.7						
TORD	Torodi Ar. Bea	82.94	70	P	P	02 09 30.0	-1.2
	comp=Z,2.1nm,0.7s,baz=266,slow=4.7,SNR=13						
TORD	Torodi Ar. Bea	82.94	70	P	P	02 09 30.7	-0.5
TORD				IAmb	IAmb	02 09 31.5	
	comp=Z,2.0nm,0.8s						
WRA	Warramunga Arr	123.09	209	PKP	PKPdf	02 16 02.0	-1.0
	comp=Z,0.5nm,0.5s,baz=159,slow=1.8,SNR=12						
WRA	Warramunga Arr	123.09	209		PKPdf	02 16 02.1	-0.8
H11S2	WAKE ISLAND Hy	126.25	271	T	T	04 35 02.8	
	baz=116,slow=75,SNR=42						
H11S1	WAKE ISLAND Hy	126.26	271	T	T	04 35 08.3	
	baz=116,slow=75,SNR=34						
H11S3	WAKE ISLAND Hy	126.27	271	T	T	04 35 09.9	
	baz=116,slow=75,SNR=33						
H11N3	WAKE ISLAND Hy	126.60	272	T	T	04 35 33.4	
	baz=116,slow=75,SNR=30						
H11N1	WAKE ISLAND Hy	126.62	272	T	T	04 35 34.0	
	baz=116,slow=75,SNR=10						
H11N2	WAKE ISLAND Hy	126.62	272	T	T	04 35 33.1	
	baz=116,slow=75,SNR=45						
BVAR	Borovoye Array	145.17	41	PKPbc	PKPbc	02 16 43.0	+0.5
	comp=Z,3.0nm,0.5s,baz=247,slow=7.7,SNR=17						
AAK	Ala-Archa	150.89	58	PKPbc	PKPbc	02 16 58.3	-0.1
	comp=Z,2.0nm,0.7s,baz=282,slow=3.3,SNR=6.3						
ZALV	Zalesovo Beam	151.92	30	PKPbc	PKPbc	02 17 00.2	-0.1
	comp=Z,4.7nm,0.5s,baz=304,slow=3.2,SNR=23						
MKAR	Makanchi Array	154.78	45	PKPab	PKPab	02 17 21.8	-0.2
	comp=Z,0.9nm,0.7s,baz=285,slow=4.8,SNR=5.9						
MKAR	Makanchi Array	154.78	45	PKPbc	PKPbc	02 17 05.7	-1.1
MKAR					PKPab	02 17 21.8	-0.2

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*IDC **16** 01:58:06.8±1.0, 38°.20N×144°.86E, h0^{km}, mb3.6/7, mb1 3.8/10, mb1mx3.6/42, mbtmp3.7/10, ML3.5/3, MS4.3/1, Ms1 4.5/1, ms1mx3.2/40, Error ellipse: s-maj=28.0km s-min=21.0km az=79.0*

*JMA **16** 01:58:10.8±0.2, 38°.36N×144°.59E, h44^{km}, M4.1*

*NEIC **16** 01:58:11.2±1.8, 38°.25N±0°.09×144°.7E±0°.2, h26^{km}±6^{km}, mb4.4/8, Error ellipse: s-maj=18.0km s-min=11.5km az=110.0*

ISC 16 01:58:11.7±0.8, 38°.38N±0°.05×144°.72E±0°.07, h35^{km}, n51, σ1^{s}.64/62, mb4.0/11, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	2.49	287	P	Pn	01 58 48.9	-0.8
OFUJ				S	Sn	01 59 17.5	-1.3
MIYJ	Miyakonagasawa	2.56	299	P	Pn	01 58 49.8	-0.9
MIYJ				S	Sn	01 59 18.4	-2.2
JIKH	Ishinomakikobu	2.56	270	P	Pn	01 58 49.4	-1.3
JIKH				S	Sn	01 59 18.2	-2.4
JKMT	Kesennumamotoy	2.58	281	P	Pn	01 58 50.2	-0.8
JKMT				S	Sn	01 59 18.9	-2.2
JMK	Ichinoseki	2.80	283	P	Pn	01 58 53.5	-0.5
JMK				S	Sn	01 59 24.9	-1.6
JOM	Ohasama	2.89	293	P	Pn	01 58 54.8	-0.4
JOM				S	Sn	01 59 27.4	-1.3
JMM	Marumori	3.14	262		Pn	01 58 57.2	-1.4
JANG	Nango	3.19	310	P	Pn	01 58 58.3	-1.0
JANG				S	Sn	01 59 33.8	-2.2
JYK	Kaneyama	3.46	280	P	Pn	01 59 03.7	+0.7
JYK				eS	Sn	01 59 42.8	+0.1
JFT	Otama	3.57	257	P	Pn	01 59 04.2	-0.4
JFT				S	Sn	01 59 43.9	-1.6
ERM	Erimo	3.83	342	Pn	Pn	01 59 07.5	-0.6
JOT	Ohata	4.12	318	P	Pn	01 59 11.7	-0.4
JOT				eS	Sn	01 59 56.5	-2.6
JYT	Yasato	4.20	241	Pn	Pn	01 59 10.9	-2.3
JCH	Churui	4.36	347	P	Pn	01 59 14.0	-1.4
JCH				S	Sn	02 00 01.8	-3.1
JKB	Kayabe	4.50	322	P	Pn	01 59 17.8	+0.4
NEM2	Nemuro 2	5.04	9	P	Pn	01 59 21.9	-2.9
NEM2				eS	Sn	02 00 15.8	-6.0
JSD	Sado	5.10	268	Pn	Pn	01 59 25.6	0.0
JRY	Ryogami san	5.21	245	P	Pn	01 59 26.1	-1.0
JRY				eS	Sn	02 00 21.8	-4.2
JOSM	Okushiri--Mats	5.46	314	P	Pn	01 59 30.8	+0.3
MJAR	Matsushiro Arr	5.49	253	Pn	Pn	01 59 29.1	-2.0
	0.2nm,0.3s,baz=57,slow=9.1,SNR=6.2						
MJAR	Matsushiro Arr	5.49	253		Pn	01 59 29.4	-1.6
MAJO	Matsushiro	5.50	253	Pn	Pn	01 59 28.0	-3.1
JTKR	Abashiri--Toko	5.62	354	P	Pn	01 59 31.4	-1.3
JTKR				S	Sn	02 00 32.3	-3.8
JHR	Hokuryu	5.82	338	P	Pn	01 59 36.7	+1.2
JHR				S	Sn	02 00 39.6	-1.3
JKA	Kamikawa-asahi	5.95	345		Pn	01 59 37.6	+0.3
ASAJ	Asahikawa	5.95	345	Pn	Pn	01 59 37.7	+0.4
	5.7nm,0.3s,baz=183,slow=10,SNR=7.6						
ASAJ				Sn	Sn	02 00 42.0	-2.2
	2.4nm,0.3s,baz=18,slow=21,SNR=2.0						
JWT	Wachi	8.08	250	Pn	Pn	02 00 06.4	-0.2
USA0B	Ussuriysk Arra	11.20	305	Pn	Pn	02 00 50.4	+1.1
USRK	Ussuriysk Ar.	11.20	305	Pn	Pn	02 00 50.4	+1.1
	baz=108,slow=14,SNR=8.0						
H11N2	WAKE ISLAND Hy	26.73	128	T	T	02 31 31.6	
	baz=320,slow=75,SNR=4.6						
H11N1	WAKE ISLAND Hy	26.74	128	T	T	02 31 39.0	
	baz=320,slow=75,SNR=4.4						
H11N3	WAKE ISLAND Hy	26.75	128	T	T	02 31 34.4	
	baz=320,slow=75,SNR=5.1						
ZALV	Zalesovo Beam	42.97	311	P	P	02 06 09.1	+1.9
	0.4nm,0.6s,baz=69,slow=7.9,SNR=1.8						
ZALV	Zalesovo Beam	42.97	311	P	P	02 06 08.7	+1.5
CMAR	Chiang Mai Arr	44.37	257	LR	LR	02 26 14.1	
	comp=Z,381nm,19.6s,baz=54,slow=38						
MKAR	Makanchi Array	45.64	302	P	P	02 06 31.0	+2.3
	0.7nm,0.9s,baz=76,slow=7.6,SNR=3.2						
MKAR	Makanchi Array	45.64	302	P	P	02 06 30.3	+1.7
ILAR	Eielson Array	46.95	33	P	P	02 06 39.3	+0.7
	0.3nm,0.8s,baz=272,slow=8.0,SNR=2.2						
KURK	Kurchatov	47.18	308	P	P	02 06 41.7	+1.0
KURK				IAmb	IAmb	02 06 53.7	
	comp=Z,2.5nm,0.8s						
KURBB	Kurchatov Arra	47.26	307	P	P	02 06 43.2	+2.0
	comp=Z,0.4nm,0.2s,baz=84,slow=8.5,SNR=4.7						
WB0	Warramunga Arr	58.64	191	P	P	02 08 04.5	-1.0
WR0	Warramunga Arr	58.81	191	P	P	02 08 05.6	-0.9
WR0				IAmb	IAmb	02 08 27.3	
	comp=Z,4.3nm,1.4s						
WRAB	Tennant Creek	58.81	191	P	P	02 08 06.9	+0.3
WB2	Warramunga Arr	58.82	191	P	P	02 08 05.8	-0.8
WB2				IAmb	IAmb	02 08 06.8	
	comp=Z,3.6nm,0.9s						
WRA	Warramunga Arr	58.82	191	P	P	02 08 05.8	-0.8
	comp=Z,1.0nm,0.7s,baz=14,slow=7.2,SNR=10						
WRA	Warramunga Arr	58.82	191	P	P	02 08 05.0	-1.6
ASAR	Alice Springs	62.54	191	P	P	02 08 31.4	-0.6
	comp=Z,0.4nm,0.8s,baz=12,slow=5.7,SNR=5.2						
GYA0B	ALIBECK ARRAY	65.46	300	P	P	02 08 52.6	+1.4
GYA0B				IAmb	IAmb	02 09 20.2	
	comp=Z,3.2nm,0.8s						
STKA	Stephens Creek	69.95	183	P	P	02 09 19.2	-0.1
TXAR	Lajitas Array	87.22	54	P	P	02 10 55.4	+0.6
	comp=Z,0.4nm,0.9s,baz=309,slow=4.0,SNR=3.4						
TXAR	Lajitas Array	87.22	54	P	P	02 10 55.6	+0.8

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*SJA **16** 02:06:48.0, 29°.69S×72°.61W, h10^{km}, ML4.4*

*GUC **16** 02:06:52.0±0.7, 29°.80S×72°.10W, h20^{km}±13^{km}, ML3.7*

ISC 16 02:06:48.6±1.3, 29°.71S±0°.05×72°.25W±0°.07, h10^{km}, n36, σ1^{s}.82/34, 1C-1D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO05	La Serena	0.90	104	⇓iP	Pg	02 07 05.9	0.0
CO05				eS	Sg	02 07 16.2	-1.5
CO05				IAML		02 07 18.7	
	comp=N,4μm,0.4s						
CO06	Fray Jorge	1.10	151	⇑iP	Pg	02 07 09.2	-0.5
CO06				eS	Sg	02 07 21.9	-2.3
CO06				IAML		02 07 23.4	
	comp=N,2μm,0.2s						
GO04	Tololo Observa	1.34	111	eP	Pb	02 07 13.4	-0.5
GO04				eS	Sb	02 07 29.0	-2.3
GO04	Tololo Observa	1.34	111	i P	Pb	02 07 13.0	-1.0
LCO	Las Campanas	1.52	63	i P	Pn	02 07 16.9	+0.9
AROD	Rodeo	2.45	102	i P	Pn	02 07 32.0	+3.1
GO03	Copiap	2.75	41	eP	Pn	02 07 34.6	+1.9
GO03				IAML		02 08 28.3	
	comp=N,208nm,0.2s						
GO03				IAML		02 08 28.5	
	comp=E,200nm,0.3s						
GO03	Copiap	2.75	41	i P	Pn	02 07 36.0	+3.2
ACCO	Cerro Coronel	2.89	108	i P	Pb	02 07 39.0	-1.5
VA06	Catapilco	2.96	164	eP	Pn	02 07 35.9	+0.3
VA06				IAML		02 08 29.8	
	comp=N,494nm,0.6s						
RTLS	Leoncito	3.29	130	i P	Pn	02 07 44.0	+3.6
VA03	San Esteban	3.38	155	eP	Pn	02 07 43.5	+2.0
VA03				IAML		02 08 39.5	
	comp=E,353nm,0.6s						
VA03	San Esteban	3.38	155	i P	Pn	02 07 44.0	+2.5
ROCH	El Roble	3.42	162	eP	Pn	02 07 42.8	+0.5
ROCH				IAML		02 08 46.6	
	comp=N,241nm,0.6s						
ROC1	El Roble	3.43	162	i P	Pn	02 07 43.0	+0.7
AUSP	Uspallata	3.51	136	i P	Pn	02 07 47.0	+3.5
VCA	Vinchina	3.66	76	i P	Pn	02 07 51.0	+5.5
PEL	Peldehue	3.68	159	eP	Pn	02 07 46.3	+0.7
PEL				IAML		02 08 51.8	
	comp=N,169nm,0.6s						
PEL	Peldehue	3.68	159	i P	Pn	02 07 47.0	+1.4
RTCV	Cerro Valdivia	3.85	125	i P	Pn	02 07 53.0	+5.1
MT05	Renca	3.90	161	eP	Pn	02 07 49.4	+0.8
MT05	Renca	3.90	161	i P	Pn	02 07 50.0	+1.4
VA05	Santo Domingo	3.98	172	eP	Pn	02 07 49.5	-0.1
ASAL	Salagasta	4.10	135	i P	Pn	02 07 56.0	+4.6
MT09	Talagante	4.20	166	eP	Pn	02 07 53.7	+0.9
ARCO	CERRO ARCO	4.22	139	i P	Pn	02 07 58.0	+4.8
MT01	Popeta	4.23	169	i P	Pn	02 07 53.0	-0.1
AAGR	Agrelo	4.46	140	i P	Pn	02 08 01.0	+4.6
ACLC	CERRO LA CRUZ	4.62	88	i P	Pn	02 08 01.0	+2.3
BO01	Tunca	4.78	168	i P	Pn	02 08 02.0	+1.4
APLL	PUNTA DE LOS L	5.01	99	i P	Pn	02 08 06.0	+2.2
BO02	Sierra Bellavi	5.22	167	i P	Pn	02 08 08.0	+1.2
GO05	Huala	5.30	177	i P	Pn	02 08 07.0	-0.8
RFA	San Rafael	5.98	149	i P	Pn	02 08 19.0	+1.8
PB15	IPOC Station P	6.93	22	i P	Pn	02 08 32.0	+1.6
PB05	IPOC Station P	7.07	16	i P	Pn	02 08 32.0	-0.2

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*IDC **16** 02:31:57.2±2.7, 31°.00S×71°.52W, h0^{km}, mb4.1/3, mb1 3.9/7, mb1mx3.7/30, mbtmp3.8/7, ML3.6/3, MS3.3/2, Ms1 3.2/2, ms1mx2.9/22, Error ellipse: s-maj=61.9km s-min=45.0km az=98.0*

*GUC **16** 02:32:03.1±0.9, 30°.93S×71°.43W, h28^{km}±10^{km}, ML3.8*

*NEIC **16** 02:32:03.3±0.8, 30°.86S±0°.04×71°.74W±0°.08, h37^{km}±10^{km}, mb4.3/5, ML3.8(GUC), Error ellipse: s-maj=9.6km s-min=6.1km az=90.0*

ISC 16 02:32:03.4±0.8, 30°.86S±0°.05×71°.74W±0°.08, h53^{km}, n68, σ1^{s}.20/63, mb4.0/4, 1C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	Fray Jorge	0.21	26	⇑iP	Pn	02 32 10.3	-1.9
CO06				eS	Sn	02 32 14.8	-3.6
CO06	Fray Jorge	0.21	26		Pn	02 32 10.5	-1.7
CO06					Sn	02 32 15.4	-3.0
CO05	La Serena	1.04	25	⇓iP	Pn	02 32 21.3	-0.4
CO05				eS	Sn	02 32 34.5	-0.7
CO05				IAML		02 32 39.6	
	comp=N,7μm,0.3s						
CO05	La Serena	1.04	25		Pn	02 32 21.4	-0.4
CO05				Sn	Sn	02 32 35.0	-0.2
GO04	Tololo Observa	1.07	50	⇓iP	Pn	02 32 20.9	-1.5
GO04				eS	Sn	02 32 32.8	-3.5
GO04	Tololo Observa	1.07	50		Pn	02 32 21.1	-1.2
GO04					Sn	02 32 34.9	-1.4
VA06	Catapilco	1.74	167	eP	Pn	02 32 30.5	-0.7
VA06				IAML		02 32 58.7	
	comp=E,1μm,0.4s						
LCO	Las Campanas	2.05	26	i P	Pn	02 32 35.9	+0.1
LCO				eS	Sn	02 32 59.6	-0.8
LCO	Las Campanas	2.05	26		Pn	02 32 36.1	+0.3
VA03	San Esteban	2.15	152	eP	Pn	02 32 37.1	+0.1
VA03				IAML		02 33 13.5	
	comp=E,1μm,0.6s						
VA03	San Esteban	2.15	152		Pn	02 32 36.9	0.0
VA01	Torpederas	2.16	178	Pn	Pn	02 32 35.0	-1.9
ROCH	El Roble	2.19	164	eP	Pn	02 32 37.1	-0.5
ROCH				IAML		02 33 18.8	
	comp=N,803nm,0.6s						
MT02	Curacav	2.44	168	Pn	Pn	02 32 40.7	-0.2
PEL	Peldehue	2.45	159	eP	Pn	02 32 40.8	-0.1
PEL				IAML		02 33 27.8	
	comp=E,430nm,0.7s						
PEL	Peldehue	2.45	159		Pn	02 32 40.9	0.0
MT05	Renca	2.66	162	eP	Pn	02 32 43.5	-0.4
MT05				IAML		02 33 21.6	
	comp=E,685nm,0.6s						
MT05	Renca	2.66	162		Pn	02 32 43.9	0.0
AC04	Llanos de Chal	2.71	13	Pn	Pn	02 32 44.5	0.0
ZON	Zonda	2.71	105		Pn	02 32 46.1	+1.5
FCH	Farellones	2.75	154	eP	Pn	02 32 45.9	+0.5
FCH				IAML		02 33 35.6	
	comp=N,228nm,0.7s						
VA05	Santo Domingo	2.79	178	eP	Pn	02 32 44.4	-1.1
VA05				IAML		02 33 31.9	
	comp=E,451nm,0.4s						
VA05	Santo Domingo	2.79	178		Pn	02 32 44.6	-1.0
MT09	Talagante	2.98	168	eP	Pn	02 32 48.4	+0.1
MT09				IAML		02 33 33.4	
	comp=E,244nm,0.5s						
MT09	Talagante	2.98	168	Pn	Pn	02 32 48.0	-0.3
MT01	Popeta	3.02	172	eP	Pn	02 32 48.3	-0.5
MT01				IAML		02 33 34.3	
	comp=E,278nm,0.5s						
MT01	Popeta	3.02	172		Pn	02 32 48.2	-0.6
LMEL	Las Melosas	3.25	157	eP	Pn	02 32 52.9	+0.8
LMEL				IAML		02 33 46.5	
	comp=N,264nm,0.7s						
BO04	La Punta	3.26	163	eP	Pn	02 32 52.0	-0.1
GO03	Copiap	3.51	22	eP	Pn	02 32 55.2	-0.4
GO03	Copiap	3.51	22		Pn	02 32 55.4	-0.2
BO01	Tunca	3.56	171	eP	Pn	02 32 55.6	-0.6
BO01	Tunca	3.56	171		Pn	02 32 55.5	-0.7
BO02	Sierra Bellavi	4.00	169	eP	Pn	02 33 02.3	0.0
BO02	Sierra Bellavi	4.00	169	Pn	Pn	02 33 02.1	-0.2
GO05	Huala	4.14	182	Pn	Pn	02 33 02.4	-1.7
AC02	Maricunga	4.62	30		Pn	02 33 11.4	+0.2
ML02	Panimavida	4.89	177	Pn	Pn	02 33 14.0	-0.4
H03N1	Juan Fernandez	6.60	245	T	T	02 40 35.0	
	baz=72,slow=72,SNR=3289						
H03N3	Juan Fernandez	6.62	245	T	T	02 40 32.9	
	baz=72,slow=72,SNR=2209						
H03N2	Juan Fernandez	6.62	245	T	T	02 40 35.6	
	baz=72,slow=72,SNR=2355						
PB15	IPOC Station P	7.89	15	Pn	Pn	02 33 55.3	-0.4
LC01	Cunco	8.02	181	Pn	Pn	02 33 55.2	-2.1
LVC	Limon Verde	8.60	18	Pn	Pn	02 34 02.8	-2.8
	comp=N,0.3nm,0.3s,baz=217,slow=10,SNR=1.5						
LVC	Limon Verde	8.60	18	Pn	Pn	02 34 05.0	-0.6
LR03	Panguipulli	8.76	183	Pn	Pn	02 34 07.4	0.0
PLCA	Paso Flores	9.90	175	LR	LR	02 38 50.7	
	comp=N,127nm,19.9s,baz=20,slow=42						
TRQA	Tornquist	10.79	134	Pn	Pn	02 34 35.1	0.0
ITQB	Itaqui	13.12	89	Pn	Pn	02 35 04.6	-2.5
CPUP	Villa Florida	13.44	74	Pn	Pn	02 35 05.8	-5.7
	comp=N,0.2nm,0.3s,baz=197,slow=14,SNR=1.6						
LPAZ	La Paz	14.88	14	Pn	Pn	02 35 32.1	+1.0
	baz=180,slow=25,SNR=666						
LPAZ	La Paz	14.88	14		Pn	02 35 33.5	+2.3
SIV	San Ignacio	17.73	36	P	Pn	02 36 06.2	-0.5
	comp=N,0.2nm,0.3s,baz=211,slow=9.3,SNR=8.5						
SIV				LR	LR	02 43 07.3	
	comp=N,104nm,19.4s,baz=90,slow=38						
ETMB	Extrema	21.56	15	P	P	02 36 49.3	+0.8
BDFB	Brasilia	26.47	60	P	P	02 37 35.9	+0.1
	comp=N,0.9nm,0.5s,baz=256,slow=9.3,SNR=3.6						
BOAV	Boa Vista	34.76	20	P	P	02 38 49.4	+0.6
BOAV				IAmb	IAmb	02 39 04.7	
	comp=Z,4.8nm,1.1s						
ACON	Acoyapa	44.50	341	P	P	02 40 10.3	+0.6
DBIC	Dimbokro	73.95	72	P	P	02 43 34.5	+1.0
	comp=Z,3.7nm,0.8s,baz=241,slow=7.0,SNR=4.7						
DBIC	Dimbokro	73.95	72	P	P	02 43 34.5	+1.0
DBIC				IAmb	IAmb	02 43 49.8	
	comp=Z,6.8nm,1.1s						
TORD	Torodi Ar. Bea	82.91	70	P	P	02 44 23.5	+0.6
	comp=Z,0.3nm,0.5s,baz=279,slow=5.7,SNR=5.8						
TORD	Torodi Ar. Bea	82.91	70	P	P	02 44 23.8	+0.9
TORD				IAmb	IAmb	02 44 39.5	
	comp=Z,1.2nm,0.8s						
H11S2	WAKE ISLAND Hy	126.01	271	T	T	05 09 49.6	
	baz=116,slow=75,SNR=93						
H11S1	WAKE ISLAND Hy	126.02	271	T	T	05 09 50.9	
	baz=116,slow=75,SNR=146						
H11S3	WAKE ISLAND Hy	126.03	271	T	T	05 09 51.4	
	baz=116,slow=75,SNR=134						
H11N3	WAKE ISLAND Hy	126.34	273	T	T	05 10 15.1	
	baz=116,slow=76,SNR=9.6						
H11N1	WAKE ISLAND Hy	126.36	273	T	T	05 10 13.4	
	baz=116,slow=76,SNR=4.5						
H11N2	WAKE ISLAND Hy	126.36	273	T	T	05 10 19.9	
	baz=116,slow=76,SNR=17						
ZALV	Zalesovo Beam	151.41	29	PKPbc	PKPbc	02 51 52.0	+1.3
	comp=Z,0.2nm,0.3s,baz=327,slow=1.2,SNR=1.5						

IDC 16 02:44:59.9±1.9, 0°.76N×125°.88E, h0^{km}, mb3.6/3, mb1 3.7/4, mb1mx3.3/38, mbtmp3.6/4, ML3.1/1, MS3.1/1, Ms1 3.1/1, ms1mx2.6/37, Error ellipse: s-maj=119.3km s-min=25.4km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	18.74	181	P	P	02 49 19.8	-0.6
	0.1nm,0.3s,baz=342,slow=9.6,SNR=1.4						
WRA	Warramunga Arr	22.18	159	P	P	02 49 56.5	-1.2
	1.8nm,0.8s,baz=337,slow=11,SNR=16						
GUMO	Guam	22.71	55	LR	LR	02 56 09.7	

	comp=Z,55nm,21.4s,baz=260,slow=30						
ASAR	Alice Springs	25.50	163	P	P	02 50 31.2	+1.1
	0.6nm,0.3s,baz=345,slow=11,SNR=14						
MKAR	Makanchi Array	59.53	327	P	P	02 55 05.0	-0.2
	0.4nm,0.5s,baz=120,slow=8.2,SNR=4.2						

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*IDC **16** 03:11:46.6±0.7, 7.°81S×118.°95E, h0^{km}, mb4.3/7, mb1 4.4/10, mb1mx4.0/35, mbtmp4.2/10, ML3.9/3, MS3.3/7, Ms1 3.3/7, ms1mx2.9/47, Error ellipse: s-maj=33.5km s-min=14.6km az=72.0*

*NEIC **16** 03:11:48.3±1.3, 7.°77S±0.°07×119.°00E±0.°07, h10^{km}±1^{km}, mb4.6/22, Error ellipse: s-maj=12.3km s-min=11.0km az=238.0*

*DJA **16** 03:11:50.0±1.6, 8°S±2°×11°9E±°, h23^{km}±15^{km}, M4.5/17, mb4.8/3, mB4.9/2, MLv4.4/17, Mw(mB)4.2/2*

ISC 16 03:11:50.8±0.4**, 7.°79S**±0.°04×**119.°04E**±0.°05**, h34**^{km}**, n72,** σ**1.**^{s}**37**/73**, mb4.5**/17**, MS3.2**/4**, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	1.62	230	P	Pn	03 12 16.9	-0.2
PLAI				S	Sn	03 12 36.2	-0.6
WBSI	Waikabubak, Su	1.87	169	P	Pn	03 12 21.2	+0.6
WBSI				S	Sn	03 12 44.4	+1.3
BSSI	Bau Bau, Buton	2.18	41	P	Pn	03 12 24.7	0.0
TWSI	Taliwang, Sumb	2.34	246	P	Pn	03 12 26.8	-0.1
BKSI	Bulukumba	2.67	24	P	Pn	03 12 31.5	0.0
EDFI	Ende, Flores	2.79	110	P	Pn	03 12 33.9	+0.7
KAPI	Kappang	2.84	14	Pn	Pn	03 12 34.0	+0.1
	7.6nm,0.3s,baz=211,slow=4.5,SNR=41						
KAPI				Sn	Sb	03 13 12.2	-3.2
	29nm,0.3s,baz=308,slow=23,SNR=11						
KAPI				LR	LR	03 13 51.6	
	comp=Z,439nm,18.6s,baz=242,slow=43						
KAPI	Kappang	2.84	14	Pn	Pn	03 12 33.7	-0.2
BASI	Baing, Sumba	2.85	148	P	Pn	03 12 35.1	+1.1
MMRI	Maumere	3.27	105	P	Pn	03 12 41.1	+1.3
MMRI	Maumere	3.27	105		Pn	03 12 40.0	+0.2
SRBI	Singaraja	3.81	265	P	Pn	03 12 46.2	-0.9
SPSI	Sidrap Palu	3.87	11	P	Pn	03 12 48.6	+0.7
IGBI	Denpasar	3.99	255	P	Pn	03 12 48.9	-0.7
ABJI	Asem Bagus	4.76	270	P	Pn	03 13 00.3	0.0
TTSI	Tana Toraja	4.78	9	P	Pn	03 13 00.6	+0.2
JAGI	Jajag, Banyuwa	4.89	262	Pn	Pn	03 13 01.6	-0.5
KMMI	Kalianget	5.09	278	P	Pn	03 13 04.8	+0.1
	0.4nm86nm,0.7s						
BATI	Baumata	5.16	118	P	Pn	03 13 05.6	-0.1
	0.2nm780nm42nm,0.5s						
SOEI	Soe	5.52	111	Pn	Pn	03 13 12.6	+1.8
GMJI	Gumukmas	5.56	265	P	Pn	03 13 12.1	+0.8
LUWI	Luwuk	7.66	29	Pn	Pn	03 13 41.3	+1.2
LEM	Lembang	11.37	274	LR	LR	03 20 45.1	
	comp=Z,124nm,18.2s,baz=163,slow=48						
FITZ	Fitzroy Crossi	12.09	149	Pn	Pn	03 14 40.0	-0.9
	0.4nm,0.3s,baz=339,slow=7.8,SNR=16						
FITZ				Sn	Sn	03 16 49.9	-4.8
FITZ	Fitzroy Crossi	12.09	149	Pn	Pn	03 14 39.7	-1.2
KNRA	Kununurra	12.33	130	Pn	Pn	03 14 42.2	-1.9
MTN	Manton Dam	12.91	114	Pn	Pn	03 14 50.5	-1.5
GIRL	Giralia	15.48	197	Pn	Pn	03 15 26.3	-0.5
WB0	Warramunga Arr	19.06	130		P	03 16 10.6	+0.1
WRA	Warramunga Arr	19.12	131	P	P	03 16 11.4	+0.3
	0.7nm,0.3s,baz=308,slow=12,SNR=57						
WRA				S	Sn	03 19 33.6	-12
	0.2nm,0.3s,baz=298,slow=22,SNR=6.8						
WRA				LR	LR	03 25 12.4	
	comp=Z,60nm,18.7s,baz=255,slow=42						
WRA	Warramunga Arr	19.12	131	P	P	03 16 11.6	+0.5
WB2	Warramunga Arr	19.13	131	P	P	03 16 11.3	0.0
WR0	Warramunga Arr	19.28	130		P	03 16 13.1	+0.2
WR0				IAmb	IAmb	03 16 20.4	
	comp=Z,10nm,0.7s						
AS31	Alice Springs	21.27	140	P	P	03 16 34.8	+0.3
AS31				IAmb	IAmb	03 16 39.1	
	comp=Z,7.3nm,0.5s						
ASAR	Alice Springs	21.27	140	P	P	03 16 34.9	+0.4
	comp=Z,21nm,0.6s,baz=317,slow=9.3,SNR=55						
ASAR				S	S	03 20 23.7	-5.5
	comp=Z,3.3nm,0.9s,baz=324,slow=23,SNR=10.0						
ASAR				LR	LR	03 24 14.0	
	comp=Z,60nm,18.7s,baz=340,slow=35						
ASAR	Alice Springs	21.27	140	P	P	03 16 35.2	+0.7
MORW	Morawa	21.36	187	P	P	03 16 35.6	+0.3
MORW				IAmb	IAmb	03 16 50.7	
	comp=Z,18nm,0.8s						
PSI	Prapat	22.66	297	LR	LR	03 27 25.9	
	comp=Z,92nm,19.5s,slow=42						
FORT	Forrest	24.38	161	P	P	03 17 05.5	-0.4
FORT				IAmb	IAmb	03 17 29.2	
	comp=Z,18nm,0.7s						
COEN	Coen	24.47	107	P	P	03 17 06.9	0.0
COEN				IAmb	IAmb	03 17 08.6	
	comp=Z,13nm,0.8s						
BBOO	Buckleboo	29.48	150	P	P	03 17 51.2	-0.7
STKA	Stephens Creek	31.86	142	P	P	03 18 14.1	+1.1
	comp=Z,6.9nm,0.5s,baz=320,slow=9.6,SNR=21						
STKA	Stephens Creek	31.86	142	P	P	03 18 13.5	+0.6
STKA				IAmb	IAmb	03 18 14.8	
	comp=Z,1.6nm,0.6s						
CMAR	Chiang Mai Arr	32.76	323	LR	LR	03 32 24.0	
	comp=Z,44nm,18.0s,baz=188,slow=38						
ARMA	Armidale	37.90	131	P	P	03 19 07.3	+2.1
ARMA				IAmb	IAmb	03 19 10.0	
	comp=Z,16nm,1.0s						
SONM	Songino Array	56.50	350	P	P	03 21 31.5	+1.8
	comp=Z,0.4nm,0.6s,baz=165,slow=6.2,SNR=4.0						
SONM	Songino Array	56.50	350	P	P	03 21 31.1	+1.3
WMQ	Urumqi	58.69	334	*e*P	P	03 21 47.4	+2.2
BKZ	Black Stump Fm	60.06	131	P	P	03 21 54.7	-0.1
KSH	Kashi	61.66	323	P	P	03 22 09.0	+3.3
KSH				pP	pP	03 22 15.0	0.0
KSH				sP	sP	03 22 16.4	-2.7
KSH				pmax	pmax		
	comp=Z,11nm,0.8s						
KBL	Kabul	63.27	315	P	P	03 22 15.7	-0.9
KBL				IAmb	IAmb	03 22 16.7	
	comp=Z,4.0nm,0.8s						
MK31	Makanchi Array	63.41	333	P	P	03 22 17.2	+0.1
MK31				IAmb	IAmb	03 22 33.2	
	comp=Z,5.4nm,1.1s						
MKAR	Makanchi Array	63.41	333	P	P	03 22 18.1	+1.1
	comp=Z,2.9nm,0.7s,baz=135,slow=8.3,SNR=21						
MKAR	Makanchi Array	63.41	333	P	P	03 22 16.1	-1.0
GAR	Garm	64.85	320	P	P	03 22 26.5	-0.4
ZALV	Zalesovo Beam	67.93	339	P	P	03 22 46.1	0.0
	comp=Z,1.3nm,0.6s,baz=124,slow=5.1,SNR=7.0						
ZALV	Zalesovo Beam	67.93	339	P	P	03 22 46.2	+0.2
KURK	Kurchatov	67.94	334	P	P	03 22 46.9	+0.7
KURK				IAmb	IAmb	03 22 48.2	
	comp=Z,8.0nm,1.1s						
MAW	Mawson	70.38	200	P	P	03 23 02.4	+1.4
	comp=Z,2.8nm,0.7s,baz=95,slow=8.9,SNR=6.6						
MAW	Mawson	70.38	200	P	P	03 23 02.6	+1.5
GEYT	Alibeck	72.64	314	P	P	03 23 15.7	+0.4
VNDA	Vanda	73.17	171	P	P	03 23 19.6	+1.9
	comp=Z,1.1nm,0.5s,baz=312,slow=7.7,SNR=13						
VNDA	Vanda	73.17	171	P	P	03 23 19.7	+2.0
VNDA				IAmb	IAmb	03 23 20.4	
	comp=Z,8.8nm,1.4s						
ABKAR	Akbulak array	76.60	325	P	P	03 23 38.2	+0.2
QSPA	South Pole Qui	82.20	180	P	P	03 24 08.6	+0.3
QSPA				IAmb	IAmb	03 24 12.9	
	comp=Z,7.0nm,1.2s						
MMAI	Mount Meron Ar	88.90	303	LR	LR	04 09 16.3	
	comp=Z,16nm,18.3s,baz=80,slow=39						
VNA2	Neumayer--Watz	93.80	195	P	P	03 25 03.0	-1.2
TORD	Torodi Ar. Bea	118.28	281	PKP	PKPdf	03 30 35.0	-0.6
	comp=Z,0.2nm,0.5s,baz=91,slow=1.8,SNR=2.2						
TORD	Torodi Ar. Bea	118.28	281		PKPdf	03 30 35.4	-0.3
CPUP	Villa Florida	145.90	186	PKPbc	PKPab	03 31 28.2	+0.2
	comp=Z,1.0nm,0.6s,baz=180,slow=5.2,SNR=5.0						
BDFB	Brasilia	153.42	209	PKPbc	PKPbc	03 31 46.8	-0.1
	comp=Z,1.3nm,0.6s,baz=196,slow=8.9,SNR=3.7						
BDFB	Brasilia	153.42	209		PKiKP	03 31 47.4	+0.4

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*NIED **16** 03:16:21.6, 31.°31N×128.°73E, h8^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.17; $M_{\theta\theta}$-0.84; $M_{\phi\phi}$2.01; $M_{r\theta}$0.30; $M_{\theta\phi}$3.40; $M_{\phi r}$-1.15; Fault plane solution: $M_0$3.92000×10^{14} NP1: ϕ_s351.00000°, δ81.00000°, λ-158.00000°. NP2: ϕ_s257.00000°, δ69.00000°, λ-10.00000°.*

JMA 16 03:16:21.5±0.4**, 31.°31N**×**128.°73E, h8**^{km}±4^{km}**, M3.6, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.92	66	P	Pg	03 16 38.5	-0.7
JSJ				*e*S	Sg	03 16 51.0	-0.1
JFU	Fukue jima 2	1.34	1	P	Pn	03 16 46.2	-0.3
JFU				*e*S	Sg	03 17 04.9	+0.2
JSU	Suzuyama	1.49	82	P	Pn	03 16 48.6	0.0
JKC	Kuchinoerabu	1.52	123	P	Pb	03 16 49.6	-0.3
JNN	Nakanoshima	1.77	146	P	Pn	03 16 53.1	+0.7
JYAK	Yakushimahirau	1.87	124	P	Pn	03 16 52.2	-1.6
JTN	Tanegashima 3	2.04	108	P	Pn	03 16 55.5	-0.6
JMTN	Minamitane	2.08	115	P	Pn	03 16 56.7	+0.1
JIU3	Izumi3	2.16	55	P	Pn	03 16 58.5	+0.7

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*IDC **16** 03:31:37.2±0.5, 52.°00N×173.°71E, h0^{km}, mb4.6/36, mb1 4.7/38, mb1mx4.7/48, mbtmp4.6/38, ML3.6/2, MS4.3/38, Ms1 4.3/38, ms1mx4.2/42, Error ellipse: s-maj=15.0km s-min=9.4km az=165.0*

*AEIC **16** 03:31:37±3.4, 51.°93N±0.°06×173.°18E±0.°09, h49^{km}±4^{km}, Error ellipse: s-maj=9.3km s-min=8.2km az=150.0*

*KRSC **16** 03:31:38.0±1.7, 51.°94N×173.°31E, h16^{km}±23^{km}, ML4.7*

*BJI **16** 03:31:38.5±0.0, 52.°13N×174.°02E, h34^{km}, mB5.0/35, mb4.8/60, Ms4.9/50, Ms7 4.6/47*

*MOS **16** 03:31:40.6±1.1, 51.°95N×173.°56E, h35^{km}, mb5.2/92, MS4.6/13, Error ellipse: s-maj=5.7km s-min=3.4km az=116.6*

*GCMT **16** 03:31:42.2±0.3, 52.°00N±0.°03×173.°67E±0.°04, h18^{km}±1^{km}, MW5.1/93, Moment Tensor Solution. s44,c53; s93,c124; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.05±.25; $M_{\theta\theta}$-3.06±.18; $M_{\phi\phi}$0.01±.13; $M_{r\theta}$5.68±.66; $M_{\theta\phi}$0.83±.09; $M_{\phi r}$-0.68±.27; Best double couple: $M_0$6.53700×10^{16} NP1: ϕ_s292.00000°, δ15.00000°, λ104.00000°. NP2: ϕ_s98.00000°, δ76.00000°, λ86.00000°. Principal axes: T 6.4480, Plg59.0000°, Azm3.0000°; N 0.1790, Plg3.0000°, Azm99.0000°; P -6.6250, Plg31.0000°, Azm191.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **16** 03:31:42.2±1.4, 52.°10N±0.°05×173.°60E±0.°09, h31^{km}±4^{km}, mb5.1/481, ML4.5(AEIC) Error ellipse: s-maj=8.3km s-min=7.0km az=108.0*

ISC 16 03:31:40.9±0.3**, 51.°96N**±0.°04×**173.°64E**±0.°03**, h24**^{km}**, n1043,** σ**1.**^{s}**30**/942**, mb5.1**/386**, MS4.5**/64**, 53C-35D, Near Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMY	Shemya	0.82	20	P	Pb	03 31 54.8	-1.7
SMY						03 32 06.6	
SMY	Shemya	0.82	20	*e*P	Pb	03 31 54.9	-1.7
SMY				*e*S	Sb	03 32 06.8	-0.4
SMY	Shemya	0.82	20		Pb	03 31 54.8	-1.7
SMY					Sb	03 32 06.6	-0.6
LSSA	Little Sitkin	3.02	88		Pn	03 32 27.2	0.0
LSSA					Sn	03 33 05.1	+2.5
LSNW	Little Sitkin	3.02	88		Pn	03 32 27.5	+0.3
LSSE	Little Sitkin	3.05	89		Pn	03 32 27.9	+0.3
AMKA	Amchitka	3.57	97		Pn	03 32 36.3	+1.5
CESW	Semis' Southwe	3.67	89		Pn	03 32 35.9	-0.3
BKI	Bering	5.60	308	P	Pn	03 33 03.7	+1.0
BKI				S	Sn	03 34 04.5	-1.7
BKI	Bering	5.60	308	*e*P	Pn	03 33 03.0	+0.3
BKI				*e*S	Sn	03 34 04.0	-2.2
KIMD	Kanaga Island	5.66	88		Pn	03 33 04.7	+1.2
KIWB	Kanaga Island	5.70	87	Pn	Pn	03 33 05.8	+1.7
ADK	Adak	5.99	87	P	Pn	03 33 10.4	+2.4
ADK	Adak	5.99	87	Pn	Pn	03 33 10.4	+2.4
ATKA	Atka Island	7.50	83		Pn	03 33 30.7	+1.9
KBTR	Krutoberegovo	7.65	308	P	Pn	03 33 30.5	-0.3
SPN	Mys Shipunski	8.38	283	P	Pn	03 33 38.2	-2.6
SMKR	Semkarok	8.49	308	P	Pn	03 33 43.9	+1.6
ZLN	Zelenaya	8.58	303	P	Pn	03 33 45.5	+1.9
BZGR	Bezymyannyi-Gr	8.61	303	P	Pn	03 33 45.5	+1.5
BZGR	Bezymyannyi-Gr	8.61	303	*e*P	Pn	03 33 45.4	+1.5
BDR	Baidarnaya	8.61	307	P	Pn	03 33 46.7	+2.7
LGNR	Loginova	8.67	304	P	Pn	03 33 46.5	+1.5
SRKR	Sorokina	8.67	308	P	Pn	03 33 46.1	+1.3
TUMR	Tumrok	8.68	298	P	Pn	03 33 46.4	+1.4
BZWR	Bezymyannyi-We	8.72	303	P	Pn	03 33 47.3	+1.7
BZWR	Bezymyannyi-We	8.72	303	*e*P	Pn	03 33 47.4	+1.8
KMNR	Kamenistaya	8.78	301	P	Pn	03 33 48.4	+2.0
KMNR	Kamenistaya	8.78	301	*e*P	Pn	03 33 48.1	+1.7
KRSR	Krestovskiy	8.78	304	P	Pn	03 33 47.5	+1.2
KRSR	Krestovskiy	8.78	304	*e*P	Pn	03 33 47.6	+1.2
NLC	Nalytchevo	8.79	284	P	Pn	03 33 46.6	+0.1
NLC				S	Sn	03 35 17.4	-7.2
NLC	Nalytchevo	8.79	284	*e*P	Pn	03 33 46.5	+0.1
KIRR	Kirishev	8.80	302	P	Pn	03 33 48.5	+1.9
KII	Karymskiy	8.81	289	P	Pn	03 33 46.5	-0.2
KII	Karymskiy	8.81	289	*e*P	Pn	03 33 46.5	-0.2
KPT	Kopyto	8.87	302	P	Pn	03 33 49.5	+2.0
KPT	Kopyto	8.87	302	*e*P	Pn	03 33 49.4	+2.0
SDLR	Sedlovina	9.07	284	P	Pn	03 33 50.2	-0.2
UGLR	Uglovaya	9.11	284	P	Pn	03 33 50.8	-0.1
UGLR				S	Sn	03 35 26.0	-6.6
UGLR	Uglovaya	9.11	284	*e*P	Pn	03 33 50.8	-0.1
SMAR	Somma	9.12	284	P	Pn	03 33 51.0	-0.2
SMAR	Somma	9.12	284	*e*P	Pn	03 33 50.9	-0.2
DALK	Dalny	9.15	283	P	Pn	03 33 51.5	+0.3
KRER	Koryakskii	9.16	284	P	Pn	03 33 51.7	+0.1
AVH	Avacha	9.16	284	P	Pn	03 33 51.5	-0.1
AVH	Avacha	9.16	284	*e*P	Pn	03 33 51.5	-0.1
PET	Petropavlovsk	9.21	283	*e*P	Pn	03 33 51.2	-0.9
PET				*e*S	Sn	03 35 29.5	-5.3
PET				pmax	pmax		
	comp=Z,56nm,1.3s						
PET				MLR	MLR		
	comp=Z,2μm,18.0s						
PET				MLR	MLR		
	comp=Z,1μm,15.0s						
PET	Petropavlovsk	9.21	283		Pn	03 33 51.9	-0.2
KOK	Koryaka	9.22	284	P	Pn	03 33 52.4	0.0
RUS	Russkaya	9.30	279	P	Pn	03 33 52.7	-0.7
RUS				S	Sn	03 35 28.7	-8.5
RUS	Russkaya	9.30	279	*e*P	Pn	03 33 52.7	-0.7
OSSR	Ossora	9.43	325	P	Pn	03 33 58.5	+3.4
TILK	Tilichiki	9.47	337	P	Pn	03 33 58.4	+2.8
TILK	Tilichiki	9.47	337	*e*P	Pn	03 33 58.9	+3.3
MTVR	Mutnovka	9.50	279	P	Pn	03 33 55.2	-1.1
GRL	Gorelyy	9.57	280	P	Pn	03 33 58.3	+1.1
KDTR	Khodutka, Kamc	9.63	275	P	Pn	03 33 56.8	-1.0
KDTR				S	Sn	03 35 36.8	-8.3
KDTR	Khodutka, Kamc	9.63	275	*e*P	Pn	03 33 56.6	-1.2
ESO	Esso	9.66	300	P	Pn	03 33 58.9	+0.6
GNL	Ganaly	9.66	287	P	Pn	03 33 59.4	+1.0
ASAK	Asacha	9.68	279	P	Pn	03 33 59.4	+0.7
ASAK	Asacha	9.68	279	*e*P	Pn	03 33 58.9	+0.2
PEA0B	Petropavlovsk-	9.78	283	*d i*P	Pn	03 34 00.1	+0.1
PEA0B	Petropavlovsk-	9.78	283	Pn	Pn	03 33 59.3	-0.7
PETK	Petropavlovsk-	9.78	283	Pn	Pn	03 34 00.1	+0.1
	comp=Z,3.6nm,0.3s,baz=306,slow=30,SNR=49						
PETK				Sn	Sn	03 35 45.7	-3.3
	comp=Z,4.4nm,0.3s,baz=99,slow=24,SNR=4.1						
PETK				LR	LR	03 39 00.3	
	comp=Z,1μm,18.1s,baz=103,slow=45						
PETK	Petropavlovsk-	9.78	283	P	Pn	03 33 59.0	-1.0
PETK	Petropavlovsk-	9.78	283	Pn	Pn	03 33 59.0	-1.0
APC	Apacha	10.11	282	P	Pn	03 34 05.8	+1.3
SPIA	Saint Paul Isl	10.70	54	P	Pn	03 34 15.2	+2.6
	baz=248						
SPIA	Saint Paul Isl	10.70	54	Pn	Pn	03 34 12.4	-0.1
SKR	Severo-Kuril's	11.04	270	*e*P	Pn	03 34 15.6	-1.6
SKR				pmax	pmax		
	comp=Z,98nm,0.8s						
SKR				pmax	pmax		
	comp=Z,100nm,3.0s						
SKR				pmax	pmax		
	comp=Z,300nm,3.6s						
SKR				MLR	MLR		
	comp=Z,600nm,12.0s						
SKR				MLR	MLR		
	comp=Z,400nm,14.0s						
KMSK	Kamenskaya	11.27	342	P	Pn	03 34 22.6	+2.4
UNV	Unalaska Valle	12.13	73	Pn	Pn	03 34 33.1	+1.0
MA2	Magadan	14.90	310	Pn	P	03 35 15.8	+0.6
	comp=Z,2.4nm,0.3s,baz=108,slow=12,SNR=5.5						
MA2				LR	LR	03 40 47.8	
	comp=Z,2μm,19.7s,baz=110,slow=37						
MA2	Magadan	14.90	310	P	P	03 35 15.3	+0.1
MA2	Magadan	14.90	310	P	P	03 35 15.3	+0.1
SDPT	Sand Point	15.68	67	Pn	Pn	03 35 20.1	+0.1
SDPT				IAmb	IAmb	03 35 42.0	
	comp=Z,95nm,1.0s						
SEY	Seymchan	15.77	322	Pn	Pn	03 35 20.5	-0.7
	comp=Z,0.2nm,0.3s,baz=164,slow=21,SNR=2.2						
SEY				LR	LR	03 41 08.4	
	comp=Z,2μm,18.9s,baz=118,slow=36						
CNBA	Chernabura Isl	16.19	69	Pn	Pn	03 35 26.4	-0.1
BILL	Bilibino	16.52	350	*d i*P	Pn	03 35 31.4	+0.6
BILL				pmax	pmax		
	comp=Z,92nm,1.5s						
BILL				MLR	MLR		
	comp=Z,2μm,17.0s						
BILL	Bilibino	16.52	350	Pn	Pn	03 35 29.2	-1.5
TNA	Tin City	16.55	28	Pn	Pn	03 35 29.7	-1.3
ANM	Nome	16.66	33	P	Pn	03 35 32.1	-0.4
ANM				pmax	pmax		
	comp=Z,131nm,1.3s						
ANM	Nome	16.66	33	P	P	03 35 33.8	-1.0
	baz=231						
ANM	Nome	16.66	33		Pn	03 35 32.1	-0.4
ANM				IAmb	IAmb	03 35 44.9	
	comp=Z,131nm,1.3s						
CHGN	Chignik	16.88	64	P	P	03 35 36.9	-0.3
	baz=267						
CHGN	Chignik	16.88	64	Pn	Pn	03 35 33.9	-1.4
CHIR	Chirikof Islan	18.44	66		P	03 35 52.2	-2.2
CHIR				IAmb	IAmb	03 36 10.8	
	comp=Z,109nm,1.3s						
P18K	Big Mountain,	18.92	55	P	Pn	03 36 00.4	0.0
	baz=261						
P18K	Big Mountain,	18.92	55	P	P	03 35 59.0	-0.7
O18K	Koktuh Hills	19.02	53	P	Pn	03 36 01.2	-0.4
	baz=260						
O18K	Koktuh Hills	19.02	53	P	Pn	03 36 01.1	-0.4
SVW2	Sparrevohn	19.11	49	P	P	03 36 02.0	+0.2
SII	Sitkinak Islan	19.24	63	P	P	03 36 02.3	-0.9
	baz=270						
SII	Sitkinak Islan	19.24	63	P	P	03 36 01.5	-1.7
TTA	Tatalina	19.47	44	P	Pn	03 36 06.3	-0.8
TTA				pmax	pmax		
	comp=Z,45nm,1.2s						
TTA	Tatalina	19.47	44	P	P	03 36 06.1	+0.4
	baz=250,SNR=9.3						
TTA	Tatalina	19.47	44		Pn	03 36 06.2	-0.8
N19K	Bonanza Creek	19.56	51	P	Pn	03 36 08.1	-0.1
	baz=258						
N19K	Bonanza Creek	19.56	51	P	Pn	03 36 07.6	-0.6
Q19K	Cape Douglas,	19.67	56	P	P	03 36 07.8	-0.1
	baz=264						
Q19K	Cape Douglas,	19.67	56	P	P	03 36 08.1	+0.2
Q19K				IAmb	IAmb	03 36 31.6	
	comp=Z,110nm,0.9s						
RDOG	Red Dog Mine	19.72	26	P	Pn	03 36 14.5	+4.5
	baz=227,SNR=18						
OHAK	Old Harbor	19.74	62	P	P	03 36 07.7	-0.9
	baz=269						
OHAK	Old Harbor	19.74	62	P	P	03 36 06.5	-2.1
OHAK				IAmb	IAmb	03 36 18.0	
	comp=Z,61nm,0.9s						
GCSA	Galena City Sc	19.83	38	P	P	03 36 09.8	+0.2
	baz=244,SNR=16						
M19K	Big River Lodg	19.87	48	P	Pn	03 36 11.3	-0.5
	baz=255						
M19K	Big River Lodg	19.87	48	P	P	03 36 09.8	-0.3
P19K	Oil Pt	19.97	54	P	Pn	03 36 12.0	-1.0
	baz=262						
P19K	Oil Pt	19.97	54	P	P	03 36 11.8	+0.7
P19K				IAmb	IAmb	03 36 38.8	
	comp=Z,70nm,0.9s						
L20K	Farewell, AK	20.26	46	P	P	03 36 14.8	+0.5
	baz=254						
RSO	Redoubt South	20.33	52	P	P	03 36 15.7	+0.4
YSS	Yuzh-Sakhalins	20.60	268	⇑*e*P	P	03 36 19.1	+1.1
YSS				*e*		03 36 36.4	
YSS				*e*		03 36 47.5	
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS				MLR	MLR		
	comp=Z,1μm,13.0s						
J20K	Nowinta River	20.69	41	P	P	03 36 19.0	+0.1
	baz=249						
J20K	Nowinta River	20.69	41	P	P	03 36 19.1	+0.1
SPCR	Spurr Chakacha	20.73	50	P	P	03 36 20.2	+0.8
	baz=259						
HOM	Homer	20.77	55	P	P	03 36 19.2	-0.6
SPU	Mount Spurr	20.80	50	P	P	03 36 20.8	+0.7
CNPM	China Poot	20.96	55	P	P	03 36 20.3	-1.7
CNPM				IAmb	IAmb	03 36 42.0	
	comp=Z,66nm,0.8s						
PPLA	Purkeypile	21.12	46	P	P	03 36 24.2	+0.4
	baz=255,SNR=8.8						
PPLA	Purkeypile	21.12	46		P	03 36 24.0	+0.2
PPLA				IAmb	IAmb	03 36 42.8	
	comp=Z,66nm,1.0s						
BRLK	Bradley Lake	21.16	54	P	P	03 36 23.0	-1.1
SKT	Skwentna	21.20	48	P	P	03 36 25.2	+0.8
	baz=258						
SKT	Skwentna	21.20	48	P	P	03 36 25.6	+1.1
SKT				IAmb	IAmb	03 36 50.8	
	comp=Z,75nm,1.2s						
BRSE	Bradley Lake S	21.23	55	P	P	03 36 24.4	-0.4
	baz=265						
CAST	Castle Rocks	21.31	44	P	P	03 36 25.9	+0.3
	baz=254						
CHUM	Lake Minchumin	21.35	43	P	P	03 36 26.5	+0.4
	baz=252,SNR=16						
SUA	Susitna One	21.47	50	P	P	03 36 27.7	+0.2
	baz=260						
SUA	Susitna One	21.47	50		P	03 36 27.5	+0.1
IMAR	Indian Mountai	21.55	37	P	P	03 36 27.6	-0.6
H21K	Melozitna Rive	21.78	38	P	P	03 36 30.2	-0.4
	baz=248						
H21K	Melozitna Rive	21.78	38	P	P	03 36 30.7	+0.1
H21K				IAmb	IAmb	03 36 47.1	
	comp=Z,95nm,1.5s						
KTH	Kantishna Hill	21.85	44	P	P	03 36 31.5	0.0
KTH				IAmb	IAmb	03 36 53.1	
	comp=Z,42nm,0.8s						
RC01	Rabbit Creek A	21.89	51	P	P	03 36 33.0	+1.1
	baz=262						
SEW	Seward	21.91	54	P	P	03 36 31.9	-0.2
	baz=265						
SEW	Seward	21.91	54		P	03 36 32.1	+0.1
I21K	Tanana	21.92	40	P	P	03 36 32.3	+0.2
	baz=250,SNR=11						
BPAW	Bear Paw Mtn.	21.98	43	P	P	03 36 33.2	+0.4
	baz=254,SNR=16						
JKA	Kamikawa-asahi	22.06	261	P	P	03 36 34.5	+0.8
JKA				IAmb	IAmb	03 36 57.1	
	comp=Z,97nm,1.3s						
ASAJ	Asahikawa	22.06	261	P	P	03 36 34.2	+0.4
	comp=Z,27nm,0.8s,baz=40,slow=5.3,SNR=9.3						
TRF	Thorofare Moun	22.10	45	P	P	03 36 34.0	-0.3
	baz=256,SNR=8.0						
PMR	Palmer	22.25	50	P	P	03 36 34.7	-1.0
PMR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PMR	Palmer	22.25	50	P	P	03 36 35.2	-0.5
	baz=262						
PMR	Palmer	22.25	50	P	P	03 36 34.7	-1.0
MLY	Manley	22.36	41	P	P	03 36 36.3	-0.7
	baz=252,SNR=31						
GHO	Glory Hole Cre	22.38	49	P	P	03 36 35.7	-1.5
PWL	Port Wells	22.54	52	P	P	03 36 38.1	-0.8
	baz=264						
KNK	Knik Glacier	22.55	50	P	P	03 36 38.1	-0.8
	baz=263						
KNK	Knik Glacier	22.55	50	P	P	03 36 37.9	-1.0
SML	Sawmill	22.66	49	P	P	03 36 39.6	-0.6
SML	Sawmill	22.66	49	P	P	03 36 39.2	-0.9
	baz=262,SNR=32						
SML	Sawmill	22.66	49	P	P	03 36 38.9	-1.3
SML				IAmb	IAmb	03 36 46.3	
	comp=Z,64nm,0.8s						
WAT1	Susitna Watana	22.73	47	P	P	03 36 39.7	-1.2
	baz=259						
MCK	McKinley	22.76	44	P	P	03 36 40.9	-0.2
	baz=257,SNR=11						
MCK	McKinley	22.76	44	IAmb	IAmb	03 37 02.6	

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       comp=Z,64nm,1.3s
JEM    Erimo              22.89 256    P      P       03 36 34.5 -8.1
JEM                                    IAmb   IAmb    03 36 47.8
       comp=Z,124nm,1.2s
ERM    Erimo              22.89 256ceP        P       03 36 46.1 +3.5
ERM                                    pmax   pmax
       comp=Z,103nm,1.3s
NEA2   Nenana             22.92  42    P      P       03 36 42.7 -0.1
       baz=255,SNR=56
NEA2   Nenana             22.92  42    IAmb   IAmb    03 36 49.2
       comp=Z,44nm,0.8s
I23K   Minto, Yukon-K     22.96  41    P      P       03 36 43.4 +0.3
       baz=253,SNR=21
WAT6   Susitna Watana     23.06  48    P      P       03 36 43.0 -1.3
       baz=261,SNR=19
GRNR   Gornyy             23.11 282⇓iP        P       03 36 45.1 +0.3
GRNR                                   pmax   pmax
       comp=Z,5.0nm,0.8s
GRNR                                   MLR    MLR
       comp=E,630nm,15.0s
GRNR                                   MLR    MLR
       comp=Z,800nm,12.0s
SCM    Sheep Creek Mo     23.14  50    P      P       03 36 43.5 -1.6
SCM                                    pmax   pmax
       comp=Z,50nm,0.9s
SCM    Sheep Creek Mo     23.14  50    P      P       03 36 44.1 -1.0
       baz=263,SNR=11
SCM    Sheep Creek Mo     23.14  50    P      P       03 36 43.5 -1.6
SCM                                    IAmb   IAmb    03 37 03.1
       comp=Z,50nm,0.9s
GLI    Glacier Island     23.15  52    P      P       03 36 44.5 -0.7
GLI                                    IAmb   IAmb    03 37 10.1
       comp=Z,84nm,1.4s
WRH    Wood River Hil     23.29  43    IAmb   IAmb    03 36 50.3
       comp=Z,31nm,0.7s
DHY    Denali Highway     23.31  46    P      P       03 36 45.8 -1.1
       baz=260
COLD   Coldfoot           23.35  35    P      P       03 36 46.4 -0.7
       baz=247,SNR=14
COLD   Coldfoot           23.35  35    P      P       03 36 46.2 -0.9
MDM    Murphy Dome        23.36  42    IAmb   IAmb    03 36 52.6
       comp=Z,32nm,0.8s
CCB    Clear Creek Bu     23.46  42    IAmb   IAmb    03 36 52.3
       comp=Z,34nm,0.8s
TCOL   CIGO, UAF Yank     23.49  42    P      P       03 36 48.6 +0.1
       baz=255,SNR=18
TCOL   CIGO, UAF Yank     23.49  42    IAmb   IAmb    03 36 53.5
       comp=Z,98nm,0.8s
COLA   College            23.50  42ceP        P       03 36 47.1 -1.4
COLA   College            23.50  42    P      P       03 36 48.6 +0.1
       baz=255
COLA   College            23.50  42    P      P       03 36 48.5  0.0
COLA                                   IAmb   IAmb    03 36 53.5
       comp=Z,97nm,0.8s
A21K   Barrow             23.54  24    P      P       03 36 47.9 -1.0
       baz=230,SNR=11
A21K   Barrow             23.54  24    IAmb   IAmb    03 36 57.7
       comp=Z,162nm,1.4s
M24K   Tolsona, Glenn     23.71  49    P      P       03 36 50.7 -0.1
       baz=264
M24K   Tolsona, Glenn     23.71  49    IAmb   IAmb    03 37 11.8
       comp=Z,70nm,1.1s
POKR   Poker Plat Res     23.73  41    P      P       03 36 50.4 -0.4
       baz=255,SNR=16
POKR   Poker Plat Res     23.73  41    P      P       03 36 50.6 -0.3
POKR                                   IAmb   IAmb    03 36 55.6
       comp=Z,50nm,1.0s
H24K   Noodor Dome        23.75  39    P      P       03 36 50.6 -0.4
       baz=253
H24K   Noodor Dome        23.75  39    IAmb   IAmb    03 37 13.6
       comp=Z,66nm,1.3s
HDA    Harding Lake       23.76  43    P      P       03 36 50.6 -0.6
       baz=257,SNR=14
KLU    Klutina            23.77  51    P      P       03 36 50.5 -0.8
       baz=265,SNR=10.0
EYAK   Cordova Ski Ar     23.78  53    P      P       03 36 50.6 -0.7
ILAR   Eielson Array      23.87  42    P      P       03 36 51.1 -1.0
       comp=Z,8.2nm,0.6s,baz=246,slow=7.4,SNR=136
ILAR                                   LR     LR      03 46 28.1
       comp=Z,522nm,18.0s,baz=245,slow=37
ILAR   Eielson Array      23.87  42    P      P       03 36 51.6 -0.5
PAX    Paxson             24.15  47    P      P       03 36 53.8 -1.1
       baz=262,SNR=24
PAX    Paxson             24.15  47    IAmb   IAmb    03 36 57.1
       comp=Z,65nm,1.4s
TOLK   Toolik Lake Re     24.15  32    P      P       03 36 54.2 -0.5
       baz=245,SNR=40
TOLK   Toolik Lake Re     24.15  32    P      P       03 36 53.8 -1.0
TOLK                                   IAmb   IAmb    03 37 03.4
       comp=Z,43nm,0.8s
HARP   HAARP              24.22  48    P      P       03 36 54.9 -0.6
       baz=264
RAGM   Ragged Mountai     24.31  53    P      P       03 36 55.9 -0.4
RAGM                                   IAmb   IAmb    03 37 11.4
       comp=Z,37nm,0.8s
BMRM   Bremner River      24.37  52    P      P       03 36 56.0 -0.8
       baz=268
BMRM   Bremner River      24.37  52    P      P       03 36 57.1 +0.2
N25K   Chitina, Valde     24.41  50    P      P       03 36 56.5 -0.8
       baz=266,SNR=6.4
KAIM   Kayak Island       24.43  54    P      P       03 36 57.0 -0.4
       baz=270
KAIM   Kayak Island       24.43  54    P      P       03 36 56.6 -0.7
KAIM                                   IAmb   IAmb    03 37 14.4
       comp=Z,62nm,1.0s
HMT    Hamilton           24.51  53    P      P       03 36 57.5 -0.6
HMT                                    IAmb   IAmb    03 37 22.9
       comp=Z,38nm,0.9s
RIDG   Independent Ri     24.54  45    P      P       03 36 56.9 -1.5
       baz=261,SNR=13
PRP    Porcupine Dome     24.61  41    P      P       03 36 58.3 -0.8
       baz=257,SNR=64
PRP    Porcupine Dome     24.61  41    IAmb   IAmb    03 37 04.5
       comp=Z,43nm,0.8s
SUCK   Suckling Hills     24.75  54    P      P       03 37 01.1 +0.8
SUCK                                   IAmb   IAmb    03 37 06.5
       comp=Z,74nm,1.3s
GLB    Gilahina Butte     24.77  51    P      P       03 36 59.4 -1.1
GLB                                    IAmb   IAmb    03 37 25.4
       comp=Z,31nm,0.8s
BERG   Berg Lake          24.79  53    P      P       03 37 00.2 -0.4
DOT    Dot Lake           24.87  46    IAmb   IAmb    03 37 06.5
       comp=Z,28nm,0.7s
VRDI   Verde Repeater     24.94  51    P      P       03 37 01.5 -0.7
SCRK   Sand Creek         24.95  45    P      P       03 37 01.2 -1.0
       baz=262,SNR=25
FYU    Fort Yukon         24.99  39    P      P       03 37 02.7 +0.4
FYU                                    IAmb   IAmb    03 37 06.0
       comp=Z,49nm,0.8s
CRQM   Cirque             25.08  53    IAmb   IAmb    03 37 18.0
       comp=Z,27nm,0.8s
CRQE   Cirque             25.10  53    P      P       03 37 03.0 -0.5
       baz=269
L26K   Log Cabin Wild     25.12  47    P      P       03 37 02.9 -0.7
       baz=264,SNR=16
MCARA  McCarthy VSAT      25.15  51    P      P       03 37 03.2 -0.6
       baz=268
MCARA  McCarthy VSAT      25.15  51    IAmb   IAmb    03 37 27.4
       comp=Z,43nm,0.9s
WAX    Waxell Ridge       25.21  53    P      P       03 37 05.3 +0.7
WAX                                    IAmb   IAmb    03 37 31.6
       comp=Z,26nm,0.8s
J26L   Joseph Creek       25.22  44    P      P       03 37 02.8 -1.7
       baz=261,SNR=39
BMAR   Burnt Mountain     25.47  37    P      P       03 37 06.3 -0.5
YAK    Yakutsk            25.47 310    P      P       03 37 06.8  0.0
       comp=Z,14nm,0.3s,baz=272,slow=14,SNR=12
YAK                                    LR     LR      03 47 21.5
       comp=Z,1µm,18.5s,baz=94,slow=37
YAK    Yakutsk            25.47 310c iP       P       03 37 06.6 -0.1
YAK                                  e                03 37 47.7
YAK                                  e                03 40 38.0
YAK                                  eS       S       03 41 34.7 +2.5
YAK                                  eSS      SnSn    03 42 33.4 +8.0
YAK                                    pmax   pmax
       comp=Z,122nm,1.2s
YAK                                    pmax   pmax
       comp=N,11nm,1.1s
YAK                                    pmax   pmax
       comp=E,75nm,1.2s
YAK                                    pmax   pmax
       comp=Z,523nm,3.2s
YAK                                    pmax   pmax
       comp=E,463nm,3.3s
YAK                                    pmax   pmax
       comp=N,449nm,3.0s
YAK                                    smax   smax
       comp=E,858nm,3.5s
YAK                                    smax   smax
       comp=N,641nm,2.8s
YAK                                    MLR    MLR
       comp=Z,1µm,19.0s
YAK                                    MLR    MLR
       comp=E,698nm,16.0s
YAK                                    MLR    MLR
       comp=N,470nm,17.0s
YAK    Yakutsk            25.47 310    P      P       03 37 07.6 +0.9
MESA   MESA               25.67  54    P      P       03 37 08.6 -0.2
       baz=272
MESA   MESA               25.67  54    P      P       03 37 08.8 +0.1
MESA                                   IAmb   IAmb    03 37 30.7
       comp=Z,45nm,0.9s
M27K   Edge Creek, AK     25.74  49    P      P       03 37 09.9 +0.6
       baz=267
M27K   Edge Creek, AK     25.74  49    IAmb   IAmb    03 37 39.7
       comp=Z,43nm,1.1s
GRNC   Granite Creek      25.76  53    IAmb   IAmb    03 37 17.2
       comp=Z,29nm,0.8s
BARN   Barnard Glacie     25.80  52    IAmb   IAmb    03 37 27.6
       comp=Z,33nm,0.8s
BCAR   Beaver Creek A     25.83  47    P      P       03 37 10.4 +0.3
CTG    Chitna Glacier     25.96  52    P      P       03 37 10.8 -0.5
       baz=270
CTGM   Chitina Glacie     25.96  52    IAmb   IAmb    03 37 18.1
       comp=Z,25nm,0.8s
LOGN   Logan Glacier      26.12  52    P      P       03 37 11.8 -1.1
BVCY   Beaver Creek       26.21  49    P      P       03 37 13.3 -0.3
       baz=268
EGAK   Eagle              26.28  43    P      P       03 37 13.1 -1.0
       baz=263
YUK3   Moose Creek        26.39  50    P      P       03 37 13.9 -1.4
       baz=270,SNR=16
KLR    Kul'dur            26.46 281    P      P       03 37 15.8 -0.1
       comp=Z,3.2nm,0.6s,baz=74,slow=6.2,SNR=7.3
KLR                                    LR     LR      03 47 50.2
       comp=Z,534nm,20.0s,baz=71,slow=37
KLR    Kul'dur            26.46 281⇓eP        P       03 37 17.3 +1.4
KLR                                    pmax   pmax
       comp=Z,31nm,1.4s
PINM   Pinnacle           26.52  54    P      P       03 37 15.7 -0.6
       baz=273
DAWY   Dawson             26.97  45    P      P       03 37 19.2 -1.2
       baz=266,SNR=17
YUK4   Talbot Arm         27.26  51    P      P       03 37 25.1 +2.0
       baz=272
I29M   Ogilvie Camp,      27.55  42    P      P       03 37 24.8 -0.7
       baz=264,SNR=9.1
ZEA    Zeya               27.69 292  eP       P       03 37 30.6 +3.8
ZEA                                    pmax   pmax
       comp=Z,20nm,1.2s
ZEA                                    MLR    MLR
       comp=Z,500nm,13.0s
HYT    Haines Junctio     27.84  52    P      P       03 37 28.0 -0.2
       baz=274
TIXI   Tiksi              27.84 331    P      P       03 37 27.2 -0.8
       comp=Z,4.6nm,0.4s,baz=109,slow=10,SNR=10
TIXI   Tiksi              27.84 331⇑eP        P       03 37 27.6 -0.4
TIXI                                   pmax   pmax
       comp=Z,21nm,1.2s
TIXI   Tiksi              27.84 331    P      P       03 37 27.4 -0.5
EPYK   Eagle Plains       28.30  40    P      P       03 37 31.5 -0.7
       baz=264
EPYK   Eagle Plains       28.30  40    P      P       03 37 31.5 -0.7
USRK   Ussuriysk Ar.      28.56 271    P      P       03 37 34.6 -0.1
       comp=Z,2.7nm,0.7s,baz=58,slow=15,SNR=2.9
USRK                                   LR     LR      03 50 02.1
       comp=Z,248nm,18.7s,baz=53,slow=39
M31M   Drury Creek, Y     29.24  49    P      P       03 37 41.5 +0.9
       baz=274
MJAR   Matsushiro Arr     29.34 252    P      P       03 37 42.4 +0.7
       comp=Z,4.8nm,0.9s,baz=48,slow=7.7,SNR=13
MJAR                                   LR     LR      03 47 29.9
       comp=Z,151nm,21.6s,baz=20,slow=32
MJAR   Matsushiro Arr     29.34 252    P      P       03 37 42.8 +1.1
MJAR                                   pmax   pmax
       comp=Z,11nm,1.5s
MJAR   Matsushiro Arr     29.34 252    P      P       03 37 42.8 +1.1
MAJO   Matsushiro         29.34 252    P      P       03 37 42.8 +1.1
MAJO                                   pmax   pmax
       comp=Z,30nm,1.1s
MAJO   Matsushiro         29.34 252    P      P       03 37 42.8 +1.1
MAJO                                   IAmb   IAmb    03 37 44.6
       comp=Z,30nm,1.1s
MAT    Matsushiro         29.34 252    P      P       03 37 42.7 +1.0
MAT                                    S      S       03 42 35.6 +2.0
FARO   Faro, Yukon        29.72  49    P      P       03 37 44.9  0.0
       baz=275
INK    Inuvik             29.75  37    P      P       03 37 45.5 +0.6
       comp=Z,2.7nm,0.5s,baz=276,slow=8.6,SNR=18
INK                                    LR     LR      03 50 52.7
       comp=Z,716nm,18.2s,baz=252,slow=39
INK    Inuvik             29.75  37    P      P       03 37 44.4 -0.5
INK                                    pmax   pmax
       comp=Z,11nm,1.0s
INK    Inuvik             29.75  37    P      P       03 37 44.9  0.0
       baz=264
INK    Inuvik             29.75  37    P      P       03 37 44.4 -0.5
P33M   Teslin, Yukon      30.21  53    P      P       03 37 49.5 +0.3
       baz=279,SNR=9.7
JGF    Kuroka             30.48 252    IAmb   IAmb    03 38 04.4
       comp=Z,35nm,1.0s
MMPY   Sheldon Lake,      30.66  48    P      P       03 37 53.5 +0.4
       baz=276
JHJ    Hachijo jima 2     30.86 246    LR     LR      03 48 13.5
       comp=Z,265nm,19.6s,baz=35,slow=32
JWT    Wachi              31.86 254    P      P       03 38 05.0 +1.1
JWT                                    IAmb   IAmb    03 38 06.7
       comp=Z,25nm,1.0s
DLBC   Dease Lake         31.95  56    P      P       03 38 05.2 +0.7
       comp=Z,4.2nm,0.8s,baz=298,slow=14,SNR=7.0
TGTN   Hyland Airport     32.20  50    P      P       03 38 07.2 +0.6
       baz=280,SNR=8.9
H11N2  WAKE ISLAND Hy     32.59 192    T      T       04 13 13.9
       baz=8.1,slow=76,SNR=39
H11N3  WAKE ISLAND Hy     32.61 192    T      T       04 13 10.8
       baz=8.1,slow=76,SNR=63
H11N1  WAKE ISLAND Hy     32.61 192    T      T       04 13 15.3
       baz=8.1,slow=76,SNR=73
CN2    Changchun          32.80 275  eP       P       03 38 12.0 -0.1
CN2                                    pmax   pmax
       comp=Z,10.0nm,0.6s
CN2                                    LR     LR
       comp=Z,800nm,13.0s
CN2                                    LR     LR
       comp=Z,500nm,13.0s
CN2                                    LR     LR
       comp=Z,900nm,14.0s
A36M   Sachs Harbour      32.91  30    P      P       03 38 13.0 +0.4
       baz=266,SNR=9.6
A36M   Sachs Harbour      32.91  30    P      P       03 38 12.6 -0.1
A36M                                   IAmb   IAmb    03 38 37.6
       comp=Z,27nm,1.0s
BOD    Bodaibo            33.80 304  eP       P       03 38 19.9 -0.7
BOD                                    pmax   pmax
       comp=Z,25nm,1.9s
H11S1  WAKE ISLAND Hy     33.83 192    T      T       04 14 55.4
       baz=7.9,slow=76,SNR=68
H11S3  WAKE ISLAND Hy     33.84 192    T      T       04 14 44.3
       baz=7.9,slow=76,SNR=57
H11S2  WAKE ISLAND Hy     33.84 192    T      T       04 15 00.8
       baz=7.9,slow=76,SNR=45
KSRS   Korea Array        34.96 264    P      P       03 38 33.1 +2.3
       comp=Z,3.1nm,0.8s,baz=53,slow=9.2,SNR=8.2
KSRS                                   LR     LR      03 51 43.8
       comp=Z,138nm,22.0s,baz=60,slow=34
YKA    Yellowknife Ar     38.22  45    P      P       03 38 58.0 -0.3
       comp=Z,3.2nm,0.5s,baz=11,slow=5.4,SNR=19
YKA                                    LR     LR      03 56 04.9
       comp=Z,1µm,18.8s,baz=0.0,slow=38
YKA    Yellowknife Ar     38.22  45    P      P       03 38 58.4 +0.1
LLLB   Lillooet           39.17  66    P      P       03 39 06.5  0.0
LLLB                                   IAmb   IAmb    03 39 17.3
       comp=Z,20nm,0.8s
D03D   Eldon              39.98  70    P      P       03 39 14.0 +0.7
       baz=301
RES    Resolute Bay       41.14  24    P      P       03 39 22.2 -0.2
       comp=Z,9.9nm,1.0s,baz=300,slow=4.9,SNR=26
RES    Resolute Bay       41.14  24    P      P       03 39 21.6 -0.9
RES                                    pmax   pmax
       comp=Z,15nm,1.2s
RES    Resolute Bay       41.14  24    P      P       03 39 21.6 -0.9
NRIK   Noril'sk           41.46 328    P      P       03 39 25.0 -0.2
       comp=Z,5.1nm,0.6s,baz=89,slow=7.1,SNR=11
NRIK                                   LR     LR      03 57 18.6
       comp=Z,510nm,18.5s,baz=68,slow=37
NRIK   Noril'sk           41.46 328ceP        P       03 39 24.8 -0.5
NRIK                                   pmax   pmax
       comp=Z,21nm,1.2s
NRIK   Noril'sk           41.46 328    P      P       03 39 24.7 -0.5
TLY    Talaya             41.71 298    P      P       03 39 27.5  0.0
       comp=Z,5.1nm,0.7s,baz=210,slow=23,SNR=3.1
TLY                                    LR     LR      03 57 04.2
       comp=Z,671nm,21.6s,baz=44,slow=37
TLY    Talaya             41.71 298  eP       P       03 39 27.4 -0.1
TLY                                  e                03 41 18.7
TLY                                  eS       S       03 45 47.0 +4.2
TLY                                    pmax   pmax
       comp=Z,12nm,0.6s
TLY                                    MLR    MLR
       comp=Z,2µm,17.0s
B08A   Colville Reser     41.72  67    P      P       03 39 26.6 -1.1
ULN    Ulaanbaatar        41.72 292deP        P       03 39 28.7 +0.8
ULN                                    pmax   pmax
       comp=Z,11nm,1.3s
ULN    Ulaanbaatar        41.72 292    P      P       03 39 27.9  0.0
SONM   Songino Array      42.12 292    P      P       03 39 30.9 -0.2
       comp=Z,2.0nm,0.7s,baz=59,slow=8.4,SNR=13
SONM                                   LR     LR      03 59 30.4
       comp=Z,262nm,18.4s,baz=33,slow=40
SONM   Songino Array      42.12 292    P      P       03 39 32.0 +1.0
E07A   Sunnyside          42.37  70    P      P       03 39 32.7 -0.3
ZAK    Zakamensk          42.55 297  eP       P       03 39 40.0 +5.5
ZAK                                    pmax   pmax
       comp=Z,9.0nm,1.5s
EDM    Edmonton           42.58  58    IAmb   IAmb    03 39 35.9
       comp=Z,43nm,0.8s
C09A   Chrisman Ranch     42.62  67    P      P       03 39 34.2 -0.8
HAWA   Hanford            42.65  70    IAmb   IAmb    03 39 39.0
       comp=Z,15nm,0.7s
F07A   Phinny Hill Vi     42.69  71    P      P       03 39 35.2 -0.4
HHC    Hu-ho-hao-te       42.97 280  eP       P       03 39 39.3 +1.3
HHC                                    sP     pwP     03 39 51.8 +2.6
HHC                                    S      S       03 46 07.4 +5.6
HHC                                    pmax   pmax
       comp=Z,12nm,0.9s
HHC                                    pmax   pmax
       comp=Z,170nm,6.6s
HHC                                    LR     LR
       comp=Z,650nm,13.0s
HHC                                    LR     LR
       comp=Z,570nm,16.1s
HHC                                    LR     LR
       comp=Z,580nm,16.3s
NEW    Newport            43.03  66    P      P       03 39 37.9 -0.4
NEW                                    pmax   pmax
       comp=Z,17nm,0.9s
NEW    Newport            43.03  66    P      P       03 39 37.7 -0.6
       baz=302,SNR=8.0
SSE    Sheshan            43.35 262    P      P       03 39 41.3 +0.3
SSE                                    S      S       03 46 11.3 +4.1
SSE                                    pmax   pmax
       comp=Z,15nm,0.7s
SSE                                    pmax   pmax
       comp=Z,60nm,3.5s
SSE                                    LR     LR
       comp=Z,150nm,16.8s
SSE                                    LR     LR
       comp=Z,120nm,16.3s
J05D   Fort Rock, OR      43.39  75    P      P       03 39 41.3 -0.1
       baz=306
E09A   Wood Farm, Sta     43.39  69    P      P       03 39 40.0 -1.1
YBH    Yreka Blue Hor     43.41  77    P      P       03 39 41.7 +0.2
       comp=Z,5.3nm,0.8s,baz=342,slow=5.8,SNR=7.9
I07A   Izee               43.96  73    P      P       03 39 45.3 -0.7
BTO    Baotou             44.06 281  eP       P       03 39 47.9 +1.1
BTO                                    S      S       03 46 20.3 +2.7
BTO                                    LR     LR
       comp=Z,2µm,18.4s
BTO                                    LR     LR
       comp=Z,2µm,17.1s
NJ2    Nanjing            44.12 265  eP       P       03 39 48.3 +1.1
NJ2                                    pmax   pmax
       comp=Z,13nm,0.5s
NJ2                                    LR     LR
       comp=Z,360nm,13.5s
NJ2                                    LR     LR
       comp=Z,390nm,16.3s
NJ2                                    LR     LR
       comp=Z,660nm,16.5s
WALA   Waterton Lakes     44.40  64    IAmb   IAmb    03 40 14.2
       comp=Z,45nm,1.1s
GUMO   Guam               44.70 222    LR     LR      03 55 33.1
       comp=Z,197nm,21.7s,baz=78,slow=32
O03E   Paynes Creek       44.82  79    P      P       03 39 52.5 -0.3
       baz=308
JTMT   Jette              44.91  65    IAmb   IAmb    03 40 09.8
       comp=Z,27nm,1.4s
MSO    Missoula           45.62  66    P      P       03 39 58.2 -1.0
       baz=305
MSO    Missoula           45.62  66    IAmb   IAmb    03 39 59.8
       comp=Z,22nm,1.4s
TULEG  Thule              45.84  17  eP       P       03 39 59.7 -0.6
NOR    Nord               46.57   2  eP       P       03 40 05.2 -0.8
PNTR   Pine Nut           46.90  78    P      P       03 40 10.3 +0.8
PNTR                                   IAmb   IAmb    03 40 32.4
       comp=Z,24nm,0.8s
LRM    Limekiln Ridge     47.04  67    P      P       03 40 08.9 -1.6
CMB    Columbia Colle     47.08  80    P      P       03 40 10.8 +0.1
CMB                                    pmax   pmax
       comp=Z,14nm,1.4s
CMB    Columbia Colle     47.08  80    P      P       03 40 10.8 +0.1
YERR   Yerington          47.18  78    P      P       03 40 10.8 -0.8
YERR                                   IAmb   IAmb    03 40 33.7
       comp=Z,14nm,1.1s
HLID   Hailey             47.25  70    P      P       03 40 11.3 -0.7
       baz=307,SNR=7.7
EGMT   Eagleton           47.28  63    P      P       03 40 11.0 -1.1
       baz=305
EGMT   Eagleton           47.28  63    IAmb   IAmb    03 40 23.4
       comp=Z,11nm,0.8s
FFC    Flin Flon          47.55  51    P      P       03 40 13.1 -0.9
FFC                                    pmax   pmax
       comp=Z,16nm,1.1s
FFC    Flin Flon          47.55  51    P      P       03 40 13.1 -0.9
FFC                                    IAmb   IAmb    03 40 42.2
       comp=Z,16nm,1.1s
BOZ    Bozeman (W)        47.64  66    P      P       03 40 14.1 -1.0
BOZ                                    pmax   pmax
       comp=Z,25nm,1.5s
BOZ    Bozeman (W)        47.64  66    P      P       03 40 14.1 -1.0
BOZ                                    IAmb   IAmb    03 40 15.3
       comp=Z,25nm,1.4s
NEEM   North Greenlan     47.91  12  i P      P       03 40 16.6 -0.3
NEEM                                   IAmb   IAmb    03 40 17.3
       comp=Z,198nm,1.5s
WHN    Wuhan              47.94 267  ⇑P       P       03 40 17.9 +0.6
WHN                                    S      S       03 47 05.3 -8.1
WHN                                    pmax   pmax
       comp=Z,82nm,1.0s
WHN                                    LR     LR
       comp=Z,1µm,16.0s
WHN                                    LR     LR
       comp=Z,1µm,20.5s
WHN                                    LR     LR
       comp=Z,690nm,15.7s
LHV    Little Huntoon     48.09  78    P      P       03 40 18.1 -0.2
LHV                                    IAmb   IAmb    03 40 41.7
       comp=Z,29nm,1.3s
NVAR   Mina Array Bea     48.10  78    P      P       03 40 17.6 -1.2
       comp=Z,3.4nm,0.6s,baz=298,slow=7.5,SNR=9.0
NVAR                                   LR     LR      03 56 52.5
       comp=Z,121nm,21.2s,baz=270,slow=32
NVAR   Mina Array Bea     48.10  78    P      P       03 40 18.8 +0.1
MDPB   Devils Postpil     48.14  80    P      P       03 40 18.4 -0.7
MDPB                                   IAmb   IAmb    03 40 45.6
       comp=Z,15nm,1.0s
YHL    Hebgen Lake        48.34  67    IAmb   IAmb    03 40 20.9
       comp=Z,27nm,1.4s
YHH    Holmes Hill        48.56  67    P      P       03 40 21.3 -1.1
YMR    Madison River      48.57  67    IAmb   IAmb    03 40 39.7
       comp=Z,12nm,0.9s
GCMT   Greycliff          48.63  65    P      P       03 40 21.9 -0.8
YNR    Norris Junctio     48.70  67    P      P       03 40 23.7 +0.3
FCC    Fort Churchill     48.88  44    P      P       03 40 23.9 -0.2
FCC                                    pmax   pmax
       comp=Z,36nm,1.0s
FCC    Fort Churchill     48.88  44    P      P       03 40 23.9 -0.2
FCC                                    IAmb   IAmb    03 40 30.4
       comp=Z,36nm,1.0s
XAN    Xi'an              48.92 275    P      P       03 40 26.1 +1.2
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XAN				pP	pwP	03 40 37.3	+1.2
XAN				sP	sP	03 40 41.3	+7.6
XAN				S	**S**	**03 47 30.0**	**+2.7**
XAN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,170nm,3.8s						
XAN				LR	LR		
	comp=Z,520nm,14.9s						
XAN				LR	LR		
	comp=Z,440nm,16.5s						
XAN				LR	LR		
	comp=Z,470nm,16.7s						
H17A	**Grant Village**	**48.96**	**67**	P	**P**	**03 40 26.0**	**+0.6**
	baz=308,SNR=9.0						
FLWY	**Flagg Ranch**	**49.08**	**68**	IAmb	IAmb	03 40 53.7	
	comp=Z,19nm,1.2s						
RLMT	**Red Lodge**	**49.26**	**66**	P	**P**	**03 40 27.0**	**-0.6**
	baz=308,SNR=9.9						
RLMT	**Red Lodge**	**49.26**	**66**	IAmb	IAmb	03 40 28.9	
	comp=Z,28nm,1.4s						
LCH	**Last Change Ra**	**49.27**	**79**	IAmb	IAmb	03 40 49.8	
	comp=Z,18nm,1.4s						
VES	**Vestal, Richgr**	**49.30**	**81**	P	**P**	**03 40 27.1**	**-0.6**
	baz=312						
TPUB	**Ta-pu**	**49.36**	**255**	P	**P**	**03 40 28.6**	**+0.2**
SPITS	**Spitsbergen Ar**	**49.38**	**354**	P	**P**	**03 40 26.4**	**-1.5**
SPITS				pmax	pmax		
	comp=Z,136nm,1.5s						
SPB2	**Spitsbergen Ar**	**49.38**	**354**	P	**P**	**03 40 26.1**	**-1.7**
CWC	**Cottonwood Cre**	**49.52**	**80**	P	**P**	**03 40 29.2**	**-0.4**
	baz=311						
ISA	**Isabella, Lake**	**49.79**	**81**	P	**P**	**03 40 31.5**	**-0.1**
	baz=312						
R11A	**Troy Canyon, C**	**49.79**	**76**	P	**P**	**03 40 31.0**	**-0.7**
	baz=310,SNR=7.5						
LAO	**LASA Array**	**50.00**	**62**	P	**P**	**03 40 33.0**	**0.0**
	baz=308,SNR=7.0						
LAO	**LASA Array**	**50.00**	**62**	IAmb	IAmb	03 40 34.0	
	comp=Z,49nm,1.4s						
DGMT	**Dagmar**	**50.02**	**59**	P	**P**	**03 40 32.9**	**-0.2**
	baz=307,SNR=6.9						
DGMT	**Dagmar**	**50.02**	**59**	IAmb	IAmb	03 40 34.1	
	comp=Z,20nm,0.8s						
ZAA0	**Zalesovo Array**	**50.12**	**310**	P	**P**	**03 40 32.6**	**-1.1**
ZALV	**Zalesovo Beam**	**50.12**	**310**	P	**P**	**03 40 32.8**	**-1.0**
	comp=Z,1.2nm,0.6s,baz=46,slow=6.4,SNR=5.0						
ZALV				LR	LR	04 03 36.1	
	comp=Z,385nm,19.1s,baz=53,slow=38						
SPR3	**Spring Creek 3**	**50.13**	**75**	P	**P**	**03 40 34.2**	**-0.2**
FURC	**Furnace Creek,**	**50.24**	**79**	P	**P**	**03 40 35.0**	**+0.2**
	baz=311						
DUG	**Dugway, Tooele**	**50.27**	**73**	P	**P**	**03 40 34.9**	**-0.3**
	baz=310,SNR=9.3						
DUG	**Dugway, Tooele**	**50.27**	**73**	IAmb	IAmb	03 40 58.0	
	comp=Z,12nm,0.9s						
BW06	**Boulder Array**	**50.54**	**68**	P	**P**	**03 40 36.6**	**-0.8**
	baz=309,SNR=7.8						
GWY	**Greenwater Val**	**50.54**	**79**	P	**P**	**03 40 37.3**	**-0.1**
GWY				IAmb	IAmb	03 40 59.7	
	comp=Z,23nm,1.1s						
PDAR	**Pinedale Array**	**50.54**	**68**	P	**P**	**03 40 36.5**	**-0.9**
	comp=Z,3.2nm,0.6s,baz=308,slow=3.1,SNR=33						
PDAR				LR	LR	03 59 42.0	
	comp=Z,209nm,20.8s,baz=314,slow=33						
PDAR	**Pinedale Array**	**50.54**	**68**	P	**P**	**03 40 36.4**	**-1.0**
CTU	**Camp Tracy**	**50.58**	**72**	P	**P**	**03 40 37.1**	**-0.5**
LZH	**Lanzhou**	**50.67**	**281**	*e*P	**P**	**03 40 39.5**	**+1.2**
LZH				pP	pwP	03 40 50.3	+0.7
LZH				sP	sP	03 40 58.3	+11
LZH				S	**S**	**03 47 57.0**	**+5.1**
LZH				sS	sS	03 48 10.0	+8.0
LZH				pmax	pmax		
	comp=Z,33nm,1.2s						
LZH				pmax	pmax		
	comp=Z,100nm,4.3s						
LZH				LR	LR		
	comp=Z,750nm,14.1s						
LZH				LR	LR		
	comp=Z,760nm,15.2s						
LZH				LR	LR		
	comp=Z,800nm,16.3s						
PRN	**Pahroc Range**	**50.72**	**77**	P	**P**	**03 40 38.8**	**+0.1**
PRN				IAmb	IAmb	03 41 02.8	
	comp=Z,18nm,1.0s						
JLU	**Jordanelle**	**50.81**	**72**	P	**P**	**03 40 38.7**	**-0.7**
NLU	**North Lily Min**	**50.85**	**73**	P	**P**	**03 40 39.2**	**-0.5**
UPNV	**Upernavik**	**50.88**	**17**	*e*P	**P**	**03 40 38.2**	**-1.0**
UPNV				IAmb	IAmb	03 40 46.5	
	comp=Z,56nm,0.9s						
GTA	**Gaotai**	**50.93**	**287**	⇑P	**P**	**03 40 40.8**	**+0.6**
GTA				pP	pwP	03 40 50.6	-1.0
GTA				sP	sP	03 40 54.8	+5.8
GTA				S	**S**	**03 47 58.4**	**+3.0**
GTA				sS	sS	03 48 16.0	+10
GTA				pmax	pmax		
	comp=Z,13nm,1.0s						
GTA				pmax	pmax		
	comp=Z,77nm,8.4s						
GTA				LR	LR		
	comp=Z,920nm,15.5s						
GTA				LR	LR		
	comp=Z,670nm,15.9s						
GTA				LR	LR		
	comp=Z,760nm,15.1s						
PASC	**Pasadena Art C**	**50.96**	**82**	P	**P**	**03 40 39.7**	**-0.6**
PASC				IAmb	IAmb	03 40 54.0	
	comp=Z,33nm,1.1s						
SHOC	**Shoshone, Teco**	**50.97**	**79**	P	**P**	**03 40 40.7**	**+0.2**
	baz=312						
MWC	**Mount Wilson**	**51.00**	**82**	IAmb	IAmb	03 40 55.5	
	comp=Z,56nm,1.4s						
GSC	**Goldstone, Bar**	**51.04**	**80**	P	**P**	**03 40 41.1**	**0.0**
	baz=312,SNR=9.2						
GSC	**Goldstone, Bar**	**51.04**	**80**	IAmb	IAmb	03 40 54.6	
	comp=Z,28nm,1.1s						
DAG	**Danmarks Havn**	**51.30**	**4**	P	**P**	**03 40 41.7**	**-0.6**
DAG				pmax	pmax		
	comp=Z,21nm,1.0s						
DAG	**Danmarks Havn**	**51.30**	**4**	⇑*i*P	**P**	**03 40 41.5**	**-0.8**
DAG				IAmb	IAmb	03 40 47.3	
	comp=Z,21nm,1.0s						
DGZ	**Jazzator, Alta**	**51.39**	**304**	⇑*i*P	**P**	**03 40 43.6**	**0.0**
DGZ				pmax	pmax		
	comp=Z,5.0nm,1.0s						
TUQ	**Turquoise Moun**	**51.49**	**80**	P	**P**	**03 40 44.7**	**+0.2**
	baz=312						
MVU	**Marysvale**	**51.71**	**74**	P	**P**	**03 40 45.8**	**-0.4**
MVU				IAmb	IAmb	03 41 07.0	
	comp=Z,25nm,1.0s						
TMUT	**Trail Mountain**	**51.79**	**73**	IAmb	IAmb	03 41 07.9	
	comp=Z,12nm,0.8s						
RDMU	**Red Mountain**	**51.93**	**70**	IAmb	IAmb	03 41 10.6	
	comp=Z,16nm,0.9s						
MURC	**Murrieta**	**51.95**	**82**	P	**P**	**03 40 46.8**	**-1.0**
	baz=313						
LCMT	**Little Creek M**	**52.07**	**76**	IAmb	IAmb	03 41 11.8	
	comp=Z,14nm,1.0s						
GMRC	**Granite Mounta**	**52.09**	**80**	P	**P**	**03 40 48.9**	**-0.1**
	baz=313,SNR=7.8						
P18A	**Preston Nutter**	**52.14**	**72**	P	**P**	**03 40 47.9**	**-1.6**
SRU	**San Rafael Swe**	**52.31**	**72**	IAmb	IAmb	03 40 52.1	
	comp=Z,33nm,1.4s						
KNB	**Kanab**	**52.32**	**76**	IAmb	IAmb	03 41 07.7	
	comp=Z,14nm,0.9s						
K22A	**Casper**	**52.35**	**67**	P	**P**	**03 40 49.6**	**-1.3**
RSSD	**Black Hills**	**52.81**	**64**	P	**P**	**03 40 52.4**	**-1.9**
RSSD				pmax	pmax		
	comp=Z,13nm,1.3s						
RSSD	**Black Hills**	**52.81**	**64**	P	**P**	**03 40 53.7**	**-0.6**
	baz=310						
RSSD	**Black Hills**	**52.81**	**64**	P	**P**	**03 40 52.4**	**-1.9**
IRM	**Iron Mountain**	**52.82**	**80**	P	**P**	**03 40 54.1**	**-0.2**
	baz=313,SNR=5.4						
MDND	**Maddock**	**52.83**	**58**	P	**P**	**03 40 54.2**	**+0.1**
	baz=309						
MDND	**Maddock**	**52.83**	**58**	P	**P**	**03 40 54.0**	**-0.1**
O20A	**White River Ci**	**52.98**	**70**	P	**P**	**03 40 54.9**	**-0.7**
	baz=311,SNR=6.7						
O20A	**White River Ci**	**52.98**	**70**	IAmb	IAmb	03 41 17.9	
	comp=Z,12nm,0.8s						
U15A	**North Rim**	**53.03**	**76**	IAmb	IAmb	03 41 19.0	
	comp=Z,13nm,0.8s						
E28A	**Huff**	**53.06**	**59**	IAmb	IAmb	03 40 57.3	
	comp=Z,36nm,1.1s						
CBX	**Cerro Bola**	**53.15**	**83**	P	**P**	**03 40 57.1**	**+0.3**
ULM	**Lac du Bonnet**	**53.21**	**53**	P	**P**	**03 40 54.8**	**-2.0**
	comp=Z,8.5nm,0.8s,baz=305,slow=9.9,SNR=6.1						
ULM				LR	LR	04 05 00.3	
	comp=Z,604nm,18.1s,baz=301,slow=38						
ULM	**Lac du Bonnet**	**53.21**	**53**	IAmb	IAmb	03 40 57.1	
	comp=Z,39nm,1.4s						
PDMCI	**Parker Dam,Lak**	**53.34**	**79**	P	**P**	**03 40 57.7**	**-0.3**
	baz=313						
DBG	**Daneborg**	**53.67**	**5**	*i* P	**P**	**03 40 58.8**	**-1.1**
DBG				IAmb	IAmb	03 40 59.8	
	comp=Z,20nm,0.7s						
SUMG	**Summit**	**53.76**	**11**	P	**P**	**03 40 59.8**	**-1.3**
SUMG				pmax	pmax		
	comp=Z,85nm,1.4s						
SUMG	**Summit**	**53.76**	**11**	*i* P	**P**	**03 41 00.5**	**-0.6**
SUMG				IAmb	IAmb	03 41 03.0	
	comp=Z,52nm,1.1s						
SUMG	**Summit**	**53.76**	**11**	P	**P**	**03 40 59.8**	**-1.3**
N23A	**Red Feather La**	**53.81**	**68**	P	**P**	**03 41 02.1**	**+0.4**
	baz=311						
CD2	**Chengdu**	**54.23**	**276**	P	**P**	**03 41 03.3**	**-1.4**
CD2				S	**S**	**03 48 37.4**	**-3.2**
CD2				ScS	**ScS**	**03 50 49.3**	**-3.1**
CD2				pmax	pmax		
	comp=Z,20nm,1.0s						
CD2				pmax	pmax		
	comp=Z,120nm,4.7s						
CD2				LR	LR		
	comp=Z,510nm,16.4s						
CD2				LR	LR		
	comp=Z,480nm,17.8s						
CD2				LR	LR		
	comp=Z,670nm,15.8s						
AGMN	**Agassiz Nation**	**54.47**	**55**	P	**P**	**03 41 05.5**	**-0.6**
	baz=311,SNR=11						
AGMN	**Agassiz Nation**	**54.47**	**55**	IAmb	IAmb	03 41 07.0	
	comp=Z,36nm,1.2s						
ISCO	**Idaho Springs**	**54.73**	**69**	P	**P**	**03 41 08.7**	**+0.2**
	baz=312,SNR=6.1						
MVCO	**Mesa Verde**	**54.77**	**73**	P	**P**	**03 41 08.2**	**-0.5**
	baz=312,SNR=5.3						
X16A	**Lo Mia Camp, P**	**54.90**	**77**	P	**P**	**03 41 09.7**	**+0.1**
X16A				IAmb	IAmb	03 41 27.1	
	comp=Z,9.4nm,0.8s						
WMQ	**Urumqi**	**54.99**	**298**	*e*P	P	03 41 15.1	+5.1
WMQ				pP	sP	03 41 19.1	+0.3
WMQ				sP	pwP	03 41 28.1	+8.2
WMQ				pmax	pmax		
	comp=Z,30nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,190nm,4.5s						
WMQ				LR	LR		
	comp=Z,980nm,19.7s						
WMQ				LR	LR		
	comp=Z,950nm,21.1s						
WMQ				LR	LR		
	comp=Z,460nm,18.3s						
KURK	**Kurchatov**	**55.11**	**309**	P	**P**	**03 41 10.1**	**-0.6**
KURK				pmax	pmax		
	comp=Z,80nm,1.4s						
KURK	**Kurchatov**	**55.11**	**309**	P	**P**	**03 41 10.1**	**-0.6**
KURBB	**Kurchatov Arra**	**55.22**	**309**	P	**P**	**03 41 10.4**	**-1.0**
S22A	**4UR Ranch, Cre**	**55.39**	**71**	P	**P**	**03 41 13.3**	**0.0**
	baz=313,SNR=7.4						
W18A	**Petrified Fore**	**55.44**	**76**	P	**P**	**03 41 14.0**	**+0.4**
	baz=313						
W18A	**Petrified Fore**	**55.44**	**76**	P	**P**	**03 41 13.7**	**+0.1**
W18A				IAmb	IAmb	03 41 25.5	
	comp=Z,15nm,1.1s						
B35A	**Bob, Littlefor**	**55.50**	**54**	IAmb	IAmb	03 41 17.4	
	comp=Z,13nm,0.7s						
GYA	**Guiyang**	**55.59**	**270**	⇑P	**P**	**03 41 15.5**	**+0.9**
GYA				pP	pwP	03 41 29.0	+3.1
GYA				S	**S**	**03 49 03.0**	**+4.0**
GYA				ScS	**ScS**	**03 50 58.8**	**-3.6**
GYA				pmax	pmax		
	comp=Z,12nm,1.1s						
GYA				LR	LR		
	comp=Z,230nm,15.2s						
GYA				LR	LR		
	comp=Z,400nm,15.2s						
GYA				LR	LR		
	comp=Z,200nm,18.2s						
214A	**Organ Pipe Nat**	**55.76**	**80**	P	**P**	**03 41 16.0**	**+0.3**
214A				IAmb	IAmb	03 41 37.5	
	comp=Z,31nm,1.4s						
HAMF	**Hammerfest**	**55.81**	**348**	*e*P	**P**	**03 41 15.7**	**+0.3**
F33A	**5 Mile Ranch,**	**55.86**	**58**	P	**P**	**03 41 15.0**	**-1.2**
F33A				IAmb	IAmb	03 41 16.1	
	comp=Z,19nm,1.3s						
MK31	**Makanchi Array**	**55.89**	**304**	*c i*P	**P**	**03 41 15.4**	**-1.0**
MKAR	**Makanchi Array**	**55.89**	**304**	P	**P**	**03 41 15.5**	**-0.9**
	comp=Z,2.5nm,0.4s,baz=55,slow=6.6,SNR=42						
MKAR				LR	LR	04 06 02.3	
	comp=Z,472nm,20.3s,baz=34,slow=37						
MKAR	**Makanchi Array**	**55.89**	**304**	P	**P**	**03 41 14.8**	**-1.6**
OGNE	**Ogallala**	**56.00**	**65**	P	**P**	**03 41 18.2**	**+0.8**
	baz=312,SNR=7.6						
OGNE	**Ogallala**	**56.00**	**65**	P	**P**	**03 41 17.7**	**+0.3**
MAKZ	**Makanchi**	**56.04**	**304**	P	**P**	**03 41 16.6**	**-0.9**
MAKZ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MAKZ	**Makanchi**	**56.04**	**304**	P	**P**	**03 41 16.6**	**-0.9**
SDCO	**Great Sand Dun**	**56.17**	**70**	P	**P**	**03 41 19.2**	**+0.3**
	baz=313,SNR=12						
SDCO	**Great Sand Dun**	**56.17**	**70**	P	**P**	**03 41 19.0**	**+0.1**
ARA0	**ARCESS Array S**	**56.59**	**347**	*e*P	**P**	**03 41 20.4**	**-0.6**
ARCES	**ARCESS Array B**	**56.59**	**347**	P	**P**	**03 41 20.0**	**-1.1**
	comp=Z,6.9nm,0.7s,baz=35,slow=7.6,SNR=21						
ARCES				LR	LR	04 07 13.1	
	comp=Z,513nm,19.4s,baz=5.0,slow=38						
ARCES	**ARCESS Array B**	**56.59**	**347**	P	**P**	**03 41 20.0**	**-1.1**
ARCES	**ARCESS Array B**	**56.59**	**347**	P	**P**	**03 41 20.4**	**-0.7**
ARCES				IAmb	IAmb	03 41 25.3	
	comp=Z,21nm,1.2s						
K31A	**O'Neill**	**56.70**	**62**	P	**P**	**03 41 21.7**	**-0.5**
TUC	**Tucson**	**56.74**	**79**	P	**P**	**03 41 22.7**	**-0.1**
TUC				pmax	pmax		
	comp=Z,11nm,1.1s						
TUC	**Tucson**	**56.74**	**79**	P	**P**	**03 41 23.0**	**+0.2**
	baz=314						
TUC	**Tucson**	**56.74**	**79**	P	**P**	**03 41 22.7**	**-0.1**
SFJD	**Kangerlussuaq**	**56.76**	**19**	P	**P**	**03 41 21.0**	**-1.2**
SFJD				pmax	pmax		
	comp=Z,16nm,1.1s						
SFJD	**Kangerlussuaq**	**56.76**	**19**	*i* P	**P**	**03 41 21.2**	**-1.0**
SFJD	**Kangerlussuaq**	**56.76**	**19**	P	**P**	**03 41 21.0**	**-1.2**
SFJD				IAmb	IAmb	03 41 42.9	
	comp=Z,16nm,1.1s						
ICESG	**Greenland Ices**	**56.80**	**14**	*i* P	**P**	**03 41 22.4**	**-0.6**
ICESG				IAmb	IAmb	03 41 27.2	
	comp=Z,27nm,0.9s						
EYMN	**Ely**	**56.89**	**53**	P	**P**	**03 41 23.3**	**-0.2**
	baz=313,SNR=7.6						
KSCO	**Kaye Shedlock’**	**56.97**	**67**	P	**P**	**03 41 24.9**	**+0.5**
	baz=313,SNR=7.7						
KSCO	**Kaye Shedlock’**	**56.97**	**67**	P	**P**	**03 41 24.5**	**+0.1**
ECSD	**EROS Data Cent**	**57.10**	**60**	P	**P**	**03 41 24.1**	**-1.0**
	baz=313,SNR=9.6						
ECSD	**EROS Data Cent**	**57.10**	**60**	IAmb	IAmb	03 41 25.0	
	comp=Z,26nm,1.4s						
T25A	**Trinidad**	**57.22**	**70**	P	**P**	**03 41 26.5**	**+0.2**
	baz=314,SNR=8.4						
T25A	**Trinidad**	**57.22**	**70**	IAmb	IAmb	03 41 28.2	
	comp=Z,21nm,1.2s						
JETT	**Jettan, Norway**	**57.22**	**349**	*e*P	**P**	**03 41 26.0**	**+0.5**
F36A	**Milaca**	**57.28**	**56**	IAmb	IAmb	03 41 48.9	
	comp=Z,8.9nm,0.8s						
BRVK	**Borovoye**	**57.31**	**316**	*c i*P	**P**	**03 41 26.0**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,20nm,1.5s						
BRVK	**Borovoye**	**57.31**	**316**	P	**P**	**03 41 26.2**	**-0.2**
BRVK				IAmb	IAmb	03 41 40.3	
	comp=Z,24nm,1.4s						
TRO	**Tromso**	**57.32**	**350**	*e*P	**P**	**03 41 26.4**	**+0.2**
SCO	**Scoresbysund**	**57.35**	**6**	P	**P**	**03 41 26.5**	**+0.2**
SCO				pmax	pmax		
	comp=Z,39nm,1.1s						
SCO	**Scoresbysund**	**57.35**	**6**	*e*P	**P**	**03 41 27.3**	**+1.0**
SCO				IAmb	IAmb	03 41 28.7	
	comp=Z,42nm,1.1s						
SCO	**Scoresbysund**	**57.35**	**6**	P	**P**	**03 41 26.5**	**+0.2**
SCO				IAmb	IAmb	03 41 28.6	
	comp=Z,39nm,1.1s						
KTK1	**Kautokeino**	**57.39**	**348**	*e*P	**P**	**03 41 26.3**	**-0.4**
ANMO	**Albuquerque**	**57.52**	**73**	⇓*e*P	**P**	**03 41 28.6**	**+0.3**
ANMO				pmax	pmax		
	comp=Z,8.0nm,1.4s						
ANMO	**Albuquerque**	**57.52**	**73**	P	**P**	**03 41 28.8**	**+0.5**
	baz=314						
ANMO	**Albuquerque**	**57.52**	**73**	P	**P**	**03 41 27.8**	**-0.6**
BGNE	**Belgrade**	**57.85**	**63**	P	**P**	**03 41 30.5**	**+0.1**
	baz=313						
DY2G	**Dye2**	**58.07**	**18**	*i* P	**P**	**03 41 30.6**	**-1.2**
DY2G				IAmb	IAmb	03 41 33.0	
	comp=Z,9.3nm,0.5s						
SPMN	**Marine on St.**	**58.09**	**56**	P	**P**	**03 41 32.0**	**0.0**
	baz=314,SNR=16						
SPMN	**Marine on St.**	**58.09**	**56**	IAmb	IAmb	03 41 33.9	
	comp=Z,26nm,0.8s						
319A	**Douglas**	**58.31**	**78**	IAmb	IAmb	03 41 47.5	
	comp=Z,20nm,0.9s						
121A	**Cookes Peak, D**	**58.40**	**76**	P	**P**	**03 41 35.4**	**+0.9**
	baz=315						
121A	**Cookes Peak, D**	**58.40**	**76**	P	**P**	**03 41 35.2**	**+0.6**
121A				IAmb	IAmb	03 41 49.0	
	comp=Z,11nm,1.0s						
CBKS	**Cedar Bluff**	**58.74**	**66**	P	**P**	**03 41 36.6**	**-0.1**
CBKS				pmax	pmax		
	comp=Z,21nm,0.8s						
CBKS	**Cedar Bluff**	**58.74**	**66**	P	**P**	**03 41 36.6**	**-0.1**
CBKS				IAmb	IAmb	03 41 52.6	
	comp=Z,21nm,0.8s						
D41A	**Chassel**	**58.94**	**52**	P	**P**	**03 41 37.6**	**-0.3**
HSIG		**58.96**	**82**	P	**P**	**03 41 36.5**	**-1.8**
HSIG				IAmb	IAmb	03 41 51.5	
	comp=Z,14nm,1.0s						
KMI	**Kunming**	**58.99**	**272**	P	**P**	**03 41 40.4**	**+1.6**
KMI				pmax	pmax		
	comp=Z,10.0nm,1.4s						
QIZ	**Qiongzhong**	**59.13**	**261**	P	**P**	**03 41 39.3**	**-0.2**
QIZ				S	**S**	**03 49 45.6**	**+0.2**
QIZ				SS	**SS**	**03 53 41.0**	**+1.5**
QIZ				pmax	pmax		
	comp=Z,20nm,1.0s						
QIZ				LR	LR		
	comp=Z,120nm,9.3s						
QIZ				LR	LR		
	comp=Z,240nm,15.2s						
QIZ				LR	LR		
	comp=Z,240nm,16.6s						
LOF	**Lofoten**	**59.31**	**351**	*e*P	**P**	**03 41 40.0**	**-0.1**
STEI	**Steigen**	**59.34**	**351**	*e*P	**P**	**03 41 40.4**	**+0.2**
MSF	**Maaselka**	**59.38**	**344**	P	**P**	**03 41 41.5**	**+0.9**
MSF				pmax	pmax		
	comp=Z,42nm,1.6s						
PRGR	**Permogore**	**59.45**	**334**	*e*P	**P**	**03 41 39.5**	**-1.6**
PRGR				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ARU	**Arti**	**59.50**	**324**	*c i*P	**P**	**03 41 41.5**	**-0.1**
ARU				S	**S**	**03 49 50.8**	**+1.5**
ARU				SS	**SS**	**03 53 45.0**	**+1.3**
ARU				pmax	pmax		
	comp=Z,35nm,1.4s						
ARU				MLR	MLR		
	comp=Z,446nm,16.0s						
ARU	**Arti**	**59.50**	**324**	P	**P**	**03 41 40.7**	**-0.9**
ARU				IAmb	IAmb	03 41 42.7	
	comp=Z,27nm,1.1s						
R32A	**Long Quarter,**	**59.59**	**66**	IAmb	IAmb	03 41 45.5	
	comp=Z,12nm,0.7s						
FAUS	**Fauske**	**59.87**	**351**	*e*P	**P**	**03 41 43.7**	**-0.2**
K38A	**Parkersburg**	**59.89**	**58**	IAmb	IAmb	03 41 45.5	
	comp=Z,32nm,1.1s						
SCIA	**State Center**	**60.17**	**59**	P	**P**	**03 41 46.2**	**-0.2**
	baz=315,SNR=7.0						
KSU1	**Kansas State U**	**60.30**	**64**	P	**P**	**03 41 46.3**	**-1.0**
	baz=315,SNR=5.6						
KSU1	**Kansas State U**	**60.30**	**64**	IAmb	IAmb	03 41 49.9	
	comp=Z,14nm,0.6s						
AMTX	**Amarillo**	**60.37**	**70**	P	**P**	**03 41 48.5**	**+0.5**
	baz=315						
AMTX	**Amarillo**	**60.37**	**70**	IAmb	IAmb	03 41 50.5	
	comp=Z,15nm,0.7s						
MNTX	**Cornudas Mount**	**60.43**	**75**	P	**P**	**03 41 48.5**	**+0.2**
	baz=316,SNR=54						
MNTX	**Cornudas Mount**	**60.43**	**75**	IAmb	IAmb	03 42 08.3	
	comp=Z,24nm,0.9s						
KIRV	**Kirov**	**60.86**	**330**	*ce*P	**P**	**03 41 51.3**	**+0.5**
KONS	**Konsvik**	**60.94**	**351**	*e*P	**P**	**03 41 51.2**	**-0.1**
N38A	**Joes South For**	**60.95**	**60**	P	**P**	**03 41 50.4**	**-1.3**
JFWS	**Jewell Farm**	**61.02**	**57**	P	**P**	**03 41 51.2**	**-1.0**
	baz=316,SNR=18						
SLVN	**Son La**	**61.06**	**268**	P	**P**	**03 41 53.2**	**+0.4**
SLVN				IAmb	IAmb	03 41 55.3	
	comp=Z,14nm,0.9s						
STOK	**Stokkvaagen**	**61.11**	**351**	*e*P	**P**	**03 41 52.0**	**-0.4**
MOR8	**Moi Rana**	**61.13**	**351**	*e*P	**P**	**03 41 51.5**	**-1.2**
SMPI	**Sarmi**	**61.32**	**221**	P	**P**	**03 41 56.3**	**+1.8**
	comp=Z,2µmcomp=Z,14nm,1.0s						
CROK	**Carrier**	**61.35**	**67**		**P**	**03 41 53.8**	**-0.7**
KLMR	**Klimovskoe**	**61.70**	**336**	*e*P	**P**	**03 41 54.9**	**-1.6**
KLMR				pmax	pmax		
	comp=Z,75nm,1.4s						
KLMR	**Klimovskoe**	**61.70**	**336**	*e*P	**P**	**03 41 54.9**	**-1.6**
KLMR				AMP		03 41 58.1	
	comp=Z,75nm,1.4s						
KLMR				LQ	LQ	04 05 30.9	
KLMR				LQ	LQ	04 05 30.9	
KLMR				LR	LR	04 07 49.1	
T35A	**Sooner Cattle**	**61.89**	**65**	P	**P**	**03 41 57.2**	**-1.0**
T35A				IAmb	IAmb	03 41 58.5	
	comp=Z,24nm,1.2s						
WMOK	**Wichita Mounta**	**62.15**	**69**	P	**P**	**03 41 59.8**	**-0.2**
WMOK				pmax	pmax		
	comp=Z,12nm,0.6s						
WMOK	**Wichita Mounta**	**62.15**	**69**	P	**P**	**03 41 59.9**	**-0.1**
	baz=316,SNR=13						
WMOK	**Wichita Mounta**	**62.15**	**69**	P	**P**	**03 41 59.8**	**-0.2**
WMOK				IAmb	IAmb	03 42 01.4	
	comp=Z,12nm,0.6s						
OK029	**Liberty Lake**	**62.16**	**67**		**P**	**03 41 59.4**	**-0.6**
OK029				IAmb	IAmb	03 42 03.3	
	comp=Z,16nm,0.6s						
SCHQ	**Schefferville**	**62.34**	**35**	P	**P**	**03 42 00.0**	**-0.9**
	comp=Z,16nm,0.6s,baz=325,slow=6.9,SNR=34						
SCHQ				LR	LR	04 11 44.5	
	comp=Z,642nm,19.2s,baz=350,slow=39						
SCHQ	**Schefferville**	**62.34**	**35**	P	**P**	**03 41 59.6**	**-1.3**
GLMI	**Grayling**	**62.47**	**52**	P	**P**	**03 42 02.2**	**+0.2**
	baz=317						
GLMI	**Grayling**	**62.47**	**52**	P	**P**	**03 42 02.1**	**+0.2**
FNO	**Franklin**	**62.57**	**67**	P	**P**	**03 42 02.1**	**-0.7**
L44A	**Lake County Fo**	**62.75**	**56**	P	**P**	**03 42 03.6**	**-0.2**
	baz=317						
AAK	**Ala-Archa**	**62.77**	**305**	*ce*P	**P**	**03 42 04.1**	**-0.1**
AAK				pmax	pmax		
	comp=Z,37nm,1.5s						
AAK	**Ala-Archa**	**62.77**	**305**	P	**P**	**03 42 03.9**	**-0.2**
AAK				IAmb	IAmb	03 42 27.1	
	comp=Z,8.9nm,0.9s						
X34A	**Smith Ranch, M**	**62.80**	**68**	P	**P**	**03 42 04.0**	**-0.3**
X34A				IAmb	IAmb	03 42 32.3	
	comp=Z,13nm,0.7s						
NSS	**Namsos**	**62.98**	**351**	*e*P	**P**	**03 42 05.0**	**+0.1**
TUL1	**Leonard**	**63.02**	**66**	P	**P**	**03 42 05.0**	**-0.7**
	baz=316						
TUL1	**Leonard**	**63.02**	**66**	IAmb	IAmb	03 42 06.5	
	comp=Z,13nm,0.8s						
TXAR	**Lajitas Array**	**63.16**	**76**	P	**P**	**03 42 06.7**	**-0.2**
	comp=Z,12nm,0.4s,baz=305,slow=5.7,SNR=285						
TXAR	**Lajitas Array**	**63.16**	**76**	P	**P**	**03 42 06.9**	**0.0**
ABTX	**Abilene, Hawle**	**63.17**	**71**	P	**P**	**03 42 06.7**	**-0.1**
	baz=316,SNR=12						
HDIL	**Hopedale**	**63.21**	**58**	P	**P**	**03 42 06.1**	**-0.8**
	baz=317,SNR=23						
R40A	**Maddies Statio**	**63.26**	**62**	P	**P**	**03 42 05.9**	**-1.4**
VLDQ	**Val d'Or**	**63.34**	**45**	IAmb	IAmb	03 42 07.0	
	comp=Z,15nm,0.9s						
U38A	**Gravette**	**63.42**	**64**	IAmb	IAmb	03 42 08.5	
	comp=Z,12nm,0.6s						
J47A	**Sunmer**	**63.53**	**53**	IAmb	IAmb	03 42 15.2	
	comp=Z,24nm,0.8s						
SWI	**Sorong**	**63.56**	**229**	P	**P**	**03 42 10.0**	**+0.6**
	comp=Z,1µmcomp=Z,101nm,1.1s						
SWI				pP	**sP**	**03 42 18.5**	**+0.5**
	comp=Z,1µmcomp=Z,101nm,1.1s						
HPIG		**63.69**	**79**	P	**P**	**03 42 10.4**	**-0.2**
HPIG				IAmb	IAmb	03 42 26.9	
	comp=Z,16nm,1.0s						
HHAR	**Hobbs**	**63.79**	**64**	IAmb	IAmb	03 42 10.8	
	comp=Z,14nm,0.5s						

CCM	Cathedral Cave	63.98	61	P	P	03 42 09.8	-2.3
CCM				pmax	pmax		
	comp=Z,11nm,0.6s						
CCM	Cathedral Cave	63.98	61	P	P	03 42 10.6	-1.4
	baz=317						
CCM	Cathedral Cave	63.98	61	P	P	03 42 09.8	-2.3
CCM				IAmb	IAmb	03 42 12.1	
	comp=Z,11nm,0.6s						
I49A	Point Hope	63.99	51	P	P	03 42 11.2	-0.7
FIA1	FINESS Array S	64.02	343	P	P	03 42 11.3	-0.6
FINES	FINESS Array B	64.02	343	P	P	03 42 11.9	0.0
	comp=Z,10nm,0.8s,baz=14,slow=7.4,SNR=30						
FINES	FINESS Array B	64.02	343	P	P	03 42 11.5	-0.4
Z35A	Perchaven, San	64.04	69	P	P	03 42 12.1	-0.4
Z35A				IAmb	IAmb	03 42 16.2	
	comp=Z,16nm,0.7s						
MGMO	Mountain Grove	64.08	62	IAmb	IAmb	03 42 12.8	
	comp=Z,9.6nm,0.8s						
X37A	Clayton	64.21	66	IAmb	IAmb	03 42 30.0	
	comp=Z,12nm,0.8s						
KSH	Kashi	64.28	302	P	P	03 42 17.8	+3.7
KSH				pP	pwP	03 42 30.8	+6.7
KSH				sP	sP	03 42 35.8	+13
KSH				S	S	03 50 52.6	+2.2
KSH				ScS	SKSac	03 52 03.4	-3.2
KSH				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KSH				LR	LR		
	comp=Z,350nm,15.3s						
KSH				LR	LR		
	comp=Z,500nm,18.9s						
KSH				LR	LR		
	comp=Z,600nm,19.2s						
U40A	Yellville	64.34	63	P	P	03 42 13.5	-0.9
	baz=317,SNR=16						
U40A	Yellville	64.34	63	IAmb	IAmb	03 42 15.0	
	comp=Z,18nm,0.6s						
AKTO	Aktyubinsk	64.35	320	LR	LR	04 12 44.7	
	comp=Z,296nm,19.3s,baz=38,slow=38						
AKTO	Aktyubinsk	64.35	320	P	P	03 42 14.0	-0.3
KK31	Karatay Array	64.41	308	iP	P	03 42 14.2	-0.6
KK31	Karatay Array	64.41	308	IAmb	IAmb	03 42 34.6	
	comp=Z,10nm,1.0s						
KKAR	Karatay Array	64.41	308	P	P	03 42 13.9	-0.9
KKAR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KKAR	Karatay Array	64.41	308	P	P	03 42 13.9	-0.9
KKAR	Karatay Array	64.41	308	P	P	03 42 14.8	-0.1
KKAR				IAmb	IAmb	03 42 34.6	
	comp=Z,10nm,1.0s						
SFIN	Lafayette	64.48	57	P	P	03 42 14.6	-0.7
	baz=318,SNR=22						
AB31	Akbulak array	64.50	318	eP	P	03 42 15.1	-0.2
ABKAR	Akbulak array	64.50	318	P	P	03 42 14.9	-0.3
ABKAR	Akbulak array	64.50	318	IAmb	IAmb	03 42 27.7	
	comp=Z,30nm,1.4s						
JCT	Junction City	64.63	73	P	P	03 42 16.0	-0.4
	baz=317,SNR=12						
W39A	Magazine	64.66	65	P	P	03 42 15.9	-0.6
	baz=317,SNR=15						
W39A	Magazine	64.66	65	IAmb	IAmb	03 42 17.4	
	comp=Z,20nm,0.7s						
L48A	N Adams	64.68	54	P	P	03 42 15.8	-0.8
AAM	Ann Arbor	64.80	53	P	P	03 42 16.6	-0.7
AAM				pmax	pmax		
	comp=Z,16nm,1.0s						
AAM	Ann Arbor	64.80	53	P	P	03 42 16.6	-0.7
AAM				IAmb	IAmb	03 42 18.4	
	comp=Z,16nm,1.0s						
T42A	Van Buren	64.81	62	IAmb	IAmb	03 42 17.2	
	comp=Z,8.4nm,0.8s						
N47A	Urbana	64.83	55	IAmb	IAmb	03 42 30.3	
	comp=Z,26nm,1.2s						
WHTX	Lake Whitney,	64.90	70	P	P	03 42 18.0	-0.2
	baz=317						
WHTX	Lake Whitney,	64.90	70	IAmb	IAmb	03 42 36.6	
	comp=Z,14nm,0.8s						
FAKI	Fak Fak	64.92	227	P	P	03 42 18.3	-0.1
	comp=Z,30nm,1.0s						
FAKI	Fak Fak	64.92	227	IAmb	IAmb	03 42 19.5	
	comp=Z,29nm,1.0s						
K50A	Casco	64.95	52	P	P	03 42 17.2	-1.2
P46A	Rosedale	64.98	57	P	P	03 42 17.9	-0.7
FCAR	Ozark Folk Cen	65.08	63	P	P	03 42 17.1	-2.2
OLIL	Olney	65.17	59	IAmb	IAmb	03 42 21.0	
	comp=Z,25nm,1.0s						
MIAR	Mount Ida	65.25	65	P	P	03 42 19.1	-1.3
MIAR				pmax	pmax		
	comp=Z,19nm,0.7s						
MIAR	Mount Ida	65.25	65	P	P	03 42 19.9	-0.5
	baz=317,SNR=17						
MIAR	Mount Ida	65.25	65	P	P	03 42 19.1	-1.3
MIAR				IAmb	IAmb	03 42 21.5	
	comp=Z,19nm,0.7s						
MOL	Molde	65.29	353	eP	P	03 42 20.1	-0.1
S44A	Carbondale	65.32	60	IAmb	IAmb	03 42 21.8	
	comp=Z,18nm,1.0s						
SIUC	Southern Illin	65.32	60	IAmb	IAmb	03 42 21.3	
	comp=Z,18nm,0.6s						
Z38A	Mt. Pleasant	65.39	67	P	P	03 42 20.8	-0.6
WHAR	Wooly Hollow	65.43	64	IAmb	IAmb	03 42 21.8	
	comp=Z,16nm,0.8s						
LCAR	Lake Charles	65.48	62	IAmb	IAmb	03 42 31.9	
	comp=Z,7.1nm,0.7s						
W41B	Gary Mavity, V	65.53	64	P	P	03 42 20.8	-1.4
	baz=318,SNR=6.9						
N49A	Columbus Grove	65.56	54	IAmb	IAmb	03 42 22.4	
	comp=Z,35nm,1.3s						
BLO	Bloomington	65.67	57	IAmb	IAmb	03 42 23.8	
	comp=Z,16nm,0.8s						
DOMB	Dombas	65.69	352	eP	P	03 42 22.7	-0.1
435B	Jarrell	65.71	71	P	P	03 42 23.4	0.0
	baz=318						
435B	Jarrell	65.71	71	IAmb	IAmb	03 42 37.7	
	comp=Z,17nm,0.7s						
X40A	Basin Creek Fa	65.71	65	P	P	03 42 22.5	-0.9
	baz=318,SNR=7.5						
X40A	Basin Creek Fa	65.71	65	IAmb	IAmb	03 42 27.1	
	comp=Z,14nm,1.1s						
AKN	Aaknes	65.72	353	eP	P	03 42 23.0	0.0
CHTO	Chiang Mai	66.01	270	P	P	03 42 25.2	-0.3
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CHTO	Chiang Mai	66.01	270	P	P	03 42 25.1	-0.3
TRQ	Mont Tremblant	66.06	45	IAmb	IAmb	03 42 26.5	
	comp=Z,31nm,1.4s						
HICK	Hickman	66.18	61	P	P	03 42 26.0	-0.4
NC303	NORSAR Array S	66.28	351	P	P	03 42 25.8	-0.8
NC303				IAmb	IAmb	03 42 28.7	
	comp=Z,32nm,1.1s						
CMAR	Chiang Mai Arr	66.28	270	P	P	03 42 28.0	+0.8
	comp=Z,4.6nm,0.8s,baz=23,slow=7.2,SNR=18						
CMAR				LR	LR	04 16 16.4	
	comp=Z,67nm,18.1s,baz=70,slow=40						
NC204	NORSAR Array S	66.29	351	P	P	03 42 25.9	-0.8
P49A	Miami Univ. Ec	66.33	56	P	P	03 42 26.2	-1.1
	baz=319,SNR=11						
GLAT	Glass	66.35	61	P	P	03 42 27.1	-0.4
LNXT	Lenox	66.37	61	P	P	03 42 27.8	+0.3
NB2	NORSAR Subarra	66.47	351	P	P	03 42 27.4	-0.5
	comp=Z,34nm,1.2s,baz=11,slow=6.5						
NB2	NORSAR Subarra	66.47	351	P	P	03 42 27.4	-0.5
	baz=11,slow=6.5						
NOA	NORSAR Array B	66.47	351	P	P	03 42 27.5	-0.5
	comp=Z,9.7nm,1.1s,baz=2.3,slow=5.8,SNR=28						
NOA				LR	LR	04 10 57.1	
	comp=Z,124nm,21.6s,baz=15,slow=36						
WCI	Wyandotte Cave	66.49	58	P	P	03 42 27.1	-1.2
WCI				pmax	pmax		
	comp=Z,18nm,0.7s						
WCI	Wyandotte Cave	66.49	58	P	P	03 42 27.6	-0.7
	baz=319						
WCI	Wyandotte Cave	66.49	58	P	P	03 42 27.1	-1.2
WCI				IAmb	IAmb	03 42 33.1	
	comp=Z,18nm,0.7s						
BTK	Batken	66.53	305	P	P	03 42 28.3	-0.4
BTK				pmax	pmax		
	comp=Z,18nm,1.0s						
BTK	Batken	66.53	305	P	P	03 42 28.3	-0.4
BTK				IAmb	IAmb	03 42 48.8	
	comp=Z,18nm,1.0s						
TAPN	Taplejung	66.54	285	eP	P	03 42 29.6	+0.4
	comp=Z,144nm,1.1s						
BELG	Belogornoye	66.56	327	LR	LR	04 11 57.2	
	comp=Z,100nm,21.6s,baz=350,slow=36						
MOS	Moscow	66.67	335	eP	P	03 42 27.9	-1.2
MOS				e		03 42 54.2	
MOS				pmax	pmax		
	comp=Z,38nm,1.2s						
MOS				MLR	MLR		
	comp=Z,800nm,19.0s						
NATX	Nacogdoches	66.68	68	P	P	03 42 30.0	+0.4
	baz=318						
VSU	Vasula	66.68	342	eP	P	03 42 29.6	+0.5
VSU	Vasula	66.68	342	⇓iP	P	03 42 29.6	+0.5
VSU				pmax	pmax		
	comp=Z,107nm,1.3s						
ACSO	Alum Creek Sta	66.69	54	P	P	03 42 28.9	-0.6
	baz=319						
CCAR	Cane Creek	66.73	64	P	P	03 42 29.8	-0.1
ERPA	Erie	66.73	51	P	P	03 42 29.5	-0.2
	baz=320						
NC602	NORSAR Array S	66.74	351	eP	P	03 42 29.9	+0.4
NC602	NORSAR Array S	66.74	351	P	P	03 42 29.2	-0.3
NC602				IAmb	IAmb	03 42 54.9	
	comp=Z,28nm,1.1s						
NORES	NORESS Array B	66.74	351	P	P	03 42 29.1	-0.4
HYA	Hoyanger	66.78	353	eP	P	03 42 30.2	+0.4
UPP	Uppsala	66.87	347	eP	P	03 42 31.1	+0.8
M53A	WI Miller and	66.91	52	P	P	03 42 30.4	-0.6
	baz=320,SNR=10						
SUE	Sulen	66.98	354	eP	P	03 42 31.3	+0.3
MTSE	Matsula	66.98	343	eP	P	03 42 31.2	+0.2
735A	Kenedy	66.99	72	P	P	03 42 32.2	+0.6
R49A	Shelbyville	67.03	57	P	P	03 42 31.0	-0.7
R49A				IAmb	IAmb	03 42 32.2	
	comp=Z,34nm,1.4s						
MNTQ	Montreal, Queb	67.03	45	IAmb	IAmb	03 42 31.8	
	comp=Z,18nm,1.1s						
MRSI	Marisa	67.05	238	P	P	03 42 32.2	+0.1
	comp=Z,44nm,0.9s						
ODAN	Odare	67.09	285	eP	P	03 42 33.0	+0.4
SKAR	Skarslia	67.09	352	eP	P	03 42 32.3	+0.4
HFS	Hagfors	67.10	349	LR	LR	04 12 52.5	
	comp=Z,166nm,20.3s,baz=3.0,slow=37						
TOLI2	Tolitoli	67.13	240	IAmb	IAmb	03 42 33.4	
	comp=Z,13nm,0.9s						
SANI	Sanana	67.13	233	P	P	03 42 31.3	-1.3
	comp=Z,24nm,1.1s						
WVNY	West Valley, N	67.17	50	IAmb	IAmb	03 42 32.9	
	comp=Z,29nm,1.1s						
JIRN	Jiri	67.22	286	eP	P	03 42 33.8	+0.2
W45A	Hickory Valley	67.23	62	P	P	03 42 32.5	-0.5
WVT	Waverly	67.24	60	P	P	03 42 32.5	-0.7
WVT				pmax	pmax		
	comp=Z,15nm,0.7s						
WVT	Waverly	67.24	60	P	P	03 42 32.4	-0.7
	baz=319						
WVT	Waverly	67.24	60	P	P	03 42 32.5	-0.7
WVT				IAmb	IAmb	03 42 34.1	
	comp=Z,15nm,0.7s						
MMNY	Mt. Morris Dam	67.25	49	IAmb	IAmb	03 42 33.7	
	comp=Z,32nm,1.1s						
HKT	Hockley	67.34	70	P	P	03 42 33.6	-0.1
HKT				pmax	pmax		
	comp=Z,17nm,1.3s						
HKT	Hockley	67.34	70	P	P	03 42 33.6	-0.1
HKT				IAmb	IAmb	03 42 35.2	
	comp=Z,17nm,1.2s						
M54A	Oil Creek Stat	67.35	51	P	P	03 42 33.2	-0.5
	baz=320,SNR=7.8						
Q51A	Peebles	67.41	55	IAmb	IAmb	03 42 47.8	
	comp=Z,18nm,0.8s						
R50A	Paris	67.47	56	P	P	03 42 33.5	-1.0
R50A				IAmb	IAmb	03 42 35.9	
	comp=Z,36nm,1.3s						
OBN	Obninsk	67.50	335	c iP	P	03 42 34.3	-0.1
OBN				i		03 42 43.6	
OBN				i		03 42 59.6	
OBN				i S	S	03 51 29.6	+0.7
OBN				i SS	SS	03 55 43.6	-4.6
OBN				pmax	pmax		
	comp=Z,29nm,1.3s						
OBN				MLR	MLR		
	comp=Z,605nm,20.0s						
RAMN	Ramite	67.50	285	eP	P	03 42 35.4	+0.2
ASK	Askoy	67.52	354	eP	P	03 42 34.8	+0.4
O53A	New Philadelph	67.55	53	P	P	03 42 34.2	-0.8
	baz=320,SNR=5.1						
P52A	Corning	67.56	54	P	P	03 42 34.3	-0.9
	baz=320						
GAR	Garm	67.59	305	P	P	03 42 34.8	-0.6
OSL	Oslo	67.61	351	eP	P	03 42 35.1	+0.1
N54A	Moraine State	67.61	52	P	P	03 42 34.5	-0.9
	baz=320,SNR=7.6						
N54A	Moraine State	67.61	52	IAmb	IAmb	03 42 36.4	
	comp=Z,23nm,1.0s						
KKN	Kakani	67.66	287	eP	P	03 42 36.6	+0.4
	comp=Z,80nm,1.1s						
PKI	Pulchoki	67.75	287	eP	P	03 42 37.1	+0.2
	comp=Z,79nm,1.0s						
PKIN	Phulchoki	67.75	287	eP	P	03 42 36.9	+0.1
	comp=Z,64nm,1.0s						
GKN	Gorkha	67.89	287	eP	P	03 42 37.9	+0.4
	comp=Z,84nm,1.1s						
K57A	Scipio Center	67.89	48	IAmb	IAmb	03 42 37.7	
	comp=Z,17nm,0.7s						
LUWI	Luwuk	67.90	237	P	P	03 42 36.6	-0.8
	comp=Z,7µmcomp=Z,45nm,0.4s						
DMN	Daman	67.90	287	eP	P	03 42 38.4	+0.7
	comp=Z,111nm,1.4s						
J58A	Remsen	67.97	47	IAmb	IAmb	03 42 50.7	
	comp=Z,26nm,1.1s						
ODD1	Odda	67.99	353	eP	P	03 42 38.2	+0.7
KONO	Kongsberg	68.00	351	⇓eP	P	03 42 37.1	-0.4
KONO				pmax	pmax		
	comp=Z,46nm,1.6s						
KONO	Kongsberg	68.00	351	eP	P	03 42 37.8	+0.3
DANN	Dangsing	68.14	288	eP	P	03 42 39.8	+0.5
	comp=Z,51nm,0.9s						
T50A	Nancy	68.16	58	P	P	03 42 37.1	-1.8
T50A				IAmb	IAmb	03 42 40.1	
	comp=Z,20nm,0.8s						
J59A	Piesco	68.24	47	IAmb	IAmb	03 42 39.6	
	comp=Z,18nm,1.1s						
MPSI	Mapaga	68.25	240	P	P	03 42 39.9	+0.2
	comp=Z,18nm,1.1s						
S51A	Beattyville	68.34	56	IAmb	IAmb	03 42 56.8	
	comp=Z,14nm,0.9s						
BLS5	Blasjo	68.49	353	eP	P	03 42 40.9	+0.2
R53A	Hurricane	68.65	55	IAmb	IAmb	03 42 41.8	
	comp=Z,24nm,1.1s						
ZAIG	Zacatecas	68.65	80	P	P	03 42 42.4	-0.2
KOLN	Koldanda	68.67	288	eP	P	03 42 42.4	-0.1
	comp=Z,52nm,1.1s						
ACCN	Adirondack Com	68.68	46	IAmb	IAmb	03 43 00.5	
	comp=Z,21nm,1.1s						
MCWV	Mont Chateau	68.68	53	P	P	03 42 41.3	-0.8
	baz=321						
VBMS	Vicksburg	68.69	65	P	P	03 42 42.1	-0.1
	baz=319						
PYUN	Piuthan	68.78	289	eP	P	03 42 43.4	+0.2
	comp=Z,109nm,1.2s						
KMY	Karmoy	68.78	354	eP	P	03 42 42.5	+0.1
O56A	Blue Knob Stat	68.83	51	P	P	03 42 42.6	-0.5
	baz=321						
O56A	Blue Knob Stat	68.83	51	IAmb	IAmb	03 43 00.5	
	comp=Z,36nm,1.4s						
SSPA	Standing Stone	68.88	51	P	P	03 42 42.7	-0.6
	baz=321						
SSPA	Standing Stone	68.88	51	P	P	03 42 42.2	-1.2
X48A	Hartselle	68.92	61	IAmb	IAmb	03 42 43.9	
	comp=Z,12nm,0.6s						
SWET	Sewanee	68.94	60	IAmb	IAmb	03 42 44.3	
	comp=Z,19nm,0.8s						
LPSR	Galich'ya Gora	69.08	332	eP	P	03 42 44.2	-0.2
LPSR				pmax	pmax		
	comp=Z,20nm,1.2s						
344A	Westbrook Farm	69.14	66	P	P	03 42 44.6	-0.5
344A				IAmb	IAmb	03 43 04.5	
	comp=Z,19nm,0.9s						
TZTN	Tazewell	69.19	57	P	P	03 42 45.2	-0.2
	baz=320						
TZTN	Tazewell	69.19	57	P	P	03 42 44.2	-1.2
TZTN				IAmb	IAmb	03 43 10.8	
	comp=Z,29nm,1.1s						
W50A	Signal Mountai	69.29	59	IAmb	IAmb	03 42 59.5	
	comp=Z,19nm,0.8s						
HOMB	Homborsund	69.46	352	eP	P	03 42 47.1	+0.5
VRH	Novokhopyorsk	69.48	330	eP	P	03 42 45.7	-1.1
VRH				pmax	pmax		
	comp=Z,20nm,0.7s						
SNART	Snartemo	69.50	352	eP	P	03 42 47.3	+0.4
ISAL	Salakas	69.51	341	eP	P	03 42 48.5	+1.5
CPCT	Cooper Cave	69.52	59	P	P	03 42 46.7	-0.7
CPCT				IAmb	IAmb	03 42 48.1	
	comp=Z,40nm,1.3s						
R55A	Marlinton	69.61	54	IAmb	IAmb	03 43 09.1	
	comp=Z,28nm,1.4s						
FPAL	Fort Paine	69.63	60	IAmb	IAmb	03 42 48.8	
	comp=Z,17nm,0.7s						
N59A	State Game Lan	69.66	49	P	P	03 42 47.5	-0.7
	baz=322						
N59A	State Game Lan	69.66	49	IAmb	IAmb	03 42 49.2	
	comp=Z,25nm,1.1s						
V52A	Sevierville	69.70	58	IAmb	IAmb	03 43 05.6	
	comp=Z,18nm,1.0s						
Y49A	Blount Mountai	69.72	61	IAmb	IAmb	03 42 47.7	
	comp=Z,17nm,1.1s						
PAGS	Pennsylvania G	69.75	50	P	P	03 42 48.1	-0.6
TKL	Tuckaleechee C	69.75	58	IAmb	IAmb	03 42 49.7	
	comp=Z,24nm,1.0s						
SAUI	Saumlaki	69.84	225	P	P	03 42 50.1	+0.6
	comp=Z,160nm,1.2s						
PABE	Paberze	69.99	342	eP	P	03 42 50.4	+0.4
PABE	Paberze	69.99	342	P	P	03 42 50.0	+0.1
NACGM	Naroch	70.00	340	i P	P	03 42 50.6	+0.6
X51A	Calhoun	70.01	59	P	P	03 42 49.4	-1.0
LUPA	Lehigh Univers	70.09	49	IAmb	IAmb	03 42 52.5	
	comp=Z,16nm,0.9s						
MVL	Millersville	70.11	50	IAmb	IAmb	03 42 51.1	
	comp=Z,43nm,1.4s						
NIL	Nilore	70.11	299	P	P	03 42 51.0	-0.1
NIL				pmax	pmax		
	comp=Z,29nm,1.2s						
NIL	Nilore	70.11	299	P	P	03 42 51.0	-0.1
NIL				IAmb	IAmb	03 42 52.6	
	comp=Z,28nm,1.2s						
MNK	Minsk	70.14	340	i P	P	03 42 52.2	+1.4
MNK				i		03 43 13.8	
MNK				i		03 45 27.4	
MNK				i PPP	PPP	03 47 09.8	
MNK				i S	S	03 51 59.7	-0.5
MNK				i		03 52 51.9	
MNK				i SS	SS	03 56 36.9	+8.0
MNK				pmax	pmax		
	comp=Z,72nm,1.0s						
MNK				pmax	pmax		
	comp=N,51nm,1.1s						
MNK				pmax	pmax		
	comp=E,5.0nm,1.4s						
MNK				MLR	MLR		
	comp=Z,384nm,17.0s						
MNK				MLR	MLR		
	comp=N,282nm,18.0s						
MNK	Minsk	70.14	340	i P	P	03 42 52.2	+1.4
	comp=E,5.0nm,1.4s						
MNK				i P	P	03 42 52.2	+1.4
	comp=N,51nm,1.1s						
MNK				i P	P	03 42 52.2	+1.4
	comp=Z,72nm,1.0s,baz=202						
MNK				i PcP	PcP	03 43 13.8	+1.1
MNK				i PP	PP	03 45 27.5	+2.0
MNK				i PPP	PPP	03 47 09.8	
MNK				i S	S	03 51 59.8	-0.4
MNK				i SS	SS	03 56 36.9	+8.0
MNK				i SSS	SSS	03 59 51.4	
MNK				i LR	LR	04 10 36.7	
MNK				i LRM	MLR	04 17 43.3	
	comp=Z,384nm,17.4s						
MNK				i LRM	MLR	04 17 47.7	
	comp=E,18nm,18.1s						
MNK				i LRM	MLR	04 17 48.4	
	comp=N,282nm,18.1s						
VSR	Storozhevoye	70.24	332	eP	P	03 42 51.2	-0.3
VSR				pmax	pmax		
	comp=Z,30nm,1.4s						
V53A	Saluda	70.25	57	IAmb	IAmb	03 42 52.5	
	comp=Z,36nm,1.4s						
SDMD	Soldier’s Deli	70.33	51	P	P	03 42 51.8	-0.5
SDMD				IAmb	IAmb	03 42 52.5	
	comp=Z,27nm,1.4s						
VORD	Divnogorie	70.42	331	eP	P	03 42 52.6	0.0
VORD				pmax	pmax		
	comp=Z,30nm,1.4s						
PAL	Palisades	70.45	48	P	P	03 42 52.1	-0.9
	baz=323						
WUPA	West Chester U	70.51	50	P	P	03 42 53.3	-0.1
S57A	Dark Hollow, R	70.59	53	IAmb	IAmb	03 42 55.1	
	comp=Z,27nm,1.2s						
P60A	Greenville	70.59	50	P	P	03 42 53.6	-0.3
	baz=322						
COEN	Coen	70.76	211	P	P	03 42 54.4	-0.7
COEN				IAmb	IAmb	03 42 56.3	
	comp=Z,14nm,1.1s						
SBUM	Sibu	70.78	248	P	P	03 42 56.0	+0.7
Z51A	Franklin	70.80	60	IAmb	IAmb	03 42 58.5	
	comp=Z,35nm,1.4s						
V55A	Taylorsville	70.93	56	IAmb	IAmb	03 43 18.1	
	comp=Z,15nm,0.9s						
U56A	King	70.97	55	P	P	03 42 55.5	-0.8
U56A				IAmb	IAmb	03 42 57.4	
	comp=Z,17nm,1.1s						
Y52A	Lilburn	70.97	59	IAmb	IAmb	03 43 15.2	
	comp=Z,20nm,0.9s						
T57A	Hurt	71.03	54	IAmb	IAmb	03 43 11.3	
	comp=Z,19nm,1.4s						
TTSI	Tana Toraja	71.14	238	P	P	03 42 57.5	+0.1
PAULI	Pauline	71.42	57	IAmb	IAmb	03 42 59.9	
	comp=Z,24nm,1.2s						
KMSC	Kings Mountain	71.42	57	P	P	03 42 58.3	-0.7
	baz=321,SNR=9.6						
152A	Waverly Hall	71.54	61	IAmb	IAmb	03 43 00.5	
	comp=Z,19nm,1.1s						
SUW	Suwalki	71.55	342	eP	P	03 42 59.0	-0.5
SUW	Suwalki	71.55	342	eP	P	03 42 59.5	+0.1
GOGA	Godfrey	71.64	59	P	P	03 42 59.3	-1.0
	baz=321						
GOGA	Godfrey	71.64	59	IAmb	IAmb	03 43 00.4	
	comp=Z,25nm,1.4s						
HODGE	Hodges	71.64	58	P	P	03 42 59.1	-1.3
HODGE				IAmb	IAmb	03 43 01.4	
	comp=Z,19nm,0.6s						
KBL	Kabul	71.66	303	P	P	03 42 59.3	-1.4
KBL				pmax	pmax		
	comp=Z,11nm,0.9s						
KBL	Kabul	71.66	303	P	P	03 42 59.3	-1.4
KBL				IAmb	IAmb	03 43 19.3	
	comp=Z,11nm,0.8s						
SPSI	Sidrap Palu	71.94	238	P	P	03 43 01.6	-0.7
	comp=Z,594nmcomp=Z,13nm,0.8s						
V58A	Windy Hill, Pi	72.05	55	IAmb	IAmb	03 43 03.2	
	comp=Z,39nm,1.4s						
JSC	Jenkinsville	72.12	57	IAmb	IAmb	03 43 04.3	
	comp=Z,19nm,1.0s						
BIRD	Birdtown, Kers	72.25	56	IAmb	IAmb	03 43 04.9	
	comp=Z,14nm,1.0s						
TAOE	Nuku Hiva Isla	72.36	132	eLR	LR	04 05 11.8	
	comp=Z,338nm,22.9s,baz=330						
BKSI	Bulukumba	72.90	237	P	P	03 43 07.0	-1.0
	comp=Z,18nm,1.3s						
AKASG	Malin Array Be	73.36	337	P	P	03 43 09.9	-0.4
	comp=Z,4.3nm,0.4s,baz=25,slow=5.9,SNR=16						
AKASG	Malin Array Be	73.36	337	P	P	03 43 08.9	-1.4
AKASG				pmax	pmax		
	comp=Z,9.0nm,1.2s						
AKASG	Malin Array Be	73.36	337	P	P	03 43 08.8	-1.4
AKBB	Malin Array Si	73.36	337	ceP	P	03 43 10.3	0.0
AKBB	Malin Array Si	73.36	337	IAmb	IAmb	03 43 11.1	
	comp=Z,32nm,1.4s						
BSSI	Bau Bau, Buton	73.41	236	P	P	03 43 10.3	-0.7
	comp=Z,21nm,1.1s						
Y59A	Loris	73.58	56	P	P	03 43 10.9	-0.9
Y59A				IAmb	IAmb	03 43 24.2	
	comp=Z,31nm,1.1s						
DZM	Mont Dzumac	73.98	187	eP	P	03 43 14.0	-0.2
	comp=Z,52nm,1.2s						
DZM	Mont Dzumac	73.98	187	eLR	LR	04 05 56.1	
	comp=Z,946nm,24.9s,baz=8.1						
DZM	Mont Dzumac	73.98	187	P	P	03 43 15.7	+1.4
DZM				IAmb	IAmb	03 43 17.1	
	comp=Z,26nm,1.1s						
BBKI	Banjar Baru	74.17	243	P	P	03 43 14.8	-0.7
MTN	Manton Dam	74.25	223	IAmb	IAmb	03 43 17.0	
	comp=Z,32nm,1.0s						
GEYT	Alibeck	74.33	312	P	P	03 43 16.0	-0.3
	comp=Z,1.7nm,0.4s,baz=234,slow=50,SNR=3.5						
GEYT				LR	LR	04 18 57.7	

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      comp=Z,513nm,18.4s,baz=35,slow=38
GOF   Gofitskoye        74.41 326⇑eP     P       03 43 17.8 +1.3
GOF                                pmax  pmax
      comp=Z,52nm,0.9s
PMOR  Pomariorio Ree    74.57 141 eT     T       05 04 08.4
      comp=Z,5.8nm,0.2s
MAK   Makhachkala       74.60 322 eP     P       03 43 16.0 -1.6
MAK                               eS     SKiKP   03 52 45.7 +4.3
MAK                                pmax  pmax
      comp=Z,330nm,1.9s
MAK                                MLR   MLR
      comp=Z,548nm,17.0s
SOEI  Soe               74.64 231  P     P       03 43 17.4 -0.9
      comp=Z,4µmcomp=Z,34nm,1.1s
EDFI  Ende, Flores      75.03 234  P     P       03 43 19.5 -1.1
      comp=Z,12nm,0.9s
LVV   L'vov             75.36 340 eP     P       03 43 22.2 +0.3
KIV   Kislovodsk        75.50 326 eP     P       03 43 23.9 +0.9
KIV                                pmax  pmax
      comp=Z,10.0nm,1.0s
NCK   Nalchik           75.58 325⇓eP     P       03 43 24.8 +1.5
NCK                                pmax  pmax
      comp=Z,13nm,0.5s
KBZ   Khabaz            75.62 325  P     P       03 43 24.5 +1.0
      comp=Z,6.6nm,0.9s,baz=260,slow=2.8,SNR=7.6
KBZ                                LR    LR      04 22 02.0
      comp=Z,252nm,18.7s,baz=18,slow=40
KBZ   Khabaz            75.62 325ceP     P       03 43 24.5 +1.0
KBZ                                pmax  pmax
      comp=Z,14nm,0.9s
CTAO  Charters Tower    75.63 207  P     P       03 43 23.9 +0.2
CTAO                               pmax  pmax
      comp=Z,19nm,1.1s
CTAO  Charters Tower    75.63 207  P     P       03 43 23.9 +0.2
CTAO                               IAmb  IAmb    03 43 25.0
      comp=Z,19nm,1.1s
KSP   Ksiaz             75.79 345  P     P       03 43 24.9 +0.5
KWP   Kalwaria Pacla    75.81 341 eP     P       03 43 25.8 +1.2
KWP   Kalwaria Pacla    75.81 341  P     P       03 43 24.4 -0.1
KWP   Kalwaria Pacla    75.81 341  P     P       03 43 24.4 -0.1
SORM  Soroca            75.96 337 ⇑P     P       03 43 25.5 +0.1
SORM  Soroca            75.96 337 ⇑P     P       03 43 25.5 +0.1
CHVC  Chvalec           76.08 345 eP     P       03 43 26.3 +0.2
OSTC  Ostas             76.08 345 eP     P       03 43 25.7 -0.4
ZEI   Tsey              76.08 324 eP     P       03 43 26.5  0.0
ZEI                                pmax  pmax
      comp=Z,5.0nm,1.0s
BRG   Berggiesshubel    76.11 347 eP     P       03 43 26.3 +0.1
BRG                                Amp           03 43 28.1
      comp=Z,11nm,1.1s
BRG                                Amp           04 21 57.0
      comp=Z,0.4nm,18.9s
UPC   Upice             76.16 346 eP     P       03 43 27.1 +0.6
UPC   Upice             76.16 346 eP     P       03 43 27.1 +0.6
DPC   Dobruska-Polom    76.26 345 eP     P       03 43 27.6 +0.4
DPC   Dobruska-Polom    76.26 345 eP     P       03 43 27.6 +0.4
PPT   Papeete           76.29 144  LR    LR      04 09 09.7
      comp=Z,289nm,19.8s,baz=336,slow=30
STHS  Stebnicka Huta    76.30 342 eP     P       03 43 27.7 +0.3
STHS  Stebnicka Huta    76.30 342 eP     P       03 43 27.7 +0.3
PPT2  Papeete2          76.31 144 eLR    LR      04 07 01.5
      comp=Z,523nm,23.2s,baz=337
KRLC  Kraliky           76.46 345 eP     P       03 43 29.1 +0.8
KRLC  Kraliky           76.46 345 eP     P       03 43 29.1 +0.8
OKC   Ostrava-Krasne    76.46 344 eP     P       03 43 28.8 +0.6
OKC                                MLR   MLR
      comp=Z,400nm,16.6s
OKC   Ostrava-Krasne    76.46 344 eP     P       03 43 28.8 +0.6
OKC                                AMS   AMS     04 22 20.0
      comp=Z,400nm,16.6s
NIE   Niedzica          76.48 342  P     P       03 43 30.5 +2.1
KOLS  Kolonicke sedl    76.56 341 eP     P       03 43 29.7 +0.9
KOLS                               pmax  pmax
      comp=Z,32nm,1.2s
KOLS  Kolonicke sedl    76.56 341 eP     P       03 43 29.7 +0.9
MORC  Moravsky Berou    76.62 344 ⇓P     P       03 43 30.1 +0.9
MORC  Moravsky Berou    76.62 344  P     P       03 43 29.0 -0.2
MORC                               pmax  pmax
      comp=Z,27nm,1.5s
MORC  Moravsky Berou    76.62 344 eP     P       03 43 29.7 +0.5
MORC  Moravsky Berou    76.62 344  P     P       03 43 29.0 -0.2
MORC                               IAmb  IAmb    03 43 31.1
      comp=Z,27nm,1.4s
CRVS  Cervenica-Dubn    76.75 342 eP     P       03 43 30.8 +0.9
CRVS                               pmax  pmax
      comp=Z,30nm,1.0s
CRVS  Cervenica-Dubn    76.75 342 eP     P       03 43 30.8 +0.9
CHVG  Ch'k'valeri       76.79 325 ⇓P     P       03 43 30.9 +0.7
CHVG  Ch'k'valeri       76.79 325  P     P       03 43 30.9 +0.7
SOC   Sochi             76.83 327 eP     P       03 43 26.7 -3.7
SOC                               e              03 46 26.2
SOC                               ePPP   PPP     03 48 08.8
SOC                               eS     S       03 53 10.4 -5.9
SOC                               eSS    SS      03 58 07.6 -3.8
SOC                                MLR   MLR
      comp=Z,309nm,17.0s
UZH   Uzhgorod          76.84 341 eP     P       03 43 30.3 -0.1
UZH                               i              03 43 38.2
PRU   Pruhonice         76.89 346 eP     P       03 43 31.1 +0.5
PRU   Pruhonice         76.89 346 eP     P       03 43 31.1 +0.5
LANS  Liptovska Anna    76.89 343 eP     P       03 43 32.4 +1.7
LANS                               pmax  pmax
      comp=Z,25nm,1.1s
LANS  Liptovska Anna    76.89 343 eP     P       03 43 32.4 +1.7
MILM  Milestii Mici     76.98 336 ⇑P     P       03 43 32.2 +1.0
MILM  Milestii Mici     76.98 336 ⇑P     P       03 43 32.2 +1.0
PLAI  Plampang          77.09 237  P     P       03 43 30.6 -1.6
      comp=Z,38nm,0.9s
BUR08 Bucovina Ar. S    77.16 339  P     P       03 43 32.8 +0.4
BUR08                              IAmb  IAmb    03 43 34.0
      comp=Z,12nm,0.7s
BURAR Bucovina Array    77.19 339 ⇓P     P       03 43 33.3 +0.8
BURAR Bucovina Array    77.19 339 ⇓P     P       03 43 33.3 +0.8
BURAR Bucovina Array    77.19 339  P     P       03 43 33.2 +0.7
BURAR                              IAmb  IAmb    03 43 34.4
      comp=Z,40nm,1.2s
VRAC  Vranov            77.23 345 ⇑P     P       03 43 33.4 +0.8
VRAC  Vranov            77.23 345 ⇑P     P       03 43 33.4 +0.8
VRAC  Vranov            77.23 345 eP     P       03 43 33.4 +0.8
MEM   Membach           77.27 352 dP     P       03 43 33.0 +0.3
      comp=Z,11nm,1.2s
TRPA  Tarpa             77.27 341 ⇑P     P       03 43 34.0 +1.2
TRPA  Tarpa             77.27 341 eP     P       03 43 33.2 +0.4
BTNL  Ternell           77.28 352 dP     P       03 43 33.0 +0.1
      comp=Z,12nm,1.2s
AKH   Akhalkalaki       77.43 324 ⇓P     P       03 43 35.4 +1.3
JAVC  Velka Javorina    77.49 344 eP     P       03 43 36.0 +1.9
KRUC  Moravsky          77.50 345 eP     P       03 43 34.7 +0.6
BCLA  Clavier           77.52 352 dP     P       03 43 34.3 +0.1
      comp=Z,8.9nm,1.2s
VYHS  Vyhne             77.64 343 eP     P       03 43 36.0 +1.1
VYHS                               pmax  pmax
      comp=Z,25nm,1.4s
VYHS  Vyhne             77.64 343 eP     P       03 43 36.0 +1.1
BMRD  Maredsous         77.68 353 dP     P       03 43 35.2 +0.1
      comp=Z,10nm,1.2s
KNRA  Kununurra         77.79 224  P     P       03 43 35.7 -0.3
KNRA                               IAmb  IAmb    03 43 47.2
      comp=Z,21nm,1.2s
KHC   Kasperske Hory    77.86 347 eP     P       03 43 36.7 +0.5
KHC   Kasperske Hory    77.86 347 eP     P       03 43 36.7 +0.5
SMOL  Smolenice         77.86 344 eP     P       03 43 37.6 +1.5
SMOL                               pmax  pmax
      comp=Z,33nm,1.7s
SMOL  Smolenice         77.86 344 eP     P       03 43 37.6 +1.5
ARCR  ARCALIA           77.88 339 ⇓P     P       03 43 37.8 +1.6
TESR  Tescani           77.89 337 ⇓P     P       03 43 36.9 +0.6
DOU   Dourbes           77.89 353 dP     P       03 43 36.5 +0.2
BAIF  Baives            77.96 353 eP     P       03 43 36.4 -0.2
BAIF                               pmax  pmax
      comp=Z,26nm,1.3s
PSZ   Piszkesteto       78.00 342 ⇑P     P       03 43 38.5 +1.6
PSZ   Piszkesteto       78.00 342 eP     P       03 43 37.9 +0.9
PSZ   Piszkesteto       78.00 342  P     P       03 43 37.3 +0.3
PSZ                                pmax  pmax
      comp=Z,33nm,1.1s
PSZ   Piszkesteto       78.00 342  P     P       03 43 37.3 +0.3
PSZ                                IAmb  IAmb    03 43 39.6
      comp=Z,33nm,1.1s
MODS  Modra-Piesok      78.02 344 eP     P       03 43 37.3 +0.2
MODS                               pmax  pmax
      comp=Z,41nm,1.4s
MODS  Modra-Piesok      78.02 344 eP     P       03 43 37.3 +0.2
CKRC  Cesky Krumlov     78.06 346 eP     P       03 43 37.4 +0.1
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GEC2  GERESS Array S    78.12 347  P     P       03 43 37.4 -0.3
GEC2                               IAmb  IAmb    03 43 39.1
      comp=Z,25nm,1.4s
GERES GERESS Array B    78.12 347  P     P       03 43 38.0 +0.3
      comp=Z,2.4nm,0.7s,baz=45,slow=4.3,SNR=8.0
GERES                              LR    LR      04 21 06.6
      comp=Z,240nm,20.6s,baz=19,slow=38
GERES GERESS Array B    78.12 347  P     P       03 43 37.3 -0.4
GERES GERESS Array B    78.12 347  P     P       03 43 37.3 -0.4
WLF   Walferdange       78.19 352 dP     P       03 43 38.4 +0.5
      comp=Z,11nm,1.3s
ZST   Bratislava        78.22 344 eP     P       03 43 39.8 +1.7
ZST   Bratislava        78.22 344 eP     P       03 43 39.8 +1.7
SRO   Srobarova         78.39 343 eP     P       03 43 40.8 +1.8
SRO   Srobarova         78.39 343 eP     P       03 43 40.8 +1.8
CJR   Cluj-Napoca       78.40 339 ⇓P     P       03 43 40.5 +1.3
CJR   Cluj-Napoca       78.40 339 ⇓P     P       03 43 40.5 +1.3
DRGR                    78.51 340 ⇑P     P       03 43 40.5 +0.6
DRGR                    78.51 340 ⇑P     P       03 43 40.5 +0.6
BSZH  Besenyszg         78.52 342 eP     P       03 43 41.2 +1.4
COVR  Voineasa-Covas    78.62 337 ⇑P     P       03 43 41.5 +1.1
CONA  Conrad Observa    78.69 345 i P    P       03 43 41.9 +1.0
      comp=Z,8.3nm,0.7s,SNR=9.3
DOPR  Dopca             78.70 338 ⇑P     P       03 43 41.9 +1.0
CFR   Carcaliu          78.78 336 ⇑P     P       03 43 42.3 +1.1
CFR   Carcaliu          78.78 336 ⇑P     P       03 43 42.3 +1.1
EGYH  Egyhazaskeszo     78.94 344 eP     P       03 43 44.0 +1.9
JURR  Jurilovca         78.97 335 ⇓P     P       03 43 43.6 +1.4
MOA   Molln             79.01 346 eP     P       03 43 43.3 +0.7
      comp=Z,5.2nm,0.8s
MLR   Muntele Rosu      79.02 337 ⇑P     P       03 43 43.9 +1.1
MLR   Muntele Rosu      79.02 337  P     P       03 43 42.4 -0.3
MLR                                pmax  pmax
      comp=Z,9.0nm,0.7s
MLR   Muntele Rosu      79.02 337  P     P       03 43 42.4 -0.3
MLR                                IAmb  IAmb    03 43 55.9
      comp=Z,9.0nm,0.7s
MPLH  Magyarpolny       79.14 344 eP     P       03 43 43.9 +0.7
WB0   Warramunga Arr    79.21 217  IAmb  IAmb    03 43 44.6
      comp=Z,25nm,1.1s
VOIR                    79.28 338 ⇓P     P       03 43 45.1 +1.0
VOIR                    79.28 338 ⇓P     P       03 43 45.1 +1.0
BFO   Black Forest      79.30 350  P     P       03 43 42.8 -1.3
BFO                                pmax  pmax
      comp=Z,28nm,1.5s
BFO   Black Forest      79.30 350  P     P       03 43 42.8 -1.3
BFO                                IAmb  IAmb    03 43 45.3
      comp=Z,28nm,1.5s
CDF   Champ du Feu      79.33 351 eP     P       03 43 43.7 -0.6
CDF                                pmax  pmax
      comp=Z,12nm,1.2s
WR0   Warramunga Arr    79.33 217  IAmb  IAmb    03 43 45.1
      comp=Z,15nm,1.1s
TIRR  Tirgusor          79.38 335 ⇓P     P       03 43 44.9 +0.4
TIRR  Tirgusor          79.38 335  P     P       03 43 44.9 +0.4
WRAB  Tennant Creek     79.38 217d iP    P       03 43 44.3 -0.4
WRAB                               pmax  pmax
      comp=Z,23nm,1.1s
WB2   Warramunga Arr    79.39 217  IAmb  IAmb    03 43 45.6
      comp=Z,23nm,1.1s
WRA   Warramunga Arr    79.39 217  P     P       03 43 44.5 -0.2
      comp=Z,11nm,1.0s,baz=35,slow=5.8,SNR=59
WRA                                LR    LR      04 16 39.5
      comp=Z,239nm,20.3s,baz=25,slow=34
WRA   Warramunga Arr    79.39 217  P     P       03 43 44.4 -0.4
ARSA  Arzberg           79.40 345 eP     P       03 43 45.8 +1.1
      comp=Z,18nm,1.6s
ARR   Arges             79.44 338 ⇓P     P       03 43 46.4 +1.4
FLN   La Foliniere      79.53 356 eP     P       03 43 44.5 -0.8
ECH   Echery            79.53 351  P     P       03 43 45.9 +0.5
HAU   Haudompre         79.82 351 eP     P       03 43 46.3 -0.6
HAU                                pmax  pmax
      comp=Z,24nm,1.2s
GZR   Gura Zlata        79.83 340 ⇑P     P       03 43 47.6 +0.5
GZR   Gura Zlata        79.83 340 ⇑P     P       03 43 47.6 +0.5
RETA  Reutte            79.85 348 eP     P       03 43 47.8 +0.7
      comp=Z,9.8nm,1.2s
BZS   Buzias            79.86 340 ⇑P     P       03 43 47.5 +0.4
BZS   Buzias            79.86 340 ⇑P     P       03 43 47.5 +0.4
MORH  Mrgy, Hungar      79.87 343⇑iP     P       03 43 47.1  0.0
WATA  Walderalm         79.89 348 i P    P       03 43 48.2 +0.7
      comp=Z,28nm,1.2s,SNR=7.2
KBA   Koelnbreinsper    79.90 346 i P    P       03 43 49.0 +1.4
      comp=Z,34nm,0.8s,SNR=6.6
GRR   Gorron            79.92 356 eP     P       03 43 46.7 -0.7
GRR                                pmax  pmax
      comp=Z,70nm,1.4s
MOTA  Moosalm           79.95 348 i P    P       03 43 48.4 +0.6
      comp=Z,32nm,1.2s,SNR=10
WTTA  Wattenberg        79.96 348 i P    P       03 43 48.9 +1.0
      comp=Z,22nm,1.0s,SNR=8.6
HINF  Hinteralfeld      79.96 351 eP     P       03 43 46.9 -0.8
HINF                               pmax  pmax
      comp=Z,71nm,2.1s
SOKA  Soboth            80.04 345 i P    P       03 43 49.6 +1.4
      comp=Z,50nm,1.3s,SNR=18
ROSF  Rostrenen         80.05 358 eP     P       03 43 48.8 +0.7
ROSF                               pmax  pmax
      comp=Z,57nm,1.8s
SQTA  Sankt Quirin      80.06 348 i P    P       03 43 49.1 +0.8
      comp=Z,29nm,1.3s,SNR=9.7
PERS  Pernice           80.06 345 i P    P       03 43 49.2 +0.8
KOVH  Kovagotottos      80.09 343 eP     P       03 43 48.5 +0.1
SGMF  Saint Gilles      80.11 357 eP     P       03 43 49.0 +0.6
SGMF                               pmax  pmax
      comp=Z,106nm,1.6s
CLF   Chambon-Foret     80.12 354  P     P       03 43 48.1 -0.4
DAVA  Damuels           80.16 349 eP     P       03 43 50.2 +1.3
      comp=Z,11nm,1.2s
GROS  Grobnik           80.17 345 i P    P       03 43 49.5 +0.6
OBKA  Obir              80.28 346 i P    P       03 43 50.4 +0.9
      comp=Z,30nm,1.1s,SNR=10
MYKA  Terra Mystica     80.30 346 eP     P       03 43 50.2 +0.6
      comp=Z,7.8nm,1.0s
FETA  Feichten          80.31 348 eP     P       03 43 49.4 -0.4
      comp=Z,13nm,1.0s
ABTA  Abfaltersbach     80.34 347 i P    P       03 43 50.2 +0.3
      comp=Z,22nm,1.1s,SNR=9.8
ZOU   Zoufplan          80.47 347  P     P       03 43 50.2 -0.4
ZOU                                IAmb  IAmb    03 43 52.0
      comp=Z,18nm,1.5s
MDVR  Moldovita         80.64 340 ⇓P     P       03 43 51.4 -0.1
FRGS  Fruska Gora       80.66 342 ⇓P     P       03 43 52.5 +0.9
FRGS  Fruska Gora       80.66 342⇑iP     P       03 43 51.8 +0.3
LOR   Lormes            80.76 353 eP     P       03 43 51.4 -0.6
LOR                                pmax  pmax
      comp=Z,19nm,1.2s
VLAD  Vladila           80.79 338 ⇓P     P       03 43 53.3 +1.1
STAL  STALIGIAL         80.79 347  P     P       03 43 51.9 -0.3
CRES  Cresnjev          80.80 345 eP     P       03 43 51.6 -0.6
TUE   Stuetta           81.02 349  P     P       03 43 52.9 -0.7
TUE                                IAmb  IAmb    03 44 13.0
      comp=Z,14nm,0.8s
CEY   Cerknica          81.05 345 eP     P       03 43 53.2 -0.4
CTI   Castel Tesino     81.15 347  P     P       03 43 53.3 -0.9
CTI                                pmax  pmax
      comp=Z,19nm,1.3s
CTI   Castel Tesino     81.15 347  P     P       03 43 53.3 -0.9
CTI                                IAmb  IAmb    03 43 55.1
      comp=Z,19nm,1.3s
CABF  La Chapelle       81.23 351 eP     P       03 43 54.3 -0.3
CABF                               pmax  pmax
      comp=Z,38nm,1.6s
AVF   Avril sur Loir    81.28 353 eP     P       03 43 54.2 -0.5
AVF                                pmax  pmax
      comp=Z,52nm,1.5s
FITZ  Fitzroy Crossi    81.30 226  IAmb  IAmb    03 43 56.7
      comp=Z,15nm,0.9s
SKDS  Skadanscina       81.30 346 i P    P       03 43 54.6 -0.3
PLVB  Pleven            81.32 338 ⇑P     P       03 43 55.3 +0.3
SENIN Lac Senin/Sane    81.35 350  P     P       03 43 55.1 -0.3
RIY   Rijeka            81.44 345⇑iP     P       03 43 55.2 -0.4
RIY   Rijeka            81.44 345  P     P       03 43 55.2 -0.4
POO   Poona             81.47 289 eP     P       03 43 55.0 -1.2
BLY   Banja Luka        81.55 343⇑iP     P       03 43 56.3 +0.1
DIVS  Divibare          81.65 341⇑iP     P       03 43 56.7 -0.1
TBI   Tubuai            81.65 146 eLR    LR      04 09 29.3
      comp=Z,410nm,23.2s,baz=340
SALO  Salr              81.72 348  P     P       03 43 56.1 -1.0
SALO                               IAmb  IAmb    03 43 58.8
      comp=Z,40nm,1.3s
BOVS  Bovan             81.73 340 ⇑P     P       03 43 57.2  0.0
RABC  Rab               81.95 345 i P    P       03 43 58.1 -0.2
BBLS  Lazi&#263;i       81.98 341⇑iP     P       03 43 59.1 +0.5
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UDBI  Udbina            82.01 344 i P    P       03 43 59.0 +0.3
NVLJ  Novalja           82.12 345 i P    P       03 43 58.6 -0.6
RUDO  Rudo              82.23 341⇑iP     P       03 43 59.9 +0.1
LPL   La Plagne         82.25 351 eP     P       03 44 00.6 +0.4
LPL                                pmax  pmax
      comp=Z,25nm,1.3s
LPG   La Plagne         82.27 351 eP     P       03 44 00.9 +0.6
LPG                                pmax  pmax
      comp=Z,23nm,1.1s
BR131 Keskin Array S    82.27 330  P     P       03 44 00.2 -0.1
BR131                              pmax  pmax
      comp=Z,12nm,1.1s
BR131 Keskin Array S    82.27 330  P     P       03 44 00.2 -0.1
BR131                              IAmb  IAmb    03 44 14.1
      comp=Z,12nm,1.1s
BRTR  Keskin Array B    82.27 330  P     P       03 44 00.5 +0.2
      comp=Z,0.4nm,0.4s,baz=57,slow=26,SNR=4.5
BRTR                               LR    LR      04 25 42.7
      comp=Z,164nm,19.0s,baz=30,slow=40
BRTR  Keskin Array B    82.27 330  P     P       03 44 00.1 -0.1
BRTR  Keskin Array B    82.27 330  P     P       03 44 00.1 -0.1
BNN   Bunyan            82.36 328  P     P       03 43 60.0 -0.8
BNN                                IAmb  IAmb    03 44 15.2
      comp=Z,32nm,1.0s
VTS   Vitosha           82.37 338 ⇑P     P       03 44 01.0 +0.3
VTS   Vitosha           82.37 338  P     P       03 44 00.5 -0.2
VTS                                pmax  pmax
      comp=Z,9.0nm,1.2s
VTS   Vitosha           82.37 338  P     P       03 44 00.5 -0.2
KIJV  Kijevo            82.41 344 i P    P       03 44 01.2 +0.4
DUGI  Dugi Otok         82.65 345 i P    P       03 44 01.7 -0.3
MORI  Morici            82.66 344 i P    P       03 44 01.7 -0.3
BNI   Bardonecchia      82.71 351  P     P       03 44 03.0 +0.5
BNI                                pmax  pmax
      comp=Z,33nm,1.2s
BNI   Bardonecchia      82.71 351  P     P       03 44 03.0 +0.5
BNI                                IAmb  IAmb    03 44 05.6
      comp=Z,33nm,1.2s
UPM   Unac-Piva         82.72 342 eP     P       03 44 04.6 +2.0
RICI  Ricice            82.77 343 i P    P       03 44 02.2 -0.4
ZIRJ  Zirje             82.88 344 i P    P       03 44 02.2 -0.9
ZCCA  Zocca             82.91 348  P     P       03 44 04.0 +0.6
ORIF  Oris-en-Rattie    82.92 351 eP     P       03 44 03.9 +0.4
ORIF                               pmax  pmax
      comp=Z,16nm,0.9s
ASAR  Alice Springs     82.95 216  P     P       03 44 04.1 +0.5
      comp=Z,6.6nm,0.9s,baz=27,slow=4.7,SNR=42
ASAR                               LR    LR      04 18 21.2
      comp=Z,233nm,20.7s,baz=24,slow=34
MBDF  Montbardon        83.03 351 eP     P       03 44 04.6 +0.5
MBDF                               pmax  pmax
      comp=Z,14nm,1.0s
BRY   Bratogost         83.08 342⇑iP     P       03 44 04.6 +0.2
VIVF  Saint-Julien-l    83.09 352 eP     P       03 44 04.4 +0.1
VIVF                               pmax  pmax
      comp=Z,16nm,1.2s
MSSA  Maissana          83.13 349  P     P       03 44 03.6 -1.0
MSSA                               IAmb  IAmb    03 44 05.7
      comp=Z,41nm,1.5s
VLC   Villacollemand    83.17 348  P     P       03 44 05.2 +0.5
VLC                                IAmb  IAmb    03 44 27.6
      comp=Z,14nm,1.0s
CAF   Calviac           83.22 354 eP     P       03 44 04.9 -0.1
CAF                                pmax  pmax
      comp=Z,16nm,1.0s
STON  Ston              83.27 342 i P    P       03 44 04.2 -1.0
TREB  Trebinje          83.30 342 eP     P       03 44 05.1 -0.3
ALN   Alexandroupoli    83.32 336  P     P       03 44 04.4 -1.1
ALN                                pmax  pmax
      comp=Z,15nm,1.1s
ALN   Alexandroupoli    83.32 336  P     P       03 44 04.3 -1.1
ALN                                IAmb  IAmb    03 44 18.1
      comp=Z,15nm,1.1s
SKO   Skopje            83.38 340 i P    P       03 44 06.4 +0.6
PDG   Podgorica         83.40 341 ⇓P     P       03 44 05.7 -0.1
PDG   Podgorica         83.40 341 eP     P       03 44 05.2 -0.6
PDG   Podgorica         83.40 341  P     P       03 44 04.7 -1.1
PDG                                IAmb  IAmb    03 44 06.8
      comp=Z,25nm,1.1s
DRME  Dracevica, Mon    83.64 341 eP     P       03 44 05.6 -1.6
OSSC  Osservatorio P    83.68 347  P     P       03 44 06.9 -0.5
OSSC                               IAmb  IAmb    03 44 08.6
      comp=Z,30nm,1.1s
VAY   Valandovo         83.75 338 i P    P       03 44 07.8 +0.1
NRCA  Norcia            84.09 346  P     P       03 44 09.8 +0.3
EZN   Ezine             84.26 335  P     P       03 44 11.3 +1.0
OHR   Ohrid             84.34 340 i P    P       03 44 12.9 +2.1
LMR   La Mourre         84.43 351 eP     P       03 44 11.2 +0.1
LMR                                pmax  pmax
      comp=Z,35nm,1.5s
AQU   L'Aquila          84.51 345 eP     P       03 44 10.0 -1.6
FNA   Florina           84.53 339  P     P       03 44 11.0 -0.8
FNA                                pmax  pmax
      comp=Z,14nm,1.3s
FNA   Florina           84.53 339  P     P       03 44 10.9 -0.8
FNA                                IAmb  IAmb    03 44 23.1
      comp=Z,14nm,1.3s
TGUH  Tegucigalpa,Un    84.56  74  P     P       03 44 12.9 +0.5
MTLF  Montolieu         84.79 354 eP     P       03 44 13.1 +0.1
MTLF                               pmax  pmax
      comp=Z,25nm,1.1s
PGF   Pioggiola         84.93 349 eP     P       03 44 13.6 -0.2
PGF                                pmax  pmax
      comp=Z,34nm,1.2s
SJPF  Ste Jean          85.20 356 eP     P       03 44 15.3 +0.3
SJPF                               pmax  pmax
      comp=Z,9.0nm,0.9s
ETSF  Etsaut            85.39 356 eP     P       03 44 16.4 +0.3
ETSF                               pmax  pmax
      comp=Z,12nm,0.8s
PVRL  Vila Real         87.13   1 eP     P       03 44 25.2 +0.5
      comp=Z,24nm,1.6s
MVO   Moncorvo          87.25   1 eP     P       03 44 25.2 -0.1
PVIS  Viseu             87.69   1 eP     P       03 44 27.7 +0.3
MTE   Manteigas         88.01   1 eP     P       03 44 28.6 -0.3
      comp=Z,17nm,1.3s
MTE   Manteigas         88.01   1  P     P       03 44 28.1 -0.8
MTE                                IAmb  IAmb    03 44 30.5
      comp=Z,12nm,1.0s
STKA  Stephens Creek    88.09 207  P     P       03 44 29.5 +0.5
      comp=Z,5.6nm,0.8s,baz=352,slow=6.7,SNR=17
STKA                               LR    LR      04 23 16.8
      comp=Z,157nm,19.2s,baz=25,slow=35
STKA  Stephens Creek    88.09 207  P     P       03 44 28.5 -0.5
STKA                               pmax  pmax
      comp=Z,1.0nm,0.9s
STKA  Stephens Creek    88.09 207        P       03 44 28.5 -0.5
PCAS  Casmilo, Conde    88.34   2 eP     P       03 44 31.2 +0.8
PCBR  Castelo Branco    88.57   1 eP     P       03 44 31.9 +0.4
      comp=Z,21nm,1.4s
ESDC  Sonseca Array     88.72 358  P     P       03 44 32.3  0.0
      comp=Z,4.1nm,1.1s,baz=3.9,slow=4.4,SNR=12
ESDC  Sonseca Array     88.72 358  P     P       03 44 31.2 -1.1
PBAR  Barrancos         90.24   1 eP     P       03 44 39.0 -0.3
      comp=Z,15nm,2.0s
BBOO  Buckleboo         90.61 211  P     P       03 44 40.6 -0.2
BBOO                               IAmb  IAmb    03 44 41.8
      comp=Z,12nm,0.9s
FORT  Forrest           91.56 218  P     P       03 44 45.6 +0.4
KEST  Kesra             91.60 347  LR    LR      04 29 05.4
      comp=Z,92nm,19.0s,baz=292,slow=38
RAYN  Ar Rayn           92.23 314  P     P       03 44 47.7 -1.2
RAYN                               pmax  pmax
      comp=Z,10.0nm,1.4s
RAYN  Ar Rayn           92.23 314  P     P       03 44 47.7 -1.2
RAYN                               IAmb  IAmb    03 44 49.4
      comp=Z,9.9nm,1.4s
ROSC  El Rosal          99.53  69  LR    LR      04 34 52.0
      comp=Z,107nm,19.5s,baz=356,slow=38
PLCA  Paso Flores      135.67 102  PKP   PKPdf   03 50 58.9 +0.3
      comp=Z,1.8nm,0.8s,baz=132,slow=2.6,SNR=4.6
QSPA  South Pole Qui   141.71 180        PKPpre  03 51 04.3
MAW   Mawson           144.06 218  PKP   PKPab   03 51 10.6 +0.2
      comp=Z,33nm,0.9s,baz=67,slow=4.1,SNR=49
BOSA  Boshof           146.88 302  PKPbc PKPdf   03 51 20.1 +0.9
      comp=Z,5.1nm,1.0s,baz=24,slow=5.6,SNR=5.1
SYO   Syowa Base       152.60 214⇓ePKPbc  PKPbc   03 51 33.4 -0.3
SYO   Syowa Base       152.60 214⇑ePKiKP  PKiKP   03 51 37.0 +3.1
SYO   Syowa Base       152.60 214⇑esPKPdf sPKPdf  03 51 40.4 +4.3
SYO   Syowa Base       152.60 214⇑epPKPbc PKPab   03 51 43.0 -1.5
SNAA  Sanae            160.16 183  PKPab PKPab   03 52 15.6 -1.4
VNA3  Neumayer Olymp   160.59 177  PKPab PKPab   03 52 17.4 -1.4
VNA3  Neumayer Olymp   160.59 177  PKPdf PKPdf   03 51 38.8 +1.8
VNA2  Neumayer--Watz   160.96 179  PKPdf PKPdf   03 51 38.9 +1.5
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*IDC **16** 03:50:59.7±2.8, 51°.54N×173°.65E, h0^{km}, mb3.2/3, mb1 3.8/4, mb1mx3.4/48, mbtmp3.4/4, ML2.1/1, Error ellipse: s-maj=89.7km s-min=37.3km az=2.0*

*NEIC **16** 03:51:08.4±1.1, 52°.04N±0°.09×174°.0E±0°.7, h38^{km}±26^{km}, mb4.1/5, Error ellipse: s-maj=59.2km s-min=6.8km az=101.0*

ISC 16 03:51:05.8±4.0, **52°.0N**±0°.2×**173°.5E**±0°.6, **h35**^{km}, **n13**, σ**0**^{s}.**84**/13, **mb3.5**/4, **Near Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMY	**Shemya**	0.78	27		Pn	03 51 19.0	-1.3
SMY				Sn	Sn	03 51 31.6	+0.9
PETK	**Petropavlovsk-**	9.70	283	Pn	Pn	03 53 23.6	+1.0
	0.1nm,0.3s,baz=98,slow=18,SNR=3.1						
OHAK	**Old Harbor**	19.77	62		P	03 55 31.8	-0.7
OHAK				IAmb	IAmb	03 55 37.6	
	comp=Z,26nm,1.5s						
J20K	**Nowinta River**	20.68	42	P	P	03 55 41.9	-0.4
J20K				IAmb	IAmb	03 55 47.0	
	comp=Z,13nm,1.5s						
IMAR	**Indian Mountai**	21.54	37	P	P	03 55 52.1	+0.6
MDM	**Murphy Dome**	23.35	42	P	P	03 56 11.2	+0.5
ILAR	**Eielson Array**	23.86	42	P	P	03 56 16.6	+1.1
	comp=Z,0.2nm,0.6s,baz=246,slow=7.6,SNR=4.3						
PDAR	**Pinedale Array**	50.58	68	P	P	04 00 01.7	+0.7
	comp=Z,0.1nm,0.4s,baz=285,slow=3.5,SNR=2.2						
PDAR	**Pinedale Array**	50.58	68	P	P	04 00 02.0	+1.0
TX31	**Lajitas Ar. Si**	63.20	76	P	P	04 01 30.2	-0.3
TX32	**Lajitas Array**	63.20	76	P	P	04 01 30.1	-0.3
TX32				IAmb	IAmb	04 01 34.4	
	comp=Z,1.9nm,1.2s						
TXAR	**Lajitas Array**	63.21	76	P	P	04 01 29.9	-0.5
	comp=Z,0.4nm,0.4s,baz=308,slow=6.0,SNR=12						
TXAR	**Lajitas Array**	63.21	76	P	P	04 01 30.1	-0.3

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*IDC **16** 03:58:16.5±1.1, 34°.91N×23°.26E, h0^{km}, mb4.2/11, mb1 4.1/19, mb1mx3.9/46, mbtmp4.0/19, ML3.8/8, MS3.2/2, Ms1 3.2/2, ms1mx2.6/58, Error ellipse: s-maj=21.4km s-min=14.5km az=11.0*

*MOS **16** 03:58:17.1±1.5, 34°.57N×23°.30E, h24^{km}, mb4.4/10, Error ellipse: s-maj=8.2km s-min=4.3km az=83.1*

*NEIC **16** 03:58:21.5±2.5, 34°.82N±0°.09×23°.34E±0°.05, h30^{km}±6^{km}, mb4.2/24, ML3.4(THE), ML3.5(ATH), Error ellipse: s-maj=13.5km s-min=5.0km az=198.0*

*THE **16** 03:58:22.4, 34°.86N×23°.31E, h4^{km}±1^{km}, ML3.4/9, Error ellipse: s-maj=1.8km s-min=0.9km az=44.0*

*ATH **16** 03:58:22.3, 34°.81N×23°.35E, h26^{km}±15^{km}, ML3.5/4, Error ellipse: s-maj=16.2km s-min=2.0km az=75.0*

*HLW **16** 03:58:23.5, 34°.70N×23°.70E, h25^{km}±27^{km}, Md4.5, Ml4.2*

*PDG **16** 03:58:24.3±0.1, 35°.35N×22°.90E, h11^{km}±2^{km}, ML3.9/12, Error ellipse: s-maj=2.7km s-min=1.2km az=90.0*

ISC 16 03:58:20.9±0.6, **34°.73N**±0°.04×**23°.24E**±0°.04, **h35**^{km}±2^{km}, **n238**, σ**1**^{s}.**80**/258, **mb4.3**/26, **MS3.2**/4, **10C-8D**, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNDR	**Palaiochora Ch**	0.62	36	P	Pn	03 58 31.5	-1.7
KNDR				S	Sn	03 58 38.3	-3.7
	3µm,0.6s						
GVD	**Gavdhos**	0.70	81	P	Pn	03 58 34.1	-0.3
GVD				S	Sn	03 58 43.9	-0.1
	11µm,0.4s						
GVD	**Gavdhos**	0.70	81	P	Pn	03 58 34.3	-0.1
GVD				S	Sn	03 58 42.4	-1.6
GVD				AML	AML	03 58 50.9	
	comp=E,26394µm,0.4s						
GVD				AML	AML	03 58 52.1	
	comp=N,18698µm,0.5s						
IMMV	**Iera Moni Meta**	0.95	39	P	Pn	03 58 37.5	-0.2
IMMV				S	Sn	03 58 49.8	-0.3
	comp=N,4µm,0.7s						
IMMV	**Iera Moni Meta**	0.95	39	P	Pn	03 58 37.9	+0.1
IMMV				S	Sn	03 58 49.6	-0.5
IMMV				AML	AML	03 59 00.9	
	comp=N,8461µm,0.5s						
IMMV				AML	AML	03 59 00.9	
	comp=E,5693µm,0.7s						
VAM	**Vamos**	1.04	49	P	Pn	03 58 39.1	+0.2
VAM				S	Sn	03 58 53.0	+0.8
	comp=E,3µm,0.6s						
VAM	**Vamos**	1.04	49	P	Pn	03 58 39.0	0.0
VAM	**Vamos**	1.04	49	P	Pn	03 58 39.1	+0.2
VAM				S	Sn	03 58 53.0	+0.8
ANKY	**Antikythira Is**	1.14	2	P	Pn	03 58 42.4	+2.1
ANKY				S	Sn	03 58 56.1	+1.4
	comp=E,2µm,0.8s						
ANKY	**Antikythira Is**	1.14	2	P	Pn	03 58 42.1	+1.8
PRNS	**Prines Rethymn**	1.21	58	P	Pn	03 58 42.0	+0.7
PRNS				S	Sn	03 58 56.8	+0.3
	comp=E,1µm,0.8s						
TMBK	**Timbaki Herakl**	1.30	74	P	Pn	03 58 44.7	+2.2
TMBK				S	Sn	03 59 03.0	+4.4
	comp=E,1µm,0.8s						
SIVA	**Sivas**	1.32	77	P	Pn	03 58 46.1	+3.3
SIVA				S	Sn	03 59 03.7	+4.5
	comp=E,4µm,0.8s						
SIVA	**Sivas**	1.32	77	P	Pn	03 58 45.1	+2.2
IDI	**Anoyia**	1.46	67	Pn	Pn	03 58 45.2	+0.3
	comp=E,38nm,0.3s,baz=254,slow=8.7,SNR=277						
IDI				Sn	Sn	03 59 06.8	+3.9
	comp=E,34nm,0.3s,baz=331,slow=20,SNR=7.2						
IDI	**Anoyia**	1.46	67	P	Pn	03 58 46.0	+1.1
IDI	**Anoyia**	1.46	67	P	Pn	03 58 46.7	+1.8
IDI				AML	AML	03 59 16.0	
	comp=E,1607µm,0.9s						
IDI				AML	AML	03 59 19.6	
	comp=N,2026µm,0.6s						
KTHA	**Kythira Island**	1.53	355	P	Pn	03 58 48.2	+2.4
KTHA				S	Sn	03 59 07.2	+2.7
	comp=N,1µm,0.7s						
KTHA	**Kythira Island**	1.53	355	P	Pn	03 58 48.2	+2.4
KTHA				AML	AML	03 59 27.6	
	comp=N,1768µm,0.7s						
KTHA				AML	AML	03 59 27.9	
	comp=E,3864µm,0.7s						
KTHR	**Kythira**	1.54	353	P	Pn	03 58 47.9	+2.0
KSTL	**Kastelli Herak**	1.61	69	P	Pn	03 58 52.1	+5.3
IACM	**Heraklion**	1.61	68	P	Pn	03 58 49.5	+2.7
HRKL	**Herakleio**	1.63	69	P	Pn	03 58 49.6	+2.5
VLI	**Veliai**	2.00	353	P	Pn	03 58 54.5	+2.3
NPS	**Neapolis**	2.02	74	P	Pn	03 58 55.0	+2.6
NPS	**Neapolis**	2.02	74	P	Pn	03 58 55.1	+2.7
NPS	**Neapolis**	2.02	74	P	Pn	03 58 55.0	+2.6
MHLO	**Agia Marina, M**	2.17	25	P	Pn	03 58 55.2	+0.6
STIA	**Sitia Lasithi**	2.39	78	P	Pn	03 59 00.6	+3.1
THR6	**Thira Island,**	2.39	47	P	Pn	03 58 58.6	+1.0
THR5	**Thira Island,**	2.41	45	P	Pn	03 58 58.6	+0.8
SNT5	**Nea Kammeni, S**	2.42	46	P	Pn	03 58 58.8	+0.8
THR3	**Thira Island,**	2.43	46	P	Pn	03 58 59.0	+0.9
PYL	**PYLOS**	2.48	331	P	Pn	03 59 00.3	+1.5
KRND	**KRANIDI**	2.65	358	P	Pn	03 59 03.0	+1.9
ITM	**Ithomi**	2.67	337		Pn	03 59 02.7	+1.3
EPID	**Epidavros**	2.88	358	P	Pn	03 59 06.2	+1.8
VLY	**Voula,Athens**	3.15	8	P	Pn	03 59 09.1	+1.1
GUR	**Goura**	3.28	347	P	Pn	03 59 12.2	+2.3
LTK	**Loutraki**	3.30	356	P	Pn	03 59 11.7	+1.7
PTL	**Penteli**	3.35	8	P	Pn	03 59 11.5	+0.7
DION	**Dionisos Attik**	3.39	9	P	Pn	03 59 11.9	+0.6
VILL	**Villia**	3.43	1	P	Pn	03 59 13.0	+1.1
KARY	**Karystos**	3.44	16	P	Pn	03 59 12.8	+0.9
SLUM	**Salum**	3.63	152	P	Pn	03 59 16.3	+1.8
	baz=157						
SLUM				S	Sn	03 59 53.2	-2.9
	baz=157						
SLUM				AMP		04 00 00.0	
	baz=157						
AGG	**Agios Georgios**	4.35	351	P	Pn	03 59 25.9	+1.4
AGG	**Agios Georgios**	4.35	351	Pn	Pn	03 59 25.9	+1.4
YER	**Yerkesik**	4.74	58	P	Pn	03 59 32.8	+2.9
PAIG	**Paliouri**	5.20	4	P	Pn	03 59 37.1	+0.9
IGT	**Igoumenitsa**	5.33	335	P	Pn	03 59 38.9	+0.9
OUR	**Ouranopolis**	5.63	6	P	Pn	03 59 42.9	+0.9
SWA2		5.78	160	P	Pn	03 59 45.4	+1.2
	baz=164						
SWA2				AMP		04 00 00.0	
	baz=164						
SWA2				S	Sn	04 00 45.6	-3.7
	baz=164						
ELL	**Elmali**	5.78	68	P	Pn	03 59 44.7	+0.4
ELL	**Elmali**	5.78	68		Pn	03 59 44.7	+0.4
KBN	**Korca**	6.20	342	P	Pn	03 59 50.8	+0.8
KBN	**Korca**	6.20	342	Pn	Pn	03 59 50.8	+0.8
FNA	**Florina**	6.22	347	P	Pn	03 59 49.7	-0.6
FNA	**Florina**	6.22	347		Pn	03 59 49.7	-0.6
SRS	**Serrai**	6.38	2	P	Pn	03 59 52.9	+0.4
SRS				pmax	pmax		
	comp=Z,17nm,0.9s						
ALN	**Alexandroupoli**	6.55	19	P	Pn	03 59 54.4	-0.2
ALN	**Alexandroupoli**	6.55	19	Pn	Pn	03 59 54.4	-0.2
SCTE	**Santa Cesarea**	6.55	326	Pn	Pn	03 59 53.7	-1.0
TIP	**Timpagrande**	6.83	312	Pn	Pn	03 59 57.9	-0.7
PLD	**Plovdiv**	7.45	8	P	Pn	04 00 08.8	+1.7
PLD				pmax	pmax		
	comp=Z,110nm,0.9s						
RAFF	**Raffo Rosso**	7.62	292	Pn	Pn	04 00 10.8	+1.4
VAE	**Valguarnera**	7.66	294	Sn	Sn	04 01 36.0	+0.5
	comp=Z,1.5nm,0.3s,baz=231,slow=3.0,SNR=4.7						
ULC	**Ulcinj**	7.88	338	*e*Pn	Pn	04 00 11.5	-1.4
VTS	**Vitosha**	7.88	360	P	Pn	04 00 14.0	+0.9
VTS	**Vitosha**	7.88	360	Pn	Pn	04 00 14.0	+0.9
DRME	**Dracevica, Mon**	8.10	338	*e*Pn	Pn	04 00 14.0	-1.9
DRME	**Dracevica, Mon**	8.10	338	*e*Pn	Pn	04 00 14.5	-1.4
DRME				*e*Sn	Sn	04 01 36.9	-9.3
RYAN	**Fayoum**	8.21	131	P	Pn	04 00 17.8	+0.2
	baz=133						
RYAN				AMP		04 01 00.0	
	baz=133						
PVY	**Plav**	8.26	343	⇓*i*Pn	Pn	04 00 16.8	-1.5
PVY				*i* Sn	Sn	04 01 40.8	-10
BUM	**Brajici-Budva**	8.29	337	*e*Pn	Pn	04 00 16.9	-1.8
BUM				*i* Sn	Sn	04 01 41.6	-10
CSS	**Mathiatis**	8.30	86	Pn	Pn	04 00 18.4	-0.3
PDG	**Podgorica**	8.30	339	*e*Pn	Pn	04 00 16.3	-2.4
PDG	**Podgorica**	8.30	339	Pn	Pn	04 00 16.9	-1.8
TTG	**Podgorica**	8.30	339	⇑*i*Pn	Pn	04 00 17.4	-1.3
TTG				*i* Sn	Sn	04 01 41.7	-9.4
CEME	**Cevo**	8.51	338	⇓*i*Pn	Pn	04 00 19.6	-2.0
CEME				*e*Sn	Sn	04 01 46.6	-10
IVA	**Berane**	8.54	343	⇓*i*Pn	Pn	04 00 20.6	-1.5
IVA				*i* Sn	Sn	04 01 47.5	-10
HCY	**Herceg Novi**	8.56	336	*e*Pn	Pn	04 00 19.8	-2.4
HCY	**Herceg Novi**	8.56	336	*e*Pn	Pn	04 00 20.1	-2.1
HCY				*i* Sn	Sn	04 01 47.9	-10
KOME	**Kolasin**	8.62	341	⇓*i*Pn	Pn	04 00 21.7	-1.4
KOME				*i* Sn	Sn	04 01 49.4	-10
CORL	**Corleone**	8.62	294	Pn	Pn	04 00 25.0	+1.8
HSAF	**As Saff**	8.69	124	P	Pn	04 00 24.1	-0.1
	baz=125						
NKME	**Niksic**	8.70	339	*e*Pn	Pn	04 00 22.6	-1.6
KOT	**Kottamia**	8.70	121	P	Pn	04 00 24.2	-0.1
	baz=122						
KOT				AMP		04 01 00.0	
	baz=122						
HFRF	**Wahat Farafira**	8.72	149	P	Pn	04 00 25.0	+0.6
	baz=151						
NKY	**Niksic**	8.73	339	⇑*i*Pn	Pn	04 00 23.1	-1.6
NKY				*e*Sn	Sn	04 01 52.1	-10
GLL	**Jalalah**	8.82	123	P	Pn	04 00 25.3	-0.7
	baz=124						
TREB	**Trebinje**	8.84	336	*e*Pn	Pn	04 00 22.8	-3.4
DBRK	**Dubrovnik**	8.87	335	*e*Pn	Pn	04 00 23.9	-2.6
DBRK				Sn	Sn	04 01 56.7	-8.5
BRY	**Bratogost**	8.95	337	*e*Pn	Pn	04 00 24.0	-3.7
BRY	**Bratogost**	8.95	337	⇓*i*Pn	Pn	04 00 26.2	-1.5
BRY				*i* Sn	Sn	04 01 57.3	-10
PLE	**Pljevlja**	9.10	342	⇑*i*Pn	Pn	04 00 28.5	-1.2
PLE				*i* Sn	Sn	04 02 01.0	-10
UPM	**Unac-Piva**	9.11	340	*e*Pn	Pn	04 00 28.7	-1.3
UPM	**Unac-Piva**	9.11	340	⇑*i*Pn	Pn	04 00 28.5	-1.5
UPM				*i* Sn	Sn	04 02 01.2	-10
SGRT	**San Giovanni R**	9.16	322	Pn	Pn	04 00 29.7	-0.9
NBNS	**Bani Suef**	9.17	129	P	Pn	04 00 31.0	+0.3
	baz=131						
NBNS				AMP		04 02 00.0	
	baz=131						
STON	**Ston**	9.21	334	*e*Pn	Pn	04 00 28.4	-2.7
STON	**Ston**	9.21	334	*e*Pn	Pn	04 00 28.5	-2.7
RUDO	**Rudo**	9.37	342	*e*Pn	Pn	04 00 28.7	-4.7
SUZ	**Suez**	9.46	118	P	Pn	04 00 34.6	-0.2
	baz=119						
BBLS	**Lazići**	9.60	343	*e*Pn	Pn	04 00 34.1	-2.5
BR131	**Keskin Array S**	9.67	56	P	Pn	04 00 36.8	-0.9
BR131	**Keskin Array S**	9.67	56	Pn	Pn	04 00 36.8	-0.9
BRTR	**Keskin Array B**	9.67	56	Pn	Pn	04 00 37.2	-0.4
	comp=Z,0.1nm,0.3s,baz=221,slow=14,SNR=8.2						
BRTR	**Keskin Array B**	9.67	56	*e*P	Pn	04 00 38.2	+0.5
BRTR	**Keskin Array B**	9.67	56	Pn	Pn	04 00 37.6	-0.1
DIVS	**Divibare**	9.69	346	*e*Pn	Pn	04 00 34.5	-3.3
DIVS	**Divibare**	9.69	346		Pn	04 00 35.2	-2.6
HVAR	**Hvar**	9.96	330	*e*Pn	Pn	04 00 39.5	-1.9
MMAI	**Mount Meron Ar**	10.25	96	Pn	Pn	04 00 44.6	-1.0
	comp=Z,2.6nm,0.3s,baz=306,slow=12,SNR=11						
MMAI				Sn	Sn	04 02 38.7	-0.6
	comp=Z,2.1nm,0.3s,baz=87,slow=21,SNR=4.9						
KIJV	**Kijevo**	10.66	332	*e*Pn	Pn	04 00 48.9	-2.2
ZIRJ	**Zirje**	10.68	329	*e*Pn	Pn	04 00 48.9	-2.4
FRGS	**Fruska Gora**	10.74	347	*e*Pn	Pn	04 00 48.1	-4.1
MGRS	**Mrkonjic Grad**	10.78	336	*e*Pn	Pn	04 00 49.6	-3.1
MORI	**Morici**	10.83	330	*e*Pn	Pn	04 00 51.6	-1.8
MLR	**Muntele Rosu**	10.95	10	LR	LR	04 05 05.9	
	comp=Z,106nm,21.6s,baz=326,slow=38						
BLY	**Banja Luka**	11.04	337	*e*Pn	Pn	04 00 54.2	-2.0
EIL	**Elat**	11.12	114	Pn	Pn	04 00 55.6	-1.9
	comp=Z,0.5nm,0.3s,baz=347,slow=5.0,SNR=15						
EIL				Sn	Sn	04 02 50.7	-10
	comp=Z,0.8nm,0.3s,baz=42,slow=18,SNR=2.4						
DUGI	**Dugi Otok**	11.21	328	*e*Pn	Pn	04 00 58.4	-0.2
NRCA	**Norcia**	11.31	319	Pn	Pn	04 01 01.3	+1.4
UDBI	**Udbina**	11.35	332	*e*Pn	Pn	04 00 59.5	-1.1
ASF	**Jabal al Asfar**	11.69	99	Pn	Pn	04 01 03.4	-1.9
	comp=Z,0.3nm,0.3s,baz=215,slow=12,SNR=3.6						
MORH	**Mrgy, Hungar**	11.99	344	*e*Pn	Pn	04 01 05.9	-3.3
CRES	**Cresnjev**	12.57	334	*e*Pn	Pn	04 01 15.0	-2.2
CEY	**Cerknica**	12.89	331	*e*Pn	Pn	04 01 19.0	-2.5
SOKA	**Soboth**	13.45	335	*e*Pn	Pn	04 01 26.7	-2.6
	comp=Z,4.3nm,1.0s						
OBKA	**Obir**	13.48	333	*e*Pn	Pn	04 01 28.2	-1.5
	comp=Z,1.6nm,0.5s						
ARSA	**Arzberg**	13.79	337	*e*Pn	Pn	04 01 32.5	-1.3
	comp=Z,2.8nm,0.6s						
ZOU	**Zoufplan**	14.14	330	Pn	Pn	04 01 37.8	-1.0
CONA	**Conrad Observa**	14.30	340	*e*Pn	Pn	04 01 38.7	-2.1
	comp=Z,5.3nm,1.4s						
MODS	**Modra-Piesok**	14.34	344	*e*P	P	04 01 48.0	+0.1
MODS	**Modra-Piesok**	14.34	344	*e*PN	P	04 01 48.0	+0.1
ABTA	**Abfaltersbach**	14.48	329	*e*Pn	Pn	04 01 44.8	+1.5
	comp=Z,3.3nm,0.6s						
MOA	**Molln**	14.73	336	*e*Pn	Pn	04 01 46.0	-0.6
	comp=Z,10nm,0.7s						
KRUC	**Moravsky**	15.19	343	*e*P	P	04 01 58.4	+1.1
WTTA	**Wattenberg**	15.26	329	*e*Pn	Pn	04 01 55.4	+1.6
	comp=Z,3.7nm,0.6s						
WATA	**Walderalm**	15.34	329	*e*Pn	Pn	04 01 54.4	-0.5
	comp=Z,3.3nm,0.6s						
VRAC	**Vranov**	15.37	343	Pn	Pn	04 01 50.2	-4.9
	comp=Z,0.6nm,0.3s,baz=163,slow=11,SNR=3.7						
VRAC	**Vranov**	15.37	343	*e*P	P	04 02 00.2	+0.8
SQTA	**Sankt Quirin**	15.41	328	*e*Pn	Pn	04 01 57.7	+1.9
	comp=Z,5.7nm,1.0s						
FETA	**Feichten**	15.48	326	*e*Pn	P	04 01 58.8	-1.9
	comp=Z,4.9nm,0.9s						
MOTA	**Moosalm**	15.55	328	*e*Pn	Pn	04 01 58.2	+0.6
	comp=Z,1.6nm,0.6s						
OKC	**Ostrava-Krasne**	15.56	348	*e*P	P	04 02 02.4	+1.0
OKC	**Ostrava-Krasne**	15.56	348	*e*P	P	04 02 02.4	+1.0
CKRC	**Cesky Krumlov**	15.56	338	*e*P	P	04 02 03.4	+1.9
MORC	**Moravsky Berou**	15.61	346	P	P	04 02 02.3	+0.2
MORC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MORC	**Moravsky Berou**	15.61	346	*e*P	P	04 02 02.9	+0.9
MORC	**Moravsky Berou**	15.61	346	P	P	04 02 02.3	+0.2
DAVOX	**Davos/Dischmat**	15.70	324	Pn	Pn	04 01 55.3	-4.3
	comp=Z,0.1nm,0.3s,baz=164,slow=15,SNR=1.6						
TUE	**Stuetta**	15.75	322	P	P	04 02 05.3	+1.5
GEC2	**GERESS Array S**	15.78	336		Pn	04 01 59.7	-0.7
GERES	**GERESS Array B**	15.78	336	Pn	Pn	04 01 57.8	-2.6
	comp=Z,0.3nm,0.3s,baz=145,slow=14,SNR=2.2						
GERES	**GERESS Array B**	15.78	336	P	P	04 02 04.1	+0.1
GERES	**GERESS Array B**	15.78	336	P	P	04 02 04.1	+0.1
RETA	**Reutte**	15.81	327	*e*Pn	P	04 02 03.9	-0.4
	comp=Z,2.7nm,0.7s						
DAVA	**Damuels**	16.07	325	*e*Pn	P	04 02 06.2	-1.0
	comp=Z,3.8nm,0.6s						
KHC	**Kasperske Hory**	16.07	337	*e*P	P	04 02 08.7	+1.6
KHC	**Kasperske Hory**	16.07	337	*e*P	P	04 02 08.7	+1.6
DPC	**Dobruska-Polom**	16.41	344	*e*P	P	04 02 12.1	+1.2
DPC	**Dobruska-Polom**	16.41	344	*e*P	P	04 02 12.1	+1.2
PRU	**Pruhonice**	16.53	340	*e*P	P	04 02 13.4	+1.2
PRU	**Pruhonice**	16.53	340	*e*P	P	04 02 13.4	+1.2
AKASG	**Malin Array Be**	16.55	13	Pn	Pn	04 02 06.8	-3.3
	comp=Z,2.0nm,0.3s,baz=208,slow=9.8,SNR=12						
AKASG	**Malin Array Be**	16.55	13	*ce*P	Pn	04 02 10.0	-0.1
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
AKASG	**Malin Array Be**	16.55	13	Pn	Pn	04 02 09.2	-0.9
AKBB	**Malin Array Si**	16.55	13	*ce*P	P	04 02 12.5	+0.2
OSTC	**Ostas**	16.63	344	*e*P	P	04 02 15.3	+2.0
UPC	**Upice**	16.63	344	*e*P	P	04 02 14.9	+1.6
UPC	**Upice**	16.63	344	*e*P	P	04 02 14.9	+1.6
GRA1	**Grafenberg Arr**	17.37	333	P	P	04 02 22.8	+1.3
GRA1				IAmb	IAmb	04 02 33.4	
	comp=Z,26nm,1.5s						
GRF	**Grafenberg Arr**	17.37	333	P	P	04 02 22.8	+1.3
GRF				pmax	pmax		
	comp=Z,26nm,1.5s						
GRFO	**Grafenberg**	17.37	333	P	P	04 02 23.0	+1.5
GRFO				pmax	pmax		
	comp=Z,18nm,1.5s						
GRFO	**Grafenberg**	17.37	333	P	P	04 02 23.0	+1.5
GRFO				IAmb	IAmb	04 02 24.9	
	comp=Z,18nm,1.5s						
BFO	**Black Forest**	17.55	325	P	P	04 02 24.3	+0.9
BFO				pmax	pmax		
	comp=Z,12nm,1.5s						
BFO	**Black Forest**	17.55	325	P	P	04 02 24.3	+0.9
KIV	**Kislovodsk**	17.60	53	*e*P	P	04 02 25.3	+1.1
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KBZ	**Khabaz**	17.65	54	P	Pn	04 02 23.5	-0.4
	comp=Z,0.1nm,0.3s,baz=243,slow=8.8,SNR=5.2						
KBZ	**Khabaz**	17.65	54	*e*P	P	04 02 24.7	+0.1
MNK	**Minsk**	20.04	8	*i* P	P	04 02 48.6	-2.1
MNK				*i* S	S	04 06 30.4	-3.4
MNK				*i*		04 07 06.0	
MNK				*i*		04 14 23.3	
MNK				pmax	pmax		
	comp=N,6.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MNK				MLR	MLR		
	comp=Z,143nm,23.0s						
MNK				MLR	MLR		
	comp=N,36nm,17.0s						
MNK				MLR	MLR		
	comp=E,10.0nm,17.0s						
MNK	**Minsk**	20.04	8	*i* P	P	04 02 48.7	-2.0
	comp=E,1.0nm,1.0s						
MNK				*i* P	P	04 02 48.7	-2.0
	comp=N,6.0nm,0.8s						
MNK				*i* P	P	04 02 48.7	-2.0
	comp=Z,6.0nm,0.8s,baz=191						
MNK				*i* PP	sP	04 03 04.2	+1.1
MNK				*i* S	S	04 06 30.4	-3.4
MNK				*i* SS	SnSn	04 06 48.6	-2.9
MNK				*i* LQ	LQ	04 08 48.0	
MNK				*i* LR	LR	04 10 18.3	
MNK				*i* LRM	MLR	04 11 22.9	
	comp=Z,143nm,23.1s						
MNK				*i* LRM	MLR	04 11 27.2	
	comp=N,36nm,16.6s						
MNK				*i* LRM	MLR	04 11 46.1	
	comp=E,10.0nm,17.4s						
NACGM	**Naroch**	20.32	6	*i* P	P	04 02 51.6	-2.1
PABE	**Paberze**	20.78	1	P	P	04 02 57.2	-1.5
ESDC	**Sonseca Array**	22.19	291	P	P	04 03 13.9	-0.2
	comp=E,0.3nm,0.8s,baz=104,slow=11,SNR=2.0						
OBN	**Obninsk**	22.39	20	*i* P	P	04 03 14.4	-1.5
OBN				*i*		04 03 20.9	
OBN				*i*		04 03 42.8	
OBN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,605nm,20.0s						
BELG	**Belogornoye**	24.79	37	P	P	04 03 38.9	-0.3
	comp=Z,8.0nm,0.6s,baz=298,slow=20,SNR=4.1						
HFS	**Hagfors**	26.17	349	P	P	04 03 50.9	-0.8
	comp=Z,5.4nm,0.5s,baz=156,slow=11,SNR=34						
FINES	**FINESS Array B**	26.80	3	P	P	04 03 55.3	-2.0
	comp=Z,1.5nm,0.7s,baz=152,slow=8.6,SNR=5.7						
FINES	**FINESS Array B**	26.80	3	*e*P	P	04 03 57.9	+0.6
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FINES	**FINESS Array B**	26.80	3	P	P	04 03 58.0	+0.7
NC602	**NORSAR Array S**	27.10	347	P	P	04 03 59.0	-1.2
NORES	**NORESS Array B**	27.10	347	P	P	04 04 00.5	+0.4
NAO01	**NORSAR Array S**	27.32	347	P	P	04 04 01.1	-1.0
NB2	**NORSAR Subarra**	27.44	347	P	P	04 04 02.5	-0.8
	comp=Z,1.0nm,0.6s,baz=156,slow=9.3						
NOA	**NORSAR Array B**	27.44	347	P	P	04 04 02.7	-0.5
	comp=Z,0.6nm,0.5s,baz=157,slow=9.9,SNR=15						
EKA	**Eskdalemuir Ar**	27.51	327	P	P	04 04 04.0	+0.2
	comp=Z,8.0nm,1.0s,baz=126,slow=7.6,SNR=7.1						
TORD	**Torodi Ar. Bea**	29.02	228	P	P	04 04 19.8	+2.1
	comp=Z,0.7nm,0.7s,baz=33,slow=8.6,SNR=6.4						
TORD				LR	LR	04 15 53.0	
	comp=Z,54nm,18.7s,baz=195,slow=36						
TORD	**Torodi Ar. Bea**	29.02	228	P	P	04 04 19.5	+1.8
AKTO	**Aktyubinsk**	29.70	47	P	P	04 04 22.0	-1.4
	comp=Z,1.7nm,0.7s,baz=266,slow=5.1,SNR=6.0						
AKTO	**Aktyubinsk**	29.70	47	P	P	04 04 22.0	-1.4
ABKAR	**Akbulak array**	30.56	50	P	P	04 04 30.6	-0.4
ARCES	**ARCESS Array B**	34.88	1	P	P	04 05 07.1	-1.5
	comp=Z,1.5nm,0.5s,baz=180,slow=7.3,SNR=12						
ARCES	**ARCESS Array B**	34.88	1	P	P	04 05 07.5	-1.1
KKAR	**Karatay Array**	37.30	63	P	P	04 05 29.8	+0.2
KKAR	**Karatay Array**	37.30	63	P	P	04 05 29.8	+0.2
BRVK	**Borovoye**	37.73	46	⇓*e*P	P	04 05 32.2	-0.8
BRVK				pmax	pmax		
	comp=Z,8.0nm,2.5s						
AAK	**Ala-Archa**	40.26	63	⇓*e*P	P	04 05 54.0	-0.6
AAK				pmax	pmax		
	comp=Z,25nm,2.1s						
KURK	**Kurchatov**	42.67	51	⇑*e*P	P	04 06 12.0	-2.0
KURK				pmax	pmax		
	comp=Z,8.0nm,2.5s						
KURK	**Kurchatov**	42.67	51	P	P	04 06 12.5	-1.5
KURK				IAmb	IAmb	04 06 13.9	
	comp=Z,2.7nm,0.7s						
MK31	**Makanchi Array**	45.32	56	*c i*P	P	04 06 35.1	-0.3
MK31	**Makanchi Array**	45.32	56	P	P	04 06 33.7	-1.7
MK31				IAmb	IAmb	04 06 35.8	
	comp=Z,2.9nm,0.8s						
MKAR	**Makanchi Array**	45.32	56	P	P	04 06 35.2	-0.1
	comp=Z,2.1nm,0.4s,baz=268,slow=7.6,SNR=60						
MKAR	**Makanchi Array**	45.32	56	P	P	04 06 35.1	-0.3
ZAA0	**Zalesovo Array**	46.44	46	P	P	04 06 41.8	-2.2
ZALV	**Zalesovo Beam**	46.44	46	P	P	04 06 43.0	-1.0
	comp=Z,4.1nm,0.4s,baz=266,slow=9.4,SNR=19						
ZALV	**Zalesovo Beam**	46.44	46	P	P	04 06 42.2	-1.8
SONM	**Songino Array**	60.97	50	P	P	04 08 31.0	+0.3
	comp=Z,1.1nm,0.4s,baz=283,slow=6.5,SNR=12						
SONM	**Songino Array**	60.97	50	P	P	04 08 31.0	+0.3
SONM	**Songino Array**	60.97	50	P	P	04 08 30.9	+0.3
SONM				IAmb	IAmb	04 08 32.5	
	comp=Z,3.1nm,1.3s						
ULN	**Ulaanbaatar**	61.38	50	*ce*P	P	04 08 33.8	+0.4
ULN				pmax	pmax		
	comp=Z,14nm,2.5s						
TIXI	**Tiksi**	62.12	20	⇓*e*P	P	04 08 37.9	+0.1
TIXI				pmax	pmax		
	comp=Z,6.0nm,2.1s						
CMAR	**Chiang Mai Arr**	68.19	82	*ce*P	P	04 09 18.0	0.0
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
BILL	**Bilibino**	73.86	14	*i* P	P	04 09 48.1	-3.5
BILL				*i*		04 09 54.2	
BILL				*i*		04 10 03.0	
BILL				*i*		04 12 44.2	
BILL				pmax	pmax		
	comp=Z,4.0nm,1.3s						
BMAR	**Burnt Mountain**	77.74	355	P	P	04 10 15.0	+1.2
EPYK	**Eagle Plains**	78.05	352	P	P	04 10 16.9	+1.3
IMAR	**Indian Mountai**	79.58	359	P	P	04 10 25.4	+1.5
H21K	**Melozitna Rive**	79.89	358	P	P	04 10 27.7	+2.0
H21K				IAmb	IAmb	04 10 28.6	
	comp=Z,2.2nm,0.9s						

ILAR	**Eielson Array**	**80.53**	**356**	P	**P**	**04 10 30.0**	**+0.9**
ILAR	**Eielson Array**	**80.53**	**356**	P	**P**	**04 10 30.0**	**+0.9**
DAWY	**Dawson**	**80.58**	**352**	P	**P**	**04 10 30.0**	**+0.6**
DAWY				IAmb	IAmb	04 10 31.7	
	comp=Z,3.6nm,1.1s						
WRH	**Wood River Hil**	**80.89**	**356**	P	**P**	**04 10 32.0**	**+0.9**
WRH				IAmb	IAmb	04 10 48.2	
	comp=Z,2.9nm,1.1s						
PCDR	**Punta Cana, DR**	**80.98**	**286**	P	**P**	**04 10 35.6**	**+3.3**
DOT	**Dot Lake**	**81.44**	**354**	P	**P**	**04 10 34.4**	**+0.5**
DOT				IAmb	IAmb	04 10 36.0	
	comp=Z,4.3nm,1.1s						
DHY	**Denali Highway**	**82.24**	**356**	P	**P**	**04 10 38.7**	**+0.3**
DHY				IAmb	IAmb	04 10 40.3	
	comp=Z,3.4nm,0.8s						
PPLA	**Purkeypile**	**82.64**	**358**	P	**P**	**04 10 40.9**	**+0.4**
ECSD	**EROS Data Cent**	**84.64**	**321**	P	**P**	**04 10 52.2**	**+1.3**
ECSD				IAmb	IAmb	04 11 05.3	
	comp=Z,2.7nm,1.1s						

*IDC **16** 04:02:49.8±1.4, 34°.76N×23°.27E, h0km, mb3.8/8, mb1 3.8/14, mb1mx3.6/47, mbtmp3.8/14, ML4.1/5, Error ellipse: s-maj=24.8km s-min=19.4km az=19.0*
*ATH **16** 04:02:54.2, 34°.68N×23°.29E, h16km±6km, ML3.2/4, Error ellipse: s-maj=7.8km s-min=2.4km az=178.0*
*THE **16** 04:02:54.5, 34°.72N×23°.27E, h6km±1km, ML3.0/9, Error ellipse: s-maj=2.0km s-min=1.0km az=55.0*
*HLW **16** 04:02:55.8, 34°.79N×23°.62E, h25km±30km, Md4.0, Ml3.7*
*NEIC **16** 04:02:55.9±2.3, 34°.9N±0°.1×23°.27E±0°.03, h33km±10km, mb4.1/5, Error ellipse: s-maj=21.8km s-min=2.3km az=189.0*
ISC 16 04:02:54.0±1.2**, 34°.67N**±0°.04×**23°.28E**±0°.04**, h30**km±9km**, n75, σ1s.59**/90**, mb4.0**/11**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNDR	**Palaiochora Ch**	**0.65**	**31**	P	**Pb**	**04 03 05.3**	**-1.6**
KNDR				S	**Sb**	**04 03 15.6**	**-0.1**
	1µm,0.6s						
GVD	**Gavdhos**	**0.69**	**76**	P	**Pn**	**04 03 07.5**	**-0.1**
GVD				S	**Sn**	**04 03 18.0**	**+0.7**
	5µm,0.4s						
GVD	**Gavdhos**	**0.69**	**76**	P	**Pn**	**04 03 07.3**	**-0.3**
GVD				S	**Sn**	**04 03 16.8**	**-0.5**
GVD				AML	AML	04 03 22.0	
	comp=E,10703µm,0.5s						
GVD				AML	AML	04 03 22.6	
	comp=N,9001µm,0.4s						
IMMV	**Iera Moni Meta**	**0.97**	**36**	P	**Pn**	**04 03 11.8**	**+0.2**
IMMV				S	**Sn**	**04 03 26.2**	**+1.8**
	comp=N,1µm,0.7s						
IMMV	**Iera Moni Meta**	**0.97**	**36**	P	**Pn**	**04 03 11.6**	**0.0**
IMMV				S	**Sn**	**04 03 25.1**	**+0.7**
VAM	**Vamos**	**1.05**	**46**	P	**Pn**	**04 03 12.9**	**+0.2**
VAM				S	**Sn**	**04 03 28.0**	**+1.7**
	comp=N,1µm,0.6s						
VAM	**Vamos**	**1.05**	**46**	P	**Pn**	**04 03 12.9**	**+0.2**
VAM				AML	AML	04 03 33.3	
	comp=E,2891µm,0.6s						
VAM				AML	AML	04 03 35.1	
	comp=N,2538µm,0.6s						
ANKY	**Antikythira Is**	**1.19**	**1**	P	**Pb**	**04 03 16.0**	**+0.1**
ANKY				S	**Sb**	**04 03 31.9**	**+0.9**
	comp=N,918nm,0.7s						
ANKY	**Antikythira Is**	**1.19**	**1**	P	**Pb**	**04 03 16.2**	**+0.2**
ANKY				AML	AML	04 03 40.5	
	comp=E,2011µm,0.7s						
ANKY				AML	AML	04 03 41.3	
	comp=N,1514µm,0.7s						
PRNS	**Prines Rethymn**	**1.22**	**55**	P	**Pb**	**04 03 15.7**	**-0.7**
PRNS				S	**Sb**	**04 03 32.6**	**+0.9**
	comp=N,472nm,0.8s						
IDI	**Anoyia**	**1.46**	**65**	Pn	**Pn**	**04 03 18.8**	**+0.4**
	comp=N,16nm,0.3s,baz=256,slow=8.1,SNR=35						
IDI				Sn	**Sb**	**04 03 43.6**	**+4.9**
	comp=N,27nm,0.3s,baz=343,slow=11,SNR=9.1						
IDI	**Anoyia**	**1.46**	**65**	P	**Pb**	**04 03 20.3**	**-0.2**
IDI				S	**Sb**	**04 03 39.9**	**+1.2**
	comp=N,408nm,0.8s						
IDI	**Anoyia**	**1.46**	**65**	P	**Pb**	**04 03 20.3**	**-0.2**
IDI				AML	AML	04 03 50.2	
	comp=E,676µm,0.9s						
IDI				AML	AML	04 03 50.4	
	comp=N,798µm,0.5s						
KTHA	**Kythira Island**	**1.59**	**354**	P	**Pb**	**04 03 22.0**	**-0.7**
KTHA				S	**Sn**	**04 03 41.6**	**+2.0**
	comp=N,390nm,0.9s						
KTHA	**Kythira Island**	**1.59**	**354**	P	**Pb**	**04 03 22.0**	**-0.7**
KTHR	**Kythira**	**1.60**	**352**	P	**Pn**	**04 03 21.8**	**+1.6**
KTHR				S	**Sb**	**04 03 42.8**	**+0.1**
VLI	**Veliai**	**2.06**	**352**	P	**Pn**	**04 03 28.3**	**+1.8**
VLI				S	**Sn**	**04 03 54.3**	**+3.1**
	comp=N,252nm,1.1s						
THR6	**Thira Island,**	**2.41**	**45**	P	**Pn**	**04 03 32.7**	**+1.4**
PYL	**PYLOS**	**2.54**	**331**	P	**Pn**	**04 03 34.2**	**+1.0**
ITM	**Ithomi**	**2.73**	**337**	Pn	**Pn**	**04 03 35.4**	**-0.4**
SLUM	**Salum**	**3.56**	**152**	P	**Pn**	**04 03 50.1**	**+2.9**
	baz=157						
SLUM				AMP		04 04 00.0	
	baz=157						
SLUM				S	**Sn**	**04 04 27.9**	**-0.4**
	baz=157						
AGG	**Agios Georgios**	**4.41**	**350**	Pn	**Pn**	**04 03 59.3**	**+0.5**
SWA2		**5.72**	**161**	P	**Pn**	**04 04 19.1**	**+2.3**
	baz=163						
SWA2				AMP		04 05 00.0	
	baz=163						
SWA2				S	**Sn**	**04 05 20.6**	**-0.9**
	baz=163						
ELL	**Elmali**	**5.78**	**67**	Pn	**Pn**	**04 04 18.7**	**+1.0**
KBN	**Korca**	**6.26**	**342**	Pn	**Pn**	**04 04 24.5**	**+0.2**
FNA	**Florina**	**6.28**	**347**		**Pn**	**04 04 24.1**	**-0.6**
SCTE	**Santa Cesarea**	**6.61**	**326**	Pn	**Pn**	**04 04 27.6**	**-1.4**
TIP	**Timpagrande**	**6.89**	**313**	Pn	**Pn**	**04 04 32.7**	**-0.2**
RAFF	**Raffo Rosso**	**7.67**	**292**	Pn	**Pn**	**04 04 43.8**	**+0.2**
VAE	**Valguarnera**	**7.71**	**294**	Sn	**Sn**	**04 06 13.3**	**+2.9**
	comp=N,0.8nm,0.3s,baz=285,slow=10,SNR=3.7						
RYAN	**Fayoum**	**8.15**	**131**	P	**Pn**	**04 04 51.8**	**+1.6**
	baz=133						
RYAN				AMP		04 06 00.0	
	baz=133						
PDG	**Podgorica**	**8.36**	**339**	Pn	**Pn**	**04 04 51.4**	**-1.6**
MDUB	**Mudurnu**	**8.54**	**45**	Pn	**Pn**	**04 04 54.0**	**-1.7**
KOT	**Kottamia**	**8.64**	**121**	P	**Pn**	**04 04 57.9**	**+0.9**
	baz=122						
HFRF	**Wahat Farafira**	**8.65**	**149**	P	**Pn**	**04 04 58.9**	**+1.7**
	baz=150						
GLL	**Jalalah**	**8.77**	**123**	P	**Pn**	**04 04 59.1**	**+0.3**
	baz=125						
DBRK	**Dubrovnik**	**8.93**	**335**	*e*Pn	**Pn**	**04 04 57.1**	**-3.9**
NBNS	**Bani Suef**	**9.11**	**129**	P	**Pn**	**04 05 04.6**	**+1.1**
	baz=131						
NBNS				AMP		04 06 00.0	
	baz=131						
SGRT	**San Giovanni R**	**9.22**	**322**	Pn	**Pn**	**04 05 03.2**	**-1.7**
STON	**Ston**	**9.27**	**334**	*e*Pn	**Pn**	**04 05 02.2**	**-3.3**
SUZ	**Suez**	**9.41**	**118**	P	**Pn**	**04 05 08.5**	**+0.9**
	baz=119						
BRTR	**Keskin Array B**	**9.68**	**56**	Pn	**Pn**	**04 05 12.4**	**+1.1**
	comp=N,0.1nm,0.3s,baz=215,slow=12,SNR=4.0						
DIVS	**Divibare**	**9.75**	**346**	Pn	**Pn**	**04 05 08.7**	**-3.4**
MAKA	**Makarska**	**9.88**	**332**	*e*Pn	**Pn**	**04 05 10.7**	**-3.2**
HVAR	**Hvar**	**10.02**	**330**	*e*Pn	**Pn**	**04 05 12.5**	**-3.2**
KIJV	**Kijevo**	**10.73**	**332**	*e*Pn	**Pn**	**04 05 22.3**	**-3.2**
ZIRJ	**Zirje**	**10.74**	**329**	*e*Pn	**Pn**	**04 05 22.1**	**-3.5**
MORI	**Morici**	**10.89**	**330**	*e*Pn	**Pn**	**04 05 25.8**	**-1.8**
EIL	**Elat**	**11.07**	**114**	Pn	**Pn**	**04 05 29.6**	**-0.8**
	comp=N,0.4nm,0.3s,baz=276,slow=3.3,SNR=6.5						
VRAC	**Vranov**	**15.44**	**343**	Pn	**Pn**	**04 06 29.9**	**+0.4**
	comp=N,0.4nm,0.3s,baz=143,slow=8.5,SNR=3.8						
CKRC	**Cesky Krumlov**	**15.62**	**338**	*e*P	**P**	**04 06 37.1**	**+1.3**
DAVOX	**Davos/Dischmat**	**15.77**	**324**	Pn	**Pn**	**04 06 33.4**	**-0.5**
	comp=N,0.2nm,0.3s,baz=143,slow=15,SNR=2.7						
GERES	**GERESS Array B**	**15.84**	**336**	Pn	**Pn**	**04 06 35.7**	**+0.9**
	comp=N,0.4nm,0.3s,baz=147,slow=12,SNR=6.8						
KHC	**Kasperske Hory**	**16.13**	**337**	*e*P	**P**	**04 06 42.2**	**+0.8**
DPC	**Dobruska-Polom**	**16.47**	**344**	*e*P	**P**	**04 06 45.7**	**+0.5**
AKASG	**Malin Array Be**	**16.59**	**13**	Pn	**Pn**	**04 06 43.1**	**-1.1**
	comp=N,0.9nm,0.3s,baz=208,slow=9.6,SNR=4.4						
OSTC	**Ostas**	**16.69**	**344**	*e*P	**P**	**04 06 48.1**	**+0.5**
PABE	**Paberze**	**20.84**	**1**	P	**P**	**04 07 30.9**	**-2.0**
HFS	**Hagfors**	**26.23**	**349**	P	**P**	**04 08 24.8**	**-1.2**
	comp=N,2.2nm,0.5s,baz=148,slow=8.7,SNR=14						
FINES	**FINESS Array B**	**26.85**	**3**	P	**P**	**04 08 30.6**	**-0.9**
	comp=N,1.6nm,1.0s,baz=202,slow=7.2,SNR=1.1						
NOA	**NORSAR Array B**	**27.50**	**347**	P	**P**	**04 08 36.6**	**-0.9**
	comp=N,0.4nm,0.5s,baz=158,slow=10,SNR=5.9						
TORD	**Torodi Ar. Bea**	**29.01**	**228**	P	**P**	**04 08 52.8**	**+1.6**
	comp=N,0.1nm,0.3s,baz=70,slow=42,SNR=1.4						
ARCES	**ARCESS Array B**	**34.94**	**1**	P	**P**	**04 09 41.0**	**-1.8**
	comp=N,2.5nm,0.8s,baz=173,slow=7.8,SNR=2.2						
KKAR	**Karatay Array**	**37.30**	**63**	P	**P**	**04 10 03.9**	**+0.6**
KURK	**Kurchatov**	**42.68**	**50**	P	**P**	**04 10 47.1**	**-0.7**
MK31	**Makanchi Array**	**45.33**	**56**	P	**P**	**04 11 07.7**	**-1.5**
MK31				IAmb	IAmb	04 11 26.2	
	comp=Z,2.9nm,1.2s						
MKAR	**Makanchi Array**	**45.33**	**56**	P	**P**	**04 11 09.0**	**-0.2**
	comp=Z,0.7nm,0.3s,baz=268,slow=7.8,SNR=22						
MKAR	**Makanchi Array**	**45.33**	**56**	P	**P**	**04 11 08.2**	**-0.9**
ZAA0	**Zalesovo Array**	**46.45**	**46**	P	**P**	**04 11 16.9**	**-0.9**
ZAA0				IAmb	IAmb	04 11 17.3	
	comp=Z,1.4nm,0.6s						
ZALV	**Zalesovo Beam**	**46.45**	**46**	P	**P**	**04 11 16.8**	**-1.1**
	comp=Z,1.5nm,0.4s,baz=266,slow=9.2,SNR=7.5						
ZALV	**Zalesovo Beam**	**46.45**	**46**	P	**P**	**04 11 16.5**	**-1.4**
SONM	**Songino Array**	**60.98**	**50**	P	**P**	**04 13 04.3**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=282,slow=6.9,SNR=5.6						
SONM	**Songino Array**	**60.98**	**50**	P	**P**	**04 13 04.8**	**+0.3**
ILAR	**Eielson Array**	**80.58**	**356**	P	**P**	**04 15 03.7**	**+0.5**
WRH	**Wood River Hil**	**80.95**	**356**	P	**P**	**04 15 05.6**	**+0.5**
WRH				IAmb	IAmb	04 15 16.3	
	comp=Z,4.2nm,1.3s						

*VAO **16** 04:55:34.4±0.4, 18°.71S×69°.85W, h77km, mb4.6*
*NEIC **16** 04:55:35.5±1.6, 18°.75S±0°.05×69°.77W±0°.07, h78km±5km, mb4.7/57, ML4.7(ARE), ML4.5(GUC), Error ellipse: s-maj=11.0km s-min=5.6km az=65.0*
*ARE **16** 04:55:35±2.6, 18°.86S±0°.04×70°.14W±0°.06, h84km±4km, Error ellipse: s-maj=9.0km s-min=5.3km az=68.0*
*IDC **16** 04:55:35.7±0.8, 18°.73S×69°.64W, h90km±6km, mb3.8/9, mb1 4.0/13, mb1mx3.8/33, mbtmp4.2/13, MS3.0/2, Ms1 3.0/2, ms1mx2.7/23, Error ellipse: s-maj=19.9km s-min=16.3km az=44.0*
*GUC **16** 04:55:36.3±0.7, 18°.79S×69°.94W, h85km±3km, ML4.6*
*SJA **16** 04:55:38.0, 18°.99S×70°.09W, h24km, ML4.2*
ISC 16 04:55:35.1±0.5**, 18°.75S**±0°.03×**69°.85W**±0°.05**, h83**km±4km**, n195, σ1s.36**/206**, mb4.7**/35**, 1C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB12	**IPOC Station P**	**0.48**	**287**	*e*P	**Pn**	**04 55 49.4**	**+0.4**
PB12				*i* S	**Sn**	**04 55 59.6**	**+0.3**
PB12				IAML		04 56 00.8	
	comp=E,26µm,0.2s						
PB12	**IPOC Station P**	**0.48**	**287**	Pn	**Pn**	**04 55 49.0**	**0.0**
PB12				Sn	**Sn**	**04 55 59.0**	**-0.3**
PB12	**IPOC Station P**	**0.48**	**287**	*i* P	**Pn**	**04 55 49.0**	**0.0**
PB16	**IPOC Station P**	**0.53**	**38**		**Pn**	**04 55 50.8**	**+0.8**
AP01	**Chacalluta**	**0.60**	**309**	⇑*i*P	**Pn**	**04 55 50.8**	**+0.8**
AP01				*e*S	**Sn**	**04 56 02.0**	**+0.9**
AP01	**Chacalluta**	**0.60**	**309**		**Pn**	**04 55 50.8**	**+0.8**
AP01				Sn	**Sn**	**04 56 02.1**	**+0.9**
AP01	**Chacalluta**	**0.60**	**309**	*i* P	**Pn**	**04 55 51.0**	**+1.0**
PB11	**IPOC Station P**	**1.02**	**170**	*e*P	**Pn**	**04 55 54.9**	**+0.1**
PB11				*i* S	**Sn**	**04 56 10.1**	**+0.8**
PB11				IAML		04 56 10.9	
	comp=N,16µm,0.2s						
PB11	**IPOC Station P**	**1.02**	**170**	Pn	**Pn**	**04 55 54.9**	**+0.1**
PB11				Sn	**Sn**	**04 56 09.8**	**+0.4**
PB11	**IPOC Station P**	**1.02**	**170**	*i* P	**Pn**	**04 55 55.0**	**+0.3**
HMBC	**Humberstone**	**1.52**	**181**	*e*P	**Pn**	**04 56 01.0**	**+0.1**
HMBC				*i* S	**Sn**	**04 56 19.9**	**-0.5**
HMBC				IAML		04 56 22.8	
	comp=N,8µm,0.5s						
PB08	**IPOC Station P**	**1.53**	**155**	*e*P	**Pn**	**04 56 02.6**	**+1.4**
PB08				*i* S	**Sn**	**04 56 23.0**	**+2.0**
PB08				IAML		04 56 24.6	
	comp=E,10µm,0.1s						
PB08	**IPOC Station P**	**1.53**	**155**		**Pn**	**04 56 02.2**	**+0.9**
PB08	**IPOC Station P**	**1.53**	**155**	*i* P	**Pn**	**04 56 02.0**	**+0.7**
TA01	**Diego Aracena**	**1.83**	**190**	*e*P	**Pn**	**04 56 04.8**	**0.0**
TA01				*i* S	**Sn**	**04 56 26.9**	**-0.5**
TA01				IAML		04 56 34.8	
	comp=N,5µm,0.5s						
TA01	**Diego Aracena**	**1.83**	**190**		**Pn**	**04 56 04.8**	**0.0**
TA01	**Diego Aracena**	**1.83**	**190**	*i* P	**Pn**	**04 56 05.0**	**+0.2**
PATCX	**Punta Patache**	**2.08**	**188**	*e*P	**Pn**	**04 56 08.1**	**-0.2**
PATCX	**Punta Patache**	**2.08**	**188**		**Pn**	**04 56 07.7**	**-0.5**
PATCX	**Punta Patache**	**2.08**	**188**	*i* P	**Pn**	**04 56 08.0**	**-0.2**
PB01	**IPOC Station P**	**2.31**	**172**	*e*P	**Pn**	**04 56 11.9**	**+0.7**
PB01				*e*S	**Sn**	**04 56 39.3**	**+0.4**
PB01				IAML		04 56 48.4	
	comp=N,4µm,0.2s						
PB01	**IPOC Station P**	**2.31**	**172**	Pn	**Pn**	**04 56 12.2**	**+0.9**
PB01	**IPOC Station P**	**2.31**	**172**	*i* P	**Pn**	**04 56 12.0**	**+0.7**
PB02	**IPOC Station P**	**2.56**	**181**	*e*P	**Pn**	**04 56 15.2**	**+0.6**
PB02				*i* S	**Sn**	**04 56 48.4**	**+3.5**
PB02	**IPOC Station P**	**2.56**	**181**	*i* P	**Pn**	**04 56 15.0**	**+0.4**
LPAZ	**La Paz**	**2.95**	**34**	P	**Pn**	**04 56 24.1**	**+3.8**
	comp=N,38nm,0.3s,baz=224,slow=4.9,SNR=576						
LPAZ	**La Paz**	**2.95**	**34**	*e*P	**Pn**	**04 56 20.0**	**-0.3**
LPAZ	**La Paz**	**2.95**	**34**	Pn	**Pn**	**04 56 23.8**	**+3.5**
PB07	**IPOC Station P**	**2.96**	**181**	*e*P	**Pn**	**04 56 20.3**	**+0.2**
PB07				*e*S	**Sn**	**04 56 55.5**	**+0.8**
PB07				IAML		04 57 06.7	
	comp=N,3µm,0.7s						
PB07	**IPOC Station P**	**2.96**	**181**		**Pn**	**04 56 21.1**	**+1.0**
PB07	**IPOC Station P**	**2.96**	**181**	*i* P	**Pn**	**04 56 21.0**	**+0.9**
PB09	**IPOC Station P**	**3.08**	**169**	⇓*e*	**Pn**	**04 56 20.2**	**-1.5**
PB09				*e*P		04 56 23.0	
PB09	**IPOC Station P**	**3.08**	**169**		**Pn**	**04 56 22.8**	**+1.1**
PB09	**IPOC Station P**	**3.08**	**169**	*i* P	**Pn**	**04 56 23.0**	**+1.2**
PB03	**IPOC Station P**	**3.28**	**178**	*e*P	**Pn**	**04 56 24.8**	**+0.4**
PB03				*e*S	**Sn**	**04 56 59.9**	**-2.6**
PB03				IAML		04 57 15.0	
	comp=E,2µm,0.5s						
PB04	**IPOC Station P**	**3.58**	**184**	*i* P	**Pn**	**04 56 27.8**	**-0.6**
PB04				*e*S	**Sn**	**04 57 10.6**	**+0.9**
PB04	**IPOC Station P**	**3.58**	**184**		**Pn**	**04 56 29.5**	**+1.1**
PB04	**IPOC Station P**	**3.58**	**184**	*i* P	**Pn**	**04 56 28.0**	**-0.4**
LVC	**Limon Verde**	**3.94**	**167**	P	**Pn**	**04 56 35.0**	**+1.5**
	comp=E,15nm,0.3s,baz=337,slow=8.5,SNR=67						
LVC				S	**Sn**	**04 57 26.9**	**+8.1**
	comp=E,51nm,0.3s,baz=146,slow=10,SNR=3.8						
LVC	**Limon Verde**	**3.94**	**167**	*e*P	**Pn**	**04 56 35.2**	**+1.6**
LVC				*e*S	**Sn**	**04 57 19.6**	**+0.9**
LVC	**Limon Verde**	**3.94**	**167**	*e*P	**Pn**	**04 56 33.5**	**-0.1**
LVC	**Limon Verde**	**3.94**	**167**	Pn	**Pn**	**04 56 34.7**	**+1.1**
LVC	**Limon Verde**	**3.94**	**167**	*i* P	**Pn**	**04 56 35.0**	**+1.5**
PB06	**IPOC Station P**	**3.94**	**176**	*e*P	**Pn**	**04 56 33.3**	**-0.1**
PB06	**IPOC Station P**	**3.94**	**176**	Pn	**Pn**	**04 56 33.4**	**0.0**
PB06	**IPOC Station P**	**3.94**	**176**	*i* P	**Pn**	**04 56 34.0**	**+0.6**
PB05	**IPOC Station P**	**4.09**	**185**	*e*P	**Pn**	**04 56 34.7**	**-0.8**
PB05	**IPOC Station P**	**4.09**	**185**	*i* P	**Pn**	**04 56 35.0**	**-0.4**
PB15	**IPOC Station P**	**4.45**	**176**	*e*P	**Pn**	**04 56 40.6**	**+0.2**
PB15	**IPOC Station P**	**4.45**	**176**		**Pn**	**04 56 40.2**	**-0.1**
PB15	**IPOC Station P**	**4.45**	**176**	*i* P	**Pn**	**04 56 41.0**	**+0.7**
PB10	**IPOC Station P**	**4.78**	**188**	*e*P	**Pn**	**04 56 43.9**	**-0.8**
PB10	**IPOC Station P**	**4.78**	**188**	Pn	**Pn**	**04 56 43.7**	**-1.0**
PB10	**IPOC Station P**	**4.78**	**188**	*i* P	**Pn**	**04 56 46.0**	**+1.3**
YJA	**Yavi**	**5.30**	**131**	*i* P	**Pn**	**04 56 56.0**	**+3.8**
PB14	**IPOC Station P**	**5.87**	**185**	Pn	**Pn**	**04 56 58.9**	**-0.9**
HJA	**Humahuaca**	**6.07**	**138**	*i* P	**Pn**	**04 57 06.0**	**+3.4**
SLA	**San Lorenzo**	**7.18**	**147**	*i* P	**Pn**	**04 57 21.0**	**+3.4**
ASTB	**Santa Barbara**	**7.21**	**137**	*i* P	**Pn**	**04 57 20.0**	**+2.0**
AC02	**Maricunga**	**8.07**	**175**	Pn	**Pn**	**04 57 29.3**	**-0.7**
AC02	**Maricunga**	**8.07**	**175**	*i* P	**Pn**	**04 57 29.0**	**-1.0**
FSA	**Cafayete**	**8.15**	**155**	*i* P	Pn	04 57 36.0	+5.2
SIV	**San Ignacio**	**8.82**	**73**	P	**Pn**	**04 57 39.0**	**-0.8**
	comp=E,8.3nm,0.3s,baz=265,slow=9.2,SNR=124						
NNA	**Nana**	**9.52**	**314**	P	**Pn**	**04 57 50.0**	**+0.5**
	comp=E,2.5nm,0.3s,baz=182,slow=9.3,SNR=5.6						
NNA	**Nana**	**9.52**	**314**	Pn	**Pn**	**04 57 49.7**	**+0.2**
ETMB	**Extrema**	**9.55**	**22**	*e*P	**Pn**	**04 57 50.4**	**+0.5**
ETMB	**Extrema**	**9.55**	**22**	Pn	**Pn**	**04 57 49.2**	**-0.7**
PTLB	**Pontes e Lacer**	**10.75**	**74**	*e*P	**Pn**	**04 58 06.0**	**-0.2**
PTLB	**Pontes e Lacer**	**10.75**	**74**	Pn	**Pn**	**04 58 04.7**	**-1.5**
VILB	**Vilhena**	**10.92**	**60**	*e*P	**Pn**	**04 58 08.4**	**-0.1**
VILB	**Vilhena**	**10.92**	**60**	Pn	**Pn**	**04 58 08.6**	**0.0**
CZSB	**Cruzeiro do Su**	**11.30**	**345**	*e*P	**Pn**	**04 58 12.4**	**-1.3**
CZSB	**Cruzeiro do Su**	**11.30**	**345**	Pn	**Pn**	**04 58 12.2**	**-1.5**
SAML	**Samuel**	**11.69**	**34**	Pn	**Pn**	**04 58 16.8**	**-2.2**
AQDB	**Aquidauana**	**13.44**	**100**	*e*P	**Pn**	**04 58 41.0**	**-1.4**
AQDB	**Aquidauana**	**13.44**	**100**	Pn	**Pn**	**04 58 40.6**	**-1.8**
CPUP	**Villa Florida**	**13.80**	**125**	P	**Pn**	**04 58 44.0**	**-3.1**
	comp=E,0.3nm,0.3s,baz=315,slow=12,SNR=5.4						
CPUP				LR	LR	05 05 21.1	
	comp=E,74nm,19.9s,baz=346,slow=43						
CPUP	**Villa Florida**	**13.80**	**125**	Pn	**Pn**	**04 58 42.9**	**-4.2**
SALV	**Santo Antonio**	**13.81**	**80**	*e*P	**Pn**	**04 58 46.0**	**-1.3**
ATAH	**Atahualpa**	**14.23**	**323**	LR	LR	05 04 32.4	
	comp=E,47nm,19.8s,baz=153,slow=37						
PP1B	**Ponte de Pedra**	**14.27**	**88**	*e*P	**Pn**	**04 58 53.9**	**+0.6**
TBTG	**Tabatinga, AM**	**14.48**	**360**	*e*P	**Pn**	**04 58 55.8**	**-0.1**
MT02	**Curacav**	**14.49**	**184**	Pn	**Pn**	**04 58 55.6**	**-0.4**
PDRB	**Porto dos Gac**	**14.51**	**63**	*e*P	**Pn**	**04 58 55.2**	**-1.2**
MT01	**Popeta**	**15.10**	**184**	Pn	**Pn**	**04 59 03.6**	**-0.3**
BO01	**Tunca**	**15.62**	**184**	Pn	**Pn**	**04 59 08.7**	**-1.7**
CLDB	**Colider**	**15.67**	**62**	*e*P	**Pn**	**04 59 09.3**	**-1.9**
BO02	**Sierra Bellavi**	**16.00**	**183**		**P**	**04 59 17.0**	**-0.2**
GO05	**Huala**	**16.30**	**186**	Pn	**Pn**	**04 59 19.3**	**+0.3**
ARAG	**Araguaiana, MT**	**17.49**	**83**	*e*P	**P**	**04 59 34.7**	**+0.9**
PTGB	**Pitanga**	**17.55**	**113**	*e*P	**P**	**04 59 35.0**	**+0.6**
MACA	**Manacapuru-AM**	**17.90**	**31**	*e*P	**P**	**04 59 38.0**	**-0.3**
MACA	**Manacapuru-AM**	**17.90**	**31**	P	**P**	**04 59 37.7**	**-0.5**
MACA				IAmb	IAmb	04 59 39.7	
	comp=Z,40nm,1.0s						
NPGB	**Novo Progresso**	**18.28**	**52**	*e*P	**P**	**04 59 41.6**	**-0.9**
CPSB	**Cacapava Do Su**	**18.88**	**131**	*e*P	**P**	**04 59 49.2**	**+0.3**
SNDB	**Serra Nova Dou**	**19.11**	**72**	*e*P	**P**	**04 59 50.5**	**-1.0**
FRTB	**Fartura**	**19.47**	**107**	*e*P	**Pn**	**04 59 56.7**	**-0.7**
PLTB	**Pedras Altas**	**19.55**	**135**	P	**P**	**04 59 55.0**	**-1.3**
ITTB	**Itaituba**	**19.86**	**46**	*e*P	**P**	**04 59 58.7**	**-1.0**
CNLB	**Canela**	**20.26**	**125**	*e*P	**P**	**05 00 04.6**	**+0.7**
PTGA	**Pitinga**	**20.36**	**30**	P	**P**	**05 00 03.5**	**-1.7**
	comp=Z,13nm,0.3s,baz=325,slow=22,SNR=11						
PTGA	**Pitinga**	**20.36**	**30**	P	**P**	**05 00 03.4**	**-1.8**
IPMB	**Ipameri, GO**	**20.55**	**91**	*e*P	**P**	**05 00 06.0**	**-1.2**
OTAV	**Otavalo**	**20.68**	**335**	P	Pn	05 00 12.1	0.0
BDFB	**Brasilia**	**21.08**	**85**	P	**P**	**05 00 10.0**	**-3.0**
	comp=Z,3.7nm,0.3s,baz=260,slow=11,SNR=6.0						
BDFB	**Brasilia**	**21.08**	**85**	P	**P**	**05 00 10.9**	**-2.1**
RCLB	**Rio Claro- Sao**	**21.20**	**104**	*e*P	**P**	**05 00 13.8**	**-0.3**
PLCA	**Paso Flores**	**21.92**	**181**	P	**P**	**05 00 21.1**	**-0.5**
	comp=Z,2.1nm,1.0s,baz=354,slow=9.2,SNR=4.2						
PLCA	**Paso Flores**	**21.92**	**181**	P	**P**	**05 00 23.3**	**+1.7**
TUMC	**Tumaco**	**22.23**	**336**	P	**P**	**05 00 27.7**	**+2.6**
MALB	**Monte Alegre**	**22.70**	**44**	*e*P	**P**	**05 00 28.0**	**-2.1**
BOAV	**Boa Vista**	**22.93**	**25**	*e*P	**P**	**05 00 31.9**	**-0.5**
BOAV	**Boa Vista**	**22.93**	**25**	P	**P**	**05 00 31.7**	**-0.7**
PRPB	**Parauapebas**	**23.18**	**60**	*e*P	**P**	**05 00 32.9**	**-1.9**
SMTB	**Santa Maria do**	**23.72**	**69**	*e*P	**P**	**05 00 39.5**	**-0.3**
JANB	**Januaria**	**24.70**	**85**	*e*P	**P**	**05 00 48.4**	**-0.3**
DIAM	**Diamantina, MG**	**24.82**	**93**	*e*P	**P**	**05 00 48.7**	**-1.2**
SDBA	**SAO DESIDERIO**	**24.82**	**79**	*e*P	**P**	**05 00 49.4**	**-0.5**
MCPB	**Macapa, AP**	**25.28**	**46**	*e*P	**P**	**05 00 52.7**	**-1.2**
ZARC	**Zaragoza, Cauc**	**26.54**	**349**	P	**P**	**05 01 04.0**	**-1.2**
NAN01	**Guarapari, ES**	**28.22**	**93**	*e*P	**P**	**05 01 20.3**	**0.0**
SJCC	**San Jacinto, C**	**28.95**	**349**	P	**P**	**05 01 28.3**	**+1.5**
MDP	**Montagnes des**	**29.14**	**37**	P	**P**	**05 01 27.2**	**-1.3**
	comp=Z,3.5nm,0.6s,baz=211,slow=9.1,SNR=7.8						
NBIT	**Itapeh - BA**	**29.34**	**87**	*e*P	**P**	**05 01 30.7**	**+0.4**
BCIP	**Isla Barro Col**	**29.44**	**340**	P	**P**	**05 01 34.0**	**+2.9**
GDU01	**Guandu, BA**	**29.47**	**85**	*e*P	**P**	**05 01 30.7**	**-0.8**
NBPN	**Ponto Novo - B**	**29.69**	**79**	*e*P	**P**	**05 01 33.3**	**-0.1**
ROSB	**Rosrio**	**29.70**	**61**	*e*P	**P**	**05 01 33.3**	**-0.1**
NBPS	**Pedro II - PI**	**31.19**	**66**	*e*P	**P**	**05 01 46.0**	**-0.8**
NBLA	**Lagarto - SE**	**31.89**	**81**	*e*P	**P**	**05 01 51.9**	**-0.9**
NBMA	**Muriti-CE**	**32.26**	**74**	*e*P	**P**	**05 01 55.7**	**-0.4**
NBPB	**Pedra_Branca-C**	**32.29**	**70**	*e*P	**P**	**05 01 55.9**	**-0.5**
NBAN	**Anadia - AL**	**33.72**	**79**	*e*P	**P**	**05 02 08.6**	**-0.3**
MG04	**Isla Riesco**	**34.06**	**182**	P	**P**	**05 02 10.3**	**-0.9**
MLPR	**Magueyes Islan**	**36.59**	**4**	P	**P**	**05 02 32.5**	**-0.8**
OBIP	**Obispado Ponce**	**36.70**	**5**	P	**P**	**05 02 34.2**	**0.0**
CELP	**Cerrillos**	**36.74**	**5**	P	**P**	**05 02 34.3**	**-0.3**
AOPR	**Arecibo Observ**	**36.99**	**5**	P	**P**	**05 02 36.5**	**-0.2**
CBYP	**Canovanas**	**37.00**	**6**	P	**P**	**05 02 35.5**	**-1.3**
CBYP				IAmb	IAmb	05 02 42.2	
	comp=Z,16nm,1.0s						
DR12	**Loma Pena Alta**	**37.31**	**1**	P	**P**	**05 02 38.3**	**-1.1**
JSC	**Jenkinsville**	**53.85**	**348**	P	**P**	**05 04 50.2**	**+0.6**
JSC				IAmb	IAmb	05 05 17.5	
	comp=Z,7.3nm,1.0s						
BIRD	**Birdtown, Kers**	**54.05**	**349**	P	**P**	**05 04 51.9**	**+0.9**
BIRD				IAmb	IAmb	05 04 53.2	
	comp=Z,7.0nm,0.8s						
KMSC	**Kings Mountain**	**54.70**	**348**	P	**P**	**05 04 56.3**	**+0.5**
KMSC				IAmb	IAmb	05 04 58.3	
	comp=Z,4.9nm,0.8s						
V55A	**Taylorsville**	**55.36**	**349**	P	**P**	**05 05 02.1**	**+1.5**
V55A				IAmb	IAmb	05 05 22.8	
	comp=Z,9.0nm,1.1s						
V52A	**Sevierville**	**55.84**	**347**	P	**P**	**05 05 04.8**	**+0.9**
V52A				IAmb	IAmb	05 05 25.4	
	comp=Z,12nm,1.1s						
T59A	**Double "B" Far**	**55.90**	**353**	P	**P**	**05 05 04.7**	**+0.4**
T59A				IAmb	IAmb	05 05 06.2	
	comp=Z,16nm,1.4s						
U49A	**Red Boiling Sp**	**56.99**	**345**	P	**P**	**05 05 12.5**	**+0.4**
U49A				IAmb	IAmb	05 05 13.3	
	comp=Z,4.1nm,0.7s						
WVT	**Waverly**	**57.17**	**343**	P	**P**	**05 05 13.4**	**0.0**
WVT				IAmb	IAmb	05 05 30.8	
	comp=Z,3.6nm,1.0s						
T50A	**Nancy**	**57.25**	**346**	P	**P**	**05 05 14.1**	**+0.2**
T50A				IAmb	IAmb	05 05 34.9	
	comp=Z,3.9nm,0.9s						
R55A	**Marlinton**	**57.55**	**350**	P	**P**	**05 05 17.5**	**+1.4**
T47A	**Sharon Grove**	**57.78**	**344**	P	**P**	**05 05 18.3**	**+0.6**
T47A				IAmb	IAmb	05 05 39.0	
	comp=Z,9.7nm,0.9s						
TXAR	**Lajitas Array**	**57.88**	**325**	P	**P**	**05 05 19.0**	**+0.4**
	comp=Z,0.2nm,0.5s,baz=148,slow=7.3,SNR=7.6						
TXAR				pP	**pP**	**05 05 40.6**	**+0.9**
	comp=Z,0.2nm,0.4s,baz=158,slow=10,SNR=2.5						
TXAR	**Lajitas Array**	**57.88**	**325**	P	**P**	**05 05 19.6**	**+1.0**
Q56A	**Snyder Ridge,**	**58.15**	**351**	P	**P**	**05 05 21.2**	**+0.9**
Q56A				IAmb	IAmb	05 05 35.7	
	comp=Z,12nm,1.1s						
PBMO	**Poplar Bluff**	**58.55**	**341**	P	**P**	**05 05 23.2**	**+0.2**
PBMO				IAmb	IAmb	05 05 45.0	
	comp=Z,5.1nm,0.7s						
SIUC	**Southern Illin**	**59.05**	**342**	P	**P**	**05 05 27.0**	**+0.5**
SIUC				IAmb	IAmb	05 05 29.1	
	comp=Z,7.0nm,0.8s						
P52A	**Corning**	**59.20**	**349**	P	**P**	**05 05 27.9**	**+0.5**
P52A				IAmb	IAmb	05 05 29.2	
	comp=Z,5.3nm,0.8s						
SSPA	**Standing Stone**	**59.55**	**353**	P	**P**	**05 05 30.6**	**+0.8**
N58A	**Sunbury**	**59.63**	**354**	P	**P**	**05 05 31.3**	**+0.9**
O53A	**New Philadelph**	**59.64**	**350**	P	**P**	**05 05 31.4**	**+0.9**
O53A				IAmb	IAmb	05 05 48.6	
	comp=Z,17nm,1.4s						
FVM	**French Village**	**59.66**	**341**	P	**P**	**05 05 31.3**	**+0.6**
FVM				IAmb	IAmb	05 05 53.5	
	comp=Z,9.8nm,0.9s						
S39A	**Bolivar**	**60.33**	**339**	P	**P**	**05 05 37.8**	**+2.5**
S39A				IAmb	IAmb	05 05 51.1	
	comp=Z,8.8nm,1.5s						
BRYW	**Bryant College**	**60.38**	**359**	P	**P**	**05 05 36.0**	**+0.5**
R40A	**Maddies Statio**	**60.52**	**340**	P	**P**	**05 05 38.0**	**+1.4**
R40A				IAmb	IAmb	05 05 43.0	
	comp=Z,3.0nm,0.7s						
M54A	**Oil Creek Stat**	**60.64**	**352**	P	**P**	**05 05 38.1**	**+0.8**
M54A				IAmb	IAmb	05 05 58.4	
	comp=Z,15nm,1.4s						
MNTX	**Cornudas Mount**	**60.65**	**325**	P	**P**	**05 05 38.4**	**+0.8**
M53A	**WI Miller and**	**60.72**	**351**	P	**P**	**05 05 38.1**	**+0.3**
M53A				IAmb	IAmb	05 06 04.4	
	comp=Z,11nm,0.9s						
QUA2	**Belchertown**	**60.77**	**358**	P	**P**	**05 05 38.3**	**+0.2**
HRV	**Adam Dziewonsk**	**60.97**	**359**	P	**P**	**05 05 40.1**	**+0.6**
MBO	**M'Bour**	**61.64**	**61**	P	**P**	**05 05 44.6**	**0.0**
VNA3	**Neumayer Olymp**	**62.95**	**162**	P	**P**	**05 05 51.8**	**-0.8**
VNA2	**Neumayer--Watz**	**63.52**	**161**	P	**P**	**05 05 57.6**	**+1.3**
G62A	**West of Eustis**	**63.66**	**359**	P	**P**	**05 05 59.3**	**+1.8**
G62A				IAmb	IAmb	05 06 19.7	
	comp=Z,16nm,1.2s						
TRQ	**Mont Tremblant**	**64.81**	**356**	P	**P**	**05 06 06.0**	**+1.0**
TRQ				IAmb	IAmb	05 06 29.5	
	comp=Z,15nm,1.5s						
SDCO	**Great Sand Dun**	**65.44**	**329**	P	**P**	**05 06 10.4**	**+0.8**
D62A	**Allapoint, All**	**65.53**	**1**	P	**P**	**05 06 09.1**	**-0.4**
D62A				IAmb	IAmb	05 06 21.3	
	comp=Z,5.7nm,0.9s						
VLDQ	**Val d'Or**	**66.90**	**354**	P	**P**	**05 06 19.5**	**+1.2**

VLDQ				IAmb	IAmb	05 06 36.8	
	comp=Z,17nm,1.4s						
DRLN	Deer Lake	68.59	9	P	P	05 06 29.8	+1.0
DBIC	Dimbokro	68.83	75	P	P	05 06 28.6	-2.6
	comp=Z,3.3nm,0.8s,baz=268,slow=3.2,SNR=10						
DBIC	Dimbokro	68.83	75	P	P	05 06 30.5	-0.7
DBIC				IAmb	IAmb	05 06 33.2	
	comp=Z,9.1nm,1.1s						
PDAR	Pinedale Array	71.30	330	P	P	05 06 46.1	+0.1
	comp=Z,0.3nm,0.7s,baz=123,slow=7.3,SNR=2.6						
QSPA	South Pole Qui	71.42	180	P	P	05 06 48.0	+1.7
KOWA	Kowa	72.77	68	P	P	05 06 54.1	-0.9
KOWA				IAmb	IAmb	05 06 56.5	
	comp=Z,4.9nm,0.6s						
TORD	Torodi Ar. Bea	77.29	71	P	P	05 07 19.8	-1.2
	comp=Z,3.8nm,0.5s,baz=265,slow=4.7,SNR=24						
TORD				pP	pP	05 07 43.5	-0.5
	comp=Z,3.1nm,0.8s,baz=262,slow=4.7,SNR=4.1						
TORD	Torodi Ar. Bea	77.29	71	P	P	05 07 19.9	-1.2
PAB	San Pablo	84.19	45	P	P	05 07 58.2	+0.7
PAB				IAmb	IAmb	05 08 08.1	
	comp=Z,3.8nm,1.0s						
ESDC	Sonseca Array	84.51	45	P	P	05 07 58.9	-0.2
	comp=Z,1.1nm,0.8s,baz=251,slow=5.2,SNR=7.8						
ESDC				pP	pP	05 08 23.4	+1.1
	comp=Z,0.5nm,0.5s,baz=262,slow=5.9,SNR=3.9						
H11S2	WAKE ISLAND Hy	126.61	279	T	T	07 33 41.3	
	baz=100,slow=74,SNR=271						
H11S1	WAKE ISLAND Hy	126.62	279	T	T	07 33 38.5	
	baz=100,slow=74,SNR=166						
H11N3	WAKE ISLAND Hy	126.62	281	T	T	07 33 53.8	
	baz=100,slow=74,SNR=61						
H11S3	WAKE ISLAND Hy	126.63	279	T	T	07 33 42.7	
	baz=100,slow=74,SNR=165						
H11N2	WAKE ISLAND Hy	126.64	281	T	T	07 33 58.0	
	baz=100,slow=74,SNR=68						
H11N1	WAKE ISLAND Hy	126.64	281	T	T	07 33 57.7	
	baz=100,slow=74,SNR=23						
SONM	Songino Array	150.83	5	PKPbc	PKiKP	05 15 19.6	+0.9
	comp=Z,1.5nm,0.7s,baz=312,slow=1.8,SNR=8.7						
SONM				pPKPbc	pPKPbc	05 15 42.4	+0.6
	comp=Z,0.9nm,0.7s,baz=321,slow=1.5,SNR=3.4						
SONM	Songino Array	150.83	5		PKiKP	05 15 19.4	+0.6

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*IDC **16** 05:02:11.2±2.7, 53°.59N×87°.81E, h0^{km}, mb1 3.3/2, mb1mx3.1/46, mbtmp3.3/2, ML3.0/2, Error ellipse: s-maj=22.8km s-min=14.3km az=60.0*

*NNC **16** 05:02:13.3±1.4, 53°.44N×87°.58E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=11.4km s-min=4.9km az=59.0, Suspected Mining explosion.*

ISC 16 05:02:11.7±3.3**, 53°.6N**±0°.1×**87°.7E**±0°.2**, h0^{km}, n9,** σ**1^s.12**/13**,** **7C-5D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.75	284	*i*		05 12 53.2	
	baz=100,slow=342,SNR=5.6						
ZAA0	Zalesovo Array	1.75	284	⇓P	Pb	05 02 43.8	-0.9
	0.8nm,0.3s						
ZAA0				⇑S	Sb	05 03 07.6	+0.4
	5.8nm,0.8s						
ZALV	Zalesovo Beam	1.75	284	Pg	Pn	05 02 43.7	+0.4
	6.1nm,0.3s,baz=101,slow=14,SNR=72						
ZALV				Lg	Lg	05 03 08.6	
	5.2nm,0.3s,baz=98,slow=25,SNR=22						
KURK	Kurchatov	6.28	247	⇓Lg	Lg	05 05 28.6	
	9.1nm,0.7s						
KURBB	Kurchatov Arra	6.37	246	Pn	Pn	05 03 47.6	+0.8
	0.2nm,0.3s,baz=62,slow=14,SNR=5.8						
KURBB				Sn	Sn	05 05 01.3	+1.1
	0.0nm,0.3s,baz=48,slow=27,SNR=3.1						
KURBB				Lg	Lg	05 05 35.4	
	0.1nm,0.3s,baz=63,slow=32,SNR=8.3						
KURBB	Kurchatov Arra	6.37	246	⇓Pn	Pn	05 03 48.1	+1.3
	1.6nm,0.3s						
KURBB				⇑Sn	Sn	05 04 58.9	-1.3
	5.8nm,0.7s						
KURBB				⇓Lg	Lg	05 05 31.7	
	14nm,0.8s						
MK31	Makanchi Array	7.62	209	⇑Pn	Pn	05 04 04.8	+0.9
	1.4nm,0.8s,baz=27,slow=13,SNR=15						
MK31				⇑Sn	Sn	05 05 29.3	-1.5
	2.1nm,0.7s						
MK31				⇑Lg	Lg	05 06 10.1	
	3.1nm,0.7s,baz=32,slow=28,SNR=5.8						
MKAR	Makanchi Array	7.62	209	Pn	Pn	05 04 05.6	+1.7
	0.3nm,0.3s,baz=28,slow=14,SNR=14						
MKAR				Sn	Sn	05 05 30.7	-0.2
	0.1nm,0.3s,baz=24,slow=22,SNR=5.6						
MKAR				Lg	Lg	05 06 13.9	
	0.2nm,0.3s,baz=30,slow=29,SNR=7.3						
MAKZ	Makanchi	7.70	211	⇑Pn	Pn	05 04 04.5	-0.5
	6.3nm,1.2s						
MAKZ				⇓Sn	Sn	05 05 32.6	-0.3
	2.8nm,0.8s						
MAKZ				⇑Lg	Lg	05 06 14.3	
	3.2nm,0.9s						

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*IDC **16** 05:03:12.5±1.9, 5°.29S×152°.50E, h0^{km}, mb3.9/7, mb1 4.1/8, mb1mx3.8/49, mbtmp3.9/8, ML2.1/1, MS3.1/4, Ms1 3.1/4, ms1mx2.8/37, Error ellipse: s-maj=71.0km s-min=20.9km az=123.0*

*NEIC **16** 05:03:22.5±0.8, 5°.16S±0°.09×152°.2E±0°.1, h65^{km}±7^{km}, mb4.0/13, Error ellipse: s-maj=18.1km s-min=10.2km az=122.0*

ISC 16 05:03:21.3±0.8**, 5°.23S**±0°.08×**152°.2E**±0°.1**, h50^{km}, n24,** σ**1^s.17**/23**, mb3.9**/13**, MS3.1**/3**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	1.03	357		Pn	05 03 40.1	+0.6
PMG	Port Moresby	6.51	230	Pn	Pn	05 04 53.3	-1.3
	2.2nm,0.3s,baz=65,slow=8.4,SNR=8.5						
PMG				Sn	Sn	05 06 07.5	-0.1
	16nm,0.3s,baz=154,slow=23,SNR=9.4						
PMG				LR	LR	05 07 01.2	
	comp=Z,68nm,20.7s,baz=80,slow=34						
PMG	Port Moresby	6.51	230		Pn	05 04 56.1	+1.5
PMG				Sn	Sn	05 06 08.5	+0.9
FAKI	Fak Fak	20.05	276	P	P	05 07 50.0	-0.5
FAKI				IAmb	IAmb	05 07 57.6	
	comp=Z,4.2nm,0.8s						
DZM	Mont Dzumac	21.68	142	LR	LR	05 15 06.7	
	comp=Z,90nm,20.1s,baz=59,slow=33						
DZM	Mont Dzumac	21.68	142	P	P	05 08 08.8	+0.7
DZM				IAmb	IAmb	05 08 15.3	
	comp=Z,5.1nm,1.0s						
OUENC	Ouen Island, N	22.18	142	P	P	05 08 13.2	-0.2
OUENC				IAmb	IAmb	05 08 20.1	
	comp=Z,12nm,0.9s						
WB0	Warramunga Arr	22.58	229	P	P	05 08 17.5	-0.2
WB0				IAmb	IAmb	05 08 28.6	
	comp=Z,3.7nm,0.8s						
WR0	Warramunga Arr	22.59	228	P	P	05 08 17.8	-0.1
WB2	Warramunga Arr	22.72	228	P	P	05 08 18.9	-0.3
WB2				IAmb	IAmb	05 08 37.9	
	comp=Z,4.6nm,0.8s						
WRA	Warramunga Arr	22.73	228	P	P	05 08 18.1	-1.2
	comp=Z,1.6nm,0.7s,baz=51,slow=10,SNR=13						
WRA				LR	LR	05 18 33.3	
	comp=Z,54nm,18.2s,baz=55,slow=40						
KNRA	Kununurra	25.26	244	P	P	05 08 43.1	0.0
KNRA				IAmb	IAmb	05 08 56.8	
	comp=Z,6.9nm,0.7s						
AS31	Alice Springs	25.44	222	P	P	05 08 44.9	+0.2
ASAR	Alice Springs	25.45	222	P	P	05 08 44.0	-0.7
	comp=Z,0.5nm,0.5s,baz=57,slow=9.1,SNR=3.7						
STKA	Stephens Creek	28.32	199	LR	LR	05 20 46.4	
	comp=Z,51nm,18.4s,baz=22,slow=37						
FITZ	Fitzroy Crossi	28.95	242	P	P	05 09 15.3	-0.9
	comp=Z,2.2nm,0.6s,baz=89,slow=23,SNR=31						
BBOO	Buckleboo	31.31	207	P	P	05 09 33.7	-3.2
BBOO				IAmb	IAmb	05 09 52.2	
	comp=Z,1.7nm,1.0s						
MORW	Morawa	41.63	231	P	P	05 11 05.2	+0.3
MLZ	Mavora Lakes	42.32	163	P	P	05 11 10.0	-0.3
SONM	Songino Array	66.38	328	P	P	05 14 05.7	+0.5
	comp=Z,0.6nm,0.6s,baz=145,slow=5.1,SNR=4.0						
MKAR	Makanchi Array	80.26	319	P	P	05 15 25.5	-1.5
	comp=Z,0.4nm,0.5s,baz=102,slow=5.1,SNR=2.5						
ILAR	Eielson Array	82.77	22	P	P	05 15 38.0	-1.7
	comp=Z,1.8nm,0.8s,baz=245,slow=5.5,SNR=23						
KURBB	Kurchatov Arra	83.77	322	P	P	05 15 44.7	-0.5
	comp=Z,0.2nm,0.3s,baz=117,slow=3.5,SNR=4.4						
TORD	Torodi Ar. Bea	149.88	287	PKPbc	PKPdf	05 23 05.8	+3.6
	comp=Z,0.2nm,0.4s,baz=64,slow=3.2,SNR=3.9						

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*IDC **16** 05:10:08.2±6.6, 36°.12N×70°.77E, h116^{km}±58^{km}, mb3.6/3, mb1 3.5/8, mb1mx3.1/61, mbtmp3.9/8, Error ellipse: s-maj=66.1km s-min=41.7km az=136.0*

*NEIC **16** 05:10:10.9±1.6, 36°.30N±0°.07×70°.62E±0°.09, h139^{km}±6^{km}, mb4.1/5, Error ellipse: s-maj=12.1km s-min=7.3km az=128.0*

*NNC **16** 05:10:15.9±3.1, 37°.00N×69°.45E, h0^{km}, mb4.3, mpv4.0, Error ellipse: s-maj=27.7km s-min=21.1km az=129.0*

ISC 16 05:10:10.4±0.7**, 36°.27N**±0°.06×**70°.70E**±0°.08**, h150^{km}, n31,** σ**2^s.42**/36**, mb3.9**/3**, 4C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	2.20	219	Pn	Pn	05 10 48.1	0.0
CHGR	Chuyangaron	2.68	333	Pn	Pn	05 10 52.9	-0.9
GAR	Garm	2.74	354		Pn	05 10 54.1	-0.5
DRK	Karamyk	3.32	15		Pn	05 11 02.1	0.0
NIL	Nilore	3.35	141	Pn	Pn	05 11 01.9	-0.4
BTK	Batken	3.78	1	Pn	Pn	05 11 07.8	0.0
DHRM	DHARAMSHALA	6.13	129	*e*P	Pn	05 11 40.7	+1.7
DHRM				*e*S	Sn	05 12 47.0	-1.4
DHRM				IAML		05 12 50.5	
	comp=E,86nm,0.3s						
KK31	Karatay Array	6.82	359	⇑P	Pn	05 11 47.3	-0.7
	comp=E,6.3nm,0.4s,baz=191,slow=15,SNR=81						
KK31				⇑S	Sn	05 13 00.6	-4.0
	comp=E,6.6nm,0.5s,baz=190,slow=25,SNR=7.5						
KK31	Karatay Array	6.82	359	Pn	Pn	05 11 47.5	-0.6
KKAR	Karatay Array	6.82	359	Pn	Pn	05 11 47.4	-0.7
KKAR	Karatay Array	6.82	359	Pn	Pn	05 11 47.6	-0.5
AAK	Ala-Archa	7.00	24	P	Pn	05 11 51.0	+0.4
	comp=E,4.4nm,0.3s,baz=194,slow=6.6,SNR=49						
AAK				S	Sn	05 13 06.8	-2.2
	comp=E,0.9nm,0.3s,baz=326,slow=22,SNR=9.3						
AAK	Ala-Archa	7.00	24	Pn	Pn	05 11 50.7	+0.2
SMLA	Simla	7.44	132	*e*S	Sn	05 13 16.8	-2.7
SMLA				IAML		05 13 18.8	
	comp=N,27nm,0.5s						
KUDL	Kundal	9.47	147	*e*P	Pn	05 12 23.5	+0.1
KUDL				*e*S	Sn	05 14 02.9	-5.5
MK31	Makanchi Array	13.61	36	Pn	Pn	05 13 18.1	+0.8
MKAR	Makanchi Array	13.61	36	P	Pn	05 13 18.3	+0.9
	comp=N,0.1nm,0.3s,baz=230,slow=11,SNR=2.0						
AB31	Akbulak array	15.17	332	P	P	05 13 37.4	-0.9
	comp=N,1.8nm,0.5s,baz=144,slow=12,SNR=90						
AB31				⇑S	Sn	05 16 12.8	-12
	comp=N,2.2nm,0.8s,baz=155,slow=21,SNR=5.1						
ABKAR	Akbulak array	15.17	332		P	05 13 37.8	-0.5
ABKAR	Akbulak array	15.17	332		P	05 13 38.1	-0.2
ABKAR				IAmb	IAmb	05 13 38.3	
	comp=Z,3.7nm,0.8s						
KURBB	Kurchatov Arra	15.41	19	P	P	05 13 41.2	+0.2
	comp=Z,0.1nm,0.3s,baz=207,slow=10,SNR=6.3						
KURK	Kurchatov	15.52	19		Pn	05 13 40.9	-0.2
KURK				IAmb	IAmb	05 14 20.8	
	comp=Z,10.0nm,1.8s						
BVAR	Borovoye Array	16.75	359	P	Pn	05 13 58.8	+2.7
	comp=Z,0.5nm,0.3s,baz=188,slow=19,SNR=7.3						
AKTO	Aktyubinsk	16.86	331	P	Pn	05 14 00.1	+2.7
	comp=Z,0.4nm,0.3s,baz=127,slow=15,SNR=8.6						
AKTO	Aktyubinsk	16.86	331	⇓P	Pn	05 13 59.6	+2.2
	comp=Z,4.2nm,0.8s						
AKTO				⇑S	S	05 16 55.4	-9.3
	comp=Z,3.0nm,0.9s						
ZAA0	Zalesovo Array	20.22	25	P	P	05 14 35.6	+2.1
ZAA0				IAmb	IAmb	05 14 36.4	
	comp=Z,5.8nm,0.7s						
ZALV	Zalesovo Beam	20.22	25	P	P	05 14 35.6	+2.1
	comp=Z,7.2nm,0.6s,baz=219,slow=11,SNR=12						
VTS	Vitosha	36.81	295	P	P	05 17 04.2	+0.3
VTS				IAmb	IAmb	05 17 39.6	
	comp=Z,6.6nm,1.5s						
PABE	Paberze	36.92	316	P	P	05 17 05.7	+1.3
ARCES	ARCESS Array B	41.26	338	P	P	05 17 43.2	+2.8
	comp=Z,2.9nm,1.0s,baz=113,slow=9.1,SNR=1.6						
TORD	Torodi Ar. Bea	65.47	269	P	P	05 20 38.4	+0.7
	comp=Z,0.3nm,0.6s,baz=54,slow=5.5,SNR=2.6						

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*NIED **16** 05:11:34.0, 30°.83N×128°.51E, h14^{km}, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-2.11; $M_{\theta\theta}$5.14; $M_{\phi\phi}$-3.03; $M_{r\theta}$3.75; $M_{\theta\phi}$2.70; $M_{\phi r}$-3.18; Fault plane solution: $M_0$7.16000×10^{15} NP1: ϕ_s293.00000°, δ77.00000°, λ-46.00000°. NP2: ϕ_s36.00000°, δ46.00000°, λ-162.00000°.*

*JMA **16** 05:11:34.0±0.2, 30°.82N×128°.51E, h14^{km}, M4.5*

*NEIC **16** 05:11:36.5±2.6, 30°.72N±0°.06×128°.76E±0°.08, h10^{km}±1^{km}, mb4.3/11, Error ellipse: s-maj=12.6km s-min=9.4km az=120.0*

*IDC **16** 05:11:36.3±0.9, 30°.79N×128°.27E, h0^{km}, mb3.6/8, mb1 3.9/13, mb1mx3.7/59, mbtmp3.8/13, ML3.5/5, MS4.0/33, Ms1 4.0/33, ms1mx3.8/57, Error ellipse: s-maj=26.3km s-min=16.6km az=83.0*

ISC 16 05:11:36.4±0.5**, 30°.78N**±0°.05×**128°.71E**±0°.05**, h10^{km}, n80,** σ**1^s.43**/54**, mb4.0**/15**, MS4.1**/26**, 1C, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	1.24	44	P	Pn	05 11 57.9	-1.9
JKC	Kuchinoerabu	1.32	104	P	Pg	05 12 01.1	-0.6
JKC				S	Sn	05 12 20.0	+1.5
JNN	Nakanoshima	1.38	133	P	Pb	05 12 01.2	-1.0
JYAK	Yakushimahirau	1.64	109	P	Pn	05 12 04.7	-0.6
JSU	Suzuyama	1.66	64	P	Pn	05 12 05.2	-0.4
JSU	Suzuyama	1.66	64	Pn	Pn	05 12 05.4	-0.2
JTAJ	Takarajima	1.68	165	P	Pn	05 12 05.1	-0.7
JFU	Fukue jima 2	1.87	1	P	Pn	05 12 05.8	-2.6
JMTN	Minamitane	1.93	101	P	Pn	05 12 09.2	0.0
JTN	Tanegashima 3	1.96	93	P	Pn	05 12 09.9	+0.2
JTZ	Takazaki	2.32	61	P	Pn	05 12 14.9	+0.3
JAM	Amami Oshima	2.49	162	P	Pn	05 12 16.9	0.0
JIU3	Izumi3	2.51	45	P	Pn	05 12 16.8	-0.5
JNU	Nakatsue	2.97	38	Pn	Pb	05 12 28.4	-1.1
	56nm,0.3s,baz=295,slow=0.0,SNR=12						
JNU	Nakatsue	2.97	38	Pn	Pn	05 12 24.9	+1.2
JTU	Tsushima	3.78	9	Pn	Pn	05 12 35.5	+0.8
JOW	Kunigami	3.95	186	Pn	Pn	05 12 39.3	+2.1
	1.8nm,0.3s,baz=356,slow=12,SNR=3.5						
JOW				LR	LR	05 14 26.2	
	comp=Z,2μm,19.4s,baz=58,slow=43						
JOW	Kunigami	3.95	186		Pn	05 12 38.1	+1.0
JMN	Monobe	5.27	55		Pn	05 12 57.1	+1.9
JMZ	Minamidaito 2	5.42	155	Pn	Pn	05 12 56.0	-1.2
JHS	Saijyo	5.60	40		Pn	05 13 00.5	+0.6
KSRS	Korea Array	6.69	355	Pn	Pn	05 13 14.2	-0.5
	0.5nm,0.3s,baz=177,slow=14,SNR=16						
KSRS				Sn	Sb	05 14 44.9	-7.8
	1.7nm,0.3s,baz=181,slow=27,SNR=5.1						
KSRS				Lg	Lg	05 15 06.8	
	2.0nm,0.3s,baz=175,slow=29,SNR=7.2						
KSRS				LR	LR	05 15 56.0	
	comp=Z,1μm,19.5s,baz=168,slow=39						
JWT	Wachi	7.19	50		Pn	05 13 21.6	0.0
YOJ	Yonaguni jima	8.07	220	Pn	Pn	05 13 30.1	-3.7
INU	Inuyama	8.32	55	Pn	Pn	05 13 40.0	+2.8
JGF	Kuroka	8.69	54	Pn	Pn	05 13 44.5	+2.2
NACB	Ninganchiao	9.12	226	Pn	Pn	05 13 49.6	+1.4
JHJ	Hachijo jima 2	9.69	73	LR	LR	05 17 39.6	
	comp=Z,232nm,21.2s,baz=238,slow=36						
MJAR	Matsushiro Arr	9.78	51	Pn	Pn	05 14 03.9	+6.8
	0.1nm,0.3s,baz=232,slow=12,SNR=1.4						
MJAR				LR	LR	05 17 34.5	
	comp=Z,404nm,18.8s,baz=245,slow=36						
JCJ	Chichijima	12.36	104	LR	LR	05 18 57.9	
	comp=Z,243nm,19.4s,baz=60,slow=35						
CN2	Changchun	13.25	350	*e*P	P	05 15 00.0	+5.5
CN2				pmax	pmax		
	comp=Z,10.0nm,1.3s						
CN2				LR	LR		
	comp=N,2μm,12.0s						
CN2				LR	LR		
	comp=E,2μm,12.0s						
CN2				LR	LR		
	comp=Z,2μm,12.0s						
USRK	Ussuriysk Ar.	13.64	10	LR	LR	05 19 52.1	
	comp=Z,424nm,18.1s,baz=174,slow=36						
BJT	Baijiatuau	13.76	315	Pn	Pn	05 14 52.6	+1.1
XAN	Xi'an	17.02	286	P	Pn	05 15 35.3	+0.7
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
XAN				LR	LR		
	comp=N,2μm,12.9s						
XAN				LR	LR		
	comp=E,1μm,13.1s						
XAN				LR	LR		
	comp=Z,560nm,14.4s						
KLR	Kul'dur	18.57	6	P	Pn	05 15 55.3	+1.7
	comp=Z,0.2nm,0.3s,baz=191,slow=8.0,SNR=11						
KLR				LR	LR	05 22 49.4	
	comp=Z,223nm,18.6s,baz=198,slow=36						
GYA	Guiyang	19.82	263	⇑*i*P	P	05 16 08.6	+1.2
GYA				pP	sP	05 16 17.8	+6.5
GYA				S	S	05 19 35.8	-15
GYA				sS	Sn	05 19 54.0	+2.2
GYA				pmax	pmax		
	comp=Z,27nm,0.6s						
GYA				pmax	pmax		
	comp=Z,130nm,3.5s						
GYA				LR	LR		
	comp=N,770nm,10.9s						
GYA				LR	LR		
	comp=E,340nm,11.7s						
GYA				LR	LR		
	comp=Z,410nm,13.4s						
GUMO	Guam	22.68	135	LR	LR	05 24 00.2	
	comp=Z,156nm,19.5s,baz=83,slow=32						
DAV	Davao City (W)	23.77	188	LR	LR	05 25 29.4	
	comp=Z,233nm,19.6s,baz=338,slow=35						
SONM	Songino Array	24.12	321	P	P	05 16 51.5	-0.9
	comp=Z,2.3nm,1.0s,baz=151,slow=6.7,SNR=7.0						
SONM				LR	LR	05 26 53.7	
	comp=Z,581nm,18.4s,baz=142,slow=38						
SONM	Songino Array	24.12	321	P	P	05 16 51.8	-0.6
TLY	Talaya	27.89	326	LR	LR	05 29 37.9	
	comp=Z,696nm,18.1s,baz=132,slow=39						
CMAR	Chiang Mai Arr	29.62	252	LR	LR	05 31 29.4	
	comp=Z,332nm,18.7s,baz=100,slow=41						
PETK	Petropavlovsk-	30.67	35	LR	LR	05 30 23.9	
	comp=Z,194nm,18.1s,baz=238,slow=36						
MKAR	Makanchi Array	38.96	308	P	P	05 19 01.9	-0.6
	comp=Z,0.9nm,0.8s,baz=100,slow=10,SNR=4.2						
ZALV	Zalesovo Beam	38.98	319	LR	LR	05 36 40.1	
	comp=Z,331nm,18.3s,baz=106,slow=39						
KURBB	Kurchatov Arra	41.96	313	P	P	05 19 26.9	-0.4
	comp=Z,1.0nm,0.7s,baz=101,slow=9.5,SNR=2.6						
PMG	Port Moresby	43.71	153	LR	LR	05 35 51.9	
	comp=Z,170nm,21.4s,baz=61,slow=33						
AAK	Ala-Archa	44.36	301	LR	LR	05 41 18.3	
	comp=Z,217nm,18.4s,baz=99,slow=40						
NRIK	Noril'sk	45.09	341	LR	LR	05 40 06.5	
	comp=Z,240nm,19.6s,baz=126,slow=38						
GSTR	Great Sitkin T	45.29	45	P	P	05 19 53.9	-0.3
KK31	Karatay Array	47.24	302	P	P	05 20 10.1	+0.4
KK31				IAmb	IAmb	05 20 28.3	
	comp=Z,3.2nm,1.0s						
KKAR	Karatay Array	47.24	302	P	P	05 20 10.3	+0.6
BRVK	Borovoye	47.31	316	P	P	05 20 10.8	+0.8
BRVK				IAmb	IAmb	05 20 15.5	
	comp=Z,3.7nm,0.7s						
WB0	Warramunga Arr	50.55	173	P	P	05 20 31.7	-3.5
WB0				IAmb	IAmb	05 20 46.4	
	comp=Z,3.0nm,1.1s						
WRA	Warramunga Arr	50.72	173	P	P	05 20 37.4	+1.0
	comp=Z,0.7nm,0.7s,baz=353,slow=7.9,SNR=5.8						
WRA				LR	LR	05 41 24.8	
	comp=Z,76nm,21.1s,baz=40,slow=35						
WRA	Warramunga Arr	50.72	173	P	P	05 20 34.8	-1.6
WB2	Warramunga Arr	50.72	173	P	P	05 20 36.2	-0.3
WB2				IAmb	IAmb	05 20 47.6	
	comp=Z,4.3nm,1.1s						
WR0	Warramunga Arr	50.76	173	P	P	05 20 35.4	-1.3
WR0				IAmb	IAmb	05 20 51.9	
	comp=Z,3.5nm,1.1s						
ABKAR	Akbulak array	53.92	311	P	P	05 20 59.3	-0.7
ARU	Arti	54.14	320	LR	LR	05 45 48.8	
	comp=Z,313nm,18.0s,baz=82,slow=38						
ASAR	Alice Springs	54.37	174	P	P	05 21 05.5	+2.1
	comp=Z,0.9nm,0.7s,baz=3.0,slow=13,SNR=9.1						
ASAR				LR	LR	05 45 13.9	
	comp=Z,38nm,19.4s,baz=330,slow=37						
AKTO	Aktyubinsk	55.01	313	LR	LR	05 46 40.5	
	comp=Z,267nm,19.3s,baz=83,slow=38						
CNBA	Chernabura Isl	55.13	42	P	P	05 21 07.6	-1.0
M19K	Big River Lodg	57.25	33	P	P	05 21 21.8	-1.9
M19K				IAmb	IAmb	05 21 34.3	
	comp=Z,3.9nm,1.1s						
GEYT	Alibeck	57.46	298	LR	LR	05 50 24.9	
	comp=Z,114nm,18.8s,baz=85,slow=41						
KIRV	Kirov	58.83	323	LR	LR	05 49 46.8	
	comp=Z,304nm,18.2s,baz=87,slow=39						
I23K	Minto, Yukon-K	59.16	29	P	P	05 21 38.4	+1.4
I23K				IAmb	IAmb	05 21 57.8	
	comp=Z,1.5nm,1.1s						
ILAR	Eielson Array	60.26	29	P	P	05 21 46.9	+2.3
	comp=Z,0.3nm,0.7s,baz=297,slow=6.0,SNR=2.3						
BELG	Belogornoye	61.05	316	LR	LR	05 49 12.5	
	comp=Z,143nm,19.1s,baz=23,slow=37						
EYAK	Cordova Ski Ar	61.59	34	P	P	05 21 52.1	-1.5
STKA	Stephens Creek	63.50	168	LR	LR	05 49 35.6	
	comp=Z,59nm,21.2s,baz=18,slow=36						
DZM	Mont Dzumac	63.82	141	LR	LR	05 48 56.7	
	comp=Z,51nm,18.4s,baz=236,slow=35						
ARCES	ARCESS Array B	65.95	338	LR	LR	05 56 14.4	
	comp=Z,269nm,18.4s,baz=65,slow=41						
FINES	FINESS Array B	69.14	330	P	P	05 22 42.3	-0.3
	comp=Z,0.4nm,0.4s,baz=48,slow=17,SNR=1.9						
FINES				LR	LR	05 56 22.8	
	comp=Z,369nm,18.3s,baz=46,slow=39						
AKASG	Malin Array Be	72.37	319	LR	LR	05 57 48.2	
	comp=Z,276nm,18.3s,baz=75,slow=38						
YKA	Yellowknife Ar	74.24	26	LR	LR	06 00 28.8	
	comp=Z,39nm,18.1s,baz=0.0,slow=39						
BRTR	Keskin Array B	74.61	307	P	P	05 23 15.7	-0.4
	comp=Z,0.5nm,0.8s,baz=60,slow=3.5,SNR=1.6						
NOA	NORSAR Array B	75.44	334	LR	LR	05 59 23.7	
	comp=Z,134nm,19.7s,baz=25,slow=38						
GERES	GERESS Array B	81.84	323	LR	LR	06 04 06.0	
	comp=Z,286nm,18.0s,baz=36,slow=39						
ESDC	Sonseca Array	97.26	325	LR	LR	06 15 01.0	
	comp=Z,125nm,18.6s,baz=60,slow=39						

IDC 16 05:13:03.5±1.8**, 0°.45N**×**126°.48E, h0^{km}, mb3.6**/4**, mb1 3.8**/4**, mb1mx3.5**/42**, mbtmp3.6**/4**, Error ellipse: s-maj=179.2km s-min=22.6km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.68	160	P	P	05 17 56.2	+0.2
	1.9nm,0.8s,baz=338,slow=11,SNR=9.5						
ASAR	Alice Springs	25.04	164	P	P	05 18 29.4	-0.1
	1.1nm,0.8s,baz=349,slow=11,SNR=14						
MKAR	Makanchi Array	60.11	326	P	P	05 23 12.5	-0.3
	0.3nm,0.5s,baz=120,slow=7.0,SNR=2.0						
KURBB	Kurchatov Arra	64.36	328	P	P	05 23 41.3	+0.2
	0.4nm,0.5s,baz=134,slow=5.9,SNR=4.3						

IDC 16 05:37:53.1±8.5**, 18°.30S**×**177°.04W, h0^{km}, mb3.5**/3**, mb1 3.8**/3**, mb1mx3.5**/42**, mbtmp3.5**/3**, Error ellipse: s-maj=369.8km s-min=39.1km az=143.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	45.84	260	P	P	05 46 17.5	+0.1
	0.2nm,0.3s,baz=95,slow=7.5,SNR=14						
ASAR	Alice Springs	45.94	255	P	P	05 46 17.7	-0.5
	0.3nm,0.4s,baz=94,slow=8.5,SNR=2.4						
ILAR	Eielson Array	85.98	12	P	P	05 50 34.9	0.0
	0.2nm,0.6s,baz=218,slow=5.4,SNR=5.1						

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*IDC **16** 05:38:38.6±3.5, 13°.49N×92°.09W, h0^{km}, mb3.8/2, mb1 4.0/4, mb1mx3.6/44, mbtmp3.7/4, ML3.4/2, MS3.4/1, Ms1 3.4/1, ms1mx2.5/38, Error ellipse: s-maj=214.3km s-min=43.8km az=50.0*

*GCG **16** 05:38:43.0±0.8, 13°.89N×92°.14W, h28^{km}±596^{km}, MD3.8*

*NEIC **16** 05:38:44.7±1.9, 13°.87N±0°.09×91°.95W±0°.09, h25^{km}±13^{km}, mb4.0/12, Error ellipse: s-maj=15.5km s-min=7.8km*

az=222.0

ISC 16 05:38:44.8±1.1**,13°8N**±0°1×**92°04W**±0°08**,h35**km**,n42,**
σ**1ˢ73**/42**,mb3.9**/6**,Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTAL	Retalhuleu	0.84	23		Pn	05 38 58.2	-1.9
STG3	Santiaguito 3,	1.06	25	eP	Pn	05 39 01.5	-1.8
THIG		1.17	349		Pn	05 39 02.1	-2.6
FUG	Fuego 3	1.35	59	eP	Pn	05 39 06.2	-1.1
PCG	Pacaya	1.53	65	eP	Pn	05 39 09.8	0.0
HUEH	Huehuetenango	1.64	18	Pn	Pn	05 39 10.3	-1.1
NBG	Las Nubes	1.84	63	eP	Pn	05 39 14.7	+0.6
NBG				eS	Sn	05 39 38.4	+2.1
CCIG	Comitan	2.52	358		Pn	05 39 23.4	0.0
MTO3	Montecristo	2.68	76	Pn	Pn	05 39 24.3	-1.3
SNET	Serv Nac Est T	2.73	91	Pn	Pn	05 39 25.1	-1.1
ESQI	Esquipulas	2.74	73	Pn	Pn	05 39 25.2	-1.1
TGIG		3.19	341		Pn	05 39 32.0	-0.5
PETF	Flores	3.78	33	Pn	Pn	05 39 41.0	+0.4
CMIG	Matias Romero	4.31	321	Pn	Pn	05 39 46.7	-1.2
	1.4nm,0.3s,baz=142,slow=11,SNR=15						
CMIG				Sn	Sn	05 40 43.5	+6.6
	6.7nm,0.3s,baz=100,slow=22,SNR=6.6						
CMIG	Matias Romero	4.31	321		Pn	05 39 46.5	-1.3
TGUH	Tegucigalpa,Un	4.64	86	Pn	Pn	05 39 50.8	-1.7
CNGN	Cerro Negro	5.35	103	Pn	Pn	05 40 01.9	-0.3
BOAB	BOACO BROADBAN	6.34	101	Pn	Pn	05 40 14.7	-1.1
ACON	Acoyapa	6.92	104	Pn	Pn	05 40 22.3	-1.5
HZTE	Horizontes, Gu	6.99	115	Pn	Pn	05 40 25.9	+1.3
ORTG	Ortega, Santa	7.26	117	Pn	Pn	05 40 30.2	+1.6
JTS	Las Juntas de	7.74	116	Pn	Pn	05 40 36.0	+0.9
H06E1	SOCORRO T-PHAS	18.80	288	T	T	06 02 11.1	
	SNR=5.4						
TXAR	Lajitas Array	18.88	327	P	Pn	05 43 04.0	+0.9
	0.0nm,0.3s,baz=156,slow=12,SNR=13						
TXAR	Lajitas Array	18.88	327	P	Pn	05 43 03.0	-0.1
TX31	Lajitas Ar. Si	18.88	327	P	Pn	05 43 02.7	-0.4
TX31				IAmb	IAmb	05 43 07.1	
	comp=Z,5.9nm,0.9s						
TX32	Lajitas Array	18.88	327	P	Pn	05 43 02.5	-0.6
TIGA	Tifton	19.24	22	P	P	05 43 04.7	-1.4
ROSC	El Rosal	19.59	115	P	P	05 43 10.7	+0.3
ROSC				IAmb	IAmb	05 43 15.4	
	comp=Z,23nm,1.6s						
CCAR	Cane Creek	20.08	1	P	P	05 43 14.5	-0.7
MNTX	Cornudas Mount	21.65	328	P	P	05 43 32.5	+0.3
X51A	Calhoun	21.72	16	P	P	05 43 32.1	-0.8
WMOK	Wichita Mounta	21.77	345	P	P	05 43 28.4	-5.0
WMOK				IAmb	IAmb	05 43 32.2	
	comp=Z,3.1nm,0.9s						
SWET	Sewanee	22.07	13	P	P	05 43 35.4	-1.4
SWET				IAmb	IAmb	05 43 36.6	
	comp=Z,8.2nm,1.1s						
LCAR	Lake Charles	22.24	2	P	P	05 43 38.2	-0.3
LCAR				IAmb	IAmb	05 43 44.6	
	comp=Z,8.5nm,1.7s						
V51A	Loudon	23.02	16	P	P	05 43 47.1	+0.3
V51A				IAmb	IAmb	05 43 54.4	
	comp=Z,11nm,1.2s						
BNM	Barren Site	24.24	329	P	P	05 43 57.7	-1.1
ANMO	Albuquerque	24.80	331	P	P	05 44 04.4	+0.7
	comp=Z,1.4nm,0.7s,baz=150,slow=12,SNR=8.4						
ANMO	Albuquerque	24.80	331	P	P	05 44 04.3	+0.5
PFO	Pinyon Flats O	29.71	316	LR	LR	05 57 52.0	
	comp=Z,69nm,19.9s,baz=293,slow=39						
ILAR	Eielson Array	63.05	337	P	P	05 49 08.2	0.0
	comp=Z,1.1nm,1.0s,baz=130,slow=5.4,SNR=6.7						
CMAR	Chiang Mai Arr	146.21	341	PKPbc	PKPab	05 58 22.6	-0.5
	comp=Z,0.6nm,0.3s,baz=330,slow=3.8,SNR=5.0						

IDC 16 05:38:51.7±2.3**,4°04S**×**151°10E,h0**km**,mb3.2**/3**,**
mb1 3.6/3**,mb1mx3.4**/37**,mbtmp3.3**/3**,Error ellipse:**
s-maj=175.7km s-min=31.6km az=125.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.73	225	P	P	05 43 56.2	+0.7
	0.4nm,0.7s,baz=50,slow=10,SNR=5.6						
ASAR	Alice Springs	25.62	219	P	P	05 44 22.4	-0.7
	0.2nm,0.5s,baz=52,slow=8.5,SNR=4.7						
ILAR	Eielson Array	82.10	22	P	P	05 51 14.0	+0.1
	0.3nm,0.8s,baz=246,slow=4.5,SNR=1.8						

*NORS **16** 05:44:17.3±0.0, 43°37N×45°63E, h16km, MPVA3.6*
*DRS **16** 05:44:17.9±0.0, 43°02N×45°45E, h12km*
*MOS **16** 05:44:17.6±0.0, 43°33N×45°60E, h16km, MPVA3.7*
*TIF **16** 05:44:18.2, 43°35N×45°55E, h11km±1km*
ISC 16 05:44:18.9±1.1**,43°31N**±0°06×**45°57E**±0°02**,h18**km±7km**,**
n25,σ**1ˢ37**/49**,Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GROC	Groznyy	0.19	122	i Pg	Pg	05 44 22.9	-0.7
	83nm,0.2s						
GROC				eSg	Sb	05 44 27.2	0.0
KMGR	Komgaron	0.57	245	ePg	Pb	05 44 30.8	+0.3
	50nm,0.3s						
KMGR				eSg	Sn	05 44 41.4	+0.1
VLKR	Vladikavkaz	0.70	249	ePg	Pn	05 44 33.5	-0.6
VLKR				eSg	Sn	05 44 45.2	+0.7
BTKR	Batakoyurt	0.76	275	ePg	Pn	05 44 34.3	-0.4
	20nm,0.2s						
BTKR				eSg	Sn	05 44 46.9	+1.1
DLMR	Dylym	0.81	107	ePg	Pn	05 44 35.2	-0.2
DLMR				eSg	Sn	05 44 47.0	+0.1
DBC	Dubki	0.96	107	ePg	Pn	05 44 37.4	-0.2
	21nm,0.3s						
DBC				eSg	Sn	05 44 50.9	0.0
PNSH	Pansheti	0.97	227	P	Pb	05 44 29.1	-8.2
PNSH				S	Sb	05 44 43.1	-6.8
MTEO	Meteo	0.99	231	P	Pg	05 44 37.8	-0.3
MTEO				S	Sn	05 44 52.1	+0.1
LACR	Lac	1.05	243	ePg	Pb	05 44 38.5	-0.1
	99nm,0.2s						
LACR				eSg	Sn	05 44 55.3	+2.1
UNCR	Uncukul	1.07	123	ePg	Pg	05 44 39.0	-0.7
UNCR				eSg	Sn	05 44 53.4	-0.2
KRNR	Karanay	1.09	116	ePg	Pg	05 44 39.7	-0.2
KRNR				eSg	Sn	05 44 54.7	+0.7
KORR	Kora	1.12	259	ePg	Pg	05 44 40.6	-0.1
	18nm,0.4s						
KORR				eSg	Sg	05 44 58.6	+3.2
XNZR	Khunzakh	1.13	132	ePg	Pg	05 44 40.5	-0.3
XNZR				eSg	Sg	05 44 56.9	+1.4
GUDG	Gudauri	1.16	224	P	Pg	05 44 41.5	+0.1
GUDG				S	Sg	05 44 57.9	+1.2
ARKR	Arakani	1.26	123	ePg	Pb	05 44 41.9	-0.2
ARKR				eSg	Sg	05 44 59.1	-0.4
LSNR	Lesken	1.28	269	ePg	Pg	05 44 42.7	-0.8
	15nm,0.4s						
LSNR				eSg	Sg	05 45 01.2	+1.0
ZEI	Tsey	1.33	248	ePg	Pb	05 44 43.1	-0.3
	20nm,0.4s						
ZEI				eSg	Sg	05 45 02.3	+0.3
GNBR	Gunib	1.37	131	ePg	Pg	05 44 44.5	-0.8
	50nm,0.3s						
GNBR				eSg	Sg	05 45 04.0	+0.8
DIGR	Digorskoe uzhe	1.52	255	ePg	Pb	05 44 45.7	-0.9
	5.8nm,0.4s						
DIGR				eSg	Sb	05 45 06.6	+1.1
LGD	Lagodekhi	1.55	161	P	Pb	05 44 47.3	+0.2
LGD				S	Sg	05 45 10.0	+1.1
KMKR	Kumukh	1.62	136	ePg	Pb	05 44 48.2	-0.2
KMKR				eSg	Sb	05 45 09.5	+0.8
ONI	Oni	1.71	246	P	Pb	05 44 49.6	-0.3
ONI				S	Sg	05 45 13.5	-0.7
URKR	Urkarakh	1.90	126	ePg	Pg	05 44 54.5	-0.8
URKR				eSg	Sb	05 45 17.6	+1.1
TRLG	Trialeti	2.07	212	P	Pb	05 44 56.1	0.0
TRLG				S	Sg	05 45 25.7	+0.1
DMNI	Dmanisi	2.23	208	P	Pb	05 44 58.0	-0.7
DMNI				S	Sb	05 45 28.4	+2.5

*IDC **16** 05:46:09.3±2.3, 29°88S×71°91W, h0km, mb3.8/2,*
mb1 3.8/6, mb1mx3.7/30, mbtmp3.7/6, ML3.7/4, MS3.2/4,
Ms1 3.2/4, ms1mx2.7/31, Error ellipse: s-maj=74.3km
s-min=30.4km az=103.0
*GUC **16** 05:46:11.3±0.8, 29°86S×72°07W, h22km±8km, ML3.9*
ISC 16 05:46:11.9±1.0**,29°84S**±0°05×**72°06W**±0°08**,h25**km**,n35,**
σ**1ˢ04**/32**,2C,Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO05	La Serena	0.72	96	eP	Pb	05 46 24.6	-1.2
CO05				i S	Sb	05 46 34.2	-1.0
CO05				IAML		05 46 38.7	
	comp=E,8µm,0.3s						
CO06	Fray Jorge	0.91	156	eP	Pb	05 46 27.5	-1.4
CO06				i S	Sb	05 46 40.0	-0.6
CO06				IAML		05 46 41.8	
	comp=E,3µm,0.2s						
GO04	Tololo Observa	1.14	107	eP	Pn	05 46 31.7	-0.8
GO04				i S	Sb	05 46 47.3	-0.3
GO04				IAML		05 46 54.1	
	comp=N,13µm,0.3s						
LCO	Las Campanas	1.45	55	eP	Pn	05 46 36.5	-0.2
LCO				i S	Sb	05 46 56.6	+0.2
GO03	Copiap	2.76	36	eP	Pn	05 46 53.9	-0.6
VA06	Catapilco	2.79	167	⇑iP	Pn	05 46 54.4	-0.5
VA06				IAML		05 47 45.8	
	comp=E,506nm,0.4s						
VA03	San Esteban	3.19	156	eP	Pn	05 47 01.5	+1.0
VA03				IAML		05 47 56.3	
	comp=N,340nm,0.4s						
ROCH	El Roble	3.25	164	i S	Sn	05 47 42.2	+2.8
PEL	Peldehue	3.49	161	⇑iP	Pn	05 47 05.0	+0.3
PEL				IAML		05 48 14.7	
	comp=E,165nm,0.4s						
MT02	Curacav	3.50	167	eP	Pn	05 47 03.7	-0.9
MT05	Renca	3.71	163	eP	Pn	05 47 08.0	+0.3
FCH	Farellones	3.79	157	eP	Pn	05 47 09.7	+0.8
VA05	Santo Domingo	3.82	174	eP	Pn	05 47 07.6	-1.5
AC02	Maricunga	3.96	41	eP	Pn	05 47 11.9	+0.5
MT09	Talagante	4.03	167	eP	Pn	05 47 12.0	-0.1
MT01	Popeta	4.07	170	i P	Pn	05 47 11.6	-0.9
LMEL	Las Melosas	4.29	159	eP	Pn	05 47 17.1	+1.4
LMEL				i S	Sn	05 48 06.7	+1.6
BO04	La Punta	4.31	164	i P	Pn	05 47 16.2	+0.2
BO01	Tunca	4.61	170	eP	Pn	05 47 19.4	-0.5
BO02	Sierra Bellavi	5.05	168	eP	Pn	05 47 25.7	-0.4
H03N1	Juan Fernandez	6.85	237	T	T	05 55 28.0	
	baz=66,slow=72,SNR=593						
H03N2	Juan Fernandez	6.87	237	T	T	05 55 26.1	
	baz=66,slow=72,SNR=449						
H03N3	Juan Fernandez	6.87	237	T	T	05 55 25.5	
	baz=66,slow=72,SNR=535						
LVC	Limon Verde	7.74	22	Pn	Pn	05 48 01.4	-1.9
	comp=E,0.3nm,0.3s,baz=196,slow=18,SNR=1.1						
PLCA	Paso Flores	10.93	174	Pn	Pn	05 48 46.2	-0.6
	comp=E,0.3nm,0.3s,baz=3.3,slow=16,SNR=5.9						
PLCA				LR	LR	05 53 06.9	
	comp=E,82nm,20.6s,baz=108,slow=38						
CPUP	Villa Florida	13.47	78	LR	LR	05 55 26.6	
	comp=E,57nm,19.9s,baz=218,slow=42						
LPAZ	La Paz	13.97	16	Pn	Pn	05 49 29.8	+1.0
	comp=E,0.1nm,0.3s,baz=208,slow=10,SNR=5.4						
SIV	San Ignacio	17.09	39	P	P	05 50 10.5	-0.2
	comp=E,0.1nm,0.3s,baz=228,slow=9.9,SNR=9.3						
SIV				LR	LR	05 57 19.4	
	comp=E,56nm,20.2s,baz=275,slow=39						
BDFB	Brasilia	26.22	63	P	P	05 51 45.3	+0.2
	comp=E,1.2nm,0.6s,baz=214,slow=11,SNR=2.1						
DBIC	Dimbokro	73.90	72	LR	LR	06 30 05.5	
	comp=E,41nm,19.4s,baz=26,slow=36						
TORD	Torodi Ar. Bea	82.83	70	P	P	05 58 35.3	+0.8
	comp=E,0.6nm,0.8s,baz=234,slow=5.6,SNR=3.2						
H11S2	WAKE ISLAND Hy	125.71	272	T	T	08 24 08.3	
	baz=115,slow=75,SNR=3.8						
H11S1	WAKE ISLAND Hy	125.72	272	T	T	08 24 02.1	
	baz=115,slow=75,SNR=4.3						
H11S3	WAKE ISLAND Hy	125.72	272	T	T	08 24 03.7	
	baz=115,slow=75,SNR=4.0						
ZALV	Zalesovo Beam	150.66	28	PKPbc	PKiKP	06 06 02.4	+0.5
	comp=E,2.1nm,0.6s,baz=313,slow=2.6,SNR=8.8						

*INET **16** 06:01:54.3, 13°09N×89°13W, h33km, MW4.0*
*GCG **16** 06:01:54.4±0.5, 13°18N×89°08W, h156km±63km, MD4.0*
*UCR **16** 06:01:57.5±1.0, 13°04N×89°26W, h41km±10km, ML4.2,*
MW4.4
*SNET **16** 06:01:57.1±1.2, 13°03N×89°27W, h42km±12km, ML4.2*
ISC 16 06:01:55.0±1.6**,12°95N**±0°07×**89°24W**±0°03**,h18**km±9km**,**
n65,σ**0ˢ59**/98**,12D,Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	Alcalda de L	0.55	351	⇓iP	Pn	06 02 07.9	0.0
LALI				eS	Sn	06 02 15.6	-1.0
LALI	Alcalda de L	0.55	351	⇓iP	Pn	06 02 07.9	0.0
LALI				eS	Sn	06 02 15.6	-1.0
LFRS	El Faro	0.69	14	i P	Pn	06 02 09.9	-0.2
LFRS	El Faro	0.69	14	i P	Pn	06 02 09.9	-0.2
SJTE	Alcalda de S	0.70	18	eP	Pn	06 02 09.9	-0.2
SJTE				eS	Sb	06 02 19.7	+1.6
SJTE	Alcalda de S	0.70	18	eP	Pn	06 02 09.9	-0.2
SJTE				eS	Sb	06 02 19.7	+1.6
ITCA	Escuela Especi	0.72	357	eP	Pn	06 02 10.2	-0.3
ITCA				eS	Sb	06 02 19.5	+0.7
ITCA	Escuela Especi	0.72	357	eP	Pn	06 02 10.2	-0.3
ITCA				eS	Sb	06 02 19.5	+0.7
JAYA	Jayaque - finc	0.73	344	eP	Pn	06 02 10.3	-0.4
JAYA				eS	Sb	06 02 19.5	+0.3
JAYA				eS	Sg	06 02 19.7	+0.4
JAYA				IAML		06 02 21.6	
	comp=Z,22µm,0.3s						
JAYA	Jayaque - finc	0.73	344	eP	Pn	06 02 10.3	-0.4
JAYA				eS	Sb	06 02 19.5	+0.3
JAYA				eS	Sg	06 02 19.7	+0.4
JAYA				IAML		06 02 21.6	
	comp=Z,22µm,0.3s						
SNET	Serv Nac Est T	0.74	0	⇓iP	Pn	06 02 10.4	-0.2
SNET				eS	Sb	06 02 20.4	+1.2
SNET				IAML		06 02 21.7	
	comp=Z,11µm,0.3s						
SNET	Serv Nac Est T	0.74	0	⇓iP	Pn	06 02 10.4	-0.2
SNET				eS	Sb	06 02 20.4	+1.2
SNET				IAML		06 02 21.7	
	comp=Z,11µm,0.3s						
SEMO	Seminario San	0.75	1	eP	Pn	06 02 10.6	-0.3
SEMO				eS	Sb	06 02 20.9	+1.3
COEG	Centro de Oper	0.75	27	eS	Sb	06 02 21.2	+1.5
COEG	Centro de Oper	0.75	27	eS	Sb	06 02 21.2	+1.5
OPAM	Oficina de Pla	0.76	3	eP	Pn	06 02 10.9	-0.1
OPAM				eS	Sn	06 02 21.4	-0.7
OPAM	Oficina de Pla	0.76	3	eP	Pn	06 02 10.9	-0.1
OPAM				eS	Sn	06 02 21.4	-0.7
IGN	Direccin Gen	0.77	5	eP	Pn	06 02 10.9	-0.1
IGN	Direccin Gen	0.77	5	eP	Pn	06 02 10.9	-0.1
PMON	Piamonte	0.77	354	eP	Pn	06 02 10.8	-0.2
PMON				eS	Sb	06 02 21.2	+1.2
PMON	Piamonte	0.77	354	eP	Pn	06 02 10.8	-0.2
PMON				eS	Sb	06 02 21.2	+1.2
UDBS	Universidad Do	0.77	6	IAML		06 02 23.5	
	comp=Z,12µm,0.3s						
UDBS	Universidad Do	0.77	6	IAML		06 02 23.5	
	comp=Z,12µm,0.3s						
UESS	Universidad de	0.77	3	⇓eP	Pn	06 02 11.0	-0.1
UESS				IAML		06 02 23.8	
	comp=Z,6µm,0.2s						
UESS	Universidad de	0.77	3	⇓eP	Pn	06 02 11.0	-0.1
UESS				IAML		06 02 23.8	
	comp=Z,6µm,0.2s						
BOQS	Boqueron	0.79	357	⇓iP	Pn	06 02 11.4	0.0
BOQS	Boqueron	0.79	357	⇓iP	Pn	06 02 11.4	0.0
LFU	La Fuente	0.81	8	eP	Pn	06 02 11.8	+0.2
LFU	La Fuente	0.81	8	eP	Pn	06 02 11.8	+0.2
LBRS	Las Brisas	0.81	13	eP	Pn	06 02 12.0	+0.4
LBRS	Las Brisas	0.81	13	eP	Pn	06 02 12.0	+0.4
UESV	Universidad de	0.81	32	⇓eP	Pn	06 02 11.6	0.0
UESV	Universidad de	0.81	32	⇓eP	Pn	06 02 11.6	0.0
PAVA	Las Pavas	0.81	21	eP	Pn	06 02 11.7	-0.1
PAVA				eS	Sn	06 02 22.9	-0.5
PAVA				IAML		06 02 27.6	
	comp=Z,4µm,0.4s						
PAVA	Las Pavas	0.81	21	eP	Pn	06 02 11.7	-0.1
PAVA				eS	Sn	06 02 22.9	-0.5
PAVA				IAML		06 02 27.6	
	comp=Z,4µm,0.4s						
CEDA	San Andres	0.86	350	⇓eP	Pn	06 02 12.1	-0.3
	comp=Z,12µm,0.3s						
CEDA				eS	Sg	06 02 23.8	+0.5
CEDA				IAML		06 02 27.6	
	comp=Z,12µm,0.3s						
CEDA	San Andres	0.86	350	⇓eP	Pn	06 02 12.1	-0.3
	comp=Z,12µm,0.3s						
CEDA				eS	Sg	06 02 23.8	+0.5
CEDA				IAML		06 02 27.6	
	comp=Z,12µm,0.3s						
COEB	Comit de Eme	0.88	51	eP	Pn	06 02 12.7	+0.1
COEB				eS	Sn	06 02 24.8	-0.2
COEB				IAML		06 02 27.8	
	comp=Z,4µm,0.2s						
COEB	Comit de Eme	0.88	51	eP	Pn	06 02 12.7	+0.1
COEB				eS	Sn	06 02 24.8	-0.2
COEB				IAML		06 02 27.8	
	comp=Z,4µm,0.2s						
SCLA	Alcaldia de Sa	0.90	33	eP	Pn	06 02 13.0	+0.1
SCLA	Alcaldia de Sa	0.90	33	eP	Pn	06 02 13.0	+0.1
TECA	Tecapa	0.90	53	eP	Pn	06 02 13.1	+0.1
TECA	Tecapa	0.90	53	eP	Pn	06 02 13.1	+0.1
CEVE	Cerro Verde	0.95	337	eP	Pn	06 02 13.3	-0.5
CEVE				eS	Sb	06 02 25.8	+0.2
CEVE				IAML		06 02 30.1	
	comp=Z,10µm,0.3s						
CEVE	Cerro Verde	0.95	337	eP	Pn	06 02 13.3	-0.5
CEVE				eS	Sb	06 02 25.8	+0.2
CEVE				IAML		06 02 30.1	
	comp=Z,10µm,0.3s						
SNJE	San Jose	0.98	339	eP	Pg	06 02 13.8	-0.4
SNJE	San Jose	0.98	339	eP	Pg	06 02 13.8	-0.4
TACO	Tacachico	1.02	354	eP	Pn	06 02 14.3	-0.2
TACO				eS	Sb	06 02 27.6	+0.2
TACO	Tacachico	1.02	354	eP	Pn	06 02 14.3	-0.2
TACO				eS	Sb	06 02 27.6	+0.2
RTR	El Retiro	1.03	337	eP	Pn	06 02 14.4	-0.3
RTR	El Retiro	1.03	337	eP	Pn	06 02 14.4	-0.3
CNRM	Centro Naciona	1.16	63	eP	Pg	06 02 17.6	0.0
CNRM	Centro Naciona	1.16	63	eP	Pg	06 02 17.6	0.0
LLGN	La Laguna	1.24	13	eP	Pn	06 02 17.5	-0.1
LLGN				eS	Sb	06 02 33.2	-0.5
LLGN	La Laguna	1.24	13	eP	Pn	06 02 17.5	-0.1
LLGN				eS	Sb	06 02 33.2	-0.5
CNCH	Conchagua	1.40	76	eP	Pb	06 02 20.8	0.0
CNCH				eS	Sg	06 02 39.5	-1.0
CNCH	Conchagua	1.40	76	eP	Pb	06 02 20.8	0.0
CNCH				eS	Sg	06 02 39.5	-1.0
MTO3	Montecristo	1.45	355	eP	Pn	06 02 20.4	-0.1
MTO3				eS	Sn	06 02 38.8	-0.5
MTO3	Montecristo	1.45	355	eP	Pn	06 02 20.4	-0.1
MTO3				eS	Sn	06 02 38.8	-0.5
ESQI	Esquipulas	1.61	356	i P	Pn	06 02 22.9	+0.3
ESQI				eS	Sn	06 02 42.5	-0.5
NBG	Las Nubes	1.96	327	eP	Pb	06 02 29.8	-0.5
PCG	Pacaya	1.96	317	eP	Pb	06 02 30.2	-0.1
FUG	Fuego 3	2.16	314	eP	Pn	06 02 31.0	+0.7
FUG				eS	Sn	06 02 56.3	-0.4
MRL	Marmol	2.17	348	eP	Pn	06 02 30.9	+0.4
STG3	Santiaguito 3,	2.87	308	eP	Pn	06 02 41.6	+1.6

*IDC **16** 06:14:02.8±2.1, 0°47N×126°26E, h0km, mb3.8/3,*
mb1 4.1/3, mb1mx3.6/47, mbtmp3.8/3, MS3.4/1, Ms1 3.4/1,
ms1mx2.3/39, Error ellipse: s-maj=178.6km s-min=27.9km
az=65.0
*NEIC **16** 06:14:03.2±0.5, 1°05N±0°05×127°4E±0°2, h11km±9km,*
mb4.1/6, Error ellipse: s-maj=24.4km s-min=6.0km
az=98.0
ISC 16 06:14:02.5±1.5**,1°0N**±0°1×**127°4E**±0°2**,h10**km**,n12,**
σ**0ˢ46**/10**,mb3.9**/7**,Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	0.28	196		Pg	06 14 08.7	+0.5
TOLI2	Tolitoli	6.66	271	Pn	Pn	06 15 40.1	-0.4
WB0	Warramunga Arr	21.77	162	P	P	06 18 54.4	-0.3
WB0				IAmb	IAmb	06 18 58.7	
	comp=Z,9.8nm,1.4s						
WRA	Warramunga Arr	21.92	162	P	P	06 18 56.4	+0.1
	comp=Z,2.9nm,0.8s,baz=338,slow=11,SNR=15						
WRA	Warramunga Arr	21.92	162	IAmb	IAmb	06 19 03.0	
	comp=Z,0.3nm,1.5s						
WB2	Warramunga Arr	21.93	162	P	P	06 18 56.3	0.0
WB2				IAmb	IAmb	06 18 59.3	
	comp=Z,4.8nm,0.9s						
WR0	Warramunga Arr	22.00	162	P	P	06 18 56.9	-0.3
WR0				IAmb	IAmb	06 18 58.1	
	comp=Z,3.7nm,1.1s						
ASAR	Alice Springs	25.35	166	P	P	06 19 29.8	-0.2
	comp=Z,2.7nm,0.9s,baz=340,slow=10,SNR=24						
FORT	Forrest	31.65	179	P	P	06 20 26.3	+0.2
BBOO	Buckleboo	34.64	167	P	P	06 20 51.5	-0.7
BBOO				IAmb	IAmb	06 20 54.5	
	comp=Z,17nm,1.4s						
KLR	Kul'dur	48.15	4	LR	LR	06 45 47.8	
	comp=Z,33nm,18.0s,baz=240,slow=39						
MKAR	Makanchi Array	60.16	326	P	P	06 24 11.1	+0.5
	comp=Z,0.6nm,0.6s,baz=110,slow=8.3,SNR=2.5						

*IDC **16** 06:26:49.8±1.1, 29°11N×51°46E, h0km, mb3.9/10,*
mb1 3.9/12, mb1mx3.6/62, mbtmp3.8/12, ML3.4/2, MS2.9/1,
Ms1 2.9/1, ms1mx2.1/47, Error ellipse: s-maj=24.8km
s-min=20.3km az=158.0
*TEH **16** 06:26:51.5, 29°22N×51°35E, h9km, ML3.5*
*THR **16** 06:26:51.8±0.5, 29°22N×51°33E, h14km±9km, ML3.5*
*NEIC **16** 06:26:52.3±0.7, 29°15N±0°05×51°5E±0°1, h10km±1km,*
mb4.1/10, Error ellipse: s-maj=15.5km s-min=8.9km
az=83.0
ISC 16 06:26:52.9±0.5**,29°20N**±0°04×**51°41E**±0°04**,h17**km**,n79,**
σ**1ˢ45**/84**,mb4.0**/14**,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AHBU	AHRAM	0.35	197	ePg	Pg	06 26 58.8	-1.3
KAZ1	Kazerun	0.47	25	ePg	Pg	06 27 00.4	-2.0
KAZ1				eSg	Sg	06 27 07.7	-1.1
KAZ1				e		06 27 18.7	
	comp=Z,5µm,0.4s						
SHI	Shiraz	1.06	65	ePg	Pb	06 27 12.5	-0.3
SHI				eSg	Sg	06 27 29.3	+2.0
SHI				e		06 27 35.1	
	comp=Z,13µm,0.4s						
QIR1	Qir	1.60	116	ePg	Pb	06 27 22.6	+0.6
QIR1				eSg	Sg	06 27 48.0	+3.4
QIR1				e		06 27 55.5	
	comp=Z,19µm,0.5s						
ABEH	Behbahan	1.72	325	ePn	Pn	06 27 22.6	+0.5
KLNJ	Kolanjah	1.81	5	ePn	Pn	06 27 25.2	+1.6
KLNJ				e		06 27 57.5	
	comp=Z,8µm,0.4s						
JHRM	Jahrom	2.02	109	ePn	Pb	06 27 28.5	-0.7
IRAM	Ramesheh	2.73	18	ePn	Pn	06 27 38.5	+2.3
IRAM				e		06 28 24.6	
	comp=Z,1µm,0.4s						
AMIS	Naft Sefid	3.07	324	ePn	Pn	06 27 41.7	+1.1
QRN	Al-Qurain	3.10	262	eP	Pn	06 27 41.7	+0.8
SHK1	Shahrekord	3.15	352	ePn	Pn	06 27 43.5	+1.6
IGAR	Gharneh	3.24	9	ePn	Pn	06 27 44.7	+1.5
IGAR				e		06 28 03.6	
	comp=Z,614nm,0.4s						
UMR	Umm Al-Rimmam	3.25	277	eP	Pn	06 27 43.9	+0.9
KBD	Kabd	3.25	270	eP	Pn	06 27 44.8	+1.7
RDF	Al-Radifah	3.39	266	eP	Pn	06 27 46.3	+1.3
IPIR	Pirpir	3.50	353	ePn	Pn	06 27 48.3	+1.5
IMEH	Mehriz	3.53	51	ePn	Pn	06 27 49.8	+2.7
IMEH				e		06 27 54.5	
	comp=Z,714nm,0.3s						
IZEF	Zefreh	3.77	12	ePn	Pn	06 27 52.0	+1.6
IZEF				e		06 28 06.5	
	comp=Z,352nm,0.6s						
NASN	Na'in	3.78	18	ePn	Pn	06 27 51.9	+1.2
NASN	Na'in	3.78	18	ePn	Pn	06 27 51.9	+1.2
IKLH	Kolahrood	4.11	2	ePn	Pn	06 27 56.9	+1.8
YZKH	Yazd	4.20	40	ePn	Pn	06 27 58.1	+1.9
YZKH	Yazd	4.20	40	ePn	Pn	06 27 58.1	+1.9
ANAR	Anarak	4.45	26	ePn	Pn	06 28 01.1	+1.5
QAMS	Qamsar	4.52	360	ePn	Pn	06 28 02.6	+1.8
KHGB	Koh Gabri	4.56	74	ePn	Pn	06 28 02.8	+1.6
NGRK	Negar Kerman	4.66	83	e		06 28 07.7	
	comp=Z,382nm,0.2s						
NGRK				ePn	Pn	06 28 05.3	+2.5
KRBR	Kerman	4.72	79	ePn	Pn	06 28 06.0	+2.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KRBR				*e*Sg	Sg	06 29 20.4	-4.2
KRBR				IAML		06 29 34.7	
	comp=E,22nm,0.7s						
KRBR				IAML		06 29 37.9	
	comp=N,22nm,0.6s						
KRBR	Kerman	4.72	79	*e*Pn	Pn	06 28 06.0	+2.4
TVBK	TV Kerman	4.72	79	*e*Pn	Pn	06 28 05.5	+1.8
KRSH	Karshahi	4.80	7	*e*Pn	Pn	06 28 05.7	+1.2
ISFB	Sefidab	5.19	8	*e*Pn	Pn	06 28 10.9	+1.1
GHVR	GHOM	5.27	359	*e*Pn	Pn	06 28 12.0	+1.1
GHVR				IAML		06 29 19.0	
	comp=N,16nm,0.5s						
GHVR	GHOM	5.27	359	*e*Pn	Pn	06 28 12.0	+1.1
IDOB	Doab	5.34	330	*e*Pn	Pn	06 28 13.2	+1.1
BANOM	Banah	5.43	126	*e*Pn	Pn	06 28 13.6	+0.5
ASAO	Ashtian	5.46	348	*e*Pn	Pn	06 28 15.1	+1.4
ASAO				IAML		06 29 21.8	
	comp=E,15nm,0.5s						
ASAO				IAML		06 29 23.1	
	comp=N,14nm,0.5s						
ASAO	Ashtian	5.46	348	*e*Pn	Pn	06 28 15.1	+1.4
IQOM	Qom	5.63	357	*e*Pn	Pn	06 28 16.8	+0.7
MSFE	Esma-Masafi	5.70	131	*e*Pn	Pn	06 28 16.5	-0.3
ASUD	Al Ashush, Dub	5.74	142	*e*Pn	Pn	06 28 19.4	+2.1
IVRN	Varamin	5.79	3	*e*Pn	Pn	06 28 19.8	+1.8
FAQ	Al Faqa, Dubai	5.79	139	*e*Pn	Pn	06 28 18.9	+0.8
TPRV	Parvadeh(Tabas	5.92	49	*e*Pn	Pn	06 28 21.3	+1.5
UOSS	Minazif	6.02	134	Pn	Pn	06 28 20.7	-0.4
UOSS				Sn	Sn	06 29 28.4	-1.2
HATD	Hatta, Dubai	6.06	135	*e*Pn	Pn	06 28 23.0	+1.3
ASHO	Ashiyiah	6.12	136	*e*Pn	Pn	06 28 23.0	+0.5
TNSJ	Nastanj	6.50	42	*e*Pn	Pn	06 28 29.6	+1.8
IGHG	Ghaleghazi	6.57	322	*e*Pn	Pn	06 28 29.3	+0.4
TKDS	Koohdasht(Taba	6.57	47	*e*Pn	Pn	06 28 30.6	+1.8
SNGE	Sanandaj	6.81	331	*e*Pn	Pn	06 28 30.8	-1.4
SNGE				IAML		06 29 53.2	
	comp=N,13nm,0.4s						
IDHR	Dehrash	6.95	323	*e*Pn	Pn	06 28 34.8	+0.7
RAYN	Ar Rayn	7.75	225		Pn	06 28 44.9	0.0
WSAR	Wadi Sarin	8.79	131	Pn	Pn	06 28 57.9	-1.3
	comp=N,0.5nm,0.3s,baz=333,slow=9.0,SNR=1.7						
WSAR				Sn	Sn	06 30 34.8	-3.0
	comp=N,0.2nm,0.3s,baz=221,slow=20,SNR=2.1						
ONI	Oni	14.83	336	Pn	Pn	06 30 22.6	+0.8
BRTR	Keskin Array B	18.00	310	P	P	06 31 03.4	+0.7
	comp=N,0.1nm,0.3s,baz=123,slow=14,SNR=4.2						
BRTR	Keskin Array B	18.00	310	P	Pn	06 31 02.6	+0.3
SNOP	Sinop	18.32	319	P	P	06 31 06.9	+0.7
GAR	Garm	18.43	53	P	P	06 31 07.4	-0.1
GAR				IAmb	IAmb	06 31 14.6	
	comp=Z,5.9nm,1.0s						
KKAR	Karatay Array	20.68	43	P	P	06 31 32.4	+0.4
ABKAR	Akbulak array	21.07	16	P	P	06 31 36.4	+0.4
ABKAR	Akbulak array	21.07	16	P	P	06 31 36.3	+0.3
AKTO	Aktyubinsk	21.79	11	P	P	06 31 44.2	+0.4
	comp=Z,1.2nm,0.4s,baz=195,slow=12,SNR=5.2						
FRU1	Bishkek	23.09	48		S	06 36 10.1	+1.9
ALN	Alexandroupoli	23.73	306	P	P	06 32 03.3	-0.8
ALN				IAmb	IAmb	06 32 07.3	
	comp=Z,7.4nm,1.2s						
MLR	Muntele Rosu	25.81	316	P	P	06 32 22.7	-0.6
MLR				IAmb	IAmb	06 32 28.0	
	comp=Z,4.6nm,0.7s						
ITM	Ithomi	25.85	296	P	P	06 32 24.4	+0.8
ITM				IAmb	IAmb	06 32 42.7	
	comp=Z,6.8nm,1.0s						
AKASG	Malin Array Be	27.20	328	P	P	06 32 36.5	+0.9
	comp=Z,0.6nm,0.4s,baz=122,slow=7.3,SNR=2.8						
OBN	Obninsk	28.02	342	LR	LR	06 45 33.9	
	comp=Z,20nm,18.6s,baz=190,slow=40						
KURBB	Kurchatov Arra	29.56	36	P	P	06 32 56.7	+0.1
	comp=Z,0.5nm,0.4s,baz=234,slow=9.1,SNR=2.4						
MK31	Makanchi Array	29.75	45	P	P	06 32 58.4	+0.1
MK31				IAmb	IAmb	06 33 01.0	
	comp=Z,3.6nm,1.1s						
MKAR	Makanchi Array	29.75	45	P	P	06 32 58.5	+0.2
	comp=Z,0.2nm,0.4s,baz=251,slow=7.9,SNR=2.3						
ZALV	Zalesovo Beam	34.62	35	P	P	06 33 41.0	+0.1
	comp=Z,0.5nm,0.3s,baz=244,slow=9.3,SNR=3.7						
FINES	FINESS Array B	36.36	340	P	P	06 33 55.0	-0.7
	comp=Z,1.4nm,0.8s,baz=153,slow=13,SNR=4.2						
ARCES	ARCESS Array B	43.03	347	P	P	06 34 51.3	+0.1
	comp=Z,3.8nm,1.1s,baz=149,slow=7.2,SNR=5.8						
TORD	Torodi Ar. Bea	48.67	262	P	P	06 35 36.1	-0.3
	comp=Z,1.5nm,0.7s,baz=52,slow=7.9,SNR=15						
TORD	Torodi Ar. Bea	48.67	262	P	P	06 35 36.0	-0.4
TORD				IAmb	IAmb	06 35 38.2	
	comp=Z,1.3nm,0.9s						
DBIC	Dimbokro	57.43	259	P	P	06 36 40.9	-0.2
	comp=Z,2.2nm,0.7s,baz=17,slow=9.1,SNR=4.7						
ILAR	Eielson Array	85.25	8	P	P	06 39 27.9	-0.3
	comp=Z,0.5nm,0.6s,baz=324,slow=4.1,SNR=6.9						

IDC 16 06:28:11.9±2.7**, 54°.30N×86°.18E, h0^{km}, mb1 3.2**/2**, mb1mx2.9**/62**, mbtmp3.2**/2**, ML2.8**/2**, Error ellipse: s-maj=20.4km s-min=12.3km az=50.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.87	247	*i*		06 33 00.0	
	baz=67,slow=340,SNR=11						
ZALV	Zalesovo Beam	0.87	247	Pg	Pg	06 28 27.3	-1.3
	1.3nm,0.3s,baz=64,slow=16,SNR=9.9						
ZALV				Lg	Lg	06 28 41.4	
	6.8nm,0.3s,baz=64,slow=27,SNR=17						
KURBB	Kurchatov Arra	5.95	235	Pn	Pn	06 29 42.4	+1.3
	0.1nm,0.3s,baz=53,slow=14,SNR=3.2						
MKAR	Makanchi Array	7.91	200	Pn	Pn	06 30 09.0	+0.9
	0.3nm,0.3s,baz=22,slow=13,SNR=9.8						

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*TUL **16** 06:28:44.1±1.3, 36°.58N±0°.01×97°.66W±0°.01, h6^{km}±4^{km}, ML2.5, mb_Lg2.1/4(NEIC), Error ellipse: s-maj=1.8km s-min=1.4km az=179.0*

NEIC 16 06:28:44.1±0.9**, 36°.57N**±0°.01×**97°.66W**±0°.01**, h4^{km}**±5^{km}**, Error ellipse: s-maj=1.9km s-min=1.8km az=189.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CROK	Carrier	0.27	256		Pg	06 28 49.3	0.0
CROK				Sg	Sg	06 28 53.5	+0.7
GC02	Grant County #	0.33	331	Pg	Pg	06 28 50.6	+0.2
GC02				Sg	Sg	06 28 55.3	+0.6
BLOK	Blackwell	0.41	62		Pg	06 28 52.2	+0.2
BLOK				Sg	Sg	06 28 57.9	+0.6
KAN14	Manchester OK	0.46	328	Pg	Pg	06 28 52.8	-0.2
KAN14				Sg	Sg	06 28 59.4	+0.5
KAN13	South Haven SW	0.47	18	Pg	Pg	06 28 53.1	0.0
KAN13				Sg	Sg	06 28 59.8	+0.6
KAN17	Caldwell West	0.48	350	Pg	Pg	06 28 53.5	+0.1
KAN05	Bluff City Nor	0.57	343	Pg	Pg	06 28 54.8	-0.2
KAN09	Caldwell North	0.57	3	Pg	Pg	06 28 53.9	-1.2
KAN10	Anthony SW Sta	0.66	328	Pg	Pg	06 28 55.3	-1.4
KAN06	Argonia West S	0.70	347	Pg	Pg	06 28 57.5	-0.1
KAN08	Anthony NE Sta	0.70	339	Pg	Pg	06 28 57.6	-0.1
KAN16	Harper SW Stat	0.73	334	Pg	Pg	06 28 58.5	+0.3
KAN12	Harper NE Stat	0.78	340		Pg	06 28 59.4	+0.4
OK029	Liberty Lake	0.79	168	Pg	Pg	06 28 59.2	0.0
QUOK	Quay	0.86	117	Pg	Pg	06 29 01.1	+0.4
OK031	S. Brethren Rd	0.90	133	Pg	Pg	06 29 01.4	0.0
OK031				IAmb_Lg		06 29 13.5	
	comp=Z,29nm,1.1s						
BCOK	Bluff Creek, N	0.91	177	Pg	Pg	06 29 01.3	-0.2
OK030	Cody Creek RV	0.95	132		Pg	06 29 02.1	-0.3
T35A	Sooner Cattle	0.98	69		Pg	06 29 02.8	-0.2
U32A	Winter Ranch,	1.10	261	Pg	Pg	06 29 04.6	-0.6
OKCFA	Oklahoma City	1.16	172	Pg	Pg	06 29 06.2	-0.3
OKCSW	OKLAHOMA CITY	1.17	171		Pg	06 29 06.3	-0.4
FNO	Franklin	1.32	171	Pn	Pn	06 29 08.8	-0.6
TUL1	Leonard	1.65	113	Pn	Pn	06 29 14.4	+0.6
TUL1					Sb	06 29 36.5	+0.3
X34A	Smith Ranch, M	1.97	184	Pn	Pn	06 29 18.4	+0.2
R32A	Long Quarter,	2.03	336		Pn	06 29 19.0	-0.2
WMOK	Wichita Mounta	2.04	207	Pn	Pn	06 29 19.3	0.0
LOOK	Love County	2.60	171	Pn	Pn	06 29 27.0	+0.1
U38A	Gravette	2.64	92	Pn	Pn	06 29 28.0	+0.5
KSU1	Kansas State U	2.66	18	Pn	Pn	06 29 27.4	-0.4
X37A	Clayton	2.72	136	Pn	Pn	06 29 28.9	+0.4
HHAR	Hobbs	3.01	94	IAmb_Lg		06 30 23.1	
	comp=Z,4.8nm,0.7s						

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*IDC **16** 06:35:02.9±1.0, 36°.22N×142°.73E, h0^{km}, mb3.6/8, mb1 3.8/11, mb1mx3.6/50, mbtmp3.7/11, ML3.7/3, Error ellipse: s-maj=23.4km s-min=19.5km az=85.0*

*JMA **16** 06:35:06.6±0.4, 36°.33N×142°.54E, h48^{km}, M3.6*

*NIED **16** 06:35:06.6, 36°.34N×142°.54E, h48^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-6.57; $M_{\theta\theta}$2.17; $M_{\phi\phi}$4.40; $M_{r\theta}$0.99; $M_{\theta\phi}$1.82; $M_{\phi r}$0.39; Fault plane solution: $M_0$6.08000×10^{14} NP1: ϕ_s214.00000°, δ49.00000°, λ-84.00000°. NP2: ϕ_s25.00000°, δ41.00000°, λ-97.00000°.*

ISC 16 06:35:08.7±0.9**, 36°.35N**±0°.05×**142°.60E**±0°.07**, h50^{km}, n29, σ2^{s}19**/31**, mb3.6**/8**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JHYU	Hitachinakayam	1.62	270	P	Pn	06 35 32.9	-2.0
ONAJ	Iwakimizuishiy	1.63	298	P	Pn	06 35 32.4	-2.6
JHO	Hitachi	1.66	280	P	Pn	06 35 33.5	-1.8
JHO				*e*S	Sn	06 35 52.2	-3.2
BSO1	Boso 1	2.15	218	P	Pn	06 35 39.9	-1.7
JFT	Otama	2.15	303	P	Pn	06 35 41.9	-0.3
JAG	Ashikaga	2.54	273	P	Pn	06 35 46.0	-1.4
JAG				*e*S	Sn	06 36 14.3	-2.8
JMK	Ichinoseki	2.82	338	P	Pn	06 35 49.4	-1.8
JMK				*e*S	Sn	06 36 20.4	-3.5
JRY	Ryogami san	3.01	265	P	Pn	06 35 52.4	-1.5
JRY				S	Sn	06 36 26.2	-2.5
JOD2	Odawara 2	3.05	250	P	Pn	06 35 53.2	-1.3
JOM	Ohasama	3.28	342	P	Pn	06 35 56.0	-1.6
JOM				S	Sn	06 36 31.8	-3.6
JYN	Shimob	3.40	257	P	Pn	06 35 58.8	-0.5
MJAR	Matsushiro Arr	3.54	274	Pn	Pn	06 36 01.0	-0.2
	0.6nm,0.3s,baz=108,slow=9.4,SNR=13						
MJAR				Sn	Sn	06 36 44.7	+2.8
	0.7nm,0.3s,baz=84,slow=24,SNR=6.4						
MAT	Matsushiro	3.54	274	P	Pn	06 36 01.0	-0.3
MAT				S	Sn	06 36 43.0	+1.1
JHJ	Hachijo jima 2	3.97	217	Pn	Pn	06 36 04.7	-2.5
	30nm,0.3s,baz=112,slow=21,SNR=5.6						
JHJ				Sn	Sn	06 36 48.4	-4.0
	30nm,0.3s,baz=73,slow=19,SNR=2.4						
ASAJ	Asahikawa	7.75	360	Pn	Pn	06 36 58.8	-0.1
	2.1nm,0.3s,baz=222,slow=15,SNR=2.5						
ASAJ				Sn	Sn	06 38 22.8	-2.5
	1.3nm,0.3s,baz=164,slow=22,SNR=1.6						
H11N2	WAKE ISLAND Hy	26.98	121	T	T	07 09 03.8	
	baz=313,slow=74						
H11N1	WAKE ISLAND Hy	26.99	121	T	T	07 09 07.1	
	baz=313,slow=74						
H11N3	WAKE ISLAND Hy	27.00	121	T	T	07 09 04.8	
	baz=313						
H11S1	WAKE ISLAND Hy	27.69	123	T	T	07 09 58.7	
	baz=314						
H11S3	WAKE ISLAND Hy	27.69	124	T	T	07 09 59.3	
	baz=314						
H11S2	WAKE ISLAND Hy	27.71	124	T	T	07 10 16.9	
	baz=314						
SONM	Songino Array	28.95	305	P	P	06 41 05.9	+2.5
	0.5nm,0.7s,baz=97,slow=7.7,SNR=2.7						
ZALV	Zalesovo Beam	43.08	313	P	P	06 43 05.4	+1.9
	0.5nm,0.4s,baz=112,slow=7.2,SNR=3.5						
MKAR	Makanchi Array	45.29	303	P	P	06 43 23.5	+2.1
	0.8nm,0.9s,baz=95,slow=9.3,SNR=2.8						
KURBB	Kurchatov Arra	47.17	309	P	P	06 43 37.9	+1.9
	0.9nm,0.3s,baz=83,slow=8.1,SNR=4.1						
ILAR	Eielson Array	49.56	32	P	P	06 43 55.4	+1.2
	0.3nm,0.6s,baz=259,slow=6.2,SNR=4.8						
WRA	Warramunga Arr	56.53	189	P	P	06 44 46.1	+0.1
	0.3nm,0.6s,baz=7.4,slow=6.9,SNR=8.0						
ASAR	Alice Springs	60.26	189	P	P	06 45 12.2	+0.2
	0.2nm,0.4s,baz=3.5,slow=6.5,SNR=8.2						
TXAR	Lajitas Array	89.78	53	P	P	06 48 04.1	+1.9
	0.2nm,0.5s,baz=325,slow=3.1,SNR=5.1						

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*IDC **16** 06:46:25.9±1.3, 34°.32N×26°.10E, h0^{km}, mb3.8/6, mb1 3.8/7, mb1mx3.6/29, mbtmp3.7/7, ML4.3/1, MS2.7/4, Ms1 2.8/4, ms1mx2.5/34, Error ellipse: s-maj=41.2km s-min=21.4km az=144.0*

*THE **16** 06:46:27.5, 34°.22N×26°.58E, h10^{km}±10^{km}, ML3.0/2, Error ellipse: s-maj=12.8km s-min=3.4km az=117.0*

*HLW **16** 06:46:29.9, 34°.11N×26°.37E, h15^{km}±12^{km}, Md3.8, Ml3.8*

ISC 16 06:46:29.1±0.7**, 34°.20N**±0°.04×**26°.33E**±0°.06**, h25^{km}, n33, σ1^{s}31**/36**, mb3.8**/6**, Crete**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FRMA	Ierapetra Chan	0.95	329	P	Pn	06 46 45.0	-1.8
FRMA				S	Sn	06 47 01.0	+1.4
	550nm,0.7s						
STIA	Sitia Lasithi	1.02	349	P	Pn	06 46 46.9	-0.9
STIA				S	Sb	06 47 00.8	-0.2
NPS	Neapolis	1.21	331	P	Pn	06 46 50.9	+0.4
SIVA	Sivas	1.49	304	P	Pb	06 46 56.2	+0.1
SIVA				S	Sb	06 47 16.0	+1.3
KSTL	Kastelli Herak	1.51	317	P	Pn	06 46 51.0	-3.6
IDI	Anoyia	1.60	313	P	Pn	06 46 56.6	+0.7
PRNS	Prines Rethymn	1.90	308	P	Pn	06 47 01.2	+1.3
GVD	Gavdhos	1.95	290	P	Pn	06 47 01.0	+0.3
GVD				S	Sb	06 47 28.8	+0.8
	355nm,0.5s						
IMMV	Iera Moni Meta	2.30	304	P	Pn	06 47 06.0	+0.5
THR3	Thira Island,	2.33	341	P	Pn	06 47 05.7	-0.1
SLUM	Salum	2.86	199	P	Pn	06 47 13.5	+0.4
	baz=201						
SLUM				AMP		06 47 00.0	
	baz=201						
SLUM				S	Sn	06 47 45.5	-1.2
	baz=201						
ANKY	Antikythira Is	2.99	305	P	Pn	06 47 16.5	+1.6
KTHR	Kythira	3.41	308	P	Pn	06 47 21.0	+0.3
SWA2		5.00	189	P	Pn	06 47 42.7	+0.2
	baz=190						
SWA2				AMP		06 48 00.0	
	baz=190						
SWA2				S	Sn	06 48 36.1	-3.4
	baz=190						
HMYD	Mayadein	5.81	138	P	Pn	06 47 54.7	+1.0
	baz=137						
RYAN	Fayoum	6.11	145	P	Pn	06 47 58.3	+0.4
	baz=145						
RYAN				AMP		06 49 00.0	
	baz=145						
KOT	Kottamia	6.32	131	P	Pn	06 48 01.7	+0.9
	baz=130						
KOT				AMP		06 49 00.0	
	baz=130						
HSAF	As Saff	6.37	134	P	Pn	06 48 02.3	+0.8
	baz=134						
HHAG	Hagoal	6.47	129	P	Pn	06 48 04.1	+1.3
	baz=128						
HHAG				AMP		06 49 00.0	
	baz=128						
GLL	Jalalah	6.50	134	P	Pn	06 48 03.0	-0.1
	baz=133						
NBNS	Bani Suef	7.00	141	P	Pn	06 48 11.4	+1.4
	baz=141						
NBNS				AMP		06 48 00.0	
	baz=141						
SUZ	Suez	7.03	126	P	Pn	06 48 10.8	+0.3
	baz=126						
HFRF	Wahat Farafira	7.23	166	P	Pn	06 48 14.0	+0.7
	baz=165						
BRTR	Keskin Array B	8.04	45	LR	LR	06 52 42.9	
	comp=Z,66nm,20.8s,baz=222,slow=47						
AKASG	Malin Array Be	16.63	6	Pn	Pn	06 50 20.0	-0.3
	1.2nm,0.3s,baz=192,slow=10,SNR=7.7						
GERES	GERESS Array B	17.38	331	LR	LR	06 58 35.9	
	comp=Z,16nm,19.0s,baz=256,slow=42						
ESDC	Sonseca Array	24.75	292	P	P	06 51 47.4	-1.3
	0.5nm,0.7s,baz=78,slow=10,SNR=4.6						
NOA	NORSAR Array B	28.57	345	LR	LR	07 04 43.0	
	comp=Z,7.9nm,19.2s,baz=255,slow=39						
TORD	Torodi Ar. Bea	30.64	233	P	P	06 52 41.4	-0.1
	0.6nm,0.3s,baz=33,slow=8.5,SNR=20						
ARCES	ARCESS Array B	35.39	360	P	P	06 53 20.7	-1.8
	6.1nm,1.1s,baz=168,slow=9.2,SNR=3.5						
MKAR	Makanchi Array	43.51	56	P	P	06 54 31.9	+1.4
	1.1nm,0.7s,baz=287,slow=6.2,SNR=5.3						
MKAR				LR	LR	07 14 01.6	
	comp=Z,29nm,18.8s,baz=306,slow=38						
ZALV	Zalesovo Beam	44.98	45	P	P	06 54 42.4	+0.3
	0.6nm,0.4s,baz=278,slow=10.0,SNR=1.9						
SONM	Songino Array	59.35	50	P	P	06 56 30.7	+1.6
	0.3nm,0.5s,baz=280,slow=8.3,SNR=2.2						

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*NORS **16** 06:54:50.8±0.0, 43°.36N×45°.56E, h13^{km}, MPVA3.5*

*MOS **16** 06:54:50.9±0.0, 43°.34N×45°.56E, h12^{km}, MPVA3.6*

*DRS **16** 06:54:51.8±0.0, 43°.26N×45°.46E, h14^{km}, ML2.6/5*

*TIF **16** 06:54:52.0, 43°.38N×45°.59E, h24^{km}±3^{km}*

ISC 16 06:54:52.0±1.1**, 43°.45N**±0°.05×**45°.60E**±0°.02**, h16^{km}**±8^{km}**, n29, σ1^{s}29**/54**, 2C-1D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GROC	Groznyy	0.29	150	*e*Pg	Pg	06 54 56.8	-1.3
GROC				*e*Sg	Sg	06 55 01.9	-0.5
DBC	Dubki	1.00	115	*e*Pg	Pb	06 55 11.3	+0.4
DBC				*i* Sg	Sn	06 55 26.1	+0.9
	98nm,0.2s						
PNSH	Pansheti	1.09	222	P	Pb	06 55 02.9	-10
PNSH				S	Sb	06 55 17.0	-10
MTEO	Meteo	1.10	226	P	Pb	06 55 11.5	-1.4
MTEO				S	Sb	06 55 26.9	-0.3
STDR	Stavd-Durt	1.12	266	*e*Pg	Pb	06 55 13.6	+0.5
STDR				*e*Sg	Sn	06 55 32.0	+3.7
LACR	Lac	1.14	237	*e*Pg	Pb	06 55 12.3	-1.1
LACR				*e*Sg	Sb	06 55 29.0	+0.9
KRNR	Karanay	1.14	123	*e*Pg	Pb	06 55 13.6	+0.1
KRNR				*i* Sg	Sb	06 55 29.1	+1.0
	65nm,0.2s						
UNCR	Uncukul	1.15	130	*e*Pg	Pn	06 55 12.8	-0.7
UNCR				*i* Sg	Sb	06 55 28.3	+0.2
	126nm,0.4s						
KORR	Kora	1.18	252	*e*Pg	Pn	06 55 13.8	-0.1
KORR				*e*Sg	Sg	06 55 31.6	+1.4
XNZR	Khunzakh	1.22	138	*e*Pg	Pn	06 55 14.8	+0.3
XNZR				*e*Sg	Sn	06 55 31.6	+0.8
BUJR	Buynaksk	1.27	119	*e*Pg	Pg	06 55 17.0	+0.5
BUJR				*e*Sg	Sg	06 55 34.8	+1.8
GUDG	Gudauri	1.29	220	P	Pn	06 55 15.2	-0.4
GUDG				S	Sb	06 55 31.7	-0.7
LSNR	Lesken	1.31	263	*e*Pg	Pn	06 55 16.3	+0.7
LSNR				*e*Sg	Sg	06 55 34.8	+0.6
ARKR	Arakani	1.33	129	*e*Pg	Pn	06 55 15.9	0.0
ARKR				*i* Sg	Sn	06 55 32.9	-0.5
	66nm,0.4s						
ZEI	Tsey	1.41	242	*e*Pg	Pn	06 55 16.3	-0.9
ZEI				*e*Sg	Sn	06 55 35.9	+0.3
GNBR	Gunib	1.46	136	*e*Pg	Pn	06 55 18.5	+0.7
GNBR				*i* Sg	Sb	06 55 38.4	+1.2
	155nm,0.8s						
MAK	Makhachkala	1.48	109	*e*Pg	Pb	06 55 20.2	+1.1
MAK				*e*Sg	Sg	06 55 40.8	+1.2
DIGR	Digorskoe uzhe	1.58	250	*e*Pg	Pn	06 55 19.2	-0.4
DIGR				*e*Sg	Sn	06 55 40.5	+0.8
LGD	Lagodekhi	1.69	163	P	Pn	06 55 21.3	+0.4
LGD				S	Sn	06 55 42.4	+0.3
KMKR	Kumukh	1.72	140	*e*Pg	Pn	06 55 23.1	+1.6
KMKR				*e*Sg	Sb	06 55 45.7	+0.9
ONI	Oni	1.80	242	P	Pn	06 55 23.2	+0.8
ONI				S	Sb	06 55 48.6	+1.7
DDFL	Dedoflistskaro	2.04	169	P	Pg	06 55 30.8	-0.4
NEY	Neytrino	2.11	265	*e*Pg	Pn	06 55 27.6	+0.8
NEY				*e*Sg	Sn	06 55 55.0	+2.2
SHA1	Shidzhatmaz	2.16	279	*e*Pg	Pn	06 55 27.5	0.0
SHA1				*e*Sg	Sn	06 55 54.6	+0.5
TRLG	Trialeti	2.21	211	P	Pn	06 55 27.9	-0.3
TRLG				S	Sb	06 55 59.3	+0.4
BKRG	Bakuriani	2.28	223	P	Pn	06 55 29.2	0.0
DMNI	Dmanisi	2.37	207	P	Pn	06 55 31.3	+1.0
DMNI				S	Sb	06 56 03.3	0.0
AKTO	Aktyubinsk	10.98	46	⇑P	Pn	06 57 27.7	-0.7
	1.9nm,0.9s						
AKTO				⇑S	Sn	06 59 26.7	-4.2
	3.0nm,1.5s						
AB31	Akbulak array	11.48	55	P	Pn	06 57 36.0	+0.8
	0.4nm,0.6s,baz=244,slow=12,SNR=11						
AB31				⇓S	Sn	06 59 39.4	-3.6
	1.0nm,0.7s,baz=246,slow=21,SNR=5.5						

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*CNRM **16** 07:13:08.5, 37°.67N×2°.13E, h630^{km}, ml2.9*

*CRAAG **16** 07:13:26.6, 36°.46N×3°.05E, Ml3.1*

*MDD **16** 07:13:28.5±0.7, 36°.50N×3°.09E, h9^{km}±7^{km}, mb3.6/11, Error ellipse: s-maj=9.8km s-min=6.1km az=72.0, PRXIMO*

ISC 16 07:13:28.1±1.0**, 36°.55N**±0°.04×**3°.10E**±0°.05**, h18^{km}, n28, σ2^{s}18**/40**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ABA	Alger-Bouzarea	0.26	348	P	Pg	07 13 34.0	0.0
ABA	Alger-Bouzarea	0.26	348	P	Pg	07 13 34.0	0.0
ABMS	Boumerdes	0.36	57	P	Pg	07 13 36.5	+0.7
ABMS	Boumerdes	0.36	57	P	Pg	07 13 36.5	+0.7
ADJB	Djebel Djouab	0.48	145	P	Pg	07 13 36.5	-1.3
ADJB	Djebel Djouab	0.48	145	P	Pg	07 13 36.5	-1.3
EIBI	Ibiza	2.84	331	P	Pn	07 14 13.5	+0.9
	1.0nm,0.1s,SNR=10						
EIBI				S	Sn	07 14 45.0	-1.2
	6.3nm,0.2s,SNR=7.9						
ETOS	Mallorca	3.22	356	P	Pn	07 14 18.6	+0.8
	1.8nm,0.1s,SNR=12						
ETOS				S	Sn	07 14 53.7	-2.1
	4.0nm,0.3s,SNR=7.7						
AFON	Font Roja	3.58	307	S	Sn	07 15 04.3	-0.5
	1.4nm,0.2s,SNR=7.9						
EMUR	La Murta	3.70	292	P	Pn	07 14 24.2	-0.2
	1.1nm,0.2s,SNR=7.9						
EMUR				S	Sn	07 15 06.4	-1.2
	0.8nm,0.2s,SNR=7.9						
ETOB	Tobarra	4.24	301	P	Pn	07 14 32.5	+0.6
	3.3nm,0.3s,SNR=7.9						
ETOB				S	Sn	07 15 20.2	-0.8
	3.0nm,0.3s,SNR=8.0						
ECHE	Chera	4.42	315	P	Pn	07 14 34.8	+0.5
	0.2nm,0.1s,SNR=7.9						
ECHE				S	Sn	07 15 20.5	-4.8
	0.5nm,0.2s,SNR=7.9						
EMOS	Mosqueruela	4.73	325	P	Pn	07 14 39.8	+1.1
	0.7nm,0.1s,SNR=7.2						
EMOS				S	Sn	07 15 31.7	-1.5
	0.7nm,0.1s,SNR=7.9						
SESP	Santiago Espad	4.76	291	P	Pn	07 14 40.7	+1.6
	0.5nm,0.1s,SNR=7.9						
SESP				S	Sn	07 15 33.1	-0.9
	1.0nm,0.1s,SNR=7.9						
TAF	Taforalt	4.81	251	P	Pn	07 14 40.2	+0.5
TAF				S	Sg	07 15 58.1	-4.5
EBER	Berja	4.83	276	S	Sn	07 15 34.0	-1.6
	0.6nm,0.2s,SNR=7.9						
ERTA	Horta de San J	4.90	335	S	Sn	07 15 35.9	-1.3
	1.0nm,0.3s,SNR=7.9						
EPOB	Poblet	5.05	342	S	Sn	07 15 38.9	-2.0
	0.5nm,0.2s,SNR=7.9						
EQES	Quesada	5.08	286	P	Pn	07 14 43.2	-0.3
	0.4nm,0.1s,SNR=4.0						
EQES				S	Sn	07 15 41.0	-0.8
	0.7nm,0.2s,SNR=7.9						
JBK	JBK	5.13	246	P	Pn	07 14 44.6	+0.4
JBK				S	Sb	07 16 02.0	+3.3
CFON	Fontmartina	5.23	355	P	Pn	07 14 45.4	-0.1
	0.6nm,0.1s,SNR=7.9						
CFON				S	Sn	07 15 42.6	-2.8
	1.0nm,0.1s,SNR=7.9						
TDRA	Tendrara	5.48	232	P	Pn	07 14 48.8	-0.3
TDRA				S	Sb	07 16 13.2	+4.2
FIGM	Figuig	5.70	221	P	Pn	07 14 53.5	+1.6
FIGM				S	Sb	07 16 19.3	+4.3
ETOR	Torete	5.87	318	P	Pn	07 14 56.9	+2.7
	SNR=7.9						
EJON	La Jonquera	5.89	358	P	Pn	07 14 57.2	+2.7
	0.4nm,0.1s,SNR=7.9						
SJAF	Saint Jean de	5.93	358	P	Pn	07 14 56.8	+1.8
	0.1nm,0.1s,SNR=7.9						
CSOR	Sort	6.01	346	S	Sn	07 15 59.5	-5.2
	1.1nm,0.1s,SNR=7.9						
MDT	Midelt	7.36	242	P	Pn	07 15 03.8	-11

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*NEIC **16** 07:25:29.9±0.4, 18°.4S±0°.1×178°.31W±0°.06, h484^{km}±13^{km}, mb4.1/15, Error ellipse: s-maj=21.6km s-min=8.4km az=186.0*

*IDC **16** 07:25:30.7±2.9, 18°.15S×178°.48W, h495^{km}±22^{km}, mb3.1/6, mb1 3.4/7, mb1mx3.2/36, mbtmp3.9/7, Error ellipse:*

s-maj=86.1km s-min=20.0km az=145.0

ISC 16 07:25:30.6±0.8**, 18°.3S**±0°.1×**178°.5W**±0°.2**, h500^{km}, n25,** σ0^{s}**89**/24**, mb4.0**/15**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.34**	**278**	P	**P**	**07 26 43.8**	**-0.3**
	7.3nm,0.3s,baz=130,slow=4.5,SNR=34						
KNTN	**Kanton**	**16.74**	**24**	P	**P**	**07 28 59.1**	**0.0**
BFZ	**Birch Farm**	**22.82**	**190**	P	**P**	**07 29 53.0**	**-1.5**
QRZ	**Quartz Range**	**23.80**	**197**	P	**P**	**07 30 01.3**	**-2.0**
QRZ				IAmb	IAmb	07 30 20.7	
	comp=Z,35nm,1.1s						
NNZ	**Nelson**	**23.94**	**195**	P	**P**	**07 30 03.2**	**-1.3**
ARMA	**Armidale**	**29.71**	**240**	P	**P**	**07 30 55.6**	**0.0**
ARMA				IAmb	IAmb	07 30 56.6	
	comp=Z,26nm,1.4s						
TOO	**Toolangi**	**36.91**	**231**	P	**P**	**07 31 56.3**	**-0.1**
TOO				IAmb	IAmb	07 32 24.5	
	comp=Z,5.2nm,1.1s						
STKA	**Stephens Creek**	**38.41**	**242**	P	**P**	**07 32 09.5**	**+0.8**
	comp=Z,0.5nm,0.3s,baz=78,slow=9.9,SNR=3.7						
STKA	**Stephens Creek**	**38.41**	**242**	IAmb	IAmb	07 32 18.3	
	comp=Z,1.4nm,1.5s						
BBOO	**Buckleboo**	**43.19**	**241**	P	**P**	**07 32 46.9**	**0.0**
BBOO				IAmb	IAmb	07 33 11.3	
	comp=Z,13nm,1.4s						
WR0	**Warramunga Arr**	**44.31**	**260**	P	**P**	**07 32 57.0**	**+1.2**
WR0				IAmb	IAmb	07 33 17.7	
	comp=Z,4.4nm,1.4s						
WB0	**Warramunga Arr**	**44.47**	**260**	P	**P**	**07 32 57.9**	**+0.8**
WB0				IAmb	IAmb	07 33 22.6	
	comp=Z,7.2nm,1.5s						
WB2	**Warramunga Arr**	**44.49**	**260**	P	**P**	**07 32 57.9**	**+0.6**
WB2				IAmb	IAmb	07 33 10.1	
	comp=Z,5.1nm,1.3s						
WRA	**Warramunga Arr**	**44.51**	**260**	P	**P**	**07 32 57.4**	**0.0**
	comp=Z,0.2nm,0.3s,baz=97,slow=6.9,SNR=7.5						
WRA	**Warramunga Arr**	**44.51**	**260**	P	**P**	**07 32 57.3**	**0.0**
AS31	**Alice Springs**	**44.63**	**255**	P	**P**	**07 32 58.7**	**+0.4**
ASAR	**Alice Springs**	**44.64**	**255**	P	**P**	**07 32 58.8**	**+0.5**
	comp=Z,2.7nm,0.4s,baz=91,slow=8.4,SNR=88						
ASAR	**Alice Springs**	**44.64**	**255**	P	**P**	**07 32 58.6**	**+0.3**
FORT	**Forrest**	**49.80**	**245**	P	**P**	**07 33 36.9**	**-0.3**
FORT				IAmb	IAmb	07 33 39.8	
	comp=Z,21nm,1.1s						
VNDA	**Vanda**	**60.10**	**185**	P	**P**	**07 34 50.7**	**+2.2**
VNDA				IAmb	IAmb	07 35 05.8	
	comp=Z,4.2nm,1.2s						
ILAR	**Eielson Array**	**86.23**	**13**	P	**P**	**07 37 18.0**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=219,slow=5.0,SNR=16						
TXAR	**Lajitas Array**	**86.23**	**58**	P	**P**	**07 37 19.2**	**0.0**
	comp=Z,0.5nm,0.7s,baz=224,slow=7.2,SNR=5.6						
TXAR	**Lajitas Array**	**86.23**	**58**	P	**P**	**07 37 19.1**	**-0.1**
INK	**Inuvik**	**92.23**	**15**	P	**P**	**07 37 46.0**	**0.0**
	comp=Z,2.0nm,1.2s,baz=200,slow=2.8,SNR=4.1						
GERES	**GERESS Array B**	**147.92**	**345**	PKPbc	**PKiKP**	**07 44 20.0**	**-0.7**
	comp=Z,0.4nm,0.4s,baz=49,slow=3.0,SNR=1.9						

JMA ***16*** *07:31:10.0±0.2, 31°.14N×128°.80E, h1^{km}±2^{km}, M4.6*
JMA Felt II J1.
NIED ***16*** *07:31:10.0, 31°.14N×128°.80E, h1^{km}, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-3.45; $M_{\theta\theta}$2.43; $M_{\phi\phi}$1.01; $M_{r\theta}$3.37; $M_{\theta\phi}$6.47; $M_{\phi r}$-3.53; Fault plane solution: $M_0$8.64000×10^{15} NP1: ϕ_s265.00000°, δ63.00000°, λ-32.00000°. NP2: ϕ_s11.00000°, δ62.00000°, λ-149.00000°.*
IDC ***16*** *07:31:12.4±0.7, 31°.05N×128°.55E, h0^{km}, mb4.1/15, mb1 4.3/20, mb1mx4.1/67, mbtmp4.2/20, ML3.9/5, MS3.9/33, Ms1 3.9/33, ms1mx3.7/52 Error ellipse: s-maj=19.4km s-min=14.4km az=85.0*
MOS ***16*** *07:31:12.4±1.2, 31°.12N×128°.77E, h14^{km}, mb4.8/21, Error ellipse: s-maj=10.5km s-min=5.6km az=91.3*
NEIC ***16*** *07:31:14.5±2.1, 31°.19N±0°.06×128°.92E±0°.07, h10^{km}±1^{km}, mb4.8/49, Error ellipse: s-maj=10.9km s-min=8.8km az=122.0*
BJI ***16*** *07:31:16.3±0.0, 30°.98N×129°.06E, h43^{km}, mB4.7/26, mb4.4/35, Ms4.5/35, Ms7 4.2/33*

ISC 16 07:31:16.5±1.1**, 31°.17N**±0°.03×**129°.06E**±0°.04**, h30**^{km}±8^{km}**, n190,** σ1^{s}**89**/183**, mb4.7**/57**, MS4.0**/40**, 11C, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	**Shimokoshiki**	**0.76**	**48**	P	**Pb**	**07 31 28.2**	**-3.1**
JSJ				*e*S	**Sb**	**07 31 41.1**	**-0.2**
JKC	**Kuchinoerabu**	**1.21**	**125**	P	**Pn**	**07 31 35.7**	**-1.7**
JKC				*e*S	**Sb**	**07 31 54.7**	**+0.8**
JSU	**Suzuyama**	**1.24**	**74**	P	**Pn**	**07 31 37.1**	**-0.8**
JSU				*e*S	**Sb**	**07 31 56.7**	**+1.6**
JSU	**Suzuyama**	**1.24**	**74**		**Pn**	**07 31 38.0**	**+0.1**
JNN	**Nakanoshima**	**1.50**	**152**	P	**Pn**	**07 31 39.2**	**-2.2**
JNN				*e*S	**Sn**	**07 32 00.4**	**+0.4**
JFU	**Fukue jima 2**	**1.51**	**350**	P	**Pn**	**07 31 37.9**	**-3.7**
JFU				*e*S	**Sn**	**07 31 58.5**	**-1.7**
JYAK	**Yakushimahirau**	**1.56**	**126**	P	**Pn**	**07 31 40.7**	**-1.5**
JYAK				*e*S	**Sb**	**07 32 03.9**	**-0.1**
JTN	**Tanegashima 3**	**1.73**	**107**	P	**Pn**	**07 31 44.2**	**-0.4**
JTN				*e*S	**Sb**	**07 32 08.8**	**-0.2**
JMTN	**Minamitane**	**1.76**	**115**	P	**Pn**	**07 31 44.5**	**-0.6**
JMTN				*e*S	**Sb**	**07 32 09.5**	**-0.4**
JTZ	**Takazaki**	**1.88**	**67**	P	**Pn**	**07 31 47.0**	**+0.3**
JTZ				*e*S	**Sb**	**07 32 13.7**	**+0.4**
JTAJ	**Takarajima**	**2.01**	**176**	P	**Pn**	**07 31 46.3**	**-2.2**
JTAJ				*e*S	**Sn**	**07 32 12.3**	**-0.3**
JNU	**Nakatsue**	**2.49**	**38**	Pn	**Pb**	**07 32 00.4**	**-0.2**
	116nm,0.3s,baz=34,slow=0.0,SNR=76						
JNU				Sn	**Sb**	**07 32 34.9**	**+4.1**
	202nm,0.3s,baz=87,slow=14,SNR=14						
JNU	**Nakatsue**	**2.49**	**38**		**Pb**	**07 31 57.8**	**-2.7**
JTU	**Tsushima**	**3.36**	**5**	Pn	**Pn**	**07 32 06.5**	**-0.5**
JOW	**Kunigami**	**4.37**	**189**	Pn	**Pn**	**07 32 21.0**	**0.0**
	3.9nm,0.3s,baz=3.3,slow=10,SNR=9.5						
JOW				LR	LR	07 33 51.1	
	comp=Z,554nm,21.0s,baz=110,slow=38						
JOW	**Kunigami**	**4.37**	**189**	Pn	**Pn**	**07 32 20.8**	**-0.2**
JMN	**Monobe**	**4.81**	**57**	Pn	**Pn**	**07 32 29.7**	**+2.7**
JHS	**Saijyo**	**5.12**	**41**	Pn	**Pn**	**07 32 34.3**	**+3.0**
TJN	**Taejon**	**5.38**	**345**	*ce*P	**Pn**	**07 32 33.0**	**-1.8**
JMZ	**Minamidaito 2**	**5.66**	**160**	Pn	**Pn**	**07 32 37.3**	**-1.4**
KSAR	**Wonju Array Be**	**6.33**	**352**	P	**Pn**	**07 32 47.2**	**-0.7**
KSAR	**Wonju Array Be**	**6.33**	**352**	Pn	**Pn**	**07 32 47.2**	**-0.7**
KSRS	**Korea Array**	**6.34**	**352**	Pn	**Pn**	**07 32 47.0**	**-1.0**
	1.2nm,0.3s,baz=175,slow=15,SNR=23						
KSRS				Sn	**Sn**	**07 33 58.0**	**-1.4**
	1.2nm,0.3s,baz=183,slow=18,SNR=1.8						
KSRS				Lg	Lg	07 34 29.7	
	2.0nm,0.3s,baz=172,slow=32,SNR=9.2						
KSRS	**Korea Array**	**6.34**	**352**	P	**Pn**	**07 32 47.0**	**-1.0**
KS19	**Wonju Array Si**	**6.40**	**351**	Pn	**Pn**	**07 32 47.6**	**-1.2**
JWT	**Wachi**	**6.71**	**51**	Pn	**Pn**	**07 32 54.0**	**+0.9**
SSE	**Sheshan**	**6.75**	**271**	P	**Pn**	**07 32 57.3**	**+3.7**
SSE				S	**Sn**	**07 34 13.5**	**+4.0**
SSE				pmax	pmax		
	comp=Z,7.0nm,0.6s						
SSE				pmax	pmax		
	comp=Z,62nm,3.5s						
SSE				LR	LR		
	comp=N,2µm,16.4s						
SSE				LR	LR		
	comp=E,680nm,16.5s						
INU	**Inuyama**	**7.86**	**56**	Pn	**Pn**	**07 33 10.8**	**+2.0**
JGF	**Kuroka**	**8.23**	**55**		**Pn**	**07 33 15.6**	**+1.7**
YOJ	**Yonaguni jima**	**8.56**	**220**	P	**Pn**	**07 33 19.3**	**+0.8**
YOJ	**Yonaguni jima**	**8.56**	**220**		**Pn**	**07 33 19.3**	**+0.8**
NJ2	**Nanjing**	**8.75**	**278**	*e*P	**Pn**	**07 33 22.0**	**+1.0**
NJ2				pmax	pmax		
	comp=Z,16nm,0.7s						
NJ2				LR	LR		
	comp=N,2µm,11.7s						
NJ2				LR	LR		
	comp=E,2µm,13.1s						
NJ2				LR	LR		
	comp=Z,2µm,14.0s						
TATO	**Taipei**	**9.09**	**229**	Pn	**Pn**	**07 33 25.4**	**-0.4**
MAJO	**Matsushiro**	**9.30**	**52**	*i* P	**Pn**	**07 33 31.1**	**+2.4**
MAJO	**Matsushiro**	**9.30**	**52**	Pn	**Pn**	**07 33 29.6**	**+0.9**
MJAR	**Matsushiro Arr**	**9.31**	**52**	Pn	Pn	07 33 33.9	+5.2
	0.1nm,0.3s,baz=231,slow=13,SNR=7.3						
MJAR				LR	LR	07 37 19.1	
	comp=Z,435nm,20.1s,baz=245,slow=38						
MJAR	**Matsushiro Arr**	**9.31**	**52**		**Pn**	**07 33 30.0**	**+1.3**
NACB	**Ninganchiao**	**9.60**	**225**	Pn	**Pn**	**07 33 31.6**	**-1.2**
SSLB	**Suanglung**	**10.28**	**226**	Pn	**Pn**	**07 33 42.4**	**+0.3**
YULB	**Yu-li**	**10.37**	**224**	Pn	**Pn**	**07 33 42.0**	**-1.4**
JYT	**Yasato**	**10.56**	**58**	Pn	**Pn**	**07 33 49.1**	**+3.3**
TPUB	**Ta-pu**	**10.84**	**226**	Pn	**Pn**	**07 33 50.1**	**+0.3**
TWG	**Pinlang**	**10.94**	**222**		**Pn**	**07 33 50.9**	**-0.3**
JMM	**Marumori**	**11.76**	**52**	Pn	**Pn**	**07 34 04.6**	**+2.4**
JCJ	**Chichijima**	**12.17**	**106**	LR	LR	07 38 27.8	
	comp=Z,133nm,18.3s,baz=88,slow=35						
CN2	**Changchun**	**12.93**	**348**	*e*P	**P**	**07 34 25.8**	**-2.7**
CN2				pmax	pmax		
	comp=Z,20nm,1.6s						
CN2				LR	LR		
	comp=N,3µm,9.0s						
CN2				LR	LR		
	comp=E,2µm,9.0s						
CN2				LR	LR		
	comp=Z,3µm,9.0s						
USA0B	**Ussuriysk Arra**	**13.21**	**9**	P	**Pn**	**07 34 24.4**	**+2.3**
USA0B	**Ussuriysk Arra**	**13.21**	**9**	Pn	**Pn**	**07 34 24.4**	**+2.3**
USRK	**Ussuriysk Ar.**	**13.21**	**9**	Pn	**P**	**07 34 29.4**	**-2.3**
	baz=199,slow=11,SNR=1.3						
USRK				LR	LR	07 39 02.1	
	comp=Z,216nm,18.1s,baz=178,slow=35						
USRK	**Ussuriysk Ar.**	**13.21**	**9**	P	**Pn**	**07 34 23.1**	**+1.0**
USRK	**Ussuriysk Ar.**	**13.21**	**9**		**Pn**	**07 34 23.1**	**+1.0**
BJT	**Baijiatuau**	**13.70**	**314**	P	**Pn**	**07 34 28.2**	**-0.6**
BJT	**Baijiatuau**	**13.70**	**314**	Pn	**Pn**	**07 34 28.2**	**-0.6**
BJI	**Beijing**	**13.71**	**314**	P	**P**	**07 34 35.6**	**-1.6**
BJI				S	**Sn**	**07 37 07.5**	**+7.5**
BJI				pmax	pmax		
	comp=Z,17nm,1.5s						
BJI				pmax	pmax		
	comp=Z,260nm,4.2s						
BJI				LR	LR		
	comp=N,1µm,16.1s						
BJI				LR	LR		
	comp=E,510nm,18.4s						
ASAJ	**Asahikawa**	**16.77**	**36**	P	**P**	**07 35 12.5**	**+1.4**
	0.5nm,0.3s,baz=235,slow=12,SNR=7.5						
JKA	**Kamikawa-asahi**	**16.77**	**36**	Pn	**Pn**	**07 35 09.5**	**+0.4**
HHC	**Hu-ho-hao-te**	**17.11**	**309**	*e*P	**P**	**07 35 14.0**	**-1.1**
HHC				pmax	pmax		
	comp=Z,20nm,0.7s						
HHC				pmax	pmax		
	comp=Z,150nm,6.6s						
HHC				LR	LR		
	comp=N,1µm,13.8s						
HHC				LR	LR		
	comp=E,1µm,15.7s						
HHC				LR	LR		
	comp=Z,940nm,18.0s						
XAN	**Xi'an**	**17.21**	**285**	P	Pn	07 35 05.9	-8.9
XAN				pP	P	07 35 16.0	-0.1
XAN				sP	pP	07 35 20.8	-3.0
XAN				S	Sn	07 38 07.8	-18
XAN				SS	**S**	**07 38 29.8**	**-4.1**
XAN				pmax	pmax		
	comp=Z,6.0nm,0.6s						
XAN				pmax	pmax		
	comp=Z,120nm,4.0s						
XAN				LR	LR		
	comp=N,2µm,12.5s						
XAN				LR	LR		
	comp=E,1µm,13.1s						
XAN				LR	LR		
	comp=Z,900nm,14.4s						
KLR	**Kul'dur**	**18.16**	**6**	P	**P**	**07 35 28.4**	**+1.9**
	comp=Z,0.3nm,0.3s,baz=202,slow=15,SNR=7.0						
KLR	**Kul'dur**	**18.16**	**6**	*ce*P	**P**	**07 35 27.9**	**+1.5**
KLR				pmax	pmax		
	comp=Z,34nm,1.5s						
YSS	**Yuzh-Sakhalins**	**18.97**	**30**	*e*P	**Pn**	**07 35 36.8**	**+0.6**
YSS				*e*S	**Sn**	**07 39 01.3**	**-6.4**
YSS				pmax	pmax		
	comp=Z,50nm,1.2s						
YSS				MLR	MLR		
	comp=Z,800nm,15.0s						
YSS				MLR	MLR		
	comp=E,400nm,14.0s						
HIA	**Hailar**	**19.40**	**341**	*i* P	**P**	**07 35 39.5**	**-0.6**
HIA				pmax	pmax		
	comp=Z,12nm,1.0s						
HIA	**Hailar**	**19.40**	**341**	P	**P**	**07 35 39.7**	**-0.4**
GYA	**Guiyang**	**20.17**	**262**	⇑P	P	07 35 35.0	-14
GYA				sP	Pn	07 35 51.3	+0.5
GYA				S	S	07 39 05.0	-29
GYA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
GYA				LR	LR		
	comp=N,880nm,8.2s						
GYA				LR	LR		
	comp=E,520nm,12.8s						
GYA				LR	LR		
	comp=Z,510nm,13.0s						
QIZ	**Qiongzhong**	**21.15**	**240**	P	**P**	**07 35 59.6**	**+0.3**
QIZ				S	**S**	**07 39 53.6**	**+0.5**
QIZ				LR	LR		
	comp=Z,540nm,11.4s						
QIZ				LR	LR		
	comp=Z,410nm,13.1s						
QIZ				LR	LR		
	comp=Z,300nm,12.1s						
LZH	**Lanzhou**	**21.54**	**290**	*e*P	**P**	**07 36 04.5**	**+1.0**
LZH				pP	sP	07 36 14.4	-0.6
LZH				sP	pP	07 36 19.6	+8.3
LZH				pmax	pmax		
	comp=Z,17nm,1.3s						
LZH				pmax	pmax		
	comp=Z,29nm,5.4s						
LZH				LR	LR		
	comp=Z,2µm,16.4s						
LZH				LR	LR		
	comp=Z,920nm,15.7s						
LZH				LR	LR		
	comp=Z,830nm,15.2s						
CD2	**Chengdu**	**21.67**	**276**	P	**P**	**07 36 02.9**	**-2.0**
CD2				S	**S**	**07 40 01.0**	**-2.4**
CD2				PcP	**PcP**	**07 40 05.0**	**-0.5**
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
CD2				pmax	pmax		
	comp=Z,210nm,9.8s						
CD2				LR	LR		
	comp=Z,2µm,20.0s						
CD2				LR	LR		
	comp=Z,1µm,12.0s						
CD2				LR	LR		
	comp=Z,1µm,11.6s						
ZEA	**Zeya**	**22.59**	**357**	*e*P	**P**	**07 36 15.7**	**+1.2**
ZEA				pmax	pmax		
	comp=E,10.0nm,1.3s						
ZEA				pmax	pmax		
	comp=N,10.0nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.4s						
GUMO	**Guam**	**22.75**	**137**	LR	LR	07 44 16.2	
	comp=Z,204nm,19.5s,baz=60,slow=34						
ULN	**Ulaanbaatar**	**23.67**	**321**	*ce*P	**P**	**07 36 23.1**	**-2.5**
ULN				pmax	pmax		
	comp=Z,13nm,2.5s						
ULN	**Ulaanbaatar**	**23.67**	**321**	P	**P**	**07 36 24.5**	**-1.1**
SONM	**Songino Array**	**24.01**	**320**	P	**P**	**07 36 27.0**	**-1.7**
	comp=Z,3.7nm,1.0s,baz=127,slow=7.9,SNR=14						
SONM				LR	LR	07 46 52.8	
	comp=Z,709nm,18.4s,baz=144,slow=40						
SONM	**Songino Array**	**24.01**	**320**	P	**P**	**07 36 27.9**	**-0.9**
SONM				pmax	pmax		
	comp=Z,15nm,1.4s						
SONM	**Songino Array**	**24.01**	**320**	P	**P**	**07 36 27.9**	**-0.9**
GTA	**Gaotai**	**25.17**	**297**	*e*P	**P**	**07 36 43.8**	**+4.4**
GTA				pP	sP	07 36 52.9	+1.6
GTA				sP	pP	07 36 57.4	+10
GTA				S	**S**	**07 41 08.9**	**+6.1**
GTA				sS	sS	07 41 22.0	+5.4
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,41nm,3.6s						
GTA				LR	LR		
	comp=Z,620nm,13.1s						
GTA				LR	LR		
	comp=Z,460nm,13.9s						
GTA				LR	LR		
	comp=Z,500nm,14.7s						
UBPT	**Khong Chiam**	**26.74**	**239**	P	**P**	**07 36 53.4**	**-0.3**
TLY	**Talaya**	**27.74**	**325**	LR	LR	07 49 19.2	
	comp=Z,464nm,18.2s,baz=130,slow=39						
CMAR	**Chiang Mai Arr**	**30.02**	**252**	LR	LR	07 51 08.9	
	comp=Z,183nm,18.3s,baz=67,slow=40						
CMAR	**Chiang Mai Arr**	**30.02**	**252**	*ce*P	P	07 37 16.3	-6.6
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	**Petropavlovsk-**	**30.18**	**35**	LR	LR	07 49 08.1	
	comp=Z,153nm,18.6s,baz=216,slow=35						
YAK	**Yakutsk**	**30.88**	**1**	LR	LR	07 49 58.4	
	comp=Z,102nm,18.1s,baz=78,slow=36						
FAKI	**Fak Fak**	**34.03**	**174**	P	**P**	**07 37 57.9**	**-0.2**
FAKI				IAmb	IAmb	07 38 02.5	
	comp=Z,19nm,1.0s						
WMQ	**Urumqi**	**34.81**	**303**	*e*P	**P**	**07 38 06.1**	**+1.3**
WMQ				LR	LR		
	comp=Z,270nm,16.3s						
WMQ				LR	LR		
	comp=Z,520nm,20.7s						
WMQ				LR	LR		
	comp=Z,260nm,19.1s						
ZALV	**Zalesovo Beam**	**38.89**	**319**	P	**P**	**07 38 37.8**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=119,slow=12,SNR=1.8						
ZALV				LR	LR	07 56 21.6	
	comp=Z,330nm,18.4s,baz=112,slow=39						
MK31	**Makanchi Array**	**38.96**	**307**	*i* P	**P**	**07 38 39.1**	**-0.8**
MKAR	**Makanchi Array**	**38.96**	**307**	P	**P**	**07 38 38.0**	**-1.9**
	comp=Z,1.8nm,1.0s,baz=83,slow=9.9,SNR=3.9						
MKAR				LR	LR	07 55 42.8	
	comp=Z,138nm,18.6s,baz=89,slow=38						
MKAR	**Makanchi Array**	**38.96**	**307**	*ce*P	**P**	**07 38 38.2**	**-1.7**
MKAR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
PSI	**Prapat**	**40.05**	**231**	LR	LR	07 56 05.5	
	comp=Z,134nm,18.4s,slow=38						
TIXI	**Tiksi**	**40.54**	**360**	*ce*P	**P**	**07 38 52.1**	**-0.5**
TIXI				pmax	pmax		
	comp=Z,11nm,1.6s						
KURK	**Kurchatov**	**41.87**	**313**	*i* P	**P**	**07 39 01.2**	**-2.7**
KURK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
KURK	**Kurchatov**	**41.87**	**313**	P	**P**	**07 39 02.3**	**-1.6**
KURBB	**Kurchatov Arra**	**41.92**	**313**	P	**P**	**07 39 02.3**	**-2.0**
	comp=Z,0.5nm,0.3s,baz=97,slow=9.3,SNR=4.5						
BILL	**Bilibino**	**42.78**	**20**	*i* P	**P**	**07 39 13.5**	**+2.4**
BILL				*i*		07 40 53.8	
BILL				pmax	pmax		
	comp=Z,20nm,1.9s						
BILL				MLR	MLR		
	comp=Z,124nm,15.0s						
LEM	**Lembang**	**42.99**	**212**	LR	LR	07 59 01.8	
	comp=Z,40nm,19.3s,baz=114,slow=39						
KSH	**Kashi**	**43.56**	**296**	P	P	07 39 22.5	+4.5
KSH				pP	sP	07 39 34.9	+4.8
KSH				sP	pP	07 39 38.6	+12
KSH				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KSH				LR	LR		
	comp=Z,460nm,15.3s						
KSH				LR	LR		
	comp=Z,390nm,15.5s						
KSH				LR	LR		
	comp=Z,480nm,19.9s						
PMG	**Port Moresby**	**43.92**	**154**	LR	LR	07 54 40.4	
	comp=Z,92nm,21.3s,baz=326,slow=32						
NRIK	**Noril'sk**	**44.82**	**341**	P	**P**	**07 39 27.0**	**-0.4**
	comp=Z,3.7nm,0.9s,baz=134,slow=7.1,SNR=4.2						
NRIK				LR	LR	07 57 33.6	
	comp=Z,161nm,18.7s,baz=126,slow=35						
NRIK	**Noril'sk**	**44.82**	**341**	*ce*P	**P**	**07 39 26.3**	**-1.1**
NRIK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
NRIK	**Noril'sk**	**44.82**	**341**	P	**P**	**07 39 27.1**	**-0.3**
NRIK				IAmb	IAmb	07 39 38.7	
	comp=Z,15nm,1.4s						
KNRA	**Kununurra**	**46.58**	**180**	P	**P**	**07 39 41.5**	**-0.3**
BVAR	**Borovoye Array**	**47.18**	**315**	P	**P**	**07 39 44.7**	**-1.6**
	comp=Z,1.2nm,0.7s,baz=169,slow=10,SNR=4.3						
BRVK	**Borovoye**	**47.25**	**315**	*i* P	**P**	**07 39 43.9**	**-2.9**
BRVK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
BRVK	**Borovoye**	**47.25**	**315**	P	**P**	**07 39 46.5**	**-0.3**
BRVK				IAmb	IAmb	07 39 52.6	
	comp=Z,9.0nm,1.3s						
KK31	**Karatay Array**	**47.29**	**302**	P	**P**	**07 39 47.4**	**+0.1**
KK31				pmax	pmax		
	comp=Z,9.0nm,1.4s						
KK31	**Karatay Array**	**47.29**	**302**	P	**P**	**07 39 47.4**	**+0.1**
KK31				IAmb	IAmb	07 40 00.2	
	comp=Z,9.2nm,1.4s						
KKAR	**Karatay Array**	**47.29**	**302**	P	**P**	**07 39 47.9**	**+0.6**
KKAR				pmax	pmax		
	comp=Z,9.0nm,1.4s						
KKAR	**Karatay Array**	**47.29**	**302**	P	**P**	**07 39 45.3**	**-2.0**
KKAR	**Karatay Array**	**47.29**	**302**	P	**P**	**07 39 47.9**	**+0.6**
KKAR				IAmb	IAmb	07 40 00.2	
	comp=Z,9.2nm,1.4s						
GAR	**Garm**	**47.98**	**296**	P	**P**	**07 39 52.8**	**0.0**
GAR				IAmb	IAmb	07 40 08.2	
	comp=Z,14nm,1.3s						
WB0	**Warramunga Arr**	**50.90**	**174**	P	**P**	**07 40 14.5**	**-0.5**
WRAB	**Tennant Creek**	**51.06**	**174**	*ce*P	**P**	**07 40 14.3**	**-1.9**
WRAB				pmax	pmax		
	comp=Z,7.0nm,0.9s						
WRA	**Warramunga Arr**	**51.07**	**174**	P	**P**	**07 40 15.7**	**-0.6**
	comp=Z,4.6nm,0.8s,baz=352,slow=8.3,SNR=18						
WRA	**Warramunga Arr**	**51.07**	**174**	*i* P	**P**	**07 40 15.8**	**-0.5**
WRA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
WRA	**Warramunga Arr**	**51.07**	**174**	P	**P**	**07 40 15.9**	**-0.4**
WB2	**Warramunga Arr**	**51.07**	**174**	P	**P**	**07 40 16.0**	**-0.3**
WB2				IAmb	IAmb	07 40 20.5	
	comp=Z,7.9nm,0.9s						
WR0	**Warramunga Arr**	**51.10**	**173**	P	**P**	**07 40 16.3**	**-0.3**
WR0				IAmb	IAmb	07 40 20.4	
	comp=Z,10nm,1.0s						
ABKAR	**Akbulak array**	**53.90**	**311**	P	**P**	**07 40 36.7**	**-0.3**
ABKAR	**Akbulak array**	**53.90**	**311**	P	**P**	**07 40 37.5**	**+0.4**
ARU	**Arti**	**54.04**	**320**	LR	LR	08 04 53.2	
	comp=Z,544nm,19.0s,baz=66,slow=38						
ARU	**Arti**	**54.04**	**320**	*c i*P	**P**	**07 40 37.3**	**-0.7**
ARU						07 42 33.6	
ARU				S	**S**	**07 48 11.1**	**-0.9**
ARU				SS	**SKiKP**	**07 51 44.4**	**-3.6**
ARU				pmax	pmax		
	comp=Z,6.0nm,1.4s						
ARU				MLR	MLR		
	comp=Z,440nm,16.0s						
ARU	**Arti**	**54.04**	**320**	P	**P**	**07 40 38.6**	**+0.6**
ARU				IAmb	IAmb	07 40 51.2	
	comp=Z,7.0nm,1.0s						
AS31	**Alice Springs**	**54.72**	**175**	P	**P**	**07 40 42.4**	**-0.9**
ASAR	**Alice Springs**	**54.72**	**175**	P	**P**	**07 40 43.1**	**-0.2**
	comp=Z,4.5nm,0.8s,baz=0.1,slow=7.3,SNR=29						
ASAR	**Alice Springs**	**54.72**	**175**	P	**P**	**07 40 42.8**	**-0.4**
J20K	**Nowinta River**	**56.72**	**31**	P	**P**	**07 40 58.4**	**+1.3**
J20K				IAmb	IAmb	07 41 00.1	
	comp=Z,15nm,1.4s						
IMAR	**Indian Mountai**	**56.79**	**28**	P	**P**	**07 40 59.3**	**+1.7**
H21K	**Melozitna Rive**	**57.20**	**29**	P	**P**	**07 41 02.3**	**+1.8**
GEYT	**Alibeck**	**57.55**	**298**	LR	LR	08 09 16.5	
	comp=Z,123nm,19.0s,baz=85,slow=40						
I21K	**Tanana**	**57.58**	**29**	P	**P**	**07 41 05.7**	**+2.5**
I21K				IAmb	IAmb	07 41 12.3	
	comp=Z,18nm,1.4s						
NEA2	**Nenana**	**58.88**	**30**	P	**P**	**07 41 13.9**	**+1.6**
NEA2				IAmb	IAmb	07 41 18.1	
	comp=Z,8.5nm,1.0s						
RND	**Reindeer**	**59.14**	**31**	P	**P**	**07 41 14.9**	**+0.7**
RND				pmax	pmax		
	comp=Z,19nm,1.4s						
RND	**Reindeer**	**59.14**	**31**	P	**P**	**07 41 14.9**	**+0.7**
MDM	**Murphy Dome**	**59.18**	**29**	P	**P**	**07 41 15.5**	**+1.1**
H24K	**Noodor Dome**	**59.21**	**28**	P	**P**	**07 41 15.9**	**+1.3**
H24K				IAmb	IAmb	07 41 20.5	
	comp=Z,6.9nm,1.1s						
PMR	**Palmer**	**59.29**	**33**	P	**P**	**07 41 15.8**	**+0.6**
PMR				pmax	pmax		
	comp=Z,15nm,1.3s						
PMR	**Palmer**	**59.29**	**33**	P	**P**	**07 41 15.8**	**+0.6**
PMR				IAmb	IAmb	07 41 19.0	
	comp=Z,15nm,1.3s						
COLA	**College**	**59.35**	**30**	*i* P	**P**	**07 41 17.2**	**+1.7**
COLA				pmax	pmax		
	comp=Z,12nm,1.6s						

POKR	**Poker Plat Res**	**59.49**	**29**	P	**P**	**07 41 18.6**	**+2.0**
POKR				IAmb	IAmb	07 41 22.7	
	comp=Z,10nm,0.9s						
ILAR	**Eielson Array**	**59.78**	**30**	P	**P**	**07 41 20.1**	**+1.6**
	comp=Z,1.0nm,0.7s,baz=286,slow=8.1,SNR=10						
ILAR				LR	LR	08 08 10.8	
	comp=Z,43nm,18.8s,baz=306,slow=37						
ILAR	**Eielson Array**	**59.78**	**30**	P	**P**	**07 41 20.2**	**+1.7**
ILAR	**Eielson Array**	**59.78**	**30**	P	**P**	**07 41 20.2**	**+1.7**
HDA	**Harding Lake**	**59.81**	**30**	P	**P**	**07 41 17.9**	**-0.8**
HDA				IAmb	IAmb	07 41 21.0	
	comp=Z,9.0nm,1.2s						
PRP	**Porcupine Dome**	**60.22**	**29**	P	**P**	**07 41 22.1**	**+0.4**
PRP				IAmb	IAmb	07 41 48.7	
	comp=Z,12nm,1.5s						
BMAR	**Burnt Mountain**	**60.26**	**26**	P	**P**	**07 41 23.9**	**+2.1**
DIV	**Divide**	**60.97**	**34**	P	**P**	**07 41 28.3**	**+1.5**
DIV				IAmb	IAmb	07 41 31.9	
	comp=Z,14nm,1.1s						
BELG	**Belogornoye**	**60.97**	**316**	LR	LR	08 09 33.2	
	comp=Z,247nm,18.1s,baz=110,slow=38						
SCRK	**Sand Creek**	**61.17**	**30**	P	**P**	**07 41 29.1**	**+0.9**
SCRK				IAmb	IAmb	07 41 32.6	
	comp=Z,7.1nm,1.0s						
DOT	**Dot Lake**	**61.20**	**31**	P	**P**	**07 41 29.2**	**+0.9**
DOT				IAmb	IAmb	07 41 32.6	
	comp=Z,8.8nm,1.2s						
BMRM	**Bremner River**	**61.56**	**34**	P	**P**	**07 41 32.8**	**+2.1**
M26K	**Nabesna, AK**	**61.96**	**32**	P	**P**	**07 41 35.1**	**+1.7**
BERG	**Berg Lake**	**62.13**	**34**	P	**P**	**07 41 36.0**	**+1.5**
MCARA	**McCarthy VSAT**	**62.20**	**33**	P	**P**	**07 41 34.7**	**-0.3**
BCAR	**Beaver Creek A**	**62.34**	**31**	P	**P**	**07 41 37.5**	**+1.5**
EPYK	**Eagle Plains**	**63.52**	**27**	P	**P**	**07 41 45.5**	**+1.7**
MAK	**Makhachkala**	**63.76**	**306**	*e*P	P	07 41 38.7	-6.9
MAK				*e*S	S	07 50 09.2	-9.3
STKA	**Stephens Creek**	**63.82**	**168**	P	**P**	**07 41 46.1**	**+0.1**
	comp=Z,2.0nm,0.8s,baz=353,slow=8.1,SNR=3.8						
STKA	**Stephens Creek**	**63.82**	**168**	P	**P**	**07 41 46.1**	**+0.1**
STKA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
STKA	**Stephens Creek**	**63.82**	**168**	IAmb	IAmb	07 41 50.4	
	comp=Z,0.7nm,0.9s						
BBOO	**Buckleboo**	**63.98**	**173**	P	**P**	**07 41 47.1**	**+0.1**
INK	**Inuvik**	**64.09**	**24**	P	**P**	**07 41 49.5**	**+2.1**
	comp=Z,3.9nm,1.1s,baz=286,slow=6.0,SNR=3.5						
INK	**Inuvik**	**64.09**	**24**	P	**P**	**07 41 48.2**	**+0.9**
INK				IAmb	IAmb	07 41 54.8	
	comp=Z,5.2nm,1.1s						
HYT	**Haines Junctio**	**64.93**	**33**	P	**P**	**07 41 54.3**	**+1.2**
KIP	**Kipapa**	**65.07**	**79***c*	*e*P	**P**	**07 41 57.3**	**+2.7**
KIP				pmax	pmax		
	comp=Z,133nm,1.7s						
A36M	**Sachs Harbour**	**65.34**	**19**	P	**P**	**07 41 56.0**	**+0.5**
A36M				IAmb	IAmb	07 42 07.1	
	comp=Z,5.4nm,0.9s						
ARCES	**ARCESS Array B**	**65.70**	**338**	LR	LR	08 14 44.1	
	comp=Z,123nm,20.4s,baz=120,slow=40						
KBZ	**Khabaz**	**66.65**	**308**	LR	LR	08 12 28.1	
	comp=Z,79nm,21.1s,baz=58,slow=37						
KBZ	**Khabaz**	**66.65**	**308**	*i* P	**P**	**07 42 01.9**	**-2.5**
KBZ				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KIV	**Kislovodsk**	**66.71**	**308**	*e*P	**P**	**07 42 02.8**	**-2.1**
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,67nm,17.0s						
MSVF	**Nonsavu**	**67.66**	**129**	LR	LR	08 06 15.2	
	comp=Z,8.2nm,19.6s,baz=351,slow=31						
FINES	**FINESS Array B**	**68.95**	**330**	P	**P**	**07 42 18.8**	**+0.2**
	comp=Z,1.2nm,0.8s,baz=74,slow=10,SNR=1.4						
FINES				LR	LR	08 14 29.1	
	comp=Z,126nm,18.5s,baz=52,slow=38						
RES	**Resolute Bay**	**70.58**	**11**	P	**P**	**07 42 28.7**	**+0.3**
RES				pmax	pmax		
	comp=Z,8.0nm,1.2s						
RES	**Resolute Bay**	**70.58**	**11**	P	**P**	**07 42 28.7**	**+0.3**
RES				IAmb	IAmb	07 42 31.2	
	comp=Z,8.1nm,1.2s						
MNK	**Minsk**	**71.25**	**323**	*i* P	P	07 42 24.4	-8.4
MNK				*i* S	S	07 51 37.5	-11
MNK				*i*		07 52 25.3	
MNK				*i* SS	**SS**	**07 56 17.7**	**-3.8**
MNK				*i* SSS	SSS	07 59 35.7	
MNK				pmax	pmax		
	comp=E,4.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,13nm,0.8s						
MNK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MNK				MLR	MLR		
	comp=Z,235nm,20.0s						
MNK				MLR	MLR		
	comp=E,29nm,17.0s						
MNK				MLR	MLR		
	comp=N,148nm,20.0s						
MNK	**Minsk**	**71.25**	**323**	*i* P	P	07 42 24.4	-8.4
	comp=E,4.0nm,0.9s						
MNK				*i* P	P	07 42 24.4	-8.4
	comp=N,13nm,0.8s						
MNK				*i* P	P	07 42 24.4	-8.4
	comp=Z,7.0nm,0.8s,baz=63						
MNK				*i* PcP	sP	07 42 44.8	-0.4
MNK				*i* PP	PP	07 45 01.3	-9.3
MNK				*i* PPP	PPP	07 46 44.3	
MNK				*i* S	S	07 51 37.5	-11
MNK				*i* SS	**SS**	**07 56 17.8**	**-3.7**
MNK				*i* SSS	SSS	07 59 35.7	
MNK				*i* LQ	LQ	08 09 20.8	
MNK				*i* LR	LR	08 14 03.6	
MNK				*i* LRM	MLR	08 16 41.9	
	comp=Z,235nm,19.6s						
MNK				*i* LRM	MLR	08 16 44.0	
	comp=E,29nm,17.4s						
MNK				*i* LRM	MLR	08 16 46.2	
	comp=N,148nm,19.5s						
AKASG	**Malin Array Be**	**72.28**	**319**	LR	LR	08 16 45.4	
	comp=N,216nm,18.5s,baz=55,slow=38						
BRTR	**Keskin Array B**	**74.61**	**307**	LR	LR	08 20 46.7	
	comp=N,68nm,18.7s,baz=48,slow=40						
NOA	**NORSAR Array B**	**75.22**	**334**	LR	LR	08 18 55.3	
	comp=N,72nm,20.0s,baz=70,slow=38						
GERES	**GERESS Array B**	**81.71**	**323**	LR	LR	08 22 58.7	
	comp=N,144nm,18.2s,baz=56,slow=38						
EGMT	**Eagleton**	**85.20**	**35**	P	**P**	**07 43 48.4**	**-1.8**
EGMT				IAmb	IAmb	07 43 55.5	
	comp=Z,7.2nm,0.9s						
NVAR	**Mina Array Bea**	**86.58**	**47**	P	**P**	**07 44 00.6**	**+3.2**
	comp=Z,1.1nm,0.6s,baz=302,slow=2.8,SNR=4.2						
NVAR	**Mina Array Bea**	**86.58**	**47**	P	**P**	**07 43 57.9**	**+0.4**
DUG	**Dugway, Tooele**	**88.77**	**43**	P	**P**	**07 44 10.4**	**+2.6**
DUG				pmax	pmax		
	comp=Z,5.0nm,2.4s						
PDAR	**Pinedale Array**	**88.87**	**39**	P	**P**	**07 44 10.3**	**+1.9**
	comp=Z,2.0nm,0.9s,baz=243,slow=1.0,SNR=12						
PDAR				LR	LR	08 26 12.0	
	comp=Z,14nm,19.3s,baz=352,slow=37						
ULM	**Lac du Bonnet**	**89.70**	**27**	P	**P**	**07 44 15.7**	**+4.0**
	comp=Z,7.7nm,0.9s,baz=285,slow=7.2,SNR=5.0						
ULM				LR	LR	08 26 51.3	
	comp=Z,21nm,19.9s,baz=74,slow=37						
ULM	**Lac du Bonnet**	**89.70**	**27**	P	**P**	**07 44 12.2**	**+0.4**
P17A	**Butcher Ranch,**	**90.44**	**42**	P	**P**	**07 44 15.6**	**0.0**
P17A				IAmb	IAmb	07 44 21.8	
	comp=Z,8.9nm,1.1s						
RSSD	**Black Hills**	**90.77**	**35**	P	**P**	**07 44 21.1**	**+3.9**
RSSD				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KEST	**Kesra**	**92.65**	**315**	LR	LR	08 29 52.2	
	comp=Z,111nm,19.3s,baz=296,slow=38						
SCHQ	**Schefferville**	**93.26**	**9**	LR	LR	08 28 47.1	
	comp=Z,46nm,20.0s,baz=60,slow=37						
ESDC	**Sonseca Array**	**97.12**	**325**	LR	LR	08 33 39.7	
	comp=Z,112nm,19.1s,baz=350,slow=39						

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*TUL **16** 07:43:48.4±1.0, 36°.462N±0°.007×98°.77W±0°.02, h5^{km}±7^{km}, ML2.7, mb_Lg2.6/29(NEIC), Error ellipse: s-maj=2.8km s-min=1.0km az=90.0*

NEIC 16 07:43:48.5±1.1**, 36°.46N**±0°.02×**98°.76W**±0°.03**, h5**^{km}±2^{km}**, Error ellipse: s-maj=4.3km s-min=3.0km az=316.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	**Winter Ranch,**	**0.21**	**248**	Pg	Pg	07 43 53.0	+0.2
U32A				Sg	Sg	07 43 56.2	+0.6
CROK	**Carrier**	**0.62**	**86**	Pg	Pg	07 44 00.8	+0.3
CROK				Sg	Sg	07 44 09.7	+1.1
KAN14	**Manchester OK**	**0.81**	**52**	Pg	Pg	07 44 04.1	+0.1
KAN14				Sg	Sg	07 44 15.0	+0.6
GC02	**Grant County #**	**0.82**	**61**		Pg	07 44 04.2	0.0
GC02				Sg	Sg	07 44 15.5	+0.6
KAN10	**Anthony SW Sta**	**0.85**	**38**	Pg	Pg	07 44 04.7	-0.1
KAN10				Sg	Sg	07 44 16.2	+0.4
KAN16	**Harper SW Stat**	**0.94**	**36**	Pg	Pg	07 44 06.6	0.0
KAN05	**Bluff City Nor**	**0.96**	**47**	Pg	Pg	07 44 06.8	-0.1
KAN05				IAmb_Lg		07 44 19.5	
	comp=Z,68nm,0.9s						
KAN05				Sg	Sg	07 44 20.0	+0.6
KAN17	**Caldwell West**	**0.98**	**54**	Pg	Pg	07 44 07.3	-0.1
KAN17				Sg	Sg	07 44 20.5	+0.3
KAN08	**Anthony NE Sta**	**0.99**	**39**	Pg	Pg	07 44 07.5	0.0
KAN08				Sg	Sg	07 44 20.6	+0.2
KAN12	**Harper NE Stat**	**1.03**	**36**	Pg	Pg	07 44 08.1	-0.2
KAN01	**Argonia South**	**1.06**	**49**	Pg	Pg	07 44 08.4	-0.4
KAN06	**Argonia West S**	**1.06**	**42**	Pg	Pg	07 44 08.8	-0.1
KAN09	**Caldwell North**	**1.13**	**53**	Pg	Pg	07 44 09.8	-0.5
BCOK	**Bluff Creek, N**	**1.23**	**131**	Pg	Pg	07 44 11.7	-0.3
KS20	**Mayfield South**	**1.23**	**51**	Pn	Pg	07 44 11.8	-0.4
OK029	**Liberty Lake**	**1.24**	**122**	Pg	Pg	07 44 11.9	-0.5
BLOK	**Blackwell**	**1.27**	**76**		Pg	07 44 12.5	-0.5
OKCSW	**OKLAHOMA CITY**	**1.50**	**134**	Pn	Pn	07 44 14.1	-2.0
FNO	**Franklin**	**1.63**	**137**		Pn	07 44 18.1	+0.3
OK031	**S. Brethren Rd**	**1.63**	**108**	Pn	Pn	07 44 17.9	0.0
QUOK	**Quay**	**1.68**	**99**		Pn	07 44 18.1	-0.5
OK030	**Cody Creek RV**	**1.68**	**108**	Pn	Pn	07 44 18.9	+0.3
WMOK	**Wichita Mounta**	**1.72**	**181**		Pn	07 44 19.1	-0.1
T35A	**Sooner Cattle**	**1.86**	**75**		Pn	07 44 21.4	+0.3
R32A	**Long Quarter,**	**1.96**	**1**	Pn	Pn	07 44 23.6	+1.1
X34A	**Smith Ranch, M**	**2.00**	**158**	Pn	Pb	07 44 24.4	-1.0
TUL1	**Leonard**	**2.46**	**102**	Pn	Pn	07 44 28.5	-0.8
CBKS	**Cedar Bluff**	**2.48**	**342**	Pn	Pn	07 44 29.5	-0.1
LOOK	**Love County**	**2.78**	**152**	Pn	Pn	07 44 32.6	-1.1
AMTX	**Amarillo**	**2.85**	**237**	Pn	Pn	07 44 34.7	-0.1
KSU1	**Kansas State U**	**3.14**	**32**	Pn	Pn	07 44 39.6	+1.0
X37A	**Clayton**	**3.33**	**123**	Pn	Pn	07 44 41.0	-0.3
U38A	**Gravette**	**3.52**	**89**	IAmb_Lg		07 45 40.5	
	comp=Z,12nm,0.8s						
HHAR	**Hobbs**	**3.89**	**91**	IAmb_Lg		07 45 50.9	
	comp=Z,11nm,0.7s						
ABTX	**Abilene, Hawle**	**3.90**	**191**	Pn	Pn	07 44 48.7	-0.4
S39A	**Bolivar**	**4.51**	**73**	IAmb_Lg		07 46 09.2	
	comp=Z,14nm,1.1s						
MIAR	**Mount Ida**	**4.64**	**113**	Pn	Pn	07 45 01.1	+1.9
U40A	**Yellville**	**4.76**	**90**	IAmb_Lg		07 46 16.3	
	comp=Z,13nm,0.8s						
OGNE	**Ogallala**	**5.16**	**331**	IAmb_Lg		07 46 44.0	
	comp=Z,12nm,0.8s						
P38A	**Dawn**	**5.19**	**51**	IAmb_Lg		07 46 38.7	
	comp=Z,8.2nm,0.8s						
R40A	**Maddies Statio**	**5.48**	**69**	IAmb_Lg		07 46 43.4	
	comp=Z,7.5nm,0.7s						
N38A	**Joes South For**	**6.11**	**43**	IAmb_Lg		07 47 07.0	
	comp=Z,12nm,0.8s						
P40A	**Paris**	**6.12**	**58**	IAmb_Lg		07 47 06.1	
	comp=Z,7.6nm,0.7s						
LCAR	**Lake Charles**	**6.15**	**91**	IAmb_Lg		07 47 02.8	
	comp=Z,6.6nm,0.9s						
T42A	**Van Buren**	**6.18**	**82**	IAmb_Lg		07 47 08.9	
	comp=Z,7.0nm,1.1s						
CCM	**Cathedral Cave**	**6.20**	**73**	IAmb_Lg		07 47 08.9	
	comp=Z,7.7nm,0.8s						
PBMO	**Poplar Bluff**	**6.70**	**85**	IAmb_Lg		07 47 23.0	
	comp=Z,10nm,1.0s						

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*IDC **16** 07:45:54.2±0.9, 1°.03N×127°.72E, h0^{km}, mb4.1/8, mb1 4.3/9, mb1mx3.8/51, mbtmp4.1/9, ML4.1/1, MS3.3/2, Ms1 3.3/2, ms1mx2.6/42, Error ellipse: s-maj=37.8km s-min=15.6km az=72.0*

*DJA **16** 07:45:55.9±0.4, 1°N±3°×12°8E±°, h10^{km}, M4.0/9, mb4.3/6, mB5.2/1, MLv3.9/9, Mw(mB)4.6/1*

*NEIC **16** 07:45:56.3±1.3, 1°.0N±0°.1×127°.50E±0°.03, h10^{km}±6^{km}, mb4.5/17, Error ellipse: s-maj=16.8km s-min=2.6km az=193.0*

ISC 16 07:45:55.6±0.7**, 1°.01N**±0°.05×**127°.56E**±0°.08**, h10**^{km}**, n39, σ0.^{s}99**/38**, mb4.3**/16**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.30**	**219**	P	**Pg**	**07 46 01.2**	**-0.5**
TNTI				S	**Sg**	**07 46 05.9**	**+0.1**
TNTI	**Ternate**	**0.30**	**219**		**Pg**	**07 46 01.2**	**-0.5**
LBMI	**Labuha**	**1.64**	**182**	P	**Pn**	**07 46 25.2**	**+0.7**
LBMI				S	**Sn**	**07 46 46.5**	**+0.9**
SANI	**Sanana**	**3.42**	**207**	P	**Pn**	**07 46 49.4**	**+0.4**
KMSI	**Cibinong**	**3.60**	**263**	P	**Pn**	**07 46 51.8**	**+0.2**
GTOI	**Gorontalo**	**4.56**	**265**	P	**Pn**	**07 47 07.4**	**+2.6**
FAKI	**Fak Fak**	**6.10**	**130**	Pn	**Pn**	**07 47 26.8**	**+0.9**
TOLI2	**Tolitoli**	**6.78**	**271**	Pn	**Pn**	**07 47 34.3**	**-0.9**
MPSI	**Mapaga**	**7.69**	**265**	P	**Pn**	**07 47 48.2**	**+0.5**
	0.1nm2µm11nm,0.8s						
TTSI	**Tana Toraja**	**8.72**	**242**	P	**Pn**	**07 48 00.5**	**-1.4**
KAPI	**Kappang**	**9.83**	**232**	Pn	**Pn**	**07 48 19.3**	**+2.2**
	1.5nm,0.3s,baz=158,slow=2.2,SNR=6.9						
KAPI	**Kappang**	**9.83**	**232**		**Pn**	**07 48 16.9**	**-0.2**
KPJI	**Karang Pucung**	**20.35**	**246**	P	**P**	**07 50 33.1**	**+0.7**
	21nm,1.1s						
GUMO	**Guam**	**21.21**	**53**	LR	LR	07 58 19.8	
	comp=Z,62nm,19.1s,baz=142,slow=35						
WB0	**Warramunga Arr**	**21.71**	**162**	P	**P**	**07 50 47.7**	**+0.7**
WB0				IAmb	IAmb	07 50 54.1	
	comp=Z,8.3nm,0.9s						
WRAB	**Tennant Creek**	**21.85**	**163**	P	**P**	**07 50 49.2**	**+0.6**
WRAB				IAmb	IAmb	07 50 51.8	
	comp=Z,9.5nm,0.7s						
WRA	**Warramunga Arr**	**21.86**	**163**	P	**P**	**07 50 49.1**	**+0.5**
	comp=Z,7.4nm,0.7s,baz=340,slow=11,SNR=43						
WRA	**Warramunga Arr**	**21.86**	**163**	P	**P**	**07 50 48.8**	**+0.2**
WB2	**Warramunga Arr**	**21.86**	**163**	P	**P**	**07 50 49.2**	**+0.5**
WB2				IAmb	IAmb	07 50 53.8	
	comp=Z,11nm,0.9s						
WR0	**Warramunga Arr**	**21.93**	**162**	P	**P**	**07 50 50.3**	**+0.9**
NACB	**Ninganchiao**	**23.74**	**346**	P	**P**	**07 51 06.6**	**-1.6**
NACB				IAmb	IAmb	07 51 22.8	
	comp=Z,11nm,0.8s						
AS31	**Alice Springs**	**25.29**	**166**	P	**P**	**07 51 22.3**	**-0.2**
ASAR	**Alice Springs**	**25.29**	**166**	P	**P**	**07 51 21.8**	**-0.7**
	comp=Z,3.0nm,0.6s,baz=343,slow=8.0,SNR=41						
ASAR	**Alice Springs**	**25.29**	**166**	P	**P**	**07 51 21.6**	**-0.9**
GIRL	**Giralia**	**26.86**	**208**	P	**P**	**07 51 35.2**	**-1.4**
FORT	**Forrest**	**31.61**	**179**	P	**P**	**07 52 18.0**	**-0.8**
FORT				IAmb	IAmb	07 52 32.9	
	comp=Z,14nm,0.9s						
MORW	**Morawa**	**31.87**	**199**	P	**P**	**07 52 19.2**	**-2.0**
MORW				IAmb	IAmb	07 52 33.8	
	comp=Z,8.4nm,1.4s						
CMAR	**Chiang Mai Arr**	**33.01**	**303**	P	**P**	**07 52 32.5**	**+1.3**
	comp=Z,1.0nm,0.4s,baz=136,slow=9.7,SNR=4.2						
STKA	**Stephens Creek**	**35.31**	**159**	P	**P**	**07 52 51.0**	**0.0**
	comp=Z,2.4nm,0.7s,baz=331,slow=7.0,SNR=9.7						
STKA	**Stephens Creek**	**35.31**	**159**	IAmb	IAmb	07 52 54.0	
	comp=Z,0.7nm,0.8s						
MJAR	**Matsushiro Arr**	**36.71**	**14**	P	**P**	**07 53 02.4**	**-0.5**
	comp=Z,0.7nm,0.4s,baz=195,slow=9.1,SNR=4.7						
SONM	**Songino Array**	**50.12**	**342**	P	**P**	**07 54 52.5**	**+1.3**
	comp=Z,1.1nm,0.8s,baz=157,slow=8.0,SNR=5.5						
MKAR	**Makanchi Array**	**60.25**	**326**	P	**P**	**07 56 04.7**	**+0.4**
	comp=Z,1.6nm,0.7s,baz=117,slow=8.1,SNR=9.3						
KBL	**Kabul**	**63.84**	**308**	P	**P**	**07 56 28.6**	**-0.2**
KBL				IAmb	IAmb	07 56 34.7	
	comp=Z,3.2nm,0.7s						
GAR	**Garm**	**64.37**	**313**	P	**P**	**07 56 32.1**	**0.0**
BTK	**Batken**	**64.40**	**315**	P	**P**	**07 56 32.5**	**+0.2**
BTK				IAmb	IAmb	07 56 34.9	
	comp=Z,7.4nm,1.4s						
KURBB	**Kurchatov Arra**	**64.47**	**328**	P	**P**	**07 56 32.6**	**+0.3**
	comp=Z,4.2nm,1.0s,baz=127,slow=6.1,SNR=13						
KURK	**Kurchatov**	**64.47**	**328**	P	**P**	**07 56 32.1**	**-0.2**
VNDA	**Vanda**	**80.64**	**173**	LR	LR	08 34 29.4	
	comp=Z,21nm,19.0s,baz=359,slow=36						

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*IDC **16** 07:58:42.7±0.9, 1°.03N×127°.87E, h0^{km}, mb3.9/7, mb1 4.1/7, mb1mx3.7/48, mbtmp4.0/7, MS2.9/1, Ms1 2.9/1, ms1mx2.2/42, Error ellipse: s-maj=67.8km s-min=16.8km az=73.0*

*DJA **16** 07:58:43.4±0.4, 1°N±2°×12°8E±°, h10^{km}, M3.5/7, MLv3.5/7*

*NEIC **16** 07:58:44.0±1.9, 1°.2N±0°.1×128°.02E±0°.08, h13^{km}±7^{km}, mb4.4/15, Error ellipse: s-maj=17.6km s-min=9.7km az=156.0*

ISC 16 07:58:43.6±0.7**, 1°.00N**±0°.06×**127°.61E**±0°.08**, h10**^{km}**, n29, σ1.^{s}24**/30**, mb4.2**/16**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.33**	**228**	P	**Pg**	**07 58 48.9**	**-1.3**
TNTI				S	**Sg**	**07 58 54.2**	**-0.4**
LBMI	**Labuha**	**1.63**	**184**	P	**Pb**	**07 59 13.5**	**-0.2**
LBMI				S	**Sg**	**07 59 36.5**	**+0.6**
SANI	**Sanana**	**3.43**	**208**	P	**Pn**	**07 59 38.0**	**+0.8**
KMSI	**Cibinong**	**3.66**	**263**	P	**Pn**	**07 59 41.0**	**+0.8**
GTOI	**Gorontalo**	**4.62**	**266**	P	**Pn**	**07 59 52.9**	**-0.5**
GUMO	**Guam**	**21.18**	**53**	LR	LR	08 10 37.2	
	comp=Z,31nm,19.6s,baz=73,slow=34						
WB0	**Warramunga Arr**	**21.68**	**162**	P	**P**	**08 03 35.3**	**+0.6**
WB0				IAmb	IAmb	08 03 41.8	
	comp=Z,7.4nm,1.0s						
WRA	**Warramunga Arr**	**21.83**	**163**	P	**P**	**08 03 36.4**	**+0.1**
	comp=Z,3.9nm,0.8s,baz=337,slow=11,SNR=20						
WRA	**Warramunga Arr**	**21.83**	**163**	P	**P**	**08 03 36.8**	**+0.5**
WB2	**Warramunga Arr**	**21.83**	**163**	P	**P**	**08 03 36.8**	**+0.5**
WB2				IAmb	IAmb	08 03 40.0	
	comp=Z,6.3nm,0.8s						
WR0	**Warramunga Arr**	**21.91**	**162**	P	**P**	**08 03 37.7**	**+0.6**
WR0				IAmb	IAmb	08 03 40.4	
	comp=Z,3.9nm,0.9s						
SSLB	**Suanglung**	**23.56**	**345**	P	**P**	**08 03 52.9**	**-1.6**
SSLB				IAmb	IAmb	08 03 56.1	
	comp=Z,6.0nm,0.7s						
AS31	**Alice Springs**	**25.26**	**166**	P	**P**	**08 04 10.3**	**+0.1**
ASAR	**Alice Springs**	**25.27**	**166**	P	**P**	**08 04 10.0**	**-0.2**
	comp=Z,5.7nm,0.9s,baz=344,slow=9.3,SNR=33						
ASAR	**Alice Springs**	**25.27**	**166**	P	**P**	**08 04 10.9**	**+0.7**
GIRL	**Giralia**	**26.87**	**208**	P	**P**	**08 04 26.1**	**+1.4**
GIRL				IAmb	IAmb	08 04 36.3	
	comp=Z,72nm,1.3s						
MORW	**Morawa**	**31.88**	**199**	P	**P**	**08 05 11.0**	**+1.9**
MORW				IAmb	IAmb	08 05 24.3	
	comp=Z,8.4nm,1.2s						
BBOO	**Buckleboo**	**34.56**	**167**	P	**P**	**08 05 31.6**	**-0.8**
BBOO				IAmb	IAmb	08 05 34.4	
	comp=Z,4.7nm,0.9s						
STKA	**Stephens Creek**	**35.28**	**159**	P	**P**	**08 05 39.6**	**+0.9**
	comp=Z,1.3nm,0.7s,baz=323,slow=8.1,SNR=5.4						
STKA	**Stephens Creek**	**35.28**	**159**	P	**P**	**08 05 39.5**	**+0.8**
MJAR	**Matsushiro Arr**	**36.71**	**14**	P	**P**	**08 05 50.3**	**-0.6**
	comp=Z,5.4nm,1.2s,baz=206,slow=8.1,SNR=4.5						
SONM	**Songino Array**	**50.15**	**341**	P	**P**	**08 07 41.2**	**+1.8**
	comp=Z,0.5nm,0.6s,baz=162,slow=6.1,SNR=2.9						
MLZ	**Mavora Lakes**	**58.42**	**147**	P	**P**	**08 08 37.8**	**-1.8**
URZ	**Urewera**	**59.96**	**136**	P	**P**	**08 08 48.3**	**-2.0**
BKZ	**Black Stump Fm**	**59.98**	**137**	P	**P**	**08 08 49.6**	**-0.9**
BKZ				IAmb	IAmb	08 08 57.7	
	comp=Z,11nm,1.0s						
MKAR	**Makanchi Array**	**60.29**	**326**	P	**P**	**08 08 53.9**	**+1.4**
	comp=Z,0.8nm,0.6s,baz=123,slow=8.8,SNR=5.2						
PLWZ	**Palliser**	**60.39**	**140**	P	**P**	**08 08 50.0**	**-3.3**
KURBB	**Kurchatov Arra**	**64.50**	**328**	P	**P**	**08 09 21.7**	**+1.2**
	comp=Z,1.6nm,0.6s,baz=129,slow=6.1,SNR=10						
KURK	**Kurchatov**	**64.51**	**328**	P	**P**	**08 09 20.7**	**+0.1**
KURK				IAmb	IAmb	08 09 23.6	
	comp=Z,4.3nm,0.9s						

IDC 16 07:59:49.3±1.8**, 0°.76N**×**126°.94E, h0**^{km}**, mb3.6**/4**, mb1 3.8**/4**, mb1mx3.5**/47**, mbtmp3.7**/4**, MS2.5**/1**, Ms1 2.5**/1**, ms1mx2.0**/41**, Error ellipse: s-maj=164.6km s-min=22.3km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	**Kappang**	**9.19**	**231**	LR	LR	08 05 29.0	
	comp=Z,29nm,21.2s,baz=76,slow=37						
WRA	**Warramunga Arr**	**21.81**	**161**	P	P	08 04 43.4	+0.1
	1.2nm,0.4s,baz=340,slow=11,SNR=13						
ASAR	**Alice Springs**	**25.20**	**165**	P	P	08 05 16.8	-0.1
	0.7nm,0.6s,baz=343,slow=8.4,SNR=8.1						
MKAR	**Makanchi Array**	**60.12**	**326**	P	P	08 09 58.5	-0.1
	0.4nm,0.4s,baz=124,slow=8.6,SNR=6.3						
KURBB	**Kurchatov Arra**	**64.35**	**328**	P	P	08 10 27.0	+0.1
	0.5nm,0.5s,baz=130,slow=6.2,SNR=2.0						

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*IDC **16** 08:07:29.3±1.2, 56°.41S×25°.48W, h0^{km}, mb4.0/6, mb1 4.2/6, mb1mx3.8/24, mbtmp4.0/6, MS3.7/3, Ms1 3.6/3, ms1mx2.9/20, Error ellipse: s-maj=43.2km s-min=28.3km az=46.0*

*NEIC **16** 08:07:31.6±1.4, 56°.45S±0°.07×25°.8W±0°.2, h10^{km}±1^{km}, mb4.5/20, Error ellipse: s-maj=23.6km s-min=7.1km az=66.0*

ISC 16 08:07:33.7±0.7**, 56°.4S**±0°.1×**25°.7W**±0°.1**, h29**^{km}**, n33, σ1.^{s}00**/29**, mb4.4**/12**, MS3.6**/3**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**6.50**	**285**	Pn	**Pn**	**08 09 09.1**	**+1.9**
SNAA	**Sanae**	**18.09**	**157**		**Pn**	**08 11 42.2**	**-0.3**
PMSA	**Palmer Station**	**20.30**	**230**	P	**P**	**08 12 07.0**	**+0.3**
PMSA				IAmb	IAmb	08 12 24.6	
	comp=Z,26nm,1.1s						
GO09	**Cerro Castillo**	**27.55**	**261**	P	**P**	**08 13 16.3**	**-1.3**
TRQA	**Tornquist**	**30.21**	**292**	P	**P**	**08 13 39.1**	**-2.3**
PLTB	**Pedras Altas**	**31.35**	**310**	P	**P**	**08 13 50.0**	**-1.5**
PLTB				IAmb	IAmb	08 14 01.1	
	comp=Z,6.4nm,1.2s						
QSPA	**South Pole Qui**	**33.85**	**180**	P	**P**	**08 14 13.0**	**-0.3**
QSPA				IAmb	IAmb	08 14 13.3	
	comp=Z,3.6nm,0.6s						
CPUP	**Villa Florida**	**37.66**	**310**	P	**P**	**08 14 46.4**	**+0.3**
	comp=Z,1.2nm,0.7s,baz=167,slow=14,SNR=3.2						
CPUP	**Villa Florida**	**37.66**	**310**	IAmb	IAmb	08 14 47.4	
	comp=Z,3.3nm,1.1s						
MT09	**Talagante**	**38.20**	**287**	P	**P**	**08 14 49.6**	**-1.1**
MT09				IAmb	IAmb	08 14 49.7	
	comp=Z,4.4nm,0.6s						
MT01	**Popeta**	**38.27**	**287**	P	**P**	**08 14 49.8**	**-1.4**
MT01				IAmb	IAmb	08 14 55.5	
	comp=Z,5.3nm,0.9s						
BOSA	**Boshof**	**45.27**	**74**	LR	LR	08 31 27.4	
	comp=Z,29nm,18.4s,baz=14,slow=32						
LVC	**Limon Verde**	**46.19**	**299**	P	**P**	**08 15 57.0**	**+0.9**
	comp=Z,5.7nm,0.7s,baz=124,slow=7.3,SNR=6.4						
LVC	**Limon Verde**	**46.19**	**299**	P	**P**	**08 15 56.4**	**+0.2**
LVC				IAmb	IAmb	08 15 57.7	
	comp=Z,6.2nm,0.8s						
VNDA	**Vanda**	**46.26**	**182**	P	**P**	**08 15 55.4**	**-0.2**
	comp=Z,1.1nm,0.9s,baz=176,slow=7.4,SNR=2.7						
PB09	**IPOC Station P**	**47.04**	**299**	P	**P**	**08 16 03.8**	**+1.2**
PB07	**IPOC Station P**	**47.41**	**298**	P	**P**	**08 16 06.2**	**+0.7**
PB01	**IPOC Station P**	**47.80**	**299**	P	**P**	**08 16 09.4**	**+1.0**
PTLB	**Pontes e Lacer**	**48.12**	**314**	P	**P**	**08 16 12.3**	**+1.5**
PTLB				IAmb	IAmb	08 16 13.1	
	comp=Z,4.2nm,1.0s						
PB08	**IPOC Station P**	**48.41**	**300**	P	**P**	**08 16 13.7**	**+0.3**
PB08				IAmb	IAmb	08 16 16.4	
	comp=Z,5.8nm,1.0s						
SIV	**San Ignacio**	**48.42**	**312**	P	**P**	**08 16 13.7**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=152,slow=13,SNR=3.5						
PB11	**IPOC Station P**	**48.97**	**300**	P	**P**	**08 16 17.5**	**0.0**
PB16	**IPOC Station P**	**50.12**	**301**	P	**P**	**08 16 27.4**	**+0.6**
LPAZ	**La Paz**	**51.25**	**304**	P	**P**	**08 16 36.5**	**+1.1**
	comp=Z,4.0nm,0.4s,baz=107,slow=7.8,SNR=31						
LPAZ	**La Paz**	**51.25**	**304**	P	**P**	**08 16 35.8**	**+0.5**
LPAZ				IAmb	IAmb	08 16 37.8	
	comp=Z,4.2nm,0.6s						
CASY	**Casey**	**53.30**	**160**	P	**P**	**08 16 50.2**	**+1.0**
PAF	**Port-aux-Franc**	**53.75**	**126**	P	**P**	**08 16 53.1**	**+0.4**
SAML	**Samuel**	**55.64**	**313**	P	**P**	**08 17 07.4**	**+0.6**
TORD	**Torodi Ar. Bea**	**72.97**	**28**	P	**P**	**08 19 00.2**	**0.0**
	comp=Z,0.5nm,0.9s,baz=199,slow=7.3,SNR=3.1						
MDT	**Midelt**	**90.66**	**18**	LR	LR	08 58 57.8	
	comp=Z,21nm,18.8s,baz=76,slow=34						
RAR	**Rarotonga**	**93.54**	**222**	LR	LR	08 58 52.3	
	comp=Z,125nm,19.4s,baz=249,slow=33						
SONM	**Songino Array**	**149.93**	**86**	PKPbc	**PKPbc**	**08 27 19.9**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=222,slow=1.9,SNR=1.5						
ILAR	**Eielson Array**	**150.96**	**311**	PKPbc	**PKiKP**	**08 27 22.3**	**-0.2**
	comp=Z,1.5nm,0.9s,baz=150,slow=1.5,SNR=9.3						

IDC ***16*** *08:11:02.6±1.4, 8°.05S×125°.82E, h0^{km}, mb4.0/2, mb1 3.7/5, mb1mx3.4/42, mbtmp3.6/5, ML3.1/2, Error ellipse: s-maj=47.5km s-min=18.4km az=66.0*

NEIC ***16*** *08:11:04.0±0.8, 8°.08S±0°.08×125°.54E±0°.07, h10^{km}±2^{km}, mb4.4/3, Error ellipse: s-maj=13.1km s-min=11.3km az=26.0*

ISC 16 08:11:05.8±0.9**, 8°.21S**±0°.07×**125°.37E**±0°.08**, h26**^{km}**, n16, σ1^{s}.23**/19**, mb4.2**/4**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	**Soe**	**1.88**	**215**	Pn	**Pb**	**08 11 38.8**	**-0.8**
BATI	**Baumata**	**2.60**	**220**	Pn	**Pb**	**08 11 51.7**	**-0.1**
	4.2nm,0.3s,baz=93,slow=9.3,SNR=1.9						
BATI				Sn	**Sb**	**08 12 22.8**	**-0.7**
	3.9nm,0.3s,baz=73,slow=8.3,SNR=4.1						
MMRI	**Maumere**	**3.13**	**262**	Pn	**Pn**	**08 11 53.7**	**+0.2**
KNRA	**Kununurra**	**8.13**	**156**		**Pn**	**08 13 03.6**	**+1.4**
TOLI2	**Tolitoli**	**10.33**	**333**	Pn	**Pn**	**08 13 31.1**	**-1.4**
WB0	**Warramunga Arr**	**14.43**	**144**		**Pn**	**08 14 29.5**	**+0.9**
WRA	**Warramunga Arr**	**14.54**	**144**	Pn	**Pn**	**08 14 28.6**	**-1.4**
	0.1nm,0.3s,baz=320,slow=13,SNR=9.4						
WRA				Sn	**Sn**	**08 17 10.5**	**+0.1**
	0.0nm,0.3s,baz=324,slow=21,SNR=3.9						
WRA	**Warramunga Arr**	**14.54**	**144**		**Pn**	**08 14 29.3**	**-0.7**
WB2	**Warramunga Arr**	**14.55**	**144**		**Pn**	**08 14 29.6**	**-0.5**
WR0	**Warramunga Arr**	**14.67**	**144**	Pn	**Pn**	**08 14 31.5**	**-0.2**
ASAR	**Alice Springs**	**17.41**	**153**	P	**Pn**	**08 15 07.4**	**+0.4**
	baz=335,slow=12,SNR=3.4						
ASAR				S	**Sn**	**08 18 20.8**	**+0.7**
	0.0nm,0.3s,baz=324,slow=20,SNR=6.9						
GIRL	**Giralia**	**17.91**	**215**		**P**	**08 15 15.4**	**+1.9**
GIRL				IAmb	IAmb	08 15 28.2	
	comp=Z,42nm,1.1s						
FORT	**Forrest**	**22.59**	**174**	P	**P**	**08 16 01.7**	**-2.8**
FORT				IAmb	IAmb	08 16 21.5	
	comp=Z,8.3nm,0.9s						
CAN	**Canberra**	**34.58**	**145**	P	**P**	**08 17 52.4**	**-0.3**
CAN				IAmb	IAmb	08 17 59.8	
	comp=Z,6.1nm,1.1s						
MKAR	**Makanchi Array**	**66.82**	**329**	P	**P**	**08 21 56.9**	**+1.6**
	comp=Z,1.2nm,0.8s,baz=116,slow=8.2,SNR=5.0						
ZALV	**Zalesovo Beam**	**70.72**	**336**	P	**P**	**08 22 20.5**	**+1.1**
	comp=Z,1.0nm,0.6s,baz=83,slow=6.0,SNR=5.2						

NEIC ***16*** *08:15:27.9±0.8, 10°.2S±0°.1×161°.3E±0°.1, h95^{km}±9^{km}, mb4.1/13, Error ellipse: s-maj=20.0km s-min=11.1km az=222.0*

IDC ***16*** *08:15:28.0±2.5, 10°.16S×161°.27E, h106^{km}±17^{km}, mb3.5/4, mb1 3.8/5, mb1mx3.3/35, mbtmp3.9/5, Error ellipse: s-maj=29.6km s-min=23.6km az=78.0*

ISC 16 08:15:26.1±0.7**, 10°.22S**±0°.08×**161°.38E**±0°.09**, h85**^{km}**, n35, σ1^{s}.56**/31**, mb3.9**/9**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.62**	**299**	P	**Pn**	**08 15 53.7**	**+0.5**
	214nm,0.3s,baz=179,slow=6.9,SNR=36						
HNR				S	**Sn**	**08 16 14.5**	**+0.8**
	301nm,0.3s,baz=180,slow=20,SNR=29						
HNR				LR	LR	08 16 16.9	
	comp=Z,24nm,19.2s,baz=172,slow=33						
HNR	**Honiara**	**1.62**	**299**		**Pn**	**08 15 53.7**	**+0.5**
HNR				Sn	**Sn**	**08 16 14.9**	**+1.2**
HNR	**Honiara**	**1.62**	**299**	P	**Pn**	**08 15 53.8**	**+0.6**
SANVU	**Saraoutou**	**7.69**	**133**		**Pn**	**08 17 17.3**	**+1.8**
SANVU	**Saraoutou**	**7.69**	**133**	P	**Pn**	**08 17 17.3**	**+1.8**
LIFNC	**LIFOU**	**11.91**	**152**	Pn	**Pn**	**08 18 15.1**	**+2.1**
DZM	**Mont Dzumac**	**12.74**	**158**	P	**Pn**	**08 18 27.6**	**+3.4**
	1.1nm,0.3s,baz=32,slow=8.7,SNR=27						
DZM				S	**Sn**	**08 20 43.4**	**-1.0**
	0.3nm,0.3s,baz=346,slow=13,SNR=2.1						
DZM	**Mont Dzumac**	**12.74**	**158**		**Pn**	**08 18 27.1**	**+2.8**
MARNC	**Mare, Loyalty**	**12.89**	**151**	Pn	**Pn**	**08 18 27.8**	**+1.7**
ONTNC	**Ouen Toro**	**12.96**	**159**	Pn	**P**	**08 18 31.4**	**-3.0**
OUENC	**Ouen Island, N**	**13.21**	**157**	Pn	**Pn**	**08 18 33.2**	**+2.8**
PATS	**Pohnpei**	**17.22**	**350**		**Pn**	**08 19 21.1**	**-0.3**
CTAO	**Charters Tower**	**17.57**	**234**	P	**P**	**08 19 25.3**	**-0.3**
CTAO				IAmb	IAmb	08 19 33.0	
	comp=Z,7.9nm,1.1s						
COEN	**Coen**	**18.18**	**256**	P	**P**	**08 19 31.9**	**-0.4**
WR0	**Warramunga Arr**	**27.62**	**246**	P	**P**	**08 21 05.3**	**-0.6**
WR0				IAmb	IAmb	08 21 07.5	
	comp=Z,2.4nm,0.9s						
WB0	**Warramunga Arr**	**27.70**	**247**	P	**P**	**08 21 06.0**	**-0.6**
WB0				IAmb	IAmb	08 21 08.3	
	comp=Z,3.2nm,0.8s						
WB2	**Warramunga Arr**	**27.79**	**246**	P	**P**	**08 21 06.8**	**-0.6**
WRA	**Warramunga Arr**	**27.80**	**246**	P	**P**	**08 21 06.7**	**-0.8**
	comp=Z,1.0nm,0.6s,baz=76,slow=8.8,SNR=12						
WRA	**Warramunga Arr**	**27.80**	**246**	P	**P**	**08 21 06.5**	**-1.0**
H11S2	**WAKE ISLAND Hy**	**29.01**	**10**	T	T	08 50 22.1	
	baz=194,slow=76,SNR=14						
H11S3	**WAKE ISLAND Hy**	**29.01**	**10**	T	T	08 50 08.8	
	baz=194,slow=76,SNR=14						
H11S1	**WAKE ISLAND Hy**	**29.03**	**10**	T	T	08 50 19.4	
	baz=194,slow=76,SNR=9.3						
ASAR	**Alice Springs**	**29.41**	**239**	P	**P**	**08 21 20.6**	**-1.3**
	comp=Z,0.5nm,0.8s,baz=62,slow=10,SNR=5.4						
H11N1	**WAKE ISLAND Hy**	**30.24**	**10**	T	T	08 51 56.2	
	baz=193,slow=74,SNR=15						
H11N3	**WAKE ISLAND Hy**	**30.25**	**10**	T	T	08 51 56.8	
	baz=193,slow=74,SNR=11						
H11N2	**WAKE ISLAND Hy**	**30.26**	**10**	T	T	08 51 56.8	
	baz=193,SNR=14						
HIZ	**Hauiti**	**30.65**	**159**	P	**P**	**08 21 34.7**	**+2.2**
HIZ				IAmb	IAmb	08 21 47.2	
	comp=Z,18nm,1.0s						
BBOO	**Buckleboo**	**32.40**	**222**	P	**P**	**08 21 47.5**	**-0.5**
BBOO				IAmb	IAmb	08 21 50.8	
	comp=Z,3.2nm,1.1s						
KHZ	**Kahutara**	**33.79**	**164**	P	**P**	**08 22 01.0**	**+1.1**
KHZ				IAmb	IAmb	08 22 13.6	
	comp=Z,20nm,1.2s						
DCZ	**Deep Cove**	**35.47**	**173**	P	**P**	**08 22 14.7**	**+0.4**
PEA0B	**Petropavlovsk-**	**63.16**	**358**	P	**P**	**08 25 45.8**	**+0.9**
SONM	**Songino Array**	**75.51**	**325**	P	**P**	**08 27 00.8**	**-0.6**
	comp=Z,0.9nm,0.6s,baz=141,slow=5.8,SNR=5.9						
SONM	**Songino Array**	**75.51**	**325**	IAmb	IAmb	08 27 09.3	
	comp=Z,2.2nm,1.2s						
QSPA	**South Pole Qui**	**79.78**	**180**	P	**P**	**08 27 24.2**	**-0.7**
ILAR	**Eielson Array**	**84.15**	**20**	P	**P**	**08 27 46.3**	**-1.2**
	comp=Z,1.1nm,1.1s,baz=240,slow=5.2,SNR=4.2						

IDC 16 08:26:16.8±13.0**, 15°.23S**×**165°.13E, h0**^{km}**, mb3.5**/3**, mb1 3.6**/4**, mb1mx3.5**/26**, mbtmp3.5**/4**, ML3.2**/1**, Error ellipse: s-maj=235.1km s-min=36.1km az=51.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.92**	**170**	Pn	Pn	08 27 59.6	-0.1
	0.4nm,0.3s,baz=3.8,slow=15,SNR=10						
DZM				Sn	Sn	08 29 20.6	+1.4
	0.1nm,0.3s,baz=185,slow=21,SNR=2.3						
STKA	**Stephens Creek**	**27.11**	**228**	P	P	08 32 01.5	0.0
	0.6nm,0.4s,baz=52,slow=12,SNR=3.4						
WRA	**Warramunga Arr**	**29.70**	**256**	P	P	08 32 24.8	0.0
	0.2nm,0.8s,baz=80,slow=7.7,SNR=1.7						
ASAR	**Alice Springs**	**30.56**	**249**	P	P	08 32 32.4	0.0
	0.2nm,0.3s,baz=78,slow=9.6,SNR=7.2						

IDC 16 08:40:00.7±62.0**, 23°.20S**×**178°.36W, h0**^{km}**, mb3.7**/3**, mb1 3.8**/3**, mb1mx3.6**/20**, mbtmp3.7**/3**, Error ellipse: s-maj=1127.0km s-min=159.2km az=87.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**36.38**	**247**	P	P	08 47 06.7	-0.1
	0.4nm,0.2s,baz=92,slow=11,SNR=4.3						
ASAR	**Alice Springs**	**43.63**	**260**	P	P	08 48 07.0	-0.3
	0.2nm,0.5s,baz=92,slow=8.4,SNR=8.1						
WRA	**Warramunga Arr**	**43.96**	**265**	P	P	08 48 09.9	0.0
	0.6nm,0.3s,baz=103,slow=8.4,SNR=19						

RSPR ***16*** *08:50:11.5, 19°.17N×68°.20W, h35^{km}±9^{km}, MD4.2/16*

NEIC ***16*** *08:50:11.7±1.6, 19°.09N±0°.04×68°.12W±0°.03, h28^{km}±9^{km}, Error ellipse: s-maj=6.3km s-min=3.8km az=204.0*

OSPL ***16*** *08:50:13.9±2.6, 19°.22N×67°.70W, h31^{km}±31^{km}, ML4.1*

ISC 16 08:50:09.8±1.3**, 19°.08N**±0°.05×**68°.09W**±0°.02**, h12**^{km}±9^{km}**, n104, σ1^{s}.34**/118**, 19C-2D, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCDR	**Punta Cana, DR**	**0.63**	**206**	⇓*i*P	**Pb**	**08 50 23.6**	**+0.9**
PCDR	**Punta Cana, DR**	**0.63**	**206**	*e*S	**Sg**	**08 50 32.3**	**+2.0**
PCDR	**Punta Cana, DR**	**0.63**	**206**		**Pb**	**08 50 23.6**	**+0.9**
PCDR					**Sb**	**08 50 33.5**	**+2.1**
IDE	**Isla Desecheo**	**0.90**	**140**	⇑*e*P	**Pg**	**08 50 26.2**	**-1.0**
AGPR	**Aguadilla, PR**	**1.11**	**123**	⇑*e*P	**Pn**	**08 50 31.4**	**+0.2**
AGPR	**Aguadilla, PR**	**1.11**	**123**	*e*S	**Sb**	**08 50 46.2**	**+1.0**
AGPR	**Aguadilla, PR**	**1.11**	**123**		**Pg**	**08 50 29.4**	**-1.7**
AGPR					**Sb**	**08 50 46.5**	**+1.2**
AGPR	**Aguadilla, PR**	**1.11**	**123**	*i* P	**Pg**	**08 50 28.6**	**-2.6**
AGPR				IAML		08 50 49.3	
	comp=N,6μm,0.4s						
PRSN	**Puerto Rico Se**	**1.24**	**134**	⇑*e*P	**Pg**	**08 50 34.0**	**+0.3**
PRSN	**Puerto Rico Se**	**1.24**	**134**	*e*S	**Sg**	**08 50 50.2**	**+0.5**
PRSN	**Puerto Rico Se**	**1.24**	**134**		**Pg**	**08 50 33.9**	**+0.3**
PRSN					**Sn**	**08 50 51.4**	**+1.8**
DR12	**Loma Pena Alta**	**1.26**	**257**	Pn	**Pn**	**08 50 33.4**	**+0.1**
CRPR	**Cabo Rojo, PR**	**1.41**	**139**	⇑*e*P	**Pn**	**08 50 35.3**	**-0.1**
CRPR	**Cabo Rojo, PR**	**1.41**	**139**	*e*S	**Sn**	**08 50 54.2**	**+0.4**
CRPR	**Cabo Rojo, PR**	**1.41**	**139**		**Pg**	**08 50 37.3**	**+0.4**
CRPR					**Sb**	**08 50 55.4**	**+1.3**
CRPR	**Cabo Rojo, PR**	**1.41**	**139**	*i* P	**Pn**	**08 50 33.6**	**-1.8**
CRPR				*e*S	**Sn**	**08 50 49.4**	**-4.4**
CRPR				IAML		08 50 56.7	
	comp=Z,6μm,0.5s						
AOPR	**Arecibo Observ**	**1.46**	**120**	⇓*e*P	**Pn**	**08 50 35.8**	**-0.2**
AOPR	**Arecibo Observ**	**1.46**	**120**	*e*P	**Pn**	**08 50 34.1**	**-1.9**
AOPR				*e*S	**Sn**	**08 50 54.4**	**-0.6**
AOPR	**Arecibo Observ**	**1.46**	**120**		**Pn**	**08 50 34.2**	**-1.8**
MLPR	**Magueyes Islan**	**1.48**	**138**	⇑*e*P	**Pn**	**08 50 36.0**	**-0.3**
MLPR	**Magueyes Islan**	**1.48**	**138**	*e*S	**Sn**	**08 50 55.7**	**+0.1**
MLPR	**Magueyes Islan**	**1.48**	**138**		**Pn**	**08 50 35.2**	**-1.1**
GBPR	**Guanica, Bosqu**	**1.59**	**134**	⇑*e*P	**Pb**	**08 50 38.8**	**-0.3**
GBPR	**Guanica, Bosqu**	**1.59**	**134**	*e*S	**Sn**	**08 50 58.7**	**+0.6**
EMPR	**Esperanza - Ma**	**1.59**	**112**	⇑*e*P	**Pn**	**08 50 37.7**	**-0.2**
EMPR	**Esperanza - Ma**	**1.59**	**112**	*e*S	**Sn**	**08 50 58.5**	**+0.2**
EMPR	**Esperanza - Ma**	**1.59**	**112**		**Pn**	**08 50 37.6**	**-0.2**
EMPR	**Esperanza - Ma**	**1.59**	**112**		**Sn**	**08 50 58.5**	**+0.2**
OBIP	**Obispado Ponce**	**1.74**	**126**	⇑*e*P	**Pn**	**08 50 40.2**	**+0.3**
OBIP	**Obispado Ponce**	**1.74**	**126**	*e*S	**Sn**	**08 51 02.2**	**+0.1**
CELP	**Cerrillos**	**1.74**	**125**	⇑*e*P	**Pn**	**08 50 40.3**	**+0.4**
CELP	**Cerrillos**	**1.74**	**125**	*e*S	**Sn**	**08 51 02.6**	**+0.5**
CELP	**Cerrillos**	**1.74**	**125**		**Pn**	**08 50 39.0**	**-0.9**
SDD	**Santo Domingo**	**1.84**	**251**	*i* P	**Pg**	**08 50 45.8**	**+0.7**
SDD				*e*S	**Sg**	**08 51 10.2**	**+1.3**
LOSC1	**San Cristbal**	**2.03**	**251**	*i* P	**Pg**	**08 50 48.0**	**-0.7**
LOSC1				*e*S	**Sg**	**08 51 15.4**	**+0.3**
LOSC1				IAML		08 51 34.7	
	comp=Z,2μm,1.6s						
GCPR	**Guaynabo City**	**2.05**	**112**	⇑*e*P	**Pn**	**08 50 44.4**	**+0.3**
GCPR	**Guaynabo City**	**2.05**	**112**	*e*S	**Sn**	**08 51 10.3**	**+0.8**
GCPR	**Guaynabo City**	**2.05**	**112**		**Pn**	**08 50 44.4**	**+0.3**
SJG	**San Juan**	**2.07**	**117**	*e*P	**Pn**	**08 50 44.4**	**0.0**
SJG	**San Juan**	**2.07**	**117**	*e*P	**Pn**	**08 50 45.4**	**+1.0**
SJG				*e*S	**Sn**	**08 51 09.3**	**-0.9**
SJG	**San Juan**	**2.07**	**117**		**Pn**	**08 50 44.6**	**+0.2**
SJG				IAML		08 51 15.5	
	comp=Z,2μm,0.4s						
SJG				IAML		08 51 16.2	
	comp=Z,1μm,0.2s						
IGPR	**InterUniversit**	**2.18**	**120**	⇑*e*P	**Pn**	**08 50 46.6**	**+0.7**
IGPR	**InterUniversit**	**2.18**	**120**	*e*S	**Sn**	**08 51 13.6**	**+0.7**
IGPR	**InterUniversit**	**2.18**	**120**		**Sn**	**08 51 13.6**	**+0.7**
PDPR	**Patillas Dam,**	**2.23**	**118**	⇑*e*P	**Pn**	**08 50 47.2**	**+0.7**
PDPR	**Patillas Dam,**	**2.23**	**118**	*e*S	**Sn**	**08 51 14.8**	**+0.9**
PDPR	**Patillas Dam,**	**2.23**	**118**		**Pn**	**08 50 47.4**	**+0.9**
PDPR	**Patillas Dam,**	**2.23**	**118**		**Sn**	**08 51 14.8**	**+0.9**
CBYP	**Canovanas**	**2.26**	**110**	⇑*e*P	**Pn**	**08 50 47.0**	**-0.1**
CBYP	**Canovanas**	**2.26**	**110**	*e*S	**Sn**	**08 51 15.1**	**+0.1**
CBYP	**Canovanas**	**2.26**	**110**		**Pn**	**08 50 47.2**	**+0.1**
HUMP	**Col San Antoni**	**2.32**	**113**	⇑*e*P	**Pn**	**08 50 47.8**	**+0.1**
HUMP	**Col San Antoni**	**2.32**	**113**	*e*S	**Sn**	**08 51 17.2**	**+0.9**
HUMP	**Col San Antoni**	**2.32**	**113**		**Pn**	**08 50 47.8**	**+0.1**
HUMP					**Sn**	**08 51 17.2**	**+0.9**
SC01	**Santiago de lo**	**2.52**	**278**	Pn	**Pn**	**08 50 47.2**	**-3.4**
SC01				IAML		08 51 42.6	
	comp=N,2μm,0.8s						
SC01	**Santiago de lo**	**2.52**	**278**	*i* P	**Pb**	**08 50 55.3**	**+0.3**
MTP	**Monte Pirata**	**2.59**	**112**	⇑*e*P	**Pn**	**08 50 51.7**	**+0.1**
MTP	**Monte Pirata**	**2.59**	**112**	*e*S	**Sn**	**08 51 23.8**	**+0.7**
MTP	**Monte Pirata**	**2.59**	**112**		**Pn**	**08 50 52.1**	**+0.5**
CUPR	**Culebra, Puert**	**2.77**	**106**	⇑*e*P	**Pn**	**08 50 54.1**	**+0.1**
CUPR	**Culebra, Puert**	**2.77**	**106**	*e*S	**Sn**	**08 51 28.3**	**+1.0**
CUPR	**Culebra, Puert**	**2.77**	**106**		**Pn**	**08 50 54.1**	**+0.1**
CUPR					**Sn**	**08 51 28.3**	**+1.0**
LOBA2	**Hotel Casa Bon**	**3.02**	**251**	*i* P	**Pb**	**08 51 02.8**	**-0.8**
LOBA2				*e*S	**Sb**	**08 51 39.3**	**-1.1**
LOBA2				IAML		08 51 53.3	
	comp=Z,173nm,0.4s						
SDDR	**Presa de Saban**	**3.03**	**269**	*e*P	**Pb**	**08 51 03.9**	**+0.2**
SDDR				*e*S	**Sb**	**08 51 42.2**	**+1.5**
STVI	**Saint Thomas**	**3.06**	**103**	⇑*e*P	**Pn**	**08 50 58.9**	**+0.9**
STVI	**Saint Thomas**	**3.06**	**103**	*e*S	**Sn**	**08 51 35.0**	**+0.5**
LONE2	**Loma La Sidra**	**3.25**	**261**	*i* P	**Pb**	**08 51 07.5**	**0.0**
LONE2				IAML		08 51 56.7	
	comp=Z,619nm,0.5s						
TBVI	**Tortola**	**3.35**	**101**	⇑*e*P	**Pn**	**08 51 02.6**	**+0.6**
CDVI	**St. Croix**	**3.42**	**112**	⇑*e*P	**Pn**	**08 51 04.3**	**+1.3**
CDVI	**St. Croix**	**3.42**	**112**	*e*S	**Sn**	**08 51 45.8**	**+2.4**
CDVI	**St. Croix**	**3.42**	**112**		**Pn**	**08 51 04.3**	**+1.3**
LOPE2	**Hotel El Peder**	**3.62**	**254**	*i* P	**Pb**	**08 51 12.8**	**-1.0**
LOPE2				IAML		08 52 18.4	
	comp=Z,166nm,0.8s						
GRTK	**Grand Turk**	**3.75**	**311**	Pn	**Pn**	**08 51 07.8**	**+0.3**
GRTK	**Grand Turk**	**3.75**	**311**	*i* P	**Pn**	**08 51 09.4**	**+2.0**
GRTK				*e*S	**Sn**	**08 51 51.8**	**+0.3**
GRTK				IAML		08 51 55.4	
	comp=Z,168nm,3.5s						
LGNH	**Logne**	**4.32**	**263**	*i* P	**Pb**	**08 51 22.3**	**-3.3**
SABA	**Saba**	**4.82**	**107**	Pn	**Pn**	**08 51 22.6**	**+0.3**
SABA				IAML		08 52 31.8	
	comp=N,220nm,1.0s						
SMRT	**St. Maarten**	**4.86**	**101**	Pn	**Pn**	**08 51 24.3**	**+1.5**
SMRT				IAML		08 52 27.9	
	comp=N,162nm,0.2s						
SMRT				IAML		08 54 04.6	
	comp=E,255nm,0.1s						
ANWB	**Willy Bob**	**6.15**	**102**	*e*P	**Pn**	**08 51 41.6**	**+1.2**
ANWB	**Willy Bob**	**6.15**	**102**	*e*S	**Sn**	**08 52 47.0**	**-3.7**
ANBD	**Bethesda, Anti**	**6.34**	**108**	*e*P	**Pn**	**08 51 44.8**	**+1.6**
MAGL	**Barre de l'ile**	**7.20**	**115**	*e*P	**Pn**	**08 51 57.1**	**+2.2**
DSLB	**Salisbury**	**7.33**	**119**	*e*P	**Pn**	**08 51 58.0**	**+1.3**
MDN	**Morne-Daniel**	**7.41**	**119**	*e*P	**Pn**	**08 51 58.5**	**+0.7**
FDF	**Fort de France**	**7.92**	**122**	Pn	**Pn**	**08 52 04.8**	**-0.1**
MPOM	**Morne Pois Mar**	**8.31**	**123**	*e*P	**Pn**	**08 52 12.7**	**+2.4**
MPOM	**Morne Pois Mar**	**8.31**	**123**	Pn	**Pn**	**08 52 12.4**	**+2.2**
BIRV	**Birongo**	**8.73**	**168**	Pn	**Pn**	**08 52 18.3**	**+2.3**
GRGR	**Grenville**	**9.28**	**137**	Pn	**Pn**	**08 52 24.7**	**+1.2**
BAUV	**El Baul**	**10.08**	**180**	Pn	**Pn**	**08 52 36.5**	**+2.0**
UREC	**San Jos de Ur**	**13.38**	**214**	*e*P	**Pn**	**08 53 18.7**	**-1.0**
BBSR	**BB Station**	**13.58**	**12**	Pn	**Pn**	**08 53 22.2**	**-0.1**
RUSC	**La Rusia**	**13.98**	**201**	*e*P	**Pn**	**08 53 24.4**	**-3.9**
SPBC	**San Pablo de B**	**14.56**	**204**	*e*P	**Pn**	**08 53 34.9**	**-1.1**
HELC	**Santa Helena**	**14.72**	**210**	*e*P	**P**	**08 53 42.5**	**-2.0**
NORC	**Norcasia**	**14.97**	**207**	*e*P	**Pn**	**08 53 44.4**	**+2.9**
CBOC	**Ciudad Bolivar**	**15.24**	**211**	*e*P	**Pn**	**08 53 43.5**	**-1.6**
CHIC	**Chingaza**	**15.38**	**202**	*e*P	**Pn**	**08 53 48.2**	**+1.0**
GUY2C	**Guyana, Caldas**	**15.49**	**208**	*e*P	**Pn**	**08 53 48.2**	**-0.5**
ANIL	**Santa Ana**	**16.16**	**207**	*e*P	**P**	**08 54 00.6**	**+0.1**
ORTC	**Ortega, Tolima**	**16.62**	**206**	*e*P	**Pn**	**08 54 04.4**	**+1.6**
PRAC	**Prado**	**16.65**	**204**	*e*P	**P**	**08 54 05.4**	**-0.3**
BOAV	**Boa Vista**	**18.16**	**155**		**Pn**	**08 54 22.2**	**+0.2**
BOAV				IAmb	IAmb	08 54 37.0	
	comp=Z,9.6nm,1.4s						
PTGA	**Pitinga**	**21.24**	**157**	P	**P**	**08 54 55.2**	**-0.7**
PTGA				IAmb	IAmb	08 55 15.0	
	comp=Z,3.6nm,0.9s						
OTAV	**Otavalo**	**21.31**	**210**	P	**P**	**08 54 55.9**	**-1.2**
OTAV				IAmb	IAmb	08 55 05.8	
	comp=Z,14nm,1.3s						

IDC ***16*** *08:59:35.1±1.0, 40°.08S×78°.45E, h0^{km}, mb4.0/8, mb1 4.2/8, mb1mx3.8/40, mbtmp4.0/8, MS3.7/17, Ms1 3.7/17, ms1mx3.5/34, Error ellipse: s-maj=35.2km s-min=23.2km az=93.0*

NEIC ***16*** *08:59:36.6±0.6, 40°.11S±0°.09×78°.3E±0°.2, h10^{km}±1^{km}, mb4.5/16, Error ellipse: s-maj=24.3km s-min=15.5km az=258.0*

ISC 16 08:59:37.1±0.6**, 40°.08S**±0°.09×**78°.4E**±0°.1**, h14**^{km}**, n45, σ0^{s}.54**/27**, mb4.3**/15**, MS3.7**/17**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AIS	**Amsterdam Isla**	**2.36**	**345**		**Pn**	**09 00 15.9**	**+0.4**
RER	**Riviere de l'E**	**26.97**	**308**	P	**P**	**09 05 17.7**	**-0.8**
H01W2	**Cape Leeuwin H**	**28.72**	**91**	T	T	09 35 15.7	
	baz=248,slow=74,SNR=209						
H01W3	**Cape Leeuwin H**	**28.73**	**91**	T	T	09 35 15.9	
	baz=248,slow=74,SNR=227						
H01W1	**Cape Leeuwin H**	**28.74**	**91**	T	T	09 35 17.1	
	baz=248,slow=74,SNR=213						
MAW	**Mawson**	**28.87**	**192**	P	**P**	**09 05 35.7**	**+0.9**
	4.0nm,0.9s,baz=20,slow=12,SNR=5.5						
MAW				LR	LR	09 15 06.7	
	comp=Z,157nm,18.5s,baz=55,slow=32						
MAW	**Mawson**	**28.87**	**192**	P	**P**	**09 05 35.0**	**+0.1**
H08S2	**Diego Garcia H**	**32.72**	**349**	T	T	09 40 39.1	
	baz=172,slow=76,SNR=5.8						
H08S1	**Diego Carcia H**	**32.72**	**349**	T	T	09 40 41.3	
	baz=172,slow=76,SNR=8.3						
H08S3	**Diego Garcia H**	**32.74**	**349**	T	T	09 40 42.8	
	baz=172,slow=76,SNR=10.0						
LEM	**Lembang**	**42.23**	**46**	LR	LR	09 21 27.4	
	comp=Z,82nm,18.7s,baz=210,slow=31						
BOSA	**Boshof**	**44.72**	**268**	LR	LR	09 23 55.9	
	comp=Z,136nm,18.4s,baz=180,slow=33						
PSI	**Prapat**	**46.65**	**29**	LR	LR	09 22 58.2	
	comp=Z,57nm,18.9s,baz=195,slow=30						
ASAR	**Alice Springs**	**49.15**	**88**	P	**P**	**09 08 24.3**	**-0.4**
	1.1nm,1.0s,baz=239,slow=6.5,SNR=9.0						
ASAR				PcP	**PcP**	**09 09 47.4**	**-0.6**
	1.1nm,0.8s,baz=229,slow=3.0,SNR=6.8						
ASAR				LR	LR	09 26 25.7	
	comp=Z,192nm,20.2s,baz=237,slow=33						
ASAR	**Alice Springs**	**49.15**	**88**	P	**P**	**09 08 24.2**	**-0.5**
AS31	**Alice Springs**	**49.16**	**88**	P	**P**	**09 08 23.6**	**-1.1**
SNAA	**Sanae**	**49.80**	**204**	P	**P**	**09 08 29.0**	**0.0**
SNAA				IAmb	IAmb	09 08 31.4	
	comp=Z,3.3nm,1.0s						
VNDA	**Vanda**	**49.84**	**164**	P	**P**	**09 08 28.9**	**-0.3**
	comp=Z,1.6nm,0.8s,baz=266,slow=7.0,SNR=5.7						
VNDA				LR	LR	09 28 06.1	
	comp=Z,116nm,18.1s,baz=268,slow=34						
VNDA	**Vanda**	**49.84**	**164**	IAmb	IAmb	09 08 31.8	
	comp=Z,6.7nm,1.2s						
BATI	**Baumata**	**49.90**	**66**	LR	LR	09 25 12.8	
	comp=Z,44nm,21.6s,baz=246,slow=31						
KNRA	**Kununurra**	**49.96**	**76**	P	**P**	**09 08 30.4**	**-0.4**
KNRA				IAmb	IAmb	09 08 32.3	
	comp=Z,13nm,1.2s						
QSPA	**South Pole Qui**	**50.08**	**180**	P	**P**	**09 08 31.0**	**-0.3**
QSPA				IAmb	IAmb	09 08 33.4	
	comp=Z,12nm,1.1s						
TAU	**Tasmania Unive**	**50.40**	**117**	P	**P**	**09 08 33.5**	**-0.4**
STKA	**Stephens Creek**	**50.87**	**102**	P	**P**	**09 08 37.4**	**-0.2**
	comp=Z,1.5nm,0.8s,baz=318,slow=10,SNR=3.7						
STKA				LR	LR	09 25 40.4	
	comp=Z,76nm,21.9s,baz=209,slow=31						
STKA	**Stephens Creek**	**50.87**	**102**	IAmb	IAmb	09 08 44.6	
	comp=Z,0.8nm,0.8s						
TOO	**Toolangi**	**51.22**	**110**	P	**P**	**09 08 40.5**	**+0.4**
TOO				IAmb	IAmb	09 08 48.3	
	comp=Z,8.0nm,1.1s						
WRA	**Warramunga Arr**	**51.59**	**84**	P	**P**	**09 08 42.8**	**-0.3**
	comp=Z,0.8nm,1.0s,baz=233,slow=7.3,SNR=4.6						
WRA				PcP	**PcP**	**09 09 56.3**	**-0.7**
	comp=Z,1.3nm,0.9s,baz=239,slow=3.2,SNR=6.3						
WRA				LR	LR	09 28 08.0	
	comp=Z,94nm,19.5s,baz=245,slow=33						
WB2	**Warramunga Arr**	**51.60**	**84**	P	**P**	**09 08 43.6**	**+0.4**
WB2				IAmb	IAmb	09 08 49.1	
	comp=Z,5.0nm,1.4s						
WB0	**Warramunga Arr**	**51.73**	**84**	P	**P**	**09 08 43.8**	**-0.4**
WB0				IAmb	IAmb	09 08 53.1	
	comp=Z,4.3nm,0.9s						
WR0	**Warramunga Arr**	**51.73**	**84**	P	**P**	**09 08 44.3**	**+0.2**
WR0				IAmb	IAmb	09 08 50.6	
	comp=Z,8.1nm,1.3s						
KMBO	**Kilima Mbogo**	**53.81**	**305**	LR	LR	09 27 16.4	
	comp=Z,66nm,20.5s,baz=100,slow=31						
ARMA	**Armidale**	**59.08**	**105**	P	**P**	**09 09 36.7**	**-0.4**
CMAR	**Chiang Mai Arr**	**61.31**	**22**	P	**P**	**09 09 52.9**	**+0.7**
	comp=Z,1.3nm,0.4s,baz=203,slow=6.8,SNR=9.9						
CMAR				LR	LR	09 35 02.7	
	comp=Z,12nm,18.1s,baz=202,slow=35						
CMAR	**Chiang Mai Arr**	**61.31**	**22**	P	**P**	**09 09 52.1**	**-0.2**
WKZ	**Wanaka**	**63.62**	**127**	P	**P**	**09 10 08.6**	**+1.1**
PMG	**Port Moresby**	**67.79**	**84**	LR	LR	09 37 09.7	
	comp=Z,73nm,18.1s,baz=139,slow=33						
GEYT	**Alibeck**	**79.82**	**344**	LR	LR	09 41 59.6	
	comp=Z,21nm,21.7s,baz=345,slow=32						
MKAR	**Makanchi Array**	**86.56**	**3**	P	**P**	**09 12 19.4**	**+0.1**
	comp=Z,2.3nm,0.8s,baz=181,slow=6.6,SNR=13						
TORD	**Torodi Ar. Bea**	**88.43**	**289**	LR	LR	09 50 20.5	
	comp=Z,108nm,19.7s,baz=150,slow=34						
DBIC	**Dimbokro**	**89.08**	**279**	LR	LR	09 47 30.3	
	comp=Z,66nm,20.3s,baz=170,slow=32						
KBZ	**Khabaz**	**89.35**	**335**	LR	LR	09 49 27.5	
	comp=Z,30nm,18.9s,baz=148,slow=34						
SONM	**Songino Array**	**91.01**	**18**	P	**P**	**09 12 40.6**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=193,slow=5.9,SNR=3.8						
KEST	**Kesra**	**98.59**	**310**	LR	LR	09 55 05.5	
	comp=Z,43nm,18.1s,baz=240,slow=34						
ILAR	**Eielson Array**	**144.19**	**31**	PKP	PKPbc	09 19 09.2	-0.4
	comp=Z,0.4nm,0.8s,baz=251,slow=2.8,SNR=4.3						
INK	**Inuvik**	**146.88**	**21**	PKPbc	**PKPbc**	**09 19 17.4**	**-0.4**
	comp=Z,5.0nm,1.1s,baz=322,slow=3.1,SNR=9.6						

IDC ***16*** *09:12:03.2±6.9, 4°.95N×123°.24E, h459^{km}±92^{km}, mb2.9/6, mb1 3.0/6, mb1mx2.8/47, mbtmp3.7/6, Error ellipse: s-maj=71.7km s-min=17.7km az=59.0*

ISC 16 09:12:02.2±1.2**, 5°.0N**±0°.3×**123°.3E**±0°.5**, h450**^{km}**, n6, σ1^{s}.06**/6**, mb3.3**/6**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**27.07**	**157**	P	**P**	**09 17 06.5**	**-0.7**
	0.2nm,0.7s,baz=340,slow=9.5,SNR=1.8						
CMAR	**Chiang Mai Arr**	**27.28**	**301**	P	**P**	**09 17 08.7**	**-0.3**
	1.1nm,0.3s,baz=101,slow=9.4,SNR=4.2						
ASAR	**Alice Springs**	**30.32**	**160**	P	**P**	**09 17 36.1**	**+0.5**
	0.2nm,0.3s,baz=340,slow=7.6,SNR=8.7						
SONM	**Songino Array**	**45.06**	**344**	P	**P**	**09 19 36.3**	**-0.2**
	0.8nm,0.8s,baz=150,slow=6.5,SNR=4.6						
MKAR	**Makanchi Array**	**54.58**	**326**	P	**P**	**09 20 48.1**	**+1.3**
	1.1nm,0.5s,baz=120,slow=7.3,SNR=13						
AKASG	**Malin Array Be**	**88.74**	**321**	P	**P**	**09 24 05.9**	**-0.9**
	0.3nm,0.4s,baz=103,slow=3.2,SNR=4.7						

ISC 16 09:14:45.4±1.3**, 49°.14N**±0°.06×**18°.88E**±0°.04**, h2**^{km}±17^{km}**, n5, σ0^{s}.65**/10**, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LANS	**Liptovska Anna**	**0.39**	**88**	*e*PG	**Pg**	**09 14 52.2**	**-0.6**
LANS				*e*SG	**Sg**	**09 14 58.3**	**+0.4**
KOLL	**Kolacno**	**0.64**	**209**	*e*PG	**Pg**	**09 14 57.0**	**-0.6**
KOLL				*e*SG	**Sb**	**09 15 08.9**	**+0.3**
VYHS	**Vyhne**	**0.64**	**182**	*e*PG	**Pb**	**09 15 00.0**	**+0.7**
VYHS				*e*SG	**Sb**	**09 15 08.9**	**+0.2**
JAVC	**Velka Javorina**	**0.84**	**251**	*e*PG	**Pb**	**09 15 03.1**	**+0.4**
JAVC				*e*SG	**Sn**	**09 15 16.3**	**-0.9**
MORC	**Moravsky Berou**	**1.08**	**307**	*e*PG	**Pg**	**09 15 05.9**	**-0.2**
MORC				*e*SG	**Sg**	**09 15 20.2**	**+0.1**

TUL ***16*** *09:15:48.1±0.9, 36°.072N±0°.010×97°.58W±0°.01, h4^{km}±7^{km}, ML2.7, mb_Lg2.8/64(NEIC), Error ellipse: s-maj=1.6km s-min=1.0km az=149.0*

NEIC 16 09:15:48.2±0.8**, 36°.079N**±0°.010×**97°.58W**±0°.02**, h5**^{km}±7^{km}**, Error ellipse: s-maj=2.1km s-min=1.4km az=97.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK029	**Liberty Lake**	**0.30**	**160**	Pg	Pg	09 15 54.1	+0.1
OK029				Sg	Sg	09 15 58.6	+0.7
BCOK	**Bluff Creek, N**	**0.42**	**183**	Pg	Pg	09 15 56.5	+0.2

BCOK				Sg	Sg	09 16 02.6	+0.8
CROK	Carrier	0.53	323	Pg	Pg	09 15 58.7	+0.2
CROK				Sg	Sg	09 16 06.2	+0.8
OK031	S. Brethren Rd	0.61	102		Pg	09 16 00.0	0.0
OK030	Cody Creek RV	0.67	103		Pg	09 16 00.9	0.0
OKCFA	Oklahoma City	0.67	171	Pg	Pg	09 16 00.9	-0.2
OKCFA				IAmb_Lg		09 16 09.0	
	comp=Z,124nm,1.2s						
OKCFA				Sg	Sg	09 16 10.2	+0.4
OKCSW	OKLAHOMA CITY	0.68	170		Pg	09 16 01.2	-0.1
OKCSW				Sg	Sg	09 16 10.7	+0.5
QUOK	Quay	0.71	82	Pg	Pg	09 16 01.8	-0.1
BLOK	Blackwell	0.74	23		Pg	09 16 02.4	0.0
BLOK				Sg	Sg	09 16 12.5	+0.5
GC02	Grant County #	0.80	344	Pg	Pg	09 16 03.5	-0.1
FNO	Franklin	0.83	170	Pg	Pg	09 16 03.8	-0.3
KAN14	Manchester OK	0.93	341		Pg	09 16 05.7	-0.3
KAN14				Sg	Sg	09 16 18.3	+0.2
KAN13	South Haven SW	0.94	5	Pg	Pg	09 16 05.9	-0.2
KAN17	Caldwell West	0.97	351	Pg	Pg	09 16 06.6	-0.3
KAN09	Caldwell North	1.05	358	Pg	Pg	09 16 08.1	-0.4
KAN09				IAmb_Lg		09 16 21.4	
	comp=Z,77nm,0.7s						
KAN01	Argonia South	1.08	352	Pg	Pg	09 16 08.6	-0.3
U32A	Winter Ranch,	1.19	285		Pg	09 16 10.3	-0.7
KAN08	Anthony NE Sta	1.19	345		Pg	09 16 10.5	-0.5
KAN06	Argonia West S	1.19	349		Pg	09 16 10.5	-0.5
T35A	Sooner Cattle	1.20	46	Pn	Pg	09 16 10.7	-0.5
KAN16	Harper SW Stat	1.21	341	Pn	Pg	09 16 11.0	-0.4
KAN12	Harper NE Stat	1.26	345		Pg	09 16 11.9	-0.5
TUL1	Leonard	1.46	96		Pn	09 16 14.5	-0.8
TUL1				IAmb_Lg		09 16 36.6	
	comp=Z,44nm,0.8s						
X34A	Smith Ranch, M	1.49	188		Pn	09 16 15.9	+0.3
WMOK	Wichita Mounta	1.66	217	Pn	Pn	09 16 17.9	0.0
LOOK	Love County	2.11	171	IAmb_Lg		09 16 55.0	
	comp=Z,41nm,1.3s						
X37A	Clayton	2.34	129	IAmb_Lg		09 17 04.4	
	comp=Z,49nm,0.7s						
HHAR	Hobbs	2.95	85	Pn	Pn	09 16 35.9	+0.1
W39A	Magazine	3.22	105	Pn	Pn	09 16 39.8	+0.5
W39A				IAmb_Lg		09 17 35.3	
	comp=Z,29nm,0.9s						
Z38A	Mt. Pleasant	3.53	142	IAmb_Lg		09 17 47.5	
	comp=Z,20nm,0.8s						
AMTX	Amarillo	3.55	252	IAmb_Lg		09 17 40.4	
	comp=Z,22nm,0.7s						
MIAR	Mount Ida	3.62	114	Pn	Pn	09 16 46.0	+1.1
U40A	Yellville	3.83	84		Pn	09 16 48.2	+0.3
U40A				IAmb_Lg		09 17 48.3	
	comp=Z,22nm,1.1s						
ABTX	Abilene, Hawle	3.84	207	IAmb_Lg		09 17 50.5	
	comp=Z,15nm,0.8s						
WHAR	Wooly Hollow	4.38	99	IAmb_Lg		09 18 16.5	
	comp=Z,14nm,0.9s						
WLAR	White Oak Lake	4.38	122	IAmb_Lg		09 18 09.4	
	comp=Z,13nm,1.0s						
MGMO	Mountain Grove	4.41	74	IAmb_Lg		09 18 14.5	
	comp=Z,19nm,0.8s						
FCAR	Ozark Folk Cen	4.43	91	IAmb_Lg		09 18 19.1	
	comp=Z,14nm,1.0s						
P38A	Dawn	4.77	41	IAmb_Lg		09 18 26.3	
	comp=Z,12nm,0.8s						
R40A	Maddies Statio	4.78	61	IAmb_Lg		09 18 18.7	
	comp=Z,23nm,0.8s						
CCAR	Cane Creek	5.23	113	IAmb_Lg		09 18 33.5	
	comp=Z,26nm,1.1s						
435B	Jarrell	5.28	180	IAmb_Lg		09 18 50.0	
	comp=Z,10nm,0.9s						
CCM	Cathedral Cave	5.44	67	IAmb_Lg		09 18 47.4	
	comp=Z,14nm,0.7s						
T25A	Trinidad	5.59	283	IAmb_Lg		09 18 59.5	
	comp=Z,14nm,1.1s						
N38A	Joes South For	5.81	35	IAmb_Lg		09 19 01.9	
	comp=Z,22nm,0.7s						
JCT	Junction City	5.89	199	IAmb_Lg		09 19 06.0	
	comp=Z,18nm,0.9s						
FVM	French Village	6.03	70	IAmb_Lg		09 18 59.5	
	comp=Z,19nm,1.1s						
SLM	Saint Louis	6.38	64	IAmb_Lg		09 19 15.1	
	comp=Z,20nm,0.8s						
SCIA	State Center	6.74	29	IAmb_Lg		09 19 35.9	
	comp=Z,15nm,0.7s						
S44A	Carbondale	6.87	74	IAmb_Lg		09 19 37.2	
	comp=Z,17nm,1.0s						
SIUC	Southern Illin	6.90	74	IAmb_Lg		09 19 44.4	
	comp=Z,13nm,0.8s						
O44A	Mansfield	8.25	58	IAmb_Lg		09 20 25.6	
	comp=Z,14nm,0.9s						
L42A	Oliver, Polo	8.54	44	IAmb_Lg		09 20 30.1	
	comp=Z,13nm,0.8s						
JFWS	Jewell Farm	8.87	37	IAmb_Lg		09 20 29.1	
	comp=Z,9.4nm,0.8s						

JMA ***16*** *09:16:00.6±0.1, 43°.10N×144°.05E, h131km±1km, M3.4*
IDC ***16*** *09:16:01.2±1.6, 43°.16N×144°.09E, h137km±12km, mb3.3/9, mb1 3.4/10, mb1mx3.2/41, mbtmp3.6/10, Error ellipse: s-maj=23.3km s-min=17.0km az=111.0*
SKHL ***16*** *09:16:01.0±0.5, 42°.80N×143°.80E, h65km±4km, mb4.2/2*
ISC 16 09:16:00.3±0.7**, 43°.10N**±0°.06×**144°.10E**±0°.04**, h133**km±6km**, n38,** σ**0^{s}74**/46**, mb3.6**/9**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOB	Onbets	0.28	225	P	Pn	09 16 19.2	+0.5
JOB				eS	Sn	09 16 33.0	+0.4
JAR	Ashorobuto	0.31	309	P	Pn	09 16 18.9	+0.1
JAR				eS	Sn	09 16 32.6	-0.3
JAK	Akkeshi	0.45	103	P	Pn	09 16 19.6	+0.2
JAK				eS	Sn	09 16 33.7	-0.1
JNK	Nakash	0.66	43	P	Pn	09 16 20.9	+0.2
JNK				eS	Sn	09 16 36.5	+0.3
JCH	Churui	0.73	229	P	Pn	09 16 21.0	-0.2
JCH				eS	Sn	09 16 35.7	-1.3
JKHN	Kushirohamanak	0.78	91	P	Pn	09 16 21.9	+0.4
JKHN				eS	Sn	09 16 37.6	0.0
JTKR	Abashiri--Toko	0.88	351	P	Pn	09 16 22.6	+0.2
JMP	Maruseppu	1.06	330	P	Pn	09 16 23.9	-0.1
JFR	Furan	1.11	274	P	Pn	09 16 24.1	-0.4
JFR				eS	Sn	09 16 42.6	-0.3
JRA	Rausu	1.12	41	P	Pn	09 16 25.0	+0.4
GLVR	Golovnino	1.22	58	eP	Pn	09 16 26.0	+0.5
GLVR				eS	Sn	09 16 45.0	+0.3
GLVR				A	A	09 16 46.0	
	420nm,0.3s						
GLVR				A	A	09 16 46.0	
	560nm,0.3s						
NMR	Nemuro--Hokkai	1.22	77	iP	Pn	09 16 25.0	-0.6
NMR				eS	Sn	09 16 43.0	-1.8
NEM2	Nemuro 2	1.23	77	P	Pn	09 16 25.6	-0.1
NEM2				eS	Sn	09 16 43.8	-1.1
JKK2	Kamakawa 2	1.25	309	P	Pn	09 16 26.0	0.0
JNBK	Urakawa-nobuka	1.29	231	P	Pn	09 16 26.0	-0.3
JNBK				eS	Sn	09 16 44.6	-1.4
ASAJ	Asahikawa	1.49	313	P	Pn	09 16 28.9	+0.4
	36nm,0.3s,baz=141,slow=13,SNR=306						
ASAJ				S	Sn	09 16 50.5	+0.5
	1.3nm,0.3s,baz=127,slow=20,SNR=1.6						
GRPR	Tuman	1.51	53	eP	Pn	09 16 29.0	+0.3
GRPR				A	A	09 16 52.2	
	309nm,0.3s						
GRPR				A	A	09 16 52.2	
	381nm,0.3s						
YUK	Yuzh-Kuril'sk	1.58	53	eP	Pn	09 16 30.0	+0.5
YUK				AMB	AMB	09 16 32.4	
	110nm,0.6s						
YUK				eS	Sn	09 16 52.0	+0.2
YUK				A	A	09 16 55.2	
	450nm,0.3s						
YUK				A	A	09 16 55.2	
	470nm,0.3s						
JHR	Hokuryu	1.85	291	P	Pn	09 16 33.2	+0.6
JEW	Eniwo	1.96	263	P	Pn	09 16 34.2	+0.2
JEW				eS	Sn	09 16 59.7	0.0
JSE	Soyaes	2.16	330	P	Pn	09 16 36.2	-0.1
JSE				eS	Sn	09 17 02.7	-1.3
KUR	Kuril'sk	3.45	50	eP	Pn	09 16 57.9	+5.1
KUR				AMB	AMB	09 16 59.7	
	90nm,0.9s						
MJAR	Matsushiro Arr	7.96	217	P	Pn	09 17 55.6	+2.3
	0.0nm,0.3s,baz=6.7,slow=11,SNR=1.4						
SONM	Songino Array	26.68	293	P	P	09 21 27.7	+0.8
	1.7nm,1.0s,baz=77,slow=8.5,SNR=5.9						
H11N2	WAKE ISLAND Hy	30.16	133	T	T	09 53 26.2	
	baz=327,slow=75,SNR=27						
H11N1	WAKE ISLAND Hy	30.18	133	T	T	09 53 30.7	
	baz=327,slow=75,SNR=27						
H11N3	WAKE ISLAND Hy	30.18	133	T	T	09 53 27.5	
	baz=327,slow=75,SNR=26						
H11S1	WAKE ISLAND Hy	31.07	135	T	T	09 54 37.5	
	baz=328,slow=76,SNR=47						
H11S3	WAKE ISLAND Hy	31.08	135	T	T	09 54 34.7	
	baz=328,slow=76,SNR=35						
H11S2	WAKE ISLAND Hy	31.09	135	T	T	09 54 39.1	
	baz=328,slow=76,SNR=30						
ZALV	Zalesovo Beam	39.62	307	P	P	09 23 19.1	+0.5
	0.6nm,0.4s,baz=64,slow=3.4,SNR=2.2						
MKAR	Makanchi Array	42.91	297	P	P	09 23 45.5	-0.2
	0.7nm,0.7s,baz=82,slow=11,SNR=4.6						
ILAR	Eielson Array	43.32	36	P	P	09 23 48.9	+0.2
	0.4nm,0.6s,baz=253,slow=5.5,SNR=6.6						
INK	Inuvik	48.08	30	P	P	09 24 25.9	+0.1
	0.5nm,0.3s,baz=288,slow=6.1,SNR=8.3						
RES	Resolute Bay	56.22	16	P	P	09 25 25.6	-0.3
	1.0nm,0.5s,baz=296,slow=2.6,SNR=5.7						
WRA	Warramunga Arr	63.37	190	P	P	09 26 14.9	-0.5
	0.5nm,1.0s,baz=7.0,slow=6.6,SNR=2.2						
FINES	FINESS Array B	64.43	332	P	P	09 26 20.7	-1.2
	2.0nm,0.9s,baz=41,slow=11,SNR=3.7						
ASAR	Alice Springs	67.09	190	P	P	09 26 40.8	+1.4
	0.2nm,0.7s,baz=12,slow=4.7,SNR=2.7						

ISN ***16*** *09:27:05.3±0.4, 34°.26N×45°.70E, h7km±2km, ML3.3*
TEH ***16*** *09:27:06.0, 34°.22N×45°.78E, h8km, ML3.4*
ISC 16 09:27:06.3±0.8**, 34°.25N**±0°.03×**45°.77E**±0°.03**, h10**km**, n34,** σ**1^{s}24**/39**, 1D, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IGHG	Ghaleghazi	0.67	83	ePg	Pb	09 27 19.8	-0.5
IGHG				eSg	Sb	09 27 29.9	+0.2
IGHG				e		09 27 31.0	
	comp=Z,50µm,0.2s						
IDHR	Dehrash	0.69	48	ePg	Pg	09 27 19.0	-0.6
KCHF	Cheshme Sefid,	1.06	88	ePg	Pg	09 27 25.9	-0.8
KCHF				eSg	Sn	09 27 41.7	-0.6
KCHF				e		09 27 47.1	
	comp=Z,16µm,0.3s						
KER	Kermanshah	1.14	83	ePg	Pn	09 27 28.2	-0.3
KER				eSg	Sn	09 27 43.8	-0.4
IBDR	Badra	1.14	173	ePg	Pg	09 27 27.5	-0.7
IBDR				eSg	Sn	09 27 44.1	+0.1
IBDR				AML	AML	09 27 50.5	
	comp=E,505nm,0.8s						
IBDR				AML	AML	09 27 51.1	
	comp=N,822nm,0.4s						
ILIN	Lien	1.19	55	ePg	Pg	09 27 29.6	+0.3
ILIN				e		09 27 30.6	
	comp=Z,6µm,0.4s						
BHD	Baghdad	1.51	230	ePn	Pb	09 27 34.0	-0.4
BHD				eSn	Sg	09 27 55.0	+0.1
BHD				AML	AML	09 28 05.1	
	comp=E,873nm,0.5s						
IKRK	Kirkuk	1.65	315	ePn	Pn	09 27 36.0	+0.7
IKRK				eSn	Sb	09 27 58.0	+0.4
IKRK				AML	AML	09 28 03.0	
	comp=N,342nm,0.3s						
IKRK				AML	AML	09 28 03.5	
	comp=E,467nm,0.4s						
IBZA	Bozab	1.75	82	ePg	Pg	09 27 39.0	-0.9
IKFM	Kafar-mosalman	1.87	112	ePn	Pb	09 27 40.8	+0.2
IDOB	Doab	2.05	102	ePn	Pb	09 27 43.1	-0.8
IALM	Almabolaq	2.08	72	ePn	Pb	09 27 43.5	-0.8
MAHB	Mahabad	2.52	359	ePn	Pb	09 27 50.5	-1.2
BMDN	Meydan	2.60	102	ePn	Pb	09 27 50.8	-2.5
BMDN				e		09 28 25.1	
	comp=Z,2µm,0.4s						
HAGD	Aghdareh	2.84	77	ePn	Pn	09 27 54.3	+2.3
NSR	Nassriya	3.24	174	ePn	Pn	09 27 49.0	-8.2
NSR				eSn	Sn	09 28 21.0	-15
QABG	Abgarm-Qazvin	3.46	64	ePn	Pn	09 28 01.8	+1.3
IRAZ	Razeghan	3.61	70	ePn	Pn	09 28 04.8	+2.2
AMIS	Naft Sefid	3.92	130	ePn	Pn	09 28 08.2	+1.6
ISHB	Shabestar	4.03	358	ePn	Pn	09 28 09.8	+1.4
IPIR	Pirpir	4.56	109	ePn	Pn	09 28 17.0	+1.3
MIB	Mutribah	4.62	163	eP	Pn	09 28 17.5	+1.2
QAMS	Qamsar	4.71	95	ePn	Pn	09 28 19.8	+2.2
IKLH	Kolahrood	4.93	99	ePn	Pn	09 28 22.3	+1.6
UMR	Umm Al-Rimmam	4.96	160	eP	Pn	09 28 21.5	+0.5
IVRN	Varamin	4.97	80	ePn	Pn	09 28 22.7	+1.6
KRSH	Karshahi	5.29	91	ePn	Pn	09 28 27.4	+1.8
KBD	Kabd	5.31	161	eP	Pn	09 28 27.0	+1.3
ISFB	Sefidab	5.36	87	ePn	Pn	09 28 27.3	+0.8
RDF	Al-Radifah	5.52	164	eP	Pn	09 28 29.5	+0.9
IZEF	Zefreh	5.64	102	ePn	Pn	09 28 31.9	+1.4
QRN	Al-Qurain	5.78	161	⇓eP	Pn	09 28 33.0	+0.8
KLNJ	Kolanjah	5.88	122	ePn	Pn	09 28 35.2	+1.3
IRAM	Ramesheh	6.06	112	ePn	Pn	09 28 37.8	+1.5

KRSC ***16*** *09:32:19.5±0.9, 53°.83N×160°.93E, h51km±19km, ML4.4*
MOS ***16*** *09:32:20.6±0.6, 53°.80N×160°.99E, h52km, mb4.3/4, Error ellipse: s-maj=9.1km s-min=4.2km az=72.9*
NEIC ***16*** *09:32:22.8±1.3, 54°.0N±0°.2×160°.4E±0°.2, h66km±6km, mb4.2/15, Error ellipse: s-maj=26.6km s-min=9.6km az=149.0*
IDC ***16*** *09:32:23.8±2.0, 54°.12N×160°.39E, h73km±20km, mb3.5/13, mb1 3.8/14, mb1mx3.6/44, mbtmp3.9/14, MS3.3/3, Ms1 3.3/3, ms1mx2.5/49, Error ellipse: s-maj=26.1km s-min=15.1km az=142.0*
ISC 16 09:32:21.5±0.9**, 53°.87N**±0°.03×**160°.80E**±0°.04**, h54**km±9km**, n134,** σ**1^{s}36**/168**, mb3.9**/23**, MS3.4**/3**, 2C, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KII	Karymskiy	0.82	282	PN	Pn	09 32 36.7	-0.2
KII				S	Sn	09 32 48.0	-0.3
KII	Karymskiy	0.82	282	eP	Pn	09 32 36.7	-0.2
KII				eS	Sn	09 32 48.0	-0.3
SPN	Mys Shipunski	0.91	211	PN	Pn	09 32 38.0	0.0
SPN				S	Sn	09 32 49.9	-0.3
SPN	Mys Shipunski	0.91	211	eP	Pn	09 32 38.0	0.0
SPN				eS	Sn	09 32 49.9	-0.3
NLC	Nalytchevo	1.12	232	PN	Pn	09 32 40.9	0.0
NLC				S	Sn	09 32 55.6	+0.4
NLC	Nalytchevo	1.12	232	eP	Pn	09 32 40.9	0.0
NLC				eS	Sn	09 32 55.6	+0.4
SDLR	Sedlovina	1.29	243	PN	Pn	09 32 43.9	+0.6
SDLR				S	Sn	09 33 00.4	+0.8
SDLR	Sedlovina	1.29	243	eP	Pn	09 32 43.9	+0.6
SDLR				eS	Sn	09 33 00.4	+0.8
SMAR	Somma	1.34	244	PN	Pn	09 32 44.6	+0.5
SMAR				S	Sn	09 33 01.2	+0.3
SMAR	Somma	1.34	244	eP	Pn	09 32 44.6	+0.5
SMAR				eS	Sn	09 33 01.2	+0.3
KRER	Koryakskii	1.35	246	PN	Pn	09 32 45.0	+0.8
KRER				S	Sn	09 33 01.5	+0.4
KRER	Koryakskii	1.35	246	eP	Pn	09 32 45.0	+0.8
KRER				eS	Sn	09 33 01.5	+0.4
UGLR	Uglovaya	1.36	241	PN	Pn	09 32 44.9	+0.7
UGLR				S	Sn	09 33 02.2	+1.1
UGLR	Uglovaya	1.36	241	eP	Pn	09 32 44.9	+0.7
UGLR				eS	Sn	09 33 02.2	+1.1
AVH	Avacha	1.37	244	PN	Pn	09 32 45.2	+0.8
AVH				S	Sn	09 33 01.9	+0.4
AVH	Avacha	1.37	244	eP	Pn	09 32 45.2	+0.8
AVH				eS	Sn	09 33 01.9	+0.4
KOK	Koryaka	1.42	247	PN	Pn	09 32 45.5	+0.5
KOK				S	Sn	09 33 03.7	+1.1
KOK	Koryaka	1.42	247	eP	Pn	09 32 45.5	+0.5
KOK				eS	Sn	09 33 03.7	+1.1
TUMR	Tumrok	1.46	345	PN	Pn	09 32 46.0	+0.4
TUMR				S	Sn	09 33 03.6	-0.1
TUMR	Tumrok	1.46	345	eP	Pn	09 32 46.0	+0.4
TUMR				eS	Sn	09 33 03.6	-0.1
DALK	Dalny	1.49	236	PN	Pn	09 32 46.3	+0.5
DALK				S	Sn	09 33 04.7	+0.6
DALK	Dalny	1.49	236	eP	Pn	09 32 46.3	+0.5
DALK				eS	Sn	09 33 04.7	+0.6
PET	Petropavlovsk	1.54	237	αiPN	Pn	09 32 47.2	+0.6
PET				eS	Sn	09 33 05.2	-0.3
PET				pmax	pmax		
	comp=Z,508nm,0.4s						
PET				smax	smax		
	comp=E,1µm,0.5s						
PET				smax	smax		
	comp=N,2µm,0.4s						
PET	Petropavlovsk	1.54	237	eP	Pn	09 32 47.1	+0.5
PET				eS	Sn	09 33 05.8	+0.3
PET	Petropavlovsk	1.54	237		Pn	09 32 47.0	+0.4
GNL	Ganaly	1.71	265	PN	Pn	09 32 49.4	+0.5
GNL	Ganaly	1.71	265	eP	Pn	09 32 49.4	+0.5
KMNR	Kamenistaya	1.91	350	PN	Pn	09 32 52.9	+1.2
KMNR	Kamenistaya	1.91	350	eP	Pn	09 32 52.9	+1.2
RUS	Russkaya	2.00	225	PN	Pn	09 32 52.9	+0.2
RUS				S	Sn	09 33 15.8	-0.7
RUS	Russkaya	2.00	225	eP	Pn	09 32 52.9	+0.2
RUS				eS	Sn	09 33 15.8	-0.7
PEA0B	Petropavlovsk-	2.01	249	PN	Pn	09 32 53.4	+0.5
PEA0B	Petropavlovsk-	2.01	249		Pn	09 32 53.4	+0.5
PETK	Petropavlovsk-	2.01	249	P	Pn	09 32 52.6	-0.4
	comp=N,31nm,0.3s,baz=77,slow=18,SNR=211						
PETK				S	Sn	09 33 18.0	+1.1
	comp=N,23nm,0.3s,baz=85,slow=19,SNR=4.7						
BZGR	Bezymyannyi-Gr	2.07	358	PN	Pn	09 32 54.9	+1.0
BZGR	Bezymyannyi-Gr	2.07	358	eP	Pn	09 32 54.9	+1.0
KIRR	Kirishev	2.10	353	PN	Pn	09 32 55.1	+0.8
KIRR	Kirishev	2.10	353	eP	Pn	09 32 55.1	+0.8
BZWR	Bezymyannyi-We	2.10	355	PN	Pn	09 32 55.6	+1.2
BZWR	Bezymyannyi-We	2.10	355	eP	Pn	09 32 55.6	+1.2
MTVR	Mutnovka	2.10	230	PN	Pn	09 32 55.4	+1.0
MTVR				S	Sn	09 33 21.3	+1.9
MTVR	Mutnovka	2.10	230	eP	Pn	09 32 55.4	+1.0
MTVR				eS	Sn	09 33 21.3	+1.9
GRL	Gorelyy	2.11	232	PN	Pn	09 32 55.7	+1.3
GRL				S	Sn	09 33 23.0	+3.5
GRL	Gorelyy	2.11	232	eP	Pn	09 32 55.7	+1.3
GRL				eS	Sn	09 33 23.0	+3.5
KPT	Kopyto	2.12	351	PN	Pn	09 32 55.5	+0.9
KPT	Kopyto	2.12	351	eP	Pn	09 32 55.5	+0.9
ZLN	Zelenaya	2.15	0	PN	Pn	09 32 56.5	+1.6
ZLN	Zelenaya	2.15	0	eP	Pn	09 32 56.5	+1.6
LGNR	Loginova	2.21	358	PN	Pn	09 32 58.0	+2.0
LGNR				S	Sn	09 33 25.1	+2.8
LGNR	Loginova	2.21	358	eP	Pn	09 32 58.0	+2.0
LGNR				eS	Sn	09 33 25.1	+2.8
CIRR	Tsirk	2.25	359	PN	Pn	09 32 58.0	+1.7
CIRR	Tsirk	2.25	359	eP	Pn	09 32 58.0	+1.7
ASAK	Asacha	2.30	231	PN	Pn	09 32 58.9	+1.9
ASAK				S	Sn	09 33 26.6	+2.5
ASAK	Asacha	2.30	231	eP	Pn	09 32 58.9	+1.9
ASAK				eS	Sn	09 33 26.6	+2.5
KRSR	Krestovskiy	2.35	357	PN	Pn	09 32 58.7	+1.0
KRSR	Krestovskiy	2.35	357	eP	Pn	09 32 58.7	+1.0
APC	Apacha	2.38	248	PN	Pn	09 32 59.1	+1.1
APC				S	Sn	09 33 26.9	+1.0
APC	Apacha	2.38	248	eP	Pn	09 32 59.1	+1.1
APC				eS	Sn	09 33 26.9	+1.0
ESO	Esso	2.39	330	PN	Pn	09 33 03.0	+4.9
ESO	Esso	2.39	330	eP	Pn	09 33 03.0	+4.9
KLY	Klyuchi	2.45	358	PN	Pn	09 33 00.1	+1.2
KLY				S	Sn	09 33 31.1	+3.6
KLY	Klyuchi	2.45	358	eP	Pn	09 33 00.1	+1.2
KLY				eS	Sn	09 33 31.1	+3.6
KBTR	Krutoberegovo	2.61	26	PN	Pn	09 33 01.8	+0.6
KBTR	Krutoberegovo	2.61	26	eP	Pn	09 33 01.8	+0.6
KBG	Krutoberegovo	2.62	24	PN	Pn	09 33 01.5	+0.2
KBG	Krutoberegovo	2.62	24	eP	Pn	09 33 01.5	+0.2
KDTR	Khodutka, Kamc	2.65	220	PN	Pn	09 33 02.8	+1.1
KDTR				S	Sn	09 33 34.8	+2.3
KDTR	Khodutka, Kamc	2.65	220	eP	Pn	09 33 02.8	+1.1
KDTR				eS	Sn	09 33 34.8	+2.3
BDR	Baidarnaya	2.71	5	PN	Pn	09 33 04.2	+1.6
BDR	Baidarnaya	2.71	5	eP	Pn	09 33 04.2	+1.6
SMKR	Semkarok	2.74	8	PN	Pn	09 33 04.3	+1.3
SMKR	Semkarok	2.74	8	eP	Pn	09 33 04.3	+1.3
SRKR	Sorokina	2.79	4	PN	Pn	09 33 05.0	+1.3
SRKR	Sorokina	2.79	4	eP	Pn	09 33 05.0	+1.3
MIPR	Malaya Ipel'ka	2.92	238	PN	Pn	09 33 06.9	+1.5
MIPR	Malaya Ipel'ka	2.92	238	eP	Pn	09 33 06.9	+1.5
BKI	Bering	3.29	64	PN	Pn	09 33 11.3	+0.8
BKI				S	Sn	09 33 46.4	-1.9
BKI	Bering	3.29	64	eP	Pn	09 33 11.3	+0.8
BKI				eS	Sn	09 33 46.4	-1.9
PAU	Pauzhetka	3.42	227	PN	Pn	09 33 14.6	+2.3
PAU				S	Sn	09 33 53.3	+1.8
PAU	Pauzhetka	3.42	227	eP	Pn	09 33 14.6	+2.3
PAU				eS	Sn	09 33 53.3	+1.8
SKR	Severo-Kuril's	4.30	224	ePN	Pn	09 33 27.1	+2.8
SKR				eS	Sn	09 34 20.6	+7.5
SKR				smax	smax		
	comp=N,369nm,0.7s						
SKR				smax	smax		
	comp=E,492nm,0.7s						
SKR	Severo-Kuril's	4.30	224	eP	Pn	09 33 25.9	+1.6
ASAJ	Asahikawa	15.39	238	P	Pn	09 35 56.8	+1.9
	comp=E,0.4nm,0.3s,baz=63,slow=4.5,SNR=2.2						
JSD	Sado	22.13	233	P	P	09 37 12.1	-0.3
MJAR	Matsushiro Arr	23.37	231	P	P	09 37 25.5	+0.4
	comp=E,2.5nm,0.7s,baz=30,slow=9.9,SNR=9.1						
TTA	Tatalina	23.92	51	P	P	09 37 30.7	+0.6
TTA				pmax	pmax		
	comp=Z,4.0nm,1.4s						
TTA	Tatalina	23.92	51	P	P	09 37 30.7	+0.6
J20K	Nowinta River	24.82	48	P	P	09 37 38.7	+0.5
J20K				IAmb	IAmb	09 37 60.0	
	comp=Z,6.2nm,1.4s						
IMAR	Indian Mountai	25.14	43	P	P	09 37 41.1	+0.1
HIA	Hailar	25.66	277	P	P	09 37 42.1	-3.9
HIA				pmax	pmax		
	comp=Z,16nm,0.9s						
HIA	Hailar	25.66	277	P	P	09 37 42.1	-3.9
HIA				IAmb	IAmb	09 37 42.9	
	comp=Z,16nm,0.9s						
NEA2	Nenana	27.03	47	P	P	09 37 58.6	+0.5
NEA2				IAmb	IAmb	09 38 00.0	
	comp=Z,3.7nm,1.1s						
TOLK	Toolik Lake Re	27.09	38	P	P	09 37 59.0	+0.3
TOLK				IAmb	IAmb	09 38 09.3	
	comp=Z,4.4nm,1.4s						
KSRS	Korea Array	27.91	247	LR	LR	09 49 39.3	
	comp=Z,14nm,19.2s,baz=35,slow=37						
ILAR	Eielson Array	27.97	46	P	P	09 38 06.4	-0.1
	comp=Z,1.2nm,0.7s,baz=263,slow=7.8,SNR=14						
ILAR	Eielson Array	27.97	46	P	P	09 38 07.0	+0.5
ILAR	Eielson Array	27.97	46	P	P	09 38 07.0	+0.5
SCM	Sheep Creek Mo	28.02	53	P	P	09 38 07.7	+0.7
SCM	Sheep Creek Mo	28.02	53	P	P	09 38 07.7	+0.7
PRP	Porcupine Dome	28.51	45	P	P	09 38 11.8	+0.3
PRP				IAmb	IAmb	09 38 13.3	
	comp=Z,6.6nm,1.1s						
M24K	Tolsona, Glenn	28.52	52	P	P	09 38 12.7	+1.2
M24K				IAmb	IAmb	09 38 32.7	
	comp=Z,8.7nm,1.0s						
BMAR	Burnt Mountain	28.87	41	P	P	09 38 15.4	+0.9
SCRK	Sand Creek	29.28	48	P	P	09 38 18.4	+0.1
DOT	Dot Lake	29.29	48	P	P	09 38 17.6	-0.6
M27K	Edge Creek, AK	30.46	51	P	P	09 38 30.7	+1.9
M27K				IAmb	IAmb	09 38 31.7	
	comp=Z,4.2nm,1.1s						
INK	Inuvik	32.99	38	P	P	09 38 50.3	-0.4
	comp=Z,0.9nm,0.5s,baz=267,slow=6.1,SNR=5.3						
H11N2	WAKE ISLAND Hy	34.40	170	T	T	10 15 49.7	
	baz=354,slow=76,SNR=139						
H11N3	WAKE ISLAND Hy	34.42	170	T	T	10 16 00.3	
	baz=354,slow=76,SNR=92						
H11N1	WAKE ISLAND Hy	34.42	170	T	T	10 16 02.6	
	baz=354,slow=76,SNR=181						
H11S1	WAKE ISLAND Hy	35.59	170	T	T	10 16 53.2	
	baz=352,slow=74						
H11S3	WAKE ISLAND Hy	35.60	170	T	T	10 16 48.7	
	baz=352						
H11S2	WAKE ISLAND Hy	35.61	170	T	T	10 16 52.1	
	baz=352,slow=74						
EUNU	Eureka	41.09	14	P	P	09 39 59.4	+0.1
EUNU				IAmb	IAmb	09 39 60.0	
	comp=Z,5.6nm,0.7s						
EDM	Edmonton	47.96	54	P	P	09 40 55.5	+1.2
EDM				pmax	pmax		
	comp=Z,4.0nm,0.8s						
EDM	Edmonton	47.96	54	P	P	09 40 55.5	+1.2
EDM				IAmb	IAmb	09 40 56.1	
	comp=Z,4.1nm,0.8s						
MKAR	Makanchi Array	48.20	295	P	P	09 40 53.9	-2.3
	comp=Z,0.3nm,0.7s,baz=37,slow=6.3,SNR=2.1						

MKAR	Makanchi Array	48.20	295	P	P	09 40 54.2	-2.0
MKAR	Makanchi Array	48.20	295	P	P	09 40 54.2	-2.0
FCC	Fort Churchill	52.60	39	P	P	09 41 29.6	+0.3
FCC	Fort Churchill	52.60	39	P	P	09 41 29.6	+0.3
ARCES	ARCESS Array B	52.67	342	LR	LR	10 08 07.0	
	comp=Z,33nm,18.1s,baz=270,slow=41						
NVAR	Mina Array Bea	55.08	71	P	P	09 41 50.3	+2.4
	comp=Z,0.9nm,0.5s,baz=332,slow=7.2,SNR=2.2						
NVAR	Mina Array Bea	55.08	71	P	P	09 41 48.4	+0.4
PDAR	Pinedale Array	56.77	62	P	P	09 42 01.4	+1.4
	comp=Z,0.7nm,0.7s,baz=311,slow=2.8,SNR=7.7						
PDAR	Pinedale Array	56.77	62	P	P	09 42 01.6	+1.6
FINES	FINESS Array B	59.57	337	P	P	09 42 17.4	-1.5
	comp=Z,2.3nm,1.0s,baz=35,slow=7.0,SNR=5.1						
NOA	NORSAR Array B	62.91	344	P	P	09 42 39.9	-1.7
	comp=Z,0.9nm,0.7s,baz=22,slow=6.7,SNR=3.1						
SCHQ	Schefferville	64.76	28	P	P	09 42 52.3	-1.4
	comp=Z,1.9nm,0.7s,baz=351,slow=13,SNR=1.6						
KAPI	Kappang	67.98	225	LR	LR	10 15 01.9	
	comp=Z,86nm,19.2s,baz=230,slow=38						
TXAR	Lajitas Array	69.94	68	P	P	09 43 28.3	+1.3
	comp=Z,0.8nm,0.5s,baz=297,slow=5.2,SNR=22						
TXAR	Lajitas Array	69.94	68	P	P	09 43 28.4	+1.4
WRA	Warramunga Arr	76.97	205	P	P	09 44 08.0	-0.1
	comp=Z,0.4nm,0.8s,baz=19,slow=5.8,SNR=2.5						
ASAR	Alice Springs	80.65	205	P	P	09 44 28.6	+0.4
	comp=Z,0.5nm,0.8s,baz=10,slow=5.7,SNR=5.4						
ESDC	Sonseca Array	85.90	348	P	P	09 44 53.3	-2.0
	comp=Z,0.4nm,0.5s,baz=7.2,slow=6.0,SNR=2.4						

IDC 16 09:55:14.0±13.0**,23°.87S**×**179°.59W,h535**^{km}±93^{km}**, mb2.9**/3**,mb1 3.0**/4**,mb1mx2.8**/38**,mbtmp3.8**/4**,Error ellipse: s-maj=141.4km s-min=97.1km az=63.0,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	12.99	275	P	P	09 58 03.2	+0.3
	0.1nm,0.3s,baz=102,slow=20,SNR=1.4						
DZM				S	S	10 00 22.9	+0.8
	0.1nm,0.3s,baz=113,slow=15,SNR=2.0						
STKA	Stephens Creek	35.08	248	P	P	10 01 21.8	-0.6
	0.7nm,0.4s,baz=96,slow=13,SNR=7.2						
ASAR	Alice Springs	42.41	260	P	P	10 02 21.9	0.0
	0.4nm,0.4s,baz=92,slow=7.0,SNR=15						
WRA	Warramunga Arr	42.78	266	P	P	10 02 24.7	-0.1
	1.0nm,0.4s,baz=102,slow=8.4,SNR=23						

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*IDC **16** 09:56:58.6±1.4, 31°.02S×71°.33W, h0^{km}, mb4.1/4, mb1 4.0/8, mb1mx3.9/30, mbtmp3.9/8, ML3.8/4, MS2.7/1, Ms1 2.7/1, ms1mx2.4/20, Error ellipse: s-maj=38.4km s-min=32.0km az=160.0*

*GUC **16** 09:57:07.2±0.8, 30°.59S×71°.27W, h47^{km}±6^{km}, ML4.0*

*NEIC **16** 09:57:07.4±1.6, 30°.62S±0°.05×71°.41W±0°.03, h50^{km}±6^{km}, mb4.4/14, ML4.0(GUC), Error ellipse: s-maj=7.5km s-min=4.1km az=167.0*

ISC 16 09:57:07.0±0.7**,30°.59S**±0°.04×**71°.36W**±0°.06**,h52**^{km}±6^{km}**, n68,**σ1§**16**/69**,mb4.2**/9**,1C-2D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.26	251	⇑*i*P	Pn	09 57 16.4	+0.5
CO06				*e*S	Sn	09 57 23.6	+1.3
CO06				IAML		09 57 26.2	
	comp=N,21μm,0.2s						
CO06	Fray Jorge	0.26	251		Pn	09 57 16.3	+0.4
GO04	Tololo Observa	0.63	49	⇓*i*P	Pn	09 57 20.5	+0.3
GO04				*i* S	Sn	09 57 30.1	+0.3
GO04	Tololo Observa	0.63	49		Pn	09 57 20.4	+0.3
CO05	La Serena	0.68	9	⇓*i*P	Pn	09 57 21.1	+0.7
CO05				*e*S	Sn	09 57 31.2	+1.0
CO05				IAML		09 57 32.2	
	comp=N,6μm,0.3s						
CO05	La Serena	0.68	9		Pn	09 57 21.2	+0.7
LCO	Las Campanas	1.67	20	*i* P	Pn	09 57 34.8	+0.7
LCO				*e*S	Sn	09 57 55.8	+1.3
LCO	Las Campanas	1.67	20	Pn	Pn	09 57 35.0	+0.9
VA06	Catapilco	1.97	179	*e*P	Pn	09 57 38.8	+0.9
VA06				*e*S	Sn	09 58 03.0	+1.6
VA06				IAML		09 58 08.5	
	comp=E,2μm,0.3s						
VA03	San Esteban	2.27	163	*e*P	Pn	09 57 42.9	+0.7
VA03				IAML		09 58 13.1	
	comp=E,1μm,0.6s						
VA03	San Esteban	2.27	163	Pn	Pn	09 57 42.9	+0.7
AC04	Llanos de Chal	2.39	6	Pn	Pn	09 57 45.1	+1.5
ROCH	El Roble	2.39	173	*e*P	Pn	09 57 44.9	+1.0
ROCH				IAML		09 58 20.2	
	comp=N,1μm,0.5s						
PEL	Peldehue	2.61	168	*e*P	Pn	09 57 46.7	0.0
PEL				IAML		09 58 34.4	
	comp=N,552nm,0.6s						
PEL	Peldehue	2.61	168	Pn	Pn	09 57 46.7	0.0
MT02	Curacav	2.67	176	*e*P	Pn	09 57 48.3	+0.8
MT02	Curacav	2.67	176	Pn	Pn	09 57 48.3	+0.8
MT05	Renca	2.84	170	*e*P	Pn	09 57 51.3	+1.3
MT05				IAML		09 58 33.2	
	comp=N,952nm,0.4s						
MT05	Renca	2.84	170		Pn	09 57 51.2	+1.2
FCH	Farellones	2.88	162	*e*P	Pn	09 57 52.6	+2.0
FCH				IAML		09 58 50.4	
	comp=E,342nm,0.7s						
VA05	Santo Domingo	3.07	184	*e*P	Pn	09 57 51.7	-1.2
VA05				IAML		09 58 41.0	
	comp=E,656nm,0.3s						
GO03	Copiap	3.14	18	*e*P	Pn	09 57 55.7	+1.7
GO03				IAML		09 58 48.5	
	comp=E,567nm,0.5s						
GO03	Copiap	3.14	18	Pn	Pn	09 57 55.9	+1.9
MT09	Talagante	3.19	175	*e*P	Pn	09 57 55.2	+0.4
MT09				IAML		09 58 51.1	
	comp=N,488nm,0.6s						
MT09	Talagante	3.19	175		Pn	09 57 55.5	+0.7
MT01	Popeta	3.27	178	*e*P	Pn	09 57 55.7	0.0
MT01				IAML		09 58 45.5	
	comp=E,310nm,0.7s						
MT01	Popeta	3.27	178		Pn	09 57 56.1	+0.4
LMEL	Las Melosas	3.39	164	*e*P	Pn	09 57 59.4	+1.8
LMEL				IAML		09 58 47.9	
	comp=N,314nm,0.2s						
BO04	La Punta	3.45	170	*e*P	Pn	09 57 58.5	+0.3
BO01	Tunca	3.80	177		Pn	09 58 03.2	+0.3
AC02	Maricunga	4.22	28	Pn	Pn	09 58 11.2	+2.0
BO02	Sierra Bellavi	4.22	174		Pn	09 58 09.9	+1.1
GO05	Huala	4.44	186		Pn	09 58 10.2	-1.6
H03N1	Juan Fernandez	7.02	244	T	T	10 05 45.5	
	baz=71,slow=72,SNR=499						
H03N3	Juan Fernandez	7.03	244	T	T	10 05 46.5	
	baz=71,slow=72,SNR=397						
VA04	Juan Fernndez	7.03	242	Pn	Pn	09 58 46.2	-1.1
H03N2	Juan Fernandez	7.04	244	T	T	10 05 42.3	
	baz=71,slow=72,SNR=425						
LVC	Limon Verde	8.24	16	Pn	Pn	09 59 05.1	+0.8
	comp=N,0.5nm,0.3s,baz=165,slow=18,SNR=1.4						
LVC				Sn	Sn	10 00 32.5	-3.7
	comp=N,0.9nm,0.3s,baz=198,slow=20,SNR=1.4						
LVC	Limon Verde	8.24	16	Pn	Pn	09 59 03.7	-0.6
TRQA	Tornquist	10.74	136	Pn	Pn	09 59 38.3	+0.2
CPUP	Villa Florida	13.05	74	Pn	Pn	10 00 06.8	-2.8
	comp=N,0.1nm,0.3s,baz=228,slow=9.5,SNR=1.4						
CPUP				Sn	Sn	10 02 32.0	-1.1
	comp=N,0.1nm,0.3s,baz=211,slow=18,SNR=1.4						
CPUP				LR	LR	10 06 10.1	
	comp=N,28nm,18.1s,baz=286,slow=42						
LPAZ	La Paz	14.54	12	Pn	Pn	10 00 32.1	+1.8
	comp=N,0.4nm,0.3s,baz=194,slow=6.4,SNR=9.3						
SIV	San Ignacio	17.31	35	P	Pn	10 01 06.2	+1.1
	comp=N,0.3nm,0.3s,baz=204,slow=9.1,SNR=15						
ETMB	Extrema	21.22	14	P	P	10 01 49.3	+0.8
BDFB	Brasilia	26.04	60	P	P	10 02 35.2	-0.5
	comp=N,3.8nm,0.5s,baz=215,slow=7.6,SNR=7.0						
BDFB	Brasilia	26.04	60	P	P	10 02 35.4	-0.3
BDFB				IAmb	IAmb	10 02 35.6	
	comp=Z,4.8nm,0.7s						
PTGA	Pitinga	31.60	22	P	P	10 03 25.0	0.0
PTGA				IAmb	IAmb	10 03 30.6	
	comp=Z,3.6nm,1.0s						
VA02	Isla de Pascua	33.42	266	P	P	10 03 39.3	-1.5
PAYG	Puerto Ayora	34.76	325	P	P	10 03 51.7	-0.8
CRPR	Cabo Rojo, PR	48.49	5	P	P	10 05 45.6	+1.1
SNAA	Sanae	54.53	159	P	P	10 06 29.7	+0.4
SNAA				IAmb	IAmb	10 06 30.4	
	comp=Z,4.6nm,1.2s						
QSPA	South Pole Qui	59.64	180	P	P	10 07 06.3	+0.7
QSPA				IAmb	IAmb	10 07 20.7	
	comp=Z,4.5nm,1.4s						
TXAR	Lajitas Array	67.07	330	P	P	10 07 56.3	+1.3
	comp=Z,0.2nm,0.5s,baz=148,slow=7.4,SNR=4.6						
TXAR	Lajitas Array	67.07	330	P	P	10 07 55.8	+0.7
BLA	Blacksburg	67.98	352	P	P	10 08 00.7	+0.2
BLA				IAmb	IAmb	10 08 12.7	
	comp=Z,8.2nm,1.2s						
GLAT	Glass	68.61	344	P	P	10 08 04.7	+0.3
O52A	Adamsville	71.02	352	P	P	10 08 19.1	0.0
O52A				IAmb	IAmb	10 08 25.6	
	comp=Z,12nm,1.4s						
CPNY	Central Park	71.06	358	P	P	10 08 20.0	+0.6
KSCT	Kent School, K	71.98	358	P	P	10 08 26.3	+1.5
DBIC	Dimbokro	73.55	72	P	P	10 08 35.1	+0.3
	comp=Z,1.7nm,0.5s,baz=255,slow=6.0,SNR=1.8						
NCB	Newcomb	74.25	358	P	P	10 08 39.4	+1.2
TORD	Torodi Ar. Bea	82.50	70	P	P	10 09 24.1	-0.3
	comp=Z,1.2nm,0.6s,baz=231,slow=4.6,SNR=10						
TORD	Torodi Ar. Bea	82.50	70	P	P	10 09 23.9	-0.6
WRA	Warramunga Arr	124.01	209	PKP	PKPdf	10 15 58.5	-1.7
	comp=Z,0.1nm,0.7s,baz=162,slow=1.2,SNR=1.0						
H11S2	WAKE ISLAND Hy	126.34	271	T	T	12 34 53.4	
	baz=115,slow=74,SNR=83						
H11S1	WAKE ISLAND Hy	126.35	271	T	T	12 35 01.7	
	baz=115,slow=74,SNR=71						
H11S3	WAKE ISLAND Hy	126.36	271	T	T	12 34 54.8	
	baz=115,slow=74,SNR=64						
ZALV	Zalesovo Beam	151.01	30	PKPbc	PKPbc	10 16 53.5	0.0
	comp=Z,2.7nm,0.5s,baz=311,slow=4.1,SNR=13						

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*KLM **16** 09:57:35, 18°.36N×120°.99E, h10^{km}, mb4.6*

*BJI **16** 09:57:36.8±0.0, 18°.70N×120°.64E, h7^{km}, mB4.6/24, mb4.4/39, ML4.1/2, Ms4.0/18, Ms7 3.8/20*

*NEIC **16** 09:57:36.0±2.1, 18°.54N±0°.03×120°.84E±0°.09, h10^{km}±1^{km}, mb4.6/37, Error ellipse: s-maj=15.1km s-min=4.5km az=78.0*

*MAN **16** 09:57:37.9, 18°.72N×120°.78E, h19^{km}, mb5.2, ML4.1, MS4.1*

*IDC **16** 09:57:40.7±3.3, 18°.56N×121°.01E, h52^{km}±30^{km}, mb4.0/28, mb1 4.1/30, mb1mx4.0/51, mbtmp4.3/30, ML4.2/2, MS3.4/13, Ms1 3.5/13, ms1mx3.2/39, Error ellipse: s-maj=16.7km s-min=11.2km az=70.0*

ISC 16 09:57:40.1±0.4**,18°.61N**±0°.04×**120°.84E**±0°.04**,h41**^{km}**,n129,** σ**1§48**/132**,mb4.5**/56**,MS3.5**/13**,5C-4D,Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIPP	Brgy, Tapao	0.77	208	⇑*i*P	Pn	09 57 53.1	-1.3
SIPP				*e*S	Sn	09 58 10.8	+5.9
APYP	Conner	0.83	153	⇑*e*P	Pn	09 57 55.8	+0.4
APYP				*e*S	Sn	09 58 08.8	+2.3
SGCP	Mt. Cagua	1.20	107	⇑*e*P	Pn	09 58 00.9	+0.5
SGCP				*i* S	Sn	09 58 18.4	+2.9
CVP	Callao Caves	1.30	134	⇓*i*P	Pn	09 58 02.7	+1.0
CVP				*i* S	Sn	09 58 20.9	+3.1
TWG	Pinlang	4.20	3		Pn	09 58 40.1	-1.5
LQP	Lukban	4.52	171	⇑*e*P	Pn	09 58 47.6	+1.5
JCNP	Jose Panganiba	4.65	157	*e*P	Pn	09 58 52.9	+5.1
TPUB	Ta-pu	4.67	358	Pn	Pn	09 58 46.6	-1.6
YULB	Yu-li	4.78	5		Pn	09 58 48.6	-1.0
SSLB	Suanglung	5.16	1	Pn	Pn	09 58 53.2	-1.6
NACB	Ninganchiao	5.58	7		Pn	09 58 59.5	-1.2
YHNB	Yeheng	6.05	5		Pn	09 59 06.6	-0.5
YOJ	Yonaguni jima	6.17	19	Pn	Pn	09 59 08.9	+0.3
TATO	Taipei	6.37	5		Pn	09 59 11.9	+0.5
QIZ	Qiongzhong	10.42	274	P	Pn	10 00 04.8	-2.2
QIZ				S	Sn	10 02 02.3	-0.3
QIZ				pmax	pmax		
	comp=Z,26nm,0.9s						
QIZ				LR	LR		
	comp=N,260nm,13.9s						
QIZ				LR	LR		
	comp=E,270nm,15.0s						
QIZ				LR	LR		
	comp=Z,380nm,20.0s						
QIZ	Qiongzhong	10.42	274	Pn	Pn	10 00 04.4	-2.6
JOW	Kunigami	10.68	39	P	Pn	10 00 09.9	-0.6
	2.9nm,0.3s,baz=242,slow=12,SNR=7.9						
JOW	Kunigami	10.68	39	Pn	Pn	10 00 10.1	-0.4
WHN	Wuhan	13.27	335	⇓P	Pn	10 00 49.8	+4.0
WHN				LR	LR		
	comp=Z,690nm,16.1s						
NJ2	Nanjing	13.51	353	*e*P	Pn	10 00 49.3	+0.2
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
SPMM	Sapulut	14.46	198	P	Pn	10 01 01.0	-1.2
GYA	Guiyang	15.24	303	⇑P	Pn	10 01 08.4	-4.2
GYA				pmax	pmax		
	comp=Z,130nm,5.4s						
GYA				LR	LR		
	comp=N,210nm,10.8s						
GYA				LR	LR		
	comp=E,200nm,11.3s						
GYA				LR	LR		
	comp=Z,280nm,18.5s						
SLVN	Son La	16.15	282	P	Pn	10 01 25.9	+1.7
KMI	Kunming	18.00	294	⇓P	Pn	10 01 47.8	+0.3
KMI				pmax	pmax		
	comp=Z,9.0nm,1.6s						
KMI				LR	LR		
	comp=N,320nm,15.4s						
KMI				LR	LR		
	comp=E,320nm,17.7s						
KMI				LR	LR		
	comp=Z,370nm,16.6s						
XAN	Xi'an	18.69	328	P	Pn	10 01 55.6	0.0
XAN				pP	pP	10 02 00.0	-4.1
XAN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,120nm,4.5s						
XAN				LR	LR		
	comp=N,220nm,14.1s						
XAN				LR	LR		
	comp=E,190nm,14.8s						
XAN				LR	LR		
	comp=Z,180nm,18.0s						
APSI	Ampana	19.41	178	P	Pn	10 02 15.7	+11
JHS	Saijyo	19.63	31	P	P	10 02 04.7	-0.6
CD2	Chengdu	19.73	312	P	Pn	10 02 07.8	-0.3
CD2				pP	P	10 02 09.1	+2.7
CD2				S	Sn	10 05 49.3	+0.3
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
CD2				pmax	pmax		
	comp=Z,100nm,7.9s						
CD2				LR	LR		
	comp=N,370nm,14.2s						
CD2				LR	LR		
	comp=E,370nm,12.7s						
CD2				LR	LR		
	comp=Z,420nm,17.2s						
KSRS	Korea Array	19.78	17	P	P	10 02 06.2	-0.6
	1.1nm,0.3s,baz=196,slow=11,SNR=19						
KSRS				LR	LR	10 10 51.0	
	comp=Z,141nm,18.2s,baz=195,slow=40						
KS19	Wonju Array Si	19.81	17	P	P	10 02 06.5	-0.5
KS19				IAmb	IAmb	10 02 21.9	
	comp=Z,40nm,1.5s						
CHTO	Chiang Mai	20.74	274	P	P	10 02 18.7	+1.3
CHTO				IAmb	IAmb	10 02 22.6	
	comp=Z,14nm,0.8s						
CMAR	Chiang Mai Arr	20.76	273	P	P	10 02 19.5	+1.9
	comp=Z,5.9nm,0.7s,baz=91,slow=8.4,SNR=32						
CMAR				PcP	PcP	10 06 27.4	+1.4
	comp=Z,1.2nm,0.4s,baz=27,slow=1.0,SNR=7.2						
CMAR				LR	LR	10 09 57.4	
	comp=Z,52nm,19.6s,baz=178,slow=35						
CMAR	Chiang Mai Arr	20.76	273		P	10 02 17.5	-0.2
JWT	Wachi	21.04	35	P	P	10 02 19.4	-1.1
JWT				IAmb	IAmb	10 02 25.6	
	comp=Z,26nm,0.8s						
SANI	Sanana	21.14	166	P	P	10 02 17.8	-3.9
	comp=Z,12nm,0.7s						
JCJ	Chichijima	21.39	63	P	P	10 02 23.6	-0.6
	comp=Z,75nm,1.0s,baz=285,slow=20,SNR=2.1						
BJT	Baijiatuau	21.72	350	P	P	10 02 29.6	+1.9
BJT				IAmb	IAmb	10 02 42.9	
	comp=Z,14nm,0.9s						
BJI	Beijing	21.74	350	P	P	10 02 29.4	+1.6
BJI				pmax	pmax		
	comp=Z,12nm,0.7s						
INU	Inuyama	21.99	37	P	P	10 02 29.8	-0.9
INU				IAmb	IAmb	10 02 34.1	
	comp=Z,25nm,0.7s						
LZH	Lanzhou	22.98	323	⇓P	P	10 02 42.3	+0.9
LZH				pP	pP	10 02 45.8	-4.9
LZH				pmax	pmax		
	comp=Z,24nm,1.3s						
KAPI	Kappang	23.50	183	P	P	10 02 45.1	-1.2
	comp=Z,3.0nm,0.3s,baz=343,slow=11,SNR=2.3						
MAT	Matsushiro	23.52	37	P	P	10 02 46.8	+0.3
MJAR	Matsushiro Arr	23.52	37	P	P	10 02 44.7	-1.7
	comp=Z,1.3nm,0.6s,baz=202,slow=7.2,SNR=6.4						
HHC	Hu-ho-hao-te	23.56	342	*e*P	P	10 02 47.1	+0.2
HHC				pmax	pmax		
	comp=Z,16nm,0.8s						
HHC				pmax	pmax		
	comp=Z,200nm,6.6s						
USRK	Ussuriysk Ar.	27.18	18	P	P	10 03 19.7	+0.1
	comp=Z,3.7nm,0.7s,baz=197,slow=9.9,SNR=7.0						
SONM	Songino Array	31.45	341	P	P	10 03 58.3	+0.6
	comp=Z,0.9nm,0.8s,baz=159,slow=12,SNR=4.7						
SONM				LR	LR	10 17 45.7	
	comp=Z,107nm,18.4s,baz=178,slow=38						
KLR	Kul'dur	31.79	14	P	P	10 04 00.6	0.0
	comp=Z,1.8nm,0.6s,baz=238,slow=9.5,SNR=3.0						
ODAN	Odare	31.85	291	*e*P	P	10 04 02.4	+0.8
	comp=Z,26nm,0.5s						
RAMN	Ramite	32.56	291	*e*P	P	10 04 09.3	+1.4
	comp=Z,36nm,0.5s						
JIRN	Jiri	33.02	292	*e*P	P	10 04 13.2	+1.2
	comp=Z,23nm,0.8s						
GUN	Gumba	33.33	293	*e*P	P	10 04 15.5	+0.8
	comp=Z,53nm,0.8s						
PKI	Pulchoki	33.70	292	*e*P	P	10 04 18.2	+0.3
PKIN	Phulchoki	33.71	292	*e*P	P	10 04 18.2	+0.3
	comp=Z,8.2nm,0.5s						
KKN	Kakani	33.84	292	*e*P	P	10 04 19.4	+0.4
	comp=Z,28nm,0.9s						
DMN	Daman	33.97	292	*e*P	P	10 04 20.7	+0.6
GKN	Gorkha	34.43	293	*e*P	P	10 04 24.5	+0.5
	comp=Z,43nm,0.9s						
DANN	Dangsing	35.24	293	*e*P	P	10 04 31.5	+0.3
	comp=Z,25nm,0.8s						
KOLN	Koldanda	35.31	292	*e*P	P	10 04 32.1	+0.4
	comp=Z,41nm,0.9s						
WMQ	Urumqi	37.48	319	*e*P	P	10 04 51.8	+2.0
WRA	Warramunga Arr	40.53	160	P	P	10 05 13.3	-2.1
	comp=Z,1.1nm,0.4s,baz=334,slow=10,SNR=39						
WRA				LR	LR	10 25 07.2	
	comp=Z,24nm,18.9s,baz=345,slow=41						
MK31	Makanchi Array	42.27	320	P	P	10 05 29.4	-0.1
MKAR	Makanchi Array	42.27	320	P	P	10 05 30.8	+1.3
	comp=Z,4.0nm,0.7s,baz=113,slow=9.5,SNR=26						
MKAR				PcP	PcP	10 07 21.1	-1.7
	comp=Z,1.6nm,0.7s,baz=90,slow=3.9,SNR=4.0						
MKAR	Makanchi Array	42.27	320	P	P	10 05 29.8	+0.3
MAKZ	Makanchi	42.46	320	P	P	10 05 32.2	+1.1
H11S3	WAKE ISLAND Hy	43.37	83	T	T	10 51 17.7	
	baz=277,slow=75,SNR=44						
H11S1	WAKE ISLAND Hy	43.38	82	T	T	10 51 08.1	
	baz=277,slow=75,SNR=9.6						
H11S2	WAKE ISLAND Hy	43.39	83	T	T	10 51 19.1	
	baz=277,slow=75,SNR=11						
H11N1	WAKE ISLAND Hy	43.41	81	T	T	10 51 26.4	
	baz=277,slow=75,SNR=13						
H11N2	WAKE ISLAND Hy	43.42	81	T	T	10 51 23.2	
	baz=277,slow=75,SNR=13						
H11N3	WAKE ISLAND Hy	43.43	81	T	T	10 51 23.5	
	baz=277,slow=75,SNR=10.0						
KSH	Kashi	43.87	308	P	P	10 05 46.5	+3.8
KSH				sP	pP	10 05 53.3	-0.7
KSH				PP	PcP	10 07 30.3	+1.8
KSH				pmax	pmax		
	comp=Z,13nm,0.8s						
AS31	Alice Springs	43.91	163	P	P	10 05 41.5	-1.4
ASAR	Alice Springs	43.91	163	P	P	10 05 42.4	-0.6
	comp=Z,0.8nm,0.3s,baz=338,slow=7.0,SNR=33						
PETK	Petropavlovsk-	44.73	31	P	P	10 05 49.0	-0.2
	comp=Z,3.1nm,0.8s,baz=197,slow=1.5,SNR=1.8						
PETK				LR	LR	10 23 02.3	
	comp=Z,53nm,21.1s,baz=232,slow=34						
ZALV	Zalesovo Beam	44.83	330	P	P	10 05 50.4	+0.4
	comp=Z,1.1nm,0.5s,baz=120,slow=8.7,SNR=5.3						
ZALV				PcP	PcP	10 07 30.9	-0.4
	comp=Z,0.6nm,0.4s,baz=149,slow=3.0,SNR=1.8						
ZALV				LR	LR	10 25 02.6	
	comp=Z,38nm,21.2s,baz=142,slow=36						
NIL	Nilore	44.89	299	P	P	10 05 51.0	+0.2
TKM2	Tokmak 2	45.11	313	P	P	10 05 54.7	+2.0
	SNR=6.2						
KBK	Karagaybulak	45.49	312	P	P	10 05 58.0	+2.3
	SNR=5.0						
UCH	Uchtor	45.67	311	P	P	10 05 60.0	+2.6
	SNR=17						
CHMS	Chumysh	45.73	312	P	P	10 05 59.0	+1.7
	SNR=5.1						
AAK	Ala-Archa	45.80	312	P	P	10 05 59.9	+1.8
	comp=Z,3.2nm,0.7s,baz=92,slow=6.9,SNR=8.6						
AAK	Ala-Archa	45.80	312	P	P	10 05 58.3	+0.2
AAK				IAmb	IAmb	10 06 00.5	
	comp=Z,4.7nm,0.9s						
AML	Almayashu	46.23	311	P	P	10 06 04.1	+2.3
	SNR=15						
KURK	Kurchatov	46.27	324	P	P	10 06 00.9	-0.5
GAR	Garm	48.04	306	P	P	10 06 16.3	+0.7
KBL	Kabul	48.46	300	P	P	10 06 19.7	+0.8
KBL				IAmb	IAmb	10 06 21.7	
	comp=Z,9.5nm,1.1s						
KK31	Karatay Array	48.75	311	P	P	10 06 21.6	+0.7
KK31				IAmb	IAmb	10 06 23.0	
	comp=Z,11nm,1.1s						
KKAR	Karatay Array	48.75	311	P	P	10 06 21.4	+0.6
KKAR				IAmb	IAmb	10 06 23.0	
	comp=Z,11nm,1.1s						
KKAR	Karatay Array	48.75	311	P	P	10 06 21.7	+0.9
CHGR	Chuyangaron	48.88	305	P	P	10 06 22.1	+0.1
BRVK	Borovoye	51.94	324	P	P	10 06 46.2	+1.5
BRVK				IAmb	IAmb	10 06 46.9	
	comp=Z,12nm,1.0s						
TIXI	Tiksi	53.25	3	P	P	10 06 53.7	-0.5
	comp=Z,1.8nm,0.6s,baz=145,slow=7.9,SNR=4.5						
TIXI	Tiksi	53.25	3	IAmb	IAmb	10 07 04.1	
	comp=Z,4.6nm,1.0s						
STKA	Stephens Creek	54.00	158	P	P	10 06 59.1	-1.0
	comp=Z,1.6nm,0.7s,baz=331,slow=9.2,SNR=6.1						
NRIK	Noril'sk	54.70	346	P	P	10 07 05.5	+0.7
	comp=Z,8.0nm,0.7s,baz=122,slow=6.0,SNR=14						
NRIK				LR	LR	10 32 12.7	
	comp=Z,81nm,18.6s,baz=141,slow=38						
NRIK	Noril'sk	54.70	346	P	P	10 07 05.2	+0.5
ABKAR	Akbulak array	57.19	317	P	P	10 07 22.7	-0.2
ABKAR				IAmb	IAmb	10 07 24.6	
	comp=Z,4.4nm,0.8s						
GEYT	Alibeck	57.46	304	LR	LR	10 34 44.7	
	comp=Z,60nm,20.8s,baz=345,slow=39						
AKTO	Aktyubinsk	58.61	318	P	P	10 07 33.5	+0.6
	comp=Z,3.2nm,0.7s,baz=88,slow=6.9,SNR=8.1						
ARU	Arti	59.42	325	P	P	10 07 38.3	-0.1
	comp=Z,1.7nm,0.2s,baz=86,slow=5.1,SNR=7.3						
ARU	Arti	59.42	325	P	P	10 07 37.5	-0.8
ARU				IAmb	IAmb	10 07 39.3	
	comp=Z,9.4nm,1.0s						
BELG	Belogornoye	65.26	320	P	P	10 08 17.6	+0.2
	comp=Z,16nm,0.8s,baz=357,slow=3.5,SNR=4.6						
GNI	Garni	67.77	307	LR	LR	10 44 18.9	
	comp=Z,21nm,18.5s,baz=74,slow=41						
KBZ	Khabaz	68.77	310	P	P	10 08 40.7	+0.7
	comp=Z,4.3nm,0.8s,baz=48,slow=4.8,SNR=4.4						
KBZ				LR	LR	10 41 59.6	
	comp=Z,34nm,19.9s,baz=112,slow=39						
KLMR	Klimovskoe	69.72	329	*e*P	P	10 08 44.5	-1.0
KLMR				AMP		10 08 45.9	
	comp=Z,11nm,1.1s						
KLMR				*e*PcP	PcP	10 09 06.9	-1.2
KLMR				*e*PP	PP	10 11 20.0	+0.3
RAYN	Ar Rayn	69.74	289	P	P	10 08 45.7	-0.7
OBN	Obninsk	71.70	323	P	P	10 08 57.5	-0.1
	comp=Z,2.5nm,0.4s,baz=117,slow=6.8,SNR=1.5						
CAST	Castle Rocks	72.24	28	P	P	10 09 01.1	+0.3
CAST				IAmb	IAmb	10 09 12.8	
	comp=Z,9.2nm,1.0s						
MLY	Manley	72.65	26	P	P	10 09 05.1	+1.9
MLY				IAmb	IAmb	10 09 19.0	

	comp=Z,9.5nm,1.2s						
NEA2	Nenana	73.41	27	P	P	10 09 09.1	+1.4
NEA2				IAmb	IAmb	10 09 10.1	
	comp=Z,3.1nm,0.8s						
AFI	Afiamalu	73.84	111	P	P	10 09 09.0	-2.1
	comp=Z,26nm,0.8s,baz=252,slow=9.6,SNR=1.7						
ILAR	Eielson Array	74.31	26	P	P	10 09 12.5	-0.5
	comp=Z,0.7nm,0.8s,baz=282,slow=6.6,SNR=8.5						
ARCES	ARCESS Array B	74.58	339	P	P	10 09 14.7	+0.3
	comp=Z,2.4nm,0.8s,baz=76,slow=7.5,SNR=5.7						
FINES	FINESS Array B	76.10	330	P	P	10 09 23.0	-0.2
	comp=Z,2.1nm,0.7s,baz=69,slow=7.6,SNR=7.2						
BRTR	Keskin Array B	76.25	308	P	P	10 09 25.0	+0.2
	comp=Z,0.9nm,0.7s,baz=64,slow=3.4,SNR=1.9						
MNK	Minsk	76.76	323	*i* P	P	10 09 26.7	-0.4
	comp=E,3.0nm,0.9s						
MNK				*i* P	P	10 09 26.7	-0.4
	comp=N,7.0nm,0.8s						
MNK				*i* P	P	10 09 26.7	-0.4
	comp=Z,15nm,0.9s,baz=76						
MNK				*i* PP	PP	10 12 18.9	-0.9
MNK				*i* PPP	PPP	10 14 08.4	
MNK				*i* S	S	10 19 14.3	+3.1
MNK				*i* SS	SS	10 24 03.6	-3.5
MNK				*i* SSS	SSS	10 27 34.4	
MNK				*i* LQ	LQ	10 37 56.6	
MNK				*i* LR	LR	10 44 02.9	
MNK				*i* LRM	MLR	10 45 14.1	
	comp=E,6.0nm,13.8s						
MNK				*i* LRM	MLR	10 45 19.1	
	comp=N,100nm,16.6s						
MNK				*i* LRM	MLR	10 45 25.9	
	comp=Z,100nm,18.1s						
AKASG	Malin Array Be	76.83	319	P	P	10 09 26.9	-0.7
	comp=Z,2.9nm,0.6s,baz=70,slow=5.5,SNR=10						
AKASG	Malin Array Be	76.83	319	IAmb	IAmb	10 09 29.1	
	comp=Z,1.6nm,1.0s						
AKBB	Malin Array Si	76.83	319	P	P	10 09 26.2	-1.4
AKBB				IAmb	IAmb	10 09 45.1	
	comp=Z,14nm,1.4s						
NACGM	Naroch	77.28	324	*i* P	P	10 09 30.6	+0.5
A36M	Sachs Harbour	79.53	17	P	P	10 09 41.3	-0.8
A36M				IAmb	IAmb	10 09 52.4	
	comp=Z,3.7nm,0.9s						
BUR08	Bucovina Ar. S	80.18	317	P	P	10 09 46.8	+0.4
NB2	NORSAR Subarra	82.99	332	P	P	10 10 00.0	-0.8
	comp=Z,0.9nm,0.7s,baz=65,slow=5.1						
NOA	NORSAR Array B	82.99	332	P	P	10 09 59.5	-1.3
	comp=Z,1.0nm,0.7s,baz=64,slow=5.0,SNR=4.6						
NOA				LR	LR	10 50 05.9	
	comp=Z,51nm,18.4s,baz=65,slow=38						
KMBO	Kilima Mbogo	84.28	267	LR	LR	10 45 10.0	
	comp=Z,23nm,18.4s,baz=103,slow=34						
FNA	Florina	84.95	311	P	P	10 10 10.0	-1.2
GERES	GERESS Array B	86.93	321	P	P	10 10 21.0	+0.1
	comp=Z,0.4nm,0.4s,baz=66,slow=5.7,SNR=1.9						
VNDA	Vanda	98.85	172	LR	LR	10 58 15.2	
	comp=Z,6.0nm,18.0s,baz=344,slow=37						
TXAR	Lajitas Array	115.85	43	PKP	PKiKP	10 16 18.8	-0.2
	comp=Z,0.2nm,0.6s,baz=230,slow=2.5,SNR=4.3						

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*NEIC **16** 09:59:45.4±0.8, 18.°8S±0.°2×177.°9W±0.°2, h493^{km}±15^{km}, mb4.4/19, Error ellipse: s-maj=27.0km s-min=22.5km az=160.0*

*IDC **16** 09:59:45.2±8.2, 18.°79S×177.°90W, h496^{km}±31^{km}, mb3.4/4, mb1 3.4/6, mb1mx3.1/29, mbtmp4.2/6, Error ellipse: s-maj=158.5km s-min=32.0km az=119.0*

ISC 16 09:59:45.1±0.9**, 18.°8S**±0.°2×**177.°9W**±0.°1**, h500^{km}, n26, σ0^s.86**/26**, mb4.3**/15**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.00	285	P	P	10 01 03.4	-0.3
	1.6nm,0.3s,baz=145,slow=18,SNR=10						
NIUE	Niue	7.54	93	P	P	10 01 36.2	-0.6
MARNC	Mare, Loyalty	13.48	256	P	P	10 02 36.2	-3.2
DZM	Mont Dzumac	15.03	255	P	P	10 02 55.8	0.0
	0.2nm,0.3s,baz=97,slow=18,SNR=2.0						
DCZ	Deep Cove	29.33	202	P	P	10 05 07.0	+0.6
ARMA	Armidale	29.92	241	P	P	10 05 12.4	+0.5
ARMA				IAmb	IAmb	10 05 27.7	
	comp=Z,26nm,1.4s						
CTAO	Charters Tower	33.79	262	P	P	10 05 45.9	+0.8
CTAO				IAmb	IAmb	10 06 56.9	
	comp=Z,26nm,1.5s						
TOO	Toolangi	36.99	232	P	P	10 06 11.6	0.0
TOO				IAmb	IAmb	10 07 45.8	
	comp=Z,14nm,1.5s						
COEN	Coen	37.61	271	P	P	10 06 17.9	+1.0
COEN				IAmb	IAmb	10 06 21.1	
	comp=Z,8.5nm,1.2s						
STKA	Stephens Creek	38.63	242	P	P	10 06 25.4	+0.4
	comp=Z,1.5nm,0.5s,baz=85,slow=8.4,SNR=8.9						
STKA	Stephens Creek	38.63	242	P	P	10 06 25.4	+0.4
WR0	Warramunga Arr	44.77	260	P	P	10 07 13.8	0.0
WR0				IAmb	IAmb	10 09 06.8	
	comp=Z,19nm,1.9s						
WB0	Warramunga Arr	44.93	261	P	P	10 07 14.8	-0.3
WB0				IAmb	IAmb	10 07 49.6	
	comp=Z,16nm,1.6s						
WB2	Warramunga Arr	44.94	260	P	P	10 07 15.2	0.0
WB2				IAmb	IAmb	10 07 35.3	
	comp=Z,22nm,1.8s						
WRAB	Tennant Creek	44.95	260	P	P	10 07 14.6	-0.6
WRA	Warramunga Arr	44.95	260	P	P	10 07 15.4	+0.1
	comp=Z,1.5nm,0.7s,baz=98,slow=8.2,SNR=10						
WRA	Warramunga Arr	44.95	260	P	P	10 07 15.4	+0.1
AS31	Alice Springs	45.02	255	P	P	10 07 16.3	+0.5
ASAR	Alice Springs	45.02	255	P	P	10 07 16.1	+0.4
	comp=Z,11nm,0.5s,baz=91,slow=8.5,SNR=126						
FORT	Forrest	50.07	245	P	P	10 07 53.4	-0.1
KNRA	Kununurra	50.89	265	P	P	10 08 00.8	+1.0
KNRA				IAmb	IAmb	10 09 21.0	
	comp=Z,19nm,1.4s						
JGF	Kuroka	68.75	322	P	P	10 09 58.0	-0.6
JGF				IAmb	IAmb	10 10 11.3	
	comp=Z,18nm,1.4s						
INU	Inuyama	68.78	322	P	P	10 09 58.6	-0.1
MJAR	Matsushiro Arr	68.93	323	P	P	10 10 00.4	+0.8
MJAR				IAmb	IAmb	10 10 02.1	
	comp=Z,7.5nm,1.4s						
MAJO	Matsushiro	68.93	323	P	P	10 10 00.4	+0.8
MAJO				IAmb	IAmb	10 10 01.0	
	comp=Z,8.4nm,0.6s						
USRK	Ussuriysk Ar.	77.64	326	P	P	10 10 49.5	+0.2
	comp=Z,1.7nm,0.5s,baz=134,slow=10,SNR=5.4						

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*DJA **16** 10:18:14.9±0.3, 1°N±2°×12°8E±°, h10^{km}, M3.8/9, mb4.2/2, mB5.4/1, MLv3.6/9, Mw(mB)4.8/1*

*IDC **16** 10:18:15.1±2.0, 1.°00N×127.°33E, h0^{km}, mb3.9/3, mb1 4.0/4, mb1mx3.6/34, mbtmp3.8/4, ML2.9/1, Error ellipse: s-maj=112.2km s-min=25.4km az=69.0*

ISC 16 10:18:16.4±1.5**, 0.°92N**±0.°10×**127.°53E**±0.°10**, h10^{km}, n10, σ1^s.65**/11**, mb3.9**/3**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.22	229	P	Pg	10 18 18.1	-2.9
TNTI				S	Sg	10 18 26.0	+1.9
LBMI	Labuha	1.54	181	P	Pn	10 18 44.2	+0.2
SANI	Sanana	3.33	208	P	Pn	10 19 09.0	+0.4
KMSI	Cibinong	3.57	265	P	Pn	10 19 12.2	+0.3
GTOI	Gorontalo	4.53	266	P	Pn	10 19 27.1	+2.0
LUWI	Luwuk	5.14	248	P	Pn	10 19 33.8	+0.2
FITZ	Fitzroy Crossi	18.99	186	P	Pn	10 22 39.9	+0.9
	0.0nm,0.3s,baz=0.0,slow=10,SNR=1.3						
WRA	Warramunga Arr	21.78	163	P	P	10 23 09.4	+0.8
	3.6nm,0.8s,baz=340,slow=11,SNR=22						
ASAR	Alice Springs	25.21	166	P	P	10 23 44.3	+1.8
	3.9nm,0.9s,baz=346,slow=11,SNR=26						
MKAR	Makanchi Array	60.31	326	P	P	10 28 24.4	-1.0
	0.5nm,0.6s,baz=120,slow=7.3,SNR=4.4						

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*IDC **16** 10:20:11.2±5.0, 62.°26S×154.°63E, h0^{km}, mb3.7/2, mb1 4.1/3, mb1mx3.8/27, mbtmp3.9/3, ML4.2/1, Error ellipse: s-maj=322.4km s-min=40.9km az=76.0*

*NEIC **16** 10:20:13.0±2.5, 62.°2S±0.°1×155.°0E±0.°6, h10^{km}±1^{km}, mb4.4/13, Error ellipse: s-maj=47.9km s-min=7.6km az=69.0*

ISC 16 10:20:12.4±0.9**, 62.°2S**±0.°1×**154.°9E**±0.°3**, h10^{km}, n17, σ0^s.94**/17**, mb4.4**/9**, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	15.58	174	Pn	Pn	10 23 50.7	-1.1
	1.0nm,0.3s,baz=339,slow=14,SNR=47						
VNDA				Sn	Sn	10 26 29.1	-15
	0.8nm,0.3s,baz=210,slow=18,SNR=6.8						
VNDA	Vanda	15.58	174		Pn	10 23 50.9	-0.8
QSPA	South Pole Qui	27.91	180	P	P	10 26 04.0	+1.6
QSPA				IAmb	IAmb	10 26 26.7	
	comp=Z,2.2nm,0.8s						
BBOO	Buckleboo	31.77	329	P	P	10 26 36.0	-0.6
BBOO				IAmb	IAmb	10 26 48.3	
	comp=Z,14nm,1.6s						
ARMA	Armidale	31.84	355	P	P	10 26 37.5	+0.2
EIDS	Eidsvold	36.88	354	P	P	10 27 20.8	-0.1
EIDS				IAmb	IAmb	10 27 41.6	
	comp=Z,14nm,1.2s						
PINNC	Pines Island,	40.46	18	P	P	10 27 52.0	+1.1
ONTNC	Ouen Toro	40.62	17	P	P	10 27 50.7	-1.5
ASAR	Alice Springs	41.05	330	P	P	10 27 56.0	+0.2
	comp=Z,0.9nm,0.7s,baz=164,slow=9.0,SNR=15						
ASAR	Alice Springs	41.05	330	P	P	10 27 55.7	-0.1
AS31	Alice Springs	41.05	330	P	P	10 27 55.1	-0.7
WR0	Warramunga Arr	44.48	332	P	P	10 28 24.9	+1.2
WR0				IAmb	IAmb	10 28 40.6	
	comp=Z,10nm,1.6s						
WB2	Warramunga Arr	44.54	332	P	P	10 28 25.2	+1.1
WB2				IAmb	IAmb	10 28 37.1	
	comp=Z,11nm,1.6s						
WRA	Warramunga Arr	44.54	332	P	P	10 28 24.6	+0.4
	comp=Z,0.9nm,0.8s,baz=162,slow=7.4,SNR=10						
WRA	Warramunga Arr	44.54	332	P	P	10 28 24.8	+0.7
WRAB	Tennant Creek	44.55	332	P	P	10 28 24.6	+0.4
WRAB				IAmb	IAmb	10 28 25.5	
	comp=Z,8.7nm,1.6s						
WB0	Warramunga Arr	44.70	332	P	P	10 28 25.7	+0.2
WB0				IAmb	IAmb	10 28 45.7	
	comp=Z,11nm,1.6s						

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*IDC **16** 10:24:21.8±0.9, 0.°96N×127.°29E, h0^{km}, mb3.9/7, mb1 3.9/9, mb1mx3.7/45, mbtmp3.8/9, ML3.2/2, MS2.7/1, Ms1 2.7/1, ms1mx2.1/43, Error ellipse: s-maj=56.0km s-min=15.8km az=66.0*

*DJA **16** 10:24:24.6±0.4, 1°N±2°×12°7E±°, h10^{km}, M3.4/7, MLv3.4/7*

ISC 16 10:24:23.5±0.9**, 1.°00N**±0.°07×**127.°52E**±0.°06**, h10^{km}, n13, σ1^s.35**/16**, mb3.9**/7**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.28	214	P	Pg	10 24 29.8	+0.7
TNTI				S	Sg	10 24 34.8	+1.9
LBMI	Labuha	1.63	181	P	Pn	10 24 49.5	-2.8
LBMI				S	Sg	10 25 16.2	+0.2
SANI	Sanana	3.40	207	P	Pn	10 25 17.5	+0.9
KMSI	Cibinong	3.56	263	P	Pn	10 25 19.3	+0.4
SIJI	Sorong	4.18	116	Pn	Pn	10 25 28.5	+1.1
	0.7nm,0.3s,baz=342,slow=7.9,SNR=4.5						
SIJI				Sn	Sn	10 26 17.4	+1.0
	0.5nm,0.3s,baz=232,slow=23,SNR=1.1						
SIJI				LR	LR	10 27 21.8	
	comp=Z,83nm,18.8s,baz=248,slow=41						
FITZ	Fitzroy Crossi	19.07	185	P	P	10 28 43.9	-2.4
	0.1nm,0.3s,baz=0.0,slow=7.1,SNR=1.2						
WRA	Warramunga Arr	21.86	163	P	P	10 29 17.2	+0.6
	4.1nm,0.9s,baz=338,slow=11,SNR=17						
ASAR	Alice Springs	25.30	166	P	P	10 29 50.5	+0.1
	2.9nm,0.8s,baz=346,slow=10,SNR=30						
STKA	Stephens Creek	35.32	159	P	P	10 31 19.3	+0.3
	1.3nm,0.7s,baz=338,slow=17,SNR=4.2						
SONM	Songino Array	50.12	342	P	P	10 33 18.9	-0.1
	0.4nm,0.7s,baz=156,slow=8.6,SNR=2.6						
MKAR	Makanchi Array	60.23	326	P	P	10 34 31.1	-0.9
	0.5nm,0.6s,baz=129,slow=8.5,SNR=5.5						
ZALV	Zalesovo Beam	63.36	333	P	P	10 34 52.9	0.0
	0.3nm,0.3s,baz=111,slow=7.9,SNR=1.9						
KURBB	Kurchatov Arra	64.45	328	P	P	10 34 58.9	-1.2
	1.3nm,0.2s,baz=125,slow=6.2,SNR=7.6						

IDC 16 10:55:56.0±3.5**, 5.°60S**×**150.°85E, h0^{km}, mb3.2**/3**, mb1 3.5**/3**, mb1mx3.1**/30**, mbtmp3.3**/3**, Error ellipse: s-maj=117.6km s-min=49.2km az=120.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.48	227	P	P	11 00 46.5	+0.2
	0.3nm,0.5s,baz=53,slow=10,SNR=5.7						
ASAR	Alice Springs	24.27	221	P	P	11 01 15.1	-0.1
	0.3nm,0.7s,baz=55,slow=9.2,SNR=8.3						
FITZ	Fitzroy Crossi	27.57	241	P	P	11 01 45.2	+0.1
	0.7nm,0.7s,baz=72,slow=11,SNR=1.5						
TORD	Torodi Ar. Bea	148.69	286	PKPbc	PKPbc	11 15 45.6	-0.8
	0.5nm,0.4s,baz=73,slow=2.8,SNR=5.3						

LJU 16 11:03:10.0, 46.°06N×**15.°18E, h0^{km}, ML0.1, 2C, Suspected explosion, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDKS	Podkum	0.13	269	⇑*i*Pg	Pg	11 03 12.4	-0.1
PDKS				*i* Sg	Sg	11 03 14.8	+0.7
LEGS	Legarje	0.15	141	⇑*i*Pg	Pg	11 03 13.1	+0.3
VISS	Visnje	0.35	223	*i* Pg	Pg	11 03 17.0	+0.2
VISS				IAML		11 03 23.3	
	comp=Z,1.3nm,0.2s						

VIE 16 11:03:47.8±0.3**, 47.°83N**×**15.°97E, h0^{km}, mb1.0**/2**, ml1.1**/2**, Error ellipse: s-maj=2.8km s-min=1.2km az=94.0 13 km NNW of Ternitz Suspected Mining explosion., Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CONA	Conrad Observa	0.12	323	*e*Pg	Pg	11 03 50.3	+0.1
	19nm,0.2s						
CONA				*e*Sg	Sg	11 03 52.1	+0.3
	29nm,0.3s						
ARSA	Arzberg	0.66	208	*e*Pg	Pg	11 04 00.5	+0.2
	0.1nm,0.1s						
ARSA				*e*Sg	Sg	11 04 09.5	+0.7
	0.3nm,0.1s						

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*IDC **16** 11:04:25.9±0.4, 26.°51S×67.°74E, h0^{km}, mb4.5/28, mb1 4.6/28, mb1mx4.4/55, mbtmp4.5/28, MS3.8/16, Ms1 3.8/16, ms1mx3.5/41, Error ellipse: s-maj=14.3km s-min=11.9km az=22.0*

*BJI **16** 11:04:27.3±0.0, 26.°67S×68.°58E, h6^{km}, mB5.1/20, mb4.8/46, Ms4.6/3, Ms7 4.5/5*

*GCMT **16** 11:04:27.6±0.4, 26.°72S±0.°03×68.°10E±0.°04, h15^{km}±1^{km}, MW4.9/72, Moment Tensor Solution. s16,c19; s72,c91; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.12±.22; $M_{\theta\theta}$1.34±.13; $M_{\phi\phi}$0.78±.14; $M_{r\theta}$-1.41±.28; $M_{\theta\phi}$-0.65±.08; $M_{\phi r}$-1.78±.38; Best double couple: $M_0$2.65500×10^{16} NP1:ϕ_s306.00000°, δ34.00000°, λ-44.00000°. NP2: ϕ_s74.00000°, δ67.00000°, λ-116.00000°. Principal axes: T 1.8430, Plg18.0000°, Azm183.0000°; N 1.6260, Plg24.0000°, Azm85.0000°; P -3.4670, Plg59.0000°, Azm307.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **16** 11:04:28.6±1.1, 26.°45S±0.°09×67.°8E±0.°1, h10^{km}±1^{km}, mb5.0/48 Error ellipse: s-maj=16.4km s-min=14.9km az=146.0*

ISC 16 11:04:27.7±0.3**, 26.°54S**±0.°07×**67.°70E**±0.°06**, h10^{km}, n153, σ1^s.17**/151**, mb4.9**/77**, MS3.9**/19**, 4C-1D, Indian Ocean Triple Junction**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RER	Riviere de l'E	12.18	294	Pn	Pn	11 07 20.7	-0.7
H08S1	Diego Carcia H	19.33	14	T	T	11 28 58.8	
	baz=194,slow=76,SNR=40						
H08S2	Diego Garcia H	19.33	14	T	T	11 28 38.0	
	baz=194,slow=76,SNR=26						
H08S3	Diego Garcia H	19.35	14	T	T	11 28 39.8	
	baz=194,slow=76,SNR=44						
OPO	Ambohidratompo	20.52	288	P	P	11 09 06.2	-0.3
	5.0nm,0.8s,baz=117,slow=9.8,SNR=5.4						
BOSA	Boshof	37.54	257	P	P	11 11 42.4	+0.1
	7.1nm,0.8s,baz=105,slow=5.9,SNR=8.8						
BOSA				LR	LR	11 25 09.3	
	comp=Z,194nm,18.2s,baz=115,slow=33						
LBTB	Lobatse	37.83	263	P	P	11 11 44.2	-0.5
	5.2nm,0.8s,baz=106,slow=7.9,SNR=4.9						
LBTB	Lobatse	37.83	263	P	P	11 11 45.5	+0.7
LSZ	Lusaka	38.43	279	P	P	11 11 51.1	+1.1
KMBO	Kilima Mbogo	38.67	306	P	P	11 11 52.4	+0.3
	0.8nm,0.3s,baz=163,slow=6.7,SNR=3.3						
KMBO	Kilima Mbogo	38.67	306	P	P	11 11 52.8	+0.8
H01W2	Cape Leeuwin H	40.48	113	T	T	11 55 00.9	
	baz=268,slow=75,SNR=18						
H01W3	Cape Leeuwin H	40.48	113	T	T	11 55 01.1	
	baz=268,slow=75,SNR=16						
H01W1	Cape Leeuwin H	40.50	113	T	T	11 55 02.2	
	baz=268,slow=75,SNR=18						
MAW	Mawson	41.19	183	P	P	11 12 12.6	+0.5
	5.4nm,0.8s,baz=359,slow=9.0,SNR=7.4						
MAW				LR	LR	11 24 59.9	
	comp=Z,225nm,22.0s,baz=50,slow=30						
MAW	Mawson	41.19	183	P	P	11 12 13.8	+1.7
PSI	Prapat	41.96	51	LR	LR	11 25 13.9	
	comp=Z,112nm,21.4s,baz=205,slow=30						
LEM	Lembang	42.71	70	P	P	11 12 25.4	0.0
	11nm,0.5s,baz=233,slow=7.5,SNR=4.0						
LEM				LR	LR	11 26 45.4	
	comp=Z,71nm,18.7s,baz=227,slow=31						
LODK	Lodwar	43.18	309	P	P	11 12 30.0	+0.9
ATD	Arta Tunnel	44.90	324	P	P	11 12 42.6	-0.2
	11nm,0.8s,baz=252,slow=20,SNR=2.4						
HYB	Hyderabad	44.95	15	*i* P	P	11 12 44.0	+0.9
SYO	Syowa Base	45.63	194	⇑*e*P	P	11 12 48.4	+0.5
BBKI	Banjar Baru	50.58	71	P	P	11 13 28.6	+1.6
FITZ	Fitzroy Crossi	53.88	94	P	P	11 13 50.8	-0.7
	6.7nm,0.9s,baz=229,slow=3.2,SNR=11						
FITZ	Fitzroy Crossi	53.88	94	P	P	11 13 51.0	-0.4
FITZ				IAmb	IAmb	11 13 52.6	
	comp=Z,16nm,1.1s						
EDFI	Ende, Flores	54.00	81	P	P	11 13 52.3	-0.2
	comp=Z,8.0nm,1.2s						
CM31	Chiang Mai Arr	54.04	37	P	P	11 13 52.4	-0.2
CMAR	Chiang Mai Arr	54.04	37	P	P	11 13 52.4	-0.1
	comp=Z,9.9nm,0.8s,baz=230,slow=7.1,SNR=57						
CMAR				LR	LR	11 32 50.9	
	comp=Z,83nm,21.9s,baz=222,slow=32						
CMAR	Chiang Mai Arr	54.04	37	P	P	11 13 52.1	-0.4
RAYN	Ar Rayn	54.20	335	P	P	11 13 54.5	+0.9
RAYN				IAmb	IAmb	11 14 02.3	
	comp=Z,10nm,1.1s						
CHTO	Chiang Mai	54.33	37	P	P	11 13 54.5	-0.1
CHTO				IAmb	IAmb	11 14 03.2	
	comp=Z,16nm,1.0s						
UBPT	Khong Chiam	55.45	46	P	P	11 14 01.9	-0.9
UBPT				IAmb	IAmb	11 14 11.6	
	comp=Z,31nm,1.2s						
SOEI	Soe	55.85	84	P	P	11 14 05.4	-0.5
SOEI				IAmb	IAmb	11 14 27.8	
	comp=Z,22nm,0.9s						
KOLN	Koldanda	56.12	17	*e*P	P	11 14 08.5	+0.9
DMN	Daman	56.38	19	*e*P	P	11 14 10.8	+1.3
PKIN	Phulchoki	56.43	19	*e*P	P	11 14 10.5	+0.6
GKN	Gorkha	56.62	18	*e*P	P	11 14 12.3	+1.2
DANN	Dangsing	56.71	17	*e*P	P	11 14 12.7	+0.8
	comp=Z,37nm,0.7s						
JIRN	Jiri	56.74	20	*e*P	P	11 14 13.3	+1.1
KNRA	Kununurra	57.53	92	P	P	11 14 16.8	-0.8
KNRA				IAmb	IAmb	11 14 18.4	
	comp=Z,16nm,1.0s						
APSI	Ampana	57.71	73	P	P	11 14 19.3	+0.3
	comp=Z,22nm,1.0s						
BBOO	Buckleboo	58.81	114	P	P	11 14 26.4	-0.1
SNAA	Sanae	58.94	200	P	P	11 14 27.6	+0.8
	comp=Z,2.6nm,0.7s,baz=80,slow=8.9,SNR=3.9						
SNAA	Sanae	58.94	200	P	P	11 14 27.2	+0.4
SNAA				IAmb	IAmb	11 14 28.8	
	comp=Z,9.1nm,1.2s						
SLVN	Son La	59.12	40	P	P	11 14 28.7	0.0
SLVN				IAmb	IAmb	11 14 37.9	
	comp=Z,17nm,1.0s						
ASAR	Alice Springs	59.41	103	P	P	11 14 30.5	-0.3
	comp=Z,11nm,0.9s,baz=250,slow=6.4,SNR=113						
AS31	Alice Springs	59.41	103	P	P	11 14 30.3	-0.6
NIL	Nilore	60.09	5	P	P	11 14 34.5	-0.6
NIL				IAmb	IAmb	11 14 42.8	
	comp=Z,11nm,0.8s						
VNA2	Neumayer--Watz	60.30	201	P	P	11 14 37.5	+1.3
KBL	Kabul	60.76	1	P	P	11 14 40.0	+0.1
KBL				IAmb	IAmb	11 14 49.2	
	comp=Z,10nm,0.8s						
WRA	Warramunga Arr	60.99	99	P	P	11 14 41.1	-0.6
	comp=Z,12nm,0.9s,baz=253,slow=6.8,SNR=61						
WRA				LR	LR	11 37 41.8	
	comp=Z,29nm,19.3s,baz=185,slow=33						
WRA	Warramunga Arr	60.99	99	P	P	11 14 41.4	-0.3
WB2	Warramunga Arr	61.01	99	P	P	11 14 41.6	-0.1
WRAB	Tennant Creek	61.01	99	P	P	11 14 41.1	-0.7
QIZ	Qiongzhong	61.03	47	P	P	11 14 41.9	+0.2
QIZ				S	S	11 23 01.6	+0.9
QIZ				LR	LR		
	comp=Z,110nm,16.5s						
VNA3	Neumayer Olymp	61.06	201	P	P	11 14 39.8	-1.6
WB0	Warramunga Arr	61.10	99	P	P	11 14 42.2	-0.2
WB0				IAmb	IAmb	11 14 43.1	
	comp=Z,20nm,1.1s						
WR0	Warramunga Arr	61.17	99	P	P	11 14 42.7	-0.1
WR0				IAmb	IAmb	11 14 43.5	
	comp=Z,19nm,1.1s						
KMI	Kunming	61.49	36	⇑P	P	11 14 46.0	+0.9
KMI				pmax	pmax		
	comp=Z,16nm,1.7s						
STKA	Stephens Creek	63.58	114	P	P	11 14 58.1	-0.7
	comp=Z,4.3nm,0.9s,baz=281,slow=6.0,SNR=12						
STKA	Stephens Creek	63.58	114	P	P	11 14 58.4	-0.4
QSPA	South Pole Qui	63.60	180	P	P	11 14 58.7	+0.2
	comp=Z,10nm,1.0s,baz=257,slow=2.6,SNR=20						
QSPA	South Pole Qui	63.60	180	P	P	11 14 58.9	+0.4
GYA	Guiyang	64.69	39	⇑P	P	11 15 06.3	+0.1
GYA				pP	pwP	11 15 14.5	+1.1
GYA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
CHGR	Chuyangaron	64.87	1	P	P	11 15 07.4	+0.4
VNDA	Vanda	65.19	166	P	P	11 15 08.7	+0.1
	comp=Z,6.7nm,0.9s,baz=261,slow=7.6,SNR=12						
VNDA				LR	LR	11 42 45.4	
	comp=Z,64nm,18.1s,baz=240,slow=35						
VNDA	Vanda	65.19	166	P	P	11 15 10.1	+1.5
VNDA				IAmb	IAmb	11 15 13.1	
	comp=Z,10nm,1.2s						
GAR	Garm	65.24	2	P	P	11 15 09.2	-0.3
FAKI	Fak Fak	65.98	81	P	P	11 15 14.7	0.0
	comp=Z,17nm,1.3s						
SWI	Sorong	66.08	78	P	P	11 15 15.3	0.0
	comp=Z,1μmcomp=Z,26nm,0.9s						
SIJI	Sorong	66.08	78	P	P	11 15 14.5	-0.8
	comp=Z,21nm,0.9s,baz=291,slow=3.0,SNR=16						
KSH	Kashi	66.17	7	P	P	11 15 19.9	+4.5
KSH				pmax	pmax		
	comp=Z,23nm,1.1s						
CD2	Chengdu	66.71	33	⇑*i*P	P	11 15 18.8	-0.3
CD2				pP	sP	11 15 23.8	+2.1
CD2				pmax	pmax		
	comp=Z,30nm,0.8s						
AAK	Ala-Archa	69.11	5	P	P	11 15 34.1	0.0
AAK				IAmb	IAmb	11 15 42.9	
	comp=Z,12nm,1.1s						
KK31	Karatay Array	69.34	2	P	P	11 15 35.8	+0.5
KKAR	Karatay Array	69.34	2	P	P	11 15 35.6	+0.3
KKAR	Karatay Array	69.34	2	P	P	11 15 35.6	+0.3
LZH	Lanzhou	71.01	30	⇓P	P	11 15 53.5	+7.6
LZH				pP	pwP	11 15 57.8	+4.7
LZH				sP	PcP	11 16 01.3	-4.9
LZH				pmax	pmax		
	comp=Z,24nm,1.3s						
LZH	Lanzhou	71.01	30	*e*P	P	11 15 44.3	-1.6
LZH				pP	pP	11 15 48.3	+0.5
LZH				pmax	pmax		
	comp=Z,21nm,1.2s						
SSLB	Suanglung	71.78	51	P	P	11 15 50.0	-0.5
XAN	Xi'an	71.82	35	P	P	11 15 50.3	-0.4
XAN				sP	pwP	11 15 57.8	-0.1
XAN				pmax	pmax		
	comp=Z,14nm,0.9s						

XAN				pmax	pmax		
	comp=Z,91nm,4.1s						
GTA	Gaotai	72.13	26	*e*P	P	11 15 52.9	+0.4
GTA				pP	sP	11 15 57.3	+2.1
GTA				sP	pwP	11 16 00.3	+0.5
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
WMQ	Urumqi	72.38	15	*e*P	P	11 15 56.5	+2.7
WMQ				pP	pwP	11 15 59.5	-1.6
WMQ				pmax	pmax		
	comp=Z,15nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,170nm,3.9s						
WMQ				LR	LR		
	comp=Z,170nm,19.3s						
BR131	Keskin Array S	73.17	333	P	P	11 15 59.5	+0.8
BR131				IAmb	IAmb	11 16 07.6	
	comp=Z,15nm,0.8s						
BRTR	Keskin Array B	73.17	333	P	P	11 15 59.4	+0.6
	comp=Z,3.2nm,0.7s,baz=140,slow=7.9,SNR=7.2						
BRTR				LR	LR	11 46 43.8	
	comp=Z,54nm,18.2s,baz=124,slow=35						
BRTR	Keskin Array B	73.17	333	P	P	11 15 58.6	-0.1
KBZ	Khabaz	73.54	342	P	P	11 16 01.4	+0.9
	comp=Z,2.8nm,0.8s,baz=177,slow=3.1,SNR=4.0						
KBZ				LR	LR	11 47 14.4	
	comp=Z,82nm,19.0s,baz=164,slow=35						
MAKZ	Makanchi	74.14	10	P	P	11 16 04.4	+0.3
MAKZ				IAmb	IAmb	11 16 12.1	
	comp=Z,11nm,1.3s						
MK31	Makanchi Array	74.17	10	P	P	11 16 03.8	-0.5
MKAR	Makanchi Array	74.17	10	P	P	11 16 03.5	-0.7
	comp=Z,2.6nm,0.9s,baz=197,slow=6.3,SNR=15						
MKAR				LR	LR	11 47 20.4	
	comp=Z,89nm,19.7s,baz=194,slow=35						
MKAR	Makanchi Array	74.17	10	P	P	11 16 03.7	-0.5
TORD	Torodi Ar. Bea	75.26	293	P	P	11 16 10.6	-0.7
	comp=Z,1.6nm,0.9s,baz=105,slow=4.7,SNR=8.8						
TORD				LR	LR	11 47 29.7	
	comp=Z,25nm,18.7s,baz=125,slow=34						
TORD	Torodi Ar. Bea	75.26	293	P	P	11 16 11.2	0.0
ABKAR	Akbulak array	75.77	355	P	P	11 16 13.6	+0.2
ABKAR	Akbulak array	75.77	355	P	P	11 16 13.3	0.0
NJ2	Nanjing	75.97	43	*e*P	P	11 16 16.8	+1.9
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
PMG	Port Moresby	76.47	94	P	P	11 16 18.3	0.0
	comp=Z,2.5nm,0.3s,baz=300,slow=6.2,SNR=5.3						
PMG	Port Moresby	76.47	94	P	P	11 16 17.6	-0.6
PMG				IAmb	IAmb	11 16 46.1	
	comp=Z,10nm,1.2s						
KURK	Kurchatov	77.52	7	P	P	11 16 23.6	+0.4
KURK				IAmb	IAmb	11 16 31.7	
	comp=Z,16nm,1.2s						
DBIC	Dimbokro	77.56	284	P	P	11 16 24.8	+0.5
	comp=Z,3.2nm,0.8s,baz=134,slow=12,SNR=1.9						
HHC	Hu-ho-hao-te	78.44	32	*e*P	P	11 16 30.8	+2.1
HHC				pmax	pmax		
	comp=Z,18nm,0.7s						
HHC				pmax	pmax		
	comp=Z,220nm,6.6s						
KOWA	Kowa	80.70	291	P	P	11 16 42.4	+0.9
KOWA				IAmb	IAmb	11 16 50.7	
	comp=Z,20nm,1.1s						
ZAA0	Zalesovo Array	81.51	10	P	P	11 16 44.5	-0.4
ZAA0				IAmb	IAmb	11 16 53.2	
	comp=Z,21nm,0.9s						
ZALV	Zalesovo Beam	81.51	10	P	P	11 16 44.9	0.0
	comp=Z,11nm,0.9s,baz=202,slow=4.2,SNR=34						
ZALV				LR	LR	11 51 17.4	
	comp=Z,62nm,21.5s,baz=230,slow=34						
SONM	Songino Array	81.80	25	P	P	11 16 46.9	+0.2
	comp=Z,6.1nm,0.9s,baz=210,slow=4.0,SNR=27						
SONM				LR	LR	11 51 23.4	
	comp=Z,102nm,21.8s,baz=194,slow=34						
SONM	Songino Array	81.80	25	P	P	11 16 46.8	0.0
SONM				IAmb	IAmb	11 16 56.0	
	comp=Z,18nm,1.1s						
ULN	Ulaanbaatar	82.07	26	P	P	11 16 47.6	-0.6
ULN				IAmb	IAmb	11 16 57.2	
	comp=Z,26nm,1.2s						
DIVS	Divibare	82.76	328	P	P	11 16 52.2	+0.4
DIVS				IAmb	IAmb	11 17 00.5	
	comp=Z,10.0nm,1.1s						
AKASG	Malin Array Be	84.09	337	P	P	11 16 57.7	-0.6
	comp=Z,1.6nm,0.6s,baz=140,slow=4.5,SNR=7.5						
AKASG	Malin Array Be	84.09	337	P	P	11 16 57.5	-0.8
AKBB	Malin Array Si	84.09	337	P	P	11 16 57.8	-0.5
AKBB				IAmb	IAmb	11 17 06.2	
	comp=Z,7.7nm,0.9s						
KSRS	Korea Array	85.12	44	P	P	11 17 03.3	-0.6
	comp=Z,1.4nm,0.9s,baz=204,slow=5.3,SNR=4.3						
VYHS	Vyhne	86.55	330	*e*P	P	11 17 14.9	+4.1
SOKA	Soboth	87.03	327	*e*P	P	11 17 14.3	+1.0
	comp=Z,6.8nm,1.4s						
OBKA	Obir	87.15	326	*e*P	P	11 17 14.6	+0.7
	comp=Z,7.9nm,1.3s						
ARSA	Arzberg	87.20	327	*e*P	P	11 17 15.4	+1.4
	comp=Z,0.2nm,0.3s						
CONA	Conrad Observa	87.52	328	*e*P	P	11 17 15.9	+0.4
	comp=Z,14nm,1.2s						
MNK	Minsk	87.69	338	*i* P	P	11 17 17.4	+1.3
MNK				*i* P	P	11 17 17.4	+1.3
	comp=N,13nm,0.7s						
MNK				*i* P	P	11 17 17.4	+1.3
	comp=Z,13nm,0.9s,baz=146						
MNK				*i* PP	PP	11 20 43.5	+1.5
MNK				*i* PPP	PPP	11 22 37.6	
MNK				*i* S	S	11 27 44.9	-13
MNK				*i* SS	SS	11 33 47.3	+2.4
MNK				*i* SSS	SSS	11 37 20.8	
MNK				*i* LQ	LQ	11 51 44.7	
MNK				*i* LR	LR	11 55 57.3	
MNK				*i* LRM	MLR	11 57 45.8	
	comp=E,10.0nm,15.9s						
MNK				*i* LRM	MLR	11 57 53.1	
	comp=Z,103nm,19.6s						
MNK				*i* LRM	MLR	11 58 09.7	
	comp=N,149nm,20.3s						
MYKA	Terra Mystica	87.69	326	*e*P	P	11 17 15.2	-1.2
	comp=N,5.3nm,1.4s						
CN2	Changchun	87.73	38	*e*P	P	11 17 20.8	+4.2
CN2				pmax	pmax		
	comp=N,10.0nm,0.7s						
KBA	Koelnbreinsper	88.15	326	*e*P	P	11 17 19.9	+1.1
	comp=N,5.3nm,1.1s						
MOA	Molln	88.22	327	*e*P	P	11 17 18.8	-0.1
	comp=N,12nm,1.2s						
ABTA	Abfaltersbach	88.34	326	*e*P	P	11 17 20.0	+0.5
	comp=N,6.6nm,1.0s						
DPC	Dobruska-Polom	89.03	330	*e*P	P	11 17 23.3	+0.7
WTTA	Wattenberg	89.13	326	*e*P	P	11 17 23.5	+0.2
	comp=N,5.6nm,0.6s						
GERES	GERESS Array B	89.19	328	P	P	11 17 22.7	-0.8
	comp=N,0.9nm,0.8s,baz=126,slow=5.1,SNR=3.0						
WATA	Walderalm	89.21	326	*e*P	P	11 17 27.7	+4.0
	comp=N,17nm,1.3s						
SQTA	Sankt Quirin	89.32	325	*e*P	P	11 17 26.0	+1.8
	comp=N,7.5nm,0.8s						
FETA	Feichten	89.43	325	*e*P	P	11 17 25.4	+0.6
	comp=N,15nm,1.3s						
KHC	Kasperske Hory	89.44	328	*e*P	P	11 17 24.4	-0.2
MOTA	Moosalm	89.45	325	*e*P	P	11 17 24.9	0.0
	comp=N,6.8nm,0.8s						
RETA	Reutte	89.72	325	*e*P	P	11 17 24.7	-1.3
	comp=N,7.0nm,1.0s						
DAVA	Damuels	90.04	325	*e*P	P	11 17 27.8	+0.2
	comp=N,7.1nm,1.1s						
KLMR	Klimovskoe	90.06	347	*e*P	P	11 17 25.5	-1.6
KLMR				AMP		11 17 36.0	
	comp=Z,31nm,1.3s						
KLMR				*e*PP	PP	11 20 55.5	-5.3
KLMR	Klimovskoe	90.06	347	*e*P	P	11 17 27.2	+0.1
KLMR				AMP		11 17 36.1	
	comp=Z,35nm,1.4s						
KLMR				*e*PP	PP	11 21 02.1	+1.3
ESDC	Sonseca Array	93.73	313	P	P	11 17 42.7	-2.1
	comp=Z,0.9nm,0.8s,baz=100,slow=5.4,SNR=6.7						
ESDC				LR	LR	12 00 35.1	
	comp=Z,22nm,18.4s,baz=165,slow=36						
FINES	FINESS Array B	93.90	341	LR	LR	12 00 24.5	
	comp=Z,48nm,19.6s,baz=151,slow=36						
NRIK	Noril'sk	96.69	7	LR	LR	12 01 47.9	
	comp=Z,82nm,19.3s,baz=164,slow=36						
A21K	Barrow	128.84	17		PKiKP	11 23 35.8	+0.6
ILAR	Eielson Array	135.85	20	PKP	PKPdf	11 23 47.0	-1.0
	comp=Z,0.6nm,1.1s,baz=332,slow=5.5,SNR=3.1						
INK	Inuvik	136.30	11	PKP	PKPdf	11 23 48.6	-0.1
	comp=Z,1.3nm,0.9s,baz=73,slow=4.8,SNR=5.0						
YKA	Yellowknife Ar	144.02	2	PKP	PKPbc	11 24 01.3	+0.5
	comp=Z,1.7nm,0.9s,baz=348,slow=2.7,SNR=2.8						
NCB	Newcomb	144.75	310		PKPab	11 24 03.5	-0.1
VLDQ	Val d'Or	145.34	318		PKPbc	11 24 04.2	-1.3
J58A	Remsen	145.67	309		PKPdf	11 24 04.9	-1.4
DLBC	Dease Lake	145.77	17	PKPbc	PKPdf	11 24 06.2	0.0
	comp=Z,6.4nm,0.9s,baz=339,slow=4.4,SNR=8.1						
DLBC	Dease Lake	145.77	17		PKPdf	11 24 05.4	-0.8
DELO	Deloro Mine	146.88	312		PKPdf	11 24 08.7	+0.3
ULM	Lac du Bonnet	153.17	336	PKPbc	PKPbc	11 24 24.3	-1.2
	comp=Z,4.2nm,0.8s,baz=353,slow=1.6,SNR=3.7						
PDAR	Pinedale Array	163.66	353	PKP	PKPdf	11 24 31.1	-0.1
	comp=Z,0.8nm,0.9s,baz=122,slow=2.3,SNR=4.8						
PDAR	Pinedale Array	163.66	353		PKPdf	11 24 30.0	-1.2
PDAR				PKPab	PKPab	11 25 22.5	-0.4
TXAR	Lajitas Array	171.88	292	PKP	PKPdf	11 24 37.9	+0.6
	comp=Z,0.4nm,0.9s,baz=38,slow=2.2,SNR=4.1						
TXAR	Lajitas Array	171.88	292		PKPdf	11 24 36.7	-0.5
TXAR				PKPab	PKPab	11 25 59.1	-0.6

IDC 16 11:07:42.8±3.4**, 5°.89S**×**153°.11E, h0^{km}, mb3.1**/3**, mb1 3.4**/3**, mb1mx3.1**/46**, mbtmp3.1**/3**, Error ellipse: s-maj=279.7km s-min=33.8km az=129.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.98	231	P	P	11 12 50.4	+1.1
	0.4nm,0.8s,baz=53,slow=9.5,SNR=1.6						
ASAR	Alice Springs	25.58	224	P	P	11 13 12.7	-1.2
	0.2nm,0.9s,baz=54,slow=9.5,SNR=2.2						
ILAR	Eielson Array	83.05	22	P	P	11 20 10.2	+0.3
	0.3nm,0.8s,baz=239,slow=6.2,SNR=1.8						

MDD ***16*** *11:14:55.1±1.4, 26°.95N×14°.40W, h30^{km}, mb4.9/16, Error ellipse: s-maj=15.8km s-min=6.0km az=156.0, PRXIMO TT-model: canary*

CNRM ***16*** *11:14:58.4, 27°.21N×14°.03W, h30^{km}, ml3.7*

ISC 16 11:14:52.6±1.4**, 26°.96N**±0°.09×**14°.31W**±0°.04**, h35^{km}, n37,** σ**2s.25**/60**, 1C-5D, Western Sahara**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CGIN	Giniginamar, F	1.25	9	⇓P	Pn	11 15 16.3	+2.6
	SNR=18						
CGIN				S	Sn	11 15 32.2	+2.9
	278nm,0.1s,SNR=7.9						
EOSO	Osorio	1.56	315	P	Pn	11 15 20.0	+2.0
	3.3nm,0.1s,SNR=13						
EOSO				S	Sn	11 15 38.3	+1.4
	110nm,0.1s,SNR=19						
CFUE	Fuerteventura	1.71	11	⇓P	Pn	11 15 21.6	+1.7
	164nm,0.1s,SNR=18						
CFUE				S	Sn	11 15 43.8	+3.2
	169nm,0.0s,SNR=7.9						
CLOB	Isla de Lobos,	1.85	14	P	Pn	11 15 23.8	+1.9
	16nm,0.1s,SNR=7.9						
EFAM	Famara	2.26	18	⇓P	Pn	11 15 28.7	+1.2
	4.7nm,0.1s,SNR=18						
EFAM				S	Sn	11 15 57.1	+2.8
	102nm,0.4s,SNR=7.9						
CGUI	Guimar, Teneri	2.32	306	⇓P	Pn	11 15 30.0	+1.5
	27nm,0.1s,SNR=18						
CGUI				S	Sn	11 15 54.2	-1.7
	235nm,0.3s,SNR=7.9						
MACI	Morro de la Ar	2.33	304	⇓P	Pn	11 15 30.2	+1.5
	8.0nm,0.1s,SNR=18						
MACI				S	Sn	11 15 54.9	-1.4
	60nm,0.1s,SNR=7.9						
EBAJ	Bajamar	2.39	312	P	Pn	11 15 30.9	+1.6
	4.6nm,0.1s,SNR=12						
EBAJ				S	Sn	11 15 56.6	-0.8
	70nm,0.2s,SNR=20						
EGOM	La Gomera	2.83	295	P	Pn	11 15 35.8	+0.4
	3.3nm,0.1s,SNR=105						
EGOM				S	Sn	11 16 04.4	-4.0
	330nm,0.1s,SNR=14						
TANT	Tantan	3.08	62	P	Pn	11 15 41.2	+2.4
TANT				S	Sn	11 16 15.3	+0.8
CTIG	El Hierro	3.31	285	⇑P	Pn	11 15 43.4	+1.4
	25nm,0.2s,SNR=18						
CTIG				S	Sn	11 16 17.5	-2.7
	228nm,0.2s,SNR=7.9						
CRST	La Restinga, E	3.33	283	P	Pn	11 15 43.8	+1.5
	28nm,0.1s,SNR=7.9						
CRST				S	Sn	11 16 17.2	-3.5
	412nm,0.1s,SNR=7.9						
CMCL	Mercadel, El H	3.38	284	P	Pn	11 15 44.5	+1.4
	64nm,0.2s,SNR=7.9						
CMCL				S	Sn	11 16 19.7	-2.3
	316nm,0.2s,SNR=7.9						
CTAN	El Hierro	3.42	284	P	Pn	11 15 44.7	+1.2
	64nm,0.1s,SNR=7.9						
CTAN				S	Sn	11 16 19.9	-3.0
	250nm,0.1s,SNR=7.9						
CJUL	El Julan, El H	3.44	284	P	Pn	11 15 45.2	+1.3
	26nm,0.1s,SNR=7.9						
CJUL				S	Sn	11 16 21.1	-2.4
	214nm,0.1s,SNR=7.9						
CTAD	Las Tabladas,	3.44	284	P	Pn	11 15 44.9	+1.1
	18nm,0.1s,SNR=7.9						
CTAD				S	Sn	11 16 22.2	-1.2
	396nm,0.2s,SNR=7.9						
CORC	Orchilla, El H	3.49	283	P	Pn	11 15 46.8	+2.4
	123nm,0.1s,SNR=7.9						
CORC				S	Sn	11 16 21.9	-2.5
	251nm,0.1s,SNR=7.9						
TBT	Taburiente	3.62	299	P	Pn	11 15 48.7	+2.5
	4.6nm,0.2s,SNR=7.9						
TBT				S	Sn	11 16 25.8	-1.9
	18nm,0.1s,SNR=7.9						
SFNM	Sidi Ifni	4.36	56	P	Pn	11 15 58.4	+2.1
SFNM				S	Sn	11 16 46.3	+0.5
CGR	Cap Guir	5.33	46	P	Pn	11 16 09.8	0.0
PMAR	Madeira	6.17	339	*e*S	Sn	11 17 27.2	-3.6
EAH	EAH	6.23	40	P	Pn	11 16 21.3	-0.8
EAH				S	Sn	11 17 30.9	-1.1
TTIG	Tnine Tigouga,	6.27	54	P	Pn	11 16 24.6	+1.9
TTIG				S	Sn	11 17 32.0	-1.2
PMPS	Porto Santo	6.32	344	*e*S	Sn	11 17 32.6	-1.7
PMPST	Porto Santo, M	6.34	344	*e*S	Sn	11 17 30.9	-3.9
PMOZ	Porto Moniz, M	6.35	337	S	Sn	11 17 37.3	+2.0
	33nm,0.4s,SNR=7.9						
OUK	Oukaimeden	7.05	52	P	Pn	11 16 35.9	+2.2
OUK				S	Sn	11 17 50.4	-2.3
OUZM	OUZ	7.70	58	P	Pn	11 16 43.9	+1.6
OUZM				S	Sn	11 18 06.6	-1.7
SRHM	Skhour des Reh	7.82	44	P	Pn	11 16 41.9	-2.1
SRHM				S	Sn	11 18 08.7	-2.7
ZGR	Zagora	8.27	66	P	Pn	11 16 52.0	+1.8
ZGR				S	Sn	11 18 19.4	-2.9
TZRR	Tazzarine	8.56	62	P	Pn	11 16 55.3	+1.2
TZRR				S	Sn	11 18 26.4	-3.1
ZHG	ZHG	9.26	44	P	Pn	11 17 02.8	-0.9
ZHG				S	Sn	11 18 40.1	-6.6
MD31	MD31	10.16	52	P	Pn	11 17 17.6	+1.5
MD31				S	Sn	11 19 04.1	-4.7
MDT	Midelt	10.24	53	P	Pn	11 17 19.9	+2.7
MDT				S	Sn	11 19 08.0	-2.8
EGRO	El Granado	12.01	27	S	Sn	11 19 48.3	-5.8
	SNR=7.9						
ECAB	El Cabril	13.37	32	S	Sn	11 20 19.6	-7.8
	0.7nm,0.2s,SNR=7.9						
EADA	Adamuz	13.85	34	S	Sn	11 20 31.2	-7.9
	1.6nm,0.2s,SNR=7.9						

IDC 16 11:17:37.1±3.1**, 12°.52N**×**122°.59E, h0^{km}, mb3.0**/3**, mb1 3.2**/3**, mb1mx3.1**/43**, mbtmp3.0**/3**, Error ellipse: s-maj=300.9km s-min=28.9km az=63.0, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	34.27	160	P	P	11 24 25.1	0.0
	0.1nm,0.5s,baz=340,slow=11,SNR=1.5						
ASAR	Alice Springs	37.63	163	P	P	11 24 53.9	-0.1
	0.2nm,0.6s,baz=335,slow=8.2,SNR=2.7						
MKAR	Makanchi Array	48.07	323	P	P	11 26 18.3	-0.2
	0.3nm,0.4s,baz=125,slow=8.0,SNR=4.9						

NNC 16 11:23:10.9±0.6**, 50°.81N**×**73°.50E, h0^{km}, mb3.5, mpv3.2, 8C-5D, Error ellipse: s-maj=6.1km s-min=6.0km az=172.0, Suspected Mining explosion., Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OTUK	Ortayu	2.67	197	⇑Pg	Pb	11 23 58.6	-1.0
	5.8nm,0.7s						
OTUK				⇑Lg	Lg	11 24 36.7	
	15nm,0.6s						
BRVK	Borovoye	3.01	320	⇑Pg	Pb	11 24 06.1	+0.8
	3.8nm,0.9s						
BRVK				⇓Lg	Lg	11 24 45.3	
	55nm,0.8s						
KURBB	Kurchatov Arra	3.20	91	⇑Pn	Pn	11 24 03.1	+0.7
	9.2nm,0.6s,baz=278,slow=12						
KURBB				⇑Lg	Lg	11 24 51.5	
	119nm,0.9s,baz=276,slow=26						
KURK	Kurchatov	3.25	90	⇓Pn	Pn	11 24 03.7	+0.6
	7.5nm,1.2s						
KURK				⇑Lg	Lg	11 24 52.2	
	49nm,0.9s						
MAKZ	Makanchi	6.88	122	⇓Pg	Pb	11 25 15.4	+4.2
	3.7nm,1.2s						
MAKZ				⇓Lg	Lg	11 26 51.0	
	16nm,1.0s						
MK31	Makanchi Array	7.05	121	⇓Pg	Pb	11 25 17.9	+3.7
	3.3nm,1.2s,baz=296,slow=12,SNR=4.0						
MK31				Lg	Lg	11 26 53.9	
	4.5nm,0.7s,baz=319,slow=25,SNR=4.6						
KK31	Karatay Array	7.97	196	⇑Sn	Sn	11 26 41.2	+2.4
	1.5nm,0.5s,baz=209,slow=30,SNR=3.6						
KK31				⇑Lg	Lg	11 27 21.5	
	2.2nm,0.6s						

PGC ***16*** *11:25:07.5±0.0, 55°.06N×134°.36W, h5^{km}, ML3.0/5, 183km Wnw of Masset, Bc Southeastern Alaska*

NEIC ***16*** *11:25:07.8±1.9, 55°.03N±0°.04×134°.36W±0°.09, h14^{km}±7^{km}, Error ellipse: s-maj=7.7km s-min=6.0km az=68.0*

ISC 16 11:25:06.6±1.7**, 55°.02N**±0°.03×**134°.40W**±0°.07**, h2**^{km}±12^{km}**, n23,** σ**1s.18**/36**, Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRAG	Craig	0.86	58		Pg	11 25 23.8	+0.8
LIB	Langara Island	1.09	134		Pg	11 25 27.2	-0.3
LIB					Sg	11 25 41.8	+0.2
LIB	Langara Island	1.09	134	P	Pg	11 25 27.2	-0.3
LIB				S	Sg	11 25 41.8	+0.2
NDB	Naden	1.36	141	Pn	Pn	11 25 31.9	-0.7
NDB				Sg	Sb	11 25 50.8	+0.2
NDB	Naden	1.36	141	Pn	Pn	11 25 31.9	-0.7
NDB				Sg	Sb	11 25 50.8	+0.2
WRAK	Wrangell Islan	1.82	39	Pn	Pn	11 25 38.6	-0.3
WRAK				IAML		11 26 12.6	
	82nm,0.7s						
VIB	Van Inlet	2.08	148	Pn	Pn	11 25 42.8	+0.3
VIB				Sn	Sn	11 26 09.6	+0.6
SIT	Sitka	2.11	346	Pn	Pn	11 25 41.9	-0.9
SIT				IAML		11 26 20.7	
	comp=E,61nm,0.6s						
DIB	Dawson Inlet,	2.14	147	Pn	Pn	11 25 43.5	+0.3
DIB				IAML		11 26 22.5	
	comp=E,63nm,2.6s						
DIB	Dawson Inlet,	2.14	147	Pn	Pn	11 25 43.7	+0.5
DIB				Sn	Sn	11 26 11.8	+1.5
MOBC	Moresby Island	2.36	142	Pn	Pn	11 25 47.8	+1.4
MOBC				IAML		11 26 47.8	
	comp=E,74nm,3.1s						
MOBC	Moresby Island	2.36	142	Pn	Pn	11 25 47.7	+1.4
MOBC				Sn	Sn	11 26 15.7	-0.1
MOBC				Sg	Sb	11 26 19.7	+0.4
RUBB	Prince Rupert	2.50	104	Pn	Pn	11 25 49.8	+1.5
RUBB				IAML		11 26 04.8	
	comp=N,39nm,2.9s						
RUBB				IAML		11 26 28.1	
	comp=E,58nm,2.7s						
RUBB	Prince Rupert	2.50	104	Pn	Pn	11 25 47.5	-0.7
RUBB				Pg	Pb	11 25 51.4	-0.9
RUBB				Sn	Sn	11 26 16.7	-2.6
RUBB				Sg	Sg	11 26 25.5	-1.5
BNB	Barry Inlet	2.91	146	Pn	Pn	11 25 54.2	+0.3
BNB				Sg	Sb	11 26 37.0	+1.9
JIS	Juneau Island	3.27	0	Pn	Pn	11 26 00.7	+2.0
JIS				IAML		11 26 53.2	
	comp=E,30nm,2.4s						
JIS				IAML		11 27 55.1	
	comp=N,29nm,3.6s						
KITB	Kitimat	3.48	103	Sn	Sn	11 26 41.7	-1.8
BESE	Bessie Mountai	3.58	356	Pn	Pn	11 26 04.4	+1.3
DLBC	Dease Lake	4.19	33	Pn	Pn	11 26 11.6	+0.1
DLBC				IAML		11 27 11.1	
	comp=E,18nm,5.0s						
DLBC				IAML		11 27 35.6	
	comp=N,18nm,3.0s						
DLBC	Dease Lake	4.19	33	Pg	Pb	11 26 21.2	+0.2
DLBC				Sg	Sb	11 27 14.4	+2.4
SKAG	Skagway	4.49	354	Pn	Pn	11 26 14.5	-0.9
WHY	Whitehorse	5.67	358	Pn	Pn	11 26 30.7	-1.1
PCA	Pinnacle	5.99	331	Pn	Pn	11 26 34.9	-1.3

DJA ***16*** *11:27:36.6±1.1, 1°N±5°×12°7E±1°6, h13^{km}±6^{km}, M3.2/5, MLv3.2/5*

IDC ***16*** *11:27:36.1±2.0, 0°.76N×126°.98E, h0^{km}, mb3.5/3, mb1 3.7/3, mb1mx3.5/29, mbtmp3.6/3, MS2.9/1, Ms1 2.9/1, ms1mx2.2/35, Error ellipse: s-maj=161.0km s-min=25.5km az=66.0*

ISC 16 11:27:37.4±1.6**, 1°.0N**±0°.1×**127°.3E**±0°.2**, h10^{km}, n7,** σ**1s.10**/7**, mb3.4**/3**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.26	157	P	Pb	11 27 44.2	0.0
TNTI				S	Sb	11 27 49.6	+0.9
LBMI	Labuha	1.65	172	P	Pn	11 28 06.7	+0.2
SANI	Sanana	3.29	203	P	Pn	11 28 29.2	+0.1
BATI	Baumata	11.70	198	LR	LR	11 36 39.9	
	comp=Z,55nm,18.4s,baz=262,slow=48						
WRA	Warramunga Arr	21.95	162	P	P	11 32 30.0	-1.4
	0.7nm,0.6s,baz=340,slow=11,SNR=9.2						
ASAR	Alice Springs	25.36	166	P	P	11 33 03.7	-1.3
	0.5nm,0.6s,baz=345,slow=7.5,SNR=11						
MKAR	Makanchi Array	60.09	326	P	P	11 37 45.5	+0.6
	0.9nm,0.7s,baz=120,slow=8.2,SNR=6.3						

IDC 16 11:29:02.9±2.3**, 0°.64N**×**126°.71E, h0^{km}, mb3.2**/3**, mb1 3.4**/3**, mb1mx3.2**/29**, mbtmp3.3**/3**, Error ellipse: s-maj=176.3km s-min=29.9km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.78	160	P	P	11 33 55.9	-0.7
	0.4nm,0.6s,baz=339,slow=11,SNR=1.1						
ASAR	Alice Springs	25.16	164	P	P	11 34 30.7	+0.6
	0.5nm,0.8s,baz=334,slow=9.0,SNR=1.5						
MKAR	Makanchi Array	60.08	326	P	P	11 39 11.9	-0.1
	0.3nm,0.6s,baz=124,slow=7.2,SNR=2.8						

NOU ***16*** *11:43:02.0, 38°.37S×178°.56E, h0^{km}, MLv4.0/7, Off E. Coast of N. Island, N.Z.*

WEL ***16*** *11:43:07.1±0.9, 38°S±3°×17°8E±°, h12^{km}±7^{km}, M3.5/10, ML3.9/10, MLv3.5/10, Error ellipse: s-maj=0.0km s-min=0.0km az=123.9*

ISC 16 11:43:05.9±1.1**, 38°.29S**±0°.03×**178°.32E**±0°.05**, h22**^{km}±7^{km}**, n115,** σ**0s.91**/123**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNGZ	Carnagh Statio	0.21	205	P	Pb	11 43 12.6	+1.1
PUZ	Puketiti	0.23	347	P	Pb	11 43 11.6	-0.1
PUZ				S	Sb	11 43 15.5	-0.1
TWGZ	Tauwhareparae	0.29	293	P	Pb	11 43 11.4	-1.3
TWGZ				S	Sb	11 43 15.5	-1.7
TKGZ	Te Karaka	0.40	248	P	Pb	11 43 13.8	-0.5
TKGZ				S	Sb	11 43 19.9	-0.1
PKGZ	Pakihiroa	0.45	335	P	Pb	11 43 15.1	0.0

PKGZ				S	Sb	11 43 21.4	0.0
WMGZ	Waiomatatini S	0.48	9	P	Pn	11 43 17.3	-0.1
WMGZ				S	Sn	11 43 25.4	+0.3
RIGZ	Rimuhau	0.60	227	P	Pn	11 43 19.1	-0.1
RIGZ				S	Sn	11 43 29.6	+1.4
RUGZ	Raukumara Rang	0.60	303	P	Pb	11 43 16.8	-1.1
RUGZ				S	Sb	11 43 24.3	-1.7
MWZ	Matawai	0.62	266	P	Pb	11 43 17.2	-1.0
MWZ				S	Sb	11 43 25.4	-1.2
HAZ	Te Kaha	0.68	321	P	Pb	11 43 18.6	-0.5
PRGZ	Paritu Road	0.71	208	P	Pn	11 43 21.4	+0.7
MXZ	Matakaoa Point	0.73	359	P	Pn	11 43 21.3	+0.5
RAGZ	Rawiri	0.74	254	P	Pb	11 43 19.9	-0.3
KNZ	Kokohu	0.89	215	P	Pn	11 43 23.2	+0.2
SNGZ	Shannon Statio	0.91	237	P	Pn	11 43 23.9	+0.5
MHGZ	Mahia Peninsul	0.92	201	P	Pn	11 43 24.3	+0.9
URZ	Urewera	0.95	272	P	Pb	11 43 23.1	-0.6
URZ	Urewera	0.95	272	P	Pb	11 43 23.3	-0.4
URZ	Urewera	0.95	272	P	Pb	11 43 22.9	-0.8
RTZ	Ruatahuna	1.10	253	P	Pb	11 43 26.4	+0.1
WHRZ	Whale Island	1.15	292	P	Pb	11 43 27.2	+0.1
RAHZ	Arahi	1.15	237	P	Pb	11 43 27.1	0.0
WHHZ	Waihua	1.16	227	P	Pb	11 43 27.2	0.0
MUGZ	Murupara	1.23	261	P	Pb	11 43 28.4	-0.1
EDRZ	Edgecumbe	1.26	278	P	Pb	11 43 29.1	+0.1
MTHZ	Maungataniwha	1.29	244	P	Pb	11 43 29.0	-0.5
MARZ	Manawahe	1.33	283	P	Pn	11 43 29.6	+0.4
ARHZ	Aropaoanui	1.42	226	P	Pb	11 43 31.2	-0.5
RRRZ	Republican Roa	1.42	268	P	Pb	11 43 31.1	-0.6
TARZ	Mount Tarawera	1.43	272	P	Pb	11 43 31.4	-0.5
NMHZ	Naumai	1.43	235	P	Pn	11 43 31.1	+0.5
OPRZ	Ohinepanea	1.46	287	P	Pn	11 43 30.8	-0.1
MKRZ	Makatiti	1.47	275	P	Pb	11 43 34.2	+1.6
PRRZ	Plateau Road	1.53	262	P	Pb	11 43 33.3	-0.2
OMRZ	Omania	1.55	276	P	Pb	11 43 33.0	-0.8
HLRZ	Highlands Stat	1.55	271	P	Pn	11 43 33.0	+0.8
ALRZ	Allen Road	1.58	260	P	Pn	11 43 33.4	+0.9
MRHZ	Matea Rd	1.59	250	P	Pn	11 43 33.3	+0.6
HRRZ	Handcock Road	1.60	266	P	Pb	11 43 34.2	-0.7
HSRZ	Hossack Road	1.63	269	P	Pn	11 43 34.0	+0.7
KARZ	Kaharoa	1.66	279	P	Pn	11 43 34.3	+0.7
CKHZ	Cape Kidnapper	1.67	215	P	Pn	11 43 33.8	0.0
BKZ	Black Stump Fm	1.67	238	P	Pn	11 43 34.3	+0.4
BKZ	Black Stump Fm	1.67	238	P	Pn	11 43 34.6	+0.7
BKZ	Black Stump Fm	1.67	238	P	Pn	11 43 34.3	+0.4
UTU	Utuhina	1.68	273	P	Pb	11 43 35.8	-0.3
NGRZ	Ngongotaha	1.69	276	P	Pb	11 43 35.8	-0.5
WPRZ	Whakapapatarin	1.71	262	P	Pb	11 43 35.7	-1.0
MCHZ	McNeill Hill	1.71	227	P	Pn	11 43 34.8	+0.4
TGRZ	Tauranga	1.72	288	P	Pn	11 43 34.7	+0.2
GRRZ	Galatos Road	1.74	267	P	Pn	11 43 35.8	+1.0
HATZ	Hinemaiaia	1.84	250	P	Pb	11 43 38.3	-0.7
KWHZ	Kaweka Forest	1.86	232	P	Pn	11 43 36.6	+0.1
KAHZ	Kahuranaki	1.87	216	P	Pn	11 43 36.3	-0.4
KMRZ	Kaimai	1.93	283	P	Pn	11 43 37.8	+0.4
KUTZ	Kaahu Road	1.97	264	P	Pn	11 43 38.9	+1.0
KRHZ	Kereru	2.03	228	P	Pn	11 43 38.6	-0.2
RITZ	Rihia Road	2.04	250	P	Pn	11 43 39.8	+0.8
PXZ	Pawanui	2.07	213	P	Pn	11 43 38.8	-0.5
RATZ	Rangitukua	2.08	253	P	Pn	11 43 40.5	+1.0
BHHZ	Black Hill Sta	2.13	235	P	Pn	11 43 40.2	+0.1
TLZ	Tolley Road	2.19	268	P	Pn	11 43 41.7	+0.7
TMVZ	Te Maari	2.21	247	P	Pn	11 43 41.8	+0.5
ETVZ	East Tongariro	2.21	247	P	Pn	11 43 41.9	+0.6
NTVZ	North Tongarir	2.22	248	P	Pn	11 43 42.0	+0.6
KRVZ	Karewarewa	2.24	248	P	Pn	11 43 42.3	+0.5
OTVZ	Oturere	2.25	246	P	Pn	11 43 42.9	+1.0
NNVZ	North Ngauruho	2.27	248	P	Pn	11 43 43.1	+0.8
SNVZ	South Ngauruho	2.28	246	P	Pn	11 43 42.8	+0.5
WTVZ	West Tongariro	2.29	248	P	Pb	11 43 45.0	-1.6
MOVZ	Moawhango	2.29	240	P	Pn	11 43 43.0	+0.6
WPHZ	Waipukurau	2.29	219	P	Pn	11 43 41.6	-0.8
TOZ	Tahuroa Road	2.30	283	P	Pn	11 43 42.3	-0.1
TUVZ	Tukino	2.30	244	P	Pn	11 43 43.6	+1.0
NGZ	Ngauruhoe	2.30	247	P	Pn	11 43 43.5	+0.9
PNHZ	Pukenui	2.31	225	P	Pn	11 43 42.1	-0.6
WHVZ	Whangaehu Hut	2.35	244	P	Pb	11 43 47.1	-0.6
WNVZ	Wahianoa	2.36	243	P	Pn	11 43 44.0	+0.6
PRHZ	Porangahau	2.37	213	P	Pn	11 43 42.2	-1.2
FWVZ	Far West T-bar	2.37	245	P	Pb	11 43 49.4	+1.4
TWVZ	Taurewa	2.38	250	P	Pn	11 43 44.3	+0.6
TRVZ	Turoa	2.39	244	P	Pn	11 43 45.5	+1.6
PKVZ	Pokaka	2.53	246	P	Pn	11 43 47.4	+1.8
TSZ	Takapari Road	2.54	225	P	Pn	11 43 44.7	-1.2
KUZ	Kuaotunu	2.58	306	P	Pn	11 43 45.9	-0.3
ANWZ	Angora Road	2.59	213	P	Pn	11 43 45.9	-0.6
DVHZ	Dannevirke	2.61	219	P	Pn	11 43 45.7	-1.1
HIZ	Hauiti	2.73	264	P	Pn	11 43 49.6	+1.2
HIZ	Hauiti	2.73	264	P	Pn	11 43 49.9	+1.5
HIZ	Hauiti	2.73	264	P	Pn	11 43 49.8	+1.4
BFZ	Birch Farm	2.88	213	P	Pn	11 43 49.2	-1.2
BFZ	Birch Farm	2.88	213	P	Pn	11 43 49.4	-1.0
BFZ	Birch Farm	2.88	213	P	Pn	11 43 49.4	-1.0
POWZ	Post Office Ro	2.88	223	P	Pn	11 43 49.2	-1.2
PRWZ	Pori Road	2.90	218	P	Pn	11 43 49.9	-0.8
VRZ	Vera Road	2.91	252	P	Pn	11 43 52.4	+1.6
WIAZ	Waiheke Island	2.94	300	P	Pn	11 43 51.7	+0.5
WAZ	Wanganui	2.98	240	P	Pn	11 43 52.9	+1.1
ETAZ	East Tamaki Re	3.01	295	P	Pn	11 43 52.9	+0.7
TIWZ	Tintock	3.11	216	P	Pn	11 43 52.4	-1.2
MBAZ	Motutapu North	3.12	298	P	Pn	11 43 54.3	+0.6
EPAZ	Eden Park BICE	3.17	295	P	Pn	11 43 55.3	+0.9
HBAZ	Herne Bay Bore	3.19	296	P	Pn	11 43 55.9	+1.1
LREZ	Lake Rotokare	3.27	248	P	Pn	11 43 57.2	+1.4
RVAZ	Riverhead Bore	3.34	296	P	Pn	11 43 57.3	+0.6
DREZ	Durham Road	3.34	253	P	Pn	11 43 58.9	+2.1
NEZ	North Egmont	3.44	252	P	Pn	11 44 00.2	+2.0
KHEZ	Kahui Hut	3.51	252	P	Pn	11 44 01.1	+1.9
WCZ	Waipu Caves	3.95	305	P	Pn	11 44 06.0	+0.8
OUZ	Omahuta	4.88	308	P	Pn	11 44 19.1	+1.2
OUZ	Omahuta	4.88	308	P	Pn	11 44 19.2	+1.3
QRZ	Quartz Range	5.14	239	P	Pn	11 44 21.0	-0.5
QRZ	Quartz Range	5.14	239	P	Pn	11 44 23.4	+1.9
KHZ	Kahutara	5.50	220	P	Pn	11 44 26.3	-0.1
CTZ	Chatham Island	6.65	146	P	Pn	11 44 43.2	+1.0

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*IDC **16** 11:48:22.9±4.6, 17°.41S×178°.81W, h604^{km}±21^{km}, mb3.1/4, mb1 3.2/5, mb1mx2.9/30, mbtmp4.0/5, Error ellipse: s-maj=89.5km s-min=75.0km az=124.0*

*NEIC **16** 11:48:25.7±0.6, 17°.7S±0°.5×179°.2W±0°.2, h590^{km}±24^{km}, mb4.1/11, Error ellipse: s-maj=70.4km s-min=28.0km az=181.0*

ISC 16 11:48:25.1±1.4**, 17°.7S**±0°.5×**179°.1W**±0°.1**, h600**^{km}**, n19, σ0^{s}69**/20**, mb4.1**/11**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	2.68	268	P	P	11 49 42.6	-0.1
	0.9nm,0.3s,baz=86,slow=23,SNR=5.4						
MSVF	Nonsavu	2.68	268	P	P	11 49 42.0	-0.6
NIUE	Niue	8.87	101	P	P	11 50 33.2	+0.4
COEN	Coen	36.40	270	P	P	11 54 42.0	+1.2
COEN				IAmb	IAmb	11 55 04.2	
	comp=Z,6.9nm,1.2s						
STKA	Stephens Creek	38.14	241	P	P	11 54 55.2	+0.5
	comp=Z,0.8nm,0.5s,baz=60,slow=7.0,SNR=3.8						
STKA	Stephens Creek	38.14	241	P	P	11 54 54.9	+0.1
BBOO	Buckleboo	42.92	241	P	P	11 55 32.8	+0.3
BBOO				IAmb	IAmb	11 55 56.1	
	comp=Z,9.8nm,1.4s						
WR0	Warramunga Arr	43.80	259	P	P	11 55 40.5	+0.9
WR0				IAmb	IAmb	11 55 53.6	
	comp=Z,8.5nm,1.4s						
WB0	Warramunga Arr	43.95	260	P	P	11 55 41.0	+0.2
WB0				IAmb	IAmb	11 55 44.9	
	comp=Z,7.8nm,1.4s						
WB2	Warramunga Arr	43.98	259	P	P	11 55 41.2	+0.2
WB2				IAmb	IAmb	11 55 49.8	
	comp=Z,8.8nm,1.4s						
WRA	Warramunga Arr	43.99	259	P	P	11 55 41.1	0.0
	comp=Z,0.8nm,0.4s,baz=94,slow=7.0,SNR=51						
WRA	Warramunga Arr	43.99	259	P	P	11 55 40.8	-0.2
AS31	Alice Springs	44.18	254	P	P	11 55 43.5	+1.0
AS31				IAmb	IAmb	11 55 44.1	
	comp=Z,2.3nm,0.5s						
ASAR	Alice Springs	44.19	254	P	P	11 55 43.1	+0.6
	comp=Z,5.7nm,0.5s,baz=88,slow=8.5,SNR=217						
ASAR				PcP	PcP	11 57 12.3	-1.6
	comp=Z,0.2nm,0.5s,baz=103,slow=3.5,SNR=1.7						
ASAR	Alice Springs	44.19	254	P	P	11 55 42.6	+0.1
MTN	Manton Dam	48.10	268	P	P	11 56 12.3	+0.1
FORT	Forrest	49.48	244	P	P	11 56 21.3	-0.8
KNRA	Kununurra	49.82	264	P	P	11 56 24.3	-0.4
KNRA				IAmb	IAmb	11 56 45.0	
	comp=Z,12nm,1.4s						
FITZ	Fitzroy Crossi	52.38	260	P	P	11 56 42.8	-0.5
	comp=Z,1.5nm,1.0s,baz=108,slow=9.6,SNR=6.3						

WEL 16 11:57:16.0, 38°S±2°×**17°8E**±°**, h14**^{km}±3^{km}**, M3.1**/10**, ML3.4**/10**, MLv3.1**/10**, Error ellipse: s-maj=0.0km s-min=0.0km az=78.5, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWGZ	Tauwhareparae	0.16	294	P	Pb	11 57 20.3	-0.4
TWGZ				S	Sb	11 57 24.6	+0.7
PUZ	Puketiti	0.18	24	P	Pb	11 57 20.9	-0.2
PUZ				S	Sb	11 57 24.9	+0.3
CNGZ	Carnagh Statio	0.24	172	P	Pb	11 57 21.9	-0.3
TKGZ	Te Karaka	0.32	231	P	Pg	11 57 18.8	-3.7
TKGZ				S	Sb	11 57 29.4	+0.9
PKGZ	Pakihiroa	0.36	349	P	Pb	11 57 24.4	+0.2
PKGZ				S	Sb	11 57 30.8	+1.1
WMGZ	Waiomatatini S	0.47	25	P	Pb	11 57 26.6	+0.7
RUGZ	Raukumara Rang	0.47	305	P	Pb	11 57 26.1	0.0
RUGZ				S	Sb	11 57 33.4	+0.4
MWZ	Matawai	0.51	259	P	Pb	11 57 26.5	-0.2
MWZ				S	Sb	11 57 34.3	+0.3
RIGZ	Rimuhau	0.56	214	P	Pb	11 57 28.5	+0.8
RIGZ				S	Sn	11 57 38.6	-0.2
HAZ	Te Kaha	0.57	328	P	Pb	11 57 28.0	+0.3
HAZ				S	Sb	11 57 36.8	+1.1
RAGZ	Rawiri	0.64	246	P	Pb	11 57 29.2	+0.2
RAGZ				S	Sb	11 57 39.3	+1.4
MXZ	Matakaoa Point	0.69	10	P	Pn	11 57 30.7	-0.5
MXZ				S	Sn	11 57 42.0	+0.3
PRGZ	Paritu Road	0.72	198	P	Pb	11 57 30.8	+0.6
PRGZ				S	Sn	11 57 43.8	+1.2
URZ	Urewera	0.83	268	P	Pb	11 57 32.4	+0.2
SNGZ	Shannon Statio	0.84	230	P	Pn	11 57 33.2	-0.3
KNZ	Kokohu	0.87	206	P	Pg	11 57 32.6	-0.1
MHGZ	Mahia Peninsul	0.93	192	P	Pb	11 57 33.6	-0.3
RTZ	Ruatahuna	1.00	248	P	Pn	11 57 35.7	0.0
WHRZ	Whale Island	1.01	292	P	Pn	11 57 36.9	+1.1
RAHZ	Arahi	1.08	231	P	Pb	11 57 36.5	0.0
WHHZ	Waihua	1.11	221	P	Pb	11 57 36.8	-0.1
MUGZ	Murupara	1.12	257	P	Pg	11 57 37.7	+0.2
EDRZ	Edgecumbe	1.13	276	P	Pg	11 57 38.5	+0.8
MARZ	Manawahe	1.20	282	P	Pg	11 57 39.0	-0.1
MTHZ	Maungataniwha	1.20	239	P	Pn	11 57 38.3	-0.1
RRRZ	Republican Roa	1.30	265	P	Pb	11 57 40.5	+0.3
TARZ	Mount Tarawera	1.30	270	P	Pg	11 57 40.8	-0.2
OPRZ	Ohinepanea	1.33	287	P	Pn	11 57 40.4	+0.2
MKRZ	Makatiti	1.34	274	P	Pg	11 57 42.7	+1.0
NMHZ	Naumai	1.36	231	P	Pn	11 57 40.6	-0.1
ARHZ	Aropaoanui	1.37	221	P	Pn	11 57 40.7	0.0
PRRZ	Plateau Road	1.42	259	P	Pg	11 57 43.3	+0.1
OMRZ	Omania	1.42	275	P	Pg	11 57 42.9	-0.3
HLRZ	Highlands Stat	1.43	269	P	Pg	11 57 42.9	-0.5
ALRZ	Allen Road	1.47	257	P	Pb	11 57 42.9	-0.1
HRRZ	Handcock Road	1.49	264	P	Pb	11 57 43.5	+0.1
MRHZ	Matea Rd	1.49	246	P	Pn	11 57 42.7	+0.3
HSRZ	Hossack Road	1.51	267	P	Pb	11 57 44.0	+0.2
KARZ	Kaharoa	1.53	278	P	Pb	11 57 43.6	-0.5
NGRZ	Ngongotaha	1.56	274	P	Pb	11 57 45.2	+0.5
TGRZ	Tauranga	1.59	288	P	Pn	11 57 44.0	+0.3
WPRZ	Whakapapatarin	1.60	259	P	Pb	11 57 45.3	0.0
BKZ	Black Stump Fm	1.60	234	P	Pn	11 57 43.8	-0.1
GRRZ	Galatos Road	1.62	266	P	Pg	11 57 48.0	+0.9
MCHZ	McNeill Hill	1.66	223	P	Pn	11 57 44.1	-0.6
KWHZ	Kaweka Forest	1.80	228	P	Pn	11 57 46.1	-0.6
KAHZ	Kahuranaki	1.85	212	P	Pn	11 57 45.8	-1.6
KUTZ	Kaahu Road	1.86	262	P	Pn	11 57 48.4	+1.0
BHHZ	Black Hill Sta	2.06	232	P	Pn	11 57 49.6	-0.7
TMVZ	Te Maari	2.11	245	P	Pn	11 57 51.3	+0.2
ETVZ	East Tongariro	2.12	244	P	Pn	11 57 51.4	+0.3
NTVZ	North Tongarir	2.13	245	P	Pn	11 57 51.9	+0.6
OTVZ	Oturere	2.16	244	P	Pn	11 57 52.4	+0.7
TOZ	Tahuroa Road	2.16	283	P	Pn	11 57 51.9	+0.3
NNVZ	North Ngauruho	2.18	245	P	Pb	11 57 53.7	-1.6
SNVZ	South Ngauruho	2.19	244	P	Pn	11 57 52.7	+0.6
WTVZ	West Tongariro	2.20	246	P	Pg	11 57 57.6	-0.5
NGZ	Ngauruhoe	2.21	244	P	Pn	11 57 52.9	+0.4
MOVZ	Moawhango	2.21	238	P	Pn	11 57 52.9	+0.6
TUVZ	Tukino	2.21	242	P	Pn	11 57 53.4	+1.0
WNVZ	Wahianoa	2.28	241	P	Pn	11 57 54.0	+0.6
PRHZ	Porangahau	2.34	210	P	Pn	11 57 52.3	-1.9
HIZ	Hauiti	2.61	263	P	Pn	11 57 59.6	+1.8
NEZ	North Egmont	3.34	251	P	Pn	11 58 09.6	+1.7

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*ARE **16** 11:58:28±6.7, 13°.51S±0°.09×76°.3W±0°.1, h56^{km}±9^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=157.0*

NEIC 16 11:58:29.8±1.8**, 13°.2S**±0°.1×**76°.48W**±0°.10**, h64**^{km}±16^{km}**, mb4.3**/2**, ML4.1**(ARE)**, Error ellipse: s-maj=18.2km s-min=8.8km az=222.0, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	1.29	344	Pn	Pn	11 58 51.8	-0.1
CZSB	Cruzeiro do Su	6.61	35	Pn	Pn	12 00 06.3	+1.8
PB16	IPOC Station P	8.41	128	Pn	Pn	12 00 28.6	-1.0
LPAZ	La Paz	8.63	112	Pn	Pn	12 00 33.1	+0.5
PB11	IPOC Station P	9.22	136	Pn	Pn	12 00 39.2	-1.0
PB08	IPOC Station P	9.82	135	Pn	Pn	12 00 47.6	-1.0
ETMB	Extrema	10.62	72	Pn	Pn	12 00 57.5	-1.8
PB09	IPOC Station P	10.96	142	Pn	Pn	12 01 04.3	+0.2
PB06	IPOC Station P	11.48	146	Pn	Pn	12 01 12.1	+0.9
BOAV	Boa Vista	22.18	47	P	P	12 03 19.4	-1.5
BOAV				IAmb	IAmb	12 03 47.5	
	comp=Z,12nm,1.4s						
ESPN	Las Esperanzas	26.43	343	P	P	12 04 00.1	-0.6
ESPN				IAmb	IAmb	12 04 04.2	
	comp=Z,15nm,0.9s						

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*IDC **16** 12:00:44.0±0.8, 30°.26S×177°.29W, h0^{km}, mb4.4/9, mb1 4.6/9, mb1mx4.2/35, mbtmp4.4/9, MS3.9/15, Ms1 3.9/15, ms1mx3.6/34, Error ellipse: s-maj=24.9km s-min=16.9km az=72.0*

*NEIC **16** 12:00:45.8±0.9, 30°.25S±0°.07×177°.2W±0°.2, h10^{km}±1^{km}, mb4.7/22, Error ellipse: s-maj=22.8km s-min=11.9km az=85.0*

ISC 16 12:00:48.8±0.6**, 30°.32S**±0°.06×**177°.3W**±0°.1**, h33**^{km}**, n61, σ1^{s}13**/52**, mb4.7**/21**, MS3.8**/15**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.19	334	Pn	Pn	12 01 07.8	-1.2
	535nm,0.3s,baz=163,slow=2.0,SNR=20						
RAO				Sn	Sb	12 01 25.3	-0.4
	1μm,0.3s,baz=84,slow=23,SNR=8.2						
RAO				LR	LR	12 01 35.0	
	comp=Z,2μm,22.0s,baz=118,slow=45						
RAO	Raoul Island	1.19	334		Pn	12 01 08.3	-0.7
URZ	Urewera	9.15	209	Pn	Pn	12 02 55.2	-3.2
	0.9nm,0.3s,baz=300,slow=23,SNR=8.5						
URZ				Sn	Sn	12 04 37.2	-3.1
	2.1nm,0.3s,baz=304,slow=24,SNR=3.5						
URZ	Urewera	9.15	209		Pn	12 02 59.6	+1.1
BFZ	Birch Farm	11.58	205	Pn	Pn	12 03 31.3	-0.5
MSVF	Nonsavu	13.22	340	LR	LR	12 08 09.9	
	comp=Z,287nm,18.0s,baz=175,slow=34						
DZM	Mont Dzumac	16.71	296	Pn	P	12 04 43.2	+0.7
	0.3nm,0.3s,baz=190,slow=12,SNR=7.4						
DZM				LR	LR	12 10 07.8	
	comp=Z,935nm,18.4s,baz=110,slow=34						
DZM	Mont Dzumac	16.71	296	*e*P	P	12 04 44.2	+1.6
	90nm,1.4s						
DZM				*e*LR	LR	12 08 47.3	
	comp=Z,806nm,22.9s						
RAR	Rarotonga	18.21	64	LR	LR	12 09 28.9	
	comp=Z,266nm,20.6s,baz=250,slow=29						
TBI	Tubuai	25.77	81	*e*LQ	LQ	12 11 19.6	
	281nm,39.8s						
TBI				*e*LR	LR	12 12 26.5	
	comp=Z,358nm,29.2s						
ARMA	Armidale	26.75	262	P	P	12 06 25.9	+0.4
ARMA				IAmb	IAmb	12 06 52.4	
	comp=Z,26nm,1.4s						
PPT2	Papeete2	28.26	70	*e*LR	LR	12 13 37.6	
	comp=Z,247nm,25.2s						
PPT	Papeete	28.27	70	LR	LR	12 18 47.7	
	comp=Z,78nm,18.1s,baz=232,slow=38						
EIDS	Eidsvold	28.32	272	P	P	12 06 39.9	+0.4
EIDS				IAmb	IAmb	12 06 53.3	
	comp=Z,12nm,1.1s						
CAN	Canberra	28.65	251	P	P	12 06 43.4	+0.9
HNR	Honiara	29.70	310	LR	LR	12 17 46.6	
	comp=Z,191nm,18.2s,baz=168,slow=34						
TOO	Toolangi	31.53	247	P	P	12 07 08.3	+0.4
TOO				IAmb	IAmb	12 07 24.8	
	comp=Z,14nm,1.2s						
CTAO	Charters Tower	34.36	279	P	P	12 07 32.7	-0.1
CTAO				IAmb	IAmb	12 07 47.6	
	comp=Z,8.9nm,0.9s						
STKA	Stephens Creek	35.06	257	P	P	12 07 40.5	+1.7
	comp=Z,9.5nm,1.1s,baz=84,slow=8.0,SNR=12						
STKA				LR	LR	12 21 18.2	
	comp=Z,347nm,18.5s,baz=43,slow=35						
STKA	Stephens Creek	35.06	257	P	P	12 07 38.8	+0.1
BBOO	Buckleboo	39.55	254	P	P	12 08 16.9	+0.1
BBOO				IAmb	IAmb	12 08 17.7	
	comp=Z,15nm,0.8s						
COEN	Coen	39.81	285	P	P	12 08 19.5	+0.4
TAOE	Nuku Hiva Isla	40.74	66	*e*LR	LR	12 19 20.4	
	comp=Z,207nm,28.3s						
AS31	Alice Springs	43.70	267	P	P	12 08 51.8	+0.9
ASAR	Alice Springs	43.70	267	P	P	12 08 50.4	-0.5
	comp=Z,4.6nm,0.9s,baz=110,slow=8.0,SNR=40						
ASAR				LR	LR	12 27 00.8	
	comp=Z,525nm,18.3s,baz=108,slow=36						
ASAR	Alice Springs	43.70	267	P	P	12 08 51.1	+0.2
WR0	Warramunga Arr	44.50	272	P	P	12 08 57.8	+0.5
WR0				IAmb	IAmb	12 08 58.4	
	comp=Z,18nm,1.4s						
WB2	Warramunga Arr	44.67	272	P	P	12 08 59.1	+0.5
WB2				IAmb	IAmb	12 09 00.3	
	comp=Z,11nm,0.9s						
WRA	Warramunga Arr	44.68	272	P	P	12 08 58.9	+0.2
	comp=Z,10nm,0.9s,baz=112,slow=7.7,SNR=37						
WRA				LR	LR	12 27 01.2	
	comp=Z,275nm,18.3s,baz=110,slow=35						
WRA	Warramunga Arr	44.68	272	P	P	12 08 59.0	+0.2
WB0	Warramunga Arr	44.70	272	P	P	12 08 59.0	+0.1
WB0				IAmb	IAmb	12 09 00.5	
	comp=Z,12nm,0.9s						
FORT	Forrest	46.63	255	P	P	12 09 13.9	-0.1
VNDA	Vanda	48.23	186	LR	LR	12 27 33.5	
	comp=Z,82nm,19.5s,baz=27,slow=33						
VNDA	Vanda	48.23	186	P	P	12 09 27.6	+1.8
VNDA				IAmb	IAmb	12 09 38.2	
	comp=Z,11nm,1.4s						
KNRA	Kununurra	51.28	274	P	P	12 09 50.6	+0.7
KNRA				IAmb	IAmb	12 10 11.6	
	comp=Z,16nm,1.4s						
FITZ	Fitzroy Crossi	52.94	269	P	P	12 10 01.4	-0.8
	comp=Z,4.3nm,1.0s,baz=177,slow=4.5,SNR=5.4						
CASY	Casey	55.48	208	P	P	12 10 20.7	+0.7
MORW	Morawa	57.11	253	P	P	12 10 32.3	+0.1
MORW				IAmb	IAmb	12 10 47.7	
	comp=Z,9.0nm,1.1s						
QSPA	South Pole Qui	59.79	180	P	P	12 10 52.0	+1.6
	comp=Z,5.4nm,0.7s,baz=55,slow=1.7,SNR=27						
QSPA	South Pole Qui	59.79	180	P	P	12 10 51.6	+1.1
MAW	Mawson	72.58	200	P	P	12 12 13.2	+1.0
	comp=Z,2.9nm,0.8s,baz=261,slow=20,SNR=4.1						
MAW	Mawson	72.58	200	P	P	12 12 13.8	+1.5
SNAA	Sanae	78.22	178	P	P	12 12 44.9	+0.2
SNAA				IAmb	IAmb	12 12 45.8	
	comp=Z,9.7nm,1.4s						
PLCA	Paso Flores	82.13	133	LR	LR	12 44 05.0	
	comp=Z,68nm,18.3s,baz=222,slow=32						
KSRS	Korea Array	84.67	319	LR	LR	12 48 20.5	
	comp=Z,29nm,19.8s,baz=156,slow=34						
PETK	Petropavlovsk-	85.89	345	P	P	12 13 26.3	+1.5
	comp=Z,5.2nm,1.0s,baz=147,slow=9.7,SNR=5.7						
PETK				LR	LR	12 48 30.5	
	comp=Z,40nm,19.1s,baz=133,slow=33						
PSI	Prapat	86.01	276	LR	LR	12 52 21.2	
	comp=Z,61nm,20.7s,baz=124,slow=36						
USRK	Ussuriysk Ar.	87.42	326	P	P	12 13 33.4	+0.9
	comp=Z,2.7nm,0.8s,baz=141,slow=3.9,SNR=4.9						
USRK	Ussuriysk Ar.	87.42	326	P	P	12 13 32.7	+0.2
U15A	North Rim	90.15	47	P	P	12 13 44.5	-1.5
TXAR	Lajitas Array	91.86	57	P	P	12 13 53.9	0.0
	comp=Z,0.6nm,1.0s,baz=254,slow=0.9,SNR=3.9						
CMAR	Chiang Mai Arr	93.93	289	LR	LR	13 00 24.7	
	comp=Z,13nm,18.2s,baz=198,slow=38						
SEY	Seymchan	96.04	347	LR	LR	12 54 21.7	
	comp=Z,34nm,20.9s,baz=169,slow=34						
ARCES	ARCESS Array B	138.64	348	PKP	PKiKP	12 20 12.3	-0.2
	comp=Z,2.2nm,0.8s,baz=54,slow=4.7,SNR=2.1						
FINES	FINESS Array B	145.27	340	PKPbc	PKPbc	12 20 21.2	-0.9
	comp=Z,8.2nm,0.7s,baz=52,slow=3.6,SNR=31						
KBZ	Khabaz	145.55	304	PKPbc	PKPdf	12 20 22.5	-0.9
	comp=Z,5.0nm,0.9s,baz=252,slow=4.7,SNR=4.2						
NOA	NORSAR Array B	148.76	352	PKPbc	PKPbc	12 20 31.0	-1.1
	comp=Z,2.2nm,0.9s,baz=14,slow=4.2,SNR=3.3						
AKASG	Malin Array Be	151.59	323	PKPbc	PKPbc	12 20 38.8	-0.4
	comp=Z,0.6nm,0.4s,baz=50,slow=2.6,SNR=7.0						
AKASG	Malin Array Be	151.59	323	PKPdf	PKPdf	12 20 31.9	-1.0
AKASG					PKPbc	12 20 38.3	-0.8
TORD	Torodi Ar. Bea	162.88	177	PKPab	PKPab	12 21 37.2	0.0
	comp=Z,0.7nm,0.7s,baz=243,slow=0.4,SNR=3.6						
TORD	Torodi Ar. Bea	162.88	177	PKPdf	PKPdf	12 20 45.8	-2.4
TORD					PKPab	12 21 35.7	-1.5

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*NIED **16** 12:07:28.4, 31°.14N×128°.70E, h4^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$0.00; M$_{\theta\theta}$0.57; M$_{\phi\phi}$-0.57; M$_{r\theta}$-0.06; M$_{\theta\phi}$1.56; M$_{\phi r}$0.21; Fault plane solution: M$_0$1.67000×10^{15} NP1: φ$_s$190.00000°, δ87.00000°, λ-173.00000°. NP2: φ$_s$100.00000°, δ83.00000°, λ-3.00000°.*

*JMA **16** 12:07:28.3±0.3, 31°.14N×128°.70E, h4^{km}±2^{km}, M4.2*

*IDC **16** 12:07:29.4±0.9, 30°.96N×128°.47E, h0^{km}, mb3.7/6, mb1 3.9/9, mb1mx3.7/57, mbtmp3.7/9, ML3.0/2, MS3.5/18, Ms1 3.5/18, ms1mx3.2/58, Error ellipse: s-maj=24.7km s-min=17.8km az=88.0*

ISC 16 12:07:29.8±2.7**, 31°.14N**±0°.05×**128°.79E**±0°.07**, h6**^{km}±17^{km}**, n34, σ1^{s}48**/24**, mb3.7**/6**, MS3.6**/15**, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.96	55	P	Pb	12 07 47.6	-1.3
JSJ				*e*S	Sn	12 08 01.7	-2.2
JKC	Kuchinoerabu	1.38	119	P	Pn	12 07 55.3	-0.4
JKC				*e*S	Sg	12 08 14.3	+0.1
JSU	Suzuyama	1.47	75	P	Pn	12 07 56.7	-0.3
JFU	Fukue jima 2	1.52	359	P	Pn	12 07 56.5	-1.1
JFU				*e*S	Sn	12 08 15.7	-2.0
JNN	Nakanoshima	1.59	144	P	Pn	12 07 58.2	-0.4
JYAK	Yakushimahirau	1.73	121	P	Pn	12 08 00.1	-0.4
JYAK				*e*S	Sb	12 08 23.6	-0.4
JTN	Tanegashima 3	1.94	104	P	Pn	12 08 02.9	-0.5
JTZ	Takazaki	2.10	68	P	Pn	12 08 05.6	0.0
JNU	Nakatsue	2.66	41	Pn	Pb	12 08 18.8	+0.9
JNU				Sn	Sg	12 08 54.6	-0.5
	51nm,0.3s,baz=237,slow=23,SNR=5.8						
JOW	Kunigami	4.31	186	Pn	Pn	12 08 37.4	+1.4
	3.1nm,0.3s,baz=2.8,slow=20,SNR=3.6						
KSRS	Korea Array	6.34	354	Pn	Pn	12 09 04.2	+0.3
	0.3nm,0.3s,baz=163,slow=14,SNR=4.1						
KSRS				Sn	Sn	12 10 15.5	-1.2
	1.2nm,0.3s,baz=163,slow=16,SNR=4.8						
KSRS				Lg	Lg	12 10 48.6	
	2.0nm,0.3s,baz=262,slow=39,SNR=1.6						
KSRS				LR	LR	12 10 56.5	
	comp=Z,97nm,18.8s,baz=175,slow=32						
MJAR	Matsushiro Arr	9.51	53	Pn	Pn	12 09 50.4	+3.1
	0.1nm,0.3s,baz=239,slow=12,SNR=2.7						
JHJ	Hachijo jima 2	9.53	75	LR	LR	12 13 31.0	
	comp=Z,116nm,18.5s,baz=253,slow=37						
ASAJ	Asahikawa	16.92	36	LR	LR	12 17 34.8	
	comp=Z,97nm,18.2s,baz=164,slow=35						
GUMO	Guam	22.88	136	LR	LR	12 20 14.7	
	comp=Z,56nm,18.1s,baz=136,slow=33						
SONM	Songino Array	23.89	321	P	P	12 12 43.3	-1.0
	1.7nm,0.8s,baz=138,slow=9.5,SNR=11						
SONM				LR	LR	12 22 23.2	
	comp=Z,146nm,20.5s,baz=138,slow=38						
TLY	Talaya	27.64	325	LR	LR	12 25 45.2	

	comp=Z,108nm,19.5s,baz=156,slow=40						
CMAR	Chiang Mai Arr	29.79	252	LR	LR	12 25 42.6	
	comp=Z,81nm,18.6s,baz=70,slow=37						
PETK	Petropavlovsk-	30.34	35	LR	LR	12 25 28.2	
	comp=Z,42nm,19.7s,baz=185,slow=35						
SEY	Seymchan	35.21	19	LR	LR	12 28 09.6	
	comp=Z,58nm,19.6s,baz=295,slow=35						
ZALV	Zalesovo Beam	38.76	319	P	P	12 14 56.7	+1.8
	0.5nm,0.4s,baz=126,slow=14,SNR=1.9						
MKAR	Makanchi Array	38.80	307	P	P	12 14 54.4	-0.9
	1.4nm,0.8s,baz=103,slow=10,SNR=7.4						
WRA	Warramunga Arr	51.06	173	P	P	12 16 32.2	-0.9
	0.9nm,0.8s,baz=354,slow=7.8,SNR=8.6						
ARU	Arti	53.92	320	LR	LR	12 42 45.1	
	comp=Z,52nm,20.8s,baz=102,slow=39						
ASAR	Alice Springs	54.71	174	P	P	12 16 59.3	-0.8
	1.1nm,0.6s,baz=2.5,slow=14,SNR=30						
AKTO	Aktyubinsk	54.82	312	LR	LR	12 41 13.7	
	comp=Z,100nm,20.2s,baz=81,slow=37						
GEYT	Alibeck	57.36	298	LR	LR	12 45 30.6	
	comp=Z,43nm,18.8s,baz=235,slow=40						
KIRV	Kirov	58.59	323	LR	LR	12 44 45.1	
	comp=Z,60nm,18.7s,baz=61,slow=38						
ILAR	Eielson Array	59.92	30	P	P	12 17 39.8	+3.3
	0.4nm,0.9s,baz=292,slow=7.6,SNR=5.5						
FINES	FINESS Array B	68.87	330	LR	LR	12 51 08.0	
	comp=Z,46nm,19.9s,baz=22,slow=38						
AKASG	Malin Array Be	72.15	319	LR	LR	12 52 15.4	
	comp=Z,52nm,18.8s,baz=35,slow=37						
YKA	Yellowknife Ar	73.89	26	LR	LR	12 56 14.8	
	comp=Z,29nm,19.0s,baz=0.0,slow=39						
NOA	NORSAR Array B	75.15	333	LR	LR	12 54 48.7	
	comp=Z,26nm,19.2s,baz=265,slow=38						
VRAC	Vranov	79.81	322	LR	LR	12 58 10.3	
	comp=Z,47nm,18.5s,baz=204,slow=38						

IDC 16 12:08:08.5±3.4**, 30°.45S×177°.15W, h0^{km}, mb3.4**/2**, mb1 3.7**/2**, mb1mx3.5**/25**, mbtmp3.4**/2**, Error ellipse: s-maj=68.8km s-min=41.2km az=100.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.37	331	Pn	Pn	12 08 34.9	+0.1
	73nm,0.3s,baz=123,slow=12,SNR=6.1						
RAO				Sn	Sg	12 08 48.1	-4.4
	114nm,0.3s,baz=119,slow=23,SNR=4.1						
ASAR	Alice Springs	43.84	267	P	P	12 16 16.5	-0.2
	0.2nm,0.6s,baz=105,slow=7.3,SNR=4.5						
WRA	Warramunga Arr	44.83	272	P	P	12 16 24.5	-0.1
	0.4nm,0.5s,baz=110,slow=8.1,SNR=7.8						
FINES	FINESS Array B	145.44	340	PKPbc	PKPbc	12 27 46.9	-0.8
	1.5nm,0.8s,baz=57,slow=7.0,SNR=4.0						

*IDC **16** 12:21:01.7±3.6, 13°.71N×91°.26W, h0^{km}, mb4.1/4, mb1 4.2/5, mb1mx3.8/45, mbtmp4.0/5, ML3.8/1, MS3.6/4, Ms1 3.6/4, ms1mx3.0/42, Error ellipse: s-maj=84.0km s-min=54.3km az=19.0*

*SNET **16** 12:21:04.8±1.0, 13°.61N×91°.86W, h14^{km}±47^{km}, ML3.6*

*UCR **16** 12:21:04.9±1.1, 13°.66N×91°.82W, h8^{km}±35^{km}, ML3.5, mb4.4(NEIC)*

*GCG **16** 12:21:05.5±0.7, 13°.66N×92°.13W, h24^{km}±717^{km}, MD4.2*

*NEIC **16** 12:21:10±1.4, 13°.77N±0°.08×91°.7W±0°.1, h35^{km}±2^{km}, mb4.4/13, Error ellipse: s-maj=21.1km s-min=8.4km az=59.0*

ISC 16 12:21:07.4±0.9**, 13°.54N**±0°.08×**91°.89W**±0°.07**, h37^{km}, n57, σ1^s.50**/59**, mb4.3**/10**, MS3.5**/4**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTAL	Retalhuleu	1.00	11		Pn	12 21 23.9	-1.0
STG3	Santiaguito 3,	1.20	15	eP	Pn	12 21 27.0	-0.8
FUG	Fuego 3	1.36	48	eP	Pn	12 21 30.4	+0.4
HUEH	Huehuetenango	1.81	12	eP	Pn	12 21 34.9	-1.4
HUEH				IAML		12 22 01.4	
	comp=Z,640nm,0.7s						
HUEH	Huehuetenango	1.81	12	Pn	Pn	12 21 35.7	-0.5
NBG	Las Nubes	1.82	55	eP	Pn	12 21 38.2	+1.7
NBG				eS	Sn	12 22 03.7	+5.2
CEVE	Cerro Verde	2.22	82	eP	Pn	12 21 41.5	-0.4
CEVE				eS	Sn	12 22 09.4	+1.1
CEVE				IAML		12 22 22.3	
	comp=Z,707nm,0.3s						
CEVE	Cerro Verde	2.22	82	eP	Pn	12 21 41.5	-0.4
CEVE				eS	Sn	12 22 09.4	+1.1
CEVE				IAML		12 22 22.3	
	comp=Z,707nm,0.3s						
JAYA	Jayaque - finc	2.38	87	eP	Pn	12 21 42.7	-1.3
JAYA				eS	Sn	12 22 12.4	+0.4
JAYA				IAML		12 22 20.1	
	comp=Z,292nm,0.3s						
JAYA	Jayaque - finc	2.38	87	eP	Pn	12 21 42.7	-1.3
JAYA				eS	Sn	12 22 12.4	+0.4
JAYA				IAML		12 22 20.1	
	comp=Z,292nm,0.3s						
PMON	Piamonte	2.51	86	eP	Pn	12 21 44.0	-1.8
PMON	Piamonte	2.51	86	eP	Pn	12 21 44.0	-1.8
BOQS	Boqueron	2.55	85	eP	Pn	12 21 45.6	-0.8
BOQS	Boqueron	2.55	85	eP	Pn	12 21 45.6	-0.8
MTO3	Montecristo	2.60	71	eP	Pn	12 21 46.0	-1.1
MTO3	Montecristo	2.60	71	eP	Pn	12 21 46.0	-1.1
MTO3	Montecristo	2.60	71	Pn	Pn	12 21 46.9	-0.2
MRL	Marmol	2.63	54	eP	Pn	12 21 49.6	+2.0
ESQI	Esquipulas	2.67	67	eP	Pn	12 21 47.5	-0.5
ESQI	Esquipulas	2.67	67	Pn	Pn	12 21 47.3	-0.7
CCIG	Comitan	2.73	355	Pn	Pn	12 21 48.9	0.0
LFRS	El Faro	2.75	88	eP	Pn	12 21 48.2	-0.9
LFRS	El Faro	2.75	88	eP	Pn	12 21 48.2	-0.9
COEG	Centro de Oper	2.93	88	eP	Pn	12 21 50.3	-1.2
COEG				IAML		12 22 40.1	
	comp=Z,144nm,0.6s						
COEG	Centro de Oper	2.93	88	eP	Pn	12 21 50.3	-1.2
COEG				IAML		12 22 40.1	
	comp=Z,144nm,0.6s						
PACA	Pacayal	3.47	91	eS	Sn	12 22 40.5	+1.5
PACA	Pacayal	3.47	91	eS	Sn	12 22 40.5	+1.5
CNGN	Cerro Negro	5.17	101	Pn	Pn	12 22 23.3	+1.0
BOAB	BOACO BROADBAN	6.16	99	Pn	Pn	12 22 35.8	-0.1
HZTE	Horizontes, Gu	6.77	114	Pn	Pn	12 22 46.2	+2.0
ORTG	Ortega, Santa	7.04	116		Pn	12 22 50.5	+2.4
RIMA	Rio Macho	8.71	115		Pn	12 23 12.2	+1.1
SRBA	San Rafael, Bu	9.40	116	Pn	Pn	12 23 22.7	+2.3
TX32	Lajitas Array	19.14	327	P	Pn	12 25 29.0	+0.4
TXAR	Lajitas Array	19.14	327	P	Pn	12 25 29.3	+0.7
	comp=Z,0.1nm,0.3s,baz=153,slow=10,SNR=22						
TXAR	Lajitas Array	19.14	327	P	Pn	12 25 28.8	+0.2
TX31	Lajitas Ar. Si	19.14	327	P	Pn	12 25 28.6	-0.1
TX31				IAmb	IAmb	12 25 31.3	
	comp=Z,21nm,1.1s						
MNTX	Cornudas Mount	21.91	328		P	12 25 57.9	+0.4
AMTX	Amarillo	23.02	339	P	P	12 26 08.5	-0.8
AMTX				IAmb	IAmb	12 26 09.1	
	comp=Z,10nm,0.6s						
PBMO	Poplar Bluff	23.18	3	P	P	12 26 08.5	-2.3
PBMO				IAmb	IAmb	12 26 09.9	
	comp=Z,8.3nm,0.9s						
T47A	Sharon Grove	23.74	10	P	P	12 26 14.5	-1.7
121A	Cookes Peak, D	23.84	325	P	P	12 26 19.6	+2.1
121A				IAmb	IAmb	12 26 23.2	
	comp=Z,9.0nm,1.1s						
S44A	Carbondale	24.17	5	P	P	12 26 18.2	-2.0
S44A				IAmb	IAmb	12 26 19.7	
	comp=Z,17nm,1.1s						
SIUC	Southern Illin	24.19	5	P	P	12 26 18.4	-2.0
CCM	Cathedral Cave	24.42	1	P	P	12 26 20.4	-2.1
ANMO	Albuquerque	25.05	331	P	P	12 26 29.5	+1.0
	comp=Z,1.1nm,0.7s,baz=148,slow=12,SNR=6.3						
MVCO	Mesa Verde	27.85	331	P	P	12 26 54.6	+0.8
MVCO				IAmb	IAmb	12 26 56.2	
	comp=Z,13nm,1.4s						
PFO	Pinyon Flats O	29.96	316	LR	LR	12 39 03.6	
	comp=Z,100nm,21.4s,baz=221,slow=36						
MCMT	McKenzie Canyo	35.93	334	P	P	12 28 06.0	+1.4
J08A	Circle Bar Ran	37.48	328	P	P	12 28 19.4	+1.7
J08A				IAmb	IAmb	12 28 20.8	
	comp=Z,5.8nm,0.8s						
SCHQ	Schefferville	45.61	20	P	P	12 29 20.7	-3.2
	comp=Z,4.7nm,0.9s,baz=204,slow=8.4,SNR=6.5						
SCHQ				LR	LR	12 49 25.1	
	comp=Z,171nm,18.6s,baz=236,slow=38						
CPUP	Villa Florida	51.97	140	LR	LR	12 51 09.6	
	comp=Z,39nm,18.1s,baz=252,slow=35						
INK	Inuvik	60.91	344	P	P	12 31 15.6	-0.5
	comp=Z,2.0nm,0.9s,baz=118,slow=6.5,SNR=9.0						
ILAR	Eielson Array	63.30	337	P	P	12 31 32.5	+0.3
	comp=Z,1.5nm,1.1s,baz=153,slow=4.5,SNR=8.5						
NOA	NORSAR Array B	84.50	28	LR	LR	13 10 01.3	
	comp=Z,16nm,18.2s,baz=35,slow=35						
CMAR	Chiang Mai Arr	146.46	341	PKPbc	PKPbc	12 40 45.3	-0.2
	comp=Z,1.4nm,0.8s,baz=345,slow=3.8,SNR=8.7						
CMAR	Chiang Mai Arr	146.46	341		PKPdf	12 40 43.4	-0.8

*IDC **16** 12:31:03.4±1.1, 8°.62N×71°.53W, h0^{km}, mb3.6/1, mb1 3.9/2, mb1mx3.4/43, mbtmp3.8/2, ML2.3/1, Error ellipse: s-maj=30.8km s-min=10.2km az=158.0*

*FUNV **16** 12:31:07.3, 8°.52N×71°.35W, h1^{km}, MW3.5*

ISC 16 12:31:05.1±1.1**, 8°.57N**±0°.03×**71°.42W**±0°.02**, h9^{km}**±9^{km}**, n35, σ1^s.66**/61**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	Socops	0.62	117	eP	Pg	12 31 15.9	-1.3
SOCV				eS	Sg	12 31 24.9	-0.6
SOCV	Socops	0.62	117	eS	Sg	12 31 25.0	-0.4
SDV	Santo Domingo	0.84	68	Pg	Pb	12 31 23.0	+1.1
	17nm,0.3s,baz=226,slow=16,SNR=10						
SDV				Lg	Lg	12 31 33.2	
	32nm,0.3s,baz=338,slow=12,SNR=9.2						
SDV	Santo Domingo	0.84	68	eP	Pg	12 31 21.4	+0.1
SDV				eS	Sg	12 31 33.4	+1.1
PAMC	Pamplona, Colo	1.76	226	eP	Pn	12 31 36.9	+0.6
PAMC				eS	Sb	12 31 59.7	-0.7
MCQV	Machiques	1.84	323	eP	Pg	12 31 40.6	+0.2
MCQV				eS	Sg	12 32 04.5	+0.2
OCAC	Ocana	1.91	260	eP	Pn	12 31 38.1	+0.1
OCAC				eS	Sb	12 32 03.0	-1.3
TAMC	Tame, Arauca	2.15	190	eP	Pb	12 31 43.6	-0.7
TAMC				eS	Sb	12 32 11.5	+0.4
ELOV	Elorza	2.47	129	eP	Pb	12 31 48.9	-0.8
ELOV				eS	Sn	12 32 17.6	+1.7
ELOV	Elorza	2.47	129	eP	Pn	12 31 47.2	+1.6
ELOV				eS	Sn	12 32 16.5	+0.5
SIQV	Siquisique	2.60	37	eP	Pb	12 31 50.3	-1.7
SIQV				eS	Sn	12 32 21.5	+2.3
BARC	Barichara	2.63	222	eP	Pb	12 31 51.7	-0.9
BARC				eS	Sb	12 32 26.3	+1.2
SMLC	San Martn de	2.63	275	eP	Pn	12 31 47.3	-0.5
SMLC				eS	Sb	12 32 23.1	-1.9
BRRC	Barranca, Sant	2.70	238	eP	Pn	12 31 49.4	+0.6
BRRC				eS	Sb	12 32 26.5	-0.4
RUSC	La Rusia	3.13	212	eP	Pn	12 31 52.5	-2.6
RUSC				eS	Sn	12 32 32.3	-0.6
BAUV	El Baul	3.36	83	eP	Pn	12 31 59.4	+1.6
BAUV				eS	Sn	12 32 37.5	-0.3
ZARC	Zaragoza, Cauc	3.57	253	eP	Pn	12 32 00.7	0.0
MONV	Montecano	3.65	23	eP	Pn	12 32 04.2	+2.3
MONV				eS	Sn	12 32 46.3	+1.2
SMRC	Santa Marta, M	3.78	313	eP	Pn	12 32 04.0	+0.4
SMRC				eS	Sn	12 32 46.0	-2.2
SPBC	San Pablo de B	3.92	222	eP	Pn	12 32 05.9	+0.3
SJCC	San Jacinto, C	3.94	290	eP	Pn	12 32 07.3	+1.4
SJCC				eS	Sn	12 32 55.5	+3.2
BENV	Beln	4.02	70	eP	Pn	12 32 08.8	+1.8
BENV				eS	Sn	12 32 52.9	-1.2
MOTC	Monteria, Cord	4.20	273	eP	Pn	12 32 10.2	+0.8
MOTC				eS	Sn	12 33 00.5	+1.8
PTGC	Puerto Gaitan,	4.40	189	eP	Pb	12 32 25.7	+3.0
PTGC				eS	Sb	12 33 21.2	+5.3
CHIC	Chingaza	4.54	211	eP	Pn	12 32 14.9	+0.5
CHIC				eS	Sn	12 33 07.9	+0.4
ROSC	El Rosal	4.70	218	Pn	Pn	12 32 15.9	-0.6
	3.1nm,0.3s,baz=37,slow=20,SNR=2.0						
ROSC				Sn	Sn	12 33 13.6	+2.2
	2.3nm,0.3s,baz=48,slow=19,SNR=2.1						
ROSC				Lg	Lg	12 33 34.2	
	1.6nm,0.3s,baz=231,slow=24,SNR=1.1						
PAYV	Puerto Ayacuch	4.87	130	eP	Pn	12 32 18.7	+0.1
PAYV				eS	Sn	12 33 12.0	-3.3
MERV	Las Mercedes	5.11	82	eP	Pn	12 32 22.1	+0.3
MERV				eS	Sn	12 33 18.5	-2.5
GUY2C	Guyana, Caldas	5.14	230	eP	Pn	12 32 24.3	+1.6
GUY2C				eS	Sn	12 33 23.6	+1.2
BIRV	Birongo	5.42	69	eP	Pn	12 32 27.6	+1.4
BIRV				eS	Sn	12 33 25.5	-3.3
ANIL	Santa Ana	5.67	225	eP	Pn	12 32 31.9	+2.1
ORTC	Ortega, Tolima	5.99	220	eP	Pn	12 32 34.2	+0.2
PDAR	Pinedale Array	47.70	322	P	P	12 39 42.4	-0.1
	0.4nm,0.5s,baz=119,slow=9.5,SNR=6.0						
ASAR	Alice Springs	151.49	235	PKPbc	PKPbc	12 50 58.8	-1.7
	0.2nm,0.6s,baz=121,slow=2.5,SNR=6.2						
WRA	Warramunga Arr	152.64	243	PKPbc	PKPbc	12 51 01.7	-1.5
	0.4nm,0.5s,baz=109,slow=2.7,SNR=9.3						

*IDC **16** 12:55:52.2±0.8, 10°.40N×62°.85W, h0^{km}, mb3.9/7, mb1 4.2/9, mb1mx3.9/60, mbtmp4.1/9, ML4.5/2, MS3.3/3, Ms1 3.3/3, ms1mx2.8/34, Error ellipse: s-maj=18.1km s-min=17.7km az=94.0*

*TRN **16** 12:55:55.7, 10°.28N×62°.88W, h109^{km}, MD4.0*

*FUNV **16** 12:55:55.3, 10°.31N×62°.90W, h5^{km}, MW3.9*

ISC 16 12:55:54.5±1.2**, 10°.35N**±0°.04×**62°.94W**±0°.03**, h17^{km}**±8^{km}**, n64, σ1^s.37**/79**, mb3.8**/7**, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRUV	Carupano	0.44	318	eP	Pg	12 56 02.5	-0.9
CRUV				eS	Sg	12 56 08.7	-0.7
CUMV	Cumana_UDO	1.24	274	eP	Pn	12 56 18.7	+1.6
CUMV				eS	Sg	12 56 36.7	+2.0
TRN	Trinidad (W)	1.54	79	eP	Pn	12 56 22.8	+1.6
TRN				eS	Sn	12 56 42.0	+1.2
PCRV	Puerto La Cruz	1.68	264	Pn	Pn	12 56 24.5	+1.3
	132nm,0.3s,baz=85,slow=7.5,SNR=126						
PCRV	Puerto La Cruz	1.68	264	eP	Pn	12 56 24.9	+1.6
PCRV				eS	Sn	12 56 46.7	+2.3
TBH	Brigand Hill	1.84	86	e	Pg	12 56 31.4	+1.4
GRFF	Grenada Fort F	2.06	35	eP	Pn	12 56 29.0	+0.6
GRFF				eS	Sn	12 56 55.5	+1.8
GRGR	Grenville	2.18	35	eP	Pn	12 56 30.9	+0.9
GRGR				eS	Sn	12 56 58.0	+1.4
PRGV	PARIAGUAN	2.31	227	eP	Pn	12 56 33.5	+1.7
PRGV				eS	Sn	12 57 02.2	+2.3
BOT	Bacolet	2.33	69	e	Pn	12 56 34.9	+2.8
RIOV	Rio Grande	2.52	154	eP	Pn	12 56 35.1	+0.4
RIOV				eS	Sn	12 57 05.1	0.0
TOSP	Speyside	2.54	68	eP	Pn	12 56 36.4	+1.4
GCMP	Grenada, Carri	2.59	35	eP	Pn	12 56 36.5	+0.8
GCMP				eS	Sn	12 57 07.4	+0.6
BIRV	Birongo	3.28	273	eP	Pn	12 56 46.2	+1.0
BIRV				eS	Sn	12 57 24.9	+1.0
SVB	Belmont	3.34	29	eP	Pn	12 56 46.7	+0.6
SVV	Soufriere Volc	3.40	30	eP	Pn	12 56 48.3	+1.4
SSV	Crater Summit	3.42	30	eP	Pn	12 56 47.1	-0.1
MERV	Las Mercedes	3.49	252	eP	Pn	12 56 48.7	+0.7
MERV				eS	Sn	12 57 29.0	0.0
MCLT	Moule a Chique	3.87	30	eP	Pn	12 56 53.9	+0.5
MCLT				eS	Sn	12 57 37.0	-1.4
TACV	Tcata	4.03	267	eP	Pn	12 56 56.1	+0.5
TACV				eS	Sn	12 57 42.4	-0.1
SLBI	Saint Lucia, B	4.13	27	eP	Pn	12 56 56.9	+0.1
SLBI	Saint Lucia, B	4.13	27	eS	Sn	12 57 42.4	-2.4
CACV	CAICARA DEL OR	4.51	232	eP	Pn	12 56 57.2	-4.8
CACV				eS	Sn	12 57 44.6	-10
BIM	Bigot	4.53	24	eP	Pn	12 57 02.7	+0.4
BIM	Bigot	4.53	24	eS	Sn	12 57 51.8	-2.9
H05S1	Guadeloupe/Mar	4.54	27	Pn	Pn	12 57 03.2	+0.6
	SNR=7.9						
H05S1				Sn	Sn	12 57 56.1	+1.1
MPOM	Morne Pois Mar	4.55	26	eP	Pn	12 57 03.1	+0.4
MPOM	Morne Pois Mar	4.55	26	eS	Sn	12 57 52.1	-3.1
BENV	Beln	4.61	266	eP	Pn	12 57 05.0	+1.5
BENV				eS	Sn	12 57 56.3	-0.4
FDF	Fort de France	4.70	22	eP	Pn	12 57 05.2	+0.5
LUEV	Luepa	4.71	162	eP	Pn	12 57 04.3	-0.7
LUEV				eS	Sn	12 57 56.6	-2.7
BAUV	El Baul	5.22	255	eP	Pn	12 57 12.3	+0.4
BAUV	El Baul	5.22	255	eP	Pn	12 57 12.1	+0.2
BAUV				eS	Sn	12 58 10.8	-1.1
DSLB	Salisbury	5.27	16	eP	Pn	12 57 12.9	+0.3
TDBA	Terre de Bas,	5.62	13	eP	Pn	12 57 18.4	+1.1
MAGL	Barre de l'ile	5.80	16	eP	Pn	12 57 20.6	+0.8
CBE	Ff, Capester	5.83	13	eP	Pn	12 57 20.6	+0.3
H05N1	Guadeloupe/Mar	6.21	17	Pn	Pn	12 57 26.2	+0.7
	SNR=15						
ANBD	Bethesda, Anti	6.76	10	eP	Pn	12 57 33.5	+0.5
PAYV	Puerto Ayacuch	6.77	224	eP	Pn	12 57 32.9	-0.3
PAYV				eS	Sn	12 58 45.9	-4.0
SOCV	Socops	8.08	256	eP	Pn	12 57 50.9	-0.4
SOCV				eS	Sn	12 59 16.5	-5.8
OCAC	Ocana	10.46	259	eP	Pn	12 58 24.6	+0.6
BARC	Barichara	10.80	251	eP	Pn	12 58 28.6	-0.1
RUSC	La Rusia	10.98	247	eP	Pn	12 58 30.4	-0.9
SMLC	San Martn de	11.09	263	eP	Pn	12 58 34.0	+1.5
PTGA	Pitinga	11.39	165	Pn	Pn	12 58 36.7	+0.1
	4.5nm,0.3s,baz=14,slow=17,SNR=35						
PTGA				Sn	Sn	13 00 36.2	-7.5
	1.4nm,0.3s,baz=79,slow=21,SNR=5.8						
PTGA				Lg	Lg	13 01 45.9	
	2.8nm,0.3s,baz=83,slow=22,SNR=5.2						
MDP	Montagnes des	11.45	116	Pn	Pn	12 58 34.9	-2.5
	2.7nm,0.3s,baz=300,slow=14,SNR=13						
MDP				Sn	Sn	13 00 36.5	-8.6
	1.4nm,0.3s,baz=28,slow=23,SNR=2.2						
MDP				LR	LR	13 03 45.3	
	comp=Z,51nm,18.5s,baz=284,slow=42						
SPBC	San Pablo de B	11.97	248	eP	Pn	12 58 43.3	-1.4
SJCC	San Jacinto, C	12.06	269	eP	Pn	12 58 45.4	-0.4
CHIC	Chingaza	12.11	243	eP	Pn	12 58 46.0	-0.8
ZARC	Zaragoza, Cauc	12.12	257	eP	Pn	12 58 45.6	-0.9
VILC	Villavicencio,	12.34	241	eP	Pn	12 58 49.3	-0.3
ROSC	El Rosal	12.54	245	LR	LR	13 04 50.7	
	comp=Z,353nm,20.0s,baz=62,slow=43						
GUY2C	Guyana, Caldas	13.32	248	eP	Pn	12 59 02.0	-1.4
PRAC	Prado	13.56	242	eP	Pn	12 59 03.4	-2.9
CBOC	Ciudad Bolivar	13.69	252	eP	Pn	12 59 07.2	-0.9
ORTC	Ortega, Tolima	13.78	243	eP	Pn	12 59 08.2	-1.2
ATAH	Atahualpa	23.21	222	P	P	13 01 03.4	+2.1
	8.5nm,0.8s,baz=357,slow=10,SNR=5.7						
SIV	San Ignacio	26.23	176	P	P	13 01 29.8	+0.9
	0.7nm,0.5s,baz=221,slow=5.4,SNR=4.0						
SIV				LR	LR	13 11 52.8	
	comp=Z,74nm,19.7s,baz=270,slow=37						
TXAR	Lajitas Array	42.44	302	P	P	13 03 49.5	+0.7
	0.8nm,0.7s,baz=121,slow=8.3,SNR=8.6						
ANMO	Albuquerque	46.54	309	P	P	13 04 23.2	+1.5
	1.1nm,0.7s,baz=103,slow=7.1,SNR=4.4						
PDAR	Pinedale Array	51.80	317	P	P	13 05 01.4	-0.5
	1.1nm,0.9s,baz=118,slow=8.8,SNR=6.1						
TORD	Torodi Ar. Bea	63.19	80	P	P	13 06 22.6	+0.2
	1.6nm,0.4s,baz=290,slow=6.0,SNR=23						
ILAR	Eielson Array	78.13	334	P	P	13 07 51.2	-1.3
	0.4nm,0.6s,baz=91,slow=4.7,SNR=11						

*SJA **16** 13:03:17±2.8, 31°.38S±0°.07×68°.7W±0°.1, h111^{km}±3^{km}, Md3.6, Error ellipse: s-maj=16.6km s-min=9.4km az=94.0*

NEIC 16 13:03:17±3.6**, 31°.51S**±0°.07×**68°.5W**±0°.2**, h112^{km}**±7^{km}**, Error ellipse: s-maj=19.7km s-min=9.7km az=98.0, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZON	Zonda	0.14	253	Pn	Pn	13 03 34.1	+1.5
ZON				Sn	Sn	13 03 45.2	+0.9
VA03	San Esteban	2.13	233		Pn	13 03 53.4	+1.6
GO04	Tololo Observa	2.37	304		Pn	13 03 54.6	-0.4
PEL	Peldehue	2.45	228		Pn	13 03 57.5	+1.6
MT05	Renca	2.65	224	Pn	Pn	13 04 00.1	+1.5
CO06	Fray Jorge	2.79	286		Pn	13 03 58.3	-2.0
MT02	Curacav	2.82	231	Pn	Pn	13 04 01.2	+0.5
CO05	La Serena	2.82	303		Pn	13 03 59.3	-1.4
VA01	Torpederas	3.05	239	Pn	Pn	13 04 03.8	+0.2
MT09	Talagante	3.07	222		Pn	13 04 05.0	+0.8
LCO	Las Campanas	3.12	322	Pn	Pn	13 04 04.5	-0.4
MT01	Popeta	3.29	224		Pn	13 04 06.8	-0.1
VA05	Santo Domingo	3.38	230	Pn	Pn	13 04 07.9	-0.1
BO01	Tunca	3.59	216	Pn	Pn	13 04 11.3	+0.4
BO02	Sierra Bellavi	3.79	209		Pn	13 04 15.1	+1.6
AC04	Llanos de Chal	3.97	325		Pn	13 04 14.9	-1.0
GO03	Copiap	4.17	339	Pn	Pn	13 04 18.6	-0.2
GO05	Huala	4.51	218	Pn	Pn	13 04 22.6	-0.7
AC02	Maricunga	4.68	353		Pn	13 04 27.4	+1.4
ML02	Panimavida	4.88	209	Pn	Pn	13 04 28.3	0.0
PB14	IPOC Station P	7.05	346	Pn	Pn	13 04 56.5	-1.5
PB15	IPOC Station P	8.31	354		Pn	13 05 13.2	-1.7
PB06	IPOC Station P	8.81	354	Pn	Pn	13 05 18.6	-3.1
LVC	Limon Verde	8.87	358	Pn	Pn	13 05 20.0	-2.6
PB09	IPOC Station P	9.69	356	Pn	Pn	13 05 31.3	-2.3
PB07	IPOC Station P	9.81	353	Pn	Pn	13 05 31.4	-3.9
ITQB	Itaqui	10.42	83	Pn	Pn	13 05 43.4	+0.2
PB01	IPOC Station P	10.46	355	Pn	Pn	13 05 40.1	-3.7

*UPA **16** 13:11:54.6±2.0, 8°.26N×77°.14W, h30^{km}±21^{km}, MW4.6*

*NEIC **16** 13:11:55.1±1.7, 8°.44N±0°.05×77°.11W±0°.04, h36^{km}±5^{km}, mb4.6/110, Error ellipse: s-maj=7.6km s-min=5.2km az=215.0*

*RSNC **16** 13:11:55.5±0.8, 8°.35N×77°.14W, h32^{km}±3^{km}, ML4.1, Mw4.2, Fault plane solution: NP1:ϕ_s71.00000°, δ73.00000°, λ18.00000°.*

*IDC **16** 13:11:55.4±1.5, 8°.41N×77°.11W, h47^{km}±16^{km}, mb3.9/11, mb1 4.2/16, mb1mx3.9/37, mbtmp4.2/16, ML3.4/5, MS3.3/17, Ms1 3.3/17, ms1mx3.1/37, Error ellipse: s-maj=17.6km s-min=11.4km az=29.0*

ISC 16 13:11:53.1±0.7**, 8°.35N**±0°.02×**77°.15W**±0°.02**, h30^{km}**±5^{km}**, n261, σ1^s.80**/314**, mb4.6**/64**, MS3.2**/13**, 4C-5D, Panama-Colombia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAPC	Capurgana	0.34	325	⇓iP	Pn	13 12 03.5	+1.5
CAPC				eS	Sn	13 12 10.6	+2.7
CAPC				i		13 12 10.8	
	comp=Z,38μm,0.2s						
CAP2	Capurgana	0.36	325	Pn	Pn	13 12 03.1	+0.9
CAP2				Sn	Sn	13 12 09.4	+1.1
UPD2	Meteti	0.87	283	⇑iP	Pb	13 12 10.4	+0.6
UPD2				eS	Sb	13 12 22.9	+1.9
LCBC	Los crdobas,	0.93	57	⇓iP	Pb	13 12 12.3	+1.7
LCBC				eS	Sb	13 12 25.0	+2.5
LCBC				i		13 12 34.3	
	comp=Z,3μm,0.2s						
PTAC	Punta Ardita,	1.36	208	⇓ePg	Pn	13 12 16.1	+0.1
PTAC				eP	Pb	13 12 17.5	-0.5
PTAC				eS	Sn	13 12 33.8	+0.7
PTAC				i		13 12 35.7	
	comp=Z,2μm,0.3s						
MOTC	Monteria, Cord	1.53	74	⇓iP	Pn	13 12 19.5	+1.1
MOTC				eS	Sn	13 12 38.2	+0.9
MOTC				i		13 12 41.2	
	comp=Z,2μm,0.5s						
MOTC	Monteria, Cord	1.53	74	Pn	Pn	13 12 19.4	+1.0
DBBC	Dabeiba	1.62	145	eP	Pn	13 12 20.4	+0.7
DBBC				eS	Sb	13 12 45.3	+2.7
UREC	San Jos de Ur	1.71	110	eP	Pn	13 12 21.8	+0.9
UREC				eS	Sn	13 12 42.1	+0.3
UREC				i		13 12 43.9	
	comp=Z,2μm,0.3s						
CHPO	Chepo, Panama	2.10	293	eP	Pn	13 12 27.9	+1.7
CHPO				eS	Sn	13 12 53.5	+2.2
SOLC	Bahia Solano	2.13	187	eP	Pn	13 12 28.1	+1.5
SOLC				eS	Sn	13 12 53.1	+1.1
SOLC				i		13 13 14.7	
	comp=Z,609nm,0.5s						
TABO3	Taboga, Panama	2.41	281	eP	Pn	13 12 32.6	+2.1
FLAM	Flamenco Islan	2.42	283	eP	Pn	13 12 33.2	+2.6
FLAM				eS	Sn	13 13 01.2	+2.0
ZARC	Zaragoza, Cauc	2.43	110	⇑eP	Pn	13 12 31.9	+1.1
ZARC				eS	Sn	13 12 59.2	-0.3
ZARC				i		13 13 01.6	
	comp=Z,3μm,0.4s						
ZARC	Zaragoza, Cauc	2.43	110		Pn	13 12 31.7	+0.9
CORZ	Corozal	2.47	285	eP	Pn	13 12 32.7	+1.4
SJCC	San Jacinto, C	2.48	52	eP	Pn	13 12 32.6	+1.1
SJCC				eS	Sn	13 13 01.5	+0.7
SJCC				i		13 13 04.0	
	comp=Z,406nm,0.6s						
SJCC	San Jacinto, C	2.48	52		Pn	13 12 31.8	+0.3
MFS3	Miraflores	2.50	285	eP	Pb	13 12 35.0	-2.2
MFS3				eS	Sn	13 13 04.2	+3.1
ARRA3	Arraijan, Pana	2.55	284	eP	Pn	13 12 34.8	+2.4
ARRA3				eS	Sb	13 13 06.6	-2.5
MAD3	Madden Dam	2.58	290	eP	Pn	13 12 35.4	+2.7

MAD3				eS	Sn	13 13 04.7	+1.5
CHOR3	La Chorrera	2.64	282	eP	Pn	13 12 35.6	+2.1
CHOR3				eS	Sn	13 13 05.4	+0.8
HELC	Santa Helena	2.69	143	⇑iP	Pn	13 12 35.6	+1.1
HELC				ePg	Pb	13 12 40.8	0.0
HELC				eS	Sn	13 13 07.2	+0.9
HELC				i		13 13 21.2	
	comp=Z,303nm,0.4s						
CBOC	Ciudad Bolivar	2.72	155	eP	Pn	13 12 37.1	+2.2
CBOC				eS	Sn	13 13 08.6	+1.8
CBOC				i		13 13 21.3	
	comp=Z,603nm,0.8s						
ZANG	Zanguenga, Cho	2.75	283	eP	Pn	13 12 36.4	+1.3
ZANG				eS	Sb	13 13 11.7	-3.1
BCIP	Isla Barro Col	2.77	287	eP	Pn	13 12 36.7	+1.3
BCIP				eS	Sn	13 13 09.2	+1.3
BCIP				i		13 13 15.9	
	comp=Z,588nm,0.5s						
BCIP	Isla Barro Col	2.77	287	Pn	Pn	13 12 36.5	+1.1
BCIP	Isla Barro Col	2.77	287	eP	Pn	13 12 37.0	+1.5
BCIP				eS	Sn	13 13 09.2	+1.3
MLIR	Monte Lirio	2.81	289	eP	Pn	13 12 37.5	+1.6
SMLC	San Martn de	3.08	81	eP	Pn	13 12 41.0	+1.3
SMLC				eS	Sn	13 13 15.5	-0.1
SMLC				i		13 13 18.6	
	comp=Z,666nm,0.3s						
AZU	Azuero	3.14	260	eP	Pn	13 12 41.7	+1.2
PNME	Penonome	3.14	273	eP	Pn	13 12 42.8	+2.3
PNME				eS	Sn	13 13 18.0	+0.9
ARGC	Ariguani, Magd	3.24	62	eP	Pn	13 12 42.6	+0.7
ARGC				eS	Sn	13 13 20.0	+0.6
ARGC				i		13 13 23.5	
	comp=Z,209nm,0.3s						
CHIT3	Chitre	3.25	263	eP	Pn	13 12 43.3	+1.3
CHIT3				eS	Sn	13 13 17.7	-2.1
PIZC	Pizarro, Choco	3.37	183	eP	Pn	13 12 45.7	+2.0
PIZC				eS	Sn	13 13 24.0	+1.2
PLMC	San Jos del P	3.53	166	eP	Pn	13 12 46.0	0.0
PLMC				eS	Sn	13 13 25.3	-1.5
PLMC				i		13 13 34.1	
	comp=Z,213nm,0.5s						
GUY2C	Guyana, Caldas	3.58	150	eP	Pn	13 12 50.0	+3.0
GUY2C				ePg	Pb	13 12 55.5	-0.5
GUY2C				eS	Sn	13 13 29.5	+1.0
GUY2C				i		13 13 38.8	
	comp=Z,327nm,0.5s						
NORC	Norcasia	3.58	141	eP	Pn	13 12 48.5	+1.9
NORC				eS	Sn	13 13 29.4	+1.4
NORC				i		13 13 49.2	
	comp=Z,196nm,0.6s						
BRRC	Barranca, Sant	3.63	110	⇑eP	Pn	13 12 49.0	+1.8
BRRC				eS	Sn	13 13 29.2	+0.1
BRRC				i		13 13 37.3	
	comp=Z,921nm,0.5s						
CALO3	Calobre, Verag	3.65	270	eP	Pn	13 12 50.4	+2.9
CALO3				eS	Sn	13 13 32.3	+2.8
LL5C	La Loma 5 El P	3.66	67	eS	Sn	13 13 31.5	+1.6
LL1C	La Loma 1 Cana	3.75	71	eP	Pn	13 12 51.8	+3.0
LL1C				eS	Sn	13 13 32.5	+0.5
LL1C				i		13 13 46.9	
	comp=Z,1µm,0.5s						
STIA3	Santiago, Vera	3.79	266	eP	Pb	13 12 55.8	-3.5
OCAC	Ocana	3.80	91	eP	Pn	13 12 51.1	+1.4
OCAC				eS	Sn	13 13 33.5	+0.1
OCAC	Ocana	3.80	91		Pn	13 12 50.7	+1.0
CACAO	El Cacao, Vera	3.81	255	eP	Pn	13 12 50.8	+1.1
CACAO				eS	Sb	13 13 40.7	-4.6
MARI3	Mariato, Verag	3.86	260	eP	Pn	13 12 46.2	-4.3
SMRC	Santa Marta, M	4.02	46	eP	Pn	13 12 54.0	+1.4
SMRC				eS	Sn	13 13 37.3	-1.3
SPBC	San Pablo de B	4.07	131	eP	Pn	13 12 54.0	+0.6
SPBC				eS	Sn	13 13 41.4	+1.3
SPBC				i		13 14 11.8	
	comp=Z,136nm,0.5s						
LL6C	La Loma 6 Bece	4.07	70	eP	Pn	13 12 55.0	+1.6
LL6C				eS	Sn	13 13 40.0	-0.1
GMAL	Guarumal, Vera	4.08	262	eP	Pn	13 12 54.5	+1.0
ANIL	Santa Ana	4.21	155	eP	Pn	13 13 00.1	+4.6
ANIL				eS	Sn	13 13 49.9	+6.0
ANIL				i		13 13 59.5	
	comp=Z,185nm,0.4s						
BARC	Barichara	4.31	114	eP	Pn	13 12 58.5	+1.7
BARC				eS	Sn	13 13 45.9	-0.4
BARC				i		13 13 50.1	
	comp=Z,874nm,0.3s						
CVALL	Valledupar, Ce	4.40	61	eP	Pn	13 12 58.7	+0.9
CVALL				eS	Sn	13 13 46.0	-2.1
CVALL				i		13 13 51.4	
	comp=Z,237nm,0.4s						
YOTC	Yotoco, Valle	4.41	169	eP	Pn	13 12 58.8	+0.6
YOTC				eS	Sn	13 13 45.8	-2.8
YOTC				i		13 13 49.8	
	comp=Z,160nm,0.5s						
ROSC	El Rosal	4.48	141	P	Pn	13 13 01.9	+2.5
	comp=Z,4.3nm,0.3s,baz=162,slow=13,SNR=4.5						
ROSC				S	Sn	13 13 53.0	+2.3
	comp=Z,12nm,0.3s,baz=195,slow=23,SNR=5.6						
ROSC				LR	LR	13 14 58.1	
	comp=Z,756nm,21.0s,baz=246,slow=41						
ROSC	El Rosal	4.48	141	eP	Pn	13 13 02.7	+3.3
ROSC				eS	Sn	13 13 56.0	+5.2
ROSC				i		13 14 23.5	
	comp=Z,160nm,0.6s						
ROSC	El Rosal	4.48	141	Pn	Pn	13 13 01.5	+2.1
PAMC	Pamplona, Colo	4.53	103	eP	Pn	13 13 02.2	+2.2
PAMC				eS	Sn	13 13 52.5	+0.6
PAMC				i		13 13 57.9	
	comp=Z,595nm,0.4s						
RUSC	La Rusia	4.72	121	eP	Pn	13 13 03.9	+1.2
RUSC				eS	Sn	13 13 56.7	0.0
ORTC	Ortega, Tolima	4.80	157	eP	Pn	13 13 08.1	+4.7
ORTC				eS	Sn	13 13 59.5	+1.3
ORTC				i		13 14 42.4	
	comp=Z,67nm,0.5s						
CHIC	Chingaza	5.02	137	eP	Pn	13 13 09.2	+2.4
CHIC				eS	Sn	13 14 05.6	+1.5
CHIC				i		13 14 17.9	
	comp=Z,103nm,0.5s						
PRAC	Prado	5.13	154	eP	Pn	13 13 11.8	+3.9
PRAC				eS	Sb	13 14 17.8	-5.6
PRAC				i		13 14 46.8	
	comp=Z,70nm,0.6s						
VILC	Villavicencio,	5.44	141	eP	Pn	13 13 14.8	+2.5
MARP	Paez Belalcaza	5.60	168	eP	Pn	13 13 18.9	+4.3
MARP				eS	Sn	13 14 19.1	+0.9
TAMC	Tame, Arauca	5.65	109	eP	Pn	13 13 16.3	+1.3
TAMC				eS	Sn	13 14 20.2	+1.2
TAMC				i		13 14 24.2	
	comp=Z,150nm,0.3s						
BETC	Betania	5.89	163	eP	Pn	13 13 19.7	+1.3
BETC				eS	Sn	13 14 27.3	+2.4
BETC				i		13 14 36.5	
	comp=Z,62nm,0.7s						
PCON	Cinco Dias	6.03	173	eP	Pn	13 13 25.2	+4.4
PCON				eS	Sn	13 14 31.3	+2.1
PCON				i		13 14 47.6	
	comp=Z,51nm,0.7s						
URIC	Uribia, Colomb	6.08	56	eP	Pn	13 13 24.4	+3.5
URIC				eS	Sn	13 14 23.2	-6.2
URIC				i		13 14 35.5	
URIC	Uribia, Colomb	6.08	56		Pn	13 13 21.2	+0.3
SRBA	San Rafael, Bu	6.20	279		Pn	13 13 24.4	+1.7
SOTA	Rioblanco	6.20	175	eP	Pn	13 13 27.9	+4.8
SOTA				eS	Sn	13 14 38.6	+5.4
SOTA				i		13 14 44.9	
	comp=Z,64nm,0.7s						
RIOS	Rincon, Osa	6.30	274		Pn	13 13 26.6	+2.6
SDV	Santo Domingo	6.47	85	P	Pn	13 13 28.4	+1.9
	comp=Z,16nm,0.3s,baz=269,slow=8.9,SNR=6.3						
SDV				S	Sn	13 14 38.5	-1.0
	comp=Z,62nm,0.3s,baz=105,slow=20,SNR=15						
SDV	Santo Domingo	6.47	85	eP	Pn	13 13 28.5	+2.1
SDV				eS	Sn	13 14 38.4	-1.1
SDV				i		13 14 43.6	
	comp=Z,201nm,0.4s						
SDV	Santo Domingo	6.47	85	Pn	Pn	13 13 27.5	+1.1
PRVC	Isla de Provid	6.48	321	Pn	Pn	13 13 26.6	+0.1
PEZE	Perez Zeledon,	6.53	280		Pn	13 13 27.7	+0.5
TUMC	Tumaco	6.67	194	Pn	Pn	13 13 32.4	+3.3
RIMA	Rio Macho	6.77	282	Pn	Pn	13 13 32.4	+1.8
MACC	Macarena, Meta	6.99	152	eP	Pn	13 13 35.9	+2.4
COVE	Coope Vega, Sa	7.53	289		Pn	13 13 42.3	+1.5
ELOV	Elorza	7.72	99	eP	Pn	13 13 43.4	-0.1
ELOV				eS	Sn	13 15 06.7	-3.3
JTS	Las Juntas de	7.93	285	P	Pn	13 13 48.3	+1.9
	comp=Z,2.1nm,0.3s,baz=148,slow=5.1,SNR=13						
JTS				S	Sn	13 15 19.2	+3.9
	baz=24,slow=22,SNR=1.2						
JTS				LR	LR	13 17 00.9	
	comp=Z,214nm,19.6s,baz=182,slow=38						
ESPN	Las Esperanzas	8.00	299		Pn	13 13 48.8	+1.5
OTAV	Otavalo	8.16	189	⇓iP	Pn	13 13 52.8	+2.8
OTAV	Otavalo	8.16	189	Pn	Pn	13 13 52.2	+2.2
ORTG	Ortega, Santa	8.44	284	Pn	Pn	13 13 56.3	+2.9
HZTE	Horizontes, Gu	8.65	286		Pn	13 13 58.2	+1.9
ACON	Acoyapa	8.67	295		Pn	13 13 58.8	+2.2
HATO	Hato, Curacao	8.92	64	Pn	Pn	13 13 59.7	-0.2
BOAB	BOACO BROADBAN	9.31	297	Pn	Pn	13 14 06.8	+1.6
MCJ	Malvern	9.53	357	i P	Pn	13 14 10.0	+1.6
MCJ				i S	Sn	13 15 52.8	-1.7
GWJ	Greenwich	9.67	2	i P	Pn	13 14 13.1	+2.7
STH	Stony Hill	9.67	2	i P	Pn	13 14 12.5	+2.2
MTDJ	Mount Denham	9.82	358	Pn	Pn	13 14 13.5	+1.1
CNGN	Cerro Negro	10.25	295		Pn	13 14 19.9	+1.7
JAKH	Jacmel	10.81	24	Pn	Pn	13 14 26.2	+0.3
LGNH	Logne	11.02	23	Pn	Pn	13 14 28.8	+0.1
TGUH	Tegucigalpa,Un	11.43	301	Pn	Pn	13 14 36.2	+1.7
FSCY	Frank Sound, G	11.57	341	Pn	Pn	13 14 34.7	-1.6
GTBY	Guantanamo Bay	11.68	10	Pn	Pn	13 14 38.8	+1.1
SDDR	Presa de Saban	12.00	28		Pn	13 14 44.2	+2.0
PCRV	Puerto La Cruz	12.49	81	P	Pn	13 14 47.8	-1.1
	comp=Z,1.8nm,0.3s,baz=262,slow=5.9,SNR=2.5						
PCRV				S	Sn	13 17 01.4	-5.7
	comp=Z,1.2nm,0.3s,baz=106,slow=13,SNR=1.9						
PLCV	Puerto La Cruz	12.53	81		Pn	13 14 47.8	-1.7
DR12	Loma Pena Alta	12.83	35	Pn	Pn	13 14 52.2	-1.3
MLPR	Magueyes Islan	13.71	45	Pn	Pn	13 15 04.1	-1.5
CELP	Cerrillos	14.11	46	Pn	Pn	13 15 08.3	-2.7
SJG	San Juan	14.44	47	Pn	Pn	13 15 13.2	-2.4
GCPR	Guaynabo City	14.62	46	Pn	Pn	13 15 15.6	-2.3
HUMP	Col San Antoni	14.68	47	Pn	Pn	13 15 14.9	-3.8
CBYP	Canovanas	14.76	47	Pn	Pn	13 15 16.2	-3.6
MTP	Monte Pirata	14.87	48	Pn	Pn	13 15 17.3	-4.0
CUPR	Culebra, Puert	15.20	48	Pn	Pn	13 15 21.3	-4.4
ATAH	Atahualpa	15.44	185	P	P	13 15 31.7	-1.7
	comp=Z,0.3nm,0.3s,baz=58,slow=9.5,SNR=3.6						
STVI	Saint Thomas	15.47	49	Pn	Pn	13 15 26.4	-2.8
STVI				IAmb	IAmb	13 15 52.3	
	comp=Z,36nm,1.1s						
BOAV	Boa Vista	17.58	109	Pn	Pn	13 15 54.3	-1.7
060A	Indiantown	18.83	351	P	P	13 16 09.0	-1.5
CMIG	Matias Romero	19.34	298	LR	LR	13 23 18.2	
	comp=Z,66nm,20.2s,baz=120,slow=35						
PTGA	Pitinga	19.36	117	P	Pn	13 16 18.0	+0.3
	comp=Z,0.3nm,0.3s,baz=336,slow=23,SNR=1.9						
PTGA				S	S	13 19 38.6	-15
	comp=Z,0.2nm,0.3s,baz=271,slow=22,SNR=2.3						
PTGA				LR	LR	13 24 22.4	
	comp=Z,131nm,18.9s,baz=40,slow=39						
NNA	Nana	20.21	179	LR	LR	13 27 04.7	
	comp=Z,34nm,20.1s,baz=346,slow=45						
SAML	Samuel	22.12	141	P	P	13 16 46.5	+0.2
MDP	Montagnes des	24.55	96	LR	LR	13 27 39.8	
	comp=Z,100nm,18.0s,baz=297,slow=38						
LPAZ	La Paz	26.06	160	P	P	13 17 26.0	+1.3
	comp=Z,0.6nm,0.5s,baz=326,slow=7.3,SNR=2.5						
LPAZ	La Paz	26.06	160	P	P	13 17 24.3	-0.5
TKL	Tuckaleechee C	27.84	348	LR	LR	13 27 30.9	
	comp=Z,64nm,20.4s,baz=170,slow=34						
SIV	San Ignacio	28.96	147	LR	LR	13 30 31.7	
	comp=Z,60nm,18.6s,baz=91,slow=38						
LCAR	Lake Charles	30.40	337	P	P	13 18 03.5	+0.8
PBMO	Poplar Bluff	30.77	339	P	P	13 18 06.1	+0.2
PBMO				IAmb	IAmb	13 18 07.3	
	comp=Z,16nm,1.2s						
X37A	Clayton	31.02	330	P	P	13 18 08.5	+0.4
X37A				IAmb	IAmb	13 18 24.4	
	comp=Z,20nm,1.5s						
T42A	Van Buren	31.23	338	P	P	13 18 10.3	+0.4
U40A	Yellville	31.33	335	P	P	13 18 11.3	+0.5
U40A				IAmb	IAmb	13 18 12.3	
	comp=Z,9.9nm,0.9s						
LVC	Limon Verde	31.81	165	LR	LR	13 32 10.5	
	comp=Z,71nm,18.3s,baz=334,slow=38						
FVM	French Village	31.85	340	P	P	13 18 15.6	+0.2
FVM				IAmb	IAmb	13 18 17.0	
	comp=Z,6.8nm,0.8s						
CCM	Cathedral Cave	32.20	339	P	P	13 18 18.3	-0.1
CCM				IAmb	IAmb	13 18 19.5	
	comp=Z,8.4nm,0.7s						
Q44A	Meyer Farm, Va	32.23	342	P	P	13 18 18.4	-0.4
Q44A				IAmb	IAmb	13 18 45.9	
	comp=Z,8.4nm,0.9s						
TUL1	Leonard	32.28	331	P	P	13 18 18.9	-0.3
TUL1				IAmb	IAmb	13 18 20.2	
	comp=Z,7.2nm,0.7s						
TXAR	Lajitas Array	32.49	313	P	P	13 18 21.0	-0.2
	comp=Z,1.3nm,0.9s,baz=134,slow=9.6,SNR=9.4						
TXAR	Lajitas Array	32.49	313	P	P	13 18 21.4	+0.1
TX31	Lajitas Ar. Si	32.49	313	P	P	13 18 21.7	+0.4
TX31				IAmb	IAmb	13 18 26.3	
	comp=Z,17nm,1.3s						
TX32	Lajitas Array	32.49	313	P	P	13 18 21.8	+0.6
FNO	Franklin	32.57	328	P	P	13 18 22.0	+0.2
S39A	Bolivar	32.67	336	P	P	13 18 21.4	-1.2
S39A				IAmb	IAmb	13 18 23.6	
	comp=Z,12nm,1.2s						
OK029	Liberty Lake	33.02	329	P	P	13 18 25.7	0.0
T35A	Sooner Cattle	33.43	331	P	P	13 18 29.0	-0.3
T35A				IAmb	IAmb	13 18 30.3	
	comp=Z,8.6nm,0.8s						
P40A	Paris	33.79	339	P	P	13 18 31.6	-0.8
P40A				IAmb	IAmb	13 18 56.6	
	comp=Z,9.5nm,1.5s						
CROK	Carrier	33.83	329	P	P	13 18 33.2	+0.4
MEDO	Medina	34.69	358	P	P	13 18 39.6	-0.6
I45A	Fountain	36.42	349	P	P	13 18 53.5	-1.4
CBKS	Cedar Bluff	36.50	330	P	P	13 18 55.9	+0.1
CBKS				IAmb	IAmb	13 18 56.9	
	comp=Z,7.2nm,0.6s						
PLVO	Plevna	36.55	0	P	P	13 18 57.1	+1.0
PLVO				IAmb	IAmb	13 19 21.9	
	comp=Z,12nm,1.2s						
AC04	Llanos de Chal	36.81	171	P	P	13 18 59.7	+1.3
PKME	Peaks-Kenny Pk	37.40	9	P	P	13 19 02.6	-0.6
ANMO	Albuquerque	37.70	319	P	P	13 19 07.0	+0.7
ANMO				IAmb	IAmb	13 19 09.3	
	comp=Z,4.7nm,0.8s						
E62A	Clayton Lake	38.69	8	P	P	13 19 15.9	+1.8
E62A				IAmb	IAmb	13 19 27.4	
	comp=Z,13nm,1.0s						
SDCO	Great Sand Dun	38.89	323	P	P	13 19 19.1	+2.8
SDCO				IAmb	IAmb	13 19 35.4	
	comp=Z,13nm,1.1s						
ECSD	EROS Data Cent	39.13	338	P	P	13 19 17.0	-0.9
D62A	Allapoint, All	39.21	9	P	P	13 19 19.1	+0.7
D62A				IAmb	IAmb	13 19 25.1	
	comp=Z,8.0nm,1.1s						
CPUP	Villa Florida	39.49	151	LR	LR	13 35 46.9	
	comp=Z,33nm,19.2s,baz=4.0,slow=36						
BATG	Bathurst New B	39.92	12	P	P	13 19 26.1	+1.6
ISCO	Idaho Springs	40.34	325	P	P	13 19 29.4	+1.0
SMCO	Snowmass	40.70	324	P	P	13 19 33.4	+1.9
EYMN	Ely	41.29	345	P	P	13 19 35.1	-0.6
EYMN				IAmb	IAmb	13 20 02.4	
	comp=Z,16nm,1.3s						
WUAZ	Wupatki	41.33	316	P	P	13 19 37.5	+1.1
B35A	Bob, Littlefor	42.26	344	P	P	13 19 43.5	-0.1
U15A	North Rim	42.44	317	P	P	13 19 47.1	+1.4
P18A	Preston Nutter	42.95	322	P	P	13 19 50.6	+0.8
MTPU	Mount Pierson	43.25	319	P	P	13 19 53.8	+1.5
BW06	Boulder Array	44.53	326	P	P	13 20 02.4	0.0
PD31	Pinedale Array	44.53	326	P	P	13 20 02.4	0.0
PDAR	Pinedale Array	44.53	326	P	P	13 20 03.0	+0.6
	comp=Z,1.2nm,0.6s,baz=124,slow=9.9,SNR=15						
PDAR				LR	LR	13 42 44.0	
	comp=Z,17nm,18.6s,baz=148,slow=42						
PDAR	Pinedale Array	44.53	326	P	P	13 20 02.3	0.0
ULM	Lac du Bonnet	44.58	343	LR	LR	13 38 28.2	
	comp=Z,53nm,19.6s,baz=91,slow=36						
BGU	Big Grassy Mou	45.43	321	P	P	13 20 09.5	0.0
BGU				IAmb	IAmb	13 20 37.5	
	comp=Z,10nm,1.4s						
REDW	Red Top Meadow	45.64	326	P	P	13 20 11.7	+0.5
REDW				IAmb	IAmb	13 20 28.5	
	comp=Z,9.9nm,1.0s						
LOHW	Long Hollow	45.66	326	P	P	13 20 12.1	+0.8
TPAW	Teton Pass	45.78	326	P	P	13 20 12.8	+0.5
MOOW	Moose Ponds	45.83	326	P	P	13 20 12.4	-0.2
FXWY	Fox Creek	45.91	326	P	P	13 20 14.1	+0.8
RLMT	Red Lodge	45.95	328	P	P	13 20 14.3	+0.7
RLMT				IAmb	IAmb	13 20 41.7	
	comp=Z,6.5nm,1.2s						
DGMT	Dagmar	46.03	335	P	P	13 20 14.2	+0.3
DGMT				IAmb	IAmb	13 20 25.0	
	comp=Z,14nm,1.1s						
YMR	Madison River	46.55	327	P	P	13 20 19.7	+1.5
YHH	Holmes Hill	46.56	327	P	P	13 20 19.9	+1.4
GCMT	Greycliff	46.61	329	P	P	13 20 19.7	+1.1
YHL	Hebgen Lake	46.78	327	P	P	13 20 21.1	+0.8
YHL				IAmb	IAmb	13 20 39.1	
	comp=Z,9.4nm,1.2s						
SCHQ	Schefferville	47.08	8	P	P	13 20 22.7	+0.7
	comp=Z,3.2nm,0.6s,baz=205,slow=5.9,SNR=5.2						
SCHQ				LR	LR	13 41 02.5	
	comp=Z,22nm,19.1s,baz=114,slow=37						
SCHQ	Schefferville	47.08	8	P	P	13 20 22.9	+0.9
SCHQ				pP	sP	13 20 33.7	-1.0
VA02	Isla de Pascua	47.17	220	P	P	13 20 24.2	+1.1
BOZ	Bozeman (W)	47.51	327	P	P	13 20 26.3	+0.6
BOZ				IAmb	IAmb	13 20 43.2	
	comp=Z,7.0nm,1.2s						
NVAR	Mina Array Bea	47.58	316	LR	LR	13 44 34.1	
	comp=Z,17nm,19.0s,baz=250,slow=41						
BCYI	Bear Canyon	47.67	325	P	P	13 20 27.3	+0.2
LRM	Limekiln Ridge	48.09	327	P	P	13 20 30.6	+0.2
YBH	Yreka Blue Hor	52.10	317	P	P	13 20 59.6	-1.0
YBH				IAmb	IAmb	13 21 05.5	
	comp=Z,13nm,1.4s						
HUMO	Hull Mountain	52.65	318	P	P	13 21 04.9	+0.3
HUMO				IAmb	IAmb	13 21 33.5	
	comp=Z,13nm,1.4s						
KRMB	Red Mountain	52.81	317	P	P	13 21 06.1	+0.1
H04A	Detroit Lake	53.13	321	P	P	13 21 08.9	+0.8
B08A	Colville Reser	53.37	326	P	P	13 21 10.0	+0.2
B08A				IAmb	IAmb	13 21 26.7	
	comp=Z,5.7nm,0.9s						
YKA	Yellowknife Ar	60.49	341	P	P	13 21 59.2	-0.7
	comp=Z,2.8nm,0.7s,baz=200,slow=2.4,SNR=10						
YKA				LR	LR	13 48 47.7	
	comp=Z,15nm,18.5s,baz=0.0,slow=37						
YKA	Yellowknife Ar	60.49	341	P	P	13 21 58.8	-1.1
SFJD	Kangerlussuaq	61.27	12	P	P	13 22 03.6	-1.5
DLBC	Dease Lake	64.09	332	P	P	13 22 25.2	+0.9
SUMG	Summit	68.27	12	i P	P	13 22 51.0	-0.2
SUMG	Summit	68.27	12	P	P	13 22 51.4	+0.3
SUMG				IAmb	IAmb	13 23 10.2	
	comp=Z,6.5nm,1.1s						
A36M	Sachs Harbour	69.95	346	P	P	13 22 59.8	-1.3
INK	Inuvik	70.26	341	P	P	13 23 02.1	-1.0
EPYK	Eagle Plains	70.48	338	P	P	13 23 04.3	-0.2
EPYK				IAmb	IAmb	13 23 04.8	
	comp=Z,7.8nm,1.2s						
BARN	Barnard Glacie	70.53	332	P	P	13 23 06.4	+1.3
BARN				IAmb	IAmb	13 23 28.4	
	comp=Z,14nm,1.4s						
DAWY	Dawson	70.59	336	P	P	13 23 05.1	-0.2
SCO	Scoresbysund	70.99	17	eP	P	13 23 04.9	-2.6
M27K	Edge Creek, AK	71.05	334	P	P	13 23 09.1	+0.8
M27K				IAmb	IAmb	13 23 10.6	
	comp=Z,5.0nm,0.9s						
BCAR	Beaver Creek A	71.24	334	P	P	13 23 10.0	+0.7
ESDC	Sonseca Array	71.78	51	P	P	13 23 13.5	+0.5
	comp=Z,1.1nm,0.8s,baz=271,slow=6.4,SNR=8.2						
EUNU	Eureka	71.83	358	P	P	13 23 13.8	+1.3
L26K	Log Cabin Wild	71.91	334	P	P	13 23 14.9	+1.7
L26K				IAmb	IAmb	13 23 16.3	
	comp=Z,11nm,1.5s						
N25K	Chitina, Valde	72.05	332	P	P	13 23 15.0	+0.8
DOT	Dot Lake	72.40	334	P	P	13 23 16.6	+0.5
SCRK	Sand Creek	72.47	335	P	P	13 23 17.2	+0.5
SCRK				IAmb	IAmb	13 23 18.9	
	comp=Z,4.0nm,0.9s						
KLU	Klutina	72.63	332	P	P	13 23 18.7	+1.1
KLU				IAmb	IAmb	13 23 18.8	
	comp=Z,10nm,1.2s						
RIDG	Independent Ri	72.76	334	P	P	13 23 19.0	+0.6
M24K	Tolsona, Glenn	72.90	333	P	P	13 23 20.1	+0.8
SCM	Sheep Creek Mo	73.36	332	P	P	13 23 23.3	+1.3
PRP	Porcupine Dome	73.55	336	P	P	13 23 23.1	0.0
PRP				IAmb	IAmb	13 23 23.7	
	comp=Z,3.4nm,0.8s						
DHY	Denali Highway	73.69	333	P	P	13 23 24.5	+0.5
DHY				IAmb	IAmb	13 23 30.6	
	comp=Z,6.9nm,1.2s						
BMAR	Burnt Mountain	73.75	338	P	P	13 23 24.3	+0.2
KNK	Knik Glacier	73.80	332	P	P	13 23 24.4	0.0
HDA	Harding Lake	73.83	335	P	P	13 23 24.4	-0.2
HDA				IAmb	IAmb	13 23 25.3	
	comp=Z,8.3nm,0.8s						
IL31		73.90	335	P	P	13 23 24.9	0.0
IL31				IAmb	IAmb	13 23 25.5	
	comp=Z,4.0nm,0.8s						
ILAR	Eielson Array	73.90	335	P	P	13 23 24.6	-0.4
	comp=Z,2.8nm,0.8s,baz=113,slow=4.8,SNR=33						
ILAR	Eielson Array	73.90	335	P	P	13 23 24.8	-0.2
GHO	Glory Hole Cre	74.09	332	P	P	13 23 26.3	0.0
GHO				IAmb	IAmb	13 23 45.1	
	comp=Z,11nm,1.2s						
CCB	Clear Creek Bu	74.25	335	P	P	13 23 27.1	+0.1
COLA	College	74.33	335	P	P	13 23 26.6	-0.8
COLA				IAmb	IAmb	13 23 28.0	
	comp=Z,3.4nm,0.7s						
WRH	Wood River Hil	74.33	335	P	P	13 23 27.6	+0.1
WRH				IAmb	IAmb	13 23 28.6	
	comp=Z,6.1nm,1.3s						
TCOL	CIGO, UAF Yank	74.33	335	P	P	13 23 26.6	-0.8
TCOL				IAmb	IAmb	13 23 28.0	
	comp=Z,3.4nm,0.7s						
RND	Reindeer	74.41	334	P	P	13 23 29.0	+0.9
MDM	Murphy Dome	74.50	335	P	P	13 23 27.9	-0.6
MDM				IAmb	IAmb	13 23 37.4	
	comp=Z,6.9nm,1.4s						
H24K	Noodor Dome	74.58	336	P	P	13 23 29.1	+0.2
I23K	Minto, Yukon-K	75.01	335	P	P	13 23 31.6	+0.2
I23K				IAmb	IAmb	13 23 55.8	
	comp=Z,7.3nm,1.2s						
TRF	Thorofare Moun	75.05	334	P	P	13 23 32.1	+0.2
TRF				IAmb	IAmb	13 23 47.9	
	comp=Z,13nm,1.4s						
KTH	Kantishna Hill	75.35	334	P	P	13 23 33.3	-0.2
KTH				IAmb	IAmb	13 23 57.1	
	comp=Z,9.5nm,1.4s						
BPAW	Bear Paw Mtn.	75.48	334	P	P	13 23 34.0	-0.2
BPAW				IAmb	IAmb	13 23 34.9	
	comp=Z,8.6nm,0.8s						
MLY	Manley	75.56	335	P	P	13 23 34.2	-0.4
MLY				IAmb	IAmb	13 23 35.4	
	comp=Z,5.2nm,0.9s						
PPLA	Purkeypile	75.80	333	P	P	13 23 35.8	-0.3
COLD	Coldfoot	75.80	337	P	P	13 23 36.4	+0.5
COLD				IAmb	IAmb	13 23 38.3	
	comp=Z,8.5nm,1.5s						
CAST	Castle Rocks	75.84	333	P	P	13 23 35.8	-0.5
CAST				IAmb	IAmb	13 23 57.0	
	comp=Z,5.3nm,1.2s						
TOLK	Toolik Lake Re	75.89	339	P	P	13 23 35.5	-1.0
TOLK				IAmb	IAmb	13 23 36.6	
	comp=Z,13nm,1.5s						
Q19K	Cape Douglas,	75.92	329	P	P	13 23 35.2	-1.5
H21K	Melozitna Rive	76.53	336	P	P	13 23 39.8	-0.3
J20K	Nowinta River	76.86	334	P	P	13 23 41.8	-0.2
J20K				IAmb	IAmb	13 23 42.5	
	comp=Z,4.8nm,0.7s						
IMAR	Indian Mountai	76.96	336	P	P	13 23 42.3	-0.2
SVW2	Sparrevohn	77.14	331	P	P	13 23 43.1	-0.6
SVW2				IAmb	IAmb	13 24 07.8	
	comp=Z,4.2nm,1.1s						
TORD	Torodi Ar. Bea	77.35	78	P	P	13 23 45.4	-0.3
	comp=Z,0.4nm,0.5s,baz=288,slow=6.2,SNR=2.8						
NOR	Nord	77.62	8	eP	P	13 24 00.4	+14
KBS	Kingsbay	81.69	11	eP	P	13 24 21.4	+13
NOA	NORSAR Array B	81.97	29	P	P	13 24 09.9	0.0
	comp=Z,2.6nm,0.9s,baz=274,slow=5.3,SNR=4.3						
VRAC	Vranov	86.17	41	LR	LR	13 56 11.9	
	comp=Z,32nm,20.7s,baz=282,slow=31						
ARCES	ARCESS Array B	86.63	20	P	P	13 24 33.5	+0.1
	comp=Z,2.0nm,0.4s,baz=274,slow=4.0,SNR=26						
FINES	FINESS Array B	88.98	28	P	P	13 24 45.3	+0.6
	comp=Z,2.8nm,0.9s,baz=170,slow=1.2,SNR=1.9						

FINES				LR	LR	13 59 58.7	
	comp=Z,22nm,21.9s,baz=220,slow=32						
ASAR	**Alice Springs**	**146.60**	**239**	PKPbc	**PKPdf**	**13 31 31.4**	**+0.4**
	comp=Z,1.2nm,0.5s,baz=120,slow=3.7,SNR=23						
WRA	**Warramunga Arr**	**147.43**	**246**	PKPbc	**PKPbc**	**13 31 34.3**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=107,slow=3.0,SNR=9.1						
CMAR	**Chiang Mai Arr**	**153.08**	**8**	PKPbc	**PKPbc**	**13 31 48.3**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=308,slow=2.2,SNR=2.0						
CMAR				PKPab	**pPKPbc**	**13 31 59.5**	**+0.7**
	comp=Z,1.6nm,0.6s,baz=332,slow=4.8,SNR=9.5						

NIED ***16*** *13:34:28.5, 31°.10N×128°.64E, h8^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-0.16; M$_{\theta\theta}$2.95; M$_{\phi\phi}$-2.79; M$_{r\theta}$0.67; M$_{\theta\phi}$3.96; M$_{\phi r}$-1.86; Fault plane solution: M$_0$5.26000×10^{14} NP1:ϕ_s20.00000°, δ78.00000°, λ-163.00000°. NP2:ϕ_s286.00000°, δ74.00000°, λ-12.00000°.*

JMA 16 13:34:28.4±0.3**, 31°.10N×128°.64E, h8^{km}**±3^{km}**, M3.8, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	**Shimokoshiki**	**1.09**	**58**	P	Pg	13 34 48.4	-0.9
JSJ				*e*S	Sg	13 35 02.8	-0.6
JKC	**Kuchinoerabu**	**1.48**	**115**	P	Pn	13 34 55.6	+0.2
JKC				*e*S	Sn	13 35 14.7	-0.2
JFU	**Fukue jima 2**	**1.55**	**3**	P	Pn	13 34 56.8	+0.4
JFU				*e*S	Sn	13 35 16.7	0.0
JSU	**Suzuyama**	**1.60**	**75**	P	Pn	13 34 57.3	+0.2
JSU				*e*S	Sn	13 35 18.3	+0.3
JNN	**Nakanoshima**	**1.65**	**139**	P	Pn	13 34 57.7	+0.1
JYAK	**Yakushimahirau**	**1.83**	**118**	P	Pn	13 34 58.6	-1.5
JTN	**Tanegashima 3**	**2.06**	**102**	P	Pn	13 35 02.9	-0.4
JMTN	**Minamitane**	**2.07**	**109**	P	Pn	13 35 03.6	+0.2
JTZ	**Takazaki**	**2.24**	**68**	P	Pn	13 35 06.1	+0.3
JIU3	**Izumi3**	**2.35**	**51**	P	Pn	13 35 08.2	+0.9
JIU3				*e*S	Sn	13 35 37.4	+1.1

IDC 16 13:41:33.6±2.9**, 30°.30S×177°.24W, h0^{km}, mb3.5**/2**, mb1 3.7**/2**, mb1mx3.2**/22**, mbtmp3.5**/2**, Error ellipse: s-maj=58.6km s-min=28.4km az=83.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.20**	**330**	Pn	Pn	13 41 57.9	+0.3
	136nm,0.3s,baz=97,slow=8.0,SNR=12						
RAO				Sn	Sn	13 42 14.9	+0.3
	364nm,0.3s,baz=135,slow=20,SNR=8.8						
RAO				LR	LR	13 42 33.5	
	comp=Z,266nm,18.3s,baz=316,slow=50						
ASAR	**Alice Springs**	**43.77**	**266**	P	P	13 49 40.9	-0.3
	0.3nm,0.7s,baz=105,slow=7.6,SNR=7.4						
WRA	**Warramunga Arr**	**44.75**	**272**	P	P	13 49 49.1	0.0
	0.5nm,0.5s,baz=110,slow=8.1,SNR=7.6						
FINES	**FINESS Array B**	**145.27**	**340**	PKPbc	PKPbc	14 01 11.3	-1.0
	1.5nm,0.8s,baz=96,slow=3.8,SNR=5.5						

IDC ***16*** *13:44:45.7±12.0, 37°.17N×72°.33E, h159^{km}±155^{km}, mb3.4/3, mb1 3.5/4, mb1mx3.0/41, mbtmp4.0/4, ML3.0/2, Error ellipse: s-maj=119.1km s-min=54.4km az=108.0*

NNC ***16*** *13:44:51.4±8.4, 37°.94N×71°.97E, h0^{km}, mb4.1, mpv3.5, Error ellipse: s-maj=64.8km s-min=46.7km az=167.0*

ISC 16 13:44:45.2±0.8**, 37°.32N**±0°.08×**72°.1E**±0°.1**, h130^{km}, n21,** σ**1ṣ70**/25**, mb3.7**/3**, 4C-4D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**5.63**	**19**	⇓P	**Pn**	**13 46 09.3**	**+2.4**
	4.2nm,0.6s						
AAK				⇑S	**Sn**	**13 47 09.5**	**-1.0**
	14nm,0.6s						
KK31	**Karatay Array**	**5.90**	**349**	⇑P	**Pn**	**13 46 12.4**	**+2.1**
	1.7nm,0.2s,baz=154,slow=15,SNR=52						
KK31				⇓S	**Sn**	**13 47 14.3**	**-2.4**
	22nm,0.3s,baz=158,slow=22,SNR=31						
MKAR	**Makanchi Array**	**12.13**	**35**	P	**Pn**	**13 47 33.2**	**-0.5**
	0.0nm,0.3s,baz=217,slow=10,SNR=1.5						
PYUN	**Piuthan**	**13.00**	**132**	*e*P	**Pn**	**13 47 45.3**	**0.0**
	21nm,0.4s						
DANN	**Dangsing**	**13.28**	**129**	*e*P	**Pn**	**13 47 49.3**	**+0.3**
	18nm,0.4s						
KOLN	**Koldanda**	**13.60**	**131**	*e*P	**Pn**	**13 47 52.9**	**-0.2**
GKN	**Gorkha**	**14.08**	**128**	*e*P	**Pn**	**13 47 59.2**	**+0.1**
	15nm,0.3s						
KKN	**Kakani**	**14.63**	**127**	*e*P	**Pn**	**13 48 06.0**	**-0.2**
	8.9nm,0.5s						
DMN	**Daman**	**14.65**	**128**	*e*P	**Pn**	**13 48 07.5**	**+1.1**
	10nm,0.4s						
AB31	**Akbulak array**	**14.82**	**327**	⇑P	**P**	**13 48 10.7**	**+0.1**
	3.9nm,0.7s,baz=138,slow=11,SNR=5.9						
AB31				⇓S	**Sn**	**13 50 51.3**	**-0.7**
	0.7nm,0.3s,baz=144,slow=24,SNR=7.8						
PKIN	**Phulchoki**	**14.85**	**127**	*e*P	**Pn**	**13 48 09.6**	**+0.6**
	12nm,0.4s						
PKI	**Pulchoki**	**14.87**	**127**	*e*P	**Pn**	**13 48 09.9**	**+0.7**
	7.5nm,0.3s						
GUN	**Gumba**	**14.94**	**125**	*e*P	**Pn**	**13 48 10.5**	**+0.4**
	7.4nm,0.3s						
JIRN	**Jiri**	**15.31**	**125**	*e*P	**P**	**13 48 15.9**	**-0.7**
	27nm,0.5s						
RAMN	**Ramite**	**16.06**	**126**	*e*P	**P**	**13 48 24.8**	**0.0**
	8.9nm,0.4s						
AKTO	**Aktyubinsk**	**16.53**	**327**	⇑P	**P**	**13 48 35.7**	**+6.2**
	2.5nm,0.6s						
AKTO				⇓S	**S**	**13 51 34.8**	**+0.2**
	2.1nm,0.6s						
ODAN	**Odare**	**16.64**	**124**	*e*P	**P**	**13 48 31.1**	**0.0**
	11nm,0.6s						
ZALV	**Zalesovo Beam**	**18.82**	**24**	P	**P**	**13 48 53.4**	**-1.2**
	0.7nm,0.3s,baz=221,slow=10,SNR=18						
ARCES	**ARCESS Array B**	**40.72**	**337**	P	**P**	**13 52 12.1**	**-0.6**
	0.5nm,0.3s,baz=108,slow=8.6,SNR=4.4						
HFS	**Hagfors**	**42.95**	**321**	P	**P**	**13 52 30.2**	**-0.7**
	3.2nm,0.9s,baz=82,slow=11,SNR=2.2						
TORD	**Torodi Ar. Bea**	**66.58**	**269**	P	**P**	**13 55 20.4**	**-1.4**
	0.2nm,0.3s,baz=39,slow=6.4,SNR=5.0						

KRSZO 16 13:52:24.8±1.4**, 48°.33N×19°.86E, h0^{km}, ML1.8**/4**, Error ellipse: s-maj=5.8km s-min=5.1km az=77.0, Explosion., Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSZ	**Piszkesteto**	**0.41**	**176**	Pg	Pb	13 52 34.0	-1.0
	comp=Z,0.2nm,SNR=3.9						
PSZ				Lg	Lg	13 52 40.4	
KECS	**Kecovo**	**0.45**	**70**	Pg	Pg	13 52 34.0	+0.7
	comp=Z,2.3nm,SNR=13						
KECS				Lg	Lg	13 52 40.7	
KECS	**Kecovo**	**0.45**	**70**	*e*PG	Pg	13 52 34.0	+0.7
KECS				*e*SG	Sg	13 52 40.9	+1.8
VYHS	**Vyhne**	**0.70**	**284**	Pg	Pb	13 52 39.3	-0.6
	SNR=1.6						
VYHS				Lg	Lg	13 52 48.8	
VYHS	**Vyhne**	**0.70**	**284**	*e*PG	Pb	13 52 39.1	-0.8
VYHS				*e*SG	Sb	13 52 48.7	-1.4
LANS	**Liptovska Anna**	**0.86**	**343**	Pg	Pb	13 52 42.3	-0.4
	comp=Z,0.1nm,SNR=1.5						
LANS				Lg	Lg	13 52 53.5	
LANS	**Liptovska Anna**	**0.86**	**343**	*e*SG	Sb	13 52 53.9	-0.9
LANS	**Liptovska Anna**	**0.86**	**343**	*e*PG	Pb	13 52 42.3	-0.4
NIE	**Niedzica**	**1.13**	**15**	Lg	Lg	13 53 01.9	
CRVS	**Cervenica-Dubn**	**1.21**	**61**	*e*PG	Pb	13 52 48.6	0.0

NEIC ***16*** *14:04:07.3±0.9, 12°.96N±0°.09×143°.1E±0°.1, h183^{km}±9^{km}, mb4.0/18, Error ellipse: s-maj=20.5km s-min=13.0km az=98.0*

IDC ***16*** *14:04:08.3±0.6, 13°.18N×143°.85E, h237^{km}±16^{km}, mb3.2/5, mb1 3.4/6, mb1mx3.0/47, mbtmp3.9/6, Error ellipse: s-maj=45.6km s-min=19.0km az=85.0*

ISC 16 14:04:07.4±0.6**, 13°.04N**±0°.10×**143°.3E**±0°.1**, h200^{km}, n29,** σ**1ṣ19**/30**, mb4.0**/15**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.66**	**70**	P	**Pn**	**14 04 43.0**	**+0.4**
	32nm,0.3s,baz=265,slow=4.3,SNR=36						
GUMO				S	**Sn**	**14 05 09.3**	**-0.6**
	144nm,0.3s,baz=40,slow=22,SNR=23						
GUMO	**Guam**	**1.66**	**70**		**Pn**	**14 04 42.9**	**+0.4**
GUMO				Sn	**Sn**	**14 05 08.7**	**-1.1**
SIJI	**Sorong**	**18.23**	**222**	P	**Pn**	**14 08 10.6**	**+2.3**
	0.7nm,0.3s,baz=12,slow=10,SNR=4.9						
PMG	**Port Moresby**	**22.63**	**170**	P	**P**	**14 08 52.0**	**+0.4**
LUWI	**Luwuk**	**24.67**	**237**	P	**P**	**14 09 09.2**	**-1.0**
WB0	**Warramunga Arr**	**33.75**	**195**	P	**P**	**14 10 29.8**	**-0.4**
WB0				IAmb	IAmb	14 10 30.6	
	comp=Z,3.3nm,0.6s						
WR0	**Warramunga Arr**	**33.89**	**195**	P	**P**	**14 10 31.1**	**-0.4**
WR0				IAmb	IAmb	14 10 38.5	
	comp=Z,5.5nm,1.3s						
WB2	**Warramunga Arr**	**33.92**	**195**	P	**P**	**14 10 31.6**	**-0.1**
WB2				IAmb	IAmb	14 10 32.3	
	comp=Z,4.4nm,0.7s						
WRA	**Warramunga Arr**	**33.93**	**195**	P	**P**	**14 10 31.6**	**-0.2**
	comp=Z,3.0nm,0.6s,baz=16,slow=9.4,SNR=71						
WRA	**Warramunga Arr**	**33.93**	**195**	IAmb	IAmb	14 10 32.3	
	comp=Z,0.3nm,1.1s						
FITZ	**Fitzroy Crossi**	**35.49**	**210**	P	**P**	**14 10 45.4**	**+0.3**
FITZ				IAmb	IAmb	14 10 45.7	
	comp=Z,4.7nm,1.1s						
AS31	**Alice Springs**	**37.61**	**194**	P	**P**	**14 11 02.6**	**-0.5**
ASAR	**Alice Springs**	**37.61**	**194**	P	**P**	**14 11 02.7**	**-0.4**
	comp=Z,0.6nm,0.7s,baz=12,slow=8.8,SNR=24						
PSA00	**Pilbara Seismi**	**41.37**	**214**	P	**P**	**14 11 33.9**	**-0.2**
CMAR	**Chiang Mai Arr**	**42.91**	**283**	P	**P**	**14 11 47.6**	**+0.9**
	comp=Z,0.5nm,0.5s,baz=75,slow=7.1,SNR=2.5						
STKA	**Stephens Creek**	**44.69**	**182**	P	**P**	**14 11 59.4**	**-1.1**
FORT	**Forrest**	**45.95**	**198**	P	**P**	**14 12 10.4**	**0.0**
BBOO	**Buckleboo**	**46.10**	**188**	P	**P**	**14 12 10.7**	**-1.0**
BBOO				IAmb	IAmb	14 12 38.4	
	comp=Z,4.9nm,1.2s						
MORW	**Morawa**	**49.43**	**212**	P	**P**	**14 12 37.0**	**-0.3**
MORW				IAmb	IAmb	14 13 03.5	
	comp=Z,8.1nm,1.4s						
TOO	**Toolangi**	**50.38**	**178**	P	**P**	**14 12 45.0**	**+0.6**
TOO				IAmb	IAmb	14 12 45.0	
	comp=Z,9.4nm,1.4s						
NWAO	**Narrogin (SRO)**	**52.03**	**208**	P	**P**	**14 12 56.0**	**-0.7**
MK31	**Makanchi Array**	**60.80**	**317**	P	**P**	**14 13 59.1**	**+0.6**
MK31				IAmb	IAmb	14 14 26.9	
	comp=Z,1.2nm,1.2s						
MKAR	**Makanchi Array**	**60.80**	**317**	P	**P**	**14 13 58.2**	**-0.2**
	comp=Z,0.2nm,0.5s,baz=88,slow=9.0,SNR=2.8						
MKAR	**Makanchi Array**	**60.80**	**317**	P	**P**	**14 13 58.5**	**0.0**
MAKZ	**Makanchi**	**61.02**	**316**	P	**P**	**14 14 00.1**	**+0.2**
MAKZ				IAmb	IAmb	14 14 06.7	
	comp=Z,2.4nm,1.4s						
BMAR	**Burnt Mountain**	**71.21**	**23**	P	**P**	**14 15 06.2**	**+1.8**
INK	**Inuvik**	**75.47**	**22**	P	**P**	**14 15 32.4**	**+3.3**
INK				IAmb	IAmb	14 15 37.1	
	comp=Z,3.8nm,1.2s						
ABKAR	**Akbulak array**	**75.90**	**318**	P	**P**	**14 15 30.9**	**-1.0**
FINES	**FINESS Array B**	**90.99**	**335**	P	**P**	**14 16 45.5**	**-3.1**
	comp=Z,0.9nm,0.7s,baz=90,slow=12,SNR=1.5						

IDC ***16*** *14:09:14.9±1.1, 33°.97S×56°.52E, h0^{km}, mb3.9/4, mb1 4.2/5, mb1mx3.6/50, mbtmp4.0/5, ML4.3/1, MS3.2/7, Ms1 3.2/7, ms1mx2.9/32, Error ellipse: s-maj=34.1km s-min=30.0km az=86.0*

NEIC ***16*** *14:09:14.4±1.5, 34°.0S±0°.1×55°.95E±0°.10, h10^{km}±1^{km}, mb4.3/7, Error ellipse: s-maj=22.1km s-min=11.8km az=201.0*

ISC 16 14:09:14.9±0.8**, 33°.9S**±0°.1×**56°.2E**±0°.2**, h10^{km}, n30,** σ**1ṣ48**/19**, mb4.2**/8**, MS3.2**/6**, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RER	**Riviere de l'E**	**12.69**	**358**	Pn	**Pn**	**14 12 13.5**	**-2.2**
VOI	**Vohitsoka**	**14.55**	**323**	Pn	**Pn**	**14 12 40.4**	**-0.7**
OPO	**Ambohidratompo**	**17.27**	**330**	P	**P**	**14 13 19.9**	**+2.1**
	1.0nm,0.3s,baz=143,slow=12,SNR=8.7						
OPO				LR	LR	14 18 26.8	
	comp=Z,64nm,20.1s,baz=30,slow=32						
BOSA	**Boshof**	**26.94**	**273**	LR	LR	14 23 26.5	
	comp=Z,43nm,18.4s,baz=134,slow=31						
H08S1	**Diego Carcia H**	**30.12**	**34**	T	T	14 46 28.9	
	baz=211,slow=76,SNR=5.6						
H08S2	**Diego Garcia H**	**30.13**	**34**	T	T	14 46 29.4	
H08S3	**Diego Garcia H**	**30.14**	**34**	T	T	14 46 29.8	
	baz=205,slow=76,SNR=4.7						
MAW	**Mawson**	**33.97**	**175**	LR	LR	14 25 59.1	
	comp=Z,47nm,21.9s,baz=50,slow=30						
KMBO	**Kilima Mbogo**	**37.13**	**327**	LR	LR	14 30 26.5	
	comp=Z,34nm,20.6s,baz=92,slow=34						
H01W2	**Cape Leeuwin H**	**47.20**	**108**	T	T	15 08 24.8	
	baz=256						
H01W3	**Cape Leeuwin H**	**47.21**	**108**	T	T	15 08 24.9	
	baz=256						
H01W1	**Cape Leeuwin H**	**47.22**	**108**	T	T	15 08 25.7	
	baz=256						
SNAA	**Sanae**	**48.56**	**201**	P	**P**	**14 18 00.1**	**+2.0**
	2.7nm,0.9s,baz=53,slow=6.5,SNR=6.6						
SNAA	**Sanae**	**48.56**	**201**	P	**P**	**14 17 55.6**	**-2.4**
SNAA				IAmb	IAmb	14 18 01.2	
	comp=Z,4.3nm,1.1s						
QSPA	**South Pole Qui**	**56.28**	**180**	P	**P**	**14 18 55.1**	**-0.4**
VNDA	**Vanda**	**60.46**	**166**	LR	LR	14 44 08.5	
	comp=Z,39nm,19.2s,baz=237,slow=35						
CMAR	**Chiang Mai Arr**	**66.08**	**45**	P	**P**	**14 20 04.5**	**+2.2**
	comp=Z,0.8nm,0.7s,baz=227,slow=6.4,SNR=7.8						
CMAR				LR	LR	14 44 17.9	
	comp=Z,15nm,20.2s,baz=293,slow=32						
ASAR	**Alice Springs**	**67.40**	**104**	P	**P**	**14 20 10.9**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=236,slow=5.8,SNR=14						
ASAR	**Alice Springs**	**67.40**	**104**	P	**P**	**14 20 11.1**	**+0.2**
AS31	**Alice Springs**	**67.40**	**104**	P	**P**	**14 20 10.8**	**-0.1**
AS31				IAmb	IAmb	14 20 13.4	
	comp=Z,0.6nm,1.1s						
WRA	**Warramunga Arr**	**69.55**	**101**	P	**P**	**14 20 23.9**	**-0.4**
	comp=Z,1.0nm,0.6s,baz=237,slow=5.6,SNR=14						
WB2	**Warramunga Arr**	**69.56**	**101**	P	**P**	**14 20 24.3**	**-0.1**
WB2				IAmb	IAmb	14 20 25.1	
	comp=Z,2.3nm,0.9s						
WB0	**Warramunga Arr**	**69.68**	**101**	P	**P**	**14 20 25.0**	**-0.1**
WB0				IAmb	IAmb	14 20 41.3	
	comp=Z,8.2nm,1.4s						
WR0	**Warramunga Arr**	**69.70**	**101**	P	**P**	**14 20 25.1**	**-0.2**
WR0				IAmb	IAmb	14 20 28.7	
	comp=Z,3.2nm,1.1s						
KKAR	**Karatay Array**	**77.73**	**11**	P	**P**	**14 21 12.7**	**+1.0**
KBZ	**Khabaz**	**78.20**	**350**	LR	LR	14 54 04.2	
	comp=Z,16nm,19.4s,baz=212,slow=34						
INK	**Inuvik**	**145.09**	**6**	PKPbc	**PKPdf**	**14 28 51.7**	**+0.2**
	comp=Z,3.1nm,1.0s,baz=346,slow=1.7,SNR=6.2						
INK	**Inuvik**	**145.09**	**6**		**PKPbc**	**14 28 48.9**	**-2.2**
ILAR	**Eielson Array**	**146.04**	**18**	PKPbc	**PKPdf**	**14 28 53.8**	**+0.5**
	comp=Z,0.7nm,0.9s,baz=301,slow=4.1,SNR=7.0						
ILAR	**Eielson Array**	**146.04**	**18**		**PKPdf**	**14 28 51.3**	**-2.1**

IDC 16 14:26:52.0±2.1**, 8°.21S×125°.61E, h0^{km}, mb3.3**/1**, mb1 3.3**/4**, mb1mx3.2**/35**, mbtmp3.2**/4**, ML3.1**/3**, MS3.1**/1**, Ms1 3.1**/1**, ms1mx2.4**/12**, Error ellipse: s-maj=50.8km s-min=32.2km az=71.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	**2.76**	**224**	Pn	Pn	14 27 38.5	+0.8
	2.3nm,0.3s,baz=84,slow=23,SNR=2.3						
WRA	**Warramunga Arr**	**14.40**	**145**	Pn	Pn	14 30 16.2	-1.1
	0.1nm,0.3s,baz=319,slow=13,SNR=9.0						
WRA				Sn	Sn	14 32 51.1	-6.8
	0.0nm,0.3s,baz=325,slow=22,SNR=2.3						
ASAR	**Alice Springs**	**17.30**	**154**	P	Pn	14 30 54.8	-0.4
	0.1nm,0.3s,baz=317,slow=11,SNR=10						
SONM	**Songino Array**	**58.34**	**345**	LR	LR	15 02 29.0	
	comp=Z,15nm,19.7s,baz=112,slow=37						
MKAR	**Makanchi Array**	**66.94**	**329**	P	P	14 37 46.5	0.0
	0.1nm,0.3s,baz=120,slow=8.8,SNR=1.7						

IDC ***16*** *14:36:43.5±4.0, 42°.29N×144°.66E, h0^{km}, mb3.4/3, mb1 3.5/4, mb1mx3.3/43, mbtmp3.4/4, ML3.4/1, MS2.7/3, Ms1 2.7/3, ms1mx2.4/35, Error ellipse: s-maj=85.8km s-min=35.8km az=175.0*

SKHL ***16*** *14:36:44.3±0.6, 42°.10N×144°.70E, h60^{km}±9^{km}, mb4.7/3*

NIED ***16*** *14:36:45.4, 42°.23N×144°.61E, h39^{km}, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$0.81; M$_{\theta\theta}$0.08; M$_{\phi\phi}$-0.89; M$_{r\theta}$1.40; M$_{\theta\phi}$-0.53; M$_{\phi r}$0.77; Fault plane solution: M$_0$1.88000×10^{14} NP1:ϕ_s55.00000°, δ77.00000°, λ110.00000°. NP2:ϕ_s176.00000°, δ24.00000°, λ34.00000°.*

JMA ***16*** *14:36:45.3, 42°.23N×144°.61E, h39^{km}±1^{km}, M3.7*

MOS ***16*** *14:36:45.9±0.6, 42°.25N×144°.65E, h34^{km}, mb4.2/1, Error ellipse: s-maj=28.9km s-min=11.9km az=77.9*

ISC 16 14:36:44.6±1.8**, 42°.22N**±0°.07×**144°.62E**±0°.05**, h16^{km}**±9^{km}**, n34,** σ**1ṣ04**/40**, mb3.2**/3**, 8C-1D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAK	**Akkeshi**	**0.77**	**4**	⇑P	**Pg**	**14 36 59.8**	**+0.1**
JAK				*e*S	**Sg**	**14 37 11.0**	**+1.1**
JOB	**Onbets**	**0.90**	**320**	⇑P	**Pg**	**14 37 01.7**	**-0.2**
JOB				*e*S	**Sg**	**14 37 14.8**	**+1.1**
JKHN	**Kushirohamanak**	**0.95**	**25**	⇑P	**Pg**	**14 37 03.1**	**+0.2**
JTHR	**Tokachihiroo**	**0.98**	**274**	⇑P	**Pg**	**14 37 02.8**	**-0.8**
JCH	**Churui**	**1.01**	**293**	⇑P	**Pb**	**14 37 03.0**	**-0.7**
JCH				*e*S	**Sg**	**14 37 16.9**	**-0.5**
JEM	**Erimo**	**1.11**	**260**	P	**Pb**	**14 37 05.3**	**0.0**
JAR	**Ashorobuto**	**1.24**	**330**	⇑P	**Pn**	**14 37 06.1**	**-1.2**
JAR				*e*S	**Sb**	**14 37 22.0**	**-1.4**
JNK	**Nakash**	**1.36**	**3**	⇑P	**Pn**	**14 37 07.7**	**-1.2**
JNBK	**Urakawa-nobuka**	**1.39**	**273**	P	**Pn**	**14 37 08.4**	**-0.9**
NMR	**Nemuro--Hokkai**	**1.41**	**35**	*i* PN	**Pn**	**14 37 08.7**	**-0.8**
NMR				*e*S	**Sn**	**14 37 26.6**	**-1.1**
NMR	**Nemuro--Hokkai**	**1.41**	**35**	*i* P	**Pn**	**14 37 08.0**	**-1.5**
NMR				*e*S	**Sn**	**14 37 26.0**	**-1.7**
NEM2	**Nemuro 2**	**1.41**	**35**	P	**Pn**	**14 37 08.7**	**-0.8**
NEM2				*e*S	**Sn**	**14 37 26.4**	**-1.4**
JSHD	**Hidakashinhida**	**1.61**	**277**	P	**Pn**	**14 37 11.7**	**-0.6**
GLVR	**Golovnino**	**1.65**	**23**	⇑*e*PN	**Pn**	**14 37 12.4**	**-0.5**
GLVR				*e*S	**Sn**	**14 37 33.4**	**-0.4**
GLVR				pmax	pmax		
	comp=Z,339nm,0.1s						
GLVR				smax	smax		
	comp=N,758nm,0.2s						
GLVR				smax	smax		
	comp=E,545nm,0.2s						
GLVR	**Golovnino**	**1.65**	**23**	*e*P	**Pn**	**14 37 12.0**	**-0.9**
GLVR				AMB	AMB	14 37 13.0	
	comp=E,160nm,0.3s						
GLVR				*e*S	**Sn**	**14 37 33.0**	**-0.8**
GLVR				A	A	14 37 36.0	
	comp=E,758nm,0.4s						
GLVR				A	A	14 37 36.0	
	comp=E,545nm,0.4s						
RUSJ	**Misakicho**	**1.94**	**13**	⇓*i*PN	**Pn**	**14 37 16.9**	**+0.1**
RUSJ				*e*S	**Sn**	**14 37 41.0**	**+0.2**
GRPR	**Tuman**	**1.96**	**25**	*e*PN	**Pn**	**14 37 16.4**	**-0.7**
GRPR				*e*S	**Sn**	**14 37 41.1**	**-0.3**
GRPR				pmax	pmax		
	comp=Z,159nm,0.2s						
GRPR				smax	smax		
	comp=E,408nm,0.3s						
GRPR				smax	smax		
	comp=N,414nm,0.2s						
GRPR	**Tuman**	**1.96**	**25**	*e*P	**Pn**	**14 37 16.0**	**-1.1**
GRPR				AMB	AMB	14 37 22.0	
	comp=N,159nm,0.4s						
GRPR				*e*S	**Sn**	**14 37 41.0**	**-0.3**
GRPR				A	A	14 37 43.0	
	comp=N,414nm,0.3s						
GRPR				A	A	14 37 43.0	
	comp=N,408nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**2.02**	**26**	*e*PN	**Pn**	**14 37 17.8**	**-0.2**
YUK				*e*S	**Sn**	**14 37 41.7**	**-1.3**
YUK				pmax	pmax		
	comp=Z,150nm,0.2s						
YUK				pmax	pmax		
	comp=N,34nm,0.1s						
YUK				pmax	pmax		
	comp=E,27nm,0.1s						
YUK				smax	smax		
	comp=N,427nm,0.2s						
YUK				smax	smax		
	comp=E,343nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**2.02**	**26**	*e*P	**Pn**	**14 37 17.0**	**-1.0**
YUK				AMB	AMB	14 37 20.0	
	comp=E,150nm,0.4s						
YUK				*e*S	**Sn**	**14 37 41.0**	**-2.0**
YUK				A	A	14 37 48.0	
	comp=E,427nm,0.4s						
YUK				A	A	14 37 48.0	
	comp=E,343nm,0.4s						
JKA	**Kamikawa-asahi**	**2.40**	**323**	*e*P	**Pn**	**14 37 23.6**	**+0.4**
ASAJ	**Asahikawa**	**2.40**	**323**	Pn	**Pn**	**14 37 23.6**	**+0.4**
	comp=E,5.4nm,0.3s,baz=171,slow=14,SNR=66						
ASAJ				LR	LR	14 38 42.7	
	comp=E,107nm,20.7s,baz=159,slow=50						
KLR	**Kul'dur**	**11.39**	**312**	LR	LR	14 43 43.8	
	comp=E,37nm,18.4s,baz=92,slow=37						
YAK	**Yakutsk**	**21.75**	**341**	LR	LR	14 50 45.5	
	comp=E,39nm,21.4s,baz=264,slow=39						
SONM	**Songino Array**	**27.39**	**295**	P	**P**	**14 42 29.0**	**-0.2**
	comp=E,0.3nm,0.5s,baz=78,slow=8.2,SNR=3.8						
SONM	**Songino Array**	**27.39**	**295**	P	**P**	**14 42 29.0**	**-0.2**
H11N2	**WAKE ISLAND Hy**	**29.29**	**133**	T	T	15 14 07.4	
	baz=326,slow=75,SNR=55						
H11N1	**WAKE ISLAND Hy**	**29.30**	**133**	T	T	15 13 53.2	
	baz=326,slow=75,SNR=43						
H11N3	**WAKE ISLAND Hy**	**29.30**	**133**	T	T	15 14 14.0	
	baz=326,slow=75,SNR=42						
H11S1	**WAKE ISLAND Hy**	**30.18**	**135**	T	T	15 15 17.8	
	baz=327,slow=76,SNR=61						
H11S3	**WAKE ISLAND Hy**	**30.19**	**135**	T	T	15 15 17.5	
	baz=327,slow=76,SNR=46						
H11S2	**WAKE ISLAND Hy**	**30.20**	**135**	T	T	15 15 17.9	
	baz=327,slow=76,SNR=50						
MKAR	**Makanchi Array**	**43.66**	**298**	P	**P**	**14 44 51.2**	**+2.9**
	comp=E,0.2nm,0.5s,baz=85,slow=9.0,SNR=2.5						
ILAR	**Eielson Array**	**43.81**	**35**	P	**P**	**14 44 49.9**	**+0.6**
	comp=E,0.3nm,0.8s,baz=250,slow=5.7,SNR=4.3						

NEIC ***16*** *14:38:22.7±1.2, 24°.76S±0°.03×175°.9W±0°.1, h35^{km}±2^{km}, mb4.7/27, Error ellipse: s-maj=21.6km s-min=4.3km az=90.0*

IDC ***16*** *14:38:25.5±3.7, 24°.72S×176°.09W, h56^{km}±30^{km}, mb3.7/7, mb1 4.0/8, mb1mx3.8/40, mbtmp4.1/8, ML5.4/2, MS3.8/11, Ms1 3.8/11, ms1mx3.4/38, Error ellipse: s-maj=29.2km s-min=25.9km az=68.0*

ISC 16 14:38:21.4±0.7**, 24°.64S**±0°.08×**176°.0W**±0°.1**, h30^{km}, n58,** σ**1ṣ35**/49**, mb4.5**/21**, MS3.8**/9**, South of Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.92**	**200**	P	**Pn**	**14 39 34.8**	**+1.5**
	57nm,0.3s,baz=264,slow=23,SNR=2.4						
RAO				S	**Sn**	**14 40 33.3**	**+4.1**
	83nm,0.3s,baz=261,slow=23,SNR=5.6						
RAO	**Raoul Island**	**4.92**	**200**	Pn	**Pn**	**14 39 34.2**	**+1.0**
MSVF	**Nonsavu**	**8.86**	**320**	P	Pn	14 40 31.7	+4.1
	2.5nm,0.3s,baz=132,slow=14,SNR=12						
MSVF				LR	LR	14 43 40.5	
	comp=Z,663nm,19.6s,baz=115,slow=36						
MSVF	**Nonsavu**	**8.86**	**320**	Pn	Pn	14 40 32.1	+4.5
URZ	**Urewera**	**14.80**	**202**	Pn	**Pn**	**14 41 44.6**	**-4.0**
BKZ	**Black Stump Fm**	**15.83**	**202**	Pn	**Pn**	**14 42 01.4**	**-0.8**
DZM	**Mont Dzumac**	**16.37**	**275**	LR	LR	14 47 21.4	
	comp=Z,333nm,19.9s,baz=83,slow=33						
DZM	**Mont Dzumac**	**16.37**	**275**	*e*P	**P**	**14 42 15.0**	**+3.2**
	28nm,0.8s						
DZM				*e*LR	LR	14 46 00.8	
	comp=Z,431nm,24.3s						
BHW	**Baring Head**	**18.39**	**202**	P	**P**	**14 42 30.7**	**-3.1**
PPT	**Papeete**	**25.57**	**79**	LR	LR	14 51 12.0	
	comp=Z,69nm,20.8s,baz=236,slow=30						
TARA	**Tarawa**	**28.00**	**336**	P	**P**	**14 44 10.2**	**+0.4**
EIDS	**Eidsvold**	**29.84**	**262**	P	**P**	**14 44 26.9**	**+0.7**
EIDS				IAmb	IAmb	14 44 40.8	
	comp=Z,24nm,1.4s						
CTAO	**Charters Tower**	**35.17**	**270**	P	**P**	**14 45 13.4**	**+0.6**
CTAO				IAmb	IAmb	14 45 13.8	
	comp=Z,20nm,1.4s						
TOO	**Toolangi**	**35.20**	**239**	P	**P**	**14 45 13.2**	**+0.2**
TOO				IAmb	IAmb	14 45 17.8	
	comp=Z,7.2nm,1.1s						
STKA	**Stephens Creek**	**37.90**	**249**	P	**P**	**14 45 35.8**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=92,slow=12,SNR=5.6						
STKA				LR	LR	15 00 08.0	
	comp=Z,238nm,18.4s,baz=35,slow=34						
PMG	**Port Moresby**	**38.23**	**287**	P	**P**	**14 45 39.0**	**-0.1**
PMG				IAmb	IAmb	14 45 48.9	

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      comp=Z,10nm,1.1s
BBOO  Buckleboo          42.57 248  P      P       14 46 14.7 -0.1
BBOO                                IAmb   IAmb    14 46 36.2
      comp=Z,9.2nm,1.4s
AS31  Alice Springs      45.55 260  P      P       14 46 39.0 +0.1
ASAR  Alice Springs      45.56 260  P      P       14 46 39.0 +0.1
      comp=Z,1.0nm,0.8s,baz=92,slow=6.3,SNR=24
ASAR                                LR     LR      15 05 34.2
      comp=Z,202nm,18.1s,baz=116,slow=36
ASAR  Alice Springs      45.56 260  P      P       14 46 38.2 -0.7
WR0   Warramunga Arr     45.85 266  P      P       14 46 40.6 -0.6
WB2   Warramunga Arr     46.03 266  P      P       14 46 41.0 -1.5
WB2                                 IAmb   IAmb    14 46 48.0
      comp=Z,11nm,1.5s
WRAB  Tennant Creek      46.03 266  P      P       14 46 41.1 -1.5
WRAB                                IAmb   IAmb    14 47 02.1
      comp=Z,3.6nm,0.9s
WB0   Warramunga Arr     46.03 266  P      P       14 46 41.1 -1.6
WB0                                 IAmb   IAmb    14 46 43.7
      comp=Z,4.3nm,0.8s
WRA   Warramunga Arr     46.04 266  P      P       14 46 42.5 -0.2
      comp=Z,1.9nm,0.6s,baz=103,slow=8.0,SNR=26
WRA                                 LR     LR      15 05 36.4
      comp=Z,181nm,18.4s,baz=110,slow=36
WRA   Warramunga Arr     46.04 266  P      P       14 46 41.6 -1.1
FORT  Forrest            49.52 250  P      P       14 47 08.9 -0.6
FORT                                IAmb   IAmb    14 47 32.5
      comp=Z,15nm,1.1s
MTN   Manton Dam         51.19 273  P      P       14 47 22.6 +0.3
MTN                                 IAmb   IAmb    14 47 31.5
      comp=Z,11nm,1.2s
KNRA  Kununurra          52.37 269  P      P       14 47 30.7 -0.4
KNRA                                IAmb   IAmb    14 47 35.4
      comp=Z,6.7nm,0.8s
FITZ  Fitzroy Crossi     54.45 265  P      P       14 47 46.4  0.0
MORW  Morawa             60.08 249  P      P       14 48 25.2 -0.9
MORW                                IAmb   IAmb    14 48 48.1
      comp=Z,17nm,1.4s
TNTI  Ternate            60.38 286  P      P       14 48 27.2 -1.0
CASY  Casey              61.08 206  P      P       14 48 31.5 -0.6
GIRL  Giralia            63.33 256  P      P       14 48 46.2 -1.8
KAPI  Kappang            64.58 276  LR     LR      15 16 52.8
      comp=Z,29nm,20.1s,baz=128,slow=36
QSPA  South Pole Qui     65.45 180  P      P       14 49 01.5 +0.2
QSPA                                IAmb   IAmb    14 49 08.0
      comp=Z,17nm,1.5s
JAGI  Jajag, Banyuwa     68.28 270  P      P       14 49 19.7 -0.4
JMM   Marumori           74.27 326  P      P       14 49 56.3 +0.6
JMM                                 IAmb   IAmb    14 50 04.4
      comp=Z,25nm,1.0s
XMIS  Christmas Isla     75.23 265  P      P       14 50 01.3 -0.6
MAW   Mawson             78.32 200  LR     LR      15 25 40.5
      comp=Z,39nm,18.1s,baz=50,slow=36
PETK  Petropavlovsk-     80.74 344  LR     LR      15 24 41.0
      comp=Z,25nm,18.3s,baz=129,slow=34
KSRS  Korea Array        81.22 318  P      P       14 50 34.1 -0.3
      comp=Z,1.0nm,0.8s,baz=145,slow=7.9,SNR=3.0
KSRS                                LR     LR      15 25 27.0
      comp=Z,22nm,19.6s,baz=134,slow=35
H03S2 Juan Fernandez     82.12 123  T      T       16 22 34.7
H03S1 Juan Fernandez     82.13 124  T      T       16 22 36.0
      baz=243,slow=74,SNR=4.5
H03S3 Juan Fernandez     82.14 123  T      T       16 22 34.9
      baz=297,slow=74,SNR=3.6
SNAA  Sanae              83.83 178  P      P       14 50 48.0 +0.3
SNAA  Sanae              83.83 178  P      P       14 50 48.2 +0.5
      comp=Z,1.9nm,0.8s,baz=144,slow=5.6,SNR=6.3
SNAA  Sanae              83.83 178  P      P       14 50 48.2 +0.5
SNAA                                IAmb   IAmb    14 51 05.2
      comp=Z,8.9nm,1.4s
VNA3  Neumayer Olymp     83.90 176  P      P       14 50 48.4 +0.4
VNA2  Neumayer--Watz     84.36 176  P      P       14 50 51.1 +0.8
TXAR  Lajitas Array      87.72  56  P      P       14 51 08.9 +1.2
      comp=Z,0.5nm,0.9s,baz=205,slow=8.0,SNR=3.5
TXAR  Lajitas Array      87.72  56  P      P       14 51 08.1 +0.4
CMAR  Chiang Mai Arr     93.25 289  P      P       14 51 35.8 +2.2
      comp=Z,1.6nm,0.9s,baz=131,slow=3.1,SNR=8.6
CMAR  Chiang Mai Arr     93.25 289  P      P       14 51 33.4 -0.3
LPAZ  La Paz             98.74 112  LR     LR      15 27 19.7
      comp=Z,110nm,21.6s,baz=164,slow=30
AKASG Malin Array Be    147.53 330  PKPbc  PKPbc   14 58 01.3 -1.1
      comp=Z,1.2nm,0.6s,baz=48,slow=4.5,SNR=1.7
BRTR  Keskin Array B    150.95 308  PKPbc  PKiKP   14 58 12.5 +0.4
      comp=Z,1.0nm,0.5s,baz=312,slow=38,SNR=2.5
TORD  Torodi Ar. Bea    168.35 169  PKP    PKPdf   14 58 26.3 +0.3
      comp=Z,0.1nm,0.3s,baz=235,slow=5.1,SNR=1.3
TORD                                PKPab  PKPab   14 59 35.8 +1.2
      comp=Z,0.5nm,0.7s,baz=180,slow=3.3,SNR=3.1
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*NEIC **16** 14:42:10.9±1.5, 19.°14N±0.°08×145.°6E±0.°1, h174km±7km, mb4.5/80, Error ellipse: s-maj=17.4km s-min=11.0km az=84.0*

*IDC **16** 14:42:10.8±2.9, 19.°19N×145.°57E, h181km±27km, mb3.6/17, mb1 3.7/19, mb1mx3.6/47, mbtmp4.1/19, Error ellipse: s-maj=22.1km s-min=10.3km az=96.0*

ISC 16 14:42:08.1±0.4**, 19.°18N**±0.°05×**145.°63E**±0.°09**, h150**km**, n108, σ1.s02**/104**, mb4.5**/55**, Mariana Islands**

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Code  Station Name         Δ°   AZ°   Phase ID          Time     Res
                                    Op     ISC       h  m  s    ISC
ANA2  Anatahan            2.82 178  Pn     Pn      14 42 56.1 +2.9
GUMO  Guam                5.60 188  Pn     Pn      14 43 32.9 +3.4
JCJ   Chichijima          8.49 339  P      Pn      14 44 10.6 +2.5
      4.9nm,0.3s,baz=276,slow=23,SNR=8.0
JCJ                                 S      Sn      14 45 41.4 -1.2
      6.4nm,0.3s,baz=285,slow=21,SNR=2.3
JMZ   Minamidaito 2      14.86 299  P      Pn      14 45 32.3 +1.5
MJAR  Matsushiro Arr     18.49 341  P      P       14 46 13.4 +0.8
      0.1nm,0.3s,baz=160,slow=7.5,SNR=4.4
MJAR  Matsushiro Arr     18.49 341  IAmb   IAmb    14 46 14.0
      comp=Z,2.1nm,1.1s
MAJO  Matsushiro         18.49 341  P      P       14 46 13.0 +0.3
JSD   Sado               19.86 343  P      P       14 46 27.1 -0.4
JSD                                 IAmb   IAmb    14 46 49.6
      comp=Z,19nm,1.3s
JTM   Tenmabayashi       21.89 351  P      P       14 46 50.7 +1.6
JTM                                 IAmb   IAmb    14 47 10.4
      comp=Z,32nm,1.3s
JAY   Jayapura           22.09 193  P      P       14 46 51.5 +0.1
      comp=Z,11nm,0.9s,baz=333,slow=11,SNR=1.4
JEM   Erimo              22.86 355  P      P       14 47 16.9  +18
YULB  Yu-li              23.05 285  P      P       14 47 00.8 +0.4
KSRS  Korea Array        23.90 323  P      P       14 47 07.6 -0.3
      comp=Z,0.8nm,0.6s,baz=146,slow=9.5,SNR=2.7
JKA   Kamikawa-asahi     25.00 355  P      P       14 47 19.2 +1.4
ASAJ  Asahikawa          25.00 355  P      P       14 47 19.2 +1.4
      comp=Z,11nm,1.1s,baz=213,slow=9.5,SNR=5.4
LUWI  Luwuk              30.12 231  P      P       14 48 02.0 -1.8
KLR   Kul'dur            32.00 343  P      P       14 48 19.4 -0.6
      comp=Z,0.9nm,0.3s,baz=146,slow=7.1,SNR=5.4
COEN  Coen               33.01 184  P      P       14 48 28.0 -1.2
MTN   Manton Dam         34.88 205  P      P       14 48 44.5 -0.8
MTN                                 IAmb   IAmb    14 48 47.8
      comp=Z,14nm,1.4s
MIDW  Midway             34.95  68  P      P       14 48 44.8 -1.0
KNRA  Kununurra          38.40 207  P      P       14 49 14.2 -0.9
KNRA                                IAmb   IAmb    14 49 43.3
      comp=Z,21nm,1.4s
CTAO  Charters Tower     39.02 179  P      P       14 49 20.9 +0.6
CTAO                                IAmb   IAmb    14 49 47.9
      comp=Z,17nm,1.4s
WB0   Warramunga Arr     40.24 197  P      P       14 49 29.6 -0.7
WR0   Warramunga Arr     40.38 196  P      P       14 49 30.7 -0.8
WB2   Warramunga Arr     40.42 196  P      P       14 49 31.1 -0.7
WB2                                 IAmb   IAmb    14 49 32.1
      comp=Z,6.8nm,0.7s
WRA   Warramunga Arr     40.42 196  P      P       14 49 31.1 -0.7
      comp=Z,5.5nm,0.6s,baz=20,slow=8.9,SNR=40
SONM  Songino Array      42.73 321  P      P       14 49 50.2 -0.3
      comp=Z,0.3nm,0.5s,baz=136,slow=5.0,SNR=2.5
AS31  Alice Springs      44.09 196         P       14 49 59.2 -2.3
ASAR  Alice Springs      44.09 196  P      P       14 50 00.6 -0.9
      comp=Z,0.5nm,0.5s,baz=14,slow=7.0,SNR=14
ASAR  Alice Springs      44.09 196  P      P       14 49 59.3 -2.2
CMAR  Chiang Mai Arr     44.09 277  P      P       14 50 01.8 +0.1
      comp=Z,0.8nm,0.7s,baz=72,slow=6.8,SNR=6.0
DZM   Mont Dzumac        45.77 153  P      P       14 50 14.0 -0.8
DZM                                 IAmb   IAmb    14 50 39.2
      comp=Z,14nm,1.4s
OUENC Ouen Island, N     46.25 152  P      P       14 50 17.8 -0.7
BILL  Bilibino           50.56  10  P      P       14 50 51.3 +0.4
BILL                                IAmb   IAmb    14 50 53.4
      comp=Z,17nm,1.2s
STKA  Stephens Creek     50.91 184  P      P       14 50 54.5 +0.5
      comp=Z,0.8nm,0.7s,baz=14,slow=12,SNR=2.6
FORT  Forrest            52.46 199  P      P       14 51 05.5  0.0
BBOO  Buckleboo          52.49 190  P      P       14 51 05.4 -0.3
SII   Sitkinak Islan     57.86  35  P      P       14 51 45.3 +1.4
MKAR  Makanchi Array     58.09 314  P      P       14 51 45.2 -0.6
      comp=Z,0.1nm,0.4s,baz=84,slow=5.9,SNR=2.0
SVW2  Sparrevohn         58.45  29  P      P       14 51 49.5 +1.6
SVW2                                IAmb   IAmb    14 52 16.8
      comp=Z,11nm,1.3s
Q19K  Cape Douglas,      58.74  32  P      P       14 51 49.9 -0.2
O19K  Port Alsworth      58.77  30  P      P       14 51 51.2 +1.1
TTA   Tatalina           58.86  27  P      P       14 51 51.6 +0.7
N19K  Bonanza Creek      58.87  30  P      P       14 51 52.6 +1.6
J20K  Nowinta River      60.06  26  P      P       14 52 00.6 +1.6
CNPM  China Poot         60.09  32  P      P       14 51 59.6 +0.3
BRLK  Bradley Lake       60.32  31  P      P       14 52 00.8  0.0
PPLA  Purkeypile         60.51  28  P      P       14 52 02.7 +0.5
CAST  Castle Rocks       60.70  27  P      P       14 52 04.5 +1.1
CAST                                IAmb   IAmb    14 52 05.4
      comp=Z,9.2nm,0.8s
IMAR  Indian Mountai     60.81  24  P      P       14 52 05.3 +1.3
O22K  Cooper Landing     61.05  31  P      P       14 52 06.5 +0.8
H21K  Melozitna Rive     61.08  25  P      P       14 52 07.1 +1.3
H21K                                IAmb   IAmb    14 52 08.5
      comp=Z,6.4nm,1.2s
NRIK  Noril'sk           61.14 340  P      P       14 52 05.4 -0.7
      comp=Z,1.3nm,0.4s,baz=120,slow=8.6,SNR=4.6
NRIK  Noril'sk           61.14 340  IAmb   IAmb    14 52 31.2
      comp=Z,10nm,1.5s
RC01  Rabbit Creek A     61.18  30  P      P       14 52 06.6  0.0
RC01                                IAmb   IAmb    14 52 08.3
      comp=Z,12nm,1.2s
KTH   Kantishna Hill     61.24  27  P      P       14 52 07.5 +0.4
KTH                                 IAmb   IAmb    14 52 09.2
      comp=Z,10.0nm,1.2s
I21K  Tanana             61.26  25  P      P       14 52 08.1 +1.1
I21K                                IAmb   IAmb    14 52 08.6
      comp=Z,11nm,1.4s
BPAW  Bear Paw Mtn.      61.36  27  P      P       14 52 08.8 +1.0
BPAW                                IAmb   IAmb    14 52 09.6
      comp=Z,8.9nm,0.9s
TRF   Thorofare Moun     61.49  27  P      P       14 52 09.1 +0.3
TRF                                 IAmb   IAmb    14 52 23.7
      comp=Z,14nm,1.4s
PMR   Palmer             61.57  30  P      P       14 52 09.2 +0.1
PMR                                 IAmb   IAmb    14 52 10.1
      comp=Z,12nm,1.3s
GHO   Glory Hole Cre     61.71  29  P      P       14 52 10.5 +0.3
GHO                                 IAmb   IAmb    14 52 11.4
      comp=Z,7.0nm,0.8s
MLY   Manley             61.72  26  P      P       14 52 11.0 +0.8
PWL   Port Wells         61.80  30  P      P       14 52 11.4 +0.7
KNK   Knik Glacier       61.85  30  P      P       14 52 11.8 +0.6
A21K  Barrow             61.87  18  P      P       14 52 11.8 +0.9
A21K                                IAmb   IAmb    14 52 35.9
      comp=Z,9.3nm,1.1s
SML   Sawmill            61.99  29  P      P       14 52 12.5 +0.4
MCK   McKinley           62.15  27  P      P       14 52 13.3 +0.3
MCK                                 IAmb   IAmb    14 52 14.7
      comp=Z,9.6nm,1.4s
NEA2  Nenana             62.30  26  P      P       14 52 13.9 -0.1
I23K  Minto, Yukon-K     62.31  26  P      P       14 52 14.8 +0.8
I23K                                IAmb   IAmb    14 52 16.0
      comp=Z,4.0nm,0.5s
SCM   Sheep Creek Mo     62.46  30  P      P       14 52 15.9 +0.6
COLD  Coldfoot           62.55  23  P      P       14 52 16.3 +0.7
COLD                                IAmb   IAmb    14 52 35.5
      comp=Z,6.9nm,1.4s
FID   Port Fidalgo       62.67  31  P      P       14 52 17.2 +0.6
WRH   Wood River Hil     62.68  27  P      P       14 52 16.5  0.0
WRH                                 IAmb   IAmb    14 52 18.9
      comp=Z,6.6nm,1.4s
DHY   Denali Highway     62.69  28  P      P       14 52 17.1 +0.3
MDM   Murphy Dome        62.73  26  P      P       14 52 16.8 -0.1
MDM                                 IAmb   IAmb    14 52 18.8
      comp=Z,3.8nm,0.6s
KLU   Klutina            63.06  30  P      P       14 52 20.1 +0.9
KLU                                 IAmb   IAmb    14 52 39.2
      comp=Z,10.0nm,1.4s
H24K  Noodor Dome        63.08  25  P      P       14 52 20.0 +0.7
H24K                                IAmb   IAmb    14 52 45.6
      comp=Z,8.7nm,1.5s
IL31                     63.25  26  P      P       14 52 19.5 -0.8
ILAR  Eielson Array      63.25  26  P      P       14 52 19.6 -0.7
      comp=Z,1.8nm,0.6s,baz=255,slow=5.9,SNR=27
PAX   Paxson             63.52  28  P      P       14 52 22.4 +0.1
PAX                                 IAmb   IAmb    14 52 23.4
      comp=Z,3.8nm,0.6s
N25K  Chitina, Valde     63.71  30  P      P       14 52 24.6 +1.1
N25K                                IAmb   IAmb    14 52 48.1
      comp=Z,7.8nm,1.4s
RIDG  Independent Ri     63.93  28  P      P       14 52 25.1 +0.3
RIDG                                IAmb   IAmb    14 52 26.2
      comp=Z,3.5nm,0.7s
BERG  Berg Lake          63.98  31  P      P       14 52 25.9 +0.8
VRDI  Verde Repeater     64.20  31  P      P       14 52 26.8 -0.1
VRDI                                IAmb   IAmb    14 52 55.0
      comp=Z,14nm,1.4s
DOT   Dot Lake           64.26  28  P      P       14 52 27.3 +0.3
DOT                                 IAmb   IAmb    14 52 28.3
      comp=Z,3.5nm,0.7s
FYU   Fort Yukon         64.29  25  P      P       14 52 28.0 +1.0
FYU                                 IAmb   IAmb    14 52 28.7
      comp=Z,6.3nm,0.9s
CRQM  Cirque             64.30  31  P      P       14 52 28.4 +1.0
SCRK  Sand Creek         64.34  27  P      P       14 52 27.3 -0.4
SCRK                                IAmb   IAmb    14 52 28.8
      comp=Z,5.9nm,1.0s
BMAR  Burnt Mountain     64.71  24  P      P       14 52 31.4 +1.5
GRNC  Granite Creek      64.97  31  P      P       14 52 32.8 +0.9
GRNC                                IAmb   IAmb    14 52 36.9
      comp=Z,13nm,1.3s
M27K  Edge Creek, AK     65.08  29  P      P       14 52 33.5 +1.1
M27K                                IAmb   IAmb    14 52 52.0
      comp=Z,11nm,1.4s
BCAR  Beaver Creek A     65.20  29  P      P       14 52 33.5 +0.4
BRVK  Borovoye           66.13 320  P      P       14 52 39.2  0.0
KKAR  Karatay Array      66.41 309  P      P       14 52 40.2 -1.0
HYT   Haines Junctio     67.06  31  P      P       14 52 46.0 +0.9
HYT                                 IAmb   IAmb    14 52 48.1
      comp=Z,7.6nm,1.2s
INK   Inuvik             68.96  23  P      P       14 52 56.0 -0.6
      comp=Z,1.9nm,0.7s,baz=275,slow=4.3,SNR=7.2
INK   Inuvik             68.96  23  P      P       14 52 56.4 -0.2
ABKAR Akbulak array      72.95 317  P      P       14 53 20.1 -1.0
EUNU  Eureka             77.27   8  P      P       14 53 44.8 -0.5
YKA   Yellowknife Ar     77.60  28  P      P       14 53 46.4 -1.0
      comp=Z,1.0nm,0.5s,baz=344,slow=4.8,SNR=5.2
LTY   Liberty            78.61  44  P      P       14 53 53.8 +0.4
LTY                                 IAmb   IAmb    14 54 06.7
      comp=Z,11nm,1.5s
RES   Resolute Bay       78.98  14  P      P       14 53 54.6 -0.1
PINE  Pine Mountain      79.39  47  P      P       14 53 59.3 +1.5
PINE                                IAmb   IAmb    14 54 26.1
      comp=Z,18nm,1.4s
K05A  Summer Lake        79.72  48  P      P       14 54 00.8 +1.2
K05A                                IAmb   IAmb    14 54 22.4
      comp=Z,12nm,1.4s
ARCES ARCESS Array B     82.02 342  P      P       14 54 09.9 -1.2
      comp=Z,1.6nm,0.6s,baz=60,slow=7.4,SNR=7.7
ARCES ARCESS Array B     82.02 342  IAmb   IAmb    14 54 10.8
      comp=Z,5.7nm,0.9s
NVAR  Mina Array Bea     82.90  52  P      P       14 54 16.7 +0.1
      comp=Z,2.7nm,0.6s,baz=267,slow=5.6,SNR=7.4
FINES FINESS Array B     86.43 335  P      P       14 54 30.5 -2.9
      comp=Z,1.1nm,0.3s,baz=64,slow=4.8,SNR=21
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*IDC **16** 14:59:25.6±0.8, 58.°87S×25.°17W, h0km, mb4.4/6, mb1 4.4/7, mb1mx4.0/36, mbtmp4.4/7, ML4.5/1, MS3.0/1, Ms1 3.0/1, ms1mx2.6/25, Error ellipse: s-maj=52.6km s-min=20.7km az=87.0*

*NEIC **16** 14:59:26.6±2.1, 58.°95S±0.°09×24.°4W±0.°3, h10km±1km, mb4.4/10, Error ellipse: s-maj=25.3km s-min=8.4km az=60.0*

ISC 16 14:59:27.1±0.6**, 59.°0S**±0.°1×**24.°4W**±0.°2**, h10**km**, n34, σ2.s33**/33**, mb4.3**/7**, South Sandwich Islands region**

```
Code  Station Name         Δ°   AZ°   Phase ID          Time     Res
                                    Op     ISC       h  m  s    ISC
HOPE  Hope Point          8.15 300  Pn     Pn      15 01 25.0 -0.3
VNA1  Neumayer--Stat     13.49 157  P      Pn      15 02 42.7 +4.4
VNA1                                S      Sn      15 05 07.1 -1.0
VNA3  Neumayer Olymp     13.70 160  P      Pn      15 02 45.0 +3.8
VNA3                                S      Sn      15 05 09.3 -4.0
VNA2  Neumayer--Watz     13.89 156  P      Pn      15 02 47.8 +4.1
      baz=318,slow=14
VNA2                                S      Sn      15 05 13.8 -4.0
SNAA  Sanae              15.43 154  P      P       15 03 08.8 -0.4
SNAA                                S      Sn      15 05 52.8 -2.6
SNAA  Sanae              15.43 154  Pn     P       15 03 08.3 -0.9
      1.9nm,0.3s,baz=316,slow=15,SNR=50
SNAA                                Sn     Sn      15 05 49.1 -6.3
      0.3nm,0.3s,baz=14,slow=24,SNR=3.3
SNAA  Sanae              15.43 154         P       15 03 08.0 -1.2
EFI   East Falkland      20.31 276  P      Pn      15 04 04.0 -0.9
EFI                                 IAmb   IAmb    15 04 08.1
      comp=Z,54nm,1.2s
QSPA  South Pole Qui     31.24 180  P      P       15 05 48.4 +1.8
      comp=Z,2.1nm,0.5s,baz=211,slow=1.8,SNR=46
QSPA  South Pole Qui     31.24 180  P      P       15 05 48.0 +1.4
QSPA                                IAmb   IAmb    15 05 50.0
      comp=Z,2.7nm,0.7s
TRQA  Tornquist          31.88 294  P      P       15 05 52.0 -0.3
TRQA                                IAmb   IAmb    15 06 17.3
      comp=Z,5.1nm,1.2s
VNDA  Vanda              43.68 182  P      P       15 07 33.6 +2.3
      comp=Z,1.9nm,0.6s,baz=186,slow=6.7,SNR=22
VNDA                                LR     LR      15 24 26.0
      comp=Z,18nm,19.9s,baz=167,slow=34
VNDA  Vanda              43.68 182  P      P       15 07 32.6 +1.3
VNDA                                IAmb   IAmb    15 07 55.7
      comp=Z,4.8nm,1.2s
H10S2 ASCENSION HYDR50.48   13  T      T       16 02 58.6
      baz=33,slow=74,SNR=5.6
H10S3 ASCENSION HYDR50.49   13  T      T       16 02 55.5
      baz=187,slow=74,SNR=8.5
CASY  Casey              50.62 158  P      P       15 08 24.4 -1.1
H10N1 ASCENSION HYDR51.60   13  T      T       16 04 19.8
H10N3 ASCENSION HYDR51.60   13  T      T       16 04 20.6
      baz=266,slow=74,SNR=7.5
H10N2 ASCENSION HYDR51.62   13  T      T       16 04 20.7
      baz=188,slow=74,SNR=5.7
TORD  Torodi Ar. Bea     74.97  26  P      P       15 11 10.2 +1.9
      comp=Z,2.1nm,0.5s,baz=198,slow=6.4,SNR=12
TORD  Torodi Ar. Bea     74.97  26  P      P       15 11 09.1 +0.8
TORD                                IAmb   IAmb    15 11 10.9
      comp=Z,1.7nm,0.7s
PLCV  Puerto La Cruz     76.15 319  P      P       15 11 13.9 -1.1
PCRV  Puerto La Cruz     76.17 319  P      P       15 11 13.9 -1.3
      comp=Z,4.0nm,0.5s,baz=186,slow=6.2,SNR=3.8
TAU   Tasmania Unive     78.22 174  P      P       15 11 25.6 -0.9
STKA  Stephens Creek     88.72 168  P      P       15 12 21.0 +0.4
      comp=Z,1.0nm,0.7s,baz=111,slow=7.3,SNR=5.2
STKA  Stephens Creek     88.72 168  P      P       15 12 20.3 -0.3
ASAR  Alice Springs      95.71 160  P      P       15 12 53.1  0.0
      comp=Z,0.6nm,0.7s,baz=185,slow=4.0,SNR=18
FINES FINESS Array B    126.31  27  PKP    PKPdf   15 18 27.5 -0.9
      comp=Z,0.8nm,0.5s,baz=203,slow=1.5,SNR=6.8
ARCES ARCESS Array B    133.14  22  PKP    PKPdf   15 18 40.8 -0.4
      comp=Z,1.6nm,0.8s,baz=243,slow=0.3,SNR=4.9
YKA   Yellowknife Ar    139.34 315  PKP    PKPdf   15 18 51.5 -1.3
      comp=Z,1.6nm,0.6s,baz=123,slow=3.1,SNR=5.3
A36M  Sachs Harbour     147.50 325  PKPdf  PKPdf   15 19 07.6 +0.8
SONM  Songino Array     149.34  89  PKPbc  PKPbc   15 19 15.1 -0.1
      comp=Z,0.5nm,0.5s,baz=199,slow=3.1,SNR=4.0
IL31                    153.14 307         PKPbc   15 19 21.6 -1.6
ILAR  Eielson Array     153.14 307  PKPbc  PKPbc   15 19 21.6 -1.7
      comp=Z,2.6nm,1.0s,baz=158,slow=2.0,SNR=15
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*IDC **16** 15:00:40.9±1.9, 39.°14N×28.°63E, h0km, mb3.5/2, mb1 3.4/3, mb1mx3.2/44, mbtmp3.4/3, ML3.0/1, MS2.5/2, Ms1 2.5/2, ms1mx2.3/24, Error ellipse: s-maj=67.3km s-min=18.7km az=161.0*

*ISK **16** 15:00:41.6, 39.°20N×28.°67E, h6km, ML3.8/57*

*DDA **16** 15:00:41.4, 39.°18N×28.°67E, h10km±2km, MW3.6*

*SOF **16** 15:00:43.3, 39.°39N×28.°57E, h10km, MD3.5*

*CFUSG **16** 15:00:44.1, 39.°20N×29.°10E, h1km, mb3.3/3, MD3.3/2, Western Turkey Magtype MSH 3.4 from 3 stations*

ISC 16 15:00:41.9±0.9**, 39.°20N**±0.°02×**28.°67E**±0.°02**, h10**km±7km**, n114, σ0.s91**/134**, 1D, Turkey**

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Code  Station Name         Δ°   AZ°   Phase ID          Time     Res
                                    Op     ISC       h  m  s    ISC
DEMI  Demirci             0.16 166 i P     Pg      15 00 45.4 -0.1
DEMI                               i S     Sg      15 00 47.5 -0.5
SMAA  Simav-Kutahya       0.26 112   PG    Pg      15 00 47.4 +0.1
SMAA                                 SG    Sg      15 00 51.8 +0.9
SIMA  Simav-Kutahya       0.27 115   PG    Pg      15 00 47.3 -0.2
SIMA                                 SG    Sg      15 00 51.1 -0.1
DST   Dursunbey           0.40 355   PG    Pg      15 00 49.6 -0.3
DURS  Dursunbey           0.43 340 i P     Pg      15 00 50.2 -0.1
SHAP  Saphane-Kutahy      0.47 112   PG    Pg      15 00 51.0 -0.1
SHAP                                 SG    Sg      15 00 57.8 +0.5
GEDZ  Gediz               0.60 105   PG    Pg      15 00 53.5 -0.1
TVSB  Tavsanli            0.67  68   PG    Pg      15 00 54.5 -0.3
KULA  Kula-Manisa         0.69 180   P     Pg      15 00 54.9 -0.3
KULA  Kula-Manisa         0.69 180   PG    Pg      15 00 55.1 -0.1
MANT  Manisa              0.71 187 i P     Pg      15 00 55.6 -0.2
MANT                               i S     Sg      15 01 04.2 -0.9
AKHS  Akhisar             0.74 244 i P     Pg      15 00 56.3 +0.1
AKHS                               i S     Sg      15 01 06.2 +0.5
AKS   Akhisar             0.74 244   PG    Pg      15 00 56.2  0.0
BALB  Balikesir           0.75 306   PG    Pb      15 00 57.2 +0.1
STEP  BALIKESIR_Sava      0.76 284 i P     Pg      15 00 56.4 -0.1
STEP                               i S     Sb      15 01 07.3 -0.3
GOMA  Golmarmara-Man      0.76 230   PG    Pb      15 00 57.2 -0.1
ORLT  Orhaneli            0.86  12   PG    Pg      15 00 58.6  0.0
BALY  Balya               0.97 304 i P     Pg      15 01 00.7  0.0
BALY                               i S     Sb      15 01 14.1 +0.2
ANDZ  Kutahya, Merke      1.00  72 i P     Pg      15 01 00.5 -0.8
ANDZ                               i S     Sb      15 01 14.6 -0.2
ULDT  Uludag              1.01  21 i P     Pg      15 01 00.8 -0.6
ULDT                               i S     Sn      15 01 17.4 +0.7
PASA  Karahalli, USA      1.07 143 i P     Pg      15 01 02.2 -0.3
PASA                               i S     Sg      15 01 14.7 -1.6
KCTX  Karacabey (Bur      1.09 347   PN    Pb      15 01 03.2 +0.3
KHL   Karahalli           1.10 142   PN    Pb      15 01 03.1 -0.1
GONE  Gonen-Balikesi      1.13 318   PN    Pn      15 01 04.2 +0.3
IGD   Bursa               1.14  21 i P     Pg      15 01 03.2 -0.7
MDNY  Mudanya-Bursa       1.18   8   PN    Pg      15 01 03.7 -0.9
ZEDA  zmir-Bergama        1.26 260 i P     Pg      15 01 05.5 -0.6
ZEDA                               i S     Sb      15 01 22.6 +0.5
BUHA  Balikesir, Bur      1.27 284 i P     Pb      15 01 06.4 +0.5
AUBOZ BOZOYUK             1.27  56 i P     Pg      15 01 05.5 -0.9
AUBOZ                              i S     Sn      15 01 23.4 +0.4
AUBOZ BOZOYUK             1.27  56   PN    Pg      15 01 05.9 -0.5
IZI   Iznik               1.29  28   PN    Pb      15 01 06.9 +0.5
GEMT  Gemlik              1.30  18   PN    Pg      15 01 06.9 +0.1
EDC   Edincik             1.30 332   PN    Pg      15 01 07.2 +0.3
AFYO  Afyonkarahisar      1.34 107 i P     Pg      15 01 07.5 -0.1
AFYO                               i S     Sn      15 01 25.8 +1.1
BILE  Bilecik/Merkez      1.34  44 i P     Pn      15 01 06.7 -0.1
BILE                               i S     Sn      15 01 26.7 +2.0
CAVI  Cavuskoy            1.35  42   PN    Pn      15 01 06.8 -0.1
ARMT  Armutlu             1.37   6   PN    Pn      15 01 06.9 -0.3
DKL   Dikili              1.38 265   PN    Pb      15 01 07.6 -0.2
AYDB  Zeytinkoy-Aydi      1.39 206   PN    Pn      15 01 07.0 -0.6
AUKIR Kırka- Seyitga      1.45  86 i P     Pg      15 01 09.9 +0.2
TRML  Termal-Yalova       1.46  15   PN    Pb      15 01 09.4 +0.2
YLV   Yalova              1.47  22   PN    Pb      15 01 09.6 +0.2
ADVT  Abdulvahap          1.48  34   PN    Pn      15 01 09.1 +0.4
KZIL  AFYON_Kizioren      1.49 129 i P     Pb      15 01 09.9 +0.1
KZIL                               i S     Sg      15 01 29.4 -0.4
BLCB  Balcova             1.51 238   P     Pn      15 01 08.4 -0.6
BLCB  Balcova             1.51 238   PN    Pn      15 01 08.7 -0.3
AYVA  Ayvalik             1.54 275 i P     Pn      15 01 09.5 +0.1
BORA  Eskisehir           1.54  63 i P     Pn      15 01 09.9 +0.3
BORA  Eskisehir           1.54  63   PN    Pb      15 01 10.8 +0.2
CFTB  Yalova              1.54  18   PN    Pb      15 01 10.6  0.0
FOCM  Foa                 1.59 253   PN    Pb      15 01 11.2 -0.1
KRBG  Karabiga-Canak      1.59 319   PN    Pn      15 01 10.9 +0.7
SHUT  Suhut-Afyon         1.61 113   PN    Pn      15 01 11.1 +0.6
MRMT  Marmara Adasi       1.62 330   PN    Pn      15 01 10.9 +0.2
AYDN  Tasoluk             1.66 202 i P     Pb      15 01 12.5 -0.1
GPA   Golpazari           1.67  49   PN    Pb      15 01 12.2 -0.6
BASM  Basmaki-Afyon       1.68 139   PN    Pn      15 01 12.1 +0.6
SGAZ  Eskisehir, Sey      1.72  78 i P     Pn      15 01 12.1 +0.1
ESKT  Eskisehir           1.72  79   PN    Pb      15 01 13.1 -0.7
SRCK  Saricakaya, Es      1.73  60   PN    Pn      15 01 12.8 +0.7
TAVA  DENIZLI_Tavas       1.74 174 i P     Pn      15 01 12.6 +0.2
HRT   Hereke              1.79  25   PN    Pn      15 01 12.6 -0.4
GEYV  SAKARYA_Geyve       1.79  44 i P     Pb      15 01 15.2 +0.3
DGB   zmir                1.81 231 i P     Pg      15 01 15.9 -0.7
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DGB				i S	Sb	15 01 38.4	+0.6
URLA	Izmir	1.82	243	i P	Pg	15 01 16.4	-0.5
URLA	Izmir	1.82	243	PN	Pn	15 01 14.3	+0.9
MAR2	Marsite Statio	1.84	326	PN	Pn	15 01 14.6	+1.0
MAR6	Marsite Statio	1.85	325	PN	Pb	15 01 15.1	-0.7
PRK	Paraskevi	1.86	272	P	Pb	15 01 15.1	-0.9
CIFT	Cifteler, Eski	1.87	84	PN	Pn	15 01 15.0	+0.9
MAR3	Marsite Statio	1.87	326	PN	Pn	15 01 14.9	+0.9
GCAM	G?zelcaml?	1.87	217	i P	Pb	15 01 16.8	+0.6
GCAM	G?zelcaml?	1.87	217	PN	Pb	15 01 15.3	-0.9
RKY	Sarkoy-Tekirda	1.88	323	PN	Pn	15 01 13.9	-0.3
LPK	Lapseki	1.88	309	PN	Pn	15 01 14.6	+0.5
GULT	Gulveren	1.88	49	PN	Pn	15 01 14.9	+0.6
KAVV	Kandilli-Istan	1.89	9	PN	Pn	15 01 14.9	+0.7
ISK	Istanbul-Kandi	1.89	9	P	Pg	15 01 17.4	-0.7
ISK	Istanbul-Kandi	1.89	9	PN	Pn	15 01 15.3	+1.0
MAR4	Marsite Statio	1.90	327	PN	Pn	15 01 14.4	-0.1
EZN	Ezine	1.92	290	PN	Pn	15 01 14.9	+0.3
BGKT	Bogazkoy	1.98	2	PN	Pn	15 01 16.5	+1.0
GPNR	Gulpinar-Canak	1.98	278	PN	Pn	15 01 16.5	+1.0
SAUV	Serdivan-Sakar	2.00	39	PN	Pn	15 01 16.4	+0.6
MLSB	Milas	2.03	200	PN	Pn	15 01 17.2	+1.0
SLVT	Silivri	2.06	350	PN	Pn	15 01 17.6	+1.0
SMG	Samos	2.07	225	P	Pn	15 01 16.4	-0.4
KLYT	Kilyos	2.07	8	PN	Pn	15 01 16.7	-0.1
YER	Yerkesik	2.08	188	P	Pb	15 01 20.4	+0.5
YER	Yerkesik	2.08	188	PN	Pn	15 01 17.9	+0.9
SILT	Sile	2.09	21	PN	Pn	15 01 18.1	+1.1
CHOS	Chios island	2.20	249	P	Pn	15 01 18.6	0.0
SVRH	Sivrihisar-ESK	2.23	83	PN	Pn	15 01 20.0	+0.9
AUSIV	SIVRIHISAR	2.24	83	PN	Pn	15 01 20.4	+1.2
CAME	Cameli-Denizli	2.31	167	PN	Pn	15 01 21.4	+1.2
MDUB	Mudurnu	2.33	56	PN	Pn	15 01 20.7	+0.3
GADA	Gvkgeada	2.35	296	P	Pg	15 01 26.4	-0.6
ALN	Alexandroupoli	2.63	311	P	Pn	15 01 24.6	+0.1
SMTH	Samothraki Isl	2.73	299	P	Pn	15 01 26.3	+0.5
KDZ	Kurdzhali	3.48	316	i P	Pn	15 01 36.8	+0.6
JMB	Yambol	3.62	335	i P	Pn	15 01 38.9	+0.7
DIM	Dimitrovgrad	3.71	321	i P	Pn	15 01 39.7	+0.4
BRTR	Keskin Array B	3.88	81	Pn	Pn	15 01 42.6	+0.8
	1.0nm,0.3s,baz=255,slow=14,SNR=14						
BRTR				Pg	Pg	15 01 54.2	-2.2
	2.0nm,0.3s,baz=261,slow=15,SNR=10						
BRTR				Sn	Sn	15 02 26.5	-1.2
	0.4nm,0.3s,baz=278,slow=23,SNR=1.7						
BRTR				Lg	Lg	15 02 46.0	
	1.1nm,0.3s,baz=265,slow=33,SNR=9.1						
BRTR				LR	LR	15 02 52.0	
	comp=Z,21nm,18.5s,baz=322,slow=33						
RZN	Rozhen	3.91	311	i P	Pn	15 01 42.6	+0.4
MMB	Musomiste	4.46	304	i P	Pn	15 01 50.3	+0.6
VAY	Valandovo	5.12	296	i Pn	Pn	15 02 03.2	+4.5
STIP	Stip	5.54	299	i Pn	Pn	15 02 03.6	-0.8
SEV	Sevastopol'	6.51	33	eP	Pn	15 02 17.5	-0.3
SEV				Pm		15 02 20.8	
	comp=Z,4.0nm,0.3s						
SEV				eS	Sn	15 03 27.4	-4.8
SEV				Sm		15 03 29.6	
	comp=N,5.0nm,0.3s,comp=E,2.0nm,0.3s						
YAL	Yalta	6.68	36	eS	Sn	15 03 33.6	-2.7
YAL				Sm		15 03 33.9	
	comp=N,33nm,0.3s,comp=E,23nm,0.3s						
SIM	Simferopol'	7.03	33	eP	Pn	15 02 26.8	+1.9
SIM				Pm		15 02 27.2	
	comp=Z,43nm,0.3s						
SUDU	Sudak	7.38	38	⇓iP	Pn	15 02 30.9	+1.2
SUDU				Pm		15 02 31.2	
	comp=Z,6.0nm,0.3s						
SUDU				eS	Sn	15 03 53.5	0.0
SUDU				Sm		15 03 54.3	
	comp=E,8.0nm,0.3s						
SUDU				Sm		15 03 54.0	
	comp=N,21nm,0.4s						
KEST	Kesra	15.72	263	LR	LR	15 10 24.3	
	comp=N,51nm,19.5s,baz=175,slow=37						
TORD	Torodi Ar. Bea	35.23	230	P	P	15 07 36.5	-0.1
	comp=N,0.6nm,0.8s,baz=28,slow=9.2,SNR=3.4						
MKAR	Makanchi Array	39.28	61	P	P	15 08 12.1	+1.2
	comp=N,0.4nm,0.6s,baz=269,slow=9.0,SNR=3.9						

MAN 16 15:02:27.7, 15°.07N×122°.14E, h1^{km}, mb3.6, ML2.4, MS1.8, 1C-2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCNP	Jose Panganiba	0.94	145	⇑eP	Pg	15 02 43.2	-2.6
JCNP				i S	Sg	15 02 54.4	-3.6
LQP	Lukban	1.11	212	⇓eP	Pn	15 02 55.9	+5.3
GQP	Guinayangan	1.19	166	⇓eP	Pn	15 02 59.4	+7.9
GQP				eS	Sb	15 03 06.5	-0.5

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*ISK **16** 15:02:54.9, 39°.17N×28°.67E, h10^{km}, ML2.6/15*

*DDA **16** 15:02:54.8, 39°.18N×28°.68E, h7^{km}±3^{km}, ML2.1*

ISC 16 15:02:55.1±0.9**, 39°.18N**±0°.03×**28°.67E**±0°.03**, h12^{km}**±8^{km}**, n22,** σ**0^{s}.48**/29**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DEMI	Demirci	0.14	165	i P	Pg	15 02 58.6	0.0
DEMI				i S	Sg	15 03 00.8	-0.3
DEMI				IAML		15 03 01.0	
	comp=N,1µm,0.4s						
DEMI				IAML		15 03 01.0	
	comp=E,876nm,0.2s						
SMAA	Simav-Kutahya	0.26	108	PG	Pg	15 03 00.7	+0.2
SMAA				SG	Sg	15 03 04.7	+0.7
SIMA	Simav-Kutahya	0.26	112	PG	Pg	15 03 00.5	-0.1
SIMA				SG	Sg	15 03 04.6	+0.3
DURS	Dursunbey	0.45	340	i P	Pg	15 03 03.5	-0.4
DURS				i S	Sg	15 03 08.7	-1.2
DURS				IAML		15 03 11.0	
	comp=N,105nm,0.5s						
SHAP	Saphane-Kutahy	0.46	110	PG	Pg	15 03 04.2	0.0
SHAP				SG	Sb	15 03 10.9	-1.1
KULA	Kula-Manisa	0.67	181	PG	Pg	15 03 08.0	-0.1
TVSB	Tavsanli	0.67	66	PG	Pg	15 03 07.8	-0.4
MANT	Manisa	0.70	187	i P	Pb	15 03 08.9	-0.4
MANT				i S	Sg	15 03 17.6	-0.2
MANT				IAML		15 03 18.0	
	comp=E,188nm,0.3s						
MANT				IAML		15 03 18.0	
	comp=N,86nm,0.5s						
AKHS	Akhisar	0.73	246	i P	Pb	15 03 09.6	-0.3
AKS	Akhisar	0.73	246	PG	Pg	15 03 09.3	0.0
BALB	Balikesir	0.76	307	PG	Pb	15 03 10.9	+0.6
STEP	BALIKESIR_Sava	0.76	285	i P	Pb	15 03 10.9	+0.5
STEP				i S	Sb	15 03 20.9	+0.1
STEP				IAML		15 03 23.0	
	comp=N,68nm,0.6s						
STEP				IAML		15 03 23.0	
	comp=E,72nm,0.3s						
ORLT	Orhaneli	0.88	11	PG	Pb	15 03 12.7	+0.3
KCTX	Karacabey (Bur	1.11	348	PN	Pn	15 03 16.7	+0.2
GONE	Gonen-Balikesi	1.15	319	PN	Pn	15 03 17.5	+0.4
MDNY	Mudanya-Bursa	1.20	8	PN	Pg	15 03 18.1	0.0
GEMT	Gemlik	1.31	18	PN	Pb	15 03 19.9	+0.2
CAVI	Cavuskoy	1.36	41	PN	Pn	15 03 20.4	+0.4
ARMT	Armutlu	1.39	6	PN	Pb	15 03 21.1	0.0
TRML	Termal-Yalova	1.48	15	PN	Pb	15 03 22.3	-0.2
YLV	Yalova	1.48	21	PN	Pn	15 03 22.3	+0.5
ADVT	Abdulvahap	1.50	33	PN	Pn	15 03 22.4	+0.6

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*INET **16** 15:03:35.1, 11°.16N×86°.62W, h15^{km}, MW3.3*

UCR 16 15:03:35.2±1.6**, 11°.02N×86°.75W, h15^{km}**±9^{km}**, MW3.6, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HZTE	Horizontes, Gu	1.18	105	eP	Pn	15 03 56.4	-0.8
HZTE				eS	Sn	15 04 13.0	0.0
SAJU	San Juanillo,	1.40	133	eP	Pn	15 03 59.0	-1.2
VMAR	Armenia, Volca	1.61	97	eP	Pn	15 04 03.1	-0.1
VMAR				eS	Sb	15 04 24.9	-0.1
ARE1	Arenal 1	2.07	105	eP	Pb	15 04 12.1	-0.5
CEDE	Laguna Cedeo	2.08	105	eP	Pb	15 04 11.5	-1.2

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*ISK **16** 15:04:18.2, 39°.31N×25°.44E, h8^{km}, ML3.5/27*

*DDA **16** 15:04:18.5, 39°.26N×25°.46E, h23^{km}±2^{km}, MW3.7*

*ATH **16** 15:04:19.5, 39°.32N×25°.46E, h16^{km}±2^{km}, ML3.3/13, Error ellipse: s-maj=3.2km s-min=1.1km az=42.0*

*THE **16** 15:04:19.1, 39°.29N×25°.45E, h7^{km}±1^{km}, ML3.4/11, Error ellipse: s-maj=1.4km s-min=0.5km az=114.0*

*SOF **16** 15:04:20.0, 39°.56N×25°.45E, h2^{km}, MD3.2*

ISC 16 15:04:19.2±0.9**, 39°.29N**±0°.02×**25°.45E**±0°.02**, h11^{km}**±8^{km}**, n112,** σ**0^{s}.69**/152**, 11C-4D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIGR	SIGRI	0.32	105	P	Pg	15 04 25.4	-0.2
SIGR				S	Sg	15 04 30.3	+0.3
	8µm,0.4s						
SIGR	SIGRI	0.32	105	P	Pg	15 04 25.4	-0.2
SIGR				S	Sg	15 04 30.3	+0.3
SIGR				AML	AML	15 04 30.5	
	comp=E,16911µm,0.3s						
SIGR				AML	AML	15 04 30.9	
	comp=N,14856µm,0.6s						
SIGR	SIGRI	0.32	105	PG	Pg	15 04 25.5	-0.2
SIGR				SG	Sg	15 04 30.4	+0.4
EFSA	Agios Efstrati	0.44	305	P	Pb	15 04 29.3	+0.4
EFSA				S	Sb	15 04 35.0	-0.5
EFSA				AML	AML	15 04 36.0	
	comp=E,10864µm,0.5s						
EFSA				AML	AML	15 04 40.6	
	comp=N,6748µm,0.4s						
GPNR	Gulpinar-Canak	0.55	73	PG	Pg	15 04 29.7	-0.2
GPNR				SG	Sg	15 04 37.4	+0.2
KOCA	Canakkale, Ayv	0.57	68	i P	Pg	15 04 30.1	-0.1
KOCA				i S	Sg	15 04 37.5	-0.3
PRK	Paraskevi	0.64	94	P	Pb	15 04 32.4	+0.1
PRK				S	Sb	15 04 40.7	-0.5
	comp=N,6µm,0.6s						
PRK	Paraskevi	0.64	94	P	Pb	15 04 32.4	+0.1
PRK				S	Sb	15 04 40.7	-0.5
PRK				AML	AML	15 04 42.7	
	comp=E,15962µm,0.6s						
PRK				AML	AML	15 04 43.8	
	comp=N,10297µm,0.7s						
LIA	Limnos Island	0.64	341	P	Pg	15 04 31.6	+0.1
LIA				S	Sg	15 04 40.3	+0.4
	comp=N,5µm,0.4s						
LIA	Limnos Island	0.64	341	P	Pg	15 04 31.6	+0.1
LIA				S	Sg	15 04 40.3	+0.4
LIA				AML	AML	15 04 44.4	
	comp=E,8234µm,0.3s						
LIA				AML	AML	15 04 44.6	
	comp=N,12328µm,0.4s						
BOZC	Bozcaada	0.72	40	i P	Pg	15 04 32.7	-0.3
BOZC				i S	Sb	15 04 43.8	+0.2
BOZC	Bozcaada	0.72	40	PG	Pg	15 04 32.3	-0.7
BOZC				SG	Sg	15 04 42.6	+0.2
PSRA	Psara	0.76	173	P	Pb	15 04 34.2	-0.1
PSRA				S	Sg	15 04 44.3	+0.7
PSRA				AML	AML	15 04 46.6	
	comp=E,14179µm,0.2s						
PSRA				AML	AML	15 04 46.7	
	comp=N,15624µm,0.3s						
SKY	Skiros Island	0.82	240	P	Pg	15 04 35.0	+0.1
SKY				S	Sb	15 04 46.4	0.0
	comp=N,7µm,0.4s						
SKY	Skiros Island	0.82	240	P	Pg	15 04 34.9	+0.1
SKY				S	Sb	15 04 46.4	0.0
SKY				AML	AML	15 04 49.8	
	comp=N,15429µm,0.6s						
SKY				AML	AML	15 04 50.0	
	comp=E,13648µm,0.3s						
EZN	Ezine	0.86	52	PG	Pg	15 04 34.9	-0.8
EZN				SG	Sb	15 04 47.8	+0.2
ECEA	Canakkale, Ece	0.93	36	i P	Pg	15 04 36.8	-0.3
ECEA				i S	Sb	15 04 50.4	+0.6
GADA	Gvkgeada	0.96	21	P	Pg	15 04 36.5	-1.1
GADA	Gvkgeada	0.96	21	PG	Pg	15 04 36.7	-0.9
GADA				SG	Sb	15 04 50.5	0.0
AYVA	Ayvalik	0.96	89	i P	Pg	15 04 37.4	-0.2
AYVA				i S	Sg	15 04 50.2	0.0
GOKA	anakkale-Gk	0.96	21	i P	Pg	15 04 36.5	-1.1
GOKA				i S	Sn	15 04 52.0	-0.3
CHOS	Chios island	1.02	152	P	Pg	15 04 38.4	-0.4
CHOS				S	Sb	15 04 52.6	+0.2
	comp=E,4µm,0.3s						
CHOS	Chios island	1.02	152	P	Pg	15 04 38.4	-0.4
CHOS				S	Sg	15 04 51.9	-0.2
CHOS				AML	AML	15 04 53.8	
	comp=N,6328µm,0.3s						
CHOS				AML	AML	15 04 54.3	
	comp=E,9656µm,0.3s						
CHOS	Chios island	1.02	152	PG	Pg	15 04 38.4	-0.4
CAND	Candarli	1.10	107	PN	Pb	15 04 40.2	-0.1
DKL	Dikili	1.15	101	PN	Pb	15 04 40.9	-0.2
FOCM	Foa	1.15	120	PN	Pb	15 04 41.2	+0.1
CESE	eme	1.17	145	PN	Pb	15 04 41.5	+0.1
SMTH	Samothraki Isl	1.18	3	P	Pb	15 04 40.7	-0.8
SMTH				S	Sn	15 04 57.9	+0.2
	comp=E,418nm,0.4s						
SMTH	Samothraki Isl	1.18	3	P	Pb	15 04 40.7	-0.8
SMTH				AML	AML	15 04 58.8	
	comp=E,712µm,0.5s						
SMTH				AML	AML	15 05 04.0	
	comp=N,1066µm,0.5s						
ALNA	Alonissos	1.24	264	P	Pn	15 04 42.1	-0.3
KYMI	Kymi, Euboea I	1.24	238	P	Pn	15 04 41.4	-1.1
KYMI				S	Sg	15 04 59.1	-0.1
	comp=N,1µm,0.6s						
KYMI	Kymi, Euboea I	1.24	238	P	Pn	15 04 41.4	-1.1
KYMI				S	Sg	15 04 59.1	-0.1
KYMI				AML	AML	15 05 03.8	
	comp=N,2481µm,0.8s						
KYMI				AML	AML	15 05 05.2	
	comp=E,2591µm,0.5s						
URLA	Izmir	1.29	136	i P	Sb	15 04 59.8	-0.3
URLA	Izmir	1.29	136	PN	Pn	15 04 42.6	-0.6
ZEDA	zmir-Bergama	1.30	104	i P	Pn	15 04 42.8	-0.6
ZEDA				i S	Sb	15 05 00.6	+0.1
ZEYE	Izmir, Urla-Ze	1.34	142	i P	Pn	15 04 43.3	-0.4
ZEYE				i S	Sg	15 05 02.3	+0.2
GELI	Tayfur-Gelibol	1.35	35	PN	Pn	15 04 43.2	-0.8
THAS	Thassos island	1.43	337	P	Pn	15 04 44.0	-1.0
THAS				S	Sg	15 05 04.8	-0.3
	comp=E,702nm,0.5s						
THAS	Thassos island	1.43	337	P	Pn	15 04 44.0	-1.0
THAS				AML	AML	15 05 07.1	
	comp=N,1870µm,0.3s						
THAS				AML	AML	15 05 08.2	
	comp=E,983µm,0.4s						
LPK	Lapseki	1.47	43	PN	Pn	15 04 44.5	-1.2
KARY	Karystos	1.49	213	P	Pn	15 04 44.7	-1.2
KARY	Karystos	1.49	213	P	Pn	15 04 44.7	-1.2
CAVK	Edirne/Enez-Ca	1.50	21	i P	Pn	15 04 45.9	-0.2
CAVK				i S	Sg	15 05 08.7	+1.2
PAIG	Paliouri	1.51	295	P	Pn	15 04 45.7	-0.4
PAIG	Paliouri	1.51	295	P	Pn	15 04 45.7	-0.4
PAIG				AML	AML	15 05 09.9	
	comp=E,941µm,0.5s						
PAIG				AML	AML	15 05 10.0	
	comp=N,561µm,0.7s						
BLCB	Balcova	1.54	126	PN	Pn	15 04 46.8	+0.3
OUR	Ouranopolis	1.54	313	P	Pn	15 04 46.2	-0.3
OUR				S	Sn	15 05 06.1	-0.4
	comp=N,812nm,0.5s						
OUR	Ouranopolis	1.54	313	P	Pn	15 04 46.2	-0.3
OUR				AML	AML	15 05 11.1	
	comp=E,1618µm,0.5s						
OUR				AML	AML	15 05 12.0	
	comp=N,1660µm,0.6s						
OUR	Ouranopolis	1.54	313	PN	Pn	15 04 45.9	-0.6
ENEZ	Enez	1.54	20	P	Pn	15 04 46.1	-0.5
ENEZ	Enez	1.54	20	PN	Pn	15 04 46.3	-0.3
ERIK	Erikli-Kesan	1.60	30	PN	Pn	15 04 47.0	-0.4
ALN	Alexandroupoli	1.67	16	P	Pn	15 04 47.6	-0.7
ALN				S	Sn	15 05 10.1	+0.4
	comp=N,372nm,0.4s						
ALN	Alexandroupoli	1.67	16	P	Pn	15 04 47.6	-0.7
ALN				AML	AML	15 05 14.0	
	comp=N,281µm,0.5s						
ALN				AML	AML	15 05 15.5	
	comp=E,529µm,0.4s						
ALN	Alexandroupoli	1.67	16	PN	Pn	15 04 47.8	-0.5
DGB	zmir	1.67	137	i P	Pn	15 04 49.1	+0.8
DGB				i S	Sb	15 05 12.0	+1.0
NEO	Neokhori	1.73	271	P	Pn	15 04 48.7	-0.5
NEO	Neokhori	1.73	271	P	Pn	15 04 48.7	-0.5
XOR	Xorichti	1.75	273	P	Pn	15 04 48.9	-0.7
XOR	Xorichti	1.75	273	P	Pn	15 04 48.9	-0.7
STEP	BALIKESIR_Sava	1.76	87	i P	Pn	15 04 50.1	+0.5
STEP				i S	Sb	15 05 14.3	+0.7
KRBG	Karabiga-Canak	1.79	52	PN	Pn	15 04 49.7	-0.4
KESN	Edirne-Kesan	1.80	31	i P	Pn	15 04 49.4	-1.1
KESN				i S	Sn	15 05 13.5	+0.1
KAVA	Kavala	1.85	337	P	Pn	15 04 50.6	-0.2
KAVA	Kavala	1.85	337	P	Pn	15 04 50.6	-0.2
RDO	Rodhopi	1.85	2	P	Pn	15 04 50.7	-0.2
RDO	Rodhopi	1.85	2	P	Pn	15 04 50.7	-0.2
RDO	Rodhopi	1.85	2	PN	Pn	15 04 50.5	-0.4
GONE	Gonen-Balikesi	1.88	66	PN	Pn	15 04 51.3	0.0
AKS	Akhisar	1.88	102	PN	Pn	15 04 51.6	+0.3
AKHS	Akhisar	1.88	102	i P	Pn	15 04 51.5	+0.2
PLG	Polygyros	1.89	306	P	Pn	15 04 51.5	+0.1
PLG	Polygyros	1.89	306	P	Pn	15 04 51.5	+0.1
BALB	Balikesir	1.91	79	PN	Pn	15 04 52.2	+0.5
SMG	Samos	1.92	145	P	Pn	15 04 51.2	-0.6
SMG				S	Sn	15 05 15.8	-0.2
	comp=E,715nm,0.4s						
SMG	Samos	1.92	145	P	Pb	15 04 54.6	+0.4
SMG				S	Sg	15 05 20.4	-0.4
RKY	Sarkoy-Tekirda	1.92	43	PN	Pn	15 04 51.6	-0.3
MAR6	Marsite Statio	1.98	44	PN	Pn	15 04 52.6	-0.1
MAR2	Marsite Statio	2.02	45	PN	Pn	15 04 53.5	+0.4
MAR3	Marsite Statio	2.02	44	PN	Pn	15 04 53.4	+0.2
UKOP	Uzunkopru-Edir	2.04	26	PN	Pn	15 04 53.4	-0.1
MAR4	Marsite Statio	2.06	43	PN	Pn	15 04 53.9	+0.1
MRMT	Marmara Adasi	2.10	51	PN	Pn	15 04 54.8	+0.4
KDZ	Kurdzhali	2.35	359	i P	Pn	15 04 57.3	-0.5
DURS	Dursunbey	2.36	82	i P	Pn	15 04 57.8	-0.1
DURS				i S	Sb	15 05 31.3	+0.4
KCTX	Karacabey (Bur	2.44	66	PN	Pn	15 04 59.3	+0.3
RZN	Rozhen	2.46	347	i P	Pn	15 04 59.1	-0.3
DEMI	Demirci	2.55	95	i P	Pg	15 05 09.6	+1.6
DEMI				i S	Sg	15 05 39.7	-1.4
MMB	Musomiste	2.64	331	i P	Pn	15 05 01.4	-0.4
EDRB	Edirne	2.73	21	PN	Pn	15 05 03.4	+0.4
DIM	Dimitrovgrad	2.75	1	i P	Pn	15 05 03.5	+0.2
SLVT	Silivri	2.86	47	PN	Pn	15 05 05.3	+0.5
VAY	Valandovo	2.99	313	i Pn	Pn	15 05 08.3	+1.7
VAY				i Sn	Sg	15 05 56.3	+1.1
KKB	Krupnik	3.14	326	i P	Pn	15 05 09.9	+1.3
STIP	Stip	3.46	315	i Pn	Pn	15 05 12.5	-0.5
STIP				i Sn	Sb	15 06 06.0	+3.5
VTS	Vitosha	3.72	334	⇑P	Pn	15 05 17.9	+1.2
VTS	Vitosha	3.72	334	i P	Pn	15 05 17.9	+1.2
PLVB	Pleven	4.14	352	⇓P	Pn	15 05 22.7	+0.4
BLKB	Belogradchik	4.80	335	⇑S	Sg	15 06 51.7	-1.6
BOVS	Bovan	5.17	328	P	Pn	15 05 36.2	-0.2
HERR	Herculane	6.02	339	⇓P	Pn	15 05 48.1	-0.1
VOIR		6.15	357	⇓P	Pn	15 05 50.5	+0.6
MDVR	Moldovita	6.15	334	⇑P	Pn	15 05 50.0	0.0
MLR	Muntele Rosu	6.20	3	⇑P	Pn	15 05 50.8	0.0
LOT	Lotru	6.28	349	⇑P	Pn	15 05 51.6	-0.2
GZR	Gura Zlata	6.41	343	⇑P	Pn	15 05 53.8	+0.2
GZR				⇑S		15 05 57.5	
PLOR	Plostina	6.61	7	⇑P	Pn	15 05 55.2	-1.1
VRI	Vrincioaia	6.63	8	⇓P	Pn	15 05 54.6	-2.0
DOPR	Dopca	6.67	360	⇑P	Pn	15 05 56.8	-0.3
TESR	Tescani	7.27	7	⇑P	Pn	15 06 05.0	-0.3
DRGR		7.76	346	⇑P	Pn	15 06 13.5	+1.5

IDC 16 15:08:10.6±3.2**, 6°.12S×147°.28E, h0^{km}, mb3.2**/2**, mb1 3.4**/4**, mb1mx3.2**/31**, mbtmp3.3**/4**, ML2.7**/2**, Error ellipse: s-maj=59.7km s-min=32.2km az=80.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.27	182	Pn	Pn	15 09 04.8	+1.6
	9.2nm,0.3s,baz=10,slow=11,SNR=12						
PMG				Pg	Pb	15 09 09.7	0.0
	9.2nm,0.3s,baz=5.5,slow=11,SNR=30						
PMG				Sn	Sn	15 09 41.4	-1.5
	7.9nm,0.3s,baz=318,slow=10,SNR=7.3						
PMG				Lg	Lg	15 09 50.8	
	12nm,0.3s,baz=286,slow=20,SNR=8.8						
WRA	Warramunga Arr	18.63	221	P	P	15 12 29.9	-0.1
	0.1nm,0.3s,baz=48,slow=11,SNR=6.9						
ASAR	Alice Springs	21.68	215	P	P	15 13 03.2	-0.1
	0.3nm,0.5s,baz=47,slow=8.7,SNR=16						
FITZ	Fitzroy Crossi	24.25	239	P	P	15 13 29.9	+0.4
	1.3nm,0.6s,baz=51,slow=14,SNR=6.7						
TORD	Torodi Ar. Bea	145.39	284	PKPbc	PKPbc	15 27 49.8	-1.7
	0.4nm,0.6s,baz=82,slow=3.7,SNR=2.4						

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*SJA **16** 15:15:24.9±0.7, 31°.85S×72°.39W, h6^{km}±5^{km}, ML4.5, MW4.1*

*NEIC **16** 15:15:29.8±1.4, 31°.84S±0°.04×72°.05W±0°.08, h10^{km}±1^{km}, mb4.5/14, Mwr4.1/35, ML4.4(GUC), Error ellipse: s-maj=11.2km s-min=6.4km az=263.0*

*NEIC **16** 15:15:29.8, 31°.84S×72°.05W, h21^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.86; M$_{\theta\theta}$0.13; M$_{\phi\phi}$-1.98; M$_{r\theta}$0.29; M$_{\theta\phi}$-0.10; M$_{\phi r}$-0.50; Fault plane solution: M$_0$2.01000×10^{15} NP1:φ$_s$173.28000°, δ52.90000°, λ78.24000°. NP2:φ$_s$12.32000°, δ38.66000°, λ105.08000°. Principal axes: T 1.9712, Plg78.0000°, Azm39.0000°; N 0.0791, Plg9.0000°, Azm180.0000°; P -2.0504, Plg7.0000°, Azm272.0000°;*

*GUC **16** 15:15:30.9±0.8, 31°.84S×72°.01W, h32^{km}±3^{km}, ML4.4*

*IDC **16** 15:15:33.0±6.5, 31°.84S×71°.72W, h29^{km}±44^{km}, mb4.3/6, mb1 4.2/11, mb1mx4.0/32, mbtmp4.2/11, ML4.0/5, MS3.5/8, Ms1 3.5/8, ms1mx3.2/24, Error ellipse: s-maj=29.2km s-min=19.9km az=94.0*

*VAO **16** 15:15:52.3±1.5, 31°.18S×70°.60W, h133^{km}±9^{km}, mb4.2*

ISC 16 15:15:29.5±1.2**, 31°.78S**±0°.02×**71°.94W**±0°.04**, h12^{km}**±7^{km}**, n142,** σ**1^{s}.70**/161**, mb4.6**/9**, MS3.6**/6**, 7C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA06	Catapilco	0.95	145	⇓iP	Pb	15 15 48.2	+0.2
VA06				i S	Sb	15 16 00.2	-0.3
VA06				IAML		15 16 03.7	
	comp=N,33µm,0.5s						
CO06	Fray Jorge	1.13	13	⇑iP	Pg	15 15 52.3	+1.1
CO06				i S	Sg	15 16 07.8	+1.9
CO06	Fray Jorge	1.13	13		Pg	15 15 52.3	+1.1
VA01	Torpederas	1.27	169	eP	Pn	15 15 52.3	-0.7
VA01				i S	Sb	15 16 06.8	-2.7
VA01	Torpederas	1.27	169	Pn	Pn	15 15 52.5	-0.5
VA01	Torpederas	1.27	169	eP	Pg	15 16 03.5	+10
ROC1	El Roble	1.43	147	eP	Pn	15 15 55.0	-0.5
VA03	San Esteban	1.53	130	⇓iP	Pn	15 15 57.7	+0.9
VA03				i S	Sn	15 16 17.5	+0.8
VA03				IAML		15 16 22.6	
	comp=E,9µm,0.3s						
VA03	San Esteban	1.53	130		Pn	15 15 57.7	+0.9
VA03	San Esteban	1.53	130	eP	Pg	15 15 59.8	+0.8
VA03				IAML		15 16 24.5	
	comp=Z,3µm,0.6s						
MT02	Curacav	1.63	156		Pn	15 15 58.1	+0.1
PEL	Peldehue	1.73	142	⇑iP	Pn	15 16 00.3	+0.9
PEL				i S	Sn	15 16 21.8	+0.4
PEL				IAML		15 16 31.9	
	comp=N,5µm,0.4s						
PEL	Peldehue	1.73	142		Pn	15 16 00.2	+0.9
PEL	Peldehue	1.73	142	eP	Pn	15 16 00.6	+1.2
PEL				eS	Sg	15 16 27.1	+2.0
GO04	Tololo Observa	1.87	32	⇑iP	Pb	15 16 03.5	-0.2
GO04				i S	Sg	15 16 29.4	-0.5
GO04	Tololo Observa	1.87	32		Pb	15 16 03.6	-0.2
GO04	Tololo Observa	1.87	32	eP	Pn	15 16 03.0	+1.4
VA05	Santo Domingo	1.90	172		Pn	15 16 01.3	-0.3
MT05	Renca	1.90	148	eP	Pn	15 16 02.6	+0.8
MT05				i S	Sb	15 16 27.3	-0.7
MT05				IAML		15 16 33.6	
	comp=E,7µm,0.2s						
MT05	Renca	1.90	148		Pn	15 16 02.3	+0.5
MT05	Renca	1.90	148	eP	Pn	15 16 03.0	+1.2
MT05				eP	Pn	15 16 03.0	+1.2
MT05				eS	Sg	15 16 30.3	-0.5
MT05				IAML		15 16 32.7	
	comp=Z,2µm,0.5s						
CO05	La Serena	1.95	18	eP	Pb	15 16 04.3	-0.6

CO05	La Serena	1.95	18		Pb	15 16 04.0	-0.9
MT09	Talagante	2.15	158	⇑*i*P	Pn	15 16 06.3	+1.0
MT09				IAML		15 16 41.0	
	comp=E,3µm,0.3s						
MT09	Talagante	2.15	158		Pn	15 16 06.3	+1.0
MT01	Popeta	2.16	165	⇑*i*P	Pn	15 16 05.5	+0.2
MT01				IAML		15 16 38.2	
	comp=E,1µm,0.2s						
MT01	Popeta	2.16	165		Pn	15 16 05.4	+0.1
MT01	Popeta	2.16	165	*e*P	Pn	15 16 05.0	-0.3
MT01				*e*S	Sg	15 16 38.8	-0.2
MT01				IAML		15 16 41.1	
	comp=Z,1µm,0.8s						
AUSP	Uspallata	2.21	102	*e*P	Pb	15 16 10.6	+1.0
AUSP				*e*S	Sg	15 16 43.4	+2.6
RTLS	Leoncito	2.25	91	*e*P	Pb	15 16 11.3	+1.0
RTLS				*e*S	Sb	15 16 39.0	+0.8
RTLS				IAML		15 16 52.4	
	comp=Z,1µm,0.5s						
BO04	La Punta	2.48	153	⇑*i*P	Pn	15 16 10.8	+1.2
LMEL	Las Melosas	2.53	145	⇑*i*P	Pn	15 16 12.1	+1.6
LMEL				*i* S	Sn	15 16 43.1	+1.7
LMEL				IAML		15 16 56.5	
	comp=N,2µm,0.3s						
AROD	Rodeo	2.66	54	*e*P	Pb	15 16 17.0	-0.2
AROD				*e*S	Sg	15 16 56.5	+1.6
BO01	Tunca	2.71	165	Pn	Pn	15 16 12.8	0.0
ACCO	Cerro Coronel	2.73	65	*e*P	Pb	15 16 18.0	-0.5
ACCO				*e*P	Pg	15 16 18.4	-3.5
ACCO				*e*S	Sg	15 16 58.6	+1.2
ASAL	Salagasta	2.75	108	*e*P	Pb	15 16 18.8	0.0
ASAL				*e*P	Pg	15 16 19.0	-3.3
ASAL				*e*S	Sg	15 16 59.0	+0.9
ARCO	CERRO ARCO	2.76	113	*e*P	Pb	15 16 18.8	0.0
ARCO				*e*P	Pg	15 16 19.0	-3.4
ARCO				*e*S	Sb	15 16 53.5	+0.8
ARCO				IAML		15 17 02.9	
	comp=Z,982nm,1.2s						
ZON	Zonda	2.79	86	Pn	Pn	15 16 16.7	+2.7
ZON	Zonda	2.79	86	*e*P	Pb	15 16 19.0	-0.3
ZON				*e*S	Sb	15 16 55.0	+1.5
ZON				IAML		15 17 12.2	
	comp=Z,726nm,0.5s						
RTCV	Cerro Valdivia	2.90	93	*e*P	Pb	15 16 20.0	-1.1
RTCV				*e*S	Sb	15 16 56.5	0.0
AAGR	Agrelo	2.94	117	*e*P	Pb	15 16 21.0	-0.8
AAGR				*e*S	Sg	15 17 05.1	+1.2
LCO	Las Campanas	2.96	22	Pn	Pn	15 16 18.0	+1.5
LCO	Las Campanas	2.96	22	*e*P	Pn	15 16 18.0	+1.5
BO02	Sierra Bellavi	3.16	162		Pn	15 16 19.6	+0.5
GO05	Huala	3.23	180		Pn	15 16 18.2	-1.7
GO05	Huala	3.23	180	*e*P	Pn	15 16 18.6	-1.4
GO05				*e*P	Pb	15 16 19.0	-7.7
AC04	Llanos de Chal	3.64	12		Pn	15 16 26.3	+0.7
RFA	San Rafael	4.17	137	*e*P	Pn	15 16 36.0	+3.0
RFA				*e*S	Sg	15 17 40.5	-2.9
RFA				IAML		15 17 44.5	
	comp=Z,269nm,1.5s						
GO03	Copiap	4.42	20	Pn	Pn	15 16 38.1	+1.7
GO03	Copiap	4.42	20	*e*P	Pn	15 16 39.0	+2.5
GO03				*e*S	Sb	15 17 36.0	-4.5
GO03				*e*S	Sg	15 17 40.5	-11
VCA	Vinchina	4.43	48	*e*P	Pn	15 16 42.0	+5.3
VCA				*e*S	Sb	15 17 37.5	-3.3
VCA				IAML		15 18 12.5	
	comp=Z,805nm,0.7s						
APLL	PUNTA DE LOS L	4.84	75	*e*P	Pn	15 16 46.2	+4.0
APLL				*e*S	Sb	15 17 49.0	-3.6
APLL				IAML		15 17 54.0	
	comp=Z,424nm,0.7s						
ACLC	CERRO LA CRUZ	4.90	63	*e*P	Pn	15 16 47.0	+3.9
ACLC				*e*S	Sb	15 17 50.5	-3.7
ACLC				IAML		15 17 57.0	
	comp=Z,718nm,0.6s						
MRA	San Martin	5.32	99	*e*P	Pn	15 16 52.0	+3.1
MRA				IAML		15 18 54.6	
	comp=Z,90nm,0.7s						
AC02	Maricunga	5.50	27	Pn	Pn	15 16 53.0	+1.3
VA04	Juan Fernndez	6.10	250	Pn	Pn	15 16 58.1	-1.2
H03N1	Juan Fernandez	6.11	252	Pn	Pn	15 16 59.8	+0.4
	baz=120,slow=19,SNR=13						
H03N1				T	T	15 23 27.9	
	baz=82,slow=72,SNR=1235						
H03N3	Juan Fernandez	6.13	252	Pn	Pn	15 16 59.4	-0.2
	baz=120,slow=19,SNR=8.5						
H03N3				T	T	15 23 30.0	
	baz=82,slow=72,SNR=1165						
H03N2	Juan Fernandez	6.13	252	Pn	Pn	15 16 59.8	+0.3
	baz=120,slow=19,SNR=17						
H03N2				T	T	15 23 28.8	
	baz=82,slow=72,SNR=1163						
CYA	Choya	6.27	60	*e*P	Pn	15 17 05.0	+3.2
CYA				*e*P	Pb	15 17 06.2	-12
CYA				*e*S	Sn	15 18 12.0	-1.5
CYA				IAML		15 18 49.3	
	comp=Z,126nm,1.0s						
LC01	Cunco	7.11	180	Pn	Pn	15 17 11.8	-1.4
AHML	Horco Molle	7.62	51	*e*P	Pn	15 17 24.1	+3.7
AHML				*e*P	Pb	15 17 27.0	-15
AHML				*e*P	Pb	15 17 27.1	-14
AHML				*e*S	Sn	15 18 49.0	+2.4
AHML				*e*S	Sb	15 18 54.5	-18
AHML				IAML		15 19 36.9	
	comp=Z,88nm,0.9s						
FSA	Cafayete	7.69	44	*e*P	Pn	15 17 27.0	+5.6
FSA				*e*S	Sb	15 19 06.9	-7.6
PB10	IPOC Station P	8.32	9	Pn	Pn	15 17 31.6	+1.6
PB15	IPOC Station P	8.81	15		Pn	15 17 37.2	+0.3
PLCA	Paso Flores	9.01	173	Pn	Pn	15 17 40.1	+0.6
	comp=Z,1.1nm,0.3s,baz=337,slow=11,SNR=18						
PLCA	Paso Flores	9.01	173	Pn	Pn	15 17 39.5	+0.1
PLCA	Paso Flores	9.01	173	*e*P	Pn	15 17 40.0	+0.6
PLCA				*e*S	Sn	15 19 16.8	-4.0
PB06	IPOC Station P	9.28	14	Pn	Pn	15 17 43.7	+0.5
LVC	Limon Verde	9.52	17	Pn	Pn	15 17 48.4	+1.7
	comp=Z,0.3nm,0.3s,baz=216,slow=17,SNR=1.2						
LVC				LR	LR	15 21 32.9	
	comp=Z,209nm,21.6s,baz=202,slow=38						
LVC	Limon Verde	9.52	17	*e*P	Pn	15 17 55.0	+8.3
PB04	IPOC Station P	9.54	10	Pn	Pn	15 17 48.6	+1.8
HJA	Humahuaca	10.31	36	*e*P	Pn	15 17 54.5	-3.2
HJA				*e*P		15 18 00.2	
ITQB	Itaqui	13.34	85	*e*P	Pn	15 18 41.1	+2.4
CPUP	Villa Florida	13.88	71	Pn	Pn	15 18 46.0	0.0
	comp=Z,0.2nm,0.3s,baz=243,slow=14,SNR=1.7						
CPUP				Sn	Sn	15 21 15.7	-4.3
	comp=Z,0.1nm,0.3s,baz=252,slow=11,SNR=2.5						
CPUP				LR	LR	15 24 34.4	
	comp=Z,313nm,18.6s,baz=246,slow=39						
CPUP	Villa Florida	13.88	71	*e*P	Pn	15 18 46.8	+0.8
PLTB	Pedras Altas	15.60	95	*e*P	Pn	15 19 11.0	+1.8
PLTB	Pedras Altas	15.60	95	Pn	Pn	15 19 09.7	+0.5
LPAZ	La Paz	15.80	14	Pn	Pn	15 19 14.1	+1.6
	comp=Z,0.1nm,0.3s,baz=193,slow=14,SNR=6.4						
LPAZ	La Paz	15.80	14	Pn	Pn	15 19 12.5	0.0
CPSB	Cacapava Do Su	15.91	90	*e*P	Pn	15 19 14.8	+1.6
AQDB	Aquidauana	18.39	56	*e*P	P	15 19 43.1	-1.3
SIV	San Ignacio	18.57	35	P	P	15 19 46.7	+0.3
	comp=Z,0.3nm,0.3s,baz=227,slow=11,SNR=9.8						
PTGB	Pitanga	18.86	73	*e*P	P	15 19 48.5	-1.0
TER01	Tubaro-SC	19.98	87	*e*P	P	15 20 01.4	-0.4
PTLB	Pontes e Lacer	20.01	39	*e*P	P	15 20 02.5	+0.4
PTLB	Pontes e Lacer	20.01	39	P	Pn	15 20 03.3	-0.6
PTLB				IAmb	IAmb	15 20 16.5	
	comp=Z,11nm,1.4s						
NNA	Nana	20.21	346	LR	LR	15 25 08.4	
	comp=Z,38nm,21.1s,baz=181,slow=28						
PP1B	Ponte de Pedra	20.92	52	*e*P	P	15 20 11.2	-0.9
PCMB	Pacaembu	21.04	66	*e*P	P	15 20 12.1	-1.1
TIJ01	Guaruva-PR	21.13	78	*e*P	P	15 20 13.0	-1.3
FRTB	Fartura	21.51	73	*e*P	P	15 20 17.9	-0.5
VILB	Vilhena	21.62	33	*e*P	P	15 20 20.8	+1.2
SALV	Santo Antonio	21.65	47	*e*P	P	15 20 18.9	-0.9
ETMB	Extrema	22.49	15	*e*P	P	15 20 30.9	+2.1
ETMB	Extrema	22.49	15	P	P	15 20 29.9	+1.0
ETMB				IAmb	IAmb	15 20 33.0	
	comp=Z,10.0nm,0.9s						
ITRB	Iturama	22.81	63	*e*P	P	15 20 31.3	-0.9
USHA	Ushuaia	23.18	175	LR	LR	15 30 31.0	
	comp=Z,176nm,18.8s,baz=349,slow=39						
BB19B	Bebedouro	23.48	69	*e*P	P	15 20 38.1	-1.0
RCLB	Rio Claro- Sao	23.60	73	*e*P	P	15 20 39.1	-1.3
SAML	Samuel	24.13	22	P	P	15 20 45.4	+0.1
ARAG	Araguaiana, MT	24.33	54	*e*P	P	15 20 46.3	-1.0
PDRB	Porto dos Gac	24.49	38	*e*P	P	15 20 47.7	-0.9
IPMB	Ipameri, GO	25.46	63	*e*P	P	15 20 56.2	-1.2
CLDB	Colider	25.60	39	*e*P	P	15 20 59.4	+0.7
BDFB	Brasilia	27.07	59	P	P	15 21 11.8	-0.3
	comp=Z,13nm,0.9s,baz=217,slow=6.2,SNR=12						
BDFB				LR	LR	15 32 35.4	
	comp=Z,115nm,20.7s,baz=277,slow=38						
BDFB	Brasilia	27.07	59	P	P	15 21 11.6	-0.5
BDFB				IAmb	IAmb	15 21 14.2	
	comp=Z,14nm,0.8s						
SNDB	Serra Nova Dou	27.39	49	*e*P	P	15 21 14.1	-0.7
NPGB	Novo Progresso	29.07	36	*e*P	P	15 21 29.3	-0.5
BSFB	Barra de Sao F	30.81	73	*e*P	P	15 21 43.2	-2.0
RPN	Rapa Nui	32.78	268	LR	LR	15 31 28.2	
	comp=Z,127nm,19.1s,baz=160,slow=29						
PRPB	Parauapebas	32.81	44	*e*P	P	15 22 02.6	-0.3
BOAV	Boa Vista	35.67	20	P	P	15 22 28.4	+0.8
BOAV				IAmb	IAmb	15 22 29.3	
	comp=Z,4.2nm,0.8s						
NBPN	Ponto Novo - B	35.95	62	*e*P	P	15 22 28.9	-1.2
ZARC	Zaragoza, Cauc	39.15	355	P	P	15 22 59.1	+2.0
NBPS	Pedro II - PI	39.50	53	*e*P	P	15 22 59.5	-0.7
CVTR	Volcan Turrial	43.07	343	P	P	15 23 30.7	+0.9
VNA2	Neumayer--Watz	52.03	158	P	P	15 24 39.3	+0.9
	baz=285,slow=7.6						
SNAA	Sanae	53.61	158	P	P	15 24 51.0	+0.8
SNAA	Sanae	53.61	158	P	P	15 24 50.7	+0.5
	comp=Z,4.7nm,0.8s,baz=294,slow=5.8,SNR=13						
SNAA	Sanae	53.61	158	P	P	15 24 50.8	+0.5
SNAA				IAmb	IAmb	15 24 52.1	
	comp=Z,6.9nm,1.0s						
QSPA	South Pole Qui	58.45	180	P	P	15 25 25.6	+0.6
TXAR	Lajitas Array	67.84	330	P	P	15 26 29.5	+1.8
	comp=Z,0.5nm,0.6s,baz=149,slow=9.0,SNR=7.0						
TXAR	Lajitas Array	67.84	330	P	P	15 26 28.5	+0.8
TX31	Lajitas Ar. Si	67.84	330	P	P	15 26 28.8	+1.2
TX31				IAmb	IAmb	15 26 52.7	
	comp=Z,6.0nm,1.1s						
DBIC	Dimbokro	74.40	72	P	P	15 27 07.3	-0.3
	comp=Z,5.7nm,0.7s,baz=231,slow=3.8,SNR=6.4						
DBIC	Dimbokro	74.40	72	P	P	15 27 07.9	+0.2
DBIC				IAmb	IAmb	15 27 10.0	
	comp=Z,7.0nm,0.9s						
MAW	Mawson	75.28	164	LR	LR	15 59 23.5	
	comp=Z,44nm,21.0s,baz=234,slow=35						
BOSA	Boshof	81.03	118	P	P	15 27 44.1	-0.6
	comp=Z,3.0nm,0.8s,baz=141,slow=7.3,SNR=3.6						
BOSA				LR	LR	16 00 16.2	
	comp=Z,35nm,19.0s,baz=204,slow=33						
BOSA	Boshof	81.03	118	IAmb	IAmb	15 27 44.7	
	comp=Z,18nm,1.4s						
TORD	Torodi Ar. Bea	83.38	70	P	P	15 27 57.5	+0.6
	comp=Z,4.0nm,0.8s,baz=264,slow=4.6,SNR=19						
TORD	Torodi Ar. Bea	83.38	70	P	P	15 27 57.2	+0.3
TORD				IAmb	IAmb	15 27 58.5	
	comp=Z,4.2nm,0.8s						
WRA	Warramunga Arr	122.73	210	PKP	PKPdf	15 34 24.8	-1.1
	comp=Z,0.7nm,1.0s,baz=166,slow=1.7,SNR=5.4						
H11S2	WAKE ISLAND Hy	125.86	271	T	T	17 53 21.6	
	baz=117,slow=75,SNR=11						
H11S1	WAKE ISLAND Hy	125.87	271	T	T	17 53 22.3	
	baz=117,slow=75,SNR=14						
H11S3	WAKE ISLAND Hy	125.88	271	T	T	17 53 23.0	
	baz=117,slow=75,SNR=13						
H11N3	WAKE ISLAND Hy	126.21	272	T	T	17 53 46.5	
	baz=118						
H11N1	WAKE ISLAND Hy	126.23	272	T	T	17 53 45.4	
	baz=118						
H11N2	WAKE ISLAND Hy	126.23	272	T	T	17 53 45.9	
	baz=118,SNR=15						
ZALV	Zalesovo Beam	152.28	30	PKPbc	PKiKP	15 35 25.7	+0.8
	comp=Z,5.5nm,0.6s,baz=305,slow=3.6,SNR=22						
KSH	Kashi	152.91	64	PKPbc	PKPdf	15 35 19.9	+0.4
MKAR	Makanchi Array	155.19	45	PKP	PKPdf	15 35 22.8	+0.5
	comp=Z,0.2nm,0.8s,baz=270,slow=1.4,SNR=2.4						
MKAR				PKPab	PKPab	15 35 48.2	+1.0
	comp=Z,1.0nm,0.8s,baz=284,slow=3.8,SNR=6.7						

JMA ***16*** *15:16:13.4±0.5, 43°.87N×148°.26E, h0^{km}, M3.5*
SKHL ***16*** *15:16:13.3±0.6, 44°.10N×148°.70E, h42^{km}±8^{km}, mb4.1/2*
ISC 16 15:16:12.5±4.0,**44°.2N**±0°.1×**148°.7E**±0°.2,**h35**^{km},**n9,**
σ**1^{s}.14**/16,**Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.23	332	*i* P	Pn	15 16 33.0	-0.1
KUR				AMB	AMB	15 16 33.0	
	31nm,0.3s						
KUR				*e*S	Sn	15 16 48.0	-0.5
KUR				A	A	15 16 53.0	
	238nm,0.5s						
KUR				A	A	15 16 53.0	
	142nm,0.5s						
YUK	Yuzh-Kuril'sk	2.05	268	*e*P	Pn	15 16 45.0	+0.7
YUK				AMB	AMB	15 16 48.0	
	61nm,0.4s						
YUK				*e*S	Sn	15 17 09.0	+0.4
YUK				A	A	15 17 11.0	
	183nm,0.4s						
YUK				A	A	15 17 11.0	
	174nm,0.4s						
GRPR	Tuman	2.11	267	*e*P	Pn	15 16 46.0	+0.7
GRPR				*e*S	Sn	15 17 10.0	-0.3
GRPR				A	A	15 17 10.0	
	111nm,0.3s						
GRPR				A	A	15 17 10.0	
	80nm,0.3s						
NEM2	Nemuro 2	2.28	251	P	Pn	15 16 47.6	0.0
NEM2				*e*S	Sn	15 17 12.2	-2.2
NMR	Nemuro--Hokkai	2.29	251	*e*P	Pn	15 16 48.0	+0.3
NMR				*e*S	Sn	15 17 13.0	-1.6
GLVR	Golovnino	2.33	261	*e*P	Pn	15 16 49.0	+0.7
GLVR				*e*S	Sn	15 17 14.0	-1.7
GLVR				A	A	15 17 18.0	
	151nm,0.3s						
GLVR				A	A	15 17 18.0	
	153nm,0.3s						
JRA	Rausu	2.59	266	P	Pn	15 16 53.1	+1.3
JNK	Nakash	2.93	260	P	Pn	15 16 57.3	+0.7
JAR	Ashorobuto	3.67	258	P	Pn	15 17 08.2	+1.5
JAR				*e*S	Sn	15 17 49.0	+0.2

NOU ***16*** *15:17:54.2, 36°.81S×177°.19E, h309^{km}, mb4.2/8, Off E. Coast of N. Island, N.Z.*
WEL 16 15:18:04.8±0.9,**37°S**±6°×**17°7E**±°,**h224**^{km}±7^{km},**M3.1**/43, **ML3.2**/7,**MLv3.1**/43,**Error ellipse: s-maj=0.0km s-min=0.0km az=26.0,North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGRZ	Tauranga	0.69	215	P	Pn	15 18 35.7	+0.4
OPRZ	Ohinepanea	0.70	193	P	Pn	15 18 35.7	+0.3
MARZ	Manawahe	0.82	185	P	Pn	15 18 36.7	+0.7
KUZ	Kuaotunu	0.93	296	P	Pn	15 18 36.2	-0.4
KARZ	Kaharoa	0.95	205	P	Pn	15 18 37.5	+0.8
OMRZ	Omania	0.99	198	P	Pn	15 18 37.9	+0.9
HAZ	Te Kaha	1.00	126	P	Pn	15 18 36.7	-0.2
RUGZ	Raukumara Rang	1.08	138	P	Pn	15 18 37.0	-0.7
RUGZ				S	S	15 19 02.7	-0.6
TARZ	Mount Tarawera	1.09	191	P	Pn	15 18 38.7	+1.1
URZ	Urewera	1.13	166	P	Pn	15 18 37.4	-0.3
URZ				S	S	15 19 03.5	-0.1
URZ	Urewera	1.13	166	P	Pn	15 18 37.5	-0.3
TOZ	Tahuroa Road	1.15	240	P	Pn	15 18 38.4	+0.5
RRRZ	Republican Roa	1.19	189	P	Pn	15 18 38.7	+0.5
HSRZ	Hossack Road	1.22	199	P	Pn	15 18 39.4	+1.0
PKGZ	Pakihiroa	1.27	125	P	Pn	15 18 39.5	+0.6
HRRZ	Handcock Road	1.28	197	P	Pn	15 18 39.6	+0.7
GRRZ	Galatos Road	1.29	203	P	Pn	15 18 39.8	+0.8
MXZ	Matakaoa Point	1.29	108	P	Pn	15 18 39.1	+0.1
MXZ				S	S	15 19 06.6	+1.0
MUGZ	Murupara	1.31	180	P	Pn	15 18 39.1	0.0
MUGZ				S	S	15 19 06.5	+0.5
MWZ	Matawai	1.32	153	P	Pn	15 18 39.2	0.0
MWZ				S	S	15 19 06.5	+0.4
WIAZ	Waiheke Island	1.35	285	P	Pn	15 18 39.2	-0.3
PRRZ	Plateau Road	1.36	192	P	Pn	15 18 39.9	+0.4
GRZ	Great Barrier	1.39	311	P	Pn	15 18 39.0	-0.8
TWGZ	Tauwhareparae	1.40	137	P	Pn	15 18 40.4	+0.6
RAGZ	Rawiri	1.43	159	P	Pn	15 18 40.4	+0.3
WPRZ	Whakapapatarin	1.43	199	P	Pn	15 18 40.6	+0.6
ALRZ	Allen Road	1.43	193	P	Pn	15 18 40.5	+0.4
RTZ	Ruatahuna	1.46	173	P	Pn	15 18 40.1	-0.2
WMGZ	Waiomatatini S	1.47	117	P	Pn	15 18 40.6	+0.3
PUZ	Puketiti	1.49	128	P	Pn	15 18 40.4	-0.1
TLZ	Tolley Road	1.51	219	P	Pn	15 18 41.5	+0.8
KUTZ	Kaahu Road	1.52	209	P	Pn	15 18 41.7	+1.0
TKGZ	Te Karaka	1.54	146	P	Pn	15 18 41.1	+0.2
SNGZ	Shannon Statio	1.68	164	P	Pn	15 18 42.3	+0.2
MTHZ	Maungataniwha	1.69	178	P	Pn	15 18 41.9	-0.3
MRHZ	Matea Rd	1.69	189	P	Pn	15 18 42.0	-0.3
AWAZ	Awhitu Peninsu	1.69	273	P	Pn	15 18 42.1	-0.2
RIGZ	Rimuhau	1.73	153	P	Pn	15 18 43.0	+0.4
WATZ	Wairara	1.74	207	P	Pn	15 18 43.3	+0.6
CNGZ	Carnagh Statio	1.75	139	P	Pn	15 18 43.4	+0.7
RAHZ	Arahi	1.77	172	P	Pn	15 18 43.2	+0.3
RVAZ	Riverhead Bore	1.79	282	P	Pn	15 18 42.5	-0.6
RATZ	Rangitukua	1.87	204	P	Pn	15 18 44.2	+0.3
NMHZ	Naumai	1.93	179	P	Pn	15 18 44.9	+0.5
RITZ	Rihia Road	1.94	201	P	Pn	15 18 45.1	+0.5
WHHZ	Waihua	1.94	169	P	Pn	15 18 44.9	+0.4
PRGZ	Paritu Road	1.97	154	P	Pn	15 18 45.2	+0.4
KNZ	Kokohu	1.99	159	P	Pn	15 18 44.7	-0.2
BKZ	Black Stump Fm	2.01	186	P	Pn	15 18 44.4	-0.8
HIZ	Hauiti	2.02	228	P	Pn	15 18 45.7	+0.4
HIZ	Hauiti	2.02	228	P	Pn	15 18 46.9	+1.6
ARHZ	Aropaoanui	2.10	175	P	Pn	15 18 46.1	+0.1
NTVZ	North Tongarir	2.11	204	P	Pn	15 18 46.7	+0.4
TMVZ	Te Maari	2.12	203	P	Pn	15 18 46.2	-0.1
ETVZ	East Tongariro	2.13	202	P	Pn	15 18 46.5	0.0
WTVZ	West Tongariro	2.15	205	P	Pn	15 18 46.6	-0.1
NNVZ	North Ngauruho	2.16	204	P	Pn	15 18 46.6	-0.2
TWVZ	Taurewa	2.17	208	P	Pn	15 18 46.8	-0.1
OTVZ	Oturere	2.17	203	P	Pn	15 18 47.1	+0.2
MHGZ	Mahia Peninsul	2.18	156	P	Pn	15 18 47.0	+0.2
SNVZ	South Ngauruho	2.20	203	P	Pn	15 18 47.3	0.0
NGZ	Ngauruhoe	2.21	204	P	Pn	15 18 47.4	+0.1
KWHZ	Kaweka Forest	2.27	187	P	Pn	15 18 47.5	-0.3
TUVZ	Tukino	2.27	202	P	Pn	15 18 47.5	-0.4
MCHZ	McNeill Hill	2.28	181	P	Pn	15 18 47.7	-0.1
FWVZ	Far West T-bar	2.29	204	P	Pn	15 18 48.0	-0.2
WCZ	Waipu Caves	2.30	301	P	Pn	15 18 47.1	-0.9
WHVZ	Whangaehu Hut	2.31	203	P	Pn	15 18 48.1	-0.3
TRVZ	Turoa	2.33	204	P	Pn	15 18 48.3	-0.3
WNVZ	Wahianoa	2.34	203	P	Pn	15 18 48.1	-0.6
MOVZ	Moawhango	2.37	199	P	Pn	15 18 47.9	-1.0
BHHZ	Black Hill Sta	2.38	193	P	Pn	15 18 48.1	-0.9
PKVZ	Pokaka	2.40	207	P	Pn	15 18 48.7	-0.4
KRHZ	Kereru	2.49	187	P	Pn	15 18 49.5	-0.6
CKHZ	Cape Kidnapper	2.50	174	P	Pn	15 18 49.7	-0.4
VRZ	Vera Road	2.51	218	P	Pn	15 18 50.7	+0.4
KAHZ	Kahuranaki	2.63	178	P	Pn	15 18 50.9	-0.6
PNHZ	Pukenui	2.78	189	P	Pn	15 18 51.9	-1.3
PXZ	Pawanui	2.86	178	P	Pn	15 18 52.8	-1.2
WPHZ	Waipukurau	2.91	185	P	Pn	15 18 53.3	-1.3
WAZ	Wanganui	2.94	208	P	Pn	15 18 54.2	-0.7
LREZ	Lake Rotokare	2.95	218	P	Pn	15 18 55.4	+0.4
TSZ	Takapari Road	2.96	192	P	Pn	15 18 53.6	-1.5
NEZ	North Egmont	2.97	224	P	Pn	15 18 56.4	+1.0
KHEZ	Kahui Hut	3.03	225	P	Pn	15 18 56.9	+0.8
PRHZ	Porangahau	3.10	182	P	Pn	15 18 55.2	-1.6
DVHZ	Dannevirke	3.16	188	P	Pn	15 18 55.7	-1.9
OUZ	Omahuta	3.21	306	P	Pn	15 18 56.6	-1.5
ANWZ	Angora Road	3.30	184	P	Pn	15 18 57.4	-1.6
POWZ	Post Office Ro	3.31	193	P	Pn	15 18 57.9	-1.3
PRWZ	Pori Road	3.44	190	P	Pn	15 18 59.1	-1.6
BFZ	Birch Farm	3.53	186	P	Pn	15 18 59.6	-2.2
BFZ	Birch Farm	3.53	186	P	Pn	15 19 00.1	-1.7
MRZ	Mangatainoka R	3.61	194	P	Pn	15 19 00.2	-2.6
TIWZ	Tintock	3.67	190	P	Pn	15 19 01.3	-2.2
CPWZ	Castlepoint	3.77	186	P	Pn	15 19 03.2	-1.3
HOWZ	Holdsworth Sta	3.85	194	P	Pn	15 19 02.9	-2.8
OGWZ	Otaki Gorge	3.85	198	P	Pn	15 19 03.1	-2.5
KIW	Kapiti Island	3.96	201	P	Pn	15 19 04.1	-2.9
TMWZ	Te Maipa	3.99	189	P	Pn	15 19 04.9	-2.4
MTW	Mount Morrison	4.11	193	P	Pn	15 19 05.4	-3.2
CAW	Cannon Point	4.15	198	P	Pn	15 19 06.1	-3.1
DUWZ	D’Urville Isla	4.25	210	P	Pn	15 19 07.3	-3.2
TRWZ	Traveller	4.31	191	P	Pn	15 19 08.1	-3.0
PAWZ	Paruwai Farm	4.34	193	P	Pn	15 19 08.0	-3.5
WEL	Wellington	4.39	200	P	Pn	15 19 09.2	-3.0
MSWZ	Moikau Station	4.40	195	P	Pn	15 19 08.8	-3.6
SNZO	South Karori	4.44	200	P	Pn	15 19 11.4	-1.3
TCW	Tory Channel	4.48	205	P	Pn	15 19 09.9	-3.3
BHW	Baring Head	4.48	198	P	Pn	15 19 09.8	-3.5
PLWZ	Palliser	4.55	194	P	Pn	15 19 10.6	-3.5
TUWZ	Tuamarina	4.79	206	P	Pn	15 19 13.5	-3.5
NNZ	Nelson	4.82	212	P	Pn	15 19 13.8	-3.7
QRZ	Quartz Range	4.92	221	P	Pn	15 19 14.9	-3.9
QRZ	Quartz Range	4.92	221	P	Pn	15 19 15.3	-3.4
CMWZ	Cape Campbell	4.98	202	P	Pn	15 19 17.0	-2.5
BSWZ	Blackbirch Sta	5.06	205	P	Pn	15 19 16.9	-3.6
THZ	Tophouse	5.47	212	P	Pn	15 19 21.6	-4.2
KHZ	Kahutara	5.80	204	P	Pn	15 19 26.1	-3.6
KHZ	Kahutara	5.80	204	P	Pn	15 19 26.2	-3.6
DSZ	Denniston Nort	5.97	218	P	Pn	15 19 26.8	-5.2
GVZ	Greta Valley S	6.46	205	P	Pn	15 19 34.0	-4.2
LTZ	Lake Taylor	6.58	210	P	Pn	15 19 35.1	-4.7
AMCZ	Amberley	6.78	206	P	Pn	15 19 37.7	-4.6
INZ	Inchbonnie	6.89	215	P	Pn	15 19 39.1	-4.6
OKCZ	Okains Bay	7.13	202	P	Pn	15 19 42.7	-4.1
OXZ	Oxford	7.13	209	P	Pn	15 19 41.4	-5.4
MQZ	McQueen’s Vall	7.24	204	P	Pn	15 19 42.8	-5.4
AKCZ	Akaroa Harbour	7.31	202	P	Pn	15 19 44.5	-4.6
RACZ	Rakaia	7.44	207	P	Pn	15 19 45.8	-4.9
MHCZ	Mount Hutt	7.49	210	P	Pn	15 19 46.5	-4.9
WACZ	Wakanui South	7.74	207	P	Pn	15 19 49.8	-4.7
RPZ	Rata Peaks	7.86	212	P	Pn	15 19 51.0	-5.1
RPZ	Rata Peaks	7.86	212	P	Pn	15 19 52.5	-3.6
GCSZ	Gaunt Creek Bo	7.87	217	P	Pn	15 19 51.0	-5.3
ARCZ	Arundel	8.00	210	P	Pn	15 19 52.6	-5.2
FOZ	Fox Glacier	8.28	218	P	Pn	15 19 56.0	-5.4
TMZ	Timaru	8.43	209	P	Pn	15 19 58.5	-4.9
ODZ	Otahua Downs	9.12	208	P	Pn	15 20 07.6	-4.7
ODZ	Otahua Downs	9.12	208	P	Pn	15 20 07.3	-5.0
JCZ	Jackson Bay	9.18	219	P	Pn	15 20 07.6	-5.6

IDC 16 15:20:06.2±1.9,**2°.02S**×**139°.20E**,**h0**^{km},**mb3.2**/2, **mb1 3.6**/3,**mb1mx3.1**/30,**mbtmp3.3**/3,**ML3.5**/1,**Error ellipse: s-maj=32.8km s-min=27.0km az=158.0,Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	1.59	108	Pn	Pb	15 20 36.4	-0.1
	9.3nm,0.3s,baz=180,slow=11,SNR=50						
JAY				Sn	Sg	15 20 57.9	+0.5
	7.2nm,0.3s,baz=235,slow=14,SNR=5.4						
WRA	Warramunga Arr	18.44	195	P	P	15 24 24.9	+1.4
	0.1nm,0.3s,baz=25,slow=12,SNR=9.8						
ASAR	Alice Springs	22.12	193	P	P	15 25 02.4	-1.2
	0.3nm,0.6s,baz=28,slow=11,SNR=12						
ILAR	Eielson Array	85.01	24	P	P	15 32 43.1	-0.3
	0.4nm,0.6s,baz=259,slow=5.6,SNR=4.3						

TUL ***16*** *15:22:43.5±0.5, 36°.48N±0°.02×98°.23W±0°.02, h5^{km}±7^{km}, ML2.6, mb_Lg2.4/5(NEIC), Error ellipse: s-maj=2.8km s-min=1.8km az=211.0*
NEIC 16 15:22:43.4±0.7,**36°.48N**±0°.02×**98°.23W**±0°.02,**h14**^{km}±4^{km}, **Error ellipse: s-maj=3.7km s-min=1.1km az=135.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CROK	Carrier	0.20	82	Pg	Pg	15 22 48.0	+0.1
GC02	Grant County #	0.48	38	Pg	Pg	15 22 53.1	+0.2
KAN14	Manchester OK	0.52	24	Pg	Pg	15 22 54.0	+0.2
U32A	Winter Ranch,	0.63	261	Pg	Pg	15 22 55.6	-0.3
KAN10	Anthony SW Sta	0.65	9	Pg	Pg	15 22 56.2	0.0
KAN10				Sg	Sg	15 23 04.5	-0.4
KAN05	Bluff City Nor	0.69	24	Pg	Pg	15 22 56.6	-0.3
KAN05				Sg	Sb	15 23 06.6	-0.2
KAN16	Harper SW Stat	0.76	10	Pg	Pg	15 22 58.0	-0.2
KAN01	Argonia South	0.77	29	Pg	Pg	15 22 58.1	-0.3
KAN01				Sg	Sg	15 23 08.5	-0.2
KAN08	Anthony NE Sta	0.78	15	Pg	Pg	15 22 58.3	-0.2
KAN13	South Haven SW	0.81	48	Pg	Pg	15 22 58.8	-0.3
KAN09	Caldwell North	0.82	36	Pg	Pg	15 22 59.2	-0.2
KAN06	Argonia West S	0.82	21	Pg	Pg	15 22 59.2	-0.2

KAN12	Harper NE Stat	0.84	13	Pg	Pg	15 22 59.6	-0.2
BLOK	Blackwell	0.86	70	Pg	Pg	15 22 59.9	-0.2
OK029	Liberty Lake	0.92	137	Pg	Pb	15 23 01.0	-0.3
KS20	Mayfield South	0.93	35	Pg	Pb	15 23 01.2	-0.1
BCOK	Bluff Creek, N	0.96	148	Pg	Pb	15 23 01.5	-0.4
OKCFA	Oklahoma City	1.23	149	Pg	Pb	15 23 06.5	0.0
OK031	S. Brethren Rd	1.24	115	Pg	Pn	15 23 06.5	+0.1
QUOK	Quay	1.26	103	Pg	Pb	15 23 07.2	+0.2
OK030	Cody Creek RV	1.29	115	Pn	Pb	15 23 07.7	+0.2
FNO	Franklin	1.39	151	Pn	Pb	15 23 08.9	-0.3
T35A	Sooner Cattle	1.45	72	Pn	Pb	15 23 10.1	0.0
WMOK	Wichita Mounta	1.79	195	Pn	Pn	15 23 15.0	+1.0
TUL1	Leonard	2.05	105	IAmb_Lg		15 23 51.9	
	comp=Z,9.8nm,0.9s						
AMTX	Amarillo	3.23	242	IAmb_Lg		15 24 32.3	
	comp=Z,7.2nm,0.9s						
N35A	Tabor	4.82	24	IAmb_Lg		15 25 27.9	
	comp=Z,16nm,0.8s						

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*IDC **16** 15:22:56.8±1.9, 16°35S×176°18W, h385^{km}±24^{km}, mb3.4/4, mb1 3.4/6, mb1mx3.0/35, mbtmp4.1/6, Error ellipse: s-maj=116.0km s-min=30.9km az=157.0*

*NEIC **16** 15:22:57.3±1.3, 16°4S±0°1×176°14W±0°07, h387^{km}±13^{km}, mb4.1/22, Error ellipse: s-maj=22.5km s-min=4.6km az=158.0*

ISC 16 15:22:55.3±0.7, 16°4S±0°1×176°13W±0°09, h364^{km}, n31, σ1^{s}26/29, mb4.0/16, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	4.90	60	P	Pn	15 24 17.1	+2.5
	4.2nm,0.3s,baz=115,slow=20,SNR=5.7						
MSVF	Nonsavu	5.72	256	P	Pn	15 24 25.7	+2.2
	1.0nm,0.3s,baz=243,slow=23,SNR=6.0						
MSVF	Nonsavu	5.72	256		Pn	15 24 26.4	+2.9
MARNC	Mare, Loyalty	15.80	249	P	P	15 26 17.5	-0.4
TARA	Tarawa	20.73	328	P	P	15 27 07.8	-1.2
URZ	Urewera	22.53	194	P	P	15 27 23.2	-2.0
PPTF	Pamatai, Papee	25.42	96	P	P	15 27 51.3	-0.2
XMAS	Kiritimati	26.04	47	P	P	15 27 55.8	-1.1
WHZ	Wether Hill Ro	32.24	201	P	P	15 28 52.2	+1.2
WHZ				IAmb	IAmb	15 29 20.8	
	comp=Z,28nm,1.0s						
ARMA	Armidale	32.56	239	P	P	15 28 54.7	+0.6
ARMA				IAmb	IAmb	15 29 20.8	
	comp=Z,31nm,1.5s						
CTAO	Charters Tower	35.86	258	P	P	15 29 21.3	-0.9
CTAO				IAmb	IAmb	15 29 24.4	
	comp=Z,23nm,1.4s						
PMG	Port Moresby	36.42	276	P	P	15 29 25.3	-1.6
PMG				IAmb	IAmb	15 29 31.3	
	comp=Z,5.8nm,1.2s						
COEN	Coen	39.31	268	P	P	15 29 50.9	0.0
COEN				IAmb	IAmb	15 29 57.0	
	comp=Z,6.8nm,1.4s						
TOO	Toolangi	39.78	230	P	P	15 29 55.5	+1.0
TOO				IAmb	IAmb	15 30 14.6	
	comp=Z,17nm,1.4s						
STKA	Stephens Creek	41.25	240	P	P	15 30 06.2	-0.2
	comp=Z,0.9nm,0.6s,baz=102,slow=13,SNR=6.6						
STKA	Stephens Creek	41.25	240	IAmb	IAmb	15 30 09.3	
	comp=Z,1.0nm,1.4s						
PTCN	Pitcairn Islan	43.72	109	P	P	15 30 24.9	-1.2
BBOO	Buckleboo	46.02	240	P	P	15 30 43.8	-0.3
BBOO				IAmb	IAmb	15 31 12.2	
	comp=Z,6.7nm,1.4s						
WR0	Warramunga Arr	46.87	258	P	P	15 30 49.6	-1.1
WB0	Warramunga Arr	47.02	258	P	P	15 30 50.6	-1.3
WB2	Warramunga Arr	47.05	258	P	P	15 30 50.9	-1.2
WRA	Warramunga Arr	47.06	258	P	P	15 30 51.1	-1.1
	comp=Z,0.9nm,0.5s,baz=93,slow=7.2,SNR=38						
WRA	Warramunga Arr	47.06	258	IAmb	IAmb	15 30 51.9	
	comp=Z,0.1nm,0.8s						
AS31	Alice Springs	47.30	253	P	P	15 30 53.4	-0.6
AS31				IAmb	IAmb	15 30 54.0	
	comp=Z,2.3nm,0.5s						
ASAR	Alice Springs	47.30	253	P	P	15 30 53.5	-0.5
	comp=Z,5.7nm,0.4s,baz=89,slow=7.7,SNR=293						
ASAR	Alice Springs	47.30	253	P	P	15 30 52.9	-1.1
MTN	Manton Dam	51.04	267	P	P	15 31 21.6	-0.5
MTN				IAmb	IAmb	15 31 49.1	
	comp=Z,18nm,1.4s						
FORT	Forrest	52.61	244	P	P	15 31 32.8	-0.5
FORT				IAmb	IAmb	15 31 48.4	
	comp=Z,21nm,1.2s						
KNRA	Kununurra	52.82	263	P	P	15 31 35.0	0.0
KNRA				IAmb	IAmb	15 31 35.3	
	comp=Z,6.7nm,0.9s						
FITZ	Fitzroy Crossi	55.43	259	P	P	15 31 53.8	+0.1
	comp=Z,0.5nm,0.4s,baz=85,slow=8.6,SNR=1.9						
PSA00	Pilbara Seismi	60.40	254	P	P	15 32 27.4	-0.4
PSA00				IAmb	IAmb	15 32 49.3	
	comp=Z,15nm,1.2s						

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*NOU **16** 15:25:50.4, 14°89S×167°41E, h121^{km}, MLv4.6/16, Vanuatu Islands*

*IDC **16** 15:25:52.0±13.0, 15°38S×165°82E, h0^{km}, mb3.6/3, mb1 3.8/4, mb1mx3.4/38, mbtmp3.7/4, ML4.3/1, Error ellipse: s-maj=235.5km s-min=37.2km az=56.0*

ISC 16 15:25:47.2±2.3, 14°8S±0°2×167°2E±0°2, h57^{km}, n16, σ2^{s}11/16, mb3.5/3, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	0.67	180	P	Pn	15 26 09.8	+8.8
DVP	Devils Point	3.08	162	P	Pn	15 26 35.7	+2.2
RTV	Rentapao	3.22	159	P	Pn	15 26 37.4	+2.0
LIFNC	LIFOU	5.97	180	P	Pn	15 27 13.8	+0.7
KOUNC	Koumac, New Ca	6.39	205	P	Pn	15 27 22.1	+3.4
MARNC	Mare, Loyalty	6.72	173	P	Pn	15 27 23.0	-0.3
YATNC	Mamie plateau,	7.25	182	P	Pn	15 27 31.7	+1.1
DZM	Mont Dzumac	7.30	186	Pn	Pn	15 27 31.8	+0.5
	5.7nm,0.3s,baz=318,slow=11,SNR=68						
DZM				Sn	Sn	15 28 50.4	-2.4
	2.4nm,0.3s,baz=152,slow=22,SNR=5.8						
DZM	Mont Dzumac	7.30	186	P	Pn	15 27 32.6	+1.3
NOUC	Port Laguerre	7.34	187	P	Pn	15 27 33.6	+1.8
ONTNC	Ouen Toro	7.53	185	P	Pn	15 27 37.5	+3.1
OUENC	Ouen Island, N	7.62	183	P	Pn	15 27 38.4	+2.9
PINNC	Pines Island,	7.80	178	P	Pn	15 27 40.2	+2.1
STKA	Stephens Creek	28.92	230	P	P	15 31 40.1	-0.9
	0.5nm,0.3s,baz=62,slow=12,SNR=5.1						
WRA	Warramunga Arr	31.76	256	P	P	15 32 05.4	-0.9
	0.2nm,0.8s,baz=86,slow=8.3,SNR=2.0						
ASAR	Alice Springs	32.60	249	P	P	15 32 12.8	-0.9
	0.4nm,0.6s,baz=83,slow=8.9,SNR=4.1						

DDA 16 15:26:06.7, 39°20N×28°64E, h7^{km}±3^{km}, ML1.2, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DEMI	Demirci	0.17	158	i P	Pg	15 26 10.8	+0.6
DEMI				IAML		15 26 13.0	
	comp=E,61nm,0.5s						
DEMI				IAML		15 26 13.0	
	comp=N,69nm,0.4s						
DEMI				i S	Sg	15 26 13.1	+0.7
DURS	Dursunbey	0.42	343	i P	Pg	15 26 15.3	+0.4
DURS				i S	Sg	15 26 21.5	+0.9
MANT	Manisa	0.71	185	i P	Pb	15 26 21.0	-0.5
MANT				i S	Sg	15 26 29.9	+0.4
MANT				IAML		15 26 35.0	
	comp=E,17nm,0.3s						
MANT				IAML		15 26 35.0	
	comp=N,9.4nm,0.6s						

ISK 16 15:27:00.5, 41°13N×28°86E, h0^{km}±2^{km}, ML0.9/5, Suspected Mining explosion., Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BGKT	Bogazkoy	0.09	310	PG	Pg	15 27 02.9	+0.7
BGKT				SG	Sg	15 27 04.7	+1.4
ISK	Istanbul-Kandi	0.16	111	PG	Pg	15 27 04.4	+0.8
ISK				SG	Sg	15 27 07.3	+1.6
KAVV	Kandilli-Istan	0.16	112	PG	Pg	15 27 04.4	+0.8
KAVV				SG	Sg	15 27 06.9	+1.2
KLYT	Kilyos	0.19	47	PG	Pg	15 27 04.9	+0.8
CTKS	Kestanelik-??a	0.29	293	PG	Pg	15 27 06.8	+0.8
CTKS				SG	Sg	15 27 11.2	+1.4

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*NEIC **16** 15:34:41.9±2.0, 14°8S±0°1×171°7E±0°1, h618^{km}±9^{km}, mb4.5/30, Error ellipse: s-maj=18.1km s-min=16.2km az=200.0*

*IDC **16** 15:34:42.0±1.4, 14°70S×171°66E, h617^{km}±18^{km}, mb3.5/10, mb1 3.6/11, mb1mx3.2/36, mbtmp4.5/11, Error ellipse: s-maj=30.4km s-min=16.3km az=163.0*

*NOU **16** 15:34:46.1, 13°15S×172°06E, h316^{km}, mb5.0/6, Vanuatu Islands Region*

ISC 16 15:34:42.5±0.6, 14°87S±0°09×171°66E±0°08, h628^{km}, n56, σ1^{s}13/56, mb4.4/26, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTV	Rentapao	4.26	226	P	P	15 36 13.8	+2.0
	456µm,0.6s						
SANVU	Saraoutou	4.34	262	P	P	15 36 12.8	+0.4
MSVF	Nonsavu	6.76	116	P	P	15 36 32.3	+0.5
	6.1nm,0.3s,baz=92,slow=23,SNR=40						
MSVF	Nonsavu	6.76	116	P	P	15 36 32.1	+0.3
MSVF	Nonsavu	6.76	116	P	P	15 36 32.5	+0.7
LIFNC	LIFOU	7.23	215	P	P	15 36 34.7	-1.1
MARNC	Mare, Loyalty	7.43	207	P	P	15 36 36.3	-1.3
DGTI	Dogotuki	7.91	101	P	P	15 36 41.8	-0.3
TAVE	Taveuni	8.32	104	P	P	15 36 45.7	-0.2
PINNC	Pines Island,	8.68	207	P	P	15 36 49.6	+0.4
DZM	Mont Dzumac	8.71	214	P	P	15 36 41.3	-8.3
OUENC	Ouen Island, N	8.79	211	P	P	15 36 47.6	-2.6
ONTNC	Ouen Toro	8.90	213	P	P	15 36 48.4	-2.8
EIDS	Eidsvold	21.94	238	P	P	15 38 52.6	+0.2
EIDS				IAmb	IAmb	15 38 53.2	
	comp=Z,8.0nm,0.7s						
URZ	Urewera	23.80	169	P	P	15 39 08.7	+0.1
PMG	Port Moresby	24.55	280	P	P	15 39 15.9	+0.3
	comp=Z,3.5nm,0.5s,baz=134,slow=3.5,SNR=5.4						
PMG	Port Moresby	24.55	280	P	P	15 39 12.4	-3.2
BKZ	Black Stump Fm	24.58	171	P	P	15 39 14.4	-1.2
BKZ				IAmb	IAmb	15 39 32.8	
	comp=Z,19nm,1.2s						
CTAO	Charters Tower	24.77	254	P	P	15 39 17.9	+0.3
CTAO				IAmb	IAmb	15 39 23.9	
	comp=Z,23nm,1.4s						
QRZ	Quartz Range	25.88	178	P	P	15 39 28.8	+2.0
MSWZ	Moikau Station	26.64	174	P	P	15 39 32.8	-0.8
THZ	Tophouse	26.82	178	P	P	15 39 35.3	0.0
THZ				IAmb	IAmb	15 39 55.2	
	comp=Z,14nm,1.0s						
KHZ	Kahutara	27.50	177	P	P	15 39 39.6	-1.4
COEN	Coen	27.60	268	P	P	15 39 42.9	+0.6
CAN	Canberra	28.79	221	P	P	15 39 53.5	+1.2
CAN				IAmb	IAmb	15 40 12.8	
	comp=Z,15nm,1.4s						
STKA	Stephens Creek	32.23	233	P	P	15 40 22.7	+1.0
	comp=Z,2.9nm,0.4s,baz=54,slow=8.6,SNR=26						
STKA	Stephens Creek	32.23	233	P	P	15 40 22.4	+0.7
TOO	Toolangi	32.40	221	P	P	15 40 24.4	+1.3
TOO				IAmb	IAmb	15 40 43.2	
	comp=Z,11nm,1.4s						
WR0	Warramunga Arr	35.73	256	P	P	15 40 50.1	-0.9
WB0	Warramunga Arr	35.86	257	P	P	15 40 51.1	-1.0
WB0				IAmb	IAmb	15 40 52.3	
	comp=Z,17nm,1.1s						
WRAB	Tennant Creek	35.91	256	P	P	15 40 51.6	-0.9
WRAB				IAmb	IAmb	15 40 52.7	
	comp=Z,6.9nm,0.8s						
WRA	Warramunga Arr	35.92	256	P	P	15 40 52.0	-0.6
	comp=Z,5.5nm,0.5s,baz=81,slow=6.2,SNR=120						
WRA				ScP	ScP	15 45 50.3	+1.1
	comp=Z,0.4nm,0.6s,baz=87,slow=3.1,SNR=3.9						
AS31	Alice Springs	36.61	250	P	P	15 40 57.8	-0.5
AS31				IAmb	IAmb	15 40 58.7	
	comp=Z,5.6nm,0.5s						
ASAR	Alice Springs	36.61	250	P	P	15 40 58.1	-0.1
	comp=Z,8.3nm,0.4s,baz=74,slow=10.0,SNR=610						
ASAR				ScP	ScP	15 45 53.6	+1.8
	comp=Z,0.6nm,0.7s,baz=88,slow=3.9,SNR=9.7						
ASAR	Alice Springs	36.61	250	P	P	15 40 57.9	-0.4
BBOO	Buckleboo	36.91	235	P	P	15 41 00.9	+0.4
BBOO				IAmb	IAmb	15 41 01.4	
	comp=Z,5.5nm,0.6s						
MTN	Manton Dam	39.37	268	P	P	15 41 20.2	-0.3
MTN				IAmb	IAmb	15 41 21.3	
	comp=Z,9.2nm,0.5s						
FAKI	Fak Fak	40.62	283	P	P	15 41 30.4	-0.1
FAKI				IAmb	IAmb	15 41 59.0	
	comp=Z,13nm,0.9s						
KNRA	Kununurra	41.34	263	P	P	15 41 36.0	-0.1
KNRA				IAmb	IAmb	15 41 36.5	
	comp=Z,11nm,0.6s						
SIJI	Sorong	42.25	285	P	P	15 41 42.7	-0.6
	comp=Z,6.1nm,0.3s,baz=14,slow=22,SNR=6.4						
FORT	Forrest	42.91	241	P	P	15 41 48.2	+0.1
FORT				IAmb	IAmb	15 41 48.9	
	comp=Z,14nm,0.6s						
FITZ	Fitzroy Crossi	44.16	259	P	P	15 41 58.7	+0.7
	comp=Z,6.0nm,0.5s,baz=92,slow=9.1,SNR=53						
BATI	Baumata	47.02	270	P	P	15 42 21.1	+1.5
	comp=Z,17nm,0.5s,baz=146,slow=3.0,SNR=7.1						
PSA00	Pilbara Seismi	49.49	254	P	P	15 42 37.8	0.0
PSA00				IAmb	IAmb	15 42 50.9	
	comp=Z,31nm,1.5s						
TOLI2	Tolitoli	52.77	283	P	P	15 43 01.4	-0.1
MORW	Morawa	53.04	245	P	P	15 43 03.1	-0.1
PTCN	Pitcairn Islan	55.32	110	P	P	15 43 19.0	-0.2
MJB9	Matsu-Tunnel	60.10	329	P	P	15 43 49.9	-1.2
JEM	Erimo	62.41	336	P	P	15 44 17.6	+12
TPUB	Ta-pu	62.69	306	P	P	15 44 07.4	-0.8
TPUB				IAmb	IAmb	15 44 35.3	
	comp=Z,38nm,1.5s						
VNDA	Vanda	62.86	182	P	P	15 44 09.1	+0.7
SII	Sitkinak Islan	76.66	19	P	P	15 45 30.4	+0.2
CMAR	Chiang Mai Arr	78.91	293	P	P	15 45 44.5	+1.5
	comp=Z,1.1nm,0.8s,baz=113,slow=4.2,SNR=7.8						
ILAR	Eielson Array	85.40	17	P	P	15 46 12.8	-1.9
	comp=Z,0.5nm,0.6s,baz=236,slow=4.7,SNR=8.8						
TXAR	Lajitas Array	92.63	60	P	P	15 46 50.1	+0.9
	comp=Z,0.2nm,0.6s,baz=241,slow=5.7,SNR=3.4						
ARCES	ARCESS Array B	121.41	347	PKP	PKPdf	15 52 24.7	-0.5
	comp=Z,1.5nm,0.7s,baz=46,slow=2.6,SNR=3.9						

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*ISK **16** 15:45:43.5, 40°83N×28°75E, h13^{km}, ML4.2/54*

*DDA **16** 15:45:43.6, 40°82N×28°76E, h13^{km}±2^{km}, MW4.0*

*NEIC **16** 15:45:44.7±1.6, 40°88N±0°04×28°76E±0°06, h9^{km}±3^{km}, mb4.4/5, ML4.2(ISK), ML4.0/2(BUC), Error ellipse: s-maj=7.2km s-min=5.4km az=110.0*

*SOF **16** 15:45:44.2, 40°93N×28°63E, h10^{km}, MD3.8*

*IDC **16** 15:45:47.1±1.8, 40°79N×28°76E, h34^{km}±17^{km}, mb3.6/7, mb1 3.7/11, mb1mx3.5/43, mbtmp3.8/11, ML3.6/3, MS2.9/4, Ms1 2.9/4, ms1mx2.4/48, Error ellipse: s-maj=16.7km s-min=10.1km az=38.0*

*CFUSG **16** 15:45:48.3, 41°19N×29°03E, h10^{km}, mb3.7/6, MD3.7/4, Northwestern Turkey Magtype MSH 3.9 from 5 stations*

ISC 16 15:45:44.3±0.7, 40°84N±0°01×28°77E±0°02, h13^{km}±4^{km}, n231, σ1^{s}01/272, mb3.9/10, 40C-27D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARMT	Armutlu	0.29	166	PG	Pg	15 45 50.1	-0.2
ARMT				SG	Sg	15 45 53.9	-0.4
KAVV	Kandilli-Istan	0.31	45	PG	Pg	15 45 50.7	0.0
KAVV				SG	Sg	15 45 55.3	+0.3
ISK	Istanbul-Kandi	0.31	44	P	Pg	15 45 50.6	-0.1
ISK	Istanbul-Kandi	0.31	44	PG	Pg	15 45 50.7	0.0
ISK				SG	Sg	15 45 55.5	+0.4
BGKT	Bogazkoy	0.34	0	PG	Pg	15 45 51.2	0.0
BGKT				SG	Sb	15 45 56.2	-1.2
TRML	Termal-Yalova	0.39	127	PG	Pg	15 45 51.7	-0.4
ELBA	Catalca	0.40	320	⇑i P	Pg	15 45 52.3	0.0
ELBA				i S	Sg	15 45 57.7	0.0
CFTB	Yalova	0.44	114	PG	Pg	15 45 52.9	-0.1
CTKS	Kestanelik-??a	0.44	333	PG	Pg	15 45 52.9	-0.2
KLYT	Kilyos	0.46	26	PG	Pg	15 45 53.5	+0.1
MDNY	Mudanya-Bursa	0.48	170	PG	Pg	15 45 53.6	-0.2
GEMT	Gemlik	0.52	142	PG	Pg	15 45 53.9	-0.6
YLV	Yalova	0.53	121	PG	Pg	15 45 54.1	-0.8
SLVT	Silivri	0.57	312	PG	Pb	15 45 55.9	-0.3
KCTX	Karacabey (Bur	0.66	209	PG	Pg	15 45 56.7	-0.5
IGD	Bursa	0.67	150	⇓i P	Pg	15 45 56.8	-0.5
IGD				i S	Sg	15 46 05.5	-0.6
HRT	Hereke	0.68	92	PG	Pg	15 45 57.2	-0.4
CTYL	Yalikoy Yolu	0.73	330	PG	Pg	15 45 58.2	-0.3
SILT	Sile	0.73	65	PG	Pg	15 45 58.2	-0.3
IZI	Iznik	0.74	133	PG	Pg	15 45 58.1	-0.5
ULDT	Uludag	0.75	158	⇓i P	Pg	15 45 58.5	-0.5
ULDT				i S	Sg	15 46 08.9	-0.1
ORLT	Orhaneli	0.80	173	PG	Pg	15 45 59.5	-0.4
ADVT	Abdulvahap	0.84	119	PG	Pg	15 45 59.9	-0.7
EDC	Edincik	0.85	235	PG	Pg	15 45 59.8	-1.0
MRMT	Marmara Adasi	0.93	255	PG	Pg	15 46 01.3	-0.9
TKR	Tekirdag	0.95	279	PG	Pg	15 46 02.1	-0.5
VIZE	Kirklareli, Vi	1.02	317	⇑i P	Pb	15 46 03.3	-0.5
VIZE				i S	Sb	15 46 17.4	+0.4
CAVI	Cavuskoy	1.04	128	PG	Pb	15 46 03.4	-0.7
BILE	Bilecik/Merkez	1.08	129	⇓i P	Pb	15 46 04.2	-0.7
BILE				i S	Sb	15 46 18.6	-0.4
KNL	Balıkesir	1.11	239	⇑i P	Pb	15 46 04.4	-0.9
KNL				i S	Sb	15 46 20.0	+0.4
MAR2	Marsite Statio	1.11	264	PN	Pb	15 46 05.0	-0.4
MAR4	Marsite Statio	1.12	268	PN	Pb	15 46 04.5	-1.0
MAR3	Marsite Statio	1.13	265	PN	Pb	15 46 04.6	-1.0
GONE	Gonen-Balikesi	1.15	226	PN	Pb	15 46 04.9	-1.1
MAR6	Marsite Statio	1.15	264	PN	Pb	15 46 05.3	-0.8
SAUV	Serdivan-Sakar	1.19	95	PN	Pn	15 46 05.9	-0.6
KAYN	Sakarya, Kayna	1.20	84	⇑i P	Pn	15 46 06.0	-0.6
KAYN				i S	Sb	15 46 21.6	-0.5
KRBG	Karabiga-Canak	1.21	249	PN	Pn	15 46 06.1	-0.8
GEYV	SAKARYA_Geyve	1.21	107	⇑i P	Pn	15 46 06.7	-0.2
GEYV				i S	Sb	15 46 23.8	+1.1
RKY	Sarkoy-Tekirda	1.22	263	PN	Pn	15 46 05.4	-1.7
PHSR	Pinarhisar	1.23	310	PN	Pn	15 46 06.7	-0.4
DST	Dursunbey	1.24	185	PN	Pn	15 46 07.6	+0.2
DURS	Dursunbey	1.26	190	⇓i P	Pn	15 46 06.8	-0.9
DURS				i S	Sb	15 46 24.1	0.0
GPA	Golpazari	1.30	115	PN	Pn	15 46 08.5	+0.4
AUBOZ	BOZOYUK	1.34	134	⇓i P	Pn	15 46 08.3	-0.4
AUBOZ				i S	Sn	15 46 26.5	+0.1
AUBOZ	BOZOYUK	1.34	134	PN	Pn	15 46 08.4	-0.4
BALB	Balikesir	1.38	210	PN	Pn	15 46 08.5	-0.7
BALB	Balikesir	1.38	210	Pn	Pn	15 46 08.5	-0.7
BALB				Sn	Sn	15 46 27.9	+0.6
GULT	Gulveren	1.39	107	PN	Pn	15 46 09.9	+0.5
BALY	Balya	1.41	219	⇓i P	Pn	15 46 08.9	-0.8
BALY				i S	Sn	15 46 29.1	+0.9
ARMN	Kirklareli, Me	1.44	316	⇓i P	Pn	15 46 09.6	-0.4
ARMN				i S	Sg	15 46 30.1	-0.5
TVSB	Tavsanli	1.49	159	PN	Pn	15 46 10.5	-0.3
KIRK	Kırklareli	1.57	307	i P	Pn	15 46 11.3	-0.5
KIRK				i S	Sn	15 46 31.5	-0.5
SAHE	Sakarya_HENDEK	1.58	89	⇑i P	Pn	15 46 12.4	+0.4
SAHE				i S	Sb	15 46 34.0	+0.7
KESN	Edirne-Kesan	1.59	270	⇓i P	Pn	15 46 11.4	-1.0
KESN				i S	Sn	15 46 33.1	+0.2
ANDZ	Kutahya, Merke	1.59	147	⇓i P	Pn	15 46 11.9	-0.3
ANDZ				i S	Sb	15 46 34.6	+1.0
LPK	Lapseki	1.60	254	PN	Pn	15 46 11.6	-0.7
BORA	Eskisehir	1.60	126	⇓i P	Pn	15 46 12.2	-0.2
BORA				i S	Sb	15 46 35.8	+1.8
BORA	Eskisehir	1.60	126	PN	Pn	15 46 11.8	-0.6
SRCK	Saricakaya, Es	1.63	119	PN	Pn	15 46 12.3	-0.3
UKOP	Uzunkopru-Edir	1.64	281	PN	Pn	15 46 12.9	+0.1
STEP	BALIKESIR_Sava	1.67	209	⇓i P	Pn	15 46 12.4	-0.9
STEP				i S	Sb	15 46 37.3	+1.4
BTAS	Taskesti	1.72	98	⇑i P	Pn	15 46 14.5	+0.6
BTAS				i S	Sb	15 46 37.3	+0.1
ERIK	Erikli-Kesan	1.72	265	PN	Pn	15 46 13.3	-0.6
SIMA	Simav-Kutahya	1.77	175	PN	Pn	15 46 14.3	-0.3
DEMI	Demirci	1.80	181	⇓i P	Pn	15 46 14.5	-0.6
DEMI				i S	Sb	15 46 41.1	+1.5
GELI	Tayfur-Gelibol	1.81	256	PN	Pn	15 46 13.9	-1.2
EDRB	Edirne	1.83	304	P	Pn	15 46 15.2	-0.2
EDRB	Edirne	1.83	304	PN	Pn	15 46 15.0	-0.4
GDZ	Gediz	1.84	162	⇓i P	Pn	15 46 15.3	-0.3
GDZ				i S	Sb	15 46 42.7	+2.0
GEDZ	Gediz	1.86	165	PN	Pn	15 46 16.0	+0.1
BUHA	Balikesir, Bur	1.87	225	i P	Pn	15 46 14.9	-1.0
BUHA				i S	Sb	15 46 43.6	+2.2
MDUB	Mudurnu	1.88	101	PN	Pn	15 46 16.9	+0.7
MDUB	Mudurnu	1.88	101	Pn	Pn	15 46 16.7	+0.4
ENEZ	Enez	1.99	268	PN	Pn	15 46 17.0	-0.6
YIGI	Dzce	2.03	86	⇑i P	Pn	15 46 18.7	+0.5
YIGI				i S	Sb	15 46 47.4	+1.1
SGAZ	Eskisehir, Sey	2.06	129	⇑i P	Pn	15 46 19.0	+0.4
SGAZ				i S	Sb	15 46 49.0	+2.0
AUKIR	Kırka- Seyitga	2.07	139	i P	Pn	15 46 18.8	0.0
AUKIR				i S	Sb	15 46 50.0	+2.7
ALN	Alexandroupoli	2.07	272	P	Pn	15 46 19.5	+0.8
ALN	Alexandroupoli	2.07	272	PN	Pn	15 46 18.9	+0.2
ALN	Alexandroupoli	2.07	272		Pn	15 46 18.4	-0.3
KDZE	Karadeniz Ereo	2.07	76	⇑P	Pn	15 46 19.0	+0.3
KDZE				⇑S	Sb	15 46 47.5	+0.1
KDZE	Karadeniz Ereo	2.07	76	PN	Pn	15 46 19.1	+0.3
KDZE	Karadeniz Ereo	2.07	76		Pn	15 46 19.0	+0.3
KDZE					Sb	15 46 47.5	+0.1
EZN	Ezine	2.13	242	PN	Pn	15 46 19.8	+0.3
YUVA	Yuva-Kibriscik	2.27	101	PN	Pn	15 46 22.0	+0.5
DKL	Dikili	2.28	220	PN	Pn	15 46 22.1	+0.5
GADA	Gvkgeada	2.29	254	P	Pn	15 46 21.5	-0.2
GADA	Gvkgeada	2.29	254	PN	Pn	15 46 22.3	+0.6
CIFT	Cifteler, Eski	2.30	129	PN	Pn	15 46 21.9	0.0
BOZC	Bozcaada	2.31	245	PN	Pn	15 46 22.0	0.0
KULA	Kula-Manisa	2.33	182	P	Pn	15 46 21.7	-0.6
KULA	Kula-Manisa	2.33	182	PN	Pn	15 46 21.8	-0.6
MANT	Manisa	2.36	184	i P	Pn	15 46 22.1	-0.8
MANT				i S	Sb	15 46 56.7	+0.9
AFYO	Afyonkarahisar	2.37	150	i P	Pb	15 46 27.8	+0.9
AFYO				i S	Sb	15 46 58.8	+2.9
KIBS	BOLU	2.38	99	i P	Pn	15 46 22.6	-0.5
KIBS				i S	Sg	15 47 00.7	-0.3
RDO	Rodhopi	2.47	278	P	Pn	15 46 24.1	-0.1
RDO	Rodhopi	2.47	278	PN	Pn	15 46 24.1	-0.1
SMTH	Samothraki Isl	2.49	262	P	Pn	15 46 23.6	-1.0
PRK	Paraskevi	2.50	231	P	Pn	15 46 25.1	+0.5
BCAM	Yenicaga	2.50	90	⇓i P	Pn	15 46 25.7	+0.9
BCAM				i S	Sb	15 47 00.7	+0.8
PASA	Karahalli, USA	2.55	167	i P	Pn	15 46 25.0	-0.4
PASA				i S	Sg	15 47 05.5	-0.9
KALB	Balgarevo	2.57	354	⇑P	Pn	15 46 25.9	+0.2
KALB				⇑S	Sn	15 46 57.2	+0.5
KALB	Balgarevo	2.57	354		Pn	15 46 25.9	+0.2
KALB					Sn	15 46 57.2	+0.5
KDZ	Kurdzhali	2.66	289	i P	Pn	15 46 27.3	+0.5
DIM	Dimitrovgrad	2.72	297	i P	Pn	15 46 27.3	-0.3
SIGR	SIGRI	2.77	235	PN	Pn	15 46 27.3	-1.0
KZIL	AFYON_Kizioren	2.79	157	i P	Pn	15 46 28.4	-0.3
KZIL				i S	Sg	15 47 13.2	-0.9
BLCB	Balcova	2.79	209	P	Pn	15 46 27.4	-1.3
MANR	Mangalia	2.97	357	⇓P	Pn	15 46 30.2	-0.9
MANR	Mangalia	2.97	357		Pn	15 46 30.2	-0.9
RZN	Rozhen	3.17	287	i P	Pn	15 46 34.2	+0.2
RAZG	Razgrad	3.20	329	⇑P	Pn	15 46 34.6	+0.4
RAZG	Razgrad	3.20	329		Pn	15 46 34.6	+0.4
SZH	Strazhica	3.21	320	i P	Pn	15 46 34.6	+0.1
BR231	Keskin MP Arra	3.22	107	Pn	Pn	15 46 36.3	+1.7
ANTO	Ankara	3.22	106	Pn	Pn	15 46 35.6	+1.0
ISP	Isparta	3.31	155	Pn	Pn	15 46 37.3	+1.5
ICOR	Ion Corvin	3.35	348	⇑P	Pn	15 46 36.8	+0.5
ICOR	Ion Corvin	3.35	348		Pn	15 46 36.8	+0.5
TIRR	Tirgusor	3.62	356	⇓P	Pn	15 46 41.1	+1.0
TIRR	Tirgusor	3.62	356		Pn	15 46 41.1	+1.0
TIRR	Tirgusor	3.62	356	Pn	Pn	15 46 40.5	+0.5
TLBR	Topalu	3.74	352	⇑P	Pn	15 46 42.7	+1.0
TLBR	Topalu	3.74	352		Pn	15 46 42.7	+1.0
MMB	Musomiste	3.88	283	i P	Pn	15 46 44.1	+0.5
BR131	Keskin Array S	3.89	105		Pn	15 46 44.0	+0.2
BRTR	Keskin Array B	3.89	105	Pn	Pn	15 46 43.6	-0.3
	1.1nm,0.3s,baz=277,slow=15,SNR=8.4						
BRTR				Pg	Pg	15 46 56.9	-1.9
	2.6nm,0.3s,baz=267,slow=17,SNR=10.0						
BRTR				Sn	Sn	15 47 26.3	-3.1
	2.0nm,0.3s,baz=278,slow=14,SNR=5.3						
BRTR				Lg	Lg	15 47 49.0	
	1.0nm,0.3s,baz=134,slow=39,SNR=2.1						
BRTR	Keskin Array B	3.89	105		Pn	15 46 43.7	-0.2
SGRR	Singureni	3.96	329	⇑P	Pn	15 46 45.0	+0.3
SGRR	Singureni	3.96	329		Pn	15 46 45.0	+0.3
PLVB	Pleven	4.00	311	⇑P	Pn	15 46 46.5	+1.3
PLVB	Pleven	4.00	311		Pn	15 46 46.5	+1.3
TPGR	Topolog	4.02	356	⇓P	Pn	15 46 45.5	0.0
TPGR	Topolog	4.02	356		Pn	15 46 45.5	0.0
BZK	Bozkurt	4.09	72	⇓P	Pn	15 46 48.6	+2.1
BZK	Bozkurt	4.09	72		Pn	15 46 47.5	+1.0

COPA	Copaceanca	4.21	323	⇑P	Pn	15 46 48.9	+0.8
COPA	Copaceanca	4.21	323		Pn	15 46 48.9	+0.8
TLCR		4.34	0	⇓P	Pn	15 46 51.4	+1.5
TLCR		4.34	0		Pn	15 46 51.4	+1.5
CFR	Carcaliu	4.36	354	⇑P	Pn	15 46 49.6	-0.6
CFR				⇑S	Sn	15 47 40.8	+0.1
CFR	Carcaliu	4.36	354		Pn	15 46 49.6	-0.6
CFR					Sn	15 47 40.8	+0.1
KKB	Krupnik	4.40	285	*i* P	Pn	15 46 52.8	+2.0
VTS	Vitosha	4.51	295	⇑P	Pn	15 46 52.6	+0.2
VTS	Vitosha	4.51	295	*i* P	Pn	15 46 53.2	+0.8
VTS	Vitosha	4.51	295		Pn	15 46 51.8	-0.6
HUMR	Humele	4.62	324	⇓P	Pn	15 46 53.9	+0.1
HUMR	Humele	4.62	324		Pn	15 46 53.9	+0.1
NEHR	Nehoiu	4.93	339	⇑P	Pn	15 46 57.6	-0.4
NEHR	Nehoiu	4.93	339		Pn	15 46 57.6	-0.4
DIKM	Dikmen	4.96	79	⇑P	Pn	15 47 00.5	+2.1
DIKM	Dikmen	4.96	79		Pn	15 47 00.5	+2.1
SNOP	Sinop	4.98	74	Pn	Pn	15 46 58.5	-0.1
VLDR	Vladesti	5.02	354	⇑P	Pn	15 47 00.6	+1.3
VLDR	Vladesti	5.02	354		Pn	15 47 00.6	+1.3
STIP	Stip	5.04	282	*i* Pn	Pn	15 46 57.7	-1.8
ODBI	Odobesti	5.07	346	⇑P	Pn	15 47 00.5	+0.6
ODBI	Odobesti	5.07	346		Pn	15 47 00.5	+0.6
MLR	Muntele Rosu	5.08	337	⇑P	Pn	15 47 00.4	+0.2
MLR	Muntele Rosu	5.08	337	Pn	Pn	15 47 02.7	+2.5
	1.8nm,0.3s,baz=116,slow=13,SNR=5.8						
MLR				Lg	Lg	15 48 30.4	
	1.5nm,0.3s,baz=253,slow=23,SNR=1.9						
SEV	Sevastopol'	5.17	43	⇓*i*P	Pn	15 47 01.4	+0.2
SEV				Pm		15 47 03.9	
	comp=Z,25nm,0.3s						
SEV				*i* S	Sn	15 47 57.1	-3.6
SEV				Sm		15 47 58.8	
	comp=E,74nm,0.5s						
SEV				Sm		15 48 02.6	
	comp=N,49nm,0.4s,comp=E,42nm,0.4s						
VRI	Vrincioaia	5.24	344	⇓P	Pn	15 47 03.2	+1.0
VRI	Vrincioaia	5.24	344		Pn	15 47 03.2	+1.0
PLOR	Plostina	5.24	344	⇑P	Pn	15 47 02.3	0.0
PLOR	Plostina	5.24	344		Pn	15 47 02.3	0.0
AGG	Agios Georgios	5.28	252	Pn	Pn	15 47 03.7	+0.9
VOIR		5.34	331	⇑P	Pn	15 47 04.7	+1.0
VOIR		5.34	331		Pn	15 47 04.7	+1.0
YAL	Yalta	5.38	46	⇑*e*P	Pn	15 47 03.7	-0.5
YAL				Pm		15 47 06.5	
	comp=Z,52nm,0.3s						
YAL				*i* S	Sn	15 48 02.4	-3.6
YAL				Sm		15 48 04.6	
	comp=N,81nm,0.3s						
YAL				Sm		15 48 04.6	
	comp=E,93nm,0.4s						
FNA	Florina	5.61	272	Pn	Pn	15 47 07.8	+0.4
SIM	Simferopol'	5.68	42	⇑*e*P	Pn	15 47 08.4	+0.1
SIM				Pm		15 47 11.1	
	comp=Z,97nm,0.4s						
SIM				*i* S	Sn	15 48 09.0	-4.3
SIM				Sm		15 48 10.6	
	comp=N,62nm,0.3s						
SIM				Sm		15 48 10.0	
	comp=E,153nm,0.5s						
OZUR		5.68	339	⇓P	Pn	15 47 09.0	+0.6
OZUR		5.68	339		Pn	15 47 09.0	+0.6
DOPR	Dopca	5.68	335	⇑P	Pn	15 47 09.2	+0.8
DOPR	Dopca	5.68	335		Pn	15 47 09.2	+0.8
BNN	Bunyan	5.80	108	Pn	Pn	15 47 11.4	+1.4
VASR	Vaslui	5.84	353	⇓P	Pn	15 47 10.0	-0.5
VASR	Vaslui	5.84	353		Pn	15 47 10.0	-0.5
TESR	Tescani	5.87	346	⇑P	Pn	15 47 10.6	-0.3
TESR	Tescani	5.87	346		Pn	15 47 10.6	-0.3
BOVS	Bovan	5.94	300	⇓P	Pn	15 47 12.2	+0.3
BOVS	Bovan	5.94	300		Pn	15 47 12.2	+0.3
MILM	Milestii Mici	6.07	0	⇑P	Pn	15 47 14.6	+0.9
MILM	Milestii Mici	6.07	0		Pn	15 47 14.6	+0.9
SUDU	Sudak	6.11	46	⇑*e*P	Pn	15 47 15.6	+1.4
SUDU				Pm		15 47 19.3	
	comp=Z,42nm,0.3s						
SUDU				*e*S	Sn	15 48 20.8	-3.0
SUDU				Sm		15 48 26.4	
	comp=N,170nm,0.6s						
SUDU				Sm		15 48 27.9	
	comp=E,66nm,0.4s						
HERR	Herculane	6.17	313	⇑P	Pn	15 47 15.0	-0.1
HERR	Herculane	6.17	313		Pn	15 47 15.0	-0.1
GZR	Gura Zlata	6.32	318	⇑P	Pn	15 47 17.7	+0.5
GZR	Gura Zlata	6.32	318		Pn	15 47 17.7	+0.5
IDI	Anoyia	6.33	210	LR	LR	15 49 57.7	
	comp=E,50nm,19.8s,baz=10.0,slow=40						
FEO	Feodosiya	6.40	47	⇓*e*P	Pn	15 47 18.7	+0.5
FEO				Pm		15 47 23.9	
	comp=Z,51nm,0.4s						
ITM	Ithomi	6.46	238	Pn	Pn	15 47 20.1	+1.0
MDVR	Moldovita	6.51	310	⇑P	Pn	15 47 19.8	0.0
MDVR	Moldovita	6.51	310		Pn	15 47 19.8	0.0
BURAR	Bucovina Array	7.23	341	⇑P	Pn	15 47 31.5	+1.7
BURAR	Bucovina Array	7.23	341		Pn	15 47 31.5	+1.7
SORM	Soroca	7.30	358	⇓P	Pn	15 47 30.4	-0.1
SORM	Soroca	7.30	358		Pn	15 47 30.4	-0.1
PDG	Podgorica	7.30	286	⇑P	Pn	15 47 31.4	+0.8
PDG	Podgorica	7.30	286		Pn	15 47 31.4	+0.8
DBRK	Dubrovnik	8.15	286	*i* P	Pn	15 47 48.0	+5.7
STON	Ston	8.51	287	*i* P	Pn	15 47 49.3	+2.2
RICI	Ricice	9.04	291	*i* P	Pn	15 47 57.0	+2.6
KIJV	Kijevo	9.68	293	*e*Pg	Pn	15 47 52.9	-10
KIJV				Sg		15 47 55.4	
AKASG	Malin Array Be	9.86	2	Pn	Pn	15 48 04.4	-1.3
	comp=Z,2.2nm,0.3s,baz=181,slow=12,SNR=8.3						
AKBB	Malin Array Si	9.86	2		Pn	15 48 05.3	-0.4
MORI	Morici	10.13	292	*e*Pg	Pn	15 48 01.4	-7.9
MORI				Sg		15 48 11.5	
DUGI	Dugi Otok	10.62	292	*i* P	Pn	15 48 14.9	-1.1
NRCA	Norcia	11.85	285	Pn	Pn	15 48 33.8	+0.8
GNI	Garni	12.18	88	Pn	Pn	15 48 43.0	+5.4
	comp=Z,0.8nm,0.3s,baz=187,slow=14,SNR=3.7						
GNI				LR	LR	15 53 39.7	
	comp=Z,55nm,19.7s,baz=228,slow=39						
DAVOX	Davos/Dischmat	14.86	300	Pn	P	15 49 18.0	-1.9
	comp=Z,0.2nm,0.3s,baz=350,slow=17,SNR=2.6						
FINES	FINESS Array B	20.69	356	P	Pn	15 50 27.7	+1.5
	comp=Z,1.0nm,0.4s,baz=161,slow=12,SNR=9.4						
KLMR	Klimovskoe	21.10	15	*e*	P	15 50 30.6	+2.4
KLMR				AMP		15 50 41.2	
	comp=Z,35nm,1.6s						
KIRV	Kirov	22.05	29	LR	LR	16 00 26.8	
	comp=Z,52nm,19.5s,baz=201,slow=40						
AKTO	Aktyubinsk	22.45	55	P	P	15 50 44.6	+1.7
	comp=Z,0.8nm,0.5s,baz=252,slow=17,SNR=2.5						
NOA	NORSAR Array B	22.91	338	LR	LR	16 00 13.1	
	comp=Z,24nm,18.2s,baz=280,slow=38						
ABKAR	Akbulak array	23.44	58	P	P	15 50 53.3	+0.2
ESDC	Sonseca Array	24.93	278	P	P	15 51 07.0	-0.1
	comp=Z,0.7nm,0.7s,baz=72,slow=8.9,SNR=6.0						
ESDC				pP	sP	15 51 12.7	-0.1
	comp=Z,1.0nm,0.7s,baz=62,slow=7.8,SNR=7.0						
TORD	Torodi Ar. Bea	36.36	228	P	P	15 52 47.6	-0.5
	comp=Z,1.5nm,0.6s,baz=33,slow=9.0,SNR=10						
TORD	Torodi Ar. Bea	36.36	228	P	P	15 52 47.9	-0.3
TORD				IAmb	IAmb	15 52 54.8	
	comp=Z,1.3nm,0.8s						
MK31	Makanchi Array	38.44	63	P	P	15 53 06.3	+0.8
MKAR	Makanchi Array	38.44	63	P	P	15 53 06.6	+1.0
	comp=Z,1.6nm,0.8s,baz=281,slow=6.6,SNR=14						
ZALV	Zalesovo Beam	39.11	51	P	P	15 53 11.0	0.0
	comp=Z,0.7nm,0.5s,baz=258,slow=7.4,SNR=3.5						
WMQ	Urumqi	42.86	66	*e*P	P	15 53 44.8	+2.6
DBIC	Dimbokro	45.36	231	P	P	15 54 01.6	-0.8
	comp=Z,2.0nm,0.6s,baz=34,slow=10,SNR=3.7						
DBIC	Dimbokro	45.36	231	P	P	15 54 01.8	-0.6
HHC	Hu-ho-hao-te	60.22	60	*e*P	P	15 55 52.4	+0.3
HHC				pmax	pmax		
	comp=Z,18nm,0.7s						
HHC				pmax	pmax		
	comp=Z,210nm,6.6s						
CMAR	Chiang Mai Arr	63.30	88	P	P	15 56 12.2	-0.8
	comp=Z,0.2nm,0.3s,baz=282,slow=8.6,SNR=4.0						
A36M	Sachs Harbour	65.98	351	P	P	15 56 30.6	+0.9
A36M				IAmb	IAmb	15 56 32.1	
	comp=Z,4.5nm,1.1s						
INK	Inuvik	70.36	353	P	P	15 56 58.3	+1.1
INK				IAmb	IAmb	15 57 03.2	
	comp=Z,8.6nm,1.5s						

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*IDC **16** 15:54:12.1±2.8, 30°.00S×71°.85W, h0^{km}, mb3.7/1, mb1 3.7/4, mb1mx3.6/26, mbtmp3.7/4, ML3.4/3, MS3.3/3, Ms1 3.3/3, ms1mx2.9/25, Error ellipse: s-maj=113.5km s-min=47.6km az=105.0*

*GUC **16** 15:54:13.8±0.7, 29°.93S×72°.05W, h30^{km}±12^{km}, ML3.7*

ISC 16 15:54:14.5±0.9, **29°.92S**±0°.05×**72°.01W**±0°.08, **h25**^{km}, **n24**, σ1^{s}**16**/28, **2C-1D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	La Serena	0.67	90	⇓*i*P	Pn	15 54 27.2	-1.1
CO05				*i* S	Sn	15 54 36.4	-1.7
CO05				IAML		15 54 39.1	
	comp=E,5μm,0.7s						
CO06	Fray Jorge	0.82	157	⇑*i*P	Pb	15 54 28.6	-1.4
CO06				*i* S	Sn	15 54 40.1	-1.7
GO04	Tololo Observa	1.08	104	*e*P	Pb	15 54 33.9	-0.8
GO04				*i* S	Sn	15 54 49.1	+0.5
LCO	Las Campanas	1.46	52	⇑*i*P	Pb	15 54 39.8	-1.3
LCO				*i* S	Sb	15 54 59.3	0.0
VA06	Catapilco	2.70	167	*e*P	Pn	15 54 55.7	-0.6
VA06				IAML		15 55 52.3	
	comp=E,343nm,0.2s						
GO03	Copiap	2.79	34	*e*P	Pn	15 54 56.6	-1.0
GO03				IAML		15 55 46.6	
	comp=E,420nm,0.2s						
VA03	San Esteban	3.10	157	*e*P	Pn	15 55 02.3	+0.4
VA03				*i* S	Sn	15 55 39.2	+1.0
VA03				IAML		15 55 56.5	
	comp=E,194nm,0.3s						
ROCH	El Roble	3.16	165	*e*P	Pn	15 55 03.0	+0.2
ROCH				IAML		15 56 00.1	
	comp=N,173nm,0.5s						
PEL	Peldehue	3.41	161	*e*P	Pn	15 55 06.9	+0.8
PEL				*e*S	Sn	15 55 45.7	0.0
PEL				IAML		15 56 06.4	
	comp=N,98nm,0.3s						
MT09	Talagante	3.94	167	*e*P	Pn	15 55 14.0	+0.5
MT01	Popeta	3.99	171	*e*P	Pn	15 55 13.1	-0.9
BO04	La Punta	4.23	164	*e*P	Pn	15 55 17.8	+0.4
BO01	Tunca	4.53	170	*e*P	Pn	15 55 20.9	-0.6
BO02	Sierra Bellavi	4.97	168	*e*P	Pn	15 55 27.5	-0.1
H03N1	Juan Fernandez	6.85	237	Pn	Pn	15 55 51.7	-1.4
	baz=115,slow=18,SNR=10						
H03N1				T	T	16 03 24.5	
	baz=66,slow=71,SNR=339						
H03N2	Juan Fernandez	6.86	237	Pn	Pn	15 55 51.9	-1.4
	baz=115,slow=18,SNR=9.7						
H03N2				T	T	16 03 25.9	
	baz=66,slow=71,SNR=262						
H03N3	Juan Fernandez	6.86	237	Pn	Pn	15 55 51.5	-1.8
	baz=115,slow=18,SNR=13						
H03N3				T	T	16 03 26.2	
	baz=66,slow=71,SNR=234						
LVC	Limon Verde	7.79	22	Pn	Pn	15 56 05.5	-1.2
	comp=N,0.3nm,0.3s,baz=202,slow=5.4,SNR=1.7						
LVC				LR	LR	15 59 18.3	
	comp=N,107nm,18.0s,baz=210,slow=39						
CPUP	Villa Florida	13.44	78	LR	LR	16 03 05.6	
	comp=N,78nm,20.0s,baz=232,slow=40						
LPAZ	La Paz	14.03	16	Pn	Pn	15 57 34.9	+2.7
	comp=N,0.1nm,0.3s,baz=198,slow=5.9,SNR=4.2						
SIV	San Ignacio	17.12	38	P	P	15 58 13.6	-0.1
	comp=N,0.1nm,0.3s,baz=222,slow=12,SNR=11						
ELK	Elko	80.91	328	LR	LR	16 38 30.5	
	comp=N,54nm,20.6s,baz=264,slow=33						
TORD	Torodi Ar. Bea	82.81	70	P	P	16 06 37.9	+0.9
	comp=N,0.6nm,0.9s,baz=254,slow=4.2,SNR=2.8						
ZALV	Zalesovo Beam	150.70	28	PKPbc	PKiKP	16 14 05.5	+1.0
	comp=N,1.3nm,0.5s,baz=303,slow=3.5,SNR=7.4						

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*IDC **16** 16:12:58.9±2.3, 0°.15N×16°.53W, h0^{km}, mb4.0/4, mb1 4.1/6, mb1mx3.8/47, mbtmp4.0/6, ML3.9/2, MS3.5/5, Ms1 3.5/5, ms1mx3.2/39, Error ellipse: s-maj=62.2km s-min=33.6km az=104.0*

*NEIC **16** 16:13:03.8±0.4, 0°.2N±0°.2×16°.3W±0°.2, h10^{km}±2^{km}, mb4.1/3, Error ellipse: s-maj=28.4km s-min=27.4km az=173.0*

ISC 16 16:13:01.2±1.9, **0°.2N**±0°.2×**16°.5W**±0°.3, **h13**^{km}, **n18**, σ1^{s}**30**/9, **mb4.0**/4, **MS3.3**/3, **North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N2	ASCENSION HYDR	8.22	166	T	T	16 22 52.6	
	baz=346						
H10N3	ASCENSION HYDR	8.23	166	T	T	16 23 06.9	
	baz=346,slow=74,SNR=154						
H10N1	ASCENSION HYDR	8.24	166	T	T	16 23 04.3	
	baz=346,slow=74,SNR=266						
H10S3	ASCENSION HYDR	9.27	169	T	T	16 24 13.4	
	baz=349,slow=74,SNR=108						
H10S2	ASCENSION HYDR	9.28	168	T	T	16 24 14.0	
	baz=231,slow=74,SNR=26						
DBIC	Dimbokro	13.30	61	Pn	Pn	16 16 09.7	-0.1
	0.5nm,0.3s,baz=258,slow=11,SNR=5.2						
DBIC				Sn	Sn	16 18 23.9	-14
	1.0nm,0.3s,baz=164,slow=11,SNR=6.6						
DBIC				LR	LR	16 20 15.2	
	comp=Z,179nm,20.4s,baz=210,slow=33						
KOWA	Kowa	18.84	40	P	P	16 17 20.0	-1.0
	0.4nm,0.3s,baz=210,slow=11,SNR=9.8						
KOWA				LR	LR	16 24 05.3	
	comp=Z,213nm,18.7s,baz=322,slow=35						
KOWA	Kowa	18.84	40	P	Pn	16 17 21.4	-0.1
KOWA				IAmb	IAmb	16 17 24.0	
	comp=Z,18nm,1.6s						
TORD	Torodi Ar. Bea	22.17	54	P	P	16 17 56.6	-0.6
	comp=Z,11nm,1.0s,baz=237,slow=11,SNR=20						
TORD				LR	LR	16 25 45.1	
	comp=Z,101nm,18.9s,baz=225,slow=34						
TORD	Torodi Ar. Bea	22.17	54	P	P	16 17 57.1	-0.1
TORD				IAmb	IAmb	16 18 01.8	
	comp=Z,3.0nm,0.9s						
ESDC	Sonseca Array	40.94	15	LR	LR	16 35 51.3	
	comp=Z,42nm,21.2s,baz=170,slow=34						
KEST	Kesra	42.77	32	LR	LR	16 40 23.7	
	comp=Z,105nm,18.1s,baz=208,slow=38						
LBTB	Lobatse	47.81	125	P	P	16 21 40.0	+1.1
	comp=Z,3.1nm,0.9s,baz=278,slow=7.1,SNR=2.4						
LBTB	Lobatse	47.81	125	IAmb	IAmb	16 22 01.1	
	comp=Z,15nm,1.4s						
GERES	GERESS Array B	55.02	24	P	P	16 22 34.1	+1.6
	comp=Z,0.4nm,0.5s,baz=197,slow=7.0,SNR=3.8						
MKAR	Makanchi Array	95.90	43	P	P	16 26 27.4	-0.5
	comp=Z,0.5nm,0.8s,baz=300,slow=2.8,SNR=3.6						
ASAR	Alice Springs	143.01	131	PKhKP	PKPpre	16 32 29.3	
	comp=Z,0.3nm,0.8s,baz=221,slow=2.8,SNR=6.5						
WRA	Warramunga Arr	145.37	126	PKPbc	PKPbc	16 32 37.5	-2.2
	comp=Z,1.4nm,0.6s,baz=239,slow=2.9,SNR=19						

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*IDC **16** 16:13:03.8±0.5, 24°.61S×175°.99W, h0^{km}, mb4.7/17, mb1 4.8/19, mb1mx4.7/31, mbtmp4.7/19, ML4.4/2, MS4.3/10, Ms1 4.3/10, ms1mx4.0/48, Error ellipse: s-maj=19.0km s-min=15.5km az=126.0*

*BJI **16** 16:13:05.9±0.0, 24°.53S×175°.58W, h25^{km}, mB5.6/6, mb5.3/34, Ms5.6/3, Ms7 5.6/3*

*GCMT **16** 16:13:07.7±0.3, 24°.74S±0°.03×175°.47W±0°.02, h20^{km}, MW5.0/52, Moment Tensor Solution. s33,c46; s52,c82; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.52±.20; M$_{\theta\theta}$-1.00±.15; M$_{\phi\phi}$-2.52±.12; M$_{r\theta}$0.82±.27; M$_{\theta\phi}$-1.08±.07; M$_{\phi r}$1.97±.22; Best double couple: M$_0$3.92900×10^{16} NP1:φ$_s$209.00000°,δ29.00000°,λ94.00000°. NP2: φ$_s$25.00000°,δ61.00000°,λ88.00000°. Principal axes: T 4.1510, Plg73.0000°, Azm290.0000°; N -0.4440, Plg2.0000°, Azm26.0000°; P -3.7060, Plg16.0000°, Azm116.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **16** 16:13:08.7±1.7, 24°.81S±0°.08×176°.0W±0°.1, h35^{km}±1^{km}, mb5.0/88 Error ellipse: s-maj=17.7km s-min=12.7km az=85.0*

ISC 16 16:13:08.9±0.3, **24°.87S**±0°.04×**176°.15W**±0°.06, **h35**^{km}, **n267**, σ1^{s}**92**/275, **mb5.0**/69, **MS4.3**/10, **4C-3D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	Raoul Island	4.63	200	S	Sn	16 15 16.5	+7.5
RAO	Raoul Island	4.64	200	Pn	Pn	16 14 19.3	+2.9
	33nm,0.3s,baz=85,slow=22,SNR=3.8						
RAO				Sn	Sn	16 15 15.1	+6.0
	24nm,0.3s,baz=97,slow=20,SNR=2.1						
RAO	Raoul Island	4.64	200	Pn	Pn	16 14 17.4	+1.0
GLKZ	Green Lake	4.65	200	P	Pn	16 14 18.8	+2.2
GLKZ				S	Sn	16 15 14.9	+5.5
NIUE	Niue	8.16	46		Pn	16 14 51.8	-13
NIUE					Sn	16 16 09.1	-27
MSVF	Nonsavu	8.93	322	Pn	Pn	16 15 18.6	+3.1
	2.5nm,0.3s,baz=144,slow=13,SNR=40						
MSVF				LR	LR	16 18 24.4	
	comp=Z,4μm,18.6s,baz=115,slow=36						
MSVF	Nonsavu	8.93	322		Pn	16 15 17.1	+1.5
AFI	Afiamalu	11.66	21	Pn	Pn	16 15 42.5	-10
	5.1nm,0.3s,baz=101,slow=2.1,SNR=5.3						
AFI				Sn	Sn	16 17 40.6	-21
	1.5nm,0.3s,baz=140,slow=21,SNR=1.7						
HAZ	Te Kaha	13.85	201	P	Pn	16 16 18.6	-4.0
URZ	Urewera	14.52	202	Pn	P	16 16 35.1	-2.9
	0.6nm,0.3s,baz=121,slow=22,SNR=2.3						
URZ				Sn	Sn	16 19 07.1	-4.5
	0.7nm,0.3s,baz=117,slow=22,SNR=2.3						
URZ	Urewera	14.52	202	P	P	16 16 37.3	-0.7
URZ				S	Sn	16 19 03.8	-7.8
URZ	Urewera	14.52	202	Pn	Pn	16 16 33.2	+1.4
RAGZ	Rawiri	14.64	200	P	P	16 16 39.6	+0.3
RAGZ				S	Sn	16 19 09.3	-5.2
RAR	Rarotonga	15.50	80	Pn	Pn	16 16 32.0	-13
	5.1nm,0.3s,baz=249,slow=6.8,SNR=15						
RAR				LR	LR	16 20 26.1	
	comp=Z,615nm,21.7s,baz=266,slow=29						
RAR	Rarotonga	15.50	80	Pn	Pn	16 16 32.4	-13
RAR				IAmb	IAmb	16 16 37.7	
	comp=Z,196nm,1.1s						
BKZ	Black Stump Fm	15.55	202	P	Pn	16 16 47.3	+1.8
BKZ	Black Stump Fm	15.55	202		Pn	16 16 45.1	-0.4
HIZ	Hauiti	15.59	207	P	P	16 16 53.3	+3.4
OUENC	Ouen Island, N	15.78	275	P	P	16 16 52.2	+0.1
OUENC				IAmb	IAmb	16 17 11.4	
	comp=Z,122nm,1.2s						
LIFNC	LIFOU	15.85	282		P	16 16 52.4	-0.5
LIFNC				IAmb	IAmb	16 17 10.7	
	comp=Z,91nm,0.9s						
KAHZ	Kahuranaki	15.99	200	P	Pn	16 16 49.1	-2.1
PXZ	Pawanui	16.21	200	P	P	16 16 57.1	+0.4
PXZ				S	Sn	16 19 43.6	-9.1
DZM	Mont Dzumac	16.22	276	Pn	P	16 17 01.5	+4.5
	comp=Z,0.9nm,0.3s,baz=95,slow=16,SNR=30						
DZM				LR	LR	16 22 06.4	
	comp=Z,1μm,21.7s,baz=106,slow=33						
DZM	Mont Dzumac	16.22	276	*e*P	P	16 17 00.5	+3.5
	comp=Z,273nm,1.6s						
DZM				*e*LQ	LQ	16 20 06.2	
	comp=Z,2μm,27.8s						
DZM				*e*LR	LR	16 20 48.2	
	comp=Z,2μm,24.3s						
DZM	Mont Dzumac	16.22	276	P	P	16 17 00.1	+3.1
DZM				IAmb	IAmb	16 17 15.0	
	comp=Z,93nm,1.1s						
WPHZ	Waipukurau	16.38	201	P	P	16 16 59.5	+1.0
WPHZ				S	Sn	16 19 48.6	-8.1
TSZ	Takapari Road	16.53	202	P	P	16 16 59.7	-0.6
DVHZ	Dannevirke	16.68	201	P	P	16 17 02.3	+0.4
DVHZ				S	Sn	16 19 55.2	-8.8
BFZ	Birch Farm	17.00	200	P	Pn	16 17 00.5	-3.4
MRZ	Mangatainoka R	17.20	202	P	Pn	16 17 05.2	-1.2
MRZ				S	Sn	16 20 04.8	-12
HOWZ	Holdsworth Sta	17.43	202	P	Pn	16 17 09.5	+0.2
HOWZ				S	Sn	16 20 07.9	-14
OGWZ	Otaki Gorge	17.48	202	P	Pn	16 17 09.2	-0.7
OGWZ				S	Sn	16 20 10.9	-12
TMWZ	Te Maipa	17.50	200	P	P	16 17 10.9	-0.1
TRWZ	Traveller	17.83	200	P	Pn	16 17 14.0	-0.2
SNZO	South Karori	18.08	203	Pn	Pn	16 17 14.9	-2.3
PLWZ	Palliser	18.12	201	P	Pn	16 17 15.4	-2.4
BSWZ	Blackbirch Sta	18.73	204	P	P	16 17 23.6	-0.9
KHZ	Kahutara	19.46	203	P	P	16 17 28.8	-3.8
RPZ	Rata Peaks	21.52	206	P	P	16 17 51.5	-3.3
KNTN	Kanton	22.38	12	P	P	16 17 59.4	-4.9
KNTN				IAmb	IAmb	16 18 06.2	
	comp=Z,60nm,1.0s						
ODZ	Otahua Downs	22.79	205	P	P	16 18 07.0	-1.5
PAE	Paea	25.75	79	*e*T	T	16 45 13.4	
	comp=Z,4.2nm,0.4s						
PPT2	Papeete2	25.77	79	*e*S	S	16 23 05.6	+1.8
	comp=Z,159nm,28.0s						
PPT2				*e*LQ	LQ	16 23 36.4	
	comp=Z,1μm,23.0s						
PPT2				*e*LR	LR	16 24 53.5	
	comp=Z,1μm,24.2s						
PPT2	Papeete2	25.77	79	*e*T	T	16 45 17.2	
	comp=Z,5.0nm,0.4s						
PPT	Papeete	25.78	79	LR	LR	16 25 45.7	
	comp=Z,428nm,20.8s,baz=252,slow=30						
HNR	Honiara	27.45	300	P	P	16 18 51.5	-0.2
	comp=Z,17nm,0.3s,baz=204,slow=12,SNR=3.8						
HNR	Honiara	27.45	300	IAmb	IAmb	16 19 19.1	
	comp=Z,85nm,1.3s						
ARMA	Armidale	29.02	252	P	P	16 19 05.6	-0.2
EIDS	Eidsvold	29.64	262	P	P	16 19 11.4	+0.2
EIDS				IAmb	IAmb	16 19 28.4	
	comp=Z,32nm,1.5s						
CAN	Canberra	31.76	243	P	P	16 19 29.4	-0.5
XMAS	Kiritimati	32.33	37	P	P	16 19 34.1	-0.9
XMAS				IAmb	IAmb	16 19 45.2	
	comp=Z,44nm,1.1s						
MCQ	Macquarie Isla	34.88	205	P	P	16 19 57.2	+0.5
TOO	Toolangi	34.93	239	P	P	16 19 57.3	-0.2
CTAO	Charters Tower	34.99	270	P	P	16 19 58.9	+0.7
CTAO				IAmb	IAmb	16 20 10.2	
	comp=Z,20nm,1.0s						
STKA	Stephens Creek	37.65	249	P	P	16 20 22.3	+1.5
	comp=Z,2.7nm,0.7s,baz=104,slow=11,SNR=8.7						
STKA				PcP	PcP	16 22 39.3	+1.5
	comp=Z,2.5nm,0.7s,baz=89,slow=5.2,SNR=3.8						
STKA				LR	LR	16 35 01.7	
	comp=Z,1μm,18.3s,baz=77,slow=35						
STKA	Stephens Creek	37.65	249	P	P	16 20 21.7	+1.0
TAOE	Nuku Hiva Isla	37.80	71	*e*S	S	16 26 16.5	+5.4
	comp=Z,99nm,29.4s						
TAOE				*e*LR	LR	16 30 09.9	
	comp=Z,438nm,28.0s						
PMG	Port Moresby	38.14	287	P	P	16 20 24.8	-0.2
	comp=Z,24nm,0.9s,baz=115,slow=5.7,SNR=28						
PMG	Port Moresby	38.14	287	P	P	16 20 24.0	-1.0
PMG				IAmb	IAmb	16 20 41.8	
	comp=Z,35nm,0.9s						
COEN	Coen	39.73	278	P	P	16 20 37.9	-0.5
BBOO	Buckleboo	42.32	248	P	P	16 20 59.2	-0.2
AS31	Alice Springs	45.34	261	P	P	16 21 23.6	-0.4
ASAR	Alice Springs	45.34	261	P	P	16 21 24.6	+0.6
	comp=Z,8.3nm,0.9s,baz=94,slow=6.3,SNR=45						
ASAR				PcP	PcP	16 23 04.4	+1.2
	comp=Z,3.0nm,0.8s,baz=98,slow=4.4,SNR=6.2						
ASAR				S	S	16 28 03.1	+0.4
	comp=Z,0.2nm,0.8s,baz=95,slow=14,SNR=1.5						
ASAR				LR	LR	16 40 27.9	
	comp=Z,960nm,18.1s,baz=118,slow=36						
ASAR	Alice Springs	45.34	261	P	P	16 21 23.4	-0.6
WR0	Warramunga Arr	45.66	266	P	P	16 21 25.8	-0.6
WB2	Warramunga Arr	45.83	266	P	P	16 21 27.4	-0.4
WB2				IAmb	IAmb	16 21 29.1	
	comp=Z,9.1nm,0.7s						
WRAB	Tennant Creek	45.84	266	P	P	16 21 27.4	-0.5
WB0	Warramunga Arr	45.84	266	P	P	16 21 27.6	-0.4
WB0				IAmb	IAmb	16 21 29.7	
	comp=Z,13nm,0.7s						
WRA	Warramunga Arr	45.84	266	P	P	16 21 28.0	+0.1
	comp=Z,7.9nm,0.7s,baz=103,slow=8.2,SNR=77						
WRA				PcP	PcP	16 23 06.2	+1.2
	comp=Z,5.1nm,0.8s,baz=103,slow=3.7,SNR=7.8						
WRA				S	S	16 28 07.9	-2.0
	comp=Z,0.3nm,0.3s,baz=53,slow=33,SNR=3.2						
WRA				LR	LR	16 40 01.9	
	comp=Z,885nm,19.2s,baz=105,slow=35						
WRA	Warramunga Arr	45.84	266	P	P	16 21 27.6	-0.3
SMPI	Sarmi	49.10	290	P	P	16 21 50.9	-2.4
	comp=Z,12nm,1.4s						
FORT	Forrest	49.27	250	P	P	16 21 53.8	-0.6
MTN	Manton Dam	51.03	273	P	P	16 22 06.7	-1.2
BAKI	Biak	51.74	290	P	P	16 22 11.3	-1.9
	comp=Z,33nm,0.8s						
KNRA	Kununurra	52.19	269	P	P	16 22 16.0	-0.5
KNRA				IAmb	IAmb	16 22 17.7	
	comp=Z,16nm,0.8s						
VNDA	Vanda	53.74	186	P	P	16 22 30.4	+3.3

	comp=Z,7.2nm,0.9s,baz=5.3,slow=8.4,SNR=45						
VNDA				LR	LR	16 41 28.8	
	comp=Z,145nm,21.4s,baz=22,slow=32						
VNDA	Vanda	53.74	186	P	P	16 22 27.5	+0.4
VNDA				IAmb	IAmb	16 22 43.9	
	comp=Z,17nm,1.2s						
FAKI	Fak Fak	54.23	285	P	P	16 22 31.1	-0.5
FAKI				IAmb	IAmb	16 22 50.2	
	comp=Z,11nm,0.9s						
FITZ	Fitzroy Crossi	54.25	265	P	P	16 22 32.4	+0.7
SWI	Sorong	56.09	287	P	P	16 22 44.3	-0.7
	comp=Z,465nmcomp=Z,39nm,0.8s						
MSAI	Masohi	56.95	283	P	P	16 22 51.2	0.0
	comp=Z,359nmcomp=Z,17nm,0.5s						
SOEI	Soe	58.42	274	P	P	16 23 00.3	-1.4
	comp=Z,42nm,0.8s						
SOEI	Soe	58.42	274	P	P	16 23 01.2	-0.5
RPN	Rapa Nui	59.44	108	LR	LR	16 45 20.9	
	comp=Z,50nm,18.2s,baz=209,slow=33						
MORW	Morawa	59.84	250	P	P	16 23 10.0	-1.2
MORW				IAmb	IAmb	16 23 12.1	
	comp=Z,13nm,1.1s						
SANI	Sanana	60.15	283	P	P	16 23 12.2	-1.3
	comp=Z,680nmcomp=Z,18nm,0.5s						
CASY	Casey	60.79	206	P	P	16 23 17.5	+0.5
EDFI	Ende, Flores	61.15	274	P	P	16 23 20.6	+0.2
	comp=Z,8.0nm,0.8s						
APSI	Ampana	64.53	282	P	P	16 23 39.8	-3.0
	comp=Z,988nmcomp=Z,36nm,0.9s						
QSPA	South Pole Qui	65.22	180	P	P	16 23 48.6	+2.0
JCJ	Chichijima	65.46	319	P	P	16 23 49.8	+1.3
UGM	Wanagama	71.62	270	P	P	16 24 27.7	+0.3
MJAR	Matsushiro Arr	74.73	323	P	P	16 24 44.3	-0.9
	comp=Z,2.2nm,0.7s,baz=176,slow=5.0,SNR=7.1						
MJAR	Matsushiro Arr	74.73	323	P	P	16 24 44.2	-0.9
MAJO	Matsushiro	74.73	323	P	P	16 24 44.2	-1.0
MAT	Matsushiro	74.73	323	P	P	16 24 43.8	-1.4
JMN	Monobe	75.19	319	P	P	16 24 48.5	+0.6
JMN				IAmb	IAmb	16 25 08.2	
	comp=Z,21nm,1.2s						
JWT	Wachi	75.39	321	P	P	16 24 48.8	-0.2
JWT				IAmb	IAmb	16 25 11.4	
	comp=Z,19nm,1.3s						
AMKA	Amchitka	76.02	357	P	P	16 24 50.8	-1.4
ADK	Adak	76.42	360	P	P	16 24 53.3	-1.2
ERM	Erimo	76.45	330	P	P	16 24 54.4	-0.5
ERM				IAmb	IAmb	16 25 03.8	
	comp=Z,26nm,1.1s						
JHS	Saijyo	76.52	319	P	P	16 24 55.8	+0.3
JHS				IAmb	IAmb	16 25 08.2	
	comp=Z,35nm,1.2s						
SSLB	Suanglung	77.80	303	P	P	16 25 01.6	-1.3
MAW	Mawson	78.04	200	P	P	16 25 05.5	+2.0
	comp=Z,9.1nm,0.8s,baz=119,slow=8.7,SNR=13						
MAW	Mawson	78.04	200	P	P	16 25 05.7	+2.1
JKA	Kamikawa-asahi	78.37	331	P	P	16 25 06.8	+1.2
MDSI	Maura Dua	78.77	270	P	P	16 25 08.6	+0.1
	comp=Z,8.1nm,0.8s						
YSS	Yuzh-Sakhalins	80.55	333	P	P	16 25 16.8	-0.6
PETK	Petropavlovsk-	80.92	344	P	P	16 25 18.7	-0.5
	comp=Z,15nm,0.9s,baz=156,slow=8.1,SNR=8.7						
ISA	Isabella, Lake	81.21	44	P	P	16 25 20.7	-0.6
	baz=231						
KSRS	Korea Array	81.28	318	P	P	16 25 22.8	+1.3
	comp=Z,9.2nm,1.0s,baz=137,slow=6.1,SNR=15						
KSAR	Wonju Array Be	81.30	318	P	P	16 25 21.7	+0.1
CMB	Columbia Colle	81.55	41	P	P	16 25 21.2	-1.8
CMB				IAmb	IAmb	16 25 46.1	
	comp=Z,15nm,1.2s						
O02D	Mt. Diablo Mer	81.57	38	P	P	16 25 23.1	0.0
	baz=227						
YBH	Yreka Blue Hor	82.67	37	P	P	16 25 28.1	-0.7
	comp=Z,2.7nm,0.9s,baz=204,slow=18,SNR=4.5						
SYO	Syowa Base	82.85	192	⇓eP	P	16 25 29.5	+0.2
SYO	Syowa Base	82.85	192	⇑ePcP	PcP	16 25 33.2	-0.9
SYO	Syowa Base	82.85	192	⇓epP	pP	16 25 40.6	+1.1
NVAR	Mina Array Bea	83.06	42	P	P	16 25 30.1	-1.0
	comp=Z,4.4nm,0.8s,baz=229,slow=9.2,SNR=7.8						
NVAR	Mina Array Bea	83.06	42	P	P	16 25 29.5	-1.7
NV11	Mina Array Sit	83.15	42	P	P	16 25 29.9	-1.6
NV11				IAmb	IAmb	16 25 40.9	
	comp=Z,15nm,1.2s						
PAHR	Pah Rah Range	83.23	41	P	P	16 25 30.7	-1.1
PAHR				IAmb	IAmb	16 25 31.5	
	comp=Z,11nm,1.2s						
TPH	Tonopah	83.50	43	P	P	16 25 31.8	-1.6
USRK	Ussuriysk Ar.	83.52	325	P	P	16 25 34.2	+1.2
	comp=Z,29nm,0.9s,baz=135,slow=3.4,SNR=54						
USRK	Ussuriysk Ar.	83.52	325	P	P	16 25 33.4	+0.4
USA0B	Ussuriysk Arra	83.52	325	P	P	16 25 33.8	+0.8
SNAA	Sanae	83.60	178	P	P	16 25 34.2	+0.9
SNAA	Sanae	83.60	178	P	P	16 25 33.9	+0.6
VNA3	Neumayer Olymp	83.68	176	P	P	16 25 34.3	+0.7
VNA3	Neumayer Olymp	83.68	176	pP	pP	16 25 40.8	-3.1
NJ2	Nanjing	83.97	309	eP	P	16 25 37.0	+1.4
NJ2				pmax	pmax		
	comp=Z,20nm,0.7s						
VNA2	Neumayer--Watz	84.14	176	P	P	16 25 37.1	+1.1
VNA2	Neumayer--Watz	84.14	176	pP	pP	16 25 43.6	-2.6
VNA1	Neumayer--Stat	84.36	176	P	P	16 25 38.1	+1.1
VNA1	Neumayer--Stat	84.36	176	pP	pP	16 25 43.9	-3.4
J05D	Fort Rock, OR	84.52	37	P	P	16 25 37.9	-0.5
	baz=228						
X16A	Lo Mia Camp, P	85.09	49	P	P	16 25 40.2	-1.3
X16A				IAmb	IAmb	16 26 01.1	
	comp=Z,12nm,1.3s						
LCMT	Little Creek M	85.39	46	P	P	16 25 41.5	-1.4
LCMT				IAmb	IAmb	16 26 07.3	
	comp=Z,10nm,1.2s						
CCUT	Cedar City	85.62	45	P	P	16 25 42.8	-1.3
CCUT				IAmb	IAmb	16 25 56.0	
	comp=Z,12nm,1.3s						
KNB	Kanab	85.66	46	P	P	16 25 43.4	-0.8
KNB				IAmb	IAmb	16 26 01.1	
	comp=Z,16nm,1.2s						
U15A	North Rim	85.67	47	P	P	16 25 43.5	-1.0
U15A				IAmb	IAmb	16 25 44.9	
	comp=Z,8.8nm,1.0s						
SZCU	Shurtz Canyon	85.83	45	P	P	16 25 44.6	-0.5
PSUT	Pine Spring	85.89	44	P	P	16 25 44.1	-1.3
O19K	Port Alsworth	86.62	11	P	P	16 25 47.0	-1.2
	baz=200						
O19K	Port Alsworth	86.62	11	P	P	16 25 46.5	-1.7
CN2	Changchun	86.79	322	eP	P	16 25 50.0	+0.6
CN2				pmax	pmax		
	comp=Z,20nm,1.1s						
GSI	Gunungsitoli	87.17	273	P	P	16 25 54.1	+2.1
	comp=Z,23nm,1.3s						
MNTX	Cornudas Mount	87.92	54	P	P	16 25 53.5	-1.7
MNTX				IAmb	IAmb	16 26 20.1	
	comp=Z,9.8nm,1.1s						
TX31	Lajitas Ar. Si	88.00	56	P	P	16 25 54.1	-1.7
TX32	Lajitas Array	88.00	56	P	P	16 25 54.0	-1.7
TX32				IAmb	IAmb	16 26 03.5	
	comp=Z,6.3nm,1.1s						
TXAR	Lajitas Array	88.00	56	P	P	16 25 54.5	-1.3
	comp=Z,2.0nm,0.8s,baz=211,slow=8.2,SNR=18						
TXAR	Lajitas Array	88.00	56	P	P	16 25 54.0	-1.7
P17A	Butcher Ranch,	88.41	45	P	P	16 25 56.1	-1.4
P17A				IAmb	IAmb	16 26 15.8	
	comp=Z,8.2nm,1.3s						
ANMO	Albuquerque	88.83	50	P	P	16 25 59.2	-0.5
	baz=238						
ANMO	Albuquerque	88.83	50	P	P	16 25 58.2	-1.5
ANMO				IAmb	IAmb	16 26 21.9	
	comp=Z,12nm,1.4s						
TTA	Tatalina	88.96	9	P	P	16 25 59.0	-0.4
	baz=198						
TTA	Tatalina	88.96	9	P	P	16 25 58.5	-1.0
TTA				IAmb	IAmb	16 26 11.9	
	comp=Z,13nm,1.1s						
GHO	Glory Hole Cre	89.08	13	P	P	16 25 58.9	-1.1
MESA	MESA	89.24	16	P	P	16 26 00.5	-0.5
	baz=210						
BMRM	Bremner River	89.29	15	P	P	16 26 00.9	-0.1
	baz=208						
CRQE	Cirque	89.46	16	P	P	16 26 02.1	+0.2
	baz=210						
SCM	Sheep Creek Mo	89.46	13	P	P	16 26 01.4	-0.4
	baz=206						
N25K	Chitina, Valde	89.85	14	P	P	16 26 03.2	-0.4
	baz=208						
N25K	Chitina, Valde	89.85	14	P	P	16 26 02.5	-1.2
N25K				IAmb	IAmb	16 26 03.6	
	comp=Z,13nm,1.1s						
ENH	Enshi	89.89	304	P	P	16 26 04.4	-0.1
MCARA	McCarthy VSAT	90.02	15	P	P	16 26 04.9	+0.6
	baz=210						
MCARA	McCarthy VSAT	90.02	15	P	P	16 26 03.4	-1.0
CAST	Castle Rocks	90.03	11	P	P	16 26 02.4	-2.0
	baz=202						
CAST	Castle Rocks	90.03	11	P	P	16 26 02.2	-2.1
CAST				IAmb	IAmb	16 26 26.4	
	comp=Z,14nm,1.2s						
S22A	4UR Ranch, Cre	90.04	48	P	P	16 26 04.6	-0.8
	baz=238						
WAT6	Susitna Watana	90.05	13	P	P	16 26 04.4	-0.3
	baz=205						
CTG	Chitna Glacier	90.08	16	P	P	16 26 04.9	+0.1
	baz=211						
BARN	Barnard Glacie	90.08	16	P	P	16 26 04.1	-0.7
WAT1	Susitna Watana	90.12	12	P	P	16 26 04.3	-0.5
	baz=205						
KTH	Kantishna Hill	90.35	11	P	P	16 26 04.4	-1.5
KTH				IAmb	IAmb	16 26 05.1	
	comp=Z,10.0nm,1.0s						
TRF	Thorofare Moun	90.36	11	P	P	16 26 04.8	-1.3
	baz=203						
TRF	Thorofare Moun	90.36	11	P	P	16 26 04.2	-2.0
J20K	Nowinta River	90.41	9	P	P	16 26 05.6	-0.5
	baz=200						
J20K	Nowinta River	90.41	9	P	P	16 26 04.2	-1.9
J20K				IAmb	IAmb	16 26 17.7	
	comp=Z,14nm,1.2s						
CHUM	Lake Minchumin	90.42	10	P	P	16 26 04.8	-1.3
	baz=201						
MCK	McKinley	90.87	12	P	P	16 26 07.8	-0.5
	baz=204						
PAX	Paxson	90.87	13	P	P	16 26 07.5	-0.8
	baz=207						
PAX	Paxson	90.87	13	P	P	16 26 06.6	-1.8
PAX				IAmb	IAmb	16 26 15.5	
	comp=Z,6.7nm,1.1s						
M26K	Nabesna, AK	90.92	15	P	P	16 26 08.5	-0.1
	baz=210						
SDCO	Great Sand Dun	90.94	48	P	P	16 26 08.5	-1.1
	baz=239						
BW06	Boulder Array	90.99	43	P	P	16 26 08.5	-1.1
	baz=236						
PDAR	Pinedale Array	90.99	43	P	P	16 26 08.3	-1.3
	comp=Z,1.4nm,0.9s,baz=251,slow=4.5,SNR=5.9						
YUK3	Moose Creek	90.99	16	P	P	16 26 08.6	-0.5
	baz=212						
M27K	Edge Creek, AK	91.14	15	P	P	16 26 09.3	-0.4
	baz=210						
M27K	Edge Creek, AK	91.14	15	P	P	16 26 09.0	-0.7
BOZ	Bozeman (W)	91.34	39	P	P	16 26 10.3	-0.8
	baz=235						
BOZ	Bozeman (W)	91.34	39	P	P	16 26 09.7	-1.4
BOZ				IAmb	IAmb	16 26 21.8	
	comp=Z,7.5nm,1.1s						
BVCY	Beaver Creek	91.44	16	P	P	16 26 10.6	-0.3
	baz=211						
WRH	Wood River Hil	91.70	12	P	P	16 26 10.9	-1.2
DOT	Dot Lake	91.77	14	P	P	16 26 11.0	-1.4
DOT				IAmb	IAmb	16 26 23.5	
	comp=Z,11nm,1.2s						
HDA	Harding Lake	91.86	12	P	P	16 26 12.3	-0.6
	baz=206						
HDA	Harding Lake	91.86	12	P	P	16 26 11.7	-1.1
HDA				IAmb	IAmb	16 26 12.2	
	comp=Z,8.8nm,1.2s						
MDM	Murphy Dome	92.12	12	P	P	16 26 12.7	-1.4
MDM				IAmb	IAmb	16 26 36.4	
	comp=Z,13nm,1.3s						
XAN	Xi'an	92.12	307	P	P	16 26 16.4	+1.6
XAN				pP	pP	16 26 26.4	+0.6
XAN				sP	sP	16 26 31.4	+1.7
XAN				pmax	pmax		
	comp=Z,13nm,0.9s						
XAN				pmax	pmax		
	comp=Z,150nm,4.1s						
ILAR	Eielson Array	92.20	12	P	P	16 26 13.1	-1.3
	comp=Z,1.3nm,0.9s,baz=216,slow=6.0,SNR=9.1						
J26L	Joseph Creek	92.62	13	P	P	16 26 16.1	-0.4
	baz=209						
KMI	Kunming	92.83	296	⇓P	P	16 26 21.0	+2.4
KMI				pP	pP	16 26 30.8	+1.6
KMI				pmax	pmax		
	comp=Z,14nm,1.4s						
PRP	Porcupine Dome	93.12	12	P	P	16 26 17.6	-1.2
	baz=207						
PRP	Porcupine Dome	93.12	12	P	P	16 26 17.2	-1.6
PRP				IAmb	IAmb	16 26 33.0	
	comp=Z,12nm,1.4s						
CMAR	Chiang Mai Arr	93.16	289	P	P	16 26 22.3	+2.4
	comp=Z,0.7nm,0.4s,baz=111,slow=29,SNR=20						
NNA	Nana	93.29	105	LR	LR	16 58 14.4	
	comp=Z,87nm,19.6s,baz=269,slow=29						
HHC	Hu-ho-hao-te	93.61	314	eP	P	16 26 23.8	+2.2
HHC				pmax	pmax		
	comp=Z,24nm,0.8s						
RSSD	Black Hills	95.12	43	P	P	16 26 27.1	-1.5
	baz=240						
RSSD	Black Hills	95.12	43	P	P	16 26 26.6	-2.0
RSSD				IAmb	IAmb	16 26 28.0	
	comp=Z,5.1nm,0.8s						
SONM	Songino Array	100.15	318	P	Pdif	16 26 52.5	+1.4
	comp=Z,0.5nm,0.8s,baz=49,slow=6.6,SNR=2.4						
WMQ	Urumqi	111.05	310	ePKP	PKiKP	16 31 37.9	-0.8
ZALV	Zalesovo Beam	114.94	320	PKP	PKPdf	16 31 44.1	-1.6
	comp=Z,1.2nm,0.7s,baz=114,slow=3.6,SNR=5.3						
MK31	Makanchi Array	115.41	312		PKPdf	16 31 45.7	-1.1
MKAR	Makanchi Array	115.41	312	PKP	PKPdf	16 31 46.0	-0.8
	comp=Z,1.8nm,0.8s,baz=72,slow=4.0,SNR=12						
MAKZ	Makanchi	115.62	312		PKPdf	16 31 45.9	-1.4
KURK	Kurchatov	118.33	316	PKPdf	PKPdf	16 31 51.0	-1.3
GAR	Garm	123.01	302		PKPdf	16 32 01.5	-0.3
KK31	Karatay Array	123.26	306	PKPdf	PKPdf	16 32 01.5	-0.5
KKAR	Karatay Array	123.26	306	PKPdf	PKPdf	16 32 01.2	-0.8
KKAR	Karatay Array	123.26	306	PKPdf	PKPdf	16 32 01.3	-0.8
KBL	Kabul	123.42	296	PKPdf	PKPdf	16 32 02.8	-0.1
ABKAR	Akbulak array	130.39	314		PKPdf	16 32 15.6	+0.1
ARCES	ARCESS Array B	133.51	350	PKP	PKPdf	16 32 20.9	+0.1
	comp=Z,2.7nm,0.7s,baz=29,slow=2.8,SNR=4.5						
KLMR	Klimovskoe	136.55	335	ePKPdf	PKPpre	16 32 15.4	
KLMR				AMP		16 32 21.3	
	comp=Z,23nm,1.7s						
KLMR				ePP	PP	16 34 46.9	-22
FINES	FINESS Array B	140.43	343	PKhKP	PKPpre	16 32 26.9	
	comp=Z,2.5nm,0.8s,baz=39,slow=9.7,SNR=2.5						
LODK	Lodwar	142.93	240	PKPdf	PKPdf	16 32 37.8	-2.0
MBAR	Mbarara	143.68	230		PKPbc	16 32 39.7	+0.9
ISAL	Salakas	145.25	338	eP	PKPab	16 32 42.3	-0.1
MNK	Minsk	145.45	335	i PKP	PKPab	16 32 43.5	+0.4
	comp=E,4.0nm,1.1s						
MNK				i PKP	PKPab	16 32 43.5	+0.4
	comp=N,26nm,1.1s						
MNK				i PKP	PKPab	16 32 43.5	+0.4
	comp=Z,46nm,0.9s,baz=220						
MNK				i PP	PP	16 36 04.9	+2.1
MNK				i SKP		16 36 15.0	
MNK				i PKS	PKSdf	16 36 19.0	+0.9
MNK				i PPP	PPP	16 39 18.4	
MNK				i SKS	SKSdf	16 39 50.0	+0.9
MNK				i SKKS	SKKSdf	16 49 02.3	+3.3
MNK				i SS	SS	16 54 56.4	+4.5
MNK				i SSS	SSS	17 00 20.4	
MNK				i LR	LR	17 33 50.9	
MNK				i LRM	MLR	17 37 53.5	
	comp=N,2µm,19.0s						
MNK				i LRM	MLR	17 38 04.0	
	comp=E,190nm,18.4s						
MNK				i LRM	MLR	17 38 04.7	
	comp=Z,2µm,15.8s						
NACGM	Naroch	145.55	337	i PKP	PKPab	16 32 43.3	-0.1
PABE	Paberze	146.02	340	eP	PKPbc	16 32 44.6	0.0
PABE	Paberze	146.02	340	PKPdf	PKPdf	16 32 43.6	-0.2
SUW	Suwalki	147.52	339	eP	PKPab	16 32 50.6	-0.4
AKASG	Malin Array Be	147.64	329	PKPbc	PKPbc	16 32 48.4	-1.0
	comp=Z,5.1nm,0.7s,baz=42,slow=4.0,SNR=17						
AKASG	Malin Array Be	147.64	329	PKPbc	PKPdf	16 32 47.8	+1.1
AKBB	Malin Array Si	147.64	329	PKPbc	PKPdf	16 32 47.9	+1.2
BR131	Keskin Array S	150.96	308		PKPbc	16 32 56.9	-1.3
BRTR	Keskin Array B	150.96	308	PKPbc	PKPbc	16 32 58.4	+0.1
	comp=Z,5.8nm,0.8s,baz=134,slow=3.6,SNR=12						
BRTR	Keskin Array B	150.96	308		PKPbc	16 32 57.6	-0.7
KWP	Kalwaria Pacla	151.25	334	ePKP	PKPbc	16 32 58.5	0.0
KWP	Kalwaria Pacla	151.25	334		PKPbc	16 32 58.2	-0.2
ANTO	Ankara	151.50	309		PKPbc	16 32 59.0	-0.5
KOLS	Kolonicke sedl	151.98	334	ePKP	PKiKP	16 33 00.6	+0.1
KOLS				e		16 33 12.5	
CRVS	Cervenica-Dubn	152.32	335	ePKP	PKiKP	16 33 02.0	+0.8
CRVS				e		16 33 14.1	
NIE	Niedzica	152.34	337	ePKP	PKiKP	16 33 02.3	+1.1
CLL	Collm	152.69	347	i PKPbc	PKPbc	16 33 01.4	-0.2
	comp=Z,22nm,1.4s						
CLL				i PKPab	sPKPbc	16 33 15.1	-0.8
	comp=Z,19nm,1.1s						
CLL	Collm	152.69	347		PKPbc	16 33 00.9	-0.8
DPC	Dobruska-Polom	152.79	342	⇑ePKP	PKiKP	16 33 02.1	-0.1
DPC				ePKPAB	pPKPbc	16 33 12.4	-0.2
BRG	Berggiesshubel	152.90	346	ePKP	PKiKP	16 33 02.5	+0.2
BRG				Amp		16 33 04.1	
	comp=Z,6.4nm,0.8s						
BRG	Berggiesshubel	152.90	346	P	PKPab	16 33 08.6	-4.7
BRG				Amp		16 33 12.7	
	comp=Z,8.2nm,1.0s						
BRG	Berggiesshubel	152.90	346	P	PKPab	16 33 23.1	+10
BRG				Amp		16 33 26.2	
	comp=Z,22nm,1.2s						
KRLC	Kraliky	152.91	342	⇑ePKP	PKPbc	16 33 02.2	0.0
KRLC				ePKPAB	PKPab	16 33 13.6	+0.2
VYHS	Vyhne	153.64	337	ePKP	PKPbc	16 33 02.0	-1.8
VYHS				e		16 33 15.8	
KHC	Kasperske Hory	154.62	345	ePKPDF	PKPdf	16 32 56.5	-1.0
KHC				⇑ePKP	PKiKP	16 33 06.1	+0.1
CKRC	Cesky Krumlov	154.73	344	ePKPDF	PKPdf	16 32 57.8	+0.2
GERES	GERESS Array B	154.85	345	PKPbc	PKPbc	16 33 06.1	-0.5
	comp=Z,0.5nm,0.7s,baz=346,slow=2.0,SNR=2.6						
CONA	Conrad Observa	155.10	341	eP	PKPab	16 33 23.9	+1.0
	comp=Z,16nm,1.7s						
MOA	Molln	155.63	343	eP	PKPab	16 33 25.5	+0.5
	comp=Z,4.4nm,0.9s						
SOKA	Soboth	156.48	340	i P	PKPab	16 33 29.0	+0.2
	comp=Z,7.1nm,0.9s						
KBA	Koelnbreinsper	156.58	344	eP	PKPab	16 33 29.5	+0.2
	comp=Z,8.3nm,1.2s						
OBKA	Obir	156.77	341	i P	PKPab	16 33 29.9	-0.1
	comp=Z,5.0nm,1.0s						
WTTA	Wattenberg	156.81	346	i P	PKPab	16 33 30.5	+0.2
	comp=Z,6.4nm,0.9s						
ABTA	Abfaltersbach	157.10	345	eP	PKPab	16 33 30.8	-0.6
	comp=Z,5.6nm,1.0s						
ESDC	Sonseca Array	163.84	22	PKP	PKPdf	16 33 08.2	-0.2
	comp=Z,2.0nm,1.0s,baz=339,slow=2.6,SNR=9.3						
ESDC				PKPab	PKPab	16 33 59.8	-1.1
	comp=Z,0.8nm,0.7s,baz=322,slow=4.1,SNR=2.5						
ESDC	Sonseca Array	163.84	22		PKPdf	16 33 07.4	-1.1
TORD	Torodi Ar. Bea	168.16	170	PKP	PKPdf	16 33 11.8	-0.8
	comp=Z,1.9nm,1.0s,baz=326,slow=0.4,SNR=7.6						
TORD				PKPab	PKPab	16 34 21.1	+0.7
	comp=Z,4.3nm,0.7s,baz=188,slow=3.9,SNR=20						
TORD				PP	PP	16 38 07.3	-0.5
	comp=Z,0.6nm,0.9s,baz=176,slow=1.4,SNR=2.2						
TORD	Torodi Ar. Bea	168.16	170		PKPdf	16 33 11.0	-1.5

IDC 16 16:15:07.7±2.2, 0°.80N×127°.07E, h0^{km}, mb3.4/3, mb1 3.7/3, mb1mx3.4/30, mbtmp3.5/3, Error ellipse: s-maj=171.3km s-min=28.0km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	21.81	161	P	P	16 20 02.3	+0.7
	1.0nm,0.7s,baz=340,slow=11,SNR=12						
ASAR	Alice Springs	25.21	165	P	P	16 20 34.9	-0.4
	1.5nm,0.9s,baz=344,slow=9.7,SNR=15						
MKAR	Makanchi Array	60.15	326	P	P	16 25 17.2	0.0
	0.1nm,0.3s,baz=125,slow=7.5,SNR=2.0						

NOU 16 16:22:19.4, 17°.79S×167°.17E, h53^{km}, MLv3.9/14, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	0.97	86	P	Pn	16 22 36.9	+0.1
RTV	Rentapao	1.20	90	P	Pn	16 22 40.1	+0.3
SANVU	Saraoutou	2.33	1	P	Pn	16 22 55.1	-0.2
LIFNC	LIFOU	2.97	179	P	Pn	16 23 02.7	-1.4
MARNC	Mare, Loyalty	3.76	168	P	Pn	16 23 14.9	0.0
KOUNC	Koumac, New Ca	3.87	224	P	Pn	16 23 16.6	+0.2
YATNC	Mamie plateau,	4.25	183	P	Pn	16 23 20.3	-1.4
DZM	Mont Dzumac	4.31	189	P	Pn	16 23 22.5	-0.1
NOUC	Port Laguerre	4.37	191	P	Pn	16 23 23.4	+0.2
ONTNC	Ouen Toro	4.54	188	P	Pn	16 23 26.3	+0.6
OUENC	Ouen Island, N	4.62	184	P	Pn	16 23 27.0	+0.4
PINNC	Pines Island,	4.80	177	P	Pn	16 23 30.0	+0.8

WEL 16 16:26:46.4±0.7, 33°S±15°×18°0W±3°0, h387^{km}±13^{km}, M3.9/10, mB4.4/6, ML4.6/18, MLv4.1/10, Mw(mB)3.5/6, Error ellipse: s-maj=0.0km s-min=0.0km az=114.7, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	4.42	22	P	Pn	16 28 00.9	-1.0
MXZ	Matakaoa Point	4.44	200	S	S	16 29 02.4	-0.8
WMGZ	Waiomatatini S	4.65	198	P	Pn	16 28 05.2	+1.1
WMGZ				S	S	16 29 06.2	-0.9
HAZ	Te Kaha	4.78	204	P	Pn	16 28 03.4	-2.0
HAZ				S	S	16 29 08.7	-0.8
PKGZ	Pakihiroa	4.81	201	P	Pn	16 28 06.8	+1.0
PKGZ				S	S	16 29 12.9	+2.8
PUZ	Puketiti	4.93	198	P	Pn	16 28 05.9	-1.1
PUZ				S	S	16 29 14.6	+2.2
RUGZ	Raukumara Rang	5.01	204	P	Pn	16 28 07.6	-0.2
RUGZ				S	S	16 29 10.8	-3.2
MWZ	Matawai	5.39	203	P	Pn	16 28 12.8	+1.0
MWZ				S	S	16 29 21.1	-0.2
URZ	Urewera	5.47	206	P	Pn	16 28 12.3	-0.3
URZ				S	S	16 29 23.6	+0.8
RAGZ	Rawiri	5.57	203	P	Pn	16 28 14.5	+0.7
RAGZ				S	S	16 29 26.3	+1.2
MUGZ	Murupara	5.79	208	P	Pn	16 28 16.7	+0.6
RTZ	Ruatahuna	5.83	206	P	Pn	16 28 16.2	-0.4
SNGZ	Shannon Statio	5.86	203	P	Pn	16 28 17.8	+0.9
SNGZ				S	S	16 29 33.3	+2.8
RAHZ	Arahi	6.06	204	P	Pn	16 28 19.9	+0.8
RAHZ				S	S	16 29 35.1	+0.4
MTHZ	Maungataniwha	6.09	206	P	Pn	16 28 20.2	+0.8
MTHZ				S	S	16 29 36.7	+1.4
TLZ	Tolley Road	6.21	216	P	Pn	16 28 22.2	+1.4
ARHZ	Aropaoanui	6.41	203	P	Pn	16 28 24.1	+1.2
ARHZ				S	S	16 29 43.9	+2.3
BKZ	Black Stump Fm	6.50	206	P	Pn	16 28 23.0	-0.9
BKZ				S	S	16 29 42.9	-0.7
KAHZ	Kahuranaki	6.93	202	P	P	16 28 29.5	-0.1
KAHZ				S	S	16 29 50.2	-2.2
BHHZ	Black Hill Sta	6.94	208	P	Pn	16 28 28.5	-0.5
BHHZ				S	S	16 29 53.0	+0.3
KRHZ	Kereru	6.96	205	P	Pn	16 28 28.6	-0.5
KRHZ				S	S	16 29 51.9	-1.2
WNVZ	Wahianoa	6.99	211	P	Pn	16 28 29.3	-0.4
PXZ	Pawanui	7.15	201	P	P	16 28 32.0	-0.1
PXZ				S	S	16 29 56.9	0.0
VRZ	Vera Road	7.22	216	P	P	16 28 33.3	+0.5
PNHZ	Pukenui	7.26	205	P	Pn	16 28 32.1	-0.5
PNHZ				S	S	16 29 58.8	-0.6
TSZ	Takapari Road	7.47	206	P	Pn	16 28 34.2	-0.8
BFZ	Birch Farm	7.93	202	P	Pn	16 28 38.7	-1.6
MRZ	Mangatainoka R	8.14	206	P	Pn	16 28 41.9	-0.8

NNC ***16*** *16:27:16.2±7.9, 46°.81N×80°.81E, h0^{km}, mb2.2, mpv2.6, Error ellipse: s-maj=81.7km s-min=23.2km az=153.0*

SOME ***16*** *16:27:24.3, 46°.38N×81°.65E, h10^{km}*

ISC 16 16:27:24.7±0.9, 46°.33N±0°.10×81°.75E±0°.09, h10^{km}, n10, σ1^{s}.33/16, 2C, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MK31	Makanchi Array	0.60	38	⇑P	Pg	16 27 33.9	-2.4
	0.3nm,0.2s,baz=219,slow=18,SNR=5.9						
MK31				⇑S	Sn	16 27 50.5	+1.4
	2.3nm,0.2s,baz=219,slow=30,SNR=18						
KAPS	Kapalarasan	1.97	239	eP	Pb	16 27 59.9	-0.8
	3.1nm,0.1s						
KAPS				eS	Sb	16 28 24.1	-1.2
	19nm,0.1s						
ZSN	Zaisan	2.42	61	eP	Pn	16 28 06.2	+2.0
	1.0nm,0.1s						

ZSN				*e*S	Sn	16 28 34.3	+0.4
	4.5nm,0.4s						
DJR	**Jarkent**	2.43	215	*e*P	Pb	16 28 08.1	-0.4
	1.2nm,0.1s						
DJR				*e*S	Sb	16 28 38.1	-0.4
	4.2nm,0.1s						
DJR	**Jarkent**	2.43	215	Pg	Pb	16 28 07.6	-0.8
	1.1nm,0.1s						
DJR				Lg	Lg	16 28 37.9	
	5.9nm,0.5s						
PDGK	**Podgornoye**	3.40	209	Pg	Pb	16 28 24.2	-0.9
	0.3nm,0.9s						
PDGK				Lg	Lg	16 29 06.3	
	1.3nm,0.5s						
ARXS	**Arharly**	3.48	234	*e*P	Pb	16 28 27.5	+1.0
	0.3nm,0.0s						
ARXS				*e*S	Sb	16 29 11.2	+2.4
	3.8nm,0.1s						
ARXS	**Arharly**	3.48	234	Pg	Pb	16 28 25.9	-0.6
	1.2nm,0.4s						
ARXS				Lg	Lg	16 29 08.7	
	1.9nm,0.2s						
UZB	**Uzynbulak**	3.73	212	*e*P	Pb	16 28 30.2	-0.4
	2.0nm,0.2s						
UZB				*e*S	Sb	16 29 16.3	+0.4
	1.8nm,0.5s						
UZB	**Uzynbulak**	3.73	212	Pg	Pb	16 28 30.2	-0.4
	2.0nm,0.2s						
UZB				Lg	Lg	16 29 16.3	
	1.8nm,0.5s						

*GUC **16** 16:32:56.9±0.6,21°.29S×68°.81W,h116^{km}±3^{km},ML3.9*
*IDC **16** 16:32:57.5±1.3,21°.33S×68°.52W,h112^{km}±17^{km},mb3.4/2,mb1 3.3/5,mb1mx3.2/32,mbtmp3.7/5,MS3.6/1,Ms1 3.6/1,ms1mx2.8/13,Error ellipse: s-maj=35.3km s-min=19.0km az=110.0*
ISC 16 16:32:56.0±0.8,**21°.27S**±0°.04×**68°.84W**±0°.08,**h120**^{km}±8^{km},**n24**,σ0^{s}.**84**/40,**12C-4D,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	0.65	290	⇑*i*P	Pn	16 33 15.2	+0.2
PB01				*i*S	Sn	16 33 29.2	-0.2
PB01				IAML		16 33 29.9	
	comp=N,6µm,0.3s						
PB09	**IPOC Station P**	0.65	216	⇓*i*P	Pn	16 33 15.5	+0.4
PB09				*i*S	Sn	16 33 29.7	+0.1
PB09				IAML		16 33 32.0	
	comp=E,2µm,0.5s						
PB02	**IPOC Station P**	0.99	267	⇑*i*P	Pn	16 33 18.3	+0.3
PB02				*i*S	Sn	16 33 34.7	0.0
PB02				IAML		16 33 35.2	
	comp=N,3µm,0.3s						
PB07	**IPOC Station P**	1.08	245	⇑*i*P	Pn	16 33 19.1	+0.2
PB07				*i*S	Sn	16 33 36.1	-0.3
PB07				IAML		16 33 36.5	
	comp=N,4µm,0.2s						
PB03	**IPOC Station P**	1.15	228	⇑*i*P	Pn	16 33 19.9	+0.1
PB03				*i*S	Sn	16 33 37.2	-0.5
PB08	**IPOC Station P**	1.16	345	⇑*i*P	Pn	16 33 21.0	+0.9
PB08				*i*S	Sn	16 33 39.5	+1.2
PB08				IAML		16 33 40.7	
	comp=E,1µm,0.2s						
PATCX	**Punta Patache**	1.31	290	⇓*i*P	Pn	16 33 21.6	+0.3
PATCX				*i*S	Sn	16 33 41.0	+0.5
PATCX				IAML		16 33 42.3	
	comp=E,3µm,0.4s						
LVC	**Limon Verde**	1.34	183	P	Pn	16 33 22.3	+0.4
	comp=E,33nm,0.3s,baz=32,slow=11,SNR=428						
LVC				S	Sn	16 33 41.7	0.0
	comp=E,151nm,0.3s,baz=234,slow=24,SNR=101						
HMBC	**Humberstone**	1.39	315	⇑*i*P	Pn	16 33 22.3	0.0
HMBC				*i*S	Sn	16 33 42.2	-0.1
HMBC				IAML		16 33 44.0	
	comp=E,1µm,0.1s						
TA01	**Diego Aracena**	1.44	299	⇑*i*P	Pn	16 33 22.8	+0.1
TA01				*i*S	Sn	16 33 42.9	-0.1
TA01				IAML		16 33 44.3	
	comp=E,2µm,0.3s						
TA02	**Huaiquique**	1.57	309	⇑*i*P	Pn	16 33 24.1	0.0
TA02				*i*S	Sn	16 33 45.6	0.0
TA02				IAML		16 33 47.7	
	comp=N,2µm,0.1s						
PB06	**IPOC Station P**	1.58	205	⇓*i*P	Pn	16 33 24.8	+0.2
PB06				*i*S	Sn	16 33 46.2	-0.1
PB06				IAML		16 33 47.3	
	comp=E,975nm,0.2s						
PB04	**IPOC Station P**	1.62	229	⇑*i*P	Pn	16 33 24.9	0.0
PB04				*i*S	Sn	16 33 46.8	-0.2
PB04				IAML		16 33 50.6	
	comp=N,1µm,0.1s						
PB11	**IPOC Station P**	1.69	333	⇑*i*P	Pn	16 33 26.0	+0.3
PB11				*i*S	Sn	16 33 48.7	+0.3
PB11				IAML		16 33 50.3	
	comp=N,4µm,0.3s						
PB15	**IPOC Station P**	2.02	197	⇓*i*P	Pn	16 33 30.0	+0.1
PB15				*i*S	Sn	16 33 56.0	+0.3
PB15				IAML		16 34 00.3	
	comp=E,3µm,0.3s						
PB05	**IPOC Station P**	2.02	219	⇑*i*P	Pn	16 33 29.9	0.0
PB05				IAML		16 33 56.2	
	comp=N,277nm,0.2s						
PB12	**IPOC Station P**	2.99	332	⇑*i*P	Pn	16 33 41.3	-0.9
PB12				*i*S	Sn	16 34 16.4	-1.5
PB12				IAML		16 34 18.4	
	comp=E,440nm,0.3s						
LPAZ	**La Paz**	5.00	8	P	Pn	16 34 11.8	+2.2
	comp=E,0.8nm,0.3s,baz=179,slow=14,SNR=10.0						
SIV	**San Ignacio**	9.04	56	P	Pn	16 35 00.9	-2.7
	comp=E,0.7nm,0.3s,baz=237,slow=13,SNR=9.9						
CPUP	**Villa Florida**	11.68	118	P	Pn	16 35 37.0	-1.8
	comp=E,0.1nm,0.3s,baz=300,slow=18,SNR=3.0						
BDFB	**Brasilia**	20.52	78	P	P	16 37 26.0	+1.1
	comp=E,2.7nm,0.5s,baz=289,slow=6.9,SNR=4.0						
USHA	**Ushuaia**	33.51	180	LR	LR	16 55 19.3	
	comp=E,86nm,19.1s,baz=261,slow=40						
TORD	**Torodi Ar. Bea**	77.21	70	P	P	16 44 37.6	+0.3
	comp=E,0.3nm,0.5s,baz=244,slow=5.9,SNR=1.8						
MKAR	**Makanchi Array**	145.41	36	PKPbc	PKPab	16 52 21.3	+1.1
	comp=E,0.3nm,0.8s,baz=341,slow=3.1,SNR=2.5						
MKAR				pPKPbc	pPKPdf	16 52 54.3	+0.6
	comp=E,0.2nm,0.7s,baz=280,slow=3.6,SNR=3.8						

*IDC **16** 16:38:56.6±0.9,1°.47S×120°.51E,h0^{km},mb3.9/7,mb1 4.1/10,mb1mx3.8/49,mbtmp4.0/10,ML3.7/3,Error ellipse: s-maj=45.9km s-min=14.0km az=66.0*
*DJA **16** 16:38:58.6±1.0,2°S±2°×12°0E±°,h14^{km}±8^{km},M4.4/19,mb4.5/5,mB5.0/1,MLv4.4/19,Mw(mB)4.4/1*
*NEIC **16** 16:38:58.3±2.0,1°.63S±0°.06×120°.22E±0°.07,h10^{km}±1^{km},mb4.2/19,Error ellipse: s-maj=12.7km s-min=9.9km az=98.0*
ISC 16 16:38:57.1±2.4,**1°.58S**±0°.04×**120°.15E**±0°.05,**h5**^{km}±16^{km},**n56**,σ1^{s}.**35**/62,**mb4.2**/16,**Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TTSI	**Tana Toraja**	1.50	193	P	Pn	16 39 23.8	-0.8
TTSI				S	Sb	16 39 44.6	0.0
APSI	**Ampana**	1.64	66	P	Pb	16 39 27.6	-0.2
APSI				S	Sg	16 39 51.1	+1.2
MPSI	**Mapaga**	1.92	353	P	Pn	16 39 29.9	-0.4
MPSI				S	Sn	16 39 54.9	+0.1
SPSI	**Sidrap Palu**	2.40	189	P	Pn	16 39 38.1	+1.1
LUWI	**Luwuk**	2.68	79	P	Pn	16 39 41.4	+0.5
LUWI				S	Sb	16 40 15.5	-3.2
LUWI	**Luwuk**	2.68	79		Pn	16 39 40.5	-0.4
MRSI	**Marisa**	2.72	41	P	Pn	16 39 42.4	+1.0
MRSI				S	Sn	16 40 16.3	+1.7
TOLI2	**Tolitoli**	2.74	13		Pn	16 39 43.1	+1.4
BNSI	**Bone**	2.81	181	P	Pn	16 39 44.4	+1.8
SMKI	**Samarinda**	3.14	291	P	Pn	16 39 44.9	-2.3
KAPI	**Kappang**	3.44	187	Pn	Pn	16 39 52.9	+1.6
	17nm,0.3s,baz=17,slow=11,SNR=15						
KAPI				Sn	Sb	16 40 39.3	-1.2
	6.5nm,0.3s,baz=280,slow=20,SNR=5.8						
KAPI	**Kappang**	3.44	187		Pn	16 39 51.9	+0.6
GTOI	**Gorontalo**	3.61	53	P	Pn	16 39 54.5	+0.8
BKSI	**Bulukumba**	3.72	180	P	Pn	16 39 56.2	+1.0
KBKI	**Kotabaru**	4.33	247	P	Pn	16 40 02.7	-0.8
KMSI	**Cibinong**	4.39	61	P	Pn	16 40 06.3	+1.9
BSSI	**Bau Bau, Buton**	4.55	176	P	Pn	16 40 07.8	+1.2
MTKI	**Muara Teweh, K**	5.29	277	P	Pn	16 40 16.4	-0.3
	0.2nm36nm,0.6s						
BBKI	**Banjar Baru**	5.62	250	P	Pn	16 40 21.4	+0.1
	0.3nm1µm65nm,0.6s						
SANI	**Sanana**	5.86	95	P	Pn	16 40 24.7	+0.1
	0.1nm13nm,0.6s						
EDFI	**Ende, Flores**	7.29	168	P	Pn	16 40 44.1	-0.3
LBMI	**Labuha**	7.41	83	P	Pn	16 40 49.7	+3.7
JAGI	**Jajag, Banyuwa**	9.08	221	Pn	Pn	16 41 10.1	+1.2
SOEI	**Soe**	9.10	153	Pn	Pn	16 41 11.3	+2.0
BATI	**Baumata**	9.26	158	Pn	Pn	16 41 11.7	+0.3
	1.5nm,0.3s,baz=165,slow=18,SNR=1.7						
SIJI	**Sorong**	11.14	87	Pn	Pn	16 41 35.6	-1.5
	0.4nm,0.3s,baz=186,slow=22,SNR=1.7						
SIJI				Sn	Sn	16 43 41.7	-0.5
	0.4nm,0.3s,baz=72,slow=23,SNR=2.1						
MTN	**Manton Dam**	15.61	136	P	P	16 42 41.6	-0.7
MTN				IAmb	IAmb	16 43 00.7	
	comp=Z,17nm,1.3s						
FITZ	**Fitzroy Crossi**	17.28	162	P	P	16 43 00.6	-0.2
	comp=Z,0.1nm,0.3s,baz=4.8,slow=12,SNR=1.8						
WB0	**Warramunga Arr**	22.83	143	P	P	16 43 59.3	-1.9
WB0				IAmb	IAmb	16 44 00.9	
	comp=Z,7.7nm,1.1s						
WRAB	**Tennant Creek**	22.93	144	P	P	16 44 01.3	-1.0
WRAB				IAmb	IAmb	16 44 03.4	
	comp=Z,8.2nm,0.9s						
WRA	**Warramunga Arr**	22.93	144	P	P	16 44 00.8	-1.5
	comp=Z,5.2nm,0.9s,baz=321,slow=11,SNR=33						
WRA	**Warramunga Arr**	22.93	144	P	P	16 44 00.5	-1.8
WB2	**Warramunga Arr**	22.94	144	P	P	16 44 01.0	-1.4
WB2				IAmb	IAmb	16 44 02.0	
	comp=Z,9.4nm,1.0s						
WR0	**Warramunga Arr**	23.07	143	P	P	16 44 02.4	-1.2
WR0				IAmb	IAmb	16 44 05.1	
	comp=Z,11nm,1.1s						
AS31	**Alice Springs**	25.69	150	P	P	16 44 27.7	-0.6
ASAR	**Alice Springs**	25.69	150	P	P	16 44 27.6	-0.7
	comp=Z,1.3nm,0.7s,baz=329,slow=9.0,SNR=28						
ASAR	**Alice Springs**	25.69	150	P	P	16 44 28.4	+0.1
CMAR	**Chiang Mai Arr**	28.83	315	P	P	16 44 59.1	+2.5
	comp=Z,1.1nm,0.8s,baz=137,slow=7.3,SNR=10						
CMAR	**Chiang Mai Arr**	28.83	315	P	P	16 44 58.8	+2.3
CHTO	**Chiang Mai**	29.07	315	P	P	16 45 00.9	+2.3
CHTO				IAmb	IAmb	16 45 01.7	
	comp=Z,2.4nm,0.9s						
FORT	**Forrest**	30.00	166	P	P	16 45 05.5	-1.3
BBOO	**Buckleboo**	34.48	156	P	P	16 45 44.1	-2.0
BBOO				IAmb	IAmb	16 45 46.1	
	comp=Z,3.4nm,0.8s						
STKA	**Stephens Creek**	36.30	148	P	P	16 46 01.2	-0.5
	comp=Z,4.0nm,0.7s,baz=317,slow=9.0,SNR=14						
STKA	**Stephens Creek**	36.30	148	P	P	16 46 00.8	-1.0
SONM	**Songino Array**	50.65	348	P	P	16 47 59.1	+1.7
	comp=Z,0.6nm,0.8s,baz=155,slow=9.4,SNR=2.6						
SONM	**Songino Array**	50.65	348	IAmb	IAmb	16 48 06.1	
	comp=Z,0.3nm,1.0s						
MK31	**Makanchi Array**	58.50	330	P	P	16 48 54.1	-0.3
MK31				IAmb	IAmb	16 48 55.4	
	comp=Z,2.3nm,0.8s						
MKAR	**Makanchi Array**	58.50	330	P	P	16 48 54.8	+0.4
	comp=Z,2.4nm,0.7s,baz=134,slow=7.7,SNR=23						
MKAR	**Makanchi Array**	58.50	330	P	P	16 48 53.9	-0.5
MAKZ	**Makanchi**	58.67	330	P	P	16 48 55.0	-0.5
MAKZ				IAmb	IAmb	16 49 17.6	
	comp=Z,2.6nm,1.1s						
AAK	**Ala-Archa**	60.19	323	P	P	16 49 06.4	+0.1
AAK				IAmb	IAmb	16 49 07.6	
	comp=Z,2.2nm,0.9s						
GAR	**Garm**	60.97	317	P	P	16 49 12.1	+0.5
ZALV	**Zalesovo Beam**	62.61	337	P	P	16 49 21.6	-0.6
	comp=Z,0.6nm,0.6s,baz=111,slow=6.5,SNR=2.0						
KKAR	**Karatay Array**	62.90	321	P	P	16 49 24.0	-0.4
KURK	**Kurchatov**	62.95	332	P	P	16 49 24.1	-0.4
CRZF	**Crozet Islands**	74.00	222	P	P	16 50 33.5	-0.3

*NEIC **16** 16:41:07.8±2.4,24°.7S±0°.2×176°.2W±0°.2,h40^{km}±6^{km},mb4.2/15,Error ellipse: s-maj=28.6km s-min=16.9km az=48.0*
*IDC **16** 16:41:21.3±12.0,24°.39S×177°.01W,h131^{km}±81^{km},mb3.6/4,mb1 3.8/5,mb1mx3.4/44,mbtmp4.0/5,MS3.2/1,Ms1 3.2/1,ms1mx2.8/37,Error ellipse: s-maj=115.5km s-min=61.2km az=131.0*
ISC 16 16:41:08.6±1.9,**24°.9S**±0°.2×**176°.2W**±0°.3,**h50**^{km},**n22**,σ1^{s}.**33**/22,**mb4.2**/10,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	8.87	322	P	Pn	16 43 15.7	+1.5
	1.1nm,0.3s,baz=265,slow=23,SNR=6.8						
DZM	**Mont Dzumac**	16.14	276	P	P	16 44 56.8	+1.9
	0.1nm,0.3s,baz=96,slow=18,SNR=5.2						
DZM				LR	LR	16 48 55.4	
	comp=Z,76nm,18.6s,baz=86,slow=30						
DZM	**Mont Dzumac**	16.14	276	P	P	16 44 56.3	+1.5
DZM				IAmb	IAmb	16 45 16.3	
	comp=Z,19nm,1.4s						
LTZ	**Lake Taylor**	20.25	205	P	Pn	16 45 41.8	-0.3
LTZ				IAmb	IAmb	16 45 58.6	
	comp=Z,11nm,1.0s						
TAU	**Tasmania Unive**	34.88	230	P	P	16 47 56.4	+1.2
TOO	**Toolangi**	34.88	239	P	P	16 47 56.2	+0.9
TOO				IAmb	IAmb	16 48 18.0	
	comp=Z,3.7nm,1.1s						
CTAO	**Charters Tower**	34.92	270	P	P	16 47 55.5	-0.4
STKA	**Stephens Creek**	37.59	249	P	P	16 48 18.5	0.0
PMG	**Port Moresby**	38.06	287	P	P	16 48 20.4	-2.2
	comp=Z,4.8nm,0.7s,baz=112,slow=7.0,SNR=6.6						
PMG	**Port Moresby**	38.06	287	P	P	16 48 22.2	-0.4
PMG				IAmb	IAmb	16 48 22.5	
	comp=Z,5.3nm,0.8s						
BBOO	**Buckleboo**	42.26	248	P	P	16 48 57.2	-0.1
BBOO				IAmb	IAmb	16 49 24.8	
	comp=Z,10nm,1.4s						
AS31	**Alice Springs**	45.28	261	P	P	16 49 20.9	-0.8
ASAR	**Alice Springs**	45.28	261	P	P	16 49 20.9	-0.8
	comp=Z,0.6nm,0.7s,baz=97,slow=7.2,SNR=13						
ASAR				PcP	PcP	16 51 00.1	-0.8
	comp=Z,0.3nm,0.8s,baz=90,slow=4.0,SNR=2.6						
WR0	**Warramunga Arr**	45.59	266	P	P	16 49 22.6	-1.5
WR0				IAmb	IAmb	16 49 23.4	
	comp=Z,2.0nm,0.9s						
WB2	**Warramunga Arr**	45.77	266	P	P	16 49 24.2	-1.3
WB2				IAmb	IAmb	16 49 25.6	
	comp=Z,2.5nm,1.1s						
WB0	**Warramunga Arr**	45.77	266	P	P	16 49 23.9	-1.7
WB0				IAmb	IAmb	16 49 35.9	
	comp=Z,3.2nm,1.0s						
WRA	**Warramunga Arr**	45.78	266	P	P	16 49 24.3	-1.3
	comp=Z,1.1nm,0.7s,baz=99,slow=6.6,SNR=14						
WRA	**Warramunga Arr**	45.78	266	P	P	16 49 24.2	-1.4
KNRA	**Kununurra**	52.12	269	P	P	16 50 13.2	-1.0
QSPA	**South Pole Qui**	65.24	180	P	P	16 51 46.0	+1.1
QSPA				IAmb	IAmb	16 51 50.5	
	comp=Z,5.2nm,1.1s						
CMAR	**Chiang Mai Arr**	93.09	289	P	P	16 54 18.2	+0.6
	comp=Z,0.8nm,0.7s,baz=132,slow=3.8,SNR=6.8						
CMAR	**Chiang Mai Arr**	93.09	289	P	P	16 54 15.8	-1.8

*SJA **16** 16:45:55.9±0.5,29°.73S×72°.32W,h2^{km}±5^{km},ML4.2,MW4.0*
*IDC **16** 16:46:00.4±2.0,29°.95S×71°.77W,h0^{km},mb4.3/2,mb1 4.0/7,mb1mx3.8/26,mbtmp3.9/7,ML3.6/5,MS3.3/3,Ms1 3.3/3,ms1mx3.0/21,Error ellipse: s-maj=64.0km s-min=29.2km az=99.0*
*NEIC **16** 16:46:00.2±2.1,29°.92S±0°.04×72°.13W±0°.05,h10^{km}±1^{km},mb4.3/5,ML4.2(GUC),Error ellipse: s-maj=8.1km s-min=5.8km az=69.0*
*GUC **16** 16:46:01.7±0.6,29°.90S×72°.12W,h29^{km}±8^{km},ML4.2*
ISC 16 16:45:58.3±1.7,**29°.88S**±0°.04×**72°.14W**±0°.05,**h2**^{km}±10^{km},**n82**,σ1^{s}.**79**/91,**mb4.3**/3,**1C,Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	**La Serena**	0.79	93	*e*P	Pb	16 46 14.6	0.0
CO05				*i*S	Sb	16 46 25.6	-0.1
CO05				IAML		16 46 28.2	
	comp=E,12µm,0.3s						
CO05	**La Serena**	0.79	93	Pg	Pb	16 46 15.4	+0.8
CO05				Sg	Sb	16 46 25.2	-0.5
CO06	**Fray Jorge**	0.91	151	*e*P	Pb	16 46 17.0	+0.3
CO06				*i*S	Sg	16 46 28.6	+1.2
CO06				IAML		16 46 30.9	
	comp=E,9µm,0.8s						
CO06	**Fray Jorge**	0.91	151		Pb	16 46 16.9	+0.2
GO04	**Tololo Observa**	1.20	104	*i*P	Pb	16 46 22.1	+0.3
GO04				*i*S	Sb	16 46 37.5	-0.4
GO04				IAML		16 46 45.2	
	comp=N,13µm,0.5s						
GO04	**Tololo Observa**	1.20	104		Pb	16 46 22.2	+0.3
GO04	**Tololo Observa**	1.20	104	*e*P	Pn	16 46 23.1	+0.8
LCO	**Las Campanas**	1.52	56	*i*P	Pg	16 46 27.9	+0.4
LCO				*e*S	Sg	16 46 47.2	-0.1
LCO	**Las Campanas**	1.52	56		Pg	16 46 27.8	+0.2
AC04	**Llanos de Chal**	1.91	30		Pn	16 46 32.6	+0.7
AROD	**Rodeo**	2.33	98	*e*P	Pb	16 46 41.0	-0.2
AROD				*e*S	Sg	16 47 14.4	+1.1
ACCO	**Cerro Coronel**	2.75	106	*e*P	Pb	16 46 47.6	-0.8
ACCO				*e*S	Sg	16 47 25.2	-1.6
ACCO				IAML		16 47 27.2	
	comp=Z,742nm,1.0s						
VA06	**Catapilco**	2.77	165	IAML		16 47 31.9	
	comp=E,981nm,0.6s						
GO03	**Copiap**	2.83	37	*e*P	Pn	16 46 45.8	+1.3
GO03				IAML		16 47 34.5	
	comp=E,681nm,0.4s						
GO03	**Copiap**	2.83	37		Pn	16 46 45.6	+1.1
RTLS	**Leoncito**	3.11	129	*e*P	Pb	16 46 53.0	-1.5
RTLS				*e*S	Sb	16 47 34.8	+2.0
RTLS				IAML		16 47 46.7	
	comp=Z,514nm,0.6s						
VA03	**San Esteban**	3.18	155	*e*P	Pn	16 46 52.0	+2.6
VA03				IAML		16 47 47.7	
	comp=N,672nm,0.7s						
VA03	**San Esteban**	3.18	155		Pn	16 46 51.3	+1.9
ROCH	**El Roble**	3.23	163	*e*P	Pn	16 46 51.0	+0.8
ROCH				*e*S	Sn	16 47 28.6	-0.8
ROCH				IAML		16 47 46.8	
	comp=N,596nm,0.7s						
ROC1	**El Roble**	3.23	163	*e*P	Pn	16 46 53.4	+3.2
AUSP	**Uspallata**	3.32	135	*e*P	Pb	16 46 55.3	-2.8
ZON	**Zonda**	3.41	120	Pn	Pn	16 46 51.1	-1.5
MT02	**Curacav**	3.48	166		Pn	16 46 54.3	+0.9
PEL	**Peldehue**	3.48	159	*e*P	Pn	16 46 55.0	+1.4
PEL				*e*S	Sn	16 47 34.6	-0.8
PEL				IAML		16 47 53.5	
	comp=N,378nm,0.5s						
PEL	**Peldehue**	3.48	159		Pn	16 46 53.7	+0.1
VCA	**Vinchina**	3.62	73	*e*P	Pn	16 46 58.0	+2.5
VCA				IAML		16 48 02.5	
	comp=Z,403nm,0.7s						
RTCV	**Cerro Valdivia**	3.67	123	*e*P	Pn	16 47 00.2	+4.0
RTCV				IAML		16 48 03.4	
	comp=Z,114nm,1.3s						
MT05	**Renca**	3.70	161	*e*P	Pn	16 46 57.5	+0.9
MT05	**Renca**	3.70	161	Pn	Pn	16 46 58.5	+2.0
VA05	**Santo Domingo**	3.79	173	*e*P	Pn	16 46 58.4	+0.7
VA05	**Santo Domingo**	3.79	173	Pn	Pn	16 46 58.9	+1.2
MT09	**Talagante**	4.01	166	*e*P	Pn	16 47 02.2	+1.4
MT09				*e*S	Sn	16 47 46.0	-2.4
MT09	**Talagante**	4.01	166		Pn	16 47 01.2	+0.4
AC02	**Maricunga**	4.03	42		Pn	16 47 02.4	+0.9
ARCO	**CERRO ARCO**	4.03	138	*e*P	Pn	16 47 05.0	+3.8
ARCO				IAML		16 48 13.5	
	comp=Z,306nm,0.7s						
MT01	**Popeta**	4.04	169	*e*P	Pn	16 47 01.5	+0.2
MT01	**Popeta**	4.04	169		Pn	16 47 01.4	+0.2
AAGR	**Agrelo**	4.27	139	*e*P	Pn	16 47 08.6	+4.2
AAGR				*e*S	Sb	16 48 02.6	-3.6
AAGR				IAML		16 48 20.7	
	comp=Z,331nm,0.9s						
LMEL	**Las Melosas**	4.29	158	*e*P	Pn	16 47 07.2	+2.5
BO04	**La Punta**	4.30	163	*e*P	Pn	16 47 05.6	+0.9
ACLC	**CERRO LA CRUZ**	4.54	86	*e*P	Pn	16 47 11.6	+3.4
ACLC				*e*S	Sb	16 48 07.6	-6.4
ACLC				IAML		16 48 18.1	
	comp=Z,220nm,1.0s						
BO01	**Tunca**	4.59	169	*e*P	Pn	16 47 09.3	+0.6
BO01	**Tunca**	4.59	169		Pn	16 47 09.0	+0.3
AVIZ	**Vizcacheras**	4.73	140	*e*P	Pn	16 47 15.0	+4.3
APLL	**PUNTA DE LOS L**	4.89	97	*e*P	Pn	16 47 17.0	+4.1
BO02	**Sierra Bellavi**	5.03	167	*i*P	Pn	16 47 14.9	0.0
BO02	**Sierra Bellavi**	5.03	167		Pn	16 47 15.0	+0.2
GO05	**Huala**	5.12	178	Pn	Pn	16 47 14.6	-1.3
PB14	**IPOC Station P**	5.46	17		Pn	16 47 19.8	-1.1
H03N1	**Juan Fernandez**	6.78	237	Pn	Pn	16 47 39.0	+0.5
	baz=112,slow=19,SNR=35						
H03N1				T	T	16 55 34.2	
	baz=65,slow=72,SNR=478						
H03N2	**Juan Fernandez**	6.79	237	Pn	Pn	16 47 39.0	+0.3
	baz=112,slow=19,SNR=31						
H03N2				T	T	16 55 34.7	
	baz=65,slow=72,SNR=345						
H03N3	**Juan Fernandez**	6.79	237	Pn	Pn	16 47 38.6	-0.1
	baz=112,slow=19,SNR=46						
H03N3				T	T	16 55 33.5	
	baz=65,slow=72,SNR=417						
VA04	**Juan Fernndez**	6.82	235	Pn	Pn	16 47 40.1	+0.8
PB15	**IPOC Station P**	7.06	20		Pn	16 47 42.8	0.0
PB06	**IPOC Station P**	7.51	18	Pn	Pn	16 47 47.8	-1.1
PB04	**IPOC Station P**	7.72	14	Pn	Pn	16 47 50.7	-1.2
LVC	**Limon Verde**	7.80	23	Pn	Pn	16 47 52.9	-0.3
	comp=Z,0.4nm,0.3s,baz=174,slow=10,SNR=1.9						
LVC				Sn	Sn	16 49 19.9	-2.3
	comp=Z,0.6nm,0.3s,baz=173,slow=19,SNR=1.4						
LVC				LR	LR	16 51 14.5	
	comp=Z,161nm,18.7s,baz=208,slow=41						
LVC	**Limon Verde**	7.80	23	Pn	Pn	16 47 52.5	-0.6
PB07	**IPOC Station P**	8.37	15	Pn	Pn	16 47 59.7	-1.1
PB09	**IPOC Station P**	8.46	19	Pn	Pn	16 48 02.4	+0.4
LC01	**Cunco**	9.00	179	Pn	Pn	16 48 08.7	-0.6
PB01	**IPOC Station P**	9.12	16	Pn	Pn	16 48 09.3	-1.7
PB11	**IPOC Station P**	10.32	13	Pn	Pn	16 48 27.3	-0.3
PLCA	**Paso Flores**	10.91	174	Pn	Pn	16 48 36.1	+0.7
	comp=Z,0.1nm,0.3s,baz=270,slow=7.3,SNR=2.9						
PLCA	**Paso Flores**	10.91	174		Pn	16 48 34.2	-1.2
TRQA	**Tornquist**	11.73	137		Pn	16 48 46.0	-0.6
CPUP	**Villa Florida**	13.54	78	Pn	Pn	16 49 09.7	-1.7
	comp=Z,0.1nm,0.3s,baz=239,slow=12,SNR=1.4						
CPUP				LR	LR	16 54 43.6	
	comp=Z,115nm,19.8s,baz=238,slow=40						
LPAZ	**La Paz**	14.02	16	Pn	Pn	16 49 22.0	+3.4
	comp=Z,0.1nm,0.3s,baz=168,slow=7.0,SNR=5.3						
SIV	**San Ignacio**	17.16	39	P	P	16 50 01.6	+0.5
	comp=Z,0.3nm,0.3s,baz=223,slow=11,SNR=21						
SIV				LR	LR	16 57 52.5	
	comp=Z,96nm,18.2s,baz=89,slow=42						
PTLB	**Pontes e Lacer**	18.69	43	P	Pn	16 50 19.0	+0.8
PTGA	**Pitinga**	31.22	24	P	P	16 52 20.5	+1.3
	comp=Z,1.2nm,0.3s,baz=176,slow=9.4,SNR=4.1						
PTGA	**Pitinga**	31.22	24	P	P	16 52 20.8	+1.6
PTGA				IAmb	IAmb	16 52 22.2	
	comp=Z,4.3nm,0.9s						
BOAV	**Boa Vista**	33.96	21	P	P	16 52 43.5	+0.3
BOAV				IAmb	IAmb	16 53 02.6	
	comp=Z,2.9nm,1.0s						
QSPA	**South Pole Qui**	60.34	180	P	P	16 56 10.7	+2.2
SYO	**Syowa Base**	69.73	159	⇑*e*sPdiff		17 06 21.1	
TORD	**Torodi Ar. Bea**	82.91	71	P	P	16 58 25.8	+0.9
	comp=Z,1.9nm,0.9s,baz=257,slow=4.5,SNR=8.4						
TORD	**Torodi Ar. Bea**	82.91	71	P	P	16 58 25.9	+0.9
TORD				IAmb	IAmb	16 58 26.8	
	comp=Z,2.5nm,1.0s						
H11S2	**WAKE ISLAND Hy**	125.64	272	T	T	19 23 57.5	
	baz=115,slow=75,SNR=5.0						
H11S1	**WAKE ISLAND Hy**	125.65	272	T	T	19 23 59.5	
	baz=115,slow=75,SNR=9.0						
H11S3	**WAKE ISLAND Hy**	125.65	272	T	T	19 23 59.9	
	baz=115,slow=75,SNR=7.1						
ZALV	**Zalesovo Beam**	150.72	28	PKPbc	PKiKP	17 05 53.9	+1.7
	comp=Z,3.5nm,0.5s,baz=306,slow=3.4,SNR=8.6						
ZALV	**Zalesovo Beam**	150.72	28		PKiKP	17 05 52.9	+0.7

*JMA **16** 16:49:10.3±0.5,48°.22N×155°.02E,h30^{km},M6.1*
*KRSC **16** 16:49:13.7±2.2,48°.07N×156°.17E,h16^{km}±42^{km},ML6.5*
*NEIC **16** 16:49:13.7±1.6,48°.33N±0°.07×154°.2E±0°.1,h34^{km}±1^{km},mb6.1/838,Ms_20 5.5/320,Mwb5.8/90,Mww5.9,Mwc5.9(GCMT),Error ellipse: s-maj=14.6km s-min=10.4km az=133.0*
*IDC **16** 16:49:14.5±0.5,48°.32N×154°.24E,h40^{km}±4^{km},mb5.3/43,mb1 5.4/47,mb1mx5.3/49,mbtmp5.5/47,ML6.0/2,MS5.5/48,Ms1 5.5/48,ms1mx5.3/58,Error ellipse: s-maj=9.8km*

s-min=7.0km az=103.0

NEIC ***16*** *16:49:15.3, 48°.30N×154°.26E, h35^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$6.25; M$_{θθ}$-1.65; M$_{φφ}$-4.60; M$_{rθ}$1.73; M$_{θφ}$-2.41; M$_{φr}$1.79; Fault plane solution: M$_0$6.59000×10^{17} NP1:φ$_s$204.36000°, δ34.43000°, λ81.64000°. NP2:φ$_s$34.46000°, δ55.99000°, λ95.69000°. Principal axes: T 6.7651, Plg78.0000°, Azm324.0000°; N -0.3558, Plg5.0000°, Azm211.0000°; P -6.4093, Plg11.0000°, Azm120.0000°;*

SKHL ***16*** *16:49:15.2±0.8, 48°.10N×154°.60E, h75^{km}±5^{km}, mb6.2/14, ms5.7/10*

BGR ***16*** *16:49:15.7±0.0, 48°.89N×153°.73E, h24^{km}, mb6.2, mB_BB6.4, Ms5.8*

MOS ***16*** *16:49:15.3±1.1, 48°.29N×154°.34E, h73^{km}, mb6.0/71, MS5.5/110, Error ellipse: s-maj=5.6km s-min=2.9km az=72.1 Broadband fault plane solution: P waves. NP1: φ$_s$202.00000°, δ45.00000°, λ83.00000°. NP2:φ$_s$31.00000°, δ45.00000°, λ97.00000°. Principal axes: T Plg85.0000°, Azm27.0000°; N Plg5.0000°, Azm207.0000°; P Plg0.0000°, Azm117.0000°;*

MOS *Fault plane solution: P-wave C75, D15 . Felt (III-IV) at Severo-Kuril'sk.*

GCMT ***16*** *16:49:16.7±0.1, 48°.25N×154°.69E, h46^{km}, MW5.9/164, Moment Tensor Solution. s157,c351; s164,c514; Duration: 2^{s}3 Moment tensor: Scale 10^{18}Nm; M$_{rr}$0.97±.01; M$_{θθ}$-0.22±.01; M$_{φφ}$-0.75±.01; M$_{rθ}$0.16±.01; M$_{θφ}$-0.45±.00; M$_{φr}$0.27±.01; Best double couple: M$_0$1.03400×10^{18} NP1:φ$_s$209.00000°, δ36.00000°, λ89.00000°. NP2:φ$_s$30.00000°, δ54.00000°, λ91.00000°. Principal axes: T 1.0150, Plg81.0000°, Azm302.0000°; N 0.0380, Plg0.0000°, Azm210.0000°; P -1.0520, Plg9.0000°, Azm120.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***16*** *16:49:18, 48°.21N×154°.78E, h48^{km}, Moment Tensor Solution. Duration: 4^{s}6 Moment tensor: Scale 10^{18}Nm; M$_{rr}$0.92; M$_{θθ}$-0.17; M$_{φφ}$-0.75; M$_{rθ}$0.16; M$_{θφ}$-0.46; M$_{φr}$0.27; Fault plane solution: M$_0$1.01000×10^{18} NP1: φ$_s$208.00000°, δ36.00000°, λ89.00000°. NP2:φ$_s$30.00000°, δ54.00000°, λ91.00000°. Principal axes: T 0.9696, Plg81.0000°, Azm305.0000°; N 0.0832, Plg1.0000°, Azm209.0000°; P -1.0528, Plg9.0000°, Azm119.0000°;*

NEIC ***16*** *16:49:20, 48°.14N×154°.55E, h50^{km}, Moment Tensor Solution. Duration: 14^{s}0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$7.98; M$_{θθ}$-2.10; M$_{φφ}$-5.88; M$_{rθ}$2.25; M$_{θφ}$-3.59; M$_{φr}$4.10; Fault plane solution: M$_0$9.28000×10^{17} NP1: φ$_s$212.00000°, δ30.00000°, λ92.00000°. NP2:φ$_s$30.00000°, δ60.00000°, λ89.00000°. Principal axes: T 9.2486, Plg75.0000°, Azm297.0000°; N 0.0605, Plg1.0000°, Azm31.0000°; P -9.3090, Plg15.0000°, Azm121.0000°;*

ISC 16 16:49:14.3±0.3**, 48°.23N**±0°.03×**154°.34E**±0°.02**, h40**^{km}±2^{km}**, h40**^{km}**:pP-P, n2838, σ1^{s}53**/3014**, mb6.0**/795**, MS5.5**/295**, 753C-164D, Fault plane solution: NP1:**φ$_s$158.27257°, δ48.34979°, λ59.69996°. **NP2:**φ$_s$19.59712°, δ49.82363°, λ119.56458°. **Principal axes:** T Plg67.8370°, Azm357.2418°; N Plg22.1475°, Azm179.4963°; P Plg0.7876°, Azm89.1757°; **Fault plane solution: NP1:** φ$_s$67.86562°, δ56.74082°, λ94.33140°. **NP2:**φ$_s$240.00243°, δ33.50787°, λ83.43105°. **Principal axes:** T Plg77.7928°, Azm352.4950°; N Plg3.6209°, Azm245.4870°; P Plg11.6420°, Azm154.7400°; **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.72**	**25**	⇓*i*PN	**Pn**	**16 49 56.1**	**+0.7**
SKR				*e*S	**Sn**	**16 50 26.0**	**-1.0**
SKR				pmax	pmax		
	comp=Z,8μm,0.7s						
SKR				smax	smax		
	comp=N,203μm,0.7s						
SKR				smax	smax		
	comp=E,108μm,0.6s						
SKR				MLR	MLR		
	comp=N,94μm,12.0s						
SKR				MLR	MLR		
	comp=E,87μm,12.0s						
SKR				MLR	MLR		
	comp=Z,93μm,12.0s						
SKR				MLR	MLR		
	comp=Z,208μm,12.0s						
SKR	**Severo-Kuril's**	**2.72**	**25**	*e*P	**Pn**	**16 49 56.6**	**+1.2**
SKR				*e*S	**Sn**	**16 50 27.4**	**+0.4**
SKR	**Severo-Kuril's**	**2.72**	**25**	*i* P	**Pn**	**16 49 56.0**	**+0.7**
SKR				AMB	AMB	16 49 57.0	
	comp=Z,8μm,0.7s						
SKR				*e*S	**Sn**	**16 50 27.0**	**0.0**
SKR				A	A	16 50 32.0	
	comp=Z,203μm,0.6s						
SKR				A	A	16 50 32.0	
	comp=Z,108μm,0.6s						
SKR				AMS	AMS	16 50 58.0	
	comp=Z,94μm,12.0s						
SKR				AMS	AMS	16 50 58.0	
	comp=Z,87μm,12.0s						
SKR				AMS	AMS	16 50 58.0	
	comp=Z,208μm,12.0s						
PAU	**Pauzhetka**	**3.62**	**25**	PN	**Pn**	**16 50 09.0**	**+1.3**
PAU				S	**Sn**	**16 50 49.2**	**+0.1**
PAU	**Pauzhetka**	**3.62**	**25**	*e*P	**Pn**	**16 50 09.0**	**+1.3**
PAU				*e*S	**Sn**	**16 50 49.2**	**+0.1**
PAU	**Pauzhetka**	**3.62**	**25**	*e*P	**Pn**	**16 50 09.4**	**+1.7**
PAU				AMB	AMB	16 50 17.6	
	comp=Z,2μm,0.5s						
PAU				*e*S	**Sn**	**16 50 50.6**	**+1.5**
PAU				A	A	16 51 01.8	
	comp=Z,36μm,0.7s						
PAU				A	A	16 51 01.8	
	comp=Z,57μm,0.7s						
KDTR	**Khodutka, Kamc**	**4.32**	**32**	PN	**Pn**	**16 50 17.4**	**0.0**
KDTR				S	**Sn**	**16 51 04.4**	**-2.0**
KDTR	**Khodutka, Kamc**	**4.32**	**32**	*e*P	**Pn**	**16 50 17.4**	**0.0**
KDTR				*e*S	**Sn**	**16 51 04.4**	**-2.0**
MIPR	**Malaya Ipel'ka**	**4.34**	**20**	PN	**Pn**	**16 50 20.7**	**+3.0**
MIPR	**Malaya Ipel'ka**	**4.34**	**20**	*e*P	**Pn**	**16 50 20.7**	**+3.0**
ASAK	**Asacha**	**4.75**	**27**	PN	**Pn**	**16 50 25.0**	**+1.7**
ASAK	**Asacha**	**4.75**	**27**	*e*P	**Pn**	**16 50 25.0**	**+1.7**
MTVR	**Mutnovka**	**4.92**	**29**	PN	**Pn**	**16 50 27.1**	**+1.3**
MTVR				S	**Sn**	**16 51 20.6**	**-0.8**
MTVR	**Mutnovka**	**4.92**	**29**	*e*P	**Pn**	**16 50 27.1**	**+1.3**
MTVR				*e*S	**Sn**	**16 51 20.6**	**-0.8**
GRL	**Gorelyy**	**4.95**	**27**	PN	**Pn**	**16 50 28.1**	**+2.0**
GRL				S	**Sn**	**16 51 22.3**	**+0.3**
GRL	**Gorelyy**	**4.95**	**27**	*e*P	**Pn**	**16 50 28.1**	**+2.0**
GRL				*e*S	**Sn**	**16 51 22.3**	**+0.3**
RUS	**Russkaya**	**4.99**	**31**	PN	**Pn**	**16 50 26.3**	**-0.2**
RUS	**Russkaya**	**4.99**	**31**	*e*P	**Pn**	**16 50 26.3**	**-0.2**
APC	**Apacha**	**5.04**	**20**	PN	**Pn**	**16 50 30.5**	**+3.3**
APC	**Apacha**	**5.04**	**20**	*e*P	**Pn**	**16 50 30.5**	**+3.3**
KRMR	**Karymshinskiy**	**5.20**	**26**	PN	**Pn**	**16 50 32.0**	**+2.5**
KRMR				S	**Sn**	**16 51 30.1**	**+1.9**
KRMR	**Karymshinskiy**	**5.20**	**26**	*e*P	**Pn**	**16 50 32.0**	**+2.5**
KRMR				*e*S	**Sn**	**16 51 30.1**	**+1.9**
PEA0B	**Petropavlovsk-**	**5.33**	**22**	*ce*PN	**Pn**	**16 50 34.1**	**+2.8**
PEA0B	**Petropavlovsk-**	**5.33**	**22**		**Pn**	**16 50 33.6**	**+2.2**
PETK	**Petropavlovsk-**	**5.33**	**22**	Pn	**Pn**	**16 50 33.0**	**+1.7**
	comp=Z,94nm,0.3s,baz=112,slow=24,SNR=792						
PETK				Sn	**Sn**	**16 51 34.8**	**+3.4**
	comp=Z,5.8nm,0.3s,baz=134,slow=13,SNR=1.8						
PETK				LR	LR	16 52 46.4	
	comp=Z,66μm,20.4s,baz=193,slow=40						
PETK	**Petropavlovsk-**	**5.33**	**22**	PN	**Pn**	**16 50 32.7**	**+1.4**
PETK	**Petropavlovsk-**	**5.33**	**22**		**Pn**	**16 50 32.7**	**+1.4**
KUR	**Kuril'sk**	**5.36**	**238**	*c i*PN	Pn	16 50 36.5	+4.8
KUR				*i* S	**Sn**	**16 51 40.9**	**+8.7**
KUR				pmax	pmax		
	comp=Z,23μm,2.4s						
KUR				pmax	pmax		
	comp=Z,5μm,0.6s						
KUR				pmax	pmax		
	comp=N,714nm,0.5s						
KUR				pmax	pmax		
	comp=E,2μm,0.4s						
KUR				smax	smax		
	comp=N,110μm,2.3s						
KUR				smax	smax		
	comp=E,62μm,2.0s						
KUR				smax	smax		
	comp=N,5μm,0.6s						
KUR				smax	smax		
	comp=E,1μm,0.4s						
KUR				MLR	MLR		
	comp=Z,79μm,13.0s						
KUR				MLR	MLR		
	comp=N,48μm,9.0s						
KUR				MLR	MLR		
	comp=E,43μm,9.0s						
KUR	**Kuril'sk**	**5.36**	**238**	*i* P	**Pn**	**16 50 36.0**	**+4.3**
KUR				AMB	AMB	16 50 39.0	
	comp=E,23μm,2.4s						
KUR				AMB	AMB	16 50 51.0	
	comp=E,5μm,0.5s						
KUR				*i* S	**Sn**	**16 51 34.9**	**+2.7**
KUR				A	A	16 51 45.0	
	comp=E,110μm,2.2s						
KUR				A	A	16 51 45.0	
	comp=E,62μm,2.2s						
KUR				A	A	16 51 49.0	
	comp=E,5μm,0.5s						
KUR				A	A	16 51 49.0	
	comp=E,1μm,0.5s						
KUR				AMS	AMS	16 52 37.0	
	comp=E,48μm,10.0s						
KUR				AMS	AMS	16 52 37.0	
	comp=E,43μm,10.0s						
KUR				AMS	AMS	16 52 37.0	
	comp=E,79μm,10.0s						
PET	**Petropavlovsk**	**5.53**	**28**	⇓*i*PN	**Pn**	**16 50 35.5**	**+1.5**
PET				*i* S	**Sn**	**16 51 37.4**	**+1.2**
PET				pmax	pmax		
	comp=Z,3μm,1.1s						
PET				smax	smax		
	comp=E,13μm,0.8s						
PET				smax	smax		
	comp=N,19μm,0.9s						
PET				MLR	MLR		
	comp=Z,40μm,16.0s						
PET	**Petropavlovsk**	**5.53**	**28**	*e*P	**Pn**	**16 50 35.4**	**+1.5**
PET				*e*S	**Sn**	**16 51 36.8**	**+0.6**
PET	**Petropavlovsk**	**5.53**	**28**	⇑S	**Pn**	**16 50 35.0**	**+1.0**
PET	**Petropavlovsk**	**5.53**	**28**	*e*P	**Pn**	**16 50 35.5**	**+1.5**
PET				AMB	AMB	16 50 42.6	
	comp=Z,3μm,1.0s						
PET				*e*S	**Sn**	**16 51 36.4**	**+0.2**
PET				A	A	16 51 50.4	
	comp=Z,19μm,0.8s						
PET				A	A	16 51 50.4	
	comp=Z,13μm,0.8s						
PET				AMS	AMS	16 52 59.4	
	comp=Z,43μm,16.0s						
PET	**Petropavlovsk**	**5.53**	**28**		**Pn**	**16 50 34.2**	**+0.2**
PET	**Petropavlovsk**	**5.53**	**28**	P	**Pn**	**16 50 35.7**	**+1.7**
DALK	**Dalny**	**5.57**	**29**	PN	**Pn**	**16 50 36.0**	**+1.5**
DALK				S	**Sn**	**16 51 37.8**	**+0.6**
DALK	**Dalny**	**5.57**	**29**	*e*P	**Pn**	**16 50 36.0**	**+1.5**
DALK				*e*S	**Sn**	**16 51 37.8**	**+0.6**
UGLR	**Uglovaya**	**5.74**	**28**	PN	**Pn**	**16 50 38.8**	**+1.8**
UGLR	**Uglovaya**	**5.74**	**28**	*e*P	**Pn**	**16 50 38.8**	**+1.8**
KOK	**Koryaka**	**5.76**	**27**	PN	**Pn**	**16 50 39.7**	**+2.5**
KOK	**Koryaka**	**5.76**	**27**	*e*P	**Pn**	**16 50 39.7**	**+2.5**
KOK	**Koryaka**	**5.76**	**27**	*e*P	**Pn**	**16 50 39.7**	**+2.5**
AVH	**Avacha**	**5.76**	**27**	PN	**Pn**	**16 50 39.8**	**+2.5**
AVH	**Avacha**	**5.76**	**27**	*e*P	**Pn**	**16 50 39.8**	**+2.5**
SMAR	**Somma**	**5.78**	**28**	PN	**Pn**	**16 50 39.6**	**+1.9**
SMAR	**Somma**	**5.78**	**28**	*e*P	**Pn**	**16 50 39.6**	**+1.9**
KRER	**Koryakskii**	**5.80**	**27**	PN	**Pn**	**16 50 40.6**	**+2.7**
KRER	**Koryakskii**	**5.80**	**27**	*e*P	**Pn**	**16 50 40.6**	**+2.7**
SDLR	**Sedlovina**	**5.82**	**28**	PN	**Pn**	**16 50 39.9**	**+1.8**
SDLR	**Sedlovina**	**5.82**	**28**	*e*P	**Pn**	**16 50 39.9**	**+1.8**
NLC	**Nalytchevo**	**5.88**	**31**	PN	**Pn**	**16 50 37.8**	**-1.0**
NLC	**Nalytchevo**	**5.88**	**31**	*e*P	**Pn**	**16 50 37.8**	**-1.0**
NLC				*e*S	**Sn**	**16 51 40.9**	**-4.0**
GNL	**Ganaly**	**5.93**	**21**	PN	**Pn**	**16 50 42.6**	**+3.0**
GNL	**Ganaly**	**5.93**	**21**	*e*P	**Pn**	**16 50 42.6**	**+3.0**
SPN	**Mys Shipunski**	**6.07**	**34**	PN	**Pn**	**16 50 41.1**	**-0.3**
SPN	**Mys Shipunski**	**6.07**	**34**	*e*P	**Pn**	**16 50 41.1**	**-0.3**
SPN				*e*S	**Sn**	**16 51 45.9**	**-3.6**
YUK	**Yuzh-Kuril'sk**	**7.23**	**238**	*e*PN	**Pn**	**16 51 01.4**	**+4.1**
YUK				*e*S	**Sn**	**16 52 23.6**	**+5.5**
YUK				pmax	pmax		
	comp=N,149nm,0.2s						
YUK				pmax	pmax		
	comp=Z,884nm,0.2s						
YUK				pmax	pmax		
	comp=E,322nm,0.3s						
YUK				pmax	pmax		
	comp=Z,7μm,1.2s						
YUK				smax	smax		
	comp=E,10μm,2.1s						
YUK				smax	smax		
	comp=N,6μm,1.1s						
YUK				MLR	MLR		
	comp=Z,40μm,15.0s						
YUK				MLR	MLR		
	comp=N,22μm,13.0s						
YUK				MLR	MLR		
	comp=E,38μm,14.0s						
YUK	**Yuzh-Kuril'sk**	**7.23**	**238**	*e*P	**Pn**	**16 51 01.1**	**+3.8**
YUK				AMB	AMB	16 51 03.0	
	comp=E,884nm,0.3s						
YUK				AMB	AMB	16 51 06.0	
	comp=E,7μm,2.0s						
YUK				*e*S	**Sn**	**16 52 19.8**	**+1.7**
YUK				A	A	16 52 36.0	
	comp=E,3μm,0.7s						
YUK				A	A	16 52 36.0	
	comp=E,3μm,0.7s						
YUK				A	A	16 52 36.0	
	comp=E,6μm,2.1s						
YUK				A	A	16 52 36.0	
	comp=E,10μm,2.1s						
YUK				AMS	AMS	16 53 44.0	
	comp=E,22μm,14.0s						
YUK				AMS	AMS	16 53 44.0	
	comp=E,38μm,14.0s						
YUK				AMS	AMS	16 53 44.0	
	comp=E,40μm,14.0s						
GRPR	**Tuman**	**7.31**	**238**	*e*PN	**Pn**	**16 51 01.5**	**+3.1**
GRPR				*e*S	**Sn**	**16 52 23.9**	**+3.9**
GRPR				pmax	pmax		
	comp=E,474nm,0.6s						
GRPR				pmax	pmax		
	comp=Z,2μm,0.6s						
GRPR				pmax	pmax		
	comp=N,874nm,0.5s						
GRPR				pmax	pmax		
	comp=Z,4μm,0.9s						
GRPR				smax	smax		
	comp=E,3μm,1.7s						
GRPR				smax	smax		
	comp=N,3μm,1.5s						
GRPR				MLR	MLR		
	comp=Z,40μm,14.0s						
GRPR				MLR	MLR		
	comp=N,18μm,18.0s						
GRPR				MLR	MLR		
	comp=E,35μm,14.0s						
GRPR	**Tuman**	**7.31**	**238**	*e*P	**Pn**	**16 51 01.0**	**+2.6**
GRPR				AMB	AMB	16 51 03.0	
	comp=E,2μm,0.6s						
GRPR				AMB	AMB	16 51 07.0	
	comp=E,4μm,2.0s						
GRPR				*e*S	**Sn**	**16 52 23.0**	**+3.0**
GRPR				A	A	16 52 31.0	
	comp=E,3μm,2.0s						
GRPR				A	A	16 52 31.0	
	comp=E,3μm,2.0s						
GRPR				AMS	AMS	16 53 42.0	
	comp=E,18μm,15.0s						
GRPR				AMS	AMS	16 53 42.0	
	comp=E,35μm,15.0s						
GRPR				AMS	AMS	16 53 42.0	
	comp=E,40μm,15.0s						
RUSJ	**Misakicho**	**7.54**	**240**	*e*PN	**Pn**	**16 51 06.2**	**+4.6**
RUSJ				*e*S	**Sn**	**16 52 31.4**	**+5.7**
GLVR	**Golovnino**	**7.61**	**237**	*e*PN	**Pn**	**16 51 05.1**	**+2.6**
GLVR				pmax	pmax		
	comp=Z,1μm,0.5s						
GLVR				pmax	pmax		
	comp=N,423nm,0.4s						
GLVR				pmax	pmax		
	comp=E,269nm,0.6s						
GLVR				pmax	pmax		
	comp=Z,7μm,2.4s						
GLVR	**Golovnino**	**7.61**	**237**	*e*P	**Pn**	**16 51 05.0**	**+2.6**
GLVR				AMB	AMB	16 51 11.0	
	comp=Z,1μm,0.5s						
GLVR				AMB	AMB	16 51 40.0	
	comp=Z,7μm,2.4s						
GLVR				*e*S	**Sn**	**16 52 29.0**	**+1.7**
GLVR				A	A	16 53 35.0	
	comp=Z,10μm,2.4s						
GLVR				A	A	16 53 35.0	
	comp=Z,20μm,2.4s						
JRA	**Rausu**	**7.71**	**240**	P	**Pn**	**16 51 07.5**	**+3.6**
NEM2	**Nemuro 2**	**7.73**	**234**	P	**Pn**	**16 51 04.7**	**+0.6**
NEM2				*e*S	**Sn**	**16 52 29.5**	**-0.8**
NMR	**Nemuro--Hokkai**	**7.73**	**234**	*e*PN	**Pn**	**16 51 04.8**	**+0.6**
NMR	**Nemuro--Hokkai**	**7.73**	**234**	*e*P	**Pn**	**16 51 04.0**	**-0.2**
NMR				*e*S	**Sn**	**16 52 29.0**	**-1.4**
TUMR	**Tumrok**	**7.93**	**25**	PN	**Pn**	**16 51 09.2**	**+2.2**
TUMR	**Tumrok**	**7.93**	**25**	*e*P	**Pn**	**16 51 09.2**	**+2.2**
YSS	**Yuzh-Sakhalins**	**7.94**	**265**	α*i*PN	Pn	16 51 12.4	+5.4
YSS				*e*S	**Sn**	**16 52 43.1**	**+7.6**
YSS				pmax	pmax		
	comp=Z,2μm,0.8s						
YSS				pmax	pmax		
	comp=E,8μm,5.3s						
YSS				pmax	pmax		
	comp=Z,8μm,5.3s						
YSS				pmax	pmax		
	comp=N,4μm,4.9s						
YSS				smax	smax		
	comp=N,6μm,5.3s						
YSS	**Yuzh-Sakhalins**	**7.94**	**265**	*e*P	Pn	16 51 12.1	+5.1
YSS				AMB	AMB	16 51 13.8	
	comp=N,2μm,0.8s						
YSS				AMB	AMB	16 51 16.0	
	comp=N,4μm,5.0s						
YSS				AMB	AMB	16 51 16.0	
	comp=N,8μm,5.0s						
YSS				AMB	AMB	16 51 16.0	
	comp=N,8μm,5.0s						
YSS				*e*S	**Sn**	**16 52 38.5**	**+3.0**
YSS				A	A	16 52 51.9	
	comp=N,6μm,5.0s						
YSS				A	A	16 52 51.9	
	comp=N,6μm,5.0s						
YSS				AMS	AMS	16 53 52.0	
	comp=N,24μm,18.0s						
YSS				AMS	AMS	16 53 52.0	
	comp=N,32μm,18.0s						
YSS	**Yuzh-Sakhalins**	**7.94**	**265**		**Pn**	**16 51 11.8**	**+4.7**
YSS	**Yuzh-Sakhalins**	**7.94**	**265**	P	Pn	16 51 12.0	+5.0
TYV	**Tymovskoe**	**8.05**	**294**	*e*PN	Pn	16 51 14.4	+5.9
TYV				*e*S	**Sn**	**16 52 43.4**	**+5.3**
TYV				pmax	pmax		
	comp=Z,11μm,2.5s						
TYV				pmax	pmax		
	comp=Z,749nm,1.4s						
TYV				smax	smax		
	comp=N,165nm,1.0s						
TYV				smax	smax		
	comp=E,166nm,1.0s						
TYV				smax	smax		
	comp=N,4μm,3.3s						
TYV				smax	smax		
	comp=E,4μm,3.3s						
TYV	**Tymovskoe**	**8.05**	**294**	*e*P	Pn	16 51 14.1	+5.6
TYV				AMB	AMB	16 51 16.0	
	comp=E,11μm,2.5s						
TYV				AMB	AMB	16 51 16.0	
	comp=E,749nm,1.4s						
TYV				*e*S	**Sn**	**16 52 41.1**	**+3.0**
TYV				A	A	16 52 44.0	
	comp=E,4μm,3.3s						
TYV				A	A	16 52 45.0	
	comp=E,165nm,0.8s						
TYV				A	A	16 52 45.0	
	comp=E,166nm,0.8s						
TYV				A	A	16 52 49.0	
	comp=E,4μm,3.2s						
TYV				A	A	16 52 49.0	
	comp=E,4μm,3.2s						
TYV				AMS	AMS	16 54 13.0	
	comp=E,42μm,20.0s						
TYV				AMS	AMS	16 54 13.0	
	comp=E,53μm,20.0s						
JNK	**Nakash**	**8.16**	**239**	P	**Pn**	**16 51 12.6**	**+2.6**
ESO	**Esso**	**8.16**	**18**	PN	**Pn**	**16 51 14.5**	**+4.4**
ESO	**Esso**	**8.16**	**18**	*e*P	**Pn**	**16 51 14.5**	**+4.4**
ESO	**Esso**	**8.16**	**18**	*e*P	**Pn**	**16 51 14.5**	**+4.4**
UGL	**Uglegorsk**	**8.18**	**281**	⇓*e*PN	Pn	16 51 15.9	+5.6
UGL				*e*S	**Sn**	**16 52 46.1**	**+4.8**
UGL				pmax	pmax		
	comp=Z,2μm,1.0s						
UGL				pmax	pmax		
	comp=Z,13μm,6.5s						
UGL				smax	smax		
	comp=N,10μm,9.0s						
UGL				smax	smax		
	comp=E,16μm,10.0s						
UGL				smax	smax		
	comp=N,824nm,1.4s						
UGL				smax	smax		
	comp=E,561nm,1.2s						
UGL				MLR	MLR		
	comp=Z,45μm,14.0s						
UGL				MLR	MLR		
	comp=N,49μm,16.0s						
UGL				MLR	MLR		
	comp=E,36μm,15.0s						
KMNR	**Kamenistaya**	**8.37**	**23**	PN	**Pn**	**16 51 16.9**	**+3.9**
KMNR	**Kamenistaya**	**8.37**	**23**	*e*P	**Pn**	**16 51 16.9**	**+3.9**
JTKR	**Abashiri--Toko**	**8.41**	**243**	P	**Pn**	**16 51 17.2**	**+3.8**
AKK	**Akkeshi**	**8.45**	**235**	*e*P	**Pn**	**16 51 15.2**	**+1.1**
AKK				*e*S	**Sn**	**16 52 49.8**	**+1.7**
JAK	**Akkeshi**	**8.54**	**236**	P	**Pn**	**16 51 15.6**	**+0.3**
JAK				*e*S	**Sn**	**16 52 49.1**	**-1.3**
KPT	**Kopyto**	**8.55**	**23**	PN	Pn	16 51 20.5	+5.0
KPT	**Kopyto**	**8.55**	**23**	*e*P	Pn	16 51 20.5	+5.0
KIRR	**Kirishev**	**8.57**	**23**	PN	**Pn**	**16 51 18.4**	**+2.6**
KIRR	**Kirishev**	**8.57**	**23**	*e*P	**Pn**	**16 51 18.4**	**+2.6**
BZWR	**Bezymyannyi-We**	**8.62**	**24**	PN	**Pn**	**16 51 18.7**	**+2.2**
BZWR	**Bezymyannyi-We**	**8.62**	**24**	*e*P	**Pn**	**16 51 18.7**	**+2.2**
BZGR	**Bezymyannyi-Gr**	**8.66**	**24**	PN	**Pn**	**16 51 19.6**	**+2.7**
BZGR	**Bezymyannyi-Gr**	**8.66**	**24**	*e*P	**Pn**	**16 51 19.6**	**+2.7**
JMP	**Maruseppu**	**8.72**	**245**	P	**Pn**	**16 51 22.2**	**+4.5**
JSE	**Soyaes**	**8.73**	**252**	P	Pn	16 51 23.6	+5.7
ZLN	**Zelenaya**	**8.75**	**25**	PN	**Pn**	**16 51 20.6**	**+2.3**
ZLN	**Zelenaya**	**8.75**	**25**	*e*P	**Pn**	**16 51 20.6**	**+2.3**
LGNR	**Loginova**	**8.78**	**24**	PN	**Pn**	**16 51 18.7**	**-0.1**
LGNR	**Loginova**	**8.78**	**24**	*e*P	**Pn**	**16 51 18.7**	**-0.1**
CIRR	**Tsirk**	**8.82**	**24**	PN	**Pn**	**16 51 22.3**	**+3.0**
CIRR	**Tsirk**	**8.82**	**24**	*e*P	**Pn**	**16 51 22.3**	**+3.0**
KRSR	**Krestovskiy**	**8.87**	**23**	PN	**Pn**	**16 51 21.7**	**+1.9**
KRSR	**Krestovskiy**	**8.87**	**23**	*e*P	**Pn**	**16 51 21.7**	**+1.9**
JAR	**Ashorobuto**	**8.88**	**240**	P	**Pn**	**16 51 22.8**	**+2.8**
OKH	**Okha**	**8.96**	**311**	*d i*PN	Pn	16 51 28.1	+7.1
OKH				*e*S	**Sn**	**16 53 06.1**	**+5.5**
OKH				pmax	pmax		
	comp=Z,5μm,7.4s						
OKH	**Okha**	**8.96**	**311**	*e*P	Pn	16 51 26.0	+5.0
OKH				AMB	AMB	16 51 32.2	
	comp=Z,5μm,7.0s						
OKH				*e*S	**Sn**	**16 53 04.4**	**+3.8**
OKH				AMS	AMS	16 55 14.4	
	comp=Z,17μm,20.0s						
OKH				AMS	AMS	16 55 14.4	
	comp=Z,47μm,20.0s						
OKH				AMS	AMS	16 55 14.4	
	comp=Z,36μm,20.0s						
KLY	**Klyuchi**	**8.97**	**23**	PN	**Pn**	**16 51 23.7**	**+2.6**
KLY	**Klyuchi**	**8.97**	**23**	*e*P	**Pn**	**16 51 23.7**	**+2.6**
JWK2	**Keihoku**	**9.02**	**256**	P	Pn	16 51 29.3	+7.4
JOB	**Onbets**	**9.09**	**238**	P	**Pn**	**16 51 24.4**	**+1.6**
JOB				*e*S	**Sn**	**16 53 03.8**	**+0.1**
JKA	**Kamikawa-asahi**	**9.12**	**248**	*e*P	Pn	16 51 28.7	+5.4
JKA	**Kamikawa-asahi**	**9.12**	**248**	Pn	Pn	16 51 28.7	+5.4
ASAJ	**Asahikawa**	**9.13**	**248**	Pn	Pn	16 51 28.8	+5.5
	comp=Z,24nm,0.3s,baz=80,slow=14,SNR=310						
ASAJ				LR	LR	16 54 39.7	
	comp=Z,44μm,21.6s,baz=59,slow=36						
ASAJ	**Asahikawa**	**9.13**	**248**	P	Pn	16 51 28.7	+5.4
ASAJ	**Asahikawa**	**9.13**	**248**	PN	Pn	16 51 28.7	+5.4
JKK2	**Kamakawa 2**	**9.16**	**246**	P	**Pn**	**16 51 28.4**	**+4.6**
BDR	**Baidarnaya**	**9.35**	**24**	PN	**Pn**	**16 51 28.2**	**+1.9**
BDR	**Baidarnaya**	**9.35**	**24**	*e*P	**Pn**	**16 51 28.2**	**+1.9**

SRKR	Sorokina	9.41	24	PN	Pn	16 51 28.3	+1.1
SRKR	Sorokina	9.41	24	*e*P	Pn	16 51 28.3	+1.1
SMKR	Semkarok	9.43	25	PN	Pn	16 51 28.6	+1.1
SMKR	Semkarok	9.43	25	*e*P	Pn	16 51 28.6	+1.1
JSS	Shosan	9.45	251	P	Pn	16 51 35.8	+8.1
JRBN	Rebuntou	9.53	258	P	Pn	16 51 34.7	+6.0
KBG	Krutoberegovo	9.53	29	PN	Pn	16 51 29.7	+0.9
KBG	Krutoberegovo	9.53	29	*e*P	Pn	16 51 29.7	+0.9
KBG	Krutoberegovo	9.53	29	*e*P	Pn	16 51 30.3	+1.5
KBG				*e*S	Sn	16 53 11.0	-3.4
KBTR	Krutoberegovo	9.53	30	PN	Pn	16 51 28.1	-0.7
KBTR	Krutoberegovo	9.53	30	*e*P	Pn	16 51 28.1	-0.7
JCH	Churui	9.54	238	P	Pn	16 51 29.9	+0.9
JCH				*e*S	Sn	16 53 12.9	-1.9
JFR	Furan	9.65	243	P	Pn	16 51 34.6	+4.1
JAB	Ashibetsu	9.68	245	P	Pn	16 51 35.8	+4.9
JHR	Hokuryu	9.86	248	P	Pn	16 51 39.9	+6.6
NKL	Nikolayevsk	9.97	305	*e*PN	Pn	16 51 38.0	+3.2
NKL				pmax	pmax		
	comp=E,3.0nm,1.0s						
NKL				pmax	pmax		
	comp=N,315nm,1.7s						
NKL				pmax	pmax		
	comp=Z,937nm,1.8s						
NKL				MLR	MLR		
	comp=N,14µm,16.0s						
NKL				MLR	MLR		
	comp=Z,21µm,17.0s						
NKL	Nikolayevsk	9.97	305	*e*P	Pn	16 51 38.0	+3.2
NKL				AMB	AMB	16 51 42.0	
	comp=Z,936nm,1.0s						
NKL				AMS	AMS	16 55 25.4	
	comp=Z,14µm,15.0s						
NKL				AMS	AMS	16 55 25.4	
	comp=Z,22µm,15.0s						
JBT2	Biratori 2	10.02	241	P	Pn	16 51 37.5	+2.0
BKI	Bering	10.04	42	PN	Pn	16 51 33.7	-2.0
BKI	Bering	10.04	42	*e*P	Pn	16 51 33.7	-2.0
BKI				*e*S	Sn	16 53 15.1	-12
BKI	Bering	10.04	42	*e*P	Pn	16 51 34.8	-0.9
JEM	Erimo	10.05	236	P	Pn	16 51 36.7	+0.8
ERM	Erimo	10.05	236	*ce*PN	Pn	16 51 36.8	+0.9
ERM				pmax	pmax		
	comp=Z,796nm,1.7s						
ERM	Erimo	10.05	236	⇑P	Pn	16 51 36.9	+0.9
ERM	Erimo	10.05	236	Pn	Pn	16 51 36.9	+1.0
ERM	Erimo	10.05	236	P	Pn	16 51 38.2	+2.3
JNBK	Urakawa-nobuka	10.10	238	P	Pn	16 51 36.3	-0.3
JEW	Eniwo	10.52	244	P	Pn	16 51 46.1	+3.7
JEW	Eniwo	10.52	244	⇓P	Pn	16 51 46.0	+3.7
JEW	Eniwo	10.52	244	Pn	Pn	16 51 45.1	+2.6
JSK	Shakotan	10.84	248	P	Pn	16 51 51.0	+4.3
JNB	Noboribetsu	10.98	243	P	Pn	16 51 50.4	+1.7
JKB	Kayabe	11.34	241	P	Pn	16 51 53.2	-0.4
JKB				*e*S	Sn	16 53 54.4	-4.5
JSH	Shimam	11.49	246	P	Pn	16 51 58.5	+2.9
MA2	Magadan	11.56	351	Pn	Pn	16 51 59.2	+2.6
	comp=Z,19nm,0.3s,baz=169,slow=12,SNR=42						
MA2				LR	LR	16 57 05.9	
	comp=Z,22µm,18.0s,baz=177,slow=41						
MA2	Magadan	11.56	351	*ce*PN	Pn	16 51 58.6	+2.0
MA2				pmax	pmax		
	comp=Z,1µm,2.5s						
MA2				MLR	MLR		
	comp=Z,25µm,17.0s						
MA2	Magadan	11.56	351	⇑P	Pn	16 51 59.0	+2.4
MA2	Magadan	11.56	351	*e*P	Pn	16 51 58.6	+2.0
MA2	Magadan	11.56	351		Pn	16 51 58.8	+2.2
JYM2	Yakumo 2	11.59	243	P	Pn	16 51 57.8	+0.7
JSR	Shiriuchi	11.92	241	P	Pn	16 52 01.1	-0.5
GRNR	Gornyy	11.93	289	⇓*i*PN	Pn	16 52 07.9	+6.3
GRNR				*e*S	Sn	16 54 25.3	+12
GRNR				pmax	pmax		
	comp=E,120nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,130nm,0.9s						
GRNR				smax	smax		
	comp=E,10.0nm,0.6s						
GRNR	Gornyy	11.93	289	*e*P	Pn	16 52 03.9	+2.3
GRNR				AMB	AMB	16 52 08.8	
	comp=E,130nm,0.9s						
JTM	Tenmabayashi	12.04	237	P	Pn	16 52 00.8	-2.3
JTM				*e*S	Sn	16 54 08.0	-7.9
JTM	Tenmabayashi	12.04	237	⇑P	Pn	16 52 01.4	-1.8
JTM	Tenmabayashi	12.04	237	Pn	Pn	16 52 01.1	-2.0
JANG	Nango	12.07	234	P	Pn	16 52 00.9	-2.8
JANG				*e*S	Sn	16 54 08.2	-8.7
JOSM	Okushiri--Mats	12.15	245	P	Pn	16 52 05.9	+1.2
JTH	Tanohata	12.20	232	P	Pn	16 52 02.1	-3.3
JTH				*e*S	Sn	16 54 10.0	-10
TEY	Ternei	12.60	262	⇑*e*PN	P	16 52 18.5	-3.0
TEY				*e*S	Sn	16 54 39.5	+10
TEY				pmax	pmax		
	comp=N,40nm,1.7s						
TEY				pmax	pmax		
	comp=E,150nm,1.7s						
TEY				pmax	pmax		
	comp=Z,130nm,1.7s						
TEY				pmax	pmax		
	comp=Z,5µm,4.4s						
TEY				pmax	pmax		
	comp=E,5µm,4.0s						
TEY				pmax	pmax		
	comp=N,2µm,4.1s						
TEY				smax	smax		
	comp=N,6µm,7.4s						
TEY				MLR	MLR		
	comp=Z,5µm,13.0s						
TEY	Ternei	12.60	262	*e*P	Pn	16 52 13.5	+2.7
TEY				AMB	AMB	16 52 19.4	
	comp=Z,130nm,1.0s						
TEY				AMB	AMB	16 52 21.4	
	comp=Z,2µm,4.0s						
TEY				AMB	AMB	16 52 21.4	
	comp=Z,5µm,4.0s						
TEY				AMB	AMB	16 52 21.4	
	comp=Z,5µm,4.0s						
TEY				AMS	AMS	16 57 04.0	
	comp=Z,5µm,13.0s						
TEY				AMS	AMS	16 57 04.0	
	comp=Z,5µm,13.0s						
OFUJ	Ofunato	12.94	230	P	Pn	16 52 12.8	-2.6
JRG	Rokugo	13.24	233	P	Pn	16 52 17.5	-2.1
JRG				*e*S	Sn	16 54 39.5	-6.0
SMY	Shemya	13.35	63	PN	Pn	16 52 19.4	-1.6
SMY	Shemya	13.35	63	⇑P	Pn	16 52 19.6	-1.4
SMY				⇑S	Sn	16 54 41.0	-6.9
SMY	Shemya	13.35	63	Pn	Pn	16 52 19.4	-1.6
JIO	Ouri	13.57	229	P	Pn	16 52 21.1	-3.0
JIO				*e*S	Sn	16 54 41.6	-12
JMM	Marumori	14.31	229	⇑P	Pn	16 52 30.9	-3.2
JMM	Marumori	14.31	229	Pn	Pn	16 52 30.4	-3.7
JYA	Atsumi	14.32	233	P	Pn	16 52 32.2	-2.1
JYA				*e*S	Sn	16 55 07.3	-4.4
EKMR	Ekimchan	14.39	298	*e*rx	rx	16 52 09.1	
SEY	Seymchan	14.78	356	Pn	Pn	16 52 41.7	+1.4
	comp=Z,3.1nm,0.3s,baz=185,slow=12,SNR=31						
KLR	Kul'dur	14.94	282	Pn	P	16 52 48.4	+1.0
	comp=Z,2.7nm,0.3s,baz=83,slow=12,SNR=46						
KLR	Kul'dur	14.94	282	*ce*P	P	16 52 46.9	-0.5
KLR				pmax	pmax		
	comp=Z,493nm,1.4s						
KLR				MLR	MLR		
	comp=Z,27µm,16.0s						
KLR	Kul'dur	14.94	282	*e*P	P	16 52 46.4	-1.0
JFY	Yanaizu	15.21	230	P	Pn	16 52 44.4	-1.8
JSD	Sado	15.51	235	⇑P	Pn	16 52 47.3	-2.7
JSD	Sado	15.51	235	Pn	Pn	16 52 47.4	-2.7
JSD				IAmb	IAmb	16 52 57.5	
	comp=Z,778nm,0.9s						
JYT	Yasato	15.89	226	⇑P	Pn	16 52 53.0	-1.9
JYT	Yasato	15.89	226	Pn	Pn	16 52 51.8	-3.0
USA0B	Ussuriysk Arra	15.97	264	P	P	16 52 57.8	-1.1
USA0B				pmax	pmax		
	comp=Z,214nm,0.7s						
USA0B	Ussuriysk Arra	15.97	264	P	P	16 52 57.8	-1.1
USRK	Ussuriysk Ar.	15.97	264	Pn	P	16 52 57.8	-1.2
	baz=62,slow=14,SNR=225						
USRK				LR	LR	16 58 45.2	
	comp=Z,10µm,20.9s,baz=69,slow=36						
AMKA	Amchitka	16.39	70	Pn	Pn	16 53 00.4	-0.8
VLA	Vladivostok	16.48	260	*i* P	P	16 53 03.9	-0.7
VLA				MLR	MLR		
	comp=Z,8µm,15.0s						
VLA	Vladivostok	16.48	260	*e*P	P	16 53 03.9	-0.7
MAJO	Matsushiro	16.64	231	*di*P	Pn	16 53 03.2	-1.3
MAJO	Matsushiro	16.64	231	⇓P	Pn	16 53 03.6	-0.9
MAJO	Matsushiro	16.64	231		Pn	16 53 03.0	-1.5
MAJO	Matsushiro	16.64	231	P	Pn	16 53 03.9	-0.6
MAT	Matsushiro	16.64	231	P	Pn	16 53 03.6	-0.9
MAT				S	Sn	16 56 07.4	-0.8
MJAR	Matsushiro Arr	16.64	231	Pn	Pn	16 53 03.7	-0.8
	comp=Z,1.0nm,0.3s,baz=30,slow=13,SNR=173						
MJAR				LR	LR	16 59 37.9	
	comp=Z,6µm,21.9s,baz=55,slow=38						
MJAR	Matsushiro Arr	16.64	231	Pn	Pn	16 53 03.2	-1.3
MJB9	Matsu-Tunnel	16.64	231	Pn	Pn	16 53 01.8	-2.7
MSHR	Mys Shultsa	17.20	259	*ce*P	P	16 53 12.8	+0.2
MSHR				pmax	pmax		
	comp=Z,223nm,1.0s						
MDJ	Mudanjiang	17.42	267	P	P	16 53 17.3	+2.4
MDJ				pP	pP	16 53 23.8	-0.5
MDJ				sP	sP	16 53 28.6	-0.6
MDJ				S	Sn	16 56 29.4	+2.6
MDJ				sS	S	16 56 36.9	+3.1
MDJ				pmax	pmax		
	comp=Z,130nm,1.0s						
MDJ				LR	LR		
	comp=Z,9µm,17.5s						
MDJ				LR	LR		
	comp=Z,9µm,23.3s						
MDJ				LR	LR		
	comp=Z,20µm,21.6s						
JGF	Kuroka	17.81	231	⇑P	Pn	16 53 18.5	-0.5
JGF	Kuroka	17.81	231	P	Pn	16 53 17.4	-1.5
ZEA	Zeya	17.87	298	*e*P	P	16 53 23.2	+3.4
ZEA				*e*S	Sn	16 56 32.3	-5.2
ZEA				pmax	pmax		
	comp=E,260nm,1.6s						
ZEA				pmax	pmax		
	comp=N,60nm,2.4s						
ZEA				pmax	pmax		
	comp=Z,280nm,2.1s						
ZEA				pmax	pmax		
	comp=E,7µm,4.3s						
ZEA				pmax	pmax		
	comp=N,2µm,5.6s						
ZEA				pmax	pmax		
	comp=Z,8µm,4.6s						
ZEA				smax	smax		
	comp=N,2µm,4.7s						
ZEA	Zeya	17.87	298	*e*P	P	16 53 23.2	+3.4
JSG	Sagara	18.11	228		P	16 53 23.4	+0.7
JSG				IAmb	IAmb	16 53 28.6	
	comp=Z,924nm,0.7s						
INU	Inuyama	18.18	231	⇑P	P	16 53 22.6	-0.8
INU	Inuyama	18.18	231		P	16 53 22.3	-1.0
INU	Inuyama	18.18	231	P	Pn	16 53 24.0	+0.6
KIWB	Kanaga Island	18.61	68	P	P	16 53 25.6	-2.4
JHJ2	Mitsune	18.64	221	⇑P	Pn	16 53 30.5	+1.5
JHJ2	Mitsune	18.64	221	P	Pn	16 53 30.4	+1.3
JHJ2				IAmb	IAmb	16 53 33.2	
	comp=Z,879nm,0.9s						
JHJ2	Mitsune	18.64	221	P	Pn	16 53 31.3	+2.3
JHJ	Hachijo jima 2	18.65	221	P	Pn	16 53 31.5	+2.3
	comp=Z,16nm,0.3s,baz=100,slow=23,SNR=15						
JHJ				LR	LR	17 03 17.8	
	comp=Z,2µm,18.9s,baz=26,slow=45						
ADK	Adak	18.90	68	P	P	16 53 29.0	-2.2
ADK				pmax	pmax		
	comp=Z,499nm,1.3s						
ADK	Adak	18.90	68	⇑P	P	16 53 30.7	-0.4
ADK	Adak	18.90	68		P	16 53 29.0	-2.2
JWT	Wachi	19.09	234	⇑P	Pn	16 53 34.0	-0.4
JWT	Wachi	19.09	234	P	P	16 53 33.1	-0.3
YAK	Yakutsk	19.57	324	P	P	16 53 39.1	+0.7
	comp=Z,0.9nm,0.3s,baz=145,slow=0.9,SNR=62						
YAK				LR	LR	17 01 04.5	
	comp=Z,13µm,21.0s,baz=132,slow=36						
YAK	Yakutsk	19.57	324	*e*P	Pn	16 53 39.8	-0.2
YAK				pmax	pmax		
	comp=Z,795nm,1.3s						
YAK				pmax	pmax		
	comp=N,249nm,1.4s						
YAK				pmax	pmax		
	comp=E,521nm,1.4s						
YAK	Yakutsk	19.57	324	⇑P	P	16 53 39.0	+0.7
YAK	Yakutsk	19.57	324	*e*P	Pn	16 53 39.8	-0.2
YAK	Yakutsk	19.57	324	P	P	16 53 38.6	+0.2
YAK				IAmb	IAmb	16 53 60.0	
	comp=Z,1µm,1.0s						
ATKA	Atka Island	20.43	67	⇑P	P	16 53 47.7	-0.1
CN2	Changchun	20.49	268	*e*P	P	16 53 47.1	-1.5
CN2				*e*S	S	16 57 23.1	-12
CN2				pmax	pmax		
	comp=Z,390nm,0.7s						
CN2				pmax	pmax		
	comp=Z,4µm,10.0s						
CN2				LR	LR		
	comp=Z,7µm,19.0s						
CN2				LR	LR		
	comp=Z,11µm,19.0s						
CN2				LR	LR		
	comp=Z,11µm,19.0s						
JHS	Saijyo	20.57	238	⇑P	Pn	16 53 51.0	-1.0
JHS	Saijyo	20.57	238	P	Pn	16 53 50.8	-1.1
BILL	Bilibino	20.77	13	*ce*P	P	16 53 49.7	-1.7
BILL				pmax	pmax		
	comp=Z,128nm,1.0s						
BILL				MLR	MLR		
	comp=Z,9µm,17.0s						
BILL	Bilibino	20.77	13	P	P	16 53 50.0	-1.4
JMN	Monobe	21.08	234	⇑P	P	16 53 56.5	+1.4
JMN	Monobe	21.08	234	P	P	16 53 54.6	-0.5
KSSKC	Sokcho	21.18	252	P	P	16 53 59.6	+3.7
	SNR=27						
KSJMJ	Jumunjin	21.27	250	P	P	16 53 59.0	+2.0
	SNR=47						
OKEB	Okgye-meyeon	21.29	250	P	P	16 53 59.0	+1.7
	SNR=24						
SEHB	SEOHWA	21.36	252	P	P	16 54 02.8	+4.8
	SNR=18						
UJN	ULJIN	21.41	248	P	P	16 54 00.4	+1.9
	SNR=27						
KSDGY	Daegwallycong	21.44	250	P	P	16 54 01.0	+2.1
	SNR=10						
KSULJ	Uljin	21.60	247	P	P	16 54 03.0	+2.4
	SNR=33						
KSULJ	Uljin	21.60	247	P	P	16 54 03.0	+2.4
	SNR=21						
KSIJA	INJE	21.62	251	P	P	16 54 04.1	+3.4
	SNR=61						
KSIJA	INJE	21.62	251	P	P	16 54 02.2	+1.5
	SNR=6.3						
KSIJA	INJE	21.62	251	P	P	16 54 03.6	+2.9
	SNR=19						
KSTBA	Taebaek	21.62	248	P	P	16 54 02.7	+1.9
	SNR=47						
KSGWL	Sabuk	21.64	249	P	P	16 54 03.6	+2.7
	SNR=21						
YODB	Yeongdeok	21.71	247	P	P	16 54 05.0	+3.3
	SNR=8.0						
CHYB	Chungyang	21.75	248	P	P	16 54 04.0	+1.8
	SNR=45						
HWCB	Hwacheon	21.76	253	P	P	16 54 04.0	+1.7
	SNR=55						
HWCB	Hwacheon	21.76	253	P	P	16 54 08.0	+5.7
	SNR=6.6						
KSYOW	Yeongwol	21.89	249	P	P	16 54 04.9	+1.2
	SNR=53						
KSCHC	Chuncheon	21.93	251	P	P	16 54 06.0	+1.9
	SNR=65						
KSCHC	Chuncheon	21.93	251	P	P	16 54 08.1	+4.0
	SNR=10						
KSCWO	Cheorwon	21.94	252	P	P	16 54 07.7	+3.5
	SNR=17						
KSCWO	Cheorwon	21.94	252	P	P	16 54 05.8	+1.6
	SNR=81						
KSPHA	Pohang	21.95	246	P	P	16 54 06.0	+1.7
	SNR=37						
KSPHA	Pohang	21.95	246	P	P	16 54 07.0	+2.6
	SNR=6.4						
KSWJU	Wonju	22.00	250	P	P	16 54 07.0	+2.1
	SNR=71						
KSWJU	Wonju	22.00	250	P	P	16 54 08.1	+3.2
	SNR=15						
YOJB	Youngju	22.04	249	P	P	16 54 08.1	+2.7
	SNR=26						
KSRS	Korea Array	22.06	251	P	P	16 54 06.7	+1.3
	comp=Z,329nm,0.9s,baz=51,slow=9.1,SNR=176						
KSRS				PcP	PcP	16 58 02.6	+0.7
	comp=Z,32nm,1.1s,baz=17,slow=0.8,SNR=7.4						
KSRS				LR	LR	17 02 19.8	
	comp=Z,14µm,18.6s,baz=49,slow=36						
KS19	Wonju Array Si	22.06	251	P	P	16 54 03.9	-1.7
JECH	Jecheon	22.07	250	P	P	16 54 07.0	+1.5
	SNR=56						
JECH	Jecheon	22.07	250	P	P	16 54 09.0	+3.4
	SNR=5.3						
KSADO	Andong	22.07	247	P	P	16 54 10.0	+4.4
	SNR=16						
KSADO	Andong	22.07	247	P	P	16 54 08.0	+2.5
	SNR=55						
KSAR	Wonju Array Be	22.09	251	P	P	16 54 06.3	+0.6
KSAR	Wonju Array Be	22.09	251	P	P	16 54 06.3	+0.6
GAPB	Gapyeong	22.09	252	P	P	16 54 08.0	+2.2
	SNR=40						
GAPB	Gapyeong	22.09	252	P	P	16 54 10.0	+4.2
	SNR=6.6						
EUSB	Uiseong	22.27	247	P	P	16 54 10.0	+2.3
	SNR=109						
EUSB	Uiseong	22.27	247	P	P	16 54 11.0	+3.3
	SNR=13						
KSEUS	ULSEONG	22.27	247	P	P	16 54 09.7	+1.9
	SNR=87						
KSEUS	ULSEONG	22.27	247	P	P	16 54 11.0	+3.2
	SNR=24						
KSDDC	Dongducheon	22.34	253	P	P	16 54 12.4	+4.0
	SNR=5.3						
KSDDC	Dongducheon	22.34	253	P	P	16 54 09.9	+1.4
	SNR=21						
YOCB	Yeongcheon	22.35	246	P	P	16 54 11.0	+2.4
	SNR=24						
KSYOC	YEONGCHEON	22.35	246	P	P	16 54 09.9	+1.3
	SNR=21						
KSCHJ	Chungju	22.38	249	P	P	16 54 12.0	+3.1
	SNR=51						
KSCHJ	Chungju	22.38	249	P	P	16 54 14.0	+5.0
	SNR=7.2						
KSUSN	Ulsan	22.43	245	P	P	16 54 09.9	+0.5
	SNR=29						
KSUSN	Ulsan	22.43	245	P	P	16 54 11.6	+2.1
	SNR=8.6						
KSMGY	Mungyeong	22.46	249	P	P	16 54 13.4	+3.6
	SNR=7.4						
KSMGY	Mungyeong	22.46	249	P	P	16 54 11.7	+1.9
	SNR=86						
KSICN	Icheon	22.48	251	P	P	16 54 13.1	+3.1
	SNR=25						
KSICN	Icheon	22.48	251	P	P	16 54 11.2	+1.3
	SNR=75						
KSDAG	Daegu	22.52	246	P	P	16 54 12.2	+1.8
	SNR=24						
KSMUS	Musan	22.54	253	P	P	16 54 12.6	+2.1
	SNR=52						
KSSAJ	Sangju	22.56	248	P	P	16 54 12.9	+2.1
	SNR=58						
SNY	Shenyang	22.57	265	⇑P	P	16 54 11.8	+0.9
SNY				S	S	16 58 14.9	-0.5
SNY				pmax	pmax		
	comp=Z,66nm,1.0s						
SNY				LR	LR		
	comp=Z,11µm,16.6s						
SNY				LR	LR		
	comp=Z,9µm,18.7s						
SNY				LR	LR		
	comp=Z,14µm,24.4s						
KSSOD	Songwoldong	22.59	252	P	P	16 54 13.6	+2.5
	SNR=27						
KSSEO	Seoul	22.67	252	P	P	16 54 15.0	+3.0
	SNR=50						
KSSEO	Seoul	22.67	252	P	P	16 54 14.6	+2.6
	SNR=50						
KSSEO	Seoul	22.67	252	P	P	16 54 16.0	+4.0
	SNR=7.4						
KSBON	Boeun	22.73	249	P	P	16 54 15.6	+3.0
	SNR=100						
HIA	Hailar	22.73	286	P	P	16 54 11.9	-0.7
HIA				pmax	pmax		
	comp=Z,151nm,1.0s						
HIA				MLR	MLR		
	comp=Z,22µm,20.0s						
HIA	Hailar	22.73	286	P	P	16 54 11.8	-0.7
HIA	Hailar	22.73	286	IAMs_20	IAMs_20	17 03 24.5	
	comp=Z,22µm,20.0s						
KSBUS	Busan	22.74	245	P	P	16 54 15.1	+2.3
	SNR=43						
KSSWO	Suwon	22.77	251	P	P	16 54 15.7	+2.7
	SNR=65						
KSCPR	CHUPUNGNYEONG	22.80	248	P	P	16 54 15.1	+1.7
	SNR=64						
MIYA	Miryang-si	22.80	246	P	P	16 54 17.0	+3.6
	SNR=11						
KSGIC	Gimchen	22.81	248	P	P	16 54 16.3	+2.8
	SNR=5.4						
OKCB	Cheongsan-myeo	22.83	248	P	P	16 54 18.0	+4.4
	SNR=6.4						
OKCB	Cheongsan-myeo	22.83	248	P	P	16 54 17.0	+3.3
	SNR=11						
KSGAH	Ganghwa	22.84	253	P	P	16 54 18.1	+4.3
	SNR=5.2						
KSGAH	Ganghwa	22.84	253	P	P	16 54 15.1	+1.3
	SNR=11						
INCN	Inchon	22.86	252	P	P	16 54 13.2	-0.8
INCN				pmax	pmax		
	comp=Z,559nm,1.2s						
INCN				MLR	MLR		
	comp=Z,12µm,20.0s						
INCN	Inchon	22.86	252	P	P	16 54 15.5	+1.5
INCN				P	P	16 54 15.5	+1.5
INCN				P	P	16 54 15.5	+1.5
INCN	Inchon	22.86	252	⇑P	P	16 54 15.2	+1.2
INCN	Inchon	22.86	252	*e*P	P	16 54 13.2	-0.8
INCN	Inchon	22.86	252	P	P	16 54 13.2	-0.8
INCN				IAmb	IAmb	16 54 17.9	
	comp=Z,559nm,1.1s						
INCN	Inchon	22.86	252	IAMs_20	IAMs_20	17 02 22.6	
	comp=Z,12µm,20.0s						
INCN	Inchon	22.86	252	P	P	16 54 16.5	+2.5
PYTK	Pyeongtaek	22.86	251	P	P	16 54 17.8	+3.8
	SNR=35						
KSCEA	Cheonan	22.86	250	P	P	16 54 17.4	+3.3
	SNR=16						
KSCEA	Cheonan	22.86	250	P	P	16 54 16.3	+2.3
	SNR=88						
KSBSA	Busan_acc	22.88	244	P	P	16 54 17.9	+3.7
	SNR=12						
KSBSA	Busan_acc	22.88	244	P	P	16 54 17.8	+3.7
	SNR=9.9						
SHHB	Siheung-si	22.89	252	P	P	16 54 17.0	+2.7
	SNR=40						
HAWB	Hwaseong-si	23.01	251	P	P	16 54 18.0	+2.5
	SNR=13						
SPIA	Saint Paul Isl	23.01	54	P	P	16 54 15.7	+0.3
SPIA				IAmb	IAmb	16 54 28.8	
	comp=Z,826nm,1.3s						
JTU	Tsushima	23.06	243	⇓P	P	16 54 18.4	+2.3
JTU	Tsushima	23.06	243	P	P	16 54 16.7	+0.7
TJN	Taejon	23.07	249	*i* P	P	16 54 15.9	-0.3
TJN	Taejon	23.07	249	P	P	16 54 17.9	+1.7
KSMAS	Masan	23.12	245	P	P	16 54 21.5	+4.9
	SNR=7.8						
KSMAS	Masan	23.12	245	P	P	16 54 17.8	+1.2
	SNR=21						
JCJ	Chichijima	23.13	209	P	P	16 54 18.0	+1.2
	comp=Z,253nm,0.9s,baz=11,slow=6.6,SNR=12						
JCJ				LR	LR	17 02 24.1	
	comp=Z,2µm,21.8s,baz=3.5,slow=34						
JCJ	Chichijima	23.13	209	P	P	16 54 16.6	-0.2
JCJ				IAmb	IAmb	16 54 20.0	
	comp=Z,600nm,1.1s						
JCJ	Chichijima	23.13	209	P	P	16 54 18.5	+1.7
KOJ2	Gongju-si	23.15	250	P	P	16 54 21.0	+4.0
	SNR=14						
KOJ2	Gongju-si	23.15	250	P	P	16 54 19.0	+2.0
	SNR=52						
JNU	Nakatsue	23.20	238	⇑P	P	16 54 18.4	+0.9
JNU	Nakatsue	23.20	238	P	P	16 54 17.0	-0.5
JNU	Nakatsue	23.20	238	P	P	16 54 20.2	+2.7
KSKCH	Geochang	23.22	247	P	P	16 54 18.9	+1.2
	SNR=26						
KSKCH	Geochang	23.22	247	P	P	16 54 21.6	+4.0
	SNR=6.5						
KUJA	Jangpyeong	23.29	245	P	P	16 54 22.0	+3.7
	SNR=12						
KUJA	Jangpyeong	23.29	245	P	P	16 54 23.0	+4.7
	SNR=6.3						

KSDEI	Deokjeokdo SNR=16	23.33	252	P	P	16 54 22.1	+3.4
YPDB	Yeonpyeongdo SNR=5.7	23.37	254	P	P	16 54 24.0	+4.9
HAMB	Hamyang SNR=5.4	23.40	247	P	P	16 54 26.0	+6.6
HAMB	Hamyang SNR=22	23.40	247	P	P	16 54 22.0	+2.6
KSJEO	Jeonju SNR=17	23.40	248	P	P	16 54 21.6	+2.3
BUYB	Buyeo SNR=28	23.42	249	P	P	16 54 22.0	+2.4
PORA	Boryeong SNR=16	23.61	250	P	P	16 54 24.0	+2.6
YKDB	Yokjido SNR=26	23.67	245	P	P	16 54 25.0	+3.0
NAWB	Namwon SNR=22	23.67	247	P	P	16 54 25.0	+3.0
KSNAH	Namhae SNR=5.8	23.75	245	P	P	16 54 25.5	+2.8
GWYB	Gwangyang SNR=19	23.80	246	P	P	16 54 26.0	+2.8
SUCA	Sunchang SNR=25	23.86	247	P	P	16 54 26.0	+2.2
SUCA	Sunchang SNR=7.5	23.86	247	P	P	16 54 27.0	+3.2
KSJEU	Jeongeup SNR=19	23.91	248	P	P	16 54 26.0	+1.7
OYDB	Oeyeondo SNR=11	23.98	250	P	P	16 54 27.0	+2.2
SMKB	Mukjeong-gil SNR=8.1	24.02	249	P	P	16 54 27.0	+1.8
MNYD	Munyeodo SNR=14	24.03	249	P	P	16 54 27.0	+1.7
YNDB	Yeoundo SNR=5.7	24.08	245	P	P	16 54 30.0	+4.2
KSKWJ	Gwangju SNR=15	24.09	247	P	P	16 54 27.6	+1.7
KSKWJ	Gwangju SNR=15	24.09	247	P	P	16 54 28.0	+2.1
GAMB	Gambell baz=246,SNR=41	24.14	37	P	P	16 54 26.6	+0.6
GAMB	baz=246			S	S	16 58 41.1	+0.2
GAMB	Gambell	24.14	37	P	P	16 54 25.1	-1.0
GOCB	Gochang-gun SNR=21	24.21	248	P	P	16 54 29.0	+2.0
JSU	Suzuyama	24.65	236	⇑P	P	16 54 32.2	+1.2
JSU	Suzuyama	24.65	236	P	P	16 54 31.9	+0.8
JSU	comp=Z,596nm,1.0s			IAmb	IAmb	16 54 35.6	
WAN2	Wando-Q330s SNR=30	24.78	246	P	P	16 54 34.1	+1.9
DL2	Dalian	25.30	261	P	P	16 54 35.8	-1.1
DL2				S	S	16 58 59.1	-0.9
DL2	comp=Z,280nm,1.1s			pmax	pmax		
DL2	comp=Z,2µm,4.7s			pmax	pmax		
DL2	comp=Z,4µm,14.5s			LR	LR		
DL2	comp=Z,6µm,24.7s			LR	LR		
DL2	comp=Z,9µm,26.9s			LR	LR		
BOD	Bodaibo	25.73	307	eP	P	16 54 40.3	-0.2
BOD	comp=Z,395nm,2.1s			pmax	pmax		
CIT	Chita	26.18	294	eP	P	16 54 43.5	-1.3
CIT				e		16 55 07.9	
CIT				e		16 55 47.3	
CIT	Chita	26.18	294	eP	P	16 54 43.5	-1.3
TIK	Tiksi	26.29	342	eP	P	16 54 43.7	-1.8
TIXI	Tiksi comp=Z,10nm,0.5s,baz=156,slow=8.9,SNR=17	26.30	342	P	P	16 54 42.9	-2.7
TIXI	comp=Z,28nm,1.0s,baz=276,slow=10,SNR=2.6			PcP	PcP	16 58 10.9	+0.3
TIXI	comp=Z,14µm,19.1s,baz=152,slow=39			LR	LR	17 06 17.9	
TIXI	Tiksi	26.30	342	ceP	P	16 54 43.7	-1.9
TIXI	comp=Z,59nm,1.5s			pmax	pmax		
TIXI	comp=Z,13µm,19.0s			MLR	MLR		
TIXI	Tiksi	26.30	342	⇑P	P	16 54 43.3	-2.3
TIXI	Tiksi	26.30	342	P	P	16 54 42.6	-3.0
TIXI	Tiksi comp=Z,13µm,20.0s	26.30	342	IAMs_20	IAMs_20	17 05 57.1	
TNA	Tin City baz=247,SNR=9.4	26.34	35	P	P	16 54 46.8	+0.8
TNA	Tin City	26.34	35	⇑P	P	16 54 47.2	+1.2
TNA	Tin City	26.34	35	P	P	16 54 46.7	+0.7
ANM	Nome	27.01	38	P	P	16 54 51.3	-0.7
ANM	comp=Z,365nm,1.2s			pmax	pmax		
ANM	comp=Z,4µm,21.0s			MLR	MLR		
ANM	Nome baz=252,SNR=20	27.01	38	P	P	16 54 53.1	+1.0
ANM	baz=252			S	S	16 59 28.9	+2.3
ANM	Nome	27.01	38	P	P	16 54 51.3	-0.7
ANM	comp=Z,365nm,1.2s			IAmb	IAmb	16 54 54.9	
BJI	Beijing	28.35	268	P	P	16 55 04.9	+0.6
BJI				pP	pP	16 55 14.1	-0.6
BJI				sP	sP	16 55 18.4	-0.9
BJI				S	S	16 59 46.4	-1.6
BJI	comp=Z,33nm,1.1s			pmax	pmax		
BJI	comp=Z,2µm,10.0s			pmax	pmax		
BJI	comp=Z,3µm,18.9s			LR	LR		
BJI	comp=Z,9µm,16.8s			LR	LR		
BJI	comp=Z,13µm,17.5s			LR	LR		
BJT	Baijiatuau	28.37	268	P	P	16 55 03.8	-0.6
BJT	comp=Z,52nm,1.3s			pmax	pmax		
BJT	comp=Z,9µm,18.0s			MLR	MLR		
BJT	Baijiatuau	28.37	268	P	P	16 55 03.8	-0.6
BJT	Baijiatuau comp=Z,9µm,18.0s	28.37	268	IAMs_20	IAMs_20	17 07 52.5	
CNBA	Chernabura Isl	28.97	59	P	P	16 55 08.7	-0.9
CNBA	comp=Z,12µm,22.0s			IAMs_20	IAMs_20	17 06 44.7	
RDOG	Red Dog Mine baz=249,SNR=71	29.12	32	P	P	16 55 17.0	+6.2
RDOG	baz=249			S	S	17 00 05.8	+6.1
RDOG	Red Dog Mine	29.12	32	P	P	16 55 11.5	+0.6
RDOG	comp=Z,598nm,1.2s			IAmb	IAmb	16 55 35.0	
JOW	Kunigami comp=Z,93nm,0.9s,baz=18,slow=9.1,SNR=23	29.48	233	P	P	16 55 15.4	+1.0
JOW	comp=Z,24nm,0.5s,baz=162,slow=4.7,SNR=7.1			PcP	PcP	16 58 20.2	+1.1
JOW	comp=Z,4µm,21.9s,baz=19,slow=38			LR	LR	17 07 41.0	
JOW	Kunigami	29.48	233	⇑P	P	16 55 14.9	+0.6
JOW	Kunigami	29.48	233	P	P	16 55 14.4	+0.1
JOW	Kunigami	29.48	233	P	P	16 55 15.7	+1.3
MIDW	Midway comp=Z,11µm,20.0s	29.62	122	IAMs_20	IAMs_20	17 03 38.8	
TIA	Tai'an	29.77	260	⇑P	P	16 55 17.0	0.0
TIA				S	S	17 00 08.4	-2.2
TIA	comp=Z,69nm,1.0s			pmax	pmax		
TIA	comp=Z,940nm,6.3s			pmax	pmax		
TIA	comp=Z,4µm,19.6s			LR	LR		
TIA	comp=Z,6µm,17.3s			LR	LR		
TIA	comp=Z,6µm,21.1s			LR	LR		
H11N2	WAKE ISLAND Hy baz=344,slow=76,SNR=4665	30.19	156	T	T	17 27 09.2	
H11N1	WAKE ISLAND Hy baz=344,slow=76,SNR=7138	30.20	156	T	T	17 26 57.4	
H11N3	WAKE ISLAND Hy baz=344,slow=76,SNR=4034	30.20	156	T	T	17 27 10.4	
SSE	Sheshan	30.42	248	P	P	16 55 22.3	-0.4
SSE				S	S	17 00 22.4	+1.8
SSE	comp=Z,18nm,0.7s			pmax	pmax		
SSE	comp=Z,870nm,4.2s			pmax	pmax		
SSE	comp=Z,1µm,17.8s			LR	LR		
SSE	comp=Z,3µm,16.5s			LR	LR		
WAKE	Wake Island comp=Z,10µm,21.0s	30.55	157	IAMs_20	IAMs_20	17 05 08.6	
GCSA	Galena City Sc baz=261,SNR=11	30.61	39	P	P	16 55 24.1	+0.1
TTA	Tatalina	30.77	43	P	P	16 55 26.0	+0.5
TTA	comp=Z,305nm,1.2s			pmax	pmax		
TTA	Tatalina baz=265,SNR=104	30.77	43	P	P	16 55 26.2	+0.7
TTA	Tatalina	30.77	43	⇑P	P	16 55 26.1	+0.5
TTA	Tatalina	30.77	43	P	P	16 55 26.0	+0.5
TTA	comp=Z,305nm,1.2s			IAmb	IAmb	16 55 27.9	
SVW2	Sparrevohn	30.86	47	P	P	16 55 26.9	+0.5
O18K	Koktuh Hills baz=271	31.04	49	P	P	16 55 28.7	+0.8
O18K	baz=271			S	S	17 00 35.4	+5.4
O18K	Koktuh Hills	31.04	49	P	P	16 55 28.7	+0.8
P18K	Big Mountain, baz=272,SNR=12	31.04	50	P	P	16 55 28.4	+0.4
P18K	baz=272			S	S	17 00 30.9	+0.9
P18K	Big Mountain,	31.04	50	P	P	16 55 28.1	+0.1
HHC	Hu-ho-hao-te	31.04	272	eP	P	16 55 28.9	+0.6
HHC				sP	pwP	16 55 40.4	-0.7
HHC				S	S	17 00 25.3	-5.3
HHC	comp=Z,74nm,1.5s			pmax	pmax		
HHC	comp=Z,450nm,5.7s			pmax	pmax		
HHC	comp=Z,8µm,16.7s			LR	LR		
HHC	comp=Z,10µm,18.0s			LR	LR		
HHC	comp=Z,13µm,24.7s			LR	LR		
CHIR	Chirikof Islan baz=277,SNR=7.2	31.11	57	P	P	16 55 28.1	-0.4
CHIR	Chirikof Islan	31.11	57	P	P	16 55 27.7	-0.8
CHIR	comp=Z,273nm,1.0s			IAmb	IAmb	16 55 40.3	
CHIR	comp=Z,10µm,22.0s			IAMs_20	IAMs_20	17 08 00.0	
ULN	Ulaanbaatar	31.23	287	i P	P	16 55 29.0	-0.9
ULN	comp=Z,77nm,3.3s			pmax	pmax		
ULN	comp=Z,19µm,18.0s			MLR	MLR		
ULN	Ulaanbaatar	31.23	287	eP	P	16 55 29.0	-0.9
ULN	Ulaanbaatar	31.23	287	P	P	16 55 27.7	-2.2
NJ2	Nanjing	31.24	252	⇑iP	P	16 55 30.4	+0.5
NJ2				sP	sP	16 55 44.0	-0.9
NJ2				PcP	PcP	16 58 24.4	+0.8
NJ2				S	S	17 00 34.0	+0.5
NJ2	comp=Z,90nm,1.1s			pmax	pmax		
NJ2	comp=Z,970nm,3.5s			pmax	pmax		
NJ2	comp=Z,9µm,18.3s			LR	LR		
NJ2	comp=Z,7µm,16.2s			LR	LR		
NJ2	comp=Z,11µm,17.8s			LR	LR		
H11S1	WAKE ISLAND Hy baz=345,slow=76	31.30	157	T	T	17 28 33.8	
H11S3	WAKE ISLAND Hy baz=345,slow=76	31.31	157	T	T	17 28 25.7	
H11S2	WAKE ISLAND Hy baz=345,slow=76	31.32	157	T	T	17 28 26.4	
N19K	Bonanza Creek baz=270	31.40	47	P	P	16 55 32.1	+0.9
N19K	baz=270			S	S	17 00 38.1	+2.5
N19K	Bonanza Creek	31.40	47	P	P	16 55 31.7	+0.6
M19K	Big River Lodg baz=268	31.46	45	P	P	16 55 32.6	+1.0
M19K	Big River Lodg	31.46	45	P	P	16 55 32.1	+0.5
O19K	Port Alsworth baz=271,SNR=7.0	31.48	48	P	P	16 55 32.6	+0.8
O19K	baz=271			S	S	17 00 39.9	+3.1
O19K	Port Alsworth	31.48	48	P	P	16 55 32.2	+0.5
SONM	Songino Array comp=Z,8.8nm,0.7s,baz=60,slow=9.5,SNR=20	31.66	288	P	P	16 55 33.2	-0.4
SONM	comp=Z,19nm,0.6s,baz=115,slow=2.3,SNR=15			PcP	PcP	16 58 24.9	+0.2
SONM	comp=Z,6.7nm,1.2s,baz=40,slow=9.8,SNR=3.9			ScP	ScP	17 02 03.1	-1.5
SONM	comp=Z,22µm,18.5s,baz=74,slow=39			LR	LR	17 09 34.1	
SONM	comp=Z,1.6nm,0.9s,baz=244,slow=2.0,SNR=7.0			P3KPbc		17 27 10.4	
SONM	Songino Array	31.66	288	P	P	16 55 32.6	-1.0
J20K	Nowinta River baz=265	31.71	41	P	P	16 55 34.6	+0.8
J20K	Nowinta River	31.71	41	P	P	16 55 33.9	+0.2
J20K	comp=Z,439nm,1.2s			IAmb	IAmb	16 55 36.2	
L20K	Farewell, AK baz=268,SNR=57	31.72	44	P	P	16 55 34.7	+0.8
IRK	Irkutsk	31.76	296	eP	P	16 55 33.2	-1.1
IRK	comp=Z,100nm,3.0s			pmax	pmax		
IRK	Irkutsk	31.76	296	eP	P	16 55 33.2	-1.1
SII	Sitkinak Islan baz=277	31.81	55	P	P	16 55 33.9	-0.8
SII	Sitkinak Islan	31.81	55	P	P	16 55 33.5	-1.3
SII	comp=Z,7µm,20.0s			IAMs_20	IAMs_20	17 09 52.6	
Q19K	Cape Douglas, baz=274	31.88	51	P	P	16 55 35.0	-0.3
Q19K	Cape Douglas,	31.88	51	P	P	16 55 35.0	-0.3
Q19K	comp=Z,248nm,1.4s			IAmb	IAmb	16 55 47.2	
Q19K	comp=Z,7µm,18.0s			IAMs_20	IAMs_20	17 10 52.4	
TIY	Taiyuan	32.05	267	⇑iP	P	16 55 39.5	+2.4
TIY				PP	PP	16 56 43.8	-6.0
TIY				S	S	17 00 47.8	+1.5
TIY	comp=Z,100nm,0.8s			pmax	pmax		
TIY	comp=Z,8µm,21.7s			LR	LR		
TIY	comp=Z,8µm,21.3s			LR	LR		
IMAR	Indian Mountai	32.09	37	P	P	16 55 37.1	+0.1
BTO	Baotou	32.19	273	eP	P	16 55 38.0	-0.3
BTO				S	S	17 00 49.1	+0.6
BTO	comp=Z,30µm,18.6s			LR	LR		
BTO	comp=Z,31µm,19.8s			LR	LR		
OHAK	Old Harbor baz=277,SNR=24	32.22	54	P	P	16 55 37.3	-0.9
OHAK	Old Harbor	32.22	54	P	P	16 55 37.2	-1.0
OHAK	comp=Z,242nm,1.1s			IAmb	IAmb	16 55 39.5	
RSO	Redoubt South	32.25	48	P	P	16 55 38.3	-0.5
TLY	Talaya	32.27	296	eP	P	16 55 40.3	+1.5
TLY				e		16 57 00.6	
TLY				eS	S	17 00 54.6	+5.3
TLY				eSS	SnSn	17 02 39.5	-3.4
TLY	comp=Z,401nm,2.0s			pmax	pmax		
TLY	comp=Z,44µm,18.0s			MLR	MLR		
TLY	Talaya	32.27	296	P	P	16 55 40.2	+1.4
TLY				P	P	16 55 40.2	+1.4
TLY				P	P	16 55 40.2	+1.4
TLY	Talaya	32.27	296	⇑P	P	16 55 40.2	+1.4
TLY	Talaya	32.27	296	P	P	16 55 39.1	+0.3
A21K	Barrow baz=251,SNR=106	32.31	27	P	P	16 55 39.1	+0.2
A21K	baz=251			S	S	17 00 48.7	-0.9
A21K	Barrow	32.31	27	P	P	16 55 38.7	-0.2
O20K	Slope Mountain baz=273,SNR=7.4	32.33	48	P	P	16 55 39.5	+0.2
H21K	Melozitna Rive baz=264,SNR=197	32.43	38	P	P	16 55 40.9	+0.8
H21K	baz=264			S	S	17 00 53.4	+1.9
H21K	Melozitna Rive	32.43	38	P	P	16 55 40.2	+0.1
H21K	comp=Z,322nm,1.1s			IAmb	IAmb	16 55 42.5	
CHUM	Lake Minchumin baz=267,SNR=53	32.49	41	P	P	16 55 41.7	+1.1
CHUM	baz=267			S	S	17 00 55.9	+3.4
SPCR	Spurr Chakacha baz=271,SNR=20	32.50	46	P	P	16 55 41.8	+1.0
SPCR	baz=271			S	S	17 00 56.4	+3.5
PPLA	Purkeypile baz=269,SNR=99	32.51	43	P	P	16 55 42.4	+1.5
PPLA	baz=269			S	S	17 00 55.5	+2.4
PPLA	Purkeypile	32.51	43	P	P	16 55 41.8	+0.8
KDAK	Kodiak Island baz=276	32.53	53	P	P	16 55 40.0	-1.0
SPU	Mount Spurr	32.58	46	P	P	16 55 42.0	+0.6
CAST	Castle Rocks baz=268,SNR=85	32.58	42	P	P	16 55 42.4	+1.1
CAST	baz=268			S	S	17 00 56.5	+2.6
CAST	Castle Rocks	32.58	42	P	P	16 55 41.8	+0.4
CAST	comp=Z,238nm,1.2s			IAmb	IAmb	16 55 44.2	
CAST	comp=Z,7µm,19.0s			IAMs_20	IAMs_20	17 11 06.5	
I21K	Tanana baz=265,SNR=102	32.73	39	P	P	16 55 43.6	+1.0
I21K	Tanana	32.73	39	P	P	16 55 43.2	+0.6
I21K	comp=Z,242nm,1.1s			IAmb	IAmb	16 55 45.4	
ZAK	Zakamensk	32.84	293	eP	P	16 55 43.5	-0.4
ZAK	comp=Z,73nm,1.4s			pmax	pmax		
ZAK	Zakamensk	32.84	293	eP	P	16 55 43.5	-0.4
HOM	Homer baz=274	32.85	49	P	P	16 55 43.0	-0.8
HOM	Homer	32.85	49	P	P	16 55 44.3	+0.6
CNPM	China Poot	33.07	49	P	P	16 55 45.3	-0.4
CNPM	comp=Z,284nm,1.3s			IAmb	IAmb	16 55 48.0	
BPAW	Bear Paw Mtn. baz=268,SNR=169	33.09	41	P	P	16 55 46.7	+0.9
BPAW	baz=268			S	S	17 01 03.7	+1.9
BPAW	Bear Paw Mtn.	33.09	41	P	P	16 55 46.5	+0.6
BPAW	comp=Z,298nm,1.1s			IAmb	IAmb	16 55 48.4	
KTH	Kantishna Hill	33.10	42	P	P	16 55 46.8	+0.8
KTH	comp=Z,6µm,19.0s			IAMs_20	IAMs_20	17 11 22.4	
BRLK	Bradley Lake	33.23	49	P	P	16 55 46.4	-0.7
MLY	Manley baz=267,SNR=139	33.24	39	P	P	16 55 48.2	+1.0
MLY	baz=267			S	S	17 01 06.6	+2.4
MLY	Manley	33.24	39	P	P	16 55 47.8	+0.6
MLY	comp=Z,282nm,1.2s			IAmb	IAmb	16 55 49.9	
BRSE	Bradley Lake S baz=275,SNR=15	33.30	49	P	P	16 55 47.3	-0.4
TRF	Thorofare Moun baz=270,SNR=67	33.38	42	P	P	16 55 49.3	+0.7
TRF	baz=270			S	S	17 01 07.7	+1.0
TRF	Thorofare Moun	33.38	42	P	P	16 55 49.0	+0.4
TRF	comp=Z,362nm,1.3s			IAmb	IAmb	16 55 50.9	
TRF	comp=Z,7µm,18.0s			IAMs_20	IAMs_20	17 11 30.9	
CUT	Chulitna baz=271,SNR=39	33.40	44	P	P	16 55 48.6	0.0
CUT	baz=271			S	S	17 01 05.5	-1.0
CUT	Chulitna	33.40	44	P	P	16 55 48.5	0.0
FIS	Fire Island comp=Z,6µm,20.0s	33.47	46	IAMs_20	IAMs_20	17 07 30.3	
M22K	Willow baz=272	33.48	45	P	P	16 55 48.5	-0.7
COLD	Coldfoot baz=264,SNR=101	33.64	35	P	P	16 55 51.4	+0.8
COLD	baz=264			S	S	17 01 13.0	+2.8
COLD	Coldfoot	33.64	35	P	P	16 55 51.2	+0.5
COLD	comp=Z,330nm,1.2s			IAmb	IAmb	16 55 53.1	
RC01	Rabbit Creek A baz=274,SNR=18	33.70	46	P	P	16 55 50.7	-0.5
RC01	baz=274			S	S	17 01 09.3	-2.0
RC01	Rabbit Creek A	33.70	46	P	P	16 55 51.5	+0.3
RC01	comp=Z,254nm,1.1s			IAmb	IAmb	16 55 53.4	
O22K	Cooper Landing baz=275,SNR=9.0	33.75	48	P	P	16 55 51.2	-0.4
O22K	Cooper Landing	33.75	48	P	P	16 55 51.9	+0.3
O22K	comp=Z,235nm,0.8s			IAmb	IAmb	16 56 16.3	
BWN	Browne	33.76	41	P	P	16 55 53.2	+1.6
BWN	comp=Z,6µm,20.0s			IAMs_20	IAMs_20	17 11 43.7	
I23K	Minto, Yukon-K baz=268,SNR=109	33.83	39	P	P	16 55 53.3	+1.1
I23K	baz=268			S	S	17 01 14.9	+1.8
I23K	Minto, Yukon-K	33.83	39	P	P	16 55 52.7	+0.5
I23K	comp=Z,426nm,1.3s			IAmb	IAmb	16 55 54.9	
MOY	Mondy	33.87	296	eP	P	16 55 55.0	+2.1
MOY	comp=Z,137nm,1.9s			pmax	pmax		
SEW	Seward baz=275,SNR=17	33.92	48	P	P	16 55 52.6	-0.4
SEW	Seward	33.92	48	P	P	16 55 52.1	-0.9
SEW	comp=Z,298nm,1.3s			IAmb	IAmb	16 55 54.2	
NEA2	Nenana baz=269,SNR=180	33.94	40	P	P	16 55 54.0	+0.8
NEA2	baz=269			S	S	17 01 16.6	+1.7
NEA2	Nenana	33.94	40	P	P	16 55 53.6	+0.4
NEA2	comp=Z,310nm,1.2s			IAmb	IAmb	16 55 55.6	
NEA2	comp=Z,6µm,18.0s			IAMs_20	IAMs_20	17 12 16.5	
PMR	Palmer	33.97	46	P	P	16 55 53.0	-0.4
PMR	comp=Z,189nm,1.2s			pmax	pmax		
PMR	Palmer baz=273,SNR=48	33.97	46	P	P	16 55 52.3	-1.1
PMR	baz=273			S	S	17 01 13.6	-1.6
PMR	Palmer	33.97	46	P	P	16 55 53.0	-0.4
PMR	comp=Z,189nm,1.2s			IAmb	IAmb	16 55 55.6	
MCK	McKinley	33.99	42	P	P	16 55 53.7	0.0
MCK	comp=Z,480nm,1.2s			pmax	pmax		
MCK	comp=Z,6µm,19.0s			MLR	MLR		
MCK	McKinley baz=270,SNR=151	33.99	42	P	P	16 55 54.1	+0.4
MCK	McKinley	33.99	42	P	P	16 55 53.7	0.0
MCK	comp=Z,6µm,19.0s			IAMs_20	IAMs_20	17 11 50.9	
RND	Reindeer	34.03	42	P	P	16 55 54.0	-0.1
RND	comp=Z,554nm,1.1s			pmax	pmax		
RND	comp=Z,7µm,20.0s			MLR	MLR		
RND	Reindeer	34.03	42	P	P	16 55 54.0	-0.1
RND	comp=Z,7µm,20.0s			IAMs_20	IAMs_20	17 11 15.9	
TOLK	Toolik Lake Re baz=262,SNR=214	34.05	33	P	P	16 55 55.0	+0.8
TOLK	baz=262			S	S	17 01 17.2	+0.6
TOLK	Toolik Lake Re	34.05	33	P	P	16 55 54.8	+0.6
GHO	Glory Hole Cre	34.05	45	P	P	16 55 53.6	-0.7

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GHO                                 IAmb     IAmb     16 55 56.1
      comp=Z,224nm,1.2s
WAT1  Susitna Watana    34.18  43   P        P        16 55 55.2  -0.2
      baz=272
YOJ   Yonaguni jima     34.24 237   P        P        16 55 54.9  -1.3
YOJ                                 pmax     pmax
      comp=Z,76nm,1.0s
YOJ   Yonaguni jima     34.24 237 ⇑P        P        16 55 55.1  -1.0
YOJ   Yonaguni jima     34.24 237   P        P        16 55 54.9  -1.3
YOJ   Yonaguni jima     34.24 237   P        P        16 55 57.1  +0.9
KNK   Knik Glacier      34.30  46   P        P        16 55 56.6  +0.2
      baz=274,SNR=208
KNK                                 S        S        17 01 18.4  -2.2
      baz=274
KNK   Knik Glacier      34.30  46   P        P        16 55 56.2  -0.2
MDM   Murphy Dome       34.30  40   P        P        16 55 56.9  +0.5
SML   Sawmill           34.33  45   P        P        16 55 57.0  +0.3
      baz=274,SNR=302
SML                                 S        S        17 01 19.1  -2.0
      baz=274
SML   Sawmill           34.33  45   P        P        16 55 56.8  +0.1
WRH   Wood River Hil    34.36  40   P        P        16 55 57.0  +0.2
PWL   Port Wells        34.40  47   P        P        16 55 56.8  -0.5
      baz=275,SNR=32
PWL                                 S        S        17 01 20.4  -1.7
      baz=275
PWL   Port Wells        34.40  47   P        P        16 55 56.7  -0.5
PWL                                 IAmb     IAmb     16 55 58.5
      comp=Z,375nm,1.2s
PWL                                 IAMs_20  IAMs_20  17 12 23.0
      comp=Z,7µm,21.0s
TCOL  CIGO, UAF Yank    34.46  40   P        P        16 55 58.6  +0.9
      baz=270,SNR=77
TCOL                                S        S        17 01 24.1  +1.2
      baz=270
TCOL  CIGO, UAF Yank    34.46  40   P        P        16 55 58.1  +0.5
COLA  College           34.47  40c iP        P        16 55 58.2  +0.5
COLA                                pmax     pmax
      comp=Z,461nm,1.0s
COLA                                MLR      MLR
      comp=Z,5µm,22.0s
COLA  College           34.47  40 ⇑P        P        16 55 58.6  +0.9
COLA  College           34.47  40   P        P        16 55 58.0  +0.3
H24K  Noodor Dome       34.47  38   P        P        16 55 59.1  +1.2
      baz=268
H24K                                S        S        17 01 25.1  +1.8
      baz=268
H24K  Noodor Dome       34.47  38   P        P        16 55 58.5  +0.6
H24K                                IAmb     IAmb     16 56 00.8
      comp=Z,454nm,1.3s
CCB   Clear Creek Bu    34.48  40   P        P        16 55 58.2  +0.3
CCB                                 IAmb     IAmb     16 56 00.2
      comp=Z,245nm,1.3s
WAT6  Susitna Watana    34.56  44   P        P        16 55 58.7  -0.2
      baz=273,SNR=65
WAT6                                S        S        17 01 24.1  -0.8
      baz=273
POKR  Poker Plat Res    34.64  39   P        P        16 56 00.5  +1.1
      baz=270,SNR=226
POKR                                S        S        17 01 27.0  +1.2
      baz=270
POKR  Poker Plat Res    34.64  39   P        P        16 55 59.9  +0.6
DHY   Denali Highway    34.71  43   P        P        16 56 00.2  +0.1
      baz=273
DHY                                 S        S        17 01 26.9  -0.2
      baz=273
DHY   Denali Highway    34.71  43   P        P        16 55 59.9  -0.2
TATO  Taipei            34.71 240   P        P        16 56 01.3  +1.0
TATO                                P        P        16 56 01.3  +1.0
TATO                                P        P        16 56 01.3  +1.0
TATO  Taipei            34.71 240   IAMs_20  IAMs_20  17 10 10.7
      comp=Z,8µm,20.0s
SCM   Sheep Creek Mo    34.80  45   P        P        16 56 00.9  +0.1
SCM                                 pmax     pmax
      comp=Z,510nm,1.1s
SCM                                 MLR      MLR
      comp=Z,5µm,20.0s
SCM   Sheep Creek Mo    34.80  45   P        P        16 56 01.2  +0.4
      baz=275,SNR=92
SCM                                 S        S        17 01 29.4  +0.9
      baz=275
SCM   Sheep Creek Mo    34.80  45   P        P        16 56 00.9  +0.1
HDA   Harding Lake      34.86  40   P        P        16 56 00.8  -0.4
      baz=271,SNR=144
HDA   Harding Lake      34.86  40   P        P        16 56 00.7  -0.5
HDA                                 IAmb     IAmb     16 56 03.5
      comp=Z,357nm,1.3s
IL31                    34.88  40   P        P        16 56 01.1  -0.1
IL31                                IAmb     IAmb     16 56 03.2
      comp=Z,439nm,1.2s
ILAR  Eielson Array     34.88  40   P        P        16 56 01.3   0.0
      comp=Z,168nm,1.1s,baz=260,slow=8.6,SNR=304
ILAR                                PcP      PcP      16 58 32.2  -1.1
      comp=Z,13nm,1.0s,baz=284,slow=3.5,SNR=4.1
ILAR                                LR       LR       17 13 05.0
      comp=Z,4µm,18.9s,baz=276,slow=41
ILAR                                P3KPbc            17 26 55.1
      comp=Z,0.8nm,0.9s,baz=110,slow=3.2,SNR=5.7
ILAR  Eielson Array     34.88  40   P        P        16 56 01.1  -0.2
GLI   Glacier Island    35.00  47   P        P        16 56 02.2  -0.2
      baz=276,SNR=20
GLI                                 S        S        17 01 31.1  -0.3
      baz=276
GLI   Glacier Island    35.00  47   P        P        16 56 01.9  -0.5
GLI                                 IAmb     IAmb     16 56 03.8
      comp=Z,310nm,1.1s
YHNB  Yeheng            35.01 240   P        P        16 56 02.5  -0.5
YHNB                                IAMs_20  IAMs_20  17 10 19.7
      comp=Z,8µm,20.0s
YHNB  Yeheng            35.01 240   P        P        16 56 03.3  +0.3
WHN   Wuhan             35.12 255 ⇑P        P        16 56 03.9  +0.2
WHN                                 S        S        17 01 30.9  -2.8
WHN                                 pmax     pmax
      comp=Z,1µm,1.6s
WHN                                 LR       LR
      comp=Z,13µm,16.0s
WHN                                 LR       LR
      comp=Z,12µm,16.4s
WHN                                 LR       LR
      comp=Z,14µm,24.4s
NACB  Ninganchiao       35.27 239   IAMs_20  IAMs_20  17 10 40.6
      comp=Z,7µm,20.0s
FID   Port Fidalgo      35.32  47   P        P        16 56 04.4  -0.8
M24K  Tolsona, Glenn    35.33  44   P        P        16 56 06.3  +1.0
      baz=275,SNR=28
M24K                                S        S        17 01 38.7  +2.2
      baz=275
M24K  Tolsona, Glenn    35.33  44   P        P        16 56 06.0  +0.7
HIN   Hinchinbrook I    35.35  47   P        P        16 56 05.4   0.0
HIN                                 IAmb     IAmb     16 56 07.3
      comp=Z,326nm,1.0s
GUMO  Guam              35.42 196   LR       LR       17 09 08.4
      comp=Z,2µm,20.7s,baz=32,slow=34
PRP   Porcupine Dome    35.45  39   P        P        16 56 07.1  +0.8
      baz=271,SNR=280
PRP                                 S        S        17 01 38.9  +0.6
      baz=271
PRP   Porcupine Dome    35.45  39   P        P        16 56 06.4   0.0
KLU   Klutina           35.50  46   P        P        16 56 07.3  +0.5
      baz=276,SNR=74
KLU                                 S        S        17 01 39.8  +0.5
      baz=276
KLU   Klutina           35.50  46   P        P        16 56 07.0  +0.2
Q23K  Middleton Isla    35.56  49   P        P        16 56 07.9  +0.7
      baz=279
Q23K  Middleton Isla    35.56  49   P        P        16 56 07.3  +0.1
FYU   Fort Yukon        35.56  37   P        P        16 56 08.3  +1.1
MID   Middleton Isla    35.56  49   P        P        16 56 07.3  +0.1
MID                                 pmax     pmax
      comp=Z,286nm,0.8s
MID   Middleton Isla    35.56  49   P        P        16 56 07.3  +0.1
MID                                 IAmb     IAmb     16 56 09.6
      comp=Z,286nm,0.8s
PAX   Paxson            35.58  43   P        P        16 56 07.2  -0.3
PAX                                 pmax     pmax
      comp=Z,235nm,1.2s
PAX   Paxson            35.58  43   P        P        16 56 07.5   0.0
      baz=274,SNR=40
PAX                                 S        S        17 01 40.6  +0.2
      baz=274
PAX   Paxson            35.58  43   P        P        16 56 07.2  -0.3
PAX                                 IAmb     IAmb     16 56 10.5
      comp=Z,235nm,1.2s
DIV   Divide            35.62  46   P        P        16 56 08.0  +0.2
DIV                                 IAmb     IAmb     16 56 09.9
      comp=Z,302nm,0.9s
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EYAK  Cordova Ski Ar    35.70  47   P        P        16 56 09.1  +0.7
      baz=278,SNR=23
EYAK                                S        S        17 01 43.7  +1.8
      baz=278
EYAK  Cordova Ski Ar    35.70  47   P        P        16 56 08.6  +0.2
EYAK                                IAmb     IAmb     16 56 10.6
      comp=Z,251nm,1.2s
HARP  HAARP             35.77  44   P        P        16 56 10.1  +1.0
      baz=276,SNR=32
HARP                                S        S        17 01 45.5  +2.3
      baz=276
RIDG  Independent Ri    35.81  42   P        P        16 56 09.2  -0.2
      baz=274,SNR=188
RIDG  Independent Ri    35.81  42   P        P        16 56 08.6  -0.7
RIDG                                IAMs_20  IAMs_20  17 13 34.9
      comp=Z,6µm,21.0s
BMAR  Burnt Mountain    35.83  35   P        P        16 56 10.8  +1.3
SSLB  Suanglung         35.94 239   P        P        16 56 09.8  -1.0
SSLB                                IAMs_20  IAMs_20  17 10 52.2
      comp=Z,9µm,20.0s
SSLB  Suanglung         35.94 239   P        P        16 56 12.7  +1.9
YULB  Yu-li             36.05 238   P        P        16 56 11.2  -0.6
N25K  Chitina, Valde    36.12  45   P        P        16 56 12.9  +0.8
      baz=277,SNR=71
N25K                                S        S        17 01 50.1  +1.4
      baz=277
N25K  Chitina, Valde    36.12  45   P        P        16 56 12.6  +0.5
N25K                                IAmb     IAmb     16 56 14.6
      comp=Z,224nm,1.0s
DOT   Dot Lake          36.16  42   P        P        16 56 11.8  -0.6
SCRK  Sand Creek        36.17  41   P        P        16 56 12.3  -0.2
      baz=274,SNR=210
SCRK                                S        S        17 01 48.4  -1.1
      baz=274
SCRK  Sand Creek        36.17  41   P        P        16 56 12.1  -0.5
SCRK                                IAMs_20  IAMs_20  17 13 35.5
      comp=Z,6µm,20.0s
BMRM  Bremner River     36.20  46   P        P        16 56 13.4  +0.6
      baz=278,SNR=69
BMRM                                S        S        17 01 51.9  +2.1
      baz=278
BMRM  Bremner River     36.20  46   P        P        16 56 13.0  +0.3
BMRM                                IAMs_20  IAMs_20  17 11 21.5
      comp=Z,9µm,22.0s
RAGM  Ragged Mountai    36.25  47   P        P        16 56 13.6  +0.5
J26L  Joseph Creek      36.32  40   P        P        16 56 12.9  -0.9
      baz=274,SNR=40
J26L                                S        S        17 01 50.5  -1.1
      baz=274
MENT  Mentasta          36.38  43   P        P        16 56 14.9  +0.6
QZH   Quanzhou          36.44 243   P        P        16 56 07.8  -7.3
QZH                                 sP       pP       16 56 22.5  -3.1
QZH                                 PP       PnPn     16 57 32.8  -5.4
QZH                                 S        S        17 01 43.0   -11
QZH                                 pmax     pmax
      comp=Z,160nm,1.1s
QZH                                 pmax     pmax
      comp=Z,2µm,4.5s
QZH                                 LR       LR
      comp=N,2µm,26.4s
QZH                                 LR       LR
      comp=E,2µm,22.5s
QZH                                 LR       LR
      comp=Z,4µm,23.0s
KAIM  Kayak Island      36.45  48   P        P        16 56 16.2  +1.4
      baz=280,SNR=32
KAIM  Kayak Island      36.45  48   P        P        16 56 15.6  +0.8
KAIM                                IAMs_20  IAMs_20  17 11 15.1
      comp=Z,8µm,22.0s
HMT   Hamilton          36.46  47   P        P        16 56 15.5  +0.5
HMT                                 IAmb     IAmb     16 56 17.6
      comp=Z,436nm,1.2s
HMT                                 IAMs_20  IAMs_20  17 14 02.4
      comp=Z,5µm,20.0s
XAN   Xi'an             36.48 264   P        P        16 56 15.1  -0.4
XAN                                 pP       pP       16 56 25.3  -0.8
XAN                                 sP       sP       16 56 30.1  -0.6
XAN                                 PP       PP       16 57 44.4  +5.5
XAN                                 S        S        17 01 55.5  +0.8
XAN                                 sS       sS       17 02 11.9  -1.1
XAN                                 PcS      PcS      17 02 26.3  -0.2
XAN                                 pmax     pmax
      comp=Z,77nm,1.5s
XAN                                 pmax     pmax
      comp=Z,2µm,6.2s
XAN                                 LR       LR
      comp=Z,6µm,16.1s
XAN                                 LR       LR
      comp=Z,6µm,17.2s
XAN                                 LR       LR
      comp=Z,10µm,17.2s
TPUB  Ta-pu             36.50 239   P        P        16 56 15.8  +0.1
TPUB                                IAmb     IAmb     16 56 34.9
      comp=Z,395nm,1.1s
TPUB                                IAMs_20  IAMs_20  17 11 20.2
      comp=Z,8µm,21.0s
TPUB  Ta-pu             36.50 239   P        P        16 56 17.5  +1.8
GLB   Gilahina Butte    36.52  45   P        P        16 56 15.9  +0.5
GLB                                 IAmb     IAmb     16 56 18.9
      comp=Z,442nm,1.4s
GLB                                 IAMs_20  IAMs_20  17 12 40.8
      comp=Z,7µm,22.0s
L26K  Log Cabin Wild    36.54  43   P        P        16 56 16.6  +1.0
      baz=276,SNR=52
L26K                                S        S        17 01 57.8  +2.8
      baz=276
L26K  Log Cabin Wild    36.54  43   P        P        16 56 15.9  +0.3
L26K                                IAMs_20  IAMs_20  17 12 55.4
      comp=Z,6µm,20.0s
TWG   Pinlang           36.62 238   P        P        16 56 16.4  -0.3
TWG                                 IAmb     IAmb     16 56 23.5
      comp=Z,431nm,1.1s
TWG                                 IAMs_20  IAMs_20  17 10 18.4
      comp=Z,6µm,22.0s
VRDI  Verde Repeater    36.72  46   P        P        16 56 17.6  +0.2
VRDI                                IAmb     IAmb     16 56 19.9
      comp=Z,319nm,1.1s
BERG  Berg Lake         36.73  47   P        P        16 56 17.7  +0.5
BERG                                IAMs_20  IAMs_20  17 14 09.5
      comp=Z,5µm,19.0s
SUCK  Suckling Hills    36.74  48   P        P        16 56 17.8  +0.5
SUCK                                IAmb     IAmb     16 56 20.4
      comp=Z,408nm,1.2s
M26K  Nabesna, AK       36.77  44   P        P        16 56 19.1  +1.5
      baz=277
M26K                                S        S        17 02 01.4  +2.8
      baz=277
M26K  Nabesna, AK       36.77  44   IAMs_20  IAMs_20  17 12 34.6
      comp=Z,7µm,21.0s
MCARA McCarthy VSAT     36.90  45   P        P        16 56 19.9  +1.2
      baz=279,SNR=36
MCARA                               S        S        17 02 03.1  +2.8
      baz=279
MCARA McCarthy VSAT     36.90  45   P        P        16 56 19.4  +0.7
MCARA                               IAmb     IAmb     16 56 21.6
      comp=Z,320nm,1.3s
MCARA                               IAMs_20  IAMs_20  17 13 01.0
      comp=Z,6µm,22.0s
KNMB  Chin-men Tao      36.92 243   P        P        16 56 20.2  +1.0
CRQM  Cirque            36.94  46   P        P        16 56 20.2  +1.0
CRQM                                IAMs_20  IAMs_20  17 12 24.7
      comp=Z,7µm,22.0s
CRQE  Cirque            36.96  46   P        P        16 56 20.6  +1.3
      baz=279,SNR=195
CRQE                                S        S        17 02 04.6  +3.0
      baz=279
BGLC  Bering Glacier    36.98  48   P        P        16 56 21.2  +2.0
      baz=280
TGL   Tana Glacier      37.09  46   P        P        16 56 20.9  +0.5
TGL                                 IAMs_20  IAMs_20  17 12 40.1
      comp=Z,7µm,22.0s
WAX   Waxell Ridge      37.13  47   P        P        16 56 21.1  +0.4
WAX                                 IAMs_20  IAMs_20  17 14 30.2
      comp=Z,5µm,18.0s
SNH   Sunshine Point    37.19  47   P        P        16 56 21.9  +0.8
SNH                                 IAMs_20  IAMs_20  17 11 52.6
      comp=Z,8µm,22.0s
BCAR  Beaver Creek A    37.24  42   P        P        16 56 22.9  +1.3
M27K  Edge Creek, AK    37.30  44   P        P        16 56 23.7  +1.5
      baz=278,SNR=178
M27K                                S        S        17 02 06.7   0.0
      baz=278
M27K  Edge Creek, AK    37.30  44   P        P        16 56 23.4  +1.2
M27K                                IAmb     IAmb     16 56 25.5
      comp=Z,500nm,1.2s
M27K                                IAMs_20  IAMs_20  17 13 21.4
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      comp=Z,8µm,21.0s
EGAK  Eagle             37.33  40   P        P        16 56 22.4  +0.2
      baz=276
EGAK                                S        S        17 02 07.8  +1.0
      baz=276
EGAK  Eagle             37.33  40   P        P        16 56 22.2  -0.1
ISLE  Juniper Island    37.35  47   P        P        16 56 22.6   0.0
KRAR  Krasnoyarsk       37.39 306 i P        P        16 56 20.8  -2.0
BARN  Barnard Glacie    37.60  46   P        P        16 56 25.4  +0.6
BARN                                IAMs_20  IAMs_20  17 12 58.6
      comp=Z,6µm,22.0s
GRNC  Granite Creek     37.62  46   P        P        16 56 25.7  +0.7
GRNC                                IAMs_20  IAMs_20  17 13 04.9
      comp=Z,6µm,21.0s
MESA  MESA              37.62  47   P        P        16 56 26.3  +1.3
      baz=281,SNR=26
MESA                                S        S        17 02 15.3  +3.5
      baz=281
MESA  MESA              37.62  47   P        P        16 56 25.8  +0.8
MESA                                IAmb     IAmb     16 56 28.0
      comp=Z,392nm,1.0s
MESA                                IAMs_20  IAMs_20  17 13 03.2
      comp=Z,6µm,21.0s
YAH   Yahtse            37.69  47   P        P        16 56 26.4  +0.8
YAH                                 IAMs_20  IAMs_20  17 12 20.8
      comp=Z,11µm,22.0s
BVCY  Beaver Creek      37.76  43   P        P        16 56 27.4  +1.5
      baz=279,SNR=123
BVCY                                S        S        17 02 14.9  +1.5
      baz=279
CTG   Chitna Glacier    37.77  46   P        P        16 56 27.5  +1.3
      baz=280,SNR=138
CTG                                 S        S        17 02 15.6  +1.7
      baz=280
CTGM  Chitina Glacie    37.78  46   P        P        16 56 27.0  +0.8
CTGM                                IAMs_20  IAMs_20  17 13 13.1
      comp=Z,6µm,22.0s
NRIK  Noril'sk          37.94 328   P        P        16 56 24.7  -2.6
      comp=Z,6.1nm,0.6s,baz=77,slow=9.5,SNR=14
NRIK                                LR       LR       17 13 27.4
      comp=Z,6µm,19.1s,baz=64,slow=38
NRIK  Noril'sk          37.94 328c iP        P        16 56 25.1  -2.2
NRIK                                pmax     pmax
      comp=Z,16nm,0.8s
NRIK                                MLR      MLR
      comp=Z,6µm,16.0s
LOGN  Logan Glacier     37.96  46   P        P        16 56 28.6  +0.8
LOGN                                IAmb     IAmb     16 56 30.5
      comp=Z,316nm,1.0s
LOGN                                IAMs_20  IAMs_20  17 13 15.0
      comp=Z,6µm,22.0s
TABL  Table Mountain    37.97  47   P        P        16 56 28.2  +0.2
TABL                                IAMs_20  IAMs_20  17 12 19.2
      comp=Z,10µm,22.0s
YUK3  Moose Creek       38.05  44   P        P        16 56 29.6  +0.9
      baz=280,SNR=173
YUK3                                S        S        17 02 20.9  +2.6
      baz=280
DAWY  Dawson            38.17  41   P        P        16 56 30.2  +0.7
      baz=278
DAWY  Dawson            38.17  41   P        P        16 56 29.7  +0.2
DAWY                                IAmb     IAmb     16 56 31.9
      comp=Z,284nm,1.4s
ENH   Enshi             38.46 259   P        P        16 56 31.8  -0.5
ENH                                 IAmb     IAmb     16 56 36.1
      comp=Z,253nm,1.1s
I29M  Ogilvie Camp,     38.46  38   P        P        16 56 32.6  +0.8
      baz=277,SNR=234
I29M                                S        S        17 02 26.3  +2.3
      baz=277
PCA   Pinnacle          38.47  47   P        P        16 56 32.2  +0.2
PCA                                 IAmb     IAmb     16 56 35.0
      comp=Z,522nm,1.2s
PINM  Pinnacle          38.47  47   P        P        16 56 32.9  +0.9
      baz=282,SNR=48
J29M  Klondike Camp     38.63  40   P        P        16 56 34.0  +0.7
      baz=278,SNR=9.8
LZH   Lanzhou           38.69 271 ⇑P        P        16 56 34.6  +0.4
LZH                                 pP       pP       16 56 44.4  -0.5
LZH                                 sP       pwP      16 56 47.4  +0.1
LZH                                 PP       PnPn     16 58 08.5  +3.0
LZH                                 S        S        17 02 25.3  -3.0
LZH                                 sS       sS       17 02 48.3  +1.6
LZH                                 pmax     pmax
      comp=Z,45nm,1.4s
LZH                                 pmax     pmax
      comp=Z,660nm,4.1s
LZH                                 LR       LR
      comp=Z,6µm,17.9s
LZH                                 LR       LR
      comp=Z,6µm,17.4s
LZH                                 LR       LR
      comp=Z,6µm,20.6s
BCPM  Bancas Point      38.80  47   P        P        16 56 35.3  +0.6
BCPM                                IAmb     IAmb     16 56 37.2
      comp=Z,299nm,1.0s
YUK4  Talbot Arm        38.98  45   P        P        16 56 37.8  +1.3
      baz=282,SNR=49
EPYK  Eagle Plains      38.98  37   P        P        16 56 37.5  +1.3
      baz=277,SNR=216
EPYK                                S        S        17 02 34.3  +2.5
      baz=277
EPYK  Eagle Plains      38.98  37   P        P        16 56 37.3  +1.1
PNL   Peninsula         38.99  48   P        P        16 56 37.5  +1.2
      baz=284,SNR=9.3
YUK6  Outpost Mounta    39.20  45   P        P        16 56 39.5  +1.2
      baz=283,SNR=23
GTA   Gaotai            39.58 278 ⇑P        P        16 56 41.4  -0.2
GTA                                 pP       pP       16 56 50.8  -1.6
GTA                                 sP       pwP      16 56 54.4  +2.0
GTA                                 PP       PnPn     16 58 19.3  +3.3
GTA                                 PcS      PcS      17 02 40.3  +2.0
GTA                                 ScS      ScS      17 06 44.6  -1.4
GTA                                 pmax     pmax
      comp=Z,17nm,1.8s
GTA                                 pmax     pmax
      comp=Z,590nm,8.4s
GTA                                 LR       LR
      comp=Z,6µm,18.7s
GTA                                 LR       LR
      comp=Z,11µm,17.1s
GTA                                 LR       LR
      comp=Z,16µm,18.7s
HYT   Haines Junctio    39.64  45   P        P        16 56 43.7  +1.9
      baz=284,SNR=116
HYT                                 S        S        17 02 45.4  +3.4
      baz=284
HYT   Haines Junctio    39.64  45   P        P        16 56 42.9  +1.1
HYT                                 IAmb     IAmb     16 56 45.3
      comp=Z,413nm,1.1s
MAYO  Mayo, Yukon       39.78  41   P        P        16 56 44.8  +1.9
      baz=282,SNR=47
INK   Inuvik            39.96  33   LR       LR       17 16 04.9
      comp=Z,3µm,21.1s,baz=274,slow=40
INK   Inuvik            39.96  33   P        P        16 56 45.2  +1.0
INK                                 pmax     pmax
      comp=Z,478nm,1.3s
INK   Inuvik            39.96  33   P        P        16 56 45.5  +1.3
      baz=278,SNR=139
INK                                 S        S        17 02 48.8  +2.6
      baz=278
INK   Inuvik            39.96  33 ⇑P        P        16 56 45.4  +1.2
INK   Inuvik            39.96  33   P        P        16 56 45.2  +1.0
INK                                 IAmb     IAmb     16 56 47.2
      comp=Z,478nm,1.3s
N31M  Braeburn, Yuko    40.29  44   P        P        16 56 49.3  +2.1
      baz=284,SNR=130
N31M                                S        S        17 02 55.4  +3.8
      baz=284
M31M  Drury Creek, Y    40.76  43   P        P        16 56 52.8  +1.8
      baz=284,SNR=154
M31M                                S        S        17 03 01.8  +3.3
      baz=284
KWAJ  Kwajalein Atol    40.86 160   IAMs_20  IAMs_20  17 09 38.8
      comp=Z,9µm,22.0s
WHY   Whitehorse        40.93  45   P        P        16 56 54.5  +2.0
      baz=286,SNR=90
WHY                                 S        S        17 03 07.1  +5.9
      baz=286
WHY   Whitehorse        40.93  45 ⇑P        P        16 56 54.2  +1.8
WHY   Whitehorse        40.93  45   P        P        16 56 54.0  +1.5
WHY                                 IAmb     IAmb     16 56 56.1
      comp=Z,478nm,1.2s
SKAG  Skagway           41.04  47   P        P        16 56 55.5  +2.2
      baz=287,SNR=33
SKAG                                S        S        17 03 08.8  +6.1
      baz=287
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SKAG	**Skagway**	**41.04**	**47**	⇑P	**P**	**16 56 55.4**	**+2.2**
SKAG	**Skagway**	**41.04**	**47**	P	**P**	**16 56 54.5**	**+1.2**
SKAG				IAmb	IAmb	16 56 58.0	
	comp=Z,447nm,1.4s						
HKC	**Hong Kong Obse**	**41.08**	**245**	⇑P	**P**	**16 56 56.0**	**+2.0**
FARO	**Faro, Yukon**	**41.23**	**43**	P	**P**	**16 56 56.4**	**+1.6**
	baz=285,SNR=123						
FARO				S	**S**	**17 03 09.3**	**+3.8**
	baz=285						
PATS	**Pohnpei**	**41.38**	**174**	P	**P**	**16 56 57.5**	**+1.0**
PATS				IAmb	IAmb	16 57 10.7	
	comp=Z,376nm,1.5s						
BESE	**Bessie Mountai**	**41.54**	**48**	P	**P**	**16 56 58.6**	**+1.2**
BESE				IAmb	IAmb	16 57 00.9	
	comp=Z,321nm,1.3s						
SIT	**Sitka**	**41.78**	**51**	P	**P**	**16 57 01.4**	**+2.1**
SIT				pmax	pmax		
	comp=Z,312nm,1.4s						
SIT	**Sitka**	**41.78**	**51**	P	**P**	**16 57 01.4**	**+2.1**
	baz=289,SNR=6.2						
SIT	**Sitka**	**41.78**	**51**	P	**P**	**16 57 01.4**	**+2.1**
CD2	**Chengdu**	**41.84**	**264**	⇑*i*P	**P**	**16 57 00.5**	**+0.2**
CD2				pP	pwP	16 57 12.5	-0.8
CD2				sP	sP	16 57 17.5	+1.9
CD2				PP	**PnPn**	**16 58 42.9**	**+0.3**
CD2				S	**S**	**17 03 13.6**	**-1.7**
CD2				SS	**SS**	**17 06 21.4**	**-0.9**
CD2				pmax	pmax		
	comp=Z,220nm,1.6s						
CD2				pmax	pmax		
	comp=Z,2µm,5.0s						
CD2				LR	LR		
	comp=Z,6µm,20.0s						
CD2				LR	LR		
	comp=Z,8µm,20.6s						
CD2				LR	LR		
	comp=Z,12µm,20.6s						
JIS	**Juneau Island**	**41.87**	**49**	P	**P**	**16 57 01.2**	**+1.2**
JIS				IAmb	IAmb	16 57 03.7	
	comp=Z,281nm,1.1s						
P33M	**Teslin, Yukon**	**42.04**	**45**	P	**P**	**16 57 03.4**	**+1.9**
	baz=288,SNR=153						
P33M				S	**S**	**17 03 22.6**	**+5.1**
	baz=288						
MMPY	**Sheldon Lake,**	**42.06**	**42**	P	**P**	**16 57 03.5**	**+1.9**
	baz=286,SNR=103						
MMPY				S	**S**	**17 03 22.3**	**+4.5**
	baz=286						
A36M	**Sachs Harbour**	**42.16**	**27**	P	**P**	**16 57 03.6**	**+1.4**
	baz=281,SNR=381						
A36M				S	**S**	**17 03 20.4**	**+1.5**
	baz=281						
A36M	**Sachs Harbour**	**42.16**	**27**	P	**P**	**16 57 03.4**	**+1.2**
A36M				IAmb	IAmb	16 57 06.3	
	comp=Z,510nm,0.9s						
ZAA0	**Zalesovo Array**	**42.44**	**305**	P	**P**	**16 57 03.5**	**-1.3**
ZALV	**Zalesovo Beam**	**42.44**	**305**	P	**P**	**16 57 03.9**	**-0.9**
	comp=Z,38nm,0.5s,baz=62,slow=6.8,SNR=135						
ZALV				PcP	**PcP**	**16 58 57.7**	**+0.6**
	comp=Z,106nm,1.1s,baz=63,slow=3.4,SNR=16						
ZALV				LR	LR	17 15 32.3	
	comp=Z,10µm,21.0s,baz=76,slow=37						
ZALV	**Zalesovo Beam**	**42.44**	**305**	P	**P**	**16 57 03.6**	**-1.1**
ZALV					**PcP**	**16 58 57.3**	**+0.2**
DGZ	**Jazzator, Alta**	**42.63**	**298**	*i* P	**P**	**16 57 07.5**	**+0.9**
DGZ				pmax	pmax		
	comp=Z,49nm,1.3s						
DGZ				MLR	MLR		
	comp=Z,13µm,17.0s						
GYA	**Guiyang**	**42.85**	**257**	⇑*i*P	**P**	**16 57 09.0**	**+0.4**
GYA				pP	pwP	16 57 21.0	-0.7
GYA				S	**S**	**17 03 27.5**	**-2.9**
GYA				sS	sS	17 03 50.5	+1.5
GYA				SS	**SS**	**17 06 34.1**	**-8.3**
GYA				pmax	pmax		
	comp=Z,350nm,1.0s						
GYA				pmax	pmax		
	comp=Z,2µm,3.5s						
GYA				LR	LR		
	comp=Z,2µm,14.8s						
GYA				LR	LR		
	comp=Z,2µm,24.3s						
GYA				LR	LR		
	comp=Z,2µm,21.6s						
CRAG	**Craig**	**43.49**	**52**	P	**P**	**16 57 15.9**	**+2.7**
	baz=292						
CRAG	**Craig**	**43.49**	**52**	P	**P**	**16 57 14.9**	**+1.7**
LQP	**Lukban**	**43.49**	**230**	⇓*i*P	**P**	**16 57 15.6**	**+1.7**
WRAK	**Wrangell Islan**	**43.54**	**51**	P	**P**	**16 57 16.0**	**+2.4**
	baz=292,SNR=7.7						
WRAK	**Wrangell Islan**	**43.54**	**51**	P	**P**	**16 57 15.1**	**+1.5**
TGTN	**Hyland Airport**	**43.73**	**43**	P	**P**	**16 57 16.7**	**+1.5**
	baz=289,SNR=98						
TGTN				S	**S**	**17 03 46.4**	**+4.0**
	baz=289						
WTLY	**Watson Lake, Y**	**43.97**	**45**	P	**P**	**16 57 18.9**	**+1.8**
	baz=290,SNR=12						
DLBC	**Dease Lake**	**43.97**	**47**	P	**P**	**16 57 18.8**	**+1.6**
DLBC				IAmb	IAmb	16 57 21.3	
	comp=Z,442nm,1.3s						
PGP	**Puerto Galera**	**44.31**	**230**	⇑*e*P	**P**	**16 57 20.9**	**+0.7**
DIB	**Dawson Inlet,**	**44.74**	**55**	P	**P**	**16 57 24.8**	**+1.6**
H02S1	**DAWSON INLET T**	**44.74**	**55**	P	**P**	**16 57 24.2**	**+0.9**
	SNR=4.6						
MOBC	**Moresby Island**	**45.04**	**55**	P	**P**	**16 57 27.1**	**+1.4**
MOBC				IAmb	IAmb	16 57 28.8	
	comp=Z,312nm,1.2s						
ZSN	**Zaisan**	**45.16**	**296**	*e*P	**P**	**16 57 24.8**	**-1.9**
	baz=296						
ZSN	**Zaisan**	**45.16**	**296**	*e*P	**P**	**16 57 24.8**	**-1.9**
WMQ	**Urumqi**	**45.18**	**290**	*e*P	**P**	**16 57 27.8**	**+0.8**
WMQ				sP	sP	16 57 40.3	-2.2
WMQ				PcP	**PcP**	**16 59 07.1**	**+0.4**
WMQ				pmax	pmax		
	comp=Z,46nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,570nm,7.1s						
WMQ				LR	LR		
	comp=Z,12µm,15.5s						
WMQ				LR	LR		
	comp=Z,8µm,16.7s						
WMQ				LR	LR		
	comp=Z,9µm,21.5s						
WRGLY	**Wrigley**	**45.25**	**39**	P	**P**	**16 57 29.1**	**+1.9**
	baz=291						
RUBB	**Prince Rupert**	**45.47**	**53**	P	**P**	**16 57 30.2**	**+1.3**
RUBB				IAmb	IAmb	16 57 32.3	
	comp=Z,207nm,1.2s						
HG4B	**Hotspring**	**45.83**	**56**	P	**P**	**16 57 32.1**	**+0.1**
HG4B				IAmb	IAmb	16 57 34.2	
	comp=Z,233nm,1.2s						
TBP	**Tagbilaran**	**46.17**	**224**	⇑*i*P	**P**	**16 57 34.3**	**-0.7**
QIZ	**Qiongzhong**	**46.20**	**247**	P	**P**	**16 57 34.8**	**-0.4**
QIZ				PP	**PP**	**16 59 23.6**	**-0.4**
QIZ				S	**S**	**17 04 19.8**	**+1.0**
QIZ				SS	**ScS**	**17 07 35.6**	**+8.3**
QIZ				pmax	pmax		
	comp=Z,76nm,1.7s						
QIZ				pmax	pmax		
	comp=Z,2µm,4.2s						
QIZ				LR	LR		
	comp=Z,3µm,15.3s						
QIZ				LR	LR		
	comp=Z,3µm,17.1s						
QIZ				LR	LR		
	comp=Z,5µm,16.5s						
QIZ	**Qiongzhong**	**46.20**	**247**	P	**P**	**16 57 35.6**	**+0.4**
QIZ				IAmb	IAmb	16 57 40.0	
	comp=Z,310nm,1.4s						
QIZ	**Qiongzhong**	**46.20**	**247**	P	**P**	**16 57 37.2**	**+2.0**
KMI	**Kunming**	**46.34**	**259**	⇑P	**P**	**16 57 37.3**	**+0.8**
KMI				pP	pP	16 57 47.5	+0.1
KMI				PcP	**PcP**	**16 59 17.3**	**+6.1**
KMI				PP	**PP**	**16 59 26.3**	**+0.7**
KMI				S	**S**	**17 04 14.0**	**-7.1**
KMI				SS	**SS**	**17 07 40.9**	**-5.9**
KMI				pmax	pmax		
	comp=Z,180nm,1.4s						
KMI				LR	LR		
	comp=Z,4µm,19.1s						
KMI				LR	LR		
	comp=Z,2µm,19.1s						
KMI				LR	LR		
	comp=Z,4µm,21.6s						
KIP	**Kipapa**	**46.39**	**108**	P	**P**	**16 57 37.6**	**+0.9**
KIP				pmax	pmax		
	comp=Z,275nm,1.2s						
KIP	**Kipapa**	**46.39**	**108**	P	**P**	**16 57 37.6**	**+0.9**
KIP				IAmb	IAmb	16 57 50.7	
	comp=Z,274nm,1.2s						
KIP	**Kipapa**	**46.39**	**108**	P	**P**	**16 57 38.7**	**+2.1**
KIP	**Kipapa**	**46.39**	**108**	P	**P**	**16 57 38.6**	**+2.0**
SEM	**Semipalatinsk**	**46.48**	**302**	*e*P	**P**	**16 57 34.8**	**-2.6**
	comp=Z,56nm,1.2s,baz=301						
SEM				*e*LR	LR	17 16 38.1	
	comp=Z,3µm,18.3s,baz=301						
SEM	**Semipalatinsk**	**46.48**	**302**	*e*P	**P**	**16 57 34.7**	**-2.6**
SEM				pmax	pmax		
	comp=Z,56nm,1.2s						
SEM				MLR	MLR		
	comp=Z,3µm,18.0s						
MK31	**Makanchi Array**	**47.01**	**297**	*i* P	**P**	**16 57 40.7**	**-0.7**
MK31				pmax	pmax		
	comp=Z,15nm,0.5s						
MK31	**Makanchi Array**	**47.01**	**297**	P	**P**	**16 57 39.9**	**-1.4**
MKAR	**Makanchi Array**	**47.01**	**297**	P	**P**	**16 57 40.4**	**-0.9**
	comp=Z,15nm,0.5s,baz=68,slow=6.4,SNR=111						
MKAR				PcP	**PcP**	**16 59 11.7**	**-1.3**
	comp=Z,19nm,0.8s,baz=63,slow=4.5,SNR=5.3						
MKAR				ScS	ScS	17 07 31.7	-0.3
	comp=Z,4.5nm,1.1s,baz=57,slow=8.8,SNR=5.0						
MKAR				LR	LR	17 19 07.3	
	comp=Z,17µm,18.4s,baz=44,slow=38						
MKAR				P4KPbc		17 35 27.0	
	comp=Z,0.3nm,0.4s,baz=58,slow=3.4,SNR=3.1						
MKAR	**Makanchi Array**	**47.01**	**297**	P	**P**	**16 57 39.8**	**-1.6**
MAKZ	**Makanchi**	**47.19**	**297**	P	**P**	**16 57 41.0**	**-1.8**
MAKZ				pmax	pmax		
	comp=Z,65nm,1.4s						
MAKZ				MLR	MLR		
	comp=Z,11µm,20.0s						
MAKZ	**Makanchi**	**47.19**	**297**	⇑P	**P**	**16 57 41.5**	**-1.3**
MAKZ	**Makanchi**	**47.19**	**297**	P	**P**	**16 57 41.0**	**-1.8**
KURK	**Kurchatov**	**47.25**	**303**	*c i*P	**P**	**16 57 40.9**	**-2.2**
KURK				pmax	pmax		
	comp=Z,164nm,0.7s						
KURK				MLR	MLR		
	comp=Z,14µm,20.0s						
KURK	**Kurchatov**	**47.25**	**303**	P	**P**	**16 57 43.1**	**0.0**
KURK				P	**P**	**16 57 43.1**	**0.0**
KURK	**Kurchatov**	**47.25**	**303**	⇑P	**P**	**16 57 41.7**	**-1.4**
KURK	**Kurchatov**	**47.25**	**303**	P	**P**	**16 57 41.5**	**-1.6**
KURK				IAmb	IAmb	16 57 45.6	
	comp=Z,160nm,0.7s						
KURBB	**Kurchatov Arra**	**47.35**	**303**	P	**P**	**16 57 43.4**	**-0.4**
EUNU	**Eureka**	**47.51**	**12**	⇑P	**P**	**16 57 45.0**	**+0.1**
EUNU	**Eureka**	**47.51**	**12**	P	**P**	**16 57 44.5**	**-0.4**
BBB	**Bella Bella**	**47.57**	**55**	P	**P**	**16 57 45.8**	**+0.3**
BBB				IAmb	IAmb	16 57 48.4	
	comp=Z,220nm,1.2s						
DAV	**Davao City (W)**	**47.72**	**220**	P	**P**	**16 57 49.0**	**+1.9**
	comp=Z,73nm,0.4s,baz=51,slow=4.9,SNR=8.6						
DAV	**Davao City (W)**	**47.72**	**220**	P	**P**	**16 57 47.5**	**+0.4**
DMPH	**Davao City--Mi**	**47.74**	**220**	⇑*e*P	**P**	**16 57 48.4**	**+1.1**
KCP	**Kidapawan**	**47.99**	**221**	⇑*i*P	**P**	**16 57 50.5**	**+1.3**
ALE	**Alert**	**48.19**	**6**	IAMs_20	IAMs_20	17 20 13.5	
	comp=Z,5µm,19.0s						
SLVN	**Son La**	**48.24**	**254**	P	**P**	**16 57 51.8**	**+0.6**
SLVN				IAmb	IAmb	16 57 54.3	
	comp=Z,136nm,1.1s						
SLVN				IAMs_20	IAMs_20	17 18 22.3	
	comp=Z,6µm,20.0s						
TLCB	**Telegraph Cove**	**49.06**	**56**	P	**P**	**16 57 58.2**	**+1.2**
TLCB				IAmb	IAmb	16 58 10.7	
	comp=Z,204nm,1.4s						
RES	**Resolute Bay**	**49.17**	**19**	P	**P**	**16 57 57.8**	**+0.3**
RES				pmax	pmax		
	comp=Z,356nm,1.5s						
RES	**Resolute Bay**	**49.17**	**19**	⇑P	**P**	**16 57 57.9**	**+0.3**
RES	**Resolute Bay**	**49.17**	**19**	P	**P**	**16 57 57.8**	**+0.3**
RES				IAmb	IAmb	16 57 60.0	
	comp=Z,356nm,1.4s						
YKA	**Yellowknife Ar**	**49.24**	**38**	P	**P**	**16 57 59.0**	**+0.7**
	comp=Z,173nm,1.1s,baz=302,slow=6.4,SNR=113						
YKA	**Yellowknife Ar**	**49.24**	**38**	P	**P**	**16 57 58.7**	**+0.4**
YKA	**Yellowknife Ar**	**49.24**	**38**	P	**P**	**16 57 58.7**	**+0.4**
YKA				pP	**pP**	**16 58 09.7**	**0.0**
LKP	**Lekhapani**	**49.42**	**267**	⇑*i*P	**P**	**16 58 01.7**	**+1.6**
LKP				IAmb	IAmb	16 58 05.8	
	comp=Z,195nm,0.7s						
DIBR	**DIBRUGARH**	**49.96**	**268**	*e*P	**P**	**16 58 07.3**	**+3.1**
DIBR				IAmb	IAmb	16 58 08.3	
	comp=Z,136nm,0.6s						
CBB	**Campbell River**	**50.13**	**56**	P	**P**	**16 58 05.7**	**+0.4**
TDK	**Taldyqorghan**	**50.26**	**296**	*e*P	**P**	**16 58 05.4**	**-0.9**
	comp=Z,70nm,0.6s,baz=296						
TDK				*e*LR	LR	17 17 59.6	
	comp=Z,5µm,18.3s,baz=296						
TDK	**Taldyqorghan**	**50.26**	**296**	*e*P	**P**	**16 58 05.4**	**-0.9**
TDK				pmax	pmax		
	comp=Z,70nm,0.6s						
TDK				MLR	MLR		
	comp=Z,5µm,18.0s						
NOR	**Nord**	**50.33**	**358**	*e*P	**P**	**16 58 05.7**	**-0.7**
NOR	**Nord**	**50.33**	**358**	⇑P	**P**	**16 58 06.7**	**+0.4**
MANU	**Manus Island**	**50.43**	**189**	P	**P**	**16 58 08.1**	**+0.3**
PDGK	**Podgornoye**	**50.51**	**294**	P	**P**	**16 58 06.2**	**-2.2**
BRVK	**Borovoye**	**50.61**	**309**	*c i*P	**P**	**16 58 07.8**	**-1.0**
BRVK				pmax	pmax		
	comp=Z,100nm,0.7s						
BRVK				MLR	MLR		
	comp=Z,14µm,17.0s						
BRVK	**Borovoye**	**50.61**	**309**	P	**P**	**16 58 08.9**	**+0.1**
BRVK	**Borovoye**	**50.61**	**309**	⇑P	**P**	**16 58 07.8**	**-1.0**
BRVK	**Borovoye**	**50.61**	**309**	*e*P	**P**	**16 58 07.8**	**-1.0**
BRVK	**Borovoye**	**50.61**	**309**	P	**P**	**16 58 08.4**	**-0.4**
BRVK				IAmb	IAmb	16 58 10.7	
	comp=Z,97nm,0.7s						
OZB	**Mount Ozzard**	**50.62**	**57**	P	**P**	**16 58 09.2**	**+0.2**
OZB				IAmb	IAmb	16 58 22.9	
	comp=Z,307nm,1.4s						
SHLS	**Shalkode**	**50.63**	**294**	*e*P	**P**	**16 58 05.0**	**-4.3**
	comp=Z,92nm,2.6s,baz=293						
SHLS	**Shalkode**	**50.63**	**294**	*e*P	**P**	**16 58 04.9**	**-4.3**
SHLS				pmax	pmax		
	comp=Z,92nm,2.6s						
UZB	**Uzynbulak**	**50.90**	**294**	*e*P	**P**	**16 58 09.3**	**-2.0**
	comp=Z,54nm,2.2s,baz=294						
UZB	**Uzynbulak**	**50.90**	**294**	*e*P	**P**	**16 58 09.3**	**-2.0**
UZB				pmax	pmax		
	comp=Z,54nm,2.2s						
BRZS	**Berezniki**	**50.92**	**305**	*e*P	**P**	**16 58 10.0**	**-1.2**
	comp=Z,35nm,0.8s,baz=304						
BRZS	**Berezniki**	**50.92**	**305**	*e*P	**P**	**16 58 10.0**	**-1.2**
BRZS				pmax	pmax		
	comp=Z,35nm,0.8s						
KPKS	**Kokpek**	**50.93**	**295**	*e*P	**P**	**16 58 09.1**	**-2.4**
	comp=Z,57nm,2.1s,baz=294						
KPKS	**Kokpek**	**50.93**	**295**	*e*P	**P**	**16 58 09.0**	**-2.4**
KPKS				pmax	pmax		
	comp=Z,57nm,2.1s						
ITAN	**ITANAGAR**	**50.97**	**268**	*e*P	**P**	**16 58 13.0**	**+1.2**
MOKO	**MOKOCHONG**	**50.98**	**267**	*e*P	**P**	**16 58 13.1**	**+1.0**
MOKO				IAmb	IAmb	16 58 16.5	
	comp=Z,278nm,1.1s						
LSA	**Lhasa**	**51.03**	**273**	P	**P**	**16 58 14.3**	**+1.5**
LSA				S	**S**	**17 05 28.3**	**+0.7**
LSA				LR	LR		
	comp=Z,9µm,20.2s						
LSA				LR	LR		
	comp=Z,9µm,16.9s						
LSA	**Lhasa**	**51.03**	**273**	P	**P**	**16 58 13.4**	**+0.6**
LSA				pmax	pmax		
	comp=Z,54nm,0.8s						
LSA				MLR	MLR		
	comp=Z,5µm,22.0s						
LSA	**Lhasa**	**51.03**	**273**	P	**P**	**16 58 13.4**	**+0.6**
LSA				IAMs_20	IAMs_20	17 20 51.6	
	comp=Z,5µm,22.0s						
ARXS	**Arharly**	**51.04**	**296**	*e*P	**P**	**16 58 13.3**	**+1.1**
KBS	**Kingsbay**	**51.16**	**351**	P	**P**	**16 58 12.0**	**-0.6**
KBS				pmax	pmax		
	comp=Z,120nm,1.4s						
KBS				MLR	MLR		
	comp=Z,4µm,22.0s						
KBS	**Kingsbay**	**51.16**	**351**	*e*P	**P**	**16 58 12.7**	**+0.1**
KBS	**Kingsbay**	**51.16**	**351**	P	**P**	**16 58 11.9**	**-0.6**
KBS	**Kingsbay**	**51.16**	**351**	IAMs_20	IAMs_20	17 18 17.2	
	comp=Z,5µm,22.0s						
SPA0	**Spitsbergen Ar**	**51.31**	**350**	*e*P	**P**	**16 58 14.1**	**+0.4**
SPITS	**Spitsbergen Ar**	**51.31**	**350**	LR	LR	17 22 19.4	
	comp=Z,3µm,18.1s,baz=40,slow=39						
SPITS	**Spitsbergen Ar**	**51.31**	**350**	P	**P**	**16 58 13.0**	**-0.7**
SPITS				pmax	pmax		
	comp=Z,91nm,1.3s						
SPB2	**Spitsbergen Ar**	**51.31**	**350**	P	**P**	**16 58 13.0**	**-0.7**
SATY	**Saty**	**51.32**	**294**	*e*P	**P**	**16 58 13.3**	**-1.2**
	baz=294						
SATY	**Saty**	**51.32**	**294**	*e*P	**P**	**16 58 13.2**	**-1.2**
KOHI	**KOHIMA**	**51.66**	**267**	⇑*i*P	**P**	**16 58 18.0**	**+0.9**
KOHI				IAmb	IAmb	16 58 20.9	
	comp=Z,556nm,1.3s						
BAKI	**Biak**	**51.71**	**203**	P	**P**	**16 58 19.5**	**+2.1**
	comp=Z,4µmcomp=Z,221nm,1.1s						
LLLB	**Lillooet**	**51.74**	**54**	P	**P**	**16 58 17.8**	**+0.4**
LLLB				IAmb	IAmb	16 58 19.9	
	comp=Z,182nm,1.1s						
UBPT	**Khong Chiam**	**51.74**	**248**	P	**P**	**16 58 18.1**	**+0.4**
UBPT				IAmb	IAmb	16 58 21.1	
	comp=Z,323nm,1.4s						
MDOK	**Medeo**	**52.09**	**295**	*e*P	**P**	**16 58 18.6**	**-1.7**
	baz=295						
MDOK				*e*LR	LR	17 21 07.2	
	comp=Z,8µm,17.0s,baz=295						
MDOK	**Medeo**	**52.09**	**295**	*e*P	**P**	**16 58 18.5**	**-1.7**
MDOK				MLR	MLR		
	comp=Z,8µm,17.0s						
KUU	**Kurty**	**52.11**	**296**	*e*P	**P**	**16 58 18.0**	**-2.2**
	baz=296						
KUU	**Kurty**	**52.11**	**296**	*e*P	**P**	**16 58 17.9**	**-2.2**
AAA	**Alma-Ata**	**52.15**	**295**	*e*P	**P**	**16 58 19.9**	**-0.6**
	baz=295						
AAA				*e*LR	LR	17 20 56.6	
	comp=Z,9µm,16.9s,baz=295						
AAA	**Alma-Ata**	**52.15**	**295**	*e*P	**P**	**16 58 19.9**	**-0.6**
AAA				MLR	MLR		
	comp=Z,9µm,17.0s						
AAA	**Alma-Ata**	**52.15**	**295**	*e*P	**P**	**16 58 19.9**	**-0.6**
TNSS	**Tian-Shan**	**52.22**	**295**	*e*P	**P**	**16 58 18.9**	**-2.6**
	baz=294						
RABL	**Rabaul**	**52.23**	**183**	P	**P**	**16 58 21.0**	**-0.3**
RABL				IAmb	IAmb	16 58 23.4	
	comp=Z,261nm,1.2s						
RABL	**Rabaul**	**52.23**	**183**	P	**P**	**16 58 22.5**	**+1.2**
A04D	**Lummi Island**	**52.30**	**56**	P	**P**	**16 58 22.5**	**+1.0**
	baz=303						
SRPI	**Serui, Papua**	**52.33**	**203**	P	**P**	**16 58 24.2**	**+2.2**
	comp=Z,2µmcomp=Z,2µmcomp=Z,62nm,1.7s						
NLWA	**Neilton Lookou**	**52.38**	**58**	⇓P	**P**	**16 58 23.8**	**+1.7**
NLWA	**Neilton Lookou**	**52.38**	**58**	P	**P**	**16 58 21.7**	**-0.5**
NLWA				IAmb	IAmb	16 58 37.1	
	comp=Z,384nm,1.4s						
HSPB	**Hornsund (broa**	**52.39**	**349**	*e*P	**P**	**16 58 22.4**	**+0.7**
TULEG	**Thule**	**52.51**	**12**	⇑*i*P	**P**	**16 58 21.9**	**-0.7**
TULEG				IAmb	IAmb	16 58 23.4	
	comp=Z,325nm,1.4s						
TULEG	**Thule**	**52.51**	**12**	⇑P	**P**	**16 58 21.9**	**-0.7**
TULEG	**Thule**	**52.51**	**12**	P	**P**	**16 58 21.6**	**-1.1**
TULEG				IAmb	IAmb	16 58 23.8	
	comp=Z,318nm,1.4s						
TULEG				IAMs_20	IAMs_20	17 21 56.9	
	comp=Z,4µm,20.0s						
WISH	**Wishkah**	**52.59**	**58**	P	**P**	**16 58 25.2**	**+1.7**
TNTI	**Ternate**	**52.71**	**215**	P	**P**	**16 58 25.1**	**+0.2**
D03D	**Eldon**	**52.74**	**58**	P	**P**	**16 58 26.0**	**+1.2**
	baz=304,SNR=16						
BTLS	**Baital**	**52.82**	**299**	*e*P	**P**	**16 58 23.1**	**-2.3**
	baz=298						
BTLS	**Baital**	**52.82**	**299**	*e*P	**P**	**16 58 23.1**	**-2.3**
SWI	**Sorong**	**52.85**	**209**	P	**P**	**16 58 27.0**	**+1.2**
	comp=Z,4µmcomp=Z,5µmcomp=Z,229nm,2.1s						
SIJI	**Sorong**	**52.85**	**209**	P	**P**	**16 58 25.1**	**-0.7**
	comp=Z,47nm,0.7s,baz=12,slow=8.3,SNR=60						
B05A	**Bryant**	**52.89**	**56**	P	**P**	**16 58 27.0**	**+1.1**
	baz=304,SNR=15						
E03A	**Lebam**	**53.02**	**59**	P	**P**	**16 58 27.8**	**+0.9**
E03A				IAmb	IAmb	16 58 40.9	
	comp=Z,334nm,1.2s						
B06A	**Marblemount**	**53.09**	**56**	P	**P**	**16 58 27.6**	**+0.3**
B06A				IAmb	IAmb	16 58 40.8	
	comp=Z,330nm,1.4s						
ULHL	**Ulahol**	**53.10**	**295**	P	**P**	**16 58 27.9**	**+0.1**
	SNR=12						
TKM2	**Tokmak 2**	**53.10**	**296**	P	**P**	**16 58 27.8**	**0.0**
	SNR=17						
TKM2	**Tokmak 2**	**53.10**	**296**	*i* P	**P**	**16 58 26.6**	**-1.2**
TKM2				pmax	pmax		
	comp=Z,52nm,0.9s						
SHL	**Shillong**	**53.25**	**268**	*e*P	**P**	**16 58 28.7**	**-0.3**
CHTO	**Chiang Mai**	**53.27**	**257**	P	**P**	**16 58 29.9**	**+0.9**
CHTO				pmax	pmax		
	comp=Z,268nm,1.2s						
CHTO				MLR	MLR		
	comp=Z,6µm,19.0s						
CHTO	**Chiang Mai**	**53.27**	**257**	P	**P**	**16 58 30.4**	**+1.4**
CHTO				P	**P**	**16 58 30.4**	**+1.4**
CHTO	**Chiang Mai**	**53.27**	**257**	⇑P	**P**	**16 58 30.1**	**+1.1**
CHTO	**Chiang Mai**	**53.27**	**257**	P	**P**	**16 58 29.9**	**+0.9**
CHTO				IAmb	IAmb	16 58 32.1	
	comp=Z,268nm,1.1s						
CHTO	**Chiang Mai**	**53.27**	**257**	P	**P**	**16 58 30.2**	**+1.1**
SVE	**Sverdlovsk**	**53.32**	**317**	*e*P	**P**	**16 58 29.0**	**+0.1**
SVE				*e*S	**S**	**17 05 52.2**	**-5.2**
SVE				pmax	pmax		
	comp=Z,46nm,0.8s						
SVE				MLR	MLR		
	comp=Z,7µm,23.0s						
SVE	**Sverdlovsk**	**53.32**	**317**	*e*P	**P**	**16 58 29.0**	**+0.1**
SGDS	**Sogindy**	**53.38**	**297**	*e*P	**P**	**16 58 26.3**	**-3.3**
	comp=Z,75nm,2.3s,baz=296						
CM31	**Chiang Mai Arr**	**53.53**	**256**	P	**P**	**16 58 32.5**	**+1.6**
	SNR=73						
CM31	**Chiang Mai Arr**	**53.53**	**256**	P	**P**	**16 58 31.7**	**+0.8**
CM31				IAmb	IAmb	16 58 34.3	
	comp=Z,269nm,1.3s						
CMAR	**Chiang Mai Arr**	**53.53**	**256**	P	**P**	**16 58 32.3**	**+1.4**
	comp=Z,70nm,0.9s,baz=32,slow=7.1,SNR=306						
CMAR				ScP	**ScP**	**17 03 32.7**	**+1.0**
	comp=Z,1.6nm,0.8s,baz=21,slow=3.8,SNR=3.3						
CMAR				LR	LR	17 23 04.9	
	comp=Z,5µm,18.2s,baz=90,slow=38						
CMAR				PKPPKP	**P'P'df**	**17 28 53.5**	**+1.7**
	comp=Z,1.0nm,0.9s,baz=254,slow=4.3,SNR=5.4						
CMAR	**Chiang Mai Arr**	**53.53**	**256**	P	**P**	**16 58 32.0**	**+1.1**
D05A	**Enumclaw**	**53.55**	**57**	P	**P**	**16 58 31.4**	**+0.6**
USP	**Ospenovka**	**53.56**	**297**	P	**P**	**16 58 31.8**	**+0.8**
	SNR=36						
CHMS	**Chumysh**	**53.57**	**296**	P	**P**	**16 58 27.4**	**-3.5**
	SNR=15						
E04D	**Cinebar**	**53.58**	**58**	P	**P**	**16 58 32.2**	**+1.2**
	baz=305,SNR=20						
F04D	**Rainier, OR**	**53.60**	**59**	P	**P**	**16 58 33.2**	**+2.1**
	baz=305						
NEEM	**North Greenlan**	**53.60**	**7**	*i* P	**P**	**16 58 30.1**	**-1.0**
NEEM				IAmb	IAmb	16 58 32.5	
	comp=Z,147nm,0.9s						
PBKT	**Sadao Pong**	**53.61**	**253**	P	**P**	**16 58 31.6**	**+0.1**
KBK	**Karagaybulak**	**53.65**	**296**	P	**P**	**16 58 30.9**	**-0.8**
	SNR=14						
PNT	**Penticton**	**53.67**	**54**	⇑P	**P**	**16 58 31.9**	**+0.3**
FRU1	**Bishkek**	**53.75**	**296**	P	**P**	**16 58 32.5**	**+0.1**
FRU1				pmax	pmax		
	comp=Z,79nm,1.2s						
FRU1	**Bishkek**	**53.75**	**296**	P	**P**	**16 58 32.5**	**+0.1**
C06D	**Leavenworth**	**53.75**	**56**	P	**P**	**16 58 32.9**	**+0.7**
	baz=304						
LON	**Longmire**	**53.90**	**58**	P	**P**	**16 58 33.6**	**+0.2**
LON				pmax	pmax		
	comp=Z,55nm,1.1s						
LON	**Longmire**	**53.90**	**58**	P	**P**	**16 58 33.6**	**+0.2**
AAK	**Ala-Archa**	**53.93**	**296**	LR	LR	17 23 02.7	
	comp=Z,9µm,20.3s,baz=48,slow=38						
AAK	**Ala-Archa**	**53.93**	**296**	P	**P**	**16 58 34.3**	**+0.6**
	SNR=18						
AAK	**Ala-Archa**	**53.93**	**296**	*i* P	**P**	**16 58 33.0**	**-0.8**
	SNR=27						
AAK	**Ala-Archa**	**53.93**	**296**	*i* P	**P**	**16 58 33.4**	**-0.4**
AAK				pmax	pmax		
	comp=Z,74nm,0.8s						
AAK				MLR	MLR		
	comp=Z,26µm,22.0s						
AAK	**Ala-Archa**	**53.93**	**296**	P	**P**	**16 58 33.3**	**-0.5**
AAK				P	**P**	**16 58 33.3**	**-0.5**
AAK	**Ala-Archa**	**53.93**	**296**	⇑P	**P**	**16 58 34.2**	**+0.4**
AAK	**Ala-Archa**	**53.93**	**296**	*e*P	**P**	**16 58 33.4**	**-0.4**
AAK	**Ala-Archa**	**53.93**	**296**	P	**P**	**16 58 32.7**	**-1.1**

G03D	McMinnville, O	53.95	60	P	P	16 58 35.5	+1.9
	baz=305						
LBMI	Labuha	53.96	214	P	P	16 58 34.2	+0.2
	comp=Z,3µmcomp=Z,2µmcomp=Z,134nm,1.6s						
F04A	Amboy	54.02	59	P	P	16 58 34.5	+0.3
F04A				IAmb	IAmb	16 58 48.0	
	comp=Z,190nm,1.1s						
SPMM	Sapulut	54.08	229	P	P	16 58 37.0	+2.0
KMSI	Cibinong	54.24	219	P	P	16 58 36.6	+0.5
	comp=Z,2µmcomp=Z,157nm,1.0s						
I02E	Swisshome, OR	54.24	61	P	P	16 58 37.3	+1.5
	baz=306						
LTY	Liberty	54.26	57	P	P	16 58 36.1	+0.1
LTY				IAmb	IAmb	16 58 49.5	
	comp=Z,144nm,1.1s						
GTK	Tadong	54.28	272	*e*P	P	16 58 36.9	+0.4
COR	Corvallis	54.29	61	IAMs_20	IAMs_20	17 17 38.5	
	comp=Z,3µm,21.0s						
EKS2	Erkin-Say	54.35	296	P	P	16 58 36.4	-0.4
	SNR=23						
B08A	Colville Reser	54.37	55	P	P	16 58 36.9	+0.2
B08A				IAmb	IAmb	16 58 38.9	
	comp=Z,226nm,1.2s						
FAKI	Fak Fak	54.47	207	⇑P	P	16 58 37.6	-0.1
FAKI	Fak Fak	54.47	207	P	P	16 58 38.8	+1.1
	comp=Z,4µmcomp=Z,3µmcomp=Z,194nm,2.1s						
FAKI	Fak Fak	54.47	207	P	P	16 58 37.4	-0.3
FAKI				IAmb	IAmb	16 58 39.7	
	comp=Z,210nm,1.1s						
FAKI	Fak Fak	54.47	207	P	P	16 58 37.8	+0.1
ARU	Arti	54.49	317	LR	LR	17 23 26.2	
	comp=Z,5µm,21.4s,baz=39,slow=38						
ARU	Arti	54.49	317	*d i*P	P	16 58 36.6	-0.8
ARU				*PP	sP	16 58 52.0	-1.2
ARU				*SP	pP	16 59 01.4	+13
ARU						16 59 38.9	
ARU				PPP	PPP	17 01 49.4	
ARU				S	S	17 06 11.4	-1.8
ARU				pmax	pmax		
	comp=Z,77nm,0.7s						
ARU				MLR	MLR		
	comp=Z,6µm,22.0s						
ARU	Arti	54.49	317	⇓P	P	16 58 36.4	-1.1
ARU	Arti	54.49	317	*e*P	P	16 58 36.6	-0.8
ARU	Arti	54.49	317	P	P	16 58 36.0	-1.4
ARU				IAmb	IAmb	16 58 38.9	
	comp=Z,77nm,0.6s						
ARU				IAMs_20	IAMs_20	17 22 39.5	
	comp=Z,6µm,22.0s						
GTOI	Gorontalo	54.60	220	P	P	16 58 37.8	-0.8
	comp=Z,1µmcomp=Z,56nm,1.9s						
F05D	White Salmon	54.60	58	P	P	16 58 39.7	+1.3
	baz=306						
H04D	Lebanon	54.65	60	P	P	16 58 40.1	+1.3
	baz=306						
EDM	Edmonton	54.70	47	P	P	16 58 39.1	+0.1
EDM				pmax	pmax		
	comp=Z,478nm,1.2s						
EDM	Edmonton	54.70	47	P	P	16 58 39.1	+0.1
AML	Almayashu	54.71	296	P	P	16 58 40.0	+0.3
	SNR=12						
AML	Almayashu	54.71	296	*i* P	P	16 58 39.2	-0.5
	SNR=13						
J01E	Myrtle Point	54.74	62	P	P	16 58 41.2	+1.7
	baz=306						
I03D	Drain, OR	54.77	62	P	P	16 58 41.6	+2.0
	baz=306						
HOOD	Mount Hood Mea	54.81	59	P	P	16 58 39.6	-0.5
TAPN	Taplejung	54.85	273	*e*P	P	16 58 40.7	-0.1
	comp=Z,79nm,0.7s						
KSH	Kashi	54.87	292	P	P	16 58 43.4	+2.8
KSH				pP	pP	16 58 52.8	+1.1
KSH				sP	sP	16 58 57.3	+1.1
KSH				PcP	PcP	16 59 43.5	+1.2
KSH				PP	PP	17 00 48.3	+4.9
KSH				S	S	17 06 22.1	+3.1
KSH				ScS	ScS	17 08 27.8	+1.4
KSH				pmax	pmax		
	comp=Z,30nm,1.8s						
KSH				pmax	pmax		
	comp=Z,1µm,7.7s						
KSH				LR	LR		
	comp=Z,14µm,20.6s						
KSH				LR	LR		
	comp=Z,12µm,22.2s						
KSH				LR	LR		
	comp=Z,22µm,20.3s						
G05D	Wamic, OR	55.05	59	P	P	16 58 42.9	+1.2
	baz=306,SNR=13						
E07A	Sunnyside	55.12	57	P	P	16 58 41.5	-0.7
E07A				IAmb	IAmb	16 58 56.1	
	comp=Z,351nm,1.4s						
TOLI2	Tolitoli	55.15	222	P	P	16 58 42.2	-0.5
TOLI2	Tolitoli	55.15	222	P	P	16 58 43.1	+0.4
DBO	Dodson Butte	55.18	62	P	P	16 58 43.9	+1.2
DBO				IAmb	IAmb	16 58 57.6	
	comp=Z,276nm,1.2s						
K02D	Willamette Mer	55.18	63	P	P	16 58 44.2	+1.4
	baz=306,SNR=9.4						
MRSI	Marisa	55.20	221	P	P	16 58 42.8	-0.2
	comp=Z,4µmcomp=Z,6µmcomp=Z,330nm,2.0s						
DAG	Danmarks Havn	55.20	358	P	P	16 58 42.4	+0.1
DAG				pmax	pmax		
	comp=Z,42nm,1.4s						
DAG	Danmarks Havn	55.20	358	*i* P	P	16 58 41.8	-0.5
DAG				IAmb	IAmb	16 58 45.1	
	comp=Z,53nm,1.2s						
DAG	Danmarks Havn	55.20	358	⇓P	P	16 58 42.1	-0.2
C09A	Chrisman Ranch	55.27	55	P	P	16 58 43.1	-0.1
C09A				IAmb	IAmb	16 58 45.2	
	comp=Z,175nm,1.1s						
I04A	Tendick Farm,	55.27	61	P	P	16 58 44.5	+1.2
	baz=306,SNR=18						
D08A	Wollman Farm,	55.34	56	P	P	16 58 43.8	0.0
ODAN	Odare	55.39	273	*e*P	P	16 58 43.5	-1.1
	comp=Z,276nm,1.2s						
HAWA	Hanford	55.39	57	⇑P	P	16 58 44.7	+0.6
HAWA	Hanford	55.39	57	P	P	16 58 44.4	+0.3
HAWA				IAmb	IAmb	16 58 58.0	
	comp=Z,275nm,1.3s						
F07A	Phinny Hill Vi	55.46	58	P	P	16 58 43.7	-0.9
F07A				IAmb	IAmb	16 58 58.8	
	comp=Z,260nm,1.1s						
L02E	Cave Junction	55.53	63	P	P	16 58 46.9	+1.7
	baz=307,SNR=12						
I05D	Terrebonne, OR	55.57	60	P	P	16 58 46.5	+1.0
	baz=306,SNR=16						
E08A	Dider Farm, El	55.60	57	P	P	16 58 45.6	0.0
E08A				IAmb	IAmb	16 58 59.3	
	comp=Z,242nm,1.4s						
NEW	Newport	55.62	54	P	P	16 58 45.4	-0.4
NEW				pmax	pmax		
	comp=Z,165nm,1.3s						
NEW	Newport	55.62	54	P	P	16 58 46.3	+0.5
	baz=306,SNR=40						
NEW	Newport	55.62	54	P	P	16 58 45.4	-0.4
NEW				IAmb	IAmb	16 58 47.9	
	comp=Z,164nm,1.2s						
HUMO	Hull Mountain	55.65	62	⇑P	P	16 58 47.6	+1.6
HUMO	Hull Mountain	55.65	62	IAMs_20	IAMs_20	17 18 33.8	
	comp=Z,4µm,21.0s						
JIRN	Jiri	55.66	274	*e*P	P	16 58 46.4	-0.4
	comp=Z,230nm,1.0s						
DZA	Taraz	55.67	298	*e*P	P	16 58 44.0	-2.2
	baz=297						
DZA	Taraz	55.67	298	*e*P	P	16 58 44.0	-2.2
GUN	Gumba	55.70	275	*e*P	P	16 58 47.4	+0.4
KRMB	Red Mountain	55.73	64	P	P	16 58 45.9	-0.9
KRMB				IAmb	IAmb	16 59 01.6	
	comp=Z,226nm,1.2s						
LVZ	Lovozero	55.74	337	*i* P	P	16 58 44.0	-2.4
LVZ				pmax	pmax		
	comp=Z,123nm,1.2s						
LVZ				MLR	MLR		
	comp=Z,9µm,22.0s						
LVZ	Lovozero	55.74	337	⇑P	P	16 58 45.3	-1.1
LVZ	Lovozero	55.74	337	P	P	16 58 45.1	-1.2
J04D	Umpqua Nationa	55.77	61	P	P	16 58 48.7	+1.5
	baz=307,SNR=24						
SANI	Sanana	55.83	215	⇑P	P	16 58 46.7	-0.8
SANI	Sanana	55.83	215	P	P	16 58 46.5	-1.0
	comp=Z,3µmcomp=Z,3µmcomp=Z,207nm,1.7s						
SANI	Sanana	55.83	215	P	P	16 58 47.0	-0.5
RAMN	Ramite	55.86	273	*e*P	P	16 58 48.3	+0.3
	comp=Z,105nm,0.4s						
MSAI	Masohi	55.95	211	P	P	16 58 48.1	-0.3
	comp=Z,246nmcomp=Z,12nm,1.8s						
KK31	Karatay Array	56.02	299	*i* P	P	16 58 48.4	-0.3
KK31	Karatay Array	56.02	299	P	P	16 58 47.6	-1.1
KKAR	Karatay Array	56.02	299	P	P	16 58 47.7	-1.0
KKAR				pmax	pmax		
	comp=Z,26nm,1.1s						
KKAR	Karatay Array	56.02	299	⇑P	P	16 58 48.2	-0.5
KKAR	Karatay Array	56.02	299	P	P	16 58 47.0	-1.7
KKAR	Karatay Array	56.02	299	P	P	16 58 47.7	-1.0
KKAR				IAmb	IAmb	16 59 03.6	
	comp=Z,26nm,1.1s						
JCC	Jacoby Creek,	56.08	65	P	P	16 58 48.8	-0.3
E09A	Wood Farm, Sta	56.10	56	P	P	16 58 48.9	-0.2
E09A				IAmb	IAmb	16 59 02.9	
	comp=Z,381nm,1.3s						
PINE	Pine Mountain	56.13	60	P	P	16 58 50.8	+1.1
KKN	Kakani	56.18	275	*e*P	P	16 58 50.2	-0.1
	comp=Z,149nm,0.8s						
LUWI	Luwuk	56.21	219	⇑P	P	16 58 49.0	-1.3
LUWI	Luwuk	56.21	219	P	P	16 58 48.6	-1.6
	comp=Z,4µmcomp=Z,5µmcomp=Z,321nm,1.4s						
LUWI	Luwuk	56.21	219	P	P	16 58 49.3	-1.0
LUWI	Luwuk	56.21	219	P	P	16 58 50.2	0.0
KHMM	Horse Mountain	56.23	65	P	P	16 58 50.7	+0.4
KEV	Kevo	56.23	341	P	P	16 58 48.3	-1.4
KEV				pmax	pmax		
	comp=Z,20nm,1.0s						
KEV				MLR	MLR		
	comp=Z,8µm,21.0s						
KEV	Kevo	56.23	341	P	P	16 58 48.3	-1.4
MPSI	Mapaga	56.23	223	P	P	16 58 50.1	-0.3
	comp=Z,4µmcomp=Z,2µmcomp=Z,62nm,2.5s						
HAMF	Hammerfest	56.24	342	*e*P	P	16 58 49.4	-0.4
PKI	Pulchoki	56.24	275	*e*P	P	16 58 51.4	+0.6
	comp=Z,222nm,1.0s						
PKIN	Phulchoki	56.25	275	*e*P	P	16 58 50.7	-0.1
	comp=Z,83nm,0.6s						
J05D	Fort Rock, OR	56.26	61	P	P	16 58 52.3	+1.7
	baz=307,SNR=42						
L04D	Klamath Falls	56.27	63	P	P	16 58 51.9	+1.3
	baz=307,SNR=38						
YBH	Yreka Blue Hor	56.32	63	P	P	16 58 51.6	+0.7
YBH				pmax	pmax		
	comp=Z,295nm,1.2s						
YBH				MLR	MLR		
	comp=Z,3µm,22.0s						
YBH	Yreka Blue Hor	56.32	63	P	P	16 58 51.6	+0.7
YBH				IAmb	IAmb	16 59 05.9	
	comp=Z,295nm,1.1s						
YBH				IAMs_20	IAMs_20	17 18 53.6	
	comp=Z,3µm,22.0s						
K04D	Chiloquin, OR	56.35	62	P	P	16 58 52.6	+1.5
	baz=307,SNR=11						
G08A	Pilot Rock	56.37	58	P	P	16 58 51.5	+0.2
G08A				IAmb	IAmb	16 59 05.3	
	comp=Z,205nm,1.4s						
DMN	Daman	56.42	275	*e*P	P	16 58 52.5	+0.5
	comp=Z,225nm,0.8s						
M02C	Callahan	56.44	64	P	P	16 58 53.5	+1.7
	baz=307,SNR=23						
BRLS	Borolday	56.46	299	*e*P	P	16 58 51.8	-0.1
	baz=298						
BRLS	Borolday	56.46	299	*e*P	P	16 58 51.7	-0.1
GKN	Gorkha	56.47	276	*e*P	P	16 58 52.2	-0.1
	comp=Z,144nm,0.5s						
AAI	Ambon	56.53	212	P	P	16 58 52.6	+0.1
	comp=Z,6µmcomp=Z,4µmcomp=Z,231nm,1.4s						
APSI	Ampana	56.57	220	P	P	16 58 52.0	-0.8
	comp=Z,2µmcomp=Z,2µmcomp=Z,179nm,1.4s						
PRGR	Permogore	56.58	327	*e*P	P	16 58 50.4	-1.9
PRGR				*e**PP	sP	16 59 07.1	-1.0
PRGR				*e*		16 59 18.3	
PRGR				pmax	pmax		
	comp=Z,17nm,0.6s						
KMRM	Mail Ridge	56.63	65	P	P	16 58 53.3	+0.1
KMRM				IAmb	IAmb	16 59 08.3	
	comp=Z,275nm,1.2s						
BNDI	Bandanaira	56.72	210	⇑P	P	16 58 54.0	+0.1
BNDI	Bandanaira	56.72	210	P	P	16 58 55.1	+1.2
ARA0	ARCESS Array S	56.73	341	*e*P	P	16 58 52.1	-1.2
ARCES	ARCESS Array B	56.73	341	P	P	16 58 52.4	-1.0
	comp=Z,12nm,0.8s,baz=51,slow=7.9,SNR=25						
ARCES				LR	LR	17 27 11.2	
	comp=Z,9µm,20.9s,baz=40,slow=40						
ARCES	ARCESS Array B	56.73	341	P	P	16 58 52.4	-1.0
ARCES				pmax	pmax		
	comp=Z,58nm,1.4s						
ARCES	ARCESS Array B	56.73	341	P	P	16 58 52.4	-1.0
I07A	Izee	56.78	59	P	P	16 58 54.6	+0.3
I07A				IAmb	IAmb	16 59 08.7	
	comp=Z,230nm,1.2s						
N02D	Trinity Center	56.78	64	P	P	16 58 55.5	+1.3
	baz=308,SNR=24						
K05A	Summer Lake	56.80	61	P	P	16 58 55.2	+0.7
M04C	Macdoel	56.81	63	P	P	16 58 55.8	+1.4
	baz=308,SNR=27						
DANN	Dangsing	56.83	277	*e*P	P	16 58 55.7	+0.7
	comp=Z,324nm,0.6s						
WALA	Waterton Lakes	56.86	52	⇑P	P	16 58 55.4	+0.6
WALA	Waterton Lakes	56.86	52	P	P	16 58 54.9	+0.2
WALA				IAmb	IAmb	16 59 08.6	
	comp=Z,274nm,1.1s						
IUG	Iuzhnay	56.88	298	*e*P	P	16 58 54.0	-0.9
	baz=297						
IUG	Iuzhnay	56.88	298	*e*P	P	16 58 54.0	-0.9
F10A	Beach Ranch, E	56.93	56	⇑P	P	16 58 55.8	+0.6
F10A	Beach Ranch, E	56.93	56	P	P	16 58 55.5	+0.3
F10A				IAmb	IAmb	16 59 09.2	
	comp=Z,200nm,1.4s						
KIRV	Kirov	57.10	323	LR	LR	17 26 11.1	
	comp=Z,4µm,18.9s,baz=44,slow=39						
KIRV	Kirov	57.10	323	*c i*P	P	16 58 54.5	-1.5
WDC	Whiskeytown Da	57.12	64	P	P	16 58 56.8	+0.3
WDC				pmax	pmax		
	comp=Z,216nm,1.2s						
WDC	Whiskeytown Da	57.12	64	⇑P	P	16 58 57.6	+1.0
WDC	Whiskeytown Da	57.12	64	P	P	16 58 56.8	+0.3
WDC				IAmb	IAmb	16 59 11.1	
	comp=Z,216nm,1.2s						
O02D	Mt. Diablo Mer	57.22	65	P	P	16 58 58.8	+1.5
	baz=308,SNR=17						
KOLN	Koldanda	57.31	276	*e*P	P	16 58 58.4	+0.1
	comp=Z,261nm,0.9s						
UPNV	Upernavik	57.44	10	⇑*i*P	P	16 58 57.3	-1.0
UPNV				IAmb	IAmb	16 58 59.4	
	comp=Z,131nm,0.9s						
JTMT	Jette	57.46	53	P	P	16 58 59.2	+0.2
JTMT				IAmb	IAmb	16 59 14.4	
	comp=Z,351nm,1.4s						
PYUN	Piuthan	57.50	277	*e*P	P	16 59 00.1	+0.5
	comp=Z,330nm,1.0s						
BMO	Blue Mountains	57.57	57	P	P	16 58 59.9	+0.2
BMO				pmax	pmax		
	comp=Z,140nm,1.1s						
BMO				MLR	MLR		
	comp=Z,2µm,20.0s						
BMO	Blue Mountains	57.57	57	P	P	16 58 59.9	+0.2
BMO				IAmb	IAmb	16 59 02.5	
	comp=Z,140nm,1.1s						
HNR	Honiara	57.62	173	P	P	16 59 00.1	0.0
	comp=Z,19nm,0.5s,baz=26,slow=22,SNR=4.9						
HNR	Honiara	57.62	173	P	P	16 58 59.9	-0.2
HNR				pmax	pmax		
	comp=Z,391nm,1.4s						
HNR				MLR	MLR		
	comp=Z,4µm,21.0s						
HNR	Honiara	57.62	173	P	P	16 58 59.9	-0.2
HNR	Honiara	57.62	173	IAMs_20	IAMs_20	17 20 06.3	
	comp=Z,4µm,21.0s						
HNR	Honiara	57.62	173	P	P	16 59 02.8	+2.7
KTK1	Kautokeino	57.64	341	*e*P	P	16 58 58.6	-1.2
MOD	Modoc Plateau	57.65	62	P	P	16 59 00.7	+0.3
BTK	Batken	57.69	296	P	P	16 58 59.5	-1.1
BTK				pmax	pmax		
	comp=Z,33nm,0.6s						
BTK	Batken	57.69	296	P	P	16 58 59.5	-1.1
DBG	Daneborg	57.70	358	⇑P	P	16 59 00.4	+0.3
PMG	Port Moresby	57.73	188	P	P	16 59 01.4	+0.5
	comp=Z,28nm,0.9s,baz=5.6,slow=7.3,SNR=45						
PMG				PKPPKP	P'P'df	17 28 54.3	+15
	comp=Z,1.2nm,0.3s,baz=48,slow=2.3,SNR=5.8						
PMG	Port Moresby	57.73	188	⇑P	P	16 59 00.9	-0.1
PMG	Port Moresby	57.73	188	P	P	16 59 00.7	-0.2
PMG	Port Moresby	57.73	188	P	P	16 59 01.7	+0.8
PMG	Port Moresby	57.73	188	P	P	16 59 01.9	+1.0
O03E	Paynes Creek	57.74	64	P	P	16 59 01.5	+0.5
	baz=308,SNR=54						
HOPS	Hopland Field	57.78	66	P	P	16 59 01.3	+0.1
HOPS				IAmb	IAmb	16 59 15.5	
	comp=Z,297nm,1.4s						
JETT	Jettan, Norway	57.78	343	*e*P	P	16 59 00.7	-0.1
J08A	Circle Bar Ran	57.82	59	P	P	16 59 01.4	-0.2
TRO	Tromso	58.01	343	*e*P	P	16 59 02.3	0.0
GDXM	Geysers	58.06	66	P	P	16 59 03.9	+0.7
GDXM				IAmb	IAmb	16 59 18.8	
	comp=Z,314nm,1.4s						
AB31	Akbulak array	58.12	310	*e*P	P	16 59 02.4	-1.0
ABKAR	Akbulak array	58.12	310	⇑P	P	16 59 01.8	-1.6
ABKAR	Akbulak array	58.12	310	P	P	16 59 01.6	-1.8
PLID	Pearl Lake	58.15	57	P	P	16 59 03.8	-0.2
SMKI	Samarinda	58.17	225	P	P	16 59 05.7	+1.6
SBUM	Sibu	58.19	232	P	P	16 59 06.0	+1.7
MSO	Missoula	58.21	54	P	P	16 59 05.0	+0.8
	baz=308,SNR=71						
MSO	Missoula	58.21	54	P	P	16 59 04.4	+0.2
WVOR	Wild Horse Val	58.29	60	P	P	16 59 05.1	+0.2
WVOR				pmax	pmax		
	comp=Z,419nm,1.5s						
WVOR	Wild Horse Val	58.29	60	⇑P	P	16 59 05.9	+1.0
WVOR	Wild Horse Val	58.29	60	P	P	16 59 05.0	+0.2
AKTO	Aktyubinsk	58.37	312	LR	LR	17 26 41.1	
	comp=Z,5µm,18.1s,baz=49,slow=39						
AKTO				PKPPKP		17 28 50.4	
	comp=Z,1.9nm,0.8s,baz=337,slow=2.8,SNR=4.3						
AKTO	Aktyubinsk	58.37	312	P	P	16 59 04.5	-0.6
ORV	Oroville	58.38	65	P	P	16 59 05.2	-0.2
ORV				pmax	pmax		
	comp=Z,202nm,1.3s						
ORV	Oroville	58.38	65	P	P	16 59 05.2	-0.2
ORV				IAmb	IAmb	16 59 19.0	
	comp=Z,202nm,1.3s						
BOK	Bokaro	58.45	271	⇑*i*P	P	16 59 06.8	+0.7
GAR	Garm	58.65	295	P	P	16 59 06.0	-1.4
GAR				IAmb	IAmb	16 59 36.4	
	comp=Z,124nm,0.9s						
NUUG	Nuugaatsiaq	58.94	10	*e*P	P	16 59 07.2	-1.6
FFC	Flin Flon	59.08	41	P	P	16 59 10.2	+0.2
FFC				pmax	pmax		
	comp=Z,315nm,1.2s						
FFC				MLR	MLR		
	comp=Z,3µm,21.0s						
FFC	Flin Flon	59.08	41	⇑P	P	16 59 10.9	+0.9
FFC				⇑P	P	16 59 11.0	+1.0
FFC	Flin Flon	59.08	41	P	P	16 59 10.2	+0.2
FFC	Flin Flon	59.08	41	IAMs_20	IAMs_20	17 24 56.3	
	comp=Z,3µm,21.0s						
SUMG	Summit	59.17	4	P	P	16 59 10.4	-0.4
SUMG				pmax	pmax		
	comp=Z,169nm,0.9s						
SUMG	Summit	59.17	4	⇑*i*P	P	16 59 11.1	+0.3
SUMG				IAmb	IAmb	16 59 12.5	
	comp=Z,629nm,1.6s						
SUMG	Summit	59.17	4	⇑P	P	16 59 10.7	-0.1
SUMG	Summit	59.17	4	P	P	16 59 10.4	-0.4
SUMG				IAmb	IAmb	16 59 13.6	
	comp=Z,169nm,0.9s						
DHRM	DHARAMSHALA	59.19	285	*e*P	P	16 59 11.2	-0.2
DHRM				IAmb	IAmb	16 59 14.6	
	comp=Z,104nm,0.8s						
TTSI	Tana Toraja	59.27	221	P	P	16 59 10.5	-1.3
	comp=Z,3µmcomp=Z,1µmcomp=Z,27nm,1.3s						
KLMR	Klimovskoe	59.27	329	*e*P	P	16 59 08.9	-2.3
KLMR				*e**PP	sP	16 59 26.6	-0.4
KLMR				*e**SP	pP	16 59 35.9	+13
KLMR				*e*		17 01 25.2	
KLMR				*e*S	S	17 07 11.4	-4.6
KLMR				*e*SS	SS	17 11 05.5	-4.6
KLMR				pmax	pmax		
	comp=Z,48nm,0.8s						
KLMR				MLR	MLR		
	comp=Z,5µm,18.0s						
KLMR	Klimovskoe	59.27	329	*e*P	P	16 59 08.9	-2.3
KLMR				AMP		16 59 13.5	
	comp=Z,48nm,0.8s						
KLMR				*e*pP	sP	16 59 26.6	-0.4
KLMR				*e*sP	pP	16 59 36.0	+13
KLMR				*e*PP	PP	17 01 25.2	+3.3
KLMR				*e*PcS	PcS	17 03 10.1	-51
KLMR				*e*PcS	PcS	17 03 10.1	-51
KLMR				*e*ScP	ScP	17 03 29.8	-27
KLMR				*e*S	S	17 07 11.5	-4.6
KLMR				*e*S	S	17 07 11.5	-4.6
KLMR				*e*SS	SS	17 11 05.6	-4.6
KLMR				*e*SS	SS	17 11 05.6	-4.6
KLMR				*e*SSS	SSS	17 14 04.0	
KLMR				*e*SSS	SSS	17 14 04.0	
KLMR				LQ	LQ	17 20 28.8	
KLMR				LQ	LQ	17 20 28.8	
KLMR				LR	LR	17 22 46.9	
KLMR				AMP		17 28 09.8	
	comp=Z,5µm,17.8s						
MFID	Camas Ranch	59.29	58	P	P	16 59 11.9	+0.1
DDI	Dehra Dun	59.30	282	*e*P	P	16 59 10.9	-1.0
SMLA	Simla	59.35	284	*e*P	P	16 59 11.2	-0.9
HRY	Holter Researc	59.41	53	P	P	16 59 12.6	0.0
MPK	Martis Peak	59.43	64	P	P	16 59 13.2	+0.1
SAUI	Saumlaki	59.54	207	⇑P	P	16 59 14.9	+1.3
SAUI	Saumlaki	59.54	207	P	P	16 59 14.0	+0.4
	comp=Z,6µmcomp=Z,7µmcomp=Z,566nm,1.2s						
SAUI	Saumlaki	59.54	207	P	P	16 59 14.0	+0.4
SAUI	Saumlaki	59.54	207	P	P	16 59 15.3	+1.7
PAHR	Pah Rah Range	59.56	63	P	P	16 59 13.9	+0.2
CHGR	Chuyangaron	59.57	295	P	P	16 59 12.3	-1.5
CHGR				IAmb	IAmb	16 59 31.5	
	comp=Z,138nm,1.0s						
FCC	Fort Churchill	59.57	34	P	P	16 59 13.3	0.0
FCC				pmax	pmax		
	comp=Z,437nm,1.3s						
FCC	Fort Churchill	59.57	34	P	P	16 59 13.3	0.0
EMB	Emerald Bay	59.59	64	P	P	16 59 14.2	+0.1
LRM	Limekiln Ridge	59.65	54	P	P	16 59 14.4	0.0
VCNR	Virginia City	59.66	64	P	P	16 59 14.4	-0.1
VCNR				IAmb	IAmb	16 59 28.9	
	comp=Z,229nm,1.2s						
EGMT	Eagleton	59.67	51	P	P	16 59 14.9	+0.6
	baz=310,SNR=15						
EGMT	Eagleton	59.67	51	P	P	16 59 14.6	+0.2
EGMT				IAMs_20	IAMs_20	17 27 12.5	
	comp=Z,3µm,19.0s						
MTKI	Muara Teweh, K	59.72	227	P	P	16 59 15.0	+0.1
	comp=Z,3µmcomp=Z,2µmcomp=Z,106nm,2.6s						
PNTR	Pine Nut	59.82	64	P	P	16 59 15.5	-0.2
DLMT	Dillon	59.86	54	P	P	16 59 15.8	0.0
HLID	Hailey	60.00	57	P	P	16 59 17.8	+1.1
	baz=310,SNR=68						
HLID	Hailey	60.00	57	P	P	16 59 16.9	+0.2
HLID				IAMs_20	IAMs_20	17 20 50.3	
	comp=Z,3µm,22.0s						
CMB	Columbia Colle	60.02	65	P	P	16 59 17.1	+0.3
CMB				pmax	pmax		
	comp=Z,287nm,1.4s						
CMB	Columbia Colle	60.02	65	P	P	16 59 17.1	+0.3
CMB				IAmb	IAmb	16 59 31.0	
	comp=Z,287nm,1.4s						
KSM	Kuching	60.03	233	P	P	16 59 19.0	+2.0
MCMT	McKenzie Canyo	60.06	55	P	P	16 59 17.4	+0.2
BCYI	Bear Canyon	60.08	56	P	P	16 59 17.4	0.0
YERR	Yerington	60.10	64	P	P	16 59 17.8	+0.2
SPSI	Sidrap Palu	60.12	221	P	P	16 59 17.2	-0.4
	comp=Z,4µmcomp=Z,2µmcomp=Z,110nm,1.3s						
STEI	Steigen	60.17	343	*e*P	P	16 59 17.3	0.0
SAO	San Andreas Ge	60.18	67	P	P	16 59 18.4	+0.5
SAO				pmax	pmax		
	comp=Z,221nm,1.4s						
SAO	San Andreas Ge	60.18	67	⇑P	P	16 59 19.6	+1.7
SAO	San Andreas Ge	60.18	67	P	P	16 59 18.4	+0.5
SAO				IAmb	IAmb	16 59 31.7	
	comp=Z,221nm,1.4s						
BOZ	Bozeman (W)	60.23	54	P	P	16 59 18.9	+0.6
BOZ				pmax	pmax		
	comp=Z,598nm,1.3s						
BOZ	Bozeman (W)	60.23	54	P	P	16 59 19.4	+1.1
	baz=310,SNR=183						
BOZ				S	S	17 07 30.8	+1.5
	baz=310						
BOZ	Bozeman (W)	60.23	54	P	P	16 59 18.9	+0.6
NIL	Nilore	60.23	288	P	P	16 59 18.1	-0.2

NIL				pmax	pmax		
	comp=Z,141nm,1.0s						
NIL				MLR	MLR		
	comp=Z,17µm,21.0s						
NIL	Nilore	60.23	288	P	P	16 59 18.1	-0.2
NIL				IAmb	IAmb	16 59 23.1	
	comp=Z,141nm,1.0s						
LOF	Lofoten	60.31	344	eP	P	16 59 18.6	+0.4
BNSI	Bone	60.36	220	P	P	16 59 18.5	-0.7
	comp=Z,3µmcomp=Z,202nm,1.2s						
BMN	Battle Mountai	60.38	61	P	P	16 59 20.2	+0.8
BMN				pmax	pmax		
	comp=Z,371nm,1.2s						
BMN	Battle Mountai	60.38	61	P	P	16 59 20.2	+0.8
JMIC	Jan Mayen	60.46	354	LR	LR	17 23 53.2	
	comp=Z,2µm,20.2s,baz=30,slow=34						
SRIT	Nakonsritamara	60.52	248	P	P	16 59 21.0	+0.6
SRIT				IAmb	IAmb	16 59 24.1	
	comp=Z,226nm,1.3s						
STKI	Sintang	60.60	231	P	P	16 59 22.4	+1.5
	comp=Z,3µmcomp=Z,119nm,1.2s						
FAUS	Fauske	60.64	343	eP	P	16 59 19.2	-1.2
KVN	Kaiserville	60.74	63	P	P	16 59 22.4	+0.5
KVN				pmax	pmax		
	comp=Z,424nm,1.3s						
KVN	Kaiserville	60.74	63	P	P	16 59 22.4	+0.5
RYN	Ryan	60.76	64	P	P	16 59 22.6	+0.6
RYN				IAmb	IAmb	16 59 36.4	
	comp=Z,268nm,1.2s						
QLMT	Earthquake Lak	60.83	54	P	P	16 59 23.1	+0.6
YHL	Hebgen Lake	60.95	54	P	P	16 59 24.0	+0.6
LHV	Little Huntoon	61.02	64	P	P	16 59 24.7	+1.2
NVAR	Mina Array Bea	61.02	64	P	P	16 59 24.7	+0.9
	comp=Z,65nm,0.8s,baz=294,slow=6.6,SNR=111						
NVAR				pP	pP	16 59 36.7	+1.1
	comp=Z,101nm,1.0s,baz=285,slow=4.7,SNR=14						
NVAR				LR	LR	17 21 35.0	
	comp=Z,2µm,21.9s,baz=300,slow=32						
NVAR				PKPPKP	P'P'df	17 28 45.7	+1.2
	comp=Z,0.6nm,0.5s,baz=132,slow=4.0,SNR=2.3						
NVAR	Mina Array Bea	61.02	64	P	P	16 59 24.3	+0.5
NVAR					pP	16 59 36.8	+1.1
KAPI	Kappang	61.06	220	P	P	16 59 24.3	+0.3
	comp=Z,64nm,1.1s,baz=58,slow=3.5,SNR=32						
KAPI	Kappang	61.06	220	⇑P	P	16 59 24.7	+0.7
KAPI				⇓P	P	16 59 25.0	+1.0
KAPI	Kappang	61.06	220	P	P	16 59 24.1	+0.1
KAPI				IAmb	IAmb	16 59 26.5	
	comp=Z,192nm,1.3s						
KAPI	Kappang	61.06	220	P	P	16 59 25.2	+1.2
MDPB	Devils Postpil	61.07	65	P	P	16 59 24.3	+0.1
MDPB				IAmb	IAmb	16 59 38.6	
	comp=Z,204nm,1.3s						
NV11	Mina Array Sit	61.11	64	P	P	16 59 24.6	+0.2
NV11				IAmb	IAmb	16 59 38.8	
	comp=Z,234nm,1.2s						
GCMT	Greycliff	61.16	53	P	P	16 59 23.9	-0.7
KBKI	Kotabaru	61.16	225	P	P	16 59 24.3	-0.4
	comp=Z,2µmcomp=Z,101nm,1.3s						
YHH	Holmes Hill	61.17	54	P	P	16 59 25.6	+0.7
BKSI	Bulukumba	61.18	220	P	P	16 59 24.7	-0.1
	comp=Z,4µmcomp=Z,2µmcomp=Z,106nm,1.0s						
YMR	Madison River	61.19	54	P	P	16 59 25.8	+0.9
MLAC	Mammoth, Mammo	61.22	65	P	P	16 59 26.5	+1.4
	baz=311,SNR=6.9						
DGPR	DIGLIPUR	61.31	257	eP	P	16 59 26.7	+1.0
YNR	Norris Junctio	61.31	54	P	P	16 59 27.0	+1.2
ELK	Elko	61.33	60	P	P	16 59 26.4	+0.5
ELK				pmax	pmax		
	comp=Z,176nm,1.3s						
ELK				MLR	MLR		
	comp=Z,2µm,20.0s						
ELK	Elko	61.33	60	P	P	16 59 26.4	+0.5
ELK				IAmb	IAmb	16 59 41.6	
	comp=Z,176nm,1.3s						
ILULI	Ilulissat	61.38	10	P	P	16 59 24.4	-1.1
ILULI	Ilulissat	61.38	10	⇑eP	P	16 59 25.0	-0.5
ILULI				IAmb	IAmb	16 59 26.9	
	comp=Z,153nm,0.9s						
ILULI	Ilulissat	61.38	10	P	P	16 59 24.4	-1.1
ILULI				IAmb	IAmb	16 59 27.2	
	comp=Z,148nm,0.8s						
YUF	Upper Falls	61.41	54	P	P	16 59 27.2	+0.8
YUF				IAmb	IAmb	16 59 46.5	
	comp=Z,182nm,1.3s						
LKWY	Lake	61.56	54	P	P	16 59 29.0	+1.5
LKWY				pmax	pmax		
	comp=Z,283nm,1.2s						
LKWY	Lake	61.56	54	P	P	16 59 29.0	+1.5
SCO	Scoresbysund	61.57	359	P	P	16 59 27.0	+0.2
SCO				pmax	pmax		
	comp=Z,69nm,1.2s						
SCO	Scoresbysund	61.57	359	eP	P	16 59 26.8	0.0
SCO				IAmb	IAmb	16 59 29.8	
	comp=Z,88nm,1.3s						
SCO	Scoresbysund	61.57	359	P	P	16 59 27.0	+0.2
H17A	Grant Village	61.58	54	P	P	16 59 30.2	+2.7
	baz=311,SNR=97						
H17A				S	S	17 07 52.6	+5.9
	baz=311						
H17A	Grant Village	61.58	54	P	P	16 59 29.3	+1.8
YMP	Mirror Lake Pl	61.58	54	P	P	16 59 28.6	+1.0
PAGB	Antelope Grade	61.59	67	P	P	16 59 27.9	+0.4
FLWY	Flagg Ranch	61.72	55	P	P	16 59 29.3	+0.8
VOG	Valley Oaks Go	61.73	66	P	P	16 59 29.2	+0.8
	baz=311						
BSSI	Bau Bau, Buton	61.76	219	P	P	16 59 28.6	-0.1
	comp=Z,3µmcomp=Z,2µmcomp=Z,143nm,1.3s						
KUDL	Kundal	61.76	281	eP	P	16 59 28.5	-0.2
RLMT	Red Lodge	61.81	53	P	P	16 59 30.5	+1.4
	baz=311,SNR=102						
RLMT				S	S	17 07 53.1	+3.6
	baz=311						
RLMT	Red Lodge	61.81	53	P	P	16 59 30.1	+1.1
RLMT				IAMs_20	IAMs_20	17 29 01.8	
	comp=Z,2µm,18.0s						
FXWY	Fox Creek	61.83	55	P	P	16 59 30.4	+1.2
KONS	Konsvik	61.83	343	eP	P	16 59 29.3	+0.8
XMAS	Kiritimati	61.86	122	P	P	16 59 30.5	+1.1
XMAS				IAmb	IAmb	16 59 43.9	
	comp=Z,282nm,1.4s						
MOR8	Moi Rana	61.86	343	eP	P	16 59 26.4	-2.4
TPH	Tonopah	61.90	63	P	P	16 59 30.2	+0.5
TPH				pmax	pmax		
	comp=Z,2µm,1.3s						
TPH	Tonopah	61.90	63	P	P	16 59 30.2	+0.5
MOOW	Moose Ponds	61.91	55	P	P	16 59 30.7	+1.0
MOOW				IAmb	IAmb	16 59 44.1	
	comp=Z,122nm,1.1s						
BBKI	Banjar Baru	61.94	226	P	P	16 59 30.3	+0.4
	comp=Z,5µmcomp=Z,256nm,1.5s						
TIN	Tinemaha, Big	61.96	65	P	P	16 59 31.0	+0.9
	baz=311						
TPAW	Teton Pass	61.97	55	P	P	16 59 31.1	+0.9
BELG	Belogornoye	61.99	318	LR	LR	17 29 45.3	
	comp=Z,4µm,18.1s,baz=43,slow=39						
BELG				PKPPKP	P'P'df	17 28 42.9	-0.9
	comp=Z,24nm,1.2s,baz=74,slow=13,SNR=4.0						
STOK	Stokkvaagen	62.00	343	eP	P	16 59 30.4	+0.7
SMMC	Simmler	62.01	67	P	P	16 59 31.3	+1.0
	baz=311,SNR=5.1						
ECR	Eagle Creek	62.02	56	P	P	16 59 31.7	+1.2
HVU	Hansel Valley	62.07	58	P	P	16 59 31.3	+0.5
HVU				pmax	pmax		
	comp=Z,278nm,1.4s						
HVU	Hansel Valley	62.07	58	P	P	16 59 31.3	+0.5
HVU				IAmb	IAmb	16 59 45.4	
	comp=Z,278nm,1.4s						
LOHW	Long Hollow	62.08	55	P	P	16 59 32.0	+1.1
SNOW	Snow King Moun	62.09	55	P	P	16 59 32.4	+1.4
REDW	Red Top Meadow	62.10	55	P	P	16 59 32.3	+1.2
DGMT	Dagmar	62.19	48	P	P	16 59 32.1	+0.8
	baz=312,SNR=38						
DGMT				S	S	17 07 56.0	+2.2
	baz=312						
DGMT	Dagmar	62.19	48	P	P	16 59 31.8	+0.5
LCH	Last Change Ra	62.19	64	P	P	16 59 32.1	+0.5
LCH				IAmb	IAmb	16 59 46.0	
	comp=Z,224nm,1.3s						
VES	Vestal, Richgr	62.23	66	P	P	16 59 31.8	+0.1
	baz=311,SNR=12						
KBL	Kabul	62.30	292	P	P	16 59 31.2	-1.3
KBL				pmax	pmax		
	comp=Z,143nm,1.5s						
KBL	Kabul	62.30	292	P	P	16 59 31.3	-1.2
	SNR=30						
KBL	Kabul	62.30	292	P	P	16 59 31.1	-1.3
AHID	Auburn Hatcher	62.36	56	P	P	16 59 33.4	+0.6
LAO	LASA Array	62.36	50	P	P	16 59 34.0	+1.5
	baz=312,SNR=10						
LAO	LASA Array	62.36	50	P	P	16 59 33.0	+0.4
LAO				IAMs_20	IAMs_20	17 29 05.2	
	comp=Z,3µm,19.0s						
PKM	Mcpherson Peak	62.41	68	P	P	16 59 33.8	+0.7
	baz=311,SNR=8.4						
CWC	Cottonwood Cre	62.45	65	P	P	16 59 33.9	+0.5
	baz=311						
KULM	Kulim	62.46	245	P	P	16 59 35.0	+1.5
JRMM	Jerantut	62.48	242	P	P	16 59 35.0	+1.4
BGU	Big Grassy Mou	62.48	59	P	P	16 59 34.0	+0.4
ICESG	Greenland Ices	62.55	6	⇑iP	P	16 59 34.0	+0.2
ICESG				IAmb	IAmb	16 59 35.3	
	comp=Z,1µm,1.6s						
PBA	Port Blair	62.56	256	eP	P	16 59 34.0	-0.2
SPUT	South Promonto	62.56	58	P	P	16 59 34.4	+0.3
R11A	Troy Canyon, C	62.69	62	P	P	16 59 35.6	+0.6
	baz=311,SNR=97						
R11A	Troy Canyon, C	62.69	62	P	P	16 59 35.2	+0.2
COEN	Coen	62.70	192	P	P	16 59 34.9	0.0
COEN				IAmb	IAmb	16 59 37.4	
	comp=Z,154nm,1.2s						
COEN	Coen	62.70	192	P	P	16 59 35.6	+0.7
	comp=Z,128nm,1.9s						
ISA	Isabella, Lake	62.72	66	P	P	16 59 34.7	-0.4
ISA				pmax	pmax		
	comp=Z,206nm,1.5s						
ISA	Isabella, Lake	62.72	66	P	P	16 59 34.7	-0.4
	baz=312,SNR=13						
ISA	Isabella, Lake	62.72	66	P	P	16 59 34.7	-0.4
ISA				IAmb	IAmb	16 59 48.4	
	comp=Z,206nm,1.5s						
SBC	Santa Barbara	62.76	68	P	P	16 59 36.5	+1.2
	baz=312						
ARVC	Arvin	62.85	67	P	P	16 59 36.1	+0.2
	baz=312,SNR=6.8						
PBKI	Pangkalan Bun	62.85	230	P	P	16 59 36.4	+0.3
	comp=Z,5µmcomp=Z,408nm,1.3s						
HWUT	Hardware Ranch	62.87	57	P	P	16 59 36.5	+0.4
HWUT				IAMs_20	IAMs_20	17 28 43.2	
	comp=Z,3µm,22.0s						
IPM	Ipoh	62.87	244	P	P	16 59 37.0	+0.7
SPR3	Spring Creek 3	63.00	61	P	P	16 59 37.9	+0.7
FIA1	FINESS Array S	63.06	335	P	P	16 59 36.0	-0.8
FIA1				IAmb	IAmb	16 59 48.6	
	comp=Z,186nm,1.5s						
FINES	FINESS Array B	63.06	335	P	P	16 59 35.6	-1.2
	comp=Z,45nm,0.6s,baz=36,slow=7.1,SNR=183						
FINES				PKPPKP	P'P'df	17 28 35.8	-6.8
	comp=Z,3.0nm,0.8s,baz=194,slow=5.2,SNR=2.6						
FINES				LR	LR	17 29 20.1	
	comp=Z,8µm,21.9s,baz=32,slow=38						
FINES	FINESS Array B	63.06	335	P	P	16 59 35.8	-1.0
DUG	Dugway, Tooele	63.09	59	P	P	16 59 38.4	+0.8
DUG				pmax	pmax		
	comp=Z,474nm,1.3s						
DUG				MLR	MLR		
	comp=Z,2µm,21.0s						
DUG	Dugway, Tooele	63.09	59	P	P	16 59 38.6	+1.0
	baz=312,SNR=111						
DUG				S	S	17 08 06.8	+1.2
	baz=312						
DUG	Dugway, Tooele	63.09	59	P	P	16 59 38.4	+0.8
SCZ2	Santa Cruz Isl	63.10	68	P	P	16 59 39.2	+1.6
	baz=312						
FURC	Furnace Creek,	63.17	65	P	P	16 59 38.9	+1.0
	baz=312,SNR=22						
BW06	Boulder Array	63.21	55	P	P	16 59 39.2	+0.8
	baz=312,SNR=147						
BW06				S	S	17 08 09.3	+2.2
	baz=312						
BW06	Boulder Array	63.21	55	P	P	16 59 38.6	+0.1
BW06				IAMs_20	IAMs_20	17 27 26.1	
	comp=Z,3µm,22.0s						
PD31	Pinedale Array	63.21	55	⇑P	P	16 59 39.0	+0.6
PD31				⇑s	pP	16 59 51.7	+1.5
PD31				⇓s	pP	16 59 52.3	+2.1
PD31	Pinedale Array	63.21	55	P	P	16 59 38.9	+0.4
PDAR	Pinedale Array	63.21	55	P	P	16 59 39.0	+0.6
	comp=Z,70nm,0.9s,baz=288,slow=1.8,SNR=220						
PDAR				pP	pP	16 59 51.8	+1.5
	comp=Z,153nm,1.0s,baz=311,slow=3.4,SNR=26						
PDAR				PKPPKP	P'P'df	17 28 37.7	-3.8
	comp=Z,1.0nm,0.6s,baz=157,slow=4.5,SNR=6.9						
PDAR	Pinedale Array	63.21	55	P	P	16 59 38.8	+0.4
PDAR					pP	16 59 51.1	+0.9
OSI	Osito Audit: C	63.26	67	P	P	16 59 39.4	+0.8
	baz=312,SNR=13						
OSI	Osito Audit: C	63.26	67	P	P	16 59 38.7	0.0
OSI				IAmb	IAmb	16 59 53.5	
	comp=Z,236nm,1.1s						
MMRI	Maumere	63.31	216	⇑P	P	16 59 38.9	-0.1
MMRI	Maumere	63.31	216	P	P	16 59 38.9	-0.1
	comp=Z,4µmcomp=Z,6µmcomp=Z,332nm,1.3s						
MMRI	Maumere	63.31	216	P	P	16 59 38.4	-0.6
MMRI	Maumere	63.31	216	P	P	16 59 39.9	+0.9
LRMC	Laurel Mtn Rad	63.33	66	P	P	16 59 40.1	+0.8
	baz=312						
CTU	Camp Tracy	63.37	58	P	P	16 59 39.8	+0.3
MYKOM	Kota Tinggi	63.37	240	P	P	16 59 41.0	+1.5
FRB	Frobisher Bay	63.38	20	PKPPKP		17 28 38.2	
	comp=Z,15nm,1.1s,baz=45,slow=8.6,SNR=3.2						
FRB				LR	LR	17 28 59.4	
	comp=Z,4µm,21.8s,baz=330,slow=38						
FRB	Frobisher Bay	63.38	20	⇑P	P	16 59 38.3	-0.6
GWY	Greenwater Val	63.47	65	P	P	16 59 40.0	-0.2
QSM	Queen of Sheba	63.50	65	P	P	16 59 40.4	+0.2
EDW2	Edwards Air Fo	63.53	67	P	P	16 59 41.1	+0.7
	baz=312,SNR=34						
SFJD	Kangerlussuaq	63.55	11	PKPPKP		17 28 39.4	
	comp=Z,18nm,1.1s,baz=166,slow=3.4,SNR=4.0						
SFJD				LR	LR	17 31 20.2	
	comp=Z,3µm,18.2s,baz=350,slow=40						
SFJD	Kangerlussuaq	63.55	11	P	P	16 59 39.3	-0.7
SFJD				pmax	pmax		
	comp=Z,100nm,0.9s						
SFJD				MLR	MLR		
	comp=Z,5µm,18.0s						
SFJD	Kangerlussuaq	63.55	11	i P	P	16 59 39.9	0.0
SFJD				IAmb	IAmb	16 59 41.2	
	comp=Z,90nm,1.1s						
SFJD	Kangerlussuaq	63.55	11	⇑P	P	16 59 39.6	-0.4
SFJD	Kangerlussuaq	63.55	11	P	P	16 59 39.3	-0.7
SFJD				IAmb	IAmb	16 59 57.1	
	comp=Z,100nm,0.8s						
SOEI	Soe	63.56	213	⇑P	P	16 59 40.1	-0.7
SOEI	Soe	63.56	213	P	P	16 59 40.1	-0.7
	comp=Z,5µmcomp=Z,4µmcomp=Z,212nm,1.7s						
SOEI	Soe	63.56	213	P	P	16 59 39.8	-1.0
SOEI				IAmb	IAmb	17 00 04.2	
	comp=Z,164nm,1.0s						
SOEI	Soe	63.56	213	P	P	16 59 41.5	+0.7
PSUT	Pine Spring	63.59	61	P	P	16 59 41.0	0.0
PSUT				IAmb	IAmb	16 59 55.3	
	comp=Z,259nm,1.4s						
JLU	Jordanelle	63.60	58	P	P	16 59 41.5	+0.4
EDFI	Ende, Flores	63.63	217	P	P	16 59 40.1	-1.2
	comp=Z,1µmcomp=Z,73nm,1.9s						
PRN	Pahroc Range	63.63	63	P	P	16 59 41.7	+0.5
NLU	North Lily Min	63.67	59	P	P	16 59 42.1	+0.6
KDU	Kakadu	63.68	204	P	P	16 59 42.1	+0.7
	comp=Z,125nm,1.3s						
MOS	Moscow	63.69	326	eP	P	16 59 49.6	+8.5
MOS				pmax	pmax		
	comp=Z,108nm,1.5s						
MOS				MLR	MLR		
	comp=N,3µm,19.0s						
MOS				MLR	MLR		
	comp=Z,4µm,19.0s						
DECC	Green Verdugo	63.74	67	P	P	16 59 42.3	+0.5
	baz=312,SNR=10						
NSS	Namsos	63.80	343	eP	P	16 59 40.9	-0.8
DRS	Darwin Rock St	63.88	206	P	P	16 59 44.5	+1.8
	comp=Z,58nm,1.2s						
MPU	Maple Canyon	63.88	59	P	P	16 59 43.5	+0.5
PASC	Pasadena Art C	63.89	67	P	P	16 59 42.5	-0.2
SHOC	Shoshone, Teco	63.90	65	P	P	16 59 44.0	+1.2
	baz=312						
MWC	Mount Wilson	63.93	67	P	P	16 59 43.3	0.0
MWC				pmax	pmax		
	comp=Z,513nm,1.4s						
MWC	Mount Wilson	63.93	67	P	P	16 59 43.3	0.0
GSC	Goldstone, Bar	63.98	66	P	P	16 59 42.9	-0.5
GSC				pmax	pmax		
	comp=Z,285nm,1.4s						
GSC	Goldstone, Bar	63.98	66	P	P	16 59 43.9	+0.5
	baz=312,SNR=17						
GSC	Goldstone, Bar	63.98	66	P	P	16 59 42.9	-0.5
GSC				IAmb	IAmb	16 59 57.5	
	comp=Z,285nm,1.4s						
AJM	Ajmer	64.09	281	⇑iP	P	16 59 43.9	-0.4
FMP	Fort Macarthur	64.12	68	P	P	16 59 45.3	+1.0
	baz=312						
RRX	Edison Barstow	64.15	66	P	P	16 59 45.4	+0.9
	baz=312						
SHPR	Sheep Range	64.17	64	P	P	16 59 45.0	+0.2
BATI	Baumata	64.20	214	P	P	16 59 45.2	+0.3
	comp=Z,94nm,0.9s,baz=196,slow=1.8,SNR=13						
BATI	Baumata	64.20	214	P	P	16 59 44.2	-0.7
	comp=Z,2µmcomp=Z,1µmcomp=Z,59nm,1.0s						
MTN	Manton Dam	64.20	205	P	P	16 59 44.8	-0.1
MTN				IAmb	IAmb	16 59 47.0	
	comp=Z,264nm,1.4s						
MTN	Manton Dam	64.20	205	P	P	16 59 46.2	+1.3
	comp=Z,145nm,1.5s						
CIS	Catalina Islan	64.26	68	P	P	16 59 46.7	+1.4
	baz=312						
TCRU	Three Creeks R	64.36	60	P	P	16 59 46.4	+0.3
SANVU	Saraoutou	64.41	166	P	P	16 59 46.2	0.0
SANVU	Saraoutou	64.41	166	P	P	16 59 47.2	+1.0
TUQ	Turquoise Moun	64.42	65	P	P	16 59 46.9	+0.5
	baz=312,SNR=9.5						
BHPL	Bhopal	64.47	277	⇑iP	P	16 59 46.9	+0.1
CCUT	Cedar City	64.53	62	P	P	16 59 47.7	+0.5
CCUT				IAmb	IAmb	17 00 01.8	
	comp=Z,305nm,1.3s						
DY2G	Dye2	64.55	9	⇑iP	P	16 59 46.7	-0.2
DY2G				IAmb	IAmb	16 59 48.0	
	comp=Z,1µm,1.6s						
OBN	Obninsk	64.56	326	LR	LR	17 31 33.2	
	comp=Z,1µm,19.7s,baz=40,slow=39						
OBN	Obninsk	64.56	326	c iP	P	16 59 45.4	-1.4
OBN				e		17 00 09.2	
OBN				i		17 00 19.1	
OBN				pmax	pmax		
	comp=Z,31nm,0.7s						
OBN				MLR	MLR		
	comp=Z,4µm,20.0s						
OBN	Obninsk	64.56	326	⇓P	P	16 59 46.1	-0.7
OBN	Obninsk	64.56	326	eP	P	16 59 45.4	-1.4
OBN	Obninsk	64.56	326	P	P	16 59 44.5	-2.3
OBN				IAmb	IAmb	17 00 01.7	
	comp=Z,164nm,1.5s						
MVU	Marysvale	64.57	60	P	P	16 59 48.1	+0.6
HEC	Hector,Ludlow	64.58	66	P	P	16 59 48.1	+0.7
	baz=312,SNR=32						
MSU	Marysvale	64.58	60	P	P	16 59 48.5	+0.9
MSU	Marysvale	64.58	60	P	P	16 59 48.5	+0.9
BBRC	Big Bear Solar	64.60	66	P	P	16 59 48.4	+0.7
	baz=312						
TMUT	Trail Mountain	64.61	59	P	P	16 59 48.2	+0.4
SZCU	Shurtz Canyon	64.67	61	P	P	16 59 48.3	+0.2
SZCU				IAmb	IAmb	17 00 02.4	
	comp=Z,283nm,1.3s						
RDMU	Red Mountain	64.68	57	P	P	16 59 48.9	+0.8
P17A	Butcher Ranch,	64.76	58	P	P	16 59 49.1	+0.5
LHMI	Lhok Sumawe	64.78	248	P	P	16 59 50.0	+1.2
	comp=Z,8µmcomp=Z,6µmcomp=Z,222nm,1.0s						
LHMI	Lhok Sumawe	64.78	248	IAMs_20	IAMs_20	17 31 22.2	
	comp=Z,2µm,19.0s						
DSRI	Dabo	64.80	238	P	P	16 59 50.1	+1.2
	comp=Z,3µmcomp=Z,2µmcomp=Z,86nm,1.2s						
MDND	Maddock	64.85	46	P	P	16 59 49.8	+1.0
	baz=315,SNR=12						
MDND	Maddock	64.85	46	P	P	16 59 49.4	+0.5
ULM	Lac du Bonnet	64.86	42	P	P	16 59 49.0	+0.1
	comp=Z,65nm,0.8s,baz=319,slow=6.7,SNR=39						
ULM				pP	pP	17 00 01.4	+0.9
	comp=Z,49nm,0.9s,baz=315,slow=8.1,SNR=10						
ULM				LR	LR	17 28 21.0	
	comp=Z,2µm,22.0s,baz=322,slow=36						
ULM				PKPPKP	P'P'df	17 28 32.6	-6.5
	comp=Z,4.1nm,0.8s,baz=230,slow=9.9,SNR=3.4						
ULM	Lac du Bonnet	64.86	42	P	P	16 59 49.0	+0.1
ULM	Lac du Bonnet	64.86	42	⇑P	P	16 59 48.9	+0.1
ULM	Lac du Bonnet	64.86	42	P	P	16 59 48.7	-0.2
ULM				IAmb	IAmb	16 59 50.7	
	comp=Z,155nm,1.1s						
MURC	Murrieta	64.88	67	P	P	16 59 49.6	+0.3
	baz=313,SNR=16						
Q16A	Castle Valley	64.89	59	P	P	16 59 49.9	+0.4
MTPU	Mount Pierson	64.89	60	P	P	16 59 50.4	+0.6
K22A	Casper	64.94	54	P	P	16 59 50.2	+0.5
	baz=313,SNR=38						
K22A				S	S	17 08 29.4	+1.0
	baz=313						
K22A	Casper	64.94	54	P	P	16 59 49.8	+0.1
K22A				IAmb	IAmb	17 00 10.1	
	comp=Z,216nm,1.3s						
P18A	Preston Nutter	64.94	58	P	P	16 59 50.6	+0.7
LCMT	Little Creek M	64.97	62	P	P	16 59 50.7	+0.7
GMRC	Granite Mounta	65.02	65	P	P	16 59 51.0	+0.7
	baz=313,SNR=37						
WSI	Waingapu	65.02	218	P	P	16 59 48.5	-1.7
	comp=Z,11µmcomp=Z,119nm,0.9s						
SRU	San Rafael Swe	65.13	59	P	P	16 59 51.5	+0.5
SRU				pmax	pmax		
	comp=Z,456nm,1.2s						
SRU	San Rafael Swe	65.13	59	P	P	16 59 51.5	+0.5
TSI	Tuntungan	65.14	245	P	P	16 59 51.5	+0.4
	comp=Z,5µmcomp=Z,3µmcomp=Z,242nm,1.0s						
KNB	Kanab	65.21	62	P	P	16 59 52.2	+0.6
KNB				pmax	pmax		
	comp=Z,522nm,1.3s						
KNB	Kanab	65.21	62	P	P	16 59 52.2	+0.6
E28A	Huff	65.22	47	P	P	16 59 51.6	+0.3
E28A				IAmb	IAmb	16 59 53.6	
	comp=Z,218nm,1.2s						
PKCU	Pink Cliffs	65.22	61	P	P	16 59 52.2	+0.4
PKCU				IAmb	IAmb	17 00 06.8	
	comp=Z,297nm,1.3s						
RWWY	Rawlins	65.22	55	P	P	16 59 51.7	0.0
RSSD	Black Hills	65.24	51	P	P	16 59 52.0	+0.3
RSSD				pmax	pmax		
	comp=Z,664nm,1.4s						
RSSD				MLR	MLR		
	comp=Z,2µm,22.0s						
RSSD	Black Hills	65.24	51	P	P	16 59 52.2	+0.4
	baz=314						
RSSD				S	S	17 08 32.2	+0.1
	baz=314						
RSSD	Black Hills	65.24	51	⇑P	P	16 59 52.2	+0.4
RSSD	Black Hills	65.24	51	P	P	16 59 52.0	+0.3
RSSD	Black Hills	65.24	51	IAMs_20	IAMs_20	17 27 41.4	
	comp=Z,2µm,22.0s						
VSU	Vasula	65.29	333	eP	P	16 59 51.6	+0.2
VSU	Vasula	65.29	333	i P	P	16 59 49.9	-1.6
VSU				pmax	pmax		
	comp=Z,95nm,0.9s						
VSU				MLR	MLR		
	comp=Z,15µm,25.0s						
VSU	Vasula	65.29	333	⇓P	P	16 59 50.9	-0.6
TBLU	Trondheim	65.29	343	eP	P	16 59 50.7	-0.7
PFO	Pinyon Flats O	65.32	67	P	P	16 59 52.5	+0.2
PFO				pmax	pmax		
	comp=Z,253nm,1.5s						
PFO	Pinyon Flats O	65.32	67	P	P	16 59 52.9	+0.6
	baz=313,SNR=6.2						
PFO	Pinyon Flats O	65.32	67	P	P	16 59 52.5	+0.2
PFO				IAmb	IAmb	17 00 06.1	
	comp=Z,253nm,1.4s						
PPBI	Pangkal Pinang	65.33	235	P	P	16 59 53.3	+1.0
	comp=Z,138nm,1.1s						
PLAI	Plampang	65.33	220	P	P	16 59 50.3	-1.9
	comp=Z,4µmcomp=Z,2µmcomp=Z,168nm,1.0s						
PLAI	Plampang	65.33	220	P	P	16 59 51.0	-1.2
BELC	Belle Mtn. Jos	65.34	66	P	P	16 59 52.7	+0.2
	baz=313,SNR=7.3						
WBSI	Waikabubak, Su	65.37	218	P	P	16 59 51.1	-1.5
	comp=Z,2µmcomp=Z,124nm,1.0s						
BASI	Baing, Sumba	65.41	217	P	P	16 59 51.4	-1.3
VRH	Novokhopyorsk	65.41	320	eP	P	16 59 51.5	-0.9
VRH				pmax	pmax		
	comp=Z,190nm,1.6s						
VRH				MLR	MLR		
	comp=Z,4µm,18.0s						

109C	**Camp Elliot, M**	**65.41**	**68**	P	**P**	**16 59 53.2**	**+0.5**
	baz=313,SNR=5.1						
109C	**Camp Elliot, M**	**65.41**	**68**	P	**P**	**16 59 53.2**	**+0.5**
109C				IAmb	IAmb	17 00 06.6	
	comp=Z,301nm,1.2s						
PSI	**Prapat**	**65.47**	**245**	P	**P**	**16 59 54.0**	**+0.6**
	comp=Z,97nm,0.9s,baz=8.9,slow=4.5,SNR=61						
LPSR	**Galich'ya Gora**	**65.53**	**323**	*e*P	**P**	**16 59 51.9**	**-1.3**
LPSR				pmax	pmax		
	comp=Z,50nm,0.6s						
LPSR				MLR	MLR		
	comp=Z,3µm,18.0s						
RPSI	**Rantau Prapat**	**65.55**	**245**	P	**P**	**16 59 54.0**	**+0.2**
TWSI	**Taliwang, Sumb**	**65.64**	**221**	P	**P**	**16 59 52.7**	**-1.5**
	comp=Z,2µmcomp=Z,905nmcomp=Z,62nm,1.0s						
NEE2	**Needles Airpor**	**65.66**	**65**	P	**P**	**16 59 54.9**	**+0.6**
	baz=313						
O20A	**White River Ci**	**65.72**	**57**	P	**P**	**16 59 55.3**	**+0.4**
	baz=314,SNR=35						
O20A				S	**S**	**17 08 38.8**	**+0.7**
	baz=314						
O20A	**White River Ci**	**65.72**	**57**	P	**P**	**16 59 54.8**	**-0.1**
IRM	**Iron Mountain**	**65.76**	**65**	P	**P**	**16 59 55.8**	**+0.8**
	baz=313,SNR=7.1						
AAL	**Aland**	**65.77**	**337**	*e*P	**P**	**16 59 54.0**	**-0.6**
BAR	**Barrett**	**65.82**	**68**	P	**P**	**16 59 55.3**	**-0.1**
BAR				IAmb	IAmb	17 00 09.2	
	comp=Z,210nm,1.2s						
MONP2	**Monument Peak**	**65.83**	**67**	P	**P**	**16 59 55.9**	**+0.2**
	baz=313,SNR=5.6						
MLSI	**Meulaboh, Aceh**	**65.86**	**248**	P	**P**	**16 59 56.7**	**+0.9**
	comp=Z,58nm,1.1s						
W13A	**Hualapai Mount**	**65.88**	**64**	P	**P**	**16 59 55.8**	**-0.2**
W13A				IAmb	IAmb	17 00 10.2	
	comp=Z,261nm,1.4s						
BC3	**Big Chuckawall**	**65.91**	**66**	P	**P**	**16 59 56.3**	**+0.3**
	baz=313,SNR=18						
U15A	**North Rim**	**65.92**	**62**	P	**P**	**16 59 56.7**	**+0.4**
MTSE	**Matsula**	**65.95**	**334**	*e*P	**P**	**16 59 55.9**	**+0.2**
ABJI	**Asem Bagus**	**66.01**	**224**	P	**P**	**16 59 57.2**	**+0.6**
	comp=Z,6µmcomp=Z,5µmcomp=Z,268nm,1.9s						
CBX	**Cerro Bola**	**66.08**	**68**	P	**P**	**16 59 57.6**	**+0.4**
NUUK	**Nuuk**	**66.08**	**12**	⇑*e*P	**P**	**16 59 57.1**	**+0.6**
NUUK				IAmb	IAmb	16 59 58.3	
	comp=Z,397nm,1.6s						
ISOG	**Isortoq, Green**	**66.10**	**6**	*e*P	**P**	**16 59 56.4**	**-0.2**
ISOG				IAmb	IAmb	16 59 58.1	
	comp=Z,719nm,1.6s						
ISOG	**Isortoq, Green**	**66.10**	**6**	⇓P	**P**	**16 59 56.5**	**0.0**
ISOG				⇓P	**P**	**16 59 56.5**	**0.0**
VORR	**Voronezh**	**66.12**	**322**	*e*P	**P**	**16 59 54.0**	**-2.9**
VORR				pmax	pmax		
	comp=Z,250nm,1.4s						
ANGG	**Ammassalik, Gr**	**66.12**	**5**	⇑*i*P	**P**	**16 59 56.3**	**-0.4**
ANGG				IAmb	IAmb	16 59 57.3	
	comp=Z,596nm,1.7s						
ANGG	**Ammassalik, Gr**	**66.12**	**5**	⇓P	**P**	**16 59 56.5**	**-0.2**
ANGG	**Ammassalik, Gr**	**66.12**	**5**	P	**P**	**16 59 56.1**	**-0.6**
ANGG				IAmb	IAmb	16 59 58.5	
	comp=Z,319nm,1.4s						
TPTI		**66.17**	**246**	P	**P**	**16 59 57.2**	**-0.6**
	comp=Z,11nm,1.1s						
SWSC	**Sam W. Stewart**	**66.18**	**67**	P	**P**	**16 59 58.2**	**+0.6**
	baz=313,SNR=7.8						
BKNI	**Bangkinang**	**66.19**	**241**	P	**P**	**16 59 58.9**	**+1.1**
	comp=Z,4µmcomp=Z,5µmcomp=Z,391nm,1.0s						
BKNI	**Bangkinang**	**66.19**	**241**	P	**P**	**17 00 00.1**	**+2.3**
IKP	**In-Ko-Pah, Jac**	**66.19**	**67**	P	**P**	**16 59 58.4**	**+0.5**
	baz=313,SNR=7.3						
JASL	**Jaisalmer**	**66.23**	**284**	*e*P	**P**	**17 00 00.4**	**+2.4**
BLJI	**Banyuglugur**	**66.27**	**225**	P	**P**	**16 59 57.8**	**-0.5**
	comp=Z,3µmcomp=Z,2µmcomp=Z,57nm,1.1s						
PDMCI	**Parker Dam,Lak**	**66.27**	**65**	P	**P**	**16 59 58.8**	**+0.6**
	baz=313,SNR=32						
JMBI	**JAMBI**	**66.28**	**238**	P	**P**	**16 59 59.9**	**+1.5**
	comp=Z,77nm,0.4s						
AGMN	**Agassiz Nation**	**66.28**	**43**	P	**P**	**16 59 58.0**	**0.0**
	baz=317,SNR=36						
AGMN				S	**S**	**17 08 44.9**	**+0.7**
	baz=317						
AGMN	**Agassiz Nation**	**66.28**	**43**	P	**P**	**16 59 57.7**	**-0.4**
AGMN				IAmb	IAmb	17 00 11.5	
	comp=Z,187nm,1.1s						
AGMN				IAMs_20	IAMs_20	17 31 53.1	
	comp=Z,4µm,20.0s						
UWJI	**Ujung Watu**	**66.40**	**228**	P	**P**	**16 59 59.8**	**+0.6**
	comp=Z,4µmcomp=Z,247nm,1.3s						
MOL	**Molde**	**66.43**	**344**	*e*P	**P**	**16 59 58.5**	**-0.3**
N23A	**Red Feather La**	**66.46**	**55**	P	**P**	**17 00 00.7**	**+1.0**
	baz=314,SNR=46						
N23A				S	**S**	**17 08 50.4**	**+3.1**
	baz=314						
VSR	**Storozhevoye**	**66.47**	**322**	*e*P	**P**	**16 59 58.7**	**-0.5**
VSR				pmax	pmax		
	comp=Z,80nm,1.5s						
VSR				MLR	MLR		
	comp=Z,5µm,20.0s						
IGBI	**Denpasar**	**66.49**	**223**	P	**P**	**16 59 58.1**	**-1.6**
	comp=Z,1µmcomp=Z,88nm,1.1s						
GEYT	**Alibeck**	**66.56**	**301**	P	**P**	**17 00 00.7**	**+0.6**
	comp=Z,22nm,0.6s,baz=292,slow=0.8,SNR=22						
GEYT				LR	LR	17 31 38.6	
	comp=Z,9µm,18.5s,baz=20,slow=38						
GEYT	**Alibeck**	**66.56**	**301**	P	**P**	**17 00 00.1**	**+0.1**
GYA0B	**ALIBECK ARRAY**	**66.56**	**301**	P	**P**	**17 00 00.1**	**+0.1**
HRA	**Herat**	**66.56**	**296**	P	**P**	**17 00 00.1**	**-0.2**
D32A	**Dogwood Acres,**	**66.59**	**45**	P	**P**	**17 00 00.6**	**+0.6**
VORD	**Divnogorie**	**66.61**	**321**	*e*P	**P**	**16 59 59.5**	**-0.6**
VORD				pmax	pmax		
	comp=Z,30nm,0.6s						
DOMB	**Dombas**	**66.62**	**343**	*e*P	**P**	**17 00 00.2**	**+0.1**
JAGI	**Jajag, Banyuwa**	**66.64**	**224**	P	**P**	**16 59 59.1**	**-1.6**
	comp=Z,3µmcomp=Z,1µmcomp=Z,38nm,2.0s						
JAGI	**Jajag, Banyuwa**	**66.64**	**224**	P	**P**	**16 59 59.7**	**-1.0**
UPP	**Uppsala**	**66.66**	**338**	*e*P	**P**	**17 00 00.4**	**+0.2**
MTSU	**Mount Surprise**	**66.66**	**190**	P	**P**	**17 00 01.7**	**+1.0**
	comp=Z,52nm,1.0s						
MNSI	**Mandailing Nat**	**66.67**	**243**	P	**P**	**17 00 03.0**	**+2.1**
GLA	**Glamis**	**66.70**	**66**	P	**P**	**17 00 01.0**	**-0.1**
GLA				pmax	pmax		
	comp=Z,420nm,1.3s						
GLA	**Glamis**	**66.70**	**66**	P	**P**	**17 00 01.9**	**+0.8**
	baz=314,SNR=20						
GLA	**Glamis**	**66.70**	**66**	P	**P**	**17 00 01.0**	**-0.1**
PMBI	**Palembang**	**66.71**	**236**	P	**P**	**17 00 02.1**	**+0.9**
	comp=Z,5µmcomp=Z,5µmcomp=Z,293nm,0.9s						
PMBI	**Palembang**	**66.71**	**236**	P	**P**	**17 00 04.3**	**+3.1**
GMJI	**Gumukmas**	**66.80**	**225**	P	**P**	**17 00 00.1**	**-1.6**
	comp=Z,1µmcomp=Z,43nm,1.8s						
NC300	**NORSAR Array S**	**66.85**	**342**	P	**P**	**17 00 00.9**	**-0.6**
AKN	**Aaknes**	**66.89**	**344**	*e*P	**P**	**17 00 02.8**	**+1.0**
NC303	**NORSAR Array S**	**66.90**	**342**	P	**P**	**17 00 00.9**	**-0.8**
NC405	**NORSAR Array S**	**66.92**	**341**	P	**P**	**17 00 00.7**	**-1.3**
NC405				IAmb	IAmb	17 00 13.4	
	comp=Z,210nm,1.2s						
NGJI	**Ngawi**	**66.97**	**227**	P	**P**	**17 00 04.0**	**+1.2**
	comp=Z,1µmcomp=Z,63nm,1.1s						
NC204	**NORSAR Array S**	**66.98**	**342**	P	**P**	**17 00 01.7**	**-0.7**
NB201	**NORSAR Array S**	**67.07**	**341**	P	**P**	**17 00 02.0**	**-0.9**
NB201				IAmb	IAmb	17 00 05.9	
	comp=Z,241nm,1.4s						
SMCO	**Snowmass**	**67.09**	**57**	⇑P	**P**	**17 00 04.4**	**+0.5**
SMCO				⇑s	**pP**	**17 00 17.2**	**+1.4**
SMCO	**Snowmass**	**67.09**	**57**	P	**P**	**17 00 03.4**	**-0.5**
SMCO				IAmb	IAmb	17 00 18.1	
	comp=Z,212nm,1.2s						
WUAZ	**Wupatki**	**67.09**	**62**	P	**P**	**17 00 04.8**	**+1.2**
	baz=314,SNR=29						
WUAZ	**Wupatki**	**67.09**	**62**	⇑P	**P**	**17 00 04.7**	**+1.0**
WUAZ				⇓P	**P**	**17 00 05.2**	**+1.5**
WUAZ	**Wupatki**	**67.09**	**62**	P	**P**	**17 00 04.0**	**+0.3**
WUAZ				IAMs_20	IAMs_20	17 25 22.0	
	comp=Z,3µm,21.0s						
NB2	**NORSAR Subarra**	**67.10**	**342**	P	**P**	**17 00 02.8**	**-0.3**
	comp=Z,689nm,2.5s,baz=26,slow=6.5						
NB2	**NORSAR Subarra**	**67.10**	**342**	P	**P**	**17 00 02.8**	**-0.3**
	baz=26,slow=6.5						
NOA	**NORSAR Array B**	**67.10**	**342**	P	**P**	**17 00 01.4**	**-1.7**
	comp=Z,14nm,0.5s,baz=26,slow=6.3,SNR=58						
NOA				PKPPKP	**P'P'df**	**17 28 29.9**	**-6.1**
	comp=Z,3.4nm,0.9s,baz=211,slow=2.9,SNR=3.8						
NOA				LR	LR	17 33 57.3	
	comp=Z,3µm,19.2s,baz=25,slow=40						
PPI	**Padang Panjang**	**67.19**	**241**	P	**P**	**17 00 04.7**	**+0.4**
	comp=Z,18nm,1.1s						
NBO00	**NORSAR Array S**	**67.20**	**342**	P	**P**	**17 00 03.5**	**-0.2**
NBO00				IAmb	IAmb	17 00 15.7	
	comp=Z,236nm,1.4s						
SMRI	**Semarang**	**67.20**	**228**	P	**P**	**17 00 04.2**	**-0.1**
	comp=Z,6µmcomp=Z,267nm,1.2s						
SMRI	**Semarang**	**67.20**	**228**	P	**P**	**17 00 04.9**	**+0.6**
SMRI	**Semarang**	**67.20**	**228**	P	**P**	**17 00 06.5**	**+2.2**
Y14A	**Wickenburg**	**67.20**	**64**	P	**P**	**17 00 04.1**	**-0.1**
Y14A				IAmb	IAmb	17 00 18.6	
	comp=Z,309nm,1.3s						
B35A	**Bob, Littlefor**	**67.20**	**42**	P	**P**	**17 00 03.2**	**-0.8**
B35A				IAmb	IAmb	17 00 17.2	
	comp=Z,162nm,1.1s						
NC602	**NORSAR Array S**	**67.30**	**341**	*e*P	**P**	**17 00 03.3**	**-1.1**
NC602	**NORSAR Array S**	**67.30**	**341**	P	**P**	**17 00 03.8**	**-0.5**
NORES	**NORESS Array B**	**67.30**	**341**	P	**P**	**17 00 04.1**	**-0.2**
SLIT	**Slitere, Latvi**	**67.31**	**334**	*e*P	**P**	**17 00 05.0**	**+0.6**
SLIT	**Slitere, Latvi**	**67.31**	**334**	⇑P	**P**	**17 00 03.8**	**-0.6**
BORG	**Borgarnes**	**67.32**	**358**	P	**P**	**17 00 05.9**	**+1.5**
BORG				pmax	pmax		
	comp=Z,225nm,1.1s						
BORG	**Borgarnes**	**67.32**	**358**	P	**P**	**17 00 05.9**	**+1.5**
BORG				IAmb	IAmb	17 00 08.6	
	comp=Z,225nm,1.1s						
NAO01	**NORSAR Array S**	**67.34**	**342**	P	**P**	**17 00 04.5**	**-0.2**
PWJI	**Pagerwojo**	**67.36**	**227**	P	**P**	**17 00 04.4**	**-0.9**
	comp=Z,7µmcomp=Z,612nm,1.2s						
ISCO	**Idaho Springs**	**67.41**	**55**	P	**P**	**17 00 06.5**	**+0.8**
ISCO				pmax	pmax		
	comp=Z,445nm,1.4s						
ISCO				MLR	MLR		
	comp=Z,2µm,22.0s						
ISCO	**Idaho Springs**	**67.41**	**55**	P	**P**	**17 00 06.9**	**+1.1**
	baz=315,SNR=67						
ISCO				S	**S**	**17 09 01.8**	**+3.0**
	baz=315						
ISCO	**Idaho Springs**	**67.41**	**55**	P	**P**	**17 00 06.5**	**+0.8**
ISCO				IAMs_20	IAMs_20	17 28 39.0	
	comp=Z,2µm,22.0s						
GSI	**Gunungsitoli**	**67.47**	**245**	⇑P	**P**	**17 00 06.8**	**+0.8**
GSI	**Gunungsitoli**	**67.47**	**245**	P	**P**	**17 00 06.7**	**+0.7**
	comp=Z,4µmcomp=Z,163nm,0.9s						
GSI	**Gunungsitoli**	**67.47**	**245**	P	**P**	**17 00 06.6**	**+0.6**
GSI				IAmb	IAmb	17 00 26.1	
	comp=Z,120nm,0.9s						
GSI	**Gunungsitoli**	**67.47**	**245**	P	**P**	**17 00 07.4**	**+1.4**
PDSI	**Padang**	**67.52**	**241**	P	**P**	**17 00 05.4**	**-1.0**
	comp=Z,3µmcomp=Z,838nmcomp=Z,42nm,1.5s						
113A	**Mohawk Valley,**	**67.55**	**66**	P	**P**	**17 00 06.3**	**0.0**
113A				IAmb	IAmb	17 00 20.4	
	comp=Z,247nm,1.3s						
KNRA	**Kununurra**	**67.58**	**207**	P	**P**	**17 00 06.7**	**+0.1**
KNRA				IAmb	IAmb	17 00 08.9	
	comp=Z,282nm,1.2s						
KNRA	**Kununurra**	**67.58**	**207**	P	**P**	**17 00 07.8**	**+1.2**
	comp=Z,190nm,1.3s						
MVCO	**Mesa Verde**	**67.59**	**59**	P	**P**	**17 00 07.5**	**+0.6**
	baz=314,SNR=53						
MVCO				S	**S**	**17 09 04.1**	**+3.1**
	baz=314						
MVCO	**Mesa Verde**	**67.59**	**59**	P	**P**	**17 00 06.8**	**-0.1**
MVCO				IAMs_20	IAMs_20	17 26 01.0	
	comp=Z,3µm,22.0s						
SUSD	**Miller**	**67.59**	**48**	P	**P**	**17 00 06.5**	**0.0**
	baz=316,SNR=6.4						
SUSD	**Miller**	**67.59**	**48**	P	**P**	**17 00 06.1**	**-0.4**
SUSD				IAmb	IAmb	17 00 20.9	
	comp=Z,260nm,1.2s						
FOO	**Floro**	**67.78**	**345**	*e*P	**P**	**17 00 08.0**	**+0.7**
HYB	**Hyderabad**	**67.80**	**272**	*i* P	**P**	**17 00 08.0**	**-0.1**
	comp=Z,220nm,1.0s						
HYB				*e*PP	**PP**	**17 02 37.0**	**-0.8**
HYB	**Hyderabad**	**67.80**	**272**	*e*P	**P**	**17 00 08.1**	**-0.1**
HYB				IAmb	IAmb	17 00 09.6	
	comp=Z,87nm,0.6s						
X16A	**Lo Mia Camp, P**	**67.81**	**63**	P	**P**	**17 00 08.6**	**+0.4**
X16A				IAmb	IAmb	17 00 23.0	
	comp=Z,284nm,1.3s						
PCJI	**Pacitan**	**67.82**	**227**	P	**P**	**17 00 07.4**	**-0.7**
	comp=Z,3µmcomp=Z,109nm,2.0s						
ISAL	**Salakas**	**67.85**	**331**	*e*P	**P**	**17 00 08.2**	**+0.3**
F33A	**5 Mile Ranch,**	**67.87**	**45**	P	**P**	**17 00 08.0**	**-0.2**
F33A				IAmb	IAmb	17 00 21.8	
	comp=Z,240nm,1.1s						
UGM	**Wanagama**	**67.90**	**228**	P	**P**	**17 00 07.9**	**-0.8**
	comp=Z,5µmcomp=Z,306nm,1.5s						
UGM	**Wanagama**	**67.90**	**228**	P	**P**	**17 00 08.1**	**-0.6**
UGM	**Wanagama**	**67.90**	**228**	P	**P**	**17 00 10.1**	**+1.4**
YOGI	**Yogyakarta**	**67.93**	**228**	P	**P**	**17 00 07.2**	**-1.7**
	comp=Z,161nm,1.9s						
HYA	**Hoyanger**	**67.98**	**344**	*e*P	**P**	**17 00 08.5**	**-0.1**
SKAR	**Skarslia**	**68.02**	**343**	*e*P	**P**	**17 00 09.1**	**+0.1**
SFX	**San Felipe**	**68.08**	**68**	P	**P**	**17 00 09.8**	**+0.1**
SFX				IAmb	IAmb	17 00 23.5	
	comp=Z,194nm,1.3s						
DGTI	**Dogotuki**	**68.12**	**154**	P	**P**	**17 00 12.0**	**+2.1**
LHSI	**Lahat**	**68.15**	**236**	P	**P**	**17 00 10.9**	**+0.7**
	comp=Z,3µmcomp=Z,166nm,1.0s						
MNK	**Minsk**	**68.15**	**330**	*i* P	**P**	**17 00 09.7**	**-0.1**
MNK				*i* *PP	**sP**	**17 00 26.8**	**+1.1**
MNK				*i*		17 02 40.6	
MNK				*i* PPP	PPP	17 04 19.8	
MNK				*i* S	**S**	**17 09 03.4**	**-3.1**
MNK				*i* *SS	sS	17 09 40.0	+14
MNK				*i*		17 10 02.4	
MNK				*i* SS	**SS**	**17 13 29.9**	**+1.4**
MNK				pmax	pmax		
	comp=E,4.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,75nm,0.8s						
MNK				pmax	pmax		
	comp=N,37nm,1.0s						
MNK				MLR	MLR		
	comp=Z,4µm,21.0s						
MNK				MLR	MLR		
	comp=N,2µm,20.0s						
MNK	**Minsk**	**68.15**	**330**	*i* P	**P**	**17 00 09.7**	**-0.1**
	comp=E,4.0nm,0.9s						
MNK				*i* P	**P**	**17 00 09.7**	**-0.1**
	comp=N,37nm,1.0s						
MNK				*i* P	**P**	**17 00 09.7**	**-0.1**
	comp=Z,75nm,0.8s,baz=216						
MNK				*i* pP	**sP**	**17 00 26.8**	**+1.1**
MNK				*i* PP	**PP**	**17 02 40.7**	**+0.9**
MNK				*i* PPP	PPP	17 04 19.8	
MNK				*i* S	**S**	**17 09 03.4**	**-3.1**
MNK				*i* sS	sS	17 09 40.1	+14
MNK				*i* SS	**SS**	**17 13 30.0**	**+1.4**
MNK				*i* SSS	SSS	17 16 46.6	
MNK				*i* LQ	LQ	17 25 31.0	
MNK				*i* LR	LR	17 28 31.9	
MNK				*i* LRM	MLR	17 32 40.5	
MNK				*i* LRM	MLR	17 32 44.1	
	comp=N,2µm,20.2s						
MNK				*i* LRM	MLR	17 32 44.1	
	comp=Z,4µm,21.0s						
S22A	**4UR Ranch, Cre**	**68.17**	**58**	P	**P**	**17 00 11.8**	**+1.2**
	baz=315,SNR=88						
S22A				S	**S**	**17 09 11.5**	**+3.6**
	baz=315						
NACGM	**Naroch**	**68.19**	**330**	*i* P	**P**	**17 00 09.2**	**-0.9**
KLSI		**68.19**	**235**	P	**P**	**17 00 10.9**	**+0.3**
	comp=Z,2µmcomp=Z,74nm,1.2s						
OSL	**Oslo**	**68.20**	**341**	*e*P	**P**	**17 00 10.4**	**+0.5**
KPJI	**Karang Pucung**	**68.20**	**230**	P	**P**	**17 00 09.9**	**-0.7**
	comp=Z,2µmcomp=Z,58nm,1.9s						
Q24A	**Divide**	**68.25**	**56**	P	**P**	**17 00 11.7**	**+0.6**
	baz=315,SNR=13						
KLI	**Kotabumi**	**68.27**	**235**	P	**P**	**17 00 10.6**	**-0.4**
	comp=Z,188nm,1.2s						
MASI	**Maura Aman, Be**	**68.31**	**238**	P	**P**	**17 00 11.8**	**+0.5**
	comp=Z,5µmcomp=Z,512nm,1.1s						
MDSI	**Maura Dua**	**68.33**	**235**	P	**P**	**17 00 11.0**	**-0.4**
	comp=Z,3µmcomp=Z,1µmcomp=Z,46nm,1.8s						
W18A	**Petrified Fore**	**68.33**	**61**	P	**P**	**17 00 12.5**	**+1.0**
	baz=314,SNR=19						
W18A				S	**S**	**17 09 13.7**	**+4.0**
	baz=314						
W18A	**Petrified Fore**	**68.33**	**61**	P	**P**	**17 00 11.4**	**-0.1**
W18A				IAmb	IAmb	17 00 26.2	
	comp=Z,231nm,1.2s						
SUE	**Sulen**	**68.34**	**345**	*e*P	**P**	**17 00 11.5**	**+0.7**
CTA	**Charters Tower**	**68.38**	**188**	P	**P**	**17 00 11.4**	**-0.1**
	comp=Z,22nm,0.6s,baz=4.3,slow=8.0,SNR=20						
CTA	**Charters Tower**	**68.38**	**188**	P	**P**	**17 00 12.1**	**+0.6**
	comp=Z,94nm,1.2s						
CTAO	**Charters Tower**	**68.38**	**188**	P	**P**	**17 00 11.3**	**-0.3**
CTAO				pmax	pmax		
	comp=Z,146nm,1.4s						
CTAO	**Charters Tower**	**68.38**	**188**	⇑P	**P**	**17 00 11.5**	**-0.1**
CTAO	**Charters Tower**	**68.38**	**188**	P	**P**	**17 00 11.3**	**-0.3**
CTAO	**Charters Tower**	**68.38**	**188**	P	**P**	**17 00 11.8**	**+0.3**
LEM	**Lembang**	**68.45**	**231**	P	**P**	**17 00 12.4**	**+0.1**
	comp=Z,54nm,0.9s,baz=357,slow=13,SNR=14						
LEM	**Lembang**	**68.45**	**231**	P	**P**	**17 00 11.9**	**-0.4**
	comp=Z,1µmcomp=Z,48nm,1.3s						
BLSI	**Bandar Lampung**	**68.48**	**234**	P	**P**	**17 00 11.6**	**-0.7**
	comp=Z,2µmcomp=Z,81nm,0.4s						
CBJI	**Citeko**	**68.50**	**232**	P	**P**	**17 00 13.0**	**+0.5**
	comp=Z,5µmcomp=Z,55nm,0.4s						
EYMN	**Ely**	**68.51**	**41**	P	**P**	**17 00 12.0**	**-0.1**
	baz=319,SNR=23						
EYMN				S	**S**	**17 09 10.3**	**-0.8**
	baz=319						
EYMN	**Ely**	**68.51**	**41**	P	**P**	**17 00 11.6**	**-0.6**
EYMN				IAmb	IAmb	17 00 25.5	
	comp=Z,198nm,1.1s						
EYMN	**Ely**	**68.51**	**41**	IAMs_20	IAMs_20	17 30 31.8	
	comp=Z,4µm,22.0s						
OGNE	**Ogallala**	**68.53**	**52**	P	**P**	**17 00 13.2**	**+0.7**
	baz=316,SNR=72						
OGNE	**Ogallala**	**68.53**	**52**	P	**P**	**17 00 12.6**	**0.0**
PABE	**Paberze**	**68.59**	**332**	*e*P	**P**	**17 00 13.7**	**+1.2**
PABE	**Paberze**	**68.59**	**332**	P	**P**	**17 00 11.8**	**-0.7**
PABE				IAmb	IAmb	17 00 14.8	
	comp=Z,127nm,1.0s						
PABE				IAMs_20	IAMs_20	17 32 17.5	
	comp=Z,3µm,19.0s						
X18A	**Snowflake**	**68.61**	**62**	P	**P**	**17 00 13.5**	**+0.2**
SBJI	**Serang**	**68.63**	**233**	P	**P**	**17 00 12.9**	**-0.4**
	comp=Z,126nm,0.8s						
SISI	**Saibi**	**68.66**	**242**	P	**P**	**17 00 14.3**	**+0.8**
	comp=Z,2µmcomp=Z,50nm,0.7s						
DBJI	**Dramaga**	**68.67**	**232**	P	**P**	**17 00 12.8**	**-0.7**
	comp=Z,2µmcomp=Z,80nm,1.1s						
214A	**Organ Pipe Nat**	**68.69**	**66**	P	**P**	**17 00 14.3**	**+0.7**
	baz=314,SNR=22						
214A				S	**S**	**17 09 16.0**	**+2.2**
	baz=314						
214A	**Organ Pipe Nat**	**68.69**	**66**	P	**P**	**17 00 13.7**	**+0.1**
KONO	**Kongsberg**	**68.70**	**342**	*i* P	**P**	**17 00 12.7**	**-0.4**
KONO				pmax	pmax		
	comp=Z,65nm,1.0s						
KONO				MLR	MLR		
	comp=Z,3µm,19.0s						
KONO	**Kongsberg**	**68.70**	**342**	*e*P	**P**	**17 00 13.6**	**+0.4**
KONO	**Kongsberg**	**68.70**	**342**	⇓P	**P**	**17 00 14.5**	**+1.3**
KONO	**Kongsberg**	**68.70**	**342**	P	**P**	**17 00 13.7**	**+0.6**
MAK	**Makhachkala**	**68.73**	**311**	*e*P	**P**	**17 00 14.6**	**+1.0**
MAK				*e*		17 02 47.7	
MAK				*e*PPP	PPP	17 04 26.9	
MAK				*e*S	**S**	**17 09 18.1**	**+4.3**
MAK				*e*SS	**SS**	**17 13 38.7**	**+0.6**
MAK				pmax	pmax		
	comp=Z,235nm,1.8s						
MAK				MLR	MLR		
	comp=Z,7µm,17.0s						
PBUR	**Paburge**	**68.77**	**334**	*e*P	**P**	**17 00 13.6**	**0.0**
ASK	**Askoy**	**68.80**	**344**	*e*P	**P**	**17 00 14.5**	**+0.8**
CMJI	**Cimerak**	**68.83**	**230**	P	**P**	**17 00 13.1**	**-1.4**
	comp=Z,2µmcomp=Z,36nm,1.1s						
LWLI	**Liwa**	**68.83**	**235**	P	**P**	**17 00 13.0**	**-1.7**
	comp=Z,2µmcomp=Z,133nm,1.0s						
BER	**Bergen**	**68.86**	**344**	*e*P	**P**	**17 00 15.0**	**+0.9**
MNAI	**Manna**	**68.90**	**237**	P	**P**	**17 00 14.9**	**-0.1**
SDCO	**Great Sand Dun**	**68.91**	**57**	P	**P**	**17 00 16.0**	**+0.8**
	baz=315,SNR=57						
SDCO				S	**S**	**17 09 19.6**	**+2.8**
	baz=315						
SDCO	**Great Sand Dun**	**68.91**	**57**	P	**P**	**17 00 15.4**	**+0.2**
SDCO				IAmb	IAmb	17 00 29.8	
	comp=Z,351nm,1.5s						
MSVF	**Nonsavu**	**69.00**	**156**	*i* P	**P**	**17 00 13.7**	**-1.8**
MSVF				pmax	pmax		
	comp=Z,64nm,1.2s						
MSVF				MLR	MLR		
	comp=Z,2µm,17.0s						
MSVF	**Nonsavu**	**69.00**	**156**	P	**P**	**17 00 15.4**	**-0.1**
MSVF	**Nonsavu**	**69.00**	**156**	P	**P**	**17 00 18.1**	**+2.6**
K31A	**O'Neill**	**69.01**	**49**	P	**P**	**17 00 15.1**	**-0.3**
KOUNC	**Koumac, New Ca**	**69.04**	**170**	P	**P**	**17 00 16.8**	**+1.2**
ODD1	**Odda**	**69.06**	**343**	*e*P	**P**	**17 00 15.6**	**+0.2**
CNJI	**Cibinong**	**69.11**	**231**	P	**P**	**17 00 14.1**	**-2.1**
	comp=Z,1µmcomp=Z,58nm,1.1s						
F36A	**Milaca**	**69.16**	**44**	P	**P**	**17 00 15.5**	**-0.7**
ECSD	**EROS Data Cent**	**69.26**	**47**	P	**P**	**17 00 16.9**	**-0.1**
	baz=318,SNR=95						
ECSD				S	**S**	**17 09 19.2**	**-1.0**
	baz=318						
ECSD	**EROS Data Cent**	**69.26**	**47**	P	**P**	**17 00 16.4**	**-0.5**
ECSD				IAmb	IAmb	17 00 30.4	
	comp=Z,228nm,1.0s						
ECSD	**EROS Data Cent**	**69.26**	**47**	IAMs_20	IAMs_20	17 32 51.4	
	comp=Z,3µm,20.0s						
PPSI	**Pulau Pagai**	**69.28**	**240**	P	**P**	**17 00 18.2**	**+0.9**
	comp=Z,5µmcomp=Z,319nm,1.1s						
GOF	**Gofitskoye**	**69.37**	**315**	⇓*i*P	**P**	**17 00 18.2**	**+0.7**
GOF				pmax	pmax		
	comp=Z,141nm,0.9s						
GROC	**Groznyy**	**69.41**	**312**	*e*P	**P**	**17 00 16.6**	**-1.2**
GROC				*e*		17 00 39.5	
GROC				*e*S	**S**	**17 09 23.0**	**+1.2**
GROC				pmax	pmax		
	comp=Z,21nm,0.6s						
IVI	**Ivigtut**	**69.42**	**11**	*e*P	**P**	**17 00 18.0**	**+0.4**
IVI				IAmb	IAmb	17 00 19.1	
	comp=Z,340nm,1.5s						
IVI	**Ivigtut**	**69.42**	**11**	⇑P	**P**	**17 00 17.7**	**+0.2**
IVI	**Ivigtut**	**69.42**	**11**	P	**P**	**17 00 17.2**	**-0.4**
E38A	**The Farm, Brul**	**69.49**	**42**	P	**P**	**17 00 17.6**	**-0.7**
E38A				IAmb	IAmb	17 00 31.4	
	comp=Z,246nm,1.1s						
BLS5	**Blasjo**	**69.55**	**343**	*e*P	**P**	**17 00 19.3**	**+0.9**
KSCO	**Kaye Shedlock'**	**69.59**	**54**	P	**P**	**17 00 19.6**	**+0.4**
	baz=316,SNR=9.4						
KSCO	**Kaye Shedlock'**	**69.59**	**54**	P	**P**	**17 00 18.9**	**-0.3**
KSCO				IAmb	IAmb	17 00 32.4	
	comp=Z,159nm,1.4s						
LIFNC	**LIFOU**	**69.65**	**167**	P	**P**	**17 00 20.4**	**+1.1**
LIFNC				IAmb	IAmb	17 00 33.3	
	comp=Z,211nm,1.5s						
LIFNC				IAMs_20	IAMs_20	17 24 25.8	
	comp=Z,3µm,22.0s						
TUC	**Tucson**	**69.67**	**64**	P	**P**	**17 00 19.8**	**+0.1**
TUC				pmax	pmax		
	comp=Z,238nm,1.4s						
TUC	**Tucson**	**69.67**	**64**	P	**P**	**17 00 20.4**	**+0.6**
	baz=315						
TUC				S	**S**	**17 09 27.3**	**+1.9**
	baz=315						
TUC	**Tucson**	**69.67**	**64**	⇑P	**P**	**17 00 20.3**	**+0.6**
TUC				⇑s	**pP**	**17 00 33.1**	**+1.4**
TUC	**Tucson**	**69.67**	**64**	P	**P**	**17 00 19.8**	**+0.1**
TUC				IAmb	IAmb	17 00 34.1	
	comp=Z,238nm,1.4s						
QIS	**Mount Isa**	**69.73**	**195**	P	**P**	**17 00 19.7**	**-0.2**
	comp=Z,123nm,1.4s						
NRS	**Narsarsuaq**	**69.81**	**10**	P	**P**	**17 00 20.6**	**+0.6**
NRS				pmax	pmax		
	comp=Z,115nm,1.2s						
NRS	**Narsarsuaq**	**69.81**	**10**	P	**P**	**17 00 20.6**	**+0.6**
T25A	**Trinidad**	**69.95**	**57**	P	**P**	**17 00 22.2**	**+0.6**
	baz=316,SNR=30						
T25A				S	**S**	**17 09 30.4**	**+1.5**
	baz=316						
T25A	**Trinidad**	**69.95**	**57**	P	**P**	**17 00 21.6**	**0.0**
SPMN	**Marine on St.**	**69.97**	**44**	P	**P**	**17 00 21.3**	**0.0**
	baz=319,SNR=8.8						
SPMN	**Marine on St.**	**69.97**	**44**	P	**P**	**17 00 21.2**	**-0.1**
SPMN				IAmb	IAmb	17 00 34.7	
	comp=Z,206nm,1.1s						
KMY	**Karmoy**	**69.97**	**344**	*e*P	**P**	**17 00 21.8**	**+0.9**
WB0	**Warramunga Arr**	**70.00**	**200**	P	**P**	**17 00 21.3**	**-0.3**
SUW	**Suwalki**	**70.09**	**332**	*e*P	**P**	**17 00 21.0**	**-0.8**
SUW				*e*L	L	17 33 24.8	
	comp=Z,5µm,21.9s						
SUW	**Suwalki**	**70.09**	**332**	*e*P	**P**	**17 00 22.1**	**+0.3**
SUW	**Suwalki**	**70.09**	**332**	P	**P**	**17 00 20.7**	**-1.1**
SUW				pmax	pmax		
	comp=Z,174nm,1.3s						
SUW				MLR	MLR		

	comp=Z,5µm,20.0s						
SUW	Suwalki	70.09	332	⇑P	P	17 00 21.1	-0.8
SUW				⇓P	P	17 00 21.4	-0.4
SUW	Suwalki	70.09	332	P	P	17 00 20.7	-1.1
SUW				IAmb	IAmb	17 00 23.5	
	comp=Z,174nm,1.3s						
POO	Poona	70.14	276	eP	P	17 00 23.1	+0.3
WR0	Warramunga Arr	70.15	200	P	P	17 00 22.1	-0.4
WR0				IAmb	IAmb	17 00 24.4	
	comp=Z,240nm,1.0s						
WRAB	Tennant Creek	70.17	200	i P	P	17 00 21.9	-0.7
WRAB				pmax	pmax		
	comp=Z,212nm,1.0s						
WRAB	Tennant Creek	70.17	200	P	P	17 00 22.3	-0.3
WRAB	Tennant Creek	70.17	200	P	P	17 00 23.2	+0.6
WB2	Warramunga Arr	70.18	200	P	P	17 00 22.4	-0.3
WRA	Warramunga Arr	70.18	200	P	P	17 00 22.6	-0.1
	comp=Z,147nm,0.9s,baz=16,slow=6.2,SNR=520						
WRA				pP	pP	17 00 33.5	-0.8
	comp=Z,64nm,1.0s,baz=16,slow=6.3,SNR=7.3						
WRA				PKPPKP	P'P'df	17 28 25.3	+5.5
	comp=Z,1.7nm,0.9s,baz=195,slow=2.8,SNR=6.8						
WRA				LR	LR	17 30 37.6	
	comp=Z,710nm,20.9s,baz=40,slow=35						
WRA	Warramunga Arr	70.18	200	P	P	17 00 22.6	-0.1
LGD	Lagodekhi	70.19	311	P	P	17 00 23.1	+0.4
HOMB	Homborsund	70.20	342	eP	P	17 00 22.5	+0.2
BGNE	Belgrade	70.21	50	P	P	17 00 22.6	-0.3
	baz=318,SNR=12						
BGNE	Belgrade	70.21	50	P	P	17 00 22.2	-0.6
NCK	Nalchik	70.27	314	i P	P	17 00 23.5	+0.3
NCK				pmax	pmax		
	comp=Z,98nm,1.5s						
NCK				MLR	MLR		
	comp=Z,6µm,18.0s						
ANMO	Albuquerque	70.36	59	P	P	17 00 24.2	+0.1
ANMO				pmax	pmax		
	comp=Z,224nm,1.3s						
ANMO				MLR	MLR		
	comp=Z,2µm,22.0s						
ANMO	Albuquerque	70.36	59	P	P	17 00 24.9	+0.9
	baz=316						
ANMO				S	S	17 09 36.5	+2.9
	baz=316						
ANMO	Albuquerque	70.36	59	⇑P	P	17 00 23.7	-0.3
ANMO				⇓s	pP	17 00 37.0	+1.0
ANMO				⇑s	pP	17 00 37.9	+1.9
ANMO	Albuquerque	70.36	59	P	P	17 00 24.1	+0.1
ANMO				IAmb	IAmb	17 00 38.6	
	comp=Z,224nm,1.2s						
KVAR	Kislovodsk Arr	70.36	315	P	P	17 00 26.2	+2.4
	comp=Z,8.4nm,0.5s,baz=270,slow=20						
KVAR				LR	LR	17 34 59.0	
	comp=Z,6µm,20.3s,baz=278,slow=39						
KIV	Kislovodsk	70.36	315	i P	P	17 00 23.5	-0.3
	SNR=9.7						
KIV	Kislovodsk	70.36	315	eP	P	17 00 24.0	+0.2
KIV				e		17 03 00.6	
KIV				ePPP	PPP	17 04 42.6	
KIV				eS	S	17 09 31.6	-1.6
KIV				eSS	SS	17 14 04.2	+0.8
KIV				pmax	pmax		
	comp=Z,41nm,1.0s						
KIV				MLR	MLR		
	comp=Z,4µm,18.0s						
KIV	Kislovodsk	70.36	315	P	P	17 00 24.9	+1.1
KIV	Kislovodsk	70.36	315	P	P	17 00 24.1	+0.2
LKBA	Tubou, Lakemba	70.38	153	P	P	17 00 25.3	+1.4
SNART	Snartemo	70.40	342	eP	P	17 00 24.4	+0.8
KBZ	Khabaz	70.43	314	P	P	17 00 24.4	+0.3
	comp=Z,19nm,0.7s,baz=94,slow=3.9,SNR=60						
KBZ				PKPPKP	P'P'df	17 28 17.9	-11
	comp=Z,2.7nm,0.9s,baz=91,slow=0.3,SNR=5.3						
KBZ				LR	LR	17 34 35.8	
	comp=Z,6µm,21.9s,baz=29,slow=39						
KBZ	Khabaz	70.43	314c	iP	P	17 00 23.8	-0.3
KBZ				pmax	pmax		
	comp=Z,91nm,1.7s						
KBZ				MLR	MLR		
	comp=Z,7µm,22.0s						
D41A	Chassel	70.46	40	P	P	17 00 24.0	-0.2
MARNC	Mare, Loyalty	70.46	166	P	P	17 00 23.9	-0.4
KLNR	Kaliningrad	70.50	334	i P	P	17 00 23.5	-0.8
KLNR				pmax	pmax		
	comp=Z,201nm,1.0s						
KLNR				MLR	MLR		
	comp=Z,7µm,22.0s						
SHA1	Shidzhatmaz	70.54	314c	iP	P	17 00 25.3	+0.2
DDFL	Dedoflistskaro	70.55	311	P	P	17 00 28.3	+3.4
I37A	Lemond, Waseca	70.60	45	P	P	17 00 25.2	+0.1
GUDG	Gudauri	70.61	312	P	P	17 00 27.3	+1.8
ZEI	Tsey	70.65	313	eP	P	17 00 26.1	+0.4
ZEI				pmax	pmax		
	comp=Z,16nm,1.4s						
L34A	Svendsen Farm,	70.69	48	P	P	17 00 24.9	-0.8
Y22D	IRIS PASSCAL I	70.71	60	P	P	17 00 27.5	+1.4
	baz=316						
Y22D	IRIS PASSCAL I	70.71	60	IAMs_20	IAMs_20	17 28 30.2	
	comp=Z,3µm,21.0s						
AKASG	Malin Array Be	70.78	327	P	P	17 00 25.0	-1.1
	comp=Z,48nm,0.6s,baz=34,slow=6.2,SNR=86						
AKASG				PKiKP	PKiKP	17 06 36.6	+1.6
	comp=Z,1.2nm,0.4s,baz=23,slow=3.1,SNR=4.1						
AKASG				LR	LR	17 33 36.7	
	comp=Z,5µm,20.6s,baz=15,slow=38						
AKASG	Malin Array Be	70.78	327	i P	P	17 00 20.5	-5.6
AKASG				pmax	pmax		
	comp=Z,10.0nm,0.6s						
AKASG	Malin Array Be	70.78	327	P	P	17 00 24.5	-1.6
AKBB	Malin Array Si	70.78	327	P	P	17 00 24.5	-1.6
AKBB				pmax	pmax		
	comp=Z,38nm,0.7s						
AKBB	Malin Array Si	70.78	327	P	P	17 00 24.5	-1.6
KIEV	Kiev	70.79	327	P	P	17 00 25.0	-1.1
DZM	Mont Dzumac	70.81	168	P	P	17 00 27.9	+1.3
	comp=Z,33nm,0.9s,baz=39,slow=6.0,SNR=23						
DZM	Mont Dzumac	70.81	168	eP	P	17 00 27.5	+1.0
	comp=Z,136nm,1.4s						
DZM				eS	S	17 09 37.0	-1.5
	comp=Z,986nm,26.9s						
DZM				eLQ	LQ	17 18 56.9	
	comp=Z,8µm,32.5s						
DZM				eLR	LR	17 21 56.0	
	comp=Z,8µm,25.2s						
DZM	Mont Dzumac	70.81	168	⇑P	P	17 00 27.6	+1.0
DZM				⇑P	P	17 00 27.6	+1.0
DZM	Mont Dzumac	70.81	168	P	P	17 00 27.0	+0.5
DZM	Mont Dzumac	70.81	168	P	P	17 00 28.5	+1.9
NOUC	Port Laguerre	70.82	168	P	P	17 00 28.4	+1.9
BNM	Barren Site	70.83	60	P	P	17 00 26.9	-0.1
FITZ	Fitzroy Crossi	70.83	209	P	P	17 00 27.5	+0.8
	comp=Z,114nm,0.9s,baz=19,slow=4.5,SNR=128						
FITZ				PKPPKP	P'P'df	17 28 26.3	+7.1
	comp=Z,2.6nm,1.0s,baz=265,slow=1.7,SNR=3.3						
FITZ	Fitzroy Crossi	70.83	209	P	P	17 00 27.1	+0.5
NEY	Neytrino	70.88	314	i P	P	17 00 28.2	+1.1
NEY				pmax	pmax		
	comp=Z,20nm,1.5s						
NEY				MLR	MLR		
	comp=Z,3µm,17.0s						
COWI	Conover	70.96	41	P	P	17 00 26.7	-0.6
COWI				IAmb	IAmb	17 00 40.5	
	comp=Z,250nm,1.4s						
COWI				IAMs_20	IAMs_20	17 32 07.7	
	comp=Z,4µm,22.0s						
SEAG	Tbilisi Sea	70.97	312	P	P	17 00 31.3	+3.8
ONI	Oni	71.02	313	P	P	17 00 28.1	+0.3
ONI				pmax	pmax		
	comp=Z,115nm,1.5s						
ONI	Oni	71.02	313	P	P	17 00 28.1	+0.3
ONTNC	Ouen Toro	71.04	168	P	P	17 00 28.4	+0.6
ONTNC	Ouen Toro	71.04	168	P	P	17 00 29.8	+2.0
KAPO	Kapuskasing	71.05	35	⇑P	P	17 00 26.9	-0.9
KAPO				⇑P	P	17 00 27.1	-0.6
G40A	Rib Lake	71.13	42	P	P	17 00 27.7	-0.6
G40A				IAmb	IAmb	17 00 41.5	
	comp=Z,138nm,1.1s						
GOET	G??ttrup	71.17	341	eP	P	17 00 31.1	+2.8
GOET				IAmb	IAmb	17 00 31.7	
	comp=Z,186nm,0.8s						
OUENC	Ouen Island, N	71.21	168	P	P	17 00 29.2	+0.4
OUENC	Ouen Island, N	71.21	168	P	P	17 00 30.6	+1.8
319A	Douglas	71.23	64	P	P	17 00 29.4	+0.1
CBKS	Cedar Bluff	71.28	52	P	P	17 00 28.5	-0.9
CBKS				pmax	pmax		
	comp=Z,311nm,1.3s						
CBKS				MLR	MLR		
	comp=Z,2µm,20.0s						
CBKS	Cedar Bluff	71.28	52	P	P	17 00 28.9	-0.5
	baz=317,SNR=9.3						
CBKS	Cedar Bluff	71.28	52	⇑P	P	17 00 28.9	-0.5
CBKS				⇑s	pP	17 00 41.7	+0.3
CBKS	Cedar Bluff	71.28	52	P	P	17 00 28.5	-0.9
CBKS				IAmb	IAmb	17 00 43.4	
	comp=Z,311nm,1.2s						
CBKS				IAMs_20	IAMs_20	17 34 36.4	
	comp=Z,2µm,20.0s						
121A	Cookes Peak, D	71.30	62	P	P	17 00 31.0	+1.2
	baz=316,SNR=11						
121A				S	S	17 09 47.7	+3.0
	baz=316						
121A	Cookes Peak, D	71.30	62	P	P	17 00 30.1	+0.3
RK1H	Rockhampton Ha	71.36	184	P	P	17 00 31.2	+1.4
	comp=Z,54nm,0.9s						
KZRT	Kazreti	71.45	312	P	P	17 00 31.6	+1.2
PINNC	Pines Island,	71.48	167	P	P	17 00 30.5	0.0
BSD	Bornholm Skovb	71.53	337	⇑iP	P	17 00 30.1	-0.4
BSD				IAmb	IAmb	17 00 32.4	
	comp=Z,135nm,1.1s						
CHVG	Ch'k'valeri	71.58	314	⇑P	P	17 00 32.1	+1.0
SCHQ	Schefferville	71.62	24	P	P	17 00 31.5	+0.3
	comp=Z,103nm,0.7s,baz=324,slow=5.4,SNR=159						
SCHQ	Schefferville	71.62	24	P	P	17 00 30.9	-0.3
COP	Copenhagen	71.65	338	⇑iP	P	17 00 31.5	+0.2
COP				IAmb	IAmb	17 00 33.6	
	comp=Z,2µm,0.8s						
F42A	Maple Grove Fa	71.66	41	P	P	17 00 30.8	-0.8
F42A				IAmb	IAmb	17 00 45.0	
	comp=Z,281nm,1.2s						
E43A	Lone Tree Farm	71.67	40	P	P	17 00 30.7	-0.9
E43A				IAmb	IAmb	17 00 44.8	
	comp=Z,211nm,1.2s						
MUD	Monsted U'grnd	71.72	340	eP	P	17 00 33.6	+2.0
MUD				IAmb	IAmb	17 00 34.2	
	comp=Z,101nm,0.9s						
N35A	Tabor	71.88	49	P	P	17 00 32.4	-0.5
N35A				IAmb	IAmb	17 00 47.5	
	comp=Z,216nm,0.9s						
AKH	Akhalkalaki	71.89	312	⇑P	P	17 00 33.2	0.0
AKH	Akhalkalaki	71.89	312	P	P	17 00 34.7	+1.5
HSIG		71.89	67	P	P	17 00 32.8	-0.4
HSIG				IAmb	IAmb	17 00 48.2	
	comp=Z,291nm,1.3s						
K38A	Parkersburg	71.94	46	P	P	17 00 32.2	-1.0
K38A				IAmb	IAmb	17 00 46.5	
	comp=Z,210nm,1.2s						
BGD	Bogdanovka	71.94	312	P	P	17 00 37.3	+3.7
I40A	Norwalk	72.00	44	P	P	17 00 32.8	-0.8
I40A				IAmb	IAmb	17 00 46.8	
	comp=Z,186nm,1.1s						
SOC	Sochi	72.04	316c	iP	P	17 00 33.3	-0.5
SOC				i *PP	sP	17 00 50.4	+0.6
SOC				e*SP	PcP	17 00 56.8	+4.6
SOC				e		17 03 09.8	
SOC				ePPP	PPP	17 04 54.9	
SOC				eS	S	17 09 52.1	-0.3
SOC				e*SS	sS	17 10 21.9	+10
SOC				eSS	SS	17 14 22.2	-6.7
SOC				pmax	pmax		
	comp=Z,45nm,0.6s						
SOC				MLR	MLR		
	comp=Z,5µm,15.0s						
R32A	Long Quarter,	72.12	52	P	P	17 00 33.6	-0.8
ANN	Anapa	72.14	318	eP	P	17 00 22.9	-11
ANN				pmax	pmax		
	comp=Z,644nm,1.9s						
ANN				MLR	MLR		
	comp=Z,5µm,17.0s						
BIGH	Upper Bighouse	72.15	348	eP	P	17 00 34.5	+0.3
BIGH				IAmb	IAmb	17 00 36.3	
	comp=Z,241nm,1.5s						
GNI	Garni	72.21	311	P	P	17 00 36.2	+1.1
	comp=Z,56nm,1.0s,baz=156,slow=4.1,SNR=5.6						
GNI				LR	LR	17 35 51.6	
	comp=Z,7µm,20.0s,baz=26,slow=39						
GNI	Garni	72.21	311	P	P	17 00 35.7	+0.5
GNI	Garni	72.21	311c	iP	P	17 00 35.8	+0.7
GNI				pmax	pmax		
	comp=Z,145nm,1.6s						
GNI				MLR	MLR		
	comp=Z,8µm,23.0s						
GNI	Garni	72.21	311	P	P	17 00 36.2	+1.1
GNI	Garni	72.21	311	⇑P	P	17 00 36.2	+1.1
GNI				⇓P	P	17 00 36.8	+1.7
GNI	Garni	72.21	311	P	P	17 00 35.6	+0.5
SCIA	State Center	72.29	46	P	P	17 00 35.5	+0.2
	baz=320,SNR=19						
SCIA	State Center	72.29	46	P	P	17 00 35.0	-0.3
SCIA				IAMs_20	IAMs_20	17 36 22.4	
	comp=Z,3µm,18.0s						
SRIG	Santa Rosalia	72.30	69	P	P	17 00 35.5	-0.1
SRIG				IAmb	IAmb	17 00 49.7	
	comp=Z,337nm,1.2s						
GOA	Goa	72.33	274	eP	P	17 00 36.5	+0.6
GOA				IAmb	IAmb	17 00 39.3	
	comp=Z,269nm,1.2s						
RGN	Rugen	72.46	337	eP	P	17 00 37.4	+1.3
RGN	Rugen	72.46	337	eP	P	17 00 37.0	+0.9
	comp=Z,394nm,1.0s,baz=24,slow=5.7						
RGN	Rugen	72.46	337	⇑P	P	17 00 36.7	+0.6
RGN				⇓P	P	17 00 37.2	+1.1
RGN	Rugen	72.46	337	P	P	17 00 36.2	+0.1
GKP	Gorka Klasztor	72.53	335	eP	P	17 00 36.6	0.0
GKP				eL	L	17 37 35.7	
	comp=Z,8µm,18.8s						
GKP	Gorka Klasztor	72.53	335	eP	P	17 00 37.5	+1.0
XMIS	Christmas Isla	72.56	231	P	P	17 00 37.1	0.0
KARS	Kars	72.68	312	P	P	17 00 37.9	0.0
KARS				pmax	pmax		
	comp=Z,149nm,0.8s						
KARS	Kars	72.68	312	P	P	17 00 37.9	0.0
KARS				IAmb	IAmb	17 00 42.1	
	comp=Z,148nm,0.8s						
KSU1	Kansas State U	72.71	50	P	P	17 00 36.7	-1.2
	baz=319,SNR=7.8						
KSU1	Kansas State U	72.71	50	⇑P	P	17 00 36.9	-1.0
KSU1				⇓P	P	17 00 37.5	-0.4
KSU1				⇓s	pP	17 00 48.7	-1.1
KSU1	Kansas State U	72.71	50	P	P	17 00 36.4	-1.5
BEL	Belsk	72.71	332	eP	P	17 00 38.1	+0.5
BEL				eL	L	17 36 57.9	
	comp=Z,5µm,20.3s						
BEL	Belsk	72.71	332	P	P	17 00 39.2	+1.6
BEL				pmax	pmax		
	comp=Z,353nm,1.0s						
I42A	Draeger Farm,	72.78	43	P	P	17 00 36.5	-1.7
I42A				IAmb	IAmb	17 00 51.5	
	comp=Z,195nm,1.1s						
BCA	Borcka	72.78	313	⇑P	P	17 00 39.0	+0.7
E46A	Sault Ste Mari	72.81	38	P	P	17 00 37.2	-1.2
E46A				IAmb	IAmb	17 00 51.2	
	comp=Z,271nm,1.4s						
H43A	Windswept, Lux	72.83	41	P	P	17 00 37.6	-1.0
H43A				IAmb	IAmb	17 00 51.9	
	comp=Z,273nm,1.1s						
JFWS	Jewell Farm	72.92	44	P	P	17 00 38.0	-1.1
JFWS				pmax	pmax		
	comp=Z,113nm,1.2s						
JFWS	Jewell Farm	72.92	44	P	P	17 00 38.3	-0.8
	baz=321,SNR=6.9						
JFWS	Jewell Farm	72.92	44	P	P	17 00 38.0	-1.1
JFWS	Jewell Farm	72.92	44	IAMs_20	IAMs_20	17 32 35.0	
	comp=Z,3µm,21.0s						
MCD	Coleburn Disti	72.94	348	eP	P	17 00 38.4	-0.5
HORU	Horodok	73.03	327	P	P	17 00 39.4	-0.2
AMTX	Amarillo	73.11	56	P	P	17 00 41.0	+0.5
	baz=318						
AMTX	Amarillo	73.11	56	P	P	17 00 39.3	-1.2
AMTX				IAMs_20	IAMs_20	17 28 59.8	
	comp=Z,2µm,22.0s						
L40A	Anamosa	73.12	45	P	P	17 00 39.2	-1.1
L40A				IAmb	IAmb	17 00 53.2	
	comp=Z,247nm,1.1s						
N38A	Joes South For	73.13	47	P	P	17 00 39.6	-0.8
N38A				IAmb	IAmb	17 00 53.6	
	comp=Z,244nm,0.9s						
SORM	Soroca	73.21	326	⇓P	P	17 00 39.6	-1.1
MDO	Dochfour	73.23	348	eP	P	17 00 40.4	-0.2
G45A	Suttons Bay	73.30	40	P	P	17 00 40.7	-0.6
G45A				IAmb	IAmb	17 00 55.3	
	comp=Z,298nm,1.1s						
EIDS	Eidsvold	73.31	183	P	P	17 00 41.5	+0.1
EIDS	Eidsvold	73.31	183	P	P	17 00 43.2	+1.8
	comp=Z,133nm,1.9s						
MNTX	Cornudas Mount	73.31	61	P	P	17 00 42.3	+0.7
	baz=317,SNR=19						
MNTX	Cornudas Mount	73.31	61	P	P	17 00 41.3	-0.3
MNTX				IAmb	IAmb	17 00 56.1	
	comp=Z,327nm,1.4s						
KAN12	Harper NE Stat	73.33	52	P	P	17 00 40.6	-1.0
KAN12				IAmb	IAmb	17 00 55.4	
	comp=Z,306nm,1.5s						
KAN16	Harper SW Stat	73.35	53		P	17 00 40.9	-0.8
KAN16				IAmb	IAmb	17 00 55.6	
	comp=Z,198nm,1.2s						
LVV	L'vov	73.37	329d	iP	P	17 00 41.8	+0.2
LVV				eS	S	17 10 07.0	-0.3
LVV				MLR	MLR		
	comp=Z,3µm,20.0s						
KAN08	Anthony NE Sta	73.40	53	P	P	17 00 40.9	-1.1
KAN08				IAmb	IAmb	17 00 55.8	
	comp=Z,183nm,1.3s						
KAN10	Anthony SW Sta	73.41	53		P	17 00 41.1	-1.0
KAN06	Argonia West S	73.44	52	P	P	17 00 41.0	-1.3
DRUM	Mains of Drumt	73.47	347	eP	P	17 00 41.8	-0.3
DRUM				IAmb	IAmb	17 00 43.9	
	comp=Z,107nm,0.8s						
U32A	Winter Ranch,	73.47	54		P	17 00 41.5	-1.0
U32A				IAmb	IAmb	17 00 56.1	
	comp=Z,240nm,1.3s						
KPL	Plockton	73.50	349	eP	P	17 00 42.1	0.0
KPL				IAmb	IAmb	17 00 44.2	
	comp=Z,226nm,1.3s						
KS21	Milan North St	73.52	52	IAMs_20	IAMs_20	17 37 51.5	
	comp=Z,2µm,20.0s						
KAN05	Bluff City Nor	73.54	53	P	P	17 00 41.9	-0.9
KAN05				IAmb	IAmb	17 00 56.8	
	comp=Z,251nm,1.4s						
KMPD	K-Podol'skiy	73.56	327	P	P	17 00 42.0	-0.7
KAN01	Argonia South	73.56	52	P	P	17 00 42.6	-0.4
KAN01				IAmb	IAmb	17 00 43.9	
	comp=Z,186nm,1.3s						
OK032	Salt Plains WL	73.58	53	P	P	17 00 42.3	-0.8
OK032				IAmb	IAmb	17 00 57.3	
	comp=Z,208nm,1.2s						
KAN14	Manchester OK	73.60	53	P	P	17 00 42.9	-0.3
KS20	Mayfield South	73.61	52	P	P	17 00 42.8	-0.5
KS20				IAmb	IAmb	17 00 50.9	
	comp=Z,139nm,0.8s						
PALK	Pallekele	73.72	263	LR	LR	17 35 13.5	
	comp=Z,1µm,21.3s,baz=142,slow=38						
PALK	Pallekele	73.72	263	P	P	17 00 44.0	-0.2
PALK				pmax	pmax		
	comp=Z,205nm,1.4s						
PALK	Pallekele	73.72	263	P	P	17 00 44.2	0.0
PALK	Pallekele	73.72	263	P	P	17 00 44.0	-0.2
PALK				IAmb	IAmb	17 00 47.4	
	comp=Z,205nm,1.4s						
GC02	Grant County #	73.74	53	P	P	17 00 43.5	-0.5
BSEG	Bad Segeberg	73.76	339	eP	P	17 00 44.6	+0.8
	comp=Z,348nm,1.7s,baz=24,slow=5.7						
I45A	Fountain	73.85	41	P	P	17 00 43.6	-1.0
P38A	Dawn	73.87	48	P	P	17 00 43.8	-0.9
P38A				IAmb	IAmb	17 00 58.1	
	comp=Z,246nm,1.0s						
AS31	Alice Springs	73.87	199	P	P	17 00 45.2	+0.4
ASAR	Alice Springs	73.88	199	P	P	17 00 45.6	+0.8
	comp=Z,55nm,0.8s,baz=14,slow=5.1,SNR=586						
ASAR				PKKP	PKKPdf	17 20 07.7	+3.9
	comp=Z,0.4nm,1.0s,baz=207,slow=3.0,SNR=4.1						
ASAR				PKPPKP	P'P'df	17 28 18.2	+4.8
	comp=Z,1.2nm,1.0s,baz=194,slow=2.9,SNR=4.9						
ASAR				LR	LR	17 30 54.1	
	comp=Z,939nm,21.7s,baz=23,slow=34						
ASAR	Alice Springs	73.88	199	P	P	17 00 45.3	+0.5
L42A	Oliver, Polo	73.90	44	P	P	17 00 43.9	-1.0
L42A				IAmb	IAmb	17 00 57.6	
	comp=Z,161nm,1.0s						
GLMI	Grayling	73.92	39	P	P	17 00 46.0	+1.1
	baz=324						
GLMI	Grayling	73.92	39	P	P	17 00 44.7	-0.3
CROK	Carrier	73.93	53		P	17 00 44.3	-0.9
CROK				IAmb	IAmb	17 00 46.6	
	comp=Z,254nm,1.4s						
PURM	Purcari	73.94	324	⇓P	P	17 00 44.8	-0.2
K43A	Burlington	73.97	43	P	P	17 00 44.4	-0.8
K43A				IAmb	IAmb	17 00 58.1	
	comp=Z,258nm,1.1s						
KIS	Kishinev	73.97	325	⇑iP	P	17 00 44.0	-1.2
	comp=Z,600nm,3.5s						
KIS	Kishinev	73.97	325	ePcP	PcP	17 00 57.0	-3.3
KIS				eS	S	17 10 13.0	-1.2
KIS				eL	L	17 27 30.0	
KIS				LRM	MLR	17 34 53.0	
	comp=Z,1µm,21.5s						
KIS	Kishinev	73.97	325c	eP	P	17 00 44.0	-1.2
KIS				e		17 00 57.0	
KIS				eS	S	17 10 13.0	-1.2
KIS				pmax	pmax		
	comp=Z,1µm,3.5s						
KWP	Kalwaria Pacla	73.98	330	eP	P	17 00 45.3	+0.1
KWP				eL	L	17 37 32.2	
	comp=Z,5µm,19.9s						
KWP	Kalwaria Pacla	73.98	330	P	P	17 00 44.5	-0.7
KWP	Kalwaria Pacla	73.98	330	P	P	17 00 44.5	-0.7
MORS	Morshin	74.00	329	P	P	17 00 45.9	+0.6
MILM	Milestii Mici	74.04	325	⇑P	P	17 00 45.1	-0.4
MILM	Milestii Mici	74.04	325c	iP	P	17 00 44.5	-1.1
MILM				e		17 00 58.0	
MILM				eS	S	17 10 16.0	+1.0
MILM				pmax	pmax		
	comp=Z,1µm,4.0s						
MILM				MLR	MLR		
	comp=E,2µm,16.0s						
VLDQ	Val d'Or	74.06	33	P	P	17 00 43.7	-1.9
VLDQ				IAmb	IAmb	17 00 58.3	
	comp=Z,298nm,1.1s						
BLOK	Blackwell	74.15	52	P	P	17 00 45.5	-0.9
BLOK				IAmb	IAmb	17 01 00.8	
	comp=Z,214nm,1.4s						
INVG	Invergeldie, C	74.17	348	eP	P	17 00 45.4	-0.8
INVG				IAmb	IAmb	17 00 48.4	
	comp=Z,111nm,1.1s						
RUE	Ruedersdorf	74.19	336	eP	P	17 00 47.3	+1.0
RUE	Ruedersdorf	74.19	336	eP	P	17 00 47.0	+0.6
	comp=Z,737nm,1.8s,baz=24,slow=5.7						
KSV	Kosov	74.27	328	P	P	17 00 47.1	+0.2
IAS	Iasi	74.29	325	⇑P	P	17 00 46.8	-0.2
IAS	Iasi	74.29	325	P	P	17 00 47.8	+0.8
N41A	Harden Midland	74.35	46	P	P	17 00 46.7	-0.8
T35A	Sooner Cattle	74.40	52	P	P	17 00 47.0	-0.9
LAWE	Loch Awe, Argy	74.52	348	eP	P	17 00 48.0	-0.2
LAWE				IAmb	IAmb	17 00 50.2	
	comp=Z,166nm,0.8s						
EDI	Edinburgh	74.53	347	eP	P	17 00 48.0	-0.3
EDI				IAmb	IAmb	17 00 49.4	
	comp=Z,270nm,1.5s						
RMQ	Roma	74.53	185	P	P	17 00 49.9	+1.4
	comp=Z,173nm,1.0s						
L44A	Lake County Fo	74.57	43	P	P	17 00 48.3	-0.5
	baz=322						
L44A	Lake County Fo	74.57	43	P	P	17 00 48.2	-0.6
L44A				IAmb	IAmb	17 01 01.9	
	comp=Z,172nm,1.1s						
STHS	Stebnicka Huta	74.65	330	eP	P	17 00 49.4	+0.3
STHS	Stebnicka Huta	74.65	330	eP	P	17 00 49.4	+0.3
VASR	Vaslui	74.66	325	⇓P	P	17 00 49.4	+0.2
P40A	Paris	74.68	47	P	P	17 00 48.9	-0.5
P40A				IAmb	IAmb	17 01 03.0	
	comp=Z,345nm,1.1s						
KOLS	Kolonicke sedl	74.72	330	eP	P	17 00 49.8	+0.3
KOLS				pmax	pmax		
	comp=Z,251nm,1.6s						
KOLS	Kolonicke sedl	74.72	330	eP	P	17 00 49.8	+0.3
OK029	Liberty Lake	74.74	53		P	17 00 49.5	-0.3
OK029				IAmb	IAmb	17 01 04.6	
	comp=Z,331nm,1.2s						
BCOK	Bluff Creek, N	74.76	53		P	17 00 49.4	-0.6
BCOK				IAmb	IAmb	17 00 51.9	
	comp=Z,199nm,1.3s						
GURO	Guroymak-BITLI	74.79	311	P	P	17 00 50.7	+0.5
BUR08	Bucovina Ar. S	74.79	327	P	P	17 00 49.4	-0.7
BURAR	Bucovina Array	74.81	327	⇑P	P	17 00 50.2	0.0

BURAR	**Bucovina Array**	**74.81**	**327**	P	**P**	**17 00 49.8**	**-0.4**
WMOK	**Wichita Mounta**	**74.82**	**55**	P	**P**	**17 00 49.9**	**-0.4**
WMOK				pmax	pmax		
	comp=Z,292nm,1.5s						
WMOK				MLR	MLR		
	comp=Z,2µm,22.0s						
WMOK	**Wichita Mounta**	**74.82**	**55**	P	**P**	**17 00 50.5**	**+0.1**
	baz=319,SNR=68						
WMOK				S	**S**	**17 10 23.8**	**-0.4**
	baz=319						
WMOK	**Wichita Mounta**	**74.82**	**55**	⇑P	**P**	**17 00 50.3**	**0.0**
WMOK				⇑P	**P**	**17 00 50.5**	**+0.1**
WMOK	**Wichita Mounta**	**74.82**	**55**		**P**	**17 00 49.9**	**-0.4**
WMOK				IAmb	IAmb	17 01 04.3	
	comp=Z,292nm,1.4s						
PGBU	**Glenifferbraes**	**74.83**	**348**	*e*P	**P**	**17 00 50.3**	**+0.3**
PGBU				IAmb	IAmb	17 00 52.3	
	comp=Z,471nm,1.0s						
QUOK	**Quay**	**74.86**	**52**		**P**	**17 00 50.0**	**-0.5**
KSP	**Ksiaz**	**74.95**	**334**	*e*P	**P**	**17 00 50.8**	**0.0**
KSP				*e*L	L	17 39 13.3	
	comp=Z,6µm,20.2s						
KSP	**Ksiaz**	**74.95**	**334**	P	**P**	**17 00 51.0**	**+0.2**
KSP				pmax	pmax		
	comp=Z,172nm,1.2s						
OK031	**S. Brethren Rd**	**74.95**	**53**	P	**P**	**17 00 50.6**	**-0.5**
OK031				IAMs_20	IAMs_20	17 36 58.6	
	comp=Z,2µm,20.0s						
NIE	**Niedzica**	**74.96**	**331**	*e*P	**P**	**17 00 51.6**	**+0.7**
NIE				*e*L	L	17 38 40.1	
	comp=Z,3µm,19.9s						
UZH	**Uzhgorod**	**74.98**	**329**	*e*P	**P**	**17 00 49.6**	**-1.4**
UZH				*i* S	**S**	**17 10 20.3**	**-5.1**
UZH				*i* PS	**PnS**	**17 11 01.3**	**-2.6**
FLTG	**Flechtingen**	**75.00**	**338**	*e*P	**P**	**17 00 51.2**	**+0.2**
	comp=Z,407nm,1.7s,baz=24,slow=5.7						
OK030	**Cody Creek RV**	**75.00**	**53**	P	**P**	**17 00 50.9**	**-0.5**
OK030				IAMs_20	IAMs_20	17 37 09.9	
	comp=Z,2µm,20.0s						
QLP	**Quilpie**	**75.01**	**189**	P	**P**	**17 00 51.9**	**+0.6**
	comp=Z,644nm,1.0s						
CRVS	**Cervenica-Dubn**	**75.02**	**330**	*e*P	**P**	**17 00 51.6**	**+0.3**
CRVS				pmax	pmax		
	comp=Z,494nm,1.9s						
CRVS	**Cervenica-Dubn**	**75.02**	**330**	*e*P	**P**	**17 00 51.6**	**+0.3**
OKCFA	**Oklahoma City**	**75.03**	**53**		**P**	**17 00 51.5**	**0.0**
OKCSW	**OKLAHOMA CITY**	**75.05**	**53**	P	**P**	**17 00 52.2**	**+0.5**
RAC	**Raciborz**	**75.05**	**332**	LMZ	LR	17 38 47.9	
	comp=Z,7.0nm,19.1s						
RAC	**Raciborz**	**75.05**	**332**	*e*P	**P**	**17 00 51.9**	**+0.6**
RAC				MLR	MLR		
	comp=Z,7µm,19.1s						
RAC	**Raciborz**	**75.05**	**332**	*e*P	**P**	**17 00 51.9**	**+0.6**
EKA	**Eskdalemuir Ar**	**75.10**	**347**	P	**P**	**17 00 51.0**	**-0.5**
J47A	**Sunmer**	**75.11**	**40**	P	**P**	**17 00 51.3**	**-0.5**
ESK	**Eskdalemuir**	**75.12**	**347**	*e*P	**P**	**17 00 51.4**	**-0.4**
ESK				IAmb	IAmb	17 00 53.7	
	comp=Z,95nm,0.8s						
ESK	**Eskdalemuir**	**75.12**	**347**	P	**P**	**17 00 51.3**	**-0.4**
ESK				pmax	pmax		
	comp=Z,107nm,0.7s						
ESK	**Eskdalemuir**	**75.12**	**347**	P	**P**	**17 00 51.3**	**-0.4**
ESK				IAmb	IAmb	17 00 53.5	
	comp=Z,106nm,0.7s						
NRDL	**Niedersach Rie**	**75.13**	**338**	*e*P	**P**	**17 00 52.4**	**+0.7**
	comp=Z,306nm,1.7s,baz=24,slow=5.7						
M44A	**Midewin, Midew**	**75.14**	**44**	P	**P**	**17 00 50.8**	**-1.2**
M44A				IAmb	IAmb	17 01 05.2	
	comp=Z,262nm,1.2s						
FNO	**Franklin**	**75.18**	**54**		**P**	**17 00 52.1**	**-0.3**
TRSU	**Trosnyk**	**75.21**	**329**	P	**P**	**17 00 52.6**	**+0.3**
HDIL	**Hopedale**	**75.21**	**45**	P	**P**	**17 00 52.3**	**-0.1**
	baz=322						
HDIL	**Hopedale**	**75.21**	**45**	P	**P**	**17 00 51.9**	**-0.6**
HDIL				IAmb	IAmb	17 01 05.9	
	comp=Z,311nm,1.0s						
HDIL				IAMs_20	IAMs_20	17 36 52.1	
	comp=Z,3µm,19.0s						
OSTC	**Ostas**	**75.22**	**334**	*e*P	**P**	**17 00 52.8**	**+0.4**
OSTC				AMS	AMS	17 39 50.0	
	comp=Z,6µm,19.0s						
CHVC	**Chvalec**	**75.24**	**334**	*e*P	**P**	**17 00 52.9**	**+0.4**
CHVC				AMS	AMS	17 39 00.0	
	comp=Z,5µm,19.1s						
OKC	**Ostrava-Krasne**	**75.28**	**332**	*e*P	**P**	**17 00 53.2**	**+0.5**
OKC				MLR	MLR		
	comp=Z,4µm,20.0s						
OKC	**Ostrava-Krasne**	**75.28**	**332**	AMS	AMS	17 36 50.0	
	comp=Z,4µm,20.0s						
OKC	**Ostrava-Krasne**	**75.28**	**332**	*e*P	**P**	**17 00 53.2**	**+0.5**
TRPA	**Tarpa**	**75.32**	**329**	⇑P	**P**	**17 00 52.8**	**-0.2**
TRPA	**Tarpa**	**75.32**	**329**	*e*P	**P**	**17 00 52.8**	**-0.2**
ASSE	**Asse, Remlinge**	**75.32**	**338**	*e*P	**P**	**17 00 53.6**	**+0.8**
	comp=Z,248nm,1.6s,baz=24,slow=5.7						
UPC	**Upice**	**75.33**	**334**	*e*P	**P**	**17 00 53.5**	**+0.5**
UPC				*e*S	**S**	**17 10 25.7**	**-3.6**
UPC				MLR	MLR		
	comp=Z,6µm,18.7s						
UPC	**Upice**	**75.33**	**334**	*e*P	**P**	**17 00 53.5**	**+0.5**
UPC				*e*S	**S**	**17 10 25.7**	**-3.6**
UPC				AMS	AMS	17 39 00.0	
	comp=Z,6µm,18.7s						
SNOP	**Sinop**	**75.33**	**318**	P	**P**	**17 00 53.1**	**-0.1**
BMR	**Baia Mare**	**75.38**	**328**	⇑P	**P**	**17 00 53.6**	**+0.3**
DPC	**Dobruska-Polom**	**75.38**	**334**	*e*P	**P**	**17 00 53.9**	**+0.6**
DPC				MLR	MLR		
	comp=Z,7µm,18.3s						
DPC	**Dobruska-Polom**	**75.38**	**334**	*e*P	**P**	**17 00 53.9**	**+0.6**
DPC				AMS	AMS	17 39 50.0	
	comp=Z,7µm,18.3s						
SIRT	**Sirnak**	**75.38**	**310**	P	**P**	**17 00 54.4**	**+0.8**
I49A	**Point Hope**	**75.39**	**39**	P	**P**	**17 00 53.2**	**-0.3**
I49A				IAmb	IAmb	17 01 07.0	
	comp=Z,342nm,1.2s						
EDMD	**Edmundbyers**	**75.39**	**346**	*e*P	**P**	**17 00 53.1**	**-0.1**
EDMD				IAmb	IAmb	17 00 54.4	
	comp=Z,403nm,1.6s						
L46A	**Eue Claire**	**75.44**	**42**	P	**P**	**17 00 53.2**	**-0.5**
L46A				IAmb	IAmb	17 01 07.0	
	comp=Z,326nm,1.2s						
X34A	**Smith Ranch, M**	**75.44**	**54**		**P**	**17 00 53.6**	**-0.3**
X34A				IAmb	IAmb	17 01 08.3	
	comp=Z,446nm,1.5s						
S39A	**Bolivar**	**75.46**	**49**	P	**P**	**17 00 52.7**	**-1.3**
S39A				IAmb	IAmb	17 01 06.7	
	comp=Z,203nm,1.4s						
CLL	**Collm**	**75.46**	**336**	⇑*i*P	**P**	**17 00 53.2**	**-0.5**
CLL				*e*S	**SKiKP**	**17 10 19.0**	**+7.0**
CLL				pmax	pmax		
	comp=Z,237nm,1.0s						
CLL				MLR	MLR		
	comp=Z,5µm,21.3s						
CLL	**Collm**	**75.46**	**336**	⇑*i*P	**P**	**17 00 53.2**	**-0.5**
	comp=Z,237nm,1.0s						
CLL				*e*Pmax		17 00 53.0	
CLL				*e*PP	**PP**	**17 03 46.0**	**+3.7**
CLL				*e*PPP	PPP	17 05 36.0	
CLL				*e*(S)	**SKiKP**	**17 10 21.0**	**+9.0**
CLL				*e*SS	SS	17 15 36.0	+16
CLL				LmV		17 36 00.0	
	comp=Z,5µm,21.3s						
CLL	**Collm**	**75.46**	**336**	*e*P	**P**	**17 00 53.8**	**+0.1**
	comp=Z,237nm,1.0s,baz=24,slow=5.7						
CLL	**Collm**	**75.46**	**336**	P	**P**	**17 00 52.9**	**-0.8**
CLL				IAmb	IAmb	17 00 55.9	
	comp=Z,190nm,0.9s						
LANS	**Liptovska Anna**	**75.46**	**331**	*e*P	**P**	**17 00 55.2**	**+1.4**
LANS				pmax	pmax		
	comp=Z,104nm,1.1s						
LANS	**Liptovska Anna**	**75.46**	**331**	*e*P	**P**	**17 00 55.2**	**+1.4**
NEWG	**New Galloway**	**75.46**	**347**	*e*P	**P**	**17 00 53.9**	**+0.2**
NEWG				IAmb	IAmb	17 00 56.0	
	comp=Z,224nm,1.3s						
TLCR		**75.47**	**324**	⇑P	**P**	**17 00 53.9**	**0.0**
KRLC	**Kraliky**	**75.48**	**333**	*e*P	**P**	**17 00 54.6**	**+0.7**
KRLC				MLR	MLR		
	comp=Z,7µm,18.9s						
KRLC	**Kraliky**	**75.48**	**333**	*e*P	**P**	**17 00 54.6**	**+0.7**
KRLC				AMS	AMS	17 38 30.0	
	comp=Z,7µm,18.9s						
MORC	**Moravsky Berou**	**75.52**	**333**	⇑P	**P**	**17 00 54.5**	**+0.3**
MORC	**Moravsky Berou**	**75.52**	**333**	P	**P**	**17 00 53.5**	**-0.6**
MORC				pmax	pmax		
	comp=Z,178nm,1.1s						
MORC	**Moravsky Berou**	**75.52**	**333**	*e*P	**P**	**17 00 54.1**	**0.0**
MORC	**Moravsky Berou**	**75.52**	**333**	P	**P**	**17 00 53.5**	**-0.6**
MORC				IAmb	IAmb	17 00 56.9	
	comp=Z,178nm,1.1s						
R40A	**Maddies Statio**	**75.53**	**48**	P	**P**	**17 00 53.5**	**-0.8**
R40A				IAmb	IAmb	17 01 07.5	
	comp=Z,209nm,1.1s						
TUL1	**Leonard**	**75.54**	**52**	P	**P**	**17 00 54.5**	**0.0**
	baz=320,SNR=17						
TUL1	**Leonard**	**75.54**	**52**	P	**P**	**17 00 54.1**	**-0.3**
TUL1				IAmb	IAmb	17 01 08.2	
	comp=Z,390nm,1.4s						
TUL1				IAMs_20	IAMs_20	17 34 20.1	
	comp=Z,3µm,22.0s						
ARCR	**ARCALIA**	**75.57**	**327**	⇑P	**P**	**17 00 55.0**	**+0.5**
BRG	**Berggiesshubel**	**75.59**	**335**	*e*P	**P**	**17 00 54.8**	**+0.3**
	comp=Z,297nm,1.8s,baz=24,slow=5.7						
BRG				*e*pP	**pP**	**17 01 01.8**	**-4.4**
BRG	**Berggiesshubel**	**75.59**	**335**	*i* P	**P**	**17 00 54.1**	**-0.4**
BRG				Amp		17 00 56.9	
	comp=Z,61nm,0.8s						
BRG	**Berggiesshubel**	**75.59**	**335**	P	P	17 01 02.6	+8.1
BRG				Amp		17 01 04.5	
	comp=Z,31nm,0.8s						
BRG	**Berggiesshubel**	**75.59**	**335**	Amp		17 37 07.0	
	comp=Z,4.2nm,19.6s						
BRG	**Berggiesshubel**	**75.59**	**335**	S	**S**	**17 10 32.0**	**-0.2**
BRG	**Berggiesshubel**	**75.59**	**335**	Amp		17 37 07.0	
	comp=E,2.1nm,22.1s						
BRG	**Berggiesshubel**	**75.59**	**335**	Amp		17 37 07.0	
	comp=N,3.3nm,20.5s						
SCHL	**Schela**	**75.60**	**324**	⇓P	**P**	**17 00 54.5**	**-0.1**
GDLE	**Glaisdale, N Y**	**75.60**	**345**	*e*P	**P**	**17 00 55.9**	**+1.5**
GDLE				IAmb	IAmb	17 00 56.5	
	comp=Z,159nm,0.9s						
DIKM	**Dikmen**	**75.60**	**317**	⇑P	**P**	**17 00 55.8**	**+1.1**
MBWA	**Marble Bar**	**75.71**	**213**	P	**P**	**17 00 56.1**	**+0.7**
KECS	**Kecovo**	**75.71**	**330**	*e*P	**P**	**17 00 55.7**	**+0.5**
KECS				pmax	pmax		
	comp=Z,52nm,1.2s						
KECS	**Kecovo**	**75.71**	**330**	*e*P	**P**	**17 00 55.7**	**+0.5**
FBE	**Freiberg**	**75.71**	**336**	*e*P	**P**	**17 00 55.8**	**+0.6**
	comp=Z,405nm,1.6s,baz=24,slow=5.7						
VRI	**Vrincioaia**	**75.72**	**325**	⇑P	**P**	**17 00 55.0**	**-0.3**
VRI				⇑P	**P**	**17 00 55.5**	**+0.2**
VRI	**Vrincioaia**	**75.72**	**325**	P	**P**	**17 00 56.5**	**+1.2**
PVCC	**Panska Ves**	**75.73**	**335**	*e*P	**P**	**17 00 55.8**	**+0.5**
PVCC				*e*S	**S**	**17 10 31.3**	**-2.4**
PVCC				MLR	MLR		
	comp=Z,6µm,20.3s						
PVCC	**Panska Ves**	**75.73**	**335**	*e*P	**P**	**17 00 55.8**	**+0.5**
PVCC				*e*S	**S**	**17 10 31.3**	**-2.4**
PVCC				AMS	AMS	17 36 20.0	
	comp=Z,6µm,20.3s						
CFR	**Carcaliu**	**75.75**	**324**	⇑P	**P**	**17 00 55.3**	**-0.1**
CLGH	**Cloghs, Cushen**	**75.76**	**349**	*e*P	**P**	**17 00 55.0**	**-0.4**
CLGH				IAmb	IAmb	17 00 57.6	
	comp=Z,198nm,0.8s						
PLOR	**Plostina**	**75.76**	**325**	⇓P	**P**	**17 00 55.7**	**+0.1**
PLOR				⇑P	**P**	**17 00 55.7**	**+0.1**
GAL1	**Galloway**	**75.78**	**348**	*e*P	**P**	**17 00 54.6**	**-0.8**
GAL1				IAmb	IAmb	17 00 57.3	
	comp=Z,224nm,1.1s						
KESW	**Keswick, Cumbr**	**75.81**	**347**	*e*P	**P**	**17 00 55.0**	**-0.6**
KESW				IAmb	IAmb	17 00 58.0	
	comp=Z,268nm,1.0s						
P43A	**Skaggs, Pawnee**	**75.82**	**46**	P	**P**	**17 00 55.2**	**-0.8**
P43A				IAmb	IAmb	17 01 09.3	
	comp=Z,221nm,1.2s						
IBBN	**Ibbenburen**	**75.87**	**340**	*e*P	**P**	**17 00 56.6**	**+0.6**
	comp=Z,702nm,1.9s,baz=24,slow=5.7						
U38A	**Gravette**	**75.87**	**51**		**P**	**17 00 55.5**	**-0.8**
NEUB	**Neuenburg**	**75.88**	**337**	*e*P	**P**	**17 00 56.5**	**+0.4**
	comp=Z,534nm,1.8s,baz=24,slow=5.7						
OZUR		**75.88**	**326**	⇓P	**P**	**17 00 57.1**	**+0.8**
TPGR	**Topolog**	**75.90**	**324**	⇑P	**P**	**17 00 56.6**	**+0.2**
O44A	**Mansfield**	**75.91**	**45**	P	**P**	**17 00 55.8**	**-0.7**
O44A				IAmb	IAmb	17 01 09.8	
	comp=Z,221nm,1.2s						
ABTX	**Abilene, Hawle**	**75.92**	**57**	P	**P**	**17 00 56.9**	**+0.2**
	baz=319,SNR=13						
ABTX				S	**S**	**17 10 35.5**	**-0.9**
	baz=319						
ABTX	**Abilene, Hawle**	**75.92**	**57**	P	**P**	**17 00 56.1**	**-0.6**
ABTX				IAmb	IAmb	17 01 10.9	
	comp=Z,359nm,1.4s						
COVR	**Voineasa-Covas**	**75.93**	**325**	⇓P	**P**	**17 00 57.2**	**+0.6**
MESR	**Meseseni**	**76.02**	**328**	⇑P	**P**	**17 00 57.1**	**+0.1**
GTTG	**Gottingen**	**76.04**	**338**	*e*P	**P**	**17 00 57.8**	**+0.8**
	comp=Z,413nm,1.8s,baz=24,slow=5.7						
PSA00	**Pilbara Seismi**	**76.04**	**213**	P	**P**	**17 00 57.4**	**+0.1**
PSA00				IAmb	IAmb	17 00 59.6	
	comp=Z,198nm,1.2s						
PSA00	**Pilbara Seismi**	**76.04**	**213**	P	**P**	**17 00 58.7**	**+1.4**
TX31	**Lajitas Ar. Si**	**76.05**	**62**	P	**P**	**17 00 57.7**	**+0.1**
TX32	**Lajitas Array**	**76.05**	**62**	P	**P**	**17 00 57.7**	**+0.1**
TX32				IAmb	IAmb	17 01 12.0	
	comp=Z,390nm,1.3s						
TXAR	**Lajitas Array**	**76.05**	**62**	P	**P**	**17 00 58.0**	**+0.4**
	comp=Z,28nm,0.5s,baz=299,slow=4.2,SNR=307						
TXAR				pP	**pP**	**17 01 09.6**	**-0.1**
	comp=Z,166nm,1.1s,baz=299,slow=3.3,SNR=18						
TXAR				PKKPbc	**PKKPbc**	**17 20 13.0**	**+2.8**
	comp=Z,0.6nm,0.9s,baz=131,slow=5.8,SNR=4.2						
TXAR				PKPPKP	**P'P'df**	**17 28 13.6**	**-5.0**
	comp=Z,0.6nm,1.0s,baz=45,slow=1.5,SNR=3.4						
TXAR	**Lajitas Array**	**76.05**	**62**	P	**P**	**17 00 57.8**	**+0.2**
CBBR	**Cluj-Babes-Bol**	**76.13**	**328**	⇑P	**P**	**17 00 58.7**	**+1.1**
DOPR	**Dopca**	**76.14**	**326**	⇑P	**P**	**17 00 57.9**	**+0.2**
CJR	**Cluj-Napoca**	**76.16**	**328**	⇑P	**P**	**17 00 58.7**	**+0.8**
BANOM	**Banah**	**76.17**	**293**	*i* P	**P**	**17 00 57.5**	**-0.7**
	SNR=40						
BANOM	**Banah**	**76.17**	**293**	P	**P**	**17 00 59.0**	**+0.8**
	SNR=21						
PRA	**Prague**	**76.18**	**335**	*e*P	**P**	**17 00 58.6**	**+0.8**
PRA				MLR	MLR		
	comp=Z,6µm,21.1s						
PRA	**Prague**	**76.18**	**335**	*e*P	**P**	**17 00 58.6**	**+0.8**
PRA				AMS	AMS	17 37 00.0	
	comp=Z,6µm,21.1s						
HPK	**Haverah Park**	**76.18**	**346**	*e*P	**P**	**17 00 58.0**	**+0.2**
HPK				IAmb	IAmb	17 01 00.2	
	comp=Z,404nm,0.9s						
SADO	**Sadowa**	**76.21**	**36**	P	**P**	**17 00 56.9**	**-1.2**
CCM	**Cathedral Cave**	**76.22**	**48**	P	**P**	**17 00 57.3**	**-1.0**
CCM				pmax	pmax		
	comp=Z,224nm,1.3s						
CCM				MLR	MLR		
	comp=Z,2µm,20.0s						
CCM	**Cathedral Cave**	**76.22**	**48**	P	**P**	**17 00 57.9**	**-0.4**
	baz=321						
CCM				S	**S**	**17 10 36.9**	**-2.5**
	baz=321						
CCM	**Cathedral Cave**	**76.22**	**48**	P	**P**	**17 00 57.3**	**-1.0**
CCM				IAmb	IAmb	17 01 11.7	
	comp=Z,224nm,1.2s						
CCM	**Cathedral Cave**	**76.22**	**48**	IAMs_20	IAMs_20	17 38 02.0	
	comp=Z,2µm,20.0s						
PRU	**Pruhonice**	**76.22**	**335**	*e*P	**P**	**17 00 58.4**	**+0.3**
PRU				*e*S	**S**	**17 10 35.4**	**-3.7**
PRU				MLR	MLR		
	comp=Z,5µm,19.0s						
PRU	**Pruhonice**	**76.22**	**335**	*e*P	**P**	**17 00 58.4**	**+0.3**
PRU				*e*S	**S**	**17 10 35.4**	**-3.7**
PRU				AMS	AMS	17 40 00.0	
	comp=Z,5µm,19.0s						
VRAC	**Vranov**	**76.22**	**333**	⇑P	**P**	**17 00 58.3**	**+0.2**
VRAC	**Vranov**	**76.22**	**333**	*e*P	**P**	**17 00 58.3**	**+0.2**
HHAR	**Hobbs**	**76.22**	**51**	P	**P**	**17 00 57.5**	**-0.9**
HHAR				IAmb	IAmb	17 01 11.6	
	comp=Z,178nm,1.1s						
HARR	**Harsova**	**76.23**	**324**	⇑P	**P**	**17 00 59.0**	**+0.8**
TIRR	**Tirgusor**	**76.23**	**323**	⇑P	**P**	**17 00 58.3**	**+0.1**
TIRR	**Tirgusor**	**76.23**	**323**	P	**P**	**17 00 58.0**	**-0.2**
TIRR				pmax	pmax		
	comp=Z,254nm,1.0s						
TIRR				MLR	MLR		
	comp=Z,11µm,20.0s						
TIRR	**Tirgusor**	**76.23**	**323**	P	**P**	**17 00 58.0**	**-0.2**
TIRR				IAmb	IAmb	17 01 00.7	
	comp=Z,254nm,1.0s						
VYHS	**Vyhne**	**76.24**	**331**	*e*P	**P**	**17 00 58.7**	**+0.5**
VYHS				pmax	pmax		
	comp=Z,172nm,1.3s						
VYHS	**Vyhne**	**76.24**	**331**	*e*P	**P**	**17 00 58.7**	**+0.5**
LOOK	**Love County**	**76.25**	**54**	P	**P**	**17 00 58.0**	**-0.5**
NEHR	**Nehoiu**	**76.25**	**325**	⇑P	**P**	**17 00 58.6**	**+0.2**
SLM	**Saint Louis**	**76.26**	**47**	P	**P**	**17 00 58.0**	**-0.5**
SLM				pmax	pmax		
	comp=Z,248nm,1.2s						
SLM	**Saint Louis**	**76.26**	**47**	P	**P**	**17 00 58.0**	**-0.5**
SLM				IAmb	IAmb	17 01 12.0	
	comp=Z,248nm,1.1s						
JAVC	**Velka Javorina**	**76.29**	**332**	*e*P	**P**	**17 00 59.6**	**+1.0**
TLBR	**Topalu**	**76.31**	**324**	⇓P	**P**	**17 00 59.2**	**+0.6**
L48A	**N Adams**	**76.32**	**41**	P	**P**	**17 00 58.1**	**-0.7**
L48A				IAmb	IAmb	17 01 12.4	
	comp=Z,314nm,1.3s						
MLR	**Muntele Rosu**	**76.33**	**325**	P	**P**	**17 00 58.5**	**-0.5**
MLR				pmax	pmax		
	comp=Z,175nm,1.0s						
MLR				MLR	MLR		
	comp=Z,4µm,22.0s						
MLR	**Muntele Rosu**	**76.33**	**325**	P	**P**	**17 00 58.5**	**-0.5**
MLR				IAmb	IAmb	17 01 02.3	
	comp=Z,175nm,1.0s						
SLBS	**Sierra La Lagu**	**76.35**	**70**	P	**P**	**17 00 59.6**	**+0.2**
SLBS				IAmb	IAmb	17 01 14.2	
	comp=Z,335nm,1.4s						
AAM	**Ann Arbor**	**76.37**	**40**	P	**P**	**17 00 58.8**	**-0.2**
AAM				pmax	pmax		
	comp=Z,179nm,1.1s						
AAM				MLR	MLR		
	comp=Z,3µm,22.0s						
AAM	**Ann Arbor**	**76.37**	**40**	P	**P**	**17 00 59.1**	**+0.1**
	baz=324						
AAM	**Ann Arbor**	**76.37**	**40**	P	**P**	**17 00 58.8**	**-0.2**
AAM				IAmb	IAmb	17 01 12.8	
	comp=Z,179nm,1.1s						
AAM				IAMs_20	IAMs_20	17 35 46.4	
	comp=Z,3µm,22.0s						
SFIN	**Lafayette**	**76.37**	**44**	P	**P**	**17 00 58.9**	**-0.2**
	baz=323,SNR=11						
SFIN	**Lafayette**	**76.37**	**44**	P	**P**	**17 00 58.5**	**-0.6**
PSZ	**Piszkesteto**	**76.40**	**330**	⇑P	**P**	**17 00 59.9**	**+0.6**
PSZ	**Piszkesteto**	**76.40**	**330**	P	**P**	**17 00 58.6**	**-0.6**
PSZ				pmax	pmax		
	comp=Z,206nm,1.3s						
PSZ				MLR	MLR		
	comp=Z,5µm,18.0s						
PSZ	**Piszkesteto**	**76.40**	**330**	P	**P**	**17 00 58.6**	**-0.6**
PSZ				IAmb	IAmb	17 01 02.2	
	comp=Z,206nm,1.3s						
MGMO	**Mountain Grove**	**76.40**	**49**	P	**P**	**17 00 58.3**	**-1.1**
DRGR		**76.41**	**328**	⇑P	**P**	**17 00 59.2**	**-0.1**
ISR	**Istrita**	**76.41**	**325**	⇑P	**P**	**17 01 00.7**	**+1.3**
TANN	**Tannenbergstha**	**76.42**	**336**	*e*P	**P**	**17 00 59.9**	**+0.6**
	comp=Z,257nm,1.7s,baz=24,slow=5.7						
K50A	**Casco**	**76.42**	**39**	P	**P**	**17 00 58.8**	**-0.6**
K50A				IAmb	IAmb	17 01 13.0	
	comp=Z,338nm,1.4s						
WERD	**Werda**	**76.43**	**336**	*e*P	**P**	**17 00 60.0**	**+0.7**
	comp=Z,383nm,1.8s,baz=24,slow=5.7						
MOX	**Moxa**	**76.43**	**337**	*e*P	**P**	**17 00 59.9**	**+0.6**
	comp=Z,410nm,1.9s,baz=24,slow=5.7						
MOX				*e*L	L	17 37 43.5	
	comp=Z,4µm,20.6s						
MFTR	**Murfatlar**	**76.46**	**323**	⇑P	**P**	**17 00 59.7**	**+0.2**
CVDA	**Cernavoda**	**76.49**	**324**	⇑P	**P**	**17 01 00.5**	**+0.8**
GUNZ	**Gunzen**	**76.50**	**336**	*e*P	**P**	**17 01 00.4**	**+0.7**
	comp=Z,371nm,1.7s,baz=24,slow=5.7						
KRUC	**Moravsky**	**76.50**	**333**	*e*P	**P**	**17 00 59.8**	**+0.1**
AMRR	**Amara**	**76.53**	**324**	⇑P	**P**	**17 00 59.8**	**-0.1**
WERN	**Wernitzgruen**	**76.55**	**336**	*e*P	**P**	**17 01 00.8**	**+0.7**
	comp=Z,356nm,1.6s,baz=24,slow=5.7						
TREC	**Trest**	**76.56**	**334**	*e*P	**P**	**17 01 00.6**	**+0.5**
TREC				*e*S	**S**	**17 10 41.0**	**-2.0**
TREC				MLR	MLR		
	comp=Z,6µm,18.3s						
TREC	**Trest**	**76.56**	**334**	AMS	AMS	17 39 50.0	
	comp=Z,6µm,18.3s						
TREC	**Trest**	**76.56**	**334**	*e*P	**P**	**17 01 00.6**	**+0.5**
TREC	**Trest**	**76.56**	**334**	*e*S	**S**	**17 10 41.0**	**-2.0**
WRKA	**Warakurna**	**76.58**	**204**	P	**P**	**17 01 01.2**	**+0.9**
INKA	**Innaminka**	**76.60**	**192**	P	**P**	**17 01 01.2**	**+1.0**
N47A	**Urbana**	**76.61**	**42**	P	**P**	**17 00 59.4**	**-1.1**
N47A				IAmb	IAmb	17 01 13.4	
	comp=Z,160nm,1.1s						
HPIG		**76.62**	**65**	P	**P**	**17 01 00.2**	**-0.8**
HPIG				IAmb	IAmb	17 01 15.2	
	comp=Z,257nm,1.2s						
MDH	**Madha**	**76.63**	**293**	*i* P	**P**	**17 00 59.2**	**-1.6**
	SNR=13						
MDH	**Madha**	**76.63**	**293**	P	**P**	**17 01 00.5**	**-0.3**
	SNR=11						
Q44A	**Meyer Farm, Va**	**76.64**	**46**	P	**P**	**17 01 00.1**	**-0.6**
Q44A				IAmb	IAmb	17 01 14.2	
	comp=Z,338nm,1.2s						
SECR		**76.67**	**325**	⇓P	**P**	**17 01 01.0**	**+0.2**
SMOL	**Smolenice**	**76.67**	**332**	*e*P	**P**	**17 01 01.3**	**+0.6**
SMOL				pmax	pmax		
	comp=Z,76nm,1.1s						
SMOL	**Smolenice**	**76.67**	**332**	*e*P	**P**	**17 01 01.3**	**+0.6**
WSAR	**Wadi Sarin**	**76.67**	**290**	P	**P**	**17 01 02.4**	**+1.3**
	SNR=10.0						
FVM	**French Village**	**76.68**	**47**	P	**P**	**17 01 00.1**	**-0.8**
FVM				pmax	pmax		
	comp=Z,209nm,1.3s						
FVM	**French Village**	**76.68**	**47**	P	**P**	**17 01 00.1**	**-0.8**
FVM				IAmb	IAmb	17 01 14.5	
	comp=Z,209nm,1.2s						
UBBA	**Unterbreizbach**	**76.69**	**338**	*e*P	**P**	**17 01 01.4**	**+0.7**
	comp=Z,376nm,1.7s,baz=24,slow=5.7						
MANR	**Mangalia**	**76.69**	**323**	⇑P	**P**	**17 01 00.5**	**-0.3**
TRQ	**Mont Tremblant**	**76.71**	**33**	P	**P**	**17 01 00.3**	**-0.7**
TRQ				IAmb	IAmb	17 01 14.1	
	comp=Z,227nm,1.0s						
Z35A	**Perchaven, San**	**76.71**	**55**	P	**P**	**17 01 00.3**	**-0.8**
Z35A				IAmb	IAmb	17 01 15.4	
	comp=Z,268nm,1.4s						
U40A	**Yellville**	**76.72**	**50**	P	**P**	**17 01 00.8**	**-0.4**
	baz=321,SNR=111						
U40A				S	**S**	**17 10 41.5**	**-3.6**
	baz=321						
U40A	**Yellville**	**76.72**	**50**	P	**P**	**17 01 00.2**	**-1.0**
U40A				IAmb	IAmb	17 01 14.4	
	comp=Z,312nm,1.1s						
U40A				IAMs_20	IAMs_20	17 35 48.2	
	comp=Z,3µm,22.0s						
LBWR	**Ladybower, Pea**	**76.73**	**346**	*e*P	**P**	**17 01 01.0**	**+0.1**
LBWR				IAmb	IAmb	17 01 03.8	
	comp=Z,490nm,1.0s						
MALT	**Malatya**	**76.75**	**313**	P	**P**	**17 01 02.6**	**+1.2**
ICOR	**Ion Corvin**	**76.76**	**324**	⇓P	**P**	**17 01 02.1**	**+0.8**
X37A	**Clayton**	**76.77**	**53**	P	**P**	**17 01 00.8**	**-0.7**
PLVO	**Plevna**	**76.78**	**35**	P	**P**	**17 01 00.2**	**-1.1**
PLVO				IAmb	IAmb	17 01 14.2	
	comp=Z,157nm,1.1s						
BIDO	**Bidbid**	**76.79**	**290**	P	**P**	**17 01 03.3**	**+1.6**
	SNR=13						
BUG	**Bochum--Univer**	**76.79**	**340**	*e*P	**P**	**17 01 01.7**	**+0.5**
	comp=Z,586nm,1.8s,baz=24,slow=5.7						
BSZH	**Besenyszg**	**76.81**	**330**	*e*P	**P**	**17 01 02.8**	**+1.3**
MODS	**Modra-Piesok**	**76.84**	**332**	*e*P	**P**	**17 01 01.6**	**0.0**
MODS				pmax	pmax		
	comp=Z,170nm,1.1s						
MODS	**Modra-Piesok**	**76.84**	**332**	*e*P	**P**	**17 01 01.6**	**0.0**
SULR		**76.89**	**325**	⇑P	**P**	**17 01 01.0**	**-1.0**
MANZ	**Manzenberg**	**76.90**	**336**	*e*P	**P**	**17 01 02.6**	**+0.6**
	comp=Z,50nm,1.5s,baz=24,slow=5.7						
WBK	**Wadi Bani Khal**	**76.92**	**289**	P	**P**	**17 01 03.9**	**+1.4**
	SNR=18						
P46A	**Rosedale**	**76.93**	**44**	P	**P**	**17 01 01.9**	**-0.4**
P46A				IAmb	IAmb	17 01 15.8	
	comp=Z,236nm,1.1s						
UOSS	**Minazif**	**76.94**	**293**	*i* P	**P**	**17 01 01.4**	**-1.2**
	SNR=74						
UOSS	**Minazif**	**76.94**	**293**	P	**P**	**17 01 02.4**	**-0.2**
UOSS				IAmb	IAmb	17 01 05.0	
	comp=Z,204nm,1.1s						
UOSS	**Minazif**	**76.94**	**293**	IAMs_20	IAMs_20	17 39 23.1	
	comp=Z,2µm,21.0s						
WACR	**West Acre**	**76.97**	**344**	*e*P	**P**	**17 01 01.8**	**-0.4**
WACR				IAmb	IAmb	17 01 04.5	
	comp=Z,350nm,0.9s						
JLN	**Jalan Bani Buh**	**76.97**	**289**	P	**P**	**17 01 04.3**	**+1.6**
	SNR=33						
SRO	**Srobarova**	**77.00**	**331**	*e*P	**P**	**17 01 03.7**	**+1.2**
SRO				pmax	pmax		
	comp=Z,151nm,1.0s						
SRO	**Srobarova**	**77.00**	**331**	*e*P	**P**	**17 01 03.7**	**+1.2**

LMQ	La Malbaie	77.01	29	P	P	17 01 02.4	-0.2
LMQ				IAmb	IAmb	17 01 04.4	
	comp=Z,334nm,1.4s						
DELO	Deloro Mine	77.01	35	P	P	17 01 01.8	-0.8
DELO				IAmb	IAmb	17 01 15.6	
	comp=Z,178nm,1.2s						
SRO2	Moca	77.02	331	eP	P	17 01 04.2	+1.6
SRO2	Moca	77.02	331	eP	P	17 01 04.2	+1.6
ZST	Bratislava	77.05	332	eP	P	17 01 03.9	+1.1
ZST	Bratislava	77.05	332	eP	P	17 01 03.9	+1.1
ROTZ	Rotzenmuhle	77.07	336	eP	P	17 01 03.8	+0.8
	comp=Z,43nm,1.1s,baz=24,slow=5.7						
HATD	Hatta, Dubai	77.08	293	i P	P	17 01 03.4	0.0
	SNR=67						
HATD	Hatta, Dubai	77.08	293	P	P	17 01 03.6	+0.2
	SNR=51						
T42A	Van Buren	77.09	48	P	P	17 01 02.1	-1.1
W39A	Magazine	77.14	51	P	P	17 01 03.2	-0.3
	baz=321,SNR=47						
W39A	Magazine	77.14	51	P	P	17 01 03.0	-0.5
W39A				IAmb	IAmb	17 01 05.1	
	comp=Z,164nm,1.2s						
SMDO	Samad	77.17	290	P	P	17 01 06.0	+2.0
	SNR=16						
LOT	Lotru	77.18	327	⇑P	P	17 01 04.9	+1.1
OLIL	Olney	77.21	45	P	P	17 01 03.5	-0.4
OLIL				IAmb	IAmb	17 01 18.4	
	comp=Z,199nm,1.2s						
ASHO	Ashiyiah	77.22	293	i P	P	17 01 03.7	-0.5
	SNR=30						
ASHO	Ashiyiah	77.22	293	P	P	17 01 05.0	+0.8
	SNR=54						
SIRR	Siria	77.23	328	⇑P	P	17 01 04.0	+0.2
HOQ	Hoqain	77.25	291	P	P	17 01 05.0	+0.6
	SNR=34						
N49A	Columbus Grove	77.26	41	P	P	17 01 03.6	-0.5
N49A				IAmb	IAmb	17 01 17.6	
	comp=Z,175nm,1.2s						
KHC	Kasperske Hory	77.27	335	eP	P	17 01 04.1	0.0
KHC				eS	S	17 10 48.0	-2.7
KHC				MLR	MLR		
	comp=Z,6µm,20.4s						
KHC	Kasperske Hory	77.27	335	eP	P	17 01 04.1	0.0
KHC				eS	S	17 10 48.0	-2.7
KHC				AMS	AMS	17 37 00.0	
	comp=Z,6µm,20.4s						
CWF	Charnwood Fore	77.30	345	eP	P	17 01 03.8	-0.3
CWF				IAmb	IAmb	17 01 06.2	
	comp=Z,852nm,1.7s						
SOHO	SOHO	77.33	292	i P	P	17 01 03.9	-0.8
	SNR=46						
CKRC	Cesky Krumlov	77.33	334	eP	P	17 01 04.6	+0.2
CKRC				eS	S	17 10 50.4	-1.0
CKRC				AMS	AMS	17 38 50.0	
	comp=Z,5µm,18.8s						
M50A	Fremont	77.36	40	P	P	17 01 03.9	-0.8
GRA1	Grafenberg Arr	77.41	336	P	P	17 01 04.8	+0.1
GRF	Grafenberg Arr	77.41	336	P	P	17 01 04.9	+0.1
GRF				pmax	pmax		
	comp=Z,305nm,1.0s						
GRF				MLR	MLR		
	comp=Z,5µm,21.0s						
GRF	Grafenberg Arr	77.41	336	eP	P	17 01 05.8	+1.0
	comp=Z,902nm,1.7s,baz=24,slow=5.7						
GRF				eL	L	17 38 33.5	
	comp=Z,5µm,21.2s						
GRFO	Grafenberg	77.41	336	P	P	17 01 05.0	+0.2
GRFO				pmax	pmax		
	comp=Z,301nm,1.0s						
GRFO				MLR	MLR		
	comp=Z,5µm,21.0s						
GRFO	Grafenberg	77.41	336	P	P	17 01 05.0	+0.2
CSKK	Cskako	77.42	331	eP	P	17 01 05.3	+0.4
JCT	Junction City	77.44	58	P	P	17 01 04.9	-0.4
JCT				pmax	pmax		
	comp=Z,378nm,1.4s						
JCT				MLR	MLR		
	comp=Z,2µm,21.0s						
JCT	Junction City	77.44	58	P	P	17 01 05.3	0.0
	baz=319,SNR=34						
JCT				S	S	17 10 52.0	-1.1
	baz=319						
JCT	Junction City	77.44	58	P	P	17 01 04.9	-0.4
JCT				IAmb	IAmb	17 01 20.1	
	comp=Z,378nm,1.4s						
JCT				IAMs_20	IAMs_20	17 32 21.0	
	comp=Z,2µm,21.0s						
WET	Wettzell	77.45	335	eP	P	17 01 06.1	+1.0
	comp=Z,610nm,1.8s,baz=24,slow=5.7						
FCAR	Ozark Folk Cen	77.46	50	P	P	17 01 04.4	-0.9
FCAR				IAmb	IAmb	17 01 18.4	
	comp=Z,199nm,1.1s						
FOEL	Foel Wylfa	77.47	346	eP	P	17 01 05.0	0.0
FOEL				IAmb	IAmb	17 01 07.4	
	comp=Z,233nm,1.0s						
FAQ	Al Faqa, Dubai	77.47	293	i P	P	17 01 05.0	-0.5
	SNR=27						
FAQ	Al Faqa, Dubai	77.47	293	P	P	17 01 05.8	+0.2
	SNR=19						
S44A	Carbondale	77.48	47	P	P	17 01 04.8	-0.5
S44A				IAmb	IAmb	17 01 19.1	
	comp=Z,264nm,1.2s						
SIUC	Southern Illin	77.48	47	P	P	17 01 04.8	-0.5
SIUC				IAmb	IAmb	17 01 19.0	
	comp=Z,310nm,1.2s						
AMBH	Ambrzfalva	77.48	329	⇑P	P	17 01 06.6	+1.4
AMBH	Ambrzfalva	77.48	329	eP	P	17 01 05.8	+0.6
GEC2	GERESS Array S	77.49	335	eP	P	17 01 05.9	+0.5
	comp=Z,301nm,1.6s,baz=24,slow=5.7						
GEC2	GERESS Array S	77.49	335	P	P	17 01 04.8	-0.7
GERES	GERESS Array B	77.49	335	P	P	17 01 05.5	+0.1
	comp=Z,42nm,0.7s,baz=38,slow=5.7,SNR=138						
GERES				PKPPKP	P'P'df	17 28 05.5	-12
	comp=Z,0.7nm,0.8s,baz=318,slow=1.8,SNR=3.8						
GERES				LR	LR	17 37 47.2	
	comp=Z,6µm,21.4s,baz=23,slow=38						
GERES	GERESS Array B	77.49	335	P	P	17 01 04.7	-0.7
ELMS	Elmsett, Ipswi	77.50	344	eP	P	17 01 05.5	+0.3
ELMS				IAmb	IAmb	17 01 07.7	
	comp=Z,401nm,0.8s						
OOD	Oodnadatta	77.50	197	P	P	17 01 06.1	+0.8
BNN	Bunyan	77.56	315	P	P	17 01 06.2	+0.2
KDZE	Karadeniz Ereo	77.56	320	⇑P	P	17 01 05.3	-0.5
GZR	Gura Zlata	77.59	327	⇑P	P	17 01 05.7	-0.2
DSB	Dublin	77.59	348	P	P	17 01 05.5	-0.2
DSB				IAmb	IAmb	17 01 08.2	
	comp=Z,177nm,1.0s						
BLO	Bloomington	77.60	44	P	P	17 01 06.0	-0.1
BLO				pmax	pmax		
	comp=Z,208nm,1.5s						
BLO	Bloomington	77.60	44	P	P	17 01 06.0	-0.1
BLO				IAmb	IAmb	17 01 19.6	
	comp=Z,208nm,1.4s						
WHTX	Lake Whitney,	77.61	56	P	P	17 01 06.4	+0.2
	baz=320,SNR=12						
WHTX	Lake Whitney,	77.61	56	P	P	17 01 05.9	-0.3
PBMO	Poplar Bluff	77.62	48	P	P	17 01 05.6	-0.6
PBMO				IAmb	IAmb	17 01 20.9	
	comp=Z,332nm,1.3s						
TNS	Taunus Mts	77.63	338	eP	P	17 01 06.8	+0.7
	comp=Z,503nm,1.7s,baz=24,slow=5.7						
JMDO	Jabal Madar	77.64	290	P	P	17 01 07.6	+1.1
	SNR=33						
J54A	Appleton	77.66	37	P	P	17 01 05.9	-0.4
J54A				IAmb	IAmb	17 01 19.7	
	comp=Z,230nm,1.1s						
MNTQ	Montreal, Queb	77.66	32	P	P	17 01 05.6	-0.6
MNTQ				IAmb	IAmb	17 01 19.4	
	comp=Z,158nm,1.1s						
AHRW	Bad Neuenahr-A	77.67	339	eP	P	17 01 07.0	+0.8
	comp=Z,284nm,1.2s,baz=24,slow=5.7						
CONA	Conrad Observa	77.67	333	i P	P	17 01 07.0	+0.6
	comp=Z,235nm,1.3s,SNR=94						
SOP	Sopron	77.67	332	eP	P	17 01 06.7	+0.4
ASUD	Al Ashush, Dub	77.72	293	i P	P	17 01 06.8	-0.1
	SNR=35						
ASUD	Al Ashush, Dub	77.72	293	P	P	17 01 07.8	+0.9
	SNR=16						
RAZG	Razgrad	77.73	324	⇑P	P	17 01 05.7	-1.0
PECO	Prince Edward	77.75	35	P	P	17 01 05.6	-1.1
PECO				IAmb	IAmb	17 01 19.7	
	comp=Z,179nm,1.2s						
MIAR	Mount Ida	77.75	52	P	P	17 01 06.5	-0.5
MIAR				pmax	pmax		
	comp=Z,205nm,1.2s						

MIAR				MLR	MLR		
	comp=Z,3µm,22.0s						
MIAR	Mount Ida	77.75	52	P	P	17 01 07.0	0.0
	baz=321,SNR=53						
MIAR				S	S	17 10 54.7	-1.5
	baz=321						
MIAR	Mount Ida	77.75	52	P	P	17 01 06.5	-0.5
MIAR				IAmb	IAmb	17 01 20.8	
	comp=Z,205nm,1.1s						
MIAR				IAMs_20	IAMs_20	17 36 40.5	
	comp=Z,3µm,22.0s						
BEBN	Eben Emael	77.75	340	dP	P	17 01 05.8	-0.9
COPA	Copaceanca	77.75	325	⇑P	P	17 01 06.6	-0.2
HLM1	Long Mynd	77.77	346	eP	P	17 01 06.1	-0.7
HLM1				IAmb	IAmb	17 01 08.2	
	comp=Z,461nm,1.7s						
O49A	Covington	77.78	42	P	P	17 01 06.1	-1.0
O49A				IAmb	IAmb	17 01 20.4	
	comp=Z,244nm,1.4s						
BZS	Buzias	77.81	328	⇑P	P	17 01 07.0	-0.1
LCAR	Lake Charles	77.81	49	P	P	17 01 06.2	-1.0
MEDO	Medina	77.82	37	P	P	17 01 05.7	-1.5
MEDO				IAmb	IAmb	17 01 19.5	
	comp=Z,284nm,1.2s						
D62A	Allapoint, All	77.83	29	P	P	17 01 06.8	-0.4
WHAR	Wooly Hollow	77.84	50	P	P	17 01 06.6	-0.9
WHAR				IAmb	IAmb	17 01 08.9	
	comp=Z,335nm,1.3s						
BTNL	Ternell	77.85	340	dP	P	17 01 07.3	+0.1
	comp=Z,106nm,0.8s						
MEM	Membach	77.85	340	dP	P	17 01 07.4	+0.1
	comp=Z,151nm,1.0s						
P48A	Milroy	77.88	43	P	P	17 01 06.8	-0.7
P48A				IAmb	IAmb	17 01 20.8	
	comp=Z,290nm,1.3s						
BR131	Keskin Array S	77.88	317	P	P	17 01 07.5	-0.3
BR131				pmax	pmax		
	comp=Z,310nm,1.2s						
BR131	Keskin Array S	77.88	317	P	P	17 01 07.8	+0.1
	SNR=41						
BR131	Keskin Array S	77.88	317	P	P	17 01 07.5	-0.3
BR131				IAmb	IAmb	17 01 10.5	
	comp=Z,310nm,1.1s						
BRTR	Keskin Array B	77.88	317	P	P	17 01 08.0	+0.2
	comp=Z,102nm,0.9s,baz=43,slow=3.1,SNR=89						
BRTR				LR	LR	17 41 05.5	
	comp=Z,3µm,18.8s,baz=58,slow=40						
BRTR	Keskin Array B	77.88	317	P	P	17 01 07.6	-0.3
ARQ	Araqi	77.92	291	P	P	17 01 09.0	+0.9
	SNR=31						
BSY	Bisya	77.93	290	P	P	17 01 09.0	+0.8
	SNR=35						
W41B	Gary Mavity, V	77.95	50	P	P	17 01 07.8	-0.2
	baz=321,SNR=54						
W41B				S	S	17 10 56.5	-1.9
	baz=321						
M52A	Chesterland	77.97	39	P	P	17 01 07.5	-0.6
M52A				IAmb	IAmb	17 01 21.9	
	comp=Z,286nm,1.2s						
J55A	Hilton	77.99	36	P	P	17 01 07.4	-0.7
J55A				IAmb	IAmb	17 01 21.2	
	comp=Z,203nm,1.1s						
Z38A	Mt. Pleasant	77.99	53	P	P	17 01 07.7	-0.6
UCC	Uccle	78.04	341	dP	P	17 01 08.2	0.0
UCC	Uccle	78.04	341	P	P	17 01 07.7	-0.6
UCC				pmax	pmax		
	comp=Z,43nm,1.1s						
UCC	Uccle	78.04	341	P	P	17 01 07.7	-0.6
PARMO	Parma	78.04	48	P	P	17 01 07.9	-0.6
N51A	Ashland	78.05	40	P	P	17 01 07.9	-0.6
N51A				IAmb	IAmb	17 01 21.9	
	comp=Z,295nm,1.2s						
SRE	Strehaia	78.06	327	⇓P	P	17 01 08.5	0.0
ERPA	Erie	78.07	38	P	P	17 01 08.4	-0.2
	baz=326,SNR=6.3						
ERPA	Erie	78.07	38	P	P	17 01 08.3	-0.2
ERPA				IAmb	IAmb	17 01 23.0	
	comp=Z,303nm,1.2s						
ERPA				IAMs_20	IAMs_20	17 42 06.3	
	comp=Z,2µm,20.0s						
LONY	Lake Ozonia	78.07	33	P	P	17 01 07.7	-0.9
	baz=329,SNR=11						
LONY	Lake Ozonia	78.07	33	P	P	17 01 07.6	-1.0
LONY				IAMs_20	IAMs_20	17 38 16.0	
	comp=Z,2µm,21.0s						
E62A	Clayton Lake	78.09	29	P	P	17 01 08.1	-0.5
E62A				IAmb	IAmb	17 01 27.0	
	comp=Z,143nm,1.1s						
BHOU	Houvegnez	78.09	340	dP	P	17 01 09.1	+0.5
P49A	Miami Univ. Ec	78.14	43	P	P	17 01 08.9	-0.2
	baz=324,SNR=7.9						
P49A	Miami Univ. Ec	78.14	43	P	P	17 01 08.4	-0.6
P49A				IAmb	IAmb	17 01 31.4	
	comp=Z,136nm,0.6s						
P49A				IAMs_20	IAMs_20	17 39 42.5	
	comp=Z,3µm,20.0s						
ANTO	Ankara	78.14	318	P	P	17 01 09.2	0.0
ANTO				pmax	pmax		
	comp=Z,197nm,0.8s						
ANTO				MLR	MLR		
	comp=Z,3µm,20.0s						
ANTO	Ankara	78.14	318	P	P	17 01 09.2	0.0
ANTO				IAmb	IAmb	17 01 12.1	
	comp=Z,197nm,0.8s						
HERR	Herculane	78.16	327	⇑P	P	17 01 08.4	-0.6
BR231	Keskin MP Arra	78.17	318	P	P	17 01 09.3	-0.1
BR231				IAmb	IAmb	17 01 12.4	
	comp=Z,262nm,1.1s						
VLAD	Vladila	78.18	326	⇑P	P	17 01 08.8	-0.3
X40A	Basin Creek Fa	78.18	51	P	P	17 01 09.3	0.0
	baz=321,SNR=22						
X40A				S	S	17 10 59.2	-1.6
	baz=321						
X40A	Basin Creek Fa	78.18	51	P	P	17 01 08.9	-0.4
X40A				IAmb	IAmb	17 01 23.1	
	comp=Z,214nm,1.4s						
BCLA	Clavier	78.19	340	dP	P	17 01 09.1	0.0
	comp=Z,103nm,1.1s						
MOA	Molln	78.22	334	i P	P	17 01 09.6	+0.2
	comp=Z,84nm,0.8s,SNR=37						
GAZ	Gaziantep	78.24	313	P	P	17 01 09.5	-0.2
GAZ				IAmb	IAmb	17 01 12.5	
	comp=Z,166nm,0.8s						
FRNY	Flat Rock	78.25	33	P	P	17 01 08.3	-1.3
BGES	Gesves	78.27	340	dP	P	17 01 09.5	-0.1
	comp=Z,106nm,1.1s						
PENMO	Penman	78.27	48	P	P	17 01 10.1	+0.3
MCH1	Michaelchurch	78.30	346	eP	P	17 01 08.7	-1.0
MCH1				IAmb	IAmb	17 01 11.1	
	comp=Z,497nm,1.6s						
MORH	Mrgy, Hungar	78.30	330	⇑P	P	17 01 09.3	-0.4
MORH	Mrgy, Hungar	78.30	330	eP	P	17 01 08.4	-1.4
MORH	Mrgy, Hungar	78.30	330	⇑i P	P	17 01 08.8	-1.0
T45A	Paducah	78.31	47	P	P	17 01 09.9	-0.1
T45A				IAmb	IAmb	17 01 23.8	
	comp=Z,258nm,1.1s						
MOQ	Mont Orford	78.31	32	P	P	17 01 09.7	-0.2
ARMA	Armidale	78.32	182	P	P	17 01 10.3	+0.3
ARMA				IAmb	IAmb	17 01 13.1	
	comp=Z,200nm,1.2s						
ARMA	Armidale	78.32	182	P	P	17 01 12.1	+2.1
SNF	Seneffe	78.33	341	dP	P	17 01 09.9	+0.1
	comp=Z,100nm,0.9s						
ACSO	Alum Creek Sta	78.35	41	P	P	17 01 10.1	-0.1
	baz=325,SNR=9.0						
ACSO	Alum Creek Sta	78.35	41	P	P	17 01 09.4	-0.8
ACSO				IAmb	IAmb	17 01 23.8	
	comp=Z,259nm,1.4s						
ACSO				IAMs_20	IAMs_20	17 36 33.9	
	comp=Z,3µm,22.0s						
M53A	WI Miller and	78.35	39	P	P	17 01 10.2	+0.1
	baz=326,SNR=15						
M53A	WI Miller and	78.35	39	P	P	17 01 09.9	-0.3
M53A				IAmb	IAmb	17 01 23.9	
	comp=Z,360nm,1.2s						
M53A				IAMs_20	IAMs_20	17 36 38.7	
	comp=Z,2µm,20.0s						
J56A	Wolcott	78.35	36	P	P	17 01 09.5	-0.7
MDUB	Mudurnu	78.36	319	P	P	17 01 09.8	-0.6
STRD	Stroud	78.37	345	eP	P	17 01 10.0	-0.1
STRD				IAmb	IAmb	17 01 12.4	
	comp=Z,700nm,1.1s						
ARSA	Arzberg	78.38	333	i P	P	17 01 10.6	+0.3
	comp=Z,179nm,1.4s,SNR=67						
ALLY	Alegheny Colle	78.39	39	P	P	17 01 09.6	-0.8

WVNY	West Valley, N	78.39	37	P	P	17 01 09.8	-0.6
WVNY				IAmb	IAmb	17 01 24.5	
	comp=Z,316nm,1.2s						
HICK	Hickman	78.40	47	P	P	17 01 09.8	-0.7
HICK				IAmb	IAmb	17 01 24.4	
	comp=Z,394nm,1.4s						
MMNY	Mt. Morris Dam	78.40	36	P	P	17 01 09.3	-1.1
MMNY				IAmb	IAmb	17 01 23.5	
	comp=Z,222nm,1.1s						
BMRD	Maredsous	78.42	341	dP	P	17 01 10.2	-0.1
	comp=Z,154nm,1.1s						
PEBM	Pemiscott Bayo	78.42	48	P	P	17 01 10.6	-0.1
RCHB	Rochefort	78.45	340	dP	P	17 01 10.7	+0.1
435B	Jarrell	78.46	57	P	P	17 01 10.9	0.0
	baz=320						
435B				S	S	17 11 02.6	-1.4
	baz=320						
435B	Jarrell	78.46	57	P	P	17 01 10.7	-0.3
435B				IAMs_20	IAMs_20	17 42 04.9	
	comp=Z,2µm,19.0s						
GNAR	Gosnell	78.46	48	P	P	17 01 10.7	-0.2
HBAR	Harrisburg	78.46	49	P	P	17 01 10.5	-0.4
WCI	Wyandotte Cave	78.47	44	P	P	17 01 10.6	-0.3
WCI				pmax	pmax		
	comp=Z,295nm,1.1s						
WCI				MLR	MLR		
	comp=Z,4µm,20.0s						
WCI	Wyandotte Cave	78.47	44	P	P	17 01 11.0	+0.1
	baz=324						
WCI				S	S	17 11 02.6	-1.3
	baz=324						
WCI	Wyandotte Cave	78.47	44	P	P	17 01 10.6	-0.3
WCI				IAmb	IAmb	17 01 24.6	
	comp=Z,295nm,1.1s						
MDVR	Moldovita	78.50	328	⇑P	P	17 01 10.5	-0.5
237A	Washetta, Mont	78.51	55	P	P	17 01 10.8	-0.4
237A				IAmb	IAmb	17 01 25.1	
	comp=Z,245nm,1.4s						
PQI	Presque Isle	78.53	28	P	P	17 01 10.2	-0.8
PQI				IAMs_20	IAMs_20	17 37 29.7	
	comp=Z,3µm,22.0s						
J57A	Williamstown	78.57	35	P	P	17 01 10.9	-0.5
J57A				IAmb	IAmb	17 01 25.2	
	comp=Z,152nm,1.2s						
UMR	Umm Al-Rimmam	78.57	302	eP	P	17 01 11.1	-0.5
F62A	Pittston Farm,	78.58	30	P	P	17 01 11.1	-0.2
F62A				IAmb	IAmb	17 01 25.0	
	comp=Z,172nm,1.1s						
GLAT	Glass	78.58	48	P	P	17 01 11.5	-0.1
BATG	Bathurst New B	78.59	27	P	P	17 01 11.2	-0.2
KOVH	Kovagotottos	78.59	331	eP	P	17 01 10.4	-1.0
MIB	Mutribah	78.60	302	eP	P	17 01 11.3	-0.4
LPAR	Lepanto	78.61	49	P	P	17 01 11.7	+0.1
LNXT	Lenox	78.62	48	P	P	17 01 12.1	+0.4
PLVB	Pleven	78.62	325	⇑P	P	17 01 11.4	-0.2
DOU	Dourbes	78.65	341	dP	P	17 01 11.7	0.0
	comp=Z,74nm,1.1s						
WOL	Wolverton	78.65	345	eP	P	17 01 11.2	-0.4
WLAR	White Oak Lake	78.65	52	P	P	17 01 11.9	0.0
WLAR				IAmb	IAmb	17 01 26.1	
	comp=Z,290nm,1.2s						
WLF	Walferdange	78.70	340	dP	P	17 01 12.4	+0.5
	comp=Z,40nm,1.2s						
WLF	Walferdange	78.70	340	P	P	17 01 11.9	-0.1
WLF				pmax	pmax		
	comp=Z,185nm,1.4s						
WLF				MLR	MLR		
	comp=Z,6µm,22.0s						
WLF	Walferdange	78.70	340	eP	P	17 01 13.1	+1.1
	comp=Z,292nm,1.6s,baz=24,slow=5.7						
WLF	Walferdange	78.70	340	P	P	17 01 11.9	-0.1
WLF				IAmb	IAmb	17 01 14.3	
	comp=Z,185nm,1.4s						
M54A	Oil Creek Stat	78.71	38	P	P	17 01 12.0	-0.2
	baz=327,SNR=10						
M54A	Oil Creek Stat	78.71	38	P	P	17 01 11.8	-0.4
M54A				IAmb	IAmb	17 01 25.7	
	comp=Z,254nm,1.2s						
M54A				IAMs_20	IAMs_20	17 38 04.3	
	comp=Z,2µm,21.0s						
UTMT	University of	78.73	47	P	P	17 01 12.3	-0.1
COCO	West Island	78.74	237	P	P	17 01 12.9	+0.4
COCO				pmax	pmax		
	comp=Z,466nm,1.5s						
COCO	West Island	78.74	237	P	P	17 01 12.9	+0.4
NCB	Newcomb	78.76	33	P	P	17 01 11.6	-0.8
BAIF	Baives	78.77	341	eP	P	17 01 11.8	-0.5
BAIF				pmax	pmax		
	comp=Z,213nm,1.2s						
STU	Stuttgart	78.78	337	P	P	17 01 11.6	-0.8
STU				pmax	pmax		
	comp=Z,216nm,1.2s						
STU				MLR	MLR		
	comp=Z,2µm,20.0s						
STU	Stuttgart	78.78	337	eP	P	17 01 13.1	+0.6
	comp=Z,1µm,1.8s,baz=24,slow=5.7						
STU	Stuttgart	78.78	337	P	P	17 01 11.6	-0.8
STU				IAmb	IAmb	17 01 15.1	
	comp=Z,216nm,1.2s						
STU				IAMs_20	IAMs_20	17 39 40.0	
	comp=Z,2µm,20.0s						
FUR	Furstenfeldbru	78.78	336	eP	P	17 01 13.4	+0.9
	comp=Z,343nm,1.1s,baz=24,slow=5.7						
HMNX	Herstmonceux	78.79	344	eP	P	17 01 12.8	+0.4
N53A	Lisbon	78.80	39	P	P	17 01 11.8	-0.8
N53A				IAmb	IAmb	17 01 26.3	
	comp=Z,329nm,1.4s						
FRGS	Fruska Gora	78.84	329	⇑P	P	17 01 12.7	-0.1
FRGS	Fruska Gora	78.84	329	⇑i P	P	17 01 12.0	-0.8
HALT	Halls	78.84	48	P	P	17 01 12.9	0.0
HALT				IAmb	IAmb	17 01 27.0	
	comp=Z,287nm,1.2s						
KBD	Kabd	78.87	301	eP	P	17 01 13.3	+0.1
J58A	Remsen	78.89	34	P	P	17 01 12.1	-1.0
J58A				IAmb	IAmb	17 01 26.1	
	comp=Z,171nm,1.1s						
P51A	Williamsport	78.93	42	P	P	17 01 12.8	-0.6
P51A				IAmb	IAmb	17 01 26.6	
	comp=Z,193nm,1.3s						
R49A	Shelbyville	78.94	44	P	P	17 01 13.0	-0.4
O52A	Adamsville	78.94	40	P	P	17 01 12.8	-0.7
O52A				IAmb	IAmb	17 01 26.9	
	comp=Z,308nm,1.3s						
K57A	Scipio Center	78.95	36	P	P	17 01 12.2	-1.2
VT1	Waterbury	78.98	32	P	P	17 01 13.4	-0.2
VT1				IAMs_20	IAMs_20	17 37 54.3	
	comp=Z,3µm,22.0s						
G62A	West of Eustis	78.98	31	P	P	17 01 13.4	-0.2
G62A				IAmb	IAmb	17 01 27.6	
	comp=Z,257nm,1.2s						
N54A	Moraine State	79.03	39	P	P	17 01 14.0	+0.1
	baz=327,SNR=12						
N54A	Moraine State	79.03	39	P	P	17 01 11.9	-2.0
N54A				IAmb	IAmb	17 01 27.6	
	comp=Z,353nm,1.4s						
N54A				IAMs_20	IAMs_20	17 36 14.8	
	comp=Z,2µm,22.0s						
F63A	Nahmakanta, Br	79.03	29	P	P	17 01 13.7	-0.2
L56A	Greenwood	79.04	37	P	P	17 01 12.8	-1.2
L56A				IAmb	IAmb	17 01 27.3	
	comp=Z,243nm,1.4s						
SOKA	Soboth	79.04	333	i P	P	17 01 14.2	+0.2
	comp=Z,389nm,1.7s,SNR=152						
PERS	Pernice	79.05	333	eP	P	17 01 14.0	0.0
QRN	Al-Qurain	79.07	301	eP	P	17 01 14.0	-0.3
DRLN	Deer Lake	79.07	21	P	P	17 01 13.2	-0.8
T47A	Sharon Grove	79.08	46	P	P	17 01 13.3	-1.0
T47A				IAmb	IAmb	17 01 28.3	
	comp=Z,280nm,1.2s						
KALN	Kalnik	79.09	332	i P	P	17 01 13.6	-0.6
J59A	Piesco	79.09	34	P	P	17 01 13.2	-1.0
GROS	Grobnik	79.09	332	eP	P	17 01 14.2	-0.1
O53A	New Philadelph	79.10	40	P	P	17 01 14.1	-0.2
	baz=326,SNR=12						
O53A	New Philadelph	79.10	40	P	P	17 01 13.5	-0.8
O53A				IAmb	IAmb	17 01 27.8	
	comp=Z,209nm,1.2s						
M55A	Ridgway	79.11	38	P	P	17 01 13.7	-0.8
M55A				IAmb	IAmb	17 01 28.1	
	comp=Z,348nm,1.3s						
F64A	Sherman	79.14	29	P	P	17 01 14.0	-0.4
RDF	Al-Radifah	79.14	301	eP	P	17 01 14.2	-0.5
Z41A	Richland Creek	79.15	52	P	P	17 01 15.0	+0.3
	baz=321,SNR=5.5						
MET	Memphis--Engin	79.17	49	P	P	17 01 15.3	+0.6

Q51A	Peebles	79.17	42	P	P	17 01 14.3	-0.5
Q51A				IAmb	IAmb	17 01 28.4	
	comp=Z,247nm,1.3s						
CCAR	Cane Creek	79.17	51	P	P	17 01 14.7	-0.1
KBA	Koelnbreinsper	79.19	334	*i* P	P	17 01 15.5	+0.6
	comp=Z,375nm,0.9s,SNR=198						
LOBO	Lobor	79.19	332	*i* P	P	17 01 14.4	-0.3
P52A	Corning	79.21	41	P	P	17 01 14.3	-0.6
	baz=326,SNR=8.3						
P52A				S	S	17 11 10.0	-1.8
	baz=326						
P52A	Corning	79.21	41	P	P	17 01 14.0	-0.9
P52A				IAmb	IAmb	17 01 28.1	
	comp=Z,191nm,1.4s						
P52A				IAMs_20	IAMs_20	17 37 10.7	
	comp=Z,3µm,22.0s						
UMZA	Um Al Zommool	79.23	292	P	P	17 01 15.6	+0.3
MZWR	Madinat Zayed	79.24	293	P	P	17 01 15.4	+0.1
833A	Chaparral WMA,	79.29	59	P	P	17 01 16.2	+0.6
	baz=319,SNR=7.5						
833A				S	S	17 11 13.4	+0.5
	baz=319						
KHOR	Al-Khor Airpor	79.30	296	P	P	17 01 16.2	+0.6
H06E1	SOCORRO T-PHAS	79.30	74	T	T	18 28 36.6	
	SNR=70						
H06S1	SOCORRO T	79.31	74	P	P	17 01 17.5	+1.7
	SNR=3.9						
H06S1				T	T	18 28 37.3	
	SNR=31						
NATX	Nacogdoches	79.32	54	P	P	17 01 16.4	+0.7
	baz=321,SNR=8.5						
NATX	Nacogdoches	79.32	54	P	P	17 01 15.9	+0.3
NATX				IAMs_20	IAMs_20	17 40 13.4	
	comp=Z,2µm,20.0s						
R50A	Paris	79.33	43	P	P	17 01 14.8	-0.8
H62A	Milan	79.33	31	P	P	17 01 15.6	+0.1
H62A				IAmb	IAmb	17 01 30.1	
	comp=Z,235nm,1.1s						
OBKA	Obir	79.34	333	*i* P	P	17 01 15.3	-0.3
	comp=Z,89nm,0.8s,SNR=44						
BLJ	Bijeljina	79.35	329	⇑*i*P	P	17 01 15.1	-0.5
LBNH	Lisbon	79.36	32	P	P	17 01 15.4	-0.3
LBNH				pmax	pmax		
	comp=Z,125nm,1.3s						
LBNH				MLR	MLR		
	comp=Z,2µm,21.0s						
LBNH	Lisbon	79.36	32	P	P	17 01 15.1	-0.6
	baz=331						
LBNH	Lisbon	79.36	32	P	P	17 01 15.4	-0.3
LBNH				IAMs_20	IAMs_20	17 38 03.9	
	comp=Z,3µm,21.0s						
PKME	Peaks-Kenny Pk	79.36	30	P	P	17 01 16.0	+0.4
	baz=332						
PKME	Peaks-Kenny Pk	79.36	30	P	P	17 01 15.2	-0.4
PKME				IAMs_20	IAMs_20	17 39 02.9	
	comp=Z,3µm,20.0s						
WVT	Waverly	79.41	47	P	P	17 01 15.6	-0.5
WVT				pmax	pmax		
	comp=Z,125nm,1.2s						
WVT				MLR	MLR		
	comp=Z,3µm,21.0s						
WVT	Waverly	79.41	47	P	P	17 01 16.2	+0.1
	baz=323						
WVT				S	S	17 11 12.6	-1.4
	baz=323						
WVT	Waverly	79.41	47	P	P	17 01 15.6	-0.5
WVT	Waverly	79.41	47	IAMs_20	IAMs_20	17 38 18.4	
	comp=Z,3µm,21.0s						
BFO	Black Forest	79.41	338	P	P	17 01 15.5	-0.4
BFO				pmax	pmax		
	comp=Z,142nm,1.0s						
BFO				MLR	MLR		
	comp=Z,3µm,22.0s						
BFO	Black Forest	79.41	338	*e*P	P	17 01 16.5	+0.5
	comp=Z,558nm,1.9s,baz=24,slow=5.7						
BFO	Black Forest	79.41	338	P	P	17 01 15.5	-0.4
BFO				IAmb	IAmb	17 01 18.5	
	comp=Z,142nm,1.0s						
BFO				IAMs_20	IAMs_20	17 38 12.7	
	comp=Z,3µm,22.0s						
PTJ	Puntijarka	79.44	332	P	P	17 01 15.7	-0.5
MOSL	Moslavina	79.45	331	*i* P	P	17 01 14.8	-1.4
SHMA	Al-Shehemyia	79.45	297	P	P	17 01 16.9	+0.5
WATA	Walderalm	79.46	335	*i* P	P	17 01 16.9	+0.6
	comp=Z,454nm,1.1s,SNR=137						
ACCN	Adirondack Com	79.47	33	P	P	17 01 15.6	-0.7
BOVS	Bovan	79.49	327	⇑P	P	17 01 15.0	-1.4
LHI	Lord Howe Isla	79.50	176	P	P	17 01 16.0	-0.2
HTL	Hartland	79.50	347	*e*P	P	17 01 15.9	-0.4
HTL				IAmb	IAmb	17 01 18.8	
	comp=Z,146nm,0.8s						
MYKA	Terra Mystica	79.50	334	*i* P	P	17 01 16.3	-0.2
	comp=Z,91nm,0.7s						
ZAG	Zagreb	79.51	332	⇑*i*P	P	17 01 16.2	-0.2
ZAG	Zagreb	79.51	332	P	P	17 01 16.8	+0.4
WTTA	Wattenberg	79.51	335	*i* P	P	17 01 17.4	+0.7
	comp=Z,776nm,1.4s,SNR=196						
O54A	Avella	79.52	39	P	P	17 01 15.8	-0.8
O54A				IAmb	IAmb	17 01 30.4	
	comp=Z,373nm,1.5s						
W45A	Hickory Valley	79.52	48	P	P	17 01 16.1	-0.6
W45A				IAmb	IAmb	17 01 30.6	
	comp=Z,307nm,1.1s						
RETA	Reutte	79.55	336	*i* P	P	17 01 17.1	+0.3
	comp=Z,136nm,0.8s,SNR=72						
UBR	Ueberruh	79.55	336	*e*P	P	17 01 17.5	+0.8
	comp=Z,439nm,1.8s,baz=24,slow=5.7						
MOTA	Moosalm	79.58	336	*i* P	P	17 01 17.5	+0.5
	comp=Z,454nm,1.0s,SNR=132						
CDF	Champ du Feu	79.60	338	*e*P	P	17 01 16.4	-0.6
CDF				pmax	pmax		
	comp=Z,412nm,1.4s						
BINY	Binghamton	79.61	36	P	P	17 01 16.3	-0.7
	baz=329,SNR=6.4						
BINY	Binghamton	79.61	36	P	P	17 01 16.2	-0.8
BINY				IAMs_20	IAMs_20	17 38 24.8	
	comp=Z,3µm,22.0s						
LCRK	Leigh Creek	79.64	194	P	P	17 01 17.9	+0.8
P53A	Whipple	79.66	41	P	P	17 01 16.5	-0.8
P53A				IAmb	IAmb	17 01 30.9	
	comp=Z,204nm,1.4s						
SQTA	Sankt Quirin	79.67	335	*i* P	P	17 01 18.1	+0.7
	comp=Z,538nm,1.3s,SNR=120						
CRES	Cresnjev	79.67	332	⇑*i*P	P	17 01 16.9	-0.5
HNH	Hanover	79.69	32	IAMs_20	IAMs_20	17 37 04.1	
	comp=Z,2µm,22.0s						
DIVS	Divibare	79.70	328	⇑*i*P	P	17 01 16.8	-0.8
DIVS	Divibare	79.70	328	P	P	17 01 16.8	-0.8
DIVS				IAmb	IAmb	17 01 20.1	
	comp=Z,178nm,1.1s						
Q52A	Bidwell	79.70	41	P	P	17 01 16.6	-1.0
Q52A				IAmb	IAmb	17 01 31.0	
	comp=Z,269nm,1.4s						
GHWR	Ruwais	79.71	294	P	P	17 01 18.0	+0.1
ABTA	Abfaltersbach	79.73	334	*i* P	P	17 01 17.5	-0.3
	comp=Z,163nm,1.3s,SNR=57						
LJU	Ljubljana	79.77	333	⇑*i*P	P	17 01 17.2	-0.6
ZOU	Zoufplan	79.77	334	P	P	17 01 16.7	-1.3
CMSA	Cobar Meteorol	79.78	188	P	P	17 01 18.7	+0.9
735A	Kenedy	79.79	58	P	P	17 01 18.8	+0.5
735A				IAmb	IAmb	17 01 34.4	
	comp=Z,369nm,1.2s						
VTS	Vitosha	79.80	326	⇑P	P	17 01 18.0	-0.3
VTS	Vitosha	79.80	326	P	P	17 01 18.0	-0.3
VTS				pmax	pmax		
	comp=Z,257nm,0.9s						
VTS	Vitosha	79.80	326	P	P	17 01 18.0	-0.3
VTS				IAmb	IAmb	17 01 20.9	
	comp=Z,257nm,0.9s						
ECH	Echery	79.81	338	P	P	17 01 17.8	-0.3
ECH				pmax	pmax		
	comp=Z,254nm,1.1s						
ECH				MLR	MLR		
	comp=Z,5µm,22.0s						
ECH	Echery	79.81	338	P	P	17 01 17.8	-0.3
ECH				IAmb	IAmb	17 01 20.7	
	comp=Z,254nm,1.1s						
WVL	Waterville	79.86	30	P	P	17 01 18.1	-0.2
WVL				IAMs_20	IAMs_20	17 43 01.0	
	comp=Z,3µm,20.0s						
OZLJ	Ozalj	79.86	332	*i* P	P	17 01 17.4	-0.9
EDC	Edincik	79.88	321	P	P	17 01 18.8	+0.2
M57A	Sunshine Farm,	79.89	37	P	P	17 01 17.9	-0.7
M57A				IAmb	IAmb	17 01 32.0	
	comp=Z,172nm,1.2s						
J61A	Chester	79.91	33	P	P	17 01 18.2	-0.4
MRAK	Mrakovica	79.94	331	⇑*i*P	P	17 01 18.0	-0.9
DAVA	Damuels	79.97	336	*i* P	P	17 01 19.5	+0.4
	comp=Z,283nm,1.1s,SNR=62						
VOJS	Vojsko	79.97	333	*e*P	P	17 01 17.9	-1.2
L59A	Walton	79.98	35	P	P	17 01 18.4	-0.7
L59A				IAmb	IAmb	17 01 32.3	
	comp=Z,271nm,1.3s						
G65A	Princeton	79.98	29	P	P	17 01 19.0	0.0
FETA	Feichten	79.98	336	*i* P	P	17 01 19.8	+0.6
	comp=Z,294nm,1.3s,SNR=77						
I63A	Otisfield	79.99	31	P	P	17 01 19.1	+0.1
I63A				IAmb	IAmb	17 01 33.4	
	comp=Z,242nm,1.2s						
BOJS	Bojanci	80.03	332	*e*P	P	17 01 19.0	-0.3
TRY	Troy	80.03	34	P	P	17 01 19.2	-0.1
TRY				IAMs_20	IAMs_20	17 39 27.9	
	comp=Z,2µm,20.0s						
A251A	Rujevac	80.04	331	*i* P	P	17 01 19.2	-0.2
HKT	Hockley	80.07	56	P	P	17 01 19.2	-0.4
HKT				pmax	pmax		
	comp=Z,51nm,1.5s						
HKT				MLR	MLR		
	comp=Z,2µm,20.0s						
HKT	Hockley	80.07	56	P	P	17 01 19.2	-0.4
HKT	Hockley	80.07	56	IAMs_20	IAMs_20	17 41 39.1	
	comp=Z,2µm,20.0s						
CEY	Cerknica	80.07	333	⇑*i*P	P	17 01 18.6	-0.9
HAPS	Han Pijesak,BI	80.07	329	⇑*i*P	P	17 01 19.6	-0.1
BLY	Banja Luka	80.08	331	⇑*i*P	P	17 01 18.7	-0.8
U49A	Red Boiling Sp	80.09	45	P	P	17 01 19.3	-0.5
U49A				IAmb	IAmb	17 01 33.5	
	comp=Z,182nm,1.3s						
STAL	STALIGIAL	80.11	334	P	P	17 01 18.3	-1.4
T50A	Nancy	80.12	44	P	P	17 01 19.1	-0.8
T50A				IAmb	IAmb	17 01 33.7	
	comp=Z,211nm,1.2s						
TRNA	Turayna	80.14	296	P	P	17 01 20.1	-0.1
RDO	Rodhopi	80.16	323	P	P	17 01 19.6	-0.4
CLTN	Cedars of Leba	80.17	46	P	P	17 01 19.7	-0.4
CLTN				IAmb	IAmb	17 01 34.1	
	comp=Z,163nm,1.1s						
ALN	Alexandroupoli	80.17	323	P	P	17 01 19.6	-0.5
ALN	Alexandroupoli	80.17	323	P	P	17 01 19.6	-0.5
ALN				pmax	pmax		
	comp=Z,242nm,1.1s						
ALN	Alexandroupoli	80.17	323	P	P	17 01 19.6	-0.5
ALN				IAmb	IAmb	17 01 22.4	
	comp=Z,242nm,1.1s						
SSPA	Standing Stone	80.17	38	P	P	17 01 20.0	-0.2
	baz=328						
SSPA	Standing Stone	80.17	38	IAMs_20	IAMs_20	17 37 58.9	
	comp=Z,2µm,21.0s						
MCWV	Mont Chateau	80.18	39	P	P	17 01 20.6	+0.4
	baz=327,SNR=7.9						
MCWV				S	S	17 11 20.5	-1.4
	baz=327						
MCWV	Mont Chateau	80.18	39	P	P	17 01 20.0	-0.2
MCWV				IAmb	IAmb	17 01 34.2	
	comp=Z,325nm,1.4s						
S51A	Beattyville	80.19	43	P	P	17 01 19.2	-1.1
S51A				IAmb	IAmb	17 01 34.0	
	comp=Z,192nm,1.4s						
HAU	Haudompre	80.20	339	*e*P	P	17 01 19.5	-0.7
HAU				pmax	pmax		
	comp=Z,218nm,1.1s						
O56A	Blue Knob Stat	80.20	38	P	P	17 01 20.3	-0.1
	baz=327,SNR=16						
O56A	Blue Knob Stat	80.20	38	P	P	17 01 19.5	-0.8
O56A				IAmb	IAmb	17 01 33.9	
	comp=Z,291nm,1.5s						
O56A				IAMs_20	IAMs_20	17 40 13.8	
	comp=Z,2µm,19.0s						
PLAL	Pickwick Lake	80.20	48	P	P	17 01 19.6	-0.8
PLAL				IAMs_20	IAMs_20	17 37 23.5	
	comp=Z,2µm,21.0s						
V48A	Smith Brothers	80.21	46	P	P	17 01 19.7	-0.7
V48A				IAmb	IAmb	17 01 22.1	
	comp=Z,182nm,1.3s						
KSPA	Keystone Colle	80.24	36	P	P	17 01 19.6	-0.9
MULG	Mulgathing	80.24	198	P	P	17 01 20.9	+0.6
LMN	Caledonia Moun	80.25	27	P	P	17 01 19.9	-0.6
HINF	Hinteralfeld	80.26	338	*e*P	P	17 01 19.6	-0.9
HINF				pmax	pmax		
	comp=Z,117nm,1.0s						
ENEZ	Enez	80.26	323	P	P	17 01 19.6	-1.0
GGN	Saint George	80.28	28	P	P	17 01 20.0	-0.6
Q54A	Coxs Mills	80.31	40	P	P	17 01 20.4	-0.5
Q54A				IAmb	IAmb	17 01 34.8	
	comp=Z,269nm,1.4s						
143A	Socs Landing,	80.31	51	P	P	17 01 20.8	-0.2
143A				IAmb	IAmb	17 01 35.5	
	comp=Z,284nm,1.2s						
RUDO	Rudo	80.34	329	⇑*i*P	P	17 01 20.2	-0.8
SLWR	Sila	80.35	295	P	P	17 01 21.5	+0.2
Y45A	Yeager Farm, C	80.36	49	P	P	17 01 21.1	-0.1
R53A	Hurricane	80.36	42	P	P	17 01 20.6	-0.6
CCA1	Carnmenellis	80.40	347	*e*P	P	17 01 19.7	-1.4
CCA1				IAmb	IAmb	17 01 23.5	
	comp=Z,423nm,1.3s						
MGRS	Mrkonjic Grad	80.41	330	⇑*i*P	P	17 01 21.5	+0.1
RIY	Rijeka	80.42	333	⇑*i*P	P	17 01 20.3	-1.1
RIY	Rijeka	80.42	333	P	P	17 01 20.4	-0.9
DAVOX	Davos/Dischmat	80.44	336	PKKPbc	PKKPbc	17 20 02.0	+0.9
	comp=Z,3.8nm,0.9s,baz=5.5,slow=5.1,SNR=5.4						
EMMW	East Machias	80.45	29	IAMs_20	IAMs_20	17 38 50.8	
	comp=Z,3µm,21.0s						
BALB	Balikesir	80.47	321	P	P	17 01 21.2	-0.5
PLIT	Plitvice	80.47	332	*i* P	P	17 01 20.8	-0.9
N58A	Sunbury	80.47	37	P	P	17 01 21.1	-0.7
N58A				IAmb	IAmb	17 01 35.1	
	comp=Z,167nm,1.2s						
STKA	Stephens Creek	80.55	191	P	P	17 01 22.2	+0.3
	comp=Z,32nm,0.9s,baz=351,slow=7.6,SNR=62						
STKA				LR	LR	17 37 30.6	
	comp=Z,1µm,19.9s,baz=13,slow=36						
STKA	Stephens Creek	80.55	191	P	P	17 01 21.6	-0.4
STKA	Stephens Creek	80.55	191	P	P	17 01 22.5	+0.5
CTI	Castel Tesino	80.61	335	P	P	17 01 21.5	-1.0
CTI	Castel Tesino	80.61	335	P	P	17 01 21.5	-1.0
L61B	Northampton	80.64	33	P	P	17 01 23.0	+0.4
	baz=330						
NVR	Nevrokopi	80.65	325	P	P	17 01 22.6	-0.1
KAVA	Kavala	80.69	324	P	P	17 01 22.0	-0.9
SMTH	Samothraki Isl	80.74	323	P	P	17 01 21.4	-1.8
UDBI	Udbina	80.74	331	*i* P	P	17 01 22.1	-1.1
N59A	State Game Lan	80.78	36	P	P	17 01 23.1	-0.3
	baz=329,SNR=12						
N59A	State Game Lan	80.78	36	P	P	17 01 22.4	-1.1
SMRN	Sveta Marina	80.79	333	*i* P	P	17 01 22.2	-1.1
NTLH	Newcastle Hard	80.79	182	P	P	17 01 26.3	+3.1
ISP	Isparta	80.83	318	P	P	17 01 22.6	-1.3
ISP				pmax	pmax		
	comp=Z,96nm,0.6s						
ISP	Isparta	80.83	318	P	P	17 01 22.6	-1.3
ISP				IAmb	IAmb	17 01 26.4	
	comp=Z,96nm,0.6s						
RABC	Rab	80.85	332	*i* P	P	17 01 22.4	-1.2
JSA	Saint Aubin	80.87	345	*e*P	P	17 01 23.5	-0.2
JSA				IAmb	IAmb	17 01 26.1	
	comp=Z,332nm,1.0s						
342A	Flagon Creek P	80.87	53	P	P	17 01 24.2	+0.2
342A				IAmb	IAmb	17 01 26.8	
	comp=Z,164nm,1.2s						
QUA2	Belchertown	80.91	33	IAMs_20	IAMs_20	17 39 51.1	
	comp=Z,2µm,22.0s						
THAS	Thassos island	80.95	324	P	P	17 01 23.2	-1.0
SRS	Serrai	80.95	325	P	P	17 01 23.8	-0.5
FLN	La Foliniere	80.96	343	*e*P	P	17 01 23.6	-0.6
FLN				pmax	pmax		
	comp=Z,245nm,1.0s						
KSCT	Kent School, K	80.97	34	P	P	17 01 23.4	-0.9
NVLJ	Novalja	80.99	332	*i* P	P	17 01 23.0	-1.4
STIP	Stip	80.99	326	*i* P	P	17 01 23.2	-1.3
PAGS	Pennsylvania G	80.99	37	P	P	17 01 23.9	-0.6
KIJV	Kijevo	81.00	331	*i* P	P	17 01 23.3	-1.2
HRV	Adam Dziewonsk	81.00	33	P	P	17 01 23.7	-0.8
HRV				pmax	pmax		
	comp=Z,108nm,1.2s						
HRV				MLR	MLR		
	comp=Z,2µm,20.0s						
HRV	Adam Dziewonsk	81.00	33	P	P	17 01 24.6	+0.1
	baz=331						
HRV	Adam Dziewonsk	81.00	33	P	P	17 01 23.7	-0.8
HRV	Adam Dziewonsk	81.00	33	IAMs_20	IAMs_20	17 40 02.4	
	comp=Z,2µm,20.0s						
BRJN	Brijuni	81.03	333	*i* P	P	17 01 23.2	-1.4
SKO	Skopje	81.03	326	*i* P	P	17 01 24.9	+0.2
SWET	Sewanee	81.06	46	P	P	17 01 24.1	-1.0
SWET				IAmb	IAmb	17 01 38.4	
	comp=Z,262nm,1.3s						
KULA	Kula-Manisa	81.08	320	P	P	17 01 24.4	-0.7
S54A	Dingess, Beckl	81.09	41	P	P	17 01 24.5	-0.6
P57A	Homestead Farm	81.09	38	P	P	17 01 24.2	-0.9
ODNJ	Ogdensburg	81.10	35	P	P	17 01 24.1	-0.9
TZTN	Tazewell	81.11	44	P	P	17 01 25.3	+0.1
	baz=325,SNR=14						
TZTN				S	S	17 11 31.4	-0.4
	baz=325						
TZTN	Tazewell	81.11	44	P	P	17 01 24.9	-0.4
TZTN				IAmb	IAmb	17 01 39.2	
	comp=Z,236nm,1.5s						
TZTN				IAMs_20	IAMs_20	17 41 30.1	
	comp=Z,2µm,21.0s						
CLF	Chambon-Foret	81.11	341	P	P	17 01 24.1	-0.9
CLF				IAmb	IAmb	17 01 28.3	
	comp=Z,242nm,1.0s						
MGCD	Mangrove Creek	81.12	183	P	P	17 01 27.2	+2.3
MEEK	Meekatharra	81.12	212	P	P	17 01 26.2	+1.0
X48A	Hartselle	81.14	47	P	P	17 01 24.2	-1.1
VBMS	Vicksburg	81.16	51	P	P	17 01 26.4	+0.9
	baz=322						
VBMS	Vicksburg	81.16	51	IAMs_20	IAMs_20	17 41 45.7	
	comp=Z,3µm,19.0s						
VAY	Valandovo	81.17	325	*i* P	P	17 01 25.5	+0.1
HWQ	Hawqa	81.17	313	*e*P	P	17 01 25.4	-0.4
PMOR	Pomariorio Ree	81.17	124	*e*P	P	17 01 26.1	+0.5
	comp=Z,96nm,0.9s						
PMOR	Pomariorio Ree	81.17	124	*e*T	T	18 30 18.9	
	comp=Z,70nm,0.2s						
KNT	Kendrikon	81.18	325	P	P	17 01 24.4	-1.1
TRNY	Table Rock, Ra	81.19	35	P	P	17 01 24.4	-1.1
WES	Weston	81.19	32	P	P	17 01 24.5	-1.0
WES				pmax	pmax		
	comp=Z,191nm,1.3s						
WES				MLR	MLR		
	comp=Z,2µm,21.0s						
WES	Weston	81.19	32	P	P	17 01 24.5	-1.0
WES				IAmb	IAmb	17 01 38.2	
	comp=Z,191nm,1.3s						
WES				IAMs_20	IAMs_20	17 38 36.5	
	comp=Z,2µm,21.0s						
R55A	Marlinton	81.21	40	P	P	17 01 25.4	-0.4
R55A				IAmb	IAmb	17 01 39.7	
	comp=Z,300nm,1.3s						
RICI	Ricice	81.21	330	*i* P	P	17 01 24.5	-1.1
LUPA	Lehigh Univers	81.21	36	P	P	17 01 24.9	-0.8
LUPA				IAmb	IAmb	17 01 39.0	
	comp=Z,206nm,1.5s						
TEOL	Teolo	81.23	334	P	P	17 01 25.1	-0.6
TEOL				IAmb	IAmb	17 01 28.1	
	comp=Z,192nm,0.8s						
BRY	Bratogost	81.25	329	⇑*i*P	P	17 01 24.8	-1.3
BCX	Boston College	81.29	32	P	P	17 01 26.0	0.0
BCX				IAMs_20	IAMs_20	17 42 16.1	
	comp=Z,2µm,21.0s						
SALO	Salr	81.32	335	P	P	17 01 25.3	-1.0
SALO				IAmb	IAmb	17 01 28.5	
	comp=Z,282nm,1.0s						
MVL	Millersville	81.34	37	P	P	17 01 25.4	-1.0
V51A	Loudon	81.34	45	P	P	17 01 25.9	-0.5
MORI	Morici	81.35	331	*i* P	P	17 01 24.9	-1.5
LIA	Limnos Island	81.36	323	P	P	17 01 25.5	-1.0
W50A	Signal Mountai	81.37	46	P	P	17 01 26.0	-0.7
UCCT	U. Connecticut	81.38	33	P	P	17 01 25.8	-0.8
GRR	Gorron	81.39	344	*e*P	P	17 01 26.1	-0.4
GRR				pmax	pmax		
	comp=Z,395nm,1.1s						
PDG	Podgorica	81.42	328	⇑P	P	17 01 26.2	-0.5
PDG	Podgorica	81.42	328	⇑*i*P	P	17 01 25.9	-0.9
PDG	Podgorica	81.42	328	P	P	17 01 25.8	-0.9
PDG				IAmb	IAmb	17 01 28.4	
	comp=Z,200nm,0.8s						
MAKA	Makarska	81.43	330	*i* P	P	17 01 25.2	-1.6
PAL	Palisades	81.43	35	P	P	17 01 26.2	-0.6
PAL				pmax	pmax		
	comp=Z,144nm,1.3s						
PAL				MLR	MLR		
	comp=Z,2µm,21.0s						
PAL	Palisades	81.43	35	P	P	17 01 26.4	-0.4
	baz=330,SNR=6.2						
PAL	Palisades	81.43	35	P	P	17 01 26.2	-0.6
PAL				IAMs_20	IAMs_20	17 41 20.0	
	comp=Z,2µm,21.0s						
DUGI	Dugi Otok	81.44	332	*i* P	P	17 01 25.7	-1.2
BRNJ	Basking Ridge	81.45	35	P	P	17 01 25.9	-1.0
OUR	Ouranopolis	81.47	324	P	P	17 01 26.1	-0.9
PRK	Paraskevi	81.47	322	P	P	17 01 27.4	+0.3
LOR	Lormes	81.48	340	*e*P	P	17 01 26.4	-0.6
LOR				pmax	pmax		
	comp=Z,239nm,1.0s						
TREB	Trebinje	81.48	329	⇑*i*P	P	17 01 25.4	-1.7
SENIN	Lac Senin/Sane	81.50	338	P	P	17 01 26.9	-0.5
WSPT	Westport, CT	81.51	34	IAMs_20	IAMs_20	17 41 11.0	
	comp=Z,3µm,20.0s						
VAH	Vaihoa	81.51	124	*e*P	P	17 01 28.0	+0.6
	comp=Z,63nm,0.9s						
BRYW	Bryant College	81.52	33	P	P	17 01 26.5	-0.8
BRYW				IAMs_20	IAMs_20	17 38 59.3	
	comp=Z,3µm,22.0s						
YLE	Yale	81.53	34	IAMs_20	IAMs_20	17 43 04.6	
	comp=Z,2µm,20.0s						
CPCT	Cooper Cave	81.55	45	P	P	17 01 26.7	-0.8
CPCT				IAmb	IAmb	17 01 41.2	
	comp=Z,173nm,1.3s						
GRG	Griva	81.55	325	P	P	17 01 25.5	-2.0
ZIRJ	Zirje	81.56	331	*i* P	P	17 01 26.0	-1.4
STON	Ston	81.57	329	⇑*i*P	P	17 01 25.9	-1.6
STON	Ston	81.57	329	*i* P	P	17 01 25.7	-1.8
146A	Union	81.58	50	P	P	17 01 26.8	-0.9
ZAIG	Zacatecas	81.58	65	P	P	17 01 27.8	-0.5
HORT	Hortiatis	81.59	325	P	P	17 01 26.4	-1.4
CPNY	Central Park	81.60	35	P	P	17 01 27.1	-0.5
GBN	Guysborough	81.61	25	P	P	17 01 27.8	+0.1
GBN				IAmb	IAmb	17 01 46.9	
	comp=Z,344nm,1.5s						
BHL	Bhannes	81.61	312	*e*P	P	17 01 28.2	+0.1
Z47A	Carrollton	81.63	49	P	P	17 01 27.5	-0.5
Z47A				IAmb	IAmb	17 01 41.8	
	comp=Z,357nm,1.2s						
SDMD	Soldier’s Deli	81.64	38	P	P	17 01 27.5	-0.5
344A	Westbrook Farm	81.65	52	P	P	17 01 28.4	+0.3
344A				IAmb	IAmb	17 01 43.2	
	comp=Z,414nm,1.4s						
DRME	Dracevica, Mon	81.66	328	⇑*i*P	P	17 01 27.4	-0.6
V52A	Sevierville	81.66	44	P	P	17 01 27.4	-0.7
V52A				IAmb	IAmb	17 01 30.1	
	comp=Z,184nm,1.3s						
HCY	Herceg Novi	81.67	329	⇑*i*P	P	17 01 26.7	-1.4
SIGR	SIGRI	81.67	322	P	P	17 01 26.7	-1.4
SYDH	Sydney Hard Ro	81.68	183	P	P	17 01 30.8	+2.9
WUPA	West Chester U	81.69	37	P	P	17 01 27.9	-0.3
HVAR	Hvar	81.72	330	*i* P	P	17 01 26.8	-1.5
TKL	Tuckaleechee C	81.73	44	P	P	17 01 27.9	-0.6
TKL				pmax	pmax		
	comp=Z,177nm,1.4s						
TKL	Tuckaleechee C	81.73	44	P	P	17 01 27.9	-0.6
TKL				IAmb	IAmb	17 01 42.3	
	comp=Z,177nm,1.4s						
L64A	Middleborough	81.76	32	P	P	17 01 27.5	-1.0
L64A				IAmb	IAmb	17 01 42.9	
	comp=Z,199nm,1.2s						
FPAL	Fort Paine	81.76	46	P	P	17 01 27.9	-0.9
FPAL				IAmb	IAmb	17 01 42.3	
	comp=Z,245nm,1.2s						
P60A	Greenville	81.78	37	P	P	17 01 28.3	-0.4
	baz=329,SNR=8.1						
P60A	Greenville	81.78	37	P	P	17 01 27.8	-0.9
P60A				IAMs_20	IAMs_20	17 40 47.4	
	comp=Z,2µm,21.0s						
M63A	Gales Ferry	81.78	33	P	P	17 01 27.7	-1.0
SATI	Passo dei Sala	81.81	337	P	P	17 01 29.8	+0.7
BLCB	Balcova	81.88	321	P	P	17 01 28.5	-0.7
ROSF	Rostrenen	81.88	345	*e*P	P	17 01 28.8	-0.3
ROSF				pmax	pmax		
	comp=Z,529nm,1.2s						
CSS	Mathiatis	81.88	315	P	P	17 01 28.9	-0.5
CSS				IAmb	IAmb	17 01 32.0	

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                comp=Z,194nm,0.8s
U54A   Nelsons Funny      81.92  43  P        P        17 01 28.6  -0.9
U54A                                 IAmb     IAmb     17 01 43.3
                comp=Z,197nm,1.4s
Y49A   Blount Mountai     81.92  47  P        P        17 01 28.9  -0.7
Y49A                                 IAmb     IAmb     17 01 43.0
                comp=Z,159nm,1.2s
PAIG   Paliouri           81.94 324  P        P        17 01 28.5  -1.0
LEF    Lefka              81.97 315 ⇑P        P        17 01 29.6  -0.1
BLA    Blacksburg         81.97  41  P        P        17 01 29.1  -0.7
BLA                                  pmax     pmax
                comp=Z,202nm,1.5s
BLA                                  MLR      MLR
                comp=Z,2µm,22.0s
BLA    Blacksburg         81.97  41  P        P        17 01 29.7  -0.1
                baz=327,SNR=9.1
BLA    Blacksburg         81.97  41  P        P        17 01 29.1  -0.7
BLA                                  IAmb     IAmb     17 01 31.6
                comp=Z,202nm,1.4s
BLA                                  IAMs_20  IAMs_20  17 38 34.7
                comp=Z,2µm,22.0s
ELL    Elmali             82.00 318  P        P        17 01 29.4  -0.7
ELL                                  pmax     pmax
                comp=Z,431nm,0.8s
ELL    Elmali             82.00 318  P        P        17 01 29.4  -0.7
OHR    Ohrid              82.01 326 iP        P        17 01 29.0  -0.9
SHBL   Chebaa             82.02 312 eP        P        17 01 30.3  +0.1
REMY   Saint-Rhmy-en      82.02 338  P        P        17 01 31.0  +0.7
AVF    Avril sur Loir     82.05 340 eP        P        17 01 29.5  -0.5
AVF                                  pmax     pmax
                comp=Z,330nm,1.2s
FNA    Florina            82.08 326  P        P        17 01 28.8  -1.6
FNA    Florina            82.08 326  P        P        17 01 29.3  -1.1
FNA                                  pmax     pmax
                comp=Z,110nm,0.8s
FNA    Florina            82.08 326  P        P        17 01 29.2  -1.1
FNA                                  IAmb     IAmb     17 01 32.0
                comp=Z,110nm,0.8s
FORT   Forrest            82.10 203  P        P        17 01 30.7  +0.5
FORT   Forrest            82.10 203  P        P        17 01 31.0  +0.8
X51A   Calhoun            82.11  46  P        P        17 01 30.1  -0.4
X51A                                 IAmb     IAmb     17 01 44.3
                comp=Z,261nm,1.4s
W52A   Murphy             82.12  45  P        P        17 01 30.1  -0.5
W52A                                 IAmb     IAmb     17 01 44.5
                comp=Z,170nm,1.4s
CIRO   Champorcher        82.14 337  P        P        17 01 31.3  +0.5
S57A   Dark Hollow, R     82.15  40  P        P        17 01 29.8  -0.8
TIR    Tirane             82.15 327  P        P        17 01 29.9  -0.7
TIR    Tirane             82.15 327  P        P        17 01 29.8  -0.7
TIR    Tirane             82.15 327  P        P        17 01 29.9  -0.7
TIR                                  pmax     pmax
                comp=Z,244nm,0.8s
TIR    Tirane             82.15 327  P        P        17 01 29.9  -0.7
V53A   Saluda             82.16  44  P        P        17 01 30.4  -0.4
PRMA   PARMA              82.17 335  P        P        17 01 30.3  -0.3
PRMA                                 IAmb     IAmb     17 01 34.0
                comp=Z,316nm,1.1s
QUIF   Quistinic          82.27 345 eP        P        17 01 30.6  -0.5
QUIF                                 pmax     pmax
                comp=Z,299nm,1.4s
WHYH   Whyalla            82.27 194  P        P        17 01 32.0  +1.0
CHOS   Chios island       82.29 322  P        P        17 01 30.3  -1.2
BBOO   Buckleboo          82.32 195  P        P        17 01 31.2   0.0
BBOO                                 IAmb     IAmb     17 01 33.4
                comp=Z,205nm,1.2s
BBOO   Buckleboo          82.32 195  P        P        17 01 31.5  +0.2
YNG    Young              82.33 185  P        P        17 01 33.2  +1.9
KZN    Kozani             82.35 325  P        P        17 01 30.0  -1.8
ZCCA   Zocca              82.36 334  P        P        17 01 32.4  +0.7
346A   Big Creek Wild     82.36  51  P        P        17 01 31.6  -0.2
346A                                 IAmb     IAmb     17 01 46.6
                comp=Z,350nm,1.3s
PPT    Papeete            82.36 127  P        P        17 01 34.0  +2.1
                comp=Z,81nm,1.1s,baz=32,slow=7.3,SNR=6.5
PPT                                  LR       LR       17 30 24.0
                comp=Z,3µm,21.3s,baz=312,slow=30
ASF    Jabal al Asfar     82.38 311  P        P        17 01 32.4  +0.3
                comp=Z,126nm,1.0s
PPT2   Papeete2           82.38 127 eP        P        17 01 32.8  +0.8
                comp=Z,83nm,1.2s
PPT2   Papeete2           82.38 127 eS        S        17 11 43.9  -1.3
                comp=Z,5µm,30.8s
PPT2   Papeete2           82.38 127 eLR       LR       17 27 16.2
                comp=Z,6µm,23.2s,baz=324
PPT2   Papeete2           82.38 127 eT        T        18 31 50.0
                comp=Z,33nm,0.2s
PPTF   Pamatai, Papee     82.39 127  P        P        17 01 30.9  -1.2
YER    Yerkesik           82.39 319  P        P        17 01 31.8  -0.2
SHAO   Shalim             82.40 288 iP        P        17 01 32.4  +0.1
                SNR=29
SHAO   Shalim             82.40 288  P        P        17 01 32.7  +0.4
                SNR=8.3
LPL    La Plagne          82.43 338 eP        P        17 01 31.9  -0.4
LPL                                  pmax     pmax
                comp=Z,252nm,0.9s
R58B   Mineral            82.43  39  P        P        17 01 31.4  -0.7
PAE    Paea               82.44 127 eP        P        17 01 32.8  +0.6
                comp=Z,20nm,1.2s
PAE    Paea               82.44 127 eT        T        18 31 53.4
                comp=Z,11nm,0.3s
CBN    Corbin Frederi     82.44  39  P        P        17 01 32.4  +0.3
                baz=328
CBN    Corbin Frederi     82.44  39  IAMs_20  IAMs_20  17 40 21.0
                comp=Z,2µm,20.0s
KBN    Korca              82.44 326  P        P        17 01 31.0  -1.3
KBN    Korca              82.44 326  P        P        17 01 31.2  -1.1
KBN                                  pmax     pmax
                comp=Z,120nm,0.8s
KBN    Korca              82.44 326  P        P        17 01 31.2  -1.1
KBN                                  IAmb     IAmb     17 01 34.0
                comp=Z,120nm,0.8s
LPG    La Plagne          82.44 338 eP        P        17 01 32.1  -0.4
LPG                                  pmax     pmax
                comp=Z,347nm,1.0s
HTT    Hallett            82.45 193  P        P        17 01 32.8  +0.8
MMAI   Mount Meron Ar     82.45 312  P        P        17 01 33.1  +0.6
                baz=34,slow=5.8
FETY   Fethiye            82.46 319  P        P        17 01 31.0  -1.3
TIAR   Tiarei             82.48 127 eP        P        17 01 33.0  +0.5
                comp=Z,15nm,0.9s
TIAR   Tiarei             82.48 127 eT        T        18 31 56.8
                comp=Z,12nm,0.3s
NEST   Nestorio           82.53 326  P        P        17 01 31.5  -1.2
KSL    Kastellorizon      82.64 318  P        P        17 01 32.3  -0.9
T57A   Hurt               82.66  41  P        P        17 01 32.4  -0.9
JSRW   J. Sargeant Re     82.66  39  P        P        17 01 32.0  -1.3
BG3    Lake Jocassee      82.67  44  P        P        17 01 32.9  -0.5
BG3                                  IAmb     IAmb     17 01 47.6
                comp=Z,260nm,1.3s
PENT   Pentalofos         82.68 326  P        P        17 01 32.5  -1.1
VLC    Villacollemand     82.70 335  P        P        17 01 33.0  -0.4
VLC                                  IAmb     IAmb     17 01 36.8
                comp=Z,399nm,1.5s
Q61A   Milford            82.70  37  P        P        17 01 33.4  -0.1
                baz=329
U56A   King               82.70  42  P        P        17 01 33.1  -0.5
U56A                                 IAmb     IAmb     17 01 35.5
                comp=Z,167nm,1.4s
V55A   Taylorsville       82.74  42  P        P        17 01 33.1  -0.7
TCF    Toulx Ste Croi     82.77 341 eP        P        17 01 33.6  -0.2
TCF                                  pmax     pmax
                comp=Z,150nm,0.9s
MSSA   Maissana           82.80 335  P        P        17 01 33.1  -1.0
MSSA                                 IAmb     IAmb     17 01 37.2
                comp=Z,177nm,1.1s
KPRO   Kipourio           82.81 325  P        P        17 01 32.5  -1.7
BNI    Bardonecchia       82.88 338  P        P        17 01 34.9  +0.3
BNI                                  pmax     pmax
                comp=Z,119nm,0.9s
BNI                                  MLR      MLR
                comp=Z,4µm,22.0s
BNI    Bardonecchia       82.88 338  P        P        17 01 34.9  +0.3
BNI                                  IAmb     IAmb     17 01 38.0
                comp=Z,119nm,0.9s
KYMI   Kymi, Euboea I     82.88 323  P        P        17 01 33.3  -1.2
MURB   Monte Urbino       82.89 333  P        P        17 01 34.4  -0.1
MURB                                 IAmb     IAmb     17 01 38.6
                comp=Z,193nm,0.8s
THL    Klokotos Trika     82.90 325  P        P        17 01 32.2  -2.3
DOK    Doka               82.91 290  P        P        17 01 35.2  +0.3
                SNR=57
LSK    Leskovik           82.93 326  P        P        17 01 34.3  -0.5
Z51A   Franklin           82.97  47  P        P        17 01 34.1  -0.9
Z51A                                 IAmb     IAmb     17 01 36.5
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                comp=Z,262nm,1.3s
OSSC   Osservatorio P     83.03 334  P        P        17 01 34.1  -1.1
OSSC                                 IAmb     IAmb     17 01 54.3
                comp=Z,170nm,1.1s
Y52A   Lilburn            83.06  46  P        P        17 01 34.7  -0.8
Y52A                                 IAmb     IAmb     17 01 49.5
                comp=Z,146nm,1.2s
DMTO   DMTO               83.06 289  P        P        17 01 35.8  +0.1
                SNR=19
NRCA   Norcia             83.10 332  P        P        17 01 35.5  -0.1
MBDF   Montbardon         83.16 337 eP        P        17 01 35.6  -0.4
MBDF                                 pmax     pmax
                comp=Z,117nm,0.9s
ORIF   Oris-en-Rattie     83.21 338 eP        P        17 01 35.7  -0.5
ORIF                                 pmax     pmax
                comp=Z,390nm,1.2s
SGRT   San Giovanni R     83.22 330  P        P        17 01 35.1  -1.2
AGG    Agios Georgios     83.25 324  P        P        17 01 33.8  -2.6
AGG    Agios Georgios     83.25 324  P        P        17 01 34.1  -2.3
AGG                                  pmax     pmax
                comp=Z,63nm,1.1s
AGG    Agios Georgios     83.25 324  P        P        17 01 34.1  -2.3
KARY   Karystos           83.26 322  P        P        17 01 35.0  -1.4
ATAL   Atalanti           83.26 324  P        P        17 01 34.3  -2.1
KMSC   Kings Mountain     83.28  43  P        P        17 01 36.5  -0.1
                baz=326,SNR=20
KMSC   Kings Mountain     83.28  43  P        P        17 01 35.7  -0.9
KMSC                                 IAmb     IAmb     17 01 50.3
                comp=Z,189nm,1.4s
CNB    Canberra Magne     83.29 184  P        P        17 01 38.3  +2.0
CAN    Canberra           83.31 184  P        P        17 01 36.0  -0.4
CAN                                  pmax     pmax
                comp=Z,71nm,1.1s
CAN                                  MLR      MLR
                comp=Z,2µm,20.0s
CAN    Canberra           83.31 184  P        P        17 01 36.0  -0.4
CAN                                  IAMs_20  IAMs_20  17 35 35.4
                comp=Z,2µm,20.0s
CAN    Canberra           83.31 184  P        P        17 01 38.1  +1.7
PAULI  Pauline            83.32  43  P        P        17 01 36.0  -0.8
T59A   Double "B" Far     83.41  39  P        P        17 01 36.5  -0.7
MEH    Mehetia            83.43 126 eP        P        17 01 37.9  +0.5
                comp=Z,31nm,1.1s
MEH    Mehetia            83.43 126 eT        T        18 33 07.6
                comp=Z,44nm,0.3s
AQU    L'Aquila           83.44 332  P        P        17 01 36.4  -1.0
AQU                                  pmax     pmax
                comp=Z,125nm,0.8s
AQU    L'Aquila           83.44 332⇑iP        P        17 01 37.4   0.0
AQU    L'Aquila           83.44 332  P        P        17 01 36.4  -1.0
AQU                                  IAmb     IAmb     17 01 40.8
                comp=Z,125nm,0.8s
VIVF   Saint-Julien-l     83.56 339 eP        P        17 01 38.0  +0.1
VIVF                                 pmax     pmax
                comp=Z,572nm,1.5s
HODGE  Hodges             83.61  44  P        P        17 01 37.5  -0.8
HODGE                                IAmb     IAmb     17 01 40.3
                comp=Z,185nm,1.3s
T60A   Surry              83.61  39  P        P        17 01 37.4  -0.8
T60A                                 IAmb     IAmb     17 01 52.1
                comp=Z,165nm,1.2s
WHFO   Wadi Hawf          83.65 290  P        P        17 01 38.9  +0.1
                SNR=51
RBK    Rabkut             83.69 289  P        P        17 01 39.0   0.0
                SNR=22
GOGA   Godfrey            83.71  45  P        P        17 01 36.9  -1.9
GOGA                                 pmax     pmax
                comp=Z,79nm,1.3s
GOGA                                 MLR      MLR
                comp=Z,3µm,20.0s
GOGA   Godfrey            83.71  45  P        P        17 01 39.0  +0.2
                baz=326,SNR=17
GOGA                                 S        S        17 11 58.1  -0.4
                baz=326
GOGA   Godfrey            83.71  45  P        P        17 01 36.9  -1.9
GOGA   Godfrey            83.71  45  IAMs_20  IAMs_20  17 42 48.2
                comp=Z,3µm,20.0s
V58A   Windy Hill, Pi     83.73  41  P        P        17 01 38.2  -0.7
V58A                                 IAmb     IAmb     17 01 52.8
                comp=Z,270nm,1.4s
GHAJ   Ghor Haditha       83.75 311  P        P        17 01 38.5  -0.6
GHAJ                                 IAmb     IAmb     17 01 42.2
                comp=Z,247nm,1.1s
BRAL   Brewton            83.77  49  P        P        17 01 40.3  +1.1
                baz=324,SNR=5.3
BRAL   Brewton            83.77  49  IAMs_20  IAMs_20  17 44 38.1
                comp=Z,2µm,19.0s
SCTE   Santa Cesarea      83.78 327  P        P        17 01 38.0  -1.1
SCTE                                 IAmb     IAmb     17 01 40.6
                comp=Z,158nm,0.7s
ANX    Ano Chora          83.78 324  P        P        17 01 37.3  -1.9
CASP   Castiglione de     83.82 334  P        P        17 01 37.4  -1.8
U59A   Littleton          83.83  40  P        P        17 01 38.4  -1.0
U59A                                 IAmb     IAmb     17 01 53.5
                comp=Z,133nm,1.3s
RJF    Les Rejaudoux      83.86 341 eP        P        17 01 39.1  -0.3
RJF                                  pmax     pmax
                comp=Z,350nm,1.5s
W57A   Gilead             83.88  42  P        P        17 01 38.3  -1.3
W57A                                 IAmb     IAmb     17 01 53.4
                comp=Z,262nm,1.4s
EFP    Efpalio            83.93 324  P        P        17 01 39.1  -0.7
GHSS   Government Hou     83.96 193  P        P        17 01 42.6  +2.9
JSC    Jenkinsville       84.03  43  P        P        17 01 39.7  -0.7
JSC                                  pmax     pmax
                comp=Z,115nm,1.2s
JSC    Jenkinsville       84.03  43  P        P        17 01 39.7  -0.7
JSC                                  IAmb     IAmb     17 01 42.2
                comp=Z,115nm,1.2s
LAKA   Lakka              84.06 324  P        P        17 01 38.7  -1.9
BIRD   Birdtown, Kers     84.09  43  P        P        17 01 39.9  -0.8
BIRD                                 IAmb     IAmb     17 01 54.5
                comp=Z,162nm,1.2s
CAF    Calviac            84.10 341 eP        P        17 01 40.8  +0.1
CAF                                  pmax     pmax
                comp=Z,245nm,1.2s
KLV    Kalavryta, Ach     84.16 324  P        P        17 01 38.5  -2.6
GUR    Goura              84.18 324  P        P        17 01 39.1  -2.2
MORW   Morawa             84.26 213  P        P        17 01 40.5  -0.9
MORW                                 IAmb     IAmb     17 01 43.6
                comp=Z,231nm,1.2s
MORW   Morawa             84.26 213  P        P        17 01 42.8  +1.4
PAOL   Paolisi            84.26 331  P        P        17 01 40.1  -1.4
FRF    La Foret Royal     84.28 337 eP        P        17 01 40.9  -0.7
FRF                                  pmax     pmax
                comp=Z,432nm,1.5s
ABTO   Aybut              84.37 290  P        P        17 01 42.7  +0.2
                SNR=46
RAYN   Ar Rayn            84.44 299 iP        P        17 01 43.0  +0.2
                SNR=58
RAYN   Ar Rayn            84.44 299  P        P        17 01 42.6  -0.2
RAYN                                 pmax     pmax
                comp=Z,152nm,1.0s
RAYN   Ar Rayn            84.44 299  P        P        17 01 42.5  -0.2
RAYN                                 IAmb     IAmb     17 01 47.1
                comp=Z,152nm,1.0s
154A   Montrose           84.54  46  P        P        17 01 42.9  -0.2
352A   Blakely            84.58  48  P        P        17 01 43.1  -0.1
X58A   Rowland            84.67  42  P        P        17 01 43.3  -0.4
X58A                                 IAmb     IAmb     17 01 45.5
                comp=Z,176nm,1.2s
CNNC   Cliffs of the      84.73  41  P        P        17 01 44.3  +0.3
                baz=328
CNNC   Cliffs of the      84.73  41  IAMs_20  IAMs_20  17 38 08.8
                comp=Z,3µm,22.0s
MOIG   Morelia            84.75  66  P        P        17 01 44.4  -0.2
MOIG                                 IAmb     IAmb     17 01 46.8
                comp=Z,124nm,1.0s
V61A   Roper              84.83  39  P        P        17 01 43.9  -0.6
OUZ    Omahuta            84.84 164  P        P        17 01 44.4  +0.3
OUZ                                  IAmb     IAmb     17 01 47.7
                comp=Z,250nm,1.3s
ITM    Ithomi             85.00 324  P        P        17 01 43.7  -1.6
TIP    Timpagrande        85.18 328 ⇑P        P        17 01 46.1  -0.2
TIP    Timpagrande        85.18 328  P        P        17 01 45.4  -0.8
TIGA   Tifton             85.27  47  P        P        17 01 47.5  +0.8
                baz=326,SNR=12
TIGA   Tifton             85.27  47  P        P        17 01 46.4  -0.3
Y59A   Loris              85.35  42  P        P        17 01 46.4  -0.6
Y59A                                 IAmb     IAmb     17 02 00.8
                comp=Z,168nm,1.1s
ARPS   Mount Arapiles     85.35 190  P        P        17 01 47.4  +0.7
255A   Hazlehurst         85.41  46  P        P        17 01 47.2  -0.2
BLDU   Ballidu            85.42 212  P        P        17 01 48.0  +0.8
NHSC   New Hope           85.50  43  P        P        17 01 48.2  +0.4
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                baz=327
NHSC   New Hope           85.50  43  IAMs_20  IAMs_20  17 44 40.4
                comp=Z,2µm,20.0s
Y60A   Bolivia            85.63  41  P        P        17 01 48.2  -0.2
Y60A                                 IAmb     IAmb     17 01 50.2
                comp=Z,155nm,1.1s
TOO    Toolangi           85.78 187  P        P        17 01 49.1  +0.2
TOO                                  pmax     pmax
                comp=Z,197nm,1.3s
TOO    Toolangi           85.78 187  P        P        17 01 49.1  +0.2
TOO                                  IAmb     IAmb     17 01 51.9
                comp=Z,197nm,1.3s
TOO    Toolangi           85.78 187  P        P        17 01 50.4  +1.5
BRAT   Ballarat           85.90 188  P        P        17 01 51.1  +1.8
KLBR   Kellerberrin       85.95 211  P        P        17 01 50.0  +0.2
MLBS   Spotswood, Mel     86.09 187  P        P        17 01 53.7  +3.4
UNM    Universidad Na     86.24  65  IAMs_20  IAMs_20  17 37 40.2
                comp=Z,2µm,22.0s
CEL    Celeste            86.30 328  P        P        17 01 50.4  -1.4
GEXS   Deakin Univers     86.51 188  P        P        17 01 55.1  +2.8
ETSF   Etsaut             86.60 342 eP        P        17 01 52.3  -0.9
ETSF                                 pmax     pmax
                comp=Z,27nm,0.5s
MUN    Mundaring          86.84 212  P        P        17 01 55.1  +0.9
TBI    Tubuai             87.20 130 eT        T        18 37 49.1
                comp=Z,47nm,0.3s
VSL    Villasalto         87.29 334  P        P        17 01 56.0  -0.5
VSL                                  IAmb     IAmb     17 02 14.6
                comp=Z,102nm,1.1s
NWAO   Narrogin (SRO)     87.35 211  P        P        17 01 57.0  +0.4
656A   Willston           87.49  47  P        P        17 01 57.2  -0.4
CORL   Corleone           87.51 330  P        P        17 01 56.6  -1.1
CORL                                 IAmb     IAmb     17 02 18.9
                comp=Z,95nm,1.2s
RAFF   Raffo Rosso        87.76 329  P        P        17 01 58.1  -0.7
RAFF                                 IAmb     IAmb     17 02 19.2
                comp=Z,162nm,1.3s
SOCY   Socotra            87.80 286  P        P        17 01 58.0  -1.4
                SNR=7.3
SOCY   Socotra            87.80 286  P        P        17 01 57.3  -2.1
SOCY                                 IAmb     IAmb     17 02 00.5
                comp=Z,161nm,1.1s
CLTB   Caltabellotta      87.83 330  P        P        17 01 58.0  -1.2
TLIG   Tlapa              87.96  66  P        P        17 01 59.2  -1.1
MAHO   Mahon              88.33 337  P        P        17 02 04.4  +3.0
MAHO                                 SKS      SKSac    17 12 22.9  -4.1
URZ    Urewera            88.46 162  P        P        17 02 00.6  -1.1
URZ                                  IAmb     IAmb     17 02 01.6
                comp=Z,145nm,1.3s
PBRG   Braganca           88.81 346 eP        P        17 02 03.2  -0.6
                comp=Z,86nm,1.9s
PGAV   Gavieira, Arco     88.89 347 eP        P        17 02 03.6  -0.6
                comp=Z,103nm,1.7s
PGAV   Gavieira, Arco     88.89 347 eS        S        17 12 51.6  +2.7
PGAV                                eSS       SS       17 19 05.4  +25
PGAV                                eLQ       LQ       17 26 25.4
PGAV                                eLR       LR       17 32 47.9
                comp=Z,1µm,20.0s
GLAD   Gladstone          89.00 185  P        P        17 02 07.4  +3.2
DWPF   Disney Wildern     89.07  47  P        P        17 02 06.0  +0.9
                baz=327
DWPF   Disney Wildern     89.07  47  P        P        17 02 05.3  +0.2
PCAB   Cabril             89.10 347 eP        P        17 02 04.6  -0.5
                comp=Z,92nm,1.5s
BKZ    Black Stump Fm     89.21 163  P        P        17 02 03.6  -1.7
BKZ                                  IAmb     IAmb     17 02 18.4
                comp=Z,158nm,1.3s
BKZ                                  IAMs_20  IAMs_20  17 34 10.7
                comp=Z,2µm,21.0s
BKZ    Black Stump Fm     89.21 163  P        P        17 02 04.7  -0.6
POLO   Lamas de Olo       89.39 347 eP        P        17 02 05.3  -1.3
                comp=Z,49nm,1.5s
MVO    Moncorvo           89.48 346 eP        P        17 02 06.2  -0.8
                comp=Z,99nm,1.6s
MVO    Moncorvo           89.48 346 eLR       LR       17 33 12.0
                comp=Z,1µm,20.0s
PVRL   Vila Real          89.48 347 eP        P        17 02 06.5  -0.4
                comp=Z,132nm,1.6s
CORO   Coronation Par     89.52 185  P        P        17 02 09.9  +3.3
UCM    Universidad Co     89.64 343  P        P        17 02 10.5  +2.8
PVIS   Viseu              90.05 347 eP        P        17 02 08.7  -0.9
                comp=Z,110nm,1.8s
QRZ    Quartz Range       90.12 166  P        P        17 02 09.3  -0.1
QRZ                                  IAmb     IAmb     17 02 23.3
                comp=Z,150nm,1.2s
MTE    Manteigas          90.31 346 eP        P        17 02 09.8  -1.1
                comp=Z,85nm,1.6s
MTE    Manteigas          90.31 346 eS        S        17 13 21.6  +20
MTE    Manteigas          90.31 346 eLQ       LQ       17 29 23.1
MTE                                 eLR       LR       17 33 30.5
                comp=Z,2µm,20.0s
MTE    Manteigas          90.31 346  P        P        17 02 09.2  -1.7
MTE                                  IAMs_20  IAMs_20  17 48 14.9
                comp=Z,2µm,20.0s
ESBB   Sonseca Array      90.39 343  P        P        17 02 09.1  -2.1
ESDC   Sonseca Array      90.39 343  P        P        17 02 10.8  -0.5
                comp=Z,16nm,0.9s,baz=355,slow=3.5,SNR=45
ESDC                                 LR       LR       17 47 11.7
                comp=Z,4µm,21.0s,baz=330,slow=38
ESDC   Sonseca Array      90.39 343  P        P        17 02 09.4  -1.8
MOO    Moorlands          90.50 185  P        P        17 02 14.6  +3.4
CMAH   Djebel Manchou     90.52 334  P        P        17 02 11.7  -0.2
COI    Coimbra            90.63 347  P        P        17 02 10.5  -1.8
COI                                  pmax     pmax
                comp=Z,101nm,1.5s
COI    Coimbra            90.63 347  P        P        17 02 10.5  -1.8
COI                                  IAmb     IAmb     17 02 30.5
                comp=Z,101nm,1.5s
NNZ    Nelson             90.64 166  P        P        17 02 11.4  -0.5
NNZ                                  IAmb     IAmb     17 02 13.5
                comp=Z,78nm,1.0s
KEST   Kesra              90.77 332  P        P        17 02 13.0  -0.1
                comp=Z,38nm,0.8s,baz=212,slow=1.2,SNR=23
KEST                                 LR       LR       17 47 59.8
                comp=Z,4µm,20.3s,baz=334,slow=39
KEST   Kesra              90.77 332  P        P        17 02 13.1   0.0
                SNR=13
KEST   Kesra              90.77 332  P        P        17 02 12.6  -0.5
KEST                                 IAmb     IAmb     17 02 31.9
                comp=Z,96nm,1.2s
PCAS   Casmilo, Conde     90.79 347 eP        P        17 02 12.2  -0.8
                comp=Z,96nm,1.7s
ABSA   Djebel Ababsia     90.83 334  P        P        17 02 12.9  -0.5
PCBR   Castelo Branco     90.84 346 eP        P        17 02 12.5  -0.7
                comp=Z,68nm,2.0s
CKFL   Kef-Lekhel         90.94 334  P        P        17 02 12.8  -1.1
TUWZ   Tuamarina          90.94 165  P        P        17 02 12.7  -0.6
SNZO   South Karori       90.96 165  P        P        17 02 12.7  -0.6
SNZO                                 IAmb     IAmb     17 02 14.8
                comp=Z,143nm,1.1s
TAU    Tasmania Unive     90.96 185  P        P        17 02 14.7  +1.4
TAU                                  pmax     pmax
                comp=Z,121nm,1.2s
TAU                                  MLR      MLR
                comp=Z,1µm,18.0s
TAU    Tasmania Unive     90.96 185  P        P        17 02 14.7  +1.4
TAU                                  IAmb     IAmb     17 02 16.7
                comp=Z,121nm,1.1s
TAU                                  IAMs_20  IAMs_20  17 48 48.0
                comp=Z,1µm,18.0s
TAU    Tasmania Unive     90.96 185  P        P        17 02 15.8  +2.5
DFRA   Djebel Bou Aff     91.04 335  P        P        17 02 13.0  -1.4
BHW    Baring Head        91.08 165  P        P        17 02 13.2  -0.7
PMRV   Marv??o            91.23 346 eP        P        17 02 13.5  -1.6
                comp=Z,76nm,1.7s
PMRV   Marv??o            91.23 346 eS        S        17 13 08.6  -1.8
PMRV   Marv??o            91.23 346 eLQ       LQ       17 28 19.1
PMRV                                eLR       LR       17 34 05.0
                comp=Z,4µm,18.0s
PSBE   So Bento           91.37 347 eP        P        17 02 15.7   0.0
                comp=Z,87nm,1.6s
CKHR   Kef el Ahmar       91.64 335  P        P        17 02 17.4  +0.2
PMTG   Montargil          91.72 347 eP        P        17 02 15.7  -1.6
                comp=Z,69nm,1.6s
PESTR  Estremoz           91.81 346 eP        P        17 02 16.1  -1.7
                comp=Z,64nm,1.6s
PESTR  Estremoz           91.81 346  P        P        17 02 16.0  -1.7
EVO    Evora              92.21 346  P        P        17 02 18.6  -1.0
EVO                                  SKS      SKSac    17 12 49.5  -0.1
EVO    Evora              92.21 346 eP        P        17 02 18.4  -1.2
                comp=Z,66nm,1.7s
PBAR   Barrancos          92.40 345 eP        P        17 02 19.5  -1.0
                comp=Z,72nm,1.6s
BBSR   BB Station         92.48  32  IAMs_20  IAMs_20  17 50 22.4
                comp=Z,1µm,20.0s
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OXZ	**Oxford**	**92.49**	**167**	P	**P**	**17 02 18.9**	**-1.5**
OXZ				IAmb	IAmb	17 02 21.5	
	comp=Z,58nm,0.9s						
PBEJ	**Beja**	**92.68**	**346**	*e*P	**P**	**17 02 21.3**	**-0.5**
	comp=Z,79nm,1.8s						
PNCL	**Nicolau / Gran**	**92.70**	**347**	*e*P	**P**	**17 02 20.6**	**-1.3**
	comp=Z,41nm,1.5s						
RPZ	**Rata Peaks**	**92.73**	**168**	P	**P**	**17 02 20.9**	**-0.6**
RPZ				IAmb	IAmb	17 02 25.4	
	comp=Z,54nm,1.1s						
CCIG	**Comitan**	**92.81**	**62**	P	**P**	**17 02 20.8**	**-2.1**
CCIG				IAmb	IAmb	17 02 25.0	
	comp=Z,68nm,1.4s						
MESJ	**Messejana**	**92.92**	**346**	*e*P	**P**	**17 02 21.9**	**-1.0**
MESJ				*e*SKSac	**SKSac**	**17 12 53.0**	**-0.5**
MESJ				IAMs_20	IAMs_20	17 49 47.2	
	comp=Z,3µm,24.4s						
MESJ	**Messejana**	**92.92**	**346**	*e*P	**P**	**17 02 21.8**	**-1.0**
MESJ				*e*		17 12 53.0	
MESJ	**Messejana**	**92.92**	**346**	*e*P	**P**	**17 02 21.9**	**-1.0**
	comp=Z,77nm,1.6s						
PCVE	**Castro Verde**	**93.09**	**346**	*e*P	**P**	**17 02 22.8**	**-0.9**
	comp=Z,97nm,1.6s						
PVAQ	**Vaqueiros**	**93.26**	**346**	*e*P	**P**	**17 02 23.1**	**-1.4**
	comp=Z,57nm,1.6s						
PVAQ	**Vaqueiros**	**93.26**	**346**	*e*S	S	17 13 15.2	-13
PVAQ				*e*SS	SS	17 20 18.0	+35
PVAQ				*e*LQ	LQ	17 29 01.9	
PVAQ				*e*LR	LR	17 35 13.4	
	comp=Z,3µm,20.0s						
PVAQ	**Vaqueiros**	**93.26**	**346**	P	**P**	**17 02 22.5**	**-2.0**
PTEO	**Sao Teotonio**	**93.28**	**347**	*e*P	**P**	**17 02 23.8**	**-0.8**
	comp=Z,102nm,1.9s						
EMAL	**Malaga-Limoner**	**93.30**	**343**	P	**P**	**17 02 25.9**	**+1.3**
EMAL	**Malaga-Limoner**	**93.30**	**343**	PS	PS	17 14 58.0	+12
ARNO	**Arenosillo**	**93.39**	**345**	P	**P**	**17 02 21.2**	**-3.8**
ARNO	**Arenosillo**	**93.39**	**345**	PS	PS	17 14 40.7	-6.0
PBDV	**Barranco-do-Ve**	**93.45**	**346**	*e*P	**P**	**17 02 24.9**	**-0.5**
	comp=Z,80nm,1.7s						
MORF	**Marmelete**	**93.51**	**346**	*e*P	**P**	**17 02 24.7**	**-1.1**
MORF				IAMs_20	IAMs_20	17 49 58.3	
	comp=Z,3µm,23.4s						
MORF	**Marmelete**	**93.51**	**346**	*e*P	**P**	**17 02 24.6**	**-1.1**
MORF	**Marmelete**	**93.51**	**346**	*e*P	**P**	**17 02 25.1**	**-0.6**
	comp=Z,92nm,1.6s						
CEU	**Ceuta**	**94.31**	**344**	P	P	17 02 34.7	+5.4
CHAS	**Isla Isabel II**	**94.41**	**341**	P	**P**	**17 02 27.6**	**-2.1**
CHAS	**Isla Isabel II**	**94.41**	**341**	PS	PS	17 14 53.8	-4.2
PVLZ	**Peæn de**	**94.81**	**343**	P	P	17 02 26.3	-5.3
PVLZ	**Peæn de**	**94.81**	**343**	PS	PS	17 14 57.4	-5.0
ATD	**Arta Tunnel**	**95.31**	**294**	P	**P**	**17 02 36.2**	**+1.9**
	SNR=7.7						
ATD	**Arta Tunnel**	**95.31**	**294**	P	**P**	**17 02 33.6**	**-0.6**
ATD				IAmb	IAmb	17 02 37.3	
	comp=Z,140nm,1.5s						
SNET	**Serv Nac Est T**	**96.57**	**61**	IAMs_20	IAMs_20	17 40 16.3	
	comp=Z,1µm,22.0s						
IFR	**Ifrane**	**96.58**	**343**	P	**P**	**17 02 36.1**	**-3.8**
IFR	**Ifrane**	**96.58**	**343**	PS	PS	17 15 15.4	-6.8
TGUH	**Tegucigalpa,Un**	**97.41**	**59**	IAMs_20	IAMs_20	17 50 47.4	
	comp=Z,2µm,22.0s						
PMOZ	**Porto Moniz, M**	**98.96**	**353**	*e*S	**SKKSac**	**17 13 56.5**	**-0.1**
PMOZ	**Porto Moniz, M**	**98.96**	**353**	*e*LR	LR	17 36 55.3	
	comp=Z,1µm,18.0s						
MTDJ	**Mount Denham**	**99.28**	**49**	IAMs_20	IAMs_20	17 52 09.9	
	comp=Z,2µm,20.0s						
MSEY	**Mahe Island**	**99.37**	**273**	IAMs_20	IAMs_20	17 51 11.2	
	comp=Z,2µm,19.0s						
GRTK	**Grand Turk**	**99.53**	**42**	IAMs_20	IAMs_20	17 52 12.9	
	comp=Z,2µm,20.0s						
BOAB	**BOACO BROADBAN**	**99.63**	**59**	IAMs_20	IAMs_20	17 49 13.0	
	comp=Z,2µm,21.0s						
SDDR	**Presa de Saban**	**101.66**	**44**	IAMs_20	IAMs_20	17 50 12.4	
	comp=Z,1µm,21.0s						
SJG	**San Juan**	**104.71**	**40**	IAMs_20	IAMs_20	17 55 24.9	
	comp=Z,1µm,20.0s						
SMRT	**St. Maarten**	**106.04**	**37**	IAMs_20	IAMs_20	17 51 49.9	
	comp=Z,2µm,22.0s						
SABA	**Saba**	**106.36**	**37**	IAMs_20	IAMs_20	17 51 39.4	
	comp=Z,2µm,22.0s						
SEUS	**St. Eustatius**	**106.58**	**37**	IAMs_20	IAMs_20	17 52 19.2	
	comp=Z,2µm,22.0s						
ANWB	**Willy Bob**	**106.90**	**36**	IAMs_20	IAMs_20	17 57 12.5	
	comp=Z,1µm,20.0s						
HATO	**Hato, Curacao**	**108.66**	**45**	IAMs_20	IAMs_20	17 59 15.1	
	comp=Z,1µm,20.0s						
FDF	**Fort de France**	**109.81**	**37**	IAMs_20	IAMs_20	17 53 46.7	
	comp=Z,970nm,22.0s						
SDV	**Santo Domingo**	**110.69**	**48**	IAMs_20	IAMs_20	17 59 33.3	
	comp=Z,1µm,21.0s						
GRGR	**Grenville**	**111.95**	**38**	IAMs_20	IAMs_20	17 53 04.6	
	comp=Z,931nm,22.0s						
ROSC	**El Rosal**	**112.20**	**54**	PP	**PP**	**17 08 31.4**	**+0.8**
	comp=Z,3.6nm,0.3s,baz=63,slow=4.7,SNR=8.1						
TORD	**Torodi Ar. Bea**	**114.24**	**331**	Pdiff	**Pdif**	**17 03 59.5**	**+0.8**
	comp=Z,0.9nm,0.8s,baz=31,slow=5.6,SNR=4.7						
TORD				PKP	**PKiKP**	**17 07 48.7**	**-0.9**
	comp=Z,6.2nm,0.5s,baz=15,slow=1.6,SNR=34						
TORD				PKKPbc	**PKKPbc**	**17 18 22.3**	**-5.5**
	comp=Z,1.8nm,0.6s,baz=183,slow=2.9,SNR=4.7						
TORD				SKKPbc	SKKPbc	17 22 02.7	-3.5
	comp=Z,1.2nm,0.8s,baz=212,slow=2.4,SNR=3.3						
TORD	**Torodi Ar. Bea**	**114.24**	**331**		**PKiKP**	**17 07 49.0**	**-0.6**
KOWA	**Kowa**	**114.65**	**337**	IAMs_20	IAMs_20	18 05 01.7	
	comp=Z,1µm,20.0s						
BOAV	**Boa Vista**	**121.15**	**42**	*e*P	**PKPdf**	**17 08 02.0**	**-1.0**
DBIC	**Dimbokro**	**122.35**	**335**	PKP	**PKPdf**	**17 08 05.0**	**-0.2**
	comp=Z,26nm,0.9s,baz=38,slow=2.0,SNR=19						
DBIC				PKKPbc	**PKKPab**	**17 18 01.2**	**-2.0**
	comp=Z,2.6nm,0.8s,baz=146,slow=3.6,SNR=2.3						
DBIC				SKKPbc	SKKPbc	17 21 32.2	-8.7
	comp=Z,6.0nm,1.0s,baz=355,slow=1.9,SNR=3.5						
DBIC	**Dimbokro**	**122.35**	**335**	PKPdf	**PKPdf**	**17 08 04.3**	**-0.9**
TIC	**Toumodi**	**122.42**	**335**	*e*PKP2	**PKPdf**	**17 08 04.6**	**-0.8**
KIC	**Kosan Boka**	**122.62**	**335**	*e*PKP2	**PKPdf**	**17 08 04.8**	**-1.0**
	comp=Z,42nm,0.9s						
LIC	**Lamto**	**122.83**	**335**	*e*PKP2	**PKPdf**	**17 08 06.0**	**-0.2**
	comp=Z,110nm,1.1s						
CZSB	**Cruzeiro do Su**	**123.43**	**60**	*e*P	**PKPdf**	**17 08 07.0**	**-0.3**
CZSB	**Cruzeiro do Su**	**123.43**	**60**	PKPdf	**PKPdf**	**17 08 07.0**	**-0.3**
PTGA	**Pitinga**	**124.17**	**43**	PKP	**PKPdf**	**17 08 07.7**	**-1.1**
	comp=Z,9.9nm,0.8s,baz=328,slow=6.9,SNR=3.4						
PTGA				PP	**PP**	**17 09 50.7**	**-2.3**
	comp=Z,2.2nm,0.3s,baz=329,slow=9.4,SNR=6.5						
PTGA	**Pitinga**	**124.17**	**43**	IAMs_20	IAMs_20	18 05 45.4	
	comp=Z,966nm,20.0s						
NNA	**Nana**	**124.30**	**67**	PKP	**PKPdf**	**17 08 08.4**	**-0.6**
	comp=Z,5.8nm,0.5s,baz=4.4,slow=3.0,SNR=3.6						
VNDA	**Vanda**	**125.56**	**178**	Pdiff	**Pdif**	**17 04 52.9**	**+5.5**
	comp=Z,1.1nm,1.2s,baz=326,slow=4.9,SNR=3.1						
VNDA				PKP	**PKPdf**	**17 08 08.7**	**-0.8**
	comp=Z,12nm,0.9s,baz=322,slow=4.2,SNR=49						
VNDA				PKKPbc	**PKKPbc**	**17 17 46.8**	**-0.1**
	comp=Z,1.7nm,0.9s,baz=242,slow=3.8,SNR=5.4						
VNDA				SKKPbc	SKKPbc	17 21 23.3	-14
	comp=Z,1.3nm,1.1s,baz=187,slow=1.7,SNR=3.6						
VNDA	**Vanda**	**125.56**	**178**	PKIKP	**PKPdf**	**17 08 09.4**	**0.0**
VNDA	**Vanda**	**125.56**	**178**	PKPdf	**PKPdf**	**17 08 09.4**	**0.0**
MACA	**Manacapuru-AM**	**125.98**	**45**	*e*P	**PKPdf**	**17 08 12.0**	**-0.2**
MCPB	**Macapa, AP**	**127.13**	**34**	*e*P	**PKPdf**	**17 08 14.2**	**-0.2**
MALB	**Monte Alegre**	**127.64**	**37**	*e*P	**PKPdf**	**17 08 15.0**	**-0.4**
ETMB	**Extrema**	**128.80**	**55**	*e*P	**PKPdf**	**17 08 16.4**	**-1.1**
ETMB	**Extrema**	**128.80**	**55**	PKPdf	**PKPdf**	**17 08 16.0**	**-1.5**
ITTB	**Itaituba**	**129.29**	**40**	*e*P	**PKPdf**	**17 08 18.7**	**+0.2**
SAML	**Samuel**	**129.71**	**51**	PKIKP	**PKPdf**	**17 08 18.1**	**-1.1**
SAML				MLR	MLR		
	comp=Z,16µm,21.0s						
SAML	**Samuel**	**129.71**	**51**	PKPdf	**PKPdf**	**17 08 18.1**	**-1.1**
TMAB	**Tom-Au,PA,Br**	**130.40**	**30**	*e*P	**PKPdf**	**17 08 20.3**	**-0.3**
NPGB	**Novo Progresso**	**131.84**	**41**	*e*P	**PKPdf**	**17 08 23.3**	**-0.1**
ROSB	**Rosrio**	**132.13**	**25**	*e*P	**PKiKP**	**17 08 24.7**	**-0.3**
LPAZ	**La Paz**	**132.92**	**62**	PKhKP	PKPpre	17 08 16.2	
	comp=Z,0.7nm,0.5s,baz=42,slow=5.7,SNR=3.6						
LPAZ				PKP	**PKiKP**	**17 08 26.9**	**-0.3**
	comp=Z,16nm,1.2s,baz=356,slow=4.7,SNR=23						
LPAZ				PP	**PP**	**17 10 52.9**	**+1.4**
	comp=Z,6.4nm,1.2s,baz=287,slow=4.2,SNR=2.6						
LPAZ	**La Paz**	**132.92**	**62**	PKIKP	**PKPdf**	**17 08 25.2**	**-0.8**
LPAZ						17 10 52.9	
LPAZ	**La Paz**	**132.92**	**62**	*e*P	**PKPdf**	**17 08 23.0**	**-3.0**
LPAZ	**La Paz**	**132.92**	**62**	*e*P	**PKPdf**	**17 08 25.5**	**-0.5**
LPAZ	**La Paz**	**132.92**	**62**	PKPdf	**PKPdf**	**17 08 25.2**	**-0.8**
PRPB	**Parauapebas**	**133.32**	**34**	*e*P	**PKPdf**	**17 08 25.6**	**-0.5**
PB12	**IPOC Station P**	**133.38**	**67**	PKPdf	**PKPdf**	**17 08 24.6**	**-1.5**
NBMO	**Morrinhos-CE**	**133.58**	**20**	*e*P	**PKPdf**	**17 08 26.4**	**-0.2**
LBTB	**Lobatse**	**133.82**	**281**	PKIKP	**PKPdf**	**17 08 27.1**	**+0.3**
LBTB	**Lobatse**	**133.82**	**281**	PKPdf	**PKPdf**	**17 08 27.1**	**+0.3**
MAW	**Mawson**	**133.90**	**212**	PKP	**PKiKP**	**17 08 26.1**	**-0.6**
	comp=Z,31nm,1.1s,baz=89,slow=3.6,SNR=22						
MAW				PP	**PP**	**17 10 57.2**	**+0.6**
	comp=Z,4.5nm,0.9s,baz=70,slow=9.0,SNR=3.8						
MAW	**Mawson**	**133.90**	**212**	PKPdf	**PKPdf**	**17 08 25.7**	**+0.3**
NBPS	**Pedro II - PI**	**134.28**	**22**	*e*P	**PKPdf**	**17 08 27.5**	**-0.5**
VILB	**Vilhena**	**134.63**	**51**	*e*P	**PKPdf**	**17 08 28.1**	**-0.4**
VILB	**Vilhena**	**134.63**	**51**	PKPdf	**PKPdf**	**17 08 28.4**	**-0.2**
PB11	**IPOC Station P**	**134.66**	**67**	PKPdf	**PKPdf**	**17 08 27.7**	**-0.9**
NBCL	**Cascavel-CE**	**134.84**	**18**	*e*P	**PKPdf**	**17 08 28.3**	**-0.7**
CLDB	**Colider**	**135.02**	**44**	*e*P	**PKPdf**	**17 08 29.8**	**+0.6**
PDRB	**Porto dos Gac**	**135.22**	**46**	*e*P	**PKPdf**	**17 08 29.5**	**-0.1**
PB01	**IPOC Station P**	**135.73**	**68**	PKPdf	**PKPdf**	**17 08 30.3**	**-0.1**
NBPB	**Pedra_Branca-C**	**135.84**	**20**	*e*P	**PKPdf**	**17 08 30.9**	**+0.1**
PB07	**IPOC Station P**	**135.99**	**69**		**PKPdf**	**17 08 30.3**	**-0.8**
BOSA	**Boshof**	**136.46**	**278**	PKhKP	PKPpre	17 08 19.1	
	comp=Z,3.9nm,0.7s,baz=75,slow=3.1,SNR=7.5						
BOSA				PKP	**PKPdf**	**17 08 31.7**	**0.0**
	comp=Z,9.6nm,0.8s,baz=20,slow=1.2,SNR=7.1						
BOSA	**Boshof**	**136.46**	**278**	PKPdf	**PKPdf**	**17 08 30.9**	**-0.8**
SMTB	**Santa Maria do**	**136.62**	**33**	*e*P	**PKiKP**	**17 08 35.0**	**+1.0**
SIV	**San Ignacio**	**136.69**	**54**	PKhKP	PKPpre	17 08 20.4	
	comp=Z,3.4nm,0.6s,baz=321,slow=2.7,SNR=13						
SIV				PKP	**PKPdf**	**17 08 33.1**	**+0.8**
	comp=Z,6.2nm,0.5s,baz=331,slow=1.9,SNR=15						
SIV				PP	**PP**	**17 11 14.7**	**+0.1**
	comp=Z,3.5nm,1.0s,baz=327,slow=7.6,SNR=3.5						
PB06	**IPOC Station P**	**136.90**	**70**		**PKPdf**	**17 08 31.6**	**-1.1**
LVC	**Limon Verde**	**137.25**	**69**	PKP	**PKPdf**	**17 08 34.3**	**+0.7**
	comp=Z,8.5nm,1.0s,baz=208,slow=2.5,SNR=6.1						
LVC	**Limon Verde**	**137.25**	**69**	PKIKP	**PKPdf**	**17 08 32.9**	**-0.7**
LVC	**Limon Verde**	**137.25**	**69**	*e*P	**PKPdf**	**17 08 33.9**	**+0.3**
LVC	**Limon Verde**	**137.25**	**69**	PKPdf	**PKPdf**	**17 08 32.9**	**-0.7**
PTLB	**Pontes e Lacer**	**137.28**	**52**	*e*P	**PKiKP**	**17 08 35.0**	**-0.2**
PTLB	**Pontes e Lacer**	**137.28**	**52**	PKPdf	**PKPdf**	**17 08 32.9**	**-0.5**
PB15	**IPOC Station P**	**137.33**	**70**		**PKPdf**	**17 08 33.1**	**-0.4**
PB14	**IPOC Station P**	**137.76**	**72**	PKPdf	**PKPdf**	**17 08 34.0**	**-0.5**
H03N2	**Juan Fernandez**	**137.92**	**90**	T	T	19 41 57.7	
	baz=310,slow=77						
H03N1	**Juan Fernandez**	**137.93**	**90**	T	T	19 41 59.0	
	baz=310,slow=77						
H03N3	**Juan Fernandez**	**137.93**	**90**	T	T	19 41 50.5	
	baz=310,slow=77						
QSPA	**South Pole Qui**	**137.96**	**180**	IAMs_20	IAMs_20	17 59 57.5	
	comp=Z,1µm,22.0s						
SNDB	**Serra Nova Dou**	**138.00**	**39**	*e*P	**PKPdf**	**17 08 32.0**	**-2.7**
NBLV	**Livramento - P**	**138.17**	**17**	*e*P	**PKPdf**	**17 08 34.7**	**-0.5**
SALV	**Santo Antonio**	**139.42**	**48**	*e*P	**PKPdf**	**17 08 35.8**	**-1.5**
NBRF	**Rio Formoso -**	**139.78**	**15**	*e*P	**PKPdf**	**17 08 38.1**	**+0.1**
NBAN	**Anadia - AL**	**140.54**	**17**	*e*P	**PKPdf**	**17 08 39.1**	**-0.4**
NBPN	**Ponto Novo - B**	**140.79**	**23**	*e*P	**PKiKP**	**17 08 41.4**	**-1.1**
SDBA	**SAO DESIDERIO**	**140.85**	**31**	*e*P	**PKPdf**	**17 08 40.0**	**0.0**
ARAG	**Araguaiana, MT**	**141.09**	**43**	*e*P	**PKPdf**	**17 08 39.9**	**-0.5**
PP1B	**Ponte de Pedra**	**141.27**	**48**	*e*P	**PKPdf**	**17 08 40.0**	**-0.6**
NBLA	**Lagarto - SE**	**141.52**	**19**	*e*P	**PKPdf**	**17 08 41.1**	**-0.1**
SYO	**Syowa Base**	**142.60**	**213**	⇑*e*pPdiff	pPdif	17 06 16.6	+1.2
BDFB	**Brasilia**	**142.66**	**37**	PKhKP	PKPpre	17 08 39.2	
	comp=Z,17nm,0.8s,baz=347,slow=4.6,SNR=21						
MT02	**Curacav**	**143.01**	**83**	PKPdf	**PKPdf**	**17 08 43.3**	**0.0**
AQDB	**Aquidauana**	**143.25**	**52**	*e*P	PKPbc	17 08 40.7	-0.4
AQDB	**Aquidauana**	**143.25**	**52**	PKPpre	PKPpre	17 08 39.4	
MT05	**Renca**	**143.35**	**83**	PKPpre	PKPpre	17 08 39.8	
JANB	**Januaria**	**143.52**	**31**	*e*P	**PKPdf**	**17 08 45.3**	**+0.6**
ZON	**Zonda**	**143.56**	**79**	PKIKP	PKPab	17 08 40.5	-0.4
ZON	**Zonda**	**143.56**	**79**	PKPpre	PKPpre	17 08 40.5	
GDU01	**Guandu, BA**	**143.71**	**23**	*e*P	**PKPdf**	**17 08 45.8**	**+0.8**
BO01	**Tunca**	**143.72**	**85**	PKPpre	PKPpre	17 08 40.0	
BO02	**Sierra Bellavi**	**144.16**	**85**		**PKPab**	**17 08 42.4**	**-0.7**
ML02	**Panimavida**	**144.29**	**87**		**PKPab**	**17 08 43.4**	**-0.1**
IPMB	**Ipameri, GO**	**144.68**	**39**	*e*P	**PKPab**	**17 08 43.7**	**-1.7**
NBIT	**Itapeh - BA**	**144.90**	**24**	*e*P	**PKPab**	**17 08 44.4**	**-1.8**
MC01	**Montes Claros**	**145.18**	**32**	*e*P	**PKPbc**	**17 08 45.9**	**-1.3**
CMC01	**Camacan, BA**	**145.29**	**24**	*e*P	**PKPbc**	**17 08 45.8**	**-1.7**
LC01	**Cunco**	**145.69**	**92**	PKPdf	**PKPdf**	**17 08 47.2**	**-0.6**
LR03	**Panguipulli**	**145.75**	**93**		**PKPbc**	**17 08 48.1**	**-0.3**
LL04	**Puerto Octay**	**146.34**	**95**	PKPdf	**PKPdf**	**17 08 49.2**	**+0.4**
GUA01	**Guaratinga, BA**	**146.38**	**25**	*e*P	**PKPdf**	**17 08 50.0**	**+0.4**
PCMB	**Pacaembu**	**146.45**	**47**	*e*P	**PKPdf**	**17 08 49.7**	**+0.1**
DIAM	**Diamantina, MG**	**146.74**	**32**	*e*P	**PKPdf**	**17 08 50.9**	**+0.6**
CPUP	**Villa Florida**	**147.01**	**60**	PKPbc	**PKPdf**	**17 08 51.2**	**+0.8**
	comp=Z,82nm,1.0s,baz=316,slow=2.9,SNR=57						
CPUP	**Villa Florida**	**147.01**	**60**	PKP2	**PKPdf**	**17 08 50.2**	**-0.1**
CPUP	**Villa Florida**	**147.01**	**60**	*e*P	**PKPdf**	**17 08 50.3**	**-0.1**
CPUP	**Villa Florida**	**147.01**	**60**	PKPdf	**PKPdf**	**17 08 50.2**	**-0.1**
BB19B	**Bebedouro**	**147.26**	**42**	*e*P	**PKPdf**	**17 08 51.2**	**+0.2**
PLCA	**Paso Flores**	**147.49**	**94**	PKPbc	**PKPbc**	**17 08 52.0**	**-1.4**
	comp=Z,77nm,1.0s,baz=288,slow=3.1,SNR=42						
PLCA	**Paso Flores**	**147.49**	**94**	PKP2	**PKPdf**	**17 08 50.7**	**-0.2**
PLCA	**Paso Flores**	**147.49**	**94**	*e*P	**PKPdf**	**17 08 50.7**	**-0.2**
PLCA	**Paso Flores**	**147.49**	**94**	PKPdf	**PKPdf**	**17 08 50.7**	**-0.2**
SJMB	**Sao Joao De Ma**	**147.96**	**29**	*e*P	**PKPdf**	**17 08 52.2**	**+0.1**
BSFB	**Barra de Sao F**	**148.19**	**28**	*e*P	**PKPdf**	**17 08 52.8**	**+0.2**
PTGB	**Pitanga**	**148.63**	**51**	*e*P	**PKPdf**	**17 08 53.3**	**+0.1**
FRTB	**Fartura**	**148.74**	**46**	*e*P	**PKPdf**	**17 08 54.1**	**+0.7**
RIB01	**Linhares ES**	**148.78**	**28**	*e*P	**PKPdf**	**17 08 53.2**	**-0.3**
BSCB	**Bom Sucesso**	**148.79**	**36**	*e*P	**PKPdf**	**17 08 53.7**	**+0.1**
RCLB	**Rio Claro- Sao**	**148.89**	**42**	*e*P	**PKPdf**	**17 08 53.6**	**0.0**
VAO	**Valinhos**	**149.65**	**42**	*e*P	**PKPdf**	**17 08 55.0**	**+0.1**
ALF01	**Guarapari-ES**	**149.90**	**29**	*e*P	**PKPdf**	**17 08 55.6**	**+0.4**
ITQB	**Itaqui**	**149.91**	**63**	*e*P	**PKPdf**	**17 08 55.0**	**+0.1**
ITQB	**Itaqui**	**149.91**	**63**	PKPdf	**PKPdf**	**17 08 54.7**	**-0.3**
ITQB					**PKPbc**	**17 08 60.0**	**+0.1**
MG05	**Puerto Natales**	**150.06**	**114**	PKPdf	**PKPdf**	**17 08 54.6**	**+0.1**
MG05				PKPbc	**PKiKP**	**17 09 00.4**	**0.0**
GO09	**Cerro Castillo**	**150.08**	**114**		**PKiKP**	**17 09 00.2**	**-0.2**
VAS01	**Vassouras-RJ**	**150.46**	**35**	*e*P	**PKPdf**	**17 08 56.1**	**0.0**
PARB	**Paraibuna**	**150.53**	**40**	*e*P	**PKPdf**	**17 08 56.5**	**+0.3**
PET01	**Itanhaem-SP**	**150.62**	**43**	*e*P	**PKPdf**	**17 08 56.5**	**+0.2**
DUB01	**Friburgo-RJ**	**150.68**	**33**	*e*P	**PKPdf**	**17 08 56.8**	**+0.3**
TIJ01	**Guaruva-PR**	**150.68**	**47**	*e*P	**PKPdf**	**17 08 56.9**	**+0.4**
CAM01	**Campos-RJ**	**150.70**	**32**	*e*P	**PKPdf**	**17 08 56.9**	**+0.5**
MAN01	**Angra dos Reis**	**150.79**	**36**	*e*P	**PKPdf**	**17 08 56.4**	**-0.3**
GO10	**Punta Arenas**	**151.21**	**117**		**PKiKP**	**17 09 02.4**	**-0.4**
CPSB	**Cacapava Do Su**	**152.32**	**60**	*e*P	**PKPdf**	**17 08 59.0**	**+0.3**
PLTB	**Pedras Altas**	**153.21**	**62**	*e*P	**PKPdf**	**17 09 00.1**	**+0.1**
PLTB	**Pedras Altas**	**153.21**	**62**		**PKPbc**	**17 09 06.9**	**-0.6**
PMSA	**Palmer Station**	**153.69**	**143**		**PKiKP**	**17 09 07.7**	**+0.3**
SNAA	**Sanae**	**154.20**	**196**	PKPdf	**PKPdf**	**17 09 00.0**	**-0.2**
SNAA	**Sanae**	**154.20**	**196**	pPKPdf	**PKPbc**	**17 09 08.2**	**-0.3**
SNAA	**Sanae**	**154.20**	**196**	PKIKP	**PKPdf**	**17 08 59.4**	**-0.8**
SNAA						17 09 23.1	
SNAA				MLR	MLR		
	comp=Z,1µm,22.0s						
SNAA	**Sanae**	**154.20**	**196**	PKPdf	**PKPdf**	**17 08 59.4**	**-0.8**
SNAA				PKPab	**PKPab**	**17 09 23.1**	**+0.6**
VNA2	**Neumayer--Watz**	**155.64**	**194**	PKPab	**PKPab**	**17 09 29.2**	**+0.7**
VNA2	**Neumayer--Watz**	**155.64**	**194**	PKPdf	**PKPdf**	**17 09 02.5**	**+0.4**
VNA2	**Neumayer--Watz**	**155.64**	**194**	pPKPdf	pPKPdf	17 09 11.6	-3.2
VNA3	**Neumayer Olymp**	**155.72**	**193**	PKPab	**PKPab**	**17 09 29.2**	**+0.3**
VNA3	**Neumayer Olymp**	**155.72**	**193**	PKPdf	**PKPdf**	**17 09 02.3**	**+0.1**
VNA3	**Neumayer Olymp**	**155.72**	**193**	pPKPdf	pPKPdf	17 09 11.4	-3.4
VNA1	**Neumayer--Stat**	**156.02**	**194**	PKPab	**PKPab**	**17 09 30.9**	**+0.7**
VNA1	**Neumayer--Stat**	**156.02**	**194**	PKPdf	**PKPdf**	**17 09 02.9**	**+0.3**
VNA1	**Neumayer--Stat**	**156.02**	**194**	pPKPdf	pPKPdf	17 09 12.5	-2.7

DJA 16 16:50:12.1±0.5, **1°N**±3°×**12°7E**±°, **h11**^{km}±3^{km}, **M3.5**/6, **MLv3.5**/6, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.29**	**195**	P	Pg	16 50 18.2	+0.3
TNTI				Pg	Pg	16 50 18.3	+0.3
TNTI				Sg	Sg	16 50 22.3	+0.5
LBMI	**Labuha**	**1.68**	**178**	P	Pn	16 50 40.9	-0.5
LBMI	**Labuha**	**1.68**	**178**	P	Pn	16 50 41.5	+0.1
LBMI				S	Sb	16 51 04.6	+0.4
SANI	**Sanana**	**3.40**	**205**	P	Pn	16 51 04.3	-0.9
KMSI	**Cibinong**	**3.49**	**262**	P	Pn	16 51 07.6	+1.2
SWI	**Sorong**	**4.27**	**116**	P	Pn	16 51 17.1	+0.1
GTOI	**Gorontalo**	**4.45**	**265**	P	Pn	16 51 23.5	+4.0

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*IDC **16** 16:50:36.6±1.7, 3°85S×129°60E, h0^{km}, mb3.3/2, mb1 3.7/5, mb1mx3.4/48, mbtmp3.5/5, ML3.1/2, Error ellipse: s-maj=44.1km s-min=24.9km az=81.0*

*DJA **16** 16:50:39.8±0.9, 4°S±6°×13°0E±°, h21^{km}±6^{km}, M3.4/6, MLv3.4/6*

ISC 16 16:50:40.5±0.9, **3°76S**±0°07×**129°50E**±0°05, **h35**^{km}, **n12**, σ**1§35**/16, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**0.70**	**306**	P	**Pn**	**16 50 52.9**	**-1.0**
MSAI				S	**Sn**	**16 51 02.7**	**-0.8**
MSAI	**Masohi**	**0.70**	**306**	P	**Pn**	**16 50 52.7**	**-1.2**
AAI	**Ambon**	**1.30**	**273**	P	**Pn**	**16 51 02.2**	**0.0**
AAI				S	**Sn**	**16 51 19.6**	**+1.2**
AAI	**Ambon**	**1.30**	**273**	P	**Pn**	**16 51 02.0**	**-0.2**
FAKI	**Fak Fak**	**2.87**	**73**	P	**Pn**	**16 51 24.6**	**+0.8**
SIJI	**Sorong**	**3.37**	**32**	Pn	**Pn**	**16 51 30.7**	**0.0**
	baz=255,slow=20						
SIJI				Sn	**Sn**	**16 52 07.8**	**-1.7**
	6.9nm,0.3s,baz=89,slow=22,SNR=11						
SWI	**Sorong**	**3.37**	**32**	P	**Pn**	**16 51 31.0**	**+0.3**
SWI				S	**Sn**	**16 52 09.7**	**+0.2**
SANI	**Sanana**	**3.89**	**296**	P	**Pn**	**16 51 38.2**	**+0.3**
FITZ	**Fitzroy Crossi**	**14.74**	**195**	Pn	**Pn**	**16 54 05.8**	**-0.8**
	0.1nm,0.3s,baz=13,slow=12,SNR=1.5						
WRA	**Warramunga Arr**	**16.77**	**164**	Pn	**Pn**	**16 54 29.7**	**-3.1**
	0.1nm,0.3s,baz=347,slow=13,SNR=6.3						
ASAR	**Alice Springs**	**20.25**	**168**	P	**P**	**16 55 13.2**	**+0.3**
	0.4nm,0.4s,baz=348,slow=11,SNR=19						
CMAR	**Chiang Mai Arr**	**37.33**	**307**	P	**P**	**16 57 52.0**	**+2.2**
	0.5nm,0.5s,baz=134,slow=7.9,SNR=5.5						

SKO 16 16:58:41.6, 41°26N×22°77E, h24^{km}**, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KNT	**Kendrikon**	**0.14**	**135**	*i* Pg	Pb	16 58 46.6	+0.1
KNT				*i* Sg	Sb	16 58 48.9	-0.8
VAY	**Valandovo**	**0.16**	**292**	*i* Pg	Pb	16 58 46.9	+0.2
VAY				*i* Sg	Sb	16 58 48.5	-1.6
VAY				*e*Lg	Lg	16 58 48.6	
	comp=N,21nm,0.2s						
GRG	**Griva**	**0.41**	**223**	*i* Pg	Pb	16 58 50.9	+0.5
GRG				*i* Sg	Sb	16 58 56.8	+0.5
STIP	**Stip**	**0.62**	**315**	*i* Pg	Pb	16 58 53.4	-0.4
STIP				*i* Sg	Sb	16 59 00.4	-1.7
STIP				*e*Lg	Lg	16 59 03.0	
	comp=E,2.0nm,0.2s						

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*TEH **16** 17:03:11.6, 38°34N×56°93E, h10^{km}, ML4.4*

*IDC **16** 17:03:11.5±0.7, 38°22N×56°82E, h0^{km}, mb3.9/18, mb1 4.1/28, mb1mx4.0/49, mbtmp4.0/28, ML3.3/6, Error ellipse: s-maj=13.5km s-min=6.8km az=12.0*

*NNC **16** 17:03:12.2±2.4, 38°54N×57°15E, h0^{km}, mb4.7, Error ellipse: s-maj=29.5km s-min=7.4km az=58.0*

*MOS **16** 17:03:13.0±1.9, 38°36N×57°04E, h22^{km}, mb4.4/9, Error ellipse: s-maj=7.2km s-min=5.9km az=76.0*

*THR **16** 17:03:13.6±0.8, 38°22N×56°93E, h14^{km}±6^{km}, ML4.0*

*NEIC **16** 17:03:15.0±2.1, 38°37N±0°08×57°06E±0°07, h32^{km}±6^{km}, mb4.2/13, Error ellipse: s-maj=12.5km s-min=6.6km az=206.0*

ISC 16 17:03:12.2±1.6, **38°38N**±0°04×**56°99E**±0°03, **h8**^{km}±10^{km}, **n183**, σ**2§29**/201, **mb4.1**/25, **11C-4D**, **Iran-Turkmenistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BJRD	**Bojnurd**	**0.76**	**154**	*e*Pg	**Pg**	**17 03 25.8**	**-1.0**
BJRD				IAML		17 03 41.1	
	comp=E,6µm,0.5s						
BJRD				IAML		17 03 43.2	
	comp=N,6µm,0.5s						
BJRD	**Bojnurd**	**0.76**	**154**	*e*Pg	**Pg**	**17 03 25.8**	**-1.0**
GEYT	**Alibeck**	**1.00**	**117**	Pg	**Pb**	**17 03 31.2**	**-0.5**
	comp=N,238nm,0.3s,baz=282,slow=16,SNR=1566						
GEYT				Lg	Lg	17 03 45.4	
	comp=N,431nm,0.3s,baz=280,slow=19,SNR=26						
GEYT	**Alibeck**	**1.00**	**117**	*e*Pn	**Pb**	**17 03 31.0**	**-0.7**
GEYT	**Alibeck**	**1.00**	**117**		**Pb**	**17 03 31.1**	**-0.7**
GYA0	**ALIBECK ARRAY**	**1.00**	**117**	P	**Pb**	**17 03 31.0**	**-0.7**
GYA0				S	**Sn**	**17 03 44.7**	**-2.0**
GYA0B	**ALIBECK ARRAY**	**1.00**	**117**	⇓P	**Pb**	**17 03 31.0**	**-0.7**
GYA0B				⇑S	**Sn**	**17 03 44.7**	**-2.0**
GYA0B	**ALIBECK ARRAY**	**1.00**	**117**		**Pb**	**17 03 31.1**	**-0.7**
GYA0B				Sn	**Sn**	**17 03 45.6**	**-1.1**
MRVT	**Maraveh tapeh**	**1.01**	**225**	*e*Pg	**Pb**	**17 03 29.6**	**-2.5**
MRVT				*e*Sg	**Sb**	**17 03 42.1**	**-3.4**
MRVT				IAML		17 03 44.3	
	comp=E,6µm,0.4s						
MRVT				IAML		17 03 45.0	
	comp=N,6µm,0.4s						
MRVT	**Maraveh tapeh**	**1.01**	**225**	*e*Pg	**Pb**	**17 03 29.6**	**-2.5**
ISFR	**Sfrayin**	**1.55**	**149**	*e*Pg	**Pb**	**17 03 41.3**	**0.0**
ISFR				*e*		17 04 08.1	
	comp=Z,83µm,0.6s						
IEMG	**Emamgholi**	**1.63**	**126**	*e*Pn	**Pb**	**17 03 42.1**	**-0.6**
IEMG				*e*		17 04 14.7	
	comp=Z,55µm,0.7s						
IMND	**Minoodasht**	**1.69**	**229**	*e*Pg	**Pn**	**17 03 41.9**	**0.0**
SBZV	**Sabzevar**	**2.05**	**166**	*e*Pn	**Pb**	**17 03 48.9**	**-0.9**
IAKL	**Akhelmad**	**2.27**	**141**	*e*Pn	**Pb**	**17 03 51.4**	**-2.1**
IAKL				*e*		17 04 34.8	
	comp=Z,17µm,0.4s						
IPAY	**Payeh**	**2.50**	**140**	*e*Pn	**Pb**	**17 03 55.5**	**-2.0**
IPAY				*e*		17 04 38.8	
	comp=Z,24µm,0.8s						
SHRO	**Shahrood**	**2.51**	**198**	*e*Pn	**Pn**	**17 03 53.8**	**+0.4**
SHRO				*e*Sg	**Sb**	**17 04 26.6**	**-2.2**
SHRO				IAML		17 04 38.7	
	comp=E,690nm,0.9s						
SHRO	**Shahrood**	**2.51**	**198**	*e*Pn	**Pn**	**17 03 53.8**	**+0.4**
IKRD	**Kardeh**	**2.57**	**128**	*e*Pn	**Pb**	**17 03 56.3**	**-2.3**
IKRD				*e*		17 04 41.0	
	comp=Z,20µm,0.8s						
IMOG	**Moghan**	**2.94**	**140**	*e*Pn	**Pb**	**17 04 02.0**	**-3.1**
IMOG				*e*		17 04 53.9	
	comp=Z,10µm,0.8s						
IGLO	**Ghaloghah**	**3.14**	**234**	*e*Pn	**Pn**	**17 04 03.0**	**+0.9**
IMYA	**Miami**	**3.21**	**128**	*e*Pn	**Pn**	**17 04 04.7**	**+1.7**
IMYA				*e*		17 05 15.0	
	comp=Z,4µm,0.8s						
JRKH	**Jarkhoshk**	**3.65**	**132**	*e*Pn	**Pn**	**17 04 10.9**	**+1.9**
IANJ	**Anjilo**	**3.81**	**221**	*e*Pn	**Pn**	**17 04 12.4**	**+1.0**
IANJ				*e*		17 05 19.1	
	comp=Z,6µm,0.5s						
ISHM	**Shahmirzad**	**3.92**	**230**	*e*Pn	**Pn**	**17 04 15.4**	**+2.5**
ISHM				*e*		17 05 31.1	
	comp=Z,7µm,0.5s						
TBJM	**Torbat-e-JAM**	**4.10**	**138**	*e*Pn	**Pn**	**17 04 17.7**	**+2.4**
IPRN	**Peran**	**4.28**	**241**	*e*Pn	**Pn**	**17 04 18.7**	**+1.0**
IFIR	**Firoozkooh**	**4.36**	**232**	*e*Pn	**Pn**	**17 04 20.0**	**+1.1**
ILAS	**Lasjerd**	**4.41**	**228**	*e*Pn	**Pn**	**17 04 21.1**	**+1.5**
TNSJ	**Nastanj**	**4.42**	**184**	*e*Pn	**Pn**	**17 04 21.2**	**+1.5**
TNSJ				*e*		17 05 39.7	
	comp=Z,4µm,0.6s						
TABS	**Tabas**	**4.73**	**179**	*e*Pn	**Pn**	**17 04 25.3**	**+1.5**
TABS				IAML		17 05 57.0	
	comp=N,105nm,0.8s						
TABS	**Tabas**	**4.73**	**179**	*e*Pn	**Pn**	**17 04 25.3**	**+1.5**
TKDS	**Koohdasht(Taba**	**4.76**	**179**	*e*Pn	**Pn**	**17 04 25.9**	**+1.6**
TKDS				*e*		17 04 43.5	
	comp=Z,3µm,0.6s						
IDMV	**Damavand**	**4.86**	**236**	*e*Pn	**Pn**	**17 04 27.0**	**+1.2**
DAMV	**Damavand**	**4.87**	**237**	*e*Pn	**Pn**	**17 04 27.1**	**+1.2**
DAMV				IAML		17 05 34.7	
	comp=N,130nm,0.6s						
DAMV				IAML		17 05 51.7	
	comp=E,103nm,0.1s						
DAMV	**Damavand**	**4.87**	**237**	*e*Pn	**Pn**	**17 04 27.1**	**+1.2**
AFRZ	**Afriz**	**5.21**	**161**	*e*Pn	**Pn**	**17 04 32.8**	**+2.2**
CHTH	**Charan**	**5.30**	**244**	*e*Pn	**Pn**	**17 04 33.1**	**+1.3**
CHTH	**Charan**	**5.30**	**244**	*e*Pn	**Pn**	**17 04 33.1**	**+1.3**
TPRV	**Parvadeh(Tabas**	**5.35**	**183**	*e*Pn	**Pn**	**17 04 33.8**	**+1.4**
TPRV				*e*		17 06 40.7	
	comp=Z,2µm,0.9s						
QALM	**Alamut, Qazvin**	**5.41**	**251**	*e*Pn	**Pn**	**17 04 33.2**	**-0.2**
IVRN	**Varamin**	**5.42**	**233**	*e*Pn	**Pn**	**17 04 34.0**	**+0.7**
ISFB	**Sefidab**	**5.56**	**225**	*e*Pn	**Pn**	**17 04 35.8**	**+0.6**
IMON	**Monand**	**5.62**	**156**	*e*Pn	**Pn**	**17 04 38.3**	**+2.1**
ITEG	**Tejag**	**5.66**	**165**	*e*Pn	**Pn**	**17 04 38.7**	**+2.0**
ITEG				*e*		17 06 23.3	
	comp=Z,942nm,0.8s						
IGZV	**Ghazvin**	**5.75**	**252**	*e*Pn	**Pn**	**17 04 38.9**	**+0.9**
HRA	**Herat**	**5.82**	**132**	Pn	**Pn**	**17 04 39.0**	**0.0**
ANAR	**Anarak**	**5.82**	**208**	*e*Pn	**Pn**	**17 04 39.9**	**+1.0**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KRSH	Karshahi	5.90	223	ePn	Pn	17 04 40.6	+0.6
IQOM	Qom	5.93	235	ePn	Pn	17 04 41.3	+0.8
JIR1	Jirandeh	5.95	256	ePn	Pn	17 04 41.3	+0.6
IDAH	Dahanechah	6.10	157	ePn	Pn	17 04 44.9	+2.1
IKOO	Kooshah	6.17	164	ePn	Pn	17 04 45.6	+1.8
YZKH	Yazd	6.29	199	ePn	Pn	17 04 46.1	+0.7
YZKH	Yazd	6.29	199	ePn	Pn	17 04 46.1	+0.7
ICHK	Chekchek	6.48	200	ePn	Pn	17 04 48.9	+0.9
QAMS	Qamsar	6.48	226	ePn	Pn	17 04 49.0	+0.9
QABG	Abgarm-Qazvin	6.50	248	ePn	Pn	17 04 48.5	+0.2
NASN	Na'in	6.53	213	ePn	Pn	17 04 49.5	+0.7
NASN	Na'in	6.53	213	ePn	Pn	17 04 49.6	+0.7
BSRN	Basiran	6.64	164	ePn	Pn	17 04 50.9	+0.8
BSRN	Basiran	6.64	164	ePn	Pn	17 04 50.9	+0.8
IZEF	Zefreh	6.66	216	ePn	Pn	17 04 51.8	+1.2
IKLH	Kolahrood	6.70	223	ePn	Pn	17 04 51.4	+0.4
IBAF	Bafgh	6.88	190	ePn	Pn	17 04 54.9	+1.5
ISAD	Sadrabad	7.00	204	ePn	Pn	17 04 56.4	+1.2
IGAR	Gharneh	7.21	216	ePn	Pn	17 04 59.9	+1.9
IMEH	Mehriz	7.25	196	ePn	Pn	17 04 59.8	+1.2
ISRB	Sarab	7.38	269	ePn	Pn	17 05 00.6	+0.3
NHDN	Nehbandan	7.41	159	ePn	Pn	17 05 02.9	+2.1
IRAM	Ramesheh	7.57	211	ePn	Pn	17 05 04.3	+1.3
IHSH	Hashtrud	7.77	265	ePn	Pn	17 05 06.1	+0.2
IHRS	Heris	7.82	273	ePn	Pn	17 05 07.1	+0.7
KHGB	Koh Gabri	8.00	183	ePn	Pn	17 05 11.0	+2.1
KRBR	Kerman	8.38	181	ePn	Pn	17 05 15.0	+0.8
KRBR	Kerman	8.38	181	ePn	Pn	17 05 15.0	+0.8
CHMN	Cheshme madani	8.51	177	ePn	Pn	17 05 18.6	+2.5
MAK	Makhachkala	8.54	305	eP	Pn	17 05 17.4	+1.4
MAK				eS	Sn	17 06 55.0	+2.6
MAK				pmax	pmax		
	comp=Z,166nm,1.1s						
MAK				MLR	MLR		
	comp=Z,219nm,12.0s						
KLNJ	Kolanjah	8.59	213	ePn	Pn	17 05 19.4	+2.2
NGRK	Negar Kerman	8.72	182	ePn	Pn	17 05 21.4	+2.5
IMRD	Marand	8.85	276	ePn	Pn	17 05 22.1	+1.6
ISHB	Shabestar	8.94	273	ePn	Pn	17 05 22.2	+0.4
AMIS	Naft Sefid	9.21	226	ePn	Pn	17 05 26.8	+1.5
CHGR	Chuyangaron	9.54	85	Pn	Pn	17 05 28.0	-1.9
GNI	Garni	9.66	284	Pn	Pn	17 05 32.4	+0.8
	comp=Z,1.1nm,0.3s,baz=53,slow=13,SNR=5.7						
GNI				Sn	Sn	17 07 19.2	-1.2
	comp=Z,1.1nm,0.3s,baz=90,slow=19,SNR=3.9						
GNI	Garni	9.66	284	i P	Pn	17 05 35.4	+3.8
GNI	Garni	9.66	284	Pn	Pn	17 05 34.7	+3.0
KBL	Kabul	10.43	108	P	Pn	17 05 40.3	-2.0
KBL	Kabul	10.43	108	Pn	Pn	17 05 40.3	-2.0
GAR	Garm	10.44	82		Pn	17 05 42.8	+0.6
BTK	Batken	10.86	77	P	Pn	17 05 47.7	-0.2
BTK	Batken	10.86	77		Pn	17 05 47.7	-0.2
AB31	Akbulak array	11.07	10	P	Pn	17 05 51.0	+0.3
AB31				eS	Sn	17 07 49.1	-5.6
AB31	Akbulak array	11.07	10	P	Pn	17 05 51.1	+0.3
	comp=Z,6.0nm,0.5s,baz=193,slow=13,SNR=103						
AB31				⇑S	Sn	17 07 51.5	-3.2
	comp=Z,38nm,0.8s,baz=199,slow=23,SNR=13						
ABKAR	Akbulak array	11.07	10	Pn	Pn	17 05 50.7	0.0
KK31	Karatay Array	11.29	61	P	Pn	17 05 54.3	+0.6
KK31	Karatay Array	11.29	61	P	Pn	17 05 52.1	-1.6
	comp=Z,4.4nm,0.5s,baz=235,slow=15,SNR=35						
KK31	Karatay Array	11.29	61	Pn	Pn	17 05 53.5	-0.2
KKAR	Karatay Array	11.29	61	P	Pn	17 05 53.4	-0.3
KKAR	Karatay Array	11.29	61	Pn	Pn	17 05 53.4	-0.3
KKAR	Karatay Array	11.29	61	Pn	Pn	17 05 52.9	-0.8
GURO	Guroymak-BITLI	11.73	275	Pn	Pn	17 06 01.9	+2.0
NEY	Neytrino	11.85	299	i P	Pn	17 06 06.1	+4.5
KBZ	Khabaz	11.90	301	Pn	Pn	17 06 00.5	-1.5
	comp=Z,0.5nm,0.3s,baz=120,slow=4.8,SNR=9.4						
KBZ				Sn	Sn	17 08 08.6	-6.4
	comp=Z,0.2nm,0.3s,baz=184,slow=15,SNR=1.9						
KBZ				Lg	Lg	17 09 26.1	
	baz=22,slow=18,SNR=2.3						
AKTO	Aktyubinsk	12.07	3	Pn	Pn	17 06 04.8	+0.4
	comp=Z,3.5nm,0.3s,baz=177,slow=12,SNR=32						
AKTO				Sn	Sn	17 08 15.0	-4.1
	comp=Z,1.0nm,0.3s,baz=213,slow=16,SNR=2.8						
AKTO				Lg	Lg	17 09 49.1	
	baz=114,slow=20,SNR=1.6						
AKTO	Aktyubinsk	12.07	3	⇑P	Pn	17 06 04.9	+0.6
	comp=Z,19nm,0.6s						
AKTO				⇓S	Sn	17 08 17.1	-2.0
	comp=Z,29nm,0.8s						
KVAR	Kislovodsk Arr	12.12	302	Pn	Pn	17 06 03.7	-1.5
	baz=45,slow=18,SNR=2.7						
KVAR				Sn	Sn	17 08 13.9	-6.7
	baz=170,slow=8.9,SNR=4.7						
KVAR				Lg	Lg	17 09 38.2	
	baz=212,slow=9.5,SNR=2.1						
KIV	Kislovodsk	12.13	302	eP	Pn	17 06 08.1	+2.8
KIV				eS	Sn	17 08 23.9	+3.2
KIV				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KIV	Kislovodsk	12.13	302	Pn	Pn	17 06 04.2	-1.1
AAK	Ala-Archa	13.97	67	Pn	Pn	17 06 31.1	+0.6
	comp=Z,0.9nm,0.3s,baz=259,slow=6.5,SNR=8.4						
AAK				Sn	Sn	17 09 04.0	-1.9
	comp=Z,0.3nm,0.3s,baz=195,slow=19,SNR=1.6						
AAK				Lg	Lg	17 10 45.6	
	comp=Z,0.3nm,0.3s,baz=339,slow=19,SNR=1.8						
AAK	Ala-Archa	13.97	67	i P	Pn	17 06 31.4	+0.8
AAK				pmax	pmax		
	comp=Z,12nm,0.8s						
AAK	Ala-Archa	13.97	67	⇓P	Pn	17 06 28.2	-2.3
	comp=Z,12nm,0.8s						
AAK	Ala-Archa	13.97	67	Pn	Pn	17 06 30.7	+0.1
NIL	Nilore	13.98	105	P	Pn	17 06 25.9	-4.6
NIL	Nilore	13.98	105	Pn	Pn	17 06 25.9	-4.6
FRU1	Bishkek	14.11	66	P	Pn	17 06 29.1	-3.2
FRU1	Bishkek	14.11	66	Pn	Pn	17 06 29.1	-3.2
KSH	Kashi	14.82	80	P	Pn	17 06 36.5	-5.6
KSH				pP	P	17 06 42.9	-5.1
KSH				sP		17 06 48.3	
KSH				pmax	pmax		
	comp=Z,16nm,0.6s						
OTUK	Ortayu	14.87	44	P	Pn	17 06 41.9	-0.7
OTUK				S	Sn	17 09 20.5	-7.0
OTUK	Ortayu	14.87	44	⇓P	Pn	17 06 41.9	-0.7
	comp=Z,5.8nm,0.5s						
OTUK				⇑S	Sn	17 09 23.7	-3.7
	comp=Z,15nm,0.7s						
BELG	Belogornoye	15.46	338	Pn	Pn	17 06 49.4	-0.9
	comp=Z,2.6nm,0.3s,baz=202,slow=11,SNR=12						
BELG				Sn	Sn	17 09 32.1	-9.4
	comp=Z,0.6nm,0.3s,baz=120,slow=20,SNR=2.2						
BRVK	Borovoye	17.32	28	i P	P	17 07 15.2	-0.3
BRVK				pmax	pmax		
	comp=Z,19nm,1.1s						
BRVK	Borovoye	17.32	28	⇑P	P	17 07 15.3	-0.3
	comp=Z,19nm,1.1s						
BRVK				⇑S	Sn	17 10 23.6	-3.2
	comp=Z,17nm,1.1s						
BRVK	Borovoye	17.32	28		Pn	17 07 14.8	+0.7
BRVK				IAmb	IAmb	17 07 19.5	
	comp=Z,16nm,0.9s						
BVAR	Borovoye Array	17.33	28	P	P	17 07 15.8	+0.1
	comp=Z,2.5nm,0.3s,baz=222,slow=20,SNR=22						
BVAR				Sn	Sn	17 10 18.3	-8.9
	comp=Z,0.8nm,0.3s,baz=221,slow=31,SNR=3.1						
ASF	Jabal al Asfar	17.52	255	P	Pn	17 07 15.5	-1.4
	comp=Z,0.2nm,0.3s,baz=108,slow=10,SNR=1.7						
RAYN	Ar Rayn	17.77	217	P	Pn	17 07 19.5	-0.4
RAYN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
RAYN	Ar Rayn	17.77	217		Pn	17 07 19.5	-0.4
ARU	Arti	18.09	3	P	P	17 07 24.1	+0.2
	comp=Z,0.0nm,0.3s,baz=174,slow=9.9,SNR=5.6						
ARU				S	Sn	17 10 38.1	-7.2
	comp=Z,0.0nm,0.3s,baz=90,slow=20,SNR=2.1						
ARU				Lg	Lg	17 13 04.6	
	comp=Z,0.0nm,0.3s,baz=270,slow=20,SNR=1.1						
ARU	Arti	18.09	3	c iP	P	17 07 24.2	+0.2
ARU				S	Sn	17 10 47.3	+2.0
ARU				pmax	pmax		
	comp=Z,11nm,0.7s						
ARU	Arti	18.09	3		Pn	17 07 23.4	-0.2
ARU				IAmb	IAmb	17 07 39.0	
	comp=Z,14nm,0.9s						
BRTR	Keskin Array B	18.18	282	P	Pn	17 07 23.5	-1.6
	baz=85,slow=16,SNR=2.7						
SVE	Sverdlovsk	18.61	6	eP	Pn	17 07 31.4	+1.4
SVE				eS	Sn	17 10 52.9	-5.1
SVE				pmax	pmax		
	comp=Z,19nm,1.2s						
KURBB	Kurchatov Arra	19.55	44	P	Pn	17 07 41.5	+0.1
	comp=Z,0.1nm,0.3s,baz=248,slow=12,SNR=7.4						
KURBB				S	S	17 11 19.1	-1.8
	comp=Z,0.0nm,0.3s,baz=255,slow=19,SNR=2.2						
KURBB				Lg	Lg	17 13 46.4	
	comp=Z,0.0nm,0.3s,baz=234,slow=28,SNR=1.4						
KURK	Kurchatov	19.65	44	i P	Pn	17 07 42.6	0.0
KURK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KURK	Kurchatov	19.65	44	P	P	17 07 39.1	-2.1
KURK				IAmb	IAmb	17 07 57.1	
	comp=Z,17nm,1.2s						
MAKZ	Makanchi	20.16	57	P	P	17 07 45.9	-1.0
MAKZ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MAKZ	Makanchi	20.16	57	P	P	17 07 45.9	-1.0
MK31	Makanchi Array	20.37	58	i P	P	17 07 49.7	+0.6
MKAR	Makanchi Array	20.37	58	P	Pn	17 07 51.9	+0.8
	comp=Z,5.7nm,0.8s,baz=247,slow=9.5,SNR=14						
MKAR				S	Sn	17 11 40.3	-0.3
	comp=Z,0.2nm,0.4s,baz=174,slow=29,SNR=1.1						
KIRV	Kirov	20.80	349	P	Pn	17 07 56.2	+0.2
	comp=Z,15nm,0.6s,baz=172,slow=4.8,SNR=7.8						
KIRV				S	S	17 11 42.1	-3.5
	comp=Z,4.8nm,0.5s,baz=234,slow=19,SNR=0.9						
KIRV	Kirov	20.80	349	ceP	Pn	17 07 55.3	-0.7
ELL	Elmali	21.51	274	P	P	17 08 03.6	+2.0
ELL				pmax	pmax		
	comp=Z,72nm,1.1s						
ELL	Elmali	21.51	274	P	P	17 08 03.6	+2.0
OBN	Obninsk	21.68	327	P	P	17 08 04.7	+1.6
	comp=Z,2.0nm,0.4s,baz=149,slow=18,SNR=1.9						
OBN	Obninsk	21.68	327	ceP	P	17 08 02.8	-0.3
OBN				pmax	pmax		
	comp=Z,37nm,1.3s						
OBN				MLR	MLR		
	comp=Z,1µm,24.0s						
OBN	Obninsk	21.68	327	P	P	17 08 03.2	+0.2
AKASG	Malin Array Be	23.16	311	P	P	17 08 18.6	-0.2
	comp=Z,0.5nm,0.3s,baz=111,slow=7.7,SNR=5.6						
AKASG	Malin Array Be	23.16	311	ceP	P	17 08 23.3	+4.5
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.6s						
AKBB	Malin Array Si	23.16	311	i P	P	17 08 20.7	+1.9
AKBB	Malin Array Si	23.16	311	P	P	17 08 21.1	+2.3
AKBB				IAmb	IAmb	17 08 33.2	
	comp=Z,16nm,1.1s						
WMQ	Urumqi	23.68	67	eP	P	17 08 24.3	0.0
WMQ				pmax	pmax		
	comp=Z,14nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,820nm,7.9s						
WMQ				LR	LR		
	comp=N,12µm,16.5s						
WMQ				LR	LR		
	comp=E,8µm,16.5s						
WMQ				LR	LR		
	comp=Z,9µm,20.7s						
PRGR	Permogore	24.32	347	eP	P	17 08 35.3	+5.3
PRGR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
DGZ	Jazzator, Alta	24.46	53	i P	P	17 08 33.1	+1.5
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ZAA0	Zalesovo Array	24.55	42	P	P	17 08 31.9	-0.3
ZAA0				IAmb	IAmb	17 08 39.6	
	comp=Z,4.0nm,0.7s						
ZALV	Zalesovo Beam	24.55	42	P	P	17 08 34.2	+2.1
	comp=Z,3.5nm,0.4s,baz=253,slow=9.8,SNR=18						
ZALV				S	S	17 13 04.3	+11
	comp=Z,0.6nm,0.6s,baz=258,slow=32,SNR=2.1						
ZALV	Zalesovo Beam	24.55	42	i P	P	17 08 35.0	+2.9
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.4s						
ZALV	Zalesovo Beam	24.55	42	P	P	17 08 30.5	-1.6
KLMR	Klimovskoe	25.02	340	eP	P	17 08 37.9	+1.7
KLMR				pmax	pmax		
	comp=Z,19nm,1.0s						
KLMR	Klimovskoe	25.02	340	eP	P	17 08 38.0	+1.7
KLMR				AMP		17 08 43.5	
	comp=Z,19nm,1.0s						
IDI	Anoyia	25.81	273	P	P	17 08 44.7	+0.9
	comp=Z,5.5nm,0.7s,baz=103,slow=12,SNR=7.4						
FINES	FINESS Array B	29.97	330	P	P	17 09 22.8	+2.1
	comp=Z,2.8nm,0.9s,baz=116,slow=8.7,SNR=6.2						
FINES	FINESS Array B	29.97	330	i P	P	17 09 24.5	+3.8
FINES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NRIK	Noril'sk	35.09	18	P	P	17 10 08.1	+2.8
	comp=Z,3.7nm,1.1s,baz=248,slow=17,SNR=1.8						
NRIK	Noril'sk	35.09	18	ceP	P	17 10 05.6	+0.3
NRIK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ARCES	ARCESS Array B	35.46	342	P	P	17 10 10.9	+2.4
	comp=Z,0.6nm,0.4s,baz=142,slow=7.1,SNR=12						
NB2	NORSAR Subarra	36.20	324	P	P	17 10 16.7	+1.6
	comp=Z,2.9nm,0.7s,baz=111,slow=8.6						
NOA	NORSAR Array B	36.20	324	P	P	17 10 16.5	+1.4
	comp=Z,2.8nm,0.8s,baz=110,slow=8.3,SNR=5.4						
SONM	Songino Array	36.73	59	P	P	17 10 22.7	+2.8
	comp=Z,0.2nm,0.4s,baz=289,slow=11,SNR=3.1						
KEST	Kesra	37.79	281	P	P	17 10 28.2	-0.7
	comp=Z,2.3nm,0.6s,baz=5.2,slow=5.2,SNR=4.1						
KEST	Kesra	37.79	281	IAmb	IAmb	17 10 36.2	
	comp=Z,8.5nm,1.1s						
CMAR	Chiang Mai Arr	41.46	107	P	P	17 11 01.4	+1.8
	comp=Z,0.5nm,0.6s,baz=308,slow=7.3,SNR=4.2						
CMAR	Chiang Mai Arr	41.46	107	i P	P	17 11 01.7	+2.1
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
HHC	Hu-ho-hao-te	41.54	69	eP	P	17 11 00.8	+0.6
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,3µm,5.7s						
ESDC	Sonseca Array	46.55	292	P	P	17 11 40.7	+0.3
	comp=Z,0.2nm,0.3s,baz=65,slow=9.1,SNR=0.7						
ESDC	Sonseca Array	46.55	292	IAmb	IAmb	17 11 55.9	
	comp=Z,3.1nm,1.4s						
TIXI	Tiksi	48.40	24	P	P	17 11 57.9	+3.8
	baz=302,slow=6.1						
TORD	Torodi Ar. Bea	54.86	258	P	P	17 12 41.2	-2.0
	comp=Z,0.2nm,0.4s,baz=44,slow=6.2,SNR=1.6						
TORD	Torodi Ar. Bea	54.86	258	IAmb	IAmb	17 12 42.6	
	comp=Z,3.7nm,1.4s						
BILL	Bilibino	61.62	24	i P	P	17 13 30.6	+0.9
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ILAR	Eielson Array	75.48	10	P	P	17 14 58.5	+2.1
	comp=Z,0.2nm,0.5s,baz=1.3,slow=8.1,SNR=2.4						
WRA	Warramunga Arr	92.73	113	P	P	17 16 26.9	+1.8
	comp=Z,0.3nm,0.8s,baz=324,slow=3.7,SNR=2.1						
ASAR	Alice Springs	94.80	116	P	P	17 16 34.5	0.0
	comp=Z,0.2nm,1.0s,baz=302,slow=5.4,SNR=1.1						

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*DDA **16** 17:04:12.8, 40°.82N×28°.78E, h7^{km}±2^{km}, MW3.5*
*ISK **16** 17:04:12.7, 40°.83N×28°.77E, h14^{km}, ML3.4/27*
*THE **16** 17:04:14.4, 40°.98N×28°.58E, h0^{km}±2^{km}, ML3.3/4, Error ellipse: s-maj=5.8km s-min=1.9km az=60.0*
*SOF **16** 17:04:17.9, 40°.88N×28°.38E, h20^{km}, MD3.5*
ISC 16 17:04:12.2±1.0, **40°.88N**±0°.02×**28°.73E**±0°.02, **h8**^{km}±9^{km}, **n77**, σ**0^{s}.66**/108, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BGKT	Bogazkoy	0.31	6	PG	Pb	17 04 20.3	+0.4
BGKT				SG	Sb	17 04 25.7	+0.6
ISK	Istanbul-Kandi	0.31	52	PG	Pb	17 04 19.7	-0.3
ISK				SG	Sb	17 04 24.5	-0.8
KAVV	Kandilli-Istan	0.31	53	PG	Pb	17 04 19.7	-0.3
KAVV				SG	Sb	17 04 24.6	-0.6
ARMT	Armutlu	0.33	162	PG	Pg	17 04 19.0	+0.4
ARMT				SG	Sg	17 04 23.0	+0.1
ELBA	Catalca	0.35	320	i P	Pb	17 04 21.5	+0.7
ELBA				i S	Sb	17 04 27.0	+0.5
CTKS	Kestanelik-??a	0.40	335	PG	Pb	17 04 22.1	+0.6
TRML	Termal-Yalova	0.43	128	PG	Pg	17 04 20.8	+0.3
TRML				SG	Sg	17 04 26.8	+0.7
KLYT	Kilyos	0.44	32	PG	Pb	17 04 22.7	+0.4
CFTB	Yalova	0.48	116	PG	Pg	17 04 22.0	+0.5
MDNY	Mudanya-Bursa	0.52	167	PG	Pg	17 04 22.6	+0.4
SLVT	Silivri	0.53	312	PG	Pn	17 04 25.0	-1.1
GEMT	Gemlik	0.56	142	PG	Pg	17 04 23.2	+0.2
YLV	Yalova	0.58	122	PG	Pg	17 04 23.6	+0.3
KCTX	Karacabey (Bur	0.67	205	PG	Pb	17 04 25.7	-0.5
CTYL	Yalikoy Yolu	0.69	331	PG	Pn	17 04 27.4	-0.8
IGD	Bursa	0.71	150	i P	Pg	17 04 25.6	-0.2
HRT	Hereke	0.71	94	PG	Pg	17 04 26.2	+0.3
SILT	Sile	0.74	68	PG	Pb	17 04 27.2	-0.2
IZI	Iznik	0.78	133	PG	Pg	17 04 27.3	+0.1
ULDT	Uludag	0.80	157	i P	Pg	17 04 27.6	+0.1
ULDT				i S	Sg	17 04 37.5	-0.3
ORLT	Orhaneli	0.84	171	PG	Pg	17 04 28.4	+0.1
EDC	Edincik	0.85	232	PG	Pb	17 04 28.9	-0.3
ADVT	Abdulvahap	0.88	120	PG	Pg	17 04 29.3	+0.1
MRMT	Marmara Adasi	0.91	253	PG	Pn	17 04 31.0	-0.3
TKR	Tekirdag	0.91	278	PG	Pn	17 04 31.3	0.0
VIZE	Kirklareli, Vi	0.97	316	i P	Pn	17 04 32.6	+0.5
VIZE				i S	Sn	17 04 46.1	0.0
CAVI	Cavuskoy	1.08	128	PG	Pg	17 04 32.8	-0.1
MAR2	Marsite Statio	1.09	262	PN	Pn	17 04 34.0	+0.3
MAR4	Marsite Statio	1.09	266	PN	Pn	17 04 34.1	+0.2
KNL	Balıkesir	1.10	237	i P	Pn	17 04 33.6	-0.3
KNL				i S	Sn	17 04 50.1	+0.8
MAR3	Marsite Statio	1.10	264	PN	Pn	17 04 34.2	+0.3
BILE	Bilecik/Merkez	1.13	129	i P	Pg	17 04 33.5	-0.2
BILE				i S	Sg	17 04 47.8	-0.6
MAR6	Marsite Statio	1.13	262	PN	Pn	17 04 34.7	+0.4
PHSR	Pinarhisar	1.18	310	PN	Pn	17 04 35.7	+0.6
SART	Tekirdag	1.19	261	i P	Pn	17 04 35.6	+0.4
SART				i S	Sn	17 04 51.7	0.0
RKY	Sarkoy-Tekirda	1.20	261	PN	Pg	17 04 34.8	-0.3
SAUV	Serdivan-Sakar	1.22	96	PN	Pb	17 04 35.3	-0.2
KAYN	Sakarya, Kayna	1.22	85	i P	Pb	17 04 35.0	-0.5
KAYN				i S	Sb	17 04 50.7	-0.7
GEYV	SAKARYA_Geyve	1.25	108	i P	Pg	17 04 36.5	+0.3
GEYV				i S	Sn	17 04 53.2	+0.2
DURS	Dursunbey	1.29	189	i P	Pb	17 04 36.7	0.0
DURS				i S	Sb	17 04 53.3	-0.2
AUBOZ	BOZOYUK	1.38	134	i P	Pb	17 04 38.4	0.0
AUBOZ				i S	Sb	17 04 55.9	-0.3
ARMN	Kirklareli, Me	1.39	316	i P	Pg	17 04 38.8	-0.1
ARMN				i S	Sg	17 04 57.9	+0.9
BALY	Balya	1.42	217	i P	Pb	17 04 39.1	+0.2
BALY				i S	Sg	17 04 58.1	+0.3
KIRK	Kırklareli	1.53	307	i P	Pb	17 04 40.0	-0.7
KESN	Edirne-Kesan	1.56	269	i P	Pb	17 04 40.8	-0.7
KESN				i S	Sg	17 05 02.2	-0.2
SAHE	Sakarya_HENDEK	1.61	90	i P	Pb	17 04 41.6	-0.6
SAHE				i S	Sg	17 05 03.2	-0.7
ANDZ	Kutahya, Merke	1.63	146	i P	Pn	17 04 40.8	-0.5
BORA	Eskisehir	1.65	127	i P	Pn	17 04 42.1	+0.5
STEP	BALIKESIR_Sava	1.69	208	i P	Pn	17 04 41.5	-0.5
STEP				i S	Sg	17 05 06.7	+0.3
EDRB	Edirne	1.78	304	P	Pb	17 04 44.0	-1.1
EDRB				S	Sn	17 05 06.2	0.0
	238nm,0.4s						
DEMI	Demirci	1.83	180	i P	Pn	17 04 43.8	-0.3
DEMI				i S	Sg	17 05 10.4	-0.6
BUHA	Balikesir, Bur	1.87	223	i P	Pn	17 04 44.1	-0.4
BUHA				i S	Sg	17 05 12.7	+0.5
GDZ	Gediz	1.88	162	i P	Pn	17 04 44.5	-0.2
GDZ				i S	Sg	17 05 12.0	-0.5
CAVK	Edirne/Enez-Ca	1.96	265	i P	Pg	17 04 49.3	-0.4
ENEZ	Enez	1.96	267	P	Pn	17 04 45.9	+0.1
ENEZ				S	Sn	17 05 10.9	+0.3
	765nm,0.4s						
ALN	Alexandroupoli	2.04	271	P	Pb	17 04 48.0	-1.4
ALN				S	Sn	17 05 12.6	+0.2
	390nm,0.6s						
YIGI	Dzce	2.06	87	i P	Pn	17 04 47.1	0.0
YIGI				i S	Sb	17 05 16.1	+0.5
SGAZ	Eskisehir, Sey	2.10	129	i P	Pn	17 04 47.7	-0.1
AKHS	Akhisar	2.12	200	i P	Pn	17 04 47.5	-0.4
EZN	Ezine	2.12	241	P	Pn	17 04 48.5	+0.6
EZN				S	Sb	17 05 17.8	+0.6
ECEA	Canakkale, Ece	2.12	248	i P	Pg	17 04 52.5	-0.3
AYVA	Ayvalik	2.21	226	i P	Pg	17 04 54.3	-0.3
AYVA				i S	Sg	17 05 23.4	+0.1
JMB	Yambol	2.26	315	P	Pb	17 04 51.5	-1.8
ZEDA	zmir-Bergama	2.29	214	i P	Pg	17 04 55.0	-1.2
BOZC	Bozcaada	2.29	244	i P	Pn	17 04 51.2	+0.9
KULA	Kula-Manisa	2.36	181	P	Pb	17 04 55.3	+0.3
KULA				S	Sg	17 05 27.0	-1.0
MANT	Manisa	2.39	183	i P	Pb	17 04 56.7	+1.2
RDO	Rodhopi	2.43	277	P	Pn	17 04 53.0	+0.8
RDO				S	Sn	17 05 23.9	+1.7
	470nm,0.5s						
SMTH	Samothraki Isl	2.47	262	P	Pn	17 04 52.5	-0.2
PRD	Provadia	2.53	337	P	Pg	17 04 59.2	-1.4
KDZ	Kurdzhali	2.62	288	P	Pb	17 04 59.5	+0.2
SIGR	SIGRI	2.77	234	P	Pn	17 04 58.1	+1.3
THAS	Thassos island	3.06	266	P	Pn	17 05 01.0	+0.1
RZN	Rozhen	3.13	286	P	Pn	17 05 03.2	+1.1
SZH	Strazhica	3.17	320	P	Pn	17 05 05.1	+2.7
MMB	Musomiste	3.84	282	P	Pn	17 05 12.8	+1.2
STIP	Stip	5.00	282	i Pn	Pn	17 05 26.8	-0.8

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*IDC **16** 17:19:03.9±1.2, 43°.88N×80°.74E, h0^{km}, mb3.5/1, mb1 3.6/7, mb1mx3.4/66, mbtmp3.5/7, ML3.2/6, Error ellipse: s-maj=21.3km s-min=9.7km az=134.0*
*SOME **16** 17:19:07.5, 43°.95N×80°.58E, h10^{km}*
*NNC **16** 17:19:07.3±0.5, 44°.02N×80°.53E, h0^{km}, mb4.1, mpv4.0, Error ellipse: s-maj=4.6km s-min=2.3km az=125.0*
ISC 16 17:19:06.1±1.3, **43°.94N**±0°.03×**80°.63E**±0°.04, **h9**^{km}±10^{km}, **n65**, σ**2^{s}.05**/96, **15C-12D**, **Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen	0.53	202	⇓eP	Pb	17 19 18.9	+1.3
	155nm,0.1s						
KTMS				eS	Sb	17 19 27.0	+1.6
	573nm,0.2s						
DJR	Jarkent	0.72	304	⇓eP	Pb	17 19 21.7	+0.8
	230nm,0.0s						
DJR				eS	Sb	17 19 31.9	+1.0
	892nm,0.1s						
PDGK	Podgornoye	1.02	234	P	Pb	17 19 27.1	+1.1
	50nm,0.2s						
PDGK				S	Sn	17 19 41.5	+0.3
	914nm,0.3s						
PDGK	Podgornoye	1.02	234	⇑P	Pg	17 19 27.0	+1.2
	27nm,0.2s						
PDGK				⇑S	Sb	17 19 41.1	+1.5
	1µm,0.4s						
SHLS	Shalkode	1.15	228	⇓eP	Pb	17 19 26.0	-2.2
	1µm,0.1s						
SHLS				eS	Sg	17 19 39.6	-3.5
	3µm,0.1s						
SHLS	Shalkode	1.15	228	P	Pb	17 19 26.0	-2.2
	1µm,0.2s						
SHLS				S	Sg	17 19 39.6	-3.5
	480nm,0.2s						
UZB	Uzynbulak	1.41	237	⇓eP	Pn	17 19 33.3	+1.3
	271nm,0.1s						
UZB				eS	Sg	17 19 52.2	+0.9
	1µm,0.1s						
UZB	Uzynbulak	1.41	237	P	Pn	17 19 33.3	+1.3
	271nm,0.2s						
UZB				S	Sg	17 19 52.2	+0.9
	1µm,0.2s						
BLB	Baldybastay	1.56	277	P	Pb	17 19 35.8	+0.6
	373nm,0.1s						
BLB				S	Sg	17 19 56.5	+0.3
	1µm,0.4s						
KAPS	Kapalarasan	1.62	327	⇓eP	Pb	17 19 37.1	+0.9
	61nm,0.1s						
KAPS				eS	Sg	17 19 58.2	-0.1
	1µm,0.1s						
KURS	Kuram	1.84	257	eP	Pb	17 19 40.4	+0.5
	23nm,0.1s						
KURS				eS	Sb	17 20 04.3	+1.4
	350nm,0.1s						
KURS	Kuram	1.84	257	P	Pb	17 19 40.3	+0.5
	23nm,0.3s						
KURS				S	Sb	17 20 04.3	+1.4
	350nm,0.5s						
SATY	Saty	1.84	242	eP	Pb	17 19 40.9	+1.0
	70nm,0.1s						
SATY				eS	Sg	17 20 05.2	+0.1
	1µm,0.1s						
SATY	Saty	1.84	242	P	Pb	17 19 40.9	+1.0
	70nm,0.1s						

SATY				S	**Sg**	**17 20 05.2**	**+0.1**
	1µm,0.2s						
TDK	**Taldyqorghan**	**1.91**	**305**	*e*P	**Pb**	**17 19 41.7**	**+0.6**
	474nm,0.4s						
TDK				*e*S	**Sb**	**17 20 06.3**	**+1.2**
	824nm,0.1s						
ARXS	**Arharly**	**2.04**	**279**	⇓*e*P	**Pb**	**17 19 43.4**	**+0.1**
	214nm,0.3s						
ARXS				*e*S	**Sb**	**17 20 09.9**	**+1.2**
	556nm,0.1s						
ARXS	**Arharly**	**2.04**	**279**	Pg	**Pb**	**17 19 43.4**	**+0.1**
	214nm,0.3s						
ARXS				Lg	Lg	17 20 09.9	
	583nm,0.6s						
KOTS	**Kotyrbulak**	**2.65**	**256**	*e*P	**Pb**	**17 19 54.9**	**+1.2**
	28nm,0.4s						
KOTS				*e*S	**Sb**	**17 20 29.3**	**+2.9**
	676nm,0.1s						
KOTS	**Kotyrbulak**	**2.65**	**256**	Pg	**Pb**	**17 19 54.9**	**+1.2**
	28nm,0.4s						
KOTS				Lg	Lg	17 20 29.3	
	675nm,0.3s						
MDOK	**Medeo**	**2.71**	**255**	*e*P	**Pb**	**17 19 55.7**	**+0.8**
	36nm,0.6s						
MDOK				*e*S	**Sb**	**17 20 30.7**	**+2.4**
	170nm,0.1s						
MDOK	**Medeo**	**2.71**	**255**	⇓Pn	**Pn**	**17 19 51.9**	**+1.9**
	35nm,0.5s						
MDOK				⇓Lg	Lg	17 20 30.5	
	151nm,0.6s						
MDOK	**Medeo**	**2.71**	**255**	Pg	**Pb**	**17 19 55.7**	**+0.8**
	36nm,0.6s						
MDOK				Lg	Lg	17 20 30.7	
	170nm,0.3s						
KNDC	**Almaty**	**2.75**	**256**	⇑Pg	**Pg**	**17 19 58.4**	**-0.5**
	25nm,0.2s						
KNDC				⇑Lg	Lg	17 20 31.7	
	298nm,0.6s						
AAA	**Alma-Ata**	**2.79**	**256**	*e*P	**Pb**	**17 19 57.6**	**+1.4**
	32nm,0.1s						
AAA				*e*S	**Sg**	**17 20 33.7**	**-2.0**
	276nm,0.3s						
AAA	**Alma-Ata**	**2.79**	**256**	Pg	**Pb**	**17 19 57.6**	**+1.4**
	32nm,0.1s						
AAA				Lg	Lg	17 20 33.7	
	276nm,0.3s						
TNSS	**Tian-Shan**	**2.82**	**253**	*e*P	**Pb**	**17 19 57.9**	**+1.0**
	10.0nm,0.1s						
TNSS				*e*S	**Sb**	**17 20 34.1**	**+2.4**
	74nm,0.3s						
TNSS	**Tian-Shan**	**2.82**	**253**	Pg	**Pb**	**17 19 57.9**	**+1.0**
	9.5nm,0.3s						
TNSS				Lg	Lg	17 20 34.1	
	74nm,0.3s						
KTBS	**Karatobe**	**2.86**	**267**	*e*P	**Pb**	**17 19 58.2**	**+0.9**
	22nm,0.1s						
KTBS				*e*S	**Sb**	**17 20 34.6**	**+2.1**
	394nm,0.2s						
KTBS	**Karatobe**	**2.86**	**267**	Pg	**Pb**	**17 19 58.2**	**+0.9**
	22nm,0.3s						
KTBS				Lg	Lg	17 20 34.6	
	396nm,0.4s						
MAKZ	**Makanchi**	**3.03**	**18**	⇑Pn	**Pn**	**17 19 54.9**	**+0.7**
	6.8nm,0.5s						
MAKZ				⇑Pg	**Pb**	**17 20 02.5**	**+2.4**
	7.1nm,0.3s						
MAKZ				⇑Lg	Lg	17 20 41.2	
	11nm,0.3s						
IZV	**Izvestkoviy**	**3.06**	**254**	*e*P	**Pb**	**17 20 02.0**	**+1.3**
	24nm,0.1s						
IZV				*e*S	**Sb**	**17 20 41.7**	**+3.6**
	176nm,0.1s						
IZV	**Izvestkoviy**	**3.06**	**254**	Pg	**Pb**	**17 20 02.0**	**+1.3**
	23nm,0.6s						
IZV				Lg	Lg	17 20 41.7	
	183nm,0.5s						
MK31	**Makanchi Array**	**3.09**	**22**	⇓Pn	**Pn**	**17 19 55.8**	**+0.7**
	1.0nm,0.2s,baz=201,slow=13,SNR=384						
MK31				⇑Pg	**Pb**	**17 20 02.2**	**+1.0**
	5.3nm,0.2s,baz=206,slow=16,SNR=49						
MK31				⇑Lg	Lg	17 20 43.2	
	7.4nm,0.2s,baz=204,slow=26,SNR=5.1						
MKAR	**Makanchi Array**	**3.09**	**22**	Pn	**Pn**	**17 19 56.0**	**+0.9**
	2.4nm,0.3s,baz=202,slow=13,SNR=81						
MKAR				Pg	**Pb**	**17 20 01.7**	**+0.5**
	7.3nm,0.3s,baz=205,slow=16,SNR=27						
MKAR				Sn	Sn	17 20 23.9	-8.2
	12nm,0.3s,baz=196,slow=15,SNR=4.7						
MKAR				Lg	Lg	17 20 42.0	
	18nm,0.3s,baz=202,slow=26,SNR=7.0						
KUU	**Kurty**	**3.10**	**271**	*e*P	**Pb**	**17 20 02.0**	**+0.7**
	25nm,0.1s						
KUU				*e*S	**Sb**	**17 20 41.3**	**+2.1**
	129nm,0.1s						
KUU	**Kurty**	**3.10**	**271**	Pg	**Pb**	**17 20 02.0**	**+0.7**
	25nm,0.4s						
KUU				Lg	Lg	17 20 41.3	
	123nm,0.2s						
MTBS	**Maitube**	**3.16**	**257**	*e*P	**Pb**	**17 20 03.4**	**+1.0**
	11nm,0.1s						
MTBS				*e*S	**Sb**	**17 20 43.6**	**+2.6**
	130nm,0.1s						
MTBS	**Maitube**	**3.16**	**257**	Pg	**Pb**	**17 20 03.3**	**+1.0**
	11nm,0.3s						
MTBS				Lg	Lg	17 20 43.6	
	126nm,0.3s						
KST	**Kastek**	**3.51**	**257**	*e*P	**Pb**	**17 20 09.4**	**+1.0**
	43nm,0.3s						
KST				*e*S	**Sb**	**17 20 53.6**	**+2.5**
	209nm,0.8s						
KST	**Kastek**	**3.51**	**257**	Pg	**Pb**	**17 20 09.4**	**+1.0**
	43nm,0.3s						
KST				Lg	Lg	17 20 53.6	
	209nm,0.8s						
KRBS	**Karabastau**	**3.59**	**268**	*e*P	**Pb**	**17 20 10.9**	**+1.1**
	27nm,0.3s						
KRBS				*e*S	**Sb**	**17 20 57.1**	**+3.6**
	127nm,0.2s						
KRBS	**Karabastau**	**3.59**	**268**	Pg	**Pb**	**17 20 10.9**	**+1.1**
	27nm,0.3s						
KRBS				Lg	Lg	17 20 57.1	
	127nm,0.5s						
TKM2	**Tokmak 2**	**3.80**	**256**	P	**Pg**	**17 20 17.8**	**-1.1**
	SNR=22						
TKM2	**Tokmak 2**	**3.80**	**256**	⇑Pg	**Pg**	**17 20 17.4**	**-1.5**
	11nm,0.3s						
TKM2				⇑Lg	Lg	17 21 04.1	
	87nm,0.5s						
KBK	**Karagaybulak**	**4.34**	**255**	P	**Pb**	**17 20 23.3**	**+0.7**
	SNR=6.4						
CHMS	**Chumysh**	**4.38**	**260**	P	**Pb**	**17 20 26.2**	**+3.1**
	SNR=13						
USP	**Ospenovka**	**4.50**	**264**	P	**Pb**	**17 20 23.9**	**-1.4**
	SNR=5.9						
ZSN	**Zaisan**	**4.60**	**39**	*e*P	**Pb**	**17 20 28.4**	**+1.4**
	14nm,0.7s						
ZSN				*e*S	**Sb**	**17 21 26.2**	**+3.7**
	72nm,0.4s						
AAK	**Ala-Archa**	**4.66**	**256**	Pn	**Pn**	**17 20 18.9**	**+2.1**
	0.3nm,0.3s,baz=120,slow=8.9,SNR=4.1						
AAK				Pg	**Pb**	**17 20 31.5**	**+3.4**
	2.9nm,0.3s,baz=82,slow=9.2,SNR=23						
AAK				Lg	Lg	17 21 30.4	
	1.8nm,0.3s,baz=77,slow=11,SNR=1.6						
AAK	**Ala-Archa**	**4.66**	**256**	P	**Pb**	**17 20 31.8**	**+3.7**
	SNR=10						
AAK	**Ala-Archa**	**4.66**	**256**	⇑Pg	**Pb**	**17 20 30.9**	**+2.9**
	12nm,0.6s						
AAK				⇑Lg	Lg	17 21 33.4	
	73nm,0.8s						
UCH	**Uchtor**	**4.79**	**251**	P	**Pg**	**17 20 35.3**	**-2.5**
	SNR=8.1						
BTLS	**Baital**	**4.84**	**285**	*e*P	**Pb**	**17 20 34.4**	**+3.5**
	9.4nm,0.2s						
BTLS				*e*S	**Sg**	**17 21 36.3**	**-5.0**
	14nm,0.1s						
MRKS	**Merke**	**5.53**	**260**	*e*P	**Pb**	**17 20 47.3**	**+4.6**
	12nm,0.7s						
MRKS				*e*S	**Sg**	**17 21 58.8**	**-4.7**
	24nm,0.3s						
MRKS	**Merke**	**5.53**	**260**	Pg	**Pb**	**17 20 47.3**	**+4.6**
	12nm,0.7s						
MRKS				Lg	Lg	17 21 58.8	
	20nm,0.5s						
KURBB	**Kurchatov Arra**	**6.84**	**349**	Pn	**Pn**	**17 20 45.9**	**-0.6**
	0.1nm,0.3s,baz=172,slow=13,SNR=4.2						
KURBB				Sn	**Sn**	**17 22 02.6**	**-1.8**
	0.2nm,0.3s,baz=129,slow=30,SNR=4.0						
KURBB				Lg	Lg	17 22 39.7	
	0.5nm,0.3s,baz=164,slow=28,SNR=5.6						
KURBB	**Kurchatov Arra**	**6.84**	**349**	⇑Lg	Lg	17 22 41.6	
	76nm,0.8s						
KURK	**Kurchatov**	**6.92**	**349**	⇓Lg	Lg	17 22 44.3	
	72nm,1.0s						
OTUK	**Ortayu**	**7.19**	**310**	⇓Lg	Lg	17 22 52.5	
	19nm,0.6s						
KK31	**Karatay Array**	**7.40**	**267**	⇑Pg	**Pb**	**17 21 19.1**	**+4.5**
	1.3nm,0.4s,baz=74,slow=13,SNR=9.1						
KK31				⇓Lg	Lg	17 22 58.8	
	4.3nm,0.5s,baz=73,slow=28,SNR=6.9						
ZALV	**Zalesovo Beam**	**10.39**	**14**	Pn	**Pn**	**17 21 34.4**	**-0.7**
	0.9nm,0.3s,baz=198,slow=14,SNR=14						
ZALV				Sn	**Sn**	**17 23 28.1**	**-3.6**
	0.5nm,0.3s,baz=202,slow=24,SNR=6.3						
BVAR	**Borovoye Array**	**11.34**	**327**	Lg	Lg	17 25 03.8	
	1.3nm,0.3s,baz=152,slow=29,SNR=8.2						
GEYT	**Alibeck**	**18.01**	**258**	P	**Pn**	**17 23 17.6**	**+1.0**
	0.5nm,0.3s,baz=63,slow=20,SNR=1.9						
SONM	**Songino Array**	**18.33**	**69**	P	**Pn**	**17 23 20.2**	**-0.3**
	0.1nm,0.3s,baz=263,slow=12,SNR=7.8						
ASAR	**Alice Springs**	**83.10**	**132**	P	**P**	**17 31 30.3**	**-1.9**
	0.4nm,0.9s,baz=326,slow=5.2,SNR=6.3						

IDC ***16*** *17:28:09.9±0.7, 1.°00N×127.°47E, h0^{km}, mb4.0/11, mb1 4.1/14, mb1mx3.9/50, mbtmp4.0/14, ML3.4/3, MS4.1/3, Ms1 4.1/3, ms1mx3.5/44, Error ellipse: s-maj=26.4km s-min=13.2km az=71.0*

DJA ***16*** *17:28:12.0±0.2, 1°N±1°×12°7E±°, h10^{km}, M4.2/18, mb4.5/15, mB4.8/2, MLv4.1/18, Mw(mB)4.0/2, MwMwp5.5/1, Mwp5.7/1*

NEIC ***16*** *17:28:12.9±1.5, 1.°00N±0.°06×127.°44E±0.°07, h17^{km}±6^{km}, mb4.4/20, Error ellipse: s-maj=10.6km s-min=8.8km az=98.0*

ISC 16 17:28:11.4±0.5**, 1.°02N**±0.°04×**127.°50E**±0.°05**, h10**^{km}**, n64, σ1.^{s}34**/70**, mb4.2**/20**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.28**	**209**	P	**Pg**	**17 28 17.3**	**+0.2**
TNTI				Pg	Pg	17 28 17.4	+0.3
TNTI				Sg	**Sg**	**17 28 21.4**	**+0.5**
TNTI				S		17 28 22.2	
TNTI	**Ternate**	**0.28**	**209**	Pg	**Pg**	**17 28 17.3**	**+0.2**
TNTI				Sg	**Sg**	**17 28 22.0**	**+1.1**
LBMI	**Labuha**	**1.65**	**180**	P	**Pn**	**17 28 40.9**	**+0.5**
LBMI				S	**Sb**	**17 29 04.1**	**+1.4**
SANI	**Sanana**	**3.41**	**206**	P	**Pn**	**17 29 05.0**	**+0.4**
SANI				S	**Sn**	**17 29 45.0**	**-0.1**
KMSI	**Cibinong**	**3.55**	**263**	P	**Pn**	**17 29 06.8**	**+0.2**
KMSI				S	**Sn**	**17 29 49.9**	**+1.2**
SWI	**Sorong**	**4.20**	**116**	P	**Pn**	**17 29 17.3**	**+1.8**
SIJI	**Sorong**	**4.20**	**116**	Pn	**Pn**	**17 29 16.1**	**+0.6**
	2.9nm,0.3s,baz=340,slow=23,SNR=17						
SIJI				Sn	**Sn**	**17 30 06.2**	**+1.4**
	0.6nm,0.3s,baz=221,slow=20,SNR=1.3						
GTOI	**Gorontalo**	**4.51**	**265**	P	**Pn**	**17 29 22.3**	**+2.5**
GTOI				S	**Sn**	**17 30 14.4**	**+2.1**
MSAI	**Masohi**	**4.56**	**162**	P	**Pn**	**17 29 23.1**	**+2.6**
AAI	**Ambon**	**4.73**	**172**	P	**Pn**	**17 29 24.2**	**+1.4**
LUWI	**Luwuk**	**5.16**	**247**	P	**Pn**	**17 29 29.6**	**+0.9**
	0.6nm69nm,0.8s						
LUWI	**Luwuk**	**5.16**	**247**	Pn	**Pn**	**17 29 29.3**	**+0.6**
MRSI	**Marisa**	**5.59**	**265**	P	**Pn**	**17 29 35.7**	**+1.1**
	0.2nm966nm37nm,0.5s						
FAKI	**Fak Fak**	**6.15**	**130**	P	**Pn**	**17 29 44.4**	**+2.1**
	0.1nm19nm,1.0s						
FAKI	**Fak Fak**	**6.15**	**130**	Pn	**Pn**	**17 29 43.7**	**+1.3**
APSI	**Ampana**	**6.16**	**252**	P	**Pn**	**17 29 43.2**	**+0.7**
	0.2nm575nm44nm,0.7s						
TOLI2	**Tolitoli**	**6.72**	**271**	Pn	**Pn**	**17 29 49.6**	**-0.7**
MPSI	**Mapaga**	**7.64**	**265**	P	**Pn**	**17 30 02.8**	**0.0**
	0.1nm11nm,1.0s						
TTSI	**Tana Toraja**	**8.68**	**242**	P	**Pn**	**17 30 17.0**	**-0.1**
	29nm,0.6s						
BNSI	**Bone**	**9.14**	**234**	P	**Pn**	**17 30 23.8**	**+0.3**
	19µm22nm,0.9s						
SPSI	**Sidrap Palu**	**9.18**	**237**	P	**Pn**	**17 30 24.4**	**+0.4**
	26nm,0.6s						
BKSI	**Bulukumba**	**9.70**	**229**	P	**Pn**	**17 30 29.9**	**-1.2**
	19nm,0.7s						
KAPI	**Kappang**	**9.79**	**232**	Pn	**Pn**	**17 30 30.1**	**-2.3**
	0.2nm,0.3s,baz=23,slow=7.0,SNR=3.6						
KAPI				Sn	**Sn**	**17 32 18.4**	**-4.1**
	0.6nm,0.3s,baz=16,slow=6.8,SNR=1.6						
KAPI				LR	LR	17 34 09.4	
	comp=Z,396nm,21.1s,baz=22,slow=37						
EDFI	**Ende, Flores**	**11.30**	**211**	P	**Pn**	**17 30 52.0**	**-1.2**
	5.8nm,0.8s						
KMMI	**Kalianget**	**15.71**	**239**	P	**P**	**17 32 00.9**	**+3.9**
KNRA	**Kununurra**	**16.64**	**176**	P	**Pn**	**17 32 03.5**	**-1.3**
KNRA				IAmb	IAmb	17 32 05.4	
	comp=Z,20nm,1.2s						
FITZ	**Fitzroy Crossi**	**19.09**	**185**	P	**P**	**17 32 34.2**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=353,slow=14,SNR=5.9						
FITZ	**Fitzroy Crossi**	**19.09**	**185**	P	**P**	**17 32 30.8**	**-3.5**
GUMO	**Guam**	**21.25**	**53**	LR	LR	17 39 53.2	
	comp=Z,399nm,19.1s,baz=260,slow=33						
WB0	**Warramunga Arr**	**21.73**	**162**	P	**P**	**17 33 03.2**	**+0.1**
WB0				IAmb	IAmb	17 33 07.7	
	comp=Z,9.2nm,0.9s						
WRAB	**Tennant Creek**	**21.88**	**162**	P	**P**	**17 33 05.0**	**+0.4**
WRAB				IAmb	IAmb	17 33 10.4	
	comp=Z,9.4nm,0.8s						
WRA	**Warramunga Arr**	**21.88**	**163**	P	**P**	**17 33 04.7**	**0.0**
	comp=Z,6.3nm,0.7s,baz=340,slow=11,SNR=58						
WRA	**Warramunga Arr**	**21.88**	**163**	P	**P**	**17 33 03.8**	**-0.9**
WB2	**Warramunga Arr**	**21.89**	**162**	P	**P**	**17 33 04.6**	**-0.1**
WB2				IAmb	IAmb	17 33 10.4	
	comp=Z,19nm,1.1s						
WR0	**Warramunga Arr**	**21.96**	**162**	P	**P**	**17 33 05.6**	**0.0**
WR0				IAmb	IAmb	17 33 15.5	
	comp=Z,7.4nm,0.8s						
PMG	**Port Moresby**	**22.15**	**118**	P	**P**	**17 33 08.0**	**+0.5**
	comp=Z,0.8nm,0.3s,baz=216,slow=20,SNR=1.8						
AS31	**Alice Springs**	**25.31**	**166**	P	**P**	**17 33 37.9**	**-0.5**
ASAR	**Alice Springs**	**25.32**	**166**	P	**P**	**17 33 37.8**	**-0.7**
	comp=Z,8.6nm,0.8s,baz=357,slow=7.6,SNR=56						
ASAR	**Alice Springs**	**25.32**	**166**	P	**P**	**17 33 37.4**	**-1.1**
CMAR	**Chiang Mai Arr**	**32.95**	**303**	P	**P**	**17 34 47.6**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=96,slow=8.3,SNR=2.1						
BBOO	**Buckleboo**	**34.60**	**167**	P	**P**	**17 34 59.7**	**-1.0**
BBOO				IAmb	IAmb	17 35 04.4	
	comp=Z,3.8nm,0.7s						
STKA	**Stephens Creek**	**35.34**	**159**	P	**P**	**17 35 06.3**	**-0.7**
	comp=Z,2.0nm,0.7s,baz=332,slow=9.3,SNR=7.8						
STKA	**Stephens Creek**	**35.34**	**159**	P	**P**	**17 35 06.9**	**-0.1**
KSRS	**Korea Array**	**36.26**	**1**	P	**P**	**17 35 13.7**	**-1.2**
	comp=Z,1.7nm,0.8s,baz=171,slow=9.3,SNR=5.3						
MJAR	**Matsushiro Arr**	**36.71**	**14**	P	**P**	**17 35 18.7**	**-0.1**
	comp=Z,2.3nm,0.7s,baz=172,slow=11,SNR=5.8						
USRK	**Ussuriysk Ar.**	**43.18**	**5**	P	**P**	**17 36 13.1**	**+0.7**
	comp=Z,2.3nm,0.8s,baz=153,slow=4.8,SNR=3.1						
SONM	**Songino Array**	**50.10**	**342**	P	**P**	**17 37 05.2**	**-1.6**
	comp=Z,0.4nm,0.6s,baz=165,slow=7.7,SNR=5.9						
MK31	**Makanchi Array**	**60.21**	**326**	P	**P**	**17 38 19.9**	**+0.1**
MK31				IAmb	IAmb	17 38 23.9	
	comp=Z,3.1nm,0.8s						
MKAR	**Makanchi Array**	**60.21**	**326**	P	**P**	**17 38 19.3**	**-0.5**
	comp=Z,2.8nm,0.6s,baz=121,slow=8.6,SNR=36						
MKAR	**Makanchi Array**	**60.21**	**326**	P	**P**	**17 38 18.9**	**-0.8**
MAKZ	**Makanchi**	**60.40**	**326**	P	**P**	**17 38 21.0**	**0.0**
AAK	**Ala-Archa**	**62.88**	**319**	P	**P**	**17 38 37.9**	**-0.2**
AAK				IAmb	IAmb	17 38 51.1	
	comp=Z,2.5nm,1.0s						
ZALV	**Zalesovo Beam**	**63.34**	**333**	P	**P**	**17 38 41.9**	**+1.3**
	comp=Z,0.9nm,0.6s,baz=141,slow=5.0,SNR=6.1						
ZALV	**Zalesovo Beam**	**63.34**	**333**	P	**P**	**17 38 39.6**	**-1.0**
GAR	**Garm**	**64.33**	**313**	P	**P**	**17 38 47.2**	**-0.4**
KURK	**Kurchatov**	**64.43**	**328**	P	**P**	**17 38 47.5**	**-0.3**
SEY	**Seymchan**	**64.49**	**12**	LR	LR	18 03 01.4	
	comp=Z,416nm,20.5s,baz=284,slow=32						
CHGR	**Chuyangaron**	**65.05**	**313**	P	**P**	**17 38 49.5**	**-2.8**
KK31	**Karatay Array**	**65.74**	**318**	P	**P**	**17 38 56.5**	**0.0**
KK31				IAmb	IAmb	17 39 00.3	
	comp=Z,5.3nm,1.1s						
KKAR	**Karatay Array**	**65.74**	**318**	P	**P**	**17 38 56.7**	**+0.1**
KKAR	**Karatay Array**	**65.74**	**318**	P	**P**	**17 38 56.4**	**-0.1**
KKAR				IAmb	IAmb	17 39 00.3	
	comp=Z,5.3nm,1.1s						
ABKAR	**Akbulak array**	**74.73**	**321**	P	**P**	**17 39 50.4**	**-1.1**
TXAR	**Lajitas Array**	**122.60**	**54**	PKP	**PKPdf**	**17 47 09.2**	**+1.0**
	comp=Z,0.5nm,1.0s,baz=352,slow=4.6,SNR=3.4						
TORD	**Torodi Ar. Bea**	**124.46**	**287**	PKP	**PKPdf**	**17 47 13.6**	**+1.6**
	comp=Z,0.3nm,0.7s,baz=134,slow=1.5,SNR=2.7						

IDC 16 17:46:41.4±2.4**, 0.°90N**×**127.°24E, h0**^{km}**, mb3.0**/3**, mb1 3.2**/3**, mb1mx3.1**/35**, mbtmp3.1**/3**, Error ellipse: s-maj=187.7km s-min=29.2km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.85**	**162**	P	P	17 51 35.5	-0.3
	0.2nm,0.7s,baz=341,slow=11,SNR=0.7						
ASAR	**Alice Springs**	**25.26**	**166**	P	P	17 52 09.7	+0.2
	0.6nm,0.9s,baz=338,slow=9.4,SNR=6.3						
MKAR	**Makanchi Array**	**60.16**	**326**	P	P	17 56 51.0	-0.1
	0.2nm,0.7s,baz=123,slow=7.7,SNR=2.4						

IDC ***16*** *17:49:34.8±0.8, 1.°05N×127.°60E, h0^{km}, mb3.9/8, mb1 4.0/11, mb1mx3.8/37, mbtmp3.9/11, ML3.3/3, MS3.4/2, Ms1 3.4/2, ms1mx3.1/42, Error ellipse: s-maj=33.6km s-min=14.9km az=76.0*

DJA ***16*** *17:49:37.6±0.3, 1°N±2°×12°8E±°, h10^{km}, M4.1/13, mb4.5/7, mB5.1/4, MLv3.8/13, Mw(mB)4.4/4*

NEIC ***16*** *17:49:37.4±1.9, 1.°0N±0.°1×127.°55E±0.°04, h10^{km}±2^{km}, mb4.3/15, Error ellipse: s-maj=22.1km s-min=6.6km az=358.0*

ISC 16 17:49:36.8±0.6**, 1.°03N**±0.°05×**127.°53E**±0.°06**, h10**^{km}**, n43, σ1.^{s}36**/49**, mb4.1**/17**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.30**	**213**	P	**Pg**	**17 49 42.9**	**+0.1**
TNTI				Pg	**Pg**	**17 49 42.9**	**+0.1**
TNTI				Sg	**Sg**	**17 49 48.2**	**+1.4**
TNTI	**Ternate**	**0.30**	**213**		**Pg**	**17 49 41.9**	**-0.9**
LBMI	**Labuha**	**1.65**	**181**	P	**Pn**	**17 50 06.8**	**+0.9**
LBMI				S	**Sg**	**17 50 30.7**	**+0.7**
SANI	**Sanana**	**3.42**	**207**	P	**Pn**	**17 50 30.2**	**0.0**
KMSI	**Cibinong**	**3.58**	**263**	P	**Pn**	**17 50 33.5**	**+1.2**
SWI	**Sorong**	**4.18**	**117**	P	**Pn**	**17 50 43.1**	**+2.5**
SIJI	**Sorong**	**4.18**	**117**	Pn	**Pn**	**17 50 41.0**	**+0.3**
	1.4nm,0.3s,baz=224,slow=23,SNR=9.2						
SIJI				Sn	**Sn**	**17 51 32.9**	**+3.1**
	0.1nm,0.3s,baz=209,slow=13,SNR=1.9						
SIJI				LR	LR	17 52 28.5	
	comp=Z,496nm,18.7s,baz=307,slow=42						
GTOI	**Gorontalo**	**4.53**	**265**	P	**Pn**	**17 50 49.1**	**+3.6**
AAI	**Ambon**	**4.73**	**172**	P	**Pn**	**17 50 50.0**	**+1.8**
LUWI	**Luwuk**	**5.18**	**247**	P	**Pn**	**17 50 56.2**	**+1.8**
	0.3nm671nm58nm,0.8s						
LUWI	**Luwuk**	**5.18**	**247**	Pn	**Pn**	**17 50 54.5**	**+0.1**
MRSI	**Marisa**	**5.61**	**264**	P	**Pn**	**17 51 02.7**	**+2.3**
	0.1nm44nm,0.7s						
APSI	**Ampana**	**6.19**	**252**	P	**Pn**	**17 51 07.7**	**-0.5**
TTSI	**Tana Toraja**	**8.70**	**242**	P	**Pn**	**17 51 42.8**	**0.0**
	1µm18nm,0.6s						
BNSI	**Bone**	**9.17**	**234**	P	**Pn**	**17 51 50.2**	**+1.0**
	448nm15nm,0.6s						
SPSI	**Sidrap Palu**	**9.20**	**237**	P	**Pn**	**17 51 50.7**	**+1.0**
	3µm27nm,0.8s						
BKSI	**Bulukumba**	**9.72**	**229**	P	**Pn**	**17 51 58.8**	**+2.0**
	15nm,0.6s						
KAPI	**Kappang**	**9.81**	**232**	Pn	**Pn**	**17 51 59.5**	**+1.4**
	0.6nm,0.3s,baz=66,slow=19,SNR=1.8						
KAPI				Sn	**Sn**	**17 53 46.2**	**-2.3**
	0.4nm,0.3s,baz=78,slow=22,SNR=1.5						
KAPI				LR	LR	17 56 23.2	
	comp=Z,185nm,18.2s,baz=124,slow=41						
FITZ	**Fitzroy Crossi**	**19.09**	**185**	P	**P**	**17 53 59.0**	**-0.8**
	0.1nm,0.3s,baz=326,slow=14,SNR=1.9						
FITZ				S	**S**	**17 57 38.1**	**+1.6**
	0.0nm,0.3s,baz=172,slow=21,SNR=1.1						
COEN	**Coen**	**21.49**	**134**	P	**P**	**17 54 23.5**	**-2.4**
COEN				IAmb	IAmb	17 54 48.9	
	comp=Z,7.2nm,1.2s						
WB0	**Warramunga Arr**	**21.73**	**162**	P	**P**	**17 54 28.5**	**0.0**
WB0				IAmb	IAmb	17 54 40.2	
	comp=Z,9.3nm,1.1s						
WRAB	**Tennant Creek**	**21.88**	**163**	P	**P**	**17 54 29.9**	**-0.2**
WRAB				IAmb	IAmb	17 54 46.0	
	comp=Z,6.9nm,1.1s						
WRA	**Warramunga Arr**	**21.88**	**163**	P	**P**	**17 54 29.9**	**-0.2**
	comp=Z,3.0nm,0.6s,baz=340,slow=11,SNR=34						
WRA	**Warramunga Arr**	**21.88**	**163**	P	**P**	**17 54 30.9**	**+0.8**
WB2	**Warramunga Arr**	**21.89**	**163**	P	**P**	**17 54 29.9**	**-0.2**
WB2				IAmb	IAmb	17 54 36.4	
	comp=Z,15nm,1.5s						
WR0	**Warramunga Arr**	**21.96**	**162**	P	**P**	**17 54 30.7**	**-0.2**
WR0				IAmb	IAmb	17 54 43.0	
	comp=Z,11nm,1.4s						
RGRI	**Rengat**	**25.23**	**267**	P	**P**	**17 55 05.2**	**+2.0**
AS31	**Alice Springs**	**25.31**	**166**	P	**P**	**17 55 03.0**	**-0.8**
ASAR	**Alice Springs**	**25.31**	**166**	P	**P**	**17 55 03.1**	**-0.8**
	comp=Z,3.3nm,0.7s,baz=355,slow=7.6,SNR=44						
ASAR	**Alice Springs**	**25.31**	**166**	P	**P**	**17 55 02.7**	**-1.1**
BBOO	**Buckleboo**	**34.60**	**167**	P	**P**	**17 56 25.2**	**-0.9**
BBOO				IAmb	IAmb	17 56 38.8	
	comp=Z,13nm,1.4s						
STKA	**Stephens Creek**	**35.34**	**159**	P	**P**	**17 56 31.1**	**-1.4**
	comp=Z,0.9nm,0.7s,baz=327,slow=11,SNR=3.7						
MJAR	**Matsushiro Arr**	**36.70**	**14**	P	**P**	**17 56 42.2**	**-1.9**
	comp=Z,1.5nm,0.7s,baz=190,slow=8.4,SNR=5.2						
USRK	**Ussuriysk Ar.**	**43.17**	**5**	P	**P**	**17 57 37.7**	**0.0**
	comp=Z,2.7nm,0.6s,baz=163,slow=17,SNR=2.6						
SONM	**Songino Array**	**50.10**	**342**	P	**P**	**17 58 31.8**	**-0.4**
	comp=Z,1.0nm,1.0s,baz=154,slow=8.2,SNR=4.8						
MK31	**Makanchi Array**	**60.22**	**326**		**P**	**17 59 45.0**	**-0.2**
MK31				IAmb	IAmb	17 59 59.0	
	comp=Z,6.0nm,1.5s						
MKAR	**Makanchi Array**	**60.22**	**326**	P	**P**	**17 59 44.8**	**-0.5**
	comp=Z,1.2nm,0.7s,baz=119,slow=7.6,SNR=16						
MKAR	**Makanchi Array**	**60.22**	**326**	P	**P**	**17 59 45.2**	**0.0**
MAKZ	**Makanchi**	**60.41**	**326**		**P**	**17 59 47.3**	**+0.8**
MAKZ				IAmb	IAmb	17 59 57.3	
	comp=Z,3.2nm,0.9s						
ZALV	**Zalesovo Beam**	**63.34**	**333**	P	**P**	**18 00 06.2**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=78,slow=13,SNR=1.8						
GAR	**Garm**	**64.34**	**313**	P	**P**	**18 00 14.2**	**+1.1**
KURK	**Kurchatov**	**64.44**	**328**	P	**P**	**18 00 12.5**	**-0.8**
KURK				IAmb	IAmb	18 00 17.9	
	comp=Z,4.4nm,0.9s						
CHGR	**Chuyangaron**	**65.06**	**313**	P	**P**	**18 00 18.3**	**+0.5**

IDC 16 17:55:16.9±2.0**, 0.°88N**×**127.°18E, h0**^{km}**, mb3.5**/3**, mb1 3.7**/3**, mb1mx3.4**/31**, mbtmp3.6**/3**, Error ellipse: s-maj=167.7km s-min=24.6km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.86**	**162**	P	P	18 00 11.9	+0.7
	1.7nm,0.8s,baz=341,slow=11,SNR=8.0						
ASAR	**Alice Springs**	**25.26**	**165**	P	P	18 00 44.5	-0.4
	0.6nm,0.8s,baz=343,slow=9.3,SNR=13						
MKAR	**Makanchi Array**	**60.14**	**326**	P	P	18 05 26.3	0.0
	0.4nm,0.4s,baz=113,slow=7.9,SNR=9.0						

IDC ***16*** *18:05:51.9±0.9, 0.°97N×127.°36E, h0^{km}, mb3.7/7, mb1 3.8/9, mb1mx3.7/37, mbtmp3.6/9, ML3.0/2, Error ellipse: s-maj=49.7km s-min=16.7km az=69.0*

ISC 16 18:05:57.0±0.9**, 0.°9N**±0.°1×**127.°5E**±0.°2**, h35**^{km}**, n9, σ0.^{s}91**/9**, mb3.8**/7**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.21**	**115**	Pn	**Pn**	**18 06 58.2**	**-0.5**
	0.6nm,0.3s,baz=313,slow=16,SNR=3.7						
FITZ	**Fitzroy Crossi**	**19.00**	**185**	P	**P**	**18 10 15.9**	**+0.1**
	0.0nm,0.3s,baz=0.0,slow=14,SNR=1.5						
WRA	**Warramunga Arr**	**21.82**	**162**	P	**P**	**18 10 47.1**	**+0.8**
	1.5nm,0.5s,baz=341,slow=11,SNR=20						
ASAR	**Alice Springs**	**25.25**	**166**	P	**P**	**18 11 20.6**	**+0.6**
	2.7nm,0.9s,baz=346,slow=10,SNR=24						
STKA	**Stephens Creek**	**35.28**	**159**	P	**P**	**18 12 48.1**	**-0.5**
	1.2nm,0.9s,baz=339,slow=9.4,SNR=4.1						
SONM	**Songino Array**	**50.16**	**342**	P	**P**	**18 14 48.6**	**-0.6**
	0.5nm,0.8s,baz=164,slow=8.1,SNR=3.1						
MKAR	**Makanchi Array**	**60.25**	**326**	P	**P**	**18 16 01.8**	**-0.1**
	0.8nm,0.7s,baz=118,slow=7.6,SNR=8.8						
ZALV	**Zalesovo Beam**	**63.39**	**333**	P	**P**	**18 16 22.1**	**-0.7**
	0.3nm,0.3s,baz=123,slow=5.3,SNR=2.2						
ILAR	**Eielson Array**	**87.30**	**25**	P	**P**	**18 18 41.5**	**+1.6**

0.2nm,0.6s,baz=270,slow=3.6,SNR=1.4

IDC 16 18:19:11.0±2.4**,0°.89N×127°.17E,h0km,mb3.1**/3**, mb1 3.3**/3**,mb1mx2.9**/33**,mbtmp3.1**/3**,Error ellipse: s-maj=192.1km s-min=29.6km az=66.0,Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.46	113	Sn	Sn	18 21 15.7	+3.2
	0.2nm,0.3s,baz=349,slow=22,SNR=1.4						
WRA	Warramunga Arr	21.87	162	P	P	18 24 05.2	-0.3
	0.6nm,0.6s,baz=340,slow=11,SNR=3.7						
ASAR	Alice Springs	25.27	165	P	P	18 24 39.5	+0.2
	0.4nm,0.8s,baz=339,slow=9.9,SNR=3.4						
MKAR	Makanchi Array	60.13	326	P	P	18 29 20.3	-0.1
	0.1nm,0.5s,baz=110,slow=9.7,SNR=1.1						

IDC 16 18:21:57.6±2.2**,0°.78N×126°.99E,h0km,mb3.4**/3**, mb1 3.7**/3**,mb1mx3.1**/32**,mbtmp3.5**/3**,MS3.4**/2**,Ms1 3.4**/2**, ms1mx2.9**/33**,Error ellipse: s-maj=166.2km s-min=28.1km az=66.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.81	161	P	P	18 26 51.7	+0.1
	1.0nm,0.6s,baz=340,slow=11,SNR=10						
ASAR	Alice Springs	25.21	165	P	P	18 27 25.2	-0.1
	1.0nm,0.7s,baz=342,slow=9.8,SNR=14						
JOW	Kunigami	25.93	3	LR	LR	18 38 50.7	
	comp=Z,80nm,20.5s,baz=191,slow=39						
JCJ	Chichijima	29.96	28	LR	LR	18 38 08.2	
	comp=Z,89nm,20.2s,baz=360,slow=32						
MKAR	Makanchi Array	60.13	326	P	P	18 32 07.0	0.0
	0.3nm,0.8s,baz=123,slow=8.8,SNR=2.0						

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*DDA **16** 18:22:49.5,37°.87N×26°.74E,h7km±2km,ML2.5*
*THE **16** 18:22:49.5,37°.71N×26°.57E,h2km±7km,ML2.5/2,Error ellipse: s-maj=7.4km s-min=1.3km az=38.0*
*ATH **16** 18:22:50.0,37°.72N×26°.60E,h10km±3km,ML2.6/2,Error ellipse: s-maj=7.5km s-min=1.4km az=208.0*
*ISK **16** 18:22:49.6,37°.88N×26°.77E,h8km,ML2.7/16*
ISC 16 18:22:49.9±0.9**,37°.87N**±0°.02×**26°.75E**±0°.03**,h11km**±6km**, n43,**σ**0ˢ.55**/64**,Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMG	Samos	0.17	156	P	Pg	18 22 53.8	0.0
SMG				S	Sg	18 22 56.9	+0.4
	3µm,0.2s						
SMG	Samos	0.17	156	P	Pg	18 22 53.8	0.0
SMG				S	Sg	18 22 56.9	+0.4
DGB	zmir	0.21	30	*i* P	Pg	18 22 54.1	-0.3
DGB				IAML		18 22 57.0	
	comp=E,805nm,0.2s						
DGB				*i* S	Sg	18 22 57.0	-0.5
GMLD	Gumuldur	0.25	33	PG	Pg	18 22 54.8	-0.3
GMLD				SG	Sg	18 22 58.5	0.0
ZEYE	Izmir, Urla-Ze	0.42	333	*i* P	Pg	18 22 57.8	-0.4
ZEYE				*i* S	Sg	18 23 04.3	+0.5
ZEYE				IAML		18 23 05.0	
	comp=E,357nm,0.2s						
GCAM	G?zelcaml?	0.42	113	*i* P	Pg	18 22 58.0	-0.3
GCAM				*i* S	Sg	18 23 04.7	+0.8
GCAM				IAML		18 23 06.0	
	comp=N,305nm,0.3s						
GCAM	G?zelcaml?	0.42	113	PG	Pg	18 22 58.1	-0.1
GCAM				SG	Sg	18 23 04.6	+0.8
URLA	Izmir	0.51	346	*i* P	Pg	18 22 59.3	-0.5
URLA				*i* S	Sb	18 23 07.2	-1.0
URLA				IAML		18 23 08.0	
	comp=E,292nm,0.4s						
URLA	Izmir	0.51	346	PG	Pg	18 22 59.4	-0.5
URLA				SG	Sb	18 23 07.3	-1.0
BLCB	Balcova	0.57	24	PG	Pg	18 23 00.7	-0.3
BLCB				SG	Sg	18 23 08.6	+0.1
DDIM	Aydin, Didim	0.57	136	*i* P	Pg	18 23 00.7	-0.3
DDIM				*i* S	Sb	18 23 09.6	-0.3
DDIM				IAML		18 23 12.0	
	comp=E,218nm,0.5s						
CHOS	Chios island	0.75	314	P	Pg	18 23 04.0	-0.5
CHOS				S	Sb	18 23 15.8	+0.4
	comp=E,298nm,0.2s						
CHOS	Chios island	0.75	314	P	Pb	18 23 04.9	-0.2
CHOS				S	Sb	18 23 15.7	+0.4
CHOS				AML	AML	18 23 17.8	
	comp=E,630µm,0.2s						
CHOS				AML	AML	18 23 18.3	
	comp=N,551µm,0.3s						
CHOS	Chios island	0.75	314	PG	Pb	18 23 04.6	-0.5
FOCM	Foa	0.84	359	PG	Pb	18 23 06.8	+0.2
AYDB	Zeytinkoy-Aydi	0.91	85	PG	Pg	18 23 07.2	-0.3
AYDN	Tasoluk	0.92	103	*i* P	Pg	18 23 07.3	-0.4
AYDN				*i* S	Sg	18 23 19.5	-0.2
BODT	Bodrum	0.92	151	PG	Pb	18 23 07.6	-0.3
BDRM	Kayabasi	0.97	145	*i* P	Pg	18 23 08.0	-0.7
BDRM				*i* S	Sb	18 23 22.0	+0.3
BDRM				IAML		18 23 26.0	
	comp=N,97nm,0.4s						
MLSB	Milas	1.00	125	PG	Pb	18 23 09.6	+0.4
ZEDA	zmir-Bergama	1.13	13	*i* P	Pg	18 23 11.0	-0.6
ZEDA				*i* S	Sn	18 23 27.1	0.0
ZEDA				IAML		18 23 29.0	
	comp=E,82nm,0.3s						
ZEDA				IAML		18 23 30.0	
	comp=N,89nm,0.4s						
KOSK	Kos Island	1.13	171	PN	Pn	18 23 12.0	+0.4
DKL	Dikili	1.21	6	PN	Pb	18 23 12.2	-0.6
AKHS	Akhisar	1.31	39	*i* P	Pg	18 23 14.8	-0.3
AKHS				*i* S	Sn	18 23 32.4	+0.7
AKHS				IAML		18 23 34.0	
	comp=E,96nm,0.5s						
AKS	Akhisar	1.31	39	PN	Pb	18 23 14.5	-0.1
DAT	Datca	1.32	150	*i* P	Pn	18 23 13.4	-1.0
DAT	Datca	1.32	150	PN	Pg	18 23 15.0	-0.2
MULA	Mugla, Merkez-	1.39	116	*i* P	Pg	18 23 16.6	-0.1
YER	Yerkesik	1.42	120	P	Pn	18 23 15.3	-0.5
YER	Yerkesik	1.42	120	PN	Pb	18 23 16.3	-0.2
PRK	Paraskevi	1.43	345	P	Pg	18 23 17.5	+0.2
PRK	Paraskevi	1.43	345	P	Pg	18 23 18.5	+1.2
PRK				S	Sg	18 23 37.9	+2.1
PRK				AML	AML	18 23 41.7	
	comp=N,492µm,0.6s						
PRK				AML	AML	18 23 42.6	
	comp=E,344µm,0.4s						
AYVA	Ayvalik	1.44	358	*i* P	Pg	18 23 17.1	-0.4
AYVA				IAML		18 23 39.0	
	comp=N,72nm,0.9s						
SIGR	SIGRI	1.51	333	P	Pg	18 23 18.4	-0.6
SIGR	SIGRI	1.51	333	P	Pg	18 23 18.4	-0.6
SIGR	SIGRI	1.51	333	PN	Pb	18 23 17.9	-0.1
MANT	Manisa	1.56	66	*i* P	Pg	18 23 19.6	-0.3
MANT				*i* S	Sn	18 23 38.5	+0.5
TURN	Turunc	1.62	132	PN	Pb	18 23 19.3	-0.5
KULA	Kula-Manisa	1.64	66	PN	Pn	18 23 19.2	+0.4
BUHA	Balikesir, Bur	1.65	9	*i* P	Pb	18 23 20.3	0.0
BUHA				*i* S	Sg	18 23 43.3	+0.2
BUHA				IAML		18 23 47.0	
	comp=E,74nm,0.6s						
STEP	BALIKESIR_Sava	1.69	27	*i* P	Pb	18 23 21.4	+0.4
STEP				*i* S	Sg	18 23 44.0	-0.3
STEP				IAML		18 23 50.0	
	comp=E,80nm,0.3s						
STEP				IAML		18 23 51.0	
	comp=N,57nm,0.7s						
KOCA	Canakkale, Ayv	1.70	344	*i* P	Pn	18 23 19.5	-0.1
BALB	Balikesir	1.98	26	PN	Pn	18 23 23.9	+0.6

IDC 16 18:25:37.9±2.2**,0°.93N×126°.91E,h0km,mb3.3**/3**, mb1 3.6**/3**,mb1mx3.1**/34**,mbtmp3.4**/3**,MS3.9**/1**,Ms1 3.9**/1**, ms1mx2.9**/31**,Error ellipse: s-maj=167.8km s-min=28.1km az=66.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.98	161	P	P	18 30 33.7	0.0
	0.8nm,0.6s,baz=340,slow=11,SNR=8.6						
ASAR	Alice Springs	25.37	165	P	P	18 31 07.0	0.0
	0.8nm,0.7s,baz=344,slow=11,SNR=13						
CTA	Charters Tower	28.21	139	LR	LR	18 44 17.8	
	comp=Z,263nm,21.2s,baz=271,slow=40						
MKAR	Makanchi Array	59.96	326	P	P	18 35 46.0	-0.1
	0.1nm,0.5s,baz=112,slow=8.8,SNR=1.8						

IDC 16 18:27:35.4±1.5**,0°.78N×126°.78E,h0km,mb3.6**/4**, mb1 3.8**/4**,mb1mx3.4**/35**,mbtmp3.6**/4**,Error ellipse: s-maj=157.1km s-min=21.4km az=69.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.88	161	P	P	18 32 30.2	0.0
	1.6nm,0.7s,baz=338,slow=11,SNR=11						
ASAR	Alice Springs	25.26	165	P	P	18 33 03.5	-0.1
	1.6nm,0.8s,baz=344,slow=10,SNR=16						
SONM	Songino Array	50.10	342	P	P	18 36 31.5	-0.9
	0.2nm,0.3s,baz=152,slow=6.5,SNR=2.2						
MKAR	Makanchi Array	60.01	326	P	P	18 37 44.5	+0.4
	0.8nm,0.7s,baz=124,slow=8.7,SNR=8.9						

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*IDC **16** 18:30:44.6±1.6,1°.02N×127°.28E,h0km,mb3.7/4, mb1 3.8/6,mb1mx3.4/41,mbtmp3.7/6,ML3.2/2,Error ellipse: s-maj=54.0km s-min=25.1km az=63.0*
ISC 16 18:30:49.5±1.4**,1°.0N**±0°.2×**127°.5E**±0°.1**,h35km,n6,**σ**1ˢ.08**/7**, mb3.8**/4**,Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.23	117	Pn	Pn	18 31 51.9	+0.3
	0.9nm,0.3s,baz=240,slow=23,SNR=8.1						
SIJI				Sn	Sn	18 32 38.9	-1.0
	0.6nm,0.3s,baz=122,slow=23,SNR=1.6						
FITZ	Fitzroy Crossi	19.10	185	P	P	18 35 08.0	-1.4
	0.1nm,0.3s,baz=12,slow=9.3,SNR=1.5						
WRA	Warramunga Arr	21.91	162	P	P	18 35 40.4	+0.5
	1.2nm,0.4s,baz=340,slow=11,SNR=30						
ASAR	Alice Springs	25.34	166	P	P	18 36 13.6	+0.3
	2.9nm,0.9s,baz=344,slow=9.3,SNR=25						
STKA	Stephens Creek	35.36	159	P	P	18 37 42.9	+1.1
	0.5nm,0.4s,baz=345,slow=12,SNR=1.7						
MKAR	Makanchi Array	60.19	326	P	P	18 40 53.7	-0.3
	0.3nm,0.5s,baz=113,slow=8.7,SNR=3.6						

IDC 16 18:49:07.8±2.6**,30°.10S×177°.38W,h0km,mb3.8**/3**, mb1 4.0**/3**,mb1mx3.7**/44**,mbtmp3.8**/3**,MS3.3**/1**,Ms1 3.3**/1**, ms1mx2.7**/33**,Error ellipse: s-maj=51.3km s-min=24.5km az=87.0,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.96	331	Pn	Pn	18 49 29.6	+1.0
	129nm,0.3s,baz=94,slow=21,SNR=8.0						
RAO				Sn	Sn	18 49 42.2	-0.8
	156nm,0.3s,baz=206,slow=23,SNR=7.6						
DZM	Mont Dzumac	16.57	295	LR	LR	18 58 08.9	
	comp=Z,91nm,18.8s,baz=330,slow=33						
STKA	Stephens Creek	35.07	256	P	P	18 56 02.9	+0.2
	1.4nm,0.8s,baz=101,slow=14,SNR=5.1						
ASAR	Alice Springs	43.66	266	P	P	18 57 14.7	0.0
	0.8nm,0.8s,baz=105,slow=7.5,SNR=11						
WRA	Warramunga Arr	44.63	272	P	P	18 57 21.7	-0.6
	1.1nm,0.5s,baz=112,slow=7.4,SNR=20						
FINES	FINESS Array B	145.04	341	PKPbc	PKPbc	19 08 44.6	-1.2
	2.1nm,0.7s,baz=43,slow=2.5,SNR=12						

KRSC 16 18:49:11.6±1.7**,48°.41N×156°.88E,h16km**±20km**,ML3.7, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.33	348	S	Sn	18 50 19.1	+1.6
RUS	Russkaya	4.16	14	P	Pn	18 50 18.7	+4.3
MTVR	Mutnovka	4.16	11	P	Pn	18 50 19.1	+4.5
GRL	Gorelyy	4.22	10	P	Pn	18 50 20.0	+4.7
SDLR	Sedlovina	5.04	14	P	Pn	18 50 31.2	+4.6

IDC 16 18:50:28.1±1.6**,1°.01N×127°.55E,h0km,mb3.5**/3**, mb1 3.7**/5**,mb1mx3.4**/48**,mbtmp3.5**/5**,ML2.8**/2**,Error ellipse: s-maj=46.9km s-min=23.8km az=57.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.16	117	Pn	Pn	18 51 33.2	+0.2
	0.5nm,0.3s,baz=176,slow=20,SNR=1.9						
SIJI				Sn	Sn	18 52 21.1	-1.2
	0.2nm,0.3s,baz=130,slow=22,SNR=1.9						
FITZ	Fitzroy Crossi	19.08	186	P	P	18 54 52.6	+0.2
	0.0nm,0.3s,baz=11,slow=9.5,SNR=2.9						
WRA	Warramunga Arr	21.86	163	P	P	18 55 23.1	+0.5
	1.1nm,0.5s,baz=340,slow=11,SNR=14						
ASAR	Alice Springs	25.29	166	P	P	18 55 56.3	-0.2
	1.1nm,0.7s,baz=343,slow=9.8,SNR=22						
MKAR	Makanchi Array	60.25	326	P	P	19 00 38.3	-0.1
	0.4nm,0.7s,baz=114,slow=7.0,SNR=4.4						

IDC 16 18:53:57.4±2.1**,0°.98N×127°.15E,h0km,mb3.7**/3**, mb1 3.8**/4**,mb1mx3.4**/48**,mbtmp3.6**/4**,ML3.2**/1**,Error ellipse: s-maj=116.1km s-min=27.0km az=69.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	19.02	184	P	P	18 58 20.7	-0.2
	0.1nm,0.3s,baz=7.1,slow=16,SNR=1.5						
WRA	Warramunga Arr	21.96	162	P	P	18 58 52.4	-0.6
	1.5nm,0.6s,baz=341,slow=11,SNR=9.1						
ASAR	Alice Springs	25.37	165	P	P	18 59 26.9	+0.4
	1.3nm,0.7s,baz=346,slow=11,SNR=16						
MKAR	Makanchi Array	60.04	326	P	P	19 04 06.1	-0.1
	1.2nm,1.1s,baz=144,slow=5.2,SNR=3.1						

NNC 16 18:57:31.9±8.0**,37°.68N×71°.27E,h0km,mb3.9,mpv3.5, 4C-1D,Error ellipse: s-maj=63.7km s-min=55.1km az=21.0,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	5.45	354	⇑Pn	Pn	18 58 55.7	+1.3
	2.2nm,0.3s,baz=184,slow=14,SNR=98						
KK31				⇑Sn	Sn	18 59 59.5	+1.7
	0.9nm,0.3s,baz=178,slow=23,SNR=5.8						
AAK	Ala-Archa	5.53	25	⇑Pn	Pn	18 58 55.7	0.0
	2.3nm,0.3s						
AAK				⇓Sn	Sn	19 00 00.2	+0.1
	2.8nm,0.5s						
TKM2	Tokmak 2	6.19	31	⇑Pn	Pn	18 59 03.8	-1.0
	1.8nm,0.5s						

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*IDC **16** 19:00:11.9±0.8,26°.54N×92°.40E,h0km,mb3.7/9, mb1 3.9/9,mb1mx3.6/52,mbtmp3.7/9,Error ellipse: s-maj=77.7km s-min=17.0km az=51.0*
ISC 16 19:00:18.5±1.1**,26°.7N**±0°.3×**92°.5E**±0°.4**,h47km,n9,**σ**0ˢ.41**/9**, mb3.8**/9**,Northeastern India**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	21.67	341	P	P	19 05 05.5	+0.4
	0.7nm,0.5s,baz=146,slow=13,SNR=11						
AAK	Ala-Archa	21.70	322	P	P	19 05 06.1	+0.4
	0.8nm,0.3s,baz=250,slow=10,SNR=2.2						
AKASG	Malin Array Be	53.13	315	P	P	19 09 30.7	-0.6
	0.8nm,0.5s,baz=82,slow=6.8,SNR=5.2						
FINES	FINESS Array B	55.72	328	P	P	19 09 49.9	-0.1
	1.2nm,0.8s,baz=108,slow=4.5,SNR=1.2						
WRA	Warramunga Arr	61.56	135	P	P	19 10 31.1	-0.1
	1.2nm,0.7s,baz=322,slow=7.3,SNR=17						
NOA	NORSAR Array B	62.89	327	P	P	19 10 39.3	-0.3
	0.5nm,0.6s,baz=99,slow=4.4,SNR=1.6						
GERES	GERESS Array B	63.28	313	P	P	19 10 42.5	0.0
	0.3nm,0.4s,baz=80,slow=8.1,SNR=2.6						
ASAR	Alice Springs	64.05	138	P	P	19 10 47.8	+0.1
	0.8nm,0.6s,baz=320,slow=6.7,SNR=21						
TORD	Torodi Ar. Bea	84.95	282	P	P	19 12 49.6	+0.4
	0.2nm,0.5s,baz=90,slow=4.2,SNR=2.1						

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*IDC **16** 19:00:14.3±3.2,36°.14N×141°.80E,h0km,mb3.2/2, mb1 3.5/5,mb1mx3.3/50,mbtmp3.6/5,ML2.6/2,Error ellipse: s-maj=66.6km s-min=28.7km az=64.0*
*JMA **16** 19:00:22.1±0.1,35°.92N×141°.17E,h43km±1km,M2.9*
ISC 16 19:00:22.0±1.7**,35°.91N**±0°.05×**141°.23E**±0°.08**,h36km**±2km**, n18,**σ**0ˢ.99**/23**,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.37	235	P	Pn	19 00 30.8	+0.2
CHOJ				S	Sn	19 00 37.4	+0.2
JIHU	Itakohorinouch	0.57	275	P	Pn	19 00 33.8	+0.1
JHYU	Hitachinakayam	0.67	310	P	Pn	19 00 35.2	+0.1
JHYU				*e*S	Sn	19 00 44.1	-0.2
JHO	Hitachi	0.88	323	P	Pn	19 00 37.7	-0.1
JHO				S	Sn	19 00 49.1	-0.3
JYT	Yasato	0.90	291	P	Pn	19 00 37.6	-0.4
JYT				S	Sn	19 00 48.9	-0.9
BSO3	Boso 3	1.25	208	P	Pn	19 00 43.5	+0.8
JFK	Kawauchi	1.48	349	P	Pn	19 00 46.3	+0.2
JFK				S	Sn	19 01 04.1	-0.1
JAG	Ashikaga	1.52	290	P	Pn	19 00 46.6	-0.1
JAG				S	Sn	19 01 04.5	-0.8
MJAR	Matsushiro Arr	2.52	285	Pn	Pn	19 01 01.1	+0.7
	0.2nm,0.3s,baz=94,slow=15,SNR=11						
MJAR				Sn	Sn	19 01 29.6	-0.3
	0.3nm,0.3s,baz=133,slow=9.2,SNR=5.4						
MAT	Matsushiro	2.52	285	S	Sn	19 01 31.4	+1.5
MAT	Matsushiro	2.52	285	P	Pn	19 01 01.8	+1.4
JHJ	Hachijo jima 2	3.03	204	Pn	Pn	19 01 09.7	+2.3
	6.4nm,0.3s,baz=45,slow=13,SNR=1.1						
JHJ				Sn	Sn	19 01 41.5	-0.9
	12nm,0.3s,baz=260,slow=24,SNR=7.7						
JCJ	Chichijima	8.83	174	Pn	Pn	19 02 24.7	-2.3
	2.7nm,0.3s,baz=283,slow=19,SNR=1.7						
JCJ				Sn	Sn	19 03 56.0	-9.3
	1.3nm,0.3s,baz=270,slow=20,SNR=2.5						
H11N2	WAKE ISLAND Hy	27.72	119	T	T	19 35 10.1	
	baz=311,slow=75,SNR=4.3						
H11N1	WAKE ISLAND Hy	27.73	119	T	T	19 35 11.0	
	baz=311,slow=75,SNR=4.5						
H11N3	WAKE ISLAND Hy	27.74	119	T	T	19 35 06.9	
	baz=311,slow=75,SNR=4.7						
MKAR	Makanchi Array	44.60	303	P	P	19 08 30.4	-0.2
	0.2nm,0.7s,baz=79,slow=7.5,SNR=1.4						
WRA	Warramunga Arr	55.93	188	P	P	19 09 56.2	-0.3
	0.4nm,0.8s,baz=5.0,slow=7.7,SNR=2.2						

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*NIED **16** 19:00:36.8,31°.29N×128°.71E,h3km,MW3.6,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.15; $M_{\theta\theta}$-0.56; $M_{\phi\phi}$0.40; $M_{r\theta}$-1.37; $M_{\theta\phi}$2.74; $M_{\phi r}$-0.22; Fault plane solution: $M_0$3.11000×10^{14} NP1: ϕ_s266.00000°,δ87.00000°,λ26.00000°. NP2: ϕ_s174.00000°,δ64.00000°,λ177.00000°.*
JMA 16 19:00:36.7±0.2**,31°.29N×128°.71E,h3km**±2km**,M3.7, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.94	66	P	Pg	19 00 54.7	-0.1
JSJ				*e*S	Sg	19 01 07.7	+0.7
JFU	Fukue jima 2	1.36	1	P	Pn	19 01 02.7	+0.1
JFU				*e*S	Sn	19 01 21.0	-0.2
JSU	Suzuyama	1.51	81	P	Pb	19 01 05.3	0.0
JSU				*e*S	Sg	19 01 25.2	0.0
JKC	Kuchinoerabu	1.52	122	P	Pb	19 01 05.2	-0.3
JKC				*e*S	Sb	19 01 25.2	0.0
JNN	Nakanoshima	1.76	145	P	Pn	19 01 08.8	+0.7
JNN				*e*S	Sb	19 01 31.9	-0.2
JYAK	Yakushimahirau	1.87	124	P	Pn	19 01 08.0	-1.6
JYAK				*e*S	Sn	19 01 33.4	-0.3
JTN	Tanegashima 3	2.05	107	P	Pn	19 01 11.3	-0.8
JMTN	Minamitane	2.08	115	P	Pn	19 01 12.4	-0.1
JTZ	Takazaki	2.12	73	P	Pn	19 01 13.0	0.0
JIU3	Izumi3	2.19	54	P	Pn	19 01 14.3	+0.4
JIU3				*e*S	Sn	19 01 41.6	+0.1

IDC 16 19:21:23.6±1.7**,1°.05N×127°.39E,h0km,mb3.5**/3**, mb1 3.7**/4**,mb1mx3.2**/33**,mbtmp3.5**/4**,ML2.6**/1**,MS4.2**/1**, Ms1 4.2**/1**,ms1mx2.9**/22**,Error ellipse: s-maj=66.1km s-min=26.4km az=60.0,Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.32	116	Pn	Pn	19 22 29.6	-0.9
	0.4nm,0.3s,baz=180,slow=22,SNR=2.0						
SIJI				Sn	Sn	19 23 17.1	-4.5
	baz=274,slow=23,SNR=1.2						
WRA	Warramunga Arr	21.94	162	P	P	19 26 19.7	+0.7
	1.1nm,0.7s,baz=340,slow=11,SNR=12						
ASAR	Alice Springs	25.37	166	P	P	19 26 52.5	-0.2
	1.4nm,0.9s,baz=344,slow=8.9,SNR=15						
SONM	Songino Array	50.03	342	LR	LR	19 51 26.5	
	comp=Z,229nm,20.2s,baz=296,slow=36						
MKAR	Makanchi Array	60.13	326	P	P	19 31 33.0	0.0
	0.2nm,0.5s,baz=142,slow=7.3,SNR=3.4						

IDC 16 19:38:22.7±1.8**,1°.27N×127°.80E,h0km,mb3.2**/3**, mb1 3.4**/4**,mb1mx3.2**/27**,mbtmp3.2**/4**,ML2.5**/1**,MS3.7**/1**, Ms1 3.7**/1**,ms1mx2.6**/20**,Error ellipse: s-maj=73.8km s-min=27.5km az=59.0,Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.07	122	Pn	Pn	19 39 25.8	-0.5
	0.3nm,0.3s,baz=283,slow=23,SNR=1.5						
GUMO	Guam	20.86	53	LR	LR	19 49 33.9	
	comp=Z,212nm,21.6s,baz=82,slow=32						
WRA	Warramunga Arr	22.04	163	P	P	19 43 19.4	+0.2
	0.7nm,0.9s,baz=341,slow=11,SNR=6.4						
ASAR	Alice Springs	25.49	167	P	P	19 43 52.9	0.0
	0.4nm,0.6s,baz=346,slow=9.9,SNR=3.6						
MKAR	Makanchi Array	60.17	326	P	P	19 48 32.4	0.0
	0.2nm,0.6s,baz=116,slow=6.6,SNR=1.6						

DDA 16 19:50:29.8,39°.18N×28°.70E,h12km±2km**,ML1.4,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DEMI	Demirci	0.13	175	*i* P	Pb	19 50 33.8	-0.5
DEMI				IAML		19 50 36.0	
	comp=E,112nm,0.6s						
DEMI				IAML		19 50 36.0	
	comp=N,128nm,0.4s						
DEMI				*i* S	Sg	19 50 36.1	+0.5
DURS	Dursunbey	0.46	338	*i* P	Pg	19 50 38.8	-0.1
MANT	Manisa	0.69	189	*i* P	Pb	19 50 44.1	+0.2
MANT				*i* S	Sb	19 50 53.1	-0.4
AKHS	Akhisar	0.75	247	*i* P	Pg	19 50 44.2	-0.1
STEP	BALIKESIR_Sava	0.79	285	*i* P	Pn	19 50 46.7	-0.1
STEP				IAML		19 51 00.0	
	comp=N,11nm,0.7s						
ULDT	Uludag	1.02	19	*i* P	Pg	19 50 49.1	-0.4
ULDT				*i* S	Sn	19 51 04.0	-0.5
ULDT				IAML		19 51 06.0	
	comp=E,12nm,0.2s						

ISK 16 19:51:14.0,40°.84N×28°.78E,h11km±1km**,ML1.8**/5**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARMT	Armutlu	0.28	166	PG	Pg	19 51 20.2	+0.5
ARMT				SG	Sg	19 51 24.6	+1.1
KAVV	Kandilli-Istan	0.31	44	PG	Pg	19 51 20.8	+0.5
KAVV				SG	Sb	19 51 25.6	-1.1
ISK	Istanbul-Kandi	0.31	43	PG	Pg	19 51 20.8	+0.5
BGKT	Bogazkoy	0.34	360	PG	Pg	19 51 21.2	+0.4
BGKT				SG	Sb	19 51 26.6	-1.0
CTKS	Kestanelik-??a	0.45	333	PG	Pg	19 51 23.2	+0.4
KLYT	Kilyos	0.46	26	PG	Pb	19 51 23.6	-0.5

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*IDC **16** 19:53:43.3±1.4,6°.79S×128°.04E,h274km±54km,mb2.9/1, mb1 3.5/6,mb1mx2.9/38,mbtmp4.2/6,Error ellipse: s-maj=60.9km s-min=13.1km az=124.0*
*DJA **16** 19:54:15.6±1.1,8°S±24°×12°6E±°,h184km±30km,M3.9/5, mb4.8/1,mB5.2/1,MLv3.4/5,Mw(mB)4.5/1*
ISC 16 19:53:43.7±0.9**,6°.72S**±0°.07×**127°.87E**±0°.07**,h300km,n15,** σ**1ˢ.91**/20**,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	Ambon	3.03	6	P	Pn	19 54 43.0	+3.2
MSAI	Masohi	3.51	18	P	Pn	19 54 40.6	-4.1
MSAI				S	Pn	19 54 41.6	-3.1
SAUI	Saumlaki	3.63	111	P	S	19 55 34.0	-1.7
SOEI	Soe	4.67	229	P	Pn	19 54 58.7	+1.1
SOEI				S	S	19 55 56.0	-0.9
SANI	Sanana	5.00	338	P	Pn	19 55 03.6	+2.3
BATI	Baumata	5.42	230	P	Pn	19 55 07.3	+1.2
	37nm,0.3s,baz=276,slow=2.2,SNR=18						
BATI				S	S	19 56 10.8	-1.6
	6.9nm,0.3s,baz=288,slow=22,SNR=13						
BATI	Baumata	5.42	230	P	Pn	19 55 06.8	+0.7
BATI				S	S	19 56 09.9	-2.5
FAKI	Fak Fak	5.77	49	P	Pn	19 55 12.2	+1.9
EDFI	Ende, Flores	6.45	251	P	Pn	19 55 20.3	+1.8
SIJI	Sorong	6.72	30	P	Pn	19 55 21.6	-0.2
	0.6nm,0.3s,baz=49,slow=23,SNR=2.0						
SIJI				S	S	19 56 37.1	-4.0
	0.8nm,0.3s,baz=331,slow=24,SNR=9.1						
SWI	Sorong	6.73	30	P	Pn	19 55 11.0	-11
FITZ	Fitzroy Crossi	11.52	191	P	Pn	19 56 20.4	-0.1
	0.5nm,0.3s,baz=18,slow=6.7,SNR=31						
FITZ				S	S	19 58 28.1	-1.0
	0.1nm,0.3s,baz=181,slow=4.2,SNR=2.1						
WRA	Warramunga Arr	14.57	155	P	Pn	19 56 57.1	-0.1
	1.4nm,0.3s,baz=329,slow=12,SNR=60						
WRA				S	S	19 59 35.4	-0.6
	0.1nm,0.3s,baz=332,slow=21,SNR=2.3						
ASAR	Alice Springs	17.83	162	P	P	19 57 33.1	+1.6
	0.8nm,0.3s,baz=343,slow=12,SNR=69						
ASAR				S	S	20 00 38.9	-1.8
	0.1nm,0.3s,baz=350,slow=25,SNR=1.5						
STKA	Stephens Creek	28.13	155	P	P	19 59 08.8	+0.1
	0.3nm,0.4s,baz=322,slow=12,SNR=1.5						

*IDC **16** 19:54:26.5±0.9, 15°.15N×120°.14E, h0^{km}, mb3.7/7, mb1 3.9/7, mb1mx3.5/43, mbtmp3.7/7, MS3.0/2, Ms1 3.0/2, ms1mx2.6/41, Error ellipse: s-maj=40.1km s-min=18.9km az=66.0*

*MAN **16** 19:54:31.4, 14°.96N×119°.66E, h15^{km}, mb4.5, ML3.4, MS3.2*

ISC 16 19:54:32.1±1.0**, 14°.9N**±0°.1×**119°.4E**±0°.1**, h35^{km}, n12, σ1^{s}38**/10**, mb4.0**/6**, 1C-2D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	Puerto Galera	1.98	132	⇓eP	Pn	19 55 02.7	-0.5
PGP				iS	Sn	19 55 29.8	+2.9
LQP	Lukban	2.16	110	⇑eP	Pn	19 55 05.8	0.0
LQP				eS	Sn	19 55 30.3	-1.1
SIPP	Brgy, Tapao	3.21	18	⇓iP	Pn	19 55 20.7	+0.7
SIPP				eS	Sn	19 56 15.6	+19
DAV	Davao City (W)	9.80	141	LR	LR	20 01 36.1	
	comp=Z,89nm,18.1s,baz=345,slow=45						
CMAR	Chiang Mai Arr	19.96	283	P	Pn	19 59 07.3	+4.1
	0.5nm,0.7s,baz=90,slow=7.3,SNR=4.9						
BATI	Baumata	25.24	170	LR	LR	20 11 31.6	
	comp=Z,39nm,20.8s,baz=179,slow=40						
SONM	Songino Array	34.62	344	P	P	20 01 16.7	-1.4
	0.2nm,0.5s,baz=165,slow=9.5,SNR=2.1						
ASAJ	Asahikawa	35.21	29	P	P	20 01 17.6	-5.4
	4.1nm,0.9s,baz=261,slow=19,SNR=1.7						
WRA	Warramunga Arr	37.55	157	P	P	20 01 42.4	-0.8
	1.4nm,0.7s,baz=337,slow=9.5,SNR=9.6						
ASAR	Alice Springs	40.81	159	P	P	20 02 10.6	+0.2
	1.2nm,0.4s,baz=335,slow=7.2,SNR=19						
MKAR	Makanchi Array	44.39	324	P	P	20 02 39.8	+0.6
	0.2nm,0.8s,baz=140,slow=7.0,SNR=1.6						
FINES	FINESS Array B	78.69	331	P	P	20 06 30.8	+0.3
	2.8nm,0.9s,baz=73,slow=6.6,SNR=10						

DJA 16 19:57:49.9±0.8**, 1°S**±5°×**13°6E**±°**, h24^{km}**±6^{km}**, M3.9**/7**, mb4.8**/1**, mB5.8**/1**, MLv3.5**/7**, Mw(mB)5.4**/1**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAKI	Biak	0.54	157	P	Pb	19 58 01.3	+0.5
SRPI	Serui, Papua	1.22	164	P	Pn	19 58 10.7	-0.8
SRPI				S	Sb	19 58 29.1	+1.4
SMPI	Sarmi	3.09	115	P	Pn	19 58 37.2	0.0
SMPI				S	Sn	19 59 13.8	+0.3
FAKI	Fak Fak	4.27	239	P	Pn	19 58 53.9	+0.5
FAKI				S	Sn	19 59 41.6	-1.0
SWI	Sorong	4.64	268	P	Pn	19 58 59.1	+0.5
SAUI	Saumlaki	8.57	212	P	Pn	19 59 51.9	-0.7

*IDC **16** 20:04:52.8±1.2, 0°.94N×127°.26E, h0^{km}, mb3.6/4, mb1 3.7/5, mb1mx3.5/36, mbtmp3.6/5, Error ellipse: s-maj=59.6km s-min=20.6km az=63.0*

*DJA **16** 20:04:54.8±0.2, 1°N±2°×12°7E±°, h10^{km}, M3.7/12, mb4.2/5, mB5.7/1, MLv3.5/12, Mw(mB)5.2/1*

ISC 16 20:04:54.9±1.0**, 1°.02N**±0°.06×**127°.46E**±0°.07**, h10^{km}, n16, σ1^{s}46**/20**, mb3.7**/4**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	0.26	200	P	Pb	20 05 00.7	-1.1
TNTI				Pg	Pg	20 05 00.5	+0.2
TNTI				S	Sg	20 05 04.6	+0.8
LBMI	Labuha	1.65	179	P	Pb	20 05 26.0	+0.6
LBMI				Pg	Pn	20 05 24.3	+0.4
LBMI				S	Sg	20 05 48.1	+0.2
SANI	Sanana	3.38	206	P	Pn	20 05 48.0	+0.2
KMSI	Cibinong	3.51	263	P	Pn	20 05 50.5	+1.0
SWI	Sorong	4.24	116	P	Pn	20 05 58.6	-0.9
SIJI	Sorong	4.24	116	Pn	Pn	20 06 00.1	+0.4
	baz=331,slow=19						
SIJI				Sn	Sn	20 06 50.5	+1.1
	0.3nm,0.3s,baz=232,slow=22,SNR=1.4						
GTOI	Gorontalo	4.46	265	P	Pn	20 06 05.8	+3.1
LUWI	Luwuk	5.12	246	P	Pn	20 06 13.8	+2.2
	0.3nm7μm27nm,0.5s						
APSI	Ampana	6.12	252	P	Pn	20 06 24.0	-1.4
	0.1nm15nm,1.2s						
TTSI	Tana Toraja	8.64	242	P	Pn	20 06 57.1	-3.0
	7.6nm,0.9s						
BKSI	Bulukumba	9.66	229	P	Pn	20 07 15.9	+1.8
	6.2nm,0.8s						
WSI	Waingapu	12.79	214	P	Pn	20 07 50.0	-7.0
WRA	Warramunga Arr	21.90	162	P	P	20 09 47.8	-0.5
	0.9nm,0.7s,baz=339,slow=11,SNR=12						
ASAR	Alice Springs	25.33	166	P	P	20 10 21.3	-0.8
	1.8nm,0.9s,baz=344,slow=10,SNR=21						
SONM	Songino Array	50.08	342	P	P	20 13 49.4	-0.8
	0.3nm,0.5s,baz=150,slow=6.0,SNR=2.1						
MKAR	Makanchi Array	60.19	326	P	P	20 15 02.5	-0.6
	0.9nm,0.7s,baz=123,slow=7.9,SNR=6.9						

*DNK **16** 20:08:30.8±1.5, 78°.70N×5°.13E, h32^{km}±17^{km}, ML2.2*

*BER **16** 20:08:30.0±1.8, 78°.82N×5°.05E, h10^{km}, ML2.4, ML2.5(DNK), Confirmed Earthquake*

*IEPN **16** 20:08:33.0, 78°.57N×6°.05E, h10^{km}*

ISC 16 20:08:28.1±1.7**, 78°.65N**±0°.06×**4°.84E**±0°.05**, h29^{km}**±17^{km}**, n20, σ2^{s}37**/30**, 1C, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	Kingsbay	1.42	75	iP	Pb	20 08 53.3	-0.5
KBS				IAML		20 09 11.8	
	comp=Z,299nm,0.3s						
KBS	Kingsbay	1.42	75	eP	Pb	20 08 53.2	-0.5
KBS				eS	Sn	20 09 08.8	-0.6
KBS				IAML		20 09 11.7	
	comp=Z,136nm,0.4s						
KBS	Kingsbay	1.42	75	⇑iP	Pb	20 08 53.2	-0.5
KBS				iS	Sn	20 09 08.6	-0.7
SPA0	Spitsbergen Ar	2.38	96	eP	Pb	20 09 08.2	-1.9
SPA0				eS	Sn	20 09 34.4	+1.3
SPA0				IAML		20 09 38.7	
	comp=Z,36nm,0.7s						
HSPB	Hornsund (broa	2.81	121	eP	Pb	20 09 15.3	-2.1
HSPB				eS	Sn	20 09 45.3	+1.7
HSPB				IAML		20 09 51.6	
	comp=Z,11nm,0.4s						
HSPB	Hornsund (broa	2.81	121	eP	Pb	20 09 15.2	-2.1
HSPB				iS	Sn	20 09 44.8	+1.2
NOR	Nord	4.70	319	e	Pn	20 09 37.5	+0.6
	baz=117,slow=18						
NOR				iP	Pb	20 09 37.9	-12
NOR				iS	Sn	20 10 28.7	-1.6
NOR				IAML		20 10 30.2	
	comp=Z,2.7nm,0.3s						
NOR	Nord	4.70	319	iP	Pn	20 09 37.5	+0.6
NOR				IAML		20 10 29.7	
	comp=Z,5.0nm,0.5s						
HOPEN	Hopen	4.84	106	eS	Sn	20 10 32.8	-0.8
HOPEN				IAML		20 10 39.1	
	comp=Z,26nm,0.6s						
HOPEN	Hopen	4.84	106	P	Pn	20 09 40.2	+1.5
HOPEN				tx	tx	20 10 30.9	
HOPEN				eS	Sn	20 10 31.0	-2.6
DAG	Danmarks Havn	5.33	261	iP	Pn	20 09 47.6	+2.2
DAG				iS	Sn	20 10 43.3	-2.4
DAG				IAML		20 10 48.4	
	comp=Z,18nm,0.3s						
DAG	Danmarks Havn	5.33	261	iP	Pn	20 09 47.6	+2.2
DAG				IAML		20 10 45.4	
	comp=Z,23nm,0.2s						
DBG	Daneborg	7.25	246	eP	Pn	20 10 13.8	+2.1
DBG				iS	Sn	20 11 28.9	-3.9
DBG				IAML		20 11 34.0	
	comp=Z,5.5nm,0.3s						
DBG	Daneborg	7.25	246	eP	Pn	20 10 14.0	+2.3
DBG				IAML		20 11 34.9	
	comp=Z,9.5nm,0.4s						
ZFI	Zemlya Franca-	7.78	54	eP	Pn	20 10 20.8	+1.8
ZFI				eS	Sn	20 11 40.2	-5.6
	comp=Z,66nm,1.9s						
SCO	Scoresbysund	10.71	235	eP	Pn	20 11 02.8	+3.7
SCO	Scoresbysund	10.71	235	eP	Pn	20 11 03.2	+4.2
NEEM	North Greenlan	11.26	292	eP	Pn	20 11 06.3	-0.7
NEEM				eS	Sn	20 13 01.4	-10
NEEM				IAML		20 13 07.4	
	comp=Z,3.2nm,0.3s						
SUMG	Summit	12.02	263	eP	Pn	20 11 19.1	+1.8
SUMG				IAML		20 13 33.6	
	comp=Z,2.0nm,0.3s						
SUMG	Summit	12.02	263	iP	Pn	20 11 19.0	+1.6

KRSC 16 20:12:49.1±1.4**, 48°.25N×156°.50E, h7^{km}**±29^{km}**, ML4.0, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.45	354	eP	Pn	20 13 30.7	+1.2
SKR				eS	Sn	20 14 01.1	+1.5
PAU	Pauzhetka	3.23	3	P	Pn	20 13 42.5	+2.3
PAU				S	Sb	20 14 23.2	-3.0
KDTR	Khodutka, Kamc	3.71	15	P	Pn	20 13 50.2	+3.5
KDTR				S	Sb	20 14 35.7	-4.2
MIPR	Malaya Ipel'ka	4.04	2	S	Sn	20 14 42.8	+4.0
ASAK	Asacha	4.23	12	P	Pn	20 13 58.6	+4.5
MTVR	Mutnovka	4.37	14	eP	Pn	20 14 00.2	+4.1
RUS	Russkaya	4.38	16	eP	Pn	20 13 59.5	+3.5
RUS				S	Sn	20 14 52.4	+5.1
GRL	Gorelyy	4.42	13	eP	Pn	20 14 01.1	+4.4
AVH	Avacha	5.22	15	P	Pn	20 14 13.6	+6.0
SMAR	Somma	5.23	15	P	Pn	20 14 12.7	+4.8
SDLR	Sedlovina	5.26	16	P	Pn	20 14 12.2	+4.0

IDC 16 20:32:48.2±10.0**, 17°.96N×108°.45W, h0^{km}, mb3.3**/3**, mb1 3.9**/4**, mb1mx3.8**/25**, mbtmp3.5**/4**, ML3.5**/1**, MS3.0**/1**, Ms1 3.0**/1**, ms1mx2.8**/12**, Error ellipse: s-maj=170.4km s-min=77.7km az=150.0, Revilla Gigedo Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	Lajitas Array	12.13	20	Pn	Pn	20 35 42.7	+0.2
	0.1nm,0.3s,baz=201,slow=14,SNR=16						
NVAR	Mina Array Bea	22.14	339	P	P	20 37 46.0	+0.3
	0.6nm,0.4s,baz=170,slow=11,SNR=1.9						
NVAR				LR	LR	20 45 17.5	
	comp=Z,36nm,19.9s,baz=98,slow=34						
PDAR	Pinedale Array	24.74	358	P	P	20 38 12.7	+1.0
	0.2nm,0.5s,baz=174,slow=9.8,SNR=2.9						
ILAR	Eielson Array	53.38	341	P	P	20 42 08.5	-0.8
	0.7nm,1.0s,baz=153,slow=6.1,SNR=3.0						

*FUNV **16** 20:48:38.6, 8°.48N×71°.41W, h5^{km}, MW3.1*

ISC 16 20:48:38.2±1.2**, 8°.52N**±0°.02×**71°.39W**±0°.02**, h9^{km}**±9^{km}**, n40, σ1^{s}25**/70**, 1C, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOCV	Socops	0.58	114	eP	Pg	20 48 49.6	+0.1
SOCV				eS	Sg	20 48 57.5	+0.3
SOCV	Socops	0.58	114	eP	Pg	20 48 49.6	+0.1
SOCV				eS	Sg	20 48 57.7	+0.5
SDV	Santo Domingo	0.83	64	eP	Pn	20 48 55.5	-0.9
SDV				eS	Sb	20 49 07.0	+0.5
CAPV	Capacho	1.12	234	eP	Pg	20 48 58.2	-1.5
CAPV				eS	Sg	20 49 13.8	-0.5
PAMC	Pamplona, Colo	1.75	228	eP	Pb	20 49 10.3	-0.4
PAMC				eS	Sn	20 49 31.5	-0.3
MCQV	Machiques	1.89	324	eP	Pn	20 49 11.1	+0.4
MCQV				eS	Sb	20 49 36.0	-0.7
OCAC	Ocana	1.93	262	eP	Pn	20 49 11.8	+0.4
OCAC				eS	Sn	20 49 35.8	0.0
TAMC	Tame, Arauca	2.11	191	eP	Pb	20 49 17.8	+1.1
TAMC				eS	Sb	20 49 42.6	-0.4
LL6C	La Loma 6 Bece	2.21	303	eS	Sn	20 49 42.6	0.0
LL1C	La Loma 1 Cana	2.36	296	eP	Pb	20 49 19.7	-1.3
LL1C				eS	Sb	20 49 50.3	0.0
ELOV	Elorza	2.42	128	eS	Sb	20 49 52.1	+0.1
ELOV	Elorza	2.42	128	eP	Pn	20 49 18.1	0.0
ELOV				eS	Sn	20 49 47.5	-0.4
LL5C	La Loma 5 El P	2.60	298	eP	Pn	20 49 21.7	+1.2
LL5C				eS	Sn	20 49 53.6	+1.3
BARC	Barichara	2.61	223	eP	Pb	20 49 25.8	+0.5
BARC				eS	Sn	20 49 54.0	+1.1
SIQV	Siquisique	2.63	36	eP	Pn	20 49 20.5	-0.4
SIQV				eS	Sn	20 49 53.4	+0.4
SMLC	San Martn de	2.66	276	eP	Pn	20 49 21.2	-0.1
SMLC				eS	Sn	20 49 55.9	+2.1
BRRC	Barranca, Sant	2.69	239	⇑iP	Pn	20 49 23.4	+1.6
BRRC				eS	Sb	20 50 00.2	+0.4
CVALL	Valledupar, Ce	2.70	317	eS	Sn	20 49 54.1	-0.6
RUSC	La Rusia	3.10	213	eP	Pn	20 49 28.3	+0.4
RUSC				eS	Sn	20 50 05.5	+0.2
ARGC	Ariguani, Magd	3.11	295	eS	Sb	20 50 14.5	+2.6
URIC	Uribia, Colomb	3.21	349	eP	Pb	20 49 36.9	+1.3
URIC				eS	Sn	20 50 05.5	-1.9
BAUV	El Baul	3.34	83	eP	Pn	20 49 31.6	+0.9
BAUV				eS	Sn	20 50 10.0	-0.6
ZARC	Zaragoza, Cauc	3.58	254	eP	Pn	20 49 34.2	+0.2
ZARC				eS	Sn	20 50 15.1	-1.4
JACV	Jacura	3.59	45	eP	Pn	20 49 34.7	+0.6
JACV				eS	Sn	20 50 15.8	-1.0
MONV	Montecano	3.69	22	eP	Pn	20 49 35.7	+0.2
MONV				eS	Sn	20 50 17.9	-1.3
SPBC	San Pablo de B	3.90	223	eP	Pn	20 49 40.7	+2.3
SPBC				eS	Sn	20 50 26.6	+2.2
SJCC	San Jacinto, C	3.98	290	eP	Pn	20 49 40.7	+1.2
SJCC				eS	Sn	20 50 26.6	+0.2
BENV	Beln	4.01	69	eP	Pn	20 49 39.5	-0.5
BENV				eS	Sn	20 50 25.7	-1.5
UREC	San Jos de Ur	4.17	260	eP	Pn	20 49 42.6	+0.5
MOTC	Monteria, Cord	4.23	274	eP	Pn	20 49 43.6	+0.6
PTGC	Puerto Gaitan,	4.36	190	eP	Pg	20 50 00.8	-0.9
PTGC				eS	Sn	20 50 37.1	+1.5
CHIC	Chingaza	4.51	211	eP	Pn	20 49 48.4	+1.2
CHIC				eS	Sn	20 50 38.0	-1.9
NORC	Norcasia	4.53	230	eP	Pn	20 49 49.3	+2.2
NORC				eS	Sn	20 50 38.0	-2.0
HELC	Santa Helena	4.71	241	eP	Pn	20 49 52.2	+2.3
VILC	Villavicencio,	4.94	208	eP	Pn	20 49 52.2	-0.7
VILC				eS	Sn	20 50 50.5	+0.2
MERV	Las Mercedes	5.09	81	eP	Pn	20 49 54.0	-0.7
GUY2C	Guyana, Caldas	5.12	231	eP	Pn	20 49 57.0	+1.3
PRAC	Prado	5.90	216	eP	Pn	20 50 06.5	+0.5
PRAC				eS	Sn	20 51 09.6	-4.3
ORTC	Ortega, Tolima	5.97	220	eP	Pn	20 50 07.5	+0.6
ORTC				eS	Sn	20 51 13.4	-2.1
MACC	Macarena, Meta	6.79	201	eP	Pn	20 50 17.0	-1.1

*SJA **16** 20:52:12.3±0.6, 30°.03S×72°.96W, h44^{km}±8^{km}, ML5.0, MW5.3*

*IDC **16** 20:52:18.6±0.6, 30°.35S×71°.98W, h0^{km}, mb4.5/11, mb1 4.5/16, mb1mx4.4/30, mbtmp4.4/16, ML4.2/5, MS3.8/17, Ms1 3.8/17, ms1mx3.7/32, Error ellipse: s-maj=24.6km s-min=14.7km az=98.0*

*NEIC **16** 20:52:19.7±2.2, 30°.29S±0°.05×72°.0W±0°.1, h8^{km}±3^{km}, mb5.0/84, Mwr4.6/34, ML4.6(GUC), Error ellipse: s-maj=13.2km s-min=6.9km az=102.0*

*NEIC **16** 20:52:20.6, 30°.28S×72°.07W, h11^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.91; M$_{\theta\theta}$0.11; M$_{\phi\phi}$-1.02; M$_{r\theta}$0.30; M$_{\theta\phi}$-0.15; M$_{\phi r}$-0.40; Fault plane solution: M$_0$1.10000×10^{16} NP1:φ$_s$168.41000°, δ58.24000°, λ67.47000°. NP2:φ$_s$26.65000°, δ38.25000°, λ121.76000°. Principal axes: T 1.0966, Plg68.0000°, Azm32.0000°; N 0.0089, Plg19.0000°, Azm181.0000°; P -1.1055, Plg11.0000°, Azm274.0000°;*

*VAO **16** 20:52:20.6±0.3, 30°.40S×72°.06W, h14^{km}, mb4.7*

*GUC **16** 20:52:21.6±0.7, 30°.41S×72°.09W, h27^{km}±5^{km}, ML4.7*

ISC 16 20:52:19.3±1.1**, 30°.33S**±0°.03×**72°.25W**±0°.04**, h12^{km}**±6^{km}**, n274, σ1^{s}68**/280**, mb5.0**/49**, MS4.0**/15**, 1C-1D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.63	123	eP	Pb	20 52 31.4	-1.0
CO06				eS	Sb	20 52 37.8	-3.5
CO06	Fray Jorge	0.63	123		Pb	20 52 31.1	-1.2
CO05	La Serena	0.97	65	⇓iP	Pb	20 52 37.0	-1.1
CO05				iS	Sb	20 52 49.6	-1.2
CO05	La Serena	0.97	65		Pb	20 52 36.5	-1.6
GO04	Tololo Observa	1.27	83	eP	Pn	20 52 41.9	-1.2
GO04				IAML		20 53 11.8	
	comp=N,47μm,0.5s						
GO04	Tololo Observa	1.27	83	Pn	Pn	20 52 41.0	-2.1
GO04	Tololo Observa	1.27	83	eP	Pn	20 52 42.9	-0.2
GO04				eS	Sg	20 53 14.2	+14
LCO	Las Campanas	1.88	46	⇑iP	Pn	20 52 51.1	-0.5
LCO				eS	Sn	20 53 14.9	-0.6
LCO	Las Campanas	1.88	46	Pn	Pn	20 52 50.4	-1.2
AC04	Llanos de Chal	2.35	26		Pn	20 52 55.1	-2.8
VA06	Catapilco	2.37	160	eP	Pn	20 52 57.8	-0.2
VA06				eS	Sn	20 53 26.2	-0.8
AROD	Rodeo	2.41	87	eP	Pb	20 53 01.2	-1.6
AROD				eS	Sg	20 53 36.6	-0.2
ACDV	Cuesta del Vie	2.71	87	eP	Pn	20 53 04.5	+1.5
ACDV				eS	Sb	20 53 43.4	+2.1
ACDV				IAML		20 53 53.9	
	comp=Z,3μm,0.9s						
VA01	Torpederas	2.73	169	Pn	Pn	20 53 02.4	-0.6
ACCO	Cerro Coronel	2.76	96	eP	Pb	20 53 06.3	-2.6
ACCO				eS	Sg	20 53 47.0	-1.2
VA03	San Esteban	2.83	150	eP	Pn	20 53 05.2	+0.7
VA03				eS	Sn	20 53 38.0	-0.5
VA03				IAML		20 53 50.4	
	comp=N,3μm,0.4s						
VA03	San Esteban	2.83	150	Pn	Pn	20 53 04.8	+0.3
ROCH	El Roble	2.84	158	eP	Pn	20 53 04.6	-0.1
ROCH				eS	Sn	20 53 35.5	-3.5
ROC1	El Roble	2.84	159	eP	Pn	20 53 05.4	+0.6
ROC1				eS	Sn	20 53 38.5	-0.6
RTLS	Leoncito	2.93	121	eP	Pb	20 53 09.0	-2.7
RTLS				eS	Sb	20 53 50.0	+2.4
RTLS				IAML		20 53 55.7	
	comp=Z,2μm,1.0s						
MT02	Curacav	3.07	162		Pn	20 53 07.1	-0.7
AUSP	Uspallata	3.10	128	eP	Pn	20 53 11.2	+2.9
AUSP				eS	Sb	20 53 51.5	-0.9
PEL	Peldehue	3.11	155	eP	Pn	20 53 08.7	+0.4
PEL				eS	Sn	20 53 45.3	0.0
PEL				IAML		20 54 01.0	
	comp=N,2μm,0.4s						
PEL	Peldehue	3.11	155		Pn	20 53 08.4	+0.1
PEL	Peldehue	3.11	155	eP	Pn	20 53 09.0	+0.8
PEL				eS	Sb	20 53 54.5	+2.0
GO03	Copiap	3.25	33	eP	Pn	20 53 09.8	-0.4
GO03				IAML		20 54 13.1	
	comp=N,1μm,0.5s						
GO03	Copiap	3.25	33	Pn	Pn	20 53 09.6	-0.6
ZON	Zonda	3.30	112	Pn	Pn	20 53 08.1	-2.9
MT05	Renca	3.31	158	eP	Pn	20 53 12.1	+1.0
MT05				eS	Sn	20 53 50.2	-0.3
MT05				IAML		20 54 09.7	
	comp=N,2μm,0.6s						
MT05	Renca	3.31	158	Pn	Pn	20 53 10.6	-0.5
VA05	Santo Domingo	3.36	171	eP	Pn	20 53 11.3	-0.3
VA05				IAML		20 54 12.3	
	comp=E,1μm,0.4s						
VA05	Santo Domingo	3.36	171		Pn	20 53 10.6	-1.1
RTCV	Cerro Valdivia	3.53	117	eP	Pn	20 53 16.6	+2.5
RTCV				eS	Sb	20 54 06.0	+1.3
MT09	Talagante	3.60	163	eP	Pn	20 53 16.1	+1.0
MT09				eS	Sn	20 53 55.3	-2.4
MT09				IAML		20 54 18.6	
	comp=N,934nm,0.6s						
MT09	Talagante	3.60	163		Pn	20 53 14.1	-1.0
MT01	Popeta	3.62	167	eP	Pn	20 53 14.8	-0.5
MT01				eS	Sn	20 53 57.1	-1.0
MT01	Popeta	3.62	167		Pn	20 53 13.8	-1.6
ARCO	CERRO ARCO	3.78	132	eP	Pn	20 53 20.5	+2.9
ARCO				eS	Sg	20 54 21.5	+0.7
ARCO				IAML		20 54 32.0	
	comp=Z,1μm,1.4s						
VCA	Vinchina	3.87	67	eP	Pn	20 53 19.1	+0.3
VCA				eS	Sg	20 54 22.5	-1.0
VCA				IAML		20 54 35.4	
	comp=Z,2μm,0.9s						
LMEL	Las Melosas	3.92	154	IAML		20 54 33.9	
	comp=N,628nm,0.7s						
AAGR	Agrelo	4.01	134	eP	Pn	20 53 23.2	+2.5
AAGR				eS	Sg	20 54 28.5	+0.5
BO01	Tunca	4.17	167	Pn	Pn	20 53 20.8	-2.0
AVIZ	Vizcacheras	4.46	136	eP	Pn	20 53 29.7	+2.8
BO02	Sierra Bellavi	4.62	165		Pn	20 53 28.8	-0.3
GO05	Huala	4.67	177		Pn	20 53 28.5	-1.3
ACLC	CERRO LA CRUZ	4.69	80	eP	Pn	20 53 32.8	+2.6
ACLC				eS	Sn	20 54 30.0	+5.4
ACLC				IAML		20 54 41.1	
	comp=Z,1μm,0.9s						
ML02	Panimavida	5.46	173		Pn	20 53 39.9	-0.7
PB14	IPOC Station P	5.91	17	Pn	Pn	20 53 43.9	-3.2
H03N1	Juan Fernandez	6.46	240	T	T	21 00 57.1	
	baz=70,slow=72						
H03N2	Juan Fernandez	6.47	240	T	T	21 00 58.6	
	baz=70,slow=72						
H03N3	Juan Fernandez	6.47	240	T	T	21 00 56.4	
	baz=70,slow=72						
VA04	Juan Fernndez	6.49	238	Pn	Pn	20 53 53.8	-0.9
PB10	IPOC Station P	6.96	13	Pn	Pn	20 53 58.6	-2.6
PB15	IPOC Station P	7.51	20		Pn	20 54 05.7	-3.3
PB06	IPOC Station P	7.96	18	Pn	Pn	20 54 10.8	-4.4
PB04	IPOC Station P	8.18	14	Pn	Pn	20 54 13.5	-4.7
LVC	Limon Verde	8.25	22	Pn	Pn	20 54 17.2	-2.0
	comp=Z,0.8nm,0.3s,baz=200,slow=8.7,SNR=2.8						
LVC				Sn	Sn	20 55 49.1	-3.5
	comp=Z,1.6nm,0.3s,baz=172,slow=7.1,SNR=2.3						
LVC				Lg	Lg	20 56 33.6	
	comp=Z,4.1nm,0.3s,baz=62,slow=16,SNR=4.5						
LVC				LR	LR	20 57 23.5	
	comp=Z,747nm,20.2s,baz=208,slow=37						
LVC	Limon Verde	8.25	22		Pn	20 54 14.4	-4.8
LC01	Cunco	8.55	178		Pn	20 54 22.2	-0.8
PB07	IPOC Station P	8.83	14		Pn	20 54 22.3	-4.7
PB09	IPOC Station P	8.92	18	Pn	Pn	20 54 25.4	-2.9
PB01	IPOC Station P	9.58	16	Pn	Pn	20 54 33.1	-4.1
PATCX	Punta Patache	9.66	12	Pn	Pn	20 54 33.1	-5.2
PLCA	Paso Flores	10.47	173	Pn	Pn	20 54 48.9	-0.5
	comp=Z,0.9nm,0.3s,baz=336,slow=12,SNR=19						
PLCA				LR	LR	20 58 17.8	
	comp=Z,226nm,19.6s,baz=353,slow=34						
PLCA	Paso Flores	10.47	173	eP	Pn	20 54 50.0	+0.6
PLCA	Paso Flores	10.47	173		Pn	20 54 49.0	-0.3
PB08	IPOC Station P	10.53	16	Pn	Pn	20 54 46.4	-4.0
PB11	IPOC Station P	10.78	13	Pn	Pn	20 54 50.7	-3.0
PB12	IPOC Station P	11.79	9	Pn	Pn	20 55 03.8	-3.8
ITQB	Itaqui	13.56	91	eP	Pn	20 55 30.4	-1.2
ITQB	Itaqui	13.56	91		Pn	20 55 27.6	-4.0
CPUP	Villa Florida	13.73	77	Pn	Pn	20 55 31.9	-2.0
	comp=Z,0.1nm,0.3s,baz=266,slow=11,SNR=5.6						

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CPUP                                LR     LR      21 01 09.8
      comp=Z,1µm,18.2s,baz=252,slow=39
CPUP  Villa Florida      13.73  77 eP     Pn      20 55 32.5 -1.4
CPUP  Villa Florida      13.73  77        Pn      20 55 29.3 -4.6
LPAZ  La Paz             14.48  16 Pn     Pn      20 55 45.4 +0.7
      comp=Z,0.7nm,0.3s,baz=187,slow=8.2,SNR=41
LPAZ                                LR     LR      21 02 31.1
      comp=Z,401nm,19.4s,baz=173,slow=42
LPAZ  La Paz             14.48  16 eP     Pn      20 55 45.6 +0.9
LPAZ  La Paz             14.48  16        Pn      20 55 43.2 -1.5
PLTB  Pedras Altas       16.05 100 eP     Pn      20 56 03.3 -1.6
PLTB  Pedras Altas       16.05 100  P     Pn      20 56 02.6 -2.3
CPSB  Cacapava Do Su     16.24  95 eP     Pn      20 56 05.8 -1.6
SIV   San Ignacio        17.57  38  P     Pn      20 56 23.9 -0.3
      comp=Z,1.1nm,0.3s,baz=218,slow=10,SNR=56
SIV                                 LR     LR      21 04 22.4
      comp=Z,531nm,18.3s,baz=244,slow=42
AQDB  Aquidauana         17.87  61 eP     P       20 56 28.6 +0.1
AQDB  Aquidauana         17.87  61  P     Pn      20 56 25.2 -2.6
CNLB  Canela             18.60  92 eP     P       20 56 34.7 -1.9
NNA   Nana               18.74 346 LR     LR      21 02 26.0
      comp=Z,27nm,19.7s,baz=168,slow=32
PTGB  Pitanga            18.75  78 eP     P       20 56 37.2 -1.1
PTLB  Pontes e Lacer     19.09  42 eP     P       20 56 42.0 +0.1
PTLB  Pontes e Lacer     19.09  42  P     P       20 56 41.9  0.0
TER01 Tubaro-SC          20.22  91 eP     P       20 56 53.1 -1.1
PP1B  Ponte de Pedra     20.28  55 eP     P       20 56 54.8 -0.2
VILB  Vilhena            20.57  35 eP     P       20 56 58.7 +0.4
VILB  Vilhena            20.57  35  P     P       20 56 55.5 -2.7
PCMB  Pacaembu           20.75  70 eP     P       20 57 00.2 +0.1
SALV  Santo Antonio      20.89  50 eP     P       20 57 01.4 -0.2
TIJ01 Guaruva-PR         21.14  82 eP     P       20 57 02.6 -1.8
ETMB  Extrema            21.17  17 eP     P       20 57 06.3 +1.6
ETMB  Extrema            21.17  17  P     P       20 57 03.4 -1.3
FRTB  Fartura            21.39  76 eP     P       20 57 07.0  0.0
ITRB  Iturama            22.44  67 eP     P       20 57 17.4 -1.0
CZSB  Cruzeiro do Su     22.49 359 eP     P       20 57 21.2 +2.5
CZSB  Cruzeiro do Su     22.49 359  P     P       20 57 18.1 -0.6
CZSB                                IAmb   IAmb    20 57 36.2
      comp=Z,38nm,0.8s
SAML  Samuel             22.90  24  P     P       20 57 21.9 -1.3
PET01 Itanhaem-SP        22.97  81 eP     P       20 57 24.1 +0.3
BB19B Bebedouro          23.25  72 eP     P       20 57 25.5 -1.2
RCLB  Rio Claro- Sao     23.47  76 eP     P       20 57 28.8 -0.2
PDRB  Porto dos Gac      23.55  41 eP     P       20 57 30.0 +0.3
ARAG  Araguaiana, MT     23.73  57 eP     P       20 57 31.2 -0.3
USHA  Ushuaia            24.64 175  P     P       20 57 40.0 +0.4
      comp=Z,7.1nm,0.6s,baz=6.1,slow=10,SNR=2.7
CLDB  Colider            24.68  42 eP     P       20 57 40.3  0.0
IPMB  Ipameri, GO        25.08  66 eP     P       20 57 43.4 -0.6
BSCB  Bom Sucesso        26.40  76 eP     P       20 57 54.8 -1.2
BDFB  Brasilia           26.60  62  P     P       20 57 57.2 -0.6
      comp=Z,14nm,0.7s,baz=224,slow=8.5,SNR=22
BDFB                                LR     LR      21 09 00.4
      comp=Z,229nm,18.5s,baz=319,slow=38
BDFB  Brasilia           26.60  62  P     P       20 57 56.7 -1.1
BDFB                                IAmb   IAmb    20 57 59.1
      comp=Z,41nm,1.3s
SNDB  Serra Nova Dou     26.67  51 eP     P       20 57 59.8 +1.5
VAS01 Vassouras-RJ       26.99  80 eP     P       20 58 01.3 +0.1
DUB01 Friburgo-RJ        27.98  80 eP     P       20 58 09.6 -0.5
NPGB  Novo Progresso     28.07  38 eP     P       20 58 11.1 +0.1
DIAM  Diamantina, MG     28.58  72 eP     P       20 58 16.5 +0.9
PEXB  Peixe              28.66  56 eP     P       20 58 17.1 +0.9
MC01  Montes Claros      29.19  69 eP     P       20 58 21.9 +1.0
JANB  Januaria           29.81  66 eP     P       20 58 26.2 -0.3
ALF01 Guarapari-ES       29.98  79 eP     P       20 58 27.2 -0.6
ITTB  Itaituba           30.17  34 eP     P       20 58 28.3 -1.2
SJMB  Sao Joao De Ma     30.45  75 eP     P       20 58 31.7 -0.3
BSFB  Barra de Sao F     30.67  75 eP     P       20 58 33.5 -0.5
SDBA  SAO DESIDERIO      30.96  61 eP     P       20 58 37.2 +0.6
OTAV  Otavalo            30.97 348 eP     P       20 58 37.6 +0.6
OTAV  Otavalo            30.97 348  P     P       20 58 34.7 -2.4
SMTB  Santa Maria do     31.42  52 eP     P       20 58 43.0 +2.4
PRPB  Parauapebas        31.98  46 eP     P       20 58 44.6 -0.9
GUA01 Guaratinga, BA     32.63  73 eP     P       20 58 50.9 -0.3
MALB  Monte Alegre       33.06  34 eP     P       20 58 55.5 +0.6
CMC01 Camacan, BA        33.50  71 eP     P       20 58 59.0 +0.2
NBIT  Itapeh - BA        33.79  70 eP     P       20 59 01.9 +0.4
GDU01 Guandu, BA         34.34  68 eP     P       20 59 04.7 -1.5
BOAV  Boa Vista          34.41  21 eP     P       20 59 07.3 +0.5
BOAV  Boa Vista          34.41  21  P     P       20 59 07.3 +0.5
PMSA  Palmer Station     34.84 174 eP     P       20 59 10.2 +0.3
ROSC  El Rosal           35.03 356 LR     LR      21 14 20.7
      comp=Z,144nm,18.6s,baz=222,slow=38
MCPB  Macapa, AP         35.45  37 eP     P       20 59 16.4 +0.6
NBPN  Ponto Novo - B     35.53  64 eP     P       20 59 16.8 +0.3
TMAB  Tom-Au,PA,Br       36.02  44 eP     P       20 59 22.0 +1.4
NBLA  Lagarto - SE       37.33  66 eP     P       20 59 28.4 -3.4
ZARC  Zaragoza, Cauc     37.69 356  P     P       20 59 32.1 -2.7
NBMA  Muriti-CE          38.81  61 eP     P       20 59 44.3 -0.1
NBPS  Pedro II - PI      38.86  54 eP     P       20 59 44.9 +0.1
NBLV  Livramento - P     40.22  63 eP     P       20 59 57.1 +0.9
NBPA  Parau_RN           41.10  61 eP     P       21 00 04.2 +0.9
NBPV  Pedro Velho        42.07  63 eP     P       21 00 10.3 -1.0
CELP  Cerrillos          48.43   7  P     P       21 01 01.4 -0.2
HUMP  Col San Antoni     48.58   8  P     P       21 01 01.0 -1.8
GTBY  Guantanamo Bay     50.04 356  P     P       21 01 12.1 -1.9
VNA3  Neumayer Olymp     52.83 159  P     P       21 01 35.9 +1.6
VNA1  Neumayer--Stat     53.12 158  P     P       21 01 38.4 +2.0
VNA2  Neumayer--Watz     53.47 158  P     P       21 01 40.5 +1.5
      baz=294,slow=8.2
SNAA  Sanae              55.05 159  P     P       21 01 51.5 +0.9
SNAA  Sanae              55.05 159  P     P       21 01 51.4 +0.8
      comp=Z,13nm,0.7s,baz=275,slow=7.5,SNR=51
SNAA  Sanae              55.05 159  P     P       21 01 51.4 +0.8
SNAA                                IAmb   IAmb    21 01 53.3
      comp=Z,24nm,1.1s
QSPA  South Pole Qui     59.90 180  P     P       21 02 26.3 +1.4
      comp=Z,4.4nm,0.7s,baz=150,slow=2.3,SNR=7.0
QSPA  South Pole Qui     59.90 180  P     P       21 02 24.2 -0.7
QSPA                                IAmb   IAmb    21 02 42.7
      comp=Z,13nm,1.1s
833A  Chaparral WMA,     63.82 333  P     P       21 02 55.2 +3.6
      baz=154
LPIG  La Paz             65.28 322 LR     LR      21 23 57.0
      comp=Z,36nm,20.2s,baz=211,slow=29
X51A  Calhoun            65.64 349  P     P       21 03 04.3 +1.1
KMSC  Kings Mountain     65.68 352  P     P       21 03 02.8 -0.8
KMSC                                IAmb   IAmb    21 03 07.0
      comp=Z,10nm,1.0s
JCT   Junction City      65.91 334  P     P       21 03 08.1 +2.9
      baz=154
JCT   Junction City      65.91 334  P     P       21 03 05.3 +0.2
V58A  Windy Hill, Pi     66.09 354  P     P       21 03 07.9 +1.8
V58A                                IAmb   IAmb    21 03 09.1
      comp=Z,14nm,1.1s
V55A  Taylorsville       66.37 352  P     P       21 03 09.7 +1.8
V55A                                IAmb   IAmb    21 03 25.0
      comp=Z,17nm,1.4s
WHTX  Lake Whitney,      66.43 337  P     P       21 03 07.7 -0.8
CPCT  Cooper Cave        66.44 349  P     P       21 03 09.1 +0.6
SWET  Sewanee            66.46 348  P     P       21 03 06.4 -2.2
SWET                                IAmb   IAmb    21 03 19.6
      comp=Z,11nm,0.8s
TXAR  Lajitas Array      66.46 330  P     P       21 03 11.2 +2.4
      comp=Z,1.5nm,0.7s,baz=150,slow=7.9,SNR=14
TXAR                                LR     LR      21 27 05.0
      comp=Z,30nm,19.1s,baz=0.0,slow=31
TXAR  Lajitas Array      66.46 330  P     P       21 03 10.4 +1.6
TX31  Lajitas Ar. Si     66.46 330  P     P       21 03 10.6 +1.8
TX32  Lajitas Array      66.46 330  P     P       21 03 10.4 +1.5
TKL   Tuckaleechee C     66.53 350  P     P       21 03 10.6 +1.6
TKL                                 IAmb   IAmb    21 03 21.3
      comp=Z,11nm,0.8s
U59A  Littleton          66.53 355  P     P       21 03 08.8 -0.2
U59A                                IAmb   IAmb    21 03 12.6
      comp=Z,17nm,1.1s
V52A  Sevierville        66.68 350  P     P       21 03 10.6 +0.6
V51A  Loudon             66.76 349  P     P       21 03 11.7 +1.3
V51A                                IAmb   IAmb    21 03 13.4
      comp=Z,11nm,0.9s
U56A  King               66.76 353  P     P       21 03 08.5 -2.0
U56A                                IAmb   IAmb    21 03 23.4
      comp=Z,12nm,0.9s
U54A  Nelsons Funny      67.10 352  P     P       21 03 11.9 -0.8
T59A  Double "B" Far     67.13 355  P     P       21 03 14.9 +2.1
T59A                                IAmb   IAmb    21 03 16.4
      comp=Z,10nm,0.9s
Z35A  Perchaven, San     67.59 337  P     P       21 03 17.6 +1.9
MIAR  Mount Ida          67.59 341  P     P       21 03 15.7 -0.1
VNDA  Vanda              67.66 191  P     P       21 03 17.2 +1.5
      comp=Z,0.8nm,1.0s,baz=113,slow=3.5,SNR=3.0
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VNDA                                LR     LR      21 29 57.8
      comp=Z,35nm,18.6s,baz=138,slow=33
VNDA  Vanda              67.66 191  P     P       21 03 17.3 +1.5
WVT   Waverly            67.71 346  P     P       21 03 19.4 +2.9
      baz=165
WVT   Waverly            67.71 346  P     P       21 03 18.3 +1.8
WVT                                 IAmb   IAmb    21 03 27.5
      comp=Z,20nm,1.4s
ABTX  Abilene, Hawle     67.78 335  P     P       21 03 17.3 +0.2
JSRW  J. Sargeant Re     67.88 355  P     P       21 03 18.0 +0.6
WHAR  Wooly Hollow       67.94 342  P     P       21 03 18.3 +0.3
WHAR                                IAmb   IAmb    21 03 29.6
      comp=Z,17nm,1.4s
S57A  Dark Hollow, R     68.03 354  P     P       21 03 16.8 -1.6
S57A                                IAmb   IAmb    21 03 31.4
      comp=Z,8.8nm,0.9s
TBI   Tubuai             68.04 255 eLR    LR      21 23 53.5
      comp=Z,140nm,29.5s
R58B  Mineral            68.14 355  P     P       21 03 19.3 +0.2
R58B                                IAmb   IAmb    21 03 31.2
      comp=Z,12nm,1.0s
W39A  Magazine           68.26 341  P     P       21 03 22.8 +2.8
      baz=160
W39A  Magazine           68.26 341  P     P       21 03 22.8 +2.8
W39A                                IAmb   IAmb    21 03 32.5
      comp=Z,16nm,1.0s
LCAR  Lake Charles       68.40 344  P     P       21 03 22.1 +1.3
LCAR                                IAmb   IAmb    21 03 23.6
      comp=Z,7.1nm,0.9s
T47A  Sharon Grove       68.40 347  P     P       21 03 20.1 -0.7
S51A  Beattyville        68.44 350  P     P       21 03 20.3 -0.8
S51A                                IAmb   IAmb    21 03 33.9
      comp=Z,16nm,1.1s
FCAR  Ozark Folk Cen     68.47 343  P     P       21 03 21.4 +0.2
FCAR                                IAmb   IAmb    21 03 32.4
      comp=Z,12nm,1.4s
PARMO Parma              68.64 345  P     P       21 03 22.1 -0.2
T45A  Paducah            68.74 346  P     P       21 03 23.3 +0.5
PBMO  Poplar Bluff       68.90 344  P     P       21 03 24.9 +1.0
PBMO                                IAmb   IAmb    21 03 26.9
      comp=Z,7.4nm,0.9s
U40A  Yellville          69.10 342  P     P       21 03 27.4 +2.2
      baz=161
U40A  Yellville          69.10 342  P     P       21 03 26.2 +1.0
U40A                                IAmb   IAmb    21 03 37.0
      comp=Z,7.4nm,0.8s
HHAR  Hobbs              69.32 341  P     P       21 03 27.7 +1.1
HHAR                                IAmb   IAmb    21 03 38.4
      comp=Z,10nm,0.8s
TUL1  Leonard            69.51 340  P     P       21 03 28.5 +0.8
TUL1                                IAmb   IAmb    21 03 39.5
      comp=Z,11nm,0.7s
SIUC  Southern Illin     69.53 346  P     P       21 03 28.1 +0.3
P57A  Homestead Farm     69.66 355  P     P       21 03 27.7 -0.9
P57A                                IAmb   IAmb    21 03 32.7
      comp=Z,12nm,0.9s
CCM   Cathedral Cave     70.31 344  P     P       21 03 34.8 +2.2
      baz=162
CCM   Cathedral Cave     70.31 344  P     P       21 03 34.6 +2.0
CCM                                 IAmb   IAmb    21 03 35.4
      comp=Z,7.8nm,0.7s
PAGS  Pennsylvania G     70.32 356  P     P       21 03 31.7 -0.9
PAGS                                IAmb   IAmb    21 03 46.5
      comp=Z,9.0nm,0.9s
S39A  Bolivar            70.48 342  P     P       21 03 34.8 +1.1
S39A                                IAmb   IAmb    21 03 45.6
      comp=Z,16nm,1.1s
PPT2  Papeete2           70.62 261 eLR    LR      21 25 05.6
      comp=Z,129nm,23.2s
PPT   Papeete            70.63 261 LR     LR      21 27 58.8
      comp=Z,46nm,18.5s,baz=7.0,slow=30
SLM   Saint Louis        70.63 345  P     P       21 03 32.8 -1.7
R40A  Maddies Statio     70.78 343  P     P       21 03 37.0 +1.6
R40A                                IAmb   IAmb    21 03 47.3
      comp=Z,13nm,0.8s
SSPA  Standing Stone     70.80 355  P     P       21 03 38.3 +2.7
      baz=175
ACSO  Alum Creek Sta     70.91 351  P     P       21 03 36.9 +0.7
N59A  State Game Lan     70.96 357  P     P       21 03 40.4 +3.9
      baz=177
KAN16 Harper SW Stat     71.42 338  P     P       21 03 40.0 +0.6
P43A  Skaggs, Pawnee     71.44 346  P     P       21 03 39.8 +0.3
P43A                                IAmb   IAmb    21 03 51.9
      comp=Z,14nm,0.8s
N49A  Columbus Grove     71.75 351  P     P       21 03 41.6 +0.3
M54A  Oil Creek Stat     71.81 354  P     P       21 03 44.3 +2.6
      baz=173
P40A  Paris              71.90 344  P     P       21 03 44.0 +1.8
P40A                                IAmb   IAmb    21 03 45.5
      comp=Z,16nm,0.8s
L56A  Greenwood          72.27 356  P     P       21 03 46.3 +1.9
L56A                                IAmb   IAmb    21 03 48.0
      comp=Z,16nm,0.9s
P38A  Dawn               72.36 343  P     P       21 03 45.5 +0.6
ANMO  Albuquerque        72.49 331  P     P       21 03 47.3 +1.2
N41A  Harden Midland     72.75 345  P     P       21 03 48.9 +1.6
N41A                                IAmb   IAmb    21 04 00.2
      comp=Z,18nm,1.1s
K50A  Casco              73.37 352  P     P       21 03 50.3 -0.6
N38A  Joes South For     73.39 344  P     P       21 03 49.5 -1.5
N38A                                IAmb   IAmb    21 03 58.5
      comp=Z,18nm,1.1s
T25A  Trinidad           73.57 334  P     P       21 03 56.3 +3.8
      baz=151
HNH   Hanover            73.67 360  P     P       21 03 53.2 +0.6
HNH                                 IAmb   IAmb    21 04 10.9
      comp=Z,14nm,1.0s
L40A  Anamosa            74.13 345  P     P       21 03 56.5 +1.1
L40A                                IAmb   IAmb    21 04 08.4
      comp=Z,17nm,0.8s
DBIC  Dimbokro           74.21  72  P     P       21 03 55.6 -0.8
      comp=Z,5.8nm,0.8s,baz=226,slow=6.1,SNR=6.3
DBIC                                LR     LR      21 34 19.7
      comp=Z,156nm,19.7s,baz=219,slow=34
DBIC  Dimbokro           74.21  72  P     P       21 03 55.1 -1.4
DBIC                                IAmb   IAmb    21 04 07.4
      comp=Z,10nm,0.8s
X16A  Lo Mia Camp, P     74.26 327  P     P       21 03 59.1 +2.6
SDCO  Great Sand Dun     74.52 333  P     P       21 04 01.5 +3.4
      baz=150
SDCO  Great Sand Dun     74.52 333  P     P       21 03 59.5 +1.3
SMCO  Snowmass           76.34 333  P     P       21 04 09.2 +0.5
SMCO                                IAmb   IAmb    21 04 22.2
      comp=Z,9.1nm,0.8s
MAW   Mawson             76.74 164  P     P       21 04 11.2 +1.0
      comp=Z,4.3nm,0.9s,baz=325,slow=4.8,SNR=4.8
MAW                                 LR     LR      21 39 28.8
      comp=Z,124nm,18.9s,baz=236,slow=37
MAW   Mawson             76.74 164 IAmb   IAmb    21 04 15.8
      comp=Z,2.3nm,1.2s
ECSD  EROS Data Cent     77.01 342  P     P       21 04 14.1 +2.3
      baz=158
ECSD  EROS Data Cent     77.01 342  P     P       21 04 13.6 +1.7
ECSD                                IAmb   IAmb    21 04 19.1
      comp=Z,10nm,0.9s
CCUT  Cedar City         77.71 328  P     P       21 04 17.6 +1.4
PRN   Pahroc Range       78.39 326  P     P       21 04 21.6 +1.7
PRN                                 IAmb   IAmb    21 04 26.0
      comp=Z,12nm,1.0s
KOWA  Kowa               79.31  66  P     P       21 04 25.6 +0.3
KOWA                                IAmb   IAmb    21 04 27.3
      comp=Z,10nm,0.7s
SPR3  Spring Creek 3     79.33 328  P     P       21 04 26.5 +1.3
DUG   Dugway, Tooele     79.62 330  P     P       21 04 29.3 +2.7
PDAR  Pinedale Array     80.42 333  P     P       21 04 32.8 +1.9
      comp=Z,0.3nm,0.3s,baz=100,slow=5.0,SNR=0.9
PDAR                                LR     LR      21 35 47.9
      comp=Z,25nm,20.5s,baz=114,slow=32
BOSA  Boshof             81.95 118  P     P       21 04 40.0 +0.5
      comp=Z,4.7nm,1.2s,baz=198,slow=6.4,SNR=1.6
BOSA                                LR     LR      21 36 19.7
      comp=Z,64nm,19.4s,baz=196,slow=32
HLID  Hailey             83.06 331  P     P       21 04 48.6 +3.9
      baz=144
TORD  Torodi Ar. Bea     83.15  71  P     P       21 04 46.1 +0.4
      comp=Z,10nm,0.8s,baz=259,slow=4.7,SNR=54
TORD                                LR     LR      21 40 13.1
      comp=Z,165nm,18.8s,baz=235,slow=35
TORD  Torodi Ar. Bea     83.15  71  P     P       21 04 45.8 +0.2
TORD                                IAmb   IAmb    21 04 47.5
      comp=Z,10nm,0.8s
PLID  Pearl Lake         84.96 331  P     P       21 04 56.5 +2.0
ESDC  Sonseca Array      94.17  46 LR     LR      21 47 40.2
      comp=Z,62nm,18.6s,baz=260,slow=35
DZM   Mont Dzumac       103.24 235 eLR    LR      21 40 13.6
      comp=Z,104nm,33.9s
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AKASG Malin Array Be    119.81  46 PKP    PKPdf   21 11 08.4 -0.7
      comp=Z,0.9nm,0.6s,baz=256,slow=3.1,SNR=5.3
ASAR  Alice Springs     120.73 208 PKP    PKiKP   21 11 12.5 +0.4
      comp=Z,0.4nm,0.8s,baz=107,slow=1.1,SNR=2.6
WRA   Warramunga Arr    123.85 210 PKP    PKPdf   21 11 18.2 +0.2
      comp=Z,0.6nm,0.6s,baz=156,slow=1.7,SNR=9.8
WRA   Warramunga Arr    123.85 210        PKPpre  21 11 13.2
H11S2 WAKE ISLAND Hy125.56 272     T      T       23 30 08.6
      baz=114,slow=74
H11S1 WAKE ISLAND Hy125.57 272     T      T       23 30 13.7
      baz=114,slow=74
H11S3 WAKE ISLAND Hy125.57 272     T      T       23 30 06.1
      baz=114,slow=74
KLMR  Klimovskoe        126.52  34 ePKPdf PKPdf   21 11 19.6 -2.1
KLMR                               AMP            21 11 35.4
      comp=Z,12nm,1.3s
GAR   Garm              148.20  64        PKPbc   21 12 05.2 -0.3
TOLI2 Tolitoli          148.41 205        PKPbc   21 12 06.5 -0.1
BTK   Batken            148.49  62        PKPbc   21 12 05.1 -1.0
DRK   Karamyk           149.31  63        PKPbc   21 12 08.1 -0.4
HYB   Hyderabad         150.47 109 i PKP  PKiKP   21 12 13.0 +0.7
ZALV  Zalesovo Beam     151.16  29 PKP    PKPdf   21 12 06.7 +0.5
      comp=Z,12nm,0.7s,baz=308,slow=7.3,SNR=4.0
ZALV                               PKPbc  sPKPdf  21 12 13.2 +4.0
      comp=Z,22nm,0.9s,baz=301,slow=3.4,SNR=57
ZALV                               PKPab  PKPab   21 12 20.8 +1.0
      comp=Z,14nm,0.7s,baz=300,slow=3.2,SNR=15
KSH   Kashi             152.50  62 PKPbc  PKiKP   21 12 16.5 +0.5
MKAR  Makanchi Array    154.35  43 PKP    PKPdf   21 12 11.8 +0.6
      comp=Z,0.4nm,0.7s,baz=302,slow=2.7,SNR=4.6
MKAR                               PKPbc  PKiKP   21 12 20.7 +1.2
      comp=Z,1.7nm,0.8s,baz=324,slow=2.0,SNR=16
MKAR                               PKPab  PKPab   21 12 33.7 +0.1
      comp=Z,1.8nm,0.8s,baz=316,slow=1.6,SNR=6.0
SONM  Songino Array     162.49   3 PKPab  PKPab   21 13 09.8 +1.0
      comp=Z,0.7nm,0.8s,baz=339,slow=4.5,SNR=3.6
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WEL 16 20:57:10.0±0.8**, 40°S**±4°×**17°4E**±°**, h181**^{km}±7^{km}**, M3.2**/25**, ML3.7**/1**, MLv3.2**/25**, Error ellipse: s-maj=0.0km s-min=0.0km az=88.8, North Island**

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Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                   Op     ISC       h  m  s    ISC
NMEZ  Namu Road           0.36 316 P      Pn      20 57 35.6 +1.2
KHEZ  Kahui Hut           0.41 339 P      Pn      20 57 35.8 +1.1
NBEZ  Newall Road No      0.48 328 P      Pn      20 57 36.0 +1.1
DREZ  Durham Road         0.49   0 P      Pn      20 57 36.1 +1.2
WAZ   Wanganui            0.61  98 P      Pn      20 57 37.2 +1.8
VRZ   Vera Road           0.70  38 P      Pn      20 57 36.2 +0.3
DRZ   Dome Shelter        1.13  70 P      Pn      20 57 39.3 +0.1
DUWZ  D'Urville Isla      1.15 191 P      Pn      20 57 39.7 +0.8
HIZ   Hauiti              1.27  24 P      Pn      20 57 39.6 -0.4
HIZ                                S      Sn      20 58 03.4 +0.3
KIW   Kapiti Island       1.30 156 P      Pn      20 57 40.8 +0.5
KIW                                S      Sn      20 58 04.1 +0.3
OGWZ  Otaki Gorge         1.36 147 P      Pn      20 57 41.4 +0.7
OGWZ                               S      Sn      20 58 04.8 +0.1
POWZ  Post Office Ro      1.40 121 P      Pn      20 57 41.6 +0.5
POWZ                               S      Sn      20 58 05.8 +0.6
TSZ   Takapari Road       1.41 106 P      Pn      20 57 41.7 +0.5
TSZ                                S      Sn      20 58 05.8 +0.4
MRZ   Mangatainoka R      1.44 133 P      Pn      20 57 41.9 +0.4
MRZ                                S      Sn      20 58 07.0 +1.1
TCW   Tory Channel        1.54 178 P      Pn      20 57 43.1 +0.7
TCW                                S      Sn      20 58 07.8 +0.3
CAW   Cannon Point        1.58 155 P      Pn      20 57 43.2 +0.4
CAW                                S      Sn      20 58 08.9 +0.7
HOWZ  Holdsworth Sta      1.58 141 P      Pn      20 57 43.0 +0.2
HOWZ                               S      Sn      20 58 08.2 -0.2
PRWZ  Pori Road           1.62 123 P      Pn      20 57 43.8 +0.6
PRWZ                               S      Sn      20 58 09.8 +0.9
DVHZ  Dannevirke          1.64 113 P      Pn      20 57 43.6 +0.2
DVHZ                               S      Sn      20 58 09.6 +0.4
NNZ   Nelson              1.66 202 P      Pn      20 57 43.7 +0.2
NNZ                                S      Sn      20 58 09.8 +0.1
WEL   Wellington          1.67 165 P      Pn      20 57 44.1 +0.5
TIWZ  Tintock             1.70 131 P      Pn      20 57 44.3 +0.3
TIWZ                               S      Sn      20 58 09.4 -1.0
QRZ   Quartz Range        1.72 228 P      Pn      20 57 43.5 -0.7
TUWZ  Tuamarina           1.76 186 P      Pn      20 57 45.1 +0.5
MTW   Mount Morrison      1.78 147 P      Pn      20 57 44.8 -0.1
BHW   Baring Head         1.81 164 P      Pn      20 57 44.5 -0.5
MSWZ  Moikau Station      1.91 156 P      Pn      20 57 45.9 -0.3
TMWZ  Te Maipa            1.93 138 P      Pn      20 57 46.3 -0.1
PAWZ  Paruwai Farm        1.94 152 P      Pn      20 57 46.3 -0.3
BSWZ  Blackbirch Sta      2.05 187 P      Pn      20 57 47.5 -0.1
PLWZ  Palliser            2.06 157 P      Pn      20 57 47.3 -0.4
TRWZ  Traveller           2.06 147 P      Pn      20 57 47.4 -0.3
TOZ   Tahuroa Road        2.19  28 P      Pn      20 57 48.0 -1.3
THZ   Tophouse            2.31 205 P      Pn      20 57 50.0 -0.6
DSZ   Denniston Nort      2.75 221 P      Pn      20 57 54.4 -1.4
KNZ   Kokohu              2.77  77 P      Pn      20 57 54.8 -1.1
KHZ   Kahutara            2.78 190 P      Pn      20 57 54.9 -1.1
MHGZ  Mahia Peninsul      2.92  81 P      Pn      20 57 57.1 -0.6
RIGZ  Rimuhau             2.93  72 P      Pn      20 57 56.7 -1.2
PRGZ  Paritu Road         2.96  76 P      Pn      20 57 57.1 -1.1
TKGZ  Te Karaka           3.10  68 P      Pn      20 57 58.1 -1.8
KUZ   Kuaotunu            3.16  23 P      Pn      20 57 59.2 -1.5
RUGZ  Raukumara Rang      3.21  59 P      Pn      20 57 58.2 -3.1
TWGZ  Tauwhareparae       3.31  64 P      Pn      20 58 01.2 -1.3
CNGZ  Carnagh Statio      3.34  70 P      Pn      20 58 01.7 -1.1
HAZ   Te Kaha             3.40  57 P      Pn      20 58 00.3 -3.2
GVZ   Greta Valley S      3.40 195 P      Pn      20 58 01.5 -2.1
LTZ   Lake Taylor         3.43 204 P      Pn      20 58 02.2 -1.7
PKGZ  Pakihiroa           3.52  61 P      Pn      20 58 02.7 -2.4
PUZ   Puketiti            3.55  64 P      Pn      20 58 03.1 -2.3
INZ   Inchbonnie          3.69 213 P      Pn      20 58 04.8 -2.3
MXZ   Matakaoa Point      3.85  58 P      Pn      20 58 05.6 -3.6
OXZ   Oxford              3.99 203 P      Pn      20 58 08.4 -2.6
OKCZ  Okains Bay          4.13 192 P      Pn      20 58 10.0 -2.8
MQZ   McQueen's Vall      4.19 196 P      Pn      20 58 10.1 -3.4
WVZ   Waitaha Valley      4.28 216 P      Pn      20 58 12.1 -2.5
AKCZ  Akaroa Harbour      4.30 193 P      Pn      20 58 12.1 -2.8
MHCZ  Mount Hutt          4.33 206 P      Pn      20 58 12.7 -2.7
RACZ  Rakaia              4.33 200 P      Pn      20 58 12.5 -2.8
WACZ  Wakanui South       4.61 202 P      Pn      20 58 16.1 -2.8
GCSZ  Gaunt Creek Bo      4.66 217 P      Pn      20 58 16.6 -2.9
RPZ   Rata Peaks          4.67 209 P      Pn      20 58 16.8 -2.9
ARCZ  Arundel             4.83 207 P      Pn      20 58 18.7 -3.0
FOZ   Fox Glacier         5.06 219 P      Pn      20 58 21.8 -3.0
TMZ   Timaru              5.27 206 P      Pn      20 58 24.5 -2.9
LBZ   Lake Benmore        5.58 211 P      Pn      20 58 27.8 -3.7
JCZ   Jackson Bay         5.97 221 P      Pn      20 58 32.6 -4.0
ODZ   Otahua Downs        5.98 205 P      Pn      20 58 33.5 -3.1
WKZ   Wanaka              6.42 215 P      Pn      20 58 38.0 -4.5
```

IDC 16 20:57:47.3±8.0**, 7°.81S**×**128°.08E, h181**^{km}±88^{km}**, mb2.8**/2**, mb1 3.2**/4**, mb1mx2.9**/31**, mbtmp3.6**/4**, MS3.2**/1**, Ms1 3.1**/1**, ms1mx2.6**/3**, Error ellipse: s-maj=189.5km s-min=30.4km az=71.0, Banda Sea**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                   Op     ISC       h  m  s    ISC
WRA   Warramunga Arr     13.50 154 P      Pn      21 00 51.0 -0.8
      0.5nm,0.3s,baz=325,slow=13,SNR=24
WRA                                S      Sn      21 03 12.4  -10
      1.1nm,0.3s,baz=328,slow=23,SNR=18
ASAR  Alice Springs      16.72 161 P      Pn      21 01 32.5 +1.1
      0.4nm,0.3s,baz=344,slow=11,SNR=35
ASAR                               S      S       21 04 34.5 -1.3
      0.3nm,0.3s,baz=323,slow=15,SNR=8.4
STKA  Stephens Creek     27.05 154 LR     LR      21 13 49.4
      comp=Z,52nm,21.9s,baz=216,slow=36
SONM  Songino Array      58.63 343 P      P       21 07 24.9 -0.6
      0.3nm,0.7s,baz=157,slow=6.7,SNR=2.6
MKAR  Makanchi Array     67.88 328 P      P       21 08 26.5 +0.3
      0.1nm,0.4s,baz=126,slow=7.0,SNR=5.5
```

IDC ***16*** *21:06:39.7±1.5, 44°.77N×7°.80E, h0^{km}, mb3.3/1, mb1 3.7/6, mb1mx3.4/52, mbtmp3.5/6, ML4.0/5, Error ellipse: s-maj=38.4km s-min=13.7km az=134.0*

BGR ***16*** *21:06:40.8±0.6, 44°.70N×7°.38E, h10^{km}, ML3.4/10, Error ellipse: s-maj=7.8km s-min=6.7km az=56.0*

STR ***16*** *21:06:41.6±0.3, 45°N±1°×°±°, h14^{km}±1^{km}, mb3.1/1, MLv3.4/12, preliminary*

GEN ***16*** *21:06:42, 44°.78N×7°.66E, h26^{km}±1^{km}, ML3.3*

PRU ***16*** *21:06:42.9±0.0, 45°.05N×7°.74E, h0^{km}*

LDG ***16*** *21:06:42.7±0.1, 44°.80N×7°.67E, h26^{km}, Md1.9/3, Ml1.5/3,*

Error ellipse: s-maj=1.5km s-min=1.4km az=86.0

*ROM **16** 21:06:42.4±0.1, 44°.768N±0°.004×7°.612E±0°.008, h35^{km}, ML3.1/73, Error ellipse: s-maj=0.5km s-min=0.4km az=98.0*

ISC 16 21:06:41.0±0.8**, 44°.78N**±0°.01×**7°.69E**±0°.01**, h18**^{km}±3^{km}**,**
n304, σ1s.68/467**, 4C-15D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BHB	**Bricherasio**	0.31	281	P	Pn	21 06 50.3	-0.3
BHB				S	Sb	21 06 55.3	+2.7
BHB	**Bricherasio**	0.31	281	⇓P	Pn	21 06 50.3	-0.3
BHB				S	Sn	21 06 55.5	-1.2
MONC	**Moncucco Torin**	0.34	30	⇓P	Pn	21 06 52.1	+1.1
MONC				S	Sn	21 06 58.6	+1.2
MONC				AML	AML		
	comp=E,15950µm,0.2s						
MONC				AML	AML		
	comp=N,11650µm,0.2s						
RSP	**Reno Superiore**	0.47	321	P	Pb	21 06 52.4	+1.5
RSP				S	Sb	21 06 58.8	+1.2
RSP	**Reno Superiore**	0.47	321	P	Pb	21 06 52.4	+1.5
RSP				S	Sb	21 06 59.0	+1.4
RSP				AML	AML		
	comp=N,2500µm,1.6s						
RSP				AML	AML		
	comp=E,3045µm,0.4s						
RSP				AML	AML		
	comp=N,2295µm,0.1s						
RSP				AML	AML		
	comp=N,2300µm,0.1s						
RSP				AML	AML		
	comp=E,3275µm,0.4s						
RSP				AML	AML		
	comp=E,3050µm,0.4s						
ROTM	**Rocchetta Tana**	0.48	82	P	Pn	21 06 54.2	+1.4
ROTM				S	Sn	21 07 02.3	+1.5
ROTM	**Rocchetta Tana**	0.48	82	⇓P	Pn	21 06 54.0	+1.2
ROTM				S	Sn	21 07 02.5	+1.8
ROTM				AML	AML		
	comp=N,19150µm,0.4s						
ROTM				AML	AML		
	comp=E,13050µm,0.5s						
PZZ	**Stroppo**	0.49	236	P	Pb	21 06 52.4	+1.2
PZZ				S	Sb	21 06 58.8	+0.7
PZZ	**Stroppo**	0.49	236	⇓P	Pb	21 06 52.4	+1.2
PZZ				S	Sb	21 06 59.1	+0.9
PZZ				AML	AML		
	comp=N,7265µm,0.7s						
PZZ				AML	AML		
	comp=E,4765µm,0.5s						
GBOS	**Grotte di Boss**	0.55	169	P	Pn	21 06 54.4	+0.5
GBOS				S	Sn	21 07 01.9	-0.8
GBOS	**Grotte di Boss**	0.55	169	⇓P	Pn	21 06 54.4	+0.5
GBOS				S	Sn	21 07 02.1	-0.6
GBOS				AML	AML		
	comp=E,6995µm,0.5s						
GBOS				AML	AML		
	comp=N,4175µm,0.4s						
ENR	**Entracque**	0.59	199	P	Pn	21 06 54.2	-0.3
ENR				S	Sb	21 07 01.9	+1.3
ENR	**Entracque**	0.59	199	⇓P	Pn	21 06 54.2	-0.3
ENR				S	Sb	21 07 02.0	+1.3
ENR				AML	AML		
	comp=N,6135µm,0.1s						
ENR				AML	AML		
	comp=E,5275µm,0.9s						
PCP	**Piancastagn**	0.66	111	P	Pn	21 06 56.3	+1.0
PCP				S	Sn	21 07 05.6	+0.2
PCP	**Piancastagn**	0.66	111	⇑P	Pn	21 06 56.4	+1.0
PCP				S	Sn	21 07 05.5	+0.2
PCP				AML	AML		
	comp=N,3065µm,0.3s						
PCP				AML	AML		
	comp=E,2825µm,1.6s						
QLNO	**Quiliano**	0.66	134	⇑P	Pn	21 06 56.3	+1.0
QLNO				S	Sn	21 07 05.3	+0.1
QLNO				AML	AML		
	comp=E,2680µm,1.5s						
QLNO				AML	AML		
	comp=N,2200µm,0.2s						
RRL	**Rocca Remolon**	0.66	283	P	Pn	21 06 55.6	0.0
RRL				S	Sb	21 07 04.2	+1.4
RRL	**Rocca Remolon**	0.66	283	⇓P	Pn	21 06 55.6	0.0
RRL				S	Sb	21 07 04.2	+1.4
RRL				AML	AML		
	comp=N,2840µm,0.4s						
RRL				AML	AML		
	comp=E,1380µm,0.4s						
MBDF	**Montbardon**	0.66	266	*e*Pg	Pn	21 06 55.6	+0.1
MBDF				*e*Sg	Sb	21 07 03.7	+0.9
	comp=E,1µm,0.2s						
CANO	**Canova, Maglio**	0.69	146	P	Pn	21 06 56.8	+0.9
CANO				S	Sn	21 07 06.5	+0.2
SURF	**Saint Ours**	0.69	245	Pg	Pb	21 06 55.7	+1.1
SURF				Sg	Sb	21 07 04.8	+0.9
RORO	**Rocca Rossa**	0.72	158	P	Pn	21 06 57.5	+1.3
RORO				S	Sn	21 07 06.7	-0.1
RORO	**Rocca Rossa**	0.72	158	⇑P	Pn	21 06 57.1	+0.8
RORO				S	Sn	21 07 06.7	-0.1
RORO				AML	AML		
	comp=E,3970µm,0.7s						
RORO				AML	AML		
	comp=N,2370µm,0.2s						
TRAV	**Traversella**	0.73	3	P	Pb	21 06 55.9	+0.7
TRAV				S	Sg	21 07 04.0	-1.1
TRAV	**Traversella**	0.73	3	P	Pb	21 06 55.9	+0.7
TRAV				S	Sg	21 07 04.2	-1.0
TRAV				AML	AML		
	comp=N,3235µm,0.2s						
TRAV				AML	AML		
	comp=E,3300µm,0.2s						
MGRO	**Montegrosso**	0.74	173	P	Pn	21 06 57.2	+0.5
MGRO				S	Sn	21 07 07.3	-0.3
MGRO	**Montegrosso**	0.74	173	⇓P	Pn	21 06 57.2	+0.5
MGRO				S	Sn	21 07 07.4	-0.3
MGRO				AML	AML		
	comp=E,2715µm,1.5s						
MGRO				AML	AML		
	comp=N,4070µm,0.4s						
ISO	**Isola**	0.75	218	Pg	Pb	21 06 56.4	+0.8
ISO				Sg	Sb	21 07 06.0	+0.4
BNI	**Bardonecchia**	0.77	291	P	Pn	21 06 57.5	+0.5
BNI				S	Sb	21 07 07.4	+1.3
BNI				AML	AML		
	comp=N,872µm,0.4s						
BNI				AML	AML		
	comp=E,775µm,0.4s						
BNI				AML	AML		
	comp=N,870µm,0.4s						
BNI				AML	AML		
	comp=N,1050µm,0.4s						
BNI				AML	AML		
	comp=E,554µm,0.4s						
LSD	**Lago del Serru**	0.78	330	P	Pb	21 06 57.2	+1.0
LSD				S	Sb	21 07 07.2	+0.6
LSD	**Lago del Serru**	0.78	330	⇓P	Pb	21 06 57.2	+1.0
LSD				S	Sg	21 07 07.0	+0.2
LSD				AML	AML		
	comp=N,1136µm,0.1s						
LSD				AML	AML		
	comp=E,1345µm,1.6s						
SPIF	**crte de Spivo**	0.80	204	Pg	Pb	21 06 57.0	+0.7
SPIF				Sg	Sb	21 07 07.6	+0.8
CIRO	**Champorcher**	0.82	354	P	Pb	21 06 57.4	+0.5
CIRO				S	Sg	21 07 07.2	-1.0
CIRO	**Champorcher**	0.82	354	⇓P	Pb	21 06 57.4	+0.5
CIRO				S	Sg	21 07 07.1	-1.0
CIRO				AML	AML		
	comp=N,1935µm,0.4s						
CIRO				AML	AML		
	comp=E,1815µm,0.5s						
OGMO	**Fort Saint-Gob**	0.83	301	Pg	Pn	21 06 58.7	+0.8
TURF	**col de Turini**	0.83	195	Pg	Pn	21 06 58.0	0.0
TURF				Sg	Sb	21 07 08.5	+0.5
IMI	**Imperia**	0.88	170	P	Pn	21 06 59.4	+0.9
IMI				S	Sn	21 07 10.5	-0.4
IMI	**Imperia**	0.88	170	⇓P	Pn	21 06 59.5	+0.9
IMI				S	Sn	21 07 11.0	+0.1
OGAG	**Argentiere**	0.88	249	Pg	Pb	21 06 58.2	+0.4
SBF	**Sospel**	0.94	191	*e*Pg	Pn	21 06 59.7	+0.4
SBF	**Sospel**	0.94	191	*e*P	Pn	21 07 01.8	+2.5
SBF				*e*Sg	Sg	21 07 11.5	-0.1
	comp=E,867nm,0.2s						
RNCA	**Ronca, Sant'Ol**	0.95	109	P	Pn	21 07 01.2	+1.8
MVIF	**Mont Vial**	0.97	204	Pg	Pg	21 06 59.8	+0.1
LPG	**La Plagne**	0.98	317	*e*Pg	Pn	21 07 00.8	+0.8
LPG				*e*Sg	Sg	21 07 13.7	+0.8
	comp=E,248nm,0.3s						
ESCA	**l'Escarene**	0.98	194	Pg	Pn	21 07 00.3	+0.5
ESCA				Sg	Sg	21 07 12.6	-0.2
LPL	**La Plagne**	1.00	318	*e*Pg	Pn	21 07 01.3	+1.0
LPL	**La Plagne**	1.00	318	*e*P	Pn	21 07 04.0	+3.7
LPL				*e*Sg	Sg	21 07 14.3	+0.7
	comp=E,330nm,0.3s						
LPL				*e*Sn	Sn	21 07 16.1	+2.1
BURY	**Giardini Botan**	1.00	186	P	Pn	21 07 01.0	+0.9
BURY				S	Sg	21 07 13.2	-0.4
BURY	**Giardini Botan**	1.00	186	P	Pn	21 07 01.0	+0.9
BURY				S	Sg	21 07 13.8	+0.1
BURY				AML	AML		
	comp=N,1665µm,0.2s						
BURY				AML	AML		
	comp=E,2035µm,0.2s						
MRGE	**Morge**	1.08	336	⇓P	Pn	21 07 02.1	+0.7
MRGE				S	Sb	21 07 15.0	-0.2
MRGE				AML	AML		
	comp=E,1580µm,0.5s						
MRGE				AML	AML		
	comp=N,1290µm,0.8s						
SATI	**Passo dei Sala**	1.10	6	P	Pb	21 07 01.4	-0.3
SATI	**Passo dei Sala**	1.10	6	P	Pb	21 07 01.4	-0.3
SATI				S	Sb	21 07 14.8	-1.0
SATI				AML	AML		
	comp=E,618µm,1.3s						
SATI				AML	AML		
	comp=N,534µm,0.7s						
REMY	**Saint-Rhmy-en**	1.12	341	P	Pg	21 07 02.8	0.0
REMY	**Saint-Rhmy-en**	1.12	341	⇓P	Pg	21 07 02.8	0.0
REMY				S	Sb	21 07 16.3	-0.1
REMY				AML	AML		
	comp=E,1270µm,0.4s						
REMY				AML	AML		
	comp=N,1162µm,0.4s						
REMY				AML	AML		
	comp=E,1275µm,0.4s						
GORR	**Gorreto**	1.16	98	P	Pg	21 07 04.2	+0.9
GORR	**Gorreto**	1.16	98	P	Pg	21 07 04.2	+0.9
GORR				S	Sg	21 07 20.7	+2.2
GORR				AML	AML		
	comp=N,910µm,1.5s						
GORR				AML	AML		
	comp=E,1315µm,0.3s						
CALF	**Calern**	1.17	208	P	Pg	21 07 03.3	-0.3
CALF				Pg	Pb	21 07 03.9	+1.2
CALF				Sg	Sg	21 07 18.9	0.0
OGDI	**Digne**	1.20	236	Pg	Pg	21 07 06.4	+2.2
OGDI				Sg	Sg	21 07 23.0	+3.0
BOB	**Bobbio (Coli)**	1.25	90	P	Pg	21 07 05.6	+0.5
BOB				AML	AML		
	comp=N,670µm,0.8s						
BOB				AML	AML		
	comp=E,500µm,0.5s						
BOB				AML	AML		
	comp=N,670µm,0.8s						
BOB				AML	AML		
	comp=E,507µm,0.3s						
BOB				AML	AML		
	comp=N,692µm,0.4s						
MMK	**Mattmark**	1.28	9	⇓P	Pn	21 07 04.5	+0.2
MMK				S	Sb	21 07 19.1	-1.8
MMK				AML	AML		
	comp=E,372µm,0.3s						
MMK				AML	AML		
	comp=N,564µm,0.3s						
MMK				AML	AML		
	comp=E,372µm,0.3s						
MMK				AML	AML		
	comp=N,564µm,0.2s						
ORIF	**Oris-en-Rattie**	1.29	277	*e*Pn	Pg	21 07 06.4	+0.4
ORIF	**Oris-en-Rattie**	1.29	277	*e*Pg	Pg	21 07 06.6	+0.6
ORIF				*e*Sn	Sn	21 07 22.5	+1.4
	comp=N,859nm,0.3s						
ORIF	**Oris-en-Rattie**	1.29	277	Pn	Pg	21 07 06.6	+0.6
ORIF	**Oris-en-Rattie**	1.29	277	Sn	Sg	21 07 24.2	+1.3
ORIF	**Oris-en-Rattie**	1.29	277	P	Pg	21 07 06.5	+0.6
ORIF				S	Sg	21 07 24.0	+1.1
ORIF				AML	AML		
	comp=E,1010µm,1.0s						
ORIF				AML	AML		
	comp=N,926µm,1.5s						
EILF	**Villa Eilenroc**	1.30	198	Pn	Pb	21 07 05.1	+0.3
EILF				Sn	Sb	21 07 21.3	+0.3
DIX	**Grande Dixence**	1.31	351	Pn	Pn	21 07 05.4	+0.7
DIX	**Grande Dixence**	1.31	351	⇓P	Pn	21 07 05.4	+0.7
DIX				S	Sb	21 07 20.3	-1.6
DIX				AML	AML		
	comp=N,458µm,0.6s						
DIX				AML	AML		
	comp=E,560µm,1.2s						
VARE	**Varese**	1.33	35	P	Pn	21 07 05.4	+0.7
VARE				AML	AML		
	comp=E,532µm,0.6s						
VARE				AML	AML		
	comp=N,528µm,1.5s						
MSSA	**Maissana**	1.39	109	P	Pb	21 07 06.6	+0.3
MSSA				AML	AML		
	comp=E,262µm,0.8s						
MSSA				AML	AML		
	comp=N,272µm,0.5s						
MSSA				AML	AML		
	comp=N,272µm,0.5s						
MSSA				AML	AML		
	comp=E,256µm,0.8s						
FRF	**La Foret Royal**	1.43	212	*e*Pn	Pb	21 07 07.2	+0.1
FRF	**La Foret Royal**	1.43	212	*e*P	Pg	21 07 09.3	+0.7
FRF				*e*Sn	Sn	21 07 24.8	+0.4
	comp=E,327nm,0.2s						
EMBD	**Embd, Matterta**	1.44	4	Pn	Pn	21 07 07.3	+1.0
BLAF	**les Blancs**	1.44	235	Pn	Pg	21 07 08.6	-0.2
BLAF				Sn	Sg	21 07 26.8	-0.8
MUGIO	**Muggio**	1.48	39	P	Pn	21 07 07.5	+0.7
MUGIO				AML	AML		
	comp=E,344µm,1.5s						
MUGIO				AML	AML		
	comp=N,352µm,0.4s						
MUGIO				AML	AML		
	comp=E,344µm,1.5s						
MUGIO				AML	AML		
	comp=N,352µm,0.5s						
MERA	**Merate**	1.51	53	P	Pb	21 07 08.5	0.0
CTL8	**Castelleone**	1.55	71	P	Pg	21 07 10.8	0.0
CTL8				AML	AML		
	comp=N,264µm,1.5s						
CTL8				AML	AML		
	comp=E,192µm,1.5s						
MLYF	**Mely**	1.59	241	Pn	Pb	21 07 10.4	+0.6
OGSM	**Saint Maurice**	1.63	301	Pn	Pb	21 07 11.7	+1.1
OGSM				Sn	Sb	21 07 31.8	+0.9
AIGLE	**Aigle**	1.64	342	Pn	Pg	21 07 12.3	-0.4
AIGLE	**Aigle**	1.64	342	Sn	Sb	21 07 32.6	+1.5
LMR	**La Mourre**	1.68	211	*e*Pn	Pn	21 07 10.3	+0.9
LMR				*e*Sn	Sn	21 07 30.4	0.0
	comp=E,256nm,0.2s						
PLMA	**Palmaria, Port**	1.71	115	⇑P	Pb	21 07 11.2	-0.6
PLMA				AML	AML		
	comp=E,161µm,0.2s						
PLMA				AML	AML		
	comp=N,173µm,0.3s						
SMRF	**Simiane la Rot**	1.72	243	*e*Pn	Pb	21 07 12.0	0.0
SMRF				*e*Sn	Sn	21 07 32.3	+0.8
	comp=N,64nm,0.1s						
SMRF				*e*Sg	Sg	21 07 36.2	-0.2
	comp=N,217nm,0.2s						
GRAM	**Graiana**	1.72	99	P	Pb	21 07 12.9	+0.8
GRAM				AML	AML		
	comp=N,544µm,1.1s						
GRAM				AML	AML		
	comp=E,598µm,0.9s						
BSTF	**la Bastide-des**	1.72	239	Pn	Pb	21 07 12.6	+0.5
BSTF				Sn	Sb	21 07 33.6	+0.2
MDI	**Monti di Nese**	1.74	54	P	Pn	21 07 11.0	+0.7
MDI				AML	AML		
	comp=N,384µm,0.6s						
MDI				AML	AML		
	comp=N,384µm,0.6s						
MDI				AML	AML		
	comp=E,498µm,1.1s						
RUSF	**Rustrel**	1.79	243	Pn	Pb	21 07 13.3	0.0
RUSF				Sn	Sb	21 07 35.1	-0.3
FUSIO	**Fusio**	1.81	22	P	Pn	21 07 11.4	+0.1
FUSIO				AML	AML		
	comp=E,206µm,0.5s						
FUSIO				AML	AML		
	comp=N,126µm,0.3s						
ARTF	**Artigues**	1.81	229	Pn	Pb	21 07 12.9	-0.6
ARTF				Sn	Sn	21 07 33.9	+0.3
EQUI	**Equi**	1.87	108	P	Pn	21 07 13.5	+1.5
OG35	**Corcelles**	1.96	311	Pn	Pb	21 07 15.7	-0.4
OG35				Sn	Sn	21 07 39.0	+1.6
VLC	**Villacollemand**	2.03	107	P	Pb	21 07 16.1	-1.1
VLC				AML	AML		
	comp=N,86µm,1.5s						
VLC				AML	AML		
	comp=N,73µm,1.4s						
VLC				AML	AML		
	comp=E,90µm,1.5s						
VLC				AML	AML		
	comp=E,89µm,1.5s						
SARO	**Sassorosso**	2.03	106	P	Pn	21 07 16.1	+1.8
SARO				AML	AML		
	comp=E,68µm,0.5s						
SARO				AML	AML		
	comp=N,111µm,0.4s						
SAUF	**chteau de Sau**	2.04	246	Pn	Pb	21 07 16.7	-0.7
SAUF				Sn	Sn	21 07 40.9	+1.6
TUE	**Stuetta**	2.05	34	P	Pn	21 07 16.2	+1.5
TUE				S	Sn	21 07 38.9	-1.1
TUE				AML	AML		
	comp=E,252µm,0.6s						
TUE				AML	AML		
	comp=N,351µm,0.2s						
TUE				AML	AML		
	comp=N,472µm,0.2s						
TUE				AML	AML		
	comp=E,326µm,0.8s						
TORNY	**Torny/Romont**	2.06	346	Pn	Pb	21 07 17.1	-0.7
TORNY	**Torny/Romont**	2.06	346	Sn	Sn	21 07 42.1	+2.2
GROG	**Isola di Gorgo**	2.09	130	P	Pn	21 07 15.7	+0.7
GROG				AML	AML		
	comp=N,93µm,0.9s						
GROG				AML	AML		
	comp=E,90µm,0.2s						
CABF	**La Chapelle**	2.15	329	*e*Pn	Pn	21 07 18.0	+2.1
CABF				*e*Sn	Sn	21 07 43.2	+1.1
	comp=E,72nm,0.4s						
VIVF	**Saint-Julien-l**	2.15	273	*e*Pn	Pn	21 07 17.6	+1.7
VIVF	**Saint-Julien-l**	2.15	273	*e*Pg	Pg	21 07 22.2	0.0
VIVF				*e*Sn	Sn	21 07 41.7	-0.4
	comp=E,118nm,0.2s						
BNALP	**Bannalp**	2.15	14	P	Pb	21 07 18.4	-1.1
BNALP				AML	AML		
	comp=E,172µm,0.8s						
BNALP				AML	AML		
	comp=N,174µm,1.6s						
SALO	**Salr**	2.17	66	P	Pn	21 07 17.1	+0.9
SALO				AML	AML		
	comp=E,280µm,0.9s						
SALO				AML	AML		
	comp=N,354µm,0.6s						
SALO				AML	AML		
	comp=N,351µm,0.5s						
SALO				AML	AML		
	comp=E,281µm,1.0s						
MAIM	**Mastiano**	2.19	112	P	Pn	21 07 17.8	+1.4
MAIM				AML	AML		
	comp=N,94µm,0.3s						
MAIM				AML	AML		
	comp=E,90µm,1.0s						
BDI	**Bagni Di Lucca**	2.20	108	P	Pn	21 07 18.5	+1.8
BDI				AML	AML		
	comp=E,135µm,0.6s						
BDI				AML	AML		
	comp=N,132µm,0.8s						
ASEAF	**Site Antares,**	2.27	210	Pn	Pn	21 07 18.8	+1.5
ASEAF				Sn	Sn	21 07 44.9	+0.2
PII	**Pisa**	2.30	117	P	Pn	21 07 19.5	+1.6
PII				AML	AML		
	comp=E,126µm,1.0s						
PII				AML	AML		
	comp=N,120µm,0.2s						
MAGA	**Magasa**	2.30	63	P	Pn	21 07 18.6	+0.6
MAGA				AML	AML		
	comp=E,654µm,1.4s						
MAGA				AML	AML		
	comp=N,426µm,0.3s						
BERNI	**Berninapass**	2.31	44	P	Pn	21 07 20.1	+1.7
BERNI				AML	AML		
	comp=N,128µm,1.2s						
BERNI				AML	AML		
	comp=E,107µm,0.4s						
BRANT	**Les Verrieres**	2.32	339	Pn	Pn	21 07 20.4	+2.1
BRANT	**Les Verrieres**	2.32	339	Sn	Sn	21 07 47.6	+1.2
MABI	**Malga Bissina**	2.36	56	P	Pn	21 07 19.8	+0.8
MABI				AML	AML		
	comp=E,128µm,1.3s						
MABI				AML	AML		
	comp=N,196µm,0.6s						
PGF	**Pioggiola**	2.43	157	*e*Pn	Pn	21 07 19.7	-0.1
PGF	**Pioggiola**	2.43	157	*e*P	Pb	21 07 23.8	-0.3
PGF				*e*Sn	Sn	21 07 46.6	-2.4
	comp=N,52nm,0.3s						
PGF	**Pioggiola**	2.43	157	Pn	Pn	21 07 19.7	-0.1
PGF	**Pioggiola**	2.43	157	P	Pn	21 07 19.7	-0.1
PGF				AML	AML		
	comp=N,109µm,0.4s						
PGF				AML	AML		
	comp=E,149µm,1.0s						
MTCR	**Monte La Croce**	2.49	107	P	Pb	21 07 24.8	-0.4
DAVOX	**Davos/Dischmat**	2.52	37	Pn	Pn	21 07 23.2	+2.0
	comp=E,19nm,0.3s,baz=220,slow=8.7,SNR=243						
DAVOX				Sn	Sn	21 07 53.1	+1.7
	comp=E,6.6nm,0.3s,baz=140,slow=24,SNR=2.3						
DAVOX	**Davos/Dischmat**	2.52	37	P	Pn	21 07 23.1	+2.0
DAVOX				AML	AML		
	comp=N,119µm,0.5s						
DAVOX				AML	AML		
	comp=E,97µm,1.2s						
BRMO	**Bormio**	2.53	47	P	Pn	21 07 23.1	+1.9
BRMO				AML	AML		
	comp=E,81µm,1.1s						
BRMO				AML	AML		
	comp=N,55µm,1.6s						
ROVR	**Rover Verones**	2.54	69	P	Pn	21 07 21.6	+0.2
ROVR				AML	AML		
	comp=N,150µm,0.6s						
ROVR				AML	AML		
	comp=E,70µm,0.5s						
BALST	**Balsthal**	2.55	0	Pn	Pn	21 07 23.4	+1.9
BALST	**Balsthal**	2.55	0	*e*Pn	Pn	21 07 23.4	+1.9
BALST				*e*Sn	Sn	21 07 52.9	+0.7
PLONS	**Plons/SG**	2.56	27	P	Pn	21 07 23.3	+1.8
PLONS				AML	AML		
	comp=E,157µm,0.2s						
PLONS				AML	AML		
	comp=N,125µm,1.5s						
PLONS	**Plons/SG**	2.56	27	*e*Pn	Pn	21 07 23.4	+1.8
PLONS				*e*Sn	Sn	21 07 54.7	+2.5
CHMF	**Charmoille**	2.57	344	Pn	Pn	21 07 23.6	+1.8
CHMF				Sn	Sn	21 07 52.7	+0.2
BOURR	**Bourrignon**	2.63	353	Sn	Sn	21 07 54.3	+0.2
BOURR	**Bourrignon**	2.63	353	Pn	Pn	21 07 24.5	+1.9
GAGG	**Gaggia**	2.64	59	P	Pn	21 07 23.7	+0.9
GAGG				AML	AML		
	comp=E,144µm,0.9s						
GAGG				AML	AML		
	comp=N,118µm,0.6s						
ZUR	**Degenried**	2.66	13	Pn	Pn	21 07 25.1	+2.2
DOSS	**Dosso del Somm**	2.70	65	P	Pn	21 07 24.0	+0.4
DOSS				AML	AML		
	comp=E,198µm,0.6s						
DOSS				AML	AML		
	comp=N,204µm,0.8s						
CORF	**Corte**	2.70	156	Pn	Pn	21 07 23.9	+0.4
CORF				Sn	Sn	21 07 53.8	-1.9
MOSI	**Grossmontoni**	2.72	47	P	Pn	21 07 26.5	+2.6
MOSI				AML	AML		
	comp=E,365µm,0.8s						
MOSI				AML	AML		
	comp=N,592µm,0.6s						
CELB	**S.Piero in Cam**	2.73	137	P	Pn	21 07 24.7	+0.8
CELB				AML	AML		
	comp=N,47µm,1.5s						
CELB				AML	AML		

	comp=E,58µm,0.3s						
TRBF	Trabuc cave	2.76	257	Pn	Pn	21 07 25.6	+1.4
SULZ	Cheisacher	2.76	6	Pn	Pn	21 07 25.9	+1.6
SULZ	Cheisacher	2.76	6	Sn	Sn	21 07 58.2	+1.0
SULZ	Cheisacher	2.76	6	*e*Pn	Pn	21 07 26.0	+1.6
SULZ				*e*Sn	Sn	21 07 57.3	+0.1
WILA	Wila	2.77	17	*e*Pn	Pn	21 07 26.7	+2.3
WILA				*e*Sn	Sn	21 07 59.6	+2.2
LASF	Ste Croix	2.84	257	*e*Pn	Pn	21 07 26.5	+1.2
LASF	Ste Croix	2.84	257	*e*P	Pb	21 07 29.8	-1.2
LASF	Ste Croix	2.84	257	*e*Pg	Pg	21 07 35.3	0.0
LASF				*e*Sn	Sn	21 07 57.9	-1.1
	comp=E,54nm,0.2s						
LASF				*e*Sg	Sg	21 08 11.8	-0.3
	comp=E,24nm,0.3s						
TEOL	Teolo	2.88	77	P	Pn	21 07 26.0	+0.1
TEOL				AML	AML		
	comp=E,411µm,0.6s						
TEOL				AML	AML		
	comp=N,316µm,1.3s						
SMPL	Sampolo	2.93	156	Pn	Pn	21 07 27.3	+0.7
SMPL				Sn	Sn	21 07 59.5	-1.8
SMPL	Sampolo	2.93	156	P	Pn	21 07 27.4	+0.8
SMPL				S	Sn	21 07 59.5	-1.8
DAVA	Damuels	2.93	31	*e*Pn	Pn	21 07 29.0	+2.2
	comp=N,12nm,0.1s,SNR=10.0						
DAVA				*i* Sn	Sn	21 08 01.2	-0.5
	comp=N,61nm,0.3s						
DAVA	Damuels	2.93	31	*e*Pn	Pn	21 07 29.1	+2.3
DAVA				*e*Sn	Sn	21 08 05.3	+3.7
METMA	Mettma DE	2.96	7	*e*Pn	Pn	21 07 28.1	+1.1
METMA				*e*Sn	Sn	21 08 02.1	+0.1
AJAC	Base Areonaval	2.96	164	Pn	Pn	21 07 27.0	+0.1
LMD	Lutirano	2.96	102	P	Pn	21 07 29.7	+2.6
LMD				AML	AML		
	comp=E,39µm,1.0s						
LMD				AML	AML		
	comp=N,37µm,1.1s						
APPI	Appiano	3.01	54	P	Pn	21 07 30.0	+2.3
APPI				AML	AML		
	comp=E,91µm,1.5s						
APPI				AML	AML		
	comp=N,118µm,0.4s						
SLE	Schleitheim	3.04	10	Pn	Pn	21 07 29.2	+1.1
SLE	Schleitheim	3.04	10	*e*Pn	Pn	21 07 29.1	+1.1
SLE				*e*Sn	Sn	21 08 04.5	+0.5
CASP	Castiglione de	3.04	130	P	Pn	21 07 29.0	+0.8
CASP				AML	AML		
	comp=E,31µm,0.8s						
CASP				AML	AML		
	comp=N,45µm,0.8s						
CTI	Castel Tesino	3.06	64	P	Pn	21 07 29.3	+0.7
CTI				S	Sn	21 08 05.0	+0.3
CTI				AML	AML		
	comp=N,260µm,0.2s						
CTI				AML	AML		
	comp=E,227µm,0.1s						
FETA	Feichten	3.08	42	*i* Pn	Pn	21 07 32.5	+3.6
	comp=E,5.0nm,0.1s,SNR=16						
FETA				*i* Sn	Sn	21 08 05.4	+0.1
	comp=E,15nm,0.4s						
KOSI	Kohlern	3.08	56	P	Pn	21 07 30.9	+2.0
KOSI				AML	AML		
	comp=E,85µm,0.8s						
KOSI				AML	AML		
	comp=N,78µm,1.4s						
HINF	Hinteralfeld	3.09	349	*e*Pn	Pn	21 07 30.3	+1.4
HINF				*e*Sn	Sn	21 08 03.8	-1.6
	comp=N,80nm,0.3s						
HINF				*e*Sg	Sg	21 08 19.6	-0.6
	comp=N,22nm,0.2s						
CGRP	Cima Grappa	3.10	68	P	Pn	21 07 29.3	+0.2
CGRP				S	Sn	21 08 03.2	-2.5
CGRP				AML	AML		
	comp=N,134µm,0.4s						
CGRP				AML	AML		
	comp=E,164µm,1.2s						
BERGE	Lenzkirch (DE)	3.11	6	*e*Pn	Pn	21 07 30.1	+1.0
BERGE				*e*Sn	Sn	21 08 05.4	-0.5
WALHA	Wallhausen, DE	3.13	18	*e*Pn	Pn	21 07 31.0	+1.6
WALHA				*e*Sn	Sn	21 08 06.8	+0.5
LBL	Lubilhac	3.18	280	Pn	Pn	21 07 31.8	+1.6
OBER	Oberstdorf	3.19	34	*e*Pn	Pn	21 07 32.5	+2.2
ABSI	Aberstueckl	3.20	51	P	Pn	21 07 32.9	+2.4
ABSI				AML	AML		
	comp=E,126µm,0.9s						
ABSI				AML	AML		
	comp=N,126µm,1.0s						
EMING	Emmingen-Lipti	3.21	14	*e*Pn	Pn	21 07 31.7	+1.1
EMING				*e*Sn	Sn	21 08 08.7	+0.4
CRE	Caprese Michel	3.28	109	P	Pn	21 07 34.1	+2.7
CRE				AML	AML		
	comp=N,52µm,1.1s						
CRE				AML	AML		
	comp=E,43µm,1.2s						
SMF	Signal de Mont	3.28	306	*e*Pn	Pn	21 07 33.4	+2.0
SMF				*e*Sn	Sn	21 08 08.9	-1.0
	comp=E,41nm,0.3s						
SMF				*e*Sg	Sg	21 08 25.7	-0.5
	comp=E,47nm,0.3s						
VARN	Col Varnada, M	3.34	67	P	Pn	21 07 32.7	+0.5
VARN				AML	AML		
	comp=E,268µm,0.6s						
VARN				AML	AML		
	comp=N,230µm,0.4s						
UBR	Ueberruh	3.35	29	*e*Pn	Pn	21 07 34.1	+1.7
UBR				*e*Sn	Sn	21 08 13.6	+1.8
HAU	Haudompre	3.36	344	*e*Pn	Pn	21 07 33.9	+1.4
HAU				*e*Sn	Sn	21 08 10.2	-1.7
	comp=N,450nm,0.3s						
ROSI	Rosskopf	3.37	49	P	Pn	21 07 35.4	+2.6
ROSI				AML	AML		
	comp=E,177µm,1.1s						
ROSI				AML	AML		
	comp=N,160µm,0.8s						
AGOR	Agordo	3.41	62	P	Pn	21 07 34.7	+1.5
AGOR				AML	AML		
	comp=N,76µm,0.4s						
AGOR				AML	AML		
	comp=E,66µm,0.5s						
RETA	Reutte	3.45	37	*i* Pn	Pn	21 07 35.8	+2.0
	comp=E,6.0nm,0.2s,SNR=24						
RETA				*e*Sn	Sn	21 08 15.0	+0.8
	comp=E,13nm,0.3s						
ECH	Echery	3.46	354	*e*Pn	Pn	21 07 34.9	+1.1
ECH				*e*Sn	Sn	21 08 12.5	-1.8
SQTA	Sankt Quirin	3.46	44	*e*Pn	Pn	21 07 37.1	+3.1
	comp=E,13nm,0.1s,SNR=56						
SQTA				*i* Sn	Sn	21 08 17.1	+2.6
	comp=E,20nm,0.3s						
PARC	Parchiule	3.46	108	P	Pn	21 07 37.3	+3.4
PARC				AML	AML		
	comp=N,25µm,0.8s						
PARC				AML	AML		
	comp=E,24µm,1.6s						
ZUGS	Zugspitze, Sch	3.49	40	*e*Pn	Pn	21 07 36.9	+2.3
MOTA	Moosalm	3.50	42	*i* Pn	Pn	21 07 37.0	+2.5
	comp=E,8.0nm,0.2s,SNR=12						
MOTA				*i* Sn	Sn	21 08 17.3	+1.8
	comp=E,11nm,0.2s						
BFO	Black Forest	3.58	7	*e*Pn	Pn	21 07 36.3	+0.8
BFO				*e*Pg	Pg	21 07 47.9	-1.6
BFO				*e*Sn	Sn	21 08 16.5	-0.8
POLC	Polcenigo	3.61	68	P	Pn	21 07 36.9	+1.0
POLC				AML	AML		
	comp=N,154µm,0.4s						
POLC				AML	AML		
	comp=E,136µm,0.4s						
PART	Garmisch-Parte	3.61	40	*e*Pn	Pn	21 07 38.2	+2.2
PE3	Peglio	3.62	106	P	Pn	21 07 36.8	+0.6
PE3				AML	AML		
	comp=E,76µm,0.4s						
PE3				AML	AML		
	comp=N,82µm,1.0s						
AVF	Avril sur Loir	3.64	305	*e*Pn	Pn	21 07 38.4	+2.1
AVF				*e*Sn	Sn	21 08 19.1	+0.3
	comp=N,20nm,0.2s						
AVF				*e*Sg	Sg	21 08 36.4	-1.4
	comp=N,18nm,0.3s						
CDF	Champ du Feu	3.64	356	*e*Pn	Pn	21 07 37.6	+1.1
CDF				*e*Sn	Sn	21 08 18.5	-0.5
	comp=N,64nm,0.3s						
LOR	Lormes	3.65	314	*e*Pn	Pn	21 07 38.4	+1.9
	baz=137						
LOR	Lormes	3.65	314	*e*Pg	Pg	21 07 49.6	-1.2
LOR				*e*Sn	Sn	21 08 18.5	-0.6
	comp=N,47nm,0.2s						
LOR				*e*Sg	Sg	21 08 36.7	-1.4
	comp=N,25nm,0.4s						
CIMO	Cimolais	3.67	64	P	Pn	21 07 37.8	+1.0
CIMO				AML	AML		
	comp=N,34µm,0.4s						
CIMO				AML	AML		
	comp=E,35µm,1.6s						
WTTA	Wattenberg	3.70	47	*i* Pn	Pn	21 07 40.4	+3.0
	comp=E,17nm,0.1s,SNR=55						
WTTA				*i* Sn	Sn	21 08 23.5	+2.8
	comp=E,12nm,0.3s						
WTTA	Wattenberg	3.70	47	P	Pn	21 07 40.2	+2.8
WTTA				AML	AML		
	comp=E,85µm,0.6s						
WTTA				AML	AML		
	comp=N,70µm,0.6s						
WTTA	Wattenberg	3.70	47	*e*Pn	Pn	21 07 40.5	+3.0
WTTA				*e*Sn	Sn	21 08 23.6	+3.0
SSF	Saint Saulge	3.71	309	*e*Pn	Pn	21 07 39.2	+1.9
SSF				*e*Sn	Sn	21 08 19.1	-1.3
	comp=N,42nm,0.4s						
SSF				*e*Sg	Sg	21 08 38.5	-1.4
	comp=N,17nm,0.3s						
NARO	Abbazia di Nar	3.71	107	P	Pn	21 07 40.6	+3.4
WATA	Walderalm	3.72	45	*i* Pn	Pn	21 07 40.2	+2.6
	comp=N,11nm,0.2s,SNR=29						
WATA				*i* Sn	Sn	21 08 24.2	+3.1
	comp=N,4.7nm,0.2s						
RISI	Rein	3.75	53	P	Pn	21 07 39.9	+1.8
RISI				AML	AML		
	comp=E,86µm,0.4s						
RISI				AML	AML		
	comp=N,164µm,0.4s						
STAL	STALIGIAL	3.83	65	P	Pn	21 07 39.5	+0.6
STAL				AML	AML		
	comp=N,212µm,0.2s						
STAL				AML	AML		
	comp=E,192µm,0.2s						
BGF	Bois d'Agland	3.83	299	*e*Pn	Pn	21 07 41.1	+2.1
BGF				*e*Sn	Sn	21 08 22.9	-0.7
	comp=E,73nm,0.4s						
BGF				*e*Sg	Sg	21 08 43.5	-0.5
	comp=E,29nm,0.3s						
SFTF	Sexfontaines	3.88	333	*e*Pn	Pn	21 07 41.5	+1.8
	baz=147						
SFTF				*e*Sn	Sn	21 08 23.0	-1.8
	comp=E,34nm,0.2s						
ABTA	Abfaltersbach	3.91	58	*i* Pn	Pn	21 07 42.2	+2.1
	comp=E,7.6nm,0.2s,SNR=33						
ABTA				*i* Sn	Sn	21 08 26.7	+1.2
	comp=E,6.7nm,0.3s						
MPRI	Monte Prat	4.00	67	P	Pn	21 07 42.2	+0.8
MPRI				AML	AML		
	comp=N,93µm,0.4s						
MPRI				AML	AML		
	comp=E,64µm,1.0s						
FVI	Forni Avoltri	4.00	61	P	Pn	21 07 44.2	+2.7
CAF	Calviac	4.00	274	*e*Pn	Pn	21 07 43.5	+2.1
CAF	Calviac	4.00	274	*e*Pg	Pg	21 07 56.1	-1.5
CAF				*e*Sn	Sn	21 08 27.2	-0.7
	comp=E,14nm,0.4s						
CAF				*e*Sg	Sg	21 08 48.6	-0.9
	comp=E,6.0nm,0.2s						
CLUD	Cludinico	4.01	63	P	Pn	21 07 42.5	+1.0
PAGF	Fort de Pagny	4.01	341	*e*Pn	Pn	21 07 43.3	+1.9
	baz=162						
PAGF				*e*Sn	Sn	21 08 26.6	-1.3
	comp=E,70nm,0.4s						
ZOU	Zoufplan	4.11	63	P	Pn	21 07 44.1	+1.1
TCF	Toulx Ste Croi	4.13	293	*e*Pn	Pn	21 07 45.3	+2.1
TCF				*e*Sn	Sn	21 08 30.4	-0.7
	comp=E,27nm,0.4s						
TCF				*e*Sg	Sg	21 08 51.8	-1.9
MEZF	Maizieres J'vi	4.14	335	*e*Pn	Pn	21 07 45.3	+2.1
	baz=154						
MEZF	Maizieres J'vi	4.14	335	*e*Pg	Pg	21 07 59.0	-1.2
MEZF				*e*Sn	Sn	21 08 29.5	-1.7
	comp=E,24nm,0.2s						
EL6	Elcito	4.16	109	P	Pn	21 07 46.1	+2.5
SJAF	Saint Jean de	4.18	238	Pn	Pn	21 07 44.9	+1.1
FUR	Furstenfeldbru	4.19	35	*e*Pn	Pn	21 07 45.3	+1.3
FUR				*e*Sn	Sn	21 08 33.1	+0.6
MTLF	Montolieu	4.20	252	*e*Pn	Pn	21 07 45.5	+1.4
MTLF	Montolieu	4.20	252	*e*P	Pn	21 07 48.7	+4.6
MTLF				*e*Sn	Sn	21 08 31.0	-1.6
	comp=E,10nm,0.2s						
MTLF				*e*Sg	Sg	21 08 53.6	-2.2
MTLF	Montolieu	4.20	252	Pn	Pn	21 07 45.8	+1.8
MTLF	Montolieu	4.20	252	P	Pn	21 07 45.9	+1.8
MTLF				S	Sn	21 08 32.0	-0.7
SAVF	Savonnieres en	4.22	336	*e*Pn	Pn	21 07 46.7	+2.4
	baz=157						
SAVF	Savonnieres en	4.22	336	*e*Pg	Pg	21 08 00.9	-0.9
SAVF				*e*Sn	Sn	21 08 32.0	-1.1
	comp=E,22nm,0.2s						
HYF	Humbligny	4.31	307	*e*Pn	Pn	21 07 47.5	+1.9
HYF	Humbligny	4.31	307	*e*Pg	Pg	21 08 02.7	-0.7
HYF				*e*Sn	Sn	21 08 34.4	-0.9
BRJN	Brijuni	4.31	86	*e*Pn	Pn	21 07 45.5	-0.1
CSP1	Cessapalombo	4.33	111	P	Pn	21 07 48.5	+2.6
ROBS	Robic	4.34	68	*i* Pn	Pn	21 07 46.3	+0.2
ROBS				*e*Sn	Sn	21 08 33.3	-2.8
RJF	Les Rejaudoux	4.41	279	*e*Pn	Pn	21 07 49.3	+2.4
RJF	Les Rejaudoux	4.41	279	*e*P	Pn	21 07 52.0	+5.1
RJF	Les Rejaudoux	4.41	279	*e*Pg	Pg	21 08 03.6	-1.7
RJF				*e*Sn	Sn	21 08 37.4	-0.4
	comp=E,8.3nm,0.3s						
RJF				*e*Sg	Sg	21 09 00.0	-2.4
FNEB	Nbias	4.45	247	Pn	Pn	21 07 49.7	+2.1
FNEB				Sn	Sn	21 08 37.9	-1.0
CADS	Cadrg	4.49	69	*i* Pn	Pn	21 07 48.3	+0.2
CADS				*i* Sn	Sn	21 08 36.4	-3.4
CADS				IAML		21 08 42.6	
	comp=Z,8.0nm,0.2s						
VOJS	Vojsko	4.54	72	*i* Pn	Pn	21 07 49.0	+0.3
MYKA	Terra Mystica	4.56	64	*i* Pn	Pn	21 07 50.3	+1.2
	comp=Z,5.9nm,0.4s						
MYKA				*i* Sn	Sn	21 08 40.3	-1.3
	comp=Z,2.1nm,0.2s						
KBA	Koelnbreinsper	4.56	58	*e*Pn	Pn	21 07 51.3	+2.0
	comp=Z,6.1nm,0.3s,SNR=20						
KBA				*i* Sn	Sn	21 08 43.8	+1.9
	comp=Z,6.2nm,0.5s						
KBA	Koelnbreinsper	4.56	58	*e*Pn	Pn	21 07 51.5	+2.3
KBA				*e*Sn	Sn	21 08 43.6	+1.7
SMRN	Sveta Marina	4.60	85	*e*Pn	Pn	21 07 48.6	-0.9
GORS	Gorjuse	4.69	69	*i* Pn	Pn	21 07 51.4	+0.6
GORS				*e*Sn	Sn	21 08 41.2	-3.6
LFF	La Frestale	4.94	274	*e*Pn	Pn	21 07 56.8	+2.5
LFF	La Frestale	4.94	274	*e*P	Pn	21 07 59.5	+5.2
LFF				*e*Sn	Sn	21 08 50.5	-0.5
	comp=Z,18nm,0.4s						
PAND	Andorre	5.00	245	Pn	Pn	21 07 57.7	+2.5
RABC	Rab	5.05	88	*e*Pn	Pn	21 07 55.5	-0.2
OBKA	Obir	5.11	68	*e*Pn	Pn	21 07 57.9	+1.3
	comp=Z,4.5nm,0.4s,SNR=15						
OBKA				*e*Sn	Sn	21 08 53.5	-1.7
	comp=Z,4.4nm,0.3s						
NVLJ	Novalja	5.13	90	*e*Pn	Pn	21 07 56.9	+0.2
DUGI	Dugi Otok	5.34	96	*e*Pn	Pn	21 07 59.6	-0.1
DUGI				Sn	Sn	21 08 55.0	-5.7
VSL	Villasalto	5.43	166	P	Pn	21 08 02.6	+1.6
GRF	Grafenberg Arr	5.47	25	*e*Pn	Pn	21 08 00.5	-1.0
GRF				*e*Sn	Sn	21 09 01.0	-2.9
TNS	Taunus Mts	5.47	5	*e*Pn	Pn	21 08 02.3	+0.8
TNS				*e*Sn	Sn	21 09 01.5	-2.5
SOKA	Soboth	5.48	67	*e*Pn	Pn	21 08 03.3	+1.6
	comp=Z,2.3nm,0.3s,SNR=8.4						
SOKA				*e*Sn	Sn	21 09 03.2	-1.0
	comp=Z,1.6nm,0.4s						
MOA	Molln	5.49	54	*i* Pn	Pn	21 08 02.9	+1.1
	comp=Z,4.4nm,0.3s,SNR=16						
MOA				*i* Sn	Sn	21 09 04.5	0.0
	comp=Z,3.6nm,0.3s						
OZLJ	Ozalj	5.56	79	*e*Pn	Pn	21 08 03.3	+0.6
CRES	Cresnjev	5.58	76	*e*Pn	Pn	21 08 03.3	+0.4
EPF	Esparros	5.59	254	*e*Pn	Pn	21 08 04.7	+1.5
EPF	Esparros	5.59	254	*e*P	Pn	21 08 08.4	+5.2
EPF				*e*Sn	Sn	21 09 04.9	-2.1
	comp=Z,4.7nm,0.3s						
EPF				*e*Sg	Sg	21 09 37.3	-3.1
WET	Wettzell	5.62	37	*e*Pn	Pn	21 08 03.9	+0.3
WET				*e*Sn	Sn	21 09 04.7	-3.1
PLIT	Plitvice	5.64	86	*e*Pn	Pn	21 08 03.8	-0.1
GIVF	Givet	5.67	341	*e*Pn	Pn	21 08 06.6	+2.4
GIVF				*e*Sn	Sn	21 09 08.0	-0.7
	comp=Z,9.0nm,0.2s						
GROS	Grobnik	5.73	70	*i* Pn	Pn	21 08 05.4	+0.3
UDBI	Udbina	5.76	90	*e*Pn	Pn	21 08 05.7	+0.1
BAIF	Baives	5.78	337	*e*Pn	Pn	21 08 07.7	+1.9
BAIF				*e*Sn	Sn	21 09 10.4	-1.2
	comp=Z,4.2nm,0.3s						
MFF	Saint Martin d	5.78	291	*e*Pn	Pn	21 08 08.0	+2.2
MFF	Saint Martin d	5.78	291	*e*P	Pn	21 08 11.8	+6.0
MFF				*e*Sn	Sn	21 09 09.1	-2.5
	comp=Z,6.0nm,0.3s						
GEC2	GERESS Array S	5.79	43	*e*Pn	Pn	21 08 06.9	+0.9
GEC2				*e*Sn	Sn	21 09 08.5	-3.4
GERES	GERESS Array B	5.79	43	Pn	Pn	21 08 06.9	+0.9
	comp=Z,7.9nm,0.3s,baz=221,slow=12,SNR=194						
GERES				Sn	Sn	21 09 09.9	-2.0
	comp=Z,3.8nm,0.3s,baz=232,slow=23,SNR=15						
MORI	Morici	5.82	96	*e*Pn	Pn	21 08 06.7	+0.3
MORI				Sn	Sn	21 09 05.5	-7.1
ZIRJ	Zirje	5.83	98	*e*Pn	Pn	21 08 05.3	-1.1
ZIRJ				Sn	Sn	21 09 05.4	-7.2
KHC	Kasperske Hory	5.93	41	*e*PN	Pn	21 08 09.1	+1.3
KHC				*e*SN	Sn	21 09 12.3	-3.0
ARSA	Arzberg	5.99	63	*i* Pn	Pn	21 08 10.0	+1.4
	comp=Z,2.7nm,0.3s,SNR=6.0						
LOBO	Lobor	6.05	74	*e*Pn	Pn	21 08 08.8	-0.6
LOBO				Sn	Sn	21 09 12.9	-5.3
CKRC	Cesky Krumlov	6.08	46	*e*PN	Pn	21 08 10.5	+0.6
CKRC				*e*SN	Sn	21 09 15.4	-3.5
ETSF	Etsaut	6.26	255	*e*Pn	Pn	21 08 13.7	+1.3
ETSF	Etsaut	6.26	255	*e*P	Pn	21 08 17.9	+5.5
ETSF	Etsaut	6.26	255	*e*Pg	Pg	21 08 37.2	-3.5
ETSF				*e*Sn	Sn	21 09 20.8	-2.6
	comp=Z,7.2nm,0.3s						
KIJV	Kijevo	6.29	94	*e*Pn	Pn	21 08 12.2	-0.6
MOSL	Moslavina	6.46	79	*e*Pn	Pn	21 08 14.1	-1.0
CONA	Conrad Observa	6.47	58	*i* Pn	Pn	21 08 16.2	+0.9
	comp=Z,0.6nm,0.1s,SNR=4.0						
CONA				*i* Sn	Sn	21 09 29.3	+0.6
	comp=Z,1.2nm,0.3s						
HVAR	Hvar	6.52	101	*e*Pn	Pn	21 08 15.5	-0.4
HVAR				Sn	Sn	21 09 21.8	-8.0
LDF	La Druitiere	6.59	308	*e*Pn	Pn	21 08 18.2	+1.4
LDF	La Druitiere	6.59	308	*e*P	Pn	21 08 22.9	+6.1
LDF				*e*Sn	Sn	21 09 28.0	-3.4
	comp=Z,3.9nm,0.3s						
SJPF	Ste Jean	6.65	259	*e*Pn	Pn	21 08 18.9	+1.2
SJPF	Ste Jean	6.65	259	*e*P	Pn	21 08 23.4	+5.7
SJPF				*e*Sn	Sn	21 09 30.2	-2.8
	comp=Z,2.7nm,0.3s						
FLN	La Foliniere	6.88	308	*e*Pn	Pn	21 08 22.6	+1.8
	baz=128						
FLN				*e*Sn	Sn	21 09 35.6	-3.0
	comp=Z,13nm,0.4s						
MAKA	Makarska	6.89	99	*e*Pn	Pn	21 08 20.7	-0.3
GRR	Gorron	6.91	305	*e*Pn	Pn	21 08 23.3	+2.1
GRR	Gorron	6.91	305	*e*P	Pn	21 08 27.2	+6.0
GRR				*e*Sn	Sn	21 09 35.9	-3.4
	comp=Z,9.9nm,0.3s						
RICI	Ricice	6.92	97	*e*Pn	Pn	21 08 21.3	0.0
PRU	Pruhonice	6.98	39	*e*PN	Pn	21 08 22.1	-0.1
PRU				*e*SN	Sn	21 09 37.3	-3.8
TREC	Trest	6.98	47	*e*PN	Pn	21 08 22.7	+0.4
KRUC	Moravsky	7.34	51	*e*PN	Pn	21 08 26.8	-0.3
KRUC				*e*SN	Sn	21 09 45.3	-4.5
STON	Ston	7.49	101	*e*Pn	Pn	21 08 29.6	+0.4
STON				Sn	Sn	21 09 47.7	-5.8
MODS	Modra-Piesok	7.52	58	*e*PN	Pn	21 08 30.5	+0.9
VRAC	Vranov	7.58	50	Pn	Pn	21 08 30.0	-0.4
	comp=Z,0.6nm,0.3s,baz=264,slow=16,SNR=5.8						
VRAC				Sn	Sn	21 09 52.9	-3.0
	comp=Z,0.5nm,0.3s,baz=107,slow=23,SNR=3.9						
VRAC	Vranov	7.58	50	*e*PN	Pn	21 08 29.2	-1.3
VRAC				*e*SN	Sn	21 09 46.3	-10
DBRK	Dubrovnik	7.86	102	*e*Pn	Pn	21 08 34.8	+0.4
SGMF	Saint Gilles	7.87	300	*e*Pn	Pn	21 08 35.9	+1.4
SGMF	Saint Gilles	7.87	300	*e*P	Pn	21 08 40.7	+6.2
UPC	Upice	8.02	41	*e*PN	Pn	21 08 37.0	+0.5
DPC	Dobruska-Polom	8.06	43	*e*PN	Pn	21 08 37.2	+0.1
CHVC	Chvalec	8.10	41	*e*PN	Pn	21 08 37.4	-0.1
KRLC	Kraliky	8.12	46	*e*PN	Pn	21 08 38.4	+0.5
KRLC				*e*SN	Sn	21 10 05.9	-3.4
QUIF	Quistinic	8.14	296	*e*Pn	Pn	21 08 39.0	+0.9
OSTC	Ostas	8.15	42	*e*PN	Pn	21 08 38.5	+0.2
ROSF	Rostrenen	8.35	299	*e*Pn	Pn	21 08 42.5	+1.5
MORC	Moravsky Berou	8.35	50	*e*PN	Pn	21 08 40.8	-0.3
VYHS	Vyhne	8.52	60	*e*PN	Pn	21 08 45.1	+1.8
ESDC	Sonseca Array	10.03	243	Pn	Pn	21 09 05.9	+1.7
	comp=Z,0.2nm,0.3s,baz=57,slow=14,SNR=9.4						
EKA	Eskdalemuir Ar	12.64	331	Pn	Pn	21 09 40.7	+1.1
	baz=146,slow=14,SNR=6.2						
TORD	Torodi Ar. Bea	31.94	191	P	P	21 13 06.1	+0.4
	comp=Z,0.4nm,0.9s,baz=14,slow=8.5,SNR=2.4						

IDC 16 21:12:50.0±3.2**,27°.66N×103°.85W,h0^{km},mb1 3.6**/2**,mb1mx3.3**/33**,mbtmp3.1**/2**,ML4.1**/2**,Error ellipse: s-maj=25.4km s-min=16.8km az=125.0,Northern Mexico**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	Lajitas Array	1.68	5	Pg	Pb	21 13 21.7	-0.1
	1.6nm,0.3s,baz=182,slow=16,SNR=80						
TXAR				Lg	Lg	21 13 42.2	
	1.0nm,0.3s,baz=184,slow=31,SNR=11						
PDAR	Pinedale Array	15.77	344	Pn	P	21 16 36.9	-0.9
	0.1nm,0.3s,baz=161,slow=14,SNR=1.8						
NVAR	Mina Array Bea	16.17	315	Pn	P	21 16 41.0	-1.2
	0.6nm,0.3s,baz=137,slow=12,SNR=3.0						

SKO 16 21:31:02.7,40°.96N×22°.12E,h8^{km},Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRG	Griva	0.21	91	*i* Pg	Pg	21 31 07.0	0.0
GRG				*i* Sg	Sg	21 31 09.7	-0.2
GRG	Griva	0.21	91	*i* Pg	Pg	21 31 07.0	0.0
GRG				*i* Sg	Sg	21 31 09.7	-0.3
VAY	Valandovo	0.50	43	*i* Pg	Pg	21 31 12.4	0.0
VAY				*i* Sg	Sg	21 31 18.9	+0.1
VAY				*e*Lg	Lg	21 31 19.0	
	comp=E,10nm,0.4s						
VAY	Valandovo	0.50	43	*i* Pg	Pg	21 31 12.3	0.0
VAY				*i* Sg	Sg	21 31 18.9	+0.1
VAY				*e*Lg	Lg	21 31 19.0	
	comp=E,10nm,0.4s						
FNA	Florina	0.59	253	*i* Pg	Pn	21 31 16.9	-0.6
FNA				*i* Sg	Sn	21 31 27.0	-0.4
KNT	Kendrikon	0.62	71	*i* Pg	Pg	21 31 14.8	0.0
KNT				*i* Sg	Sg	21 31 23.0	+0.1
KNT	Kendrikon	0.62	71	*i* Pg	Pg	21 31 14.7	0.0
KNT				*i* Sg	Sg	21 31 23.0	+0.1
STIP	Stip	0.73	4	*i* Pg	Pn	21 31 19.2	-0.3
STIP				*i* Sg	Sn	21 31 30.2	-0.6
STIP				*e*Lg	Lg	21 31 30.8	
	comp=N,0.9nm,0.3s						
STIP	Stip	0.73	4	*i* Pg	Pn	21 31 19.7	+0.2
STIP				*i* Sg	Sn	21 31 30.3	-0.6
STIP				*e*Lg	Lg	21 31 30.8	
	comp=N,0.9nm,0.3s						

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*NIED **16** 21:32:55.2,31°.50N×128°.84E,h3^{km},MW3.8,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-4.13; $M_{\theta\theta}$3.69; $M_{\phi\phi}$0.44; $M_{r\theta}$1.46; $M_{\theta\phi}$3.46; $M_{\phi r}$-3.15; Fault plane solution: $M_0$6.26000×10^{14} NP1:ϕ_s27.00000°, δ57.00000°,λ-133.00000°. NP2:ϕ_s267.00000°, δ52.00000°,λ-43.00000°.*

*JMA **16** 21:32:55.1±0.4,31°.50N×128°.84E,h3^{km}±4^{km},M3.6*

*IDC **16** 21:32:59.2±2.7,31°.45N×128°.70E,h0^{km},mb3.4/3,mb1 3.5/4,mb1mx3.2/56,mbtmp3.4/4,ML3.0/1,Error ellipse: s-maj=40.7km s-min=34.0km az=141.0*

ISC 16 21:32:58.6±1.0**,31°.27N**±0°.06×**129°.10E**±0°.07**,h10^{km},n12,σ2^{s}.25**/14**,mb3.1**/3**,Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.67	52	P	Pg	21 33 10.0	-1.5

JSJ				eS	Sg	21 33 20.2	-0.1
JSU	Suzuyama	1.19	78	P	Pb	21 33 21.1	-0.1
JFU	Fukue jima 2	1.41	348	P	Pn	21 33 17.2	-7.2
JNN	Nakanoshima	1.57	155	P	Pn	21 33 28.4	+1.8
JYAK	Yakushimahirau	1.59	130	P	Pn	21 33 25.9	-0.9
JTN	Tanegashima 3	1.73	110	P	Pn	21 33 28.4	-0.3
JTZ	Takazaki	1.81	69	P	Pn	21 33 29.0	-0.9
JNU	Nakatsue	2.39	39	Pn	Pb	21 33 41.1	-0.5
	baz=197,slow=20						
JNU				Sn	Sg	21 34 19.5	+4.2
	baz=163,slow=19						
KSRS	Korea Array	6.25	351	Pn	Pn	21 34 29.1	-1.6
	0.4nm,0.3s,baz=175,slow=14,SNR=3.9						
KSRS				Sn	Sn	21 35 47.3	+5.1
	0.3nm,0.3s,baz=175,slow=28,SNR=2.4						
KSRS				Lg	Lg	21 36 10.1	
	0.6nm,0.3s,baz=174,slow=30,SNR=6.8						
SONM	Songino Array	23.95	320	P	P	21 38 12.1	-0.9
	0.3nm,0.6s,baz=134,slow=8.3,SNR=2.3						
KURBB	Kurchatov Arra	41.87	313	P	P	21 40 48.1	-0.7
	0.1nm,0.3s,baz=102,slow=10,SNR=2.0						
FINES	FINESS Array B	68.88	330	P	P	21 44 02.8	-0.4
	2.0nm,0.9s,baz=63,slow=6.7,SNR=1.5						

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*IDC **16** 21:36:00.0±0.6, 37°.42N×143°.81E, h0^{km}, mb4.0/20, mb1 4.2/25, mb1mx4.0/65, mbtmp4.1/25, ML4.1/4, MS3.1/10, Ms1 3.1/10, ms1mx2.8/62, Error ellipse: s-maj=18.7km s-min=12.9km az=91.0*

*NIED **16** 21:36:04.3, 37°.56N×143°.52E, h56^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.44; M$_{\theta\theta}$-1.66; M$_{\phi\phi}$2.10; M$_{r\theta}$-0.07; M$_{\theta\phi}$0.29; M$_{\phi r}$0.87; Fault plane solution: M$_0$2.04000×10^{15} NP1: ϕ_s319.00000°, δ83.00000°, λ163.00000°. NP2: ϕ_s51.00000°, δ73.00000°, λ7.00000°.*

*JMA **16** 21:36:04.3±0.2, 37°.56N×143°.52E, h56^{km}, M4.4*

*NEIC **16** 21:36:05.5±2.5, 37°.52N±0°.06×143°.57E±0°.10, h35^{km}±7^{km}, mb4.4/23, Error ellipse: s-maj=11.4km s-min=8.3km az=79.0*

ISC 16 21:36:05.5±0.6, **37°.54N**±0°.04×**143°.63E**±0°.06, **h35**^{km}, **n114**, σ**1.^{s}95**/128, **mb4.3**/34, **MS3.1**/5, **1C, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	1.87	295	P	Pn	21 36 33.7	-1.3
JIKH				S	Sn	21 36 54.9	-2.5
JIO	Ouri	2.02	298	P	Pn	21 36 35.8	-1.2
JIO				S	Sn	21 36 58.6	-2.4
JKMT	Kesennumamotoy	2.12	307	P	Pn	21 36 37.0	-1.4
JKMT				S	Sn	21 37 00.8	-2.7
OFUJ	Ofunato	2.17	316	P	Pn	21 36 37.7	-1.5
OFUJ				S	Sn	21 37 02.6	-2.3
JMST	Minamisoumatoc	2.18	276	P	Pn	21 36 37.4	-1.8
JMST				S	Sn	21 37 02.8	-2.2
JFK	Kawauchi	2.20	266	P	Pn	21 36 37.8	-1.7
JFK				S	Sn	21 37 03.0	-2.5
JMM	Marumori	2.27	279		Pn	21 36 39.0	-1.4
JMK	Ichinoseki	2.36	307	P	Pn	21 36 40.6	-1.1
JMK				S	Sn	21 37 07.3	-2.2
JFT	Otama	2.61	271	P	Pn	21 36 44.6	-0.6
JFT				S	Sn	21 37 14.5	-1.3
JOM	Ohasama	2.66	317	P	Pn	21 36 44.9	-0.9
JOM				S	Sn	21 37 15.1	-1.8
JYK	Kaneyama	2.92	299	P	Pn	21 36 48.8	-0.6
JYK				eS	Sn	21 37 22.0	-1.2
JYT	Yasato	3.05	246		Pn	21 36 49.4	-1.8
JANG	Nango	3.27	330	P	Pn	21 36 52.9	-1.4
JANG				S	Sn	21 37 28.6	-3.4
JNS	Sasagawa	3.43	276	P	Pn	21 36 56.0	-0.4
JAG	Ashikaga	3.52	253	P	Pn	21 36 56.5	-1.2
JAG				S	Sn	21 37 36.2	-1.9
JAW	Awa shima	3.58	286	P	Pn	21 36 58.4	0.0
BSO1	Boso 1	3.59	217	P	Pn	21 36 56.4	-1.8
BSO1				S	Sn	21 37 36.9	-2.2
JTM	Tenmabayashi	3.80	329		Pn	21 37 02.0	+0.4
JRY	Ryogami san	4.08	250	P	Pn	21 37 04.4	-1.1
JRY				S	Sn	21 37 48.7	-3.4
JSD	Sado	4.28	278	Pn	Pn	21 37 07.8	-0.3
JOD2	Odawara 2	4.31	240	P	Pn	21 37 07.0	-1.5
JOD2				S	Sn	21 37 53.2	-4.3
JOT	Ohata	4.32	333	P	Pn	21 37 08.3	-0.4
JOT				eS	Sn	21 37 53.7	-4.2
MJAR	Matsushiro Arr	4.45	259	Pn	Pn	21 37 10.2	-0.2
	3.3nm,0.3s,baz=90,slow=16,SNR=159						
MJAR				Sn	Sn	21 38 00.9	-0.1
	1.4nm,0.3s,baz=109,slow=23,SNR=7.8						
MJAR	Matsushiro Arr	4.45	259	Pn	Pn	21 37 10.5	+0.1
MAJO	Matsushiro	4.45	259	Pn	Pn	21 37 10.6	+0.1
MAT	Matsushiro	4.45	259	P	Pn	21 37 10.4	-0.1
MAT				S	Sn	21 38 00.9	-0.1
MJB9	Matsu-Tunnel	4.45	259	Pn	Pn	21 37 11.1	+0.7
ERM	Erimo	4.48	356	Pn	Pn	21 37 08.8	-2.1
JKB	Kayabe	4.78	336	P	Pn	21 37 14.2	-0.8
JKB				eS	Sn	21 38 04.4	-4.7
JCH	Churui	5.07	358	P	Pn	21 37 16.8	-2.2
JCH				eS	Sn	21 38 10.4	-5.9
JSG	Sagara	5.25	239	Pn	Pn	21 37 19.6	-1.8
JGF	Kuroka	5.40	251	Pn	Pn	21 37 24.3	+0.7
JHJ2	Mitsune	5.40	216	P	Pn	21 37 21.0	-2.6
JHJ2				S	Sn	21 38 17.9	-6.6
JHJ2	Mitsune	5.40	216	Pn	Pn	21 37 20.7	-2.9
JHJ	Hachijo jima 2	5.41	217	Pn	Pn	21 37 20.4	-3.4
	31nm,0.3s,baz=345,slow=23,SNR=22						
JHJ				Sn	Sn	21 38 17.4	-7.4
	98nm,0.3s,baz=275,slow=21,SNR=3.7						
JHJ				LR	LR	21 39 56.2	
	comp=Z,34nm,20.8s,baz=99,slow=44						
JOSM	Okushiri--Mats	5.55	326	P	Pn	21 37 25.1	-0.4
JOSM				eS	Sn	21 38 24.0	-4.0
JEW	Eniwo	5.55	343	Pn	Pn	21 37 24.7	-0.8
INU	Inuyama	5.76	250	Pn	Pn	21 37 28.0	-0.4
JKA	Kamikawa-asahi	6.62	354	Pn	Pn	21 37 38.2	-1.9
ASAJ	Asahikawa	6.62	354	Pn	Pn	21 37 39.0	-1.2
	9.4nm,0.3s,baz=211,slow=10,SNR=43						
ASAJ				Sn	Sn	21 38 49.5	-4.8
	3.4nm,0.3s,baz=35,slow=29,SNR=1.7						
ASAJ				LR	LR	21 41 00.5	
	comp=Z,325nm,18.3s,baz=192,slow=44						
JWT	Wachi	7.00	254		Pn	21 37 45.8	+0.3
JCJ	Chichijima	10.48	187	Pn	Pn	21 38 27.1	-6.2
	18nm,0.3s,baz=55,slow=4.7,SNR=30						
JCJ				Sn	Sn	21 40 15.3	-14
	9.4nm,0.3s,baz=260,slow=22,SNR=2.2						
USRK	Ussuriysk Ar.	11.03	311	Pn	Pn	21 38 41.8	+1.0
	baz=108,slow=12,SNR=8.9						
USRK				LR	LR	21 42 57.7	
	comp=Z,84nm,18.5s,baz=140,slow=37						
USRK	Ussuriysk Ar.	11.03	311	Pn	Pn	21 38 40.0	-0.7
USA0B	Ussuriysk Arra	11.03	311	Pn	Pn	21 38 39.8	-1.0
KSRS	Korea Array	12.47	274	Pn	Pn	21 39 02.5	+2.1
	0.3nm,0.3s,baz=87,slow=14,SNR=11						
KSRS				LR	LR	21 43 20.1	
	comp=Z,89nm,21.8s,baz=66,slow=35						
KLR	Kul'dur	14.51	327	Pn	Pn	21 39 26.1	-2.0
	0.3nm,0.3s,baz=143,slow=14,SNR=13						
CN2	Changchun	15.13	300	eP	P	21 39 42.9	+1.6
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PETK	Petropavlovsk-	18.39	28	LR	LR	21 47 45.2	
	comp=Z,54nm,20.6s,baz=179,slow=38						
HHC	Hu-ho-hao-te	24.99	288	eP	P	21 41 26.3	+0.3
HHC				pmax	pmax		
	comp=Z,19nm,0.7s						
HHC				pmax	pmax		
	comp=Z,1μm,5.7s						
SEY	Seymchan	25.98	9	P	P	21 41 35.4	+0.8
	comp=Z,6.7nm,1.1s,baz=180,slow=20,SNR=2.9						
H11N2	WAKE ISLAND Hy	26.94	125	T	T	22 10 01.0	
	baz=317,slow=75						
H11N1	WAKE ISLAND Hy	26.95	125	T	T	22 10 06.5	
	baz=317,slow=75						
H11N3	WAKE ISLAND Hy	26.96	125	T	T	22 10 00.6	
	baz=317,slow=75						
H11S1	WAKE ISLAND Hy	27.70	127	T	T	22 10 55.5	
	baz=319,slow=76						
H11S3	WAKE ISLAND Hy	27.70	127	T	T	22 10 54.5	
	baz=319,slow=76						
H11S2	WAKE ISLAND Hy	27.72	127	T	T	22 10 57.8	
	baz=319,slow=76						
XAN	Xi'an	28.27	273	P	P	21 41 57.1	+1.6
XAN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SONM	Songino Array	28.98	303	P	P	21 42 04.7	+2.9
	comp=Z,1.1nm,0.5s,baz=106,slow=8.7,SNR=8.1						
SONM				PcP	PcP	21 45 10.3	+0.5
	comp=Z,0.3nm,0.7s,baz=111,slow=4.9,SNR=1.8						
SONM	Songino Array	28.98	303	P	P	21 42 00.4	-1.4
GTA	Gaotai	34.10	287	⇑P	P	21 42 49.5	+2.6
GTA				pP	pP	21 42 53.6	-2.1
GTA				sP	sP	21 42 57.5	-1.8
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
TIXI	Tiksi	35.02	352	LR	LR	21 59 11.7	
	comp=Z,22nm,19.1s,baz=178,slow=40						
WMQ	Urumqi	42.19	297	eP	P	21 43 56.0	+1.2
ZALV	Zalesovo Beam	42.88	312	P	P	21 44 01.2	+1.0
	comp=Z,0.4nm,0.4s,baz=100,slow=7.2,SNR=2.8						
ZALV				PcP	PcP	21 45 51.0	+0.4
	comp=Z,1.1nm,0.6s,baz=108,slow=4.3,SNR=3.8						
ZALV	Zalesovo Beam	42.88	312	P	P	21 44 04.2	+4.0
CMAR	Chiang Mai Arr	43.33	257	P	P	21 44 04.5	+0.3
	comp=Z,0.7nm,0.4s,baz=46,slow=7.4,SNR=8.2						
CMAR				LR	LR	22 05 02.5	
	comp=Z,20nm,18.5s,baz=36,slow=40						
K20K	Telida	44.92	34	P	P	21 44 18.2	+1.8
K20K				IAmb	IAmb	21 44 19.0	
	comp=Z,4.6nm,1.0s						
MK31	Makanchi Array	45.34	302	P	P	21 44 21.1	+1.0
MK31				IAmb	IAmb	21 44 40.7	
	comp=Z,2.9nm,0.8s						
MKAR	Makanchi Array	45.34	302	P	P	21 44 20.7	+0.6
	comp=Z,0.6nm,0.6s,baz=82,slow=8.5,SNR=4.2						
MKAR	Makanchi Array	45.34	302	P	P	21 44 20.0	-0.1
MAKZ	Makanchi	45.55	302	P	P	21 44 22.3	+0.5
MAKZ				IAmb	IAmb	21 44 28.9	
	comp=Z,4.1nm,0.9s						
PPLA	Purkeypile	45.74	35	P	P	21 44 25.2	+2.0
CAST	Castle Rocks	45.81	34		P	21 44 24.7	+1.1
CAST				IAmb	IAmb	21 44 27.6	
	comp=Z,6.8nm,1.4s						
MLY	Manley	46.48	32	P	P	21 44 30.6	+1.7
KURK	Kurchatov	47.01	308	P	P	21 44 32.5	-0.6
KURK				IAmb	IAmb	21 44 49.7	
	comp=Z,5.4nm,0.8s						
KURBB	Kurchatov Arra	47.08	308	P	P	21 44 34.4	+0.8
	comp=Z,1.5nm,0.5s,baz=81,slow=8.3,SNR=12						
SML	Sawmill	47.54	37	P	P	21 44 38.0	+0.8
MDM	Murphy Dome	47.55	32	P	P	21 44 38.6	+1.5
MDM				IAmb	IAmb	21 44 39.3	
	comp=Z,6.0nm,0.9s						
WRH	Wood River Hil	47.60	33	P	P	21 44 38.9	+1.4
WRH				IAmb	IAmb	21 44 49.3	
	comp=Z,9.9nm,1.5s						
IL31		48.12	33	P	P	21 44 41.6	+0.2
IL31				IAmb	IAmb	21 44 57.1	
	comp=Z,3.6nm,0.8s						
ILAR	Eielson Array	48.12	33	P	P	21 44 41.8	+0.3
	comp=Z,2.2nm,0.7s,baz=262,slow=6.3,SNR=29						
ILAR				LR	LR	22 07 11.8	
	comp=Z,17nm,19.0s,baz=118,slow=39						
ILAR	Eielson Array	48.12	33	P	P	21 44 41.1	-0.5
BMAR	Burnt Mountain	49.04	29	P	P	21 44 48.8	+0.2
SCRK	Sand Creek	49.41	34	P	P	21 44 51.4	-0.2
SCRK				IAmb	IAmb	21 44 52.7	
	comp=Z,6.7nm,1.4s						
CRQM	Cirque	50.12	38	P	P	21 44 58.5	+1.4
BVAR	Borovoye Array	51.53	312	P	P	21 45 10.1	+2.5
	comp=Z,0.9nm,0.7s,baz=106,slow=11,SNR=2.7						
AAK	Ala-Archa	51.80	299	P	P	21 45 12.1	+2.2
	comp=Z,0.3nm,0.3s,baz=169,slow=5.2,SNR=1.8						
INK	Inuvik	53.13	27	P	P	21 45 19.9	+0.7
	comp=Z,0.8nm,0.6s,baz=298,slow=8.7,SNR=4.1						
INK	Inuvik	53.13	27	P	P	21 45 19.9	+0.7
ARU	Arti	57.15	319	P	P	21 45 48.9	+0.5
	comp=Z,0.6nm,0.5s,baz=80,slow=3.1,SNR=4.4						
ARU	Arti	57.15	319	P	P	21 45 48.8	+0.5
ARU				IAmb	IAmb	21 46 06.7	
	comp=Z,3.9nm,1.0s						
WB0	Warramunga Arr	57.66	190	P	P	21 45 50.5	-1.9
WR0	Warramunga Arr	57.83	190	P	P	21 45 52.3	-1.2
WR0				IAmb	IAmb	21 45 53.3	
	comp=Z,5.3nm,0.8s						
WB2	Warramunga Arr	57.84	190	P	P	21 45 52.4	-1.2
WRA	Warramunga Arr	57.84	190	P	P	21 45 52.5	-1.1
	comp=Z,5.9nm,0.7s,baz=12,slow=7.4,SNR=44						
WRA	Warramunga Arr	57.84	190	P	P	21 45 52.1	-1.5
FITZ	Fitzroy Crossi	57.88	200	P	P	21 45 53.5	-0.3
	comp=Z,1.6nm,0.7s,baz=360,slow=24,SNR=28						
ABKAR	Akbulak array	58.96	311	P	P	21 46 00.4	-0.8
EUNU	Eureka	59.42	9	P	P	21 46 04.3	+0.3
EUNU				IAmb	IAmb	21 46 18.3	
	comp=Z,1.9nm,0.8s						
ASAR	Alice Springs	61.56	190	P	P	21 46 18.6	-0.7
	comp=Z,2.3nm,0.8s,baz=11,slow=6.4,SNR=33						
ASAR	Alice Springs	61.56	190	P	P	21 46 18.1	-1.1
YKA	Yellowknife Ar	62.48	31	LR	LR	22 14 56.4	
	comp=Z,18nm,19.5s,baz=0.0,slow=37						
ARCES	ARCESS Array B	64.14	340	LR	LR	22 19 28.1	
	comp=Z,30nm,18.7s,baz=225,slow=41						
STKA	Stephens Creek	69.08	182	P	P	21 47 06.7	-1.0
	comp=Z,2.2nm,0.6s,baz=345,slow=10,SNR=7.5						
STKA	Stephens Creek	69.08	182	P	P	21 47 06.7	-1.0
FINES	FINESS Array B	69.18	333	P	P	21 47 08.7	+0.6
	comp=Z,3.6nm,1.0s,baz=44,slow=10,SNR=4.5						
FINES	FINESS Array B	69.18	333	P	P	21 47 08.0	0.0
NOA	NORSAR Array B	74.39	338	P	P	21 47 39.8	+0.3
	comp=Z,1.0nm,0.8s,baz=28,slow=4.6,SNR=2.1						
AKASG	Malin Array Be	74.96	323	P	P	21 47 43.1	+0.3
	comp=Z,0.7nm,0.5s,baz=44,slow=6.2,SNR=6.4						
AKASG	Malin Array Be	74.96	323	P	P	21 47 42.0	-0.9
AKASG				IAmb	IAmb	21 47 57.0	
	comp=Z,3.8nm,1.4s						
CLL	Collm	81.52	331	epP	pP	21 48 29.0	+0.7
CLL				esP	pwP	21 48 35.0	-0.6
GERES	GERESS Array B	83.19	329	P	P	21 48 27.2	-0.9
	comp=Z,0.1nm,0.3s,baz=28,slow=7.0,SNR=1.9						
GERES	GERESS Array B	83.19	329	P	P	21 48 26.9	-1.2
TXAR	Lajitas Array	88.41	54	P	P	21 48 54.5	+0.2
	comp=Z,0.2nm,0.6s,baz=324,slow=4.5,SNR=3.0						

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*IDC **16** 21:41:21.6±3.6, 42°.29N×143°.83E, h61^{km}±33^{km}, mb3.0/2, mb1 3.3/4, mb1mx2.9/61, mbtmp3.3/4, ML2.9/2, Error ellipse: s-maj=49.7km s-min=29.8km az=114.0*

*JMA **16** 21:41:29.6±0.1, 43°.02N×143°.51E, h97^{km}±1^{km}, M2.3*

ISC 16 21:41:29.2±1.0, **43°.00N**±0°.05×**143°.56E**±0°.05, **h100**^{km}±7^{km}, **n17**, σ**0.^{s}41**/26, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOB	Onbets	0.23	115	P	Pn	21 41 44.1	+0.6
JOB				eS	Sn	21 41 54.8	+0.7
JAR	Ashorobuto	0.34	27	P	Pn	21 41 43.9	-0.1
JAR				eS	Sn	21 41 54.5	-0.6
JCH	Churui	0.41	201	P	Pn	21 41 44.4	0.0
JCH				eS	Sn	21 41 55.4	-0.3
JFR	Furan	0.72	284	P	Pn	21 41 46.6	-0.3
JAK	Akkeshi	0.84	90	P	Pn	21 41 47.9	0.0
JAK				eS	Sn	21 42 01.8	-0.2
JBT2	Biratori 2	0.90	256	P	Pn	21 41 48.7	+0.1
JNBK	Urakawa-nobuka	0.93	220	P	Pn	21 41 49.0	+0.1
JNBK				eS	Sn	21 42 03.2	-0.5
JTKR	Abashiri--Toko	1.01	15	P	Pn	21 41 49.7	0.0
JTKR				eS	Sn	21 42 05.0	-0.1
JMP	Maruseppu	1.02	352	P	Pn	21 41 49.9	0.0
JMP				eS	Sn	21 42 05.2	-0.3
JNK	Nakash	1.03	55	P	Pn	21 41 50.3	+0.3
JNK				eS	Sn	21 42 05.9	+0.3
JKK2	Kamakawa 2	1.05	326	P	Pn	21 41 50.6	+0.3
ASAJ	Asahikawa	1.32	328	P	Pn	21 41 53.7	+0.4
	1.9nm,0.3s,baz=127,slow=17,SNR=6.4						
ASAJ				S	Sn	21 42 10.8	-0.6
	0.8nm,0.3s,baz=268,slow=32,SNR=1.7						
NEM2	Nemuro 2	1.64	76	P	Pn	21 41 57.1	-0.1
NEM2				eS	Sn	21 42 17.4	-1.0
MJAR	Matsushiro Arr	7.65	214	P	Pn	21 43 04.2	-14
	0.6nm,0.3s,baz=100,slow=8.1,SNR=26						
MKAR	Makanchi Array	42.60	297	P	P	21 49 15.6	+0.3
	0.2nm,0.7s,baz=81,slow=9.2,SNR=1.9						
ILAR	Eielson Array	43.63	36	P	P	21 49 23.2	-0.1
	0.5nm,0.8s,baz=259,slow=7.8,SNR=3.3						
ILAR	Eielson Array	43.63	36	P	P	21 49 23.2	-0.1

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*KRSC **16** 21:42:53.2±1.5, 50°.85N×157°.83E, h41^{km}±23^{km}, ML4.6*

*MOS **16** 21:42:54.4±1.1, 50°.87N×157°.49E, h37^{km}, mb4.3/4, Error ellipse: s-maj=14.1km s-min=4.5km az=80.5*

MOS Felt (II) at Severo-Kuril'sk.

*NEIC **16** 21:42:57.0±1.3, 51°.0N±0°.1×157°.4E±0°.2, h65^{km}±10^{km}, mb4.2/8, Error ellipse: s-maj=22.7km s-min=12.5km az=133.0*

*IDC **16** 21:42:59.0±2.7, 51°.15N×157°.27E, h77^{km}±21^{km}, mb3.6/11, mb1 3.8/13, mb1mx3.4/59, mbtmp3.9/13, MS3.4/7, Ms1 3.4/7, ms1mx2.9/55, Error ellipse: s-maj=34.2km s-min=16.8km az=133.0*

ISC 16 21:42:54.4±1.2, **50°.81N**±0°.07×**157°.74E**±0°.06, **h54**^{km}±9^{km}, **n102**, σ**1.^{s}33**/111, **mb4.0**/16, **MS3.6**/6, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAU	Pauzhetka	0.88	319	PN	Pn	21 43 10.8	+0.2
PAU				S	Sn	21 43 22.8	+0.2
PAU	Pauzhetka	0.88	319	eP	Pn	21 43 10.8	+0.2
PAU				eS	Sn	21 43 22.8	+0.2
KDTR	Khodutka, Kamc	1.03	12	PN	Pn	21 43 12.2	-0.3
KDTR				S	Sn	21 43 24.4	-1.6
KDTR	Khodutka, Kamc	1.03	12	eP	Pn	21 43 12.2	-0.3
KDTR				eS	Sn	21 43 24.4	-1.6
SKR	Severo-Kuril’s	1.04	264	ePN	Pn	21 43 13.3	+0.6
SKR				eS	Sn	21 43 26.4	+0.2
SKR				pmax	pmax		
	comp=Z,1μm,0.3s						
SKR				smax	smax		
	comp=N,9μm,0.3s						
SKR				smax	smax		
	comp=E,18μm,0.4s						
SKR	Severo-Kuril’s	1.04	264	eP	Pn	21 43 13.1	+0.4
SKR				eS	Sn	21 43 26.2	0.0
ASAK	Asacha	1.58	4	PN	Pn	21 43 20.6	+0.5
ASAK	Asacha	1.58	4	eP	Pn	21 43 20.6	+0.5
MIPR	Malaya Ipel'ka	1.59	338	PN	Pn	21 43 21.0	+0.8
MIPR	Malaya Ipel'ka	1.59	338	eP	Pn	21 43 21.0	+0.8
RUS	Russkaya	1.70	16	PN	Pn	21 43 21.3	-0.3
RUS				S	Sn	21 43 41.0	-1.2
RUS	Russkaya	1.70	16	eP	Pn	21 43 21.3	-0.3
RUS				eS	Sn	21 43 41.0	-1.2
MTVR	Mutnovka	1.70	9	PN	Pn	21 43 22.1	+0.3
MTVR				S	Sn	21 43 41.7	-0.8
MTVR	Mutnovka	1.70	9	eP	Pn	21 43 22.1	+0.3
MTVR				eS	Sn	21 43 41.7	-0.8
GRL	Gorelyy	1.76	7	PN	Pn	21 43 23.3	+0.7
GRL				S	Sn	21 43 44.1	+0.1
GRL	Gorelyy	1.76	7	eP	Pn	21 43 23.3	+0.7
GRL				eS	Sn	21 43 44.1	+0.1
APC	Apacha	2.15	351	PN	Pn	21 43 28.6	+0.8
APC	Apacha	2.15	351	eP	Pn	21 43 28.6	+0.8
PET	Petropavlovsk	2.29	14	ePN	Pn	21 43 30.2	+0.5
PET				eS	Sn	21 43 56.4	-0.3
PET				pmax	pmax		
	comp=Z,85nm,0.4s						
PET				smax	smax		
	comp=E,890nm,0.6s						
PET				smax	smax		
	comp=N,1μm,0.6s						
PET	Petropavlovsk	2.29	14	eP	Pn	21 43 30.3	+0.5
PET				eS	Sn	21 43 56.6	-0.1
PET	Petropavlovsk	2.29	14		Pn	21 43 30.2	+0.5
PEA0B	Petropavlovsk-	2.31	359	i PN	Pn	21 43 30.9	+1.0
PEA0B	Petropavlovsk-	2.31	359	Pn	Pn	21 43 31.0	+1.1
PETK	Petropavlovsk-	2.31	359	P	Pn	21 43 31.1	+1.1
	comp=N,3.8nm,0.3s,baz=170,slow=12,SNR=56						
PETK				S	Sn	21 43 59.5	+2.4
	comp=N,7.2nm,0.3s,baz=167,slow=16,SNR=3.9						
PETK	Petropavlovsk-	2.31	359		Pn	21 43 30.8	+0.8
DALK	Dalny	2.32	15	PN	Pn	21 43 30.6	+0.6
DALK				S	Sn	21 43 57.2	-0.1
DALK	Dalny	2.32	15	eP	Pn	21 43 30.6	+0.6
DALK				eS	Sn	21 43 57.2	-0.1
UGLR	Uglovaya	2.50	15	PN	Pn	21 43 34.6	+1.9
UGLR				S	Sn	21 44 04.0	+2.0
UGLR	Uglovaya	2.50	15	eP	Pn	21 43 34.6	+1.9
UGLR				eS	Sn	21 44 04.0	+2.0
AVH	Avacha	2.54	14	PN	Pn	21 43 34.9	+1.7
AVH	Avacha	2.54	14	eP	Pn	21 43 34.9	+1.7
SMAR	Somma	2.55	15	PN	Pn	21 43 35.3	+1.9
SMAR	Somma	2.55	15	eP	Pn	21 43 35.3	+1.9
KOK	Koryaka	2.55	12	PN	Pn	21 43 35.4	+2.0
KOK	Koryaka	2.55	12	eP	Pn	21 43 35.4	+2.0
NLC	Nalytchevo	2.57	22	eS	Sn	21 44 00.6	-2.9
SDLR	Sedlovina	2.58	16	PN	Pn	21 43 34.3	+0.6
SDLR	Sedlovina	2.58	16	eP	Pn	21 43 34.3	+0.6
KRER	Koryakskii	2.58	14	PN	Pn	21 43 35.4	+1.6
KRER	Koryakskii	2.58	14	eP	Pn	21 43 35.4	+1.6
SPN	Mys Shipunski	2.70	31	PN	Pn	21 43 35.6	+0.4
SPN				S	Sn	21 44 05.7	-0.9
SPN	Mys Shipunski	2.70	31	eP	Pn	21 43 35.6	+0.4
SPN				eS	Sn	21 44 05.7	-0.9
GNL	Ganaly	2.90	2	PN	Pn	21 43 38.5	+0.4
GNL	Ganaly	2.90	2	eP	Pn	21 43 38.5	+0.4
TUMR	Tumrok	4.71	17	PN	Pn	21 44 06.2	+3.2
TUMR	Tumrok	4.71	17	eP	Pn	21 44 06.2	+3.2
KBTR	Krutoberegovo	6.20	27	PN	Pn	21 44 24.6	+1.4
KBTR	Krutoberegovo	6.20	27	eP	Pn	21 44 24.6	+1.4
JKA	Kamikawa-asahi	12.22	243	Pn	Pn	21 45 48.4	+2.8
ASAJ	Asahikawa	12.22	243	P	Pn	21 45 48.1	+2.5
	comp=N,1.8nm,0.3s,baz=71,slow=15,SNR=13						
ASAJ	Asahikawa	12.22	243	PN	Pn	21 45 48.4	+2.8
ERM	Erimo	13.34	234	ePN	Pn	21 45 58.5	-2.3
ERM	Erimo	13.34	234	Pn	Pn	21 45 59.2	-1.7
KLR	Kul'dur	16.75	275	LR	LR	21 53 08.1	
	comp=N,58nm,21.6s,baz=306,slow=37						
JSD	Sado	18.81	235	P	P	21 47 09.8	+0.5
JSD				IAmb	IAmb	21 47 17.6	
	comp=Z,8.4nm,0.9s						
YAK	Yakutsk	18.98	317	i P	P	21 47 09.8	-1.2
YAK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MAJO	Matsushiro	19.98	232	i P	P	21 47 20.9	-1.3
MAJO				pmax	pmax		
	comp=Z,13nm,1.7s						
MJAR	Matsushiro Arr	19.98	232	P	Pn	21 47 23.8	-0.5
	comp=Z,0.1nm,0.3s,baz=24,slow=11,SNR=5.7						
MJAR	Matsushiro Arr	19.98	232	P	P	21 47 22.6	+0.4
KSRS	Korea Array	25.02	249	P	P	21 48 13.8	+0.6
	comp=Z,1.5nm,0.8s,baz=54,slow=12,SNR=3.1						
MCK	McKinley	30.59	45	P	P	21 49 04.5	+1.8
MCK				pmax	pmax		
	comp=Z,8.0nm,1.4s						
MCK	McKinley	30.59	45	P	P	21 49 04.5	+1.8
MCK				IAmb	IAmb	21 49 20.5	
	comp=Z,8.5nm,1.4s						
SML	Sawmill	30.95	48	P	P	21 49 07.8	+1.9
SML				IAmb	IAmb	21 49 17.8	
	comp=Z,13nm,1.3s						
COLA	College	31.07	42	i P	P	21 49 04.9	-1.9
COLA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
H11N2	WAKE ISLAND Hy	31.84	163	T	T	22 23 01.1	
	baz=349,slow=76						
H11N3	WAKE ISLAND Hy	31.86	163	T	T	22 23 06.4	
	baz=349,slow=76						
H11N1	WAKE ISLAND Hy	31.86	164	T	T	22 23 01.3	
	baz=349,slow=76						
H11S1	WAKE ISLAND Hy	33.01	164	T	T	22 24 28.9	
	baz=349,slow=76						
H11S3	WAKE ISLAND Hy	33.02	164	T	T	22 24 26.3	
	baz=349,slow=76						
H11S2	WAKE ISLAND Hy	33.02	164	T	T	22 24 30.0	
	baz=349,slow=76						
SONM	Songino Array	33.05	285	P	P	21 49 23.9	-0.6
	comp=Z,0.2nm,0.3s,baz=61,slow=8.1,SNR=6.4						
SONM				PcP	PcP	21 52 08.0	+1.0
	comp=Z,0.3nm,0.7s,baz=59,slow=3.7,SNR=2.3						
SONM	Songino Array	33.05	285	P	P	21 49 24.2	-0.4
SONM	Songino Array	33.05	285	P	P	21 49 24.2	-0.4
GUMO	Guam	38.56	200	LR	LR	22 04 22.2	
	comp=Z,38nm,20.1s,baz=96,slow=33						
KURK	Kurchatov	47.72	302	P	P	21 51 24.5	-0.9
KURBB	Kurchatov Arra	47.82	302	P	P	21 51 24.5	-1.7
	comp=Z,0.7nm,0.5s,baz=60,slow=7.0,SNR=5.4						
MK31	Makanchi Array	47.84	296	P	P	21 51 25.2	-1.3
MK31				pmax	pmax		
	comp=Z,2.0nm,1.4s						
MK31	Makanchi Array	47.84	296	P	P	21 51 25.2	-1.3
MKAR	Makanchi Array	47.84	296	P	P	21 51 24.9	-1.6
	comp=Z,0.3nm,0.4s,baz=62,slow=7.5,SNR=14						
MKAR	Makanchi Array	47.84	296	P	P	21 51 25.3	-1.2

MKAR	Makanchi Array	47.84	296	P	P	21 51 25.3	-1.2
MAKZ	Makanchi	48.02	296	P	P	21 51 26.5	-1.3
MAKZ				pmax	pmax		
	comp=Z,3.0nm,1.5s						
MAKZ	Makanchi	48.02	296	P	P	21 51 26.4	-1.3
MAKZ				IAmb	IAmb	21 51 48.7	
	comp=Z,3.0nm,1.5s						
SPITS	Spitsbergen Ar	49.15	350	P	P	21 51 35.2	-0.8
	comp=Z,4.2nm,0.8s,baz=32,slow=8.9,SNR=1.1						
YBH	Yreka Blue Hor	53.22	67	LR	LR	22 13 05.5	
	comp=Z,18nm,19.6s,baz=226,slow=34						
CM31	Chiang Mai Arr	56.27	257	P	P	21 52 28.8	-0.6
CMAR	Chiang Mai Arr	56.27	257	P	P	21 52 31.4	+2.1
	comp=Z,3.1nm,0.8s,baz=25,slow=7.0,SNR=16						
CMAR	Chiang Mai Arr	56.27	257	P	P	21 52 29.3	0.0
ABKAR	Akbulak array	58.16	310	P	P	21 52 42.7	+0.4
GAR	Garm	59.56	295	P	P	21 52 50.9	-1.4
FINES	FINESS Array B	61.63	336	P	P	21 53 04.5	-1.4
	comp=Z,2.8nm,0.9s,baz=3.4,slow=7.0,SNR=5.4						
FINES	FINESS Array B	61.63	336	P	P	21 53 04.9	-1.0
FINES	FINESS Array B	61.63	336	P	P	21 53 04.9	-1.0
NOA	NORSAR Array B	65.32	343	P	P	21 53 29.7	-0.5
	comp=Z,1.0nm,1.0s,baz=32,slow=8.3,SNR=1.8						
AFI	Afiamalu	69.74	148	LR	LR	22 18 07.9	
	comp=Z,46nm,21.7s,baz=62,slow=30						
MSVF	Nonsavu	70.54	159	LR	LR	22 18 25.6	
	comp=Z,36nm,20.5s,baz=119,slow=30						
TXAR	Lajitas Array	72.91	65	P	P	21 54 20.3	+2.5
	comp=Z,0.3nm,0.6s,baz=285,slow=3.5,SNR=3.6						
TXAR	Lajitas Array	72.91	65	P	P	21 54 19.7	+1.9
CLL	Collm	73.95	338	*e*pP	pP	21 54 41.0	+2.4
RAR	Rarotonga	80.88	140	LR	LR	22 24 25.1	
	comp=Z,40nm,21.6s,baz=217,slow=31						
ESDC	Sonseca Array	88.48	346	P	P	21 55 40.4	-0.3
	comp=Z,0.5nm,0.9s,baz=15,slow=1.7,SNR=3.0						
ESDC				LR	LR	22 41 25.3	
	comp=Z,20nm,18.1s,baz=285,slow=40						
KEST	Kesra	89.44	335	P	P	21 55 45.1	-0.2
	comp=Z,1.2nm,0.5s,baz=287,slow=6.9,SNR=6.1						

*IDC **16** 21:46:07.4±1.6, 5°.91S×130°.05E, h194^{km}±16^{km}, mb4.0/19, mb1 4.1/25, mb1mx3.9/46, mbtmp4.7/25, MS3.8/2, Ms1 3.8/2, ms1mx2.6/35, Error ellipse: s-maj=15.9km s-min=9.4km az=79.0*

*NEIC **16** 21:46:08.3±1.5, 5°.89S±0°.05×129°.96E±0°.08, h199^{km}±8^{km}, mb4.5/35, Error ellipse: s-maj=13.1km s-min=4.4km az=60.0*

*DJA **16** 21:46:08.6±0.2, 6°S±2°×13°0E±°, h199^{km}±2^{km}, M4.7/26, mB5.2/12, mb4.6/26, MLv5.0/14, Mw(mB)4.6/12*

ISC 16 21:46:07.8±0.3**, 5°.88S**±0°.04×**130°.01E**±0°.05**, h200**^{km}**, n135,** σ1^{s}.**73**/146**, mb4.5**/53**, 1D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	Bandanaira	1.35	356	P	Pn	21 46 43.0	+2.8
SAUI	Saumlaki	2.46	149	P	Pn	21 46 52.7	+1.5
SAUI				S	Sn	21 47 25.5	+0.4
SAUI	Saumlaki	2.46	149	Pn	Pn	21 46 51.6	+0.4
SAUI	Saumlaki	2.46	149	P	Pn	21 46 52.9	+1.7
MSAI	Masohi	2.73	337	P	Pn	21 46 56.3	+1.9
MSAI				S	Sn	21 47 31.2	+0.4
AAI	Ambon	2.83	320	P	Pn	21 46 58.3	+2.9
FAKI	Fak Fak	3.69	37	P	Pn	21 47 07.1	+1.3
FAKI				S	Sn	21 47 45.9	-5.5
FAKI	Fak Fak	3.69	37	Pn	Pn	21 47 06.9	+1.1
FAKI	Fak Fak	3.69	37	P	Pn	21 47 06.9	+1.1
SIJI	Sorong	5.13	14	P	Pn	21 47 23.6	-0.3
	107nm,0.3s,baz=203,slow=11,SNR=147						
SIJI				S	Sn	21 48 20.6	-3.4
	125nm,0.3s,baz=282,slow=23,SNR=34						
SWI	Sorong	5.14	14	P	Pn	21 47 24.5	+0.5
	4.4nm16µm305nm,0.4s						
SWI				S	Sn	21 48 17.3	-6.8
	4.4nm16µm305nm,0.4s						
SANI	Sanana	5.52	313	P	Pn	21 47 30.5	+1.6
	1.3nm4µm403nm,0.7s						
SANI				S	Sn	21 48 26.3	-6.8
	1.3nm4µm403nm,0.7s						
SANI	Sanana	5.52	313	P	Pn	21 47 31.1	+2.1
LBMI	Labuha	5.77	334	P	Pn	21 47 34.0	+1.8
	2.5nm10µm557nm,0.5s						
LBMI				S	Sn	21 48 33.6	-5.3
	2.5nm10µm557nm,0.5s						
SOEI	Soe	6.87	236	P	Pn	21 47 47.0	+0.5
	0.3nm814nm32nm,0.6s						
SOEI				S	Sn	21 49 02.5	-2.2
	0.3nm814nm32nm,0.6s						
SOEI	Soe	6.87	236	Pn	Pn	21 47 46.7	+0.3
SOEI	Soe	6.87	236	P	Pn	21 47 47.6	+1.1
TNTI	Ternate	7.11	338	P	Pn	21 47 47.8	-1.7
	0.7nm1µm101nm,0.7s						
TNTI	Ternate	7.11	338	Pn	Pn	21 47 50.6	+1.1
TNTI	Ternate	7.11	338	P	Pn	21 47 51.6	+2.1
SRPI	Serui, Papua	7.38	58	P	Pn	21 47 58.1	+5.0
BATI	Baumata	7.61	235	P	Pn	21 47 55.9	-0.1
	21nm,0.3s,baz=103,slow=3.1,SNR=18						
BATI				S	Sn	21 49 18.7	-3.5
	7.7nm,0.3s,baz=4.9,slow=18,SNR=6.2						
BATI	Baumata	7.61	235	P	Pn	21 47 56.2	+0.1
	0.2nm639nm42nm,0.6s						
BAKI	Biak	7.66	53	P	Pn	21 47 58.4	+1.7
	0.6nm2µm192nm,0.8s						
MMRI	Maumere	8.18	250	P	Pn	21 48 05.5	+2.1
	18nm,0.9s						
LUWI	Luwuk	8.67	303	P	Pn	21 48 11.1	+1.3
	6µm51nm,0.8s						
EDFI	Ende, Flores	8.73	250	P	Pn	21 48 11.8	+1.1
	9.7nm,0.7s						
KMSI	Cibinong	8.79	317	P	Pn	21 48 12.3	+0.9
	84nm,0.5s						
GTOI	Gorontalo	9.52	313	P	Pn	21 48 25.4	+4.5
	21nm,0.7s						
MRSI	Marisa	10.23	308	P	Pn	21 48 32.0	+1.9
	721nm92nm,0.8s						
FITZ	Fitzroy Crossi	12.87	199	P	Pn	21 49 01.9	-1.9
	1.4nm,0.3s,baz=26,slow=9.0,SNR=60						
FITZ				S	S	21 51 17.0	-10
	baz=220,slow=17						
WB0	Warramunga Arr	14.45	163		Pn	21 49 21.4	-2.0
WRAB	Tennant Creek	14.60	164	Pn	Pn	21 49 22.4	-2.7
WRA	Warramunga Arr	14.60	164	P	Pn	21 49 22.7	-2.5
	5.2nm,0.3s,baz=340,slow=12,SNR=56						
WRA				S	S	21 51 59.1	-8.5
	8.2nm,0.3s,baz=354,slow=21,SNR=13						
WRA	Warramunga Arr	14.60	164	Pn	Pn	21 49 22.6	-2.6
WB2	Warramunga Arr	14.61	164	Pn	Pn	21 49 22.4	-2.9
WR0	Warramunga Arr	14.68	163	Pn	Pn	21 49 23.0	-3.1
BBKI	Banjar Baru	15.30	278	P	P	21 49 34.7	+0.5
	31nm,1.3s						
MTKI	Muara Teweh, K	15.86	287	P	Pn	21 49 42.0	+1.5
JAGI	Jajag, Banyuwa	15.94	260		P	21 49 39.4	-1.8
JAGI				IAmb	IAmb	21 49 45.2	
	comp=Z,15nm,0.8s						
KMMI	Kalianget	15.98	265	P	Pn	21 49 43.6	+1.6
	comp=Z,96nm,0.8s						
PMG	Port Moresby	17.36	103	P	P	21 49 57.2	+0.4
	comp=Z,2.3nm,0.3s,baz=294,slow=5.5,SNR=22						
PMG	Port Moresby	17.36	103		P	21 49 58.5	+1.7
AS31	Alice Springs	18.08	168		P	21 50 04.4	-0.2
ASAR	Alice Springs	18.08	168	P	P	21 50 05.2	+0.6
	comp=Z,9.6nm,0.3s,baz=351,slow=11,SNR=469						
ASAR				S	S	21 53 17.3	-4.2
	comp=Z,0.6nm,0.3s,baz=353,slow=25,SNR=11						
ASAR	Alice Springs	18.08	168	P	P	21 50 05.0	+0.4
KPJI	Karang Pucung	20.98	265	P	P	21 50 37.0	+1.2
	comp=Z,24nm,0.7s						
CTAO	Charters Tower	21.19	133	P	P	21 50 38.1	+0.2
CTAO				IAmb	IAmb	21 50 39.6	
	comp=Z,14nm,0.8s						
STKA	Stephens Creek	28.05	159	P	P	21 51 40.5	0.0
	comp=Z,4.3nm,0.3s,baz=330,slow=8.7,SNR=21						
STKA	Stephens Creek	28.05	159	P	P	21 51 40.4	-0.2
PPI	Padang Panjang	30.04	279	P	P	21 52 01.4	+3.0
	comp=Z,13nm,0.7s						
MNSI	Mandailing Nat	31.09	281	P	P	21 52 06.5	-1.2
	comp=Z,14nm,0.6s						
UBPT	Khong Chiam	32.14	311	P	P	21 52 16.9	+0.2
UBPT				IAmb	IAmb	21 52 18.1	
	comp=Z,14nm,0.8s						
JOW	Kunigami	32.56	357	P	P	21 52 21.4	+1.1
	comp=Z,21nm,0.8s,baz=176,slow=10,SNR=5.1						
JOW	Kunigami	32.56	357	P	P	21 52 21.1	+0.8
CAN	Canberra	34.13	152	P	P	21 52 33.7	-0.2
CAN				IAmb	IAmb	21 52 35.5	
	comp=Z,7.0nm,0.5s						
DZM	Mont Dzumac	38.70	118	P	P	21 53 13.0	+0.2
	comp=Z,2.4nm,0.7s,baz=287,slow=9.2,SNR=5.9						
DZM	Mont Dzumac	38.70	118	P	P	21 53 13.1	+0.3
CM31	Chiang Mai Arr	39.03	309	P	P	21 53 15.8	+0.4
CM31				IAmb	IAmb	21 53 17.2	
	comp=Z,9.9nm,1.1s						
CMAR	Chiang Mai Arr	39.03	309	P	P	21 53 16.4	+1.0
	comp=Z,5.3nm,0.7s,baz=140,slow=7.7,SNR=32						
CMAR				PcP	PcP	21 55 22.4	+1.0
	comp=Z,0.9nm,0.6s,baz=134,slow=3.9,SNR=5.1						
CMAR	Chiang Mai Arr	39.03	309	P	P	21 53 14.7	-0.7
NJ2	Nanjing	39.19	345	*e*P	P	21 53 19.3	+2.9
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
CHTO	Chiang Mai	39.23	309	P	P	21 53 17.4	+0.3
CHTO				IAmb	IAmb	21 53 18.7	
	comp=Z,11nm,0.7s						
JHS	Saijyo	40.76	4	P	P	21 53 30.0	+0.6
JHS				IAmb	IAmb	21 53 31.4	
	comp=Z,13nm,1.0s						
JWT	Wachi	41.25	7	P	P	21 53 33.3	0.0
MJAR	Matsushiro Arr	42.89	10	P	P	21 53 46.1	-0.5
	comp=Z,6.3nm,0.7s,baz=184,slow=10.0,SNR=20						
MAJO	Matsushiro	42.89	10	P	P	21 53 46.4	-0.3
MAJO				IAmb	IAmb	21 53 47.0	
	comp=Z,13nm,0.8s						
MAT	Matsushiro	42.89	10	P	P	21 53 46.2	-0.4
MJB9	Matsu-Tunnel	42.89	10	P	P	21 53 45.6	-1.0
KSRS	Korea Array	43.15	358	P	P	21 53 49.0	+0.3
	comp=Z,1.7nm,0.6s,baz=172,slow=9.0,SNR=6.4						
KSRS				LR	LR	22 12 43.4	
	comp=Z,20nm,18.2s,baz=82,slow=37						
XAN	Xi'an	44.43	335	P	P	21 53 58.8	-0.2
XAN				pmax	pmax		
	comp=Z,11nm,0.8s						
XAN				pmax	pmax		
	comp=Z,250nm,5.5s						
HHC	Hu-ho-hao-te	49.49	342	*e*P	P	21 54 42.8	+4.8
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,980nm,6.6s						
USA0B	Ussuriysk Arra	49.88	2	P	P	21 54 40.1	-0.7
USRK	Ussuriysk Ar.	49.88	2	P	P	21 54 41.8	+1.0
	comp=Z,4.5nm,0.5s,baz=186,slow=7.6,SNR=12						
USRK	Ussuriysk Ar.	49.88	2	P	P	21 54 40.4	-0.4
ASAJ	Asahikawa	51.04	12	P	P	21 54 50.0	+0.4
	comp=Z,6.4nm,0.6s,baz=220,slow=19,SNR=4.0						
LSA	Lhasa	51.40	316	P	P	21 54 52.6	-0.4
LSA				IAmb	IAmb	21 54 54.9	
	comp=Z,8.1nm,0.9s						
ODAN	Odare	52.53	310	*e*P	P	21 55 01.5	+0.3
	comp=Z,33nm,0.6s						
TAPN	Taplejung	52.55	311	*e*P	P	21 55 01.7	+0.3
	comp=Z,35nm,0.4s						
GTA	Gaotai	53.00	331	⇓P	P	21 55 05.5	+1.3
GTA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
RAMN	Ramite	53.18	310	*e*P	P	21 55 06.6	+0.7
	comp=Z,97nm,0.4s						
BKZ	Black Stump Fm	53.38	135	P	P	21 55 06.5	-0.5
BKZ				IAmb	IAmb	21 55 15.7	
	comp=Z,11nm,1.1s						
JIRN	Jiri	53.86	310	*e*P	P	21 55 11.4	+0.4
	comp=Z,12nm,0.3s						
PKI	Pulchoki	54.41	310	*e*P	P	21 55 14.7	-0.2
PKIN	Phulchoki	54.42	310	*e*P	P	21 55 14.7	-0.2
	comp=Z,15nm,0.6s						
KKN	Kakani	54.62	310	*e*P	P	21 55 16.4	+0.1
	comp=Z,27nm,0.6s						
DMN	Daman	54.66	310	*e*P	P	21 55 16.9	+0.3
	comp=Z,27nm,0.5s						
KLR	Kul'dur	54.90	1	P	P	21 55 18.5	+0.9
	comp=Z,2.6nm,0.8s,baz=209,slow=1.6,SNR=5.6						
GKN	Gorkha	55.22	310	*e*P	P	21 55 20.7	+0.2
	comp=Z,52nm,0.5s						
KOLN	Koldanda	55.90	309	*e*P	P	21 55 25.7	+0.3
	comp=Z,34nm,0.8s						
DANN	Dangsing	56.06	310	*e*P	P	21 55 26.8	+0.2
	comp=Z,19nm,0.6s						
PYUN	Piuthan	56.53	309	*e*P	P	21 55 30.3	+0.4
	comp=Z,58nm,0.8s						
ULN	Ulaanbaatar	57.21	342	P	P	21 55 35.1	+0.9
ULN				IAmb	IAmb	21 55 36.5	
	comp=Z,8.4nm,0.6s						
SONM	Songino Array	57.39	341	P	P	21 55 36.4	+1.0
	comp=Z,2.6nm,0.5s,baz=162,slow=6.8,SNR=49						
SONM	Songino Array	57.39	341	P	P	21 55 35.1	-0.3
WMQ	Urumqi	62.46	327	*e*P	P	21 56 09.9	-0.1
WMQ				pmax	pmax		
	comp=Z,26nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,380nm,3.9s						
KSH	Kashi	67.20	317	P	P	21 56 41.9	+1.2
KSH				pmax	pmax		
	comp=Z,8.0nm,0.6s						
MK31	Makanchi Array	67.30	327	P	P	21 56 41.5	+0.5
MK31				IAmb	IAmb	21 56 42.9	
	comp=Z,9.0nm,0.8s						
MKAR	Makanchi Array	67.30	327	P	P	21 56 42.0	+1.0
	comp=Z,12nm,0.6s,baz=114,slow=8.3,SNR=152						
MKAR	Makanchi Array	67.30	327	P	P	21 56 41.8	+0.8
MKAR				PcP	PcP	21 57 07.8	+0.6
MAKZ	Makanchi	67.48	326	P	P	21 56 42.0	-0.2
MAKZ				IAmb	IAmb	21 56 43.8	
	comp=Z,8.9nm,0.7s						
YAK	Yakutsk	67.71	360	P	P	21 56 43.6	+0.4
	comp=Z,16nm,0.5s,baz=2.2,slow=1.1,SNR=8.7						
YAK	Yakutsk	67.71	360	P	P	21 56 42.4	-0.9
TKM2	Tokmak 2	69.13	320	P	P	21 56 53.9	+1.2
	SNR=9.4						
KBK	Karagaybulak	69.41	320	P	P	21 56 56.2	+1.7
	SNR=5.1						
UCH	Uchtor	69.48	319	P	P	21 56 56.8	+1.6
	SNR=8.3						
AAK	Ala-Archa	69.69	320	P	P	21 56 56.9	+0.7
	comp=Z,5.2nm,0.8s,baz=130,slow=6.5,SNR=20						
AAK	Ala-Archa	69.69	320	P	P	21 56 57.9	+1.7
	SNR=7.1						
AAK	Ala-Archa	69.69	320	P	P	21 56 56.7	+0.6
AAK				IAmb	IAmb	21 56 58.5	
	comp=Z,5.4nm,0.8s						
AML	Almayashu	69.97	319	P	P	21 56 59.6	+1.5
	SNR=10.0						
USP	Ospenovka	70.00	320	P	P	21 56 59.0	+1.2
	SNR=12						
EKS2	Erkin-Say	70.17	319	P	P	21 57 00.7	+1.7
	SNR=7.6						
ZAA0	Zalesovo Array	70.58	334	P	P	21 57 00.3	-0.7
ZAA0				PcP	PcP	21 57 21.4	+0.5
ZALV	Zalesovo Beam	70.58	334	P	P	21 57 00.9	-0.1
	comp=Z,4.2nm,0.5s,baz=135,slow=5.4,SNR=18						
ZALV	Zalesovo Beam	70.58	334	P	P	21 57 00.6	-0.5
GAR	Garm	70.89	315	P	P	21 57 03.2	-0.2
GAR				IAmb	IAmb	21 57 04.9	
	comp=Z,14nm,0.9s						
BTK	Batken	70.98	316	P	P	21 57 03.9	0.0
KURK	Kurchatov	71.57	328	P	P	21 57 07.5	+0.5
KURK				IAmb	IAmb	21 57 08.1	
	comp=Z,5.3nm,0.7s						
CHGR	Chuyangaron	71.57	314	P	P	21 57 07.5	0.0
KK31	Karatay Array	72.51	319	P	P	21 57 13.2	+0.4
KKAR	Karatay Array	72.51	319	P	P	21 57 13.1	+0.3
TAS	Tashkent	72.56	316	P	P	21 57 13.8	+0.6
VNDA	Vanda	73.55	173	P	P	21 57 18.5	+0.1
	comp=Z,0.7nm,0.9s,baz=324,slow=2.1,SNR=2.6						
MAW	Mawson	75.99	201	P	P	21 57 32.7	+0.3
	comp=Z,1.2nm,0.5s,baz=45,slow=7.1,SNR=2.2						
BRVK	Borovoye	77.19	328	P	P	21 57 39.2	-0.3
TIXI	Tiksi	77.38	360	P	P	21 57 39.9	-0.2
	comp=Z,6.4nm,0.5s,baz=166,slow=5.3,SNR=39						
TIXI	Tiksi	77.38	360	P	P	21 57 40.3	+0.3
TIXI				IAmb	IAmb	21 57 41.0	
	comp=Z,6.1nm,0.6s						
SOCY	Socotra	77.66	284	P	P	21 57 41.9	-1.0
SOCY				IAmb	IAmb	21 57 54.5	
	comp=Z,22nm,1.1s						
NRIK	Noril'sk	80.48	346	P	P	21 57 57.9	+0.9
	comp=Z,5.0nm,0.6s,baz=128,slow=8.0,SNR=4.4						
ABKAR	Akbulak array	81.64	321	P	P	21 58 02.7	-0.8
ARU	Arti	84.76	328	P	P	21 58 18.6	-0.7
ILAR	Eielson Array	92.33	25	P	P	21 58 53.9	-1.2
	comp=Z,0.5nm,0.6s,baz=238,slow=5.0,SNR=9.9						
INK	Inuvik	97.82	22	LR	LR	22 39 55.5	
	comp=Z,255nm,21.4s,baz=303,slow=33						
TORD	Torodi Ar. Bea	128.59	282	PKP	PKPdf	22 04 51.9	-0.1
	comp=Z,0.5nm,0.5s,baz=65,slow=1.8,SNR=4.8						
TORD	Torodi Ar. Bea	128.59	282		PKPdf	22 04 51.6	-0.4

IDC 16 22:03:31.5±1.5**, 1°.21N×127°.79E, h0**^{km}**, mb3.4**/3**, mb1 3.6**/4**, mb1mx3.4**/35**, mbtmp3.4**/4**, ML2.9**/1**, Error ellipse: s-maj=69.2km s-min=24.3km az=60.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	4.04	121	Pn	Pn	22 04 34.7	-0.1
	0.7nm,0.3s,baz=231,slow=23,SNR=2.0						
WRA	Warramunga Arr	21.98	163	P	P	22 08 26.9	-0.5
	1.0nm,0.7s,baz=343,slow=12,SNR=7.3						
ASAR	Alice Springs	25.44	167	P	P	22 09 01.7	+0.4
	1.0nm,0.9s,baz=354,slow=8.9,SNR=6.5						
MKAR	Makanchi Array	60.21	326	P	P	22 13 41.5	-0.1
	0.3nm,0.5s,baz=125,slow=7.9,SNR=6.9						

*IDC **16** 22:31:54.5±0.5, 51°.85S×28°.86E, h0^{km}, mb4.5/18, mb1 4.6/18, mb1mx4.5/26, mbtmp4.5/18, MS3.7/13, Ms1 3.7/13, ms1mx3.5/32, Error ellipse: s-maj=18.5km s-min=12.8km az=76.0*

*NEIC **16** 22:31:56.0±1.6, 51°.88S±0°.10×29°.0E±0°.1, h10^{km}±1^{km}, mb4.8/36, Error ellipse: s-maj=17.2km s-min=12.5km az=198.0*

ISC 16 22:31:55.6±0.4**, 51°.83S**±0°.07×**29°.0E**±0°.1**, h10**^{km}**, n96,** σ1^{s}.**20**/96**, mb4.7**/28**, MS3.8**/13**, 2C-1D, South of Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SYO	Syowa Base	17.95	168	⇑*i*pPn	P	22 36 06.0	+0.5
SYO	Syowa Base	17.95	168	⇑*e*sPn	P	22 36 07.6	+2.1
SYO	Syowa Base	17.95	168	⇓*e*sPn	P	22 36 09.1	+3.6
SUR	Sutherland	20.34	340	P	P	22 36 32.8	+0.6
	23nm,0.8s,baz=150,slow=9.1,SNR=16						
SUR				S	S	22 40 06.4	-14
	3.5nm,0.5s,baz=84,slow=22,SNR=1.6						
SUR				LR	LR	22 42 38.8	
	comp=Z,432nm,18.8s,baz=158,slow=32						
SUR	Sutherland	20.34	340	P	P	22 36 32.2	0.0
SUR				IAmb	IAmb	22 36 48.1	
	comp=Z,55nm,1.1s						
MAW	Mawson	22.81	147	P	P	22 36 59.6	+1.4
	comp=Z,24nm,0.8s,baz=289,slow=11,SNR=29						
MAW				S	S	22 41 02.6	-4.4
	comp=Z,3.7nm,0.4s,baz=287,slow=11,SNR=4.6						
MAW				LR	LR	22 43 59.3	
	comp=Z,192nm,21.5s,baz=272,slow=32						
MAW	Mawson	22.81	147	P	P	22 36 59.0	+0.8
BOSA	Boshof	23.36	352	P	P	22 37 04.5	+0.2
	comp=Z,19nm,1.0s,baz=181,slow=9.8,SNR=23						
BOSA				LR	LR	22 44 44.3	
	comp=Z,306nm,19.2s,baz=182,slow=33						
BOSA	Boshof	23.36	352	*e*P	P	22 37 04.7	+0.4
BOSA	Boshof	23.36	352	*e*P	P	22 37 04.7	+0.4
BOSA	Boshof	23.36	352	P	P	22 37 04.2	-0.2
BOSA				IAmb	IAmb	22 37 08.1	
	comp=Z,24nm,1.0s						
SNAA	Sanae	24.40	204	P	P	22 37 14.9	+1.1
SNAA	Sanae	24.40	204	P	P	22 37 14.4	+0.6
	comp=Z,35nm,0.9s,baz=51,slow=7.4,SNR=72						
SNAA				S	S	22 41 45.9	+13
	comp=Z,1.0nm,0.5s,baz=74,slow=24,SNR=2.0						
SNAA				LR	LR	22 45 02.4	
	comp=Z,167nm,19.1s,baz=12,slow=32						
SNAA	Sanae	24.40	204	P	P	22 37 14.3	+0.6
SNAA				IAmb	IAmb	22 37 17.4	
	comp=Z,26nm,0.8s						
VNA2	Neumayer--Watz	25.20	207	P	P	22 37 22.3	+1.3
	baz=52,slow=9.9						
VNA1	Neumayer--Stat	25.32	208	P	P	22 37 24.0	+2.0
VNA3	Neumayer Olymp	26.01	207	P	P	22 37 29.1	+0.8
LBTB	Lobatse	26.91	353	P	P	22 37 36.5	-0.4
	comp=Z,9.3nm,0.7s,baz=176,slow=8.9,SNR=16						
LBTB				LR	LR	22 47 00.2	
	comp=Z,226nm,18.2s,baz=182,slow=34						
LBTB	Lobatse	26.91	353	*e*P	P	22 37 35.7	-1.2
LBTB	Lobatse	26.91	353	*e*P	P	22 37 35.7	-1.2
LBTB	Lobatse	26.91	353	P	P	22 37 35.9	-1.0
LBTB				IAmb	IAmb	22 37 39.8	
	comp=Z,12nm,0.8s						
MOPA	Mopani	28.33	5	*e*P	P	22 37 50.6	+1.1
MOPA	Mopani	28.33	5	*e*P	P	22 37 50.6	+1.1
MSNA	Messina	29.45	2	*e*P	P	22 38 00.1	+0.6
MSNA	Messina	29.45	2	*e*P	P	22 38 00.1	+0.6
WIN	Windhoek	30.63	338	P	P	22 38 09.5	-0.7
MATP	Matopo	31.35	359	*e*P	P	22 38 13.1	-3.3
MATP	Matopo	31.35	359	*e*P	P	22 38 13.1	-3.3
TSUM	Tsumeb	33.78	340	P	P	22 38 37.9	+0.2
LSZ	Lusaka	36.47	359	P	P	22 39 00.9	0.0
QSPA	South Pole Qui	38.38	180	P	P	22 39 16.5	-0.2
QSPA				IAmb	IAmb	22 39 19.7	
	comp=Z,19nm,0.9s						
PMSA	Palmer Station	46.02	216	P	P	22 40 19.3	+0.6
	comp=Z,9.3nm,0.8s,baz=304,slow=11,SNR=2.4						
PMSA	Palmer Station	46.02	216	P	P	22 40 20.0	+1.3
VNDA	Vanda	47.65	168	P	P	22 40 32.2	+0.9
	comp=Z,4.0nm,0.7s,baz=239,slow=9.0,SNR=29						
VNDA				LR	LR	23 00 02.5	
	comp=Z,100nm,20.0s,baz=202,slow=35						
VNDA	Vanda	47.65	168	P	P	22 40 31.8	+0.5
VNDA				IAmb	IAmb	22 40 43.7	
	comp=Z,5.3nm,0.8s						
KIBK	Kibwezi	49.90	12	P	P	22 40 50.7	+1.3
KMBO	Kilima Mbogo	51.00	11	P	P	22 41 00.2	+2.3
	comp=Z,4.5nm,0.8s,baz=194,slow=9.6,SNR=9.7						
KMBO				LR	LR	23 00 29.3	
	comp=Z,88nm,20.4s,baz=93,slow=34						
KMBO	Kilima Mbogo	51.00	11	P	P	22 40 59.6	+1.7
LODK	Lodwar	55.31	8	P	P	22 41 31.1	+1.6
LODK				IAmb	IAmb	22 41 34.1	
	comp=Z,12nm,1.5s						
PLTB	Pedras Altas	61.40	254	P	P	22 42 11.8	0.0
PLTB				IAmb	IAmb	22 42 15.5	
	comp=Z,6.3nm,0.9s						
PLCA	Paso Flores	64.44	236	P	P	22 42 31.5	-0.5
	comp=Z,4.3nm,1.0s,baz=97,slow=4.7,SNR=5.0						
PLCA	Paso Flores	64.44	236	P	P	22 42 30.3	-1.7
PLCA				IAmb	IAmb	22 42 35.5	
	comp=Z,8.7nm,1.1s						
ITQB	Itaqui	64.70	254	P	P	22 42 32.5	-1.3
DBIC	Dimbokro	65.08	322	P	P	22 42 36.3	0.0
	comp=Z,6.4nm,0.8s,baz=163,slow=11,SNR=6.5						
DBIC				LR	LR	23 07 42.2	
	comp=Z,22nm,18.1s,baz=176,slow=33						
DBIC	Dimbokro	65.08	322	P	P	22 42 36.2	-0.1
CPUP	Villa Florida	67.57	256	P	P	22 42 51.8	-0.4
	comp=Z,4.4nm,0.8s,baz=132,slow=6.8,SNR=9.8						
CPUP				LR	LR	23 05 59.8	
	comp=Z,30nm,20.2s,baz=79,slow=30						
CPUP	Villa Florida	67.57	256	P	P	22 42 51.0	-1.2
CPUP				IAmb	IAmb	22 42 55.9	
	comp=Z,7.5nm,1.0s						
TORD	Torodi Ar. Bea	68.91	331	P	P	22 43 00.6	0.0
	comp=Z,3.9nm,0.7s,baz=172,slow=6.7,SNR=30						
TORD				LR	LR	23 10 54.9	
	comp=Z,32nm,18.0s,baz=150,slow=34						
TORD	Torodi Ar. Bea	68.91	331	P	P	22 42 59.6	-1.0
BDFB	Brasilia	69.86	270	P	P	22 43 06.8	0.0
	comp=Z,4.3nm,0.5s,baz=130,slow=2.5,SNR=8.9						
BDFB	Brasilia	69.86	270	P	P	22 43 06.6	-0.1
BDFB				IAmb	IAmb	22 43 07.6	
	comp=Z,4.7nm,0.6s						
KOWA	Kowa	72.01	326	P	P	22 43 20.0	+0.5
BBOO	Buckleboo	74.35	123	P	P	22 43 33.3	-0.1
PTLB	Pontes e Lacer	76.88	262	P	P	22 43 47.5	-0.5
PTLB				IAmb	IAmb	22 43 48.9	
	comp=Z,8.5nm,1.3s						
STKA	Stephens Creek	77.92	127	P	P	22 43 54.7	+1.0
	comp=Z,1.2nm,0.5s,baz=241,slow=5.3,SNR=6.7						
STKA				LR	LR	23 13 15.1	
	comp=Z,55nm,18.2s,baz=208,slow=32						
STKA	Stephens Creek	77.92	127	P	P	22 43 53.6	-0.1
PB01	IPOC Station P	78.80	250	P	P	22 43 59.3	+0.5
PB11	IPOC Station P	79.89	251	P	P	22 44 05.0	+0.1
PB11				IAmb	IAmb	22 44 09.0	
	comp=Z,9.9nm,0.8s						
FITZ	Fitzroy Crossi	79.98	106	P	P	22 44 04.3	-0.8
UOSS	Minazif	80.09	25	P	P	22 44 05.4	0.0
UOSS				IAmb	IAmb	22 44 09.4	

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
	comp=Z,7.8nm,0.9s						
ASAR	Alice Springs	80.40	116	P	P	22 44 08.2	+0.8
	comp=Z,1.8nm,0.7s,baz=207,slow=5.2,SNR=23						
ASAR	Alice Springs	80.40	116	P	P	22 44 06.3	-1.1
AS31	Alice Springs	80.40	116	P	P	22 44 06.6	-0.8
LPAZ	La Paz	81.69	254	P	P	22 44 16.1	+1.0
	comp=Z,0.6nm,0.5s,baz=200,slow=18,SNR=2.7						
LPAZ	La Paz	81.69	254	P	P	22 44 15.3	+0.2
WRA	Warramunga Arr	83.59	114	P	P	22 44 24.5	+0.2
	comp=Z,2.6nm,1.1s,baz=211,slow=3.8,SNR=11						
WRA	Warramunga Arr	83.59	114	P	P	22 44 24.7	+0.5
WB2	Warramunga Arr	83.60	114	P	P	22 44 24.0	-0.3
WB2				IAmb	IAmb	22 44 28.4	
	comp=Z,10.0nm,1.4s						
WR0	Warramunga Arr	83.70	114	P	P	22 44 24.7	0.0
WR0				IAmb	IAmb	22 44 39.6	
	comp=Z,5.9nm,1.2s						
WB0	Warramunga Arr	83.77	114	P	P	22 44 23.7	-1.4
EDFI	Ende, Flores	84.85	98	P	P	22 44 32.2	+1.5
	comp=Z,2.6nm,0.7s						
ETMB	Extrema	85.57	260	P	P	22 44 33.0	-1.3
ETMB				IAmb	IAmb	22 44 46.3	
	comp=Z,8.9nm,1.3s						
KEST	Kesra	88.88	344	LR	LR	23 25 29.9	
	comp=Z,70nm,19.8s,baz=289,slow=36						
HRA	Herat	90.67	27	P	P	22 44 56.4	-1.8
HRA				IAmb	IAmb	22 44 59.8	
	comp=Z,4.8nm,0.8s						
ESDC	Sonseca Array	95.56	335	P	P	22 45 21.6	+1.1
	comp=Z,1.7nm,1.0s,baz=167,slow=4.3,SNR=8.6						
DZM	Mont Dzumac	97.53	141	LR	LR	23 22 30.0	
	comp=Z,43nm,19.2s,baz=86,slow=31						
WAMI	Wamena	98.97	108	P	Pdif	22 45 34.3	-2.3
SONM	Songino Array	119.22	49	PKP	PKPdf	22 50 43.6	-0.6
	comp=Z,0.7nm,0.9s,baz=198,slow=2.9,SNR=3.6						
SONM	Songino Array	119.22	49		PKPdf	22 50 43.4	-0.7
ARCES	ARCESS Array B	121.08	359	PKP	PKPdf	22 50 46.8	-0.1
	comp=Z,3.5nm,0.9s,baz=205,slow=2.6,SNR=8.5						
TXAR	Lajitas Array	138.55	256	PKP	PKiKP	22 51 23.0	-0.5
	comp=Z,1.4nm,1.0s,baz=187,slow=6.4,SNR=5.1						
TXAR	Lajitas Array	138.55	256	PKPdf	PKPdf	22 51 21.6	+0.2
ULM	Lac du Bonnet	146.00	290	PKPbc	PKPdf	22 51 34.3	+0.5
	comp=Z,11nm,0.6s,baz=113,slow=4.4,SNR=15						
ULM	Lac du Bonnet	146.00	290	PKPdf	PKPdf	22 51 33.7	-0.1
RES	Resolute Bay	147.99	335	PKPbc	PKiKP	22 51 40.6	-0.7
	comp=Z,5.7nm,0.6s,baz=60,slow=7.7,SNR=14						
RES	Resolute Bay	147.99	335		PKPbc	22 51 40.1	+0.5
SEY	Seymchan	148.59	47	PKPbc	PKPbc	22 51 40.0	-1.4
	comp=Z,3.3nm,0.6s,baz=92,slow=22,SNR=1.7						
PDAR	Pinedale Array	150.82	268	PKPbc	PKPbc	22 51 47.4	-0.5
	comp=Z,2.8nm,0.7s,baz=99,slow=4.7,SNR=17						
PDAR	Pinedale Array	150.82	268	PKPdf	PKPdf	22 51 41.7	-0.5
PDAR					PKPbc	22 51 47.1	-0.7
NVAR	Mina Array Bea	153.58	252	PKPab	PKPab	22 52 05.1	-1.7
	comp=Z,1.4nm,0.5s,baz=167,slow=4.1,SNR=4.1						
YKA	Yellowknife Ar	157.89	313	PKPab	PKPab	22 52 22.8	-1.5
	comp=Z,1.1nm,0.7s,baz=134,slow=8.9,SNR=3.9						
YKA	Yellowknife Ar	157.89	313		PKPab	22 52 24.1	-0.2
INK	Inuvik	161.45	339	PKPab	PKPab	22 52 40.7	+1.1
	comp=Z,1.3nm,0.5s,baz=31,slow=7.2,SNR=7.9						
INK	Inuvik	161.45	339	PKPab	PKPab	22 52 39.3	-0.2
ILAR	Eielson Array	166.85	352	PKPab	PKPab	22 53 04.3	+0.8
	comp=Z,0.8nm,0.8s,baz=9.1,slow=5.0,SNR=8.9						
ILAR	Eielson Array	166.85	352		PKPab	22 53 03.7	+0.3

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*NIED **16** 22:37:21.1, 31°.12N×128°.79E, h4km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.93; $M_{\theta\theta}$1.30; $M_{\phi\phi}$-0.37; $M_{r\theta}$0.81; $M_{\theta\phi}$1.67; $M_{\phi r}$-0.77; Fault plane solution: $M_0$2.32000×10^{15} NP1: ϕ_s276.00000°, δ68.00000°, λ-34.00000°. NP2: ϕ_s20.00000°, δ59.00000°, λ-154.00000°.*

*JMA **16** 22:37:21.0±0.5, 31°.12N×128°.79E, h4km±4km, M4.1*

*IDC **16** 22:37:22.7±0.9, 31°.14N×128°.69E, h0km, mb3.7/6, mb1 3.9/8, mb1mx3.7/52, mbtmp3.7/8, ML2.7/2, MS3.5/16, Ms1 3.5/16, ms1mx3.2/53, Error ellipse: s-maj=37.6km s-min=18.1km az=78.0*

ISC 16 22:37:22.9±0.8, **31°.14N**±0°.05×**128°.90E**±0°.08, **h6km, n30,** σ**1^{s}11**/19, **mb3.8**/6, **MS3.5**/14, **Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.89	52	P	Pg	22 37 39.4	-0.5
JKC	Kuchinoerabu	1.30	121	P	Pg	22 37 47.0	-1.0
JKC				S	Sb	22 38 05.4	+0.5
JSU	Suzuyama	1.38	74	P	Pn	22 37 48.7	-0.1
JFU	Fukue jima 2	1.52	355	P	Pn	22 37 49.8	-0.9
JFU				S	Sn	22 38 09.5	-1.3
JNN	Nakanoshima	1.54	147	P	Pn	22 37 49.5	-1.5
JYAK	Yakushimahirau	1.65	122	P	Pn	22 37 50.6	-1.9
JTN	Tanegashima 3	1.85	104	P	Pn	22 37 54.1	-1.2
JMTN	Minamitane	1.88	113	P	Pn	22 37 55.4	-0.2
JTZ	Takazaki	2.02	67	P	Pn	22 37 56.6	-1.0
JOW	Kunigami	4.32	187	Pn	Pn	22 38 30.5	+1.2
	0.7nm,0.3s,baz=128,slow=20,SNR=1.8						
KSRS	Korea Array	6.35	353	Pn	Pn	22 38 56.6	-0.4
	0.3nm,0.3s,baz=178,slow=15,SNR=7.9						
KSRS				Lg	Lg	22 40 31.9	
	0.5nm,0.3s,baz=177,slow=30,SNR=4.6						
ASAJ	Asahikawa	16.87	36	LR	LR	22 47 15.7	
	comp=Z,53nm,20.5s,baz=210,slow=35						
KLR	Kul'dur	18.20	6	LR	LR	22 49 22.4	
	comp=Z,104nm,18.4s,baz=210,slow=40						
SONM	Songino Array	23.94	321	P	P	22 42 37.0	-0.9
	1.5nm,0.8s,baz=144,slow=10,SNR=9.5						
SONM				LR	LR	22 53 11.2	
	comp=Z,322nm,18.5s,baz=160,slow=40						
DAV	Davao City (W)	24.14	188	LR	LR	22 54 00.3	
	comp=Z,44nm,18.0s,baz=298,slow=41						
CMAR	Chiang Mai Arr	29.88	252	LR	LR	22 56 42.8	
	comp=Z,58nm,18.7s,baz=79,slow=39						
PETK	Petropavlovsk-	30.29	35	LR	LR	22 55 17.0	
	comp=Z,51nm,18.9s,baz=191,slow=35						
KAPI	Kappang	36.99	195	LR	LR	22 59 41.9	
	comp=Z,18nm,20.1s,baz=24,slow=36						
ZALV	Zalesovo Beam	38.82	319	LR	LR	23 02 23.0	
	comp=Z,148nm,18.6s,baz=110,slow=39						
MKAR	Makanchi Array	38.87	307	P	P	22 44 48.8	-0.2
	1.1nm,0.8s,baz=97,slow=9.9,SNR=9.4						
MKAR				LR	LR	23 03 29.5	
	comp=Z,72nm,18.6s,baz=78,slow=40						
TIXI	Tiksi	40.57	360	LR	LR	23 02 01.7	
	comp=Z,111nm,21.3s,baz=216,slow=36						
PALK	Pallekele	50.82	253	LR	LR	23 07 49.3	
	comp=Z,30nm,20.4s,baz=193,slow=36						
WRA	Warramunga Arr	51.05	173	P	P	22 46 26.2	+0.1
	1.3nm,0.7s,baz=355,slow=8.1,SNR=7.2						
ASAR	Alice Springs	54.70	174	P	P	22 46 53.9	+0.9
	1.2nm,0.7s,baz=3.0,slow=11,SNR=15						
ILAR	Eielson Array	59.87	30	P	P	22 47 30.9	+1.7
	0.5nm,0.7s,baz=281,slow=7.9,SNR=4.5						
ILAR				LR	LR	23 16 51.4	
	comp=Z,16nm,20.0s,baz=314,slow=40						
FINES	FINESS Array B	68.91	330	LR	LR	23 21 34.4	
	comp=Z,136nm,20.3s,baz=297,slow=38						
AKASG	Malin Array Be	72.21	319	LR	LR	23 23 02.3	
	comp=Z,83nm,18.1s,baz=35,slow=38						
NOA	NORSAR Array B	75.19	334	LR	LR	23 23 21.8	
	comp=Z,25nm,19.3s,baz=255,slow=37						
VRAC	Vranov	79.86	322	LR	LR	23 28 26.8	
	comp=Z,157nm,18.6s,baz=59,slow=38						
PDAR	Pinedale Array	88.98	39	P	P	22 50 20.1	+1.1
	0.3nm,0.6s,baz=12,slow=4.9,SNR=3.9						

IDC 16 22:57:41.7±1.7, **2°.32N**×**126°.90E, h0km, mb3.4**/5, **mb1 3.6**/5, **mb1mx3.3**/39, **mbtmp3.5**/5, **Error ellipse: s-maj=120.2km s-min=20.1km az=69.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	20.32	183	P	P	23 02 19.0	-0.5
	0.4nm,0.4s,baz=360,slow=12,SNR=1.2						
WRA	Warramunga Arr	23.30	162	P	P	23 02 50.4	-1.0
	1.2nm,0.6s,baz=342,slow=11,SNR=15						
ASAR	Alice Springs	26.71	166	P	P	23 03 24.3	+1.3
	0.3nm,0.3s,baz=341,slow=10,SNR=5.9						
MKAR	Makanchi Array	58.81	326	P	P	23 07 41.5	-0.5
	0.2nm,0.3s,baz=122,slow=7.6,SNR=13						
KURBB	Kurchatov Arra	63.01	328	P	P	23 08 11.0	+0.6
	0.3nm,0.5s,baz=142,slow=4.7,SNR=1.7						

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*NAO **16** 23:18:53.8±2.0, 74°.88N×7°.43E, ML3.2*

*BER **16** 23:18:55.4±2.5, 74°.80N×8°.04E, h10km, ML2.0, ML3.2(NAO), Confirmed Earthquake*

*IDC **16** 23:19:01.8±1.6, 74°.97N×10°.75E, h0km, mb3.4/2, mb1 3.5/4, mb1mx3.2/52, mbtmp3.5/4, ML3.7/2, MS3.0/1, Ms1 3.0/1, ms1mx2.3/39, Error ellipse: s-maj=31.3km s-min=12.5km az=74.0*

ISC 16 23:18:52.4±1.0, **74°.83N**±0°.07×**7°.66E**±0°.06, **h10km, n22,** σ**2^{s}86**/28, **2C, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HSPB	Hornsund (broa	2.91	38	Pn	Pn	23 19 39.5	+0.9
HSPB	Hornsund (broa	2.91	38	⇑*i*P	Pn	23 19 39.8	+1.2
HSPB				*e*		23 20 08.7	
HSPB				IAML		23 20 11.4	
	comp=Z,4.5nm,0.9s						
BJO1	Bjornoya	3.03	91	*e*S	Sn	23 20 11.7	-4.9
BJO1				IAML		23 20 17.3	
	comp=Z,23nm,0.9s						
BRBA	Barentsburg A	3.59	22	Pn	Pn	23 19 49.9	+1.9
BRBA	Barentsburg A	3.59	22	*e*P	Pn	23 19 48.3	+0.3
BRBA				*e*S	Sn	23 20 28.9	-1.4
BRBA				IAML		23 20 48.3	
	comp=Z,4.8nm,0.3s						
BRBB	Barentsburg B	3.62	22	Pn	Pn	23 19 50.4	+2.0
BRBB	Barentsburg B	3.62	22	⇑*i*P	Pn	23 19 50.4	+2.0
BRBB				*e*S	Sn	23 20 30.7	-0.4
SPA0	Spitsbergen Ar	3.93	27	Pn	Pn	23 19 55.4	+2.7
	baz=214,slow=16						
SPA0	Spitsbergen Ar	3.93	27	Pn	Pn	23 19 55.4	+2.7
	baz=214,slow=16						
SPITS	Spitsbergen Ar	3.93	27	Pn	Pn	23 19 55.3	+2.7
	baz=202,slow=15,SNR=473						
SPITS				Sn	Sn	23 20 37.6	-1.1
	baz=201,slow=19,SNR=0.5						
KBS	Kingsbay	4.23	11	Pn	Pn	23 19 58.5	+1.7
KBS	Kingsbay	4.23	11	*e*P	Pn	23 19 58.3	+1.5
KBS				*e*S	Sn	23 20 45.0	-1.1
KBS				IAML		23 20 49.0	
	comp=Z,5.5nm,0.7s						
HOPEN	Hopen	4.62	60	Pn	Pn	23 20 03.8	+1.7
HOPEN				Sn	Sn	23 20 50.5	-5.1
HOPEN	Hopen	4.62	60	*e*P	Pn	23 20 02.1	0.0
HOPEN				*e*S	Sn	23 20 50.5	-5.1
HOPEN				IAML		23 21 00.6	
	comp=Z,18nm,0.9s						
DAG	Danmarks Havn	6.72	299	*e*P	Pn	23 20 32.8	+1.9
DAG				*e*S	Sn	23 21 42.9	-4.4
DBG	Daneborg	7.41	279	Pn	Pn	23 20 41.5	+1.1
DBG				Sn	Sn	23 21 58.6	-5.8
DBG	Daneborg	7.41	279	*e*P	Pn	23 20 41.6	+1.1
ARA0	ARCESS Array S	7.60	125	Pn	Pn	23 20 45.9	+2.9
	baz=325,slow=12						
ARA0				Sn	Sn	23 22 02.2	-6.8
	baz=328,slow=22						
ARA0	ARCESS Array S	7.60	125	Pn	Pn	23 20 45.9	+2.9
	baz=325,slow=12						
ARA0				Sn	Sn	23 22 02.2	-6.8
	baz=328,slow=22						
ARCES	ARCESS Array B	7.60	125	Pn	Pn	23 20 45.1	+2.1
	baz=328,slow=12,SNR=14						
ARCES				Sn	Sn	23 22 02.6	-6.4
	baz=330,slow=18,SNR=7.3						
ARCES				LR	LR	23 23 37.8	
	comp=Z,99nm,18.1s,baz=300,slow=39						
AKASG	Malin Array Be	25.81	148	P	P	23 24 33.2	+10
	comp=Z,0.4nm,0.5s,baz=349,slow=9.5,SNR=2.6						
TORD	Torodi Ar. Bea	61.76	187	P	P	23 29 22.3	+11
	comp=Z,0.3nm,0.7s,baz=356,slow=5.8,SNR=1.7						

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*TRN **16** 23:43:49.0, 13°.97N×58°.47W, h82km, MD3.8*

ISC 16 23:43:48.6±3.2, **14°.02N**±0°.06×**58°.5W**±0°.2, **h10km, n17,** σ**1^{s}06**/24, **North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBSP	Saint Philip	1.29	225	*e*P	Pn	23 44 12.9	+0.3
BBSP				*e*S	Sb	23 44 30.9	+1.3
BBGH	Gun Hill	1.34	230	*e*P	Pn	23 44 13.4	+0.1
MPOM	Morne Pois Mar	2.31	281	*e*P	Pn	23 44 26.2	-0.6
MPOM				*e*S	Sn	23 44 55.1	-0.1
SLBI	Saint Lucia, B	2.39	270	*e*P	Pn	23 44 28.1	+0.3
SLBI				*e*S	Sn	23 44 55.6	-1.5
ZAM	Aeronautique	2.50	283	*e*P	Pn	23 44 29.4	+0.1
BIM	Bigot	2.53	282	*e*P	Pn	23 44 29.8	+0.1
BIM				*e*S	Sn	23 45 00.0	-0.6
BAMF	Morne Balai	2.67	288	*e*P	Pn	23 44 32.8	+1.1
GBMF	Grand Be	2.68	287	*e*P	Pn	23 44 34.7	+2.8
PML	Morne Lenard	2.69	287	*e*P	Pn	23 44 33.8	+1.8
PCM	Pelee Case Pet	2.73	287	*e*P	Pn	23 44 32.6	+0.1
SVB	Belmont	2.76	255	*e*P	Pn	23 44 32.3	-0.6
SVB				*e*S	Sn	23 45 05.9	-0.5
DSLB	Salisbury	3.15	297	*e*P	Pn	23 44 39.1	+0.9
MAGL	Barre de l'ile	3.29	306	*e*P	Pn	23 44 40.1	-0.2
MAGL				*e*S	Sn	23 45 18.4	-1.1
TDBA	Terre de Bas,	3.52	302	*e*P	Pn	23 44 44.5	+1.1
GRGR	Grenville	3.59	239	*e*P	Pn	23 44 44.0	-0.3
CBE	Ff, Capester	3.62	305	*e*P	Pn	23 44 45.6	+0.9
CBE				*e*S	Sn	23 45 26.4	-1.1
ANBD	Bethesda, Anti	4.35	314	*e*P	Pn	23 44 54.1	-0.6

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*IDC **17** 00:22:55.0±0.7, 10°.16S×167°.36E, h0km, mb4.4/11, mb1 4.6/12, mb1mx4.3/35, mbtmp4.4/12, ML3.1/1, MS3.7/19, Ms1 3.7/19, ms1mx3.5/40, Error ellipse: s-maj=29.3km s-min=18.3km az=135.0*

*GCMT **17** 00:22:59.0±0.4, 10°.34S±0°.03×167°.37E±0°.03, h30km, MW5.0/63, Moment Tensor Solution. s25,c31; s63,c86; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.65±.30; $M_{\theta\theta}$1.92±.19; $M_{\phi\phi}$1.73±.19; $M_{r\theta}$-1.24±.20; $M_{\theta\phi}$-1.91±.10; $M_{\phi r}$-0.38±.21; Best double couple: $M_0$3.91000×10^{16} NP1: ϕ_s329.00000°, δ42.00000°, λ-66.00000°. NP2: ϕ_s118.00000°, δ52.00000°, λ-110.00000°. Principal axes: T 3.7940, Plg5.0000°, Azm222.0000°; N 0.2320, Plg16.0000°, Azm131.0000°; P -4.0260, Plg73.0000°, Azm330.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **17** 00:23:02.0±1.6, 10°.17S±0°.08×167°.20E±0°.09, h35km±1km, mb4.8/65 Error ellipse: s-maj=16.3km s-min=11.1km az=53.0*

ISC 17 00:23:01.0±0.5, **10°.17S**±0°.08×**167°.30E**±0°.07, **h35km, n137,** σ**1^{s}09**/114, **mb4.7**/57, **MS3.7**/18, **2C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	5.25	181	Pn	Pn	00 24 16.9	-0.1
SANVU	Saraoutou	5.25	181	P	Pn	00 24 17.1	+0.1
HNR	Honiara	7.29	275	Pn	Pn	00 24 46.3	+1.3
	38nm,0.3s,baz=156,slow=1.6,SNR=9.6						
HNR				Sn	Sn	00 26 07.8	+1.2
	6.8nm,0.3s,baz=228,slow=17,SNR=1.0						
HNR				LR	LR	00 27 22.9	
	comp=Z,861nm,19.9s,baz=129,slow=36						
HNR	Honiara	7.29	275	Pn	Pn	00 24 44.9	-0.2
HNR	Honiara	7.29	275	P	Pn	00 24 48.1	+3.1
LIFNC	LIFOU	10.55	180	Pn	Pn	00 25 29.1	-0.6
KOUNC	Koumac, New Ca	10.73	195	P	Pn	00 25 35.0	+2.8
DZM	Mont Dzumac	11.87	184	Pn	Pn	00 25 48.9	+1.0
	0.4nm,0.3s,baz=19,slow=17,SNR=11						
DZM				LR	LR	00 29 59.7	
	comp=Z,422nm,19.1s,baz=42,slow=36						
DZM	Mont Dzumac	11.87	184	*e*Pn	Pn	00 25 49.3	+1.4
	50nm,1.3s						
DZM				*e*LR	LR	00 28 38.3	
	comp=Z,1μm,28.1s						
DZM	Mont Dzumac	11.87	184	Pn	Pn	00 25 49.1	+1.2
DZM	Mont Dzumac	11.87	184	P	Pn	00 25 49.1	+1.2
OUENC	Ouen Island, N	12.19	182	Pn	Pn	00 25 53.3	+1.0
OUENC	Ouen Island, N	12.19	182	P	Pn	00 25 53.4	+1.2
PINNC	Pines Island,	12.38	179	Pn	Pn	00 25 55.5	+0.8
PMG	Port Moresby	19.87	270	P	Pn	00 27 30.6	-0.5
	1.8nm,0.3s,baz=59,slow=3.1,SNR=6.8						
PMG				LR	LR	00 34 27.0	
	comp=Z,483nm,20.3s,baz=118,slow=35						
PMG	Port Moresby	19.87	270	P	P	00 27 28.9	-0.4
PMG	Port Moresby	19.87	270	P	Pn	00 27 31.0	-0.1
PMG	Port Moresby	19.87	270	P	Pn	00 27 31.3	+0.2
AFI	Afiamalu	20.79	102	LR	LR	00 33 41.7	
	comp=Z,255nm,20.2s,baz=172,slow=31						
EIDS	Eidsvold	21.58	223	P	P	00 27 48.0	+0.3
CTAO	Charters Tower	22.56	242	P	P	00 27 57.8	-0.6
LHI	Lord Howe Isla	22.58	199	P	P	00 27 58.5	0.0
COEN	Coen	23.89	259	P	P	00 28 11.4	-0.3
RMQ	Roma	23.89	225	P	P	00 28 12.5	+0.9
	20nm,0.9s						
ARMA	Armidale	24.88	214	P	P	00 28 20.8	0.0
ARMA	Armidale	24.88	214	P	P	00 28 22.1	+1.4
	19nm,1.1s						
QLP	Quilpie	27.23	230	P	P	00 28 42.5	+0.6
	21nm,1.2s						
H11S2	WAKE ISLAND Hy	28.48	359	T	T	00 58 32.4	
	baz=181,slow=76,SNR=82						
H11S3	WAKE ISLAND Hy	28.49	359	T	T	00 58 31.0	
	baz=181,slow=76,SNR=89						
H11S1	WAKE ISLAND Hy	28.50	359	T	T	00 58 31.1	
	baz=181,slow=76,SNR=72						
URZ	Urewera	29.33	164	LR	LR	00 38 27.2	
	comp=Z,96nm,18.4s,baz=31,slow=32						
H11N1	WAKE ISLAND Hy	29.69	359	T	T	01 00 02.6	
	baz=182,slow=76,SNR=39						
H11N3	WAKE ISLAND Hy	29.70	359	T	T	01 00 01.7	
	baz=182,slow=76,SNR=32						
H11N2	WAKE ISLAND Hy	29.71	359	T	T	01 00 03.0	
	baz=182,slow=76,SNR=26						
INKA	Innaminka	30.49	231	P	P	00 29 11.6	+0.8
	15nm,1.0s						
STKA	Stephens Creek	32.13	224	P	P	00 29 25.1	-0.2
	12nm,0.8s,baz=36,slow=11,SNR=30						
STKA				PcP	PcP	00 32 14.3	+0.4
	2.9nm,0.9s,baz=116,slow=1.2,SNR=3.2						
STKA				LR	LR	00 41 59.0	
	comp=Z,288nm,18.1s,baz=24,slow=36						
STKA	Stephens Creek	32.13	224	P	P	00 29 25.2	-0.1
STKA	Stephens Creek	32.13	224	P	P	00 29 25.4	+0.1
	3.5nm,0.8s						
WR0	Warramunga Arr	33.04	249	P	P	00 29 32.6	-0.8
WB0	Warramunga Arr	33.14	249	P	P	00 29 33.1	-1.2
WB0				IAmb	IAmb	00 29 36.9	
	comp=Z,9.1nm,0.8s						
WRAB	Tennant Creek	33.21	249	P	P	00 29 36.7	+1.8
WB2	Warramunga Arr	33.21	249	P	P	00 29 34.0	-0.9
WB2				IAmb	IAmb	00 29 40.5	
	comp=Z,10.0nm,1.1s						
WRA	Warramunga Arr	33.22	249	P	P	00 29 33.8	-1.3
	comp=Z,5.2nm,0.9s,baz=82,slow=8.6,SNR=24						
WRA				PcP	PcP	00 32 17.4	+0.2
	comp=Z,0.6nm,0.7s,baz=76,slow=3.1,SNR=7.2						
WRA				LR	LR	00 43 00.6	
	comp=Z,166nm,18.2s,baz=75,slow=36						
WRA	Warramunga Arr	33.22	249	P	P	00 29 34.1	-0.9
LCRK	Leigh Creek	33.76	229	P	P	00 29 39.4	-0.1
	comp=Z,18nm,0.9s						
AS31	Alice Springs	34.55	243	P	P	00 29 44.7	-1.9
ASAR	Alice Springs	34.55	243	P	P	00 29 45.2	-1.3
	comp=Z,2.7nm,0.8s,baz=74,slow=8.8,SNR=28						
ASAR				PcP	PcP	00 32 20.9	-0.1
	comp=Z,1.2nm,0.7s,baz=83,slow=2.6,SNR=8.7						
ASAR				LR	LR	00 42 26.1	
	comp=Z,176nm,21.1s,baz=73,slow=34						
ASAR	Alice Springs	34.55	243	P	P	00 29 44.4	-2.2
HTT	Hallett	34.87	224	P	P	00 29 49.0	-0.2
	comp=Z,16nm,0.8s						
JOHN	Johnston Islan	35.20	41	P	P	00 29 51.5	-0.6
MTN	Manton Dam	35.53	262	P	P	00 29 53.1	-1.9
MTN				IAmb	IAmb	00 30 01.7	
	comp=Z,14nm,1.1s						
FAKI	Fak Fak	35.53	279	P	P	00 29 50.8	-4.3
WHYH	Whyalla	35.58	226	P	P	00 29 56.7	+1.5
	comp=Z,15nm,0.8s						
BBOO	Buckleboo	36.55	227	P	P	00 30 03.1	-0.4
BBOO	Buckleboo	36.55	227	P	P	00 30 03.0	-0.5
	comp=Z,23nm,0.8s						
MULG	Mulgathing	36.85	232	P	P	00 30 05.7	-0.4
	comp=Z,12nm,1.0s						
BNDI	Bandanaira	37.49	276	P	P	00 30 12.7	+0.9
KNRA	Kununurra	37.92	258	P	P	00 30 13.6	-1.8
FORT	Forrest	41.80	235	P	P	00 30 47.0	-0.5
FORT	Forrest	41.80	235	P	P	00 30 47.6	+0.2
	comp=Z,52nm,0.9s						
PPT	Papeete	42.43	105	LR	LR	00 44 43.1	
	comp=Z,69nm,20.4s,baz=0.5,slow=31						
PPT2	Papeete2	42.43	105	*e*LR	LR	00 42 26.1	
	comp=Z,186nm,28.5s						
LUWI	Luwuk	45.18	279	P	P	00 31 14.0	-0.9
HON	Honolulu	46.27	47	P	P	00 31 24.9	+1.5
PSA00	Pilbara Seismi	46.87	250	P	P	00 31 27.5	-0.7
PSA00	Pilbara Seismi	46.87	250	P	P	00 31 26.9	-1.2
PSA00				IAmb	IAmb	00 31 28.5	
	comp=Z,9.0nm,0.9s						
PSA00	Pilbara Seismi	46.87	250	P	P	00 31 28.8	+0.7
TAOE	Nuku Hiva Isla	51.80	93	*e*LR	LR	00 46 42.1	
	comp=Z,495nm,26.7s						
MJAR	Matsushiro Arr	53.92	331	LR	LR	00 56 32.7	
	comp=Z,16nm,18.0s,baz=100,slow=37						
LEM	Lembang	59.06	268	LR	LR	01 00 34.9	
	comp=Z,35nm,18.8s,baz=206,slow=38						
NJ2	Nanjing	62.49	314	*e*P	P	00 33 22.3	+1.1
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
PETK	Petropavlovsk-	63.56	354	LR	LR	00 56 32.6	
	comp=Z,76nm,19.4s,baz=152,slow=32						
WHN	Wuhan	64.97	311	P	P	00 33 40.6	+3.0
VNDA	Vanda	67.40	181	P	P	00 33 51.7	-0.7
	comp=Z,2.8nm,1.1s,baz=323,slow=5.5,SNR=5.4						
VNDA				LR	LR	01 00 00.7	
	comp=Z,46nm,19.0s,baz=22,slow=33						
VNDA	Vanda	67.40	181	P	P	00 33 52.2	-0.2
XAN	Xi'an	70.68	311	P	P	00 34 13.1	-0.4
XAN				pP	pP	00 34 23.3	-0.3
XAN				pmax	pmax		
	comp=Z,12nm,0.9s						
HHC	Hu-ho-hao-te	72.17	319	*e*P	P	00 34 24.4	+1.9
HHC				pmax	pmax		
	comp=Z,17nm,1.1s						
HHC				pmax	pmax		
	comp=Z,510nm,6.0s						
CMAR	Chiang Mai Arr	73.18	293	P	P	00 34 29.2	+0.4
	comp=Z,3.4nm,0.8s,baz=111,slow=4.6,SNR=20						
CMAR				LR	LR	01 03 37.6	
	comp=Z,7.4nm,21.7s,baz=204,slow=33						
CMAR	Chiang Mai Arr	73.18	293	P	P	00 34 28.8	0.0
CD2	Chengdu	73.30	307	⇑P	P	00 34 29.5	+0.1
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
L19K	White Mountain	77.89	17	IAmb	IAmb	00 34 56.4	
	comp=Z,6.7nm,0.9s						
TTA	Tatalina	78.16	16	P	P	00 34 56.5	+0.1
ULN	Ulaanbaatar	78.50	323	P	P	00 34 58.6	-0.2
SONM	Songino Array	78.88	323	P	P	00 35 00.7	-0.1
	comp=Z,1.9nm,1.1s,baz=144,slow=5.1,SNR=7.8						
GTA	Gaotai	79.56	313	⇑P	P	00 35 05.6	+0.8
GTA				pP	pP	00 35 15.8	+0.8
GTA				sP	sP	00 35 20.0	+1.3
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CAST	Castle Rocks	79.65	17	IAmb	IAmb	00 35 04.5	
	comp=Z,6.9nm,1.0s						
J20K	Nowinta River	79.66	16	P	P	00 35 05.2	+0.6
J20K				IAmb	IAmb	00 35 08.7	
	comp=Z,7.6nm,1.0s						
GLB	Gilahina Butte	80.95	22	P	P	00 35 11.8	+0.2
GLB				IAmb	IAmb	00 35 13.2	
	comp=Z,15nm,1.2s						
I21K	Tanana	81.03	16	IAmb	IAmb	00 35 13.1	
	comp=Z,11nm,1.1s						
M26K	Nabesna, AK	81.87	21	IAmb	IAmb	00 35 17.5	
	comp=Z,11nm,1.0s						
MDM	Murphy Dome	81.93	18	IAmb	IAmb	00 35 19.2	
	comp=Z,11nm,1.2s						
IL31		82.20	18	IAmb	IAmb	00 35 18.8	
	comp=Z,7.9nm,1.1s						
ILAR	Eielson Array	82.20	18	P	P	00 35 17.2	-0.9
	comp=Z,6.7nm,1.1s,baz=221,slow=5.8,SNR=22						
M27K	Edge Creek, AK	82.24	21	P	P	00 35 18.8	+0.2
M27K				IAmb	IAmb	00 35 20.1	
	comp=Z,11nm,1.1s						
POKR	Poker Plat Res	82.28	18	IAmb	IAmb	00 35 18.4	
	comp=Z,6.2nm,0.9s						
DOT	Dot Lake	82.33	20	IAmb	IAmb	00 35 20.2	
	comp=Z,8.7nm,1.0s						
SCRK	Sand Creek	82.58	20	P	P	00 35 20.6	+0.3
SCRK				IAmb	IAmb	00 35 21.3	
	comp=Z,9.5nm,1.0s						

PAHR	Pah Rah Range	83.89	48	IAmb	IAmb	00 35 29.0	
	comp=Z,6.5nm,1.1s						
EGAK	Eagle	84.03	20	P	P	00 35 27.9	+0.3
NVAR	Mina Array Bea	84.29	49	P	P	00 35 29.4	-0.4
	comp=Z,2.3nm,0.9s,baz=224,slow=6.2,SNR=6.0						
NVAR				LR	LR	01 05 50.4	
	comp=Z,103nm,18.9s,baz=271,slow=30						
NV11	Mina Array Sit	84.40	50	P	P	00 35 30.6	+0.3
NV11				IAmb	IAmb	00 35 39.0	
	comp=Z,5.1nm,1.0s						
TIXI	Tiksi	85.53	349	P	P	00 35 34.3	-0.7
TIXI				IAmb	IAmb	00 35 35.6	
	comp=Z,7.7nm,1.1s						
MAW	Mawson	86.10	202	LR	LR	01 07 34.7	
	comp=Z,57nm,22.0s,baz=62,slow=31						
KNB	Kanab	88.08	52	P	P	00 35 49.4	+1.0
U15A	North Rim	88.36	53	P	P	00 35 51.2	+1.3
X16A	Lo Mia Camp, P	88.56	55	P	P	00 35 51.8	+1.0
X16A				IAmb	IAmb	00 35 53.0	
	comp=Z,4.3nm,1.0s						
MTPU	Mount Pierson	88.82	51	P	P	00 35 53.4	+1.2
MTPU				IAmb	IAmb	00 35 54.7	
	comp=Z,6.8nm,1.1s						
MSU	Marysvale	88.94	51	P	P	00 35 53.7	+1.2
WMQ	Urumqi	89.57	315	*e*P	P	00 35 56.8	+1.7
319A	Douglas	89.67	58	P	P	00 35 57.0	+1.0
CTU	Camp Tracy	89.78	49	P	P	00 35 56.9	+0.6
CTU				IAmb	IAmb	00 35 58.0	
	comp=Z,8.1nm,1.1s						
X18A	Snowflake	89.79	55	P	P	00 35 57.4	+0.8
X18A				IAmb	IAmb	00 35 58.1	
	comp=Z,4.2nm,0.8s						
Q16A	Castle Valley	89.80	50	P	P	00 35 57.5	+1.0
Q16A				IAmb	IAmb	00 35 58.1	
	comp=Z,7.1nm,1.1s						
TMUT	Trail Mountain	89.86	50	P	P	00 35 57.6	+0.7
TMUT				IAmb	IAmb	00 35 59.0	
	comp=Z,6.8nm,1.0s						
JLU	Jordanelle	89.98	49	P	P	00 35 57.8	+0.5
HWUT	Hardware Ranch	90.12	48	P	P	00 35 57.9	-0.1
HWUT				IAmb	IAmb	00 35 59.1	
	comp=Z,4.0nm,0.9s						
P17A	Butcher Ranch,	90.25	50	P	P	00 35 58.6	0.0
P17A				IAmb	IAmb	00 35 59.9	
	comp=Z,4.2nm,1.1s						
BOZ	Bozeman (W)	91.00	44	P	P	00 36 02.8	+0.9
BOZ				IAmb	IAmb	00 36 04.8	
	comp=Z,4.8nm,1.1s						
REDW	Red Top Meadow	91.04	46	IAmb	IAmb	00 36 04.5	
	comp=Z,5.2nm,1.1s						
YHL	Hebgen Lake	91.14	45	P	P	00 36 03.5	+0.8
YHL				IAmb	IAmb	00 36 04.4	
	comp=Z,5.0nm,1.1s						
YMR	Madison River	91.25	45	P	P	00 36 04.6	+1.4
RDMU	Red Mountain	91.37	49	P	P	00 36 03.1	-0.7
RDMU				IAmb	IAmb	00 36 06.7	
	comp=Z,4.7nm,1.1s						
PD31	Pinedale Array	91.83	47	IAmb	IAmb	00 36 12.3	
	comp=Z,3.2nm,1.1s						
PDAR	Pinedale Array	91.83	47	P	P	00 36 05.4	-0.5
	comp=Z,3.2nm,1.1s,baz=259,slow=3.0,SNR=9.0						
PDAR				LR	LR	01 10 29.2	
	comp=Z,29nm,19.7s,baz=250,slow=31						
YKA	Yellowknife Ar	93.50	27	LR	LR	01 14 12.1	
	comp=Z,17nm,19.6s,baz=0.0,slow=33						
ZALV	Zalesovo Beam	93.75	324	P	P	00 36 12.3	-1.8
	comp=Z,0.4nm,0.6s,baz=88,slow=4.7,SNR=5.7						
MKAR	Makanchi Array	93.94	317	P	P	00 36 14.5	-0.8
	comp=Z,3.8nm,0.9s,baz=101,slow=6.3,SNR=27						
MAKZ	Makanchi	94.15	317	P	P	00 36 15.9	-0.4
NRIK	Noril'sk	95.84	339	LR	LR	01 17 39.4	
	comp=Z,23nm,19.3s,baz=28,slow=34						
KEST	Kesra	147.61	325	PKPbc	PKPbc	00 42 42.1	-0.2
	comp=Z,7.5nm,0.9s,baz=220,slow=1.3,SNR=7.2						
MVO	Moncorvo	148.72	352	*e*PKPbc	PKPbc	00 42 44.2	-0.9
MTE	Manteigas	149.54	352	*e*PKPbc	PKPbc	00 42 47.0	-0.1
ESDC	Sonseca Array	149.60	347	PKPbc	PKPbc	00 42 46.5	-0.8
	comp=Z,0.9nm,0.9s,baz=15,slow=2.4,SNR=6.8						
ESDC	Sonseca Array	149.60	347		PKPbc	00 42 47.2	-0.1
PMRV	Marv??o	150.48	352	*e*PKPbc	PKPbc	00 42 49.3	-0.1
PMTG	Montargil	150.94	353	*e*PKPbc	PKPbc	00 42 50.1	-0.3
TORD	Torodi Ar. Bea	165.60	283	PKP	PKPdf	00 43 02.2	-0.8
	comp=Z,0.8nm,0.8s,baz=17,slow=0.8,SNR=5.1						
TORD				PKPab	PKPab	00 44 00.5	-1.4
	comp=Z,0.3nm,0.6s,baz=52,slow=3.0,SNR=3.7						

IDC ***17*** *00:32:48.6±1.3, 2°.89N×128°.74E, h0^{km}, mb3.9/6, mb1 4.0/6, mb1mx3.7/44, mbtmp3.9/6, MS3.2/2, Ms1 3.2/2, ms1mx2.5/41, Error ellipse: s-maj=87.8km s-min=18.0km az=72.0*

DJA ***17*** *00:32:52.6±0.8, 3°N±4°×12°9E±°, h10^{km}, M4.3/7, mb4.6/2, MLv4.1/7*

NEIC ***17*** *00:32:53.3±0.3, 2°.94N±0°.09×128°.9E±0°.1, h27^{km}±6^{km}, mb4.3/13, Error ellipse: s-maj=20.0km s-min=13.5km az=93.0*

ISC 17 00:32:54.4±0.8**, 2°.93N**±0°.09×**128°.82E**±0°.09**, h44**^{km}**, n32, σ0^s.60**/24**, mb4.1**/13**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	2.59	214	P	Pn	00 33 33.6	-0.3
SGSI	Sangihe	3.37	283	P	Pn	00 33 44.2	-0.4
SGSI				S	Sn	00 34 22.3	-1.1
LBMI	Labuha	3.78	200	P	Pn	00 33 50.4	+0.1
DAV	Davao City (W)	5.23	322	LR	LR	00 35 50.1	
	comp=Z,35nm,21.5s,baz=300,slow=35						
GTOI	Gorontalo	6.24	249	P	Pn	00 34 25.0	+1.0
	0.1nm13nm,0.6s						
MRSI	Marisa	7.30	251	P	Pn	00 34 39.9	+1.4
TOLI2	Tolitoli	8.23	257		Pn	00 34 51.0	-0.4
FITZ	Fitzroy Crossi	21.13	188	P	P	00 37 35.0	-0.7
	1.4nm,0.8s,baz=10,slow=11,SNR=3.6						
WB0	Warramunga Arr	23.21	167	P	P	00 37 57.4	-0.4
WB0				IAmb	IAmb	00 37 58.2	
	comp=Z,4.8nm,0.6s						
WRA	Warramunga Arr	23.37	167	P	P	00 37 58.8	-0.5
	comp=Z,3.3nm,0.6s,baz=346,slow=10,SNR=49						
WRA	Warramunga Arr	23.37	167	IAmb	IAmb	00 38 00.5	
	comp=Z,0.6nm,1.4s						
WB2	Warramunga Arr	23.37	167	P	P	00 37 58.9	-0.4
WB2				IAmb	IAmb	00 38 00.2	
	comp=Z,17nm,1.4s						
WR0	Warramunga Arr	23.43	166	P	P	00 37 59.8	0.0
WR0				IAmb	IAmb	00 38 00.4	
	comp=Z,8.0nm,1.2s						
PSA00	Pilbara Seismi	25.89	199	P	P	00 38 23.0	+0.7
ASAR	Alice Springs	26.90	170	P	P	00 38 31.0	-0.5
	comp=Z,0.6nm,0.5s,baz=355,slow=7.8,SNR=13						
PATS	Pohnpei	29.63	81	P	P	00 38 55.8	-0.2
BBOO	Buckleboo	36.20	170	P	P	00 39 53.0	0.0
BBOO				IAmb	IAmb	00 39 53.7	
	comp=Z,2.9nm,0.8s						
STKA	Stephens Creek	36.68	162	P	P	00 39 56.7	-0.4
	comp=Z,1.8nm,0.6s,baz=324,slow=7.6,SNR=5.6						
STKA	Stephens Creek	36.68	162	P	P	00 39 57.1	-0.1
H11S3	WAKE ISLAND Hy	40.16	65	T	T	01 23 30.2	
	SNR=7.3						
H11S2	WAKE ISLAND Hy	40.18	65	T	T	01 23 32.0	
H11S1	WAKE ISLAND Hy	40.18	65	T	T	01 23 32.0	
H11N1	WAKE ISLAND Hy	40.73	63	T	T	01 24 22.9	
	baz=253,slow=75,SNR=3.8						
H11N2	WAKE ISLAND Hy	40.74	63	T	T	01 24 14.7	
H11N3	WAKE ISLAND Hy	40.75	63	T	T	01 24 10.3	
	baz=259,slow=75,SNR=4.5						
SONM	Songino Array	48.74	340	P	P	00 41 35.2	+0.4
	comp=Z,0.4nm,0.6s,baz=145,slow=10,SNR=4.2						
MK31	Makanchi Array	59.40	325	P	P	00 42 52.9	+0.4
MK31				IAmb	IAmb	00 42 56.9	
	comp=Z,4.6nm,1.5s						
MKAR	Makanchi Array	59.40	325	P	P	00 42 53.0	+0.5
	comp=Z,2.6nm,0.7s,baz=115,slow=8.2,SNR=30						
MKAR	Makanchi Array	59.40	325	P	P	00 42 53.0	+0.5
MAKZ	Makanchi	59.59	324	P	P	00 42 54.2	+0.4
MAKZ				IAmb	IAmb	00 42 54.7	
	comp=Z,2.1nm,0.7s						
KURK	Kurchatov	63.54	327	P	P	00 43 20.4	+0.1
KURK				IAmb	IAmb	00 43 30.5	
	comp=Z,1.8nm,1.1s						
FINES	FINESS Array B	93.52	332	LR	LR	01 31 21.0	
	comp=Z,86nm,20.9s,baz=36,slow=38						

IDC ***17*** *00:38:12.6±1.1, 38°.47N×144°.82E, h0^{km}, mb3.8/7, mb1 4.0/10, mb1mx3.8/39, mbtmp4.0/10, ML3.4/3, MS3.2/3, Ms1 3.2/3, ms1mx2.5/48, Error ellipse: s-maj=30.2km s-min=19.8km az=80.0*

NIED ***17*** *00:38:15.6, 38°.52N×144°.68E, h42^{km}, MW3.8, Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-3.49; M$_{\theta\theta}$0.15; M$_{\phi\phi}$3.34; M$_{r\theta}$-0.08; M$_{\theta\phi}$-0.33; M$_{\phi r}$3.48; Fault plane solution: M$_0$4.89000×10^{14} NP1: φ$_s$177.00000°, δ68.00000°, λ-88.00000°. NP2: φ$_s$351.00000°, δ22.00000°, λ-96.00000°.*

JMA ***17*** *00:38:15.6±0.2, 38°.52N×144°.68E, h42^{km}, M3.9*

NEIC ***17*** *00:38:16.8±2.1, 38°.47N±0°.05×144°.8E±0°.1, h26^{km}±6^{km}, mb4.6/12, Error ellipse: s-maj=14.1km s-min=1.8km az=123.0*

ISC 17 00:38:17.1±0.7**, 38°.51N**±0°.05×**144°.80E**±0°.07**, h35**^{km}**, n65, σ2^s.05**/75**, mb4.3**/13**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	2.51	284	P	Pn	00 38 54.0	-1.4
OFUJ				*e*S	Sn	00 39 22.8	-2.0
MIYJ	Miyakonagasawa	2.55	296	P	Pn	00 38 54.4	-1.6
JKMT	Kesennumamotoy	2.62	278	P	Pn	00 38 55.6	-1.3
JKMT				*e*S	Sn	00 39 25.5	-1.9
JIKH	Ishinomakikobu	2.63	267	P	Pn	00 38 55.4	-1.6
JIKH				*e*S	Sn	00 39 24.2	-3.4
JMK	Ichinoseki	2.83	280	P	Pn	00 38 58.9	-0.9
JMK				*e*S	Sn	00 39 30.7	-2.0
JOM	Ohasama	2.90	290	P	Pn	00 38 59.6	-1.1
JOM				*e*S	Sn	00 39 32.6	-1.7
JANG	Nango	3.15	307	P	Pn	00 39 02.6	-1.6
JMM	Marumori	3.22	260		Pn	00 39 03.9	-1.2
JMM				Sn	Sn	00 39 38.9	-3.4
JYK	Kaneyama	3.50	278	P	Pn	00 39 08.4	-0.6
JFT	Otama	3.66	256	P	Pn	00 39 10.9	-0.3
JFT				*e*S	Sn	00 39 52.0	-1.2
JTM	Tenmabayashi	3.67	309	Pn	Pn	00 39 10.6	-0.7
ERM	Erimo	3.72	341		Pn	00 39 11.2	-0.8
ERM					Sn	00 39 51.5	-3.0
JOT	Ohata	4.06	316	P	Pn	00 39 16.6	-0.1
JCH	Churui	4.24	346	P	Pn	00 39 17.2	-2.0
JCH				*e*S	Sn	00 40 03.3	-4.1
JYT	Yasato	4.32	240		Pn	00 39 18.7	-1.6
NEM2	Nemuro 2	4.90	8	P	Pn	00 39 24.8	-3.4
NEM2				S	Sn	00 40 16.4	-7.3
JSD	Sado	5.17	267		Pn	00 39 31.3	-0.6
JRY	Ryogami san	5.32	244	P	Pn	00 39 33.0	-1.1
JRY				S	Sn	00 40 30.9	-3.3
JOSM	Okushiri--Mats	5.41	313	P	Pn	00 39 34.9	-0.3
JTKR	Abashiri--Toko	5.49	353	P	Pn	00 39 34.2	-2.2
JTKR				*e*S	Sn	00 40 33.2	-5.1
MJAR	Matsushiro Arr	5.59	251	Pn	Pn	00 39 37.5	-0.3
	1.0nm,0.3s,baz=57,slow=9.7,SNR=34						
MJAR				LR	LR	00 42 07.3	
	comp=Z,43nm,20.9s,baz=15,slow=42						
MJAR	Matsushiro Arr	5.59	251	P	Pn	00 39 38.0	+0.2
MAJO	Matsushiro	5.59	251		Pn	00 39 38.3	+0.5
MAJO	Matsushiro	5.59	251	P	Pn	00 39 38.8	+0.9
MAT	Matsushiro	5.59	251	P	Pn	00 39 38.4	+0.6
MAT				S	Sn	00 40 40.5	-0.4
JHR	Hokuryu	5.72	337	P	Pn	00 39 39.5	0.0
JHR				*e*S	Sn	00 40 42.0	-1.8
JKA	Kamikawa-asahi	5.84	344	Pn	Pn	00 39 41.5	+0.4
JGF	Kuroka	6.62	246		Pn	00 39 52.1	+0.1
JHJ2	Mitsune	6.74	218	Pn	Pn	00 39 54.1	+0.6
JHJ	Hachijo jima 2	6.75	219	Pn	Pn	00 39 51.5	-2.1
	6.8nm,0.3s,baz=54,slow=20,SNR=1.1						
JHJ				Sn	Sn	00 41 01.8	-7.5
	13nm,0.3s,baz=255,slow=23,SNR=1.8						
INU	Inuyama	6.99	246	Pn	Pn	00 39 56.9	0.0
JWT	Wachi	8.19	250	Pn	Pn	00 40 13.3	-0.1
JHS	Saijyo	10.01	253	Pn	Pn	00 40 40.1	+1.7
USA0B	Ussuriysk Arra	11.17	305		Pn	00 40 56.1	+1.8
USRK	Ussuriysk Ar.	11.17	305	Pn	Pn	00 40 55.4	+1.2
	baz=108,slow=14,SNR=16						
USRK	Ussuriysk Ar.	11.17	305	Pn	Pn	00 40 55.8	+1.5
H11N2	WAKE ISLAND Hy	26.77	128	T	T	01 11 48.9	
	baz=319,slow=74,SNR=9.6						
H11N1	WAKE ISLAND Hy	26.78	128	T	T	01 11 46.8	
	baz=319,slow=74,SNR=8.7						
H11N3	WAKE ISLAND Hy	26.79	128	T	T	01 11 42.9	
	baz=319,slow=74,SNR=6.5						
SONM	Songino Array	29.25	301	P	P	00 44 16.8	+1.0
	0.4nm,0.5s,baz=109,slow=9.5,SNR=3.7						
SONM	Songino Array	29.25	301	P	P	00 44 19.1	+3.3
ZAA0	Zalesovo Array	42.93	311	P	P	00 46 13.8	+1.6
ZALV	Zalesovo Beam	42.93	311	P	P	00 46 13.0	+0.8
	0.2nm,0.3s,baz=76,slow=12,SNR=2.1						
NRIK	Noril'sk	43.08	334	P	P	00 46 14.2	+1.0
MK31	Makanchi Array	45.62	301	P	P	00 46 33.6	-0.3
MKAR	Makanchi Array	45.62	301	P	P	00 46 35.2	+1.3
	0.7nm,0.7s,baz=87,slow=8.6,SNR=6.7						
MKAR	Makanchi Array	45.62	301	P	P	00 46 34.8	+0.8
ILAR	Eielson Array	46.80	33	P	P	00 46 44.5	+1.6
	0.2nm,0.8s,baz=252,slow=10.0,SNR=1.8						
ILAR				LR	LR	01 07 53.0	
	comp=Z,26nm,19.9s,baz=189,slow=38						
TABL	Table Mountain	49.81	39	P	P	00 47 07.2	+0.8
PCA	Pinnacle	50.30	39	P	P	00 47 10.9	+1.0
BCPM	Bancas Point	50.63	39	P	P	00 47 12.7	+0.3
INK	Inuvik	51.84	28	LR	LR	01 10 59.7	
	comp=Z,93nm,18.6s,baz=204,slow=38						
KNRA	Kununurra	55.96	199	P	P	00 47 52.3	+0.4
KNRA				IAmb	IAmb	00 48 05.7	
	comp=Z,7.2nm,1.1s						
WB0	Warramunga Arr	58.79	191	P	P	00 48 11.8	0.0
WB0				IAmb	IAmb	00 48 12.7	
	comp=Z,3.6nm,0.7s						
WR0	Warramunga Arr	58.95	191	P	P	00 48 13.1	+0.1
WR0				IAmb	IAmb	00 48 13.9	
	comp=Z,1.4nm,0.7s						
WB2	Warramunga Arr	58.97	191	P	P	00 48 12.7	-0.4
WB2				IAmb	IAmb	00 48 14.4	
	comp=Z,3.2nm,0.8s						
WRA	Warramunga Arr	58.97	191	P	P	00 48 13.4	+0.4
	comp=Z,2.4nm,0.7s,baz=12,slow=7.2,SNR=22						
WRA	Warramunga Arr	58.97	191	P	P	00 48 13.1	0.0
ABKAR	Akbulak array	59.03	310	P	P	00 48 14.7	+1.4
ASAR	Alice Springs	62.69	191	P	P	00 48 39.2	+0.8
	comp=Z,1.1nm,0.7s,baz=12,slow=6.8,SNR=14						
FINES	FINESS Array B	68.73	333	P	P	00 49 16.5	-0.4
	comp=Z,2.8nm,0.9s,baz=60,slow=8.2,SNR=2.0						
BCYI	Bear Canyon	71.55	48	P	P	00 49 37.6	+2.8
QLMT	Earthquake Lak	72.37	46	P	P	00 49 37.9	-1.8
YHL	Hebgen Lake	72.50	46	P	P	00 49 38.2	-2.3
YHL				IAmb	IAmb	00 49 42.9	
	comp=Z,12nm,0.5s						
YMP	Mirror Lake Pl	73.15	46	P	P	00 49 44.7	+0.3
YMP				IAmb	IAmb	00 49 47.4	
	comp=Z,6.7nm,0.7s						

NEIC ***17*** *00:56:18.7±1.3, 0°.04S±0°.08×123°.3E±0°.1, h136^{km}±4^{km}, mb4.0/14, Error ellipse: s-maj=15.0km s-min=11.3km az=83.0*

IDC ***17*** *00:56:19.4±5.4, 0°.07S×123°.27E, h148^{km}±52^{km}, mb3.4/7, mb1 3.6/9, mb1mx3.4/40, mbtmp3.9/9, Error ellipse: s-maj=51.3km s-min=14.1km az=59.0*

DJA ***17*** *00:56:20.1±0.5, 0°S±3°×12°3E±°, h125^{km}±5^{km}, M4.3/12, mb4.5/3, mB4.6/2, MLv4.2/12, Mw(mB)3.9/2*

ISC 17 00:56:18.7±0.7**, 0°.09S**±0°.04×**123°.29E**±0°.06**, h141**^{km}±6^{km}**, n44, σ1^s.17**/51**, mb3.9**/14**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GTOI	Gorontalo	0.77	339	P	Pn	00 56 42.1	+1.3
GTOI				S	Sn	00 56 59.5	+1.9
KMSI	Cibinong	0.95	46	P	Pn	00 56 43.2	+1.0
KMSI				S	Sn	00 57 01.1	+1.0
LUWI	Luwuk	1.08	209	P	Pn	00 56 43.5	+0.1
LUWI				S	Sn	00 57 01.3	-0.9
LUWI	Luwuk	1.08	209	Pn	Pn	00 56 43.4	0.0
LUWI				Sn	Sn	00 57 01.4	-0.8
LUWI	Luwuk	1.08	209	P	Pn	00 56 43.3	-0.1
MRSI	Marisa	1.46	293	P	Pn	00 56 46.2	-1.0
MRSI				S	Sn	00 57 06.8	-2.2
APSI	Ampana	1.84	244	P	Pn	00 56 51.8	+0.4
APSI				S	Sn	00 57 15.6	-0.8
TOLI2	Tolitoli	2.78	295		Pn	00 57 02.9	0.0
TOLI2	Tolitoli	2.78	295	P	Pn	00 57 04.0	+1.1
SANI	Sanana	3.33	126	P	Pn	00 57 08.2	-1.7
SANI	Sanana	3.33	126	P	Pn	00 57 08.6	-1.3
MPSI	Mapaga	3.42	277	P	Pn	00 57 12.7	+1.5
TTSI	Tana Toraja	4.55	230	P	Pn	00 57 27.3	+1.3
SPSI	Sidrap Palu	5.22	222	P	Pn	00 57 37.2	+2.3
	0.2nm850nm25nm,0.6s						
BNSI	Bone	5.34	217	P	Pn	00 57 38.5	+2.0
	0.2nm41nm,0.5s						
KAPI	Kappang	6.04	216	P	Pn	00 57 47.8	+2.0
	2.3nm,0.3s,baz=41,slow=3.0,SNR=12						
KAPI				S	Sn	00 58 53.3	-0.7
	0.3nm,0.3s,baz=233,slow=22,SNR=1.4						
KAPI	Kappang	6.04	216		Pn	00 57 46.4	+0.6
KAPI	Kappang	6.04	216	P	Pn	00 57 48.0	+2.1
BSSI	Bau Bau, Buton	6.63	205	P	Pn	00 57 55.6	+1.8
FAKI	Fak Fak	9.38	108	Pn	Pn	00 58 30.5	-0.2
FAKI	Fak Fak	9.38	108	P	Pn	00 58 30.5	-0.2
KNRA	Kununurra	16.41	161		P	01 00 02.4	+1.3
KNRA				IAmb	IAmb	01 00 05.6	
	comp=Z,6.4nm,0.8s						
FITZ	Fitzroy Crossi	18.05	173	P	Pn	01 00 20.3	-0.3
	comp=Z,0.6nm,0.3s,baz=6.0,slow=6.7,SNR=7.5						
LWLI	Liwa	19.82	255	P	P	01 00 37.2	-1.5
PSA00	Pilbara Seismi	21.62	189	P	P	01 00 58.4	+0.7
PSA00				IAmb	IAmb	01 00 59.4	
	comp=Z,2.9nm,0.8s						
WB0	Warramunga Arr	22.38	152	P	P	01 01 05.5	0.0
WB0				IAmb	IAmb	01 01 06.5	
	comp=Z,3.8nm,0.5s						
WRA	Warramunga Arr	22.50	152	P	P	01 01 06.6	-0.1
	comp=Z,2.9nm,0.5s,baz=332,slow=10,SNR=76						
WRA	Warramunga Arr	22.50	152	P	P	01 01 05.8	-0.9
WB2	Warramunga Arr	22.51	152	P	P	01 01 07.0	+0.3
WB2				IAmb	IAmb	01 01 08.1	
	comp=Z,3.8nm,0.6s						
WR0	Warramunga Arr	22.61	152	P	P	01 01 07.7	-0.1
WR0				IAmb	IAmb	01 01 09.0	
	comp=Z,2.0nm,0.6s						
COEN	Coen	24.03	126	P	P	01 01 20.8	0.0
COEN				IAmb	IAmb	01 01 23.3	
	comp=Z,2.4nm,0.7s						
ASAR	Alice Springs	25.60	157	P	P	01 01 35.7	+0.6
	comp=Z,0.9nm,0.8s,baz=346,slow=18,SNR=9.4						
ASAR	Alice Springs	25.60	157	P	P	01 01 36.1	+1.1
MORW	Morawa	29.64	193	P	P	01 02 10.0	-0.9
CMAR	Chiang Mai Arr	30.20	309	P	P	01 02 17.8	+1.8
	comp=Z,1.0nm,0.5s,baz=136,slow=7.3,SNR=5.1						
FORT	Forrest	30.86	172	P	P	01 02 21.9	+0.4
JCJ	Chichijima	32.57	32	P	P	01 02 35.6	-1.1
STKA	Stephens Creek	36.05	153	P	P	01 03 07.2	+0.6
	comp=Z,1.3nm,0.5s,baz=308,slow=9.4,SNR=5.0						
JWT	Wachi	36.96	17	P	P	01 03 13.5	-0.8
JWT				IAmb	IAmb	01 03 33.1	
	comp=Z,5.1nm,1.0s						
CAN	Canberra	42.46	148	P	P	01 04 01.2	+1.3
CAN				IAmb	IAmb	01 04 03.1	
	comp=Z,5.1nm,0.6s						
SONM	Songino Array	49.94	345	P	P	01 04 57.5	-0.8
	comp=Z,0.3nm,0.4s,baz=177,slow=3.6,SNR=4.5						
MK31	Makanchi Array	58.84	328	P	P	01 06 01.7	-0.7
MKAR	Makanchi Array	58.84	328	P	P	01 06 01.2	-1.3
	comp=Z,0.2nm,0.5s,baz=123,slow=8.3,SNR=8.3						
VNDA	Vanda	80.12	172	P	P	01 08 12.6	+0.1
	comp=Z,0.8nm,0.7s,baz=314,slow=6.2,SNR=4.9						

IDC ***17*** *01:02:20.3±0.9, 3°.39N×128°.57E, h0^{km}, mb3.8/10, mb1 4.0/10, mb1mx3.7/39, mbtmp3.9/10, MS3.0/4, Ms1 3.0/4, ms1mx2.6/54, Error ellipse: s-maj=63.9km s-min=15.2km az=71.0*

NEIC ***17*** *01:02:34±1.4, 3°.06N±0°.08×127°.6E±0°.3, h105^{km}±6^{km}, mb4.1/12, Error ellipse: s-maj=39.7km s-min=10.0km az=81.0*

ISC 17 01:02:33.2±0.7**, 3°.05N**±0°.08×**127°.9E**±0°.2**, h100**^{km}**, n33, σ1^s.29**/28**, mb3.9**/13**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	2.33	193	Pn	Pn	01 03 10.6	+0.6
TNTI				Sn	Sn	01 03 35.8	-2.5
KAPI	Kappang	11.43	225	LR	LR	01 09 46.9	
	comp=Z,28nm,21.0s,baz=91,slow=37						
MTN	Manton Dam	16.11	169	Pn	Pn	01 06 13.9	0.0
MTN				IAmb	IAmb	01 06 24.4	
	comp=Z,19nm,1.4s						
KNRA	Kununurra	18.63	177	P	P	01 06 43.4	+0.4
KNRA				IAmb	IAmb	01 06 47.0	
	comp=Z,13nm,1.1s						
FITZ	Fitzroy Crossi	21.14	186	P	P	01 07 10.6	+0.5
	comp=Z,0.9nm,0.7s,baz=26,slow=16,SNR=1.8						
FITZ	Fitzroy Crossi	21.14	186	P	P	01 07 10.1	-0.1
LEM	Lembang	22.50	244	LR	LR	01 17 56.6	
	comp=Z,40nm,20.4s,baz=221,slow=40						
WB0	Warramunga Arr	23.56	165	P	P	01 07 34.0	-0.8
WB0				IAmb	IAmb	01 07 44.1	
	comp=Z,5.3nm,0.7s						
JOW	Kunigami	23.65	1	LR	LR	01 14 45.1	
	comp=Z,47nm,19.4s,baz=124,slow=32						
WRA	Warramunga Arr	23.71	165	P	P	01 07 35.1	-1.1
	comp=Z,3.0nm,0.9s,baz=343,slow=10,SNR=18						
WRA	Warramunga Arr	23.71	165	P	P	01 07 36.2	0.0
WB2	Warramunga Arr	23.71	165	P	P	01 07 37.0	+0.8
WR0	Warramunga Arr	23.78	164	P	P	01 07 36.5	-0.3
WR0				IAmb	IAmb	01 07 47.5	
	comp=Z,7.0nm,1.2s						
PSA00	Pilbara Seismi	25.71	198	P	P	01 07 51.7	-2.6
ASAR	Alice Springs	27.19	168	P	P	01 08 09.2	+1.6
	comp=Z,0.3nm,0.5s,baz=344,slow=7.7,SNR=3.0						
ASAR				PcP	PcP	01 11 26.8	+1.1
	comp=Z,0.5nm,0.6s,baz=5.3,slow=2.4,SNR=5.7						
CTAO	Charters Tower	29.21	143	P	P	01 08 26.8	+1.1
CMAR	Chiang Mai Arr	32.22	300	P	P	01 08 54.4	+2.2
	comp=Z,0.6nm,0.3s,baz=115,slow=8.0,SNR=4.4						
STKA	Stephens Creek	37.09	160	P	P	01 09 32.9	-1.1
	comp=Z,0.6nm,0.6s,baz=342,slow=16,SNR=1.7						
H11S3	WAKE ISLAND Hy	40.94	65	T	T	01 53 03.6	
	baz=253,slow=75,SNR=8.3						
H11S2	WAKE ISLAND Hy	40.95	65	T	T	01 53 02.5	
	baz=253,slow=75,SNR=5.8						
H11S1	WAKE ISLAND Hy	40.95	65	T	T	01 53 03.7	
	baz=253,slow=75,SNR=2.9						
SONM	Songino Array	48.31	341	P	P	01 11 03.4	-1.2
	comp=Z,0.9nm,0.8s,baz=165,slow=8.1,SNR=6.1						
MK31	Makanchi Array	58.78	325	P	P	01 12 20.7	-0.2
MK31				IAmb	IAmb	01 12 23.0	
	comp=Z,2.3nm,1.1s						
MKAR	Makanchi Array	58.78	325	P	P	01 12 21.3	+0.3
	comp=Z,1.3nm,0.3s,baz=111,slow=8.0,SNR=39						
MKAR	Makanchi Array	58.78	325	P	P	01 12 20.7	-0.3
MAKZ	Makanchi	58.97	325	P	P	01 12 21.1	-1.1
ZALV	Zalesovo Beam	61.72	333	P	P	01 12 39.7	-1.1
	comp=Z,1.0nm,0.6s,baz=97,slow=7.6,SNR=6.5						
ZALV	Zalesovo Beam	61.72	333	P	P	01 12 39.1	-1.7
NRIK	Noril'sk	71.36	346	P	P	01 13 40.5	-1.3
	comp=Z,1.7nm,0.6s,baz=122,slow=5.9,SNR=4.9						
VNDA	Vanda	82.61	173	P	P	01 14 46.3	+1.5
	comp=Z,1.1nm,0.8s,baz=320,slow=6.4,SNR=6.7						
VNDA	Vanda	82.61	173	P	P	01 14 45.8	+1.0
VNDA				IAmb	IAmb	01 14 47.1	
	comp=Z,1.6nm,0.8s						
GNI	Garni	82.81	310	LR	LR	01 54 36.0	
	comp=Z,12nm,21.5s,baz=346,slow=38						
TORD	Torodi Ar. Bea	124.24	288	PKP	PKiKP	01 21 23.1	+1.5
	comp=Z,0.3nm,0.7s,baz=80,slow=1.9,SNR=2.6						

UCR ***17*** *01:03:38.7±0.8, 13°.22N×89°.91W, h31^{km}±2^{km}, ML3.8*

SNET ***17*** *01:03:38.7±0.8, 13°.22N×89°.91W, h30^{km}±2^{km}, ML3.7*

GCG ***17*** *01:03:40.0±0.6, 13°.28N×90°.13W, h16^{km}±10^{km}, MD3.8*

ISC 17 01:03:38.0±2.0**, 13°.18N**±0°.09×**89°.93W**±0°.05**, h26**^{km}±13^{km}**, n46, σ0^s.27**/58**, 8C-18D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAYA	Jayaque - finc	0.67	45	⇓ *i*P	Pb	01 03 51.4	+0.2
JAYA				*e*S	Sb	01 04 00.2	+0.1
JAYA				IAML		01 04 02.4	
	comp=Z,9µm,0.3s						
JAYA	Jayaque - finc	0.67	45	⇓ *i*P	Pb	01 03 51.4	+0.2
JAYA				*e*S	Sb	01 04 00.2	+0.1
JAYA				IAML		01 04 02.4	
	comp=Z,9µm,0.3s						
LALI	Alcalda de L	0.67	63	⇓ *e*P	Pb	01 03 51.0	-0.1
LALI				*e*S	Sb	01 04 00.1	+0.1
LALI	Alcalda de L	0.67	63	⇓ *e*P	Pb	01 03 51.0	-0.1
LALI				*e*S	Sb	01 04 00.1	+0.1

CEVE	**Cerro Verde**	**0.71**	**25**	⇓*i*P	**Pb**	**01 03 52.0**	**+0.1**
CEVE				*e*S	**Sn**	**01 04 03.1**	**+0.2**
CEVE	**Cerro Verde**	**0.71**	**25**	⇓*i*P	**Pb**	**01 03 52.0**	**+0.1**
CEVE				*e*S	**Sn**	**01 04 03.1**	**+0.2**
SNJE	**San Jose**	**0.76**	**25**	⇓*e*P	**Pb**	**01 03 52.6**	**-0.1**
SNJE	**San Jose**	**0.76**	**25**	⇓*e*P	**Pb**	**01 03 52.6**	**-0.1**
RTR	**El Retiro**	**0.77**	**21**	⇓*i*P	**Pb**	**01 03 52.9**	**+0.1**
RTR	**El Retiro**	**0.77**	**21**	⇓*i*P	**Pb**	**01 03 52.9**	**+0.1**
CEDA	**San Andres**	**0.81**	**40**	⇑*e*P	**Pb**	**01 03 53.5**	**0.0**
CEDA				IAML		01 04 22.0	
	comp=Z,3μm,0.6s						
CEDA	**San Andres**	**0.81**	**40**	⇑*e*P	**Pb**	**01 03 53.5**	**0.0**
CEDA				IAML		01 04 22.0	
	comp=Z,3μm,0.6s						
BOQS	**Boqueron**	**0.84**	**49**	⇑*e*P	**Pb**	**01 03 54.0**	**-0.1**
BOQS				*e*S	**Sn**	**01 04 06.2**	**+0.2**
BOQS	**Boqueron**	**0.84**	**49**	⇑*e*P	**Pb**	**01 03 54.0**	**-0.1**
BOQS				*e*S	**Sn**	**01 04 06.2**	**+0.2**
SNET	**Serv Nac Est T**	**0.85**	**54**	*e*P	**Pb**	**01 03 53.9**	**-0.3**
SNET				IAML		01 04 09.2	
	comp=Z,1μm,0.3s						
SNET	**Serv Nac Est T**	**0.85**	**54**	*e*P	**Pb**	**01 03 53.9**	**-0.3**
SNET				IAML		01 04 09.2	
	comp=Z,1μm,0.3s						
LFRS	**El Faro**	**0.96**	**62**	⇓*e*P	**Pn**	**01 03 55.2**	**-0.7**
LFRS	**El Faro**	**0.96**	**62**	⇓*e*P	**Pn**	**01 03 55.2**	**-0.7**
TACO	**Tacachico**	**0.97**	**36**	⇓*i*P	**Pn**	**01 03 55.5**	**-0.4**
TACO				*e*S	**Sb**	**01 04 08.6**	**0.0**
TACO	**Tacachico**	**0.97**	**36**	⇓*i*P	**Pn**	**01 03 55.5**	**-0.4**
TACO				*e*S	**Sb**	**01 04 08.6**	**0.0**
LFU	**La Fuente**	**0.98**	**55**	*e*P	**Pn**	**01 03 56.1**	**-0.1**
LFU	**La Fuente**	**0.98**	**55**	*e*P	**Pn**	**01 03 56.1**	**-0.1**
SJTE	**Alcalda de S**	**1.00**	**64**	⇑*e*P	**Pn**	**01 03 56.0**	**-0.5**
SJTE	**Alcalda de S**	**1.00**	**64**	⇑*e*P	**Pn**	**01 03 56.0**	**-0.5**
LBRS	**Las Brisas**	**1.03**	**57**	*e*P	**Pn**	**01 03 56.6**	**-0.2**
LBRS	**Las Brisas**	**1.03**	**57**	*e*P	**Pn**	**01 03 56.6**	**-0.2**
PAVA	**Las Pavas**	**1.10**	**61**	*e*P	**Pn**	**01 03 57.8**	**-0.1**
PAVA	**Las Pavas**	**1.10**	**61**	*e*P	**Pn**	**01 03 57.8**	**-0.1**
COEG	**Centro de Oper**	**1.11**	**67**	*e*P	**Pn**	**01 03 57.9**	**-0.1**
COEG				IAML		01 04 17.6	
	comp=Z,1μm,0.3s						
COEG	**Centro de Oper**	**1.11**	**67**	*e*P	**Pn**	**01 03 57.9**	**-0.1**
COEG				IAML		01 04 17.6	
	comp=Z,1μm,0.3s						
SCLA	**Alcaldia de Sa**	**1.28**	**66**	⇓*e*P	**Pn**	**01 04 00.5**	**+0.2**
SCLA	**Alcaldia de Sa**	**1.28**	**66**	⇓*e*P	**Pn**	**01 04 00.5**	**+0.2**
MTO3	**Montecristo**	**1.33**	**25**	⇓*e*P	**Pn**	**01 04 01.1**	**0.0**
MTO3	**Montecristo**	**1.33**	**25**	⇓*e*P	**Pn**	**01 04 01.1**	**0.0**
COEB	**Comit de Eme**	**1.40**	**77**	*e*P	**Pn**	**01 04 01.5**	**-0.5**
COEB	**Comit de Eme**	**1.40**	**77**	*e*P	**Pn**	**01 04 01.5**	**-0.5**
NBG	**Las Nubes**	**1.46**	**344**	*e*P	**Pb**	**01 04 04.2**	**-0.4**
NBG				*e*S	**Sb**	**01 04 22.5**	**-0.3**
ESQI	**Esquipulas**	**1.49**	**23**	*e*P	**Pn**	**01 04 03.6**	**+0.4**
FUG	**Fuego 3**	**1.54**	**325**	*e*P	**Pn**	**01 04 03.9**	**-0.1**
FUG				*e*S	**Sn**	**01 04 23.1**	**-0.1**
PACA	**Pacayal**	**1.59**	**79**	*e*P	**Pn**	**01 04 05.2**	**+0.6**
PACA	**Pacayal**	**1.59**	**79**	*e*P	**Pn**	**01 04 05.2**	**+0.6**
LCND	**La Caada**	**1.99**	**86**	⇑*e*P	**Pn**	**01 04 10.1**	**+0.1**
LCND	**La Caada**	**1.99**	**86**	⇑*e*P	**Pn**	**01 04 10.1**	**+0.1**
CNCH	**Conchagua**	**2.05**	**87**	*e*P	**Pn**	**01 04 10.8**	**0.0**
CNCH	**Conchagua**	**2.05**	**87**	*e*P	**Pn**	**01 04 10.8**	**0.0**
STG3	**Santiaguito 3,**	**2.20**	**314**	*e*P	**Pn**	**01 04 13.4**	**+0.3**

IDC 17 01:09:28.5±2.3, 7°.33S×127°.21E, h0^{km}, mb3.3/1, mb1 4.0/3, mb1mx3.4/28, mbtmp3.7/3, ML3.9/2, Error ellipse: s-maj=273.1km s-min=32.8km az=63.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.32**	**152**	Pn	Pn	01 12 52.0	-0.7
	0.6nm,0.3s,baz=328,slow=14,SNR=23						
WRA				Sn	Sn	01 15 16.6	-16
	0.8nm,0.3s,baz=321,slow=27,SNR=8.8						
ASAR	**Alice Springs**	**17.47**	**159**	P	Pn	01 13 34.2	+0.4
	0.5nm,0.3s,baz=342,slow=11,SNR=31						
MKAR	**Makanchi Array**	**67.02**	**328**	P	P	01 20 23.4	0.0
	0.2nm,0.5s,baz=129,slow=7.2,SNR=1.9						

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*IDC **17** 01:29:08.8±7.6, 1°.29N×123°.57E, h0^{km}, mb3.8/3, mb1 3.9/4, mb1mx3.4/59, mbtmp3.8/4, ML4.0/1, MS2.9/1, Ms1 2.9/1, ms1mx2.2/38, Error ellipse: s-maj=126.8km s-min=107.1km az=111.0*

*DJA **17** 01:29:38.2±0.8, 0°S±4°×12°3E±°, h124^{km}±7^{km}, M3.3/6, MLv3.3/6*

ISC 17 01:29:35.7±1.1, 0°.09S±0°.09×123°.32E±0°.08, h150^{km}, n11, σ1^{s}.56/12, mb3.7/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**0.94**	**45**	P	**Pn**	**01 30 01.9**	**+2.0**
LUWI	**Luwuk**	**1.09**	**210**	P	**Pn**	**01 30 00.8**	**-0.4**
LUWI				S	**Sn**	**01 30 20.5**	**-0.3**
MRSI	**Marisa**	**1.49**	**292**	P	**Pn**	**01 30 04.5**	**-0.6**
MRSI				S	**Sn**	**01 30 26.3**	**-1.2**
APSI	**Ampana**	**1.85**	**244**	P	**Pn**	**01 30 09.9**	**+0.8**
MPSI	**Mapaga**	**3.44**	**277**	P	**Pn**	**01 30 30.5**	**+1.8**
TTSI	**Tana Toraja**	**4.56**	**230**	P	**Pn**	**01 30 46.2**	**+2.9**
FITZ	**Fitzroy Crossi**	**18.04**	**173**	P	**P**	**01 33 35.4**	**-0.1**
	0.3nm,0.3s,baz=11,slow=8.8,SNR=14						
WRA	**Warramunga Arr**	**22.49**	**152**	P	**P**	**01 34 21.1**	**-1.7**
	1.6nm,0.5s,baz=334,slow=10,SNR=51						
ASAR	**Alice Springs**	**25.59**	**157**	P	**P**	**01 34 51.2**	**+0.1**
	0.5nm,0.5s,baz=344,slow=14,SNR=7.0						
STKA	**Stephens Creek**	**36.03**	**153**	P	**P**	**01 36 21.8**	**-0.9**
	0.9nm,0.5s,baz=330,slow=10,SNR=3.6						
MJAR	**Matsushiro Arr**	**38.98**	**19**	LR	LR	01 53 11.1	
	comp=Z,18nm,18.8s,baz=150,slow=38						

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*IDC **17** 01:34:14.2±4.0, 38°.09N×144°.44E, h0^{km}, mb3.5/2, mb1 3.8/4, mb1mx3.3/68, mbtmp3.7/4, ML2.9/1, Error ellipse: s-maj=89.2km s-min=37.3km az=44.0*

*JMA **17** 01:34:15.0±0.2, 38°.52N×144°.62E, h46^{km}, M3.3*

ISC 17 01:34:14.3±1.4, 38°.58N±0°.06×144°.80E±0°.09, h35^{km}, n27, σ1^{s}.75/31, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**2.50**	**282**	P	**Pn**	**01 34 52.6**	**+0.3**
MIYJ	**Miyakonagasawa**	**2.52**	**294**	P	**Pn**	**01 34 52.9**	**+0.2**
MIYJ				*e*S	**Sn**	**01 35 21.5**	**-0.7**
JKMT	**Kesennumamotoy**	**2.61**	**276**	P	**Pn**	**01 34 54.3**	**+0.4**
JIKH	**Ishinomakikobu**	**2.63**	**265**	P	**Pn**	**01 34 54.2**	**0.0**
JIKH				*e*S	**Sn**	**01 35 22.6**	**-2.3**
JMK	**Ichinoseki**	**2.82**	**279**	P	**Pn**	**01 34 57.5**	**+0.7**
JMK				*e*S	**Sn**	**01 35 29.7**	**+0.1**
JOM	**Ohasama**	**2.87**	**289**	P	**Pn**	**01 34 58.4**	**+0.9**
JOM				*e*S	**Sn**	**01 35 31.6**	**+0.7**
JANG	**Nango**	**3.11**	**306**	P	**Pn**	**01 35 01.2**	**+0.4**
JYK	**Kaneyama**	**3.49**	**277**	P	**Pn**	**01 35 07.1**	**+1.1**
JYK				*e*S	**Sn**	**01 35 46.4**	**+0.3**
JFT	**Otama**	**3.68**	**255**	P	**Pn**	**01 35 09.5**	**+0.8**
JFT				S	**Sn**	**01 35 49.9**	**-0.9**
JOT	**Ohata**	**4.01**	**315**	P	**Pn**	**01 35 14.8**	**+1.6**
JOT				*e*S	**Sn**	**01 35 57.7**	**-1.3**
JCH	**Churui**	**4.17**	**345**	P	**Pn**	**01 35 15.8**	**+0.4**
JCH				*e*S	**Sn**	**01 36 01.3**	**-1.6**
JKB	**Kayabe**	**4.38**	**320**	P	**Pn**	**01 35 20.4**	**+2.1**
NEM2	**Nemuro 2**	**4.83**	**8**	P	**Pn**	**01 35 23.4**	**-1.0**
NEM2				*e*S	**Sn**	**01 36 14.1**	**-5.0**
BSO1	**Boso 1**	**4.98**	**219**	*e*S	**Sn**	**01 36 19.8**	**-2.3**
JRY	**Ryogami san**	**5.35**	**243**	P	**Pn**	**01 35 31.7**	**0.0**
JRY				S	**Sn**	**01 36 28.5**	**-3.6**
JOSM	**Okushiri--Mats**	**5.36**	**312**	P	**Pn**	**01 35 33.7**	**+1.9**
JTKR	**Abashiri--Toko**	**5.43**	**353**	P	**Pn**	**01 35 32.7**	**+0.1**
JTKR				*e*S	**Sn**	**01 36 31.5**	**-2.3**
MJAR	**Matsushiro Arr**	**5.62**	**251**	Pn	**Pn**	**01 35 33.0**	**-2.3**
	0.4nm,0.3s,baz=56,slow=9.5,SNR=13						
USRK	**Ussuriysk Ar.**	**11.13**	**304**	Pn	Pn	01 36 55.3	+4.4
	baz=101,slow=13,SNR=5.1						
H11N2	**WAKE ISLAND Hy**	**26.81**	**128**	T	T	02 08 14.7	
	baz=329,slow=75,SNR=7.7						
H11N1	**WAKE ISLAND Hy**	**26.82**	**128**	T	T	02 08 16.6	
	baz=329,slow=75,SNR=9.9						
H11N3	**WAKE ISLAND Hy**	**26.83**	**128**	T	T	02 08 18.7	
	baz=329,slow=75,SNR=8.1						
H11S1	**WAKE ISLAND Hy**	**27.62**	**130**	T	T	02 09 25.4	
	baz=331,slow=76,SNR=24						
H11S3	**WAKE ISLAND Hy**	**27.63**	**130**	T	T	02 09 35.5	
	baz=331,slow=76,SNR=29						
H11S2	**WAKE ISLAND Hy**	**27.64**	**130**	T	T	02 09 26.0	
	baz=331,slow=76,SNR=18						
WRA	**Warramunga Arr**	**59.04**	**191**	P	**P**	**01 44 12.0**	**+1.3**
	0.4nm,0.7s,baz=7.1,slow=7.3,SNR=5.7						
ASAR	**Alice Springs**	**62.76**	**191**	P	**P**	**01 44 37.7**	**+1.7**
	0.1nm,0.3s,baz=22,slow=7.5,SNR=4.9						

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*NIED **17** 02:07:10.6, 31°.22N×128°.72E, h6^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.58; M$_{\theta\theta}$-0.64; M$_{\phi\phi}$1.22; M$_{r\theta}$-0.25; M$_{\theta\phi}$1.89; M$_{\phi r}$0.71; Fault plane solution: M$_0$2.27000×10^{15} NP1: φ$_s$169.00000°, δ81.00000°, λ-157.00000°. NP2: φ$_s$76.00000°, δ68.00000°, λ-10.00000°.*

*JMA **17** 02:07:10.5±0.5, 31°.22N×128°.72E, h6^{km}±4^{km}, M4.4*

JMA Felt I J1.

*IDC **17** 02:07:12.3±0.9, 31°.24N×128°.87E, h0^{km}, mb3.8/8, mb1 3.9/11, mb1mx3.8/45, mbtmp3.8/11, ML3.4/3, MS3.4/14, Ms1 3.4/14, ms1mx3.1/48, Error ellipse: s-maj=35.5km s-min=16.9km az=78.0*

*NEIC **17** 02:07:12.8±2.3, 31°.22N±0°.06×128°.73E±0°.06, h10^{km}±1^{km}, mb4.3/12, Error ellipse: s-maj=10.2km s-min=8.7km az=173.0*

ISC 17 02:07:12.2±0.6, 31°.21N±0°.04×128°.80E±0°.05, h10^{km}, n53, σ1^{s}.50/47, mb4.1/13, MS3.4/9, Northwest of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	**Shimokoshiki**	**0.91**	**59**	P	**Pg**	**02 07 28.9**	**-0.8**
JSJ				*e*S	**Sg**	**02 07 41.2**	**-0.4**
JKC	**Kuchinoerabu**	**1.41**	**121**	P	**Pn**	**02 07 36.4**	**-1.5**
JSU	**Suzuyama**	**1.45**	**78**	P	**Pb**	**02 07 38.6**	**-0.6**
JSU	**Suzuyama**	**1.45**	**78**		**Pb**	**02 07 38.9**	**-0.3**
JSU				Sn	**Sg**	**02 07 59.2**	**+0.5**
JFU	**Fukue jima 2**	**1.45**	**358**	P	**Pb**	**02 07 37.0**	**-2.2**
JNN	**Nakanoshima**	**1.64**	**145**	P	**Pb**	**02 07 41.4**	**-1.2**
JYAK	**Yakushimahirau**	**1.76**	**123**	P	**Pn**	**02 07 42.6**	**-0.1**
JTN	**Tanegashima 3**	**1.95**	**106**	P	**Pn**	**02 07 45.9**	**+0.6**
JMTN	**Minamitane**	**1.98**	**114**	P	**Pn**	**02 07 46.2**	**+0.5**
JTZ	**Takazaki**	**2.07**	**70**	P	**Pn**	**02 07 47.5**	**+0.5**
JIU3	**Izumi3**	**2.17**	**51**	P	**Pn**	**02 07 48.8**	**+0.4**
JIU3				*e*S	**Sn**	**02 08 14.7**	**-0.7**
JNU	**Nakatsue**	**2.60**	**42**	Pn	**Pb**	**02 07 59.3**	**+0.4**
	baz=180,slow=20						
JNU				Sn	**Sg**	**02 08 33.2**	**-2.4**
	baz=128,slow=19						
JNU	**Nakatsue**	**2.60**	**42**	Pn	**Pb**	**02 07 56.2**	**-2.7**
JTU	**Tsushima**	**3.35**	**8**		**Pn**	**02 08 05.4**	**+0.9**
JOW	**Kunigami**	**4.38**	**186**	Pn	Pn	02 08 22.2	+3.4
	1.9nm,0.3s,baz=24,slow=16,SNR=4.5						
JOW	**Kunigami**	**4.38**	**186**	Pn	**Pn**	**02 08 21.4**	**+2.6**
JMN	**Monobe**	**4.97**	**58**	Pn	**Pn**	**02 08 28.1**	**+1.2**
JHS	**Saijyo**	**5.24**	**43**	Pn	**Pn**	**02 08 32.0**	**+1.5**
KSRS	**Korea Array**	**6.28**	**354**	Pn	**Pn**	**02 08 45.5**	**+0.7**
	1.2nm,0.3s,baz=175,slow=14,SNR=14						
KSRS				Sn	**Sn**	**02 09 55.3**	**-1.2**
	2.6nm,0.3s,baz=174,slow=24,SNR=5.6						
KSRS				LR	LR	02 11 08.8	
	comp=Z,93nm,18.8s,baz=168,slow=38						
KS19	**Wonju Array Si**	**6.33**	**353**		**Pn**	**02 08 47.3**	**+1.8**
JWT	**Wachi**	**6.86**	**52**		**Pn**	**02 08 54.5**	**+1.6**
MJAR	**Matsushiro Arr**	**9.46**	**53**	LR	LR	02 12 58.8	
	comp=Z,138nm,18.9s,baz=265,slow=37						
JCJ	**Chichijima**	**12.39**	**106**	LR	LR	02 14 20.6	
	comp=Z,92nm,21.6s,baz=68,slow=35						
ASAJ	**Asahikawa**	**16.86**	**36**	Pn	**P**	**02 11 09.6**	**-0.7**
	0.4nm,0.3s,baz=306,slow=2.1,SNR=4.5						
ASAJ				LR	LR	02 17 33.7	
	comp=Z,150nm,18.2s,baz=232,slow=37						
JKA	**Kamikawa-asahi**	**16.86**	**36**		**P**	**02 11 09.0**	**-1.3**
JKA				IAmb	IAmb	02 11 23.6	
	comp=Z,44nm,1.5s						
KLR	**Kul'dur**	**18.14**	**6**	P	**P**	**02 11 29.1**	**+4.7**
	comp=Z,0.1nm,0.3s,baz=170,slow=17,SNR=3.8						
KLR				LR	LR	02 17 41.1	
	comp=Z,47nm,20.2s,baz=302,slow=35						
SONM	**Songino Array**	**23.84**	**321**	P	**P**	**02 12 26.6**	**+1.1**
	comp=Z,1.2nm,0.8s,baz=138,slow=8.0,SNR=4.7						
SONM				LR	LR	02 22 39.6	
	comp=Z,217nm,20.9s,baz=132,slow=39						
SONM	**Songino Array**	**23.84**	**321**	P	**P**	**02 12 26.2**	**+0.6**
TLY	**Talaya**	**27.59**	**325**	LR	LR	02 25 04.8	
	comp=Z,150nm,18.6s,baz=133,slow=39						
CMAR	**Chiang Mai Arr**	**29.82**	**252**	LR	LR	02 25 12.7	
	comp=Z,59nm,18.2s,baz=28,slow=36						
PETK	**Petropavlovsk-**	**30.28**	**35**	LR	LR	02 24 48.4	
	comp=Z,55nm,19.7s,baz=231,slow=35						
YAK	**Yakutsk**	**30.84**	**1**	P	**P**	**02 13 27.2**	**-0.9**
ZALV	**Zalesovo Beam**	**38.71**	**319**	LR	LR	02 31 59.3	
	comp=Z,145nm,18.6s,baz=100,slow=38						
MKAR	**Makanchi Array**	**38.76**	**307**	P	**P**	**02 14 39.3**	**+2.6**
	comp=Z,0.6nm,1.0s,baz=76,slow=7.7,SNR=2.5						
KURK	**Kurchatov**	**41.69**	**313**	P	**P**	**02 15 00.9**	**+0.1**
KURBB	**Kurchatov Arra**	**41.73**	**313**	P	P	02 15 04.1	+2.9
	comp=Z,2.0nm,0.3s,baz=107,slow=8.1,SNR=3.5						
NRIK	**Noril'sk**	**44.71**	**341**	P	**P**	**02 15 25.2**	**+0.2**
	comp=Z,0.8nm,0.3s,baz=104,slow=4.2,SNR=1.7						
NRIK	**Noril'sk**	**44.71**	**341**	P	**P**	**02 15 24.9**	**-0.1**
XMIS	**Christmas Isla**	**47.02**	**212**	P	**P**	**02 15 42.1**	**-1.8**
BRVK	**Borovoye**	**47.07**	**315**	P	**P**	**02 15 42.9**	**-1.0**
BRVK				IAmb	IAmb	02 15 49.6	
	comp=Z,2.0nm,0.7s						
KK31	**Karatay Array**	**47.09**	**302**	P	**P**	**02 15 42.1**	**-2.1**
KK31				IAmb	IAmb	02 15 56.3	
	comp=Z,1.6nm,0.8s						
KKAR	**Karatay Array**	**47.09**	**302**	P	**P**	**02 15 44.4**	**+0.1**
KKAR				IAmb	IAmb	02 16 03.2	
	comp=Z,1.9nm,0.9s						
GAR	**Garm**	**47.77**	**296**	P	**P**	**02 15 47.9**	**-1.9**
GAR				IAmb	IAmb	02 15 58.3	
	comp=Z,6.2nm,1.3s						
HNR	**Honiara**	**50.24**	**138**	LR	LR	02 35 00.9	
	comp=Z,33nm,18.4s,baz=352,slow=33						
WB0	**Warramunga Arr**	**50.96**	**173**	P	**P**	**02 16 14.1**	**0.0**
WRA	**Warramunga Arr**	**51.13**	**173**	P	**P**	**02 16 16.4**	**+1.1**
	comp=Z,0.6nm,0.7s,baz=353,slow=8.2,SNR=6.2						
WB2	**Warramunga Arr**	**51.13**	**173**	P	**P**	**02 16 14.8**	**-0.5**
WB2				IAmb	IAmb	02 16 24.8	
	comp=Z,6.3nm,1.4s						
ASAR	**Alice Springs**	**54.78**	**174**	P	**P**	**02 16 44.0**	**+1.8**
	comp=Z,0.9nm,0.6s,baz=4.4,slow=14,SNR=10						
GEYT	**Alibeck**	**57.34**	**298**	LR	LR	02 43 05.4	
	comp=Z,30nm,20.1s,baz=135,slow=38						
ILAR	**Eielson Array**	**59.85**	**30**	P	**P**	**02 17 19.6**	**+2.0**
	comp=Z,0.5nm,0.7s,baz=285,slow=8.3,SNR=5.0						
ILAR				LR	LR	02 43 26.9	
	comp=Z,25nm,18.6s,baz=207,slow=36						
ILAR	**Eielson Array**	**59.85**	**30**	P	**P**	**02 17 17.4**	**-0.2**
ARCES	**ARCESS Array B**	**65.59**	**338**	LR	LR	02 50 23.8	
	comp=Z,51nm,18.6s,baz=10.0,slow=40						
FINES	**FINESS Array B**	**68.81**	**330**	P	**P**	**02 18 17.4**	**+1.1**
	comp=Z,5.4nm,1.1s,baz=128,slow=2.3,SNR=1.7						

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*IDC **17** 02:09:01.6±1.4, 0°.92N×127°.33E, h0^{km}, mb3.8/5, mb1 3.9/5, mb1mx3.7/36, mbtmp3.8/5, MS3.2/3, Ms1 3.2/3, ms1mx2.6/41, Error ellipse: s-maj=138.7km s-min=20.2km az=69.0*

*NEIC **17** 02:09:03.4±1.9, 1°.02N±0°.04×127°.4E±0°.1, h13^{km}±5^{km}, mb4.3/9, Error ellipse: s-maj=19.0km s-min=6.5km az=87.0*

ISC 17 02:09:02.5±0.7, 1°.04N±0°.07×127°.3E±0°.1, h10^{km}, n23, σ1^{s}.16/21, mb4.0/9, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.27**	**173**	Pg	**Pg**	**02 09 08.2**	**+0.3**
TNTI				Sg	**Sg**	**02 09 13.0**	**+1.4**
KAPI	**Kappang**	**9.67**	**231**	Pn	**Pn**	**02 11 21.1**	**-0.7**
BATI	**Baumata**	**11.75**	**198**	LR	LR	02 16 53.0	
	comp=Z,35nm,18.2s,baz=310,slow=40						
WB0	**Warramunga Arr**	**21.80**	**162**	P	**P**	**02 13 54.5**	**-0.5**
WB0				IAmb	IAmb	02 14 00.1	
	comp=Z,8.3nm,1.2s						
WRA	**Warramunga Arr**	**21.95**	**162**	P	**P**	**02 13 56.0**	**-0.5**
	comp=Z,2.5nm,0.8s,baz=340,slow=11,SNR=14						
WRA	**Warramunga Arr**	**21.95**	**162**	P	**P**	**02 13 55.0**	**-1.5**
WB2	**Warramunga Arr**	**21.96**	**162**	P	**P**	**02 13 55.1**	**-1.5**
WB2				IAmb	IAmb	02 14 01.1	
	comp=Z,16nm,1.6s						
WR0	**Warramunga Arr**	**22.03**	**162**	P	**P**	**02 13 57.1**	**-0.3**
PMG	**Port Moresby**	**22.30**	**118**	LR	LR	02 25 23.2	
	comp=Z,49nm,19.5s,baz=180,slow=44						
PMG	**Port Moresby**	**22.30**	**118**	P	**P**	**02 14 00.1**	**-0.2**
ASAR	**Alice Springs**	**25.37**	**166**	P	**P**	**02 14 29.6**	**-0.5**
	comp=Z,3.5nm,1.0s,baz=344,slow=10,SNR=21						
ASAR	**Alice Springs**	**25.37**	**166**	P	**P**	**02 14 29.1**	**-1.0**
USRK	**Ussuriysk Ar.**	**43.17**	**5**	P	**P**	**02 17 03.3**	**-0.1**
LSA	**Lhasa**	**44.68**	**313**	P	**P**	**02 17 16.2**	**-0.2**
SONM	**Songino Array**	**50.02**	**342**	P	**P**	**02 17 58.0**	**+0.7**
	comp=Z,0.6nm,0.9s,baz=155,slow=8.6,SNR=2.8						
SONM	**Songino Array**	**50.02**	**342**	P	**P**	**02 17 58.8**	**+1.5**
SONM				IAmb	IAmb	02 19 45.3	
	comp=Z,9.7nm,2.0s						
MKAR	**Makanchi Array**	**60.10**	**326**	P	**P**	**02 19 11.2**	**+1.1**
	comp=Z,1.1nm,0.8s,baz=120,slow=8.5,SNR=6.4						
MKAR	**Makanchi Array**	**60.10**	**326**	P	**P**	**02 19 10.5**	**+0.4**
KURBB	**Kurchatov Arra**	**64.32**	**328**	P	**P**	**02 19 40.4**	**+2.2**
	comp=Z,0.5nm,0.4s,baz=129,slow=5.8,SNR=2.1						
KURK	**Kurchatov**	**64.32**	**328**	P	**P**	**02 19 40.3**	**+2.0**
KURK				IAmb	IAmb	02 19 41.5	
	comp=Z,3.2nm,1.1s						
KK31	**Karatay Array**	**65.61**	**318**	P	**P**	**02 19 45.6**	**-1.3**
KK31				IAmb	IAmb	02 21 17.2	
	comp=Z,3.1nm,1.1s						
VNDA	**Vanda**	**80.70**	**173**	LR	LR	02 52 23.5	
	comp=Z,44nm,21.8s,baz=354,slow=32						
RSO	**Redoubt South**	**84.12**	**29**	P	**P**	**02 21 33.0**	**-0.9**

IDC 17 02:35:10.5±2.3, 1°.08N×127°.19E, h0^{km}, mb3.4/3, mb1 3.6/3, mb1mx3.2/37, mbtmp3.4/3, Error ellipse: s-maj=167.9km s-min=28.1km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.04**	**162**	P	P	02 40 05.7	-1.2
	0.5nm,0.4s,baz=340,slow=11,SNR=9.1						
ASAR	**Alice Springs**	**25.45**	**166**	P	P	02 40 41.1	+0.8
	0.7nm,0.6s,baz=344,slow=11,SNR=12						
MKAR	**Makanchi Array**	**59.99**	**326**	P	P	02 45 18.8	-0.1
	0.2nm,0.5s,baz=114,slow=7.1,SNR=2.9						

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*IDC **17** 02:39:03.3±4.2, 49°.78S×164°.78E, h0^{km}, mb3.8/4, mb1 4.0/4, mb1mx3.6/35, mbtmp3.8/4, MS3.7/7, Ms1 3.7/7, ms1mx3.3/25, Error ellipse: s-maj=307.5km s-min=67.2km az=43.0*

*NEIC **17** 02:39:05.5±1.7, 53°.39S±0°.10×160°.2E±0°.2, h10^{km}±2^{km}, mb4.1/9, Error ellipse: s-maj=29.2km s-min=7.0km az=121.0*

*GCMT **17** 02:39:09.5±0.3, 52°.86S±0°.02×159°.44E±0°.03, h19^{km}±2^{km}, MW4.9/80, Moment Tensor Solution. s19,c21; s80,c96; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.15±.15; M$_{\theta\theta}$2.10±.11; M$_{\phi\phi}$-2.25±.11; M$_{r\theta}$0.14±.21; M$_{\theta\phi}$0.99±.10; M$_{\phi r}$1.02±.32; Best double couple: M$_0$2.58100×10^{16} NP1:φ$_s$121.00000°, δ70.00000°, λ-6.00000°. NP2: φ$_s$213.00000°, δ84.00000°, λ-160.00000°. Principal axes: T 2.3760, Plg10.0000°, Azm346.0000°; N 0.4110, Plg69.0000°, Azm229.0000°; P -2.7870, Plg18.0000°, Azm79.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 02:39:05.0±1.6, 53°.35S±0°.10×160°.2E±0°.3, h10^{km}, n21, σ2^{s}.06/17, mb4.1/9, MS3.7/7, Macquarie Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MCQ	**Macquarie Isla**	**1.37**	**212**	Pn	**Pn**	**02 39 30.3**	**+0.2**
MCQ				Sn	**Sn**	**02 39 48.1**	**-0.3**
STKA	**Stephens Creek**	**25.31**	**321**	P	**P**	**02 44 28.9**	**-2.6**
	1.8nm,0.8s,baz=135,slow=11,SNR=6.6						
STKA				LR	LR	02 52 02.4	
	comp=Z,189nm,20.1s,baz=195,slow=31						
STKA	**Stephens Creek**	**25.31**	**321**	P	**P**	**02 44 32.1**	**+0.6**
RAO	**Raoul Island**	**28.92**	**42**	LR	LR	02 54 52.5	
	comp=Z,121nm,18.5s,baz=226,slow=39						
DZM	**Mont Dzumac**	**31.59**	**11**	LR	LR	02 54 56.3	
	comp=Z,118nm,18.1s,baz=224,slow=34						
ASAR	**Alice Springs**	**35.68**	**316**	P	**P**	**02 45 59.9**	**-3.5**
	0.6nm,0.6s,baz=139,slow=7.7,SNR=7.6						
ASAR				LR	LR	02 59 21.0	
	comp=Z,114nm,18.7s,baz=148,slow=34						
ASAR	**Alice Springs**	**35.68**	**316**	P	**P**	**02 46 02.8**	**-0.5**
AS31	**Alice Springs**	**35.68**	**316**	P	**P**	**02 46 03.0**	**-0.4**
AS31				IAmb	IAmb	02 46 18.6	
	comp=Z,2.3nm,1.2s						
QSPA	**South Pole Qui**	**36.77**	**180**	P	**P**	**02 46 12.6**	**+0.2**
WR0	**Warramunga Arr**	**38.75**	**319**	P	**P**	**02 46 28.7**	**-0.7**
WR0				IAmb	IAmb	02 46 32.2	
	comp=Z,5.1nm,1.0s						
WB2	**Warramunga Arr**	**38.84**	**319**	P	**P**	**02 46 33.3**	**+3.2**
WB2				IAmb	IAmb	02 46 45.9	
	comp=Z,7.3nm,1.2s						
WRA	**Warramunga Arr**	**38.84**	**319**	P	P	02 46 25.9	-4.3
	comp=Z,0.7nm,1.0s,baz=152,slow=6.7,SNR=4.5						
WRA				LR	LR	03 01 45.2	
	comp=Z,101nm,18.0s,baz=110,slow=36						
WRA	**Warramunga Arr**	**38.84**	**319**	P	**P**	**02 46 33.0**	**+2.8**
WRAB	**Tennant Creek**	**38.84**	**319**	P	**P**	**02 46 29.7**	**-0.5**
WRAB				IAmb	IAmb	02 46 37.2	
	comp=Z,4.6nm,0.8s						
WB0	**Warramunga Arr**	**38.98**	**319**	P	**P**	**02 46 34.4**	**+3.1**
WB0				IAmb	IAmb	02 46 37.3	
	comp=Z,4.8nm,1.1s						
MORW	**Morawa**	**40.24**	**289**	P	**P**	**02 46 42.0**	**+0.3**
FITZ	**Fitzroy Crossi**	**44.22**	**309**	P	**P**	**02 47 16.9**	**+2.7**
	comp=Z,4.1nm,1.1s,baz=152,slow=10,SNR=4.9						
PLCA	**Paso Flores**	**76.58**	**143**	LR	LR	03 15 24.0	
	comp=Z,51nm,21.1s,baz=196,slow=28						
ASAJ	**Asahikawa**	**98.25**	**347**	LR	LR	03 28 30.3	
	comp=Z,26nm,19.8s,baz=214,slow=31						
AKASG	**Malin Array Be**	**150.19**	**285**	PKPbc	**PKPab**	**02 58 59.3**	**-1.9**
	comp=Z,0.2nm,0.3s,baz=90,slow=1.9,SNR=1.6						
AKASG	**Malin Array Be**	**150.19**	**285**		**PKPbc**	**02 58 55.1**	**+0.1**

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*JMA **17** 02:44:50.5±0.1, 24°.61N×121°.56E, h59^{km}±2^{km}, M3.0*

*TAP **17** 02:44:50.8, 24°.62N×121°.60E, h58^{km}, ML3.7, B*

*IASPEI **17** 02:44:51.6±1.3, 24°.65N±0°.02×121°.61E±0°.03, h55^{km}±5^{km}, Error ellipse: s-maj=3.9km s-min=3.3km az=131.8, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

ISC 17 02:44:51.2±1.2, 24°.66N±0°.02×121°.60E±0°.02, h58^{km}±4^{km}, n135, σ0^{s}.74/224, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENTT	**Nioudou**	**0.04**	**232**	P	**Pn**	**02 45 00.0**	**+0.1**
	baz=309						
ENTT				S	**Sn**	**02 45 06.4**	**+0.2**
	baz=309						
TWE	**Neicheng**	**0.09**	**47**	P	**Pn**	**02 45 00.2**	**+0.2**
	baz=41						
TWE				S	**Sn**	**02 45 06.8**	**+0.5**
	baz=41						
NDT	**Datong Townshi**	**0.10**	**232**	*e*P	**Pn**	**02 45 00.2**	**+0.1**
	baz=266						
NDT				S	**Sn**	**02 45 06.3**	**0.0**
	baz=266						
NDS	**Dongshan**	**0.11**	**105**	P	**Pn**	**02 45 00.1**	**0.0**
	baz=85						
NDS				S	**Sn**	**02 45 06.4**	**0.0**
	baz=85						
NWLT	**Wulai**	**0.14**	**322**	P	**Pn**	**02 44 60.0**	**-0.2**
	baz=340						
NWLT				*e*S	**Sn**	**02 45 06.0**	**-0.8**
	baz=340						
ILA	**Ilan**	**0.17**	**53**	*e*P	**Pn**	**02 45 00.8**	**+0.5**
	baz=48						
ILA				*e*S	**Sn**	**02 45 08.4**	**+1.6**
	baz=48						
NSK	**Sanguang**	**0.22**	**273**	*e*P	**Pn**	**02 45 00.3**	**-0.4**
	baz=289						
NSK				*e*S	**Sn**	**02 45 07.3**	**-0.2**
	baz=289						
TWC	**Suao**	**0.23**	**103**	P	**Pn**	**02 45 00.7**	**0.0**
	baz=93						
TWC				*e*S	**Sn**	**02 45 07.4**	**-0.1**
	baz=93						

ENA	**Nanau** baz=150	**0.27**	**151**	P	**Pn**	**02 45 00.5**	**-0.4**
ENA	baz=150			*e*S	**Sn**	**02 45 07.6**	**-0.2**
EWUT	**Wuta** baz=142	**0.27**	**143**	P	**Pn**	**02 45 00.3**	**-0.6**
EWUT	baz=142			S	**Sn**	**02 45 07.5**	**-0.4**
NTC	**Toucheng** baz=43	**0.28**	**48**	*e*P	**Pn**	**02 45 01.1**	**+0.1**
NTC	baz=43			*e*S	**Sn**	**02 45 08.0**	**0.0**
NNS	**Nan Shan** baz=226	**0.30**	**223**	P	**Pn**	**02 45 01.3**	**-0.1**
NNS	baz=226			S	**Sn**	**02 45 08.4**	**-0.2**
NNSB	**Datong** baz=225	**0.30**	**220**	*e*P	**Pn**	**02 45 01.3**	**0.0**
NNSB	baz=225			S	**Sn**	**02 45 08.3**	**-0.3**
NHDH	**Xindian Distri** baz=349	**0.31**	**347**	P	**Pn**	**02 45 01.1**	**-0.1**
NHDH	baz=349			S	**Sn**	**02 45 08.3**	**-0.1**
TWA	**Mucha** baz=352	**0.32**	**358**	P	**Pn**	**02 45 01.3**	**0.0**
TWA	baz=352			S	**Sn**	**02 45 08.6**	**0.0**
TATO	**Taipei** baz=351	**0.33**	**342**	*e*P	**Pn**	**02 45 01.2**	**-0.2**
TATO	baz=351			*e*S	**Sn**	**02 45 08.4**	**-0.3**
EGS	baz=49	**0.35**	**59**	P	**Pn**	**02 45 02.2**	**+0.7**
EGS	baz=49			*e*S	**Sn**	**02 45 10.6**	**+1.5**
BACT	**New Taipei Cit** baz=346	**0.36**	**337**	*e*P	**Pn**	**02 45 01.7**	**+0.1**
BACT	baz=346			*e*S	**Sn**	**02 45 09.7**	**+0.5**
TIPB	**Shuangxi** baz=23	**0.37**	**34**	*e*P	**Pn**	**02 45 02.0**	**+0.2**
TIPB	baz=23			*e*S	**Sn**	**02 45 09.5**	**+0.1**
NHY	**Taipei** baz=349	**0.38**	**356**	P	**Pn**	**02 45 02.0**	**+0.2**
NHY	baz=349			S	**Sn**	**02 45 09.8**	**+0.4**
TAP	**Taipei** baz=350	**0.38**	**347**	P	**Pn**	**02 45 01.9**	**0.0**
TAP	baz=350			*e*S	**Sn**	**02 45 09.9**	**+0.4**
NTY	**Taoyuan** baz=325	**0.43**	**321**	*e*P	**Pn**	**02 45 02.6**	**+0.3**
NTY	baz=325			*e*S	**Sn**	**02 45 11.1**	**+0.7**
NWF	**Wu-fen Shan** baz=13	**0.44**	**22**	P	**Pn**	**02 45 02.7**	**+0.2**
NWF	baz=13			S	**Sn**	**02 45 10.6**	**0.0**
WFSB	**Wu-fen Shan** baz=13	**0.44**	**22**	*e*P	**Pn**	**02 45 02.6**	**+0.2**
WFSB	baz=13			*e*S	**Sn**	**02 45 10.7**	**+0.2**
ETLH	**Xiulin Townshi** baz=188	**0.47**	**193**	*e*P	**Pn**	**02 45 02.4**	**-0.4**
ETLH	baz=188			*e*S	**Sn**	**02 45 11.2**	**0.0**
NJD	**Zhudong** baz=294	**0.47**	**279**	*e*P	**Pn**	**02 45 03.1**	**+0.4**
NJD	baz=294			S	**Sn**	**02 45 11.6**	**+0.5**
YM01	**YM01** baz=352	**0.48**	**357**	P	**Pn**	**02 45 02.9**	**-0.1**
YM01	baz=352			*e*S	**Sn**	**02 45 11.6**	**+0.2**
NCU	**National Centr** baz=306	**0.48**	**309**	*e*P	**Pn**	**02 45 02.8**	**-0.1**
NCU	baz=306			S	**Sn**	**02 45 11.8**	**+0.5**
NCUH	**Zhongli** baz=305	**0.48**	**309**	P	**Pn**	**02 45 03.1**	**+0.3**
NCUH	baz=305			*e*S	**Sn**	**02 45 11.5**	**+0.2**
NACB	**Ninganchiao** baz=174	**0.49**	**180**	*e*P	**Pn**	**02 45 01.7**	**-1.2**
NACB	baz=174			*e*S	**Sn**	**02 45 10.3**	**-1.1**
TWB1	**Santiao Chiao** baz=37	**0.49**	**46**	P	**Pn**	**02 45 03.2**	**+0.3**
TWB1	baz=37			*e*S	**Sn**	**02 45 12.0**	**+0.5**
ETL	**Fush Village** baz=168	**0.50**	**177**	*e*P	**Pn**	**02 45 01.9**	**-1.2**
NTST	**Danshui** baz=338	**0.52**	**345**	*e*P	**Pn**	**02 45 03.5**	**+0.3**
NTST	baz=338			*e*S	**Sn**	**02 45 12.6**	**+0.7**
YM08	**YM08** baz=352	**0.52**	**359**	*e*P	**Pn**	**02 45 03.0**	**-0.3**
YM08	baz=352			*e*S	**Sn**	**02 45 11.5**	**-0.6**
FUSS	**Fushou** baz=221	**0.53**	**218**	P	**Pn**	**02 45 03.8**	**+0.2**
FUSS	baz=221			*e*S	**Sn**	**02 45 12.5**	**0.0**
ANP	**Anpu** baz=1.0	**0.53**	**352**	P	**Pn**	**02 45 03.2**	**-0.2**
ANP	baz=1.0			*e*S	**Sn**	**02 45 11.9**	**-0.4**
LIOB	**Emei** baz=273	**0.53**	**268**	P	**Pn**	**02 45 03.4**	**0.0**
LIOB	baz=273			S	**Sn**	**02 45 12.3**	**0.0**
HSN1	**Hsinchu** baz=297	**0.54**	**282**	P	**Pn**	**02 45 03.7**	**+0.2**
HSN1	baz=297			S	**Sn**	**02 45 12.9**	**+0.5**
NWRT	**Kuosheng** baz=13	**0.54**	**6**	*e*P	**Pn**	**02 45 03.4**	**0.0**
NWRT	baz=13			*e*S	**Sn**	**02 45 12.2**	**-0.1**
NSTT	**Nanjuang** baz=271	**0.55**	**267**	*e*P	**Pn**	**02 45 03.3**	**-0.2**
NSTT	baz=271			*e*S	**Sn**	**02 45 12.2**	**-0.3**
TWT	**Tachien** baz=221	**0.56**	**223**	*e*P	**Pn**	**02 45 04.4**	**+0.5**
TWT	baz=221			*e*S	**Sn**	**02 45 13.6**	**+0.5**
SBCB	**Hsinchu** baz=297	**0.57**	**283**	*e*P	**Pn**	**02 45 04.0**	**+0.2**
SBCB	baz=297			*e*S	**Sn**	**02 45 13.5**	**+0.5**
TDCB	**Techi** baz=221	**0.57**	**225**	*e*P	**Pn**	**02 45 04.3**	**+0.3**
TDCB	baz=221			*e*S	**Sn**	**02 45 13.5**	**+0.2**
TWD	**Chiawan** baz=171	**0.58**	**180**	*e*P	**Pn**	**02 45 02.7**	**-1.2**
HSN	**Hsinchu** baz=291	**0.59**	**284**	*e*P	**Pn**	**02 45 03.9**	**-0.2**
HSN	baz=291			*e*S	**Sn**	**02 45 13.2**	**-0.1**
WHF	**Hehuan Shan** baz=204	**0.60**	**211**	P	**Pn**	**02 45 04.7**	**+0.1**
WHF	baz=204			*e*S	**Sn**	**02 45 14.2**	**0.0**
TWY	**Chenhua** baz=353	**0.61**	**0**	*e*P	**Pn**	**02 45 04.8**	**+0.5**
TWY	baz=353			S	**Sn**	**02 45 14.4**	**+0.6**
HWA	**Hwalien** baz=178	**0.68**	**180**	P	**Pn**	**02 45 04.2**	**-0.9**
ETM	**Tongmen** baz=178	**0.70**	**188**	*e*P	**Pn**	**02 45 04.1**	**-1.3**
WHP	**Taichung City** baz=248	**0.71**	**237**	*e*P	**Pn**	**02 45 06.0**	**+0.4**
WHP	baz=248			*e*S	**Sn**	**02 45 16.3**	**+0.3**
CHGB	**Renai** baz=207	**0.71**	**213**	P	**Pn**	**02 45 06.1**	**+0.4**
CHGB	baz=207			S	**Sn**	**02 45 16.7**	**+0.4**
NMLH	**Miaoli** baz=263	**0.75**	**260**	*e*P	**Pn**	**02 45 05.9**	**0.0**
NMLH	baz=263			S	**Sn**	**02 45 17.2**	**+0.5**
TEYL	**Yanliau Villag** baz=179	**0.79**	**180**	*e*P	**Pn**	**02 45 05.9**	**-0.6**
NSY	**Sanyi** baz=254	**0.80**	**252**	P	**Pn**	**02 45 06.9**	**+0.3**
NSY	baz=254			S	**Sn**	**02 45 18.6**	**+0.6**
OWD	**Renai** baz=209	**0.80**	**209**	P	**Pn**	**02 45 07.1**	**+0.3**
OWD	baz=209			*e*S	**Sn**	**02 45 18.6**	**+0.4**
TWQ1	**Liyutan** baz=249	**0.81**	**248**	P	**Pn**	**02 45 06.9**	**+0.1**
TWQ1	baz=249			S	**Sn**	**02 45 18.4**	**+0.1**
ESL	**Shilin** baz=181	**0.86**	**190**	*e*P	**Pn**	**02 45 05.7**	**-1.7**
WCS	**Beigang Elemen** baz=236	**0.87**	**226**	*e*P	**Pn**	**02 45 07.8**	**+0.3**
WCS	baz=236			*e*S	**Sn**	**02 45 20.2**	**+0.7**
WPL	**Puli Township** baz=232	**0.87**	**222**	*e*P	**Pn**	**02 45 08.6**	**+1.0**
WPL	baz=232			*e*S	**Sn**	**02 45 20.5**	**+0.9**
DPDB	**Guoxing** baz=234	**0.88**	**224**	*e*P	**Pn**	**02 45 08.6**	**+1.0**
DPDB	baz=234			*e*S	**Sn**	**02 45 20.4**	**+0.7**
WDJ	**Dajia District** baz=252	**0.93**	**250**	P	**Pn**	**02 45 08.2**	**0.0**
WDJ	baz=252			*e*S	**Sn**	**02 45 20.8**	**0.0**
TEGC	**Jichi Village** baz=181	**0.95**	**183**	*e*P	**Pn**	**02 45 07.0**	**-1.6**
TCU	**Taichung** baz=249	**0.98**	**239**	*e*P	**Pn**	**02 45 09.2**	**+0.2**
TCU	baz=249			*e*S	**Sn**	**02 45 22.4**	**+0.2**
VWDT	**VWDT** baz=213	**1.00**	**205**	*e*P	**Pn**	**02 45 09.7**	**+0.6**
VWDT	baz=213			*e*S	**Sn**	**02 45 23.1**	**+0.7**
EGFH	**Guangfu** baz=181	**1.00**	**189**	*e*P	**Pn**	**02 45 07.4**	**-1.9**
SMLT	**Sun Moon Lake** baz=226	**1.00**	**220**	P	**Pn**	**02 45 09.8**	**+0.4**
SMLT	baz=226			*e*S	**Sn**	**02 45 23.4**	**+0.7**
TYC	**Yuchr** baz=229	**1.01**	**222**	P	**Pn**	**02 45 09.7**	**+0.3**
TYC	baz=229			*e*S	**Sn**	**02 45 23.5**	**+0.7**
WWF	**Wufeng** baz=244	**1.03**	**233**	*e*P	**Pn**	**02 45 10.4**	**+0.8**
WWF	baz=244			*e*S	**Sn**	**02 45 23.8**	**+0.6**
SSLB	**Suanglung** baz=208	**1.05**	**214**	*e*P	**Pn**	**02 45 10.2**	**+0.3**
SSLB	baz=208			*e*S	**Sn**	**02 45 24.5**	**+0.7**
WCHH	**Zhanghua** baz=239	**1.11**	**239**	*e*P	**Pn**	**02 45 11.3**	**+0.6**
WCHH	baz=239			*e*S	**Sn**	**02 45 25.9**	**+0.8**
WNT1	**Nantou City** baz=239	**1.13**	**228**	*e*P	**Pn**	**02 45 11.3**	**+0.5**
WNT1	baz=239			*e*S	**Sn**	**02 45 26.3**	**+0.9**
WNT	**Mingjian** baz=237	**1.14**	**227**	P	**Pn**	**02 45 11.4**	**+0.3**
WNT	baz=237			*e*S	**Sn**	**02 45 26.2**	**+0.3**
WJS	**Zhushan** baz=235	**1.16**	**224**	*e*P	**Pn**	**02 45 11.6**	**+0.4**
WJS	baz=235			*e*S	**Sn**	**02 45 26.7**	**+0.6**
WYL	**Yuanlin Townsh** baz=246	**1.16**	**233**	*e*P	**Pn**	**02 45 12.1**	**+0.8**
WYL	baz=246			*e*S	**Sn**	**02 45 26.7**	**+0.4**
HGSD	**Ruisui** baz=186	**1.18**	**188**	*e*P	**Pn**	**02 45 10.8**	**-0.7**
EHY	**Hungye** baz=181	**1.18**	**192**	*e*P	**Pn**	**02 45 11.0**	**-0.5**
JYNG	**Yonagunijimaku**	**1.24**	**99**	P	**Pn**	**02 45 12.6**	**+0.2**
JYNG				*e*S	**Sn**	**02 45 28.7**	**+0.5**
YULB	**Yu-li** baz=182	**1.29**	**192**	*e*P	**Pn**	**02 45 10.7**	**-2.4**
YOJ	**Yonaguni jima** baz=97	**1.30**	**99**	*e*P	**Pn**	**02 45 13.3**	**+0.1**
YOJ	baz=97			*e*S	**Sn**	**02 45 30.4**	**+0.8**
YOJ	**Yonaguni jima**	**1.30**	**99**	P	**Pn**	**02 45 13.3**	**+0.1**
YOJ				*e*S	**Sn**	**02 45 29.8**	**+0.2**
TWF1	**Yuli** baz=182	**1.33**	**192**	*e*P	**Pn**	**02 45 11.2**	**-2.4**
EYUL	**Yuli** baz=183	**1.33**	**191**	*e*P	**Pn**	**02 45 13.7**	**+0.1**
ECBN	**Changbin** baz=184	**1.35**	**186**	*e*P	**Pn**	**02 45 12.7**	**-1.2**
WRL	**Guolierlin Hig** baz=245	**1.35**	**236**	*e*P	**Pn**	**02 45 13.3**	**-0.5**
WRL	baz=245			*e*S	**Sn**	**02 45 29.6**	**-1.1**
CHN5	**Tsauling** baz=218	**1.35**	**219**	*e*P	**Pn**	**02 45 14.2**	**+0.2**
CHN5	baz=218			*e*S	**Sn**	**02 45 31.9**	**+0.9**
WGK	**Gukeng** baz=235	**1.36**	**224**	*e*P	**Pn**	**02 45 14.5**	**+0.6**
WGK	baz=235			*e*S	**Sn**	**02 45 31.9**	**+0.9**
ALS	**Alishan** baz=221	**1.36**	**212**	*e*P	**Pn**	**02 45 14.7**	**+0.5**
ALS	baz=221			*e*S	**Sn**	**02 45 32.5**	**+1.1**
WDLH	**Douliu** baz=236	**1.37**	**225**	*e*P	**Pn**	**02 45 14.3**	**+0.2**
WDLH	baz=236			*e*S	**Sn**	**02 45 31.5**	**+0.2**
WTK	**Tuku** baz=228	**1.47**	**229**	*e*P	**Pn**	**02 45 15.4**	**0.0**
WTK	baz=228			*e*S	**Sn**	**02 45 33.3**	**-0.4**
FULB	**Fuli** baz=182	**1.48**	**191**	*e*P	**Pn**	**02 45 15.9**	**+0.2**
CHN2	**Minshiung** baz=233	**1.52**	**223**	*e*P	**Pn**	**02 45 16.7**	**+0.5**
CHN2	baz=233			*e*S	**Sn**	**02 45 36.0**	**+1.0**
ELDTW	**Lidau** baz=189	**1.56**	**200**	*e*P	**Pn**	**02 45 16.5**	**-0.3**
CHKT	**Chengkung** baz=175	**1.57**	**188**	*e*P	**Pn**	**02 45 17.4**	**+0.6**
CHY	**Chiayi** baz=232	**1.58**	**223**	*e*P	**Pn**	**02 45 17.1**	**+0.1**
CHY	baz=232			*e*S	**Sn**	**02 45 36.8**	**+0.4**
TPUB	**Ta-pu** baz=212	**1.62**	**213**	*e*P	**Pn**	**02 45 17.9**	**+0.4**
TPUB	baz=212			*e*S	**Sn**	**02 45 38.4**	**+1.0**
STYH	**Taoyuan** baz=216	**1.67**	**207**	*e*P	**Pn**	**02 45 19.2**	**+1.1**
STYH	baz=216			*e*S	**Sn**	**02 45 39.5**	**+1.1**
WTP	**Ta-pu** baz=212	**1.67**	**213**	*e*P	**Pn**	**02 45 19.2**	**+0.9**
WTP	baz=212			*e*S	**Sn**	**02 45 39.6**	**+0.9**
STYT	**Tauyuan** baz=205	**1.68**	**207**	*e*P	**Pn**	**02 45 19.2**	**+0.9**
EDH	**Donghe** baz=176	**1.71**	**189**	*e*P	**Pn**	**02 45 17.6**	**-1.0**
TWK	**Hsinying** baz=214	**1.72**	**216**	*e*P	**Pn**	**02 45 19.5**	**+0.6**
CHN1	**Nanshi** baz=212	**1.77**	**214**	*e*P	**Pn**	**02 45 19.9**	**+0.3**
CHN1	baz=212			*e*S	**Sn**	**02 45 42.3**	**+1.4**
ICHU	**Yijhu** baz=232	**1.77**	**223**	*e*P	**Pn**	**02 45 19.8**	**+0.2**
ICHU	baz=232			*e*S	**Sn**	**02 45 41.0**	**0.0**
LONT	**Longtian** baz=181	**1.80**	**194**	*e*P	**Pn**	**02 45 21.0**	**+1.1**
SGST	**Jiashian** baz=221	**1.83**	**211**	*e*P	**Pn**	**02 45 21.4**	**+1.1**
SLGT	**Liugui** baz=206	**1.88**	**208**	*e*P	**Pn**	**02 45 21.8**	**+0.8**
TWG	**Pinlang** baz=181	**1.90**	**195**	*e*P	**Pn**	**02 45 22.2**	**+1.0**
TWGBT	**Beinan** baz=181	**1.90**	**195**	*e*P	**Pn**	**02 45 22.0**	**+0.7**
IRIF	**Iriomote-Funau**	**1.97**	**99**	P	**Pn**	**02 45 21.9**	**-0.3**
IRIF				*e*S	**Sn**	**02 45 45.1**	**-0.7**
LDUT	**Ludao** baz=175	**1.98**	**183**	*e*P	**Pn**	**02 45 21.6**	**-0.8**
HATJ	**Hateruma jima**	**2.10**	**106**	P	**Pn**	**02 45 24.9**	**+0.9**
HATJ				S	**Sn**	**02 45 50.0**	**+1.0**
SSD	**Sandimen** baz=214	**2.10**	**205**	*e*P	**Pn**	**02 45 25.2**	**+1.2**
MATB	**Ma-tsu** baz=315	**2.10**	**315**	*e*P	**Pn**	**02 45 23.2**	**-0.9**
MSUT	**Lienchiang** baz=316	**2.13**	**315**	*e*P	**Pn**	**02 45 23.7**	**-0.8**
TSMG	**Majia** baz=214	**2.14**	**204**	*e*P	**Pn**	**02 45 25.5**	**+1.0**
ECL	**Taimali** baz=183	**2.14**	**196**	*e*P	**Pn**	**02 45 25.6**	**+1.0**
PNG	**Penghu** baz=238	**2.16**	**240**	*e*P	**Pn**	**02 45 23.7**	**-1.2**
PHUB	**P'eng-hu** baz=237	**2.18**	**239**	*e*P	**Pn**	**02 45 23.7**	**-1.3**
PHUB	baz=237			*e*S	**Sn**	**02 45 47.6**	**-3.3**
MASBT	**Mashibuluo** baz=214	**2.23**	**204**	*e*P	**Pn**	**02 45 27.0**	**+1.3**
JKRS	**Kuro-shima**	**2.24**	**100**	P	**Pn**	**02 45 26.2**	**+0.3**
JKRS				S	**Sn**	**02 45 53.3**	**+0.9**
PTMZ	**Houxiangcun** baz=280	**2.28**	**280**	*e*P	**Pn**	**02 45 25.7**	**-0.8**
JIJ	**Ishigaki jima**	**2.34**	**97**	P	**Pn**	**02 45 27.3**	**+0.1**
JIJ				*e*S	**Sn**	**02 45 53.5**	**-1.3**
EAST	**Anshuo** baz=184	**2.37**	**197**	*e*P	**Pn**	**02 45 29.0**	**+1.2**
SCZT	**Fangliau** baz=211	**2.45**	**202**	*e*P	**Pn**	**02 45 30.0**	**+1.2**
VCHM	**Qimei** baz=221	**2.46**	**234**	*e*P	**Pn**	**02 45 27.8**	**-1.1**
JISG	**Ishigakijimahi**	**2.47**	**91**	P	**Pn**	**02 45 28.7**	**-0.3**
JISG				*e*S	**Sn**	**02 45 57.5**	**-0.5**
LYJJ	**Jianjiangzhen** baz=319	**2.51**	**319**	*e*P	**Pn**	**02 45 29.1**	**-0.5**
SLIU	**Shizi** baz=194	**2.54**	**197**	*e*P	**Pn**	**02 45 31.3**	**+1.2**
XPSS	**Dashiqiu** baz=332	**2.59**	**331**	*e*P	**Pn**	**02 45 29.8**	**-0.9**
LAY	**Lan-yu** baz=173	**2.61**	**181**	*e*P	**Pn**	**02 45 29.5**	**-1.6**
MHZQ	**Yeshan** baz=302	**2.73**	**302**	*e*P	**Pn**	**02 45 32.5**	**-0.1**
JTJ	**Tarama**	**2.82**	**90**	P	**Pn**	**02 45 33.2**	**-0.7**
JTJ				*e*S	**Sn**	**02 46 08.0**	**+1.3**
KNM	**Kinmen** baz=265	**2.89**	**266**	*e*P	**Pn**	**02 45 35.5**	**+0.6**
KNMB	**Chin-men Tao** baz=266	**2.93**	**267**	*e*P	**Pn**	**02 45 34.2**	**-1.1**
AXDP	**Jialang** baz=274	**3.31**	**275**	*e*P	**Pn**	**02 45 40.0**	**-0.5**
ZPLA	**Ao Xicun** baz=258	**3.59**	**259**	*e*P	**Pn**	**02 45 43.3**	**-1.0**

IDC 17 02:46:22.3±1.5**, 31°.58N×104°.48E, h0^{km}, mb3.3**/3**, mb1 3.5**/3**, mb1mx3.3**/48**, mbtmp3.3**/3**, MS3.0**/1**, Ms1 3.0**/1**, ms1mx2.4**/36**, Error ellipse: s-maj=220.0km s-min=26.3km az=56.0, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	**Songino Array** comp=Z,48nm,19.8s,baz=196,slow=38	**16.30**	**5**	LR	LR	02 56 35.9	
MKAR	**Makanchi Array** 0.2nm,0.7s,baz=125,slow=9.4,SNR=2.2	**22.84**	**318**	P	P	02 51 26.9	-0.1
ZALV	**Zalesovo Beam** 0.8nm,0.5s,baz=141,slow=9.3,SNR=3.6	**26.44**	**333**	P	P	02 52 00.7	+0.1
WRA	**Warramunga Arr** 0.4nm,0.8s,baz=338,slow=7.7,SNR=3.6	**58.69**	**147**	P	P	02 56 21.7	-0.1

KMA 17 02:49:19.9±3.6**, 35°.84N×130°.45E, h2^{km}±4^{km}, Error ellipse: s-maj=59.9km s-min=4.6km az=280.0, Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YODB	**Yeongdeok** SNR=10	**1.09**	**310**	P	Pg	02 49 39.6	-1.2
KSULJ	**Uljin** SNR=14	**1.21**	**316**	P	Pg	02 49 43.0	0.0
KSADO	**Andong** SNR=7.9	**1.34**	**296**	P	Pb	02 49 45.7	-0.1
ANMD	**Anmado** SNR=7.3	**3.64**	**264**	P	Pn	02 50 17.0	-0.2

KRSC 17 02:55:27.5±1.4**, 48°.24N×156°.27E, h40^{km}±30^{km}, ML4.3, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.44**	**358**	*e*P	Pn	02 56 06.9	+2.1
SKR				*e*S	Sn	02 56 36.9	+3.5
PAU	**Pauzhetka**	**3.25**	**6**	*e*P	Pn	02 56 19.1	+3.3
PAU				*e*S	Sn	02 56 58.4	+5.2
KDTR	**Khodutka, Kamc**	**3.75**	**17**	*e*P	Pn	02 56 26.9	+4.1
KDTR				*e*S	Sn	02 57 12.5	+6.8
RUS	**Russkaya**	**4.43**	**18**	*e*P	Pn	02 56 36.0	+3.9
RUS				*e*S	Sn	02 57 26.8	+4.4
GRL	**Gorelyy**	**4.46**	**14**	*e*P	Pn	02 56 37.6	+4.9
AVH	**Avacha**	**5.26**	**16**	*e*P	Pn	02 56 48.5	+4.9

KMA 17 02:57:30.8±0.1**, 37°.61N×129°.06E, h5^{km}, Error ellipse: s-maj=2.5km s-min=0.8km az=237.0, South Korea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKEB	**Okgye-meyeon** SNR=19	**0.06**	**277**	P	Pg	02 57 32.1	-0.2
KSDGY	**Daegwallycong** SNR=12	**0.31**	**284**	P	Pg	02 57 35.8	-1.1
KSJMJ	**Jumunjin** SNR=17	**0.36**	**319**	P	Pg	02 57 37.9	+0.1
KSGWL	**Sabuk** SNR=8.9	**0.45**	**205**	P	Pg	02 57 37.7	-1.6
KSTBA	**Taebaek** SNR=6.3	**0.50**	**190**	P	Pg	02 57 39.1	-1.3
KSULJ	**Uljin** SNR=15	**0.95**	**163**	P	Pg	02 57 48.0	-1.0
KSCHC	**Chuncheon** SNR=12	**1.00**	**280**	P	Pg	02 57 50.0	0.0
BUYB	**Buyeo** SNR=36	**2.17**	**233**	P	Pn	02 57 41.6	-26

TIR **17** *02:59:57.2, 39°.37N×24°.94E, h12^{km}±2^{km}, Md4.5, Ml4.5*
DDA **17** *03:00:08.0, 39°.52N×24°.10E, h12^{km}±3^{km}, MW4.2*
IDC **17** *03:00:09.7±0.7, 39°.48N×24°.04E, h0^{km}, mb4.0/15, mb1 4.0/24, mb1mx3.9/55, mbtmp4.0/24, ML3.5/9, MS3.4/18, Ms1 3.4/18, ms1mx3.2/49, Error ellipse: s-maj=14.3km s-min=10.9km az=138.0*
ATH **17** *03:00:09.9, 39°.51N×24°.07E, h43^{km}±3^{km}, ML3.9/17, Error ellipse: s-maj=3.8km s-min=0.9km az=328.0*
ISK **17** *03:00:09.9, 39°.54N×24°.13E, h16^{km}, ML4.1/24*
SOF **17** *03:00:09.5, 39°.49N×24°.19E, h20^{km}, MD4.0*
PDG **17** *03:00:10.4±0.5, 39°.51N×24°.11E, h22^{km}±1^{km}, ML3.5/11, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*
NEIC **17** *03:00:10.8±1.8, 39°.53N±0°.02×24°.11E±0°.02, h6^{km}±2^{km}, Error ellipse: s-maj=2.9km s-min=2.3km az=133.0*
THE **17** *03:00:10.7, 39°.52N×24°.10E, h12^{km}, ML3.9/16, Error ellipse: s-maj=0.7km s-min=0.4km az=293.0*
NEIC **17** *03:00:10.9, 39°.53N×24°.10E, h13^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-3.36; $M_{\theta\theta}$3.98; $M_{\phi\phi}$-0.62; $M_{r\theta}$-1.36; $M_{\theta\phi}$-0.21; $M_{\phi r}$0.23; Fault plane solution: $M_0$3.96000×10^{15} NP1:ϕ_s95.60000°, δ55.28000°, λ-86.27000°. NP2:ϕ_s269.07000°, δ34.90000°, λ-95.36000°. Principal axes: T 4.2373, Plg10.0000°, Azm183.0000°; N -0.6180, Plg3.0000°, Azm273.0000°; P -3.6193, Plg79.0000°, Azm20.0000°;*

BEO 17 03:00:11.3±0.9, 39°.59N×24°.10E, h0^{km}, ML3.9/17

ISC 17 03:00:10.6±1.0, **39°.51N**±0°.02×**24°.12E**±0°.01, **h8**^{km}±7^{km}, **n361**, σ1^{s}**19**/422, **mb4.0**/19, **MS3.3**/12, **29C-16D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALNA	Alonissos	0.41	209	P	Pg	03 00 18.4	-0.2
ALNA				AML	AML	03 00 26.7	
	comp=N,52898μm,0.6s						
ALNA				AML	AML	03 00 26.9	
	comp=E,43134μm,0.6s						
PAIG	Paliouri	0.54	321	P	Pg	03 00 21.0	0.0
PAIG				S	Sg	03 00 28.9	+0.9
	comp=E,19μm,0.3s						
PAIG	Paliouri	0.54	321	P	Pg	03 00 21.0	0.0
PAIG				S	Sg	03 00 28.9	+0.9
PAIG				AML	AML	03 00 30.7	
	comp=N,47060μm,0.4s						
PAIG				AML	AML	03 00 31.5	
	comp=E,29932μm,0.3s						
PAIG	Paliouri	0.54	321		Pg	03 00 21.0	0.0
PAIG					Sg	03 00 28.9	+0.9
EFSA	Agios Efstrati	0.67	87	P	Pb	03 00 24.8	+0.2
EFSA				AML	AML	03 00 37.3	
	comp=E,19517μm,0.5s						
EFSA				AML	AML	03 00 37.9	
	comp=N,34215μm,0.7s						
SKY	Skiros Island	0.72	152	P	Pg	03 00 24.1	-0.2
SKY				S	Sb	03 00 35.1	-0.2
	comp=N,22μm,0.2s						
SKY	Skiros Island	0.72	152	P	Pg	03 00 24.2	-0.2
SKY				S	Sb	03 00 34.5	-0.8
SKY				AML	AML	03 00 36.0	
	comp=E,37347μm,0.2s						
SKY				AML	AML	03 00 37.1	
	comp=N,50424μm,0.2s						
NEO	Neokhori	0.72	254	P	Pg	03 00 24.4	-0.2
NEO				S	Sb	03 00 35.1	-0.5
	comp=N,18μm,0.3s						
NEO	Neokhori	0.72	254	P	Pg	03 00 24.1	-0.4
NEO				S	Sb	03 00 34.7	-0.9
NEO				AML	AML	03 00 36.5	
	comp=N,43337μm,0.3s						
NEO				AML	AML	03 00 36.7	
	comp=E,29261μm,0.3s						
NEO	Neokhori	0.72	254		Pg	03 00 24.4	-0.2
NEO					Sb	03 00 35.1	-0.5
XOR	Xorichti	0.73	259	P	Pg	03 00 24.3	-0.4
XOR				S	Sg	03 00 34.6	+0.3
	comp=E,14μm,0.5s						
XOR	Xorichti	0.73	259	P	Pg	03 00 24.8	0.0
XOR				S	Sg	03 00 34.4	+0.1
XOR				AML	AML	03 00 36.7	
	comp=N,31474μm,0.4s						
XOR				AML	AML	03 00 36.9	
	comp=E,22859μm,0.6s						
XOR	Xorichti	0.73	259		Pg	03 00 24.3	-0.4
XOR					Sg	03 00 34.6	+0.3
OUR	Ouranopolis	0.83	353	P	Pg	03 00 26.0	-0.5
OUR				S	Sb	03 00 37.9	-0.7
	comp=E,7μm,0.4s						
OUR	Ouranopolis	0.83	353	P	Pg	03 00 26.2	-0.3
OUR				AML	AML	03 00 39.9	
	comp=E,11982μm,0.4s						
OUR				AML	AML	03 00 40.1	
	comp=N,15107μm,0.5s						
OUR	Ouranopolis	0.83	353	PG	Pg	03 00 26.2	-0.3
OUR				SG	Sg	03 00 37.6	+0.3
OUR	Ouranopolis	0.83	353		Pg	03 00 26.0	-0.5
OUR					Sb	03 00 37.9	-0.7
KYMI	Kymi, Euboea I	0.88	181	P	Pg	03 00 27.0	-0.5
KYMI				S	Sb	03 00 40.5	+0.5
	comp=N,7μm,0.4s						
KYMI	Kymi, Euboea I	0.88	181	P	Pg	03 00 26.9	-0.5
KYMI				AML	AML	03 00 42.1	
	comp=E,14049μm,0.4s						
KYMI				AML	AML	03 00 44.0	
	comp=N,13884μm,0.4s						
KYMI	Kymi, Euboea I	0.88	181		Pg	03 00 27.0	-0.5
KYMI					Sb	03 00 40.5	+0.5
LIA	Limnos Island	0.91	64	P	Pg	03 00 27.7	-0.3
LIA				S	Sb	03 00 41.0	+0.2
	comp=N,7μm,0.6s						
LIA	Limnos Island	0.91	64	P	Pg	03 00 28.1	+0.1
LIA				S	Sb	03 00 40.8	0.0
LIA				AML	AML	03 00 42.3	
	comp=E,15147μm,0.6s						
LIA				AML	AML	03 00 42.9	
	comp=N,13351μm,0.7s						
LIA	Limnos Island	0.91	64		Pg	03 00 27.7	-0.3
LIA					Sb	03 00 41.0	+0.2
PLG	Polygyros	1.00	329	P	Pg	03 00 29.0	-0.9
PLG				S	Sg	03 00 42.1	-0.9
	comp=N,4μm,0.6s						
PLG	Polygyros	1.00	329	P	Pg	03 00 28.7	-1.2
PLG				S	Sg	03 00 41.4	-1.6
PLG				AML	AML	03 00 44.4	
	comp=N,5679μm,1.0s						
PLG				AML	AML	03 00 44.9	
	comp=E,6651μm,0.4s						
PLG	Polygyros	1.00	329		Pg	03 00 29.0	-0.9
PLG					Sg	03 00 42.1	-0.9
ATAL	Atalanti	1.18	227	P	Pg	03 00 32.0	-1.3
ATAL				S	Sg	03 00 47.6	-1.1
	comp=E,9μm,0.7s						
ATAL	Atalanti	1.18	227	P	Pg	03 00 32.1	-1.2
ATAL				AML	AML	03 00 52.4	
	comp=N,19572μm,0.7s						
ATAL				AML	AML	03 00 52.5	
	comp=E,15002μm,0.7s						
THAS	Thassos island	1.19	23	P	Pg	03 00 32.0	-1.4
THAS				S	Sg	03 00 48.5	-0.3
	comp=E,2μm,0.3s						
THAS	Thassos island	1.19	23	P	Pg	03 00 31.7	-1.7
THAS				AML	AML	03 00 51.5	
	comp=E,6013μm,0.3s						
THAS				AML	AML	03 00 53.1	
	comp=N,4160μm,0.6s						
HORT	Hortiatis	1.34	324	P	Pn	03 00 34.6	-1.1
HORT				S	Sb	03 00 52.2	-1.2
	comp=N,3μm,0.4s						
HORT	Hortiatis	1.34	324	PN	Pn	03 00 34.3	-1.4
HORT				SN	Sb	03 00 52.8	-0.6
LRSO	Larissa Observ	1.34	277	P	Pn	03 00 34.0	-1.7
SIGR	SIGRI	1.38	102	P	Pn	03 00 34.1	-2.0
SIGR				S	Sb	03 00 53.8	-0.6
	comp=N,3μm,0.8s						
SIGR	SIGRI	1.38	102	P	Pn	03 00 35.7	-0.5
SIGR				AML	AML	03 01 03.4	
	comp=N,6584μm,0.7s						
SIGR				AML	AML	03 01 04.1	
	comp=E,6877μm,0.7s						
SIGR	SIGRI	1.38	102	PN	Pn	03 00 35.4	-0.7
THE	Thessaloniki	1.43	322	P	Pn	03 00 35.5	-1.3
THE				S	Sb	03 00 55.5	-0.3
THE	Thessaloniki	1.43	322	P	Pn	03 00 35.8	-1.1
SOH	Sokhos	1.43	336	P	Pn	03 00 35.9	-1.1
SOH	Sokhos	1.43	336	P	Pn	03 00 36.0	-1.1
SOH				AML	AML	03 01 00.7	
	comp=N,6626μm,0.4s						
SOH				AML	AML	03 01 01.5	
	comp=E,4491μm,0.5s						
DION	Dionisos Attik	1.44	186	P	Pn	03 00 36.0	-1.0
DION	Dionisos Attik	1.44	186	P	Pn	03 00 36.0	-1.0
SMTH	Samothraki Isl	1.45	48	P	Pn	03 00 35.5	-1.6
SMTH	Samothraki Isl	1.45	48	P	Pn	03 00 35.2	-1.9
VIL2	Platees	1.46	207	P	Pn	03 00 36.3	-1.0
AGG	Agios Georgios	1.47	251	P	Pn	03 00 35.6	-1.9
AGG				S	Sn	03 00 55.7	-1.3
	comp=E,4μm,0.6s						
AGG	Agios Georgios	1.47	251	P	Pn	03 00 36.0	-1.5
AGG				S	Sn	03 00 54.8	-2.2
AGG				AML	AML	03 01 01.3	
	comp=E,2238μm,1.0s						
AGG				AML	AML	03 01 06.0	
	comp=N,9276μm,0.7s						
AGG	Agios Georgios	1.47	251	*i* P	Pn	03 00 35.9	-1.5
AGG				*i* S	Sn	03 00 56.3	-0.7
AGG	Agios Georgios	1.47	251	PN	Pn	03 00 36.0	-1.5
AGG	Agios Georgios	1.47	251		Pn	03 00 36.0	-1.5
AGG				Sg	Sg	03 00 58.6	+0.6
PTL	Penteli	1.48	188	P	Pn	03 00 36.4	-1.2
PTL	Penteli	1.48	188	P	Pn	03 00 36.3	-1.2
VILL	Villia	1.49	205	P	Pn	03 00 36.7	-1.0
VILL				S	Sn	03 00 55.2	-2.1
KARY	Karystos	1.50	170	P	Pn	03 00 37.0	-0.8
KARY	Karystos	1.50	170	P	Pn	03 00 36.9	-0.8
KAVA	Kavala	1.51	11	P	Pn	03 00 36.1	-1.9
BOZC	Bozcaada	1.53	77	*i* P	Pn	03 00 37.6	-0.6
BOZC				*i* S	Sn	03 00 55.7	-2.6
BOZC	Bozcaada	1.53	77	PN	Pn	03 00 37.4	-0.8
GADA	Gvkgeada	1.53	63	P	Pn	03 00 37.1	-1.2
GADA	Gvkgeada	1.53	63	PN	Pn	03 00 37.0	-1.2
GOKA	anakkale-Gk	1.53	63	*i* P	Pn	03 00 37.2	-1.1
GOKA				*i* S	Sn	03 00 57.2	-1.2
KOCA	Canakkale, Ayv	1.56	90	*i* P	Pn	03 00 38.5	-0.2
KOCA				*i* S	Sn	03 00 59.2	+0.1
ATHU	Athens Univers	1.56	190	P	Pn	03 00 37.6	-1.2
ATHU	Athens Univers	1.56	190	P	Pn	03 00 37.6	-1.2
ATHU				AML	AML	03 01 10.4	
	comp=N,2564μm,0.7s						
ATHU				AML	AML	03 01 13.2	
	comp=E,2205μm,0.9s						
ATH	Athens Observa	1.57	192	P	Pn	03 00 37.7	-1.0
ATH				S	Sn	03 00 58.8	-0.5
	comp=E,3μm,0.7s						
ATH	Athens Observa	1.57	192	P	Pn	03 00 37.8	-1.0
MAKR	Makrakomi, Fth	1.62	253	P	Pn	03 00 38.6	-1.0
MAKR	Makrakomi, Fth	1.62	253	P	Pn	03 00 38.6	-1.0
THL	Klokotos Trika	1.63	273	P	Pn	03 00 37.9	-1.7
THL	Klokotos Trika	1.63	273	P	Pn	03 00 38.1	-1.5
DLFA	Delphi	1.63	231	P	Pn	03 00 38.3	-1.4
SRS	Serrai	1.65	346	P	Pn	03 00 38.6	-1.4
SRS	Serrai	1.65	346	P	Pn	03 00 38.6	-1.4
ECEA	Canakkale, Ece	1.67	71	*i* P	Pg	03 00 42.1	-0.5
ECEA				*i* S	Sg	03 01 04.1	-0.1
VLY	Voula,Athens	1.68	189	P	Pn	03 00 39.1	-1.2
VLY				S	Sn	03 01 02.1	+0.1
VLY	Voula,Athens	1.68	189	P	Pn	03 00 39.3	-0.9
PRK	Paraskevi	1.69	98	P	Pn	03 00 40.9	+0.5
PRK	Paraskevi	1.69	98	P	Pn	03 00 41.0	+0.5
EZN	Ezine	1.73	79	P	Pn	03 00 40.5	-0.5
EZN				S	Sb	03 01 04.2	-0.3
	comp=E,2μm,0.6s						
EZN	Ezine	1.73	79	PN	Pn	03 00 39.9	-1.1
LTK	Loutraki	1.74	212	P	Pn	03 00 39.9	-1.2
LTK	Loutraki	1.74	212	P	Pn	03 00 39.9	-1.2
LTK				AML	AML	03 01 12.6	
	comp=E,7223μm,0.8s						
LTK				AML	AML	03 01 16.7	
	comp=N,7458μm,0.5s						
NVR	Nevrokopi	1.85	354	P	Pn	03 00 41.5	-1.1
NVR	Nevrokopi	1.85	354	P	Pn	03 00 41.6	-1.1
THAL	Thalero	1.86	218	P	Pn	03 00 41.8	-1.0
THAL	Thalero	1.86	218	P	Pn	03 00 42.0	-0.8
CHOS	Chios island	1.88	126	P	Pn	03 00 42.9	-0.2
CHOS	Chios island	1.88	126	PN	Pn	03 00 42.7	-0.4
EVR	Evrytania	1.89	252	P	Pn	03 00 42.1	-1.2
EVR	Evrytania	1.89	252	P	Pn	03 00 42.3	-1.0
KNT	Kendrikon	1.90	331	P	Pn	03 00 42.4	-0.9
KNT	Kendrikon	1.90	331	PN	Pn	03 00 41.7	-1.6
ANX	Ano Chora	1.94	243	P	Pn	03 00 43.1	-0.9
GRG	Griva	1.95	318	PN	Pn	03 00 43.1	-1.0
RDO	Rodhopi	1.96	33	PN	Pn	03 00 42.7	-1.4
CAVK	Edirne/Enez-Ca	1.96	52	*i* P	Pn	03 00 43.9	-0.3
CAVK				*i* S	Sn	03 01 07.9	-1.1
TRIZ	Trizonia	1.96	235	P	Pn	03 00 43.1	-1.1
TRIZ	Trizonia	1.96	235	P	Pn	03 00 43.2	-1.1
KZN	Kozani	1.97	294	P	Pn	03 00 43.2	-1.2
ENEZ	Enez	1.98	51	P	Pn	03 00 43.4	-1.0
ENEZ	Enez	1.98	51	PN	Pn	03 00 43.3	-1.1
AYVA	Ayvalik	2.00	95	*i* P	Pn	03 00 44.9	+0.2
AYVA				*i* S	Sb	03 01 13.3	+1.0
ALIK	Aliki, Aigiali	2.00	232	P	Pn	03 00 44.2	-0.6
GELI	Tayfur-Gelibol	2.01	63	PN	Pn	03 00 43.9	-1.0
ALN	Alexandroupoli	2.02	46	P	Pn	03 00 43.6	-1.4
ALN	Alexandroupoli	2.02	46	*i* P	Pn	03 00 44.0	-1.0
ALN	Alexandroupoli	2.02	46	PN	Pn	03 00 43.6	-1.4
ALN	Alexandroupoli	2.02	46	Pn	Pn	03 00 43.5	-1.4
ALN				Sn	Sn	03 01 11.0	+0.6
EFP	Efpalio	2.04	239	P	Pn	03 00 44.3	-0.9
EPID	Epidavros	2.05	203	P	Pn	03 00 44.3	-1.1
MMB	Musomiste	2.10	352	P	Pn	03 00 44.4	-1.7
GUR	Goura	2.10	222	P	Pn	03 00 45.1	-1.1
LAKA	Lakka	2.10	233	P	Pn	03 00 44.9	-1.2
VAY	Valandovo	2.16	327	*e*Pn	Pn	03 00 46.7	-0.2
VAY				*e*Sn	Sn	03 01 14.2	+0.3
VAY	Valandovo	2.16	327	*i* Pn	Pn	03 00 46.8	-0.2
ERIK	Erikli-Kesan	2.17	57	PN	Pn	03 00 45.5	-1.5
KPRO	Kipourio	2.17	283	P	Pn	03 00 46.3	-0.9
LPK	Lapseki	2.20	66	PN	Pn	03 00 46.7	-0.8
DKL	Dikili	2.21	101	PN	Pn	03 00 47.0	-0.5
RZN	Rozhen	2.22	12	P	Pn	03 00 47.2	-0.7
URLA	Izmir	2.25	120	*i* P	Pn	03 00 47.4	-0.8
URLA				*i* S	Sb	03 01 18.9	-0.6
URLA	Izmir	2.25	120	PN	Pn	03 00 47.7	-0.4
ZEYE	Izmir, Urla-Ze	2.25	124	*i* P	Pn	03 00 47.7	-0.5
KRND	KRANIDI	2.26	200	P	Pn	03 00 47.1	-1.2
BUHA	Balikesir, Bur	2.29	89	*i* P	Pn	03 00 48.7	+0.1
BUHA				*i* S	Sg	03 01 22.6	-1.5
KDZ	Kurdzhali	2.35	24	P	Pn	03 00 48.0	-1.6
KESN	Edirne-Kesan	2.36	55	*i* P	Pb	03 00 52.7	-0.9
ZEDA	zmir-Bergama	2.36	102	*i* P	Pn	03 00 49.6	-0.1
DRO	Drossia	2.44	231	P	Pn	03 00 50.0	-0.9
FNA	Florina	2.46	302	P	Pn	03 00 50.4	-0.6
FNA	Florina	2.46	302	*i* P	Pn	03 00 50.2	-0.8
FNA	Florina	2.46	302	PN	Pn	03 00 50.5	-0.6
FNA	Florina	2.46	302	Pn	Pn	03 00 50.5	-0.6
KKB	Krupnik	2.48	342	P	Pn	03 00 50.4	-1.0
UKOP	Uzunkopru-Edir	2.51	49	PN	Pn	03 00 50.9	-0.8
BLCB	Balcova	2.54	115	PN	Pn	03 00 51.9	-0.2
KRBG	Karabiga-Canak	2.60	69	PN	Pn	03 00 52.3	-0.6
DGB	zmir	2.60	123	*i* P	Pn	03 00 52.5	-0.5
DGB				*i* S	Sg	03 01 32.1	-2.2
RKY	Sarkoy-Tekirda	2.62	62	PN	Pn	03 00 52.6	-0.7
SART	Tekirdag	2.62	62	*i* P	Pb	03 00 58.6	+0.7
PLD	Plovdiv	2.63	9	PN	Pn	03 00 52.4	-0.9
STIP	Stip	2.63	327	*i* Pn	Pn	03 00 52.2	-1.1
BALY	Balya	2.71	84	*i* P	Pn	03 00 53.6	-1.0
MAR3	Marsite Statio	2.73	62	PN	Pn	03 00 54.0	-0.7
KNL	Balıkesir	2.73	73	*i* P	Pb	03 00 59.8	+0.2
MAR4	Marsite Statio	2.75	61	PN	Pn	03 00 54.1	-1.0
LSK	Leskovik	2.79	284	P	Pn	03 00 57.5	+1.9
	baz=285						
LSK				S	Sg	03 01 47.0	+7.0
	baz=285						
LSK				AMP			
	comp=N,3.6nm,1.4s,baz=285						
KBN	Korca	2.79	295		Pn	03 00 55.9	+0.3
KBN	Korca	2.79	295	P	Pb	03 00 58.9	-1.8
	baz=293						
KBN				S	Sg	03 01 45.1	+5.0
	baz=293						
KBN				AMP			
	comp=N,2.9nm,1.6s,baz=293						
LKD2	Lefkada island	2.79	256	P	Pn	03 00 57.1	+1.5
STEP	BALIKESIR_Sava	2.79	92	*i* P	Pn	03 00 54.4	-1.2
MRMT	Marmara Adasi	2.88	67	PN	Pn	03 00 56.3	-0.6
ITM	Ithomi	2.90	217	P	Pn	03 00 57.8	+0.7
ITM	Ithomi	2.90	217	PN	Pn	03 00 57.3	+0.2
ITM	Ithomi	2.90	217	Pn	Pn	03 00 57.7	+0.7
BALB	Balikesir	2.91	86	PN	Pn	03 00 56.8	-0.4
BALB	Balikesir	2.91	86		Pn	03 00 57.9	+0.7
IGT	Igoumenitsa	2.93	272	P	Pn	03 00 59.4	+1.9
AKHS	Akhisar	2.94	101	*i* P	Pn	03 00 58.4	+0.7
EDC	Edincik	3.00	73	PN	Pn	03 00 58.1	-0.3
OHR	Ohrid	3.00	303	*e*Pn	Pn	03 00 58.5	0.0
OHR	Ohrid	3.00	303	*i* Pn	Pn	03 00 59.1	+0.5
GCAM	G?zelcaml?	3.04	126	*i* P	Pn	03 00 59.0	+0.1
GCAM				*i* S	Sg	03 01 45.8	-2.3
EDRB	Edirne	3.07	40	PN	Pn	03 00 58.1	-1.3
PSDA	Pessada-Kefalo	3.10	244	P	Pn	03 01 00.3	+0.5
VTS	Vitosha	3.17	348	⇑P	Pn	03 01 00.7	-0.3
VTS	Vitosha	3.17	348	*e*Pn	Pn	03 01 00.8	-0.2
VTS				*e*Sn	Sn	03 01 38.6	-0.6
VTS	Vitosha	3.17	348	P	Pn	03 01 00.4	-0.6
VTS	Vitosha	3.17	348	Pn	Pn	03 01 00.5	-0.5
SKO	Skopje	3.19	321	*i* Pn	Pn	03 01 01.8	+0.7
DDIM	Aydin, Didim	3.19	129	*i* P	Pn	03 00 56.4	-4.8
SRN	Sarande	3.20	278	P	Pn	03 01 01.0	-0.2
	baz=280						
SRN				S	Sn	03 01 40.6	+1.1
	baz=280						
KIRK	Kırklareli	3.20	44	*i* P	Pn	03 00 59.6	-1.7
BOSS	Bosilegrad	3.23	338	*e*Pn	Pn	03 01 02.2	+0.6
THR5	Thira Island,	3.24	162	P	Pn	03 01 01.4	-0.3
THR6	Thira Island,	3.31	162	P	Pn	03 01 01.2	-1.5
KCTX	Karacabey (Bur	3.34	76	PN	Pn	03 01 02.9	-0.3
DURS	Dursunbey	3.37	87	*i* P	Pn	03 01 03.9	+0.3
PRVS	Prvonek	3.37	333	*e*Pn	Pn	03 01 03.3	-0.3
ARMN	Kirklareli, Me	3.44	46	*i* P	Pn	03 01 03.1	-1.4
AYDN	Tasoluk	3.48	121	*i* P	Pn	03 01 05.7	+0.6
VIZE	Kirklareli, Vi	3.51	53	*i* P	Pn	03 01 04.0	-1.4
PHP	Peshkopia	3.54	309	P	Pn	03 01 06.2	+0.2
	baz=306						
PHP				S	Sg	03 02 01.9	-2.5
	baz=306						
PHP				AMP			
	comp=N,1.1nm,1.4s,baz=306						
SLVT	Silivri	3.56	60	PN	Pn	03 01 05.9	-0.3
BDRM	Kayabasi	3.58	132	*i* P	Pn	03 01 06.1	-0.3
MANT	Manisa	3.60	105	*i* P	Pn	03 01 07.3	+0.4
VLO	Vlora	3.68	287	Pn	Pn	03 01 08.6	+0.8
TIR	Tirane	3.73	301	⇑P	Pn	03 01 09.3	+0.8
TIR	Tirane	3.73	301	*e*Pn	Pn	03 01 08.8	+0.3
TIR	Tirane	3.73	301		Pn	03 01 08.7	+0.2
TIR	Tirane	3.73	301	P	Pb	03 01 13.0	-3.7
	baz=299						
TIR				S	Sg	03 02 13.2	+2.8
	baz=299						
BARS	Barje	3.73	333	*e*Pn	Pn	03 01 07.9	-0.6
BARS	Barje	3.73	333	*e*Pn	Pg	03 01 22.8	+0.7
BARS				*e*Sn	Sn	03 01 51.5	-1.2
CTYL	Yalikoy Yolu	3.73	57	PN	Pn	03 01 08.4	-0.1
CTKS	Kestanelik-??a	3.77	61	PN	Pn	03 01 09.2	+0.2
PLVB	Pleven	3.89	5	⇑P	Pn	03 01 10.6	0.0
USAK	Uak-Merkez	3.89	100	*i* P	Pn	03 01 11.8	+1.0
ULDT	Uludag	3.91	79	*i* P	Pn	03 01 11.8	+0.6
ZAPS	Zavoj	3.92	344	*e*Pn	Pn	03 01 12.2	+1.0
SZH	Strazhica	3.99	19	P	Pn	03 01 12.0	-0.1
MULA	Mugla, Merkez-	4.00	123	*i* P	Pn	03 01 12.8	+0.6
BCI	Bajram Curri	4.19	314	P	Pn	03 01 14.9	0.0
	baz=311						
BCI				S	Sn	03 02 05.8	+1.8
	baz=311						
TURN	Turunc	4.25	129	*i* P	Pn	03 01 04.0	-12
IDI	Anoyia	4.26	171	Pn	Pn	03 01 15.3	-0.6
	comp=N,6.2nm,0.3s,baz=313,slow=2.7,SNR=33						
TAVA	DENIZLI_Tavas	4.28	117	*i* P	Pn	03 01 17.2	+1.1
SELS	Selova	4.34	330	*e*Pn	Pn	03 01 16.1	-0.8
PASA	Karahalli, USA	4.34	104	*i* P	Pn	03 01 17.7	+0.7
SCTE	Santa Cesarea	4.39	279	Pn	Pn	03 01 17.9	+0.3
PVY	Plav	4.40	316	⇓*i*Pn	Pn	03 01 18.0	+0.1
PVY				*i* Sn	Sn	03 02 07.0	-2.4
RAZG	Razgrad	4.43	23	⇓P	Pn	03 01 16.7	-1.4
PRD	Provadia	4.43	33	P	Pn	03 01 17.2	-1.0
ULC	Ulcinj	4.44	305	*e*Pn	Pn	03 01 18.3	0.0
ULC				*i* Sn	Sn	03 02 07.9	-2.3
ANDZ	Kutahya, Merke	4.47	88	*i* P	Pn	03 01 17.9	-0.8
BILE	Bilecik/Merkez	4.48	80	*i* P	Pn	03 01 18.5	-0.4
BOVS	Bovan	4.50	337	⇑P	Pn	03 01 19.3	+0.2
BOVS	Bovan	4.50	337	*e*Pn	Pn	03 01 19.3	+0.2
ZAGS	Zajecar	4.52	342	*e*Pn	Pn	03 01 19.6	+0.2
DRME	Dracevica, Mon	4.60	307	*e*Pn	Pn	03 01 21.1	+0.7
DRME	Dracevica, Mon	4.60	307	⇑*i*Pn	Pn	03 01 20.3	-0.1
DRME				*i* Sn	Sn	03 02 11.6	-2.5
IVA	Berane	4.63	318	⇓*i*Pn	Pn	03 01 20.8	-0.2
IVA				*i* Sn	Sn	03 02 12.7	-2.2
COPA	Copaceanca	4.69	10	⇑P	Pn	03 01 21.7	0.0
PDG	Podgorica	4.70	310	⇑P	Pn	03 01 22.5	+0.7
PDG	Podgorica	4.70	310	*e*Pn	Pn	03 01 22.9	+1.1
PDG	Podgorica	4.70	310	*e*Pn	Pn	03 01 22.8	+1.0
PDG	Podgorica	4.70	310	Pn	Pn	03 01 22.1	+0.3
TTG	Podgorica	4.70	310	⇑*i*Pn	Pn	03 01 21.7	-0.1
TTG				*i* Sn	Sn	03 02 14.0	-2.4
CAEL	Denizli, Camel	4.73	119	*i* P	Pn	03 01 24.3	+1.9
KOME	Kolasin	4.82	315	⇑*i*Pn	Pn	03 01 23.2	-0.3
KOME				*i* Sn	Sn	03 02 16.9	-2.6
BUM	Brajici-Budva	4.84	307	⇓*i*Pn	Pn	03 01 23.6	-0.2
BUM				*i* Sn	Sn	03 02 17.6	-2.5
SJES	Sjenica	4.87	322	*e*Pn	Pn	03 01 25.1	+0.8
CEME	Cevo	4.97	309	*e*Pn	Pn	03 01 26.4	+0.8
HUMR	Humele	5.05	7	⇓P	Pn	03 01 26.0	-0.6
GRUS	Gruza	5.06	331	*e*Pn	Pn	03 01 26.8	0.0
NKME	Niksic	5.08	311	*e*Pn	Pn	03 01 27.1	0.0
NKME				*i* Sn	Sn	03 02 23.3	-2.6
NKY	Niksic	5.08	312	*e*Pn	Pn	03 01 26.8	-0.4
NKY				*i* Sn	Sn	03 02 23.3	-2.9
HCY	Herceg Novi	5.17	306	*e*Pn	Pn	03 01 27.9	-0.4
HCY	Herceg Novi	5.17	306	⇓*i*Pn	Pn	03 01 28.1	-0.2
HCY				*i* Sn	Sn	03 02 25.4	-2.7
SRE	Strehaia	5.19	353	⇑P	Pn	03 01 29.0	+0.4
DJES	Djerdap	5.29	348	*e*Pn	Pn	03 01 30.6	+0.7
ELL	Elmali	5.33	119	Pn	Pn	03 01 32.2	+1.6
ICOR	Ion Corvin	5.36	30	⇑P	Pn	03 01 30.7	-0.2
STFAR	Stefanesti-Arg	5.38	6	⇑P	Pn	03 01 31.4	+0.1
BRY	Bratogost	5.40	311	*e*Pn	Pn	03 01 32.2	+0.6
BRY	Bratogost	5.40	311	⇓*i*Pn	Pn	03 01 31.3	-0.3
TREB	Trebinje	5.41	308	*e*Pn	Pn	03 01 31.9	+0.3
TREB	Trebinje	5.41	308	*e*Pn	Pn	03 01 31.6	0.0
RUDO	Rudo	5.43	321	*e*Pn	Pn	03 01 31.4	-0.5
TRUS	Trudelj	5.46	331	*e*Pn	Pn	03 01 31.8	-0.5
HERR	Herculane	5.51	347	⇑P	Pn	03 01 32.7	-0.3
MDUB	Mudurnu	5.52	78	Pn	Pn	03 01 34.1	+0.9
DIVS	Divibare	5.52	327	*e*Pn	Pn	03 01 33.2	0.0
DIVS	Divibare	5.52	327	*e*Pn	Pn	03 01 32.0	-1.2
DIVS	Divibare	5.52	327		Pn	03 01 33.1	-0.1
MDVR	Moldovita	5.56	342	⇑P	Pn	03 01 34.1	+0.4
BBLS	Lazići	5.60	322	*e*Pn	Pn	03 01 36.8	+2.5
BBLS	Lazići	5.60	322	*e*Pn	Pn	03 01 35.2	+0.9
TIP	Timpagrande	5.72	269	⇑P	Pn	03 01 35.6	-0.3
TIP	Timpagrande	5.72	269	Pn	Pn	03 01 35.8	0.0
MATE	Matera	5.80	284	⇑P	Pn	03 01 36.2	-0.7
TIRR	Tirgusor	5.89	32	⇑P	Pn	03 01 37.5	-0.6
HARR	Harsova	5.90	27	⇑P	Pn	03 01 37.4	-0.9
LOT	Lotru	5.94	358	⇓P	Pn	03 01 38.6	-0.4
GZR	Gura Zlata	5.96	351	⇑P	Pn	03 01 39.4	+0.2
VOIR		5.96	6	⇑P	Pn	03 01 38.8	-0.4
HAPS	Han Pijesak,BI	5.98	321	*e*Pn	Pn	03 01 39.8	+0.2
MLR	Muntele Rosu	6.12	12	⇑P	Pn	03 01 42.0	+0.4
MLR	Muntele Rosu	6.12	12	Pn	Pn	03 01 42.0	+0.4
	comp=N,0.9nm,0.3s,baz=268,slow=3.3,SNR=18						
MLR				Lg	Lg	03 03 29.3	
	comp=N,0.9nm,0.3s,baz=229,slow=20,SNR=2.1						
MLR				LR	LR	03 04 21.6	
	comp=N,181nm,20.1s,baz=209,slow=41						
NEHR	Nehoiu	6.13	14	⇑P	Pn	03 01 42.4	+1.0
TPGR	Topolog	6.22	29	⇑P	Pn	03 01 42.0	-0.8
BZS	Buzias	6.37	344	⇑P	Pn	03 01 45.6	+0.7
BZS	Buzias	6.37	344	*e*Pn	Pn	03 01 44.2	-0.6
CFR	Carcaliu	6.39	26	⇑P	Pn	03 01 44.7	-0.4
FRGS	Fruska Gora	6.48	332	*e*Pn	Pn	03 01 45.7	-0.6
COVR	Voineasa-Covas	6.51	13	⇑P	Pn	03 01 47.5	+0.8
DOPR	Dopca	6.52	8	⇓P	Pn	03 01 47.3	+0.5
PLOR	Plostina	6.60	16	⇓P	Pn	03 01 48.9	+0.9
ODBI	Odobesti	6.61	18	⇑P	Pn	03 01 48.5	+0.4
VRI	Vrincioaia	6.63	16	⇓P	Pn	03 01 49.8	+1.4
OZUR		6.69	10	⇑P	Pn	03 01 50.1	+0.8
ANTO	Ankara	6.70	84	Pn	Pn	03 01 49.2	-0.1
SGRT	San Giovanni R	6.75	292	Pn	Pn	03 01 49.6	-0.5
VLDR	Vladesti	6.97	23	⇓P	Pn	03 01 53.7	+0.8
MGRS	Mrkonjic Grad	7.18	315	*e*Pn	Pn	03 01 55.9	0.0
TESR	Tescani	7.24	14	⇓P	Pn	03 01 57.5	+0.8
BLY	Banja Luka	7.34	318	*e*Pn	Pn	03 01 58.3	+0.2
BLY	Banja Luka	7.34	318	*e*Pn	Pn	03 01 56.4	-1.7
DRGR		7.35	352	⇓P	Pn	03 01 59.1	+0.9
BRTR	Keskin Array B	7.35	85	Pn	Pn	03 01 59.5	+1.2
	comp=N,0.4nm,0.3s,baz=269,slow=11,SNR=2.7						
BRTR				Sn	Sn	03 03 17.1	-5.0
	baz=259,slow=22,SNR=1.2						
PAOL	Paolisi	7.46	285		Pn	03 02 00.7	+0.9
MRAK	Mrakovica	7.67	318	*e*Pn	Pn	03 02 03.1	+0.4
MORH	Mrgy, Hungar	7.81	331	*e*Pn	Pn	03 02 03.3	-1.2
VAE	Valguarnera	7.88	258	Pn	Pn	03 02 05.8	+0.2
	comp=N,1.4nm,0.3s,baz=192,slow=7.0,SNR=4.3						
VAE				Sn	Sn	03 03 34.2	-0.8
	comp=N,0.6nm,0.3s,baz=132,slow=14,SNR=1.8						
KOVH	Kovagotottos	7.92	328	*e*P	Pn	03 02 05.5	-0.5
RAFF	Raffo Rosso	8.00	256		Pn	03 02 05.3	-1.9
BURAR	Bucovina Array	8.14	5	⇓P	Pn	03 02 09.9	+0.8
MILM	Milestii Mici	8.16	23	⇑P	Pn	03 02 09.2	0.0
BUR08	Bucovina Ar. S	8.17	5	Pn	Pn	03 02 09.4	-0.1
TRPA	Tarpa	8.69	353	*e*P	Pn	03 02 16.5	-0.1
CLTB	Caltabellotta	8.76	261	Pn	Pn	03 02 16.7	-1.0
NRCA	Norcia	8.94	295		Pn	03 02 19.8	-0.3

CRES	Cresnjev	8.97	318	*e*Pn	Pn	03 02 20.0	-0.4
MPLH	Magyarpolny	9.03	330	*e*P	Pn	03 02 21.9	+0.7
MPLH				*e*S	Sn	03 03 58.6	-4.4
SORM	Soroca	9.14	18	⇓P	Pn	03 02 21.1	-1.6
CEY	Cerknica	9.47	314	*e*Pn	Pn	03 02 25.5	-1.8
SOKA	Soboth	9.77	320	*e*Pn	Pn	03 02 32.2	+0.7
	comp=N,1.5nm,0.5s						
OBKA	Obir	9.90	318	*e*Pn	Pn	03 02 33.0	-0.2
	comp=N,9.0nm,1.4s						
ARSA	Arzberg	9.94	324	*e*Pn	Pn	03 02 34.5	+0.7
	comp=N,3.2nm,0.6s						
CONA	Conrad Observa	10.31	327	*e*Pn	Pn	03 02 37.5	-1.4
	comp=N,4.4nm,1.2s						
ZOU	Zoufplan	10.77	314		Pn	03 02 44.5	-0.8
KBA	Koelnbreinsper	10.89	317	*e*Pn	Pn	03 02 46.8	-0.2
	comp=N,8.6nm,1.1s						
MOA	Molln	10.96	323	*e*Pn	Pn	03 02 48.1	+0.3
	comp=N,11nm,1.5s						
ABTA	Abfaltersbach	11.14	314	*e*Pn	Pn	03 02 49.5	-0.7
	comp=N,1.4nm,0.9s						
MMAI	Mount Meron Ar	11.17	122	Pn	Pn	03 02 50.2	-0.5
	comp=N,0.6nm,0.3s,baz=308,slow=12,SNR=7.0						
MMAI				LR	LR	03 07 52.4	
	comp=N,88nm,19.8s,baz=285,slow=41						
AKASG	Malin Array Be	11.75	16	Pn	Pn	03 02 58.2	-0.3
	comp=N,0.5nm,0.3s,baz=197,slow=13,SNR=2.1						
WTTA	Wattenberg	11.93	315	*e*Pn	Pn	03 03 00.9	-0.2
	comp=N,5.8nm,1.1s						
GERES	GERESS Array B	11.95	325	Pn	Pn	03 03 02.1	+0.8
	comp=N,0.1nm,0.3s,baz=141,slow=13,SNR=6.0						
GERES				LR	LR	03 07 56.4	
	comp=N,162nm,19.3s,baz=158,slow=39						
GERES	GERESS Array B	11.95	325		Pn	03 03 00.3	-0.9
WATA	Walderalm	12.00	315	*e*Pn	Pn	03 03 02.5	+0.4
	comp=N,7.3nm,1.3s						
SQTA	Sankt Quirin	12.14	314	*e*Pn	Pn	03 03 03.6	-0.4
	comp=N,5.7nm,1.1s						
MOTA	Moosalm	12.27	314	*e*Pn	Pn	03 03 05.7	-0.1
	comp=N,9.0nm,1.2s						
FETA	Feichten	12.30	312	*e*Pn	Pn	03 03 06.0	-0.1
	comp=N,4.6nm,1.3s						
KEST	Kesra	12.31	257	Pn	Pn	03 03 06.8	+0.5
	comp=N,0.1nm,0.3s,baz=14,slow=17,SNR=3.4						
KEST				LR	LR	03 09 18.3	
	comp=N,208nm,19.2s,baz=216,slow=45						
RETA	Reutte	12.54	314	*e*Pn	Pn	03 03 10.8	+1.4
	comp=N,8.0nm,1.7s						
DAVOX	Davos/Dischmat	12.67	310	Pn	Pn	03 03 12.1	+0.8
	comp=N,0.2nm,0.3s,baz=145,slow=18,SNR=2.3						
DAVOX				LR	LR	03 08 17.9	
	comp=N,186nm,19.6s,baz=106,slow=39						
DAVA	Damuels	12.93	312	*e*Pn	Pn	03 03 13.7	-1.1
	comp=N,4.1nm,1.0s						
CLL	Collm	14.12	330	*e*PP	P	03 03 41.0	+2.4
GNI	Garni	15.86	81	LR	LR	03 11 02.3	
	comp=N,129nm,18.3s,baz=281,slow=41						
ESBB	Sonseca Array	21.61	279	P	P	03 04 59.9	-1.2
ESBB				IAmb	IAmb	03 05 04.0	
	comp=Z,8.6nm,1.4s						
ESDC	Sonseca Array	21.61	279	P	P	03 05 01.4	+0.4
	comp=Z,1.6nm,0.8s,baz=74,slow=11,SNR=18						
ESDC				LR	LR	03 12 54.8	
	comp=Z,75nm,21.6s,baz=90,slow=36						
ESDC	Sonseca Array	21.61	279	P	P	03 05 00.1	-0.9
HFS	Hagfors	21.66	346	P	P	03 05 01.7	+0.4
	comp=Z,4.0nm,0.9s,baz=144,slow=12,SNR=2.1						
HFS				LR	LR	03 14 43.4	
	comp=Z,135nm,21.3s,baz=63,slow=40						
PAB	San Pablo	21.93	279	P	P	03 05 04.8	+0.3
PAB				IAmb	IAmb	03 05 06.9	
	comp=Z,7.3nm,1.0s						
FINES	FINESS Array B	21.99	3	P	P	03 05 04.9	0.0
	comp=Z,4.8nm,0.9s,baz=155,slow=15,SNR=3.7						
FINES				LR	LR	03 14 35.0	
	comp=Z,167nm,18.1s,baz=205,slow=39						
NB2	NORSAR Subarra	22.99	344	P	P	03 05 16.5	+0.9
	comp=Z,31nm,2.0s,baz=153,slow=10						
NOA	NORSAR Array B	22.99	344	P	P	03 05 14.6	-1.0
	comp=Z,3.0nm,0.9s,baz=153,slow=11,SNR=5.0						
KLMR	Klimovskoe	23.41	19	AMP		03 05 25.3	
	comp=Z,31nm,1.5s						
KLMR	Klimovskoe	23.41	19	*e*	P	03 05 19.7	-0.1
MDT	Midelt	24.07	263	P	P	03 05 25.4	-1.1
	comp=Z,3.7nm,0.9s,baz=87,slow=6.0,SNR=8.2						
MDT				LR	LR	03 17 04.9	
	comp=Z,83nm,18.1s,baz=52,slow=42						
EKA	Eskdalemuir Ar	24.09	320	P	P	03 05 25.6	-0.8
	comp=Z,2.4nm,0.7s,baz=124,slow=10,SNR=4.5						
RAYN	Ar Rayn	24.12	125	P	P	03 05 27.4	+0.4
RAYN				IAmb	IAmb	03 05 33.3	
	comp=Z,18nm,1.4s						
AKTO	Aktyubinsk	26.13	54	P	P	03 05 46.8	+1.8
	comp=Z,1.1nm,0.9s,baz=255,slow=12,SNR=3.5						
AKTO				LR	LR	03 20 12.1	
	comp=Z,41nm,18.3s,baz=256,slow=46						
GEYT	Alibeck	26.48	83	LR	LR	03 18 26.1	
	comp=Z,72nm,20.2s,baz=260,slow=41						
ARU	Arti	28.20	42	P	P	03 06 03.4	-0.1
	comp=Z,0.7nm,0.3s,baz=253,slow=7.1,SNR=4.5						
ARU				LR	LR	03 16 52.5	
	comp=Z,63nm,18.6s,baz=130,slow=36						
ARU	Arti	28.20	42	P	P	03 06 02.9	-0.6
ARU				IAmb	IAmb	03 06 09.5	
	comp=Z,6.9nm,1.3s						
ARCES	ARCESS Array B	30.09	1	LR	LR	03 20 54.5	
	comp=Z,81nm,19.1s,baz=190,slow=41						
TORD	Torodi Ar. Bea	32.88	223	P	P	03 06 44.5	-0.7
	comp=Z,1.6nm,0.6s,baz=32,slow=8.9,SNR=12						
BRVK	Borovoye	34.04	51	P	P	03 06 56.5	+1.5
BRVK				IAmb	IAmb	03 07 07.3	
	comp=Z,4.5nm,1.2s						
GAR	Garm	35.47	76	P	P	03 07 04.7	-3.0
DBIC	Dimbokro	41.81	226	P	P	03 08 00.1	-0.8
	comp=Z,2.8nm,0.8s,baz=36,slow=11,SNR=4.7						
DBIC				LR	LR	03 26 05.9	
	comp=Z,33nm,18.7s,baz=15,slow=37						
DBIC	Dimbokro	41.81	226	P	P	03 08 01.5	+0.6
DBIC				IAmb	IAmb	03 08 07.2	
	comp=Z,9.3nm,1.2s						
MK31	Makanchi Array	42.20	60	P	P	03 08 05.4	+1.5
MKAR	Makanchi Array	42.20	60	P	P	03 08 04.9	+1.0
	comp=Z,1.6nm,0.6s,baz=278,slow=7.2,SNR=16						
ZAA0	Zalesovo Array	42.70	49	P	P	03 08 08.8	+1.0
ZALV	Zalesovo Beam	42.70	49	P	P	03 08 08.5	+0.7
	comp=Z,9.7nm,0.7s,baz=277,slow=8.5,SNR=31						
ZALV	Zalesovo Beam	42.70	49	P	P	03 08 08.6	+0.8
SONM	Songino Array	57.43	52	P	P	03 10 02.5	+2.7
	comp=Z,1.6nm,1.1s,baz=276,slow=7.8,SNR=6.5						
BOSA	Boshof	67.78	179	LR	LR	03 43 53.8	
	comp=Z,32nm,18.8s,baz=352,slow=39						
KSRS	Korea Array	76.30	53	LR	LR	03 50 20.5	
	comp=Z,22nm,18.8s,baz=205,slow=39						
BDFB	Brasilia	86.63	247	P	P	03 12 54.5	-0.5
	comp=Z,1.6nm,0.6s,baz=140,slow=7.9,SNR=1.8						
ROSC	El Rosal	93.44	279	LR	LR	03 56 08.1	
	comp=Z,33nm,18.8s,baz=32,slow=36						
TXAR	Lajitas Array	96.03	316	P	P	03 13 40.8	+1.9
	comp=Z,0.3nm,0.6s,baz=83,slow=3.7,SNR=3.6						

PRU ***17*** *03:01:11.8±0.0, 50°.23N×18°.88E, h0km*

ISC 17 03:01:11.7±1.9**, 50°.25N**±0°.09×**18°.85E**±0°.07**, h0km, n9, σ0ˢ.78**/14**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.61	228	*e*PG	Pg	03 01 23.6	+0.2
OKC				*e*SG	Sg	03 01 32.2	+0.9
MORC	Moravsky Berou	0.97	241	*e*PG	Pb	03 01 31.6	+0.2
MORC				*e*SG	Sb	03 01 44.2	-0.5
LANS	Liptovska Anna	1.17	160	*e*PG	Pg	03 01 34.0	-0.1
LANS				*e*SG	Sb	03 01 49.5	-1.0
LANS				*e*LG	Lg	03 01 52.8	
KRLC	Kraliky	1.34	263	*e*PG	Pg	03 01 36.3	-1.1
KRLC				*e*SG	Sg	03 01 55.4	+0.6
DPC	Dobruska-Polom	1.63	275	*e*PG	Pn	03 01 41.9	+0.2
DPC				*e*SG	Sn	03 02 03.4	+0.1
OSTC	Ostas	1.72	281	*e*SG	Sg	03 02 07.5	+0.7
VRAC	Vranov	1.74	238	*e*SG	Sn	03 02 06.4	+0.3
CHVC	Chvalec	1.82	282	*e*SG	Sg	03 02 11.4	+1.2
KHC	Kasperske Hory	3.60	254	*e*SG	Sg	03 03 06.3	-1.1

IDC 17 03:12:27.1±2.9**, 1°.14N**×**127°.59E, h0km, mb3.2**/3**, mb1 3.5**/3**, mb1mx3.3**/49**, mbtmp3.3**/3**, Error ellipse: s-maj=244.0km s-min=28.7km az=67.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.98	163	P	P	03 17 21.5	-1.4
	0.4nm,0.8s,baz=341,slow=11,SNR=3.7						
ASAR	Alice Springs	25.41	166	P	P	03 17 57.5	+0.9
	1.0nm,0.8s,baz=342,slow=9.8,SNR=9.9						
MKAR	Makanchi Array	60.16	326	P	P	03 22 36.6	-0.2
	0.2nm,0.6s,baz=108,slow=9.3,SNR=2.7						

JMA ***17*** *03:18:14.1±0.3, 31°.18N×128°.80E, h2km±3km, M3.9*

NIED ***17*** *03:18:14.2, 31°.18N×128°.80E, h2km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale* 10^{15}*Nm;* M_{rr}*-0.12;* $M_{\theta\theta}$*0.26;* $M_{\phi\phi}$*-0.15;* $M_{r\theta}$*0.35;* $M_{\theta\phi}$*1.01;* $M_{\phi r}$*-0.27; Fault plane solution:* M_0*1.12000×*10^{15} *NP1:* ϕ_s*274.00000°, δ78.00000°, λ-20.00000°. NP2:*ϕ_s*8.00000°, δ70.00000°, λ-167.00000°.*

IDC ***17*** *03:18:16.8±1.1, 31°.14N×128°.56E, h0km, mb3.7/6, mb1 3.8/8, mb1mx3.5/57, mbtmp3.6/8, ML3.1/2, MS3.6/5, Ms1 3.7/5, ms1mx3.0/34 Error ellipse: s-maj=24.7km s-min=20.3km az=81.0*

ISC 17 03:18:15.4±1.9**, 31°.18N**±0°.04×**128°.90E**±0°.06**, h3km**±13km**, n24, σ1ˢ.07**/27**, mb3.7**/6**, MS3.5**/5**, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.86	55	P	Pg	03 18 32.0	+0.2
JSJ				*e*S	Sb	03 18 44.7	-0.2
JKC	Kuchinoerabu	1.33	122	P	Pb	03 18 40.6	-0.4
JKC				*e*S	Sg	03 18 58.9	+0.8
JSU	Suzuyama	1.37	76	P	Pb	03 18 41.7	-0.1
JSU				*e*S	Sg	03 19 01.2	+1.7
JFU	Fukue jima 2	1.47	355	P	Pn	03 18 41.6	-1.3
JFU				*e*S	Sn	03 19 01.2	-1.5
JNN	Nakanoshima	1.58	147	P	Pb	03 18 44.3	-1.0
JNN				*e*S	Sg	03 19 05.8	-0.4
JYAK	Yakushimahirau	1.68	124	P	Pn	03 18 44.4	-1.3
JYAK				*e*S	Sb	03 19 08.2	-0.3
JTN	Tanegashima 3	1.87	106	P	Pn	03 18 47.8	-0.5
JTN				*e*S	Sb	03 19 13.2	-0.8
JMTN	Minamitane	1.90	114	P	Pn	03 18 47.8	-0.9
JTZ	Takazaki	2.00	69	P	Pn	03 18 50.5	+0.3
JIU3	Izumi3	2.12	50	P	Pb	03 18 52.7	-1.9
JNU	Nakatsue	2.56	41	Pn	Pg	03 19 04.1	-0.4
	baz=180,slow=20						
JNU				Sn	Sg	03 19 38.6	+0.8
	baz=253,slow=19						
KSRS	Korea Array	6.31	353	Pn	Pn	03 19 50.1	+0.8
	0.7nm,0.3s,baz=200,slow=22,SNR=5.4						
KSRS				Sn	Sn	03 21 00.5	-1.3
	0.5nm,0.3s,baz=219,slow=42,SNR=1.4						
KSRS				LR	LR	03 21 34.3	
	comp=Z,27nm,21.1s,baz=178,slow=31						
MJAR	Matsushiro Arr	9.41	53	Pn	Pn	03 20 36.0	+4.1
	0.1nm,0.3s,baz=221,slow=6.3,SNR=5.9						
SONM	Songino Array	23.91	320	P	P	03 23 30.9	+0.4
	1.1nm,0.8s,baz=139,slow=11,SNR=8.0						
CMAR	Chiang Mai Arr	29.89	252	LR	LR	03 37 44.7	
	comp=Z,34nm,20.1s,baz=250,slow=40						
ZALV	Zalesovo Beam	38.78	319	LR	LR	03 43 34.6	
	comp=Z,66nm,18.5s,baz=162,slow=39						
MKAR	Makanchi Array	38.84	307	P	P	03 25 42.0	+0.3
	0.7nm,0.9s,baz=97,slow=9.9,SNR=5.9						
KURBB	Kurchatov Arra	41.80	313	P	P	03 26 06.1	-0.1
	0.4nm,0.2s,baz=95,slow=9.6,SNR=1.8						
BVAR	Borovoye Array	47.07	315	P	P	03 26 48.9	+0.5
	0.8nm,0.6s,baz=171,slow=10,SNR=4.7						
WRA	Warramunga Arr	51.10	173	P	P	03 27 21.9	+2.4
	0.7nm,0.6s,baz=348,slow=8.6,SNR=4.6						
ASAR	Alice Springs	54.75	174	P	P	03 27 47.1	+0.7
	0.6nm,0.7s,baz=0.7,slow=7.4,SNR=2.5						
AKASG	Malin Array Be	72.18	319	LR	LR	04 03 57.2	
	comp=Z,66nm,18.8s,baz=305,slow=38						
NOA	NORSAR Array B	75.15	334	LR	LR	04 04 15.9	
	comp=Z,22nm,18.4s,baz=275,slow=37						
GERES	GERESS Array B	81.62	323	LR	LR	04 10 23.2	
	comp=Z,126nm,18.2s,baz=303,slow=38						

BER ***17*** *03:41:32.3±1.9, 76°.95N×18°.34E, h21km±9km, ML2.1, ML2.3(NAO), Confirmed Earthquake*

NAO 17 03:41:30.2±1.3**, 76°.96N**×**18°.45E, h15km**±11km**, ML2.3, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HSPB	Hornsund (broa	0.66	275	Pg	Pb	03 41 43.6	+0.2
HSPB				Lg	Lg	03 41 52.2	
HSPB	Hornsund (broa	0.66	275	Pg	Pb	03 41 43.6	+0.2
HSPB				Sg	Sb	03 41 52.2	-0.2
SPA0	Spitsbergen Ar	1.30	341	Pn	Pn	03 41 53.6	-0.2
	baz=155,slow=22						
SPA0				Lg	Lg	03 42 11.0	
	baz=157,slow=37						
SPA0	Spitsbergen Ar	1.30	341	Pn	Pn	03 41 53.6	-0.2
	baz=155,slow=22						
SPA0				Sg	Sn	03 42 11.0	+0.1
	baz=157,slow=37						
BRBA	Barentsburg A	1.44	322	Pn	Pn	03 41 55.5	-0.1
BRBA				Pg	Pb	03 41 57.0	+0.4
BRBA				Lg	Lg	03 42 15.3	
BRBA	Barentsburg A	1.44	322	Pn	Pn	03 41 55.5	-0.1
BRBA				Pg	Pb	03 41 57.0	+0.4
BRBA				Sg	Sb	03 42 15.3	+0.7
BRBB	Barentsburg B	1.46	323	Pn	Pn	03 41 56.0	+0.1
BRBB				Pg	Pb	03 41 57.4	+0.4
BRBB				Lg	Lg	03 42 16.3	
BRBB	Barentsburg B	1.46	323	Pn	Pn	03 41 56.0	+0.1
BRBB				Pg	Pb	03 41 57.4	+0.4
BRBB				Sg	Sb	03 42 16.3	+0.9
HOPEN	Hopen	1.58	104	Lg	Lg	03 42 21.2	
HOPEN	Hopen	1.58	104	*e*P	Pn	03 41 55.8	-1.8
HOPEN				*e*S	Sn	03 42 17.9	+0.1
HOPEN				*e*Sg	Sg	03 42 21.1	0.0
HOPEN				IAML		03 42 23.6	
	comp=Z,41nm,0.5s						
KBS	Kingsbay	2.40	328	Pn	Pn	03 42 09.0	+0.2
KBS				Pg	Pb	03 42 13.3	+0.3
KBS				Lg	Lg	03 42 44.0	
KBS	Kingsbay	2.40	328	*e*P	Pn	03 42 08.3	-0.5
KBS				*e*Pg	Pb	03 42 14.0	+1.0
KBS				*e*Sg	Sb	03 42 44.0	+1.7
KBS				IAML		03 42 46.9	
	comp=Z,17nm,0.3s						
ARA0	ARCESS Array S	7.73	161	Sn	Sn	03 44 43.5	-5.7
	slow=22						
ARA0	ARCESS Array S	7.73	161	Sn	Sn	03 44 43.5	-5.7
	slow=22						

DNK 17 03:42:34.3±1.3**, 77°.63N**×**25°.19W, h0km**±18km**, ML1.3, Eastern Kalaallit Nunaat**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAG	Danmarks Havn	1.69	118	*e*	Pn	03 43 02.2	-2.8
	baz=299,slow=18						
DAG				*e*P	Pb	03 43 04.6	-1.6
DAG				*e*S	Sn	03 43 26.9	-0.5
DAG				IAML		03 43 31.0	
	comp=Z,2.9nm,0.4s						
DBG	Daneborg	3.56	158	*e*P	Pn	03 43 29.9	-0.7
DBG				*i*		03 43 39.8	
DBG				*e*S	Sn	03 44 11.6	-1.6
DBG				IAML		03 44 26.3	
	comp=Z,2.6nm,0.5s						

SJA ***17*** *04:01:36±3.3, 24°.18S±0°.08×67°.1W±0°.1, h193km±6km, Error ellipse: s-maj=0.0km s-min=0.0km az=174.0*

NEIC ***17*** *04:01:36.2±0.4, 24°.13S±0°.07×67°.0W±0°.1, h173km±8km, mb4.1/9, Md3.7(SJA), Error ellipse: s-maj=17.2km s-min=8.7km az=112.0*

IDC ***17*** *04:01:36.4±1.9, 24°.02S×66°.98W, h184km±20km, mb3.2/1, mb1 3.3/6, mb1mx3.2/26, mbtmp3.8/6, Error ellipse: s-maj=30.5km s-min=19.5km az=142.0*

ISC 17 04:01:36.1±0.6**, 24°.09S**±0°.06×**67°.01W**±0°.08**, h181km, n28, σ0ˢ.74**/32**, mb4.0**/4**, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	2.29	310	P	Pn	04 02 17.8	+1.0
	9.0nm,0.3s,baz=122,slow=5.4,SNR=10						
LVC				S	Sn	04 02 48.5	+0.1
	70nm,0.3s,baz=173,slow=2.7,SNR=80						
LVC	Limon Verde	2.29	310	Pn	Pn	04 02 16.8	0.0
LVC				Sn	Sn	04 02 48.0	-0.4
PB15	IPOC Station P	2.42	291	Pn	Pn	04 02 18.8	+0.6
PB15				Sn	Sn	04 02 49.8	-1.0
PB06	IPOC Station P	2.73	300	Pn	Pn	04 02 22.1	+0.4
PB14	IPOC Station P	3.14	260	Pn	Pn	04 02 26.4	-0.4
PB10	IPOC Station P	3.30	279		Pn	04 02 27.9	-0.6
AC02	Maricunga	3.34	215	Pn	Pn	04 02 29.4	0.0
PB16	IPOC Station P	6.18	337		Pn	04 03 06.5	+0.4
LPAZ	La Paz	7.83	352	P	Pn	04 03 28.6	+0.7
	0.5nm,0.3s,baz=129,slow=4.4,SNR=13						
LPAZ				S	Sn	04 04 54.5	-1.7
	0.1nm,0.3s,baz=342,slow=19,SNR=3.8						
LPAZ	La Paz	7.83	352	Pn	Pn	04 03 28.1	+0.2
SIV	San Ignacio	9.80	36	P	Pn	04 03 51.0	-2.1
	0.7nm,0.3s,baz=215,slow=11,SNR=15						
TRQA	Tornquist	14.57	164	P	P	04 04 55.1	-0.2
PLCA	Paso Flores	16.86	189	P	Pn	04 05 20.7	-0.9
	0.1nm,0.3s,baz=346,slow=12,SNR=2.0						
PLCA	Paso Flores	16.86	189	P	P	04 05 19.9	-0.8
PLCA				IAmb	IAmb	04 05 32.9	
	comp=Z,10nm,1.4s						
CZSB	Cruzeiro do Su	17.16	341		P	04 05 24.9	+0.8
LL04	Puerto Octay	17.37	194	P	P	04 05 26.2	0.0
LL04				IAmb	IAmb	04 05 26.6	
	comp=Z,9.8nm,1.1s						
BDFB	Brasilia	19.73	68	P	P	04 05 52.3	+0.2
	comp=Z,0.5nm,0.3s,baz=242,slow=11,SNR=11						
BDFB	Brasilia	19.73	68	P	P	04 05 52.2	+0.2
SNAA	Sanae	59.27	161	P	P	04 11 18.8	+0.7
SNAA				IAmb	IAmb	04 11 31.7	
	comp=Z,5.2nm,1.5s						
QSPA	South Pole Qui	66.11	180	P	P	04 12 04.4	+0.8
QSPA				IAmb	IAmb	04 12 19.1	
	comp=Z,4.5nm,1.4s						
TORD	Torodi Ar. Bea	76.61	69	P	P	04 13 07.0	-0.1
	comp=Z,0.3nm,0.4s,baz=263,slow=5.7,SNR=5.8						
TORD	Torodi Ar. Bea	76.61	69	P	P	04 13 07.0	-0.1
BOSA	Boshof	80.70	117	P	P	04 13 29.5	0.0
BOSA				IAmb	IAmb	04 13 44.8	
	comp=Z,3.5nm,1.0s						
LBTB	Lobatse	82.36	114	P	P	04 13 38.9	+0.6
ASAR	Alice Springs	128.37	205	PKP	PKPdf	04 20 21.2	-0.6
	comp=Z,0.3nm,0.6s,baz=177,slow=1.9,SNR=2.3						
WRA	Warramunga Arr	131.54	207	PKP	PKPdf	04 20 28.0	+0.1
	comp=Z,0.2nm,0.3s,baz=156,slow=1.8,SNR=9.0						
WRA	Warramunga Arr	131.54	207	PKPdf	PKPdf	04 20 27.6	-0.3
MKAR	Makanchi Array	146.60	40	PKPbc	PKPdf	04 20 55.2	+0.8
	comp=Z,0.7nm,0.6s,baz=322,slow=2.8,SNR=6.3						

IDC 17 04:22:16.3±2.3**, 1°.05N**×**127°.47E, h0km, mb3.4**/3**, mb1 3.7**/3**, mb1mx3.2**/35**, mbtmp3.5**/3**, MS1.7**/1**, Ms1 1.7**/1**, ms1mx1.7**/16**, Error ellipse: s-maj=171.8km s-min=28.2km az=67.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	Kappang	9.79	232	LR	LR	04 29 14.8	
	comp=Z,5.0nm,20.7s,baz=184,slow=43						
WRA	Warramunga Arr	21.93	162	P	P	04 27 10.8	-0.6
	0.6nm,0.4s,baz=341,slow=11,SNR=9.3						
ASAR	Alice Springs	25.36	166	P	P	04 27 45.6	+0.4
	0.6nm,0.6s,baz=346,slow=9.8,SNR=10						
MKAR	Makanchi Array	60.17	326	P	P	04 32 25.8	-0.1
	0.3nm,0.5s,baz=114,slow=7.0,SNR=2.3						

NEIC ***17*** *05:09:50.9±1.9, 17°.7S±0°.1×178°.7W±0°.1, h568km±9km, mb4.3/29, Error ellipse: s-maj=21.6km s-min=11.5km az=142.0*

NOU ***17*** *05:09:50.1, 17°.65S×178°.53W, h577km, mb4.4/23, Fiji Islands Region*

IDC ***17*** *05:09:52.2±1.5, 17°.73S×178°.76W, h581km±16km, mb3.7/10, mb1 4.0/12, mb1mx3.6/26, mbtmp4.6/12, Error ellipse: s-maj=32.7km s-min=12.2km az=152.0*

ISC 17 05:09:49.2±0.5**, 17°.7S**±0°.1×**178°.63W**±0°.07**, h547km, n73, σ1ˢ.43**/72**, mb4.4**/29**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAVE	Taveuni	1.58	310	P	P	05 11 01.4	+4.4
DGTI	Dogotuki	2.11	312	P	P	05 11 03.0	+3.8
MSVF	Nonsavu	3.16	269	P	P	05 11 09.4	+4.3
	27nm,0.3s,baz=105,slow=2.6,SNR=200						
MSVF	Nonsavu	3.16	269	P	P	05 11 09.4	+4.3
AFI	Afiamalu	7.61	61	P	P	05 11 43.4	+0.3
	7.1nm,0.3s,baz=198,slow=2.7,SNR=7.2						
NIUE	Niue	8.37	101	P	P	05 11 51.8	+1.2
MARNC	Mare, Loyalty	13.11	251	P	P	05 12 38.8	-0.4
SANVU	Saraoutou	13.77	277	P	P	05 12 46.1	+0.1
SANVU	Saraoutou	13.77	277	P	P	05 12 47.9	+1.8
PINNC	Pines Island,	13.94	247	P	P	05 12 49.8	+1.9
DZM	Mont Dzumac	14.69	250	P	P	05 12 58.4	+2.8
	1.7nm,0.3s,baz=100,slow=23,SNR=22						
DZM	Mont Dzumac	14.69	250	P	P	05 12 56.7	+1.1
DZM	Mont Dzumac	14.69	250	P	P	05 12 57.5	+1.9
KNTN	Kanton	16.33	25	P	P	05 13 11.5	-0.7
KNTN	Kanton	16.33	25	P	P	05 13 11.4	-0.7
RAR	Rarotonga	18.12	104	P	P	05 13 28.2	-0.1
OUZ	Omahuta	18.75	200	P	P	05 13 35.7	+1.8
OUZ				IAmb	IAmb	05 13 51.2	
	comp=Z,16nm,1.3s						
EIDS	Eidsvold	29.13	250	P	P	05 15 06.1	-0.3
EIDS				IAmb	IAmb	05 15 06.7	
	comp=Z,7.7nm,0.7s						
ARMA	Armidale	29.85	239	P	P	05 15 13.3	+0.6
ARMA				IAmb	IAmb	05 15 13.9	
	comp=Z,9.5nm,0.7s						
ARMA	Armidale	29.85	239	P	P	05 15 12.8	+0.1
	comp=Z,13nm,1.0s						
MGCD	Mangrove Creek	31.22	235	P	P	05 15 25.1	+0.8
	comp=Z,13nm,1.2s						
RMQ	Roma	31.37	248	P	P	05 15 25.8	+0.1
	comp=Z,15nm,0.7s						
CTA	Charters Tower	33.27	260	P	P	05 15 41.7	-0.2
	baz=94,slow=13						
CTAO	Charters Tower	33.27	260	P	P	05 15 41.7	-0.2
CTAO				IAmb	IAmb	05 16 03.8	
	comp=Z,12nm,1.2s						
CNB	Canberra Magne	33.37	232	P	P	05 15 42.7	+0.1
	comp=Z,26nm,0.7s						
PMG	Port Moresby	34.22	279	P	P	05 15 51.0	+1.1
	comp=Z,12nm,0.4s,baz=242,slow=17,SNR=3.3						
CMSA	Cobar Meteorol	35.05	240	P	P	05 15 56.1	-0.6
	comp=Z,21nm,0.7s						
QLP	Quilpie	35.40	249	P	P	05 15 59.0	-0.6
	comp=Z,41nm,0.6s						
COEN	Coen	36.89	270	P	P	05 16 12.2	+0.1
COEN				IAmb	IAmb	05 16 13.2	
	comp=Z,13nm,0.7s						
COEN	Coen	36.89	270	P	P	05 16 12.2	+0.1
	comp=Z,21nm,0.8s						
STKA	Stephens Creek	38.53	241	P	P	05 16 25.6	+0.4
	comp=Z,10nm,0.5s,baz=93,slow=10,SNR=33						
STKA	Stephens Creek	38.53	241	P	P	05 16 25.4	+0.2
STKA	Stephens Creek	38.53	241	P	P	05 16 25.0	-0.2
	comp=Z,4.6nm,0.9s						
LCRK	Leigh Creek	41.14	244	P	P	05 16 45.4	-0.8
	comp=Z,41nm,0.9s						
BBOO	Buckleboo	43.31	241	P	P	05 17 03.0	-0.2
WR0	Warramunga Arr	44.27	259	P	P	05 17 09.4	-1.3
WR0				IAmb	IAmb	05 17 27.3	
	comp=Z,7.1nm,1.2s						
WB0	Warramunga Arr	44.42	260	P	P	05 17 10.8	-1.2
WB0				IAmb	IAmb	05 17 11.7	
	comp=Z,6.4nm,0.7s						
WB2	Warramunga Arr	44.44	259	P	P	05 17 11.0	-1.2
WB2				IAmb	IAmb	05 17 11.9	
	comp=Z,8.4nm,0.6s						
WRAB	Tennant Creek	44.45	259	P	P	05 17 10.9	-1.2
WRA	Warramunga Arr	44.46	259	P	P	05 17 11.0	-1.2
	comp=Z,5.5nm,0.5s,baz=92,slow=6.9,SNR=186						
WRA				PcP	PcP	05 18 43.5	-0.5
	comp=Z,1.2nm,0.9s,baz=91,slow=3.5,SNR=5.4						
WRA	Warramunga Arr	44.46	259	P	P	05 17 11.0	-1.2
AS31	Alice Springs	44.63	254	P	P	05 17 13.1	-0.5
ASAR	Alice Springs	44.64	254	P	P	05 17 13.4	-0.1
	comp=Z,62nm,0.5s,baz=88,slow=8.2,SNR=898						
ASAR				PcP	PcP	05 18 43.9	-0.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,1.5nm,0.4s,baz=101,slow=4.0,SNR=4.8						
ASAR				S	S	05 23 06.8	-3.6
	comp=Z,0.1nm,0.3s,baz=86,slow=17,SNR=4.3						
ASAR	**Alice Springs**	44.64	254	P	P	05 17 13.3	-0.3
MTN	**Manton Dam**	48.59	268	P	P	05 17 42.9	-0.7
MTN				IAmb	IAmb	05 17 43.3	
	comp=Z,6.3nm,0.7s						
FORT	**Forrest**	49.89	244	P	P	05 17 51.9	-1.0
KNRA	**Kununurra**	50.30	264	P	P	05 17 55.6	-0.5
KNRA				IAmb	IAmb	05 17 56.1	
	comp=Z,14nm,0.7s						
FITZ	**Fitzroy Crossi**	52.85	260	P	P	05 18 14.3	-0.2
PSA00	**Pilbara Seismi**	57.75	255	P	P	05 18 47.3	-1.3
MBWA	**Marble Bar**	57.91	256	P	P	05 18 48.8	-0.8
MMRI	**Maumere**	58.08	271		pP	05 20 39.7	+1.9
MORW	**Morawa**	60.36	246	P	P	05 19 04.9	-1.0
MORW				IAmb	IAmb	05 19 27.9	
	comp=Z,18nm,1.4s						
GIRL	**Giralia**	62.74	253	P	P	05 19 21.5	-0.1
UGM	**Wanagama**	69.44	268	P	P	05 20 02.2	-1.1
QSPA	**South Pole Qui**	72.33	180	P	P	05 20 19.6	+0.1
QSPA				IAmb	IAmb	05 20 22.2	
	comp=Z,9.5nm,1.4s						
NVAR	**Mina Array Bea**	79.44	44	P	P	05 21 00.0	+0.7
	comp=Z,1.7nm,0.7s,baz=232,slow=9.1,SNR=9.8						
KVN	**Kaiserville**	79.91	44	P	P	05 21 02.0	+0.3
LCMT	**Little Creek M**	82.16	47		pP	05 23 11.5	+1.2
U15A	**North Rim**	82.56	48	P	P	05 21 15.2	-0.4
U15A				IAmb	IAmb	05 21 17.0	
	comp=Z,3.8nm,0.7s						
MAW	**Mawson**	83.96	200	P	P	05 21 21.2	-0.4
	comp=Z,1.6nm,0.7s,baz=167,slow=5.1,SNR=4.3						
ILAR	**Eielson Array**	85.76	13	P	P	05 21 29.0	-1.2
	comp=Z,0.5nm,0.4s,baz=221,slow=5.3,SNR=16						
TX32	**Lajitas Array**	86.08	58	IAmb	IAmb	05 21 35.0	
	comp=Z,6.7nm,1.2s						
TXAR	**Lajitas Array**	86.08	58	P	P	05 21 33.6	+0.9
	comp=Z,2.0nm,0.7s,baz=219,slow=7.0,SNR=10						
PDAR	**Pinedale Array**	87.37	44	P	P	05 21 38.6	0.0
	comp=Z,1.3nm,0.6s,baz=214,slow=3.2,SNR=14						
CMAR	**Chiang Mai Arr**	88.62	290	P	P	05 21 45.1	+0.4
	comp=Z,1.3nm,0.3s,baz=106,slow=3.1,SNR=6.2						
SNAA	**Sanae**	90.78	179	P	P	05 21 52.5	-1.4
VNA3	**Neumayer Olymp**	90.93	176	P	P	05 21 53.6	-0.8
OK030	**Cody Creek RV**	93.85	54		pP	05 24 12.2	+4.0
ZALV	**Zalesovo Beam**	107.96	322	PP	PP	05 27 48.4	+0.2
	comp=Z,1.2nm,0.3s,baz=214,slow=9.9,SNR=5.4						
MKAR	**Makanchi Array**	108.86	314	PKiKP	PKiKP	05 27 15.1	-1.4
	comp=Z,0.2nm,0.5s,baz=346,slow=0.3,SNR=4.3						
BRTR	**Keskin Array B**	144.50	315	PKP	PKPdf	05 28 23.1	-0.8
	comp=Z,2.7nm,0.8s,baz=62,slow=2.9,SNR=4.3						
GERES	**GERESS Array B**	147.38	345	PKPbc	PKPbc	05 28 31.6	-0.2
	comp=Z,0.6nm,0.5s,baz=46,slow=3.9,SNR=5.6						
TORD	**Torodi Ar. Bea**	175.44	184	PKPab	PKPab	05 30 36.9	-1.1
	comp=Z,0.4nm,0.9s,baz=186,slow=5.4,SNR=2.2						

NNC 17 05:23:44.9±4.2**,37°.80N**×**71°.85E,h225**^{km}±43^{km}**,mb2.5, mpv3.6,5C-5D,Error ellipse: s-maj=39.0km s-min=25.4km az=13.0,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	5.24	22	⇑P	Pn	05 25 02.3	-0.6
	3.7nm,0.6s						
AAK				⇓S	S	05 26 05.0	+0.1
	6.9nm,0.8s						
KK31	**Karatay Array**	5.39	350	⇓P	Pn	05 25 04.8	+0.1
	7.6nm,0.7s,baz=161,slow=12,SNR=40						
KK31				⇓S	S	05 26 08.4	+0.3
	5.0nm,0.3s,baz=169,slow=21,SNR=20						
TKM2	**Tokmak 2**	5.86	28	⇑P	Pn	05 25 10.6	-0.2
	3.5nm,0.8s						
TKM2				⇓S	S	05 26 21.0	+1.9
	1.3nm,0.7s						
AB31	**Akbulak array**	14.32	327	⇑P	P	05 27 00.1	+1.7
	0.4nm,0.4s,baz=158,slow=11,SNR=21						
AB31				⇓S	S	05 29 36.6	+0.8
	1.2nm,0.7s,baz=151,slow=23,SNR=4.6						
AKTO	**Aktyubinsk**	16.03	326	⇑P	P	05 27 16.5	-0.8
	3.5nm,1.1s						
AKTO				⇑S	S	05 30 13.5	-0.5
	0.8nm,0.9s						

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*VAO **17** 05:36:59.8±0.3,21°.00S×68°.47W,h131^{km},mb4.2*
*SJA **17** 05:36:59.0,21°.12S×68°.65W,h163^{km},ML4.2*
*IDC **17** 05:37:00.2±0.9,21°.15S×68°.27W,h127^{km}±9^{km},mb4.1/8, mb1 4.1/13,mb1mx3.9/26,mbtmp4.4/13,Error ellipse: s-maj=19.4km s-min=12.7km az=117.0*
*NEIC **17** 05:37:00.0±2.0,21°.17S±0°.05×68°.43W±0°.09,h130^{km}±7^{km}, Error ellipse: s-maj=12.5km s-min=7.8km az=88.0*
*GUC **17** 05:37:01.0±0.7,21°.15S×68°.49W,h131^{km}±4^{km},ML4.4*
ISC 17 05:36:59.6±0.6**,21°.11S**±0°.04×**68°.46W**±0°.05**,h130**^{km}±6^{km}**, n167,**σ**1^{s}.30**/181**,mb4.7**/15**,12C-3D,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	0.96	274	⇓*i*P	Pn	05 37 22.9	+0.6
PB01				*e*S	Sn	05 37 40.0	+0.5
PB01				IAML		05 37 42.8	
	comp=E,6µm,0.3s						
PB01	**IPOC Station P**	0.96	274	Pn	Pn	05 37 23.2	+0.9
PB01	**IPOC Station P**	0.96	274	*i* P	Pn	05 37 23.0	+0.7
PB09	**IPOC Station P**	1.00	227	⇑*e*P	Pn	05 37 23.9	+1.2
PB09				*e*S	Sn	05 37 41.2	+0.9
PB09				IAML		05 37 43.2	
	comp=N,4µm,0.3s						
PB09	**IPOC Station P**	1.00	227		Pn	05 37 24.1	+1.4
PB09	**IPOC Station P**	1.00	227	*i* P	Pn	05 37 24.0	+1.2
PB08	**IPOC Station P**	1.17	326	⇑*i*P	Pn	05 37 26.2	+1.6
PB08				*e*S	Sn	05 37 45.2	+1.7
PB08				IAML		05 37 46.7	
	comp=N,7µm,0.2s						
PB08	**IPOC Station P**	1.17	326		Pn	05 37 26.2	+1.6
PB08	**IPOC Station P**	1.17	326	*i* P	Pn	05 37 26.0	+1.4
PB02	**IPOC Station P**	1.36	261	⇑*i*P	Pn	05 37 26.9	+0.6
PB02				*e*S	Sn	05 37 45.8	-0.8
PB02				IAML		05 37 49.1	
	comp=E,13µm,0.4s						
PB02	**IPOC Station P**	1.36	261	*i* P	Pn	05 37 27.0	+0.7
PB07	**IPOC Station P**	1.46	245	⇑*i*P	Pn	05 37 27.9	+0.4
PB07				*e*S	Sn	05 37 48.3	-0.5
PB07				IAML		05 37 51.0	
	comp=E,6µm,0.3s						
PB07	**IPOC Station P**	1.46	245		Pn	05 37 27.9	+0.4
PB07	**IPOC Station P**	1.46	245	*i* P	Pn	05 37 28.0	+0.5
PB03	**IPOC Station P**	1.52	232	⇑*i*P	Pn	05 37 28.6	+0.5
PB03				*e*S	Sn	05 37 49.4	-0.6
PB03				IAML		05 37 50.9	
	comp=N,5µm,0.3s						
PB03	**IPOC Station P**	1.52	232	*i* P	Pn	05 37 28.0	-0.2
LVC	**Limon Verde**	1.55	196	P	Pn	05 37 29.7	+1.0
	comp=N,149nm,0.3s,baz=23,slow=9.9,SNR=1337						
LVC				LR	LR	05 37 47.1	
	comp=N,96nm,18.1s,baz=98,slow=30						
LVC				S	Sn	05 37 51.2	+0.3
	comp=N,191nm,0.3s,baz=112,slow=23,SNR=20						
LVC	**Limon Verde**	1.55	196	⇑*e*P	Pn	05 37 29.4	+0.7
LVC				*e*S	Sn	05 37 51.0	+0.1
LVC	**Limon Verde**	1.55	196	*e*P	Pn	05 37 29.6	+0.9
LVC	**Limon Verde**	1.55	196	Pn	Pn	05 37 29.6	+0.9
LVC	**Limon Verde**	1.55	196	*i* P	Pn	05 37 29.0	+0.3
HMBC	**Humberstone**	1.57	302	⇑*i*P	Pn	05 37 29.1	+0.4
HMBC				*i* S	Sn	05 37 51.2	+0.3
HMBC				IAML		05 37 52.0	
	comp=N,11µm,0.2s						
PATCX	**Punta Patache**	1.61	280	⇑*e*P	Pn	05 37 29.6	+0.5
PATCX				*e*S	Sn	05 37 51.8	+0.3
PATCX				IAML		05 37 54.2	
	comp=E,8µm,0.2s						
PATCX	**Punta Patache**	1.61	280		Pn	05 37 30.0	+0.9
TA01	**Diego Aracena**	1.70	288	⇓*i*P	Pn	05 37 30.4	+0.4
TA01				*e*S	Sn	05 37 53.1	-0.1
TA01				IAML		05 37 55.0	
	comp=N,5µm,0.3s						
TA01	**Diego Aracena**	1.70	288		Pn	05 37 30.4	+0.4
TA01	**Diego Aracena**	1.70	288	*i* P	Pn	05 37 30.0	0.0
PB11	**IPOC Station P**	1.75	320	⇑*i*P	Pn	05 37 31.4	+0.6
PB11				*e*S	Sn	05 37 55.1	+0.5
PB11				IAML		05 37 57.3	
	comp=N,8µm,0.3s						
PB11	**IPOC Station P**	1.75	320	Pn	Pn	05 37 31.3	+0.5
PB11	**IPOC Station P**	1.75	320	*i* P	Pn	05 37 31.0	+0.2
TA02	**Huaiquique**	1.78	298	⇑*e*P	Pn	05 37 31.2	+0.3
TA02				*e*S	Sn	05 37 54.9	+0.1
TA02				IAML		05 37 57.0	
	comp=N,7µm,0.1s						
TA02	**Huaiquique**	1.78	298		Pn	05 37 31.4	+0.5
TA02	**Huaiquique**	1.78	298	*i* P	Pn	05 37 31.0	+0.1
PB06	**IPOC Station P**	1.89	213	⇑*i*P	Pn	05 37 33.0	+0.5
PB06				*i* S	Sn	05 37 57.5	-0.1
PB06				IAML		05 37 58.4	
	comp=N,3µm,0.4s						
PB06	**IPOC Station P**	1.89	213		Pn	05 37 32.9	+0.5
PB06	**IPOC Station P**	1.89	213	*i* P	Pn	05 37 33.0	+0.5
PB04	**IPOC Station P**	1.99	232	*e*P	Pn	05 37 33.9	+0.3
PB04				*e*S	Sn	05 37 58.4	-1.2
PB04				IAML		05 38 02.1	
	comp=E,3µm,0.3s						
PB04	**IPOC Station P**	1.99	232		Pn	05 37 34.0	+0.4
PB04	**IPOC Station P**	1.99	232	*i* P	Pn	05 37 33.0	-0.6
PB15	**IPOC Station P**	2.29	204		Pn	05 37 38.1	+0.7
PB15	**IPOC Station P**	2.29	204	*i* P	Pn	05 37 38.0	+0.7
PB05	**IPOC Station P**	2.37	223	⇑*e*P	Pn	05 37 38.2	-0.1
PB05				*i* S	Sn	05 38 06.3	-1.8
PB05				IAML		05 38 16.2	
	comp=E,895nm,0.3s						
PB16	**IPOC Station P**	2.93	340		Pn	05 37 47.5	+1.5
YJA	**Yavi**	2.94	112	*i* P	Pn	05 37 48.0	+2.2
PB12	**IPOC Station P**	3.04	324		Pn	05 37 46.7	-0.3
PB12	**IPOC Station P**	3.04	324	*i* P	Pn	05 37 46.0	-1.0
PB10	**IPOC Station P**	3.08	219	Pn	Pn	05 37 46.3	-1.0
AP01	**Chacalluta**	3.25	327		Pn	05 37 49.1	-0.5
HJA	**Humahuaca**	3.51	127	*i* P	Pn	05 37 56.0	+2.7
PB14	**IPOC Station P**	3.93	207	Pn	Pn	05 37 58.1	-0.7
PB14	**IPOC Station P**	3.93	207	*i* P	Pn	05 37 58.0	-0.7
AZAP	**Zapla**	4.41	135	*i* P	Pn	05 38 06.0	+1.0
SLA	**San Lorenzo**	4.51	143	*i* P	Pn	05 38 08.0	+1.7
ASTB	**Santa Barbara**	4.66	128	*i* P	Pn	05 38 09.0	+0.7
LPAZ	**La Paz**	4.81	4	P	Pn	05 38 13.6	+2.8
	comp=E,21nm,0.3s,baz=177,slow=7.1,SNR=499						
LPAZ	**La Paz**	4.81	4	*e*P	Pn	05 38 09.4	-1.3
LPAZ	**La Paz**	4.81	4	Pn	Pn	05 38 13.1	+2.3
ALOL	**LOMAS DE OLMED**	4.94	124	*i* P	Pn	05 38 12.0	+0.1
FSA	**Cafayete**	5.47	156	*i* P	Pn	05 38 20.0	+0.8
AC02	**Maricunga**	5.73	186	Pn	Pn	05 38 22.0	-1.0
AC02	**Maricunga**	5.73	186	*i* P	Pn	05 38 22.0	-1.0
AHML	**Horco Molle**	6.33	154	*i* P	Pn	05 38 31.0	+0.4
GO03	**Copiap**	6.65	194	Pn	Pn	05 38 32.2	-2.8
GO03	**Copiap**	6.65	194	*i* P	Pn	05 38 32.0	-3.0
AC04	**Llanos de Chal**	7.45	198	Pn	Pn	05 38 41.1	-4.5
VCA	**Vinchina**	7.59	178	*i* P	Pn	05 38 47.0	-0.7
LCO	**Las Campanas**	8.12	194	Pn	Pn	05 38 50.8	-4.1
ACLC	**CERRO LA CRUZ**	8.39	171	*i* P	Pn	05 38 57.0	-1.4
SIV	**San Ignacio**	8.66	55	P	Pn	05 39 00.0	-2.0
	comp=E,5.8nm,0.3s,baz=238,slow=12,SNR=135						
SIV				S	Sn	05 40 32.5	-5.6
	comp=E,0.2nm,0.3s,baz=96,slow=20,SNR=6.0						
CO05	**La Serena**	9.12	195		Pn	05 39 03.1	-4.9
GO04	**Tololo Observa**	9.27	193		Pn	05 39 07.2	-3.1
ACCO	**Cerro Coronel**	9.45	183	*i* P	Pn	05 39 11.0	-1.9
AVFE	**Valle Fertil**	9.55	175	*i* P	Pn	05 39 12.0	-1.9
PTLB	**Pontes e Lacer**	10.49	59	*e*P	Pn	05 39 25.6	-1.0
PTLB	**Pontes e Lacer**	10.49	59	Pn	Pn	05 39 25.5	-1.0
RTLS	**Leoncito**	10.67	184	*i* P	Pn	05 39 26.0	-3.2
RTCV	**Cerro Valdivia**	10.71	180	*i* P	Pn	05 39 27.0	-2.4
AUSP	**Uspallata**	11.10	184	*i* P	Pn	05 39 32.0	-2.8
VILB	**Vilhena**	11.32	46	*e*P	Pn	05 39 36.6	-1.0
VILB	**Vilhena**	11.32	46	Pn	Pn	05 39 36.9	-0.8
ETMB	**Extrema**	11.44	11	*e*P	Pn	05 39 37.5	-1.7
ETMB	**Extrema**	11.44	11	Pn	Pn	05 39 37.3	-1.9
CPUP	**Villa Florida**	11.44	119	P	Pn	05 39 36.0	-3.1
	comp=E,0.2nm,0.3s,baz=290,slow=12,SNR=2.6						
CPUP	**Villa Florida**	11.44	119	*e*P	Pn	05 39 41.3	+2.2
VA03	**San Esteban**	11.75	189		Pn	05 39 40.0	-3.4
AQDB	**Aquidauana**	11.95	89	*e*P	Pn	05 39 47.1	+1.2
AQDB	**Aquidauana**	11.95	89	Pn	Pn	05 39 46.7	+0.8
SALV	**Santo Antonio**	13.17	69	*e*P	Pn	05 40 02.2	+0.5
BO01	**Tunca**	13.43	189	Pn	Pn	05 40 04.4	-0.6
BO02	**Sierra Bellavi**	13.78	188		Pn	05 40 09.8	+0.2
CZSB	**Cruzeiro do Su**	13.92	342	*e*P	Pn	05 40 10.0	-1.4
PDRB	**Porto dos Gac**	14.68	52	*e*P	Pn	05 40 17.6	-3.5
ML02	**Panimavida**	14.83	189		Pn	05 40 22.0	-0.7
PTGB	**Pitanga**	15.52	106	*e*P	P	05 40 33.4	+0.3
CLDB	**Colider**	15.86	52	*e*P	Pn	05 40 36.0	+0.4
PCMB	**Pacaembu**	16.03	95	*e*P	P	05 40 38.9	+0.2
CPSB	**Cacapava Do Su**	16.38	127	*e*P	Pn	05 40 42.0	+0.1
ARAG	**Araguaiana, MT**	16.68	74	*e*P	P	05 40 46.8	+0.9
TBTG	**Tabatinga, AM**	16.88	355	*e*P	P	05 40 47.4	-0.7
PLTB	**Pedras Altas**	17.00	132	*e*P	Pn	05 40 49.8	+0.3
ITRB	**Iturama**	17.02	88	*e*P	Pn	05 40 51.1	+1.1
FRTB	**Fartura**	17.64	101	*e*P	Pn	05 40 57.4	+0.1
TRQA	**Tornquist**	17.79	163		P	05 40 58.2	+0.3
TRQA				IAmb	IAmb	05 41 00.9	
	comp=Z,52nm,1.3s						
LC01	**Cunco**	17.97	189		Pn	05 41 00.6	-0.5
LC01				IAmb	IAmb	05 41 03.5	
	comp=Z,22nm,1.0s						
BB19B	**Bebedouro**	18.60	93	*e*P	P	05 41 07.0	0.0
SNDB	**Serra Nova Dou**	18.78	64	*e*P	P	05 41 08.9	-0.1
NPGB	**Novo Progresso**	18.87	44	*e*P	P	05 41 09.7	-0.3
IPMB	**Ipameri, GO**	19.33	84	*e*P	P	05 41 14.8	-0.2
MACA	**Manacapuru-AM**	19.38	24	*e*P	P	05 41 13.9	-1.6
MACA	**Manacapuru-AM**	19.38	24	P	P	05 41 14.6	-0.8
RCLB	**Rio Claro- Sao**	19.48	98	*e*P	P	05 41 15.9	-0.7
PLCA	**Paso Flores**	19.64	185	P	P	05 41 19.4	+1.2
	comp=Z,0.3nm,0.3s,baz=8.0,slow=13,SNR=9.9						
PLCA	**Paso Flores**	19.64	185	*e*P	P	05 41 19.2	+1.1
PET01	**Itanhaem-SP**	19.80	103	*e*P	P	05 41 20.6	+0.8
LL04	**Puerto Octay**	20.02	189	P	P	05 41 22.4	+0.3
LL04				IAmb	IAmb	05 41 26.6	
	comp=Z,32nm,1.2s						
BDFB	**Brasilia**	20.14	78	P	P	05 41 23.4	-0.4
	comp=Z,1.2nm,0.3s,baz=249,slow=10,SNR=13						
BDFB	**Brasilia**	20.14	78	P	P	05 41 23.5	-0.4
ITTB	**Itaituba**	20.73	38	*e*P	P	05 41 29.0	-1.0
PARB	**Paraibuna**	21.25	100	*e*P	P	05 41 34.8	-0.8
PEXB	**Peixe**	21.27	68	*e*P	P	05 41 35.0	-0.8
PTGA	**Pitinga**	21.89	23	P	P	05 41 41.5	-0.8
	comp=Z,2.7nm,0.3s,baz=323,slow=20,SNR=11						
PTGA	**Pitinga**	21.89	23	P	P	05 41 41.4	-0.9
BSCB	**Bom Sucesso**	22.10	94	*e*P	P	05 41 44.7	+0.1
OTAV	**Otavalo**	23.36	334	*e*P	P	05 41 56.4	-0.7
PRPB	**Parauapebas**	23.38	53	*e*P	P	05 41 56.4	-0.4
DIAM	**Diamantina, MG**	23.50	87	*e*P	P	05 41 58.2	+0.2
SMTB	**Santa Maria do**	23.52	62	*e*P	P	05 41 58.2	+0.2
MC01	**Montes Claros**	23.59	83	*e*P	P	05 41 58.5	-0.3
MALB	**Monte Alegre**	23.62	38	*e*P	P	05 41 58.8	-0.2
JANB	**Januaria**	23.71	79	*e*P	P	05 41 58.8	-1.1
SDBA	**SAO DESIDERIO**	24.13	73	*e*P	P	05 42 03.4	-0.3
DUB01	**Friburgo-RJ**	24.27	97	*e*P	P	05 42 04.8	0.0
BOAV	**Boa Vista**	24.62	19	*e*P	P	05 42 08.4	+0.4
BOAV	**Boa Vista**	24.62	19	P	P	05 42 09.0	+1.0
CAM01	**Campos-RJ**	24.94	97	*e*P	P	05 42 12.8	+1.9
SJMB	**Sao Joao De Ma**	25.74	89	*e*P	P	05 42 18.6	+0.4
RIB01	**Linhares ES**	26.38	91	*e*P	P	05 42 24.1	+0.1
NAN01	**Guarapari, ES**	26.89	88	*e*P	P	05 42 28.8	+0.2
GUA01	**Guaratinga, BA**	27.47	85	*e*P	P	05 42 34.3	+0.6
GDU01	**Guandu, BA**	28.49	80	*e*P	P	05 42 42.4	-0.4
NBPS	**Pedro II - PI**	31.05	61	*e*P	P	05 43 05.0	-0.5
JTS	**Las Juntas de**	35.16	331	P	P	05 43 41.3	+0.1
JTS				IAmb	IAmb	05 43 43.1	
	comp=Z,23nm,1.4s						
CELP	**Cerrillos**	38.99	3	P	P	05 44 13.6	+0.2
WVT	**Waverly**	59.81	342	P	P	05 46 51.0	-0.1
WVT				IAmb	IAmb	05 46 52.0	
	comp=Z,14nm,1.1s						
T50A	**Nancy**	59.85	345	P	P	05 46 51.7	+0.3
T50A				IAmb	IAmb	05 46 52.5	
	comp=Z,5.6nm,0.8s						
T47A	**Sharon Grove**	60.41	343	P	P	05 46 55.3	+0.1
Q54A	**Coxs Mills**	60.89	349	P	P	05 46 59.5	+1.0
HHAR	**Hobbs**	61.96	337	P	P	05 47 06.4	+0.7
HHAR				IAmb	IAmb	05 47 07.3	
	comp=Z,12nm,1.2s						
FVM	**French Village**	62.31	340	P	P	05 47 08.5	+0.6
CCM	**Cathedral Cave**	62.63	340	P	P	05 47 10.4	+0.3
CCM				IAmb	IAmb	05 47 11.5	
	comp=Z,6.4nm,0.8s						
M57A	**Sunshine Farm,**	62.65	353	P	P	05 47 11.4	+1.3
M57A				IAmb	IAmb	05 47 24.9	
	comp=Z,16nm,1.4s						
S39A	**Bolivar**	63.00	338	P	P	05 47 13.0	+0.5
S39A				IAmb	IAmb	05 47 14.1	
	comp=Z,8.4nm,0.8s						
DBIC	**Dimbokro**	68.22	73	P	P	05 47 46.4	-0.2
	comp=Z,6.9nm,0.8s,baz=271,slow=7.0,SNR=5.5						
ULM	**Lac du Bonnet**	75.08	342	P	P	05 48 27.2	+0.4
	comp=Z,6.1nm,0.8s,baz=146,slow=4.8,SNR=6.1						
ULM	**Lac du Bonnet**	75.08	342	IAmb	IAmb	05 48 27.9	
	comp=Z,6.6nm,0.9s						
NVAR	**Mina Array Bea**	75.45	322	P	P	05 48 32.1	+2.5
	comp=Z,0.5nm,0.7s,baz=106,slow=6.7,SNR=3.5						
SYO	**Syowa Base**	76.72	159	⇓*e*X	P	05 48 31.0	-5.0
TORD	**Torodi Ar. Bea**	76.83	70	P	P	05 48 37.6	0.0
	comp=Z,15nm,0.9s,baz=254,slow=5.4,SNR=63						
BOSA	**Boshof**	83.26	118	P	P	05 49 11.9	-0.3
	comp=Z,4.0nm,0.9s,baz=197,slow=5.3,SNR=4.4						
ESDC	**Sonseca Array**	85.26	44	P	P	05 49 23.0	+1.2
	comp=Z,2.1nm,1.0s,baz=250,slow=4.4,SNR=7.7						
YKA	**Yellowknife Ar**	90.96	340	P	P	05 49 48.9	+0.6
	comp=Z,0.6nm,0.5s,baz=91,slow=12,SNR=7.5						
ASAR	**Alice Springs**	130.45	207	PKP	PKiKP	05 55 56.8	+0.4
	comp=Z,0.7nm,0.5s,baz=130,slow=1.9,SNR=7.9						
WRA	**Warramunga Arr**	133.50	210	PKP	PKPdf	05 56 01.8	+0.4
	comp=Z,1.0nm,0.6s,baz=157,slow=1.7,SNR=16						
KURBB	**Kurchatov Arra**	140.78	33	PKP	PKPdf	05 56 12.0	-1.8
	comp=Z,0.4nm,0.5s,baz=306,slow=3.1,SNR=1.9						
ZALV	**Zalesovo Beam**	141.43	25	PKP	PKiKP	05 56 16.7	-1.0
	comp=Z,1.9nm,0.6s,baz=336,slow=3.3,SNR=5.5						
MKAR	**Makanchi Array**	145.07	36	PKPbc	PKPdf	05 56 22.5	+1.0
	comp=Z,9.6nm,0.7s,baz=316,slow=3.1,SNR=72						
SONM	**Songino Array**	153.02	8	PKPbc	PKiKP	05 56 43.5	+1.6
	comp=Z,0.9nm,0.6s,baz=338,slow=2.0,SNR=4.4						

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*IDC **17** 05:44:24.8±2.0,31°.26N×128°.22E,h0^{km},mb3.2/2, mb1 3.5/3,mb1mx3.2/31,mbtmp3.3/3,ML3.1/1,MS2.9/6, Ms1 2.9/6,ms1mx2.7/24,Error ellipse: s-maj=71.6km s-min=26.6km az=104.0*
*NIED **17** 05:44:26.0,31°.45N×128°.75E,h4^{km},MW3.9,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-1.95; M$_{\theta\theta}$1.41; M$_{\phi\phi}$0.54; M$_{r\theta}$-3.56; M$_{\theta\phi}$6.80; M$_{\phi r}$-0.15; Fault plane solution: M$_0$7.77000×10^{14} NP1:φ$_s$88.00000°, δ82.00000°,λ-30.00000°. NP2:φ$_s$183.00000°,δ60.00000°, λ-171.00000°.*
*JMA **17** 05:44:25.9±0.3,31°.45N×128°.75E,h4^{km}±3^{km},M4.0*
ISC 17 05:44:25.8±1.1**,31°.42N**±0°.05×**128°.75E**±0°.07**,h10**^{km}**,n16,** σ**0^{s}.74**/14**,1D,Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	**Shimokoshiki**	0.86	73	⇓P	Pg	05 44 42.4	-0.1
JSJ				*e*S	Sg	05 44 53.8	+0.1
JFU	**Fukue jima 2**	1.23	360	P	Pb	05 44 48.7	-0.5
JFU				*e*S	Sg	05 45 04.8	-0.6
JSU	**Suzuyama**	1.46	86	P	Pb	05 44 53.3	+0.2
JNN	**Nakanoshima**	1.85	148	P	Pb	05 45 00.0	+0.2
JNN				*e*S	Sb	05 45 23.7	+0.7
JTZ	**Takazaki**	2.05	76	P	Pn	05 45 01.0	+0.6
JTN	**Tanegashima 3**	2.06	111	P	Pn	05 44 59.9	-0.7
JIU3	**Izumi3**	2.08	57	P	Pn	05 45 01.5	+0.7
JNU	**Nakatsue**	2.47	46	Pn	Pg	05 45 12.8	-0.5
	baz=180,slow=20						
KSRS	**Korea Array**	6.05	354	Pn	Pn	05 45 56.9	+1.5
	0.4nm,0.3s,baz=174,slow=13,SNR=4.3						
KSRS				LR	LR	05 47 56.0	
	comp=Z,23nm,20.5s,baz=170,slow=34						
MJAR	**Matsushiro Arr**	9.37	54	LR	LR	05 50 34.9	
	comp=Z,56nm,18.9s,baz=240,slow=38						
JCJ	**Chichijima**	12.49	107	LR	LR	05 51 28.2	
	comp=Z,29nm,18.6s,baz=152,slow=33						
ASAJ	**Asahikawa**	16.71	37	LR	LR	05 54 16.4	
	comp=Z,63nm,19.7s,baz=227,slow=35						
SONM	**Songino Array**	23.64	320	LR	LR	06 00 00.9	
	comp=Z,90nm,18.3s,baz=105,slow=40						
TLY	**Talaya**	27.38	325	LR	LR	06 02 26.2	
	comp=Z,72nm,18.8s,baz=166,slow=40						
WRA	**Warramunga Arr**	51.35	173	P	P	05 53 29.6	-1.0
	0.3nm,0.8s,baz=353,slow=8.2,SNR=2.1						
ASAR	**Alice Springs**	55.00	174	P	P	05 53 57.6	+0.1
	0.4nm,0.7s,baz=5.2,slow=11,SNR=4.7						

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*VAO **17** 06:02:36.6±0.4,24°.03S×67°.03W,h164^{km},mb4.9*
*SJA **17** 06:02:37.5±0.9,24°.08S×67°.12W,h201^{km}±6^{km},ML4.3, MW4.1*
*IDC **17** 06:02:38.3±0.8,24°.01S×66°.91W,h172^{km}±7^{km},mb4.1/17, mb1 4.3/23,mb1mx4.2/33,mbtmp4.6/23,MS2.7/1, Ms1 2.7/1,ms1mx2.4/26,Error ellipse: s-maj=11.6km s-min=9.4km az=55.0*
*NEIC **17** 06:02:38.0±1.9,24°.08S±0°.05×66°.98W±0°.08,h168^{km}±5^{km}, mb4.5/80,Error ellipse: s-maj=11.3km s-min=7.5km az=94.0*
*GUC **17** 06:02:40.4±0.4,23°.92S×67°.46W,h225^{km}±5^{km},ML4.8*
ISC 17 06:02:38.4±0.6**,24°.03S**±0°.03×**67°.13W**±0°.03**,h180**^{km}±5^{km}**, n252,**σ**1^{s}.40**/266**,mb4.5**/48**,18C-1D,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLA	**San Lorenzo**	1.63	115	⇓*i*P	Pn	06 03 13.4	+1.7
SLA				*i* S	Sn	06 03 39.7	+2.0
SLA	**San Lorenzo**	1.63	115	*e*P	Pn	06 03 13.5	+1.7
SLA				*e*S	Sn	06 03 39.7	+2.0
SLA				IAML		06 03 40.4	
	comp=Z,1µm,0.9s						
HJA	**Humahuaca**	1.77	63	*e*P	Pn	06 03 15.1	+1.6
HJA				*e*S	Sn	06 03 43.3	+2.8
AZAP	**Zapla**	1.89	96	*e*P	Pn	06 03 15.8	+1.3
AZAP				*e*S	Sn	06 03 45.0	+2.5
AZAP				IAML		06 03 51.6	
	comp=Z,1µm,1.2s						
LVC	**Limon Verde**	2.16	310	P	Pn	06 03 19.5	+1.9
	comp=Z,90nm,0.3s,baz=139,slow=7.4,SNR=1951						
LVC				LR	LR	06 03 44.8	
	comp=Z,156nm,19.7s,baz=142,slow=29						
LVC				S	Sn	06 03 49.6	+1.7
	comp=Z,334nm,0.3s,baz=52,slow=21,SNR=44						
LVC	**Limon Verde**	2.16	310	⇑*e*P	Pn	06 03 19.1	+1.5
LVC				*i* S	Sn	06 03 49.3	+1.3
LVC	**Limon Verde**	2.16	310	*e*P	Pn	06 03 19.5	+1.9
LVC				*e*S	Sn	06 03 50.3	+2.3
LVC				IAML		06 03 51.5	
	comp=Z,799nm,0.9s						
PB15	**IPOC Station P**	2.30	290	⇑*i*P	Pn	06 03 20.7	+1.7
PB15				*e*S	Sn	06 03 51.5	+1.1
PB15	**IPOC Station P**	2.30	290		Pn	06 03 20.7	+1.7
PB15	**IPOC Station P**	2.30	290	*e*P	Pn	06 03 20.7	+1.7
FSA	**Cafayete**	2.32	154	*e*P	Pn	06 03 20.0	+0.8
FSA				*e*S	Sn	06 03 50.6	-0.4
YJA	**Yavi**	2.37	39	*e*P	Pn	06 03 21.9	+1.9
ASTB	**Santa Barbara**	2.45	89	*e*P	Pn	06 03 21.7	+1.1
PB06	**IPOC Station P**	2.60	300	⇑*i*P	Pn	06 03 24.0	+1.6
PB06				*i* S	Sn	06 03 56.9	+0.3
PB06				IAML		06 03 59.6	
	comp=E,4µm,0.3s						
PB06	**IPOC Station P**	2.60	300		Pn	06 03 23.7	+1.3
PB06	**IPOC Station P**	2.60	300	*e*P	Pn	06 03 23.8	+1.4
PB06				*e*S	Sn	06 03 57.3	+0.7
ALOL	**LOMAS DE OLMED**	2.89	86	*e*P	Pn	06 03 26.1	+0.4
PB09	**IPOC Station P**	2.95	318	⇑*i*P	Pn	06 03 28.6	+2.0
PB09				*i* S	Sn	06 04 05.0	+0.7
PB09				IAML		06 04 07.6	
	comp=N,1µm,0.4s						
PB09	**IPOC Station P**	2.95	318		Pn	06 03 28.7	+2.0
PB09	**IPOC Station P**	2.95	318	*e*P	Pn	06 03 27.9	+1.2
PB09				*e*S	Sn	06 04 05.6	+1.3
PB14	**IPOC Station P**	3.05	258	⇑*i*P	Pn	06 03 28.4	+0.5
PB14				*i* S	Sn	06 04 04.6	-1.8
PB14	**IPOC Station P**	3.05	258		Pn	06 03 28.4	+0.5
PB14	**IPOC Station P**	3.05	258	*e*P	Pn	06 03 28.4	+0.5
PB14				*e*S	Sn	06 04 06.5	+0.1
PB14				IAML		06 04 08.7	
	comp=Z,610nm,0.2s						
PB05	**IPOC Station P**	3.06	292	⇑*i*P	Pn	06 03 28.6	+0.8
PB05				*e*S	Sn	06 04 05.1	-1.2
PB05				IAML		06 04 09.7	
	comp=E,1µm,0.5s						
PB05	**IPOC Station P**	3.06	292	*e*P	Pn	06 03 28.9	+1.1
PB05				IAML		06 04 12.7	
	comp=Z,789nm,0.4s						
PB03	**IPOC Station P**	3.12	309	⇑*i*P	Pn	06 03 29.8	+1.1
PB03				*i* S	Sn	06 04 07.1	-0.6

PB03				IAML		06 04 09.1	
	comp=N,2µm,0.2s						
PB10	IPOC Station P	3.18	279	⇑iP	Pn	06 03 30.2	+1.0
PB10				eS	Sn	06 04 07.7	-1.2
PB10				IAML		06 04 13.2	
	comp=E,730nm,0.3s						
PB10	IPOC Station P	3.18	279		Pn	06 03 30.2	+1.0
PB10	IPOC Station P	3.18	279	eP	Pn	06 03 30.2	+1.0
PB10				eS	Sn	06 04 08.6	-0.2
PB10				IAML		06 04 10.7	
	comp=Z,507nm,0.5s						
AHML	Horco Molle	3.19	150	⇑iP	Pn	06 03 29.6	+0.3
AHML				eS	Sn	06 04 07.3	-2.0
AHML	Horco Molle	3.19	150	eP	Pn	06 03 29.7	+0.3
AHML				eS	Sn	06 04 08.1	-1.2
PB04	IPOC Station P	3.25	301	⇑iP	Pn	06 03 31.1	+0.9
PB04				eS	Sn	06 04 09.3	-1.4
PB04				IAML		06 04 13.7	
	comp=E,2µm,0.3s						
PB04	IPOC Station P	3.25	301		Pn	06 03 31.2	+0.9
AC02	Maricunga	3.33	212	⇑iP	Pn	06 03 32.2	+0.7
AC02				eS	Sn	06 04 13.2	+0.1
AC02	Maricunga	3.33	212		Pn	06 03 32.2	+0.7
AC02	Maricunga	3.33	212	eP	Pn	06 03 32.3	+0.7
AC02				eS	Sn	06 04 11.9	-1.1
PB07	IPOC Station P	3.42	311	⇑iP	Pn	06 03 33.3	+0.9
PB07				i S	Sn	06 04 13.5	-1.1
PB07	IPOC Station P	3.42	311		Pn	06 03 33.3	+0.9
PB01	IPOC Station P	3.68	323	⇑iP	Pn	06 03 36.3	+0.7
PB01				eS	Sn	06 04 19.5	-0.8
PB01	IPOC Station P	3.68	323		Pn	06 03 36.4	+0.7
PB02	IPOC Station P	3.71	316	⇑iP	Pn	06 03 36.5	+0.5
PB02				eS	Sn	06 04 19.2	-1.8
PATCX	Punta Patache	4.24	318	eP	Pn	06 03 42.7	0.0
PATCX				eS	Sn	06 04 29.0	-4.0
PATCX	Punta Patache	4.24	318		Pn	06 03 43.0	+0.3
PB08	IPOC Station P	4.30	334	⇑eP	Pn	06 03 45.1	+1.4
PB08				i S	Sn	06 04 34.8	0.0
PB08	IPOC Station P	4.30	334		Pn	06 03 45.0	+1.3
TA01	Diego Aracena	4.46	320	eP	Pn	06 03 45.7	+0.4
TA01				eS	Sn	06 04 35.8	-2.0
TA01	Diego Aracena	4.46	320		Pn	06 03 45.7	+0.4
HMBC	Humberstone	4.52	325	⇑eP	Pn	06 03 45.6	-0.7
GO03	Copiap	4.52	218	eP	Pn	06 03 44.8	-1.4
GO03	Copiap	4.52	218		Pn	06 03 44.8	-1.4
CYA	Choya	4.56	165	eP	Pn	06 03 46.9	+0.3
CYA				eS	Sn	06 04 38.2	-2.0
TA02	Huaiquique	4.66	323	⇑eP	Pn	06 03 48.4	+0.4
TA02				eS	Sn	06 04 40.4	-2.1
TA02	Huaiquique	4.66	323		Pn	06 03 48.2	+0.2
PB11	IPOC Station P	4.85	331	⇑eP	Pn	06 03 50.2	-0.4
PB11				eS	Sn	06 04 44.5	-2.7
PB11	IPOC Station P	4.85	331		Pn	06 03 50.3	-0.4
AC04	Llanos de Chal	5.47	220	eP	Pn	06 03 56.2	-2.2
AC04	Llanos de Chal	5.47	220		Pn	06 03 56.3	-2.1
LCO	Las Campanas	5.91	212		Pn	06 04 02.2	-2.2
PB16	IPOC Station P	6.08	338		Pn	06 04 07.5	+0.5
GO04	Tololo Observa	6.94	207		Pn	06 04 16.6	-1.3
LPAZ	La Paz	7.76	353	P	Pn	06 04 31.0	+1.9
	comp=E,6.9nm,0.3s,baz=144,slow=9.1,SNR=205						
LPAZ				S	Sn	06 05 53.9	-2.7
	baz=330,slow=20,SNR=1.6						
LPAZ	La Paz	7.76	353	Pn	Pn	06 04 30.8	+1.7
CPUP	Villa Florida	9.17	107	P	Pn	06 04 45.5	-1.5
	comp=E,0.8nm,0.3s,baz=292,slow=12,SNR=21						
CPUP	Villa Florida	9.17	107	eP	Pn	06 04 45.6	-1.4
VA03	San Esteban	9.21	198		Pn	06 04 46.0	-1.6
SIV	San Ignacio	9.81	37	P	Pn	06 04 54.2	-1.4
	comp=E,4.2nm,0.3s,baz=214,slow=12,SNR=97						
SIV				S	Sn	06 06 31.3	-14
	comp=E,0.5nm,0.3s,baz=223,slow=15,SNR=6.1						
MT02	Curacav	9.85	200		Pn	06 04 53.5	-2.4
MT05	Renca	9.85	198		Pn	06 04 54.4	-1.6
MT09	Talagante	10.29	198		Pn	06 04 59.6	-2.1
MT01	Popeta	10.45	199		Pn	06 05 01.7	-1.9
BO01	Tunca	10.89	198		Pn	06 05 07.8	-1.7
ITQB	Itaqui	10.93	123	Pn	Pn	06 05 08.5	-1.5
AQDB	Aquidauana	11.16	74	eP	Pn	06 05 11.0	-2.0
AQDB	Aquidauana	11.16	74	Pn	Pn	06 05 11.4	-1.6
BO02	Sierra Bellavi	11.19	196		Pn	06 05 12.7	-0.7
PTLB	Pontes e Lacer	11.37	43	eP	Pn	06 05 14.8	-1.0
PTLB	Pontes e Lacer	11.37	43	Pn	Pn	06 05 14.6	-1.2
ML02	Panimavida	12.27	197	Pn	Pn	06 05 26.1	-1.1
VILB	Vilhena	12.82	32	Pn	Pn	06 05 34.7	+0.3
PP1B	Ponte de Pedra	13.11	63	eP	Pn	06 05 36.5	-1.5
SALV	Santo Antonio	13.44	55	eP	Pn	06 05 40.5	-1.7
CPSB	Cacapava Do Su	13.73	121	eP	Pn	06 05 43.8	-1.9
PTGB	Pitanga	13.75	96	eP	Pn	06 05 46.0	-0.1
ETMB	Extrema	14.16	4	eP	Pn	06 05 50.0	-1.2
ETMB	Extrema	14.16	4	Pn	Pn	06 05 50.3	-0.8
PLTB	Pedras Altas	14.22	126	eP	Pn	06 05 49.3	-2.5
PLTB	Pedras Altas	14.22	126	Pn	Pn	06 05 49.6	-2.2
TRQA	Tornquist	14.66	164	P	P	06 05 58.1	-0.7
PCMB	Pacaembu	14.83	84	eP	Pn	06 05 57.4	-2.0
LC01	Cunco	15.37	194	Pn	Pn	06 06 04.8	-1.1
LC01				IAmb	IAmb	06 06 06.9	
	comp=Z,16nm,0.8s						
SAML	Samuel	15.46	15		Pn	06 06 07.0	-0.2
CNLB	Canela	15.47	113	eP	Pn	06 06 04.7	-2.5
PDRB	Porto dos Gac	15.81	40	eP	Pn	06 06 10.7	-0.9
FRTB	Fartura	16.11	91	eP	P	06 06 12.8	-2.1
ITRB	Iturama	16.15	78	eP	P	06 06 13.4	-2.0
LR03	Panguipulli	16.17	195	P	P	06 06 15.2	-0.3
TIJ01	Guaruva-PR	16.52	98	eP	P	06 06 17.6	-2.0
ARAG	Araguaiana, MT	16.60	63	eP	P	06 06 19.6	-0.8
TER01	Tubaro-SC	16.75	109	eP	P	06 06 20.4	-1.5
PLCA	Paso Flores	16.91	189	P	P	06 06 23.6	0.0
	comp=Z,1.0nm,0.3s,baz=11,slow=10.0,SNR=31						
PLCA				PcP	PcP	06 11 01.2	+0.9
	comp=Z,0.1nm,0.3s,baz=63,slow=5.2,SNR=3.3						
PLCA	Paso Flores	16.91	189	eP	P	06 06 23.1	-0.5
PLCA	Paso Flores	16.91	189		P	06 06 23.8	+0.2
PLCA				IAmb	IAmb	06 06 31.6	
	comp=Z,24nm,0.8s						
CLDB	Colider	16.95	41	eP	P	06 06 23.6	-0.7
CZSB	Cruzeiro do Su	17.06	341		Pn	06 06 26.7	+0.2
CZSB				IAmb	IAmb	06 06 36.2	
	comp=Z,19nm,0.6s						
LL04	Puerto Octay	17.41	193	P	P	06 06 28.7	-0.3
BB19B	Bebedouro	17.43	84	eP	P	06 06 27.2	-2.3
RCLB	Rio Claro- Sao	18.08	89	eP	P	06 06 35.4	-1.2
PET01	Itanhaem-SP	18.12	95	eP	P	06 06 36.1	-0.9
LL05	Los Muermos	18.12	196	P	P	06 06 36.6	-0.2
VAO	Valinhos	18.52	91	eP	P	06 06 40.1	-1.3
IPMB	Ipameri, GO	18.65	75	eP	P	06 06 41.4	-1.4
LL01	San Ignacio de	18.82	192	P	P	06 06 44.6	+0.3
SNDB	Serra Nova Dou	19.22	54	eP	P	06 06 47.9	-1.0
PARB	Paraibuna	19.71	92	eP	P	06 06 52.2	-2.0
GO07	Milladeo Hill,	19.79	194	P	P	06 06 54.3	-0.4
BDFB	Brasilia	19.80	69	P	P	06 06 55.0	-0.4
	comp=Z,20nm,0.3s,baz=241,slow=11,SNR=339						
BDFB	Brasilia	19.80	69	P	P	06 06 54.9	-0.4
TBTG	Tabatinga, AM	19.91	352	eP	P	06 06 57.5	+1.2
TBTG	Tabatinga, AM	19.91	352	P	P	06 06 57.8	+1.5
NPGB	Novo Progresso	20.31	36	eP	P	06 06 58.6	-2.1
BSCB	Bom Sucesso	20.87	86	eP	P	06 07 05.0	-1.6
MAN01	Angra dos Reis	21.28	92	eP	P	06 07 09.1	-1.9
PEXB	Peixe	21.44	60	eP	P	06 07 10.8	-1.8
MACA	Manacapuru-AM	21.66	18	eP	P	06 07 13.4	-1.5
MACA	Manacapuru-AM	21.66	18	P	P	06 07 13.4	-1.5
VAS01	Vassouras-RJ	21.84	90	eP	P	06 07 15.6	-1.2
COYC	Coyhaique	21.87	189	P	P	06 07 16.4	-0.3
ITTB	Itaituba	22.42	31	eP	P	06 07 20.1	-2.2
DIAM	Diamantina, MG	22.59	80	eP	P	06 07 22.8	-1.3
DUB01	Friburgo-RJ	22.85	90	eP	P	06 07 25.4	-0.9
MC01	Montes Claros	22.90	76	eP	P	06 07 24.6	-2.2
JANB	Januaria	23.25	72	eP	P	06 07 28.4	-1.6
CAM01	Campos-RJ	23.55	90	eP	P	06 07 30.9	-1.7
SMTB	Santa Maria do	24.00	54	eP	P	06 07 35.5	-1.3
SDBA	SAO DESIDERIO	24.02	65	eP	P	06 07 35.7	-1.3
PTGA	Pitinga	24.18	18	P	P	06 07 37.8	-0.5
	comp=Z,9.0nm,0.4s,baz=319,slow=22,SNR=22						
PTGA	Pitinga	24.18	18	P	P	06 07 37.8	-0.5
PTGA				IAmb	IAmb	06 07 38.9	
	comp=Z,10nm,0.5s						
PRPB	Parauapebas	24.33	46	eP	P	06 07 37.5	-2.2
ALF01	Guarapari-ES	24.64	87	eP	P	06 07 41.2	-1.4
SJMB	Sao Joao De Ma	24.71	83	eP	P	06 07 41.5	-1.7
BSFB	Barra de Sao F	24.98	83	eP	P	06 07 44.4	-1.3
RIB01	Linhares ES	25.26	85	eP	P	06 07 46.9	-1.2
MALB	Monte Alegre	25.32	31	eP	P	06 07 47.1	-1.5
NAN01	Guarapari, ES	25.93	81	eP	P	06 07 52.7	-1.5
OTAV	Otavalo	26.50	334	eP	P	06 08 00.6	+0.8
GUA01	Guaratinga, BA	26.64	79	eP	P	06 07 59.1	-1.5
BOAV	Boa Vista	27.04	15	eP	P	06 08 04.3	+0.2
BOAV	Boa Vista	27.04	15	P	P	06 08 04.4	+0.3
BOAV				IAmb	IAmb	06 08 07.2	
	comp=Z,12nm,1.4s						
GARC	Garzon, Huila	27.30	342	eP	P	06 08 08.7	+2.0
CMC01	Camacan, BA	27.34	77	eP	P	06 08 05.7	-1.2
NBIT	Itapeh - BA	27.59	76	eP	P	06 08 07.9	-1.1
SOTA	Rioblanco	27.59	339	eP	P	06 08 12.2	+2.6
MCPB	Macapa, AP	27.70	34	eP	P	06 08 09.0	-0.9
GDU01	Guandu, BA	27.96	73	eP	P	06 08 10.2	-2.2
TMAB	Tom-Au,PA,Br	28.32	43	eP	P	06 08 14.8	-0.7
NBPN	Ponto Novo - B	28.77	68	eP	P	06 08 17.8	-1.7
ORTC	Ortega, Tolima	28.87	343	eP	P	06 08 21.6	+1.2
PLMC	San Jos del P	30.11	342	eP	P	06 08 32.0	+0.6
GUY2C	Guyana, Caldas	30.16	344	eP	P	06 08 33.5	+1.2
RUSC	La Rusia	30.30	348	eP	P	06 08 33.5	0.0
ROSB	Rosrio	30.58	50	eP	P	06 08 34.9	-0.5
NBLA	Lagarto - SE	30.75	70	eP	P	06 08 34.6	-2.5
USHA	Ushuaia	30.78	181	P	P	06 08 36.3	-0.5
	comp=Z,6.0nm,0.8s,baz=17,slow=11,SNR=1.9						
HELC	Santa Helena	31.13	344	eP	P	06 08 40.7	0.0
NBPS	Pedro II - PI	31.52	56	eP	P	06 08 41.4	-2.4
NBMA	Muriti-CE	31.83	63	eP	P	06 08 43.9	-2.6
MDP	Montagnes des	32.21	28	P	P	06 08 48.5	-1.2
	comp=Z,8.3nm,0.3s,baz=197,slow=10,SNR=3.7						
ZARC	Zaragoza, Cauc	32.22	346	eP	P	06 08 48.2	-1.6
NBPB	Pedra_Branca-C	32.24	60	eP	P	06 08 48.5	-1.6
UREC	San Jos de Ur	32.63	344	eP	P	06 08 53.6	+0.2
NBAN	Anadia - AL	32.70	69	eP	P	06 08 52.6	-1.5
NBMO	Morrinhos-CE	33.28	56	eP	P	06 08 57.8	-1.3
NBLV	Livramento - P	33.35	65	eP	P	06 08 58.5	-1.2
NBCL	Cascavel-CE	34.06	59	eP	P	06 09 04.8	-0.9
NBPA	Parau_RN	34.09	63	eP	P	06 09 04.3	-1.8
NBRF	Rio Formoso -	34.17	69	eP	P	06 09 04.8	-1.9
SJCC	San Jacinto, C	34.62	346	eP	P	06 09 09.9	-0.7
NBPV	Pedro Velho	35.22	65	eP	P	06 09 15.0	-0.8
PMSA	Palmer Station	40.79	178	P	P	06 10 01.4	-0.2
	comp=Z,9.4nm,0.9s,baz=38,slow=3.4,SNR=4.6						
PMSA	Palmer Station	40.79	178	IAmb	IAmb	06 10 04.8	
	comp=Z,17nm,1.1s						
CELP	Cerrillos	41.85	1	P	P	06 10 10.1	-0.8
MTO3	Montecristo	43.94	328	P	P	06 10 29.1	+1.1
MTO3				IAmb	IAmb	06 10 30.7	
	comp=Z,11nm,0.8s						
VNA3	Neumayer Olymp	57.17	161	P	P	06 12 06.6	+0.6
VNA1	Neumayer--Stat	57.36	160	P	P	06 12 08.2	+0.9
VNA2	Neumayer--Watz	57.73	160	P	P	06 12 10.1	+0.2
	baz=286,slow=7.8						
SNAA	Sanae	59.36	161	P	P	06 12 21.6	+0.3
SNAA	Sanae	59.36	161	P	P	06 12 21.9	+0.6
	comp=Z,4.2nm,0.6s,baz=277,slow=8.6,SNR=43						
SNAA				PcP	PcP	06 13 07.9	+0.6
	comp=Z,2.1nm,0.6s,baz=289,slow=5.9,SNR=2.4						
SNAA	Sanae	59.36	161	P	P	06 12 21.6	+0.3
SNAA				IAmb	IAmb	06 12 22.6	
	comp=Z,5.2nm,0.7s						
JSC	Jenkinsville	59.52	346	P	P	06 12 23.8	+1.1
JSC				IAmb	IAmb	06 12 24.5	
	comp=Z,13nm,1.3s						
JCT	Junction City	62.61	328	P	P	06 12 44.6	+1.0
WVT	Waverly	62.95	341	P	P	06 12 45.6	-0.1
WVT				IAmb	IAmb	06 12 46.5	
	comp=Z,6.8nm,0.7s						
T47A	Sharon Grove	63.54	342	IAmb	IAmb	06 12 50.5	
	comp=Z,6.7nm,0.8s						
TXAR	Lajitas Array	63.63	325	P	P	06 12 51.8	+1.3
	comp=Z,1.0nm,0.7s,baz=158,slow=8.1,SNR=8.3						
TX31	Lajitas Ar. Si	63.63	325	IAmb	IAmb	06 13 15.8	
	comp=Z,11nm,1.4s						
PBMO	Poplar Bluff	64.35	339	IAmb	IAmb	06 12 56.1	
	comp=Z,8.9nm,1.0s						
U40A	Yellville	64.79	337	IAmb	IAmb	06 12 59.2	
	comp=Z,7.6nm,1.1s						
CCM	Cathedral Cave	65.78	339	P	P	06 13 04.2	+0.2
CCM				IAmb	IAmb	06 13 05.3	
	comp=Z,7.6nm,0.9s						
S39A	Bolivar	66.15	337	IAmb	IAmb	06 13 08.0	
	comp=Z,13nm,1.1s						
QSPA	South Pole Qui	66.18	180	P	P	06 13 07.2	+0.7
DBIC	Dimbokro	67.92	72	P	P	06 13 16.3	-1.8
	comp=Z,5.6nm,0.5s,baz=243,slow=4.6,SNR=10						
DBIC	Dimbokro	67.92	72	IAmb	IAmb	06 13 20.8	
	comp=Z,6.6nm,0.7s						
121A	Cookes Peak, D	68.33	324	IAmb	IAmb	06 13 24.0	
	comp=Z,9.1nm,0.9s						
ANMO	Albuquerque	69.50	326	P	P	06 13 29.7	+2.0
ANMO				IAmb	IAmb	06 13 30.7	
	comp=Z,6.0nm,0.9s						
TUC	Tucson	69.83	321	P	P	06 13 31.7	+2.1
T25A	Trinidad	70.25	329	IAmb	IAmb	06 13 35.2	
	comp=Z,5.7nm,0.8s						
SDCO	Great Sand Dun	71.25	329	P	P	06 13 40.0	+1.6
X16A	Lo Mia Camp, P	71.75	323	IAmb	IAmb	06 13 44.9	
	comp=Z,7.3nm,1.2s						
KOWA	Kowa	72.55	65	P	P	06 13 45.8	-0.4
KOWA				IAmb	IAmb	06 13 49.1	
	comp=Z,7.9nm,0.7s						
U15A	North Rim	73.70	323	IAmb	IAmb	06 13 56.6	
	comp=Z,6.1nm,0.9s						
KNB	Kanab	74.43	324	IAmb	IAmb	06 14 00.8	
	comp=Z,13nm,0.9s						
O20A	White River Ci	74.44	328	IAmb	IAmb	06 14 00.1	
	comp=Z,8.7nm,0.9s						
VNDA	Vanda	74.66	190	P	P	06 13 59.8	+2.4
	comp=Z,3.4nm,0.9s,baz=133,slow=7.1,SNR=11						
VNDA	Vanda	74.66	190	P	P	06 13 59.5	+2.0
P18A	Preston Nutter	75.03	327	IAmb	IAmb	06 14 03.8	
	comp=Z,6.8nm,0.8s						
CCUT	Cedar City	75.11	324	P	P	06 14 03.9	+3.0
CCUT				IAmb	IAmb	06 14 04.9	
	comp=Z,11nm,0.8s						
RWWY	Rawlins	75.18	330	IAmb	IAmb	06 14 22.3	
	comp=Z,9.4nm,1.0s						
SUR	Sutherland	75.90	119	P	P	06 14 06.4	+0.7
	comp=Z,7.2nm,0.8s,baz=247,slow=14,SNR=2.5						
PSUT	Pine Spring	76.09	324	IAmb	IAmb	06 14 09.8	
	comp=Z,5.9nm,0.7s						
TORD	Torodi Ar. Bea	76.69	69	P	P	06 14 09.3	-0.7
	comp=Z,8.2nm,0.5s,baz=261,slow=5.5,SNR=81						
TORD	Torodi Ar. Bea	76.69	69	P	P	06 14 09.0	-1.1
TORD				IAmb	IAmb	06 14 10.4	
	comp=Z,8.8nm,0.7s						
PD31	Pinedale Array	77.11	329	P	P	06 14 13.2	+1.1
PDAR	Pinedale Array	77.11	329	P	P	06 14 13.7	+1.6
	comp=Z,0.8nm,0.5s,baz=138,slow=7.6,SNR=9.6						
TSUM	Tsumeb	77.76	106	P	P	06 14 16.1	-0.1
	comp=Z,3.7nm,0.5s,baz=240,slow=8.9,SNR=7.6						
AHID	Auburn Hatcher	77.84	328	IAmb	IAmb	06 14 18.4	
	comp=Z,6.7nm,0.8s						
ULM	Lac du Bonnet	78.22	342	P	P	06 14 18.5	+0.8
	comp=Z,6.0nm,0.7s,baz=150,slow=7.9,SNR=5.0						
NVAR	Mina Array Bea	78.49	321	P	P	06 14 22.1	+2.3
	comp=Z,1.2nm,0.7s,baz=148,slow=6.1,SNR=9.2						
KVN	Kaiserville	78.80	322	IAmb	IAmb	06 14 24.1	
	comp=Z,6.5nm,0.8s						
YMR	Madison River	79.22	330	P	P	06 14 26.2	+2.5
YMR				IAmb	IAmb	06 14 27.2	
	comp=Z,5.3nm,0.8s						
YHH	Holmes Hill	79.26	330	P	P	06 14 26.6	+2.7
YHH				IAmb	IAmb	06 14 27.4	
	comp=Z,5.7nm,0.7s						
YERR	Yerington	79.40	321	IAmb	IAmb	06 14 27.9	
	comp=Z,4.3nm,0.7s						
PNTR	Pine Nut	79.68	321	IAmb	IAmb	06 14 30.0	
	comp=Z,9.6nm,0.7s						
PAHR	Pah Rah Range	79.97	322	IAmb	IAmb	06 14 31.0	
	comp=Z,9.2nm,0.9s						
HLID	Hailey	80.05	327	IAmb	IAmb	06 14 31.1	
	comp=Z,5.8nm,0.8s						
BOSA	Boshof	80.82	117	P	P	06 14 32.4	-0.2
	comp=Z,3.9nm,0.4s,baz=259,slow=3.5,SNR=18						
MAW	Mawson	81.44	163	P	P	06 14 35.7	+0.8
	comp=Z,5.6nm,0.6s,baz=210,slow=4.9,SNR=8.5						
MAW	Mawson	81.44	163	IAmb	IAmb	06 14 36.8	
	comp=Z,3.1nm,1.1s						
PLID	Pearl Lake	81.94	327	IAmb	IAmb	06 14 40.7	
	comp=Z,8.1nm,0.8s						
LBTB	Lobatse	82.48	114	P	P	06 14 41.2	-0.1
ESDC	Sonseca Array	86.50	44	P	P	06 15 02.6	+1.7
	comp=Z,1.6nm,0.8s,baz=227,slow=3.9,SNR=4.9						
ASAR	Alice Springs	128.38	205	PKP	PKPdf	06 21 24.7	+0.3
	comp=Z,3.6nm,0.7s,baz=137,slow=1.9,SNR=40						
ASAR	Alice Springs	128.38	205		PKPdf	06 21 23.7	-0.7
AKTO	Aktyubinsk	130.38	43	SKPbc	SKPab	06 24 35.4	+1.6
	comp=Z,0.5nm,0.5s,baz=121,slow=5.9,SNR=3.9						
WRA	Warramunga Arr	131.55	207	PKP	PKPdf	06 21 31.0	+0.6
	comp=Z,2.7nm,0.5s,baz=160,slow=1.7,SNR=64						
WRA				SKPbc	SKPbc	06 24 38.9	-0.2
	comp=Z,1.0nm,0.4s,baz=150,slow=3.4,SNR=22						
PETK	Petropavlovsk-	135.56	323	PKP	PKiKP	06 21 38.4	0.0
	comp=Z,5.2nm,0.9s,baz=20,slow=4.6,SNR=2.2						
FITZ	Fitzroy Crossi	136.32	198	PKP	PKPdf	06 21 40.0	+0.6
	comp=Z,2.4nm,0.7s,baz=302,slow=1.5,SNR=6.1						
KURBB	Kurchatov Arra	142.47	36	PKP	PKPdf	06 21 49.6	+0.1
	comp=Z,0.5nm,0.6s,baz=306,slow=2.8,SNR=2.6						
KURBB				SKPbc	SKPbc	06 25 11.4	+1.0
	comp=Z,0.6nm,0.7s,baz=328,slow=3.3,SNR=4.1						
ZALV	Zalesovo Beam	143.47	28	PKP	PKPbc	06 21 49.2	+0.3
	comp=Z,1.7nm,0.5s,baz=303,slow=4.6,SNR=9.4						
ZALV				SKPbc	SKiKP	06 25 14.0	+0.3
	comp=Z,1.1nm,0.6s,baz=299,slow=3.1,SNR=5.0						
KSH	Kashi	145.31	55	PKPbc	PKPab	06 21 55.6	+0.1
MKAR	Makanchi Array	146.62	39	PKPbc	PKPdf	06 21 57.4	+0.5
	comp=Z,1.7nm,0.6s,baz=295,slow=1.5,SNR=18						
MKAR	Makanchi Array	146.62	39		PKPdf	06 21 57.7	+0.8
MJAR	Matsushiro Arr	154.90	306	PKPab	PKPab	06 22 36.1	+1.3
	comp=Z,1.8nm,0.5s,baz=77,slow=2.4,SNR=8.4						
CMAR	Chiang Mai Arr	165.88	110	PKPab	PKPab	06 23 22.4	-0.8
	comp=Z,1.2nm,0.5s,baz=246,slow=5.2,SNR=5.6						

VAO ***17*** *06:16:25.9±0.6, 2°.32S×79°.51W, h91^{km}, mb4.7*

IDC ***17*** *06:16:26.8±1.8, 2°.22S×79°.32W, h93^{km}±17^{km}, mb4.1/20, mb1 4.3/26, mb1mx4.2/41, mbtmp4.5/26, MS3.2/7, Ms1 3.2/7, ms1mx3.0/24, Error ellipse: s-maj=15.9km s-min=10.4km az=63.0*

NEIC ***17*** *06:16:26.7±2.0, 2°.30S±0°.07×79°.28W±0°.09, h86^{km}±6^{km}, mb4.9/236, Error ellipse: s-maj=13.2km s-min=9.8km az=66.0*

IGQ ***17*** *06:16:27±0.2, 2˚S±2˚×8˚0W±˚, h52^{km}*

ISC 17 06:16:26.9±0.3**, 2°.32S**±0°.04×**79°.41W**±0°.05**, h100^{km}, n459, σ1^{s}.21**/374**, mb4.9**/132**, 1C, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COHC	Cochancay	0.22	133	P	Pn	06 16 39.0	-2.2
COHC				S	Sn	06 16 48.0	-3.8
AMIL	Milagro (Trans	0.26	315	P	Pn	06 16 38.0	-3.3
ACUE	Ecuador-Cuenca	0.74	142	P	Pn	06 16 44.0	-1.1
CHSH	Refugio Sur-Vo	0.98	34	P	Pn	06 16 47.0	-0.8
ISPG	Isla Puna-Puer	0.99	229	P	Pn	06 16 46.0	-1.3
ACH2	Ecuador-Machal	1.02	203	P	Pn	06 16 46.0	-1.6
SANGA	Volcan Sangay	1.07	76	P	Pn	06 16 49.0	+0.4
ACH1	Ecuador-Univer	1.08	207	P	Pn	06 16 47.0	-1.3
IGUA	Igualata	1.13	43	P	Pn	06 16 49.0	-0.4
BOSC	San Juan Bosco	1.23	132	P	Pn	06 16 52.0	+1.8
BMAS	Trigal station	1.24	49	P	Pn	06 16 50.0	-0.4
ARRY	Arrayan	1.25	50	P	Pn	06 16 50.0	-0.6
BBIL	Ulba Tungurahu	1.27	47	P	Pn	06 16 51.0	+0.3
BPAT	Tungurahua Vol	1.27	50	P	Pn	06 16 51.0	+0.1
BULB	Ulba Tungurahu	1.33	49	P	Pn	06 16 49.0	-2.5
BRUN	Tungurahua Vol	1.34	48	P	Pn	06 16 52.0	+0.4
ARNL	Arenillas	1.39	208	P	Pn	06 16 50.0	-1.8
PIAT	Ana Tenorio	1.75	41	P	Pn	06 16 57.0	+0.4
BMOR	Cotopaxi Volca	1.84	31	P	Pn	06 16 58.0	-0.1
CAMI	Rancho Maria	1.87	29	P	Pn	06 16 59.0	+0.7
BNAS	Cotopaxi Volca	1.88	30	P	Pn	06 16 59.0	+0.5
BREF	Cotopaxi Volca	1.91	31	P	Pn	06 16 59.0	+0.1
GONZ	Gonzanam	1.91	179	P	Pn	06 16 59.0	+0.3
NAS2	Nasa	1.91	30	P	Pn	06 16 59.0	+0.1
TAMB	Tambo	1.92	33	P	Pn	06 16 59.0	0.0
BTAM	Cotopaxi Volca	1.92	32	P	Pn	06 16 59.0	-0.1
BVC2	Cotopaxi Volca	1.93	31	P	Pn	06 17 00.0	+0.8
VC1	Cotopaxi 1	1.95	31	P	Pn	06 17 00.0	+0.6
LOJ1	Universidad t	1.96	148	P	Pn	06 16 56.0	-3.2
PITA	Cotopaxi Volc	2.00	29	P	Pn	06 17 00.0	0.0
TOMA	Boca Toma-Volc	2.06	28	P	Pn	06 17 01.0	+0.4
MCRA	Macar, Loja	2.11	195	P	Pn	06 17 00.0	-1.0
ANTM	Antisana-La Mi	2.13	34	P	Pn	06 17 02.0	+0.2
ANTG	Antisana-Guama	2.14	33	P	Pn	06 17 02.0	+0.1
CAB1	Cabo Pasado-Ma	2.17	332	P	Pn	06 17 00.0	-1.7
CABP	Cabo Pasado	2.17	332	P	Pn	06 16 59.0	-2.7
JAMA	Jama	2.19	339	P	Pn	06 16 59.0	-3.1
ANTS	Antisana-Sarah	2.19	34	P	Pn	06 17 03.0	+0.4
HPAL	Hacienda Las P	2.22	20	P	Pn	06 17 02.0	-0.7
GGPT	Toaza - Volcan	2.23	21	P	Pn	06 17 03.0	+0.2
ANTI	Antisana	2.24	34	P	Pn	06 17 03.0	-0.2
JUA2	San Juan 2	2.24	21	P	Pn	06 17 03.0	-0.1
MAG1	Magdalena	2.26	351	P	Pn	06 17 01.0	-1.9
GGPC	Guagua Pichinc	2.28	21	P	Pn	06 17 04.0	+0.3
TERV	Terraza Guagua	2.28	21	P	Pn	06 17 04.0	+0.3
PINO	Pino	2.29	21	P	Pn	06 17 04.0	+0.1
YANA	Yana	2.34	21	P	Pn	06 17 04.0	-0.4
BV15	Puerto Quito-O	2.47	4	P	Pn	06 17 03.0	-2.7
PULU	Pululahua	2.50	21	P	Pn	06 17 06.0	-0.4
PAC1	Pacto, Paraso	2.64	14	eP	Pn	06 17 06.9	-1.1
PAC1	Pacto, Paraso	2.64	14	P	Pn	06 17 07.0	-1.1
CAYR	Refugio Cayamb	2.71	31	P	Pn	06 17 10.0	+0.6
OTAV	Otavalo	2.71	21	eP	Pn	06 17 09.9	+0.5
OTAV	Otavalo	2.71	21	eP	Pn	06 17 09.7	+0.3
OTAV	Otavalo	2.71	21	Pn	Pn	06 17 09.7	+0.3
ANGU	Angureal	2.74	31	P	Pn	06 17 11.0	+1.2
CAYA	Cayambe	2.77	31	P	Pn	06 17 15.0	+4.9
CUSE	Cuicocha Este	2.80	21	eP	Pn	06 17 11.7	+1.3
CUSE	Cuicocha Este	2.80	21	P	Pn	06 17 11.0	+0.6
CUSW	Cuicocha Oeste	2.80	22	P	Pn	06 17 11.0	+0.6
REVS	Reventador Sur	2.84	39	P	Pn	06 17 11.0	+0.3
LAV4	Lava4-Reventad	2.84	39	P	Pn	06 17 12.0	+1.2
COTA	Cotacachi	2.85	22	P	Pn	06 17 12.0	+0.9
IMBA	Imbabura, San	2.85	25	P	Pn	06 17 12.0	+0.9
AIB2	Ibarra (Univer	2.95	26	P	Pn	06 17 13.0	+0.7
URCU	Urcuqui	2.97	23	P	Pn	06 17 13.0	+0.3
YAHU	Yahuarcocha	2.99	27	P	Pn	06 17 13.0	+0.1
CASC	Dorado de Casc	3.20	40	P	Pn	06 17 16.0	+0.5
LNGL	El Angel-Carch	3.35	25	P	Pn	06 17 17.0	-0.9
RVRD	Rio Verde	3.36	0	P	Pn	06 17 16.0	-1.6
CHL1	Volc¡n Chiles	3.42	25	P	Pn	06 17 19.0	+0.2
TULM	Tulcn-Chalpat	3.42	28	eP	Pn	06 17 20.2	+1.3
TULM	Tulcn-Chalpat	3.42	28	P	Pn	06 17 19.0	+0.2
CHMA	Chilma	3.44	23	P	Pn	06 17 18.0	-0.8
ECEN	Cerro Negro	3.44	25	P	Pn	06 17 19.0	-0.1
CHL2	Volc¡n Chiles	3.44	26	P	Pn	06 17 19.0	-0.1
ATUL	Tulcn	3.50	29	P	Pn	06 17 20.0	+0.3
CPAS1	Pasto	4.06	31	eP	Pn	06 17 29.8	+2.5
GCUF	Volcan Galeras	4.08	30	eP	Pn	06 17 28.8	+1.1
CCUFI	Cufio, Nario	4.08	30	eP	Pn	06 17 28.8	+1.1
CPAS2	Pasto	4.13	32	eP	Pn	06 17 29.1	+0.9
TUMC	Tumaco	4.17	9	eP	Pn	06 17 28.8	+0.3
TUMC	Tumaco	4.17	9	Pn	Pn	06 17 29.4	+1.0
ATAH	Atahualpa	4.89	168	P	Pn	06 17 40.7	+2.2
	31nm,0.3s,baz=16,slow=8.1,SNR=246						
ATAH				S	Sn	06 18 35.1	+0.9
	73nm,0.3s,baz=274,slow=23,SNR=9.7						
ATAH				LR	LR	06 20 05.6	
	comp=Z,417nm,21.8s,baz=347,slow=44						
PTLC	Puerto Leguiza	5.24	62	eP	Pn	06 17 40.5	-2.4
SOTA	Rioblanco	5.24	32	eP	Pn	06 17 43.6	+0.3
PCON	Cinco Dias	5.51	33	eP	Pn	06 17 47.7	+0.5
GARC	Garzon, Huila	5.95	41	eP	Pn	06 17 52.7	-0.1
YOTC	Yotoco, Valle	6.97	26	eP	Pn	06 18 03.0	-3.6
MACC	Macarena, Meta	7.12	51	eP	Pn	06 18 06.2	-2.3
ORTC	Ortega, Tolima	7.46	34	eP	Pn	06 18 11.2	-1.9
PRAC	Prado	7.51	37	eP	Pn	06 18 12.9	-0.9
PLMC	San Jos del P	7.83	24	eP	Pn	06 18 12.4	-5.7
GUVC	San Jose del G	8.33	55	eP	Pn	06 18 24.6	-0.3
GUY2C	Guyana, Caldas	8.51	28	eP	Pn	06 18 23.4	-4.5
VILC	Villavicencio,	8.57	42	eP	Pn	06 18 29.3	+0.9
CZSB	Cruzeiro do Su	8.57	129	eP	Pn	06 18 27.6	-0.7
CZSB	Cruzeiro do Su	8.57	129	Pn	Pn	06 18 27.9	-0.4
SOLC	Bahia Solano	8.72	13	eP	Pn	06 18 27.2	-3.1
ROSC	El Rosal	8.74	36	P	Pn	06 18 29.1	-1.9
	4.4nm,0.3s,baz=266,slow=23,SNR=7.9						
ROSC				LR	LR	06 22 26.3	
	comp=Z,206nm,18.2s,baz=200,slow=42						
ROSC	El Rosal	8.74	36	eP	Pn	06 18 28.8	-2.1
ROSC	El Rosal	8.74	36		Pn	06 18 29.3	-1.7
CBOC	Ciudad Bolivar	8.81	23	eP	Pn	06 18 27.7	-4.0
NORC	Norcasia	9.05	30	eP	Pn	06 18 32.6	-2.2
HELC	Santa Helena	9.30	25	eP	Pn	06 18 34.7	-3.8
PTAC	Punta Ardita,	9.54	10	eP	Pn	06 18 40.2	-1.2
TBTG	Tabatinga, AM	9.67	101	eP	Pn	06 18 41.0	-2.1
TBTG	Tabatinga, AM	9.67	101	Pn	Pn	06 18 40.6	-2.6
DBBC	Dabeiba	9.81	19	eP	Pn	06 18 42.7	-2.5

NNA	Nana	9.94	165	P	Pn	06 18 46.8	-0.1
	24nm,0.3s,baz=327,slow=11,SNR=39						
NNA				S	Sn	06 20 30.1	-6.5
	13nm,0.3s,baz=210,slow=16,SNR=3.6						
NNA				LR	LR	06 22 35.3	
	comp=Z,83nm,20.3s,baz=336,slow=37						
RUSC	La Rusia	10.32	38	*e*P	Pn	06 18 54.9	+2.4
UREC	San Jos de Ur	10.73	21	*e*P	Pn	06 18 56.2	-1.4
ZARC	Zaragoza, Cauc	10.75	25	*e*P	Pn	06 18 51.7	-6.2
ZARC	Zaragoza, Cauc	10.75	25	Pn	Pn	06 18 56.9	-1.1
PAYG	Puerto Ayora	10.99	278	*e*P	Pn	06 19 04.5	+3.3
PAYG	Puerto Ayora	10.99	278	Pn	Pn	06 19 02.6	+1.5
CAPC	Capurgana	11.07	11	*e*P	Pn	06 19 02.8	+0.5
CAP2	Capurgana	11.09	11	Pn	Pn	06 19 02.0	-0.4
BCIP	Isla Barro Col	11.42	358	*e*P	Pn	06 19 07.9	+1.0
BCIP	Isla Barro Col	11.42	358	Pn	Pn	06 19 06.6	-0.3
BRU2	Volcan	11.51	344	Pn	Pn	06 19 07.9	-0.4
MOTC	Monteria, Cord	11.64	19	Pn	Pn	06 19 08.0	-1.8
OCAC	Ocana	12.12	30		Pn	06 19 15.1	-1.4
SMLC	San Martn de	12.26	26	*e*P	Pn	06 19 16.0	-2.2
RIMA	Rio Macho	12.80	340	Pn	Pn	06 19 25.1	-0.3
ELOV	Elorza	13.56	47	*e*P	P	06 19 41.1	+0.3
JTS	Las Juntas de	13.69	336	P	P	06 19 42.5	+0.4
	0.4nm,0.3s,baz=178,slow=1.3,SNR=9.8						
JTS				LR	LR	06 23 55.8	
	comp=Z,126nm,19.8s,baz=211,slow=33						
JTS	Las Juntas de	13.69	336	Pn	Pn	06 19 37.6	+0.7
ORTG	Ortega, Santa	13.96	335	Pn	Pn	06 19 41.5	+0.9
SDV	Santo Domingo	14.16	38	P	P	06 19 48.0	+0.4
	4.9nm,0.3s,baz=230,slow=5.3,SNR=7.5						
ETMB	Extrema	15.08	120	Pn	Pn	06 19 51.6	-3.2
ESPN	Las Esperanzas	15.21	341	Pn	Pn	06 19 56.8	+0.3
ESPN				IAmb	IAmb	06 20 02.0	
	comp=Z,49nm,0.9s						
ACON	Acoyapa	15.30	338	Pn	Pn	06 19 58.1	+0.5
URIC	Uribia, Colomb	15.76	28		P	06 20 03.7	-1.5
BAUV	El Baul	15.93	45	Pn	Pn	06 20 04.0	-1.4
BOAB	BOACO BROADBAN	15.93	337		Pn	06 20 06.1	+0.6
BOAB				IAmb	IAmb	06 20 07.9	
	comp=Z,97nm,1.4s						
SAML	Samuel	17.43	113	Pn	P	06 20 22.3	-1.5
SAML					Pn	06 20 22.5	-1.4
SAML				IAmb	IAmb	06 20 25.5	
	comp=Z,97nm,1.1s						
LPAZ	La Paz	17.78	142	P	Pn	06 20 28.4	-0.3
	comp=Z,1.0nm,0.3s,baz=340,slow=7.0,SNR=24						
LPAZ	La Paz	17.78	142	*e*P	Pn	06 20 28.5	-0.2
LPAZ	La Paz	17.78	142	*e*P	P	06 20 27.4	-0.7
LPAZ	La Paz	17.78	142		Pn	06 20 28.0	-0.7
PB12	IPOC Station P	18.48	152	P	P	06 20 34.2	-1.1
MACA	Manacapuru-AM	18.73	93	P	P	06 20 36.7	-1.2
PCRV	Puerto La Cruz	19.25	50	P	Pn	06 20 44.1	-1.6
	comp=Z,1.8nm,0.3s,baz=260,slow=2.7,SNR=7.3						
MTO3	Montecristo	19.31	330	P	P	06 20 45.0	+0.5
BOAV	Boa Vista	19.46	76	*e*P	Pn	06 20 46.4	-1.7
BOAV	Boa Vista	19.46	76	P	P	06 20 44.5	-1.4
PTGA	Pitinga	19.50	86	P	P	06 20 45.3	-1.1
	comp=Z,1.0nm,0.3s,baz=272,slow=10,SNR=22						
PTGA	Pitinga	19.50	86	P	Pn	06 20 46.1	-2.5
PB11	IPOC Station P	19.79	152	P	Pn	06 20 52.1	+0.1
PB11				IAmb	IAmb	06 21 07.0	
	comp=Z,50nm,1.1s						
TA02	Huaiquique	20.01	154	P	P	06 20 51.7	-0.1
TA02				IAmb	IAmb	06 20 58.5	
	comp=Z,113nm,1.4s						
PB08	IPOC Station P	20.35	151	P	Pn	06 20 57.8	-1.1
PB07	IPOC Station P	21.40	155	P	P	06 21 06.4	-0.5
VILB	Vilhena	21.75	120	*e*P	P	06 21 10.4	-0.2
VILB	Vilhena	21.75	120	P	P	06 21 10.5	-0.1
VILB				IAmb	IAmb	06 21 37.8	
	comp=Z,38nm,0.7s						
LVC	Limon Verde	22.60	154	P	P	06 21 22.3	+2.5
	comp=Z,4.1nm,0.6s,baz=1.2,slow=7.8,SNR=5.9						
LVC	Limon Verde	22.60	154	*e*P	P	06 21 20.4	+0.6
LVC	Limon Verde	22.60	154	IAmb	IAmb	06 21 44.1	
	comp=Z,26nm,0.7s						
SIV	San Ignacio	22.60	128	P	P	06 21 19.7	+0.2
	comp=Z,6.9nm,0.7s,baz=303,slow=9.4,SNR=26						
TOSP	Speyside	23.14	54	P	P	06 21 24.0	-0.7
ITTB	Itaituba	23.72	96	*e*P	P	06 21 30.4	+0.3
PTLB	Pontes e Lacer	23.87	124	*e*P	P	06 21 32.0	+0.7
PTLB	Pontes e Lacer	23.87	124	P	P	06 21 32.1	+0.7
CELP	Cerrillos	23.89	31	P	P	06 21 31.8	+0.3
SJG	San Juan	24.14	32	P	P	06 21 34.3	+0.6
	comp=Z,17nm,0.4s,baz=210,slow=7.7,SNR=7.1						
PDRB	Porto dos Gac	24.31	113	*e*P	P	06 21 36.3	+0.9
NPGB	Novo Progresso	24.42	102	*e*P	P	06 21 36.7	+0.2
MTP	Monte Pirata	24.45	33	P	P	06 21 36.1	-0.5
MTP				IAmb	IAmb	06 21 38.6	
	comp=Z,41nm,0.9s						
CMIG	Matias Romero	24.60	322	P	P	06 21 38.4	+0.5
	comp=Z,13nm,1.0s,baz=117,slow=7.2,SNR=12						
CUPR	Culebra, Puert	24.77	34	P	P	06 21 39.6	+0.1
CLDB	Colider	24.93	111	*e*P	P	06 21 41.6	+0.5
MALB	Monte Alegre	25.14	89	*e*P	P	06 21 43.9	+0.9
SALV	Santo Antonio	26.98	121	*e*P	P	06 22 00.9	+1.4
MCPB	Macapa, AP	27.42	86	*e*P	P	06 22 03.4	-0.1
MDP	Montagnes des	27.74	75	P	P	06 22 05.9	-0.5
	comp=Z,12nm,1.0s,baz=240,slow=9.4,SNR=6.6						
AQDB	Aquidauana	29.34	130	*e*P	P	06 22 21.3	+0.8
SNDB	Serra Nova Dou	29.47	110	*e*P	P	06 22 23.1	+1.4
TMAB	Tom-Au,PA,Br	31.29	91	*e*P	P	06 22 38.0	+0.2
CPUP	Villa Florida	31.93	140	P	P	06 22 44.2	+0.9
	comp=Z,0.7nm,0.5s,baz=324,slow=8.7,SNR=3.1						
CPUP				LR	LR	06 38 35.7	
	comp=Z,49nm,18.0s,baz=23,slow=42						
CPUP	Villa Florida	31.93	140	P	P	06 22 42.2	-1.1
BDFB	Brasilia	33.65	115	P	P	06 22 58.8	+0.3
	comp=Z,4.0nm,0.9s,baz=273,slow=9.8,SNR=5.5						
IPMB	Ipameri, GO	34.33	119	*e*P	P	06 23 04.7	+0.4
ITQB	Itaqui	34.76	144	*e*P	P	06 23 08.6	+0.8
ITQB	Itaqui	34.76	144	P	P	06 23 08.1	+0.2
152A	Waverly Hall	35.16	352	IAmb	IAmb	06 23 11.5	
	comp=Z,19nm,0.9s						
FRTB	Fartura	35.67	128	*e*P	P	06 23 15.8	0.0
GOGA	Godfrey	35.74	354	P	P	06 23 15.6	-0.6
	baz=173						
GOGA	Godfrey	35.74	354	P	P	06 23 15.4	-0.7
GOGA				IAmb	IAmb	06 23 16.4	
	comp=Z,11nm,0.7s						
Z51A	Franklin	35.86	352	P	P	06 23 16.7	-0.5
JSC	Jenkinsville	36.45	357	P	P	06 23 22.1	-0.1
JSC				IAmb	IAmb	06 23 22.1	
	comp=Z,20nm,1.3s						
HODGE	Hodges	36.45	356	P	P	06 23 21.8	-0.4
HODGE				IAmb	IAmb	06 23 22.6	
	comp=Z,20nm,1.2s						
Y49A	Blount Mountai	36.58	350	P	P	06 23 22.5	-0.8
Y49A				IAmb	IAmb	06 23 22.8	
	comp=Z,10nm,0.6s						
FPAL	Fort Paine	37.12	352	P	P	06 23 27.1	-0.8
FPAL				IAmb	IAmb	06 23 27.8	
	comp=Z,20nm,1.1s						
Y45A	Yeager Farm, C	37.24	346	P	P	06 23 28.8	0.0
BG3	Lake Jocassee	37.26	355	P	P	06 23 28.9	-0.2
BG3				IAmb	IAmb	06 23 29.7	
	comp=Z,20nm,0.8s						
X48A	Hartselle	37.27	350	P	P	06 23 28.1	-1.0
X48A				IAmb	IAmb	06 23 28.9	
	comp=Z,14nm,0.7s						
KMSC	Kings Mountain	37.31	357	P	P	06 23 29.1	-0.4
	baz=177						
W52A	Murphy	37.46	354	P	P	06 23 30.1	-0.6
W52A				IAmb	IAmb	06 23 31.0	
	comp=Z,11nm,0.7s						
W50A	Signal Mountai	37.73	352	P	P	06 23 31.7	-1.3
W50A				IAmb	IAmb	06 23 33.3	
	comp=Z,23nm,1.2s						
SWET	Sewanee	37.84	351	P	P	06 23 32.6	-1.3
SWET				IAmb	IAmb	06 23 33.8	
	comp=Z,13nm,1.0s						
V53A	Saluda	37.92	355	IAmb	IAmb	06 23 34.9	
	comp=Z,12nm,0.8s						
JCT	Junction City	37.98	331	P	P	06 23 36.6	+1.4
	baz=146,SNR=6.2						
JCT	Junction City	37.98	331	IAmb	IAmb	06 23 36.8	
	comp=Z,10nm,0.8s						
WLAR	White Oak Lake	38.07	341	IAmb	IAmb	06 23 37.9	
	comp=Z,21nm,1.0s						
V52A	Sevierville	38.16	354	IAmb	IAmb	06 23 36.7	
	comp=Z,16nm,0.9s						
V51A	Loudon	38.20	354	IAmb	IAmb	06 23 37.2	
	comp=Z,19nm,0.8s						
V48A	Smith Brothers	38.49	350	P	P	06 23 38.0	-1.4
CLTN	Cedars of Leba	38.75	351	IAmb	IAmb	06 23 41.5	
	comp=Z,16nm,1.1s						
TZTN	Tazewell	38.85	355	P	P	06 23 41.6	-0.8
	baz=173,SNR=5.6						
TZTN	Tazewell	38.85	355	IAmb	IAmb	06 23 42.4	
	comp=Z,19nm,0.8s						
MIAR	Mount Ida	39.01	341	P	P	06 23 43.2	-0.5
	baz=157						
WVT	Waverly	39.05	349	P	P	06 23 42.2	-1.9
	baz=166						
WVT	Waverly	39.05	349	P	P	06 23 42.3	-1.8
WVT				IAmb	IAmb	06 23 42.9	
	comp=Z,13nm,0.7s						
PLCA	Paso Flores	39.07	169	P	P	06 23 46.3	+2.0
	comp=Z,2.0nm,0.9s,baz=340,slow=13,SNR=2.3						
U49A	Red Boiling Sp	39.09	352	IAmb	IAmb	06 23 44.0	
	comp=Z,13nm,0.8s						
TXAR	Lajitas Array	39.12	325	P	P	06 23 45.8	+1.0
	comp=Z,1.6nm,0.8s,baz=149,slow=9.8,SNR=11						
TXAR				PcP	PcP	06 25 54.0	+1.2
	comp=Z,2.7nm,0.7s,baz=148,slow=6.2,SNR=16						
TXAR				LR	LR	06 39 19.5	
	comp=Z,20nm,18.3s,baz=0.0,slow=35						
TX31	Lajitas Ar. Si	39.12	325	IAmb	IAmb	06 23 46.6	
	comp=Z,24nm,1.4s						
W41B	Gary Mavity, V	39.19	343	P	P	06 23 44.6	-0.6
	baz=159,SNR=8.1						
WHAR	Wooly Hollow	39.31	343	P	P	06 23 45.7	-0.5
WHAR				IAmb	IAmb	06 23 46.5	
	comp=Z,19nm,0.9s						
X37A	Clayton	39.66	339	IAmb	IAmb	06 23 51.1	
	comp=Z,9.7nm,0.6s						
W39A	Magazine	39.67	341	P	P	06 23 49.6	+0.4
	baz=157,SNR=12						
ABTX	Abilene, Hawle	39.68	333	IAmb	IAmb	06 23 51.3	
	comp=Z,24nm,0.9s						
LCAR	Lake Charles	39.73	345	IAmb	IAmb	06 23 49.5	
	comp=Z,20nm,0.8s						
T47A	Sharon Grove	39.76	350	IAmb	IAmb	06 23 49.2	
	comp=Z,18nm,0.8s						
LOOK	Love County	39.81	337		P	06 23 51.6	+1.3
FCAR	Ozark Folk Cen	39.82	344	IAmb	IAmb	06 23 50.3	
	comp=Z,16nm,1.1s						
S51A	Beattyville	39.95	355	IAmb	IAmb	06 23 51.3	
	comp=Z,20nm,0.8s						
PBMO	Poplar Bluff	40.23	346	IAmb	IAmb	06 23 53.4	
	comp=Z,20nm,1.2s						
CBN	Corbin Frederi	40.37	2	P	P	06 23 55.4	+0.5
	baz=183						
U40A	Yellville	40.47	343	P	P	06 23 55.5	-0.3
	baz=159,SNR=15						
U40A	Yellville	40.47	343	IAmb	IAmb	06 23 56.3	
	comp=Z,22nm,0.8s						
X34A	Smith Ranch, M	40.60	336	IAmb	IAmb	06 23 59.0	
	comp=Z,24nm,0.9s						
T42A	Van Buren	40.63	346	IAmb	IAmb	06 23 56.2	
	comp=Z,17nm,0.6s						
R50A	Paris	40.65	354	IAmb	IAmb	06 23 56.6	
	comp=Z,13nm,0.7s						
HHAR	Hobbs	40.72	342	IAmb	IAmb	06 23 58.5	
	comp=Z,13nm,0.8s						
R49A	Shelbyville	40.76	353	IAmb	IAmb	06 23 57.6	
	comp=Z,14nm,0.7s						
S44A	Carbondale	40.84	348	IAmb	IAmb	06 23 58.4	
	comp=Z,21nm,0.8s						
WCI	Wyandotte Cave	40.84	352	P	P	06 23 57.2	-1.6
	baz=169						
WCI	Wyandotte Cave	40.84	352	P	P	06 23 57.2	-1.6
WCI				IAmb	IAmb	06 23 58.1	
	comp=Z,24nm,1.1s						
TUL1	Leonard	41.00	340	P	P	06 24 00.2	0.0
	baz=154,SNR=10.0						
TUL1	Leonard	41.00	340		P	06 23 60.0	-0.2
MGMO	Mountain Grove	41.05	344	IAmb	IAmb	06 24 00.8	
	comp=Z,19nm,0.8s						
WMOK	Wichita Mounta	41.10	335	P	P	06 24 01.5	+0.4
	baz=150,SNR=8.8						
WMOK	Wichita Mounta	41.10	335	IAmb	IAmb	06 24 02.4	
	comp=Z,16nm,0.9s						
Q52A	Bidwell	41.16	357	IAmb	IAmb	06 24 01.4	
	comp=Z,28nm,1.2s						
FVM	French Village	41.38	347	P	P	06 24 01.9	-1.3
FVM				IAmb	IAmb	06 24 03.5	
	comp=Z,27nm,0.9s						
CCM	Cathedral Cave	41.64	346	P	P	06 24 04.3	-1.1
	baz=162						
CCM	Cathedral Cave	41.64	346	P	P	06 24 04.2	-1.1
CCM				IAmb	IAmb	06 24 04.8	
	comp=Z,11nm,0.6s						
BLO	Bloomington	41.80	352	IAmb	IAmb	06 24 05.7	
	comp=Z,21nm,0.7s						
P52A	Corning	41.82	357	P	P	06 24 05.8	-1.1
	baz=176						
MNTX	Cornudas Mount	41.87	326	P	P	06 24 07.9	+0.5
	baz=139,SNR=7.6						
P49A	Miami Univ. Ec	41.93	354	P	P	06 24 06.0	-1.8
	baz=172						
P49A	Miami Univ. Ec	41.93	354	IAmb	IAmb	06 24 06.6	
	comp=Z,22nm,1.1s						
P48A	Milroy	41.94	353	IAmb	IAmb	06 24 06.6	
	comp=Z,14nm,1.0s						
Q44A	Meyer Farm, Va	41.96	349	P	P	06 24 06.4	-1.6
MVL	Millersville	42.21	4	P	P	06 24 10.1	+0.2
MVL				IAmb	IAmb	06 24 11.3	
	comp=Z,17nm,1.0s						
ACSO	Alum Creek Sta	42.47	356	P	P	06 24 11.5	-0.6
	baz=174						
ACSO	Alum Creek Sta	42.47	356	IAmb	IAmb	06 24 11.8	
	comp=Z,18nm,0.8s						
AMTX	Amarillo	42.50	333	P	P	06 24 13.4	+0.8
	baz=146						
AMTX	Amarillo	42.50	333	IAmb	IAmb	06 24 13.9	
	comp=Z,31nm,1.1s						
SSPA	Standing Stone	42.77	2	P	P	06 24 14.5	0.0
	baz=182						
P43A	Skaggs, Pawnee	42.77	348	IAmb	IAmb	06 24 13.9	
	comp=Z,20nm,0.8s						
LUPA	Lehigh Univers	42.87	5	IAmb	IAmb	06 24 17.0	
	comp=Z,20nm,0.9s						
O44A	Mansfield	43.07	350	IAmb	IAmb	06 24 15.9	
	comp=Z,17nm,0.6s						
N54A	Moraine State	43.08	359	P	P	06 24 16.2	-0.8
	baz=179						
N59A	State Game Lan	43.16	4	P	P	06 24 18.2	+0.5
	baz=185						
N47A	Urbana	43.37	353	IAmb	IAmb	06 24 18.2	
	comp=Z,28nm,1.2s						
NBAN	Anadia - AL	43.48	102	*e*P	P	06 24 21.7	+0.9
M57A	Sunshine Farm,	43.50	2	P	P	06 24 20.7	+0.3
M57A				IAmb	IAmb	06 24 21.4	
	comp=Z,21nm,0.9s						
121A	Cookes Peak, D	43.85	325	P	P	06 24 25.7	+2.2
	baz=137,SNR=8.5						
121A	Cookes Peak, D	43.85	325	IAmb	IAmb	06 24 26.4	
	comp=Z,13nm,0.8s						
319A	Douglas	43.92	322	IAmb	IAmb	06 24 26.5	
	comp=Z,18nm,0.6s						
N41A	Harden Midland	44.08	347	IAmb	IAmb	06 24 24.2	
	comp=Z,25nm,1.1s						
KSU1	Kansas State U	44.15	341	P	P	06 24 25.8	+0.1
	baz=155,SNR=22						
L48A	N Adams	44.29	355	IAmb	IAmb	06 24 25.9	
	comp=Z,24nm,1.1s						
BINY	Binghamton	44.42	4	P	P	06 24 27.8	0.0
	baz=185						
ANMO	Albuquerque	44.91	328	P	P	06 24 33.4	+1.3
	baz=140						
ANMO	Albuquerque	44.91	328	P	P	06 24 33.3	+1.2
K57A	Scipio Center	44.92	3	P	P	06 24 31.0	-0.7
CBKS	Cedar Bluff	45.02	337	P	P	06 24 33.6	+1.0
	baz=150,SNR=8.3						
TUC	Tucson	45.49	322	P	P	06 24 37.5	+0.9
	baz=133						
TUC	Tucson	45.49	322	P	P	06 24 37.4	+0.9
T25A	Trinidad	45.61	332	P	P	06 24 39.0	+1.4
	baz=144,SNR=9.1						
T25A	Trinidad	45.61	332	IAmb	IAmb	06 24 40.0	
	comp=Z,29nm,1.4s						
SCIA	State Center	45.77	346	P	P	06 24 37.5	-0.9
	baz=160,SNR=5.1						
JFWS	Jewell Farm	46.08	349	P	P	06 24 39.2	-1.6
	baz=165,SNR=7.5						
K38A	Parkersburg	46.36	346	IAmb	IAmb	06 24 42.7	
	comp=Z,22nm,0.8s						
214A	Organ Pipe Nat	46.53	320	P	P	06 24 46.2	+1.5
	baz=131						
214A	Organ Pipe Nat	46.53	320	P	P	06 24 46.2	+1.5
214A				IAmb	IAmb	06 24 47.0	
	comp=Z,13nm,1.0s						
SDCO	Great Sand Dun	46.62	331	P	P	06 24 46.7	+1.2
	baz=143,SNR=16						
SDCO	Great Sand Dun	46.62	331	IAmb	IAmb	06 24 47.6	
	comp=Z,15nm,1.2s						
BGNE	Belgrade	46.74	341	P	P	06 24 46.4	+0.3
	baz=154,SNR=5.1						
LBNH	Lisbon	46.83	7	P	P	06 24 46.9	+0.2
	baz=190						
W18A	Petrified Fore	46.84	325	P	P	06 24 48.9	+1.7
	baz=136,SNR=7.2						
LONY	Lake Ozonia	46.93	5	P	P	06 24 46.8	-0.7
	baz=186						
S22A	4UR Ranch, Cre	47.27	330	P	P	06 24 51.7	+1.2
	baz=141						
X16A	Lo Mia Camp, P	47.34	323	IAmb	IAmb	06 24 53.4	
	comp=Z,13nm,0.8s						
WUAZ	Wupatki	48.06	325	P	P	06 24 58.5	+1.9
	baz=135,SNR=8.6						
ISCO	Idaho Springs	48.31	333	P	P	06 24 59.4	+0.7
	baz=144,SNR=5.6						
ECSD	EROS Data Cent	48.38	343	P	P	06 24 57.7	-1.0
	baz=157,SNR=17						
ECSD	EROS Data Cent	48.38	343	IAmb	IAmb	06 24 58.5	
	comp=Z,15nm,0.7s						
SPMN	Marine on St.	48.81	347	P	P	06 25 00.2	-1.8
	baz=162						
SPMN	Marine on St.	48.81	347	IAmb	IAmb	06 25 01.1	
	comp=Z,22nm,1.1s						
U15A	North Rim	49.23	325	IAmb	IAmb	06 25 08.2	
	comp=Z,7.8nm,0.9s						
W13A	Hualapai Mount	49.27	322	IAmb	IAmb	06 25 08.4	
	comp=Z,9.0nm,0.8s						
F36A	Milaca	49.58	347	IAmb	IAmb	06 25 07.6	
	comp=Z,19nm,1.3s						
SUSD	Miller	49.73	342	P	P	06 25 08.5	-0.5
	baz=154						
KNB	Kanab	49.95	325	IAmb	IAmb	06 25 13.4	
	comp=Z,9.6nm,1.0s						
GMRC	Granite Mounta	50.17	321	P	P	06 25 13.4	+0.6
	baz=130						
F33A	5 Mile Ranch,	50.23	345	IAmb	IAmb	06 25 12.3	
	comp=Z,12nm,1.1s						
RWWY	Rawlins	50.55	333	IAmb	IAmb	06 25 17.1	
	comp=Z,10nm,0.6s						
SHPR	Sheep Range	50.98	323	IAmb	IAmb	06 25 21.2	
	comp=Z,9.3nm,1.0s						
RSSD	Black Hills	51.22	337	P	P	06 25 21.5	+1.0
	baz=148						
RSSD	Black Hills	51.22	337	P	P	06 25 21.2	+0.7
RSSD				IAmb	IAmb	06 25 22.3	
	comp=Z,14nm,0.9s						
FURC	Furnace Creek,	52.00	322	P	P	06 25 28.1	+2.0
	baz=130						
TCUT	Toone Canyon	52.13	330	IAmb	IAmb	06 25 30.0	
	comp=Z,14nm,0.9s						
MPMC	Manual Prospec	52.14	321	P	P	06 25 28.6	+1.2
	baz=129						
SPR3	Spring Creek 3	52.18	326	IAmb	IAmb	06 25 29.5	
	comp=Z,7.8nm,0.8s						
DUG	Dugway, Tooele	52.18	328	P	P	06 25 29.0	+1.3
	baz=136,SNR=5.0						
AGMN	Agassiz Nation	52.41	346	P	P	06 25 28.5	-0.5
	baz=159,SNR=6.3						
R11A	Troy Canyon, C	52.46	324	P	P	06 25 31.1	+1.3
	baz=132,SNR=6.0						
BW06	Boulder Array	52.48	332	P	P	06 25 30.1	+0.2
	baz=141,SNR=6.5						
PDAR	Pinedale Array	52.48	332	P	P	06 25 29.9	0.0
	comp=Z,4.2nm,0.6s,baz=128,slow=8.9,SNR=40						
PDAR				LR	LR	06 47 56.3	
	comp=Z,20nm,21.3s,baz=126,slow=36						
ISA	Isabella, Lake	52.52	320	P	P	06 25 31.7	+1.6
	baz=128						
MDND	Maddock	52.99	343	P	P	06 25 34.0	+0.8
	baz=154,SNR=5.9						
VES	Vestal, Richgr	53.02	320	P	P	06 25 35.4	+1.7
	baz=127						
AHID	Auburn Hatcher	53.21	331	IAmb	IAmb	06 25 36.1	
	comp=Z,8.1nm,0.8s						
REDW	Red Top Meadow	53.54	332	IAmb	IAmb	06 25 39.0	
	comp=Z,16nm,1.5s						
SNOW	Snow King Moun	53.57	332	IAmb	IAmb	06 25 39.5	
	comp=Z,7.3nm,0.6s						
NVAR	Mina Array Bea	54.13	323	P	P	06 25 43.5	+1.5
	comp=Z,4.1nm,0.6s,baz=129,slow=7.1,SNR=41						
NVAR				PcP	PcP	06 26 46.1	+0.5
	comp=Z,1.7nm,0.7s,baz=140,slow=4.5,SNR=4.5						
LHV	Little Huntoon	54.14	322	IAmb	IAmb	06 25 44.4	
	comp=Z,7.2nm,0.8s						
RLMT	Red Lodge	54.19	334	P	P	06 25 42.6	+0.3
	baz=142,SNR=6.9						
RLMT	Red Lodge	54.19	334	IAmb	IAmb	06 25 42.9	
	comp=Z,5.9nm,0.7s						
ULM	Lac du Bonnet	54.24	347	P	P	06 25 41.2	-1.1
	comp=Z,13nm,0.7s,baz=159,slow=6.6,SNR=13						
ULM				PcP	PcP	06 26 45.0	-0.4
	comp=Z,6.1nm,0.9s,baz=102,slow=8.6,SNR=3.0						
ULM	Lac du Bonnet	54.24	347	IAmb	IAmb	06 25 41.7	
	comp=Z,12nm,0.7s						
YMR	Madison River	54.59	333	IAmb	IAmb	06 25 48.5	
	comp=Z,5.3nm,0.7s						
YHL	Hebgen Lake	54.83	333	IAmb	IAmb	06 25 49.5	
	comp=Z,14nm,0.7s						
DGMT	Dagmar	54.99	340	P	P	06 25 48.9	+1.1
	baz=149						
HLID	Hailey	55.43	330	P	P	06 25 52.0	+0.7
	baz=136,SNR=7.8						
BOZ	Bozeman (W)	55.60	333	P	P	06 25 53.0	+0.6
	baz=140,SNR=11						
BOZ	Bozeman (W)	55.60	333	IAmb	IAmb	06 25 54.0	
	comp=Z,11nm,0.8s						
MFID	Camas Ranch	56.05	329	IAmb	IAmb	06 25 57.6	
	comp=Z,17nm,1.1s						
EGMT	Eagleton	56.70	336	P	P	06 26 00.7	+0.6
	baz=143						
EGMT	Eagleton	56.70	336	IAmb	IAmb	06 26 01.4	
	comp=Z,11nm,0.9s						
ORV	Oroville	56.78	322	IAmb	IAmb	06 26 03.1	
	comp=Z,16nm,1.1s						
WVOR	Wild Horse Val	56.91	326	IAmb	IAmb	06 26 03.2	
	comp=Z,17nm,1.1s						
O03E	Paynes Creek	57.41	322	P	P	06 26 05.4	0.0
	baz=127						
J08A	Circle Bar Ran	57.43	327	IAmb	IAmb	06 26 06.4	
	comp=Z,5.6nm,0.6s						
MOD	Modoc Plateau	57.51	325	IAmb	IAmb	06 26 07.5	
	comp=Z,10nm,1.2s						
SCHQ	Schefferville	57.90	9	P	P	06 26 07.1	-1.2
	comp=Z,4.0nm,0.8s,baz=248,slow=15,SNR=2.8						
SCHQ				PcP	PcP	06 26 59.5	-0.1
	comp=Z,2.7nm,0.6s,baz=215,slow=4.1,SNR=4.4						
M04C	Macdoel	58.34	324	P	P	06 26 12.5	+0.6
	baz=128						
I07A	Izee	58.47	327	IAmb	IAmb	06 26 14.6	
	comp=Z,7.0nm,0.7s						
F10A	Beach Ranch, E	58.55	330	IAmb	IAmb	06 26 15.8	
	comp=Z,24nm,1.5s						
J05D	Fort Rock, OR	58.91	325	P	P	06 26 17.0	+1.2
	baz=129						
G08A	Pilot Rock	58.98	328	IAmb	IAmb	06 26 17.8	
	comp=Z,14nm,1.0s						
PINE	Pine Mountain	59.07	326	IAmb	IAmb	06 26 18.8	
	comp=Z,14nm,0.9s						
J04D	Umpqua Nationa	59.39	325	P	P	06 26 20.0	+0.9
	baz=128						
I05D	Terrebonne, OR	59.64	326	P	P	06 26 22.0	+1.3
	baz=129						
K02D	Willamette Mer	59.97	324	P	P	06 26 23.9	+0.9
	baz=126						
NEW	Newport	60.11	332	P	P	06 26 24.3	+0.5
	baz=135						
NEW	Newport	60.11	332	IAmb	IAmb	06 26 25.0	
	comp=Z,8.7nm,0.8s						
YKA	Yellowknife Ar	69.91	343	P	P	06 27 26.5	-0.4
	comp=Z,7.0nm,0.8s,baz=133,slow=7.1,SNR=20						
TGTN	Hyland Airport	73.75	338	P	P	06 27 51.4	+1.4
	baz=128						
P33M	Teslin, Yukon	74.78	335	P	P	06 27 56.9	+0.9
	baz=124						
MMPY	Sheldon Lake,	75.54	338	P	P	06 28 01.3	+1.0
	baz=126,SNR=6.3						
FARO	Faro, Yukon	76.11	337	P	P	06 28 04.6	+1.0
	baz=124,SNR=5.7						
ICESG	Greenland Ices	76.22	14	*i* P	P	06 28 03.6	-0.8
ICESG				IAmb	IAmb	06 28 04.8	
	comp=Z,14nm,0.8s						
M31M	Drury Creek, Y	76.51	337	P	P	06 28 06.7	+0.9

	baz=123						
YUK4	**Talbot Arm**	**77.81**	**335**	P	**P**	**06 28 14.4**	**+1.1**
	baz=119						
YUK3	**Moose Creek**	**78.78**	**335**	P	**P**	**06 28 19.6**	**+1.0**
	baz=117						
SUMG	**Summit**	**79.11**	**12**	*i* P	**P**	**06 28 20.1**	**-0.4**
SUMG				IAmb	IAmb	06 28 21.6	
	comp=Z,10nm,0.8s						
SUMG	**Summit**	**79.11**	**12**	P	**P**	**06 28 20.6**	**+0.1**
SUMG				IAmb	IAmb	06 28 21.2	
	comp=Z,12nm,0.7s						
DAWY	**Dawson**	**79.41**	**337**	P	**P**	**06 28 22.1**	**+0.2**
	baz=118						
EPYK	**Eagle Plains**	**79.58**	**340**	P	**P**	**06 28 23.2**	**+0.4**
	baz=121,SNR=6.0						
INK	**Inuvik**	**79.60**	**342**	P	**P**	**06 28 23.2**	**+0.5**
	baz=124,SNR=13						
INK	**Inuvik**	**79.60**	**342**	IAmb	IAmb	06 28 24.3	
	comp=Z,19nm,1.0s						
I29M	**Ogilvie Camp,**	**79.64**	**339**	P	**P**	**06 28 23.5**	**+0.5**
	baz=120						
M27K	**Edge Creek, AK**	**79.64**	**335**	P	**P**	**06 28 24.1**	**+0.9**
	baz=116						
A36M	**Sachs Harbour**	**79.72**	**347**	P	**P**	**06 28 23.2**	**-0.1**
	baz=133,SNR=41						
BCAR	**Beaver Creek A**	**79.91**	**336**	P	**P**	**06 28 25.0**	**+0.4**
L27K	**Beaver Creek,**	**79.92**	**336**	P	**P**	**06 28 25.8**	**+1.2**
	baz=116,SNR=5.2						
L27K	**Beaver Creek,**	**79.92**	**336**	P	**P**	**06 28 25.5**	**+0.9**
ESDC	**Sonseca Array**	**80.32**	**49**	P	**P**	**06 28 27.5**	**+0.2**
	comp=Z,1.3nm,0.8s,baz=264,slow=6.0,SNR=5.1						
EGAK	**Eagle**	**80.42**	**337**	P	**P**	**06 28 27.9**	**+0.6**
	baz=117,SNR=9.8						
EGAK	**Eagle**	**80.42**	**337**	IAmb	IAmb	06 28 28.6	
	comp=Z,18nm,0.9s						
SCRK	**Sand Creek**	**81.19**	**336**	P	**P**	**06 28 31.7**	**+0.3**
	baz=114						
NEEM	**North Greenlan**	**81.19**	**6**	*i* P	**P**	**06 28 31.7**	**+0.2**
NEEM				IAmb	IAmb	06 28 32.8	
	comp=Z,5.6nm,0.6s						
J26L	**Joseph Creek**	**81.24**	**337**	P	**P**	**06 28 32.3**	**+0.6**
	baz=114,SNR=7.9						
VNA3	**Neumayer Olymp**	**81.38**	**162**	P	**P**	**06 28 34.4**	**+2.2**
PAX	**Paxson**	**81.40**	**335**	P	**P**	**06 28 32.7**	**+0.1**
	baz=112						
RIDG	**Independent Ri**	**81.44**	**336**	P	**P**	**06 28 33.1**	**+0.4**
	baz=113						
VNA1	**Neumayer--Stat**	**81.63**	**161**	P	**P**	**06 28 34.2**	**+0.7**
SCM	**Sheep Creek Mo**	**81.78**	**334**	P	**P**	**06 28 35.0**	**+0.3**
	baz=111						
TORD	**Torodi Ar. Bea**	**81.87**	**76**	P	**P**	**06 28 35.4**	**-0.5**
	comp=Z,1.6nm,1.0s,baz=273,slow=6.0,SNR=7.4						
VNA2	**Neumayer--Watz**	**81.99**	**162**	P	**P**	**06 28 37.0**	**+1.5**
SML	**Sawmill**	**82.22**	**333**	P	**P**	**06 28 36.8**	**-0.1**
	baz=110						
WAT6	**Susitna Watana**	**82.23**	**334**	P	**P**	**06 28 37.2**	**+0.2**
	baz=110						
PRP	**Porcupine Dome**	**82.41**	**337**	P	**P**	**06 28 37.8**	**-0.1**
	baz=113						
HDA	**Harding Lake**	**82.55**	**336**	P	**P**	**06 28 38.4**	**-0.1**
	baz=111,SNR=6.2						
ILAR	**Eielson Array**	**82.66**	**336**	P	**P**	**06 28 38.6**	**-0.4**
	comp=Z,4.3nm,0.8s,baz=128,slow=3.9,SNR=34						
ILAR				PP	**PP**	**06 31 49.4**	**-0.6**
	comp=Z,2.4nm,0.9s,baz=109,slow=7.5,SNR=16						
FYU	**Fort Yukon**	**82.71**	**338**	IAmb	IAmb	06 28 40.7	
	comp=Z,14nm,0.9s						
BMAR	**Burnt Mountain**	**82.82**	**339**	P	**P**	**06 28 40.5**	**+0.6**
MCK	**McKinley**	**83.13**	**335**	P	**P**	**06 28 41.5**	**0.0**
	baz=109						
MDM	**Murphy Dome**	**83.26**	**336**	IAmb	IAmb	06 28 43.1	
	comp=Z,18nm,1.1s						
H24K	**Noodor Dome**	**83.43**	**337**	P	**P**	**06 28 43.3**	**+0.3**
	baz=111						
H24K	**Noodor Dome**	**83.43**	**337**	IAmb	IAmb	06 28 44.4	
	comp=Z,14nm,1.1s						
NEA2	**Nenana**	**83.48**	**336**	P	**P**	**06 28 43.1**	**-0.1**
	baz=109,SNR=8.5						
NEA2	**Nenana**	**83.48**	**336**	IAmb	IAmb	06 28 44.1	
	comp=Z,13nm,0.8s						
SNAA	**Sanae**	**83.60**	**162**	P	**P**	**06 28 45.1**	**+1.3**
TRF	**Thorofare Moun**	**83.61**	**335**	P	**P**	**06 28 43.8**	**-0.3**
	baz=108						
SKT	**Skwentna**	**83.72**	**333**	P	**P**	**06 28 44.6**	**+0.1**
	baz=107,SNR=5.3						
SKT	**Skwentna**	**83.72**	**333**	IAmb	IAmb	06 28 45.4	
	comp=Z,12nm,0.8s						
I23K	**Minto, Yukon-K**	**83.78**	**336**	P	**P**	**06 28 45.0**	**+0.3**
	baz=109,SNR=11						
I23K	**Minto, Yukon-K**	**83.78**	**336**	IAmb	IAmb	06 28 45.9	
	comp=Z,15nm,0.8s						
KTH	**Kantishna Hill**	**83.92**	**335**	IAmb	IAmb	06 28 46.7	
	comp=Z,11nm,0.9s						
EKA	**Eskdalemuir Ar**	**84.11**	**34**	P	**P**	**06 28 47.0**	**+0.4**
	comp=Z,1.4nm,0.6s,baz=263,slow=2.4,SNR=5.2						
BPAW	**Bear Paw Mtn.**	**84.11**	**335**	P	**P**	**06 28 46.4**	**-0.1**
	baz=108,SNR=8.6						
PPLA	**Purkeypile**	**84.27**	**334**	P	**P**	**06 28 47.6**	**+0.1**
	baz=106						
MLY	**Manley**	**84.30**	**336**	P	**P**	**06 28 47.5**	**+0.1**
	baz=108,SNR=8.3						
MLY	**Manley**	**84.30**	**336**	IAmb	IAmb	06 28 48.8	
	comp=Z,13nm,0.9s						
CAST	**Castle Rocks**	**84.38**	**334**	P	**P**	**06 28 47.6**	**-0.3**
	baz=106,SNR=9.2						
CAST	**Castle Rocks**	**84.38**	**334**	IAmb	IAmb	06 28 48.4	
	comp=Z,14nm,0.8s						
COLD	**Coldfoot**	**84.78**	**338**	P	**P**	**06 28 51.1**	**+1.3**
	baz=108,SNR=5.3						
I21K	**Tanana**	**84.84**	**336**	P	**P**	**06 28 50.0**	**-0.1**
	baz=107						
I21K	**Tanana**	**84.84**	**336**	IAmb	IAmb	06 28 50.8	
	comp=Z,11nm,1.1s						
L20K	**Farewell, AK**	**84.91**	**333**	P	**P**	**06 28 50.2**	**-0.4**
	baz=105						
TOLK	**Toolik Lake Re**	**85.02**	**340**	P	**P**	**06 28 51.2**	**+0.2**
	baz=109						
K20K	**Telida**	**85.22**	**334**	P	**P**	**06 28 51.6**	**-0.4**
	baz=105						
H21K	**Melozitna Rive**	**85.31**	**337**	P	**P**	**06 28 51.5**	**-0.9**
	baz=106						
J20K	**Nowinta River**	**85.46**	**335**	P	**P**	**06 28 53.0**	**-0.3**
	baz=105						
DAG	**Danmarks Havn**	**85.80**	**12**	*i* P	**P**	**06 28 54.5**	**-0.2**
DAG				IAmb	IAmb	06 28 55.5	
	comp=Z,3.5nm,0.8s						
QSPA	**South Pole Qui**	**87.75**	**180**	P	**P**	**06 29 06.5**	**+2.0**
A21K	**Barrow**	**88.09**	**342**	P	**P**	**06 29 07.0**	**+1.2**
	baz=103						
A21K	**Barrow**	**88.09**	**342**	IAmb	IAmb	06 29 07.4	
	comp=Z,15nm,0.9s						
DAVOX	**Davos/Dischmat**	**91.19**	**43**	P	**P**	**06 29 21.9**	**+0.7**
	comp=Z,1.6nm,0.6s,baz=94,slow=17,SNR=3.7						
ARCES	**ARCESS Array B**	**97.36**	**20**	P	**P**	**06 29 47.6**	**-1.0**
	comp=Z,2.0nm,0.8s,baz=249,slow=4.7,SNR=3.5						
CRVS	**Cervenica-Dubn**	**98.89**	**41**	*e*PDIFF	Pdif	06 29 56.6	+0.6
ZALV	**Zalesovo Beam**	**126.93**	**12**	PKP	**PKiKP**	**06 35 19.1**	**-0.5**
	comp=Z,2.6nm,0.6s,baz=280,slow=2.6,SNR=14						
KURK	**Kurchatov**	**128.32**	**18**		**PKiKP**	**06 35 22.6**	**+0.1**
KURBB	**Kurchatov Arra**	**128.38**	**18**	PKP	**PKiKP**	**06 35 22.9**	**+0.4**
	comp=Z,3.1nm,0.8s,baz=330,slow=2.5,SNR=15						
MKAR	**Makanchi Array**	**132.92**	**17**	PKP	**PKPdf**	**06 35 30.9**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=302,slow=3.1,SNR=5.7						
SONM	**Songino Array**	**134.38**	**355**	PKP	**PKiKP**	**06 35 34.2**	**-0.8**
	comp=Z,1.2nm,0.6s,baz=337,slow=1.6,SNR=9.6						
KSRS	**Korea Array**	**136.94**	**328**	PKP	**PKPdf**	**06 35 38.0**	**-0.5**
	comp=Z,2.3nm,0.8s,baz=242,slow=0.5,SNR=5.5						
ASAR	**Alice Springs**	**138.55**	**230**	PKhKP	PKPpre	06 35 34.9	
	comp=Z,0.3nm,0.7s,baz=122,slow=3.4,SNR=2.8						
ASAR				PKP	**PKPdf**	**06 35 41.8**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=112,slow=2.3,SNR=5.4						
WRA	**Warramunga Arr**	**140.17**	**235**	PKhKP	PKPpre	06 35 36.8	
	comp=Z,0.8nm,0.5s,baz=123,slow=2.4,SNR=6.6						
WRA				PKP	**PKPdf**	**06 35 45.0**	**0.0**
	comp=Z,0.6nm,0.5s,baz=112,slow=2.1,SNR=7.0						
NJ2	**Nanjing**	**145.79**	**332**	*e*P	**PKPdf**	**06 35 53.8**	**-0.7**
NJ2	**Nanjing**	**145.79**	**332**	pmax	pmax		
	comp=Z,6.0nm,0.5s						
LZH	**Lanzhou**	**146.26**	**355**	⇑PKPbc	**PKPab**	**06 35 57.9**	**+0.4**
LZH				pPKP	pPKPab	06 36 25.0	+0.7
DANN	**Dangsing**	**149.54**	**30**	*e*P	**PKiKP**	**06 36 06.4**	**-0.4**
	comp=Z,44nm,0.8s						
KOLN	**Koldanda**	**149.93**	**31**	*e*P	**PKiKP**	**06 36 06.8**	**-0.8**
	comp=Z,16nm,0.7s						
GKN	**Gorkha**	**150.26**	**29**	*e*P	**PKPbc**	**06 36 06.7**	**-0.7**
	comp=Z,44nm,0.8s						
KKN	**Kakani**	**150.75**	**29**	*e*P	**PKiKP**	**06 36 08.7**	**-0.6**
	comp=Z,16nm,0.6s						
DMN	**Daman**	**150.81**	**29**	*e*P	**PKiKP**	**06 36 09.3**	**-0.2**
	comp=Z,20nm,0.8s						
GUN	**Gumba**	**150.93**	**28**	*e*P	**PKPbc**	**06 36 08.5**	**-0.7**
PKIN	**Phulchoki**	**150.98**	**29**	*e*P	**PKiKP**	**06 36 09.2**	**-0.6**
	comp=Z,13nm,0.7s						
JIRN	**Jiri**	**151.28**	**27**	*e*P	**PKiKP**	**06 36 10.1**	**-0.5**
	comp=Z,4.8nm,0.4s						
RAMN	**Ramite**	**152.08**	**27**	*e*P	**PKiKP**	**06 36 12.2**	**+0.1**
	comp=Z,21nm,0.5s						
TAPN	**Taplejung**	**152.22**	**25**	*e*P	**PKiKP**	**06 36 12.4**	**0.0**
	comp=Z,9.8nm,0.5s						
CMAR	**Chiang Mai Arr**	**163.88**	**6**	PKP	**PKPdf**	**06 36 18.7**	**-0.7**
	comp=Z,1.2nm,0.3s,baz=305,slow=2.5,SNR=5.7						
CMAR				PKPab	**PKPab**	**06 37 11.8**	**-0.3**
	comp=Z,0.8nm,0.3s,baz=340,slow=5.0,SNR=1.8						

IDC 17 06:29:16.8±2.4**,54°.26N**×**86°.05E,h0**^{km}**,mb1 3.1**/2**,mb1mx3.0**/47**,mbtmp3.1**/2**,ML3.0**/2**,Error ellipse: s-maj=17.9km s-min=10.6km az=53.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.79**	**247**	*i*		06 34 00.0	
	baz=65,slow=339,SNR=29						
ZALV	**Zalesovo Beam**	**0.79**	**247**	Pg	Pg	06 29 30.9	-1.0
	1.4nm,0.3s,baz=65,slow=17,SNR=15						
ZALV				Lg	Lg	06 29 43.3	
	3.5nm,0.3s,baz=68,slow=29,SNR=26						
KURBB	**Kurchatov Arra**	**5.87**	**235**	Pn	Pn	06 30 46.2	+1.3
	0.2nm,0.3s,baz=51,slow=13,SNR=3.7						
KURBB				Lg	Lg	06 32 24.4	
	0.0nm,0.3s,baz=51,slow=31,SNR=2.3						
MKAR	**Makanchi Array**	**7.85**	**199**	Pn	Pn	06 31 13.1	+0.9
	0.5nm,0.3s,baz=18,slow=9.8,SNR=18						

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*ISN **17** 06:37:26.4*±*1.4,31°.84N*×*46°.04E,h6*^{km}±*12*^{km}*,ML3.5*
*TEH **17** 06:37:27.9,31°.73N*×*46°.10E,h8*^{km}*,ML3.5*
*THR **17** 06:37:33.3*±*0.4,32°.35N*×*46°.23E,h14*^{km}±*6*^{km}*,ML3.2*
ISC 17 06:37:28.1±1.3**,31°.80N**±0°.05×**46°.05E**±0°.05**,h10**^{km}**,n21,** σ**1ˢ.68**/27**,Iraq**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IBDR	**Badra**	**1.31**	**356**	*e*Pg	**Pn**	**06 37 50.9**	**-1.5**
IBDR				*e*Sg	**Sb**	**06 38 08.2**	**-1.4**
DHL1	**Dehloran**	**1.36**	**50**	*e*Pg	**Pg**	**06 37 54.4**	**+0.1**
DHL1				*e*Sg	**Sg**	**06 38 13.9**	**+1.9**
BHD	**Baghdad**	**2.03**	**316**	*e*Pn	**Pn**	**06 38 03.5**	**+1.1**
BHD				*e*Sn	**Sn**	**06 38 28.0**	**+0.2**
BHD				AML	AML	06 38 45.5	
	comp=E,467nm,0.3s						
MIB	**Mutribah**	**2.28**	**151**	*e*P	**Pn**	**06 38 05.9**	**+0.1**
IKFM	**Kafar-mosalman**	**2.29**	**41**	*e*Pn	**Pb**	**06 38 09.2**	**-0.3**
AMIS	**Naft Sefid**	**2.76**	**92**	*e*Pn	**Pn**	**06 38 13.0**	**+0.5**
AMIS				*e*		06 39 12.1	
	comp=Z,1µm,0.5s						
IDHR	**Dehrash**	**2.90**	**5**	*e*Pn	**Pn**	**06 38 16.8**	**+2.2**
IDHR				*e*		06 38 26.2	
	comp=Z,1µm,0.4s						
RDF	**Al-Radifah**	**3.15**	**155**	*e*P	**Pn**	**06 38 17.8**	**+0.1**
QRN	**Al-Qurain**	**3.45**	**152**	*e*P	**Pn**	**06 38 22.5**	**+0.5**
SNGE	**Sanandaj**	**3.46**	**18**	*e*Pn	**Pn**	**06 38 21.5**	**-0.7**
SNGE				*e*Sg	**Sn**	**06 39 03.8**	**+0.5**
KHMZ	**Khomeyn**	**3.82**	**59**	*e*Pn	**Pn**	**06 38 28.7**	**+1.5**
IKRK	**Kirkuk**	**3.86**	**339**	*e*Pn	**Pn**	**06 38 28.0**	**+0.4**
IKRK				*e*Sn	**Sn**	**06 39 13.0**	**0.0**
IPIR	**Pirpir**	**4.20**	**77**	*e*Pn	**Pn**	**06 38 34.7**	**+2.2**
IPIR				*e*		06 38 35.7	
	comp=Z,649nm,0.3s						
ASAO	**Ashtian**	**4.31**	**50**	*e*Pn	**Pn**	**06 38 34.5**	**+0.5**
QAMS	**Qamsar**	**4.90**	**65**	*e*Pn	**Pn**	**06 38 44.6**	**+2.5**
QAMS				*e*		06 38 47.1	
	comp=Z,709nm,0.4s						
IKLH	**Kolahrood**	**4.91**	**71**	*e*Pn	**Pn**	**06 38 44.1**	**+1.9**
IKLH				*e*		06 38 44.9	
	comp=Z,771nm,0.2s						
GHVR	**GHOM**	**5.15**	**57**	*e*Pn	**Pn**	**06 38 46.0**	**+0.7**
GHVR				*e*S	**Sn**	**06 39 39.4**	**-5.5**
GHVR				IAML		06 39 50.2	
	comp=E,14nm,0.5s						
GHVR				IAML		06 39 52.8	
	comp=N,14nm,0.4s						
IRAM	**Ramesheh**	**5.39**	**88**	*e*Pn	**Pn**	**06 38 49.8**	**+1.0**
IZEF	**Zefreh**	**5.42**	**77**	*e*Pn	**Pn**	**06 38 50.6**	**+1.3**
IZEF				*e*		06 38 54.3	
	comp=Z,189nm,0.2s						
KRSH	**Karshahi**	**5.56**	**66**	*e*Pn	**Pn**	**06 38 52.1**	**+1.1**
ANAR	**Anarak**	**6.63**	**76**	*e*Pn	**Pn**	**06 39 06.4**	**+0.6**

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*ISK **17** 06:38:31.2,38°.16N*×*26°.67E,h8*^{km}*,ML2.5/9*
*DDA **17** 06:38:31.5,38°.16N*×*26°.65E,h14*^{km}±*1*^{km}*,ML2.2*
ISC 17 06:38:31.8±0.9**,38°.18N**±0°.03×**26°.67E**±0°.03**,h14**^{km}±6^{km}**, n26,** σ**0ˢ.47**/38**,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZEYE	**Izmir, Urla-Ze**	**0.14**	**296**	*i* P	**Pg**	**06 38 35.3**	**-0.2**
ZEYE				*i* S	**Sg**	**06 38 38.0**	**+0.1**
ZEYE				IAML		06 38 38.0	
	comp=E,793nm,0.2s						
ZEYE				IAML		06 38 38.0	
	comp=N,607nm,0.2s						
URLA	**Izmir**	**0.19**	**343**	*i* P	**Pg**	**06 38 36.2**	**0.0**
URLA				*i* S	**Sg**	**06 38 39.9**	**+0.7**
URLA				IAML		06 38 40.0	
	comp=E,493nm,0.2s						
URLA	**Izmir**	**0.19**	**343**	PG	**Pg**	**06 38 36.2**	**0.0**
URLA				SG	**Sg**	**06 38 39.7**	**+0.4**
DGB	**zmir**	**0.21**	**126**	*i* P	**Pg**	**06 38 36.1**	**-0.4**
GMLD	**Gumuldur**	**0.22**	**117**	PG	**Pg**	**06 38 36.2**	**-0.4**
BLCB	**Balcova**	**0.36**	**55**	PG	**Pg**	**06 38 39.0**	**-0.1**
BLCB				SG	**Sg**	**06 38 44.1**	**0.0**
CHOS	**Chios island**	**0.53**	**294**	PG	**Pg**	**06 38 41.9**	**-0.3**
CHOS				SG	**Sb**	**06 38 49.8**	**-0.6**
FOCM	**Foa**	**0.54**	**5**	PG	**Pg**	**06 38 42.4**	**0.0**
GCAM	**G?zelcaml?**	**0.65**	**136**	*i* P	**Pg**	**06 38 44.2**	**-0.3**
GCAM				*i* S	**Sb**	**06 38 53.9**	**0.0**
GCAM				IAML		06 38 55.0	
	comp=E,135nm,0.2s						
GCAM				IAML		06 38 56.0	
	comp=N,110nm,0.4s						
GCAM	**G?zelcaml?**	**0.65**	**136**	PG	**Pg**	**06 38 43.9**	**-0.6**
DDIM	**Aydin, Didim**	**0.85**	**147**	*i* P	**Pb**	**06 38 48.2**	**-0.1**
DDIM				*i* S	**Sb**	**06 39 00.1**	**+0.5**
DDIM				IAML		06 39 03.0	
	comp=E,104nm,1.1s						
ZEDA	**zmir-Bergama**	**0.85**	**22**	*i* P	**Pg**	**06 38 47.5**	**-0.8**
ZEDA				*i* S	**Sb**	**06 39 00.7**	**+0.9**
AYDB	**Zeytinkoy-Aydi**	**0.99**	**103**	PG	**Pb**	**06 38 50.8**	**-0.1**
AYDN	**Tasoluk**	**1.09**	**118**	*i* P	**Pn**	**06 38 52.6**	**-0.1**
AYDN				*i* S	**Sb**	**06 39 06.9**	**+0.3**
AKHS	**Akhisar**	**1.14**	**52**	*i* P	**Pb**	**06 38 53.4**	**+0.1**
SIGR	**SIGRI**	**1.21**	**329**	PN	**Pg**	**06 38 54.9**	**-0.3**
BODT	**Bodrum**	**1.22**	**155**	PN	**Pn**	**06 38 54.2**	**-0.3**
BDRM	**Kayabasi**	**1.27**	**151**	*i* P	**Pg**	**06 38 56.7**	**+0.5**
BDRM				*i* S	**Sn**	**06 39 12.8**	**+0.8**
BDRM				IAML		06 39 15.0	
	comp=N,46nm,0.9s						
BUHA	**Balikesir, Bur**	**1.36**	**14**	*i* P	**Pn**	**06 38 56.9**	**+0.5**
KOCA	**Canakkale, Ayv**	**1.39**	**343**	*i* P	**Pn**	**06 38 57.0**	**+0.3**
STEP	**BALIKESIR_Sava**	**1.45**	**34**	*i* P	**Pb**	**06 38 58.6**	**-0.1**
MANT	**Manisa**	**1.52**	**77**	*i* P	**Pg**	**06 39 00.9**	**-0.1**
MANT				*i* S	**Sn**	**06 39 18.9**	**+0.4**
MANT				IAML		06 39 21.0	
	comp=N,45nm,0.7s						
MANT				IAML		06 39 22.0	
	comp=E,33nm,0.3s						
KULA	**Kula-Manisa**	**1.60**	**77**	PN	**Pb**	**06 39 00.6**	**-0.7**
BALY	**Balya**	**1.73**	**25**	*i* P	**Pn**	**06 39 00.5**	**-1.0**
BOZC	**Bozcaada**	**1.73**	**344**	*i* P	**Pb**	**06 39 03.4**	**0.0**
BOZC				*i* S	**Sg**	**06 39 27.3**	**-0.2**
BOZC				IAML		06 39 29.0	
	comp=N,30nm,0.7s						
BOZC	**Bozcaada**	**1.73**	**344**	PN	**Pb**	**06 39 02.7**	**-0.7**

IDC 17 06:39:16.1±999.0**,62°.29N**×**42°.62E,h0**^{km}**,Error ellipse: s-maj=626.1km s-min=239.7km az=119.0,Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I31KZ	**AKTYUBINSK INF**	**14.61**	**138**	*i*		08 10 10.0	
	baz=330,slow=335,SNR=2.0						
I46RU	**ZALESOVO INFRA**	**23.40**	**91**	*i*		09 01 40.0	
	baz=310,slow=333,SNR=2.9						
I34MN	**SONGINO INFRAS**	**37.62**	**82**	*i*		10 30 50.0	
	baz=315,slow=334,SNR=2.8						

IDC 17 06:41:56.4±594.0**,62°.14N**×**48°.68E,h0**^{km}**,Error ellipse: s-maj=356.9km s-min=212.9km az=134.0,Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I31KZ	**AKTYUBINSK INF**	**12.84**	**152**	*i*		08 01 50.0	
	baz=341,slow=337,SNR=1.9						
I46RU	**ZALESOVO INFRA**	**20.56**	**97**	*i*		08 48 20.0	
	baz=310,slow=327,SNR=0.8						
I34MN	**SONGINO INFRAS**	**34.80**	**87**	*i*		10 16 30.0	
	baz=313,slow=340,SNR=0.6						

NNC 17 06:50:01.1±2.7**,53°.86N**×**91°.06E,h0**^{km}**,mb3.8,mpv3.7, 6C-8D,Error ellipse: s-maj=20.1km s-min=15.9km az=54.0,Suspected Mining explosion.,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAA0	**Zalesovo Array**	**3.69**	**274**	⇑Pg	Pb	06 51 06.4	-0.7
	5.3nm,0.8s						
ZAA0				⇓Lg	Lg	06 52 00.1	
	18nm,0.8s						
KURK	**Kurchatov**	**8.25**	**253**	⇓Pn	Pn	06 52 02.9	+1.0
	5.2nm,0.9s						
KURK				⇓Sn	Sn	06 53 36.9	+1.2
	14nm,1.0s						
KURK				⇑Lg	Lg	06 54 22.9	
	39nm,1.2s						
KURBB	**Kurchatov Arra**	**8.34**	**252**	⇓Pn	Pn	06 52 04.2	+1.1
	4.7nm,0.6s						
KURBB				⇓Sn	Sn	06 53 40.0	+2.0
	34nm,0.8s						
KURBB				⇑Lg	Lg	06 54 27.1	
	102nm,1.1s						
MK31	**Makanchi Array**	**9.02**	**222**	⇓Pn	Pn	06 52 13.0	+0.4
	0.3nm,0.5s,baz=39,slow=13,SNR=7.8						
MK31				⇓Sn	Sn	06 53 56.0	+1.3
	5.1nm,0.8s,baz=45,slow=22,SNR=5.0						
MK31				⇓Lg	Lg	06 54 45.8	
	24nm,1.1s,baz=45,slow=32,SNR=4.7						
MAKZ	**Makanchi**	**9.13**	**223**	⇑Pn	Pn	06 52 14.1	0.0
	1.4nm,0.8s						
MAKZ				⇑Sn	Sn	06 53 58.4	+0.9
	2.7nm,0.8s						
MAKZ				⇑Lg	Lg	06 54 45.8	
	18nm,1.1s						

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*SKO **17** 07:10:03.4,38°.39N*×*20°.30E,h0*^{km}

*MOS **17** 07:10:06.7*±*1.2,38°.75N*×*20°.38E,h16*^{km}*,mb6.1/91, MS6.5/70,Error ellipse: s-maj=3.3km s-min=1.9km az=79.6*

*IDC **17** 07:10:06.4*±*0.3,38°.78N*×*20°.58E,h0*^{km}*,mb5.5/48, mb1 5.5/62,mb1mx5.5/66,mbtmp5.5/62,ML5.0/14, MS6.4/44,Ms1 6.4/44,ms1mx6.4/54,Error ellipse: s-maj=8.0km s-min=7.7km az=93.0*

*UPSL **17** 07:10:07.0,38°.68N*×*20°.57E,h12*^{km}*,Mw6.4,Moment Tensor Solution. s6 Moment tensor:* M_{rr}*-1.62;* $M_{\theta\theta}$*4.82;* $M_{\phi\phi}$*-3.21;* $M_{r\theta}$*-1.22;* $M_{\theta\phi}$*2.58;* $M_{\phi r}$*1.22; Fault plane solution: NP1:*ϕ_s*211.00000°,δ67.00000°,λ-165.00000°. NP2:*ϕ_s*115.00000°,δ77.00000°,λ-24.00000°.*

*THE **17** 07:10:07.5,38°.67N*×*20°.53E,h0*^{km}±*2*^{km}*,ML6.0/7 Error ellipse: s-maj=2.5km s-min=0.7km az=265.0*

*BGR **17** 07:10:07.9*±*0.8,38°.70N*×*20°.59E,h10*^{km}*,Error ellipse: s-maj=24.5km s-min=10.0km az=43.0*

*ATH **17** 07:10:07.3,38°.67N*×*20°.60E,h11*^{km}±*1*^{km}*,ML6.0/24,Error ellipse: s-maj=1.5km s-min=0.7km az=278.0*

*BJI **17** 07:10:07.0*±*0.0,38°.75N*×*20°.55E,h10*^{km}*,mB6.2/76, mb5.5/78,Ms6.6/96,Ms7 6.5/88*

*BEO **17** 07:10:08.2*±*0.6,38°.75N*×*20°.27E,h0*^{km}*,ML6.1/23*

*NEIC **17** 07:10:08.7*±*1.9,38°.77N*±*0°.05*×*20°.54E*±*0°.06,h10*^{km}±*2*^{km}*, Error ellipse: s-maj=6.9km s-min=6.0km az=213.0*

*NEIC **17** 07:10:08.5,38°.77N*×*20°.56E,h15*^{km}*,Moment Tensor Solution. Moment tensor: Scale* 10^{18}*Nm;* M_{rr}*-0.81;* $M_{\theta\theta}$*5.20;* $M_{\phi\phi}$*-4.39;* $M_{r\theta}$*0.86;* $M_{\theta\phi}$*4.48;* $M_{\phi r}$*-0.66; Fault plane solution:* M_0*6.69000×*10^{18} *NP1:*ϕ_s*23.75000°, δ80.27000°,λ-176.02000°. NP2:*ϕ_s*293.08000°, δ86.08000°,λ-9.75000°. Principal axes: T 7.0056, Plg4.0000°, Azm339.0000°; N -0.6940, Plg79.0000°, Azm91.0000°; P -6.3116, Plg10.0000°, Azm248.0000°;*

*MED_RC **17** 07:10:08.0*±*0.1,38°.62N*×*20°.51E,h10*^{km}*,MW6.5/48, Moment Tensor Solution. Body waves: s30,c52;Mantle waves: s48,c124; Duration:* $4^{s}.2$ *Moment tensor: Scale* 10^{18}*Nm;* M_{rr}*0.29*±*.07;* $M_{\theta\theta}$*4.77*±*.07;* $M_{\phi\phi}$*-5.06*±*.07;* $M_{r\theta}$*2.03*±*.30;* $M_{\theta\phi}$*4.72*±*.06;* $M_{\phi r}$*-2.95*±*.29; Best double couple:* M_0*7.58000×*10^{18} *NP1:*ϕ_s*26.00000°,δ69.00000°, λ-170.00000°. NP2:*ϕ_s*292.00000°,δ80.00000°, λ-22.00000°. Principal axes: T 6.7800, Plg8.0000°, Azm340.0000°; N 1.5900, Plg66.0000°, Azm89.0000°; P -8.3800, Plg22.0000°, Azm247.0000°; nsta1 refers to body waves, cutoff=30s. nsta2 refers to surface waves, cutoff=40s.*

*TIR **17** 07:10:08.0,38°.67N*×*20°.07E,h52*^{km}±*41*^{km}*,Md6.6,Ml6.0*

*PDG **17** 07:10:09.8*±*0.5,38°.85N*×*20°.45E,h24*^{km}±*1*^{km}*,MD6.5/14, ML6.5/14,Error ellipse: s-maj=0.7km s-min=0.7km az=0.0*

*GCMT **17** 07:10:12.3*±*0.0,38°.47N*×*20°.53E,h15*^{km}*,MW6.5/155, Moment Tensor Solution. s152,c358; s155,c686; Duration:* $4^{s}.3$ *Moment tensor: Scale* 10^{18}*Nm;* M_{rr}*0.10*±*.03;* $M_{\theta\theta}$*4.51*±*.03;* $M_{\phi\phi}$*-4.61*±*.02;* $M_{r\theta}$*2.91*±*.08;* $M_{\theta\phi}$*4.54*±*.02;* $M_{\phi r}$*-1.12*±*.08; Best double couple:* M_0*7.15100×*10^{18} *NP1:*ϕ_s*22.00000°,δ64.00000°, λ179.00000°. NP2:*ϕ_s*113.00000°,δ89.00000°,λ26.00000°. Principal axes: T 7.1470, Plg19.0000°, Azm341.0000°; N 0.0070, Plg64.0000°, Azm115.0000°; P -7.1540, Plg17.0000°, Azm245.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **17** 07:10:14,38°.50N*×*20°.51E,h14*^{km}*,Moment Tensor Solution. Duration:* $8^{s}.6$ *Moment tensor: Scale* 10^{18}*Nm;* M_{rr}*0.10;* $M_{\theta\theta}$*4.54;* $M_{\phi\phi}$*-4.63;* $M_{r\theta}$*2.12;* $M_{\theta\phi}$*4.48;* $M_{\phi r}$*-1.56; Fault plane solution:* M_0*6.93000×*10^{18} *NP1:*ϕ_s*24.00000°, δ69.00000°,λ-176.00000°. NP2:*ϕ_s*292.00000°, δ87.00000°,λ-21.00000°. Principal axes: T 6.6683, Plg13.0000°, Azm340.0000°; N 0.4970, Plg68.0000°, Azm104.0000°; P -7.1653, Plg17.0000°, Azm246.0000°;*

*NEIC **17** 07:10:15,38°.45N*×*20°.17E,h12*^{km}*,Moment Tensor Solution. Duration:* $13^{s}.2$ *Moment tensor: Scale* 10^{18}*Nm;* M_{rr}*0.04;* $M_{\theta\theta}$*3.75;* $M_{\phi\phi}$*-3.79;* $M_{r\theta}$*1.74;* $M_{\theta\phi}$*4.08;* $M_{\phi r}$*2.21; Fault plane solution:* M_0*6.23000×*10^{18} *NP1:* ϕ_s*113.00000°,δ65.00000°,λ6.00000°. NP2:*ϕ_s*21.00000°, δ85.00000°,λ155.00000°. Principal axes: T 6.5072, Plg21.0000°, Azm334.0000°; N -0.6055, Plg64.0000°, Azm190.0000°; P -5.9017, Plg14.0000°, Azm69.0000°;*

*HLW **17** 07:10:19.5,37°.87N*×*21°.71E,h20*^{km}±*27*^{km}*,Md5.9,Ml6.6*

*DNK **17** 07:10:30.8,39°.92N*×*20°.42E,h136*^{km}*,mb5.8,Ms6.1, Ms6.5*

ISC 17 07:10:08.6±0.3**,38°.68N**±0°.01×**20°.53E**±0°.02**,h11**^{km}±1^{km}**, h11**^{km}**:pP-P,n2294,** σ**2ˢ.00**/2681**,mb6.0**/328**,MS6.5**/325**, 527C-277D,Fault plane solution: NP1:**ϕ_s137.29669°**,** δ59.32222°**,**λ-0.94028°. **NP2:**ϕ_s227.77646°**,**δ89.19132°**,** λ-149.31883°. **Principal axes:** T Plg20.5358°**,** Azm358.2723°**;** N Plg59.3092°**,** Azm229.1391°**;** P Plg21.7620°**,** Azm96.8726°**; Fault plane solution: NP1:**ϕ_s113.29270°**,**δ77.90195°**,**λ20.42269°. **NP2:** ϕ_s18.83046°**,**δ70.05041°**,**λ167.11678°. **Principal axes:** T Plg22.9209°**,** Azm337.2822°**;** N Plg66.3954°**,** Azm142.6668°**;** P Plg5.3397°**,** Azm245.0172°**; Greece**

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

EVGI	**Lefkada island**	0.11	119	P	Pg	07 10 09.4	-2.1
EVGI	**Lefkada island**	0.11	119	P	Pg	07 10 09.5	-2.1
NYDR	**Nydri-Lefkada**	0.14	74	P	Pg	07 10 09.5	-2.3
NYDR	**Nydri-Lefkada**	0.14	74	P	Pg	07 10 09.5	-2.3
LKD2	**Lefkada island**	0.15	41	P	Pg	07 10 09.9	-2.2
LKD2	**Lefkada island**	0.15	41	P	Pg	07 10 10.1	-2.0
TSLK	**Tsoukalades, L**	0.18	33	P	Pg	07 10 10.9	-1.7
TSLK	**Tsoukalades, L**	0.18	33	P	Pg	07 10 10.8	-1.7
FSK	**Fiskardo**	0.22	174	P	Pg	07 10 12.1	-1.1
FSK	**Fiskardo**	0.22	174	P	Pg	07 10 12.1	-1.1
KEF4	**Livadi, Kephal**	0.42	191	P	Pg	07 10 15.8	-1.2
KEF4	**Livadi, Kephal**	0.42	191	P	Pg	07 10 15.7	-1.2
DMLN	**Damoulianata-K**	0.45	196	P	Pg	07 10 16.4	-1.1
DMLN	**Damoulianata-K**	0.45	196	P	Pg	07 10 16.2	-1.3
DMLN				S	Sg	07 10 22.1	-1.4
LXRA	**Lixouri, Kepha**	0.48	189	P	Pg	07 10 16.8	-1.2
KEF3	**Kipouria, Keph**	0.49	197	P	Pg	07 10 16.4	-1.8
KEF3				S	Sg	07 10 24.7	-0.1
	4246µm,1.1s						
KEF3	**Kipouria, Keph**	0.49	197	P	Pg	07 10 16.4	-1.8
KEF3				S	Sg	07 10 23.3	-1.4
VLS	**Valsamata**	0.50	175	P	Pg	07 10 16.9	-1.5
VLS				S	Sg	07 10 24.4	-0.6
	1567µm,0.6s						
VLS	**Valsamata**	0.50	175	P	Pg	07 10 16.4	-1.9
VLS	**Valsamata**	0.50	175	P	Pg	07 10 16.9	-1.5
VLS				S	Sg	07 10 24.4	-0.6
PSDA	**Pessada-Kefalo**	0.56	176	P	Pg	07 10 17.8	-1.7
PSDA				S	Sg	07 10 26.6	-0.4
PSDA	**Pessada-Kefalo**	0.56	176	P	Pg	07 10 17.8	-1.7
PSDA				S	Sg	07 10 25.7	-1.2
PVO	**Paravola**	0.78	94	P	Pg	07 10 22.0	-1.7
PVO				S	Sg	07 10 34.6	+0.7
	1530µm,0.5s						
PVO	**Paravola**	0.78	94	P	Pg	07 10 21.8	-1.9
PVO				AML	AML	07 10 36.3	
PVO				AML	AML	07 10 46.6	
IGT	**Igoumenitsa**	0.87	350	P	Pg	07 10 23.1	-2.3
IGT				S	Sb	07 10 37.8	+0.5
	519µm,0.8s						
IGT	**Igoumenitsa**	0.87	350	P	Pg	07 10 23.0	-2.3
IGT				S	Sg	07 10 36.7	-0.1
IGT				AML	AML	07 10 52.2	
IGT				AML	AML	07 10 53.0	
IGT	**Igoumenitsa**	0.87	350	P	Pg	07 10 23.1	-2.3
IGT				S	Sb	07 10 37.8	+0.5
IGT	**Igoumenitsa**	0.87	350	*i* Pg	Pg	07 10 22.8	-2.6
IGT				*i* Sg	Sn	07 10 39.9	+0.5
VTN	**Vitineika**	0.92	146	P	Pg	07 10 25.3	-0.9
VTN	**Vitineika**	0.92	146	P	Pg	07 10 24.4	-1.8
ZAK2	**Zakynthos**	0.93	162	P	Pg	07 10 25.0	-1.6
RLS	**Riolos of Patr**	0.96	130	P	Pb	07 10 25.0	-2.2
RLS				S	Sg	07 10 39.5	-0.1
	656µm,1.2s						
RLS	**Riolos of Patr**	0.96	130	P	Pb	07 10 24.5	-2.7
RLS				AML	AML	07 10 50.3	
RLS				AML	AML	07 10 51.1	
LTHK	**Lithakia**	0.99	166	P	Pb	07 10 24.9	-2.9
LTHK				S	Sn	07 10 41.8	-0.6
LTHK	**Lithakia**	0.99	166	P	Pb	07 10 24.7	-3.1
LTHK				S	Sb	07 10 38.8	-2.0
JAN	**Janina**	1.01	14	P	Pb	07 10 26.2	-1.9
JAN	**Janina**	1.01	14	P	Pb	07 10 26.3	-1.8
JAN				AML	AML	07 10 46.5	
JAN				AML	AML	07 10 53.7	
JAN	**Janina**	1.01	14	P	Pb	07 10 26.3	-1.8
JAN				S	Sg	07 10 41.9	+0.6
EVR	**Evrytania**	1.03	76	P	Pb	07 10 26.0	-2.4
EVR	**Evrytania**	1.03	76	P	Pb	07 10 25.6	-2.9
EVR				AML	AML	07 10 58.4	
EVR				AML	AML	07 11 02.9	
UPR	**University Cam**	1.06	111	P	Pb	07 10 27.4	-1.5
ANX	**Ano Chora**	1.09	94	P	Pb	07 10 27.1	-2.4
ANX				S	Sn	07 10 44.8	-0.2
	1013µm,0.9s						
ANX	**Ano Chora**	1.09	94	P	Pb	07 10 26.4	-3.1
ANX				AML	AML	07 10 54.3	
ANX				AML	AML	07 10 55.2	
EFP	**Efpalio**	1.10	103	P	Pb	07 10 26.9	-2.7
EFP				S	Sn	07 10 45.7	+0.5
EFP	**Efpalio**	1.10	103	P	Pb	07 10 27.0	-2.7
KASA	**Kassiopi**	1.17	337	P	Pb	07 10 29.4	-1.4
DRO	**Drossia**	1.18	128	P	Pn	07 10 28.1	-2.8
DRO	**Drossia**	1.18	128	P	Pn	07 10 28.0	-3.0
DRO				AML	AML	07 11 02.7	
DRO				AML	AML	07 11 02.8	
KEK	**Kerkira**	1.18	331	P	Pn	07 10 29.1	-2.0
KEK	**Kerkira**	1.18	331	P	Pn	07 10 29.6	-1.5
KEK				AML	AML	07 10 58.0	
KEK				AML	AML	07 11 10.4	
KEK	**Kerkira**	1.18	331	⇑P	Pn	07 10 28.8	-2.3
LAKA	**Lakka**	1.22	110	P	Pn	07 10 28.4	-3.1
LAKA	**Lakka**	1.22	110	P	Pn	07 10 28.3	-3.1
TRIZ	**Trizonia**	1.25	104	P	Pn	07 10 29.0	-2.9
TRIZ	**Trizonia**	1.25	104	P	Pn	07 10 29.2	-2.7
SRN	**Sarande**	1.27	341	P	Pn	07 10 30.8	-1.5
SRN	**Sarande**	1.27	341	P	Pn	07 10 31.0	-1.2
	baz=358						
SRN				S	Sb	07 10 47.3	-1.6
	baz=358						
SRN				AMP			
	comp=E,698nm,1.6s,baz=358						
MAKR	**Makrakomi, Fth**	1.29	74	P	Pn	07 10 31.0	-1.6
MAKR	**Makrakomi, Fth**	1.29	74	P	Pn	07 10 30.4	-2.2
MAKR				AML	AML	07 11 06.5	
MAKR				AML	AML	07 11 07.1	
KLV	**Kalavryta, Ach**	1.42	116	P	Pn	07 10 32.0	-2.4
KLV	**Kalavryta, Ach**	1.42	116	P	Pn	07 10 31.7	-2.6
KLV				AML	AML	07 11 05.2	
KLV				AML	AML	07 11 09.6	
KPRO	**Kipourio**	1.43	27	P	Pn	07 10 33.0	-1.5
KPRO				S	Sg	07 10 55.5	+0.8
	comp=E,489µm,1.4s						
KPRO	**Kipourio**	1.43	27	P	Pn	07 10 33.5	-1.1
KPRO				AML	AML	07 11 09.5	
KPRO				AML	AML	07 11 10.4	
AGG	**Agios Georgios**	1.45	76	P	Pn	07 10 33.0	-1.7
AGG	**Agios Georgios**	1.45	76	P	Pn	07 10 33.1	-1.6
AGG				AML	AML	07 11 10.4	
AGG				AML	AML	07 11 12.3	
AGG	**Agios Georgios**	1.45	76	P	Pn	07 10 33.8	-0.9
AGG	**Agios Georgios**	1.45	76	⇓P	Pn	07 10 32.9	-1.8
AGG	**Agios Georgios**	1.45	76		Pn	07 10 33.8	-0.9
THL	**Klokotos Trika**	1.46	52	P	Pn	07 10 33.2	-1.6
THL				S	Sg	07 10 55.8	+0.3
THL	**Klokotos Trika**	1.46	52	P	Pn	07 10 33.1	-1.6
THL				AML	AML	07 11 08.4	
THL				AML	AML	07 11 08.9	
LSK	**Leskovik**	1.47	2	P	Pn	07 10 34.3	-0.8
LSK	**Leskovik**	1.47	2	P	Pn	07 10 34.7	-0.4
	baz=15						
LSK				S	Sn	07 10 51.9	-2.5
	baz=15						
LSK				AMP			
	comp=N,1µm,0.9s,baz=15						
PENT	**Pentalofos**	1.59	17	P	Pn	07 10 36.7	0.0
PENT	**Pentalofos**	1.59	17	P	Pn	07 10 36.5	-0.2
PENT				AML	AML	07 11 16.2	
PENT				AML	AML	07 11 21.7	
GUR	**Goura**	1.60	117	P	Pn	07 10 35.4	-1.5
GUR				S	Sg	07 11 03.1	+2.9
GUR	**Goura**	1.60	117	P	Pn	07 10 34.9	-2.1
GUR				AML	AML	07 11 13.6	
GUR				AML	AML	07 11 18.6	
LRSO	**Larissa Observ**	1.75	55	P	Pn	07 10 39.3	+0.4
NEST	**Nestorio**	1.78	13	P	Pb	07 10 40.6	-0.7
THAL	**Thalero**	1.79	110	P	Pn	07 10 40.4	+1.0
ITM	**Ithomi**	1.86	143	P	Pn	07 10 40.0	-0.3
ITM	**Ithomi**	1.86	143	P	Pn	07 10 40.1	-0.2
ITM				AML	AML	07 11 15.1	
ITM				AML	AML	07 11 24.0	
ITM	**Ithomi**	1.86	143	⇑P	Pn	07 10 39.6	-0.7
ITM	**Ithomi**	1.86	143		Pn	07 10 41.1	+0.8
KZN	**Kozani**	1.89	30	P	Pn	07 10 41.6	+0.7
KZN	**Kozani**	1.89	30	P	Pn	07 10 41.4	+0.6
KZN				AML	AML	07 11 20.1	
KZN				AML	AML	07 11 30.7	
KZN	**Kozani**	1.89	30	P	Pn	07 10 41.6	+0.7
ATAL	**Atalanti**	1.95	89	P	Pn	07 10 42.3	+0.7
ATAL	**Atalanti**	1.95	89	P	Pn	07 10 41.2	-0.4
ATAL				AML	AML	07 11 32.8	
ATAL				AML	AML	07 11 43.2	
KBN	**Korca**	1.96	6	P	Pb	07 10 43.1	-1.2
KBN	**Korca**	1.96	6	P	Pb	07 10 43.1	-1.2
KBN	**Korca**	1.96	6		Pb	07 10 43.1	-1.2
KBN	**Korca**	1.96	6	P	Pb	07 10 43.5	-0.7
	baz=15						
KBN				S	Sb	07 11 08.5	-0.2
	baz=15						
VLO	**Vlora**	1.96	336	P	Pn	07 10 42.0	+0.3
VLO	**Vlora**	1.96	336	P	Pn	07 10 42.2	+0.5
VLO	**Vlora**	1.96	336		Pn	07 10 42.2	+0.5
PYL	**PYLOS**	2.02	151	P	Pn	07 10 42.7	+0.2
PYL	**PYLOS**	2.02	151	P	Pn	07 10 42.1	-0.4
PYL				AML	AML	07 11 32.5	
PYL				AML	AML	07 11 48.4	
LTK	**Loutraki**	2.02	108	P	Pn	07 10 43.6	+1.0
SCTE	**Santa Cesarea**	2.12	312	Pn	Pn	07 10 43.4	-0.5
XOR	**Xorichti**	2.18	71	P	Pn	07 10 45.6	+0.8
XOR	**Xorichti**	2.18	71	P	Pn	07 10 45.2	+0.3
XOR				AML	AML	07 11 38.6	
XOR				AML	AML	07 11 45.3	
NEO	**Neokhori**	2.19	72	P	Pn	07 10 45.4	+0.5
NEO				AML	AML	07 11 36.5	
NEO				AML	AML	07 11 38.9	
VIL2	**Platees**	2.20	101	P	Pn	07 10 46.3	+1.3
VIL2				AML	AML	07 11 34.9	
VIL2				AML	AML	07 11 35.4	
FNA	**Florina**	2.20	17	P	Pn	07 10 45.9	+0.7
FNA	**Florina**	2.20	17	P	Pn	07 10 46.1	+1.0
FNA	**Florina**	2.20	17	*i* Pn	Pn	07 10 45.9	+0.7
FNA	**Florina**	2.20	17	⇑P	Pn	07 10 45.9	+0.7
FNA	**Florina**	2.20	17		Pn	07 10 46.1	+1.0
VILL	**Villia**	2.24	102	P	Pn	07 10 46.9	+1.2
EPID	**Epidavros**	2.30	117	P	Pn	07 10 47.1	+0.7
EPID	**Epidavros**	2.30	117	P	Pn	07 10 47.1	+0.7
KRND	**KRANIDI**	2.44	121	P	Pn	07 10 49.1	+0.8
KRND	**KRANIDI**	2.44	121	P	Pn	07 10 49.1	+0.8
KRND				AML	AML	07 11 38.5	
KRND				AML	AML	07 11 38.8	
OHR	**Ohrid**	2.44	5	*e*Pn	Pn	07 10 49.5	+1.1
OHR				*e*Sn	Sn	07 11 19.8	+1.5
OHR	**Ohrid**	2.44	5	*e*P	Pn	07 10 50.0	+1.6
OHR				*e*S	Sn	07 11 19.8	+1.5
OHR	**Ohrid**	2.44	5	*i* Pn	Pn	07 10 49.6	+1.1
OHR				*i* Sn	Sg	07 11 28.8	+1.8
OHR				*e*Lg	Lg	07 11 31.0	
	comp=N,84µm,1.1s						
ATH	**Athens Observa**	2.60	105	P	Pn	07 10 51.8	+1.3
ATH	**Athens Observa**	2.60	105	P	Pn	07 10 51.6	+1.1
ATHU	**Athens Univers**	2.65	104	P	Pn	07 10 52.3	+1.0
GRG	**Griva**	2.69	32	P	Pn	07 10 52.2	+0.3
GRG	**Griva**	2.69	32	P	Pn	07 10 52.2	+0.3
GRG	**Griva**	2.69	32	*i* Pn	Pn	07 10 52.2	+0.3
THE	**Thessaloniki**	2.71	43	*i* Pn	Pn	07 10 53.1	+1.1
TIR	**Tirane**	2.72	349	⇑P	Pn	07 10 52.5	+0.4
TIR				⇑S	Sn	07 11 20.4	-4.6
TIR	**Tirane**	2.72	349	*e*Pn	Pn	07 10 53.0	+0.8
TIR				*e*Sn	Sn	07 11 25.4	+0.4
TIR	**Tirane**	2.72	349	P	Pn	07 10 52.2	+0.1
TIR	**Tirane**	2.72	349	P	Pn	07 10 52.6	+0.4
TIR	**Tirane**	2.72	349	*i* Pn	Pn	07 10 52.3	+0.1
TIR	**Tirane**	2.72	349	⇑P	Pn	07 10 52.3	+0.1
TIR	**Tirane**	2.72	349		Pn	07 10 52.6	+0.4
TIR	**Tirane**	2.72	349	P	Pn	07 10 52.5	+0.4
	baz=357						
VLI	**Veliai**	2.73	135	P	Pn	07 10 54.2	+1.9
VLI				AML	AML	07 11 52.1	
VLI				AML	AML	07 12 00.6	
DION	**Dionisos Attik**	2.74	102	P	Pn	07 10 53.3	+0.8
PAIG	**Paliouri**	2.74	62	P	Pn	07 10 52.9	+0.4
HORT	**Hortiatis**	2.76	45	P	Pn	07 10 53.2	+0.4
TIP	**Timpagrande**	2.99	281	⇓S	Sn	07 11 30.9	-0.8
TIP	**Timpagrande**	2.99	281	⇑P	Pn	07 10 55.6	-0.3
TIP	**Timpagrande**	2.99	281	Pn	Pn	07 10 57.1	+1.2
TIP	**Timpagrande**	2.99	281	⇓P	Pn	07 10 56.9	+1.0
PHP	**Peshkopia**	3.01	359	P	Pn	07 10 56.9	+0.7
PHP	**Peshkopia**	3.01	359	P	Pn	07 10 56.6	+0.5
	baz=5.0						
SOH	**Sokhos**	3.05	45	*i* Pn	Pn	07 10 57.7	+0.9
VAY	**Valandovo**	3.07	30	*e*Pn	Pn	07 10 59.1	+2.1
VAY	**Valandovo**	3.07	30	P	Pn	07 10 57.0	0.0
VAY	**Valandovo**	3.07	30	*i* Pn	Pn	07 10 57.5	+0.5
VAY				*i* Sn	Sg	07 11 55.5	+8.3
VAY				*e*Lg	Lg	07 11 55.7	
	comp=E,66µm,1.3s						
KTHR	**Kythira**	3.11	140	P	Pn	07 10 59.4	+1.8
KARY	**Karystos**	3.14	101	P	Pn	07 10 59.6	+1.7
OUR	**Ouranopolis**	3.14	57	P	Pn	07 10 59.0	+1.1
STIP	**Stip**	3.27	22	*i* Pn	Pn	07 11 01.3	+1.6
SKO	**Skopje**	3.37	12	*i* Pn	Pn	07 11 01.8	+0.7
SKO				*i* Sn	Sg	07 12 08.3	+12
SKO				*e*Lg	Lg	07 12 13.6	
	comp=E,78µm,4.5s						
SRS	**Serrai**	3.39	43	P	Pn	07 11 01.5	+0.1
SRS	**Serrai**	3.39	43	*i* Pn	Pn	07 11 01.7	+0.3
ULC	**Ulcinj**	3.43	344	*i* Pn	Pn	07 11 00.9	-1.1
ULC	**Ulcinj**	3.43	344	*e*Pn	Pn	07 11 00.8	-1.1
ULC				*i* Sn	Sn	07 11 39.0	-3.6
MATE	**Matera**	3.55	305	⇑P	Pn	07 11 03.2	-0.4
MATE	**Matera**	3.55	305	⇑P	Pn	07 11 02.6	-0.9
ANKY	**Antikythira Is**	3.57	141	P	Pn	07 11 05.4	+1.6
DRME	**Dracevica, Mon**	3.66	344	*e*Pn	Pn	07 11 03.9	-1.1
DRME	**Dracevica, Mon**	3.66	344	*e*Pn	Pn	07 11 04.0	-1.1
DRME				*i* Sn	Sn	07 11 44.4	-3.7
CEL	**Celeste**	3.66	265	⇑P	Pn	07 11 04.7	-0.6
CEL	**Celeste**	3.66	265		Pn	07 11 05.2	0.0
BCI	**Bajram Curri**	3.70	355	P	Pn	07 11 06.4	+0.7
	baz=0.0						
BUM	**Brajici-Budva**	3.83	341	⇑*i*Pn	Pn	07 11 06.4	-1.1
BUM				*i* Sn	Sn	07 11 48.4	-4.1
PDG	**Podgorica**	3.88	346	⇓P	Pn	07 11 07.8	-0.2
PDG	**Podgorica**	3.88	346	*e*Pn	Pn	07 11 07.5	-0.5
PDG				*e*Sn	Sn	07 11 52.2	-1.3
PDG	**Podgorica**	3.88	346	⇑*i*Pn	Pn	07 11 06.9	-1.1
PDG	**Podgorica**	3.88	346	*i* Pn	Pn	07 11 07.1	-1.0
PDG	**Podgorica**	3.88	346	⇑P	Pn	07 11 06.9	-1.1
PDG	**Podgorica**	3.88	346	Pn	Pn	07 11 07.0	-1.0
TTG	**Podgorica**	3.88	346	⇑*i*Pn	Pn	07 11 07.2	-0.8
TTG				*i* Sn	Sn	07 11 49.6	-3.9
PVY	**Plav**	3.94	354	*e*Pn	Pn	07 11 09.4	+0.3
PVY				*i* Sn	Sn	07 11 51.2	-4.1
PRVS	**Prvonek**	4.00	17	*e*Pn	Pn	07 11 10.8	+0.9
CEME	**Cevo**	4.06	343	*e*Pn	Pn	07 11 09.4	-1.2
CEME				*i* Sn	Sn	07 11 54.0	-4.1
HCY	**Herceg Novi**	4.08	338	⇑*i*Pn	Pn	07 11 08.4	-2.4
HCY	**Herceg Novi**	4.08	338	*e*Pn	Pn	07 11 08.8	-2.0
HCY				*i* Sn	Sn	07 11 54.3	-4.2
BOSS	**Bosilegrad**	4.09	21	*e*Pn	Pn	07 11 11.4	+0.3
BOSS				*e*Sn	Sn	07 12 00.0	+1.0
MRVN	**Minervino Murg**	4.10	307	⇑P	Pn	07 11 10.3	-0.9
IVA	**Berane**	4.22	354	*e*Pn	Pn	07 11 12.6	-0.3
IVA				*i* Sn	Sn	07 11 58.0	-4.2
KOME	**Kolasin**	4.24	350	*e*Pn	Pn	07 11 12.8	-0.4
KOME				*i* Sn	Sn	07 11 58.4	-4.3
BARS	**Barje**	4.25	13	*e*Pn	Pn	07 11 13.5	+0.3
BARS	**Barje**	4.25	13	*e*Pn	Pg	07 11 30.3	+0.3
BARS	**Barje**	4.25	13	*i* Pn	Pn	07 11 12.7	-0.5
NKME	**Niksic**	4.26	344	*e*Pn	Pn	07 11 12.1	-1.3
NKME				*i* Sn	Sn	07 11 58.7	-4.4
KNDR	**Palaiochora Ch**	4.26	143	P	Pn	07 11 12.9	-0.5
NKY	**Niksic**	4.30	345	⇑*i*Pn	Pn	07 11 12.7	-1.2
NKY				*i* Sn	Sn	07 11 59.7	-4.4
TREB	**Trebinje**	4.37	338	*e*Pn	Pn	07 11 13.3	-1.5
TREB				*e*Sn	Sn	07 12 02.8	-2.8
TREB	**Trebinje**	4.37	338	⇑*i*Pn	Pn	07 11 12.3	-2.5
DBRK	**Dubrovnik**	4.38	336	*i* Pn	Pn	07 11 13.5	-1.5
DBRK				Sn	Sn	07 12 00.8	-5.2
RZN	**Rozhen**	4.40	45	P	Pn	07 11 17.8	+2.4
GADA	**Gvkgeada**	4.42	68	P	Pn	07 11 16.0	+0.4
VTS	**Vitosha**	4.44	27	⇑P	Pn	07 11 16.9	+1.0
VTS	**Vitosha**	4.44	27	*e*Pn	Pn	07 11 17.0	+1.0
VTS				*e*Sn	Sn	07 12 07.8	+0.1
VTS	**Vitosha**	4.44	27	P	Pn	07 11 16.6	+0.6
VTS	**Vitosha**	4.44	27	⇑P	Pn	07 11 16.1	+0.1
VTS	**Vitosha**	4.44	27		Pn	07 11 16.6	+0.6
BRY	**Bratogost**	4.49	341	⇑*i*Pn	Pn	07 11 14.4	-2.2
BRY	**Bratogost**	4.49	341	⇑*i*Pn	Pn	07 11 15.0	-1.6
BRY				*i* Sn	Sn	07 12 04.0	-4.8
SOF	**Sofiya**	4.54	27	P	Pn	07 11 18.9	+1.7
SELS	**Selova**	4.56	5	*e*Pn	Pn	07 11 17.0	-0.5
RDO	**Rodhopi**	4.57	56	⇓P	Pn	07 11 16.7	-0.9
SJES	**Sjenica**	4.60	355	*e*Pn	Pn	07 11 18.2	+0.1
EZN	**Ezine**	4.64	74	P	Pn	07 11 19.4	+0.8
PLD	**Plovdiv**	4.68	42	P	Pn	07 11 19.7	+0.6
UPM	**Unac-Piva**	4.69	345	⇑*i*Pn	Pn	07 11 18.0	-1.4
UPM	**Unac-Piva**	4.69	345	⇑*i*Pn	Pn	07 11 18.1	-1.4
UPM				*i* Sn	Sn	07 12 08.9	-4.9
STON	**Ston**	4.71	334	*e*Pn	Pn	07 11 18.1	-1.4
STON				*e*Sn	Sn	07 12 11.4	-2.7
STON	**Ston**	4.71	334	⇑*i*Pn	Pn	07 11 16.8	-2.7
STON	**Ston**	4.71	334	*e*Pn	Pn	07 11 18.0	-1.5
STON				Sn	Sn	07 12 10.5	-3.6
PLE	**Pljevlja**	4.73	350	*e*Pn	Pn	07 11 19.2	-0.7
PLE				*i* Sn	Sn	07 12 10.0	-4.8
PGB	**Panagyurishte**	4.76	34	P	Pn	07 11 21.5	+1.3
GVD	**Gavdhos**	4.78	142	P	Pn	07 11 19.8	-0.6
KDZ	**Kurdzhali**	4.78	50	P	Pn	07 11 21.3	+0.8
SGRT	**San Giovanni R**	4.79	312	Pn	Pn	07 11 19.8	-0.8
ALN	**Alexandroupoli**	4.79	61	P	Pn	07 11 20.7	+0.1
ALN	**Alexandroupoli**	4.79	61	P	Pn	07 11 21.2	+0.6
ALN	**Alexandroupoli**	4.79	61	⇓P	Pn	07 11 20.9	+0.3
ALN	**Alexandroupoli**	4.79	61	Pn	Pn	07 11 21.2	+0.6
ENEZ	**Enez**	4.80	63	P	Pn	07 11 20.7	0.0
IDI	**Anoyia**	4.86	133	Pn	Pn	07 11 22.8	+1.2
	comp=E,14nm,0.3s,baz=304,slow=10.0,SNR=56						
IDI				Sn	Sn	07 12 18.0	+0.1
	comp=E,199nm,0.3s,baz=32,slow=15,SNR=6.5						
IDI				LR	LR	07 13 52.1	
	comp=E,793µm,20.1s,baz=317,slow=46						
ZAPS	**Zavoj**	4.86	18	*e*Pn	Pn	07 11 22.5	+0.9
VAE	**Valguarnera**	4.97	258	Pn	Pn	07 11 23.4	+0.2
	comp=E,26nm,0.3s,baz=129,slow=3.1,SNR=86						
VAE				Sn	Sn	07 12 22.4	+1.6
	comp=E,348nm,0.3s,baz=134,slow=23,SNR=7.8						
VAE				LR	LR	07 12 56.6	
	comp=E,143µm,21.3s,baz=58,slow=34						
RUDO	**Rudo**	5.02	350	⇑*i*Pn	Pn	07 11 22.6	-1.1
BOVS	**Bovan**	5.03	10	⇑P	Pn	07 11 23.1	-0.8
BOVS				⇑S	Sn	07 12 18.2	-3.9
BOVS	**Bovan**	5.03	10	*e*Pn	Pn	07 11 22.7	-1.3
RAFF	**Raffo Rosso**	5.09	255		Pn	07 11 23.1	-1.6
PAOL	**Paolisi**	5.16	299		Pn	07 11 26.6	+0.9
GRUS	**Gruza**	5.21	1	*e*Pn	Pn	07 11 25.7	-0.7
BBLS	**Lazići**	5.25	351	*e*Sn	Sn	07 12 22.0	-5.6
BBLS	**Lazići**	5.25	351	⇑*i*Pn	Pn	07 11 26.1	-1.0
ZAGS	**Zajecar**	5.29	13	*e*Pn	Pn	07 11 27.0	-0.5
MAKA	**Makarska**	5.32	331	*e*Pn	Pn	07 11 26.9	-0.9
MAKA				Sn	Sn	07 12 25.5	-3.6
DIVS	**Divibare**	5.43	356	*e*Pn	Pn	07 11 28.4	-1.1
DIVS	**Divibare**	5.43	356	⇑*i*Pn	Pn	07 11 28.5	-1.1
DIVS	**Divibare**	5.43	356	⇑P	Pn	07 11 27.8	-1.7
DIVS	**Divibare**	5.43	356		Pn	07 11 28.1	-1.4
RICI	**Ricice**	5.46	333	*i* Pn	Pn	07 11 28.5	-1.3
HVAR	**Hvar**	5.46	327	*e*Pn	Pn	07 11 28.6	-1.2
HVAR				Sn	Sn	07 12 29.6	-3.0
TRUS	**Trudelj**	5.54	359	*e*Pn	Pn	07 11 30.7	-0.3
TRUS				*e*Sn	Sn	07 12 31.3	-3.4
SVIS	**Svilajnac**	5.61	5	*e*Pn	Pn	07 11 32.4	+0.6
PLVB	**Pleven**	5.63	32	⇓P	Pn	07 11 33.8	+1.6
CORL	**Corleone**	5.74	264		Pn	07 11 33.5	-0.2
BALB	**Balikesir**	5.79	78		Pn	07 11 36.6	+2.2
KUBS	**Kucevo**	5.80	8	*e*Pn	Pn	07 11 33.1	-1.3
PVL	**Pavlikeni**	5.81	37	P	Pn	07 11 34.1	-0.5
CLTB	**Caltabellotta**	5.87	262	⇓P	Pn	07 11 35.8	+0.2
CLTB	**Caltabellotta**	5.87	262	Pn	Pn	07 11 36.0	+0.4
PUNG	**Punghina**	5.88	17	⇑P	Pn	07 11 35.6	0.0
EDC	**Edincik**	5.91	71	P	Pn	07 11 37.7	+1.7
TEKS	**Tekeris**	5.92	353	*e*Pn	Pn	07 11 34.3	-1.8
TEKS	**Tekeris**	5.92	353	*e*Pn	Pn	07 11 34.4	-1.7
TEKS				*e*Sn	Sn	07 12 39.1	-4.8
TEKS	**Tekeris**	5.92	353	*e*Pn	Pn	07 11 33.6	-2.5
JMB	**Yambol**	5.96	49	P	Pn	07 11 36.4	-0.3
VLAD	**Vladila**	6.06	27	⇑P	Pn	07 11 38.3	+0.2
BEO	**Beograd**	6.13	360	P	Pn	07 11 36.0	-3.0
KIJV	**Kijevo**	6.16	331	*e*Pn	Pn	07 11 37.9	-1.6
MDVR	**Moldovita**	6.17	8	⇓P	Pn	07 11 38.4	-1.1
DJES	**Djerdap**	6.17	13	⇑P	Pn	07 11 39.5	-0.1
ZIMR		6.17	35	⇓P	Pn	07 11 41.0	+1.5
BLJ	**Bijeljina**	6.18	352	⇑*i*Pn	Pn	07 11 37.3	-2.3
ZIRJ	**Zirje**	6.19	325	*e*Pn	Pn	07 11 38.2	-1.7
ZIRJ				Sn	Sn	07 12 46.0	-4.6
MGRS	**Mrkonjic Grad**	6.29	337	*e*Pn	Pn	07 11 39.9	-1.4
SRE	**Strehaia**	6.31	18	⇓P	Pn	07 11 41.9	+0.4
SRE	**Strehaia**	6.31	18	P	Pn	07 11 41.8	+0.4
YER	**Yerkesik**	6.32	102	P	Pn	07 11 45.0	+3.3
DOB	**Doboj**	6.32	344	*e*Pn	Pn	07 11 39.1	-2.5
MORI	**Morici**	6.33	327	*e*Pn	Pn	07 11 40.8	-1.0
HERR	**Herculane**	6.36	12	⇑P	Pn	07 11 41.6	-0.6
COPA	**Copaceanca**	6.49	31	⇑P	Pn	07 11 45.0	+1.0
FRGS	**Fruska Gora**	6.50	355	⇑P	Pn	07 11 42.7	-1.4
FRGS	**Fruska Gora**	6.50	355	*e*Pn	Pn	07 11 42.8	-1.4
FRGS				*e*Sn	Sn	07 12 54.5	-3.7
FRGS	**Fruska Gora**	6.50	355	⇑*i*Pn	Pn	07 11 42.4	-1.7
ARG	**Arkhangelos**	6.52	110	⇑P	Pn	07 11 45.7	+1.3
ARG	**Arkhangelos**	6.52	110	⇑P	Pn	07 11 45.7	+1.3
AQU	**L'Aquila**	6.56	306	P	Pn	07 11 45.8	+0.8
AQU	**L'Aquila**	6.56	306	*e*Pn	Pn	07 11 46.0	+1.0
AQU	**L'Aquila**	6.56	306	⇑P	Pn	07 11 45.4	+0.5
AQU	**L'Aquila**	6.56	306	Pn	Pn	07 11 45.8	+0.8
BLY	**Banja Luka**	6.56	339	*e*Pn	Pn	07 11 44.0	-1.0
BLY	**Banja Luka**	6.56	339	⇑*i*Pn	Pn	07 11 43.6	-1.4
BLY	**Banja Luka**	6.56	339	⇑P	Pn	07 11 43.2	-1.7
RAZG	**Razgrad**	6.65	41	⇓P	Pn	07 11 48.7	+2.6
BANR	**Banloc**	6.72	4	⇓P	Pn	07 11 46.5	-0.5
DUGI	**Dugi Otok**	6.72	324	*i* Pn	Pn	07 11 45.7	-1.5
DUGI				Sn	Sn	07 12 59.8	-3.8
UDBI	**Udbina**	6.85	330	*i* Pn	Pn	07 11 48.4	-0.6
SGRR	**Singureni**	6.89	35	⇓P	Pn	07 11 50.7	+1.3
MRAK	**Mrakovica**	6.89	338	⇑*i*Pn	Pn	07 11 47.5	-2.0
PRD	**Provadia**	6.89	47	P	Pn	07 11 51.6	+2.2
PRIJ	**Prijedor**	6.91	337	*e*Pn	Pn	07 11 48.9	-0.8
GZR	**Gura Zlata**	6.92	13	⇑P	Pn	07 11 49.5	-0.4
BZS	**Buzias**	6.98	6	⇑P	Pn	07 11 49.8	-0.9
BZS	**Buzias**	6.98	6	*e*Pn	Pn	07 11 49.6	-1.1
BZS	**Buzias**	6.98	6	P	Pn	07 11 49.0	-1.7
BZS				pmax	pmax		
	comp=Z,642nm,0.7s						
NRCA	**Norcia**	7.00	309		Pn	07 11 51.5	+0.5
STFAR	**Stefanesti-Arg**	7.01	27	⇓P	Pn	07 11 53.0	+1.8
LOT	**Lotru**	7.18	19	⇑P	Pn	07 11 53.5	-0.1
A251A	**Rujevac**	7.19	335	*e*Pn	Pn	07 11 52.4	-1.2
PLIT	**Plitvice**	7.20	331	*e*Pn	Pn	07 11 52.8	-0.9
PLIT				Sn	Sn	07 13 12.1	-3.4
NVLJ	**Novalja**	7.25	326	*e*Pn	Pn	07 11 52.8	-1.6
NVLJ				Sn	Sn	07 13 11.9	-4.7
ARR	**Arges**	7.35	23	⇑P	Pn	07 11 56.1	+0.3
MTUR	**Matau**	7.36	26	⇓P	Pn	07 11 57.2	+1.2
SULR		7.37	34	⇓P	Pn	07 11 58.1	+2.1
DEV	**Deva**	7.41	13	⇑P	Pn	07 11 56.9	+0.3
DEV	**Deva**	7.41	13	P	Pn	07 11 58.3	+1.7
DEV				pmax	pmax		
	comp=Z,851nm,0.8s						
RASA	**Rasa**	7.44	40	⇑P	Pn	07 11 59.4	+2.5
RABC	**Rab**	7.44	327	*e*Pn	Pn	07 11 55.1	-1.8
LEHL	**Lehliu**	7.47	37	⇓P	Pn	07 11 59.9	+2.6
MOSL	**Moslavina**	7.48	339	*e*Pn	Pn	07 11 54.8	-2.7
VOIR		7.54	25	⇓P	Pn	07 11 60.0	+1.5
VOIR		7.54	25	P	Pn	07 11 59.0	+0.5
VOIR				pmax	pmax		
	comp=Z,931nm,0.7s						
SECR		7.58	31	⇑P	Pn	07 12 01.3	+2.3
MURB	**Monte Urbino**	7.59	310		Pn	07 11 59.7	+0.5
KALB	**Balgarevo**	7.60	49	⇑P	Pn	07 12 01.6	+2.4
KOVH	**Kovagotottos**	7.62	347	*e*P	Pn	07 11 56.9	-2.6
KOVH	**Kovagotottos**	7.62	347	*e*PN	Pn	07 11 57.2	-2.3
KOVH				*e*SN	Sn	07 13 17.8	-8.1
SIRR	**Siria**	7.63	6	⇓P	Pn	07 11 58.7	-1.0
PSN	**Preselentsi**	7.63	47	P	Pn	07 12 02.0	+2.3
MGAB	**Montegabbione**	7.66	306	⇑P	Pn	07 12 00.2	+0.1
MORH	**Mrgy, Hungar**	7.66	350	*e*P	Pn	07 11 57.3	-2.7
MORH	**Mrgy, Hungar**	7.66	350	*e*PN	Pn	07 11 57.7	-2.4
MORH				*e*SN	Sn	07 13 22.3	-4.5
MORH	**Mrgy, Hungar**	7.66	350	⇑*i*Pn	Pn	07 11 56.9	-3.1
AMBH	**Ambrzfalva**	7.67	1	⇑P	Pn	07 11 59.7	-0.5
AMBH	**Ambrzfalva**	7.67	1	*e*PN	Pn	07 11 59.7	-0.5
AMBH	**Ambrzfalva**	7.67	1	*e*P	Pn	07 11 59.7	-0.5
ELL	**Elmali**	7.68	102	P	Pn	07 12 05.4	+5.0
ELL	**Elmali**	7.68	102		Pn	07 12 05.4	+5.0
ICOR	**Ion Corvin**	7.71	43	⇑P	Pn	07 12 02.7	+2.1
AMRR	**Amara**	7.81	38	⇓P	Pn	07 12 04.6	+2.5

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ISR    Istrita           7.84  33 ⇓P     Pn       07 12 04.2 +1.7
ISR    Istrita           7.84  33  P     Pn       07 12 04.3 +1.7
ISR                                pmax  pmax
       comp=Z,4µm,1.0s
BOJS   Bojanci           7.87 332 i Pn   Pn       07 12 01.2 -1.7
BOJS                              eSn    Sn       07 13 26.5 -5.4
BOJS                               IAML           07 16 14.3
       comp=Z,328µm,7.7s
OZLJ   Ozalj             7.89 333 ePn    Pn       07 12 00.9 -2.2
ZAG    Zagreb            7.90 336  P     Pn       07 12 01.6 -1.7
ZAG    Zagreb            7.90 336⇑iPn    Pn       07 12 01.3 -2.0
ZAG    Zagreb            7.90 336 i Pn   Pn       07 12 01.6 -1.7
ISP    Isparta           7.91  93  P     Pn       07 12 06.6 +3.1
ISP    Isparta           7.91  93  Pn    Pn       07 12 06.6 +3.1
MLR    Muntele Rosu      7.91  29 ⇓P     Pn       07 12 05.6 +2.0
MLR    Muntele Rosu      7.91  29  Pn    Pn       07 12 04.8 +1.3
       comp=Z,11nm,0.3s,baz=223,slow=6.2,SNR=74
MLR                                LR    LR       07 15 58.9
       comp=Z,572µm,18.6s,baz=204,slow=45
SMRN   Sveta Marina      7.94 325 ePn    Pn       07 12 01.8 -2.0
SMRN                               Sn    Sn       07 13 27.1 -6.4
MANR   Mangalia          7.95  47 ⇓P     Pn       07 12 06.2 +2.3
PTJ    Puntijarka        7.98 336 ePn    Pn       07 12 01.7 -2.8
NEHR   Nehoiu            7.99  31 ⇑P     Pn       07 12 06.7 +2.1
BRJN   Brijuni           8.02 323 i Pn   Pn       07 12 03.5 -1.5
BRJN                               Sn    Sn       07 13 30.0 -5.6
RIY    Rijeka            8.03 328⇑iPn    Pn       07 12 03.0 -2.0
RIY    Rijeka            8.03 328 ePn    Pn       07 12 03.7 -1.3
KALN   Kalnik            8.04 339 ePn    Pn       07 12 02.1 -3.1
CRES   Cresnjev          8.07 334⇑iPn    Pn       07 12 03.5 -2.2
MFTR   Murfatlar         8.08  45 ⇑P     Pn       07 12 07.9 +2.1
DOPR   Dopca             8.12  25 ⇑P     Pn       07 12 07.4 +0.9
SLUM   Salum             8.13 150  P     Pn       07 12 01.9 -4.6
       baz=154
EFOR   EFORIE            8.14  46 ⇑P     Pn       07 12 09.6 +3.1
HARR   Harsova           8.17  40 ⇑P     Pn       07 12 08.2 +1.2
LOBO   Lobor             8.17 338 ePn    Pn       07 12 04.2 -2.8
GRER                     8.24  34 ⇑P     Pn       07 12 10.0 +2.1
BISRR  Bisoca            8.26  32 ⇓P     Pn       07 12 10.7 +2.4
TIRR   Tirgusor          8.26  43 ⇑P     Pn       07 12 10.0 +1.8
TIRR   Tirgusor          8.26  43  P     Pn       07 12 09.6 +1.4
TIRR   Tirgusor          8.26  43 ⇑P     Pn       07 12 08.7 +0.4
TIRR   Tirgusor          8.26  43        Pn       07 12 09.6 +1.4
DRGR                     8.27  10 ⇑P     Pn       07 12 08.0 -0.4
DRGR                     8.27  10  P     Pn       07 12 07.2 -1.2
DRGR                               pmax  pmax
       comp=Z,210nm,0.7s
COVR   Voineasa-Covas    8.31  29 ⇑P     Pn       07 12 10.3 +1.3
CJR    Cluj-Napoca       8.34  15 ⇓P     Pn       07 12 10.3 +0.9
CJR    Cluj-Napoca       8.34  15  P     Pn       07 12 10.3 +0.9
OZUR                     8.37  26 ⇓P     Pn       07 12 11.2 +1.4
CEY    Cerknica          8.38 329⇑iPn    Pn       07 12 08.2 -1.8
CBBR   Cluj-Babes-Bol    8.39  14 ⇑P     Pn       07 12 09.8 -0.2
CASP   Castiglione de    8.41 302        Pn       07 12 10.6 +0.2
MDUB   Mudurnu           8.43  74        Pn       07 12 12.9 +2.2
TIH    Tihany            8.45 348 eP     Pn       07 12 08.6 -2.2
TIH    Tihany            8.45 348 ePN    Pn       07 12 09.1 -1.7
TIH                               eSN    Sn       07 13 39.3 -6.7
PLOR   Plostina          8.48  30 ⇓P     Pn       07 12 13.4 +2.1
PLOR   Plostina          8.48  30  P     Pn       07 12 12.6 +1.3
PLOR                               pmax  pmax
       comp=Z,4µm,1.1s
OSSC   Osservatorio P    8.52 308        Pn       07 12 11.8  0.0
VRI    Vrincioaia        8.53  31 ⇑P     Pn       07 12 14.0 +2.0
VRI    Vrincioaia        8.53  31  P     Pn       07 12 13.0 +1.1
VRI                                pmax  pmax
       comp=Z,3µm,1.5s
TPGR   Topolog           8.53  41 ⇑P     Pn       07 12 14.2 +2.1
LJU    Ljubljana         8.60 331⇑iPn    Pn       07 12 11.1 -1.8
CFR    Carcaliu          8.62  39 ⇑P     Pn       07 12 14.4 +1.3
BSZH   Besenyszg         8.62 359 ⇑P     Pn       07 12 13.3 +0.1
BSZH   Besenyszg         8.62 359 ePN    Pn       07 12 14.0 +0.8
BSZH   Besenyszg         8.62 359 eP     Pn       07 12 13.5 +0.3
JURR   Jurilovca         8.71  43 ⇑P     Pn       07 12 15.7 +1.3
VSL    Villasalto        8.71 279 ⇑P     Pn       07 12 13.7 -0.8
VSL    Villasalto        8.71 279  Pn    Pn       07 12 14.6 +0.1
IZVR   Izvoarele         8.71  36 ⇑P     Pn       07 12 16.2 +1.7
MPLH   Magyarpolny       8.77 346 ePN    Pn       07 12 13.5 -1.8
MPLH   Magyarpolny       8.77 346 eP     Pn       07 12 13.2 -2.0
MPLH   Magyarpolny       8.77 346 eSN    Sn       07 13 49.4 -4.6
KDZE   Karadeniz Ereo    8.78  69 ⇓P     Pn       07 12 19.8 +4.4
CSKK   Cskako            8.84 350 eP     Pn       07 12 14.9 -1.3
CSKK   Cskako            8.84 350 ePN    Pn       07 12 15.3 -0.9
CSKK                              eSN    Sn       07 13 47.0 -8.7
ARCR   ARCALIA           8.86  17 ⇑P     Pn       07 12 16.8 +0.4
TATR   Tatarca           8.89  36 ⇓P     Pn       07 12 19.4 +2.5
SCTR   Scanteiesti       8.92  36 ⇓P     Pn       07 12 19.1 +1.8
SOKA   Soboth            8.96 335  Pn    Pn       07 12 15.4 -2.5
       comp=Z,1µm,0.8s,SNR=362
SOKA                              eSn    Sn       07 13 57.9 -0.9
       comp=Z,769nm,0.7s
TLCR                     8.96  41 ⇑P     Pn       07 12 20.3 +2.5
TLCR                     8.96  41  P     Pn       07 12 20.8 +2.9
TLCR                               pmax  pmax
       comp=Z,113nm,0.7s
OBKA   Obir              8.98 333  Pn    Pn       07 12 15.9 -2.4
       comp=Z,918nm,0.7s,SNR=141
OBKA                              eSn    Sn       07 13 55.8 -3.6
       comp=Z,2µm,0.7s
VARL   Varlezi           9.03  35 ⇑P     Pn       07 12 21.1 +2.4
TESR   Tescani           9.04  28 ⇓P     Pn       07 12 20.1 +1.2
VLDR   Vladesti          9.09  36 ⇑P     Pn       07 12 21.9 +2.3
ZCCA   Zocca             9.14 311        Pn       07 12 21.5 +1.2
PSZ    Piszkesteto       9.25 357 ⇑P     Pn       07 12 20.4 -1.5
PSZ    Piszkesteto       9.25 357 eP     Pn       07 12 19.6 -2.3
PSZ    Piszkesteto       9.25 357 ePN    Pn       07 12 20.2 -1.7
PSZ                               eSN    Sn       07 13 58.7 -7.2
PSZ    Piszkesteto       9.25 357 ⇑P     Pn       07 12 19.4 -2.4
PSZ    Piszkesteto       9.25 357        Pn       07 12 19.6 -2.3
SRO    Srobarova         9.28 351 eP     Pn       07 12 22.0 -0.1
SRO                               e               07 14 09.6
SRO    Srobarova         9.28 351 ePN    Pn       07 12 22.0 -0.1
SRO                               eSN    Sn       07 14 09.6 +3.2
ARSA   Arzberg           9.32 338 i Pn   Pn       07 12 20.6 -2.2
       comp=Z,426nm,0.8s,SNR=140
PTCC   Patocco-Chiusa    9.36 328 ⇑P     Pn       07 12 20.7 -2.7
TEOL   Teolo             9.38 318  Pn    Pn       07 12 21.1 -2.5
VLC    Villacollemand    9.38 309 ⇑P     Pn       07 12 22.6 -1.1
VLC    Villacollemand    9.38 309        Pn       07 12 22.6 -1.1
KEST   Kesra             9.39 255  Pn    Pn       07 12 24.1 +0.2
       comp=Z,7.5nm,0.3s,baz=33,slow=3.8,SNR=51
KEST                               LR    LR       07 17 04.0
       comp=Z,286µm,21.2s,baz=13,slow=44
KEST   Kesra             9.39 255  P     Pn       07 12 24.6 +0.7
       SNR=212
KEST                               P     Pn       07 12 24.6 +0.7
       SNR=212
KEST                               P     Pn       07 12 24.6 +0.7
       SNR=212
KEST                               S     Sn       07 14 08.6 -1.0
KEST                               S     Sn       07 14 08.6 -1.0
KEST                               S     Sn       07 14 08.6 -1.0
KEST   Kesra             9.39 255        Pn       07 12 23.7 -0.2
MYKA   Terra Mystica     9.43 330  Pn    Pn       07 12 21.9 -2.5
       comp=Z,144nm,0.6s,SNR=91
MYKA                              eSn    Sn       07 14 09.1 -1.2
       comp=Z,968nm,0.8s
SOP    Sopron            9.46 343 eP     Pn       07 12 22.3 -2.3
SOP    Sopron            9.46 343 ePN    Pn       07 12 22.3 -2.3
SOP    Sopron            9.46 343  P     Pn       07 12 22.1 -2.6
SOP                                pmax  pmax
       comp=Z,472nm,1.8s
STAL   STALIGIAL         9.53 325        Pn       07 12 23.1 -2.5
TRPA   Tarpa             9.56   8 ⇓P     Pn       07 12 25.5 -0.6
TRPA   Tarpa             9.56   8 eP     Pn       07 12 25.2 -0.9
TRPA   Tarpa             9.56   8 ePN    Pn       07 12 25.2 -0.9
BURAR  Bucovina Array    9.57  19 ⇓P     Pn       07 12 27.5 +1.3
BURAR  Bucovina Array    9.57  19  P     Pn       07 12 26.0 -0.2
BURAR  Bucovina Array    9.57  19        Pn       07 12 26.0 -0.2
BR231  Keskin MP Arra    9.57  79        Pn       07 12 26.4 +0.1
TRSU   Trosnyk           9.58  10  P     Pn       07 12 25.0 -1.3
ANTO   Ankara            9.58  79  P     Pn       07 12 29.3 +2.8
ANTO   Ankara            9.58  79        Pn       07 12 29.3 +2.8
PGF    Pioggiola         9.58 297  P     Pn       07 12 26.8 +0.3
BUR08  Bucovina Ar. S    9.59  19        Pn       07 12 26.6  0.0
PRAR   RASCA             9.63  24 ⇓P     Pn       07 12 28.6 +1.5
ZOU    Zoufplan          9.64 327        Pn       07 12 25.2 -2.2
GRAM   Graiana           9.76 310  P     Pn       07 12 29.0 +0.2
PRMA   PARMA             9.76 312        Pn       07 12 28.8  0.0
KECS   Kecovo            9.80 360 eP     Pn       07 12 29.3 -0.1
KECS   Kecovo            9.80 360 ePN    Pn       07 12 29.3 -0.1
ZST    Bratislava        9.84 346 eP     Pn       07 12 28.4 -1.4
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ZST                               e               07 14 13.7
ZST    Bratislava        9.84 346 ePN    Pn       07 12 28.4 -1.4
ZST                               eSN    Sn       07 14 13.7 -6.5
CONA   Conrad Observa    9.85 341 i Pn   Pn       07 12 27.4 -2.8
       comp=Z,287nm,0.8s,SNR=76
CTI    Castel Tesino     9.87 321  P     Pn       07 12 27.8 -2.6
CTI    Castel Tesino     9.87 321        Pn       07 12 27.8 -2.6
VYHS   Vyhne             9.89 353 eP     Pn       07 12 29.1 -1.5
VYHS                              e               07 14 15.8
VYHS                               MLR   MLR
       comp=Z,402µm,18.5s
VYHS   Vyhne             9.89 353 ePN    Pn       07 12 29.1 -1.5
VYHS                              eSN    Sn       07 14 15.8 -5.8
VYHS                              eL     L        07 17 20.8
KBA    Koelnbreinsper    9.91 330 i Pn   Pn       07 12 28.7 -2.4
       comp=Z,393nm,0.9s,SNR=197
KBA                               eSn    Sn       07 14 19.9 -2.4
       comp=Z,958nm,1.1s
KBA    Koelnbreinsper    9.91 330  P     Pn       07 12 29.0 -2.1
KBA                                pmax  pmax
       comp=Z,985nm,1.0s
IAS    Iasi              9.95  29  P     Pn       07 12 33.3 +2.0
IAS                                pmax  pmax
       comp=Z,1µm,0.8s
MODS   Modra-Piesok      9.98 347 eP     Pn       07 12 28.9 -2.9
MODS                              e               07 14 16.7
MODS   Modra-Piesok      9.98 347 ePN    Pn       07 12 28.9 -2.9
MODS                              eSN    Sn       07 14 16.7 -7.0
MODS                              eL     L        07 16 39.1
ABTA   Abfaltersbach     9.99 326 i Pn   Pn       07 12 29.7 -2.3
       comp=Z,286nm,0.9s,SNR=137
ABTA                              eSn    Sn       07 14 22.0 -2.1
       comp=Z,2µm,0.7s
MSSA   Maissana         10.00 308        Pn       07 12 31.6 -0.6
KOLL   Kolacno          10.02 352 ePN    Pn       07 12 31.6 -0.7
KOLL                              eSN    Sn       07 14 20.1 -4.6
UZH    Uzhgorod         10.03   7 eP     Pn       07 12 31.4 -1.1
UZH                               eS     Sn       07 14 24.4 -0.6
UZH                                MLR   MLR
       comp=Z,26µm,14.0s
SMOL   Smolenice        10.09 348 eP     Pn       07 12 32.2 -1.1
SMOL   Smolenice        10.09 348 ePN    Pn       07 12 32.2 -1.1
SALO   Salr             10.16 316 ⇑P     Pn       07 12 31.7 -2.6
SALO   Salr             10.16 316        Pn       07 12 32.0 -2.3
KSV    Kosov            10.18  17  P     Pn       07 12 34.3 -0.3
BR131  Keskin Array S   10.23  80  P     Pn       07 12 37.7 +2.3
BR131  Keskin Array S   10.23  80  P     Pn       07 12 39.0 +3.6
       SNR=73
BR131                              P     Pn       07 12 39.0 +3.6
       SNR=73
BR131  Keskin Array S   10.23  80        Pn       07 12 37.7 +2.3
BRTR   Keskin Array B   10.23  80  Pn    Pn       07 12 37.0 +1.6
       comp=Z,5.6nm,0.3s,baz=262,slow=12,SNR=50
BRTR                               Sn    Sn       07 14 28.2 -1.9
       baz=289,slow=18,SNR=1.6
BRTR                               LR    LR       07 17 23.2
       comp=Z,249µm,19.9s,baz=266,slow=43
BRTR   Keskin Array B   10.23  80 i P    Pn       07 12 38.4 +3.0
BRTR                               pmax  pmax
       comp=Z,76nm,0.7s
BRTR   Keskin Array B   10.23  80        Pn       07 12 37.6 +2.3
MILM   Milestii Mici    10.24  34 ⇑P     Pn       07 12 36.5 +1.2
MILM   Milestii Mici    10.24  34 eP     Pn       07 12 36.0 +0.7
MILM                              eS     Sn       07 14 36.0 +6.0
MILM                               MLR   MLR
       comp=N,321µm,12.5s
MILM                               MLR   MLR
       comp=E,242µm,10.5s
MILM                               MLR   MLR
       comp=Z,181µm,10.5s
MOA    Molln            10.24 336 i Pn   Pn       07 12 33.5 -1.9
       comp=Z,473nm,0.9s,SNR=189
MOA                               eSn    Sn       07 14 28.7 -1.4
       comp=Z,357nm,0.6s
CRVS   Cervenica-Dubn   10.25   3 eP     Pn       07 12 34.9 -0.6
CRVS   Cervenica-Dubn   10.25   3 ePN    Pn       07 12 34.9 -0.6
CRVS                              eL     L        07 16 34.0
SWA2                    10.26 155  P     Pn       07 12 31.3 -4.3
       baz=159
BOB    Bobbio (Coli)    10.28 310 ⇑P     Pn       07 12 35.8 -0.1
KIS    Kishinev         10.30  33 eP     Pn       07 12 36.0 -0.2
KIS                               eS     Sn       07 14 36.0 +4.5
KIS                               eLq    LQ       07 15 40.0
       comp=Z,122µm,21.0s
KIS                                LRM   MLR      07 17 24.0
       comp=Z,94µm,13.0s
KIS                               eLR    LR       07 17 34.0
KIS    Kishinev         10.30  33 eP     Pn       07 12 36.0 -0.2
KIS                               eS     Sn       07 14 36.0 +4.5
KIS                                MLR   MLR
       comp=Z,78µm,12.0s
KIS                                MLR   MLR
       comp=N,137µm,13.0s
KIS                                MLR   MLR
       comp=E,94µm,13.0s
KOLS   Kolonicke sedl   10.33   6 eP     Pn       07 12 36.7 +0.1
KOLS   Kolonicke sedl   10.33   6 ePN    Pn       07 12 36.7 +0.1
KOLS                              eL     L        07 16 54.3
JAVC   Velka Javorina   10.39 349 ePN    Pn       07 12 36.4 -1.0
PURM   Purcari          10.43  38 ⇑P     Pn       07 12 40.1 +2.1
LANS   Liptovska Anna   10.50 356 eP     Pn       07 12 38.8 -0.2
LANS   Liptovska Anna   10.50 356 ePN    Pn       07 12 38.8 -0.2
CMAH   Djebel Manchou   10.60 263  P     Pn       07 12 42.3 +1.9
ABSA   Djebel Ababsia   10.65 261  P     Pn       07 12 43.7 +2.6
MORS   Morshin          10.73  12  P     Pn       07 12 41.0 -1.1
NIE    Niedzica         10.74 359 eP     Pn       07 12 42.8 +0.5
NIE                               eL     L        07 20 55.2
       comp=E,66µm,18.4s
NIE    Niedzica         10.74 359  P     Pn       07 12 42.7 +0.5
NIE                                pmax  pmax
       comp=Z,317nm,1.6s
STHS   Stebnicka Huta   10.75   2 eP     Pn       07 12 42.1 -0.3
STHS   Stebnicka Huta   10.75   2 ePN    Pn       07 12 42.1 -0.3
WTTA   Wattenberg       10.77 326 i Pn   Pn       07 12 41.0 -1.8
       comp=Z,680nm,1.3s,SNR=152
WTTA                              eSn    Sn       07 14 41.2 -2.2
       comp=Z,4µm,1.4s
WTTA   Wattenberg       10.77 326  P     Pn       07 12 41.3 -1.5
WTTA                               pmax  pmax
       comp=Z,2µm,1.2s
KMPD   K-Podol'skiy     10.77  22  P     Pn       07 12 43.0 +0.4
KRUC   Moravsky         10.80 345  P     Pn       07 12 40.5 -2.6
KRUC                               pmax  pmax
       comp=Z,173nm,0.9s
KRUC   Moravsky         10.80 345 ePN    Pn       07 12 39.3 -3.8
WATA   Walderalm        10.85 326 i Pn   Pn       07 12 42.5 -1.4
       comp=Z,698nm,0.8s,SNR=227
WATA                              eSn    Sn       07 14 45.0 -0.3
       comp=Z,2µm,0.9s
CSS    Mathiatis        10.91 106 ⇑P     Pn       07 12 44.3 -0.3
CSS    Mathiatis        10.91 106        Pn       07 12 44.7 +0.1
SQTA   Sankt Quirin     10.93 324 i Pn   Pn       07 12 43.2 -1.7
       comp=Z,390nm,1.2s,SNR=52
SQTA                              eSn    Sn       07 14 43.7 -3.5
       comp=Z,925nm,0.6s
VRAC   Vranov           11.00 346 ⇓P     Pn       07 12 44.0 -1.7
VRAC   Vranov           11.00 346  Pn    Pn       07 12 43.1 -2.7
       comp=Z,3.9nm,0.3s,baz=175,slow=12,SNR=155
VRAC                               LR    LR       07 17 52.9
       comp=Z,222µm,18.1s,baz=178,slow=43
VRAC   Vranov           11.00 346 ePN    Pn       07 12 42.8 -3.0
FETA   Feichten         11.01 322 i Pn   Pn       07 12 44.0 -2.0
       comp=Z,164nm,1.2s,SNR=83
FETA                              eSn    Sn       07 14 47.5 -1.7
       comp=Z,949nm,0.9s
SORM   Soroca           11.03  28 ⇑P     Pn       07 12 46.8 +0.7
SORM   Soroca           11.03  28  P     Pn       07 12 47.1 +1.0
SORM                               pmax  pmax
       comp=Z,214nm,0.9s
KWP    Kalwaria Pacla   11.06   7 eP     Pn       07 12 47.4 +0.7
KWP                               eL     L        07 21 05.1
       comp=Z,204µm,12.3s
KWP    Kalwaria Pacla   11.06   7  P     Pn       07 12 47.8 +1.2
KWP    Kalwaria Pacla   11.06   7 ⇑P     Pn       07 12 47.3 +0.7
KWP    Kalwaria Pacla   11.06   7        Pn       07 12 47.8 +1.2
MOTA   Moosalm          11.07 325 i Pn   Pn       07 12 45.3 -1.6
       comp=Z,792nm,0.8s,SNR=256
MOTA                               Sn    Sn       07 14 48.4 -2.2
       comp=Z,953nm,1.0s
CKRC   Cesky Krumlov    11.09 338 ePN    Pn       07 12 45.2 -1.8
CKFL   Kef-Lekhel       11.20 263  P     Pn       07 12 51.4 +2.7
TREC   Trest            11.22 343 eP     Pn       07 12 47.2 -1.6
TREC                              e               07 14 48.5
TREC                               MLR   MLR
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       comp=Z,233µm,11.7s
TREC   Trest            11.22 343 ePN    Pn       07 12 47.2 -1.6
TREC                              eSN    Sn       07 14 48.5 -5.6
TREC                               AMS   AMS      07 17 10.0
       comp=Z,233µm,11.7s
DAVOX  Davos/Dischmat   11.26 319  Pn    Pn       07 12 47.9 -1.6
       comp=Z,4.9nm,0.3s,baz=143,slow=14,SNR=68
DAVOX                              Sn    Sn       07 14 54.6 -0.8
       comp=Z,46nm,0.3s,baz=342,slow=23,SNR=6.3
DAVOX                              LR    LR       07 17 54.5
       comp=Z,246µm,19.7s,baz=125,slow=42
OKC    Ostrava-Krasne   11.29 352 eP     Pn       07 12 48.8 -0.9
OKC                               e               07 14 52.4
OKC                                MLR   MLR
       comp=Z,295µm,13.2s
OKC    Ostrava-Krasne   11.29 352 ePN    Pn       07 12 48.8 -0.9
OKC                               eSN    Sn       07 14 52.4 -3.4
OKC                                AMS   AMS      07 18 00.0
       comp=Z,295µm,13.2s
GEC2   GERESS Array S   11.30 336 ePn    Pn       07 12 47.2 -2.7
GEC2                              eSn    Sn       07 14 49.5 -6.7
GEC2   GERESS Array S   11.30 336  Pn    Pn       07 12 46.8 -3.1
GERES  GERESS Array B   11.30 336  Pn    Pn       07 12 47.1 -2.8
       comp=Z,18nm,0.3s,baz=154,slow=13,SNR=390
GERES                              Sn    Sn       07 14 53.3 -2.9
       comp=Z,20nm,0.3s,baz=152,slow=22,SNR=3.3
GERES                              LR    LR       07 17 55.0
       comp=Z,215µm,21.4s,baz=154,slow=42
GERES                              ScP   ScP      07 22 15.9 -0.8
       comp=Z,0.4nm,0.3s,baz=166,slow=1.1,SNR=4.9
GERES  GERESS Array B   11.30 336  Pn    Pn       07 12 46.8 -3.1
MORC   Moravsky Berou   11.30 350 ⇓P     Pn       07 12 49.1 -0.8
MORC   Moravsky Berou   11.30 350  P     Pn       07 12 47.6 -2.4
MORC   Moravsky Berou   11.30 350 ePN    Pn       07 12 47.3 -2.7
MORC   Moravsky Berou   11.30 350 ⇑P     Pn       07 12 48.1 -1.8
MORC   Moravsky Berou   11.30 350        Pn       07 12 47.6 -2.4
RETA   Reutte           11.33 324 i Pn   Pn       07 12 48.8 -1.6
       comp=Z,241nm,1.6s,SNR=49
RETA                              eSn    Sn       07 14 54.2 -2.8
       comp=Z,2µm,1.4s
TUE    Stuetta          11.34 317 ⇑P     Pn       07 12 48.1 -2.5
TUE    Stuetta          11.34 317        Pn       07 12 49.0 -1.6
HORU   Horodok          11.36  20  P     Pn       07 12 50.8 +0.2
MONC   Moncucco Torin   11.36 308 ⇓P     Pn       07 12 51.4 +0.7
CASM   Ain Smara        11.42 262  P     Pn       07 12 53.6 +2.0
LVV    L'vov            11.42  12 eP     Pn       07 12 51.8 +0.3
LVV                               eS     Sn       07 14 56.6 -2.4
LVV                                pmax  pmax
       comp=Z,290nm,1.0s
LVV                                MLR   MLR
       comp=N,114µm,9.0s
LVV                                MLR   MLR
       comp=E,161µm,9.0s
LVV                                MLR   MLR
       comp=Z,132µm,9.0s
ISO    Isola            11.52 303  P     Pn       07 12 54.9 +2.0
ISO                                pmax  pmax
       comp=Z,551nm,2.8s
RAC    Raciborz         11.53 352 eP     Pn       07 12 52.3 -0.7
RAC                                LMZ   LR       07 18 17.0
       comp=Z,298nm,18.4s
RAC    Raciborz         11.53 352 eP     Pn       07 12 52.3 -0.7
RAC                                MLR   MLR
       comp=Z,298µm,18.4s
CTEI   Djebel Teioual   11.54 261  P     Pn       07 12 56.0 +2.7
FRF    La Foret Royal   11.55 299  P     Pn       07 12 53.2 -0.1
KHC    Kasperske Hory   11.59 337 eP     Pn       07 12 50.9 -2.9
KHC                               e               07 14 58.0
KHC                                MLR   MLR
       comp=Z,318µm,13.2s
KHC    Kasperske Hory   11.59 337 ePN    Pn       07 12 50.9 -2.9
KHC                               eSN    Sn       07 14 58.0 -5.1
KHC                                AMS   AMS      07 17 50.0
       comp=Z,318µm,13.2s
KHC    Kasperske Hory   11.59 337 ⇑P     Pn       07 12 50.7 -3.1
DAVA   Damuels          11.61 321 i Pn   Pn       07 12 53.0 -1.2
       comp=Z,162nm,0.5s,SNR=39
DAVA                              eSn    Sn       07 15 02.2 -1.6
       comp=Z,709nm,0.5s
FUR    Furstenfeldbru   11.62 328 ePn    Pn       07 12 52.5 -1.8
FUR                               eSn    Sn       07 14 54.9 -9.1
KRLC   Kraliky          11.71 348 eP     Pn       07 12 54.2 -1.3
KRLC                              e               07 15 01.7
KRLC                               MLR   MLR
       comp=Z,267µm,14.4s
KRLC   Kraliky          11.71 348 ePN    Pn       07 12 54.2 -1.3
KRLC                              eSN    Sn       07 15 01.7 -4.4
KRLC                               AMS   AMS      07 18 30.0
       comp=Z,267µm,14.4s
UBR    Ueberruh         11.78 323 ePn    Pn       07 12 54.7 -1.8
UBR                               eSn    Sn       07 14 57.2  -11
DFRA   Djebel Bou Aff   11.82 264  P     Pn       07 12 59.5 +2.4
WET    Wettzell         11.82 335  P     Pn       07 12 53.8 -3.3
WET                                pmax  pmax
       comp=Z,396nm,1.0s
WET    Wettzell         11.82 335 ePn    Pn       07 12 54.3 -2.8
SIM    Simferopol'      11.91  54 eP     Pn       07 12 58.5 +0.3
SIM                               eS     Sn       07 15 12.8 +1.8
SIM                                pmax  pmax
       comp=Z,243nm,1.0s
SIM                                smax  smax
       comp=E,278nm,1.0s
SIM                                smax  smax
       comp=N,236nm,1.0s
SIM                                MLR   MLR
       comp=Z,49µm,11.5s
BNN    Bunyan           11.96  84        Pn       07 13 01.6 +2.5
DPC    Dobruska-Polom   12.05 347 eP     Pn       07 12 57.9 -2.3
DPC                                MLR   MLR
       comp=Z,318µm,10.9s
DPC    Dobruska-Polom   12.05 347 ePN    Pn       07 12 57.9 -2.3
DPC                                AMS   AMS      07 18 20.0
       comp=Z,318µm,10.9s
PRU    Pruhonice        12.09 341 eP     Pn       07 12 58.6 -2.1
PRU                                MLR   MLR
       comp=Z,271µm,11.5s
PRU    Pruhonice        12.09 341 ePN    Pn       07 12 58.6 -2.1
PRU                                AMS   AMS      07 19 00.0
       comp=Z,271µm,11.5s
BNI    Bardonecchia     12.13 306  P     Pn       07 13 00.2 -1.1
BNI    Bardonecchia     12.13 306 ⇓P     Pn       07 13 02.4 +1.1
BNI    Bardonecchia     12.13 306        Pn       07 13 00.2 -1.1
PRA    Prague           12.19 341 eP     Pn       07 13 00.2 -1.9
PRA                                MLR   MLR
       comp=Z,283µm,12.0s
PRA    Prague           12.19 341 ePN    Pn       07 13 00.2 -1.9
PRA                                AMS   AMS      07 18 50.0
       comp=Z,283µm,12.0s
UPC    Upice            12.26 346 eP     Pn       07 13 01.0 -2.0
UPC                                MLR   MLR
       comp=Z,308µm,12.9s
UPC    Upice            12.26 346 ePN    Pn       07 13 01.0 -2.0
UPC                                AMS   AMS      07 18 40.0
       comp=Z,308µm,12.9s
HMYD   Mayadein         12.27 133  P     Pn       07 12 58.7 -4.4
       baz=134
HMYD                               S     Sn       07 14 54.5  -25
       baz=134
OSTC   Ostas            12.27 347 ePN    Pn       07 13 02.0 -1.1
OSTC                               AMS   AMS      07 18 50.0
       comp=Z,287µm,14.1s
SET    Setif            12.28 263  P     Pn       07 13 07.0 +3.6
HNAT   Natroun          12.28 134  P     Pn       07 12 59.0 -4.4
       baz=135
LPG    La Plagne        12.29 308  P     Pn       07 13 02.8 -0.9
LPL    La Plagne        12.31 308  P     Pn       07 13 02.3 -1.6
CHVC   Chvalec          12.33 347 ePN    Pn       07 13 02.2 -1.7
CHVC                               AMS   AMS      07 18 50.0
       comp=Z,280µm,13.8s
SENIN  Lac Senin/Sane   12.41 312  Pn    Pn       07 13 05.6 +0.3
KSP    Ksiaz            12.53 348 eP     Pn       07 13 04.3 -2.4
KSP                               eL     L        07 21 10.7
       comp=Z,98µm,16.4s
KSP    Ksiaz            12.53 348  P     Pn       07 13 05.4 -1.3
KSP                                pmax  pmax
       comp=Z,307nm,1.1s
KSP    Ksiaz            12.53 348 ⇑P     Pn       07 13 04.3 -2.4
PVCC   Panska Ves       12.58 342 eP     Pn       07 13 04.9 -2.5
PVCC                               MLR   MLR
       comp=Z,211µm,12.8s
PVCC   Panska Ves       12.58 342 ePN    Pn       07 13 04.9 -2.5
PVCC                               AMS   AMS      07 17 50.0
       comp=Z,211µm,12.8s
SLE    Schleitheim      12.62 320  P     Pn       07 13 05.2 -2.7
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SLE				pmax	pmax		
	comp=Z,370nm,1.1s						
SLE	Schleitheim	12.62	320	ePn	Pn	07 13 05.3	-2.7
SLE				eSn	Sn	07 15 19.8	-8.6
MAHO	Mahon	12.66	281	P	Pn	07 13 09.0	+0.4
MAHO				S	Sn	07 15 21.1	-8.4
MAHO	Mahon	12.66	281	⇓P	Pn	07 13 09.0	+0.4
BALST	Balsthal	12.76	317	ePn	Pn	07 13 07.4	-2.5
BALST				eSn	Sn	07 15 24.8	-7.1
KOT	Kottamia	12.77	130	P	Pn	07 13 05.5	-4.6
	baz=130						
HSAF	As Saff	12.83	131	P	Pn	07 13 06.5	-4.5
	baz=132						
GRFO	Grafenberg	12.87	332	P	Pn	07 13 07.4	-3.9
GRFO	Grafenberg	12.87	332		Pn	07 13 07.4	-3.9
GRA1	Grafenberg Arr	12.87	332		Pn	07 13 07.2	-4.1
GRF	Grafenberg Arr	12.87	332	P	Pn	07 13 07.2	-4.1
GRF	Grafenberg Arr	12.87	332	ePn	Pn	07 13 08.0	-3.4
HHAG	Hagoal	12.92	129	P	Pn	07 13 08.5	-3.6
	baz=129						
GLL	Jalalah	12.95	131	P	Pn	07 13 08.7	-3.9
	baz=132						
STU	Stuttgart	12.99	325	P	Pn	07 13 09.5	-3.5
STU	Stuttgart	12.99	325	ePn	Pn	07 13 10.9	-2.1
STU	Stuttgart	12.99	325	⇑P	Pn	07 13 09.8	-3.2
STU	Stuttgart	12.99	325		Pn	07 13 09.5	-3.5
BRG	Berggiesshubel	13.06	341	P	Pn	07 13 11.1	-2.8
BRG				pmax	pmax		
	comp=Z,210nm,1.1s						
BRG	Berggiesshubel	13.06	341	ePn	Pn	07 13 11.5	-2.4
BRG	Berggiesshubel	13.06	341	i P	Pn	07 13 11.1	-2.8
BRG				Amp		07 13 17.2	
	comp=Z,82nm,0.9s						
BRG	Berggiesshubel	13.06	341	P	P	07 13 21.5	-2.8
BRG				Amp		07 13 27.0	
	comp=Z,134nm,0.9s						
BRG				Amp		07 18 24.0	
	comp=E,433nm,12.3s						
BRG				Amp		07 18 35.0	
	comp=N,268nm,12.7s						
BRG				Amp		07 18 38.0	
	comp=Z,194nm,11.6s						
GUNZ	Gunzen	13.06	336	ePn	Pn	07 13 10.5	-3.4
BFO	Black Forest	13.08	321	P	Pn	07 13 11.4	-2.9
BFO	Black Forest	13.08	321	ePn	Pn	07 13 11.3	-2.9
BFO				eSn	Sn	07 15 31.9	-7.8
BFO	Black Forest	13.08	321	P	Pn	07 13 11.4	-2.9
BFO	Black Forest	13.08	321		Pn	07 13 11.4	-2.9
BHL	Bhannes	13.09	107	eP	Pn	07 13 14.4	-0.1
WERD	Werda	13.14	336	ePn	Pn	07 13 13.0	-2.0
HWQ	Hawqa	13.16	105	eP	Pn	07 13 15.3	-0.1
BEL	Belsk	13.16	1	eP	Pn	07 13 15.0	-0.3
BEL				eL	L	07 22 54.4	
	comp=Z,84µm,17.5s						
BEL	Belsk	13.16	1	P	Pn	07 13 17.1	+1.8
BEL				pmax	pmax		
	comp=Z,2µm,1.3s						
BEL	Belsk	13.16	1	⇓P	Pn	07 13 17.0	+1.8
PLN	Plauen	13.22	336	ePn	Pn	07 13 13.2	-2.9
ATAF	Djebel Tarf	13.25	263	P	Pn	07 13 18.8	+2.2
FBE	Freiberg	13.25	340	ePn	Pn	07 13 14.2	-2.4
GAZ	Gaziantep	13.26	91		Pn	07 13 17.4	+0.6
MMAI	Mount Meron Ar	13.31	111	Pn	Pn	07 13 15.2	-2.3
	comp=Z,13nm,0.3s,baz=310,slow=12,SNR=19						
MMAI				Sn	Sn	07 15 43.2	-2.4
	comp=Z,44nm,0.3s,baz=255,slow=13,SNR=6.6						
SHBL	Chebaa	13.41	109	eP	Pn	07 13 15.8	-3.1
NBNS	Bani Suef	13.44	135	P	Pn	07 13 14.5	-4.7
	baz=136						
SUZ	Suez	13.45	127	P	Pn	07 13 15.3	-4.0
	baz=127						
KIEV	Kiev	13.50	24	P	Pn	07 13 18.0	-1.8
AKET	Djebel Ketaf	13.50	264	P	Pn	07 13 22.1	+1.9
AKASG	Malin Array Be	13.51	24	Pn	Pn	07 13 17.4	-2.6
	comp=Z,4.7nm,0.3s,baz=210,slow=12,SNR=48						
AKASG				LR	LR	07 19 37.4	
	comp=Z,326µm,18.2s,baz=215,slow=43						
AKASG				ScP	ScP	07 22 20.9	+1.0
	comp=Z,0.9nm,0.3s,baz=251,slow=1.5,SNR=6.5						
AKASG	Malin Array Be	13.51	24	i P	Pn	07 13 17.8	-2.2
AKASG				pmax	pmax		
	comp=Z,26nm,0.7s						
AKASG	Malin Array Be	13.51	24	Pn	Pn	07 13 17.9	-2.1
AKBB	Malin Array Si	13.51	24	ceP	Pn	07 13 19.3	-0.7
AKBB	Malin Array Si	13.51	24	Pn	Pn	07 13 18.5	-1.5
MOX	Moxa	13.53	335	P	Pn	07 13 17.1	-3.3
MOX				pmax	pmax		
	comp=Z,580nm,1.0s						
MOX	Moxa	13.53	335	ePn	Pn	07 13 16.9	-3.5
ECH	Echery	13.60	319	P	Pn	07 13 20.7	-0.5
ECH	Echery	13.60	319	⇓P	Pn	07 13 18.5	-2.7
ECH	Echery	13.60	319	Pn	Pn	07 13 20.7	-0.5
ABMS	Boumerdes	13.64	267	P	Pn	07 13 22.9	+1.0
ZAF	Zafarana	13.67	130	P	Pn	07 13 17.8	-4.5
	baz=130						
CLL	Collm	13.70	340	i P	Pn	07 13 20.3	-2.3
CLL				pmax	pmax		
	comp=Z,1µm,2.1s						
CLL				MLR	MLR		
	comp=Z,160µm,20.1s						
CLL	Collm	13.70	340	i P	Pn	07 13 20.3	-2.3
	comp=Z,71nm,1.3s						
CLL				i PP	P	07 13 31.9	+0.5
	comp=Z,1µm,2.1s						
CLL				ePmax		07 13 32.0	
CLL				Lmax		07 19 00.0	
CLL				L	L	07 19 00.0	
	comp=Z,160µm,20.1s						
CLL	Collm	13.70	340	ePn	Pn	07 13 20.2	-2.3
CLL	Collm	13.70	340	Pn	Pn	07 13 19.4	-3.2
ZNM	Zenema	13.80	129	P	Pn	07 13 20.1	-4.1
	baz=129						
ADJB	Djebel Djouab	13.82	265	P	P	07 13 30.3	-2.6
ABA	Alger-Bouzarea	13.97	268	P	Pn	07 13 25.7	-0.8
ANN	Anapa	14.02	59	d iP	Pn	07 13 27.1	+0.2
ANN				pmax	pmax		
	comp=Z,201nm,2.7s						
ANN				MLR	MLR		
	comp=Z,37µm,13.0s						
UBBA	Unterbreizbach	14.24	332	ePn	Pn	07 13 26.4	-3.6
GHAJ	Ghor Haditha	14.34	116		Pn	07 13 29.3	-2.2
TNS	Taunus Mts	14.39	327	ePn	Pn	07 13 29.0	-3.1
TNS				eSn	Sn	07 16 01.8	-10
ASUT		14.55	137	P	Pn	07 13 30.9	-3.5
	baz=138						
RUE	Ruedersdorf	14.58	343	eP	P	07 13 40.8	-0.3
RUE	Ruedersdorf	14.58	343	⇑P	Pn	07 13 32.0	-2.6
GKP	Gorka Klasztor	14.77	352	eP	Pn	07 13 35.9	-1.4
GKP				eL	L	07 23 13.3	
	comp=Z,165µm,15.6s						
GKP	Gorka Klasztor	14.77	352	eP	P	07 13 42.1	-1.2
ASF	Jabal al Asfar	14.83	111	Pn	Pn	07 13 36.9	-1.4
	comp=Z,4.3nm,0.3s,baz=281,slow=2.6,SNR=14						
KTUT	Trabzon	14.96	75	⇓P	P	07 13 44.5	-1.0
WLF	Walferdange	15.04	322	dPn	Pn	07 13 39.4	-1.5
	comp=Z,1µm,1.1s						
WLF				dPnPn	PnPn	07 13 48.2	-0.7
WLF				dx	x	07 13 55.8	
WLF	Walferdange	15.04	322	P	Pn	07 13 39.0	-1.9
WLF				pmax	pmax		
	comp=Z,2µm,1.1s						
WLF	Walferdange	15.04	322	⇑P	Pn	07 13 40.1	-0.8
WLF	Walferdange	15.04	322	Pn	Pn	07 13 39.0	-1.9
HBST	Basata	15.08	124	P	Pn	07 13 37.9	-3.7
	baz=124						
HBST				AMP		07 15 34.4	
	baz=124						
HKAT	Jabal Katrina	15.09	128	P	Pn	07 13 38.9	-3.1
	baz=128						
FLTG	Flechtingen	15.11	338	P	Pn	07 13 38.1	-3.7
NUB	Nuweibaa	15.15	125	P	Pn	07 13 39.1	-3.4
	baz=125						
AHRW	Bad Neuenahr-A	15.22	326	ePn	Pn	07 13 42.0	-1.3
SOC	Sochi	15.26	65	d iP	Pn	07 13 45.2	+1.4
SOC				e		07 16 38.4	
SOC				pmax	pmax		
	comp=Z,74nm,0.8s						
EBNR	Beni Rached	15.27	267	P	Pn	07 13 45.0	+0.9
HDHB	Dhahab	15.34	126	P	Pn	07 13 42.1	-2.9
	baz=126						
ECHA	Ech Chlef	15.44	267	P	P	07 13 48.4	-2.3
SUW	Suwalki	15.45	6	eP	Pn	07 13 43.5	-2.8
SUW				eS	S	07 16 46.5	-6.7
SUW				eL	L	07 22 29.2	
	comp=Z,90µm,16.5s						
SUW	Suwalki	15.45	6	eP	Pn	07 13 45.3	-1.0
SUW	Suwalki	15.45	6	P	Pn	07 13 43.4	-2.8
SUW	Suwalki	15.45	6	⇑P	Pn	07 13 42.9	-3.3
SUW	Suwalki	15.45	6		Pn	07 13 43.4	-2.8
BHOU	Houvegnez	15.58	323	dx	x	07 13 45.5	
BHOU				dPn	Pn	07 13 46.6	-1.3
	comp=Z,209nm,1.2s						
BHOU				dx	x	07 14 02.4	
NRDL	Niedersach Rie	15.60	336	ePn	Pn	07 13 47.3	-0.9
BTNL	Ternell	15.68	324	dPn	Pn	07 13 47.8	-1.6
	comp=Z,452nm,1.2s						
BTNL				dPnPn	PnPn	07 13 57.3	-0.4
BTNL				dx	x	07 14 01.9	
EANR	'Ain N'Sour	15.70	266	P	Pn	07 13 48.0	-1.7
MEM	Membach	15.75	324	dPn	Pn	07 13 48.5	-1.7
	comp=Z,592nm,1.1s						
RCHB	Rochefort	15.82	321	dPn	Pn	07 13 50.3	-0.8
	comp=Z,271nm,0.9s						
RCHB				dx	x	07 13 56.1	
RCHB				dPnPn	sP	07 13 59.8	+0.8
KLNR	Kaliningrad	15.94	359	d iP	Pn	07 13 50.7	-1.8
KLNR				pmax	pmax		
	comp=Z,580nm,1.0s						
BCLA	Clavier	15.95	322	dx	x	07 13 45.5	
BCLA				dPn	Pn	07 13 52.6	-0.2
	comp=Z,244nm,1.1s						
BCLA				dPnPn	PnPn	07 14 01.1	-0.3
BCLA				dx	x	07 14 04.0	
BCLA				dSn	Sn	07 16 44.0	-5.6
BEBN	Eben Emael	16.03	324	dPn	Pn	07 13 52.7	-1.1
	comp=Z,358nm,1.2s						
BEBN				dPnPn	PnPn	07 14 02.1	-0.3
BEBN				dx	x	07 14 06.4	
OKGL	Djebel Kef Gue	16.03	267	P	Pn	07 13 54.0	0.0
BGES	Gesves	16.03	322	dPn	Pn	07 13 52.7	-1.2
	comp=Z,327nm,1.0s						
BGES				dx	x	07 14 06.6	
BGES				dSn	Sn	07 16 40.6	-11
DOU	Dourbes	16.09	320	dPn	Pn	07 13 53.7	-0.9
	comp=Z,639nm,1.1s						
DOU				dPnPn	PnPn	07 14 02.7	-0.6
DOU				dx	x	07 14 05.3	
DOU				dSn	Sn	07 16 46.8	-6.1
OJGS	Djebel Guires	16.10	265	P	Pn	07 13 53.0	-1.9
BMRD	Maredsous	16.14	321	dPn	Pn	07 13 53.6	-1.5
	comp=Z,222nm,1.3s						
CLF	Chambon-Foret	16.21	311		Pn	07 13 53.1	-3.1
IBBN	Ibbenburen	16.27	331	⇑P	Pn	07 13 54.5	-2.4
OJBR	Djebel Berber	16.39	265	P	Pn	07 13 54.0	-4.6
SNF	Seneffe	16.51	321	dPn	Pn	07 13 59.0	-0.8
MNK	Minsk	16.60	15	i P	Pn	07 13 59.9	-1.2
MNK				i S	Sn	07 17 04.5	-0.7
MNK				pmax	pmax		
	comp=N,760nm,0.8s						
MNK				pmax	pmax		
	comp=E,58nm,0.8s						
MNK				pmax	pmax		
	comp=Z,2µm,0.8s						
MNK				MLR	MLR		
	comp=E,23µm,17.0s						
MNK				MLR	MLR		
	comp=Z,79µm,17.0s						
MNK				MLR	MLR		
	comp=N,60µm,17.0s						
MNK	Minsk	16.60	15	i P	Pn	07 13 59.9	-1.1
	comp=E,58nm,0.8s						
MNK				i P	Pn	07 13 59.9	-1.1
	comp=N,760nm,0.8s						
MNK				i P	Pn	07 13 59.9	-1.1
	comp=Z,2µm,0.8s,baz=201						
MNK				i PP	sP	07 14 09.1	+0.9
MNK				i S	Sn	07 17 04.6	-0.6
MNK				i SS	SnSn	07 17 19.1	+0.7
MNK				i LQ	LQ	07 18 47.1	
MNK				i LR	LR	07 19 54.5	
MNK				i LRM	MLR	07 20 43.4	
	comp=E,23µm,17.3s						
MNK				i LRM	MLR	07 20 44.5	
	comp=Z,79µm,17.3s						
MNK				i LRM	MLR	07 21 00.1	
	comp=N,60µm,17.4s						
RGN	Rugen	16.62	345	eP	P	07 14 02.7	-1.0
RGN	Rugen	16.62	345	⇑P	Pn	07 13 58.5	-2.7
RGN	Rugen	16.62	345		Pn	07 13 58.8	-2.4
RGN				IAmb	IAmb	07 14 12.8	
	comp=Z,3µm,1.6s						
UCC	Uccle	16.66	322	dPn	Pn	07 14 01.0	-0.8
UCC				dP	P	07 14 02.7	-1.4
UCC				dpP	pP	07 14 05.4	-1.7
UCC				dPnPn	PnPn	07 14 10.2	-0.8
UCC				dx	x	07 14 13.4	
UCC	Uccle	16.66	322	P	Pn	07 14 00.7	-1.1
UCC				pmax	pmax		
	comp=Z,303nm,1.1s						
UCC	Uccle	16.66	322		Pn	07 14 00.7	-1.1
NACGM	Naroch	16.78	13	i P	Pn	07 14 00.6	-2.7
BSEG	Bad Segeberg	16.79	339	P	Pn	07 14 01.7	-1.7
BSEG				pmax	pmax		
	comp=Z,829nm,1.3s						
BSEG	Bad Segeberg	16.79	339	ePn	Pn	07 14 01.3	-2.1
GURO	Guroymak-BITLI	16.81	84	P	Pn	07 14 04.8	+0.9
ODJA	Bouhanifia	16.85	265	P	Pn	07 14 04.0	-0.4
BSD	Bornholm Skovb	16.88	349	eP	Pn	07 14 03.9	-0.6
BSD				IVmB_BB		07 14 14.5	
	comp=Z,3µm,4.0s						
BSD				IAmb	IAmb	07 14 18.5	
	comp=Z,194nm,1.0s						
BSD				IVMs_BB	IVMs_BB	07 22 13.1	
	comp=Z,44µm,12.3s						
BSD				IAMs_20	IAMs_20	07 22 15.8	
	comp=Z,98µm,18.0s						
CART	Cartagena	16.98	273	P	Pn	07 14 03.4	-2.6
CART				S	Sn	07 17 12.8	-1.8
CART	Cartagena	16.98	273	⇓P	Pn	07 14 04.8	-1.2
CART	Cartagena	16.98	273		Pn	07 14 03.9	-2.1
CART	Cartagena	16.98	273	P	Pn	07 14 05.2	-0.8
PABE	Paberze	17.00	7	eP	Pn	07 14 04.1	-1.9
PABE	Paberze	17.00	7	Pn	Pn	07 14 03.1	-2.9
USTO	Oran	17.05	267	P	Pn	07 14 06.0	-0.8
SIRT	Sirnak	17.29	87	P	P	07 14 11.5	+0.1
ISAL	Salakas	17.32	11	eP	Pn	07 14 08.4	-1.7
ISAL				IAmb	IAmb	07 14 24.1	
	comp=Z,286nm,0.8s						
NEY	Neytrino	17.36	68	⇓iP	P	07 14 12.5	+0.3
NEY				pmax	pmax		
	comp=Z,125nm,1.7s						
NEY				MLR	MLR		
	comp=Z,21µm,15.0s						
PBUR	Paburge	17.38	3	eP	Pn	07 14 09.0	-1.9
PBUR				IAmb	IAmb	07 14 26.1	
	comp=Z,931nm,1.0s						
SHA1	Shidzhatmaz	17.38	66	⇓eP	Pn	07 14 10.5	-0.7
KIV	Kislovodsk	17.44	65	eP	Pn	07 14 12.4	+0.6
KIV				eS	Sn	07 17 27.1	+1.2
KIV				pmax	pmax		
	comp=Z,734nm,1.4s						
KIV				MLR	MLR		
	comp=Z,36µm,14.0s						
KIV	Kislovodsk	17.44	65	P	P	07 14 13.7	+0.6
KIV				P	P	07 14 13.7	+0.6
KIV				P	P	07 14 13.7	+0.6
KIV				S	Sn	07 17 28.6	+2.7
KIV				S	Sn	07 17 28.6	+2.7
KIV				S	Sn	07 17 28.6	+2.7
KIV	Kislovodsk	17.44	65	⇓P	Pn	07 14 12.1	+0.3
KIV	Kislovodsk	17.44	65		Pn	07 14 12.0	+0.2
KARS	Kars	17.47	76	P	P	07 14 14.1	+0.7
KARS				pmax	pmax		
	comp=Z,8µm,1.7s						
KARS	Kars	17.47	76	P	P	07 14 14.1	+0.7
KBZ	Khabaz	17.55	66	P	Pn	07 14 13.4	+0.3
	comp=Z,3.1nm,0.3s,baz=276,slow=8.1,SNR=36						
KBZ	Khabaz	17.55	66	d iP	P	07 14 13.7	-0.4
KBZ				MLR	MLR		
	comp=Z,86µm,27.0s						
HLG	Helgoland	17.75	335	ePn	Pn	07 14 13.9	-1.5
PYA1	Pyatigorsk	17.75	65	⇑iP	P	07 14 16.1	-0.3
ONI	Oni	17.82	70	P	Pn	07 14 16.7	+0.2
ONI				pmax	pmax		
	comp=Z,418nm,1.0s						
ONI	Oni	17.82	70	P	Pn	07 14 16.7	+0.2
BGD	Bogdanovka	17.86	74	P	P	07 14 21.4	+3.6
COP	Copenhagen	17.86	345	eP	Pn	07 14 16.1	-0.7
COP				IAmb	IAmb	07 14 29.4	
	comp=Z,3µm,1.1s						
COP				IAMs_20	IAMs_20	07 22 05.3	
	comp=Z,861µm,11.6s						
GOF	Gofitskoye	17.91	62	⇑eP	P	07 14 18.2	+0.1
GOF				pmax	pmax		
	comp=Z,678nm,0.8s						
NCK	Nalchik	18.02	67	⇑eP	P	07 14 21.0	+1.6
NCK				pmax	pmax		
	comp=Z,1µm,2.3s						
NCK				MLR	MLR		
	comp=Z,53µm,15.0s						
VORD	Divnogorie	18.05	41	eP	Pn	07 14 19.1	-0.1
VORD				pmax	pmax		
	comp=Z,790nm,0.9s						
VORD				MLR	MLR		
	comp=Z,25µm,10.0s						
VSR	Storozhevoye	18.13	40	eP	Pn	07 14 20.2	0.0
VSR				pmax	pmax		
	comp=Z,510nm,0.7s						
VSR				MLR	MLR		
	comp=Z,96µm,11.0s						
ZEI	Tsey	18.16	69	eP	Pn	07 14 20.8	-0.1
ZEI				pmax	pmax		
	comp=Z,152nm,1.1s						
UCM	Universidad Co	18.41	283	P	P	07 14 22.1	-1.7
UCM				S	Sn	07 17 47.6	-1.8
VORR	Voronezh	18.43	39	eP	P	07 14 22.0	-1.7
VORR				pmax	pmax		
	comp=Z,1µm,1.4s						
KZRT	Kazreti	18.46	74	P	Pn	07 14 26.2	+1.8
GUDG	Gudauri	18.56	71	P	Pn	07 14 27.7	+1.9
CHAS	Isla Isabel II	18.68	266	P	P	07 14 25.0	-1.6
CHAS				S	Sn	07 17 51.1	-4.6
HMNX	Herstmonceux	18.75	317	eP	P	07 14 26.0	-1.2
GNI	Garni	18.75	78	P	P	07 14 27.3	-0.3
	comp=Z,3.5nm,0.3s,baz=264,slow=21,SNR=18						
GNI				LR	LR	07 23 02.2	
	comp=Z,110µm,19.7s,baz=268,slow=42						
GNI	Garni	18.75	78	d iP	P	07 14 26.7	-0.9
GNI				pmax	pmax		
	comp=Z,557nm,1.7s						
GNI				MLR	MLR		
	comp=Z,83µm,17.0s						
GNI	Garni	18.75	78	P	Pn	07 14 29.2	+1.1
GNI				P	Pn	07 14 29.2	+1.1
GNI				S	S	07 18 00.4	-0.6
GNI				S	S	07 18 00.4	-0.6
GNI	Garni	18.75	78	⇓P	P	07 14 27.6	-0.1
GNI	Garni	18.75	78	P	P	07 14 26.5	-1.2
GNI				IAmb	IAmb	07 14 50.5	
	comp=Z,2µm,1.4s						
LPSR	Galich'ya Gora	18.88	37	eP	P	07 14 27.5	-1.2
LPSR				pmax	pmax		
	comp=Z,1µm,0.8s						
LPSR				MLR	MLR		
	comp=Z,74µm,12.0s						
FIGM	Figuig	18.91	256	P	P	07 14 29.0	-0.3
SLIT	Slitere, Latvi	19.00	3	eP	P	07 14 28.8	-1.1
SLIT	Slitere, Latvi	19.00	3	⇑P	P	07 14 26.6	-3.3
ESBB	Sonseca Array	19.01	281	P	P	07 14 29.1	-1.1
ESDC	Sonseca Array	19.01	281	P	P	07 14 29.8	-0.5
	comp=Z,3.1nm,0.3s,baz=75,slow=11,SNR=159						
ESDC				LR	LR	07 22 06.5	
	comp=Z,76µm,20.0s,baz=55,slow=38						
ESDC				ScP	ScP	07 22 31.1	+0.3
	comp=Z,0.0nm,0.3s,baz=52,slow=2.7,SNR=5.6						
ESDC				P3KPbc		07 49 04.0	
	comp=Z,0.1nm,0.3s,baz=260,slow=4.4,SNR=4.9						
ESDC	Sonseca Array	19.01	281	P	P	07 14 29.1	-1.1
JBK	JBK	19.05	264	P	Pn	07 14 31.1	-0.7
ELMS	Elmsett, Ipswi	19.11	321	eP	Pn	07 14 32.0	-0.1
ELMS				IAMs_20	IAMs_20	07 22 27.3	
	comp=Z,145µm,16.7s						
TDRA	Tendrara	19.11	260	P	Pn	07 14 32.4	-0.1
JQE	Queens East	19.29	310	eP	P	07 14 33.0	-0.1
PAB	San Pablo	19.32	280	P	P	07 14 32.8	-0.9
PAB				pmax	pmax		
	comp=Z,494nm,1.2s						
PAB	San Pablo	19.32	280	⇑P	P	07 14 32.8	-0.9
PAB	San Pablo	19.32	280		P	07 14 32.8	-0.9
PAB	San Pablo	19.32	280	P	Pn	07 14 35.4	+0.6
MUD	Monsted U'grnd	19.32	341	eP	P	07 14 31.1	-2.4
MUD				IAmb	IAmb	07 14 34.4	
	comp=Z,1µm,2.0s						
MUD				IAMs_20	IAMs_20	07 22 41.3	
	comp=Z,100µm,16.4s						
JSA	Saint Aubin	19.36	310	eP	P	07 14 33.4	-0.6
JSA				IAMs_20	IAMs_20	07 22 58.0	
	comp=Z,168µm,16.1s						
JSA	Saint Aubin	19.36	310	⇑P	P	07 14 33.2	-0.8
JVM	Valle D.L. Mar	19.40	310	eP	P	07 14 34.4	0.0
VRH	Novokhopyorsk	19.46	43	eP	Pn	07 14 37.1	+0.9
VRH				pmax	pmax		
	comp=Z,2µm,1.8s						
VRH				MLR	MLR		
	comp=Z,103µm,16.0s						
WACR	West Acre	19.67	322	eP	P	07 14 37.0	-0.4
WACR				IAMs_20	IAMs_20	07 22 12.0	
	comp=Z,99µm,14.6s						
OBN	Obninsk	19.68	28	P	P	07 14 34.4	-3.0
	comp=Z,3.5nm,0.3s,baz=37,slow=1.6,SNR=27						
OBN				LR	LR	07 22 55.1	
	comp=Z,34µm,19.5s,baz=218,slow=39						
OBN	Obninsk	19.68	28	ceP	P	07 14 34.7	-2.7
OBN				i S	S	07 18 13.8	-5.2
OBN				pmax	pmax		
	comp=Z,2µm,1.8s						
OBN				MLR	MLR		
	comp=Z,129µm,19.0s						
OBN	Obninsk	19.68	28	⇑P	P	07 14 34.9	-2.5
OBN	Obninsk	19.68	28	P	P	07 14 34.8	-2.5
OBN				IAmb	IAmb	07 14 55.5	
	comp=Z,570nm,0.8s						
DDFL	Dedoflistskaro	19.76	74	P	Pn	07 14 41.2	+1.2
WOL	Wolverton	19.82	317	eP	P	07 14 38.4	-0.5
EMAL	Malaga-Limoner	19.82	272	P	P	07 14 37.0	-2.2
EMAL				S	S	07 18 14.9	-7.4
OVD	Ostervraa, Den	19.85	343	eP	P	07 14 38.3	-0.9
OVD				IAmb	IAmb	07 14 49.3	
	comp=Z,1µm,1.1s						
OVD				IAMs_20	IAMs_20	07 23 53.5	
	comp=Z,131µm,12.0s						
LGD	Lagodekhi	19.85	73	P	P	07 14 39.7	+0.2
PVLZ	Peæn de	20.14	268	P	P	07 14 42.8	+0.2
PVLZ				S	S	07 18 22.3	-6.3
MTSE	Matsula	20.17	5	eP	P	07 14 41.3	-1.3
VSU	Vasula	20.21	9	eP	P	07 14 42.0	-1.1
VSU	Vasula	20.21	9	c iP	P	07 14 41.4	-1.7
VSU				pmax	pmax		
	comp=Z,2µm,0.8s						
VSU				MLR	MLR		
	comp=Z,340µm,18.0s						
VSU	Vasula	20.21	9	⇑P	P	07 14 41.5	-1.7
SWN1	Swindon	20.23	317	eP	P	07 14 43.4	0.0
SWN1				IAMs_20	IAMs_20	07 23 16.9	
	comp=Z,129µm,13.6s						
GNBR	Gunib	20.40	71	d iP	P	07 14 45.8	+0.3
GNBR				pmax	pmax		
	comp=Z,251nm,0.7s						
GNBR				MLR	MLR		
	comp=Z,36µm,17.0s						
MOS	Moscow	20.55	28	eP	P	07 14 43.4	-3.4
MOS				e		07 15 23.3	
MOS				eS	S	07 18 32.8	-3.5
MOS				pmax	pmax		
	comp=Z,2µm,1.7s						
MOS				pmax	pmax		
	comp=Z,1µm,1.4s						
MOS				smax	smax		
	comp=N,13µm,5.0s						
MOS				smax	smax		
	comp=E,26µm,6.0s						
MOS				MLR	MLR		
	comp=Z,144µm,14.0s						
LIJA	Lijar	20.55	273	P	P	07 14 45.2	-2.0
STRD	Stroud	20.56	317	eP	P	07 14 46.8	-0.2
STRD				IAMs_20	IAMs_20	07 24 56.0	
	comp=Z,109µm,12.1s						
LMK	Market Rasen	20.57	323	eP	P	07 14 47.0	-0.2
LMK				IAMs_20	IAMs_20	07 22 38.6	
	comp=Z,93µm,21.1s						
CWF	Charnwood Fore	20.63	320	eP	P	07 14 47.1	-0.7
CWF				IAmb	IAmb	07 14 51.9	
	comp=Z,2µm,1.8s						

CWF				IAMs_20	IAMs_20	07 23 22.0	
	comp=Z,172µm,17.5s						
OLDB	Oldbury-Upon-S	20.71	316	eP	P	07 14 48.1	-0.5
OLDB				IAMs_20	IAMs_20	07 23 40.1	
	comp=Z,138µm,15.8s						
CEU	Ceuta	20.78	270	P	P	07 14 47.4	-2.1
CEU				S	S	07 18 33.8	-7.4
MAK	Makhachkala	20.82	70	eP	Pn	07 14 52.0	-0.4
MAK				eS	Sn	07 18 45.2	-2.1
MAK				pmax	pmax		
	comp=Z,4µm,1.2s						
DYA	Yadsworthy	20.92	312	eP	P	07 14 50.3	-0.6
DYA				IAmb	IAmb	07 14 52.8	
	comp=Z,1µm,1.4s						
DYA				IAMs_20	IAMs_20	07 24 05.7	
	comp=Z,111µm,16.7s						
AKT	Akhty	20.97	74c	iP	P	07 14 51.6	-0.1
AKT				pmax	pmax		
	comp=Z,107nm,0.7s						
AKT				MLR	MLR		
	comp=Z,40µm,16.0s						
CHEFC	Chefchaouen	20.97	268	P	P	07 14 52.0	+0.2
PBRG	Braganca	21.02	287	eP	P	07 14 51.5	-0.7
	comp=Z,1µm,2.2s						
LCRM	LCR	21.06	264	P	P	07 14 54.0	+1.2
HOMB	Homborsund	21.11	342	eP	P	07 14 51.7	-1.1
HOMB				IVmB_BB		07 15 04.7	
	comp=Z,17µm,3.8s						
HOMB				eS	Sn	07 18 51.1	-2.7
HOMB				IVMs_BB	IVMs_BB	07 24 45.9	
	comp=Z,96µm,10.1s						
MCH1	Michaelchurch	21.12	317	eP	P	07 14 52.5	-0.5
MCH1				IAMs_20	IAMs_20	07 23 52.9	
	comp=Z,118µm,16.3s						
MCH1	Michaelchurch	21.12	317	⇑P	P	07 14 52.8	-0.3
I43RU	DUBNA INFRASON	21.16	26	P	P	07 14 53.2	-0.3
	baz=201,slow=9.0,SNR=1.3						
CNIL	Conil	21.19	272	P	P	07 14 53.0	-1.0
MDT	Midelt	21.19	262	P	P	07 14 54.1	0.0
	comp=Z,70nm,0.8s,baz=89,slow=15,SNR=68						
MDT				LR	LR	07 25 18.9	
	comp=Z,43µm,19.6s,baz=72,slow=43						
MDT	Midelt	21.19	262	P	P	07 14 54.2	0.0
LBWR	Ladybower, Pea	21.22	321	eP	P	07 14 53.4	-0.8
LBWR				IAMs_20	IAMs_20	07 23 50.7	
	comp=Z,114µm,17.6s						
MVO	Moncorvo	21.25	285	eP	P	07 14 53.9	-0.8
	comp=Z,1µm,1.7s						
MVO				eLQ	LQ	07 18 45.9	
MVO				eLR	LR	07 21 07.0	
	comp=Z,84µm,20.0s						
STNC	Stoke	21.28	320	eP	P	07 14 55.0	+0.2
STNC				IAMs_20	IAMs_20	07 23 42.3	
	comp=Z,160µm,17.6s						
SFS	San Fernando	21.28	272	P	P	07 14 54.2	-0.8
SFS				pmax	pmax		
	comp=Z,1µm,0.9s						
SFS				MLR	MLR		
	comp=Z,161µm,22.0s						
SFS	San Fernando	21.28	272	P	P	07 14 53.5	-1.5
SFS				S	S	07 18 41.5	-10
SFS	San Fernando	21.28	272	⇓P	P	07 14 55.2	+0.2
SFS	San Fernando	21.28	272	P	P	07 14 54.2	-0.8
SFS				IAMs_20	IAMs_20	07 23 15.5	
	comp=Z,161µm,22.0s						
UPP	Uppsala	21.28	356	eP	P	07 14 53.5	-1.2
IFR	Ifrane	21.33	264	P	P	07 14 54.0	-1.8
IFR				S	S	07 18 50.7	-2.0
GDLE	Glaisdale, N Y	21.40	324	eP	P	07 14 55.1	-1.0
HTL	Hartland	21.48	313	eP	P	07 14 57.0	+0.1
HTL				IAMs_20	IAMs_20	07 25 17.7	
	comp=Z,143µm,10.4s						
SNART	Snartemo	21.49	341	eP	P	07 14 56.5	-0.5
SNART				eS	S	07 18 54.4	-0.6
HPK	Haverah Park	21.49	323	eP	P	07 14 56.2	-0.9
HPK				IAMs_20	IAMs_20	07 24 53.7	
	comp=Z,81µm,27.2s						
AAL	Aland	21.53	359	eP	P	07 14 55.8	-1.5
ARNO	Arenosillo	21.55	274	P	P	07 14 56.4	-1.4
ARNO				S	S	07 18 53.8	-2.7
PBAR	Barrancos	21.58	277	eP	P	07 14 58.8	+0.6
	comp=Z,1µm,1.9s						
CCA1	Carnmenellis	21.58	311	eP	P	07 14 57.5	-0.5
CCA1				IAMs_20	IAMs_20	07 24 16.5	
	comp=Z,143µm,13.8s						
PMRV	Marv??o	21.67	281	eP	P	07 14 58.2	-0.9
	comp=Z,1µm,1.5s						
PMRV				eLQ	LQ	07 18 55.5	
PMRV				eLR	LR	07 20 41.8	
	comp=Z,83µm,22.0s						
FOEL	Foel Wylfa	21.68	319	eP	P	07 14 58.5	-0.7
FOEL				IAMs_20	IAMs_20	07 25 37.0	
	comp=Z,127µm,17.3s						
MTE	Manteigas	21.69	283	eP	P	07 14 58.3	-1.1
	comp=Z,844nm,1.5s						
MTE				eLQ	LQ	07 18 54.5	
MTE				eLR	LR	07 21 16.3	
	comp=Z,108µm,18.0s						
MTE	Manteigas	21.69	283	⇑P	P	07 14 57.0	-2.4
MTE	Manteigas	21.69	283	P	P	07 14 57.6	-1.8
MTE				IAmb	IAmb	07 15 05.1	
	comp=Z,1µm,1.5s						
MTE				IAMs_20	IAMs_20	07 23 47.3	
	comp=Z,138µm,18.0s						
PCBR	Castelo Branco	21.69	282	eP	P	07 14 58.2	-1.1
	comp=Z,1µm,2.1s						
PVRL	Vila Real	21.77	286⇑	eP	P	07 15 01.9	+1.7
	comp=Z,508nm,1.9s						
POLO	Lamas de Olo	21.82	286	eP	P	07 15 00.3	-0.5
	comp=Z,195nm,1.5s						
PESTR	Estremoz	21.90	279	eP	P	07 14 59.9	-1.7
	comp=Z,1µm,1.8s						
PESTR	Estremoz	21.90	279	⇑P	P	07 14 59.9	-1.7
PESTR	Estremoz	21.90	279	P	P	07 14 59.6	-1.9
PESTR	Estremoz	21.90	279	P	P	07 15 01.8	+0.2
LLW	Llanuwychllyn	21.90	318	eP	P	07 15 00.8	-0.7
HFS	Hagfors	21.91	351	P	P	07 14 59.4	-2.1
	comp=Z,262nm,0.6s,baz=155,slow=11,SNR=206						
HFS				S	S	07 19 01.4	-1.8
	comp=Z,55nm,1.0s,baz=101,slow=22,SNR=3.2						
HFS				LR	LR	07 26 04.9	
	comp=Z,68µm,18.6s,baz=174,slow=44						
GOLM	Goulmima	21.92	259	P	P	07 15 03.0	+1.0
PVIS	Viseu	21.93	284	eP	P	07 15 01.5	-0.5
	comp=Z,2µm,1.6s						
PCAB	Cabril	21.98	287	eP	P	07 15 01.0	-1.5
	comp=Z,744nm,1.6s						
PUL	Pulkovo	22.02	13	eP	P	07 15 00.7	-1.9
PUL	Pulkovo	22.02	13c	iP	P	07 14 59.9	-2.7
PUL				pmax	pmax		
	comp=Z,1µm,0.7s						
PUL				MLR	MLR		
	comp=Z,120µm,22.0s						
RSBS	Rosebush, Pemb	22.05	315	eP	P	07 15 01.7	-1.4
RSBS				IAMs_20	IAMs_20	07 25 19.3	
	comp=Z,170µm,16.5s						
KONO	Kongsberg	22.12	345c	eP	P	07 15 01.4	-2.3
KONO				pmax	pmax		
	comp=Z,575nm,1.3s						
KONO				MLR	MLR		
	comp=Z,99µm,18.0s						
KONO	Kongsberg	22.12	345	eP	P	07 15 01.7	-2.1
KONO				IVmB_BB		07 15 02.4	
	comp=Z,4µm,0.7s						
KONO				eS	S	07 19 05.6	-1.6
KONO				IVMs_BB	IVMs_BB	07 26 06.8	
	comp=Z,42µm,9.9s						
KONO	Kongsberg	22.12	345	⇑P	P	07 15 01.5	-2.2
KONO	Kongsberg	22.12	345	P	P	07 15 00.8	-2.9
KONO				IAmb	IAmb	07 15 12.1	
	comp=Z,1µm,1.4s						
PGAV	Gavieira, Arco	22.16	288	eP	P	07 15 02.6	-1.9
	comp=Z,631nm,2.2s						
PGAV				eLQ	LQ	07 19 01.5	
PGAV				eLR	LR	07 22 07.6	
	comp=Z,72µm,22.0s						
OSL	Oslo	22.17	347	eP	P	07 15 02.6	-1.7
OSL				IVmBBB		07 15 11.6	
	comp=Z,14µm,1.8s						
OSL				eS	S	07 19 08.8	+0.6
OSL				IVMs_BB	IVMs_BB	07 25 58.0	
	comp=Z,58µm,9.9s						
EDMD	Edmundbyers	22.18	324	eP	P	07 15 02.9	-1.5
EDMD				IAMs_20	IAMs_20	07 26 25.1	
	comp=Z,73µm,11.4s						
PBEJ	Beja	22.25	277	eP	P	07 15 04.4	-1.0
	comp=Z,682nm,1.8s						
PVAQ	Vaqueiros	22.25	276	eP	P	07 15 04.0	-1.4
	comp=Z,438nm,1.4s						
PVAQ				eLQ	LQ	07 19 02.7	
PVAQ				eLR	LR	07 20 43.4	
	comp=Z,42µm,22.0s						
PVAQ	Vaqueiros	22.25	276	P	P	07 15 02.9	-2.5
PVAQ	Vaqueiros	22.25	276	P	P	07 15 06.3	+0.9
EVO	Evora	22.27	279	P	P	07 15 05.0	-0.6
EVO				S	S	07 19 02.3	-8.2
EVO	Evora	22.27	279	eP	P	07 15 04.1	-1.5
	comp=Z,853nm,1.4s						
YLL	Llanberis	22.31	318⇑	eP	P	07 15 04.5	-1.3
COI	Coimbra	22.37	283	P	P	07 15 05.5	-1.1
COI				pmax	pmax		
	comp=Z,2µm,1.7s						
COI				MLR	MLR		
	comp=Z,120µm,19.0s						
COI	Coimbra	22.37	283	eP	P	07 15 05.7	-0.9
	comp=Z,1µm,1.3s						
COI	Coimbra	22.37	283	P	P	07 15 05.5	-1.1
COI				IAMs_20	IAMs_20	07 24 06.8	
	comp=Z,120µm,19.0s						
PCAS	Casmilo, Conde	22.45	283	eP	P	07 15 06.7	-0.8
	comp=Z,888nm,1.9s						
PBDV	Barranco-do-Ve	22.45	275	eP	P	07 15 06.8	-0.8
	comp=Z,519nm,1.3s						
PCVE	Castro Verde	22.46	276	eP	P	07 15 06.3	-1.3
	comp=Z,480nm,2.0s						
WLF1	Llynfaes	22.50	319	eP	P	07 15 06.5	-1.4
WLF1				IAMs_20	IAMs_20	07 24 30.1	
	comp=Z,243µm,23.4s						
WME	Myndd Eilian	22.51	319	eP	P	07 15 06.8	-1.1
MESJ	Messejana	22.56	277	eP	P	07 15 07.4	-1.2
MESJ				IAMs_20	IAMs_20	07 26 27.6	
	comp=N,85µm,20.4s						
MESJ	Messejana	22.56	277	eP	P	07 15 07.4	-1.2
MESJ	Messejana	22.56	277	eP	P	07 15 07.8	-0.9
	comp=N,484nm,1.5s						
KESW	Keswick, Cumbr	22.57	323	eP	P	07 15 07.5	-1.1
KESW				IAMs_20	IAMs_20	07 23 59.4	
	comp=Z,83µm,20.5s						
YRC	Rhoscolyn	22.58	318⇑	eP	P	07 15 07.4	-1.3
WPS	Cemaes, Angles	22.61	319	eP	P	07 15 08.9	-0.2
WPS				IAMs_20	IAMs_20	07 24 32.4	
	comp=Z,120µm,21.5s						
BLS5	Blasjo	22.63	341	eP	P	07 15 08.1	-1.1
BLS5				IVmB_BB		07 15 09.0	
	comp=Z,5µm,3.0s						
BLS5				eS	S	07 19 16.7	-0.1
BLS5				IVMs_BB	IVMs_BB	07 26 15.3	
	comp=Z,59µm,15.7s						
PSBE	So Bento	22.74	281	eP	P	07 15 10.1	-0.5
	comp=Z,760nm,2.4s						
PNCL	Nicolau / Gran	22.75	278	eP	P	07 15 10.2	-0.5
	comp=Z,1µm,1.4s						
KMY	Karmoy	22.77	339	eP	P	07 15 09.3	-1.3
KMY				eS	S	07 19 19.2	+0.1
NC602	NORSAR Array S	22.79	349	eP	P	07 15 08.9	-2.0
NC602				eS	S	07 19 19.0	-0.7
NC602				IVMs_BB	IVMs_BB	07 29 49.5	
	comp=Z,41µm,10.8s						
NC602	NORSAR Array S	22.79	349	P	P	07 15 08.0	-2.9
NORES	NORESS Array B	22.79	349	P	P	07 15 10.1	-0.8
TZRR	Tazzarine	22.80	258	P	P	07 15 11.2	-0.2
NAO01	NORSAR Array S	23.00	348	P	P	07 15 10.4	-2.7
MORF	Marmelete	23.00	276	eP	P	07 15 12.1	-1.4
MORF				eS	S	07 19 23.6	-0.3
MORF				IAMs_20	IAMs_20	07 21 44.1	
	comp=N,202µm,43.0s						
MORF	Marmelete	23.00	276	eP	P	07 15 12.0	-1.4
MORF				eS	S	07 19 23.5	-0.3
MORF	Marmelete	23.00	276	eP	P	07 15 12.6	-0.8
	comp=N,311nm,1.9s						
MORF	Marmelete	23.00	276	⇓P	P	07 15 12.4	-1.0
PTEO	Sao Teotonio	23.01	276	eP	P	07 15 12.1	-1.3
	comp=N,489nm,1.7s						
ODD1	Odda	23.01	342	eP	P	07 15 12.0	-1.3
ODD1				eS	S	07 19 25.0	+1.4
ODD1				e		07 23 54.0	
EKA	Eskdalemuir Ar	23.03	324	P	P	07 15 11.3	-2.2
	comp=N,772nm,0.9s,baz=122,slow=10,SNR=483						
EKA				PcP	PcP	07 19 04.8	+2.2
	comp=N,16nm,0.8s,baz=98,slow=2.7,SNR=3.5						
EKA				ScP	ScP	07 22 39.9	-0.4
	comp=N,10nm,0.9s,baz=106,slow=4.4,SNR=4.9						
ESK	Eskdalemuir	23.04	324	eP	P	07 15 12.5	-1.0
ESK				IAmb	IAmb	07 15 13.6	
	comp=Z,824nm,0.9s						
ESK				IAMs_20	IAMs_20	07 24 02.4	
	comp=Z,89µm,25.7s						
ESK	Eskdalemuir	23.04	324	P	P	07 15 12.1	-1.4
ESK				pmax	pmax		
	comp=Z,1µm,0.9s						
ESK	Eskdalemuir	23.04	324	⇑P	P	07 15 12.5	-1.0
ESK	Eskdalemuir	23.04	324	P	P	07 15 12.1	-1.4
FINES	FINESS Array B	23.05	7	P	P	07 15 10.6	-3.0
	comp=Z,416nm,0.8s,baz=165,slow=9.8,SNR=127						
FINES				PcP	PcP	07 19 04.4	+1.9
	comp=Z,15nm,0.4s,baz=140,slow=4.9,SNR=1.9						
FINES				ScP	ScP	07 22 39.2	-0.9
	comp=Z,31nm,0.9s,baz=119,slow=2.4,SNR=4.9						
FINES				LR	LR	07 25 20.5	
	comp=Z,154µm,19.5s,baz=190,slow=40						
FINES	FINESS Array B	23.05	7	P	P	07 15 10.5	-3.1
FIA1	FINESS Array S	23.05	7	P	P	07 15 11.1	-2.5
WIM	Isle of Man	23.09	320⇑	eP	P	07 15 13.0	-1.1
IOMK	Kirk Michael	23.10	321	eP	P	07 15 13.0	-1.2
IOMK				IAMs_20	IAMs_20	07 24 36.0	
	comp=Z,268µm,18.7s						
LIS	Lisbon	23.12	279	eP	P	07 15 13.4	-1.2
LIS				eS	S	07 19 25.4	-0.4
LIS				IAMs_20	IAMs_20	07 23 21.2	
	comp=E,135µm,22.5s						
LIS	Lisbon	23.12	279	eP	P	07 15 13.3	-1.2
LIS				eS	S	07 19 25.3	-0.4
NC405	NORSAR Array S	23.13	349	P	P	07 15 11.2	-3.2
NB201	NORSAR Array S	23.13	349	P	P	07 15 11.8	-2.6
NB2	NORSAR Subarra	23.13	348	P	P	07 15 12.0	-2.5
	comp=Z,1µm,1.7s,baz=161,slow=11						
NB2	NORSAR Subarra	23.13	348	P	P	07 15 13.2	-1.3
NB2				pmax	pmax		
	comp=Z,1µm,1.7s						
NOA	NORSAR Array B	23.13	348	P	P	07 15 11.7	-2.9
	comp=Z,111nm,0.6s,baz=157,slow=9.5,SNR=348						
NOA				PcP	PcP	07 19 04.9	+2.1
	comp=Z,15nm,0.8s,baz=146,slow=2.1,SNR=4.7						
NOA				LR	LR	07 26 13.9	
	comp=Z,60µm,19.2s,baz=160,slow=42						
ESY	Stoneypath	23.14	326	eP	P	07 15 12.9	-1.7
PMST	Lisbon--Monsan	23.15	280	eP	P	07 15 14.6	-0.2
	comp=Z,1µm,1.5s						
ZGR	Zagora	23.15	256	P	P	07 15 15.0	0.0
PFVI	Vila Bisbo	23.18	275	eP	P	07 15 14.3	-0.8
	comp=Z,606nm,1.8s						
PFVI	Vila Bisbo	23.18	275	P	P	07 15 16.9	+1.8
PMAFR	Mafra	23.19	280	eP	P	07 15 15.3	0.0
	comp=Z,572nm,1.6s						
AVE	Averroes	23.19	265	P	P	07 15 16.0	+0.6
AVE				S	S	07 19 22.7	-4.3
AVE	Averroes	23.19	265	⇓P	P	07 15 15.4	+0.1
AVE	Averroes	23.19	265	P	P	07 15 16.5	+1.2
EBL	Broad Law	23.24	325⇑	eP	P	07 15 14.3	-1.4
NC303	NORSAR Array S	23.29	349	P	P	07 15 13.2	-2.8
SKAR	Skarslia	23.33	345	eP	P	07 15 15.1	-1.4
SKAR				eS	S	07 19 24.5	-4.3
EDI	Edinburgh	23.40	325	eP	P	07 15 15.7	-1.4
EDI				IAMs_20	IAMs_20	07 26 29.8	
	comp=Z,72µm,14.6s						
NEWG	New Galloway	23.40	323	eP	P	07 15 15.7	-1.6
GAL1	Galloway	23.50	322	eP	P	07 15 16.3	-1.8
GAL1				IAMs_20	IAMs_20	07 24 37.7	
	comp=Z,102µm,20.5s						
DSB	Dublin	23.52	317	⇑P	P	07 15 17.6	-0.9
DSB	Dublin	23.52	317	P	P	07 15 17.4	-1.0
EDU	Dundee	23.71	327⇑	eP	P	07 15 18.7	-1.5
DRUM	Mains of Drumt	23.72	328	eP	P	07 15 18.1	-2.2
DRUM				IAMs_20	IAMs_20	07 28 59.5	
	comp=Z,95µm,12.4s						
BER	Bergen	23.75	341	P	P	07 15 19.8	-0.7
BER				pmax	pmax		
	comp=Z,375nm,1.3s						
BER	Bergen	23.75	341	eP	P	07 15 19.1	-1.4
BER				eS	S	07 19 36.7	+1.3
BER				e		07 24 25.1	
BER				IVMs_BB	IVMs_BB	07 32 55.2	
	comp=Z,26µm,10.8s						
GMM	Mts of Mourne	23.78	320	eP	P	07 15 20.2	-0.7
MIB	Mutribah	23.80	104	eP	P	07 15 19.3	-2.0
ASK	Askoy	23.87	341	eP	P	07 15 20.5	-1.2
ASK				eS	S	07 19 37.3	0.0
ASK				e		07 24 31.4	
INVG	Invergeldie, C	24.09	326	eP	P	07 15 22.7	-1.1
INVG				IAMs_20	IAMs_20	07 26 58.1	
	comp=Z,81µm,16.2s						
UMR	Umm Al-Rimmam	24.21	104	eP	P	07 15 23.2	-2.0
HYA	Hoyanger	24.22	343	eP	P	07 15 24.4	-0.6
HYA				eS	S	07 19 42.5	-0.5
CLGH	Cloghs, Cushen	24.29	321	eP	P	07 15 24.7	-1.0
CLGH				IAMs_20	IAMs_20	07 25 10.9	
	comp=Z,118µm,21.8s						
OUK	Oukaimeden	24.38	261	P	P	07 15 29.0	+1.8
RDF	Al-Radifah	24.39	105	eP	P	07 15 25.4	-1.5
DOMB	Dombas	24.44	347	eP	P	07 15 26.4	-0.6
DOMB				IVmB_BB		07 15 27.8	
	comp=Z,7µm,1.5s						
DOMB				eS	S	07 19 47.3	+0.7
DOMB				e		07 22 33.9	
DOMB				IVMs_BB	IVMs_BB	07 26 52.4	
	comp=Z,44µm,12.8s						
SUE	Sulen	24.47	341	eP	P	07 15 25.8	-1.4
SUE				eS	S	07 19 51.1	+4.2
SUE				IVMs_BB	IVMs_BB	07 30 02.1	
	comp=Z,39µm,8.3s						
MCD	Coleburn Disti	24.47	328⇑	eP	P	07 15 25.9	-1.4
LAWE	Loch Awe, Argy	24.60	324	eP	P	07 15 26.7	-1.7
LAWE				IAMs_20	IAMs_20	07 24 51.5	
	comp=Z,62µm,19.4s						
QRN	Al-Qurain	24.76	105	eP	P	07 15 28.7	-1.5
MDO	Dochfour	24.85	327	eP	P	07 15 28.9	-1.8
FOO	Floro	24.87	342	eP	P	07 15 30.1	-0.7
FOO				IVmBBB		07 15 37.9	
	comp=Z,10µm,4.1s						
FOO				eS	S	07 19 55.9	+2.5
FOO				IVMs_BB	IVMs_BB	07 27 39.8	
	comp=Z,66µm,12.1s						
AKN	Aaknes	24.95	345	eP	P	07 15 31.0	-0.7
AKN				eS	S	07 19 56.2	+1.3
AKN				eScP	ScP	07 22 45.2	-0.2
MLA1	Latheron	24.99	330	eP	P	07 15 30.3	-1.7
TTIG	Tnine Tigouga,	25.11	260	P	P	07 15 36.0	+2.5
VAL	Valentia	25.17	312	⇓P	P	07 15 33.5	-0.1
KLMR	Klimovskoe	25.18	22c	iP	P	07 15 31.6	-2.0
KLMR				e		07 16 04.6	
KLMR				e		07 19 00.9	
KLMR				eS	S	07 19 58.0	-0.3
KLMR				pmax	pmax		
	comp=Z,761nm,0.8s						
KLMR				MLR	MLR		
	comp=Z,111µm,14.0s						
KLMR	Klimovskoe	25.18	22	⇑iP	P	07 15 31.6	-2.0
KLMR				⇑iP	P	07 15 31.6	-2.0
KLMR				⇑iP	P	07 15 31.6	-2.0
KLMR				AMP		07 15 44.9	
	comp=Z,761nm,0.8s						
KLMR				ePP	PnPn	07 16 04.6	-2.9
KLMR				ePcP	PcP	07 19 01.0	-6.1
KLMR				eS	S	07 19 58.1	-0.3
KLMR				eS	S	07 19 58.1	-0.3
KLMR				LQ	LQ	07 23 07.1	
KLMR				LQ	LQ	07 23 07.1	
KLMR				LR	LR	07 25 36.7	
KLMR				AMP		07 26 29.8	
	comp=Z,111µm,13.7s						
MOL	Molde	25.20	346	eP	P	07 15 33.2	-0.7
MOL				eS	S	07 20 01.4	+2.7
MOL				e		07 24 25.0	
MOL				IVMs_BB	IVMs_BB	07 27 42.3	
	comp=Z,53µm,12.2s						
KAC	Achnashellach	25.28	327	eP	P	07 15 33.4	-1.2
BIGH	Upper Bighouse	25.33	329	eP	P	07 15 33.5	-1.6
BIGH				IAMs_20	IAMs_20	07 28 41.4	
	comp=Z,149µm,14.1s						
KPL	Plockton	25.34	326	eP	P	07 15 34.0	-1.2
KPL				IAMs_20	IAMs_20	07 31 03.4	
	comp=Z,90µm,13.5s						
TBLU	Trondheim	25.38	349	eP	P	07 15 35.4	-0.1
TBLU				IVmB_BB		07 15 44.6	
	comp=Z,6µm,2.7s						
TBLU				eS	S	07 20 01.4	-0.1
TBLU				IVMs_BB	IVMs_BB	07 28 24.8	
	comp=Z,67µm,9.2s						
LRW	Lerwick	25.48	335	eP	P	07 15 34.9	-1.5
LRW	Lerwick	25.48	335	⇑P	P	07 15 35.7	-0.7
RAYN	Ar Rayn	26.07	118	P	P	07 15 41.9	-0.2
RAYN				pmax	pmax		
	comp=Z,2µm,2.0s						
RAYN				MLR	MLR		
	comp=Z,71µm,21.0s						
RAYN	Ar Rayn	26.07	118	P	P	07 15 43.2	+1.1
RAYN				S	S	07 20 14.3	+1.1
RAYN	Ar Rayn	26.07	118	⇑P	P	07 15 42.5	+0.4
RAYN	Ar Rayn	26.07	118	P	P	07 15 41.9	-0.2
NSS	Namsos	26.38	352	eP	P	07 15 42.9	-1.6
NSS				IVmB_BB		07 15 43.4	
	comp=Z,4µm,2.8s						
NSS				eS	S	07 20 17.2	-0.2
NSS				IVMs_BB	IVMs_BB	07 27 19.2	
	comp=Z,81µm,9.8s						
KIRV	Kirov	27.24	34	P	P	07 15 49.9	-2.4
	comp=Z,97nm,0.8s,baz=231,slow=5.7,SNR=24						
KIRV				LR	LR	07 27 33.2	
	comp=Z,99µm,21.3s,baz=235,slow=39						
KIRV	Kirov	27.24	34c	eP	P	07 15 50.1	-2.2
PRGR	Permogore	27.71	26	eP	P	07 15 54.1	-2.4
PRGR				eS	S	07 20 30.0	-8.3
PRGR				pmax	pmax		
	comp=Z,427nm,0.8s						
MOR8	Moi Rana	27.76	355	eP	P	07 15 56.1	-0.9
MOR8				eS	S	07 20 46.4	+7.2
MOR8				e		07 25 42.3	
MOR8				IVMs_BB	IVMs_BB	07 28 36.9	
	comp=Z,88µm,12.5s						
STOK	Stokkvaagen	28.04	354	eP	P	07 15 58.5	-0.8
KONS	Konsvik	28.19	354	eP	P	07 15 59.5	-1.2
KONS				eS	S	07 20 45.8	0.0
SAKB	Bahrain	28.20	108	P	P	07 16 02.2	+0.9
NBB40	Tonnes	28.21	354	eP	P	07 15 59.6	-1.3
NBB13	Alf Garage	28.30	354	eP	P	07 16 00.4	-1.3
NBB17	Glomfjord B¥r	28.43	355	eP	P	07 16 01.9	-1.0
SHMA	Al-Shehemyia	28.59	108	P	P	07 16 05.8	+1.1
SHMA				S	S	07 20 51.2	-1.6
NBB30	Finnes	28.61	354	eP	P	07 16 03.5	-1.0
NBB05	Inndyr	28.65	355	eP	P	07 16 03.9	-0.9
AKTO	Aktyubinsk	28.88	54	P	P	07 16 05.3	-1.7
	comp=Z,26nm,0.5s,baz=257,slow=8.5,SNR=50						
AKTO				LR	LR	07 30 04.8	
	comp=Z,50µm,20.5s,baz=281,slow=42						
FAUS	Fauske	28.91	356	eP	P	07 16 05.9	-1.2
FAUS				eS	S	07 20 58.7	+1.6
NBB08	Skaug oppvekst	28.95	355	eP	P	07 16 06.3	-1.2
KHOR	Al-Khor Airpor	29.13	107	P	P	07 16 11.3	+1.8
KHOR				S	S	07 20 59.4	-2.0
GEYT	Alibeck	29.37	80	P	P	07 16 10.5	-1.1
	comp=Z,37nm,0.4s,baz=270,slow=8.9,SNR=36						
GEYT				LR	LR	07 30 37.9	
	comp=Z,51µm,21.1s,baz=280,slow=42						
GEYT	Alibeck	29.37	80	P	P	07 16 11.1	-0.6
GYA0	ALIBECK ARRAY	29.37	80	P	P	07 16 11.1	-0.5
GYA0B	ALIBECK ARRAY	29.37	80	P	P	07 16 11.2	-0.5
TRNA	Turayna	29.41	109	P	P	07 16 13.0	+1.0
TRNA				S	S	07 21 03.8	-2.1
STEI	Steigen	29.45	356	eP	P	07 16 10.9	-1.1
STEI				eS	S	07 21 07.3	+1.7
LOF	Lofoten	29.76	355	eP	P	07 16 12.9	-1.8
LOF				IVmB_BB		07 16 13.2	
	comp=Z,3µm,2.5s						
LOF				eS	S	07 21 12.4	+1.9
LOF				IVMs_BB	IVMs_BB	07 29 48.8	
	comp=Z,60µm,10.3s						
APA	Apatity	29.83	10	⇓iP	P	07 16 12.5	-2.8
APA				i		07 17 10.0	
APA				i S	S	07 21 07.0	-4.5
APA				pmax	pmax		
	comp=Z,86nm,0.7s						
AB31	Akbulak array	29.96	56	eP	P	07 16 15.2	-1.4

ABKAR	Akbulak array	29.96	56	⇑P	P	07 16 15.2	-1.4
ABKAR	Akbulak array	29.96	56	P	P	07 16 15.0	-1.6
ABKAR	Akbulak array	29.96	56	P	P	07 16 14.8	-1.9
SLWR	Sila	30.16	110	P	P	07 16 19.4	+0.8
SLWR				P	P	07 16 19.4	+0.8
SLWR				P	P	07 16 19.4	+0.8
PMPST	Porto Santo, M	30.25	271	eP	P	07 16 19.2	-0.2
	comp=Z,325nm,1.1s						
PMPST				eS	S	07 21 21.5	+2.6
PMPS	Porto Santo	30.26	271	eP	P	07 16 20.5	+1.1
	comp=Z,279nm,1.9s						
LVZ	Lovozero	30.31	11	ceP	P	07 16 17.9	-1.7
LVZ				pmax	pmax		
	comp=Z,317nm,2.5s						
LVZ				MLR	MLR		
	comp=Z,92µm,18.0s						
LVZ	Lovozero	30.31	11	⇓P	P	07 16 18.4	-1.2
LVZ	Lovozero	30.31	11	P	P	07 16 18.0	-1.6
LVZ				IAmb	IAmb	07 17 25.1	
	comp=Z,266nm,1.0s						
LVZ				IAMs_20	IAMs_20	07 29 06.4	
	comp=Z,135µm,22.0s						
TORD	Torodi Ar. Bea	30.42	218	P	P	07 16 20.4	-0.6
	comp=Z,142nm,0.6s,baz=30,slow=9.4,SNR=381						
TORD				ScP	ScP	07 23 01.8	-1.0
	comp=Z,12nm,1.2s,baz=60,slow=3.6,SNR=3.6						
TORD	Torodi Ar. Bea	30.42	218	P	P	07 16 19.8	-1.2
TORD				IAmb	IAmb	07 16 36.2	
	comp=Z,408nm,1.3s						
KTK1	Kautokeino	30.43	2	eP	P	07 16 19.1	-1.5
KTK1				IVmBBB		07 16 19.6	
	comp=Z,3µm,2.8s						
KTK1				eS	S	07 21 24.6	+3.6
KTK1				IVMs_BB	IVMs_BB	07 30 22.4	
	comp=Z,63µm,9.7s						
JRN	Qarnain Island	30.51	107	P	P	07 16 21.8	+0.1
	SNR=16						
ARU	Arti	30.68	42	P	P	07 16 21.5	-1.5
	comp=Z,7.7nm,0.4s,baz=232,slow=6.9,SNR=35						
ARU	Arti	30.68	42	c iP	P	07 16 21.5	-1.5
ARU						07 17 19.5	
ARU						07 19 17.2	
ARU				S	S	07 21 25.2	0.0
ARU				pmax	pmax		
	comp=Z,217nm,1.3s						
ARU				MLR	MLR		
	comp=Z,54µm,13.0s						
ARU	Arti	30.68	42	⇓P	P	07 16 21.4	-1.6
ARU	Arti	30.68	42	P	P	07 16 20.9	-2.1
ARU				IAMs_20	IAMs_20	07 28 46.8	
	comp=Z,85µm,22.0s						
PMAR	Madeira	30.83	271	eP	P	07 16 26.1	+1.3
	comp=Z,621nm,1.4s						
PMAR				eS	S	07 21 30.8	+2.4
JETT	Jettan, Norway	30.94	360	eP	P	07 16 24.5	-0.7
PMOZ	Porto Moniz, M	31.02	271	eP	P	07 16 25.3	-1.0
	comp=Z,302nm,1.2s						
PMOZ				eS	S	07 21 33.2	+2.1
PMOZ				eLQ	LQ	07 23 47.3	
PMOZ				eLR	LR	07 25 34.7	
	comp=Z,12µm,20.0s						
PMOZ	Porto Moniz, M	31.02	271	⇓P	P	07 16 27.6	+1.3
TRO	Tromso	31.03	359	eP	P	07 16 24.5	-1.4
TRO				eS	S	07 21 31.5	+1.2
TRO				IVMs_BB	IVMs_BB	07 30 35.7	
	comp=Z,81µm,15.5s						
ARA0	ARCESS Array S	31.04	3	eP	P	07 16 24.4	-1.6
ARCES	ARCESS Array B	31.04	3	P	P	07 16 24.0	-1.9
	comp=Z,31nm,0.4s,baz=191,slow=9.9,SNR=126						
ARCES				PcP	PcP	07 19 22.2	+0.9
	comp=Z,8.7nm,0.5s,baz=235,slow=3.2,SNR=1.5						
ARCES				LR	LR	07 30 17.1	
	comp=Z,124µm,18.3s,baz=180,slow=39						
ARCES	ARCESS Array B	31.04	3	P	P	07 16 23.8	-2.2
ARCES				IAmb	IAmb	07 16 33.5	
	comp=Z,307nm,1.1s						
GHWR	Ruwais	31.09	109	P	P	07 16 27.1	+0.2
GHWR				P	P	07 16 27.1	+0.2
GHWR				P	P	07 16 27.1	+0.2
GHWR				S	S	07 21 30.0	-2.2
GHWR				S	S	07 21 30.0	-2.2
GHWR				S	S	07 21 30.0	-2.2
KEV	Kevo	31.34	4	P	P	07 16 27.0	-1.5
KEV				pmax	pmax		
	comp=Z,347nm,1.2s						
KEV				MLR	MLR		
	comp=Z,67µm,20.0s						
KEV	Kevo	31.34	4	⇑P	P	07 16 26.9	-1.7
KEV	Kevo	31.34	4	P	P	07 16 27.0	-1.5
KEV				IAmb	IAmb	07 16 36.5	
	comp=Z,348nm,1.2s						
KEV				IAMs_20	IAMs_20	07 30 04.1	
	comp=Z,67µm,20.0s						
SVE	Sverdlovsk	31.90	42	deP	P	07 16 32.2	-1.5
SVE				eS	S	07 21 45.2	+1.0
SVE				pmax	pmax		
	comp=Z,427nm,1.1s						
SVE				MLR	MLR		
	comp=E,76µm,15.0s						
SVE				MLR	MLR		
	comp=Z,80µm,14.0s						
HAMF	Hammerfest	32.08	2	eP	P	07 16 34.1	-1.0
HAMF				eS	S	07 21 47.8	+1.2
MZR	Muzera	32.11	109	P	P	07 16 35.6	-0.2
	SNR=26						
MZR				P	P	07 16 35.6	-0.2
	SNR=26						
MZR				S	S	07 21 46.0	-2.1
MZR				S	S	07 21 46.0	-2.1
DESE	Dese	32.31	143	eP	P	07 16 40.3	+2.3
DESE				eS	S	07 22 01.1	+9.2
UMQ	Umm Al-Quwin	32.32	103	P	P	07 16 37.9	+0.2
	SNR=20						
UMQ				P	P	07 16 37.9	+0.2
	SNR=20						
UMQ				S	S	07 21 49.4	-1.9
UMQ				S	S	07 21 49.4	-1.9
AJN	Ajban	32.33	106	P	P	07 16 38.1	+0.3
	SNR=14						
AJN				P	P	07 16 38.1	+0.3
	SNR=14						
KOWA	Kowa	32.39	229	P	P	07 16 38.0	-0.4
	comp=Z,94nm,0.8s,baz=39,slow=14,SNR=119						
KOWA				LR	LR	07 31 09.3	
	comp=Z,202µm,19.1s,baz=38,slow=39						
KOWA	Kowa	32.39	229	⇓P	P	07 16 38.0	-0.4
KOWA	Kowa	32.39	229	P	P	07 16 37.2	-1.1
TEND	Ethiopian Broa	32.39	140	eP	P	07 16 40.2	+1.8
TEND				eS	S	07 21 58.5	+5.9
SHME	Shamm	32.40	102	P	P	07 16 37.4	-1.0
	SNR=48						
SHME				P	P	07 16 37.4	-1.0
	SNR=48						
SHME				S	S	07 21 48.6	-4.1
SHME				S	S	07 21 48.6	-4.1
ASUD	Al Ashush, Dub	32.55	105	P	P	07 16 39.6	-0.2
	SNR=24						
ASUD				S	S	07 21 53.0	-2.0
BANOM	Banah	32.59	102	P	P	07 16 39.0	-1.1
	SNR=86						
BANOM				P	P	07 16 39.0	-1.1
	SNR=86						
BANOM				S	S	07 21 52.8	-2.8
BANOM				S	S	07 21 52.8	-2.8
FAQ	Al Faqa, Dubai	32.69	105	P	P	07 16 40.1	-0.8
	SNR=33						
FAQ				P	P	07 16 40.1	-0.8
	SNR=33						
FAQ				P	P	07 16 40.1	-0.8
	SNR=33						
FAQ				S	S	07 21 53.8	-3.3
FAQ				S	S	07 21 53.8	-3.3
FAQ				S	S	07 21 53.8	-3.3
MASF	Masafi	32.78	103	P	P	07 16 40.6	-1.1
	SNR=52						
MASF				P	P	07 16 40.6	-1.1
	SNR=52						
MASF				S	S	07 21 55.6	-3.0
MASF				S	S	07 21 55.6	-3.0
MDH	Madha	32.92	103	P	P	07 16 42.0	-1.0
	SNR=53						
MDH				P	P	07 16 42.0	-1.0
	SNR=53						
MDH				P	P	07 16 42.0	-1.0
	SNR=53						
MDH				S	S	07 21 58.0	-2.8
MDH				S	S	07 21 58.0	-2.8
MDH				S	S	07 21 58.0	-2.8
UOSS	Minazif	33.04	104	P	P	07 16 42.8	-1.2
UOSS				P	P	07 16 42.8	-1.2
UOSS				P	P	07 16 42.8	-1.2
UOSS				S	S	07 21 57.6	-5.1
UOSS				S	S	07 21 57.6	-5.1
UOSS				S	S	07 21 57.6	-5.1
UOSS	Minazif	33.04	104	⇓P	P	07 16 42.1	-2.0
UOSS	Minazif	33.04	104	P	P	07 16 42.2	-1.9
UOSS				IAmb	IAmb	07 16 48.4	
	comp=Z,245nm,0.8s						
HATD	Hatta, Dubai	33.05	104	P	P	07 16 43.0	-1.1
	SNR=124						
HATD				P	P	07 16 43.0	-1.1
	SNR=124						
HATD				P	P	07 16 43.0	-1.1
	SNR=124						
HATD				S	S	07 21 57.7	-5.1
HATD				S	S	07 21 57.7	-5.1
HATD				S	S	07 21 57.7	-5.1
ASHO	Ashiyiah	33.08	104	P	P	07 16 43.4	-1.0
	SNR=133						
ASHO				P	P	07 16 43.4	-1.0
	SNR=133						
ASHO				S	S	07 21 59.4	-3.9
ASHO				S	S	07 21 59.4	-3.9
ALNE	Al Ain	33.19	106	P	P	07 16 45.1	-0.2
	SNR=91						
ALNE				P	P	07 16 45.1	-0.2
	SNR=91						
ALNE				S	S	07 22 01.5	-3.4
ALNE				S	S	07 22 01.5	-3.4
UMZA	Um Al Zommool	33.52	108	P	P	07 16 47.8	-0.4
UMZA				P	P	07 16 47.8	-0.4
UMZA				P	P	07 16 47.8	-0.4
UMZA				S	S	07 22 07.1	-3.0
UMZA				S	S	07 22 07.1	-3.0
UMZA				S	S	07 22 07.1	-3.0
ATD	Arta Tunnel	33.56	138	P	P	07 16 48.8	+0.2
	comp=Z,75nm,1.2s,baz=314,slow=6.3,SNR=17						
ATD	Arta Tunnel	33.56	138	P	P	07 16 50.4	+1.7
	SNR=20						
ATD	Arta Tunnel	33.56	138	P	P	07 16 49.5	+0.9
ATD				IAmb	IAmb	07 16 57.0	
	comp=Z,305nm,1.3s						
HRA	Herat	33.58	84	P	P	07 16 48.3	-0.6
HRA				IAmb	IAmb	07 16 58.1	
	comp=Z,234nm,1.4s						
ANKE	Ethiopia-Afar	33.69	144	eP	P	07 16 52.5	+2.3
ANKE				eS	S	07 22 24.7	+11
SOHO	SOHO	33.74	105	P	P	07 16 49.7	-0.4
SOHO				P	P	07 16 49.7	-0.4
SOHO				P	P	07 16 49.7	-0.4
SOHO				S	S	07 22 10.3	-3.1
SOHO				S	S	07 22 10.3	-3.1
SOHO				S	S	07 22 10.3	-3.1
AAE	Adis Abeba	33.76	146	eP	P	07 16 53.0	+2.3
AAE				eS	S	07 22 19.6	+5.2
FURI	Furi	33.84	146	P	P	07 16 54.0	+2.6
FURI	Furi	33.84	146	IAMs_20	IAMs_20	07 32 37.8	
	comp=Z,92µm,19.0s						
ARQ	Araqi	34.18	106	P	P	07 16 53.6	-0.4
	SNR=82						
ARQ				P	P	07 16 53.6	-0.4
	SNR=82						
HOQ	Hoqain	34.64	105	P	P	07 16 57.4	-0.5
	SNR=70						
HOQ				P	P	07 16 57.4	-0.5
	SNR=70						
HOQ				S	S	07 22 24.3	-3.0
HOQ				S	S	07 22 24.3	-3.0
BSY	Bisya	35.03	106	P	P	07 17 00.8	-0.6
	SNR=50						
BSY				P	P	07 17 00.8	-0.6
	SNR=50						
BSY				P	P	07 17 00.8	-0.6
	SNR=50						
BSY				S	S	07 22 31.5	-2.0
BSY				S	S	07 22 31.5	-2.0
BSY				S	S	07 22 31.5	-2.0
BIDO	Bidbid	35.29	104	P	P	07 17 03.0	-0.5
	SNR=56						
BIDO				P	P	07 17 03.0	-0.5
	SNR=56						
BIDO				S	S	07 22 34.4	-3.0
BIDO				S	S	07 22 34.4	-3.0
DOK	Doka	35.34	115	P	P	07 17 04.0	0.0
	SNR=52						
DOK				P	P	07 17 04.0	0.0
	SNR=52						
DOK				P	P	07 17 04.0	0.0
	SNR=52						
DOK				S	S	07 22 36.4	-1.8
DOK				S	S	07 22 36.4	-1.8
DOK				S	S	07 22 36.4	-1.8
SMDO	Samad	35.49	105	P	P	07 17 05.0	-0.4
	SNR=90						
SMDO				P	P	07 17 05.0	-0.4
	SNR=90						
SMDO				S	S	07 22 40.2	-0.5
SMDO				S	S	07 22 40.2	-0.5
WHFO	Wadi Hawf	35.55	116	P	P	07 17 06.3	+0.5
	SNR=32						
WHFO				P	P	07 17 06.3	+0.5
	SNR=32						
WHFO				P	P	07 17 06.3	+0.5
	SNR=32						
WHFO				S	S	07 22 39.3	-2.1
WHFO				S	S	07 22 39.3	-2.1
WHFO				S	S	07 22 39.3	-2.1
ABTO	Aybut	35.60	117	P	P	07 17 07.0	+0.7
	SNR=51						
ABTO				P	P	07 17 07.0	+0.7
	SNR=51						
ABTO				S	S	07 22 41.3	-1.0
ABTO				S	S	07 22 41.3	-1.0
BART	Pico Bartolome	35.63	283	eP	P	07 17 03.4	-3.0
	comp=Z,123nm,1.3s						
HARA	HARA	35.68	139	eP	P	07 17 03.7	-3.5
HARA				eS	S	07 22 43.9	+0.1
JMIC	Jan Mayen	35.68	344	P	P	07 17 05.5	-0.9
	comp=Z,230nm,0.8s,baz=55,slow=7.5,SNR=6.2						
JMIC	Jan Mayen	35.68	344	eP	P	07 17 06.0	-0.4
JMIC				eS	S	07 22 43.2	+0.8
BORG	Borgarnes	35.68	331	P	P	07 17 05.4	-1.0
	comp=Z,44nm,0.8s,baz=111,slow=3.4,SNR=19						
BORG	Borgarnes	35.68	331	P	P	07 17 06.8	+0.3
BORG				pmax	pmax		
	comp=Z,476nm,1.5s						
BORG				MLR	MLR		
	comp=Z,33µm,18.0s						
BORG	Borgarnes	35.68	331	P	P	07 17 06.8	+0.3
BORG				IAmb	IAmb	07 17 23.8	
	comp=Z,476nm,1.5s						
PSMN	Pico do Norte,	35.77	282	eP	P	07 17 07.0	-0.5
	comp=Z,311nm,1.5s						
PSMA	Santa Maria	35.82	282	eP	P	07 17 12.2	+4.3
	comp=Z,428nm,1.3s						
WSAR	Wadi Sarin	35.83	104	P	P	07 17 06.7	-1.5
	comp=Z,13nm,0.4s,baz=313,slow=8.4,SNR=17						
WSAR	Wadi Sarin	35.83	104	P	P	07 17 08.7	+0.5
	SNR=33						
WSAR				S	S	07 22 43.4	-2.3
PCALD	Caldeiras da R	35.87	283	eP	P	07 17 12.2	+3.8
	comp=Z,139nm,0.8s						
DILA	Dilla	35.89	149	eP	P	07 17 12.3	+3.3
DILA				i S	S	07 22 51.3	+4.3
CMLA	Cha da Macela	35.90	283	eP	P	07 17 04.6	-4.1
	comp=Z,148nm,1.8s						
GRON	Grota Negra	35.91	283	eP	P	07 17 11.8	+3.0
	comp=Z,513nm,2.0s						
BJO1	Bjornoya	35.92	359	eP	P	07 17 07.3	-1.1
BJO1				eS	S	07 22 40.1	-5.9
BJO1				IVMs_BB	IVMs_BB	07 32 14.5	
	comp=Z,37µm,22.5s						
JMDO	Jabal Madar	35.93	106	P	P	07 17 08.4	-0.7
	SNR=53						
JMDO				P	P	07 17 08.4	-0.7
	SNR=53						
JMDO				P	P	07 17 08.4	-0.7
	SNR=53						
JMDO				S	S	07 22 44.3	-2.9
JMDO				S	S	07 22 44.3	-2.9
JMDO				S	S	07 22 44.3	-2.9
PSET	Sete Cidades	36.04	283	eP	P	07 17 12.6	+2.7
	comp=Z,347nm,1.5s						
RBK	Rabkut	36.13	116	P	P	07 17 11.0	+0.2
	SNR=66						
RBK				P	P	07 17 11.0	+0.2
	SNR=66						
RBK				P	P	07 17 11.0	+0.2
	SNR=66						
RBK				S	S	07 22 48.0	-2.4
RBK				S	S	07 22 48.0	-2.4
RBK				S	S	07 22 48.0	-2.4
WBK	Wadi Bani Khal	36.44	105	P	P	07 17 13.2	-0.2
	SNR=42						
WBK				P	P	07 17 13.2	-0.2
	SNR=42						
WBK				S	S	07 22 53.8	-1.3
WBK				S	S	07 22 53.8	-1.3
DMTO	DMTO	36.51	115	P	P	07 17 15.0	+0.9
	SNR=27						
DMTO				P	P	07 17 15.0	+0.9
	SNR=27						
DMTO				P	P	07 17 15.0	+0.9
	SNR=27						
DMTO				S	S	07 22 54.6	-1.6
DMTO				S	S	07 22 54.6	-1.6
DMTO				S	S	07 22 54.6	-1.6
BRVK	Borovoye	36.73	50	ceP	P	07 17 14.3	-1.3
BRVK				pmax	pmax		
	comp=Z,267nm,1.3s						
BRVK				MLR	MLR		
	comp=Z,32µm,15.0s						
BRVK	Borovoye	36.73	50	P	P	07 17 14.9	-0.6
BRVK				S	S	07 22 54.0	-4.9
BRVK	Borovoye	36.73	50	⇑P	P	07 17 14.1	-1.4
BRVK	Borovoye	36.73	50	P	P	07 17 14.2	-1.4
BRVK				IAmb	IAmb	07 17 24.6	
	comp=Z,239nm,0.8s						
BVAR	Borovoye Array	36.79	50	P	P	07 17 13.7	-2.4
	comp=Z,64nm,0.6s,baz=253,slow=15,SNR=81						
SHAO	Shalim	36.79	114	P	P	07 17 20.0	+3.5
	SNR=19						
SHAO				P	P	07 17 20.0	+3.5
	SNR=19						
SHAO				S	S	07 22 59.1	-1.4
SHAO				S	S	07 22 59.1	-1.4
PAGU	Agualva, Azore	36.89	286	eP	P	07 17 16.6	-0.5
	comp=Z,358nm,1.2s						
ADH	Angra Heroismo	36.96	285	eP	P	07 17 14.0	-3.7
	comp=Z,128nm,0.8s						
DQM	DQM	36.97	110	P	P	07 17 19.0	+1.0
	SNR=18						
DQM				P	P	07 17 19.0	+1.0
	SNR=18						
DQM				S	S	07 23 01.5	-1.6
DQM				S	S	07 23 01.5	-1.6
JLN	Jalan Bani Buh	37.04	105	P	P	07 17 19.0	+0.5
	SNR=63						
BRLS	Borolday	37.12	67	eP	P	07 17 18.6	-0.4
	baz=68						
BRLS				eS	S	07 23 02.2	-2.9
	baz=68						
BRLS	Borolday	37.12	67	eP	P	07 17 18.6	-0.4
BRLS				eS	S	07 23 02.2	-2.9
PGRA	Graciosa	37.42	286	eP	P	07 17 20.8	-0.8
	comp=Z,331nm,0.9s						
IUG	Iuzhnay	37.43	69	eP	P	07 17 20.1	-1.7
	baz=69						
IUG				eS	S	07 23 07.9	-2.1
	baz=69						
IUG	Iuzhnay	37.43	69	eP	P	07 17 20.1	-1.7
IUG				eS	S	07 23 07.9	-2.1
SRBC	Serra Branca	37.47	286	eP	P	07 17 23.2	+1.2
	comp=Z,266nm,1.1s						
KK31	Karatay Array	37.59	67	i P	P	07 17 21.9	-1.1
KK31	Karatay Array	37.59	67	P	P	07 17 21.8	-1.3
KK31				IAmb	IAmb	07 17 31.6	
	comp=Z,226nm,0.6s						
KKAR	Karatay Array	37.59	67	P	P	07 17 21.8	-1.3
KKAR				pmax	pmax		
	comp=Z,226nm,0.6s						
KKAR	Karatay Array	37.59	67	⇓P	P	07 17 21.7	-1.3
KKAR	Karatay Array	37.59	67	P	P	07 17 21.8	-1.3
KKAR				IAmb	IAmb	07 17 31.6	
	comp=Z,226nm,0.6s						
KKAR	Karatay Array	37.59	67	P	P	07 17 21.6	-1.5
LODK	Lodwar	37.60	155	P	P	07 17 25.1	+1.7
	SNR=110						
LODK	Lodwar	37.60	155	P	P	07 17 24.0	+0.6
CHGR	Chuyangaron	37.61	74	P	P	07 17 22.2	-1.1
PMAN	Manadas	37.61	286	eP	P	07 17 29.3	+6.1
	comp=Z,516nm,1.4s						
ROSA	Rosais	37.70	286	eP	P	07 17 20.1	-3.9
	comp=Z,430nm,1.6s						
PICO	Pico	37.90	286	eP	P	07 17 25.0	-0.7
	comp=Z,155nm,1.4s						
HOPEN	Hopen	37.99	2	eP	P	07 17 25.4	-0.6
HOPEN				i S	S	07 23 17.8	+0.4
HOPEN				IVMs_BB	IVMs_BB	07 34 40.0	
	comp=Z,45µm,12.8s						
HOR	Horta	38.05	286	eP	P	07 17 21.4	-5.5
	comp=Z,234nm,1.5s						
PCED	Cedros	38.07	286	eP	P	07 17 34.5	+7.4
	comp=Z,453nm,1.1s						
CALA	Caldeira	38.08	286	eP	P	07 17 31.1	+3.8
	comp=Z,498nm,1.2s						
OTUK	Ortayu	38.15	58	P	P	07 17 26.6	-1.1
DZA	Taraz	38.22	67	eP	P	07 17 26.5	-1.9
	baz=67						
DZA	Taraz	38.22	67	eP	P	07 17 26.4	-1.9
BRZS	Berezniki	38.24	55	eP	P	07 17 26.5	-2.0
	comp=Z,103nm,1.4s,baz=56						
BRZS	Berezniki	38.24	55	eP	P	07 17 26.4	-2.0
BRZS				pmax	pmax		
	comp=Z,103nm,1.4s						
GAR	Garm	38.38	73	P	P	07 17 29.2	-0.7
HSPB	Hornsund (broa	38.49	358	eP	P	07 17 29.0	-1.1
HSPB				eS	S	07 23 25.7	+0.6
HSPB				IVMs_BB	IVMs_BB	07 33 30.3	
	comp=Z,32µm,21.9s						
SCO	Scoresbysund	38.73	339	P	P	07 17 32.4	+0.2
SCO				pmax	pmax		
	comp=Z,314nm,1.1s						
SCO				MLR	MLR		
	comp=Z,24µm,18.0s						
SCO	Scoresbysund	38.73	339	i P	P	07 17 31.5	-0.7
SCO	Scoresbysund	38.73	339	⇑P	P	07 17 32.8	+0.6
SCO	Scoresbysund	38.73	339	P	P	07 17 32.4	+0.2
SCO				IAmb	IAmb	07 17 48.8	
	comp=Z,314nm,1.1s						
KBL	Kabul	38.80	81	P	P	07 17 33.4	-0.2
KBL				pmax	pmax		
	comp=Z,97nm,0.9s						
KBL	Kabul	38.80	81	P	P	07 17 33.7	+0.1
	SNR=57						
KBL				P	P	07 17 33.7	+0.1
	SNR=57						
KBL				P	P	07 17 33.7	+0.1
	SNR=57						
KBL				S	S	07 23 27.4	-3.8
KBL				S	S	07 23 27.4	-3.8
KBL				S	S	07 23 27.4	-3.8
KBL	Kabul	38.80	81	P	P	07 17 33.4	-0.2
DBIC	Dimbokro	39.26	222	P	P	07 17 36.5	-0.8
	comp=Z,294nm,1.0s,baz=34,slow=9.1,SNR=60						
DBIC				LR	LR	07 34 54.6	
	comp=Z,161µm,19.6s,baz=43,slow=38						
DBIC	Dimbokro	39.26	222	⇓P	P	07 17 36.5	-0.8
DBIC	Dimbokro	39.26	222	P	P	07 17 36.3	-1.0
DBIC				IAmb	IAmb	07 17 42.4	
	comp=Z,432nm,1.1s						
DRK	Karamyk	39.36	72	P	P	07 17 38.0	-0.3
TIC	Toumodi	39.37	222	eP	P	07 17 36.9	-1.3
KIC	Kosan Boka	39.47	222	eP	P	07 17 37.6	-1.4
	comp=Z,335nm,0.8s						
SPB2	Spitsbergen Ar	39.65	359	P	P	07 17 38.0	-1.9
SPA0	Spitsbergen Ar	39.65	359	eP	P	07 17 39.2	-0.7
SPA0				eS	S	07 23 42.6	+0.1
SPA0				IVMs_BB	IVMs_BB	07 34 16.4	
	comp=Z,38µm,24.5s						
SPITS	Spitsbergen Ar	39.65	359	P	P	07 17 39.4	-0.5
	comp=Z,27nm,0.6s,baz=154,slow=10,SNR=56						
LIC	Lamto	39.73	222	eP	P	07 17 39.8	-1.4
	comp=Z,1µm,1.1s						
SOCY	Socotra	39.73	123	P	P	07 17 40.0	-1.3

	SNR=25						
SOCY	Socotra	39.73	123	⇑P	P	07 17 38.9	-2.4
SOCY	Socotra	39.73	123	P	P	07 17 38.7	-2.6
SOCY				IAmb	IAmb	07 17 46.5	
	comp=Z,624nm,1.0s						
BTLS	Baital	39.75	63	eP	P	07 17 39.8	-1.3
	baz=63						
BTLS				eS	S	07 23 41.9	-2.8
	baz=63						
BTLS	Baital	39.75	63	eP	P	07 17 39.8	-1.3
BTLS				eS	S	07 23 41.9	-2.8
EKS2	Erkin-Say	40.03	67	P	P	07 17 42.7	-1.0
	SNR=99						
AML	Almayashu	40.09	68	P	P	07 17 47.4	+2.9
	SNR=6.0						
AML	Almayashu	40.09	68	P	P	07 17 43.8	-0.6
MBAR	Mbarara	40.20	164	P	P	07 17 45.7	+0.5
	comp=Z,174nm,1.2s,baz=330,slow=8.0,SNR=69						
MBAR				LR	LR	07 36 13.6	
	comp=Z,70µm,19.8s,baz=336,slow=39						
MBAR	Mbarara	40.20	164c	iP	P	07 17 46.2	+1.0
MBAR	Mbarara	40.20	164	P	P	07 17 46.4	+1.2
MBAR				P	P	07 17 46.4	+1.2
MBAR				S	S	07 23 53.2	+1.1
MBAR				S	S	07 23 53.2	+1.1
MBAR	Mbarara	40.20	164	⇓P	P	07 17 45.7	+0.5
MBAR	Mbarara	40.20	164	P	P	07 17 45.4	+0.2
MBAR	Mbarara	40.20	164	IAMs_20	IAMs_20	07 36 02.7	
	comp=Z,65µm,19.0s						
USP	Ospenovka	40.41	66	P	P	07 17 45.5	-1.2
	SNR=23						
SGDS	Sogindy	40.47	65	eP	P	07 17 45.6	-1.6
	baz=66						
SGDS				eS	S	07 23 54.4	-1.2
	baz=66						
DBG	Daneborg	40.52	344	eP	P	07 17 44.5	-2.6
DBG				IAmb	IAmb	07 17 49.7	
	comp=Z,86nm,1.5s						
DBG	Daneborg	40.52	344	⇑P	P	07 17 47.0	0.0
KBS	Kingsbay	40.52	357c	eP	P	07 17 46.5	-0.5
KBS				pmax	pmax		
	comp=Z,235nm,1.3s						
KBS				MLR	MLR		
	comp=Z,61µm,18.0s						
KBS	Kingsbay	40.52	357	eP	P	07 17 44.5	-2.6
KBS				IAmb	IAmb	07 17 47.7	
	comp=Z,302nm,1.1s						
KBS	Kingsbay	40.52	357	eP	P	07 17 47.0	-0.1
KBS				eS	S	07 23 54.0	-1.4
KBS				IVMs_BB	IVMs_BB	07 36 49.7	
	comp=Z,25µm,14.3s						
KBS	Kingsbay	40.52	357	⇑P	P	07 17 46.7	-0.3
KBS	Kingsbay	40.52	357	P	P	07 17 46.4	-0.6
KBS	Kingsbay	40.52	357	IAMs_20	IAMs_20	07 36 57.7	
	comp=Z,67µm,18.0s						
AAK	Ala-Archa	40.55	67	P	P	07 17 47.7	-0.2
	comp=Z,35nm,0.5s,baz=258,slow=6.9,SNR=30						
AAK				ScP	ScP	07 23 38.0	-1.5
	comp=Z,18nm,0.9s,baz=256,slow=4.2,SNR=3.8						
AAK				LR	LR	07 37 42.9	
	comp=Z,26µm,19.0s,baz=304,slow=41						
AAK	Ala-Archa	40.55	67	P	P	07 17 47.0	-1.0
	SNR=30						
AAK	Ala-Archa	40.55	67	P	P	07 17 47.4	-0.6
AAK				P	P	07 17 47.4	-0.6
AAK				S	S	07 23 51.2	-5.9
AAK				S	S	07 23 51.2	-5.9
AAK	Ala-Archa	40.55	67	⇑P	P	07 17 47.6	-0.4
AAK	Ala-Archa	40.55	67	P	P	07 17 47.2	-0.8
FRU1	Bishkek	40.61	66	P	P	07 17 48.4	+0.1
FRU1				pmax	pmax		
	comp=Z,359nm,0.7s						
FRU1	Bishkek	40.61	66	P	P	07 17 48.4	+0.1
FRU1				IAmb	IAmb	07 17 57.7	
	comp=Z,359nm,0.7s						
CHMS	Chumysh	40.65	66	P	P	07 17 48.3	-0.4
	SNR=39						
UCH	Uchtor	40.66	67	P	P	07 17 51.2	+1.9
	SNR=45						
KBK	Karagaybulak	40.87	66	P	P	07 17 50.4	-0.3
	SNR=35						
TKM2	Tokmak 2	41.28	66	P	P	07 17 53.0	-0.9
	SNR=40						
TKM2	Tokmak 2	41.28	66	P	P	07 17 53.1	-0.9
KUU	Kurty	41.58	64	eP	P	07 17 55.0	-1.3
	comp=Z,366nm,1.4s,baz=64						
KUU				eS	S	07 24 09.8	-2.3
	baz=64						
KUU	Kurty	41.58	64	eP	P	07 17 55.0	-1.3
KUU				eS	S	07 24 09.8	-2.3
KUU				pmax	pmax		
	comp=Z,366nm,1.4s						
DAG	Danmarks Havn	41.81	347	P	P	07 17 56.9	-0.8
DAG				pmax	pmax		
	comp=Z,80nm,1.2s						
DAG	Danmarks Havn	41.81	347	iP	P	07 17 56.0	-1.7
DAG				IAmb	IAmb	07 17 57.9	
	comp=Z,73nm,1.2s						
DAG	Danmarks Havn	41.81	347	⇑P	P	07 17 56.6	-1.1
ULHL	Ulahol	41.90	67	P	P	07 18 01.9	+2.7
	SNR=12						
KURBB	Kurchatov Arra	41.93	54	P	P	07 17 57.5	-1.4
	comp=Z,96nm,1.0s,baz=281,slow=9.0,SNR=68						
KURBB				PP	PnPn	07 19 44.7	+3.8
	comp=Z,54nm,1.0s,baz=281,slow=12,SNR=6.5						
KURK	Kurchatov	41.98	54d	iP	P	07 17 58.1	-1.2
KURK				pmax	pmax		
	comp=Z,142nm,1.3s						
KURK				MLR	MLR		
	comp=Z,40µm,19.0s						
KURK	Kurchatov	41.98	54	P	P	07 17 57.9	-1.5
KURK				P	P	07 17 57.9	-1.5
KURK				S	S	07 24 11.6	-6.1
KURK				S	S	07 24 11.6	-6.1
KURK	Kurchatov	41.98	54	⇓P	P	07 17 58.3	-1.0
KURK	Kurchatov	41.98	54	P	P	07 17 58.0	-1.4
KURK	Kurchatov	41.98	54	IAMs_20	IAMs_20	07 37 47.9	
	comp=Z,43µm,19.0s						
AAA	Alma-Ata	42.15	65	eP	P	07 17 59.5	-1.5
	baz=65						
AAA	Alma-Ata	42.15	65	eP	P	07 17 59.5	-1.5
KNDC	Almaty	42.18	65	P	P	07 18 03.0	+1.7
TNSS	Tian-Shan	42.21	65	eP	P	07 18 00.5	-1.4
	baz=66						
MDOK	Medeo	42.25	65	eP	P	07 17 59.7	-2.2
	baz=65						
MDOK				eS	S	07 24 21.0	-1.4
	baz=65						
MDOK	Medeo	42.25	65	eP	P	07 17 59.7	-2.2
MDOK				eS	S	07 24 20.9	-1.4
NIL	Nilore	42.38	80	P	P	07 18 02.7	-0.2
NIL				pmax	pmax		
	comp=Z,489nm,1.0s						
NIL	Nilore	42.38	80	P	P	07 18 02.5	-0.4
NIL				P	P	07 18 02.5	-0.4
NIL	Nilore	42.38	80	P	P	07 18 02.7	-0.2
NIL				IAmb	IAmb	07 18 13.8	
	comp=Z,489nm,1.0s						
KSH	Kashi	42.45	71	P	P	07 18 01.0	-2.5
KSH				pP	pP	07 18 05.5	-1.7
KSH				sP	sP	07 18 07.3	-1.1
KSH				PcP	PcP	07 19 56.4	0.0
KSH				S	S	07 24 17.3	-8.0
KSH				SS	SS	07 27 20.5	-14
KSH				ScS	ScS	07 27 58.9	-6.5
KSH				pmax	pmax		
	comp=Z,31nm,0.9s						
KSH				pmax	pmax		
	comp=Z,4µm,4.5s						
KSH				LR	LR		
	comp=Z,22µm,20.8s						
KSH				LR	LR		
	comp=Z,22µm,21.1s						
KSH				LR	LR		
	comp=Z,25µm,24.4s						
ANGG	Ammassalik, Gr	42.48	329	IAMs_20	IAMs_20	07 34 43.5	
	comp=Z,55µm,22.0s						
KMBO	Kilima Mbogo	42.49	155	P	P	07 18 04.6	+0.4
	comp=Z,75nm,1.3s,baz=343,slow=7.5,SNR=54						
KMBO				LR	LR	07 36 56.9	
	comp=Z,48µm,20.7s,baz=342,slow=38						
KMBO	Kilima Mbogo	42.49	155	iP	P	07 18 06.0	+1.8
KMBO				pmax	pmax		
	comp=Z,75nm,1.3s						
KMBO	Kilima Mbogo	42.49	155	P	P	07 18 05.2	+1.0
KMBO				P	P	07 18 05.2	+1.0
KMBO				S	S	07 24 27.9	+1.5
KMBO				S	S	07 24 27.9	+1.5
KMBO	Kilima Mbogo	42.49	155	⇑P	P	07 18 05.9	+1.8
KMBO	Kilima Mbogo	42.49	155	P	P	07 18 04.7	+0.5
KMBO	Kilima Mbogo	42.49	155	IAMs_20	IAMs_20	07 35 59.4	
	comp=Z,70µm,22.0s						
ARXS	Arharly	42.56	63	eP	P	07 18 03.1	-1.2
TDK	Taldyqorghan	42.78	62	eP	P	07 18 05.3	-0.8
	baz=62						
TDK				eS	S	07 24 28.6	-1.3
	baz=62						
TDK	Taldyqorghan	42.78	62	eP	P	07 18 05.3	-0.8
TDK				eS	S	07 24 28.5	-1.3
ISOG	Isortoq, Green	43.01	328	iP	P	07 18 06.4	-1.2
ISOG				IAmb	IAmb	07 18 09.2	
	comp=Z,143nm,0.8s						
ISOG	Isortoq, Green	43.01	328	⇑P	P	07 18 08.3	+0.7
SEM	Semipalatinsk	43.05	54	eP	P	07 18 06.3	-2.0
	baz=54						
SEM				eS	S	07 24 32.9	-1.1
	baz=54						
SEM	Semipalatinsk	43.05	54	eP	P	07 18 06.3	-2.0
SEM				eS	S	07 24 32.8	-1.1
SATY	Saty	43.24	65	eP	P	07 18 08.8	-1.1
	comp=Z,177nm,1.7s,baz=65						
SATY				eS	S	07 24 39.6	+2.7
	baz=65						
SATY	Saty	43.24	65	eP	P	07 18 08.8	-1.1
SATY				eS	S	07 24 39.5	+2.7
SATY				pmax	pmax		
	comp=Z,177nm,1.7s						
KPKS	Kokpek	43.34	64	eP	P	07 18 09.3	-1.4
	baz=64						
KPKS				eS	S	07 24 36.6	-1.5
	baz=64						
KPKS	Kokpek	43.34	64	eP	P	07 18 09.2	-1.4
KPKS				eS	S	07 24 36.6	-1.5
PRZ	Przheval'sk	43.39	66	P	P	07 18 11.9	+0.7
PRZ				pmax	pmax		
	comp=Z,169nm,1.0s						
PRZ	Przheval'sk	43.39	66	P	P	07 18 11.8	+0.7
JASL	Jaisalmer	43.44	90	eP	P	07 18 13.4	+1.8
KIBK	Kibwezi	43.90	154	P	P	07 18 15.5	+0.2
KIBK				IAMs_20	IAMs_20	07 39 02.9	
	comp=Z,60µm,18.0s						
ICESG	Greenland Ices	43.90	333	iP	P	07 18 14.4	-0.7
ICESG				IAmb	IAmb	07 18 17.6	
	comp=Z,210nm,1.3s						
PDGK	Podgornoye	43.94	64	P	P	07 18 14.1	-1.5
SHLS	Shalkode	43.97	65	eP	P	07 18 16.7	+0.9
	baz=65						
SHLS				eS	S	07 24 51.4	+3.9
	baz=65						
SHLS	Shalkode	43.97	65	eP	P	07 18 16.6	+0.9
SHLS				eS	S	07 24 51.3	+3.9
SUMG	Summit	44.36	338	P	P	07 18 18.0	-0.9
SUMG				pmax	pmax		
	comp=Z,469nm,1.4s						
SUMG				MLR	MLR		
	comp=Z,36µm,18.0s						
SUMG	Summit	44.36	338	iP	P	07 18 18.4	-0.5
SUMG	Summit	44.36	338	⇑P	P	07 18 18.8	-0.1
SUMG	Summit	44.36	338	P	P	07 18 18.0	-0.9
SUMG				IAmb	IAmb	07 18 32.4	
	comp=Z,469nm,1.4s						
SUMG				IAMs_20	IAMs_20	07 38 08.0	
	comp=Z,36µm,18.0s						
MAKZ	Makanchi	44.82	59	P	P	07 18 21.5	-0.9
MAKZ				pmax	pmax		
	comp=Z,99nm,0.9s						
MAKZ				MLR	MLR		
	comp=Z,38µm,21.0s						
MAKZ	Makanchi	44.82	59	⇑P	P	07 18 21.2	-1.2
MAKZ	Makanchi	44.82	59	P	P	07 18 21.5	-0.9
NOR	Nord	44.99	353	P	P	07 18 22.0	-1.3
NOR				pmax	pmax		
	comp=Z,207nm,1.2s						
NOR	Nord	44.99	353	iP	P	07 18 22.3	-0.9
NOR				IAmb	IAmb	07 18 23.4	
	comp=Z,133nm,1.1s						
NOR				IVmB_BB		07 18 37.2	
	comp=Z,2µm,4.7s						
NOR	Nord	44.99	353	⇑P	P	07 18 21.7	-1.6
NOR				⇑P	pP	07 18 22.1	-4.7
MK31	Makanchi Array	45.03	59d	iP	P	07 18 22.9	-1.2
MK31	Makanchi Array	45.03	59	P	P	07 18 22.5	-1.6
MK31				IAmb	IAmb	07 18 34.3	
	comp=Z,109nm,0.6s						
MKAR	Makanchi Array	45.03	59	P	P	07 18 22.4	-1.7
	comp=Z,38nm,0.6s,baz=277,slow=7.1,SNR=82						
MKAR				ScP	ScP	07 23 55.7	-1.5
	comp=Z,19nm,1.0s,baz=336,slow=3.2,SNR=3.1						
MKAR				LR	LR	07 41 19.3	
	comp=Z,25µm,18.8s,baz=280,slow=42						
MKAR	Makanchi Array	45.03	59	iP	P	07 18 22.3	-1.9
MKAR				pmax	pmax		
	comp=Z,38nm,0.6s						
MKAR	Makanchi Array	45.03	59	P	P	07 18 22.2	-1.9
DHRM	DHARAMSHALA	45.28	80	eP	P	07 18 25.7	-0.8
DHRM				IAmb	IAmb	07 18 40.4	
	comp=Z,316nm,0.4s						
ZAA0	Zalesovo Array	45.35	48	P	P	07 18 24.8	-1.7
ZALV	Zalesovo Beam	45.35	48	P	P	07 18 24.4	-2.1
	comp=Z,140nm,0.5s,baz=276,slow=8.4,SNR=210						
ZALV				S	S	07 25 03.2	-3.7
	comp=Z,8.3nm,0.8s,baz=261,slow=14,SNR=3.9						
ZALV				LR	LR	07 38 12.0	
	comp=Z,48µm,19.4s,baz=281,slow=37						
SACV	Santiago Islan	45.36	251	P	P	07 18 26.8	-0.2
SACV				IAmb	IAmb	07 18 37.0	
	comp=Z,255nm,1.0s						
SACV				IAMs_20	IAMs_20	07 38 49.9	
	comp=Z,36µm,20.0s						
KOND	Kondoa	45.61	158	iP	P	07 18 30.5	+1.4
NRS	Narsarsuaq	45.66	322	P	P	07 18 29.0	+0.2
NRS				pmax	pmax		
	comp=Z,132nm,1.0s						
NRS				MLR	MLR		
	comp=Z,36µm,20.0s						
NRS	Narsarsuaq	45.66	322	P	P	07 18 28.9	+0.2
NRS				IAMs_20	IAMs_20	07 39 12.8	
	comp=Z,36µm,20.0s						
DY2G	Dye2	46.07	329	iP	P	07 18 32.8	+0.6
DY2G				IAmb	IAmb	07 18 34.7	
	comp=Z,649nm,1.6s						
NRIK	Noril'sk	46.35	27	P	P	07 18 34.1	-0.1
	comp=Z,47nm,0.5s,baz=225,slow=2.5,SNR=45						
NRIK				LR	LR	07 40 56.1	
	comp=Z,64µm,20.0s,baz=262,slow=40						
NRIK	Noril'sk	46.35	27c	iP	P	07 18 33.9	-0.2
NRIK				pmax	pmax		
	comp=Z,221nm,1.4s						
NRIK				MLR	MLR		
	comp=Z,60µm,18.0s						
NRIK	Noril'sk	46.35	27	P	P	07 18 33.3	-0.8
NRIK				IAmb	IAmb	07 18 57.8	
	comp=Z,430nm,1.6s						
SMLA	Simla	46.42	81	eP	P	07 18 34.3	-1.0
SMLA				IAmb	IAmb	07 18 41.7	
	comp=Z,153nm,0.9s						
AJM	Ajmer	46.59	88	eP	P	07 18 37.6	+0.9
ZSN	Zaisan	46.59	57	eP	P	07 18 35.1	-1.3
	baz=58						
ZSN				eS	S	07 25 25.8	+0.7
	baz=58						
ZSN	Zaisan	46.59	57	eP	P	07 18 35.1	-1.3
ZSN				eS	S	07 25 25.8	+0.7
IVI	Ivigtut	46.99	322	iP	P	07 18 39.3	+0.1
IVI				IAmb	IAmb	07 18 40.2	
	comp=Z,1µm,2.6s						
IVI	Ivigtut	46.99	322	⇑P	P	07 18 39.0	-0.2
IVI	Ivigtut	46.99	322	P	P	07 18 38.8	-0.4
IVI				IAmb	IAmb	07 18 48.1	
	comp=Z,210nm,1.0s						
KUDL	Kundal	47.24	85	eP	P	07 18 42.8	+1.1
NDI	New Delhi	47.55	84	eP	P	07 18 44.0	-0.1
AYAN	Aya Nagar	47.58	85	eP	P	07 18 43.8	-0.5
DGZ	Jazzator, Alta	47.72	54d	iP	P	07 18 44.5	-0.9
DGZ				pmax	pmax		
	comp=Z,60nm,1.0s						
DGZ				MLR	MLR		
	comp=Z,36µm,17.0s						
SFJD	Kangerlussuaq	47.81	330	P	P	07 18 44.9	-0.6
SFJD				pmax	pmax		
	comp=Z,201nm,1.1s						
SFJD				MLR	MLR		
	comp=Z,44µm,20.0s						
SFJD	Kangerlussuaq	47.81	330	eP	P	07 18 45.3	-0.3
SFJD	Kangerlussuaq	47.81	330	⇑P	P	07 18 45.2	-0.3
SFJD				⇓P	pP	07 18 45.6	-3.6
SFJD	Kangerlussuaq	47.81	330	P	P	07 18 44.9	-0.6
SFJD				IAmb	IAmb	07 18 59.1	
	comp=Z,201nm,1.1s						
SFJD	Kangerlussuaq	47.81	330	IAMs_20	IAMs_20	07 39 23.3	
	comp=Z,44µm,20.0s						
ILULI	Ilulissat	47.98	333	P	P	07 18 46.1	-0.8
ILULI				pmax	pmax		
	comp=Z,199nm,0.8s						
ILULI				MLR	MLR		
	comp=Z,48µm,18.0s						
ILULI	Ilulissat	47.98	333	iP	P	07 18 46.4	-0.4
ILULI				IAmb	IAmb	07 18 47.4	
	comp=Z,1µm,2.2s						
ILULI	Ilulissat	47.98	333	P	P	07 18 46.1	-0.8
ILULI				IAmb	IAmb	07 18 55.3	
	comp=Z,199nm,0.8s						
ILULI				IAMs_20	IAMs_20	07 40 54.8	
	comp=Z,48µm,18.0s						
NUUK	Nuuk	48.40	326	eP	P	07 18 49.2	-0.9
NEEM	North Greenlan	48.60	344	iP	P	07 18 51.1	-0.8
NEEM				IAmb	IAmb	07 18 52.3	
	comp=Z,116nm,1.3s						
NEEM				IVmB_BB		07 18 53.3	
	comp=Z,4µm,6.9s						
NUUG	Nuugaatsiaq	48.72	336	eP	P	07 18 52.2	-0.3
NUUG				IAmb	IAmb	07 19 00.5	
	comp=Z,64nm,0.7s						
WMQ	Urumqi	49.51	61	P	P	07 18 59.6	+0.5
WMQ				pP	sP	07 19 04.1	+0.1
WMQ				sP	pP	07 19 09.9	+7.3
WMQ				ScP	ScP	07 24 15.3	-0.9
WMQ				S	S	07 26 07.9	+1.3
WMQ				pmax	pmax		
	comp=Z,150nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,3µm,4.1s						
WMQ				LR	LR		
	comp=Z,37µm,20.1s						
WMQ				LR	LR		
	comp=Z,40µm,21.1s						
WMQ				LR	LR		
	comp=Z,31µm,21.3s						
KRAR	Krasnoyarsk	49.59	45	⇑iP	P	07 18 59.2	-0.2
UPNV	Upernavik	49.62	338	eP	P	07 18 59.4	0.0
UPNV				IAmb	IAmb	07 19 00.2	
	comp=Z,63nm,0.7s						
POO	Poona	50.19	98	eP	P	07 19 03.6	-1.0
BHPL	Bhopal	50.40	90	eP	P	07 19 05.7	-0.3
BHPL				IAmb	IAmb	07 19 11.1	
	comp=Z,283nm,1.3s						
GOA	Goa	51.95	101	eP	P	07 19 17.1	-0.6
GOA				IAmb	IAmb	07 19 25.3	
	comp=Z,986nm,1.8s						
PYUN	Piuthan	52.31	82	eP	P	07 19 18.8	-1.8
TULEG	Thule	52.62	343	iP	P	07 19 20.7	-1.2
TULEG				IAmb	IAmb	07 19 26.2	
	comp=Z,330nm,1.5s						
TULEG	Thule	52.62	343	⇑P	P	07 19 20.7	-1.2
TULEG				⇑P	P	07 19 20.8	-1.2
TULEG	Thule	52.62	343	P	P	07 19 20.6	-1.2
TULEG				IAmb	IAmb	07 19 31.1	
	comp=Z,511nm,1.7s						
TULEG				IAMs_20	IAMs_20	07 44 21.0	
	comp=Z,40µm,19.0s						
DANN	Dangsing	52.79	81	eP	P	07 19 22.5	-1.7
	comp=Z,310nm,0.7s						
KOLN	Koldanda	52.94	82	eP	P	07 19 23.2	-2.1
	comp=Z,358nm,0.9s						
GKN	Gorkha	53.63	81	eP	P	07 19 28.3	-2.0
MSEY	Mahe Island	53.91	135	P	P	07 19 33.4	+1.3
LSZ	Lusaka	54.14	171	P	P	07 19 34.6	+0.7
LSZ				pmax	pmax		
	comp=Z,54nm,0.9s						
LSZ				MLR	MLR		
	comp=Z,58µm,21.0s						
LSZ	Lusaka	54.14	171	P	P	07 19 34.6	+0.7
DMN	Daman	54.19	81	eP	P	07 19 32.6	-1.9
KKN	Kakani	54.23	81	eP	P	07 19 34.3	-0.4
PKIN	Phulchoki	54.43	81	eP	P	07 19 36.4	+0.2
PKI	Pulchoki	54.44	81	eP	P	07 19 36.3	-0.1
HYB	Hyderabad	54.48	96	iP	P	07 19 34.0	-2.4
	comp=Z,240nm,1.0s						
HYB				ePcP	PcP	07 20 37.5	-2.4
HYB				ePP	PP	07 21 40.0	+1.4
HYB				eS	S	07 27 16.0	+0.6
HYB				eLR	LR		
	comp=Z,50nm,21.0s						
HYB	Hyderabad	54.48	96	eP	P	07 19 34.3	-2.1
HYB				IAmb	IAmb	07 19 42.1	
	comp=Z,196nm,0.9s						
GUN	Gumba	54.64	80	eP	P	07 19 39.4	+1.6
DRLN	Deer Lake	54.80	308	P	P	07 19 37.1	-1.2
DRLN				IAmb	IAmb	07 19 53.1	
	comp=Z,193nm,0.8s						
JIRN	Jiri	55.00	81	eP	P	07 19 42.0	+1.5
EUNU	Eureka	55.03	348	P	P	07 19 38.9	-0.7
MOY	Mondy	55.41	48	eP	P	07 19 42.7	-0.1
MOY				pmax	pmax		
	comp=Z,320nm,2.8s						
KRI	Karoi	55.87	169	iP	P	07 19 48.2	+1.9
KRI	Karoi	55.87	169	iP	P	07 19 48.2	+1.9
ODAN	Odare	56.32	81	eP	P	07 19 50.1	+0.3
TAPN	Taplejung	56.33	80	eP	P	07 19 52.0	+2.1
H10N2	ASCENSION HYDR	56.57	223	P	P	07 19 53.8	+2.8
	baz=30,slow=7.3,SNR=3.5						
H10N1	ASCENSION HYDR	56.58	223	P	P	07 19 54.5	+3.5
	baz=30,slow=7.3,SNR=4.5						
H10N3	ASCENSION HYDR	56.59	223	P	P	07 19 53.3	+2.2
	baz=30,slow=7.3,SNR=3.9						
BOK	Bokaro	56.72	85	eP	P	07 19 53.1	+0.7
TLY	Talaya	56.94	48	eP	P	07 19 52.8	-0.8
TLY				eS	S	07 27 46.9	-0.5
TLY				eSSS	SSS	07 33 48.7	
TLY				pmax	pmax		
	comp=Z,695nm,1.3s						
TLY				MLR	MLR		
	comp=Z,103µm,15.0s						
TLY	Talaya	56.94	48	P	P	07 19 51.7	-1.9
TLY	Talaya	56.94	48	P	P	07 19 53.2	-0.4
TLY				IAmb	IAmb	07 20 02.5	
	comp=Z,317nm,1.3s						
TLY				IAMs_20	IAMs_20	07 45 51.5	
	comp=Z,44µm,18.0s						
IRK	Irkutsk	57.09	47	eP	P	07 19 48.4	-6.3
IRK				e		07 23 29.6	
IRK				pmax	pmax		
	comp=Z,459nm,2.4s						
ZAK	Zakamensk	57.23	49	eP	P	07 19 55.1	-0.6
ZAK				pmax	pmax		
	comp=Z,163nm,1.3s						
TSUM	Tsumeb	57.64	183	P	P	07 19 58.2	-0.7
LSA	Lhasa	57.81	76	P	P	07 19 59.6	-1.0
LSA				S	S	07 27 57.9	-2.3
LSA				LR	LR		
	comp=Z,22µm,21.2s						
LSA				LR	LR		
	comp=Z,14µm,21.0s						
SCHQ	Schefferville	58.10	317	P	P	07 20 01.5	-0.2
	comp=Z,69nm,0.5s,baz=69,slow=6.0,SNR=106						
SCHQ				LR	LR	07 43 27.5	
	comp=Z,39µm,21.6s,baz=72,slow=34						
SCHQ	Schefferville	58.10	317	P	P	07 20 01.3	-0.4
SCHQ				IAmb	IAmb	07 20 09.7	
	comp=Z,121nm,0.6s						
SBV	Sambava	58.70	146	P	P	07 20 08.6	+2.4
GBN	Guysborough	58.80	305	P	P	07 20 06.4	-0.3
GBN				IAmb	IAmb	07 20 50.9	
	comp=Z,311nm,1.4s						
TIXI	Tiksi	59.18	20c	eP	P	07 20 08.0	-0.9
TIXI				pmax	pmax		
	comp=Z,77nm,0.7s						
TIXI				MLR	MLR		
	comp=Z,141µm,17.0s						
TIXI	Tiksi	59.18	20	P	P	07 20 07.7	-1.3
TIXI				IAmb	IAmb	07 20 20.1	
	comp=Z,168nm,1.1s						
MATP	Matopo	59.26	171	iP	P	07 20 09.8	-0.4
MATP	Matopo	59.26	171	iP	P	07 20 09.8	-0.4
RES	Resolute Bay	59.29	344	P	P	07 20 09.1	-0.6

RES				pmax	pmax		
	comp=Z,154nm,1.4s						
RES	**Resolute Bay**	**59.29**	**344**	P	**P**	**07 20 09.1**	**-0.6**
RES				IAmb	IAmb	07 20 38.9	
	comp=Z,154nm,1.4s						
GTA	**Gaotai**	**59.58**	**62**	⇑P	**P**	**07 20 11.0**	**-1.4**
GTA				pP	pP	07 20 15.6	-0.4
GTA				sP	sP	07 20 18.4	+1.0
GTA				S	**S**	**07 28 19.8**	**-2.6**
GTA				sS	sS	07 28 29.8	+1.2
GTA				pmax	pmax		
	comp=Z,13nm,0.8s						
GTA				pmax	pmax		
	comp=Z,770nm,7.6s						
GTA				LR	LR		
	comp=Z,22µm,20.7s						
GTA				LR	LR		
	comp=Z,23µm,22.3s						
GTA				LR	LR		
	comp=Z,24µm,24.7s						
BOD	**Bodaibo**	**59.98**	**38**	*e*P	**P**	**07 20 12.6**	**-2.0**
BOD				pmax	pmax		
	comp=Z,167nm,1.6s						
SONM	**Songino Array**	**60.14**	**51**	P	**P**	**07 20 14.9**	**-1.2**
	comp=Z,55nm,0.9s,baz=284,slow=8.3,SNR=58						
SONM				LR	LR	07 49 08.7	
	comp=Z,28µm,19.6s,baz=304,slow=39						
SONM				PKPPKP	**P'P'df**	**07 49 43.8**	**-3.0**
	comp=Z,1.6nm,1.0s,baz=115,slow=2.1,SNR=4.4						
SONM	**Songino Array**	**60.14**	**51**	P	**P**	**07 20 15.1**	**-1.0**
SONM				pmax	pmax		
	comp=Z,395nm,1.4s						
SONM	**Songino Array**	**60.14**	**51**	P	**P**	**07 20 15.1**	**-1.0**
SHL	**Shillong**	**60.45**	**80**	P	**P**	**07 20 17.0**	**-1.6**
SHL				pmax	pmax		
	comp=Z,196nm,1.2s						
SHL	**Shillong**	**60.45**	**80**	*e*P	**P**	**07 20 17.8**	**-0.9**
SHL	**Shillong**	**60.45**	**80**	P	**P**	**07 20 17.0**	**-1.6**
SHL				IAmb	IAmb	07 20 41.5	
	comp=Z,196nm,1.2s						
ULN	**Ulaanbaatar**	**60.52**	**51**	*de*P	**P**	**07 20 17.7**	**-1.1**
ULN				pmax	pmax		
	comp=Z,82nm,1.3s						
ULN				MLR	MLR		
	comp=Z,29µm,19.0s						
ULN	**Ulaanbaatar**	**60.52**	**51**	P	**P**	**07 20 16.4**	**-2.4**
ULN				P	**P**	**07 20 16.4**	**-2.4**
ULN	**Ulaanbaatar**	**60.52**	**51**	P	**P**	**07 20 16.9**	**-1.9**
ULN				IAmb	IAmb	07 20 27.6	
	comp=Z,108nm,0.9s						
ULN	**Ulaanbaatar**	**60.52**	**51**	IAMs_20	IAMs_20	07 49 05.1	
	comp=Z,35µm,21.0s						
LMN	**Caledonia Moun**	**60.69**	**307**	P	**P**	**07 20 19.2**	**-0.5**
BATG	**Bathurst New B**	**60.83**	**309**	P	**P**	**07 20 19.9**	**-0.7**
BATG				IAmb	IAmb	07 20 30.7	
	comp=Z,271nm,1.3s						
WIN	**Windhoek**	**61.00**	**184**	P	**P**	**07 20 21.8**	**-0.4**
WIN				pmax	pmax		
	comp=Z,144nm,1.3s						
WIN	**Windhoek**	**61.00**	**184**	P	**P**	**07 20 21.8**	**-0.4**
WIN				IAmb	IAmb	07 20 31.2	
	comp=Z,144nm,1.3s						
ITAN	**ITANAGAR**	**61.04**	**77**	*e*P	**P**	**07 20 23.9**	**+1.4**
KAAM	**Kaadhehdhoo**	**61.17**	**115**	P	**P**	**07 20 23.6**	**+0.2**
MSNA	**Messina**	**61.35**	**170**	*i* P	**P**	**07 20 24.0**	**-0.4**
MSNA	**Messina**	**61.35**	**170**	*i* P	**P**	**07 20 24.0**	**-0.4**
MOKO	**MOKOCHONG**	**62.08**	**78**	*e*P	**P**	**07 20 30.0**	**+0.5**
KOHI	**KOHIMA**	**62.08**	**78**	*e*P	**P**	**07 20 29.7**	**+0.1**
PQI	**Presque Isle**	**62.30**	**309**	P	**P**	**07 20 29.8**	**-0.7**
PQI				IAmb	IAmb	07 20 43.1	
	comp=Z,240nm,1.2s						
PQI				IAMs_20	IAMs_20	07 46 57.5	
	comp=Z,29µm,21.0s						
GGN	**Saint George**	**62.30**	**307**	P	**P**	**07 20 30.5**	**0.0**
PALK	**Pallekele**	**62.32**	**104**	P	**P**	**07 20 31.0**	**-0.2**
	comp=Z,126nm,1.1s,baz=49,slow=6.0,SNR=12						
PALK	**Pallekele**	**62.32**	**104**	P	**P**	**07 20 31.0**	**-0.2**
PALK	**Pallekele**	**62.32**	**104**	P	**P**	**07 20 30.0**	**-1.2**
PALK	**Pallekele**	**62.32**	**104**	IAMs_20	IAMs_20	07 49 44.6	
	comp=Z,29µm,19.0s						
CIT	**Chita**	**62.37**	**44**	*e*P	**P**	**07 20 30.2**	**-0.8**
CIT				*e*		07 21 13.4	
CIT				*e*		07 22 47.0	
CIT				pmax	pmax		
	comp=Z,405nm,2.7s						
LKP	**Lekhapani**	**62.56**	**76**	*e*P	**P**	**07 20 31.1**	**-1.5**
MOPA	**Mopani**	**62.70**	**169**	*i* P	**P**	**07 20 36.1**	**+2.8**
MOPA	**Mopani**	**62.70**	**169**	*i* P	**P**	**07 20 36.1**	**+2.8**
G65A	**Princeton**	**62.71**	**307**	P	**P**	**07 20 33.5**	**+0.1**
D62A	**Allapoint, All**	**62.73**	**310**	P	**P**	**07 20 33.8**	**+0.4**
D62A				IAmb	IAmb	07 20 50.6	
	comp=Z,240nm,1.2s						
EMMW	**East Machias**	**62.88**	**307**	P	**P**	**07 20 34.8**	**+0.4**
EMMW				IAMs_20	IAMs_20	07 47 38.0	
	comp=Z,27µm,22.0s						
F64A	**Sherman**	**62.88**	**308**	P	**P**	**07 20 34.4**	**-0.1**
F64A				IAmb	IAmb	07 20 47.3	
	comp=Z,293nm,1.6s						
E62A	**Clayton Lake**	**63.23**	**309**	P	**P**	**07 20 36.5**	**-0.3**
LMQ	**La Malbaie**	**63.27**	**311**	P	**P**	**07 20 37.3**	**+0.3**
LMQ				IAmb	IAmb	07 20 49.6	
	comp=Z,364nm,1.8s						
F63A	**Nahmakanta, Br**	**63.42**	**308**	P	**P**	**07 20 37.7**	**-0.4**
LBTB	**Lobatse**	**63.53**	**175**	P	**P**	**07 20 39.1**	**+0.1**
LBTB				pmax	pmax		
	comp=Z,109nm,0.9s						
LBTB	**Lobatse**	**63.53**	**175**	*i* P	**P**	**07 20 39.8**	**+0.8**
LBTB	**Lobatse**	**63.53**	**175**	*i* P	**P**	**07 20 39.8**	**+0.8**
LBTB	**Lobatse**	**63.53**	**175**	P	**P**	**07 20 39.1**	**+0.1**
LBTB				IAmb	IAmb	07 20 45.6	
	comp=Z,110nm,0.9s						
PKME	**Peaks-Kenny Pk**	**63.75**	**308**	P	**P**	**07 20 41.1**	**+0.9**
	baz=61,SNR=5.5						
PKME				S	**S**	**07 29 14.1**	**-0.5**
	baz=61						
PKME	**Peaks-Kenny Pk**	**63.75**	**308**	P	**P**	**07 20 40.1**	**-0.1**
PKME				IAmb	IAmb	07 20 53.4	
	comp=Z,140nm,1.2s						
PKME				IAMs_20	IAMs_20	07 46 05.0	
	comp=Z,29µm,22.0s						
F62A	**Pittston Farm,**	**63.85**	**309**	P	**P**	**07 20 40.6**	**-0.3**
LZH	**Lanzhou**	**63.97**	**64**	⇓P	**P**	**07 20 41.4**	**-0.7**
LZH				pP	pP	07 20 45.9	+0.2
LZH				sP	sP	07 20 48.6	+1.5
LZH				S	**S**	**07 29 14.3**	**-3.8**
LZH				sS	sS	07 29 29.4	+5.0
LZH				SS	**SS**	**07 33 28.9**	**+2.7**
LZH				pmax	pmax		
	comp=Z,31nm,1.3s						
LZH				pmax	pmax		
	comp=Z,1µm,4.6s						
LZH				LR	LR		
	comp=Z,26µm,18.1s						
LZH				LR	LR		
	comp=Z,27µm,19.4s						
LZH				LR	LR		
	comp=Z,22µm,19.7s						
WVL	**Waterville**	**64.32**	**308**	P	**P**	**07 20 43.9**	**-0.1**
WVL				IAMs_20	IAMs_20	07 46 35.2	
	comp=Z,30µm,22.0s						
G62A	**West of Eustis**	**64.53**	**308**	P	**P**	**07 20 46.3**	**+0.9**
G62A				IAmb	IAmb	07 20 47.9	
	comp=Z,315nm,1.8s						
YAK	**Yakutsk**	**64.67**	**30**	*e*P	**P**	**07 20 49.5**	**+3.5**
YAK				*e**PP	**sP**	**07 20 52.4**	**+1.4**
YAK				*e*		07 21 14.1	
YAK				*e*		07 23 11.3	
YAK				*e*S	**S**	**07 29 27.6**	**+2.0**
YAK				pmax	pmax		
	comp=Z,123nm,0.9s						
YAK				pmax	pmax		
	comp=E,54nm,1.3s						
YAK				pmax	pmax		
	comp=N,63nm,1.6s						
YAK				pmax	pmax		
	comp=E,195nm,1.8s						
YAK				pmax	pmax		
	comp=Z,1µm,3.5s						
YAK				pmax	pmax		
	comp=N,3µm,4.4s						
YAK				smax	smax		
	comp=N,572nm,3.0s						
YAK				MLR	MLR		
	comp=Z,44µm,22.0s						
YAK				MLR	MLR		
	comp=N,29µm,18.0s						
YAK				MLR	MLR		
	comp=E,18µm,20.0s						
YAK	**Yakutsk**	**64.67**	**30**	P	**P**	**07 20 46.1**	**+0.2**
YAK				IAMs_20	IAMs_20	07 51 23.8	
	comp=Z,41µm,22.0s						
VOI	**Vohitsoka**	**65.10**	**153**	P	**P**	**07 20 50.1**	**+0.8**
VOI				IAmb	IAmb	07 20 57.0	
	comp=Z,243nm,1.2s						
VOI				IAMs_20	IAMs_20	07 51 19.5	
	comp=Z,22µm,20.0s						
VOI	**Vohitsoka**	**65.10**	**153**	P	**P**	**07 20 50.8**	**+1.5**
H62A	**Milan**	**65.24**	**308**	P	**P**	**07 20 49.3**	**-0.8**
H62A				IAmb	IAmb	07 20 59.8	
	comp=Z,189nm,1.6s						
MOQ	**Mont Orford**	**65.53**	**309**	P	**P**	**07 20 52.2**	**+0.2**
I62A	**Tamworth**	**65.71**	**308**	P	**P**	**07 20 52.9**	**-0.1**
BTO	**Baotou**	**65.87**	**57**	*e*P	**P**	**07 20 51.6**	**-2.7**
BTO				S	**S**	**07 29 38.3**	**-2.9**
BTO				LR	LR		
	comp=Z,113µm,14.9s						
BTO				LR	LR		
	comp=Z,97µm,16.1s						
LBNH	**Lisbon**	**65.89**	**308**	P	**P**	**07 20 53.2**	**-1.0**
LBNH				pmax	pmax		
	comp=Z,102nm,1.1s						
LBNH				MLR	MLR		
	comp=Z,29µm,21.0s						
LBNH	**Lisbon**	**65.89**	**308**	P	**P**	**07 20 55.4**	**+1.2**
	baz=59,SNR=5.3						
LBNH				S	**S**	**07 29 45.2**	**+4.1**
	baz=59						
LBNH	**Lisbon**	**65.89**	**308**	P	**P**	**07 20 53.2**	**-1.0**
LBNH				IAmb	IAmb	07 21 13.1	
	comp=Z,102nm,1.1s						
LBNH				IAMs_20	IAMs_20	07 49 18.5	
	comp=Z,29µm,21.0s						
FFD	**Franklin Falls**	**66.11**	**307**	P	**P**	**07 20 55.3**	**-0.3**
FFD				IAmb	IAmb	07 21 25.1	
	comp=Z,297nm,1.9s						
FFD				IAMs_20	IAMs_20	07 47 38.6	
	comp=Z,26µm,21.0s						
MNTQ	**Montreal, Queb**	**66.26**	**310**	P	**P**	**07 20 57.3**	**+0.7**
VT1	**Waterbury**	**66.35**	**309**	IAMs_20	IAMs_20	07 49 21.8	
	comp=Z,22µm,21.0s						
HNH	**Hanover**	**66.39**	**308**	P	**P**	**07 20 58.5**	**+1.1**
HNH				IAmb	IAmb	07 21 00.1	
	comp=Z,205nm,1.6s						
HNH				IAMs_20	IAMs_20	07 49 35.8	
	comp=Z,32µm,20.0s						
L64A	**Middleborough**	**66.40**	**306**	P	**P**	**07 20 57.4**	**-0.1**
BCX	**Boston College**	**66.40**	**306**	P	**P**	**07 20 56.8**	**-0.7**
BCX				IAmb	IAmb	07 21 10.8	
	comp=Z,268nm,1.4s						
BCX				IAMs_20	IAMs_20	07 49 43.3	
	comp=Z,25µm,21.0s						
TRQ	**Mont Tremblant**	**66.44**	**311**	P	**P**	**07 20 58.0**	**+0.2**
TRQ				IAmb	IAmb	07 21 10.7	
	comp=Z,156nm,1.3s						
M65A	**Busby, Falmout**	**66.47**	**305**	S	**S**	**07 29 51.2**	**+3.1**
	baz=58						
M65A	**Busby, Falmout**	**66.47**	**305**	IAMs_20	IAMs_20	07 49 27.1	
	comp=Z,23µm,21.0s						
WES	**Weston**	**66.47**	**306**	P	**P**	**07 20 57.4**	**-0.5**
WES				pmax	pmax		
	comp=Z,230nm,1.3s						
WES				MLR	MLR		
	comp=Z,28µm,21.0s						
WES	**Weston**	**66.47**	**306**	P	**P**	**07 20 57.4**	**-0.5**
WES				IAmb	IAmb	07 21 10.3	
	comp=Z,230nm,1.3s						
WES				IAMs_20	IAMs_20	07 49 45.1	
	comp=Z,29µm,21.0s						
HRV	**Adam Dziewonsk**	**66.56**	**306**	P	**P**	**07 20 58.5**	**0.0**
HRV				pmax	pmax		
	comp=Z,204nm,1.5s						
HRV				MLR	MLR		
	comp=Z,25µm,21.0s						
HRV	**Adam Dziewonsk**	**66.56**	**306**	P	**P**	**07 20 59.7**	**+1.2**
	baz=58						
HRV				S	**S**	**07 29 52.5**	**+3.3**
	baz=58						
HRV	**Adam Dziewonsk**	**66.56**	**306**	P	**P**	**07 20 58.5**	**0.0**
HRV				IAmb	IAmb	07 21 11.9	
	comp=Z,204nm,1.4s						
HRV	**Adam Dziewonsk**	**66.56**	**306**	IAMs_20	IAMs_20	07 49 48.4	
	comp=Z,25µm,21.0s						
CD2	**Chengdu**	**66.58**	**68**	P	**P**	**07 20 58.0**	**-0.9**
CD2				PP	**PP**	**07 23 27.3**	**+2.0**
CD2				S	**S**	**07 29 47.9**	**-2.1**
CD2				SKS	**SKSac**	**07 30 53.3**	**-2.4**
CD2				SS	**SS**	**07 34 05.6**	**-1.2**
CD2				pmax	pmax		
	comp=Z,120nm,1.2s						
CD2				pmax	pmax		
	comp=Z,2µm,7.6s						
CD2				LR	LR		
	comp=Z,33µm,26.4s						
CD2				LR	LR		
	comp=Z,26µm,19.8s						
CD2				LR	LR		
	comp=Z,32µm,20.0s						
FRNY	**Flat Rock**	**66.59**	**309**	P	**P**	**07 20 58.4**	**-0.3**
FRNY				IAmb	IAmb	07 21 00.6	
	comp=Z,226nm,1.8s						
J61A	**Chester**	**66.74**	**308**	P	**P**	**07 20 59.8**	**+0.1**
J61A				IAmb	IAmb	07 21 18.7	
	comp=Z,130nm,1.4s						
HHC	**Hu-ho-hao-te**	**66.75**	**56**	*e*P	**P**	**07 20 58.9**	**-1.0**
HHC				pP	pP	07 21 03.4	-0.1
HHC				sP	sP	07 21 06.1	+1.2
HHC				S	**S**	**07 29 47.0**	**-4.9**
HHC				ScS	**SKSac**	**07 30 51.4**	**-5.4**
HHC				SS	**SS**	**07 34 05.0**	**-4.0**
HHC				pmax	pmax		
	comp=Z,83nm,1.2s						
HHC				pmax	pmax		
	comp=Z,2µm,5.4s						
HHC				LR	LR		
	comp=Z,32µm,14.8s						
HHC				LR	LR		
	comp=Z,49µm,14.4s						
HHC				LR	LR		
	comp=Z,31µm,15.6s						
BRYW	**Bryant College**	**66.85**	**306**	P	**P**	**07 21 00.7**	**+0.3**
BRYW				IAMs_20	IAMs_20	07 50 08.2	
	comp=Z,22µm,20.0s						
K62A	**Royalston**	**66.90**	**307**	P	**P**	**07 20 59.5**	**-1.2**
A36M	**Sachs Harbour**	**67.04**	**349**	P	**P**	**07 21 01.2**	**+0.1**
	baz=28,SNR=60						
A36M				S	**S**	**07 29 56.4**	**+2.2**
	baz=28						
A36M	**Sachs Harbour**	**67.04**	**349**	P	**P**	**07 21 00.9**	**-0.2**
A36M				IAmb	IAmb	07 21 35.7	
	comp=Z,171nm,0.9s						
BOSA	**Boshof**	**67.08**	**175**	P	**P**	**07 21 01.6**	**-0.4**
	comp=Z,74nm,1.1s,baz=351,slow=6.9,SNR=33						
BOSA				LR	LR	07 52 25.3	
	comp=Z,82µm,19.8s,baz=360,slow=38						
BOSA	**Boshof**	**67.08**	**175**	P	**P**	**07 21 02.1**	**+0.1**
BOSA				pmax	pmax		
	comp=Z,136nm,1.2s						
BOSA	**Boshof**	**67.08**	**175**	*i* P	**P**	**07 21 02.5**	**+0.5**
BOSA	**Boshof**	**67.08**	**175**	*i* P	**P**	**07 21 02.5**	**+0.5**
BOSA	**Boshof**	**67.08**	**175**	P	**P**	**07 21 02.1**	**+0.1**
BOSA				IAmb	IAmb	07 21 08.8	
	comp=Z,136nm,1.1s						
VLDQ	**Val d'Or**	**67.11**	**314**	P	**P**	**07 21 02.8**	**+0.9**
VLDQ				IAmb	IAmb	07 21 11.2	
	comp=Z,88nm,0.8s						
HIA	**Hailar**	**67.16**	**45**	*d i*P	**P**	**07 21 02.1**	**-0.2**
HIA				pmax	pmax		
	comp=Z,91nm,1.0s						
HIA				MLR	MLR		
	comp=Z,40µm,16.0s						
HIA	**Hailar**	**67.16**	**45**	P	**P**	**07 21 02.1**	**-0.2**
HIA	**Hailar**	**67.16**	**45**	IAMs_20	IAMs_20	07 52 19.2	
	comp=Z,32µm,18.0s						
QUA2	**Belchertown**	**67.18**	**306**	P	**P**	**07 21 02.1**	**-0.3**
QUA2				IAMs_20	IAMs_20	07 50 17.8	
	comp=Z,27µm,21.0s						
BBSR	**BB Station**	**67.25**	**294**	P	**P**	**07 21 02.7**	**-0.4**
BBSR				IAmb	IAmb	07 21 09.8	
	comp=Z,186nm,1.3s						
L61B	**Northampton**	**67.29**	**307**	P	**P**	**07 21 04.6**	**+1.4**
	baz=58						
L61B				S	**S**	**07 30 00.9**	**+2.8**
	baz=58						
LONY	**Lake Ozonia**	**67.31**	**310**	P	**P**	**07 21 04.3**	**+1.0**
	baz=58,SNR=13						
LONY				S	**S**	**07 29 59.4**	**+1.1**
	baz=58						
LONY	**Lake Ozonia**	**67.31**	**310**	P	**P**	**07 21 03.6**	**+0.3**
LONY				IAmb	IAmb	07 21 16.4	
	comp=Z,316nm,1.6s						
LONY				IAMs_20	IAMs_20	07 49 51.0	
	comp=Z,21µm,20.0s						
UCCT	**U. Connecticut**	**67.35**	**306**	P	**P**	**07 21 02.6**	**-1.0**
UCCT				IAmb	IAmb	07 21 17.4	
	comp=Z,355nm,1.7s						
ACCN	**Adirondack Com**	**67.41**	**308**	P	**P**	**07 21 04.0**	**+0.1**
ACCN				IAmb	IAmb	07 21 34.1	
	comp=Z,106nm,1.1s						
NCB	**Newcomb**	**67.44**	**309**	P	**P**	**07 21 04.4**	**+0.3**
NCB				IAmb	IAmb	07 21 17.8	
	comp=Z,207nm,1.8s						
M63A	**Gales Ferry**	**67.45**	**306**	P	**P**	**07 21 05.5**	**+1.4**
M63A				IAmb	IAmb	07 21 17.8	
	comp=Z,304nm,1.5s						
TRY	**Troy**	**67.76**	**307**	P	**P**	**07 21 07.2**	**+1.1**
TRY				IAMs_20	IAMs_20	07 50 28.1	
	comp=Z,28µm,21.0s						
J59A	**Piesco**	**67.88**	**308**	P	**P**	**07 21 07.6**	**+0.6**
J59A				IAmb	IAmb	07 21 20.6	
	comp=Z,182nm,1.5s						
YLE	**Yale**	**68.06**	**306**	P	**P**	**07 21 08.2**	**+0.1**
YLE				IAmb	IAmb	07 21 41.0	
	comp=Z,128nm,1.1s						
YLE				IAMs_20	IAMs_20	07 48 37.2	
	comp=Z,29µm,22.0s						
RER	**Riviere de l'E**	**68.06**	**145**	P	**P**	**07 21 09.8**	**+1.5**
RER	**Riviere de l'E**	**68.06**	**145**	P	**P**	**07 21 09.3**	**+1.0**
RER				IAMs_20	IAMs_20	07 51 21.9	
	comp=Z,26µm,20.0s						
KSCT	**Kent School, K**	**68.18**	**306**	P	**P**	**07 21 08.7**	**-0.1**
DGPR	**DIGLIPUR**	**68.19**	**90**	*e*P	**P**	**07 21 09.6**	**+0.4**
DGPR				IAmb	IAmb	07 21 15.2	
	comp=Z,1µm,1.8s						
WSPT	**Westport, CT**	**68.39**	**306**	IAMs_20	IAMs_20	07 51 03.8	
	comp=Z,22µm,20.0s						
J58A	**Remsen**	**68.41**	**309**	P	**P**	**07 21 10.9**	**+0.6**
NBPV	**Pedro Velho**	**68.41**	**242**	*e*P	**P**	**07 21 11.9**	**+1.3**
ZEA	**Zeya**	**68.48**	**38**	*e*P	**P**	**07 21 10.2**	**-0.3**
ZEA				*e*S	**S**	**07 30 14.4**	**+2.4**
ZEA				*e*		07 37 37.3	
ZEA				pmax	pmax		
	comp=E,30nm,1.7s						
ZEA				pmax	pmax		
	comp=Z,40nm,1.4s						
ZEA				smax	smax		
	comp=E,900nm,9.8s						
ZEA				smax	smax		
	comp=N,2µm,14.4s						
ZEA				MLR	MLR		
	comp=E,12µm,15.0s						
ZEA				MLR	MLR		
	comp=N,19µm,13.0s						
PLVO	**Plevna**	**68.57**	**311**	P	**P**	**07 21 12.0**	**+0.8**
XAN	**Xi'an**	**68.59**	**63**	P	**P**	**07 21 10.5**	**-1.1**
XAN				pP	pP	07 21 14.3	-0.9
XAN				sP	sP	07 21 17.0	+0.4
XAN				S	**S**	**07 30 14.6**	**+0.5**
XAN				sS	sS	07 30 21.0	+0.6
XAN				ScS	**SKiKP**	**07 31 05.5**	**+0.9**
XAN				SS	**SS**	**07 34 43.8**	**+6.1**
XAN				pmax	pmax		
	comp=N,52nm,1.2s						
XAN				pmax	pmax		
	comp=N,750nm,4.3s						
XAN				LR	LR		
	comp=N,16µm,19.2s						
XAN				LR	LR		
	comp=N,26µm,16.8s						
XAN				LR	LR		
	comp=N,19µm,17.4s						
J57A	**Williamstown**	**68.82**	**309**	P	**P**	**07 21 12.5**	**-0.3**
J57A				IAmb	IAmb	07 21 26.1	
	comp=Z,190nm,1.4s						
FCC	**Fort Churchill**	**68.83**	**329**	P	**P**	**07 21 12.7**	**+0.2**
FCC				pmax	pmax		
	comp=Z,111nm,1.1s						
FCC	**Fort Churchill**	**68.83**	**329**	P	**P**	**07 21 12.7**	**+0.2**
FCC				IAmb	IAmb	07 21 22.7	
	comp=Z,111nm,1.1s						
PAL	**Palisades**	**68.84**	**306**	P	**P**	**07 21 12.5**	**-0.4**
PAL				pmax	pmax		
	comp=Z,246nm,1.5s						
PAL				MLR	MLR		
	comp=Z,21µm,20.0s						
PAL	**Palisades**	**68.84**	**306**	P	**P**	**07 21 14.0**	**+1.1**
	baz=57						
PAL				S	**S**	**07 30 18.9**	**+2.2**
	baz=57						
PAL	**Palisades**	**68.84**	**306**	P	**P**	**07 21 12.5**	**-0.4**
PAL				IAmb	IAmb	07 21 27.4	
	comp=Z,246nm,1.5s						
PAL				IAMs_20	IAMs_20	07 51 16.9	
	comp=Z,21µm,20.0s						
L59A	**Walton**	**68.91**	**308**	P	**P**	**07 21 14.0**	**+0.6**
PBA	**Port Blair**	**68.95**	**92**	*e*P	**P**	**07 21 13.2**	**-0.8**
PBA	**Port Blair**	**68.95**	**92**	P	**P**	**07 21 14.7**	**+0.8**
	SNR=5.9						
KMI	**Kunming**	**68.96**	**74**	⇓P	**P**	**07 21 13.1**	**-1.1**
KMI				pP	pP	07 21 17.9	0.0
KMI				sP	sP	07 21 19.6	+0.3
KMI				PcP	**PcP**	**07 21 41.3**	**+2.8**
KMI				PP	**PP**	**07 23 44.3**	**-2.0**
KMI				SS	SS	07 34 42.8	-1.4
KMI				pmax	pmax		
	comp=Z,19nm,1.1s						
KMI				pmax	pmax		
	comp=Z,2µm,8.2s						
KMI				LR	LR		
	comp=Z,17µm,27.4s						
KMI				LR	LR		
	comp=Z,15µm,28.7s						
KMI				LR	LR		
	comp=Z,21µm,26.1s						
TRNY	**Table Rock, Ra**	**68.97**	**306**	P	**P**	**07 21 13.2**	**-0.6**
TRNY				IAmb	IAmb	07 21 44.8	
	comp=Z,203nm,1.6s						
NBCL	**Cascavel-CE**	**68.99**	**246**	*e*P	**P**	**07 21 15.7**	**+1.5**
TIY	**Taiyuan**	**68.99**	**58**	⇑P	**P**	**07 21 13.3**	**-0.8**
TIY				S	**S**	**07 30 14.9**	**-3.9**
TIY				ScS	**SKiKP**	**07 31 07.4**	**+2.3**
TIY				SS	**SS**	**07 34 47.1**	**+3.3**
TIY				pmax	pmax		
	comp=Z,34nm,0.7s						
TIY				pmax	pmax		
	comp=Z,2µm,4.2s						
TIY				LR	LR		
	comp=Z,18µm,13.1s						
TIY				LR	LR		
	comp=Z,11µm,13.0s						
TIY				LR	LR		
	comp=Z,17µm,23.5s						
CPNY	**Central Park**	**68.99**	**306**	P	**P**	**07 21 14.2**	**+0.3**
CPNY				IAmb	IAmb	07 21 16.3	
	comp=Z,182nm,1.4s						
PECO	**Prince Edward**	**69.13**	**310**	P	**P**	**07 21 14.8**	**+0.1**
PECO				IAmb	IAmb	07 21 28.1	
	comp=Z,249nm,1.6s						
DELO	**Deloro Mine**	**69.18**	**311**	P	**P**	**07 21 14.8**	**-0.2**
NBPA	**Parau_RN**	**69.21**	**244**	*e*P	**P**	**07 21 17.0**	**+1.4**
ODNJ	**Ogdensburg**	**69.24**	**306**	P	**P**	**07 21 15.1**	**-0.4**
ODNJ				IAmb	IAmb	07 21 28.7	
	comp=Z,260nm,1.6s						
J56A	**Wolcott**	**69.42**	**309**	P	**P**	**07 21 16.7**	**+0.3**
J56A				IAmb	IAmb	07 21 29.9	
	comp=Z,272nm,1.4s						
BINY	**Binghamton**	**69.48**	**308**	P	**P**	**07 21 18.1**	**+1.1**
	baz=56,SNR=10						
BINY				S	**S**	**07 30 26.5**	**+2.2**
	baz=56						
BINY	**Binghamton**	**69.48**	**308**	P	**P**	**07 21 17.2**	**+0.3**
BINY				IAmb	IAmb	07 21 30.4	
	comp=Z,322nm,1.7s						
BINY				IAMs_20	IAMs_20	07 49 41.8	
	comp=Z,26µm,21.0s						
K57A	**Scipio Center**	**69.51**	**309**	P	**P**	**07 21 17.9**	**+0.7**
CHTO	**Chiang Mai**	**69.61**	**82**	P	**P**	**07 21 15.7**	**-2.4**

CHTO				pmax	pmax		
	comp=Z,144nm,1.3s						
CHTO				MLR	MLR		
	comp=Z,8µm,21.0s						
CHTO	**Chiang Mai**	**69.61**	**82**	P	**P**	**07 21 18.0**	**0.0**
CHTO				P	**P**	**07 21 18.0**	**0.0**
CHTO				P	**P**	**07 21 18.0**	**0.0**
CHTO	**Chiang Mai**	**69.61**	**82**	P	**P**	**07 21 15.7**	**-2.4**
CHTO				IAmb	IAmb	07 22 00.4	
	comp=Z,144nm,1.3s						
CHTO	**Chiang Mai**	**69.61**	**82**	P	**P**	**07 21 16.6**	**-1.5**
NBMO	**Morrinhos-CE**	**69.62**	**248**	*e*P	**P**	**07 21 19.7**	**+1.6**
KSPA	**Keystone Colle**	**69.71**	**307**	P	**P**	**07 21 18.3**	**0.0**
KSPA				IAmb	IAmb	07 21 31.8	
	comp=Z,192nm,1.4s						
CMAR	**Chiang Mai Arr**	**69.81**	**82**	P	**P**	**07 21 17.6**	**-1.7**
	comp=Z,9.6nm,0.7s,baz=302,slow=7.8,SNR=31						
CMAR				PKPPKP		07 49 28.8	
	comp=Z,1.0nm,0.4s,baz=138,slow=1.9,SNR=12						
NBRF	**Rio Formoso -**	**69.92**	**240**	*e*P	**P**	**07 21 21.4**	**+1.5**
SADO	**Sadowa**	**69.93**	**312**	P	**P**	**07 21 19.8**	**+0.1**
SADO				IAmb	IAmb	07 21 32.9	
	comp=Z,310nm,1.4s						
LUPA	**Lehigh Univers**	**69.99**	**306**	P	**P**	**07 21 21.2**	**+1.1**
LUPA				IAmb	IAmb	07 21 37.5	
	comp=Z,123nm,1.2s						
J55A	**Hilton**	**70.00**	**310**	P	**P**	**07 21 20.5**	**+0.5**
J55A				IAmb	IAmb	07 21 33.4	
	comp=Z,245nm,1.4s						
N59A	**State Game Lan**	**70.07**	**307**	P	**P**	**07 21 21.7**	**+1.1**
	baz=56,SNR=30						
N59A				S	**S**	**07 30 33.9**	**+2.7**
	baz=56						
N59A	**State Game Lan**	**70.07**	**307**	P	**P**	**07 21 21.6**	**+1.1**
N59A				IAmb	IAmb	07 21 29.7	
	comp=Z,121nm,0.9s						
N59A				IAMs_20	IAMs_20	07 54 35.2	
	comp=Z,21µm,20.0s						
BJI	**Beijing**	**70.14**	**54**	P	**P**	**07 21 19.3**	**-1.7**
BJI				S	**S**	**07 30 27.8**	**-4.2**
BJI				SS	**SS**	**07 34 59.8**	**-1.3**
BJI				pmax	pmax		
	comp=Z,34nm,2.2s						
BJI				pmax	pmax		
	comp=Z,780nm,7.2s						
BJI				LR	LR		
	comp=Z,38µm,14.5s						
BJI				LR	LR		
	comp=Z,31µm,15.4s						
BJI				LR	LR		
	comp=Z,36µm,20.8s						
BJT	**Baijiatuau**	**70.15**	**54**	P	**P**	**07 21 20.7**	**-0.3**
BJT				pmax	pmax		
	comp=Z,309nm,1.8s						
BJT				MLR	MLR		
	comp=Z,29µm,21.0s						
BJT	**Baijiatuau**	**70.15**	**54**	P	**P**	**07 21 20.7**	**-0.3**
BJT				IAmb	IAmb	07 21 32.1	
	comp=Z,308nm,1.8s						
BJT	**Baijiatuau**	**70.15**	**54**	IAMs_20	IAMs_20	07 55 11.2	
	comp=Z,29µm,21.0s						
NBLV	**Livramento - P**	**70.21**	**243**	*e*P	**P**	**07 21 22.5**	**+0.7**
A21K	**Barrow**	**70.29**	**359**	P	**P**	**07 21 21.9**	**+0.6**
	baz=2.3,SNR=13						
A21K				S	**S**	**07 30 31.7**	**-1.0**
	baz=2.3						
A21K	**Barrow**	**70.29**	**359**	P	**P**	**07 21 21.3**	**0.0**
A21K				IAMs_20	IAMs_20	07 52 15.8	
	comp=Z,32µm,22.0s						
MMNY	**Mt. Morris Dam**	**70.36**	**309**	P	**P**	**07 21 22.7**	**+0.4**
MMNY				IAmb	IAmb	07 21 35.6	
	comp=Z,348nm,1.7s						
MEDO	**Medina**	**70.44**	**310**	P	**P**	**07 21 22.4**	**-0.4**
MEDO				IAmb	IAmb	07 21 34.9	
	comp=Z,310nm,1.4s						
BILL	**Bilibino**	**70.53**	**13**	*de*P	**P**	**07 21 22.0**	**-0.9**
BILL				*e*		07 21 41.2	
BILL				*e*		07 24 01.5	
BILL				*e*PPP	PPP	07 25 42.8	
BILL				*i* S	**S**	**07 30 35.0**	**-0.7**
BILL				*i* SS	**SS**	**07 35 10.1**	**+4.3**
BILL				pmax	pmax		
	comp=Z,134nm,1.3s						
BILL	**Bilibino**	**70.53**	**13**	P	**P**	**07 21 21.4**	**-1.5**
BILL				IAmb	IAmb	07 21 33.7	
	comp=Z,178nm,1.0s						
BILL				IAMs_20	IAMs_20	07 56 54.1	
	comp=Z,18µm,19.0s						
P60A	**Greenville**	**70.60**	**306**	P	**P**	**07 21 24.6**	**+0.8**
	baz=56,SNR=7.9						
P60A				S	**S**	**07 30 39.4**	**+2.0**
	baz=56						
P60A	**Greenville**	**70.60**	**306**	IAMs_20	IAMs_20	07 49 49.5	
	comp=Z,25µm,22.0s						
SUR	**Sutherland**	**70.69**	**180**	P	**P**	**07 21 27.3**	**+2.9**
SUR	**Sutherland**	**70.69**	**180**	P	**P**	**07 21 24.9**	**+0.4**
SUR				IAmb	IAmb	07 21 33.8	
	comp=Z,192nm,1.4s						
NBPB	**Pedra_Branca-C**	**70.82**	**246**	*e*P	**P**	**07 21 26.6**	**+1.2**
Q61A	**Milford**	**70.93**	**305**	S	**S**	**07 30 45.2**	**+3.9**
	baz=55						
MVL	**Millersville**	**70.95**	**306**	P	**P**	**07 21 26.0**	**+0.1**
MVL				IAmb	IAmb	07 21 38.4	
	comp=Z,243nm,1.6s						
WVNY	**West Valley, N**	**70.97**	**309**	P	**P**	**07 21 26.7**	**+0.6**
WVNY				IAmb	IAmb	07 21 34.9	
	comp=Z,121nm,0.9s						
ENH	**Enshi**	**71.06**	**66**	P	**P**	**07 21 25.6**	**-1.3**
GYA	**Guiyang**	**71.15**	**71**	⇑*i*P	**P**	**07 21 27.0**	**-0.5**
GYA				pP	pP	07 21 31.3	+0.1
GYA				S	**S**	**07 30 43.3**	**-1.1**
GYA				pmax	pmax		
	comp=Z,21nm,1.2s						
GYA				pmax	pmax		
	comp=Z,2µm,4.1s						
GYA				LR	LR		
	comp=Z,9µm,19.8s						
GYA				LR	LR		
	comp=Z,19µm,24.0s						
GYA				LR	LR		
	comp=Z,27µm,26.8s						
NBPS	**Pedro II - PI**	**71.38**	**248**	*e*P	**P**	**07 21 29.7**	**+0.8**
NBAN	**Anadia - AL**	**71.42**	**241**	*e*P	**P**	**07 21 30.3**	**+1.3**
NBMA	**Muriti-CE**	**71.51**	**244**	*e*P	**P**	**07 21 30.9**	**+1.3**
SSPA	**Standing Stone**	**71.55**	**307**	P	**P**	**07 21 30.5**	**+0.9**
	baz=55						
SSPA				S	**S**	**07 30 50.3**	**+1.9**
	baz=55						
SSPA	**Standing Stone**	**71.55**	**307**	P	**P**	**07 21 30.2**	**+0.6**
SSPA				IAmb	IAmb	07 21 44.2	
	comp=Z,283nm,1.4s						
SSPA	**Standing Stone**	**71.55**	**307**	IAMs_20	IAMs_20	07 52 32.4	
	comp=Z,19µm,20.0s						
INK	**Inuvik**	**71.58**	**350**	P	**P**	**07 21 28.3**	**-0.9**
	comp=Z,5.7nm,0.5s,baz=17,slow=8.5,SNR=52						
INK	**Inuvik**	**71.58**	**350**	P	**P**	**07 21 28.5**	**-0.7**
	baz=21,SNR=18						
INK				S	**S**	**07 30 46.3**	**-1.4**
	baz=21						
INK	**Inuvik**	**71.58**	**350**	P	**P**	**07 21 27.8**	**-1.4**
ERPA	**Erie**	**71.97**	**310**	P	**P**	**07 21 32.9**	**+0.8**
	baz=54,SNR=25						
ERPA				S	**S**	**07 30 54.3**	**+1.1**
	baz=54						
SLVN	**Son La**	**71.98**	**77**	P	**P**	**07 21 31.8**	**-0.8**
M54A	**Oil Creek Stat**	**72.13**	**309**	P	**P**	**07 21 34.1**	**+1.0**
	baz=54,SNR=22						
M54A				S	**S**	**07 30 57.5**	**+2.4**
	baz=54						
M54A	**Oil Creek Stat**	**72.13**	**309**	IAMs_20	IAMs_20	07 53 40.0	
	comp=Z,19µm,19.0s						
O56A	**Blue Knob Stat**	**72.18**	**307**	P	**P**	**07 21 34.3**	**+0.9**
	baz=54,SNR=15						
O56A				S	**S**	**07 30 56.4**	**+0.5**
	baz=54						
ROSB	**Rosrio**	**72.34**	**251**	*e*P	**P**	**07 21 35.7**	**+1.1**
CBN	**Corbin Frederi**	**72.63**	**305**	P	**P**	**07 21 36.9**	**+0.8**
	baz=54,SNR=13						
CBN				S	**S**	**07 31 03.3**	**+2.4**
	baz=54						
CBN	**Corbin Frederi**	**72.63**	**305**	P	**P**	**07 21 36.5**	**+0.4**
CBN				IAmb	IAmb	07 21 44.8	
	comp=Z,150nm,0.8s						
CBN				IAMs_20	IAMs_20	07 53 33.7	
	comp=Z,24µm,20.0s						
N54A	**Moraine State**	**72.65**	**309**	P	**P**	**07 21 37.2**	**+1.0**
	baz=54,SNR=27						
N54A				S	**S**	**07 31 02.3**	**+1.2**
	baz=54						
N54A	**Moraine State**	**72.65**	**309**	IAMs_20	IAMs_20	07 54 53.8	
	comp=Z,26µm,20.0s						
TOLK	**Toolik Lake Re**	**72.75**	**356**	P	**P**	**07 21 36.8**	**+0.5**
	baz=8.0,SNR=17						
TOLK	**Toolik Lake Re**	**72.75**	**356**	P	**P**	**07 21 36.5**	**+0.2**
TOLK				IAmb	IAmb	07 21 55.7	
	comp=Z,196nm,1.2s						
TOLK				IAMs_20	IAMs_20	07 53 59.8	
	comp=Z,23µm,22.0s						
M53A	**WI Miller and**	**72.79**	**309**	P	**P**	**07 21 37.6**	**+0.7**
	baz=53,SNR=20						
M53A				S	**S**	**07 31 04.1**	**+1.5**
	baz=53						
M53A	**WI Miller and**	**72.79**	**309**	IAMs_20	IAMs_20	07 52 13.3	
	comp=Z,30µm,22.0s						
YKA	**Yellowknife Ar**	**72.93**	**340**	P	**P**	**07 21 36.9**	**-0.5**
	comp=Z,16nm,0.9s,baz=47,slow=6.0,SNR=24						
YKA				LR	LR	07 54 49.3	
	comp=Z,19µm,20.1s,baz=0.0,slow=37						
YKA	**Yellowknife Ar**	**72.93**	**340**	P	**P**	**07 21 36.6**	**-0.8**
TIA	**Tai'an**	**72.94**	**57**	⇓P	**P**	**07 21 36.8**	**-1.2**
TIA				S	**S**	**07 31 11.8**	**+7.3**
TIA				SKS	**SKSac**	**07 31 39.0**	**-4.5**
TIA				SS	**SS**	**07 35 45.0**	**+0.7**
TIA				pmax	pmax		
	comp=Z,40nm,1.4s						
TIA				pmax	pmax		
	comp=Z,2µm,6.9s						
TIA				LR	LR		
	comp=Z,20µm,23.7s						
TIA				LR	LR		
	comp=Z,17µm,23.9s						
TIA				LR	LR		
	comp=Z,15µm,27.9s						
GLMI	**Grayling**	**73.04**	**314**	P	**P**	**07 21 39.4**	**+1.0**
	baz=52,SNR=9.9						
GLMI				S	**S**	**07 31 06.4**	**+1.0**
	baz=52						
ANWB	**Willy Bob**	**73.29**	**279**	*e*P	**P**	**07 21 44.0**	**+3.7**
ANWB	**Willy Bob**	**73.29**	**279**	*e*	**S**	**07 31 11.4**	**+2.5**
MCWV	**Mont Chateau**	**73.34**	**308**	P	**P**	**07 21 41.4**	**+1.1**
	baz=53,SNR=46						
MCWV				S	**S**	**07 31 11.2**	**+2.3**
	baz=53						
MCWV	**Mont Chateau**	**73.34**	**308**	IAMs_20	IAMs_20	07 51 43.7	
	comp=Z,27µm,21.0s						
NBLA	**Lagarto - SE**	**73.40**	**241**	*e*P	**P**	**07 21 41.5**	**+0.7**
KLR	**Kul'dur**	**73.48**	**40**	⇓*e*P	**P**	**07 21 40.4**	**-0.5**
KLR				pmax	pmax		
	comp=Z,246nm,1.9s						
KLR				MLR	MLR		
	comp=Z,22µm,18.0s						
CN2	**Changchun**	**73.54**	**47**	*e*P	**P**	**07 21 40.6**	**-0.8**
CN2				*e*S	**S**	**07 31 05.6**	**-5.4**
CN2				SS	**SS**	**07 35 57.0**	**+4.1**
CN2				pmax	pmax		
	comp=Z,40nm,1.0s						
CN2				pmax	pmax		
	comp=Z,900nm,4.4s						
CN2				LR	LR		
	comp=Z,32µm,18.0s						
CN2				LR	LR		
	comp=Z,34µm,18.0s						
CN2				LR	LR		
	comp=Z,31µm,17.0s						
RDOG	**Red Dog Mine**	**73.56**	**1**	P	P	07 21 46.7	+5.6
	baz=357,SNR=14						
RDOG				S	**S**	**07 31 15.6**	**+5.1**
	baz=357						
RDOG	**Red Dog Mine**	**73.56**	**1**	IAMs_20	IAMs_20	07 54 01.2	
	comp=Z,34µm,22.0s						
BMAR	**Burnt Mountain**	**73.61**	**354**	P	**P**	**07 21 41.6**	**+0.2**
ANBD	**Bethesda, Anti**	**73.64**	**279**	*e*P	**P**	**07 21 46.6**	**+4.3**
ANBD	**Bethesda, Anti**	**73.64**	**279**	*e*	**S**	**07 31 05.5**	**-7.4**
SNY	**Shenyang**	**73.65**	**49**	⇓P	**P**	**07 21 41.0**	**-1.0**
SNY				S	**S**	**07 31 08.3**	**-4.1**
SNY				pmax	pmax		
	comp=Z,47nm,1.3s						
SNY				pmax	pmax		
	comp=Z,690nm,5.0s						
SNY				LR	LR		
	comp=Z,42µm,15.3s						
SNY				LR	LR		
	comp=Z,34µm,14.5s						
SNY				LR	LR		
	comp=Z,38µm,15.7s						
O53A	**New Philadelph**	**73.82**	**309**	P	**P**	**07 21 44.0**	**+0.9**
	baz=53,SNR=15						
O53A				S	**S**	**07 31 16.4**	**+2.0**
	baz=53						
O53A	**New Philadelph**	**73.82**	**309**	P	**P**	**07 21 43.0**	**-0.2**
O53A				IAMs_20	IAMs_20	07 55 28.9	
	comp=Z,26µm,20.0s						
EPYK	**Eagle Plains**	**73.83**	**351**	P	**P**	**07 21 42.2**	**-0.5**
	baz=18,SNR=57						
EPYK				S	**S**	**07 31 12.7**	**-0.9**
	baz=18						
MA2	**Magadan**	**73.84**	**24**	⇓*e*P	**P**	**07 21 43.2**	**+0.4**
MA2				pmax	pmax		
	comp=Z,319nm,1.3s						
MA2				MLR	MLR		
	comp=Z,35µm,17.0s						
MA2	**Magadan**	**73.84**	**24**	P	**P**	**07 21 41.8**	**-1.0**
MA2				IAmb	IAmb	07 21 51.5	
	comp=Z,188nm,0.7s						
MA2	**Magadan**	**73.84**	**24**	P	**P**	**07 21 42.9**	**+0.1**
S57A	**Dark Hollow, R**	**73.90**	**306**	P	**P**	**07 21 43.9**	**+0.3**
S57A				IAmb	IAmb	07 21 55.6	
	comp=Z,255nm,1.9s						
MAGL	**Barre de l'ile**	**73.91**	**278**	*e*P	**P**	**07 21 47.7**	**+3.8**
MAGL	**Barre de l'ile**	**73.91**	**278**	*e*	**S**	**07 31 17.3**	**+1.4**
U59A	**Littleton**	**73.99**	**304**	P	**P**	**07 21 44.2**	**+0.1**
U59A				IAmb	IAmb	07 21 52.8	
	comp=Z,110nm,0.8s						
AAM	**Ann Arbor**	**74.04**	**312**	P	**P**	**07 21 44.4**	**+0.1**
AAM				pmax	pmax		
	comp=Z,195nm,1.4s						
AAM	**Ann Arbor**	**74.04**	**312**	P	**P**	**07 21 44.7**	**+0.4**
	baz=52						
AAM				S	**S**	**07 31 18.5**	**+1.7**
	baz=52						
AAM	**Ann Arbor**	**74.04**	**312**	P	**P**	**07 21 44.4**	**+0.1**
AAM				IAmb	IAmb	07 21 54.5	
	comp=Z,194nm,1.4s						
AAM				IAMs_20	IAMs_20	07 52 45.1	
	comp=Z,31µm,21.0s						
SMRT	**St. Maarten**	**74.06**	**280**	*e*P	**P**	**07 21 48.5**	**+3.7**
SMRT	**St. Maarten**	**74.06**	**280**	*e*	S	07 31 05.5	-12
CBE	**Ff, Capester**	**74.09**	**278**	*e*P	**P**	**07 21 47.7**	**+2.7**
CBE	**Ff, Capester**	**74.09**	**278**	*e*	**S**	**07 31 24.7**	**+6.7**
BBSP	**Saint Philip**	**74.17**	**274**	*e*P	**P**	**07 21 47.5**	**+2.0**
COLD	**Coldfoot**	**74.19**	**356**	P	**P**	**07 21 45.0**	**+0.2**
	baz=7.5,SNR=40						
COLD				S	**S**	**07 31 19.5**	**+1.9**
	baz=7.5						
BBGH	**Gun Hill**	**74.23**	**274**	*e*P	P	07 21 51.6	+5.8
BBGH	**Gun Hill**	**74.23**	**274**	*e*	**S**	**07 31 19.1**	**-0.4**
DL2	**Dalian**	**74.23**	**53**	P	**P**	**07 21 49.4**	**+3.9**
DL2				S	**S**	**07 31 23.8**	**+4.8**
DL2				pmax	pmax		
	comp=Z,60nm,1.2s						
DL2				pmax	pmax		
	comp=Z,1µm,7.3s						
DL2				LR	LR		
	comp=Z,32µm,18.8s						
DL2				LR	LR		
	comp=Z,24µm,17.5s						
DL2				LR	LR		
	comp=Z,25µm,19.6s						
TDBA	**Terre de Bas,**	**74.24**	**278**	*e*P	**P**	**07 21 49.4**	**+3.5**
TDBA	**Terre de Bas,**	**74.24**	**278**	*e*	S	07 31 09.9	-10
DLPL	**La Plaine**	**74.25**	**277**	*e*P	P	07 21 51.9	+6.0
DLPL	**La Plaine**	**74.25**	**277**	*e*	**S**	**07 31 16.7**	**-3.0**
SEUS	**St. Eustatius**	**74.32**	**280**	*e*P	P	07 21 51.1	+4.8
SEUS	**St. Eustatius**	**74.32**	**280**	*e*	**S**	**07 31 17.4**	**-3.1**
DSLB	**Salisbury**	**74.32**	**277**	*e*P	**P**	**07 21 50.3**	**+3.9**
DSLB	**Salisbury**	**74.32**	**277**	*e*	**S**	**07 31 16.7**	**-3.8**
WHN	**Wuhan**	**74.35**	**63**	⇑P	**P**	**07 21 45.4**	**-0.9**
WHN				pP	**pP**	**07 21 50.1**	**+0.1**
WHN				sP	**sP**	**07 21 53.3**	**+1.9**
WHN				PP	**PP**	**07 24 39.4**	**+7.3**
WHN				S	**S**	**07 31 15.8**	**-4.8**
WHN				SKS	**SKSac**	**07 31 46.1**	**-8.2**
WHN				LR	LR		
	comp=Z,25µm,16.0s						
WHN				LR	LR		
	comp=Z,23µm,11.9s						
WHN				LR	LR		
	comp=Z,59µm,21.6s						
MDN	**Morne-Daniel**	**74.37**	**277**	*e*P	**P**	**07 21 47.7**	**+1.1**
MDN	**Morne-Daniel**	**74.37**	**277**	*e*	**S**	**07 31 12.1**	**-9.0**
WRGLY	**Wrigley**	**74.45**	**344**	P	**P**	**07 21 46.8**	**+0.5**
	baz=28,SNR=7.7						
FYU	**Fort Yukon**	**74.52**	**354**	P	**P**	**07 21 47.2**	**+0.6**
FYU				IAmb	IAmb	07 22 00.8	
	comp=Z,256nm,1.2s						
GRNR	**Gornyy**	**74.71**	**36**	⇑*i*P	**P**	**07 21 47.1**	**-1.0**
GRNR				*e*S	**S**	**07 31 26.6**	**+2.6**
GRNR				pmax	pmax		
	comp=Z,20nm,0.7s						
GRNR				smax	smax		
	comp=N,5.0nm,0.8s						
GRNR				MLR	MLR		
	comp=E,11µm,15.0s						
GRNR				MLR	MLR		
	comp=N,17µm,16.0s						
COWI	**Conover**	**74.71**	**317**	P	**P**	**07 21 48.5**	**+0.3**
COWI				IAmb	IAmb	07 21 58.7	
	comp=Z,117nm,0.9s						
COWI				IAMs_20	IAMs_20	07 52 57.5	
	comp=Z,29µm,22.0s						
CNNC	**Cliffs of the**	**74.71**	**303**	P	**P**	**07 21 48.9**	**+0.6**
	baz=53						
CNNC				S	**S**	**07 31 26.1**	**+1.6**
	baz=53						
CNNC	**Cliffs of the**	**74.71**	**303**	IAMs_20	IAMs_20	07 54 40.5	
	comp=Z,18µm,20.0s						
EYMN	**Ely**	**74.73**	**320**	P	**P**	**07 21 48.5**	**+0.3**
	baz=49,SNR=7.8						
EYMN				S	**S**	**07 31 25.4**	**+1.0**
	baz=49						
EYMN	**Ely**	**74.73**	**320**	IAMs_20	IAMs_20	07 53 13.8	
	comp=Z,28µm,20.0s						
FFC	**Flin Flon**	**74.76**	**330**	P	**P**	**07 21 48.1**	**-0.2**
FFC				pmax	pmax		
	comp=Z,490nm,2.0s						
FFC				MLR	MLR		
	comp=Z,40µm,20.0s						
FFC	**Flin Flon**	**74.76**	**330**	P	**P**	**07 21 48.1**	**-0.2**
FFC				IAmb	IAmb	07 21 58.5	
	comp=Z,490nm,2.0s						
P52A	**Corning**	**74.76**	**309**	P	**P**	**07 21 48.9**	**+0.4**
	baz=52,SNR=30						
P52A				S	**S**	**07 31 25.8**	**+0.9**
	baz=52						
P52A	**Corning**	**74.76**	**309**	P	**P**	**07 21 47.8**	**-0.8**
P52A				IAMs_20	IAMs_20	07 54 44.6	
	comp=Z,29µm,21.0s						
SLBI	**Saint Lucia, B**	**74.81**	**276**	*e*P	**P**	**07 21 49.6**	**+0.4**
SLBI	**Saint Lucia, B**	**74.81**	**276**	*e*	**S**	**07 31 31.1**	**+5.0**
ACSO	**Alum Creek Sta**	**74.91**	**310**	P	**P**	**07 21 49.7**	**+0.2**
	baz=52,SNR=18						
ACSO				S	**S**	**07 31 27.7**	**+1.1**
	baz=52						
ACSO	**Alum Creek Sta**	**74.91**	**310**	P	**P**	**07 21 49.3**	**-0.1**
ACSO				IAmb	IAmb	07 22 02.2	
	comp=Z,225nm,1.4s						
ACSO				IAMs_20	IAMs_20	07 53 55.2	
	comp=Z,24µm,21.0s						
NBPN	**Ponto Novo - B**	**74.95**	**243**	*e*P	**P**	**07 21 50.3**	**+0.3**
TMAB	**Tom-Au,PA,Br**	**74.96**	**254**	*e*P	**P**	**07 21 51.8**	**+1.7**
MCLT	**Moule a Chique**	**74.97**	**276**	*e*P	**P**	**07 21 53.3**	**+3.2**
MCLT	**Moule a Chique**	**74.97**	**276**	*e*	S	07 31 16.2	-12
I29M	**Ogilvie Camp,**	**74.99**	**351**	P	**P**	**07 21 49.2**	**-0.3**
	baz=17,SNR=148						
H43A	**Windswept, Lux**	**75.02**	**315**	P	**P**	**07 21 50.4**	**+0.4**
H43A				IAmb	IAmb	07 21 58.8	
	comp=Z,164nm,0.9s						
BLA	**Blacksburg**	**75.17**	**306**	P	**P**	**07 21 50.8**	**-0.2**
	baz=52,SNR=5.2						
BLA				S	**S**	**07 31 31.8**	**+2.2**
	baz=52						
BLA	**Blacksburg**	**75.17**	**306**	IAMs_20	IAMs_20	07 56 33.3	
	comp=Z,19µm,18.0s						
ULM	**Lac du Bonnet**	**75.31**	**324**	P	**P**	**07 21 51.4**	**-0.2**
	comp=Z,52nm,0.9s,baz=43,slow=5.5,SNR=34						
ULM				LR	LR	07 55 57.9	
	comp=Z,16µm,18.4s,baz=52,slow=37						
ULM	**Lac du Bonnet**	**75.31**	**324**	P	**P**	**07 21 51.0**	**-0.5**
ULM				IAmb	IAmb	07 22 00.2	
	comp=Z,119nm,0.8s						
MDJ	**Mudanjiang**	**75.34**	**44**	P	**P**	**07 21 50.3**	**-1.5**
MDJ				pP	pP	07 21 53.8	-1.7
MDJ				S	**S**	**07 31 29.4**	**-1.8**
MDJ				pmax	pmax		
	comp=Z,49nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,3µm,7.6s						
MDJ				LR	LR		
	comp=Z,42µm,19.2s						
MDJ				LR	LR		
	comp=Z,69µm,17.8s						
MDJ				LR	LR		
	comp=Z,77µm,15.0s						
H24K	**Noodor Dome**	**75.43**	**355**	P	**P**	**07 21 52.2**	**+0.2**
	baz=9.3						
H24K				S	**S**	**07 31 33.4**	**+1.8**
	baz=9.3						
H24K	**Noodor Dome**	**75.43**	**355**	IAMs_20	IAMs_20	07 56 57.3	
	comp=Z,17µm,22.0s						
SVB	**Belmont**	**75.47**	**275**	*e*P	**P**	**07 21 54.6**	**+1.6**
SVB	**Belmont**	**75.47**	**275**	*e*	**S**	**07 31 36.1**	**+2.7**
SVB	**Belmont**	**75.47**	**275**	P	**P**	**07 21 54.0**	**+1.0**
SVB				IAmb	IAmb	07 22 00.4	
	comp=Z,395nm,1.6s						
PRP	**Porcupine Dome**	**75.57**	**354**	P	**P**	**07 21 53.1**	**+0.1**
	baz=11,SNR=42						
PRP	**Porcupine Dome**	**75.57**	**354**	IAMs_20	IAMs_20	07 57 07.5	
	comp=Z,19µm,21.0s						
IMAR	**Indian Mountai**	**75.58**	**358**	P	**P**	**07 21 53.6**	**+0.8**
J29M	**Klondike Camp**	**75.85**	**351**	P	**P**	**07 21 54.8**	**+0.3**
	baz=17						
H21K	**Melozitna Rive**	**75.87**	**357**	P	**P**	**07 21 55.3**	**+0.8**
	baz=5.3						
H21K				S	**S**	**07 31 40.1**	**+3.6**
	baz=5.3						
EGAK	**Eagle**	**75.88**	**352**	P	**P**	**07 21 54.3**	**-0.2**
	baz=15,SNR=17						
EGAK				S	**S**	**07 31 39.2**	**+2.7**
	baz=15						
EGAK	**Eagle**	**75.88**	**352**	P	**P**	**07 21 54.0**	**-0.5**
EGAK				IAmb	IAmb	07 22 50.1	
	comp=Z,207nm,1.8s						
TNA	**Tin City**	**75.89**	**4**	P	**P**	**07 21 54.1**	**-0.4**
	baz=353						
TNA				S	**S**	**07 31 37.0**	**+0.5**
	baz=353						
MTP	**Monte Pirata**	**75.94**	**282**	P	**P**	**07 21 55.3**	**-0.3**
GCMP	**Grenada, Carri**	**76.08**	**275**	*e*P	**P**	**07 21 58.4**	**+1.9**
GCMP	**Grenada, Carri**	**76.08**	**275**	*e*	**S**	**07 31 33.2**	**-6.9**
TOSP	**Speyside**	**76.09**	**273**	*e*P	P	07 22 01.6	+5.1
TOSP	**Speyside**	**76.09**	**273**	*e*	S	07 31 26.1	-14
POKR	**Poker Plat Res**	**76.11**	**355**	P	**P**	**07 21 56.1**	**+0.2**
	baz=9.6,SNR=32						
POKR				S	**S**	**07 31 42.2**	**+3.0**
	baz=9.6						
POKR	**Poker Plat Res**	**76.11**	**355**	IAMs_20	IAMs_20	07 59 57.7	
	comp=Z,18µm,21.0s						
I23K	**Minto, Yukon-K**	**76.21**	**356**	P	**P**	**07 21 56.6**	**+0.2**
	baz=8.1,SNR=29						
I23K				S	**S**	**07 31 43.9**	**+3.8**
	baz=8.1						
I23K	**Minto, Yukon-K**	**76.21**	**356**	P	**P**	**07 21 56.1**	**-0.3**
I23K				IAmb	IAmb	07 22 09.9	
	comp=Z,184nm,1.3s						
I21K	**Tanana**	**76.31**	**357**	P	**P**	**07 21 57.4**	**+0.4**
	baz=6.0,SNR=21						
I21K				S	**S**	**07 31 46.1**	**+4.8**
	baz=6.0						
I21K	**Tanana**	**76.31**	**357**	IAMs_20	IAMs_20	07 56 45.0	
	comp=Z,17µm,21.0s						
MLSI	**Meulaboh, Aceh**	**76.32**	**96**	P	**P**	**07 21 55.8**	**-2.0**
	comp=Z,3µmcomp=Z,178nm,0.9s						
MDM	**Murphy Dome**	**76.33**	**355**	IAMs_20	IAMs_20	07 54 20.3	
	comp=Z,18µm,22.0s						
DAWY	**Dawson**	**76.37**	**351**	P	**P**	**07 21 57.5**	**+0.1**
	baz=16,SNR=48						
DAWY				S	**S**	**07 31 45.1**	**+3.1**
	baz=16						
DAWY	**Dawson**	**76.37**	**351**	P	**P**	**07 21 57.3**	**-0.2**

DAWY				IAmb	IAmb	07 22 06.3	
	comp=Z,106nm,0.8s						
COLA	**College**	76.38	355*c*	*i*P	P	07 21 56.6	-0.8
COLA				pmax	pmax		
	comp=Z,58nm,1.9s						
COLA	**College**	76.38	355	P	P	07 21 57.5	+0.2
COLA				IAmb	IAmb	07 22 10.5	
	comp=Z,229nm,1.6s						
TCOL	**CIGO, UAF Yank**	76.39	355	P	P	07 21 57.3	-0.1
	baz=9.3,SNR=13						
TCOL				S	S	07 31 44.1	+2.1
	baz=9.3						
TCOL	**CIGO, UAF Yank**	76.39	355	P	P	07 21 57.0	-0.4
TCOL				IAmb	IAmb	07 22 10.5	
	comp=Z,230nm,1.6s						
SJG	**San Juan**	76.39	282	P	P	07 21 58.2	0.0
SJG				pmax	pmax		
	comp=Z,123nm,1.2s						
SJG	**San Juan**	76.39	282	*e*P	P	07 22 00.3	+2.1
SJG	**San Juan**	76.39	282	P	P	07 21 58.2	0.0
SJG	**San Juan**	76.39	282	IAMs_20	IAMs_20	07 50 12.1	
	comp=Z,23µm,22.0s						
P49A	**Miami Univ. Ec**	76.39	310	P	P	07 21 57.4	-0.5
	baz=51						
P49A				S	S	07 31 41.8	-1.2
	baz=51						
P49A	**Miami Univ. Ec**	76.39	310	P	P	07 21 57.1	-0.8
P49A				IAMs_20	IAMs_20	07 54 04.6	
	comp=Z,24µm,21.0s						
J26L	**Joseph Creek**	76.40	353	P	P	07 21 57.5	-0.1
	baz=13,SNR=64						
J26L				S	S	07 31 44.8	+2.4
	baz=13						
MLY	**Manley**	76.40	356	P	P	07 21 58.0	+0.4
	baz=7.0,SNR=71						
MLY				S	S	07 31 46.1	+3.7
	baz=7.0						
MLY	**Manley**	76.40	356	P	P	07 21 57.5	-0.1
IL31		76.42	354	P	P	07 21 56.6	-0.9
ILAR	**Eielson Array**	76.42	354	P	P	07 21 56.9	-0.8
	comp=Z,7.9nm,0.9s,baz=350,slow=3.7,SNR=60						
ILAR				PKKPbc	PKKPbc	07 41 16.4	+6.6
	comp=Z,0.6nm,0.7s,baz=225,slow=2.5,SNR=5.4						
ILAR				PKPPKP	P'P'df	07 49 19.9	+0.1
	comp=Z,0.9nm,0.9s,baz=226,slow=2.3,SNR=4.5						
ILAR				LR	LR	07 57 11.8	
	comp=Z,11µm,19.8s,baz=22,slow=37						
ILAR	**Eielson Array**	76.42	354	P	P	07 21 56.7	-0.9
GRGR	**Grenville**	76.47	275	*e*P	P	07 22 01.6	+2.9
GRGR	**Grenville**	76.47	275	*e*	S	07 31 42.7	-1.7
K43A	**Burlington**	76.47	314	P	P	07 21 57.8	-0.5
MMPY	**Sheldon Lake,**	76.53	347	P	P	07 21 59.7	+1.3
	baz=22,SNR=29						
NJ2	**Nanjing**	76.56	60	*e*P	P	07 21 58.1	-0.9
NJ2				pP	pP	07 22 02.8	+0.2
NJ2				sP	sP	07 22 05.4	+1.4
NJ2				PP	PP	07 24 56.0	+5.3
NJ2				S	S	07 31 42.0	-3.0
NJ2				sS	sS	07 31 53.3	+2.3
NJ2				SS	SS	07 36 45.8	+6.5
NJ2				pmax	pmax		
	comp=Z,99nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,2µm,3.8s						
NJ2				LR	LR		
	comp=Z,15µm,23.5s						
NJ2				LR	LR		
	comp=Z,21µm,22.8s						
NJ2				LR	LR		
	comp=Z,19µm,21.8s						
GDU01	**Guandu, BA**	76.56	240	*e*P	P	07 21 59.4	+0.4
L44A	**Lake County Fo**	76.57	314	P	P	07 21 58.9	+0.1
	baz=50						
L44A				S	S	07 31 45.0	+0.2
	baz=50						
L44A	**Lake County Fo**	76.57	314	IAMs_20	IAMs_20	07 55 41.9	
	comp=Z,24µm,20.0s						
AGMN	**Agassiz Nation**	76.65	322	P	P	07 21 59.2	0.0
	baz=46,SNR=11						
AGMN				S	S	07 31 46.4	+0.9
	baz=46						
AGMN	**Agassiz Nation**	76.65	322	IAMs_20	IAMs_20	07 57 50.3	
	comp=Z,27µm,18.0s						
MCPB	**Macapa, AP**	76.68	259	*e*P	P	07 22 00.9	+1.0
UBPT	**Khong Chiam**	76.72	81	P	P	07 21 59.3	-0.8
NEA2	**Nenana**	76.74	355	P	P	07 21 59.1	-0.3
	baz=8.3,SNR=14						
NEA2	**Nenana**	76.74	355	IAMs_20	IAMs_20	07 54 32.4	
	comp=Z,18µm,22.0s						
BIRD	**Birdtown, Kers**	76.75	304	P	P	07 22 00.1	0.0
HDA	**Harding Lake**	76.78	354	P	P	07 21 59.1	-0.6
	baz=10.0,SNR=52						
HDA	**Harding Lake**	76.78	354	P	P	07 21 59.0	-0.7
HDA				IAmb	IAmb	07 22 08.3	
	comp=Z,140nm,0.8s						
HDA				IAMs_20	IAMs_20	07 57 41.4	
	comp=Z,22µm,22.0s						
GCSA	**Galena City Sc**	76.89	359	P	P	07 22 00.8	+0.5
	baz=2.0						
GCSA				S	S	07 31 51.5	+4.0
	baz=2.0						
USA0B	**Ussuriysk Arra**	76.91	43	P	P	07 22 00.2	-0.6
USA0B				pmax	pmax		
	comp=Z,350nm,1.3s						
USA0B	**Ussuriysk Arra**	76.91	43	P	P	07 22 00.2	-0.6
USRK	**Ussuriysk Ar.**	76.91	43	P	P	07 21 59.6	-1.1
	comp=Z,24nm,0.5s,baz=284,slow=5.3,SNR=26						
USRK				LR	LR	08 01 42.1	
	comp=Z,28µm,18.3s,baz=313,slow=40						
USRK	**Ussuriysk Ar.**	76.91	43	P	P	07 21 59.8	-1.0
USRK	**Ussuriysk Ar.**	76.91	43	P	P	07 21 59.8	-1.0
SCRK	**Sand Creek**	76.95	353	P	P	07 22 01.1	+0.3
	baz=12,SNR=43						
SCRK				S	S	07 31 51.1	+2.5
	baz=12						
TGTN	**Hyland Airport**	76.98	345	P	P	07 22 02.0	+1.1
	baz=24,SNR=19						
TGTN				S	S	07 31 55.8	+7.0
	baz=24						
ANM	**Nome**	76.99	3	P	P	07 22 00.5	-0.4
	baz=355						
KMSC	**Kings Mountain**	77.01	305	P	P	07 22 02.0	+0.5
	baz=52,SNR=32						
KMSC				S	S	07 31 49.3	-0.6
	baz=52						
TRN	**Trinidad (W)**	77.16	273	*e*P	P	07 22 02.8	+0.2
TRN	**Trinidad (W)**	77.16	273	*e*	S	07 31 47.8	-4.2
BWN	**Browne**	77.19	356	IAMs_20	IAMs_20	07 58 21.7	
	comp=Z,16µm,22.0s						
SPMN	**Marine on St.**	77.22	318	P	P	07 22 02.6	+0.1
	baz=47,SNR=16						
SPMN				S	S	07 31 53.9	+2.0
	baz=47						
FARO	**Faro, Yukon**	77.25	348	P	P	07 22 03.1	+0.7
	baz=21,SNR=33						
FARO				S	S	07 31 56.6	+4.9
	baz=21						
SFIN	**Lafayette**	77.26	312	P	P	07 22 02.6	-0.2
	baz=50,SNR=16						
SFIN				S	S	07 31 52.1	-0.3
	baz=50						
RIDG	**Independent Ri**	77.26	353	P	P	07 22 02.6	+0.1
	baz=12,SNR=31						
RIDG				S	S	07 31 52.8	+1.0
	baz=12						
RIDG	**Independent Ri**	77.26	353	IAMs_20	IAMs_20	07 57 13.1	
	comp=Z,18µm,22.0s						
NBIT	**Itapeh - BA**	77.33	239	*e*P	P	07 22 04.6	+1.2
BPAW	**Bear Paw Mtn.**	77.34	356	P	P	07 22 02.1	-0.8
	baz=6.7,SNR=29						
BPAW				S	S	07 31 53.0	+0.4
	baz=6.7						
JFWS	**Jewell Farm**	77.40	315	P	P	07 22 03.3	-0.2
	baz=48,SNR=22						
JFWS				S	S	07 31 52.1	-1.7
	baz=48						
JFWS	**Jewell Farm**	77.40	315	IAMs_20	IAMs_20	07 56 19.6	
	comp=Z,23µm,20.0s						
J20K	**Nowinta River**	77.40	358	P	P	07 22 03.5	+0.4
	baz=4.2,SNR=32						
GAMB	**Gambell**	77.43	6	IAMs_20	IAMs_20	08 00 37.0	
	comp=Z,28µm,20.0s						
TYV	**Tymovskoe**	77.43	33	*e*P	P	07 22 09.4	+5.9
TYV				*e*S	S	07 32 07.7	+14
TYV				pmax	pmax		
	comp=Z,88nm,1.1s						
TYV				pmax	pmax		
	comp=Z,1µm,3.4s						
TYV				smax	smax		
	comp=N,2µm,6.5s						
TYV				smax	smax		
	comp=E,3µm,6.5s						
M31M	**Drury Creek, Y**	77.45	348	P	P	07 22 04.3	+0.8
	baz=20,SNR=27						
NHSC	**New Hope**	77.51	302	P	P	07 22 05.3	+1.0
	baz=52						
NHSC				S	S	07 31 56.6	+1.2
	baz=52						
MSHR	**Mys Shultsa**	77.53	45⇓	*e*P	P	07 22 01.6	-2.7
MSHR				pmax	pmax		
	comp=Z,27nm,1.2s						
MSHR				MLR	MLR		
	comp=Z,26µm,15.0s						
TPTI		77.55	96	P	P	07 22 02.8	-2.0
	comp=Z,1µmcomp=Z,43nm,0.8s						
TZTN	**Tazewell**	77.55	307	P	P	07 22 04.8	+0.2
	baz=51,SNR=11						
TZTN				S	S	07 31 56.6	+0.9
	baz=51						
TZTN	**Tazewell**	77.55	307	IAMs_20	IAMs_20	07 54 53.7	
	comp=Z,23µm,22.0s						
VLA	**Vladivostok**	77.57	44⇑	*e*P	P	07 22 03.4	-1.1
VLA				pmax	pmax		
	comp=Z,177nm,1.4s						
VLA				MLR	MLR		
	comp=Z,38µm,16.0s						
MCK	**McKinley**	77.59	355	P	P	07 22 03.6	-0.7
	baz=8.4,SNR=56						
MCK				S	S	07 31 55.0	-0.2
	baz=8.4						
BCAR	**Beaver Creek A**	77.62	352	P	P	07 22 05.0	+0.5
CHUM	**Lake Minchumin**	77.62	357	P	P	07 22 04.3	-0.1
	baz=5.7,SNR=30						
CHUM				S	S	07 31 56.7	+1.1
	baz=5.7						
L27K	**Beaver Creek,**	77.62	352	P	P	07 22 05.0	+0.5
	baz=14,SNR=51						
L27K				S	S	07 31 57.2	+1.4
	baz=14						
L27K	**Beaver Creek,**	77.62	352	IAMs_20	IAMs_20	08 00 58.4	
	comp=Z,14µm,18.0s						
CMC01	**Camacan, BA**	77.69	239	*e*P	P	07 22 06.6	+1.2
L26K	**Log Cabin Wild**	77.82	353	P	P	07 22 05.8	+0.2
	baz=13,SNR=24						
L26K				S	S	07 32 02.1	+4.3
	baz=13						
QIZ	**Qiongzhong**	77.84	75	P	P	07 22 04.8	-1.6
QIZ				PP	PP	07 25 00.3	-1.5
QIZ				S	S	07 31 57.5	-1.8
QIZ				pmax	pmax		
	comp=Z,1µm,6.8s						
QIZ				LR	LR		
	comp=Z,14µm,32.4s						
QIZ				LR	LR		
	comp=Z,7µm,33.8s						
QIZ				LR	LR		
	comp=Z,10µm,33.3s						
QIZ	**Qiongzhong**	77.84	75	P	P	07 22 06.9	+0.5
KTH	**Kantishna Hill**	77.89	356	IAMs_20	IAMs_20	08 02 04.5	
	comp=Z,17µm,20.0s						
RND	**Reindeer**	77.91	355	IAMs_20	IAMs_20	07 55 22.1	
	comp=Z,16µm,22.0s						
TRF	**Thorofare Moun**	77.95	356	P	P	07 22 05.7	-0.8
	baz=7.3,SNR=12						
TRF	**Thorofare Moun**	77.95	356	IAMs_20	IAMs_20	07 58 55.3	
	comp=Z,16µm,21.0s						
GZH	**Guangzhou**	78.04	70	P	P	07 22 06.8	-0.6
GZH				S	S	07 31 59.1	-2.2
GZH				LR	LR		
	comp=Z,13µm,23.8s						
GZH				LR	LR		
	comp=Z,16µm,28.9s						
CAST	**Castle Rocks**	78.08	357	P	P	07 22 06.7	-0.3
	baz=5.8,SNR=26						
PAX	**Paxson**	78.08	354	P	P	07 22 06.4	-0.7
	baz=11,SNR=11						
GRTK	**Grand Turk**	78.13	288	IAMs_20	IAMs_20	07 53 32.8	
	comp=Z,23µm,22.0s						
DHY	**Denali Highway**	78.13	354	P	P	07 22 07.2	-0.3
	baz=9.6						
BG3	**Lake Jocassee**	78.13	305	P	P	07 22 08.2	+0.4
BVCY	**Beaver Creek**	78.14	351	P	P	07 22 07.9	+0.5
	baz=15,SNR=42						
WCI	**Wyandotte Cave**	78.17	310	P	P	07 22 07.9	0.0
WCI				pmax	pmax		
	comp=Z,119nm,0.9s						
WCI	**Wyandotte Cave**	78.17	310	P	P	07 22 08.1	+0.2
	baz=50						
WCI				S	S	07 32 02.6	+0.3
	baz=50						
WCI	**Wyandotte Cave**	78.17	310	P	P	07 22 07.9	0.0
WCI				IAmb	IAmb	07 22 16.2	
	comp=Z,119nm,0.8s						
WCI	**Wyandotte Cave**	78.17	310	IAMs_20	IAMs_20	07 54 25.7	
	comp=Z,20µm,22.0s						
HODGE	**Hodges**	78.18	304	P	P	07 22 08.5	+0.5
INCN	**Inchon**	78.20	51	P	P	07 22 08.3	+0.1
INCN				pmax	pmax		
	comp=Z,210nm,1.3s						
INCN				MLR	MLR		
	comp=Z,30µm,20.0s						
INCN	**Inchon**	78.20	51	P	P	07 22 08.3	+0.1
INCN				IAmb	IAmb	07 22 15.3	
	comp=Z,210nm,1.2s						
INCN	**Inchon**	78.20	51	P	P	07 22 08.3	+0.1
O44A	**Mansfield**	78.20	312	P	P	07 22 08.4	+0.3
K20K	**Telida**	78.22	358	P	P	07 22 07.6	-0.1
	baz=4.2,SNR=29						
K20K				S	S	07 32 03.0	+0.9
	baz=4.2						
K20K	**Telida**	78.22	358	P	P	07 22 07.5	-0.3
TKL	**Tuckaleechee C**	78.25	306	P	P	07 22 08.6	+0.2
TKL				pmax	pmax		
	comp=Z,71nm,0.9s						
TKL	**Tuckaleechee C**	78.25	306	P	P	07 22 08.6	+0.2
M27K	**Edge Creek, AK**	78.32	352	P	P	07 22 08.9	+0.4
	baz=14,SNR=24						
N31M	**Braeburn, Yuko**	78.34	349	P	P	07 22 08.8	+0.3
	baz=19,SNR=11						
WTLY	**Watson Lake, Y**	78.37	345	P	P	07 22 09.8	+1.1
	baz=24						
M26K	**Nabesna, AK**	78.40	352	P	P	07 22 08.6	-0.2
	baz=13						
M26K	**Nabesna, AK**	78.40	352	P	P	07 22 08.6	-0.2
HDIL	**Hopedale**	78.42	313	IAMs_20	IAMs_20	07 55 10.8	
	comp=Z,32µm,22.0s						
WAT1	**Susitna Watana**	78.46	355	P	P	07 22 08.0	-1.2
	baz=8.6						
TSI	**Tuntungan**	78.48	95	P	P	07 22 07.5	-2.4
	comp=Z,5µmcomp=Z,154nm,1.2s						
UGL	**Uglegorsk**	78.48	35	*e*P	P	07 22 11.6	+2.2
UGL				*e*S	S	07 32 13.7	+8.5
UGL				pmax	pmax		
	comp=Z,320nm,1.0s						
UGL				smax	smax		
	comp=N,6µm,15.0s						
UGL				smax	smax		
	comp=E,6µm,15.0s						
UGL				MLR	MLR		
	comp=Z,22µm,15.0s						
UGL				MLR	MLR		
	comp=E,25µm,13.0s						
UGL				MLR	MLR		
	comp=N,30µm,14.0s						
PPLA	**Purkeypile**	78.60	357	P	P	07 22 10.4	+0.4
	baz=5.7,SNR=31						
HARP	**HAARP**	78.61	353	P	P	07 22 10.5	+0.5
	baz=11						
WAT6	**Susitna Watana**	78.65	354	P	P	07 22 09.4	-0.9
	baz=9.3,SNR=30						
TTA	**Tatalina**	78.70	358	P	P	07 22 10.4	-0.1
	baz=2.7,SNR=17						
YUK3	**Moose Creek**	78.71	351	P	P	07 22 11.2	+0.4
	baz=15,SNR=39						
SSE	**Sheshan**	78.72	59	P	P	07 22 11.1	+0.1
SSE				S	S	07 32 01.8	-6.6
SSE				pmax	pmax		
	comp=N,17nm,0.7s						
SSE				pmax	pmax		
	comp=N,860nm,6.3s						
SSE				LR	LR		
	comp=N,10µm,19.4s						
MDND	**Maddock**	78.74	324	P	P	07 22 10.7	-0.2
	baz=44						
PRPB	**Parauapebas**	78.74	253	*e*P	P	07 22 12.7	+1.3
TEY	**Ternei**	78.76	40	*e*P	P	07 22 10.5	-0.5
TEY				*e*		07 22 17.2	
TEY				*e*		07 32 06.9	
GUA01	**Guaratinga, BA**	78.76	238	*e*P	P	07 22 12.2	+0.9
SMTB	**Santa Maria do**	78.87	249	*e*P	P	07 22 12.7	+0.6
YUK4	**Talbot Arm**	78.89	350	P	P	07 22 10.6	-1.1
	baz=16,SNR=15						
KS19	**Wonju Array Si**	78.94	51	P	P	07 22 12.2	0.0
KS19				IAmb	IAmb	07 22 20.5	
	comp=Z,259nm,1.2s						
K38A	**Parkersburg**	78.95	316	P	P	07 22 11.0	-1.2
WHY	**Whitehorse**	78.98	348	P	P	07 22 12.0	-0.2
	baz=19						
M24K	**Tolsona, Glenn**	78.99	354	P	P	07 22 12.0	-0.1
	baz=10						
KSAR	**Wonju Array Be**	78.99	51	P	P	07 22 12.1	-0.4
KSAR	**Wonju Array Be**	78.99	51	P	P	07 22 12.1	-0.4
CUT	**Chulitna**	78.99	356	P	P	07 22 13.4	+1.4
	baz=7.3						
CUT	**Chulitna**	78.99	356	IAMs_20	IAMs_20	08 02 40.7	
	comp=Z,17µm,20.0s						
KSRS	**Korea Array**	79.01	51	P	P	07 22 11.8	-0.7
	comp=Z,76nm,1.1s,baz=311,slow=4.8,SNR=37						
KSRS				LR	LR	07 58 48.0	
	comp=Z,12µm,18.7s,baz=318,slow=37						
P33M	**Teslin, Yukon**	79.05	347	P	P	07 22 12.3	-0.2
	baz=21,SNR=31						
GSI	**Gunungsitoli**	79.08	97	P	P	07 22 13.6	+0.4
	comp=Z,6µmcomp=Z,4µmcomp=Z,189nm,0.7s						
GSI	**Gunungsitoli**	79.08	97	P	P	07 22 12.6	-0.6
GSI				IAmb	IAmb	07 22 33.2	
	comp=Z,338nm,1.4s						
GSI	**Gunungsitoli**	79.08	97	P	P	07 22 13.4	+0.2
L20K	**Farewell, AK**	79.09	357	P	P	07 22 12.3	-0.3
	baz=4.4						
HKC	**Hong Kong Obse**	79.12	70	⇑P	P	07 22 20.0	+6.6
PSI	**Prapat**	79.19	95	P	P	07 22 13.6	-0.5
	comp=Z,44nm,0.7s,baz=282,slow=6.4,SNR=20						
HYT	**Haines Junctio**	79.23	349	P	P	07 22 13.8	+0.3
	baz=17,SNR=26						
YUK6	**Outpost Mounta**	79.24	350	P	P	07 22 14.3	+0.6
	baz=17,SNR=19						
SDBA	**SAO DESIDERIO**	79.34	245	*e*P	P	07 22 15.1	+0.5
N25K	**Chitina, Valde**	79.34	353	P	P	07 22 13.3	-0.7
	baz=12,SNR=20						
N25K	**Chitina, Valde**	79.34	353	IAMs_20	IAMs_20	07 58 49.7	
	comp=Z,18µm,22.0s						
SCM	**Sheep Creek Mo**	79.36	354	P	P	07 22 14.3	+0.2
	baz=9.6,SNR=16						
TJN	**Taejon**	79.36	52*d*	*e*P	P	07 22 15.0	+0.5
TJN	**Taejon**	79.36	52	P	P	07 22 14.7	+0.2
MCARA	**McCarthy VSAT**	79.39	352	P	P	07 22 15.2	+0.9
	baz=13						
MCARA	**McCarthy VSAT**	79.39	352	IAMs_20	IAMs_20	07 58 54.2	
	comp=Z,16µm,21.0s						
L19K	**White Mountain**	79.42	358	P	P	07 22 14.6	+0.2
	baz=3.6,SNR=45						
L19K				S	S	07 32 16.7	+1.8
	baz=3.6						
L19K	**White Mountain**	79.42	358	IAMs_20	IAMs_20	08 02 42.1	
	comp=Z,21µm,21.0s						
SML	**Sawmill**	79.46	355	P	P	07 22 13.9	-0.7
	baz=8.8,SNR=14						
GOGA	**Godfrey**	79.47	304	P	P	07 22 15.3	+0.2
	baz=50,SNR=17						
GOGA				S	S	07 32 16.2	-0.2
	baz=50						
GOGA	**Godfrey**	79.47	304	IAMs_20	IAMs_20	07 54 42.8	
	comp=Z,30µm,22.0s						
SKT	**Skwentna**	79.49	356	P	P	07 22 13.5	-1.2
	baz=6.2,SNR=25						
CLTN	**Cedars of Leba**	79.57	308	P	P	07 22 16.0	+0.4
CLTN				IAmb	IAmb	07 22 27.3	
	comp=Z,438nm,1.7s						
KLU	**Klutina**	79.57	353	P	P	07 22 15.1	-0.2
	baz=11,SNR=11						
KLU				S	S	07 32 18.5	+1.8
	baz=11						
CTG	**Chitna Glacier**	79.61	351	P	P	07 22 15.6	0.0
	baz=14,SNR=12						
CTG				S	S	07 32 19.6	+2.4
	baz=14						
M22K	**Willow**	79.63	355	P	P	07 22 15.0	-0.5
	baz=7.4						
M19K	**Big River Lodg**	79.68	358	P	P	07 22 15.6	-0.3
	baz=4.0						
M19K	**Big River Lodg**	79.68	358	IAMs_20	IAMs_20	08 02 40.1	
	comp=Z,18µm,22.0s						
SCIA	**State Center**	79.70	316	P	P	07 22 15.9	-0.3
	baz=47						
SCIA	**State Center**	79.70	316	IAMs_20	IAMs_20	07 57 43.5	
	comp=Z,23µm,20.0s						
LOGN	**Logan Glacier**	79.70	351	IAMs_20	IAMs_20	08 03 33.4	
	comp=Z,16µm,20.0s						
PMR	**Palmer**	79.73	355	P	P	07 22 15.6	-0.4
	baz=8.1,SNR=17						
PMR				S	S	07 32 19.8	+1.7
	baz=8.1						
SDDR	**Presa de Saban**	79.76	286	*e*P	P	07 22 19.3	+2.3
IPM	**Ipoh**	79.80	92	P	P	07 22 17.0	-0.2
KNK	**Knik Glacier**	79.86	355	P	P	07 22 16.6	-0.2
	baz=8.7						
KNK				S	S	07 32 19.6	0.0
	baz=8.7						
NAN01	**Guarapari, ES**	79.88	238	*e*P	P	07 22 18.5	+1.1
GRNC	**Granite Creek**	79.89	351	IAMs_20	IAMs_20	07 57 06.2	
	comp=Z,16µm,22.0s						
SUA	**Susitna One**	79.96	356	P	P	07 22 17.1	-0.3
	baz=6.9,SNR=22						
BMRM	**Bremner River**	79.97	353	P	P	07 22 17.4	0.0
	baz=12,SNR=11						
CRQE	**Cirque**	80.02	352	P	P	07 22 17.9	+0.1
	baz=13						
CRQM	**Cirque**	80.02	352	IAMs_20	IAMs_20	07 59 12.7	
	comp=Z,18µm,22.0s						
TABL	**Table Mountain**	80.09	351	IAMs_20	IAMs_20	08 03 35.8	
	comp=Z,17µm,19.0s						
FPAL	**Fort Paine**	80.12	306	P	P	07 22 19.1	+0.4
SKAG	**Skagway**	80.19	348	P	P	07 22 19.0	+0.5
	baz=19						
SKAG				S	S	07 32 23.2	+0.1
	baz=19						
ECSD	**EROS Data Cent**	80.22	319	P	P	07 22 19.4	+0.3
	baz=45,SNR=33						
ECSD				S	S	07 32 23.4	-0.6
	baz=45						
ECSD	**EROS Data Cent**	80.22	319	P	P	07 22 18.7	-0.3
ECSD	**EROS Data Cent**	80.22	319	IAMs_20	IAMs_20	07 56 03.1	
	comp=Z,31µm,22.0s						
YAH	**Yahtse**	80.24	351	IAMs_20	IAMs_20	08 03 51.8	
	comp=Z,15µm,19.0s						
FIS	**Fire Island**	80.24	355	IAMs_20	IAMs_20	08 03 42.9	
	comp=Z,16µm,20.0s						
RC01	**Rabbit Creek A**	80.27	355	P	P	07 22 19.0	0.0
	baz=7.7,SNR=32						
RC01				S	S	07 32 24.9	+1.1
	baz=7.7						
WAX	**Waxell Ridge**	80.29	352	IAMs_20	IAMs_20	07 59 41.1	
	comp=Z,15µm,20.0s						
SPCR	**Spurr Chakacha**	80.30	356	P	P	07 22 18.9	-0.3
	baz=5.7						
SPU	**Mount Spurr**	80.31	356	P	P	07 22 18.0	-1.2
PINM	**Pinnacle**	80.31	350	P	P	07 22 20.0	+0.6
	baz=15,SNR=20						
DGMT	**Dagmar**	80.34	326	P	P	07 22 20.0	+0.4
	baz=41,SNR=8.2						
DGMT	**Dagmar**	80.34	326	IAMs_20	IAMs_20	08 01 02.7	
	comp=Z,23µm,19.0s						
YSS	**Yuzh-Sakhalins**	80.36	36⇑	*e*P	P	07 22 19.1	-0.6
YSS				*e**SP	PcP	07 22 27.0	+0.2
YSS				*e*		07 25 23.5	
YSS				*e*S	S	07 32 23.3	-1.9
YSS				pmax	pmax		
	comp=Z,1µm,5.5s						
YSS				pmax	pmax		
	comp=Z,210nm,1.2s						
YSS	**Yuzh-Sakhalins**	80.36	36	P	P	07 22 18.7	-1.0
YSS	**Yuzh-Sakhalins**	80.36	36	P	P	07 22 19.5	-0.2
BCPM	**Bancas Point**	80.37	350	IAMs_20	IAMs_20	08 03 24.1	
	comp=Z,16µm,20.0s						
PWL	**Port Wells**	80.40	354	IAMs_20	IAMs_20	08 00 17.0	
	comp=Z,19µm,22.0s						
BERG	**Berg Lake**	80.44	352	IAMs_20	IAMs_20	07 59 24.7	
	comp=Z,16µm,21.0s						
MESA	**MESA**	80.45	351	P	P	07 22 20.6	+0.4

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      baz=14
MESA                                S       S       07 32 26.8 +0.6
      baz=14
MESA  MESA               80.45 351  IAMs_20 IAMs_20 07 57 25.1
      comp=Z,23µm,22.0s
WVT   Waverly            80.46 309  P       P       07 22 19.4 -1.0
WVT                                 pmax    pmax
      comp=Z,455nm,1.9s
WVT                                 MLR     MLR
      comp=Z,23µm,20.0s
WVT   Waverly            80.46 309  P       P       07 22 20.2 -0.3
      baz=49
WVT                                 S       S       07 32 24.5 -2.2
      baz=49
WVT   Waverly            80.46 309  P       P       07 22 19.4 -1.0
WVT                                 IAmb    IAmb    07 22 33.8
      comp=Z,455nm,1.9s
WVT   Waverly            80.46 309  IAMs_20 IAMs_20 07 59 25.5
      comp=Z,23µm,20.0s
N38A  Joes South For     80.47 315  P       P       07 22 20.3 -0.1
N38A                                IAmb    IAmb    07 22 29.0
      comp=Z,157nm,1.0s
RAGM  Ragged Mountai     80.54 353  IAMs_20 IAMs_20 08 03 10.6
      comp=Z,17µm,19.0s
SNH   Sunshine Point     80.55 352  IAMs_20 IAMs_20 08 00 48.8
      comp=Z,13µm,19.0s
PNL   Peninsula          80.61 350  P       P       07 22 21.1 +0.2
      baz=16
CAPN  Captain Cook N     80.67 356  IAMs_20 IAMs_20 08 04 48.9
      comp=Z,16µm,21.0s
HIN   Hinchinbrook I     80.71 354  IAMs_20 IAMs_20 08 03 21.2
      comp=Z,16µm,21.0s
QZH   Quanzhou           80.71  66⇑iP       P       07 22 10.4  -12
JANB  Januaria           80.75 242 eP       P       07 22 23.1 +0.9
SUCK  Suckling Hills     80.76 352  IAMs_20 IAMs_20 07 59 23.3
      comp=Z,18µm,22.0s
N19K  Bonanza Creek      80.78 358  P       P       07 22 22.5 +0.7
      baz=3.9
N19K  Bonanza Creek      80.78 358  P       P       07 22 21.8  0.0
N19K                                IAmb    IAmb    07 22 35.0
      comp=Z,344nm,1.8s
N19K                                IAMs_20 IAMs_20 08 03 41.6
      comp=Z,19µm,21.0s
TIGA  Tifton             80.81 303  P       P       07 22 23.0 +0.7
      baz=50
TIGA                                S       S       07 32 31.0 +0.6
      baz=50
O22K  Cooper Landing     80.87 355  P       P       07 22 20.6 -1.5
      baz=7.7
O22K  Cooper Landing     80.87 355  IAMs_20 IAMs_20 08 04 15.5
      comp=Z,16µm,21.0s
SUSD  Miller             80.89 321  P       P       07 22 23.5 +0.8
      baz=44,SNR=6.3
SUSD                                S       S       07 32 31.4 +0.4
      baz=44
MNSI  Mandailing Nat     80.95  96  P       P       07 22 22.4 -1.0
      comp=Z,3µmcomp=Z,75nm,0.9s
BSFB  Barra de Sao F     81.06 237 eP       P       07 22 24.4 +0.6
RIB01 Linhares ES        81.11 237 eP       P       07 22 25.2 +1.2
JIS   Juneau Island      81.15 347  IAMs_20 IAMs_20 07 59 47.9
      comp=Z,21µm,19.0s
SJMB  Sao Joao De Ma     81.19 238 eP       P       07 22 25.6 +1.2
CCM   Cathedral Cave     81.21 312  P       P       07 22 24.0 -0.5
CCM                                 pmax    pmax
      comp=Z,95nm,0.8s
CCM                                 MLR     MLR
      comp=Z,35µm,20.0s
CCM   Cathedral Cave     81.21 312  P       P       07 22 24.7 +0.2
      baz=47
CCM                                 S       S       07 32 33.4 -1.1
      baz=47
CCM   Cathedral Cave     81.21 312  P       P       07 22 24.0 -0.5
SEW   Seward             81.23 355  P       P       07 22 23.9 -0.2
      baz=7.8
JRMM  Jerantut           81.30  92  P       P       07 22 24.0 -1.2
PEA0B Petropavlovsk-     81.35  24⇓eP       P       07 22 25.1 +0.2
PEA0B Petropavlovsk-     81.35  24  P       P       07 22 25.5 +0.6
PEA0B                               IAmb    IAmb    07 22 35.2
      comp=Z,401nm,1.9s
PETK  Petropavlovsk-     81.35  24  P       P       07 22 24.3 -0.6
      comp=Z,32nm,1.1s,baz=291,slow=4.5,SNR=9.6
PETK                                LR      LR      08 02 39.6
      comp=Z,30µm,19.4s,baz=318,slow=39
PETK  Petropavlovsk-     81.35  24  P       P       07 22 24.1 -0.8
O19K  Port Alsworth      81.39 357  P       P       07 22 25.0 +0.1
      baz=4.0
BOAV  Boa Vista          81.52 266 eP       P       07 22 27.5 +1.1
BOAV  Boa Vista          81.52 266  P       P       07 22 27.3 +0.9
PEXB  Peixe              81.56 247 eP       P       07 22 27.5 +0.9
MC01  Montes Claros      81.64 241 eP       P       07 22 28.0 +1.1
BRLK  Bradley Lake       81.66 356  IAMs_20 IAMs_20 08 04 19.7
      comp=Z,16µm,21.0s
BRSE  Bradley Lake S     81.67 356  P       P       07 22 26.4 -0.1
      baz=6.8
PET   Petropavlovsk      81.72  24 eP       P       07 22 29.1 +2.3
PET                                eS       S       07 32 35.8 -3.4
PET                                eSS      SS      07 37 52.9 -2.5
PET                                 MLR     MLR
      comp=Z,39µm,19.0s
PET   Petropavlovsk      81.72  24  IAMs_20 IAMs_20 08 02 30.6
      comp=Z,27µm,20.0s
O18K  Koktuh Hills       81.76 358  P       P       07 22 27.4 +0.5
      baz=3.3
O18K  Koktuh Hills       81.76 358  P       P       07 22 26.8 -0.2
O18K                                IAMs_20 IAMs_20 08 02 54.6
      comp=Z,22µm,21.0s
P19K  Oil Pt             81.89 357  IAMs_20 IAMs_20 08 04 10.4
      comp=Z,20µm,21.0s
SISI  Saibi              81.90  98  P       P       07 22 29.4 +1.0
      comp=Z,3µmcomp=Z,3µmcomp=Z,84nm,1.3s
CNPM  China Poot         81.92 356  IAMs_20 IAMs_20 08 04 25.1
      comp=Z,20µm,20.0s
GTBY  Guantanamo Bay     82.04 289  IAMs_20 IAMs_20 07 53 28.3
      comp=Z,20µm,22.0s
ITTB  Itaituba           82.06 258 eP       P       07 22 30.1 +0.8
HATO  Hato, Curacao      82.11 279  IAMs_20 IAMs_20 07 55 46.2
      comp=Z,15µm,20.0s
P18K  Big Mountain,      82.23 358  IAMs_20 IAMs_20 08 03 07.8
      comp=Z,22µm,22.0s
ALF01 Guarapari-ES       82.26 236 eP       P       07 22 29.5 -0.5
PPI   Padang Panjang     82.37  97  P       P       07 22 30.3 -0.6
      comp=Z,890nmcomp=Z,95nm,0.8s
BKNI  Bangkinang         82.38  96  P       P       07 22 27.9 -3.0
      comp=Z,5µmcomp=Z,5µmcomp=Z,155nm,1.4s
BKNI  Bangkinang         82.38  96  P       P       07 22 32.2 +1.3
MGMO  Mountain Grove     82.42 312  P       P       07 22 31.1 +0.2
LCAR  Lake Charles       82.50 311  P       P       07 22 31.3 +0.1
LCAR                                IAmb    IAmb    07 22 39.6
      comp=Z,97nm,0.9s
WRAK  Wrangell Islan     82.52 345  IAMs_20 IAMs_20 08 06 19.0
      comp=Z,15µm,19.0s
DIAM  Diamantina, MG     82.56 240 eP       P       07 22 32.8 +0.9
LAO   LASA Array         82.59 326  P       P       07 22 32.8 +1.2
      baz=39,SNR=24
LAO   LASA Array         82.59 326  P       P       07 22 32.3 +0.7
BGNE  Belgrade           82.68 318  P       P       07 22 32.8 +0.7
      baz=44,SNR=14
BGNE                                S       S       07 32 51.6 +2.0
      baz=44
PDSI  Padang             82.70  97  P       P       07 22 31.4 -1.2
      comp=Z,11µmcomp=Z,7µmcomp=Z,115nm,0.9s
N33A  J Bar K, Exete     82.79 317  P       P       07 22 32.8  0.0
SKR   Severo-Kuril's     82.85  27 eP       P       07 22 37.1 +4.3
SKR                                eS       S       07 32 46.9 -3.9
SKR                                 MLR     MLR
      comp=Z,15µm,20.0s
YHNB  Yeheng             82.86  64  P       P       07 22 33.7 +0.3
EGMT  Eagleton           83.02 329  P       P       07 22 34.8 +0.9
      baz=37,SNR=30
EGMT                                S       S       07 32 55.8 +2.9
      baz=37
EGMT  Eagleton           83.02 329  P       P       07 22 34.4 +0.5
PTGA  Pitinga            83.03 263  P       P       07 22 34.8 +0.5
PTGA                                IAmb    IAmb    07 22 41.0
      comp=Z,197nm,1.6s
PTGA                                IAMs_20 IAMs_20 08 05 33.1
      comp=Z,14µm,18.0s
SSLB  Suanglung          83.11  65  IAMs_20 IAMs_20 08 05 32.8
      comp=Z,14µm,20.0s
SSLB  Suanglung          83.11  65  P       P       07 22 35.4 +0.7
TPUB  Ta-pu              83.19  66  IAMs_20 IAMs_20 08 06 24.9
      comp=Z,14µm,19.0s
TPUB  Ta-pu              83.19  66  P       P       07 22 35.2 +0.1
FCAR  Ozark Folk Cen     83.20 311  P       P       07 22 34.7 -0.2
FCAR                                IAmb    IAmb    07 22 43.9
      comp=Z,168nm,1.1s
BRAL  Brewton            83.23 305  P       P       07 22 35.9 +0.8
      baz=48
BRAL  Brewton            83.23 305  IAMs_20 IAMs_20 07 56 48.4
      comp=Z,20µm,22.0s
U40A  Yellville          83.31 312  P       P       07 22 35.8 +0.3
      baz=46,SNR=44
U40A                                S       S       07 32 56.4 +0.3
      baz=46
NACB  Ninganchiao        83.32  64  IAMs_20 IAMs_20 08 03 31.3
      comp=Z,20µm,22.0s
NPGB  Novo Progresso     83.48 256 eP       P       07 22 36.6  0.0
KSU1  Kansas State U     83.51 316  P       P       07 22 36.7 +0.3
      baz=44,SNR=23
KSU1                                S       S       07 32 58.2 +0.2
      baz=44
KSU1  Kansas State U     83.51 316  P       P       07 22 35.7 -0.7
KSU1  Kansas State U     83.51 316  IAMs_20 IAMs_20 08 00 10.3
      comp=Z,20µm,19.0s
PPSI  Pulau Pagai        83.51  99  P       P       07 22 31.9 -4.9
      comp=Z,6µmcomp=Z,210nm,1.4s
RSSD  Black Hills        83.58 323  P       P       07 22 37.2 +0.3
RSSD                                pmax    pmax
      comp=Z,79nm,1.3s
RSSD                                MLR     MLR
      comp=Z,27µm,19.0s
RSSD  Black Hills        83.58 323  P       P       07 22 37.3 +0.3
      baz=40
RSSD                                S       S       07 33 00.0 +1.0
      baz=40
RSSD  Black Hills        83.58 323  P       P       07 22 37.2 +0.3
YULB  Yu-li              83.61  65  P       P       07 22 37.6 +0.4
YULB                                IAmb    IAmb    07 23 13.6
      comp=Z,115nm,1.2s
YULB                                IAMs_20 IAMs_20 08 03 52.9
      comp=Z,20µm,20.0s
SNDB  Serra Nova Dou     83.65 249 eP       P       07 22 36.8 -0.6
MYKOM Kota Tinggi        83.67  93  P       P       07 22 39.0 +1.4
JNU   Nakatsue           83.68  52  P       P       07 22 38.0 +0.5
JNU                                 IAmb    IAmb    07 22 45.2
      comp=Z,132nm,1.0s
WHAR  Wooly Hollow       83.71 311  P       P       07 22 37.1 -0.4
CAM01 Campos-RJ          83.73 236 eP       P       07 22 37.6  0.0
KDAK  Kodiak Island      83.73 356  P       P       07 22 36.3 -0.9
KDAK                                pmax    pmax
      comp=Z,111nm,0.8s
KDAK                                MLR     MLR
      comp=Z,14µm,22.0s
KDAK  Kodiak Island      83.73 356  P       P       07 22 37.7 +0.6
      baz=5.3
KDAK                                S       S       07 33 01.1 +1.6
      baz=5.3
KDAK  Kodiak Island      83.73 356  P       P       07 22 36.2 -0.9
KDAK                                IAmb    IAmb    07 22 46.0
      comp=Z,111nm,0.8s
BDFB  Brasilia           83.74 244  P       P       07 22 38.8 +0.9
      comp=Z,34nm,0.8s,baz=64,slow=4.4,SNR=47
BDFB                                LR      LR      08 01 36.4
      comp=Z,36µm,18.3s,baz=60,slow=37
BDFB  Brasilia           83.74 244  P       P       07 22 39.0 +1.1
BDFB                                pmax    pmax
      comp=Z,46nm,0.8s
BDFB  Brasilia           83.74 244  P       P       07 22 39.0 +1.1
W41B  Gary Mavity, V     83.77 311  P       P       07 22 38.1 +0.3
      baz=46,SNR=70
W41B                                S       S       07 33 02.3 +1.5
      baz=46
KUR   Kuril'sk           83.98  34⇑iP       P       07 22 38.7  0.0
KUR                                eS       S       07 33 00.7 -1.7
KUR                                 SS      SS      07 38 34.8 +5.6
KUR                                 pmax    pmax
      comp=Z,273nm,1.8s
KUR                                 pmax    pmax
      comp=N,153nm,1.4s
KUR                                 MLR     MLR
      comp=Z,30µm,19.0s
KUR                                 MLR     MLR
      comp=E,34µm,16.0s
KUR                                 MLR     MLR
      comp=N,25µm,17.0s
YUK   Yuzh-Kuril'sk      84.00  36c iP      P       07 22 37.8 -1.0
YUK                                i S      S       07 33 00.8 -1.9
YUK                                eSS      SS      07 38 38.0 +8.4
YUK                                 pmax    pmax
      comp=N,155nm,1.3s
YUK                                 pmax    pmax
      comp=Z,1µm,1.3s
JTM   Tenmabayashi       84.09  41  P       P       07 22 38.2 -1.2
KRJI  Kerinci            84.22  97  P       P       07 22 40.4 -0.1
      comp=Z,8µmcomp=Z,11µmcomp=Z,827nm,1.1s
ERM   Erimo              84.23  39⇓eP       P       07 22 40.1 +0.1
ERM                                 pmax    pmax
      comp=Z,345nm,1.3s
ERM                                 MLR     MLR
      comp=Z,40µm,19.0s
ERM   Erimo              84.23  39  P       P       07 22 40.1 +0.1
ERM   Erimo              84.23  39  P       P       07 22 40.2 +0.2
OHAK  Old Harbor         84.32 357  P       P       07 22 40.7 +0.5
      baz=4.8
DUB01 Friburgo-RJ        84.37 236 eP       P       07 22 41.5 +0.5
X40A  Basin Creek Fa     84.59 310  P       P       07 22 42.2 +0.2
      baz=46,SNR=56
X40A                                S       S       07 33 08.3 -0.7
      baz=46
W39A  Magazine           84.66 311  P       P       07 22 43.0 +0.6
      baz=46,SNR=24
W39A                                S       S       07 33 11.5 +1.8
      baz=46
VBMS  Vicksburg          84.73 307  P       P       07 22 43.3 +0.5
      baz=47,SNR=10
VBMS                                S       S       07 33 10.1 -0.3
      baz=47
URIC  Uribia, Colomb     84.74 281 eP       P       07 22 43.9 +0.8
MIAR  Mount Ida          84.99 311  P       P       07 22 44.7 +0.7
MIAR                                pmax    pmax
      comp=Z,207nm,1.0s
MIAR  Mount Ida          84.99 311  P       P       07 22 45.0 +1.0
      baz=46,SNR=55
MIAR                                S       S       07 33 12.2 -0.8
      baz=46
MIAR  Mount Ida          84.99 311  P       P       07 22 44.7 +0.7
OGNE  Ogallala           85.00 320  P       P       07 22 44.6 +0.5
      baz=41
OGNE                                S       S       07 33 14.9 +1.7
      baz=41
OGNE  Ogallala           85.00 320  IAMs_20 IAMs_20 07 59 04.5
      comp=Z,18µm,20.0s
SII   Sitkinak Islan     85.02 357  IAMs_20 IAMs_20 08 06 20.2
      comp=Z,25µm,20.0s
MACA  Manacapuru-AM      85.11 262 eP       P       07 22 46.4 +1.5
RLMT  Red Lodge          85.14 327  P       P       07 22 45.8 +0.9
      baz=37,SNR=22
RLMT                                S       S       07 33 16.3 +1.7
      baz=37
RLMT  Red Lodge          85.14 327  IAMs_20 IAMs_20 08 02 26.5
      comp=Z,24µm,20.0s
BSCB  Bom Sucesso        85.19 238 eP       P       07 22 45.1 -0.1
VAS01 Vassouras-RJ       85.21 237 eP       P       07 22 46.2 +1.1
TUL1  Leonard            85.32 313  P       P       07 22 46.1 +0.5
      baz=45,SNR=58
TUL1                                S       S       07 33 23.2 +7.0
      baz=45
TUL1  Leonard            85.32 313  IAMs_20 IAMs_20 08 01 42.5
      comp=Z,20µm,18.0s
KS20  Mayfield South     85.37 315  IAMs_20 IAMs_20 08 03 11.6
      comp=Z,18µm,21.0s
KS21  Milan North St     85.39 315  IAMs_20 IAMs_20 08 01 06.1
      comp=Z,20µm,21.0s
CBKS  Cedar Bluff        85.40 317  P       P       07 22 46.6 +0.5
      baz=42,SNR=47
CBKS                                S       S       07 33 16.9 -0.1
      baz=42
CBKS  Cedar Bluff        85.40 317  IAMs_20 IAMs_20 08 01 33.2
      comp=Z,24µm,19.0s
Z41A  Richland Creek     85.42 309  P       P       07 22 47.3 +1.1
      baz=46,SNR=45
Z41A                                S       S       07 33 20.1 +2.8
      baz=46
SDV   Santo Domingo      85.42 278 eP       P       07 22 49.4 +2.7
SDV   Santo Domingo      85.42 278 eP       P       07 22 47.2 +0.5
SDV   Santo Domingo      85.42 278  P       P       07 22 47.0 +0.3
SDV                                 IAmb    IAmb    07 22 52.9
      comp=Z,101nm,0.8s
IPMB  Ipameri, GO        85.46 243 eP       P       07 22 47.1 +0.5
MASI  Maura Aman, Be     85.48  98  P       P       07 22 46.7 -0.1
      comp=Z,7µmcomp=Z,363nm,1.3s
JMJ   Miyako jima 2      85.50  62  P       P       07 22 52.2 +5.5
BLOK  Blackwell          85.52 315          P       07 22 47.0 +0.3
NEW   Newport            85.61 333  P       P       07 22 47.4 +0.4
NEW                                 pmax    pmax
      comp=Z,56nm,1.9s
NEW   Newport            85.61 333  P       P       07 22 47.3 +0.4
      baz=32,SNR=22
NEW                                 S       S       07 33 18.6 -0.2
      baz=32
MAJO  Matsushiro         85.63  46d iP      P       07 22 46.3 -1.0
MAJO                                pmax    pmax
      comp=Z,128nm,1.3s
MAJO  Matsushiro         85.63  46  P       P       07 22 46.0 -1.3
MAJO  Matsushiro         85.63  46  P       P       07 22 46.1 -1.2
MJAR  Matsushiro Arr     85.63  46  P       P       07 22 46.8 -0.5
      comp=Z,53nm,1.0s,baz=329,slow=3.5,SNR=28
MJAR                                LR      LR      08 02 35.5
      comp=Z,15µm,20.4s,baz=335,slow=37
MJAR  Matsushiro Arr     85.63  46  P       P       07 22 46.2 -1.1
MJAR                                IAmb    IAmb    07 22 55.2
      comp=Z,164nm,0.9s
DSRI  Dabo               85.64  94  P       P       07 22 47.1 -0.5
      comp=Z,3µmcomp=Z,69nm,1.3s
MSO   Missoula           85.64 331  P       P       07 22 47.4 +0.2
      baz=34,SNR=16
MSO                                 S       S       07 33 18.6 -0.8
      baz=34
MSO   Missoula           85.64 331  P       P       07 22 47.1 -0.2
MSO                                 IAmb    IAmb    07 23 47.0
      comp=Z,145nm,1.6s
BOZ   Bozeman (W)        85.74 329  P       P       07 22 48.5 +0.7
      baz=36,SNR=14
BOZ                                 S       S       07 33 21.2 +0.8
      baz=36
BOZ   Bozeman (W)        85.74 329  IAMs_20 IAMs_20 08 04 49.4
      comp=Z,23µm,20.0s
INU   Inuyama            85.81  47  P       P       07 22 47.2 -0.9
CHIR  Chirikof Islan     85.81 358  IAMs_20 IAMs_20 08 06 17.1
      comp=Z,20µm,21.0s
K22A  Casper             85.86 324  P       P       07 22 47.9 -0.6
      baz=39,SNR=8.0
K22A                                S       S       07 33 21.0 -0.8
      baz=39
OK030 Cody Creek RV      85.87 314  IAMs_20 IAMs_20 08 00 20.0
      comp=Z,25µm,20.0s
OK031 S. Brethren Rd     85.88 314  IAMs_20 IAMs_20 08 00 21.4
      comp=Z,23µm,20.0s
MAN01 Angra dos Reis     85.96 237 eP       P       07 22 49.7 +0.7
KSI   Kapahiang          86.07  98  P       P       07 22 49.4 -0.4
      comp=Z,291nm,0.8s
JOW   Kunigami           86.20  59  P       P       07 22 51.6 +1.4
CLDB  Colider            86.27 253 eP       P       07 22 51.2 +0.6
H17A  Grant Village      86.28 327  P       P       07 22 52.8 +2.2
      baz=36,SNR=22
H17A                                S       S       07 33 29.5 +3.6
      baz=36
DLMT  Dillon             86.32 329  IAMs_20 IAMs_20 08 00 33.8
      comp=Z,23µm,20.0s
SDPT  Sand Point         86.34   1  P       P       07 22 49.5 -0.8
      baz=359
PHWY  Pilot Hill         86.41 322  IAMs_20 IAMs_20 08 00 01.6
      comp=Z,25µm,21.0s
ARAG  Araguaiana, MT     86.49 247 eP       P       07 22 51.8 +0.2
FLWY  Flagg Ranch        86.58 327  IAMs_20 IAMs_20 08 04 15.7
      comp=Z,26µm,21.0s
KSCO  Kaye Shedlock'     86.75 319  P       P       07 22 53.5 +0.6
      baz=41
KSCO                                S       S       07 33 33.0 +2.5
      baz=41
MNAI  Manna              86.80  98  P       P       07 22 53.8 +0.5
      comp=Z,171nm,1.1s
MOOW  Moose Ponds        86.87 327  P       P       07 22 53.7 +0.2
MOOW                                IAMs_20 IAMs_20 08 04 59.4
      comp=Z,25µm,20.0s
LHSI  Lahat              86.90  97  P       P       07 22 51.9 -1.9
      comp=Z,6µmcomp=Z,218nm,0.9s
LOHW  Long Hollow        86.92 327  IAMs_20 IAMs_20 08 04 37.7
      comp=Z,24µm,22.0s
LL6C  La Loma 6 Bece     86.94 280 eP       P       07 22 56.3 +2.3
N23A  Red Feather La     86.96 322  P       P       07 22 54.5 +0.5
      baz=39,SNR=24
N23A                                S       S       07 33 34.8 +2.2
      baz=39
FXWY  Fox Creek          87.08 327  IAMs_20 IAMs_20 08 04 53.9
      comp=Z,25µm,22.0s
SNOW  Snow King Moun     87.10 327  IAMs_20 IAMs_20 08 04 43.6
      comp=Z,25µm,22.0s
BW06  Boulder Array      87.14 326  P       P       07 22 54.2 -0.7
      baz=37,SNR=12
BW06                                S       S       07 33 34.7 +0.4
      baz=37
BW06  Boulder Array      87.14 326  P       P       07 22 53.1 -1.7
PD31  Pinedale Array     87.14 326  P       P       07 22 53.8 -1.1
PD31                                IAmb    IAmb    07 23 08.5
      comp=Z,201nm,2.0s
PDAR  Pinedale Array     87.14 326  P       P       07 22 54.0 -0.8
      comp=Z,3.4nm,0.7s,baz=69,slow=4.9,SNR=18
PDAR                                LR      LR      08 05 19.4
      comp=Z,22µm,18.3s,baz=40,slow=38
PDAR  Pinedale Array     87.14 326  P       P       07 22 53.4 -1.5
TPAW  Teton Pass         87.17 327  IAMs_20 IAMs_20 08 04 57.2
      comp=Z,24µm,22.0s
C06D  Leavenworth        87.19 335  P       P       07 22 54.6 -0.1
      baz=29
REDW  Red Top Meadow     87.23 327  IAMs_20 IAMs_20 08 03 46.9
      comp=Z,23µm,21.0s
PMBI  Palembang          87.31  96  IAMs_20 IAMs_20 08 07 12.8
      comp=Z,18µm,19.0s
PARB  Paraibuna          87.38 237 eP       P       07 22 56.7 +0.8
PDRB  Porto dos Gac      87.44 253 eP       P       07 22 57.1 +0.8
NATX  Nacogdoches        87.58 310  P       P       07 22 58.3 +1.4
      baz=45
NATX                                S       S       07 33 41.1 +2.7
      baz=45
ISCO  Idaho Springs      87.64 321  P       P       07 22 56.9 -0.6
ISCO                                pmax    pmax
      comp=Z,60nm,1.2s
ISCO                                MLR     MLR
      comp=Z,24µm,21.0s
ISCO  Idaho Springs      87.64 321  P       P       07 22 57.6 +0.2
      baz=39,SNR=15
ISCO                                S       S       07 33 41.0 +1.6
      baz=39
ISCO  Idaho Springs      87.64 321  P       P       07 22 56.9 -0.6
ISCO                                IAMs_20 IAMs_20 08 00 56.3
      comp=Z,24µm,21.0s
UNV   Unalaska Valle     87.65   4  P       P       07 23 06.6  +10
BB19B Bebedouro          87.77 241 eP       P       07 22 58.5 +0.7
AHID  Auburn Hatcher     87.82 327  IAMs_20 IAMs_20 08 03 55.5
      comp=Z,25µm,21.0s
MDSI  Maura Dua          87.82  97  P       P       07 22 57.9 -0.3
      comp=Z,3µmcomp=Z,3µmcomp=Z,86nm,1.3s
WMOK  Wichita Mounta     87.86 314  P       P       07 22 58.9 +0.8
WMOK                                pmax    pmax
      comp=Z,146nm,1.1s
WMOK  Wichita Mounta     87.86 314  P       P       07 22 59.0 +0.8
      baz=43,SNR=42
WMOK                                S       S       07 33 45.0 +4.1
      baz=43
PPBI  Pangkal Pinang     87.90  94  P       P       07 22 57.4 -1.2
RCLB  Rio Claro- Sao     88.02 239 eP       P       07 22 59.7 +0.7
LWLI  Liwa               88.06  98  P       P       07 23 00.5 +1.0
      comp=Z,253nm,1.2s
Q24A  Divide             88.06 321  P       P       07 22 59.5 +0.1
      baz=39,SNR=6.3
Q24A                                S       S       07 33 43.0 -0.4
      baz=39
ITRB  Iturama            88.12 243 eP       P       07 23 01.1 +1.7
SMLC  San Martn de       88.14 280 eP       P       07 23 00.4 +0.6
D03D  Eldon              88.24 336  P       P       07 23 00.9 +1.2
      baz=28
SJCC  San Jacinto, C     88.31 281 eP       P       07 23 02.4 +1.8
KLSI                     88.38  97  P       P       07 22 59.8 -1.0
      comp=Z,3µmcomp=Z,2µmcomp=Z,64nm,1.3s
HLID  Hailey             88.54 329  P       P       07 23 01.6 +0.2
      baz=34
ADK   Adak               88.57  11  IAMs_20 IAMs_20 08 05 31.1
      comp=Z,12µm,20.0s
KLI   Kotabumi           88.58  97  P       P       07 22 58.1 -3.7
      comp=Z,214nm,0.4s
O20A  White River Ci     88.64 323  P       P       07 23 01.6 -0.4
      baz=38,SNR=11
KASI  Kota Agung         88.72  98  P       P       07 23 01.7 -0.7
      comp=Z,9µmcomp=Z,4µmcomp=Z,195nm,0.9s
KSM   Kuching            88.91  89  P       P       07 23 05.0 +1.6
LUBP  Lubang             88.94  73 eP       P       07 23 08.0 +4.5
HWUT  Hardware Ranch     88.96 326  P       P       07 23 02.9 -0.6
HWUT                                IAmb    IAmb    07 23 25.5
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	comp=Z,80nm,0.9s						
WHTX	Lake Whitney,	89.08	311	P	P	07 23 05.1	+1.1
	baz=44						
WHTX				S	S	07 33 52.8	+0.2
	baz=44						
T25A	Trinidad	89.09	319	P	P	07 23 04.6	+0.4
	baz=40,SNR=8.7						
T25A				S	S	07 33 52.6	-0.4
	baz=40						
PET01	Itanhaem-SP	89.13	238	eP	P	07 23 05.1	+1.1
RUSC	La Rusia	89.18	277	eP	P	07 23 07.6	+2.3
SDCO	Great Sand Dun	89.18	320	P	P	07 23 04.4	-0.3
	baz=39,SNR=23						
SDCO				S	S	07 33 53.0	-0.9
	baz=39						
SDCO	Great Sand Dun	89.18	320	P	P	07 23 03.5	-1.2
BLSI	Bandar Lampung	89.20	97	P	P	07 22 57.9	-6.8
	comp=Z,6µmcomp=Z,263nm,1.2s						
CRZF	Crozet Islands	89.25	159	IAMs_20	IAMs_20	08 07 12.0	
	comp=Z,18µm,20.0s						
AMTX	Amarillo	89.35	316	IAMs_20	IAMs_20	08 06 42.1	
	comp=Z,18µm,19.0s						
MOTC	Monteria, Cord	89.38	281	eP	P	07 23 07.6	+2.0
SALV	Santo Antonio	89.43	249	eP	P	07 23 06.7	+1.0
TPI	Tanjungpandan	89.45	94	P	P	07 23 05.7	-0.2
	comp=Z,3µmcomp=Z,134nm,1.4s						
PTGC	Puerto Gaitan,	89.49	275	eP	P	07 23 06.5	+0.4
ZARC	Zaragoza, Cauc	89.56	279	eP	P	07 23 06.8	+0.4
HKT	Hockley	89.57	309c	iP	P	07 23 07.1	+0.9
HKT				pmax	pmax		
	comp=Z,29nm,1.4s						
HKT				MLR	MLR		
	comp=Z,38µm,21.0s						
HKT	Hockley	89.57	309	P	P	07 23 07.1	+0.9
HKT				IAmb	IAmb	07 23 20.0	
	comp=Z,104nm,1.2s						
JLU	Jordanelle	89.72	326	P	P	07 23 06.1	-1.0
JLU				IAmb	IAmb	07 23 19.5	
	comp=Z,200nm,1.5s						
CTU	Camp Tracy	89.78	326	P	P	07 23 07.1	-0.3
SBUM	Sibu	89.81	87	P	P	07 23 10.0	+2.4
S22A	4UR Ranch, Cre	89.84	321	P	P	07 23 07.8	0.0
	baz=38,SNR=15						
S22A				S	S	07 34 01.7	+1.6
	baz=38						
ABTX	Abilene, Hawle	89.89	313	P	P	07 23 08.8	+1.0
	baz=42,SNR=18						
ABTX				S	S	07 34 00.3	+0.1
	baz=42						
UREC	San Jos de Ur	89.92	280	eP	P	07 23 08.9	+0.7
PP1B	Ponte de Pedra	89.94	247	eP	P	07 23 09.7	+1.6
PCMB	Pacaembu	90.02	242	eP	P	07 23 09.1	+0.8
FRTB	Fartura	90.02	240	eP	P	07 23 09.0	+0.7
435B	Jarrell	90.03	311	P	P	07 23 09.2	+0.8
	baz=44						
435B				S	S	07 34 00.1	-1.4
	baz=44						
SPBC	San Pablo de B	90.09	277	eP	P	07 23 10.2	+1.1
SBJI	Serang	90.35	97	P	P	07 23 10.6	+0.5
	comp=Z,8µmcomp=Z,427nm,2.0s						
DUG	Dugway, Tooele	90.66	326	P	P	07 23 11.6	+0.2
DUG				pmax	pmax		
	comp=Z,61nm,1.0s						
DUG	Dugway, Tooele	90.66	326	P	P	07 23 11.4	0.0
	baz=34,SNR=32						
DUG	Dugway, Tooele	90.66	326	IAMs_20	IAMs_20	08 10 00.7	
	comp=Z,17µm,20.0s						
SAML	Samuel	90.66	259	P	P	07 23 11.0	-0.5
SAML				pmax	pmax		
	comp=Z,669nm,1.2s						
SAML	Samuel	90.66	259	P	P	07 23 11.0	-0.5
STKI	Sintang	90.70	89	P	P	07 23 12.5	+0.7
VILC	Villavicencio,	90.76	276	eP	P	07 23 15.1	+2.9
ROSC	El Rosal	90.79	277	P	P	07 23 13.9	+1.2
	comp=Z,18nm,0.5s,baz=137,slow=11,SNR=16						
ROSC				LR	LR	08 00 31.5	
	comp=Z,14µm,21.8s,baz=42,slow=33						
ROSC	El Rosal	90.79	277	eP	P	07 23 17.1	+4.4
PINE	Pine Mountain	90.82	333	P	P	07 23 12.3	+0.1
HELC	Santa Helena	90.89	279	eP	P	07 23 14.7	+1.6
GUVC	San Jose del G	90.90	274	eP	P	07 23 15.8	+3.1
VILB	Vilhena	90.90	254	eP	P	07 23 13.4	+0.8
TIJ01	Guaruva-PR	90.98	238	eP	P	07 23 13.3	+0.4
MVCO	Mesa Verde	91.08	322	P	P	07 23 14.1	+0.6
	baz=37						
MVCO	Mesa Verde	91.08	322	IAMs_20	IAMs_20	08 05 15.2	
	comp=Z,22µm,20.0s						
DBJI	Dramaga	91.10	97	P	P	07 23 14.7	+1.1
	comp=Z,14µmcomp=Z,335nm,1.2s						
WVOR	Wild Horse Val	91.15	331	P	P	07 23 14.1	+0.5
WVOR				pmax	pmax		
	comp=Z,44nm,1.8s						
GUY2C	Guyana, Caldas	91.36	278	eP	P	07 23 17.5	+2.0
J05D	Fort Rock, OR	91.36	333	P	P	07 23 14.2	-0.4
	baz=29						
CBOC	Ciudad Bolivar	91.47	279	eP	P	07 23 16.8	+1.2
JCT	Junction City	91.56	312	P	P	07 23 16.2	+0.6
	baz=42						
JCT				S	S	07 34 16.6	+1.0
	baz=42						
PTLB	Pontes e Lacer	91.68	252	eP	P	07 23 17.1	+1.0
SPMM	Sapulut	91.71	83	P	P	07 23 18.0	+1.5
ANMO	Albuquerque	91.83	319⇓	eP	P	07 23 17.6	+0.6
ANMO				pmax	pmax		
	comp=Z,19nm,1.8s						
ANMO				MLR	MLR		
	comp=Z,24µm,20.0s						
ANMO	Albuquerque	91.83	319	P	P	07 23 16.7	-0.3
	baz=39						
ANMO				S	S	07 34 25.2	+6.9
	baz=39						
ANMO	Albuquerque	91.83	319	P	P	07 23 17.3	+0.3
ANMO	Albuquerque	91.83	319	IAMs_20	IAMs_20	08 03 29.5	
	comp=Z,23µm,21.0s						
ANIL	Santa Ana	91.85	277	eP	P	07 23 22.3	+4.8
CNJI	Cibinong	91.87	98	P	P	07 23 14.3	-2.8
	comp=Z,5µmcomp=Z,4µmcomp=Z,246nm,1.3s						
PRAC	Prado	91.93	276	eP	P	07 23 17.5	-0.1
LEM	Lembang	91.95	97	P	P	07 23 18.1	+0.4
	comp=Z,30nm,0.4s,baz=339,slow=6.2,SNR=11						
ORTC	Ortega, Tolima	92.09	277	eP	P	07 23 18.2	-0.1
MACC	Macarena, Meta	92.10	274	eP	P	07 23 18.8	+0.6
K04D	Chiloquin, OR	92.13	333	P	P	07 23 18.7	+0.6
	baz=28						
PLMC	San Jos del P	92.27	278	eP	P	07 23 20.9	+1.7
SOLC	Bahia Solano	92.32	280	eP	P	07 23 23.6	+4.3
BCIP	Isla Barro Col	92.33	284	eP	P	07 23 20.5	+1.2
BCIP	Isla Barro Col	92.33	284	IAMs_20	IAMs_20	07 58 25.5	
	comp=Z,15µm,22.0s						
AQDB	Aquidauana	92.39	246	eP	P	07 23 16.9	-2.5
PTGB	Pitanga	92.63	240	eP	P	07 23 20.9	+0.4
L04D	Klamath Falls	92.68	333	P	P	07 23 20.5	-0.2
	baz=28						
Y22D	IRIS PASSCAL I	92.75	319	IAMs_20	IAMs_20	08 05 46.8	
	comp=Z,18µm,20.0s						
833A	Chaparral WMA,	92.90	310	P	P	07 23 22.9	+1.1
	baz=43						
833A				S	S	07 34 26.6	-1.0
	baz=43						
M04C	Macdoel	92.90	333	P	P	07 23 21.3	-0.4
	baz=28						
YOTC	Yotoco, Valle	92.90	277	eP	P	07 23 22.0	-0.1
TBTG	Tabatinga, AM	92.93	267	eP	P	07 23 23.6	+1.5
TBTG	Tabatinga, AM	92.93	267	eP	P	07 23 22.4	+0.4
CMJI	Cimerak	93.18	97	P	P	07 23 23.2	0.0
	comp=Z,2µmcomp=Z,1µmcomp=Z,40nm,1.0s						
TER01	Tubaro-SC	93.23	236	eP	P	07 23 24.0	+1.0
YBH	Yreka Blue Hor	93.25	333	IAMs_20	IAMs_20	08 06 45.7	
	comp=Z,21µm,19.0s						
MARP	Paez Belalcaza	93.31	276	eP	P	07 23 25.7	+1.5
R11A	Troy Canyon, C	93.39	327	P	P	07 23 24.6	+0.5
	baz=33						
ETMB	Extrema	93.53	260	eP	P	07 23 25.6	+0.8
M02C	Callahan	93.60	333	P	P	07 23 24.9	0.0
	baz=28						
MNTX	Cornudas Mount	93.78	316	P	P	07 23 26.0	+0.2
	baz=39						
MNTX	Cornudas Mount	93.78	316	IAMs_20	IAMs_20	08 06 28.3	
	comp=Z,18µm,19.0s						
WUAZ	Wupatki	93.82	323	P	P	07 23 26.8	+0.7
	baz=36						
WUAZ	Wupatki	93.82	323	IAMs_20	IAMs_20	08 06 01.6	
	comp=Z,15µm,20.0s						
N02D	Trinity Center	93.92	333	P	P	07 23 26.2	-0.1
	baz=28						
PCON	Cinco Dias	93.97	276	eP	P	07 23 30.1	+2.5
PTLC	Puerto Leguiza	94.06	273	eP	P	07 23 29.1	+1.8
O03E	Paynes Creek	94.19	332	P	P	07 23 30.5	+2.9
	baz=28						
SOTA	Rioblanco	94.25	276	eP	P	07 23 30.8	+2.0
121A	Cookes Peak, D	94.41	318	P	P	07 23 28.1	-0.8
	baz=38						
NVAR	Mina Array Bea	94.45	329	P	P	07 23 29.0	0.0
	comp=Z,4.8nm,1.0s,baz=44,slow=3.5,SNR=12						
NVAR				PP	PP	07 27 21.6	+6.0
	comp=Z,3.4nm,0.9s,baz=48,slow=6.4,SNR=4.3						
NVAR				PKKPbc	PKKPbc	07 40 30.6	+3.4
	comp=Z,1.2nm,0.7s,baz=196,slow=5.7,SNR=6.4						
NVAR				PKPPKP		07 48 46.5	
	comp=Z,0.5nm,0.8s,baz=204,slow=3.3,SNR=3.9						
NVAR				LR	LR	08 10 09.9	
	comp=Z,24µm,19.0s,baz=32,slow=38						
NVAR	Mina Array Bea	94.45	329	P	P	07 23 28.3	-0.7
BOAB	BOACO BROADBAN	94.59	290	P	P	07 23 29.6	-0.1
TX31	Lajitas Ar. Si	94.64	314	P	P	07 23 29.9	0.0
TXAR	Lajitas Array	94.64	314	P	P	07 23 29.9	0.0
	comp=Z,8.2nm,0.9s,baz=71,slow=3.1,SNR=27						
TXAR				PKKPbc	PKKPbc	07 40 30.7	+4.3
	comp=Z,1.1nm,0.9s,baz=165,slow=5.2,SNR=3.8						
TXAR				LR	LR	08 05 18.1	
	comp=Z,18µm,21.8s,baz=0.0,slow=35						
TXAR	Lajitas Array	94.64	314	P	P	07 23 29.7	-0.2
TX32	Lajitas Array	94.64	314	P	P	07 23 30.8	+0.9
TGUH	Tegucigalpa,Un	94.71	292	IAMs_20	IAMs_20	08 03 57.7	
	comp=Z,15µm,20.0s						
CNLB	Canela	94.87	236	eP	P	07 23 30.6	-0.1
UGM	Wanagama	94.88	96	P	P	07 23 30.0	-1.0
	comp=Z,3µmcomp=Z,120nm,1.9s						
UGM	Wanagama	94.88	96	IAMs_20	IAMs_20	08 11 46.2	
	comp=Z,11µm,21.0s						
HDC	Heredia	95.02	287	IAMs_20	IAMs_20	08 00 36.6	
	comp=Z,16µm,22.0s						
JTS	Las Juntas de	95.46	288	IAMs_20	IAMs_20	08 01 29.1	
	comp=Z,21µm,21.0s						
BBKI	Banjar Baru	95.51	90	P	P	07 23 38.8	+4.9
FURC	Furnace Creek,	95.52	327	P	P	07 23 35.0	+1.4
	baz=32						
PCJI	Pacitan	95.56	96	P	P	07 23 33.3	-0.8
	comp=Z,73nm,1.1s						
CMB	Columbia Colle	95.62	330	IAMs_20	IAMs_20	08 06 23.8	
	comp=Z,17µm,20.0s						
CWC	Cottonwood Cre	96.06	328	P	P	07 23 37.1	+0.8
	baz=31						
TULM	Tulcn-Chalpat	96.06	276	eP	P	07 23 39.6	+2.6
PDMCI	Parker Dam,Lak	96.11	324	P	P	07 23 37.4	+1.0
	baz=34						
TUC	Tucson	96.12	320	P	P	07 23 36.1	-0.4
TUC				pmax	pmax		
	comp=Z,29nm,1.2s						
TUC				MLR	MLR		
	comp=Z,36µm,21.0s						
TUC	Tucson	96.12	320	P	P	07 23 37.3	+0.7
	baz=36						
TUC	Tucson	96.12	320	P	P	07 23 36.1	-0.4
MPMC	Manual Prospec	96.13	327	P	P	07 23 37.0	+0.3
	baz=32						
MCCM	Marconi Confer	96.47	332	IAMs_20	IAMs_20	08 07 37.2	
	comp=Z,21µm,21.0s						
IRM	Iron Mountain	96.69	324	P	P	07 23 40.0	+0.9
	baz=33						
OTAV	Otavalo	96.87	276	P	P	07 23 41.4	+0.7
OTAV				pmax	pmax		
	comp=Z,59nm,1.3s						
OTAV				MLR	MLR		
	comp=Z,8µm,22.0s						
OTAV	Otavalo	96.87	276	eP	P	07 23 40.9	+0.2
OTAV	Otavalo	96.87	276	P	P	07 23 41.4	+0.7
OTAV				IAmb	IAmb	07 23 52.5	
	comp=Z,59nm,1.3s						
ISA	Isabella, Lake	96.88	327	P	P	07 23 40.2	+0.2
	baz=31						
MPSI	Mapaga	97.11	84	P	P	07 23 40.1	-1.1
	comp=Z,2µmcomp=Z,1µmcomp=Z,31nm,1.4s						
SAO	San Andreas Ge	97.14	330	IAMs_20	IAMs_20	08 08 49.0	
	comp=Z,20µm,21.0s						
BC3	Big Chuckawall	97.25	324	P	Pdif	07 23 42.3	+0.5
	baz=33						
CPSB	Cacapava Do Su	97.28	237	eP	Pdif	07 23 41.5	-0.1
CPUP	Villa Florida	97.29	242	P	Pdif	07 23 42.1	+0.4
	comp=Z,6.8nm,1.2s,baz=50,slow=0.5,SNR=4.1						
CPUP				PP	PP	07 27 44.4	+5.7
	comp=Z,13nm,1.2s,baz=43,slow=7.2,SNR=5.7						
CPUP				LR	LR	08 09 06.3	
	comp=Z,77µm,18.9s,baz=52,slow=36						
CPUP	Villa Florida	97.29	242	eP	Pdif	07 23 41.8	+0.1
CZSB	Cruzeiro do Su	97.29	266	eP	Pdif	07 23 42.1	0.0
EDW2	Edwards Air Fo	97.35	327	P	Pdif	07 23 43.1	+0.9
	baz=31						
GMJI	Gumukmas	97.37	95	P	Pdif	07 23 49.5	+7.1
GLA	Glamis	97.47	323	P	Pdif	07 23 43.3	+0.6
	baz=34						
PFO	Pinyon Flats O	97.75	325	P	Pdif	07 23 44.0	0.0
PFO				pmax	pmax		
	comp=Z,34nm,1.2s						
PFO	Pinyon Flats O	97.75	325	P	Pdif	07 23 45.3	+1.2
	baz=32						
PFO	Pinyon Flats O	97.75	325	P	Pdif	07 23 44.0	0.0
PFO	Pinyon Flats O	97.75	325	IAMs_20	IAMs_20	08 12 19.4	
	comp=Z,15µm,18.0s						
PASC	Pasadena Art C	98.03	326	IAMs_20	IAMs_20	08 14 17.9	
	comp=Z,19µm,19.0s						
MRSI	Marisa	98.61	82	P	Pdif	07 23 57.4	+9.4
109C	Camp Elliot, M	98.64	325	IAMs_20	IAMs_20	08 10 01.2	
	comp=Z,18µm,20.0s						
ITQB	Itaqui	98.92	239	eP	Pdif	07 23 49.2	+0.3
LPAZ	La Paz	98.97	256	P	Pdif	07 23 50.4	+0.2
	comp=Z,1.7nm,0.8s,baz=26,slow=15,SNR=5.9						
LPAZ				PP	PP	07 27 57.0	+4.6
	comp=Z,7.2nm,1.1s,baz=82,slow=10,SNR=4.1						
LPAZ	La Paz	98.97	256	eP	Pdif	07 23 50.1	-0.1
SPSI	Sidrap Palu	99.68	87	P	Pdif	07 23 59.0	+6.3
KAPI	Kappang	100.31	88	P	Pdif	07 23 58.2	+2.7
PB16	IPOC Station P	101.25	256	IAMs_20	IAMs_20	08 17 10.1	
	comp=Z,16µm,20.0s						
PB12	IPOC Station P	102.04	256	IAMs_20	IAMs_20	08 11 34.1	
	comp=Z,15µm,22.0s						
SLBS	Sierra La Lagu	102.55	314	IAMs_20	IAMs_20	08 16 18.6	
	comp=Z,13µm,18.0s						
PB01	IPOC Station P	102.85	253	IAMs_20	IAMs_20	08 13 00.7	
	comp=Z,17µm,19.0s						
NNA	Nana	103.11	265	IAMs_20	IAMs_20	08 11 55.7	
	comp=Z,15µm,21.0s						
LVC	Limon Verde	103.35	252	eP	Pdif	07 24 11.0	+1.8
PB07	IPOC Station P	103.55	253	IAMs_20	IAMs_20	08 18 43.4	
	comp=Z,14µm,21.0s						
EDFI	Ende, Flores	104.11	90	P	Pdif	07 24 10.3	-2.2
SYO	Syowa Base	108.30	173⇓	ePP	PP	07 29 01.2	+0.9
MBWA	Marble Bar	109.89	102	IAMs_20	IAMs_20	08 19 08.1	
	comp=Z,10µm,20.0s						
VNA1	Neumayer--Stat	110.98	190	PKiKP	PKiKP	07 28 43.6	+3.0
VNA2	Neumayer--Watz	111.12	190	PKiKP	PKiKP	07 28 44.7	+3.8
VNA2	Neumayer--Watz	111.12	190	Pdiff	Pdif	07 24 40.3	-1.9
SNAA	Sanae	111.29	188	PKKPab	PKKPab	07 39 44.1	+0.3
SNAA	Sanae	111.29	188	PKiKP	PKiKP	07 28 45.3	+3.9
SNAA	Sanae	111.29	188	Pdiff	Pdif	07 24 40.6	-2.4
VNA3	Neumayer Olymp	111.72	190	PKKPab	PKKPab	07 39 43.3	+1.5
VNA3	Neumayer Olymp	111.72	190	PKiKP	PKiKP	07 28 46.1	+4.0
VNA3	Neumayer Olymp	111.72	190	Pdiff	Pdif	07 24 44.2	-0.6
WAKE	Wake Island	114.18	35	IAMs_20	IAMs_20	08 23 49.1	
	comp=Z,11µm,22.0s						
NWAO	Narrogin (SRO)	114.43	113	IAMs_20	IAMs_20	08 23 23.5	
	comp=Z,9µm,19.0s						
PLCA	Paso Flores	114.57	237	PKKPbc	PKKPbc	07 39 28.8	+2.0
	comp=Z,3.7nm,1.0s,baz=105,slow=2.6,SNR=3.1						
WRKA	Warakurna	118.59	100	P	PKiKP	07 28 57.7	+0.9
PATS	Pohnpei	120.13	50	IAMs_20	IAMs_20	08 25 22.8	
	comp=Z,11µm,22.0s						
WB0	Warramunga Arr	120.49	92		PKPdf	07 28 59.6	-0.8
WRA	Warramunga Arr	120.55	92	Pdiff	Pdif	07 25 25.7	+0.4
	comp=Z,0.4nm,0.7s,baz=317,slow=4.0,SNR=2.6						
WRA				PKP	PKPdf	07 28 59.6	-1.0
	comp=Z,4.6nm,0.5s,baz=324,slow=1.6,SNR=47						
WRA				PP	PP	07 30 33.7	+5.8
	comp=Z,25nm,1.3s,baz=317,slow=7.3,SNR=8.9						
WRA				PKKPbc	PKKPab	07 39 06.8	-0.1
	comp=Z,1.3nm,0.7s,baz=113,slow=3.6,SNR=9.8						
WRA	Warramunga Arr	120.55	92	PKPdf	PKPdf	07 28 59.0	-1.5
WRAB	Tennant Creek	120.55	92	PKIKP	PKPdf	07 28 59.1	-1.5
WRAB	Tennant Creek	120.55	92		PKPdf	07 28 59.1	-1.5
WRAB	Tennant Creek	120.55	92	P	PKiKP	07 29 01.0	+0.3
WB2	Warramunga Arr	120.56	92		PKPdf	07 28 59.1	-1.5
WR0	Warramunga Arr	120.72	92	PKPdf	PKPdf	07 29 00.0	-0.9
FORT	Forrest	121.32	106	PKPdf	PKPdf	07 29 01.4	-0.3
FORT	Forrest	121.32	106	P	PKiKP	07 29 09.8	+7.9
POHA	Pohakuloa	121.76	356	IAMs_20	IAMs_20	08 23 10.3	
	comp=Z,10µm,20.0s						
PMSA	Palmer Station	122.05	210	eP	PKiKP	07 29 03.6	+1.5
ASAR	Alice Springs	122.22	96	Pdiff	Pdif	07 25 34.5	+1.8
	comp=Z,0.3nm,0.6s,baz=316,slow=5.1,SNR=2.4						
ASAR				PKP	PKPdf	07 29 01.8	-1.9
	comp=Z,8.8nm,0.6s,baz=312,slow=0.9,SNR=4.7						
ASAR				PP	PP	07 30 42.6	+3.3
	comp=Z,8.5nm,1.1s,baz=315,slow=4.9,SNR=4.5						
ASAR				PKKPbc	PKKPab	07 39 00.7	+1.1
	comp=Z,1.7nm,0.9s,baz=120,slow=3.7,SNR=12						
ASAR				SKKPbc	SKKPbc	07 42 57.6	+10
	comp=Z,2.4nm,1.1s,baz=126,slow=4.5,SNR=4.2						
ASAR	Alice Springs	122.22	96	PKIKP	PKPdf	07 29 03.1	-0.6
ASAR	Alice Springs	122.22	96	PKPdf	PKPdf	07 29 03.1	-0.6
AS31	Alice Springs	122.22	96	PKPdf	PKPdf	07 29 02.3	-1.5
COEN	Coen	123.99	80	PKPdf	PKiKP	07 29 07.9	+0.3
COEN	Coen	123.99	80	P	PKiKP	07 29 08.7	+1.1
JOHN	Johnston Islan	124.08	12	IAMs_20	IAMs_20	08 24 02.7	
	comp=Z,8µm,18.0s						
PMG	Port Moresby	124.18	73	PKIKP	PKPdf	07 29 06.6	-1.1
PMG	Port Moresby	124.18	73	PKPdf	PKPdf	07 29 06.6	-1.1
PMG	Port Moresby	124.18	73	P	PKiKP	07 29 10.4	+2.4
PMG	Port Moresby	124.18	73	P	PKiKP	07 29 08.0	0.0
PMG	Port Moresby	124.18	73	P	PKiKP	07 29 10.4	+2.4
PMG	Port Moresby	124.18	73	P	PKiKP	07 29 07.8	-0.2
CASY	Casey	124.69	151	PKPdf	PKiKP	07 29 09.7	+2.3
CASY	Casey	124.69	151	IAMs_20	IAMs_20	08 19 48.0	
	comp=Z,12µm,22.0s						
QIS	Mount Isa	125.01	89	P	PKiKP	07 29 10.0	+0.5
MULG	Mulgathing	125.63	103	P	PKiKP	07 29 10.2	-0.2
OOD	Oodnadatta	125.69	99	P	PKiKP	07 29 10.7	+0.1
MTSU	Mount Surprise	127.33	84	P	PKiKP	07 29 16.7	+2.5
BBOO	Buckleboo	128.29	104	PKPdf	PKiKP	07 29 16.1	+0.4
BBOO	Buckleboo	128.29	104	P	PKiKP	07 29 17.5	+1.8
QSPA	South Pole Qui	128.53	180		PKiKP	07 29 14.8	-0.4
LCRK	Leigh Creek	128.89	101	P	PKiKP	07 29 18.8	+1.9
WHYH	Whyalla	129.54	104	P	PKiKP	07 29 22.7	+4.6
INKA	Innaminka	129.59	96	P	PKiKP	07 29 20.4	+2.0
CTA	Charters Tower	129.94	84	P	PKiKP	07 29 22.2	+2.9
CTAO	Charters Tower	129.94	84	PKIKP	PKiKP	07 29 19.2	-0.2
CTAO	Charters Tower	129.94	84	PKPdf	PKiKP	07 29 19.1	-0.2
CTAO	Charters Tower	129.94	84	P	PKiKP	07 29 22.2	+2.9
CTAO	Charters Tower	129.94	84	P	PKiKP	07 29 20.1	+0.8
HTT	Hallett	130.73	104	P	PKiKP	07 29 23.0	+2.4
QLP	Quilpie	131.75	93	P	PKiKP	07 29 24.0	+1.2
STKA	Stephens Creek	132.12	101	PKhKP	PKPpre	07 29 11.4	
	comp=Z,2.7nm,0.9s,baz=352,slow=2.6,SNR=5.0						
STKA				PKP	PKiKP	07 29 22.8	-0.6
	comp=Z,6.9nm,0.8s,baz=350,slow=5.5,SNR=10						
STKA				SKPbc	SKPbc	07 32 47.6	-0.9
	comp=Z,18nm,0.8s,baz=324,slow=5.3,SNR=8.2						
STKA	Stephens Creek	132.12	101	PKIKP	PKiKP	07 29 23.3	-0.1
STKA	Stephens Creek	132.12	101		PKiKP	07 29 23.3	-0.1
HNR	Honiara	133.46	62	IAMs_20	IAMs_20	08 37 29.8	
	comp=Z,7µm,22.0s						
ARPS	Mount Arapiles	134.23	107	P	PKiKP	07 29 30.8	+3.3
CMSA	Cobar Meteorol	135.14	98	P	PKiKP	07 29 30.5	+1.0
RMQ	Roma	135.25	90	P	PKiKP	07 29 31.8	+1.9
BRAT	Ballarat	136.07	107	P	PKiKP	07 29 34.6	+3.4
RPN	Rapa Nui	136.84	270	IAMs_20	IAMs_20	08 33 13.9	
	comp=Z,9µm,20.0s						
VNDA	Vanda	137.76	168	PKP	PKiKP	07 29 32.4	-1.1
	comp=Z,3.9nm,1.1s,baz=192,slow=1.7,SNR=4.2						
YNG	Young	138.32	101	P	PKiKP	07 29 38.3	+2.4
CAN	Canberra	139.15	102	IAMs_20	IAMs_20	08 32 38.9	
	comp=Z,10µm,22.0s						
CAN	Canberra	139.15	102	P	PKiKP	07 29 38.5	+0.9
CAN	Canberra	139.15	102	P	PKiKP	07 29 37.0	-0.6
ARMA	Armidale	139.29	94	PKPdf	PKPdf	07 29 34.5	-1.4
ARMA	Armidale	139.29	94	P	PKPdf	07 29 35.7	-0.2
XMAS	Kiritimati	139.44	357	IAMs_20	IAMs_20	08 28 17.0	
	comp=Z,10µm,21.0s						
SYDH	Sydney Hard Ro	139.93	99	P	PKiKP	07 29 45.0	+5.8
MGCD	Mangrove Creek	140.01	98	P	PKiKP	07 29 45.5	+6.1
TAU	Tasmania Unive	140.05	114	IAMs_20	IAMs_20	08 41 19.6	
	comp=Z,8µm,21.0s						
KNTN	Kanton	142.56	20	IAMs_20	IAMs_20	08 31 47.4	
	comp=Z,9µm,22.0s						
SANVU	Saraoutou	142.69	61	IAMs_20	IAMs_20	08 37 55.2	
	comp=Z,7µm,22.0s						
SANVU	Saraoutou	142.69	61	P	PKiKP	07 29 50.1	+4.8
KOUNC	Koumac, New Ca	143.98	70	P	PKiKP	07 29 51.7	+3.8
KOUNC	Koumac, New Ca	143.98	70	P	PKiKP	07 29 50.7	+2.8
DVP	Devils Point	144.95	63	P	PKiKP	07 29 48.8	-1.1
LHI	Lord Howe Isla	145.56	91		PKPdf	07 29 45.4	-1.4
LHI	Lord Howe Isla	145.56	91	P	PKiKP	07 29 50.8	0.0
LHI	Lord Howe Isla	145.56	91	P	PKPab	07 29 48.7	+1.5
TAOE	Nuku Hiva Isla	145.60	325	ePKPab	PKPab	07 29 48.0	0.0
	comp=Z,1µm,1.2s						
TAOE	Nuku Hiva Isla	145.60	325	eSS	SS	07 52 00.5	+0.8
	comp=Z,8µm,30.6s						
TAOE	Nuku Hiva Isla	145.60	325	eLR	LR	08 17 42.0	
	comp=Z,15µm,23.4s						
LIFNC	LIFOU	146.28	68		PKPdf	07 29 47.0	-1.3
LIFNC				IAMs_20	IAMs_20	08 35 57.0	
	comp=Z,7µm,22.0s						
LIFNC	LIFOU	146.28	68	P	PKiKP	07 29 53.4	+0.8
LIFNC	LIFOU	146.28	68	P	PKiKP	07 29 52.4	-0.2
NOUC	Port Laguerre	146.41	71	P	PKPab	07 29 51.1	+0.4
NOUC	Port Laguerre	146.41	71	P	PKPab	07 29 50.3	-0.4
DZM	Mont Dzumac	146.49	70	ePKPbc	PKPab	07 29 51.0	-0.2
	comp=Z,417nm,1.4s						
DZM	Mont Dzumac	146.49	70	eSS	SS	07 52 15.3	+3.9
	comp=Z,5µm,28.4s						
DZM	Mont Dzumac	146.49	70	eLR	LR	08 18 16.4	
	comp=Z,25µm,26.1s						
DZM	Mont Dzumac	146.49	70		PKPbc	07 29 49.7	-0.5
DZM	Mont Dzumac	146.49	70	P	PKPab	07 29 51.4	+0.2
DZM	Mont Dzumac	146.49	70	P	PKPab	07 29 51.4	+0.2
ONTNC	Ouen Toro	146.64	71		PKPbc	07 29 50.2	-0.3
ONTNC	Ouen Toro	146.64	71	P	PKiKP	07 29 52.3	-1.0
ONTNC	Ouen Toro	146.64	71	P	PKPab	07 29 51.1	-0.5
YATNC	Mamie plateau,	146.81	70	P	PKPab	07 29 52.5	+0.2
YATNC	Mamie plateau,	146.81	70	P	PKPab	07 29 51.9	-0.4
OUENC	Ouen Island, N	147.00	70		PKPbc	07 29 50.8	-0.7
OUENC	Ouen Island, N	147.00	70	P	PKiKP	07 29 53.5	-0.5
OUENC	Ouen Island, N	147.00	70	P	PKPbc	07 29 51.9	+0.4
MARNC	Mare, Loyalty	147.29	68	P	PKiKP	07 29 54.7	0.0
MARNC	Mare, Loyalty	147.29	68	P	PKPab	07 29 53.1	-1.0
PINNC	Pines Island,	147.56	70	P	PKPab	07 29 57.1	+1.9
PINNC	Pines Island,	147.56	70	P	PKPab	07 29 56.7	+1.5
DGTI	Dogotuki	151.20	45	P	PKiKP	07 30 06.0	+3.1
DGTI	Dogotuki	151.20	45	P	PKiKP	07 30 05.5	+2.6
MSVF	Nonsavu	151.37	50	PKPbc	PKPbc	07 30 02.6	-0.2
	comp=Z,36nm,0.8s,baz=216,slow=2.3,SNR=15						
MSVF	Nonsavu	151.37	50	PKIKP	PKPbc	07 30 02.3	-0.5
MSVF	Nonsavu	151.37	50		PKPbc	07 30 02.3	-0.5
MSVF	Nonsavu	151.37	50	IAMs_20	IAMs_20	08 46 24.4	
	comp=Z,7µm,21.0s						
MSVF	Nonsavu	151.37	50	P	PKiKP	07 30 04.5	+1.2
MSVF	Nonsavu	151.37	50	P	PKiKP	07 30 04.4	+1.2
PTCN	Pitcairn Islan	151.75	290	IAMs_20	IAMs_20	08 49 45.7	
	comp=Z,7µm,22.0s						
AFI	Afiamalu	153.03	27	PKPbc	PKPbc	07 30 05.5	-1.1
	comp=Z,41nm,0.8s,baz=50,slow=7.9,SNR=3.8						
LKBA	Tubou, Lakemba	153.57	45	P	PKiKP	07 30 10.0	+2.3
PYZ	Puysegur Point	154.06	118	IAMs_20	IAMs_20	08 52 27.2	
	comp=Z,9µm,20.0s						
DCZ	Deep Cove	154.44	116	IAMs_20	IAMs_20	08 54 36.3	
	comp=Z,8µm,20.0s						
PPT2	Papeete2	157.28	335	eSS	SS	07 54 13.6	+5.3
	comp=Z,4µm,26.5s						
PPT2	Papeete2	157.28	335	eLR	LR	08 23 02.0	
	comp=Z,18µm,23.0s						
RPZ	Rata Peaks	157.32	112	PKPdf	PKPdf	07 30 03.2	-1.0
RPZ					PKPab	07 30 35.7	+0.2
OUZ	Omahuta	158.23	89	PKPdf	PKPdf	07 30 05.3	-0.2
OUZ				PKPab	PKPab	07 30 38.5	-1.1
TBI	Tubuai	162.50	328	eSS	SS	07 55 08.6	+5.2
	comp=Z,9µm,32.5s						
TBI	Tubuai	162.50	328	eLR	LR	08 25 22.2	
	comp=Z,17µm,27.8s						

NNC 17 07:15:06.2±0.9, 50.°04N×78.°95E, h0km, mb2.6, mpv2.3, 5C-4D Error ellipse: s-maj=24.9km s-min=4.4km az=65.0, Suspected Mining explosion., Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**0.64**	**336**	⇓P	Pg	07 15 18.4	-0.1
	8.4nm,0.5s						
KURBB				⇑S	Sg	07 15 28.2	+1.3
	49nm,0.6s						
KURK	**Kurchatov**	**0.71**	**343**	⇓P	Pg	07 15 19.8	-0.1
	3.6nm,0.5s						
KURK				⇑S	Sg	07 15 30.0	+1.0
	11nm,0.8s						
MAKZ	**Makanchi**	**3.81**	**147**	⇓Pg	Pb	07 16 15.8	+1.5
	0.4nm,0.5s						
MAKZ				⇑Lg	Lg	07 17 07.1	
	2.8nm,0.8s						
MK31	**Makanchi Array**	**3.94**	**144**	⇑Pn	Pn	07 16 10.4	+2.5
	0.1nm,0.2s,baz=324,slow=9.9,SNR=14						
MK31				⇑Pg	Pb	07 16 18.7	+2.2
	0.3nm,0.3s,baz=323,slow=15,SNR=6.5						
MK31				⇓Lg	Lg	07 17 12.6	
	1.5nm,0.6s,baz=327,slow=26,SNR=4.3						

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*THE **17** 07:18:11.9, 38°.69N×20°.65E, h13^{km}±1^{km}, ML3.4/6, Error ellipse: s-maj=3.2km s-min=0.6km az=96.0*

*ATH **17** 07:18:12.6, 38°.68N×20°.61E, h9^{km}±2^{km}, ML3.5/2, Error ellipse: s-maj=3.2km s-min=1.3km az=75.0*

ISC 17 07:18:12.0±0.9**, 38°.69N**±0°.02×**20°.59E**±0°.05**, h12**^{km}±5^{km}**,**
n20, σ0^{s}.52/32**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EVGI	**Lefkada island**	**0.08**	**143**	P	**Pg**	**07 18 14.6**	**0.0**
EVGI				S	**Sg**	**07 18 16.8**	**+0.3**
EVGI	**Lefkada island**	**0.08**	**143**	P	**Pg**	**07 18 14.5**	**0.0**
EVGI				S	**Sg**	**07 18 16.8**	**+0.3**
NYDR	**Nydri-Lefkada**	**0.09**	**72**	P	**Pg**	**07 18 14.3**	**-0.3**
NYDR				S	**Sg**	**07 18 16.0**	**-0.6**
	23µm,0.3s						
NYDR	**Nydri-Lefkada**	**0.09**	**72**	P	**Pg**	**07 18 14.4**	**-0.3**
NYDR				S	**Sg**	**07 18 16.2**	**-0.3**
LKD2	**Lefkada island**	**0.11**	**27**	P	**Pg**	**07 18 14.7**	**-0.4**
LKD2				S	**Sg**	**07 18 16.9**	**-0.4**
	24µm,0.2s						
LKD2	**Lefkada island**	**0.11**	**27**	P	**Pg**	**07 18 14.9**	**-0.2**
LKD2				S	**Sg**	**07 18 17.1**	**-0.1**
LKD2				AML	AML	07 18 20.5	
	comp=E,34540µm,0.5s						
LKD2				AML	AML	07 18 23.6	
	comp=N,42210µm,0.8s						
TSLK	**Tsoukalades, L**	**0.15**	**20**	P	**Pg**	**07 18 15.6**	**+0.1**
TSLK				S	**Sg**	**07 18 17.8**	**-0.2**
TSLK	**Tsoukalades, L**	**0.15**	**20**	P	**Pg**	**07 18 15.7**	**+0.2**
TSLK				S	**Sg**	**07 18 18.8**	**+0.8**
TSLK				AML	AML	07 18 20.5	
TSLK				AML	AML	07 18 22.0	
	comp=E,72364µm,0.5s						
KEF4	**Livadi, Kephal**	**0.45**	**197**	P	**Pg**	**07 18 20.8**	**0.0**
KEF4				S	**Sb**	**07 18 28.6**	**+0.1**
	comp=E,31µm,0.3s						
VLS	**Valsamata**	**0.51**	**180**	P	**Pg**	**07 18 21.6**	**-0.4**
VLS				S	**Sg**	**07 18 29.8**	**+1.1**
	comp=E,4µm,0.3s						
KEF3	**Kipouria, Keph**	**0.52**	**202**	P	**Pg**	**07 18 21.0**	**-1.2**
IGT	**Igoumenitsa**	**0.87**	**347**	P	**Pg**	**07 18 28.6**	**-0.2**
IGT				S	**Sb**	**07 18 41.6**	**+0.9**
	comp=E,3µm,0.4s						
IGT	**Igoumenitsa**	**0.87**	**347**	P	**Pg**	**07 18 28.8**	**0.0**
EVR	**Evrytania**	**0.98**	**76**	P	**Pb**	**07 18 30.9**	**0.0**
JAN	**Janina**	**0.99**	**12**	P	**Pg**	**07 18 30.1**	**-1.0**
JAN	**Janina**	**0.99**	**12**	P	**Pn**	**07 18 31.8**	**0.0**
ANX	**Ano Chora**	**1.04**	**95**	P	**Pg**	**07 18 31.8**	**-0.3**
EFP	**Efpalio**	**1.06**	**104**	P	**Pn**	**07 18 32.8**	**+0.1**
KEK	**Kerkira**	**1.20**	**329**	P	**Pn**	**07 18 34.0**	**-0.6**
KEK				S	**Sb**	**07 18 50.9**	**+0.8**
	comp=E,2µm,1.5s						
TRIZ	**Trizonia**	**1.21**	**105**	P	**Pn**	**07 18 34.7**	**0.0**

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*IDC **17** 07:19:37.2±1.4, 38°.91N×20°.66E, h0^{km}, mb4.2/7, mb1 4.2/8, mb1mx3.9/48, mbtmp4.2/8, ML3.9/1, Error ellipse: s-maj=31.3km s-min=24.2km az=153.0*

*ATH **17** 07:19:38.3, 38°.67N×20°.59E, h10^{km}±1^{km}, ML4.2/2, Error ellipse: s-maj=3.6km s-min=1.4km az=258.0*

*THE **17** 07:19:39.1, 38°.68N×20°.61E, h4^{km}±3^{km}, ML4.0/4, Error ellipse: s-maj=3.5km s-min=0.6km az=96.0*

ISC 17 07:19:38.3±0.8**, 38°.68N**±0°.03×**20°.62E**±0°.05**, h10**^{km}±4^{km}**,**
n26, σ1^{s}.17/37**, mb4.4**/7**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EVGI	**Lefkada island**	**0.06**	**154**	P	**Pg**	**07 19 40.5**	**+0.1**
EVGI				S	**Sg**	**07 19 42.1**	**+0.1**
	94µm,0.4s						
EVGI	**Lefkada island**	**0.06**	**154**	P	**Pg**	**07 19 40.6**	**+0.1**
EVGI				S	**Sg**	**07 19 42.3**	**+0.3**
NYDR	**Nydri-Lefkada**	**0.07**	**58**	P	**Pg**	**07 19 40.5**	**-0.1**
NYDR				S	**Sg**	**07 19 42.4**	**+0.2**
	142µm,0.4s						
NYDR	**Nydri-Lefkada**	**0.07**	**58**	P	**Pg**	**07 19 40.6**	**+0.1**
NYDR				S	**Sg**	**07 19 42.3**	**+0.1**
LKD2	**Lefkada island**	**0.12**	**14**	P	**Pg**	**07 19 41.2**	**0.0**
LKD2				S	**Sg**	**07 19 43.5**	**+0.2**
	161µm,0.3s						
LKD2	**Lefkada island**	**0.12**	**14**	P	**Pg**	**07 19 41.2**	**0.0**
LKD2				S	**Sg**	**07 19 43.7**	**+0.3**
LKD2				AML	AML	07 19 43.8	
LKD2				AML	AML	07 19 43.8	
TSLK	**Tsoukalades, L**	**0.15**	**10**	P	**Pg**	**07 19 41.9**	**+0.2**
TSLK				S	**Sg**	**07 19 44.9**	**+0.8**
	115µm,0.4s						
TSLK	**Tsoukalades, L**	**0.15**	**10**	P	**Pg**	**07 19 42.0**	**+0.2**
TSLK				S	**Sg**	**07 19 44.5**	**+0.4**
TSLK				AML	AML	07 19 45.1	
TSLK				AML	AML	07 19 45.2	
PVO	**Paravola**	**0.71**	**94**	P	**Pb**	**07 19 52.9**	**+0.2**
IGT	**Igoumenitsa**	**0.89**	**345**	P	**Pb**	**07 19 56.0**	**+0.3**
IGT	**Igoumenitsa**	**0.89**	**345**	P	**Pg**	**07 19 54.6**	**-0.7**
EVR	**Evrytania**	**0.96**	**75**	P	**Pg**	**07 19 56.8**	**0.0**
ANX	**Ano Chora**	**1.02**	**94**	P	**Pg**	**07 19 57.8**	**-0.1**
EFP	**Efpalio**	**1.04**	**103**	P	**Pg**	**07 19 58.0**	**-0.2**
AGG	**Agios Georgios**	**1.38**	**75**	P	**Pg**	**07 20 04.5**	**-0.2**
OHR	**Ohrid**	**2.44**	**3**	*i* Pn	**Pn**	**07 20 19.9**	**+1.7**
OHR				*i* Sn	**Sg**	**07 20 59.4**	**+2.8**
VAY	**Valandovo**	**3.04**	**29**	*i* Pn	**Pb**	**07 20 32.7**	**+0.3**
VAY				*i* Sn	**Sn**	**07 21 05.0**	**+2.3**
STIP	**Stip**	**3.25**	**21**	*i* Pn	**Pb**	**07 20 32.8**	**-3.1**
STIP				*i* Sn	**Sb**	**07 21 14.8**	**-0.7**
ESDC	**Sonseca Array**	**19.08**	**281**	P	**Pn**	**07 24 01.7**	**+0.1**
	0.1nm,0.3s,baz=73,slow=10,SNR=1.8						
FINES	**FINESS Array B**	**23.05**	**7**	P	**P**	**07 24 41.0**	**-2.3**
	8.2nm,0.8s,baz=151,slow=6.3,SNR=2.2						
EKA	**Eskdalemuir Ar**	**23.07**	**324**	P	**P**	**07 24 42.6**	**-1.0**
	16nm,1.0s,baz=124,slow=11,SNR=8.6						
NOA	**NORSAR Array B**	**23.15**	**348**	P	**P**	**07 24 42.4**	**-2.1**
	1.9nm,0.9s,baz=158,slow=9.2,SNR=2.4						
TORD	**Torodi Ar. Bea**	**30.47**	**219**	P	**P**	**07 25 53.2**	**+2.0**
	7.5nm,1.2s,baz=34,slow=11,SNR=2.3						
MKAR	**Makanchi Array**	**44.98**	**59**	P	**P**	**07 27 53.6**	**+0.2**
	0.8nm,0.5s,baz=282,slow=7.4,SNR=4.6						
ZALV	**Zalesovo Beam**	**45.30**	**48**	P	**P**	**07 27 54.5**	**-1.5**
	2.8nm,0.5s,baz=279,slow=8.4,SNR=6.2						
SCHQ	**Schefferville**	**58.15**	**317**	P	**P**	**07 29 31.2**	**-0.6**
	9.1nm,1.2s,baz=73,slow=12,SNR=1.7						

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*TUL **17** 07:23:35.6±1.4, 36°.08N±0°.01×96°.87W±0°.02, h6^{km}±5^{km}, ML2.7, ML2.7/34(NEIC), Error ellipse: s-maj=2.1km s-min=1.7km az=115.0*

*ANF **17** 07:23:36.1±0.5, 36°.08N×96°.88W, h6^{km}, ML2.8/5, Error ellipse: s-maj=5.5km s-min=3.2km az=163.0*

NEIC 17 07:23:35.8±0.8**, 36°.10N**±0°.01×**96°.89W**±0°.01**, h6**^{km}±2^{km}**,**
Error ellipse: s-maj=1.8km s-min=1.6km az=180.0,
Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK031	**S. Brethren Rd**	**0.15**	**163**	Pg	Pg	07 23 38.6	-0.2
OK031				Sg	Sg	07 23 41.1	+0.2
OK031				IAML		07 23 42.7	
	2µm,0.2s						
QUOK	**Quay**	**0.17**	**64**	Pg	Pg	07 23 39.3	+0.1
QUOK				IAML		07 23 42.2	
	comp=E,3µm,0.2s						
QUOK				IAML		07 23 42.2	
	comp=N,5µm,0.2s						
QUOK				Sg	Sg	07 23 42.3	+0.8
OK030	**Cody Creek RV**	**0.19**	**152**	Pg	Pg	07 23 39.3	-0.2
OK030				Sg	Sg	07 23 42.0	-0.2
OK030				IAML		07 23 42.2	
	comp=N,4µm,0.2s						
OK030				IAML		07 23 42.2	
	comp=N,3µm,0.2s						
OK005	**Luther M Schoo**	**0.50**	**209**	Pg	Pg	07 23 45.5	+0.1
BLOK	**Blackwell**	**0.71**	**339**	Pg	Pb	07 23 50.0	-0.5
BLOK				Sg	Sg	07 23 57.6	-1.1
BLOK				IAML		07 24 02.9	
	comp=E,516nm,0.2s						
BLOK				IAML		07 24 09.8	
	comp=N,587nm,0.2s						
BCOK	**Bluff Creek, N**	**0.73**	**233**	Pg	Pg	07 23 49.7	-0.1
BCOK				Sg	Sg	07 23 58.5	-0.8
BCOK				IAML		07 24 00.1	
	comp=N,189nm,0.4s						
BCOK				IAML		07 24 00.2	
	comp=E,202nm,0.2s						
OKCFA	**Oklahoma City**	**0.82**	**214**		Pg	07 23 51.0	-0.5
OKCFA				Sg	Sg	07 24 02.4	+0.3
OKCFA	**Oklahoma City**	**0.82**	**214**	P	Pg	07 23 51.1	-0.4
	baz=35,SNR=9.2						
OKCFA				S	Sg	07 24 02.5	+0.4
	baz=35						
OKCSW	**OKLAHOMA CITY**	**0.82**	**213**		Pg	07 23 50.7	-0.8
OKCSW				Sg	Sg	07 24 02.4	+0.2
T35A	**Sooner Cattle**	**0.87**	**20**	Pg	Pg	07 23 52.5	0.0
T35A				Sg	Sg	07 24 04.1	+0.3
T35B	**Sooner Cattle**	**0.87**	**20**	P	Pg	07 23 52.5	0.0
	baz=199,SNR=75						
TUL1	**Leonard**	**0.91**	**102**	Pg	Pg	07 23 52.5	-0.8
TUL1					Sg	07 24 04.5	-0.6
TUL1				IAML		07 24 04.7	
	comp=N,155nm,0.2s						
TUL1	**Leonard**	**0.91**	**102**	P	Pg	07 23 52.5	-0.8
	baz=281,SNR=107						
TUL1				S	Sg	07 24 04.3	-0.8
	baz=281						
FNO	**Franklin**	**0.94**	**206**	Pg	Pg	07 23 52.9	-0.8
FNO					Sn	07 24 08.4	-0.8
FNO				IAML		07 24 08.6	
	comp=E,176nm,0.1s						
FNO				IAML		07 24 08.7	
	comp=N,170nm,0.2s						
CROK	**Carrier**	**0.97**	**295**	Pg	Pg	07 23 54.2	-0.2
CROK				Sg	Sg	07 24 07.0	+0.1
CROK				IAML		07 24 14.1	
	comp=N,231nm,0.2s						
CROK				IAML		07 24 17.4	
	comp=E,197nm,0.3s						
KAN13	**South Haven SW**	**1.03**	**333**	Pg	Pb	07 23 55.8	-0.2
KAN13				Sg	Sg	07 24 09.0	+0.2
GC02	**Grant County #**	**1.08**	**314**		Pg	07 23 56.6	0.0
GC02				Sg	Sg	07 24 10.3	-0.3
KAN17	**Caldwell West**	**1.18**	**324**	Pg	Pg	07 23 58.0	-0.4
KAN17				Sg	Sb	07 24 13.8	-0.2
KAN14	**Manchester OK**	**1.22**	**315**	Pg	Pg	07 23 59.1	0.0
KAN14				Sg	Sg	07 24 14.5	-0.4
KAN14				IAML		07 24 19.4	
	comp=E,220nm,0.2s						
KAN01	**Argonia South**	**1.26**	**327**	Pn	Pn	07 23 59.5	-0.5
KAN06	**Argonia West S**	**1.39**	**326**	Pn	Pn	07 24 01.4	-0.3
KAN10	**Anthony SW Sta**	**1.41**	**317**	Pn	Pn	07 24 01.5	-0.5
KAN08	**Anthony NE Sta**	**1.42**	**323**		Pb	07 24 02.7	0.0
KAN16	**Harper SW Stat**	**1.47**	**320**	Pn	Pn	07 24 02.7	-0.1
X34A	**Smith Ranch, M**	**1.68**	**207**	Pn	Pn	07 24 05.7	0.0
U32A	**Winter Ranch,**	**1.73**	**280**		Pb	07 24 07.3	-0.6
U32A	**Winter Ranch,**	**1.73**	**280**	P	Pb	07 24 07.2	-0.7
	baz=99,SNR=12						
U32A				Sb	Sg	07 24 31.6	+0.3
	baz=99						
X37A	**Clayton**	**1.95**	**140**	Pn	Pn	07 24 09.2	-0.2
X37A	**Clayton**	**1.95**	**140**	P	Pn	07 24 10.4	+1.0
	baz=321						
WMOK	**Wichita Mounta**	**2.05**	**229**	Pn	Pn	07 24 12.0	+1.1
WMOK	**Wichita Mounta**	**2.05**	**229**	S	Sb	07 24 39.5	+0.2
	baz=49						
U38A	**Gravette**	**2.06**	**80**	Pn	Pb	07 24 12.2	-1.2
U38A	**Gravette**	**2.06**	**80**	P	Pn	07 24 11.8	+0.9
	baz=261,SNR=16						
U38A				S	Sb	07 24 39.5	+0.3
	baz=261						
LOOK	**Love County**	**2.11**	**186**	Pn	Pn	07 24 12.4	+0.7
HHAR	**Hobbs**	**2.40**	**85**	Pn	Pn	07 24 16.3	+0.7
W39A	**Magazine**	**2.69**	**109**	Pn	Pn	07 24 20.8	+1.3
W39A	**Magazine**	**2.69**	**109**	P	Pn	07 24 20.3	+0.8
	baz=290,SNR=15						
R32A	**Long Quarter,**	**2.74**	**329**	Pn	Pn	07 24 21.0	+0.8
KSU1	**Kansas State U**	**3.01**	**4**	Pn	Pn	07 24 24.9	+0.9
S39A	**Bolivar**	**3.27**	**60**	Pn	Pn	07 24 26.5	-1.1
U40A	**Yellville**	**3.28**	**84**	Pn	Pn	07 24 27.7	+0.1
MGMO	**Mountain Grove**	**3.87**	**73**	Pn	Pn	07 24 35.9	+0.1
FCAR	**Ozark Folk Cen**	**3.87**	**92**	Pn	Pn	07 24 35.5	-0.4
AMTX	**Amarillo**	**4.09**	**254**	Pn	Pn	07 24 38.6	-0.3
R40A	**Maddies Statio**	**4.29**	**58**	Pn	Pn	07 24 42.3	+0.7
P38A	**Dawn**	**4.41**	**36**	Pn	Pn	07 24 44.0	+0.8

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*IDC **17** 07:25:47.2±1.6, 38°.85N×20°.44E, h0^{km}, mb3.7/6, mb1 3.9/7, mb1mx3.6/53, mbtmp3.8/7, ML3.6/1, Error ellipse: s-maj=35.2km s-min=23.9km az=126.0*

*THE **17** 07:25:49.5, 38°.68N×20°.56E, h0^{km}±3^{km}, ML3.4/7, Error ellipse: s-maj=3.4km s-min=0.8km az=260.0*

*ATH **17** 07:25:49.5, 38°.67N×20°.64E, h8^{km}±1^{km}, ML3.7/4, Error ellipse: s-maj=1.8km s-min=0.9km az=95.0*

ISC 17 07:25:48.6±0.8**, 38°.69N**±0°.02×**20°.61E**±0°.04**, h12**^{km}±4^{km}**,**
n34, σ0^{s}.99/48**, mb3.8**/6**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NYDR	**Nydri-Lefkada**	**0.07**	**72**	P	**Pg**	**07 25 51.0**	**0.0**
NYDR				S	**Sg**	**07 25 52.8**	**-0.1**
	67µm,0.5s						
NYDR	**Nydri-Lefkada**	**0.07**	**72**	P	**Pg**	**07 25 51.1**	**0.0**
NYDR				S	**Sg**	**07 25 52.9**	**0.0**
EVGI	**Lefkada island**	**0.08**	**151**	P	**Pg**	**07 25 51.0**	**-0.1**
EVGI				S	**Sg**	**07 25 53.0**	**0.0**
	27µm,0.2s						
EVGI	**Lefkada island**	**0.08**	**151**	P	**Pg**	**07 25 51.0**	**-0.1**
EVGI				S	**Sg**	**07 25 53.2**	**+0.2**
LKD2	**Lefkada island**	**0.11**	**22**	P	**Pg**	**07 25 51.6**	**+0.1**
LKD2				S	**Sg**	**07 25 54.0**	**+0.4**
LKD2	**Lefkada island**	**0.11**	**22**	P	**Pg**	**07 25 51.8**	**+0.3**
LKD2				S	**Sg**	**07 25 54.2**	**+0.5**
LKD2				AML	AML	07 25 54.2	
LKD2				AML	AML	07 25 54.2	
TSLK	**Tsoukalades, L**	**0.14**	**16**	P	**Pg**	**07 25 52.3**	**+0.4**
TSLK				S	**Sg**	**07 25 55.1**	**+0.8**
	83µm,0.3s						
TSLK	**Tsoukalades, L**	**0.14**	**16**	P	**Pg**	**07 25 52.5**	**+0.6**
TSLK				S	**Sg**	**07 25 55.5**	**+1.1**
TSLK				AML	AML	07 25 55.6	
TSLK				AML	AML	07 25 55.7	
FSK	**Fiskardo**	**0.23**	**189**	P	**Pg**	**07 25 53.5**	**0.0**
FSK				S	**Sg**	**07 25 57.4**	**+0.7**
	7µm,0.4s						
FSK	**Fiskardo**	**0.23**	**189**	P	**Pg**	**07 25 53.6**	**+0.2**
FSK				S	**Sg**	**07 25 57.5**	**+0.7**
FSK				AML	AML	07 25 59.0	
	comp=E,16948µm,0.3s						
FSK				AML	AML	07 26 03.8	
	comp=N,11633µm,0.5s						
PVO	**Paravola**	**0.72**	**96**	P	**Pb**	**07 26 03.3**	**+0.2**
PVO				S	**Sn**	**07 26 15.7**	**0.0**
	comp=N,6µm,0.3s						
PVO	**Paravola**	**0.72**	**96**	P	**Pb**	**07 26 03.3**	**+0.2**
PVO				AML	AML	07 26 16.1	
	comp=E,11671µm,0.4s						
PVO				AML	AML	07 26 16.8	
	comp=N,10253µm,0.3s						
IGT	**Igoumenitsa**	**0.87**	**346**	P	**Pb**	**07 26 05.4**	**-0.2**
IGT				S	**Sn**	**07 26 19.4**	**+0.1**
	comp=N,1µm,0.6s						
IGT	**Igoumenitsa**	**0.87**	**346**	P	**Pn**	**07 26 06.3**	**-0.4**
VTN	**Vitineika**	**0.90**	**149**	P	**Pg**	**07 26 06.0**	**+0.1**
EVR	**Evrytania**	**0.97**	**76**	P	**Pg**	**07 26 06.9**	**-0.3**
JAN	**Janina**	**0.98**	**11**	P	**Pn**	**07 26 08.9**	**+0.7**
JAN				S	**Sn**	**07 26 23.9**	**+1.7**
	comp=N,2µm,0.5s						
JAN	**Janina**	**0.98**	**11**	P	**Pn**	**07 26 08.9**	**+0.7**
ANX	**Ano Chora**	**1.03**	**95**	P	**Pb**	**07 26 08.3**	**-0.2**
EFP	**Efpalio**	**1.05**	**104**	P	**Pb**	**07 26 08.2**	**-0.5**
KASA	**Kassiopi**	**1.18**	**334**	P	**Pg**	**07 26 12.0**	**+0.8**
KEK	**Kerkira**	**1.20**	**329**	P	**Pg**	**07 26 12.1**	**+0.5**
MAKR	**Makrakomi, Fth**	**1.23**	**74**	P	**Pg**	**07 26 12.2**	**-0.1**
THL	**Klokotos Trika**	**1.40**	**51**	P	**Pg**	**07 26 15.3**	**-0.1**
OHR	**Ohrid**	**2.42**	**3**	*i* Pn	**Pb**	**07 26 30.5**	**-1.6**
VAY	**Valandovo**	**3.03**	**29**	*i* Pn	**Pb**	**07 26 40.9**	**-1.6**
VAY				*i* Sn	**Sn**	**07 27 15.0**	**+2.4**
STIP	**Stip**	**3.23**	**21**	*i* Pn	**Pb**	**07 26 44.1**	**-1.8**
MLR	**Muntele Rosu**	**7.87**	**29**	Pn	**Pn**	**07 27 45.1**	**+2.2**
	comp=N,0.2nm,0.3s,baz=219,slow=14,SNR=2.6						
FINES	**FINESS Array B**	**23.03**	**7**	P	**P**	**07 30 51.5**	**-1.7**
	comp=N,7.6nm,0.9s,baz=194,slow=11,SNR=4.6						
EKA	**Eskdalemuir Ar**	**23.05**	**324**	P	**P**	**07 30 52.1**	**-1.5**
	comp=N,5.7nm,0.9s,baz=121,slow=12,SNR=5.2						
NOA	**NORSAR Array B**	**23.13**	**348**	P	**P**	**07 30 51.7**	**-2.7**
	comp=N,1.0nm,0.8s,baz=155,slow=9.5,SNR=1.6						
TORD	**Torodi Ar. Bea**	**30.47**	**219**	P	**P**	**07 32 02.7**	**+1.4**
	comp=N,0.5nm,0.8s,baz=36,slow=7.6,SNR=1.5						
MKAR	**Makanchi Array**	**44.98**	**59**	P	**P**	**07 34 03.9**	**+0.3**
	comp=N,0.3nm,0.4s,baz=277,slow=7.5,SNR=3.2						
ZALV	**Zalesovo Beam**	**45.30**	**48**	P	**P**	**07 34 05.4**	**-0.5**
	comp=N,0.9nm,0.5s,baz=287,slow=9.9,SNR=2.3						

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*IDC **17** 07:29:39.5±1.2, 38°.74N×20°.47E, h0^{km}, mb3.7/9, mb1 3.8/12, mb1mx3.6/55, mbtmp3.7/12, ML3.4/3, Error ellipse: s-maj=23.1km s-min=19.1km az=64.0*

*BEO **17** 07:29:41.4±1.3, 38°.63N×20°.30E, h0^{km}, ML3.8/4*

*THE **17** 07:29:42.6, 38°.64N×20°.56E, h4^{km}±2^{km}, ML3.8/6, Error ellipse: s-maj=2.3km s-min=0.6km az=142.0*

*ATH **17** 07:29:42.1, 38°.66N×20°.59E, h14^{km}±1^{km}, ML3.7/10, Error ellipse: s-maj=2.1km s-min=0.7km az=295.0*

ISC 17 07:29:41.4±0.7**, 38°.64N**±0°.02×**20°.54E**±0°.03**, h14**^{km}±4^{km}**,**
n106, σ1^{s}.16/136**, mb3.8**/9**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EVGI	**Lefkada island**	**0.09**	**105**	P	**Pg**	**07 29 44.5**	**0.0**
EVGI				S	**Sg**	**07 29 45.9**	**-0.6**
EVGI	**Lefkada island**	**0.09**	**105**	P	**Pg**	**07 29 44.5**	**0.0**
EVGI				S	**Sg**	**07 29 45.9**	**-0.6**
NYDR	**Nydri-Lefkada**	**0.14**	**60**	P	**Pg**	**07 29 45.0**	**-0.1**
NYDR				S	**Sg**	**07 29 46.8**	**-0.7**
NYDR	**Nydri-Lefkada**	**0.14**	**60**	P	**Pg**	**07 29 44.9**	**-0.1**
NYDR				S	**Sg**	**07 29 47.1**	**-0.4**
LKD2	**Lefkada island**	**0.17**	**32**	P	**Pg**	**07 29 45.7**	**+0.2**
LKD2	**Lefkada island**	**0.17**	**32**	P	**Pg**	**07 29 45.7**	**+0.2**
LKD2				S	**Sg**	**07 29 48.5**	**+0.2**
LKD2				AML	AML	07 29 48.7	
	comp=N,89396µm,0.4s						
LKD2				AML	AML	07 29 48.9	
	comp=E,83786µm,0.3s						
FSK	**Fiskardo**	**0.18**	**175**	P	**Pg**	**07 29 46.6**	**+0.9**
FSK				S	**Sg**	**07 29 49.9**	**+1.3**
FSK	**Fiskardo**	**0.18**	**175**	P	**Pg**	**07 29 46.6**	**+0.9**
FSK				S	**Sg**	**07 29 50.0**	**+1.3**
FSK				AML	AML	07 29 50.1	
	comp=N,80780µm,0.4s						
FSK				AML	AML	07 29 51.9	
	comp=E,94599µm,0.2s						
TSLK	**Tsoukalades, L**	**0.20**	**26**	P	**Pg**	**07 29 46.4**	**+0.4**
TSLK				S	**Sg**	**07 29 49.9**	**+0.8**
TSLK	**Tsoukalades, L**	**0.20**	**26**	P	**Pg**	**07 29 46.4**	**+0.4**
TSLK				S	**Sg**	**07 29 50.0**	**+0.8**
TSLK				AML	AML	07 29 50.0	
	comp=N,83369µm,0.3s						
TSLK				AML	AML	07 29 50.2	
	comp=E,81529µm,0.4s						
KEF4	**Livadi, Kephal**	**0.40**	**194**	P	**Pg**	**07 29 50.0**	**+0.7**
KEF4	**Livadi, Kephal**	**0.40**	**194**	P	**Pg**	**07 29 50.1**	**+0.7**
KEF4				S	**Sb**	**07 29 57.1**	**+1.0**
DMLN	**Damoulianata-K**	**0.43**	**198**	P	**Pg**	**07 29 50.6**	**+0.7**
DMLN				S	**Sb**	**07 29 57.8**	**+0.8**
	comp=E,25µm,0.4s						
DMLN	**Damoulianata-K**	**0.43**	**198**	P	**Pg**	**07 29 50.5**	**+0.6**
DMLN				S	**Sb**	**07 29 57.6**	**+0.6**
LXRA	**Lixouri, Kepha**	**0.45**	**191**	P	**Pg**	**07 29 51.0**	**+0.6**
LXRA				S	**Sb**	**07 29 58.8**	**+1.1**
KEF3	**Kipouria, Keph**	**0.47**	**199**	P	**Pg**	**07 29 50.8**	**+0.2**
KEF3	**Kipouria, Keph**	**0.47**	**199**	P	**Pg**	**07 29 50.8**	**+0.2**
KEF3				S	**Sg**	**07 29 57.4**	**+0.5**
VLS	**Valsamata**	**0.47**	**176**	P	**Pg**	**07 29 51.0**	**+0.3**
VLS				S	**Sg**	**07 29 58.0**	**+1.0**
	comp=E,15µm,0.3s						
VLS	**Valsamata**	**0.47**	**176**	P	**Pg**	**07 29 51.0**	**+0.3**
VLS				S	**Sb**	**07 29 58.5**	**+0.3**
VLS				AML	AML	07 29 59.6	
	comp=N,26317µm,0.2s						
VLS				AML	AML	07 30 00.3	
	comp=E,23642µm,0.2s						
PSDA	**Pessada-Kefalo**	**0.53**	**177**	P	**Pg**	**07 29 52.1**	**+0.3**
PSDA	**Pessada-Kefalo**	**0.53**	**177**	P	**Pg**	**07 29 52.1**	**+0.3**
PSDA				S	**Sb**	**07 30 00.7**	**+0.8**
PVO	**Paravola**	**0.77**	**92**	P	**Pg**	**07 29 56.9**	**+0.5**
PVO				S	**Sb**	**07 30 08.7**	**+1.8**
	comp=E,9µm,0.3s						
PVO	**Paravola**	**0.77**	**92**	P	**Pg**	**07 29 56.9**	**+0.5**
PVO				AML	AML	07 30 09.9	
	comp=N,24672µm,0.4s						
PVO				AML	AML	07 30 10.2	
	comp=E,13011µm,0.2s						
VTN	**Vitineika**	**0.89**	**145**	P	**Pg**	**07 29 59.0**	**+0.4**
IGT	**Igoumenitsa**	**0.90**	**350**	P	**Pg**	**07 29 58.7**	**-0.2**
IGT				S	**Sn**	**07 30 13.5**	**+1.0**
IGT	**Igoumenitsa**	**0.90**	**350**	P	**Pg**	**07 29 58.7**	**-0.2**
RLS	**Riolos of Patr**	**0.93**	**129**	P	**Pg**	**07 29 59.2**	**-0.3**
RLS				AML	AML	07 30 19.6	
	comp=N,2691µm,0.6s						
RLS				AML	AML	07 30 20.7	
	comp=E,4655µm,0.9s						
LTHK	**Lithakia**	**0.96**	**166**	P	**Pg**	**07 29 59.4**	**-0.6**
LTHK				S	**Sb**	**07 30 13.9**	**+1.5**
	comp=E,3µm,0.7s						
LTHK	**Lithakia**	**0.96**	**166**	P	**Pg**	**07 29 59.4**	**-0.6**
LTHK				AML	AML	07 30 20.7	
	comp=N,6075µm,1.0s						
LTHK				AML	AML	07 30 27.6	
	comp=E,4791µm,0.4s						
EVR	**Evrytania**	**1.03**	**74**	P	**Pb**	**07 30 00.7**	**-0.3**
JAN	**Janina**	**1.04**	**13**	P	**Pb**	**07 30 02.0**	**+0.8**
JAN				S	**Sn**	**07 30 18.0**	**+2.1**
JAN	**Janina**	**1.04**	**13**	P	**Pb**	**07 30 01.8**	**+0.6**
ANX	**Ano Chora**	**1.08**	**92**	P	**Pb**	**07 30 01.8**	**-0.1**
ANX				S	**Sg**	**07 30 18.2**	**+1.8**
	comp=E,4µm,0.6s						
ANX	**Ano Chora**	**1.08**	**92**	P	**Pb**	**07 30 01.5**	**-0.5**
ANX				AML	AML	07 30 24.6	
	comp=N,10008µm,0.6s						
ANX				AML	AML	07 30 24.9	
	comp=E,6084µm,0.7s						
EFP	**Efpalio**	**1.09**	**101**	P	**Pb**	**07 30 01.9**	**-0.1**
EFP				AML	AML	07 30 24.2	
	comp=N,6183µm,0.4s						
EFP				AML	AML	07 30 24.4	
	comp=E,6928µm,0.4s						
DRO	**Drossia**	**1.15**	**127**	P	**Pb**	**07 30 02.2**	**-0.8**
DRO				AML	AML	07 30 27.4	
	comp=E,6176µm,0.3s						
DRO				AML	AML	07 30 29.8	
	comp=N,6150µm,0.4s						
LAKA	**Lakka**	**1.20**	**109**	P	**Pn**	**07 30 03.3**	**-0.5**
KEK	**Kerkira**	**1.21**	**332**	P	**Pg**	**07 30 05.7**	**+0.9**
TRIZ	**Trizonia**	**1.23**	**103**	P	**Pn**	**07 30 03.9**	**-0.3**
KLV	**Kalavryta, Ach**	**1.40**	**115**	P	**Pn**	**07 30 06.3**	**-0.3**
AGG	**Agios Georgios**	**1.45**	**74**	P	**Pn**	**07 30 07.0**	**-0.2**
AGG				S	**Sg**	**07 30 29.7**	**+1.7**
	comp=N,2µm,0.8s						
KPRO	**Kipourio**	**1.46**	**26**	P	**Pb**	**07 30 09.6**	**+1.3**
GUR	**Goura**	**1.58**	**116**	P	**Pn**	**07 30 09.5**	**+0.4**
OHR	**Ohrid**	**2.47**	**4**	*e*Pn	**Pb**	**07 30 24.4**	**-1.3**
OHR	**Ohrid**	**2.47**	**4**	*i* Pn	**Pb**	**07 30 24.4**	**-1.3**
TIR	**Tirane**	**2.75**	**349**	*e*Pn	**Pn**	**07 30 27.6**	**+2.5**
VAY	**Valandovo**	**3.09**	**30**	*e*Pn	**Pn**	**07 30 33.4**	**+3.6**
VAY	**Valandovo**	**3.09**	**30**	*i* Pn	**Pn**	**07 30 33.7**	**+3.9**
STIP	**Stip**	**3.30**	**22**	*i* Pn	**Pb**	**07 30 37.4**	**-2.3**
SKO	**Skopje**	**3.39**	**11**	*e*Pn	**Pn**	**07 30 33.4**	**-0.5**
DRME	**Dracevica, Mon**	**3.69**	**344**	*e*Pn	**Pn**	**07 30 38.9**	**+0.9**
PDG	**Podgorica**	**3.91**	**346**	*e*Pn	**Pn**	**07 30 42.4**	**+1.4**
PDG				*e*Sn	**Sn**	**07 31 27.1**	**+0.5**

PDG	Podgorica	3.91	346	*e*Pn	Pn	07 30 41.1	+0.1
PRVS	Prvonek	4.03	16	*e*Pn	Pn	07 30 44.6	+1.9
HCY	Herceg Novi	4.11	338	*e*Pn	Pn	07 30 43.1	-0.6
BOSS	Bosilegrad	4.12	20	*e*Pn	Pn	07 30 45.9	+2.0
BARS	Barje	4.28	13	*e*Pn	Pn	07 30 47.8	+1.7
BARS	Barje	4.28	13	*e*Pn	Pg	07 31 04.5	+1.2
TREB	Trebinje	4.40	338	*e*Pn	Pn	07 30 48.0	+0.3
TREB				*e*Sn	Sn	07 31 38.7	0.0
TREB	Trebinje	4.40	338	*e*Pn	Pn	07 30 47.3	-0.4
DBRK	Dubrovnik	4.41	336	*e*Pn	Pn	07 30 47.7	-0.3
DBRK				Sn	Sn	07 31 36.0	-3.1
VTS	Vitosha	4.47	26	*e*Pn	Pn	07 30 51.7	+2.9
BRY	Bratogost	4.52	341	*e*Pn	Pn	07 30 49.2	-0.3
SELS	Selova	4.59	5	*e*Pn	Pn	07 30 51.4	+1.0
SJES	Sjenica	4.63	355	*e*Pn	Pn	07 30 53.1	+2.0
UPM	Unac-Piva	4.72	345	*e*Pn	Pn	07 30 52.9	+0.6
STON	Ston	4.74	334	*e*Pn	Pn	07 30 52.5	0.0
STON				*e*Sn	Sn	07 31 46.7	-0.5
STON	Ston	4.74	334	*e*Pn	Pn	07 30 51.9	-0.5
STON	Ston	4.74	334	*e*Pn	Pn	07 30 52.5	0.0
STON				Sn	Sn	07 31 45.1	-2.1
IDI	Anoyia	4.83	133	Pn	Pn	07 30 55.9	+2.2
	comp=N,0.4nm,0.3s,baz=319,slow=19,SNR=1.5						
IDI				Sn	Sn	07 31 48.9	-0.6
	comp=N,1.0nm,0.3s,baz=101,slow=19,SNR=1.5						
ZAPS	Zavoj	4.89	18	*e*Pn	Pn	07 30 57.1	+2.6
RUDO	Rudo	5.05	350	*e*Pn	Pn	07 30 54.2	-2.5
BOVS	Bovan	5.06	10	*e*Pn	Pn	07 30 57.7	+0.9
GRUS	Gruza	5.24	1	*e*Pn	Pn	07 31 00.4	+1.1
BBLS	Lazići	5.29	351	*e*Pn	Pn	07 30 59.4	-0.6
MAKA	Makarska	5.35	331	*e*Pn	Pn	07 31 00.8	+0.1
DIVS	Divibare	5.46	356	*e*Pn	Pn	07 31 03.2	+0.7
DIVS	Divibare	5.46	356	*e*Pn	Pn	07 31 01.9	-0.6
RICI	Ricice	5.49	333	*e*Pn	Pn	07 31 02.6	-0.1
HVAR	Hvar	5.49	327	*e*Pn	Pn	07 31 02.5	-0.2
TEKS	Tekeris	5.95	353	*e*Pn	Pn	07 31 08.4	-0.6
KIJV	Kijevo	6.20	331	*e*Pn	Pn	07 31 12.8	+0.4
ZIRJ	Zirje	6.22	325	*e*Pn	Pn	07 31 12.7	-0.1
MORI	Morici	6.36	327	*e*Pn	Pn	07 31 15.2	+0.5
BLY	Banja Luka	6.60	339	*e*Pn	Pn	07 31 17.8	-0.1
DUGI	Dugi Otok	6.75	324	*e*Pn	Pn	07 31 20.4	+0.3
MRAK	Mrakovica	6.92	338	*e*Pn	Pn	07 31 20.2	-2.2
PLIT	Plitvice	7.23	331	*e*Pn	Pn	07 31 27.6	+0.9
NVLJ	Novalja	7.28	326	*e*Pn	Pn	07 31 27.6	+0.3
RABC	Rab	7.47	327	*e*Pn	Pn	07 31 30.8	+0.9
MLR	Muntele Rosu	7.93	29	Pn	Pn	07 31 37.3	+0.9
	comp=N,0.1nm,0.3s,baz=216,slow=17,SNR=1.9						
MLR				Sn	Sn	07 33 02.4	-3.5
	comp=N,0.4nm,0.3s,baz=133,slow=21,SNR=3.4						
SMRN	Sveta Marina	7.97	325	*e*Pn	Pn	07 31 36.8	+0.1
BRJN	Brijuni	8.05	323	*e*Pn	Pn	07 31 38.0	+0.2
CRES	Cresnjev	8.11	334	*e*Pn	Pn	07 31 38.4	-0.2
CEY	Cerknica	8.42	329	*e*Pn	Pn	07 31 42.4	-0.5
GERES	GERESS Array B	11.33	336	Pn	Pn	07 32 22.9	0.0
	comp=N,0.3nm,0.3s,baz=160,slow=13,SNR=4.9						
HFS	Hagfors	21.94	351	P	P	07 34 33.8	-0.5
	comp=N,1.5nm,0.3s,baz=165,slow=10,SNR=13						
EKA	Eskdalemuir Ar	23.06	324	P	P	07 34 45.3	-0.8
	comp=N,2.1nm,0.7s,baz=123,slow=10,SNR=4.2						
FINES	FINESS Array B	23.08	7	P	P	07 34 44.7	-1.6
	comp=N,2.6nm,0.5s,baz=164,slow=14,SNR=10						
NB2	NORSAR Subarra	23.16	348	P	P	07 34 47.2	-0.1
	comp=Z,0.3nm,0.4s,baz=161,slow=11						
NOA	NORSAR Array B	23.16	348	P	P	07 34 45.8	-1.5
	comp=Z,0.4nm,0.5s,baz=155,slow=10,SNR=4.5						
TORD	Torodi Ar. Bea	30.40	218	P	P	07 35 53.6	+0.4
	comp=Z,0.5nm,0.5s,baz=30,slow=9.9,SNR=4.2						
ARCES	ARCESS Array B	31.07	3	P	P	07 35 57.8	-0.8
	comp=Z,1.5nm,0.9s,baz=190,slow=9.2,SNR=1.4						
AAK	Ala-Archa	40.55	67	P	P	07 37 21.3	+0.9
	comp=Z,0.7nm,0.4s,baz=212,slow=13,SNR=2.2						
MKAR	Makanchi Array	45.04	59	P	P	07 37 56.3	-0.3
	comp=Z,0.2nm,0.4s,baz=278,slow=7.9,SNR=7.1						
ZALV	Zalesovo Beam	45.37	48	P	P	07 37 58.9	-0.1
	comp=Z,1.2nm,0.5s,baz=271,slow=8.8,SNR=5.9						

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*IDC **17** 07:30:51.7±1.0, 38.°80N×20.°88E, h0^{km}, mb3.7/6, mb1 3.8/6, mb1mx3.5/50, mbtmp3.8/6, Error ellipse: s-maj=21.3km s-min=16.8km az=116.0*

ISC 17 07:30:53.4±1.3**, 38.°8N**±0.°2×**20.°9E**±0.°2**, h11**^{km}**, n6, σ0.^{s}82**/6**, mb3.7**/6**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HFS	Hagfors	21.81	350	P	P	07 35 45.9	+0.5
	2.7nm,0.8s,baz=165,slow=12,SNR=1.8						
FINES	FINESS Array B	22.88	6	P	P	07 35 56.2	-0.5
	5.8nm,0.9s,baz=175,slow=6.6,SNR=1.4						
EKA	Eskdalemuir Ar	23.07	324	P	P	07 35 58.8	+0.1
	7.8nm,1.1s,baz=127,slow=11,SNR=3.3						
TORD	Torodi Ar. Bea	30.70	219	P	P	07 37 08.2	-0.1
	0.5nm,0.8s,baz=30,slow=8.5,SNR=1.9						
MKAR	Makanchi Array	44.74	59	P	P	07 39 07.5	+0.9
	0.3nm,0.8s,baz=269,slow=9.2,SNR=1.6						
ZALV	Zalesovo Beam	45.06	49	P	P	07 39 08.2	-0.8
	0.5nm,0.4s,baz=274,slow=7.1,SNR=1.4						

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*BEO **17** 07:34:49.9±3.9, 37.°77N×20.°03E, h65^{km}±8^{km}, ML3.9/3*

*IDC **17** 07:34:55.9±1.3, 38.°67N×20.°39E, h0^{km}, mb3.8/8, mb1 3.8/12, mb1mx3.7/46, mbtmp3.7/12, ML3.6/4, Error ellipse: s-maj=22.7km s-min=18.7km az=67.0*

*THE **17** 07:34:58.6, 38.°77N×20.°62E, h0^{km}±1^{km}, ML3.6/18, Error ellipse: s-maj=1.3km s-min=0.6km az=357.0*

*ATH **17** 07:34:58.2, 38.°79N×20.°62E, h9^{km}±1^{km}, ML3.6/22, Error ellipse: s-maj=1.2km s-min=0.7km az=290.0*

ISC 17 07:34:57.8±0.7**, 38.°78N**±0.°01×**20.°58E**±0.°02**, h8**^{km}±4^{km}**, n119, σ1.^{s}14**/158**, mb3.6**/8**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LKD2	Lefkada island	0.06	78	P	Pg	07 34 59.6	-0.1
LKD2	Lefkada island	0.06	78	P	Pg	07 34 59.7	-0.1
LKD2				S	Sg	07 35 00.8	-0.2
TSLK	Tsoukalades, L	0.08	49	P	Pg	07 34 59.8	-0.1
TSLK				S	Sg	07 35 01.1	-0.2
TSLK	Tsoukalades, L	0.08	49	P	Pg	07 34 59.8	-0.1
TSLK				S	Sg	07 35 01.3	0.0
NYDR	Nydri-Lefkada	0.11	124	P	Pg	07 35 00.6	+0.3
NYDR				S	Sg	07 35 02.3	+0.2
NYDR	Nydri-Lefkada	0.11	124	P	Pg	07 35 00.6	+0.3
NYDR				S	Sg	07 35 02.7	+0.6
EVGI	Lefkada island	0.17	159	P	Pg	07 35 02.0	+0.8
EVGI				S	Sg	07 35 05.1	+1.5
	46µm,0.5s						
EVGI	Lefkada island	0.17	159	P	Pg	07 35 02.1	+0.8
EVGI				S	Sg	07 35 04.6	+1.0
FSK	Fiskardo	0.32	183	P	Pg	07 35 05.0	+0.9
FSK				S	Sb	07 35 10.0	-1.0
FSK	Fiskardo	0.32	183	P	Pg	07 35 04.5	+0.4
FSK				S	Sg	07 35 09.7	+1.4
FSK				AML	AML	07 35 12.1	
	comp=E,29774µm,0.2s						
FSK				AML	AML	07 35 14.9	
	comp=N,14819µm,0.4s						
KEF4	Livadi, Kephal	0.53	193	P	Pg	07 35 08.4	+0.3
KEF4				S	Sb	07 35 17.1	-0.1
KEF4	Livadi, Kephal	0.53	193	P	Pg	07 35 08.0	-0.2
KEF4				S	Sb	07 35 16.9	-0.4
DMLN	Damoulianata-K	0.56	197	P	Pg	07 35 09.1	+0.4
DMLN				S	Sg	07 35 17.4	+1.4
	comp=N,8µm,0.5s						
DMLN	Damoulianata-K	0.56	197	P	Pg	07 35 09.0	+0.3
DMLN				S	Sg	07 35 17.2	+1.2
VLS	Valsamata	0.60	179	P	Pg	07 35 09.3	-0.1
VLS				S	Sb	07 35 19.7	+0.5
	comp=N,5µm,0.4s						
VLS	Valsamata	0.60	179	P	Pg	07 35 09.3	-0.1
VLS				S	Sg	07 35 17.8	+0.7
VLS				AML	AML	07 35 25.3	
	comp=N,8297µm,0.6s						
VLS				AML	AML	07 35 27.1	
	comp=E,8903µm,0.3s						
KEF3	Kipouria, Keph	0.60	198	P	Pg	07 35 09.2	-0.2
KEF3				S	Sg	07 35 18.5	+1.2
KEF3	Kipouria, Keph	0.60	198	P	Pg	07 35 09.1	-0.3
KEF3				S	Sg	07 35 18.4	+1.2
ARGA	Argostoli. Kep	0.60	188	P	Pg	07 35 09.9	+0.4
PSDA	Pessada-Kefalo	0.66	180	P	Pg	07 35 10.2	-0.4
PSDA				S	Sb	07 35 20.2	-0.7
PSDA	Pessada-Kefalo	0.66	180	P	Pg	07 35 10.3	-0.2
PVO	Paravola	0.76	102	P	Pg	07 35 12.6	+0.2
PVO				S	Sb	07 35 22.9	-0.8
	comp=E,7µm,1.4s						
PVO	Paravola	0.76	102	P	Pg	07 35 12.6	+0.2
PVO				S	Sg	07 35 22.2	0.0
PVO				AML	AML	07 35 28.1	
	comp=N,11759µm,0.4s						
PVO				AML	AML	07 35 29.9	
	comp=E,12881µm,0.8s						
IGT	Igoumenitsa	0.78	346	P	Pg	07 35 13.1	+0.2
IGT				S	Sb	07 35 25.9	+1.4
	comp=E,2µm,0.9s						
IGT	Igoumenitsa	0.78	346	P	Pg	07 35 12.7	-0.2
IGT				AML	AML	07 35 33.5	
	comp=E,3488µm,0.6s						
IGT				AML	AML	07 35 34.6	
	comp=N,4723µm,0.5s						
JAN	Janina	0.90	13	P	Pb	07 35 15.9	+0.1
JAN	Janina	0.90	13	P	Pg	07 35 15.6	+0.4
JAN				AML	AML	07 35 32.9	
	comp=N,6946µm,1.0s						
JAN				AML	AML	07 35 33.0	
	comp=E,13210µm,0.8s						
EVR	Evrytania	0.97	81	P	Pg	07 35 16.1	-0.4
EVR	Evrytania	0.97	81	P	Pg	07 35 15.5	-1.0
EVR				AML	AML	07 35 42.0	
	comp=E,3295µm,0.8s						
EVR				AML	AML	07 35 47.6	
	comp=N,3605µm,0.8s						
VTN	Vitineika	0.98	151	P	Pb	07 35 17.1	0.0
VTN	Vitineika	0.98	151	P	Pg	07 35 16.3	-0.4
RLS	Riolos of Patr	1.00	136	P	Pg	07 35 17.1	+0.1
RLS				S	Sb	07 35 30.7	0.0
	comp=N,3µm,0.9s						
RLS	Riolos of Patr	1.00	136	P	Pg	07 35 16.8	-0.2
RLS				AML	AML	07 35 38.9	
	comp=N,6712µm,0.8s						
RLS				AML	AML	07 35 41.6	
	comp=E,5003µm,1.1s						
ANX	Ano Chora	1.06	99	P	Pg	07 35 17.5	-0.8
ANX				S	Sn	07 35 33.4	-0.8
	comp=E,5µm,0.5s						
ANX	Ano Chora	1.06	99	P	Pg	07 35 17.3	-0.9
ANX				AML	AML	07 35 43.1	
	comp=N,7491µm,0.5s						
ANX				AML	AML	07 35 45.9	
	comp=E,11722µm,0.5s						
LTHK	Lithakia	1.08	169	P	Pg	07 35 17.6	-1.0
LTHK				S	Sn	07 35 35.8	+1.3
	comp=E,3µm,0.6s						
LTHK	Lithakia	1.08	169	P	Pg	07 35 17.9	-0.7
KASA	Kassiopi	1.09	333	P	Pg	07 35 18.9	+0.1
EFP	Efpalio	1.09	108	P	Pg	07 35 18.0	-0.8
EFP				S	Sn	07 35 34.9	+0.1
	comp=E,4µm,0.9s						
EFP	Efpalio	1.09	108	P	Pg	07 35 17.7	-1.1
EFP				AML	AML	07 35 39.9	
	comp=N,6159µm,0.6s						
EFP				AML	AML	07 35 47.4	
	comp=E,6865µm,0.7s						
KEK	Kerkira	1.12	327	P	Pn	07 35 20.2	+0.4
KEK	Kerkira	1.12	327	P	Pg	07 35 19.0	-0.3
KEK				AML	AML	07 35 41.5	
	comp=E,3262µm,0.5s						
KEK				AML	AML	07 35 50.7	
	comp=N,3125µm,0.9s						
DRO	Drossia	1.21	132	P	Pb	07 35 20.2	-0.8
DRO				S	Sn	07 35 38.4	+0.7
	comp=N,5µm,0.5s						
DRO	Drossia	1.21	132	P	Pb	07 35 20.0	-1.0
DRO				AML	AML	07 35 48.6	
	comp=E,10120µm,0.4s						
DRO				AML	AML	07 35 57.1	
	comp=N,8540µm,0.7s						
LAKA	Lakka	1.22	116	P	Pb	07 35 20.1	-1.1
LAKA				S	Sn	07 35 39.0	+1.1
	comp=N,6µm,0.7s						
LAKA	Lakka	1.22	116	P	Pb	07 35 19.9	-1.3
LAKA				AML	AML	07 35 49.8	
	comp=N,14263µm,0.7s						
LAKA				AML	AML	07 35 49.9	
	comp=E,12459µm,0.6s						
MAKR	Makrakomi, Fth	1.23	78	P	Pg	07 35 21.5	0.0
MAKR				S	Sn	07 35 39.7	+1.4
	comp=E,4µm,1.0s						
MAKR	Makrakomi, Fth	1.23	78	P	Pb	07 35 21.1	-0.3
MAKR				AML	AML	07 35 46.8	
	comp=E,3188µm,0.7s						
MAKR				AML	AML	07 35 48.2	
	comp=N,3271µm,1.0s						
TRIZ	Trizonia	1.24	109	P	Pb	07 35 20.7	-0.8
TRIZ				S	Sn	07 35 38.6	+0.3
	comp=N,1µm,0.6s						
TRIZ	Trizonia	1.24	109	P	Pb	07 35 20.4	-1.0
ALIK	Aliki, Aigiali	1.30	113	P	Pn	07 35 21.8	-0.6
KPRO	Kipourio	1.32	27	P	Pg	07 35 23.4	+0.1
KPRO	Kipourio	1.32	27	P	Pn	07 35 22.2	-0.5
KPRO				AML	AML	07 35 54.3	
	comp=N,5364µm,0.8s						
KPRO				AML	AML	07 35 54.8	
	comp=E,6585µm,0.7s						
THL	Klokotos Trika	1.36	54	P	Pn	07 35 23.0	-0.2
THL	Klokotos Trika	1.36	54	P	Pn	07 35 22.8	-0.4
THL				AML	AML	07 35 51.8	
	comp=N,4600µm,0.7s						
THL				AML	AML	07 35 52.1	
	comp=E,4122µm,0.5s						
LSK	Leskovik	1.37	1	P	Pg	07 35 25.3	+1.1
LSK				S	Sg	07 35 44.7	+2.7
	comp=E,3µm,0.9s						
AGG	Agios Georgios	1.39	79	P	Pb	07 35 23.7	-0.3
AGG				S	Sg	07 35 44.2	+1.8
	comp=E,2µm,0.9s						
AGG	Agios Georgios	1.39	79	P	Pn	07 35 23.6	0.0
AGG				AML	AML	07 35 51.4	
	comp=N,3927µm,1.0s						
AGG				AML	AML	07 35 55.0	
	comp=E,4569µm,0.8s						
KLV	Kalavryta, Ach	1.43	120	P	Pn	07 35 23.4	-0.8
KLV				S	Sg	07 35 44.8	+0.9
	comp=E,1µm,1.1s						
KLV	Kalavryta, Ach	1.43	120	P	Pn	07 35 23.2	-1.0
KLV				AML	AML	07 35 53.9	
	comp=E,2010µm,1.2s						
KLV				AML	AML	07 35 55.3	
	comp=N,2121µm,1.1s						
PENT	Pentalofos	1.48	17	P	Pg	07 35 26.7	+0.4
PENT				S	Sb	07 35 45.1	+0.3
	comp=N,818nm,1.0s						
GUR	Goura	1.62	121	P	Pn	07 35 27.0	+0.2
GUR	Goura	1.62	121	P	Pn	07 35 26.7	-0.1
GUR				AML	AML	07 36 00.3	
	comp=E,6139µm,1.0s						
GUR				AML	AML	07 36 02.6	
	comp=N,4537µm,0.5s						
KZN	Kozani	1.78	31	P	Pb	07 35 31.6	+0.7
ATAL	Atalanti	1.91	92	P	Pb	07 35 32.2	-0.7
ATAL	Atalanti	1.91	92	P	Pb	07 35 32.3	-0.6
ATAL				AML	AML	07 36 08.5	
	comp=N,1506µm,0.8s						
ATAL				AML	AML	07 36 19.2	
	comp=E,938µm,0.7s						
ITM	Ithomi	1.92	146	P	Pb	07 35 33.3	+0.2
ITM				AML	AML	07 36 07.2	
	comp=N,1968µm,0.7s						
ITM				AML	AML	07 36 24.0	
	comp=E,2041µm,1.4s						
PYL	PYLOS	2.09	154	P	Pb	07 35 35.8	-0.2
PYL				AML	AML	07 36 08.8	
	comp=E,1334µm,0.5s						
PYL				AML	AML	07 36 18.2	
	comp=N,958µm,0.8s						
NEO	Neokhori	2.12	75	P	Pb	07 35 35.7	-0.9
NEO				S	Sb	07 36 02.1	-1.1
	comp=N,558nm,0.5s						
VIL2	Platees	2.18	104	P	Pb	07 35 38.1	+0.5
VIL2				AML	AML	07 36 22.4	
	comp=E,1919µm,0.6s						
VIL2				AML	AML	07 36 29.3	
	comp=N,1671µm,0.8s						
OHR	Ohrid	2.34	4	*e*Pn	Pb	07 35 39.5	-0.8
OHR				*e*Sn	Sg	07 36 14.9	+1.9
OHR	Ohrid	2.34	4	*i* Pn	Pb	07 35 39.1	-1.2
TIR	Tirane	2.63	348	*e*Pn	Pn	07 35 43.0	+2.4
VAY	Valandovo	2.96	30	*e*Pn	Pb	07 35 49.3	-1.6
VAY	Valandovo	2.96	30	*i* Pn	Pb	07 35 49.4	-1.5
STIP	Stip	3.16	22	*i* Pn	Pn	07 35 50.8	+2.8
DRME	Dracevica, Mon	3.57	343	*e*Pn	Pn	07 35 54.3	+0.8
PDG	Podgorica	3.79	345	*e*Pn	Pn	07 35 56.6	+0.1
PRVS	Prvonek	3.90	16	*e*Pn	Pn	07 36 00.2	+2.1
BOSS	Bosilegrad	3.99	21	*e*Pn	Pn	07 36 01.4	+2.1
HCY	Herceg Novi	4.00	337	*e*Pn	Pn	07 35 58.9	-0.5
TREB	Trebinje	4.29	337	*e*Pn	Pn	07 36 03.0	-0.4
TREB	Trebinje	4.29	337	*e*Pn	Pn	07 36 02.5	-0.9
DBRK	Dubrovnik	4.31	335	*e*Pn	Pn	07 36 02.5	-1.2
DBRK				Sn	Sn	07 36 50.7	-3.3
VTS	Vitosha	4.33	27	*e*Pn	Pn	07 36 05.9	+1.7
BRY	Bratogost	4.40	340	*e*Pn	Pn	07 36 04.9	-0.2
SJES	Sjenica	4.50	354	*e*Pn	Pn	07 36 08.0	+1.5
UPM	Unac-Piva	4.60	345	*e*Pn	Pn	07 36 08.4	+0.5
STON	Ston	4.64	333	*e*Pn	Pn	07 36 07.8	-0.4
STON				*e*Sn	Sn	07 37 01.2	-1.0
STON	Ston	4.64	333	*e*Pn	Pn	07 36 06.3	-1.9
STON	Ston	4.64	333	*e*Pn	Pn	07 36 07.3	-0.9
STON				Sn	Sn	07 36 59.3	-2.9
ZAPS	Zavoj	4.75	18	*e*Pn	Pn	07 36 13.6	+3.8
IDI	Anoyia	4.90	134	Pn	Pn	07 36 13.2	+1.4
	comp=N,0.5nm,0.3s,baz=292,slow=14,SNR=1.8						
IDI				Sn	Sn	07 37 10.3	+1.5
	comp=N,1.8nm,0.3s,baz=129,slow=16,SNR=2.8						
BBLS	Lazići	5.16	350	*e*Pn	Pn	07 36 22.0	+6.5
MAKA	Makarska	5.25	330	*e*Pn	Pn	07 36 16.3	-0.3
MAKA				Sn	Sn	07 37 15.2	-2.0
DIVS	Divibare	5.34	355	*e*Pn	Pn	07 36 17.4	-0.4
DIVS	Divibare	5.34	355	*e*Pn	Pn	07 36 17.5	-0.4
RICI	Ricice	5.38	332	*e*Pn	Pn	07 36 18.0	-0.5
HVAR	Hvar	5.40	326	*e*Pn	Pn	07 36 18.1	-0.5
KIJV	Kijevo	6.09	330	*e*Pn	Pn	07 36 28.2	0.0
ZIRJ	Zirje	6.13	324	*e*Pn	Pn	07 36 28.2	-0.5
ZIRJ				Sn	Sn	07 37 34.5	-4.5
MGRS	Mrkonjic Grad	6.22	336	*e*Pn	Pn	07 36 30.4	+0.5
BLY	Banja Luka	6.49	338	*e*Pn	Pn	07 36 26.6	-7.0
DUGI	Dugi Otok	6.66	323	*e*Pn	Pn	07 36 36.0	0.0
MRAK	Mrakovica	6.81	337	*e*Pn	Pn	07 36 37.4	-0.7
NVLJ	Novalja	7.19	325	*e*Pn	Pn	07 36 43.2	0.0
MLR	Muntele Rosu	7.80	29	Pn	Pn	07 36 56.2	+4.5
	comp=N,0.3nm,0.3s,baz=180,slow=6.1,SNR=3.3						
CRES	Cresnjev	8.00	333	*e*Pn	Pn	07 36 54.1	-0.3
CEY	Cerknica	8.32	329	*e*Pn	Pn	07 36 58.6	-0.2
GERES	GERESS Array B	11.22	336	Pn	Pn	07 37 39.0	+0.4
	comp=N,0.2nm,0.3s,baz=153,slow=15,SNR=2.2						
AKASG	Malin Array Be	13.40	24	Pn	Pn	07 38 10.2	+2.0
	comp=N,1.0nm,0.3s,baz=209,slow=10,SNR=1.7						
HFS	Hagfors	21.82	351	P	P	07 39 50.2	-0.1
	comp=N,1.6nm,0.6s,baz=173,slow=13,SNR=1.6						
FINES	FINESS Array B	22.95	7	P	P	07 40 02.5	+0.2
	comp=N,5.9nm,0.8s,baz=154,slow=10,SNR=4.7						
EKA	Eskdalemuir Ar	22.97	324	P	P	07 40 01.2	-1.4
	comp=N,7.1nm,0.9s,baz=122,slow=11,SNR=4.7						
NOA	NORSAR Array B	23.04	348	P	P	07 40 03.4	0.0
	comp=N,1.3nm,0.8s,baz=158,slow=9.4,SNR=2.5						
AKTO	Aktyubinsk	28.79	54	P	P	07 40 56.3	+0.3
	comp=N,0.6nm,0.5s,baz=290,slow=12,SNR=2.1						
TORD	Torodi Ar. Bea	30.53	218	P	P	07 41 10.3	-1.4
	comp=N,0.4nm,0.6s,baz=33,slow=8.8,SNR=2.4						
MKAR	Makanchi Array	44.95	59	P	P	07 43 12.2	-1.1
	comp=N,0.5nm,0.6s,baz=278,slow=7.3,SNR=5.7						
ZALV	Zalesovo Beam	45.26	49	P	P	07 43 15.4	-0.1
	comp=N,3.7nm,0.7s,baz=279,slow=8.9,SNR=7.0						

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*ATH **17** 07:52:21.9, 38.°58N×20.°47E, h17^{km}±2^{km}, ML3.5/2, Error ellipse: s-maj=4.1km s-min=1.4km az=110.0*

*THE **17** 07:52:23.8, 38.°49N×20.°46E, h10^{km}±1^{km}, ML3.1/7, Error ellipse: s-maj=1.9km s-min=0.8km az=267.0*

ISC 17 07:52:22.5±1.1**, 38.°55N**±0.°03×**20.°46E**±0.°04**, h12**^{km}±7^{km}**, n27, σ0.^{s}65**/45**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FSK	Fiskardo	0.12	136	P	Pb	07 52 26.6	-0.1
FSK	Fiskardo	0.12	136	P	Pb	07 52 26.4	-0.3
FSK				S	Sg	07 52 28.4	+0.6
FSK				AML	AML	07 52 28.6	
	comp=N,82501µm,0.2s						
FSK				AML	AML	07 52 28.8	
EVGI	Lefkada island	0.17	64	P	Pg	07 52 25.8	-0.7
NYDR	Nydri-Lefkada	0.25	48	P	Pg	07 52 26.9	-0.9
KEF4	Livadi, Kephal	0.29	185	P	Pg	07 52 28.6	+0.2
KEF4				S	Sg	07 52 32.9	+0.5
KEF4	Livadi, Kephal	0.29	185	P	Pg	07 52 28.7	+0.3
KEF4				S	Sg	07 52 33.2	+0.8
DMLN	Damoulianata-K	0.31	192	P	Pg	07 52 29.1	+0.2
DMLN				S	Sg	07 52 33.7	+0.5
	comp=N,9µm,0.5s						
DMLN	Damoulianata-K	0.31	192	P	Pg	07 52 29.1	+0.2
DMLN				S	Sg	07 52 34.2	+1.0
TSLK	Tsoukalades, L	0.32	29	P	Pb	07 52 30.7	+0.6
TSLK				S	Sb	07 52 36.9	+1.6
TSLK	Tsoukalades, L	0.32	29	P	Pg	07 52 27.1	-1.9
LXRA	Lixouri, Kepha	0.35	183	P	Pg	07 52 29.8	+0.3
KEF3	Kipouria, Keph	0.35	194	P	Pg	07 52 29.3	-0.3
KEF3				S	Sg	07 52 34.0	-0.3
KEF3	Kipouria, Keph	0.35	194	P	Pg	07 52 29.4	-0.3
KEF3				S	Sg	07 52 34.2	-0.1
ARGA	Argostoli. Kep	0.37	177	P	Pb	07 52 30.6	-0.3
ARGA				S	Sb	07 52 36.2	-0.5
VLS	Valsamata	0.38	164	P	Pg	07 52 29.9	-0.3
VLS				S	Sg	07 52 35.2	-0.1
	comp=N,4µm,0.1s						
VLS	Valsamata	0.38	164	P	Pg	07 52 30.0	-0.1
VLS				S	Sg	07 52 35.5	+0.2
VLS				AML	AML	07 52 35.7	
	comp=E,8698µm,0.1s						
VLS				AML	AML	07 52 35.8	
	comp=N,6594µm,0.1s						
PSDA	Pessada-Kefalo	0.44	167	P	Pg	07 52 30.9	-0.3
PSDA				S	Sg	07 52 36.7	-0.4
VTN	Vitineika	0.85	137	P	Pg	07 52 38.5	-0.4
VTN				S	Sn	07 52 51.6	-1.0
LTHK	Lithakia	0.89	160	P	Pg	07 52 38.5	-1.1
LTHK				S	Sb	07 52 51.6	0.0
	comp=N,1µm,0.5s						
LTHK	Lithakia	0.89	160	P	Pg	07 52 38.7	-1.0
RLS	Riolos of Patr	0.93	121	P	Pb	07 52 40.2	-0.4
RLS				S	Sb	07 52 53.5	+0.6
	comp=N,660nm,0.4s						
EVR	Evrytania	1.12	70	P	Pg	07 52 44.6	+0.5
DRO	Drossia	1.15	121	P	Pg	07 52 45.6	+0.9
DRO				S	Sn	07 53 00.1	0.0
	comp=N,972nm,0.5s						
LAKA	Lakka	1.23	104	P	Pn	07 52 45.6	0.0
LAKA				S	Sg	07 53 02.8	+0.5
	comp=N,1µm,0.7s						
ALIK	Aliki, Aigiali	1.33	102	P	Pb	07 52 47.2	-0.2
KLV	Kalavryta, Ach	1.42	110	P	Pn	07 52 48.6	+0.4
GUR	Goura	1.60	112	P	Pb	07 52 51.7	-0.4
GUR				S	Sg	07 53 14.1	0.0
	comp=N,368nm,0.4s						

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*ATH **17** 07:57:14.0, 38.°69N×20.°62E, h9^{km}±1^{km}, ML3.2/5, Error ellipse: s-maj=2.1km s-min=1.1km az=258.0*

*THE **17** 07:57:14.3, 38.°70N×20.°61E, h5^{km}±3^{km}, ML3.0/6, Error ellipse: s-maj=3.8km s-min=0.5km az=93.0*

ISC 17 07:57:14.5±0.9**, 38.°70N**±0.°02×**20.°64E**±0.°03**, h7**^{km}±5^{km}**, n28, σ0.^{s}84**/38**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NYDR	Nydri-Lefkada	0.05	69	P	Pg	07 57 15.7	-0.4
NYDR				S	Sg	07 57 17.5	+0.3
	9µm,0.3s						
NYDR	Nydri-Lefkada	0.05	69	P	Pg	07 57 15.7	-0.4
EVGI	Lefkada island	0.07	168	P	Pg	07 57 15.9	-0.5
EVGI				S	Sg	07 57 17.8	+0.1
	33µm,0.4s						
EVGI	Lefkada island	0.07	168	P	Pg	07 57 16.0	-0.4
EVGI				S	Sg	07 57 17.8	+0.1
LKD2	Lefkada island	0.10	10	P	Pg	07 57 16.0	-0.7
LKD2				S	Sg	07 57 18.0	-0.3
	20µm,0.3s						
LKD2	Lefkada island	0.10	10	P	Pg	07 57 16.1	-0.7
LKD2				S	Sg	07 57 18.1	-0.2
LKD2				AML	AML	07 57 18.4	
	comp=E,31176µm,0.3s						
LKD2				AML	AML	07 57 18.4	

	comp=N,50395µm,0.3s						
TSLK	Tsoukalades, L	0.13	7	P	Pg	07 57 16.8	-0.5
TSLK				S	Sg	07 57 19.4	+0.2
	comp=N,20µm,0.3s						
TSLK	Tsoukalades, L	0.13	7	P	Pg	07 57 16.9	-0.5
TSLK				S	Sg	07 57 19.6	+0.4
TSLK				AML	AML	07 57 20.6	
	comp=E,40417µm,0.3s						
TSLK				AML	AML	07 57 21.9	
	comp=N,37531µm,0.4s						
FSK	Fiskardo	0.24	194	P	Pg	07 57 18.7	-0.6
FSK				S	Sg	07 57 22.6	+0.1
	comp=N,14µm,0.2s						
FSK	Fiskardo	0.24	194	P	Pg	07 57 18.8	-0.4
DMLN	Damoulianata-K	0.50	204	P	Pg	07 57 24.1	0.0
DMLN				S	Sg	07 57 31.2	+0.6
PVO	Paravola	0.70	96	P	Pg	07 57 28.2	+0.3
PVO	Paravola	0.70	96	P	Pg	07 57 28.3	+0.3
PVO				AML	AML	07 57 41.9	
	comp=E,3977µm,0.4s						
PVO				AML	AML	07 57 42.5	
	comp=N,3958µm,0.3s						
IGT	Igoumenitsa	0.87	344	P	Pg	07 57 29.8	-1.4
IGT				S	Sb	07 57 43.9	+0.2
	comp=N,585nm,0.4s						
IGT	Igoumenitsa	0.87	344	P	Pg	07 57 29.9	-1.2
RLS	Riolos of Patr	0.91	134	P	Pg	07 57 31.4	-0.6
JAN	Janina	0.97	10	P	Pg	07 57 33.1	-0.1
ANX	Ano Chora	1.01	95	P	Pg	07 57 33.1	-0.8
ANX				AML	AML	07 57 57.3	
	comp=N,6086µm,0.6s						
ANX				AML	AML	07 57 58.4	
	comp=E,4215µm,0.7s						
EFP	Efpalio	1.03	105	P	Pg	07 57 33.3	-0.9
EFP				AML	AML	07 57 57.7	
	comp=E,1528µm,0.7s						
EFP				AML	AML	07 57 58.6	
	comp=N,1597µm,0.4s						
LAKA	Lakka	1.15	113	P	Pg	07 57 35.2	-1.3
TRIZ	Trizonia	1.17	106	P	Pg	07 57 35.6	-1.3
KASA	Kassiopi	1.18	333	P	Pg	07 57 35.6	-1.6
KEK	Kerkira	1.21	328	P	Pg	07 57 36.6	-1.1
KLV	Kalavryta, Ach	1.36	118	P	Pn	07 57 38.5	-1.4
AGG	Agios Georgios	1.36	76	P	Pn	07 57 39.7	-0.2
VIL2	Platees	2.12	102	P	Pb	07 57 53.5	+0.3
OHR	Ohrid	2.42	3	*i* Pn	Pn	07 57 55.5	+1.1
STIP	Stip	3.22	21	*i* Pn	Pn	07 58 07.7	+2.2

*RSPR **17** 07:58:15.5, 18°.41N×68°.99W, h140^{km}±1^{km}, MD3.5/13*
*NEIC **17** 07:58:15.7±1.2, 18°.4N±0°.2×69°.00W±0°.08, h138^{km}±7^{km}, Error ellipse: s-maj=34.9km s-min=8.8km az=191.0*
*OSPL **17** 07:58:19.0±0.3, 18°.34N×69°.02W, h86^{km}±53^{km}, ML2.7*
ISC 17 07:58:15.9±1.3**, 18°.5N**±0°.1×**68°.97W**±0°.05**, h134^{km}, n50, σ0^{s}.92**/56**, 12C-1D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DR12	Loma Pena Alta	0.50	309		Pn	07 58 35.0	-0.5
PCDR	Punta Cana, DR	0.56	85⇑	*e*P	Pn	07 58 36.0	+0.3
PCDR	Punta Cana, DR	0.56	85	*e*S	Sn	07 58 52.0	+1.2
PCDR	Punta Cana, DR	0.56	85		Pn	07 58 36.0	+0.3
PCDR					Sn	07 58 52.0	+1.2
IDE	Isla Desecheo	1.42	93⇑	*e*P	Pn	07 58 41.3	-2.1
IDE	Isla Desecheo	1.42	93	*e*S	Sn	07 59 05.0	+0.6
PRSN	Puerto Rico Se	1.75	98	Pn	Pn	07 58 47.4	+0.3
AGPR	Aguadilla, PR	1.77	90⇓	*e*P	Pn	07 58 47.6	+0.4
AGPR	Aguadilla, PR	1.77	90	*e*S	Sn	07 59 12.1	+0.8
AGPR	Aguadilla, PR	1.77	90		Pn	07 58 47.6	+0.4
AGPR					Sn	07 59 12.1	+0.8
AGPR	Aguadilla, PR	1.77	90	*i* P	Pn	07 58 47.5	+0.3
AGPR				IAML		07 59 14.2	
	comp=Z,77nm,1.1s						
LSP	Las Mesas	1.81	99⇑	*e*P	Pn	07 58 48.1	+0.2
LSP	Las Mesas	1.81	99	*e*S	Sn	07 59 12.9	+0.5
CRPR	Cabo Rojo, PR	1.83	104⇑	*e*P	Pn	07 58 47.4	-0.6
CRPR	Cabo Rojo, PR	1.83	104	*e*S	Sn	07 59 13.2	+0.6
CRPR	Cabo Rojo, PR	1.83	104		Pn	07 58 47.4	-0.6
CRPR					Sn	07 59 13.2	+0.6
CRPR	Cabo Rojo, PR	1.83	104	*i* P	Pn	07 58 47.9	-0.1
CRPR				IAML		07 59 28.0	
	comp=Z,67nm,1.9s						
MLPR	Magueyes Islan	1.90	105⇑	*e*P	Pn	07 58 48.2	-0.7
MLPR	Magueyes Islan	1.90	105	*e*S	Sn	07 59 14.8	+0.8
MLPR	Magueyes Islan	1.90	105		Pn	07 58 48.2	-0.7
MLPR					Sn	07 59 14.8	+0.8
SC01	Santiago de lo	1.92	300	Pn	Pn	07 58 49.0	-0.1
SC01				IAML		07 59 15.8	
	comp=N,136nm,0.7s						
SC01				IAML		07 59 17.1	
	comp=E,103nm,0.4s						
SC01	Santiago de lo	1.92	300	*i* P	Pn	07 58 49.2	+0.2
SC01				IAML		07 59 18.5	
	comp=Z,55nm,1.2s						
LOBA2	Hotel Casa Bon	2.05	260	*i* P	Pn	07 58 49.8	-0.9
LOBA2				IAML		07 59 16.0	
	comp=Z,34nm,1.9s						
AOPR	Arecibo Observ	2.11	93⇑	*e*P	Pn	07 58 52.1	+0.7
AOPR	Arecibo Observ	2.11	93	*e*S	Sn	07 59 17.8	-0.9
AOPR	Arecibo Observ	2.11	93		Pn	07 58 52.1	+0.7
AOPR					Sn	07 59 17.8	-0.9
SDDR	Presa de Saban	2.25	283		Pn	07 58 54.3	+1.1
OBIP	Obispado Ponce	2.29	100⇑	*e*P	Pn	07 58 53.8	+0.2
OBIP	Obispado Ponce	2.29	100	*e*S	Sn	07 59 23.4	+0.9
OBIP	Obispado Ponce	2.29	100		Pn	07 58 53.8	+0.2
OBIP					Sn	07 59 23.4	+0.9
CELP	Cerrillos	2.31	99⇑	*e*P	Pn	07 58 54.0	+0.2
CELP	Cerrillos	2.31	99	*e*S	Sn	07 59 24.0	+1.0
CELP	Cerrillos	2.31	99		Pn	07 58 54.0	+0.2
CELP					Sn	07 59 24.0	+1.0
CELP	Cerrillos	2.31	99	IAML		07 59 29.7	
	comp=N,98nm,0.5s						
EMPR	Esperanza - Ma	2.32	89⇑	*e*P	Pn	07 58 53.6	-0.4
EMPR	Esperanza - Ma	2.32	89	*e*S	Sn	07 59 21.2	-2.0
EMPR	Esperanza - Ma	2.32	89		Pn	07 58 53.6	-0.4
EMPR					Sn	07 59 21.2	-2.0
LONE2	Loma La Sidra	2.38	272	*i* P	Pn	07 58 54.5	-0.3
LONE2				IAML		07 59 31.2	
	comp=Z,33nm,1.5s						
SJG	San Juan	2.71	97	Pn	Pn	07 58 59.5	+0.6
SJG				IAML		07 59 35.8	
	comp=Z,60nm,0.4s						
SJG				IAML		07 59 36.1	
	comp=Z,64nm,0.3s						
GCPR	Guaynabo City	2.75	93	Pn	Pn	07 58 59.2	-0.2
IGPR	InterUniversit	2.77	100⇑	*e*P	Pn	07 58 59.8	+0.2
IGPR	InterUniversit	2.77	100	*e*S	Sn	07 59 35.0	+1.7
CBYP	Canovanas	2.96	93	Pn	Pn	07 59 02.6	+0.4
HUMP	Col San Antoni	2.98	96	Pn	Pn	07 59 02.8	+0.4
LGNH	Logne	3.45	271	Pn	Pn	07 59 07.0	-1.5
LGNH				IAML		07 59 46.1	
	comp=N,67nm,3.2s						
CUPR	Culebra, Puert	3.51	92⇑	*e*P	Pn	07 59 07.5	-1.7
CUPR	Culebra, Puert	3.51	92		Pn	07 59 07.5	-1.7
STVI	Saint Thomas	3.82	91⇑	*e*P	Pn	07 59 12.2	-1.1
STVI	Saint Thomas	3.82	91		Pn	07 59 12.2	-1.1
STVI	Saint Thomas	3.82	91	IAML		08 00 07.6	
	comp=N,33nm,2.6s						

*IASPEI **17** 08:06:23.3±0.8, 38°.61N±0°.02×20°.57E±0°.03, h15^{km}±5^{km}, Error ellipse: s-maj=4.5km s-min=2.4km az=96.0, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*
*THE **17** 08:06:23.8, 38°.63N×20°.52E, h8^{km}±1^{km}, ML3.1/13, Error ellipse: s-maj=1.8km s-min=0.3km az=96.0*
*TIR **17** 08:06:23.7, 38°.73N×20°.73E, h25^{km}±2^{km}, Md3.7*
*ATH **17** 08:06:23.9, 38°.62N×20°.57E, h12^{km}±1^{km}, ML3.0/8, Error ellipse: s-maj=1.6km s-min=0.6km az=290.0*
ISC 17 08:06:23.5±0.8**, 38°.62N**±0°.02×**20°.56E**±0°.03**, h13^{km}**±5^{km}**, n47, σ0^{s}.53**/73**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EVGI	Lefkada island	0.08	87	P	Pg	08 06 26.1	-0.2
EVGI				S	Sg	08 06 27.8	-0.4
	18µm,0.2s						
EVGI	Lefkada island	0.08	87	P	Pg	08 06 26.1	-0.2
EVGI				S	Sg	08 06 27.8	-0.4
NYDR	Nydri-Lefkada	0.14	49	P	Pg	08 06 27.1	0.0
NYDR				S	Sg	08 06 29.7	0.0
	7µm,0.2s						
NYDR	Nydri-Lefkada	0.14	49	P	Pg	08 06 27.2	0.0
NYDR				S	Sg	08 06 29.6	0.0
FSK	Fiskardo	0.16	179	P	Pg	08 06 27.6	+0.3
FSK				S	Sg	08 06 30.3	+0.4
	35µm,0.2s						
FSK	Fiskardo	0.16	179	P	Pg	08 06 27.3	0.0
FSK				S	Sg	08 06 30.4	+0.4
FSK				AML	AML	08 06 30.8	
	comp=N,41138µm,0.2s						
FSK				AML	AML	08 06 31.2	
LKD2	Lefkada island	0.19	24	P	Pg	08 06 27.9	+0.1
LKD2				S	Sg	08 06 31.1	+0.3
	comp=N,8µm,0.3s						
LKD2	Lefkada island	0.19	24	P	Pg	08 06 27.9	+0.1
LKD2				S	Sg	08 06 31.1	+0.3
LKD2	Lefkada island	0.19	24	P	Pg	08 06 28.0	+0.1
	baz=317						
LKD2				S	Sg	08 06 31.2	+0.3
	baz=317						
TSLK	Tsoukalades, L	0.22	20	P	Pg	08 06 28.7	+0.4
TSLK				S	Sg	08 06 31.4	-0.2
	comp=N,7µm,0.5s						
TSLK	Tsoukalades, L	0.22	20	P	Pg	08 06 28.6	+0.3
TSLK				S	Sg	08 06 31.4	-0.2
KEF4	Livadi, Kephal	0.37	196	P	Pg	08 06 30.9	-0.1
KEF4				S	Sg	08 06 36.5	+0.4
	comp=N,51µm,0.3s						
KEF4	Livadi, Kephal	0.37	196	P	Pg	08 06 31.0	-0.1
KEF4				S	Sg	08 06 37.1	+1.1
DMLN	Damoulianata-K	0.41	201	P	Pg	08 06 31.4	-0.2
DMLN				S	Sg	08 06 38.0	+1.0
	comp=N,6µm,0.4s						
DMLN	Damoulianata-K	0.41	201	P	Pg	08 06 31.5	-0.1
DMLN				S	Sg	08 06 38.0	+1.0
LXRA	Lixouri, Kepha	0.43	193	P	Pg	08 06 31.7	-0.3
LXRA				S	Sg	08 06 38.5	+0.8
VLS	Valsamata	0.44	177	P	Pg	08 06 32.1	-0.1
VLS				S	Sb	08 06 39.4	-0.2
	comp=N,8µm,0.4s						
VLS	Valsamata	0.44	177	P	Pg	08 06 32.1	-0.1
VLS				S	Sb	08 06 39.2	-0.4
VLS				AML	AML	08 06 39.5	
	comp=E,12078µm,0.5s						
VLS				AML	AML	08 06 39.8	
	comp=N,21264µm,0.3s						
ARGA	Argostoli. Kep	0.44	188	P	Pb	08 06 33.1	-0.1
KEF3	Kipouria, Keph	0.45	202	P	Pg	08 06 31.6	-0.7
KEF3				S	Sg	08 06 38.8	+0.5
	comp=N,8µm,0.2s						
KEF3	Kipouria, Keph	0.45	202	P	Pg	08 06 31.8	-0.5
KEF3				S	Sg	08 06 38.2	-0.1
PSDA	Pessada-Kefalo	0.50	178	P	Pg	08 06 33.2	-0.2
PSDA				S	Sb	08 06 41.3	-0.1
	comp=N,868nm,0.2s						
PSDA	Pessada-Kefalo	0.50	178	P	Pg	08 06 33.2	-0.2
PSDA				S	Sb	08 06 41.1	-0.3
PVO	Paravola	0.76	90	P	Pb	08 06 38.6	+0.1
PVO				S	Sb	08 06 50.0	+1.3
	comp=N,1µm,0.4s						
PVO	Paravola	0.76	90	P	Pg	08 06 38.3	+0.1
PVO				AML	AML	08 06 53.2	
	comp=E,2695µm,0.3s						
PVO				AML	AML	08 06 53.5	
	comp=N,2352µm,0.3s						
VTN	Vitineika	0.86	145	P	Pb	08 06 40.4	+0.2
VTN	Vitineika	0.86	145	P	Pb	08 06 40.3	+0.1
RLS	Riolos of Patr	0.91	128	P	Pg	08 06 40.6	-0.4
IGT	Igoumenitsa	0.93	349	P	Pg	08 06 41.1	-0.4
IGT				S	Sb	08 06 54.3	+0.6
	comp=N,365nm,0.4s						
IGT	Igoumenitsa	0.93	349	P	Pg	08 06 41.2	-0.3
IGT				AML	AML	08 06 59.1	
	comp=E,795µm,0.5s						
IGT				AML	AML	08 07 00.0	
	comp=N,652µm,0.4s						
IGT	Igoumenitsa	0.93	349	P	Pg	08 06 41.4	-0.1
	baz=339						
IGT				S	Sg	08 06 52.0	-1.6
	baz=339						
LTHK	Lithakia	0.93	166	P	Pg	08 06 40.8	-0.7
EVR	Evrytania	1.02	73	P	Pb	08 06 42.3	-0.8
ANX	Ano Chora	1.07	91	P	Pb	08 06 43.3	-0.6
ANX				AML	AML	08 07 07.3	
	comp=N,2076µm,0.5s						
ANX				AML	AML	08 07 08.2	
	comp=E,2310µm,0.7s						
DRO	Drossia	1.12	126	P	Pb	08 06 44.8	0.0
LAKA	Lakka	1.18	108	P	Pb	08 06 44.6	-1.0
KEK	Kerkira	1.24	332	P	Pb	08 06 47.2	+0.4
KEK				S	Sg	08 07 04.7	+1.1
	comp=E,128nm,0.5s						
KEK	Kerkira	1.24	332	P	Pg	08 06 47.3	-0.1
MAKR	Makrakomi, Fth	1.29	72	P	Pb	08 06 47.9	+0.3
SRN	Sarande	1.33	341	P	Pg	08 06 50.4	+1.3
	baz=335						
KLV	Kalavryta, Ach	1.38	114	P	Pn	08 06 48.5	+0.1
AGG	Agios Georgios	1.44	73	P	Pb	08 06 50.5	+0.3
AGG				AML	AML	08 07 17.3	
	comp=N,572µm,0.8s						
AGG				AML	AML	08 07 19.7	
	comp=E,712µm,0.5s						
KPRO	Kipourio	1.47	25	P	Pb	08 06 50.7	-0.1
KPRO				AML	AML	08 07 18.5	
	comp=E,580µm,0.4s						
KPRO				AML	AML	08 07 21.2	
	comp=N,544µm,0.7s						
THL	Klokotos Trika	1.48	50	P	Pb	08 06 50.8	+0.1
THL				AML	AML	08 07 17.8	
	comp=E,329µm,0.4s						
THL				AML	AML	08 07 18.0	
	comp=N,397µm,0.7s						
LSK	Leskovik	1.53	1	P	Pn	08 06 49.9	-0.7
	baz=356						
GUR	Goura	1.56	115	P	Pn	08 06 51.4	+0.4
SCTE	Santa Cesarea	2.18	313	P	Pb	08 07 01.7	-1.0
	baz=309						

*IDC **17** 08:10:04.2±1.0, 38°.78N×20°.47E, h0^{km}, mb4.0/10, mb1 4.0/18, mb1mx3.9/48, mbtmp3.9/18, ML3.6/8, MS4.5/1, Ms1 4.6/1, ms1mx3.8/70, Error ellipse: s-maj=16.9km s-min=15.3km az=169.0*
*MOS **17** 08:10:04.1±1.2, 38°.57N×20°.24E, h14^{km}, mb4.7/4, Error ellipse: s-maj=7.5km s-min=3.4km az=81.4*
*THE **17** 08:10:06.2, 38°.62N×20°.56E, h8^{km}±1^{km}, ML4.1/11, Error ellipse: s-maj=1.1km s-min=0.4km az=106.0*
*ATH **17** 08:10:06.4, 38°.63N×20°.59E, h10^{km}±1^{km}, ML3.9/12, Error ellipse: s-maj=1.5km s-min=0.7km az=278.0*
*PDG **17** 08:10:08.1±0.5, 38°.74N×20°.40E, h27^{km}±1^{km}, ML3.7/13, Error ellipse: s-maj=1.0km s-min=1.0km az=0.0*
*NEIC **17** 08:10:08.3±2.4, 38°.63N±0°.06×20°.44E±0°.07, h22^{km}±9^{km}, Error ellipse: s-maj=9.0km s-min=6.8km az=217.0*
*TIR **17** 08:10:08.7, 38°.80N×20°.64E, h5^{km}±4^{km}, Md4.2, Ml4.2*
ISC 17 08:10:05.9±0.7**, 38°.64N**±0°.01×**20°.52E**±0°.02**, h10^{km}**±4^{km}**, n273, σ1^{s}.57**/337**, mb4.1**/15**, 15C-17D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EVGI	Lefkada island	0.11	102	P	Pg	08 10 08.2	-0.4
EVGI				S	Sg	08 10 09.7	-0.8
EVGI	Lefkada island	0.11	102	P	Pg	08 10 08.2	-0.4
EVGI				S	Sg	08 10 09.5	-1.0
NYDR	Nydri-Lefkada	0.15	63	P	Pg	08 10 09.0	-0.3
NYDR				S	Sg	08 10 11.2	-0.4
	90µm,0.7s						
NYDR	Nydri-Lefkada	0.15	63	P	Pg	08 10 09.0	-0.3
NYDR				S	Sg	08 10 11.3	-0.4
LKD2	Lefkada island	0.18	36	P	Pg	08 10 09.8	0.0
LKD2				S	Sg	08 10 12.3	-0.1
	146µm,0.7s						
LKD2	Lefkada island	0.18	36	P	Pg	08 10 09.8	0.0
LKD2				S	Sg	08 10 12.9	+0.4
LKD2				AML	AML	08 10 13.1	
LKD2				AML	AML	08 10 13.5	
LKD2	Lefkada island	0.18	36	P	Pg	08 10 09.8	0.0
	baz=111						
LKD2				S	Sg	08 10 09.9	-2.5
	baz=111						
FSK	Fiskardo	0.19	170	P	Pg	08 10 10.1	+0.3
FSK				S	Sg	08 10 12.1	-0.4
	79µm,0.6s						
FSK	Fiskardo	0.19	170	P	Pg	08 10 10.1	+0.3
FSK				S	Sg	08 10 13.5	+1.0
FSK				AML	AML	08 10 14.3	
FSK				AML	AML	08 10 16.7	
TSLK	Tsoukalades, L	0.21	30	P	Pg	08 10 10.5	+0.2
TSLK				S	Sg	08 10 13.8	+0.6
	123µm,0.6s						
TSLK	Tsoukalades, L	0.21	30	P	Pg	08 10 10.5	+0.2
TSLK				S	Sg	08 10 13.9	+0.7
TSLK				AML	AML	08 10 14.7	
TSLK				AML	AML	08 10 16.1	
KEF4	Livadi, Kephal	0.39	191	P	Pg	08 10 13.5	-0.1
KEF4				S	Sb	08 10 19.9	-1.2
	188µm,0.4s						
KEF4	Livadi, Kephal	0.39	191	P	Pg	08 10 13.7	+0.1
KEF4				S	Sb	08 10 20.4	-0.7
DMLN	Damoulianata-K	0.42	196	P	Pg	08 10 14.1	0.0
DMLN				S	Sg	08 10 20.1	+0.4
	34µm,0.4s						
DMLN	Damoulianata-K	0.42	196	P	Pg	08 10 14.1	0.0
DMLN				S	Sg	08 10 20.7	+1.0
LXRA	Lixouri, Kepha	0.45	189	P	Pg	08 10 14.7	+0.1
LXRA				S	Sb	08 10 21.9	-0.8
KEF3	Kipouria, Keph	0.46	197	P	Pg	08 10 14.2	-0.7
KEF3				S	Sg	08 10 21.2	+0.3
	54µm,0.5s						
KEF3	Kipouria, Keph	0.46	197	P	Pg	08 10 14.1	-0.7
KEF3				S	Sg	08 10 21.5	+0.5
VLS	Valsamata	0.47	173	P	Pg	08 10 14.6	-0.5
VLS				S	Sg	08 10 21.3	+0.1
	17µm,0.4s						
VLS	Valsamata	0.47	173	P	Pg	08 10 14.6	-0.5
VLS				S	Sg	08 10 21.5	+0.3
VLS				AML	AML	08 10 22.3	
	comp=E,34526µm,0.5s						
VLS				AML	AML	08 10 23.1	
	comp=N,34253µm,0.3s						
VLS	Valsamata	0.47	173	P	Pg	08 10 14.6	-0.5
VLS				S	Sg	08 10 21.3	+0.1
PSDA	Pessada-Kefalo	0.53	175	P	Pg	08 10 15.6	-0.6
PSDA				S	Sg	08 10 23.6	+0.4
	comp=N,3µm,0.3s						
PSDA	Pessada-Kefalo	0.53	175	P	Pg	08 10 15.7	-0.5
PSDA				S	Sg	08 10 23.9	+0.7
PVO	Paravola	0.79	92	P	Pg	08 10 20.6	-0.5
PVO				S	Sb	08 10 32.2	-0.3
	comp=N,11µm,0.4s						
PVO	Paravola	0.79	92	P	Pg	08 10 20.8	-0.3
PVO				S	Sg	08 10 30.8	-0.6
PVO				AML	AML	08 10 33.8	
	comp=N,22132µm,0.4s						
PVO				AML	AML	08 10 36.3	
	comp=E,19924µm,0.4s						
VTN	Vitineika	0.89	144	P	Pg	08 10 22.9	-0.2
VTN	Vitineika	0.89	144	P	Pg	08 10 23.1	-0.1
IGT	Igoumenitsa	0.90	351	P	Pg	08 10 22.9	-0.4
IGT				S	Sn	08 10 37.3	-0.6
	comp=E,7µm,0.6s						
IGT	Igoumenitsa	0.90	351	P	Pg	08 10 22.7	-0.6
IGT	Igoumenitsa	0.90	351	P	Pg	08 10 22.9	-0.4
IGT				S	Sn	08 10 37.3	-0.6
IGT	Igoumenitsa	0.90	351	P	Pg	08 10 22.3	-1.0
	baz=342						
IGT				S	Sn	08 10 38.3	+0.5
	baz=342						
RLS	Riolos of Patr	0.94	128	P	Pg	08 10 23.5	-0.6
RLS	Riolos of Patr	0.94	128	P	Pg	08 10 23.3	-0.8
RLS				AML	AML	08 10 44.0	
	comp=E,8391µm,0.5s						
RLS				AML	AML	08 10 44.7	
	comp=N,10412µm,0.8s						
LTHK	Lithakia	0.96	165	P	Pg	08 10 22.8	-1.7
LTHK	Lithakia	0.96	165	P	Pg	08 10 22.8	-1.7
LTHK				AML	AML	08 10 43.3	
	comp=N,9838µm,0.5s						
LTHK				AML	AML	08 10 47.0	
	comp=E,8810µm,0.5s						
EVR	Evrytania	1.04	74	P	Pg	08 10 24.7	-1.3
EVR	Evrytania	1.04	74	P	Pg	08 10 24.6	-1.3
EVR				AML	AML	08 10 56.7	
	comp=N,8284µm,0.8s						
EVR				AML	AML	08 10 57.8	
	comp=E,6804µm,0.7s						
JAN	Janina	1.04	14	P	Pg	08 10 26.2	+0.2
JAN	Janina	1.04	14	P	Pn	08 10 26.6	-0.1
JAN				AML	AML	08 10 44.1	
	comp=N,11002µm,0.5s						
JAN				AML	AML	08 10 45.0	
	comp=E,15234µm,0.5s						
JAN	Janina	1.04	14	P	Pg	08 10 26.2	+0.2
ANX	Ano Chora	1.10	92	P	Pb	08 10 25.8	-1.3
ANX	Ano Chora	1.10	92	P	Pb	08 10 25.9	-1.3
EFP	Efpalio	1.11	101	P	Pb	08 10 25.9	-1.3
DRO	Drossia	1.16	126	P	Pb	08 10 27.4	-0.7
KASA	Kassiopi	1.19	338	P	Pg	08 10 29.3	+0.5
KEK	Kerkira	1.21	332	P	Pg	08 10 29.6	+0.5
KEK	Kerkira	1.21	332	P	Pg	08 10 29.6	+0.5
KEK				AML	AML	08 10 54.2	
	comp=E,5354µm,0.5s						
KEK				AML	AML	08 10 55.6	
	comp=N,5852µm,0.6s						
LAKA	Lakka	1.21	109	P	Pn	08 10 27.4	-1.6
LAKA	Lakka	1.21	109	P	Pn	08 10 27.4	-1.6
TRIZ	Trizonia	1.25	102	P	Pn	08 10 28.0	-1.5
TRIZ	Trizonia	1.25	102	P	Pn	08 10 27.9	-1.6
SRN	Sarande	1.30	342	P	Pb	08 10 30.8	+0.3
SRN	Sarande	1.30	342	P	Pn	08 10 30.4	+0.2
	baz=336						
SRN				S	Sg	08 10 50.4	+2.6
	baz=336						
SRN				AMP			
	comp=N,5.1nm,0.7s,baz=336						
MAKR	Makrakomi, Fth	1.31	73	P	Pn	08 10 29.7	-0.7
MAKR	Makrakomi, Fth	1.31	73	P	Pn	08 10 29.8	-0.6
KLV	Kalavryta, Ach	1.41	115	P	Pn	08 10 30.3	-1.5
AGG	Agios Georgios	1.46	74	P	Pn	08 10 32.6	+0.2
AGG	Agios Georgios	1.46	74	P	Pn	08 10 32.6	+0.2
AGG	Agios Georgios	1.46	74	P	Pn	08 10 32.7	+0.2
AGG	Agios Georgios	1.46	74		Pn	08 10 32.7	+0.2
KPRO	Kipourio	1.46	26	P	Pg	08 10 34.1	+0.1
KPRO	Kipourio	1.46	26	P	Pn	08 10 33.0	+0.4
THL	Klokotos Trika	1.48	51	P	Pn	08 10 33.1	+0.4
THL				AML	AML	08 10 58.4	
	comp=E,10200µm,0.8s						
THL				AML	AML	08 10 58.8	
	comp=N,13829µm,0.8s						
LSK	Leskovik	1.51	2	P	Pb	08 10 34.6	+0.5
	baz=359						
LSK				S	Sg	08 10 55.4	+1.0
	baz=359						
LSK				AMP			
	comp=E,22nm,0.8s,baz=359						
GUR	Goura	1.60	116	P	Pn	08 10 33.7	-0.7
PENT	Pentalofos	1.62	17	P	Pg	08 10 37.3	+0.2
PENT				AML	AML	08 11 07.1	
	comp=E,4085µm,0.5s						
PENT				AML	AML	08 11 09.7	
	comp=N,3656µm,1.0s						
NEST	Nestorio	1.82	13	P	Pg	08 10 40.4	-0.3
ITM	Ithomi	1.84	142	P	Pb	08 10 39.7	0.0
ITM	Ithomi	1.84	142		Pb	08 10 40.1	+0.5
KZN	Kozani	1.92	30	P	Pb	08 10 41.4	+0.3
KZN	Kozani	1.92	30	P	Pg	08 10 42.9	+0.1
VLO	Vlora	1.99	337	P	Pn	08 10 40.9	+1.2
VLO	Vlora	1.99	337		Pn	08 10 40.9	+1.2
VLO	Vlora	1.99	337	P	Pg	08 10 44.1	0.0
	baz=333						
VLO				S	Sg	08 11 10.8	+1.0
	baz=333						
VLO				AMP			
	comp=N,9.0nm,0.5s,baz=333						
KBN	Korca	1.99	6	P	Pb	08 10 41.6	-0.7
KBN	Korca	1.99	6		Pb	08 10 41.6	-0.7
KBN	Korca	1.99	6	P	Pb	08 10 42.1	-0.1
	baz=3.0						
KBN				S	Sb	08 11 07.4	+0.2
	baz=3.0						
KBN				AMP			
	comp=N,4.7nm,0.6s,baz=3.0						
LTK	Loutraki	2.02	107	P	Pb	08 10 42.1	-0.7
SCTE	Santa Cesarea	2.14	313		Pn	08 10 42.2	+0.4

XOR	Xorichti	2.20	70	P	Pn	08 10 44.3	+1.7
FNA	Florina	2.24	17	P	Pn	08 10 44.9	+1.8
FNA	Florina	2.24	17	P	Pn	08 10 44.4	+1.2
FNA	Florina	2.24	17		Pn	08 10 44.4	+1.2
FNA	Florina	2.24	17	P	Pb	08 10 45.0	-1.5
	baz=15						
FNA				S	Sb	08 11 14.0	-0.4
	baz=15						
OHR	Ohrid	2.48	5	*e*P	Pb	08 10 49.1	-1.5
OHR				*e*S	Sb	08 11 20.5	-0.6
OHR	Ohrid	2.48	5	*i* Pn	Pb	08 10 48.7	-1.9
ATH	Athens Observa	2.60	104	P	Pb	08 10 52.7	0.0
GRG	Griva	2.73	31	P	Pn	08 10 51.3	+1.4
THE	Thessaloniki	2.74	43	P	Pn	08 10 51.2	+1.2
	baz=43						
THE				S	Sb	08 11 29.8	+1.1
	baz=43						
TIR	Tirane	2.75	350	⇓P	Pn	08 10 51.0	+0.9
TIR				⇓S	Sn	08 11 18.6	-4.8
TIR	Tirane	2.75	350	P	Pn	08 10 50.8	+0.7
TIR	Tirane	2.75	350		Pn	08 10 50.8	+0.7
TIR	Tirane	2.75	350	P	Pn	08 10 51.1	+0.9
	baz=348						
TIR				S	Sb	08 11 26.5	-2.5
	baz=348						
TIR				AMP			
	comp=N,1.5nm,0.6s,baz=348						
PAIG	Paliouri	2.77	61	P	Pb	08 10 53.4	-2.1
TIP	Timpagrande	2.98	281	⇑P	Pn	08 10 54.2	+0.8
TIP	Timpagrande	2.98	281	Pn	Pn	08 10 53.9	+0.5
PHP	Peshkopia	3.04	359	P	Pn	08 10 56.0	+1.9
	baz=358						
PHP				S	Sn	08 11 33.5	+2.8
	baz=358						
PHP				AMP			
	comp=N,1.6nm,1.0s,baz=358						
SOH	Sokhos	3.08	44	P	Pn	08 10 56.8	+2.0
VAY	Valandovo	3.10	30	*e*P	Pn	08 10 57.0	+2.0
VAY				*e*S	Sn	08 11 34.6	+2.4
VAY	Valandovo	3.10	30	*i* Pn	Pn	08 10 56.4	+1.4
KNT	Kendrikon	3.11	35	P	Pn	08 10 56.8	+1.7
STIP	Stip	3.30	22	*i* Pn	Pn	08 11 00.6	+2.8
SKO	Skopje	3.40	12	P	Pn	08 11 00.5	+1.4
SKO	Skopje	3.40	12	*i* Pn	Pn	08 11 00.4	+1.3
SRS	Serrai	3.42	43	P	Pn	08 11 02.0	+2.6
NOCI	Noci	3.42	310	P	Pg	08 11 10.7	-0.8
	baz=308						
ULC	Ulcinj	3.46	344	P	Pn	08 11 00.4	+0.5
ULC	Ulcinj	3.46	344	⇓*i*Pn	Pn	08 10 59.7	-0.2
ULC				*i* Sn	Sn	08 11 38.6	-2.4
MATE	Matera	3.56	305	⇓P	Pn	08 11 01.0	-0.3
CEL	Celeste	3.65	265		Pn	08 11 02.6	0.0
DRME	Dracevica, Mon	3.68	344	*e*Pn	Pn	08 11 02.8	-0.2
DRME	Dracevica, Mon	3.68	344	⇑*i*Pn	Pn	08 11 03.1	+0.1
DRME				*i* Sn	Sn	08 11 44.4	-2.1
BCI	Bajram Curri	3.74	355	P	Pn	08 11 05.3	+1.6
	baz=354						
BCI				S	Sn	08 11 51.4	+3.5
	baz=354						
BCI				AMP			
	comp=N,1.3nm,0.8s,baz=354						
BUM	Brajici-Budva	3.86	342	*e*Pn	Pn	08 11 05.3	-0.2
BUM				*i* Sn	Sn	08 11 48.6	-2.3
PDG	Podgorica	3.90	346	⇑P	Pn	08 11 05.9	-0.1
PDG	Podgorica	3.90	346	*e*Pn	Pn	08 11 05.8	-0.2
PDG	Podgorica	3.90	346	Pn	Pn	08 11 05.8	-0.2
TTG	Podgorica	3.90	346	⇑*i*Pn	Pn	08 11 06.1	+0.1
TTG				*i* Sn	Sn	08 11 49.7	-2.2
PVY	Plav	3.97	354	*e*Pn	Pn	08 11 08.8	+1.8
CEME	Cevo	4.09	343	*e*Pn	Pn	08 11 08.2	-0.4
CEME				*i* Sn	Sn	08 11 53.9	-2.6
HCY	Herceg Novi	4.10	339	P	Pn	08 11 08.7	0.0
HCY	Herceg Novi	4.10	339	*e*Pn	Pn	08 11 07.3	-1.4
HCY	Herceg Novi	4.10	339	*e*Pn	Pn	08 11 08.2	-0.5
HCY				*i* Sn	Sn	08 11 54.1	-2.7
MRVN	Minervino Murg	4.11	307	P	Pn	08 11 10.8	+1.9
	baz=305						
IVA	Berane	4.25	354	⇑*i*Pn	Pn	08 11 12.2	+1.3
IVA				*i* Sn	Sn	08 11 58.1	-2.5
KOME	Kolasin	4.27	350	⇑*i*Pn	Pn	08 11 11.4	+0.2
KOME				*i* Sn	Sn	08 11 58.5	-2.6
NKME	Niksic	4.29	344	*e*Pn	Pn	08 11 11.4	+0.1
NKME				*i* Sn	Sn	08 11 58.9	-2.6
NKY	Niksic	4.32	345	P	Pn	08 11 13.1	+1.2
NKY	Niksic	4.32	345	⇓*i*Pn	Pn	08 11 12.0	+0.1
NKY				*i* Sn	Sn	08 11 59.7	-2.7
TREB	Trebinje	4.39	339	*e*Pn	Pn	08 11 11.9	-0.8
DBRK	Dubrovnik	4.41	337	*e*Pn	Pn	08 11 12.5	-0.4
DBRK				Sn	Sn	08 12 01.4	-3.0
VTS	Vitosha	4.47	27	⇓P	Pn	08 11 15.8	+1.8
VTS	Vitosha	4.47	27	P	Pn	08 11 14.2	+0.2
VTS	Vitosha	4.47	27	Pn	Pn	08 11 14.2	+0.2
BRY	Bratogost	4.51	341	P	Pn	08 11 14.4	-0.1
BRY	Bratogost	4.51	341	*e*Pn	Pn	08 11 13.2	-1.3
BRY	Bratogost	4.51	341	⇓*i*Pn	Pn	08 11 13.8	-0.7
BRY				*i* Sn	Sn	08 12 03.8	-3.3
UPM	Unac-Piva	4.72	345	*e*Pn	Pn	08 11 17.5	+0.1
UPM	Unac-Piva	4.72	345	*e*Pn	Pn	08 11 17.4	+0.1
UPM				*i* Sn	Sn	08 12 08.8	-3.4
STON	Ston	4.74	334	*e*Pn	Pn	08 11 16.3	-1.1
STON	Ston	4.74	334	*e*Pn	Pn	08 11 16.4	-1.0
PLE	Pljevlja	4.76	350	P	Pn	08 11 22.6	+4.7
PLE	Pljevlja	4.76	350	⇓*i*Pn	Pn	08 11 18.1	+0.2
PLE				*e*Sn	Sn	08 12 09.9	-3.3
SGRT	San Giovanni R	4.80	312		Pn	08 11 18.8	+0.4
SGRT	San Giovanni R	4.80	312	P	Pn	08 11 16.8	-1.6
	baz=310						
ALN	Alexandroupoli	4.81	60	P	Pn	08 11 20.1	+1.6
ALN	Alexandroupoli	4.81	60		Pn	08 11 20.1	+1.6
IDI	Anoyia	4.84	132	Pn	Pn	08 11 20.7	+1.7
	comp=N,0.4nm,0.3s,baz=310,slow=18,SNR=1.9						
IDI				Sn	Sn	08 12 15.9	+0.7
	comp=N,3.3nm,0.3s,baz=338,slow=17,SNR=2.6						
RUDO	Rudo	5.05	350	*e*Pn	Pn	08 11 20.1	-1.6
BOVS	Bovan	5.07	10	⇑P	Pn	08 11 21.6	-0.4
RAFF	Raffo Rosso	5.07	256		Pn	08 11 21.1	-0.9
PAOL	Paolisi	5.17	299		Pn	08 11 23.1	-0.3
MAKA	Makarska	5.34	331	*e*Pn	Pn	08 11 25.4	-0.4
MAKA				Sn	Sn	08 12 24.8	-2.6
DIVS	Divibare	5.46	356	*e*Pn	Pn	08 11 26.7	-0.8
DIVS	Divibare	5.46	356		Pn	08 11 27.1	-0.4
HVAR	Hvar	5.48	327	*e*Pn	Pn	08 11 26.7	-1.0
RICI	Ricice	5.48	333	*e*Pn	Pn	08 11 26.6	-1.1
TEKS	Tekeris	5.95	353	*e*Pn	Pn	08 11 32.3	-1.8
KIJV	Kijevo	6.19	331	*e*Pn	Pn	08 11 36.9	-0.5
KIJV				Sn	Sn	08 12 45.5	-2.8
ZIRJ	Zirje	6.21	325	*e*Pn	Pn	08 11 36.4	-1.3
MGRS	Mrkonjic Grad	6.32	337	*e*Pn	Pn	08 11 31.2	-8.0
MORI	Morici	6.35	327	*e*Pn	Pn	08 11 39.4	-0.2
HERR	Herculane	6.39	12	⇓P	Pn	08 11 40.4	+0.3
FRGS	Fruska Gora	6.53	356	⇓P	Pn	08 11 41.3	-0.9
FRGS	Fruska Gora	6.53	356	*e*Pn	Pn	08 11 36.5	-5.6
BLY	Banja Luka	6.59	339	*e*Pn	Pn	08 11 39.2	-3.7
DUGI	Dugi Otok	6.74	324	*e*Pn	Pn	08 11 45.3	+0.3
DUGI				Sn	Sn	08 12 58.3	-3.6
UDBI	Udbina	6.88	330	*e*Pn	Pn	08 11 48.1	+1.2
MRAK	Mrakovica	6.92	338	*e*Pn	Pn	08 11 46.3	-1.1
GZR	Gura Zlata	6.95	13	⇓P	Pn	08 11 48.2	+0.3
NRCA	Norcia	7.01	309		Pn	08 11 50.2	+1.4
BZS	Buzias	7.02	6	⇓P	Pn	08 11 48.0	-0.8
BZS	Buzias	7.02	6	P	Pn	08 11 47.9	-0.8
NVLJ	Novalja	7.27	326	*e*Pn	Pn	08 11 51.9	-0.4
NVLJ				Sn	Sn	08 13 11.0	-3.9
RABC	Rab	7.46	327	*e*Pn	Pn	08 11 53.9	-0.9
MOSL	Moslavina	7.51	339	*e*Pn	Pn	08 11 53.9	-1.6
VOIR		7.58	25	⇑P	Pn	08 11 57.6	+1.1
VOIR		7.58	25	P	Pn	08 11 58.3	+1.8
VOIR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MURB	Monte Urbino	7.61	310		Pn	08 11 58.4	+1.4
MORH	Mrgy, Hungar	7.69	350	*e*Pn	Pn	08 11 56.0	-2.0
ISR	Istrita	7.88	33	P	Pn	08 12 03.9	+3.3
ISR				pmax	pmax		
	comp=Z,30nm,1.5s						
MLR	Muntele Rosu	7.94	29	⇓P	Pn	08 12 02.7	+1.2
MLR	Muntele Rosu	7.94	29	Pn	Pn	08 12 01.9	+0.3
	comp=Z,0.3nm,0.3s,baz=276,slow=11,SNR=11						
MLR	Muntele Rosu	7.94	29	P	Pn	08 12 05.3	+3.7
MLR	Muntele Rosu	7.94	29	Pn	Pn	08 12 05.3	+3.7
SMRN	Sveta Marina	7.96	325	*e*Pn	Pn	08 12 01.6	0.0
BRJN	Brijuni	8.04	323	*e*Pn	Pn	08 12 01.6	-1.2
RIY	Rijeka	8.05	328	*e*Pn	Pn	08 12 00.9	-2.0
CRES	Cresnjev	8.10	334	*e*Pn	Pn	08 12 02.5	-1.1
DOPR	Dopca	8.16	25	⇑P	Pn	08 12 04.7	+0.3
DRGR		8.30	10	⇑P	Pn	08 12 06.8	+0.3
DRGR		8.30	10	P	Pn	08 12 06.7	+0.3
CEY	Cerknica	8.41	329	*e*Pn	Pn	08 12 07.1	-0.8
PLOR	Plostina	8.51	30	⇓P	Pn	08 12 09.5	+0.1
PLOR	Plostina	8.51	30	P	Pn	08 12 09.4	+0.1
VRI	Vrincioaia	8.56	31	⇑P	Pn	08 12 11.0	+1.1
VRI	Vrincioaia	8.56	31	P	Pn	08 12 13.7	+3.8
VRI				pmax	pmax		
	comp=Z,23nm,1.2s						
MPLH	Magyarpolny	8.80	347	*e*PN	Pn	08 12 08.7	-4.5
CSKK	Cskako	8.87	350	*e*P	Pn	08 12 10.8	-3.3
CSKK	Cskako	8.87	350	*e*PN	Pn	08 12 10.1	-4.1
SOKA	Soboth	8.99	335	*i* Pn	Pn	08 12 14.6	-1.2
	comp=Z,7.7nm,0.6s						
SOKA				*e*Sn	Sn	08 13 51.6	-5.6
	comp=Z,3.3nm,0.6s						
OBKA	Obir	9.01	333	*e*Pn	Pn	08 12 16.4	+0.2
	comp=Z,5.2nm,0.4s						
OBKA				*e*Sn	Sn	08 13 53.1	-4.6
	comp=Z,16nm,0.6s						
PSZ	Piszkesteto	9.28	357	*e*PN	Pn	08 12 19.9	+0.1
PSZ	Piszkesteto	9.28	357	*e*P	Pn	08 12 21.6	+1.7
PSZ	Piszkesteto	9.28	357	P	Pn	08 12 20.0	+0.1
PSZ				pmax	pmax		
	comp=Z,13nm,0.8s						
KEST	Kesra	9.38	255	Pn	Pn	08 12 21.9	+0.7
	comp=Z,0.2nm,0.3s,baz=24,slow=3.0,SNR=4.0						
TEOL	Teolo	9.40	318		Pn	08 12 22.5	+1.1
STAL	STALIGIAL	9.55	325		Pn	08 12 23.5	0.0
ZOU	Zoufplan	9.66	327		Pn	08 12 24.5	-0.8
CTI	Castel Tesino	9.89	321	P	Pn	08 12 27.2	-1.0
CTI	Castel Tesino	9.89	321	Pn	Pn	08 12 27.2	-1.0
VYHS	Vyhne	9.92	353	*e*P	Pn	08 12 28.1	-0.5
VYHS				*e*	Sn	08 14 16.1	-3.9
VYHS	Vyhne	9.92	353	*e*PN	Pn	08 12 28.1	-0.5
VYHS				*e*SN	Sn	08 14 16.1	-3.9
KBA	Koelnbreinsper	9.94	330	P	Pn	08 12 28.8	-0.1
KBA				pmax	pmax		
	comp=Z,11nm,2.0s						
MODS	Modra-Piesok	10.01	347	*e*P	Pn	08 12 32.2	+2.4
MODS	Modra-Piesok	10.01	347	*e*PN	Pn	08 12 32.2	+2.4
MSSA	Maissana	10.01	308	Pn	Pn	08 12 32.0	+2.1
SALO	Salr	10.18	316	Pn	Pn	08 12 32.3	+0.2
BRTR	Keskin Array B	10.24	80	Pn	Pn	08 12 37.0	+3.8
	comp=Z,0.1nm,0.3s,baz=278,slow=14,SNR=1.8						
BRTR	Keskin Array B	10.24	80	P	Pn	08 12 37.0	+3.8
MOA	Molln	10.27	336	*e*Pn	Pn	08 12 32.6	-0.7
	comp=Z,3.2nm,0.4s						
KOLS	Kolonicke sedl	10.36	6	*e*P	Pn	08 12 33.9	-0.7
KOLS	Kolonicke sedl	10.36	6	*e*PN	Pn	08 12 33.9	-0.7
NIE	Niedzica	10.77	359	P	Pn	08 12 42.5	+2.2
NIE				pmax	pmax		
	comp=Z,4.0nm,1.3s						
WTTA	Wattenberg	10.79	326	*i* Pn	Pn	08 12 41.3	+0.6
	comp=Z,1.4nm,0.2s						
WTTA				*e*Sn	Sn	08 14 39.4	-2.2
	comp=Z,6.8nm,0.5s						
WTTA	Wattenberg	10.79	326	P	Pn	08 12 42.4	+1.7
WTTA				pmax	pmax		
	comp=Z,17nm,0.8s						
MOTA	Moosalm	11.09	325	*e*Pn	Pn	08 12 45.2	+0.5
	comp=Z,8.6nm,0.7s						
DAVOX	Davos/Dischmat	11.28	320	Pn	Pn	08 12 46.0	-1.3
	comp=Z,0.3nm,0.3s,baz=142,slow=20,SNR=2.1						
DAVOX				Sn	Sn	08 14 53.0	-0.6
	comp=Z,0.6nm,0.3s,baz=136,slow=22,SNR=4.5						
GERES	GERESS Array B	11.32	336	Pn	Pn	08 12 45.6	-2.2
	comp=Z,0.3nm,0.3s,baz=152,slow=12,SNR=9.7						
GERES	GERESS Array B	11.32	336	*e*P	Pn	08 12 46.8	-1.0
TUE	Stuetta	11.35	317		Pn	08 12 49.7	+1.3
KHC	Kasperske Hory	11.61	337	*e*P	Pn	08 12 50.5	-1.3
KHC	Kasperske Hory	11.61	337	*e*PN	Pn	08 12 50.5	-1.3
SENIN	Lac Senin/Sane	12.43	313	Pn	Pn	08 13 03.9	+0.9
AKASG	Malin Array Be	13.54	24	Pn	Pn	08 13 16.5	-1.5
	comp=Z,0.4nm,0.3s,baz=210,slow=13,SNR=2.1						
AKBB	Malin Array Si	13.54	24	⇓*e*P	Pn	08 13 19.8	+1.8
CLL	Collm	13.72	340	*e*PP	P	08 13 30.0	+0.7
ANN	Anapa	14.04	59	*de*P	Pn	08 13 28.6	+3.8
ANN				pmax	pmax		
	comp=Z,56nm,1.0s						
KLNR	Kaliningrad	15.97	359	⇑*e*P	Pn	08 13 51.4	+0.9
KLNR				pmax	pmax		
	comp=Z,49nm,0.8s						
PABE	Paberze	17.03	7	Pn	Pn	08 14 02.9	-1.2
PABE				lAmb	lAmb	08 14 22.4	
	comp=Z,23nm,1.0s						
ESDC	Sonseca Array	19.00	281	P	P	08 14 26.5	-1.4
	comp=Z,0.2nm,0.3s,baz=78,slow=11,SNR=6.1						
OBN	Obninsk	19.71	28	⇓*e*P	Pn	08 14 36.5	-0.3
OBN				*e*S	S	08 18 13.8	-3.6
OBN				pmax	pmax		
	comp=Z,14nm,0.7s						
OBN				MLR	MLR		
	comp=Z,2µm,17.0s						
VSU	Vasula	20.24	9	⇑*e*P	P	08 14 41.2	+0.1
VSU				pmax	pmax		
	comp=Z,52nm,0.8s						
HFS	Hagfors	21.94	351	P	P	08 14 57.4	-2.0
	comp=Z,4.0nm,0.6s,baz=163,slow=11,SNR=11						
EKA	Eskdalemuir Ar	23.05	324	P	P	08 15 09.8	-1.5
	comp=Z,8.8nm,0.8s,baz=121,slow=11,SNR=12						
FINES	FINESS Array B	23.09	7	P	P	08 15 08.5	-3.0
	comp=Z,20nm,1.1s,baz=173,slow=11,SNR=11						
FINES	FINESS Array B	23.09	7	*e*P	P	08 15 11.6	+0.1
FINES				pmax	pmax		
	comp=Z,20nm,1.1s						
FINES	FINESS Array B	23.09	7	P	P	08 15 10.9	-0.6
FIA1	FINESS Array S	23.09	7	P	P	08 15 12.3	+0.7
FIA1				lAmb	lAmb	08 15 13.0	
	comp=Z,44nm,1.3s						
NC405	NORSAR Array S	23.16	349	P	P	08 15 11.5	-0.8
NOA	NORSAR Array B	23.16	348	P	P	08 15 10.9	-1.5
	comp=Z,1.2nm,0.7s,baz=158,slow=12,SNR=5.8						
NOA				LR	LR	08 26 03.1	
	comp=Z,1µm,20.8s,baz=90,slow=42						
NOA	NORSAR Array B	23.16	348	*e*P	P	08 15 10.9	-1.5
NOA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NC303	NORSAR Array S	23.32	349	P	P	08 15 13.4	-0.5
KLMR	Klimovskoe	25.21	22	*e*P	P	08 15 30.5	-1.0
KLMR				pmax	pmax		
	comp=Z,30nm,1.4s						
KLMR	Klimovskoe	25.21	22	*e*P	P	08 15 30.5	-1.0
KLMR				AMP		08 15 35.2	
	comp=Z,30nm,1.4s						
PRGR	Permogore	27.74	26	*e*P	P	08 15 57.5	+3.1
PRGR				pmax	pmax		
	comp=Z,31nm,0.9s						
ABKAR	Akbulak array	29.98	56	P	P	08 16 15.4	+0.9
TORD	Torodi Ar. Bea	30.39	218	P	P	08 16 18.4	0.0
	comp=Z,1.0nm,0.5s,baz=32,slow=9.6,SNR=6.3						
ARCES	ARCESS Array B	31.07	3	P	P	08 16 21.6	-2.3
	comp=Z,2.4nm,1.0s,baz=196,slow=9.4,SNR=1.5						
ARCES	ARCESS Array B	31.07	3	*e*P	P	08 16 27.6	+3.7
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BRVK	Borovoye	36.76	50	⇑*e*P	P	08 17 13.3	-0.1
BRVK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
KK31	Karatay Array	37.61	67	P	P	08 17 21.6	+0.8
KK31				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KK31	Karatay Array	37.61	67	P	P	08 17 21.6	+0.8
KK31				lAmb	lAmb	08 17 23.9	
	comp=Z,2.5nm,0.7s						
KKAR	Karatay Array	37.61	67	P	P	08 17 21.8	+1.0
KKAR	Karatay Array	37.61	67	P	P	08 17 21.8	+1.0
MK31	Makanchi Array	45.06	59	⇑*e*P	P	08 18 23.2	+1.2
MK31	Makanchi Array	45.06	59	P	P	08 18 22.2	+0.3
MKAR	Makanchi Array	45.06	59	P	P	08 18 21.2	-0.8
	comp=Z,0.7nm,0.5s,baz=295,slow=6.1,SNR=10						
MKAR	Makanchi Array	45.06	59	*e*P	P	08 18 23.1	+1.1
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZALV	Zalesovo Beam	45.38	48	P	P	08 18 23.2	-1.1
	comp=Z,4.3nm,0.6s,baz=268,slow=7.1,SNR=14						
ZALV	Zalesovo Beam	45.38	48	P	P	08 18 25.6	+1.2
SCHQ	Schefferville	58.12	317	P	P	08 19 59.5	0.0
	comp=Z,3.2nm,1.0s,baz=68,slow=11,SNR=1.6						
SONM	Songino Array	60.16	51	P	P	08 20 12.6	-1.3
	comp=Z,0.8nm,0.8s,baz=315,slow=14,SNR=4.2						

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*IDC **17** 08:11:13.6±1.2, 4°.57S×131°.72E, h294km±48km, mb2.9/1, mb1 2.9/4, mb1mx2.7/29, mbtmp3.5/4, Error ellipse: s-maj=278.8km s-min=17.2km az=76.0*

*DJA **17** 08:11:14.2±1.3, 5°S±14°×13°0E±°, h201km±8km, M3.8/7, MLv3.8/7*

ISC 17 08:11:09.3±1.0**, 5°.01S**±0°.08×**129°.84E**±0°.07**, h200**km**, n8,** σ**$1^{s}64$**/13**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	1.89	331	P	Pn	08 11 48.5	+1.8
MSAI				S	Sn	08 12 16.4	+0.5
FAKI	Fak Fak	3.17	49	P	Pn	08 12 02.4	+1.3
FAKI				S	Sn	08 12 41.3	-0.2
SIJI	Sorong	4.35	19	P	Pn	08 12 16.6	+1.0
	5.1nm,0.3s,baz=124,slow=23,SNR=7.3						
SIJI				S	Sn	08 13 06.9	-0.9
	7.2nm,0.3s,baz=66,slow=22,SNR=8.8						
SWI	Sorong	4.36	19	P	Pn	08 12 16.7	+1.1
SANI	Sanana	4.84	307	P	Pn	08 12 23.2	+1.4
SANI				S	Sn	08 13 17.5	-1.3
WRA	Warramunga Arr	15.47	164	P	Pn	08 14 34.9	-2.6
	0.1nm,0.3s,baz=351,slow=12,SNR=4.1						
WRA				S	S	08 17 18.1	-11
	0.2nm,0.3s,baz=332,slow=23,SNR=9.4						
ASAR	Alice Springs	18.96	168	P	P	08 15 15.8	+0.2
	0.1nm,0.3s,baz=350,slow=11,SNR=14						
ASAR				S	S	08 18 43.0	+2.7
	0.0nm,0.3s,baz=349,slow=24,SNR=3.3						
MKAR	Makanchi Array	66.49	326	P	P	08 21 36.4	-1.1
	0.6nm,0.9s,baz=120,slow=8.7,SNR=2.6						

VIE 17 08:33:13.5±0.2**, 48°.01N×15°.83E, h0**km**, mb1.0**/2**, ml1.7**/2**, Error ellipse: s-maj=3.0km s-min=1.3km az=75.0 5 km ESE of Hainfeld Suspected Mining explosion., Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CONA	Conrad Observa	0.09	166	*e*Pg	Pg	08 33 14.8	-0.3
	16nm,0.2s						
CONA				*e*Sg	Sg	08 33 16.3	+0.1
	290nm,0.4s						
KRUC	Moravsky	1.12	19	*e*PG	Pg	08 33 34.3	-0.6
KRUC				*e*SG	Sg	08 33 48.6	-0.7
VRAC	Vranov	1.39	21	*e*PG	Pg	08 33 39.2	-1.0
VRAC				*e*SG	Sg	08 33 57.8	-0.4

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*IDC **17** 08:33:37.3±5.3, 7°.48S×146°.86E, h75km±56km, mb3.6/3, mb1 3.8/4, mb1mx3.4/38, mbtmp4.0/4, ML3.5/1, Error ellipse: s-maj=55.4km s-min=39.4km az=124.0*

ISC 17 08:33:34.0±1.8**, 7°.3S**±0°.1×**146°.7E**±0°.2**, h35**km**, n6,** σ**$1^{s}25$**/7**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	2.11	168	P	Pn	08 34 06.4	-0.4
	49nm,0.3s,baz=10,slow=11,SNR=45						
PMG				S	Sn	08 34 32.5	+0.6
	15nm,0.3s,baz=112,slow=21,SNR=11						
WRA	Warramunga Arr	17.35	223	P	Pn	08 37 33.9	+0.3
	0.2nm,0.3s,baz=44,slow=11,SNR=21						
ASAR	Alice Springs	20.37	216	P	P	08 38 08.1	+0.3
	6.1nm,0.9s,baz=34,slow=12,SNR=31						
FITZ	Fitzroy Crossi	23.14	240	P	P	08 38 37.0	-0.5
	1.2nm,0.8s,baz=54,slow=12,SNR=1.5						
MKAR	Makanchi Array	78.34	321	P	P	08 45 32.0	+1.2
	1.7nm,0.8s,baz=108,slow=9.3,SNR=2.4						
TORD	Torodi Ar. Bea	145.11	282	PKPbc	PKPbc	08 53 06.5	-1.9
	2.4nm,0.7s,baz=82,slow=4.1,SNR=12						

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*BJI **17** 08:33:37.9±0.0, 38°.75N×20°.25E, h15km, mB5.7/24, mb4.9/62, Ms5.4/14, Ms7 5.2/14*

*MOS **17** 08:33:39.7±1.4, 38°.74N×20°.42E, h12km, mb5.4/61, MS4.7/19, Error ellipse: s-maj=3.5km s-min=1.9km az=83.5*

*IDC **17** 08:33:39.7±0.4, 38°.78N×20°.58E, h0km, mb5.0/45, mb1 5.0/60, mb1mx4.9/70, mbtmp4.9/60, ML4.4/14, MS4.8/11, Ms1 4.8/11, ms1mx4.3/69, Error ellipse: s-maj=9.0km s-min=8.2km az=128.0*

*BGR **17** 08:33:39.7±0.9, 38°.47N×20°.50E, h10km, Error ellipse: s-maj=28.9km s-min=12.2km az=44.0*

*ATH **17** 08:33:40.9, 38°.65N×20°.56E, h9km±1km, ML5.1/17, Error ellipse: s-maj=1.6km s-min=0.6km az=155.0*

*UPSL **17** 08:33:40.0, 38°.65N×20°.56E, h9km, Mw5.0, Moment Tensor Solution. s8 Moment tensor: M_{rr}1.69; $M_{\theta\theta}$1.11; $M_{\phi\phi}$-2.79; $M_{r\theta}$0.72; $M_{\theta\phi}$2.41; $M_{\phi r}$1.45; Fault plane solution: NP1:ϕ_s115.00000°, δ55.00000°, λ24.00000°. NP2: ϕ_s11.00000°, δ71.00000°, λ142.00000°.*

*THE **17** 08:33:40.7, 38°.65N×20°.57E, h7km±1km, ML5.1/7 Error ellipse: s-maj=1.6km s-min=0.8km az=114.0*

*TIR **17** 08:33:41.9, 38°.78N×20°.53E, h7km±4km, Ml5.5*

*MED_RC **17** 08:33:42.0±0.5, 38°.70N×20°.49E, h10km, MW5.1/15, Moment Tensor Solution.Mantle waves: s15,c27; Duration: $1^{s}3$ Moment tensor: Scale 10^{16}Nm; M_{rr}1.39±.40; $M_{\theta\theta}$3.68±.35; $M_{\phi\phi}$-5.07±.30; $M_{r\theta}$1.37±1.05; $M_{\theta\phi}$4.25±.22; $M_{\phi r}$-0.77±.85; Best double couple: $M_0$6.31000×10^{16} NP1:ϕ_s23.00000°, δ75.00000°, λ176.00000°. NP2:ϕ_s114.00000°, δ87.00000°, λ16.00000°. Principal axes: T 5.6400, Plg13.0000°, Azm339.0000°; N 1.3400, Plg74.0000°, Azm126.0000°; P -6.9800, Plg8.0000°, Azm247.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*PDG **17** 08:33:43.4±0.5, 38°.96N×20°.47E, h14km±1km, MD5.1/12, ML5.0/13 Error ellipse: s-maj=0.8km s-min=0.8km az=90.0*

*NEIC **17** 08:33:43.3±1.9, 38°.75N±0°.05×20°.54E±0°.06, h18km±3km, Error ellipse: s-maj=7.5km s-min=6.2km az=216.0*

*NEIC **17** 08:33:44, 38°.77N×20°.54E, h12km, Moment Tensor Solution. Duration: $4^{s}0$ Moment tensor: Scale 10^{16}Nm; M_{rr}2.07; $M_{\theta\theta}$2.34; $M_{\phi\phi}$-4.41; $M_{r\theta}$3.02; $M_{\theta\phi}$3.20; $M_{\phi r}$-1.05; Fault plane solution: $M_0$5.92000×10^{16} NP1:ϕ_s18.00000°, δ52.00000°, λ161.00000°. NP2:ϕ_s120.00000°, δ75.00000°, λ40.00000°. Principal axes: T 5.5189, Plg38.0000°, Azm347.0000°; N 0.7291, Plg48.0000°, Azm137.0000°; P -6.2479, Plg15.0000°, Azm244.0000°;*

*HLW **17** 08:34:02.0, 37°.65N×22°.70E, h10km±19km, Md4.6, Ml5.2*

ISC 17 08:33:41.2±0.4**, 38°.67N**±0°.01×**20°.56E**±0°.02**, h10**km±2km**, h11**km**:pP-P, n1324,** σ**$1^{s}68$**/1467**, mb5.3**/197**, MS5.1**/13**, 308C-239D, Fault plane solution: NP1:**ϕ_s113.10167°, δ66.95584°**,** λ39.40312°. **NP2:**ϕ_s5.27552°**,** δ54.25916°, λ151.16643°. **Principal axes:** T Plg43.6163°, Azm334.1030°; N Plg45.3196°, Azm138.5792°; P Plg7.8306°, Azm236.5733°; **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EVGI	Lefkada island	0.09	124	P	Pg	08 33 42.1	-1.6
EVGI				S	Sg	08 33 43.8	-1.6
EVGI	Lefkada island	0.09	124	P	Pg	08 33 42.3	-1.4
EVGI				S	Sg	08 33 45.2	-0.2
NYDR	Nydri-Lefkada	0.11	68	P	Pg	08 33 42.5	-1.5
NYDR				S	Sg	08 33 45.8	-0.2
NYDR	Nydri-Lefkada	0.11	68	P	Pg	08 33 43.1	-0.9
NYDR				S	Sg	08 33 45.7	-0.3
LKD2	Lefkada island	0.14	32	P	Pg	08 33 44.2	-0.3
LKD2	Lefkada island	0.14	32	P	Pg	08 33 44.6	+0.1
LKD2				S	Sg	08 33 46.6	-0.1
LKD2	Lefkada island	0.14	32	P	Pg	08 33 44.5	+0.1
	baz=85						
LKD2				S	Sg	08 33 46.4	-0.4
	baz=85						
TSLK	Tsoukalades, L	0.17	25	P	Pg	08 33 44.8	-0.1
TSLK	Tsoukalades, L	0.17	25	P	Pg	08 33 45.2	+0.3
TSLK				S	Sg	08 33 47.9	+0.4
FSK	Fiskardo	0.21	180	P	Pg	08 33 44.6	-1.0
FSK	Fiskardo	0.21	180	P	Pg	08 33 44.1	-1.5
FSK				S	Sg	08 33 48.6	0.0
KEF4	Livadi, Kephal	0.43	195	P	Pg	08 33 48.1	-1.5
KEF4	Livadi, Kephal	0.43	195	P	Pg	08 33 48.3	-1.3
KEF4				S	Sg	08 33 53.8	-1.4
DMLN	Damoulianata-K	0.46	199	P	Pg	08 33 49.0	-1.2
DMLN	Damoulianata-K	0.46	199	P	Pg	08 33 48.9	-1.2
DMLN				S	Sg	08 33 55.8	-0.4

LXRA	Lixouri, Kepha	0.48	192	P	Pg	08 33 49.6	-1.0
LXRA				S	Sg	08 33 56.5	-0.4
VLS	Valsamata	0.49	178	P	Pg	08 33 49.4	-1.4
VLS				S	Sg	08 33 57.3	0.0
	118µm,0.5s						
VLS	Valsamata	0.49	178	P	Pg	08 33 49.2	-1.6
VLS				S	Sg	08 33 57.2	-0.1
VLS				AML	AML	08 34 00.3	
VLS				AML	AML	08 34 01.4	
VLS	Valsamata	0.49	178	P	Pg	08 33 49.4	-1.4
VLS				S	Sg	08 33 57.3	0.0
KEF3	Kipouria, Keph	0.50	200	P	Pg	08 33 49.1	-1.8
KEF3				S	Sb	08 33 58.6	-0.7
	312µm,0.7s						
KEF3	Kipouria, Keph	0.50	200	P	Pg	08 33 48.9	-2.0
KEF3				S	Sg	08 33 56.7	-0.7
ARGA	Argostoli. Kep	0.50	188	P	Pg	08 33 50.5	-0.4
ARGA				S	Sg	08 33 57.4	0.0
PSDA	Pessada-Kefalo	0.56	178	P	Pg	08 33 50.5	-1.5
PSDA	Pessada-Kefalo	0.56	178	P	Pg	08 33 50.3	-1.7
PSDA				S	Sg	08 33 58.9	-0.5
PVO	Paravola	0.76	94	P	Pg	08 33 54.6	-1.2
PVO				S	Sg	08 34 06.2	+0.5
	312µm,0.5s						
PVO	Paravola	0.76	94	P	Pg	08 33 55.4	-0.4
PVO				S	Sg	08 34 05.6	-0.1
PVO				AML	AML	08 34 09.4	
PVO				AML	AML	08 34 09.4	
IGT	Igoumenitsa	0.88	348	P	Pg	08 33 57.0	-1.2
IGT				S	Sb	08 34 11.3	+0.9
	103µm,0.7s						
IGT	Igoumenitsa	0.88	348	P	Pg	08 33 57.4	-0.8
IGT				S	Sb	08 34 10.3	-0.1
IGT				AML	AML	08 34 15.7	
IGT				AML	AML	08 34 16.6	
IGT	Igoumenitsa	0.88	348	P	Pg	08 33 57.0	-1.2
IGT				S	Sb	08 34 11.1	+0.7
IGT	Igoumenitsa	0.88	348	P	Pg	08 33 57.1	-1.1
	baz=349						
IGT				S	Sg	08 34 08.6	-1.1
	baz=349						
VTN	Vitineika	0.90	147	P	Pg	08 33 57.2	-1.3
VTN	Vitineika	0.90	147	P	Pg	08 33 58.4	-0.1
RLS	Riolos of Patr	0.94	130	P	Pg	08 33 58.7	-0.6
RLS	Riolos of Patr	0.94	130	P	Pg	08 33 58.6	-0.6
RLS				S	Sg	08 34 10.8	-0.7
RLS				AML	AML	08 34 20.6	
RLS				AML	AML	08 34 20.7	
LTHK	Lithakia	0.98	167	P	Pg	08 33 57.6	-2.5
LTHK	Lithakia	0.98	167	P	Pg	08 33 58.5	-1.6
LTHK				S	Sg	08 34 12.6	-0.3
EVR	Evrytania	1.00	75	P	Pg	08 33 58.9	-1.6
EVR	Evrytania	1.00	75	P	Pg	08 33 59.5	-1.1
EVR				AML	AML	08 34 25.4	
EVR				AML	AML	08 34 28.7	
JAN	Janina	1.01	13	P	Pg	08 33 59.7	-0.9
JAN				S	Sn	08 34 16.0	+0.2
	115µm,1.0s						
JAN	Janina	1.01	13	P	Pg	08 33 59.8	-0.9
JAN				S	Sg	08 34 13.8	0.0
JAN				AML	AML	08 34 18.1	
JAN				AML	AML	08 34 20.1	
JAN	Janina	1.01	13	P	Pg	08 33 59.9	-0.8
JAN				S	Sb	08 34 14.5	+0.3
UPR	University Cam	1.03	112	P	Pg	08 34 00.8	-0.3
ANX	Ano Chora	1.07	94	P	Pg	08 33 59.4	-2.3
ANX				S	Sb	08 34 16.4	+0.6
	206µm,0.5s						
ANX	Ano Chora	1.07	94	P	Pg	08 34 01.1	-0.7
ANX				S	Sg	08 34 15.7	+0.1
ANX				AML	AML	08 34 19.6	
ANX				AML	AML	08 34 26.2	
EFP	Efpalio	1.08	103	P	Pb	08 33 59.9	-2.1
EFP	Efpalio	1.08	103	P	Pb	08 34 01.1	-0.8
EFP				AML	AML	08 34 24.2	
EFP				AML	AML	08 34 25.1	
DRO	Drossia	1.15	128	P	Pb	08 34 02.3	-0.9
DRO	Drossia	1.15	128	P	Pb	08 34 02.4	-0.8
DRO				AML	AML	08 34 27.2	
DRO				AML	AML	08 34 28.7	
KASA	Kassiopi	1.18	336	P	Pb	08 34 03.6	-0.1
LAKA	Lakka	1.19	111	P	Pb	08 34 02.8	-1.1
LAKA	Lakka	1.19	111	P	Pb	08 34 02.8	-1.1
LAKA				AML	AML	08 34 28.0	
LAKA				AML	AML	08 34 29.1	
KEK	Kerkira	1.20	331	P	Pb	08 34 03.4	-0.6
KEK				S	Sn	08 34 20.5	+0.1
	54µm,0.5s						
KEK	Kerkira	1.20	331	P	Pb	08 34 03.3	-0.8
KEK				AML	AML	08 34 29.2	
KEK				AML	AML	08 34 30.1	
	comp=N,92528µm,0.5s						
KEK	Kerkira	1.20	331	⇑P	Pb	08 34 03.0	-1.0
TRIZ	Trizonia	1.22	104	P	Pn	08 34 01.9	-2.4
TRIZ	Trizonia	1.22	104	P	Pn	08 34 03.3	-1.1
MAKR	Makrakomi, Fth	1.27	74	P	Pn	08 34 04.2	-0.9
MAKR	Makrakomi, Fth	1.27	74	P	Pn	08 34 04.7	-0.4
MAKR				AML	AML	08 34 30.2	
MAKR				AML	AML	08 34 30.9	
ALIK	Aliki, Aigiali	1.28	108	P	Pn	08 34 03.1	-2.1
SRN	Sarande	1.28	340	P	Pn	08 34 04.5	-0.7
	baz=340						
SRN				S	Sb	08 34 21.8	-0.3
	baz=340						
SRN				AMP			
	comp=E,119nm,1.5s,baz=340						
KLV	Kalavryta, Ach	1.40	116	P	Pn	08 34 06.2	-0.6
KLV	Kalavryta, Ach	1.40	116	P	Pn	08 34 06.3	-0.6
KLV				AML	AML	08 34 36.6	
	comp=E,72566µm,1.5s						
KLV				AML	AML	08 34 37.7	
	comp=N,71142µm,0.8s						
AGG	Agios Georgios	1.42	75	P	Pn	08 34 07.3	+0.1
AGG	Agios Georgios	1.42	75	P	Pn	08 34 06.5	-0.7
AGG	Agios Georgios	1.42	75	P	Pn	08 34 07.2	+0.1
AGG	Agios Georgios	1.42	75	⇑P	Pn	08 34 06.8	-0.3
AGG	Agios Georgios	1.42	75		Pn	08 34 07.2	0.0
KPRO	Kipourio	1.43	26	P	Pb	08 34 07.6	-0.3
KPRO	Kipourio	1.43	26	P	Pb	08 34 08.1	+0.1
KPRO				AML	AML	08 34 33.0	
KPRO				AML	AML	08 34 34.0	
THL	Klokotos Trika	1.44	51	P	Pn	08 34 07.1	-0.2
THL	Klokotos Trika	1.44	51	P	Pn	08 34 06.9	-0.4
THL				S	Sb	08 34 26.6	+0.1
THL				AML	AML	08 34 34.1	
THL				AML	AML	08 34 35.0	
LSK	Leskovik	1.48	1	P	Pn	08 34 07.9	0.0
	baz=2.0						
LSK				S	Sg	08 34 30.1	+1.3
	baz=2.0						
LSK				AMP			
	comp=N,329nm,1.4s,baz=2.0						
GUR	Goura	1.58	117	P	Pn	08 34 09.4	+0.1
PENT	Pentalofos	1.59	16	P	Pb	08 34 10.8	+0.1
PENT	Pentalofos	1.59	16	P	Pb	08 34 10.6	-0.1
PENT				AML	AML	08 34 41.6	
	comp=N,80271µm,0.7s						
PENT				AML	AML	08 34 42.3	
	comp=E,86994µm,0.8s						
NEST	Nestorio	1.78	12	P	Pb	08 34 14.1	0.0
ITM	Ithomi	1.84	144	P	Pn	08 34 13.9	+1.1
ITM	Ithomi	1.84	144	⇑P	Pb	08 34 14.5	-0.4
ITM	Ithomi	1.84	144	Pn	Pb	08 34 14.8	-0.2
KZN	Kozani	1.88	29	P	Pb	08 34 15.0	-0.7
KZN				AML	AML	08 34 51.0	
	comp=N,58102µm,0.7s						
KZN				AML	AML	08 34 51.3	
	comp=E,76195µm,0.7s						
KZN	Kozani	1.88	29	P	Pb	08 34 15.9	+0.2
KBN	Korca	1.96	5	P	Pb	08 34 17.0	0.0
KBN	Korca	1.96	5		Pb	08 34 17.0	0.0
KBN	Korca	1.96	5	P	Pb	08 34 17.2	+0.2
	baz=6.0						
KBN				S	Sb	08 34 41.8	+0.2
	baz=6.0						
KBN				AMP			
	comp=N,100nm,0.7s,baz=6.0						
VLO	Vlora	1.98	336	P	Pn	08 34 15.8	+1.1
VLO	Vlora	1.98	336		Pn	08 34 15.8	+1.1
VLO	Vlora	1.98	336	P	Pn	08 34 15.8	+1.1
	baz=336						
VLO				AMP			
	comp=N,210nm,0.6s,baz=336						
SCTE	Santa Cesarea	2.15	311	P	Pn	08 34 17.4	+0.4
SCTE	Santa Cesarea	2.15	311	Pn	Pn	08 34 17.3	+0.2
SCTE	Santa Cesarea	2.15	311	P	Pn	08 34 17.5	+0.4
	baz=310						
SCTE				S	Sb	08 34 45.1	-1.7
	baz=310						
XOR	Xorichti	2.16	70	P	Pn	08 34 18.8	+1.5
FNA	Florina	2.20	16	P	Pb	08 34 19.6	-1.6
FNA	Florina	2.20	16	P	Pn	08 34 18.8	+0.9
FNA	Florina	2.20	16	⇓P	Pn	08 34 18.6	+0.7
FNA	Florina	2.20	16	Pn	Pn	08 34 18.8	+0.9
FNA	Florina	2.20	16	P	Pb	08 34 19.9	-1.2
	baz=18						
OHR	Ohrid	2.44	4	eP	Pn	08 34 23.0	+1.8
OHR				eS	Sb	08 34 54.3	-1.2
OHR	Ohrid	2.44	4	⇑i Pg	Pb	08 34 23.6	-1.7
ATH	Athens Observa	2.58	105	P	Pn	08 34 25.1	+2.1
GRG	Griva	2.69	31	P	Pn	08 34 25.5	+1.0
THE	Thessaloniki	2.70	43	P	Pb	08 34 27.8	-1.7
	baz=44						
PAIG	Paliouri	2.72	62	P	Pn	08 34 27.2	+2.2
TIR	Tirane	2.73	349	P	Pn	08 34 25.7	+0.6
TIR	Tirane	2.73	349	⇑P	Pn	08 34 25.8	+0.6
TIR	Tirane	2.73	349		Pn	08 34 25.7	+0.6
TIR	Tirane	2.73	349	P	Pn	08 34 26.2	+1.2
	baz=350						
TIR				AMP			
	comp=N,41nm,0.8s,baz=350						
TIP	Timpagrande	3.01	281	⇑P	Pn	08 34 29.8	+0.8
TIP	Timpagrande	3.01	281	⇑P	Pn	08 34 29.4	+0.4
TIP	Timpagrande	3.01	281	Pn	Pn	08 34 29.5	+0.4
PHP	Peshkopia	3.01	358	P	Pn	08 34 30.6	+1.6
PHP	Peshkopia	3.01	358	P	Pn	08 34 30.6	+1.6
	baz=359						
PHP				AMP			
	comp=N,43nm,0.9s,baz=359						
SOH	Sokhos	3.04	44	P	Pn	08 34 31.3	+1.9
VAY	Valandovo	3.06	30	P	Pn	08 34 30.7	+1.0
VAY	Valandovo	3.06	30	i Pg	Pn	08 34 31.0	+1.3
KNT	Kendrikon	3.07	35	P	Pn	08 34 31.0	+1.2
OUR	Ouranopolis	3.12	57	P	Pn	08 34 33.5	+3.0
STIP	Stip	3.27	22	i Pg	Pn	08 34 35.4	+2.9
SKO	Skopje	3.37	11	P	Pn	08 34 34.6	+0.8
SKO	Skopje	3.37	11	⇑i Pg	Pn	08 34 35.2	+1.3
SRS	Serrai	3.38	43	P	Pn	08 34 35.2	+1.2
NOCI	Noci	3.43	309	P	Pn	08 34 34.8	0.0
	baz=309						
ULC	Ulcinj	3.44	343	ePn	Pn	08 34 33.6	-1.3
ULC				i Sn	Sn	08 35 12.1	-3.6
MATE	Matera	3.57	305	⇑P	Pn	08 34 36.5	-0.1
DRME	Dracevica, Mon	3.67	344	⇑i Pn	Pn	08 34 38.1	+0.1
DRME	Dracevica, Mon	3.67	344	⇓i Pn	Pn	08 34 37.3	-0.7
DRME				i Sn	Sn	08 35 17.5	-3.8
CEL	Celeste	3.69	265	⇓P	Pn	08 34 38.9	+0.5
CEL	Celeste	3.69	265		Pn	08 34 38.7	+0.4
BCI	Bajram Curri	3.71	354	P	Pn	08 34 40.1	+1.5
	baz=355						
BCI				AMP			
	comp=E,33nm,0.9s,baz=355						
BUM	Brajici-Budva	3.84	341	⇑i Pn	Pn	08 34 39.3	-1.2
BUM				i Sn	Sn	08 35 21.7	-4.0
PDG	Podgorica	3.89	346	⇑P	Pn	08 34 40.4	-0.6
PDG	Podgorica	3.89	346	ePn	Pn	08 34 40.0	-1.0
PDG	Podgorica	3.89	346	⇓P	Pn	08 34 39.9	-1.1
PDG	Podgorica	3.89	346	Pn	Pn	08 34 41.0	0.0
TTG	Podgorica	3.89	346	⇑i Pn	Pn	08 34 40.4	-0.6
TTG				i Sn	Sn	08 35 22.7	-3.9
PVY	Plav	3.95	353	⇑i Pn	Pn	08 34 41.2	-0.8
PVY				i Sn	Sn	08 35 24.3	-4.1
CEME	Cevo	4.07	343	⇑i Pn	Pn	08 34 42.7	-0.9
CEME				i Sn	Sn	08 35 27.0	-4.3
HCY	Herceg Novi	4.09	338	P	Pn	08 34 42.9	-0.9
HCY	Herceg Novi	4.09	338	⇑i Pn	Pn	08 34 42.8	-1.0
HCY	Herceg Novi	4.09	338	⇓i Pn	Pn	08 34 41.9	-1.9
HCY				i Sn	Sn	08 35 27.7	-4.0
MRVN	Minervino Murg	4.12	307	⇑P	Pn	08 34 44.1	-0.2
IVA	Berane	4.23	353	⇑i Pn	Pn	08 34 45.1	-0.7
IVA				i Sn	Sn	08 35 31.0	-4.2
KOME	Kolasin	4.25	350	⇑i Pn	Pn	08 34 45.3	-0.8
KOME				i Sn	Sn	08 35 31.5	-4.3
NKME	Niksic	4.27	344	⇑i Pn	Pn	08 34 45.7	-0.6
NKME				i Sn	Sn	08 35 32.0	-4.2
NKY	Niksic	4.31	344	P	Pn	08 34 47.0	+0.1
NKY	Niksic	4.31	344	⇓i Pn	Pn	08 34 46.4	-0.5
NKY				i Sn	Sn	08 35 32.8	-4.4
TREB	Trebinje	4.38	338	ePn	Pn	08 34 45.7	-2.1
DBRK	Dubrovnik	4.40	336	ePn	Pn	08 34 46.7	-1.3
DBRK				Sn	Sn	08 35 34.9	-4.4
VTS	Vitosha	4.44	26	⇑P	Pn	08 34 50.1	+1.4
VTS	Vitosha	4.44	26	P	Pn	08 34 49.9	+1.2
VTS	Vitosha	4.44	26	⇑P	Pn	08 34 49.9	+1.2
VTS	Vitosha	4.44	26	Pn	Pn	08 34 49.9	+1.2
BRY	Bratogost	4.50	341	P	Pn	08 34 48.7	-0.8
BRY	Bratogost	4.50	341	⇑i Pn	Pn	08 34 47.5	-2.0
BRY	Bratogost	4.50	341	⇑i Pn	Pn	08 34 47.7	-1.8
BRY				i Sn	Sn	08 35 37.4	-4.5
RDO	Rodhopi	4.55	56	⇓P	Pn	08 34 51.5	+1.3
EZN	Ezine	4.62	74	P	Pn	08 34 53.7	+2.7
PLD	Plovdiv	4.66	41	P	Pn	08 34 54.3	+2.6
UPM	Unac-Piva	4.70	345	ePn	Pn	08 34 52.5	+0.2
UPM	Unac-Piva	4.70	345	⇓i Pn	Pn	08 34 51.5	-0.8
UPM				i Sn	Sn	08 35 42.3	-4.7
STON	Ston	4.73	334	⇑i Pn	Pn	08 34 51.2	-1.3
STON	Ston	4.73	334	ePn	Pn	08 34 50.5	-2.0
STON				Sn	Sn	08 35 42.3	-5.0
PLE	Pljevlja	4.74	350	P	Pn	08 34 54.0	+1.2
PLE	Pljevlja	4.74	350	⇑i Pn	Pn	08 34 52.0	-0.8
PLE				i Sn	Sn	08 35 40.8	-7.1
ALN	Alexandroupoli	4.77	61	P	Pn	08 34 54.8	+1.6
ALN	Alexandroupoli	4.77	61	⇓P	Pn	08 34 54.5	+1.3
ALN	Alexandroupoli	4.77	61	Pn	Pn	08 34 54.8	+1.6
SGRT	San Giovanni R	4.81	311	Pn	Pn	08 34 53.4	-0.3
SGRT	San Giovanni R	4.81	311	P	Pn	08 34 53.8	0.0
	baz=311						
IDI	Anoyia	4.84	133	Pn	Pn	08 34 56.5	+2.4
	comp=E,9.2nm,0.3s,baz=315,slow=18,SNR=21						
IDI				Sn	Sn	08 35 51.0	+0.8
	comp=E,29nm,0.3s,baz=241,slow=12,SNR=4.8						
IDI				LR	LR	08 36 52.1	
	comp=E,5µm,20.5s,baz=306,slow=39						
VAE	Valguarnera	5.00	258	Pn	Pn	08 34 57.4	+1.0
	comp=E,12nm,0.3s,baz=147,slow=2.1,SNR=6.1						
VAE				Sn	Sn	08 35 55.4	+1.2
	comp=E,60nm,0.3s,baz=13,slow=6.4,SNR=6.7						
VAE				LR	LR	08 37 38.3	
	comp=E,4µm,19.6s,baz=63,slow=47						
RUDO	Rudo	5.03	350	⇑i Pn	Pn	08 34 56.0	-0.6
BOVS	Bovan	5.03	9	⇑P	Pn	08 34 56.7	-0.1
RAFF	Raffo Rosso	5.11	255		Pn	08 34 56.8	-1.0
PAOL	Paolisi	5.18	299	Pn	Pn	08 35 00.4	+1.5
BBLS	Lazići	5.26	351	⇑i Pn	Pn	08 34 59.5	-0.5
MAKA	Makarska	5.33	331	ePn	Pn	08 34 59.3	-1.6
MAKA				Sn	Sn	08 35 57.5	-4.9
DIVS	Divibare	5.44	356	⇑i Pn	Pn	08 35 01.9	-0.5
DIVS	Divibare	5.44	356	⇑P	Pn	08 35 01.1	-1.4
DIVS	Divibare	5.44	356	Pn	Pn	08 35 02.0	-0.4
RICI	Ricice	5.47	333	ePn	Pn	08 35 00.5	-2.3
RICI				Sn	Sn	08 36 02.9	-2.8
HVAR	Hvar	5.48	327	ePn	Pn	08 35 01.4	-1.4
HVAR				Sn	Sn	08 36 01.4	-4.4
PLVB	Pleven	5.62	32	⇓P	Pn	08 35 07.1	+2.2
CORL	Corleone	5.76	265		Pn	08 35 05.4	-1.5
BALB	Balikesir	5.77	78		Pn	08 35 08.7	+1.8
EDC	Edincik	5.89	71	P	Pn	08 35 12.1	+3.6
CLTB	Caltabellotta	5.89	262	⇓P	Pn	08 35 11.6	+2.9
CLTB	Caltabellotta	5.89	262	Pn	Pn	08 35 09.7	+1.0
TEKS	Tekeris	5.92	353	⇑i Pn	Pn	08 35 07.4	-1.6
BEO	Beograd	6.13	359	P	Pn	08 35 09.6	-2.2
MDVR	Moldovita	6.17	8	⇑P	Pn	08 35 11.9	-0.5
DJES	Djerdap	6.17	13	⇓P	Pn	08 35 13.6	+1.3
KIJV	Kijevo	6.18	331	ePn	Pn	08 35 10.6	-1.9
KIJV				Sn	Sn	08 36 17.8	-5.4
BLJ	Bijeljina	6.18	351	⇑i Pn	Pn	08 35 09.2	-3.3
ZIRJ	Zirje	6.21	325	i Pn	Pn	08 35 11.3	-1.6
ZIRJ				Sn	Sn	08 36 18.3	-5.6
YER	Yerkesik	6.29	102	P	Pn	08 35 18.9	+4.8
SRE	Strehaia	6.30	17	⇑P	Pn	08 35 14.8	+0.6
SRE	Strehaia	6.30	17	P	Pn	08 35 14.8	+0.6
MGRS	Mrkonjic Grad	6.31	337	ePn	Pn	08 35 14.4	+0.1
DOB	Doboj	6.33	344	ePn	Pn	08 35 12.0	-2.6
MORI	Morici	6.35	326	i Pn	Pn	08 35 13.3	-1.5
MORI				Sn	Sn	08 36 24.9	-2.5
HERR	Herculane	6.36	12	⇑P	Pn	08 35 14.8	-0.1
COPA	Copaceanca	6.48	31	⇑P	Pn	08 35 19.1	+2.4
ARG	Arkhangelos	6.50	110	⇑P	Pn	08 35 21.6	+4.7
ARG	Arkhangelos	6.50	110	⇑P	Pn	08 35 21.6	+4.7
FRGS	Fruska Gora	6.51	355	⇑P	Pn	08 35 15.9	-1.1
FRGS	Fruska Gora	6.51	355	⇑i Pn	Pn	08 35 15.9	-1.1
BLY	Banja Luka	6.58	338	⇑i Pn	Pn	08 35 17.1	-0.9
BLY	Banja Luka	6.58	338	⇑P	Pn	08 35 17.3	-0.7
AQU	L'Aquila	6.58	306	P	Pn	08 35 19.4	+1.3
AQU	L'Aquila	6.58	306	⇑i Pn	Pn	08 35 19.6	+1.5
AQU	L'Aquila	6.58	306	⇑P	Pn	08 35 19.0	+1.0
AQU	L'Aquila	6.58	306	Pn	Pn	08 35 19.4	+1.3
RAZG	Razgrad	6.64	41	⇓P	Pn	08 35 22.4	+3.6
BANR	Banloc	6.72	3	⇑P	Pn	08 35 20.2	+0.3
HUMR	Humele	6.72	28	⇑P	Pn	08 35 21.4	+1.4
DUGI	Dugi Otok	6.74	324	ePn	Pn	08 35 18.9	-1.3
DUGI				Sn	Sn	08 36 32.5	-4.5
UDBI	Udbina	6.87	330	ePn	Pn	08 35 21.6	-0.4
SGRR	Singureni	6.88	34	⇓P	Pn	08 35 23.7	+1.7
MRAK	Mrakovica	6.90	338	⇑i Pn	Pn	08 35 21.6	-0.9
GZR	Gura Zlata	6.92	13	⇑P	Pn	08 35 22.6	0.0
PRIJ	Prijedor	6.92	337	ePn	Pn	08 35 19.4	-3.3
BZS	Buzias	6.99	6	⇑P	Pn	08 35 22.4	-1.1
BZS	Buzias	6.99	6	P	Pn	08 35 22.5	-1.1
BZS				pmax	pmax		
	comp=Z,106nm,1.0s						
STFAR	Stefanesti-Arg	7.00	27	⇑P	Pn	08 35 26.1	+2.2
NRCA	Norcia	7.02	309		Pn	08 35 24.9	+0.8
LOT	Lotru	7.18	18	⇑P	Pn	08 35 26.8	+0.5
PLIT	Plitvice	7.22	331	ePn	Pn	08 35 26.4	-0.3
PLIT				Sn	Sn	08 36 43.6	-5.2
NVLJ	Novalja	7.27	326	ePn	Pn	08 35 25.8	-1.6
NVLJ				Sn	Sn	08 36 43.8	-6.2
ARR	Arges	7.34	23	⇑P	Pn	08 35 28.6	+0.1
MTUR	Matau	7.36	26	⇓P	Pn	08 35 30.7	+2.0
DEV	Deva	7.41	13	⇓P	Pn	08 35 31.3	+1.9
DEV	Deva	7.41	13	P	Pn	08 35 31.7	+2.3
DEV				pmax	pmax		
	comp=Z,157nm,0.9s						
RABC	Rab	7.46	326	ePn	Pn	08 35 28.7	-1.2
RABC				Sn	Sn	08 36 50.2	-4.4
LEHL	Lehliu	7.46	37	⇑P	Pn	08 35 34.0	+4.0
MOSL	Moslavina	7.49	339	ePn	Pn	08 35 28.3	-2.2
VOIR		7.54	25	⇓P	Pn	08 35 32.6	+1.3
VOIR		7.54	25	P	Pn	08 35 32.5	+1.3
VOIR				pmax	pmax		
	comp=Z,241nm,0.8s						
SECR		7.57	31	⇑P	Pn	08 35 34.4	+2.8
KALB	Balgarevo	7.59	49	⇑P	Pn	08 35 36.0	+4.2
MURB	Monte Urbino	7.62	310	Pn	Pn	08 35 33.3	+1.0
KOVH	Kovagotottos	7.63	347	ePN	Pn	08 35 30.1	-2.4
KOVH				eSN	Sn	08 36 52.5	-6.4
SIRR	Siria	7.64	6	⇓P	Pn	08 35 31.5	-0.9
ELL	Elmali	7.65	102	P	Pn	08 35 37.9	+5.1
ELL	Elmali	7.65	102		Pn	08 35 37.9	+5.0
MORH	Mrgy, Hungar	7.67	350	ePN	Pn	08 35 31.0	-2.0
MORH	Mrgy, Hungar	7.67	350	eP	Pn	08 35 31.1	-1.8
MORH	Mrgy, Hungar	7.67	350	eSN	Sn	08 36 54.6	-5.2
MORH	Mrgy, Hungar	7.67	350	⇑i Pn	Pn	08 35 30.9	-2.0
AMBH	Ambrzfalva	7.68	1	⇓P	Pn	08 35 32.7	-0.3
AMBH	Ambrzfalva	7.68	1	eP	Pn	08 35 34.1	+1.1
MGAB	Montegabbione	7.68	306	⇑P	Pn	08 35 34.3	+1.1
ICOR	Ion Corvin	7.69	43	⇑P	Pn	08 35 37.6	+4.4
ISR	Istrita	7.83	33	⇑P	Pn	08 35 38.1	+2.9
ISR	Istrita	7.83	33	P	Pn	08 35 38.3	+3.1
ISR				pmax	pmax		
	comp=Z,758nm,0.9s						
ISP	Isparta	7.88	93	eP	Pn	08 35 39.9	+3.9
ISP	Isparta	7.88	93	Pn	Pn	08 35 39.0	+3.0
BOJS	Bojanci	7.89	332	i Pn	Pn	08 35 35.2	-0.7
BOJS				i Sn	Sn	08 37 01.7	-3.5
BOJS				IAML		08 39 24.6	
	comp=Z,6µm,4.9s						
MLR	Muntele Rosu	7.90	29	⇓P	Pn	08 35 38.8	+2.5
MLR	Muntele Rosu	7.90	29	Pn	Pn	08 35 37.6	+1.3
	comp=Z,2.7nm,0.3s,baz=251,slow=6.1,SNR=51						
MLR				LR	LR	08 39 36.4	
	comp=Z,5µm,18.8s,baz=72,slow=46						
MLR	Muntele Rosu	7.90	29	Pn	Pn	08 35 36.7	+0.4
ZAG	Zagreb	7.92	336	P	Pn	08 35 35.7	-0.6
ZAG	Zagreb	7.92	336	ePn	Pn	08 35 34.4	-1.9
MANR	Mangalia	7.93	47	⇑P	Pn	08 35 40.8	+4.3
SMRN	Sveta Marina	7.96	325	ePn	Pn	08 35 35.4	-1.5
NEHR	Nehoiu	7.98	30	⇓P	Pn	08 35 40.1	+2.9
PTJ	Puntijarka	7.99	336	ePn	Pn	08 35 35.4	-2.0
RIY	Rijeka	8.04	328	⇑i Pn	Pn	08 35 37.3	-0.7
RIY	Rijeka	8.04	328	ePn	Pn	08 35 35.7	-2.3
RIY				Sn	Sn	08 37 04.3	-4.7
KALN	Kalnik	8.05	339	i Pn	Pn	08 35 36.3	-1.9
MFTR	Murfatlar	8.07	45	⇓P	Pn	08 35 41.4	+3.0
CRES	Cresnjev	8.09	334	⇑i Pn	Pn	08 35 37.6	-1.1
SLUM	Salum	8.11	151	P	Pn	08 35 38.0	-1.1
	baz=160						
DOPR	Dopca	8.12	25	⇓P	Pn	08 35 40.8	+1.7
EFOR	EFORIE	8.12	46	⇑P	Pn	08 35 43.6	+4.5
HARR	Harsova	8.16	40	⇑P	Pn	08 35 41.7	+2.0
HARR	Harsova	8.16	40	P	Pn	08 35 41.6	+2.0
LOBO	Lobor	8.18	337	ePn	Pn	08 35 38.3	-1.7
GRER		8.23	33	⇓P	Pn	08 35 43.6	+3.0
TIRR	Tirgusor	8.25	43	P	Pn	08 35 43.7	+2.9
TIRR	Tirgusor	8.25	43	⇑P	Pn	08 35 44.5	+3.6
TIRR	Tirgusor	8.25	43	Pn	Pn	08 35 43.7	+2.9
BISRR	Bisoca	8.25	32	⇓P	Pn	08 35 43.8	+2.8
DRGR		8.27	10	⇑P	Pn	08 35 41.4	+0.2
DRGR		8.27	10	P	Pn	08 35 41.2	0.0
DRGR				pmax	pmax		
	comp=Z,45nm,0.9s						
COVR	Voineasa-Covas	8.30	28	⇑P	Pn	08 35 44.4	+2.8
CJR	Cluj-Napoca	8.34	15	⇑P	Pn	08 35 43.6	+1.3
CJR	Cluj-Napoca	8.34	15	P	Pn	08 35 43.5	+1.3
OZUR		8.36	26	⇓P	Pn	08 35 44.7	+2.1
CEY	Cerknica	8.40	329	⇑i Pn	Pn	08 35 42.2	-0.8
MDUB	Mudurnu	8.41	74		Pn	08 35 46.0	+2.8
CASP	Castiglione de	8.43	302	Pn	Pn	08 35 42.9	-0.6
TIH	Tihany	8.46	347	eP	Pn	08 35 42.3	-1.4
TIH	Tihany	8.46	347	ePN	Pn	08 35 42.1	-1.6
TIH				eSN	Sn	08 37 12.1	-7.1
PLOR	Plostina	8.47	30	⇑P	Pn	08 35 45.7	+1.7
PLOR	Plostina	8.47	30	P	Pn	08 35 46.5	+2.5
PLOR				pmax	pmax		
	comp=Z,612nm,0.8s						
VRI	Vrincioaia	8.52	30	⇓P	Pn	08 35 46.5	+1.9
VRI	Vrincioaia	8.52	30	P	Pn	08 35 47.0	+2.4
VRI				pmax	pmax		
	comp=Z,351nm,1.0s						
TPGR	Topolog	8.52	41	⇑P	Pn	08 35 47.5	+2.9
OSSC	Osservatorio P	8.54	308	Pn	Pn	08 35 45.2	+0.3
CFR	Carcaliu	8.61	39	⇑P	Pn	08 35 47.8	+2.0
CFR	Carcaliu	8.61	39	P	Pn	08 35 47.4	+1.6
CFR				pmax	pmax		
	comp=Z,84nm,1.0s						
LJU	Ljubljana	8.62	331	⇑i Pn	Pn	08 35 44.5	-1.4
JURR	Jurilovca	8.70	43	⇑P	Pn	08 35 50.8	+3.8
VSL	Villasalto	8.74	279	⇑P	Pn	08 35 48.1	+0.5
VSL	Villasalto	8.74	279	Pn	Pn	08 35 47.7	0.0
MPLH	Magyarpolny	8.78	346	eP	Pn	08 35 46.7	-1.5
MPLH	Magyarpolny	8.78	346	ePN	Pn	08 35 46.6	-1.6
MPLH				eSN	Sn	08 37 22.1	-5.0
CSKK	Cskako	8.85	350	ePN	Pn	08 35 48.8	-0.3
CSKK	Cskako	8.85	350	eP	Pn	08 35 49.5	+0.4
CSKK	Cskako	8.85	350	eSN	Sn	08 37 23.7	-5.1
ARCR	ARCALIA	8.86	17	⇓P	Pn	08 35 50.5	+1.2
TLCR		8.95	41	P	Pn	08 35 54.9	+4.4
TLCR				pmax	pmax		
	comp=Z,36nm,0.7s						
SOKA	Soboth	8.98	335	ePn	Pn	08 35 49.6	-1.4
	comp=Z,289nm,0.9s,SNR=167						
SOKA				eSn	Sn	08 37 31.2	-0.9
	comp=Z,53nm,0.6s						
OBKA	Obir	9.00	332	i Pn	Pn	08 35 49.7	-1.5
	comp=Z,70nm,0.5s,SNR=49						
OBKA				eSn	Sn	08 37 33.1	+0.4
	comp=Z,251nm,0.9s						
TESR	Tescani	9.03	28	⇑P	Pn	08 35 52.6	+1.1
ZCCA	Zocca	9.16	311	Pn	Pn	08 35 54.9	+1.5
BMR	Baia Mare	9.25	12	⇓P	Pn	08 35 55.8	+1.2
BMR	Baia Mare	9.25	12	P	Pn	08 35 56.1	+1.5
BMR				pmax	pmax		
	comp=Z,99nm,0.9s						

PSZ	Piszkesteto	9.26	357	⇑P	Pn	08 35 53.1	-1.6
PSZ	Piszkesteto	9.26	357	ePN	Pn	08 35 53.0	-1.8
PSZ	Piszkesteto	9.26	357	eP	Pn	08 35 53.5	-1.2
PSZ	Piszkesteto	9.26	357	eSN	Sn	08 37 33.0	-5.9
PSZ	Piszkesteto	9.26	357	⇓P	Pn	08 35 53.5	-1.2
PSZ	Piszkesteto	9.26	357	Pn	Pn	08 35 53.2	-1.6
SRO	Srobarova	9.29	351	eP	Pn	08 35 55.9	+0.8
SRO	Srobarova	9.29	351	ePN	Pn	08 35 55.9	+0.8
ARSA	Arzberg	9.34	338	i Pn	Pn	08 35 54.1	-1.7
	comp=Z,97nm,1.0s,SNR=65						
PTCC	Patocco-Chiusa	9.38	328	⇑P	Pn	08 35 54.6	-1.8
TEOL	Teolo	9.40	318	Pn	Pn	08 35 54.4	-2.3
VLC	Villacollemand	9.40	309	⇑P	Pn	08 35 57.3	+0.5
VLC	Villacollemand	9.40	309	Pn	Pn	08 35 56.2	-0.6
KEST	Kesra	9.42	255	Pn	Pn	08 35 57.3	+0.3
	comp=Z,3.8nm,0.3s,baz=341,slow=1.8,SNR=21						
KEST	Kesra	9.42	255	P	Pn	08 35 57.5	+0.5
	SNR=14						
KEST	Kesra	9.42	255	Pn	Pn	08 35 57.0	-0.1
MYKA	Terra Mystica	9.45	330	ePn	Pn	08 35 56.7	-0.6
	comp=Z,70nm,0.8s,SNR=27						
MYKA				eSn	Sn	08 37 44.1	+0.5
	comp=Z,40nm,0.5s						
SOP	Sopron	9.47	343	ePN	Pn	08 35 55.8	-1.8
SOP	Sopron	9.47	343	eP	Pn	08 35 56.7	-0.9
SOP	Sopron	9.47	343	P	Pn	08 35 56.3	-1.3
SOP				pmax	pmax		
	comp=Z,100nm,1.4s						
STAL	STALIGIAL	9.54	325	Pn	Pn	08 35 56.9	-1.8
BR231	Keskin MP Arra	9.55	79		Pn	08 36 01.1	+2.3
ANTO	Ankara	9.56	79	P	Pn	08 36 04.4	+5.4
BURAR	Bucovina Array	9.56	19	⇓P	Pn	08 36 00.7	+1.7
BURAR	Bucovina Array	9.56	19	P	Pn	08 35 59.4	+0.4
BURAR	Bucovina Array	9.56	19	Pn	Pn	08 35 59.4	+0.4
TRPA	Tarpa	9.56	8	⇓P	Pn	08 35 58.2	-0.7
TRPA	Tarpa	9.56	8	ePN	Pn	08 35 58.8	-0.1
TRPA	Tarpa	9.56	8	eP	Pn	08 35 59.0	+0.2
BUR08	Bucovina Ar. S	9.59	19		Pn	08 36 00.4	+1.1
PGF	Pioggiola	9.61	297	P	Pn	08 36 01.2	+1.6
ZOU	Zoufplan	9.66	327	Pn	Pn	08 35 58.5	-1.9
PRMA	PARMA	9.78	312		Pn	08 36 02.7	+0.9
KECS	Kecovo	9.81	360	eP	Pn	08 36 02.6	+0.3
KECS	Kecovo	9.81	360	ePN	Pn	08 36 02.6	+0.3
ZST	Bratislava	9.85	346	eP	Pn	08 36 02.2	-0.6
ZST				e	Sn	08 37 47.5	-5.8
ZST	Bratislava	9.85	346	ePN	Pn	08 36 02.2	-0.6
ZST				eSN	Sn	08 37 47.5	-5.8
CONA	Conrad Observa	9.87	341	ePn	Pn	08 36 01.2	-2.0
	comp=Z,55nm,0.8s,SNR=35						
CTI	Castel Tesino	9.89	321	P	Pn	08 36 01.5	-1.9
CTI	Castel Tesino	9.89	321	Pn	Pn	08 36 01.5	-1.9
VYHS	Vyhne	9.90	353	eP	Pn	08 36 03.1	-0.4
VYHS				e	Sn	08 37 49.5	-5.1
VYHS	Vyhne	9.90	353	ePN	Pn	08 36 03.1	-0.4
VYHS				eSN	Sn	08 37 49.5	-5.1
KBA	Koelnbreinsper	9.93	330	ePn	Pn	08 36 03.3	-0.8
	comp=Z,44nm,0.6s,SNR=58						
KBA				eSn	Sn	08 37 53.9	-1.7
	comp=Z,45nm,0.5s						
KBA	Koelnbreinsper	9.93	330	P	Pn	08 36 03.3	-0.8
KBA				pmax	pmax		
	comp=Z,149nm,0.8s						
MODS	Modra-Piesok	9.99	347	eP	Pn	08 36 03.0	-1.7
MODS	Modra-Piesok	9.99	347	ePN	Pn	08 36 03.0	-1.7
ABTA	Abfaltersbach	10.01	326	ePn	Pn	08 36 03.8	-1.3
	comp=Z,53nm,0.6s,SNR=69						
ABTA				i Sn	Sn	08 37 55.6	-1.8
	comp=Z,122nm,0.7s						
MSSA	Maissana	10.02	308		Pn	08 36 05.7	+0.5
UZH	Uzhgorod	10.04	7	eP	Pn	08 36 05.2	-0.1
UZH				eS	Sn	08 37 58.2	+0.3
UZH				MLR	MLR		
	comp=Z,600nm,13.0s						
SMOL	Smolenice	10.10	348	eP	Pn	08 36 05.5	-0.7
SMOL	Smolenice	10.10	348	ePN	Pn	08 36 05.5	-0.7
SALO	Salr	10.18	316	⇑P	Pn	08 36 05.7	-1.7
SALO	Salr	10.18	316	Pn	Pn	08 36 05.9	-1.5
BR131	Keskin Array S	10.21	80	P	Pn	08 36 11.7	+3.8
BR131	Keskin Array S	10.21	80	P	Pn	08 36 12.0	+4.2
	SNR=15						
BR131	Keskin Array S	10.21	80		Pn	08 36 11.7	+3.8
BRTR	Keskin Array B	10.21	80	Pn	Pn	08 36 10.5	+2.6
	comp=Z,1.6nm,0.3s,baz=262,slow=11,SNR=21						
BRTR				LR	LR	08 40 09.4	
	comp=Z,4µm,21.8s,baz=310,slow=38						
BRTR	Keskin Array B	10.21	80	P	Pn	08 36 10.8	+2.9
BRTR	Keskin Array B	10.21	80		Pn	08 36 10.8	+2.9
MILM	Milestii Mici	10.23	34	⇑P	Pn	08 36 10.1	+2.1
MILM	Milestii Mici	10.23	34	eP	Pn	08 36 09.0	+1.1
MILM				eS	Sn	08 38 09.0	+6.4
SWA2		10.24	155	P	Pn	08 36 05.3	-3.0
	baz=163						
CRVS	Cervenica-Dubn	10.25	3	eP	Pn	08 36 08.6	+0.3
CRVS	Cervenica-Dubn	10.25	3	ePN	Pn	08 36 08.5	+0.3
MOA	Molln	10.26	335	ePn	Pn	08 36 07.4	-1.0
	comp=Z,111nm,0.6s,SNR=111						
MOA				eSn	Sn	08 38 02.4	-1.0
	comp=Z,39nm,0.6s						
BOB	Bobbio (Coli)	10.30	310	⇑P	Pn	08 36 09.8	+0.8
KOLS	Kolonicke sedl	10.33	6	eP	Pn	08 36 10.2	+0.8
KOLS	Kolonicke sedl	10.33	6	ePN	Pn	08 36 10.2	+0.8
JAVC	Velka Javorina	10.40	349	ePN	Pn	08 36 09.2	-1.2
LANS	Liptovska Anna	10.51	356	eP	Pn	08 36 12.4	+0.5
LANS	Liptovska Anna	10.51	356	ePN	Pn	08 36 12.4	+0.5
NIE	Niedzica	10.75	359	eP	Pn	08 36 17.3	+2.2
NIE	Niedzica	10.75	359	P	Pn	08 36 17.0	+1.9
NIE				pmax	pmax		
	comp=Z,104nm,1.1s						
STHS	Stebnicka Huta	10.76	2	eP	Pn	08 36 15.6	+0.4
STHS	Stebnicka Huta	10.76	2	ePN	Pn	08 36 15.6	+0.4
KMPD	K-Podol'skiy	10.77	21	P	Pn	08 36 16.0	+0.6
WTTA	Wattenberg	10.79	326	ePn	Pn	08 36 14.9	-0.9
	comp=Z,99nm,0.8s,SNR=90						
WTTA				eSn	Sn	08 38 14.6	-2.1
	comp=Z,141nm,0.8s						
WTTA	Wattenberg	10.79	326	P	Pn	08 36 15.1	-0.7
WTTA				pmax	pmax		
	comp=Z,229nm,0.8s						
KRUC	Moravsky	10.81	345	P	Pn	08 36 14.6	-1.4
KRUC				pmax	pmax		
	comp=Z,33nm,1.0s						
KRUC	Moravsky	10.81	345	ePN	Pn	08 36 13.9	-2.1
WATA	Walderalm	10.87	326	ePn	Pn	08 36 16.4	-0.6
	comp=Z,103nm,0.6s,SNR=147						
WATA				eSn	Sn	08 38 14.1	-4.6
	comp=Z,87nm,0.6s						
CSS	Mathiatis	10.88	106	⇓P	Pn	08 36 21.3	+4.3
CSS	Mathiatis	10.88	106		Pn	08 36 20.5	+3.5
SQTA	Sankt Quirin	10.95	324	ePn	Pn	08 36 17.9	-0.1
	comp=Z,58nm,0.6s,SNR=41						
SQTA				eSn	Sn	08 38 16.4	-4.1
	comp=Z,111nm,0.8s						
VRAC	Vranov	11.01	346	⇓P	Pn	08 36 17.9	-0.8
VRAC	Vranov	11.01	346	Pn	Pn	08 36 17.5	-1.2
	comp=Z,0.9nm,0.3s,baz=176,slow=12,SNR=55						
VRAC				LR	LR	08 41 10.7	
	comp=Z,3µm,19.2s,baz=174,slow=41						
VRAC	Vranov	11.01	346	P	Pn	08 36 17.6	-1.1
VRAC				pmax	pmax		
	comp=Z,96nm,0.9s						
VRAC	Vranov	11.01	346	ePN	Pn	08 36 16.5	-2.2
SORM	Soroca	11.02	28	⇑P	Pn	08 36 20.3	+1.5
SORM	Soroca	11.02	28	P	Pn	08 36 22.1	+3.3
SORM				pmax	pmax		
	comp=Z,117nm,0.7s						
FETA	Feichten	11.03	322	ePn	Pn	08 36 17.8	-1.3
	comp=Z,34nm,0.7s,SNR=26						
FETA				eSn	Sn	08 38 20.6	-1.9
	comp=Z,56nm,0.7s						
KWP	Kalwaria Pacla	11.07	7	eP	Pn	08 36 21.7	+2.2
KWP	Kalwaria Pacla	11.07	7	P	Pn	08 36 21.2	+1.8
KWP	Kalwaria Pacla	11.07	7	⇑P	Pn	08 36 20.9	+1.4
KWP	Kalwaria Pacla	11.07	7		Pn	08 36 21.2	+1.8
MOTA	Moosalm	11.09	324	i Pn	Pn	08 36 19.7	-0.2
	comp=Z,192nm,0.8s,SNR=95						
MOTA				eSn	Sn	08 38 19.6	-4.4
	comp=Z,144nm,0.8s						
CKRC	Cesky Krumlov	11.10	338	ePN	Pn	08 36 18.1	-1.9
TREC	Trest	11.23	343	eP	Pn	08 36 20.5	-1.2
TREC				MLR	MLR		
	comp=Z,8µm,19.7s						
TREC	Trest	11.23	343	ePN	Pn	08 36 20.5	-1.2
TREC				AMS	AMS	08 41 20.0	
	comp=Z,8µm,19.7s						
DAVOX	Davos/Dischmat	11.28	319	Pn	Pn	08 36 22.5	-0.1
	comp=Z,3.2nm,0.3s,baz=143,slow=14,SNR=36						
DAVOX				Sn	Sn	08 38 27.2	-1.6
	comp=Z,5.0nm,0.3s,baz=207,slow=3.6,SNR=3.9						
OKC	Ostrava-Krasne	11.30	352	eP	Pn	08 36 22.0	-0.6
OKC				MLR	MLR		
	comp=Z,6µm,11.0s						
OKC	Ostrava-Krasne	11.30	352	ePN	Pn	08 36 22.0	-0.6
OKC				AMS	AMS	08 42 20.0	
	comp=Z,6µm,11.0s						
GEC2	GERESS Array S	11.31	336	ePn	Pn	08 36 20.9	-2.0
GEC2				eSn	Sn	08 38 25.1	-4.3
GEC2	GERESS Array S	11.31	336		Pn	08 36 20.9	-2.0
GERES	GERESS Array B	11.31	336	Pn	Pn	08 36 20.8	-2.0
	comp=Z,3.0nm,0.3s,baz=156,slow=14,SNR=169						
GERES				Sn	Sn	08 38 27.2	-2.2
	comp=Z,3.2nm,0.3s,baz=158,slow=24,SNR=5.4						
GERES	GERESS Array B	11.31	336	Pn	Pn	08 36 20.7	-2.2
MORC	Moravsky Berou	11.31	350	⇑P	Pn	08 36 21.8	-1.1
MORC	Moravsky Berou	11.31	350	P	Pn	08 36 21.8	-1.1
MORC	Moravsky Berou	11.31	350	ePN	Pn	08 36 20.9	-2.0
MORC	Moravsky Berou	11.31	350	⇑P	Pn	08 36 22.1	-0.7
MORC	Moravsky Berou	11.31	350		Pn	08 36 21.8	-1.1
RETA	Reutte	11.35	324	i Pn	Pn	08 36 23.2	-0.2
	comp=Z,23nm,0.6s,SNR=24						
RETA				eSn	Sn	08 38 28.3	-2.0
	comp=Z,54nm,0.5s						
TUE	Stuetta	11.36	317	⇑P	Pn	08 36 23.0	-0.6
TUE	Stuetta	11.36	317		Pn	08 36 22.8	-0.8
LVV	L'vov	11.42	11	eP	Pn	08 36 26.8	+2.5
LVV				eS	Sn	08 38 32.5	+0.7
LVV				MLR	MLR		
	comp=Z,2µm,12.0s						
ISO	Isola	11.54	303	P	Pn	08 36 28.9	+2.9
ISO				pmax	pmax		
	comp=Z,115nm,1.5s						
KHC	Kasperske Hory	11.60	337	eP	Pn	08 36 24.8	-2.0
KHC				e	Sn	08 38 34.0	-2.4
KHC				MLR	MLR		
	comp=Z,6µm,11.4s						
KHC	Kasperske Hory	11.60	337	ePN	Pn	08 36 24.8	-2.0
KHC				eSN	Sn	08 38 34.0	-2.4
KHC				AMS	AMS	08 41 40.0	
	comp=Z,6µm,11.4s						
KHC	Kasperske Hory	11.60	337	⇑P	Pn	08 36 24.6	-2.2
DAVA	Damuels	11.62	321	i Pn	Pn	08 36 26.1	-1.2
	comp=Z,32nm,0.8s,SNR=20						
DAVA				eSn	Sn	08 38 34.0	-3.1
	comp=Z,111nm,0.7s						
FUR	Furstenfeldbru	11.64	328	P	Pn	08 36 26.1	-1.2
FUR				pmax	pmax		
	comp=Z,181nm,1.2s						
FUR	Furstenfeldbru	11.64	328	ePn	Pn	08 36 26.2	-1.1
KRLC	Kraliky	11.72	348	eP	Pn	08 36 27.8	-0.6
KRLC				MLR	MLR		
	comp=Z,6µm,14.0s						
KRLC	Kraliky	11.72	348	ePN	Pn	08 36 27.8	-0.6
KRLC				AMS	AMS	08 42 30.0	
	comp=Z,6µm,14.0s						
UBR	Ueberruh	11.79	323	ePn	Pn	08 36 29.3	-0.2
UBR				eSn	Sn	08 38 36.8	-4.4
WET	Wettzell	11.84	335	P	Pn	08 36 27.6	-2.5
WET				pmax	pmax		
	comp=Z,127nm,1.1s						
WET	Wettzell	11.84	335	ePn	Pn	08 36 27.8	-2.2
SIM	Simferopol'	11.89	54	eP	Pn	08 36 32.7	+1.9
SIM				S	Sn	08 38 48.0	+4.5
SIM				pmax	pmax		
	comp=Z,56nm,0.8s						
BNN	Bunyan	11.94	84		Pn	08 36 35.8	+4.2
DPC	Dobruska-Polom	12.06	347	eP	Pn	08 36 32.2	-0.9
DPC				MLR	MLR		
	comp=Z,7µm,16.2s						
DPC	Dobruska-Polom	12.06	347	ePN	Pn	08 36 32.2	-0.9
DPC				AMS	AMS	08 41 50.0	
	comp=Z,7µm,16.2s						
PRU	Pruhonice	12.10	341	eP	Pn	08 36 31.7	-1.9
PRU				MLR	MLR		
	comp=Z,8µm,12.9s						
PRU	Pruhonice	12.10	341	ePN	Pn	08 36 31.7	-1.9
PRU				AMS	AMS	08 41 50.0	
	comp=Z,8µm,12.9s						
BNI	Bardonecchia	12.15	306	P	Pn	08 36 35.1	+0.7
BNI	Bardonecchia	12.15	306		Pn	08 36 35.1	+0.7
PRA	Prague	12.21	341	eP	Pn	08 36 34.6	-0.4
PRA				MLR	MLR		
	comp=Z,7µm,20.5s						
PRA	Prague	12.21	341	ePN	Pn	08 36 34.6	-0.4
PRA				AMS	AMS	08 42 00.0	
	comp=Z,7µm,20.5s						
UPC	Upice	12.27	346	eP	Pn	08 36 34.8	-1.1
UPC				MLR	MLR		
	comp=Z,9µm,11.4s						
UPC	Upice	12.27	346	ePN	Pn	08 36 34.8	-1.1
UPC				AMS	AMS	08 42 10.0	
	comp=Z,9µm,11.4s						
OSTC	Ostas	12.28	347	ePN	Pn	08 36 35.7	-0.3
OSTC				AMS	AMS	08 42 00.0	
	comp=Z,6µm,13.3s						
CHVC	Chvalec	12.34	346	ePN	Pn	08 36 35.5	-1.4
CHVC				AMS	AMS	08 42 00.0	
	comp=Z,6µm,17.4s						
SENIN	Lac Senin/Sane	12.43	312		Pn	08 36 38.6	+0.2
RYAN	Fayoum	12.51	137	S		08 39 31.7	
	baz=141						
RYAN				AMP		08 39 31.7	
	baz=141						
KSP	Ksiaz	12.54	347	eP	Pn	08 36 39.1	-0.4
KSP	Ksiaz	12.54	347	P	Pn	08 36 39.0	-0.6
KSP				pmax	pmax		
	comp=Z,46nm,1.1s						
KSP	Ksiaz	12.54	347	⇑P	Pn	08 36 39.2	-0.4
PVCC	Panska Ves	12.60	342	eP	Pn	08 36 39.1	-1.3
PVCC				MLR	MLR		
	comp=Z,4µm,15.3s						
PVCC	Panska Ves	12.60	342	ePN	Pn	08 36 39.1	-1.3
PVCC				AMS	AMS	08 42 20.0	
	comp=Z,4µm,15.3s						
SLE	Schleitheim	12.64	320	P	Pn	08 36 39.2	-1.8
SLE				pmax	pmax		
	comp=Z,47nm,1.3s						
SLE	Schleitheim	12.64	320	ePn	Pn	08 36 39.4	-1.7
SLE				eSn	Sn	08 38 52.7	-9.1
BALST	Balsthal	12.78	317	ePn	Pn	08 36 41.4	-1.5
BALST				eSn	Sn	08 38 57.3	-8.0
GRFO	Grafenberg	12.88	332	P	Pn	08 36 42.3	-2.0
GRFO	Grafenberg	12.88	332		Pn	08 36 42.3	-2.0
GRA1	Grafenberg Arr	12.88	332		Pn	08 36 41.7	-2.6
GRF	Grafenberg Arr	12.88	332	P	Pn	08 36 41.7	-2.6
GRF	Grafenberg Arr	12.88	332	ePn	Pn	08 36 42.3	-2.1
GLL	Jalalah	12.93	131	P	Pn	08 36 41.6	-3.5
	baz=134						
WERN	Wernitzgruen	12.99	336	ePn	Pn	08 36 44.1	-1.7
STU	Stuttgart	13.01	325	P	Pn	08 36 44.3	-1.6
STU	Stuttgart	13.01	325	ePn	Pn	08 36 44.4	-1.6
STU	Stuttgart	13.01	325		Pn	08 36 44.3	-1.6
BRG	Berggiesshubel	13.07	341	P	Pn	08 36 45.4	-1.4
BRG				pmax	pmax		
	comp=Z,45nm,1.0s						
BRG	Berggiesshubel	13.07	341	i P	Pn	08 36 45.2	-1.6
BRG				Amp		08 36 47.8	
	comp=Z,40nm,1.0s						
BRG	Berggiesshubel	13.07	341	P	P	08 36 58.6	+1.5
BRG				Amp		08 36 59.6	
	comp=Z,39nm,0.9s						
BRG				Amp		08 42 59.0	
	comp=N,5.4nm,10.0s						
BRG				Amp		08 43 02.0	
	comp=Z,7.8nm,10.3s						
BRG				Amp		08 43 05.0	
	comp=E,1.6nm,14.6s						
GUNZ	Gunzen	13.07	336	ePn	Pn	08 36 45.3	-1.6
BFO	Black Forest	13.10	321	eP	Pn	08 36 45.2	-2.1
BFO	Black Forest	13.10	321	ePn	Pn	08 36 45.2	-2.1
BFO				eSn	Sn	08 39 05.7	-7.4
BFO	Black Forest	13.10	321	P	Pn	08 36 45.5	-1.8
BFO	Black Forest	13.10	321		Pn	08 36 45.2	-2.1
BEL	Belsk	13.17	1	P	Pn	08 36 51.1	+3.0
BEL				pmax	pmax		
	comp=Z,349nm,1.0s						
GAZ	Gaziantep	13.23	91		Pn	08 36 50.0	+0.8
MMAI	Mount Meron Ar	13.29	111	Pn	Pn	08 36 48.2	-1.8
	comp=Z,2.8nm,0.3s,baz=324,slow=12,SNR=8.8						
SUZ	Suez	13.43	127	P	Pn	08 36 48.3	-3.5
	baz=129						
KIEV	Kiev	13.49	24	P	Pn	08 36 52.0	-0.5
AKASG	Malin Array Be	13.50	24	Pn	Pn	08 36 51.2	-1.4
	comp=Z,1.2nm,0.3s,baz=212,slow=12,SNR=20						
AKASG	Malin Array Be	13.50	24		Pn	08 36 51.0	-1.6
AKBB	Malin Array Si	13.50	24	⇓eP	Pn	08 36 51.6	-1.1
AKBB	Malin Array Si	13.50	24	Pn	Pn	08 36 52.0	-0.7
MOX	Moxa	13.55	335	P	Pn	08 36 51.0	-2.3
MOX				pmax	pmax		
	comp=Z,80nm,0.9s						
MOX	Moxa	13.55	335	ePn	Pn	08 36 50.7	-2.6
ECH	Echery	13.62	319	P	Pn	08 36 52.6	-1.7
ECH	Echery	13.62	319	⇑P	Pn	08 36 52.6	-1.7
ECH				⇑S	Sn	08 39 20.9	-4.7
ECH	Echery	13.62	319		Pn	08 36 52.6	-1.7
CLL	Collm	13.71	340	i P	Pn	08 36 54.6	-1.0
CLL				pmax	pmax		
	comp=Z,305nm,1.5s						
CLL				MLR	MLR		
	comp=Z,4µm,18.2s						
CLL	Collm	13.71	340	i P	Pn	08 36 54.6	-1.0
	comp=Z,305nm,1.5s						
CLL				i PP	P	08 37 04.7	+0.4
CLL				i		08 37 05.8	
CLL				ePmax		08 37 05.0	
CLL				L	L	08 43 00.0	
	comp=Z,4µm,18.2s						
ANN	Anapa	14.00	59	eP	P	08 37 05.0	-2.5
ANN				pmax	pmax		
	comp=Z,88nm,0.9s						
ANN				MLR	MLR		
	comp=Z,2µm,17.0s						
TNS	Taunus Mts	14.41	327	P	Pn	08 37 02.9	-2.3
TNS	Taunus Mts	14.41	327	ePn	Pn	08 37 03.0	-2.3
RUE	Ruedersdorf	14.59	343	eP	P	08 37 14.0	-0.1
GKP	Gorka Klasztor	14.78	352	eP	P	08 37 16.6	+0.5
GKP	Gorka Klasztor	14.78	352	P	Pn	08 37 12.0	+1.8
GKP				pmax	pmax		
	comp=Z,325nm,1.6s						
ASF	Jabal al Asfar	14.80	111	Pn	Pn	08 37 11.8	+1.1
	comp=Z,0.9nm,0.3s,baz=293,slow=4.7,SNR=6.3						
HBST	Basata	15.06	125	P	Pn	08 37 10.1	-3.9
	baz=126						
WLF	Walferdange	15.06	322	dPnPn	P	08 37 21.4	+2.1
FLTG	Flechtingen	15.12	338	P	Pn	08 37 15.1	+0.3
AHRW	Bad Neuenahr-A	15.24	326	ePn	Pn	08 37 15.4	-0.9
SUW	Suwalki	15.45	6	eP	Pn	08 37 18.1	-1.0
SUW	Suwalki	15.45	6	eP	Pn	08 37 19.7	+0.6
SUW	Suwalki	15.45	6	P	Pn	08 37 17.9	-1.2
SUW				pmax	pmax		
	comp=Z,497nm,1.0s						
SUW	Suwalki	15.45	6	⇓P	Pn	08 37 18.6	-0.4
SUW	Suwalki	15.45	6		Pn	08 37 17.9	-1.2
BHOU	Houvegnez	15.60	323	dPn	Pn	08 37 20.6	-0.4
BHOU				dpP	pP	08 37 28.4	+0.3
BHOU				dx	x	08 37 34.1	
BHOU				dPbPb	PbPb	08 38 11.3	-1.1
BHOU				dPgPg	PgPg	08 38 38.3	-1.5
NRDL	Niedersach Rie	15.62	336	ePn	Pn	08 37 21.1	-0.1
BTNL	Ternell	15.70	324	dPn	Pn	08 37 22.1	-0.3
	comp=Z,85nm,1.2s						
BTNL				dpP	pP	08 37 28.0	-1.3
MEM	Membach	15.77	324	dPn	Pn	08 37 22.5	-0.8
MEM				dpP	pP	08 37 28.8	-1.3
MEM				dPbPb	PbPb	08 38 15.7	+0.3
MEM	Membach	15.77	324	P	Pn	08 37 22.8	-0.5
RCHB	Rochefort	15.84	321	dPn	Pn	08 37 23.5	-0.5
	comp=Z,69nm,1.3s						
RCHB				dpP	pP	08 37 30.0	-0.8
KLNR	Kaliningrad	15.94	359	⇑eP	Pn	08 37 24.0	-1.4
BCLA	Clavier	15.97	322	dPn	Pn	08 37 25.7	-0.2
BCLA				dpP	pP	08 37 31.4	-0.9
BCLA				dPbPb	PbPb	08 38 18.2	-0.6
BGES	Gesves	16.05	322	dpPn	Pn	08 37 28.1	+1.2
BGES				dpP	pP	08 37 32.1	-1.1
DOU	Dourbes	16.11	320	dPn	Pn	08 37 26.8	-0.9
	comp=Z,134nm,1.0s						
DOU				dpPn	P	08 37 29.4	-1.6
DOU				dpP	pP	08 37 32.4	-1.4
DOU				dPbPb	PbPb	08 38 20.4	-0.7
BMRD	Maredsous	16.16	321	dPn	Pn	08 37 27.9	-0.3
BMRD				dpP	pP	08 37 33.2	-1.2
BMRD				dPbPb	PbPb	08 38 21.1	-0.8
CLF	Chambon-Foret	16.23	311	P	P	08 37 32.1	-0.2
SNF	Seneffe	16.52	321	dpP	pP	08 37 37.5	-0.9
SNF				dPnPn	PnPn	08 37 42.1	+0.1
MNK	Minsk	16.60	15	i P	Pn	08 37 29.9	-4.0
MNK				i S	Sn	08 40 33.7	-4.4
MNK				pmax	pmax		
	comp=N,181nm,0.9s						
MNK				pmax	pmax		
	comp=E,8.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,252nm,0.9s						
MNK				MLR	MLR		
	comp=E,559nm,18.0s						
MNK				MLR	MLR		
	comp=Z,2µm,17.0s						
MNK				MLR	MLR		
	comp=N,1µm,17.0s						
MNK	Minsk	16.60	15	i P	Pn	08 37 30.0	-3.9
	comp=E,8.0nm,0.9s						
MNK				i P	Pn	08 37 30.0	-3.9
	comp=N,181nm,0.9s						
MNK				i P	Pn	08 37 30.0	-3.9
	comp=Z,252nm,0.9s,baz=201						
MNK				i PP	pP	08 37 39.1	-0.2
MNK				i S	Sn	08 40 33.7	-4.3
MNK				i SS	S	08 40 48.2	-1.5
MNK				i LQ	LQ	08 42 21.9	
MNK				i LR	LR	08 42 50.5	
MNK				i LRM	MLR	08 44 01.7	
	comp=E,559nm,17.6s						
MNK				i LRM	MLR	08 44 18.2	
	comp=Z,2µm,17.1s						
MNK				i LRM	MLR	08 44 48.4	
	comp=N,1µm,17.2s						
RGN	Rugen	16.63	345	eP	P	08 37 36.5	-0.1
RGN	Rugen	16.63	345	P	P	08 37 36.1	-0.5
RGN				IAmb	IAmb	08 37 38.0	
	comp=Z,328nm,1.0s						
UCC	Uccle	16.68	322	dpP	pP	08 37 39.0	-1.0
UCC				dPnPn	PnPn	08 37 44.1	0.0
UCC	Uccle	16.68	322	P	Pn	08 37 35.8	+1.0
UCC				pmax	pmax		
	comp=Z,89nm,1.2s						
UCC	Uccle	16.68	322	P	Pn	08 37 35.8	+1.0
NACGM	Naroch	16.78	13	i P	Pn	08 37 34.3	-1.8
BSEG	Bad Segeberg	16.80	339	P	Pn	08 37 35.2	-1.2
BSEG				pmax	pmax		
	comp=Z,165nm,1.1s						
BSEG	Bad Segeberg	16.80	339	ePn	Pn	08 37 35.4	-1.0
PABE	Paberze	17.00	7	eP	Pn	08 37 37.5	-1.4
PABE	Paberze	17.00	7		Pn	08 37 37.0	-1.8
PABE				IAmb	IAmb	08 37 40.6	
	comp=Z,364nm,1.0s						
CART	Cartagena	17.00	273	P	P	08 37 42.9	+2.0
SIRT	Sirnak	17.26	87	P	P	08 37 44.2	+0.3
ISAL	Salakas	17.32	11	eP	Pn	08 37 41.8	-1.0
ISAL				IAmb	IAmb	08 37 59.0	
	comp=Z,36nm,0.8s						
NEY	Neytrino	17.34	68	⇑eP	P	08 37 44.9	+0.1
NEY				pmax	pmax		
	comp=Z,98nm,1.6s						
SHA1	Shidzhatmaz	17.36	66	d iP	P	08 37 46.2	+1.1
PBUR	Paburge	17.39	3	eP	Pn	08 37 42.8	-0.9
PBUR				IAmb	IAmb	08 37 52.8	
	comp=Z,112nm,0.8s						
KIV	Kislovodsk	17.42	65	i P	P	08 37 46.7	+1.1
	SNR=6.9						
KIV	Kislovodsk	17.42	65	eP	P	08 37 45.6	0.0
KIV				eS	Sn	08 41 00.9	+2.7
KIV				pmax	pmax		
	comp=Z,109nm,1.1s						
KIV	Kislovodsk	17.42	65	P	P	08 37 46.5	+0.9
KIV				P	P	08 37 46.5	+0.9
KIV	Kislovodsk	17.42	65	⇓p	P	08 37 51.5	+5.9
KIV	Kislovodsk	17.42	65	P	P	08 37 45.7	+0.1
KBZ	Khabaz	17.53	66	P	P	08 37 46.3	-0.5
	comp=Z,0.5nm,0.3s,baz=252,slow=9.9,SNR=17						
KBZ	Khabaz	17.53	66	c iP	P	08 37 47.7	+1.0
KBZ				pmax	pmax		

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              comp=Z,90nm,1.0s
LUNU   Lund              17.63 347  i P     P       08 37 47.4 -0.3
PYA1   Pyatigorsk        17.73  65⇑eP       P       08 37 50.6 +1.6
ONI    Oni               17.80  70   P      P       08 37 51.1 +1.3
ONI                                  pmax   pmax
              comp=Z,62nm,1.1s
ONI    Oni               17.80  70   P      P       08 37 51.1 +1.3
GOF    Gofitskoye        17.89  62⇑eP       P       08 37 51.5 +0.8
GOF                                  pmax   pmax
              comp=Z,291nm,1.1s
BLEU   Blekinge          17.92 351  i P     Pn      08 37 48.0 -2.4
NCK    Nalchik           18.00  67⇓eP       P       08 37 54.0 +2.0
NCK                                  pmax   pmax
              comp=Z,46nm,1.5s
VORD   Divnogorie        18.04  41  eP      Pn      08 37 51.8  0.0
VORD                                 pmax   pmax
              comp=Z,60nm,1.0s
VSR    Storozhevoye      18.12  40  eP      Pn      08 37 51.3 -1.5
VSR                                  pmax   pmax
              comp=Z,40nm,0.8s
ZEI    Tsey              18.14  69  eP      P       08 37 56.6 +2.9
ZEI                                  pmax   pmax
              comp=Z,26nm,1.0s
DEL    Delary            18.36 348  i P     Pn      08 37 55.0 -0.7
VORR   Voronezh          18.42  39  eP      P       08 37 56.0 -0.4
VORR                                 pmax   pmax
              comp=Z,250nm,1.0s
GNI    Garni             18.73  78   P      Pn      08 38 01.3 +0.7
              comp=Z,1.7nm,0.3s,baz=30,slow=3.9,SNR=6.5
GNI    Garni             18.73  78deP       Pn      08 38 02.3 +1.7
GNI                                  pmax   pmax
              comp=Z,45nm,1.0s
GNI    Garni             18.73  78   P      Pn      08 38 02.2 +1.7
GNI                                  S      S       08 41 32.0 -1.5
GNI    Garni             18.73  78   P      Pn      08 38 02.7 +2.1
GNI                                  IAmb   IAmb    08 38 15.6
              comp=Z,222nm,1.2s
TAF    Taforalt          18.80 265   P      Pn      08 38 04.0 +2.6
LPSR   Galich'ya Gora    18.87  36  eP      P       08 38 00.3 -1.1
LPSR                                 pmax   pmax
              comp=Z,160nm,0.9s
FIGM   Figuig            18.93 256   P      Pn      08 38 05.0 +2.0
ESBB   Sonseca Array     19.03 281   P      P       08 38 02.6 -0.8
ESDC   Sonseca Array     19.03 281   P      P       08 38 03.6 +0.3
              comp=Z,0.7nm,0.3s,baz=75,slow=11,SNR=44
ESDC                                 LR     LR      08 44 59.0
              comp=Z,2µm,19.1s,baz=255,slow=36
ESDC   Sonseca Array     19.03 281   P      P       08 38 02.8 -0.6
FABU   Falkenberg        19.06 347  i P     P       08 38 03.3 -0.1
JBK    JBK               19.08 264   P      Pn      08 38 08.0 +3.2
TDRA   Tendrara          19.14 260   P      Pn      08 38 10.0 +4.4
PAB    San Pablo         19.34 280   P      P       08 38 06.5 -0.3
PAB                                  pmax   pmax
              comp=Z,38nm,1.0s
PAB    San Pablo         19.34 280 ⇑P       P       08 38 06.8  0.0
PAB    San Pablo         19.34 280   P      P       08 38 06.5 -0.3
JVM    Valle D.L. Mar    19.42 310  eP      P       08 38 07.7 +0.3
VRH    Novokhopyorsk     19.44  43  eP      P       08 38 08.1 +0.4
VRH                                  pmax   pmax
              comp=Z,100nm,0.7s
ONAU   Onsala            19.58 346  eP      P       08 38 09.4 +0.3
BORU   Boraas            19.65 347  i P     P       08 38 10.1 +0.2
OBN    Obninsk           19.67  28   P      P       08 38 08.8 -1.4
              comp=Z,1.0nm,0.3s,baz=203,slow=7.2,SNR=16
OBN    Obninsk           19.67  28deP       P       08 38 09.1 -1.0
OBN                                  pmax   pmax
              comp=Z,165nm,1.3s
OBN                                  MLR    MLR
              comp=Z,2µm,16.0s
OBN    Obninsk           19.67  28   P      P       08 38 09.1 -1.0
OBN                                  IAmb   IAmb    08 38 19.0
              comp=Z,167nm,1.1s
DDFL   Dedoflistskaro    19.74  74   P      Pn      08 38 16.8 +4.3
ROSF   Rostrenen         19.74 307   P      P       08 38 10.7 -0.2
ROSF                                 pmax   pmax
              comp=Z,119nm,1.3s
LGD    Lagodekhi         19.83  73   P      Pn      08 38 16.4 +2.8
MTSE   Matsula           20.17   5  eP      P       08 38 15.7 +0.2
VSU    Vasula            20.21   9  eP      P       08 38 15.1 -0.8
VSU    Vasula            20.21   9c iP      P       08 38 14.7 -1.2
VSU                                  pmax   pmax
              comp=Z,1µm,0.9s
VSU    Vasula            20.21   9 ⇑P       P       08 38 14.9 -1.0
TJOU   Tjoern            20.23 346  i P     P       08 38 16.0 -0.2
MOS    Moscow            20.54  28  eP      P       08 38 17.6 -2.0
MOS                                 eS      S       08 42 05.8 -3.3
MOS                                  pmax   pmax
              comp=Z,700nm,2.0s
MOS                                  pmax   pmax
              comp=Z,301nm,1.5s
STRD   Stroud            20.58 317  eP      P       08 38 20.5 +0.5
STRD                                 IAmb   IAmb    08 38 24.5
              comp=Z,519nm,1.3s
LIJA   Lijar             20.58 273   P      P       08 38 20.0 -0.3
MAK    Makhachkala       20.80  70  eP      Pn      08 38 24.8 -0.1
MAK                                 eS      Sn      08 42 19.2 -0.4
MAK                                  pmax   pmax
              comp=Z,1µm,1.2s
MAK                                  MLR    MLR
              comp=Z,2µm,17.0s
CHEFC  Chefchaouen       21.00 268   P      Pn      08 38 29.0 +1.5
PBRG   Braganca          21.05 287  eP      P       08 38 26.1 +0.8
              comp=Z,73nm,1.9s
LCRM   LCR               21.09 264   P      P       08 38 31.0 +5.1
HOMB   Homborsund        21.12 342  eP      P       08 38 25.4 -0.4
MCH1   Michaelchurch     21.14 317  eP      P       08 38 25.2 -0.9
MCH1   Michaelchurch     21.14 317 ⇓P       P       08 38 26.6 +0.5
MDT    Midelt            21.22 262   P      P       08 38 27.7 +0.5
              comp=Z,7.6nm,0.9s,baz=76,slow=7.0,SNR=14
LBWR   Ladybower, Pea    21.24 321  eP      P       08 38 26.9 -0.3
LBWR                                 IAmb   IAmb    08 38 28.2
              comp=Z,388nm,1.3s
STRU   Stroemstad        21.25 347  i P     P       08 38 26.2 -1.0
MVO    Moncorvo          21.28 285  eP      P       08 38 28.4 +0.6
              comp=Z,82nm,1.6s
UPP    Uppsala           21.29 356  eP      P       08 38 26.9 -0.7
STNC   Stoke             21.30 320  eP      P       08 38 27.9 +0.1
STNC                                 IAmb   IAmb    08 38 29.6
              comp=Z,424nm,1.2s
HLM1   Long Mynd         21.34 318  eP      P       08 38 28.1 -0.2
HLM1                                 IAmb   IAmb    08 38 33.7
              comp=Z,214nm,1.3s
SNART  Snartemo          21.50 341  eP      P       08 38 29.7 -0.2
HPK    Haverah Park      21.51 323  eP      P       08 38 29.3 -0.8
AAL    Aland             21.53 359  eP      P       08 38 29.0 -1.2
PBAR   Barrancos         21.61 277  eP      P       08 38 31.2  0.0
              comp=Z,166nm,2.0s
PMRV   Marv??o           21.70 281  eP      P       08 38 31.7 -0.5
              comp=Z,177nm,1.8s
FOEL   Foel Wylfa        21.70 319  eP      P       08 38 32.3 +0.1
FOEL                                 IAmb   IAmb    08 38 33.5
              comp=Z,323nm,1.2s
MTE    Manteigas         21.71 283  eP      P       08 38 32.3 -0.2
              comp=Z,132nm,1.7s
MTE    Manteigas         21.71 283 ⇑P       P       08 38 32.2 -0.2
MTE    Manteigas         21.71 283   P      P       08 38 31.8 -0.7
HFS    Hagfors           21.92 351   P      P       08 38 33.1 -1.4
              comp=Z,37nm,0.5s,baz=169,slow=12,SNR=64
PESTR  Estremoz          21.92 279  eP      P       08 38 33.5 -1.1
              comp=Z,119nm,1.8s
PESTR  Estremoz          21.92 279 ⇑P       P       08 38 33.5 -1.1
PESTR  Estremoz          21.92 279   P      P       08 38 33.3 -1.3
GOLM   Goulmima          21.94 259   P      P       08 38 40.0 +5.0
PUL    Pulkovo           22.02  13  eP      P       08 38 33.1 -2.3
PUL    Pulkovo           22.02  13ceP       P       08 38 33.7 -1.7
PUL                                  pmax   pmax
              comp=Z,682nm,1.3s
RSBS   Rosebush, Pemb    22.07 315  eP      P       08 38 34.8 -1.3
RSBS                                 IAmb   IAmb    08 38 39.5
              comp=Z,223nm,1.5s
KONO   Kongsberg         22.13 345d iP      P       08 38 35.5 -1.2
KONO                                 pmax   pmax
              comp=Z,294nm,1.7s
KONO   Kongsberg         22.13 345  eP      P       08 38 36.0 -0.7
KONO   Kongsberg         22.13 345 ⇓P       P       08 38 35.6 -1.0
OSL    Oslo              22.18 347  eP      P       08 38 36.0 -1.3
EDMD   Edmundbyers       22.20 324  eP      P       08 38 36.2 -1.2
EDMD                                 IAmb   IAmb    08 38 40.0
              comp=Z,644nm,1.8s
PVAQ   Vaqueiros         22.28 276  eP      P       08 38 37.2 -1.3
              comp=Z,57nm,1.8s
PVAQ   Vaqueiros         22.28 276   P      P       08 38 37.9 -0.6
EVO    Evora             22.30 279  eP      P       08 38 37.5 -1.2
              comp=Z,100nm,1.5s
YLL    Llanberis         22.33 318  eP      P       08 38 38.4 -0.5
PMTG   Montargil         22.38 280  eP      P       08 38 38.0 -1.6
              comp=Z,104nm,1.5s
COI    Coimbra           22.39 283   P      P       08 38 39.1 -0.6
COI                                  pmax   pmax
              comp=Z,101nm,1.3s
COI    Coimbra           22.39 283   P      P       08 38 39.1 -0.6
COI                                  IAmb   IAmb    08 38 40.2
              comp=Z,101nm,1.2s
PCAS   Casmilo, Conde    22.47 283  eP      P       08 38 40.4 -0.2
              comp=Z,72nm,1.5s
PBDV   Barranco-do-Ve    22.48 275  eP      P       08 38 42.0 +1.3
              comp=Z,78nm,1.3s
PCVE   Castro Verde      22.48 276  eP      P       08 38 39.0 -1.7
              comp=Z,56nm,1.5s
WLF1   Llynfaes          22.52 319  eP      P       08 38 38.9 -2.0
MESJ   Messejana         22.58 277  eP      P       08 38 41.2 -0.6
MESJ                                 IAmb   IAmb    08 38 46.0
              comp=Z,32nm,1.2s
MESJ   Messejana         22.58 277  eP      P       08 38 41.1 -0.6
              comp=Z,77nm,1.4s
KESW   Keswick, Cumbr    22.59 323  eP      P       08 38 40.8 -0.9
KESW                                 IAmb   IAmb    08 38 42.9
              comp=Z,603nm,1.3s
YRC    Rhoscolyn         22.60 318  eP      P       08 38 41.8 +0.1
BLS5   Blasjo            22.64 341  eP      P       08 38 41.9 -0.2
PNCL   Nicolau / Gran    22.77 278  eP      P       08 38 42.9 -0.8
              comp=Z,136nm,1.4s
KMY    Karmoy            22.78 339  eP      P       08 38 43.5 -0.1
NC602  NORSAR Array S    22.80 349  eP      P       08 38 42.4 -1.5
NC602  NORSAR Array S    22.80 349   P      P       08 38 41.7 -2.1
NORES  NORESS Array B    22.80 349   P      P       08 38 42.2 -1.6
NORES                                pmax   pmax
              comp=Z,19nm,0.7s
TZRR   Tazzarine         22.82 258   P      P       08 38 48.0 +3.6
NAO01  NORSAR Array S    23.01 348   P      P       08 38 44.5 -1.6
ODD1   Odda              23.03 342  eP      P       08 38 46.2  0.0
EKA    Eskdalemuir Ar    23.05 324   P      P       08 38 45.8 -0.6
              comp=Z,255nm,0.9s,baz=122,slow=11,SNR=226
EKA                                  PcP    PcP     08 42 35.6 +0.1
              comp=Z,2.7nm,0.7s,baz=75,slow=3.7,SNR=3.6
FINES  FINESS Array B    23.05   7   P      P       08 38 44.4 -2.1
              comp=Z,322nm,1.0s,baz=167,slow=9.0,SNR=91
FINES                                PcP    PcP     08 42 35.3  0.0
              comp=Z,8.5nm,0.9s,baz=151,slow=3.2,SNR=2.6
FINES  FINESS Array B    23.05   7   P      P       08 38 45.7 -0.7
FINES  FINESS Array B    23.05   7   P      P       08 38 45.7 -0.7
FIA1   FINESS Array S    23.06   7   P      P       08 38 45.7 -0.7
ESK    Eskdalemuir       23.06 324  eP      P       08 38 45.8 -0.7
ESK                                  IAmb   IAmb    08 38 47.0
              comp=Z,405nm,0.9s
ESK    Eskdalemuir       23.06 324   P      P       08 38 45.6 -1.0
ESK                                  pmax   pmax
              comp=Z,386nm,0.9s
ESK    Eskdalemuir       23.06 324 ⇑P       P       08 38 45.2 -1.3
ESK    Eskdalemuir       23.06 324   P      P       08 38 45.6 -1.0
WIM    Isle of Man       23.11 320  eP      P       08 38 46.4 -0.7
IOMK   Kirk Michael      23.11 321  eP      P       08 38 46.1 -1.0
NB2    NORSAR Subarra    23.14 348   P      P       08 38 45.3 -2.1
              comp=Z,152nm,1.2s,baz=161,slow=11
NOA    NORSAR Array B    23.14 348   P      P       08 38 46.2 -1.2
              comp=Z,74nm,0.9s,baz=159,slow=9.3,SNR=104
NOA                                  LR     LR      08 48 22.2
              comp=Z,1µm,22.0s,baz=130,slow=38
ZGR    Zagora            23.17 256   P      P       08 38 52.1 +4.0
PFVI   Vila Bisbo        23.20 275  eP      P       08 38 50.1 +1.9
BELG   Belogornoye       23.23  45   P      P       08 38 47.5 -0.8
              comp=Z,198nm,1.1s,baz=63,slow=3.5,SNR=42
EBL    Broad Law         23.26 325  eP      P       08 38 48.0 -0.7
SKAR   Skarslia          23.34 345  eP      P       08 38 49.4 -0.1
EDI    Edinburgh         23.42 325  eP      P       08 38 49.1 -1.0
EDI                                  IAmb   IAmb    08 38 51.3
              comp=Z,268nm,1.1s
NEWG   New Galloway      23.42 323  eP      P       08 38 49.7 -0.5
NEWG                                 IAmb   IAmb    08 38 51.6
              comp=Z,218nm,1.7s
EDU    Dundee            23.73 327  eP      P       08 38 52.4 -0.8
BER    Bergen            23.76 341  eP      P       08 38 53.4 -0.1
MIB    Mutribah          23.77 104  eP      P       08 38 52.3 -1.5
UMR    Umm Al-Rimmam     24.18 104  eP      P       08 38 57.4 -0.3
HYA    Hoyanger          24.24 343  eP      P       08 38 57.9  0.0
CLGH   Cloghs, Cushen    24.31 321  eP      P       08 38 58.3 -0.4
CLGH                                 IAmb   IAmb    08 38 59.6
              comp=Z,201nm,1.2s
RDF    Al-Radifah        24.37 105  eP      P       08 38 59.2 -0.3
OUK    Oukaimeden        24.40 261   P      P       08 39 06.0 +5.8
DOMB   Dombas            24.45 347  eP      P       08 38 59.4 -0.6
MCD    Coleburn Disti    24.49 328  eP      P       08 38 59.3 -1.0
QRN    Al-Qurain         24.74 105  eP      P       08 39 03.0 +0.2
FOO    Floro             24.88 342  eP      P       08 39 03.7 -0.1
AKN    Aaknes            24.97 345  eP      P       08 39 04.0 -0.6
KLMR   Klimovskoe        25.17  22  eP      P       08 39 03.7 -2.7
KLMR                                e       PcP     08 42 36.7 -3.2
KLMR                                 pmax   pmax
              comp=Z,177nm,1.0s
KLMR   Klimovskoe        25.17  22  eP      P       08 39 03.7 -2.7
KLMR                                 AMP            08 39 11.8
              comp=Z,177nm,1.0s
KLMR                                ePcP    PcP     08 42 36.8 -3.2
KLMR                                 LQ     LQ      08 46 45.5
KLMR                                 LQ     LQ      08 46 45.5
MOL    Molde             25.21 346  eP      P       08 39 06.6 -0.1
KAC    Achnashellach     25.30 327  eP      P       08 39 06.8 -0.8
TBLU   Trondheim         25.39 349  eP      P       08 39 10.1 +1.7
RAYN   Ar Rayn           26.04 118  i P     P       08 39 16.4 +1.7
              SNR=23
RAYN   Ar Rayn           26.04 118   P      P       08 39 17.4 +2.6
RAYN                                 pmax   pmax
              comp=Z,104nm,1.3s
RAYN   Ar Rayn           26.04 118   P      P       08 39 16.0 +1.2
RAYN   Ar Rayn           26.04 118 ⇑P       P       08 39 17.0 +2.3
RAYN   Ar Rayn           26.04 118   P      P       08 39 17.4 +2.6
RAYN                                 IAmb   IAmb    08 39 20.6
              comp=Z,104nm,1.2s
NSS    Namsos            26.39 352  eP      P       08 39 16.3 -1.2
KIRV   Kirov             27.23  34   P      P       08 39 23.7 -1.3
              comp=Z,18nm,0.6s,baz=237,slow=11,SNR=10
PRGR   Permogore         27.70  26  eP      P       08 39 28.1 -1.2
PRGR                                eS      S       08 44 08.7 -2.5
PRGR                                 pmax   pmax
              comp=Z,306nm,1.0s
MOR8   Moi Rana          27.77 355  eP      P       08 39 29.9  0.0
STOK   Stokkvaagen       28.04 354  eP      P       08 39 32.8 +0.5
KONS   Konsvik           28.20 354  eP      P       08 39 32.9 -0.7
SHMA   Al-Shehemyia      28.57 108   P      P       08 39 36.2 -1.1
AKTO   Aktyubinsk        28.86  54   P      P       08 39 38.6 -1.1
              comp=Z,8.8nm,0.5s,baz=256,slow=7.1,SNR=19
AKTO                                 LR     LR      08 53 21.5
              comp=Z,2µm,19.5s,baz=35,slow=41
FAUS   Fauske            28.91 356  eP      P       08 39 39.2 -0.8
GEYT   Alibeck           29.35  80   P      P       08 39 44.4 +0.2
              comp=Z,10nm,0.5s,baz=251,slow=18,SNR=18
GEYT   Alibeck           29.35  80   P      P       08 39 44.8 +0.6
GEYT                                 IAmb   IAmb    08 39 49.5
              comp=Z,52nm,1.1s
GYA0   ALIBECK ARRAY     29.35  80   P      P       08 39 44.3  0.0
GYA0B  ALIBECK ARRAY     29.35  80   P      P       08 39 44.8 +0.6
GYA0B                                IAmb   IAmb    08 39 49.5
              comp=Z,54nm,1.1s
STEI   Steigen           29.46 356  eP      P       08 39 44.1 -0.7
LOF    Lofoten           29.77 355  eP      P       08 39 47.7 +0.1
APA    Apatity           29.83  10⇓iP       P       08 39 45.9 -2.2
APA                                  pmax   pmax
              comp=Z,19nm,1.2s
APA                                  MLR    MLR
              comp=Z,2µm,12.0s
AB31   Akbulak array     29.94  56  i P     P       08 39 47.9 -1.4
ABKAR  Akbulak array     29.94  56 ⇑P       P       08 39 48.2 -1.1
ABKAR  Akbulak array     29.94  56   P      P       08 39 48.2 -1.1
LVZ    Lovozero          30.31  11⇑eP       P       08 39 52.5 +0.1
LVZ                                  pmax   pmax
              comp=Z,40nm,1.4s
KTK1   Kautokeino        30.43   2  eP      P       08 39 52.5 -1.0
TORD   Torodi Ar. Bea    30.43 218   P      P       08 39 54.1 +0.2
              comp=Z,12nm,0.8s,baz=31,slow=8.0,SNR=28
TORD   Torodi Ar. Bea    30.43 218   P      P       08 39 54.9 +0.9
ARU    Arti              30.67  42   P      P       08 39 53.9 -1.8
              comp=Z,3.9nm,0.2s,baz=244,slow=6.4,SNR=21
ARU    Arti              30.67  42c iP      P       08 39 54.8 -0.9
ARU                                         PcP     08 42 48.6 -4.8
ARU                                  S      S       08 44 58.8 +0.8
ARU                                  pmax   pmax
              comp=Z,65nm,1.5s
ARU    Arti              30.67  42   P      P       08 39 54.3 -1.3
ARU                                  IAmb   IAmb    08 39 57.6
              comp=Z,37nm,1.1s
JETT   Jettan, Norway    30.95 360  eP      P       08 39 58.1 +0.1
TRO    Tromso            31.04 359  eP      P       08 39 57.9 -0.9
ARA0   ARCESS Array S    31.04   3  eP      P       08 39 57.6 -1.2
ARCES  ARCESS Array B    31.04   3   P      P       08 39 57.5 -1.3
              comp=Z,40nm,0.8s,baz=189,slow=10,SNR=54
ARCES  ARCESS Array B    31.04   3   P      P       08 39 56.9 -1.9
ARCES                                IAmb   IAmb    08 39 58.7
              comp=Z,75nm,1.1s
KEV    Kevo              31.34   4   P      P       08 40 00.2 -1.2
KEV                                  pmax   pmax
              comp=Z,102nm,1.3s
KEV    Kevo              31.34   4 ⇓P       P       08 40 00.6 -0.8
KEV    Kevo              31.34   4   P      P       08 40 00.2 -1.2
KEV                                  IAmb   IAmb    08 40 02.2
              comp=Z,102nm,1.3s
SVE    Sverdlovsk        31.89  42⇑eP       P       08 40 06.0 -0.4
SVE                                  pmax   pmax
              comp=Z,101nm,1.5s
HAMF   Hammerfest        32.08   2  eP      P       08 40 07.3 -0.6
MZR    Muzera            32.08 109  i P     P       08 40 08.2 -0.2
              SNR=12
SHME   Shamm             32.38 102  i P     P       08 40 09.3 -1.7
              SNR=16
SHME   Shamm             32.38 102   P      P       08 40 10.1 -0.9
              SNR=6.1
KOWA   Kowa              32.41 229   P      P       08 40 12.3 +1.0
              comp=Z,6.9nm,0.7s,baz=46,slow=11,SNR=16
KOWA   Kowa              32.41 229 ⇑P       P       08 40 13.5 +2.1
ASUD   Al Ashush, Dub    32.53 105   P      P       08 40 14.0 +1.6
BANOM  Banah             32.57 102  i P     P       08 40 12.1 -0.7
              SNR=12
BANOM  Banah             32.57 102   P      P       08 40 11.9 -0.9
              SNR=9.4
MASF   Masafi            32.75 103   P      P       08 40 13.9 -0.4
              SNR=10
MASF                                 S      S       08 45 28.3 -2.8
MSFE   Esma-Masafi       32.76 103  i P     P       08 40 13.4 -1.1
              SNR=16
MDH    Madha             32.90 103  i P     P       08 40 15.0 -0.6
              SNR=21
MDH    Madha             32.90 103   P      P       08 40 15.3 -0.2
              SNR=12
MDH                                  S      S       08 45 29.4 -3.9
UOSS   Minazif           33.02 104  i P     P       08 40 15.9 -0.8
              SNR=5.7
UOSS   Minazif           33.02 104   P      P       08 40 16.1 -0.5
UOSS                                 S      S       08 45 31.4 -3.8
UOSS   Minazif           33.02 104 ⇑P       P       08 40 15.7 -1.0
UOSS   Minazif           33.02 104   P      P       08 40 16.2 -0.5
UOSS                                 IAmb   IAmb    08 40 26.0
              comp=Z,58nm,0.8s
HATD   Hatta, Dubai      33.03 104  i P     P       08 40 16.0 -0.7
              SNR=29
HATD   Hatta, Dubai      33.03 104   P      P       08 40 16.2 -0.5
              SNR=17
HATD                                 S      S       08 45 31.4 -4.0
ASHO   Ashiyiah          33.05 104  i P     P       08 40 16.1 -0.8
              SNR=8.1
ASHO   Ashiyiah          33.05 104   P      P       08 40 16.4 -0.6
              SNR=16
ALNE   Al Ain            33.17 106  i P     P       08 40 17.7 -0.2
              SNR=12
ALNE   Al Ain            33.17 106   P      P       08 40 18.0 +0.1
              SNR=15
HRA    Herat             33.56  84   P      P       08 40 20.9 -0.7
HRA                                  IAmb   IAmb    08 40 27.0
              comp=Z,34nm,1.2s
SOHO   SOHO              33.71 105  i P     P       08 40 22.0 -0.7
              SNR=50
ARQ    Araqi             34.16 106   P      P       08 40 26.6 +0.1
              SNR=12
ARQ                                  S      S       08 45 50.5 -2.4
HOQ    Hoqain            34.61 105   P      P       08 40 30.1 -0.4
              SNR=9.0
BSY    Bisya             35.01 106   P      P       08 40 34.7 +0.7
              SNR=7.4
BSY                                  S      S       08 46 01.7 -4.3
DOK    Doka              35.31 115   P      P       08 40 38.0 +1.5
DOK                                  S      S       08 46 08.3 -2.4
SMDO   Samad             35.47 105   P      P       08 40 37.1 -0.9
              SNR=14
WHFO   Wadi Hawf         35.52 116   P      P       08 40 40.6 +2.1
              SNR=5.0
ABTO   Aybut             35.57 117   P      P       08 40 40.3 +1.4
              SNR=8.0
JMDO   Jabal Madar       35.90 106   P      P       08 40 41.1 -0.5
              SNR=9.0
RBK    Rabkut            36.11 116   P      P       08 40 43.4  0.0
              SNR=8.6
WBK    Wadi Bani Khal    36.42 105   P      P       08 40 46.4 +0.3
              SNR=6.4
BRVK   Borovoye          36.72  50deP       P       08 40 48.0 -0.2
BRVK                                 pmax   pmax
              comp=Z,133nm,1.7s
BRVK                                 MLR    MLR
              comp=Z,2µm,19.0s
BRVK   Borovoye          36.72  50   P      P       08 40 48.1 -0.2
BRVK                                 S      S       08 46 28.7 -2.9
BRVK   Borovoye          36.72  50 ⇑P       P       08 40 47.7 -0.5
BRVK   Borovoye          36.72  50   P      P       08 40 47.8 -0.5
BRVK                                 IAmb   IAmb    08 40 53.8
              comp=Z,67nm,0.8s
BVAR   Borovoye Array    36.78  50   P      P       08 40 48.3 -0.5
              comp=Z,16nm,0.7s,baz=254,slow=15,SNR=32
JLN    Jalan Bani Buh    37.02 105   P      P       08 40 52.7 +1.6
              SNR=8.9
BRLS   Borolday          37.10  67  eP      P       08 40 49.1 -2.7
              baz=68
BRLS   Borolday          37.10  67  eP      P       08 40 49.0 -2.7
KK31   Karatay Array     37.57  67  i P     P       08 40 54.9 -0.8
KK31   Karatay Array     37.57  67   P      P       08 40 55.2 -0.4
KKAR   Karatay Array     37.57  67   P      P       08 40 55.5 -0.2
KKAR                                 pmax   pmax
              comp=Z,80nm,0.7s
KKAR   Karatay Array     37.57  67 ⇓P       P       08 40 55.1 -0.6
KKAR   Karatay Array     37.57  67   P      P       08 40 55.2 -0.4
KKAR   Karatay Array     37.57  67   P      P       08 40 55.5 -0.2
KKAR                                 IAmb   IAmb    08 41 01.6
              comp=Z,80nm,0.7s
CHGR   Chuyangaron       37.58  74   P      P       08 40 56.1 +0.2
LODK   Lodwar            37.59 155   P      P       08 40 58.2 +2.1
              SNR=11
LODK   Lodwar            37.59 155   P      P       08 40 58.8 +2.7
OTUK   Ortayu            38.13  58   P      P       08 40 58.7 -1.7
DZA    Taraz             38.20  67  eP      P       08 40 59.5 -1.6
              baz=67
DZA    Taraz             38.20  67  eP      P       08 40 59.4 -1.6
BRZS   Berezniki         38.23  55  eP      P       08 40 58.9 -2.3
              baz=56
BRZS   Berezniki         38.23  55  eP      P       08 40 58.8 -2.3
GAR    Garm              38.36  73   P      P       08 41 03.1 +0.6
BTK    Batken            38.46  72   P      P       08 41 03.4 +0.1
BTK                                  pmax   pmax
              comp=Z,46nm,0.9s
BTK    Batken            38.46  72   P      P       08 41 03.4 +0.1
BTK                                  IAmb   IAmb    08 41 12.3
              comp=Z,46nm,0.9s
SCO    Scoresbysund      38.74 339 ⇓P       P       08 41 06.5 +1.4
KBL    Kabul             38.78  81   P      P       08 41 07.2 +1.0
KBL                                  pmax   pmax
              comp=Z,13nm,0.8s
KBL    Kabul             38.78  81   P      P       08 41 05.9 -0.3
              SNR=9.9
KBL    Kabul             38.78  81   P      P       08 41 07.2 +1.0
DBIC   Dimbokro          39.28 222   P      P       08 41 10.4 +0.2
              comp=Z,9.7nm,0.7s,baz=26,slow=9.4,SNR=9.5
DBIC   Dimbokro          39.28 222 ⇓P       P       08 41 10.3 +0.1
DBIC                               ⇓P       pP      08 41 13.1 -0.2
TIC    Toumodi           39.38 223  eP      P       08 41 13.6 +2.4
KIC    Kosan Boka        39.48 222  eP      P       08 41 12.5 +0.6
              comp=Z,32nm,0.9s
SPA0   Spitsbergen Ar    39.66 359  eP      P       08 41 12.3 -0.5
BTLS   Baital            39.73  63  eP      P       08 41 11.8 -1.9
              baz=63
BTLS   Baital            39.73  63  eP      P       08 41 11.8 -1.9
LIC    Lamto             39.74 222  eP      P       08 41 14.7 +0.6
              comp=Z,208nm,1.5s
EKS2   Erkin-Say         40.01  67   P      P       08 41 16.3 +0.1
              SNR=36
AML    Almayashu         40.07  68   P      P       08 41 17.1  0.0
              SNR=9.2
AML    Almayashu         40.07  68  i P     P       08 41 17.1  0.0
              SNR=12
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MBAR  Mbarara            40.19 164    P      P      08 41 19.2 +1.2
            comp=Z,4.1nm,0.2s,baz=338,slow=4.7,SNR=11
MBAR  Mbarara            40.19 164   ⇓P      P      08 41 20.3 +2.3
MBAR                                 ⇑P      sP     08 41 21.7 -0.5
MBAR  Mbarara            40.19 164    P      P      08 41 19.0 +1.0
USP   Ospenovka          40.39  66    P      P      08 41 17.9 -1.5
            SNR=11
SGDS  Sogindy            40.45  65   eP      P      08 41 17.7 -2.1
            baz=66
KBS   Kingsbay           40.52 357d iP       P      08 41 20.3 +0.4
KBS                                   pmax   pmax
            comp=Z,113nm,1.8s
AAK   Ala-Archa          40.53  67    P      P      08 41 20.3 -0.3
            comp=Z,12nm,0.6s,baz=25,slow=0.9,SNR=23
AAK   Ala-Archa          40.53  67    P      P      08 41 20.8 +0.1
            SNR=16
AAK   Ala-Archa          40.53  67  i P      P      08 41 20.8 +0.1
            SNR=22
AAK   Ala-Archa          40.53  67deP      P      08 41 20.7 +0.1
AAK                                   pmax   pmax
            comp=Z,185nm,1.7s
AAK   Ala-Archa          40.53  67   ⇓P      P      08 41 20.7 +0.1
AAK   Ala-Archa          40.53  67    P      P      08 41 20.2 -0.4
FRU1  Bishkek            40.59  66    P      P      08 41 20.9 -0.1
FRU1                                  pmax   pmax
            comp=Z,64nm,0.9s
FRU1  Bishkek            40.59  66    P      P      08 41 20.9 -0.1
FRU1                                  IAmb   IAmb   08 41 26.5
            comp=Z,64nm,0.8s
CHMS  Chumysh            40.63  66    P      P      08 41 21.1 -0.2
            SNR=8.9
UCH   Uchtor             40.64  67    P      P      08 41 22.0 +0.1
            SNR=18
KBK   Karagaybulak       40.85  66    P      P      08 41 23.0 -0.3
            SNR=10
TKM2  Tokmak 2           41.26  66    P      P      08 41 25.8 -0.8
            SNR=9.2
TKM2  Tokmak 2           41.26  66    P      P      08 41 25.4 -1.3
KUU   Kurty              41.56  64   eP      P      08 41 27.5 -1.5
            baz=64
KUU   Kurty              41.56  64   eP      P      08 41 27.4 -1.5
DAG   Danmarks Havn      41.82 347    P      P      08 41 30.3 -0.3
DAG   Danmarks Havn      41.82 347  i P      P      08 41 30.4 -0.2
DAG                                   IAmb   IAmb   08 41 31.2
            comp=Z,29nm,1.1s
DAG   Danmarks Havn      41.82 347   ⇑P      P      08 41 29.7 -0.9
KURBB Kurchatov Arra     41.91  54    P      P      08 41 30.1 -1.6
KURK  Kurchatov          41.96  54deP      P      08 41 31.2 -0.8
KURK                                  pmax   pmax
            comp=Z,74nm,1.7s
KURK  Kurchatov          41.96  54   ⇓P      P      08 41 31.1 -0.8
KURK  Kurchatov          41.96  54    P      P      08 41 31.3 -0.8
AAA   Alma-Ata           42.13  65   eP      P      08 41 32.4 -1.3
            baz=65
AAA   Alma-Ata           42.13  65   eP      P      08 41 32.3 -1.3
TNSS  Tian-Shan          42.19  65   eP      P      08 41 32.9 -1.7
            baz=66
MDOK  Medeo              42.23  65   eP      P      08 41 32.5 -2.2
            baz=65
MDOK  Medeo              42.23  65   eP      P      08 41 32.4 -2.2
NIL   Nilore             42.35  80    P      P      08 41 35.6 +0.1
NIL                                   pmax   pmax
            comp=Z,64nm,1.0s
NIL   Nilore             42.35  80    P      P      08 41 35.6 +0.1
NIL                                   IAmb   IAmb   08 41 42.9
            comp=Z,64nm,0.9s
KSH   Kashi              42.43  71    P      P      08 41 35.1 -1.1
KSH                                   pP     sP     08 41 40.3 -0.5
KSH                                   sP     pP     08 41 43.4 +3.9
KSH                                   PP     PP     08 43 17.3 +2.9
KSH                                   ScP    ScP    08 47 19.3 -0.6
KSH                                   pmax   pmax
            comp=Z,16nm,1.1s
KMBO  Kilima Mbogo       42.48 155    P      P      08 41 37.4 +0.5
            comp=Z,1.3nm,0.3s,baz=340,slow=8.0,SNR=8.9
KMBO  Kilima Mbogo       42.48 155    P      P      08 41 39.7 +2.8
KMBO                                  pmax   pmax
            comp=Z,16nm,1.3s
KMBO  Kilima Mbogo       42.48 155    P      P      08 41 39.7 +2.8
ARXS  Arharly            42.54  63   eP      P      08 41 35.9 -1.1
TDK   Taldyqorghan       42.77  62   eP      P      08 41 37.0 -1.7
            baz=62
TDK   Taldyqorghan       42.77  62   eP      P      08 41 37.0 -1.7
SEM   Semipalatinsk      43.03  54   eP      P      08 41 38.9 -2.2
            baz=54
SEM   Semipalatinsk      43.03  54   eP      P      08 41 38.8 -2.2
TARG  Taragay, Kyrgy     43.14  67    P      P      08 41 42.8 +0.5
SATY  Saty               43.22  65   eP      P      08 41 40.8 -1.9
            baz=65
SATY  Saty               43.22  65   eP      P      08 41 40.7 -1.9
KPKS  Kokpek             43.32  64   eP      P      08 41 41.4 -1.9
            baz=64
KPKS  Kokpek             43.32  64   eP      P      08 41 41.4 -1.9
UZB   Uzynbulak          43.64  65   eP      P      08 41 44.1 -1.9
            baz=65
UZB   Uzynbulak          43.64  65   eP      P      08 41 44.0 -1.9
KIBK  Kibwezi            43.88 154    P      P      08 41 51.4 +3.4
            SNR=6.6
KIBK  Kibwezi            43.88 154    P      P      08 41 50.8 +2.7
ICESG Greenland Ices     43.91 333   eP      P      08 41 48.7 +0.6
ICESG                                 IAmb   IAmb   08 41 52.4
            comp=Z,849nm,2.9s
PDGK  Podgornoye         43.92  64    P      P      08 41 46.9 -1.3
SHLS  Shalkode           43.94  65   eP      P      08 41 49.2 +0.8
            baz=64
SHLS  Shalkode           43.94  65   eP      P      08 41 49.2 +0.8
SUMG  Summit             44.38 338    P      P      08 41 52.0 +0.2
SUMG                                  pmax   pmax
            comp=Z,41nm,1.1s
SUMG  Summit             44.38 338  i P      P      08 41 52.3 +0.6
SUMG                                  IAmb   IAmb   08 41 53.4
            comp=Z,48nm,1.1s
SUMG  Summit             44.38 338   ⇑P      P      08 41 52.4 +0.6
SUMG  Summit             44.38 338    P      P      08 41 52.0 +0.2
SUMG                                  IAmb   IAmb   08 41 53.1
            comp=Z,41nm,1.1s
MAKZ  Makanchi           44.80  59    P      P      08 41 54.8 -0.3
MAKZ                                  pmax   pmax
            comp=Z,19nm,1.0s
MAKZ  Makanchi           44.80  59    P      P      08 41 54.8 -0.3
NOR   Nord               45.00 353   eP      P      08 41 55.6 -0.6
NOR                                   IAmb   IAmb   08 41 56.6
            comp=Z,100nm,1.4s
MK31  Makanchi Array     45.02  59c iP       P      08 41 55.4 -1.4
MK31  Makanchi Array     45.02  59    P      P      08 41 56.1 -0.8
MK31                                  IAmb   IAmb   08 42 07.0
            comp=Z,24nm,0.8s
MKAR  Makanchi Array     45.02  59    P      P      08 41 55.6 -1.2
            comp=Z,13nm,0.5s,baz=276,slow=7.3,SNR=97
MKAR                                  PcP    PcP    08 43 38.0 +0.3
            comp=Z,2.9nm,0.6s,baz=276,slow=2.6,SNR=1.4
MKAR                                  ScP    ScP    08 47 30.3 +0.1
            comp=Z,1.6nm,0.8s,baz=310,slow=3.2,SNR=4.6
MKAR  Makanchi Array     45.02  59    P      P      08 41 55.8 -1.0
MKAR  Makanchi Array     45.02  59    P      P      08 41 55.8 -1.0
ZAA0  Zalesovo Array     45.34  48    P      P      08 41 58.6 -0.6
ZALV  Zalesovo Beam      45.34  48    P      P      08 41 58.0 -1.2
            comp=Z,36nm,0.5s,baz=276,slow=8.5,SNR=127
ZALV  Zalesovo Beam      45.34  48    P      P      08 41 58.7 -0.5
ZALV  Zalesovo Beam      45.34  48    P      P      08 41 58.6 -0.5
DY2G  Dye2               46.09 329   eP      P      08 42 06.3 +1.0
DY2G                                  IAmb   IAmb   08 42 07.8
            comp=Z,344nm,1.6s
NRIK  Noril'sk           46.34  27    P      P      08 42 07.1 +0.2
            comp=Z,11nm,0.5s,baz=260,slow=6.4,SNR=18
NRIK  Noril'sk           46.34  27ceP      P      08 42 07.1 +0.2
NRIK                                  pmax   pmax
            comp=Z,29nm,0.9s
NRIK  Noril'sk           46.34  27    P      P      08 42 07.5 +0.6
NRIK                                  IAmb   IAmb   08 42 10.0
            comp=Z,48nm,1.2s
ZSN   Zaisan             46.58  57   eP      P      08 42 07.4 -1.7
            baz=58
ZSN   Zaisan             46.58  57   eP      P      08 42 07.4 -1.7
IVI   Ivigtut            47.01 322   eP      P      08 42 12.6 +0.4
IVI                                   IAmb   IAmb   08 42 13.5
            comp=Z,66nm,1.1s
IVI   Ivigtut            47.01 322    P      P      08 42 12.1 -0.1
DGZ   Jazzator, Alta     47.71  54⇑eP      P      08 42 17.1 -1.0
DGZ                                   pmax   pmax
            comp=Z,11nm,0.8s
SFJD  Kangerlussuaq      47.82 330    P      P      08 42 18.1 -0.4
SFJD                                  pmax   pmax
            comp=Z,85nm,1.3s
SFJD  Kangerlussuaq      47.82 330   eP      P      08 42 19.2 +0.7
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SFJD                                  IAmb   IAmb   08 42 19.6
            comp=Z,53nm,1.3s
SFJD  Kangerlussuaq      47.82 330    P      P      08 42 18.1 -0.4
NEEM  North Greenlan     48.61 344   eP      P      08 42 24.5 -0.4
NEEM                                  IAmb   IAmb   08 42 25.6
            comp=Z,182nm,2.1s
WMQ   Urumqi             49.49  61   eP      P      08 42 33.6 +1.8
WMQ                                   pP     sP     08 42 40.1 +3.7
WMQ                                   pmax   pmax
            comp=Z,26nm,1.1s
WMQ                                   pmax   pmax
            comp=Z,130nm,5.9s
WMQ                                   LR     LR
            comp=Z,1μm,18.5s
WMQ                                   LR     LR
            comp=Z,1μm,20.5s
WMQ                                   LR     LR
            comp=Z,1μm,21.7s
UPNV  Upernavik          49.63 338   eP      P      08 42 32.6 +0.2
UPNV                                  IAmb   IAmb   08 42 35.9
            comp=Z,54nm,1.2s
POO   Poona              50.16  98   eP      P      08 42 37.0 -0.2
TULEG Thule              52.63 343   eP      P      08 42 54.6 -0.2
TULEG                                 IAmb   IAmb   08 42 56.0
            comp=Z,132nm,1.5s
TULEG Thule              52.63 343    P      P      08 42 54.4 -0.4
LSZ   Lusaka             54.13 171    P      P      08 43 05.2 -1.5
LSZ                                   pmax   pmax
            comp=Z,10.0nm,1.2s
LSZ   Lusaka             54.13 171    P      P      08 43 05.2 -1.5
HYB   Hyderabad          54.46  96  i P      P      08 43 08.0 -1.1
DRLN  Deer Lake          54.82 308    P      P      08 43 10.4 -0.8
EUNU  Eureka             55.04 348    P      P      08 43 12.3 -0.2
TLY   Talaya             56.93  48    P      P      08 43 26.8 +0.5
            comp=Z,8.1nm,0.8s,baz=259,slow=6.9,SNR=10
TLY   Talaya             56.93  48   eP      P      08 43 26.3 -0.1
TLY                                   pmax   pmax
            comp=Z,49nm,1.0s
TLY   Talaya             56.93  48    P      P      08 43 26.4 +0.1
TLY                                   IAmb   IAmb   08 43 37.1
            comp=Z,24nm,1.1s
ZAK   Zakamensk          57.21  49   eP      P      08 43 27.2 -1.3
ZAK                                   pmax   pmax
            comp=Z,20nm,1.5s
LSA   Lhasa              57.78  76    P      P      08 43 32.7 -0.5
LSA                                   pmax   pmax
            comp=Z,17nm,0.8s
LSA   Lhasa              57.78  76    P      P      08 43 32.7 -0.5
SCHQ  Schefferville      58.12 317    P      P      08 43 35.0 +0.3
            comp=Z,34nm,0.6s,baz=68,slow=5.3,SNR=82
SCHQ  Schefferville      58.12 317    P      P      08 43 33.8 -0.9
TIXI  Tiksi              59.18  20    P      P      08 43 40.7 -1.1
            comp=Z,13nm,0.9s,baz=313,slow=5.2,SNR=14
TIXI  Tiksi              59.18  20ceP      P      08 43 41.7  0.0
TIXI                                  pmax   pmax
            comp=Z,70nm,2.1s
TIXI                                  MLR    MLR
            comp=Z,1μm,16.0s
TIXI  Tiksi              59.18  20    P      P      08 43 41.2 -0.5
TIXI                                  IAmb   IAmb   08 43 44.5
            comp=Z,35nm,1.2s
RES   Resolute Bay       59.30 344    P      P      08 43 43.0 +0.4
RES                                   pmax   pmax
            comp=Z,18nm,1.1s
RES   Resolute Bay       59.30 344    P      P      08 43 43.0 +0.4
GTA   Gaotai             59.56  62   eP      P      08 43 44.0 -1.1
GTA                                   pP     pP     08 43 48.6 +0.1
GTA                                   sP     sP     08 43 51.6 +1.8
GTA                                   pmax   pmax
            comp=Z,7.0nm,1.0s
BOD   Bodaibo            59.97  38   eP      P      08 43 45.5 -1.9
BOD                                   pmax   pmax
            comp=Z,28nm,1.9s
SONM  Songino Array      60.12  51    P      P      08 43 48.0 -0.8
            comp=Z,8.9nm,0.9s,baz=290,slow=9.1,SNR=34
SONM  Songino Array      60.12  51    P      P      08 43 48.4 -0.4
SONM                                  pmax   pmax
            comp=Z,23nm,1.2s
SONM  Songino Array      60.12  51    P      P      08 43 48.4 -0.4
SONM                                  IAmb   IAmb   08 43 51.3
            comp=Z,23nm,1.2s
SHL   Shillong           60.43  80    P      P      08 43 50.2 -1.1
SHL                                   pmax   pmax
            comp=Z,24nm,1.1s
SHL   Shillong           60.43  80    P      P      08 43 49.8 -1.5
            SNR=11
SHL   Shillong           60.43  80    P      P      08 43 50.1 -1.1
SHL                                   IAmb   IAmb   08 44 08.3
            comp=Z,24nm,1.1s
ULN   Ulaanbaatar        60.51  51⇑eP      P      08 43 50.7 -0.8
ULN                                   pmax   pmax
            comp=Z,30nm,1.7s
ULN   Ulaanbaatar        60.51  51    P      P      08 43 50.8 -0.7
ULN                                   IAmb   IAmb   08 43 56.6
            comp=Z,14nm,0.8s
LMN   Caledonia Moun     60.71 307    P      P      08 43 52.5 -0.3
LMN                                   IAmb   IAmb   08 43 53.6
            comp=Z,32nm,0.9s
BATG  Bathurst New B     60.85 309    P      P      08 43 53.9 +0.3
PALK  Pallekele          62.30 104    P      P      08 44 05.1 +1.3
            comp=Z,25nm,1.1s,baz=79,slow=11,SNR=5.8
PALK  Pallekele          62.30 104    P      P      08 44 05.0 +1.2
PALK                                  IAmb   IAmb   08 44 06.0
            comp=Z,42nm,1.1s
PQI   Presque Isle       62.32 309    P      P      08 44 03.8 +0.3
PQI                                   IAmb   IAmb   08 44 04.6
            comp=Z,30nm,0.8s
GGN   Saint George       62.32 307    P      P      08 44 03.8 +0.2
D62A  Allapoint, All     62.75 310    P      P      08 44 07.1 +0.7
LMQ   La Malbaie         63.29 311    P      P      08 44 10.2 +0.2
F63A  Nahmakanta, Br     63.44 308    P      P      08 44 10.8 -0.2
F63A                                  IAmb   IAmb   08 44 20.0
            comp=Z,17nm,1.1s
LBTB  Lobatse            63.52 175    P      P      08 44 13.3 +1.5
LBTB                                  pmax   pmax
            comp=Z,15nm,1.0s
LBTB  Lobatse            63.52 175    P      P      08 44 13.3 +1.5
LZH   Lanzhou            63.95  64   ⇑P      P      08 44 18.8 +4.0
LZH                                   pP     sP     08 44 25.0 +5.5
LZH                                   sP     pP     08 44 28.0  +10
LZH                                   pmax   pmax
            comp=Z,39nm,1.3s
YAK   Yakutsk            64.67  30    P      P      08 44 18.2 -0.5
            comp=Z,6.0nm,0.4s,baz=255,slow=12,SNR=4.8
YAK   Yakutsk            64.67  30   eP      P      08 44 16.6 -2.2
YAK                                   pmax   pmax
            comp=Z,12nm,0.8s
YAK                                   pmax   pmax
            comp=E,5.0nm,1.3s
YAK                                   pmax   pmax
            comp=N,13nm,1.5s
VOI   Vohitsoka          65.08 153    P      P      08 44 27.3 +5.2
LBNH  Lisbon             65.91 308    P      P      08 44 27.1 -0.1
LBNH                                  pmax   pmax
            comp=Z,25nm,0.9s
LBNH  Lisbon             65.91 308    P      P      08 44 28.8 +1.6
            baz=59
LBNH  Lisbon             65.91 308    P      P      08 44 27.1 -0.1
LBNH                                  IAmb   IAmb   08 44 29.4
            comp=Z,25nm,0.9s
MNTQ  Montreal, Queb     66.28 310    P      P      08 44 30.4 +0.9
CD2   Chengdu            66.56  68    P      P      08 44 32.8 +1.2
CD2                                   pP     pP     08 44 35.3 +0.3
CD2                                   sP     sP     08 44 36.3  0.0
CD2                                   pmax   pmax
            comp=Z,80nm,1.3s
HHC   Hu-ho-hao-te       66.73  56   eP      P      08 44 32.6  0.0
HHC                                   pmax   pmax
            comp=Z,39nm,1.1s
HHC                                   pmax   pmax
            comp=Z,660nm,5.7s
A36M  Sachs Harbour      67.05 349    P      P      08 44 34.7 +0.7
            baz=28,SNR=27
A36M  Sachs Harbour      67.05 349    P      P      08 44 34.0 +0.1
BOSA  Boshof             67.08 176    P      P      08 44 35.5 +0.7
            comp=Z,1.8nm,0.4s,baz=354,slow=6.6,SNR=5.5
BOSA  Boshof             67.08 176    P      P      08 44 34.6 -0.2
VLDQ  Val d'Or           67.13 314    P      P      08 44 36.0 +1.1
HIA   Hailar             67.15  45    P      P      08 44 34.6 -0.5
HIA                                   pmax   pmax
            comp=Z,21nm,0.9s
HIA   Hailar             67.15  45    P      P      08 44 34.6 -0.5
HIA                                   IAmb   IAmb   08 44 40.8
            comp=Z,22nm,0.9s
LONY  Lake Ozonia        67.33 310    P      P      08 44 37.5 +1.2
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            baz=58,SNR=8.4
LONY  Lake Ozonia        67.33 310    P      P      08 44 36.6 +0.4
LONY                                  IAmb   IAmb   08 44 38.7
            comp=Z,51nm,1.4s
XAN   Xi'an              68.57  63    P      P      08 44 42.3 -2.0
XAN                                   pmax   pmax
            comp=Z,9.0nm,1.0s
XAN                                   LR     LR
            comp=Z,750nm,16.8s
XAN                                   LR     LR
            comp=Z,1μm,17.9s
XAN                                   LR     LR
            comp=Z,2μm,18.5s
PLVO  Plevna             68.59 311    P      P      08 44 45.4 +1.2
L59A  Walton             68.93 308    P      P      08 44 47.4 +1.0
L59A                                  IAmb   IAmb   08 44 48.6
            comp=Z,32nm,1.1s
BINY  Binghamton         69.51 308    P      P      08 44 51.0 +1.0
            baz=56
CHTO  Chiang Mai         69.58  82    P      P      08 44 50.6 -0.2
CHTO                                  pmax   pmax
            comp=Z,24nm,1.1s
CHTO  Chiang Mai         69.58  82    P      P      08 44 50.6 -0.2
CHTO                                  IAmb   IAmb   08 44 55.4
            comp=Z,24nm,1.1s
NBMO  Morrinhos-CE       69.64 248   eP      P      08 44 52.4 +1.3
CMAR  Chiang Mai Arr     69.79  82    P      P      08 44 50.8 -1.3
            comp=Z,8.3nm,0.9s,baz=303,slow=7.9,SNR=24
CMAR                                  PP     PP     08 47 24.8 -1.4
            comp=Z,1.4nm,0.5s,baz=292,slow=5.4,SNR=6.0
NBRF  Rio Formoso -      69.94 240   eP      P      08 44 54.0 +1.1
SADO  Sadowa             69.95 312    P      P      08 44 53.4 +0.8
N59A  State Game Lan     70.09 307    P      P      08 44 55.2 +1.7
            baz=56,SNR=5.6
BJI   Beijing            70.12  54    P      P      08 44 55.3 +1.6
BJI                                   S      S      08 54 05.0 +0.2
BJI                                   pmax   pmax
            comp=Z,17nm,1.1s
BJI                                   LR     LR
            comp=Z,590nm,13.1s
BJI                                   LR     LR
            comp=Z,1μm,15.1s
NBLV  Livramento - P     70.23 243   eP      P      08 44 55.4 +0.6
A21K  Barrow             70.29 359    P      P      08 44 55.3 +1.0
            baz=2.4,SNR=8.5
A21K  Barrow             70.29 359    P      P      08 44 55.0 +0.8
BILL  Bilibino           70.53  13⇓eP      P      08 44 55.3 -0.4
BILL                                 e       PcP    08 45 19.2 +2.3
BILL                                 e       PP     08 47 33.5 +2.2
BILL                                 ePPP    PPP    08 49 18.7
BILL                                 eSS     SS     08 58 43.3 +4.5
BILL                                  pmax   pmax
            comp=Z,67nm,1.7s
BILL                                  MLR    MLR
            comp=Z,764nm,18.0s
NBPB  Pedra_Branca-C     70.84 246   eP      P      08 44 59.4 +0.9
MVL   Millersville       70.97 306    P      P      08 44 58.9  0.0
MVL                                   IAmb   IAmb   08 45 08.1
            comp=Z,35nm,1.5s
ENH   Enshi              71.04  66    P      P      08 44 57.7 -1.8
ENH                                   IAmb   IAmb   08 45 03.9
            comp=Z,23nm,0.8s
GYA   Guiyang            71.13  71   ⇑P      P      08 44 59.3 -0.9
GYA                                   pP     pP     08 45 04.3 +0.6
GYA                                   pmax   pmax
            comp=Z,11nm,1.0s
NBPS  Pedro II - PI      71.40 248   eP      P      08 45 02.6 +0.7
NBAN  Anadia - AL        71.44 241   eP      P      08 45 03.0 +1.0
NBMA  Muriti-CE          71.53 244   eP      P      08 45 03.6 +1.0
SSPA  Standing Stone     71.57 307    P      P      08 45 03.7 +1.2
            baz=55
SSPA  Standing Stone     71.57 307    P      P      08 45 03.3 +0.8
SSPA                                  IAmb   IAmb   08 45 05.1
            comp=Z,71nm,1.5s
INK   Inuvik             71.58 350    P      P      08 45 01.1 -1.0
            comp=Z,5.6nm,0.9s,baz=7.6,slow=8.6,SNR=18
INK   Inuvik             71.58 350    P      P      08 45 01.3 -0.8
INK                                   pmax   pmax
            comp=Z,13nm,1.1s
INK   Inuvik             71.58 350    P      P      08 45 01.8 -0.3
            baz=21,SNR=7.1
INK   Inuvik             71.58 350    P      P      08 45 01.3 -0.8
SEY   Seymchan           71.67  21    P      P      08 45 01.8 -0.9
            comp=Z,15nm,0.9s,baz=310,slow=2.6,SNR=8.6
E46A  Sault Ste Mari     71.95 315    P      P      08 45 05.5 +0.8
SLVN  Son La             71.96  77    P      P      08 45 05.5 +0.3
ERPA  Erie               71.99 310    P      P      08 45 06.5 +1.4
            baz=54,SNR=6.2
ERPA  Erie               71.99 310    P      P      08 45 05.2 +0.2
M54A  Oil Creek Stat     72.16 309    P      P      08 45 07.4 +1.4
            baz=54,SNR=7.2
O56A  Blue Knob Stat     72.20 307    P      P      08 45 07.9 +1.4
            baz=54,SNR=5.4
O56A  Blue Knob Stat     72.20 307    P      P      08 45 07.2 +0.8
O56A                                  IAmb   IAmb   08 45 08.3
            comp=Z,17nm,0.9s
P57A  Homestead Farm     72.32 307    P      P      08 45 07.8 +0.8
P57A                                  IAmb   IAmb   08 45 08.9
            comp=Z,22nm,1.0s
N54A  Moraine State      72.67 309    P      P      08 45 10.6 +1.4
            baz=54,SNR=10
TOLK  Toolik Lake Re     72.75 356    P      P      08 45 10.0 +0.8
            baz=8.1,SNR=8.3
TOLK  Toolik Lake Re     72.75 356    P      P      08 45 09.5 +0.3
TOLK                                  IAmb   IAmb   08 45 13.1
            comp=Z,34nm,1.4s
M53A  WI Miller and      72.81 309    P      P      08 45 11.1 +1.2
            baz=53
YKA   Yellowknife Ar     72.94 340    P      P      08 45 10.4 +0.1
            comp=Z,5.3nm,0.8s,baz=44,slow=6.4,SNR=14
YKA   Yellowknife Ar     72.94 340    P      P      08 45 10.6 +0.3
YKA   Yellowknife Ar     72.94 340    P      P      08 45 10.6 +0.3
GLMI  Grayling           73.06 314    P      P      08 45 13.1 +1.7
            baz=52
GLMI  Grayling           73.06 314    P      P      08 45 11.8 +0.4
M52A  Chesterland        73.16 310    P      P      08 45 13.2 +1.1
Q56A  Snyder Ridge,      73.31 307    P      P      08 45 12.8 -0.2
Q56A                                  IAmb   IAmb   08 45 15.3
            comp=Z,43nm,1.1s
MCWV  Mont Chateau       73.36 308    P      P      08 45 14.3 +1.1
            baz=53,SNR=7.0
NBLA  Lagarto - SE       73.42 241   eP      P      08 45 15.0 +1.2
KLR   Kul'dur            73.47  40    P      P      08 45 13.3 -0.4
            comp=Z,8.1nm,1.0s,baz=321,slow=4.2,SNR=10
KLR   Kul'dur            73.47  40⇓eP      P      08 45 13.4 -0.3
KLR                                   pmax   pmax
            comp=Z,34nm,1.5s
CN2   Changchun          73.52  47   eP      P      08 45 13.8 -0.3
CN2                                   pmax   pmax
            comp=Z,40nm,0.9s
RDOG  Red Dog Mine       73.56   1    P      P      08 45 20.0 +6.1
            baz=357,SNR=5.6
BMAR  Burnt Mountain     73.62 354    P      P      08 45 15.4 +1.1
MA2   Magadan            73.83  24    P      P      08 45 15.2 -0.4
            comp=Z,60nm,0.9s,baz=335,slow=10,SNR=7.6
MA2   Magadan            73.83  24⇑eP      P      08 45 17.0 +1.4
MA2                                   pmax   pmax
            comp=Z,82nm,1.1s
MA2   Magadan            73.83  24    P      P      08 45 16.2 +0.5
EPYK  Eagle Plains       73.83 351    P      P      08 45 15.6  0.0
            baz=18,SNR=8.8
O53A  New Philadelph     73.85 309    P      P      08 45 17.4 +1.4
            baz=53,SNR=7.5
U59A  Littleton          74.01 304    P      P      08 45 17.3 +0.2
U59A                                  IAmb   IAmb   08 45 18.9
            comp=Z,20nm,0.9s
N51A  Ashland            74.15 310    P      P      08 45 18.4 +0.6
COLD  Coldfoot           74.19 356    P      P      08 45 18.3 +0.7
            baz=7.5,SNR=16
WRGLY Wrigley            74.46 344    P      P      08 45 20.2 +1.0
            baz=28
FYU   Fort Yukon         74.52 354    P      P      08 45 21.0 +1.5
EYMN  Ely                74.75 320    P      P      08 45 21.8 +0.6
            baz=49
FFC   Flin Flon          74.77 330    P      P      08 45 21.6 +0.4
FFC                                   pmax   pmax
            comp=Z,34nm,1.3s
FFC   Flin Flon          74.77 330    P      P      08 45 21.6 +0.4
FFC                                   IAmb   IAmb   08 45 23.9
            comp=Z,34nm,1.2s
P52A  Corning            74.78 309    P      P      08 45 22.5 +1.0
            baz=52,SNR=7.6
ACSO  Alum Creek Sta     74.93 310    P      P      08 45 23.0 +0.6
            baz=52,SNR=6.7
NBPN  Ponto Novo - B     74.97 243   eP      P      08 45 24.2 +1.3
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TMAB  Tom-Au,PA,Br      74.99 254 eP     P     08 45 24.6 +1.6
I29M  Ogilvie Camp,     75.00 351  P     P     08 45 22.5 +0.2
      baz=17,SNR=23
BLA   Blacksburg        75.19 306  P     P     08 45 24.2 +0.2
      baz=52
ULM   Lac du Bonnet     75.32 324  P     P     08 45 24.7 +0.2
      comp=Z,28nm,0.9s,baz=50,slow=5.4,SNR=16
ULM   Lac du Bonnet     75.32 324  P     P     08 45 24.2 -0.3
ULM                                IAmb  IAmb  08 45 26.0
      comp=Z,68nm,1.2s
MDJ   Mudanjiang        75.33  44  P     P     08 45 24.8 +0.2
MDJ                                pmax  pmax
      comp=Z,16nm,1.1s
MDJ                                pmax  pmax
      comp=Z,1µm,7.8s
H24K  Noodor Dome       75.44 355  P     P     08 45 25.6 +0.7
      baz=9.3
PRP   Porcupine Dome    75.58 354  P     P     08 45 26.5 +0.7
      baz=11,SNR=17
IMAR  Indian Mountai    75.58 358  P     P     08 45 26.4 +0.7
H21K  Melozitna Rive    75.88 357  P     P     08 45 28.8 +1.4
      baz=5.3
H21K  Melozitna Rive    75.88 357  P     P     08 45 28.4 +1.0
EGAK  Eagle             75.89 352  P     P     08 45 27.5 +0.1
      baz=15
EGAK  Eagle             75.89 352  P     P     08 45 28.2 +0.7
POKR  Poker Plat Res    76.12 355  P     P     08 45 29.6 +0.8
      baz=9.7,SNR=15
POKR  Poker Plat Res    76.12 355  P     P     08 45 29.0 +0.2
POKR                               IAmb  IAmb  08 45 30.8
      comp=Z,48nm,1.2s
N47A  Urbana            76.14 311  P     P     08 45 29.4  0.0
N47A                               IAmb  IAmb  08 45 30.8
      comp=Z,75nm,1.4s
I23K  Minto, Yukon-K    76.22 356  P     P     08 45 30.3 +1.0
      baz=8.1,SNR=11
MLSI  Meulaboh, Aceh    76.29  96  P     P     08 45 28.7 -1.8
      comp=Z,50nm,0.7s
I21K  Tanana            76.32 357  P     P     08 45 31.1 +1.3
      baz=6.0,SNR=9.7
DAWY  Dawson            76.38 351  P     P     08 45 31.1 +0.8
      baz=16,SNR=20
DAWY  Dawson            76.38 351  P     P     08 45 30.6 +0.3
DAWY                               IAmb  IAmb  08 45 32.2
      comp=Z,49nm,1.2s
COLA  College           76.39 355⇓eP     P     08 45 30.8 +0.5
COLA                               pmax  pmax
      comp=Z,16nm,1.2s
COLA  College           76.39 355  P     P     08 45 30.8 +0.5
COLA                               IAmb  IAmb  08 45 32.0
      comp=Z,37nm,1.4s
TCOL  CIGO, UAF Yank    76.39 355  P     P     08 45 31.2 +1.0
      baz=9.3
TCOL  CIGO, UAF Yank    76.39 355  P     P     08 45 30.9 +0.6
TCOL                               IAmb  IAmb  08 45 32.0
      comp=Z,35nm,1.3s
J26L  Joseph Creek      76.41 353  P     P     08 45 31.0 +0.5
      baz=13,SNR=20
MLY   Manley            76.41 356  P     P     08 45 31.3 +0.9
      baz=7.0,SNR=17
P49A  Miami Univ. Ec    76.41 310  P     P     08 45 31.2 +0.3
      baz=51
IL31                    76.42 355  P     P     08 45 31.1 +0.6
ILAR  Eielson Array     76.42 355  P     P     08 45 30.6 +0.2
      comp=Z,6.3nm,1.0s,baz=2.4,slow=4.6,SNR=34
ILAR                               PP    PP    08 48 23.9 +2.5
      comp=Z,1.8nm,1.1s,baz=0.2,slow=7.1,SNR=4.1
ILAR  Eielson Array     76.42 355  P     P     08 45 30.4 -0.1
NJ2   Nanjing           76.54  60 eP     P     08 45 32.8 +1.1
NJ2                                pmax  pmax
      comp=Z,9.0nm,0.5s
MMPY  Sheldon Lake,     76.54 347  P     P     08 45 33.1 +1.8
      baz=22,SNR=10
GDU01 Guandu, BA        76.58 240 eP     P     08 45 33.0 +0.9
AGMN  Agassiz Nation    76.67 322  P     P     08 45 32.8 +0.6
      baz=46
AGMN  Agassiz Nation    76.67 322  P     P     08 45 32.3 +0.1
MCPB  Macapa, AP        76.71 259 eP     P     08 45 33.9 +1.0
NEA2  Nenana            76.75 355  P     P     08 45 32.8 +0.5
      baz=8.3,SNR=7.5
HDA   Harding Lake      76.79 354  P     P     08 45 32.7 +0.1
      baz=10.0,SNR=15
WRH   Wood River Hil    76.81 355  P     P     08 45 32.4 -0.3
WRH                                IAmb  IAmb  08 45 33.9
      comp=Z,32nm,1.0s
USRK  Ussuriysk Ar.     76.90  43  P     P     08 45 32.2 -1.4
      comp=Z,11nm,0.8s,baz=289,slow=5.2,SNR=16
USRK  Ussuriysk Ar.     76.90  43  P     P     08 45 32.5 -1.1
USRK  Ussuriysk Ar.     76.90  43  P     P     08 45 32.5 -1.1
GCSA  Galena City Sc    76.90 359  P     P     08 45 34.5 +1.4
      baz=2.1
SCRK  Sand Creek        76.96 353  P     P     08 45 34.5 +0.8
      baz=12,SNR=18
R50A  Paris             76.96 309  P     P     08 45 34.2 +0.2
R50A                               IAmb  IAmb  08 45 35.9
      comp=Z,38nm,1.4s
TGTN  Hyland Airport    76.99 345  P     P     08 45 35.6 +1.8
      baz=24,SNR=5.7
KMSC  Kings Mountain    77.04 305  P     P     08 45 35.7 +1.2
      baz=52,SNR=5.8
SPMN  Marine on St.     77.24 318  P     P     08 45 36.1 +0.7
      baz=47,SNR=7.3
FARO  Faro, Yukon       77.26 348  P     P     08 45 37.0 +1.7
      baz=21,SNR=13
RIDG  Independent Ri    77.27 353  P     P     08 45 36.4 +1.1
      baz=12,SNR=8.1
SFIN  Lafayette         77.28 312  P     P     08 45 36.5 +0.7
      baz=50,SNR=6.0
BPAW  Bear Paw Mtn.     77.35 356  P     P     08 45 35.5 -0.2
      baz=6.8,SNR=11
BPAW  Bear Paw Mtn.     77.35 356  P     P     08 45 35.7 -0.1
BPAW                               IAmb  IAmb  08 45 36.7
      comp=Z,40nm,1.3s
J20K  Nowinta River     77.41 358  P     P     08 45 36.6 +0.6
      baz=4.2,SNR=9.8
JFWS  Jewell Farm       77.42 315  P     P     08 45 37.0 +0.5
      baz=48
M31M  Drury Creek, Y    77.46 348  P     P     08 45 37.9 +1.5
      baz=20,SNR=10
R49A  Shelbyville       77.47 309  P     P     08 45 37.3 +0.4
R49A                               IAmb  IAmb  08 45 38.7
      comp=Z,55nm,1.4s
NHSC  New Hope          77.54 302  P     P     08 45 38.9 +1.7
      baz=52
PAULI Pauline           77.55 305  P     P     08 45 38.1 +0.8
PAULI                              IAmb  IAmb  08 45 39.5
      comp=Z,42nm,1.4s
VLA   Vladivostok       77.56  44ceP     P     08 45 36.8 -0.5
VLA                                pmax  pmax
      comp=Z,31nm,0.8s
TZTN  Tazewell          77.57 307  P     P     08 45 38.7 +1.2
      baz=51
MCK   McKinley          77.60 355  P     P     08 45 37.4 +0.2
      baz=8.4,SNR=14
BCAR  Beaver Creek A    77.62 352  P     P     08 45 37.8 +0.5
L27K  Beaver Creek,     77.63 352  P     P     08 45 38.4 +1.0
      baz=14,SNR=19
CMC01 Camacan, BA       77.71 239 eP     P     08 45 39.4 +1.0
BLO   Bloomington       77.72 310  P     P     08 45 38.7 +0.4
BLO                                pmax  pmax
      comp=Z,62nm,1.2s
BLO   Bloomington       77.72 310  P     P     08 45 38.7 +0.4
BLO                                IAmb  IAmb  08 45 40.1
      comp=Z,62nm,1.2s
L26K  Log Cabin Wild    77.83 353  P     P     08 45 39.3 +0.8
      baz=13,SNR=7.8
TRF   Thorofare Moun    77.96 356  P     P     08 45 39.5 +0.1
      baz=7.3,SNR=6.0
CAST  Castle Rocks      78.08 357  P     P     08 45 40.0 +0.2
      baz=5.9,SNR=9.5
PAX   Paxson            78.08 354  P     P     08 45 40.5 +0.6
      baz=11
DHY   Denali Highway    78.14 354  P     P     08 45 40.7 +0.4
      baz=9.6
BVCY  Beaver Creek      78.15 351  P     P     08 45 41.4 +1.1
      baz=15,SNR=16
WCI   Wyandotte Cave    78.19 310  P     P     08 45 41.6 +0.7
      baz=50
K20K  Telida            78.22 358  P     P     08 45 41.1 +0.5
      baz=4.3,SNR=11
M27K  Edge Creek, AK    78.32 352  P     P     08 45 42.7 +1.4
      baz=14,SNR=8.0
M27K  Edge Creek, AK    78.32 352  P     P     08 45 42.4 +1.0
M27K                               IAmb  IAmb  08 45 43.9
      comp=Z,47nm,1.4s
N31M  Braeburn, Yuko    78.35 349  P     P     08 45 42.0 +0.6
      baz=19
M26K  Nabesna, AK       78.40 352  P     P     08 45 42.6 +0.9
      baz=13
M26K  Nabesna, AK       78.40 352  P     P     08 45 42.1 +0.4
M26K                               IAmb  IAmb  08 45 44.4
      comp=Z,32nm,1.4s
WAT1  Susitna Watana    78.47 355  P     P     08 45 41.5 -0.5
      baz=8.7
PPLA  Purkeypile        78.61 357  P     P     08 45 43.3 +0.3
      baz=5.8
WAT6  Susitna Watana    78.66 355  P     P     08 45 43.8 +0.6
      baz=9.3,SNR=6.5
TTA   Tatalina          78.71 358  P     P     08 45 44.2 +0.9
      baz=2.7,SNR=9.5
YUK3  Moose Creek       78.72 351  P     P     08 45 44.4 +0.7
      baz=15,SNR=14
PRPB  Parauapebas       78.76 253 eP     P     08 45 46.3 +2.0
SMTB  Santa Maria do    78.89 249 eP     P     08 45 45.9 +0.9
YUK4  Talbot Arm        78.90 350  P     P     08 45 45.1 +0.4
      baz=16
KS19  Wonju Array Si    78.93  51  P     P     08 45 45.1 +0.1
KS19                               IAmb  IAmb  08 45 51.0
      comp=Z,27nm,1.0s
KSAR  Wonju Array Be    78.98  51  P     P     08 45 44.5 -0.7
KSAR  Wonju Array Be    78.98  51  P     P     08 45 44.5 -0.7
KULM  Kulim             78.98  92  P     P     08 45 45.0 -0.5
U49A  Red Boiling Sp    78.98 308  P     P     08 45 45.5 +0.2
U49A                               IAmb  IAmb  08 45 47.4
      comp=Z,68nm,1.2s
KSRS  Korea Array       78.99  51  P     P     08 45 44.6 -0.6
      comp=Z,8.9nm,0.8s,baz=315,slow=4.4,SNR=22
P33M  Teslin, Yukon     79.06 347  P     P     08 45 46.3 +0.9
      baz=21,SNR=6.5
L20K  Farewell, AK      79.10 357  P     P     08 45 46.0 +0.5
      baz=4.4
HYT   Haines Junctio    79.24 349  P     P     08 45 47.6 +1.2
      baz=17,SNR=9.3
HYT   Haines Junctio    79.24 349  P     P     08 45 47.2 +0.8
HYT                                IAmb  IAmb  08 45 49.2
      comp=Z,39nm,1.2s
YUK6  Outpost Mounta    79.25 350  P     P     08 45 47.6 +1.0
      baz=17,SNR=8.5
N25K  Chitina, Valde    79.35 353  P     P     08 45 47.2 +0.3
      baz=12
TJN   Taejon            79.35  52⇓eP     P     08 45 47.1 -0.1
MALB  Monte Alegre      79.35 259 eP     P     08 45 48.7 +1.1
SDBA  SAO DESIDERIO     79.36 245 eP     P     08 45 47.9 +0.3
SCM   Sheep Creek Mo    79.36 354  P     P     08 45 47.7 +0.7
      baz=9.6
L19K  White Mountain    79.43 358  P     P     08 45 48.1 +0.8
      baz=3.6,SNR=11
SML   Sawmill           79.47 355  P     P     08 45 47.5  0.0
      baz=8.8
SKT   Skwentna          79.49 356  P     P     08 45 47.1 -0.5
      baz=6.3,SNR=7.4
GOGA  Godfrey           79.50 304  P     P     08 45 49.1 +1.0
      baz=50,SNR=6.3
CTG   Chitna Glacier    79.62 351  P     P     08 45 49.4 +0.9
      baz=14
M19K  Big River Lodg    79.69 358  P     P     08 45 48.9 +0.2
      baz=4.0
M19K  Big River Lodg    79.69 358  P     P     08 45 49.0 +0.3
PMR   Palmer            79.73 355  P     P     08 45 49.1 +0.2
      baz=8.2
IPM   Ipoh              79.77  92  P     P     08 45 50.0 +0.1
KNK   Knik Glacier      79.86 355  P     P     08 45 50.2 +0.6
      baz=8.7
BMRM  Bremner River     79.97 353  P     P     08 45 50.8 +0.5
      baz=12
FPAL  Fort Paine        80.14 306  P     P     08 45 52.2 +0.6
FPAL                               IAmb  IAmb  08 45 53.8
      comp=Z,41nm,1.3s
EDM   Edmonton          80.17 334  P     P     08 45 51.6 +0.1
EDM                                pmax  pmax
      comp=Z,54nm,1.4s
EDM   Edmonton          80.17 334  P     P     08 45 51.6 +0.1
EDM                                IAmb  IAmb  08 45 53.1
      comp=Z,54nm,1.4s
SKAG  Skagway           80.20 348  P     P     08 45 52.6 +1.1
      baz=19
SKAG  Skagway           80.20 348  P     P     08 45 51.9 +0.4
ECSD  EROS Data Cent    80.24 319  P     P     08 45 52.6 +0.6
      baz=45,SNR=11
ECSD  EROS Data Cent    80.24 319  P     P     08 45 52.6 +0.6
ECSD                               IAmb  IAmb  08 45 53.9
      comp=Z,33nm,1.3s
RC01  Rabbit Creek A    80.28 355  P     P     08 45 52.2 +0.3
      baz=7.7,SNR=6.1
PINM  Pinnacle          80.32 350  P     P     08 45 53.4 +1.2
      baz=15
YSS   Yuzh-Sakhalins    80.35  36 eP     P     08 45 52.5  0.0
YSS                                pmax  pmax
      comp=Z,60nm,1.3s
YSS   Yuzh-Sakhalins    80.35  36  P     P     08 45 52.7 +0.2
DGMT  Dagmar            80.36 326  P     P     08 45 54.2 +1.6
      baz=41
WVT   Waverly           80.48 309  P     P     08 45 53.2 -0.2
WVT                                pmax  pmax
      comp=Z,36nm,1.4s
WVT   Waverly           80.48 309  P     P     08 45 53.2 -0.2
      baz=49
WVT   Waverly           80.48 309  P     P     08 45 53.2 -0.2
WVT                                IAmb  IAmb  08 45 54.8
      comp=Z,36nm,1.4s
JANB  Januaria          80.77 242 eP     P     08 45 55.9 +0.7
N19K  Bonanza Creek     80.78 358  P     P     08 45 54.1 -0.6
      baz=3.9
N19K  Bonanza Creek     80.78 358  P     P     08 45 54.9 +0.2
N19K                               IAmb  IAmb  08 45 57.2
      comp=Z,54nm,1.5s
FVM   French Village    80.80 312  P     P     08 45 55.2 +0.1
FVM                                pmax  pmax
      comp=Z,41nm,1.2s
FVM   French Village    80.80 312  P     P     08 45 55.2 +0.1
FVM                                IAmb  IAmb  08 45 57.1
      comp=Z,41nm,1.2s
CCM   Cathedral Cave    81.23 312  P     P     08 45 57.3 -0.1
CCM                                pmax  pmax
      comp=Z,46nm,1.4s
CCM   Cathedral Cave    81.23 312  P     P     08 45 57.9 +0.4
      baz=47
CCM   Cathedral Cave    81.23 312  P     P     08 45 57.2 -0.1
CCM                                IAmb  IAmb  08 45 59.2
      comp=Z,46nm,1.4s
JRMM  Jerantut          81.27  92  P     P     08 45 58.0 +0.1
BOAV  Boa Vista         81.55 266 eP     P     08 46 00.7 +1.3
PEXB  Peixe             81.58 247 eP     P     08 46 00.7 +1.2
MC01  Montes Claros     81.66 241 eP     P     08 46 01.9 +2.0
ITTB  Itaituba          82.08 258 eP     P     08 46 03.3 +1.2
ASAJ  Asahikawa         82.38  38  P     P     08 46 02.7 -0.6
      comp=Z,12nm,0.9s,baz=283,slow=11,SNR=7.9
LCAR  Lake Charles      82.53 311  P     P     08 46 04.7 +0.5
LCAR                               IAmb  IAmb  08 46 06.3
      comp=Z,31nm,1.2s
LAO   LASA Array        82.61 326  P     P     08 46 06.1 +1.5
      baz=39,SNR=9.7
LAO   LASA Array        82.61 326  P     P     08 46 05.5 +0.9
LAO                                IAmb  IAmb  08 46 10.1
      comp=Z,39nm,1.2s
PDSI  Padang            82.68  97  P     P     08 46 02.3 -3.1
      comp=Z,33nm,1.1s
BGNE  Belgrade          82.70 318  P     P     08 46 06.2 +1.1
      baz=44,SNR=5.3
EGMT  Eagleton          83.04 329  P     P     08 46 08.0 +1.2
      baz=37,SNR=20
EGMT  Eagleton          83.04 329  P     P     08 46 07.9 +1.2
PTGA  Pitinga           83.06 264  P     P     08 46 07.4 +0.1
FCAR  Ozark Folk Cen    83.22 311  P     P     08 46 08.3 +0.5
FCAR                               IAmb  IAmb  08 46 09.9
      comp=Z,39nm,1.2s
U40A  Yellville         83.33 312  P     P     08 46 09.2 +0.8
      baz=46,SNR=9.0
U40A  Yellville         83.33 312  P     P     08 46 08.5  0.0
U40A                               IAmb  IAmb  08 46 10.4
      comp=Z,32nm,1.3s
NPGB  Novo Progresso    83.50 256 eP     P     08 46 10.7 +1.2
KSU1  Kansas State U    83.53 316  P     P     08 46 10.4 +1.0
      baz=44,SNR=6.4
RSSD  Black Hills       83.59 323  P     P     08 46 10.6 +0.7
RSSD                               pmax  pmax
      comp=Z,25nm,1.3s
RSSD  Black Hills       83.59 323  P     P     08 46 10.9 +1.0
      baz=40
RSSD  Black Hills       83.59 323  P     P     08 46 10.6 +0.7
RSSD                               IAmb  IAmb  08 46 12.1
      comp=Z,25nm,1.3s
SNDB  Serra Nova Dou    83.67 249 eP     P     08 46 11.5 +1.1
WHAR  Wooly Hollow      83.73 311  P     P     08 46 11.4 +0.9
BDFB  Brasilia          83.76 244  P     P     08 46 11.9 +1.0
      comp=Z,5.9nm,0.6s,baz=76,slow=4.6,SNR=13
BDFB  Brasilia          83.76 244  P     P     08 46 12.0 +1.1
BDFB                               pmax  pmax
      comp=Z,8.0nm,0.7s
BDFB  Brasilia          83.76 244  P     P     08 46 12.0 +1.1
W41B  Gary Mavity, V    83.79 311  P     P     08 46 11.7 +1.0
      baz=46,SNR=16
HHAR  Hobbs             84.01 312  P     P     08 46 12.6 +0.7
HHAR                               IAmb  IAmb  08 46 13.8
      comp=Z,35nm,1.3s
JTM   Tenmabayashi      84.08  41  P     P     08 46 10.9 -1.2
ERM   Erimo             84.22  39ceP     P     08 46 13.8 +1.0
ERM                                pmax  pmax
      comp=Z,147nm,1.7s
ERM   Erimo             84.22  39  P     P     08 46 13.3 +0.5
X40A  Basin Creek Fa    84.61 310  P     P     08 46 16.0 +1.0
      baz=46,SNR=8.5
W39A  Magazine          84.68 311  P     P     08 46 16.5 +1.2
      baz=46,SNR=8.2
VBMS  Vicksburg         84.75 307  P     P     08 46 17.2 +1.5
      baz=47
MIAR  Mount Ida         85.01 311  P     P     08 46 17.9 +0.9
MIAR                               pmax  pmax
      comp=Z,59nm,1.3s
MIAR  Mount Ida         85.01 311  P     P     08 46 18.3 +1.4
      baz=46,SNR=14
MIAR  Mount Ida         85.01 311  P     P     08 46 17.9 +0.9
MACA  Manacapuru-AM     85.13 262 eP     P     08 46 19.1 +1.3
RLMT  Red Lodge         85.15 327  P     P     08 46 19.2 +1.4
      baz=37,SNR=13
TUL1  Leonard           85.34 313  P     P     08 46 19.8 +1.2
      baz=45,SNR=5.2
TUL1  Leonard           85.34 313  P     P     08 46 19.1 +0.5
CBKS  Cedar Bluff       85.42 317  P     P     08 46 20.0 +1.0
      baz=43,SNR=10.0
Z41A  Richland Creek    85.44 310  P     P     08 46 20.4 +1.3
      baz=46,SNR=5.6
SDV   Santo Domingo     85.45 278 eP     P     08 46 20.5 +0.8
MAJO  Matsushiro        85.62  46⇑iP     P     08 46 20.0  0.0
MAJO                               pmax  pmax
      comp=Z,20nm,1.1s
MAJO  Matsushiro        85.62  46  P     P     08 46 19.8 -0.2
MAJO                               IAmb  IAmb  08 46 22.6
      comp=Z,34nm,1.2s
MAT   Matsushiro        85.62  46  P     P     08 46 18.7 -1.3
MJAR  Matsushiro Arr    85.62  46  P     P     08 46 19.4 -0.7
      comp=Z,17nm,0.8s,baz=314,slow=4.5,SNR=36
MJAR                               LR    LR    09 28 23.0
      comp=Z,1µm,20.6s,baz=60,slow=38
MJAR  Matsushiro Arr    85.62  46  P     P     08 46 19.7 -0.4
MJAR                               pmax  pmax
      comp=Z,32nm,1.2s
MJAR  Matsushiro Arr    85.62  46  P     P     08 46 19.7 -0.4
MJAR                               IAmb  IAmb  08 46 23.0
      comp=Z,32nm,1.2s
NEW   Newport           85.63 333  P     P     08 46 20.7 +0.8
      baz=32,SNR=8.9
MSO   Missoula          85.66 331  P     P     08 46 20.4 +0.2
      baz=34,SNR=10
MSO   Missoula          85.66 331  P     P     08 46 20.2  0.0
MSO                                IAmb  IAmb  08 46 21.9
      comp=Z,31nm,1.4s
BOZ   Bozeman (W)       85.76 329  P     P     08 46 21.8 +1.1
      baz=36,SNR=9.3
K22A  Casper            85.88 324  P     P     08 46 21.6 +0.2
      baz=39,SNR=5.2
KSI   Kapahiang         86.05  98  P     P     08 46 34.0  +12
JOW   Kunigami          86.18  59  P     P     08 46 22.0 -0.9
      comp=Z,26nm,1.0s,baz=358,slow=6.6,SNR=4.5
CLDB  Colider           86.29 253 eP     P     08 46 24.3 +0.7
H17A  Grant Village     86.29 327  P     P     08 46 26.6 +3.1
      baz=36,SNR=11
B08A  Colville Reser    86.31 334  P     P     08 46 23.1 -0.1
DLMT  Dillon            86.34 329  P     P     08 46 24.4 +0.8
DLMT                               IAmb  IAmb  08 46 26.7
      comp=Z,27nm,1.2s
BCOK  Bluff Creek, N    86.55 314  P     P     08 46 25.5 +0.9
BCOK                               IAmb  IAmb  08 46 26.5
      comp=Z,20nm,0.9s
FLWY  Flagg Ranch       86.60 327  P     P     08 46 26.5 +1.5
FLWY                               IAmb  IAmb  08 46 31.9
      comp=Z,42nm,1.4s
LHSI  Lahat             86.88  97  P     P     08 46 24.7 -1.8
N23A  Red Feather La    86.97 322  P     P     08 46 28.0 +1.0
      baz=39
BW06  Boulder Array     87.16 326  P     P     08 46 27.5 -0.3
      baz=37,SNR=5.6
BW06  Boulder Array     87.16 326  P     P     08 46 27.6 -0.3
PD31  Pinedale Array    87.16 326  P     P     08 46 27.2 -0.6
PDAR  Pinedale Array    87.16 326  P     P     08 46 27.4 -0.4
      comp=Z,3.6nm,1.1s,baz=71,slow=5.4,SNR=10
PDAR  Pinedale Array    87.16 326  P     P     08 46 26.5 -1.3
PDRB  Porto dos Gac     87.46 253 eP     P     08 46 30.1 +0.8
ISCO  Idaho Springs     87.66 322  P     P     08 46 30.7 +0.3
ISCO                               pmax  pmax
      comp=Z,12nm,1.4s
ISCO  Idaho Springs     87.66 322  P     P     08 46 30.9 +0.6
      baz=39
ISCO  Idaho Springs     87.66 322  P     P     08 46 30.7 +0.3
MDSI  Maura Dua         87.80  97  P     P     08 46 29.0 -1.9
      comp=Z,12nm,1.1s
AHID  Auburn Hatcher    87.83 327  P     P     08 46 31.1 +0.1
AHID                               IAmb  IAmb  08 46 32.4
      comp=Z,20nm,1.4s
WMOK  Wichita Mounta    87.88 314  P     P     08 46 31.7 +0.6
WMOK                               pmax  pmax
      comp=Z,35nm,1.4s
WMOK  Wichita Mounta    87.88 314  P     P     08 46 32.2 +1.0
      baz=43,SNR=9.9
WMOK  Wichita Mounta    87.88 314  P     P     08 46 31.7 +0.6
WMOK                               IAmb  IAmb  08 46 33.7
      comp=Z,35nm,1.4s
KLSI                    88.35  97  P     P     08 46 32.4 -1.2
HLID  Hailey            88.56 329  P     P     08 46 35.2 +0.8
      baz=34
O20A  White River Ci    88.66 323  P     P     08 46 34.9  0.0
      baz=38,SNR=7.0
RDMU  Red Mountain      88.92 324  P     P     08 46 36.2  0.0
HWUT  Hardware Ranch    88.98 326  P     P     08 46 36.3 -0.1
JHJ   Hachijo jima 2    88.98  47  LR    LR    09 27 08.5
      comp=Z,1µm,21.1s,baz=120,slow=36
SDCO  Great Sand Dun    89.20 320  P     P     08 46 37.6  0.0
      baz=39,SNR=8.9
SDCO  Great Sand Dun    89.20 320  P     P     08 46 37.7  0.0
TPI   Tanjungpandan     89.43  94  P     P     08 46 45.2 +6.6
SALV  Santo Antonio     89.46 249 eP     P     08 46 39.7 +1.1
HKT   Hockley           89.60 309⇓eP     P     08 46 39.4 +0.2
HKT                                pmax  pmax
      comp=Z,21nm,1.4s
HKT   Hockley           89.60 309  P     P     08 46 39.8 +0.7
JLU   Jordanelle        89.74 326  P     P     08 46 39.6 -0.4
JLU                                IAmb  IAmb  08 46 42.4
      comp=Z,27nm,1.3s
SBUM  Sibu              89.78  87  P     P     08 46 40.0 -0.3
S22A  4UR Ranch, Cre    89.86 321  P     P     08 46 41.5 +0.8
      baz=38,SNR=6.3
ABTX  Abilene, Hawle    89.91 313  P     P     08 46 42.2 +1.5
      baz=42,SNR=5.9
ABTX  Abilene, Hawle    89.91 313  P     P     08 46 42.0 +1.2
ABTX                               IAmb  IAmb  08 46 44.1
      comp=Z,32nm,1.2s
PP1B  Ponte de Pedra    89.96 247 eP     P     08 46 41.9 +0.9
PCMB  Pacaembu          90.03 242 eP     P     08 46 41.3  0.0
435B  Jarrell           90.05 311  P     P     08 46 43.2 +1.9
      baz=44
DUG   Dugway, Tooele    90.67 326  P     P     08 46 45.0 +0.7
      baz=35,SNR=12
STKI  Sintang           90.67  89  P     P     08 46 51.8 +7.3
SAML  Samuel            90.68 259  P     P     08 46 45.8 +1.3
VILB  Vilhena           90.92 254 eP     P     08 46 46.1 +0.5
VILB  Vilhena           90.92 254  P     P     08 46 45.6  0.0
VILB                               IAmb  IAmb  08 46 47.8
      comp=Z,10nm,0.8s
JCT   Junction City     91.58 312  P     P     08 46 50.0 +1.5
      baz=42
SPMM  Sapulut           91.69  83  P     P     08 46 51.0 +1.7
PTLB  Pontes e Lacer    91.70 252 eP     P     08 46 50.5 +1.4
MSU   Marysvale         91.77 325  P     P     08 46 50.4 +0.8
MSU   Marysvale         91.77 325  P     P     08 46 50.4 +0.8
ANMO  Albuquerque       91.85 319  P     P     08 46 50.4 +0.4
ANMO                               pmax  pmax
      comp=Z,4.0nm,1.2s
ANMO  Albuquerque       91.85 319  P     P     08 46 50.8 +0.9
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	baz=39						
ANMO	**Albuquerque**	**91.85**	**319**	P	**P**	**08 46 50.4**	**+0.4**
PBKI	**Pangkalan Bun**	**92.54**	**91**	P	P	08 47 03.0	+10
M04C	**Macdoel**	**92.91**	**333**	P	**P**	**08 46 54.7**	**0.0**
	baz=28						
TBTG	**Tabatinga, AM**	**92.96**	**267**	*e*P	**P**	**08 46 55.5**	**+0.4**
R11A	**Troy Canyon, C**	**93.40**	**327**	P	**P**	**08 46 57.9**	**+0.9**
	baz=33,SNR=8.2						
U15A	**North Rim**	**93.53**	**324**	P	**P**	**08 46 57.6**	**-0.1**
U15A				IAmb	IAmb	08 46 59.3	
	comp=Z,25nm,1.5s						
MNTX	**Cornudas Mount**	**93.80**	**316**	P	**P**	**08 46 59.2**	**+0.5**
	baz=39						
MNTX	**Cornudas Mount**	**93.80**	**316**	P	**P**	**08 46 59.1**	**+0.4**
MNTX				IAmb	IAmb	08 47 00.2	
	comp=Z,14nm,1.4s						
NVAR	**Mina Array Bea**	**94.47**	**329**	P	**P**	**08 47 01.8**	**-0.1**
	comp=Z,2.1nm,1.0s,baz=50,slow=5.6,SNR=9.5						
TX31	**Lajitas Ar. Si**	**94.66**	**314**	P	**P**	**08 47 03.7**	**+0.9**
TX31				IAmb	IAmb	08 47 04.5	
	comp=Z,18nm,1.1s						
TX32	**Lajitas Array**	**94.66**	**314**	P	**P**	**08 47 03.7**	**+0.9**
TXAR	**Lajitas Array**	**94.66**	**314**	P	**P**	**08 47 03.5**	**+0.7**
	comp=Z,2.4nm,0.9s,baz=66,slow=4.3,SNR=12						
TUC	**Tucson**	**96.14**	**320**	P	**P**	**08 47 09.3**	**-0.2**
TUC				pmax	pmax		
	comp=Z,9.0nm,1.4s						
TUC	**Tucson**	**96.14**	**320**	P	**P**	**08 47 10.2**	**+0.7**
	baz=36						
TUC	**Tucson**	**96.14**	**320**	P	**P**	**08 47 09.3**	**-0.2**
OTAV	**Otavalo**	**96.90**	**276**	*e*P	**P**	**08 47 13.8**	**+0.2**
ISA	**Isabella, Lake**	**96.90**	**327**	P	**P**	**08 47 14.0**	**+1.1**
	baz=31						
CPUP	**Villa Florida**	**97.31**	**242**	LR	LR	09 33 34.6	
	comp=Z,943nm,18.3s,baz=254,slow=37						
SYO	**Syowa Base**	**108.29**	**173**	⇑*e*PP	**PP**	**08 52 34.1**	**+1.0**
SNAA	**Sanae**	**111.29**	**188**	⇑*i*PKIKP	**PKiKP**	**08 52 16.1**	**+1.9**
SNAA				pmax	pmax		
	comp=Z,10.0nm,2.5s						
WRA	**Warramunga Arr**	**120.52**	**92**	PKP	**PKPdf**	**08 52 32.5**	**-0.9**
	comp=Z,1.9nm,0.6s,baz=324,slow=1.8,SNR=28						
WRA				PP	**PP**	**08 54 04.8**	**+4.1**
	comp=Z,1.2nm,0.8s,baz=310,slow=7.6,SNR=7.8						
WRA				PKKPbc	**PKKPab**	**09 02 39.5**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=114,slow=3.6,SNR=6.2						
WRAB	**Tennant Creek**	**120.53**	**92**	⇑*i*PKIKP	**PKPdf**	**08 52 32.8**	**-0.6**
WB2	**Warramunga Arr**	**120.53**	**92**		**PKPdf**	**08 52 33.0**	**-0.5**
PMSA	**Palmer Station**	**122.06**	**210**	*e*P	**PKiKP**	**08 52 35.9**	**+0.9**
PMSA	**Palmer Station**	**122.06**	**210**		**PKiKP**	**08 52 39.6**	**+4.6**
AS31	**Alice Springs**	**122.19**	**96**	PKPdf	**PKPdf**	**08 52 35.5**	**-1.0**
ASAR	**Alice Springs**	**122.19**	**96**	PKP	**PKPdf**	**08 52 35.8**	**-0.7**
	comp=Z,2.8nm,0.7s,baz=318,slow=1.3,SNR=42						
ASAR				PKKPbc	**PKKPab**	**09 02 33.0**	**+0.6**
	comp=Z,0.2nm,0.7s,baz=127,slow=3.1,SNR=5.6						
COEN	**Coen**	**123.97**	**80**	PKPdf	**PKPdf**	**08 52 40.1**	**0.0**
QSPA	**South Pole Qui**	**128.52**	**180**		**PKiKP**	**08 52 47.7**	**-0.3**
STKA	**Stephens Creek**	**132.09**	**101**	PKP	**PKPdf**	**08 52 54.9**	**-0.2**
	comp=Z,1.9nm,0.7s,baz=314,slow=3.0,SNR=6.0						
STKA				SKPbc	**SKPbc**	**08 56 19.9**	**-1.5**
	comp=Z,0.4nm,0.3s,baz=339,slow=3.3,SNR=3.2						
TAOE	**Nuku Hiva Isla**	**145.62**	**325**	*e*PKPab	**PKPab**	**08 53 21.2**	**+0.3**
	comp=Z,526nm,1.3s						
DZM	**Mont Dzumac**	**146.47**	**70**	PKPbc	**PKPab**	**08 53 24.2**	**+0.2**
	comp=Z,12nm,0.8s,baz=262,slow=8.5,SNR=11						
DZM	**Mont Dzumac**	**146.47**	**70**	*e*PKPbc	**PKPab**	**08 53 24.1**	**+0.2**
	comp=Z,130nm,1.6s						
DZM	**Mont Dzumac**	**146.47**	**70**		**PKPdf**	**08 53 18.4**	**-3.2**
MSVF	**Nonsavu**	**151.35**	**50**	PKPbc	**PKPbc**	**08 53 35.8**	**+0.2**
	comp=Z,17nm,0.8s,baz=283,slow=2.7,SNR=9.3						
MSVF	**Nonsavu**	**151.35**	**50**	PKPdf	**PKPdf**	**08 53 25.7**	**-3.9**

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*IDC **17** 08:58:21.3±19.0, 24.°11S×177.°40W, h141^{km}±110^{km}, mb3.6/5, mb1 3.8/6, mb1mx3.4/40, mbtmp4.1/6, ML4.9/1 Error ellipse: s-maj=225.2km s-min=36.0km az=122.0*

ISC 17 08:58:23.1±3.3**, 24.°1S**±0.°2×**177.°6W**±0.°5**, h150**^{km}**, n6, **σ**0.**^{s}**54**/6**, mb3.7**/5**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**7.50**	**326**	P	**Pn**	**09 00 09.9**	**0.0**
	0.7nm,0.3s,baz=155,slow=17,SNR=6.0						
STKA	**Stephens Creek**	**36.73**	**248**	P	**P**	**09 05 15.7**	**-0.3**
	0.3nm,0.3s,baz=67,slow=13,SNR=1.4						
ASAR	**Alice Springs**	**44.20**	**260**	P	**P**	**09 06 17.4**	**0.0**
	0.9nm,0.9s,baz=97,slow=7.1,SNR=7.6						
WRA	**Warramunga Arr**	**44.61**	**265**	P	**P**	**09 06 21.0**	**+0.2**
	1.4nm,0.8s,baz=104,slow=8.1,SNR=11						
USRK	**Ussuriysk Ar.**	**82.11**	**326**	P	**P**	**09 10 26.2**	**-0.5**
	5.3nm,0.9s,baz=144,slow=5.2,SNR=5.2						
CMAR	**Chiang Mai Arr**	**91.67**	**289**	P	**P**	**09 11 14.5**	**+0.7**
	0.8nm,0.3s,baz=122,slow=2.6,SNR=7.0						

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*IDC **17** 09:02:12.4±0.9, 38.°56N×20.°63E, h0^{km}, mb4.1/15, mb1 4.0/21, mb1mx3.9/62, mbtmp4.0/21, ML3.7/6, Error ellipse: s-maj=17.5km s-min=15.3km az=14.0*

*TIR **17** 09:02:13.9, 38.°54N×20.°51E, h13^{km}±4^{km}, Ml4.1*

*THE **17** 09:02:14.8, 38.°56N×20.°53E, h17^{km}, ML4.2/10, Error ellipse: s-maj=1.3km s-min=0.4km az=289.0*

*NEIC **17** 09:02:15.1±2.1, 38.°57N±0.°04×20.°47E±0.°04, h12^{km}±4^{km}, Error ellipse: s-maj=6.0km s-min=3.9km az=219.0*

*BEO **17** 09:02:15.8±1.8, 38.°39N×20.°18E, h41^{km}±2^{km}, ML3.9/20*

*PDG **17** 09:02:15.7±0.3, 38.°66N×20.°38E, h22^{km}±2^{km}, ML4.2/12, Error ellipse: s-maj=2.1km s-min=0.9km az=90.0*

*ATH **17** 09:02:15.6, 38.°55N×20.°55E, h11^{km}±1^{km}, ML3.9/23, Error ellipse: s-maj=1.5km s-min=0.6km az=268.0*

ISC 17 09:02:14.7±0.7**, 38.°56N**±0.°01×**20.°47E**±0.°02**, h17**^{km}±4^{km}**, n237, **σ**1.**^{s}**44**/304**, mb4.2**/22**, 19C-8D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FSK	**Fiskardo**	**0.12**	**145**	P	**Pg**	**09 02 18.6**	**+0.2**
FSK				S	**Sg**	**09 02 21.0**	**+0.1**
	172µm,0.2s						
FSK	**Fiskardo**	**0.12**	**145**	P	**Pg**	**09 02 18.5**	**+0.1**
FSK				S	**Sg**	**09 02 20.6**	**-0.3**
FSK				AML	AML	09 02 21.1	
FSK				AML	AML	09 02 22.9	
FSK	**Fiskardo**	**0.12**	**145**		**Pg**	**09 02 18.6**	**+0.2**
FSK					**Sg**	**09 02 21.0**	**+0.1**
EVGI	**Lefkada island**	**0.15**	**67**	P	**Pg**	**09 02 18.6**	**-0.3**
EVGI				S	**Sg**	**09 02 21.1**	**-0.6**
	330µm,0.1s						
EVGI	**Lefkada island**	**0.15**	**67**	P	**Pg**	**09 02 18.5**	**-0.4**
EVGI				S	**Sg**	**09 02 21.0**	**-0.7**
EVGI	**Lefkada island**	**0.15**	**67**		**Pg**	**09 02 18.6**	**-0.3**
EVGI					**Sg**	**09 02 21.1**	**-0.6**
NYDR	**Nydri-Lefkada**	**0.23**	**49**	P	**Pg**	**09 02 19.6**	**-0.4**
NYDR				S	**Sg**	**09 02 23.2**	**-0.4**
	53µm,0.2s						
NYDR	**Nydri-Lefkada**	**0.23**	**49**	P	**Pg**	**09 02 19.6**	**-0.4**
NYDR				S	**Sg**	**09 02 22.7**	**-1.0**
NYDR	**Nydri-Lefkada**	**0.23**	**49**		**Pg**	**09 02 19.6**	**-0.4**
NYDR					**Sg**	**09 02 23.2**	**-0.4**
LKD2	**Lefkada island**	**0.27**	**32**	P	**Pg**	**09 02 20.4**	**-0.3**
LKD2				S	**Sg**	**09 02 24.2**	**-0.6**
	25µm,0.2s						
LKD2	**Lefkada island**	**0.27**	**32**	P	**Pg**	**09 02 20.3**	**-0.3**
LKD2				S	**Sg**	**09 02 24.2**	**-0.6**
LKD2				AML	AML	09 02 24.9	
	comp=N,52090µm,0.2s						
LKD2				AML	AML	09 02 27.8	
	comp=E,46495µm,0.2s						
LKD2	**Lefkada island**	**0.27**	**32**		**Pg**	**09 02 20.4**	**-0.3**
LKD2					**Sg**	**09 02 24.2**	**-0.6**
LKD2	**Lefkada island**	**0.27**	**32**	P	**Pg**	**09 02 20.4**	**-0.3**
	baz=24						
LKD2				S	**Sg**	**09 02 24.2**	**-0.6**
	baz=24						
TSLK	**Tsoukalades, L**	**0.30**	**28**	P	**Pg**	**09 02 21.1**	**-0.1**
TSLK				S	**Sg**	**09 02 25.5**	**-0.1**
	comp=E,31µm,0.4s						
TSLK	**Tsoukalades, L**	**0.30**	**28**	P	**Pg**	**09 02 21.1**	**-0.1**
TSLK				S	**Sg**	**09 02 25.3**	**-0.2**
TSLK				AML	AML	09 02 27.6	
	comp=E,65016µm,0.2s						
TSLK				AML	AML	09 02 32.3	
	comp=N,65188µm,0.5s						
TSLK	**Tsoukalades, L**	**0.30**	**28**		**Pg**	**09 02 21.1**	**-0.1**
TSLK					**Sg**	**09 02 25.5**	**-0.1**
KEF4	**Livadi, Kephal**	**0.30**	**187**	P	**Pg**	**09 02 21.6**	**+0.4**
KEF4				S	**Sb**	**09 02 27.0**	**+0.7**
	comp=N,297µm,0.2s						
KEF4	**Livadi, Kephal**	**0.30**	**187**	P	**Pg**	**09 02 21.6**	**+0.4**
KEF4				S	**Sg**	**09 02 25.2**	**-0.4**
KEF4	**Livadi, Kephal**	**0.30**	**187**		**Pg**	**09 02 21.6**	**+0.4**
KEF4					**Sb**	**09 02 27.0**	**+0.7**
DMLN	**Damoulianata-K**	**0.33**	**194**	P	**Pg**	**09 02 22.1**	**+0.4**
DMLN				S	**Sb**	**09 02 27.9**	**+0.8**
	comp=N,64µm,0.5s						
DMLN	**Damoulianata-K**	**0.33**	**194**	P	**Pg**	**09 02 22.1**	**+0.4**
DMLN				S	**Sg**	**09 02 27.1**	**+0.7**
LXRA	**Lixouri, Kepha**	**0.36**	**185**	P	**Pg**	**09 02 22.6**	**+0.5**
KEF3	**Kipouria, Keph**	**0.37**	**196**	P	**Pg**	**09 02 22.3**	**0.0**
KEF3				S	**Sg**	**09 02 28.1**	**+0.6**
	comp=N,74µm,0.3s						
KEF3	**Kipouria, Keph**	**0.37**	**196**	P	**Pg**	**09 02 22.2**	**0.0**
KEF3				S	**Sg**	**09 02 27.5**	**0.0**
ARGA	**Argostoli. Kep**	**0.38**	**179**	P	**Pb**	**09 02 23.5**	**+0.5**
ARGA				S	**Sg**	**09 02 28.3**	**+0.4**
VLS	**Valsamata**	**0.39**	**167**	P	**Pg**	**09 02 22.6**	**-0.1**
VLS				S	**Sg**	**09 02 28.9**	**+0.7**
	comp=N,40µm,0.2s						
VLS	**Valsamata**	**0.39**	**167**	P	**Pg**	**09 02 22.6**	**-0.1**
VLS				S	**Sg**	**09 02 27.7**	**-0.5**
VLS				AML	AML	09 02 29.1	
	comp=N,87104µm,0.3s						
VLS				AML	AML	09 02 29.7	
	comp=E,72725µm,0.3s						
PSDA	**Pessada-Kefalo**	**0.45**	**169**	P	**Pg**	**09 02 23.7**	**-0.1**
PSDA				S	**Sg**	**09 02 30.7**	**+0.7**
	comp=E,5µm,0.4s						
PSDA	**Pessada-Kefalo**	**0.45**	**169**	P	**Pg**	**09 02 23.6**	**-0.2**
PSDA				S	**Sg**	**09 02 30.6**	**+0.6**
DSL	**Palaion Diasel**	**0.75**	**40**	P	**Pg**	**09 02 29.3**	**-0.1**
PVO	**Paravola**	**0.83**	**86**	P	**Pg**	**09 02 30.5**	**-0.3**
PVO				AML	AML	09 02 45.9	
	comp=N,15519µm,0.4s						
PVO				AML	AML	09 02 53.9	
	comp=E,14600µm,0.3s						
VTN	**Vitineika**	**0.85**	**139**	P	**Pg**	**09 02 30.9**	**-0.4**
LTHK	**Lithakia**	**0.90**	**161**	P	**Pg**	**09 02 30.8**	**-1.3**
LTHK	**Lithakia**	**0.90**	**161**	P	**Pg**	**09 02 30.7**	**-1.4**
RLS	**Riolos of Patr**	**0.93**	**122**	P	**Pg**	**09 02 31.8**	**-0.8**
RLS	**Riolos of Patr**	**0.93**	**122**	P	**Pg**	**09 02 31.9**	**-0.8**
RLS				S	**Sg**	**09 02 43.3**	**-1.6**
RLS				AML	AML	09 02 49.3	
	comp=N,21207µm,0.4s						
RLS				AML	AML	09 02 49.3	
	comp=E,12808µm,0.6s						
IGT	**Igoumenitsa**	**0.98**	**354**	P	**Pb**	**09 02 33.9**	**+0.7**
IGT				AML	AML	09 02 52.6	
	comp=E,14533µm,0.3s						
IGT				AML	AML	09 02 54.5	
	comp=N,10331µm,0.3s						
IGT	**Igoumenitsa**	**0.98**	**354**	P	**Pb**	**09 02 33.1**	**-0.1**
	baz=352						
IGT				S	**Sn**	**09 02 48.8**	**+1.7**
	baz=352						
EVR	**Evrytania**	**1.10**	**71**	P	**Pb**	**09 02 34.8**	**-0.6**
EVR				AML	AML	09 02 58.9	
	comp=N,4888µm,0.6s						
EVR				AML	AML	09 03 04.1	
	comp=E,4476µm,0.8s						
EFP	**Efpalio**	**1.13**	**96**	P	**Pb**	**09 02 35.0**	**-0.7**
EFP				AML	AML	09 02 56.8	
	comp=E,8849µm,0.3s						
EFP				AML	AML	09 02 58.8	
	comp=N,8948µm,0.3s						
ANX	**Ano Chora**	**1.13**	**88**	P	**Pb**	**09 02 35.6**	**-0.3**
ANX				AML	AML	09 02 58.4	
	comp=E,18302µm,0.6s						
ANX				AML	AML	09 02 58.6	
	comp=N,16797µm,0.7s						
JAN	**Janina**	**1.13**	**15**	P	**Pg**	**09 02 37.2**	**+0.6**
JAN				AML	AML	09 02 56.0	
	comp=N,9187µm,0.6s						
JAN				AML	AML	09 02 57.1	
	comp=E,9009µm,0.4s						
DRO	**Drossia**	**1.15**	**122**	P	**Pb**	**09 02 35.8**	**-0.2**
DRO				AML	AML	09 02 57.1	
	comp=N,29268µm,0.5s						
DRO				AML	AML	09 02 58.9	
	comp=E,23338µm,0.4s						
LAKA	**Lakka**	**1.22**	**105**	P	**Pn**	**09 02 36.7**	**-0.3**
LAKA				AML	AML	09 02 58.6	
	comp=N,5487µm,0.8s						
LAKA				AML	AML	09 03 01.4	
	comp=E,5983µm,0.5s						
KASA	**Kassiopi**	**1.26**	**341**	P	**Pg**	**09 02 39.3**	**+0.4**
KEK	**Kerkira**	**1.27**	**336**	P	**Pg**	**09 02 39.4**	**+0.3**
KEK				AML	AML	09 03 05.7	
	comp=E,5096µm,0.4s						
KEK				AML	AML	09 03 06.3	
	comp=N,5629µm,0.4s						
TRIZ	**Trizonia**	**1.27**	**98**	P	**Pn**	**09 02 37.4**	**-0.3**
SRN	**Sarande**	**1.37**	**345**	P	**Pb**	**09 02 41.0**	**+1.1**
	baz=344						
SRN				S	**Sg**	**09 03 00.2**	**+1.2**
	baz=344						
SRN				AMP			
	comp=N,5.2nm,0.5s,baz=344						
MAKR	**Makrakomi, Fth**	**1.37**	**70**	P	**Pb**	**09 02 39.9**	**0.0**
MAKR				AML	AML	09 03 09.5	
	comp=E,17971µm,0.4s						
MAKR				AML	AML	09 03 12.4	
	comp=N,11370µm,0.5s						
KLV	**Kalavryta, Ach**	**1.42**	**111**	P	**Pn**	**09 02 39.9**	**+0.2**
KLV				AML	AML	09 03 04.4	
	comp=N,2275µm,0.5s						
KLV				AML	AML	09 03 06.9	
	comp=E,2470µm,0.8s						
AGG	**Agios Georgios**	**1.52**	**72**	P	**Pb**	**09 02 42.5**	**0.0**
AGG				AML	AML	09 03 11.0	
	comp=N,7588µm,0.8s						
AGG				AML	AML	09 03 12.4	
	comp=E,7855µm,0.9s						
AGG	**Agios Georgios**	**1.52**	**72**	Pn	**Pb**	**09 02 42.2**	**-0.3**
AGG					**Sg**	**09 03 04.7**	**+0.9**
KPRO	**Kipourio**	**1.56**	**26**	P	**Pg**	**09 02 44.4**	**-0.2**
KPRO				AML	AML	09 03 10.1	
	comp=N,10614µm,0.6s						
KPRO				AML	AML	09 03 14.7	
	comp=E,7043µm,0.5s						
THL	**Klokotos Trika**	**1.56**	**50**	P	**Pb**	**09 02 43.7**	**+0.5**
THL				AML	AML	09 03 08.7	
	comp=N,9485µm,0.7s						
THL				AML	AML	09 03 12.8	
	comp=E,6124µm,0.5s						
DLFA	**Delphi**	**1.59**	**92**	P	**Pb**	**09 02 44.2**	**+0.6**
LSK	**Leskovik**	**1.59**	**3**	P	**Pb**	**09 02 44.7**	**+1.0**
	baz=2.0						
LSK				S	**Sg**	**09 03 07.6**	**+1.6**
	baz=2.0						
LSK				AMP			
	comp=E,12nm,0.9s,baz=2.0						
GUR	**Goura**	**1.60**	**112**	P	**Pb**	**09 02 43.7**	**-0.1**
GUR				AML	AML	09 03 13.8	
	comp=N,10006µm,0.5s						
GUR				AML	AML	09 03 14.8	
	comp=E,7024µm,0.4s						
PENT	**Pentalofos**	**1.71**	**17**	P	**Pb**	**09 02 46.7**	**+0.9**
PENT				AML	AML	09 03 15.3	
	comp=N,3299µm,0.5s						
PENT				AML	AML	09 03 20.3	
	comp=E,2807µm,0.6s						
ITM	**Ithomi**	**1.79**	**140**	P	**Pb**	**09 02 48.0**	**+0.9**
ITM				AML	AML	09 03 15.6	
	comp=E,6315µm,0.6s						
ITM				AML	AML	09 03 15.7	
	comp=N,8642µm,1.0s						
ITM	**Ithomi**	**1.79**	**140**	Pn	**Pb**	**09 02 47.3**	**+0.2**
THAL	**Thalero**	**1.80**	**106**	P	**Pb**	**09 02 46.9**	**-0.3**
LRSO	**Larissa Observ**	**1.86**	**53**	P	**Pb**	**09 02 48.5**	**+0.3**
NEST	**Nestorio**	**1.91**	**13**	P	**Pb**	**09 02 50.2**	**+1.1**
ATAL	**Atalanti**	**2.00**	**85**	P	**Pn**	**09 02 49.2**	**+1.5**
ATAL				AML	AML	09 03 28.9	
	comp=N,1629µm,0.8s						
ATAL				AML	AML	09 03 32.6	
	comp=E,1283µm,0.7s						
KZN	**Kozani**	**2.01**	**30**	P	**Pb**	**09 02 50.3**	**-0.6**
VLO	**Vlora**	**2.05**	**339**		**Pn**	**09 02 50.0**	**+1.6**
VLO	**Vlora**	**2.05**	**339**	P	**Pg**	**09 02 54.7**	**+0.6**
	baz=339						
KBN	**Korca**	**2.08**	**7**		**Pb**	**09 02 51.3**	**-0.6**
KBN	**Korca**	**2.08**	**7**	P	**Pb**	**09 02 52.6**	**+0.7**
	baz=5.0						
KBN				S	**Sg**	**09 03 21.1**	**-0.4**
	baz=5.0						
KBN				AMP			
	comp=E,3.5nm,0.6s,baz=5.0						
SCTE	**Santa Cesarea**	**2.17**	**315**	Pn	**Pn**	**09 02 51.7**	**+1.7**
SCTE	**Santa Cesarea**	**2.17**	**315**	P	**Pn**	**09 02 51.7**	**+1.7**
	baz=315						
SCTE				S	**Sn**	**09 03 18.6**	**+2.1**
	baz=315						
FNA	**Florina**	**2.33**	**17**	Pn	**Pn**	**09 02 54.7**	**+2.5**
FNA	**Florina**	**2.33**	**17**	P	**Pn**	**09 02 54.7**	**+2.5**
	baz=16						
OHR	**Ohrid**	**2.56**	**5**	*e*Pn	**Pn**	**09 02 58.0**	**+2.5**
OHR	**Ohrid**	**2.56**	**5**	*i* Pn	**Pn**	**09 02 58.4**	**+2.9**
TIR	**Tirane**	**2.82**	**351**	⇑P	**Pn**	**09 02 59.3**	**+0.3**
TIR	**Tirane**	**2.82**	**351**	*e*Pn	**Pn**	**09 03 00.9**	**+1.9**
TIR	**Tirane**	**2.82**	**351**		**Pn**	**09 03 01.1**	**+2.1**
TIR	**Tirane**	**2.82**	**351**	P	**Pn**	**09 03 00.6**	**+1.6**
	baz=351						
TIP	**Timpagrande**	**2.97**	**283**	⇑P	**Pn**	**09 03 01.5**	**+0.5**
TIP				⇓S	**Sn**	**09 03 31.1**	**-5.2**
TIP	**Timpagrande**	**2.97**	**283**	Pn	**Pn**	**09 03 03.0**	**+2.0**
PHP	**Peshkopia**	**3.12**	**360**	P	**Pn**	**09 03 05.5**	**+2.3**
	baz=0.0						
VAY	**Valandovo**	**3.19**	**30**	*e*Pn	**Pn**	**09 03 06.9**	**+2.8**
VAY				*e*Sn	**Sn**	**09 03 45.2**	**+3.4**
VAY	**Valandovo**	**3.19**	**30**	*e*Pn	**Pn**	**09 03 05.6**	**+1.5**
STIP	**Stip**	**3.40**	**22**	*i* Pn	**Pn**	**09 03 10.8**	**+3.9**
SKO	**Skopje**	**3.49**	**12**	*e*Pn	**Pn**	**09 03 10.9**	**+2.7**
ULC	**Ulcinj**	**3.53**	**345**	*e*Pn	**Pn**	**09 03 08.9**	**+0.2**
ULC				*e*Sn	**Sn**	**09 03 48.9**	**-1.2**
MATE	**Matera**	**3.58**	**307**	⇑P	**Pn**	**09 03 07.8**	**-1.6**
CEL	**Celeste**	**3.61**	**267**		**Pn**	**09 03 11.2**	**+1.3**
DRME	**Dracevica, Mon**	**3.75**	**345**	*e*Pn	**Pn**	**09 03 11.4**	**-0.4**
DRME	**Dracevica, Mon**	**3.75**	**345**	⇓*i*Pn	**Pn**	**09 03 11.9**	**+0.1**
DRME				*e*Sn	**Sn**	**09 03 54.3**	**-1.3**
BUM	**Brajici-Budva**	**3.93**	**343**	*e*Pn	**Pn**	**09 03 14.2**	**0.0**
BUM				*e*Sn	**Sn**	**09 03 59.0**	**-1.0**
PDG	**Podgorica**	**3.98**	**347**	⇑P	**Pn**	**09 03 15.2**	**+0.3**
PDG				⇑S	**Sn**	**09 03 58.1**	**-3.0**
PDG	**Podgorica**	**3.98**	**347**	*e*Pn	**Pn**	**09 03 16.0**	**+1.1**
PDG				*e*Sn	**Sn**	**09 04 00.9**	**-0.1**
PDG	**Podgorica**	**3.98**	**347**	*e*Pn	**Pn**	**09 03 15.5**	**+0.7**
PDG	**Podgorica**	**3.98**	**347**	Pn	**Pn**	**09 03 15.9**	**+1.1**
TTG	**Podgorica**	**3.98**	**347**	*e*Pn	**Pn**	**09 03 15.7**	**+0.9**
TTG				*e*Sn	**Sn**	**09 04 00.4**	**-0.6**
PVY	**Plav**	**4.05**	**355**	⇓*i*Pn	**Pn**	**09 03 18.2**	**+2.2**
PVY				*e*Sn	**Sn**	**09 04 02.6**	**-0.5**
PRVS	**Prvonek**	**4.13**	**17**	*e*Pn	**Pn**	**09 03 19.9**	**+2.9**
CEME	**Cevo**	**4.16**	**344**	⇑*i*Pn	**Pn**	**09 03 17.5**	**+0.1**
CEME				*e*Sn	**Sn**	**09 04 04.1**	**-1.5**
HCY	**Herceg Novi**	**4.17**	**339**	*e*Pn	**Pn**	**09 03 17.3**	**-0.2**
HCY	**Herceg Novi**	**4.17**	**339**	⇓*i*Pn	**Pn**	**09 03 17.6**	**+0.1**
HCY				*e*Sn	**Sn**	**09 04 04.0**	**-1.8**
BOSS	**Bosilegrad**	**4.22**	**21**	*e*Pn	**Pn**	**09 03 20.4**	**+2.2**
IVA	**Berane**	**4.33**	**354**	⇓*i*Pn	**Pn**	**09 03 20.1**	**+0.3**
IVA				*e*Sn	**Sn**	**09 04 09.5**	**-0.4**
KOME	**Kolasin**	**4.35**	**351**	⇑*i*Pn	**Pn**	**09 03 20.4**	**+0.3**
KOME				*e*Sn	**Sn**	**09 04 09.1**	**-1.3**
NKME	**Niksic**	**4.36**	**345**	⇑*i*Pn	**Pn**	**09 03 21.0**	**+0.8**
NKME				*e*Sn	**Sn**	**09 04 08.9**	**-1.7**
BARS	**Barje**	**4.37**	**13**	*e*Pn	**Pn**	**09 03 21.8**	**+1.5**
BARS				*e*Sn	**Sn**	**09 04 12.5**	**+1.6**
NKY	**Niksic**	**4.40**	**346**	*e*Pn	**Pn**	**09 03 21.0**	**+0.3**
NKY				*e*Sn	**Sn**	**09 04 10.5**	**-1.1**
TREB	**Trebinje**	**4.46**	**339**	*e*Pn	**Pn**	**09 03 21.6**	**+0.1**
TREB				*e*Sn	**Sn**	**09 04 10.5**	**-2.4**
TREB	**Trebinje**	**4.46**	**339**	*e*Pn	**Pn**	**09 03 21.4**	**-0.1**
DBRK	**Dubrovnik**	**4.47**	**337**	*e*Pn	**Pn**	**09 03 21.5**	**-0.1**
DBRK				Sn	**Sn**	**09 04 10.8**	**-2.4**
VTS	**Vitosha**	**4.57**	**27**	*e*Pn	**Pn**	**09 03 24.7**	**+1.6**
VTS				*e*Sn	**Sn**	**09 04 17.9**	**+2.1**
VTS	**Vitosha**	**4.57**	**27**		**Pn**	**09 03 24.3**	**+1.2**
BRY	**Bratogost**	**4.58**	**342**	*e*Pn	**Pn**	**09 03 23.2**	**0.0**
BRY	**Bratogost**	**4.58**	**342**	⇑*i*Pn	**Pn**	**09 03 23.3**	**0.0**
BRY				*e*Sn	**Sn**	**09 04 14.2**	**-2.0**
SELS	**Selova**	**4.68**	**6**	*e*Pn	**Pn**	**09 03 25.1**	**+0.5**
SELS				*e*Sn	**Sn**	**09 04 17.4**	**-1.1**
SJES	**Sjenica**	**4.71**	**356**	*e*Pn	**Pn**	**09 03 26.7**	**+1.6**
SJES				*e*Sn	**Sn**	**09 04 20.1**	**+0.7**
UPM	**Unac-Piva**	**4.79**	**346**	*e*Pn	**Pn**	**09 03 27.0**	**+0.8**
UPM	**Unac-Piva**	**4.79**	**346**	*e*Pn	**Pn**	**09 03 26.6**	**+0.4**
UPM				*e*Sn	**Sn**	**09 04 20.1**	**-1.3**
STON	**Ston**	**4.80**	**335**	*e*Pn	**Pn**	**09 03 26.2**	**+0.1**
STON				*e*Sn	**Sn**	**09 04 18.2**	**-3.0**
STON	**Ston**	**4.80**	**335**	*e*Pn	**Pn**	**09 03 26.0**	**-0.1**
STON	**Ston**	**4.80**	**335**	*e*Pn	**Pn**	**09 03 26.0**	**-0.1**
IDI	**Anoyia**	**4.81**	**131**	Pn	**Pn**	**09 03 26.4**	**0.0**
	comp=E,2.0nm,0.3s,baz=315,slow=11,SNR=1.4						
IDI				Sn	**Sn**	**09 04 24.6**	**+2.8**
	comp=E,8.6nm,0.3s,baz=300,slow=22,SNR=7.7						
SGRT	**San Giovanni R**	**4.83**	**313**	Pn	**Pn**	**09 03 27.9**	**+1.2**
PLE	**Pljevlja**	**4.84**	**351**	*e*Pn	**Pn**	**09 03 27.0**	**+0.2**
PLE				*e*Sn	**Sn**	**09 04 20.8**	**-1.6**
ALN	**Alexandroupoli**	**4.89**	**60**	Pn	**Pn**	**09 03 28.8**	**+1.4**
ZAPS	**Zavoj**	**4.99**	**18**	*e*Pn	**Pn**	**09 03 31.3**	**+2.5**
RAFF	**Raffo Rosso**	**5.01**	**256**	Pn	**Pn**	**09 03 29.5**	**+0.3**
RUDO	**Rudo**	**5.12**	**351**	*e*Pn	**Pn**	**09 03 32.1**	**+1.5**
BOVS	**Bovan**	**5.16**	**10**	*e*Pn	**Pn**	**09 03 31.8**	**+0.8**
BOVS				*e*Sn	**Sn**	**09 04 31.6**	**+1.5**
PAOL	**Paolisi**	**5.18**	**300**		**Pn**	**09 03 33.0**	**+1.6**
GRUS	**Gruza**	**5.33**	**2**	*e*Pn	**Pn**	**09 03 34.7**	**+1.3**
GRUS				*e*Sn	**Sn**	**09 04 35.3**	**+0.9**
BBLS	**Lazići**	**5.36**	**352**	*e*Pn	**Pn**	**09 03 34.4**	**+0.4**
BBLS				*e*Sn	**Sn**	**09 04 35.2**	**-0.1**
BBLS	**Lazići**	**5.36**	**352**	*e*Pn	**Pn**	**09 03 32.6**	**-1.4**
MAKA	**Makarska**	**5.40**	**332**	*e*Pn	**Pn**	**09 03 34.6**	**+0.2**
ZAGS	**Zajecar**	**5.41**	**14**	*e*Pn	**Pn**	**09 03 35.8**	**+1.2**
ZAGS				*e*Sn	**Sn**	**09 04 36.1**	**-0.4**
HVAR	**Hvar**	**5.53**	**328**	*e*Pn	**Pn**	**09 03 36.1**	**-0.1**
RICI	**Ricice**	**5.54**	**334**	*e*Pn	**Pn**	**09 03 36.5**	**+0.2**
DIVS	**Divibare**	**5.55**	**356**	*e*Pn	**Pn**	**09 03 37.2**	**+0.7**
DIVS				*e*Sn	**Sn**	**09 04 37.3**	**-2.6**
DIVS	**Divibare**	**5.55**	**356**	*e*Pn	**Pn**	**09 03 36.7**	**+0.2**
DIVS	**Divibare**	**5.55**	**356**		**Pn**	**09 03 36.8**	**+0.2**
TRUS	**Trudelj**	**5.66**	**360**	*e*Pn	**Pn**	**09 03 39.2**	**+1.2**
KIJV	**Kijevo**	**6.24**	**332**	*e*Pn	**Pn**	**09 03 46.8**	**+0.8**
ZIRJ	**Zirje**	**6.26**	**326**	*e*Pn	**Pn**	**09 03 46.4**	**+0.2**
MDVR	**Moldovita**	**6.29**	**8**	⇑P	**Pn**	**09 03 48.3**	**+1.7**
MGRS	**Mrkonjic Grad**	**6.38**	**338**	*e*Pn	**Pn**	**09 03 48.8**	**+0.9**
MORI	**Morici**	**6.40**	**327**	*e*Pn	**Pn**	**09 03 49.0**	**+0.8**
HERR	**Herculane**	**6.48**	**12**	⇑P	**Pn**	**09 03 51.2**	**+1.9**
FRGS	**Fruska Gora**	**6.61**	**356**	⇑P	**Pn**	**09 03 51.5**	**+0.4**
FRGS	**Fruska Gora**	**6.61**	**356**	*e*Pn	**Pn**	**09 03 50.7**	**-0.3**
FRGS	**Fruska Gora**	**6.61**	**356**	*e*Pn	**Pn**	**09 03 50.8**	**-0.3**
BLY	**Banja Luka**	**6.66**	**339**	*e*Pn	**Pn**	**09 03 52.2**	**+0.6**
BLY				*e*Sn	**Sn**	**09 05 03.7**	**-3.4**
BLY	**Banja Luka**	**6.66**	**339**	*e*Pn	**Pn**	**09 03 49.5**	**-2.1**
DUGI	**Dugi Otok**	**6.79**	**325**	*e*Pn	**Pn**	**09 03 54.1**	**+0.6**
UDBI	**Udbina**	**6.93**	**331**	*e*Pn	**Pn**	**09 03 56.8**	**+1.4**
MRAK	**Mrakovica**	**6.98**	**339**	*e*Pn	**Pn**	**09 03 56.3**	**+0.2**
NRCA	**Norcia**	**7.03**	**310**		**Pn**	**09 03 59.3**	**+2.4**
GZR	**Gura Zlata**	**7.04**	**13**	⇑P	**Pn**	**09 03 58.9**	**+1.9**
BZS	**Buzias**	**7.10**	**6**	*e*Pn	**Pn**	**09 03 58.5**	**+0.7**
PLIT	**Plitvice**	**7.28**	**332**	*e*Pn	**Pn**	**09 04 01.0**	**+0.8**
NVLJ	**Novalja**	**7.32**	**327**	*e*Pn	**Pn**	**09 04 01.1**	**+0.3**
ARR	**Arges**	**7.47**	**23**	⇓P	**Pn**	**09 04 07.1**	**+4.1**
MOSL	**Moslavina**	**7.57**	**340**	*e*Pn	**Pn**	**09 04 03.6**	**-0.6**
MURB	**Monte Urbino**	**7.63**	**310**		**Pn**	**09 04 08.0**	**+2.8**
VOIR		**7.67**	**25**	⇑P	Pn	09 04 10.3	+4.7
KOVH	**Kovagotottos**	**7.73**	**348**	*e*PN	**Pn**	**09 04 03.9**	**-2.4**
KOVH				*e*SN	Sn	09 05 25.4	-8.0
MORH	**Mrgy, Hungar**	**7.77**	**351**	*e*PN	**Pn**	**09 04 06.8**	**-0.1**
MORH				*e*SN	Sn	09 05 26.5	-8.0
MORH	**Mrgy, Hungar**	**7.77**	**351**	*e*Pn	**Pn**	**09 04 06.5**	**-0.4**
ISR	**Istrita**	**7.96**	**33**	⇑P	Pn	09 04 16.5	+6.9
SMRN	**Sveta Marina**	**8.01**	**326**	*e*Pn	**Pn**	**09 04 10.3**	**+0.1**
MLR	**Muntele Rosu**	**8.03**	**29**	⇓P	Pn	09 04 16.2	+5.6
MLR	**Muntele Rosu**	**8.03**	**29**	Pn	**Pn**	**09 04 12.7**	**+2.1**
	comp=E,0.2nm,0.3s,baz=220,slow=7.9,SNR=2.6						
BRJN	**Brijuni**	**8.09**	**324**	*e*Pn	**Pn**	**09 04 11.5**	**+0.2**
RIY	**Rijeka**	**8.10**	**328**	*e*Pn	**Pn**	**09 04 11.4**	**0.0**
NEHR	**Nehoiu**	**8.11**	**30**	⇑P	Pn	09 04 17.5	+5.8
CRES	**Cresnjev**	**8.16**	**334**	*e*Pn	**Pn**	**09 04 12.2**	**-0.1**
BISRR	**Bisoca**	**8.38**	**32**	⇑P	Pn	09 04 21.2	+5.8
COVR	**Voineasa-Covas**	**8.43**	**28**	⇑P	Pn	09 04 21.1	+5.1
CEY	**Cerknica**	**8.46**	**330**	*e*Pn	**Pn**	**09 04 17.1**	**+0.6**
PLOR	**Plostina**	**8.61**	**30**	⇑P	Pn	09 04 23.8	+5.4
VRI	**Vrincioaia**	**8.65**	**30**	⇓P	Pn	09 04 24.1	+5.1
LJU	**Ljubljana**	**8.68**	**331**	*e*Pn	**Pn**	**09 04 20.1**	**+0.7**

MPLH	Magyarpolny	8.87	347	ePN	Pn	09 04 23.4	+1.4
MPLH				eSN	Sn	09 05 58.7	-2.8
SOKA	Soboth	9.05	335	i Pn	Pn	09 04 24.6	+0.1
	comp=E,2.4nm,0.2s						
SOKA				eSn	Sn	09 06 00.3	-5.7
	comp=E,5.4nm,0.5s						
OBKA	Obir	9.07	333	ePn	Pn	09 04 26.3	+1.5
	comp=E,2.6nm,0.2s						
OBKA				i Sn	Sn	09 06 02.6	-3.9
	comp=E,14nm,0.5s						
PSZ	Piszkesteto	9.37	358	ePN	Pn	09 04 29.7	+0.8
PSZ				eSN	Sn	09 06 07.4	-6.4
TEOL	Teolo	9.44	319	Pn	Pn	09 04 30.3	+0.5
STAL	STALIGIAL	9.60	326	Pn	Pn	09 04 32.4	+0.3
ZOU	Zoufplan	9.72	328		Pn	09 04 34.4	+0.6
CTI	Castel Tesino	9.93	322	Pn	Pn	09 04 36.9	+0.2
MOA	Molln	10.33	336	ePn	Pn	09 04 42.8	+0.8
	comp=E,2.5nm,0.3s						
WTTA	Wattenberg	10.84	326	ePn	Pn	09 04 50.2	+1.0
	comp=E,2.5nm,0.3s						
WATA	Walderalm	10.92	326	i Sn	Sn	09 06 48.0	-4.1
	comp=E,2.5nm,0.2s						
MOTA	Moosalm	11.14	325	ePn	Pn	09 04 54.8	+1.6
	comp=E,3.3nm,0.4s						
MOTA				i Sn	Sn	09 06 54.5	-2.9
	comp=E,2.8nm,0.4s						
DAVOX	Davos/Dischmat	11.32	320	Pn	Pn	09 04 57.0	+1.3
	comp=E,0.2nm,0.3s,baz=142,slow=19,SNR=3.0						
DAVOX				Sn	Sn	09 07 01.1	-0.8
	comp=E,0.7nm,0.3s,baz=195,slow=22,SNR=5.2						
GERES	GERESS Array B	11.38	337	Pn	Pn	09 04 57.4	+0.9
	comp=E,0.3nm,0.3s,baz=158,slow=14,SNR=6.9						
GERES				Sn	Sn	09 06 57.0	-6.3
	comp=E,0.4nm,0.3s,baz=153,slow=22,SNR=3.1						
GERES	GERESS Array B	11.38	337		Pn	09 04 56.1	-0.4
TUE	Stuetta	11.39	318	Pn	Pn	09 04 57.8	+1.0
KHC	Kasperske Hory	11.68	337	ePN	Pn	09 05 00.7	+0.3
KHC				eSN	Sn	09 07 04.8	-5.5
SENIN	Lac Senin/Sane	12.46	313	Pn	Pn	09 05 12.7	+1.4
AKASG	Malin Array Be	13.63	24	Pn	Pn	09 05 27.2	+0.1
	comp=E,0.5nm,0.3s,baz=210,slow=11,SNR=1.7						
ESDC	Sonseca Array	18.98	281	P	Pn	09 06 38.0	+1.9
	comp=E,0.1nm,0.3s,baz=78,slow=10,SNR=5.4						
HFS	Hagfors	22.02	351	P	P	09 07 08.1	+0.2
	comp=E,6.0nm,0.7s,baz=187,slow=11,SNR=4.4						
NC602	NORSAR Array S	22.90	349	P	P	09 07 18.0	+0.7
EKA	Eskdalemuir Ar	23.10	324	P	P	09 07 21.0	+1.6
	comp=E,1.8nm,0.6s,baz=123,slow=10,SNR=3.2						
FINES	FINESS Array B	23.17	7	P	P	09 07 19.4	-0.6
	comp=E,3.8nm,0.5s,baz=168,slow=11,SNR=17						
FINES	FINESS Array B	23.17	7	P	P	09 07 19.8	-0.3
FIA1	FINESS Array S	23.17	7	P	P	09 07 19.6	-0.5
FIA1				IAmb	IAmb	09 07 43.9	
	comp=Z,29nm,1.3s						
NB2	NORSAR Subarra	23.24	349	P	P	09 07 20.7	-0.1
	comp=Z,1.1nm,0.7s,baz=160,slow=10						
NOA	NORSAR Array B	23.24	349	P	P	09 07 20.8	-0.1
	comp=Z,0.7nm,0.5s,baz=106,slow=16,SNR=4.0						
BELG	Belogornoye	23.36	45	P	P	09 07 21.5	-0.5
	comp=Z,17nm,0.7s,baz=240,slow=20,SNR=4.9						
AKTO	Aktyubinsk	28.98	54	P	P	09 08 11.8	-1.4
	comp=Z,0.8nm,0.4s,baz=240,slow=6.4,SNR=4.5						
GEYT	Alibeck	29.44	79	P	P	09 08 17.2	-0.2
	comp=Z,2.6nm,0.5s,baz=264,slow=13,SNR=3.5						
GEYT	Alibeck	29.44	79	P	P	09 08 17.1	-0.4
ABKAR	Akbulak array	30.06	56	P	P	09 08 22.4	-0.4
ABKAR	Akbulak array	30.06	56	P	P	09 08 22.9	+0.2
ABKAR				IAmb	IAmb	09 08 22.9	
	comp=Z,3.7nm,1.4s						
TORD	Torodi Ar. Bea	30.30	218	P	P	09 08 26.3	+1.1
	comp=Z,0.7nm,0.5s,baz=32,slow=8.6,SNR=5.5						
ARCES	ARCESS Array B	31.16	3	P	P	09 08 31.9	-0.3
	comp=Z,0.4nm,0.4s,baz=188,slow=11,SNR=10.0						
UOSS	Minazif	33.06	104	P	P	09 08 48.5	-0.9
UOSS				IAmb	IAmb	09 08 49.5	
	comp=Z,3.6nm,0.9s						
BVAR	Borovoye Array	36.90	50	P	P	09 09 22.3	0.0
	comp=Z,1.0nm,0.6s,baz=238,slow=14,SNR=4.7						
KK31	Karatay Array	37.68	67	P	P	09 09 28.5	-0.5
KK31				IAmb	IAmb	09 09 30.5	
	comp=Z,2.4nm,0.5s						
KKAR	Karatay Array	37.68	67	P	P	09 09 28.4	-0.6
KKAR				IAmb	IAmb	09 09 30.5	
	comp=Z,2.4nm,0.5s						
KKAR	Karatay Array	37.68	67	P	P	09 09 28.3	-0.6
KURBB	Kurchatov Arra	42.03	54	P	P	09 10 04.2	-0.8
	comp=Z,0.7nm,0.4s,baz=278,slow=9.0,SNR=4.4						
KURK	Kurchatov	42.08	54	P	P	09 10 05.1	-0.3
MK31	Makanchi Array	45.13	59	P	P	09 10 29.1	-1.0
MK31				IAmb	IAmb	09 10 31.7	
	comp=Z,1.4nm,0.6s						
MKAR	Makanchi Array	45.13	59	P	P	09 10 29.1	-1.1
	comp=Z,1.1nm,0.4s,baz=278,slow=7.1,SNR=19						
MKAR	Makanchi Array	45.13	59	P	P	09 10 29.3	-0.9
ZAA0	Zalesovo Array	45.47	48	P	P	09 10 32.0	-0.6
ZAA0				IAmb	IAmb	09 10 34.8	
	comp=Z,8.3nm,0.9s						
ZALV	Zalesovo Beam	45.47	48	P	P	09 10 31.8	-0.8
	comp=Z,6.4nm,0.5s,baz=281,slow=8.0,SNR=7.1						
SCHQ	Schefferville	58.16	317	P	P	09 12 08.4	+1.1
	comp=Z,3.5nm,0.7s,baz=63,slow=4.8,SNR=6.8						
SCHQ	Schefferville	58.16	317	P	P	09 12 07.9	+0.6
SONM	Songino Array	60.24	51	P	P	09 12 21.2	-0.9
	comp=Z,0.4nm,0.4s,baz=309,slow=7.9,SNR=3.8						
BMAR	Burnt Mountain	73.73	354	P	P	09 13 47.7	+0.4
IMAR	Indian Mountai	75.69	358	P	P	09 14 00.2	+1.5
H21K	Melozitna Rive	75.98	357	P	P	09 14 02.1	+1.8
H21K				IAmb	IAmb	09 14 04.8	
	comp=Z,2.7nm,0.9s						
ASAR	Alice Springs	122.25	96	PKP	PKPdf	09 21 08.5	-0.4
	comp=Z,0.1nm,0.4s,baz=278,slow=1.9,SNR=4.0						

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*IDC **17** 09:02:55.3±4.5, 4°.56S×103°.89E, h0^{km}, mb3.5/4, mb1 3.7/4, mb1mx3.3/63, mbtmp3.5/4, Error ellipse: s-maj=249.6km s-min=28.9km az=52.0*

*DJA **17** 09:02:57.3±0.6, 5°S±5°×10°3E±°, h11^{km}±6^{km}, M3.8/10, MLv3.8/10*

ISC 17 09:02:55.6±1.1**, 5°.39S**±0°.08×**103°.16E**±0°.07**, h10^{km}, n15,** σ**1^{s}.44**/15**, mb3.5**/4**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LWLI	Liwa	0.97	67	P	Pg	09 03 15.0	+0.7
LWLI				S	Sb	09 03 27.5	0.0
MNAI	Manna	1.04	349	P	Pg	09 03 16.4	+0.7
KASI	Kota Agung	1.34	96	P	Pn	09 03 20.5	+0.2
KASI				S	Sb	09 03 35.9	-2.0
MDSI	Maura Dua	1.36	48	P	Pn	09 03 20.7	+0.1
MDSI				S	Sb	09 03 37.7	-0.8
LHSI	Lahat	1.60	13	P	Pb	09 03 25.6	+0.4
KLSI		1.71	66	P	Pn	09 03 26.5	+1.0
BLSI	Bandar Lampung	2.08	89	P	Pn	09 03 32.3	+1.8
MASI	Maura Aman, Be	2.42	338	P	Pn	09 03 36.3	+1.1
H08S2	Diego Garcia H	30.55	264	T	T	09 41 40.4	
	baz=86,slow=75,SNR=7.3						
H08S3	Diego Garcia H	30.55	264	T	T	09 41 39.9	
	baz=86,slow=75,SNR=7.1						
H08S1	Diego Carcia H	30.57	264	T	T	09 41 38.3	
	baz=86,slow=75,SNR=6.4						
WRA	Warramunga Arr	33.59	118	P	P	09 09 35.3	-1.0
	0.3nm,0.6s,baz=288,slow=10.0,SNR=7.0						
ASAR	Alice Springs	34.73	125	P	P	09 09 45.9	-0.3
	0.2nm,0.5s,baz=292,slow=7.8,SNR=5.2						
STKA	Stephens Creek	44.56	131	P	P	09 11 09.9	+2.0
	0.4nm,0.4s,baz=306,slow=14,SNR=4.1						
MKAR	Makanchi Array	55.16	343	P	P	09 12 25.4	-2.9
	0.4nm,0.6s,baz=170,slow=7.4,SNR=3.6						

IDC 17 09:14:25.8±1.2**, 25°.57N**×**101°.27E, h0^{km}, mb3.5**/4**, mb1 3.7**/4**, mb1mx3.4**/59**, mbtmp3.5**/4**, MS4.4**/1**, Ms1 4.4**/1**, ms1mx3.6**/45**, Error ellipse: s-maj=38.8km s-min=19.4km az=81.0, Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	7.40	197	Pg	Pg	09 16 42.1	-5.6
	1.2nm,0.3s,baz=12,slow=18,SNR=14						
CMAR				Lg	Lg	09 18 20.1	
	0.8nm,0.3s,baz=7.5,slow=30,SNR=9.4						
SONM	Songino Array	22.59	9	P	P	09 19 27.1	-0.9
	0.3nm,0.3s,baz=199,slow=13,SNR=3.3						
MKAR	Makanchi Array	26.01	329	P	P	09 20 01.3	+0.8
	0.8nm,0.6s,baz=134,slow=10,SNR=8.2						
DAV	Davao City (W)	29.61	124	LR	LR	09 31 28.2	
	comp=Z,702nm,21.5s,baz=128,slow=34						
WRA	Warramunga Arr	55.50	141	P	P	09 24 02.2	-0.5
	0.4nm,0.6s,baz=330,slow=8.0,SNR=7.9						
ASAR	Alice Springs	58.27	144	P	P	09 24 22.4	0.0
	0.4nm,0.6s,baz=323,slow=6.6,SNR=5.7						

IDC 17 09:15:24.1±7.5**, 16°.38S**×**177°.07W, h445^{km}**±30^{km}**, mb2.9**/3**, mb1 3.2**/4**, mb1mx2.9**/38**, mbtmp3.7**/4**, Error ellipse: s-maj=261.4km s-min=36.9km az=140.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.86	253	P	P	09 16 47.1	+0.1
	1.4nm,0.3s,baz=77,slow=14,SNR=7.4						
WRA	Warramunga Arr	46.19	258	P	P	09 23 07.3	-0.5
	0.2nm,0.4s,baz=94,slow=7.1,SNR=5.6						
ASAR	Alice Springs	46.45	253	P	P	09 23 09.8	0.0
	2.6nm,0.4s,baz=86,slow=8.0,SNR=45						
ILAR	Eielson Array	84.12	13	P	P	09 27 06.6	0.0
	0.3nm,0.9s,baz=215,slow=6.6,SNR=1.9						

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*IDC **17** 09:17:07.7±2.5, 36°.40N×71°.23E, h218^{km}±24^{km}, mb3.6/18, mb1 3.7/25, mb1mx3.5/55, mbtmp4.2/25, Error ellipse: s-maj=16.3km s-min=10.0km az=13.0*

*BJI **17** 09:17:07.4±0.0, 36°.78N×71°.17E, h215^{km}, mB4.6/1, mb4.2/9*

*NEIC **17** 09:17:08.9±1.8, 36°.56N±0°.07×71°.17E±0°.08, h223^{km}±5^{km}, mb4.2/21, Error ellipse: s-maj=9.6km s-min=9.5km az=178.0*

*NNC **17** 09:17:10.6±5.7, 36°.84N×70°.92E, h183^{km}±63^{km}, mb3.3, mpv4.1, Error ellipse: s-maj=47.6km s-min=35.1km az=23.0*

ISC 17 09:17:06.7±0.4**, 36°.53N**±0°.04×**71°.25E**±0°.04**, h200^{km}, n106,** σ**1^{s}.97**/120**, mb4.0**/26**, 6C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAR	Garm	2.58	344	Pn	Pn	09 17 54.5	+2.9
GAR				Sn	Sn	09 18 27.8	+1.1
KBL	Kabul	2.68	223	Pn	Pn	09 17 56.4	+3.5
CHGR	Chuyangaron	2.70	323	Pn	Pn	09 17 55.6	+2.7
CHGR				Sn	Sn	09 18 29.9	+0.8
CEP	Cherat	2.75	169	P	Pn	09 17 57.5	+3.8
CEP				S	Sn	09 18 34.0	+3.7
DRK	Karamyk	2.98	8		Pn	09 17 59.4	+3.1
CHCP	Chirah Chowk	3.30	149	P	Pn	09 18 03.8	+3.8
NIL	Nilore	3.31	150		Pn	09 18 04.0	+4.0
BTK	Batken	3.54	355		Pn	09 18 06.3	+3.4
THW	Thamme Wali	3.75	174	P	Pn	09 18 08.4	+3.0
KSH	Kashi	4.77	50	P	Pn	09 18 15.3	-3.0
KSH				S	Sn	09 19 05.1	-10
KSH				smax	smax		
	comp=N,450nm,0.7s						
KSH				smax	smax		
	comp=E,290nm,0.8s						
AML	Almayashu	5.91	18	P	Pn	09 18 34.7	+1.7
	SNR=106						
DHRM	DHARAMSHALA	5.97	134	eP	Pn	09 18 35.9	+2.1
DHRM				eS	Sn	09 19 43.4	+0.8
DHRM				IAML		09 19 43.6	
	comp=E,1μm,0.4s						
DHRM				IAML		09 19 44.0	
	comp=N,798nm,0.1s						
UCH	Uchtor	6.23	23	P	Pn	09 18 38.9	+1.7
	SNR=49						
EKS2	Erkin-Say	6.43	17	P	Pn	09 18 42.0	+2.5
	SNR=19						
KK31	Karatay Array	6.59	355	⇑P	Pn	09 18 42.7	+1.1
	comp=N,2.6nm,0.4s,baz=178,slow=12,SNR=58						
KK31				⇑S	Sn	09 19 53.4	-3.4
	comp=N,21nm,0.5s,baz=182,slow=22,SNR=9.9						
KK31	Karatay Array	6.59	355	Pn	Pn	09 18 42.8	+1.3
KKAR	Karatay Array	6.59	355		Pn	09 18 42.6	+1.1
AAK	Ala-Archa	6.59	21	P	Pn	09 18 43.6	+1.9
	comp=N,7.6nm,0.3s,baz=171,slow=4.6,SNR=56						
AAK				S	Sn	09 19 52.0	-5.1
	comp=N,2.2nm,0.3s,baz=201,slow=16,SNR=4.5						
AAK	Ala-Archa	6.59	21	P	Pn	09 18 43.7	+2.0
	SNR=25						
AAK	Ala-Archa	6.59	21	P	Pn	09 18 43.3	+1.6
	comp=N,12nm,0.5s						
AAK				S	Sn	09 19 56.4	-0.7
	comp=N,52nm,0.7s						
KBK	Karagaybulak	6.75	24	P	Pn	09 18 46.0	+2.2
	SNR=16						
FRU1	Bishkek	6.79	22	Pn	Pn	09 18 46.4	+2.2
ULHL	Ulahol	6.89	33	P	Pn	09 18 47.1	+1.5
	SNR=8.8						
CHMS	Chumysh	7.00	22	P	Pn	09 18 49.0	+2.2
	SNR=6.8						
TKM2	Tokmak 2	7.21	26	P	Pn	09 18 51.3	+1.5
	SNR=30						
TKM2	Tokmak 2	7.21	26	⇑P	Pn	09 18 50.7	+0.9
	comp=N,12nm,0.5s						
TKM2				⇓S	Sn	09 20 10.5	-1.0
	comp=N,9.7nm,0.8s						
TARG	Taragay, Kyrgy	7.27	42		Pn	09 18 52.1	+1.4
SMLA	Simla	7.29	136	eP	Pn	09 18 52.4	+1.7
SMLA				eS	Sn	09 20 10.3	-3.1
SMLA				IAML		09 20 12.5	
	comp=N,176nm,0.3s						
SMLA				IAML		09 20 13.2	
	comp=E,259nm,0.4s						
HRA	Herat	7.66	256	Pn	Pn	09 18 56.9	+1.2
PRZ	Przheval'sk	8.11	41	Pn	Pn	09 19 03.5	+2.0
NDI	New Delhi	9.30	146	eP	Pn	09 19 17.1	+0.2
NDI				eS	Sn	09 20 54.0	-7.0
AYAN	Aya Nagar	9.43	147	eP	Pn	09 19 19.9	+1.4
AYAN				eS	Sn	09 20 58.5	-5.6
KUDL	Kundal	9.46	151	eP	Pn	09 19 20.0	+1.1
KUDL				eS	Sn	09 20 58.0	-6.8
GEYT	Alibeck	10.57	282	P	Pn	09 19 33.3	+0.1
	comp=E,1.3nm,0.3s,baz=88,slow=13,SNR=4.3						
GEYT				S	Sn	09 21 27.1	-4.2
	comp=E,1.0nm,0.3s,baz=87,slow=39,SNR=3.0						
GEYT	Alibeck	10.57	282	Pn	Pn	09 19 32.5	-0.8
MAKZ	Makanchi	13.02	35		Pn	09 20 04.5	+0.2
MKAR	Makanchi Array	13.15	35	P	P	09 20 09.7	+0.8
	comp=E,1.4nm,0.3s,baz=219,slow=9.0,SNR=32						
MKAR	Makanchi Array	13.15	35	Pn	Pn	09 20 06.7	+0.8
DANN	Dangsing	13.33	124	eP	Pn	09 20 09.8	+1.1
	comp=E,38nm,0.3s						
KOLN	Koldanda	13.62	126	eP	Pn	09 20 13.7	+1.6
	comp=E,23nm,0.3s						
GKN	Gorkha	14.15	123	eP	Pn	09 20 19.6	+1.0
	comp=E,49nm,0.3s						
BHPL	Bhopal	14.28	156	eP	P	09 20 24.1	+2.4
BHPL				ex	x	09 22 53.4	
WMQ	Urumqi	14.51	55	eP	P	09 20 25.3	+1.2
DMN	Daman	14.72	123	eP	P	09 20 27.6	+0.8
	comp=E,34nm,0.3s						
KKN	Kakani	14.72	122	eP	Pn	09 20 26.1	+0.4
PKIN	Phulchoki	14.94	123	eP	Pn	09 20 28.8	+0.4
PKI	Pulchoki	14.95	123	eP	P	09 20 30.2	+0.8
KURBB	Kurchatov Arra	15.03	18	P	Pn	09 20 29.1	0.0
	comp=E,0.1nm,0.3s,baz=206,slow=8.5,SNR=7.2						
GUN	Gumba	15.05	121	eP	Pn	09 20 30.6	+0.6
AB31	Akbulak array	15.16	331	⇑P	Pn	09 20 29.7	-0.9
	comp=E,1.9nm,0.4s,baz=142,slow=11,SNR=10						
AB31				⇓S	S	09 23 17.7	-1.1
	comp=E,1.6nm,0.5s,baz=150,slow=23,SNR=5.7						
ABKAR	Akbulak array	15.16	331		Pn	09 20 29.7	-0.9
ABKAR	Akbulak array	15.16	331	P	Pn	09 20 30.1	-0.5
ABKAR				IAmb	IAmb	09 20 34.1	
	comp=Z,10nm,1.1s						
JIRN	Jiri	15.43	121	eP	Pn	09 20 35.1	+0.6
RAMN	Ramite	16.16	122	eP	P	09 20 43.5	+0.9
BVAR	Borovoye Array	16.51	358	P	Pn	09 20 47.8	+1.0
	comp=Z,0.6nm,0.3s,baz=198,slow=17,SNR=6.9						
TAPN	Taplejung	16.68	119	eP	Pn	09 20 50.6	+1.1
	comp=Z,23nm,0.4s						
ODAN	Odare	16.76	121	eP	Pn	09 20 51.4	+1.0
AKTO	Aktyubinsk	16.86	330	P	Pn	09 20 51.2	+0.2
	comp=Z,4.1nm,0.3s,baz=139,slow=9.1,SNR=72						
AKTO	Aktyubinsk	16.86	330	⇑P	P	09 20 50.4	+0.6
	comp=Z,16nm,0.8s						
AKTO				⇑S	S	09 23 52.7	-2.7
	comp=Z,7.0nm,1.1s						
UOSS	Minazif	17.31	232	P	P	09 20 55.5	+0.4
UOSS				IAmb	IAmb	09 20 57.3	
	comp=Z,4.9nm,0.8s						
LSA	Lhasa	17.99	107	P	Pn	09 21 05.5	+0.4
ZAA0	Zalesovo Array	19.80	24	P	P	09 21 21.9	+0.2
ZAA0				IAmb	IAmb	09 21 24.8	
	comp=Z,4.1nm,0.4s						
ZALV	Zalesovo Beam	19.80	24	P	P	09 21 22.0	+0.3
	comp=Z,1.7nm,0.3s,baz=208,slow=10,SNR=14						
ZALV	Zalesovo Beam	19.80	24	P	P	09 21 21.6	-0.1
SHL	Shillong	20.74	116	P	P	09 21 32.2	+0.1
ARU	Arti	21.67	341	P	P	09 21 41.4	+0.1
	comp=Z,3.5nm,0.2s,baz=167,slow=6.8,SNR=4.1						
GTA	Gaotai	22.66	74	eP	P	09 21 53.0	+1.9
GTA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BELG	Belogornoye	23.00	321	P	P	09 21 54.0	+0.3
	comp=Z,33nm,0.8s,baz=133,slow=4.9,SNR=12						
KIRV	Kirov	26.30	334	P	P	09 22 24.2	+0.7
	comp=Z,25nm,0.5s,baz=109,slow=3.9,SNR=3.9						
TLY	Talaya	27.47	46	P	P	09 22 34.8	+0.7
TLY				IAmb	IAmb	09 22 40.7	
	comp=Z,3.4nm,1.0s						
SONM	Songino Array	28.15	55	P	P	09 22 40.7	+0.4
	comp=Z,0.6nm,0.4s,baz=280,slow=10,SNR=3.6						
BRTR	Keskin Array B	29.62	288	P	P	09 22 54.7	+1.3
	comp=Z,1.3nm,0.6s,baz=96,slow=8.3,SNR=2.6						
CMAR	Chiang Mai Arr	30.29	119	P	P	09 22 59.7	+0.4
	comp=Z,1.0nm,0.3s,baz=307,slow=8.5,SNR=5.6						
HHC	Hu-ho-hao-te	31.56	70	eP	P	09 23 12.9	+2.5
ELL	Elmali	32.99	283	P	P	09 23 23.0	0.0
AKASG	Malin Array Be	33.09	309	P	P	09 23 24.3	+0.9
	comp=Z,0.8nm,0.4s,baz=86,slow=6.1,SNR=5.3						
FIA1	FINESS Array S	37.57	326	P	P	09 24 01.5	0.0
FINES	FINESS Array B	37.57	326	P	P	09 24 01.9	+0.5
	comp=Z,2.1nm,0.4s,baz=124,slow=9.8,SNR=18						
FINES	FINESS Array B	37.57	326	P	P	09 24 01.4	0.0
ARCES	ARCESS Array B	41.20	338	P	P	09 24 31.7	+0.4
	comp=Z,1.1nm,0.4s,baz=108,slow=6.1,SNR=18						
NB201	NORSAR Array S	44.44	323	P	P	09 24 57.5	0.0
NB201				IAmb	IAmb	09 25 16.6	
	comp=Z,8.8nm,1.1s						
NB2	NORSAR Subarra	44.48	323	P	P	09 24 57.1	-0.7
	comp=Z,4.0nm,0.9s,baz=96,slow=7.9						
NOA	NORSAR Array B	44.48	323	P	P	09 24 57.5	-0.3
	comp=Z,1.6nm,0.7s,baz=96,slow=7.7,SNR=6.0						
KSRS	Korea Array	44.68	71	P	P	09 24 59.3	-0.4
	comp=Z,0.7nm,0.4s,baz=270,slow=6.8,SNR=2.2						
KLR	Kul'dur	44.96	54	P	P	09 25 01.7	0.0
	comp=Z,1.2nm,0.4s,baz=303,slow=7.4,SNR=5.0						
TIXI	Tiksi	45.67	22	P	P	09 25 06.6	-0.4
	comp=Z,1.0nm,0.3s,baz=288,slow=8.2,SNR=3.3						
TIXI	Tiksi	45.67	22	P	P	09 25 07.2	+0.3
KEST	Kesra	49.22	289	P	P	09 25 33.7	-1.2
	comp=Z,2.2nm,0.5s,baz=297,slow=2.6,SNR=4.7						
KEST	Kesra	49.22	289	P	P	09 25 33.9	-1.0
KEST				IAmb	IAmb	09 25 51.4	
	comp=Z,13nm,1.4s						
ESDC	Sonseca Array	57.62	298	P	P	09 26 35.5	-0.5
	comp=Z,1.4nm,0.8s,baz=56,slow=8.0,SNR=8.7						
TORD	Torodi Ar. Bea	65.92	269	P	P	09 27 29.4	-2.1
	comp=Z,3.0nm,0.6s,baz=42,slow=5.8,SNR=22						
TORD	Torodi Ar. Bea	65.92	269	P	P	09 27 30.3	-1.2
KOWA	Kowa	69.77	273	P	P	09 27 54.2	-1.3
KOWA				IAmb	IAmb	09 28 17.4	
	comp=Z,9.2nm,1.4s						
COLD	Coldfoot	71.89	16	P	P	09 28 07.7	+0.3
IMAR	Indian Mountai	72.08	18	P	P	09 28 08.5	-0.2
BMAR	Burnt Mountain	72.86	14	P	P	09 28 14.2	+0.9
INK	Inuvik	73.84	9	P	P	09 28 18.4	-0.4
	comp=Z,0.6nm,0.6s,baz=324,slow=2.8,SNR=5.6						
INK	Inuvik	73.84	9	P	P	09 28 19.5	+0.6
INK				IAmb	IAmb	09 28 29.9	
	comp=Z,4.4nm,1.4s						
K20K	Telida	74.12	19	P	P	09 28 20.9	+0.3
K20K				IAmb	IAmb	09 28 31.1	
	comp=Z,5.8nm,1.4s						
KNRA	Kununurra	75.07	123	P	P	09 28 26.0	-0.6
KNRA				IAmb	IAmb	09 28 26.7	
	comp=Z,5.9nm,0.7s						
WRA	Warramunga Arr	81.83	122	P	P	09 29 01.9	-1.7
	comp=Z,2.0nm,0.5s,baz=324,slow=4.8,SNR=52						
WRA	Warramunga Arr	81.83	122	P	P	09 29 02.1	-1.6
WB2	Warramunga Arr	81.84	122	P	P	09 29 02.1	-1.6
WB2				IAmb	IAmb	09 29 02.3	
	comp=Z,10nm,1.4s						
AS31	Alice Springs	84.10	125	P	P	09 29 13.9	-1.4
ASAR	Alice Springs	84.10	125	P	P	09 29 13.8	-1.5
	comp=Z,1.6nm,0.6s,baz=311,slow=5.0,SNR=41						
EIDS	Eidsvold	97.11	116	P	Pdif	09 30 18.0	+1.7

NOU 17 09:17:45.8, 14°.57S×**167°.37E, h99^{km}, mb4.3**/6**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.89	190	P	Pn	09 18 05.4	+0.4
DVP	Devils Point	3.23	166	P	Pn	09 18 34.9	+0.2
YATNC	Mamie plateau,	7.46	183	P	Pn	09 19 31.4	-0.6
DZM	Mont Dzumac	7.51	187	P	Pn	09 19 33.4	+0.6
NFK	Norfolk Island	14.41	178	P	Pn	09 21 05.0	-0.1
	163nm,1.4s						

IDC 17 09:26:48.8±3.2**, 54°.32N**×**86°.98E, h0^{km}, mb1 2.8**/2**, mb1mx2.8**/48**, mbtmp2.8**/2**, ML2.4**/2**, Error ellipse: s-maj=28.9km s-min=17.2km az=60.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.32	255	i		09 33 30.0	
	baz=74,slow=338,SNR=9.8						
ZALV	Zalesovo Beam	1.32	255	Pg	Pg	09 27 12.8	-1.3
	2.3nm,0.3s,baz=76,slow=17,SNR=27						
ZALV				Lg	Lg	09 27 32.4	
	0.8nm,0.3s,baz=76,slow=27,SNR=5.7						
KURBB	Kurchatov Arra	6.35	238	Pn	Pn	09 28 23.0	-0.5
	0.1nm,0.3s,baz=56,slow=15,SNR=5.9						
MKAR	Makanchi Array	8.10	203	Pn	Pn	09 28 49.6	+2.1
	0.1nm,0.3s,baz=25,slow=14,SNR=5.4						
MKAR				Lg	Lg	09 31 07.0	
	0.0nm,0.3s,baz=15,slow=28,SNR=3.3						

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*IDC **17** 09:29:15.7±1.5, 31°.89N×140°.02E, h0^{km}, mb3.4/2, mb1 3.6/4, mb1mx3.4/43, mbtmp3.5/4, ML2.9/2, Error ellipse: s-maj=117.2km s-min=16.3km az=83.0*

*JMA **17** 09:29:16.9±0.1, 32°.41N×141°.20E, h39^{km}, M3.5*

ISC 17 09:29:16.9±1.3**, 32°.31N**±0°.07×**141°.18E**±0°.10**, h35^{km}, n13,** σ**0^{s}.84**/16**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	1.21	278	P	Pn	09 29 37.9	+0.5
JHCJ	Hachijojimakas	1.40	304	eS	Sn	09 29 56.7	-0.4
JHJ2	Mitsune	1.41	305	eS	Sn	09 29 57.1	-0.2
JHJ	Hachijo jima 2	1.43	305	Pn	Pn	09 29 41.3	+0.9
	18nm,0.3s,baz=2.5,slow=22,SNR=6.8						
JHJ				Sn	Sn	09 29 56.8	-1.2
	27nm,0.3s,baz=91,slow=23,SNR=2.7						
JMKN	Mikurajimanish	2.07	320	P	Pn	09 29 49.5	+0.3
JMKN				eS	Sn	09 30 13.6	-0.2
BSO1	Boso 1	2.35	356	P	Pn	09 29 53.0	+0.5
BSO2	Boso 2	2.47	352	eS	Sn	09 30 22.8	-0.3
JOD2	Odawara 2	3.43	330	P	Pn	09 30 08.7	+0.8
JOD2				eS	Sn	09 30 46.1	-1.2
JRY	Ryogami san	4.16	334	eS	Sn	09 31 03.8	-1.5
MJAR	Matsushiro Arr	4.89	331	Pn	Pn	09 30 28.8	+0.9
	0.1nm,0.3s,baz=175,slow=15,SNR=4.8						
JCJ	Chichijima	5.26	170	Pn	Pn	09 30 32.7	-0.4
	2.0nm,0.3s,baz=287,slow=19,SNR=1.2						
WRA	Warramunga Arr	52.36	188	P	P	09 38 25.1	-0.5
	0.3nm,0.4s,baz=3.3,slow=7.6,SNR=14						
ASAR	Alice Springs	56.09	188	P	P	09 38 53.4	+0.7
	0.2nm,0.5s,baz=16,slow=14,SNR=5.8						

TRN 17 09:40:11.1, 15°.09N×**61°.11W, h152^{km}, MD3.7, 6D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DLPL	La Plaine	0.27	332	eP	Pn	09 40 33.3	+1.4
DLPL				eS	Sn	09 40 49.0	+1.2
PCM	Pelee Case Pet	0.29	199	eP	Pn	09 40 33.1	+1.1

GBMF	Grand Be	0.29	190	⇓eP	Pn	09 40 33.4	+1.4
PML	Morne Lenard	0.32	193	eP	Pn	09 40 33.5	+1.4
MDN	Morne-Daniel	0.35	310	eP	Pn	09 40 33.3	+1.2
MDN				eS	Sn	09 40 49.1	+1.0
FDF	Fort de France	0.36	186	⇓eP	Pn	09 40 33.6	+1.4
ILAM	Ilet Lapin Mar	0.39	144	⇓eP	Pn	09 40 33.3	+1.1
DSLB	Salisbury	0.46	319	eP	Pn	09 40 34.2	+1.6
DSLB				eS	Sn	09 40 49.9	+1.0
ZAM	Aeronautique	0.52	171	eP	Pn	09 40 33.7	+0.9
LPMF	Morne Lapointe	0.53	165	⇓eP	Pn	09 40 33.7	+0.8
TRMF	Trois Ilets	0.55	174	eP	Pn	09 40 34.3	+1.2
BIM	Bigot	0.57	176	eP	Pn	09 40 34.5	+1.3
MVM	Montagne Vaucl	0.57	159	⇓eP	Pn	09 40 34.3	+1.1
MDPV	Dominica, Penn	0.61	331	eS	Sn	09 40 50.7	+0.3
MPOM	Morne Pois Mar	0.69	159	⇓eP	Pn	09 40 34.9	+1.1
MAGL	Barre de l'ile	0.87	349	eP	Pn	09 40 36.5	+1.5
MAGL				eS	Sn	09 40 53.9	+0.4
TDBA	Terre de Bas,	0.91	326	eP	Pn	09 40 36.8	+1.5
TDBA				eS	Sn	09 40 54.5	+0.6
SLBI	Saint Lucia, B	1.07	173	eP	Pn	09 40 37.6	+0.9
SLBI				eS	Sn	09 40 56.2	-0.1
SLCP	Castries, St.	1.08	174	eP	Pn	09 40 38.1	+1.3
SLCP				eS	Sn	09 40 56.6	+0.1
CBE	Ff, Capester	1.08	334	eP	Pn	09 40 38.2	+1.4
CBE				eS	Sn	09 40 57.4	+0.8
MCLT	Moule a Chique	1.38	173	eP	Pn	09 40 41.9	+2.2
MCLT				eS	Sn	09 41 02.5	+1.0
SSV	Crater Summit	1.75	183	eS	Sn	09 41 09.8	+1.1
SVV	Soufriere Volc	1.76	183	eS	Sn	09 41 10.3	+1.4
SVB	Belmont	1.81	184	eP	Pn	09 40 45.5	+1.2
SVB				eS	Sn	09 41 10.6	+0.8
SVOC	Richmond Hill,	1.93	183	eS	Sn	09 41 12.3	+0.2
ANBD	Bethesda, Anti	2.05	342	eP	Pn	09 40 47.9	+1.0
ANBD				eS	Sn	09 41 14.1	-0.5
GCMP	Grenada, Carri	2.61	187	eP	Pn	09 40 54.5	+0.8
GCMP				eS	Sn	09 41 26.8	+0.2
ANWB	Willy Bob	2.64	346	eP	Pn	09 40 54.5	+0.3
ANWB				eS	Sn	09 41 27.0	-0.4
GRGR	Grenville	2.99	190	eP	Pn	09 40 59.5	+1.1
GRGR				eS	Sn	09 41 35.1	+0.1
GRFF	Grenada Fort F	3.08	191	eP	Pn	09 41 00.3	+0.6
GRFF				eS	Sn	09 41 36.5	-0.7
TOSP	Speyside	3.81	171	eP	Pn	09 41 10.4	+1.4
TOSP				eS	Sn	09 41 52.3	-1.7
TRN	Trinidad (W)	4.42	184	eP	Pn	09 41 18.2	+1.2
TRN	Trinidad (W)	4.42	184	eS	Sn	09 42 06.1	-2.3

IDC 17 09:49:29.2±0.5**, 54°39N×86°04E, h0^{km}, mb1 3.2**/2**, mb1mx3.1**/36**, mbtmp3.2**/2**, ML2.4**/2**, Error ellipse: s-maj=10.6km s-min=0.7km az=149.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	0.84	239	*i*		09 54 07.3	
	baz=62,slow=339,SNR=3.8						
ZALV	Zalesovo Beam	0.84	239	Pg	Pg	09 49 44.4	-1.0
	0.4nm,0.3s,baz=61,slow=17,SNR=5.5						
ZALV				Lg	Lg	09 49 57.1	
	2.0nm,0.3s,baz=62,slow=29,SNR=12						
KURBB	Kurchatov Arra	5.94	234	Pn	Pn	09 50 59.8	+1.5
	0.1nm,0.3s,baz=50,slow=14,SNR=1.8						
MKAR	Makanchi Array	7.97	199	Pn	Pn	09 51 27.1	+0.8
	0.1nm,0.3s,baz=18,slow=9.7,SNR=7.1						

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*ATH **17** 10:09:35.6, 34°34N×22°12E, h10^{km}±31^{km}, ML3.3/6, Error ellipse: s-maj=31.6km s-min=2.4km az=0.0*

*IDC **17** 10:09:35.4±0.7, 34°60N×21°92E, h0^{km}, mb4.1/5, mb1 4.1/8, mb1mx3.7/56, mbtmp4.1/8, ML3.9/3, Error ellipse: s-maj=18.4km s-min=3.8km az=2.0*

*NEIC **17** 10:09:39.1±2.2, 34°69N±0°09×22°4E±0°2, h10^{km}±2^{km}, mb4.0/4, Error ellipse: s-maj=22.9km s-min=12.2km az=116.0*

*THE **17** 10:09:44.8, 34°61N×22°38E, h30^{km}±11^{km}, ML3.2/3, Error ellipse: s-maj=13.6km s-min=1.6km az=214.0*

ISC 17 10:09:36.3±1.9**, 34°50N**±0°07×**22°15E**±0°05**, h9**^{km}±10^{km}**, n44, σ1^{s}54**/52**, mb4.2**/8**, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GVD	Gavdhos	1.63	77	P	Pg	10 10 07.4	-0.2
GVD				S	Sb	10 10 27.0	-0.3
	768nm,0.4s						
GVD	Gavdhos	1.63	77	P	Pb	10 10 06.3	-0.3
GVD				S	Sg	10 10 28.3	-0.4
GVD				AML	AML	10 10 35.1	
	comp=E,1476μm,0.5s						
GVD				AML	AML	10 10 40.9	
	comp=N,1584μm,0.3s						
ANKY	Antikythira Is	1.66	34	P	Pg	10 10 09.0	+0.9
ANKY	Antikythira Is	1.66	34	P	Pg	10 10 08.5	+0.4
ANKY				S	Sg	10 10 31.8	+2.2
ANKY				AML	AML	10 10 46.9	
	comp=E,1440μm,0.7s						
ANKY				AML	AML	10 11 14.1	
	comp=N,1208μm,0.9s						
IMMV	Iera Moni Meta	1.78	57	P	Pg	10 10 10.4	-0.1
IMMV				S	Sn	10 10 28.9	-1.2
	comp=N,470nm,0.8s						
IMMV	Iera Moni Meta	1.78	57	P	Pb	10 10 09.5	+0.3
IMMV				S	Sg	10 10 34.1	+0.6
IMMV				AML	AML	10 10 54.5	
	comp=N,1082μm,1.0s						
IMMV				AML	AML	10 11 27.8	
	comp=E,1253μm,1.1s						
KTHA	Kythira Island	1.91	23	P	Pg	10 10 13.0	+0.2
KTHA	Kythira Island	1.91	23	P	Pg	10 10 12.1	-0.7
KTHA				AML	AML	10 11 00.0	
	comp=N,396μm,0.7s						
KTHA				AML	AML	10 11 02.9	
	comp=E,848μm,0.9s						
VAM	Vamos	1.91	61	P	Pb	10 10 11.7	+0.4
VAM	Vamos	1.91	61	P	Pb	10 10 11.7	+0.4
VAM				AML	AML	10 11 03.1	
	comp=E,767μm,0.8s						
VAM				AML	AML	10 11 06.4	
	comp=N,1179μm,0.8s						
VLI	Veliai	2.31	16	P	Pg	10 10 19.6	-0.9
VLI				AML	AML	10 10 50.7	
	comp=N,499μm,0.5s						
VLI				AML	AML	10 10 51.4	
	comp=E,529μm,0.8s						
IDI	Anoyia	2.38	70	Pn	Pb	10 10 18.1	-1.4
	comp=E,8.1nm,0.3s,baz=243,slow=6.2,SNR=20						
IDI				Sn	Sb	10 10 48.6	-0.4
	comp=E,18nm,0.3s,baz=357,slow=16,SNR=6.8						
IDI	Anoyia	2.38	70	P	Pb	10 10 17.8	-1.7
PYL	PYLOS	2.42	352	P	Pb	10 10 20.3	+0.3
PYL				S	Sb	10 10 48.9	-1.0
PYL	PYLOS	2.42	352	P	Pb	10 10 20.3	+0.3
ITM	Ithomi	2.68	356		Pn	10 10 19.0	-0.8
KLV	Kalavryta, Ach	3.54	360	P	Pb	10 10 36.8	-2.3
LTK	Loutraki	3.58	10	P	Pb	10 10 36.4	-3.4
LTK				S	Sn	10 11 16.0	+1.5
	comp=E,128nm,0.4s						
DION	Dionisos Attik	3.85	21	P	Pn	10 10 39.2	+3.4
AGG	Agios Georgios	4.52	2	Pn	Pn	10 10 41.4	-3.6
SCTE	Santa Cesarea	6.29	333	Pn	Pn	10 11 12.3	+3.0
FNA	Florina	6.30	355		Pn	10 11 10.8	+1.3
RAFF	Raffo Rosso	6.88	295		Pn	10 11 19.4	+1.9
TIR	Tirane	7.07	346	Pn	Pn	10 11 20.4	+0.4
PDG	Podgorica	8.24	345	Pn	Pn	10 11 35.0	-1.0
SGRT	San Giovanni R	8.83	327	Pn	Pn	10 11 46.0	+1.8
DIVS	Divibare	9.73	351	Pn	Pn	10 11 56.1	-0.5
KEST	Kesra	10.56	280	Pn	Pn	10 12 04.3	-3.7
	comp=E,1.4nm,0.3s,baz=28,slow=3.1,SNR=5.9						
NRCA	Norcia	10.91	322	Pn	Pn	10 12 14.8	+2.1
VSL	Villasalto	11.37	300	Pn	Pn	10 12 21.6	+2.8
AKASG	Malin Array Be	17.00	16	Pn	Pn	10 13 33.1	-1.1
	comp=E,1.0nm,0.3s,baz=205,slow=12,SNR=2.1						
ESDC	Sonseca Array	21.43	292	P	P	10 14 24.0	-0.7
	comp=E,0.2nm,0.4s,baz=74,slow=9.5,SNR=2.6						
HFS	Hagfors	26.24	350	P	P	10 15 12.4	+0.9
	comp=E,5.3nm,1.1s,baz=146,slow=11,SNR=5.1						
FINES	FINESS Array B	27.08	4	P	P	10 15 20.4	+1.4
	comp=E,4.8nm,1.0s,baz=162,slow=19,SNR=2.2						
ARCES	ARCESS Array B	35.14	2	P	P	10 16 30.0	+0.1
	comp=E,3.6nm,0.9s,baz=185,slow=10.0,SNR=5.0						
KK31	Karatay Array	38.20	62	P	P	10 16 56.3	-0.1
KKAR	Karatay Array	38.20	62	P	P	10 16 55.5	-0.9
KKAR	Karatay Array	38.20	62	P	P	10 16 55.5	-0.9
KKAR				IAmb	IAmb	10 17 06.1	
	comp=Z,1.6nm,0.8s						
AAK	Ala-Archa	41.16	63	P	P	10 17 21.7	+0.5
AAK				IAmb	IAmb	10 17 29.6	
	comp=Z,6.2nm,1.4s						
MK31	Makanchi Array	46.20	56	P	P	10 18 02.5	+1.0
MKAR	Makanchi Array	46.20	56	P	P	10 18 02.5	+1.0
	comp=Z,1.5nm,0.5s,baz=279,slow=6.7,SNR=20						
MKAR	Makanchi Array	46.20	56	P	P	10 18 02.4	+0.9
ZALV	Zalesovo Beam	47.24	46	P	P	10 18 09.9	+0.4
	comp=Z,0.7nm,0.5s,baz=264,slow=8.8,SNR=3.5						
ZALV	Zalesovo Beam	47.24	46	P	P	10 18 09.7	+0.2

IDC 17 10:09:55.0±1.7**, 5°73S×131°07E, h0^{km}, mb4.0**/1**, mb1 3.6**/3**, mb1mx3.4**/45**, mbtmp3.5**/3**, ML3.4**/2**, Error ellipse: s-maj=109.1km s-min=11.5km az=71.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	14.48	168	Pn	Pn	10 13 21.1	-0.3
	0.2nm,0.3s,baz=348,slow=13,SNR=12						
WRA				Sn	Sn	10 15 47.0	-16
	0.4nm,0.3s,baz=342,slow=22,SNR=8.9						
ASAR	Alice Springs	18.04	172	P	Pn	10 14 07.5	+0.2
	0.1nm,0.3s,baz=349,slow=10,SNR=13						
ASAR				S	Sn	10 17 15.9	-13
	0.1nm,0.3s,baz=348,slow=24,SNR=5.6						
MKAR	Makanchi Array	67.76	326	P	P	10 20 54.5	-0.1
	0.6nm,0.4s,baz=115,slow=7.7,SNR=4.2						

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*IDC **17** 10:15:50.8±0.9, 37°23N×137°24E, h270^{km}±10^{km}, mb3.4/8, mb1 3.6/13, mb1mx3.3/55, mbtmp4.2/13, Error ellipse: s-maj=22.5km s-min=10.9km az=72.0*

*NEIC **17** 10:15:51.3±1.0, 37°16N±0°06×137°12E±0°09, h266^{km}±6^{km}, mb4.1/27, Error ellipse: s-maj=10.9km s-min=9.1km az=113.0*

*JMA **17** 10:15:51.2±0.1, 37°11N×137°18E, h268^{km}±1^{km}, M3.7*

ISC 17 10:15:50.9±0.6**, 37°13N**±0°05×**137°12E**±0°05**, h267**^{km}±5^{km}**, n89, σ0^{s}74**/105**, mb4.0**/21**, 5C-5D, Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJH	Hakui	0.34	233	P	Pn	10 16 26.2	+0.7
JJH				S	S	10 16 53.5	+0.8
JSZ	Suzu	0.37	32	⇓P	Pn	10 16 26.0	+0.6
JSZ				S	S	10 16 52.5	-0.2
MJB9	Matsu-Tunnel	1.05	123		Pn	10 16 28.5	+0.3
MJB9				Sn	S	10 16 57.5	0.0
MAJO	Matsushiro	1.05	123		Pn	10 16 28.5	+0.3
MAJO				Sn	S	10 16 58.1	+0.6
MAT	Matsushiro	1.05	123	P	Pn	10 16 28.5	+0.3
MAT				S	S	10 16 57.8	+0.2
MAT	Matsushiro	1.05	123	P	Pn	10 16 28.5	+0.3
MAT				eS	S	10 16 58.0	+0.4
MJAR	Matsushiro Arr	1.06	123	P	Pn	10 16 27.8	-0.4
	8.3nm,0.3s,baz=292,slow=5.0,SNR=357						
MJAR				S	S	10 16 57.6	+0.1
	0.5nm,0.3s,baz=294,slow=16,SNR=5.7						
JKG	Kaga	1.06	217	⇑P	Pn	10 16 28.5	+0.3
JSD	Sado	1.28	45	P	Pn	10 16 29.9	+0.5
JSD				S	S	10 16 59.2	-0.6
JSD	Sado	1.28	45	Pn	Pn	10 16 29.7	+0.3
JSD				Sn	S	10 16 59.4	-0.4
JGF	Kuroka	1.54	173		Pn	10 16 31.9	+0.6
JYTA	Yamagatataniai	1.56	191	⇑P	Pn	10 16 32.0	+0.6
JYTA				S	S	10 17 03.9	+0.4
INU	Inuyama	1.78	183	Pn	Pn	10 16 33.2	+0.1
JRY	Ryogami san	1.82	127	⇓P	Pn	10 16 33.0	-0.4
JRY				S	S	10 17 05.8	-1.2
JNS	Sasagawa	1.88	68	⇓P	Pn	10 16 34.2	+0.4
JYN	Shimob	2.00	144	P	Pn	10 16 35.0	0.0
JAG	Ashikaga	2.00	110	⇓P	Pn	10 16 34.4	-0.5
JAW	Awa shima	2.15	51	P	Pn	10 16 36.6	+0.5
JAW				S	S	10 17 11.1	-0.8
JWT	Wachi	2.31	217	⇑P	Pn	10 16 37.7	0.0
JWT				S	S	10 17 12.7	-2.0
JWT	Wachi	2.31	217	Pn	Pn	10 16 37.6	-0.1
JFNN	Fujinakano	2.31	146	P	Pn	10 16 38.0	+0.3
JOD2	Odawara 2	2.45	139	P	Pn	10 16 39.1	0.0
JOD2				S	S	10 17 16.7	-0.5
JFT	Otama	2.60	80	⇓P	Pn	10 16 40.8	+0.4
JSG	Sagara	2.60	160		Pn	10 16 40.8	+0.3
JYT	Yasato	2.63	109		Pn	10 16 39.5	-1.2
JIE	Ise	2.75	187	⇑P	Pn	10 16 42.8	+0.8
JIE				eS	S	10 17 22.7	+0.1
JMM	Marumori	3.02	75		Pn	10 16 44.7	+0.1
JYK	Kaneyama	3.12	54	P	Pn	10 16 46.2	+0.5
JYK				eS	S	10 17 28.6	-0.7
JWY	Kouya	3.16	204	⇑P	Pn	10 16 46.8	+0.5
JWY				eS	S	10 17 29.6	-0.8
JOI	OKI	3.22	256	P	Pn	10 16 47.3	+0.5
JHS	Saijyo	3.88	238	Pn	Pn	10 16 54.4	+0.2
JMN	Monobe	4.30	219	Pn	Pn	10 16 59.3	+0.2
JHJ	Hachijo jima 2	4.56	151	P	Pn	10 17 02.6	+0.5
	32nm,0.3s,baz=62,slow=22,SNR=7.3						
JHJ				S	S	10 17 58.2	-0.7
	67nm,0.3s,baz=57,slow=21,SNR=8.6						
JHJ2	Mitsune	4.58	150	Pn	Pn	10 17 01.6	-0.7
JEW	Eniwo	6.60	29		Pn	10 17 26.7	0.0
ERM	Erimo	6.75	42	Pn	Pn	10 17 26.9	-1.6
KSRS	Korea Array	7.33	275	P	Pn	10 17 37.6	+1.7
	1.3nm,0.3s,baz=94,slow=13,SNR=36						
KSAR	Wonju Array Be	7.37	275	Pn	Pn	10 17 36.5	+0.2
KS19	Wonju Array Si	7.38	276	Pn	Pn	10 17 37.7	+1.2
USA0B	Ussuriysk Arra	8.06	333	Pn	Pn	10 17 45.7	+0.8
USRK	Ussuriysk Ar.	8.06	333	P	Pn	10 17 45.9	+1.0
	baz=155,slow=12,SNR=29						
USRK	Ussuriysk Ar.	8.06	333		Pn	10 17 45.8	+0.9
ASAJ	Asahikawa	8.13	29	P	Pn	10 17 43.8	-1.9
	19nm,0.3s,baz=230,slow=10,SNR=116						
JKA	Kamikawa-asahi	8.13	29	Pn	Pn	10 17 43.8	-1.9
YSS	Yuzh-Sakhalins	10.67	21		Pn	10 18 15.7	-1.7
JCJ	Chichijima	10.89	155	P	Pn	10 18 14.7	-5.7
	21nm,0.3s,baz=27,slow=20,SNR=18						
JCJ				S	S	10 20 06.6	-16
	19nm,0.3s,baz=280,slow=23,SNR=9.8						
KLR	Kul'dur	12.71	344	P	Pn	10 18 41.8	-0.8
	4.2nm,0.3s,baz=153,slow=12,SNR=53						
BJT	Baijiatuau	16.63	286	P	P	10 19 27.4	-0.1
ENH	Enshi	23.93	262	P	P	10 20 39.8	-1.3
MA2	Magadan	24.13	17	P	P	10 20 42.9	+0.5
SONM	Songino Array	24.90	305	P	P	10 20 49.0	-0.8
	1.9nm,0.7s,baz=106,slow=9.4,SNR=8.8						
SONM	Songino Array	24.90	305	P	P	10 20 50.8	+1.1
TIXI	Tiksi	34.85	355	P	P	10 22 15.4	-1.1
	4.3nm,0.5s,baz=144,slow=5.3,SNR=19						
TIXI	Tiksi	34.85	355	P	P	10 22 16.1	-0.3
TIXI				IAmb	IAmb	10 22 16.7	
	comp=Z,4.5nm,0.7s						
ZALV	Zalesovo Beam	39.31	312	P	P	10 22 53.4	-0.7
	comp=Z,0.9nm,0.5s,baz=102,slow=7.8,SNR=4.5						
ZALV	Zalesovo Beam	39.31	312	P	P	10 22 54.2	+0.1
SHL	Shillong	39.97	266	P	P	10 22 59.1	-1.1
SHL				IAmb	IAmb	10 22 59.8	
	comp=Z,6.3nm,0.5s						
MK31	Makanchi Array	41.14	301	P	P	10 23 09.0	-0.3
MKAR	Makanchi Array	41.14	301	P	P	10 23 09.3	+0.1
	comp=Z,0.8nm,0.5s,baz=85,slow=11,SNR=8.3						
MKAR	Makanchi Array	41.14	301	P	P	10 23 09.2	-0.1
KURK	Kurchatov	43.16	308	P	P	10 23 24.9	-0.4
KURK				IAmb	IAmb	10 23 26.3	
	comp=Z,5.1nm,0.8s						
TARG	Taragay, Kyrgy	45.26	295	P	P	10 23 43.0	+0.5
TARG				IAmb	IAmb	10 23 44.2	
	comp=Z,7.8nm,0.7s						
BOOM	Boomskoye usch	46.41	297	P	P	10 23 51.4	+0.2
AAK	Ala-Archa	47.40	297	P	P	10 23 59.2	+0.4
AAK				IAmb	IAmb	10 23 59.9	
	comp=Z,6.8nm,1.1s						
A21K	Barrow	47.73	23	P	P	10 24 02.0	+1.3
BRVK	Borovoye	48.01	312	P	P	10 24 03.0	-0.1
MTN	Manton Dam	50.02	188	P	P	10 24 19.1	+0.5
MTN				IAmb	IAmb	10 24 32.2	
	comp=Z,15nm,1.3s						
KK31	Karatay Array	50.08	299	P	P	10 24 18.8	-0.1
KK31				IAmb	IAmb	10 24 20.1	
	comp=Z,3.8nm,0.8s						
KKAR	Karatay Array	50.08	299	P	P	10 24 19.2	+0.3
COEN	Coen	51.13	172	P	P	10 24 28.1	+1.2
NIL	Nilore	51.30	286	P	P	10 24 28.2	0.0
NIL				IAmb	IAmb	10 24 29.5	
	comp=Z,8.1nm,0.7s						
GAR	Garm	51.53	294	P	P	10 24 29.9	0.0
GAR				IAmb	IAmb	10 24 30.2	
	comp=Z,6.5nm,0.7s						
CHGR	Chuyangaron	52.50	294	P	P	10 24 36.9	-0.1
KNRA	Kununurra	53.11	190	P	P	10 24 42.1	+0.7
KNRA				IAmb	IAmb	10 24 58.9	
	comp=Z,12nm,1.2s						
ABKAR	Akbulak array	55.23	309	P	P	10 24 56.3	0.0
ABKAR	Akbulak array	55.23	309	P	P	10 24 56.3	0.0
ABKAR				IAmb	IAmb	10 24 56.8	
	comp=Z,3.8nm,0.7s						
INK	Inuvik	55.85	27	P	P	10 25 01.5	+1.1
AKTO	Aktyubinsk	56.03	311	P	P	10 25 01.8	-0.2
	comp=Z,1.8nm,0.9s,baz=80,slow=15,SNR=5.4						
WB0	Warramunga Arr	56.65	183	P	P	10 25 06.7	+0.1
WB0				IAmb	IAmb	10 25 33.5	
	comp=Z,3.5nm,1.1s						
WRA	Warramunga Arr	56.83	183	P	P	10 25 08.1	+0.2
	comp=Z,0.6nm,0.3s,baz=357,slow=7.5,SNR=18						
WRA	Warramunga Arr	56.83	183	P	P	10 25 07.6	-0.2
A36M	Sachs Harbour	57.44	21	P	P	10 25 12.8	+1.4
ASAR	Alice Springs	60.55	183	P	P	10 25 33.9	+0.6
	comp=Z,0.2nm,0.3s,baz=0.4,slow=6.2,SNR=11						
RES	Resolute Bay	63.34	14	P	P	10 25 51.6	+0.5
RES	Resolute Bay	63.34	14	P	P	10 25 51.6	+0.5
RES				IAmb	IAmb	10 26 16.4	
	comp=Z,8.1nm,1.4s						
RES	Resolute Bay	63.34	14	pmax	pmax		
	comp=Z,8.0nm,1.5s						
SUMG	Summit	70.55	359	P	P	10 26 38.0	+1.1
SUMG				IAmb	IAmb	10 26 39.0	
	comp=Z,2.0nm,0.7s						
AKASG	Malin Array Be	72.08	321	P	P	10 26 44.9	-1.1
	comp=Z,2.0nm,0.5s,baz=47,slow=6.1,SNR=4.8						
NC405	NORSAR Array S	72.50	335	P	P	10 26 48.2	-0.1

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*AEIC **17** 10:17:19±1.2, 62°53N±0°03×151°26W±0°07, h86^{km}±4^{km}, ML3.2, mb3.6/1(NEIC), ML3.4/156(NEIC), Error ellipse: s-maj=4.8km s-min=4.4km az=73.0*

*NEIC **17** 10:17:19.4±1.4, 62°55N±0°03×151°25W±0°05, h90^{km}±6^{km}, Error ellipse: s-maj=4.8km s-min=1.4km az=221.0*

ISC 17 10:17:19.6±1.0**, 62°54N**±0°03×**151°23W**±0°03**, h89**^{km}±7^{km}**, n250, σ0^{s}63**/230**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CUT	Chulitna	0.47	106	P	Pn	10 17 34.0	+0.1
	baz=286						
CUT				S	Sn	10 17 44.7	+0.2
	baz=286						
CUT	Chulitna	0.47	106		Pn	10 17 34.0	+0.1
CUT					Sn	10 17 44.7	+0.2
CUT	Chulitna	0.47	106	IAML		10 17 45.0	
	comp=E,5μm,0.3s						
CUT				IAML		10 17 45.5	
	comp=N,3μm,0.4s						
PPLA	Purkeypile	0.57	310	P	Pn	10 17 35.1	+0.2
	baz=130						
PPLA				S	Sn	10 17 46.5	+0.1
	baz=130						
PPLA	Purkeypile	0.57	310		Pn	10 17 35.1	+0.2
PPLA					Sn	10 17 46.5	+0.1
SKT	Skwentna	0.57	194	P	Pn	10 17 34.5	-0.4
	baz=13						
SKT				S	Sn	10 17 46.0	-0.2
	baz=13						
SKT	Skwentna	0.57	194		Pn	10 17 34.5	-0.4
SKT					Sn	10 17 46.0	-0.2
SKT	Skwentna	0.57	194	IAML		10 17 46.3	
	comp=E,4μm,0.3s						
M22K	Willow	0.94	146	P	Pn	10 17 38.1	-0.3
	baz=326						
M22K				S	Sn	10 17 52.3	-0.3
	baz=326						
M22K	Willow	0.94	146		Pn	10 17 38.1	-0.3
M22K					Sn	10 17 52.3	-0.3
CAST	Castle Rocks	0.97	337	P	Pn	10 17 38.7	-0.1
	baz=157						
CAST				S	Sn	10 17 52.3	-1.0
	baz=157						
CAST	Castle Rocks	0.97	337		Pn	10 17 38.7	-0.1
CAST					Sn	10 17 52.3	-1.0
TRF	Thorofare Moun	1.01	25	P	Pn	10 17 39.8	+0.3
	baz=206						
TRF	Thorofare Moun	1.01	25		Pn	10 17 39.8	+0.3
TRF	Thorofare Moun	1.01	25	IAML		10 17 55.7	
	comp=N,680nm,0.3s						
TRF				IAML		10 17 56.5	
	comp=E,560nm,0.8s						
KTH	Kantishna Hill	1.03	8		Pn	10 17 39.9	+0.3
KTH					Sn	10 17 54.3	-0.3
KTH	Kantishna Hill	1.03	8	IAML		10 17 54.9	
	comp=N,524nm,0.2s						
KTH				IAML		10 17 55.0	
	comp=E,566nm,0.5s						
STLK	Strandline Lak	1.08	196		Pn	10 17 39.8	-0.4
SUA	Susitna One	1.10	168	P	Pn	10 17 40.2	-0.2
	baz=348						
SUA	Susitna One	1.10	168		Pn	10 17 40.2	-0.2
SUA	Susitna One	1.10	168	IAML		10 17 58.4	
	comp=N,489nm,0.5s						
WAT7	Susitna Watana	1.14	74		Pn	10 17 40.9	0.0
WAT7					Sn	10 17 56.3	-0.6
L20K	Farewell, AK	1.23	269	P	Pn	10 17 41.5	-0.4
	baz=86						
L20K				S	Sn	10 17 58.0	-0.7
	baz=86						
L20K	Farewell, AK	1.23	269		Pn	10 17 41.5	-0.4
L20K					Sn	10 17 58.0	-0.7
WAT1	Susitna Watana	1.27	75	P	Pn	10 17 42.4	0.0
	baz=258						
WAT1	Susitna Watana	1.27	75		Pn	10 17 42.4	0.0
SPCG	Spurr Capps Gl	1.30	197		Pn	10 17 42.3	-0.6
GHO	Glory Hole Cre	1.33	124		Pn	10 17 43.5	+0.4
GHO	Glory Hole Cre	1.33	124	IAML		10 18 03.6	
	comp=E,1μm,0.5s						
GHO				IAML		10 18 03.7	
	comp=N,1μm,0.5s						
SPCP	Crater Peak Br	1.35	199		Pn	10 17 43.1	-0.3
SPCP					Sn	10 18 02.3	+0.8
PMR	Palmer	1.37	133	P	Pn	10 17 43.4	-0.2
	baz=314						
PMR	Palmer	1.37	133		Pn	10 17 43.4	-0.2
PMR	Palmer	1.37	133	IAML		10 18 05.2	
	comp=E,461nm,0.4s						
PMR				IAML		10 18 06.0	
	comp=N,583nm,0.2s						
SPBG	Spurr Blockage	1.39	203		Pn	10 17 44.1	+0.1
SPCN	Chakachatna No	1.39	199		Pn	10 17 43.9	0.0
RND	Reindeer	1.39	50		Pn	10 17 44.3	+0.3
RND					Sn	10 18 02.4	0.0
RND	Reindeer	1.39	50	IAML		10 18 03.4	
	comp=E,520nm,0.3s						
RND				IAML		10 18 03.5	
	comp=N,513nm,0.5s						
SPU	Mount Spurr	1.41	196		Pn	10 17 43.7	-0.5
SPCR	Spurr Chakacha	1.42	200	P	Pn	10 17 44.1	-0.2
	baz=18						
SPCR	Spurr Chakacha	1.42	200		Pn	10 17 44.1	-0.2
CHUM	Lake Minchumin	1.44	340	P	Pn	10 17 44.6	+0.2
	baz=160						
CHUM				S	Sn	10 18 02.8	-0.4
	baz=160						
CHUM	Lake Minchumin	1.44	340		Pn	10 17 44.6	+0.2
CHUM					Sn	10 18 02.8	-0.4
FIS	Fire Island	1.48	161		Pn	10 17 46.2	+1.4
K20K	Telida	1.54	304	P	Pn	10 17 45.6	-0.1
	baz=122						
K20K	Telida	1.54	304		Pn	10 17 45.6	-0.1
K20K	Telida	1.54	304	IAML		10 18 05.6	
	comp=E,279nm,0.7s						
SML	Sawmill	1.54	117	P	Pn	10 17 45.9	+0.1
	baz=299						
SML	Sawmill	1.54	117		Pn	10 17 46.0	+0.1
SML	Sawmill	1.54	117	IAML		10 18 10.0	
	comp=N,740nm,0.4s						
SML				IAML		10 18 11.4	
	comp=E,629nm,0.6s						
BPAW	Bear Paw Mtn.	1.57	4	P	Pn	10 17 46.0	-0.2

	baz=185						
BPAW				S	Sn	10 18 05.0	-1.3
	baz=185						
BPAW	Bear Paw Mtn.	1.57	4		Pn	10 17 46.0	-0.2
BPAW					Sn	10 18 05.0	-1.3
BPAW	Bear Paw Mtn.	1.57	4	IAML		10 18 06.6	
	comp=N,259nm,0.6s						
MCK	McKinley	1.59	40	P	Pn	10 17 46.8	+0.4
	baz=222						
MCK	McKinley	1.59	40		Pn	10 17 46.8	+0.4
MCK	McKinley	1.59	40	IAML		10 18 09.0	
	comp=E,296nm,0.7s						
M19K	Big River Lodg	1.61	248	P	Pn	10 17 46.1	-0.5
	baz=65						
M19K	Big River Lodg	1.61	248		Pn	10 17 46.1	-0.5
RC01	Rabbit Creek A	1.61	153	P	Pn	10 17 46.2	-0.5
	baz=334						
RC01	Rabbit Creek A	1.61	153		Pn	10 17 46.2	-0.5
RC01	Rabbit Creek A	1.61	153	IAML		10 18 08.2	
	comp=E,483nm,0.2s						
RC01				IAML		10 18 10.5	
	comp=N,672nm,0.2s						
WAT6	Susitna Watana	1.62	87	P	Pn	10 17 46.5	-0.4
	baz=270						
WAT6	Susitna Watana	1.62	87		Pn	10 17 46.5	-0.4
KNK	Knik Glacier	1.73	129	P	Pn	10 17 48.1	0.0
	baz=312						
KNK	Knik Glacier	1.73	129		Pn	10 17 48.1	0.0
KNK	Knik Glacier	1.73	129	IAML		10 18 14.7	
	comp=N,522nm,0.4s						
KNK				IAML		10 18 15.0	
	comp=E,811nm,0.4s						
L19K	White Mountain	1.73	260	P	Pn	10 17 47.9	-0.3
	baz=77						
L19K	White Mountain	1.73	260		Pn	10 17 47.9	-0.3
CAPN	Captain Cook N	1.77	179	P	Pn	10 17 50.9	+2.2
	baz=358						
CAPN	Captain Cook N	1.77	179		Pn	10 17 50.9	+2.2
BWN	Browne	1.82	25		Pn	10 17 50.0	+0.6
BWN	Browne	1.82	25	IAML		10 18 18.2	
	comp=E,183nm,0.6s						
BWN				IAML		10 18 18.3	
	comp=N,232nm,0.7s						
DHY	Denali Highway	1.85	71	P	Pn	10 17 50.1	+0.2
	baz=255						
DHY	Denali Highway	1.85	71		Pn	10 17 50.1	+0.2
DHY	Denali Highway	1.85	71	IAML		10 18 17.3	
	comp=N,395nm,0.6s						
DHY				IAML		10 18 17.9	
	comp=E,257nm,0.6s						
SCM	Sheep Creek Mo	1.96	109	P	Pn	10 17 50.9	-0.4
	baz=293						
SCM	Sheep Creek Mo	1.96	109		Pn	10 17 50.9	-0.4
SCM	Sheep Creek Mo	1.96	109	IAML		10 18 21.2	
	comp=E,375nm,0.8s						
SCM				IAML		10 18 25.9	
	comp=N,311nm,0.7s						
DFR	Drift River	2.07	200		Pn	10 17 52.6	-0.2
SLKM	Skilak Lake	2.09	166		Pn	10 17 51.8	-1.1
J20K	Nowinta River	2.11	323	P	Pn	10 17 53.0	-0.1
	baz=140						
J20K	Nowinta River	2.11	323		Pn	10 17 53.0	-0.1
J20K	Nowinta River	2.11	323	IAML		10 18 21.3	
	comp=N,212nm,0.5s						
NCT	North Crescent	2.14	203		Pn	10 17 53.7	0.0
PWL	Port Wells	2.17	139	P	Pn	10 17 53.3	-0.7
	baz=322						
PWL	Port Wells	2.17	139		Pn	10 17 53.3	-0.7
O22K	Cooper Landing	2.18	160	P	Pn	10 17 53.6	-0.5
	baz=341						
O22K	Cooper Landing	2.18	160		Pn	10 17 53.6	-0.5
RDWB	Redoubt West	2.19	201		Pn	10 17 54.4	0.0
RSO	Redoubt South	2.21	200		Pn	10 17 54.6	0.0
RDSO	Redoubt South	2.21	200		Pn	10 17 54.6	0.0
TT01	Tatalina	2.24	282		Pn	10 17 54.5	-0.3
TTA	Tatalina	2.24	282	P	Pn	10 17 54.5	-0.4
	baz=98						
TTA	Tatalina	2.24	282		Pn	10 17 54.5	-0.4
RED	Redoubt Volcan	2.25	200		Pn	10 17 55.1	0.0
NEA2	Nenana	2.28	24	P	Pn	10 17 55.0	-0.4
	baz=206						
NEA2	Nenana	2.28	24		Pn	10 17 55.0	-0.4
NEA2	Nenana	2.28	24	IAML		10 18 21.3	
	comp=E,121nm,0.4s						
N19K	Bonanza Creek	2.32	223	P	Pn	10 17 55.9	-0.1
	baz=40						
N19K	Bonanza Creek	2.32	223		Pn	10 17 55.9	-0.1
M24K	Tolsona, Glenn	2.40	98	P	Pn	10 17 57.4	+0.4
	baz=282						
M24K	Tolsona, Glenn	2.40	98		Pn	10 17 57.4	+0.4
WRH	Wood River Hil	2.40	35		Pn	10 17 56.9	0.0
MLY	Manley	2.52	5	P	Pn	10 17 58.5	0.0
	baz=185						
MLY	Manley	2.52	5		Pn	10 17 58.5	0.0
SVW2	Sparrevohn	2.52	237		Pn	10 17 58.3	-0.3
O20K	Slope Mountain	2.55	196	P	Pn	10 17 59.8	+0.7
	baz=14						
O20K	Slope Mountain	2.55	196		Pn	10 17 59.8	+0.7
GLI	Glacier Island	2.58	128	P	Pn	10 17 58.5	-0.8
	baz=312						
GLI	Glacier Island	2.58	128		Pn	10 17 58.5	-0.8
GLI	Glacier Island	2.58	128	IAML		10 18 38.9	
	comp=E,298nm,0.4s						
GLI				IAML		10 18 50.0	
	comp=N,292nm,0.9s						
SEW	Seward	2.59	160	P	Pn	10 17 58.7	-0.8
	baz=341						
SEW	Seward	2.59	160		Pn	10 17 58.6	-0.8
CCB	Clear Creek Bu	2.61	34		Pn	10 17 59.7	-0.1
JPK	Jack Peak	2.65	122		Pn	10 17 59.8	-0.6
IVE	Iliamna Volcan	2.67	200		Pn	10 18 00.9	+0.3
I21K	Tanana	2.68	353	P	Pn	10 18 00.8	+0.2
	baz=173						
I21K	Tanana	2.68	353		Pn	10 18 00.8	+0.2
PAX	Paxson	2.69	78	P	Pn	10 18 01.6	+0.7
	baz=263						
PAX	Paxson	2.69	78		Pn	10 18 01.6	+0.7
HDA	Harding Lake	2.69	44	P	Pn	10 18 00.9	+0.1
	baz=228						
HDA	Harding Lake	2.69	44		Pn	10 18 00.9	+0.1
HDA	Harding Lake	2.69	44	IAML		10 18 32.6	
	comp=E,240nm,0.4s						
KLU	Klutina	2.71	110	P	Pn	10 18 00.3	-0.9
	baz=295						
KLU	Klutina	2.71	110		Pn	10 18 00.3	-0.9
KLU	Klutina	2.71	110	IAML		10 18 45.7	
	comp=N,196nm,0.4s						
KLU				IAML		10 18 47.0	
	comp=E,158nm,0.3s						
ILSW	Iliamna Southw	2.72	201		Pn	10 18 01.8	+0.4
PS11	TAPS Pump St11	2.73	97		Pn	10 18 02.0	+0.7
ILS	Iliamna Low So	2.73	200		Pn	10 18 02.0	+0.4
I23K	Minto, Yukon-K	2.75	17	P	Pn	10 18 01.6	0.0
	baz=199						
I23K	Minto, Yukon-K	2.75	17		Pn	10 18 01.6	0.0
MDM	Murphy Dome	2.77	27		Pn	10 18 02.0	+0.1
O19K	Port Alsworth	2.78	214	P	Pn	10 18 02.0	0.0
	baz=31						
O19K	Port Alsworth	2.78	214		Pn	10 18 02.0	0.0
O19K	Port Alsworth	2.78	214	IAML		10 18 38.9	
	comp=E,104nm,0.5s						
O19K				IAML		10 18 59.5	
	comp=N,96nm,0.5s						
TCOL	CIGO, UAF Yank	2.79	31	P	Pn	10 18 02.4	+0.3
	baz=214						
TCOL	CIGO, UAF Yank	2.79	31		Pn	10 18 02.4	+0.3
TCOL	CIGO, UAF Yank	2.79	31	IAML		10 18 39.9	
	comp=N,273nm,0.5s						
TCOL				IAML		10 18 52.2	
	comp=E,201nm,0.6s						
BRLK	Bradley Lake	2.79	176		Pn	10 18 02.4	+0.2
BRLK	Bradley Lake	2.79	176	IAML		10 18 42.4	
	comp=E,152nm,0.6s						
BRLK				IAML		10 18 43.3	
	comp=N,209nm,0.6s						
COLA	College	2.79	31		Pn	10 18 02.2	+0.1
COLA	College	2.79	31	IAML		10 18 51.5	
	comp=N,220nm,0.5s						
PS08	TAPS Pump Stn8	2.82	42		Pn	10 18 02.6	+0.1
HARP	HAARP	2.82	90	P	Pn	10 18 03.2	+0.5
	baz=275						
HARP	HAARP	2.82	90		Pn	10 18 03.2	+0.5
FID	Port Fidalgo	2.89	126		Pn	10 18 02.4	-1.1
FID	Port Fidalgo	2.89	126	IAML		10 18 38.2	
	comp=N,221nm,0.3s						
FID				IAML		10 18 47.3	
	comp=E,260nm,0.5s						
HOM	Homer	2.89	184	P	Pn	10 18 04.4	+0.8
	baz=3.6						
HOM	Homer	2.89	184		Pn	10 18 04.4	+0.8
DIV	Divide	2.95	116		Pn	10 18 03.2	-1.2
IL31		2.96	39		Pn	10 18 04.5	+0.1
ILAR	Eielson Array	2.96	39	Pn	Pn	10 18 04.5	0.0
CNPM	China Poot	3.02	180		Pn	10 18 05.3	0.0
CNPM	China Poot	3.02	180	IAML		10 18 48.9	
	comp=E,180nm,0.4s						
P19K	Oil Pt	3.05	199	Pn	Pn	10 18 06.2	+0.4
P19K				IAML		10 18 47.5	
	comp=E,87nm,0.6s						
P19K				IAML		10 18 58.5	
	comp=N,96nm,1.1s						
POKR	Poker Plat Res	3.09	31	P	Pn	10 18 06.6	+0.4
	baz=215						
POKR	Poker Plat Res	3.09	31		Pn	10 18 06.6	+0.4
RIDG	Independent Ri	3.14	65	P	Pn	10 18 08.0	+1.1
	baz=250						
RIDG	Independent Ri	3.14	65		Pn	10 18 08.0	+1.1
H21K	Melozitna Rive	3.21	348	P	Pn	10 18 08.0	+0.1
	baz=167						
H21K	Melozitna Rive	3.21	348		Pn	10 18 08.0	+0.1
N25K	Chitina, Valde	3.26	104	P	Pn	10 18 08.1	-0.4
	baz=289						
N25K	Chitina, Valde	3.26	104		Pn	10 18 08.1	-0.4
N25K	Chitina, Valde	3.26	104	IAML		10 18 57.4	
	comp=N,119nm,0.6s						
N25K				IAML		10 18 58.7	
	comp=E,117nm,0.6s						
EYAK	Cordova Ski Ar	3.29	125	P	Pn	10 18 08.1	-0.8
	baz=309						
EYAK	Cordova Ski Ar	3.29	125		Pn	10 18 08.1	-0.8
DOT	Dot Lake	3.44	68		Pn	10 18 11.2	+0.2
MENT	Mentasta	3.48	80		Pn	10 18 13.8	+2.3
MENT				IAML		10 19 02.5	
	comp=N,157nm,0.6s						
SCRK	Sand Creek	3.58	63	P	Pn	10 18 13.3	+0.4
	baz=249						
SCRK	Sand Creek	3.58	63		Pn	10 18 13.3	+0.4
SCRK	Sand Creek	3.58	63	IAML		10 18 59.8	
	comp=E,93nm,0.7s						
SCRK				IAML		10 19 00.3	
	comp=N,84nm,0.7s						
H24K	Noodor Dome	3.62	22	P	Pn	10 18 13.5	+0.1
	baz=206						
H24K	Noodor Dome	3.62	22		Pn	10 18 13.5	+0.1
IM03		3.63	343		Pn	10 18 13.7	+0.3
IMAR	Indian Mountai	3.63	343	Pn	Pn	10 18 13.9	+0.4
L26K	Log Cabin Wild	3.66	79	P	Pn	10 18 14.6	+0.8
	baz=266						
L26K	Log Cabin Wild	3.66	79		Pn	10 18 14.6	+0.8
GLB	Gilahina Butte	3.67	104		Pn	10 18 13.5	-0.5
GLB	Gilahina Butte	3.67	104	IAML		10 19 09.4	
	comp=E,56nm,0.6s						
GLB				IAML		10 19 11.8	
	comp=N,70nm,0.6s						
GOAT	Goat Mountain	3.68	119		Pn	10 18 12.9	-1.3
P18K	Big Mountain,	3.71	214	Pn	Pn	10 18 14.8	+0.2
Q19K	Cape Douglas,	3.81	199	Pn	Pn	10 18 16.6	+0.7
RAGM	Ragged Mountai	3.81	122	Pn	Pn	10 18 16.7	+0.7
M26K	Nabesna, AK	3.83	88	P	Pn	10 18 15.6	-0.6
	baz=276						
M26K	Nabesna, AK	3.83	88		Pn	10 18 15.6	-0.6
M26K	Nabesna, AK	3.83	88	IAML		10 19 15.8	
	comp=E,65nm,0.6s						
M26K				IAML		10 19 22.2	
	comp=N,70nm,0.7s						
PRP	Porcupine Dome	3.91	37	P	Pn	10 18 17.5	+0.2
	baz=223						
PRP	Porcupine Dome	3.91	37		Pn	10 18 17.5	+0.2
PRP	Porcupine Dome	3.91	37	IAML		10 19 01.0	
	comp=E,30nm,0.8s						
PRP				IAML		10 19 10.4	
	comp=N,38nm,0.6s						
VRDI	Verde Repeater	3.91	106		Pn	10 18 16.5	-1.0
VRDI	Verde Repeater	3.91	106	IAML		10 19 16.4	
	comp=N,60nm,0.8s						
VRDI				IAML		10 19 19.5	
	comp=E,39nm,1.0s						
J26L	Joseph Creek	3.96	57	P	Pn	10 18 18.5	+0.5
	baz=244						
J26L	Joseph Creek	3.96	57		Pn	10 18 18.5	+0.5
HMT	Hamilton	4.01	120	Pn	Pn	10 18 17.7	-0.9
MCARA	McCarthy VSAT	4.04	103	P	Pn	10 18 18.3	-0.8
	baz=290						
MCARA	McCarthy VSAT	4.04	103		Pn	10 18 18.3	-0.8
NICHA	Nichawak Mount	4.18	120		Pn	10 18 20.0	-1.1
CRQM	Cirque	4.25	111		Pn	10 18 21.2	-0.9
CRQM	Cirque	4.25	111	IAML		10 19 31.9	
	comp=N,89nm,0.3s						
CRQE	Cirque	4.27	111	P	Pn	10 18 21.2	-1.1
	baz=298						
PS05	TAPS Pump Stn5	4.30	3		Pn	10 18 23.6	+1.1
M27K	Edge Creek, AK	4.35	88	P	Pn	10 18 23.5	+0.1
	baz=276						
M27K	Edge Creek, AK	4.35	88		Pn	10 18 23.5	+0.1
M27K	Edge Creek, AK	4.35	88	IAML		10 19 36.9	
	comp=N,36nm,1.9s						
M27K				IAML		10 19 37.8	
	comp=E,34nm,1.2s						
L27K	Beaver Creek,	4.35	79	P	Pn	10 18 22.9	-0.3
	baz=267						
L27K	Beaver Creek,	4.35	79		Pn	10 18 22.9	-0.3
L27K	Beaver Creek,	4.35	79	IAML		10 19 35.6	
	comp=N,25nm,0.7s						
SUCK	Suckling Hills	4.36	121	Pn	Pn	10 18 23.3	-0.1
KHIT	Khitrov Hills	4.36	115		Pn	10 18 22.6	-0.9
PTPK	Patty Peak	4.37	104		Pn	10 18 22.9	-0.7
BC03		4.37	79		Pn	10 18 23.4	-0.1
BCAR	Beaver Creek A	4.37	79	Pn	Pn	10 18 23.1	-0.5
TGL	Tana Glacier	4.38	110	Pn	Pn	10 18 23.6	-0.3
TGL				IAML		10 19 32.8	
	comp=N,68nm,0.5s						
BALM	Baldy	4.48	106		Pn	10 18 24.1	-1.0
KIAG	Kiagna River	4.52	107		Pn	10 18 24.4	-1.3
WAX	Waxell Ridge	4.53	114	Pn	Pn	10 18 25.2	-0.5
KAKN	Katmai Knife C	4.66	206		Pn	10 18 28.2	+0.7
COLD	Coldfoot	4.73	5	P	Pn	10 18 28.9	+0.5
	baz=186						
COLD	Coldfoot	4.73	5		Pn	10 18 28.9	+0.5
BARN	Barnard Glacie	4.78	104		Pn	10 18 28.5	-0.7
BARN	Barnard Glacie	4.78	104	IAML		10 19 42.4	
	comp=N,33nm,0.9s						
BARN				IAML		10 19 45.9	
	comp=E,41nm,0.6s						
FYU	Fort Yukon	4.80	30		Pn	10 18 29.4	+0.1
FYU				IAML		10 19 39.0	
	comp=E,51nm,4.2s						
KDAK	Kodiak Island	4.82	189	P	Pn	10 18 27.8	-1.8
	baz=7.3						
KDAK	Kodiak Island	4.82	189		Pn	10 18 28.7	-0.8
KDAK	Kodiak Island	4.82	189	IAML		10 21 21.3	
	comp=E,55nm,3.1s						
GRNC	Granite Creek	4.87	108		Pn	10 18 29.9	-0.5
GRNC				IAML		10 19 46.5	
	comp=N,44nm,0.9s						
GRNC				IAML		10 19 49.1	
	comp=E,25nm,0.9s						
YUK2	White River	4.93	94		Pn	10 18 30.1	-1.1
CTG	Chitna Glacier	4.96	104	P	Pn	10 18 31.0	-0.6
	baz=293						
CTGM	Chitina Glacie	4.96	104		Pn	10 18 31.0	-0.7
CTGM	Chitina Glacie	4.96	104	IAML		10 19 52.9	
	comp=E,19nm,1.7s						
CTGM				IAML		10 19 59.0	
	comp=N,29nm,3.6s						
EGAK	Eagle	5.02	59	P	Pn	10 18 32.3	0.0
	baz=248						
EGAK	Eagle	5.02	59		Pn	10 18 32.3	0.0
YAH	Yahtse	5.04	111	Pn	Pn	10 18 32.2	-0.7
YAH				IAML		10 19 51.2	
	comp=E,38nm,1.0s						
YUK3	Moose Creek	5.11	94	P	Pn	10 18 33.2	-0.5
	baz=283						
YUK3	Moose Creek	5.11	94		Pn	10 18 33.2	-0.5
LOGN	Logan Glacier	5.16	105	Pn	Pn	10 18 33.2	-1.3
LOGN				IAML		10 19 53.3	
	comp=E,25nm,1.0s						
LOGN				IAML		10 19 54.4	
	comp=N,30nm,1.0s						
OHAK	Old Harbor	5.43	192	Pn	Pn	10 18 38.5	+0.6
DAWY	Dawson	5.55	69	P	Pn	10 18 39.6	-0.1
	baz=259						
DAWY	Dawson	5.55	69		Pn	10 18 38.9	-0.7
BM03	Burnt Mountain	5.65	27		Pn	10 18 41.3	+0.4
BMAR	Burnt Mountain	5.66	27	Pn	Pn	10 18 41.0	0.0
PCA	Pinnacle	5.82	110	Pn	Pn	10 18 42.9	-0.4
BCPM	Bancas Point	6.17	110	Pn	Pn	10 18 47.5	-0.4
TOLK	Toolik Lake Re	6.17	6	Pn	Pn	10 18 49.7	+1.8
WHY	Whitehorse	8.02	96	Pn	Pn	10 19 12.5	-0.8
SKAG	Skagway	8.31	105	Pn	Pn	10 19 16.2	-1.0
A21K	Barrow	9.07	349	Pn	Pn	10 19 27.0	-0.3
INK	Inuvik	9.35	44	Pn	Pn	10 19 31.9	+0.8
JIS	Juneau Island	9.35	110	Pn	Pn	10 19 30.8	-0.5
A36M	Sachs Harbour	13.66	35	Pn	Pn	10 20 29.0	0.0
RES	Resolute Bay	22.71	35	P	P	10 22 14.6	+1.3
RES				IAmb	IAmb	10 22 26.8	
	comp=Z,3.2nm,1.1s						

IDC ***17*** *10:18:18.7±0.6, 53°.39N×170°.41E, h0^{km}, mb4.2/24, mb1 4.5/25, mb1mx4.2/52, mbtmp4.3/25, ML4.0/1, Error ellipse: s-maj=17.9km s-min=12.1km az=162.0*

MOS ***17*** *10:18:22.2±0.9, 53°.27N×170°.42E, h38^{km}, mb4.7/37, Error ellipse: s-maj=6.8km s-min=5.4km az=30.5*

AEIC ***17*** *10:18:22±2.3, 53°.69N±0°.09×170°.76E±0°.08, h25^{km}±4^{km}, Error ellipse: s-maj=14.2km s-min=5.3km az=197.0*

NEIC ***17*** *10:18:23.7±1.2, 53°.4N±0°.1×170°.46E±0°.09, h30^{km}±5^{km}, mb4.7/189, ML4.4(AEIC), Error ellipse: s-maj=16.4km s-min=8.0km az=184.0*

KRSC ***17*** *10:18:26.0±2.0, 53°.24N×169°.73E, h62^{km}±24^{km}, ML5.0*

ISC 17 10:18:22.1±0.4, **53°.26N**±0°.06×**170°.36E**±0°.04, **h24**^{km}, **n375**, σ**1^{s}.57**/404, **mb4.6**/134, **8C-5D, Near Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMY	Shemya	2.32	102	P	Pn	10 18 59.5	+0.8
SMY					Sn	10 19 27.5	+1.0
SMY	Shemya	2.32	102		Pn	10 18 59.5	+0.8
BKI	Bering	3.23	309	P	Pb	10 19 17.0	-1.7
MKZ	Mys Kozlova	5.26	288	P	Pn	10 19 40.2	+1.1
MKZ				S	Sn	10 20 37.5	-1.5
MKZ	Mys Kozlova	5.26	288	*e*P	Pn	10 19 40.2	+1.1
MKZ				*e*S	Sn	10 20 36.1	-2.9
KBTR	Krutoberegovo	5.28	307	P	Pn	10 19 40.9	+1.6
KBTR	Krutoberegovo	5.28	307	*e*P	Pn	10 19 39.7	+0.4
CEPE	Semis’ Perret	5.81	99		Pn	10 19 48.4	+1.8
SMKR	Semkarok	6.11	307	P	Pn	10 19 53.5	+2.6
SMKR	Semkarok	6.11	307	P	Pn	10 19 53.8	+2.9
ZLN	Zelenaya	6.20	300	P	Pn	10 19 54.7	+2.6
ZLN				S	Sn	10 21 02.0	-0.2
SPN	Mys Shipunski	6.22	273	P	Pn	10 19 53.4	+1.2
SPN				S	Sn	10 20 59.0	-3.5
SPN	Mys Shipunski	6.22	273	*e*P	Pn	10 19 53.4	+1.2
SPN				*e*S	Sn	10 20 58.4	-4.1
LGNR	Loginova	6.28	301	P	Pn	10 19 56.2	+2.8
LGNR	Loginova	6.28	301	*e*P	Pn	10 19 56.2	+2.8
SRKR	Sorokina	6.29	306	P	Pn	10 19 56.3	+3.0
SRKR	Sorokina	6.29	306	*e*P	Pn	10 19 56.7	+3.4
KLY	Klyuchi	6.39	302	P	Pn	10 19 55.9	+1.3
KRSR	Krestovskiy	6.40	302	P	Pn	10 19 56.5	+1.7
KRSR				S	Sn	10 21 08.5	+1.4
KRSR	Krestovskiy	6.40	302	*e*P	Pn	10 19 56.5	+1.7
KRSR				*e*S	Sn	10 21 03.8	-3.3
KII	Karymskiy	6.54	281	*e*P	Pn	10 19 58.2	+1.5
NLC	Nalytchevo	6.62	274	P	Pn	10 19 59.7	+2.0
NLC				S	Sn	10 21 10.0	-2.3
NLC	Nalytchevo	6.62	274	*e*P	Pn	10 19 59.7	+2.0
NLC				*e*S	Sn	10 21 08.3	-4.0
SDLR	Sedlovina	6.88	275	P	Pn	10 20 03.3	+1.7
SDLR				S	Sn	10 21 17.4	-1.7
SDLR	Sedlovina	6.88	275	*e*P	Pn	10 20 03.2	+1.7
SDLR				*e*S	Sn	10 21 16.1	-3.0
UGLR	Uglovaya	6.93	274	P	Pn	10 20 04.1	+2.0
UGLR				S	Sn	10 21 18.5	-1.6
UGLR	Uglovaya	6.93	274	*e*P	Pn	10 20 04.2	+2.1
UGLR				*e*S	Sn	10 21 17.3	-2.8
SMAR	Somma	6.94	275	P	Pn	10 20 04.0	+1.7
SMAR	Somma	6.94	275	*e*P	Pn	10 20 04.0	+1.7
KRER	Koryakskii	6.96	275	P	Pn	10 20 04.7	+2.0
KRER	Koryakskii	6.96	275	*e*P	Pn	10 20 04.6	+1.9
KRER				*e*S	Sn	10 21 18.0	-3.1
AVH	Avacha	6.97	275	P	Pn	10 20 04.8	+2.1
AVH				S	Sn	10 21 19.9	-1.3
AVH	Avacha	6.97	275	*e*P	Pn	10 20 04.8	+2.1
AVH				*e*S	Sn	10 21 17.9	-3.3
DALK	Dalny	6.99	273	P	Pn	10 20 03.6	+0.8
DALK				S	Sn	10 21 17.6	-3.8
DALK	Dalny	6.99	273	*e*P	Pn	10 20 04.2	+1.4
DALK				*e*S	Sn	10 21 17.0	-4.4
KOK	Koryaka	7.03	275	P	Pn	10 20 05.3	+1.8
KOK	Koryaka	7.03	275	*e*P	Pn	10 20 05.3	+1.8
PET	Petropavlovsk	7.05	273	*e*P	Pn	10 20 06.0	+2.5
PET				*e*S	Sn	10 21 22.2	-0.7
PET				pmax	pmax		
	comp=Z,30nm,0.4s						
PET				smax	smax		
	comp=N,112nm,0.8s						
PET				smax	smax		
	comp=E,228nm,0.5s						
PET	Petropavlovsk	7.05	273	*e*P	Pn	10 20 06.1	+2.5
PET				*e*S	Sn	10 21 19.3	-3.6
PET	Petropavlovsk	7.05	273	Pn	Pn	10 20 05.4	+1.8
TASE	Tanaga Southea	7.22	97		Pn	10 20 05.1	-1.0
RUS	Russkaya	7.22	268	P	Pn	10 20 08.4	+2.4
RUS				S	Sn	10 21 22.4	-4.8
RUS	Russkaya	7.22	268	*e*P	Pn	10 20 07.6	+1.6
RUS				*e*S	Sn	10 21 21.8	-5.4
TAFP	Tanaga Falls P	7.24	96		Pn	10 20 05.5	-0.7
ESO	Esso	7.28	296	P	Pn	10 20 10.6	+3.7
MTVR	Mutnovka	7.41	269	P	Pn	10 20 10.5	+1.7
MTVR	Mutnovka	7.41	269	P	Pn	10 20 10.5	+1.7
MTVR				S	Sn	10 21 28.3	-3.8
GNL	Ganaly	7.42	278	*e*P	Pn	10 20 11.0	+2.1
GRL	Gorelyy	7.46	270	P	Pn	10 20 12.2	+2.8
GRL	Gorelyy	7.46	270	*e*P	Pn	10 20 12.3	+2.8
TILK	Tilichiki	7.57	344	*e*P	Pn	10 20 15.1	+4.4
ASAK	Asacha	7.60	268	P	Pn	10 20 12.4	+1.1
ASAK				S	Sn	10 21 32.8	-3.8
ASAK	Asacha	7.60	268	*e*P	Pn	10 20 13.6	+2.3
ASAK				*e*S	Sn	10 21 32.5	-4.1
PEA0B	Petropavlovsk-	7.61	274⥣	*e*P	Pn	10 20 14.0	+2.6
PEA0B	Petropavlovsk-	7.61	274		Pn	10 20 13.7	+2.3
PETK	Petropavlovsk-	7.61	274	Pn	Pn	10 20 12.8	+1.5
	comp=E,11nm,0.3s,baz=90,slow=21,SNR=59						
PETK				Sn	Sn	10 21 35.8	-1.0
	comp=E,7.6nm,0.3s,baz=201,slow=25,SNR=9.9						
PETK	Petropavlovsk-	7.61	274	Pn	Pn	10 20 13.5	+2.1
KDTR	Khodutka, Kamc	7.63	264	P	Pn	10 20 11.8	+0.2
KDTR				S	Sn	10 21 31.6	-5.6
KDTR	Khodutka, Kamc	7.63	264	*e*P	Pn	10 20 11.3	-0.3
KDTR				*e*S	Sn	10 21 30.9	-6.3
KIMD	Kanaga Island	7.72	96		Pn	10 20 13.5	+0.7
KIWB	Kanaga Island	7.75	95	Pn	Pn	10 20 13.7	+0.5
APC	Apacha	7.96	273	P	Pn	10 20 19.5	+3.4
APC				S	Sn	10 21 45.4	+0.2
APC	Apacha	7.96	273	*e*P	Pn	10 20 19.3	+3.2
APC				*e*S	Sn	10 21 43.5	-1.7
ADK	Adak	8.02	95	P	Pn	10 20 17.1	+0.2
ADK	Adak	8.02	95	Pn	Pn	10 20 17.1	+0.2
GSTD	Great Sitkin T	8.30	93		Pn	10 20 20.0	-0.8
GSTD					Sn	10 21 51.5	-2.2
GSTR	Great Sitkin T	8.34	93	Pn	Pn	10 20 21.6	+0.2
GSMY	Great Sitkin M	8.35	93		Pn	10 20 21.0	-0.5
SKR	Severo-Kuril’s	9.16	259	*e*P	Pn	10 20 27.0	-5.6
SKR				pmax	pmax		
	comp=Z,154nm,1.1s						
SKR				MLR	MLR		
	comp=Z,2µm,14.0s						
SKR				MLR	MLR		
	comp=Z,3µm,16.0s						
SKR	Severo-Kuril’s	9.16	259	P	Pn	10 20 34.3	+1.7
SKR				S	Sn	10 22 08.3	-6.5
KOKL	Mount Kliuchef	9.41	90		Pn	10 20 36.1	+0.1
ATKA	Atka Island	9.43	90		Pn	10 20 36.1	-0.2
ATKA					Sn	10 22 19.6	-1.9
KOFP	Korovin Flat P	9.48	90		Pn	10 20 37.4	+0.4
MA2	Magadan	12.53	308⥣	*e*P	Pn	10 21 22.5	+3.9
MA2				pmax	pmax		
	comp=Z,45nm,1.4s						
UNV	Unalaska Valle	13.76	78	Pn	Pn	10 21 35.8	+0.4
AKUT	Akutan	14.15	77	Pn	Pn	10 21 41.0	+0.3

BILL	Bilibino	14.96	354	⇑eP	P	10 21 56.1	-0.9
BILL				eS	S	10 24 47.2	-6.6
BILL				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BILL				MLR	MLR		
	comp=Z,264nm,19.0s						
CHGN	Chignik	18.18	68		Pn	10 22 31.4	-1.1
CHGN				IAmb	IAmb	10 22 42.4	
	comp=Z,50nm,1.0s						
SVW2	Sparrevohn	19.86	53	P	P	10 22 49.9	-1.1
TTA	Tatalina	20.00	48	P	P	10 22 53.1	+0.4
TTA				pmax	pmax		
	comp=Z,20nm,1.3s						
TTA	Tatalina	20.00	48	P	P	10 22 53.1	+0.4
L19K	White Mountain	20.37	50	P	P	10 22 56.5	-0.2
Q19K	Cape Douglas,	20.68	60	P	P	10 22 59.2	-0.8
K20K	Telida	20.96	47	P	P	10 23 02.6	-0.3
J20K	Nowinta River	21.11	45	P	P	10 23 03.9	-0.7
RSO	Redoubt South	21.18	55	P	P	10 23 04.9	-0.7
KDAK	Kodiak Island	21.27	63	P	P	10 23 05.4	-0.9
	comp=Z,14nm,0.7s,baz=259,slow=5.2,SNR=12						
KDAK	Kodiak Island	21.27	63	P	P	10 23 05.4	-0.9
KDAK				pmax	pmax		
	comp=Z,21nm,1.2s						
KDAK	Kodiak Island	21.27	63	P	P	10 23 05.4	-0.9
KDAK				IAmb	IAmb	10 23 22.8	
	comp=Z,21nm,1.1s						
PPLA	Purkeypile	21.71	49	P	P	10 23 11.3	+0.1
PPLA				IAmb	IAmb	10 23 19.4	
	comp=Z,21nm,1.2s						
IMAR	Indian Mountai	21.79	40	P	P	10 23 10.9	-0.9
CAST	Castle Rocks	21.85	47	P	P	10 23 11.9	-0.6
SKT	Skwentna	21.89	51	P	P	10 23 12.3	-0.7
SKT				IAmb	IAmb	10 23 18.8	
	comp=Z,25nm,1.4s						
CNPM	China Poot	21.92	58	P	P	10 23 12.6	-0.7
CNPM				IAmb	IAmb	10 23 36.2	
	comp=Z,40nm,1.2s						
BRLK	Bradley Lake	22.09	57	P	P	10 23 14.5	-0.7
BRLK				IAmb	IAmb	10 23 28.6	
	comp=Z,63nm,1.5s						
SUA	Susitna One	22.22	53	P	P	10 23 15.6	-1.0
SUA				IAmb	IAmb	10 23 24.2	
	comp=Z,23nm,0.9s						
KTH	Kantishna Hill	22.38	47	P	P	10 23 18.4	0.0
KTH				IAmb	IAmb	10 23 29.6	
	comp=Z,26nm,1.2s						
BPAW	Bear Paw Mtn.	22.45	46	P	P	10 23 18.2	-0.7
TRF	Thorofare Moun	22.65	48	P	P	10 23 20.4	-0.8
RC01	Rabbit Creek A	22.69	54	P	P	10 23 21.1	-0.4
RC01				IAmb	IAmb	10 23 46.2	
	comp=Z,16nm,1.1s						
MLY	Manley	22.74	44	P	P	10 23 19.9	-2.2
SEW	Seward	22.81	56	P	P	10 23 21.4	-1.4
SEW				IAmb	IAmb	10 23 40.0	
	comp=Z,44nm,1.4s						
PMR	Palmer	23.00	53	P	P	10 23 23.6	-1.1
PMR				pmax	pmax		
	comp=Z,18nm,1.3s						
PMR	Palmer	23.00	53	P	P	10 23 23.6	-1.1
YAK	Yakutsk	23.11	308	⇓eP	P	10 23 26.9	+1.1
YAK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BWN	Browne	23.12	46	P	P	10 23 26.2	+0.3
BWN				IAmb	IAmb	10 23 40.9	
	comp=Z,18nm,0.7s						
A21K	Barrow	23.21	26	P	P	10 23 25.4	-1.4
A21K				IAmb	IAmb	10 23 25.8	
	comp=Z,9.3nm,0.6s						
RND	Reindeer	23.28	48	P	P	10 23 26.5	-1.2
RND				pmax	pmax		
	comp=Z,13nm,0.8s						
RND	Reindeer	23.28	48	P	P	10 23 26.5	-1.2
RND				IAmb	IAmb	10 23 26.9	
	comp=Z,13nm,0.8s						
MCK	McKinley	23.29	47	P	P	10 23 27.1	-0.6
MCK				pmax	pmax		
	comp=Z,20nm,1.4s						
MCK	McKinley	23.29	47	P	P	10 23 27.1	-0.6
MCK				IAmb	IAmb	10 23 54.9	
	comp=Z,20nm,1.4s						
I23K	Minto, Yukon-K	23.34	44	P	P	10 23 27.5	-0.5
NEA2	Nenana	23.36	45	P	P	10 23 27.5	-0.9
PWL	Port Wells	23.37	55	P	P	10 23 26.9	-1.6
PWL				IAmb	IAmb	10 23 38.5	
	comp=Z,43nm,1.2s						
SML	Sawmill	23.39	52	P	P	10 23 27.4	-1.3
SML				pmax	pmax		
	comp=Z,15nm,1.1s						
SML	Sawmill	23.39	52	P	P	10 23 27.5	-1.3
SML				IAmb	IAmb	10 23 55.5	
	comp=Z,15nm,1.1s						
COLD	Coldfoot	23.52	38	P	P	10 23 28.6	-1.2
WRH	Wood River Hil	23.76	46	P	P	10 23 31.1	-1.1
MDM	Murphy Dome	23.77	44	P	P	10 23 31.1	-1.3
SCM	Sheep Creek Mo	23.87	52	P	P	10 23 32.1	-1.3
SCM				pmax	pmax		
	comp=Z,23nm,1.1s						
SCM	Sheep Creek Mo	23.87	52	P	P	10 23 32.1	-1.3
SCM				IAmb	IAmb	10 23 38.9	
	comp=Z,23nm,1.1s						
CCB	Clear Creek Bu	23.91	45	P	P	10 23 32.5	-1.0
DHY	Denali Highway	23.91	49	P	P	10 23 32.7	-1.2
DHY				IAmb	IAmb	10 23 43.4	
	comp=Z,18nm,1.3s						
TCOL	CIGO, UAF Yank	23.91	45	P	P	10 23 32.6	-1.0
TCOL				IAmb	IAmb	10 23 34.5	
	comp=Z,25nm,1.4s						
COLA	College	23.92	45	⇑eP	P	10 23 33.0	-0.7
COLA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
COLA	College	23.92	45	P	P	10 23 32.6	-1.0
POKR	Poker Plat Res	24.13	44	P	P	10 23 35.2	-0.5
TOLK	Toolik Lake Re	24.18	35	P	P	10 23 35.1	-1.1
TOLK				IAmb	IAmb	10 23 36.8	
	comp=Z,14nm,0.5s						
HDA	Harding Lake	24.24	46	P	P	10 23 35.0	-1.7
KLR	Kul'dur	24.30	276	P	P	10 23 37.5	+0.2
	comp=Z,1.3nm,0.5s,baz=90,slow=9.9,SNR=3.7						
IL31		24.31	45	P	P	10 23 35.6	-1.7
ILAR	Eielson Array	24.31	45	P	P	10 23 35.6	-1.8
	comp=Z,2.0nm,0.4s,baz=250,slow=7.1,SNR=12						
ILAR	Eielson Array	24.31	45	P	P	10 23 35.7	-1.6
M24K	Tolsona, Glenn	24.42	51	P	P	10 23 38.1	-0.4
PAX	Paxson	24.78	49	P	P	10 23 40.8	-0.9
PAX				pmax	pmax		
	comp=Z,10.0nm,1.1s						
PAX	Paxson	24.78	49	P	P	10 23 40.8	-0.9
PRP	Porcupine Dome	24.99	43	P	P	10 23 42.4	-1.3
RIDG	Independent Ri	25.10	48	P	P	10 23 42.4	-2.1
RIDG				IAmb	IAmb	10 23 44.9	
	comp=Z,16nm,1.2s						
N25K	Chitina, Valde	25.17	53	P	P	10 23 44.3	-0.9
N25K				IAmb	IAmb	10 24 03.9	
	comp=Z,13nm,1.1s						
RAGM	Ragged Mountai	25.18	56	P	P	10 23 45.0	-0.3
FYU	Fort Yukon	25.27	41	P	P	10 23 45.4	-0.6
FYU				IAmb	IAmb	10 23 50.9	
	comp=Z,15nm,0.9s						
DOT	Dot Lake	25.44	48	P	P	10 23 47.2	-0.4
DOT				IAmb	IAmb	10 23 51.4	
	comp=Z,16nm,0.9s						
SCRK	Sand Creek	25.49	47	P	P	10 23 46.0	-2.2
SCRK				IAmb	IAmb	10 23 48.2	
	comp=Z,6.5nm,0.6s						
GLB	Gilahina Butte	25.55	53	P	P	10 23 47.8	-0.9
MENT	Mentasta	25.57	50	P	P	10 23 47.8	-1.1
MENT				IAmb	IAmb	10 24 10.2	
	comp=Z,14nm,1.2s						
BERG	Berg Lake	25.67	55	P	P	10 23 48.9	-0.8
BERG				IAmb	IAmb	10 24 11.1	
	comp=Z,32nm,1.1s						
BMAR	Burnt Mountain	25.68	39	P	P	10 23 49.5	-0.3
VRDI	Verde Repeater	25.73	54	P	P	10 23 49.8	-0.7
VRDI				IAmb	IAmb	10 24 05.2	
	comp=Z,20nm,1.4s						
TIXI	Tiksi	25.74	331	P	P	10 23 50.4	+0.2
	comp=Z,2.1nm,0.5s,baz=114,slow=11,SNR=7.2						
TIXI	Tiksi	25.74	331	⇓eP	P	10 23 50.8	+0.6
TIXI	Tiksi	25.74	331	P	P	10 23 50.8	+0.6
L26K	Log Cabin Wild	25.75	49	P	P	10 23 49.9	-0.5
CRQM	Cirque	25.91	55	P	P	10 23 51.6	-0.5
CRQM				IAmb	IAmb	10 24 08.3	
	comp=Z,44nm,1.3s						
MCARA	McCarthy VSAT	25.93	53	P	P	10 23 51.2	-0.8
MCARA				IAmb	IAmb	10 24 15.2	
	comp=Z,21nm,1.2s						
ISLE	Juniper Island	26.32	55	P	P	10 23 55.1	-0.6
ISLE				IAmb	IAmb	10 24 16.8	
	comp=Z,25nm,1.2s						
M27K	Edge Creek, AK	26.43	51	P	P	10 23 56.7	0.0
M27K				IAmb	IAmb	10 24 08.1	
	comp=Z,18nm,1.3s						
L27K	Beaver Creek,	26.44	49	P	P	10 23 56.4	-0.3
BCAR	Beaver Creek A	26.46	49	P	P	10 23 56.6	-0.3
MESA	MESA	26.55	56	P	P	10 23 58.0	+0.1
GRNC	Granite Creek	26.60	55	P	P	10 23 58.3	-0.1
GRNC				IAmb	IAmb	10 23 58.9	
	comp=Z,16nm,0.7s						
USRK	Ussuriysk Ar.	26.60	266	P	P	10 23 58.7	+0.5
	comp=Z,2.1nm,0.7s,baz=70,slow=6.4,SNR=5.5						
USRK	Ussuriysk Ar.	26.60	266	P	P	10 23 58.9	+0.7
USRK	Ussuriysk Ar.	26.60	266	P	P	10 23 58.9	+0.7
BARN	Barnard Glacie	26.61	54	P	P	10 23 58.6	+0.2
BARN				IAmb	IAmb	10 24 09.3	
	comp=Z,21nm,1.3s						
YAH	Yahtse	26.64	55	P	P	10 23 58.0	-0.7
EGAK	Eagle	26.76	45	P	P	10 23 57.8	-1.6
CTGM	Chitina Glacie	26.78	54	P	P	10 23 59.2	-0.7
CTGM				IAmb	IAmb	10 24 21.3	
	comp=Z,22nm,1.3s						
LOGN	Logan Glacier	26.95	54	P	P	10 24 00.9	-0.6
LOGN				IAmb	IAmb	10 24 23.9	
	comp=Z,18nm,1.2s						
HYT	Haines Junctio	28.65	54	P	P	10 24 16.1	-0.5
INK	Inuvik	29.93	38	P	P	10 24 26.5	-1.2
	comp=Z,1.0nm,0.3s,baz=266,slow=7.9,SNR=16						
INK				PcP	PcP	10 27 29.4	-0.1
	comp=Z,1.0nm,0.4s,baz=292,slow=3.2,SNR=11						
INK	Inuvik	29.93	38	P	P	10 24 26.9	-0.7
A36M	Sachs Harbour	32.81	31	P	P	10 24 52.3	-0.6
A36M				IAmb	IAmb	10 25 14.4	
	comp=Z,8.4nm,1.2s						
DLBC	Dease Lake	32.89	57	P	P	10 24 54.6	+0.7
H11N2	WAKE ISLAND Hy	33.57	186	T	T	11 00 25.9	
	baz=4.5,slow=76,SNR=173						
H11N3	WAKE ISLAND Hy	33.58	186	T	T	11 00 26.8	
	baz=4.5,slow=76,SNR=309						
H11N1	WAKE ISLAND Hy	33.59	186	T	T	11 00 27.2	
	baz=4.5,slow=76,SNR=264						
H11S1	WAKE ISLAND Hy	34.79	186	T	T	11 01 57.9	
	baz=4.5,slow=76,SNR=1277						
H11S3	WAKE ISLAND Hy	34.81	186	T	T	11 02 16.4	
	baz=4.5,slow=76,SNR=647						
H11S2	WAKE ISLAND Hy	34.81	186	T	T	11 02 10.3	
	baz=4.5,slow=76,SNR=668						
YKA	Yellowknife Ar	38.74	46	P	P	10 25 43.2	-0.6
	comp=Z,0.5nm,0.4s,baz=291,slow=12,SNR=12						
YKA	Yellowknife Ar	38.74	46	ceP	P	10 25 47.5	+3.7
YKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
YKA	Yellowknife Ar	38.74	46	P	P	10 25 42.7	-1.2
SONM	Songino Array	39.79	289	P	P	10 25 52.9	-0.1
	comp=Z,0.7nm,0.6s,baz=59,slow=8.3,SNR=4.3						
SONM	Songino Array	39.79	289	P	P	10 25 54.1	+1.1
SONM				pmax	pmax		
	comp=Z,2.0nm,1.2s						
SONM	Songino Array	39.79	289	P	P	10 25 54.1	+1.1
HHC	Hu-ho-hao-te	40.80	277	eP	P	10 26 01.3	-0.1
HHC				pmax	pmax		
	comp=Z,12nm,1.1s						
HHC				pmax	pmax		
	comp=Z,130nm,5.3s						
NLWA	Neilton Lookou	41.06	71	P	P	10 26 04.2	+0.9
NLWA				IAmb	IAmb	10 26 31.2	
	comp=Z,37nm,1.4s						
NJ2	Nanjing	42.29	261	eP	P	10 26 13.6	+0.1
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
B08A	Colville Reser	43.06	67	P	P	10 26 19.9	+0.2
DBO	Dodson Butte	43.90	75	P	P	10 26 27.3	+0.7
YBH	Yreka Blue Hor	45.06	77	P	P	10 26 36.8	+0.9
YBH	Yreka Blue Hor	45.06	77	P	P	10 26 36.8	+0.9
I07A	Izee	45.47	72	P	P	10 26 39.2	+0.1
I07A				IAmb	IAmb	10 26 39.9	
	comp=Z,6.0nm,1.1s						
F10A	Beach Ranch, E	45.61	68	P	P	10 26 39.7	-0.5
BMO	Blue Mountains	46.25	70	P	P	10 26 45.0	-0.2
BMO				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BMO	Blue Mountains	46.25	70	P	P	10 26 45.0	-0.2
MOD	Modoc Plateau	46.36	75	P	P	10 26 46.9	+0.7
MOD				IAmb	IAmb	10 26 57.9	
	comp=Z,3.7nm,0.7s						
PLID	Pearl Lake	46.84	69	P	P	10 26 50.0	0.0
PLID				IAmb	IAmb	10 27 16.9	
	comp=Z,9.0nm,1.4s						
ZALV	Zalesovo Beam	47.75	307	P	P	10 26 56.1	-0.5
ZALV	Zalesovo Beam	47.75	307	P	P	10 26 56.1	-0.5
TPUB	Ta-pu	47.82	251	P	P	10 26 59.9	+2.3
SPITS	Spitsbergen Ar	47.87	353	P	P	10 26 57.1	-0.2
SPITS				pmax	pmax		
	comp=Z,50nm,1.2s						
SPB2	Spitsbergen Ar	47.87	353	P	P	10 26 57.2	-0.1
MFID	Camas Ranch	47.97	70	P	P	10 26 58.5	-0.3
HLID	Hailey	48.68	69	P	P	10 27 04.0	-0.2
MCMT	McKenzie Canyo	48.75	67	P	P	10 27 04.5	-0.4
BCYI	Bear Canyon	48.77	68	P	P	10 27 04.6	-0.4
BMN	Battle Mountai	49.09	74	P	P	10 27 07.6	+0.2
BMN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BMN	Battle Mountai	49.09	74	P	P	10 27 07.6	+0.2
BMN				IAmb	IAmb	10 27 08.5	
	comp=Z,3.1nm,0.7s						
ENH	Enshi	49.16	267	P	P	10 27 09.0	+1.2
ENH				IAmb	IAmb	10 27 10.3	
	comp=Z,9.2nm,0.7s						
QLMT	Earthquake Lak	49.53	66	P	P	10 27 10.6	-0.2
YHL	Hebgen Lake	49.66	66	P	P	10 27 11.8	-0.1
YHL				IAmb	IAmb	10 27 12.8	
	comp=Z,6.9nm,1.1s						
NVAR	Mina Array Bea	49.77	77	P	P	10 27 13.2	+0.5
	comp=Z,0.7nm,0.6s,baz=303,slow=7.9,SNR=6.4						
NV11	Mina Array Sit	49.86	77	P	P	10 27 13.7	+0.4
NV11				IAmb	IAmb	10 27 29.9	
	comp=Z,6.6nm,1.4s						
YHH	Holmes Hill	49.88	66	P	P	10 27 13.5	-0.1
YHH				IAmb	IAmb	10 27 14.2	
	comp=Z,3.3nm,0.8s						
YMR	Madison River	49.89	66	P	P	10 27 13.0	-0.5
YMR				IAmb	IAmb	10 27 14.4	
	comp=Z,8.7nm,1.1s						
ELK	Elko	50.02	73	P	P	10 27 15.0	+0.4
ELK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ELK	Elko	50.02	73	P	P	10 27 15.0	+0.4
H17A	Grant Village	50.28	66	P	P	10 27 17.7	+1.2
H17A				IAmb	IAmb	10 27 18.8	
	comp=Z,6.7nm,1.2s						
FLWY	Flagg Ranch	50.41	67	P	P	10 27 18.2	+0.7
FLWY				IAmb	IAmb	10 27 19.4	
	comp=Z,6.7nm,0.8s						
RLMT	Red Lodge	50.53	65	P	P	10 27 18.7	+0.3
RLMT				IAmb	IAmb	10 27 19.4	
	comp=Z,6.3nm,1.1s						
HVU	Hansel Valley	50.75	70	P	P	10 27 20.2	+0.2
HVU				pmax	pmax		
	comp=Z,2.0nm,0.8s						
HVU	Hansel Valley	50.75	70	P	P	10 27 20.1	+0.2
LOHW	Long Hollow	50.77	67	P	P	10 27 20.5	+0.3
DUG	Dugway, Tooele	51.77	72	P	P	10 27 27.9	+0.2
DUG				pmax	pmax		
	comp=Z,9.0nm,1.5s						
DUG	Dugway, Tooele	51.77	72	P	P	10 27 27.9	+0.2
DUG				IAmb	IAmb	10 27 51.6	
	comp=Z,8.9nm,1.5s						
BW06	Boulder Array	51.90	67	P	P	10 27 28.8	+0.1
PD31	Pinedale Array	51.90	67	P	P	10 27 28.7	0.0
PDAR	Pinedale Array	51.90	67	P	P	10 27 28.7	0.0
	comp=Z,2.6nm,0.7s,baz=300,slow=3.7,SNR=16						
PDAR	Pinedale Array	51.90	67	P	P	10 27 29.0	+0.3
PSUT	Pine Spring	52.29	74	P	P	10 27 32.2	+0.6
PSUT				IAmb	IAmb	10 27 42.1	
	comp=Z,3.2nm,0.6s						
WMQ	Urumqi	52.62	295	eP	P	10 27 37.1	+3.3
KURK	Kurchatov	52.74	307	⇓eP	P	10 27 34.1	-0.4
KURK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KURK	Kurchatov	52.74	307	P	P	10 27 34.5	+0.1
KURK				IAmb	IAmb	10 27 35.2	
	comp=Z,8.3nm,0.9s						
SUMG	Summit	52.87	10	P	P	10 27 35.4	-0.2
SUMG				pmax	pmax		
	comp=Z,15nm,1.5s						
SUMG	Summit	52.87	10	i P	P	10 27 35.2	-0.5
SUMG				IAmb	IAmb	10 27 37.4	
	comp=Z,0.8nm,0.3s						
SUMG	Summit	52.87	10	P	P	10 27 35.4	-0.2
SUMG				IAmb	IAmb	10 27 53.3	
	comp=Z,16nm,1.5s						
MSU	Marysvale	53.27	73	P	P	10 27 40.1	+1.2
MSU	Marysvale	53.27	73	P	P	10 27 40.1	+1.2
RDMU	Red Mountain	53.36	69	P	P	10 27 40.4	+0.9
RDMU				IAmb	IAmb	10 27 50.7	
	comp=Z,3.9nm,0.7s						
MK31	Makanchi Array	53.51	301	⇑eP	P	10 27 39.5	-0.7
MK31	Makanchi Array	53.51	301	P	P	10 27 39.5	-0.7
MKAR	Makanchi Array	53.51	301	P	P	10 27 39.5	-0.8
	comp=Z,1.3nm,0.7s,baz=56,slow=7.4,SNR=12						
MKAR	Makanchi Array	53.51	301	P	P	10 27 39.8	-0.4
ARCES	ARCESS Array B	54.86	346	P	P	10 27 49.3	-0.5
	comp=Z,9.6nm,1.1s,baz=27,slow=8.2,SNR=5.3						
ARCES	ARCESS Array B	54.86	346	P	P	10 27 50.2	+0.4
BRVK	Borovoye	54.98	313	⇓eP	P	10 27 50.7	-0.1
BRVK				pmax	pmax		
	comp=Z,12nm,1.7s						
BRVK	Borovoye	54.98	313	P	P	10 27 50.8	-0.1
BRVK				IAmb	IAmb	10 27 51.7	
	comp=Z,5.9nm,0.8s						
ISCO	Idaho Springs	56.10	67	P	P	10 28 00.6	+1.2
ISCO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ISCO	Idaho Springs	56.10	67	P	P	10 28 00.6	+1.2
ISCO				IAmb	IAmb	10 28 01.4	
	comp=Z,3.3nm,0.8s						
SFJD	Kangerlussuaq	56.17	18	P	P	10 27 58.5	-0.6
SFJD				pmax	pmax		
	comp=Z,15nm,1.0s						
SFJD	Kangerlussuaq	56.17	18	P	P	10 27 58.5	-0.6
OGNE	Ogallala	57.26	64	P	P	10 28 07.8	+0.4
PRGR	Permogore	57.39	332	eP	P	10 28 07.5	-0.4
PRGR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ANMO	Albuquerque	59.04	72	⇑eP	P	10 28 20.5	+0.4
ANMO				pmax	pmax		
	comp=Z,5.0nm,2.5s						
KLMR	Klimovskoe	59.69	335	eP	P	10 28 19.5	-4.3
KLMR				pmax	pmax		
	comp=Z,19nm,1.6s						
KLMR	Klimovskoe	59.69	335	eP	P	10 28 19.6	-4.3
KLMR				AMP		10 28 21.3	
	comp=Z,19nm,1.6s						
CBKS	Cedar Bluff	60.02	64	P	P	10 28 26.3	-0.3
CBKS				pmax	pmax		
	comp=Z,8.0nm,0.6s						
CBKS	Cedar Bluff	60.02	64	P	P	10 28 26.3	-0.3
AAK	Ala-Archa	60.38	302	⇑eP	P	10 28 29.8	+0.6
AAK				pmax	pmax		
	comp=Z,25nm,2.5s						
R32A	Long Quarter,	60.85	64	P	P	10 28 32.0	-0.3
KSH	Kashi	61.90	299	P	P	10 28 43.4	+4.0
KSH				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KK31	Karatay Array	62.03	305	P	P	10 28 40.1	0.0
KK31				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KK31	Karatay Array	62.03	305	P	P	10 28 40.1	0.0
KKAR	Karatay Array	62.03	305	P	P	10 28 39.9	-0.2
KKAR	Karatay Array	62.03	305	P	P	10 28 39.9	-0.2
AKTO	Aktyubinsk	62.06	318	P	P	10 28 39.7	-0.5
	comp=Z,2.7nm,0.7s,baz=42,slow=6.7,SNR=9.5						
FIA1	FINESS Array S	62.18	342	P	P	10 28 40.6	-0.2
FINES	FINESS Array B	62.18	342	P	P	10 28 40.6	-0.1
	comp=Z,3.7nm,0.8s,baz=46,slow=8.2,SNR=5.6						
FINES	FINESS Array B	62.18	342	i P	P	10 28 40.7	-0.1
FINES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
FINES	FINESS Array B	62.18	342	P	P	10 28 40.4	-0.4
U32A	Winter Ranch,	62.18	66	P	P	10 28 40.9	-0.4
ABKAR	Akbulak array	62.19	316	P	P	10 28 41.0	-0.1
ABKAR				IAmb	IAmb	10 28 41.7	
	comp=Z,5.2nm,1.4s						
WMOK	Wichita Mounta	63.51	67	P	P	10 28 50.2	+0.1
WMOK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
WMOK	Wichita Mounta	63.51	67	P	P	10 28 50.2	+0.1
WMOK				IAmb	IAmb	10 28 51.0	
	comp=Z,5.8nm,0.7s						
P40A	Paris	63.55	59	P	P	10 28 49.8	-0.5
OK031	S. Brethren Rd	63.68	65	P	P	10 28 50.7	-0.5
OK031				IAmb	IAmb	10 28 51.3	
	comp=Z,7.0nm,0.7s						
CHTO	Chiang Mai	64.05	267	P	P	10 28 55.3	+1.5
CHTO				pmax	pmax		
	comp=Z,3.0nm,1.0s						
CHTO	Chiang Mai	64.05	267	P	P	10 28 55.3	+1.5
CHTO				IAmb	IAmb	10 28 56.0	
	comp=Z,3.3nm,0.9s						
BTK	Batken	64.15	303	P	P	10 28 54.6	+0.2
BTK				pmax	pmax		
	comp=Z,11nm,1.3s						
BTK	Batken	64.15	303	P	P	10 28 54.6	+0.2
BTK				IAmb	IAmb	10 28 55.4	
	comp=Z,11nm,1.3s						
TUL1	Leonard	64.28	64	P	P	10 28 53.5	-1.6
CMAR	Chiang Mai Arr	64.32	267	P	P	10 28 57.0	+1.4
	comp=Z,0.9nm,0.4s,baz=27,slow=6.9,SNR=6.1						
R40A	Maddies Statio	64.37	60	P	P	10 28 54.3	-1.4
ABTX	Abilene, Hawle	64.60	69	P	P	10 28 57.3	-0.1
NC300	NORSAR Array S	64.61	349	P	P	10 28 56.9	0.0
NC300				IAmb	IAmb	10 29 04.3	
	comp=Z,7.3nm,1.1s						
U38A	Gravette	64.64	63	P	P	10 28 56.1	-1.4
U38A				IAmb	IAmb	10 28 57.2	
	comp=Z,3.7nm,0.6s						
NC204	NORSAR Array S	64.67	349	P	P	10 28 57.5	+0.1
TX31	Lajitas Ar. Si	64.76	74	P	P	10 28 58.8	+0.3
TX32	Lajitas Array	64.76	74	P	P	10 28 58.9	+0.4
TX32				IAmb	IAmb	10 28 59.6	
	comp=Z,4.7nm,0.8s						
TXAR	Lajitas Array	64.76	74	P	P	10 28 58.9	+0.4
	comp=Z,4.2nm,0.6s,baz=306,slow=5.0,SNR=29						
NB201	NORSAR Array S	64.83	349	P	P	10 28 58.3	-0.1
NB2	NORSAR Subarra	64.85	349	P	P	10 28 58.4	-0.1
	comp=Z,2.7nm,0.6s,baz=13,slow=6.9						
NOA	NORSAR Array B	64.85	349	P	P	10 28 58.3	-0.2
	comp=Z,3.0nm,0.6s,baz=15,slow=6.6,SNR=13						
GAR	Garm	65.20	302	P	P	10 29 01.5	+0.2
GAR				IAmb	IAmb	10 29 12.5	
	comp=Z,13nm,1.2s						
MGMO	Mountain Grove	65.22	61	P	P	10 28 59.9	-1.4
MGMO				IAmb	IAmb	10 29 00.4	
	comp=Z,5.1nm,0.6s						
HFS	Hagfors	65.42	347	P	P	10 29 01.7	-0.5
U40A	Yellville	65.51	62	P	P	10 29 02.0	-1.2
U40A				IAmb	IAmb	10 29 02.6	
	comp=Z,6.6nm,0.9s						
FVM	French Village	65.55	59	P	P	10 29 02.5	-0.9
FVM				pmax	pmax		
	comp=Z,6.0nm,0.7s						
FVM	French Village	65.55	59	P	P	10 29 02.5	-0.9
FVM				IAmb	IAmb	10 29 03.1	
	comp=Z,5.5nm,0.7s						
T42A	Van Buren	65.93	60	P	P	10 29 04.3	-1.5
T42A				IAmb	IAmb	10 29 05.0	
	comp=Z,3.6nm,0.7s						
CHGR	Chuyangaron	66.05	303	P	P	10 29 06.6	-0.1
JCT	Junction City	66.12	71	P	P	10 29 07.0	-0.2
JCT				pmax	pmax		
	comp=Z,9.0nm,0.6s						
JCT	Junction City	66.12	71	P	P	10 29 07.0	-0.2
FCAR	Ozark Folk Cen	66.25	62	P	P	10 29 06.7	-1.3
PBMO	Poplar Bluff	66.47	60	P	P	10 29 08.4	-0.9
M53A	WI Miller and	67.65	50	P	P	10 29 16.1	-0.6
NIL	Nilore	67.73	297	P	P	10 29 17.6	+0.2
NIL				pmax	pmax		
	comp=Z,14nm,1.1s						
NIL	Nilore	67.73	297	P	P	10 29 17.6	+0.2
T47A	Sharon Grove	68.01	57	P	P	10 29 18.6	-0.5
O52A	Adamsville	68.15	52	P	P	10 29 19.4	-0.5
WVT	Waverly	68.30	59	P	P	10 29 20.5	-0.4
WVT				pmax	pmax		

	comp=Z,8.0nm,0.6s						
WVT	Waverly	68.30	59	P	P	10 29 20.5	-0.4
N54A	Moraine State	68.35	50	P	P	10 29 20.7	-0.5
L56A	Greenwood	68.51	48	P	P	10 29 21.4	-0.8
BATG	Bathurst New B	68.95	37	P	P	10 29 23.9	-0.9
G62A	West of Eustis	68.97	41	P	P	10 29 24.3	-0.7
U49A	Red Boiling Sp	69.05	57	P	P	10 29 25.4	-0.2
U49A				IAmb	IAmb	10 29 25.7	
	comp=Z,5.0nm,0.6s						
PLAL	Pickwick Lake	69.06	59	P	P	10 29 24.9	-0.8
CLTN	Cedars of Leba	69.10	58	P	P	10 29 25.4	-0.4
V48A	Smith Brothers	69.12	58	P	P	10 29 25.5	-0.6
V48A				IAmb	IAmb	10 29 26.2	
	comp=Z,5.8nm,0.8s						
T50A	Nancy	69.12	56	P	P	10 29 25.6	-0.4
T50A				IAmb	IAmb	10 29 26.3	
	comp=Z,5.8nm,0.8s						
S51A	Beattyville	69.25	55	P	P	10 29 26.0	-0.8
S51A				IAmb	IAmb	10 29 45.4	
	comp=Z,11nm,1.3s						
M57A	Sunshine Farm,	69.35	48	P	P	10 29 26.7	-0.7
M57A				IAmb	IAmb	10 29 53.3	
	comp=Z,7.4nm,1.1s						
R53A	Hurricane	69.50	53	P	P	10 29 28.0	-0.3
Q54A	Coxs Mills	69.52	52	P	P	10 29 27.8	-0.6
Q54A				IAmb	IAmb	10 29 53.8	
	comp=Z,17nm,1.4s						
SSPA	Standing Stone	69.57	49	P	P	10 29 28.1	-0.6
SSPA				IAmb	IAmb	10 29 32.6	
	comp=Z,10nm,1.1s						
L59A	Walton	69.57	46	P	P	10 29 27.7	-1.1
SWET	Sewanee	69.98	58	P	P	10 29 30.5	-0.9
SWET				IAmb	IAmb	10 29 31.1	
	comp=Z,7.1nm,0.8s						
X48A	Hartselle	70.01	59	P	P	10 29 30.6	-0.9
TZTN	Tazewell	70.14	55	P	P	10 29 32.0	-0.3
TZTN				IAmb	IAmb	10 29 41.7	
	comp=Z,9.3nm,1.1s						
N59A	State Game Lan	70.29	47	P	P	10 29 32.3	-0.9
N59A				IAmb	IAmb	10 29 44.8	
	comp=Z,13nm,1.1s						
V51A	Loudon	70.32	56	P	P	10 29 32.9	-0.5
V51A				IAmb	IAmb	10 29 33.6	
	comp=Z,7.0nm,0.8s						
R55A	Marlinton	70.42	52	P	P	10 29 33.1	-0.9
R55A				IAmb	IAmb	10 29 47.8	
	comp=Z,14nm,1.2s						
Z47A	Carrollton	70.45	61	P	P	10 29 33.5	-0.8
GGN	Saint George	70.48	39	P	P	10 29 33.4	-0.8
LMN	Caledonia Moun	70.62	37	P	P	10 29 34.2	-0.8
FPAL	Fort Paine	70.68	58	P	P	10 29 34.8	-0.8
FPAL				IAmb	IAmb	10 29 35.6	
	comp=Z,8.0nm,0.8s						
Y49A	Blount Mountai	70.80	59	P	P	10 29 35.4	-1.0
Y49A				IAmb	IAmb	10 29 35.7	
	comp=Z,9.0nm,1.0s						
U54A	Nelsons Funny	71.00	54	P	P	10 29 37.3	-0.3
EKA	Eskdalemuir Ar	71.64	356	P	P	10 29 39.9	-1.2
	comp=Z,4.7nm,0.8s,baz=8.7,slow=5.2,SNR=6.9						
BG3	Lake Jocassee	71.67	56	P	P	10 29 41.1	-0.5
BG3				IAmb	IAmb	10 29 42.7	
	comp=Z,15nm,1.4s						
V55A	Taylorsville	71.83	54	P	P	10 29 42.3	-0.3
T57A	Hurt	71.86	52	P	P	10 29 42.3	-0.4
HODGE	Hodges	72.61	56	P	P	10 29 47.0	-0.2
HODGE				IAmb	IAmb	10 29 47.5	
	comp=Z,5.9nm,0.6s						
DSB	Dublin	73.83	358	P	P	10 29 54.1	0.0
DPC	Dobruska-Polom	74.47	343	*e*P	P	10 29 58.5	+0.5
DPC	Dobruska-Polom	74.47	343	*e*P	P	10 29 58.5	+0.5
LANS	Liptovska Anna	75.03	341	*e*P	P	10 30 03.0	+1.7
LANS				pmax	pmax		
	comp=Z,4.0nm,0.8s						
LANS	Liptovska Anna	75.03	341	*e*P	P	10 30 03.0	+1.7
PRU	Pruhonice	75.12	344	*e*P	P	10 30 02.3	+0.6
PRU	Pruhonice	75.12	344	*e*P	P	10 30 02.3	+0.6
BURAR	Bucovina Array	75.22	336	P	P	10 30 03.0	+0.5
CTAO	Charters Tower	75.96	203	P	P	10 30 08.1	+1.4
CTAO				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CTAO	Charters Tower	75.96	203	P	P	10 30 08.1	+1.4
CTAO				IAmb	IAmb	10 30 08.8	
	comp=Z,7.0nm,0.9s						
KHC	Kasperske Hory	76.11	345	*e*P	P	10 30 07.0	-0.4
KHC	Kasperske Hory	76.11	345	*e*P	P	10 30 07.0	-0.4
CKRC	Cesky Krumlov	76.29	344	*e*P	P	10 30 08.7	+0.3
GEC2	GERESS Array S	76.37	344	P	P	10 30 09.1	+0.1
GEC2				IAmb	IAmb	10 30 10.1	
	comp=Z,4.8nm,0.8s						
GERES	GERESS Array B	76.37	344	P	P	10 30 08.9	0.0
	comp=Z,3.3nm,0.7s,baz=35,slow=4.9,SNR=16						
GERES	GERESS Array B	76.37	344	P	P	10 30 09.0	0.0
KNRA	Kununurra	77.40	221	P	P	10 30 16.5	+1.6
WB0	Warramunga Arr	79.09	214	P	P	10 30 24.6	+0.3
WB0				IAmb	IAmb	10 30 25.5	
	comp=Z,6.5nm,0.9s						
WRAB	Tennant Creek	79.26	214	*de*P	P	10 30 25.6	+0.5
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WB2	Warramunga Arr	79.27	214	P	P	10 30 26.4	+1.2
WB2				IAmb	IAmb	10 30 27.0	
	comp=Z,7.1nm,0.9s						
WRA	Warramunga Arr	79.27	214	P	P	10 30 26.0	+0.8
	comp=Z,3.9nm,0.8s,baz=26,slow=6.2,SNR=28						
WRA	Warramunga Arr	79.27	214	P	P	10 30 26.0	+0.8
BRTR	Keskin Array B	80.12	328	P	P	10 30 31.0	+1.0
	comp=Z,2.2nm,0.7s,baz=262,slow=8.6,SNR=3.9						
MSSA	Maissana	81.42	346	P	P	10 30 36.6	-0.1
MSSA				IAmb	IAmb	10 30 38.5	
	comp=Z,15nm,1.1s						
VLC	Villacollemand	81.45	346	P	P	10 30 37.4	+0.5
VLC				IAmb	IAmb	10 30 39.1	
	comp=Z,6.2nm,0.7s						
NRCA	Norcia	82.30	343	P	P	10 30 42.5	+1.1
NRCA				IAmb	IAmb	10 30 43.6	
	comp=Z,10nm,0.8s						
AS31	Alice Springs	82.87	213	P	P	10 30 45.3	+1.0
ASAR	Alice Springs	82.88	213	P	P	10 30 45.8	+1.4
	comp=Z,3.6nm,0.9s,baz=18,slow=4.9,SNR=32						
ESDC	Sonseca Array	87.31	356	P	P	10 31 06.5	-0.2
	comp=Z,1.0nm,0.7s,baz=358,slow=5.3,SNR=6.6						
STKA	Stephens Creek	88.39	204	P	P	10 31 12.4	+0.9
	comp=Z,2.4nm,0.8s,baz=343,slow=10.0,SNR=5.4						

BUC 17 10:41:17.7±0.7**, 44°.23N×28°.24E, h5^{km}, ml1.5**/2**, 4C-5D,**
Error ellipse: s-maj=5.7km s-min=2.5km az=57.0,
Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MFTR	Murfatlar	0.14	110	⇑P	Pg	10 41 20.5	0.0
MFTR				⇓S	Sg	10 41 22.5	0.0
TIRR	Tirgusor	0.26	29	⇑P	Pg	10 41 23.2	+0.4
TIRR				⇑S	Sg	10 41 26.9	+0.5
HARR	Harsova	0.51	335	⇓P	Pg	10 41 27.5	-0.1
TPGR	Topolog	0.64	12	⇓P	Pg	10 41 30.5	+0.4
TPGR				⇑S	Sg	10 41 39.2	+0.8
CFR	Carcaliu	0.95	356	⇓P	Pb	10 41 36.7	0.0
CFR				⇓S	Sg	10 41 48.0	-0.4

TIR ***17*** *10:41:33.0, 38°.32N×20°.35E, h6^{km}±1^{km}, Ml4.0*
BEO ***17*** *10:41:35.6±0.9, 38°.37N×20°.10E, h0^{km}, ML3.6/12*
IDC ***17*** *10:41:37.4±1.3, 38°.76N×20°.55E, h0^{km}, mb3.8/9, mb1 3.9/13, mb1mx3.7/42, mbtmp3.8/13, ML3.7/4, Error ellipse: s-maj=22.1km s-min=19.3km az=61.0*
NEIC ***17*** *10:41:37.6±1.8, 38°.50N±0°.01×20°.45E±0°.04, h7^{km}±5^{km}, Error ellipse: s-maj=4.2km s-min=1.7km az=98.0*
THE ***17*** *10:41:37.4, 38°.50N×20°.45E, h7^{km}±1^{km}, ML3.7/14, Error ellipse: s-maj=1.7km s-min=0.3km az=106.0*
ATH ***17*** *10:41:37.9, 38°.48N×20°.51E, h10^{km}±1^{km}, ML3.6/19, Error ellipse: s-maj=1.5km s-min=0.6km az=268.0*
ISC 17 10:41:37.3±0.8**, 38°.49N**±0°.01×**20°.46E**±0°.02**, h10**^{km}±5^{km}**,**
n208, σ1^{s}**19**/262**, mb4.0**/13**, 8C-2D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FSK	Fiskardo	0.08	111	P	Pg	10 41 39.6	-0.1
FSK				S	Sg	10 41 41.1	-0.2
	145µm,0.1s						
FSK	Fiskardo	0.08	111	P	Pg	10 41 39.6	-0.1
FSK				S	Sg	10 41 40.9	-0.4
FSK				AML	AML	10 41 41.1	
FSK				AML	AML	10 41 41.6	
EVGI	Lefkada island	0.20	49	P	Pg	10 41 41.6	+0.1
EVGI				S	Sg	10 41 45.0	+0.6
EVGI	Lefkada island	0.20	49	P	Pg	10 41 41.7	+0.1
EVGI				S	Sg	10 41 45.0	+0.6
EVGI	Lefkada island	0.20	49		Pg	10 41 41.6	+0.1
EVGI					Sg	10 41 45.0	+0.6
KEF4	Livadi, Kephal	0.23	187	P	Pg	10 41 42.3	+0.2
KEF4				S	Sg	10 41 46.3	+1.0
	176µm,0.2s						
KEF4	Livadi, Kephal	0.23	187	P	Pg	10 41 42.4	+0.2
KEF4				S	Sg	10 41 46.4	+1.0
KEF4	Livadi, Kephal	0.23	187		Pg	10 41 42.3	+0.2
KEF4					Sg	10 41 46.3	+1.0
DMLN	Damoulianata-K	0.26	196	P	Pg	10 41 42.8	+0.2
DMLN				S	Sg	10 41 46.6	+0.5
	34µm,0.6s						
DMLN	Damoulianata-K	0.26	196	P	Pg	10 41 42.9	+0.3
DMLN				S	Sg	10 41 47.0	+0.9
DMLN	Damoulianata-K	0.26	196		Pg	10 41 42.8	+0.2
DMLN					Sg	10 41 46.6	+0.5
LXRA	Lixouri, Kepha	0.29	184	P	Pg	10 41 43.4	+0.3
LXRA				S	Sg	10 41 47.9	+0.9
NYDR	Nydri-Lefkada	0.29	40	P	Pg	10 41 43.0	-0.2
NYDR				S	Sg	10 41 47.5	+0.4
	27µm,0.3s						
NYDR	Nydri-Lefkada	0.29	40	P	Pg	10 41 43.2	0.0
NYDR				S	Sg	10 41 47.7	+0.7
NYDR	Nydri-Lefkada	0.29	40		Pg	10 41 43.0	-0.2
NYDR					Sg	10 41 47.5	+0.4
KEF3	Kipouria, Keph	0.30	197	P	Pg	10 41 43.0	-0.3
KEF3				S	Sg	10 41 47.7	+0.4
	45µm,0.7s						
KEF3	Kipouria, Keph	0.30	197	P	Pg	10 41 43.1	-0.2
KEF3				S	Sg	10 41 47.3	0.0
KEF3	Kipouria, Keph	0.30	197		Pg	10 41 43.0	-0.3
KEF3					Sg	10 41 47.7	+0.4
ARGA	Argostoli. Kep	0.31	178	P	Pb	10 41 44.5	-0.5
ARGA				S	Sg	10 41 48.8	+1.1
VLS	Valsamata	0.33	162	P	Pg	10 41 43.7	-0.2
VLS				S	Sg	10 41 48.9	+0.7
	16µm,0.2s						
VLS	Valsamata	0.33	162	P	Pg	10 41 43.9	0.0
VLS				S	Sg	10 41 48.5	+0.2
VLS				AML	AML	10 41 49.6	
	comp=N,32053µm,0.3s						
VLS				AML	AML	10 41 50.4	
	comp=E,35701µm,0.3s						
VLS	Valsamata	0.33	162		Pg	10 41 43.7	-0.2
VLS					Sg	10 41 48.9	+0.7
LKD2	Lefkada island	0.34	27	P	Pg	10 41 44.0	0.0
LKD2				S	Sg	10 41 49.2	+0.7
	comp=E,16µm,0.4s						
LKD2	Lefkada island	0.34	27	P	Pg	10 41 44.1	+0.1
LKD2				S	Sg	10 41 48.7	+0.2
LKD2				AML	AML	10 41 50.4	
	comp=E,39842µm,0.2s						
LKD2				AML	AML	10 41 52.2	
	comp=N,33895µm,0.5s						
LKD2	Lefkada island	0.34	27		Pg	10 41 44.0	0.0
LKD2					Sg	10 41 49.2	+0.7
LKD2	Lefkada island	0.34	27	P	Pg	10 41 43.6	-0.5
	baz=27						
LKD2				S	Sg	10 41 49.6	+1.1
	baz=27						
PSDA	Pessada-Kefalo	0.39	166	P	Pg	10 41 44.8	-0.1
PSDA				S	Sb	10 41 51.4	-0.9
PSDA	Pessada-Kefalo	0.39	166	P	Pg	10 41 44.8	-0.1
PSDA				S	Sg	10 41 50.4	+0.4
PSDA	Pessada-Kefalo	0.39	166		Pg	10 41 44.8	-0.1
PSDA					Sb	10 41 51.4	-0.9
ZAK2	Zakynthos	0.78	154	P	Pg	10 41 52.8	+0.4
ZAK2				S	Sb	10 42 04.6	+0.9
	comp=N,35µm,0.5s						
ZAK2	Zakynthos	0.78	154		Pg	10 41 52.8	+0.4
ZAK2					Sb	10 42 04.6	+0.9
VTN	Vitineika	0.81	135	P	Pg	10 41 52.9	0.0
LTHK	Lithakia	0.83	159	P	Pg	10 41 52.5	-0.9
LTHK				S	Sb	10 42 05.3	+0.1
	comp=N,7µm,0.4s						
LTHK	Lithakia	0.83	159	P	Pg	10 41 52.4	-0.9
LTHK				S	Sg	10 42 04.7	+0.5
PVO	Paravola	0.84	81	P	Pg	10 41 53.3	-0.3
PVO				S	Sb	10 42 06.2	+0.7
PVO	Paravola	0.84	81	P	Pg	10 41 53.4	-0.3
PVO				AML	AML	10 42 12.3	
	comp=E,8777µm,0.4s						
PVO				AML	AML	10 42 13.6	
	comp=N,12382µm,0.6s						
RLS	Riolos of Patr	0.90	118	P	Pg	10 41 54.2	-0.4
RLS				S	Sn	10 42 08.5	-0.7
	comp=N,3µm,0.6s						
RLS	Riolos of Patr	0.90	118	P	Pg	10 41 54.3	-0.4
RLS				S	Sg	10 42 05.6	-0.8
RLS				AML	AML	10 42 14.8	
	comp=N,6291µm,1.0s						
RLS				AML	AML	10 42 15.6	
	comp=E,4094µm,0.4s						
IGT	Igoumenitsa	1.05	355	P	Pg	10 41 56.8	-0.7
IGT				S	Sb	10 42 12.1	+0.7
	comp=E,2µm,0.4s						
IGT	Igoumenitsa	1.05	355	P	Pg	10 41 56.8	-0.7
IGT				AML	AML	10 42 17.6	
	comp=N,4394µm,0.4s						
IGT				AML	AML	10 42 20.4	
	comp=E,5206µm,0.5s						
IGT	Igoumenitsa	1.05	355	P	Pg	10 41 56.8	-0.7
	baz=0.0						
IGT				S	Sn	10 42 13.4	+0.5
	baz=0.0						
DRO	Drossia	1.12	118	P	Pb	10 41 57.9	-0.9
DRO				S	Sn	10 42 14.6	-0.1
	comp=E,5µm,0.4s						
DRO	Drossia	1.12	118	P	Pb	10 41 58.0	-0.9
DRO				AML	AML	10 42 26.0	
	comp=E,10550µm,0.5s						
DRO				AML	AML	10 42 28.8	
	comp=N,11822µm,0.5s						
EFP	Efpalio	1.14	93	P	Pb	10 41 57.5	-1.6
EFP				S	Sn	10 42 15.2	+0.2
	comp=N,3µm,0.7s						
EFP	Efpalio	1.14	93	P	Pb	10 41 57.5	-1.6
EFP				AML	AML	10 42 24.6	
	comp=N,6614µm,0.9s						
EFP				AML	AML	10 42 31.3	
	comp=E,5382µm,0.6s						
EVR	Evrytania	1.14	68	P	Pb	10 41 58.1	-1.1
EVR				S	Sn	10 42 15.3	+0.1
	comp=E,2µm,0.7s						
EVR	Evrytania	1.14	68	P	Pb	10 41 58.1	-1.1
EVR				AML	AML	10 42 24.5	
	comp=E,4223µm,0.5s						
EVR				AML	AML	10 42 28.0	
	comp=N,3485µm,0.9s						
ANX	Ano Chora	1.15	84	P	Pb	10 41 58.4	-1.0
ANX				AML	AML	10 42 23.9	
	comp=N,7030µm,0.4s						
ANX				AML	AML	10 42 24.6	
	comp=E,6844µm,0.5s						
JAN	Janina	1.20	14	P	Pg	10 42 00.5	0.0
JAN	Janina	1.20	14	P	Pg	10 42 00.9	+0.4
JAN				AML	AML	10 42 20.8	
	comp=E,6680µm,0.9s						
JAN				AML	AML	10 42 23.9	
	comp=N,4053µm,0.5s						
LAKA	Lakka	1.22	101	P	Pn	10 41 59.1	-1.4
LAKA	Lakka	1.22	101	P	Pn	10 41 58.9	-1.6
LAKA				AML	AML	10 42 26.7	
	comp=E,4030µm,0.6s						
LAKA				AML	AML	10 42 26.8	
	comp=N,2984µm,0.7s						
TRIZ	Trizonia	1.27	95	P	Pn	10 42 00.0	-1.2
TRIZ	Trizonia	1.27	95	P	Pn	10 42 00.0	-1.2
ALIK	Aliki, Aigiali	1.32	99	P	Pn	10 42 01.1	-0.7
KASA	Kassiopi	1.32	342	P	Pg	10 42 02.8	+0.1
KEK	Kerkira	1.33	337	P	Pn	10 42 02.1	+0.1
KEK	Kerkira	1.33	337	P	Pn	10 42 02.1	+0.1
KEK				AML	AML	10 42 30.7	
	comp=E,1754µm,0.3s						
KEK				AML	AML	10 42 36.8	
	comp=N,2374µm,0.6s						
KLV	Kalavryta, Ach	1.40	108	P	Pn	10 42 02.2	-0.9
KLV	Kalavryta, Ach	1.40	108	P	Pn	10 42 02.3	-0.8
KLV				AML	AML	10 42 31.0	
	comp=E,2080µm,1.1s						
KLV				AML	AML	10 42 38.6	
	comp=N,2460µm,0.8s						
MAKR	Makrakomi, Fth	1.41	68	P	Pn	10 42 03.2	+0.1
MAKR	Makrakomi, Fth	1.41	68	P	Pn	10 42 03.1	0.0
MAKR				AML	AML	10 42 33.3	
	comp=N,7771µm,0.7s						
MAKR				AML	AML	10 42 33.6	
	comp=E,7939µm,0.4s						
SRN	Sarande	1.43	346	P	Pb	10 42 04.2	0.0
SRN	Sarande	1.43	346	P	Pb	10 42 04.2	0.0
	baz=351						
SRN				S	Sg	10 42 26.2	+2.7
	baz=351						
SRN				AMP			
	comp=N,1.7nm,0.5s,baz=351						
AGG	Agios Georgios	1.56	69	P	Pn	10 42 05.5	+0.3
AGG	Agios Georgios	1.56	69	P	Pn	10 42 05.5	+0.3
AGG	Agios Georgios	1.56	69		Pn	10 42 05.1	-0.1
GUR	Goura	1.58	110	P	Pn	10 42 05.9	+0.3
GUR				AML	AML	10 42 36.6	
	comp=N,5576µm,0.5s						
GUR				AML	AML	10 42 37.5	
	comp=E,3578µm,0.4s						
DLFA	Delphi	1.60	90	P	Pb	10 42 07.1	+0.1
THL	Klokotos Trika	1.62	48	P	Pb	10 42 07.3	0.0
THL				AML	AML	10 42 34.2	
	comp=E,4015µm,0.6s						
THL				AML	AML	10 42 37.9	
	comp=N,3930µm,0.5s						
KPRO	Kipourio	1.62	25	P	Pg	10 42 08.1	-0.4
KPRO	Kipourio	1.62	25	P	Pb	10 42 07.5	+0.1
LSK	Leskovik	1.66	4	P	Pb	10 42 08.1	0.0
	baz=5.0						
LSK				S	Sg	10 42 34.3	+3.5
	baz=5.0						
LSK				AMP			
	comp=E,11nm,0.9s,baz=5.0						
ITM	Ithomi	1.75	138	P	Pb	10 42 09.2	-0.4
ITM				AML	AML	10 42 39.5	
	comp=N,2347µm,0.7s						
ITM				AML	AML	10 42 39.9	
	comp=E,1666µm,0.6s						
ITM	Ithomi	1.75	138	Pn	Pb	10 42 09.9	+0.4
PENT	Pentalofos	1.78	17	P	Pb	10 42 10.9	+0.7
PENT				AML	AML	10 42 40.2	
	comp=N,1759µm,0.6s						
PENT				AML	AML	10 42 40.8	
	comp=E,1482µm,0.4s						
THAL	Thalero	1.79	104	P	Pb	10 42 10.4	+0.2
NEST	Nestorio	1.98	13	P	Pb	10 42 13.9	+0.4
ATAL	Atalanti	2.02	83	P	Pb	10 42 13.3	-0.8
ATAL	Atalanti	2.02	83	P	Pb	10 42 13.1	-1.0
LTK	Loutraki	2.03	103	P	Pb	10 42 13.2	-1.1
KZN	Kozani	2.08	29	P	Pb	10 42 14.8	-0.4
VLO	Vlora	2.11	340		Pn	10 42 12.9	+0.2
KBN	Korca	2.15	7		Pn	10 42 13.6	+0.2
KBN	Korca	2.15	7	P	Pb	10 42 15.8	-0.6
	baz=8.0						
KBN				S	Sg	10 42 47.5	+1.2
	baz=8.0						
KBN				AMP			
	comp=N,1.9nm,0.5s,baz=8.0						
SCTE	Santa Cesarea	2.21	316	Pn	Pn	10 42 14.4	+0.3
SCTE	Santa Cesarea	2.21	316	P	Pn	10 42 14.4	+0.3
	baz=321						
VIL2	Platees	2.22	96	P	Pb	10 42 16.7	-1.0
FNA	Florina	2.40	17	Pn	Pn	10 42 17.6	+0.8
FNA	Florina	2.40	17	P	Pn	10 42 18.5	+1.7
	baz=17						
OHR	Ohrid	2.63	6	*e*Pn	Pb	10 42 23.2	-1.4
OHR				*e*Sn	Sb	10 42 55.8	-1.3
OHR	Ohrid	2.63	6	*i* Pn	Pn	10 42 22.2	+2.3
TIR	Tirane	2.89	351	⇑P	Pn	10 42 24.5	+1.0
TIR	Tirane	2.89	351	*e*Pn	Pn	10 42 25.2	+1.7
TIR	Tirane	2.89	351		Pn	10 42 24.2	+0.8
TIR	Tirane	2.89	351	P	Pn	10 42 24.7	+1.2
	baz=354						
PHP	Peshkopia	3.19	360	P	Pn	10 42 29.1	+1.4
	baz=1.0						
PHP				AMP			
	comp=N,1.0nm,0.9s,baz=1.0						
VAY	Valandovo	3.26	29	*e*Pn	Pb	10 42 32.1	-3.2
VAY	Valandovo	3.26	29	*i* Pn	Pn	10 42 29.6	+1.1
STIP	Stip	3.46	22	*i* Pn	Pn	10 42 34.3	+2.9
CEL	Celeste	3.60	268	Pn	Pn	10 42 35.1	+1.8
MATE	Matera	3.62	308	⇓P	Pg	10 42 45.4	-1.2
DRME	Dracevica, Mon	3.82	346	*e*Pn	Pn	10 42 36.1	-0.2
BCI	Bajram Curri	3.88	356	P	Pn	10 42 38.9	+1.8
	baz=358						
PDG	Podgorica	4.04	347	⇑P	Pn	10 42 39.5	+0.2
PDG	Podgorica	4.04	347	*e*Pn	Pn	10 42 39.0	-0.2
PDG				*e*Sn	Sn	10 43 27.1	+0.4
PDG	Podgorica	4.04	347	*e*Pn	Pn	10 42 39.1	-0.2
PDG	Podgorica	4.04	347	Pn	Pn	10 42 38.9	-0.4
PRVS	Prvonek	4.20	17	*e*Pn	Pn	10 42 43.0	+1.5
HCY	Herceg Novi	4.23	340	*e*Pn	Pn	10 42 40.6	-1.3
BOSS	Bosilegrad	4.29	20	*e*Pn	Pn	10 42 44.2	+1.5
TREB	Trebinje	4.52	340	*e*Pn	Pn	10 42 44.9	-1.0
TREB	Trebinje	4.52	340	*e*Pn	Pn	10 42 44.8	-1.1
DBRK	Dubrovnik	4.53	338	*e*Pn	Pn	10 42 44.4	-1.7
DBRK				Sn	Sn	10 43 36.3	-2.5
VTS	Vitosha	4.63	26	⇑P	Pn	10 42 49.1	+1.6
VTS	Vitosha	4.63	26	*e*Pn	Pn	10 42 48.8	+1.2
VTS				*e*Sn	Sn	10 43 44.9	+3.4
VTS	Vitosha	4.63	26	Pn	Pn	10 42 48.2	+0.7
BRY	Bratogost	4.64	342	*e*Pn	Pn	10 42 46.6	-1.1
SELS	Selova	4.75	6	*e*Pn	Pn	10 42 48.6	-0.5
IDI	Anoyia	4.78	131	Pn	Pn	10 42 52.6	+3.1
	comp=N,0.6nm,0.3s,baz=270,slow=9.1,SNR=2.2						
IDI				Sn	Sn	10 43 44.6	-0.3
	comp=N,2.8nm,0.3s,baz=281,slow=23,SNR=6.1						
SJES	Sjenica	4.78	356	*e*Pn	Pn	10 42 50.0	+0.4
UPM	Unac-Piva	4.85	346	*e*Pn	Pn	10 42 50.7	0.0
STON	Ston	4.86	335	*e*Pn	Pn	10 42 50.0	-0.4
STON				*e*Sn	Sn	10 43 44.3	-2.4
STON	Ston	4.86	335	*e*Pn	Pn	10 42 49.2	-1.2
STON	Ston	4.86	335	*e*Pn	Pn	10 42 49.2	-1.2
SGRT	San Giovanni R	4.87	314		Pn	10 42 49.8	-1.0
ALN	Alexandroupoli	4.93	59	Pn	Pn	10 42 53.5	+2.0
RAFF	Raffo Rosso	4.99	257		Pn	10 42 53.9	+1.6
ZAPS	Zavoj	5.05	18	*e*Pn	Pn	10 42 55.6	+2.3
RUDO	Rudo	5.19	351	*e*Pn	Pn	10 42 53.3	-1.8
PAOL	Paolisi	5.20	301		Pn	10 42 56.9	+1.6
BOVS	Bovan	5.23	10	⇑P	Pn	10 42 55.4	-0.1
BOVS	Bovan	5.23	10	*e*Pn	Pn	10 42 55.5	-0.1
GRUS	Gruza	5.40	2	*e*Pn	Pn	10 42 58.1	+0.2
MAKA	Makarska	5.46	333	*i* Pn	Pn	10 42 58.1	-0.6
MAKA				Sn	Sn	10 43 58.9	-2.6
ZAGS	Zajecar	5.48	14	*e*Pn	Pn	10 42 59.2	+0.1
HVAR	Hvar	5.58	328	*e*Pn	Pn	10 42 59.1	-1.4
RICI	Ricice	5.60	334	*e*Pn	Pn	10 42 59.2	-1.5
RICI				Sn	Sn	10 44 02.3	-2.8
DIVS	Divibare	5.62	357	*e*Pn	Pn	10 43 00.6	-0.4
DIVS	Divibare	5.62	357	*e*Pn	Pn	10 43 00.2	-0.8
DIVS	Divibare	5.62	357		Pn	10 43 00.3	-0.7
TRUS	Trudelj	5.73	360	*e*Pn	Pn	10 43 02.2	-0.3
KIJV	Kijevo	6.30	332	*e*Pn	Pn	10 43 09.4	-1.0
ZIRJ	Zirje	6.31	326	*e*Pn	Pn	10 43 09.2	-1.3
MGRS	Mrkonjic Grad	6.44	338	*e*Pn	Pn	10 43 11.9	-0.4
MORI	Morici	6.46	328	*i* Pn	Pn	10 43 12.2	-0.3
FRGS	Fruska Gora	6.68	356	*e*Pn	Pn	10 43 14.5	-1.1
BLY	Banja Luka	6.72	340	*e*Pn	Pn	10 43 16.3	+0.2
BLY	Banja Luka	6.72	340	*e*Pn	Pn	10 43 15.7	-0.4
DUGI	Dugi Otok	6.84	325	*e*Pn	Pn	10 43 16.9	-0.9
MRAK	Mrakovica	7.04	339	*e*Pn	Pn	10 43 18.6	-1.9
NRCA	Norcia	7.07	310		Pn	10 43 22.3	+1.3
GZR	Gura Zlata	7.11	13	⇓P	Pn	10 43 21.5	0.0
NVLJ	Novalja	7.38	327	*e*Pn	Pn	10 43 24.4	-0.7
NVLJ				Sn	Sn	10 44 44.3	-4.5
RABC	Rab	7.56	328	*e*Pn	Pn	10 43 26.9	-0.7
MURB	Monte Urbino	7.67	311		Pn	10 43 31.2	+1.9
VOIR		7.74	25	⇑P	Pn	10 43 31.4	+1.3
MLR	Muntele Rosu	8.10	28	⇑P	Pn	10 43 36.6	+1.4
MLR	Muntele Rosu	8.10	28	Pn	Pn	10 43 35.7	+0.6
	comp=N,0.4nm,0.3s,baz=312,slow=12,SNR=2.5						
BRJN	Brijuni	8.14	324	*e*Pn	Pn	10 43 34.3	-1.3
BRJN				Sn	Sn	10 45 01.1	-6.5
RIY	Rijeka	8.15	329	*e*Pn	Pn	10 43 35.2	-0.5
CRES	Cresnjev	8.22	335	*e*Pn	Pn	10 43 35.6	-1.0
CEY	Cerknica	8.52	330	*e*Pn	Pn	10 43 40.0	-0.8

PLOR	Plostina	8.67	30	⇑P	Pn	10 43 44.1	+1.2
VRI	Vrincioaia	8.71	30	⇑P	Pn	10 43 45.2	+1.8
LJU	Ljubljana	8.73	332	*e*Pn	Pn	10 43 41.9	-1.8
SOKA	Soboth	9.11	336	*e*Pn	Pn	10 43 48.0	-1.0
	comp=N,8.1nm,0.5s,SNR=6.3						
VLC	Villacollemand	9.46	310	Pn	Pn	10 43 55.4	+1.8
ARSA	Arzberg	9.47	339	*e*Pn	Pn	10 43 52.9	-0.9
	comp=N,1.9nm,0.3s						
TEOL	Teolo	9.48	319	Pn	Pn	10 43 54.1	+0.1
MYKA	Terra Mystica	9.56	330	*i* Pn	Pn	10 43 55.1	0.0
	comp=N,2.8nm,0.4s						
STAL	STALIGIAL	9.65	326		Pn	10 43 54.8	-1.5
ZOU	Zoufplan	9.77	328		Pn	10 43 57.7	-0.4
CTI	Castel Tesino	9.98	322	Pn	Pn	10 43 59.6	-1.3
KBA	Koelnbreinsper	10.05	331	*e*Pn	Pn	10 44 02.1	+0.3
	comp=N,1.7nm,0.3s						
WTTA	Wattenberg	10.89	326	*i* Pn	Pn	10 44 14.3	+0.9
	comp=N,4.4nm,0.5s						
WATA	Walderalm	10.97	327	*i* Pn	Pn	10 44 15.2	+0.7
	comp=N,2.7nm,0.3s						
MOTA	Moosalm	11.19	325	*i* Pn	Pn	10 44 18.1	+0.7
	comp=N,4.0nm,0.4s						
DAVOX	Davos/Dischmat	11.37	320	Pn	Pn	10 44 19.2	-0.7
	comp=N,0.4nm,0.3s,baz=128,slow=20,SNR=2.5						
TUE	Stuetta	11.44	318	Pn	Pn	10 44 21.2	+0.3
GERES	GERESS Array B	11.44	337	Pn	Pn	10 44 19.2	-1.7
	comp=N,0.5nm,0.3s,baz=159,slow=13,SNR=5.8						
GERES	GERESS Array B	11.44	337		Pn	10 44 19.4	-1.5
SENIN	Lac Senin/Sane	12.50	313		Pn	10 44 35.2	-0.2
HFS	Hagfors	22.09	351	P	P	10 46 31.7	-0.7
	comp=N,4.5nm,0.8s,baz=165,slow=12,SNR=6.5						
EKA	Eskdalemuir Ar	23.15	324	P	P	10 46 44.0	+0.3
	comp=N,0.7nm,0.5s,baz=127,slow=8.4,SNR=3.9						
FINES	FINESS Array B	23.24	7	P	P	10 46 42.9	-1.6
	comp=N,2.4nm,0.5s,baz=171,slow=12,SNR=14						
FINES	FINESS Array B	23.24	7	P	P	10 46 42.5	-2.1
FIA1	FINESS Array S	23.25	7	P	P	10 46 43.5	-1.1
FIA1				IAmb	IAmb	10 46 44.7	
	comp=Z,21nm,1.2s						
NC405	NORSAR Array S	23.30	349	P	P	10 46 43.8	-1.4
NOA	NORSAR Array B	23.30	349	P	P	10 46 44.8	-0.5
	comp=Z,0.6nm,0.6s,baz=161,slow=13,SNR=3.5						
BELG	Belogornoye	23.41	45	P	P	10 46 45.4	-1.0
	comp=Z,9.2nm,0.7s,baz=347,slow=10.0,SNR=4.1						
ABKAR	Akbulak array	30.11	56	P	P	10 47 48.3	+1.3
TORD	Torodi Ar. Bea	30.24	218	P	P	10 47 52.6	+4.2
	comp=Z,0.6nm,0.7s,baz=36,slow=9.2,SNR=4.1						
ARCES	ARCESS Array B	31.23	3	P	P	10 47 55.1	-1.5
	comp=Z,1.2nm,0.8s,baz=178,slow=6.8,SNR=3.6						
ARCES	ARCESS Array B	31.23	3	P	P	10 47 55.9	-0.8
KK31	Karatay Array	37.71	67	P	P	10 48 52.9	-0.2
KK31				IAmb	IAmb	10 49 06.5	
	comp=Z,4.8nm,1.5s						
KKAR	Karatay Array	37.71	67	P	P	10 48 53.2	+0.1
KKAR	Karatay Array	37.71	67	P	P	10 48 52.8	-0.3
KKAR				IAmb	IAmb	10 49 06.5	
	comp=Z,4.8nm,1.5s						
MK31	Makanchi Array	45.18	59	P	P	10 49 53.2	-1.1
MKAR	Makanchi Array	45.18	59	P	P	10 49 53.6	-0.7
	comp=Z,0.4nm,0.5s,baz=274,slow=7.8,SNR=6.1						
MKAR	Makanchi Array	45.18	59	P	P	10 49 52.9	-1.4
ZAA0	Zalesovo Array	45.52	48	P	P	10 49 55.7	-1.1
ZAA0				IAmb	IAmb	10 49 56.5	
	comp=Z,2.8nm,0.6s						
ZALV	Zalesovo Beam	45.52	48	P	P	10 49 55.9	-0.9
	comp=Z,2.4nm,0.5s,baz=275,slow=8.3,SNR=9.9						
ZALV	Zalesovo Beam	45.52	48	P	P	10 49 55.6	-1.2
A21K	Barrow	70.47	359	P	P	10 52 52.2	+0.7
BMAR	Burnt Mountain	73.79	354	P	P	10 53 12.8	+1.2
IMAR	Indian Mountai	75.76	358	P	P	10 53 23.6	+0.7
H21K	Melozitna Rive	76.05	357	P	P	10 53 25.6	+1.0

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*NNC **17** 10:52:37.9±5.8, 40.°84N×70.°36E, h0^{km}, mb3.0, mpv2.6, Error ellipse: s-maj=45.4km s-min=25.0km az=37.0*

*KRNET **17** 10:52:37.7±0.1, 40.°99N×70.°20E, h14^{km}, mb2.7*

ISC 17 10:52:38.4±1.7**, 41.°01N**±0.°04×**70.°27E**±0.°08**, h11**^{km}±12^{km}**, n11, σ1^{s}88**/20**, 17C-3D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRKS	Terek-Say	0.83	51	⇑*i*P	Pg	10 52 54.3	-0.2
	baz=57						
TRKS				⇑*i*S	Sg	10 53 06.4	+0.9
	baz=57						
BTK	Batken	1.04	156	⇑*e*P	Pb	10 52 57.6	-0.8
	baz=53						
BTK				⇑*i*S	Sn	10 53 12.1	-1.4
	baz=53						
DRK	Karamyk	1.92	142	⇓*i*P	Pb	10 53 13.7	+0.1
	baz=40						
DRK				⇓*i*S	Sg	10 53 40.2	0.0
	baz=40						
OHH	Osh	1.97	103	⇑*i*P	Pb	10 53 14.8	+0.5
	baz=3.0						
OHH				⇑*i*S	Sg	10 53 41.7	+0.1
	baz=3.0						
KK31	Karatay Array	2.10	5	Pn	Pg	10 53 17.6	-1.1
	2.2nm,0.6s,baz=199,slow=17,SNR=11						
KK31				⇑Sn	Sg	10 53 46.1	+0.2
	2.2nm,0.4s,baz=192,slow=27,SNR=7.6						
MNAS	Manas	2.23	48	⇑*i*P	Pb	10 53 18.6	-0.2
	baz=48						
MNAS				⇑*i*S	Sb	10 53 48.4	+2.0
	baz=48						
AML	Almayashu	2.80	65	⇑*i*P	Pb	10 53 26.4	-2.3
	baz=65						
AML				⇑*i*S	Sb	10 54 01.7	-1.4
	baz=65						
EKS2	Erkin-Say	3.10	57	⇑*e*P	Pb	10 53 30.5	-3.0
	baz=57						
EKS2				⇑*i*S	Sb	10 54 09.2	-2.1
	baz=57						
UCH	Uchtor	3.40	68	⇑*i*P	Pn	10 53 35.1	+3.3
	baz=68						
UCH				⇑*i*S	Sb	10 54 16.9	-3.6
	baz=68						
AAK	Ala-Archa	3.55	61	Pg	Pb	10 53 41.3	0.0
	1.0nm,0.7s						
AAK				⇑Lg	Lg	10 54 34.9	
	1.9nm,0.6s						
TKM2	Tokmak 2	4.40	63	⇓Pg	Pb	10 53 57.7	+1.8
	0.6nm,0.5s						
TKM2				⇑Lg	Lg	10 55 00.5	
	1.4nm,0.9s						

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*IDC **17** 10:57:22.3±1.2, 31.°75S×71.°69W, h0^{km}, mb3.8/4, mb1 4.0/7, mb1mx3.9/21, mbtmp3.8/7, ML3.9/3, Error ellipse: s-maj=34.3km s-min=32.2km az=98.0*

*GUC **17** 10:57:25.5±0.7, 31.°78S×71.°79W, h38^{km}±2^{km}, ML4.2*

*NEIC **17** 10:57:26.2±1.2, 31.°76S±0.°03×71.°93W±0.°10, h32^{km}±2^{km}, mb4.2/7, ML4.1(GUC), Error ellipse: s-maj=12.0km s-min=4.2km az=94.0*

ISC 17 10:57:24.6±1.2**, 31.°74S**±0.°03×**71.°79W**±0.°06**, h19**^{km}±4^{km}**, n76, σ1^{s}24**/85**, mb4.1**/6**, 1C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VA06	Catapilco	0.92	153	*e*P	Pn	10 57 42.0	-0.4
VA06				*i* S	Sb	10 57 53.5	-0.1
VA06				IAML		10 57 57.9	
	comp=E,17µm,0.4s						
CO06	Fray Jorge	1.07	7	*e*P	Pg	10 57 45.3	-0.2
CO06				*i* S	Sg	10 58 00.1	+0.4
CO06	Fray Jorge	1.07	7		Pg	10 57 45.3	-0.2
CO06				Sn	Sg	10 58 00.1	+0.4
VA01	Torpederas	1.28	175	*e*P	Pn	10 57 47.5	+0.1
VA01				*i* S	Sn	10 58 04.1	0.0
VA01				IAML		10 58 10.8	
	comp=E,5µm,0.9s						
VA01	Torpederas	1.28	175		Pn	10 57 47.6	+0.1
VA01				Sn	Sb	10 58 04.5	+0.3
ROCH	El Roble	1.39	152	*e*P	Pb	10 57 49.3	-0.9
ROCH				*i* S	Sb	10 58 07.7	+0.1
ROCH				IAML		10 58 12.2	
	comp=N,7µm,0.4s						
VA03	San Esteban	1.46	134	*e*P	Pb	10 57 50.3	-0.9
VA03				*i* S	Sb	10 58 09.8	+0.3
VA03				IAML		10 58 11.1	
	comp=E,11µm,0.3s						
VA03	San Esteban	1.46	134		Pb	10 57 50.4	-0.9
VA03				Sn	Sb	10 58 09.8	+0.3
MT02	Curacav	1.61	160	*e*P	Pb	10 57 52.5	-1.2
MT02				*i* S	Sn	10 58 12.7	+0.5
MT02	Curacav	1.61	160		Pb	10 57 52.5	-1.2
PEL	Peldehue	1.68	147	*e*P	Pb	10 57 53.7	-1.2
PEL				*i* S	Sb	10 58 15.3	-0.4
PEL				IAML		10 58 17.1	
	comp=E,5µm,0.4s						
PEL	Peldehue	1.68	147		Pb	10 57 53.9	-1.1
GO04	Tololo Observa	1.78	29	*e*P	Pb	10 57 55.8	-1.0
GO04				*i* S	Sg	10 58 19.9	-2.4
GO04	Tololo Observa	1.78	29		Pb	10 57 55.8	-1.0
MT05	Renca	1.87	152	⇑*i*P	Pb	10 57 56.7	-1.5
MT05				*e*S	Sb	10 58 19.6	-1.6
MT05				IAML		10 58 26.5	
	comp=E,6µm,0.3s						
MT05	Renca	1.87	152		Pb	10 57 56.6	-1.5
CO05	La Serena	1.88	15	*e*P	Pb	10 57 57.9	-0.4
CO05				⇓*e*S	Sb	10 58 21.5	+0.2
CO05	La Serena	1.88	15		Pb	10 57 56.7	-1.6
VA05	Santo Domingo	1.91	176	*e*P	Pn	10 57 56.4	+0.2
VA05				*e*S	Sb	10 58 22.0	-0.4
VA05				IAML		10 58 31.2	
	comp=E,3µm,0.5s						
VA05	Santo Domingo	1.91	176		Pn	10 57 56.2	0.0
MT09	Talagante	2.14	162	*e*P	Pb	10 58 00.9	-1.9
MT09				*e*S	Sb	10 58 29.5	+0.5
MT09				IAML		10 58 37.9	
	comp=N,2µm,0.5s						
MT09	Talagante	2.14	162		Pn	10 58 00.7	+1.3
MT01	Popeta	2.16	168	*e*P	Pn	10 58 00.7	+1.1
MT01				*e*S	Sb	10 58 28.7	-0.9
MT01	Popeta	2.16	168		Pn	10 58 00.3	+0.7
BO04	La Punta	2.45	156	*e*P	Pn	10 58 05.2	+1.6
BO04				*e*S	Sn	10 58 35.0	+1.9
BO04				IAML		10 58 44.5	
	comp=E,1µm,0.4s						
ZON	Zonda	2.66	87		Pb	10 58 10.5	-1.1
BO01	Tunca	2.71	168	*e*P	Pn	10 58 08.0	+0.9
BO01				*e*S	Sn	10 58 40.5	+1.2
BO01				IAML		10 58 52.9	
	comp=N,491nm,0.7s						
BO01	Tunca	2.71	168		Pn	10 58 08.1	+0.9
LCO	Las Campanas	2.88	19	*e*P	Pn	10 58 10.7	+1.0
LCO				*e*S	Sb	10 58 48.8	-1.7
LCO	Las Campanas	2.88	19		Pn	10 58 10.8	+1.0
BO02	Sierra Bellavi	3.16	165		Pn	10 58 14.4	+1.1
GO05	Huala	3.26	182		Pn	10 58 14.3	-0.4
AC04	Llanos de Chal	3.58	10		Pn	10 58 19.3	+0.2
ML02	Panimavida	4.02	176		Pn	10 58 27.4	+2.3
VCA	Vinchina	4.31	47	*e*P	Pb	10 58 34.8	-5.2
GO03	Copiap	4.35	19		Pn	10 58 30.8	+1.0
AC02	Maricunga	5.41	26		Pn	10 58 45.7	+1.0
CYA	Choya	6.14	59	*e*P	Pn	10 58 56.3	+2.0
H03S3	Juan Fernandez	6.34	249	T	T	11 05 49.3	
	baz=70,slow=79,SNR=13						
H03S1	Juan Fernandez	6.35	249	T	T	11 05 45.2	
	baz=70,slow=79,SNR=14						
H03S2	Juan Fernandez	6.36	249	T	T	11 05 44.8	
	baz=70,slow=79,SNR=14						
LC01	Cunco	7.14	181		Pn	10 59 08.1	+0.2
PB15	IPOC Station P	8.75	14	Pn	Pn	10 59 28.7	-1.6
PLCA	Paso Flores	9.03	174	Pn	Pn	10 59 35.2	+1.2
	comp=N,0.5nm,0.3s,baz=333,slow=11,SNR=6.4						
PLCA	Paso Flores	9.03	174		Pn	10 59 34.2	+0.2
LVC	Limon Verde	9.45	16	Pn	Pn	10 59 41.4	+1.3
PB04	IPOC Station P	9.49	9	Pn	Pn	10 59 42.2	+1.9
PB09	IPOC Station P	10.16	14	Pn	Pn	10 59 49.6	0.0
TRQA	Tornquist	10.22	131	Pn	Pn	10 59 51.7	+1.4
ITQB	Itaqui	13.21	85	Pn	Pn	11 00 31.8	+0.6
CPUP	Villa Florida	13.75	71	Pn	Pn	11 00 37.4	-1.2
	comp=N,0.2nm,0.3s,baz=260,slow=13,SNR=3.1						
CPUP	Villa Florida	13.75	71		Pn	11 00 40.6	+2.1
PLTB	Pedras Altas	15.47	95	Pn	Pn	11 01 00.5	-1.4
PLTB				IAmb	IAmb	11 01 19.0	
	comp=Z,17nm,1.3s						
LPAZ	La Paz	15.74	13	Pn	Pn	11 01 06.5	+0.6
	comp=Z,0.1nm,0.3s,baz=2.9,slow=1.5,SNR=8.4						
LPAZ	La Paz	15.74	13	Pn	Pn	11 01 05.3	-0.7
BDFB	Brasilia	26.94	59	P	P	11 03 05.4	+0.4
	comp=Z,2.7nm,0.8s,baz=230,slow=17,SNR=2.1						
BDFB	Brasilia	26.94	59	P	P	11 03 05.0	0.0
BDFB				IAmb	IAmb	11 03 17.0	
	comp=Z,7.0nm,1.1s						
BOAV	Boa Vista	35.60	20	P	P	11 04 20.8	-0.3
BOAV				IAmb	IAmb	11 04 40.8	
	comp=Z,4.6nm,1.2s						
VNA3	Neumayer Olymp	51.37	159	P	P	11 06 31.3	+3.7
VNA1	Neumayer--Stat	51.67	158	P	P	11 06 26.1	-3.6
VNA2	Neumayer--Watz	52.01	158	P	P	11 06 29.9	-2.4
SNAA	Sanae	53.60	158	P	P	11 06 43.7	-0.4
SNAA	Sanae	53.60	158	P	P	11 06 43.6	-0.4
QSPA	South Pole Qui	58.49	180	P	P	11 07 17.9	-1.3
QSPA				IAmb	IAmb	11 07 33.1	
	comp=Z,1.6nm,0.9s						
TXAR	Lajitas Array	67.88	330	P	P	11 08 22.8	+0.9
	comp=Z,0.4nm,0.7s,baz=152,slow=8.2,SNR=2.5						
NVAR	Mina Array Bea	82.16	325	P	P	11 09 46.0	+1.8
	comp=Z,0.5nm,0.8s,baz=148,slow=7.0,SNR=4.0						
TORD	Torodi Ar. Bea	83.25	70	P	P	11 09 50.0	-0.1
	comp=Z,0.6nm,0.8s,baz=279,slow=4.5,SNR=3.8						
TORD	Torodi Ar. Bea	83.25	70		P	11 09 50.5	+0.3
TORD				IAmb	IAmb	11 10 10.8	
	comp=Z,3.3nm,1.5s						
WRA	Warramunga Arr	122.83	210	PKP	PKPdf	11 16 19.4	-0.5
	comp=Z,0.2nm,0.5s,baz=153,slow=1.6,SNR=1.8						
H11S2	WAKE ISLAND Hy	125.98	271	T	T	13 35 23.3	
	baz=117,slow=74,SNR=59						
H11S1	WAKE ISLAND Hy	126.00	271	T	T	13 35 24.2	
	baz=117,slow=74,SNR=42						
H11S3	WAKE ISLAND Hy	126.00	271	T	T	13 35 20.1	
	baz=117,slow=74,SNR=35						
H11N3	WAKE ISLAND Hy	126.34	272	T	T	13 35 39.4	
	baz=116,slow=75,SNR=24						
H11N1	WAKE ISLAND Hy	126.36	272	T	T	13 35 42.5	
	baz=116,slow=75,SNR=7.9						
H11N2	WAKE ISLAND Hy	126.36	272	T	T	13 35 49.2	
	baz=116,slow=75,SNR=45						
ZALV	Zalesovo Beam	152.19	30	PKPbc	PKiKP	11 17 19.5	+0.9
	comp=Z,1.7nm,0.6s,baz=288,slow=3.6,SNR=6.8						

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*IDC **17** 11:05:37.9±4.2, 5.°01S×152.°74E, h91^{km}±38^{km}, mb3.7/10, mb1 3.8/11, mb1mx3.6/41, mbtmp4.0/11, Error ellipse: s-maj=24.4km s-min=21.4km az=127.0*

ISC 17 11:05:38.8±0.8**, 5.°0S**±0.°1×**152.°7E**±0.°1**, h100**^{km}**, n13, σ1^{s}12**/14**, mb3.9**/11**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	7.06	231	P	Pn	11 07 19.7	+0.2
	0.8nm,0.3s,baz=294,slow=2.3,SNR=3.9						
PMG				S	Sn	11 08 38.5	+0.3
	1.7nm,0.3s,baz=142,slow=21,SNR=1.8						
DZM	Mont Dzumac	21.54	143	P	P	11 10 21.1	+0.9
	3.4nm,0.5s,baz=311,slow=11,SNR=7.7						
WRA	Warramunga Arr	23.27	229	P	P	11 10 36.6	-1.2
	2.7nm,0.3s,baz=55,slow=10,SNR=55						
ASAR	Alice Springs	25.96	223	P	P	11 11 01.8	-0.5
	0.7nm,0.3s,baz=54,slow=9.0,SNR=31						
STKA	Stephens Creek	28.71	200	P	P	11 11 26.9	+0.2
	0.9nm,0.5s,baz=27,slow=14,SNR=3.9						
FITZ	Fitzroy Crossi	29.51	242	P	P	11 11 32.3	-1.6
	2.2nm,0.4s,baz=53,slow=8.7,SNR=33						
CMAR	Chiang Mai Arr	57.91	295	P	P	11 15 21.5	+0.6
	0.4nm,0.3s,baz=128,slow=5.8,SNR=2.2						
PETK	Petropavlovsk-	58.04	4	P	P	11 15 20.2	-1.0
	38nm,1.4s,baz=167,slow=7.1,SNR=1.6						
MKAR	Makanchi Array	80.43	319	P	P	11 17 40.8	+1.2
	0.4nm,0.5s,baz=102,slow=5.0,SNR=9.1						
ZALV	Zalesovo Beam	81.28	326	P	P	11 17 45.1	+1.3
	0.9nm,0.5s,baz=107,slow=4.8,SNR=3.5						
ILAR	Eielson Array	82.36	22	P	P	11 17 47.8	-1.6
	0.4nm,0.6s,baz=242,slow=5.5,SNR=8.7						
BVAR	Borovoye Array	89.36	323	P	P	11 18 25.3	+1.2
	0.9nm,0.5s,baz=198,slow=9.3,SNR=4.0						
TORD	Torodi Ar. Bea	150.31	288	PKPbc	PKiKP	11 25 20.8	+0.5
	0.5nm,0.3s,baz=67,slow=2.2,SNR=6.8						

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*ATH **17** 11:31:17.7, 36.°62N×26.°68E, h220^{km}±10^{km}, ML3.5/7, Error ellipse: s-maj=10.4km s-min=1.8km az=86.0*

*ISK **17** 11:31:31.1, 36.°61N×26.°68E, h137^{km}±1^{km}, ML2.9/16*

*DDA **17** 11:31:35.0, 36.°44N×27.°28E, h7^{km}±1^{km}, ML2.6*

ISC 17 11:31:30.9±1.6**, 36.°59N**±0.°06×**26.°71E**±0.°04**, h138**^{km}±10^{km}**, n39, σ1^{s}01**/46**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOSK	Kos Island	0.27	53	PG	Pn	11 31 50.4	+0.5
KOSK				SG	Sn	11 32 04.3	0.0
NIS1	Nisyros Isl.	0.38	88	PG	Pn	11 31 50.9	+0.6
BODT	Bodrum	0.67	45	PG	Pn	11 31 52.6	+0.6
BODT				SG	Sn	11 32 08.1	+0.1
DAT	Datca	0.71	79	PG	Pn	11 31 52.9	+0.6
SNT5	Nea Kammeni, S	1.08	260	P	Pn	11 31 56.1	+0.9
MLSB	Milas	1.10	50	PN	Pn	11 31 55.9	+0.4
SMG	Samos	1.12	5	P	Pn	11 31 56.2	+0.5
GCAM	G?zelcaml?	1.18	20	PN	Pn	11 31 57.0	+0.8
ARG	Arkhangelos	1.20	108	P	Pn	11 31 57.3	+0.8
ARG				AML	AML	11 32 17.5	
	comp=E,755µm,0.3s						
ARG				AML	AML	11 32 19.2	
	comp=N,621µm,0.3s						
ARG	Arkhangelos	1.20	108	PN	Pn	11 31 57.3	+0.8
MRSB	Marmaris-Mugla	1.20	84	PN	Pn	11 31 57.7	+1.2
TURN	Turunc	1.25	81	*i* P	Pn	11 31 57.4	+0.5
TURN				*i* S	Sn	11 32 16.2	-0.4
TURN	Turunc	1.25	81	PN	Pn	11 31 57.5	+0.6
YER	Yerkesik	1.37	66	PN	Pn	11 31 58.9	+0.7
MULA	Mugla, Merkez-	1.45	62	*i* P	Pn	11 32 00.3	+1.2
DALY	Dalyan (Mula)	1.58	81	PN	Pn	11 32 02.0	+1.6
NPS	Neapolis	1.60	214	P	Pn	11 32 00.9	+0.2
NPS				AML	AML	11 32 23.0	
	comp=E,1343µm,0.2s						
NPS				AML	AML	11 32 23.3	
	comp=N,1214µm,0.2s						
AYDB	Zeytinkoy-Aydi	1.65	34	PN	Pn	11 32 02.1	+0.8
URLA	Izmir	1.77	357	PN	Pn	11 32 02.6	0.0
HRKL	Herakleio	1.83	226	PN	Pn	11 32 03.7	+0.4
IACM	Heraklion	1.85	227	P	Pn	11 32 03.7	+0.2
FETY	Fethiye	1.91	88	PN	Pn	11 32 05.0	+0.8
TAVA	DENIZLI_Tavas	1.96	63	*i* P	Pn	11 32 05.9	+0.9
TAVA				*i* S	Sn	11 32 29.2	-1.9
TAVA				IAML		11 32 32.0	
	comp=E,46nm,0.5s						
TAVA				IAML		11 32 32.0	
	comp=N,49nm,0.5s						
IDI	Anoyia	1.97	229	P	Pn	11 32 05.1	0.0
IDI				AML	AML	11 32 30.1	
	comp=E,419µm,0.2s						
IDI				AML	AML	11 32 31.6	
	comp=N,549µm,0.2s						
CAME	Cameli-Denizli	2.11	80	PN	Pn	11 32 07.6	+0.8
CAEL	Denizli, Camel	2.16	75	*i* P	Pn	11 32 07.4	0.0
CAEL				*i* S	Sn	11 32 32.8	-2.5
VAM	Vamos	2.36	241	P	Pn	11 32 09.7	0.0
VAM				AML	AML	11 32 39.9	
	comp=E,668µm,0.3s						
VAM				AML	AML	11 32 43.5	
	comp=N,552µm,0.3s						
KSL	Kastellorizon	2.36	100	P	Pn	11 32 10.4	+0.7
KSL				AML	AML	11 32 39.4	
	comp=E,1034µm,0.4s						
KSL				AML	AML	11 32 40.6	
	comp=N,489µm,0.4s						
AKAS	Kas	2.36	98	*i* P	Pn	11 32 10.3	+0.5
AKAS				*i* S	Sn	11 32 36.8	-3.0
AKAS				IAML		11 32 42.0	
	comp=E,185nm,0.4s						
AKAS				IAML		11 32 43.0	
	comp=N,272nm,0.3s						
AKAS	Kas	2.36	98	PN	Pn	11 32 10.5	+0.7
IMMV	Iera Moni Meta	2.49	244	P	Pn	11 32 11.7	+0.4
IMMV				AML	AML	11 32 46.5	
	comp=E,807µm,0.3s						
IMMV				AML	AML	11 32 47.0	
	comp=N,711µm,0.3s						
IMMV	Iera Moni Meta	2.49	244	PN	Pn	11 32 11.9	+0.6
GVD	Gavdhos	2.76	231	P	Pn	11 32 15.6	+0.8
GVD	Gavdhos	2.76	231	PN	Pn	11 32 15.8	+1.0
KNDR	Palaiochora Ch	2.81	242	PN	Pn	11 32 16.6	+1.3
ANKY	Antikythira Is	2.85	256	P	Pn	11 32 16.1	+0.2
KORT	Korkueli	2.95	81	*i* P	Pn	11 32 18.6	+1.4
KORT				*i* S	Sn	11 32 54.4	+1.4
KTHA	Kythira Island	2.96	265	P	Pn	11 32 17.9	+0.5
VLI	Veliai	3.04	273	P	Pn	11 32 18.8	+0.5
VLI				AML	AML	11 32 53.9	
	comp=N,250µm,0.3s						
VLI				AML	AML	11 32 55.9	
	comp=E,196µm,0.4s						

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*GCG **17** 11:39:40.2±0.6, 14.°84N×92.°74W, h35^{km}±999^{km}, MD4.4*

*UCR **17** 11:39:42.9±0.8, 14.°90N×92.°39W, h35^{km}±999^{km}, ML4.5, mb4.5(NEIC)*

*SNET **17** 11:39:42.9±0.8, 14.°90N×92.°39W, h35^{km}±999^{km}, ML4.9*

*MEX **17** 11:39:43.2±0.9, 14.°77N×92.°39W, h81^{km}±8^{km}, MD4.5*

*NEIC **17** 11:39:43.5±2.6, 14.°75N±0.°05×92.°47W±0.°05, h80^{km}±6^{km}, Error ellipse: s-maj=8.3km s-min=5.9km az=205.0*

*IDC **17** 11:39:43.6±1.5, 14.°98N×92.°16W, h82^{km}±15^{km}, mb4.0/18, mb1 4.1/21, mb1mx4.0/55, mbtmp4.3/21, MS3.6/2, Ms1 3.5/2, ms1mx3.0/36, Error ellipse: s-maj=24.1km s-min=9.1km az=49.0*

ISC 17 11:39:42.4±0.7**, 14.°69N**±0.°05×**92.°53W**±0.°04**, h80**^{km}±6^{km}**, n299, σ1^{s}62**/328**, mb4.5**/67**, 2C-4D, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		0.34	50		Pn	11 39 53.5	-1.5
THIG					Sn	11 40 02.3	-1.9
THIG		0.34	50	*i* P	Pn	11 39 53.5	-1.5
THIG				*i* S	Sn	11 40 02.3	-1.9
RTAL	Retalhuleu	0.83	101	Pn	Pn	11 39 58.2	-1.3
RTAL				Sn	Sn	11 40 10.9	-1.3
HUEH	Huehuetenango	1.18	58	Pn	Pn	11 40 03.6	-0.2
HUEH				Sn	Sn	11 40 20.6	+0.7
PCIG		1.21	327		Pn	11 40 03.9	-0.1
PCIG					Sn	11 40 19.7	-0.5
PCIG		1.21	327	*i* P	Pn	11 40 03.9	-0.1
PCIG				*i* S	Sn	11 40 19.7	-0.5
CCIG	Comitan	1.63	14		Pn	11 40 09.7	+0.1
CCIG	Comitan	1.63	14	*i* P	Pn	11 40 10.0	+0.4
CCIG				*i* S	Sn	11 40 27.1	-3.0
FUG	Fuego 3	1.66	98	*e*P	Pn	11 40 10.3	+0.4
PCG	Pacaya	1.89	99	⇑*i*P	Pn	11 40 14.0	+0.9
PCG				⇑*e*P	Pn	11 40 14.0	+0.9
NBG	Las Nubes	2.12	93	*e*P	Pn	11 40 17.6	+1.5
NBG				*e*S	Sn	11 40 45.9	+4.0
TGBT	Tuxtla Gutierr	2.14	346		Pn	11 40 17.5	+1.3
TGBT	Tuxtla Gutierr	2.14	346	*i* P	Pn	11 40 17.5	+1.3
TGIG		2.15	345		Pn	11 40 15.7	-0.7
TGIG					Sn	11 40 43.1	+0.8
TGIG		2.15	345	*i* P	Pn	11 40 15.7	-0.7
TGIG				*i* S	Sn	11 40 43.1	+0.8
MRL	Marmol	2.78	82	*e*P	Pn	11 40 25.6	+0.6
CEVE	Cerro Verde	2.95	107	*e*P	Pn	11 40 27.3	0.0
CEVE	Cerro Verde	2.95	107	*e*P	Pn	11 40 27.3	0.0
MTO3	Montecristo	3.09	95		Pn	11 40 28.4	-0.7
ESQI	Esquipulas	3.09	92	Pn	Pn	11 40 29.6	+0.5
JAYA	Jayaque - finc	3.16	109	*e*P	Pn	11 40 29.8	-0.3
JAYA				IAML		11 41 20.6	
	comp=Z,4µm,0.3s						
JAYA	Jayaque - finc	3.16	109	*e*P	Pn	11 40 29.8	-0.3
JAYA				IAML		11 41 20.6	
	comp=Z,4µm,0.3s						
TACO	Tacachico	3.16	103	⇓*e*P	Pn	11 40 29.3	-0.7
TACO	Tacachico	3.16	103	⇓*e*P	Pn	11 40 29.3	-0.7
CMIG	Matias Romero	3.29	317	P	Pn	11 40 32.2	+0.6
	comp=Z,40nm,0.3s,baz=162,slow=13,SNR=182						
CMIG				S	Sn	11 41 12.3	+2.6
	comp=Z,160nm,0.3s,baz=223,slow=9.7,SNR=11						
CMIG	Matias Romero	3.29	317		Pn	11 40 31.9	+0.2
CMIG					Sn	11 41 10.2	+0.5
CMIG	Matias Romero	3.29	317	*i* P	Pn	11 40 31.9	+0.2
CMIG				*i* S	Sn	11 41 10.2	+0.5
LALI	Alcalda de L	3.34	111	*e*P	Pn	11 40 32.4	+0.1
LALI	Alcalda de L	3.34	111	*e*P	Pn	11 40 32.4	+0.1
SNET	Serv Nac Est T	3.35	107	Pn	Pn	11 40 32.4	-0.3
PETF	Flores	3.39	49	Pn	Pn	11 40 32.9	-0.2
SJTE	Alcalda de S	3.58	107	⇓*e*P	Pn	11 40 35.9	+0.1
SJTE	Alcalda de S	3.58	107	⇓*e*P	Pn	11 40 35.9	+0.1
HUIG	Huatulco	3.61	288		Pn	11 40 35.8	-0.3
HUIG	Huatulco	3.61	288	*i* P	Pn	11 40 35.8	-0.3
HUIG				*i* S	Sn	11 41 11.5	-6.1
PAVA	Las Pavas	3.62	105	*e*P	Pn	11 40 36.4	+0.1

PAVA	Las Pavas	3.62	105	eP	Pn	11 40 36.4	+0.1
COEG	Centro de Oper	3.70	106	eP	Pn	11 40 37.5	+0.1
COEG				IAML		11 41 37.7	
	comp=Z,2µm,0.6s						
COEG	Centro de Oper	3.70	106	eP	Pn	11 40 37.5	+0.1
COEG				IAML		11 41 37.7	
	comp=Z,2µm,0.6s						
TUIG	Tuzandepetl	3.79	332		Pn	11 40 38.2	-0.2
TUIG	Tuzandepetl	3.79	332	eP	Pn	11 40 38.2	-0.2
SCLA	Alcaldia de Sa	3.82	104	eP	Pn	11 40 38.6	-0.3
SCLA	Alcaldia de Sa	3.82	104	eP	Pn	11 40 38.6	-0.3
COEB	Comit de Eme	4.06	106	eP	Pn	11 40 42.5	+0.3
COEB	Comit de Eme	4.06	106	eP	Pn	11 40 42.5	+0.3
PEIG	Puerto Escondi	4.64	287	i P	Pn	11 40 50.2	+0.2
PEIG				i S	Sn	11 41 38.7	-4.0
VHO	Vista Hermosa	4.68	301	i P	Pn	11 40 53.2	+2.3
VHO				i S	Sn	11 41 44.1	+0.1
LCND	La Caada	4.71	106	eP	Pn	11 40 51.8	+0.7
LCND	La Caada	4.71	106	eP	Pn	11 40 51.8	+0.7
TGUH	Tegucigalpa,Un	5.14	96	Pn	Pn	11 40 55.0	-1.9
YOIG	Yosondua	5.28	295	i P	Pn	11 41 00.7	+1.6
YOIG				i S	Sn	11 41 56.7	-2.1
TOIG	Toxpalan	5.51	309	i P	Pn	11 41 03.2	+1.1
TOIG				i S	Sn	11 42 01.3	-2.8
TXIG	Tlaxiaco	5.64	298	i P	Pn	11 41 06.5	+2.5
TXIG				i S	Sn	11 42 06.4	-1.2
PNIG	Pinotepa	5.65	288		Pn	11 41 04.7	+0.8
PNIG					Sn	11 42 07.4	0.0
PNIG	Pinotepa	5.65	288	eP	Pn	11 41 04.7	+0.8
PNIG				i S	Sn	11 42 00.6	-6.8
PNIG				i S	Sn	11 42 07.4	0.0
TPIG	Tehuac#an	5.93	309		Pn	11 41 08.7	+0.9
TPIG					Sn	11 42 15.6	+1.1
TPIG	Tehuac#an	5.93	309	i P	Pn	11 41 08.7	+0.9
TPIG				i S	Sn	11 42 15.6	+1.1
HLIG	Huajuapan de L	5.95	302	i P	Pn	11 41 10.8	+2.8
HLIG				i S	Sn	11 42 15.2	+0.2
CNGN	Cerro Negro	6.08	110	Pn	Pn	11 41 10.1	+0.4
FTIG	Fresnillo de T	6.26	302	i P	Pn	11 41 15.2	+3.0
FTIG				i S	Sn	11 42 20.7	-1.6
TLIG	Tlapa	6.46	297	Pn	Pn	11 41 18.0	+3.0
TLIG	Tlapa	6.46	297	i P	Pn	11 41 18.0	+3.0
TLIG				i S	Sn	11 42 26.9	-0.6
BOAB	BOACO BROADBAN	7.04	108	Pn	Pn	11 41 22.7	-0.1
PPM	Popocatepetl	7.28	308	i P	Pn	11 41 31.6	+5.1
PPM				i S	Sn	11 42 52.3	+4.4
YAIG	Yautepec	7.51	304		Pn	11 41 32.5	+3.2
YAIG	Yautepec	7.51	304	i P	Pn	11 41 32.5	+3.2
YAIG				i S	Sn	11 42 47.5	-5.5
MEIG	Mezcala	7.53	296		Pn	11 41 32.0	+2.5
MEIG	Mezcala	7.53	296	i P	Pn	11 41 32.0	+2.5
MEIG				i S	Sn	11 42 47.7	-5.6
ACON	Acoyapa	7.66	110	Pn	Pn	11 41 31.3	0.0
HZTE	Horizontes, Gu	7.84	119	Pn	Pn	11 41 34.5	+0.7
MAVM	Malinalco, Edo	7.90	303		Pn	11 41 38.5	+3.7
MAVM	Malinalco, Edo	7.90	303	eP	Pn	11 41 38.5	+3.7
MAVM				i S	Sn	11 42 59.7	-3.1
ORTG	Ortega, Santa	8.14	121	Pn	Pn	11 41 38.8	+0.9
DUNO	Dulce Nombre,	8.26	123	Pn	Pn	11 41 40.5	+1.0
ESPN	Las Esperanzas	8.38	106		Pn	11 41 42.8	+1.6
JTS	Las Juntas de	8.60	120	P	Pn	11 41 44.8	+0.7
	comp=Z,4.1nm,0.3s,baz=170,slow=22,SNR=8.7						
JTS				S	Sn	11 43 21.2	+1.6
	comp=Z,0.7nm,0.3s,baz=31,slow=18,SNR=1.2						
JTS	Las Juntas de	8.60	120		Pn	11 41 44.6	+0.5
CAO2	Cobano, Puntar	8.80	124	Pn	Pn	11 41 48.0	+1.2
MOIG	Morelia	9.64	302	Pn	Pn	11 42 02.7	+4.1
RIMA	Rio Macho	9.78	119		Pn	11 42 00.6	+0.1
PEZE	Perez Zeledon,	10.14	120		Pn	11 42 05.9	+0.7
SRBA	San Rafael, Bu	10.48	120	Pn	Pn	11 42 10.5	+0.5
DRK0	Durika	10.57	120	Pn	Pn	11 42 11.4	+0.3
RIOS	Rincon, Osa	10.65	123	Pn	Pn	11 42 13.4	+1.3
SOR	Soroa	12.09	47	Pn	Pn	11 42 30.2	-1.5
ZAIG	Zacatecas	12.44	312	Pn	Pn	11 42 39.7	+3.0
MTDJ	Mount Denham	14.81	74	P	P	11 43 11.6	0.0
833A	Chaparral WMA,	14.99	336	P	P	11 43 11.7	-1.6
	baz=153						
553A	Crawfordville	17.13	24		Pn	11 43 36.3	-0.3
BRAL	Brewton	17.16	16	P	P	11 43 39.2	+1.9
	baz=198						
HPIG		17.28	317	Pn	Pn	11 43 37.3	-1.4
VBMS	Vicksburg	17.55	6		Pn	11 43 42.0	+0.3
TXAR	Lajitas Array	17.84	327	P	Pn	11 43 47.4	+2.0
	comp=Z,0.3nm,0.3s,baz=155,slow=11,SNR=30						
TXAR	Lajitas Array	17.84	327	P	Pn	11 43 47.5	+2.1
TX32	Lajitas Array	17.84	327		Pn	11 43 47.7	+2.3
143A	Socs Landing,	17.96	3	P	P	11 43 46.2	0.0
143A				IAmb	IAmb	11 43 49.1	
	comp=Z,36nm,0.8s						
352A	Blakely	18.10	21	P	P	11 43 47.8	-0.1
352A				IAmb	IAmb	11 43 51.7	
	comp=Z,40nm,0.9s						
250A	Grady	18.14	17	P	P	11 43 48.1	-0.1
250A				IAmb	IAmb	11 43 51.0	
	comp=Z,25nm,0.9s						
Z41A	Richland Creek	18.49	359	P	Pn	11 43 54.9	+1.8
	baz=179						
ZARC	Zaragoza, Cauc	18.75	111	P	P	11 43 54.9	-0.3
Z47A	Carrollton	18.87	12	P	Pn	11 43 57.8	+0.2
WLAR	White Oak Lake	18.92	359	P	Pn	11 43 57.6	-0.6
WLAR				IAmb	IAmb	11 44 02.0	
	comp=Z,36nm,0.8s						
ABTX	Abilene, Hawle	18.99	341	P	P	11 43 58.0	+0.4
152A	Waverly Hall	19.26	20	P	P	11 44 00.3	-0.2
152A				IAmb	IAmb	11 44 05.5	
	comp=Z,19nm,0.6s						
Y45A	Yeager Farm, C	19.28	8		Pn	11 44 02.1	-0.4
Y45A				IAmb	IAmb	11 44 06.6	
	comp=Z,32nm,0.8s						
Z51A	Franklin	19.71	19	P	P	11 44 05.7	+0.3
X40A	Basin Creek Fa	19.71	359	P	P	11 44 05.1	-0.3
MIAR	Mount Ida	19.79	357	P	Pn	11 44 08.3	-0.2
	baz=176,SNR=20						
MIAR	Mount Ida	19.79	357	P	Pn	11 44 07.8	-0.6
Y49A	Blount Mountai	19.87	15	P	P	11 44 06.7	-0.4
X37A	Clayton	19.98	353	P	P	11 44 08.4	+0.1
X37A				IAmb	IAmb	11 44 30.1	
	comp=Z,32nm,1.2s						
OTAV	Otavalo	20.00	135	P	Pn	11 44 10.5	-1.1
X48A	Hartselle	20.29	13	P	P	11 44 11.3	-0.4
X48A				IAmb	IAmb	11 44 17.1	
	comp=Z,24nm,0.8s						
GOGA	Godfrey	20.37	22	P	P	11 44 12.5	0.0
	baz=206						
W41B	Gary Mavity, V	20.40	1	P	P	11 44 14.1	+1.3
	baz=180						
WHAR	Wooly Hollow	20.51	1	P	P	11 44 14.6	+0.5
Y52A	Lilburn	20.57	20	P	P	11 44 14.8	0.0
Y52A				IAmb	IAmb	11 44 17.3	
	comp=Z,20nm,0.8s						
PLAL	Pickwick Lake	20.60	10	P	P	11 44 11.4	-3.6
MNTX	Cornudas Mount	20.61	327	P	Pn	11 44 17.2	-0.9
	baz=142,SNR=8.2						
MNTX	Cornudas Mount	20.61	327	P	P	11 44 16.1	+0.9
FPAL	Fort Paine	20.73	16	P	P	11 44 15.6	-0.8
FPAL				IAmb	IAmb	11 44 43.5	
	comp=Z,28nm,1.1s						
WMOK	Wichita Mounta	20.74	345	P	P	11 44 17.8	+1.2
	baz=162						
WMOK	Wichita Mounta	20.74	345		P	11 44 17.3	+0.8
FCAR	Ozark Folk Cen	21.11	1	P	P	11 44 21.0	+0.5
SWET	Sewanee	21.28	15	P	P	11 44 21.2	-1.1
SWET				IAmb	IAmb	11 44 29.0	
	comp=Z,25nm,0.7s						
LCAR	Lake Charles	21.32	3	P	P	11 44 22.2	-0.5
W50A	Signal Mountai	21.43	16	P	P	11 44 22.9	-1.0
W50A				IAmb	IAmb	11 44 51.5	
	comp=Z,15nm,0.8s						
HODGE	Hodges	21.56	24	P	P	11 44 24.0	-1.3
HODGE				IAmb	IAmb	11 44 32.1	
	comp=Z,18nm,1.2s						
U40A	Yellville	21.58	359	P	P	11 44 25.5	+0.1
	baz=179						
V48A	Smith Brothers	21.58	13	P	P	11 44 24.5	-1.0
U38A	Gravette	21.72	356		P	11 44 27.0	0.0
AMTX	Amarillo	21.73	339	P	P	11 44 28.0	+0.8
AMTX				IAmb	IAmb	11 44 47.7	
	comp=Z,22nm,0.8s						
WVT	Waverly	21.76	10	P	P	11 44 26.3	-1.1
	baz=192						
WVT	Waverly	21.76	10	P	P	11 44 26.1	-1.3
CPCT	Cooper Cave	21.89	18	P	P	11 44 27.5	-1.3
CPCT				IAmb	IAmb	11 44 46.7	
	comp=Z,12nm,0.8s						
BG3	Lake Jocassee	21.99	21	P	P	11 44 29.5	-0.4
BG3				IAmb	IAmb	11 44 30.9	
	comp=Z,13nm,0.9s						
JSC	Jenkinsville	22.00	26	P	P	11 44 29.6	-0.4
JSC				IAmb	IAmb	11 44 37.2	
	comp=Z,20nm,1.0s						
CLTN	Cedars of Leba	22.02	13	P	P	11 44 29.0	-1.2
CLTN				IAmb	IAmb	11 44 30.6	
	comp=Z,13nm,0.7s						
V51A	Loudon	22.27	18	P	P	11 44 31.7	-1.2
V51A				IAmb	IAmb	11 44 41.3	
	comp=Z,16nm,1.1s						
T42A	Van Buren	22.29	3	P	P	11 44 32.1	-0.9
TKL	Tuckaleechee C	22.31	19	P	P	11 44 32.0	-1.3
	comp=Z,13nm,1.0s,baz=200,slow=11,SNR=9.7						
TKL	Tuckaleechee C	22.31	19	P	P	11 44 32.6	-0.7
TKL				IAmb	IAmb	11 44 55.9	
	comp=Z,23nm,1.1s						
121A	Cookes Peak, D	22.55	325	P	P	11 44 38.6	+2.5
	baz=138,SNR=9.8						
121A	Cookes Peak, D	22.55	325	P	P	11 44 37.4	+1.3
121A				IAmb	IAmb	11 44 55.9	
	comp=Z,18nm,0.9s						
U49A	Red Boiling Sp	22.55	14	P	P	11 44 34.2	-1.7
U49A				IAmb	IAmb	11 44 44.1	
	comp=Z,21nm,0.9s						
319A	Douglas	22.61	320	P	P	11 44 38.4	+1.7
319A				IAmb	IAmb	11 44 57.3	
	comp=Z,27nm,1.0s						
KMSC	Kings Mountain	22.72	24	P	P	11 44 36.7	-0.9
	baz=209,SNR=5.7						
KMSC	Kings Mountain	22.72	24	P	P	11 44 36.2	-1.5
KMSC				IAmb	IAmb	11 44 37.5	
	comp=Z,15nm,0.8s						
T47A	Sharon Grove	22.73	11	P	P	11 44 35.8	-1.9
T47A				IAmb	IAmb	11 44 37.3	
	comp=Z,21nm,0.8s						
S44A	Carbondale	23.09	7	P	P	11 44 39.9	-1.5
S44A				IAmb	IAmb	11 45 00.5	
	comp=Z,16nm,0.7s						
SIUC	Southern Illin	23.12	7	P	P	11 44 39.6	-2.0
SIUC				IAmb	IAmb	11 45 00.4	
	comp=Z,14nm,0.7s						
BNM	Barren Site	23.19	329	P	P	11 44 44.1	+1.5
TZTN	Tazewell	23.20	19	P	P	11 44 41.3	-1.1
	baz=202						
TZTN	Tazewell	23.20	19	P	P	11 44 40.8	-1.6
TZTN				IAmb	IAmb	11 44 42.7	
	comp=Z,25nm,1.1s						
T50A	Nancy	23.27	16	P	P	11 44 40.9	-2.1
T50A				IAmb	IAmb	11 44 42.0	
	comp=Z,14nm,0.8s						
CCM	Cathedral Cave	23.30	3	P	P	11 44 40.8	-2.4
	baz=183						
V55A	Taylorsville	23.39	24	P	P	11 44 42.5	-1.6
V55A				IAmb	IAmb	11 44 44.0	
	comp=Z,15nm,0.8s						
ANMO	Albuquerque	23.75	331	P	P	11 44 49.4	+1.8
	comp=Z,2.3nm,0.5s,baz=151,slow=12,SNR=12						
ANMO	Albuquerque	23.75	331	P	P	11 44 49.5	+1.8
	baz=144						
ANMO	Albuquerque	23.75	331	P	P	11 44 47.8	+0.2
U54A	Nelsons Funny	23.75	22	P	P	11 44 46.2	-1.2
U54A				IAmb	IAmb	11 45 09.1	
	comp=Z,18nm,0.9s						
WCI	Wyandotte Cave	24.09	12	P	P	11 44 49.3	-1.1
	baz=194						
WCI	Wyandotte Cave	24.09	12	P	P	11 44 49.2	-1.1
TUC	Tucson	24.18	320	P	P	11 44 53.0	+1.6
R32A	Long Quarter,	24.26	348	P	P	11 44 51.2	-0.7
OLIL	Olney	24.27	8	P	P	11 44 51.5	-0.5
OLIL				IAmb	IAmb	11 44 52.4	
	comp=Z,22nm,0.7s						
R49A	Shelbyville	24.39	14	P	P	11 44 51.6	-1.5
R49A				IAmb	IAmb	11 45 06.2	
	comp=Z,22nm,1.1s						
BAUV	El Baul	24.63	101	P	P	11 44 54.7	-0.9
BAUV				IAmb	IAmb	11 45 04.6	
	comp=Z,14nm,1.1s						
T57A	Hurt	25.17	26	P	P	11 44 58.8	-1.5
T57A				IAmb	IAmb	11 44 59.6	
	comp=Z,11nm,0.9s						
X18A	Snowflake	25.24	325	P	P	11 45 02.5	+1.4
P46A	Rosedale	25.27	10	P	P	11 45 00.1	-1.0
P46A				IAmb	IAmb	11 45 03.3	
	comp=Z,18nm,0.7s						
P48A	Milroy	25.45	13	P	P	11 45 00.8	-2.0
P48A				IAmb	IAmb	11 45 03.4	
	comp=Z,28nm,1.2s						
P49A	Miami Univ. Ec	25.68	14	P	P	11 45 02.6	-2.3
P49A				IAmb	IAmb	11 45 05.7	
	comp=Z,9.9nm,0.6s						
SDCO	Great Sand Dun	25.68	336	P	P	11 45 03.8	-1.4
Q52A	Bidwell	25.82	19	P	P	11 45 04.4	-1.7
Q52A				IAmb	IAmb	11 45 08.0	
	comp=Z,16nm,0.7s						
ATAH	Atahualpa	25.82	146	P	P	11 45 09.2	+2.4
	comp=Z,12nm,0.8s,baz=330,slow=5.9,SNR=6.4						
R55A	Marlinton	25.94	23	P	P	11 45 06.1	-1.2
R55A				IAmb	IAmb	11 45 34.0	
	comp=Z,20nm,1.2s						
S57A	Dark Hollow, R	25.94	25	P	P	11 45 06.1	-1.2
X16A	Lo Mia Camp, P	26.02	322	P	P	11 45 09.7	+1.5
Q54A	Coxs Mills	26.30	21	P	P	11 45 09.1	-1.4
Q54A				IAmb	IAmb	11 45 23.9	
	comp=Z,24nm,1.3s						
P57A	Homestead Farm	27.80	25	P	P	11 45 22.9	-1.0
P57A				IAmb	IAmb	11 45 23.5	
	comp=Z,12nm,0.8s						
L48A	N Adams	28.05	13	P	P	11 45 24.0	-2.1
KNB	Kanab	28.65	325	P	P	11 45 33.5	+1.9
PSUT	Pine Spring	30.30	326	P	P	11 45 48.3	+1.9
SPR3	Spring Creek 3	30.90	326	P	P	11 45 54.2	+2.5
BINY	Binghamton	30.91	24	P	P	11 45 49.6	-1.8
	baz=212						
BINY	Binghamton	30.91	24	P	P	11 45 49.5	-2.0
BINY				IAmb	IAmb	11 45 50.4	
	comp=Z,10.0nm,0.6s						
R11A	Troy Canyon, C	31.15	323	P	P	11 45 56.8	+3.0
	baz=133						
J56A	Wolcott	31.50	22	P	P	11 45 54.6	-1.9
PDAR	Pinedale Array	31.58	336	P	P	11 45 58.8	+1.2
	comp=Z,0.2nm,0.4s,baz=150,slow=4.2,SNR=1.0						
LCH	Last Change Ra	31.66	320	P	P	11 46 00.8	+2.5
REDW	Red Top Meadow	32.60	335	P	P	11 46 07.1	+0.5
REDW				IAmb	IAmb	11 46 09.0	
	comp=Z,9.2nm,1.1s						
ELK	Elko	32.63	327	P	P	11 46 08.9	+2.1
ELK				IAmb	IAmb	11 46 10.0	
	comp=Z,4.1nm,0.8s						
NV11	Mina Array Sit	32.72	321	P	P	11 46 10.3	+2.7
NV11				IAmb	IAmb	11 46 12.0	
	comp=Z,16nm,1.2s						
NVAR	Mina Array Bea	32.81	321	P	P	11 46 11.4	+3.0
	comp=Z,7.6nm,0.8s,baz=133,slow=8.1,SNR=43						
NVAR				PcP	PcP	11 48 54.5	+2.7
	comp=Z,1.2nm,0.8s,baz=123,slow=3.3,SNR=4.0						
NVAR	Mina Array Bea	32.81	321	P	P	11 46 11.3	+2.9
LHV	Little Huntoon	32.82	321	P	P	11 46 11.9	+3.7
LHV				IAmb	IAmb	11 46 13.0	
	comp=Z,16nm,1.3s						
KVN	Kaiserville	33.09	322	P	P	11 46 13.2	+2.4
KVN				IAmb	IAmb	11 46 14.7	
	comp=Z,9.6nm,1.0s						
BMN	Battle Mountai	33.49	325	P	P	11 46 16.3	+2.1
BMN				IAmb	IAmb	11 46 17.5	
	comp=Z,6.6nm,0.9s						
YERR	Yerington	33.73	321	P	P	11 46 19.1	+2.7
YERR				IAmb	IAmb	11 46 38.1	
	comp=Z,14nm,1.3s						
PAHR	Pah Rah Range	34.27	322	P	P	11 46 23.2	+2.2
PAHR				IAmb	IAmb	11 46 24.9	
	comp=Z,5.6nm,1.1s						
HLID	Hailey	34.33	331	P	P	11 46 24.2	+2.8
	baz=140,SNR=7.9						
HLID	Hailey	34.33	331	P	P	11 46 23.1	+1.7
HLID				IAmb	IAmb	11 46 26.3	
	comp=Z,4.6nm,0.8s						
ULM	Lac du Bonnet	35.57	356	LR	LR	12 01 45.9	
	comp=Z,62nm,21.1s,baz=156,slow=38						
WVOR	Wild Horse Val	35.63	326	P	P	11 46 34.7	+2.0
WVOR				IAmb	IAmb	11 46 35.9	
	comp=Z,9.7nm,1.1s						
ETMB	Extrema	35.69	131	P	P	11 46 33.3	0.0
ETMB				IAmb	IAmb	11 46 34.1	
	comp=Z,9.5nm,1.0s						
J08A	Circle Bar Ran	36.18	327	P	P	11 46 39.1	+1.8
BMO	Blue Mountains	36.67	330	P	P	11 46 42.2	+0.8
BMO				IAmb	IAmb	11 46 43.3	
	comp=Z,4.3nm,1.0s						
SAML	Samuel	37.40	127	P	P	11 46 46.3	-1.5
SAML				IAmb	IAmb	11 46 47.4	
	comp=Z,4.6nm,0.9s						
LPAZ	La Paz	39.09	141	P	P	11 47 02.9	+0.2
	comp=Z,1.0nm,0.8s,baz=294,slow=7.1,SNR=4.8						
LPAZ	La Paz	39.09	141	P	P	11 47 03.1	+0.3
PB16	IPOC Station P	39.90	145	P	P	11 47 10.3	+1.0
PB16				IAmb	IAmb	11 47 11.6	
	comp=Z,5.2nm,1.0s						
PB11	IPOC Station P	40.97	146	P	P	11 47 18.6	+0.9
EDM	Edmonton	41.82	341	P	P	11 47 24.3	+0.2
EDM				IAmb	IAmb	11 47 26.1	
	comp=Z,13nm,1.4s						
PGC	Sidney	42.34	330	P	P	11 47 30.1	+1.8
PB09	IPOC Station P	42.86	147	P	P	11 47 32.9	-0.2
SCHQ	Schefferville	44.76	21	P	P	11 47 44.4	-3.3
	comp=Z,2.3nm,0.6s,baz=241,slow=8.2,SNR=3.8						
SCHQ				LR	LR	12 06 37.5	
	comp=Z,131nm,19.9s,baz=222,slow=36						
AC02	Maricunga	47.13	151	P	P	11 48 08.7	+1.4
AC02				IAmb	IAmb	11 48 18.4	
	comp=Z,7.9nm,1.1s						
YKA	Yellowknife Ar	50.24	347	P	P	11 48 28.4	-1.6
	comp=Z,1.1nm,0.6s,baz=143,slow=8.2,SNR=12						
YKA	Yellowknife Ar	50.24	347	P	P	11 48 29.3	-0.7
DLBC	Dease Lake	51.81	336	P	P	11 48 44.4	+2.4
CPUP	Villa Florida	53.24	140	P	P	11 48 53.2	+0.3
	comp=Z,1.1nm,0.3s,baz=176,slow=16,SNR=3.0						
TGTN	Hyland Airport	53.30	340	P	P	11 48 55.5	+2.6
	baz=135						
BDFB	Brasilia	53.33	123	P	P	11 48 53.4	-0.5
	comp=Z,2.2nm,0.5s,baz=313,slow=1.9,SNR=3.5						
MMPY	Sheldon Lake,	55.08	339	P	P	11 49 07.7	+1.8
	baz=132						
FARO	Faro, Yukon	55.55	338	P	P	11 49 10.4	+1.2
	baz=130						
LC01	Cunco	56.70	161	P	P	11 49 17.8	+0.2
PLCA	Paso Flores	58.79	161	P	P	11 49 32.8	+0.5
	comp=Z,3.2nm,1.0s,baz=291,slow=14,SNR=3.4						
DAWY	Dawson	58.85	338	P	P	11 49 33.3	+0.8
	baz=124						
MCARA	McCarthy VSAT	58.85	334	P	P	11 49 34.9	+2.4
	baz=119						
BCAR	Beaver Creek A	59.20	336	P	P	11 49 36.0	+1.1
L27K	Beaver Creek,	59.22	336	P	P	11 49 36.6	+1.6
	baz=121,SNR=5.2						
L27K	Beaver Creek,	59.22	336	P	P	11 49 36.2	+1.2
I29M	Ogilvie Camp,	59.22	340	P	P	11 49 35.9	+1.0
	baz=126						
N25K	Chitina, Valde	59.62	334	P	P	11 49 39.6	+1.8
	baz=118						
N25K	Chitina, Valde	59.62	334	P	P	11 49 39.9	+2.1
INK	Inuvik	59.63	344	P	P	11 49 38.0	+0.3
	comp=Z,4.1nm,0.7s,baz=129,slow=7.3,SNR=7.7						
INK	Inuvik	59.63	344	P	P	11 49 38.4	+0.7
	baz=132,SNR=6.6						
INK	Inuvik	59.63	344	P	P	11 49 38.1	+0.4
EGAK	Eagle	59.88	338	P	P	11 49 39.8	+0.4
	baz=123						
EGAK	Eagle	59.88	338	P	P	11 49 40.0	+0.5
RES	Resolute Bay	60.01	359	P	P	11 49 38.0	-2.2
	comp=Z,1.4nm,0.7s,baz=189,slow=9.0						
SCRK	Sand Creek	60.52	337	P	P	11 49 44.9	+0.9
PAX	Paxson	60.62	335	P	P	11 49 45.9	+1.2
	baz=117						
PAX	Paxson	60.62	335	P	P	11 49 45.7	+1.1
J26L	Joseph Creek	60.62	337	P	P	11 49 46.3	+1.7
	baz=120,SNR=6.2						
RIDG	Independent Ri	60.73	336	P	P	11 49 46.8	+1.4
	baz=118						
WAT6	Susitna Watana	61.38	334	P	P	11 49 52.0	+2.1
	baz=115,SNR=5.6						
GHO	Glory Hole Cre	61.55	333	P	P	11 49 51.9	+0.9
RC01	Rabbit Creek A	61.64	332	P	P	11 49 52.6	+1.1
	baz=112						
WAT1	Susitna Watana	61.82	334	P	P	11 49 53.7	+0.9
	baz=114						
PRP	Porcupine Dome	61.85	338	P	P	11 49 53.9	+0.9
	baz=119,SNR=7.7						
PRP	Porcupine Dome	61.85	338	P	P	11 49 53.6	+0.7
KDAK	Kodiak Island	61.86	328	P	P	11 49 53.4	+0.4
	comp=Z,8.3nm,0.8s,baz=125,slow=12,SNR=1.8						
HDA	Harding Lake	61.86	336	P	P	11 49 53.7	+0.7
	baz=117						
IL31		62.00	337	P	P	11 49 54.6	+0.8
ILAR	Eielson Array	62.00	337	P	P	11 49 54.4	+0.5
	comp=Z,6.2nm,0.9s,baz=132,slow=5.2,SNR=46						
SII	Sitkinak Islan	62.34	327	P	P	11 49 55.3	-1.0
	baz=106						
MCK	McKinley	62.36	335	P	P	11 49 57.3	+1.0
	baz=114						
MCK	McKinley	62.36	335	P	P	11 49 57.1	+0.8
TCOL	CIGO, UAF Yank	62.42	337	P	P	11 49 57.6	+1.0
	baz=116						
BMAR	Burnt Mountain	62.47	340	P	P	11 49 57.7	+0.7
BWN	Browne	62.75	336	P	P	11 49 59.6	+0.8
SKT	Skwentna	62.77	333	P	P	11 50 00.0	+0.9
	baz=111						
SKT	Skwentna	62.77	333	P	P	11 49 59.9	+0.9
TRF	Thorofare Moun	62.80	335	P	P	11 50 00.4	+1.0
	baz=113						
TRF	Thorofare Moun	62.80	335	P	P	11 50 00.3	+1.0
H24K	Noodor Dome	62.86	338	P	P	11 50 00.7	+1.1
	baz=116						
H24K	Noodor Dome	62.86	338	P	P	11 50 00.4	+0.8
I23K	Minto, Yukon-K	63.12	337	P	P	11 50 02.4	+1.2
	baz=114,SNR=6.1						
I23K	Minto, Yukon-K	63.12	337	P	P	11 50 02.4	+1.2
BPAW	Bear Paw Mtn.	63.34	335	P	P	11 50 03.2	+0.4
	baz=112						
CAST	Castle Rocks	63.53	334	P	P	11 50 04.2	+0.2
	baz=111,SNR=5.1						
MLY	Manley	63.60	336	P	P	11 50 05.2	+0.7
	baz=113,SNR=9.2						
MLY	Manley	63.60	336	P	P	11 50 05.4	+0.9
L20K	Farewell, AK	63.98	333	P	P	11 50 07.5	+0.5
	baz=109,SNR=5.9						
M19K	Big River Lodg	64.02	332	P	P	11 50 08.1	+0.9
	baz=108						
M19K	Big River Lodg	64.02	332	P	P	11 50 08.3	+1.0
I21K	Tanana	64.14	336	P	P	11 50 08.7	+0.7
	baz=112						
COLD	Coldfoot	64.30	339	P	P	11 50 10.5	+1.5
	baz=115						
COLD	Coldfoot	64.30	339	P	P	11 50 10.5	+1.5
K20K	Telida	64.35	334	P	P	11 50 09.8	+0.4
	baz=109						
H21K	Melozitna Rive	64.64	337	P	P	11 50 10.9	-0.4
	baz=111						
J20K	Nowinta River	64.66	335	P	P	11 50 11.7	+0.3
	baz=109						
TOLK	Toolik Lake Re	64.70	340	P	P	11 50 12.7	+1.1
	baz=116,SNR=5.9						
TOLK	Toolik Lake Re	64.70	340	P	P	11 50 12.8	+1.1
TTA	Tatalina	65.05	333	P	P	11 50 14.2	+0.2
	baz=107						
TTA	Tatalina	65.05	333	P	P	11 50 14.3	+0.2
TTA				IAmb	IAmb	11 50 15.2	
	comp=Z,5.6nm,0.8s						
IMAR	Indian Mountai	65.12	337	P	P	11 50 14.5	+0.1
ESDC	Sonseca Array	79.69	52	P	P	11 51 38.6	-3.0
	comp=Z,0.5nm,0.5s,baz=267,slow=6.4,SNR=2.9						
ARCES	ARCESS Array B	85.64	18	P	P	11 52 09.0	-2.8
	comp=Z,2.0nm,0.9s,baz=298,slow=6.1,SNR=4.9						
TIXI	Tiksi	89.48	348	P	P	11 52 29.4	-0.8
	comp=Z,3.0nm,0.6s,baz=17,slow=5.1,SNR=6.7						
WMQ	Urumqi	121.77	360	eP	PKiKP	11 58 28.6	+1.0
NJ2	Nanjing	124.64	327	eP	PKiKP	11 58 33.8	+0.3
NJ2	Nanjing	124.64	327	pmax	pmax		
	comp=Z,7.0nm,0.5s						
KSH	Kashi	125.02	11	PKP	PKPdf	11 58 33.3	-0.6
WRA	Warramunga Arr	135.06	256	PKP	PKiKP	11 58 54.2	-0.6
	comp=Z,0.3nm,0.8s,baz=90,slow=2.5,SNR=2.1						
ASAR	Alice Springs	135.40	251	PKP	PKiKP	11 58 55.6	+0.2
	comp=Z,0.3nm,0.7s,baz=81,slow=3.0,SNR=2.3						
CMAR	Chiang Mai Arr	145.17	341	PKPbc	PKPdf	11 59 11.8	+0.1
	comp=Z,5.4nm,0.8s,baz=340,slow=3.9,SNR=33						

*ATH **17** 11:47:26.3, 38°.73N×20°.58E, h12^{km}±1^{km}, ML3.1/2, Error ellipse: s-maj=2.4km s-min=1.0km az=301.0*

*THE **17** 11:47:27.7, 38°.70N×20°.60E, h0^{km}±2^{km}, ML2.9/5, Error ellipse: s-maj=3.0km s-min=1.0km az=161.0*

ISC 17 11:47:26.9±1.0**, 38°.71N**±0°.03×**20°.59E**±0°.04**, h9**^{km}±5^{km}**, n20, σ0^{s}.69**/30**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NYDR	Nydri-Lefkada	0.08	87	P	Pg	11 47 28.8	-0.4
NYDR				S	Sg	11 47 30.4	-0.4
	22µm,0.2s						
NYDR	Nydri-Lefkada	0.08	87	P	Pg	11 47 28.8	-0.4
NYDR				S	Sg	11 47 30.5	-0.4
LKD2	Lefkada island	0.09	32	P	Pg	11 47 29.0	-0.4
LKD2				S	Sg	11 47 30.9	-0.3
	25µm,0.2s						
LKD2	Lefkada island	0.09	32	P	Pg	11 47 29.0	-0.4
LKD2				S	Sg	11 47 30.9	-0.3
LKD2				AML	AML	11 47 31.1	
	comp=E,49199µm,0.2s						
LKD2				AML	AML	11 47 31.3	
	comp=N,49004µm,0.3s						
EVGI	Lefkada island	0.10	151	P	Pg	11 47 29.2	-0.2
EVGI				S	Sg	11 47 31.4	+0.2
	comp=N,9µm,0.1s						
EVGI	Lefkada island	0.10	151	P	Pg	11 47 29.2	-0.2
EVGI				S	Sg	11 47 31.5	+0.2
FSK	Fiskardo	0.25	186	P	Pg	11 47 31.9	-0.1
FSK				S	Sg	11 47 36.2	+0.8
FSK				AML	AML	11 47 37.3	
	comp=E,15838µm,0.2s						
FSK				AML	AML	11 47 38.4	
	comp=N,2944µm,0.2s						
KEF4	Livadi, Kephal	0.47	196	P	Pg	11 47 35.6	-0.4
DMLN	Damoulianata-K	0.50	200	P	Pg	11 47 36.0	-0.7
VLS	Valsamata	0.53	180	P	Pg	11 47 36.5	-0.7
VLS				S	Sg	11 47 44.0	-0.2
KEF3	Kipouria, Keph	0.54	201	P	Pg	11 47 36.2	-1.2
PSDA	Pessada-Kefalo	0.59	181	P	Pg	11 47 37.6	-0.8
PVO	Paravola	0.74	97	P	Pg	11 47 41.4	+0.3
PVO				S	Sb	11 47 53.1	+1.1
	comp=N,715nm,0.6s						
PVO	Paravola	0.74	97	P	Pg	11 47 40.9	-0.2
IGT	Igoumenitsa	0.85	346	P	Pb	11 47 44.5	+0.7
IGT				S	Sn	11 47 57.0	-0.5
	comp=N,810nm,0.3s						
VTN	Vitineika	0.92	149	P	Pg	11 47 44.3	-0.2
RLS	Riolos of Patr	0.95	133	P	Pg	11 47 44.4	-0.7
RLS	Riolos of Patr	0.95	133	P	Pg	11 47 44.2	-0.9
LAKA	Lakka	1.18	113	P	Pg	11 47 48.2	-1.4
TRIZ	Trizonia	1.21	106	P	Pg	11 47 48.7	-1.4

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*BEO **17** 11:49:41.3±2.6, 37°.86N×20°.09E, h75^{km}±7^{km}, ML4.2/14*

*IDC **17** 11:49:43.5±0.7, 38°.55N×20°.51E, h0^{km}, mb4.0/21, mb1 4.1/31, mb1mx4.0/60, mbtmp4.0/31, ML3.8/10, MS3.7/1, Ms1 3.7/1, ms1mx2.7/60, Error ellipse: s-maj=12.5km s-min=11.5km az=173.0*

*TIR **17** 11:49:43.1, 38°.41N×20°.63E, h25^{km}±2^{km}, Md3.7, Ml4.3*

*PDG **17** 11:49:44.8±0.8, 38°.52N×20°.34E, h11^{km}±1^{km}, ML3.8/12, Error ellipse: s-maj=1.1km s-min=1.3km az=0.0*

*UPSL **17** 11:49:45.7, 38°.49N×20°.49E, h8^{km}, Mw4.0, Moment Tensor Solution. s7 Moment tensor: M_{rr}-3.46; $M_{\theta\theta}$9.60; $M_{\phi\phi}$-6.14; $M_{r\theta}$0.07; $M_{\theta\phi}$8.10; $M_{\phi r}$0.11; Fault plane solution: NP1:ϕ_s202.00000°, δ90.00000°, λ-179.00000°.*

*NEIC **17** 11:49:45.3±2.3, 38°.51N±0°.05×20°.46E±0°.06, h7^{km}±4^{km} Error ellipse: s-maj=7.7km s-min=6.4km az=224.0*

*ATH **17** 11:49:45.7, 38°.49N×20°.49E, h8^{km}±3^{km}, ML4.1/4, Error ellipse: s-maj=3.4km s-min=0.8km az=121.0*

*THE **17** 11:49:45.2, 38°.49N×20°.44E, h8^{km}±3^{km}, ML4.1/13, Error ellipse: s-maj=3.2km s-min=0.6km az=102.0*

*NEIC **17** 11:49:48.2, 38°.55N×20°.43E, h6^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.11; $M_{\theta\theta}$1.09; $M_{\phi\phi}$-0.98; $M_{r\theta}$-1.30; $M_{\theta\phi}$0.38; $M_{\phi r}$-1.41; Fault plane solution: $M_0$2.21000×10^{15} NP1:ϕ_s39.89000°, δ87.86000°, λ-119.30000°. NP2:ϕ_s306.08000°, δ29.37000°, λ-4.37000°. Principal axes: T 2.3094, Plg36.0000°, Azm155.0000°; N -0.2090, Plg29.0000°, Azm41.0000°; P -2.1005, Plg40.0000°, Azm283.0000°;*

ISC 17 11:49:45.3±0.7**, 38°.50N**±0°.01×**20°.45E**±0°.02**, h12**^{km}±4^{km}**, n251, σ1^{s}.57**/325**, mb4.2**/30**, 19C-4D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FSK	Fiskardo	0.10	115	P	Pg	11 49 47.1	-1.0
FSK				S	Pg	11 49 48.9	+0.8
	215µm,0.3s						
FSK	Fiskardo	0.10	115	P	Pg	11 49 47.1	-1.0
FSK				S	Sg	11 49 49.0	-1.1
FSK	Fiskardo	0.10	115		Pg	11 49 48.9	+0.8
EVGI	Lefkada island	0.20	53	P	Pg	11 49 49.2	-0.5
EVGI				S	Sg	11 49 53.0	+0.3
	127µm,0.3s						
EVGI	Lefkada island	0.20	53	P	Pg	11 49 49.4	-0.2
EVGI				S	Sg	11 49 53.0	+0.3
EVGI	Lefkada island	0.20	53		Pg	11 49 49.2	-0.5
EVGI					Sg	11 49 53.0	+0.3
KEF4	Livadi, Kephal	0.24	185	P	Pg	11 49 49.9	-0.5
KEF4				S	Sg	11 49 54.2	+0.4
	376µm,0.3s						
KEF4	Livadi, Kephal	0.24	185	P	Pg	11 49 49.9	-0.5
KEF4				S	Sg	11 49 54.3	+0.5
KEF4	Livadi, Kephal	0.24	185		Pg	11 49 49.9	-0.5
KEF4					Sg	11 49 54.2	+0.4
DMLN	Damoulianata-K	0.27	193	P	Pg	11 49 50.2	-0.7
DMLN				S	Sg	11 49 55.2	+0.6
	63µm,0.7s						
DMLN	Damoulianata-K	0.27	193	P	Pg	11 49 50.4	-0.5
DMLN				S	Sg	11 49 55.2	+0.6
DMLN	Damoulianata-K	0.27	193		Pg	11 49 50.2	-0.7
DMLN					Sg	11 49 55.2	+0.6
NYDR	Nydri-Lefkada	0.29	42	P	Pg	11 49 50.8	-0.4
NYDR				S	Sg	11 49 55.5	+0.4
	52µm,0.5s						
NYDR	Nydri-Lefkada	0.29	42	P	Pg	11 49 51.0	-0.2
NYDR				S	Sg	11 49 55.7	+0.6
NYDR	Nydri-Lefkada	0.29	42		Pg	11 49 50.8	-0.4
NYDR					Sg	11 49 55.5	+0.4
LXRA	Lixouri, Kepha	0.30	182	P	Pg	11 49 51.1	-0.3
LXRA				S	Sg	11 49 56.3	+0.8
KEF3	Kipouria, Keph	0.31	195	P	Pg	11 49 50.5	-1.0
KEF3				S	Sg	11 49 55.4	-0.3
	104µm,0.7s						
KEF3	Kipouria, Keph	0.31	195	P	Pg	11 49 50.5	-1.0
KEF3				S	Sg	11 49 55.7	0.0
KEF3	Kipouria, Keph	0.31	195		Pg	11 49 50.5	-1.0
KEF3					Sg	11 49 55.4	-0.3
ARGA	Argostoli. Kep	0.32	176	P	Pg	11 49 52.2	+0.3
LKD2	Lefkada island	0.33	29	P	Pg	11 49 51.6	-0.3
LKD2				S	Sg	11 49 56.9	+0.4
	42µm,0.6s						
LKD2	Lefkada island	0.33	29	P	Pg	11 49 51.8	-0.2
LKD2				S	Sg	11 49 57.0	+0.6
LKD2				AML	AML	11 49 58.0	
	comp=N,76116µm,0.7s						
LKD2				AML	AML	11 49 58.9	
	comp=E,93727µm,0.7s						
LKD2	Lefkada island	0.33	29	P	Pg	11 49 51.7	-0.3
	baz=2.0						
LKD2				S	Sg	11 49 57.4	+0.9
	baz=2.0						
VLS	Valsamata	0.34	161	P	Pg	11 49 51.3	-0.8
VLS				S	Sg	11 49 56.9	+0.1
	comp=E,38µm,0.4s						
VLS	Valsamata	0.34	161	P	Pg	11 49 51.3	-0.8
VLS				S	Sg	11 49 56.9	+0.1
VLS				AML	AML	11 49 57.7	
	comp=N,72766µm,0.3s						
VLS				AML	AML	11 49 58.0	
	comp=E,82122µm,0.4s						
PSDA	Pessada-Kefalo	0.40	165	P	Pg	11 49 52.3	-0.9
PSDA				S	Sg	11 49 58.9	+0.3
	comp=E,13µm,0.3s						
PSDA	Pessada-Kefalo	0.40	165	P	Pg	11 49 52.4	-0.8
PSDA				S	Sg	11 49 59.3	+0.8
ZAK2	Zakynthos	0.80	153	P	Pg	11 50 00.2	-0.4
VTN	Vitineika	0.82	135	P	Pg	11 50 00.5	-0.6
LTHK	Lithakia	0.85	159	P	Pg	11 50 00.1	-1.5
LTHK				S	Sb	11 50 13.2	0.0
	comp=E,20µm,0.4s						
LTHK	Lithakia	0.85	159	P	Pg	11 50 00.5	-1.2
LTHK				S	Sb	11 50 13.5	+0.3
LTHK				AML	AML	11 50 15.3	
	comp=E,38244µm,0.5s						
LTHK				AML	AML	11 50 16.1	
	comp=N,40916µm,0.3s						
PVO	Paravola	0.85	82	P	Pb	11 50 02.0	0.0
PVO				S	Sg	11 50 12.1	-0.7
PVO				AML	AML	11 50 21.8	
	comp=N,27465µm,0.4s						
PVO				AML	AML	11 50 22.0	
	comp=E,36505µm,0.4s						
RLS	Riolos of Patr	0.91	119	P	Pg	11 50 01.9	-1.0
RLS				S	Sn	11 50 16.5	-0.5
	comp=E,7µm,0.6s						
RLS	Riolos of Patr	0.91	119	P	Pg	11 50 02.1	-0.8
IGT	Igoumenitsa	1.03	355	P	Pb	11 50 04.4	-0.7
IGT				S	Sn	11 50 20.7	+0.7
	comp=E,5µm,0.6s						
IGT	Igoumenitsa	1.03	355	P	Pn	11 50 05.6	0.0
IGT	Igoumenitsa	1.03	355	P	Pb	11 50 04.3	-0.8
	baz=349						
IGT				S	Sn	11 50 21.7	+1.7
	baz=349						
DRO	Drossia	1.13	119	P	Pb	11 50 05.8	-1.0
DRO				S	Sn	11 50 24.1	+1.7
	comp=E,17µm,0.5s						
DRO	Drossia	1.13	119	P	Pb	11 50 05.9	-1.0
JAN	Janina	1.20	15	P	Pg	11 50 08.8	+0.5
SRN	Sarande	1.42	346	P	Pb	11 50 11.9	+0.2
	baz=342						
SRN				S	Sg	11 50 35.2	+4.2
	baz=342						
SRN				AMP			
	comp=E,6.2nm,0.7s,baz=342						
AGG	Agios Georgios	1.56	70		Pb	11 50 13.7	-0.3
LSK	Leskovik	1.65	4	P	Pb	11 50 15.9	+0.3
	baz=0.0						
LSK				S	Sg	11 50 38.4	0.0
	baz=0.0						
LSK				AMP			
	comp=N,22nm,0.7s,baz=0.0						
ITM	Ithomi	1.76	138	Pn	Pb	11 50 17.8	+0.3
VLO	Vlora	2.10	340		Pn	11 50 21.5	+1.3
VLO	Vlora	2.10	340	P	Pb	11 50 21.9	-1.3
	baz=338						
KBN	Korca	2.14	7		Pb	11 50 23.3	-0.7
KBN	Korca	2.14	7	P	Pb	11 50 23.6	-0.4
	baz=3.0						
KBN				S	Sb	11 50 51.5	+1.1
	baz=3.0						
KBN				AMP			
	comp=N,4.7nm,0.8s,baz=3.0						
SCTE	Santa Cesarea	2.20	316	Pn	Pn	11 50 22.7	+1.2
SCTE	Santa Cesarea	2.20	316	P	Pn	11 50 22.2	+0.6
	baz=316						
FNA	Florina	2.39	17	Pn	Pn	11 50 26.0	+1.7
FNA	Florina	2.39	17	P	Pb	11 50 26.3	-1.9
	baz=13						
FNA				S	Sb	11 50 56.5	-1.2
	baz=13						
OHR	Ohrid	2.62	6	*e*Pn	Pb	11 50 30.1	-2.1
OHR				*e*Sn	Sb	11 51 04.2	-0.2
OHR	Ohrid	2.62	6	*i* Pn	Pb	11 50 29.9	-2.2
TIR	Tirane	2.88	351	⇑P	Pn	11 50 32.1	+1.2
TIR	Tirane	2.88	351	*e*Pn	Pn	11 50 32.5	+1.6
TIR				*e*Sn	Sn	11 51 08.2	+2.7
TIR	Tirane	2.88	351		Pn	11 50 32.5	+1.6
TIR	Tirane	2.88	351	P	Pn	11 50 32.3	+1.4
	baz=349						
PHP	Peshkopia	3.18	360	P	Pn	11 50 36.8	+1.7
	baz=358						
PHP				AMP			
	comp=N,2.0nm,1.1s,baz=358						
VAY	Valandovo	3.25	29	*e*Pn	Pn	11 50 37.8	+1.7
VAY				*e*Sn	Sn	11 51 18.2	+3.5
VAY	Valandovo	3.25	29	*i* Pn	Pn	11 50 37.4	+1.3
STIP	Stip	3.46	22	*i* Pn	Pn	11 50 42.0	+3.1
SKO	Skopje	3.55	12	*i* Pn	Pn	11 50 41.8	+1.7
ULC	Ulcinj	3.58	345	⇑*i*Pn	Pn	11 50 40.3	-0.3
ULC				*i* Sn	Sn	11 51 23.2	+0.4
CEL	Celeste	3.59	268		Pn	11 50 41.3	+0.5
MATE	Matera	3.60	308	⇑P	Pn	11 50 44.2	+3.4
DRME	Dracevica, Mon	3.81	346	*e*Pn	Pn	11 50 43.8	+0.1
DRME	Dracevica, Mon	3.81	346	⇑*i*Pn	Pn	11 50 44.3	+0.6
DRME				*i* Sn	Sn	11 51 27.2	-1.2
BCI	Bajram Curri	3.87	356	P	Pn	11 50 46.4	+1.7
	baz=354						
PDG	Podgorica	4.03	347	⇑P	Pn	11 50 46.8	+0.1
PDG	Podgorica	4.03	347	*e*Pn	Pn	11 50 48.0	+1.3
PDG				*e*Sn	Sn	11 51 34.9	+1.1
PDG	Podgorica	4.03	347	*e*Pn	Pn	11 50 46.6	-0.1
PDG	Podgorica	4.03	347	Pn	Pn	11 50 46.9	+0.1
TTG	Podgorica	4.03	347	⇑*i*Pn	Pn	11 50 46.8	+0.1
TTG				*i* Sn	Sn	11 51 33.6	-0.2
PVY	Plav	4.11	355	⇓*i*Pn	Pn	11 50 48.5	+0.6
PVY				*i* Sn	Sn	11 51 35.9	0.0
PRVS	Prvonek	4.19	17	*e*Pn	Pn	11 50 51.3	+2.3
CEME	Cevo	4.21	344	⇑*i*Pn	Pn	11 50 48.7	-0.6
CEME				*i* Sn	Sn	11 51 38.0	-0.3
HCY	Herceg Novi	4.21	340	*e*Pn	Pn	11 50 48.1	-1.2
HCY	Herceg Novi	4.21	340	*e*Pn	Pn	11 50 46.9	-2.4
HCY				*i* Sn	Sn	11 51 37.1	-1.3
BOSS	Bosilegrad	4.28	21	*e*Pn	Pn	11 50 52.3	+2.1
BOSS				*e*Sn	Sn	11 51 41.8	+1.7
IVA	Berane	4.39	355	*e*Pn	Pn	11 50 52.4	+0.7
IVA				*i* Sn	Sn	11 51 42.0	-0.8
KOME	Kolasin	4.40	351	⇑*i*Pn	Pn	11 50 52.8	+0.8
KOME				*i* Sn	Sn	11 51 42.4	-0.8
NKME	Niksic	4.41	346	⇓*i*Pn	Pn	11 50 52.0	0.0
NKME				*i* Sn	Sn	11 51 42.9	-0.4
BARS	Barje	4.43	13	*e*Pn	Pn	11 50 53.4	+1.1
NKY	Niksic	4.45	346	⇑*i*Pn	Pn	11 50 53.3	+0.7
NKY				*i* Sn	Sn	11 51 43.9	-0.4
TREB	Trebinje	4.50	340	*e*Pn	Pn	11 50 53.0	-0.3
TREB				*e*Sn	Sn	11 51 41.6	-4.0
TREB	Trebinje	4.50	340	*e*Pn	Pn	11 50 52.1	-1.2
DBRK	Dubrovnik	4.52	338	*e*Pn	Pn	11 50 52.6	-0.8
VTS	Vitosha	4.63	26	*e*Pn	Pn	11 50 57.2	+2.1
VTS				*e*Sn	Sn	11 51 48.0	-0.8
VTS	Vitosha	4.63	26	Pn	Pn	11 50 56.2	+1.1
BRY	Bratogost	4.63	342	*e*Pn	Pn	11 50 54.4	-0.7
BRY	Bratogost	4.63	342	⇓*i*Pn	Pn	11 50 54.6	-0.5
BRY				*i* Sn	Sn	11 51 47.8	-1.1
SELS	Selova	4.74	6	*e*Pn	Pn	11 50 57.8	+1.2
SJES	Sjenica	4.77	356	*e*Pn	Pn	11 50 58.3	+1.3
IDI	Anoyia	4.79	131	Pn	Pn	11 50 57.8	+0.5
	comp=N,0.9nm,0.3s,baz=311,slow=17,SNR=1.9						
IDI				Sn	Sn	11 51 52.5	-0.3
	comp=N,9.6nm,0.3s,baz=108,slow=22,SNR=8.1						
STON	Ston	4.84	335	*e*Pn	Pn	11 50 57.6	-0.3
STON	Ston	4.84	335	*e*Pn	Pn	11 50 56.9	-1.0
STON	Ston	4.84	335	*e*Pn	Pn	11 50 57.1	-0.8
STON				Sn	Sn	11 51 50.7	-3.1
SGRT	San Giovanni R	4.86	313	Pn	Pn	11 50 59.0	+0.8
SGRT	San Giovanni R	4.86	313	P	Pn	11 50 59.2	+1.0
	baz=314						
VAE	Valguarnera	4.88	260	Pn	Pn	11 51 01.6	+3.2
	comp=N,15nm,0.3s,baz=357,slow=9.4,SNR=1.6						
VAE				Sn	Sn	11 51 58.9	+4.0
	comp=N,15nm,0.3s,baz=105,slow=5.8,SNR=3.7						
PLE	Pljevlja	4.89	351	*e*Pn	Pn	11 50 59.0	+0.3
PLE				*i* Sn	Sn	11 51 54.3	-1.0
ALN	Alexandroupoli	4.93	59	Pn	Pn	11 51 00.8	+1.6
RAFF	Raffo Rosso	4.98	257	Pn	Pn	11 51 01.1	+1.2
RUDO	Rudo	5.18	351	*e*Pn	Pn	11 51 01.9	-0.6
PAOL	Paolisi	5.19	301		Pn	11 51 03.3	+0.6
BOVS	Bovan	5.22	10	*e*Pn	Pn	11 51 03.2	+0.2
GRUS	Gruza	5.39	2	*e*Pn	Pn	11 51 06.0	+0.6
BBLS	Lazići	5.42	352	*e*Pn	Pn	11 51 05.5	-0.4
BBLS	Lazići	5.42	352	*e*Pn	Pn	11 51 04.7	-1.2
MAKA	Makarska	5.44	333	*i* Pn	Pn	11 51 06.1	-0.1
MAKA				Sn	Sn	11 52 06.5	-2.2
HVAR	Hvar	5.57	328	*e*Pn	Pn	11 51 07.1	-0.8
HVAR				Sn	Sn	11 52 07.7	-4.1
RICI	Ricice	5.58	334	*e*Pn	Pn	11 51 07.5	-0.6
RICI				Sn	Sn	11 52 10.2	-2.0
DIVS	Divibare	5.60	357	*e*Pn	Pn	11 51 09.0	+0.5
DIVS				*e*Sn	Sn	11 52 10.5	-2.3
DIVS	Divibare	5.60	357	*e*Pn	Pn	11 51 07.9	-0.6
DIVS	Divibare	5.60	357		Pn	11 51 08.0	-0.4
CORL	Corleone	5.66	266	Pn	Pn	11 51 10.7	+1.4
HAPS	Han Pijesak,BI	5.69	349	*e*Pn	Pn	11 51 07.5	-2.2
CLTB	Caltabellotta	5.79	263	Pn	Pn	11 51 11.6	+0.6
BALB	Balikesir	5.89	77	Pn	Pn	11 51 13.4	+1.1
TEKS	Tekeris	6.08	354	*e*Pn	Pn	11 51 13.7	-1.3
TEKS	Tekeris	6.08	354	*e*Pn	Pn	11 51 12.7	-2.3
KIJV	Kijevo	6.29	332	*e*Pn	Pn	11 51 17.7	-0.1
ZIRJ	Zirje	6.30	326	*e*Pn	Pn	11 51 17.0	-0.9
MDVR	Moldovita	6.35	8	⇑P	Pn	11 51 18.8	+0.1
MGRS	Mrkonjic Grad	6.43	338	*e*Pn	Pn	11 51 19.5	-0.2
MORI	Morici	6.44	328	*e*Pn	Pn	11 51 19.9	0.0
MORI				Sn	Sn	11 52 30.3	-3.0
AQU	L'Aquila	6.61	308	Pn	Pn	11 51 22.0	-0.2
FRGS	Fruska Gora	6.67	356	⇑P	Pn	11 51 22.1	-0.9
FRGS	Fruska Gora	6.67	356	*e*Pn	Pn	11 51 23.4	+0.4
FRGS				*e*Sn	Sn	11 52 33.9	-5.0
FRGS	Fruska Gora	6.67	356	*e*Pn	Pn	11 51 19.2	-3.8
BLY	Banja Luka	6.70	340	*e*Pn	Pn	11 51 23.4	-0.1
BLY	Banja Luka	6.70	340	*e*Pn	Pn	11 51 22.3	-1.2
DUGI	Dugi Otok	6.83	325	*e*Pn	Pn	11 51 24.4	-0.7
UDBI	Udbina	6.97	331	*i* Pn	Pn	11 51 28.0	+0.8
MRAK	Mrakovica	7.03	339	*e*Pn	Pn	11 51 27.0	-1.0
NRCA	Norcia	7.06	310		Pn	11 51 29.9	+1.5
GZR	Gura Zlata	7.10	13	⇑P	Pn	11 51 29.8	+0.8
BZS	Buzias	7.16	7	⇓P	Pn	11 51 31.0	+1.3
PLIT	Plitvice	7.32	332	*e*Pn	Pn	11 51 32.9	+0.8
NVLJ	Novalja	7.36	327	*e*Pn	Pn	11 51 32.0	-0.4
ARR	Arges	7.54	23	⇑P	Pn	11 51 37.1	+2.1
RABC	Rab	7.55	328	*e*Pn	Pn	11 51 35.5	+0.5
MURB	Monte Urbino	7.66	311		Pn	11 51 38.0	+1.4
VOIR		7.73	25	⇑P	Pn	11 51 39.4	+1.8
KOVH	Kovagotottos	7.78	348	*e*PN	Pn	11 51 36.2	-2.0
KOVH				*e*SN	Sn	11 52 57.9	-8.3
MORH	Mrgy, Hungar	7.82	351	⇑P	Pn	11 51 37.9	-0.9
MORH	Mrgy, Hungar	7.82	351	*e*PN	Pn	11 51 37.6	-1.2
MORH				*e*SN	Sn	11 52 59.2	-8.0
MORH	Mrgy, Hungar	7.82	351	*e*Pn	Pn	11 51 33.7	-5.1
SMRN	Sveta Marina	8.04	326	*e*Pn	Pn	11 51 41.9	+0.1
MLR	Muntele Rosu	8.09	29	⇑P	Pn	11 51 45.3	+2.7
MLR	Muntele Rosu	8.09	29	Pn	Pn	11 51 44.6	+2.0
	comp=N,0.5nm,0.3s,baz=309,slow=18,SNR=7.5						
MLR	Muntele Rosu	8.09	29		Pn	11 51 44.3	+1.7
BRJN	Brijuni	8.13	324	*e*Pn	Pn	11 51 42.0	-1.0
RIY	Rijeka	8.14	329	*e*Pn	Pn	11 51 42.7	-0.5
CRES	Cresnjev	8.20	335	*e*Pn	Pn	11 51 43.1	-1.0
DOPR	Dopca	8.31	25	⇑P	Pn	11 51 47.7	+2.1
CEY	Cerknica	8.50	330	*e*Pn	Pn	11 51 47.6	-0.6
PLOR	Plostina	8.66	30	⇑P	Pn	11 51 53.9	+3.5
VRI	Vrincioaia	8.71	30	⇑P	Pn	11 51 54.5	+3.6
LJU	Ljubljana	8.72	332	*e*Pn	Pn	11 51 49.2	-1.9
MPLH	Magyarpolny	8.92	347	*e*PN	Pn	11 51 51.2	-2.7
SOKA	Soboth	9.09	336	*e*Pn	Pn	11 51 55.4	-0.9
	comp=N,17nm,0.6s,SNR=15						
SOKA				*e*Sn	Sn	11 53 33.0	-5.6
	comp=N,8.2nm,0.6s						
OBKA	Obir	9.11	333	*e*Pn	Pn	11 51 57.6	+1.0
	comp=N,6.6nm,0.4s,SNR=4.2						
OBKA				*e*Sn	Sn	11 53 35.5	-3.6
	comp=N,15nm,0.7s						
ZCCA	Zocca	9.21	312	Pn	Pn	11 51 59.6	+1.7
KEST	Kesra	9.29	256	Pn	Pn	11 52 01.5	+2.4
	comp=N,0.2nm,0.3s,baz=4.0,slow=9.1,SNR=3.2						
KEST	Kesra	9.29	256	Pn	Pn	11 52 01.1	+2.0
PSZ	Piszkesteto	9.42	358	*e*PN	Pn	11 52 02.1	+1.3
PSZ	Piszkesteto	9.42	358	Pn	Pn	11 52 02.3	+1.5
TEOL	Teolo	9.47	319	Pn	Pn	11 52 01.4	0.0
STAL	STALIGIAL	9.63	326		Pn	11 52 02.7	-1.0
ZOU	Zoufplan	9.76	328		Pn	11 52 04.5	-1.0
CTI	Castel Tesino	9.96	322	Pn	Pn	11 52 07.2	-1.1
KBA	Koelnbreinsper	10.03	331	*e*Pn	Pn	11 52 09.2	-0.1
	comp=N,2.9nm,0.4s						
KBA				*e*Sn	Sn	11 53 58.3	-3.6
	comp=N,8.0nm,0.7s						
VYHS	Vyhne	10.06	354	*e*PN	Pn	11 52 09.0	-0.5
ABTA	Abfaltersbach	10.10	327	*e*Pn	Pn	11 52 09.3	-0.9
	comp=N,3.8nm,0.4s,SNR=4.4						
ABTA				*i* Sn	Sn	11 53 59.7	-3.7
	comp=N,7.9nm,0.6s						
MODS	Modra-Piesok	10.13	348	*e*PN	Pn	11 52 09.6	-0.9
SALO	Salr	10.24	317	Pn	Pn	11 52 11.9	-0.1
SMOL	Smolenice	10.24	349	*e*PN	Pn	11 52 08.5	-3.5
BRTR	Keskin Array B	10.32	79	Pn	Pn	11 52 14.8	+1.6
	comp=N,0.4nm,0.3s,baz=268,slow=11,SNR=2.6						
MOA	Molln	10.37	336	*e*Pn	Pn	11 52 13.7	-0.1
	comp=N,4.0nm,0.3s						
WTTA	Wattenberg	10.88	326	*e*Pn	Pn	11 52 21.6	+0.7
	comp=N,3.0nm,0.3s						
WATA	Walderalm	10.96	327	*e*Pn	Pn	11 52 22.8	+0.8
	comp=N,8.9nm,0.5s						
FETA	Feichten	11.11	323	*i* Pn	Pn	11 52 29.3	+5.3
	comp=N,4.5nm,0.8s						
FETA				*e*Sn	Sn	11 54 26.1	-2.1
	comp=N,2.5nm,0.5s						
VRAC	Vranov	11.15	347	Pn	Pn	11 52 24.5	0.0
	comp=N,0.4nm,0.3s,baz=173,slow=16,SNR=2.3						
VRAC				LR	LR	11 58 01.4	
	comp=N,391nm,18.3s,baz=170,slow=45						
MOTA	Moosalm	11.18	325	*e*Pn	Pn	11 52 25.8	+0.9
	comp=N,5.9nm,0.4s,SNR=8.3						
MOTA				*e*Sn	Sn	11 54 27.1	-2.7
	comp=N,9.2nm,0.6s						
CKRC	Cesky Krumlov	11.23	339	*e*PN	Pn	11 52 24.6	-0.9
DAVOX	Davos/Dischmat	11.35	320	Pn	Pn	11 52 27.2	-0.1
	comp=N,0.4nm,0.3s,baz=163,slow=18,SNR=4.6						
DAVOX				Sn	Sn	11 54 32.8	-1.4
	comp=N,0.3nm,0.3s,baz=173,slow=23,SNR=2.3						
TUE	Stuetta	11.42	318		Pn	11 52 28.8	+0.5
GEC2	GERESS Array S	11.43	337		Pn	11 52 27.7	-0.6
GERES	GERESS Array B	11.43	337	Pn	Pn	11 52 27.4	-1.0
	comp=N,0.4nm,0.3s,baz=153,slow=15,SNR=10.0						
GERES				Sn	Sn	11 54 31.8	-4.2
	comp=N,0.3nm,0.3s,baz=158,slow=24,SNR=3.2						
GERES	GERESS Array B	11.43	337		Pn	11 52 26.8	-1.5
MORC	Moravsky Berou	11.46	350	Pn	Pn	11 52 27.8	-0.9
DAVA	Damuels	11.70	322	*e*Pn	Pn	11 52 33.5	+1.4
	comp=N,3.4nm,0.5s						
DAVA				*e*Sn	Sn	11 54 39.2	-3.5
	comp=N,2.2nm,0.3s						
KHC	Kasperske Hory	11.72	337	*e*PN	Pn	11 52 30.4	-1.9
KHC				*e*SN	Sn	11 54 40.8	-2.2
SENIN	Lac Senin/Sane	12.48	313		Pn	11 52 43.5	+0.7
AKASG	Malin Array Be	13.69	24	Pn	Pn	11 52 58.6	-0.5
	comp=N,0.8nm,0.3s,baz=210,slow=11,SNR=4.4						
SUW	Suwalki	15.63	6	Pn	Pn	11 53 25.3	+0.1
SUW				IAmb	IAmb	11 53 30.4	
	comp=Z,49nm,1.1s						
PABE	Paberze	17.18	7	Pn	Pn	11 53 44.9	+0.1
PABE				IAmb	IAmb	11 53 47.6	
	comp=Z,18nm,0.9s						
ESDC	Sonseca Array	18.98	281	P	P	11 54 05.9	-0.7
	comp=Z,0.1nm,0.3s,baz=81,slow=11,SNR=6.8						
MDT	Midelt	21.11	262	P	P	11 54 31.9	+2.1
	comp=Z,0.9nm,0.7s,baz=81,slow=15,SNR=2.3						
HFS	Hagfors	22.07	351	P	P	11 54 39.7	-0.1
	comp=Z,6.0nm,0.5s,baz=165,slow=12,SNR=9.5						
NC602	NORSAR Array S	22.95	349	P	P	11 54 49.5	+0.3
EKA	Eskdalemuir Ar	23.13	324	P	P	11 54 51.5	+0.5
	comp=Z,3.8nm,0.7s,baz=124,slow=11,SNR=6.5						
FINES	FINESS Array B	23.23	7	P	P	11 54 51.3	-0.7
	comp=Z,5.3nm,0.5s,baz=171,slow=9.8,SNR=19						
FIA1	FINESS Array S	23.23	7	P	P	11 54 51.8	-0.2
FIA1				IAmb	IAmb	11 54 55.9	
	comp=Z,18nm,0.9s						
NB2	NORSAR Subarra	23.29	349	P	P	11 54 51.5	-1.2
	comp=Z,13nm,1.2s,baz=161,slow=11						
NOA	NORSAR Array B	23.29	349	P	P	11 54 52.1	-0.6
	comp=Z,1.5nm,0.7s,baz=166,slow=10,SNR=6.7						
BELG	Belogornoye	23.41	45	P	P	11 54 53.3	-0.6
	comp=Z,19nm,0.8s,baz=276,slow=19,SNR=5.6						
NC303	NORSAR Array S	23.44	349	P	P	11 54 54.8	+0.7
NC303				IAmb	IAmb	11 55 03.0	
	comp=Z,24nm,1.1s						
KLMR	Klimovskoe	25.36	22	*e*	P	11 55 10.8	-1.1
KLMR				AMP		11 55 15.8	
	comp=Z,27nm,1.2s						
AKTO	Aktyubinsk	29.03	53	P	P	11 55 44.8	-0.2
	comp=Z,0.8nm,0.4s,baz=219,slow=6.5,SNR=2.5						
GEYT	Alibeck	29.47	79	P	P	11 55 47.9	-1.1
	comp=Z,1.9nm,0.4s,baz=234,slow=31,SNR=2.2						
ABKAR	Akbulak array	30.11	56	P	P	11 55 53.9	-0.6
ABKAR	Akbulak array	30.11	56	P	P	11 55 54.0	-0.6
ABKAR				IAmb	IAmb	11 56 20.0	
	comp=Z,0.9nm,0.8s						
TORD	Torodi Ar. Bea	30.25	218	P	P	11 55 56.4	+0.3
	comp=Z,0.8nm,0.6s,baz=28,slow=9.1,SNR=6.0						

ARCES	**ARCESS Array B**	31.21	3	P	P	11 56 03.1	-1.0
	comp=Z,2.0nm,0.9s,baz=192,slow=8.3,SNR=4.8						
BRVK	**Borovoye**	36.89	50	P	P	11 56 54.4	+0.9
BVAR	**Borovoye Array**	36.95	50	P	P	11 56 52.9	-1.1
	comp=Z,0.9nm,0.7s,baz=253,slow=10,SNR=3.7						
CHGR	**Chuyangaron**	37.71	74	P	P	11 57 01.3	+0.5
CHGR				IAmb	IAmb	11 57 08.1	
	comp=Z,5.5nm,0.8s						
KK31	**Karatay Array**	37.72	67	P	P	11 57 00.3	-0.4
KK31				IAmb	IAmb	11 57 10.4	
	comp=Z,2.5nm,0.6s						
KKAR	**Karatay Array**	37.72	67	P	P	11 57 00.0	-0.7
GAR	**Garm**	38.49	73	P	P	11 57 07.3	-0.1
GAR				IAmb	IAmb	11 57 17.9	
	comp=Z,6.8nm,1.0s						
DBIC	**Dimbokro**	39.09	222	P	P	11 57 11.6	-0.8
	comp=Z,2.9nm,0.8s,baz=38,slow=12,SNR=1.8						
DBIC	**Dimbokro**	39.09	222	P	P	11 57 11.7	-0.7
DBIC				IAmb	IAmb	11 57 36.6	
	comp=Z,8.1nm,1.1s						
BOOM	**Boomskoye usch**	41.75	66	P	P	11 57 34.4	-0.1
KURBB	**Kurchatov Arra**	42.08	54	P	P	11 57 35.5	-1.3
	comp=Z,1.2nm,0.2s,baz=282,slow=8.8,SNR=6.5						
KSH	**Kashi**	42.57	71	P	P	11 57 44.0	+2.9
KSH				pmax	pmax		
	comp=Z,6.0nm,0.4s						
MK31	**Makanchi Array**	45.18	59	P	P	11 58 00.9	-0.9
MKAR	**Makanchi Array**	45.18	59	P	P	11 58 00.8	-1.1
	comp=Z,0.8nm,0.4s,baz=279,slow=7.2,SNR=23						
MKAR	**Makanchi Array**	45.18	59	P	P	11 58 00.9	-0.9
ZAA0	**Zalesovo Array**	45.52	48	P	P	11 58 03.6	-0.8
ZAA0				IAmb	IAmb	11 58 04.3	
	comp=Z,5.3nm,0.6s						
ZALV	**Zalesovo Beam**	45.52	48	P	P	11 58 03.7	-0.6
	comp=Z,5.2nm,0.5s,baz=275,slow=8.5,SNR=22						
ZALV	**Zalesovo Beam**	45.52	48	P	P	11 58 03.6	-0.7
NRS	**Narsarsuaq**	45.75	322	P	P	11 58 05.8	-0.3
WMQ	**Urumqi**	49.65	61	*e*P	P	11 58 39.5	+2.8
SONM	**Songino Array**	60.30	51	P	P	11 59 53.3	-0.4
	comp=Z,0.4nm,0.6s,baz=292,slow=7.6,SNR=3.6						
HHC	**Hu-ho-hao-te**	66.90	56	*e*P	P	12 00 38.3	+0.9
HHC				pmax	pmax		
	comp=Z,16nm,1.1s						
HHC				pmax	pmax		
	comp=Z,410nm,5.8s						
CMAR	**Chiang Mai Arr**	69.90	82	P	P	12 00 56.6	+0.2
	comp=Z,0.5nm,0.4s,baz=309,slow=7.8,SNR=1.7						
INK	**Inuvik**	71.74	350	P	P	12 01 08.2	+1.4
	comp=Z,1.4nm,1.1s,baz=0.0,slow=10,SNR=2.1						
INK	**Inuvik**	71.74	350	P	P	12 01 07.6	+0.9
INK				IAmb	IAmb	12 01 23.6	
	comp=Z,5.6nm,1.4s						
BMAR	**Burnt Mountain**	73.78	354	P	P	12 01 18.5	-0.5
IMAR	**Indian Mountai**	75.75	358	P	P	12 01 31.5	+1.2
H21K	**Melozitna Rive**	76.04	357	P	P	12 01 33.4	+1.3
H21K				IAmb	IAmb	12 01 38.9	
	comp=Z,3.2nm,0.9s						
ILAR	**Eielson Array**	76.58	354	P	P	12 01 36.8	+1.7
	comp=Z,0.4nm,0.9s,baz=3.3,slow=6.3,SNR=4.6						
ILAR	**Eielson Array**	76.58	354	P	P	12 01 35.7	+0.6
PPLA	**Purkeypile**	78.77	357	P	P	12 01 48.5	+1.0
KSRS	**Korea Array**	79.17	51	P	P	12 01 51.4	+1.5
	comp=Z,1.0nm,0.7s,baz=305,slow=5.3,SNR=3.0						
FCAR	**Ozark Folk Cen**	83.27	311	P	P	12 02 13.2	+1.4
MJAR	**Matsushiro Arr**	85.80	46	P	P	12 02 24.0	-0.6
	comp=Z,0.7nm,0.4s,baz=302,slow=6.5,SNR=2.5						
ASAR	**Alice Springs**	122.26	96	PKP	PKPdf	12 08 39.5	-0.8
	comp=Z,0.4nm,0.8s,baz=318,slow=1.2,SNR=4.1						

JMA 17 11:56:02.0±0.5, 31°.28N×128°.75E, h9^{km}±5^{km}, M2.8,
Northwest of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	**Shimokoshiki**	0.92	64	P	Pg	11 56 19.4	-0.2
JSJ				*e*S	Sg	11 56 31.4	-0.1
JFU	**Fukue jima 2**	1.37	360	P	Pn	11 56 27.2	-0.1
JFU				*e*S	Sb	11 56 45.3	-0.2
JSU	**Suzuyama**	1.48	81	P	Pb	11 56 29.3	-0.3
JYAK	**Yakushimahirau**	1.84	124	P	Pn	11 56 33.2	-0.5

BEO ***17*** *11:57:23.6±1.0, 38°.58N×20°.23E, h0^{km}, ML4.4/10*

TIR ***17*** *11:57:23.4, 38°.64N×20°.66E, h6^{km}±6^{km}, Ml4.8*

IDC ***17*** *11:57:23.8±0.5, 38°.76N×20°.60E, h0^{km}, mb4.3/31, mb1 4.3/42, mb1mx4.3/52, mbtmp4.3/42, ML4.0/10, MS3.9/38, Ms1 3.9/38, ms1mx3.8/66, Error ellipse: s-maj=10.0km s-min=9.6km az=110.0*

MOS ***17*** *11:57:24.5±1.1, 38°.68N×20°.39E, h17^{km}, mb5.0/33, Error ellipse: s-maj=4.7km s-min=2.6km az=78.2*

PDG ***17*** *11:57:25.1±0.9, 38°.71N×20°.46E, h11^{km}±1^{km}, MD5.3/1, ML4.0/12, Error ellipse: s-maj=1.0km s-min=1.3km az=0.0*

ATH ***17*** *11:57:25.1, 38°.70N×20°.61E, h10^{km}, ML4.4/24, Error ellipse: s-maj=1.1km s-min=0.7km az=286.0*

MED_RC ***17*** *11:57:25.0±0.5, 38°.65N×20°.49E, h19^{km}±1^{km}, MW4.7/25, Moment Tensor Solution.Mantle waves: s25,c39; Duration: 1^{s}0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.06±.10; $M_{\theta\theta}$1.31±.07; $M_{\phi\phi}$-1.37±.07; $M_{r\theta}$0.04±.10; $M_{\theta\phi}$0.18±.06; $M_{\phi r}$-0.11±.10; Best double couple: $M_0$1.36000×10^{16} NP1:ϕ_s41.00000°,δ86.00000°, λ-178.00000°. NP2:ϕ_s311.00000°,δ88.00000°, λ-4.00000°. Principal axes: T 1.3200, Plg1.0000°, Azm356.0000°; N 0.0600, Plg85.0000°, Azm104.0000°; P -1.3900, Plg5.0000°, Azm266.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

UPSL ***17*** *11:57:25.0, 38°.66N×20°.54E, h5^{km}, Mw4.5, Moment Tensor Solution. s8 Moment tensor: M_{rr}-1.79; $M_{\theta\theta}$6.07; $M_{\phi\phi}$-4.28; $M_{r\theta}$-2.05; $M_{\theta\phi}$5.14; $M_{\phi r}$0.82; Fault plane solution: NP1:ϕ_s203.00000°,δ71.00000°,λ-174.00000°. NP2:ϕ_s111.00000°,δ84.00000°,λ-19.00000°.*

THE ***17*** *11:57:25.1, 38°.71N×20°.60E, h9^{km}±1^{km}, ML4.5/8 Error ellipse: s-maj=1.5km s-min=0.5km az=87.0*

NEIC ***17*** *11:57:26.1±2.0, 38°.712N±0°.006×20°.51E±0°.06, h10^{km}±1^{km}, Error ellipse: s-maj=8.4km s-min=2.9km az=272.0*

ISC 17 11:57:25.4±0.6, 38°.69N±0°.01×20°.58E±0°.02, h8^{km}±3^{km}, n540, σ1^{s}.52/601, mb4.7/80, MS3.9/32, 41C-22D, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NYDR	**Nydri-Lefkada**	0.09	78	P	Pg	11 57 27.0	-0.7
NYDR	**Nydri-Lefkada**	0.09	78	P	Pg	11 57 27.0	-0.7
NYDR				S	Sg	11 57 28.6	-0.7
NYDR	**Nydri-Lefkada**	0.09	78		Pg	11 57 27.0	-0.7
EVGI	**Lefkada island**	0.09	142	P	Pg	11 57 27.5	-0.2
EVGI				S	Pg	11 57 29.3	+1.6
EVGI	**Lefkada island**	0.09	142	P	Pg	11 57 27.5	-0.2
EVGI				S	Sg	11 57 29.6	+0.3
EVGI	**Lefkada island**	0.09	142		Pg	11 57 29.3	+1.6
LKD2	**Lefkada island**	0.11	31	P	Pg	11 57 27.3	-0.8
LKD2				S	Pg	11 57 29.0	+1.0
	925µm,0.4s						
LKD2	**Lefkada island**	0.11	31	P	Pg	11 57 27.2	-0.8
LKD2				S	Sg	11 57 29.2	-0.7
LKD2	**Lefkada island**	0.11	31		Pg	11 57 29.0	+1.0
LKD2	**Lefkada island**	0.11	31	P	Pg	11 57 27.4	-0.7
	baz=359						
LKD2				S	Pg	11 57 29.1	+1.0
	baz=359						
FSK	**Fiskardo**	0.23	184	P	Pg	11 57 30.4	+0.2
FSK				S	Sg	11 57 34.0	+0.7
	128µm,0.3s						
FSK	**Fiskardo**	0.23	184	P	Pg	11 57 30.4	+0.2
FSK				S	Sg	11 57 33.9	+0.7
FSK				AML	AML	11 57 35.6	
FSK				AML	AML	11 57 42.1	
FSK	**Fiskardo**	0.23	184		Pg	11 57 30.4	+0.2
FSK					Sg	11 57 34.0	+0.7
KEF4	**Livadi, Kephal**	0.45	196	P	Pg	11 57 33.9	-0.4
KEF4				S	Sb	11 57 41.7	-0.8
	340µm,0.5s						
KEF4	**Livadi, Kephal**	0.45	196	P	Pg	11 57 33.8	-0.4
KEF4	**Livadi, Kephal**	0.45	196		Pg	11 57 33.9	-0.4
KEF4					Sb	11 57 41.7	-0.8
DMLN	**Damoulianata-K**	0.48	200	P	Pg	11 57 34.4	-0.4
DMLN				S	Sb	11 57 42.4	-1.0
	77µm,0.5s						
DMLN	**Damoulianata-K**	0.48	200	P	Pg	11 57 34.4	-0.4
DMLN				S	Sg	11 57 41.6	+0.4
DMLN	**Damoulianata-K**	0.48	200		Pg	11 57 34.4	-0.4
DMLN					Sb	11 57 42.4	-1.0
VLS	**Valsamata**	0.52	180	P	Pg	11 57 34.8	-0.7
VLS				S	Sg	11 57 43.1	+0.9
	39µm,0.5s						
VLS	**Valsamata**	0.52	180	P	Pg	11 57 34.7	-0.7
VLS				S	Sg	11 57 42.5	+0.3
VLS				AML	AML	11 57 46.4	
	comp=E,56634µm,0.5s						
VLS				AML	AML	11 57 47.7	
	comp=N,95390µm,0.5s						
VLS	**Valsamata**	0.52	180	P	Pg	11 57 34.8	-0.7
VLS				S	Sg	11 57 43.1	+0.9
VLS	**Valsamata**	0.52	180		Pg	11 57 34.8	-0.7
VLS					Sg	11 57 43.1	+0.9
ARGA	**Argostoli. Kep**	0.52	189	P	Pg	11 57 35.9	+0.4
KEF3	**Kipouria, Keph**	0.52	201	P	Pg	11 57 34.6	-1.0
KEF3				S	Sg	11 57 43.1	+0.7
	comp=N,111µm,0.5s						
KEF3	**Kipouria, Keph**	0.52	201	P	Pg	11 57 34.6	-1.0
KEF3				S	Sg	11 57 42.7	+0.3
KEF3	**Kipouria, Keph**	0.52	201		Pg	11 57 34.6	-1.0
KEF3					Sg	11 57 43.1	+0.7
PSDA	**Pessada-Kefalo**	0.58	180	P	Pg	11 57 35.8	-0.8
PSDA				S	Sb	11 57 45.5	-0.6
PSDA	**Pessada-Kefalo**	0.58	180	P	Pg	11 57 35.9	-0.7
PSDA				S	Sg	11 57 44.8	+0.7
PSDA	**Pessada-Kefalo**	0.58	180		Pg	11 57 35.8	-0.8
PSDA					Sb	11 57 45.5	-0.6
PVO	**Paravola**	0.74	96	P	Pg	11 57 39.4	-0.3
PVO				S	Sg	11 57 50.0	+0.6
	comp=N,61µm,0.6s						
PVO	**Paravola**	0.74	96	P	Pg	11 57 39.2	-0.5
PVO				S	Sg	11 57 48.9	-0.5
PVO				AML	AML	11 57 52.8	
PVO				AML	AML	11 57 53.6	
IGT	**Igoumenitsa**	0.86	347	P	Pg	11 57 40.4	-1.6
IGT				S	Sb	11 57 54.2	-0.1
	comp=N,15µm,0.7s						
IGT	**Igoumenitsa**	0.86	347	P	Pg	11 57 40.9	-1.1
IGT				S	Sg	11 57 52.6	-0.6
IGT				AML	AML	11 57 59.4	
	comp=E,34351µm,0.7s						
IGT				AML	AML	11 58 02.5	
	comp=N,25608µm,0.4s						
IGT	**Igoumenitsa**	0.86	347	P	Pg	11 57 40.4	-1.6
IGT				S	Sb	11 57 54.2	-0.1
IGT	**Igoumenitsa**	0.86	347	P	Pg	11 57 40.6	-1.4
	baz=344						
IGT				S	Sn	11 57 56.3	-0.3
	baz=344						
VTN	**Vitineika**	0.91	148	P	Pg	11 57 42.4	-0.5
VTN	**Vitineika**	0.91	148	P	Pg	11 57 42.5	-0.5
ZAK2	**Zakynthos**	0.94	165	P	Pg	11 57 43.1	-0.4
RLS	**Riolos of Patr**	0.94	132	P	Pg	11 57 42.4	-1.1
RLS	**Riolos of Patr**	0.94	132	P	Pg	11 57 42.4	-1.1
RLS				AML	AML	11 58 04.6	
	comp=N,39065µm,0.7s						
RLS				AML	AML	11 58 05.0	
	comp=E,40992µm,0.7s						
EVR	**Evrytania**	0.98	77	P	Pg	11 57 42.8	-1.5
EVR	**Evrytania**	0.98	77	P	Pg	11 57 43.0	-1.3
EVR				AML	AML	11 58 10.3	
	comp=N,18235µm,1.2s						
EVR				AML	AML	11 58 16.9	
	comp=E,19813µm,0.6s						
JAN	**Janina**	0.98	12	P	Pg	11 57 44.3	-0.1
JAN	**Janina**	0.98	12	P	Pg	11 57 43.9	-0.4
JAN				AML	AML	11 58 03.7	
	comp=E,28069µm,0.8s						
JAN				AML	AML	11 58 12.8	
	comp=N,16932µm,0.9s						
JAN	**Janina**	0.98	12	P	Pg	11 57 44.3	-0.1
LTHK	**Lithakia**	1.00	168	P	Pg	11 57 42.8	-1.8
LTHK	**Lithakia**	1.00	168	P	Pg	11 57 42.9	-1.8
ANX	**Ano Chora**	1.05	95	P	Pg	11 57 44.2	-1.5
ANX				AML	AML	11 58 08.2	
ANX				AML	AML	11 58 09.1	
EFP	**Efpalio**	1.07	104	P	Pg	11 57 44.4	-1.6
EFP	**Efpalio**	1.07	104	P	Pg	11 57 44.3	-1.7
EFP				AML	AML	11 58 06.9	
	comp=E,47230µm,0.6s						
EFP				AML	AML	11 58 09.3	
	comp=N,58174µm,0.9s						
DRO	**Drossia**	1.15	130	P	Pg	11 57 46.0	-1.6
DRO	**Drossia**	1.15	130	P	Pg	11 57 45.5	-2.1
DRO				AML	AML	11 58 12.1	
	comp=E,65030µm,0.7s						
DRO				AML	AML	11 58 13.2	
	comp=N,47537µm,0.5s						
KASA	**Kassiopi**	1.17	335	P	Pb	11 57 47.0	-0.8
LAKA	**Lakka**	1.18	112	P	Pb	11 57 46.5	-1.6
LAKA	**Lakka**	1.18	112	P	Pb	11 57 46.4	-1.7
LAKA				AML	AML	11 58 13.2	
	comp=N,96800µm,0.9s						
LAKA				AML	AML	11 58 14.7	
KEK	**Kerkira**	1.19	329	P	Pb	11 57 47.6	-0.6
KEK	**Kerkira**	1.19	329	P	Pb	11 57 47.2	-1.0
KEK				AML	AML	11 58 08.4	
	comp=E,12672µm,0.6s						
KEK				AML	AML	11 58 20.6	
	comp=N,14480µm,1.3s						
TRIZ	**Trizonia**	1.21	105	P	Pb	11 57 47.0	-1.6
TRIZ	**Trizonia**	1.21	105	P	Pb	11 57 46.9	-1.7
MAKR	**Makrakomi, Fth**	1.25	75	P	Pn	11 57 47.7	-1.5
MAKR				AML	AML	11 58 13.9	
	comp=E,22806µm,1.3s						
MAKR				AML	AML	11 58 24.6	
	comp=N,16919µm,1.5s						
SRN	**Sarande**	1.27	339	P	Pg	11 57 50.0	+0.2
	baz=338						
SRN				S	Sn	11 58 06.7	+0.1
	baz=338						
SRN				AMP			
	comp=E,17nm,1.0s,baz=338						
KLV	**Kalavryta, Ach**	1.39	117	P	Pn	11 57 49.7	-1.5
KLV				AML	AML	11 58 21.4	
	comp=E,16498µm,0.8s						
KLV				AML	AML	11 58 25.1	
	comp=N,13770µm,0.7s						
KPRO	**Kipourio**	1.40	25	P	Pn	11 57 50.6	-0.7
KPRO				AML	AML	11 58 17.6	
	comp=E,21960µm,1.0s						
KPRO				AML	AML	11 58 21.3	
	comp=N,19582µm,0.6s						
AGG	**Agios Georgios**	1.40	76	P	Pn	11 57 50.6	-0.7
AGG	**Agios Georgios**	1.40	76	P	Pn	11 57 50.5	-0.7
AGG				AML	AML	11 58 20.6	
	comp=N,23269µm,0.6s						
AGG				AML	AML	11 58 22.6	
	comp=E,29884µm,1.1s						
AGG	**Agios Georgios**	1.40	76	P	Pn	11 57 50.7	-0.6
AGG	**Agios Georgios**	1.40	76		Pn	11 57 50.7	-0.7
THL	**Klokotos Trika**	1.41	52	P	Pn	11 57 50.2	-1.2
THL	**Klokotos Trika**	1.41	52	P	Pn	11 57 50.7	-0.6
THL				AML	AML	11 58 17.0	
	comp=E,25922µm,0.6s						
THL				AML	AML	11 58 19.1	
	comp=N,24441µm,0.6s						
LSK	**Leskovik**	1.45	0	P	Pg	11 57 53.0	-0.3
	baz=359						
LSK				S	Sg	11 58 12.7	+0.5
	baz=359						
LSK				AMP			
	comp=N,42nm,0.7s,baz=359						
DLFA	**Delphi**	1.51	98	P	Pn	11 57 52.3	-0.6
GUR	**Goura**	1.58	118	P	Pn	11 57 52.5	-1.3
GUR				AML	AML	11 58 25.8	
	comp=N,35401µm,0.6s						
GUR				AML	AML	11 58 26.3	
	comp=E,35739µm,0.5s						
THAL	**Thalero**	1.76	111	P	Pn	11 57 56.5	+0.3
THAL				AML	AML	11 58 33.6	
	comp=N,30264µm,0.7s						
THAL				AML	AML	11 58 35.9	
	comp=E,37695µm,0.6s						
ITM	**Ithomi**	1.85	145	P	Pn	11 57 58.2	+0.9
ITM				AML	AML	11 58 39.9	
	comp=E,8299µm,0.8s						
ITM				AML	AML	11 58 46.9	
	comp=N,10868µm,1.0s						
ITM	**Ithomi**	1.85	145		Pb	11 57 58.9	-0.5
KZN	**Kozani**	1.85	29	P	Pb	11 57 58.8	-0.8
KZN				AML	AML	11 58 31.5	
	comp=E,8654µm,0.9s						
KZN				AML	AML	11 58 36.5	
	comp=N,5788µm,0.6s						
KZN	**Kozani**	1.85	29	P	Pb	11 57 59.7	+0.1
ATAL	**Atalanti**	1.91	89	P	Pn	11 57 59.2	+1.0
ATAL				AML	AML	11 58 43.9	
	comp=E,7009µm,0.9s						
ATAL				AML	AML	11 58 44.0	
	comp=N,7383µm,0.9s						
KBN	**Korca**	1.93	5	P	Pn	11 57 59.3	+0.7
KBN	**Korca**	1.93	5		Pn	11 57 59.3	+0.7
KBN	**Korca**	1.93	5	P	Pb	11 57 59.7	-1.2
	baz=2.0						
KBN				S	Sg	11 58 31.4	+3.8
	baz=2.0						
KBN				AMP			
	comp=N,14nm,0.9s,baz=2.0						
VLO	**Vlora**	1.96	335	P	Pn	11 57 59.1	+0.2
VLO	**Vlora**	1.96	335		Pn	11 57 59.1	+0.2
VLO	**Vlora**	1.96	335	P	Pb	11 58 00.2	-1.2
	baz=335						
VLO				AMP			
	comp=E,31nm,0.7s,baz=335						
LTK	**Loutraki**	1.99	109	P	Pn	11 58 00.5	+1.2
PYL	**PYLOS**	2.02	153	P	Pn	11 58 00.3	+0.6
SCTE	**Santa Cesarea**	2.14	311		Pn	11 58 01.0	-0.4
SCTE	**Santa Cesarea**	2.14	311	P	Pn	11 58 01.0	-0.4
	baz=311						
NEO	**Neokhori**	2.15	73	P	Pb	11 58 03.3	-1.2
NEO				AML	AML	11 58 55.6	
	comp=N,8595µm,0.8s						
NEO				AML	AML	11 58 55.9	
	comp=E,5890µm,0.8s						
VIL2	**Platees**	2.16	102	P	Pb	11 58 03.6	-1.2
VIL2				AML	AML	11 58 45.2	
	comp=N,9404µm,0.7s						
VIL2				AML	AML	11 58 45.2	
	comp=E,15325µm,0.7s						
FNA	**Florina**	2.17	16	P	Pn	11 58 02.9	+0.9
FNA	**Florina**	2.17	16		Pn	11 58 02.9	+0.9
FNA	**Florina**	2.17	16	P	Pn	11 58 03.3	+1.3
	baz=14						
FNA				S	Sg	11 58 33.9	-1.4
	baz=14						
OHR	**Ohrid**	2.42	4	*e*Pn	Pn	11 58 07.2	+1.9
OHR				*e*Sn	Sb	11 58 38.4	-0.8
OHR	**Ohrid**	2.42	4	*e*P	Pn	11 58 07.2	+1.9
OHR				*e*S	Sb	11 58 38.4	-0.8
OHR	**Ohrid**	2.42	4	*i* Pn	Pn	11 58 07.2	+1.9
ATH	**Athens Observa**	2.57	105	P	Pn	11 58 09.3	+2.1
GRG	**Griva**	2.66	31	P	Pn	11 58 10.1	+1.5
PAIG	**Paliouri**	2.70	62	P	Pn	11 58 10.8	+1.7
TIR	**Tirane**	2.71	348	⇑P	Pn	11 58 09.8	+0.6
TIR	**Tirane**	2.71	348	*e*Pn	Pn	11 58 10.2	+1.0
TIR	**Tirane**	2.71	348	P	Pn	11 58 10.1	+0.9
TIR	**Tirane**	2.71	348		Pn	11 58 10.1	+0.9
TIR	**Tirane**	2.71	348	P	Pn	11 58 10.1	+0.9
	baz=348						
PHP	**Peshkopia**	2.99	358	P	Pn	11 58 14.3	+1.2
PHP	**Peshkopia**	2.99	358	P	Pn	11 58 14.3	+1.2
	baz=357						
PHP				S	Sg	11 59 05.3	+3.8
	baz=357						
PHP				AMP			
	comp=N,7.8nm,1.6s,baz=357						
SOH	**Sokhos**	3.01	44	P	Pn	11 58 15.5	+2.1
TIP	**Timpagrande**	3.02	280		Pn	11 58 12.9	-0.7
VAY	**Valandovo**	3.04	30	*e*Pn	Pn	11 58 15.6	+1.9
VAY	**Valandovo**	3.04	30	*e*P	Pn	11 58 15.6	+1.9
VAY	**Valandovo**	3.04	30	*i* Pn	Pn	11 58 15.3	+1.7
KNT	**Kendrikon**	3.04	35	P	Pn	11 58 15.6	+1.8
OUR	**Ouranopolis**	3.10	57	P	Pb	11 58 19.2	-1.5
STIP	**Stip**	3.24	22	*i* Pn	Pn	11 58 19.5	+3.0
SKO	**Skopje**	3.34	11	P	Pn	11 58 19.9	+2.0
SKO	**Skopje**	3.34	11	*e*Pn	Pn	11 58 20.7	+2.8
SRS	**Serrai**	3.35	43	P	Pn	11 58 19.6	+1.6
ULC	**Ulcinj**	3.42	343	*e*Pn	Pn	11 58 17.1	-2.0
ULC				*i* Sn	Sn	11 58 59.7	-0.1
NOCI	**Noci**	3.43	309	P	Pn	11 58 18.6	-0.5
	baz=309						
MATE	**Matera**	3.58	304	⇓P	Pn	11 58 21.2	+0.1
DRME	**Dracevica, Mon**	3.65	343	*e*Pn	Pn	11 58 21.7	-0.5
DRME	**Dracevica, Mon**	3.65	343	⇓*i*Pn	Pn	11 58 21.7	-0.5
DRME				*i* Sn	Sn	11 59 05.0	-0.4
BCI	**Bajram Curri**	3.69	354	P	Pn	11 58 23.9	+1.2
	baz=354						
BCI				AMP			
	comp=E,9.5nm,1.7s,baz=354						
CEL	**Celeste**	3.71	265		Pn	11 58 21.9	-1.1
PDG	**Podgorica**	3.87	345	⇑P	Pn	11 58 24.5	-0.7
PDG	**Podgorica**	3.87	345	*e*Pn	Pn	11 58 25.8	+0.7
PDG				*e*Sn	Sn	11 59 10.0	-0.7
PDG	**Podgorica**	3.87	345	*e*Pn	Pn	11 58 24.1	-1.0
PDG	**Podgorica**	3.87	345	Pn	Pn	11 58 24.4	-0.7
TTG	**Podgorica**	3.87	345	⇓*i*Pn	Pn	11 58 25.4	+0.3
TTG				*i* Sn	Sn	11 59 10.3	-0.4
PVY	**Plav**	3.93	353	*e*Pn	Pn	11 58 24.3	-1.8
PVY				*i* Sn	Sn	11 59 12.1	-0.3
PRVS	**Prvonek**	3.98	16	*e*Pn	Pn	11 58 28.8	+2.1
CEME	**Cevo**	4.05	342	⇓*i*Pn	Pn	11 58 26.8	-1.0
CEME				*i* Sn	Sn	11 59 13.4	-2.0
BOSS	**Bosilegrad**	4.06	20	*e*Pn	Pn	11 58 30.0	+2.1
HCY	**Herceg Novi**	4.07	338	P	Pn	11 58 26.9	-1.1
HCY	**Herceg Novi**	4.07	338	*e*Pn	Pn	11 58 26.3	-1.7
HCY	**Herceg Novi**	4.07	338	⇑*i*Pn	Pn	11 58 26.4	-1.6
HCY				*i* Sn	Sn	11 59 13.6	-2.2
IVA	**Berane**	4.21	353	⇓*i*Pn	Pn	11 58 30.3	+0.4
IVA				*i* Sn	Sn	11 59 18.8	-0.4
BARS	**Barje**	4.22	12	*e*Pn	Pn	11 58 30.9	+0.8
KOME	**Kolasin**	4.23	349	*e*Pn	Pn	11 58 28.9	-1.3
KOME				*i* Sn	Sn	11 59 19.2	-0.6
NKME	**Niksic**	4.25	344	*e*Pn	Pn	11 58 28.7	-1.8
NKME				*i* Sn	Sn	11 59 19.6	-0.7
NKY	**Niksic**	4.29	344	P	Pn	11 58 31.7	+0.7
NKY	**Niksic**	4.29	344	*e*Pn	Pn	11 58 29.6	-1.4
NKY				*i* Sn	Sn	11 59 19.9	-1.4
TREB	**Trebinje**	4.36	338	*e*Pn	Pn	11 58 30.8	-1.2
TREB	**Trebinje**	4.36	338	*e*Pn	Pn	11 58 30.2	-1.8
VTS	**Vitosha**	4.41	26	⇑P	Pn	11 58 34.6	+1.9
VTS	**Vitosha**	4.41	26	*e*Pn	Pn	11 58 33.8	+1.1
VTS				*e*Sn	Sn	11 59 27.4	+3.1
VTS	**Vitosha**	4.41	26	P	Pn	11 58 33.1	+0.4
VTS	**Vitosha**	4.41	26	Pn	Pn	11 58 33.1	+0.4
BRY	**Bratogost**	4.48	340	P	Pn	11 58 32.9	-0.8
BRY	**Bratogost**	4.48	340	*e*Pn	Pn	11 58 32.3	-1.4
BRY	**Bratogost**	4.48	340	⇑*i*Pn	Pn	11 58 32.4	-1.3
BRY				*i* Sn	Sn	11 59 24.6	-1.5
SELS	**Selova**	4.54	5	*e*Pn	Pn	11 58 33.9	-0.5
SJES	**Sjenica**	4.59	354	*e*Pn	Pn	11 58 35.7	+0.6
EZN	**Ezine**	4.60	74	P	Pn	11 58 39.9	+4.7
PLD	**Plovdiv**	4.64	41	P	Pn	11 58 39.7	+4.0
PLE	**Pljevlja**	4.72	349	P	Pn	11 58 39.3	+2.3
PLE	**Pljevlja**	4.72	349	⇑*i*Pn	Pn	11 58 37.3	+0.3
PLE				*i* Sn	Sn	11 59 28.3	-3.6
ALN	**Alexandroupoli**	4.75	61	P	Pn	11 58 38.1	+0.9
ALN	**Alexandroupoli**	4.75	61		Pn	11 58 38.1	+0.9
SGRT	**San Giovanni R**	4.80	311	Pn	Pn	11 58 37.3	-0.8
SGRT	**San Giovanni R**	4.80	311	P	Pn	11 58 37.2	-0.9
	baz=312						
ZAPS	**Zavoj**	4.83	18	*e*Pn	Pn	11 58 39.2	+0.8
IDI	**Anoyia**	4.84	133	Pn	Pn	11 58 38.9	+0.3
	comp=E,2.5nm,0.3s,baz=305,slow=11,SNR=4.3						
IDI				Sn	Sn	11 59 35.0	+0.2
	comp=E,6.0nm,0.3s,baz=248,slow=20,SNR=3.7						
IDI				LR	LR	12 00 26.6	
	comp=E,735nm,18.9s,baz=318,slow=38						
RUDO	**Rudo**	5.00	350	*e*Pn	Pn	11 58 39.3	-1.5
BOVS	**Bovan**	5.01	9	⇓P	Pn	11 58 40.2	-0.6
BOVS	**Bovan**	5.01	9	*e*Pn	Pn	11 58 40.4	-0.4
VAE	**Valguarnera**	5.02	258	Pn	Pn	11 58 43.1	+2.1
	comp=E,2.0nm,0.3s,baz=50,slow=7.9,SNR=6.9						
VAE				Sn	Sn	11 59 37.8	-1.4
	comp=E,9.6nm,0.3s,baz=140,slow=16,SNR=3.2						
RAFF	**Raffo Rosso**	5.13	255		Pn	11 58 40.9	-1.7
PAOL	**Paolisi**	5.18	299		Pn	11 58 43.8	+0.5
GRUS	**Gruza**	5.19	1	*e*Pn	Pn	11 58 42.9	-0.4
BBLS	**Lazići**	5.24	351	*e*Pn	Pn	11 58 43.2	-0.9
DIVS	**Divibare**	5.42	355	*e*Pn	Pn	11 58 45.7	-0.8
DIVS	**Divibare**	5.42	355	*e*Pn	Pn	11 58 45.3	-1.2
DIVS	**Divibare**	5.42	355		Pn	11 58 45.5	-1.0
HVAR	**Hvar**	5.46	326	*e*Pn	Pn	11 58 45.2	-1.8
HAPS	**Han Pijesak,BI**	5.53	348	*e*Pn	Pn	11 58 47.0	-1.0

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PLVB  Pleven             5.59  32 ⇑P    Pn    11 58 51.8 +3.0
BALB  Balikesir          5.75  78       Pn    11 58 53.5 +2.5
CORL  Corleone           5.78 264  Pn   Pn    11 58 52.9 +1.3
EDC   Edincik            5.87  71  P    Pn    11 58 58.0 +5.4
TEKS  Tekeris            5.90 353 ePn   Pn    11 58 49.7 -3.4
CLTB  Caltabellotta      5.92 261       Pn    11 58 55.6 +2.2
DJES  Djerdap            6.14  13 ⇑P    Pn    11 58 58.1 +1.7
MDVR  Moldovita          6.14   8 ⇓P    Pn    11 58 56.3 -0.1
MGRS  Mrkonjic Grad      6.29 336 ePn   Pn    11 58 58.0 -0.5
HERR  Herculane          6.33  12 ⇓P    Pn    11 59 00.3 +1.4
FRGS  Fruska Gora        6.49 355 ⇑P    Pn    11 58 59.9 -1.3
FRGS  Fruska Gora        6.49 355 ePn   Pn    11 59 00.5 -0.6
FRGS  Fruska Gora        6.49 355 ePn   Pn    11 58 59.7 -1.4
BLY   Banja Luka         6.56 338 ePn   Pn    11 59 00.7 -1.5
AQU   L'Aquila           6.58 306  P    Pn    11 59 02.8 +0.3
AQU   L'Aquila           6.58 306 ePn   Pn    11 59 03.9 +1.4
AQU   L'Aquila           6.58 306       Pn    11 59 02.8 +0.3
MRAK  Mrakovica          6.89 338 ePn   Pn    11 59 04.8 -1.9
GZR   Gura Zlata         6.89  13 ⇑P    Pn    11 59 08.4 +1.7
BZS   Buzias             6.96   6 ⇓P    Pn    11 59 07.6  0.0
BZS   Buzias             6.96   6  P    Pn    11 59 09.3 +1.7
BZS                                pmax pmax
      comp=Z,28nm,1.0s
NRCA  Norcia             7.02 308       Pn    11 59 08.7 +0.2
LOT   Lotru              7.15  18 ⇓P    Pn    11 58 60.0  -10
ARR   Arges              7.32  23 ⇓P    Pn    11 59 12.7 +0.1
VOIR                     7.51  25 ⇓P    Pn    11 59 17.4 +2.1
VOIR                     7.51  25  P    Pn    11 59 17.6 +2.3
VOIR                               pmax pmax
      comp=Z,24nm,1.1s
KOVH  Kovagotottos       7.61 347 ePN   Pn    11 59 14.7 -1.9
MURB  Monte Urbino       7.62 309       Pn    11 59 17.2 +0.6
ELL   Elmali             7.64 102  P    Pn    11 59 19.8 +2.7
ELL   Elmali             7.64 102       Pn    11 59 19.8 +2.7
MORH  Mrgy, Hungar       7.65 350 ⇓P    Pn    11 59 16.2 -0.9
MORH  Mrgy, Hungar       7.65 350 ePN   Pn    11 59 15.4 -1.7
MORH  Mrgy, Hungar       7.65 350 eP    Pn    11 59 17.1 +0.1
MORH  Mrgy, Hungar       7.65 350 ePn   Pn    11 59 15.5 -1.6
ISR   Istrita            7.80  33 ⇑P    Pn    11 59 21.0 +1.7
ISR   Istrita            7.80  33  P    Pn    11 59 22.7 +3.4
ISR                                pmax pmax
      comp=Z,123nm,0.9s
MLR   Muntele Rosu       7.87  29 ⇑P    Pn    11 59 23.1 +2.8
MLR   Muntele Rosu       7.87  29  Pn   Pn    11 59 21.6 +1.3
      comp=Z,0.6nm,0.3s,baz=234,slow=8.2,SNR=14
MLR                                LR   LR    12 03 05.2
      comp=Z,2µm,18.5s,baz=200,slow=44
MLR   Muntele Rosu       7.87  29  P    Pn    11 59 21.8 +1.5
MLR   Muntele Rosu       7.87  29       Pn    11 59 21.8 +1.5
NEHR  Nehoiu             7.96  30 ⇑P    Pn    11 59 24.1 +2.8
RIY   Rijeka             8.03 328 ePn   Pn    11 59 21.1 -1.2
CRES  Cresnjev           8.08 334 ePn   Pn    11 59 20.4 -2.5
TLBR  Topalu             8.09  41 ⇑P    Pn    11 59 30.2 +7.1
DOPR  Dopca              8.09  25 ⇑P    Pn    11 59 26.0 +2.8
HARR  Harsova            8.13  40 ⇓P    Pn    11 59 29.0 +5.4
TIRR  Tirgusor           8.22  43  P    Pn    11 59 26.3 +1.4
TIRR  Tirgusor           8.22  43  Pn   Pn    11 59 26.3 +1.4
BISRR Bisoca             8.22  32 ⇑P    Pn    11 59 30.7 +5.7
DRGR                     8.24  10 ⇑P    Pn    11 59 26.7 +1.4
DRGR                     8.24  10  P    Pn    11 59 27.1 +1.8
DRGR                               pmax pmax
      comp=Z,6.0nm,0.7s
COVR  Voineasa-Covas     8.27  28 ⇓P    Pn    11 59 29.0 +3.4
OZUR                     8.34  26 ⇓P    Pn    11 59 28.7 +2.2
MDUB  Mudurnu            8.39  74       Pn    11 59 28.2 +0.9
CEY   Cerknica           8.39 329 ePn   Pn    11 59 26.0 -1.3
CASP  Castiglione de     8.44 302       Pn    11 59 28.0 +0.1
PLOR  Plostina           8.45  30 ⇑P    Pn    11 59 31.5 +3.4
VRI   Vrincioaia         8.49  30 ⇓P    Pn    11 59 31.9 +3.2
VRI   Vrincioaia         8.49  30  P    Pn    11 59 31.8 +3.2
VRI                                pmax pmax
      comp=Z,66nm,0.9s
OSSC  Osservatorio P     8.54 307       Pn    11 59 29.7 +0.4
LJU   Ljubljana          8.60 331 ePn   Pn    11 59 28.9 -1.3
VSL   Villasalto         8.75 279       Pn    11 59 32.2  0.0
MPLH  Magyarpolny        8.76 346 ePN   Pn    11 59 30.6 -1.7
MPLH  Magyarpolny        8.76 346 eP    Pn    11 59 33.6 +1.3
MPLH  Magyarpolny        8.76 346 eSN   Sn    12 01 00.4  -11
SOKA  Soboth             8.96 335 ePn   Pn    11 59 33.3 -1.9
      comp=Z,18nm,0.6s,SNR=18
SOKA                              i Sn  Sn    12 01 08.8 -7.5
      comp=Z,11nm,0.6s
OBKA  Obir               8.99 332 ePn   Pn    11 59 35.4 -0.1
      comp=Z,19nm,0.6s
OBKA                              eSn   Sn    12 01 14.8 -2.1
      comp=Z,14nm,0.5s
TESR  Tescani            9.00  28 ⇓P    Pn    11 59 39.4 +3.8
ZCCA  Zocca              9.15 311       Pn    11 59 38.4 +0.7
PSZ   Piszkesteto        9.23 357 ⇑P    Pn    11 59 38.6 -0.3
PSZ   Piszkesteto        9.23 357 ePN   Pn    11 59 39.1 +0.2
PSZ   Piszkesteto        9.23 357 eP    Pn    11 59 40.5 +1.6
PSZ   Piszkesteto        9.23 357 eSN   Sn    12 01 18.1 -4.8
PSZ   Piszkesteto        9.23 357       Pn    11 59 38.8 -0.1
ARSA  Arzberg            9.32 338 ePn   Pn    11 59 37.5 -2.5
      comp=Z,7.1nm,0.6s
ARSA                              i Sn  Sn    12 01 22.3 -2.7
      comp=Z,3.4nm,0.5s
TEOL  Teolo              9.40 318  Pn   Pn    11 59 39.9 -1.1
VLC   Villacollemand     9.40 309  Pn   Pn    11 59 40.7 -0.5
MYKA  Terra Mystica      9.43 329 ePn   Pn    11 59 40.2 -1.4
      comp=Z,4.1nm,0.5s
MYKA                              eSn   Sn    12 01 25.9 -1.9
      comp=Z,10nm,0.8s
KEST  Kesra              9.44 255  Pn   Pn    11 59 41.2 -0.6
      comp=Z,0.5nm,0.3s,baz=51,slow=11,SNR=6.2
KEST  Kesra              9.44 255  Pn   Pn    11 59 41.0 -0.7
BURAR Bucovina Array     9.54  19  P    Pn    11 59 43.8 +0.8
BURAR Bucovina Array     9.54  19  Pn   Pn    11 59 43.8 +0.8
STAL  STALIGIAL          9.54 325       Pn    11 59 41.1 -1.8
ZOU   Zoufplan           9.65 327       Pn    11 59 43.3 -1.4
ZST   Bratislava         9.83 346 eP    Pn    11 59 43.7 -3.2
ZST   Bratislava         9.83 346 ePN   Pn    11 59 43.7 -3.2
CONA  Conrad Observa     9.85 341 ePn   Pn    11 59 46.4 -0.9
      comp=Z,4.7nm,0.6s
VYHS  Vyhne              9.88 353 eP    Pn    11 59 47.1 -0.5
VYHS                              e     Sn    12 01 32.7 -5.9
VYHS  Vyhne              9.88 353 ePN   Pn    11 59 47.1 -0.5
VYHS                              eSN   Sn    12 01 32.7 -5.9
CTI   Castel Tesino      9.88 321  P    Pn    11 59 45.7 -2.1
CTI   Castel Tesino      9.88 321       Pn    11 59 45.7 -2.1
KBA   Koelnbreinsper     9.92 330 ePn   Pn    11 59 46.7 -1.6
      comp=Z,4.4nm,0.4s
KBA                               i Sn  Sn    12 01 37.4 -2.5
      comp=Z,7.6nm,0.5s
KBA   Koelnbreinsper     9.92 330  P    Pn    11 59 48.5 +0.2
KBA                                pmax pmax
      comp=Z,16nm,1.1s
MODS  Modra-Piesok       9.97 347 eP    Pn    11 59 47.5 -1.4
MODS  Modra-Piesok       9.97 347 ePN   Pn    11 59 47.5 -1.4
ABTA  Abfaltersbach     10.00 326 i Pn  Pn    11 59 47.4 -1.9
      comp=Z,8.3nm,0.6s
ABTA                              eSn   Sn    12 01 39.5 -2.2
      comp=Z,17nm,0.6s
UZH   Uzhgorod          10.01   7 eP    Pn    11 59 51.0 +1.6
SMOL  Smolenice         10.08 348 eP    Pn    11 59 51.5 +1.1
SMOL  Smolenice         10.08 348 ePN   Pn    11 59 51.5 +1.1
SALO  Salr              10.18 316  Pn   Pn    11 59 50.5 -1.2
BR131 Keskin Array S    10.19  80  P    Pn    11 59 53.6 +1.6
BR131 Keskin Array S    10.19  80  Pn   Pn    11 59 53.6 +1.6
BRTR  Keskin Array B    10.19  80  Pn   Pn    11 59 53.7 +1.6
      comp=Z,0.2nm,0.3s,baz=260,slow=12,SNR=2.1
BRTR                               LR   LR    12 04 54.1
      comp=Z,760nm,20.8s,baz=288,slow=44
BRTR  Keskin Array B    10.19  80  P    Pn    11 59 53.8 +1.8
BRTR  Keskin Array B    10.19  80       Pn    11 59 53.8 +1.8
CRVS  Cervenica-Dubn    10.22   3 eP    Pn    11 59 53.8 +1.4
CRVS  Cervenica-Dubn    10.22   3 ePN   Pn    11 59 53.8 +1.4
MOA   Molln             10.24 335 i Pn  Pn    11 59 51.9 -0.7
      comp=Z,7.7nm,0.4s
KOLS  Kolonicke sedl    10.31   6 eP    Pn    11 59 56.3 +2.8
KOLS  Kolonicke sedl    10.31   6 ePN   Pn    11 59 56.3 +2.8
JAVC  Velka Javorina    10.38 349 ePN   Pn    11 59 55.4 +0.9
NIE   Niedzica          10.72 359  P    Pn    12 00 01.8 +2.6
NIE                                pmax pmax
      comp=Z,15nm,1.6s
WTTA  Wattenberg        10.78 325 ePn   Pn    11 59 59.8 -0.3
      comp=Z,6.3nm,0.5s
WTTA                              eSn   Sn    12 01 57.6 -3.4
      comp=Z,15nm,0.6s
WTTA  Wattenberg        10.78 325  P    Pn    12 00 00.3 +0.2
WTTA                               pmax pmax
      comp=Z,19nm,0.8s
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KRUC  Moravsky          10.79 345  P    Pn    11 59 59.4 -0.8
KRUC                               pmax pmax
      comp=Z,10.0nm,2.8s
KRUC  Moravsky          10.79 345 ePN   Pn    11 59 58.5 -1.7
WATA  Walderalm         10.86 326 ePn   Pn    12 00 01.2  0.0
      comp=Z,6.3nm,0.5s
WATA                              eSn   Sn    12 02 00.6 -2.3
      comp=Z,19nm,0.7s
CSS   Mathiatis         10.87 106       Pn    12 00 03.6 +2.3
VRAC  Vranov            10.99 346  Pn   Pn    12 00 01.8 -1.1
      comp=Z,0.5nm,0.3s,baz=178,slow=10,SNR=5.9
VRAC  Vranov            10.99 346 ePN   Pn    12 00 02.7 -0.2
FETA  Feichten          11.02 322 ePn   Pn    12 00 04.3 +0.9
      comp=Z,4.1nm,0.7s
FETA                              eSn   Sn    12 02 05.6 -1.2
      comp=Z,5.3nm,0.5s
MOTA  Moosalm           11.08 324 ePn   Pn    12 00 04.2  0.0
      comp=Z,12nm,0.6s,SNR=9.0
MOTA                              i Sn  Sn    12 02 05.7 -2.6
      comp=Z,16nm,0.8s
CKRC  Cesky Krumlov     11.09 338 ePN   Pn    12 00 03.0 -1.2
DAVOX Davos/Dischmat    11.27 319  Pn   Pn    12 00 07.2 +0.3
      comp=Z,0.4nm,0.3s,baz=143,slow=18,SNR=3.4
DAVOX                              Sn   Sn    12 02 12.2 -0.9
      comp=Z,1.2nm,0.3s,baz=328,slow=11,SNR=5.2
MORC  Moravsky Berou    11.29 350 ⇑P    Pn    12 00 07.0  0.0
MORC  Moravsky Berou    11.29 350  P    Pn    12 00 06.8 -0.2
MORC  Moravsky Berou    11.29 350 ePN   Pn    12 00 07.2 +0.2
MORC  Moravsky Berou    11.29 350       Pn    12 00 06.8 -0.2
GEC2  GERESS Array S    11.30 336       Pn    12 00 04.8 -2.3
GERES GERESS Array B    11.30 336  Pn   Pn    12 00 05.2 -1.9
      comp=Z,0.7nm,0.3s,baz=156,slow=13,SNR=14
GERES                              Sn   Sn    12 02 09.1 -4.4
      comp=Z,0.4nm,0.3s,baz=154,slow=24,SNR=1.9
GERES                              LR   LR    12 05 12.9
      comp=Z,706nm,19.0s,baz=152,slow=42
GERES GERESS Array B    11.30 336 eP    Pn    12 00 03.9 -3.2
GERES GERESS Array B    11.30 336  Pn   Pn    12 00 04.9 -2.2
TUE   Stuetta           11.35 317  Pn   Pn    12 00 08.1 +0.1
KHC   Kasperske Hory    11.59 336 eP    Pn    12 00 09.8 -1.2
KHC                               e     Sn    12 02 15.3 -5.2
KHC                                MLR  MLR
      comp=Z,1µm,7.4s
KHC   Kasperske Hory    11.59 336 ePN   Pn    12 00 09.8 -1.2
KHC                               eSN   Sn    12 02 15.3 -5.2
KHC                                AMS  AMS   12 06 10.0
      comp=Z,1µm,7.4s
WET   Wettzell          11.82 335  P    Pn    12 00 12.5 -1.8
WET                                pmax pmax
      comp=Z,11nm,2.0s
PRU   Pruhonice         12.09 341 eP    Pn    12 00 17.0 -0.8
PRU                                MLR  MLR
      comp=Z,1µm,13.2s
PRU   Pruhonice         12.09 341 ePN   Pn    12 00 17.0 -0.8
PRU                                AMS  AMS   12 05 20.0
      comp=Z,1µm,13.2s
SENIN Lac Senin/Sane    12.43 312  Pn   Pn    12 00 22.8 +0.1
BRG   Berggiesshubel    13.05 341 eP    Pn    12 00 33.6 +2.6
BRG                                Amp        12 00 35.3
      comp=Z,3.2nm,0.9s
BRG   Berggiesshubel    13.05 341  P    P     12 00 43.5 +2.0
BRG                                Amp        12 00 45.1
      comp=Z,7.3nm,1.0s
BRG                                Amp        12 06 48.0
      comp=Z,1.4nm,14.1s
BRG                                Amp        12 06 51.0
      comp=N,0.9nm,15.6s
BRG                                Amp        12 06 56.0
      comp=E,0.5nm,13.5s
GAZ   Gaziantep         13.22  91  Pn   Pn    12 00 33.9 +0.5
MMAI  Mount Meron Ar    13.28 111  Pn   Pn    12 00 34.8 +0.5
      comp=E,1.2nm,0.3s,baz=294,slow=14,SNR=2.5
MMAI                               Sn   Sn    12 02 58.7 -3.5
      comp=E,1.6nm,0.3s,baz=302,slow=25,SNR=1.8
MMAI                               LR   LR    12 06 26.2
      comp=E,230nm,18.1s,baz=310,slow=41
KIEV  Kiev              13.46  24  P    Pn    12 00 38.0 +1.4
AKASG Malin Array Be    13.47  24  Pn   Pn    12 00 38.3 +1.6
      comp=E,0.9nm,0.3s,baz=213,slow=13,SNR=5.9
AKASG                              LR   LR    12 06 33.3
      comp=E,976nm,19.0s,baz=215,slow=41
AKASG Malin Array Be    13.47  24  P    Pn    12 00 35.9 -0.8
AKASG Malin Array Be    13.47  24       Pn    12 00 35.9 -0.8
AKBB  Malin Array Si    13.47  24⇑eP    Pn    12 00 37.3 +0.6
AKBB  Malin Array Si    13.47  24       Pn    12 00 37.8 +1.1
MOX   Moxa              13.53 335  P    Pn    12 00 37.1 -0.5
MOX                                pmax pmax
      comp=Z,8.0nm,1.2s
ECH   Echery            13.61 319  P    Pn    12 00 37.4 -1.2
ECH   Echery            13.61 319  Pn   Pn    12 00 37.4 -1.2
CLL   Collm             13.70 340 i P   Pn    12 00 38.6 -1.2
CLL                                MLR  MLR
      comp=Z,1µm,15.8s
CLL   Collm             13.70 340 i P   Pn    12 00 38.6 -1.2
CLL                               i PP  P     12 00 49.7 +1.1
      comp=Z,27nm,1.3s
CLL                               i           12 00 57.7
      comp=Z,71nm,2.1s
RUE   Ruedersdorf       14.58 343 eP    P     12 00 58.4 +0.1
ASF   Jabal al Asfar    14.80 111  Pn   P     12 01 01.0 -0.1
      comp=Z,0.6nm,0.3s,baz=278,slow=8.7,SNR=5.9
SOC   Sochi             15.21  65 eP    Pn    12 01 00.8 +0.4
SOC                               e     Sn    12 03 51.8 +2.8
SOC                                MLR  MLR
      comp=Z,126nm,10.0s
SUW   Suwalki           15.43   6 eP    P     12 01 06.7 -1.1
SUW   Suwalki           15.43   6  P    Pn    12 01 04.1 +1.0
SUW                                pmax pmax
      comp=Z,46nm,0.9s
SUW   Suwalki           15.43   6  Pn   Pn    12 01 04.1 +1.0
SUW                                IAmb IAmb  12 01 09.7
      comp=Z,46nm,0.9s
MNK   Minsk             16.57  15 i P   Pn    12 01 15.0 -2.9
MNK                               i S   Sn    12 04 18.8 -3.1
MNK                                pmax pmax
      comp=E,1.0nm,0.8s
MNK                                pmax pmax
      comp=Z,23nm,0.8s
MNK                                pmax pmax
      comp=N,18nm,0.8s
MNK                                MLR  MLR
      comp=E,126nm,18.0s
MNK                                MLR  MLR
      comp=Z,518nm,17.0s
MNK                                MLR  MLR
      comp=N,347nm,18.0s
MNK   Minsk             16.57  15 i P   Pn    12 01 15.0 -2.9
      comp=E,1.0nm,0.8s
MNK                               i P   Pn    12 01 15.0 -2.9
      comp=N,18nm,0.8s
MNK                               i P   Pn    12 01 15.0 -2.9
      comp=Z,23nm,0.8s,baz=201
MNK                               i PP  sP    12 01 24.1  0.0
MNK                               i S   Sn    12 04 18.8 -3.1
MNK                               i SS  S     12 04 33.2 -0.5
MNK                               i LQ  LQ    12 06 18.3
MNK                               i LR  LR    12 06 49.1
MNK                               i LRM MLR   12 07 37.1
      comp=E,126nm,17.5s
MNK                               i LRM MLR   12 07 50.6
      comp=Z,518nm,17.1s
MNK                               i LRM MLR   12 07 57.7
      comp=N,347nm,17.6s
NACGM Naroch            16.75  12 i P   Pn    12 01 18.5 -1.7
GURO  Guroymak-BITLI    16.76  84       Pn    12 01 21.3 +0.7
BSEG  Bad Segeberg      16.79 339  P    Pn    12 01 20.1 -0.5
BSEG                               pmax pmax
      comp=Z,40nm,1.0s
PABE  Paberze           16.97   7 eP    Pn    12 01 23.5 +0.5
PABE  Paberze           16.97   7       Pn    12 01 22.0 -0.9
PABE                               IAmb IAmb  12 01 26.1
      comp=Z,42nm,1.0s
SIRT  Sirnak            17.24  87       P     12 01 27.5 -0.6
NEY   Neytrino          17.31  68⇑eP    P     12 01 28.8 -0.2
SHA1  Shidzhatmaz       17.34  66⇑i P   P     12 01 29.9 +0.6
PBUR  Paburge           17.36   3  IAmb IAmb  12 01 37.3
      comp=Z,45nm,0.7s
KIV   Kislovodsk        17.39  65 eP    P     12 01 30.1 +0.3
KIV                               eS    Sn    12 04 45.8 +3.6
KIV                                pmax pmax
      comp=Z,29nm,1.1s
KIV                                MLR  MLR
      comp=Z,130nm,14.0s
KIV   Kislovodsk        17.39  65       P     12 01 29.3 -0.5
KVAR  Kislovodsk Arr    17.40  65  P    P     12 01 40.9  +11
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      baz=277,slow=18,SNR=3.0
KBZ   Khabaz            17.51  66  P    P     12 01 32.6 +1.7
      comp=Z,0.4nm,0.3s,baz=269,slow=12,SNR=8.6
KBZ   Khabaz            17.51  66ceP    P     12 01 33.9 +3.0
KBZ                                pmax pmax
      comp=Z,25nm,1.2s
VORD  Divnogorie        18.01  41 eP    P     12 01 38.3 +1.9
VORD                               pmax pmax
      comp=Z,10.0nm,0.5s
VSR   Storozhevoye      18.09  40 eP    P     12 01 37.6 +0.3
VSR                                pmax pmax
      comp=Z,10.0nm,0.6s
ZEI   Tsey              18.12  70 eP    P     12 01 40.1 +2.2
ZEI                                pmax pmax
      comp=Z,7.0nm,1.3s
GNI   Garni             18.71  78  P    Pn    12 01 48.2 +3.5
      comp=Z,3.0nm,0.3s,baz=88,slow=17,SNR=3.9
GNI   Garni             18.71  78⇑eP    Pn    12 01 48.4 +3.6
GNI                                pmax pmax
      comp=Z,44nm,1.4s
SLIT  Slitere, Latvi    18.98   3  IAmb IAmb  12 01 45.2
      comp=Z,236nm,1.1s
ESDC  Sonseca Array     19.04 281  P    P     12 01 47.2 -0.7
      comp=Z,0.3nm,0.3s,baz=75,slow=11,SNR=12
ESDC                               LR   LR    12 08 57.2
      comp=Z,356nm,21.7s,baz=90,slow=36
ESDC  Sonseca Array     19.04 281  P    P     12 01 48.0  0.0
PAB   San Pablo         19.35 280  P    P     12 01 50.9 -0.4
PAB                                pmax pmax
      comp=Z,6.0nm,0.9s
PAB   San Pablo         19.35 280  P    P     12 01 50.9 -0.4
VRH   Novokhopyorsk     19.41  43 eP    Pn    12 01 53.0 +0.1
VRH                                pmax pmax
      comp=Z,30nm,1.2s
OBN   Obninsk           19.64  28  P    P     12 01 54.8 +0.6
      comp=Z,1.4nm,0.3s,baz=94,slow=11,SNR=5.5
OBN                                LR   LR    12 10 27.1
      comp=Z,118nm,20.3s,baz=208,slow=40
OBN   Obninsk           19.64  28⇑eP    Pn    12 01 55.4 -0.2
OBN                               eS    Sn    12 05 37.5 +1.4
OBN                                pmax pmax
      comp=Z,81nm,1.7s
OBN                                MLR  MLR
      comp=Z,481nm,17.0s
OBN   Obninsk           19.64  28  P    P     12 01 53.5 -0.8
OBN                                IAmb IAmb  12 02 05.4
      comp=Z,53nm,1.3s
VSU   Vasula            20.18   9 eP    P     12 02 00.7 +0.6
VSU   Vasula            20.18   9ceP    P     12 02 00.3 +0.2
VSU                                pmax pmax
      comp=Z,129nm,0.9s
MOS   Moscow            20.51  28 eP    P     12 02 02.7 -1.0
MOS                                pmax pmax
      comp=Z,84nm,1.1s
AKT   Akhty             20.92  74⇑eP    Pn    12 02 10.2 -0.8
AKT                                pmax pmax
      comp=Z,23nm,1.1s
MDT   Midelt            21.24 262  P    P     12 02 13.2 +1.3
      comp=Z,4.6nm,0.9s,baz=56,slow=5.7,SNR=10
MDT                                LR   LR    12 11 09.6
      comp=Z,210nm,20.4s,baz=66,slow=39
MVO   Moncorvo          21.29 285 eLR   LR    12 08 48.3
      comp=Z,225nm,20.0s
PBAR  Barrancos         21.62 277 eP    P     12 02 16.2 +0.4
      comp=Z,48nm,1.8s
PMRV  Marv??o           21.71 281 eP    P     12 02 15.4 -1.4
      comp=Z,50nm,1.4s
PMRV                              eLR   LR    12 09 23.0
      comp=Z,212nm,22.0s
MTE   Manteigas         21.73 283 eLR   LR    12 09 07.6
      comp=Z,440nm,18.0s
PCBR  Castelo Branco    21.73 282 eP    P     12 02 16.5 -0.5
HFS   Hagfors           21.90 351  P    P     12 02 17.2 -1.4
      comp=Z,8.7nm,0.8s,baz=171,slow=10,SNR=15
HFS                                LR   LR    12 11 22.2
      comp=Z,168nm,18.6s,baz=172,slow=38
PESTR Estremoz          21.93 279 eP    P     12 02 18.2 -1.1
      comp=Z,39nm,1.7s
PESTR Estremoz          21.93 279  P    P     12 02 17.8 -1.5
PGAV  Gavieira, Arco    22.19 288 eLR   LR    12 09 18.2
      comp=Z,151nm,20.0s
EVO   Evora             22.31 279 eP    P     12 02 21.5 -1.8
      comp=Z,25nm,1.3s
PMTG  Montargil         22.39 280 eP    P     12 02 21.8 -2.4
      comp=Z,44nm,1.4s
NC602 NORSAR Array S    22.78 348  P    P     12 02 27.4 -0.7
NORES NORESS Array B    22.78 348  P    P     12 02 27.9 -0.2
PNCL  Nicolau / Gran    22.79 278 eP    P     12 02 28.7 +0.4
      comp=Z,44nm,1.5s
FINES FINESS Array B    23.03   7  P    P     12 02 28.6 -2.1
      comp=Z,29nm,0.8s,baz=171,slow=9.8,SNR=28
FINES                              LR   LR    12 13 28.8
      comp=Z,196nm,19.1s,baz=188,slow=42
FINES FINESS Array B    23.03   7 i P   P     12 02 28.7 -1.9
FINES                              pmax pmax
      comp=Z,29nm,0.8s
FINES FINESS Array B    23.03   7  P    P     12 02 29.5 -1.2
FIA1  FINESS Array S    23.03   7  P    P     12 02 29.0 -1.7
EKA   Eskdalemuir Ar    23.04 324  P    P     12 02 29.4 -1.4
      comp=Z,20nm,0.8s,baz=122,slow=11,SNR=14
ESK   Eskdalemuir       23.05 324  P    P     12 02 30.0 -0.9
ESK                                pmax pmax
      comp=Z,83nm,1.2s
ESK   Eskdalemuir       23.05 324  P    P     12 02 30.0 -0.9
NC405 NORSAR Array S    23.12 349  P    P     12 02 30.6 -1.0
NB201 NORSAR Array S    23.12 348  P    P     12 02 31.8 +0.2
NB201                              IAmb IAmb  12 02 58.1
      comp=Z,44nm,1.2s
NB2   NORSAR Subarra    23.12 348  P    P     12 02 30.4 -1.3
      comp=Z,30nm,1.0s,baz=158,slow=10
NOA   NORSAR Array B    23.12 348  P    P     12 02 30.3 -1.3
      comp=Z,10nm,0.8s,baz=159,slow=9.6,SNR=18
NOA                                LR   LR    12 13 03.0
      comp=Z,195nm,18.3s,baz=165,slow=41
BELG  Belogornoye       23.20  45  P    P     12 02 32.1 -0.4
      comp=Z,22nm,0.6s,baz=217,slow=20,SNR=16
BELG                               LR   LR    12 11 35.3
      comp=Z,169nm,21.1s,baz=204,slow=37
NC303 NORSAR Array S    23.27 349  P    P     12 02 33.3 +0.1
KLMR  Klimovskoe        25.14  22 eP    P     12 02 49.6 -1.0
KLMR                              e           12 03 22.3
KLMR                               pmax pmax
      comp=Z,46nm,1.2s
KLMR  Klimovskoe        25.14  22 eP    P     12 02 49.6 -1.0
KLMR                               AMP        12 02 54.4
      comp=Z,46nm,1.2s
KLMR                              ePP   sP    12 03 22.3  +28
KLMR                               LQ   LQ    12 10 59.0
KLMR                               LQ   LQ    12 10 59.0
KLMR                               LR   LR    12 12 31.1
RAYN  Ar Rayn           26.04 118  P    P     12 03 00.2 +1.0
RAYN                               pmax pmax
      comp=Z,8.0nm,0.8s
RAYN  Ar Rayn           26.04 118  P    P     12 03 00.2 +1.0
KIRV  Kirov             27.20  34  P    P     12 03 09.3 +0.1
      comp=Z,6.8nm,0.4s,baz=270,slow=3.0,SNR=5.1
KIRV                               LR   LR    12 14 30.6
      comp=Z,308nm,19.5s,baz=236,slow=38
KIRV  Kirov             27.20  34⇓eP    P     12 03 09.5 +0.3
PRGR  Permogore         27.68  26 eP    P     12 03 12.3 -1.2
PRGR                               pmax pmax
      comp=Z,157nm,1.5s
AKTO  Aktyubinsk        28.83  54  P    P     12 03 24.0  0.0
      comp=Z,2.9nm,0.7s,baz=270,slow=9.3,SNR=7.9
AKTO                               LR   LR    12 16 03.9
      comp=Z,240nm,20.2s,baz=282,slow=39
AKTO  Aktyubinsk        28.83  54  P    P     12 03 24.0  0.0
GEYT  Alibeck           29.33  80  P    P     12 03 28.1 -0.5
      comp=Z,5.8nm,0.6s,baz=336,slow=9.8,SNR=7.4
GEYT                               LR   LR    12 17 59.4
      comp=Z,112nm,21.1s,baz=250,slow=42
GEYT  Alibeck           29.33  80  P    P     12 03 28.6  0.0
GEYT                               IAmb IAmb  12 03 32.1
      comp=Z,14nm,1.1s
GYA0B ALIBECK ARRAY     29.33  80  P    P     12 03 29.0 +0.4
GYA0B                              IAmb IAmb  12 03 32.4
      comp=Z,14nm,0.7s
ABKAR Akbulak array     29.91  56  P    P     12 03 32.7 -0.8
ABKAR                              IAmb IAmb  12 03 35.4
      comp=Z,12nm,1.5s
ABKAR Akbulak array     29.91  56  P    P     12 03 32.9 -0.7
TORD  Torodi Ar. Bea    30.46 218  P    P     12 03 38.0 -0.6
      comp=Z,1.7nm,0.5s,baz=33,slow=9.4,SNR=10
TORD  Torodi Ar. Bea    30.46 218  P    P     12 03 38.0 -0.6
ARU   Arti              30.64  42  LR   LR    12 15 13.7
      comp=Z,138nm,21.8s,baz=229,slow=35
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ARU	Arti	30.64	42	c iP	P	12 03 39.8	-0.1
ARU				S	S	12 08 44.3	+2.1
ARU				SS	ScP	12 10 20.7	+0.1
ARU				pmax	pmax		
	comp=Z,21nm,1.5s						
ARU	Arti	30.64	42	P	P	12 03 39.5	-0.4
ARU				IAmb	IAmb	12 03 41.4	
	comp=Z,19nm,1.3s						
ARCES	ARCESS Array B	31.02	3	P	P	12 03 42.0	-1.0
	comp=Z,7.0nm,0.8s,baz=184,slow=7.2,SNR=12						
ARCES				LR	LR	12 17 32.2	
	comp=Z,249nm,19.9s,baz=185,slow=39						
SVE	Sverdlovsk	31.86	42	eP	P	12 03 50.8	+0.2
SVE				pmax	pmax		
	comp=Z,35nm,1.5s						
KOWA	Kowa	32.43	229	P	P	12 03 56.2	+0.2
	comp=Z,2.1nm,0.7s,baz=39,slow=13,SNR=4.6						
KOWA	Kowa	32.43	229	P	P	12 03 56.0	-0.1
UOSS	Minazif	33.01	104	P	P	12 04 00.4	-0.7
UOSS				IAmb	IAmb	12 04 04.1	
	comp=Z,11nm,0.8s						
HRA	Herat	33.54	84	P	P	12 04 06.1	+0.3
HRA				IAmb	IAmb	12 04 08.0	
	comp=Z,7.3nm,1.0s						
WSAR	Wadi Sarin	35.80	104	LR	LR	12 22 05.7	
	comp=Z,80nm,18.7s,baz=319,slow=41						
BRVK	Borovoye	36.69	50	⇑eP	P	12 04 33.0	+0.5
BRVK				pmax	pmax		
	comp=Z,36nm,1.7s						
BRVK	Borovoye	36.69	50	P	P	12 04 32.8	+0.3
BRVK				IAmb	IAmb	12 04 34.8	
	comp=Z,24nm,1.1s						
KK31	Karatay Array	37.55	67	P	P	12 04 38.8	-1.2
KK31				pmax	pmax		
	comp=Z,15nm,0.7s						
KK31	Karatay Array	37.55	67	P	P	12 04 38.8	-1.2
KKAR	Karatay Array	37.55	67	P	P	12 04 39.1	-0.9
KKAR				pmax	pmax		
	comp=Z,15nm,0.7s						
KKAR	Karatay Array	37.55	67	P	P	12 04 39.1	-0.9
KKAR	Karatay Array	37.55	67	P	P	12 04 38.9	-1.0
KKAR				IAmb	IAmb	12 04 43.8	
	comp=Z,15nm,0.7s						
CHGR	Chuyangaron	37.56	74	P	P	12 04 39.5	-0.7
LODK	Lodwar	37.60	155	P	P	12 04 41.3	+0.6
GAR	Garm	38.34	73	P	P	12 04 46.8	0.0
BTK	Batken	38.44	72	P	P	12 04 47.7	+0.1
BTK				pmax	pmax		
	comp=Z,15nm,1.2s						
BTK	Batken	38.44	72	P	P	12 04 47.7	+0.1
BTK				IAmb	IAmb	12 04 49.9	
	comp=Z,15nm,1.2s						
KBL	Kabul	38.76	81	P	P	12 04 50.9	+0.4
KBL				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KBL	Kabul	38.76	81	P	P	12 04 50.9	+0.4
DBIC	Dimbokro	39.31	222	P	P	12 04 54.2	-0.7
	comp=Z,6.4nm,1.1s,baz=14,slow=11,SNR=4.5						
DBIC				LR	LR	12 22 01.5	
	comp=Z,186nm,19.4s,baz=42,slow=38						
DBIC	Dimbokro	39.31	222	P	P	12 04 54.4	-0.6
DBIC				pmax	pmax		
	comp=Z,22nm,1.5s						
DBIC	Dimbokro	39.31	222	P	P	12 04 54.4	-0.6
DBIC				IAmb	IAmb	12 05 00.9	
	comp=Z,22nm,1.4s						
DRK	Karamyk	39.32	72	P	P	12 04 55.6	+0.3
DRK				IAmb	IAmb	12 05 05.9	
	comp=Z,8.3nm,0.7s						
SOCY	Socotra	39.70	123	P	P	12 04 56.1	-2.3
MBAR	Mbarara	40.20	164	P	P	12 05 03.9	+1.3
	comp=Z,2.0nm,0.2s,baz=3.1,slow=4.8,SNR=4.3						
MBAR	Mbarara	40.20	164	ceP	P	12 05 05.6	+3.0
MBAR	Mbarara	40.20	164	P	P	12 05 03.1	+0.5
AAK	Ala-Archa	40.51	67	LR	LR	12 25 26.7	
	comp=Z,98nm,18.4s,baz=254,slow=42						
AAK	Ala-Archa	40.51	67	⇑eP	P	12 05 04.7	-0.2
AAK				pmax	pmax		
	comp=Z,74nm,2.5s						
AAK	Ala-Archa	40.51	67	P	P	12 05 04.9	0.0
FRU1	Bishkek	40.56	66	P	P	12 05 05.4	+0.1
FRU1				pmax	pmax		
	comp=Z,34nm,1.3s						
FRU1	Bishkek	40.56	66	P	P	12 05 05.4	+0.1
FRU1				IAmb	IAmb	12 05 07.3	
	comp=Z,34nm,1.2s						
BOOM	Boomskoye usch	41.58	66	P	P	12 05 14.3	+0.5
BOOM				pmax	pmax		
	comp=Z,7.0nm,0.6s						
BOOM	Boomskoye usch	41.58	66	P	P	12 05 14.3	+0.5
BOOM				IAmb	IAmb	12 05 19.3	
	comp=Z,7.4nm,0.6s						
KURBB	Kurchatov Arra	41.88	54	P	P	12 05 14.2	-1.7
	comp=Z,1.9nm,0.6s,baz=281,slow=8.7,SNR=22						
KURK	Kurchatov	41.93	54	⇑eP	P	12 05 16.2	-0.1
KURK				pmax	pmax		
	comp=Z,18nm,1.7s						
KURK	Kurchatov	41.93	54	P	P	12 05 16.4	+0.1
KURK				IAmb	IAmb	12 05 17.3	
	comp=Z,24nm,1.4s						
NIL	Nilore	42.33	80	P	P	12 05 20.6	+0.7
NIL				pmax	pmax		
	comp=Z,16nm,1.0s						
NIL	Nilore	42.33	80	P	P	12 05 20.6	+0.7
NIL				IAmb	IAmb	12 05 24.8	
	comp=Z,16nm,0.9s						
KSH	Kashi	42.40	71	P	P	12 05 21.6	+1.1
KMBO	Kilima Mbogo	42.49	155	LR	LR	12 23 36.1	
	comp=Z,124nm,21.8s,baz=88,slow=37						
MAKZ	Makanchi	44.78	59	P	P	12 05 39.6	+0.2
MAKZ				pmax	pmax		
	comp=Z,14nm,1.5s						
MAKZ	Makanchi	44.78	59	P	P	12 05 39.6	+0.2
MAKZ				IAmb	IAmb	12 05 40.4	
	comp=Z,14nm,1.5s						
MK31	Makanchi Array	44.99	59	c iP	P	12 05 41.1	0.0
MK31	Makanchi Array	44.99	59	P	P	12 05 40.0	-1.1
MKAR	Makanchi Array	44.99	59	P	P	12 05 39.4	-1.7
	comp=Z,4.3nm,0.6s,baz=280,slow=7.5,SNR=28						
MKAR				PcP	PcP	12 07 21.8	-0.4
	comp=Z,1.4nm,0.6s,baz=287,slow=3.0,SNR=3.1						
MKAR				ScP	ScP	12 11 15.3	+0.6
	comp=Z,0.2nm,0.4s,baz=316,slow=4.0,SNR=4.8						
MKAR				LR	LR	12 28 08.7	
	comp=Z,103nm,19.1s,baz=284,slow=41						
MKAR	Makanchi Array	44.99	59	P	P	12 05 40.1	-1.0
ZAA0	Zalesovo Array	45.31	48	P	P	12 05 41.9	-1.6
ZALV	Zalesovo Beam	45.31	48	P	P	12 05 42.0	-1.5
	comp=Z,12nm,0.5s,baz=279,slow=9.1,SNR=40						
ZALV				LR	LR	12 25 18.2	
	comp=Z,146nm,19.0s,baz=278,slow=37						
ZALV	Zalesovo Beam	45.31	48	P	P	12 05 41.7	-1.8
NRIK	Noril'sk	46.31	27	P	P	12 05 51.6	+0.4
	comp=Z,3.5nm,0.5s,baz=250,slow=8.3,SNR=5.6						
NRIK				LR	LR	12 28 02.0	
	comp=Z,229nm,18.7s,baz=264,slow=40						
NRIK	Noril'sk	46.31	27	⇑eP	P	12 05 52.5	+1.3
NRIK				pmax	pmax		
	comp=Z,17nm,1.5s						
NRIK	Noril'sk	46.31	27	P	P	12 05 51.7	+0.5
NRIK				IAmb	IAmb	12 05 56.9	
	comp=Z,4.8nm,0.7s						
DGZ	Jazzator, Alta	47.68	54	⇑eP	P	12 06 02.1	-0.2
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
WMQ	Urumqi	49.47	61	eP	P	12 06 20.8	+4.7
WMQ				pP	sP	12 06 23.5	+3.6
WMQ				pmax	pmax		
	comp=Z,18nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,81nm,5.5s						
DRLN	Deer Lake	54.82	308	P	P	12 06 56.4	+0.7
EUNU	Eureka	55.02	348	P	P	12 06 57.8	+1.0
TLY	Talaya	56.90	48	LR	LR	12 32 01.0	
	comp=Z,159nm,19.5s,baz=300,slow=36						
LSA	Lhasa	57.76	76	P	P	12 07 16.7	-0.9
LSA				pmax	pmax		
	comp=Z,5.0nm,0.5s						
LSA	Lhasa	57.76	76	P	P	12 07 16.7	-0.9
LSA				IAmb	IAmb	12 07 24.4	
	comp=Z,4.9nm,0.5s						
SCHQ	Schefferville	58.12	317	P	P	12 07 19.8	+0.6
	comp=Z,4.9nm,0.6s,baz=95,slow=5.1,SNR=9.6						
SCHQ				LR	LR	12 30 15.8	
	comp=Z,134nm,21.9s,baz=92,slow=34						
SCHQ	Schefferville	58.12	317	P	P	12 07 18.6	-0.5
SCHQ				IAmb	IAmb	12 07 21.8	
	comp=Z,8.5nm,0.8s						
TIXI	Tiksi	59.15	21	⇑eP	P	12 07 26.8	+0.8
TIXI				pmax	pmax		
	comp=Z,17nm,1.7s						
TIXI	Tiksi	59.15	21	P	P	12 07 27.0	+0.9
GTA	Gaotai	59.54	62	eP	P	12 07 29.6	+0.2
GTA				pP	sP	12 07 34.0	+0.7
GTA				sP	pP	12 07 36.9	+4.7
GTA				pmax	pmax		
	comp=Z,4.0nm,1.4s						
SONM	Songino Array	60.09	51	P	P	12 07 32.3	-0.8
	comp=Z,2.2nm,0.7s,baz=292,slow=8.9,SNR=14						
SONM				LR	LR	12 34 32.4	
	comp=Z,150nm,19.8s,baz=327,slow=37						
SONM	Songino Array	60.09	51	P	P	12 07 34.2	+1.1
SONM				pmax	pmax		
	comp=Z,12nm,1.4s						
SONM	Songino Array	60.09	51	P	P	12 07 34.2	+1.1
SONM				IAmb	IAmb	12 07 35.0	
	comp=Z,12nm,1.4s						
ULN	Ulaanbaatar	60.48	51	⇑eP	P	12 07 36.4	+0.6
ULN				pmax	pmax		
	comp=Z,7.0nm,1.7s						
E62A	Clayton Lake	63.25	309	P	P	12 07 54.1	-0.2
LZH	Lanzhou	63.93	64	⇓P	P	12 08 00.3	+1.2
LZH				sP	sP	12 08 11.5	+8.5
LZH				pmax	pmax		
	comp=Z,14nm,1.3s						
HHC	Hu-ho-hao-te	66.70	56	eP	P	12 08 17.9	+0.9
HHC				pmax	pmax		
	comp=Z,14nm,1.1s						
HHC				pmax	pmax		
	comp=Z,120nm,5.6s						
A36M	Sachs Harbour	67.03	349	P	P	12 08 19.2	+0.9
A36M				IAmb	IAmb	12 08 32.1	
	comp=Z,5.5nm,0.8s						
BOSA	Boshof	67.10	176	P	P	12 08 19.1	-0.4
	comp=Z,1.1nm,0.4s,baz=18,slow=6.4,SNR=1.8						
BOSA				LR	LR	12 39 47.8	
	comp=Z,175nm,19.6s,baz=360,slow=38						
HIA	Hailar	67.12	45	⇓eP	P	12 08 20.9	+1.5
HIA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
XAN	Xi'an	68.55	63	P	P	12 08 29.3	+0.7
XAN				pmax	pmax		
	comp=Z,11nm,1.4s						
XAN				pmax	pmax		
	comp=Z,160nm,4.1s						
CHTO	Chiang Mai	69.56	82	P	P	12 08 36.1	+1.0
CHTO				pmax	pmax		
	comp=Z,6.0nm,1.2s						
CHTO	Chiang Mai	69.56	82	P	P	12 08 36.1	+1.0
CHTO				IAmb	IAmb	12 08 39.0	
	comp=Z,5.7nm,1.2s						
CMAR	Chiang Mai Arr	69.77	82	P	P	12 08 34.6	-1.7
	comp=Z,1.9nm,0.8s,baz=305,slow=7.2,SNR=11						
CMAR				LR	LR	12 43 46.5	
	comp=Z,58nm,20.2s,baz=6.5,slow=40						
BILL	Bilibino	70.50	13	⇑iP	P	12 08 41.2	+1.1
BILL				e		12 09 06.1	
BILL				e		12 11 12.4	
BILL				MLR	MLR		
	comp=Z,140nm,19.0s						
ENH	Enshi	71.02	66	P	P	12 08 43.9	0.0
ENH				IAmb	IAmb	12 08 45.0	
	comp=Z,8.3nm,1.1s						
INK	Inuvik	71.56	350	P	P	12 08 47.1	+0.7
	comp=Z,1.4nm,0.9s,baz=0.2,slow=4.3,SNR=3.5						
INK	Inuvik	71.56	350	P	P	12 08 47.7	+1.2
INK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
INK	Inuvik	71.56	350	P	P	12 08 47.7	+1.2
INK				IAmb	IAmb	12 09 10.0	
	comp=Z,4.7nm,1.2s						
YKA	Yellowknife Ar	72.92	340	P	P	12 08 53.2	-1.5
	comp=Z,0.7nm,0.7s,baz=44,slow=5.7,SNR=2.7						
YKA				LR	LR	12 42 31.1	
	comp=Z,83nm,20.5s,baz=0.0,slow=37						
CN2	Changchun	73.50	47	eP	P	12 08 58.4	0.0
CN2				pmax	pmax		
	comp=Z,10.0nm,1.5s						
MA2	Magadan	73.80	24	⇑eP	P	12 08 59.5	-0.5
MA2				pmax	pmax		
	comp=Z,375nm,2.5s						
ULM	Lac du Bonnet	75.31	324	LR	LR	12 41 45.0	
	comp=Z,56nm,20.1s,baz=26,slow=35						
IMAR	Indian Mountai	75.56	358	P	P	12 09 10.7	+0.6
H21K	Melozitna Rive	75.85	357	P	P	12 09 12.5	+0.7
H21K				IAmb	IAmb	12 09 27.9	
	comp=Z,8.2nm,1.2s						
DAWY	Dawson	76.36	351	P	P	12 09 15.0	+0.3
DAWY				IAmb	IAmb	12 09 36.9	
	comp=Z,5.6nm,1.1s						
ILAR	Eielson Array	76.40	355	P	P	12 09 14.5	-0.4
	comp=Z,0.6nm,0.9s,baz=356,slow=3.9,SNR=6.2						
ILAR				LR	LR	12 45 53.9	
	comp=Z,31nm,18.3s,baz=332,slow=38						
ILAR	Eielson Array	76.40	355	P	P	12 09 17.0	+2.1
ILAR	Eielson Array	76.40	355	P	P	12 09 17.0	+2.1
NJ2	Nanjing	76.51	60	eP	P	12 09 15.3	-0.8
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
USRK	Ussuriysk Ar.	76.87	43	P	P	12 09 17.7	-0.2
	comp=Z,4.0nm,1.0s,baz=256,slow=4.3,SNR=2.9						
USRK				LR	LR	12 45 42.5	
	comp=Z,99nm,19.4s,baz=330,slow=38						
SCRK	Sand Creek	76.94	353	P	P	12 09 19.8	+1.7
BCAR	Beaver Creek A	77.60	352	P	P	12 09 23.9	+2.2
KSAR	Wonju Array Be	78.95	51	P	P	12 09 29.0	-0.5
KSAR	Wonju Array Be	78.95	51	P	P	12 09 29.0	-0.5
KSRS	Korea Array	78.96	51	P	P	12 09 29.7	+0.1
	comp=Z,4.3nm,1.0s,baz=309,slow=4.8,SNR=8.6						
T47A	Sharon Grove	79.48	309	P	P	12 09 33.0	+0.6
T47A				IAmb	IAmb	12 09 35.9	
	comp=Z,8.5nm,0.9s						
W50A	Signal Mountai	79.53	307	P	P	12 09 33.7	+0.8
W50A				IAmb	IAmb	12 09 37.5	
	comp=Z,16nm,1.3s						
YSS	Yuzh-Sakhalins	80.32	36	deP	P	12 09 38.4	+1.6
YSS				pmax	pmax		
	comp=Z,67nm,1.7s						
PETK	Petropavlovsk-	81.31	25	LR	LR	12 50 56.0	
	comp=Z,112nm,19.0s,baz=316,slow=40						
PDSI	Padang	82.66	97	P	P	12 09 54.6	+4.8
BDFB	Brasilia	83.78	244	P	P	12 09 56.1	+0.5
	comp=Z,4.0nm,0.8s,baz=45,slow=2.9,SNR=4.1						
BDFB				LR	LR	12 47 47.2	
	comp=Z,66nm,19.4s,baz=227,slow=36						
T35A	Sooner Cattle	85.03	314	P	P	12 10 01.7	+0.2
MJAR	Matsushiro Arr	85.59	46	P	P	12 10 04.0	-0.4
	comp=Z,2.7nm,0.7s,baz=320,slow=4.1,SNR=9.6						
MJAR	Matsushiro Arr	85.59	46	P	P	12 10 04.3	-0.1
MJAR				pmax	pmax		
	comp=Z,14nm,1.3s						
MJAR	Matsushiro Arr	85.59	46	P	P	12 10 04.3	-0.1
PDAR	Pinedale Array	87.15	326	P	P	12 10 11.9	-0.4
	comp=Z,0.2nm,0.6s,baz=55,slow=7.8,SNR=2.9						
PDAR				LR	LR	12 50 09.2	
	comp=Z,91nm,18.9s,baz=39,slow=36						
PDAR	Pinedale Array	87.15	326	P	P	12 10 12.4	+0.2
NVAR	Mina Array Bea	94.45	329	LR	LR	12 55 25.1	
	comp=Z,97nm,18.3s,baz=22,slow=37						
TXAR	Lajitas Array	94.65	314	P	P	12 10 48.0	+0.7
	comp=Z,0.3nm,0.7s,baz=50,slow=2.8,SNR=2.4						
TXAR	Lajitas Array	94.65	314	P	P	12 10 47.3	0.0
PFO	Pinyon Flats O	97.75	325	LR	LR	12 56 21.2	
	comp=Z,930nm,21.2s,baz=277,slow=36						
WRA	Warramunga Arr	120.51	92	PKP	PKPdf	12 16 16.4	-1.5
	comp=Z,0.7nm,0.5s,baz=323,slow=1.2,SNR=16						
WRA	Warramunga Arr	120.51	92	c iPKIKP	PKiKP	12 16 18.5	+0.5
WRA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ASAR	Alice Springs	122.18	96	PKP	PKPdf	12 16 19.7	-1.3
	comp=Z,1.4nm,0.6s,baz=304,slow=1.4,SNR=24						

ATH ***17*** *12:08:22.5, 38.°72N×20.°60E, h9km±2km, ML3.5/5, Error ellipse: s-maj=2.4km s-min=1.1km az=114.0*
THE ***17*** *12:08:22.7, 38.°71N×20.°60E, h8km±2km, ML3.4/7, Error ellipse: s-maj=2.4km s-min=0.6km az=92.0*
BEO ***17*** *12:08:24.3±0.9, 38.°82N×20.°23E, h0km, ML3.3/4*
ISC 17 12:08:22.3±0.9**, 38.°73N**±0.°02×**20.°56E**±0.°04**, h7**km±7km**,**
n40, σ1ˢ28/56**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
LKD2	Lefkada island	0.10	51	P	Pg	12 08 24.8	+0.2
LKD2				S	Sg	12 08 26.7	+0.4
	120μm,0.2s						
LKD2	Lefkada island	0.10	51	P	Pg	12 08 24.9	+0.2
LKD2				S	Sg	12 08 26.6	+0.3
LKD2				AML	AML	12 08 26.9	
LKD2				AML	AML	12 08 27.1	
NYDR	Nydri-Lefkada	0.11	96	P	Pg	12 08 24.6	-0.1
NYDR				S	Sg	12 08 26.1	-0.3
	47μm,0.2s						
NYDR	Nydri-Lefkada	0.11	96	P	Pg	12 08 24.5	-0.3
NYDR				S	Sg	12 08 26.0	-0.4
EVGI	Lefkada island	0.13	143	P	Pg	12 08 25.2	+0.1
EVGI				S	Sg	12 08 26.9	0.0
	56μm,0.2s						
EVGI	Lefkada island	0.13	143	P	Pg	12 08 25.1	0.0
EVGI				S	Sg	12 08 26.9	0.0
FSK	Fiskardo	0.27	179	P	Pg	12 08 28.0	+0.5
FSK				S	Sg	12 08 32.3	+1.3
	8μm,0.2s						
FSK	Fiskardo	0.27	179	P	Pg	12 08 27.8	+0.3
FSK				S	Sg	12 08 31.9	+0.9
FSK				AML	AML	12 08 33.0	
	comp=E,23645μm,0.2s						
FSK				AML	AML	12 08 35.4	
	comp=N,9249μm,0.3s						
KEF4	Livadi, Kephal	0.48	192	P	Pg	12 08 31.6	+0.1
KEF4				S	Sb	12 08 39.3	-0.9
KEF4	Livadi, Kephal	0.48	192	P	Pg	12 08 31.8	+0.3
DMLN	Damoulianata-K	0.51	196	P	Pg	12 08 32.1	+0.1
DMLN				S	Sb	12 08 40.6	-0.5
	comp=N,4μm,0.7s						
DMLN	Damoulianata-K	0.51	196	P	Pg	12 08 32.1	+0.1
KEF3	Kipouria, Keph	0.55	197	P	Pg	12 08 32.3	-0.5
KEF3				S	Sg	12 08 40.1	+0.2
KEF3	Kipouria, Keph	0.55	197	P	Pg	12 08 32.3	-0.5
VLS	Valsamata	0.55	177	P	Pg	12 08 32.5	-0.3
VLS				S	Sg	12 08 40.8	+0.8
	comp=N,2μm,0.3s						
VLS	Valsamata	0.55	177	P	Pg	12 08 32.6	-0.3
PSDA	Pessada-Kefalo	0.61	178	P	Pg	12 08 33.6	-0.4
PSDA				S	Sb	12 08 43.3	-0.7
	comp=N,345nm,0.2s						
PVO	Paravola	0.77	98	P	Pb	12 08 37.1	-0.8
PVO	Paravola	0.77	98	P	Pb	12 08 36.8	-1.1
PVO				AML	AML	12 08 50.2	
	comp=N,7758μm,0.6s						
PVO				AML	AML	12 08 50.5	
	comp=E,10457μm,0.5s						
IGT	Igoumenitsa	0.82	348	P	Pb	12 08 39.1	+0.2
RLS	Riolos of Patr	0.98	133	P	Pg	12 08 40.6	-0.4
RLS	Riolos of Patr	0.98	133	P	Pb	12 08 40.8	-0.7
RLS				AML	AML	12 09 02.1	
	comp=N,3839μm,0.8s						
RLS				AML	AML	12 09 03.1	
	comp=E,4548μm,0.6s						
EFP	Efpalio	1.10	105	P	Pg	12 08 42.2	-1.2
EFP	Efpalio	1.10	105	P	Pb	12 08 42.9	-0.7
EFP				AML	AML	12 09 04.3	
	comp=E,4867μm,0.5s						
EFP				AML	AML	12 09 05.0	
	comp=N,5195μm,0.4s						
TRIZ	Trizonia	1.24	106	P	Pb	12 08 44.3	-1.7
OHR	Ohrid	2.39	4	ePn	Pb	12 09 04.1	-1.6
OHR				eSn	Sn	12 09 32.7	+1.2
VAY	Valandovo	3.02	30	ePn	Pb	12 09 14.0	-2.3
PDG	Podgorica	3.83	345	ePn	Pn	12 09 21.8	+0.2
PRVS	Prvonek	3.95	17	ePn	Pn	12 09 26.1	+2.8
BOSS	Bosilegrad	4.04	21	ePn	Pn	12 09 27.6	+3.1
BARS	Barje	4.20	13	ePn	Pn	12 09 28.2	+1.5
TREB	Trebinje	4.33	338	ePn	Pn	12 09 28.1	-0.3
VTS	Vitosha	4.39	27	ePn	Pn	12 09 32.1	+2.6
SELS	Selova	4.51	5	ePn	Pn	12 09 32.0	+1.0
SJES	Sjenica	4.55	355	ePn	Pn	12 09 32.9	+1.2
STON	Ston	4.67	333	ePn	Pn	12 09 32.3	-0.9
STON				eSn	Sn	12 10 25.9	-1.7
ZAPS	Zavoj	4.81	18	ePn	Pn	12 09 39.4	+4.3
BOVS	Bovan	4.98	10	ePn	Pn	12 09 38.8	+1.4
BOVS				eSn	Sn	12 10 35.0	-0.2
DIVS	Divibare	5.38	356	ePn	Pn	12 09 42.9	-0.2
VYHS	Vyhne	9.84	353	ePN	Pn	12 10 47.1	+2.9

IDC ***17*** *12:10:30.1±1.3, 38.°67N×20.°82E, h0km, mb3.6/6, mb1 3.7/8, mb1mx3.5/46, mbtmp3.6/8, ML3.9/2, MS3.7/2, Ms1 3.7/2, ms1mx2.8/58, Error ellipse: s-maj=26.7km s-min=23.3km az=107.0*
NEIC ***17*** *12:10:32.5±1.7, 38.°66N±0.°03×20.°53E±0.°06, h10km±2km, Error ellipse: s-maj=9.0km s-min=3.3km az=233.0*
THE ***17*** *12:10:32.1, 38.°72N×20.°59E, h9km±2km, ML3.9/8, Error ellipse: s-maj=2.4km s-min=0.5km az=95.0*
ATH ***17*** *12:10:32.4, 38.°69N×20.°62E, h10km±1km, ML4.0/2, Error ellipse: s-maj=1.7km s-min=0.8km az=285.0*
BEO ***17*** *12:10:34.8±0.7, 38.°69N×20.°25E, h21km, ML3.5/9*
ISC 17 12:10:31.9±0.8**, 38.°72N**±0.°02×**20.°55E**±0.°03**, h8**km±5km**,**
n124, σ1ˢ27/149**, mb3.9**/11**, 2C-5D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
LKD2	Lefkada island	0.11	49	P	Pg	12 10 34.4	0.0
LKD2				S	Sg	12 10 36.0	-0.2
	158μm,0.4s						
LKD2	Lefkada island	0.11	49	P	Pg	12 10 34.5	0.0
LKD2				S	Sg	12 10 35.9	-0.2
LKD2				AML	AML	12 10 36.9	
LKD2				AML	AML	12 10 37.1	
NYDR	Nydri-Lefkada	0.12	91	P	Pg	12 10 34.3	-0.1
NYDR				S	Sg	12 10 35.9	-0.3
	164μm,0.3s						
NYDR	Nydri-Lefkada	0.12	91	P	Pg	12 10 34.3	-0.1
NYDR				S	Sg	12 10 35.4	-0.8
EVGI	Lefkada island	0.12	138	P	Pg	12 10 34.9	+0.3
EVGI				S	Sg	12 10 37.0	+0.5
	141μm,0.3s						
EVGI	Lefkada island	0.12	138	P	Pg	12 10 34.9	+0.3
EVGI				S	Sg	12 10 36.7	+0.2
FSK	Fiskardo	0.26	178	P	Pg	12 10 37.6	+0.7
FSK				S	Sg	12 10 41.9	+1.6
	41μm,0.3s						
FSK	Fiskardo	0.26	178	P	Pg	12 10 37.7	+0.7
FSK				S	Sg	12 10 40.8	+0.5
FSK				AML	AML	12 10 42.7	
	comp=N,42446μm,0.3s						
FSK				AML	AML	12 10 43.0	
KEF4	Livadi, Kephal	0.47	192	P	Pg	12 10 41.2	+0.3
KEF4				S	Sb	12 10 49.0	-0.4
KEF4	Livadi, Kephal	0.47	192	P	Pg	12 10 41.1	+0.2
KEF4				S	Sg	12 10 48.2	+1.2
DMLN	Damoulianata-K	0.49	196	P	Pg	12 10 41.6	+0.2
DMLN				S	Sb	12 10 49.8	-0.5
	comp=N,15μm,0.4s						
DMLN	Damoulianata-K	0.49	196	P	Pg	12 10 41.7	+0.3
DMLN				S	Sg	12 10 48.9	+1.0
LXRA	Lixouri, Kepha	0.52	190	P	Pg	12 10 42.1	+0.1
KEF3	Kipouria, Keph	0.54	197	P	Pg	12 10 41.8	-0.4
KEF3				S	Sg	12 10 50.3	+1.1
	comp=N,24μm,0.3s						
KEF3	Kipouria, Keph	0.54	197	P	Pg	12 10 41.9	-0.4
KEF3				S	Sg	12 10 49.3	+0.1
VLS	Valsamata	0.54	177	P	Pg	12 10 42.2	-0.1
VLS				S	Sg	12 10 50.1	+0.8
	comp=N,6μm,0.3s						
VLS	Valsamata	0.54	177	P	Pg	12 10 42.0	-0.3
VLS				S	Sg	12 10 49.4	+0.2
PSDA	Pessada-Kefalo	0.60	177	P	Pg	12 10 43.4	0.0
PSDA				S	Sb	12 10 52.8	-0.4
	comp=N,1μm,0.2s						
PVO	Paravola	0.77	97	P	Pg	12 10 46.5	-0.2
IGT	Igoumenitsa	0.83	348	P	Pg	12 10 48.1	+0.2
JAN	Janina	0.97	14	P	Pg	12 10 51.4	+0.9
JAN				S	Sb	12 11 05.3	+1.4
RLS	Riolos of Patr	0.97	132	P	Pg	12 10 49.6	-1.0
EVR	Evrytania	1.00	78	P	Pg	12 10 50.3	-0.8
KASA	Kassiopi	1.14	335	P	Pb	12 10 54.1	+0.3
LAKA	Lakka	1.22	112	P	Pb	12 10 53.6	-1.5
TRIZ	Trizonia	1.24	106	P	Pn	12 10 54.1	-1.5
MAKR	Makrakomi, Fth	1.27	76	P	Pn	12 10 55.3	-0.7
AGG	Agios Georgios	1.42	77	Pn	Pn	12 10 58.2	+0.1

ITM	Ithomi	1.88	144		Pn	12 11 04.2	-0.1
KBN	Korca	1.92	5	Pn	Pb	12 11 06.9	-0.3
VLO	Vlora	1.93	335	Pn	Pn	12 11 05.9	+0.9
SCTE	Santa Cesarea	2.11	311	Pn	Pn	12 11 07.7	+0.3
FNA	Florina	2.16	17	Pn	Pn	12 11 09.1	+0.8
OHR	Ohrid	2.40	4	*e*Pn	Pn	12 11 14.1	+2.5
OHR				*e*Sn	Sb	12 11 44.2	-1.0
OHR	Ohrid	2.40	4	*i* Pn	Pn	12 11 14.1	+2.5
TIR	Tirane	2.68	349	⇓P	Pn	12 11 17.6	+2.2
TIR	Tirane	2.68	349	*e*Pn	Pn	12 11 17.8	+2.4
TIR				*e*Sn	Sn	12 11 49.8	+1.8
TIR	Tirane	2.68	349	Pn	Pn	12 11 16.3	+0.9
TIP	Timpagrande	2.99	280	Pn	Pn	12 11 19.9	+0.2
VAY	Valandovo	3.03	30	*e*Pn	Pb	12 11 24.3	-1.8
VAY				*e*Sn	Sb	12 12 00.9	-2.3
VAY	Valandovo	3.03	30	*e*Pn	Pb	12 11 27.7	+1.7
STIP	Stip	3.23	22	*i* Pn	Pb	12 11 26.7	-2.7
MATE	Matera	3.54	304	⇓P	Pg	12 11 53.6	+14
DRME	Dracevica, Mon	3.62	344	*e*Pn	Pn	12 11 28.7	+0.4
CEL	Celeste	3.68	264	Pn	Pn	12 11 28.3	-0.9
PDG	Podgorica	3.84	346	⇑P	Pn	12 11 32.8	+1.6
PDG	Podgorica	3.84	346	*e*Pn	Pn	12 11 32.6	+1.3
PDG				*e*Sn	Sn	12 12 16.5	-0.1
PDG	Podgorica	3.84	346	*e*Pn	Pn	12 11 32.1	+0.8
PDG	Podgorica	3.84	346	Pn	Pn	12 11 32.4	+1.1
PRVS	Prvonek	3.96	17	*e*Pn	Pn	12 11 36.9	+3.9
PRVS				*e*Sn	Sn	12 12 20.5	+0.8
HCY	Herceg Novi	4.04	338	*e*Pn	Pn	12 11 32.9	-1.2
BOSS	Bosilegrad	4.05	21	*e*Pn	Pn	12 11 37.6	+3.4
BOSS				*e*Sn	Sn	12 12 22.1	+0.2
BARS	Barje	4.21	13	*e*Pn	Pn	12 11 38.4	+2.0
BARS				*e*Sn	Sn	12 12 24.9	-0.8
TREB	Trebinje	4.33	338	*e*Pn	Pn	12 11 37.4	-0.7
TREB				*e*Sn	Sn	12 12 26.2	-2.6
TREB	Trebinje	4.33	338	*e*Pn	Pn	12 11 37.1	-1.0
VTS	Vitosha	4.40	27	*e*Pn	Pn	12 11 42.5	+3.4
VTS				*e*Sn	Sn	12 12 33.4	+2.7
VTS	Vitosha	4.40	27	Pn	Pn	12 11 40.7	+1.5
BRY	Bratogost	4.45	341	*e*Pn	Pn	12 11 39.5	-0.3
SELS	Selova	4.52	5	*e*Pn	Pn	12 11 41.4	+0.7
STON	Ston	4.68	333	*e*Pn	Pn	12 11 42.6	-0.2
STON				*e*Sn	Sn	12 12 34.6	-2.7
STON	Ston	4.68	333	*e*Pn	Pn	12 11 41.7	-1.1
STON	Ston	4.68	333	*e*Pn	Pn	12 11 41.5	-1.3
STON				Sn	Sn	12 12 33.9	-3.4
ALN	Alexandroupoli	4.76	61		Pn	12 11 43.4	-0.5
SGRT	San Giovanni R	4.77	311		Pn	12 11 44.5	+0.4
BOVS	Bovan	4.99	10	⇓P	Pn	12 11 47.5	+0.4
BOVS	Bovan	4.99	10	*e*Pn	Pn	12 11 48.7	+1.6
RAFF	Raffo Rosso	5.11	255		Pn	12 11 47.9	-0.8
PAOL	Paolisi	5.15	299	Pn	Pn	12 11 49.1	-0.3
GRUS	Gruza	5.17	1	*e*Pn	Pn	12 11 51.0	+1.4
GRUS				*e*Sn	Sn	12 12 49.5	+0.1
BBLS	Lazići	5.22	351	*e*Pn	Pn	12 11 50.0	-0.3
ZAGS	Zajecar	5.25	13	*e*Pn	Pn	12 11 53.1	+2.5
MAKA	Makarska	5.29	331	*e*Pn	Pn	12 11 50.7	-0.4
DIVS	Divibare	5.39	356	*e*Pn	Pn	12 11 53.0	+0.3
DIVS				*e*Sn	Sn	12 12 52.8	-2.3
DIVS	Divibare	5.39	356	*e*Pn	Pn	12 11 52.7	0.0
DIVS	Divibare	5.39	356	Pn	Pn	12 11 52.3	-0.4
RICI	Ricice	5.43	333	*e*Pn	Pn	12 11 52.6	-0.5
RICI				Sn	Sn	12 12 52.4	-3.3
HVAR	Hvar	5.43	326	*e*Pn	Pn	12 11 52.5	-0.6
HAPS	Han Pijesak,Bl	5.50	348	*e*Pn	Pn	12 11 55.7	+1.5
BALB	Balikesir	5.77	78	Pn	Pn	12 11 58.9	+1.1
TEKS	Tekeris	5.88	353	*e*Pn	Pn	12 11 57.5	-1.8
KIJV	Kijevo	6.14	331	*e*Pn	Pn	12 12 02.7	-0.1
ZIRJ	Zirje	6.17	325	*e*Pn	Pn	12 12 02.5	-0.7
MORI	Morici	6.31	326	*i* Pn	Pn	12 12 05.3	+0.1
FRGS	Fruska Gora	6.46	355	*e*Pn	Pn	12 12 08.2	+0.9
FRGS	Fruska Gora	6.46	355	*e*Pn	Pn	12 12 07.5	+0.2
BLY	Banja Luka	6.53	338	*e*Pn	Pn	12 12 04.0	-4.3
DUGI	Dugi Otok	6.70	324	*e*Pn	Pn	12 12 10.3	-0.2
MRAK	Mrakovica	6.86	338	*e*Pn	Pn	12 12 12.4	-0.4
NRCA	Norcia	6.98	308	Pn	Pn	12 12 15.5	+0.9
PLIT	Plitvice	7.17	331	*e*Pn	Pn	12 12 17.6	+0.5
NVLJ	Novalja	7.23	326	*e*Pn	Pn	12 12 17.6	-0.1
RABC	Rab	7.41	326	*e*Pn	Pn	12 12 20.5	+0.2
VOIR		7.50	25	⇓P	Pn	12 12 27.9	+6.3
MLR	Muntele Rosu	7.87	29	⇓P	Pn	12 12 33.6	+6.9
MLR	Muntele Rosu	7.87	29	Pn	Pn	12 12 27.3	+0.6
RIY	Rijeka	8.00	328	*e*Pn	Pn	12 12 28.1	-0.3
BRJN	Brijuni	8.00	323	*e*Pn	Pn	12 12 27.2	-1.1
PLOR	Plostina	8.44	30	⇑P	Pn	12 12 41.7	+7.2
STAL	STALIGIAL	9.50	325	Pn	Pn	12 12 50.3	+1.2
ZOU	Zoufplan	9.62	327	Pn	Pn	12 12 52.0	+1.3
VRAC	Vranov	10.96	346	LR	LR	12 17 25.7	
	comp=N,112nm,18.1s,baz=185,slow=38						
GERES	GERESS Array B	11.27	336	Pn	Pn	12 13 13.6	+0.4
	comp=N,0.2nm,0.3s,baz=155,slow=14,SNR=2.3						
SENIN	Lac Senin/Sane	12.39	312	Pn	Pn	12 13 29.8	+1.1
ESDC	Sonseca Array	19.01	281	P	Pn	12 14 57.7	+2.9
	comp=N,0.2nm,0.3s,baz=77,slow=13,SNR=4.5						
HFS	Hagfors	21.87	351	P	P	12 15 25.7	+0.8
	comp=N,1.4nm,0.6s,baz=158,slow=12,SNR=2.1						
FINES	FINESS Array B	23.01	7	P	P	12 15 36.5	-0.5
	comp=N,3.3nm,0.8s,baz=166,slow=8.8,SNR=4.7						
FINES	FINESS Array B	23.01	7	P	P	12 15 37.5	+0.6
FIA1	FINESS Array S	23.01	7	P	P	12 15 37.5	+0.5
NOA	NORSAR Array B	23.10	348	P	P	12 15 39.6	+1.7
	comp=N,0.8nm,0.9s,baz=156,slow=9.7,SNR=1.4						
ABKAR	Akbulak array	29.93	56	P	P	12 16 40.6	+0.5
TORD	Torodi Ar. Bea	30.46	218	P	P	12 16 44.8	-0.4
	comp=N,0.5nm,0.6s,baz=28,slow=9.4,SNR=4.1						
ARU	Arti	30.64	42	P	P	12 16 45.9	-0.6
ARU				IAmb	IAmb	12 17 05.2	
	comp=Z,4.0nm,1.1s						
BRVK	Borovoye	36.70	50	P	P	12 17 37.7	-1.4
BRVK				IAmb	IAmb	12 18 06.7	
	comp=Z,3.9nm,1.4s						
KK31	Karatay Array	37.56	67	P	P	12 17 47.6	+1.0
KK31				IAmb	IAmb	12 17 53.2	
	comp=Z,1.8nm,0.8s						
KKAR	Karatay Array	37.56	67	P	P	12 17 47.6	+1.0
KKAR	Karatay Array	37.56	67	P	P	12 17 47.3	+0.7
KKAR				IAmb	IAmb	12 17 53.1	
	comp=Z,1.8nm,0.8s						
MK31	Makanchi Array	45.00	59	P	P	12 18 47.4	-0.3
MKAR	Makanchi Array	45.00	59	P	P	12 18 46.2	-1.5
	comp=Z,0.3nm,0.4s,baz=281,slow=7.1,SNR=6.0						
MKAR	Makanchi Array	45.00	59	P	P	12 18 47.8	+0.1
ZAA0	Zalesovo Array	45.32	48	P	P	12 18 49.9	-0.1
ZAA0				IAmb	IAmb	12 19 01.5	
	comp=Z,2.2nm,0.8s						
ZALV	Zalesovo Beam	45.32	48	P	P	12 18 47.9	-2.1
	comp=Z,0.8nm,0.4s,baz=292,slow=10,SNR=3.0						
ZALV	Zalesovo Beam	45.32	48	P	P	12 18 49.4	-0.7
LEM	Lembang	91.94	97	LR	LR	13 08 15.8	
	comp=Z,136nm,19.5s,baz=58,slow=38						
ASAR	Alice Springs	122.21	96	PKP	PKPdf	12 29 26.6	-1.1
	comp=Z,0.1nm,0.4s,baz=306,slow=1.5,SNR=1.3						

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*IDC **17** 12:22:59.0±1.4, 22°.58N×12°.33W, h0^{km}, mb3.9/6, mb1 4.0/8, mb1mx3.7/53, mbtmp3.9/8, ML3.8/2, Error ellipse: s-maj=36.7km s-min=29.2km az=74.0*

ISC 17 12:22:59.3±1.2**, 22°.3N**±0°.1×**12°.3W**±0°.2**, h10**^{km}**, n12,** σ1^{s}.**40**/13**, mb3.9**/6**, Mauritania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOWA	Kowa	11.05	134	Pn	Pn	12 25 40.0	+2.6
	0.9nm,0.3s,baz=326,slow=14,SNR=7.0						
KOWA				Sn	Sn	12 27 39.8	-1.4
	0.9nm,0.3s,baz=118,slow=8.8,SNR=9.4						
KOWA				Lg	Lg	12 28 51.7	
	0.1nm,0.3s,baz=150,slow=23,SNR=1.0						
TORD	Torodi Ar. Bea	16.12	122	Pn	Pn	12 26 47.8	+1.6
	0.3nm,0.3s,baz=306,slow=12,SNR=5.6						
TORD				Sn	Sn	12 29 43.0	-2.2
	0.2nm,0.3s,baz=303,slow=23,SNR=3.6						
DBIC	Dimbokro	17.14	154	P	Pn	12 26 58.3	-0.8
	0.4nm,0.3s,baz=356,slow=14,SNR=5.3						
DBIC				S	Sn	12 29 58.0	-12
	0.2nm,0.3s,baz=108,slow=7.5,SNR=1.9						
KEST	Kesra	23.06	50	P	P	12 28 06.1	+1.0
	2.0nm,0.5s,baz=226,slow=8.1,SNR=1.8						
I48TN	KESRA INFRASON	23.08	50	*i*		14 43 00.2	
	baz=240,slow=315,SNR=0.5						
GERES	GERESS Array B	33.53	32	P	P	12 29 38.7	-0.5
	0.9nm,0.5s,baz=216,slow=8.3,SNR=5.6						
HFS	Hagfors	41.94	19	P	P	12 30 49.1	-0.9
	1.6nm,0.7s,baz=199,slow=7.6,SNR=1.2						
FINES	FINESS Array B	47.12	24	P	P	12 31 30.7	-0.7
	10nm,1.1s,baz=224,slow=7.8,SNR=2.4						
MKAR	Makanchi Array	77.05	45	P	P	12 34 52.9	+0.1
	0.3nm,0.5s,baz=295,slow=4.1,SNR=4.6						
TXAR	Lajitas Array	80.54	298	P	P	12 35 12.3	0.0
	0.3nm,0.7s,baz=64,slow=4.1,SNR=2.7						
WRA	Warramunga Arr	148.79	92	PKPbc	PKiKP	12 42 49.5	+0.2
	0.4nm,0.6s,baz=292,slow=2.7,SNR=7.8						
ASAR	Alice Springs	148.87	99	PKPbc	PKiKP	12 42 50.0	+0.6
	0.5nm,0.6s,baz=293,slow=1.9,SNR=16						

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*TIR **17** 12:37:50.0, 38°.57N×20°.40E, h0^{km}±45^{km}, Ml5.0*

*THE **17** 12:37:54.6, 38°.72N×20°.58E, h8^{km}±1^{km}, ML4.5/5, Error ellipse: s-maj=1.7km s-min=0.5km az=92.0*

*MOS **17** 12:37:54.5±1.1, 38°.70N×20°.35E, h17^{km}, mb5.1/32, MS4.3/9, Error ellipse: s-maj=4.4km s-min=2.6km az=77.7*

*BEO **17** 12:37:54.2±0.6, 38°.37N×20°.24E, h35^{km}±6^{km}, ML4.6/10*

*IDC **17** 12:37:54.2±0.5, 38°.79N×20°.60E, h0^{km}, mb4.3/34, mb1 4.4/48, mb1mx4.3/61, mbtmp4.3/48, ML4.1/14, MS4.1/44, Ms1 4.2/44, ms1mx4.0/67, Error ellipse: s-maj=9.9km s-min=9.5km az=74.0*

*IASPEI **17** 12:37:55.1±0.8, 38°.70N±0°.02×20°.62E±0°.03, h7^{km}±5^{km}, mb4.7/86, MS4.2/33, Error ellipse: s-maj=3.8km s-min=2.2km az=101.4, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*NEIC **17** 12:37:56.0±2.2, 38°.68N±0°.04×20°.52E±0°.06, h10^{km}±1^{km}, mb4.8/83, ML4.5(ATH), ML4.5(THE), Error ellipse: s-maj=7.9km s-min=5.8km az=75.0*

*HLW **17** 12:37:55.0, 39°.02N×21°.44E, h22^{km}±33^{km}, Md5.6*

*ATH **17** 12:37:56.0, 38°.70N×20°.65E, h5^{km}±2^{km}, ML4.5/4, Error ellipse: s-maj=2.3km s-min=0.7km az=294.0*

*UPSL **17** 12:37:56.0, 38°.70N×20°.58E, h5^{km}, Mw4.7, Moment Tensor Solution. s7 Moment tensor: M$_{rr}$0.18; M$_{\theta\theta}$1.00; M$_{\phi\phi}$-1.18; M$_{r\theta}$-0.68; M$_{\theta\phi}$0.89; M$_{\phi r}$0.13; Fault plane solution: NP1:φ$_s$297.00000°, δ82.00000°, λ26.00000°. NP2:φ$_s$204.00000°, δ64.00000°, λ171.00000°.*

*GCMT **17** 12:37:56.0±0.3, 38°.60N±0°.02×20°.52E±0°.02, h16^{km}±1^{km}, MW4.9/93, Moment Tensor Solution. s14,c16; s93,c126; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.16±.11; M$_{\theta\theta}$2.34±.10; M$_{\phi\phi}$-2.50±.11; M$_{r\theta}$-0.16±.30; M$_{\theta\phi}$1.07±.10; M$_{\phi r}$0.76±.34; Best double couple: M$_0$2.74400×10^{16} NP1:φ$_s$122.00000°, δ80.00000°, λ-10.00000°. NP2: φ$_s$214.00000°, δ80.00000°, λ-170.00000°. Principal axes: T 2.5660, Plg0.0000°, Azm348.0000°; N 0.3560, Plg76.0000°, Azm258.0000°; P -2.9210, Plg14.0000°, Azm78.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MED_RC **17** 12:37:56.0±0.4, 38°.79N×20°.53E, h10^{km}, MW4.8/29, Moment Tensor Solution.Mantle waves: s29,c45; Duration: 1^{s}.1 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.24±.08; M$_{\theta\theta}$1.93±.06; M$_{\phi\phi}$-2.17±.06; M$_{r\theta}$0.11±.24; M$_{\theta\phi}$0.74±.07; M$_{\phi r}$0.03±.30; Best double couple: M$_0$2.18000×10^{16} NP1:φ$_s$125.00000°, δ87.00000°, λ2.00000°. NP2:φ$_s$35.00000°, δ88.00000°, λ177.00000°. Principal axes: T 2.0700, Plg4.0000°, Azm350.0000°; N 0.2300, Plg86.0000°, Azm175.0000°; P -2.3000, Plg0.0000°, Azm80.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*PDG **17** 12:37:57.1±0.6, 38°.88N×20°.38E, h16^{km}±1^{km}, MD4.8/3, ML4.8/12 Error ellipse: s-maj=1.0km s-min=1.1km az=0.0*

ISC 17 12:37:55.5±0.5**, 38°.70N**±0°.01×**20°.60E**±0°.02**, h9**^{km}±2^{km}**, n603,** σ1^{s}.**71**/689**, mb4.7**/86**, MS4.2**/33**, 84C-66D, Fault plane solution: NP1:**φ$_s$116.28499°, δ62.53023°, λ14.02912°. **NP2:**φ$_s$19.71013°**,** δ77.57956°**,** λ151.81401°. **Principal axes:** T Plg28.5719°**,** Azm334.9194°**;** N Plg59.4054°**,** Azm177.8413°**;** P Plg10.0256°**,** Azm70.4441°**; Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NYDR	Nydri-Lefkada	0.08	76	P	Pg	12 37 56.4	-1.2
NYDR	Nydri-Lefkada	0.08	76	P	Pg	12 37 56.5	-1.1
NYDR				S	Sg	12 37 58.1	-1.0
NYDR	Nydri-Lefkada	0.08	76		Pg	12 37 56.4	-1.2
EVGI	Lefkada island	0.09	150	P	Pg	12 37 57.0	-0.7
EVGI				S	Sg	12 37 59.0	-0.3
EVGI	Lefkada island	0.09	150	P	Pg	12 37 57.7	0.0
EVGI				S	Sg	12 37 59.8	+0.5
EVGI	Lefkada island	0.09	150		Pg	12 37 57.0	-0.7
EVGI					Sg	12 37 59.0	-0.3
LKD2	Lefkada island	0.10	25	P	Pg	12 37 56.8	-1.2
LKD2				S	Sg	12 37 59.1	-0.7
LKD2	Lefkada island	0.10	25	P	Pg	12 37 57.4	-0.6
LKD2				S	Sg	12 37 59.4	-0.4
LKD2	Lefkada island	0.10	25		Pg	12 37 56.8	-1.2
LKD2					Sg	12 37 59.1	-0.7
LKD2	Lefkada island	0.10	25	P	Pg	12 37 56.8	-1.2
	baz=41						
LKD2				S	Sg	12 37 59.8	0.0
	baz=41						
FSK	Fiskardo	0.24	188	P	Pg	12 37 59.9	-0.3
FSK				S	Sg	12 38 03.7	+0.2
	215µm,0.9s						
FSK	Fiskardo	0.24	188	P	Pg	12 37 60.0	-0.3
FSK				S	Sg	12 38 05.1	+1.6
FSK				AML	AML	12 38 07.0	
FSK				AML	AML	12 38 13.3	
FSK	Fiskardo	0.24	188		Pg	12 37 59.9	-0.3
FSK					Sg	12 38 03.7	+0.2
KEF4	Livadi, Kephal	0.46	198	P	Pg	12 38 03.3	-1.1
KEF4	Livadi, Kephal	0.46	198	P	Pg	12 38 04.7	+0.4
KEF4				S	Sb	12 38 12.3	-0.3
KEF4	Livadi, Kephal	0.46	198		Pg	12 38 03.3	-1.1
DMLN	Damoulianata-K	0.49	202	P	Pg	12 38 04.2	-0.8
DMLN				S	Sg	12 38 12.2	+0.8
	95µm,0.7s						
DMLN	Damoulianata-K	0.49	202	P	Pb	12 38 05.6	-0.6
DMLN				S	Sb	12 38 12.8	-0.8
DMLN	Damoulianata-K	0.49	202		Pg	12 38 04.2	-0.8
DMLN					Sg	12 38 12.2	+0.8
LXRA	Lixouri, Kepha	0.51	195	P	Pg	12 38 05.3	0.0
LXRA				S	Sb	12 38 14.0	-0.2
VLS	Valsamata	0.52	181	P	Pg	12 38 05.2	-0.3
VLS				S	Sg	12 38 12.9	+0.6
	45µm,0.4s						
VLS	Valsamata	0.52	181	P	Pg	12 38 05.3	-0.1
VLS				S	Sb	12 38 13.3	-1.0
VLS				AML	AML	12 38 16.0	
	comp=E,84043µm,0.3s						
VLS				AML	AML	12 38 25.0	
VLS	Valsamata	0.52	181	P	Pg	12 38 05.2	-0.3
VLS				S	Sg	12 38 12.9	+0.6
VLS	Valsamata	0.52	181		Pg	12 38 05.2	-0.3
VLS					Sg	12 38 12.9	+0.6
ARGA	Argostoli. Kep	0.53	191	P	Pb	12 38 06.7	-0.2
ARGA				S	Sb	12 38 14.7	+0.2
KEF3	Kipouria, Keph	0.53	202	P	Pg	12 38 04.2	-1.5
KEF3				S	Sg	12 38 13.0	+0.3
	comp=E,172µm,0.6s						
KEF3	Kipouria, Keph	0.53	202	P	Pg	12 38 05.5	-0.2
KEF3				S	Sb	12 38 14.3	-0.4
KEF3	Kipouria, Keph	0.53	202		Pg	12 38 04.2	-1.5
KEF3					Sg	12 38 13.0	+0.3
PSDA	Pessada-Kefalo	0.58	181	P	Pg	12 38 05.5	-1.2
PSDA	Pessada-Kefalo	0.58	181	P	Pg	12 38 06.7	0.0
PSDA				S	Sb	12 38 16.1	0.0
DSL	Palaion Diasel	0.58	41	P	Pb	12 38 07.5	-0.4
DSL				S	Sg	12 38 14.3	-0.1
PVO	Paravola	0.73	96	P	Pg	12 38 09.0	-0.5
PVO	Paravola	0.73	96	P	Pg	12 38 09.3	-0.2
PVO				S	Sg	12 38 18.1	-0.8
PVO				AML	AML	12 38 26.4	
PVO				AML	AML	12 38 26.6	
	comp=E,94069µm,0.5s						
IGT	Igoumenitsa	0.86	346	P	Pg	12 38 12.0	0.0
IGT				S	Sb	12 38 24.2	-0.2
IGT				AML	AML	12 38 29.5	
	comp=N,69329µm,0.4s						
IGT				AML	AML	12 38 29.8	
	comp=E,60267µm,0.5s						
IGT	Igoumenitsa	0.86	346	P	Pg	12 38 06.4	-5.7
	baz=357						
IGT				S	Sb	12 38 25.4	+1.1
	baz=357						
VTN	Vitineika	0.90	149	P	Pg	12 38 12.3	-0.5
VTN	Vitineika	0.90	149	P	Pg	12 38 12.4	-0.4
RLS	Riolos of Patr	0.93	133	P	Pg	12 38 12.6	-0.8
RLS	Riolos of Patr	0.93	133	P	Pg	12 38 12.9	-0.5
EVR	Evrytania	0.97	76	P	Pg	12 38 13.0	-1.1
EVR	Evrytania	0.97	76	P	Pg	12 38 13.9	-0.2
JAN	Janina	0.98	11	P	Pb	12 38 14.7	0.0
JAN	Janina	0.98	11	P	Pg	12 38 13.7	-0.6
ANX	Ano Chora	1.04	95	P	Pg	12 38 14.2	-1.2
ANX	Ano Chora	1.04	95	P	Pg	12 38 15.1	-0.3
EFP	Efpalio	1.06	104	P	Pg	12 38 15.1	-0.6
DRO	Drossia	1.14	130	P	Pg	12 38 16.9	-0.5
KASA	Kassiopi	1.17	334	P	Pn	12 38 18.3	+0.3
LAKA	Lakka	1.17	112	P	Pb	12 38 17.3	-0.6
KEK	Kerkira	1.19	329	P	Pb	12 38 18.0	-0.2
TRIZ	Trizonia	1.20	105	P	Pb	12 38 17.1	-1.3
MAKR	Makrakomi, Fth	1.23	75	P	Pn	12 38 18.6	-0.4
MAKR	Makrakomi, Fth	1.23	75	P	Pb	12 38 19.1	+0.1
ALIK	Aliki, Aigiali	1.26	110	P	Pn	12 38 17.8	-1.5
SRN	Sarande	1.27	339	P	Pn	12 38 19.5	+0.1
	baz=347						
SRN				S	Sb	12 38 34.7	-1.4
	baz=347						
SRN				AMP			
	comp=E,34nm,0.6s,baz=347						
KLV	Kalavryta, Ach	1.38	118	P	Pn	12 38 20.5	-0.4
AGG	Agios Georgios	1.39	76	P	Pn	12 38 20.6	-0.5
AGG	Agios Georgios	1.39	76	P	Pn	12 38 21.0	-0.1
AGG	Agios Georgios	1.39	76		Pn	12 38 21.0	-0.1
THL	Klokotos Trika	1.40	51	P	Pb	12 38 21.8	0.0
LSK	Leskovik	1.45	360	P	Pb	12 38 22.9	+0.1
	baz=5.0						
LSK				S	Sg	12 38 45.3	+3.0
	baz=5.0						
LSK				AMP			
	comp=E,70nm,0.7s,baz=5.0						
DLFA	Delphi	1.50	98	P	Pn	12 38 23.0	+0.4
GUR	Goura	1.56	118	P	Pn	12 38 23.8	+0.2
ITM	Ithomi	1.84	145	Pn	Pb	12 38 28.7	-0.6
KZN	Kozani	1.85	29	P	Pb	12 38 29.7	+0.2
KBN	Korca	1.93	4	P	Pb	12 38 30.2	-0.7
KBN	Korca	1.93	4	Pn	Pb	12 38 30.2	-0.7
KBN	Korca	1.93	4	P	Pb	12 38 31.4	+0.4
	baz=8.0						
KBN				S	Sg	12 38 58.1	+0.6
	baz=8.0						
KBN				AMP			
	comp=E,26nm,1.1s,baz=8.0						
VLO	Vlora	1.97	335	P	Pn	12 38 29.3	+0.3
VLO	Vlora	1.97	335		Pn	12 38 29.3	+0.3
VLO	Vlora	1.97	335	P	Pb	12 38 31.6	+0.2
	baz=341						
VLO				S	Sg	12 38 59.4	+0.7
	baz=341						
VLO				AMP			
	comp=N,57nm,0.6s,baz=341						
SCTE	Santa Cesarea	2.15	310	Pn	Pn	12 38 30.3	-1.3
SCTE	Santa Cesarea	2.15	310	P	Pn	12 38 30.6	-0.9
	baz=316						
FNA	Florina	2.17	16	P	Pn	12 38 33.4	+1.6
FNA	Florina	2.17	16	P	Pn	12 38 33.1	+1.2
FNA	Florina	2.17	16		Pn	12 38 33.1	+1.2
FNA	Florina	2.17	16	P	Pn	12 38 33.5	+1.6
	baz=18						
FNA				S	Sg	12 39 11.1	+5.9
	baz=18						
OHR	Ohrid	2.42	4	*e*Pn	Pb	12 38 37.4	-1.8
OHR				*e*Sn	Sb	12 39 07.8	-1.4
OHR	Ohrid	2.42	4	*e*P	Pb	12 38 37.4	-1.8
OHR				*e*S	Sb	12 39 07.8	-1.4
OHR	Ohrid	2.42	4	*i* Pn	Pn	12 38 36.7	+1.4
ATH	Athens Observa	2.55	105	P	Pb	12 38 39.6	-1.8
GRG	Griva	2.65	31	P	Pn	12 38 39.8	+1.4
PAIG	Paliouri	2.69	62	P	Pb	12 38 41.6	-2.1
TIR	Tirane	2.71	348	*e*Pn	Pn	12 38 40.2	+1.0
TIR				*e*Sn	Sn	12 39 14.4	+2.3
TIR	Tirane	2.71	348	P	Pn	12 38 40.2	+1.0
TIR	Tirane	2.71	348		Pn	12 38 40.2	+1.0
TIR	Tirane	2.71	348	P	Pn	12 38 40.3	+1.1
	baz=352						
TIR				S	Sg	12 39 23.8	+1.3
	baz=352						
TIR				AMP			
	comp=N,7.0nm,1.8s,baz=352						
PHP	Peshkopia	2.99	358	P	Pn	12 38 44.3	+1.1
	baz=0.0						
PHP				S	Sn	12 39 21.7	+2.6
	baz=0.0						
PHP				AMP			
	comp=N,10.0nm,1.2s,baz=0.0						
SOH	Sokhos	3.00	44	P	Pn	12 38 45.5	+2.2
VAY	Valandovo	3.03	29	*e*Pn	Pn	12 38 45.4	+1.8
VAY				*e*Sn	Sb	12 39 23.7	-2.9
VAY	Valandovo	3.03	29	*e*P	Pn	12 38 45.4	+1.8
VAY				*e*S	Sb	12 39 23.7	-2.9
VAY	Valandovo	3.03	29	*i* Pn	Pn	12 38 45.0	+1.4
OUR	Ouranopolis	3.08	57	P	Pb	12 38 48.0	-2.5
STIP	Stip	3.23	22	*i* Pn	Pn	12 38 47.8	+1.4
SKO	Skopje	3.33	11	*i* Pn	Pn	12 38 49.3	+1.4
SRS	Serrai	3.34	43	P	Pn	12 38 49.1	+1.2
ULC	Ulcinj	3.43	343	⇓*i*Pn	Pn	12 38 48.0	-1.1
ULC				*i* Sn	Sn	12 39 27.2	-2.7
NOCI	Noci	3.44	309	P	Pn	12 38 49.3	+0.1
	baz=312						
MATE	Matera	3.58	304	⇓P	Pn	12 38 51.2	-0.1
DRME	Dracevica, Mon	3.65	343	*e*Pn	Pn	12 38 51.4	-0.8
DRME	Dracevica, Mon	3.65	343	*e*Pn	Pn	12 38 51.6	-0.6
DRME				*e*Sn	Sn	12 39 33.4	-2.0
BCI	Bajram Curri	3.69	354	P	Pn	12 38 54.1	+1.4
	baz=357						
BCI				S	Sb	12 39 42.3	-3.5
	baz=357						
BCI				AMP			
	comp=E,8.2nm,0.7s,baz=357						
CEL	Celeste	3.72	265		Pn	12 38 53.8	+0.6
PDG	Podgorica	3.87	345	⇓P	Pn	12 38 55.4	+0.2
PDG	Podgorica	3.87	345	*e*Pn	Pn	12 38 55.2	+0.1
PDG				*e*Sn	Sn	12 39 39.6	-1.1
PDG	Podgorica	3.87	345	⇑*i*Pn	Pn	12 38 54.7	-0.4
PDG	Podgorica	3.87	345	Pn	Pn	12 38 54.5	-0.6
TTG	Podgorica	3.87	345	⇑*i*Pn	Pn	12 38 54.7	-0.4
TTG				*i* Sn	Sn	12 39 37.8	-2.9
PVY	Plav	3.93	353	⇑*i*Pn	Pn	12 38 55.8	-0.3
PVY				*i* Sn	Sn	12 39 39.7	-2.6
PRVS	Prvonek	3.97	16	*e*Pn	Pn	12 38 57.6	+1.0
CEME	Cevo	4.05	342	⇓*i*Pn	Pn	12 38 56.7	-1.1
CEME				*i* Sn	Sn	12 39 42.1	-3.3
BOSS	Bosilegrad	4.06	20	*e*Pn	Pn	12 38 59.4	+1.6
HCY	Herceg Novi	4.08	337	*e*Pn	Pn	12 38 56.2	-1.8
HCY	Herceg Novi	4.08	337	⇑*i*Pn	Pn	12 38 56.4	-1.6
HCY				*i* Sn	Sn	12 39 42.3	-3.6
MRVN	Minervino Murg	4.13	306	P	Pn	12 38 58.2	-0.7
	baz=309						
IVA	Berane	4.21	353	⇑*i*Pn	Pn	12 38 59.6	-0.3
IVA				*i* Sn	Sn	12 39 46.3	-2.9
BARS	Barje	4.22	12	*e*Pn	Pn	12 39 00.7	+0.7
BARS	Barje	4.22	12	*e*Pn	Pg	12 39 17.1	+0.8
KOME	Kolasin	4.23	349	*e*Pn	Pn	12 38 59.7	-0.5
KOME				*i* Sn	Sn	12 39 46.8	-3.0
NKME	Niksic	4.26	343	⇓*i*Pn	Pn	12 38 59.7	-0.8
NKME				*i* Sn	Sn	12 39 46.9	-3.5
NKY	Niksic	4.29	344	⇓*i*Pn	Pn	12 39 00.4	-0.7
NKY				*i* Sn	Sn	12 39 47.8	-3.5
TREB	Trebinje	4.37	338	*e*Pn	Pn	12 39 00.4	-1.6
TREB				*e*Sn	Sn	12 39 50.4	-2.6
TREB	Trebinje	4.37	338	*e*Pn	Pn	12 39 00.1	-1.9
DBRK	Dubrovnik	4.39	336	*e*Pn	Pn	12 39 00.8	-1.5
DBRK				Sn	Sn	12 39 50.2	-3.3
VTS	Vitosha	4.40	26	⇑P	Pn	12 39 04.1	+1.5
VTS	Vitosha	4.40	26	*e*Pn	Pn	12 39 03.8	+1.2
VTS				*e*Sn	Sn	12 39 57.4	+3.3
VTS	Vitosha	4.40	26	P	Pn	12 39 03.2	+0.6
VTS	Vitosha	4.40	26	Pn	Pn	12 39 03.2	+0.6
BRY	Bratogost	4.48	340	*e*Pn	Pn	12 39 02.5	-1.3
BRY	Bratogost	4.48	340	⇑*i*Pn	Pn	12 39 02.3	-1.5
BRY				*i* Sn	Sn	12 39 52.2	-3.9
SELS	Selova	4.54	5	*e*Pn	Pn	12 39 05.1	+0.7

EZN	Ezine	4.58	74	P	Pn	12 39 09.5	+4.5
SJES	Sjenica	4.59	354	ePn	Pn	12 39 06.0	+0.9
SJES				eSn	Sn	12 39 58.3	-0.3
PLD	Plovdiv	4.63	41	P	Pn	12 39 09.8	+4.3
UPM	Unac-Piva	4.68	345	ePn	Pn	12 39 06.1	-0.4
UPM	Unac-Piva	4.68	345	⇑iPn	Pn	12 39 05.9	-0.6
UPM				i Sn	Sn	12 39 57.1	-4.0
STON	Ston	4.72	333	ePn	Pn	12 39 06.0	-0.8
STON				eSn	Sn	12 39 58.7	-2.9
STON	Ston	4.72	333	ePn	Pn	12 39 04.2	-2.6
STON	Ston	4.72	333	ePn	Pn	12 39 05.0	-1.8
PLE	Pljevlja	4.72	349	ePn	Pn	12 39 06.1	-0.9
PLE				i Sn	Sn	12 39 58.3	-3.6
ALN	Alexandroupoli	4.73	61	P	Pn	12 39 08.9	+1.9
ALN	Alexandroupoli	4.73	61	Pn	Pn	12 39 08.9	+1.9
SGRT	San Giovanni R	4.81	311	Pn	Pn	12 39 07.0	-1.2
SGRT	San Giovanni R	4.81	311	P	Pn	12 39 07.3	-0.9
	baz=314						
ZAPS	Zavoj	4.83	18	ePn	Pn	12 39 10.1	+1.8
IDI	Anoyia	4.83	133	Pn	Pn	12 39 10.2	+1.7
	comp=E,5.6nm,0.3s,baz=328,slow=14,SNR=17						
IDI				Sn	Sn	12 40 04.1	-0.4
	comp=E,4.2nm,0.3s,baz=271,slow=22,SNR=1.5						
IDI				LR	LR	12 40 57.2	
	comp=E,2µm,19.3s,baz=322,slow=37						
BOVS	Bovan	5.00	9	⇓P	Pn	12 39 11.2	+0.4
BOVS	Bovan	5.00	9	ePn	Pn	12 39 10.3	-0.5
BOVS				eSn	Sn	12 40 10.7	+2.0
RUDO	Rudo	5.00	350	ePn	Pn	12 39 10.3	-0.5
VAE	Valguarnera	5.03	258	Pn	Pn	12 39 14.0	+2.8
	comp=E,5.0nm,0.3s,baz=134,slow=5.5,SNR=3.9						
VAE				Sn	Sn	12 40 08.9	-0.6
	comp=E,12nm,0.3s,baz=143,slow=4.9,SNR=4.6						
VAE				LR	LR	12 41 25.8	
	comp=E,1µm,20.4s,baz=58,slow=42						
RAFF	Raffo Rosso	5.15	255		Pn	12 39 11.2	-1.5
GRUS	Gruza	5.19	1	ePn	Pn	12 39 13.6	+0.3
PAOL	Paolisi	5.20	299		Pn	12 39 13.8	+0.4
BBLS	Lazići	5.24	350	ePn	Pn	12 39 13.8	-0.3
BBLS				eSn	Sn	12 40 14.1	-0.6
BBLS	Lazići	5.24	350	ePn	Pn	12 39 13.4	-0.7
MAKA	Makarska	5.33	331	ePn	Pn	12 39 13.4	-1.8
MAKA				Sn	Sn	12 40 13.2	-3.4
DIVS	Divibare	5.42	355	ePn	Pn	12 39 16.3	-0.2
DIVS	Divibare	5.42	355	ePn	Pn	12 39 15.5	-1.0
DIVS	Divibare	5.42	355		Pn	12 39 15.3	-1.3
RICI	Ricice	5.46	332	ePn	Pn	12 39 15.3	-1.7
HVAR	Hvar	5.47	326	ePn	Pn	12 39 15.5	-1.7
TRUS	Trudelj	5.53	359	ePn	Pn	12 39 18.6	+0.7
HAPS	Han Pijesak,BI	5.53	348	ePn	Pn	12 39 16.6	-1.5
PLVB	Pleven	5.58	32	⇓P	Pn	12 39 20.8	+2.1
BALB	Balikesir	5.73	78		Pn	12 39 23.2	+2.4
CORL	Corleone	5.80	264	Pn	Pn	12 39 22.7	+1.0
EDC	Edincik	5.85	71	P	Pb	12 39 30.1	-7.6
TEKS	Tekeris	5.90	353	ePn	Pn	12 39 21.8	-1.3
TEKS	Tekeris	5.90	353	ePn	Pn	12 39 20.5	-2.6
CLTB	Caltabellotta	5.93	261	Pn	Pn	12 39 23.9	+0.3
MDVR	Moldovita	6.14	7	⇑P	Pn	12 39 26.8	+0.4
KIJV	Kijevo	6.17	331	ePn	Pn	12 39 25.1	-1.7
ZIRJ	Zirje	6.21	325	ePn	Pn	12 39 25.3	-2.0
YER	Yerkesik	6.27	102	P	Pn	12 39 33.7	+5.5
SRE	Strehaia	6.27	17	⇓P	Pn	12 39 29.4	+1.3
SRE	Strehaia	6.27	17	P	Pn	12 39 29.4	+1.3
MGRS	Mrkonjic Grad	6.30	336	ePn	Pn	12 39 28.5	0.0
HERR	Herculane	6.33	12	⇑P	Pn	12 39 29.7	+0.8
MORI	Morici	6.35	326	ePn	Pn	12 39 27.9	-1.3
MORI				Sn	Sn	12 40 38.9	-2.9
FRGS	Fruska Gora	6.49	355	⇓P	Pn	12 39 30.2	-0.9
FRGS	Fruska Gora	6.49	355	ePn	Pn	12 39 30.5	-0.6
FRGS	Fruska Gora	6.49	355	ePn	Pn	12 39 29.7	-1.4
BLY	Banja Luka	6.57	338	ePn	Pn	12 39 31.1	-1.1
BLY	Banja Luka	6.57	338	ePn	Pn	12 39 30.9	-1.3
AQU	L'Aquila	6.59	306	P	Pn	12 39 32.5	-0.1
AQU	L'Aquila	6.59	306	ePn	Pn	12 39 33.7	+1.1
AQU	L'Aquila	6.59	306	Pn	Pn	12 39 32.5	-0.1
DUGI	Dugi Otok	6.74	324	ePn	Pn	12 39 32.9	-1.7
GZR	Gura Zlata	6.89	13	⇑P	Pn	12 39 37.1	+0.4
MRAK	Mrakovica	6.89	338	ePn	Pn	12 39 35.3	-1.4
BZS	Buzias	6.96	6	⇑P	Pn	12 39 38.1	+0.5
BZS	Buzias	6.96	6	P	Pn	12 39 38.3	+0.7
BZS				pmax	pmax		
	comp=Z,16nm,0.7s						
NRCA	Norcia	7.03	308		Pn	12 39 38.9	+0.3
PLIT	Plitvice	7.21	331	ePn	Pn	12 39 40.3	-0.8
NVLJ	Novalja	7.26	326	ePn	Pn	12 39 40.2	-1.5
ARR	Arges	7.31	23	⇓P	Pn	12 39 43.9	+1.4
RABC	Rab	7.45	326	ePn	Pn	12 39 43.2	-1.2
MOSL	Moslavina	7.48	339	ePn	Pn	12 39 42.7	-2.0
VOIR		7.50	25	⇑P	Pn	12 39 47.0	+1.9
VOIR		7.50	25	P	Pn	12 39 47.1	+1.9
VOIR				pmax	pmax		
	comp=Z,46nm,1.0s						
KOVH	Kovagotottos	7.62	347	ePN	Pn	12 39 45.2	-1.4
MURB	Monte Urbino	7.62	309		Pn	12 39 47.5	+0.7
ELL	Elmali	7.63	102	P	Pn	12 39 50.2	+3.3
ELL	Elmali	7.63	102	Pn	Pn	12 39 50.2	+3.3
MORH	Mrgy, Hungar	7.65	350	⇓P	Pn	12 39 46.1	-1.0
MORH	Mrgy, Hungar	7.65	350	ePN	Pn	12 39 45.4	-1.7
MORH	Mrgy, Hungar	7.65	350	eP	Pn	12 39 46.4	-0.7
MORH	Mrgy, Hungar	7.65	350	ePn	Pn	12 39 44.8	-2.3
ISR	Istrita	7.80	33	⇓P	Pn	12 39 52.5	+3.4
ISR	Istrita	7.80	33	P	Pn	12 39 53.6	+4.5
ISR				pmax	pmax		
	comp=Z,122nm,0.8s						
ISP	Isparta	7.85	93	eP	Pn	12 39 51.5	+1.5
ISP	Isparta	7.85	93	Pn	Pn	12 39 53.2	+3.2
MLR	Muntele Rosu	7.87	29	⇑P	Pn	12 39 53.2	+3.0
MLR	Muntele Rosu	7.87	29	Pn	Pn	12 39 50.4	+0.3
	comp=Z,1.2nm,0.3s,baz=208,slow=8.3,SNR=17						
MLR				Lg	Lg	12 42 08.0	
	comp=Z,0.5nm,0.3s,baz=116,slow=13,SNR=1.4						
MLR				LR	LR	12 43 35.8	
	comp=Z,2µm,18.7s,baz=200,slow=44						
MLR	Muntele Rosu	7.87	29	P	Pn	12 39 51.5	+1.3
MLR	Muntele Rosu	7.87	29		Pn	12 39 51.5	+1.3
OZLJ	Ozalj	7.89	333	ePn	Pn	12 39 49.8	-0.6
NEHR	Nehoiu	7.95	30	⇑P	Pn	12 39 54.6	+3.4
SMRN	Sveta Marina	7.95	325	ePn	Pn	12 39 50.9	-0.3
PTJ	Puntijarka	7.98	336	P	Pn	12 39 49.8	-1.9
PTJ	Puntijarka	7.98	336	ePn	Pn	12 39 50.0	-1.8
RIY	Rijeka	8.04	327	ePn	Pn	12 39 51.0	-1.4
RIY	Rijeka	8.04	327	ePn	Pn	12 39 50.0	-2.4
BRJN	Brijuni	8.04	323	ePn	Pn	12 39 51.0	-1.4
CRES	Cresnjev	8.08	334	ePn	Pn	12 39 50.8	-2.2
DOPR	Dopca	8.08	24	⇓P	Pn	12 39 54.9	+1.8
SLUM	Salum	8.12	151	P	Pn	12 39 53.1	-0.5
	baz=156						
SLUM				S	Sn	12 41 18.8	-6.6
	baz=156						
HARR	Harsova	8.12	40	⇓P	Pn	12 39 56.9	+3.4
HARR	Harsova	8.12	40	P	Pn	12 39 56.8	+3.4
TIRR	Tirgusor	8.21	43	P	Pn	12 39 55.8	+1.1
TIRR	Tirgusor	8.21	43	Pn	Pn	12 39 55.8	+1.1
DRGR		8.24	10	⇑P	Pn	12 39 56.9	+1.6
DRGR		8.24	10	P	Pn	12 39 56.5	+1.3
DRGR				pmax	pmax		
	comp=Z,8.0nm,1.6s						
OZUR		8.33	26	⇑P	Pn	12 39 59.1	+2.7
MDUB	Mudurnu	8.37	74	Pn	Pn	12 39 58.9	+1.8
CEY	Cerknica	8.40	329	⇑iPn	Pn	12 39 56.0	-1.3
PLOR	Plostina	8.44	30	⇑P	Pn	12 40 01.6	+3.6
PLOR	Plostina	8.44	30	P	Pn	12 40 01.5	+3.6
TIH	Tihany	8.44	347	ePN	Pn	12 39 56.4	-1.5
CASP	Castiglione de	8.45	302	Pn	Pn	12 39 58.4	+0.4
VRI	Vrincioaia	8.48	30	⇓P	Pn	12 40 01.7	+3.3
VRI	Vrincioaia	8.48	30	P	Pn	12 40 01.8	+3.3
VRI				pmax	pmax		
	comp=Z,83nm,0.8s						
TPGR	Topolog	8.48	41	⇑P	Pn	12 40 02.4	+3.9
OSSC	Osservatorio P	8.55	307	Pn	Pn	12 40 00.8	+1.3
CFR	Carcaliu	8.57	38	⇑P	Pn	12 40 04.0	+4.3
CFR	Carcaliu	8.57	38	P	Pn	12 40 03.9	+4.3
LJU	Ljubljana	8.61	330	ePn	Pn	12 39 59.2	-1.0
MPLH	Magyarpolny	8.76	346	ePN	Pn	12 40 00.0	-2.3
MPLH	Magyarpolny	8.76	346	eP	Pn	12 40 01.4	-0.9
MPLH	Magyarpolny	8.76	346	eSN	Sn	12 41 36.0	-5.2
VSL	Villasalto	8.77	279	Pn	Pn	12 40 02.1	-0.3
SOKA	Soboth	8.97	335	ePn	Pn	12 40 03.7	-1.5
	comp=Z,17nm,0.6s,SNR=26						
SOKA				eSn	Sn	12 41 41.2	-5.2
	comp=Z,16nm,0.5s						
OBKA	Obir	8.99	332	ePn	Pn	12 40 05.4	-0.2
	comp=Z,14nm,0.6s,SNR=9.1						
OBKA				eSn	Sn	12 41 43.2	-3.8
	comp=Z,35nm,0.6s						
ZCCA	Zocca	9.16	311	Pn	Pn	12 40 07.3	-0.6
PSZ	Piszkesteto	9.23	357	⇓P	Pn	12 40 09.5	+0.6
PSZ	Piszkesteto	9.23	357	eP	Pn	12 40 12.6	+3.7
PSZ	Piszkesteto	9.23	357	P	Pn	12 40 08.8	-0.1
PSZ	Piszkesteto	9.23	357		Pn	12 40 08.8	-0.1
ARSA	Arzberg	9.32	338	ePn	Pn	12 40 09.0	-1.0
	comp=Z,9.4nm,0.6s						
ARSA				i Sn	Sn	12 41 51.1	-3.9
	comp=Z,6.0nm,0.6s						
TEOL	Teolo	9.40	318	Pn	Pn	12 40 10.5	-0.6
VLC	Villacollemand	9.41	309	Pn	Pn	12 40 10.4	-0.9
MYKA	Terra Mystica	9.44	329	ePn	Pn	12 40 11.0	-0.7
	comp=Z,5.0nm,0.4s						
KEST	Kesra	9.45	255	Pn	Pn	12 40 12.4	+0.5
	comp=Z,0.9nm,0.3s,baz=68,slow=17,SNR=6.3						
KEST				Sn	Sn	12 41 54.7	-3.6
	comp=Z,0.3nm,0.3s,baz=299,slow=6.5,SNR=2.0						
KEST	Kesra	9.45	255		Pn	12 40 12.0	+0.1
BR231	Keskin MP Arra	9.51	79	Pn	Pn	12 40 14.1	+1.4
BURAR	Bucovina Array	9.53	19	⇓P	Pn	12 40 14.9	+2.0
BURAR	Bucovina Array	9.53	19	P	Pn	12 40 14.9	+2.0
BURAR	Bucovina Array	9.53	19	Pn	Pn	12 40 13.7	+0.7
TRPA	Tarpa	9.54	8	ePN	Pn	12 40 14.4	+1.5
TRPA	Tarpa	9.54	8	eP	Pn	12 40 19.1	+6.2
STAL	STALIGIAL	9.54	325		Pn	12 40 10.4	-2.7
BUR08	Bucovina Ar. S	9.55	19	Pn	Pn	12 40 13.9	+0.7
ZOU	Zoufplan	9.66	327		Pn	12 40 13.5	-1.3
KECS	Kecovo	9.79	360	eP	Pn	12 40 18.2	+1.9
KECS	Kecovo	9.79	360	ePN	Pn	12 40 18.1	+1.8
ZST	Bratislava	9.83	346	P	Pn	12 40 17.0	+0.1
ZST	Bratislava	9.83	346	eSN	Sn	12 41 59.7	-7.7
CONA	Conrad Observa	9.85	341	ePn	Pn	12 40 17.5	+0.2
	comp=Z,6.1nm,0.5s						
VYHS	Vyhne	9.88	353	eP	Pn	12 40 15.9	-1.7
VYHS				e	Sn	12 42 05.4	-3.2
VYHS	Vyhne	9.88	353	ePN	Pn	12 40 15.9	-1.7
VYHS				eSN	Sn	12 42 05.4	-3.2
CTI	Castel Tesino	9.89	321	P	Pn	12 40 16.0	-1.9
CTI	Castel Tesino	9.89	321		Pn	12 40 16.0	-1.9
KBA	Koelnbreinsper	9.92	330	ePn	Pn	12 40 18.4	0.0
	comp=Z,5.5nm,0.4s						
KBA				i Sn	Sn	12 42 06.9	-3.0
	comp=Z,17nm,0.6s						
KBA	Koelnbreinsper	9.92	330	P	Pn	12 40 18.4	0.0
KBA				pmax	pmax		
	comp=Z,28nm,1.0s						
MODS	Modra-Piesok	9.97	347	eP	Pn	12 40 17.9	-1.0
MODS				e	Sn	12 42 07.9	-3.0
MODS				MLR	MLR		
	comp=Z,5µm,14.6s						
MODS	Modra-Piesok	9.97	347	ePN	Pn	12 40 17.9	-1.0
MODS				eSN	Sn	12 42 07.9	-3.0
MODS				eL	L	12 45 00.2	
ABTA	Abfaltersbach	10.00	326	ePn	Pn	12 40 18.1	-1.3
	comp=Z,5.3nm,0.3s,SNR=6.8						
ABTA				eSn	Sn	12 42 09.3	-2.5
	comp=Z,34nm,0.7s						
UZH	Uzhgorod	10.01	6	eP	Pn	12 40 20.6	+1.2
MSSA	Maissana	10.03	308	Pn	Pn	12 40 21.3	+1.5
BR131	Keskin Array S	10.17	80	P	Pn	12 40 24.8	+3.0
BR131	Keskin Array S	10.17	80		Pn	12 40 24.8	+3.0
BRTR	Keskin Array B	10.17	80	Pn	Pn	12 40 24.5	+2.7
	comp=Z,1.1nm,0.3s,baz=265,slow=12,SNR=9.3						
BRTR				LR	LR	12 44 31.7	
	comp=Z,2µm,18.6s,baz=281,slow=39						
BRTR	Keskin Array B	10.17	80	i P	Pn	12 40 26.8	+5.0
BRTR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
SALO	Salr	10.18	316		Pn	12 40 20.1	-1.7
CRVS	Cervenica-Dubn	10.22	3	eP	Pn	12 40 22.9	+0.6
CRVS				MLR	MLR		
	comp=Z,3µm,15.4s						
CRVS	Cervenica-Dubn	10.22	3	ePN	Pn	12 40 22.9	+0.6
CRVS				eL	L	12 44 55.7	
MOA	Molln	10.25	335	i Pn	Pn	12 40 22.0	-0.7
	comp=Z,9.2nm,0.4s,SNR=9.3						
MOA				i Sn	Sn	12 42 14.3	-3.4
	comp=Z,7.8nm,0.7s						
JAVC	Velka Javorina	10.38	349	ePN	Pn	12 40 25.8	+1.3
NIE	Niedzica	10.72	359	P	Pn	12 40 31.5	+2.3
NIE				pmax	pmax		
	comp=Z,11nm,0.9s						
WTTA	Wattenberg	10.79	325	ePn	Pn	12 40 30.3	+0.1
	comp=Z,6.7nm,0.5s						
WTTA				i Sn	Sn	12 42 28.2	-2.9
	comp=Z,46nm,0.8s						
WTTA	Wattenberg	10.79	325	P	Pn	12 40 29.8	-0.4
WTTA				pmax	pmax		
	comp=Z,40nm,1.1s						
KRUC	Moravsky	10.80	345	ePN	Pn	12 40 28.3	-1.9
CSS	Mathiatis	10.86	106	Pn	Pn	12 40 32.6	+1.5
WATA	Walderalm	10.87	326	ePn	Pn	12 40 31.4	+0.1
	comp=Z,7.4nm,0.4s						
WATA				eSn	Sn	12 42 30.1	-2.9
	comp=Z,23nm,0.9s						
VRAC	Vranov	10.99	346	⇑P	Pn	12 40 32.9	0.0
VRAC	Vranov	10.99	346	Pn	Pn	12 40 31.2	-1.7
	comp=Z,0.4nm,0.3s,baz=179,slow=10,SNR=5.2						
VRAC				LR	LR	12 46 13.9	
	comp=Z,2µm,18.1s,baz=184,slow=46						
VRAC	Vranov	10.99	346	ePN	Pn	12 40 31.5	-1.4
FETA	Feichten	11.03	322	ePn	Pn	12 40 36.2	+2.7
	comp=Z,2.7nm,0.5s						
FETA				eSn	Sn	12 42 33.4	-3.5
	comp=Z,6.1nm,0.5s						
MOTA	Moosalm	11.09	324	ePn	Pn	12 40 34.2	-0.1
	comp=Z,9.4nm,0.6s,SNR=13						
MOTA				eSn	Sn	12 42 34.7	-3.7
	comp=Z,22nm,0.6s						
CKRC	Cesky Krumlov	11.09	338	ePN	Pn	12 40 32.2	-2.0
DAVOX	Davos/Dischmat	11.28	319	Pn	Pn	12 40 36.8	-0.2
	comp=Z,1.2nm,0.3s,baz=133,slow=21,SNR=5.7						
DAVOX				Sn	Sn	12 42 37.3	-6.0
	comp=Z,0.7nm,0.3s,baz=158,slow=23,SNR=1.4						
DAVOX				LR	LR	12 45 24.8	
	comp=Z,2µm,18.5s,baz=124,slow=40						
MORC	Moravsky Berou	11.29	350	P	Pn	12 40 37.8	+0.8
MORC	Moravsky Berou	11.29	350	ePN	Pn	12 40 37.6	+0.6
MORC	Moravsky Berou	11.29	350		Pn	12 40 37.8	+0.8
GEC2	GERESS Array S	11.30	336		Pn	12 40 35.7	-1.5
GERES	GERESS Array B	11.30	336	Pn	Pn	12 40 35.6	-1.5
	comp=Z,1.0nm,0.3s,baz=150,slow=14,SNR=28						
GERES				Sn	Sn	12 42 39.3	-4.3
	comp=Z,1.5nm,0.3s,baz=152,slow=23,SNR=7.7						
GERES				LR	LR	12 45 34.6	
	comp=Z,1µm,18.5s,baz=154,slow=41						
GERES	GERESS Array B	11.30	336	eP	Pn	12 40 35.3	-1.9
GERES	GERESS Array B	11.30	336	Pn	Pn	12 40 35.3	-1.9
RETA	Reutte	11.35	324	eSn	Sn	12 42 44.8	+0.1
	comp=Z,14nm,0.6s						
TUE	Stuetta	11.36	317		Pn	12 40 37.1	-1.0
LVV	L'vov	11.39	11	eP	Pn	12 40 53.8	+16
ISO	Isola	11.55	303	P	Pn	12 40 42.9	+2.3
ISO				pmax	pmax		
	comp=Z,19nm,1.4s						
KHC	Kasperske Hory	11.59	336	eP	Pn	12 40 39.2	-1.9
KHC				e	Sn	12 42 46.7	-3.9
KHC				MLR	MLR		
	comp=Z,2µm,9.1s						
KHC	Kasperske Hory	11.59	336	ePN	Pn	12 40 39.2	-1.9
KHC				eSN	Sn	12 42 46.7	-3.9
KHC				AMS	AMS	12 46 00.0	
	comp=Z,2µm,9.1s						
WET	Wettzell	11.83	334	P	Pn	12 40 43.2	-1.1
WET				pmax	pmax		
	comp=Z,18nm,1.1s						
BNN	Bunyan	11.90	84	Pn	Pn	12 40 46.7	+1.2
PRU	Pruhonice	12.09	341	eP	Pn	12 40 46.9	-1.0
PRU				MLR	MLR		
	comp=Z,3µm,10.9s						
PRU	Pruhonice	12.09	341	ePN	Pn	12 40 46.9	-1.0
PRU				AMS	AMS	12 46 20.0	
	comp=Z,3µm,10.9s						
SENIN	Lac Senin/Sane	12.44	312		Pn	12 40 51.9	-1.0
HHAG	Hagoal	12.89	129	P	Pn	12 40 56.2	-2.7
	baz=132						
GLL	Jalalah	12.93	131	P	Pn	12 40 56.1	-3.3
	baz=135						
STU	Stuttgart	13.00	324	P	Pn	12 40 58.6	-1.8
STU	Stuttgart	13.00	324	Pn	Pn	12 40 58.6	-1.8
BRG	Berggiesshubel	13.05	341	eP	P	12 41 12.9	+1.4
BRG				Amp		12 41 15.2	
	comp=Z,5.0nm,0.9s						
BRG				Amp		12 47 12.0	
	comp=Z,3.6nm,9.7s						
BRG				Amp		12 47 15.0	
	comp=N,2.1nm,13.7s						
BRG				Amp		12 47 20.0	
	comp=E,1.8nm,8.8s						
BFO	Black Forest	13.10	321	P	Pn	12 40 59.1	-2.6
BFO				pmax	pmax		
	comp=Z,15nm,1.1s						
GAZ	Gaziantep	13.20	91		Pn	12 41 04.7	+1.5
MMAI	Mount Meron Ar	13.27	111	Pn	Pn	12 41 04.8	+0.6
	comp=Z,3.7nm,0.3s,baz=324,slow=11,SNR=5.9						
MMAI				Sn	Sn	12 43 26.8	-5.1
	comp=Z,2.1nm,0.3s,baz=306,slow=30,SNR=2.6						
NBNS	Bani Suef	13.41	135	P	Pn	12 41 03.5	-2.5
	baz=139						
AKASG	Malin Array Be	13.47	24	Pn	Pn	12 41 04.2	-2.4
	comp=Z,0.8nm,0.3s,baz=211,slow=13,SNR=2.6						
AKASG				LR	LR	12 46 29.1	
	comp=Z,877nm,18.7s,baz=210,slow=38						
AKASG	Malin Array Be	13.47	24	P	Pn	12 41 07.2	+0.6
AKASG	Malin Array Be	13.47	24	Pn	Pn	12 41 07.2	+0.6
AKBB	Malin Array Si	13.47	24	⇓iP	Pn	12 41 07.3	+0.7
AKBB	Malin Array Si	13.47	24		Pn	12 41 07.4	+0.8
MOX	Moxa	13.54	335	P	Pn	12 41 06.2	-1.4
MOX				pmax	pmax		
	comp=Z,15nm,1.0s						
ECH	Echery	13.62	319	P	Pn	12 41 07.6	-1.1
ECH	Echery	13.62	319	Pn	Pn	12 41 07.6	-1.1
CLL	Collm	13.70	339	P	Pn	12 41 08.7	-1.1
CLL	Collm	13.70	339	ePP	P	12 41 19.0	+0.4
CLL				i		12 41 21.3	
	comp=Z,24nm,1.4s						
CLL	Collm	13.70	339	Pn	Pn	12 41 08.7	-1.1
ANN	Anapa	13.96	59	eP	Pn	12 41 10.9	-2.5
ANN				pmax	pmax		
	comp=Z,44nm,0.9s						
TNS	Taunus Mts	14.40	327	P	Pn	12 41 20.2	+0.7
TNS				pmax	pmax		
	comp=Z,18nm,1.4s						
ASF	Jabal al Asfar	14.78	111	Pn	Pn	12 41 26.3	+1.4
	comp=Z,0.4nm,0.3s,baz=227,slow=5.8,SNR=3.3						
WLF	Walferdange	15.06	321	P	Pn	12 41 27.9	-0.5
WLF				pmax	pmax		
	comp=Z,26nm,0.9s						
WLF	Walferdange	15.06	321	Pn	Pn	12 41 27.9	-0.5
WLF				IAmb	IAmb	12 41 39.5	
	comp=Z,26nm,0.9s						
HKAT	Jabal Katrina	15.06	128	P	Pn	12 41 27.1	-1.6
	baz=131						
SOC	Sochi	15.20	65	eP	Pn	12 41 30.9	+0.7
SOC				e	Sn	12 44 22.0	+3.3
SOC				MLR	MLR		
	comp=Z,393nm,16.0s						
SUW	Suwalki	15.42	6	P	Pn	12 41 33.2	+0.1
SUW				pmax	pmax		
	comp=Z,65nm,1.0s						
SUW	Suwalki	15.42	6	Pn	Pn	12 41 33.2	+0.1
SUW				IAmb	IAmb	12 41 44.7	
	comp=Z,65nm,1.0s						
KLNR	Kaliningrad	15.92	359	⇑eP	Pn	12 41 38.4	-1.1
MNK	Minsk	16.57	15	i P	Pn	12 41 44.8	-3.1
MNK				i S	Sn	12 44 48.5	-3.3
MNK				pmax	pmax		
	comp=E,3.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,16nm,0.8s						
MNK				pmax	pmax		
	comp=Z,17nm,0.8s						
MNK				MLR	MLR		
	comp=E,221nm,17.0s						
MNK				MLR	MLR		
	comp=Z,967nm,17.0s						
MNK				MLR	MLR		
	comp=N,493nm,18.0s						
MNK	Minsk	16.57	15	i P	Pn	12 41 44.9	-3.0
	comp=E,3.0nm,0.8s						
MNK				i P	Pn	12 41 44.9	-3.0
	comp=N,16nm,0.8s						
MNK				i P	Pn	12 41 44.9	-3.0
	comp=Z,17nm,0.8s,baz=201						
MNK				i PP	sP	12 41 54.0	-0.2
MNK				i S	Sn	12 44 48.6	-3.2
MNK				i SS	S	12 45 03.0	-0.6
MNK				i LQ	LQ	12 46 33.8	
MNK				i LR	LR	12 47 31.8	
MNK				i LRM	MLR	12 48 08.3	
	comp=E,221nm,17.2s						
MNK				i LRM	MLR	12 48 29.1	
	comp=Z,967nm,17.1s						
MNK				i LRM	MLR	12 48 35.4	
	comp=N,493nm,17.6s						
NACGM	Naroch	16.75	12	i P	Pn	12 41 49.0	-1.1
GURO	Guroymak-BITLI	16.75	84		P	12 41 52.5	-0.2
PABE	Paberze	16.97	7		Pn	12 41 51.5	-1.4
PABE				IAmb	IAmb	12 41 55.0	
	comp=Z,41nm,0.8s						
SIRT	Sirnak	17.23	87	P	P	12 41 58.4	+0.4
ISAL	Salakas	17.29	11	IAmb	IAmb	12 42 34.6	
	comp=Z,8.9nm,0.6s						
NEY	Neytrino	17.30	68	⇓eP	Pn	12 41 58.0	+0.6
SHA1	Shidzhatmaz	17.32	66	⇑eP	P	12 42 00.8	+1.6
KIV	Kislovodsk	17.38	65	eP	P	12 42 00.9	+1.3
KIV				eS	S	12 45 16.5	-4.0
KIV				pmax	pmax		
	comp=Z,33nm,1.1s						
KIV				MLR	MLR		
	comp=Z,255nm,14.0s						
KIV	Kislovodsk	17.38	65	Pn	Pn	12 41 58.6	+0.3
KBZ	Khabaz	17.50	66	P	P	12 42 01.2	+0.4
	comp=Z,0.4nm,0.3s,baz=258,slow=9.3,SNR=4.2						
KBZ	Khabaz	17.50	66	⇓eP	P	12 42 05.2	+4.5
KBZ				pmax	pmax		
	comp=Z,29nm,1.0s						
PYA1	Pyatigorsk	17.69	65	⇓eP	P	12 42 05.9	+2.9
NCK	Nalchik	17.96	67	⇑eP	P	12 42 09.3	+3.3
NCK				pmax	pmax		
	comp=Z,35nm,1.0s						
VSR	Storozhevoye	18.08	40	eP	P	12 42 07.5	+0.3
VSR				pmax	pmax		
	comp=Z,20nm,1.0s						
VSR				MLR	MLR		
	comp=Z,2µm,13.0s						
ZEI	Tsey	18.11	70	eP	P	12 42 11.4	+3.6
ZEI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GNI	Garni	18.70	78	LR	LR	12 50 44.4	
	comp=Z,762nm,21.6s,baz=268,slow=41						
GNI	Garni	18.70	78	⇑eP	Pn	12 42 19.0	+4.4
GNI				pmax	pmax		
	comp=Z,54nm,1.7s						
LPSR	Galich'ya Gora	18.83	36	eP	P	12 42 15.2	-0.2
LPSR				pmax	pmax		
	comp=Z,30nm,1.0s						
LPSR				MLR	MLR		
	comp=Z,1µm,15.0s						
SLIT	Slitere, Latvi	18.98	3	IAmb	IAmb	12 42 29.0	
	comp=Z,520nm,1.4s						
ESBB	Sonseca Array	19.06	281	P	P	12 42 16.6	-1.5
ESDC	Sonseca Array	19.06	281	P	P	12 42 18.1	0.0
	comp=Z,0.2nm,0.3s,baz=74,slow=11,SNR=21						
ESDC				LR	LR	12 49 49.1	
	comp=Z,544nm,19.1s,baz=115,slow=38						
ESDC	Sonseca Array	19.06	281	P	P	12 42 16.6	-1.5
PAB	San Pablo	19.37	280	P	P	12 42 20.8	-0.7
PAB				pmax	pmax		
	comp=Z,14nm,1.2s						
PAB	San Pablo	19.37	280	P	P	12 42 20.8	-0.7
VRH	Novokhopyorsk	19.40	43	eP	Pn	12 42 23.5	+0.7
VRH				pmax	pmax		
	comp=Z,40nm,1.0s						
VRH				MLR	MLR		
	comp=Z,1µm,16.0s						
OBN	Obninsk	19.64	28	P	P	12 42 24.0	-0.2
	comp=Z,1.9nm,0.3s,baz=3.7,slow=1.8,SNR=6.4						
OBN				LR	LR	12 50 21.7	
	comp=Z,140nm,19.8s,baz=214,slow=38						
OBN	Obninsk	19.64	28	⇑eP	Pn	12 42 26.2	+0.7
OBN				i S	S	12 46 00.3	-5.3
OBN				pmax	pmax		
	comp=Z,33nm,1.9s						
OBN				MLR	MLR		

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      comp=Z,618nm,17.0s
OBN   Obninsk           19.64  28   P      P      12 42 24.5 +0.3
OBN                                 IAmb   IAmb   12 42 29.2
      comp=Z,40nm,1.1s
LGD   Lagodekhi         19.79  73   P      Pn     12 42 32.6 +5.0
MTSE  Matsula           20.14   5  eP      Pn     12 42 30.6 -0.9
VSU   Vasula            20.18   9  eP      P      12 42 30.3 +0.3
VSU   Vasula            20.18   9⇑eP      P      12 42 29.5 -0.5
VSU                                 pmax   pmax
      comp=Z,117nm,0.7s
GNBR  Gunib             20.34  71⇓eP      Pn     12 42 35.2 +1.1
GNBR                                pmax   pmax
      comp=Z,80nm,0.9s
MOS   Moscow            20.50  28  eP      P      12 42 33.9 +0.3
MOS                                 pmax   pmax
      comp=Z,75nm,1.0s
MDT   Midelt            21.25 262   P      P      12 42 41.8 -0.2
      comp=Z,1.8nm,0.8s,baz=187,slow=12,SNR=3.9
MDT                                 LR     LR     12 52 06.4
      comp=Z,284nm,19.8s,baz=66,slow=40
UPP   Uppsala           21.27 356  eP      P      12 42 42.7 +0.9
MVO   Moncorvo          21.30 285  eP      P      12 42 42.0 -0.5
MVO                                eS      Sn     12 46 46.4  0.0
MVO                                eLR     LR     12 49 20.2
      comp=Z,462nm,18.0s
AAL   Aland             21.51 359  eP      P      12 42 45.7 +1.3
PBAR  Barrancos         21.63 277  eP      P      12 42 47.2 +1.2
      comp=Z,39nm,1.6s
PMRV  Marv??o           21.72 281  eP      P      12 42 46.5 -0.4
      comp=Z,42nm,1.8s
PMRV                               eS      S      12 46 46.8 -0.6
PMRV                               eLR     LR     12 48 39.9
      comp=Z,477nm,22.0s
MTE   Manteigas         21.74 283  eP      P      12 42 47.1 -0.1
      comp=Z,64nm,1.4s
MTE                                eS      S      12 46 47.1 -0.7
MTE                                eLR     LR     12 49 20.4
      comp=Z,818nm,18.0s
MTE   Manteigas         21.74 283   P      P      12 42 44.9 -2.3
MTE                                 IAmb   IAmb   12 42 49.9
      comp=Z,66nm,1.5s
PCBR  Castelo Branco    21.74 282  eP      P      12 42 48.4 +1.3
      comp=Z,31nm,1.2s
HFS   Hagfors           21.90 351   P      P      12 42 47.9 -0.7
      comp=Z,7.9nm,0.6s,baz=170,slow=12,SNR=22
HFS                                 LR     LR     12 51 35.3
      comp=Z,567nm,18.8s,baz=177,slow=38
PESTR Estremoz          21.95 279  eP      P      12 42 48.4 -1.0
      comp=Z,28nm,1.1s
PESTR Estremoz          21.95 279   P      P      12 42 47.5 -1.9
PVIS  Viseu             21.98 284  eP      P      12 42 49.8  0.0
PGAV  Gavieira, Arco    22.21 288  eS      S      12 46 57.7 +0.9
PGAV                               eLR     LR     12 50 13.8
      comp=Z,368nm,20.0s
PVAQ  Vaqueiros         22.31 276  eP      P      12 42 54.8 +1.6
PVAQ                               eS      Sn     12 47 05.2 -5.3
PVAQ                               eLR     LR     12 49 22.5
      comp=Z,233nm,18.0s
PMTG  Montargil         22.41 280  eP      P      12 42 53.0 -1.3
      comp=Z,40nm,2.3s
PCAS  Casmilo, Conde    22.50 283  eP      P      12 42 54.9 -0.4
PBDV  Barranco-do-Ve    22.51 275  eP      P      12 42 59.7 +4.3
MESJ  Messejana         22.61 277  eP      P      12 42 58.0 +1.5
NC602 NORSAR Array S    22.78 348   P      P      12 42 57.0 -1.1
NORES NORESS Array B    22.78 348   P      P      12 42 57.4 -0.7
PNCL  Nicolau / Gran    22.80 278  eP      P      12 42 59.0 +0.5
      comp=Z,31nm,2.0s
NAO01 NORSAR Array S    22.99 348   P      P      12 42 59.8 -0.5
NAO01                               IAmb   IAmb   12 43 28.3
      comp=Z,21nm,0.9s
FINES FINESS Array B    23.03   7   P      P      12 42 58.5 -2.1
      comp=Z,15nm,0.7s,baz=181,slow=11,SNR=23
FINES                               PcP    PcP    12 46 50.1 +0.4
      comp=Z,3.9nm,0.9s,baz=174,slow=7.3,SNR=3.5
FINES                               ScP    ScP    12 50 26.0 -1.8
      comp=Z,2.0nm,0.6s,baz=158,slow=4.5,SNR=4.6
FINES                               LR     LR     12 53 48.5
      comp=Z,456nm,18.0s,baz=190,slow=42
FIA1  FINESS Array S    23.03   7   P      P      12 42 58.3 -2.3
EKA   Eskdalemuir Ar    23.05 324   P      P      12 43 00.0 -0.8
      comp=Z,33nm,0.8s,baz=123,slow=10,SNR=28
MORF  Marmelete         23.05 276  eP      P      12 43 08.0 +6.8
ESK   Eskdalemuir       23.06 324   P      P      12 43 00.7 -0.3
ESK                                 pmax   pmax
      comp=Z,74nm,1.1s
ESK   Eskdalemuir       23.06 324   P      P      12 43 00.7 -0.3
NC405 NORSAR Array S    23.12 349   P      P      12 42 59.8 -1.8
NB201 NORSAR Array S    23.12 348   P      P      12 43 00.6 -1.1
NB2   NORSAR Subarra    23.12 348   P      P      12 43 01.1 -0.6
      comp=Z,6.3nm,0.6s,baz=158,slow=11
NOA   NORSAR Array B    23.12 348   P      P      12 43 01.5 -0.2
      comp=Z,2.8nm,0.7s,baz=158,slow=10,SNR=15
NOA                                 LR     LR     12 53 32.4
      comp=Z,265nm,20.4s,baz=165,slow=41
BELG  Belogornoye       23.19  45   P      P      12 43 02.3 -0.1
      comp=Z,22nm,0.6s,baz=68,slow=9.4,SNR=12
BELG                                LR     LR     12 52 07.2
      comp=Z,402nm,21.6s,baz=184,slow=37
BELG  Belogornoye       23.19  45⇓iP      P      12 43 04.3 +2.0
BELG                                pmax   pmax
      comp=Z,8.0nm,1.2s
NC303 NORSAR Array S    23.28 349   P      P      12 43 01.7 -1.5
NC303                               IAmb   IAmb   12 43 05.2
      comp=Z,44nm,1.2s
KLMR  Klimovskoe        25.14  22  eP      P      12 43 19.8 -0.7
KLMR                               eS      S      12 47 45.6 +0.3
KLMR                                pmax   pmax
      comp=Z,72nm,1.4s
KLMR  Klimovskoe        25.14  22  eP      P      12 43 19.9 -0.6
KLMR                                AMP           12 43 24.3
      comp=Z,72nm,1.4s
KLMR                               eS      S      12 47 45.7 +0.4
KLMR                               eS      S      12 47 45.7 +0.4
KLMR                                LQ     LQ     12 50 44.6
KLMR                                LQ     LQ     12 50 44.6
KLMR                                LR     LR     12 53 02.7
RAYN  Ar Rayn           26.03 118   P      P      12 43 29.5 +0.4
RAYN                                pmax   pmax
      comp=Z,21nm,1.2s
RAYN  Ar Rayn           26.03 118   P      P      12 43 29.5 +0.4
RAYN                                IAmb   IAmb   12 43 36.5
      comp=Z,21nm,1.1s
KIRV  Kirov             27.19  34   P      P      12 43 38.4 -0.8
      comp=Z,7.7nm,0.5s,baz=254,slow=7.4,SNR=5.0
KIRV                                LR     LR     12 55 11.0
      comp=Z,799nm,18.1s,baz=235,slow=38
KIRV  Kirov             27.19  34⇑eP      P      12 43 39.4 +0.3
PRGR  Permogore         27.67  26  eP      P      12 43 43.3 -0.1
PRGR                                pmax   pmax
      comp=Z,17nm,0.5s
AKTO  Aktyubinsk        28.82  54   P      P      12 43 53.4 -0.5
      comp=Z,2.8nm,0.5s,baz=270,slow=9.5,SNR=6.8
AKTO                                LR     LR     12 56 34.4
      comp=Z,447nm,20.2s,baz=281,slow=39
AKTO  Aktyubinsk        28.82  54   P      P      12 43 53.6 -0.2
GEYT  Alibeck           29.32  80   P      P      12 43 58.8 +0.4
      comp=Z,6.0nm,0.5s,baz=252,slow=11,SNR=7.9
GEYT                                LR     LR     12 59 02.0
      comp=Z,216nm,19.1s,baz=40,slow=43
GEYT  Alibeck           29.32  80   P      P      12 43 58.5 +0.1
GEYT                                IAmb   IAmb   12 44 01.3
      comp=Z,32nm,1.4s
GYA0  ALIBECK ARRAY     29.32  80   P      P      12 43 58.6 +0.2
GYA0B ALIBECK ARRAY     29.32  80   P      P      12 43 58.5 +0.1
AB31  Akbulak array     29.90  56   P      P      12 44 02.4 -1.0
ABKAR Akbulak array     29.90  56   P      P      12 44 02.8 -0.6
ABKAR Akbulak array     29.90  56   P      P      12 44 02.5 -0.9
TORD  Torodi Ar. Bea    30.47 218   P      P      12 44 08.7 -0.1
      comp=Z,3.0nm,0.5s,baz=32,slow=8.7,SNR=17
TORD                                PcP    PcP    12 47 08.4 +0.4
      comp=Z,0.4nm,0.5s,baz=7.2,slow=2.4,SNR=1.9
TORD  Torodi Ar. Bea    30.47 218   P      P      12 44 07.9 -0.8
ARU   Arti              30.63  42   P      P      12 44 09.3 -0.5
      comp=Z,0.7nm,0.3s,baz=218,slow=7.8,SNR=6.3
ARU                                 LR     LR     12 56 26.7
      comp=Z,437nm,19.1s,baz=244,slow=36
ARU   Arti              30.63  42c iP      P      12 44 10.3 +0.5
ARU                                 S      S      12 49 11.9  0.0
ARU                                 pmax   pmax
      comp=Z,36nm,1.8s
ARU   Arti              30.63  42   P      P      12 44 09.6 -0.1
ARU                                 IAmb   IAmb   12 44 25.5
      comp=Z,16nm,1.3s
ARCES ARCESS Array B    31.01   3   P      P      12 44 12.1 -0.9
      comp=Z,3.5nm,0.7s,baz=189,slow=9.4,SNR=12
ARCES                               LR     LR     12 56 50.1
      comp=Z,513nm,18.3s,baz=180,slow=37
ARCES ARCESS Array B    31.01   3   P      P      12 44 11.6 -1.5
ARCES                               IAmb   IAmb   12 44 19.3
      comp=Z,6.3nm,0.9s
SVE   Sverdlovsk        31.85  42  eP      P      12 44 20.7 +0.2
SVE                                 pmax   pmax
      comp=Z,33nm,1.5s
SHME  Shamm             32.35 102   P      P      12 44 22.9 -2.4
KOWA  Kowa              32.45 229   P      P      12 44 26.1  0.0
ASUD  Al Ashush, Dub    32.51 105   P      P      12 44 24.9 -1.7
BANOM Banah             32.54 102  i P     P      12 44 25.7 -1.3
      SNR=7.0
NAZ   Nazwa, Dubai      32.56 104  i P     P      12 44 26.5 -0.5
      SNR=8.5
FAQ   Al Faqa, Dubai    32.64 105   P      P      12 44 27.1 -0.7
MSFE  Esma-Masafi       32.73 103   P      P      12 44 28.0 -0.6
MDH   Madha             32.87 103   P      P      12 44 28.8 -1.0
UOSS  Minazif           32.99 104   P      P      12 44 29.8 -1.1
UOSS  Minazif           32.99 104   P      P      12 44 29.6 -1.3
HATD  Hatta, Dubai      33.00 104  i P     P      12 44 30.5 -0.5
      SNR=11
ASHO  Ashiyiah          33.03 104  i P     P      12 44 30.4 -0.8
      SNR=14
ALNE  Al Ain            33.14 106   P      P      12 44 31.6 -0.6
HRA   Herat             33.52  84   P      P      12 44 35.4 -0.3
HRA                                 IAmb   IAmb   12 44 42.4
      comp=Z,7.8nm,1.1s
SOHO  SOHO              33.69 105  i P     P      12 44 36.6 -0.4
      SNR=22
BRVK  Borovoye          36.68  50  i P     P      12 45 02.9 +0.5
BRVK                                pmax   pmax
      comp=Z,41nm,1.9s
BRVK  Borovoye          36.68  50   P      P      12 45 01.9 -0.5
BRVK                                IAmb   IAmb   12 45 04.8
      comp=Z,34nm,1.4s
KK31  Karatay Array     37.53  67   P      P      12 45 09.3 -0.5
KK31                                pmax   pmax
      comp=Z,17nm,0.7s
KK31  Karatay Array     37.53  67   P      P      12 45 09.3 -0.5
KK31                                IAmb   IAmb   12 45 15.2
      comp=Z,17nm,0.7s
KKAR  Karatay Array     37.53  67   P      P      12 45 09.1 -0.7
KKAR  Karatay Array     37.53  67   P      P      12 45 09.1 -0.7
CHGR  Chuyangaron       37.55  74   P      P      12 45 09.6 -0.4
GAR   Garm              38.33  73   P      P      12 45 16.6 -0.1
BTK   Batken            38.42  72   P      P      12 45 17.7 +0.2
BTK                                 pmax   pmax
      comp=Z,14nm,1.0s
BTK   Batken            38.42  72   P      P      12 45 17.7 +0.2
BTK                                 IAmb   IAmb   12 45 30.2
      comp=Z,14nm,0.9s
KBL   Kabul             38.74  81   P      P      12 45 20.2 -0.2
KBL                                 pmax   pmax
      comp=Z,5.0nm,0.8s
KBL   Kabul             38.74  81   P      P      12 45 20.2 -0.2
DRK   Karamyk           39.30  72   P      P      12 45 24.9 -0.2
DBIC  Dimbokro          39.32 222   P      P      12 45 24.4 -0.6
      comp=Z,5.1nm,0.9s,baz=33,slow=11,SNR=5.9
DBIC                                LR     LR     13 02 31.5
      comp=Z,520nm,19.9s,baz=45,slow=38
DBIC  Dimbokro          39.32 222   P      P      12 45 24.9 -0.1
DBIC                                pmax   pmax
      comp=Z,14nm,1.1s
DBIC  Dimbokro          39.32 222   P      P      12 45 24.9 -0.1
DBIC                                IAmb   IAmb   12 45 33.4
      comp=Z,14nm,1.1s
SPITS Spitsbergen Ar    39.63 359   P      P      12 45 24.8 -2.2
      comp=Z,12nm,1.0s,baz=171,slow=10,SNR=2.0
SPITS Spitsbergen Ar    39.63 359   P      P      12 45 28.1 +1.1
SPITS                               pmax   pmax
      comp=Z,125nm,1.5s
SOCY  Socotra           39.69 123   P      P      12 45 27.7 -0.6
AML   Almayashu         40.03  68  i P     P      12 45 31.8 +0.5
      SNR=7.0
MBAR  Mbarara           40.20 164   P      P      12 45 32.3 -0.2
      comp=Z,2.5nm,0.3s,baz=350,slow=16,SNR=1.5
MBAR  Mbarara           40.20 164⇑eP      P      12 45 35.6 +3.0
MBAR  Mbarara           40.20 164   P      P      12 45 33.7 +1.1
MBAR                                IAmb   IAmb   12 45 37.4
      comp=Z,18nm,1.4s
AAK   Ala-Archa         40.49  67  i P     P      12 45 35.8 +1.0
AAK                                 pmax   pmax
      comp=Z,47nm,1.6s
AAK   Ala-Archa         40.49  67   P      P      12 45 34.3 -0.4
FRU1  Bishkek           40.55  66   P      P      12 45 35.9 +0.8
FRU1                                pmax   pmax
      comp=Z,21nm,0.5s
FRU1  Bishkek           40.55  66   P      P      12 45 35.9 +0.8
TKM2  Tokmak 2          41.22  66  i P     P      12 45 41.2 +0.4
TKM2                                pmax   pmax
      comp=Z,3.0nm,0.7s
KURK  Kurchatov         41.92  54⇓eP      P      12 45 46.2  0.0
KURK                                pmax   pmax
      comp=Z,17nm,1.3s
KURK  Kurchatov         41.92  54   P      P      12 45 46.4 +0.2
KURK                                IAmb   IAmb   12 45 48.9
      comp=Z,15nm,1.2s
MDOK  Medeo             42.19  65   P      P      12 45 49.4 +0.6
NIL   Nilore            42.32  80   P      P      12 45 50.5 +0.8
NIL                                 pmax   pmax
      comp=Z,32nm,1.3s
NIL   Nilore            42.32  80   P      P      12 45 50.5 +0.8
NIL                                 IAmb   IAmb   12 45 56.7
      comp=Z,32nm,1.2s
KSH   Kashi             42.39  71   P      P      12 45 50.5 +0.1
KSH                                 pP     sP     12 45 55.9 +1.6
KSH                                 pmax   pmax
      comp=Z,9.0nm,1.2s
KMBO  Kilima Mbogo      42.49 155   LR     LR     13 04 06.9
      comp=Z,289nm,21.5s,baz=60,slow=37
KMBO  Kilima Mbogo      42.49 155  i P     P      12 45 52.4 +1.0
      SNR=10.0
KMBO  Kilima Mbogo      42.49 155  i P     P      12 45 52.2 +0.8
KMBO                                pmax   pmax
      comp=Z,1.0nm,0.3s
MAKZ  Makanchi          44.77  59   P      P      12 46 09.2 -0.1
MAKZ                                pmax   pmax
      comp=Z,10.0nm,1.5s
MAKZ  Makanchi          44.77  59   P      P      12 46 09.2 -0.1
MAKZ                                IAmb   IAmb   12 46 16.1
      comp=Z,10nm,1.5s
MK31  Makanchi Array    44.98  59d iP      P      12 46 09.5 -1.5
MK31  Makanchi Array    44.98  59   P      P      12 46 09.7 -1.3
MK31                                IAmb   IAmb   12 46 20.7
      comp=Z,5.2nm,0.8s
MKAR  Makanchi Array    44.98  59   P      P      12 46 09.8 -1.1
      comp=Z,3.1nm,0.5s,baz=281,slow=7.0,SNR=43
MKAR                                PcP    PcP    12 47 53.0 +1.0
      comp=Z,2.7nm,0.6s,baz=277,slow=3.6,SNR=4.1
MKAR                                ScP    ScP    12 51 43.1 -1.6
      comp=Z,0.4nm,0.6s,baz=283,slow=4.3,SNR=3.4
MKAR                                LR     LR     13 08 38.1
      comp=Z,244nm,19.3s,baz=285,slow=41
MKAR  Makanchi Array    44.98  59   P      P      12 46 10.0 -1.0
ZAA0  Zalesovo Array    45.30  48   P      P      12 46 12.3 -1.1
ZALV  Zalesovo Beam     45.30  48   P      P      12 46 12.2 -1.2
      comp=Z,17nm,0.6s,baz=276,slow=8.5,SNR=48
ZALV                                LR     LR     13 05 48.7
      comp=Z,305nm,19.7s,baz=282,slow=37
ZALV  Zalesovo Beam     45.30  48  i P     P      12 46 12.1 -1.3
ZALV                                pmax   pmax
      comp=Z,17nm,0.6s
NRIK  Noril'sk          46.31  27   P      P      12 46 22.3 +1.2
      comp=Z,4.8nm,0.5s,baz=254,slow=9.3,SNR=3.2
NRIK                                LR     LR     13 07 51.9
      comp=Z,336nm,18.4s,baz=263,slow=39
NRIK  Noril'sk          46.31  27⇑eP      P      12 46 23.3 +2.2
NRIK                                pmax   pmax
      comp=Z,13nm,1.5s
DGZ   Jazzator, Alta    47.67  54⇓eP      P      12 46 32.6 +0.4
DGZ                                 pmax   pmax
      comp=Z,2.0nm,0.8s
SFJD  Kangerlussuaq     47.82 330   LR     LR     13 07 34.9
      comp=Z,257nm,19.8s,baz=90,slow=37
WMQ   Urumqi            49.45  61  eP      P      12 46 49.8 +3.8
HYB   Hyderabad         54.43  96  i P     P      12 47 37.0  +14
DRLN  Deer Lake         54.83 308   P      P      12 47 25.5 -0.2
EUNU  Eureka            55.02 348   P      P      12 47 27.4 +0.6
FRB   Frobisher Bay     55.75 327   P      P      12 47 31.1 -1.0
      comp=Z,4.1nm,0.8s,baz=98,slow=8.2,SNR=1.7
SCHQ  Schefferville     58.12 317   P      P      12 47 49.2 +0.1
      comp=Z,5.0nm,0.5s,baz=84,slow=5.7,SNR=12
SCHQ                                LR     LR     13 10 57.7
      comp=Z,228nm,21.8s,baz=74,slow=34
SCHQ  Schefferville     58.12 317   P      P      12 47 48.9 -0.3
TIXI  Tiksi             59.14  21⇑eP      P      12 47 57.6 +1.6
TIXI                                pmax   pmax
      comp=Z,13nm,1.3s
TIXI  Tiksi             59.14  21   P      P      12 47 57.4 +1.5
TIXI                                IAmb   IAmb   12 47 59.5
      comp=Z,13nm,1.3s
RES   Resolute Bay      59.29 344   P      P      12 47 56.9  0.0
      comp=Z,1.9nm,1.0s,baz=81,slow=22,SNR=2.3
GTA   Gaotai            59.52  62  eP      P      12 47 59.6 +0.3
GTA                                 pP     sP     12 48 04.3 +1.0
GTA                                 sP     pP     12 48 07.3 +5.1
GTA                                 pmax   pmax
      comp=Z,4.0nm,1.3s
SONM  Songino Array     60.08  51   P      P      12 48 02.3 -0.7
      comp=Z,1.6nm,0.6s,baz=288,slow=8.2,SNR=11
SONM  Songino Array     60.08  51   P      P      12 48 03.4 +0.4
SONM                                pmax   pmax
      comp=Z,13nm,1.5s
SONM  Songino Array     60.08  51   P      P      12 48 03.4 +0.4
SONM                                IAmb   IAmb   12 48 27.8
      comp=Z,13nm,1.5s
SHL   Shillong          60.39  80   P      P      12 48 04.9 -0.6
SHL                                 pmax   pmax
      comp=Z,6.0nm,0.7s
SHL   Shillong          60.39  80   P      P      12 48 04.9 -0.6
SHL                                 IAmb   IAmb   12 48 07.8
      comp=Z,5.8nm,0.7s
ULN   Ulaanbaatar       60.47  51⇑eP      P      12 48 06.7 +1.0
ULN                                 pmax   pmax
      comp=Z,8.0nm,1.3s
ULN   Ulaanbaatar       60.47  51   P      P      12 48 06.3 +0.6
ULN                                 IAmb   IAmb   12 48 16.5
      comp=Z,4.3nm,0.8s
LMN   Caledonia Moun    60.72 307   P      P      12 48 07.7 +0.4
BATG  Bathurst New B    60.86 309   P      P      12 48 08.8 +0.7
PALK  Pallekele         62.27 104   LR     LR     13 20 34.4
      comp=Z,142nm,18.3s,baz=205,slow=41
D62A  Allapoint, All    62.76 310   P      P      12 48 22.1 +1.2
D62A                                IAmb   IAmb   12 48 44.5
      comp=Z,12nm,1.1s
LBTB  Lobatse           63.55 175   P      P      12 48 27.3 +0.9
LBTB                                pmax   pmax
      comp=Z,8.0nm,0.9s
LBTB  Lobatse           63.55 175   P      P      12 48 27.3 +0.9
LBTB                                IAmb   IAmb   12 48 31.0
      comp=Z,8.1nm,0.9s
LZH   Lanzhou           63.91  64  eP      P      12 48 20.5 -8.5
LZH                                 pP     pP     12 48 24.4 -7.5
LZH                                 pmax   pmax
      comp=Z,21nm,1.4s
VOI   Vohitsoka         65.09 153   P      P      12 48 37.9 +1.3
HHC   Hu-ho-hao-te      66.69  56  eP      P      12 48 46.6 -0.3
HHC                                 pmax   pmax
      comp=Z,11nm,1.1s
HHC                                 pmax   pmax
      comp=Z,230nm,5.5s
A36M  Sachs Harbour     67.03 349   P      P      12 48 49.4 +1.1
A36M                                IAmb   IAmb   12 48 55.5
      comp=Z,7.8nm,0.9s
BOSA  Boshof            67.10 176   P      P      12 48 50.0 +0.6
      comp=Z,1.9nm,0.5s,baz=345,slow=8.8,SNR=8.5
BOSA                                LR     LR     13 20 55.6
      comp=Z,361nm,18.2s,baz=358,slow=38
BOSA  Boshof            67.10 176   P      P      12 48 50.0 +0.6
BOSA  Boshof            67.10 176   P      P      12 48 49.8 +0.4
BOSA                                IAmb   IAmb   12 49 17.1
      comp=Z,16nm,1.4s
XAN   Xi'an             68.53  63   P      P      12 48 58.6 +0.1
XAN                                 sP     sP     12 49 05.5 +2.9
XAN                                 pmax   pmax
      comp=Z,8.0nm,1.5s
XAN                                 pmax   pmax
      comp=Z,73nm,5.2s
CHTO  Chiang Mai        69.55  82   P      P      12 49 05.0  0.0
CHTO                                pmax   pmax
      comp=Z,7.0nm,1.1s
CHTO  Chiang Mai        69.55  82   P      P      12 49 05.0  0.0
CHTO                                IAmb   IAmb   12 49 10.3
      comp=Z,6.9nm,1.1s
CMAR  Chiang Mai Arr    69.75  82   P      P      12 49 05.6 -0.6
      comp=Z,1.4nm,0.5s,baz=309,slow=7.7,SNR=10
CMAR  Chiang Mai Arr    69.75  82  i P     P      12 49 06.5 +0.2
CMAR                                pmax   pmax
      comp=Z,2.0nm,0.7s
CMAR  Chiang Mai Arr    69.75  82   P      P      12 49 06.3  0.0
A21K  Barrow            70.27 359   P      P      12 49 09.3 +0.8
A21K                                IAmb   IAmb   12 49 32.2
      comp=Z,15nm,1.4s
SUR   Sutherland        70.71 180   P      P      12 49 12.8 +0.9
ENH   Enshi             71.01  66   P      P      12 49 14.1 +0.2
ENH                                 IAmb   IAmb   12 49 21.1
      comp=Z,11nm,1.1s
INK   Inuvik            71.57 350   P      P      12 49 16.6 +0.1
      comp=Z,0.7nm,0.5s,baz=314,slow=1.5,SNR=6.5
INK   Inuvik            71.57 350   P      P      12 49 16.4  0.0
TOLK  Toolik Lake Re    72.73 356   P      P      12 49 25.0 +1.5
YKA   Yellowknife Ar    72.93 340   P      P      12 49 24.9 +0.2
      comp=Z,0.2nm,0.4s,baz=46,slow=6.2,SNR=1.2
YKA                                 LR     LR     13 23 10.5
      comp=Z,187nm,18.3s,baz=0.0,slow=37
BMAR  Burnt Mountain    73.60 354   P      P      12 49 29.4 +0.8
MA2   Magadan           73.80  24   P      P      12 49 30.9 +1.0
MA2                                 pmax   pmax
      comp=Z,35nm,1.1s
MA2   Magadan           73.80  24   P      P      12 49 30.9 +1.0
COLD  Coldfoot          74.17 356   P      P      12 49 33.1 +1.1
WHN   Wuhan             74.29  63 ⇑P      P      12 49 33.0 -0.3
WHN                                 sP     sP     12 49 39.6 +2.2
ULM   Lac du Bonnet     75.32 324   P      P      12 49 39.1 +0.2
      comp=Z,4.2nm,0.9s,baz=70,slow=3.7,SNR=3.5
ULM                                 LR     LR     13 24 32.0
      comp=Z,133nm,18.7s,baz=19,slow=37
H24K  Noodor Dome       75.42 355   P      P      12 49 40.3 +1.0
IMAR  Indian Mountai    75.56 358   P      P      12 49 40.8 +0.8
H21K  Melozitna Rive    75.85 357   P      P      12 49 43.2 +1.5
H21K                                IAmb   IAmb   12 49 46.9
      comp=Z,9.1nm,1.1s
MDM   Murphy Dome       76.31 355   P      P      12 49 45.0 +0.6
MDM                                 IAmb   IAmb   12 49 48.8
      comp=Z,15nm,1.4s
DAWY  Dawson            76.36 351   P      P      12 49 45.4 +0.8
DAWY                                IAmb   IAmb   12 50 04.1
      comp=Z,5.3nm,1.1s
ILAR  Eielson Array     76.40 355   P      P      12 49 45.4 +0.6
      comp=Z,0.4nm,0.5s,baz=351,slow=3.7,SNR=11
ILAR                                LR     LR     13 23 09.5
      comp=Z,82nm,21.1s,baz=353,slow=36
NJ2   Nanjing           76.50  60  eP      P      12 49 45.8 -0.1
NJ2                                 pmax   pmax
      comp=Z,6.0nm,0.5s
WRH   Wood River Hil    76.78 355   P      P      12 49 47.1 +0.1
WRH                                 IAmb   IAmb   12 50 04.3
      comp=Z,5.6nm,1.0s
USRK  Ussuriysk Ar.     76.86  43   P      P      12 49 48.4 +0.6
      comp=Z,2.2nm,0.6s,baz=304,slow=2.5,SNR=4.2
USRK                                LR     LR     13 26 13.7
      comp=Z,212nm,19.4s,baz=302,slow=38
USRK  Ussuriysk Ar.     76.86  43   P      P      12 49 48.2 +0.4
SCRK  Sand Creek        76.94 353   P      P      12 49 48.9 +0.8
BCAR  Beaver Creek A    77.61 352   P      P      12 49 52.4 +0.7
L27K  Beaver Creek,     77.61 352   P      P      12 49 51.4 -0.4
L27K                                IAmb   IAmb   12 50 07.7
      comp=Z,6.4nm,1.2s
KSAR  Wonju Array Be    78.94  51   P      P      12 49 59.8 +0.3
KSAR  Wonju Array Be    78.94  51   P      P      12 49 59.8 +0.3
KSRS  Korea Array       78.95  51   P      P      12 49 59.2 -0.3
      comp=Z,3.1nm,0.7s,baz=309,slow=4.8,SNR=8.2
KSRS                                LR     LR     13 29 51.3
      comp=Z,104nm,18.6s,baz=200,slow=40
PSI   Prapat            79.14  95   P      P      12 50 01.3 +0.2
      comp=Z,3.5nm,0.5s,baz=326,slow=8.5,SNR=1.6
SKT   Skwentna          79.47 356   P      P      12 50 01.9 -0.1
SKT                                 IAmb   IAmb   12 50 22.0
      comp=Z,16nm,1.5s
M19K  Big River Lodg    79.67 358   P      P      12 50 04.2 +1.2
M19K                                IAmb   IAmb   12 50 25.3
      comp=Z,14nm,1.4s
DLBC  Dease Lake        80.16 345   LR     LR     13 25 23.2
      comp=Z,98nm,21.3s,baz=60,slow=36
YSS   Yuzh-Sakhalins    80.31  36  eP      P      12 50 08.4 +1.7
YSS                                 pmax   pmax
      comp=Z,30nm,1.1s
ERM   Erimo             84.18  39ceP      P      12 50 26.4 -0.7
ERM                                 pmax   pmax
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	comp=Z,191nm,2.5s						
BBB	**Bella Bella**	**85.48**	**341**	LR	LR	13 29 37.7	
	comp=Z,38nm,19.9s,baz=34,slow=36						
MAT	**Matsushiro**	**85.58**	**46**	P	**P**	**12 50 35.1**	**+0.8**
MJAR	**Matsushiro Arr**	**85.58**	**46**	P	**P**	**12 50 35.3**	**+0.9**
	comp=Z,3.8nm,0.7s,baz=316,slow=3.8,SNR=9.0						
MJAR	**Matsushiro Arr**	**85.58**	**46**	P	**P**	**12 50 34.7**	**+0.4**
MJAR				IAmb	IAmb	12 50 37.6	
	comp=Z,12nm,1.4s						
PDAR	**Pinedale Array**	**87.16**	**326**	P	**P**	**12 50 43.6**	**+1.3**
	comp=Z,0.4nm,0.9s,baz=15,slow=3.7,SNR=2.2						
PDAR				LR	LR	13 31 31.3	
	comp=Z,170nm,18.3s,baz=33,slow=37						
ROSC	**El Rosal**	**90.84**	**277**	LR	LR	13 26 38.0	
	comp=Z,53nm,18.6s,baz=34,slow=32						
LEM	**Lembang**	**91.89**	**97**	LR	LR	13 39 42.2	
	comp=Z,30nm,18.3s,baz=346,slow=40						
NVAR	**Mina Array Bea**	**94.46**	**329**	LR	LR	13 36 23.1	
	comp=Z,150nm,19.7s,baz=22,slow=37						
TXAR	**Lajitas Array**	**94.66**	**314**	P	**P**	**12 51 18.9**	**+1.6**
	comp=Z,0.6nm,1.0s,baz=43,slow=5.7,SNR=3.7						
TXAR				LR	LR	13 33 10.0	
	comp=Z,116nm,21.1s,baz=0.0,slow=35						
CPUP	**Villa Florida**	**97.34**	**242**	LR	LR	13 37 02.1	
	comp=Z,233nm,18.9s,baz=46,slow=36						
LPAZ	**La Paz**	**99.03**	**256**	LR	LR	13 35 45.2	
	comp=Z,59nm,21.6s,baz=63,slow=35						

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*DJA **17** 12:46:39.3±1.2, 8°S±8°×12°3E±°, h209^{km}±16^{km}, M3.4/7, MLv3.4/7*

*IDC **17** 12:46:43.8±1.4, 8°.51S×122°.37E, h190^{km}±10^{km}, mb3.4/1, mb1 3.4/5, mb1mx3.0/33, mbtmp3.9/5, MS3.9/2, Ms1 3.9/2, ms1mx3.1/23, Error ellipse: s-maj=100.6km s-min=14.5km az=57.0*

ISC 17 12:46:42.1±1.1, **8°.31S**±0°.09×**122°.6E**±0°.1, **h200**^{km}**, n13,** σ**2^{s}40**/16**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMRI	**Maumere**	**0.50**	**230**	P	**Pn**	**12 47 08.2**	**-1.0**
EDFI	**Ende, Flores**	**1.02**	**245**	P	**Pn**	**12 47 11.8**	**-0.3**
BATI	**Baumata**	**2.15**	**151**	P	**Pn**	**12 47 22.6**	**+0.5**
	79nm,0.3s,baz=88,slow=2.5,SNR=52						
BATI				S	**Sn**	**12 47 53.7**	**+0.2**
	49nm,0.3s,baz=31,slow=23,SNR=7.1						
BATI	**Baumata**	**2.15**	**151**	P	**Pn**	**12 47 22.5**	**+0.3**
SOEI	**Soe**	**2.17**	**132**	P	**Pn**	**12 47 22.3**	**-0.2**
BASI	**Baing, Sumba**	**2.77**	**227**	P	**Pn**	**12 47 29.6**	**+0.6**
WBSI	**Waikabubak, Su**	**3.45**	**247**	P	**Pn**	**12 47 34.8**	**-2.4**
BKSI	**Bulukumba**	**3.87**	**320**	P	**Pn**	**12 47 39.3**	**-3.0**
FITZ	**Fitzroy Crossi**	**10.16**	**163**	P	**Pn**	**12 49 03.3**	**-0.2**
	0.4nm,0.3s,baz=348,slow=10,SNR=25						
FITZ				S	**Sn**	**12 50 52.8**	**-4.2**
	0.9nm,0.3s,baz=232,slow=15,SNR=11						
WRA	**Warramunga Arr**	**16.20**	**137**	P	**Pn**	**12 50 19.8**	**+0.9**
	0.3nm,0.3s,baz=314,slow=12,SNR=20						
WRA				S	**S**	**12 53 13.6**	**-4.5**
	0.3nm,0.3s,baz=316,slow=25,SNR=7.2						
ASAR	**Alice Springs**	**18.71**	**146**	P	**Pn**	**12 50 49.0**	**+0.4**
	0.8nm,0.3s,baz=327,slow=11,SNR=80						
ASAR				S	**S**	**12 54 11.4**	**+3.2**
	0.1nm,0.3s,baz=320,slow=20,SNR=4.7						
KSRS	**Korea Array**	**45.80**	**6**	LR	LR	13 14 48.7	
	comp=Z,116nm,21.8s,baz=190,slow=37						
MKAR	**Makanchi Array**	**65.55**	**331**	P	**P**	**12 57 07.2**	**+3.0**
	0.8nm,0.5s,baz=140,slow=7.2,SNR=8.3						
MKAR				LR	LR	13 27 01.7	
	comp=Z,141nm,21.4s,baz=115,slow=37						

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*IDC **17** 12:51:01.6±0.4, 1°.46N×126°.39E, h0^{km}, mb4.6/26, mb1 4.6/32, mb1mx4.5/42, mbtmp4.6/32, ML4.2/6, MS3.7/7, Ms1 3.7/7, ms1mx3.3/38, Error ellipse: s-maj=16.8km s-min=9.6km az=75.0*

*BJI **17** 12:51:02.9±0.0, 1°.54N×126°.27E, h13^{km}, mB5.1/21, mb4.8/56, Ms4.7/10, Ms7 4.3/8*

*NEIC **17** 12:51:03.6±2.1, 1°.53N±0°.08×126°.50E±0°.06, h10^{km}±1^{km}, mb5.0/71, Error ellipse: s-maj=13.9km s-min=9.3km az=22.0*

*DJA **17** 12:51:04.4±0.3, 1°N±4°×12°7E±°, h10^{km}, M4.8/12, mb4.6/2, mB4.8/2, MLv4.9/12, Mw(mB)4.0/2, MwMwp4.6/1, Mwp5.0/1*

*KLM **17** 12:51:08, 1°.47N×126°.66E, h52^{km}, mb4.8*

*GCMT **17** 12:51:10.6±0.4, 1°.61N±0°.02×126°.55E±0°.03, h35^{km}±1^{km}, MW5.0/60, Moment Tensor Solution. s30,c34; s60,c80; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.36±.30; $M_{\theta\theta}$-0.18±.18; $M_{\phi\phi}$-3.18±.20; $M_{r\theta}$1.52±.25; $M_{\theta\phi}$-2.16±.17; $M_{\phi r}$-0.25±.22; Best double couple: $M_0$4.20700×10^{16} NP1:ϕ_s184.00000°, δ47.00000°, λ55.00000°. NP2: ϕ_s50.00000°, δ54.00000°, λ122.00000°. Principal axes: T 4.0730, Plg65.0000°, Azm21.0000°; N 0.2700, Plg25.0000°, Azm210.0000°; P -4.3420, Plg4.0000°, Azm119.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 12:51:08.0±0.3, **1°.45N**±0°.04×**126°.48E**±0°.05, **h47**^{km}**, n179,** σ**1^{s}45**/188, **mb4.9**/71, **MS3.8**/6, **12C-4D, Fault plane solution: NP1:**ϕ_s189.22412°, δ69.22412°, λ31.44365°. **NP2:**ϕ_s86.98682°, δ60.80793°, λ156.02611°. **Principal axes:** T Plg36.5628°, Azm50.5401°; N Plg52.9089°, Azm219.3430°; P Plg5.3974°, Azm316.5219°; **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.12**	**127**	P	**Pn**	**12 51 25.6**	**-1.6**
TNTI				S	**Sn**	**12 51 40.3**	**-1.2**
TNTI	**Ternate**	**1.12**	**127**	Pn	**Pn**	**12 51 25.6**	**-1.6**
TNTI	**Ternate**	**1.12**	**127**	P	**Pn**	**12 51 25.9**	**-1.4**
LBMI	**Labuha**	**2.32**	**154**	P	**Pn**	**12 51 42.9**	**-0.8**
SGSI	**Sangihe**	**2.41**	**337**	P	**Pn**	**12 51 42.1**	**-2.9**
KMSI	**Cibinong**	**2.65**	**251**	P	**Pn**	**12 51 48.3**	**+0.1**
SANI	**Sanana**	**3.51**	**188**	P	**Pn**	**12 51 58.9**	**-1.2**
SANI	**Sanana**	**3.51**	**188**	P	**Pn**	**12 52 00.2**	**+0.1**
GTOI	**Gorontalo**	**3.56**	**257**	P	**Pn**	**12 52 01.7**	**+1.0**
LUWI	**Luwuk**	**4.46**	**236**	P	**Pn**	**12 52 14.4**	**+1.3**
LUWI	**Luwuk**	**4.46**	**236**	Pn	**Pn**	**12 52 14.0**	**+0.9**
LUWI	**Luwuk**	**4.46**	**236**	P	**Pn**	**12 52 15.8**	**+2.7**
MRSI	**Marisa**	**4.64**	**258**	P	**Pn**	**12 52 16.1**	**+0.5**
SIJI	**Sorong**	**5.32**	**116**	Pn	**Pn**	**12 52 23.9**	**-1.0**
	4.3nm,0.3s,baz=206,slow=20,SNR=11						
MSAI	**Masohi**	**5.36**	**153**	P	**Pn**	**12 52 27.8**	**+2.3**
APSI	**Ampana**	**5.37**	**244**	P	**Pn**	**12 52 23.5**	**-2.1**
AAI	**Ambon**	**5.39**	**161**	P	**Pn**	**12 52 27.3**	**+1.4**
DAV	**Davao City (W)**	**5.65**	**351**	Pn	**Pn**	**12 52 28.6**	**-0.8**
	64nm,0.3s,baz=240,slow=20,SNR=2.1						
DAV				Sn	**Sn**	**12 53 36.0**	**+2.9**
	baz=274,slow=22,SNR=1.2						
DAV				LR	LR	12 54 52.5	
	comp=Z,956nm,21.3s,baz=158,slow=41						
DMPH	**Davao City--Mi**	**5.67**	**350**	⇑*e*P	**Pn**	**12 52 31.9**	**+2.1**
DMPH				*e*S	Sn	12 53 44.6	+11
KCP	**Kidapawan**	**5.69**	**346**	⇓*e*P	**Pn**	**12 52 28.5**	**-1.6**
TOLI2	**Tolitoli**	**5.70**	**267**	Pn	**Pn**	**12 52 29.1**	**-1.1**
TOLI2	**Tolitoli**	**5.70**	**267**	P	**Pn**	**12 52 29.6**	**-0.6**
BUKP	**Musuan**	**6.54**	**348**	⇑*i*P	**Pn**	**12 52 43.2**	**+1.5**
BUKP				*i* S	**Sn**	**12 54 02.8**	**+7.8**
BNDI	**Bandanaira**	**6.85**	**150**	P	**Pn**	**12 52 49.9**	**+3.9**
ZCP	**Zamboanga City**	**6.99**	**321**	⇑*e*P	**Pn**	**12 52 49.8**	**+1.9**
ZCP				*e*S	**Sn**	**12 54 08.2**	**+2.1**
PAGZ	**Pagadian**	**7.06**	**334**	*e*P	**Pn**	**12 52 48.9**	**0.0**
FAKI	**Fak Fak**	**7.22**	**127**	Pn	**Pn**	**12 52 51.3**	**+0.3**
FAKI	**Fak Fak**	**7.22**	**127**	P	**Pn**	**12 52 51.9**	**+0.8**
KAPI	**Kappang**	**9.30**	**226**	Pn	**Pn**	**12 53 17.5**	**-1.9**
	1.7nm,0.3s,baz=84,slow=13,SNR=2.0						
KAPI				Sn	**Sn**	**12 55 03.7**	**+0.9**
	2.2nm,0.3s,baz=194,slow=19,SNR=1.6						
KAPI	**Kappang**	**9.30**	**226**	Pn	**Pn**	**12 53 20.1**	**+0.7**
KAPI	**Kappang**	**9.30**	**226**	P	**Pn**	**12 53 21.9**	**+2.4**
SPMM	**Sapulut**	**10.51**	**288**	P	**Pn**	**12 53 38.0**	**+1.9**
SOEI	**Soe**	**11.35**	**191**	Pn	**Pn**	**12 53 47.3**	**-0.5**
BATI	**Baumata**	**11.92**	**194**	Pn	**Pn**	**12 53 53.9**	**-1.5**
	1.6nm,0.3s,baz=45,slow=14,SNR=1.3						
LQP	**Lukban**	**13.49**	**339**	⇑*e*P	**P**	**12 54 22.3**	**-2.8**
JAY	**Jayapura**	**14.76**	**105**	Pn	**Pn**	**12 54 33.9**	**-0.1**
	0.2nm,0.3s,baz=269,slow=15,SNR=1.8						
JAY				LR	LR	13 01 21.5	
	comp=Z,478nm,18.1s,baz=286,slow=42						
JAGI	**Jajag, Banyuwa**	**15.75**	**231**	Pn	**Pn**	**12 54 47.5**	**+0.6**
JAGI				IAmb	IAmb	12 54 56.4	
	comp=Z,57nm,0.9s						
KSM	**Kuching**	**16.16**	**270**	P	**P**	**12 54 56.0**	**+1.4**
FITZ	**Fitzroy Crossi**	**19.45**	**182**	P	**P**	**12 55 30.7**	**0.0**
	comp=Z,1.1nm,0.3s,baz=17,slow=10,SNR=20						
GUMO	**Guam**	**21.83**	**56**	LR	LR	13 02 22.0	
	comp=Z,107nm,20.6s,baz=251,slow=31						
TWG	**Pinlang**	**21.88**	**347**	P	**P**	**12 55 53.3**	**-3.7**
TWG				IAmb	IAmb	12 56 00.8	
	comp=Z,39nm,0.8s						
YULB	**Yu-li**	**22.38**	**347**	P	**P**	**12 55 57.6**	**-4.8**
TPUB	**Ta-pu**	**22.45**	**346**	P	**P**	**12 56 00.2**	**-3.0**
TPUB				IAmb	IAmb	12 56 06.1	
	comp=Z,73nm,0.8s						
WB0	**Warramunga Arr**	**22.47**	**160**	P	**P**	**12 56 03.2**	**-0.3**
WB0				IAmb	IAmb	12 56 09.1	
	comp=Z,49nm,0.6s						
WRAB	**Tennant Creek**	**22.61**	**160**	P	**P**	**12 56 04.2**	**-0.8**
WRAB				IAmb	IAmb	12 56 15.8	
	comp=Z,54nm,0.9s						
WRA	**Warramunga Arr**	**22.62**	**160**	P	**P**	**12 56 04.7**	**-0.4**
	comp=Z,15nm,0.4s,baz=339,slow=11,SNR=88						
WRA				PcP	**PcP**	**12 59 58.5**	**+1.6**
	comp=Z,0.8nm,0.6s,baz=313,slow=2.6,SNR=2.6						
WRA				S	**S**	**13 00 09.2**	**-0.5**
	comp=Z,6.2nm,0.8s,baz=338,slow=19,SNR=7.6						
WRA				ScP	**ScP**	**13 03 33.3**	**+2.4**
	comp=Z,0.7nm,0.8s,baz=337,slow=2.7,SNR=3.7						
WRA	**Warramunga Arr**	**22.62**	**160**	P	**P**	**12 56 03.8**	**-1.2**
MYKOM	**Kota Tinggi**	**22.62**	**271**	P	**P**	**12 56 05.0**	**-0.1**
WR0	**Warramunga Arr**	**22.70**	**160**	P	**P**	**12 56 05.0**	**-0.9**
WR0				IAmb	IAmb	12 56 17.1	
	comp=Z,63nm,1.2s						
YOJ	**Yonaguni jima**	**23.12**	**352**	P	**P**	**12 56 09.1**	**-1.0**
YOJ				IAmb	IAmb	12 56 24.0	
	comp=Z,59nm,1.1s						
PMG	**Port Moresby**	**23.25**	**118**	P	**P**	**12 56 12.0**	**+0.4**
	comp=Z,5.1nm,0.5s,baz=15,slow=8.4,SNR=2.3						
PMG	**Port Moresby**	**23.25**	**118**	P	**P**	**12 56 11.1**	**-0.4**
QIZ	**Qiongzhong**	**23.89**	**318**	P	**P**	**12 56 16.6**	**-0.9**
QIZ				LR	LR		
	comp=Z,190nm,18.2s						
QIZ				LR	LR		
	comp=Z,200nm,12.6s						
QIZ	**Qiongzhong**	**23.89**	**318**	P	**P**	**12 56 15.4**	**-2.1**
JRMM	**Jerantut**	**24.09**	**276**	P	**P**	**12 56 22.0**	**+2.5**
UBPT	**Khong Chiam**	**24.87**	**305**	P	**P**	**12 56 24.7**	**-1.8**
UBPT				IAmb	IAmb	12 56 35.1	
	comp=Z,26nm,1.4s						
JOW	**Kunigami**	**25.29**	**4**	P	**P**	**12 56 30.7**	**+0.5**
	comp=Z,39nm,0.7s,baz=198,slow=9.0,SNR=10						
JOW				LR	LR	13 07 56.0	
	comp=Z,58nm,18.4s,baz=159,slow=40						
JOW	**Kunigami**	**25.29**	**4**	P	**P**	**12 56 29.4**	**-0.8**
BKNI	**Bangkinang**	**25.46**	**268**	P	**P**	**12 56 31.1**	**-0.7**
IPM	**Ipoh**	**25.59**	**277**	P	**P**	**12 56 35.0**	**+1.9**
AS31	**Alice Springs**	**25.99**	**164**	P	**P**	**12 56 36.4**	**-0.2**
ASAR	**Alice Springs**	**25.99**	**164**	P	**P**	**12 56 36.6**	**0.0**
	comp=Z,5.1nm,0.4s,baz=343,slow=7.1,SNR=50						
ASAR				PcP	**PcP**	**13 00 04.0**	**-0.2**
	comp=Z,1.2nm,0.6s,baz=336,slow=2.1,SNR=3.3						
ASAR				S	**S**	**13 01 05.1**	**+0.9**
	comp=Z,1.9nm,0.8s,baz=351,slow=23,SNR=4.9						
ASAR				ScP	**ScP**	**13 03 44.5**	**+4.3**
	comp=Z,0.5nm,0.6s,baz=338,slow=3.0,SNR=3.2						
ASAR	**Alice Springs**	**25.99**	**164**	P	**P**	**12 56 36.2**	**-0.4**
RPSI	**Rantau Prapat**	**27.56**	**273**	P	**P**	**12 56 50.0**	**-0.8**
PSI	**Prapat**	**27.57**	**273**	P	**P**	**12 56 50.0**	**-1.0**
	comp=Z,2.7nm,0.5s,baz=109,slow=1.9,SNR=5.2						
CTA	**Charters Tower**	**28.89**	**139**	P	**P**	**12 57 03.5**	**+0.9**
	comp=Z,4.4nm,0.8s,baz=337,slow=4.4,SNR=3.8						
CTAO	**Charters Tower**	**28.89**	**139**	PKIKP	**P**	**12 57 03.9**	**+1.3**
CTAO	**Charters Tower**	**28.89**	**139**	P	**P**	**12 57 03.9**	**+1.3**
CTAO	**Charters Tower**	**28.89**	**139**	pmax	pmax		
	comp=Z,13nm,1.1s						
GSI	**Gunungsitoli**	**28.89**	**270**	P	**P**	**12 57 01.6**	**-1.2**
GSI				IAmb	IAmb	12 57 46.8	
	comp=Z,64nm,1.4s						
SLVN	**Son La**	**29.57**	**314**	P	**P**	**12 57 06.8**	**-1.9**
NJ2	**Nanjing**	**31.27**	**347**	*e*P	**P**	**12 57 23.4**	**-0.1**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
GYA	**Guiyang**	**31.32**	**324**	⇑P	**P**	**12 57 25.4**	**+1.2**
GYA				pmax	pmax		
	comp=Z,13nm,0.8s						
CM31	**Chiang Mai Arr**	**31.86**	**304**	P	**P**	**12 57 28.9**	**0.0**
CMAR	**Chiang Mai Arr**	**31.86**	**304**	P	**P**	**12 57 28.2**	**-0.7**
	comp=Z,3.2nm,0.8s,baz=110,slow=6.5,SNR=18						
CMAR				PcP	**PcP**	**13 00 19.6**	**+0.6**
	comp=Z,0.8nm,0.8s,baz=170,slow=1.6,SNR=4.3						
CHTO	**Chiang Mai**	**32.03**	**304**	P	**P**	**12 57 28.5**	**-1.9**
ENH	**Enshi**	**32.89**	**332**	P	**P**	**12 57 36.5**	**-1.3**
ENH				IAmb	IAmb	12 57 40.9	
	comp=Z,16nm,0.8s						
JWT	**Wachi**	**34.67**	**13**	P	**P**	**12 57 53.3**	**+0.2**
JWT				IAmb	IAmb	12 57 56.9	
	comp=Z,20nm,1.1s						
INU	**Inuyama**	**35.12**	**15**	P	**P**	**12 57 56.5**	**-0.5**
INU				IAmb	IAmb	12 58 00.9	
	comp=Z,17nm,0.9s						
KSRS	**Korea Array**	**35.85**	**2**	P	**P**	**12 58 03.5**	**+0.3**
	comp=Z,4.7nm,0.8s,baz=180,slow=10,SNR=15						
STKA	**Stephens Creek**	**36.12**	**158**	P	**P**	**12 58 05.2**	**-0.4**
	comp=Z,9.0nm,0.7s,baz=332,slow=7.5,SNR=18						
STKA	**Stephens Creek**	**36.12**	**158**	P	**P**	**12 58 05.6**	**0.0**
XAN	**Xi'an**	**36.34**	**335**	P	**P**	**12 58 06.5**	**-1.1**
XAN				sP	pP	12 58 13.3	-6.4
XAN				pmax	pmax		
	comp=Z,16nm,0.8s						
XAN				pmax	pmax		
	comp=Z,69nm,4.0s						
CD2	**Chengdu**	**36.35**	**326**	P	**P**	**12 58 06.6**	**-1.1**
CD2				pmax	pmax		
	comp=Z,30nm,0.9s						
MAJO	**Matsushiro**	**36.56**	**16**	P	**P**	**12 58 09.8**	**+0.4**
MAT	**Matsushiro**	**36.56**	**16**	P	**P**	**12 58 08.5**	**-0.9**
MJAR	**Matsushiro Arr**	**36.56**	**16**	P	**P**	**12 58 08.3**	**-1.1**
	comp=Z,3.2nm,0.6s,baz=179,slow=9.8,SNR=9.5						
MJAR	**Matsushiro Arr**	**36.56**	**16**	P	**P**	**12 58 08.3**	**-1.1**
DL2	**Dalian**	**37.54**	**354**	P	**P**	**12 58 19.8**	**+2.2**
DL2				pmax	pmax		
	comp=Z,40nm,0.8s						
JMM	**Marumori**	**38.55**	**18**	P	**P**	**12 58 26.5**	**+0.3**
JMM				IAmb	IAmb	12 58 28.4	
	comp=Z,35nm,1.1s						
BJI	**Beijing**	**39.53**	**348**	P	**P**	**12 58 35.3**	**+1.0**
BJI				pmax	pmax		
	comp=Z,17nm,0.8s						
LZH	**Lanzhou**	**40.34**	**331**	⇑P	**P**	**12 58 42.1**	**+0.7**
LZH				pP	pP	12 58 49.5	-4.1
LZH				sP	sP	12 58 53.3	-5.7
LZH				pmax	pmax		
	comp=Z,14nm,1.3s						
SHL	**Shillong**	**41.05**	**309**	P	**P**	**12 58 45.8**	**-1.6**
SHL				IAmb	IAmb	12 58 51.3	
	comp=Z,11nm,0.6s						
HHC	**Hu-ho-hao-te**	**41.48**	**343**	*e*P	**P**	**12 58 52.1**	**+1.6**
HHC				pmax	pmax		
	comp=Z,17nm,1.2s						
HHC				pmax	pmax		
	comp=Z,240nm,5.3s						
CAN	**Canberra**	**42.21**	**152**	P	**P**	**12 58 57.5**	**+0.9**
CAN				IAmb	IAmb	12 59 09.0	
	comp=Z,20nm,1.1s						
USRK	**Ussuriysk Ar.**	**42.84**	**6**	P	**P**	**12 59 02.0**	**+0.5**
	comp=Z,7.7nm,0.7s,baz=193,slow=4.8,SNR=12						
USRK	**Ussuriysk Ar.**	**42.84**	**6**	P	**P**	**12 59 01.6**	**+0.1**
LSA	**Lhasa**	**43.78**	**313**	P	**P**	**12 59 08.8**	**-1.0**
GTA	**Gaotai**	**44.92**	**331**	*e*P	**P**	**12 59 17.6**	**-0.8**
GTA				pP	pP	12 59 21.9	-8.9
GTA				sP	sP	12 59 25.1	-11
GTA				PP	**PP**	**13 01 03.3**	**-0.8**
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ODAN	**Odare**	**45.21**	**307**	*e*P	**P**	**12 59 20.4**	**-0.7**
RAMN	**Ramite**	**45.88**	**307**	*e*P	**P**	**12 59 26.0**	**-0.4**
JIRN	**Jiri**	**46.52**	**308**	*e*P	**P**	**12 59 30.0**	**-1.6**
	comp=Z,30nm,0.9s						
PKIN	**Phulchoki**	**47.12**	**307**	*e*P	**P**	**12 59 34.9**	**-1.2**
KKN	**Kakani**	**47.30**	**307**	*e*P	**P**	**12 59 36.6**	**-0.9**
YSS	**Yuzh-Sakhalins**	**47.49**	**15**	P	**P**	**12 59 39.2**	**+0.9**
KOLN	**Koldanda**	**48.64**	**307**	*e*P	**P**	**12 59 47.3**	**-0.5**
	comp=Z,52nm,0.7s						
DANN	**Dangsing**	**48.76**	**307**	*e*P	**P**	**12 59 47.9**	**-0.9**
	comp=Z,54nm,0.7s						
ULN	**Ulaanbaatar**	**49.20**	**343**	P	**P**	**12 59 51.4**	**-0.2**
ULN				IAmb	IAmb	13 00 29.7	
	comp=Z,25nm,1.6s						
PYUN	**Piuthan**	**49.27**	**307**	*e*P	**P**	**12 59 52.3**	**-0.3**
SONM	**Songino Array**	**49.37**	**342**	P	**P**	**12 59 52.8**	**-0.1**
	comp=Z,4.4nm,0.8s,baz=156,slow=9.2,SNR=16						
SONM	**Songino Array**	**49.37**	**342**	P	**P**	**12 59 52.1**	**-0.8**
MSVF	**Nonsavu**	**54.23**	**113**	P	**P**	**13 00 30.4**	**+0.7**
MSVF				IAmb	IAmb	13 00 32.4	
	comp=Z,16nm,1.0s						
WMQ	**Urumqi**	**54.45**	**326**	*e*P	**P**	**13 00 30.5**	**-0.3**
WMQ				pP	pP	13 00 36.0	-7.4
WMQ				sP	sP	13 00 45.0	-3.7
WMQ				pmax	pmax		
	comp=Z,15nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,380nm,5.5s						
PEA0B	**Petropavlovsk-**	**57.62**	**22**	P	**P**	**13 00 54.2**	**+1.0**
PETK	**Petropavlovsk-**	**57.62**	**22**	P	**P**	**13 00 54.2**	**+1.0**
	comp=Z,2.5nm,0.6s,baz=191,slow=3.7,SNR=9.8						
NIL	**Nilore**	**59.13**	**309**	P	**P**	**13 01 02.9**	**-1.2**
NIL				IAmb	IAmb	13 01 12.7	
	comp=Z,13nm,1.1s						
PRZ	**Przheval'sk**	**59.27**	**320**	P	**P**	**13 01 04.9**	**-0.2**
PRZ				IAmb	IAmb	13 01 19.2	
	comp=Z,13nm,0.8s						
MK31	**Makanchi Array**	**59.28**	**326**	P	**P**	**13 01 03.5**	**-1.4**
MK31				IAmb	IAmb	13 01 07.7	
	comp=Z,7.1nm,0.8s						
MKAR	**Makanchi Array**	**59.28**	**326**	P	**P**	**13 01 03.7**	**-1.2**
	comp=Z,4.4nm,0.3s,baz=118,slow=7.1,SNR=52						
MAKZ	**Makanchi**	**59.46**	**326**	P	**P**	**13 01 05.6**	**-0.6**
MAKZ				IAmb	IAmb	13 01 11.6	
	comp=Z,9.0nm,0.8s						
KSH	**Kashi**	**59.48**	**316**	P	**P**	**13 01 09.5**	**+2.9**
KSH				pmax	pmax		
	comp=Z,7.0nm,0.7s						
TUWZ	**Tuamarina**	**60.55**	**140**	P	**P**	**13 01 13.1**	**-0.6**
MA2	**Magadan**	**60.96**	**14**	P	**P**	**13 01 15.7**	**-0.5**
BKZ	**Black Stump Fm**	**61.08**	**137**	P	**P**	**13 01 16.9**	**-0.5**
AAK	**Ala-Archa**	**61.88**	**319**	P	**P**	**13 01 22.3**	**-0.6**
AAK				IAmb	IAmb	13 01 38.8	
	comp=Z,8.4nm,1.4s						
DRK	**Karamyk**	**62.40**	**315**	P	**P**	**13 01 26.7**	**+0.1**
ZAA0	**Zalesovo Array**	**62.50**	**334**	P	**P**	**13 01 26.3**	**-0.2**
ZAA0				IAmb	IAmb	13 01 48.1	
	comp=Z,6.4nm,1.1s						
ZALV	**Zalesovo Beam**	**62.50**	**334**	P	**P**	**13 01 26.2**	**-0.3**
	comp=Z,2.4nm,0.5s,baz=120,slow=5.4,SNR=12						
ZALV	**Zalesovo Beam**	**62.50**	**334**	P	**P**	**13 01 25.5**	**-1.0**
KBL	**Kabul**	**62.72**	**308**	P	**P**	**13 01 27.5**	**-1.2**
KBL				IAmb	IAmb	13 01 30.7	
	comp=Z,7.8nm,0.9s						
GAR	**Garm**	**63.28**	**314**	P	**P**	**13 01 31.3**	**-1.0**
BTK	**Batken**	**63.32**	**315**	P	**P**	**13 01 31.7**	**-0.7**
BTK				IAmb	IAmb	13 01 43.9	
	comp=Z,16nm,1.3s						
KURK	**Kurchatov**	**63.52**	**328**	P	**P**	**13 01 32.1**	**-1.3**
CHGR	**Chuyangaron**	**64.00**	**313**	P	**P**	**13 01 36.8**	**-0.3**
KK31	**Karatay Array**	**64.73**	**318**	P	**P**	**13 01 40.8**	**-0.7**
KKAR	**Karatay Array**	**64.73**	**318**	P	**P**	**13 01 40.3**	**-1.3**
BRVK	**Borovoye**	**69.16**	**328**	P	**P**	**13 02 08.8**	**-0.7**
BRVK				IAmb	IAmb	13 02 12.9	
	comp=Z,10nm,0.8s						
TIXI	**Tiksi**	**70.11**	**1**	P	**P**	**13 02 14.8**	**-0.1**
TIXI				IAmb	IAmb	13 02 46.8	
	comp=Z,16nm,1.4s						
GEYT	**Alibeck**	**72.12**	**309**	P	**P**	**13 02 27.6**	**-0.3**
	comp=Z,6.4nm,0.8s,baz=180,slow=8.2,SNR=6.0						
GEYT	**Alibeck**	**72.12**	**309**	P	**P**	**13 02 27.8**	**-0.1**
NRIK	**Noril'sk**	**72.57**	**346**	P	**P**	**13 02 29.6**	**-0.2**
	comp=Z,14nm,0.7s,baz=131,slow=7.4,SNR=14						
NRIK	**Noril'sk**	**72.57**	**346**	P	**P**	**13 02 30.0**	**+0.2**
NRIK				IAmb	IAmb	13 02 33.8	
	comp=Z,17nm,0.8s						
SOCY	**Socotra**	**72.58**	**282**	P	**P**	**13 02 30.2**	**-0.9**
ABKAR	**Akbulak array**	**73.75**	**321**	P	**P**	**13 02 36.0**	**-1.2**
ABKAR	**Akbulak array**	**73.75**	**321**	P	**P**	**13 02 36.3**	**-0.9**
ARU	**Arti**	**76.72**	**328**	P	**P**	**13 02 53.4**	**-0.8**
ARU				IAmb	IAmb	13 02 56.5	
	comp=Z,12nm,0.8s						
VOI	**Vohitsoka**	**80.97**	**248**	P	**P**	**13 03 18.4**	**0.0**
RAYN	**Ar Rayn**	**81.14**	**293**	P	**P**	**13 03 18.6**	**-0.6**
RAYN				IAmb	IAmb	13 03 23.9	
	comp=Z,8.5nm,0.9s						
VNDA	**Vanda**	**81.22**	**173**	P	**P**	**13 03 18.7**	**+0.3**
	comp=Z,2.0nm,0.5s,baz=313,slow=6.9,SNR=18						
VNDA	**Vanda**	**81.22**	**173**	P	**P**	**13 03 18.9**	**+0.5**
VNDA				IAmb	IAmb	13 03 21.9	
	comp=Z,12nm,1.5s						
MAW	**Mawson**	**81.55**	**200**	P	**P**	**13 03 20.5**	**+0.2**
	comp=Z,3.3nm,0.9s,baz=58,slow=9.5,SNR=2.5						
MAW	**Mawson**	**81.55**	**200**	P	**P**	**13 03 21.0**	**+0.7**
J20K	**Nowinta River**	**84.07**	**26**	P	**P**	**13 03 35.4**	**+1.9**
KBZ	**Khabaz**	**84.35**	**314**	P	**P**	**13 03 34.1**	**-1.2**
	comp=Z,18nm,1.3s,baz=206,slow=5.4,SNR=5.1						
KBZ				LR	LR	13 45 09.6	
	comp=Z,48nm,21.5s,baz=50,slow=38						
SIRT	**Sirnak**	**84.38**	**307**	P	**P**	**13 03 36.5**	**+0.7**
A21K	**Barrow**	**84.44**	**18**	P	**P**	**13 03 36.6**	**+1.4**
IMAR	**Indian Mountai**	**84.51**	**24**	P	**P**	**13 03 37.0**	**+1.3**
GURO	**Guroymak-BITLI**	**84.75**	**308**	P	**P**	**13 03 38.4**	**+0.7**
I23K	**Minto, Yukon-K**	**86.23**	**25**	P	**P**	**13 03 46.0**	**+1.8**
I23K				IAmb	IAmb	13 05 54.4	
	comp=Z,30nm,1.8s						
TOLK	**Toolik Lake Re**	**86.44**	**21**		**P**	**13 03 47.5**	**+2.2**
TOLK				IAmb	IAmb	13 05 27.7	
	comp=Z,29nm,1.8s						
KLMR	**Klimovskoe**	**87.25**	**331**	*e*P	**P**	**13 03 50.0**	**+0.7**
KLMR	**Klimovskoe**	**87.25**	**331**	AMP		13 04 06.5	
	comp=Z,23nm,1.4s						
ILAR	**Eielson Array**	**87.25**	**25**	P	**P**	**13 03 49.5**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=235,slow=5.5,SNR=10						
BMAR	**Burnt Mountain**	**88.26**	**23**	P	**P**	**13 03 55.3**	**+1.2**
KMBO	**Kilima Mbogo**	**89.25**	**269**	LR	LR	13 41 26.7	
	comp=Z,56nm,21.2s,baz=92,slow=34						
L27K	**Beaver Creek,**	**89.49**	**27**	P	**P**	**13 04 01.1**	**+1.1**
L27K				IAmb	IAmb	13 06 36.8	
	comp=Z,26nm,1.8s						
BCAR	**Beaver Creek A**	**89.50**	**27**		**P**	**13 04 01.0**	**+1.0**
BRTR	**Keskin Array B**	**91.27**	**310**	P	**P**	**13 04 09.7**	**+0.8**
	comp=Z,2.2nm,0.8s,baz=101,slow=4.0,SNR=4.7						
BRTR				LR	LR	13 51 03.9	
	comp=Z,31nm,18.0s,baz=89,slow=40						
BRTR	**Keskin Array B**	**91.27**	**310**	P	**P**	**13 04 09.4**	**+0.5**
INK	**Inuvik**	**92.36**	**21**	P	**P**	**13 04 13.1**	**0.0**
	comp=Z,1.3nm,0.8s,baz=272,slow=3.3,SNR=3.9						
INK	**Inuvik**	**92.36**	**21**	P	**P**	**13 04 13.9**	**+0.8**
INK				IAmb	IAmb	13 06 17.3	
	comp=Z,12nm,1.7s						
ARCES	**ARCESS Array B**	**92.48**	**340**	P	**P**	**13 04 12.8**	**-0.9**
	comp=Z,8.1nm,1.0s,baz=111,slow=4.9,SNR=4.9						
AKASG	**Malin Array Be**	**93.49**	**321**	P	**P**	**13 04 20.6**	**+1.9**
	comp=Z,0.9nm,0.5s,baz=68,slow=4.8,SNR=4.1						
FINES	**FINESS Array B**	**93.70**	**332**	P	**P**	**13 04 21.7**	**+2.2**
	comp=Z,5.2nm,0.8s,baz=64,slow=6.6,SNR=4.8						
RES	**Resolute Bay**	**100.08**	**10**	P	**Pdif**	**13 04 49.2**	**+1.1**
	comp=Z,1.7nm,0.8s,baz=286,slow=5.0,SNR=1.7						
NOA	**NORSAR Array B**	**100.70**	**333**	P	**Pdif**	**13 04 52.2**	**+1.1**
	comp=Z,1.5nm,0.8s,baz=70,slow=4.6,SNR=3.0						
TXAR	**Lajitas Array**	**123.17**	**53**	PKP	**PKiKP**	**13 10 00.7**	**0.0**
	comp=Z,0.4nm,0.7s,baz=241,slow=1.3,SNR=3.8						
TXAR	**Lajitas Array**	**123.17**	**53**		**PKiKP**	**13 10 01.0**	**+0.4**
TORD	**Torodi Ar. Bea**	**123.36**	**287**	PKP	**PKiKP**	**13 10 02.0**	**+0.8**
	comp=Z,2.0nm,0.8s,baz=47,slow=1.7,SNR=7.4						

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*TUL **17** 12:58:12.7±1.3, 36°.47N±0°.02×98°.76W±0°.02, h5^{km}±2^{km}, ML2.5, mb_Lg2.3/11(NEIC) Error ellipse: s-maj=4.2km s-min=3.1km az=333.0*

NEIC 17 12:58:12.8±1.3, **36°.48N**±0°.03×**98°.77W**±0°.02, **h11**^{km}±6^{km}**, Error ellipse: s-maj=4.1km s-min=2.5km az=170.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	**Winter Ranch,**	**0.21**	**242**		Pg	12 58 17.3	-0.1
U32A				Sg	Sg	12 58 20.6	+0.2
CROK	**Carrier**	**0.63**	**87**	Pg	Pg	12 58 24.8	-0.3
CROK				Sg	Sg	12 58 33.6	+0.2
GC02	**Grant County #**	**0.82**	**63**		Pg	12 58 28.3	-0.3
GC02				Sg	Sg	12 58 39.7	+0.4
KAN10	**Anthony SW Sta**	**0.84**	**40**	Pg	Pg	12 58 28.8	-0.2
KAN16	**Harper SW Stat**	**0.93**	**37**	Pg	Pg	12 58 30.5	-0.3
KAN05	**Bluff City Nor**	**0.95**	**49**	Pg	Pg	12 58 30.8	-0.5

KAN05				Sg	Sb	12 58 44.0	0.0
KAN08	**Anthony NE Sta**	**0.98**	**40**	Pg	Pg	12 58 31.4	-0.4
KAN17	**Caldwell West**	**0.98**	**55**	Pg	Pg	12 58 31.3	-0.4
KAN17				Sg	Sg	12 58 44.5	0.0
KAN01	**Argonia South**	**1.05**	**50**	Pg	Pg	12 58 32.8	-0.3
KAN06	**Argonia West S**	**1.06**	**43**	Pg	Pg	12 58 32.9	-0.4
KAN09	**Caldwell North**	**1.13**	**54**	Pg	Pb	12 58 34.0	-0.5
KAN13	**South Haven SW**	**1.16**	**62**	Pg	Pb	12 58 34.5	-0.5
BCOK	**Bluff Creek, N**	**1.25**	**131**	Pg	Pn	12 58 35.7	-0.6
BLOK	**Blackwell**	**1.28**	**77**		Pn	12 58 36.2	-0.5
OK031	**S. Brethren Rd**	**1.64**	**108**	Pn	Pb	12 58 42.5	-0.7
FNO	**Franklin**	**1.65**	**137**	IAmb_Lg		12 59 04.9	
	comp=Z,9.9nm,0.8s						
QUOK	**Quay**	**1.69**	**100**		Pn	12 58 42.8	+0.4
OK030	**Cody Creek RV**	**1.69**	**108**	Pn	Pb	12 58 43.4	-0.7
WMOK	**Wichita Mounta**	**1.74**	**180**		Pn	12 58 43.1	0.0
T35A	**Sooner Cattle**	**1.86**	**76**		Pb	12 58 46.2	-0.8
R32A	**Long Quarter,**	**1.94**	**1**		Pb	12 58 47.5	-0.8
X34A	**Smith Ranch, M**	**2.02**	**158**		Pb	12 58 48.6	-1.0
CBKS	**Cedar Bluff**	**2.46**	**342**	Pn	Pn	12 58 54.9	+2.0
CBKS				IAmb_Lg		12 59 31.8	
	comp=Z,12nm,0.8s						
TUL1	**Leonard**	**2.47**	**102**	Pn	Pn	12 58 54.2	+1.1
AMTX	**Amarillo**	**2.86**	**237**	IAmb_Lg		12 59 43.5	
	comp=Z,13nm,0.7s						
KSU1	**Kansas State U**	**3.12**	**32**	Pn	Pn	12 59 03.3	+1.2
X37A	**Clayton**	**3.35**	**123**	Pn	Pn	12 59 06.3	+1.1
X37A				IAmb_Lg		13 00 03.1	
	comp=Z,11nm,0.8s						
U38A	**Gravette**	**3.53**	**89**		Pn	12 59 09.2	+1.5
U38A				IAmb_Lg		13 00 07.0	
	comp=Z,6.8nm,0.8s						
S39A	**Bolivar**	**4.52**	**73**	IAmb_Lg		13 00 38.5	
	comp=Z,7.4nm,1.1s						

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*EAF **17** 12:59:51.0±2.2, 26°.48S×29°.68E, h10^{km}, MD3.6*

BUL 17 12:59:52.6±1.1**, 26°.44S×29°.56E, h10**^{km}**, MD3.8, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOPA	**Mopani**	**3.36**	**30**	*e*P	Pn	13 00 42.0	-3.2
MOPA				*e*S	Sn	13 01 19.3	-5.8
MOPA	**Mopani**	**3.36**	**30**	*e*P	Pn	13 00 42.0	-3.2
MOPA				*e*S	Sn	13 01 19.3	-5.8
LBTB	**Lobatse**	**3.85**	**291**	*e*P	Pn	13 00 50.2	-1.7
LBTB				*e*S	Sn	13 01 34.5	-2.8
LBTB	**Lobatse**	**3.85**	**291**	*e*P	Pn	13 00 50.2	-1.7
LBTB				*e*S	Sn	13 01 34.5	-2.8
MSNA	**Messina**	**4.10**	**6**	*e*P	Pn	13 00 54.9	-0.6
MSNA				*e*S	Sn	13 01 41.4	-2.2
MSNA	**Messina**	**4.10**	**6**	*e*P	Pn	13 00 54.9	-0.6
MSNA				*e*S	Sn	13 01 41.4	-2.2
BOSA	**Boshof**	**4.39**	**240**	*e*P	Pn	13 00 59.1	-0.3
BOSA				*e*S	Sn	13 01 48.0	-2.7
BOSA	**Boshof**	**4.39**	**240**	*e*P	Pn	13 00 59.1	-0.3
BOSA				*e*S	Sn	13 01 48.0	-2.7
MATP	**Matopo**	**6.07**	**351**	*e*P	Pn	13 01 21.8	-0.8
MATP				*e*S	Sn	13 02 26.6	-5.6
MATP	**Matopo**	**6.07**	**351**	*e*P	Pn	13 01 21.8	-0.8
MATP				*e*S	Sn	13 02 26.6	-5.6

IDC 17 13:10:19.1±3.2**, 28°.15N×85°.25E, h0**^{km}**, mb3.4**/3**, mb1 3.6**/5**, mb1mx3.3**/58**, mbtmp3.3**/5**, ML3.2**/1**, MS3.5**/1**, Ms1 3.5**/1**, ms1mx2.7**/37**, Error ellipse: s-maj=100.5km s-min=29.4km az=76.0, Nepal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**15.84**	**125**	Pn	Pn	13 14 02.1	-1.5
	baz=310,slow=12,SNR=1.3						
MKAR	**Makanchi Array**	**18.75**	**354**	P	P	13 14 38.4	-1.1
	0.1nm,0.3s,baz=180,slow=10,SNR=3.2						
SONM	**Songino Array**	**25.62**	**34**	P	P	13 15 51.0	+0.7
	0.2nm,0.4s,baz=219,slow=11,SNR=2.5						
BATI	**Baumata**	**53.24**	**130**	LR	LR	13 47 34.6	
	comp=Z,41nm,18.6s,baz=302,slow=42						
WRA	**Warramunga Arr**	**67.36**	**130**	P	P	13 21 16.1	-0.2
	0.3nm,0.7s,baz=323,slow=6.6,SNR=5.8						
ASAR	**Alice Springs**	**69.67**	**133**	P	P	13 21 31.1	+0.4
	0.3nm,0.7s,baz=314,slow=6.2,SNR=4.7						

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*NEIC **17** 13:14:26.0±1.2, 52°.68N±0°.08×163°.27W±0°.10, h10^{km}±2^{km}, ML3.4/6, ML3.2/30(AEIC), Error ellipse: s-maj=13.9km s-min=8.4km az=151.0*

*AEIC **17** 13:14:29±0.8, 52°.65N±0°.10×163°.22W±0°.06, h4^{km}±8^{km}, Error ellipse: s-maj=14.9km s-min=2.7km az=160.0*

*IDC **17** 13:14:41.6±9.8, 54°.13N×163°.05W, h124^{km}±92^{km}, mb3.2/3, mb1 3.3/5, mb1mx3.0/60, mbtmp3.5/5, ML2.9/2, Error ellipse: s-maj=120.2km s-min=24.3km az=6.0*

ISC 17 13:14:26.8±1.2**, 52°.76N**±0°.09×**163°.21W**±0°.05**, h10**^{km}**, n37,** σ**1^{s}.48**/40**, mb3.5**/3**, South of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WESP	**Westdahl Peak**	**1.96**	**333**		**Pn**	**13 15 00.3**	**+0.1**
WESP					**Sn**	**13 15 24.1**	**-0.8**
ISLZ	**Isanotski Laza**	**2.00**	**352**		**Pn**	**13 15 00.6**	**-0.1**
ISLZ					**Sn**	**13 15 25.5**	**-0.2**
WECS	**Westdahl Cape**	**2.01**	**333**		**Pn**	**13 15 01.1**	**+0.3**
WECS					**Sn**	**13 15 25.1**	**-0.9**
SSLS	**Shishaldin Sou**	**2.02**	**347**		**Pn**	**13 15 01.1**	**+0.2**
SSLS					**Sn**	**13 15 26.9**	**+0.7**
AKSA	**Akutan Strait**	**2.03**	**314**		**Pn**	**13 15 00.7**	**-0.3**
AKSA					**Sn**	**13 15 24.8**	**-1.6**
AKUT	**Akutan**	**2.06**	**313**	Pn	**Pn**	**13 15 01.1**	**-0.4**
AKUT				IAML		13 15 43.9	
	comp=E,160nm,3.3s						
SSBA	**Shishaldin**	**2.09**	**345**		**Pn**	**13 15 02.0**	**0.0**
FALS	**False Pass**	**2.11**	**357**		**Pn**	**13 15 02.1**	**0.0**
FALS					**Sn**	**13 15 28.6**	**+0.2**
AKBBA	**Akutan Broad B**	**2.11**	**311**		**Pn**	**13 15 02.2**	**0.0**
AKBBA					**Sn**	**13 15 27.8**	**-0.7**
AKMO	**Akutan Morgan**	**2.14**	**310**		**Pn**	**13 15 02.3**	**-0.3**
AKMO					**Sn**	**13 15 28.1**	**-1.1**
AKGG	**Akutan Green G**	**2.20**	**312**		**Pn**	**13 15 03.4**	**0.0**
UNV	**Unalaska Valle**	**2.26**	**300**		**Pn**	**13 15 03.3**	**-0.9**
UNV					**Sn**	**13 15 29.2**	**-2.8**
MNAT	**Makushin Natee**	**2.37**	**300**		**Pn**	**13 15 05.3**	**-0.5**
MNAT					**Sn**	**13 15 32.3**	**-2.5**
MSW	**Makushin Switc**	**2.44**	**300**		**Pn**	**13 15 06.3**	**-0.4**
OKFG	**Magazine Ridge**	**2.91**	**285**		**Pn**	**13 15 11.8**	**-1.4**
OKTU	**Okmok Mt. Tuli**	**2.98**	**284**		**Pn**	**13 15 13.0**	**-1.1**
OKNC	**Okmok New Cone**	**3.04**	**285**		**Pn**	**13 15 14.1**	**-0.9**
OKSO	**Okmok South**	**3.04**	**283**		**Pn**	**13 15 13.8**	**-1.2**
SDPT	**Sand Point**	**3.06**	**31**		**Pn**	**13 15 16.0**	**+0.8**
SDPT	**Sand Point**	**3.06**	**31**	IAML		13 15 51.9	
	comp=N,105nm,1.6s						
SDPT				IAML		13 16 09.2	
	comp=E,130nm,2.5s						
NIKH	**Nikolski High**	**3.43**	**276**		**Pn**	**13 15 18.9**	**-1.3**
CHGN	**Chignik**	**4.52**	**36**	Pn	**Pn**	**13 15 35.9**	**+0.7**
CHGN				IAML		13 16 37.3	
	comp=N,55nm,0.3s						
OHAK	**Old Harbor**	**7.25**	**48**	Pn	**Pn**	**13 16 12.5**	**-0.3**
KDAK	**Kodiak Island**	**7.88**	**46**	P	**Pn**	**13 16 20.4**	**-1.0**
	comp=N,0.3nm,0.3s,baz=241,slow=10,SNR=1.7						
KDAK				S	**Sn**	**13 17 44.0**	**-6.6**
	comp=N,0.1nm,0.3s,baz=189,slow=22,SNR=2.3						
ADK	**Adak**	**8.30**	**269**	Pn	**Pn**	**13 16 26.4**	**-0.7**
KIWB	**Kanaga Island**	**8.59**	**270**	Pn	**Pn**	**13 16 30.6**	**-0.5**
N19K	**Bonanza Creek**	**9.38**	**27**	Pn	**Pn**	**13 16 42.7**	**+0.7**
ILAR	**Eielson Array**	**14.66**	**28**	P	Pn	13 17 45.9	-8.1
	comp=N,0.0nm,0.3s,baz=229,slow=12,SNR=1.4						
PETK	**Petropavlovsk-**	**23.37**	**287**	P	**P**	**13 19 36.4**	**+1.2**
	comp=N,4.1nm,1.0s,baz=91,slow=12,SNR=4.6						
PDAR	**Pinedale Array**	**36.63**	**84**	P	**P**	**13 21 35.0**	**+1.5**
	comp=N,0.6nm,0.7s,baz=312,slow=5.2,SNR=5.6						
H11N2	**WAKE ISLAND Hy**	**40.28**	**227**	T	T	14 06 54.0	
	baz=25						
H11N3	**WAKE ISLAND Hy**	**40.29**	**227**	T	T	14 07 01.6	
	baz=25						
H11N1	**WAKE ISLAND Hy**	**40.30**	**227**	T	T	14 07 04.9	
	baz=25						
H11S1	**WAKE ISLAND Hy**	**41.44**	**226**	T	T	14 08 49.3	
	baz=23						
H11S2	**WAKE ISLAND Hy**	**41.46**	**226**	T	T	14 08 32.4	
	baz=23,slow=74						
H11S3	**WAKE ISLAND Hy**	**41.46**	**226**	T	T	14 08 16.5	
	baz=23,slow=74						
TXAR	**Lajitas Array**	**49.00**	**94**	P	**P**	**13 23 14.5**	**+0.8**
	comp=N,0.2nm,0.5s,baz=294,slow=5.5,SNR=3.4						

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*SJA **17** 13:16:25.4±1.2, 30°.67S×71°.60W, h50^{km}, ML4.4, MW4.2*

*IDC **17** 13:16:26.8±2.9, 30°.79S×71°.32W, h42^{km}±24^{km}, mb4.0/8, mb1 4.1/13, mb1mx4.0/31, mbtmp4.2/13, ML3.9/5, MS2.9/1, Ms1 2.9/1, ms1mx2.6/19, Error ellipse: s-maj=23.6km s-min=21.6km az=69.0*

*NEIC **17** 13:16:27.9±1.0, 30°.69S±0°.03×71°.49W±0°.07, h49^{km}±5^{km}, mb4.6/26, Mwr4.1/24, ML4.5(GUC), Error ellipse: s-maj=9.0km s-min=4.1km az=87.0*

*GUC **17** 13:16:27.5±1.1, 30°.69S×71°.36W, h54^{km}±4^{km}, ML4.6*

*NEIC **17** 13:16:27.9, 30°.70S×71°.50W, h52^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.50; M$_{\theta\theta}$0.19; M$_{\phi\phi}$-1.69; M$_{r\theta}$0.31; M$_{\theta\phi}$0.07; M$_{\phi r}$-0.37; Fault plane solution: M$_0$1.68000×10^{15} NP1:φ$_s$166.49000°, δ52.92000°, λ75.34000°. NP2:φ$_s$9.94000°, δ39.48000°, λ108.52000°. Principal axes: T 1.6130, Plg76.0000°, Azm27.0000°; N 0.1272, Plg12.0000°, Azm175.0000°; P -1.7403, Plg7.0000°, Azm267.0000°;*

ISC 17 13:16:26.9±0.7**, 30°.67S**±0°.03×**71°.49W**±0°.04**, h45**^{km}±6^{km}**, n139,** σ**2^{s}.09**/186**, mb4.5**/21**, 3C-4D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	**Fray Jorge**	**0.12**	**269**	⇑*i*P	**Pn**	**13 16 36.1**	**+1.9**
CO06				*i* S	**Sn**	**13 16 42.4**	**+3.1**
CO06	**Fray Jorge**	**0.12**	**269**		**Pn**	**13 16 36.0**	**+1.9**
CO06				Sn	**Sn**	**13 16 40.8**	**+1.5**
GO04	**Tololo Observa**	**0.78**	**50**	⇓*i*P	**Pn**	**13 16 42.0**	**+0.3**
GO04				*i* S	**Sn**	**13 16 52.5**	**0.0**
GO04	**Tololo Observa**	**0.78**	**50**		**Pn**	**13 16 42.0**	**+0.3**
GO04				Sn	**Sn**	**13 16 52.8**	**+0.4**
GO04	**Tololo Observa**	**0.78**	**50**	*e*P	**Sn**	**13 16 52.9**	**+0.4**
CO05	**La Serena**	**0.78**	**16**	⇓*i*P	**Pn**	**13 16 42.7**	**+1.2**
CO05				*i* S	**Sn**	**13 16 52.5**	**+0.3**
CO05	**La Serena**	**0.78**	**16**		**Pn**	**13 16 42.6**	**+1.0**
CO05				Sn	**Sn**	**13 16 52.2**	**0.0**
LCO	**Las Campanas**	**1.79**	**23**	⇓*i*P	**Pn**	**13 16 56.7**	**+1.1**
LCO				*i* S	**Sn**	**13 17 18.7**	**+1.4**
LCO	**Las Campanas**	**1.79**	**23**		**Pn**	**13 16 56.7**	**+1.1**
LCO	**Las Campanas**	**1.79**	**23**	*e*P	**Pn**	**13 16 57.0**	**+1.4**
AROD	**Rodeo**	**1.81**	**74**	*e*P	**Pn**	**13 16 58.4**	**+2.4**
AROD				*e*S	**Sn**	**13 17 15.5**	**-2.5**
VA06	**Catapilco**	**1.89**	**175**	⇓*i*P	**Pn**	**13 16 57.6**	**+0.9**
VA06				IAML		13 17 26.8	
	comp=E,7μm,0.6s						
ACCO	**Cerro Coronel**	**2.09**	**88**	*e*P	**Pn**	**13 17 02.3**	**+2.5**
ACDV	**Cuesta del Vie**	**2.11**	**77**	*e*P	**Pn**	**13 17 03.0**	**+3.1**
ACDV				*e*S	**Sn**	**13 17 16.1**	**-8.9**
RTLS	**Leoncito**	**2.19**	**121**	*e*P	**Pn**	**13 17 03.4**	**+2.3**
RTLS				IAML		13 17 35.9	
	comp=Z,1μm,0.2s						
VA03	**San Esteban**	**2.23**	**159**	*e*P	**Pn**	**13 17 02.5**	**+0.9**
VA03				*i* S	**Sn**	**13 17 29.4**	**+1.4**
VA03				IAML		13 17 33.2	
	comp=E,5μm,0.3s						
VA03	**San Esteban**	**2.23**	**159**		**Pn**	**13 17 02.6**	**+1.1**
VA03	**San Esteban**	**2.23**	**159**	*e*P	**Pn**	**13 17 02.7**	**+1.2**
VA03				*e*S	**Sn**	**13 17 31.1**	**+3.2**
VA03				IAML		13 17 38.0	
	comp=Z,2μm,0.2s						
ROCH	**El Roble**	**2.33**	**170**	*e*P	**Pn**	**13 17 04.0**	**+1.0**
ROCH				*e*S	**Sn**	**13 17 32.3**	**+1.8**
ROCH				IAML		13 17 40.2	
	comp=N,3μm,0.3s						
ROC1	**El Roble**	**2.33**	**170**	*e*P	**Pn**	**13 17 04.0**	**+1.0**
ROC1				*e*S	**Sn**	**13 17 29.2**	**-1.4**
VA01	**Torpederas**	**2.35**	**183**		**Pn**	**13 17 03.0**	**0.0**
VA01	**Torpederas**	**2.35**	**183**	*e*P	**Pn**	**13 17 03.2**	**+0.2**
VA01				*e*S	**Sn**	**13 17 37.3**	**+6.7**
AUSP	**Uspallata**	**2.37**	**131**	*e*P	**Pn**	**13 17 06.0**	**+2.4**
AC04	**Llanos de Chal**	**2.48**	**9**	⇑*i*P	**Pn**	**13 17 06.6**	**+1.7**
AC04				IAML		13 17 47.0	
	comp=E,2μm,0.3s						
AC04	**Llanos de Chal**	**2.48**	**9**		**Pn**	**13 17 06.6**	**+1.7**
AC04	**Llanos de Chal**	**2.48**	**9**	*e*P	**Pn**	**13 17 06.6**	**+1.7**
AC04				*e*S	Sn	13 17 23.1	-11
AC04				IAML		13 17 52.1	
	comp=Z,902nm,0.4s						
PEL	**Peldehue**	**2.56**	**165**	*e*P	**Pn**	**13 17 06.8**	**+0.9**
PEL				*e*S	**Sn**	**13 17 36.4**	**+0.6**
PEL				IAML		13 17 42.8	
	comp=E,2μm,0.4s						
PEL	**Peldehue**	**2.56**	**165**		**Pn**	**13 17 06.9**	**+0.9**
PEL	**Peldehue**	**2.56**	**165**	*e*P	**Pn**	**13 17 07.0**	**+1.1**
PEL				*e*S	**Sn**	**13 17 36.5**	**+0.6**
ZON	**Zonda**	**2.57**	**111**		**Pn**	**13 17 08.1**	**+2.0**
ZON	**Zonda**	**2.57**	**111**	*e*P	**Pn**	**13 17 08.0**	**+2.0**
ZON				*e*S	**Sn**	**13 17 27.4**	**-8.7**
ZON				IAML		13 17 58.7	
	comp=Z,863nm,0.4s						
MT02	**Curacav**	**2.60**	**173**	*e*P	**Pn**	**13 17 07.0**	**+0.6**
MT02				*e*S	**Sn**	**13 17 37.2**	**+0.4**
MT02	**Curacav**	**2.60**	**173**		**Pn**	**13 17 07.1**	**+0.7**
MT02	**Curacav**	**2.60**	**173**	*e*P	**Pn**	**13 17 07.0**	**+0.6**
MT02				*e*S	**Sn**	**13 17 41.0**	**+4.2**
MT02				IAML		13 17 48.7	
	comp=Z,1μm,0.4s						
MT05	**Renca**	**2.79**	**167**	*e*P	**Pn**	**13 17 10.0**	**+0.9**
MT05	**Renca**	**2.79**	**167**		**Pn**	**13 17 10.2**	**+1.1**
MT05	**Renca**	**2.79**	**167**	*e*P	**Pn**	**13 17 10.2**	**+1.1**
MT05				*e*S	Sn	13 17 25.9	-16
MT05				IAML		13 17 55.0	
	comp=Z,1μm,0.2s						
RTCV	**Cerro Valdivia**	**2.79**	**116**	*e*P	**Pn**	**13 17 12.0**	**+2.9**
RTCV				*e*S	Sn	13 17 28.8	-13
ASAL	**Salagasta**	**2.97**	**131**	*e*P	**Pn**	**13 17 14.0**	**+2.4**
ASAL				*e*S	**Sn**	**13 17 50.0**	**+4.1**
VA05	**Santo Domingo**	**2.98**	**182**	IAML		13 18 07.8	
	comp=E,2μm,0.3s						
VA05	**Santo Domingo**	**2.98**	**182**		**Pn**	**13 17 11.3**	**-0.3**
ARCO	**CERRO ARCO**	**3.07**	**135**	*e*P	**Pn**	**13 17 16.0**	**+2.9**
ARCO				IAML		13 18 04.0	
	comp=Z,629nm,0.7s						
ARCO				*e*S	Sn	13 18 04.0	+15
MT09	**Talagante**	**3.12**	**172**	*i* P	**Pn**	**13 17 14.8**	**+1.0**
MT09				*e*S	**Sn**	**13 17 50.8**	**+0.8**
MT09				IAML		13 18 02.2	
	comp=E,1μm,0.6s						
MT09	**Talagante**	**3.12**	**172**		**Pn**	**13 17 14.4**	**+0.6**
MT01	**Popeta**	**3.19**	**176**	*e*P	**Pn**	**13 17 15.2**	**+0.6**
MT01				*e*S	**Sn**	**13 17 51.4**	**+0.1**
MT01	**Popeta**	**3.19**	**176**		**Pn**	**13 17 15.0**	**+0.5**
MT01	**Popeta**	**3.19**	**176**	*e*P	**Pn**	**13 17 15.3**	**+0.8**
MT01				*e*S	**Sn**	**13 17 53.2**	**+1.8**
MT01				IAML		13 18 04.4	
	comp=Z,676nm,0.5s						
GO03	**Copiap**	**3.26**	**20**	*e*P	**Pn**	**13 17 17.3**	**+1.7**
GO03				*e*S	**Sn**	**13 17 55.7**	**+2.6**
GO03				IAML		13 18 08.9	
	comp=E,1μm,0.2s						
GO03	**Copiap**	**3.26**	**20**		**Pn**	**13 17 17.0**	**+1.4**
GO03	**Copiap**	**3.26**	**20**	*e*P	**Pn**	**13 17 17.0**	**+1.4**
GO03				*e*S	Sn	13 18 06.0	+13
AAGR	**Agrelo**	**3.31**	**137**	*e*P	**Pn**	**13 17 19.5**	**+3.2**
AAGR				*e*S	Sn	13 17 37.9	-16
BO04	**La Punta**	**3.39**	**168**	⇑*i*P	**Pn**	**13 17 18.5**	**+1.1**
BO04				*e*S	**Sn**	**13 18 00.3**	**+3.9**
BO04				IAML		13 18 04.3	
	comp=E,1μm,0.5s						
BO04				IAML		13 18 07.6	
	comp=E,935nm,0.3s						
VCA	**Vinchina**	**3.45**	**57**	*i* P	**Pn**	**13 17 22.4**	**+4.1**
VCA				*e*S	**Sn**	**13 18 04.2**	**+6.2**
VCA	**Vinchina**	**3.45**	**57**	*e*P	**Pn**	**13 17 22.1**	**+3.9**
VCA				*e*P	**Pn**	**13 17 22.2**	**+3.9**
VCA				*e*S	**Sn**	**13 18 01.5**	**+3.5**
VCA				*e*S	**Sn**	**13 18 02.0**	**+4.0**
VCA				*e*S		13 18 05.5	
VCA				*e*S		13 18 06.0	
VCA				IAML		13 18 15.2	
	comp=Z,2μm,0.6s						
AVFE	**Valle Fertil**	**3.48**	**91**	*e*P	**Pn**	**13 17 19.7**	**+1.1**
AVFE				*e*S	**Sn**	**13 18 02.0**	**+3.4**
AVFE				IAML		13 18 10.9	
	comp=Z,740nm,0.4s						
BO01	**Tunca**	**3.73**	**175**	*e*P	**Pn**	**13 17 22.8**	**+0.9**
BO01				*e*S	**Sn**	**13 18 03.1**	**-1.5**
BO01	**Tunca**	**3.73**	**175**		**Pn**	**13 17 22.6**	**+0.7**
BO01	**Tunca**	**3.73**	**175**	*e*P	**Pn**	**13 17 22.7**	**+0.7**
BO01				*e*S	**Sn**	**13 18 05.5**	**+0.9**
BO01				IAML		13 18 25.0	
	comp=Z,336nm,0.7s						
ACLC	**CERRO LA CRUZ**	**4.13**	**74**	*e*P	**Pn**	**13 17 29.4**	**+1.8**
ACLC				*e*S	**Sn**	**13 18 17.0**	**+2.3**
ACLC				IAML		13 18 26.3	
	comp=Z,1μm,0.5s						
BO02	**Sierra Bellavi**	**4.15**	**172**	*e*P	**Pn**	**13 17 28.9**	**+1.0**
BO02				*e*S	**Sn**	**13 18 15.7**	**+0.5**
BO02	**Sierra Bellavi**	**4.15**	**172**		**Pn**	**13 17 28.5**	**+0.6**
BO02	**Sierra Bellavi**	**4.15**	**172**	*e*P	**Pn**	**13 17 28.9**	**+1.0**
BO02				*e*S	**Sn**	**13 18 15.6**	**+0.5**
BO02				IAML		13 18 34.4	
	comp=Z,441nm,0.2s						
ACHE	**Chepes**	**4.18**	**98**	*e*P	**Pn**	**13 17 29.2**	**+0.9**
ACHE				*e*S	**Sn**	**13 18 19.5**	**+3.6**
APLL	**PUNTA DE LOS L**	**4.29**	**88**	*e*P	**Pn**	**13 17 31.0**	**+1.2**
APLL				*e*S	**Sn**	**13 18 20.0**	**+1.4**
GO05	**Huala**	**4.34**	**185**		**Pn**	**13 17 29.5**	**-0.9**
GO05	**Huala**	**4.34**	**185**	*e*P	**Pn**	**13 17 29.8**	**-0.6**
GO05				*e*S	**Sn**	**13 18 17.9**	**-1.9**
AC02	**Maricunga**	**4.35**	**29**	Pn	**Pn**	**13 17 32.7**	**+1.7**
RFA	**San Rafael**	**4.82**	**149**	*e*P	**Pn**	**13 17 37.9**	**+0.9**
RFA				IAML		13 19 13.7	
	comp=Z,119nm,0.8s						
ML02	**Panimavida**	**5.08**	**179**		**Pn**	**13 17 40.4**	**-0.1**
MRA	**San Martin**	**5.23**	**111**	*e*P	**Pn**	**13 17 43.1**	**+0.4**
MRA				*e*S	**Sn**	**13 18 42.5**	**+0.8**
MRA				IAML		13 18 48.6	
	comp=Z,430nm,1.0s						
CYA	**Choya**	**5.43**	**67**	*e*P	**Pn**	**13 17 46.4**	**+1.0**
CYA				*e*P	**Pn**	**13 17 46.5**	**+1.1**
CYA				*e*S	**Sn**	**13 18 46.5**	**-0.1**
CYA				IAML		13 18 55.4	
	comp=Z,175nm,1.4s						
AHML	**Horco Molle**	**6.65**	**56**	*e*P	**Pn**	**13 18 02.4**	**+0.3**
AHML				*e*S	**Sn**	**13 19 18.0**	**+1.3**
AHML				IAML		13 19 47.7	
	comp=Z,86nm,0.8s						
FSA	**Cafayete**	**6.65**	**48**	*e*P	**Pn**	**13 18 03.9**	**+1.6**
FSA				*e*S	**Sn**	**13 19 24.5**	**+7.7**
VA04	**Juan Fernndez**	**6.89**	**243**		**Pn**	**13 18 05.2**	**-0.1**
PB15	**IPOC Station P**	**7.65**	**14**		**Pn**	**13 18 15.0**	**-1.0**
PB15	**IPOC Station P**	**7.65**	**14**	*e*P	**Pn**	**13 18 15.4**	**-0.6**
PB15				*e*S	Sn	13 19 55.0	+14
PB05	**IPOC Station P**	**7.87**	**9**	*e*P	**Pn**	**13 18 17.0**	**-2.0**
PB05				*e*P	**Pn**	**13 18 17.0**	**-2.0**
PB05				*e*P		13 18 18.5	
PB05				*e*S	**Sn**	**13 19 42.0**	**-4.9**
PB06	**IPOC Station P**	**8.12**	**13**	Pn	**Pn**	**13 18 20.3**	**-2.1**
PB06	**IPOC Station P**	**8.12**	**13**	*e*P	**Pn**	**13 18 21.5**	**-0.9**
PB06				*e*P	**Pn**	**13 18 21.5**	**-0.9**
LC01	**Cunco**	**8.21**	**182**	Pn	**Pn**	**13 18 22.3**	**-1.2**
LVC	**Limon Verde**	**8.35**	**17**	P	**Pn**	**13 18 25.1**	**-0.7**
	comp=Z,1.0nm,0.3s,baz=185,slow=8.9,SNR=21						
LVC				LR	LR	13 21 56.4	
	comp=Z,70nm,19.6s,baz=229,slow=39						
LVC	**Limon Verde**	**8.35**	**17**	Pn	**Pn**	**13 18 24.8**	**-1.0**
PB04	**IPOC Station P**	**8.39**	**9**	Pn	**Pn**	**13 18 25.1**	**-1.1**
PB04	**IPOC Station P**	**8.39**	**9**	*e*P	**Pn**	**13 18 25.0**	**-1.1**
PB03	**IPOC Station P**	**8.73**	**11**	*e*P	**Pn**	**13 18 29.2**	**-1.5**
PB03				*e*P	**Pn**	**13 18 29.2**	**-1.5**
PB03				*e*P	**Pn**	**13 18 29.3**	**-1.4**
PB03				*e*S	Sn	13 19 57.1	-11
PB09	**IPOC Station P**	**9.07**	**13**	Pn	**Pn**	**13 18 34.2**	**-1.2**
PB09	**IPOC Station P**	**9.07**	**13**	*e*P	**Pn**	**13 18 34.1**	**-1.3**
PB01	**IPOC Station P**	**9.76**	**11**	Pn	**Pn**	**13 18 42.1**	**-2.7**
PLCA	**Paso Flores**	**10.07**	**176**	P	**Pn**	**13 18 47.0**	**-1.9**
	comp=Z,0.1nm,0.3s,baz=17,slow=17,SNR=1.9						
PB08	**IPOC Station P**	**10.70**	**12**	Pn	**Pn**	**13 18 54.9**	**-3.0**
ITQB	**Itaqui**	**12.90**	**89**		**Pn**	**13 19 24.1**	**-3.5**
CPUP	**Villa Florida**	**13.18**	**74**	P	**Pn**	**13 19 29.2**	**-2.3**
	comp=Z,0.5nm,0.3s,baz=236,slow=10.0,SNR=6.0						
CPUP				S	**Sn**	**13 21 54.1**	**-2.6**
	comp=Z,0.2nm,0.3s,baz=207,slow=19,SNR=1.8						
CPUP	**Villa Florida**	**13.18**	**74**	Pn	**Pn**	**13 19 28.1**	**-3.4**
LPAZ	**La Paz**	**14.64**	**13**	P	**Pn**	**13 19 54.0**	**+2.1**
	comp=Z,0.2nm,0.3s,baz=186,slow=8.5,SNR=13						
LPAZ	**La Paz**	**14.64**	**13**	Pn	**Pn**	**13 19 51.9**	**0.0**
SIV	**San Ignacio**	**17.45**	**35**	P	**P**	**13 20 28.2**	**+0.3**
	comp=Z,0.8nm,0.3s,baz=209,slow=10,SNR=16						
AQDB	**Aquidauana**	**17.48**	**58**		**P**	**13 20 28.0**	**-0.1**
PTLB	**Pontes e Lacer**	**18.92**	**40**	P	**P**	**13 20 43.6**	**-0.4**
VILB	**Vilhena**	**20.49**	**33**	P	**P**	**13 21 01.1**	**-0.1**
VILB				IAmb	IAmb	13 21 01.8	
	comp=Z,14nm,0.7s						
MG05	**Puerto Natales**	**21.00**	**182**	P	**P**	**13 21 06.8**	**+0.4**
MG05				IAmb	IAmb	13 21 10.2	
	comp=Z,47nm,1.1s						
ETMB	**Extrema**	**21.32**	**14**	P	**P**	**13 21 10.3**	**+0.2**
BDFB	**Brasilia**	**26.18**	**60**	P	**P**	**13 21 56.7**	**-0.8**
	comp=Z,9.7nm,0.7s,baz=231,slow=6.9,SNR=11						
BDFB	**Brasilia**	**26.18**	**60**	P	**P**	**13 21 56.3**	**-1.2**
BDFB				IAmb	IAmb	13 21 57.4	
	comp=Z,8.7nm,0.6s						
BOAV	**Boa Vista**	**34.51**	**20**	P	**P**	**13 23 11.0**	**+0.1**
MLPR	**Magueyes Islan**	**48.55**	**6**	P	**P**	**13 25 05.9**	**+0.2**
OBIP	**Obispado Ponce**	**48.66**	**6**	P	**P**	**13 25 06.8**	**+0.2**
VNA3	**Neumayer Olymp**	**52.27**	**159**	P	**P**	**13 25 34.0**	**+0.6**
VNA2	**Neumayer--Watz**	**52.91**	**158**	P	**P**	**13 25 38.0**	**0.0**
	baz=287,slow=5.4						
SNAA	**Sanae**	**54.50**	**159**	P	**P**	**13 25 49.6**	**-0.2**
SNAA	**Sanae**	**54.50**	**159**	P	**P**	**13 25 49.6**	**-0.2**
SNAA				IAmb	IAmb	13 25 50.4	
	comp=Z,8.9nm,1.5s						
QSPA	**South Pole Qui**	**59.56**	**180**	P	**P**	**13 26 26.2**	**+0.5**
QSPA				IAmb	IAmb	13 26 27.1	
	comp=Z,4.0nm,1.0s						
TX31	**Lajitas Ar. Si**	**67.08**	**330**	P	**P**	**13 27 16.6**	**+0.7**
TX31				IAmb	IAmb	13 27 18.6	
	comp=Z,11nm,1.3s						
TX32	**Lajitas Array**	**67.08**	**330**	P	**P**	**13 27 16.6**	**+0.7**
TXAR	**Lajitas Array**	**67.08**	**330**	P	**P**	**13 27 17.7**	**+1.9**
	comp=Z,0.6nm,0.5s,baz=156,slow=9.1,SNR=7.9						
TXAR	**Lajitas Array**	**67.08**	**330**	P	**P**	**13 27 16.3**	**+0.5**
V52A	**Sevierville**	**67.13**	**349**	P	**P**	**13 27 16.4**	**+0.5**
WVT	**Waverly**	**68.20**	**346**	P	**P**	**13 27 24.1**	**+1.6**
WVT				IAmb	IAmb	13 27 24.5	
	comp=Z,3.7nm,0.8s						
W39A	**Magazine**	**68.80**	**341**	P	**P**	**13 27 27.7**	**+1.4**
W39A				IAmb	IAmb	13 27 29.8	
	comp=Z,6.4nm,1.1s						
LCAR	**Lake Charles**	**68.91**	**343**	P	**P**	**13 27 27.6**	**+0.6**
LCAR				IAmb	IAmb	13 27 28.8	
	comp=Z,6.5nm,1.0s						
CCM	**Cathedral Cave**	**70.82**	**344**	P	**P**	**13 27 39.3**	**+0.6**
CCM				IAmb	IAmb	13 27 40.9	
	comp=Z,6.5nm,1.1s						
R40A	**Maddies Statio**	**71.30**	**343**	P	**P**	**13 27 42.0**	**+0.5**
R40A				IAmb	IAmb	13 27 43.2	
	comp=Z,7.4nm,0.8s						
LIC	**Lamto**	**73.30**	**72**	*e*P	**P**	**13 27 53.5**	**-0.6**
	comp=Z,20nm,1.0s						
TIC	**Toumodi**	**73.54**	**72**	*e*P	**P**	**13 27 54.9**	**-0.7**
KIC	**Kosan Boka**	**73.61**	**72**	*e*P	**P**	**13 27 55.5**	**-0.5**
	comp=Z,14nm,0.7s						
DBIC	**Dimbokro**	**73.69**	**72**	P	**P**	**13 27 56.3**	**-0.2**
	comp=Z,6.1nm,0.6s,baz=236,slow=4.3,SNR=11						
DBIC	**Dimbokro**	**73.69**	**72**	P	**P**	**13 27 56.2**	**-0.2**
MAW	**Mawson**	**76.23**	**164**	P	**P**	**13 28 10.3**	**+0.1**
	comp=Z,4.0nm,0.9s,baz=230,slow=6.9,SNR=3.0						
MAW	**Mawson**	**76.23**	**164**	P	**P**	**13 28 10.3**	**+0.1**
ECSD	**EROS Data Cent**	**77.54**	**342**	P	**P**	**13 28 18.5**	**+0.7**
ECSD				IAmb	IAmb	13 28 19.1	
	comp=Z,3.3nm,0.7s						
KOWA	**Kowa**	**78.85**	**66**	P	**P**	**13 28 25.7**	**0.0**
KOWA				IAmb	IAmb	13 28 26.3	
	comp=Z,12nm,1.5s						
D41A	**Chassel**	**78.89**	**348**	P	**P**	**13 28 26.0**	**+0.9**
PDAR	**Pinedale Array**	**81.02**	**333**	P	**P**	**13 28 37.9**	**+0.8**
	comp=Z,0.2nm,0.5s,baz=134,slow=7.6,SNR=2.1						
NVAR	**Mina Array Bea**	**81.43**	**325**	P	**P**	**13 28 41.0**	**+1.6**
	comp=Z,0.7nm,0.8s,baz=138,slow=6.4,SNR=4.0						
TORD	**Torodi Ar. Bea**	**82.64**	**70**	P	**P**	**13 28 45.7**	**-0.3**
	comp=Z,2.9nm,0.8s,baz=279,slow=6.1,SNR=19						
ULM	**Lac du Bonnet**	**83.42**	**345**	P	**P**	**13 28 49.0**	**-0.1**
	comp=Z,3.1nm,0.7s,baz=169,slow=5.2,SNR=3.2						
ULM	**Lac du Bonnet**	**83.42**	**345**	IAmb	IAmb	13 29 01.0	
	comp=Z,8.1nm,1.2s						
WRA	**Warramunga Arr**	**123.88**	**210**	PKP	**PKPdf**	**13 35 19.4**	**-1.3**
	comp=Z,0.2nm,0.5s,baz=156,slow=1.7,SNR=8.4						

ZALV	**Zalesovo Beam**	151.14	29	PKPbc	PKPbc	13 36 14.8	+0.1
	comp=Z,7.0nm,0.5s,baz=303,slow=3.4,SNR=30						
MKAR	**Makanchi Array**	154.14	44	PKPbc	PKPbc	13 36 20.2	-1.4
	comp=Z,0.3nm,0.5s,baz=345,slow=2.8,SNR=4.4						

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*THE **17** 13:29:02.5, 38°.53N×20°.54E, h11^{km}±1^{km}, ML3.2/11, Error ellipse: s-maj=1.6km s-min=0.3km az=104.0*

*ATH **17** 13:29:02.5, 38°.54N×20°.56E, h13^{km}±1^{km}, ML3.0/3, Error ellipse: s-maj=2.0km s-min=0.7km az=285.0*

ISC 17 13:29:01.6±0.8**, 38°.54N**±0°.02×**20°.52E**±0°.04**, h17**^{km}±5^{km}**, n43, σ1^{s}.14**/74**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FSK	**Fiskardo**	0.09	156	P	Pg	13 29 04.9	-0.1
FSK				S	Sg	13 29 06.3	-1.0
	42μm,0.2s						
FSK	**Fiskardo**	0.09	156	P	Pg	13 29 04.9	-0.1
FSK				S	Sg	13 29 06.5	-0.8
EVGI	**Lefkada island**	0.14	55	P	Pg	13 29 05.5	0.0
EVGI				S	Sg	13 29 08.0	-0.2
	39μm,0.1s						
EVGI	**Lefkada island**	0.14	55	P	Pg	13 29 05.5	0.0
EVGI				S	Sg	13 29 08.0	-0.2
NYDR	**Nydri-Lefkada**	0.22	40	P	Pg	13 29 06.8	+0.1
NYDR				S	Sg	13 29 10.6	+0.3
	13μm,0.2s						
NYDR	**Nydri-Lefkada**	0.22	40	P	Pg	13 29 06.9	+0.1
NYDR				S	Sg	13 29 10.5	+0.3
LKD2	**Lefkada island**	0.27	25	P	Pg	13 29 07.7	+0.1
LKD2				S	Sg	13 29 12.3	+0.7
LKD2	**Lefkada island**	0.27	25	P	Pg	13 29 07.8	+0.3
LKD2				S	Sg	13 29 12.4	+0.8
LKD2				AML	AML	13 29 12.8	
	comp=E,11356μm,0.2s						
LKD2				AML	AML	13 29 13.6	
	comp=N,8579μm,0.2s						
KEF4	**Livadi, Kephal**	0.29	194	P	Pg	13 29 08.2	+0.3
KEF4				S	Sg	13 29 12.4	+0.2
	comp=N,60μm,0.2s						
KEF4	**Livadi, Kephal**	0.29	194	P	Pg	13 29 08.4	+0.5
KEF4				S	Sb	13 29 13.7	+0.8
TSLK	**Tsoukalades, L**	0.30	21	P	Pg	13 29 08.6	+0.5
TSLK				S	Sg	13 29 13.6	+1.1
	comp=N,6μm,0.2s						
TSLK	**Tsoukalades, L**	0.30	21	P	Pg	13 29 08.6	+0.5
TSLK				S	Sg	13 29 12.8	+0.3
DMLN	**Damoulianata-K**	0.32	200	P	Pg	13 29 08.8	+0.4
DMLN				S	Sg	13 29 14.2	+1.1
	comp=N,11μm,0.4s						
DMLN	**Damoulianata-K**	0.32	200	P	Pg	13 29 08.9	+0.4
DMLN				S	Sg	13 29 14.2	+1.1
LXRA	**Lixouri, Kepha**	0.35	190	P	Pg	13 29 08.4	-0.4
LXRA				S	Sb	13 29 15.0	+0.5
KEF3	**Kipouria, Keph**	0.36	201	P	Pg	13 29 09.0	-0.1
KEF3				S	Sg	13 29 14.5	+0.2
	comp=N,11μm,0.3s						
KEF3	**Kipouria, Keph**	0.36	201	P	Pg	13 29 09.0	-0.1
KEF3				S	Sg	13 29 14.6	+0.4
ARGA	**Argostoli. Kep**	0.37	184	P	Pb	13 29 10.6	+1.0
ARGA				S	Sb	13 29 15.6	+0.5
VLS	**Valsamata**	0.37	171	P	Pg	13 29 09.3	+0.1
VLS				S	Sg	13 29 15.2	+0.7
	comp=N,6μm,0.3s						
VLS	**Valsamata**	0.37	171	P	Pg	13 29 09.4	+0.1
VLS				S	Sg	13 29 15.2	+0.7
VLS				AML	AML	13 29 15.6	
	comp=E,13472μm,0.3s						
VLS				AML	AML	13 29 15.8	
	comp=N,9480μm,0.3s						
PSDA	**Pessada-Kefalo**	0.43	173	P	Pg	13 29 10.3	-0.1
PSDA				S	Sg	13 29 17.1	+0.9
	comp=N,1μm,0.2s						
PSDA	**Pessada-Kefalo**	0.43	173	P	Pg	13 29 10.5	+0.2
PSDA				S	Sg	13 29 17.2	+0.9
PVO	**Paravola**	0.80	84	P	Pg	13 29 17.5	+0.4
LTHK	**Lithakia**	0.87	163	P	Pg	13 29 17.9	-0.6
LTHK				S	Sb	13 29 31.4	+1.8
	comp=N,875nm,0.2s						
LTHK	**Lithakia**	0.87	163	P	Pg	13 29 17.9	-0.6
LTHK				S	Sb	13 29 30.7	+1.1
LTHK				AML	AML	13 29 32.0	
	comp=E,1480μm,0.3s						
LTHK				AML	AML	13 29 32.4	
	comp=N,2013μm,0.2s						
RLS	**Riolos of Patr**	0.89	123	P	Pg	13 29 18.9	-0.1
IGT	**Igoumenitsa**	1.00	352	P	Pb	13 29 21.1	+0.6
IGT				S	Sn	13 29 36.9	+2.4
	comp=N,802nm,0.5s						
IGT	**Igoumenitsa**	1.00	352	P	Pb	13 29 21.0	+0.6
EFP	**Efpalio**	1.10	96	P	Pb	13 29 21.7	-0.4
ANX	**Ano Chora**	1.10	87	P	Pb	13 29 22.2	0.0
DRO	**Drossia**	1.11	122	P	Pb	13 29 22.6	+0.2
JAN	**Janina**	1.14	13	P	Pg	13 29 24.6	+0.9
LAKA	**Lakka**	1.19	104	P	Pb	13 29 23.3	-0.4
DBRK	**Dubrovnik**	4.50	337	*e*Pn	Pn	13 30 09.0	+0.1
DBRK				Sn	Sn	13 30 58.9	-1.9
STON	**Ston**	4.82	335	*e*Pn	Pn	13 30 13.5	+0.2
MAKA	**Makarska**	5.43	332	*e*Pn	Pn	13 30 21.5	-0.2
MAKA				Sn	Sn	13 31 20.4	-3.3
HVAR	**Hvar**	5.56	328	*e*Pn	Pn	13 30 24.3	+0.8
RICI	**Ricice**	5.57	334	*e*Pn	Pn	13 30 23.7	+0.1
RICI				Sn	Sn	13 31 24.9	-2.3
KIJV	**Kijevo**	6.27	332	*e*Pn	Pn	13 30 34.0	+0.7
ZIRJ	**Zirje**	6.29	326	*e*Pn	Pn	13 30 33.8	+0.2
ZIRJ				Sn	Sn	13 31 41.0	-4.0
MORI	**Morici**	6.43	327	*e*Pn	Pn	13 30 36.5	+1.0
DUGI	**Dugi Otok**	6.82	325	*e*Pn	Pn	13 30 41.5	+0.7
DUGI				Sn	Sn	13 31 54.4	-3.6
NVLJ	**Novalja**	7.35	327	*e*Pn	Pn	13 30 48.5	+0.4
NVLJ				Sn	Sn	13 32 07.5	-3.6

THE 17 13:48:46.4, 38°.51N×20°.54E, h8^{km}±1^{km}**, ML2.5**/3**, Error ellipse: s-maj=1.9km s-min=1.1km az=92.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FSK	**Fiskardo**	0.05	161	P	Pg	13 48 48.5	+0.4
FSK				S	Sg	13 48 49.2	-0.2
	15μm,0.2s						
KEF4	**Livadi, Kephal**	0.27	200	P	Pg	13 48 51.8	+0.1
KEF4				S	Sg	13 48 56.0	+0.8
DMLN	**Damoulianata-K**	0.30	206	P	Pg	13 48 52.4	+0.1
DMLN				S	Sg	13 48 57.1	+0.8
	915nm,0.3s						
VLS	**Valsamata**	0.33	173	P	Pg	13 48 52.6	-0.3
VLS				S	Sg	13 48 58.1	+0.8
	730nm,0.2s						
KEF3	**Kipouria, Keph**	0.34	207	P	Pg	13 48 52.5	-0.6
KEF3				S	Sg	13 48 57.7	+0.1
PSDA	**Pessada-Kefalo**	0.40	175	P	Pg	13 48 54.0	-0.1
PSDA				S	Sg	13 48 59.7	+0.4

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*IDC **17** 13:50:02.0±1.5, 38°.68N×20°.54E, h0^{km}, mb3.7/4, mb1 3.7/5, mb1mx3.5/35, mbtmp3.6/5, ML3.7/1, Error ellipse: s-maj=32.5km s-min=27.3km az=109.0*

*IASPEI **17** 13:50:05.2±0.8, 38°.61N±0°.02×20°.61E±0°.03, h16^{km}±4^{km}, mb3.5/4, Error ellipse: s-maj=4.6km s-min=2.4km az=103.1, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*ATH **17** 13:50:05.7, 38°.62N×20°.57E, h15^{km}±1^{km}, ML3.1/2, Error ellipse: s-maj=2.8km s-min=0.9km az=298.0*

*THE **17** 13:50:05.8, 38°.61N×20°.56E, h12^{km}±1^{km}, ML3.3/12, Error ellipse: s-maj=1.0km s-min=0.3km az=79.0*

ISC 17 13:50:05.0±0.7**, 38°.61N**±0°.02×**20°.63E**±0°.03**, h17**^{km}±4^{km}**, n55, σ0^{s}.85**/79**, mb3.5**/4**, 1C-1D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EVGI	**Lefkada island**	0.03	73	P	Pg	13 50 08.2	+0.2
EVGI				S	Sg	13 50 10.1	+0.1
	60μm,0.2s						
EVGI	**Lefkada island**	0.03	73	P	Pg	13 50 08.2	+0.2
EVGI				S	Sg	13 50 10.1	+0.1
NYDR	**Nydri-Lefkada**	0.12	30	P	Pg	13 50 09.1	+0.4
NYDR				S	Sg	13 50 11.6	+0.5
	12μm,0.3s						
NYDR	**Nydri-Lefkada**	0.12	30	P	Pg	13 50 09.1	+0.4
NYDR				S	Sg	13 50 11.8	+0.6
FSK	**Fiskardo**	0.16	198	P	Pb	13 50 09.6	0.0
FSK				S	Sb	13 50 12.2	-0.4
	8μm,0.2s						
FSK	**Fiskardo**	0.16	198	P	Pb	13 50 09.6	0.0
FSK				S	Sb	13 50 12.3	-0.4
FSK				AML	AML	13 50 12.5	
	comp=N,11330μm,0.3s						
FSK				AML	AML	13 50 12.9	
	comp=E,22173μm,0.3s						
LKD2	**Lefkada island**	0.18	8	P	Pg	13 50 09.9	+0.3
LKD2				S	Sg	13 50 13.3	+0.7
TSLK	**Tsoukalades, L**	0.21	6	P	Pg	13 50 10.5	+0.5
TSLK				S	Sg	13 50 14.3	+0.8
	comp=E,10μm,0.3s						
TSLK	**Tsoukalades, L**	0.21	6	P	Pg	13 50 10.5	+0.5
TSLK				S	Sg	13 50 14.8	+1.3
KEF4	**Livadi, Kephal**	0.39	204	P	Pg	13 50 12.9	-0.1
KEF4				S	Sg	13 50 18.6	+0.2
	comp=E,23μm,0.3s						
KEF4	**Livadi, Kephal**	0.39	204	P	Pg	13 50 13.2	+0.1
KEF4				S	Sb	13 50 19.4	+0.2
DMLN	**Damoulianata-K**	0.42	208	P	Pb	13 50 13.5	-0.6
DMLN				S	Sb	13 50 20.3	+0.1
	comp=E,4μm,0.5s						
DMLN	**Damoulianata-K**	0.42	208	P	Pb	13 50 13.5	-0.6
DMLN				S	Sb	13 50 20.3	+0.1
VLS	**Valsamata**	0.44	184	P	Pb	13 50 13.8	-0.5
VLS				S	Sb	13 50 20.7	+0.1
	comp=E,3μm,0.2s						
VLS	**Valsamata**	0.44	184	P	Pb	13 50 14.0	-0.3
VLS				S	Sb	13 50 20.6	+0.1
VLS				AML	AML	13 50 22.9	
	comp=N,6412μm,0.3s						
VLS				AML	AML	13 50 23.3	
	comp=E,6697μm,0.2s						
LXRA	**Lixouri, Kepha**	0.44	200	P	Pb	13 50 14.2	-0.1
LXRA				S	Sb	13 50 21.4	+0.8
ARGA	**Argostoli. Kep**	0.45	195	P	Pg	13 50 15.2	+1.0
KEF3	**Kipouria, Keph**	0.46	208	P	Pb	13 50 13.6	-1.1
KEF3				S	Sb	13 50 20.6	-0.7
KEF3	**Kipouria, Keph**	0.46	208	P	Pb	13 50 13.7	-1.1
KEF3				S	Sb	13 50 20.3	-1.1
PSDA	**Pessada-Kefalo**	0.50	184	P	Pb	13 50 14.9	-0.4
PSDA				S	Sg	13 50 23.2	+1.4
	comp=E,422nm,0.2s						
PSDA	**Pessada-Kefalo**	0.50	184	P	Pb	13 50 15.0	-0.4
PSDA				S	Sg	13 50 23.2	+1.4
PVO	**Paravola**	0.70	89	P	Pn	13 50 20.2	0.0
PVO				S	Sn	13 50 31.6	+0.9
	comp=E,3μm,0.5s						
PVO	**Paravola**	0.70	89	P	Pn	13 50 20.3	+0.1
VTN	**Vitineika**	0.82	147	P	Pn	13 50 22.0	+0.1
RLS	**Riolos of Patr**	0.86	130	P	Pn	13 50 22.1	-0.3
RLS	**Riolos of Patr**	0.86	130	P	Pn	13 50 22.6	+0.2
LTHK	**Lithakia**	0.92	170	P	Pb	13 50 22.3	-0.2
IGT	**Igoumenitsa**	0.94	346	P	Pn	13 50 23.1	-0.5
IGT				S	Sn	13 50 37.5	+0.8
	comp=E,1μm,0.6s						
EVR	**Evrytania**	0.97	72	P	Pg	13 50 24.6	+0.7
ANX	**Ano Chora**	1.01	91	P	Pg	13 50 25.1	+0.4
ANX				S	Sg	13 50 41.9	+3.8
	comp=E,3μm,0.4s						
JAN	**Janina**	1.06	9	P	Pg	13 50 26.6	+1.1
DRO	**Drossia**	1.08	127	P	Pg	13 50 26.1	+0.2
LAKA	**Lakka**	1.13	109	P	Pg	13 50 26.4	-0.4
TRIZ	**Trizonia**	1.16	102	P	Pg	13 50 27.1	-0.4
KEK	**Kerkira**	1.27	330	P	Pb	13 50 29.1	+0.5
KEK				S	Sg	13 50 46.9	+0.7
	comp=E,290nm,0.5s						
KLV	**Kalavryta, Ach**	1.33	115	P	Pb	13 50 29.7	+0.2
OHR	**Ohrid**	2.50	3	*i* Pn	Pb	13 50 48.2	-1.3
TIP	**Timpagrande**	3.07	282	⇓P	Pn	13 50 55.4	+2.5
VAY	**Valandovo**	3.09	28	*i* Pn	Pb	13 50 59.8	+0.2
STIP	**Stip**	3.30	21	*i* Pn	Pb	13 51 00.9	-2.2
PDG	**Podgorica**	3.95	345	⇑P	Pn	13 51 05.8	+0.9
DBRK	**Dubrovnik**	4.47	336	*e*Pn	Pn	13 51 11.8	-0.2
STON	**Ston**	4.80	333	*e*Pn	Pn	13 51 16.2	-0.3
MAKA	**Makarska**	5.41	331	*e*Pn	Pn	13 51 25.0	+0.2
RICI	**Ricice**	5.54	333	*e*Pn	Pn	13 51 26.5	-0.3
KIJV	**Kijevo**	6.25	331	*e*Pn	Pn	13 51 36.8	+0.3
ZIRJ	**Zirje**	6.28	325	*e*Pn	Pn	13 51 36.6	-0.3
MORI	**Morici**	6.42	326	*e*Pn	Pn	13 51 39.0	+0.2
DUGI	**Dugi Otok**	6.81	324	*e*Pn	Pn	13 51 44.7	+0.5
NVLJ	**Novalja**	7.34	326	*e*Pn	Pn	13 51 51.6	+0.2
GERES	**GERESS Array B**	11.38	336	Pn	Pn	13 52 45.9	-1.0
	comp=E,0.2nm,0.3s,baz=160,slow=15,SNR=2.2						
FINES	**FINESS Array B**	23.11	7	P	P	13 55 08.5	-1.3
	comp=E,1.4nm,0.6s,baz=172,slow=11,SNR=5.2						
TORD	**Torodi Ar. Bea**	30.42	219	P	P	13 56 16.2	-0.4
	comp=E,0.2nm,0.4s,baz=41,slow=8.1,SNR=1.7						
MKAR	**Makanchi Array**	45.00	59	P	P	13 58 19.1	-0.3
	comp=E,0.2nm,0.4s,baz=294,slow=6.9,SNR=8.8						
ZALV	**Zalesovo Beam**	45.34	48	P	P	13 58 21.4	-0.6
	comp=E,1.9nm,0.6s,baz=286,slow=9.3,SNR=6.8						

NOU 17 13:54:55.3, 20°.52S×169°.15E, h0^{km}**, MLv3.3**/7**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	1.42	227	P	Pn	13 55 21.3	-1.0
LIFNC	**LIFOU**	1.81	262	P	Pn	13 55 27.1	-0.6
YATNC	**Mamie plateau,**	2.60	234	P	Pn	13 55 38.2	-0.5
PINNC	**Pines Island,**	2.62	217	P	Pn	13 55 38.0	-0.9
OUENC	**Ouen Island, N**	2.86	228	P	Pn	13 55 43.3	+1.1
DZM	**Mont Dzumac**	2.96	238	P	Pn	13 55 43.8	+0.2

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*ARE **17** 14:04:27±2.3, 15°.7S±0°.1×72°.1W±0°.1, h6^{km}±6^{km}, Error ellipse: s-maj=19.6km s-min=14.7km az=109.0*

*NEIC **17** 14:04:34.0±0.9, 16°.0S±0°.1×72°.2W±0°.1, h87^{km}±14^{km}, mb4.3/4, ML3.9(ARE), Error ellipse: s-maj=21.2km s-min=16.0km az=116.0*

*IDC **17** 14:04:39.0±6.6, 15°.92S×71°.68W, h95^{km}±49^{km}, mb3.7/1, mb1 3.5/4, mb1mx3.3/32, mbtmp3.8/4, MS3.1/5, Ms1 3.1/5, ms1mx2.7/29, Error ellipse: s-maj=73.9km s-min=30.1km az=108.0*

ISC 17 14:04:34.7±1.0**, 15°.90S**±0°.07×**72°.1W**±0°.1**, h100**^{km}**, n32, σ1^{s}.61**/29**, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB12	**IPOC Station P**	3.19	148		Pn	14 05 22.0	-1.2
PB16	**IPOC Station P**	3.47	135		Pn	14 05 27.1	-0.2
LPAZ	**La Paz**	3.84	96	P	Pn	14 05 32.8	+0.4
	0.9nm,0.3s,baz=263,slow=10,SNR=14						
LPAZ	**La Paz**	3.84	96		Pn	14 05 32.3	0.0
PB11	**IPOC Station P**	4.49	149		Pn	14 05 40.0	-0.7
TA02	**Huaiquique**	4.74	157		Pn	14 05 42.7	-1.2
TA01	**Diego Aracena**	4.99	159		Pn	14 05 45.7	-1.6
PB08	**IPOC Station P**	5.07	147		Pn	14 05 48.8	+0.1
PATCX	**Punta Patache**	5.24	160		Pn	14 05 49.3	-1.4
PB01	**IPOC Station P**	5.69	154		Pn	14 05 55.4	-1.4
NNA	**Nana**	6.02	310	LR	LR	14 08 17.1	
	comp=Z,128nm,20.4s,baz=136,slow=34						
PB07	**IPOC Station P**	6.17	160		Pn	14 06 02.1	-1.3
PB09	**IPOC Station P**	6.46	156		Pn	14 06 07.2	-0.3
PB04	**IPOC Station P**	6.66	164		Pn	14 06 07.8	-2.4
PB06	**IPOC Station P**	7.18	161		Pn	14 06 15.3	-1.9
LVC	**Limon Verde**	7.33	156	P	Pn	14 06 19.3	-0.1
	3.2nm,0.3s,baz=343,slow=12,SNR=16						
LVC				S	Sn	14 07 43.4	+2.2
	0.6nm,0.3s,baz=253,slow=19,SNR=1.3						
LVC				LR	LR	14 09 10.0	
	comp=Z,139nm,21.5s,baz=318,slow=38						
LVC	**Limon Verde**	7.33	156		Pn	14 06 18.0	-1.4
PB15	**IPOC Station P**	7.68	162		Pn	14 06 22.5	-1.6
PB10	**IPOC Station P**	7.71	169	Pn	Pn	14 06 22.4	-1.9
ETMB	**Extrema**	8.34	44		Pn	14 06 29.4	-3.5
SIV	**San Ignacio**	10.61	92	P	Pn	14 07 00.9	-3.0
	0.3nm,0.3s,baz=288,slow=15,SNR=4.2						
ATAH	**Atahualpa**	10.67	324	LR	LR	14 11 16.9	
	comp=Z,98nm,18.9s,baz=170,slow=36						
AC02	**Maricunga**	11.23	166	Pn	Pn	14 07 11.5	-1.0
OTAV	**Otavalo**	17.21	338	P	P	14 08 30.4	+0.8
OTAV				IAmb	IAmb	14 08 53.4	
	comp=Z,24nm,1.3s						
ROSC	**El Rosal**	20.72	354	LR	LR	14 17 09.7	
	comp=Z,51nm,20.9s,baz=314,slow=36						
BOAV	**Boa Vista**	21.48	33	P	P	14 09 15.8	+0.4
CAP2	**Capurgana**	24.94	348	P	P	14 09 48.9	+0.1
BAUV	**El Baul**	25.01	10	P	P	14 09 49.9	+0.5
BAUV				IAmb	IAmb	14 09 55.0	
	comp=Z,15nm,1.0s						
MDP	**Montagnes des**	28.40	44	LR	LR	14 21 09.9	
	comp=Z,54nm,20.1s,baz=176,slow=35						
TORD	**Torodi Ar. Bea**	78.47	73	P	P	14 16 27.6	+2.3
	comp=Z,1.2nm,0.8s,baz=263,slow=5.2,SNR=5.3						
SONM	**Songino Array**	148.13	2	PKPbc	PKPab	14 24 14.2	+2.1
	comp=Z,0.7nm,0.7s,baz=0.8,slow=2.2,SNR=3.9						
SONM	**Songino Array**	148.13	2	PKPbc	PKPbc	14 24 08.5	-0.6

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*IDC **17** 14:21:35.5±3.3, 32°.54S×178°.15W, h0^{km}, mb4.3/2, mb1 4.5/3, mb1mx3.9/27, mbtmp4.2/3, ML3.5/1, MS3.4/3, Ms1 3.4/3, ms1mx2.8/32, Error ellipse: s-maj=73.7km s-min=37.2km az=113.0*

*NEIC **17** 14:21:36.2±0.5, 32°.59S±0°.09×177°.9W±0°.2, h10^{km}±1^{km}, mb4.5/12, Error ellipse: s-maj=27.8km s-min=13.7km az=107.0*

ISC 17 14:21:37.1±1.6**, 32°.57S**±0°.09×**177°.9W**±0°.2**, h20**^{km}**, n24, σ0^{s}.47**/22**, mb4.4**/4**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	3.31	0	Pn	Pn	14 22 28.0	+0.3
URZ	**Urewera**	6.97	214	Pn	Pn	14 23 17.8	-0.2
	0.9nm,0.3s,baz=301,slow=24,SNR=8.6						
URZ				Sn	Sn	14 24 36.9	+0.3
	4.8nm,0.3s,baz=119,slow=21,SNR=7.2						
URZ	**Urewera**	6.97	214	Pn	Pn	14 23 17.2	-0.8
BKZ	**Black Stump Fm**	7.98	213	Pn	Pn	14 23 31.7	-0.3
MSVF	**Nonsavu**	15.21	345	Pn	Pn	14 25 09.7	-1.2
MSVF				IAmb	IAmb	14 25 28.5	
	comp=Z,24nm,1.5s						
ODZ	**Otahua Downs**	15.29	212	P	P	14 25 16.8	+0.5
ODZ				IAmb	IAmb	14 25 31.6	
	comp=Z,47nm,1.4s						
PINNC	**Pines Island,**	16.31	304	Pn	Pn	14 25 25.0	+0.1
PINNC				IAmb	IAmb	14 25 38.1	
	comp=Z,82nm,1.5s						
MLZ	**Mavora Lakes**	16.73	216	Pn	Pn	14 25 29.9	-0.3
MLZ				IAmb	IAmb	14 25 57.8	
	comp=Z,60nm,1.3s						
DZM	**Mont Dzumac**	17.36	303	LR	LR	14 30 59.0	
	comp=Z,146nm,18.3s,baz=199,slow=33						
DZM	**Mont Dzumac**	17.36	303	P	P	14 25 39.8	+0.2
STKA	**Stephens Creek**	34.10	260	LR	LR	14 42 14.0	
	comp=Z,45nm,18.6s,baz=22,slow=36						
CTAO	**Charters Tower**	34.26	282	P	P	14 28 22.5	+0.6
AS31	**Alice Springs**	43.09	269	P	P	14 29 36.0	-0.1
ASAR	**Alice Springs**	43.09	269	P	P	14 29 36.2	+0.1
	comp=Z,2.1nm,0.7s,baz=106,slow=7.6,SNR=47						
ASAR	**Alice Springs**	43.09	269	P	P	14 29 35.7	-0.4
WR0	**Warramunga Arr**	44.10	274	P	P	14 29 43.9	-0.3
WR0				IAmb	IAmb	14 29 57.9	
	comp=Z,4.4nm,0.8s						
WB2	**Warramunga Arr**	44.27	274	P	P	14 29 45.4	-0.1
WRAB	**Tennant Creek**	44.27	274	P	P	14 29 45.2	-0.3
WRAB				IAmb	IAmb	14 29 59.2	
	comp=Z,6.6nm,0.7s						
WRA	**Warramunga Arr**	44.28	274	P	P	14 29 45.5	-0.2
	comp=Z,4.1nm,0.5s,baz=115,slow=7.5,SNR=100						
WRA	**Warramunga Arr**	44.28	274	P	P	14 29 45.4	-0.2
WB0	**Warramunga Arr**	44.31	275	P	P	14 29 45.6	-0.2
BATI	**Baumata**	58.01	279	LR	LR	14 55 42.5	
	comp=Z,30nm,18.5s,baz=172,slow=35						
FINES	**FINESS Array B**	147.19	339	PKPbc	PKPbc	14 41 18.8	+0.8
	comp=Z,3.9nm,0.9s,baz=35,slow=5.1,SNR=3.4						
FINES	**FINESS Array B**	147.19	339	PKPdf	PKPdf	14 41 15.5	-0.2

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*TIR **17** 14:27:47.6, 38°.53N×20°.60E, h21^{km}±6^{km}, Ml3.1*

*IASPEI **17** 14:27:49.7±0.8, 38°.60N±0°.02×20°.57E±0°.03, h13^{km}±5^{km}, Error ellipse: s-maj=4.7km s-min=2.5km az=103.0, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*THE **17** 14:27:49.5, 38°.61N×20°.57E, h15^{km}±1^{km}, ML3.4/10, Error ellipse: s-maj=1.6km s-min=0.4km az=102.0*

*ATH **17** 14:27:50.3, 38°.61N×20°.56E, h9^{km}±2^{km}, ML3.3/3, Error ellipse: s-maj=2.6km s-min=0.7km az=311.0*

ISC 17 14:27:49.6±0.8**, 38°.60N**±0°.02×**20°.56E**±0°.03**, h13**^{km}±5^{km}**, n49, σ0^{s}.69**/75**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EVGI	**Lefkada island**	0.08	77	P	Pg	14 27 52.2	-0.2
EVGI				S	Sg	14 27 54.2	-0.1
	59μm,0.2s						
EVGI	**Lefkada island**	0.08	77	P	Pg	14 27 52.2	-0.2
EVGI				S	Sg	14 27 54.1	-0.3
FSK	**Fiskardo**	0.14	178	P	Pg	14 27 53.5	+0.4
FSK				S	Sb	14 27 56.5	-0.7
	17μm,0.2s						
FSK	**Fiskardo**	0.14	178	P	Pg	14 27 53.5	+0.4
FSK				S	Sg	14 27 56.0	+0.4
NYDR	**Nydri-Lefkada**	0.16	45	P	Pg	14 27 53.1	-0.3
NYDR				S	Sg	14 27 55.9	0.0
	13μm,0.5s						
NYDR	**Nydri-Lefkada**	0.16	45	P	Pg	14 27 53.0	-0.3
NYDR				S	Sg	14 27 56.0	0.0
LKD2	**Lefkada island**	0.20	23	P	Pg	14 27 54.0	-0.1
LKD2				S	Sg	14 27 57.3	+0.1
	13μm,0.5s						
LKD2	**Lefkada island**	0.20	23	P	Pg	14 27 53.9	-0.1
LKD2				S	Sg	14 27 57.6	+0.4
LKD2				AML	AML	14 27 57.8	
	comp=E,25315μm,0.5s						
LKD2				AML	AML	14 27 58.0	
	comp=N,26537μm,0.5s						
LKD2	**Lefkada island**	0.20	23	P	Pg	14 27 54.0	-0.1
	baz=9.0						
LKD2				S	Sg	14 27 57.3	+0.1
	baz=9.0						
TSLK	**Tsoukalades, L**	0.23	19	P	Pg	14 27 54.6	0.0
TSLK				S	Sb	14 27 58.7	-1.1
	comp=N,11μm,0.5s						
TSLK	**Tsoukalades, L**	0.23	19	P	Pg	14 27 54.7	+0.1
TSLK				S	Sb	14 27 59.1	-0.7
KEF4	**Livadi, Kephal**	0.36	197	P	Pg	14 27 56.9	+0.1
KEF4				S	Sb	14 28 03.3	-0.1
	comp=N,56μm,0.2s						
KEF4	**Livadi, Kephal**	0.36	197	P	Pg	14 27 57.1	+0.3
KEF4				S	Sb	14 28 03.5	+0.2
DMLN	**Damoulianata-K**	0.39	201	P	Pg	14 27 57.4	0.0
DMLN				S	Sb	14 28 03.8	-0.5
	comp=N,7μm,0.4s						
DMLN	**Damoulianata-K**	0.39	201	S	Sb	14 28 04.2	-0.1
LXRA	**Lixouri, Kepha**	0.41	193	P	Pg	14 27 58.2	+0.4
LXRA				S	Sb	14 28 05.1	+0.2
VLS	**Valsamata**	0.43	176	P	Pg	14 27 57.7	-0.4
VLS				S	Sb	14 28 04.7	-0.6
	comp=N,5μm,0.2s						
VLS	**Valsamata**	0.43	176	P	Pg	14 27 57.8	-0.3
VLS				S	Sg	14 28 04.6	+0.8
VLS				AML	AML	14 28 07.1	
	comp=N,12052μm,0.3s						
VLS				AML	AML	14 28 07.5	
	comp=E,10410μm,0.2s						
ARGA	**Argostoli. Kep**	0.43	188	P	Pb	14 27 59.1	+0.1
ARGA				S	Sb	14 28 05.0	-0.4
KEF3	**Kipouria, Keph**	0.43	202	P	Pg	14 27 57.5	-0.6
KEF3				S	Sg	14 28 04.6	+0.7
	comp=E,10μm,0.2s						
KEF3	**Kipouria, Keph**	0.43	202	P	Pg	14 27 57.7	-0.5
KEF3				S	Sg	14 28 04.3	+0.4
PSDA	**Pessada-Kefalo**	0.49	177	P	Pg	14 27 58.9	-0.3
PSDA				S	Sb	14 28 06.9	-0.2
	comp=E,965nm,0.2s						
PSDA	**Pessada-Kefalo**	0.49	177	P	Pg	14 27 58.9	-0.3
PSDA				S	Sb	14 28 07.1	0.0
PVO	**Paravola**	0.76	89	P	Pg	14 28 04.1	-0.2
PVO	**Paravola**	0.76	89	P	Pb	14 28 04.3	-0.4
PVO				S	Sb	14 28 15.5	+0.5
PVO				AML	AML	14 28 18.8	
	comp=E,2768μm,0.5s						

PVO				AML	AML	14 28 19.8	
	comp=N,4063µm,0.6s						
RLS	Riolos of Patr	0.90	127	P	Pb	14 28 06.6	-0.4
LTHK	Lithakia	0.92	166	P	Pg	14 28 07.3	0.0
IGT	Igoumenitsa	0.94	349	P	Pb	14 28 07.4	-0.5
IGT	Igoumenitsa	0.94	349	P	Pb	14 28 07.1	-0.7
	baz=349						
IGT				S	Sn	14 28 22.0	+0.1
	baz=349						
EVR	Evrytania	1.03	72	P	Pb	14 28 08.7	-0.6
ANX	Ano Chora	1.07	90	P	Pb	14 28 09.5	-0.5
EFP	Efpalio	1.07	99	P	Pg	14 28 11.4	+1.1
JAN	Janina	1.08	12	P	Pg	14 28 11.0	+0.6
DRO	Drossia	1.12	125	P	Pg	14 28 11.4	+0.3
SRN	Sarande	1.35	342	P	Pg	14 28 14.9	-0.5
	baz=342						
SRN				S	Sg	14 28 35.1	+2.1
	baz=342						
SRN				AMP			
	comp=E,0.6nm,0.5s,baz=342						
THL	Klokotos Trika	1.49	49	P	Pg	14 28 17.6	-0.5
LSK	Leskovik	1.54	1	P	Pb	14 28 18.3	+0.2
	baz=0.0						
LSK				S	Sg	14 28 41.1	+1.7
	baz=0.0						
LSK				AMP			
	comp=E,1.4nm,0.7s,baz=0.0						
KBN	Korca	2.03	5	P	Pb	14 28 26.9	+0.6
	baz=3.0						
SCTE	Santa Cesarea	2.19	313	P	Pn	14 28 26.3	+0.7
	baz=314						
FNA	Florina	2.27	16	P	Pb	14 28 28.6	-1.9
	baz=14						
TIR	Tirane	2.79	349	P	Pn	14 28 35.5	+1.5
	baz=349						
PHP	Peshkopia	3.08	358	P	Pn	14 28 39.7	+1.7
	baz=358						
DBRK	Dubrovnik	4.46	336	*e*Pn	Pn	14 28 55.7	-1.1
STON	Ston	4.78	334	*e*Pn	Pn	14 28 59.8	-1.5
HVAR	Hvar	5.53	327	*e*Pn	Pn	14 29 10.5	-1.0
KIJV	Kijevo	6.24	331	*e*Pn	Pn	14 29 20.8	-0.5
ZIRJ	Zirje	6.26	325	*e*Pn	Pn	14 29 20.7	-0.9
MORI	Morici	6.40	327	*e*Pn	Pn	14 29 22.8	-0.8
DUGI	Dugi Otok	6.79	324	*e*Pn	Pn	14 29 28.3	-0.6

IDC ***17*** *14:31:31.2±2.2, 3°.57S×99°.64E, h0^{km}, mb3.8/8, mb1 3.9/8, mb1mx3.7/37, mbtmp3.8/8, MS2.5/2, Ms1 2.6/2, ms1mx2.4/39, Error ellipse: s-maj=81.9km s-min=18.3km az=60.0*

NEIC ***17*** *14:31:32.9±1.5, 3°.6S±0°.1×99°.6E±0°.1, h10^{km}±2^{km}, mb4.0/15, Error ellipse: s-maj=30.0km s-min=12.7km az=225.0*

DJA ***17*** *14:31:33.8±1.2, 4°S±8°×10°0E±°, h56^{km}±15^{km}, M3.9/5, MLv3.9/5*

ISC 17 14:31:35.6±0.9, 3°.56S±0°.08×99°.56E±0°.10, h35^{km}, n43, σ0^{s}.91/38, mb4.1/15, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PPSI	Pulau Pagai	0.91	30	P	Pn	14 31 51.0	-1.0
PPSI				S	Sn	14 32 03.6	-0.3
SISI	Saibi	2.27	348	P	Pn	14 32 08.4	-2.2
SISI				S	Sn	14 32 36.8	-0.5
MASI	Maura Aman, Be	2.71	81	P	Pn	14 32 15.0	-1.8
PDSI	Padang	2.78	19	P	Pn	14 32 15.9	-1.8
PPI	Padang Panjang	3.19	15	P	Pn	14 32 22.8	-0.6
MNAI	Manna	3.48	103	Pn	Pn	14 32 26.7	-0.7
MNSI	Mandailing Nat	4.33	0	P	Pn	14 32 39.9	+1.0
GSI	Gunungsitoli	5.22	338	Pn	Pn	14 32 49.2	-2.0
LEM	Lembang	8.66	112	LR	LR	14 37 16.6	
	comp=Z,42nm,21.4s,baz=220,slow=40						
UBPT	Khong Chiam	19.61	17	P	P	14 36 01.1	0.0
UBPT				IAmb	IAmb	14 36 03.5	
	comp=Z,3.7nm,0.7s						
CM31	Chiang Mai Arr	21.89	358	P	P	14 36 26.9	+1.2
CM31				IAmb	IAmb	14 36 27.9	
	comp=Z,7.2nm,0.8s						
CMAR	Chiang Mai Arr	21.89	358	P	P	14 36 26.5	+0.8
	comp=Z,5.1nm,0.8s,baz=188,slow=9.8,SNR=41						
CMAR				LR	LR	14 44 03.8	
	comp=Z,10nm,18.7s,baz=212,slow=34						
CHTO	Chiang Mai	22.24	358	P	P	14 36 30.2	+0.7
CHTO				IAmb	IAmb	14 36 30.7	
	comp=Z,1.8nm,0.7s						
SLVN	Son La	25.10	10	P	P	14 36 57.7	+0.4
H08S2	Diego Garcia H	27.23	260	T	T	15 07 43.9	
	baz=81,slow=74,SNR=20						
H08S3	Diego Garcia H	27.24	260	T	T	15 07 27.0	
	baz=223,slow=74,SNR=48						
H08S1	Diego Carcia H	27.25	260	T	T	15 06 51.6	
	SNR=6.9						
H01W3	Cape Leeuwin H	33.98	158	T	T	15 14 39.5	
	baz=337,slow=76,SNR=8.8						
H01W2	Cape Leeuwin H	33.99	158	T	T	15 14 42.9	
	baz=337,slow=76,SNR=9.4						
H01W1	Cape Leeuwin H	33.99	158	T	T	15 14 40.6	
	baz=337,slow=76,SNR=12						
WB0	Warramunga Arr	37.60	118	P	P	14 38 47.6	+0.3
WB0				IAmb	IAmb	14 39 16.4	
	comp=Z,5.4nm,1.2s						
WRA	Warramunga Arr	37.62	118	P	P	14 38 46.9	-0.5
	comp=Z,0.4nm,0.6s,baz=303,slow=9.0,SNR=7.6						
WRA	Warramunga Arr	37.62	118	P	P	14 38 47.1	-0.3
WRAB	Tennant Creek	37.62	118	P	P	14 38 47.0	-0.5
WRAB				IAmb	IAmb	14 39 10.6	
	comp=Z,6.4nm,1.2s						
WB2	Warramunga Arr	37.63	118	P	P	14 38 47.3	-0.2
WB2				IAmb	IAmb	14 38 58.7	
	comp=Z,3.2nm,1.1s						
WR0	Warramunga Arr	37.80	118	P	P	14 38 48.7	-0.3
WR0				IAmb	IAmb	14 39 00.9	
	comp=Z,5.6nm,1.5s						
ASAR	Alice Springs	38.72	124	P	P	14 38 57.2	+0.5
	comp=Z,0.2nm,0.6s,baz=296,slow=7.1,SNR=4.6						
ASAR	Alice Springs	38.72	124	P	P	14 38 55.7	-1.0
AS31	Alice Springs	38.72	124	P	P	14 38 55.7	-1.0
STKA	Stephens Creek	48.47	130	P	P	14 40 15.1	+0.1
	comp=Z,1.4nm,0.9s,baz=289,slow=15,SNR=3.5						
KSAR	Wonju Array Be	48.55	30	P	P	14 40 15.4	-0.1
KSRS	Korea Array	48.58	30	P	P	14 40 16.0	+0.3
	comp=Z,2.0nm,0.8s,baz=224,slow=7.2,SNR=4.5						
SONM	Songino Array	51.53	6	P	P	14 40 38.7	+0.6
	comp=Z,2.1nm,0.7s,baz=192,slow=9.0,SNR=14						
SONM	Songino Array	51.53	6	P	P	14 40 39.2	+1.1
SONM				IAmb	IAmb	14 40 40.7	
	comp=Z,1.8nm,0.8s						
MK31	Makanchi Array	52.41	345	P	P	14 40 45.7	+1.2
MK31				IAmb	IAmb	14 40 50.2	
	comp=Z,3.5nm,1.4s						
MKAR	Makanchi Array	52.41	345	P	P	14 40 45.6	+1.1
	comp=Z,1.2nm,0.7s,baz=151,slow=8.3,SNR=10.0						
MKAR	Makanchi Array	52.41	345	P	P	14 40 45.2	+0.6
ZAA0	Zalesovo Array	58.61	350	P	P	14 41 29.3	+0.3
ZALV	Zalesovo Beam	58.61	350	P	P	14 41 29.6	+0.6
	comp=Z,1.1nm,0.4s,baz=177,slow=5.6,SNR=7.8						
ZALV	Zalesovo Beam	58.61	350	P	P	14 41 29.1	+0.2
ABKAR	Akbulak array	62.79	332	P	P	14 41 57.2	-0.3
TXAR	Lajitas Array	146.20	38	PKPbc	PKPab	14 51 14.2	+0.3
	comp=Z,0.3nm,0.6s,baz=27,slow=0.6,SNR=6.3						
TXAR	Lajitas Array	146.20	38	PKPdf	PKPdf	14 51 12.1	-0.1

MAN 17 14:37:33.4, 15°.84N×119°.92E, h13^{km}, mb4.2, ML3.0, MS2.7, Luzon

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IDC ***17*** *14:43:21.2±1.1, 0°.77S×134°.05E, h0^{km}, mb3.9/6, mb1 4.1/8, mb1mx3.9/32, mbtmp3.9/8, ML4.2/2, MS3.8/1, Ms1 3.8/1, ms1mx2.4/39, Error ellipse: s-maj=34.4km s-min=18.3km az=72.0*

DJA ***17*** *14:43:23.5±0.6, 1°S±5°×13°4E±°, h10^{km}, M4.2/6, mb4.3/2, mB5.1/1, MLv4.1/6, Mw(mB)4.4/1*

NEIC ***17*** *14:43:27.1±3.0, 0°.70S±0°.09×133°.9E±0°.1, h32^{km}±6^{km}, mb4.3/17, Error ellipse: s-maj=15.1km s-min=13.1km az=89.0*

ISC 17 14:43:26.1±0.6, 0°.72S±0°.07×133°.94E±0°.05, h32^{km}, n37, σ1^{s}.03/37, mb4.1/12, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BAKI	Biak	2.22	102	P	Pn	14 44 00.3	-0.4
SRPI	Serui, Papua	2.57	116	P	Pn	14 44 06.1	+0.6
SIJI	Sorong	2.68	267	Pn	Pn	14 44 06.2	-0.8
	13nm,0.3s,baz=242,slow=23,SNR=20						
SIJI				Sn	Sn	14 44 38.2	-0.3
	10nm,0.3s,baz=310,slow=23,SNR=1.7						
SWI	Sorong	2.68	267	P	Pn	14 44 07.0	-0.1
FAKI	Fak Fak	2.76	218	P	Pn	14 44 08.8	+0.6
FAKI	Fak Fak	2.76	218	Pn	Pn	14 44 08.8	+0.6
AAI	Ambon	6.45	243	P	Pn	14 45 00.2	+1.2
	0.1nm1µm28nm,0.5s						
WB0	Warramunga Arr	18.93	179	P	P	14 47 43.6	-1.0
FITZ	Fitzroy Crossi	19.10	205	P	P	14 47 45.0	-1.4
WRAB	Tennant Creek	19.10	179	P	P	14 47 44.7	-1.7
WRAB				IAmb	IAmb	14 47 47.0	
	comp=Z,4.5nm,0.5s						
WB2	Warramunga Arr	19.11	179	P	P	14 47 45.0	-1.5
WB2				IAmb	IAmb	14 47 46.6	
	comp=Z,4.9nm,0.4s						
WRA	Warramunga Arr	19.11	179	P	P	14 47 45.4	-1.0
	comp=Z,1.4nm,0.3s,baz=358,slow=11,SNR=107						
WRA	Warramunga Arr	19.11	179	P	P	14 47 44.5	-2.0
WR0	Warramunga Arr	19.13	178	P	P	14 47 45.5	-1.2
WR0				IAmb	IAmb	14 47 54.3	
	comp=Z,13nm,1.4s						
CTA	Charters Tower	22.71	149	LR	LR	14 58 56.9	
	comp=Z,217nm,19.4s,baz=264,slow=41						
CTAO	Charters Tower	22.71	149	P	P	14 48 26.8	+1.4
CTAO				IAmb	IAmb	14 48 29.7	
	comp=Z,17nm,1.3s						
AS31	Alice Springs	22.81	180	P	P	14 48 25.6	-0.9
ASAR	Alice Springs	22.81	180	P	P	14 48 25.6	-0.8
	comp=Z,3.1nm,0.5s,baz=7.3,slow=10,SNR=101						
ASAR	Alice Springs	22.81	180	P	P	14 48 25.5	-1.0
STKA	Stephens Creek	31.82	168	P	P	14 49 47.1	-0.9
	comp=Z,0.4nm,0.4s,baz=346,slow=11,SNR=5.5						
JNU	Nakatsue	33.79	355	P	P	14 50 05.0	-0.2
KWAJ	Kwajalein Atol	34.86	74	P	P	14 50 15.3	+0.6
JHS	Saijyo	35.54	359	P	P	14 50 19.1	-1.2
JWT	Wachi	35.84	2	P	P	14 50 21.6	-1.3
JWT				IAmb	IAmb	14 50 32.7	
	comp=Z,28nm,1.4s						
CMAR	Chiang Mai Arr	39.33	301	P	P	14 50 53.5	+0.9
	comp=Z,1.6nm,0.8s,baz=116,slow=6.6,SNR=16						
CMAR	Chiang Mai Arr	39.33	301	P	P	14 50 52.7	+0.1
CHTO	Chiang Mai	39.48	301	P	P	14 50 54.0	+0.1
CHTO				IAmb	IAmb	14 50 55.1	
	comp=Z,2.5nm,0.8s						
USA0B	Ussuriysk Arra	44.76	358	P	P	14 51 36.7	+0.1
USA0B				IAmb	IAmb	14 51 48.9	
	comp=Z,7.5nm,0.9s						
USRK	Ussuriysk Ar.	44.76	358	P	P	14 51 36.8	+0.2
SONM	Songino Array	53.98	337	P	P	14 52 48.0	+0.9
	comp=Z,0.3nm,0.5s,baz=145,slow=5.3,SNR=2.1						
MA2	Magadan	61.55	10	P	P	14 53 38.6	-1.4
MK31	Makanchi Array	65.34	324	P	P	14 54 05.9	+0.6
MK31				IAmb	IAmb	14 54 07.1	
	comp=Z,1.6nm,0.8s						
MKAR	Makanchi Array	65.34	324	P	P	14 54 06.3	+1.0
	comp=Z,2.1nm,0.7s,baz=115,slow=8.0,SNR=24						
MKAR	Makanchi Array	65.34	324	P	P	14 54 05.9	+0.6
MAKZ	Makanchi	65.54	324	P	P	14 54 06.9	+0.3
MAKZ				IAmb	IAmb	14 54 08.3	
	comp=Z,3.4nm,0.8s						
KIWB	Kanaga Island	66.56	31	P	P	14 54 15.0	+2.0
ILAR	Eielson Array	86.03	25	P	P	14 56 02.9	-0.4
	comp=Z,0.8nm,0.9s,baz=239,slow=3.5,SNR=8.3						

TUL ***17*** *15:05:17±0.9, 36°.422N±0°.009×98°.23W±0°.03, h6^{km}±6^{km}, ML2.6, mb_Lg2.5/17(NEIC), Error ellipse: s-maj=3.3km s-min=0.6km az=70.0*

NEIC 17 15:05:16.8±0.7, 36°.42N±0°.01×98°.23W±0°.01, h11^{km}±5^{km}, Error ellipse: s-maj=2.1km s-min=1.5km az=172.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CROK	Carrier	0.22	66	Pg	Pg	15 05 21.6	+0.2
CROK				Sg	Sg	15 05 24.8	+0.2
OK032	Salt Plains WL	0.39	2		Pg	15 05 24.8	+0.2
GC02	Grant County #	0.53	34	Pg	Pg	15 05 27.2	0.0
GC02				Sg	Sg	15 05 34.3	+0.2
KAN14	Manchester OK	0.58	22		Pg	15 05 28.2	+0.1
KAN14				Sg	Sg	15 05 35.9	+0.1
U32A	Winter Ranch,	0.62	267	Pg	Pg	15 05 29.0	+0.1
KAN10	Anthony SW Sta	0.71	9		Pg	15 05 30.6	-0.1
KAN17	Caldwell West	0.73	31		Pg	15 05 31.0	0.0
KAN05	Bluff City Nor	0.75	23	Pg	Pg	15 05 31.2	-0.1
KAN05				Sg	Sg	15 05 41.0	-0.1
KAN16	Harper SW Stat	0.82	9	Pg	Pg	15 05 32.5	-0.1
KAN01	Argonia South	0.83	27	Pg	Pg	15 05 32.6	-0.3
KAN08	Anthony NE Sta	0.84	14	Pg	Pg	15 05 32.9	-0.1
KAN13	South Haven SW	0.85	45	Pg	Pg	15 05 33.2	0.0
KAN13				Sg	Sg	15 05 44.4	0.0
KAN09	Caldwell North	0.87	34	Pg	Pg	15 05 33.6	-0.1
OK029	Liberty Lake	0.88	134	Pg	Pg	15 05 33.6	-0.2
OK029				Sg	Sb	15 05 45.7	-0.2
KAN06	Argonia West S	0.88	20		Pg	15 05 33.6	-0.2
BLOK	Blackwell	0.89	67	Pg	Pg	15 05 33.7	-0.2
BLOK				Sg	Sg	15 05 45.5	0.0
KAN12	Harper NE Stat	0.90	12		Pg	15 05 33.8	-0.4
BCOK	Bluff Creek, N	0.91	146	Pg	Pg	15 05 34.1	-0.2
KS20	Mayfield South	0.98	34	Pg	Pg	15 05 35.3	-0.4
OKCFA	Oklahoma City	1.18	147	Pg	Pb	15 05 39.0	-0.3
OKCSW	OKLAHOMA CITY	1.20	147	Pg	Pb	15 05 39.2	-0.3
OK031	S. Brethren Rd	1.22	112		Pn	15 05 39.8	-0.1
QUOK	Quay	1.25	101		Pn	15 05 40.4	0.0
OK030	Cody Creek RV	1.27	112		Pb	15 05 40.7	-0.1
FNO	Franklin	1.34	149	Pn	Pn	15 05 41.5	0.0
T35A	Sooner Cattle	1.47	70	Pn	Pb	15 05 43.9	-0.3
WMOK	Wichita Mounta	1.73	195	Pn	Pn	15 05 47.7	+0.7
WMOK				IAmb_Lg		15 06 14.1	
	comp=Z,22nm,0.7s						
X34A	Smith Ranch, M	1.84	170		Pb	15 05 49.5	-1.0
TUL1	Leonard	2.04	104		Pb	15 05 52.8	-1.1
TUL1				IAmb_Lg		15 06 23.8	
	comp=Z,23nm,0.9s						
R32A	Long Quarter,	2.04	349		Pn	15 05 51.9	+0.8
R32A				IAmb_Lg		15 06 27.3	
	comp=Z,13nm,0.9s						
X37A	Clayton	2.96	127	Pn	Pn	15 06 03.0	-0.8
X37A				IAmb_Lg		15 06 52.7	
	comp=Z,13nm,1.1s						
U38A	Gravette	3.10	88	IAmb_Lg		15 07 03.8	
	comp=Z,11nm,0.8s						
W39A	Magazine	3.81	107	IAmb_Lg		15 07 27.5	
	comp=Z,12nm,1.1s						
P40A	Paris	5.79	56	IAmb_Lg		15 08 22.9	
	comp=Z,7.5nm,0.7s						
CCM	Cathedral Cave	5.81	72	IAmb_Lg		15 08 22.0	
	comp=Z,6.4nm,0.7s						
JCT	Junction City	6.06	193	IAmb_Lg		15 08 36.4	
	comp=Z,8.2nm,0.9s						

NIED ***17*** *15:07:59.5, 30°.99N×128°.61E, h7^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$0.08; M$_{\theta\theta}$1.06; M$_{\phi\phi}$-1.14; M$_{r\theta}$1.13; M$_{\theta\phi}$1.10; M$_{\phi r}$3.04; Fault plane solution: M$_{0}$3.60000×10^{14} NP1:φ$_{s}$21.00000°, δ89.00000°, λ116.00000°. NP2:φ$_{s}$113.00000°, δ26.00000°, λ2.00000°.*

JMA 17 15:07:59.5±0.2, 30°.99N×128°.61E, h7^{km}, M3.5, Northwest of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	Shimokoshiki	1.17	54	P	Pg	15 08 21.5	-0.4
JSJ				*e*S	Sg	15 08 37.2	+0.1
JKC	Kuchinoerabu	1.46	111	P	Pn	15 08 26.3	0.0
JKC				*e*S	Sn	15 08 44.9	-0.8
JNN	Nakanoshima	1.58	136	P	Pn	15 08 27.8	-0.2
JNN				*e*S	Sb	15 08 49.8	+0.5
JSU	Suzuyama	1.66	72	P	Pn	15 08 29.3	+0.2
JFU	Fukue jima 2	1.67	4	P	Pn	15 08 29.5	+0.4
JYAK	Yakushimahirau	1.80	114	P	Pn	15 08 30.1	-0.9
JYAK				*e*S	Sn	15 08 54.3	+0.2
JMTN	Minamitane	2.06	106	P	Pn	15 08 34.4	-0.1
JTN	Tanegashima 3	2.07	99	P	Pn	15 08 34.6	0.0
JTZ	Takazaki	2.30	66	P	Pn	15 08 38.5	+0.6
JIU3	Izumi3	2.44	50	P	Pn	15 08 40.4	+0.7

IDC ***17*** *15:11:39.5±1.1, 37°.04N×142°.15E, h0^{km}, mb3.6/6, mb1 3.7/9, mb1mx3.6/34, mbtmp3.7/9, ML3.5/3, MS3.0/4, Ms1 3.0/4, ms1mx2.5/44, Error ellipse: s-maj=26.1km s-min=18.2km az=93.0*

JMA ***17*** *15:11:46.1±0.2, 37°.07N×141°.66E, h49^{km}±4^{km}, M3.5*

NIED ***17*** *15:11:46.1, 37°.07N×141°.66E, h49^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$0.75; M$_{\theta\theta}$0.61; M$_{\phi\phi}$-1.36; M$_{r\theta}$2.29; M$_{\theta\phi}$-0.90; M$_{\phi r}$2.94; Fault plane solution: M$_{0}$3.96000×10^{14} NP1:φ$_{s}$39.00000°, δ82.00000°, λ101.00000°. NP2:φ$_{s}$165.00000°, δ14.00000°, λ36.00000°.*

ISC 17 15:11:40.7±2.1, 37°.07N±0°.04×141°.92E±0°.07, h7^{km}±12^{km}, n29, σ1^{s}.47/31, mb3.6/6, 8D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	Kawauchi	0.88	290	⇓P	Pn	15 11 59.6	0.0
JFK				*e*S	Sg	15 12 09.2	0.0
ONAJ	Iwakimizuishiy	0.89	272	⇓P	Pb	15 11 59.6	+1.0
ONAJ				*e*S	Sg	15 12 09.7	+0.2
JMST	Minamisoumatoc	1.05	309	⇓P	Pn	15 12 02.2	+0.4
JMST				*e*S	Sg	15 12 13.5	-1.0
JFFD	Fukushimafurud	1.08	272	⇓P	Pb	15 12 02.3	+0.5
JFFD				*e*S	Sg	15 12 14.2	-1.4
JHO	Hitachi	1.17	247	⇓P	Pg	15 12 03.2	0.0
JHO				*e*S	Sg	15 12 16.0	-2.5
JMM	Marumori	1.20	312	⇓P	Pn	15 12 04.4	+0.6
JMM				*e*S	Sg	15 12 16.7	-2.5
JFT	Otama	1.34	290	⇓P	Pg	15 12 07.2	+0.8
JFT				*e*S	Sb	15 12 20.8	-2.6
JIO	Ouri	1.45	342	⇓P	Pn	15 12 07.9	+0.5
JIO				*e*S	Sn	15 12 25.5	-1.2
JOU	Okura	1.63	323	P	Pb	15 12 11.6	+0.5
MJAR	Matsushiro Arr	3.02	261	Pn	Pn	15 12 31.3	+2.4
	1.6nm,0.3s,baz=90,slow=15,SNR=58						
MJAR				Sn	Sb	15 13 11.2	-0.7
	1.5nm,0.3s,baz=75,slow=25,SNR=2.3						
MAT	Matsushiro	3.02	261	P	Pn	15 12 31.6	+2.6
MAT				*e*S	Sn	15 13 05.8	+0.4
JHJ	Hachijo jima 2	4.31	205	Pn	Pn	15 12 47.5	+0.8
	21nm,0.3s,baz=329,slow=20,SNR=9.0						
JHJ				Sn	Sn	15 13 33.6	-3.6
	13nm,0.3s,baz=76,slow=19,SNR=1.5						
ASAJ	Asahikawa	7.06	4	Pn	Pn	15 13 25.5	+1.1
	0.8nm,0.3s,baz=211,slow=10,SNR=16						
ASAJ				Sn	Sn	15 14 44.2	-0.7
	0.6nm,0.3s,baz=113,slow=34,SNR=1.6						
USRK	Ussuriysk Ar.	10.37	316	LR	LR	15 18 08.0	
	comp=Z,67nm,19.6s,baz=94,slow=37						
KSRS	Korea Array	11.16	276	LR	LR	15 18 44.5	
	comp=Z,60nm,18.3s,baz=90,slow=37						
KLR	Kul'dur	14.22	332	LR	LR	15 20 00.5	
	comp=Z,41nm,19.0s,baz=121,slow=35						
H11N2	WAKE ISLAND Hy	27.82	122	T	T	15 46 34.0	
	baz=314,slow=75,SNR=44						
H11N1	WAKE ISLAND Hy	27.83	122	T	T	15 46 34.0	
	baz=314,slow=75,SNR=42						
H11N3	WAKE ISLAND Hy	27.84	122	T	T	15 46 34.0	
	baz=314,slow=75,SNR=24						
SONM	Songino Array	28.10	304	P	P	15 17 34.3	+1.2
	0.7nm,0.7s,baz=105,slow=7.9,SNR=4.7						
H11S1	WAKE ISLAND Hy	28.54	124	T	T	15 47 31.2	
	baz=316,slow=76,SNR=26						
H11S3	WAKE ISLAND Hy	28.54	124	T	T	15 47 35.8	
	baz=316,slow=76,SNR=16						
H11S2	WAKE ISLAND Hy	28.56	124	T	T	15 47 34.8	
	baz=316,slow=76,SNR=14						
ZALV	Zalesovo Beam	42.19	312	P	P	15 19 34.4	+0.6
	0.6nm,0.4s,baz=94,slow=10,SNR=3.6						
MKAR	Makanchi Array	44.44	302	P	P	15 19 53.2	+1.1
	0.6nm,0.7s,baz=85,slow=9.3,SNR=6.3						
ILAR	Eielson Array	49.25	32	P	P	15 20 29.1	-0.4
	0.4nm,0.9s,baz=266,slow=7.4,SNR=5.0						
AAK	Ala-Archa	50.83	298	LR	LR	15 43 19.1	
	comp=Z,43nm,19.6s,baz=77,slow=37						
WRA	Warramunga Arr	57.15	188	P	P	15 21 27.5	-0.7
	0.5nm,0.6s,baz=10,slow=7.0,SNR=7.3						
ASAR	Alice Springs	60.88	188	P	P	15 21 53.9	-0.1
	0.3nm,0.6s,baz=17,slow=6.8,SNR=8.1						

IDC ***17*** *15:27:19.3±75.0, 14°.24S×176°.51E, h0^{km}, mb3.7/3, mb1 3.9/3, mb1mx3.6/32, mbtmp3.7/3, Error ellipse: s-maj=1325.0km s-min=157.9km az=71.0*

NOU ***17*** *15:28:42.9, 17°.93S×167°.77E, h34^{km}, MLv4.6/17, Vanuatu Islands*

ISC 17 15:28:41.2±1.1, 17°.94S±0°.06×167°.72E±0°.08, h23^{km}, n16, σ1^{s}.37/17, mb3.7/3, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	0.49	65	P	Pn	15 28 53.9	+1.1
RTV	Rentapao	0.69	78	P	Pn	15 28 56.3	+0.8
SANVU	Saraoutou	2.52	349	P	Pn	15 29 21.1	+0.3
LIFNC	LIFOU	2.86	189	P	Pn	15 29 25.3	-0.2
MARNC	Mare, Loyalty	3.54	175	P	Pn	15 29 35.1	+0.3
KOUNC	Koumac, New Ca	4.16	231	P	Pn	15 29 45.1	+1.8
YATNC	Mamie plateau,	4.18	191	P	Pn	15 29 44.0	+0.5
DZM	Mont Dzumac	4.29	196	*e*Pn	Pn	15 29 46.5	+1.4
	8.2nm,0.1s						
DZM				*e*Sn	Sn	15 30 32.2	-2.3
	42nm,0.3s						
DZM	Mont Dzumac	4.29	196	P	Pn	15 29 45.8	+0.7
NOUC	Port Laguerre	4.35	198	P	Pn	15 29 47.5	+1.5
ONTNC	Ouen Toro	4.51	195	P	Pn	15 29 49.1	+1.0
OUENC	Ouen Island, N	4.54	190	P	Pn	15 29 50.6	+2.1
PINNC	Pines Island,	4.66	183	P	Pn	15 29 51.9	+1.7
STKA	Stephens Creek	27.37	235	P	P	15 34 25.7	+0.9
	1.0nm,0.6s,baz=79,slow=10,SNR=4.4						
WRA	Warramunga Arr	31.61	261	P	P	15 35 01.7	-0.9
	0.3nm,0.7s,baz=80,slow=6.0,SNR=5.8						
ASAR	Alice Springs	32.07	254	P	P	15 35 05.8	-0.9
	1.3nm,0.7s,baz=81,slow=8.6,SNR=50						

DJA ***17*** *15:37:06.7±0.9, 8°S±10°×12°3E±°, h218^{km}±14^{km}, M3.0/7, MLv3.0/7*

IDC ***17*** *15:37:09.1±11.0, 7°.64S×123°.33E, h224^{km}±115^{km}, mb3.4/1, mb1 3.4/3, mb1mx3.0/43, mbtmp3.9/3, Error ellipse: s-maj=192.7km s-min=97.7km az=42.0*

ISC 17 15:37:07.1±1.3, 8°.0S±0°.1×122°.7E±0°.1, h226^{km}, n9, σ1^{s}.17/12, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMRI	Maumere	0.78	213	P	Pn	15 37 38.0	-0.4
EDFI	Ende, Flores	1.24	231	P	Pn	15 37 40.7	-0.6
EDFI				S	S	15 38 07.8	-0.2
SOEI	Soe	2.37	138	P	Pn	15 37 50.7	-0.8
BATI	Baumata	2.42	156	P	Pn	15 37 51.4	-0.6
BATI				S	S	15 38 25.7	-1.4
BSSI	Bau Bau, Buton	2.83	310	P	Pn	15 37 55.0	-1.3
BKSI	Bulukumba	3.65	316	P	Pn	15 38 05.5	-0.3
WRA	Warramunga Arr	16.41	138	P	P	15 40 43.6	-0.4
	0.4nm,0.3s,baz=317,slow=12,SNR=23						
WRA				S	S	15 43 43.3	-1.3
	0.3nm,0.3s,baz=248,slow=20,SNR=7.1						
ASAR	Alice Springs	18.96	147	P	P	15 41 13.2	+1.4
	0.3nm,0.3s,baz=324,slow=11,SNR=46						
STKA	Stephens Creek	29.60	146	P	P	15 42 53.1	+1.8
	0.5nm,0.3s,baz=339,slow=8.6,SNR=1.9						

EAF 17 15:38:16.9±1.1, 25°.88S×29°.29E, h10^{km}, MD3.7, South Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOPA	Mopani	3.04	40	*e*P	Pn	15 39 04.9	-0.1
MOPA				*e*S	Sn	15 39 39.1	-2.4
MOPA	Mopani	3.04	40	*e*P	Pn	15 39 04.9	-0.1
MOPA				*e*S	Sn	15 39 39.1	-2.4
LBTB	Lobatse	3.44	284	*e*P	Pn	15 39 09.4	-1.3
LBTB				*e*S	Sn	15 39 49.7	-2.0
LBTB	Lobatse	3.44	284	*e*P	Pn	15 39 09.4	-1.3
LBTB				*e*S	Sn	15 39 49.7	-2.0
MSNA	Messina	3.58	11	*e*P	Pn	15 39 13.0	+0.5
MSNA				*e*S	Sn	15 39 52.0	-3.0
MSNA	Messina	3.58	11	*e*P	Pn	15 39 13.0	+0.5
MSNA				*e*S	Sn	15 39 52.0	-3.0
MATP	Matopo	5.47	352	*e*P	Pn	15 39 38.6	-0.1
MATP				*e*S	Sn	15 40 37.6	-4.3

MATP	Matopo	5.47	352	eP	Pn	15 39 38.6	-0.1
MATP				eS	Sn	15 40 37.6	-4.3
BLWY	Bulawayo	5.75	354	eP	Pn	15 39 41.7	-0.8
BLWY				eS	Sn	15 40 43.0	-5.5
BLWY	Bulawayo	5.75	354	eP	Pn	15 39 41.7	-0.8
BLWY				eS	Sn	15 40 43.0	-5.5

JMA ***17*** *15:39:43.6±0.2, 30°.31N×138°.92E, h484^{km}±3^{km}, M4.2*

BJI ***17*** *15:39:45.0±0.0, 30°.25N×138°.44E, h432^{km}, mB4.7/17, mb4.4/29*

IDC ***17*** *15:39:46.5±0.7, 30°.34N×138°.48E, h433^{km}±7^{km}, mb3.5/22, mb1 3.7/29, mb1mx3.5/53, mbtmp4.3/29, Error ellipse: s-maj=11.8km s-min=8.0km az=88.0*

NEIC ***17*** *15:39:48.0±1.0, 30°.32N±0°.09×138°.4E±0°.1, h444^{km}±6^{km}, mb4.2/98, Error ellipse: s-maj=16.2km s-min=12.4km az=101.0*

ISC 17 15:39:47.0±0.4**, 30°.33N**±0°.05×**138°.52E**±0°.06**, h440^{km}, n202, σ1^{s}34**/219**, mb4.2**/84**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHCJ	Hachijojimakas	2.94	21	P	P	15 40 52.9	+0.2
JHJ	Hachijo jima 2	2.98	21	P	P	15 40 53.1	+0.1
	81nm,0.3s,baz=116,slow=23,SNR=49						
JHJ				S	S	15 41 45.3	-1.5
	50nm,0.3s,baz=264,slow=23,SNR=2.4						
JHJ2	Mitsune	2.98	21	P	P	15 40 53.4	+0.4
JHJ2				eS	S	15 41 48.1	+1.3
JHJ2	Mitsune	2.98	21		P	15 40 53.4	+0.4
JHJ2	Mitsune	2.98	21	P	P	15 40 53.7	+0.7
TTO1	TONANKAI O.B.S	3.60	336	P	P	15 41 00.0	+2.4
JTNC	Tanabenakahech	4.27	325	P	P	15 41 05.4	+1.5
JTNC				eS	S	15 42 07.5	+1.0
JIE	Ise	4.33	340	P	P	15 41 06.3	+1.9
JKN2	Miekihoku	4.34	335	P	P	15 41 06.1	+1.6
JSG	Sagara	4.34	356	P	P	15 41 06.6	+2.1
CBIJ	Chichi jima	4.55	134	P	P	15 41 04.4	-2.3
CBIJ				S	S	15 42 06.2	-5.3
JCJ	Chichijima	4.55	134	P	P	15 41 04.4	-2.3
	20nm,0.3s,baz=34,slow=12,SNR=54						
JCJ				S	S	15 42 05.8	-5.6
	88nm,0.3s,baz=102,slow=23,SNR=20						
HMMJ	Hamamatsu 2	4.56	352	P	P	15 41 07.8	+1.2
BSO3	Boso 3	4.76	20	P	P	15 41 07.1	-1.1
BSO3				eS	S	15 42 13.1	-1.4
BSO1	Boso 1	4.78	25	P	P	15 41 07.7	-0.4
BSO1				eS	S	15 42 13.6	-0.7
BSO4	Boso 4	4.89	18	eS	S	15 42 15.7	-1.3
JOD2	Odawara 2	4.94	5	P	P	15 41 09.7	-0.5
JOD2				S	S	15 42 17.6	-0.6
JAO	Obara	5.04	348	P	P	15 41 12.6	+1.4
JNY	Yasuok	5.04	354	P	P	15 41 12.4	+1.1
INU	Inuyama	5.16	346	P	P	15 41 12.6	+0.3
INU	Inuyama	5.16	346	P	P	15 41 14.1	+1.8
JMN	Monobe	5.20	312	P	P	15 41 14.7	+1.9
JGF	Kuroka	5.35	350	P	P	15 41 14.6	+0.4
JTO	Tosashimizu	5.49	299	P	P	15 41 17.6	+1.9
JHU	Hanno	5.54	6	P	P	15 41 15.1	-1.1
JWT	Wachi	5.59	333		P	15 41 17.7	+1.1
JRY	Ryogami san	5.68	3	P	P	15 41 17.4	-0.2
JRY				eS	S	15 42 29.6	-2.0
JYT	Yasato	6.05	13	P	P	15 41 19.3	-2.0
JYT	Yasato	6.05	13	P	P	15 41 19.2	-2.1
JAG	Ashikaga	6.13	7	P	P	15 41 20.6	-1.5
JAG				S	S	15 42 33.8	-6.2
MJAR	Matsushiro Arr	6.20	358	P	P	15 41 21.4	-1.6
	2.2nm,0.3s,baz=172,slow=11,SNR=84						
MJAR				S	S	15 42 38.5	-3.0
	0.2nm,0.3s,baz=127,slow=27,SNR=6.2						
MAJO	Matsushiro	6.20	358	P	P	15 41 22.4	-0.6
MAJO	Matsushiro	6.20	358	P	P	15 41 22.7	-0.2
MAT	Matsushiro	6.20	358	P	P	15 41 22.5	-0.4
MAT				S	S	15 42 38.6	-2.9
MJB9	Matsu-Tunnel	6.21	358		P	15 41 22.4	-0.6
JHO	Hitachi	6.49	15	P	P	15 41 24.5	-1.5
JHS	Saijyo	6.51	317	P	P	15 41 27.9	+1.5
JHS	Saijyo	6.51	317		P	15 41 27.8	+1.4
JFK	Kawauchi	7.29	15	eS	S	15 42 58.1	-4.5
JSD	Sado	7.69	358	P	P	15 41 37.3	-1.5
JMM	Marumori	7.75	13	P	P	15 41 38.8	-0.7
JAMN	Amaminishikomi	8.42	258	P	P	15 41 48.0	+1.1
JMK	Ichinoseki	8.88	14	P	P	15 41 49.8	-2.0
JMK				eS	S	15 43 29.7	-4.7
JOW	Kunigami	9.66	251	P	P	15 42 02.4	+1.9
	2.4nm,0.3s,baz=102,slow=18,SNR=8.3						
JTM	Tenmabayashi	10.64	11		P	15 42 11.7	+0.7
KSRS	Korea Array	11.31	312	P	P	15 42 19.3	+1.0
	2.7nm,0.3s,baz=126,slow=10,SNR=76						
KSAR	Wonju Array Be	11.33	312	P	P	15 42 19.1	+0.5
KS19	Wonju Array Si	11.37	312	P	P	15 42 19.4	+0.4
INCN	Inchon	12.18	309	P	P	15 42 27.6	-0.3
ERM	Erimo	12.24	16	P	P	15 42 30.0	+1.6
JEW	Eniwo	12.70	10	P	P	15 42 34.6	+1.2
ASAJ	Asahikawa	14.13	12	P	P	15 42 50.3	+1.4
	0.7nm,0.3s,baz=76,slow=15,SNR=6.5						
JKA	Kamikawa-asahi	14.14	12	P	P	15 42 50.5	+1.6
USA0B	Ussuriysk Arra	14.78	341	P	P	15 42 56.2	+0.3
USRK	Ussuriysk Ar.	14.78	341	P	P	15 42 56.1	+0.3
	baz=153,slow=9.5,SNR=23						
YHNB	Yeheng	16.22	254	P	P	15 43 11.3	-0.3
YHNB				IAmb	IAmb	15 43 29.1	
	comp=Z,5.5nm,0.9s						
YULB	Yu-li	16.84	250	P	P	15 43 16.4	-1.7
YULB				IAmb	IAmb	15 43 33.9	
	comp=Z,12nm,1.2s						
SSLB	Suanglung	16.94	252	P	P	15 43 18.4	-0.8
SSLB				IAmb	IAmb	15 43 26.9	
	comp=Z,10nm,1.1s						
KLR	Kul'dur	19.57	347	P	P	15 43 45.1	+0.3
	comp=Z,0.2nm,0.3s,baz=198,slow=8.0,SNR=4.3						
HHC	Hu-ho-hao-te	24.22	303	eP	P	15 44 28.9	+1.8
HHC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,200nm,5.6s						
ENH	Enshi	25.04	277	P	P	15 44 33.7	-0.8
XAN	Xi'an	25.28	286	P	P	15 44 36.0	-0.6
XAN				pmax	pmax		
	comp=Z,25nm,0.7s						
XAN				pmax	pmax		
	comp=Z,180nm,5.8s						
LZH	Lanzhou	29.47	291	eP	P	15 45 13.0	-0.7
LZH				pmax	pmax		
	comp=Z,16nm,1.3s						
ULN	Ulaanbaatar	29.77	315	P	P	15 45 15.6	-0.4
SONM	Songino Array	30.16	315	P	P	15 45 19.4	-0.1
	comp=Z,1.3nm,0.4s,baz=124,slow=8.5,SNR=22						
SONM	Songino Array	30.16	315	P	P	15 45 19.4	-0.1
MA2	Magadan	30.40	12	P	P	15 45 21.6	+0.5
	comp=Z,14nm,0.9s,baz=163,slow=6.2,SNR=4.4						
MA2	Magadan	30.40	12	P	P	15 45 21.6	+0.5
GTA	Gaotai	32.82	297	eP	P	15 45 41.8	-0.7
GTA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
FAKI	Fak Fak	33.60	191	P	P	15 45 49.4	+0.2
FAKI				IAmb	IAmb	15 45 50.6	
	comp=Z,11nm,1.1s						
LUWI	Luwuk	34.62	209	P	P	15 45 56.9	-0.9
CHTO	Chiang Mai	37.60	262	P	P	15 46 21.4	-1.3
CHTO				IAmb	IAmb	15 46 23.3	
	comp=Z,5.1nm,0.7s						
CMAR	Chiang Mai Arr	37.75	261	P	P	15 46 24.0	0.0
	comp=Z,1.6nm,0.7s,baz=60,slow=6.3,SNR=17						
BILL	Bilibino	41.12	15	P	P	15 46 51.9	+1.3
BILL				IAmb	IAmb	15 46 56.7	
	comp=Z,10nm,1.3s						
TIXI	Tiksi	41.71	355	P	P	15 46 55.0	-0.1
WMQ	Urumqi	42.10	303	eP	P	15 46 59.6	+0.7
SOEI	Soe	42.15	201	P	P	15 46 58.8	-0.7
SOEI				IAmb	IAmb	15 47 17.2	
	comp=Z,11nm,0.7s						
BATI	Baumata	42.76	202	P	P	15 47 04.7	+0.3
	comp=Z,12nm,0.4s,baz=39,slow=2.4,SNR=5.9						
TAPN	Taplejung	44.31	279	eP	P	15 47 16.6	-0.2
	comp=Z,7.3nm,0.4s						
ODAN	Odare	44.73	279	eP	P	15 47 19.5	-0.4
	comp=Z,10nm,0.6s						
ZALV	Zalesovo Beam	44.94	318	P	P	15 47 20.4	-0.5
	comp=Z,1.2nm,0.4s,baz=94,slow=7.9,SNR=5.3						
ZALV				PcP	PcP	15 48 52.4	-0.8
	comp=Z,0.7nm,0.4s,baz=132,slow=4.1,SNR=3.2						
ZALV				ScP	ScP	15 52 01.6	-1.4
	comp=Z,0.7nm,0.6s,baz=90,slow=1.4,SNR=2.5						
ZALV				P3KPbc		16 16 07.1	
	comp=Z,2.1nm,0.5s,baz=306,slow=3.1,SNR=11						
RAMN	Ramite	45.37	279	eP	P	15 47 24.7	-0.2
	comp=Z,17nm,0.4s						
JIRN	Jiri	45.52	280	eP	P	15 47 26.6	+0.4
	comp=Z,31nm,0.4s						
GUN	Gumba	45.71	281	eP	P	15 47 27.8	+0.1
	comp=Z,28nm,0.5s						
MK31	Makanchi Array	45.95	307	P	P	15 47 28.4	-0.4
MKAR	Makanchi Array	45.95	307	P	P	15 47 28.5	-0.3
	comp=Z,0.9nm,0.5s,baz=95,slow=8.1,SNR=16						
MKAR				PcP	PcP	15 48 56.8	-0.2
	comp=Z,0.3nm,0.4s,baz=77,slow=6.5,SNR=4.8						
MKAR				ScP	ScP	15 52 06.4	-1.0
	comp=Z,0.6nm,0.8s,baz=83,slow=4.5,SNR=6.3						
MKAR	Makanchi Array	45.95	307	P	P	15 47 28.0	-0.8
PKIN	Phulchoki	46.22	280	eP	P	15 47 30.9	-0.6
	comp=Z,5.3nm,0.5s						
KKN	Kakani	46.26	281	eP	P	15 47 31.5	-0.2
	comp=Z,7.3nm,0.4s						
DMN	Daman	46.46	281	eP	P	15 47 33.0	-0.3
	comp=Z,9.8nm,0.3s						
GKN	Gorkha	46.74	281	eP	P	15 47 35.1	-0.2
	comp=Z,6.7nm,0.3s						
DANN	Dangsing	47.39	282	eP	P	15 47 40.7	+0.3
	comp=Z,20nm,0.4s						
KOLN	Koldanda	47.69	281	eP	P	15 47 42.6	0.0
	comp=Z,25nm,0.8s						
PYUN	Piuthan	48.11	282	eP	P	15 47 46.0	+0.3
	comp=Z,84nm,0.4s						
GSI	Gunungsitoli	48.38	241	P	P	15 47 47.2	-0.4
KURK	Kurchatov	48.43	313	P	P	15 47 46.9	-0.6
KURBB	Kurchatov Arra	48.49	313	P	P	15 47 47.6	-0.3
	comp=Z,1.4nm,0.3s,baz=91,slow=7.6,SNR=9.1						
WB0	Warramunga Arr	49.97	185	P	P	15 47 58.9	-0.4
WB0				IAmb	IAmb	15 47 59.7	
	comp=Z,9.9nm,0.5s						
WRAB	Tennant Creek	50.13	185	P	P	15 48 00.1	-0.4
WRAB				IAmb	IAmb	15 48 00.5	
	comp=Z,7.5nm,0.6s						
WB2	Warramunga Arr	50.14	185	P	P	15 48 00.2	-0.4
WB2				IAmb	IAmb	15 48 01.0	
	comp=Z,6.6nm,0.8s						
WRA	Warramunga Arr	50.14	185	P	P	15 48 00.3	-0.4
	comp=Z,6.5nm,0.4s,baz=0.7,slow=7.6,SNR=55						
WRA				ScP	ScP	15 52 25.0	-0.4
	comp=Z,0.2nm,0.5s,baz=359,slow=5.0,SNR=2.1						
WRA	Warramunga Arr	50.14	185	P	P	15 48 00.2	-0.4
WR0	Warramunga Arr	50.15	185	P	P	15 48 00.3	-0.3
WR0				IAmb	IAmb	15 48 00.7	
	comp=Z,9.0nm,0.5s						
AAK	Ala-Archa	51.79	302	P	P	15 48 12.5	-0.2
CHIR	Chirikof Islan	52.09	41	P	P	15 48 15.6	+1.2
TTA	Tatalina	52.34	32	P	P	15 48 17.2	+1.1
TTA				IAmb	IAmb	15 48 29.5	
	comp=Z,12nm,1.4s						
O19K	Port Alsworth	52.92	35	P	P	15 48 22.0	+1.8
M19K	Big River Lodg	52.99	33	P	P	15 48 22.8	+2.0
M19K				IAmb	IAmb	15 48 39.9	
	comp=Z,18nm,1.4s						
K20K	Telida	53.26	31	P	P	15 48 24.5	+1.8
K20K				IAmb	IAmb	15 48 25.3	
	comp=Z,9.3nm,0.7s						
J20K	Nowinta River	53.30	30	P	P	15 48 24.7	+1.8
J20K				IAmb	IAmb	15 48 25.4	
	comp=Z,9.7nm,0.7s						
OHAK	Old Harbor	53.39	39	P	P	15 48 24.2	+0.5
BRVK	Borovoye	53.55	316	P	P	15 48 25.0	+0.1
A21K	Barrow	53.56	21	P	P	15 48 26.0	+1.4
A21K				IAmb	IAmb	15 48 38.7	
	comp=Z,15nm,1.1s						
IMAR	Indian Mountai	53.66	28	P	P	15 48 26.6	+1.0
RSO	Redoubt South	53.71	35	P	P	15 48 27.0	+0.8
KDAK	Kodiak Island	53.77	38	P	P	15 48 26.9	+0.5
AS31	Alice Springs	53.87	185	P	P	15 48 27.4	-0.2
AS31	Alice Springs	53.87	185	IAmb	IAmb	15 48 27.9	
	comp=Z,1.3nm,0.3s						
ASAR	Alice Springs	53.87	185	P	P	15 48 27.4	-0.2
	comp=Z,3.5nm,0.6s,baz=16,slow=12,SNR=36						
H21K	Melozitna Rive	54.01	29	P	P	15 48 29.6	+1.5
H21K				IAmb	IAmb	15 48 29.7	
	comp=Z,12nm,1.4s						
SPU	Mount Spurr	54.07	34	P	P	15 48 30.2	+1.6
PPLA	Purkeypile	54.08	32	P	P	15 48 30.2	+1.5
PPLA				IAmb	IAmb	15 48 36.0	
	comp=Z,29nm,1.5s						
CAST	Castle Rocks	54.15	31	P	P	15 48 30.6	+1.5
CAST				IAmb	IAmb	15 48 31.4	
	comp=Z,11nm,1.0s						
SKT	Skwentna	54.34	33	P	P	15 48 31.7	+1.2
SKT				IAmb	IAmb	15 48 37.3	
	comp=Z,20nm,1.5s						
KK31	Karatay Array	54.60	304	P	P	15 48 32.4	-0.3
KKAR	Karatay Array	54.60	304	P	P	15 48 32.4	-0.3
KKAR	Karatay Array	54.60	304	P	P	15 48 32.0	-0.6
NIL	Nilore	54.63	292	P	P	15 48 33.0	0.0
NIL				IAmb	IAmb	15 48 34.1	
	comp=Z,5.7nm,0.8s						
BRLK	Bradley Lake	54.64	36	P	P	15 48 33.9	+1.3
BRLK				IAmb	IAmb	15 48 55.5	
	comp=Z,28nm,1.2s						
BPAW	Bear Paw Mtn.	54.67	30	P	P	15 48 34.5	+1.7
MLY	Manley	54.83	29	P	P	15 48 35.3	+1.4
COLD	Coldfoot	55.19	27	P	P	15 48 37.6	+1.3
RC01	Rabbit Creek A	55.20	34	P	P	15 48 37.0	+0.5
RC01				IAmb	IAmb	15 48 38.1	
	comp=Z,14nm,1.1s						
SEW	Seward	55.35	35	P	P	15 48 38.3	+0.7
NEA2	Nenana	55.53	30	P	P	15 48 39.9	+1.2
TOLK	Toolik Lake Re	55.53	25	P	P	15 48 40.1	+1.4
GHO	Glory Hole Cre	55.58	33	P	P	15 48 40.0	+0.7
GHO				IAmb	IAmb	15 49 03.6	
	comp=Z,24nm,1.4s						
RND	Reindeer	55.60	31	P	P	15 48 39.9	+0.5
RND				IAmb	IAmb	15 48 40.5	
	comp=Z,9.7nm,0.7s						
KNK	Knik Glacier	55.81	34	P	P	15 48 41.3	+0.5
KNK				IAmb	IAmb	15 48 42.3	
	comp=Z,12nm,0.8s						
SML	Sawmill	55.86	33	P	P	15 48 41.8	+0.7
PWL	Port Wells	55.88	34	P	P	15 48 41.7	+0.4
MDM	Murphy Dome	55.89	29	P	P	15 48 42.5	+1.1
WRH	Wood River Hil	55.95	30	P	P	15 48 42.3	+0.7
CCB	Clear Creek Bu	56.07	30	P	P	15 48 44.5	+2.0
SCM	Sheep Creek Mo	56.34	33	P	P	15 48 45.5	+1.0
SCM				IAmb	IAmb	15 48 45.9	
	comp=Z,13nm,0.8s						
HDA	Harding Lake	56.44	30	P	P	15 48 45.1	0.0
IL31		56.47	30	P	P	15 48 45.1	-0.1
IL31				IAmb	IAmb	15 48 48.2	
	comp=Z,11nm,1.5s						
ILAR	Eielson Array	56.47	30	P	P	15 48 45.1	-0.2
	comp=Z,1.1nm,0.6s,baz=259,slow=5.1,SNR=21						
CHGR	Chuyangaron	56.55	299	P	P	15 48 46.1	-0.3
M24K	Tolsona, Glenn	56.87	33	P	P	15 48 49.5	+1.4
KLU	Klutina	57.02	34	P	P	15 48 50.3	+1.0
EYAK	Cordova Ski Ar	57.17	35	P	P	15 48 51.2	+1.0
BMAR	Burnt Mountain	57.37	27	P	P	15 48 53.0	+1.5
N25K	Chitina, Valde	57.65	33	P	P	15 48 55.0	+1.4
N25K				IAmb	IAmb	15 49 02.7	
	comp=Z,13nm,1.4s						
RAGM	Ragged Mountai	57.71	35	P	P	15 48 55.4	+1.4
DOT	Dot Lake	57.74	31	P	P	15 48 54.6	+0.5
DOT				IAmb	IAmb	15 48 55.2	
	comp=Z,9.9nm,0.6s						
SCRK	Sand Creek	57.76	31	P	P	15 48 54.8	+0.5
SCRK				IAmb	IAmb	15 48 55.5	
	comp=Z,8.5nm,0.6s						
MENT	Mentasta	57.95	32	P	P	15 48 56.9	+1.4
MENT				IAmb	IAmb	15 48 57.6	
	comp=Z,16nm,1.3s						
GLB	Gilahina Butte	58.04	34	P	P	15 48 57.5	+1.3
GLB				IAmb	IAmb	15 48 57.9	
	comp=Z,7.3nm,0.9s						
BERG	Berg Lake	58.19	35	P	P	15 48 58.4	+1.1
VRDI	Verde Repeater	58.23	34	P	P	15 48 58.6	+1.0
VRDI				IAmb	IAmb	15 49 14.9	
	comp=Z,14nm,1.2s						
MCARA	McCarthy VSAT	58.42	34	P	P	15 49 00.3	+1.6
CRQM	Cirque	58.43	34	P	P	15 49 00.3	+1.3
WAX	Waxell Ridge	58.61	35	P	P	15 49 01.1	+1.0
L27K	Beaver Creek,	58.80	32	P	P	15 49 02.1	+0.8
BCAR	Beaver Creek A	58.82	32	P	P	15 49 02.6	+1.1
ISLE	Juniper Island	58.84	34	P	P	15 49 02.6	+0.8
M27K	Edge Creek, AK	58.85	32	P	P	15 49 02.8	+0.9
M27K				IAmb	IAmb	15 49 08.2	
	comp=Z,8.9nm,1.3s						
EGAK	Eagle	58.92	30	P	P	15 49 02.5	+0.5
EGAK				IAmb	IAmb	15 49 29.1	
	comp=Z,11nm,1.4s						
GRNC	Granite Creek	59.11	34	P	P	15 49 04.5	+0.8
BARN	Barnard Glacie	59.11	34	P	P	15 49 04.7	+1.0
BARN				IAmb	IAmb	15 49 08.8	
	comp=Z,14nm,1.4s						
CTGM	Chitina Glacie	59.28	34	P	P	15 49 06.1	+1.3
CTGM				IAmb	IAmb	15 49 16.5	
	comp=Z,19nm,1.2s						
ARU	Arti	59.90	321	P	P	15 49 08.4	-0.4
	comp=Z,1.1nm,0.4s,baz=149,slow=0.8,SNR=5.8						
ARU	Arti	59.90	321	P	P	15 49 08.0	-0.7
ABKAR	Akbulak array	60.54	312	P	P	15 49 12.7	-0.5
HYT	Haines Junctio	61.15	34	P	P	15 49 18.8	+1.6
HYT				IAmb	IAmb	15 49 20.4	
	comp=Z,9.7nm,1.2s						
INK	Inuvik	61.45	25	P	P	15 49 19.1	+0.2
	comp=Z,2.4nm,0.6s,baz=293,slow=5.8,SNR=22						
INK	Inuvik	61.45	25	P	P	15 49 19.4	+0.5
INK				IAmb	IAmb	15 49 26.3	
	comp=Z,6.6nm,1.4s						
AKTO	Aktyubinsk	61.48	314	P	P	15 49 19.2	-0.2
	comp=Z,2.5nm,0.6s,baz=111,slow=6.9,SNR=9.1						
STKA	Stephens Creek	61.94	177	P	P	15 49 22.8	+0.2
	comp=Z,2.4nm,0.5s,baz=352,slow=6.6,SNR=11						
STKA	Stephens Creek	61.94	177	P	P	15 49 22.7	+0.2
WHY	Whitehorse	62.45	34	P	P	15 49 26.8	+1.1
WHY				IAmb	IAmb	15 49 28.1	
	comp=Z,4.6nm,0.8s						
SKAG	Skagway	62.51	35	P	P	15 49 27.7	+1.8
SKAG				IAmb	IAmb	15 49 36.6	
	comp=Z,18nm,1.4s						
A36M	Sachs Harbour	63.36	20	P	P	15 49 32.4	+1.1
A36M				IAmb	IAmb	15 49 33.5	
	comp=Z,7.6nm,0.8s						
GRNB	Grenville Isla	66.97	40	P	P	15 49 55.2	+0.7
EUNU	Eureka	67.14	8	P	P	15 49 55.8	+0.6
EUNU				IAmb	IAmb	15 49 56.5	
	comp=Z,3.4nm,0.6s						
ARCES	ARCESS Array B	69.42	340	P	P	15 50 09.3	+0.2
	comp=Z,1.7nm,0.4s,baz=70,slow=8.4,SNR=30						
RES	Resolute Bay	69.67	13	P	P	15 50 11.1	+0.6
RES				IAmb	IAmb	15 50 28.3	
	comp=Z,3.8nm,1.0s						
TLCB	Telegraph Cove	69.98	43	P	P	15 50 14.0	+1.2
TLCB				IAmb	IAmb	15 50 31.0	
	comp=Z,11nm,1.0s						
YKA	Yellowknife Ar	70.82	28	P	P	15 50 17.4	-0.2
	comp=Z,1.4nm,0.7s,baz=308,slow=5.0,SNR=5.9						
YKA	Yellowknife Ar	70.82	28	P	P	15 50 18.5	+0.9
KBZ	Khabaz	73.46	311	P	P	15 50 33.3	0.0
	comp=Z,1.7nm,0.7s,baz=114,slow=10.0,SNR=1.5						
FINES	FINESS Array B	73.62	332	P	P	15 50 33.4	-0.5
	comp=Z,1.9nm,0.3s,baz=68,slow=5.0,SNR=25						
BKZ	Black Stump Fm	77.65	151	P	P	15 50 56.8	0.0
NB2	NORSAR Subarra	79.40	337	P	P	15 51 05.6	-0.4
	comp=Z,0.7nm,0.5s,baz=44,slow=5.3						
NOA	NORSAR Array B	79.40	337	P	P	15 51 05.5	-0.5
	comp=Z,0.2nm,0.4s,baz=58,slow=6.9,SNR=5.4						
NVAR	Mina Array Bea	81.01	51	P	P	15 51 16.1	+1.0
	comp=Z,0.8nm,0.5s,baz=298,slow=5.7,SNR=9.3						
HVU	Hansel Valley	82.75	46	P	P	15 51 25.1	+1.2
HVU				IAmb	IAmb	15 51 26.1	
	comp=Z,4.6nm,0.7s						
QSM	Queen of Sheba	83.29	52	P	P	15 51 27.1	+0.6
QSM				IAmb	IAmb	15 51 28.3	
	comp=Z,6.8nm,0.8s						
DUG	Dugway, Tooele	83.62	47	P	P	15 51 29.1	+0.8
DUG				IAmb	IAmb	15 51 30.3	
	comp=Z,3.8nm,0.7s						
PDAR	Pinedale Array	84.13	43	P	P	15 51 31.8	+0.8
	comp=Z,1.7nm,0.9s,baz=343,slow=2.7,SNR=8.6						
TXAR	Lajitas Array	96.16	51	P	P	15 52 28.6	+1.5
	comp=Z,0.4nm,0.6s,baz=296,slow=3.9,SNR=4.8						

IDC ***17*** *15:42:29.2±1.5, 0°.71N×126°.37E, h0^{km}, mb3.8/3, mb1 4.1/4, mb1mx3.6/33, mbtmp3.9/4, ML4.1/1, Error ellipse: s-maj=56.5km s-min=23.1km az=67.0*

DJA ***17*** *15:42:33.1±0.4, 0°N±6°×12°6E±°, h10^{km}, M3.9/6, mb4.4/1, MLv3.6/6*

NEIC ***17*** *15:42:35.5±2.0, 0°.64N±0°.08×126°.32E±0°.06, h44^{km}±12^{km}, mb4.1/11, Error ellipse: s-maj=12.6km s-min=7.3km az=159.0*

ISC 17 15:42:35.3±0.8**, 0°.61N**±0°.08×**126°.30E**±0°.06**, h47^{km}, n33, σ1^{s}00**/32**, mb4.0**/9**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.07	81	P	Pn	15 42 54.2	+0.2
TNTI	Ternate	1.07	81		Pn	15 42 54.0	0.0
TNTI				Sn	Sn	15 43 06.9	-0.9
LBMI	Labuha	1.72	136	P	Pn	15 43 02.3	-0.6
KMSI	Cibinong	2.32	269	P	Pn	15 43 09.2	-1.9
SANI	Sanana	2.66	187	P	Pn	15 43 13.8	-1.9
GTOI	Gorontalo	3.29	270	P	Pn	15 43 25.7	+1.3
LUWI	Luwuk	3.89	245	P	Pn	15 43 40.5	+7.8
LUWI	Luwuk	3.89	245	Pn	Pn	15 43 33.3	+0.6
AAI	Ambon	4.67	156	P	Pn	15 43 54.7	+11
APSI	Ampana	4.89	252	P	Pn	15 43 44.8	-1.6
TOLI2	Tolitoli	5.54	275	Pn	Pn	15 43 54.9	-0.5
FAKI	Fak Fak	6.90	121	Pn	Pn	15 44 14.5	+0.5
BNSI	Bone	7.94	231	P	Pn	15 44 28.4	+0.1
SPSI	Sidrap Palu	7.96	235	P	Pn	15 44 29.4	+0.9
BKSI	Bulukumba	8.53	226	P	Pn	15 44 37.8	+1.4
KAPI	Kappang	8.60	229	Pn	Pn	15 44 37.7	+0.3
	2.1nm,0.3s,baz=147,slow=8.0,SNR=3.8						
UGM	Wanagama	17.87	241	P	P	15 46 41.6	+0.7
WB0	Warramunga Arr	21.75	159	P	P	15 47 22.2	-0.9
WB0				IAmb	IAmb	15 47 36.4	
	comp=Z,8.4nm,1.2s						
WRAB	Tennant Creek	21.89	159	P	P	15 47 23.6	-0.9
WRAB				IAmb	IAmb	15 47 28.4	
	comp=Z,3.5nm,0.7s						
WRA	Warramunga Arr	21.89	159	P	P	15 47 23.6	-0.9
	comp=Z,1.8nm,0.5s,baz=336,slow=11,SNR=27						
WRA	Warramunga Arr	21.89	159	P	P	15 47 23.6	-1.0
WB2	Warramunga Arr	21.89	159	P	P	15 47 23.6	-1.0
WB2				IAmb	IAmb	15 47 35.2	
	comp=Z,3.8nm,0.8s						
WR0	Warramunga Arr	21.98	159	P	P	15 47 24.6	-0.9
TPUB	Ta-pu	23.22	347	P	P	15 47 39.0	+0.5
TPUB				IAmb	IAmb	15 48 01.4	
	comp=Z,17nm,1.2s						
AS31	Alice Springs	25.23	163	P	P	15 47 58.2	+1.1
ASAR	Alice Springs	25.23	163	P	P	15 47 58.5	+1.3
	comp=Z,0.9nm,0.3s,baz=341,slow=9.9,SNR=43						
ASAR	Alice Springs	25.23	163	P	P	15 47 58.6	+1.5
MK31	Makanchi Array	59.88	327	P	P	15 52 35.7	-0.7
MK31				IAmb	IAmb	15 52 40.7	
	comp=Z,2.5nm,1.4s						
MKAR	Makanchi Array	59.88	327	P	P	15 52 36.5	0.0
	comp=Z,0.5nm,0.3s,baz=121,slow=7.8,SNR=18						
MKAR	Makanchi Array	59.88	327	P	P	15 52 36.2	-0.2
MAKZ	Makanchi	60.07	326	P	P	15 52 37.5	-0.2
MAKZ				IAmb	IAmb	15 53 04.9	
	comp=Z,3.9nm,1.5s						
KURK	Kurchatov	64.14	329	P	P	15 53 05.0	+0.1
ABKAR	Akbulak array	74.30	321	P	P	15 54 08.4	+0.6

BEO ***17*** *15:44:07.6±4.1, 37°.62N×20°.16E, h112^{km}±9^{km}, ML3.3/4*

ATH ***17*** *15:44:16.9, 38°.76N×20°.64E, h7^{km}±2^{km}, ML3.2/4, Error ellipse: s-maj=2.0km s-min=1.0km az=5.0*

THE ***17*** *15:44:17.0, 38°.78N×20°.58E, h3^{km}±5^{km}, ML3.4/9, Error ellipse: s-maj=5.9km s-min=0.6km az=89.0*

ISC 17 15:44:16.1±0.9**, 38°.78N**±0°.02×**20°.53E**±0°.04**, h6^{km}**±8^{km}**, n52, σ1^{s}41**/73**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LKD2	Lefkada island	0.10	86	P	Pg	15 44 18.2	-0.2
LKD2				S	Sg	15 44 19.1	-0.8
	143µm,0.2s						
LKD2	Lefkada island	0.10	86	P	Pg	15 44 18.2	-0.2
LKD2				S	Sg	15 44 19.1	-0.8
LKD2				AML	AML	15 44 19.5	

LKD2				AML	AML	15 44 19.6	
TSLK	Tsoukalades, L	0.11	66	P	Pg	15 44 18.5	0.0
TSLK				S	Sg	15 44 20.0	-0.1
	100µm,0.4s						
TSLK	Tsoukalades, L	0.11	66	P	Pg	15 44 18.5	0.0
TSLK				S	Sg	15 44 19.7	-0.3
NYDR	Nydri-Lefkada	0.15	117	P	Pg	15 44 19.1	-0.1
NYDR				S	Sg	15 44 21.1	-0.1
	16µm,0.6s						
NYDR	Nydri-Lefkada	0.15	117	P	Pg	15 44 18.4	-0.8
NYDR				S	Sg	15 44 20.4	-0.8
EVGI	Lefkada island	0.19	148	P	Pg	15 44 20.4	+0.5
EVGI				S	Sg	15 44 23.8	+1.4
	20µm,0.1s						
EVGI	Lefkada island	0.19	148	P	Pg	15 44 19.9	0.0
EVGI				S	Sg	15 44 22.1	-0.4
FSK	Fiskardo	0.32	175	P	Pg	15 44 23.3	+0.9
FSK				S	Sb	15 44 28.8	-1.0
	9µm,0.4s						
FSK	Fiskardo	0.32	175	P	Pg	15 44 23.0	+0.6
FSK				S	Sg	15 44 27.3	+0.6
FSK				AML	AML	15 44 29.6	
	comp=E,21905µm,0.2s						
FSK				AML	AML	15 44 29.9	
	comp=N,10419µm,0.3s						
KEF4	Livadi, Kephal	0.53	189	P	Pg	15 44 27.1	+0.8
KEF4				S	Sb	15 44 34.9	-0.8
KEF4	Livadi, Kephal	0.53	189	P	Pg	15 44 26.9	+0.6
DMLN	Damoulianata-K	0.56	193	P	Pg	15 44 27.4	+0.5
DMLN				S	Sb	15 44 36.5	0.0
	comp=N,4µm,0.4s						
KEF3	Kipouria, Keph	0.59	194	P	Pg	15 44 27.6	0.0
KEF3				S	Sb	15 44 37.7	+0.1
	comp=N,6µm,0.4s						
VLS	Valsamata	0.61	176	P	Pg	15 44 27.9	+0.1
VLS				S	Sb	15 44 37.3	-0.6
	comp=N,2µm,0.3s						
VLS	Valsamata	0.61	176	P	Pg	15 44 27.8	+0.1
VLS				S	Sg	15 44 35.7	0.0
VLS				AML	AML	15 44 41.5	
	comp=E,3803µm,0.3s						
VLS				AML	AML	15 44 44.0	
	comp=N,4487µm,0.3s						
PSDA	Pessada-Kefalo	0.67	176	P	Pg	15 44 29.0	0.0
PSDA				S	Sb	15 44 39.2	-0.5
	comp=N,275nm,0.2s						
PSDA	Pessada-Kefalo	0.67	176	P	Pg	15 44 28.9	0.0
PSDA				S	Sg	15 44 38.7	+1.0
PVO	Paravola	0.80	102	P	Pg	15 44 31.3	-0.1
PVO	Paravola	0.80	102	P	Pg	15 44 30.7	-0.7
PVO				S	Sg	15 44 40.3	-1.4
PVO				AML	AML	15 44 46.9	
	comp=N,2777µm,0.2s						
PVO				AML	AML	15 44 49.2	
	comp=E,3089µm,0.4s						
JAN	Janina	0.91	16	P	Pg	15 44 34.7	+1.1
KEK	Kerkira	1.09	329	P	Pb	15 44 38.9	+1.5
KLV	Kalavryta, Ach	1.47	120	P	Pn	15 44 41.9	-1.4
OHR	Ohrid	2.34	5	*e*Pn	Pb	15 44 58.5	-0.2
OHR				*e*Sn	Sb	15 45 28.7	+0.9
OHR	Ohrid	2.34	5	*i* Pn	Pb	15 44 59.3	+0.6
VAY	Valandovo	2.98	31	*i* Pn	Pn	15 45 07.0	+3.0
STIP	Stip	3.17	23	*i* Pn	Pn	15 45 09.7	+3.1
DRME	Dracevica, Mon	3.55	344	*e*Pn	Pn	15 45 12.7	+0.9
PDG	Podgorica	3.77	346	*e*Pn	Pn	15 45 16.7	+1.9
PDG	Podgorica	3.77	346	*e*Pn	Pn	15 45 15.2	+0.4
PRVS	Prvonek	3.90	17	*e*Pn	Pn	15 45 19.7	+3.0
HCY	Herceg Novi	3.98	338	*e*Pn	Pn	15 45 16.5	-1.1
BOSS	Bosilegrad	4.00	21	*e*Pn	Pn	15 45 20.1	+2.2
BARS	Barje	4.15	13	*e*Pn	Pn	15 45 21.8	+1.8
TREB	Trebinje	4.26	338	*e*Pn	Pn	15 45 21.7	+0.1
TREB				*e*Sn	Sn	15 46 09.2	-2.5
TREB	Trebinje	4.26	338	*e*Pn	Pn	15 45 20.7	-0.9
VTS	Vitosha	4.35	27	*e*Pn	Pn	15 45 23.7	+0.8
BRY	Bratogost	4.38	340	*e*Pn	Pn	15 45 23.6	+0.2
SELS	Selova	4.46	6	*e*Pn	Pn	15 45 26.5	+2.3
STON	Ston	4.62	333	*e*Pn	Pn	15 45 26.2	-0.2
STON				*e*Sn	Sn	15 46 17.1	-3.1
STON	Ston	4.62	333	*e*Pn	Pn	15 45 25.9	-0.5
ZAPS	Zavoj	4.76	19	*e*Pn	Pn	15 45 32.6	+4.2
RUDO	Rudo	4.91	350	*e*Pn	Pn	15 45 32.7	+2.2
GRUS	Gruza	5.10	2	*e*Pn	Pn	15 45 34.2	+1.1
BBLS	Lazići	5.15	351	*e*Pn	Pn	15 45 38.0	+4.2
DIVS	Divibare	5.33	356	*e*Pn	Pn	15 45 37.7	+1.4
DIVS	Divibare	5.33	356	*e*Pn	Pn	15 45 36.2	-0.1
HAPS	Han Pijesak,Bl	5.43	348	*e*Pn	Pn	15 45 36.6	-1.1
TRUS	Trudelj	5.44	359	*e*Pn	Pn	15 45 39.3	+1.6
MRAK	Mrakovica	6.79	338	*e*Pn	Pn	15 45 54.4	-1.9
CRES	Cresnjev	7.98	334	*e*Pn	Pn	15 46 12.1	-0.5
CEY	Cerknica	8.29	329	*e*Pn	Pn	15 46 15.3	-1.6

TAP 17 15:52:34.2, 24°.84N×121°.86E, h22^{km}, ML1.5, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NTC	Toucheng	0.03	304	*e*P	Pb	15 52 38.6	+0.5
	baz=307						
NTC				S	Sb	15 52 41.6	+0.9
	baz=307						
EGS		0.07	81	*e*P	Pb	15 52 38.0	-0.3
	baz=84						
EGS				*e*S	Sb	15 52 41.7	+0.7
	baz=84						
ILA	Ilan	0.12	236	*e*S	Sb	15 52 42.6	+0.6
	baz=241						
TWB1	Santiao Chiao	0.21	34	*e*S	Sb	15 52 43.9	+0.3
	baz=42						

JMA 17 15:53:33.0±0.2, 24°.92N×124°.01E, h4^{km}, M1.9,
Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JISG	Ishigakijimahi	0.43	140	P	Pg	15 53 41.7	+0.4
JISG				S	Sg	15 53 47.4	+0.5
JIJ	Ishigaki jima	0.57	168	P	Pg	15 53 43.9	0.0
JIJ				S	Sg	15 53 51.6	+0.3
IRIF	Iriomote-Funau	0.64	204	P	Pg	15 53 45.6	+0.4
IRIF				*e*S	Sg	15 53 54.6	+1.1
JKRS	Kuro-shima	0.68	180	P	Pg	15 53 46.6	+0.6
JKRS				*e*S	Sg	15 53 55.8	+0.9
JTJ	Tarama	0.69	114	P	Pg	15 53 46.7	+0.5
JTJ				S	Sb	15 53 56.4	-1.0
HATJ	Hateruma jima	0.88	192	P	Pg	15 53 50.2	+0.3
HATJ				*e*S	Sb	15 54 02.6	-0.3

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*KRSC **17** 16:08:58.9±1.0, 53°.02N×159°.52E, h20^{km}±7^{km}, ML3.8*
*IDC **17** 16:08:59.3±1.0, 52°.81N×158°.96E, h0^{km}, mb3.6/5, mb1 3.9/5, mb1mx3.4/34, mbtmp3.6/5, Error ellipse: s-maj=24.8km s-min=16.5km az=2.0*
ISC 17 16:08:59.4±1.1, **53°.03N**±0°.03×**159°.52E**±0°.03, **h15**^{km}±7^{km}, **n47**, σ1^{s}**64**/61, **mb3.5**/5, **Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NLC	Nalytchevo	0.18	324	*i* P	Pg	16 09 04.0	+0.3
NLC				*i* S	Sb	16 09 06.9	-0.8
SPN	Mys Shipunski	0.31	77	*i* P	Pb	16 09 06.6	0.0
SPN				*i* S	Sb	16 09 11.5	0.0
UGLR	Uglovaya	0.46	294	P	Pg	16 09 08.9	+0.4
UGLR				*e*S	Sb	16 09 15.7	-0.1
SDLR	Sedlovina	0.46	304	*e*P	Pg	16 09 08.8	+0.2
SDLR				*e*S	Sg	16 09 15.3	+0.5
DALK	Dalny	0.46	271	*i* P	Pg	16 09 08.6	0.0
DALK				*i* S	Sg	16 09 15.3	+0.5
SMAR	Somma	0.49	299	P	Pg	16 09 09.1	-0.1
SMAR				*e*S	Sg	16 09 15.9	0.0
PET	Petropavlovsk	0.52	270	P	Pb	16 09 09.6	-0.6
PET				*e*S	Sb	16 09 16.9	-0.6
AVH	Avacha	0.53	297	P	Pb	16 09 10.1	-0.2
AVH				*e*S	Sb	16 09 17.2	-0.6
KRER	Koryakskii	0.54	301	P	Pb	16 09 10.3	-0.3
KRER				*e*S	Sb	16 09 17.8	-0.5
KOK	Koryaka	0.59	297	P	Pb	16 09 10.9	-0.6
RUS	Russkaya	0.85	226	P	Pb	16 09 14.8	-1.0
RUS				*e*S	Sb	16 09 25.8	-1.2
MTVR	Mutnovka	0.98	237	P	Pb	16 09 17.2	-0.8
MTVR				*e*S	Sb	16 09 29.7	-1.1
GRL	Gorelyy	1.00	242	P	Pb	16 09 18.0	-0.4
GRL				*e*S	Sb	16 09 31.4	+0.1
KII	Karymskiy	1.01	358	*e*P	Pb	16 09 18.2	-0.4
KII				*e*S	Sb	16 09 31.6	-0.1
PETK	Petropavlovsk-	1.10	275	Pn	Pn	16 09 17.9	-2.4
	26nm,0.3s,baz=92,slow=22,SNR=453						
PETK				Sn	Sb	16 09 32.7	-1.5
	46nm,0.3s,baz=96,slow=14,SNR=11						
GNL	Ganaly	1.16	306	*e*P	Pn	16 09 20.2	-0.9
GNL				*e*S	Sb	16 09 35.2	-0.8
ASAK	Asacha	1.18	237	P	Pn	16 09 20.8	-0.5
ASAK				*e*S	Sn	16 09 36.5	-0.6
APC	Apacha	1.43	267	*e*P	Pb	16 09 25.5	-0.2
APC				*e*S	Sb	16 09 43.9	+0.2
KDTR	Khodutka, Kamc	1.50	216	*e*P	Pn	16 09 25.1	-0.6
KDTR				*e*S	Sn	16 09 44.2	-0.8
MKZ	Mys Kozlova	2.02	40	P	Pn	16 09 31.8	-0.9
MKZ				*e*S	Sn	16 09 55.4	-2.2
PAU	Pauzhetka	2.28	228	*e*P	Pn	16 09 37.3	+0.9
ESO	Esso	2.94	351	*e*P	Pb	16 09 51.9	+0.4
BZGR	Bezymyannyi-Gr	3.00	13	*e*P	Pb	16 09 49.4	-3.1
BZGR				*e*S	Sb	16 10 25.6	-3.3
ZLN	Zelenaya	3.09	14	*e*P	Pb	16 09 50.9	-3.1
ZLN				*e*S	Sb	16 10 28.2	-3.3
LGNR	Loginova	3.14	12	*e*P	Pn	16 09 51.0	+2.6
SKR	Severo-Kuril's	3.15	223	*e*P	Pn	16 09 51.2	+2.8
CIRR	Tsirk	3.18	13	*e*P	Pb	16 09 52.8	-2.7
CIRR				*e*S	Sb	16 10 31.0	-3.1
KRSR	Krestovskiy	3.25	10	*e*P	Pn	16 09 51.6	+1.7
KRSR				*e*S	Sn	16 10 28.9	+0.6
KLY	Klyuchi	3.36	11	*e*P	Pn	16 09 54.0	+2.8
KLY				*e*S	Sn	16 10 33.4	+2.7
BDR	Baidarnaya	3.68	15	*e*P	Pn	16 09 59.2	+3.5
KBTR	Krutoberegovo	3.72	30	*e*P	Pn	16 09 58.0	+1.8
KBTR				*e*S	Sn	16 10 40.1	+0.4
SMKR	Semkarok	3.74	17	*e*P	Pn	16 09 58.7	+2.2
SRKR	Sorokina	3.76	14	*e*P	Pn	16 09 59.9	+3.1
SRKR				*e*S	Sn	16 10 43.1	+2.4
ILAR	Eielson Array	29.11	45	P	P	16 15 04.4	+5.4
	0.3nm,0.6s,baz=259,slow=7.3,SNR=7.3						
H11N2	WAKE ISLAND Hy	33.72	167	T	T	16 51 21.5	
	baz=352,slow=76,SNR=156						
H11N3	WAKE ISLAND Hy	33.74	167	T	T	16 51 23.9	
	baz=352,slow=76,SNR=107						
H11N1	WAKE ISLAND Hy	33.74	167	T	T	16 51 24.0	
	baz=352,slow=76,SNR=118						
INK	Inuvik	34.13	38	P	P	16 15 47.8	+4.8
	1.0nm,0.7s,baz=304,slow=8.9,SNR=4.0						
H11S1	WAKE ISLAND Hy	34.90	168	T	T	16 52 56.4	
	baz=352,slow=76,SNR=24						
H11S3	WAKE ISLAND Hy	34.91	168	T	T	16 52 46.7	
	baz=352,slow=76,SNR=53						
H11S2	WAKE ISLAND Hy	34.92	168	T	T	16 52 57.1	
	baz=352,slow=76,SNR=8.1						
PDAR	Pinedale Array	57.86	60	P	P	16 18 56.7	+6.3
	0.5nm,0.6s,baz=328,slow=2.3,SNR=4.7						
WRA	Warramunga Arr	75.88	204	P	P	16 20 45.1	+0.2
	0.3nm,0.6s,baz=20,slow=6.2,SNR=6.0						
ASAR	Alice Springs	79.56	204	P	P	16 21 06.2	+0.9
	0.2nm,0.5s,baz=16,slow=5.0,SNR=7.5						
H03N2	Juan Fernandez	134.54	89	T	T	18 58 21.8	
	baz=315						
H03N1	Juan Fernandez	134.55	89	T	T	18 58 26.6	
	baz=315						
H03N3	Juan Fernandez	134.55	89	T	T	18 58 22.6	
	baz=315						

NOU 17 16:27:31.9, 15°.47S×167°.53E, h99^{km}, mb3.8/10, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.32	274	P	Pn	16 27 47.4	+1.0
DVP	Devils Point	2.33	164	P	Pn	16 28 09.4	+0.7
YATNC	Mamie plateau,	6.58	185	P	Pn	16 29 05.3	-0.8
DZM	Mont Dzumac	6.65	189	P	Pn	16 29 06.9	-0.2
NOUC	Port Laguerre	6.70	190	P	Pn	16 29 08.2	+0.5
PINNC	Pines Island,	7.11	181	P	Pn	16 29 14.0	+0.8

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*BEO **17** 16:39:59.0±3.0, 38°.11N×20°.24E, h52^{km}±1^{km}, ML3.6/10*
*TIR **17** 16:40:00.4, 38°.54N×20°.50E, h11^{km}±4^{km}, Ml3.4*
*THE **17** 16:40:01.0, 38°.53N×20°.54E, h13^{km}, ML3.7/11, Error ellipse: s-maj=1.3km s-min=0.4km az=286.0*
*ATH **17** 16:40:01.2, 38°.53N×20°.56E, h13^{km}±1^{km}, ML3.4/5, Error ellipse: s-maj=1.8km s-min=0.7km az=282.0*
*IDC **17** 16:40:04.2±12.0, 39°.15N×21°.25E, h0^{km}, mb3.5/4, mb1 3.5/4, mb1mx3.2/46, mbtmp3.5/4, Error ellipse: s-maj=232.5km s-min=43.9km az=39.0*
ISC 17 16:40:00.6±0.7, **38°.53N**±0°.01×**20°.52E**±0°.03, **h15**^{km}±4^{km}, **n95**, σ1^{s}**17**/134, **mb3.6**/4, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FSK	Fiskardo	0.08	155	P	Pg	16 40 03.5	-0.2
FSK				S	Sg	16 40 05.2	-0.5
	121µm,0.2s						
FSK	Fiskardo	0.08	155	P	Pg	16 40 03.5	-0.2
FSK				S	Sg	16 40 05.4	-0.3
EVGI	Lefkada island	0.14	51	P	Pg	16 40 04.2	-0.2
EVGI				S	Sg	16 40 06.8	-0.1
	73µm,0.2s						
EVGI	Lefkada island	0.14	51	P	Pg	16 40 04.2	-0.2
EVGI				S	Sg	16 40 06.6	-0.2
NYDR	Nydri-Lefkada	0.23	38	P	Pg	16 40 05.6	-0.1
NYDR				S	Sg	16 40 09.2	+0.1
	31µm,0.4s						
NYDR	Nydri-Lefkada	0.23	38	P	Pg	16 40 05.7	0.0
NYDR				S	Sg	16 40 09.3	+0.1
LKD2	Lefkada island	0.28	23	P	Pg	16 40 06.5	-0.1
LKD2				S	Sb	16 40 11.8	0.0
	10µm,0.4s						
LKD2	Lefkada island	0.28	23	P	Pg	16 40 06.6	+0.1
LKD2				S	Sg	16 40 11.2	+0.6
LKD2				AML	AML	16 40 12.0	
	comp=N,23097µm,0.6s						
LKD2				AML	AML	16 40 12.6	
	comp=E,15593µm,0.2s						
LKD2	Lefkada island	0.28	23	P	Pg	16 40 06.4	-0.1
	baz=27						
LKD2				S	Sg	16 40 10.8	+0.2
	baz=27						
KEF4	Livadi, Kephal	0.28	195	P	Pg	16 40 06.8	+0.3
KEF4				S	Sb	16 40 12.1	+0.2
	comp=E,144µm,0.3s						
KEF4	Livadi, Kephal	0.28	195	P	Pg	16 40 06.9	+0.3
KEF4				S	Sg	16 40 11.8	+1.1
TSLK	Tsoukalades, L	0.31	20	P	Pg	16 40 07.2	+0.1
TSLK				S	Sb	16 40 12.7	0.0
	comp=E,10µm,0.7s						
TSLK	Tsoukalades, L	0.31	20	P	Pg	16 40 07.4	+0.3
TSLK				S	Sb	16 40 12.7	0.0
DMLN	Damoulianata-K	0.32	201	P	Pg	16 40 07.3	+0.2
DMLN				S	Sb	16 40 12.9	+0.1
	comp=E,32µm,0.4s						
DMLN	Damoulianata-K	0.32	201	P	Pg	16 40 07.4	+0.3
DMLN				S	Sg	16 40 12.8	+1.1
LXRA	Lixouri, Kepha	0.34	191	P	Pg	16 40 07.9	+0.3
LXRA				S	Sb	16 40 13.5	+0.1
KEF3	Kipouria, Keph	0.36	202	P	Pg	16 40 07.5	-0.3
KEF3				S	Sg	16 40 12.9	+0.1
	comp=E,32µm,0.2s						
KEF3	Kipouria, Keph	0.36	202	P	Pg	16 40 07.5	-0.3
KEF3				S	Sg	16 40 13.1	+0.3
ARGA	Argostoli. Kep	0.36	185	P	Pb	16 40 08.9	+0.3
ARGA				S	Sb	16 40 14.8	+0.8
VLS	Valsamata	0.36	171	P	Pg	16 40 07.9	0.0
VLS				S	Sg	16 40 13.7	+0.8
	comp=E,21µm,0.3s						
VLS	Valsamata	0.36	171	P	Pg	16 40 07.9	0.0
VLS				S	Sg	16 40 13.8	+0.8
VLS				AML	AML	16 40 13.9	
	comp=N,35149µm,0.4s						
VLS				AML	AML	16 40 14.5	
	comp=E,46401µm,0.2s						
PSDA	Pessada-Kefalo	0.42	173	P	Pg	16 40 09.0	0.0
PSDA				S	Sb	16 40 15.8	0.0
	comp=E,4µm,0.2s						
PSDA	Pessada-Kefalo	0.42	173	P	Pg	16 40 09.0	0.0
PSDA				S	Sb	16 40 16.1	+0.3
PVO	Paravola	0.79	84	P	Pg	16 40 15.9	-0.1
PVO	Paravola	0.79	84	P	Pg	16 40 16.0	-0.1
PVO				S	Sg	16 40 26.2	-0.2
PVO				AML	AML	16 40 34.6	
	comp=N,4295µm,0.6s						
PVO				AML	AML	16 40 37.3	
	comp=E,4698µm,0.5s						
LTHK	Lithakia	0.86	163	P	Pg	16 40 16.3	-0.9
LTHK				S	Sb	16 40 29.7	+1.2
	comp=E,4µm,0.2s						
LTHK	Lithakia	0.86	163	P	Pg	16 40 16.4	-0.9
LTHK				S	Sn	16 40 30.0	-0.3
LTHK				AML	AML	16 40 30.7	
	comp=E,5549µm,0.2s						
LTHK				AML	AML	16 40 31.2	
	comp=N,9843µm,0.2s						
RLS	Riolos of Patr	0.88	122	P	Pg	16 40 17.5	-0.2
RLS	Riolos of Patr	0.88	122	P	Pg	16 40 17.4	-0.3
RLS				S	Sb	16 40 30.0	+0.9
RLS				AML	AML	16 40 32.7	
	comp=N,2667µm,0.7s						
RLS				AML	AML	16 40 39.2	
	comp=E,2340µm,0.3s						
IGT	Igoumenitsa	1.01	352	P	Pb	16 40 19.9	+0.2
IGT	Igoumenitsa	1.01	352	P	Pb	16 40 20.2	+0.5
IGT	Igoumenitsa	1.01	352	P	Pb	16 40 20.0	+0.2
	baz=353						
IGT				S	Sn	16 40 34.9	+0.8
	baz=353						
EVR	Evrytania	1.08	69	P	Pb	16 40 20.7	-0.3
EFP	Efpalio	1.09	95	P	Pb	16 40 20.3	-0.8
EFP	Efpalio	1.09	95	P	Pb	16 40 20.4	-0.8
ANX	Ano Chora	1.10	86	P	Pb	16 40 21.0	-0.4
DRO	Drossia	1.10	121	P	Pb	16 40 21.2	-0.1
DRO	Drossia	1.10	121	P	Pb	16 40 21.3	-0.1
JAN	Janina	1.15	13	P	Pg	16 40 23.4	+0.6
LAKA	Lakka	1.18	104	P	Pb	16 40 22.0	-0.7
SRN	Sarande	1.40	344	P	Pb	16 40 27.0	+0.6
	baz=345						
SRN				S	Sg	16 40 47.0	+1.1
	baz=345						
SRN				AMP			
	comp=N,1.3nm,0.4s,baz=345						
LSK	Leskovik	1.62	2	P	Pb	16 40 30.7	+0.6
	baz=2.0						
LSK				S	Sg	16 40 53.9	+1.3
	baz=2.0						
LSK				AMP			
	comp=N,3.3nm,0.7s,baz=2.0						
KBN	Korca	2.10	6	P	Pb	16 40 39.5	+1.2
	baz=6.0						
KBN				S	Sg	16 41 07.5	-0.6
	baz=6.0						
KBN				AMP			
	comp=N,0.6nm,0.5s,baz=6.0						
SCTE	Santa Cesarea	2.21	315	P	Pn	16 40 38.4	+1.7
	baz=315						
FNA	Florina	2.34	16	P	Pb	16 40 41.2	-1.3
	baz=16						
OHR	Ohrid	2.58	5	*e*Pn	Pn	16 40 44.7	+2.8
OHR				*e*Sn	Sb	16 41 17.7	-0.5
OHR	Ohrid	2.58	5	*i* Pn	Pb	16 40 45.6	-1.0
TIR	Tirane	2.85	350	*e*Pn	Pn	16 40 48.3	+2.8
TIR	Tirane	2.85	350	P	Pn	16 40 47.7	+2.2
	baz=351						
PHP	Peshkopia	3.15	359	P	Pn	16 40 51.9	+2.3
	baz=0.0						
PHP				AMP			
	comp=N,0.3nm,0.7s,baz=0.0						
VAY	Valandovo	3.20	29	*e*Pn	Pn	16 40 52.8	+2.5
VAY	Valandovo	3.20	29	*i* Pn	Pn	16 40 52.1	+1.8
STIP	Stip	3.41	22	*i* Pn	Pn	16 40 56.5	+3.4
DRME	Dracevica, Mon	3.79	345	*e*Pn	Pn	16 40 59.1	+0.7
BCI	Bajram Curri	3.84	355	P	Pn	16 41 01.4	+2.3
	baz=356						
PDG	Podgorica	4.01	347	*e*Pn	Pn	16 41 02.4	+1.0
PDG				*e*Sn	Sn	16 41 49.0	+0.9
PDG	Podgorica	4.01	347	*e*Pn	Pn	16 41 02.1	+0.7
PRVS	Prvonek	4.14	16	*e*Pn	Pn	16 41 05.1	+1.8
HCY	Herceg Novi	4.20	339	*e*Pn	Pn	16 41 03.5	-0.6
BOSS	Bosilegrad	4.23	20	*e*Pn	Pn	16 41 07.0	+2.5
BARS	Barje	4.39	13	*e*Pn	Pn	16 41 08.8	+2.1
TREB	Trebinje	4.49	339	*e*Pn	Pn	16 41 08.1	+0.1
TREB				*e*Sn	Sn	16 41 58.2	-1.8
TREB	Trebinje	4.49	339	*e*Pn	Pn	16 41 07.6	-0.4
DBRK	Dubrovnik	4.51	337	*e*Pn	Pn	16 41 07.7	-0.5
DBRK				Sn	Sn	16 41 56.9	-3.5
BRY	Bratogost	4.62	342	*e*Pn	Pn	16 41 09.8	-0.1
SELS	Selova	4.70	5	*e*Pn	Pn	16 41 12.1	+1.1
SJES	Sjenica	4.74	355	*e*Pn	Pn	16 41 13.4	+1.8
UPM	Unac-Piva	4.82	346	*e*Pn	Pn	16 41 14.8	+2.1
STON	Ston	4.83	335	*e*Pn	Pn	16 41 12.6	-0.1
STON				*e*Sn	Sn	16 42 07.3	-1.1
STON	Ston	4.83	335	*e*Pn	Pn	16 41 12.1	-0.6
STON	Ston	4.83	335	*e*Pn	Pn	16 41 12.3	-0.4
RUDO	Rudo	5.15	351	*e*Pn	Pn	16 41 17.6	+0.5
BOVS	Bovan	5.17	10	*e*Pn	Pn	16 41 18.3	+0.9
BBLS	Lazići	5.39	351	*e*Pn	Pn	16 41 21.3	+0.8
BBLS				*e*Sn	Sn	16 42 23.6	+1.3
BBLS	Lazići	5.39	351	*e*Pn	Pn	16 41 22.0	+1.5
MAKA	Makarska	5.44	332	*e*Pn	Pn	16 41 21.3	+0.3
MAKA				Sn	Sn	16 42 19.9	-3.3
HVAR	Hvar	5.57	328	*e*Pn	Pn	16 41 22.9	+0.1
DIVS	Divibare	5.57	356	*e*Pn	Pn	16 41 23.1	+0.1
DIVS				*e*Sn	Sn	16 42 25.1	-1.7
DIVS	Divibare	5.57	356	*e*Pn	Pn	16 41 21.8	-1.2
RICI	Ricice	5.58	334	*e*Pn	Pn	16 41 22.9	-0.1
HAPS	Han Pijesak,Bl	5.67	348	*e*Pn	Pn	16 41 23.7	-0.6
KIJV	Kijevo	6.28	332	*e*Pn	Pn	16 41 33.0	+0.4
ZIRJ	Zirje	6.30	326	*e*Pn	Pn	16 41 32.9	0.0
MORI	Morici	6.44	327	*e*Pn	Pn	16 41 35.5	+0.7
BLY	Banja Luka	6.69	339	*e*Pn	Pn	16 41 43.0	+4.8
DUGI	Dugi Otok	6.83	325	*e*Pn	Pn	16 41 40.5	+0.4
UDBI	Udbina	6.97	331	*e*Pn	Pn	16 41 42.7	+0.6
MRAK	Mrakovica	7.02	338	*e*Pn	Pn	16 41 40.0	-2.7
NVLJ	Novalja	7.36	327	*e*Pn	Pn	16 41 47.8	+0.4
CRES	Cresnjev	8.20	334	*e*Pn	Pn	16 41 58.4	-0.5
CEY	Cerknica	8.50	330	*e*Pn	Pn	16 42 03.2	+0.1
FINES	FINESS Array B	23.20	7	P	P	16 45 05.4	-1.1
	comp=N,1.3nm,0.5s,baz=169,slow=9.7,SNR=9.4						
NOA	NORSAR Array B	23.27	349	P	P	16 45 07.9	+0.6
	comp=N,0.2nm,0.4s,baz=155,slow=11,SNR=1.8						
MKAR	Makanchi Array	45.12	59	P	P	16 48 15.8	-0.4
	comp=N,0.3nm,0.5s,baz=284,slow=7.6,SNR=4.9						
ZALV	Zalesovo Beam	45.46	48	P	P	16 48 17.7	-0.9
	comp=N,1.2nm,0.5s,baz=274,slow=9.7,SNR=5.4						

IDC 17 16:47:04.1±3.0, **30°.51S**×**177°.56W**, **h0**^{km}, **mb3.5**/2, **mb1 3.7**/2, **mb1mx3.5**/22, **mbtmp3.5**/2, **Error ellipse: s-maj=63.3km s-min=25.3km az=102.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.29	346	Pn	Pn	16 47 30.3	+1.0
	211nm,0.3s,baz=74,slow=8.6,SNR=16						
RAO				Sn	Sn	16 47 47.2	-0.2
	490nm,0.3s,baz=11,slow=23,SNR=9.2						
ASAR	Alice Springs	43.48	267	P	P	16 55 09.4	0.0
	0.3nm,0.5s,baz=105,slow=7.5,SNR=8.5						
WRA	Warramunga Arr	44.48	272	P	P	16 55 17.1	-0.3
	0.3nm,0.3s,baz=111,slow=8.0,SNR=20						
FINES	FINESS Array B	145.38	340	PKPbc	PKPbc	17 06 41.7	-1.4
	2.7nm,0.9s,baz=54,slow=2.8,SNR=8.3						

NOU 17 16:47:18.0, 14°.24S×167°.16E, h109^{km}, mb3.9/10, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.20	178	P	Pn	16 47 41.9	+0.6
DVP	Devils Point	3.60	164	P	Pn	16 48 11.2	-0.8
KOUNC	Koumac, New Ca	6.85	203	P	Pn	16 48 55.8	-0.1
YATNC	Mamie plateau,	7.78	182	P	Pn	16 49 08.7	+0.2
DZM	Mont Dzumac	7.82	185	P	Pn	16 49 07.8	-1.3
NOUC	Port Laguerre	7.86	186	P	Pn	16 49 10.4	+0.8
OUENC	Ouen Island, N	8.14	182	P	Pn	16 49 13.8	+0.4

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*TUL **17** 16:50:49.8±0.7, 36°.37N±0°.01×97°.13W±0°.02, h3^{km}±7^{km}, ML3.1, mb_Lg3.1/63(NEIC), Error ellipse: s-maj=2.5km s-min=1.8km az=54.0*
NEIC 17 16:50:49.9±0.7, **36°.372N**±0°.005×**97°.14W**±0°.02, **h5**^{km}±7^{km}, **Error ellipse: s-maj=2.8km s-min=0.5km az=77.0,**

Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BLOK	Blackwell	0.39	351		Pg	16 50 57.9	+0.4
QUOK	Quay	0.40	120		Pg	16 50 57.8	+0.1
QUOK				Sg	Sg	16 51 02.8	-0.2
OK031	S. Brethren Rd	0.48	150		Pg	16 50 59.3	+0.1
OK030	Cody Creek RV	0.53	147		Pg	16 51 00.1	+0.1
OK029	Liberty Lake	0.63	204		Pg	16 51 02.1	+0.1
OK029				Sg	Sg	16 51 10.6	+0.4
CROK	Carrier	0.69	281		Pg	16 51 03.3	0.0
CROK				Sg	Sg	16 51 12.8	+0.5
KAN13	South Haven SW	0.70	337		Pg	16 51 03.5	+0.2
T35A	Sooner Cattle	0.74	43		Pg	16 51 03.9	-0.2
GC02	Grant County #	0.75	310		Pg	16 51 04.5	+0.1
GC02				Sg	Sg	16 51 14.6	+0.5
BCOK	Bluff Creek, N	0.81	208		Pg	16 51 05.3	-0.2
BCOK				Sg	Sg	16 51 16.1	+0.1
KAN17	Caldwell West	0.84	323		Pg	16 51 05.7	-0.3
KAN09	Caldwell North	0.85	333		Pg	16 51 06.3	-0.1
KAN09				Sg	Sg	16 51 17.6	+0.1
KAN14	Manchester OK	0.88	312		Pg	16 51 06.8	-0.1
KS20	Mayfield South	0.92	339		Pg	16 51 07.4	-0.2
KAN01	Argonia South	0.93	328		Pg	16 51 07.6	-0.1
KAN05	Bluff City Nor	0.94	321		Pg	16 51 07.9	-0.2
KAN05				Sg	Sg	16 51 20.3	+0.1
OK032	Salt Plains WL	0.96	297		Pg	16 51 08.2	-0.2
OK032				Sg	Sg	16 51 21.4	+0.4
OKCFA	Oklahoma City	0.99	195		Pg	16 51 08.6	-0.3
OKCSW	OKLAHOMA CITY	0.99	194	Pg	Pg	16 51 08.8	-0.2
KAN06	Argonia West S	1.05	327		Pg	16 51 09.8	-0.2
KAN10	Anthony SW Sta	1.07	315		Pg	16 51 10.3	-0.2
KAN08	Anthony NE Sta	1.08	322		Pg	16 51 10.5	-0.2
FNO	Franklin	1.13	191		Pg	16 51 11.0	-0.7
KAN16	Harper SW Stat	1.13	319		Pg	16 51 11.3	-0.3
KAN12	Harper NE Stat	1.15	323		Pg	16 51 11.8	-0.3
TUL1	Leonard	1.18	113	Pg	Pg	16 51 11.9	-0.7
U32A	Winter Ranch,	1.50	271		Pn	16 51 17.7	+0.1
X34A	Smith Ranch, M	1.86	198		Pn	16 51 21.7	-0.7
WMOK	Wichita Mounta	2.11	220	Pn	Pn	16 51 26.4	+0.5
WMOK				IAmb_Lg		16 52 00.2	
	comp=Z,59nm,0.8s						
U38A	Gravette	2.22	87	Pn	Pn	16 51 27.9	+0.5
X37A	Clayton	2.29	140	Pn	Pn	16 51 28.6	+0.3
LOOK	Love County	2.37	181	Pn	Pn	16 51 29.5	-0.1
R32A	Long Quarter,	2.40	329		Pn	16 51 29.4	-0.6
HHAR	Hobbs	2.58	91		Pn	16 51 31.7	-0.8
KSU1	Kansas State U	2.76	9	Pn	Pn	16 51 34.3	-0.5
W39A	Magazine	2.97	112	Pn	Pn	16 51 37.6	-0.1
W39A				IAmb_Lg		16 52 27.4	
	comp=Z,73nm,0.8s						
Z35A	Perchaven, San	3.04	182	Pn	Pn	16 51 38.4	-0.3
S39A	Bolivar	3.32	66		Pn	16 51 42.4	-0.2
S39A				IAmb_Lg		16 52 41.8	
	comp=Z,37nm,0.8s						
MIAR	Mount Ida	3.43	121	Pn	Pn	16 51 44.3	+0.3
U40A	Yellville	3.46	89		Pn	16 51 43.9	-0.6
U40A				IAmb_Lg		16 52 46.8	
	comp=Z,39nm,0.7s						
Z38A	Mt. Pleasant	3.57	150	Pn	Pn	16 51 46.2	+0.2
Z38A				IAmb_Lg		16 52 47.3	
	comp=Z,60nm,0.8s						
X40A	Basin Creek Fa	3.98	117	Pn	Pn	16 51 51.9	+0.2
X40A				IAmb_Lg		16 52 58.2	
	comp=Z,63nm,0.7s						
AMTX	Amarillo	3.99	249	IAmb_Lg		16 53 03.1	
	comp=Z,41nm,0.9s						
MGMO	Mountain Grove	3.99	77	Pn	Pn	16 51 51.9	+0.1
FCAR	Ozark Folk Cen	4.09	95	IAmb_Lg		16 53 03.6	
	comp=Z,41nm,1.0s						
WLAR	White Oak Lake	4.25	128	IAmb_Lg		16 53 01.8	
	comp=Z,34nm,0.8s						
ABTX	Abilene, Hawle	4.27	210	IAmb_Lg		16 53 09.3	
	comp=Z,26nm,0.8s						
P38A	Dawn	4.32	40	IAmb_Lg		16 53 12.0	
	comp=Z,38nm,0.8s						
R40A	Maddies Statio	4.33	62	Pn	Pn	16 51 56.2	-0.1
LCAR	Lake Charles	4.85	92	IAmb_Lg		16 53 25.7	
	comp=Z,39nm,0.8s						
T42A	Van Buren	4.90	81	Pn	Pn	16 52 04.3	0.0
T42A				IAmb_Lg		16 53 35.6	
	comp=Z,38nm,1.1s						
CCM	Cathedral Cave	5.00	69	Pn	Pn	16 52 06.0	+0.5
CCM				IAmb_Lg		16 53 27.7	
	comp=Z,28nm,0.7s						
BGNE	Belgrade	5.09	351	Pn	Pn	16 52 07.0	+0.1
BGNE				IAmb_Lg		16 53 45.4	
	comp=Z,49nm,0.9s						
P40A	Paris	5.11	50	IAmb_Lg		16 53 30.9	
	comp=Z,44nm,0.8s						
N38A	Joes South For	5.37	34	Pn	Pn	16 52 11.2	+0.5
PBMO	Poplar Bluff	5.41	84	IAmb_Lg		16 53 50.5	
	comp=Z,37nm,0.7s						
435B	Jarrell	5.59	184	IAmb_Lg		16 53 53.8	
	comp=Z,21nm,0.8s						
FVM	French Village	5.59	71	Pn	Pn	16 52 14.1	+0.2
FVM				IAmb_Lg		16 53 50.1	
	comp=Z,24nm,0.9s						
L34A	Svendsen Farm,	5.62	6	Pn	Pn	16 52 14.5	+0.4
T25A	Trinidad	5.89	280	Pn	Pn	16 52 17.9	-0.1
SLM	Saint Louis	5.93	66	IAmb_Lg		16 54 05.6	
	comp=Z,20nm,0.8s						
OGNE	Ogallala	5.96	321	Pn	Pn	16 52 18.5	-0.5
OGNE				IAmb_Lg		16 54 03.6	
	comp=Z,34nm,0.7s						
JCT	Junction City	6.28	202	IAmb_Lg		16 54 11.3	
	comp=Z,34nm,1.1s						
S44A	Carbondale	6.44	76	IAmb_Lg		16 54 20.2	
	comp=Z,28nm,0.7s						
SIUC	Southern Illin	6.47	76	IAmb_Lg		16 54 16.3	
	comp=Z,27nm,0.8s						
P43A	Skaggs, Pawnee	6.84	59	IAmb_Lg		16 54 30.4	
	comp=Z,26nm,0.8s						
L40A	Anamosa	7.30	37	IAmb_Lg		16 54 45.7	
	comp=Z,17nm,0.8s						
ECSD	EROS Data Cent	7.36	3	Pn	Pn	16 52 38.4	+0.3
PLAL	Pickwick Lake	7.50	98	IAmb_Lg		16 54 48.8	
	comp=Z,16nm,1.0s						
ISCO	Idaho Springs	7.51	300	IAmb_Lg		16 54 56.0	
	comp=Z,14nm,0.9s						
OLIL	Olney	7.56	69	IAmb_Lg		16 55 07.2	
	comp=Z,24nm,1.0s						
O44A	Mansfield	7.79	58	IAmb_Lg		16 55 13.8	
	comp=Z,17nm,0.7s						
P46A	Rosedale	8.48	65	IAmb_Lg		16 55 12.9	
	comp=Z,26nm,0.9s						
SPMN	Marine on St.	9.43	19	IAmb_Lg		16 55 59.8	
	comp=Z,22nm,1.2s						
K22A	Casper	9.58	314	IAmb_Lg		16 56 09.3	
	comp=Z,13nm,1.1s						

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*IDC **17** 17:08:28.0±3.2, 6°.03S×147°.00E, h78^{km}±27^{km}, mb3.7/5, mb1 3.9/8, mb1mx3.6/39, mbtmp4.0/8, MS2.7/4, Ms1 2.7/4, ms1mx2.4/41, Error ellipse: s-maj=33.6km s-min=22.8km az=81.0*

ISC 17 17:08:28.7±1.1, **6°.15S**±0°.09×**146°.8E**±0°.1, **h78**^{km}**, n10, σ1^{s}.87**/12, **mb3.7**/6, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.25	174	P	Pn	17 09 19.1	+1.6
	7.9nm,0.3s,baz=29,slow=5.1,SNR=44						
PMG				S	Sn	17 09 54.9	-0.2
	6.9nm,0.3s,baz=170,slow=19,SNR=4.1						
JAY	Jayapura	7.10	300	P	Pn	17 10 11.1	+1.1
	0.4nm,0.3s,baz=168,slow=9.3,SNR=2.1						
JAY				LR	LR	17 13 20.8	
	comp=Z,30nm,21.8s,baz=13,slow=41						
WRA	Warramunga Arr	18.32	220	P	P	17 12 36.9	0.0
	0.5nm,0.3s,baz=35,slow=10,SNR=33						
WRA				S	S	17 15 57.5	-4.1
	0.1nm,0.3s,baz=50,slow=23,SNR=2.1						
WRA				PcP	PcP	17 17 06.0	+0.3
	0.1nm,0.3s,baz=38,slow=2.4,SNR=2.7						
WRA				LR	LR	17 19 52.8	
	comp=Z,31nm,19.5s,baz=60,slow=37						
ASAR	Alice Springs	21.41	214	P	P	17 13 10.8	+0.5
	2.3nm,0.6s,baz=54,slow=8.8,SNR=86						
ASAR				S	S	17 17 02.7	-1.2
	0.5nm,0.9s,baz=32,slow=18,SNR=2.9						
ASAR				LR	LR	17 23 13.4	
	comp=Z,15nm,18.1s,baz=58,slow=41						
BATI	Baumata	23.29	259	P	P	17 13 31.2	+1.2
	20nm,0.8s,baz=27,slow=2.3,SNR=4.6						
STKA	Stephens Creek	26.07	190	P	P	17 13 54.9	-0.1
	1.1nm,0.6s,baz=0.7,slow=11,SNR=5.1						
STKA				LR	LR	17 23 33.1	
	comp=Z,28nm,21.2s,baz=24,slow=34						
CMAR	Chiang Mai Arr	53.18	298	pP	pP	17 18 00.8	+1.0
	0.3nm,0.7s,baz=128,slow=6.0,SNR=1.7						
VNDA	Vanda	71.78	177	P	P	17 19 42.9	+0.7
	0.6nm,0.5s,baz=357,slow=6.7,SNR=6.4						
ILAR	Eielson Array	85.67	23	P	P	17 20 55.9	-2.7
	0.6nm,0.7s,baz=248,slow=5.0,SNR=8.1						
TORD	Torodi Ar. Bea	144.97	284	PKPbc	PKPbc	17 27 57.3	-0.1
	0.7nm,0.9s,baz=91,slow=4.6,SNR=3.6						
TORD				pPKPbc	pPKPdf	17 28 18.6	-2.1
	1.0nm,0.9s,baz=95,slow=3.6,SNR=3.4						

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*IDC **17** 17:09:45.1±4.2, 21°.70N×144°.66E, h117^{km}±39^{km}, mb3.5/7, mb1 3.7/9, mb1mx3.3/53, mbtmp3.9/9, MS3.0/1, Ms1 3.0/1, ms1mx2.2/40, Error ellipse: s-maj=42.8km s-min=16.3km az=100.0*

ISC 17 17:09:43.6±1.0, **21°.7N**±0°.1×**144°.7E**±0°.2, **h100**^{km}**, n16, σ1^{s}.54**/10, **mb3.7**/7, **Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	Chichijima	5.80	338	P	Pn	17 11 08.3	+1.1
	5.6nm,0.3s,baz=143,slow=20,SNR=8.3						
JCJ				S	Sn	17 12 10.1	-2.3
	17nm,0.3s,baz=66,slow=23,SNR=7.3						
MJAR	Matsushiro Arr	15.80	341	P	Pn	17 13 21.0	+0.7
	0.1nm,0.3s,baz=165,slow=10,SNR=3.1						
H11N1	WAKE ISLAND Hy	20.89	91	T	T	17 36 47.2	
	baz=277						
H11N2	WAKE ISLAND Hy	20.89	91	T	T	17 36 36.8	
	baz=277						
H11N3	WAKE ISLAND Hy	20.91	91	T	T	17 36 34.2	
	baz=277						
H11S3	WAKE ISLAND Hy	20.93	95	T	T	17 36 51.6	
	baz=282						
H11S1	WAKE ISLAND Hy	20.94	95	T	T	17 36 46.6	
	baz=282						
H11S2	WAKE ISLAND Hy	20.95	95	T	T	17 36 22.3	
	baz=282						
KSRS	Korea Array	21.34	321	P	P	17 14 24.8	+2.3
	1.5nm,0.6s,baz=144,slow=8.7,SNR=9.2						
PETK	Petropavlovsk-	32.89	15	P	P	17 16 07.3	-0.7
	5.6nm,0.9s,baz=218,slow=8.8,SNR=2.4						
KAPI	Kappang	36.08	225	LR	LR	17 32 17.0	
	comp=Z,23nm,19.3s,baz=221,slow=38						
WRA	Warramunga Arr	42.62	194	P	P	17 17 29.8	-0.4
	1.9nm,0.5s,baz=15,slow=8.7,SNR=26						
ASAR	Alice Springs	46.32	194	P	P	17 17 58.9	-0.7
	0.4nm,0.6s,baz=13,slow=9.0,SNR=8.3						
ILAR	Eielson Array	61.39	27	P	P	17 19 48.6	-0.2
	0.7nm,0.8s,baz=258,slow=4.6,SNR=6.3						
NVAR	Mina Array Bea	82.05	52	P	P	17 21 54.4	+1.1
	0.4nm,0.6s,baz=288,slow=3.7,SNR=2.9						
FINES	FINESS Array B	83.74	335	P	P	17 21 59.8	-1.4
	0.8nm,0.4s,baz=69,slow=4.6,SNR=7.1						

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*JMA **17** 17:14:52.7, 35°.58N×136°.39E, h12^{km}, M3.3 Broadband fault plane solution: P waves. NP1:φ$_s$121.00000°, δ70.00000°, λ19.00000°. NP2:φ$_s$24.00000°, δ72.00000°, λ159.00000°. Principal axes: T Plg27.0000°, Azm342.0000°; N Plg63.0000°, Azm165.0000°; P Plg1.0000°, Azm73.0000°;*

JMA Felt II J1.

*IDC **17** 17:14:52.7±1.9, 35°.61N×136°.42E, h0^{km}, mb3.2/1, mb1 3.4/2, mb1mx3.1/53, mbtmp3.1/2, ML2.6/1 Error ellipse: s-maj=28.5km s-min=24.2km az=145.0*

*NIED **17** 17:14:52.7, 35°.58N×136°.39E, h12^{km}, MW3.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$0.57; M$_{θθ}$0.21; M$_{φφ}$-0.79; M$_{rθ}$0.34; M$_{θφ}$0.65; M$_{φr}$0.07; Fault plane solution: M$_0$1.00000×10^{14} NP1: φ$_s$120.00000°, δ61.00000°, λ39.00000°. NP2:φ$_s$9.00000°, δ56.00000°, λ145.00000°.*

ISC 17 17:14:52.8±1.2, **35°.58N**±0°.03×**136°.39E**±0°.03, **h3**^{km}±12^{km}, **n11, σ0^{s}.57**/19, **2C-4D, Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYTA	Yamagatataniai	0.28	87	⇓P	Pg	17 14 58.5	+0.2
JYTA				S	Sg	17 15 02.4	+0.5
JFM	Mihama	0.33	262	⇓P	Pg	17 14 59.6	+0.4
JFM				S	Sg	17 15 04.3	+0.7
JICN	Ichinomiyachia	0.46	126	P	Pg	17 15 01.8	+0.1
JICN				S	Sg	17 15 07.9	+0.3
JKG	Kaga	0.70	356	⇑P	Pg	17 15 06.2	0.0
JKG				S	Sg	17 15 15.5	+0.2
JWT	Wachi	0.86	250	⇓P	Pg	17 15 08.8	-0.4
JWT				S	Sg	17 15 19.5	-0.9
TSUJ	Tsu 2	0.87	178	⇑P	Pg	17 15 09.0	-0.4
TSUJ				S	Sg	17 15 20.3	-0.3
JKY	Yasaka	1.05	273	⇓P	Pg	17 15 12.4	-0.5
MAT	Matsushiro	1.76	56	P	Pn	17 15 23.7	-0.5
MAT				S	Sb	17 15 47.6	-0.7
MJAR	Matsushiro Arr	1.76	56	Pn	Pn	17 15 24.1	-0.2
	3.7nm,0.3s,baz=236,slow=18,SNR=103						
MJAR				Sn	Sg	17 15 48.4	-1.0
	0.9nm,0.3s,baz=239,slow=28,SNR=5.2						
KSRS	Korea Array	7.07	288	Pn	Pn	17 16 37.5	+0.3
	0.1nm,0.3s,baz=103,slow=15,SNR=1.6						
WRA	Warramunga Arr	55.25	182	P	P	17 24 28.1	+0.7
	0.3nm,0.8s,baz=358,slow=7.5,SNR=2.3						

DJA 17 17:27:50.6±0.9, **6°S**±4°×**13°0E**±°, **h152**^{km}±19^{km}, **M4.0**/6, **mb3.9**/4, **mB4.6**/3, **MLv4.0**/6, **Mw(mB)3.8**/3, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	1.99	155	P	Pn	17 28 27.4	+1.6
SAUI				S	Sn	17 28 52.6	-0.3
MSAI	Masohi	3.19	331	P	Pn	17 28 41.3	+0.9
FAKI	Fak Fak	3.68	29	P	Pn	17 28 47.7	+0.9
FAKI				S	Sn	17 29 30.1	-0.3
SWI	Sorong	5.32	9	P	Pn	17 29 08.2	-0.2
	0.2nm697nm10nm,0.8s						
LBMI	Labuha	6.23	332	P	Pn	17 29 20.4	-0.1
	0.1nm10.0nm,0.6s						
SOEI	Soe	7.10	239	P	Pn	17 29 30.9	-1.2

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*BJI **17** 17:29:32.6±0.0, 40°.41N×73°.05E, h10^{km}, mB5.6/60, mb5.4/80, ML5.8/5, Ms5.7/97, Ms7 5.6/86*

*IDC **17** 17:29:33.2±0.3, 40°.25N×73°.27E, h0^{km}, mb5.2/59, mb1 5.2/66, mb1mx5.2/73, mbtmp5.2/66, ML4.7/7, MS5.2/53, Ms1 5.2/53, ms1mx5.1/59, Error ellipse: s-maj=7.0km s-min=6.2km az=155.0*

*SFS **17** 17:29:35.3, 40°.40N×73°.30E, h10^{km}, ML5.7, KIRGUISTAN*

*NEIC **17** 17:29:36.7, 40°.38N×73°.14E, h21^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.14; M$_{θθ}$-1.32; M$_{φφ}$0.18; M$_{rθ}$-0.01; M$_{θφ}$-0.48; M$_{φr}$-0.52; Fault plane solution: M$_0$1.43000×10^{17} NP1:φ$_s$97.12000°, δ46.98000°, λ125.41000°. NP2:φ$_s$230.95000°, δ53.42000°, λ58.17000°. Principal axes: T 1.3843, Plg65.0000°, Azm80.0000°; N 0.0855, Plg25.0000°, Azm251.0000°; P -1.4697, Plg4.0000°, Azm343.0000°;*

*NEIC **17** 17:29:36.3±1.5, 40°.38N±0°.03×73°.20E±0°.06, h18^{km}±1^{km}, mb5.9/424, Ms_20 5.4/255, Mwb5.4/48, Mwr5.5/26, Mww5.6, Mwc5.5(GCMT) Error ellipse: s-maj=9.5km s-min=2.6km az=120.0*

*KRNET **17** 17:29:36.5±0.1, 40°.31N×73°.16E, h13^{km}, mb6.4*

*NEIC **17** 17:29:36.7, 40°.37N×73°.16E, h20^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.11; M$_{θθ}$-0.71; M$_{φφ}$-0.40; M$_{rθ}$0.96; M$_{θφ}$-0.69; M$_{φr}$1.56; Fault plane solution: M$_0$2.18000×10^{17} NP1:φ$_s$248.64000°, δ18.86000°, λ122.44000°. NP2:φ$_s$34.74000°, δ74.17000°, λ79.61000°. Principal axes: T 2.1648, Plg60.0000°, Azm290.0000°; N 0.0354, Plg10.0000°, Azm38.0000°; P -2.2002, Plg28.0000°, Azm133.0000°;*

*SOME **17** 17:29:37.7, 40°.47N×73°.25E, h10^{km}, MS5.6*

*MOS **17** 17:29:38.8±1.0, 40°.29N×73°.25E, h17^{km}, mb6.0/59, MS5.5/70, Error ellipse: s-maj=3.5km s-min=3.1km az=102.4 Broadband fault plane solution: P waves. M$_0$4.40000×10^{17} NP1:φ$_s$207.00000°, δ52.00000°, λ52.00000°. NP2:φ$_s$79.00000°, δ52.00000°, λ128.00000°. Principal axes: T Plg61.0000°, Azm53.0000°; N Plg29.0000°, Azm233.0000°; P Plg0.0000°, Azm143.0000°;*

MOS Fault plane solution: P-wave C57, D28 . Felt (VII) at Bek-Dzhar, Kara-Seget, Laglan; (VI-VII) at Bash-Bulak, Kyzyl-Tuu, Chaichi; (VI) at Osh; (V-VI) at Uzgen; (IV-V) at Dzhalal-Abad; (III-IV) at Bishkek; (III) at Taraz, Shymkent; (II) at Almaty.

*KNET **17** 17:29:38.7±0.6, 40°.49N×73°.31E, h16^{km}±6^{km}, ml6.2 Error ellipse: s-maj=7.1km s-min=3.4km az=66.0*

*NNC **17** 17:29:39.5±1.1, 40°.54N×73°.23E, h6^{km}±5^{km}, mb6.4, mpv6.2, Error ellipse: s-maj=9.2km s-min=4.0km az=178.0*

*GCMT **17** 17:29:39.3±0.1, 40°.44N±0°.01×73°.07E±0°.01, h23^{km}, MW5.5/141, Moment Tensor Solution. s120,c184; s141,c274; Duration: 1^{s}.4 Moment tensor: Scale 10^{17} Nm; M$_{rr}$1.85±.04; M$_{θθ}$-1.87±.03; M$_{φφ}$0.01±.03; M$_{rθ}$-0.32±.05; M$_{θφ}$-1.24±.02; M$_{φr}$-1.36±.06; Best double couple: M$_0$2.63600×10^{17} NP1:φ$_s$90.00000°, δ40.00000°, λ134.00000°. NP2:φ$_s$218.00000°, δ62.00000°, λ59.00000°. Principal axes: T 2.5950, Plg60.0000°, Azm81.0000°; N 0.0750, Plg27.0000°, Azm233.0000°; P -2.6770, Plg12.0000°, Azm330.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **17** 17:29:40, 40°.29N×73°.21E, h26^{km}, Moment Tensor Solution. Duration: 8^{s}.0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.90; M$_{θθ}$-1.95; M$_{φφ}$0.05; M$_{rθ}$1.03; M$_{θφ}$-1.54; M$_{φr}$-0.91; Fault plane solution: M$_0$2.83000×10^{17} NP1: φ$_s$212.00000°, δ48.00000°, λ43.00000°. NP2:φ$_s$91.00000°, δ59.00000°, λ130.00000°. Principal axes: T 2.8100, Plg56.0000°, Azm54.0000°; N 0.0313, Plg33.0000°, Azm248.0000°; P -2.8413, Plg6.0000°, Azm154.0000°;*

*NEIC **17** 17:29:41, 40°.41N×73°.11E, h22^{km}, Moment Tensor Solution. Duration: 2^{s}.8 Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.91; M$_{θθ}$-1.94; M$_{φφ}$0.03; M$_{rθ}$0.20; M$_{θφ}$-1.34; M$_{φr}$-1.05; Fault plane solution: M$_0$2.58000×10^{17} NP1:φ$_s$90.00000°, δ48.00000°, λ131.00000°. NP2:φ$_s$217.00000°, δ56.00000°, λ53.00000°. Principal axes: T 2.5104, Plg60.0000°, Azm69.0000°; N 0.1289, Plg29.0000°, Azm240.0000°; P -2.6393, Plg4.0000°, Azm332.0000°;*

*BGR **17** 17:29:43.9±0.0, 40°.73N×72°.50E, h22^{km}±3^{km}, mb5.9, mB_BB6.0, Ms5.6*

ISC 17 17:29:36.0±0.3, **40°.31N**±0°.02×**73°.27E**±0°.01, **h17**^{km}±1^{km}, **h17**^{km}**:pP-P, n1680, σ1^{s}.71**/1720, **mb5.8**/457, **MS5.4**/259, **242C-216D, Fault plane solution: NP1:**φ$_s$200.98401°, δ76.44758°, λ23.64535°. **NP2:**φ$_s$105.12600°, δ67.05131°, λ165.25749°. **Principal axes:** T Plg26.1936°, Azm64.7747°; N Plg62.9411°, Azm229.1404°; P Plg6.3157°, Azm331.6537°; **Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	0.34	149	⇓*i*P	Pb	17 29 44.3	+0.5
	baz=38						
SFK				⇓*i*S	Sb	17 29 50.1	+1.0
	baz=38						
OHH	Osh	0.43	301	⇓*i*P	Pg	17 29 43.8	-0.9
	baz=7.0						
OHH				⇓*i*S	Sg	17 29 48.9	-1.8
	baz=7.0						
DRK	Karamyk	1.40	234		Pn	17 30 01.1	+0.1
DRK	Karamyk	1.40	234	⇓*i*P	Pb	17 30 01.6	-0.3
	baz=32						
DRK				⇓*i*S	Sb	17 30 20.2	+0.6
	baz=32						
AML	Almayashu	1.85	10	⇑P	Pb	17 30 09.7	0.0
	98µm,0.3s						
AML				⇓S	Sb	17 30 33.1	+0.5
	261µm,0.5s						
AML	Almayashu	1.85	10	*e*P	Pb	17 30 09.6	0.0
AML	Almayashu	1.85	10	⇓*e*PN	Pb	17 30 09.9	+0.3
AML				*i* S	Sg	17 30 34.6	-1.1
AML	Almayashu	1.85	10	⇓*e*P	Pg	17 30 11.2	-0.4
	baz=12						
AML				⇓*i*S	Sg	17 30 36.4	+0.7
	baz=12						
BTK	Batken	1.90	263	PN	Pn	17 30 08.4	+0.7
BTK	Batken	1.90	263		Pn	17 30 08.4	+0.7
BTK	Batken	1.90	263	⇑*i*P	Pb	17 30 10.2	0.0
	baz=63						
BTK				⇑*i*S	Sb	17 30 35.0	+1.4
	baz=63						
TRKS	Terek-Say	2.02	308	⇓*i*P	Pb	17 30 11.8	-0.7
	baz=8.0						
TRKS				⇓*i*S	Sb	17 30 37.5	+0.1
	baz=8.0						
UCH	Uchtor	2.14	26	⇑P	Pb	17 30 14.3	-0.2
	8µm,0.3s,SNR=5315						
UCH				⇓S	Sg	17 30 42.9	-1.9
	67µm,0.5s						
UCH	Uchtor	2.14	26	*i* PN	Pb	17 30 15.3	+0.8
UCH				*i* S	Sg	17 30 44.1	-0.7
UCH	Uchtor	2.14	26	⇑*i*P	Pg	17 30 15.8	-1.2
	baz=28						
UCH				⇑*i*S	Sg	17 30 44.6	-0.2
	baz=28						
KSH	Kashi	2.22	110	Pn	Pb	17 30 15.6	-0.2
KSH				Sn	Sb	17 30 42.9	-0.2
KSH				smax	smax		
	comp=N,376µm,0.9s						
KSH				smax	smax		
	comp=E,199µm,0.6s						
MNAS	Manas	2.25	345	⇓*i*PN	Pb	17 30 15.4	-0.9
MNAS				*i* S	Sb	17 30 44.1	+0.1
MNAS	Manas	2.25	345	⇓*i*P	Pb	17 30 16.4	+0.1
	baz=47						
MNAS				⇓*i*S	Sb	17 30 45.8	+1.8
	baz=47						
EKS2	Erkin-Say	2.38	9	P	Pb	17 30 17.6	-0.9
	13µm,0.6s,SNR=4343						
EKS2				⇓S	Sb	17 30 48.0	+0.2
	22µm,0.4s						
EKS2	Erkin-Say	2.38	9	*e*PN	Pb	17 30 18.2	-0.3
EKS2				*i* S	Sb	17 30 48.5	+0.8
EKS2	Erkin-Say	2.38	9	⇓*e*P	Pb	17 30 18.8	+0.3
	baz=11						
EKS2				⇓*i*S	Sb	17 30 49.9	+2.2
	baz=11						
MRKS	Merke	2.44	359	*e*P	Pb	17 30 20.4	+0.9
	16µm,0.5s						
MRKS				*e*S	Sb	17 30 51.4	+2.1
	111µm,0.6s						
MRKS	Merke	2.44	359	Pg	Pb	17 30 20.4	+0.9
	16µm,0.5s						
AAK	Ala-Archa	2.50	21	Pn	Pb	17 30 19.8	-0.8
	6µm,0.3s,baz=196,slow=9.6,SNR=5189						
AAK				Pg	Pg	17 30 22.0	-2.0
	6µm,0.3s,baz=201,slow=14,SNR=542						
AAK				Sn	Sb	17 30 51.2	0.0
	8µm,0.3s,baz=126,slow=19,SNR=42						
AAK	Ala-Archa	2.50	21	⇑P	Pb	17 30 19.8	-0.8
	20µm,0.4s,SNR=1641						
AAK				⇓S	Sb	17 30 50.8	-0.4
	69µm,0.4s						
AAK	Ala-Archa	2.50	21	*e*P	Pb	17 30 19.8	-0.8
AAK	Ala-Archa	2.50	21	⇑Pn	Pb	17 30 19.9	-0.7
	5µm,0.5s						
AAK				⇑Lg	Lg	17 30 53.1	
	4µm,0.3s						
AAK	Ala-Archa	2.50	21		Pb	17 30 18.5	-2.1
AAK				LR	LR	17 30 51.6	
AAK	Ala-Archa	2.50	21	⇓*e*P	Pb	17 30 20.7	+0.1
	baz=23						
AAK				⇓*i*S	Sb	17 30 53.2	+2.0
	baz=23						
GAR	Garm	2.63	241	*i* PN	Pb	17 30 21.2	-1.5
GAR				*i* S	Sb	17 30 53.5	-1.2
GAR	Garm	2.63	241	Pn	Pb	17 30 21.7	-1.0
GAR				LR	LR	17 30 58.5	
GAR	Garm	2.63	241	⇑*i*P	Pb	17 30 21.0	-1.7
	baz=40						
GAR				⇑*i*S	Sb	17 30 53.8	-0.9
	baz=40						
KBK	Karagaybulak	2.67	28	⇑P	Pb	17 30 22.4	-1.0
	8µm,0.4s,SNR=8821						
KBK	Karagaybulak	2.67	28	⇓*e*PN	Pb	17 30 22.6	-0.8
KBK				*i* S	Sb	17 30 56.8	+0.9

KBK	**Karagaybulak**	2.67	28	⇑*e*P	Pb	17 30 23.2	-0.2
	baz=29						
KBK				⇑*i*S	Sb	17 30 57.2	+1.3
	baz=29						
FRU1	**Bishkek**	2.70	22	PN	Pn	17 30 21.1	+2.4
FRU1	**Bishkek**	2.70	22		Pn	17 30 21.1	+2.4
FRU1	**Bishkek**	2.70	22	⇑*i*P	Pb	17 30 23.8	-0.1
	baz=23						
FRU1				⇑*i*S	Sb	17 30 58.2	+1.4
	baz=23						
CHMS	**Chumysh**	2.91	22	⇑P	Pb	17 30 25.4	-2.1
	9µm,0.5s,SNR=2122						
CHMS				⇑S	Sb	17 31 01.7	-1.1
	40µm,0.4s						
CHMS	**Chumysh**	2.91	22	⇓*e*PN	Pb	17 30 25.8	-1.6
CHMS				*i* S	Sb	17 31 01.2	-1.6
CHMS	**Chumysh**	2.91	22	⇓*e*P	Pb	17 30 26.5	-0.9
	baz=23						
CHMS				⇓*e*S	Sb	17 31 02.8	0.0
	baz=23						
ULHL	**Ulahol**	2.96	48	⇑P	Pb	17 30 25.7	-2.7
	2µm,0.4s,SNR=1368						
ULHL				⇓S	Sb	17 31 03.4	-1.0
	27µm,0.6s						
ULHL	**Ulahol**	2.96	48	⇓*e*PN	Pb	17 30 27.6	-0.8
ULHL				*i* S	Sb	17 31 05.2	+0.8
ULHL	**Ulahol**	2.96	48	⇓*e*P	Pb	17 30 27.6	-0.8
	baz=49						
ULHL				⇓*i*S	Sb	17 31 04.9	+0.5
	baz=49						
DZA	**Taraz**	2.96	331	*e*P	Pb	17 30 30.4	+2.0
	18µm,0.7s						
DZA				*e*S	Sb	17 31 07.3	+2.9
	42µm,0.4s						
DZA	**Taraz**	2.96	331	⇓*i*Pn	Pn	17 30 24.5	+2.2
	baz=330						
DZA				*e*Pg	Pb	17 30 29.6	+1.2
	baz=330						
DZA				*e*Lg	Lg	17 31 08.4	
	baz=330						
DZA	**Taraz**	2.96	331	*d* *i*PN	Pn	17 30 24.5	+2.2
DZA	**Taraz**	2.96	331	Pg	Pb	17 30 30.4	+2.0
	18µm,0.7s						
DZA				Lg	Lg	17 31 07.3	
	42µm,0.4s						
USP	**Ospenovka**	3.10	17	P	Pn	17 30 27.3	+3.2
	568nm,0.4s,SNR=1329						
USP	**Ospenovka**	3.10	17	⇓*i*PN	Pb	17 30 28.3	-2.4
USP				*i* S	Sb	17 31 05.8	-2.4
USP	**Ospenovka**	3.10	17	⇓*i*P	Pb	17 30 28.6	-2.1
	baz=18						
USP				⇓*i*S	Sb	17 31 07.3	-0.9
	baz=18						
TKM2	**Tokmak 2**	3.14	33	⇑P	Pb	17 30 28.6	-2.8
	1µm,0.4s,SNR=2343						
TKM2	**Tokmak 2**	3.14	33	*i* PN	Pb	17 30 28.7	-2.8
TKM2				pmax	pmax		
	comp=Z,3µm,0.4s						
TKM2	**Tokmak 2**	3.14	33	⇑Pn	Pb	17 30 28.7	-2.8
	comp=Z,3µm,0.5s						
TKM2				⇓Lg	Lg	17 31 13.7	
	comp=Z,5µm,0.5s						
TKM2	**Tokmak 2**	3.14	33	⇑*i*P	Pb	17 30 29.8	-1.7
	baz=34						
TKM2				⇑*i*S	Sb	17 31 08.9	-0.7
	baz=34						
SGDS	**Sogindy**	3.30	17	⇓*i*Pn	Pn	17 30 30.2	+3.2
	baz=20						
SGDS				*e*Pg	Pb	17 30 36.6	+2.5
	baz=20						
SGDS				*i* Lg	Lg	17 31 19.1	
	baz=20						
KST	**Kastek**	3.40	36	*e*P	Pg	17 30 39.4	-1.6
	comp=Z,7µm,0.8s						
KST				*e*S	Sg	17 31 22.8	-2.3
	comp=Z,40µm,0.9s						
KST	**Kastek**	3.40	36	Pg	Pg	17 30 39.4	-1.6
	comp=Z,7µm,0.8s						
KST				Lg	Lg	17 31 22.8	
	comp=Z,40µm,0.9s						
CHM	**Chimkent**	3.42	307	*e*P	Pg	17 30 39.4	-2.0
	comp=Z,14µm,0.4s						
CHM				*e*S	Sg	17 31 22.7	-3.0
	comp=Z,52µm,0.3s						
CHM	**Chimkent**	3.42	307	*e*Pg	Pb	17 30 37.9	+1.8
	baz=304						
CHM				*e*Lg	Lg	17 31 23.0	
	baz=304						
CHM	**Chimkent**	3.42	307	*e*PN	Pb	17 30 37.8	+1.8
KK31	**Karatay Array**	3.48	324	*e*PN	Pn	17 30 31.1	+1.8
KK31						17 31 20.9	
KK31	**Karatay Array**	3.48	324	⇓Pn	Pn	17 30 31.3	+2.0
	comp=Z,378nm,0.4s,baz=139,slow=11						
KK31				⇑Pg	Pb	17 30 39.2	+2.1
	comp=Z,10µm,0.8s,baz=141,slow=16,SNR=78						
KK31				⇓Lg	Lg	17 31 21.3	
	comp=Z,5µm,0.5s,baz=142,slow=30,SNR=4.2						
KK31	**Karatay Array**	3.48	324		Pn	17 30 30.8	+1.5
KKAR	**Karatay Array**	3.48	324	PN	Pn	17 30 31.0	+1.7
KKAR	**Karatay Array**	3.48	324		Pn	17 30 30.5	+1.2
KKAR	**Karatay Array**	3.48	324		Pn	17 30 31.0	+1.7
KKAR	**Karatay Array**	3.48	324	⇓*i*P	Pn	17 30 33.0	+3.7
	baz=25						
KKAR				⇓*i*S	Sn	17 31 14.3	+4.2
	baz=25						
DGS	**Degeres**	3.48	32	*e*P	Pg	17 30 40.6	-2.0
	comp=Z,12µm,0.7s						
DGS				*e*S	Sg	17 31 24.9	-2.8
	comp=Z,38µm,0.7s						
DGS	**Degeres**	3.48	32	Pg	Pg	17 30 40.7	-2.0
	comp=Z,12µm,0.7s						
DGS				Lg	Lg	17 31 24.9	
	comp=Z,38µm,0.7s						
CHGR	**Chuyangaron**	3.58	244	Pn	Pn	17 30 31.0	+0.1
CHGR	**Chuyangaron**	3.58	244	⇑*e*P	Pn	17 30 34.1	+3.2
	baz=43						
CHGR				⇑*i*S	Sn	17 31 16.7	+3.8
	baz=43						
MTBS	**Maitube**	3.68	39	*e*P	Pg	17 30 43.8	-2.7
	comp=Z,6µm,0.6s						
MTBS				*e*S	Sg	17 31 31.8	-2.4
	comp=Z,17µm,0.5s						
MTBS	**Maitube**	3.68	39	Pg	Pg	17 30 43.8	-2.7
	comp=Z,6µm,0.6s						
MTBS				Lg	Lg	17 31 31.8	
	comp=Z,17µm,0.5s						
BRLS	**Borolday**	3.75	318	*e*P	Pb	17 30 42.9	+1.2
	comp=Z,11µm,0.5s						
BRLS				*e*S	Sb	17 31 28.6	+1.8
	comp=Z,12µm,0.5s						
BRLS	**Borolday**	3.75	318	*e*Pn	Pn	17 30 32.6	-0.4
	baz=312						
BRLS				*i* Pg	Pb	17 30 42.4	+0.7
	baz=312						
BRLS				*e*Lg	Lg	17 31 30.4	
	baz=312						
BRLS	**Borolday**	3.75	318	*e*PN	Pn	17 30 32.6	-0.4
BRLS	**Borolday**	3.75	318	Pg	Pb	17 30 42.9	+1.2
	comp=Z,11µm,0.5s						
BRLS				Lg	Lg	17 31 28.6	
	comp=Z,12µm,0.5s						
TNSS	**Tian-Shan**	3.88	44	*e*P	Pg	17 30 48.3	-2.0
	comp=Z,3µm,0.6s						
TNSS				*e*S	Sg	17 31 38.2	-2.2
	comp=Z,17µm,0.7s						
TNSS	**Tian-Shan**	3.88	44	⇓*i*Pn	Pn	17 30 39.1	+3.9
	baz=48						
TNSS				*e*Pg	Pg	17 30 48.0	-2.3
	baz=48						
TNSS				*e*Lg	Lg	17 31 38.4	
	baz=48						
TNSS	**Tian-Shan**	3.88	44	Pg	Pg	17 30 48.3	-2.0
	comp=Z,3µm,0.6s						
TNSS				Lg	Lg	17 31 38.2	
	comp=Z,17µm,0.7s						
AAA	**Alma-Ata**	3.98	42	*e*P	Pg	17 30 50.3	-1.9
	comp=Z,6µm,0.6s						
AAA				*e*S	Sg	17 31 41.7	-2.0
	comp=Z,74µm,0.5s						
AAA	**Alma-Ata**	3.98	42	*e*Pn	Pn	17 30 40.8	+4.4
	baz=46						
AAA				*e*Pg	Pg	17 30 50.0	-2.2
	baz=46						
AAA				*e*Lg	Lg	17 31 41.9	
	baz=46						
AAA	**Alma-Ata**	3.98	42	*e*PN	Pn	17 30 40.6	+4.3
AAA	**Alma-Ata**	3.98	42	Pg	Pg	17 30 50.3	-1.9
	comp=Z,6µm,0.6s						
AAA				Lg	Lg	17 31 41.7	
	comp=Z,74µm,0.5s						
KNDC	**Almaty**	4.01	42	PN	Pn	17 30 41.0	+4.3
KNDC	**Almaty**	4.01	42	⇑Pn	Pn	17 30 41.1	+4.3
	comp=Z,2µm,0.5s						
KNDC				⇓Pg	Pg	17 30 50.2	-2.6
KNDC				⇑Lg	Lg	17 31 43.0	
MDOK	**Medeo**	4.02	43	*e*P	Pg	17 30 50.8	-2.1
	comp=Z,4µm,0.4s						
MDOK				*e*S	Sg	17 31 42.3	-2.6
	comp=Z,33µm,0.7s						
MDOK	**Medeo**	4.02	43	*e*Pn	Pn	17 30 40.8	+4.0
	baz=47						
MDOK				*e*Pg	Pg	17 30 50.2	-2.7
	baz=47						
MDOK				*e*Lg	Lg	17 31 41.8	
	baz=47						
MDOK	**Medeo**	4.02	43	PN	Pn	17 30 40.1	+3.3
MDOK	**Medeo**	4.02	43	⇓Pn	Pn	17 30 40.2	+3.3
	comp=Z,3µm,0.6s						
MDOK				⇓Lg	Lg	17 31 42.2	
	comp=Z,4µm,0.6s						
MDOK	**Medeo**	4.02	43	Pg	Pg	17 30 50.8	-2.1
	comp=Z,4µm,0.4s						
MDOK				Lg	Lg	17 31 42.3	
	comp=Z,33µm,0.7s						
KOTS	**Kotyrbulak**	4.10	43	*e*P	Pg	17 30 52.9	-1.5
	comp=Z,6µm,0.7s						
KOTS				*e*S	Sg	17 31 45.9	-1.7
	comp=Z,51µm,0.5s						
KOTS	**Kotyrbulak**	4.10	43	Pg	Pg	17 30 52.9	-1.5
	comp=Z,6µm,0.7s						
KOTS				Lg	Lg	17 31 45.9	
	comp=Z,51µm,0.5s						
ANVS	**Anan'yevo**	4.12	52	⇓*e*PN	Pn	17 30 42.8	+4.4
ANVS				*e*S	Sb	17 31 32.9	-4.9
ANVS	**Anan'yevo**	4.12	52	⇓*e*P	Pb	17 30 43.9	-4.3
	baz=52						
ANVS				⇓*e*S	Sb	17 31 33.0	-4.9
	baz=52						
KUU	**Kurty**	4.25	31	*e*P	Pg	17 30 54.2	-3.1
	comp=Z,2µm,0.7s						
KUU				*e*S	Sg	17 31 48.1	-4.3
	comp=Z,23µm,0.7s						
KUU	**Kurty**	4.25	31	*e*Pn	Pn	17 30 42.6	+2.7
	baz=34						
KUU				*i* Pg	Pg	17 30 53.8	-3.5
	baz=34						
KUU				*e*Lg	Lg	17 31 47.7	
	baz=34						
KUU	**Kurty**	4.25	31	*e*PN	Pn	17 30 42.6	+2.7
KUU	**Kurty**	4.25	31	Pg	Pg	17 30 54.2	-3.1
	comp=Z,2µm,0.7s						
KUU				Lg	Lg	17 31 48.1	
	comp=Z,23µm,0.7s						
PRZ	**Przheval'sk**	4.43	59	PN	Pn	17 30 42.3	-0.3
PRZ	**Przheval'sk**	4.43	59		Pn	17 30 42.3	-0.3
PRZ	**Przheval'sk**	4.43	59	⇑*e*P	Pb	17 30 48.2	-5.2
	baz=59						
PRZ				⇑*i*S	Sb	17 31 41.0	-5.6
	baz=59						
SATY	**Saty**	4.73	53	*e*P	Pg	17 31 02.8	-3.7
	comp=Z,5µm,0.9s						
SATY				*e*S	Sg	17 32 03.7	-4.0
	comp=Z,30µm,1.1s						
SATY	**Saty**	4.73	53	⇑*i*Pn	Pn	17 30 49.6	+3.0
	baz=56						
SATY				*i* Pg	Pg	17 31 03.5	-3.0
	baz=56						
SATY				*i* Lg	Lg	17 32 03.9	
	baz=56						
SATY	**Saty**	4.73	53	*c* *i*PN	Pn	17 30 49.6	+3.0
SATY	**Saty**	4.73	53	Pg	Pg	17 31 02.8	-3.7
	comp=Z,5µm,0.9s						
SATY				Lg	Lg	17 32 03.7	
	comp=Z,30µm,1.1s						
BTLS	**Baital**	4.77	7	*e*P	Pb	17 31 01.1	+2.0
	comp=Z,3µm,0.9s						
BTLS				*e*S	Sb	17 32 01.0	+4.9
	comp=Z,10µm,0.6s						
BTLS	**Baital**	4.77	7	*e*Pn	Pn	17 30 49.6	+2.5
	baz=8.0						
BTLS				*i* Pg	Pg	17 31 03.3	-4.0
	baz=8.0						
BTLS				*e*Lg	Lg	17 32 04.2	
	baz=8.0						
BTLS	**Baital**	4.77	7	*e*PN	Pn	17 30 49.5	+2.5
BTLS	**Baital**	4.77	7	Pg	Pb	17 31 01.1	+2.0
	comp=Z,3µm,0.9s						
BTLS				Lg	Lg	17 32 01.0	
	comp=Z,10µm,0.6s						
KURS	**Kuram**	4.84	47	*e*P	Pg	17 31 05.3	-3.4
	comp=Z,3µm,1.2s						
KURS				*e*S	Sg	17 32 07.2	-4.2
	comp=Z,14µm,1.8s						
KURS	**Kuram**	4.84	47	Pg	Pg	17 31 05.4	-3.4
	comp=Z,3µm,1.2s						
KURS				Lg	Lg	17 32 07.2	
	comp=Z,14µm,1.8s						
KPKS	**Kokpek**	5.13	50	*e*P	Pg	17 31 10.3	-3.8
	comp=Z,3µm,0.4s						
KPKS				*e*S	Sg	17 32 15.8	-4.8
	comp=Z,23µm,0.9s						
KPKS	**Kokpek**	5.13	50	⇑*i*Pn	Pn	17 30 55.5	+3.4
	baz=53						
KPKS				*e*Pg	Pg	17 31 10.4	-3.7
	baz=53						
KPKS				*i* Lg	Lg	17 32 15.5	
	baz=53						
KPKS	**Kokpek**	5.13	50	*c* *i*PN	Pn	17 30 55.5	+3.4
UZB	**Uzynbulak**	5.16	55	*e*P	Pg	17 31 10.4	-4.3
	comp=Z,3µm,0.6s						
UZB				*e*S	Sg	17 32 16.1	-5.3
	comp=Z,20µm,0.7s						
UZB	**Uzynbulak**	5.16	55	⇑*i*Pn	Pn	17 30 55.5	+3.0
	baz=58						
UZB				*i* Pg	Pg	17 31 11.2	-3.5
	baz=58						
UZB				*i* Lg	Lg	17 32 16.9	
	baz=58						
UZB	**Uzynbulak**	5.16	55	*c* *i*PN	Pn	17 30 55.5	+3.0
UZB	**Uzynbulak**	5.16	55	Pg	Pg	17 31 10.4	-4.3
	comp=Z,3µm,0.6s						
UZB				Lg	Lg	17 32 16.1	
	comp=Z,20µm,0.7s						
ARXS	**Arharly**	5.16	39	*e*P	Pg	17 31 10.6	-4.3
	comp=Z,2µm,0.6s						
ARXS				*e*S	Sg	17 32 16.4	-5.3
	comp=Z,17µm,0.7s						
ARXS	**Arharly**	5.16	39	*e*PN	Pn	17 30 54.9	+2.3
ARXS	**Arharly**	5.16	39	Pg	Pg	17 31 10.6	-4.3
	comp=Z,2µm,0.6s						
ARXS				Lg	Lg	17 32 16.4	
	comp=Z,17µm,0.7s						
BLB	**Baldybastay**	5.41	44	Pg	Pg	17 31 15.7	-3.9
	comp=Z,6µm,0.5s						
BLB				Lg	Lg	17 32 25.1	
	comp=Z,25µm,0.9s						
SHLS	**Shalkode**	5.44	56	*e*P	Pg	17 31 21.2	+1.2
	comp=Z,5µm,1.0s						
SHLS				*e*S	Sg	17 32 34.9	+4.5
	comp=Z,25µm,0.8s						
SHLS	**Shalkode**	5.44	56	⇑*i*Pn	Pn	17 31 03.2	+6.8
	baz=60						
SHLS				*e*Pg	Pg	17 31 21.6	+1.6
	baz=60						
SHLS				*e*Lg	Lg	17 32 36.4	
	baz=60						
SHLS	**Shalkode**	5.44	56	*c* *i*PN	Pn	17 31 03.1	+6.7
SHLS	**Shalkode**	5.44	56	Pg	Pg	17 31 21.2	+1.2
	comp=Z,5µm,1.0s						
SHLS				Lg	Lg	17 32 34.9	
	comp=Z,25µm,0.8s						
PDGK	**Podgornoye**	5.54	55	PN	Pn	17 31 00.1	+2.3
PDGK						17 32 04.4	
PDGK	**Podgornoye**	5.54	55	Pg	Pb	17 31 16.9	+4.5
	comp=Z,1µm,1.1s						
PDGK				Lg	Lg	17 32 27.7	
	comp=Z,6µm,0.9s						
PDGK	**Podgornoye**	5.54	55	⇑Pn	Pn	17 31 00.2	+2.3
	comp=Z,4µm,1.1s						
PDGK				⇑Sn	Sn	17 32 04.4	+3.2
	comp=Z,8µm,0.6s						
TDK	**Taldyqorghan**	6.03	37	*e*P	Pb	17 31 25.1	+4.5
	comp=Z,6µm,0.8s						
TDK				*e*S	Sg	17 32 41.5	-7.8
	comp=Z,22µm,0.6s						
TDK	**Taldyqorghan**	6.03	37	*e*Pn	Pn	17 31 06.8	+2.4
	baz=39						
TDK				*e*Pg	Pg	17 31 27.4	-3.9
	baz=39						
TDK				*e*Lg	Lg	17 32 44.7	
	baz=39						
TDK	**Taldyqorghan**	6.03	37	*e*PN	Pn	17 31 06.7	+2.4
TDK	**Taldyqorghan**	6.03	37	Pg	Pb	17 31 25.1	+4.5
	comp=Z,6µm,0.8s						
TDK				Lg	Lg	17 32 41.5	
	comp=Z,22µm,0.6s						
KTMS	**Ketmen**	6.15	57	*e*P	Pb	17 31 27.5	+4.9
	comp=Z,862nm,0.9s						
KTMS				*e*S	Sg	17 32 45.2	-7.9
	comp=Z,3µm,0.5s						
KTMS	**Ketmen**	6.15	57	Pg	Pb	17 31 27.5	+4.9
	comp=Z,862nm,0.9s						
KTMS				Lg	Lg	17 32 45.2	
	comp=Z,3µm,0.5s						
DJR	**Jarkent**	6.29	48	*e*P	Pg	17 31 31.4	-4.9
	comp=Z,1µm,0.8s						
DJR				*e*S	Sg	17 32 51.9	-5.7
	comp=Z,6µm,0.9s						
DJR	**Jarkent**	6.29	48	Pg	Pg	17 31 31.4	-4.9
	comp=Z,1µm,0.8s						
DJR				Lg	Lg	17 32 51.9	
	comp=Z,6µm,0.9s						
CEP	**Cherat**	6.56	190	P	Pn	17 31 16.8	+4.9
CHCP	**Chirah Chowk**	6.64	180	P	Pn	17 31 18.0	+5.2
NIL	**Nilore**	6.64	180	PN	Pn	17 31 17.2	+4.3
NIL	**Nilore**	6.64	180		Pn	17 31 17.2	+4.3
KBL	**Kabul**	6.67	212	PN	Pn	17 31 16.4	+3.1
KBL	**Kabul**	6.67	212	P	Pn	17 31 18.3	+5.0
	SNR=785						
KBL	**Kabul**	6.67	212	Pn	Pn	17 31 16.4	+3.1
KAPS	**Kapalarasan**	6.69	40	*e*P	Pb	17 31 37.0	+5.2
	comp=Z,1µm,0.7s						
KAPS				*e*S	Sg	17 33 01.6	-9.0
	comp=Z,6µm,1.1s						
KAPS	**Kapalarasan**	6.69	40	Pg	Pb	17 31 37.1	+5.2
	comp=Z,1µm,0.7s						
KAPS				Lg	Lg	17 33 01.5	
	comp=Z,6µm,1.1s						
THW	**Thamme Wali**	7.60	190	P	Pn	17 31 28.5	+2.5
SARP	**Sargodha**	8.38	183	P	Pn	17 31 40.1	+3.4
DHRM	**DHARAMSHALA**	8.40	162	*e*P	Pn	17 31 40.0	+2.9
MAKZ	**Makanchi**	9.06	41	P	Pn	17 31 47.7	+1.7
MAKZ	**Makanchi**	9.06	41	⇑Pn	Pn	17 31 47.9	+1.9
	comp=Z,228nm,0.8s						
MAKZ				⇑Lg	Lg	17 34 23.0	
	comp=Z,5µm,1.4s						
MAKZ	**Makanchi**	9.06	41		Pn	17 31 47.7	+1.7
MK31	**Makanchi Array**	9.21	42	*c* *i*P	Pn	17 31 50.0	+1.9
MK31				pmax	pmax		
	comp=Z,170nm,0.6s						
MK31	**Makanchi Array**	9.21	42	Pn	Pn	17 31 50.0	+1.9
	comp=Z,260nm,0.6s,baz=218,slow=15,SNR=656						
MK31				⇑Lg	Lg	17 34 25.3	
	comp=Z,2µm,1.0s,baz=222,slow=29,SNR=5.5						
MK31	**Makanchi Array**	9.21	42	Pn	Pn	17 31 49.8	+1.8
MKAR	**Makanchi Array**	9.21	42	Pn	Pn	17 31 50.0	+2.0
	comp=Z,8.6nm,0.3s,baz=228,slow=9.7,SNR=258						
MKAR				Lg	Lg	17 34 24.9	
	comp=Z,45nm,0.3s,baz=219,slow=25,SNR=5.8						
MKAR				LR	LR	17 35 44.1	
	comp=Z,18µm,18.3s,baz=227,slow=40						
MKAR	**Makanchi Array**	9.21	42	P	Pn	17 31 48.8	+0.7
MKAR	**Makanchi Array**	9.21	42	Pn	Pn	17 31 48.8	+0.7
BRZS	**Berezniki**	9.69	358	*e*P	Pg	17 32 32.7	
	comp=Z,333nm,0.9s						
BRZS				*e*S	Sg	17 34 37.6	
	comp=Z,1µm,1.1s						
BRZS	**Berezniki**	9.69	358	*e*Pn	Pn	17 31 54.8	+0.2
	baz=358						
BRZS				*e*Lg	Lg	17 34 39.7	
	baz=358						
BRZS	**Berezniki**	9.69	358	*e*P	Pn	17 31 54.7	+0.2
BRZS	**Berezniki**	9.69	358	Pg	Pg	17 32 32.7	
	comp=Z,333nm,0.9s						
BRZS				Lg	Lg	17 34 37.6	
	comp=Z,1µm,1.1s						
SMLA	**Simla**	9.69	160	*e*P	Pn	17 31 56.4	+1.8
HRA	**Herat**	10.58	240	Pn	Pn	17 32 06.1	-0.9
DDI	**Dehra Dun**	10.70	157	*e*P	Pn	17 32 09.3	+0.8
DDI				IAmb	IAmb	17 32 12.8	
	comp=Z,1µm,0.8s						
KURBB	**Kurchatov Arra**	10.95	18	Pn	Pn	17 32 11.0	-0.9
	comp=Z,4.1nm,0.3s,baz=208,slow=13,SNR=93						
KURBB				Sn	Sn	17 34 13.6	-0.3
	comp=Z,2.9nm,0.3s,baz=204,slow=22,SNR=4.1						
KURBB				Lg	Lg	17 35 17.2	
	comp=Z,13nm,0.3s,baz=202,slow=31,SNR=8.5						
KURBB	**Kurchatov Arra**	10.95	18	⇓Pn	Pn	17 32 10.9	-0.9
	comp=Z,139nm,0.6s						
KURBB				⇑Lg	Lg	17 35 19.1	
	comp=Z,11µm,1.4s						
ZSN	**Zaisan**	10.99	46	*e*P	Pg	17 32 53.5	
	comp=Z,137nm,1.1s						
ZSN				*e*S	Sg	17 35 14.2	
	comp=Z,1µm,1.1s						
ZSN	**Zaisan**	10.99	46	*e*Pn	Pn	17 32 15.1	+2.6
	baz=47						
ZSN				*e*Lg	Lg	17 35 18.4	
	baz=47						
ZSN	**Zaisan**	10.99	46	*e*P	Pn	17 32 15.0	+2.6
ZSN	**Zaisan**	10.99	46	Pg	Pg	17 32 53.5	
	comp=Z,137nm,1.1s						
ZSN				Lg	Lg	17 35 14.2	
	comp=Z,1µm,1.1s						
KURK	**Kurchatov**	11.06	18	*c* *i*P	Pn	17 32 13.1	-0.2
KURK				pmax	pmax		
	comp=Z,140nm,1.3s						
KURK				MLR	MLR		
	comp=Z,30µm,12.0s						
KURK	**Kurchatov**	11.06	18	⇑Pn	Pn	17 32 12.5	-0.8
	comp=Z,67nm,0.7s						
KURK				⇑Lg	Lg	17 35 25.8	
	comp=Z,13µm,1.3s						
KURK	**Kurchatov**	11.06	18	Pn	Pn	17 32 13.1	-0.2
SEM	**Semipalatinsk**	11.22	24	*e*P	Pg	17 33 01.1	
SEM				*e*S	Sg	17 35 26.4	
SEM	**Semipalatinsk**	11.22	24	*e*Pn	Pn	17 32 16.3	+0.5
	baz=24						
SEM				*e*Lg	Lg	17 35 22.8	
	baz=24						
SEM	**Semipalatinsk**	11.22	24	*e*P	Pn	17 32 16.3	+0.5
SEM	**Semipalatinsk**	11.22	24	Pg	Pg	17 33 01.0	
SEM				Lg	Lg	17 35 26.4	
WMQ	**Urumqi**	11.28	67	P	Pn	17 32 17.3	+0.8
WMQ				pP		17 32 22.0	
WMQ				sP		17 32 26.8	
WMQ				S	Sn	17 34 30.8	+8.6
WMQ				SS	SnSn	17 34 43.6	+10
WMQ				pmax	pmax		
	comp=Z,220nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,1µm,4.7s						
WMQ				LR	LR		
	comp=Z,34µm,9.9s						
WMQ				LR	LR		
	comp=Z,22µm,9.5s						
WMQ				LR	LR		
	comp=Z,30µm,10.7s						
BHGR	**Bahadurgarh**	11.98	164	*e*P	Pn	17 32 27.7	+1.8
GEYT	**Alibeck**	12.01	263	Pn	Pn	17 32 24.6	-1.8
	comp=Z,5.7nm,0.3s,baz=97,slow=11,SNR=32						
GEYT				Sn	Sn	17 34 39.2	-0.8
	comp=Z,19nm,0.3s,baz=84,slow=28,SNR=1.5						
GEYT				LR	LR	17 37 45.2	
	comp=Z,9µm,19.4s,baz=70,slow=41						
GYA0	**ALIBECK ARRAY**	12.01	263	P	Pn	17 32 28.6	+2.2
GYA0B	**ALIBECK ARRAY**	12.01	263	⇑Pn	Pn	17 32 28.6	+2.2
GYA0B	**ALIBECK ARRAY**	12.01	263		Pn	17 32 23.9	-2.5
NDI	**New Delhi**	12.04	163	*e*P	Pn	17 32 26.6	-0.2
AYAN	**Aya Nagar**	12.21	164	*e*P	Pn	17 32 28.6	-0.6
KUDL	**Kundal**	12.42	167	*e*P	Pn	17 32 30.4	-1.5
SONA	**Sohna**	12.43	164	*e*P	Pn	17 32 31.6	-0.6
BVAR	**Borovoye Array**	12.87	352	Pn	Pn	17 32 36.0	-2.1
	comp=Z,19nm,0.3s,baz=188,slow=21,SNR=362						
BVAR				Lg	Lg	17 36 16.0	
	comp=Z,19nm,0.3s,baz=163,slow=26,SNR=2.8						
BRVK	**Borovoye**	12.92	352	*d* *i*P	Pn	17 32 37.4	-1.3
BRVK				pmax	pmax		
	comp=Z,384nm,1.3s						
BRVK				MLR	MLR		
	comp=Z,31µm,11.0s						

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BRVK  Borovoye         12.92 352 ⇓Pn    Pn      17 32 37.9 -0.8
      comp=Z,216nm,0.7s
BRVK  Borovoye         12.92 352        Pn      17 32 36.8 -1.9
AB31  Akbulak array    13.01 318 eP     Pn      17 32 37.6 -2.3
AB31  Akbulak array    13.01 318 ⇓Pn    Pn      17 32 37.8 -2.1
      comp=Z,221nm,0.6s,baz=126,slow=12,SNR=2522
AB31                             ⇓Sn    Sn      17 35 03.0 -1.2
      comp=Z,197nm,0.7s
ABKAR Akbulak array    13.01 318        Pn      17 32 37.5 -2.5
ABKAR Akbulak array    13.01 318        Pn      17 32 37.6 -2.3
JASL  Jaisalmer        13.49 189 eP     Pn      17 32 45.7 -1.0
DGZ   Jazzator, Alta   13.71  42c iP    Pn      17 32 50.6 +0.9
DGZ                              pmax   pmax
      comp=Z,255nm,1.1s
DGZ                              MLR    MLR
      comp=Z,25µm,11.0s
AJM   Ajmer            13.84 175 eP     Pn      17 32 49.4 -2.0
PYUN  Piuthan          14.58 144 eP     Pn      17 32 59.7 -2.0
AKTO  Aktyubinsk       14.72 319 Pn     Pn      17 33 00.9 -2.4
      comp=Z,16nm,0.3s,baz=129,slow=13,SNR=193
AKTO                             Sn     Sn      17 35 39.0 -6.9
      baz=168,slow=19,SNR=2.1
AKTO                             Lg     Lg      17 37 15.7
      comp=Z,1.9nm,0.3s,baz=198,slow=20,SNR=1.6
AKTO                             LR     LR      17 39 11.1
      comp=Z,16µm,21.0s,baz=136,slow=39
AKTO  Aktyubinsk       14.72 319 ⇓Pn    Pn      17 33 01.6 -1.7
      comp=Z,618nm,0.8s
AKTO                             ⇑Sn    Sn      17 35 46.0 +0.1
      comp=Z,314nm,0.9s
DANN  Dangsing         14.73 141 eP     Pn      17 33 01.0 -2.8
      comp=Z,466nm,0.3s
KOLN  Koldanda         15.14 143 eP     Pn      17 33 07.0 -2.3
      comp=Z,607nm,0.5s
GKN   Gorkha           15.45 139 eP     Pn      17 33 10.5 -2.7
      comp=Z,596nm,0.4s
ZAA0  Zalesovo Array   15.72  26 ⇑Pn    Pn      17 33 18.1 +1.6
      comp=Z,149nm,1.2s
ZAA0  Zalesovo Array   15.72  26        Pn      17 33 15.6 -0.8
ZAA0                             IAmb   IAmb    17 33 23.5
      comp=Z,889nm,1.2s
ZALV  Zalesovo Beam    15.72  26 Pn     Pn      17 33 15.2 -1.2
      comp=Z,10nm,0.3s,baz=221,slow=12,SNR=258
ZALV                             Lg     Lg      17 37 51.4
      comp=Z,2.5nm,0.3s,baz=203,slow=25,SNR=2.4
ZALV                             LR     LR      17 39 37.3
      comp=Z,15µm,18.9s,baz=216,slow=38
ZALV  Zalesovo Beam    15.72  26        Pn      17 33 15.1 -1.4
KKN   Kakani           15.95 138 eP     Pn      17 33 17.0 -2.8
      comp=Z,745nm,0.6s
DMN   Daman            16.00 139 eP     Pn      17 33 17.7 -2.9
      comp=Z,347nm,0.4s
GUN   Gumba            16.16 136 eP     Pn      17 33 19.7 -3.0
      comp=Z,1µm,0.5s
PKIN  Phulchoki        16.18 138 eP     Pn      17 33 19.8 -3.0
PKI   Pulchoki         16.19 138 eP     Pn      17 33 20.1 -2.9
      comp=Z,1µm,0.8s
JIRN  Jiri             16.53 136 eP     Pn      17 33 24.9 -2.4
      comp=Z,936nm,0.5s
RAMN  Ramite           17.31 136 eP     Pn      17 33 33.7 -3.4
      comp=Z,751nm,0.5s
BHPL  Bhopal           17.37 167 eP     Pn      17 33 34.3 -3.4
BHPL                             IAmb   IAmb    17 33 40.4
      comp=Z,403nm,0.9s
TAPN  Taplejung        17.60 133 eP     Pn      17 33 37.9 -2.9
      comp=Z,2µm,0.9s
ODAN  Odare            17.81 135 eP     Pn      17 33 40.3 -3.0
      comp=Z,2µm,0.9s
LSA   Lhasa            18.04 120 P      P       17 33 48.8 +2.1
LSA                              S      S       17 37 14.9 +1.6
LSA                              pmax   pmax
      comp=Z,120nm,1.0s
LSA                              LR     LR
      comp=Z,46µm,14.5s
LSA                              LR     LR
      comp=Z,32µm,13.5s
LSA   Lhasa            18.04 120 P      P       17 33 47.1 +0.4
LSA                              pmax   pmax
      comp=Z,207nm,0.9s
LSA   Lhasa            18.04 120 P      P       17 33 47.1 +0.4
GTK   Tadong           18.13 131 ex     P       17 33 44.3 -3.2
SVE   Sverdlovsk       18.47 338ceP     P       17 33 48.9 -1.9
SVE                             eS      Sn      17 37 17.2 +0.3
SVE                              pmax   pmax
      comp=Z,273nm,0.9s
SVE                              MLR    MLR
      comp=Z,21µm,12.0s
ARU   Arti             18.79 334 P      P       17 33 52.8 -1.5
      comp=Z,0.1nm,0.3s,baz=122,slow=10,SNR=82
ARU                              Lg     Lg      17 39 24.8
      comp=Z,0.0nm,0.3s,baz=170,slow=22,SNR=3.9
ARU                              LR     LR      17 41 38.3
      comp=Z,13µm,18.5s,baz=138,slow=38
ARU   Arti             18.79 334d iP    P       17 33 53.1 -1.2
ARU                              S      Sn      17 37 25.4 +0.8
ARU                              pmax   pmax
      comp=Z,300nm,0.8s
ARU                              MLR    MLR
      comp=Z,11µm,12.0s
ARU   Arti             18.79 334 P      P       17 33 52.9 -1.5
AKT   Akhty            19.33 282deP     P       17 33 59.8 -0.7
AKT                              pmax   pmax
      comp=Z,40nm,0.5s
AKT                              MLR    MLR
      comp=Z,3µm,11.0s
MAK   Makhachkala      19.42 286 eP     P       17 33 58.7 -2.6
MAK                             eS      Sn      17 37 36.9 -3.0
MAK                              pmax   pmax
      comp=Z,900nm,1.5s
MAK                              MLR    MLR
      comp=Z,23µm,14.0s
BOK   Bokaro           19.59 143 ex     P       17 34 01.7 -1.7
BOK                              IAmb   IAmb    17 34 05.2
      comp=Z,210nm,0.5s
GNBR  Gunib            19.84 285ceP     Pn      17 34 07.7 +0.1
GNBR                             pmax   pmax
      comp=Z,367nm,0.9s
GNBR                             MLR    MLR
      comp=Z,13µm,16.0s
SHME  Shamm            20.14 230 i P    P       17 34 09.6 +0.3
      SNR=50
SHME  Shamm            20.14 230 P      Pn      17 34 12.0 +0.8
      SNR=26
BANOM Banah            20.14 230 i P    P       17 34 09.1 -0.3
      SNR=43
BANOM Banah            20.14 230 P      Pn      17 34 11.0 -0.3
      SNR=68
KRAR  Krasnoyarsk      20.33  33c iP    P       17 34 11.8 +0.7
GTA   Gaotai           20.38  84 ⇑P     Pn      17 34 13.8 -0.2
GTA                              pP     pP      17 34 18.3 +1.0
GTA                              sP     sP      17 34 20.8 +1.1
GTA                              S      Sn      17 38 01.9 -1.3
GTA                              sS     sS      17 38 09.4 +1.2
GTA                              pmax   pmax
      comp=Z,400nm,1.2s
GTA                              pmax   pmax
      comp=Z,3µm,9.2s
GTA                              LR     LR
      comp=Z,7µm,12.4s
GTA                              LR     LR
      comp=Z,10µm,13.9s
GTA                              LR     LR
      comp=Z,12µm,12.3s
LGD   Lagodekhi        20.41 283 P      P       17 34 12.4 +0.3
DVE   Vedeno           20.43 286c iP    P       17 34 13.2 +0.8
DVE                              pmax   pmax
      comp=Z,483nm,1.0s
DVE                              MLR    MLR
      comp=Z,11µm,15.0s
DDFL  Dedoflistskaro   20.54 282 P      Pn      17 34 16.4 +0.6
MDH   Madha            20.62 229 i P    P       17 34 13.4 -1.1
      SNR=15
MDH   Madha            20.62 229 P      Pn      17 34 17.6 +0.8
      SNR=21
MASF  Masafi           20.65 229 P      Pn      17 34 17.3 +0.1
      SNR=19
MSFE  Esma-Masafi      20.66 229 i P    P       17 34 13.8 -1.2
      SNR=19
UMQ   Umm Al-Quwin     20.82 230 i P    P       17 34 17.4 +0.7
      SNR=23
UMQ   Umm Al-Quwin     20.82 230 P      Pn      17 34 19.4 +0.3
      SNR=22
UOSS  Minazif          20.95 228 i P    P       17 34 17.0 -1.1
      SNR=30
UOSS  Minazif          20.95 228 P      P       17 34 16.8 -1.3
WSAR  Wadi Sarin       21.03 220 P      P       17 34 18.9  0.0
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      comp=Z,35nm,0.7s,baz=49,slow=6.2,SNR=26
WSAR                             LR     LR      17 44 29.9
      comp=Z,6µm,18.7s,baz=48,slow=43
WSAR  Wadi Sarin       21.03 220 P      P       17 34 21.2 +2.2
      SNR=55
BIDO  Bidbid           21.05 222 P      P       17 34 22.0 +2.8
      SNR=28
HATD  Hatta, Dubai     21.08 228 i P    P       17 34 18.2 -1.3
      SNR=31
HATD  Hatta, Dubai     21.08 228 P      P       17 34 21.9 +2.4
      SNR=60
NAZ   Nazwa, Dubai     21.23 229 i P    P       17 34 21.6 +0.5
      SNR=22
NAZ   Nazwa, Dubai     21.23 229 P      P       17 34 22.8 +1.8
      SNR=82
ASHO  Ashiyiah         21.23 228 i P    P       17 34 22.0 +0.8
      SNR=147
ASHO  Ashiyiah         21.23 228 P      P       17 34 23.0 +1.8
      SNR=14
BELG  Belogornoye      21.31 313 P      P       17 34 20.9 -0.8
      comp=Z,3µm,1.1s,baz=19,slow=1.6,SNR=48
BELG                             LR     LR      17 43 46.7
      comp=Z,9µm,21.1s,baz=107,slow=40
BELG  Belogornoye      21.31 313d iP    P       17 34 21.0 -0.7
BELG                             pmax   pmax
      comp=Z,536nm,1.3s
BELG                             MLR    MLR
      comp=Z,2µm,18.0s
SHL   Shillong         21.39 128 P      P       17 34 23.6 +0.6
SHL                              pmax   pmax
      comp=Z,566nm,1.1s
SHL   Shillong         21.39 128⇑iP     P       17 34 23.3 +0.4
SHL   Shillong         21.39 128 P      P       17 34 24.1 +1.1
      SNR=166
SHL   Shillong         21.39 128 P      P       17 34 23.6 +0.6
SHL                              IAmb   IAmb    17 34 48.2
      comp=Z,566nm,1.1s
WBK   Wadi Bani Khal   21.40 219 P      P       17 34 25.0 +2.0
      SNR=20
SOHO  SOHO             21.40 226 i P    P       17 34 22.7 -0.2
      SNR=14
SOHO  SOHO             21.40 226 P      P       17 34 22.2 -0.7
ITAN  ITANAGAR         21.42 122⇑iP     P       17 34 25.6 +2.5
HOQ   Hoqain           21.42 224 P      P       17 34 23.3 +0.1
      SNR=12
FAQ   Al Faqa, Dubai   21.45 229 i P    P       17 34 23.9 +0.4
      SNR=18
FAQ   Al Faqa, Dubai   21.45 229 P      P       17 34 24.7 +1.2
      SNR=46
SMDO  Samad            21.47 221 P      P       17 34 25.8 +1.9
      SNR=18
JLN   Jalan Bani Buh   21.59 217 P      P       17 34 26.2 +1.3
      SNR=36
GUDG  Gudauri          21.67 285 P      P       17 34 28.3 +2.4
ASUD  Al Ashush, Dub   21.70 229 i P    P       17 34 27.2 +1.1
      SNR=30
ASUD  Al Ashush, Dub   21.70 229 P      P       17 34 28.1 +2.0
      SNR=86
POO   Poona            21.71 179⇓iP     P       17 34 25.0 -1.3
      comp=Z,450nm,1.0s
POO                             eP      pP      17 34 26.6 -5.2
POO                              IAmb   IAmb    17 34 31.2
      comp=Z,204nm,0.8s
POO                             i S     S       17 38 25.0 -1.0
GNI   Garni            21.75 279 P      P       17 34 27.7 +1.0
      comp=Z,76nm,0.7s,baz=19,slow=2.3,SNR=43
GNI                              LR     LR      17 44 33.1
      comp=Z,4µm,19.2s,baz=90,slow=41
GNI   Garni            21.75 279 P      P       17 34 27.8 +1.0
GNI   Garni            21.75 279deP     P       17 34 28.2 +1.4
GNI                              pmax   pmax
      comp=Z,120nm,0.8s
GNI                              MLR    MLR
      comp=Z,4µm,18.0s
GNI   Garni            21.75 279 P      P       17 34 27.2 +0.5
KZRT  Kazreti          21.83 282 P      P       17 34 29.1 +1.6
ALNE  Al Ain           21.90 228 i P    P       17 34 28.6 +0.4
      SNR=33
ALNE  Al Ain           21.90 228 P      P       17 34 29.5 +1.2
      SNR=175
AJN   Ajban            21.95 230 i P    P       17 34 29.1 +0.4
      SNR=60
AJN   Ajban            21.95 230 P      P       17 34 29.8 +1.1
      SNR=65
DIBR  DIBRUGARH        21.99 119 eP     P       17 34 31.3 +2.1
JMDO  Jabal Madar      22.02 220 P      P       17 34 31.0 +1.4
      SNR=47
JORH  JORHAT           22.04 121⇑iP     P       17 34 31.7 +2.0
ARQ   Araqi            22.04 225 P      P       17 34 31.5 +1.6
      SNR=74
ZEI   Tsey             22.07 286 eP     P       17 34 29.4 -0.9
ZEI                              pmax   pmax
      comp=Z,98nm,0.7s
BSY   Bisya            22.17 223 P      P       17 34 34.2 +3.0
      SNR=64
MOY   Mondy            22.22  50 eP     P       17 34 33.4 +1.7
MOY                              pmax   pmax
      comp=Z,651nm,1.6s
NCK   Nalchik          22.26 288⇑iP     P       17 34 32.4 +0.3
NCK                              pmax   pmax
      comp=Z,159nm,0.8s
NCK                              MLR    MLR
      comp=Z,14µm,16.0s
ONI   Oni              22.42 286 P      P       17 34 33.4 -0.4
ONI                              pmax   pmax
      comp=Z,2µm,1.2s
ONI   Oni              22.42 286 P      P       17 34 33.4 -0.4
BGD   Bogdanovka       22.44 282 P      P       17 34 37.2 +2.9
AKH   Akhalkalaki      22.50 283 ⇑P     P       17 34 37.0 +2.1
AKH   Akhalkalaki      22.50 283 P      P       17 34 36.6 +1.7
PYA1  Pyatigorsk       22.61 290ceP     P       17 34 35.4 -0.4
GOF   Gofitskoye       22.65 292⇑eP     P       17 34 36.5 +0.3
GOF                              pmax   pmax
      comp=Z,1µm,1.0s
KOHI  KOHIMA           22.66 124⇑iP     P       17 34 38.6 +2.0
LKP   Lekhapani        22.71 118⇑iP     P       17 34 38.8 +1.9
KBZ   Khabaz           22.76 289 P      P       17 34 37.2 -0.1
      comp=Z,60nm,0.7s,baz=135,slow=5.3,SNR=26
KBZ                              LR     LR      17 45 44.6
      comp=Z,9µm,18.0s,baz=92,slow=43
KBZ   Khabaz           22.76 289⇓eP     P       17 34 37.5 +0.2
KBZ                              pmax   pmax
      comp=Z,135nm,0.9s
KBZ                              MLR    MLR
      comp=Z,9µm,17.0s
KVAR  Kislovodsk Arr   22.90 289 P      P       17 34 39.6 +0.6
      comp=Z,16nm,0.6s,baz=88,slow=22,SNR=7.9
KVAR                             LR     LR      17 44 19.1
      comp=Z,9µm,19.4s,baz=208,slow=39
KIV   Kislovodsk       22.91 289 ⇑P     P       17 34 41.5 +2.5
KIV   Kislovodsk       22.91 289 i P    P       17 34 39.4 +0.4
      SNR=8.4
KIV   Kislovodsk       22.91 289 eP     P       17 34 37.4 -1.6
KIV                             eS      S       17 38 47.4 -0.8
KIV                              pmax   pmax
      comp=Z,583nm,1.1s
KIV                              MLR    MLR
      comp=Z,3µm,14.0s
KIV   Kislovodsk       22.91 289 P      P       17 34 37.1 -1.9
NEY   Neytrino         22.91 287ceP     P       17 34 39.6 +0.5
NEY                              MLR    MLR
      comp=Z,5µm,17.0s
KARS  Kars             22.92 281 P      P       17 34 38.4 -0.9
KARS                             pmax   pmax
      comp=Z,6µm,1.1s
KARS  Kars             22.92 281 P      P       17 34 38.4 -0.9
SHA1  Shidzhatmaz      22.93 289deP     P       17 34 38.5 -0.9
JRN   Qarnain Island   22.95 234 P      P       17 34 39.9 +0.5
      SNR=17
ZAK   Zakamensk        23.23  54 eP     P       17 34 43.5 +1.3
ZAK                              pmax   pmax
      comp=Z,210nm,1.2s
HYD   Hyderabad        23.23 167 eP     P       17 34 42.0 -0.4
HYD                             eS      S       17 38 55.0 +1.2
HYB   Hyderabad        23.26 167 i P    P       17 34 42.0 -0.7
      comp=Z,340nm,1.0s
HYB                             esP     sP      17 34 57.0 +6.1
HYB                             ePP     PnPn    17 35 18.0 +9.4
HYB   Hyderabad        23.26 167 eP     P       17 34 42.3 -0.5
HYB                              IAmb   IAmb    17 34 46.2
      comp=Z,319nm,1.1s
KHOR  Al-Khor Airpor   23.32 238 P      P       17 34 44.7 +1.6
UMR   Umm Al-Rimmam    23.46 251 eP     P       17 34 46.0 +1.4
SHMA  Al-Shehemyia     23.51 239 P      P       17 34 46.5 +1.4
MIB   Mutribah         23.59 252 eP     P       17 34 46.7 +0.8
GHWR  Ruwais           23.66 233 P      P       17 34 48.4 +1.9
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SAKB  Bahrain          23.71 240 P      P       17 34 48.2 +1.1
KIRV  Kirov            23.76 328 P      P       17 34 47.6 +0.4
      comp=Z,190nm,0.8s,baz=120,slow=2.9,SNR=74
KIRV                             Lg     Lg      17 42 10.3
      comp=Z,37nm,1.0s,baz=118,slow=19,SNR=1.3
KIRV                             LR     LR      17 44 45.6
      comp=Z,19µm,18.8s,baz=124,slow=38
KIRV  Kirov            23.76 328d iP    P       17 34 47.2  0.0
QRN   Al-Qurain        23.78 249 eP     P       17 34 48.6 +0.9
QRN                             i P     P       17 34 48.6 +0.9
TLY   Talaya           23.79  51 P      P       17 34 49.3 +1.6
      comp=Z,17nm,0.7s,baz=247,slow=12,SNR=16
TLY                              Lg     Lg      17 41 59.1
      comp=Z,11nm,1.0s,baz=319,slow=16,SNR=3.0
TLY   Talaya           23.79  51c iP    P       17 34 49.0 +1.3
TLY                             eSSS    SSS     17 40 02.9
TLY                              pmax   pmax
      comp=Z,238nm,1.1s
TLY                              MLR    MLR
      comp=Z,11µm,13.0s
TLY   Talaya           23.79  51 P      P       17 34 48.6 +0.9
BCA   Borcka           23.89 283 ⇑P     P       17 34 53.0 +4.3
RDF   Al-Radifah       23.93 250 eP     P       17 34 49.7 +0.5
MZR   Muzera           24.02 230 i P    P       17 34 50.0 -0.1
      SNR=60
MZR   Muzera           24.02 230 P      P       17 34 50.9 +0.9
      SNR=77
SIRT  Sirnak           24.10 273 P      P       17 34 50.8  0.0
GURO  Guroymak-BITLI   24.13 276 P      P       17 34 51.6 +0.4
GURO                             IAmb   IAmb    17 35 00.2
      comp=Z,243nm,1.0s
IRK   Irkutsk          24.33  50 eP     P       17 34 51.5 -1.2
IRK                              pmax   pmax
      comp=Z,283nm,2.0s
LZH   Lanzhou          24.33  90 ⇑P     P       17 34 54.4 +1.4
LZH                              pP     pP      17 34 59.4 +0.7
LZH                              sP     sP      17 35 03.0 +2.0
LZH                              pmax   pmax
      comp=Z,150nm,1.2s
LZH                              pmax   pmax
      comp=Z,1µm,5.2s
LZH                              LR     LR
      comp=Z,9µm,19.5s
LZH                              LR     LR
      comp=Z,15µm,18.4s
LZH                              LR     LR
      comp=Z,14µm,18.3s
VRH   Novokhopyorsk    24.38 307 eP     P       17 34 54.6 +1.5
VRH                             eS      S       17 39 11.8 +0.1
VRH                              pmax   pmax
      comp=Z,1µm,1.2s
VRH                              smax   smax
      comp=E,2µm,8.6s
VRH                              MLR    MLR
      comp=Z,15µm,19.0s
GOA   Goa              24.73 179 eP     P       17 34 56.7 +0.2
SONM  Songino Array    24.82  61 P      P       17 34 58.3 +1.0
      comp=Z,170nm,1.0s,baz=268,slow=8.4,SNR=152
SONM                             Lg     Lg      17 42 32.8
      comp=Z,10nm,1.2s,baz=262,slow=29,SNR=2.0
SONM                             LR     LR      17 45 50.2
      comp=Z,13µm,19.3s,baz=267,slow=39
SONM                             P3KPbc         18 08 01.2
      comp=Z,0.6nm,0.9s,baz=116,slow=3.4,SNR=2.6
SONM  Songino Array    24.82  61 P      P       17 34 58.0 +0.7
SONM                             pmax   pmax
      comp=Z,286nm,1.2s
SONM  Songino Array    24.82  61 P      P       17 34 58.0 +0.7
SONM                             IAmb   IAmb    17 35 01.1
      comp=Z,286nm,1.2s
I34MN SONGINO INFRAS 24.82    61 i              19 55 40.0
      baz=262,slow=340,SNR=0.5
SOC   Sochi            25.07 289 eP     P       17 35 04.7 +5.2
SOC                             e               17 35 23.8
SOC                             ePPP    PPP     17 35 39.8
SOC                             eSSS    SSS     17 40 24.7
SOC                              pmax   pmax
      comp=Z,505nm,1.3s
SOC                              MLR    MLR
      comp=Z,6µm,18.0s
ULN   Ulaanbaatar      25.26  61c iP    P       17 35 02.2 +0.9
ULN                              pmax   pmax
      comp=Z,309nm,1.3s
ULN                              MLR    MLR
      comp=Z,12µm,18.0s
ULN   Ulaanbaatar      25.26  61 P      P       17 35 01.9 +0.6
ULN                              IAmb   IAmb    17 35 05.4
      comp=Z,231nm,1.1s
ULN   Ulaanbaatar      25.26  61 IAMs_20 IAMs_20 17 45 51.9
      comp=Z,13µm,18.0s
KTUT  Trabzon          25.35 283 ⇑P     P       17 35 06.3 +4.3
VORD  Divnogorie       25.82 306 eP     P       17 35 05.5 -0.6
VORD                             pmax   pmax
      comp=Z,310nm,0.9s
VORD                             MLR    MLR
      comp=Z,6µm,16.0s
VSR   Storozhevoye     25.95 306 eP     P       17 35 07.4 +0.1
VSR                             eS      S       17 39 32.7 -4.1
VSR                              pmax   pmax
      comp=Z,460nm,1.2s
VSR                              smax   smax
      comp=N,1µm,8.7s
VSR                              MLR    MLR
      comp=Z,20µm,18.0s
VORR  Voronezh         26.02 307 eP     P       17 35 07.0 -0.9
VORR                             pmax   pmax
      comp=Z,1µm,2.2s
CD2   Chengdu          26.39 101⇑iP     P       17 35 13.6 +2.0
CD2                              PP     PnPn    17 35 56.8 +5.6
CD2                              S      S       17 39 45.0 +0.7
CD2                              sS     sS      17 39 52.9 -0.8
CD2                              SS     SnSn    17 40 54.5 +9.4
CD2                              pmax   pmax
      comp=Z,410nm,1.2s
CD2                              pmax   pmax
      comp=Z,1µm,9.2s
CD2                              LR     LR
      comp=Z,9µm,13.9s
CD2                              LR     LR
      comp=Z,9µm,12.7s
CD2                              LR     LR
      comp=Z,12µm,13.7s
LPSR  Galich'ya Gora   26.40 309 eP     P       17 35 13.2 +1.9
LPSR                            eS      S       17 39 46.0 +2.2
LPSR                             pmax   pmax
      comp=Z,720nm,0.8s
LPSR                             smax   smax
      comp=N,810nm,6.2s
LPSR                             MLR    MLR
      comp=Z,13µm,13.0s
ANN   Anapa            26.64 292 eP     P       17 35 18.1 +4.5
ANN                             e               17 35 55.8
ANN                              pmax   pmax
      comp=E,108nm,1.0s
ANN                              pmax   pmax
      comp=Z,559nm,1.3s
ANN                              pmax   pmax
      comp=N,134nm,1.1s
ANN                              MLR    MLR
      comp=N,7µm,13.0s
ANN                              MLR    MLR
      comp=Z,7µm,12.0s
ANN                              MLR    MLR
      comp=E,4µm,13.0s
SHAO  Shalim           26.93 220 P      P       17 35 18.6 +2.2
MALT  Malatya          26.93 277 P      P       17 35 19.2 +2.7
PRGR  Permogore        27.17 331 eP     P       17 35 18.3 +0.1
PRGR                             pmax   pmax
      comp=Z,49nm,0.4s
DOK   Doka             27.18 223 P      P       17 35 20.6 +1.9
      SNR=43
BTO   Baotou           27.84  77 eP     P       17 35 24.0 -0.6
BTO                              S      S       17 40 08.3 +1.2
BTO                              LR     LR
      comp=Z,26µm,15.9s
BTO                              LR     LR
      comp=Z,33µm,14.9s
WHFO  Wadi Hawf        27.95 223 P      P       17 35 27.0 +1.3
      SNR=29
MOS   Moscow           28.01 315 eP     P       17 35 25.6 -0.2
MOS                             eS      S       17 40 09.8 +0.6
MOS                              pmax   pmax
      comp=Z,487nm,1.4s
MOS                              MLR    MLR
      comp=Z,13µm,15.0s
MOS                              MLR    MLR
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	comp=E,10µm,15.0s				
RBK	**Rabkut**	**28.07 221**	P	**P**	**17 35 28.0 +1.2**
	SNR=13				
GAZ	**Gaziantep**	**28.18 275**	P	**P**	**17 35 26.9 -0.7**
GAZ			IAmb	IAmb	17 35 35.5
	comp=Z,187nm,1.0s				
OBN	**Obninsk**	**28.40 314**	⇓P	**P**	**17 35 29.5 +0.2**
OBN	**Obninsk**	**28.40 314**	P	**P**	**17 35 28.9 -0.3**
	comp=Z,13nm,0.7s,baz=80,slow=6.1,SNR=10				
OBN			LR	LR	17 47 45.4
	comp=Z,2µm,20.3s,baz=99,slow=38				
OBN	**Obninsk**	**28.40 314**	⇓*i*P	**P**	**17 35 29.2 -0.1**
OBN			*e*		17 36 23.0
OBN			*i* S	**S**	**17 40 16.8 +1.5**
OBN			pmax	pmax	
	comp=Z,122nm,1.3s				
OBN			MLR	MLR	
	comp=Z,9µm,16.0s				
OBN	**Obninsk**	**28.40 314**	P	**P**	**17 35 28.9 -0.3**
OBN			IAMs_20	IAMs_20	17 47 31.4
	comp=Z,14µm,21.0s				
SNOP	**Sinop**	**28.55 286**	P	**P**	**17 35 29.9 -0.9**
DIKM	**Dikmen**	**28.58 285**	⇑P	**P**	**17 35 34.4 +3.3**
ABTO	**Aybut**	**28.66 223**	P	**P**	**17 35 33.1 +1.1**
	SNR=23				
RAYN	**Ar Rayn**	**28.74 243**	*i* P	**P**	**17 35 33.5 +0.8**
	SNR=65				
RAYN	**Ar Rayn**	**28.74 243**	P	**P**	**17 35 32.5 -0.2**
RAYN			pmax	pmax	
	comp=Z,468nm,1.3s				
RAYN			MLR	MLR	
	comp=Z,5µm,18.0s				
RAYN	**Ar Rayn**	**28.74 243**	P	**P**	**17 35 32.5 -0.2**
BNN	**Bunyan**	**28.75 279**	P	**P**	**17 35 32.4 -0.3**
BNN			IAmb	IAmb	17 35 41.0
	comp=Z,322nm,1.1s				
KMI	**Kunming**	**28.88 113**	⇑P	**P**	**17 35 35.5 +1.3**
KMI			pP	pP	17 35 40.9 +1.1
KMI			sP	sP	17 35 43.5 +1.4
KMI			S	**S**	**17 40 25.3 +1.3**
KMI			sS	sS	17 40 36.3 +3.0
KMI			pmax	pmax	
	comp=Z,58nm,1.4s				
KMI			LR	LR	
	comp=Z,4µm,16.2s				
KMI			LR	LR	
	comp=Z,2µm,17.2s				
KMI			LR	LR	
	comp=Z,6µm,15.2s				
HHC	**Hu-ho-hao-te**	**28.94 76**	⇑*i*P	**P**	**17 35 35.4 +1.0**
HHC			pP	pP	17 35 39.8 -0.3
HHC			sP	sP	17 35 42.4 0.0
HHC			S	**S**	**17 40 24.4 0.0**
HHC			sS	pS	17 40 31.9 +1.1
HHC			SS	ScP	17 41 50.4 -33
HHC			pmax	pmax	
	comp=Z,51nm,1.2s				
HHC			pmax	pmax	
	comp=Z,270nm,5.6s				
HHC			LR	LR	
	comp=Z,7µm,12.0s				
HHC			LR	LR	
	comp=Z,5µm,14.5s				
HHC			LR	LR	
	comp=Z,8µm,14.3s				
XAN	**Xi'an**	**28.95 91**	⇑P	**P**	**17 35 35.0 +0.5**
XAN			pP	pP	17 35 38.3 -1.9
XAN			sP	sP	17 35 41.5 -1.0
XAN			PP	**PnPn**	**17 36 30.4 +4.3**
XAN			S	**S**	**17 40 28.1 +3.5**
XAN			sS	sS	17 40 36.4 +2.4
XAN			pmax	pmax	
	comp=Z,81nm,1.2s				
XAN			pmax	pmax	
	comp=Z,500nm,4.3s				
XAN			LR	LR	
	comp=Z,8µm,16.1s				
XAN			LR	LR	
	comp=Z,15µm,16.7s				
XAN			LR	LR	
	comp=Z,19µm,17.0s				
SIM	**Simferopol'**	**28.98 292**	*d i*P	P	17 35 39.7 +5.1
SIM			pmax	pmax	
	comp=Z,312nm,1.0s				
KLMR	**Klimovskoe**	**29.18 326**	*e*P	**P**	**17 35 35.2 -0.9**
KLMR			*e*		17 36 28.1
KLMR			*e*		17 38 42.6
KLMR			*e*S	**S**	**17 40 27.8 +0.3**
KLMR			pmax	pmax	
	comp=Z,330nm,1.2s				
KLMR			MLR	MLR	
	comp=Z,7µm,13.0s				
KLMR	**Klimovskoe**	**29.18 326**	*e*P	**P**	**17 35 35.3 -0.9**
KLMR			AMP		17 35 50.1
	comp=Z,330nm,1.2s				
KLMR			*e*PP	PP	17 36 28.2 -14
KLMR			*e*PcP	**PcP**	**17 38 42.6 -0.5**
KLMR			*e*S	**S**	**17 40 27.9 +0.4**
KLMR			*e*S	**S**	**17 40 27.9 +0.4**
KLMR			LQ	LQ	17 44 42.0
KLMR			LQ	LQ	17 44 42.0
KLMR			LR	LR	17 46 48.6
KLMR			AMP		17 47 29.7
	comp=Z,7µm,13.0s				
BZK	**Bozkurt**	**29.45 286**	⇑P	**P**	**17 35 42.6 +3.8**
BZK	**Bozkurt**	**29.45 286**	P	**P**	**17 35 38.6 -0.1**
CIT	**Chita**	**29.88 53**	*e*P	**P**	**17 35 42.1 -0.4**
CIT			*e*		17 35 55.5
CIT			*e*		17 36 07.8
CIT			*e*		17 36 45.6
CIT			*e*		17 37 01.4
CIT			*e*		17 40 41.8
CIT			*e*		17 41 09.5
CIT			pmax	pmax	
	comp=Z,237nm,2.6s				
NRIK	**Noril'sk**	**30.07 10**	P	**P**	**17 35 45.6 +1.7**
	comp=Z,43nm,1.0s,baz=205,slow=8.5,SNR=21				
NRIK			LR	LR	17 49 32.5
	comp=Z,6µm,20.4s,baz=200,slow=40				
NRIK	**Noril'sk**	**30.07 10**	*ce*P	**P**	**17 35 44.6 +0.7**
NRIK			MLR	MLR	
	comp=Z,10µm,15.0s				
NRIK	**Noril'sk**	**30.07 10**	P	**P**	**17 35 43.5 -0.5**
HWQ	**Hawqa**	**30.14 271**	*e*P	P	17 35 52.2 +7.1
BR131	**Keskin Array S**	**30.19 282**	P	**P**	**17 35 45.2 -0.3**
BR131			pmax	pmax	
	comp=Z,1µm,1.8s				
BR131	**Keskin Array S**	**30.19 282**	P	**P**	**17 35 45.2 -0.3**
BRTR	**Keskin Array B**	**30.19 282**	P	**P**	**17 35 46.0 +0.5**
	comp=Z,9.0nm,0.8s,baz=93,slow=8.6,SNR=17				
BRTR			LR	LR	17 49 53.1
	comp=Z,4µm,19.2s,baz=70,slow=40				
BRTR	**Keskin Array B**	**30.19 282**	P	**P**	**17 35 45.3 -0.3**
BRTR	**Keskin Array B**	**30.19 282**	P	**P**	**17 35 45.3 -0.2**
ASF	**Jabal al Asfar**	**30.27 266**	P	**P**	**17 35 48.2 +1.9**
	comp=Z,40nm,1.0s,baz=74,slow=3.9,SNR=21				
ASF			LR	LR	17 49 05.8
	comp=Z,2µm,20.2s,baz=88,slow=39				
TIY	**Taiyuan**	**30.38 82**	⇓*i*P	**P**	**17 35 48.5 +1.4**
TIY			PP	**PP**	**17 36 51.8 -3.8**
TIY			S	S	17 40 56.4 +9.5
TIY			SS	**ScP**	**17 42 27.6 -0.7**
TIY			ScS	**ScS**	**17 46 22.1 -2.2**
TIY			pmax	pmax	
	comp=Z,41nm,0.5s				
TIY			LR	LR	
	comp=Z,6µm,13.0s				
TIY			LR	LR	
	comp=Z,4µm,10.7s				
TIY			LR	LR	
	comp=Z,6µm,16.5s				
BHL	**Bhannes**	**30.51 270**	*e*P	P	17 35 55.4 +7.1
CHTO	**Chiang Mai**	**30.75 127**	P	**P**	**17 35 50.0 -0.4**
CHTO			pmax	pmax	
	comp=Z,36nm,1.0s				
CHTO	**Chiang Mai**	**30.75 127**	P	**P**	**17 35 50.0 -0.4**
ANTO	**Ankara**	**30.78 283**	P	**P**	**17 35 50.5 -0.2**
ANTO			pmax	pmax	
	comp=Z,480nm,1.4s				
ANTO			MLR	MLR	
	comp=Z,2µm,20.0s				
ANTO	**Ankara**	**30.78 283**	P	**P**	**17 35 50.5 -0.2**
BR231	**Keskin MP Arra**	**30.80 282**	P	**P**	**17 35 49.7 -1.2**
GYA	**Guiyang**	**30.92 106**	⇑*i*P	**P**	**17 35 53.3 +1.3**
GYA			pP	sP	17 36 00.3 +0.3
GYA			PP	**PnPn**	**17 36 53.1 +0.4**
GYA			S	**S**	**17 40 56.9 +1.2**
GYA			sS	sS	17 41 08.3 +3.2
GYA			pmax	pmax	
	comp=Z,150nm,1.2s				
GYA			pmax	pmax	
	comp=Z,760nm,4.0s				
GYA			LR	LR	
	comp=Z,3µm,20.0s				
GYA			LR	LR	
	comp=Z,2µm,15.2s				
GYA			LR	LR	
	comp=Z,5µm,17.2s				
CM31	**Chiang Mai Arr**	**31.02 127**	P	**P**	**17 35 52.7 -0.1**
CMAR	**Chiang Mai Arr**	**31.02 127**	P	**P**	**17 35 53.0 +0.1**
	comp=Z,9.5nm,0.8s,baz=315,slow=8.7,SNR=47				
CMAR			PcP	**PcP**	**17 38 49.5 +0.9**
	comp=Z,13nm,0.9s,baz=303,slow=3.6,SNR=4.1				
CMAR			ScP	**ScP**	**17 42 30.4 -0.2**
	comp=Z,2.6nm,1.0s,baz=316,slow=5.0,SNR=2.5				
CMAR			LR	LR	17 49 41.4
	comp=Z,2µm,18.2s,baz=356,slow=39				
CMAR	**Chiang Mai Arr**	**31.02 127**	P	**P**	**17 35 52.5 -0.4**
CMAR				**PcP**	**17 38 48.8 +0.2**
ENH	**Enshi**	**31.02 97**	P	**P**	**17 35 52.6 -0.3**
ENH			IAmb	IAmb	17 35 55.4
	comp=Z,118nm,1.1s				
MMAI	**Mount Meron Ar**	**31.06 269**	P	**P**	**17 35 54.5 +1.4**
	comp=Z,35nm,1.3s,baz=64,slow=9.8,SNR=5.7				
MMAI			PcP	**PcP**	**17 38 49.5 +0.9**
	comp=Z,7.3nm,0.7s,baz=49,slow=4.4,SNR=3.0				
MMAI			LR	LR	17 51 16.9
	comp=Z,2µm,19.9s,baz=55,slow=42				
BOD	**Bodaibo**	**31.30 42**	*e*P	**P**	**17 35 55.6 +0.6**
BOD			pmax	pmax	
	comp=Z,153nm,1.8s				
KDZE	**Karadeniz Ereo**	**31.46 286**	⇑P	**P**	**17 35 58.9 +2.4**
GHAJ	**Ghor Haditha**	**31.68 266**	P	**P**	**17 35 57.6 -0.9**
GHAJ			IAmb	IAmb	17 36 07.1
	comp=Z,124nm,1.0s				
PURM	**Purcari**	**31.82 296**	⇓P	**P**	**17 36 00.7 +1.1**
MDUB	**Mudurnu**	**31.83 284**	P	**P**	**17 35 59.8 -0.1**
TRD	**Trivandrum**	**31.84 173**	*e*P	**P**	**17 35 58.4 -1.6**
TRD			IAmb	IAmb	17 36 05.0
	comp=Z,126nm,0.7s				
CSS	**Mathiatis**	**31.88 273**	P	**P**	**17 35 59.7 -0.7**
CSS			IAmb	IAmb	17 36 09.4
	comp=Z,121nm,1.0s				
DGPR	**DIGLIPUR**	**32.07 142**	*e*P	**P**	**17 36 01.6 -0.5**
DGPR			IAmb	IAmb	17 36 07.8
	comp=Z,214nm,1.0s				
AKASG	**Malin Array Be**	**32.13 304**	P	**P**	**17 36 01.9 -0.4**
	comp=Z,12nm,0.6s,baz=79,slow=7.4,SNR=129				
AKASG			PcP	**PcP**	**17 38 52.6 +1.6**
	comp=Z,13nm,0.7s,baz=71,slow=3.0,SNR=1.7				
AKASG			LR	LR	17 52 06.0
	comp=Z,9µm,18.6s,baz=85,slow=42				
AKASG	**Malin Array Be**	**32.13 304**	P	**P**	**17 36 01.4 -0.9**
AKASG			IAmb	IAmb	17 36 10.0
	comp=Z,212nm,0.9s				
AKBB	**Malin Array Si**	**32.13 304**	P	**P**	**17 36 01.6 -0.7**
AKBB			pmax	pmax	
	comp=Z,269nm,0.9s				
AKBB	**Malin Array Si**	**32.13 304**	P	**P**	**17 36 01.6 -0.7**
LEF	**Lefka**	**32.16 274**	⇑P	**P**	**17 36 07.0 +4.2**
SLVN	**Son La**	**32.17 117**	P	**P**	**17 36 04.5 +1.5**
KIS	**Kishinev**	**32.50 297**	*e*P	P	17 36 11.0 +5.4
	comp=Z,380nm,1.0s				
KIS			*e*LR	LR	17 49 44.0
	comp=Z,2µm,18.0s				
KIS	**Kishinev**	**32.50 297**	*e*P	P	17 36 11.0 +5.4
KIS			pmax	pmax	
	comp=Z,380nm,1.0s				
KIS			MLR	MLR	
	comp=N,1µm,15.0s				
KIS			MLR	MLR	
	comp=Z,2µm,15.0s				
MILM	**Milestii Mici**	**32.51 297**	⇓P	**P**	**17 36 06.2 +0.5**
MILM	**Milestii Mici**	**32.51 297**	*e*P	P	17 36 11.0 +5.3
MILM			*e*		17 37 19.0
MILM			*e*PPP	PPP	17 37 39.0
MILM			pmax	pmax	
	comp=Z,660nm,1.0s				
BJI	**Beijing**	**32.55 76**	P	**P**	**17 36 07.0 +0.9**
BJI			PP	**PP**	**17 37 20.5 +0.9**
BJI			S	**S**	**17 41 21.0 +0.4**
BJI			pmax	pmax	
	comp=Z,30nm,1.2s				
BJI			pmax	pmax	
	comp=Z,380nm,4.6s				
BJI			LR	LR	
	comp=Z,6µm,16.6s				
BJI			LR	LR	
	comp=Z,8µm,17.7s				
BJI			LR	LR	
	comp=Z,11µm,18.7s				
BJT	**Baijiatuau**	**32.55 76**	P	**P**	**17 36 06.8 +0.7**
BJT			pmax	pmax	
	comp=Z,28nm,1.1s				
BJT			MLR	MLR	
	comp=Z,8µm,19.0s				
BJT	**Baijiatuau**	**32.55 76**	P	**P**	**17 36 06.8 +0.7**
BJT	**Baijiatuau**	**32.55 76**	IAMs_20	IAMs_20	17 50 07.5
	comp=Z,8µm,19.0s				
TLCR		**32.69 294**	⇓P	**P**	**17 36 08.2 +1.0**
JURR	**Jurilovca**	**32.70 293**	⇓P	**P**	**17 36 09.6 +2.2**
SORM	**Soroca**	**32.74 299**	⇑P	**P**	**17 36 07.7 0.0**
SOCY	**Socotra**	**32.76 217**	P	**P**	**17 36 05.8 -2.5**
EIL	**Elat**	**32.91 263**	P	**P**	**17 36 10.4 +1.0**
	comp=Z,110nm,1.0s,baz=76,slow=4.6,SNR=10				
EIL			LR	LR	17 51 43.2
	comp=Z,2µm,19.1s,baz=66,slow=40				
PUL	**Pulkovo**	**32.97 321**	*ce*P	**P**	**17 36 10.0 +0.5**
PUL			pmax	pmax	
	comp=Z,227nm,1.3s				
PUL			MLR	MLR	
	comp=Z,6µm,15.0s				
EFOR	**EFORIE**	**32.98 292**	⇑P	**P**	**17 36 13.2 +3.4**
ISP	**Isparta**	**33.05 280**	P	**P**	**17 36 09.7 -1.0**
ISP			pmax	pmax	
	comp=Z,184nm,0.9s				
ISP			MLR	MLR	
	comp=Z,3µm,19.0s				
ISP	**Isparta**	**33.05 280**	P	**P**	**17 36 09.7 -1.0**
ISP			IAmb	IAmb	17 36 18.2
	comp=Z,184nm,0.9s				
TIRR	**Tirgusor**	**33.08 292**	⇑P	**P**	**17 36 11.9 +1.3**
TIRR	**Tirgusor**	**33.08 292**	P	**P**	**17 36 11.1 +0.5**
TIRR			pmax	pmax	
	comp=Z,257nm,1.1s				
TIRR			MLR	MLR	
	comp=Z,6µm,22.0s				
TIRR	**Tirgusor**	**33.08 292**	P	**P**	**17 36 11.1 +0.5**
TIRR			IAmb	IAmb	17 36 18.4
	comp=Z,257nm,1.1s				
TIRR			IAMs_20	IAMs_20	17 51 30.9
	comp=Z,6µm,22.0s				
MFTR	**Murfatlar**	**33.11 292**	⇑P	**P**	**17 36 13.8 +2.8**
VLDR	**Vladesti**	**33.12 295**	⇓P	**P**	**17 36 11.8 +0.7**
CFR	**Carcaliu**	**33.17 294**	⇓P	**P**	**17 36 12.6 +1.1**
TATR	**Tatarca**	**33.17 294**	⇑P	**P**	**17 36 13.4 +1.9**
SCTR	**Scanteiesti**	**33.20 295**	⇓P	**P**	**17 36 13.9 +2.2**
MNK	**Minsk**	**33.21 311**	*c i*P	**P**	**17 36 12.0 +0.3**
MNK	**Minsk**	**33.21 311**	*i* P	**P**	**17 36 12.1 +0.3**
	comp=E,40nm,1.0s,baz=96				
MNK			*i* P	**P**	**17 36 12.1 +0.3**
	comp=N,30nm,1.0s				
MNK			*i* P	**P**	**17 36 12.1 +0.3**
	comp=Z,342nm,1.0s				
MNK			*i* PcP	PcP	17 39 21.1 +27
MNK			*i* S	**S**	**17 41 31.3 +0.7**
MNK			*i* SS	**SnSn**	**17 43 20.6 -10**
MNK			*i* SSS	SSS	17 43 51.9
MNK			*i* LQ	LQ	17 47 34.3
MNK			*i* LR	LR	17 49 36.0
MNK			*i* LRM	MLR	17 50 16.7
	comp=E,1µm,17.6s				
MNK			*i* LRM	MLR	17 50 17.2
	comp=N,7µm,17.6s				
MNK			*i* LRM	MLR	17 50 17.8
	comp=Z,7µm,17.6s				
VASR	**Vaslui**	**33.23 296**	⇓P	**P**	**17 36 12.6 +0.6**
VARL	**Varlezi**	**33.28 295**	⇑P	**P**	**17 36 14.5 +2.1**
PBA	**Port Blair**	**33.31 144**	P	**P**	**17 36 15.1 +2.2**
	SNR=8.9				
PBA	**Port Blair**	**33.31 144**	P	**P**	**17 36 13.8 +0.9**
TLBR	**Topalu**	**33.32 292**	⇑P	**P**	**17 36 14.1 +1.3**
IAS	**Iasi**	**33.34 297**	⇑P	**P**	**17 36 15.7 +2.8**
SCHL	**Schela**	**33.34 294**	⇑P	**P**	**17 36 14.2 +1.3**
SLCR	**Slobozia Conac**	**33.37 294**	⇑P	**P**	**17 36 13.9 +0.7**
IZVR	**Izvoarele**	**33.38 294**	⇑P	**P**	**17 36 16.0 +2.7**
HARR	**Harsova**	**33.38 293**	⇑P	**P**	**17 36 14.6 +1.2**
TUDR		**33.44 294**	⇑P	**P**	**17 36 16.2 +2.3**
PALK	**Pallekele**	**33.56 167**	LR	LR	17 50 41.0
	comp=Z,9µm,18.6s,baz=95,slow=38				
PALK	**Pallekele**	**33.56 167**	P	**P**	**17 36 16.3 +1.2**
PALK			pmax	pmax	
	comp=Z,82nm,0.8s				
PALK			MLR	MLR	
	comp=Z,10µm,18.0s				
PALK	**Pallekele**	**33.56 167**	P	**P**	**17 36 16.3 +1.2**
PALK			IAmb	IAmb	17 36 20.7
	comp=Z,82nm,0.8s				
ICOR	**Ion Corvin**	**33.56 292**	⇑P	**P**	**17 36 16.7 +1.8**
PBKT	**Sadao Pong**	**33.70 127**	P	**P**	**17 36 16.7 +0.4**
HIA	**Hailar**	**33.71 59**	IAMs_20	IAMs_20	17 51 27.3
	comp=Z,7µm,19.0s				
ODBI	**Odobesti**	**33.84 295**	⇓P	**P**	**17 36 20.3 +2.9**
ELL	**Elmali**	**33.86 278**	P	**P**	**17 36 17.4 -0.3**
ELL			pmax	pmax	
	comp=Z,353nm,0.9s				
ELL	**Elmali**	**33.86 278**	P	**P**	**17 36 17.4 -0.3**
NACGM	**Naroch**	**33.89 311**	*i* P	**P**	**17 36 18.2 +0.6**
GRER		**33.95 294**	⇑P	**P**	**17 36 21.1 +2.8**
PGOR	**Pogoanele**	**34.02 293**	⇑P	**P**	**17 36 21.3 +2.5**
TESR	**Tescani**	**34.03 296**	⇑P	**P**	**17 36 19.9 +0.9**
VRI	**Vrincioaia**	**34.06 295**	⇑P	**P**	**17 36 21.1 +1.8**
VRI	**Vrincioaia**	**34.06 295**	P	**P**	**17 36 22.1 +2.9**
BISRR	**Bisoca**	**34.11 295**	⇑P	**P**	**17 36 22.8 +3.0**
PLOR	**Plostina**	**34.11 295**	⇑P	**P**	**17 36 21.5 +1.7**
ISR	**Istrita**	**34.29 294**	⇑P	**P**	**17 36 23.8 +2.4**
ISAL	**Salakas**	**34.34 312**	*e*P	**P**	**17 36 22.9 +1.4**
TIA	**Tai'an**	**34.41 82**	⇑P	**P**	**17 36 23.6 +1.2**
TIA			pmax	pmax	
	comp=Z,72nm,1.2s				
TIA			pmax	pmax	
	comp=Z,590nm,3.6s				
TIA			LR	LR	
	comp=Z,2µm,11.1s				
TIA			LR	LR	
	comp=Z,5µm,12.2s				
TIA			LR	LR	
	comp=Z,5µm,11.2s				
NEHR	**Nehoiu**	**34.42 294**	⇑P	**P**	**17 36 25.0 +2.6**
COVR	**Voineasa-Covas**	**34.42 295**	⇓P	**P**	**17 36 23.8 +1.3**
VSU	**Vasula**	**34.45 318**	*e*P	**P**	**17 36 22.7 +0.3**
VSU	**Vasula**	**34.45 318**	⇑*e*P	**P**	**17 36 22.0 -0.4**
VSU			pmax	pmax	
	comp=Z,136nm,0.8s				
VSU			MLR	MLR	
	comp=Z,23µm,16.0s				
BALB	**Balikesir**	**34.50 284**	P	**P**	**17 36 22.0 -1.1**
BALB			IAmb	IAmb	17 36 30.9
	comp=Z,343nm,1.5s				
FETY	**Fethiye**	**34.52 278**	P	**P**	**17 36 27.4 +4.0**
RAZG	**Razgrad**	**34.58 291**	⇑P	**P**	**17 36 25.2 +1.4**
WHN	**Wuhan**	**34.60 93**	⇑*i*P	**P**	**17 36 25.3 +1.3**
WHN			pP	**pP**	**17 36 30.3 +0.5**
WHN			S	**S**	**17 41 57.8 +5.2**
WHN			pmax	pmax	
	comp=Z,860nm,1.5s				
WHN			LR	LR	
	comp=Z,11µm,14.0s				
WHN			LR	LR	
	comp=Z,8µm,17.7s				
WHN			LR	LR	
	comp=Z,17µm,18.2s				
SECR		**34.64 294**	⇑P	**P**	**17 36 26.5 +2.3**
MLR	**Muntele Rosu**	**34.65 295**	⇑P	**P**	**17 36 27.5 +2.9**
MLR	**Muntele Rosu**	**34.65 295**	P	**P**	**17 36 25.1 +0.6**
	comp=Z,41nm,0.9s,baz=149,slow=5.4,SNR=35				
MLR	**Muntele Rosu**	**34.65 295**	P	**P**	**17 36 23.6 -0.9**
MLR			pmax	pmax	
	comp=Z,631nm,1.0s				
MLR			MLR	MLR	
	comp=Z,6µm,20.0s				
MLR	**Muntele Rosu**	**34.65 295**	P	**P**	**17 36 23.6 -0.9**
MLR			IAMs_20	IAMs_20	17 52 39.5
	comp=Z,6µm,20.0s				
LVZ	**Lovozero**	**34.66 335**	*de*P	**P**	**17 36 24.7 +0.5**
LVZ			pmax	pmax	
	comp=Z,167nm,0.7s				
LVZ			MLR	MLR	
	comp=Z,9µm,16.0s				
LVZ	**Lovozero**	**34.66 335**	P	**P**	**17 36 24.1 -0.1**
OZUR		**34.68 296**	⇑P	**P**	**17 36 25.8 +1.2**
SGRR	**Singureni**	**34.84 292**	⇑P	**P**	**17 36 27.4 +1.4**
BURAR	**Bucovina Array**	**34.88 298**	⇓P	**P**	**17 36 27.1 +0.6**
BURAR	**Bucovina Array**	**34.88 298**	P	**P**	**17 36 25.8 -0.7**
BURAR			pmax	pmax	
	comp=Z,128nm,1.0s				
BURAR	**Bucovina Array**	**34.88 298**	P	**P**	**17 36 25.8 -0.7**
BURAR			IAmb	IAmb	17 36 34.5
	comp=Z,129nm,1.0s				
APA	**Apatity**	**34.89 335**	⇓*i*P	**P**	**17 36 25.7 -0.4**
APA			*i*		17 37 47.0
APA			pmax	pmax	
	comp=Z,48nm,0.9s				
APA			MLR	MLR	
	comp=Z,19µm,11.0s				
BUR08	**Bucovina Ar. S**	**34.89 298**	P	**P**	**17 36 25.6 -1.0**
BUR08			IAmb	IAmb	17 36 36.7
	comp=Z,217nm,1.1s				
YER	**Yerkesik**	**34.96 280**	P	**P**	**17 36 28.4 +1.2**
DOPR	**Dopca**	**34.97 295**	⇓P	**P**	**17 36 29.1 +1.9**
VOIR		**35.28 295**	⇓P	**P**	**17 36 30.7 +0.8**
ZIMR		**35.38 292**	⇑P	**P**	**17 36 33.6 +3.0**
ARG	**Arkhangelos**	**35.39 278**	P	P	17 36 37.3 +6.5
FIA1	**FINESS Array S**	**35.43 323**	P	**P**	**17 36 29.8 -1.1**
FINES	**FINESS Array B**	**35.43 323**	P	**P**	**17 36 31.0 +0.1**
	comp=Z,25nm,0.6s,baz=110,slow=9.6,SNR=176				
FINES			LR	LR	17 51 38.8
	comp=Z,7µm,19.4s,baz=109,slow=37				
FINES	**FINESS Array B**	**35.43 323**	P	**P**	**17 36 30.0 -0.9**
FINES	**FINESS Array B**	**35.43 323**	P	**P**	**17 36 29.9 -0.9**
STFAR	**Stefanesti-Arg**	**35.44 294**	⇓P	**P**	**17 36 33.0 +1.8**
LVV	**L'vov**	**35.48 302**	*e*P	**P**	**17 36 31.8 +0.3**
LVV			*e*		17 37 52.8
LVV			*e*PPP	PPP	17 38 13.5
LVV			*e*S	**S**	**17 42 03.3 -2.5**
LVV			pmax	pmax	
	comp=Z,870nm,1.2s				
LVV			MLR	MLR	
	comp=N,4µm,14.0s				
LVV			MLR	MLR	
	comp=E,9µm,14.0s				
LVV			MLR	MLR	
	comp=Z,10µm,14.0s				
ENEZ	**Enez**	**35.48 286**	P	P	17 36 25.0 -6.5
HUMR	**Humele**	**35.49 293**	⇓P	**P**	**17 36 32.7 +1.1**
ALN	**Alexandroupoli**	**35.52 287**	P	**P**	**17 36 30.7 -1.1**
ALN			pmax	pmax	
	comp=Z,76nm,1.1s				
ALN	**Alexandroupoli**	**35.52 287**	P	**P**	**17 36 30.7 -1.1**
ARCR	**ARCALIA**	**35.53 298**	⇓P	**P**	**17 36 33.7 +1.8**
PABE	**Paberze**	**35.55 312**	*e*P	**P**	**17 36 32.6 +0.7**
PABE	**Paberze**	**35.55 312**	P	**P**	**17 36 31.5 -0.5**
ARR	**Arges**	**35.59 295**	⇓P	**P**	**17 36 35.1 +2.6**
EZN	**Ezine**	**35.60 285**	P	**P**	**17 36 34.7 +2.1**
SMG	**Samos**	**35.86 281**	P	**P**	**17 36 37.8 +2.9**
SUW	**Suwalki**	**35.93 310**	*e*P	**P**	**17 36 35.9 +0.7**
SUW			*e*sP	**pP**	**17 36 41.6 +0.7**
SUW			*e*L	L	17 55 29.1
	comp=Z,11µm,17.4s				
SUW	**Suwalki**	**35.93 310**	*e*P	**P**	**17 36 36.8 +1.6**
SUW	**Suwalki**	**35.93 310**	P	**P**	**17 36 34.2 -1.0**
SUW			pmax	pmax	
	comp=Z,392nm,1.0s				
SUW			MLR	MLR	
	comp=Z,8µm,19.0s				
SUW	**Suwalki**	**35.93 310**	P	**P**	**17 36 34.2 -1.0**
SUW			IAMs_20	IAMs_20	17 52 15.6
	comp=Z,8µm,19.0s				
PLVB	**Pleven**	**35.97 291**	⇑P	**P**	**17 36 38.9 +3.3**
MTSE	**Matsula**	**36.00 318**	*e*P	**P**	**17 36 36.1 +0.4**
BMR	**Baia Mare**	**36.03 299**	P	**P**	**17 36 38.7 +2.5**
LOT	**Lotru**	**36.17 295**	⇓P	**P**	**17 36 38.6 +1.0**
CHOS	**Chios island**	**36.23 283**	P	**P**	**17 36 40.8 +2.7**

KWP	Kalwaria Pacla	36.35	302	*e*P	P	17 36 40.3	+1.3
KWP				*e*pP	pP	17 36 44.0	-0.6
KWP				*e*sP	sP	17 36 45.8	-1.1
KWP				*e*L	L	17 55 00.3	
	comp=Z,13µm,16.0s						
KWP	Kalwaria Pacla	36.35	302	P	P	17 36 38.4	-0.6
KWP	Kalwaria Pacla	36.35	302	P	P	17 36 38.4	-0.6
LIA	Limnos Island	36.42	285	P	P	17 36 39.4	-0.2
THAS	Thassos island	36.57	287	P	P	17 36 39.1	-1.7
TRPA	Tarpa	36.62	300	⇑P	P	17 36 42.5	+1.3
TRPA	Tarpa	36.62	300	*e*P	P	17 36 41.8	+0.6
SLIT	Slitere, Latvi	36.66	316	*e*P	P	17 36 42.3	+0.9
DRGR		36.68	297	⇓P	P	17 36 43.0	+1.1
DRGR		36.68	297	P	P	17 36 42.4	+0.5
KOLS	Kolonicke sedl	36.70	301	*e*P	P	17 36 42.4	+0.5
KOLS				pmax	pmax		
	comp=Z,193nm,1.1s						
KOLS				MLR	MLR		
	comp=Z,7µm,18.9s						
KOLS	Kolonicke sedl	36.70	301	*e*P	P	17 36 42.4	+0.5
KOLS				*e*		17 36 47.9	
KOLS				*e*L	L	17 55 16.4	
SRE	Strehaia	36.71	294	⇓P	P	17 36 44.9	+2.8
UZH	Uzhgorod	36.72	300	*e*P	P	17 36 42.8	+0.7
UZH				*e*		17 36 58.0	
UZH				*e*		17 37 05.4	
UZH				*e*		17 38 26.4	
UZH				*e*S	S	17 42 22.8	-2.0
PBUR	Paburge	36.73	313	*e*P	P	17 36 42.5	+0.5
GZR	Gura Zlata	36.87	295	⇑P	P	17 36 44.5	+1.0
DL2	Dalian	36.92	76	P	P	17 36 44.6	+0.8
DL2				PP	PnPn	17 38 11.0	+3.0
DL2				S	S	17 42 32.6	+4.6
DL2				pmax	pmax		
	comp=Z,64nm,0.9s						
DL2				pmax	pmax		
	comp=Z,420nm,4.2s						
DL2				LR	LR		
	comp=Z,13µm,18.8s						
DL2				LR	LR		
	comp=Z,12µm,18.9s						
DL2				LR	LR		
	comp=Z,6µm,17.9s						
PUNG	Punghina	36.98	293	⇑P	P	17 36 45.1	+0.8
NVR	Nevrokopi	36.99	288	P	P	17 36 44.2	-0.3
VTS	Vitosha	37.13	290	⇑P	P	17 36 47.4	+1.6
VTS	Vitosha	37.13	290	P	P	17 36 44.0	-1.8
VTS				pmax	pmax		
	comp=Z,183nm,1.1s						
VTS	Vitosha	37.13	290	P	P	17 36 44.0	-1.8
VTS				IAmb	IAmb	17 36 54.9	
	comp=Z,183nm,1.1s						
OUR	Ouranopolis	37.18	287	P	P	17 36 47.2	+1.1
DJES	Djerdap	37.19	294	⇑P	P	17 36 48.5	+2.4
HERR	Herculane	37.22	294	⇓P	P	17 36 46.9	+0.5
CRVS	Cervenica-Dubn	37.24	301	*e*P	P	17 36 47.3	+0.8
CRVS				pmax	pmax		
	comp=Z,114nm,1.2s						
CRVS				MLR	MLR		
	comp=Z,9µm,17.2s						
CRVS	Cervenica-Dubn	37.24	301	*e*P	P	17 36 47.3	+0.8
CRVS				*e*		17 36 52.8	
CRVS				*e*PP	PP	17 38 06.7	-4.6
CRVS				*e*L	L	17 55 34.5	
SRS	Serrai	37.25	288	P	P	17 36 47.8	+1.1
STHS	Stebnicka Huta	37.32	302	*e*P	P	17 36 52.7	+5.5
STHS	Stebnicka Huta	37.32	302	*e*	P	17 36 52.7	+5.5
NJ2	Nanjing	37.37	88	⇑P	P	17 36 48.8	+1.1
NJ2				pP	pP	17 36 52.3	-1.2
NJ2				sP	sP	17 36 55.3	-0.5
NJ2				PP	PnPn	17 38 15.3	+1.7
NJ2				S	S	17 42 37.3	+2.4
NJ2				sS	sS	17 42 46.9	+2.5
NJ2				pmax	pmax		
	comp=Z,46nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,500nm,5.7s						
NJ2				LR	LR		
	comp=Z,4µm,11.4s						
NJ2				LR	LR		
	comp=Z,7µm,14.5s						
NJ2				LR	LR		
	comp=Z,9µm,14.3s						
BEL	Belsk	37.41	306	*e*P	P	17 36 49.6	+1.7
BEL				*e*sP	sP	17 36 55.0	-0.9
BEL				*e*PP	PnPn	17 38 17.1	+3.2
BEL				*e*L	L	17 53 54.6	
	comp=Z,7µm,20.4s						
BEL	Belsk	37.41	306	P	P	17 36 51.8	+3.9
SIRR	Siria	37.48	297	⇑P	P	17 36 51.1	+2.5
UBPT	Khong Chiam	37.51	122	P	P	17 36 48.4	-0.7
SNY	Shenyang	37.52	71	⇓P	P	17 36 49.6	+0.7
SNY				S	S	17 42 38.9	+1.8
SNY				pmax	pmax		
	comp=Z,32nm,1.4s						
SNY				pmax	pmax		
	comp=Z,550nm,4.3s						
SNY				LR	LR		
	comp=Z,6µm,13.5s						
SNY				LR	LR		
	comp=Z,15µm,14.8s						
SNY				LR	LR		
	comp=Z,20µm,14.7s						
PAIG	Paliouri	37.52	286	P	P	17 36 51.7	+2.7
PLG	Polygyros	37.56	287	P	P	17 36 53.2	+3.8
BZS	Buzias	37.63	296	⇓P	P	17 36 51.6	+1.8
BZS	Buzias	37.63	296	P	P	17 36 50.8	+1.0
MDVR	Moldovita	37.73	294	⇓P	P	17 36 51.9	+1.2
KNT	Kendrikon	37.74	288	P	P	17 36 54.3	+3.4
GZH	Guangzhou	37.80	105	P	P	17 36 51.4	-0.1
GZH				S	S	17 42 43.3	+1.6
GZH				LR	LR		
	comp=Z,2µm,12.3s						
GZH				LR	LR		
	comp=Z,4µm,11.3s						
QIZ	Qiongzhong	37.83	113	P	P	17 36 50.6	-1.2
QIZ				S	S	17 42 46.5	+4.3
QIZ				pmax	pmax		
	comp=Z,19nm,1.9s						
QIZ				pmax	pmax		
	comp=Z,540nm,4.0s						
QIZ				LR	LR		
	comp=Z,3µm,13.2s						
QIZ				LR	LR		
	comp=Z,4µm,14.8s						
QIZ				LR	LR		
	comp=Z,6µm,13.1s						
QIZ	Qiongzhong	37.83	113	P	P	17 36 50.9	-0.9
KECS	Kecovo	37.93	300	*e*P	P	17 36 58.2	+5.9
KECS				*e*		17 38 18.9	
KECS	Kecovo	37.93	300	*e*	P	17 36 58.2	+5.9
KECS				*e*PP	PP	17 38 18.9	0.0
NIE	Niedzica	37.93	302	*e*P	P	17 36 54.3	+1.9
NIE				*e*pP	pP	17 36 58.4	+0.3
NIE				*e*sP	sP	17 37 00.4	-0.2
NIE				*e*L	L	17 56 17.4	
	comp=Z,11µm,16.1s						
NIE	Niedzica	37.93	302	P	P	17 36 54.1	+1.7
VAY	Valandovo	37.94	289	*e*P	P	17 36 53.0	+0.5
BOVS	Bovan	37.98	292	⇓P	P	17 36 54.0	+1.2
KEV	Kevo	37.99	336	P	P	17 36 51.6	-1.0
KEV				pmax	pmax		
	comp=Z,175nm,1.3s						
KEV				MLR	MLR		
	comp=Z,5µm,18.0s						
KEV	Kevo	37.99	336	P	P	17 36 51.6	-1.0
KEV				IAmb	IAmb	17 37 01.5	
	comp=Z,175nm,1.3s						
KEV				IAMs_20	IAMs_20	17 53 27.2	
	comp=Z,5µm,18.0s						
NEO	Neokhori	38.05	285	P	P	17 37 00.1	+6.6
AMBH	Ambrzfalva	38.11	297	⇑P	P	17 36 56.6	+2.8
AMBH	Ambrzfalva	38.11	297	*e*P	P	17 37 01.2	+7.4
STIP	Stip	38.12	289	*i* P	P	17 36 52.6	-1.4
AAL	Aland	38.13	320	*e*P	P	17 36 55.1	+1.3
IDI	Anoyia	38.18	278	P	P	17 36 53.9	-0.7
	comp=Z,7.0nm,0.4s,baz=78,slow=13,SNR=2.0						
ZEA	Zeya	38.23	51	*e*P	P	17 36 55.9	+1.1
ZEA				pmax	pmax		
	comp=E,30nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,30nm,1.1s						
ZEA				MLR	MLR		
	comp=E,2µm,13.0s						
BSZH	Besenyszg	38.25	299	*e*P	P	17 37 01.5	+6.5
CN2	Changchun	38.37	67	*e*P	P	17 36 54.9	-1.2
CN2				*e*S	S	17 42 47.9	-2.1
CN2				pmax	pmax		
	comp=E,20nm,2.3s						
CN2				pmax	pmax		
	comp=E,400nm,5.0s						
CN2				LR	LR		
	comp=E,4µm,13.0s						
CN2				LR	LR		
	comp=E,10µm,13.0s						
CN2				LR	LR		
	comp=E,12µm,15.0s						
ARA0	ARCESS Array S	38.38	335	*e*P	P	17 36 56.3	+0.4
ARCES	ARCESS Array B	38.38	335	P	P	17 36 56.3	+0.5
	comp=E,69nm,0.6s,baz=107,slow=8.3,SNR=478						
ARCES				LR	LR	17 54 21.8	
	comp=E,2µm,20.0s,baz=100,slow=39						
ARCES	ARCESS Array B	38.38	335	P	P	17 36 55.6	-0.2
ARCES				pmax	pmax		
	comp=Z,433nm,1.5s						
ARCES	ARCESS Array B	38.38	335	P	P	17 36 55.6	-0.2
ARCES				IAmb	IAmb	17 37 05.1	
	comp=Z,433nm,1.4s						
PSZ	Piszkesteto	38.40	300	⇓P	P	17 36 57.5	+1.1
PSZ	Piszkesteto	38.40	300	*e*P	P	17 36 57.0	+0.6
PSZ	Piszkesteto	38.40	300	P	P	17 36 55.8	-0.6
PSZ				pmax	pmax		
	comp=Z,112nm,1.0s						
PSZ	Piszkesteto	38.40	300	P	P	17 36 55.8	-0.6
LANS	Liptovska Anna	38.51	302	*e*P	P	17 36 58.7	+1.4
LANS				pmax	pmax		
	comp=Z,107nm,1.3s						
LANS	Liptovska Anna	38.51	302	*e*P	P	17 36 58.7	+1.4
LANS				*e*		17 37 05.2	
SKO	Skopje	38.58	290	*e*P	P	17 36 58.8	+0.9
AGG	Agios Georgios	38.79	285	P	P	17 36 57.8	-2.0
AGG				pmax	pmax		
	comp=Z,169nm,1.1s						
AGG	Agios Georgios	38.79	285	P	P	17 36 57.8	-2.0
AGG				IAmb	IAmb	17 37 07.3	
	comp=Z,169nm,1.1s						
KTK1	Kautokeino	38.92	334	*e*P	P	17 37 00.6	+0.2
FNA	Florina	38.96	288	P	P	17 36 59.5	-1.6
FNA				pmax	pmax		
	comp=Z,164nm,1.0s						
FNA	Florina	38.96	288	P	P	17 36 59.5	-1.6
FNA				IAmb	IAmb	17 37 08.7	
	comp=Z,164nm,1.0s						
FRGS	Fruska Gora	38.97	295	⇑P	P	17 37 02.4	+1.3
FRGS	Fruska Gora	38.97	295	*e*P	P	17 37 01.7	+0.6
VYHS	Vyhne	39.02	301	*e*P	P	17 37 01.8	+0.3
VYHS				pmax	pmax		
	comp=Z,260nm,1.3s						
VYHS				MLR	MLR		
	comp=Z,9µm,17.5s						
VYHS	Vyhne	39.02	301	*e*P	P	17 37 01.8	+0.3
VYHS				*e*		17 37 08.7	
VYHS				*e*L	L	17 57 02.7	
DIVS	Divibare	39.08	294	*e*P	P	17 37 02.2	0.0
DIVS	Divibare	39.08	294	P	P	17 37 00.7	-1.5
ATD	Arta Tunnel	39.26	232	P	P	17 37 11.9	+8.0
	SNR=18						
ATD	Arta Tunnel	39.26	232	P	P	17 37 03.5	-0.4
ATD				IAmb	IAmb	17 37 14.4	
	comp=Z,377nm,1.1s						
ATD				IAMs_20	IAMs_20	17 56 12.8	
	comp=Z,4µm,18.0s						
OKC	Ostrava-Krasne	39.27	303	*e*P	P	17 37 04.0	+0.4
OKC				MLR	MLR		
	comp=Z,8µm,14.3s						
OKC	Ostrava-Krasne	39.27	303	*e*P	P	17 37 04.0	+0.4
OKC				*e*pP	pP	17 37 10.0	+0.7
OKC				AMS	AMS	17 56 40.0	
	comp=Z,8µm,14.3s						
UPP	Uppsala	39.28	319	*e*P	P	17 37 04.6	+1.1
OHR	Ohrid	39.28	289	*e*P	P	17 37 08.8	+5.0
KOLL	Kolacno	39.29	301	*e*P	P	17 37 04.9	+1.2
KOLL				*e*		17 37 10.9	
TEKS	Tekeris	39.30	294	*e*P	P	17 37 04.2	+0.3
SRIT	Nakonsritamara	39.33	136	P	P	17 37 05.7	+1.3
HAMF	Hammerfest	39.40	336	*e*P	P	17 37 05.1	+0.8
SRO2	Moca	39.43	300	*e*P	P	17 37 11.2	+6.3
BLJ	Bijeljina	39.43	295	*e*P	P	17 37 08.9	+4.0
SRO	Srobarova	39.47	300	*e*	P	17 37 13.0	+7.8
GKP	Gorka Klasztor	39.48	308	*e*P	P	17 37 05.8	+0.5
GKP				*e*sP	sP	17 37 12.3	-1.1
GKP				*e*PP	PnPn	17 38 38.8	+0.1
GKP				*e*L	L	17 54 34.8	
	comp=Z,11µm,17.4s						
GKP	Gorka Klasztor	39.48	308	*e*P	P	17 37 06.5	+1.3
GKP	Gorka Klasztor	39.48	308	P	P	17 37 06.3	+1.0
BBLS	Lazići	39.55	293	*e*P	P	17 37 06.1	+0.1
MORH	Mrgy, Hungar	39.55	297	⇑P	P	17 37 06.9	+1.0
MORH	Mrgy, Hungar	39.55	297	*e*P	P	17 37 06.0	+0.1
MORH	Mrgy, Hungar	39.55	297	*e*P	P	17 37 06.8	+0.9
SSE	Sheshan	39.57	88	P	P	17 37 07.0	+0.7
SSE				S	S	17 43 08.8	+0.5
SSE				pmax	pmax		
	comp=Z,48nm,1.4s						
SSE				pmax	pmax		
	comp=Z,370nm,3.5s						
SSE				LR	LR		
	comp=Z,2µm,13.1s						
SSE				LR	LR		
	comp=Z,2µm,15.7s						
CSKK	Cskako	39.59	299	*e*P	P	17 37 07.6	+1.3
KAAM	Kaadhehdhoo	39.63	180	P	P	17 37 06.7	-0.2
RUDO	Rudo	39.63	293	*e*P	P	17 37 04.9	-1.8
MORC	Moravsky Berou	39.67	303	⇓P	P	17 37 07.6	+0.7
MORC	Moravsky Berou	39.67	303	P	P	17 37 06.6	-0.3
MORC				pmax	pmax		
	comp=Z,193nm,1.2s						
MORC	Moravsky Berou	39.67	303	*e*P	P	17 37 07.1	+0.2
MORC				*e*		17 37 13.9	
MORC	Moravsky Berou	39.67	303	P	P	17 37 06.6	-0.3
MORC				IAmb	IAmb	17 37 14.9	
	comp=Z,193nm,1.2s						
PLE	Pljevlja	39.69	293	⇓*i*P	P	17 37 08.8	+1.5
ITM	Ithomi	39.71	283	P	P	17 37 05.6	-1.8
JAVC	Velka Javorina	39.72	301	*e*P	P	17 37 08.6	+1.2
JAVC				*e*		17 37 15.6	
KOME	Kolasin	39.73	292	⇓*i*P	P	17 37 08.1	+0.5
HAPS	Han Pijesak,Bl	39.81	294	*e*P	P	17 37 09.9	+1.6
YAK	Yakutsk	39.85	38	P	P	17 37 08.1	-0.1
	comp=Z,97nm,0.8s,baz=295,slow=0.4,SNR=72						
YAK				LR	LR	17 54 48.8	
	comp=Z,3µm,19.1s,baz=271,slow=38						
YAK	Yakutsk	39.85	38*c*	*i*P	P	17 37 08.3	+0.1
YAK				*e**PP	sP	17 37 27.5	+11
YAK				*e*		17 39 19.6	
YAK				*e*S	S	17 43 01.7	-10
YAK				*e*SS	SS	17 45 59.3	-8.5
YAK				pmax	pmax		
	comp=Z,336nm,1.0s						
YAK				pmax	pmax		
	comp=E,189nm,1.2s						
YAK				pmax	pmax		
	comp=N,40nm,1.1s						
YAK				smax	smax		
	comp=N,191nm,11.2s						
YAK				smax	smax		
	comp=E,391nm,11.4s						
YAK				MLR	MLR		
	comp=Z,6µm,15.0s						
YAK				MLR	MLR		
	comp=N,2µm,13.0s						
YAK				MLR	MLR		
	comp=E,2µm,11.0s						
YAK	Yakutsk	39.85	38	P	P	17 37 07.5	-0.7
TIR	Tirane	39.89	290	⇑P	P	17 37 12.1	+3.3
TIR	Tirane	39.89	290	P	P	17 37 06.2	-2.6
TIR				pmax	pmax		
	comp=Z,115nm,1.1s						
TIR				MLR	MLR		
	comp=Z,2µm,18.0s						
TIR	Tirane	39.89	290	P	P	17 37 06.2	-2.6
TIH	Tihany	39.92	298	*e*P	P	17 37 10.4	+1.4
SMOL	Smolenice	39.94	301	*e*	P	17 37 16.3	+7.2
KOVH	Kovagotottos	39.95	297	*e*P	P	17 37 09.8	+0.6
PDG	Podgorica	40.02	291	*e*P	P	17 37 09.6	-0.3
PDG	Podgorica	40.02	291	P	P	17 37 08.4	-1.5
TTG	Podgorica	40.02	291	⇓*i*P	P	17 37 09.9	0.0
JETT	Jettan, Norway	40.05	334	*e*P	P	17 37 11.4	+1.6
MODS	Modra-Piesok	40.06	301	*e*P	P	17 37 10.9	+0.7
MODS				pmax	pmax		
	comp=Z,199nm,1.4s						
MODS				MLR	MLR		
	comp=Z,9µm,15.8s						
MODS	Modra-Piesok	40.06	301	*e*P	P	17 37 10.9	+0.7
MODS				*e*		17 37 16.4	
MODS				*e*L	L	17 57 43.9	
MODS				*e*L	L	17 57 56.9	
UPM	Unac-Piva	40.06	293	*e*P	P	17 37 11.6	+1.1
UPM	Unac-Piva	40.06	293	⇓*i*P	P	17 37 15.9	+5.4
MPLH	Magyarpolny	40.10	299	*e*P	P	17 37 11.7	+1.2
NKY	Niksic	40.10	292	⇑*i*P	P	17 37 17.9	+7.2
KRLC	Kraliky	40.11	304	*e*P	P	17 37 16.8	+6.2
KRLC				MLR	MLR		
	comp=Z,7µm,16.8s						
KRLC	Kraliky	40.11	304	*e*pP	pP	17 37 16.8	+0.4
KRLC				AMS	AMS	17 56 50.0	
	comp=Z,7µm,16.8s						
DRME	Dracevica, Mon	40.14	291	*e*P	P	17 37 10.8	-0.1
NKME	Niksic	40.15	292	⇑*i*P	P	17 37 11.5	+0.5
ULC	Ulcinj	40.16	291	⇓*i*P	P	17 37 17.2	+6.1
EGYH	Egyhazaskeszo	40.20	299	*e*P	P	17 37 09.8	-1.5
ZST	Bratislava	40.20	301	*e*P	P	17 37 12.7	+1.3
ZST				*e*		17 38 46.0	
ZST				pmax	pmax		
	comp=Z,310nm,1.5s						
ZST	Bratislava	40.20	301	*e*P	P	17 37 12.7	+1.3
ZST				*e*		17 37 18.1	
ZST				*e*PP	PP	17 38 46.0	+2.3
KSP	Ksiaz	40.31	305	*e*P	P	17 37 12.9	+0.6
KSP				*e*pP	pP	17 37 17.1	-0.9
KSP				*e*sP	sP	17 37 18.9	-1.4
KSP				*e*PP	PP	17 38 45.6	+0.7
KSP				*e*L	L	17 57 08.9	
	comp=Z,11µm,18.0s						
KSP	Ksiaz	40.31	305	P	P	17 37 12.9	+0.6
VRAC	Vranov	40.35	302	⇑P	P	17 37 13.9	+1.4
VRAC	Vranov	40.35	302	P	P	17 37 12.9	+0.4
	comp=Z,11nm,0.8s,baz=84,slow=9.1,SNR=18						
VRAC	Vranov	40.35	302	*e*P	P	17 37 13.3	+0.7
VRAC				*e*		17 37 19.8	
DPC	Dobruska-Polom	40.36	304	*e*P	P	17 37 12.5	-0.2
DPC				MLR	MLR		
	comp=Z,8µm,17.7s						
DPC	Dobruska-Polom	40.36	304	*e*P	P	17 37 12.5	-0.2
DPC				*e*pP	pP	17 37 19.1	+0.6
DPC				AMS	AMS	17 56 30.0	
	comp=Z,8µm,17.7s						
OSTC	Ostas	40.40	304	*e*P	P	17 37 14.3	+1.3
OSTC				*e*x	x	17 37 19.9	
OSTC				AMS	AMS	17 56 40.0	
	comp=Z,9µm,17.2s						
BRY	Bratogost	40.40	292	*e*P	P	17 37 14.1	+0.8
VLO	Vlora	40.42	288	P	P	17 37 12.4	-0.8
VLO				pmax	pmax		
	comp=Z,695nm,1.1s						
VLO	Vlora	40.42	288	P	P	17 37 12.4	-0.8
CHVC	Chvalec	40.50	304	*e*P	P	17 37 14.2	+0.4
CHVC				*e*x	x	17 37 20.0	
CHVC				AMS	AMS	17 56 50.0	
	comp=Z,9µm,19.7s						
KRUC	Moravsky	40.52	302	*e*P	P	17 37 14.5	+0.6
KRUC				*e*		17 37 21.4	
UPC	Upice	40.54	304	*e*P	P	17 37 14.8	+0.7
UPC				*e*S	S	17 43 20.9	-1.5
UPC				MLR	MLR		
	comp=Z,10µm,19.2s						
UPC	Upice	40.54	304	*e*P	P	17 37 14.8	+0.7
UPC				*e*pP	pP	17 37 20.9	+1.0
UPC				*e*S	S	17 43 20.9	-1.5
UPC				AMS	AMS	17 56 50.0	
	comp=Z,10µm,19.2s						
HCY	Herceg Novi	40.56	292	*e*P	P	17 37 14.3	-0.1
HCY	Herceg Novi	40.56	292	⇓*i*P	P	17 37 14.0	-0.4
TRO	Tromso	40.57	334	*e*P	P	17 37 14.5	+0.4
TREB	Trebinje	40.59	292	*e*P	P	17 37 14.8	+0.2
SOP	Sopron	40.66	300	*e*P	P	17 37 16.5	+1.4
SOP	Sopron	40.66	300	P	P	17 37 17.6	+2.5
QZH	Quanzhou	40.68	98	⇑*i*P	P	17 37 06.9	-8.6
QZH				PP	PP	17 38 46.0	-3.3
QZH				S	S	17 43 18.4	-6.6
QZH				SS	SS	17 46 26.0	+0.6
QZH				pmax	pmax		
	comp=Z,39nm,0.8s						
QZH				pmax	pmax		
	comp=Z,510nm,4.2s						
QZH				LR	LR		
	comp=N,3µm,12.6s						
QZH				LR	LR		
	comp=E,3µm,11.2s						
QZH				LR	LR		
	comp=Z,4µm,15.6s						
BSD	Bornholm Skovb	40.72	311	*e*P	P	17 37 15.1	-0.4
BSD				IAmb	IAmb	17 37 24.4	
	comp=Z,178nm,0.7s						
DBRK	Dubrovnik	40.74	292	*i* P	P	17 37 15.4	-0.5
KNMB	Chin-men Tao	40.79	99	P	P	17 37 16.4	0.0
KNMB				IAMs_20	IAMs_20	17 56 05.2	
	comp=Z,4µm,20.0s						
HARA	HARA	40.80	229	*e*P	P	17 37 14.4	-2.4
HARA				*e*S	S	17 43 42.8	+16
BLY	Banja Luka	40.88	295	*e*P	P	17 37 16.6	-0.4
LHMI	Lhok Sumawe	40.90	142	P	P	17 37 20.8	+3.4
	comp=Z,3µmcomp=Z,3µmcomp=Z,183nm,1.0s						
LHMI	Lhok Sumawe	40.90	142	P	P	17 37 17.6	+0.2
LHMI				IAmb	IAmb	17 37 51.0	
	comp=Z,179nm,0.9s						
MOSL	Moslavina	40.97	297	*i* P	P	17 37 17.6	-0.1
STON	Ston	41.01	292	*e*P	P	17 37 16.0	-2.0
STON	Ston	41.01	292	*i* P	P	17 37 17.4	-0.6
MRAK	Mrakovica	41.01	296	*e*P	P	17 37 18.3	+0.2
MGRS	Mrkonjic Grad	41.03	295	*e*P	P	17 37 19.1	+0.8
KALN	Kalnik	41.05	298	*i* P	P	17 37 19.0	+0.5
TREC	Trest	41.06	303	*e*P	P	17 37 24.9	+6.4
TREC				MLR	MLR		
	comp=Z,7µm,17.0s						
TREC	Trest	41.06	303	*e*pP	pP	17 37 24.9	+0.7
TREC				AMS	AMS	17 58 00.0	
	comp=Z,7µm,17.0s						
CONA	Conrad Observa	41.07	300	*e*P	P	17 37 19.2	+0.5
	comp=Z,8.1nm,0.6s,SNR=46						
CONA				*i* S	sP	17 37 25.8	-1.1
	comp=Z,60nm,0.9s						
CONA				*e*P	PP	17 39 04.7	+11
	comp=Z,58nm,1.3s						
MDJ	Mudanjiang	41.07	65	P	P	17 37 19.8	+1.2
MDJ				S	S	17 43 31.3	+0.8
MDJ				pmax	pmax		
	comp=Z,23nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,610nm,6.6s						
MDJ				LR	LR		
	comp=Z,5µm,15.7s						
MDJ				LR	LR		
	comp=Z,15µm,14.2s						
MDJ				LR	LR		
	comp=Z,19µm,14.2s						
INCN	Inchon	41.11	76	P	P	17 37 18.6	-0.4
INCN				pmax	pmax		
	comp=Z,156nm,1.4s						
INCN				MLR	MLR		
	comp=Z,6µm,19.0s						
INCN	Inchon	41.11	76	P	P	17 37 18.6	-0.4
INCN	Inchon	41.11	76	IAMs_20	IAMs_20	17 55 58.3	
	comp=Z,6µm,19.0s						
RICI	Ricice	41.23	294	*i* P	P	17 37 19.3	-0.7
HFS	Hagfors	41.27	319	P	P	17 37 19.7	-0.2
	comp=Z,45nm,0.6s,baz=99,slow=9.2,SNR=93						
SCTE	Santa Cesarea	41.29	288	P	P	17 37 18.2	-2.2
SCTE				IAmb	IAmb	17 37 26.5	
	comp=Z,216nm,1.0s						
LOBO	Lobor	41.31	298	*i* P	P	17 37 20.7	+0.2
FAUS	Fauske	41.32	330	*e*P	P	17 37 20.5	+0.2
ARSA	Arzberg	41.44	299	*i* P	P	17 37 22.5	+0.9
	comp=Z,6.1nm,0.9s						
ARSA				*e*S	sP	17 37 28.2	-1.6
	comp=Z,33nm,0.8s,SNR=26						
PTJ	Puntijarka	41.44	297	P	P	17 37 22.7	+1.0
PTJ	Puntijarka	41.44	297	*i* P	P	17 37 23.0	+1.4
ZAG	Zagreb	41.44	297	*e*P	P	17 37 26.2	+4.6
PVCC	Panska Ves	41.45	305	*e*P	P	17 37 22.6	+1.0
PVCC				MLR	MLR		

	comp=Z,9µm,17.9s						
PVCC	**Panska Ves**	41.45	305	*e*P	P	17 37 22.6	+1.0
PVCC				*e*pP	sP	17 37 28.6	-1.0
PVCC				AMS	AMS	17 57 20.0	
	comp=Z,9µm,17.9s						
MOR8	**Moi Rana**	41.45	328	*e*P	P	17 37 20.9	-0.5
MLSI	**Meulaboh, Aceh**	41.50	144	P	P	17 37 23.9	+1.6
	comp=Z,97nm,0.8s						
KLR	**Kul'dur**	41.52	57	P	P	17 37 21.9	-0.4
	comp=Z,17nm,0.5s,baz=287,slow=7.0,SNR=82						
KLR				LR	LR	17 56 22.9	
	comp=Z,5µm,18.0s,baz=276,slow=39						
KLR	**Kul'dur**	41.52	57*c*	*i*P	P	17 37 22.4	+0.2
KLR				pmax	pmax		
	comp=Z,50nm,1.3s						
KLR				MLR	MLR		
	comp=Z,4µm,17.0s						
PRU	**Pruhonice**	41.55	304	*e*P	P	17 37 22.6	+0.2
PRU				MLR	MLR		
	comp=Z,7µm,14.3s						
PRU	**Pruhonice**	41.55	304	*e*P	P	17 37 22.6	+0.2
PRU				*e*pP	pP	17 37 29.3	+1.1
PRU				AMS	AMS	17 58 00.0	
	comp=Z,7µm,14.3s						
NBB08	**Skaug oppvekst**	41.57	330	*e*P	P	17 37 22.8	+0.5
TIXI	**Tiksi**	41.58	23	P	P	17 37 22.4	0.0
	comp=Z,52nm,0.7s,baz=267,slow=4.9,SNR=4.1						
TIXI				PcP	PcP	17 39 18.3	-0.9
	comp=Z,26nm,0.5s,baz=262,slow=3.2,SNR=2.0						
TIXI				LR	LR	17 56 04.4	
	comp=Z,2µm,18.4s,baz=256,slow=38						
TIXI	**Tiksi**	41.58	23*c*	*i*P	P	17 37 22.7	+0.3
TIXI				pmax	pmax		
	comp=Z,197nm,1.2s						
TIXI				MLR	MLR		
	comp=Z,5µm,15.0s						
TIXI	**Tiksi**	41.58	23	P	P	17 37 22.5	+0.1
TIXI				IAmb	IAmb	17 37 31.1	
	comp=Z,268nm,0.9s						
NBB28	**Valnes**	41.60	330	*e*P	P	17 37 22.8	+0.2
PRA	**Prague**	41.61	304	*e*P	P	17 37 24.4	+1.5
PRA				MLR	MLR		
	comp=Z,7µm,18.0s						
PRA	**Prague**	41.61	304	*e*P	P	17 37 24.4	+1.5
PRA				*e*pP	pP	17 37 29.3	+0.7
PRA				AMS	AMS	17 57 50.0	
	comp=Z,7µm,18.0s						
KIJV	**Kijevo**	41.61	294	*i* P	P	17 37 22.4	-0.6
RUE	**Ruedersdorf**	41.65	308	*e*P	P	17 37 24.3	+1.1
RGN	**Rugen**	41.69	311	*e*P	P	17 37 25.3	+1.8
RGN	**Rugen**	41.69	311	*e*P	P	17 37 25.5	+2.1
	comp=Z,1µm,0.9s,baz=79,slow=8.0						
RGN	**Rugen**	41.69	311	P	P	17 37 22.8	-0.7
NBB17	**Glomfjord B¥r**	41.74	329	*e*P	P	17 37 24.3	+0.6
NBB05	**Inndyr**	41.74	330	*e*P	P	17 37 24.6	+0.8
HOPEN	**Hopen**	41.77	345	*e*P	P	17 37 23.6	-0.3
BRG	**Berggiesshubel**	41.78	305	*e*P	P	17 37 26.1	+1.7
	comp=Z,243nm,1.1s,baz=79,slow=8.0						
BRG				*e*pP	sP	17 37 32.0	-0.4
	baz=78,slow=8.0						
BRG	**Berggiesshubel**	41.78	305	*e*P	P	17 37 25.0	+0.7
BRG				Amp		17 37 30.0	
	comp=Z,26nm,0.8s						
BRG	**Berggiesshubel**	41.78	305	P	P	17 37 31.5	+7.2
BRG				Amp		17 37 34.8	
	comp=Z,192nm,0.9s						
BRG				⇑PP	PnPn	17 39 07.5	+1.7
BRG				Amp		17 39 19.9	
	comp=Z,76nm,1.3s						
BRG	**Berggiesshubel**	41.78	305	S	S	17 43 43.0	+2.2
CRES	**Cresnjev**	41.80	297	*e*P	P	17 37 22.4	-2.2
HVAR	**Hvar**	41.80	293	*i* P	P	17 37 23.5	-1.1
PERS	**Pernice**	41.84	299	*i* P	P	17 37 25.2	+0.3
PERS				*i*		17 37 31.4	
NBB30	**Finnes**	41.85	329	*e*P	P	17 37 25.1	+0.5
SOKA	**Soboth**	41.89	299	*e*P	P	17 37 25.7	+0.3
	comp=Z,7.9nm,0.9s,SNR=58						
SOKA				*i* S	sP	17 37 32.3	-1.3
	comp=Z,127nm,1.1s						
CKRC	**Cesky Krumlov**	41.91	302	*e*P	P	17 37 26.6	+1.1
CKRC				*e*x	x	17 37 32.5	
CKRC				*e*S	S	17 43 51.9	+9.0
UDBI	**Udbina**	41.91	295	*i* P	P	17 37 26.9	+1.4
PLIT	**Plitvice**	41.92	296	*i* P	P	17 37 25.7	+0.1
NBB13	**Alf Garage**	41.96	329	*e*P	P	17 37 25.9	+0.4
KS19	**Wonju Array Si**	42.02	76	P	P	17 37 25.7	-0.7
KONS	**Konsvik**	42.02	329	*e*P	P	17 37 26.4	+0.4
STOK	**Stokkvaagen**	42.04	328	*e*P	P	17 37 26.6	+0.4
KSAR	**Wonju Array Be**	42.05	76	P	P	17 37 26.4	-0.3
KSAR	**Wonju Array Be**	42.05	76	P	P	17 37 26.4	-0.3
TJN	**Taejon**	42.06	77*c*	*i*P	P	17 37 26.2	-0.5
NBB40	**Tonnes**	42.07	329	*e*P	P	17 37 26.7	+0.3
KSRS	**Korea Array**	42.08	76	P	P	17 37 26.5	-0.4
	comp=Z,15nm,0.9s,baz=283,slow=6.9,SNR=37						
KSRS				LR	LR	17 56 39.2	
	comp=Z,3µm,18.8s,baz=283,slow=39						
COP	**Copenhagen**	42.09	312	*e*P	P	17 37 27.8	+1.1
COP				IAmb	IAmb	17 37 36.7	
	comp=Z,3µm,0.9s						
LOF	**Lofoten**	42.11	331	*e*P	P	17 37 26.9	+0.1
MOA	**Molln**	42.14	301	*i* P	P	17 37 27.7	+0.4
	comp=Z,3.1nm,0.7s						
MOA				*e*S	sP	17 37 34.1	-1.5
	comp=Z,29nm,0.9s,SNR=25						
MOA				*e*P	PcP	17 39 13.6	-8.0
	comp=Z,42nm,1.0s						
FBE	**Freiberg**	42.14	305	*e*P	P	17 37 29.2	+2.0
	comp=Z,406nm,1.1s,baz=79,slow=8.0						
FBE				*e*pP	sP	17 37 35.2	-0.2
	baz=78,slow=8.0						
BJO1	**Bjornoya**	42.21	341	*e*P	P	17 37 28.1	+0.6
ZIRJ	**Zirje**	42.23	294	*i* P	P	17 37 26.9	-1.1
OBKA	**Obir**	42.25	299	*i* P	P	17 37 29.1	+0.8
	comp=Z,4.2nm,0.7s,SNR=53						
OBKA				*i* S	sP	17 37 35.4	-1.1
	comp=Z,41nm,0.7s						
NC405	**NORSAR Array S**	42.26	321	P	P	17 37 26.8	-1.3
NSS	**Namsos**	42.29	326	*e*P	P	17 37 27.9	-0.3
CLL	**Collm**	42.30	306	P	P	17 37 27.8	-0.7
CLL				pmax	pmax		
	comp=Z,190nm,0.9s						
CLL				MLR	MLR		
	comp=Z,10µm,18.0s						
CLL	**Collm**	42.30	306	*i* P	P	17 37 29.1	+0.6
	comp=Z,282nm,1.1s						
CLL				*i* sP	pP	17 37 35.3	+1.0
CLL				*e*pPP		17 39 12.0	
CLL				*e*S	S	17 43 48.0	-0.4
CLL				*e*SS	SS	17 47 00.0	+3.3
CLL				LmV		17 56 00.0	
	comp=Z,11µm,18.6s						
CLL	**Collm**	42.30	306	*e*P	P	17 37 29.8	+1.3
	comp=Z,282nm,1.1s,baz=79,slow=8.0						
CLL				*e*pP	sP	17 37 35.7	-0.9
	baz=78,slow=8.0						
CLL	**Collm**	42.30	306	P	P	17 37 27.8	-0.7
CLL				IAmb	IAmb	17 37 38.3	
	comp=Z,190nm,0.9s						
GEC2	**GERESS Array S**	42.30	302	*e*P	P	17 37 30.6	+1.8
	comp=Z,354nm,1.2s,baz=79,slow=8.0						
GEC2				*e*pP	sP	17 37 36.4	-0.6
	baz=78,slow=8.0						
GEC2	**GERESS Array S**	42.30	302	P	P	17 37 27.5	-1.2
GEC2				IAmb	IAmb	17 37 37.5	
	comp=Z,387nm,1.3s						
GERES	**GERESS Array B**	42.30	302	P	P	17 37 29.1	+0.4
	comp=Z,14nm,0.6s,baz=65,slow=8.0,SNR=42						
GERES				PP	PP	17 39 07.3	+0.8
	comp=Z,16nm,0.9s,baz=75,slow=12,SNR=1.8						
GERES				LR	LR	17 58 12.6	
	comp=Z,5µm,20.3s,baz=80,slow=41						
GERES	**GERESS Array B**	42.30	302	P	P	17 37 27.5	-1.2
GERES						17 39 07.3	
GERES	**GERESS Array B**	42.30	302	P	P	17 37 27.5	-1.2
KHC	**Kasperske Hory**	42.33	303	*e*P	P	17 37 28.8	0.0
KHC				*e*		17 39 12.0	
KHC				*e*S	S	17 43 44.4	-4.6
KHC				MLR	MLR		
	comp=Z,7µm,14.8s						
KHC	**Kasperske Hory**	42.33	303	*e*P	P	17 37 28.8	0.0
KHC				*e*pP	pP	17 37 35.8	+1.2
KHC				*e*PP	PP	17 39 12.0	+5.2
KHC				*e*S	S	17 43 44.4	-4.6
KHC				AMS	AMS	17 58 50.0	
	comp=Z,7µm,14.8s						
NC602	**NORSAR Array S**	42.34	320	*e*P	P	17 37 28.6	-0.1
NC602	**NORSAR Array S**	42.34	320	P	P	17 37 28.1	-0.6
NC602				IAmb	IAmb	17 37 38.1	
	comp=Z,280nm,1.3s						
NORES	**NORESS Array B**	42.34	320	P	P	17 37 31.1	+2.4
MOZS	**Mozjanca**	42.37	298	*i* P	P	17 37 29.4	+0.1
MOZS				*i*		17 37 35.7	
LJU	**Ljubljana**	42.38	298	*e*P	P	17 37 29.5	+0.2
LJU	**Ljubljana**	42.38	298	*e*P	P	17 37 30.5	+1.3
LJU				*e*		17 37 35.6	
MATE	**Matera**	42.38	290	⇑P	P	17 37 32.8	+3.5
NC303	**NORSAR Array S**	42.42	321	P	P	17 37 28.1	-1.3
NC303				IAmb	IAmb	17 37 39.1	
	comp=Z,161nm,1.0s						
NC303				PP	PP	17 39 02.8	-4.8
NB201	**NORSAR Array S**	42.46	320	P	P	17 37 28.1	-1.6
NB2	**NORSAR Subarra**	42.50	320	P	P	17 37 29.8	-0.3
	comp=Z,82nm,0.7s,baz=91,slow=8.6						
NOA	**NORSAR Array B**	42.50	320	P	P	17 37 29.7	-0.4
	comp=Z,25nm,0.8s,baz=91,slow=8.0,SNR=68						
NOA				PP	PP	17 39 04.6	-3.9
	comp=Z,16nm,0.7s,baz=88,slow=11,SNR=3.9						
NOA				LR	LR	17 55 59.5	
	comp=Z,6µm,19.4s,baz=90,slow=37						
CEY	**Cerknica**	42.52	298	*e*P	P	17 37 30.5	0.0
NVLJ	**Novalja**	42.52	296	*i* P	P	17 37 29.6	-0.7
RABC	**Rab**	42.53	296	*i* P	P	17 37 30.2	-0.2
RIY	**Rijeka**	42.59	297	*e*P	P	17 37 30.4	-0.5
NAO01	**NORSAR Array S**	42.66	320	P	P	17 37 30.7	-0.6
NAO01				IAmb	IAmb	17 37 40.7	
	comp=Z,310nm,1.2s						
NAO01				PP	PP	17 39 06.8	-3.3
KULM	**Kulim**	42.67	137	P	P	17 37 33.0	+1.1
NC204	**NORSAR Array S**	42.72	321	P	P	17 37 30.9	-1.0
SGRT	**San Giovanni R**	42.72	291	P	P	17 37 31.2	-0.9
SGRT				IAmb	IAmb	17 37 39.7	
	comp=Z,234nm,0.9s						
TPTI		42.74	143	P	P	17 37 33.4	+0.9
	comp=Z,633nmcomp=Z,48nm,1.1s						
OSL	**Oslo**	42.76	319	*e*P	P	17 37 32.5	+0.4
WET	**Wettzell**	42.77	303	*e*P	P	17 37 34.2	+1.8
	comp=Z,232nm,1.1s,baz=79,slow=8.0						
WET				*e*pP	sP	17 37 40.1	-0.6
	baz=78,slow=8.0						
TANN	**Tannenbergstha**	42.79	305	*e*P	P	17 37 34.3	+1.7
	comp=Z,172nm,1.2s,baz=79,slow=8.0						
TANN				*e*pP	sP	17 37 40.3	-0.5
	baz=78,slow=8.0						
TIP	**Timpagrande**	42.83	288	⇓P	P	17 37 36.7	+3.6
TIP	**Timpagrande**	42.83	288	P	P	17 37 31.8	-1.3
TIP				IAmb	IAmb	17 37 40.7	
	comp=Z,328nm,1.3s						
MYKA	**Terra Mystica**	42.83	299	*i* P	P	17 37 33.8	+0.8
	comp=Z,4.4nm,0.7s						
MYKA				*e*S	sP	17 37 39.5	-1.7
	comp=Z,11nm,0.7s,SNR=20						
MYKA				*e*P	PcP	17 39 19.1	-4.9
	comp=Z,90nm,1.5s						
USA0B	**Ussuriysk Arra**	42.84	65	P	P	17 37 33.6	+0.6
USA0B				pmax	pmax		
	comp=Z,41nm,1.4s						
USA0B	**Ussuriysk Arra**	42.84	65	P	P	17 37 33.6	+0.6
USRK	**Ussuriysk Ar.**	42.84	65	P	P	17 37 32.5	-0.5
	comp=Z,3.9nm,0.5s,baz=264,slow=7.5,SNR=17						
USRK				LR	LR	17 56 45.8	
	comp=Z,6µm,21.2s,baz=272,slow=38						
USRK	**Ussuriysk Ar.**	42.84	65	P	P	17 37 31.8	-1.2
TATO	**Taipei**	42.86	96	P	P	17 37 32.9	-0.5
TATO	**Taipei**	42.86	96	IAMs_20	IAMs_20	17 56 56.1	
	comp=Z,4µm,19.0s						
WERN	**Wernitzgruen**	42.87	305	*e*P	P	17 37 34.9	+1.7
	comp=Z,145nm,1.4s,baz=79,slow=8.0						
WERN				*e*pP	sP	17 37 40.9	-0.4
	baz=78,slow=8.0						
GUNZ	**Gunzen**	42.88	305	*e*P	P	17 37 35.1	+1.7
	comp=Z,188nm,1.1s,baz=79,slow=8.0						
GUNZ				*e*pP	sP	17 37 41.1	-0.3
	baz=78,slow=8.0						
WERD	**Werda**	42.88	305	*e*P	P	17 37 35.0	+1.6
	comp=Z,239nm,1.2s,baz=79,slow=8.0						
WERD				*e*pP	sP	17 37 40.9	-0.5
	baz=78,slow=8.0						
KBA	**Koelnbreinsper**	42.92	300	*i* P	P	17 37 34.7	+0.9
	comp=Z,4.3nm,0.4s						
KBA				*e*S	sP	17 37 40.3	-1.8
	comp=Z,29nm,0.6s,SNR=19						
YHNB	**Yeheng**	42.94	96	P	P	17 37 34.8	+0.7
YHNB				IAMs_20	IAMs_20	17 57 12.0	
	comp=Z,5µm,20.0s						
PLN	**Plauen**	42.97	305	*e*P	P	17 37 35.5	+1.5
	comp=Z,209nm,1.2s,baz=79,slow=8.0						
PLN				*e*pP	sP	17 37 41.5	-0.6
	baz=78,slow=8.0						
TBLU	**Trondheim**	42.98	324	*e*P	P	17 37 33.8	0.0
VLA	**Vladivostok**	43.07	66*c*	*e*P	P	17 37 34.4	-0.5
VLA				pmax	pmax		
	comp=Z,70nm,1.2s						
VLA				MLR	MLR		
	comp=Z,9µm,18.0s						
NEUB	**Neuenburg**	43.08	306	*e*P	P	17 37 36.3	+1.5
	comp=Z,366nm,1.1s,baz=79,slow=8.0						
NEUB				*e*pP	sP	17 37 42.2	-0.7
	baz=78,slow=8.0						
ROTZ	**Rotzenmuhle**	43.08	304	*e*P	P	17 37 36.8	+1.9
	comp=Z,50nm,1.5s,baz=79,slow=8.0						
ROTZ				*e*pP	sP	17 37 42.8	-0.3
	baz=78,slow=8.0						
MANZ	**Manzenberg**	43.09	304	*e*P	P	17 37 36.8	+1.8
	comp=Z,42nm,1.2s,baz=79,slow=8.0						
MANZ				*e*pP	sP	17 37 42.8	-0.5
	baz=78,slow=8.0						
SSLB	**Suanglung**	43.11	98	P	P	17 37 36.6	+1.1
SSLB				IAmb	IAmb	17 37 40.0	
	comp=Z,218nm,1.1s						
SSLB				IAMs_20	IAMs_20	17 57 30.5	
	comp=Z,6µm,20.0s						
TPUB	**Ta-pu**	43.14	98	P	P	17 37 36.3	+0.6
TSI	**Tuntungan**	43.18	141	P	P	17 37 45.1	+9.1
OVD	**Ostervraa, Den**	43.18	315	*e*P	P	17 37 42.9	+7.4
OVD				IAmb	IAmb	17 37 45.0	
	comp=Z,396nm,1.1s						
FLTG	**Flechtingen**	43.21	308	*e*P	P	17 37 37.0	+1.1
	comp=Z,392nm,0.9s,baz=79,slow=8.0						
FLTG				*e*pP	sP	17 37 42.9	-1.1
	baz=78,slow=8.0						
MOX	**Moxa**	43.28	305	*e*P	P	17 37 38.2	+1.7
	comp=Z,191nm,1.1s,baz=79,slow=8.0						
MOX				*e*pP	sP	17 37 44.1	-0.5
	baz=78,slow=8.0						
MOX				*e*L	L	17 57 25.9	
	comp=Z,10µm,19.7s						
ZOU	**Zoufplan**	43.30	299	P	P	17 37 36.4	-0.5
KONO	**Kongsberg**	43.34	318	⇑*e*P	P	17 37 35.9	-0.9
KONO				pmax	pmax		
	comp=Z,20nm,1.0s						
KONO				MLR	MLR		
	comp=Z,10µm,15.0s						
KONO	**Kongsberg**	43.34	318	*e*P	P	17 37 36.8	-0.1
KONO	**Kongsberg**	43.34	318	P	P	17 37 37.0	+0.2
KONO				IAmb	IAmb	17 37 46.4	
	comp=Z,148nm,1.0s						
NACB	**Ninganchiao**	43.38	97	P	P	17 37 38.2	+0.6
BSEG	**Bad Segeberg**	43.51	310	*e*P	P	17 37 39.7	+1.5
	comp=Z,436nm,1.0s,baz=79,slow=8.0						
DOMB	**Dombas**	43.52	322	*e*P	P	17 37 38.5	+0.2
STAL	**STALIGIAL**	43.55	299	P	P	17 37 37.6	-1.1
STAL				IAmb	IAmb	17 37 46.1	
	comp=Z,226nm,1.5s						
ABTA	**Abfaltersbach**	43.56	299	*i* P	P	17 37 38.9	0.0
	comp=Z,0.4nm,0.3s,SNR=39						
ABTA				*i* S	sP	17 37 45.2	-2.0
	comp=Z,17nm,0.7s						
IPM	**Ipoh**	43.56	138	P	P	17 37 40.0	+0.9
YULB	**Yu-li**	43.59	98	P	P	17 37 38.9	-0.5
GRA1	**Grafenberg Arr**	43.72	304	P	P	17 37 39.9	-0.1
GRA1				IAmb	IAmb	17 37 53.7	
	comp=Z,263nm,0.9s						
GRF	**Grafenberg Arr**	43.72	304	P	P	17 37 39.9	-0.1
GRF				pmax	pmax		
	comp=Z,263nm,0.9s						
GRF				MLR	MLR		
	comp=Z,8µm,22.0s						
GRF	**Grafenberg Arr**	43.72	304	*e*P	P	17 37 42.4	+2.4
	comp=Z,352nm,1.0s,baz=79,slow=8.0						
GRF				*e*pP	sP	17 37 48.5	+0.2
	baz=78,slow=8.0						
GRF				*e*L	L	17 57 52.2	
	comp=Z,7µm,21.9s						
GRFO	**Grafenberg**	43.72	304	P	P	17 37 40.6	+0.6
GRFO				pmax	pmax		
	comp=Z,265nm,0.9s						
GRFO				MLR	MLR		
	comp=Z,8µm,21.0s						
GRFO	**Grafenberg**	43.72	304	P	P	17 37 40.6	+0.6
GRFO				IAmb	IAmb	17 37 53.7	
	comp=Z,265nm,0.9s						
GOET	**G??ttrup**	43.74	315	*e*P	P	17 37 48.6	+8.5
GOET				IAmb	IAmb	17 37 50.2	
	comp=Z,178nm,0.9s						
TWG	**Pinlang**	43.74	99	P	P	17 37 41.0	+0.4
TWG				IAmb	IAmb	17 37 45.4	
	comp=Z,255nm,1.1s						
PAOL	**Paolisi**	43.79	291	P	P	17 37 40.2	-0.6
CEL	**Celeste**	43.79	287	P	P	17 37 39.5	-1.3
CLZ	**Clausthal**	43.82	307	*e*P	P	17 37 43.5	+2.6
	comp=Z,256nm,1.6s,baz=79,slow=8.0						
CLZ				*e*pP	sP	17 37 48.5	-0.5
	baz=78,slow=8.0						
MUD	**Monsted U'grnd**	43.83	314	*e*P	P	17 37 45.0	+4.2
MUD				IAmb	IAmb	17 37 49.3	
	comp=Z,132nm,1.0s						
FURI	**Furi**	43.86	234	IAMs_20	IAMs_20	17 58 49.5	
	comp=Z,4µm,20.0s						
NRDL	**Niedersach Rie**	43.87	308	*e*P	P	17 37 43.1	+2.0
	comp=Z,432nm,1.1s,baz=79,slow=8.0						
NRDL				*e*pP	sP	17 37 49.1	-0.1
	baz=78,slow=8.0						
SKAR	**Skarslia**	43.93	320	*e*P	P	17 37 41.8	+0.2
PSI	**Prapat**	43.96	141	LR	LR	17 57 48.2	
	comp=Z,1µm,21.3s,baz=296,slow=38						
HOMB	**Homborsund**	44.00	317	*e*P	P	17 37 42.3	+0.2
WTTA	**Wattenberg**	44.01	300	*i* P	P	17 37 42.5	-0.2
	comp=Z,7.2nm,0.8s,SNR=37						
WTTA				*e*S	sP	17 37 49.0	-1.9
	comp=Z,52nm,0.8s						
WTTA				*e*P	PcP	17 39 30.7	+2.7
	comp=Z,185nm,1.3s						
FUR	**Furstenfeldbru**	44.02	302	*e*P	P	17 37 44.5	+1.9
	comp=Z,308nm,1.0s,baz=79,slow=8.0						
FUR				*e*pP	sP	17 37 50.5	-0.3
	baz=78,slow=8.0						
WATA	**Walderalm**	44.03	301	*e*P	P	17 37 42.5	-0.3
	comp=Z,3.1nm,0.4s,SNR=38						
WATA				*i* S	sP	17 37 48.8	-2.2
	comp=Z,55nm,0.8s						
WATA				*e*P	PcP	17 39 30.9	+2.8
	comp=Z,118nm,1.2s						
GTTG	**Gottingen**	44.13	307	*e*P	P	17 37 45.2	+1.9
	comp=Z,750nm,1.1s,baz=79,slow=8.0						
GTTG				*e*pP	sP	17 37 51.1	-0.3
	baz=78,slow=8.0						
GRNR	**Gornyy**	44.19	54	⇓*i*P	P	17 37 43.7	-0.1
GRNR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
GRNR				MLR	MLR		
	comp=E,3µm,13.0s						
GRNR				MLR	MLR		
	comp=N,1µm,15.0s						
GRNR				MLR	MLR		
	comp=Z,4µm,12.0s						
AQU	**L'Aquila**	44.19	293	P	P	17 37 42.7	-1.3
AQU				pmax	pmax		
	comp=Z,197nm,1.0s						
AQU				MLR	MLR		
	comp=Z,4µm,19.0s						
AQU	**L'Aquila**	44.19	293	*e*P	P	17 37 45.1	+1.1
AQU	**L'Aquila**	44.19	293	P	P	17 37 42.7	-1.3
AQU				IAmb	IAmb	17 37 55.1	
	comp=Z,197nm,1.0s						
AQU				IAMs_20	IAMs_20	17 59 03.8	
	comp=Z,4µm,19.0s						
MOL	**Molde**	44.22	323	*e*P	P	17 37 43.0	-0.9
SPB2	**Spitsbergen Ar**	44.22	346	P	P	17 37 44.3	+0.6
SPB2				IAmb	IAmb	17 38 06.5	
	comp=Z,145nm,0.9s						
SPA0	**Spitsbergen Ar**	44.23	346	*e*P	P	17 37 44.7	+0.9
SPITS	**Spitsbergen Ar**	44.23	346	P	P	17 37 44.9	+1.1
	comp=Z,29nm,0.6s,baz=110,slow=12,SNR=31						
SPITS	**Spitsbergen Ar**	44.23	346	P	P	17 37 44.0	+0.2
SPITS				pmax	pmax		
	comp=Z,211nm,1.2s						
NRCA	**Norcia**	44.24	294	P	P	17 37 44.0	-0.4
NRCA				IAmb	IAmb	17 38 02.7	
	comp=Z,287nm,1.1s						
SQTA	**Sankt Quirin**	44.30	300	*i* P	P	17 37 44.6	-0.4
	comp=Z,1.1nm,0.2s						
SQTA				*i* S	sP	17 37 51.1	-2.1
	comp=Z,39nm,0.8s,SNR=20						
SQTA				*e*P	PcP	17 39 34.1	+5.1
	comp=Z,149nm,1.3s						
CTI	**Castel Tesino**	44.31	299	P	P	17 37 44.1	-0.9
CTI				pmax	pmax		
	comp=Z,184nm,1.2s						
CTI	**Castel Tesino**	44.31	299	P	P	17 37 44.1	-0.9
CTI				IAmb	IAmb	17 37 55.9	
	comp=Z,184nm,1.2s						
MOTA	**Moosalm**	44.34	301	*i* P	P	17 37 44.9	-0.3
	comp=Z,11nm,0.8s						
MOTA				*e*S	sP	17 37 51.4	-2.1
	comp=Z,37nm,0.9s,SNR=15						
MOTA				*e*P	PcP	17 39 34.1	+4.9
	comp=Z,70nm,1.1s						
AKN	**Aaknes**	44.49	322	*e*P	P	17 37 46.6	+0.6
TEOL	**Teolo**	44.49	298	P	P	17 37 45.5	-0.8
MURB	**Monte Urbino**	44.52	295	P	P	17 37 45.9	-0.8
GSI	**Gunungsitoli**	44.66	144	P	P	17 37 49.9	+2.0
	comp=Z,4µmcomp=Z,5µmcomp=Z,247nm,1.8s						
GSI	**Gunungsitoli**	44.66	144	P	P	17 37 48.9	+1.0
GSI				IAmb	IAmb	17 38 06.4	
	comp=Z,254nm,1.1s						
GSI				IAMs_20	IAMs_20	17 58 13.5	
	comp=Z,3µm,19.0s						
FETA	**Feichten**	44.67	300	*e*P	P	17 37 47.5	-0.4
	comp=Z,2.4nm,0.6s,SNR=36						
FETA				*e*S	sP	17 37 54.2	-1.9
	comp=Z,29nm,1.1s						
SNART	**Snartemo**	44.68	317	*e*P	P	17 37 48.0	+0.4
JRMM	**Jerantut**	44.81	136	P	P	17 37 50.0	+0.8
ODD1	**Odda**	44.82	319	*e*P	P	17 37 48.7	-0.1
HYA	**Hoyanger**	44.93	321	*e*P	P	17 37 50.4	+0.8
BLS5	**Blasjo**	44.95	318	*e*P	P	17 37 50.5	+0.6
DAVA	**Damuels**	45.16	301	*e*P	P	17 37 51.5	-0.3
	comp=Z,8.5nm,0.6s,SNR=37						
DAVA				*i* S	sP	17 37 58.3	-1.8
	comp=Z,90nm,0.8s						
VAE	**Valguarnera**	45.17	286	P	P	17 37 50.7	-1.2
	comp=Z,28nm,0.9s,baz=41,slow=9.3,SNR=5.3						
SALO	**Salr**	45.19	298	P	P	17 37 51.2	-0.7
STU	**Stuttgart**	45.22	303	P	P	17 37 51.4	-0.7
STU				pmax	pmax		
	comp=Z,304nm,1.3s						
STU				MLR	MLR		
	comp=Z,5µm,19.0s						
STU	**Stuttgart**	45.22	303	*e*P	P	17 37 53.8	+1.7
	comp=Z,623nm,1.2s,baz=79,slow=8.0						
STU				*e*pP	sP	17 37 59.8	-0.6
	baz=78,slow=8.0						
STU	**Stuttgart**	45.22	303	P	P	17 37 51.4	-0.7
STU				IAMs_20	IAMs_20	17 59 08.5	
	comp=Z,5µm,19.0s						
ZCCA	**Zocca**	45.26	297	P	P	17 37 52.3	-0.2
ZCCA				IAmb	IAmb	17 38 13.9	
	comp=Z,253nm,1.3s						
DAVOX	**Davos/Dischmat**	45.29	300	P	P	17 37 52.2	-0.7
	comp=Z,17nm,0.6s,baz=99,slow=3.6,SNR=26						
RAFF	**Raffo Rosso**	45.30	286	P	P	17 37 52.3	-0.6
IBBN	**Ibbenburen**	45.32	308	*e*P	P	17 37 54.3	+1.6
	comp=Z,349nm,1.1s,baz=79,slow=8.0						
IBBN				*e*pP	sP	17 38 00.2	-0.6
	baz=78,slow=8.0						
KBS	**Kingsbay**	45.32	346*d*	*e*P	P	17 37 54.3	+1.8
KBS				pmax	pmax		
	comp=Z,79nm,0.8s						
KBS				MLR	MLR		
	comp=Z,6µm,16.0s						
KBS	**Kingsbay**	45.32	346	*e*P	P	17 37 52.2	-0.3
KBS				IAmb	IAmb	17 37 55.2	
	comp=Z,189nm,0.8s						
KBS	**Kingsbay**	45.32	346	*e*P	P	17 37 52.1	-0.3
KBS	**Kingsbay**	45.32	346	P	P	17 37 52.0	-0.5
KBS				IAmb	IAmb	17 38 02.2	
	comp=Z,168nm,0.9s						

KBS	**Kingsbay**	**45.32**	**346**	IAMs_20	IAMs_20	17 58 18.0	
	comp=Z,3µm,19.0s						
OSSC	**Osservatorio P**	**45.32**	**295**	P	**P**	**17 37 52.1**	**-0.8**
TNS	**Taunus Mts**	**45.35**	**305**	*e*P	**P**	**17 37 54.6**	**+1.5**
	comp=Z,142nm,1.1s,baz=79,slow=8.0						
TNS				*e*pP	**sP**	**17 38 00.7**	**-0.7**
	baz=78,slow=8.0						
BER	**Bergen**	**45.42**	**320**	*e*P	**P**	**17 37 53.7**	**+0.3**
FOO	**Floro**	**45.45**	**321**	*e*P	**P**	**17 37 52.9**	**-0.8**
ASK	**Askoy**	**45.48**	**320**	*e*P	**P**	**17 37 54.5**	**+0.6**
PRMA	**PARMA**	**45.58**	**297**	P	**P**	**17 37 54.7**	**-0.2**
SUE	**Sulen**	**45.63**	**321**	*e*P	**P**	**17 37 55.5**	**+0.4**
VLC	**Villacollemand**	**45.72**	**297**	P	**P**	**17 37 55.5**	**-0.6**
VLC				IAMs_20	IAMs_20	17 59 37.2	
	comp=Z,3µm,20.0s						
TUE	**Stuetta**	**45.73**	**300**	P	**P**	**17 37 55.4**	**-1.0**
TUE				IAmb	IAmb	17 38 14.3	
	comp=Z,79nm,0.9s						
BUG	**Bochum--Univer**	**45.80**	**307**	*e*P	**P**	**17 37 59.4**	**+2.9**
	comp=Z,382nm,1.2s,baz=79,slow=8.0						
BUG				*e*pP	**sP**	**17 38 04.3**	**-0.4**
	baz=78,slow=8.0						
CORL	**Corleone**	**45.82**	**287**	P	**P**	**17 37 56.1**	**-0.9**
CORL				IAmb	IAmb	17 38 07.6	
	comp=Z,116nm,1.0s						
CASP	**Castiglione de**	**45.82**	**295**	P	**P**	**17 37 55.3**	**-1.6**
CASP				IAmb	IAmb	17 38 04.7	
	comp=Z,134nm,1.3s						
BFO	**Black Forest**	**45.89**	**303**	P	**P**	**17 37 56.6**	**-0.8**
BFO				pmax	pmax		
	comp=Z,210nm,1.3s						
BFO	**Black Forest**	**45.89**	**303**	*e*P	**P**	**17 37 58.6**	**+1.2**
	comp=Z,189nm,1.2s,baz=79,slow=8.0						
BFO				*e*pP	**sP**	**17 38 04.7**	**-1.0**
	baz=78,slow=8.0						
BFO	**Black Forest**	**45.89**	**303**	P	**P**	**17 37 56.6**	**-0.8**
BFO				IAmb	IAmb	17 38 05.6	
	comp=Z,210nm,1.3s						
CLTB	**Caltabellotta**	**46.01**	**287**	P	**P**	**17 37 56.6**	**-1.9**
CLTB				IAmb	IAmb	17 38 05.3	
	comp=Z,181nm,1.2s						
MNSI	**Mandailing Nat**	**46.02**	**142**	P	**P**	**17 37 59.3**	**+0.6**
	comp=Z,3µmcomp=Z,198nm,0.9s						
JNU	**Nakatsue**	**46.03**	**80**	P	**P**	**17 37 58.6**	**-0.1**
JNU				IAmb	IAmb	17 38 01.5	
	comp=Z,291nm,1.4s						
AHRW	**Bad Neuenahr-A**	**46.12**	**306**	*e*P	**P**	**17 38 01.0**	**+1.8**
	comp=Z,193nm,1.2s,baz=79,slow=8.0						
AHRW				*e*pP	**sP**	**17 38 07.0**	**-0.3**
	baz=78,slow=8.0						
MSSA	**Maissana**	**46.26**	**297**	P	**P**	**17 37 59.5**	**-0.9**
JSU	**Suzuyama**	**46.44**	**82**	P	**P**	**17 38 01.2**	**-0.8**
JSU				IAmb	IAmb	17 38 04.9	
	comp=Z,208nm,1.5s						
CDF	**Champ du Feu**	**46.55**	**303**	*e*P	**P**	**17 38 02.7**	**+0.1**
CDF				pmax	pmax		
	comp=Z,230nm,1.4s						
ECH	**Echery**	**46.67**	**303**	P	**P**	**17 38 02.4**	**-1.2**
ECH				pmax	pmax		
	comp=Z,137nm,1.2s						
ECH	**Echery**	**46.67**	**303**	P	**P**	**17 38 02.4**	**-1.2**
ECH				IAmb	IAmb	17 38 11.7	
	comp=Z,137nm,1.2s						
BTNL	**Ternell**	**46.70**	**306**	*d*P	**P**	**17 38 04.3**	**+0.6**
BTNL				*d*pP	**pP**	**17 38 09.8**	**+0.3**
MEM	**Membach**	**46.77**	**306**	*d*P	**P**	**17 38 05.6**	**+1.4**
MEM				*d*pP	**pP**	**17 38 11.1**	**+1.0**
BHOU	**Houvegnez**	**46.84**	**306**	*d*P	**P**	**17 38 06.3**	**+1.5**
BHOU				*d*pP	**sP**	**17 38 11.9**	**-1.1**
JHS	**Saijyo**	**46.90**	**76**	P	**P**	**17 38 04.4**	**-1.1**
WLF	**Walferdange**	**46.92**	**305**	*d*P	**P**	**17 38 06.3**	**+0.8**
WLF				*d*pP	**pP**	**17 38 12.3**	**+1.0**
WLF	**Walferdange**	**46.92**	**305**	P	**P**	**17 38 04.3**	**-1.1**
WLF				pmax	pmax		
	comp=Z,264nm,1.1s						
WLF				MLR	MLR		
	comp=Z,10µm,18.0s						
WLF	**Walferdange**	**46.92**	**305**	*e*P	**P**	**17 38 07.4**	**+1.9**
	comp=Z,388nm,1.3s,baz=79,slow=8.0						
WLF				*e*pP	**sP**	**17 38 13.3**	**-0.4**
	baz=78,slow=8.0						
WLF	**Walferdange**	**46.92**	**305**	P	**P**	**17 38 04.3**	**-1.1**
HINF	**Hinteralfeld**	**46.98**	**302**	*e*P	**P**	**17 38 06.0**	**0.0**
HINF				pmax	pmax		
	comp=Z,250nm,1.4s						
JOW	**Kunigami**	**47.06**	**89**	P	**P**	**17 38 06.5**	**-0.3**
JOW				IAmb	IAmb	17 38 57.3	
	comp=Z,76nm,0.5s						
SENIN	**Lac Senin/Sane**	**47.12**	**300**	P	**P**	**17 38 06.0**	**-1.3**
SENIN				IAMs_20	IAMs_20	17 59 53.7	
	comp=Z,5µm,21.0s						
BKNI	**Bangkinang**	**47.13**	**141**	P	**P**	**17 38 08.1**	**+0.7**
	comp=Z,4µmcomp=Z,296nm,0.9s						
BKNI	**Bangkinang**	**47.13**	**141**	P	**P**	**17 38 07.6**	**+0.2**
BCLA	**Clavier**	**47.25**	**306**	*d*pP	**pP**	**17 38 14.2**	**+0.4**
BCLA				*d*PKiKP	PKiKP	17 46 11.1	-21
HAU	**Haudompre**	**47.26**	**303**	*e*P	**P**	**17 38 08.1**	**0.0**
HAU				pmax	pmax		
	comp=Z,189nm,1.1s						
MYKOM	**Kota Tinggi**	**47.31**	**136**	P	**P**	**17 38 11.0**	**+2.2**
BGES	**Gesves**	**47.40**	**306**	*d*P	**P**	**17 38 09.2**	**+0.1**
BGES				*d*pP	**pP**	**17 38 14.4**	**-0.5**
DGAR	**Diego Garcia**	**47.49**	**181**	P	**P**	**17 38 11.7**	**+1.6**
DGAR				pmax	pmax		
	comp=Z,402nm,1.3s						
DGAR				MLR	MLR		
	comp=Z,1µm,18.0s						
DGAR	**Diego Garcia**	**47.49**	**181**	P	**P**	**17 38 11.7**	**+1.6**
BMRD	**Maredsous**	**47.61**	**306**	*d*P	**P**	**17 38 13.0**	**+2.2**
BMRD				*d*pP	**pP**	**17 38 17.8**	**+1.1**
GIVF	**Givet**	**47.63**	**306**	*e*P	**P**	**17 38 11.5**	**+0.5**
GIVF				pmax	pmax		
	comp=Z,230nm,1.3s						
MSEY	**Mahe Island**	**47.65**	**204**	P	**P**	**17 38 10.9**	**-0.6**
MSEY				pmax	pmax		
	comp=Z,63nm,1.0s						
MSEY				MLR	MLR		
	comp=Z,2µm,19.0s						
MSEY	**Mahe Island**	**47.65**	**204**	P	**P**	**17 38 10.9**	**-0.6**
UCC	**Uccle**	**47.73**	**307**	P	**P**	**17 38 10.6**	**-1.1**
UCC				pmax	pmax		
	comp=Z,15nm,0.8s						
UCC	**Uccle**	**47.73**	**307**	P	**P**	**17 38 10.6**	**-1.1**
LPG	**La Plagne**	**47.75**	**299**	*e*P	**P**	**17 38 12.7**	**+0.4**
LPG				pmax	pmax		
	comp=Z,243nm,1.4s						
LPL	**La Plagne**	**47.76**	**299**	*e*P	**P**	**17 38 13.4**	**+1.1**
LPL				pmax	pmax		
	comp=Z,172nm,1.0s						
DOU	**Dourbes**	**47.78**	**306**	*d*P	**P**	**17 38 12.7**	**+0.6**
DOU				*d*pP	**pP**	**17 38 18.6**	**+0.7**
CABF	**La Chapelle**	**47.84**	**301**	*e*P	**P**	**17 38 12.6**	**-0.2**
CABF				pmax	pmax		
	comp=Z,168nm,1.4s						
SNF	**Seneffe**	**47.86**	**306**	*d*P	**P**	**17 38 14.2**	**+1.5**
SNF				*d*pP	**pP**	**17 38 19.0**	**+0.5**
BNI	**Bardonecchia**	**47.94**	**299**	P	**P**	**17 38 13.2**	**-0.4**
BNI				pmax	pmax		
	comp=Z,316nm,1.2s						
BNI				MLR	MLR		
	comp=Z,4µm,22.0s						
BNI	**Bardonecchia**	**47.94**	**299**	P	**P**	**17 38 13.2**	**-0.4**
BNI				IAMs_20	IAMs_20	18 00 44.6	
	comp=Z,4µm,22.0s						
JMN	**Monobe**	**48.02**	**78**	P	**P**	**17 38 14.3**	**+0.1**
JMN				IAmb	IAmb	17 38 23.5	
	comp=Z,197nm,1.6s						
VSL	**Villasalto**	**48.04**	**291**	P	**P**	**17 38 12.6**	**-1.8**
VSL				IAmb	IAmb	17 38 21.0	
	comp=Z,64nm,0.9s						
JWT	**Wachi**	**48.47**	**75**	P	**P**	**17 38 17.7**	**0.0**
JWT				IAmb	IAmb	17 38 19.9	
	comp=Z,197nm,1.3s						
ORIF	**Oris-en-Rattie**	**48.52**	**299**	*e*P	**P**	**17 38 19.1**	**+1.0**
ORIF				pmax	pmax		
	comp=Z,55nm,1.0s						
LOR	**Lormes**	**49.08**	**302**	*e*P	**P**	**17 38 21.5**	**-0.7**
LOR				pmax	pmax		
	comp=Z,102nm,1.2s						
YSS	**Yuzh-Sakhalins**	**49.23**	**58**	*e*P	**P**	**17 38 22.1**	**-1.2**
YSS				e*SP	**sP**	**17 38 34.0**	**+2.3**
YSS				*e*		17 40 16.0	
YSS				*e*S	**S**	**17 45 26.6**	**-1.7**
YSS				pmax	pmax		
	comp=Z,40nm,1.2s						
YSS				pmax	pmax		
	comp=Z,400nm,4.2s						
YSS	**Yuzh-Sakhalins**	**49.23**	**58**	P	**P**	**17 38 22.5**	**-0.8**
YSS				IAMs_20	IAMs_20	18 01 27.2	
	comp=Z,5µm,20.0s						
VIVF	**Saint-Julien-l**	**49.35**	**299**	*e*P	**P**	**17 38 24.4**	**+0.1**
VIVF				pmax	pmax		
	comp=Z,313nm,1.4s						
ELMS	**Elmsett, Ipswi**	**49.41**	**309**	*e*P	**P**	**17 38 24.9**	**+0.4**
ELMS				IAmb	IAmb	17 38 33.1	
	comp=Z,328nm,0.8s						
JSD	**Sado**	**49.41**	**70**	P	**P**	**17 38 24.0**	**-0.8**
WACR	**West Acre**	**49.44**	**310**	*e*P	**P**	**17 38 24.9**	**+0.1**
WACR				IAmb	IAmb	17 38 31.8	
	comp=Z,384nm,0.9s						
AVF	**Avril sur Loir**	**49.57**	**302**	*e*P	**P**	**17 38 25.7**	**-0.2**
AVF				pmax	pmax		
	comp=Z,336nm,1.1s						
KEST	**Kesra**	**49.60**	**286**	P	**P**	**17 38 26.3**	**-0.1**
	comp=Z,14nm,0.8s,baz=342,slow=1.0,SNR=14						
KEST				LR	LR	18 04 34.3	
	comp=Z,2µm,18.5s,baz=1.5,slow=42						
KEST	**Kesra**	**49.60**	**286**	P	**P**	**17 38 26.2**	**-0.3**
INU	**Inuyama**	**49.63**	**74**	P	**P**	**17 38 25.9**	**-0.7**
JGF	**Kuroka**	**49.77**	**74**	P	**P**	**17 38 26.8**	**-0.9**
JEW	**Eniwo**	**49.79**	**63**	P	**P**	**17 38 27.5**	**-0.2**
JMZ	**Minamidaito 2**	**49.84**	**88**	P	**P**	**17 38 28.6**	**+0.4**
JMZ				IAmb	IAmb	17 38 42.3	
	comp=Z,178nm,1.2s						
CLF	**Chambon-Foret**	**49.86**	**304**	P	**P**	**17 38 27.7**	**-0.4**
JMIC	**Jan Mayen**	**49.86**	**335**	*e*P	**P**	**17 38 28.2**	**+0.4**
BGF	**Bois d'Agland**	**49.97**	**302**	*e*P	**P**	**17 38 28.7**	**-0.3**
BGF				pmax	pmax		
	comp=Z,106nm,1.1s						
MJB9	**Matsu-Tunnel**	**49.99**	**72**	P	**P**	**17 38 28.7**	**-0.6**
MJB9				IAmb	IAmb	17 38 30.0	
	comp=Z,203nm,1.4s						
MAJO	**Matsushiro**	**49.99**	**72***c*	*i*P	**P**	**17 38 28.6**	**-0.7**
MAJO				pmax	pmax		
	comp=Z,87nm,1.0s						
MAJO				MLR	MLR		
	comp=Z,2µm,17.0s						
MAJO	**Matsushiro**	**49.99**	**72**	P	**P**	**17 38 28.1**	**-1.3**
MAJO				IAmb	IAmb	17 38 31.0	
	comp=Z,80nm,1.0s						
MAT	**Matsushiro**	**49.99**	**72**	P	**P**	**17 38 28.4**	**-0.9**
MAT				S	**S**	**17 45 39.8**	**+0.5**
MJAR	**Matsushiro Arr**	**49.99**	**72**	P	**P**	**17 38 28.6**	**-0.7**
	comp=Z,81nm,1.0s,baz=292,slow=7.8,SNR=87						
MJAR				LR	LR	18 01 00.3	
	comp=Z,2µm,18.3s,baz=290,slow=38						
MJAR	**Matsushiro Arr**	**49.99**	**72**	P	**P**	**17 38 27.7**	**-1.6**
MJAR				IAmb	IAmb	17 38 31.3	
	comp=Z,79nm,1.0s						
DRUM	**Mains of Drumt**	**50.06**	**316**	*e*P	**P**	**17 38 30.9**	**+1.4**
ASAJ	**Asahikawa**	**50.10**	**61**	P	**P**	**17 38 29.7**	**-0.3**
	comp=Z,8.4nm,0.5s,baz=267,slow=6.8,SNR=16						
ASAJ				LR	LR	18 00 09.8	
	comp=Z,2µm,18.9s,baz=280,slow=37						
JKA	**Kamikawa-asahi**	**50.10**	**61**	P	**P**	**17 38 29.4**	**-0.6**
JKA				IAmb	IAmb	17 38 57.7	
	comp=Z,245nm,1.9s						
JMBI	**JAMBI**	**50.11**	**139**	P	**P**	**17 38 32.5**	**+2.2**
MLA1	**Latheron**	**50.17**	**318**	*e*P	**P**	**17 38 30.6**	**+0.3**
LODK	**Lodwar**	**50.17**	**233**	P	P	17 38 36.1	+5.2
	SNR=46						
LODK	**Lodwar**	**50.17**	**233**	P	**P**	**17 38 30.7**	**-0.2**
LODK				IAmb	IAmb	17 38 39.9	
	comp=Z,124nm,1.5s						
SEY	**Seymchan**	**50.28**	**36**	P	**P**	**17 38 31.6**	**+0.5**
	comp=Z,29nm,1.1s,baz=298,slow=6.6,SNR=7.8						
SEY				PcP	**PcP**	**17 39 50.1**	**+0.4**
	comp=Z,18nm,0.8s,baz=234,slow=5.2,SNR=3.7						
MA2	**Magadan**	**50.29**	**40**	P	**P**	**17 38 31.0**	**-0.2**
	comp=Z,28nm,1.1s,baz=342,slow=20,SNR=3.0						
MA2	**Magadan**	**50.29**	**40**	P	**P**	**17 38 31.2**	**0.0**
MA2				IAmb	IAmb	17 39 44.2	
	comp=Z,326nm,1.9s						
MCD	**Coleburn Disti**	**50.29**	**317**	*e*P	**P**	**17 38 31.5**	**+0.2**
MCD				IAmb	IAmb	17 38 39.3	
	comp=Z,184nm,1.1s						
JTM	**Tenmabayashi**	**50.30**	**66**	P	**P**	**17 38 29.2**	**-2.4**
JTM				IAmb	IAmb	17 38 32.8	
	comp=Z,202nm,1.3s						
EDMD	**Edmundbyers**	**50.33**	**313**	*e*P	**P**	**17 38 31.5**	**-0.1**
EDMD				IAmb	IAmb	17 38 40.5	
	comp=Z,78nm,0.7s						
HPK	**Haverah Park**	**50.39**	**312**	*e*P	**P**	**17 38 32.1**	**+0.1**
ESY	**Stoneypath**	**50.39**	**315**	*e*P	**P**	**17 38 34.3**	**+2.3**
BIGH	**Upper Bighouse**	**50.40**	**318**	*e*P	**P**	**17 38 32.4**	**+0.4**
NOR	**Nord**	**50.40**	**349**	*i* P	**P**	**17 38 32.5**	**+0.7**
NOR				IAmb	IAmb	17 38 43.2	
	comp=Z,96nm,1.3s						
EDU	**Dundee**	**50.44**	**316**	*e*P	**P**	**17 38 32.3**	**0.0**
TCF	**Toulx Ste Croi**	**50.48**	**302**	*e*P	**P**	**17 38 33.0**	**+0.1**
TCF				pmax	pmax		
	comp=Z,212nm,1.2s						
LBWR	**Ladybower, Pea**	**50.61**	**312**	*e*P	**P**	**17 38 35.6**	**+1.9**
LBWR				IAmb	IAmb	17 38 44.1	
	comp=Z,129nm,1.0s						
CMAH	**Djebel Manchou**	**50.62**	**288**	P	P	17 38 40.1	+5.9
EBL	**Broad Law**	**50.66**	**315**	*e*P	**P**	**17 38 34.0**	**-0.1**
ABSA	**Djebel Ababsia**	**50.73**	**288**	P	**P**	**17 38 35.2**	**+0.2**
JSG	**Sagara**	**50.79**	**74**	P	**P**	**17 38 35.8**	**+0.4**
JSG				IAmb	IAmb	17 39 26.6	
	comp=Z,103nm,1.1s						
EKA	**Eskdalemuir Ar**	**50.85**	**314**	P	**P**	**17 38 35.0**	**-0.5**
	comp=Z,13nm,0.6s,baz=87,slow=7.8,SNR=29						
ESK	**Eskdalemuir**	**50.88**	**314**	P	**P**	**17 38 35.7**	**-0.1**
ESK				pmax	pmax		
	comp=Z,189nm,1.2s						
ESK	**Eskdalemuir**	**50.88**	**314**	P	**P**	**17 38 35.7**	**-0.1**
ESK				IAmb	IAmb	17 38 45.2	
	comp=Z,189nm,1.1s						
MDO	**Dochfour**	**50.91**	**317**	*e*P	**P**	**17 38 34.9**	**-1.0**
STNC	**Stoke**	**50.98**	**311**	IAmb	IAmb	17 38 46.1	
	comp=Z,232nm,1.1s						
INVG	**Invergeldie, C**	**51.02**	**316**	*e*P	**P**	**17 38 38.5**	**+1.7**
INVG				IAmb	IAmb	17 38 45.8	
	comp=Z,154nm,1.1s						
KESW	**Keswick, Cumbr**	**51.04**	**313**	*e*P	**P**	**17 38 37.8**	**+0.9**
KESW				IAmb	IAmb	17 38 48.6	
	comp=Z,358nm,1.1s						
CAF	**Calviac**	**51.06**	**300**	*e*P	**P**	**17 38 37.7**	**+0.4**
CAF				pmax	pmax		
	comp=Z,173nm,1.2s						
KSM	**Kuching**	**51.19**	**129**	P	**P**	**17 38 41.0**	**+2.5**
CKFL	**Kef-Lekhel**	**51.23**	**288**	P	P	17 38 44.3	+5.5
SWN1	**Swindon**	**51.23**	**309**	*e*P	**P**	**17 38 40.6**	**+2.2**
ERM	**Erimo**	**51.27**	**64**	P	**P**	**17 38 39.4**	**+0.6**
ERM				pmax	pmax		
	comp=Z,60nm,1.0s						
ERM				MLR	MLR		
	comp=Z,8µm,20.0s						
ERM	**Erimo**	**51.27**	**64**	P	**P**	**17 38 39.4**	**+0.6**
JEM	**Erimo**	**51.27**	**64**	P	P	17 38 29.7	-9.2
RJF	**Les Rejaudoux**	**51.28**	**301**	*e*P	**P**	**17 38 39.4**	**+0.5**
RJF				pmax	pmax		
	comp=Z,206nm,1.2s						
JMM	**Marumori**	**51.30**	**70**	P	**P**	**17 38 38.1**	**-1.0**
FLN	**La Foliniere**	**51.34**	**306**	*e*P	**P**	**17 38 38.7**	**-0.6**
FLN				pmax	pmax		
	comp=Z,69nm,0.8s						
STRD	**Stroud**	**51.36**	**310**	*e*P	**P**	**17 38 39.5**	**+0.1**
STRD				IAmb	IAmb	17 38 40.2	
	comp=Z,89nm,0.9s						
KAC	**Achnashellach**	**51.38**	**317**	*e*P	**P**	**17 38 39.0**	**-0.5**
PGBU	**Glenifferbraes**	**51.43**	**315**	*e*P	**P**	**17 38 40.1**	**+0.3**
CASM	**Ain Smara**	**51.46**	**288**	P	P	17 38 46.2	+5.8
NEWG	**New Galloway**	**51.50**	**314**	*e*P	**P**	**17 38 41.1**	**+0.7**
NEWG				IAmb	IAmb	17 38 50.9	
	comp=Z,209nm,1.2s						
SBUM	**Sibu**	**51.57**	**127**	P	**P**	**17 38 44.0**	**+2.6**
JYT	**Yasato**	**51.57**	**72**	P	**P**	**17 38 39.5**	**-1.6**
JYT				IAmb	IAmb	17 38 42.6	
	comp=Z,200nm,0.9s						
DAG	**Danmarks Havn**	**51.60**	**343**	*i* P	**P**	**17 38 41.4**	**+0.6**
DAG				IAmb	IAmb	17 38 50.4	
	comp=Z,709nm,1.9s						
CTEI	**Djebel Teioual**	**51.60**	**288**	P	P	17 38 47.7	+6.1
KPL	**Plockton**	**51.61**	**317**	*e*P	**P**	**17 38 40.6**	**-0.5**
KPL				IAmb	IAmb	17 38 50.4	
	comp=Z,77nm,0.9s						
GRR	**Gorron**	**51.70**	**305**	*e*P	**P**	**17 38 41.5**	**-0.5**
GRR				pmax	pmax		
	comp=Z,281nm,1.1s						
DFRA	**Djebel Bou Aff**	**51.78**	**289**	P	P	17 38 48.9	+6.0
MCH1	**Michaelchurch**	**51.78**	**310**	*e*P	**P**	**17 38 42.3**	**-0.2**
MCH1				IAmb	IAmb	17 38 50.6	
	comp=Z,239nm,1.0s						
LAWE	**Loch Awe, Argy**	**51.79**	**316**	*e*P	**P**	**17 38 42.7**	**+0.2**
LAWE				IAmb	IAmb	17 38 52.0	
	comp=Z,196nm,1.2s						
PMBI	**Palembang**	**51.79**	**138**	P	**P**	**17 38 43.2**	**+0.3**
CKHR	**Kef el Ahmar**	**52.27**	**288**	P	P	17 38 52.8	+6.2
SET	**Setif**	**52.27**	**289**	P	P	17 38 56.0	+9.4
SPMM	**Sapulut**	**52.54**	**121**	P	**P**	**17 38 50.0**	**+1.4**
DBG	**Daneborg**	**52.60**	**340**	*e*P	**P**	**17 38 49.3**	**+1.0**
DBG				IAmb	IAmb	17 38 58.9	
	comp=Z,523nm,2.3s						
KMBO	**Kilima Mbogo**	**52.71**	**228**	P	**P**	**17 38 50.0**	**-0.1**
	comp=Z,3.2nm,0.7s,baz=14,slow=8.8,SNR=11						
KMBO				LR	LR	18 03 50.4	
	comp=Z,1µm,19.1s,baz=51,slow=39						
KMBO	**Kilima Mbogo**	**52.71**	**228**	*i* P	**P**	**17 38 51.5**	**+1.4**
	SNR=14						
KMBO	**Kilima Mbogo**	**52.71**	**228**	P	**P**	**17 38 49.5**	**-0.6**
SGMF	**Saint Gilles**	**52.81**	**306**	*e*P	**P**	**17 38 50.0**	**-0.2**
SGMF				pmax	pmax		
	comp=Z,205nm,1.1s						
KIBK	**Kibwezi**	**53.27**	**226**	P	**P**	**17 38 56.0**	**+1.9**
	SNR=35						
KIBK	**Kibwezi**	**53.27**	**226**	P	**P**	**17 38 53.3**	**-0.8**
DSB	**Dublin**	**53.30**	**312**	P	**P**	**17 38 53.0**	**-0.7**
QUIF	**Quistinic**	**53.31**	**305**	*e*P	**P**	**17 38 53.5**	**-0.4**
QUIF				pmax	pmax		
	comp=Z,237nm,1.2s						
SCO	**Scoresbysund**	**54.30**	**336**	P	**P**	**17 39 00.6**	**-0.2**
SCO				pmax	pmax		
	comp=Z,54nm,1.3s						
SCO	**Scoresbysund**	**54.30**	**336**	*e*P	**P**	**17 39 01.2**	**+0.3**
SCO	**Scoresbysund**	**54.30**	**336**	P	**P**	**17 39 00.6**	**-0.2**
BILL	**Bilibino**	**54.41**	**28***d*	*i*P	**P**	**17 39 02.8**	**+1.1**
BILL				*i*		17 41 02.9	
BILL				pmax	pmax		
	comp=Z,113nm,1.3s						
BILL				MLR	MLR		
	comp=Z,6µm,17.0s						
BILL	**Bilibino**	**54.41**	**28**	P	**P**	**17 39 01.9**	**+0.2**
BILL				IAmb	IAmb	17 39 04.2	
	comp=Z,187nm,1.5s						
OKGL	**Djebel Kef Gue**	**55.77**	**291**	P	P	17 39 19.0	+7.0
OJGS	**Djebel Guires**	**55.95**	**290**	P	P	17 39 20.0	+6.6
PEA0B	**Petropavlovsk-**	**56.02**	**46**	P	**P**	**17 39 13.5**	**-0.1**
PEA0B				pmax	pmax		
	comp=Z,160nm,1.5s						
PEA0B	**Petropavlovsk-**	**56.02**	**46**	P	**P**	**17 39 13.5**	**-0.1**
PEA0B				IAmb	IAmb	17 40 39.5	
	comp=Z,160nm,1.5s						
PETK	**Petropavlovsk-**	**56.02**	**46**	P	**P**	**17 39 13.6**	**0.0**
	comp=Z,19nm,1.1s,baz=18,slow=6.7,SNR=7.3						
PETK				LR	LR	18 04 17.6	
	comp=Z,2µm,19.3s,baz=292,slow=37						
PETK	**Petropavlovsk-**	**56.02**	**46**	P	**P**	**17 39 13.2**	**-0.3**
MBAR	**Mbarara**	**56.17**	**234**⇑	*i*P	**P**	**17 39 15.1**	**-0.1**
MBAR	**Mbarara**	**56.17**	**234**	P	**P**	**17 39 13.6**	**-1.6**
MBAR	**Mbarara**	**56.17**	**234**	IAMs_20	IAMs_20	18 05 25.7	
	comp=Z,2µm,18.0s						
OJBR	**Djebel Berber**	**56.20**	**290**	P	P	17 39 21.0	+5.9
CART	**Cartagena**	**56.22**	**293**	S	**S**	**17 47 03.1**	**-0.8**
CART	**Cartagena**	**56.22**	**293**	P	**P**	**17 39 13.4**	**-1.7**
CART	**Cartagena**	**56.22**	**293**	P	P	17 39 21.4	+6.3
BORG	**Borgarnes**	**56.24**	**329**	P	**P**	**17 39 17.3**	**+2.5**
	comp=Z,25nm,0.8s,baz=104,slow=5.4,SNR=5.7						
BORG	**Borgarnes**	**56.24**	**329**	P	**P**	**17 39 14.1**	**-0.7**
BORG				pmax	pmax		
	comp=Z,100nm,1.1s						
BORG	**Borgarnes**	**56.24**	**329**	P	**P**	**17 39 14.1**	**-0.7**
BORG				IAmb	IAmb	17 39 27.0	
	comp=Z,100nm,1.1s						
UCM	**Universidad Co**	**56.53**	**297**	S	**S**	**17 47 14.9**	**+6.8**
LEM	**Lembang**	**56.57**	**138**	LR	LR	18 06 17.6	
	comp=Z,2µm,19.9s,baz=330,slow=39						
PET	**Petropavlovsk**	**56.59**	**46**	*e*P	**P**	**17 39 20.7**	**+3.2**
PET				*e*S	**S**	**17 47 07.4**	**-1.0**
PET				pmax	pmax		
	comp=Z,300nm,15.3s						
PET	**Petropavlovsk**	**56.59**	**46**	P	**P**	**17 39 16.5**	**-0.9**
COCO	**West Island**	**56.62**	**152**	P	**P**	**17 39 18.0**	**-0.1**
COCO				pmax	pmax		
	comp=Z,459nm,1.4s						
COCO	**West Island**	**56.62**	**152**	P	**P**	**17 39 18.0**	**-0.1**
KOND	**Kondoa**	**56.64**	**227**	*i* P	P	17 39 24.8	+6.3
ODJA	**Bouhanifia**	**56.68**	**290**	P	P	17 39 25.0	+6.5
USTO	**Oran**	**56.77**	**291**	P	P	17 39 24.0	+4.9
DAV	**Davao City (W)**	**57.12**	**111**	P	**P**	**17 39 23.3**	**+1.4**
	comp=Z,94nm,0.3s,baz=271,slow=1.7,SNR=3.6						
DAV				LR	LR	18 05 55.9	
	comp=Z,3µm,21.4s,baz=353,slow=38						
DAV	**Davao City (W)**	**57.12**	**111**	P	**P**	**17 39 21.7**	**-0.1**
DAV	**Davao City (W)**	**57.12**	**111**	IAMs_20	IAMs_20	18 05 45.3	
	comp=Z,3µm,21.0s						
ESBB	**Sonseca Array**	**57.30**	**297**	P	**P**	**17 39 21.5**	**-1.4**
ESBB				IAmb	IAmb	17 39 30.0	
	comp=Z,86nm,1.0s						
ESDC	**Sonseca Array**	**57.31**	**297**	P	**P**	**17 39 22.3**	**-0.7**
	comp=Z,5.9nm,0.7s,baz=55,slow=6.9,SNR=32						
ESDC				LR	LR	18 08 07.7	
	comp=Z,2µm,18.6s,baz=15,slow=40						
ESDC	**Sonseca Array**	**57.31**	**297**	P	**P**	**17 39 21.4**	**-1.5**
JCJ	**Chichijima**	**57.51**	**80**	LR	LR	18 07 18.8	
	comp=Z,1µm,19.4s,baz=326,slow=39						
PAB	**San Pablo**	**57.63**	**297**	P	**P**	**17 39 23.7**	**-1.5**
PAB				pmax	pmax		
	comp=Z,76nm,1.1s						
PAB				MLR	MLR		
	comp=Z,2µm,18.0s						
PAB	**San Pablo**	**57.63**	**297**	P	**P**	**17 39 23.7**	**-1.5**
PAB	**San Pablo**	**57.63**	**297**	IAMs_20	IAMs_20	18 08 07.5	
	comp=Z,2µm,18.0s						
PAB	**San Pablo**	**57.63**	**297**	P	P	17 39 31.0	+5.8
NEEM	**North Greenlan**	**57.70**	**348**	*i* P	**P**	**17 39 26.1**	**+0.7**
NEEM				IAmb	IAmb	17 39 30.8	
	comp=Z,127nm,0.8s						
SBV	**Sambava**	**57.72**	**207**	P	**P**	**17 39 27.9**	**+2.1**
SUMG	**Summit**	**58.05**	**341**	P	**P**	**17 39 27.1**	**-1.0**
SUMG				pmax	pmax		
	comp=Z,256nm,1.1s						
SUMG	**Summit**	**58.05**	**341**	*e*P	**P**	**17 39 29.3**	**+1.2**
SUMG				IAmb	IAmb	17 39 31.6	
	comp=Z,181nm,0.9s						
SUMG	**Summit**	**58.05**	**341**	P	**P**	**17 39 27.1**	**-1.0**
TOLI2	**Tolitoli**	**58.07**	**120**	P	**P**	**17 39 28.7**	**+0.2**
TOLI2				IAmb	IAmb	17 39 30.9	
	comp=Z,134nm,1.7s						
PBRG	**Braganca**	**58.19**	**300**	*e*P	**P**	**17 39 29.9**	**+0.8**
	comp=Z,122nm,1.5s						
PBRG				*e*pP	**pP**	**17 39 34.7**	**-0.3**
SMRI	**Semarang**	**58.24**	**135**	P	**P**	**17 39 28.7**	**-1.0**
SMRI				IAmb	IAmb	17 39 58.9	
	comp=Z,94nm,1.2s						
CHAS	**Isla Isabel II**	**58.38**	**291**	P	**P**	**17 39 29.6**	**-0.8**
CHAS				S	S	17 47 23.1	-9.4
TAF	**Taforalt**	**58.55**	**291**	P	P	17 39 38.0	+6.2
MVO	**Moncorvo**	**58.68**	**299**	*e*P	**P**	**17 39 33.0**	**+0.4**
	comp=Z,134nm,1.0s						
MVO				*e*pP	**pP**	**17 39 38.4**	**-0.1**
MVO				*e*S	**S**	**17 47 40.4**	**+3.9**
MVO	**Moncorvo**	**58.68**	**299**	*e*LQ	LQ	18 00 10.0	
MVO				*e*LR	LR	18 03 45.3	
	comp=Z,1µm,18.0s						
JBK	**JBK**	**58.90**	**290**	P	P	17 39 41.2	+6.9
UGM	**Wanagama**	**59.01**	**136**	P	**P**	**17 39 34.1**	**-0.9**
EMAL	**Malaga-Limoner**	**59.02**	**294**	P	**P**	**17 39 31.3**	**-3.5**
EMAL				S	**S**	**17 47 40.1**	**-0.6**
PCAB	**Cabril**	**59.09**	**300**	*e*P	**P**	**17 39 36.0**	**+0.7**
PCAB				*e*pP	**pP**	**17 39 41.7**	**+0.4**
PVRL	**Vila Real**	**59.09**	**300**	*e*P	**P**	**17 39 35.5**	**+0.2**
	comp=Z,86nm,1.9s						
PVRL				*e*pP	**pP**	**17 39 41.6**	**+0.3**
POLO	**Lamas de Olo**	**59.09**	**300**	*e*P	**P**	**17 39 35.6**	**+0.2**
	comp=Z,49nm,2.0s						
POLO				*e*pP	**pP**	**17 39 41.5**	**+0.1**
PGAV	**Gavieira, Arco**	**59.13**	**301**	*e*P	**P**	**17 39 36.7**	**+1.0**
	comp=Z,234nm,1.7s						
PGAV				*e*pP	**pP**	**17 39 41.9**	**+0.3**
PGAV				*e*S	**S**	**17 47 44.0**	**+1.7**
PGAV				*e*SS	**SS**	**17 51 39.3**	**+3.3**
PGAV				*e*LQ	LQ	17 59 04.7	

PGAV				*e*LR	LR	18 02 26.4	
	comp=Z,2µm,20.0s						
EUNU	**Eureka**	**59.35**	**356**	P	**P**	**17 39 34.6**	**-2.0**
EUNU				IAmb	IAmb	17 39 50.0	
	comp=Z,77nm,1.1s						
MTE	**Manteigas**	**59.39**	**299**	*e*P	**P**	**17 39 37.7**	**+0.2**
	comp=Z,219nm,1.4s						
MTE				*e*pP	**pP**	**17 39 44.0**	**+0.4**
MTE				*e*S	**S**	**17 47 46.3**	**+0.7**
MTE				*e*SS	**SS**	**17 51 43.3**	**+3.2**
MTE				*e*LQ	LQ	18 00 16.4	
MTE				*e*LR	LR	18 03 54.9	
	comp=Z,1µm,20.0s						
MTE	**Manteigas**	**59.39**	**299**	P	**P**	**17 39 35.6**	**-1.9**
PALE	**Palemas**	**59.43**	**292**	P	P	17 39 44.0	+6.2
PVIS	**Viseu**	**59.47**	**299**	*e*P	**P**	**17 39 38.4**	**+0.4**
	comp=Z,155nm,1.2s						
PVIS				*e*pP	**pP**	**17 39 44.3**	**+0.2**
PCBR	**Castelo Branco**	**59.61**	**298**	*e*P	**P**	**17 39 39.3**	**+0.4**
	comp=Z,99nm,1.5s						
PCBR				*e*pP	**pP**	**17 39 45.0**	**0.0**
LIJA	**Lijar**	**59.63**	**294**	P	**P**	**17 39 38.5**	**-0.7**
PVLZ	**Peæn de**	**59.71**	**292**	P	**P**	**17 39 41.7**	**+2.1**
PVLZ				S	**S**	**17 47 43.9**	**-5.9**
PMRV	**Marv??o**	**59.76**	**298**	*e*P	**P**	**17 39 40.3**	**+0.3**
	comp=Z,200nm,1.8s						
PMRV				*e*pP	**pP**	**17 39 46.1**	**+0.1**
PMRV				*e*S	**S**	**17 47 49.7**	**-0.6**
PMRV				*e*LQ	LQ	17 56 53.4	
PMRV				*e*LR	LR	18 02 05.4	
	comp=Z,1µm,18.0s						
COI	**Coimbra**	**60.06**	**299**	P	**P**	**17 39 40.6**	**-1.4**
COI				pmax	pmax		
	comp=Z,219nm,0.9s						
COI	**Coimbra**	**60.06**	**299**	*e*P	**P**	**17 39 43.2**	**+1.2**
	comp=Z,286nm,0.9s						
COI				*e*sP	**pP**	**17 39 48.6**	**+0.5**
COI	**Coimbra**	**60.06**	**299**	P	**P**	**17 39 40.6**	**-1.4**
CEU	**Ceuta**	**60.10**	**293**	P	**P**	**17 39 41.4**	**-0.9**
CEU				S	S	17 47 26.4	-28
PBAR	**Barrancos**	**60.13**	**296**	*e*P	**P**	**17 39 42.6**	**+0.1**
	comp=Z,216nm,1.5s						
PBAR				*e*pP	**pP**	**17 39 48.4**	**-0.2**
PESTR	**Estremoz**	**60.16**	**297**	*e*P	**P**	**17 39 43.2**	**+0.4**
	comp=Z,112nm,1.7s						
PESTR				*e*pP	**pP**	**17 39 48.5**	**-0.4**
PESTR	**Estremoz**	**60.16**	**297**	P	**P**	**17 39 41.3**	**-1.5**
PESTR	**Estremoz**	**60.16**	**297**	P	P	17 39 49.1	+6.3
PCAS	**Casmilo, Conde**	**60.20**	**299**	*e*P	**P**	**17 39 43.5**	**+0.5**
	comp=Z,130nm,1.5s						
PCAS				*e*pP	**pP**	**17 39 49.3**	**+0.2**
ICESG	**Greenland Ices**	**60.37**	**338**	*e*P	**P**	**17 39 45.3**	**+1.2**
ICESG				IAmb	IAmb	17 39 55.0	
	comp=Z,3µm,2.6s						
SFS	**San Fernando**	**60.40**	**294**	S	S	17 48 14.1	+15
ARNO	**Arenosillo**	**60.45**	**295**	P	P	17 39 50.2	+5.5
ARNO				S	**S**	**17 48 01.3**	**+2.1**
CHEFC	**Chefchaouen**	**60.48**	**293**	P	P	17 39 51.0	+5.9
PMTG	**Montargil**	**60.50**	**298**	*e*P	**P**	**17 39 45.4**	**+0.4**
	comp=Z,92nm,1.4s						
PMTG				*e*pP	**pP**	**17 39 50.9**	**-0.2**
EVO	**Evora**	**60.62**	**297**	P	P	17 39 53.3	+7.4
EVO				S	**S**	**17 48 04.2**	**+2.9**
EVO	**Evora**	**60.62**	**297**	*e*P	**P**	**17 39 46.7**	**+0.9**
	comp=Z,81nm,1.5s						
EVO				*e*pP	**pP**	**17 39 51.7**	**-0.2**
PSBE	**So Bento**	**60.66**	**298**	*e*P	**P**	**17 39 47.4**	**+1.2**
	comp=Z,233nm,1.9s						
PSBE				*e*pP	**pP**	**17 39 52.7**	**+0.4**
PBEJ	**Beja**	**60.77**	**297**	*e*P	**P**	**17 39 48.1**	**+1.2**
	comp=Z,127nm,1.5s						
PBEJ				*e*pP	**pP**	**17 39 53.0**	**0.0**
LCRM	**LCR**	**60.86**	**291**	P	P	17 39 55.0	+7.2
PVAQ	**Vaqueiros**	**60.98**	**296**	*e*P	**P**	**17 39 48.9**	**+0.6**
	comp=Z,210nm,1.5s						
PVAQ				*e*pP	**pP**	**17 39 54.5**	**+0.1**
PVAQ				*e*S	**S**	**17 48 06.3**	**+0.3**
PVAQ	**Vaqueiros**	**60.98**	**296**	*e*LQ	LQ	18 01 46.5	
PVAQ				*e*LR	LR	18 04 39.5	
	comp=Z,1µm,20.0s						
PVAQ	**Vaqueiros**	**60.98**	**296**	P	**P**	**17 39 47.4**	**-0.9**
PVAQ				IAmb	IAmb	17 39 55.7	
	comp=Z,126nm,1.1s						
PVAQ	**Vaqueiros**	**60.98**	**296**	P	P	17 39 54.5	+6.2
TULEG	**Thule**	**60.98**	**351**	*i* P	**P**	**17 39 48.0**	**+0.3**
TULEG				IAmb	IAmb	17 39 53.3	
	comp=Z,81nm,1.1s						
TULEG	**Thule**	**60.98**	**351**	P	**P**	**17 39 47.4**	**-0.4**
LUWI	**Luwuk**	**60.99**	**120**	P	**P**	**17 39 48.3**	**-0.4**
LUWI				IAmb	IAmb	17 40 34.6	
	comp=Z,76nm,0.8s						
PCVE	**Castro Verde**	**61.09**	**296**	*e*P	**P**	**17 39 49.4**	**+0.4**
	comp=Z,89nm,1.5s						
PCVE				*e*pP	**pP**	**17 39 55.1**	**0.0**
MESJ	**Messejana**	**61.10**	**297**	*e*P	**P**	**17 39 48.7**	**-0.4**
MESJ				*e*S	**S**	**17 48 07.5**	**0.0**
MESJ				IAMs_20	IAMs_20	18 11 37.3	
	comp=E,3µm,15.3s						
MESJ	**Messejana**	**61.10**	**297**	*e*P	**P**	**17 39 48.7**	**-0.4**
MESJ				*e*S	**S**	**17 48 07.5**	**0.0**
MESJ	**Messejana**	**61.10**	**297**	*e*P	**P**	**17 39 49.7**	**+0.5**
	comp=E,95nm,1.4s						
MESJ				*e*pP	**pP**	**17 39 55.4**	**+0.1**
MDT	**Midelt**	**61.13**	**290**	P	P	17 39 56.1	+6.6
IFR	**Ifrane**	**61.14**	**291**	P	**P**	**17 39 53.0**	**+3.3**
IFR				S	**S**	**17 48 05.8**	**-2.8**
PNCL	**Nicolau / Gran**	**61.18**	**297**	*e*P	**P**	**17 39 51.1**	**+1.4**
	comp=E,94nm,1.7s						
PNCL				*e*pP	**pP**	**17 39 56.0**	**+0.2**
PBDV	**Barranco-do-Ve**	**61.21**	**296**	*e*P	**P**	**17 39 51.3**	**+1.4**
	comp=E,257nm,1.6s						
PBDV				*e*sP	**pP**	**17 39 56.6**	**+0.6**
PMAFR	**Mafra**	**61.27**	**298**	*e*P	**P**	**17 39 53.4**	**+3.1**
PMAFR				*e*pP	**pP**	**17 39 56.5**	**+0.1**
LIS	**Lisbon**	**61.30**	**298**	*e*pP	**pP**	**17 39 56.9**	**+0.4**
LIS				A	A	17 39 58.3	
	comp=E,218nm,1.1s						
PMST	**Lisbon--Monsan**	**61.31**	**298**	*e*P	**P**	**17 39 51.7**	**+1.2**
	comp=E,210nm,1.2s						
PMST				*e*pP	**pP**	**17 39 57.0**	**+0.4**
CZD	**Col de Zad**	**61.33**	**290**	P	P	17 39 58.0	+6.8
JAGI	**Jajag, Banyuwa**	**61.47**	**133**	P	**P**	**17 39 48.7**	**-3.1**
JAGI				IAmb	IAmb	17 39 51.0	
	comp=Z,94nm,1.2s						
PTEO	**Sao Teotonio**	**61.60**	**297**	*e*pP	**pP**	**17 39 58.8**	**+0.2**
PTEO				A	A	17 40 01.6	
	comp=Z,128nm,1.5s						
MORF	**Marmelete**	**61.67**	**296**	*e*pP	**pP**	**17 39 58.8**	**-0.4**
MORF				A	A	17 40 01.5	
	comp=Z,127nm,1.5s						
ANGG	**Ammassalik, Gr**	**61.78**	**334**	*e*P	**P**	**17 39 54.0**	**+0.8**
ANGG				IAmb	IAmb	17 40 03.4	
	comp=Z,111nm,0.8s						
ANGG	**Ammassalik, Gr**	**61.78**	**334**	P	**P**	**17 39 52.1**	**-1.1**
ANGG				IAmb	IAmb	17 40 03.7	
	comp=Z,108nm,0.8s						
PFVI	**Vila Bisbo**	**61.88**	**296**	*e*P	**P**	**17 39 56.9**	**+2.5**
	comp=Z,138nm,1.5s						
PFVI				*e*pP	**pP**	**17 40 00.6**	**+0.1**
PFVI	**Vila Bisbo**	**61.88**	**296**	P	**P**	**17 39 52.2**	**-2.2**
PFVI				IAmb	IAmb	17 40 02.0	
	comp=Z,87nm,1.1s						
UPNV	**Upernavik**	**61.93**	**345**	*e*P	**P**	**17 39 55.5**	**+1.3**
UPNV				IAmb	IAmb	17 40 04.0	
	comp=Z,180nm,1.4s						
GOLM	**Goulmima**	**61.97**	**289**	P	P	17 40 02.1	+6.9
KAPI	**Kappang**	**62.05**	**125**	P	**P**	**17 39 54.9**	**-0.8**
	comp=Z,18nm,0.7s,baz=325,slow=6.3,SNR=18						
KAPI				LR	LR	18 10 22.3	
	comp=Z,1µm,20.8s,baz=331,slow=40						
KAPI	**Kappang**	**62.05**	**125**	P	**P**	**17 39 54.7**	**-1.0**
ZHG	**ZHG**	**62.26**	**292**	P	P	17 40 04.0	+6.8
TNTI	**Ternate**	**62.80**	**114**	P	**P**	**17 39 59.7**	**-1.1**
AVE	**Averroes**	**62.89**	**292**	P	**P**	**17 40 00.6**	**-0.6**
AVE				S	**S**	**17 48 31.5**	**+1.3**
AVE	**Averroes**	**62.89**	**292**	P	P	17 40 07.8	+6.6
TZRR	**Tazzarine**	**62.90**	**288**	P	P	17 40 08.0	+6.5
A21K	**Barrow**	**63.18**	**16**	P	**P**	**17 40 03.2**	**+0.7**
	baz=319,SNR=16						
A21K	**Barrow**	**63.18**	**16**	P	**P**	**17 40 02.4**	**-0.1**
A21K				IAMs_20	IAMs_20	18 11 16.2	
	comp=Z,2µm,19.0s						
RER	**Riviere de l'E**	**63.29**	**198**	P	**P**	**17 40 03.5**	**-0.4**
RER				IAmb	IAmb	17 40 22.0	
	comp=Z,74nm,1.0s						
ZGR	**Zagora**	**63.30**	**288**	P	P	17 40 11.0	+6.8
ILULI	**Ilulissat**	**63.40**	**341**	P	**P**	**17 40 04.1**	**+0.1**
ILULI				pmax	pmax		
	comp=Z,417nm,1.6s						
ILULI	**Ilulissat**	**63.40**	**341**	*e*P	**P**	**17 40 05.3**	**+1.3**
ILULI				IAmb	IAmb	17 40 13.5	
	comp=Z,457nm,1.7s						
ILULI	**Ilulissat**	**63.40**	**341**	P	**P**	**17 40 04.0**	**+0.1**
DY2G	**Dye2**	**63.97**	**337**	*e*P	**P**	**17 40 08.9**	**+0.8**
DY2G				IVmB_BB		17 40 17.6	
	comp=Z,5µm,1.8s						
DY2G				IAmb	IAmb	17 40 18.9	
	comp=Z,4µm,2.7s						
RDOG	**Red Dog Mine**	**64.08**	**20**	P	P	17 40 14.5	+5.9
	baz=315						
RDOG	**Red Dog Mine**	**64.08**	**20**	P	**P**	**17 40 07.1**	**-1.5**
RDOG				IAmb	IAmb	17 40 23.3	
	comp=Z,112nm,1.4s						
RDOG				IAMs_20	IAMs_20	18 12 25.4	
	comp=Z,2µm,21.0s						
GAMB	**Gambell**	**64.31**	**27**	P	**P**	**17 40 10.5**	**+0.5**
GAMB				IAmb	IAmb	17 40 58.7	
	comp=Z,165nm,1.3s						
OUK	**Oukaimeden**	**64.33**	**290**	P	P	17 40 18.0	+6.8
TNA	**Tin City**	**64.36**	**24**	P	**P**	**17 40 11.0**	**+0.6**
	baz=312						
TNA	**Tin City**	**64.36**	**24**	P	**P**	**17 40 10.2**	**-0.2**
SFJD	**Kangerlussuaq**	**64.86**	**339**	P	**P**	**17 40 13.1**	**-0.5**
SFJD				pmax	pmax		
	comp=Z,186nm,1.4s						
SFJD	**Kangerlussuaq**	**64.86**	**339**	*e*P	**P**	**17 40 14.9**	**+1.3**
SFJD				IAmb	IAmb	17 40 22.9	
	comp=Z,102nm,1.4s						
SFJD	**Kangerlussuaq**	**64.86**	**339**	P	**P**	**17 40 13.1**	**-0.5**
SFJD				IAmb	IAmb	17 40 23.3	
	comp=Z,186nm,1.4s						
RES	**Resolute Bay**	**65.02**	**357**	P	**P**	**17 40 14.6**	**0.0**
	comp=Z,12nm,0.8s,baz=24,slow=7.5						
RES	**Resolute Bay**	**65.02**	**357**	P	**P**	**17 40 14.0**	**-0.6**
RES				pmax	pmax		
	comp=Z,31nm,1.0s						
RES	**Resolute Bay**	**65.02**	**357**	P	**P**	**17 40 14.0**	**-0.6**
TTIG	**Tnine Tigouga,**	**65.11**	**290**	P	P	17 40 23.0	+7.0
ANM	**Nome**	**65.84**	**24**	P	**P**	**17 40 19.9**	**-0.1**
ANM				pmax	pmax		
	comp=Z,95nm,1.2s						
ANM				MLR	MLR		
	comp=Z,2µm,19.0s						
ANM	**Nome**	**65.84**	**24**	P	**P**	**17 40 21.4**	**+1.4**
	baz=314						
ANM	**Nome**	**65.84**	**24**	P	**P**	**17 40 19.9**	**-0.1**
ANM				IAmb	IAmb	17 40 32.3	
	comp=Z,95nm,1.2s						
ANM				IAMs_20	IAMs_20	18 10 33.1	
	comp=Z,2µm,19.0s						
CGR	**Cap Guir**	**66.09**	**291**	P	P	17 40 29.0	+6.8
ANA2	**Anatahan**	**66.32**	**88**	P	**P**	**17 40 21.4**	**-2.4**
MMRI	**Maumere**	**66.40**	**126**	P	**P**	**17 40 21.5**	**-2.8**
MMRI				IAmb	IAmb	17 40 29.6	
	comp=Z,107nm,0.9s						
VOI	**Vohitsoka**	**66.63**	**207**	P	**P**	**17 40 25.0**	**-0.7**
VOI	**Vohitsoka**	**66.63**	**207**	P	**P**	**17 40 27.0**	**+1.3**
SIJI	**Sorong**	**66.70**	**113**	P	**P**	**17 40 25.0**	**-1.2**
	comp=Z,91nm,1.0s,baz=324,slow=7.7,SNR=55						
TOLK	**Toolik Lake Re**	**66.79**	**16**	P	**P**	**17 40 26.7**	**+0.6**
	baz=326,SNR=45						
TOLK	**Toolik Lake Re**	**66.79**	**16**	P	**P**	**17 40 24.7**	**-1.5**
TOLK				IAmb	IAmb	17 40 37.1	
	comp=Z,120nm,1.1s						
TOLK				IAMs_20	IAMs_20	18 10 46.6	
	comp=Z,2µm,19.0s						
NUUK	**Nuuk**	**67.22**	**337**	*e*P	**P**	**17 40 30.8**	**+2.0**
A36M	**Sachs Harbour**	**67.25**	**6**	P	**P**	**17 40 29.4**	**+0.5**
	baz=345						
A36M	**Sachs Harbour**	**67.25**	**6**	P	**P**	**17 40 28.4**	**-0.5**
A36M				IAMs_20	IAMs_20	18 11 22.1	
	comp=Z,2µm,21.0s						
NRS	**Narsarsuaq**	**67.32**	**333**	P	**P**	**17 40 28.1**	**-1.4**
NRS				pmax	pmax		
	comp=Z,111nm,1.0s						
NRS	**Narsarsuaq**	**67.32**	**333**	*e*P	**P**	**17 40 29.8**	**+0.2**
NRS				IAmb	IAmb	17 40 37.0	
	comp=Z,102nm,1.0s						
NRS	**Narsarsuaq**	**67.32**	**333**	P	**P**	**17 40 28.1**	**-1.4**
NRS				IAmb	IAmb	17 40 45.9	
	comp=Z,111nm,1.0s						
GUMO	**Guam**	**67.34**	**91**	LR	LR	18 13 09.7	
	comp=Z,472nm,19.8s,baz=296,slow=39						
GUMO	**Guam**	**67.34**	**91**	P	**P**	**17 40 28.4**	**-2.0**
GUMO				pmax	pmax		
	comp=Z,484nm,1.3s						
GUMO	**Guam**	**67.34**	**91**	P	**P**	**17 40 28.4**	**-2.0**
TORD	**Torodi Ar. Bea**	**67.60**	**268**	P	**P**	**17 40 30.9**	**-1.1**
	comp=Z,21nm,0.5s,baz=44,slow=5.5,SNR=104						
TORD	**Torodi Ar. Bea**	**67.60**	**268**	P	**P**	**17 40 29.9**	**-2.1**
COLD	**Coldfoot**	**67.82**	**17**	P	**P**	**17 40 33.1**	**+0.5**
	baz=326,SNR=58						
COLD	**Coldfoot**	**67.82**	**17**	P	**P**	**17 40 31.9**	**-0.7**
COLD				IAmb	IAmb	17 40 43.7	
	comp=Z,68nm,0.9s						
IMAR	**Indian Mountai**	**68.00**	**19**	P	**P**	**17 40 32.8**	**-1.0**
GCSA	**Galena City Sc**	**68.17**	**21**	P	**P**	**17 40 35.4**	**+0.6**
	baz=321,SNR=10.0						
IVI	**Ivigtut**	**68.24**	**334**	*e*P	**P**	**17 40 35.7**	**+0.3**
IVI	**Ivigtut**	**68.24**	**334**	P	**P**	**17 40 34.4**	**-0.9**
H21K	**Melozitna Rive**	**68.50**	**19**	P	**P**	**17 40 37.1**	**+0.1**
	baz=324						
H21K	**Melozitna Rive**	**68.50**	**19**	P	**P**	**17 40 36.0**	**-0.9**
H21K				IAmb	IAmb	17 40 38.7	
	comp=Z,177nm,1.6s						
H21K				IAMs_20	IAMs_20	18 14 58.1	
	comp=Z,2µm,19.0s						
BATI	**Baumata**	**68.50**	**125**	P	**P**	**17 40 36.3**	**-1.3**
	comp=Z,55nm,0.7s,baz=321,slow=3.1,SNR=14						
SOEI	**Soe**	**68.53**	**125**	P	**P**	**17 40 36.2**	**-1.7**
BMAR	**Burnt Mountain**	**68.82**	**15**	P	**P**	**17 40 38.1**	**-0.8**
FAKI	**Fak Fak**	**68.84**	**113**	P	**P**	**17 40 39.0**	**-0.8**
FAKI				IAmb	IAmb	17 40 47.9	
	comp=Z,99nm,0.8s						
I21K	**Tanana**	**69.09**	**19**	P	**P**	**17 40 41.1**	**+0.5**
	baz=325,SNR=16						
I21K	**Tanana**	**69.09**	**19**	P	**P**	**17 40 39.9**	**-0.7**
I21K				IAmb	IAmb	17 40 42.6	
	comp=Z,142nm,1.6s						
I21K				IAMs_20	IAMs_20	18 15 16.7	
	comp=Z,2µm,20.0s						
PMPST	**Porto Santo, M**	**69.24**	**296**	*e*pP	**pP**	**17 40 48.2**	**0.0**
PMPST				A	A	17 40 49.3	
	comp=Z,275nm,1.1s						
PMPS	**Porto Santo**	**69.25**	**296**	*e*pP	**pP**	**17 40 48.3**	**0.0**
PMPS				A	A	17 40 49.3	
	comp=Z,245nm,1.1s						
J20K	**Nowinta River**	**69.35**	**20**	P	**P**	**17 40 42.9**	**+0.7**
	baz=323,SNR=22						
J20K	**Nowinta River**	**69.35**	**20**	P	**P**	**17 40 42.3**	**+0.1**
J20K				IAmb	IAmb	17 40 50.7	
	comp=Z,60nm,0.8s						
FYU	**Fort Yukon**	**69.44**	**15**	P	**P**	**17 40 42.4**	**-0.3**
FYU				IAMs_20	IAMs_20	18 14 31.6	
	comp=Z,2µm,19.0s						
H24K	**Noodor Dome**	**69.50**	**17**	P	**P**	**17 40 44.0**	**+0.8**
	baz=328						
H24K	**Noodor Dome**	**69.50**	**17**	IAMs_20	IAMs_20	18 14 39.4	
	comp=Z,2µm,19.0s						
MLY	**Manley**	**69.52**	**18**	P	**P**	**17 40 43.6**	**+0.3**
	baz=326,SNR=21						
MLY	**Manley**	**69.52**	**18**	P	**P**	**17 40 43.0**	**-0.3**
MLY				IAmb	IAmb	17 40 45.2	
	comp=Z,126nm,1.5s						
MLY				IAMs_20	IAMs_20	18 15 37.9	
	comp=Z,2µm,20.0s						
I23K	**Minto, Yukon-K**	**69.75**	**18**	P	**P**	**17 40 45.4**	**+0.8**
	baz=327,SNR=32						
I23K	**Minto, Yukon-K**	**69.75**	**18**	P	**P**	**17 40 44.7**	**+0.1**
I23K				IAmb	IAmb	17 40 46.8	
	comp=Z,177nm,1.6s						
I23K				IAMs_20	IAMs_20	18 16 03.9	
	comp=Z,2µm,19.0s						
TTA	**Tatalina**	**69.83**	**22**	P	**P**	**17 40 45.3**	**0.0**
TTA				pmax	pmax		
	comp=Z,143nm,1.5s						
TTA	**Tatalina**	**69.83**	**22**	P	**P**	**17 40 45.9**	**+0.6**
	baz=322,SNR=15						
TTA	**Tatalina**	**69.83**	**22**	P	**P**	**17 40 45.3**	**0.0**
TTA				IAmb	IAmb	17 40 47.5	
	comp=Z,143nm,1.5s						
PMAR	**Madeira**	**69.84**	**296**	*e*P	**P**	**17 40 46.7**	**+0.7**
	comp=Z,487nm,1.5s						
PMAR				*e*sP	**pP**	**17 40 52.5**	**+0.3**
KRI	**Karoi**	**69.85**	**225**	*e*P	**P**	**17 40 46.2**	**+0.2**
KRI	**Karoi**	**69.85**	**225**	*e*P	**P**	**17 40 46.2**	**+0.2**
INK	**Inuvik**	**69.86**	**10**	P	**P**	**17 40 45.6**	**+0.4**
	comp=Z,47nm,0.6s,baz=354,slow=8.0,SNR=133						
INK	**Inuvik**	**69.86**	**10**	P	**P**	**17 40 44.8**	**-0.4**
INK				pmax	pmax		
	comp=Z,127nm,0.9s						
INK	**Inuvik**	**69.86**	**10**	P	**P**	**17 40 45.8**	**+0.6**
	baz=338						
INK	**Inuvik**	**69.86**	**10**	P	**P**	**17 40 44.8**	**-0.4**
INK				IAmb	IAmb	17 40 56.3	
	comp=Z,127nm,0.9s						
FUL	**Funchal**	**69.87**	**296**	*e*pP	**pP**	**17 40 52.3**	**+0.2**
FUL				A	A	17 40 55.1	
	comp=Z,193nm,1.1s						
PMOZ	**Porto Moniz, M**	**69.98**	**296**	*e*pP	**pP**	**17 40 53.3**	**+0.4**
PMOZ				A	A	17 40 58.7	
	comp=Z,197nm,1.1s						
PMOZ	**Porto Moniz, M**	**69.98**	**296**	*e*LR	LR	18 09 01.3	
	comp=Z,824nm,20.0s						
PMOZ	**Porto Moniz, M**	**69.98**	**296**	P	**P**	**17 40 45.7**	**-1.0**
K20K	**Telida**	**70.03**	**21**	P	**P**	**17 40 47.1**	**+0.7**
	baz=323,SNR=26						
K20K	**Telida**	**70.03**	**21**	P	**P**	**17 40 46.2**	**-0.2**
K20K				IAmb	IAmb	17 40 48.7	
	comp=Z,198nm,1.5s						
K20K				IAMs_20	IAMs_20	18 13 40.7	
	comp=Z,2µm,20.0s						
CHUM	**Lake Minchumin**	**70.07**	**20**	P	**P**	**17 40 47.2**	**+0.6**
	baz=325,SNR=15						
MDM	**Murphy Dome**	**70.17**	**17**	P	**P**	**17 40 47.0**	**-0.2**
MDM				IAmb	IAmb	17 40 49.2	
	comp=Z,210nm,1.6s						
MDM				IAMs_20	IAMs_20	18 16 26.0	
	comp=Z,1µm,18.0s						
POKR	**Poker Plat Res**	**70.21**	**17**	P	**P**	**17 40 48.3**	**+0.8**
	baz=328,SNR=21						
POKR	**Poker Plat Res**	**70.21**	**17**	P	**P**	**17 40 47.9**	**+0.3**
POKR				IAMs_20	IAMs_20	18 15 12.2	
	comp=Z,1µm,19.0s						
BPAW	**Bear Paw Mtn.**	**70.22**	**19**	P	**P**	**17 40 47.6**	**0.0**
	baz=326,SNR=20						
BPAW	**Bear Paw Mtn.**	**70.22**	**19**	IAmb	IAmb	17 40 49.1	
	comp=Z,114nm,1.4s						
BPAW				IAMs_20	IAMs_20	18 16 16.7	
	comp=Z,2µm,20.0s						
NEA2	**Nenana**	**70.28**	**18**	P	**P**	**17 40 48.0**	**+0.1**
	baz=327,SNR=24						
NEA2	**Nenana**	**70.28**	**18**	IAmb	IAmb	17 40 49.5	
	comp=Z,116nm,1.3s						
NEA2				IAMs_20	IAMs_20	18 16 49.0	
	comp=Z,2µm,19.0s						
PRP	**Porcupine Dome**	**70.28**	**16**	P	**P**	**17 40 48.8**	**+0.7**
	baz=330,SNR=12						
PRP	**Porcupine Dome**	**70.28**	**16**	IAmb	IAmb	17 40 50.6	
	comp=Z,179nm,2.0s						
TCOL	**CIGO, UAF Yank**	**70.32**	**17**	P	**P**	**17 40 48.6**	**+0.4**
	baz=328,SNR=9.1						
TCOL	**CIGO, UAF Yank**	**70.32**	**17**	IAmb	IAmb	17 40 56.4	
	comp=Z,62nm,0.8s						
TCOL				IAMs_20	IAMs_20	18 15 36.1	
	comp=Z,1µm,19.0s						
COLA	**College**	**70.32**	**17***c*	*i*P	**P**	**17 40 48.4**	**+0.3**
COLA				pmax	pmax		
	comp=Z,61nm,1.1s						
COLA				MLR	MLR		
	comp=Z,2µm,16.0s						
COLA	**College**	**70.32**	**17**	P	**P**	**17 40 48.4**	**+0.3**
COLA				IAmb	IAmb	17 40 56.4	
	comp=Z,61nm,0.8s						
CAST	**Castle Rocks**	**70.51**	**20**	P	**P**	**17 40 49.8**	**+0.4**
	baz=325,SNR=36						
CCB	**Clear Creek Bu**	**70.53**	**17**	P	**P**	**17 40 49.0**	**-0.4**
CCB				IAmb	IAmb	17 40 50.8	
	comp=Z,145nm,1.7s						
BWN	**Browne**	**70.54**	**18**	IAmb	IAmb	17 40 57.7	
	comp=Z,109nm,0.8s						
BWN				IAMs_20	IAMs_20	18 15 40.9	
	comp=Z,1µm,19.0s						
WRH	**Wood River Hil**	**70.61**	**18**	IAmb	IAmb	17 40 51.2	
	comp=Z,160nm,2.0s						
WRH				IAMs_20	IAMs_20	18 16 38.8	
	comp=Z,2µm,20.0s						
ILAR	**Eielson Array**	**70.63**	**17**	P	**P**	**17 40 49.6**	**-0.4**
	comp=Z,19nm,0.8s,baz=320,slow=5.1,SNR=62						
ILAR				PKPPKP	P'P'df	18 08 47.2	-9.1
	comp=Z,1.6nm,1.1s,baz=189,slow=1.7,SNR=4.7						
ILAR				LR	LR	18 15 44.4	
	comp=Z,1µm,18.7s,baz=312,slow=39						
KTH	**Kantishna Hill**	**70.69**	**19**	P	**P**	**17 40 50.1**	**-0.4**
KTH				IAmb	IAmb	17 40 52.1	
	comp=Z,141nm,1.2s						
L19K	**White Mountain**	**70.76**	**22**	P	**P**	**17 40 51.7**	**+0.8**
	baz=323,SNR=16						
L19K	**White Mountain**	**70.76**	**22**	IAmb	IAmb	17 40 53.2	
	comp=Z,96nm,1.2s						
L19K				IAMs_20	IAMs_20	18 14 46.0	
	comp=Z,1µm,18.0s						
L20K	**Farewell, AK**	**70.79**	**21**	P	**P**	**17 40 51.7**	**+0.6**
	baz=324,SNR=18						
PPLA	**Purkeypile**	**70.91**	**20**	P	**P**	**17 40 52.1**	**+0.1**
	baz=325,SNR=14						
PPLA	**Purkeypile**	**70.91**	**20**	IAmb	IAmb	17 40 53.6	
	comp=Z,210nm,1.4s						
HDA	**Harding Lake**	**70.93**	**17**	P	**P**	**17 40 51.0**	**-0.9**
	baz=329,SNR=12						
TRF	**Thorofare Moun**	**70.94**	**19**	P	**P**	**17 40 51.8**	**-0.4**
	baz=326						
TRF	**Thorofare Moun**	**70.94**	**19**	IAMs_20	IAMs_20	18 16 26.6	
	comp=Z,2µm,18.0s						
MCK	**McKinley**	**71.03**	**18**	P	**P**	**17 40 52.7**	**+0.1**
	baz=327						
MCK	**McKinley**	**71.03**	**18**	IAMs_20	IAMs_20	18 17 35.1	
	comp=Z,2µm,18.0s						
M19K	**Big River Lodg**	**71.11**	**22**	P	**P**	**17 40 54.2**	**+1.2**
	baz=323						
M19K	**Big River Lodg**	**71.11**	**22**	IAMs_20	IAMs_20	18 14 24.4	
	comp=Z,2µm,19.0s						
KOWA	**Kowa**	**71.14**	**273**	P	**P**	**17 40 52.9**	**-1.0**
RND	**Reindeer**	**71.33**	**19**	IAmb	IAmb	17 41 03.3	
	comp=Z,125nm,1.6s						
RND				IAMs_20	IAMs_20	18 17 43.8	
	comp=Z,2µm,18.0s						
J26L	**Joseph Creek**	**71.58**	**16**	P	**P**	**17 40 56.1**	**+0.2**
	baz=331,SNR=21						
CUT	**Chulitna**	**71.82**	**20**	IAMs_20	IAMs_20	18 17 36.8	
	comp=Z,2µm,18.0s						
EGAK	**Eagle**	**71.83**	**15**	P	**P**	**17 40 57.6**	**+0.3**
	baz=333,SNR=15						
EGAK	**Eagle**	**71.83**	**15**	IAmb	IAmb	17 40 59.1	
	comp=Z,145nm,1.7s						
I29M	**Ogilvie Camp,**	**71.83**	**13**	P	**P**	**17 40 57.3**	**0.0**
	baz=335,SNR=19						
SKT	**Skwentna**	**71.84**	**21**	P	**P**	**17 40 57.1**	**-0.3**
	baz=326,SNR=45						
SKT	**Skwentna**	**71.84**	**21**	P	**P**	**17 40 56.5**	**-0.9**
WAT1	**Susitna Watana**	**71.89**	**19**	P	**P**	**17 40 56.7**	**-1.0**
	baz=328						
SCRK	**Sand Creek**	**71.95**	**16**	P	**P**	**17 40 58.5**	**+0.2**
	baz=331,SNR=23						
SCRK	**Sand Creek**	**71.95**	**16**	IAmb	IAmb	17 41 00.0	
	comp=Z,170nm,1.6s						
SCRK				IAMs_20	IAMs_20	18 15 39.2	
	comp=Z,2µm,21.0s						
N19K	**Bonanza Creek**	**71.96**	**22**	P	**P**	**17 40 59.1**	**+0.8**
	baz=324						
N19K	**Bonanza Creek**	**71.96**	**22**	IAMs_20	IAMs_20	18 14 26.9	
	comp=Z,2µm,20.0s						
DHY	**Denali Highway**	**71.97**	**18**	P	**P**	**17 40 57.9**	**-0.5**
	baz=328						
DHY	**Denali Highway**	**71.97**	**18**	IAMs_20	IAMs_20	18 16 32.7	
	comp=Z,2µm,20.0s						
RIDG	**Independent Ri**	**71.97**	**17**	P	**P**	**17 40 57.9**	**-0.4**
	baz=330,SNR=15						
RIDG	**Independent Ri**	**71.97**	**17**	P	**P**	**17 40 57.6**	**-0.7**
RIDG				IAmb	IAmb	17 40 59.4	
	comp=Z,68nm,1.0s						
DOT	**Dot Lake**	**72.23**	**17**	IAmb	IAmb	17 41 01.2	
	comp=Z,152nm,1.8s						
SPCR	**Spurr Chakacha**	**72.30**	**21**	P	**P**	**17 40 60.0**	**-0.3**
	baz=325						
WAT6	**Susitna Watana**	**72.30**	**19**	P	**P**	**17 40 59.7**	**-0.7**
	baz=328,SNR=19						

M22K	Willow	72.40	20	P	P	17 41 00.1	-0.6
	baz=327						
PAX	Paxson	72.50	17	P	P	17 41 01.4	-0.1
	baz=330,SNR=25						
PAX	Paxson	72.50	17	IAmb	IAmb	17 41 02.8	
	comp=Z,137nm,1.4s						
O19K	Port Alsworth	72.51	23	P	P	17 41 02.4	+1.0
	baz=324,SNR=6.0						
O19K	Port Alsworth	72.51	23	P	P	17 41 01.3	-0.1
O19K				IAMs_20	IAMs_20	18 15 50.4	
	comp=Z,1µm,18.0s						
O18K	Koktuh Hills	72.52	23	P	P	17 41 02.4	+0.8
	baz=323						
O18K	Koktuh Hills	72.52	23	IAMs_20	IAMs_20	18 16 14.7	
	comp=Z,2µm,19.0s						
GHO	Glory Hole Cre	72.69	20	IAmb	IAmb	17 41 13.6	
	comp=Z,86nm,0.8s						
PMR	Palmer	72.79	20	P	P	17 41 02.9	-0.2
	baz=327,SNR=9.2						
PMR	Palmer	72.79	20	IAmb	IAmb	17 41 10.7	
	comp=Z,68nm,0.8s						
DAWY	Dawson	72.81	14	P	P	17 41 03.3	0.0
	baz=334,SNR=18						
DAWY	Dawson	72.81	14	P	P	17 41 02.9	-0.3
DAWY				IAmb	IAmb	17 41 04.9	
	comp=Z,159nm,1.8s						
SML	Sawmill	72.81	19	P	P	17 41 03.3	0.0
	baz=328,SNR=20						
P18K	Big Mountain,	72.88	24	P	P	17 41 04.5	+0.8
	baz=323						
P18K	Big Mountain,	72.88	24	IAmb	IAmb	17 41 12.4	
	comp=Z,93nm,0.9s						
P18K				IAMs_20	IAMs_20	18 16 24.4	
	comp=Z,2µm,21.0s						
L26K	Log Cabin Wild	72.93	17	P	P	17 41 04.2	+0.2
	baz=332,SNR=15						
L26K	Log Cabin Wild	72.93	17	P	P	17 41 03.7	-0.3
L26K				IAmb	IAmb	17 41 05.9	
	comp=Z,129nm,1.6s						
SCM	Sheep Creek Mo	73.04	19	P	P	17 41 04.6	-0.1
	baz=329,SNR=14						
SCM	Sheep Creek Mo	73.04	19	IAmb	IAmb	17 41 12.5	
	comp=Z,124nm,0.8s						
RC01	Rabbit Creek A	73.06	20	P	P	17 41 04.3	-0.4
	baz=327,SNR=13						
RC01	Rabbit Creek A	73.06	20	IAmb	IAmb	17 41 12.9	
	comp=Z,206nm,1.4s						
RC01				IAMs_20	IAMs_20	18 18 20.7	
	comp=Z,2µm,18.0s						
HARP	HAARP	73.07	18	P	P	17 41 05.7	+0.9
	baz=330,SNR=24						
M24K	Tolsona, Glenn	73.09	18	P	P	17 41 05.6	+0.7
	baz=330,SNR=14						
KNK	Knik Glacier	73.12	20	P	P	17 41 05.4	+0.3
	baz=328,SNR=14						
KNK	Knik Glacier	73.12	20	P	P	17 41 04.8	-0.2
KNK				IAmb	IAmb	17 41 13.9	
	comp=Z,141nm,1.0s						
L27K	Beaver Creek,	73.22	16	P	P	17 41 06.3	+0.6
	baz=333,SNR=23						
MATP	Matopo	73.40	224	*e*P	P	17 41 04.1	-3.2
MATP	Matopo	73.40	224	*e*P	P	17 41 04.1	-3.2
M26K	Nabesna, AK	73.56	17	P	P	17 41 08.1	+0.4
	baz=332						
O22K	Cooper Landing	73.57	21	P	P	17 41 07.4	-0.3
O22K				IAMs_20	IAMs_20	18 15 17.3	
	comp=Z,2µm,21.0s						
PWL	Port Wells	73.62	20	P	P	17 41 07.9	-0.2
	baz=328,SNR=5.9						
PWL	Port Wells	73.62	20	IAmb	IAmb	17 41 15.7	
	comp=Z,55nm,0.8s						
KLU	Klutina	73.68	18	P	P	17 41 08.8	+0.3
	baz=330,SNR=8.5						
KLU	Klutina	73.68	18	P	P	17 41 08.1	-0.3
KLU				IAMs_20	IAMs_20	18 17 29.0	
	comp=Z,2µm,19.0s						
Q19K	Cape Douglas,	73.74	23	IAMs_20	IAMs_20	18 15 33.0	
	comp=Z,2µm,19.0s						
M27K	Edge Creek, AK	73.84	16	P	P	17 41 10.3	+0.9
	baz=333,SNR=14						
M27K	Edge Creek, AK	73.84	16	IAmb	IAmb	17 41 11.9	
	comp=Z,87nm,1.2s						
M27K				IAMs_20	IAMs_20	18 18 52.0	
	comp=Z,1µm,20.0s						
N25K	Chitina, Valde	73.89	18	P	P	17 41 10.3	+0.5
	baz=331,SNR=12						
N25K	Chitina, Valde	73.89	18	P	P	17 41 09.8	+0.1
N25K				IAMs_20	IAMs_20	18 12 28.6	
	comp=Z,1µm,20.0s						
BRSE	Bradley Lake S	73.91	21	P	P	17 41 09.4	-0.4
	baz=327						
SEW	Seward	73.96	21	P	P	17 41 09.7	-0.3
	baz=327						
SEW	Seward	73.96	21	IAmb	IAmb	17 41 11.2	
	comp=Z,116nm,1.4s						
BVCY	Beaver Creek	74.00	16	P	P	17 41 11.0	+0.7
	baz=334,SNR=8.3						
FID	Port Fidalgo	74.19	19	P	P	17 41 11.3	0.0
FID				IAmb	IAmb	17 41 13.9	
	comp=Z,191nm,1.2s						
FID				IAMs_20	IAMs_20	18 18 28.1	
	comp=Z,2µm,19.0s						
MSNA	Messina	74.21	221	*e*P	P	17 41 12.1	+0.2
MSNA	Messina	74.21	221	*e*P	P	17 41 12.1	+0.2
GLB	Gilahina Butte	74.22	18	IAmb	IAmb	17 41 13.6	
	comp=Z,148nm,1.9s						
BMRM	Bremner River	74.45	18	P	P	17 41 13.7	+0.7
	baz=331,SNR=6.5						
BMRM	Bremner River	74.45	18	IAmb	IAmb	17 41 28.8	
	comp=Z,82nm,0.9s						
MCARA	McCarthy VSAT	74.45	17	P	P	17 41 13.3	+0.4
	baz=332						
VRDI	Verde Repeater	74.49	17	P	P	17 41 13.0	-0.3
MOPA	Mopani	74.51	219	*e*P	P	17 41 15.7	+2.1
MOPA	Mopani	74.51	219	*e*P	P	17 41 15.7	+2.1
EYAK	Cordova Ski Ar	74.54	19	P	P	17 41 14.4	+1.0
	baz=330						
JAY	Jayapura	74.63	107	P	P	17 41 15.2	+0.6
	comp=Z,19nm,0.7s,baz=21,slow=2.8,SNR=5.1						
JAY				LR	LR	18 18 56.6	
	comp=Z,303nm,18.1s,baz=6.5,slow=40						
YUK3	Moose Creek	74.66	16	P	P	17 41 15.3	+0.9
	baz=334,SNR=13						
RAGM	Ragged Mountai	74.94	18	IAMs_20	IAMs_20	18 18 12.4	
	comp=Z,2µm,22.0s						
KDAK	Kodiak Island	75.00	23	P	P	17 41 15.9	-0.2
	comp=Z,58nm,1.1s,baz=327,slow=3.4,SNR=17						
KDAK	Kodiak Island	75.00	23	P	P	17 41 16.0	-0.1
	baz=326						
KDAK	Kodiak Island	75.00	23	P	P	17 41 16.2	+0.1
KDAK				IAmb	IAmb	17 41 18.6	
	comp=Z,286nm,1.6s						
KDAK	Kodiak Island	75.00	23	IAMs_20	IAMs_20	18 12 02.4	
	comp=Z,1µm,18.0s						
BARN	Barnard Glacie	75.05	17	IAmb	IAmb	17 41 18.7	
	comp=Z,142nm,1.6s						
TGL	Tana Glacier	75.05	17	IAMs_20	IAMs_20	18 19 43.3	
	comp=Z,1µm,21.0s						
CTG	Chitna Glacier	75.20	17	P	P	17 41 18.2	+0.8
	baz=333,SNR=8.4						
CTGM	Chitina Glacie	75.20	17	P	P	17 41 17.2	-0.2
CTGM				IAmb	IAmb	17 41 19.6	
	comp=Z,230nm,1.7s						
CTGM				IAMs_20	IAMs_20	18 17 10.1	
	comp=Z,2µm,20.0s						
OHAK	Old Harbor	75.25	24	P	P	17 41 18.3	+0.8
	baz=325						
WAX	Waxell Ridge	75.32	18	P	P	17 41 17.5	-0.5
WAX				IAmb	IAmb	17 43 08.2	
	comp=Z,88nm,0.7s						
LOGN	Logan Glacier	75.40	17	IAmb	IAmb	17 41 29.0	
	comp=Z,234nm,1.8s						
LOGN				IAMs_20	IAMs_20	18 17 47.3	
	comp=Z,2µm,21.0s						
YUK4	Talbot Arm	75.42	15	P	P	17 41 19.4	+0.7
	baz=336,SNR=9.5						
M31M	Drury Creek, Y	75.43	13	P	P	17 41 19.1	+0.6
	baz=339,SNR=16						
SII	Sitkinak Islan	75.50	25	P	P	17 41 19.8	+0.7
	baz=325						
SII	Sitkinak Islan	75.50	25	P	P	17 41 19.1	0.0
MMPY	Sheldon Lake,	75.54	11	P	P	17 41 20.3	+1.0
	baz=341,SNR=10						
FARO	Faro, Yukon	75.58	13	P	P	17 41 19.8	+0.4
	baz=339,SNR=13						
YAH	Yahtse	75.65	17	P	P	17 41 20.0	-0.1
YAH				IAmb	IAmb	17 41 29.7	
	comp=Z,161nm,1.5s						
TABL	Table Mountain	75.72	17	IAMs_20	IAMs_20	18 20 40.7	
	comp=Z,2µm,19.0s						
N31M	Braeburn, Yuko	75.85	14	P	P	17 41 21.4	+0.4
	baz=338,SNR=6.4						
YUK6	Outpost Mounta	75.85	15	P	P	17 41 21.8	+0.6
	baz=336,SNR=6.1						
WRGLY	Wrigley	75.95	8	P	P	17 41 23.0	+1.6
	baz=347,SNR=5.5						
HYT	Haines Junctio	76.13	15	P	P	17 41 23.7	+1.0
	baz=336,SNR=21						
HYT	Haines Junctio	76.13	15	P	P	17 41 22.7	0.0
HYT				IAmb	IAmb	17 41 31.6	
	comp=Z,71nm,0.7s						
DBIC	Dimbokro	76.67	267	P	P	17 41 25.6	-0.7
	comp=Z,36nm,0.7s,baz=46,slow=6.6,SNR=28						
DBIC				LR	LR	18 20 06.7	
	comp=Z,1µm,18.1s,baz=50,slow=40						
DBIC	Dimbokro	76.67	267	P	P	17 41 25.3	-0.9
KIC	Kosan Boka	76.77	267	*e*PKIKP	P	17 41 25.3	-1.6
	comp=Z,419nm,0.8s						
WHY	Whitehorse	76.78	14	P	P	17 41 26.0	-0.3
	baz=338,SNR=6.3						
TIC	Toumodi	76.81	268	*e*PKIKP	P	17 41 25.0	-2.1
TGTN	Hyland Airport	77.02	10	P	P	17 41 28.9	+1.2
	baz=343,SNR=9.6						
LIC	Lamto	77.08	267	*e*PKIKP	P	17 41 25.7	-2.9
	comp=Z,839nm,1.0s						
YKA	Yellowknife Ar	77.35	4	P	P	17 41 29.1	-0.3
	comp=Z,22nm,0.8s,baz=1.5,slow=5.3,SNR=44						
YKA	Yellowknife Ar	77.35	4	P	P	17 41 28.9	-0.4
YKA	Yellowknife Ar	77.35	4	P	P	17 41 28.9	-0.4
P33M	Teslin, Yukon	77.56	13	P	P	17 41 30.8	+0.1
	baz=340,SNR=13						
SKAG	Skagway	77.81	14	P	P	17 41 33.0	+1.0
	baz=338						
TSUM	Tsumeb	78.65	233	P	P	17 41 36.2	-1.1
TSUM				IAmb	IAmb	17 41 45.2	
	comp=Z,80nm,1.0s						
TSUM	Tsumeb	78.65	233	IAMs_20	IAMs_20	18 19 42.8	
	comp=Z,1µm,18.0s						
JIS	Juneau Island	79.10	14	IAmb	IAmb	17 41 50.0	
	comp=Z,130nm,1.8s						
SCHQ	Schefferville	79.28	338	P	P	17 41 39.6	-0.6
	comp=Z,14nm,0.7s,baz=34,slow=5.1,SNR=19						
SCHQ				LR	LR	18 16 21.0	
	comp=Z,2µm,20.5s,baz=32,slow=35						
SCHQ	Schefferville	79.28	338	P	P	17 41 39.5	-0.7
DRLN	Deer Lake	80.82	330	P	P	17 41 46.2	-2.4
DRLN				IAmb	IAmb	17 42 02.8	
	comp=Z,173nm,1.5s						
WRAK	Wrangell Islan	81.23	14	P	P	17 41 52.1	+1.5
	baz=341,SNR=6.6						
WRAK	Wrangell Islan	81.23	14	IAmb	IAmb	17 42 00.1	
	comp=Z,78nm,1.1s						
BOSA	Boshof	81.79	221	P	P	17 41 53.6	-0.4
	comp=Z,9.5nm,0.6s,baz=30,slow=5.3,SNR=12						
BOSA				LR	LR	18 17 46.5	
	comp=Z,1µm,21.8s,baz=42,slow=35						
BOSA	Boshof	81.79	221	P	P	17 41 53.5	-0.5
BOSA				IAmb	IAmb	17 42 01.6	
	comp=Z,108nm,1.1s						
WB0	Warramunga Arr	82.46	124	IAmb	IAmb	17 41 58.5	
	comp=Z,120nm,1.2s						
WRA	Warramunga Arr	82.56	124	P	P	17 41 57.6	-0.4
	comp=Z,54nm,0.9s,baz=322,slow=5.1,SNR=198						
WRA				PKKPbc	PKKPbc	18 00 22.7	-0.3
	comp=Z,1.4nm,0.8s,baz=133,slow=2.3,SNR=7.1						
WRA				LR	LR	18 24 27.0	
	comp=Z,292nm,20.1s,baz=315,slow=40						
WRAB	Tennant Creek	82.56	124*c*	*i*P	P	17 41 57.7	-0.4
WRAB				pmax	pmax		
	comp=Z,90nm,0.8s						
WRAB				MLR	MLR		
	comp=Z,547nm,25.0s						
WRAB	Tennant Creek	82.56	124	P	P	17 41 57.3	-0.8
WRAB				IAmb	IAmb	17 42 05.6	
	comp=Z,116nm,0.9s						
WB2	Warramunga Arr	82.56	124	IAmb	IAmb	17 42 05.6	
	comp=Z,110nm,0.9s						
WR0	Warramunga Arr	82.70	124	P	P	17 41 58.1	-0.7
WR0				IAmb	IAmb	17 42 06.2	
	comp=Z,85nm,0.9s						
PMG	Port Moresby	83.98	108	P	P	17 42 05.7	+0.1
	comp=Z,28nm,0.9s,baz=341,slow=4.0,SNR=11						
PMG				LR	LR	18 22 59.6	
	comp=Z,92nm,20.4s,baz=328,slow=38						
PMG	Port Moresby	83.98	108	P	P	17 42 05.5	-0.1
PMG				pmax	pmax		
	comp=Z,29nm,0.8s						
PMG	Port Moresby	83.98	108	P	P	17 42 05.5	-0.1
AS31	Alice Springs	85.03	127	P	P	17 42 09.6	-1.1
ASAR	Alice Springs	85.03	127	P	P	17 42 10.1	-0.6
	comp=Z,32nm,0.9s,baz=324,slow=5.3,SNR=138						
ASAR				PKKPbc	PKKPbc	18 00 19.6	+2.3
	comp=Z,0.5nm,0.7s,baz=113,slow=2.8,SNR=3.3						
ASAR				LR	LR	18 24 12.9	
	comp=Z,450nm,20.0s,baz=324,slow=39						
FFC	Flin Flon	85.25	357	P	P	17 42 10.4	-1.0
FFC				pmax	pmax		
	comp=Z,194nm,1.5s						
FFC	Flin Flon	85.25	357	P	P	17 42 10.4	-1.0
BATG	Bathurst New B	85.59	334	P	P	17 42 12.9	-0.4
BATG				IAmb	IAmb	17 42 25.7	
	comp=Z,100nm,0.9s						
D62A	Allapoint, All	86.75	335	P	P	17 42 18.5	-0.5
PQI	Presque Isle	86.77	334	IAmb	IAmb	17 42 31.2	
	comp=Z,97nm,1.0s						
SUR	Sutherland	87.08	222	P	P	17 42 19.8	-1.1
E62A	Clayton Lake	87.31	335	IAmb	IAmb	17 42 33.0	
	comp=Z,53nm,1.1s						
F64A	Sherman	87.59	334	IAmb	IAmb	17 42 35.7	
	comp=Z,39nm,0.9s						
VLDQ	Val d'Or	88.21	341	P	P	17 42 25.8	-0.2
PKME	Peaks-Kenny Pk	88.43	335	P	P	17 42 27.5	+0.4
	baz=28						
G62A	West of Eustis	88.87	335	IAmb	IAmb	17 42 41.4	
	comp=Z,48nm,1.1s						
WVL	Waterville	89.17	334	IAMs_20	IAMs_20	18 21 17.2	
	comp=Z,2µm,20.0s						
TRQ	Mont Tremblant	89.18	338	P	P	17 42 30.2	-0.5
ULM	Lac du Bonnet	89.32	353	P	P	17 42 30.7	-0.5
	comp=Z,15nm,1.1s,baz=352,slow=5.5,SNR=6.9						
ULM				LR	LR	18 25 20.7	
	comp=Z,2µm,19.6s,baz=9.5,slow=38						
ULM	Lac du Bonnet	89.32	353	IAmb	IAmb	17 42 40.7	
	comp=Z,48nm,1.1s						
H62A	Milan	89.65	335		pP	17 42 41.8	+2.7
LBNH	Lisbon	90.19	336	P	P	17 42 35.3	-0.1
LBNH				pmax	pmax		
	comp=Z,50nm,1.1s						
LBNH	Lisbon	90.19	336	P	P	17 42 37.2	+1.8
	baz=26						
LBNH	Lisbon	90.19	336	P	P	17 42 35.3	-0.1
LBNH				IAmb	IAmb	17 42 45.6	
	comp=Z,50nm,1.1s						
CTAO	Charters Tower	90.55	116	P	P	17 42 37.5	+0.2
CTAO				pmax	pmax		
	comp=Z,63nm,1.2s						
CTAO				MLR	MLR		
	comp=Z,500nm,21.0s						
CTAO	Charters Tower	90.55	116	P	P	17 42 37.5	+0.2
CTAO				IAmb	IAmb	17 42 38.8	
	comp=Z,63nm,1.2s						
LONY	Lake Ozonia	90.65	338	P	P	17 42 39.1	+1.6
	baz=24,SNR=7.8						
LONY	Lake Ozonia	90.65	338	IAmb	IAmb	17 42 49.5	
	comp=Z,54nm,1.0s						
B05A	Bryant	90.76	10	P	P	17 42 39.1	+1.2
	baz=348						
WALA	Waterton Lakes	90.79	5	P	P	17 42 36.2	-2.0
WALA				IAmb	IAmb	17 42 48.2	
	comp=Z,74nm,1.1s						
PLVO	Plevna	90.96	339	IAmb	IAmb	17 42 49.4	
	comp=Z,86nm,1.7s						
B35A	Bob, Littlefor	90.97	351	IAmb	IAmb	17 42 49.6	
	comp=Z,131nm,1.8s						
B08A	Colville Reser	91.01	8	IAmb	IAmb	17 42 49.5	
	comp=Z,62nm,1.1s						
EYMN	Ely	91.09	350	P	P	17 42 39.1	-0.4
	baz=12						
EYMN	Ely	91.09	350	P	P	17 42 37.5	-2.0
EYMN				IAmb	IAmb	17 42 49.6	
	comp=Z,102nm,1.1s						
EYMN	Ely	91.09	350	IAMs_20	IAMs_20	18 27 08.2	
	comp=Z,1µm,19.0s						
J61A	Chester	91.19	336	P	P	17 42 38.3	-1.7
J61A				IAmb	IAmb	17 42 52.9	
	comp=Z,60nm,0.9s						
AGMN	Agassiz Nation	91.25	353	P	P	17 42 41.1	+0.8
	baz=8.3						
AGMN	Agassiz Nation	91.25	353	IAMs_20	IAMs_20	18 25 52.2	
	comp=Z,1µm,22.0s						
NEW	Newport	91.33	7	P	P	17 42 41.5	+0.8
	baz=352						
NEW	Newport	91.33	7	IAmb	IAmb	17 42 51.2	
	comp=Z,52nm,1.1s						
NEW	Newport	91.33	7	IAMs_20	IAMs_20	18 26 17.2	
	comp=Z,2µm,20.0s						
E46A	Sault Ste Mari	91.41	345	IAmb	IAmb	17 42 50.9	
	comp=Z,69nm,1.2s						
DGMT	Dagmar	91.58	358	P	P	17 42 43.4	+1.6
	baz=2.0						
DELO	Deloro Mine	91.59	340	P	P	17 42 41.4	-0.5
DELO				IAmb	IAmb	17 42 52.2	
	comp=Z,33nm,1.0s						
HRV	Adam Dziewonsk	91.63	335	IAMs_20	IAMs_20	18 29 39.2	
	comp=Z,2µm,20.0s						
C09A	Chrisman Ranch	91.68	8	IAmb	IAmb	17 42 52.8	
	comp=Z,58nm,1.0s						
J59A	Piesco	91.68	337	IAmb	IAmb	17 42 50.7	
	comp=Z,55nm,1.1s						
K62A	Royalston	91.71	335	IAmb	IAmb	17 42 54.8	
	comp=Z,41nm,0.9s						
D05A	Enumclaw	91.83	10	P	P	17 42 42.7	-0.2
PECO	Prince Edward	91.96	339		pP	17 42 52.4	+2.6
J58A	Remsen	92.01	338	IAmb	IAmb	17 42 54.1	
	comp=Z,51nm,1.2s						
EGMT	Eagleton	92.01	2	P	P	17 42 44.7	+0.9
	baz=358,SNR=7.0						
EGMT	Eagleton	92.01	2	IAmb	IAmb	17 42 54.2	
	comp=Z,90nm,1.2s						
L61B	Northampton	92.04	336	P	P	17 42 45.0	+0.9
	baz=25						
JTMT	Jette	92.07	5	IAmb	IAmb	17 42 54.8	
	comp=Z,77nm,1.3s						
TRY	Troy	92.10	336	P	P	17 42 43.3	-0.9
TRY				IAmb	IAmb	17 42 55.6	
	comp=Z,132nm,1.8s						
BRYW	Bryant College	92.15	335	IAMs_20	IAMs_20	18 23 03.0	
	comp=Z,2µm,19.0s						
J57A	Williamstown	92.17	338	IAmb	IAmb	17 42 56.2	
	comp=Z,58nm,1.1s						
E04D	Cinebar	92.37	11	P	P	17 42 47.5	+2.1
	baz=348						
E38A	The Farm, Brul	92.42	350	IAmb	IAmb	17 42 59.3	
	comp=Z,64nm,1.3s						
UCCT	U. Connecticut	92.49	335	IAmb	IAmb	17 42 57.8	
	comp=Z,30nm,1.0s						
COWI	Conover	92.55	348	P	P	17 42 45.3	-1.0
COWI				IAmb	IAmb	17 42 55.8	
	comp=Z,36nm,1.1s						
COWI				IAMs_20	IAMs_20	18 28 16.3	
	comp=Z,2µm,20.0s						
K57A	Scipio Center	92.94	338	IAmb	IAmb	17 42 59.8	
	comp=Z,61nm,1.0s						
F04A	Amboy	93.00	11	P	P	17 42 48.1	-0.2
L59A	Walton	93.01	337	IAmb	IAmb	17 42 58.5	
	comp=Z,105nm,1.8s						
MSO	Missoula	93.01	5	P	P	17 42 48.7	+0.2
	baz=355,SNR=5.8						
MSO	Missoula	93.01	5	IAmb	IAmb	17 42 59.5	
	comp=Z,37nm,1.2s						
MSO				IAMs_20	IAMs_20	18 28 19.4	
	comp=Z,2µm,20.0s						
F05D	White Salmon	93.18	10	P	P	17 42 50.4	+1.2
	baz=349						
BINY	Binghamton	93.28	338	P	P	17 42 49.7	0.0
	baz=23						
BINY	Binghamton	93.28	338	IAmb	IAmb	17 43 01.2	
	comp=Z,34nm,0.8s						
BINY				IAMs_20	IAMs_20	18 30 29.0	
	comp=Z,1µm,21.0s						
F07A	Phinny Hill Vi	93.37	9	IAmb	IAmb	17 43 08.8	
	comp=Z,86nm,1.5s						
LAO	LASA Array	93.39	360	P	P	17 42 51.0	+0.8
	baz=0.4						
F36A	Milaca	93.40	351	P	P	17 42 48.5	-1.7
F36A				IAmb	IAmb	17 42 59.8	
	comp=Z,50nm,1.2s						
WSPT	Westport, CT	93.41	335	IAMs_20	IAMs_20	18 23 58.1	
	comp=Z,2µm,20.0s						
HNR	Honiara	93.51	99	LR	LR	18 25 17.6	
	comp=Z,311nm,21.5s,baz=316,slow=36						
G40A	Rib Lake	93.53	348	IAmb	IAmb	17 43 00.6	
	comp=Z,59nm,1.1s						
F10A	Beach Ranch, E	93.59	7	IAmb	IAmb	17 43 01.6	
	comp=Z,29nm,1.0s						
F33A	5 Mile Ranch,	93.73	353	IAmb	IAmb	17 43 01.7	
	comp=Z,40nm,1.0s						
PAL	Palisades	93.74	336	IAMs_20	IAMs_20	18 30 47.0	
	comp=Z,1µm,21.0s						
L56A	Greenwood	93.78	339	P	P	17 42 51.5	-0.6
SPMN	Marine on St.	93.94	350	P	P	17 42 53.0	+0.3
	baz=11						
M57A	Sunshine Farm,	94.40	338	IAmb	IAmb	17 43 06.4	
	comp=Z,62nm,1.1s						
DLMT	Dillon	94.55	4	P	P	17 42 55.3	-0.4
DLMT				IAmb	IAmb	17 43 11.0	
	comp=Z,39nm,1.1s						
BMO	Blue Mountains	94.69	8	IAMs_20	IAMs_20	18 30 55.1	
	comp=Z,1µm,20.0s						
I05D	Terrebonne, OR	94.72	10	P	P	17 42 58.0	+1.7
	baz=349						
N58A	Sunbury	94.74	338	IAmb	IAmb	17 43 06.1	
	comp=Z,66nm,1.5s						
RLMT	Red Lodge	94.92	2	P	P	17 42 58.6	+1.1
	baz=358,SNR=10						
RLMT	Red Lodge	94.92	2	IAmb	IAmb	17 43 18.1	
	comp=Z,41nm,1.2s						
I40A	Norwalk	94.93	348	P	P	17 42 55.5	-1.8
I40A				IAmb	IAmb	17 43 07.3	
	comp=Z,47nm,0.9s						
M54A	Oil Creek Stat	94.94	340	IAmb	IAmb	17 45 42.6	
	comp=Z,52nm,0.9s						
AAM	Ann Arbor	95.16	343	IAMs_20	IAMs_20	18 31 26.7	
	comp=Z,1µm,19.0s						
I37A	Lemond, Waseca	95.20	350	P	P	17 42 57.7	-0.8
I37A				IAmb	IAmb	17 43 08.7	
	comp=Z,61nm,1.1s						
M53A	WI Miller and	95.26	341	IAMs_20	IAMs_20	18 26 45.2	
	comp=Z,2µm,18.0s						
SSPA	Standing Stone	95.27	338	P	P	17 42 59.3	+0.4
	baz=22						
SSPA	Standing Stone	95.27	338	P	P	17 42 57.9	-1.0
SSPA				IAmb	IAmb	17 43 09.5	
	comp=Z,121nm,1.9s						
SSPA	Standing Stone	95.27	338	IAMs_20	IAMs_20	18 27 22.3	
	comp=Z,1µm,19.0s						
LKWY	Lake	95.45	3	IAMs_20	IAMs_20	18 29 53.5	
	comp=Z,2µm,20.0s						
BCYI	Bear Canyon	95.55	5	P	P	17 42 59.5	-0.9
H17A	Grant Village	95.61	3	P	P	17 43 03.7	+3.0
	baz=357,SNR=7.4						
H17A	Grant Village	95.61	3	IAmb	IAmb	17 43 13.0	
	comp=Z,42nm,1.1s						
STKA	Stephens Creek	95.64	127	P	P	17 42 59.6	-0.8
	comp=Z,5.7nm,1.0s,baz=328,slow=5.2,SNR=10						
STKA				LR	LR	18 30 59.9	
	comp=Z,583nm,19.1s,baz=323,slow=39						
STKA	Stephens Creek	95.64	127	P	P	17 42 59.0	-1.5
J05D	Fort Rock, OR	95.77	11	P	P	17 43 03.1	+1.8
	baz=349						
O56A	Blue Knob Stat	95.80	339	IAmb	IAmb	17 43 12.7	
	comp=Z,34nm,1.1s						
JFWS	Jewell Farm	95.83	348	P	P	17 43 01.4	0.0
	baz=13,SNR=6.4						
JFWS	Jewell Farm	95.83	348	IAmb	IAmb	17 43 10.8	
	comp=Z,49nm,0.8s						
ECSD	EROS Data Cent	95.85	353	P	P	17 43 01.8	+0.3
	baz=7.8,SNR=12						
ECSD	EROS Data Cent	95.85	353	IAmb	IAmb	17 43 11.5	
	comp=Z,33nm,0.9s						
ECSD	EROS Data Cent	95.85	353	IAMs_20	IAMs_20	18 28 32.7	
	comp=Z,1µm,20.0s						
FLWY	Flagg Ranch	95.92	3	IAMs_20	IAMs_20	18 31 29.0	
	comp=Z,985nm,19.0s						
RSSD	Black Hills	95.92	358	P	P	17 43 01.6	-0.5
RSSD				pmax	pmax		
	comp=Z,22nm,0.9s						
RSSD				MLR	MLR		
	comp=Z,3µm,20.0s						
RSSD	Black Hills	95.92	358	P	P	17 43 02.7	+0.7
	baz=2.1						
RSSD	Black Hills	95.92	358	P	P	17 43 01.6	-0.5

J08A	Circle Bar Ran	96.04	9	P	P	17 43 01.9	-0.6
HLID	Hailey	96.22	6	P	P	17 43 04.0	+0.6
	baz=354						
HLID	Hailey	96.22	6	IAMs_20	IAMs_20	18 30 49.3	
	comp=Z,2µm,19.0s						
FXWY	Fox Creek	96.35	3	P	P	17 43 02.9	-1.2
FXWY				IAMs_20	IAMs_20	18 30 50.4	
	comp=Z,1µm,18.0s						
P57A	Homestead Farm	96.37	338	IAmb	IAmb	17 43 11.1	
	comp=Z,36nm,1.3s						
LOHW	Long Hollow	96.39	3	IAMs_20	IAMs_20	18 31 43.5	
	comp=Z,1µm,19.0s						
HQIL	Hanson Quary C	96.50	346	IAMs_20	IAMs_20	18 33 31.9	
	comp=Z,2µm,20.0s						
SNOW	Snow King Moun	96.53	3	IAMs_20	IAMs_20	18 31 40.6	
	comp=Z,1µm,18.0s						
L42A	Oliver, Polo	96.62	347	IAmb	IAmb	17 43 14.4	
	comp=Z,50nm,0.9s						
REDW	Red Top Meadow	96.63	3	P	P	17 43 05.0	-0.4
ACSO	Alum Creek Sta	96.97	342	IAMs_20	IAMs_20	18 27 55.4	
	comp=Z,1µm,18.0s						
AHID	Auburn Hatcher	97.22	3	IAMs_20	IAMs_20	18 31 27.4	
	comp=Z,1µm,20.0s						
PD31	Pinedale Array	97.27	2	P	P	17 43 07.8	-0.4
PDAR	Pinedale Array	97.27	2	P	Pdif	17 43 08.6	+0.2
	comp=Z,1.7nm,0.7s,baz=26,slow=3.1,SNR=13						
PDAR				PKiKP	PKiKP	17 47 43.8	+0.4
	comp=Z,0.7nm,0.8s,baz=79,slow=2.3,SNR=1.3						
PDAR				PKKPbc	PKKPbc	17 59 45.5	-0.7
	comp=Z,0.3nm,0.3s,baz=199,slow=5.2,SNR=6.9						
PDAR				LR	LR	18 31 55.1	
	comp=Z,2µm,18.9s,baz=2.5,slow=38						
P53A	Whipple	97.28	340	IAmb	IAmb	17 43 16.2	
	comp=Z,40nm,1.4s						
HDIL	Hopedale	97.97	347	IAMs_20	IAMs_20	18 32 36.8	
	comp=Z,1µm,18.0s						
P49A	Miami Univ. Ec	98.03	343	IAMs_20	IAMs_20	18 27 54.5	
	comp=Z,1µm,19.0s						
P48A	Milroy	98.26	343	IAmb	IAmb	17 43 21.4	
	comp=Z,25nm,1.1s						
N35A	Tabor	98.58	352	P	P	17 43 10.8	-3.0
N35A				IAmb	IAmb	17 43 24.4	
	comp=Z,54nm,1.2s						
TCUT	Toone Canyon	98.84	4	IAmb	IAmb	17 43 28.2	
	comp=Z,46nm,1.2s						
BGU	Big Grassy Mou	98.94	5	IAmb	IAmb	17 43 26.8	
	comp=Z,38nm,1.9s						
OGNE	Ogallala	99.02	356	IAMs_20	IAMs_20	18 31 10.7	
	comp=Z,2µm,20.0s						
T57A	Hurt	99.04	338	P	Pdif	17 43 14.0	-2.0
T57A				IAmb	IAmb	17 43 26.0	
	comp=Z,44nm,1.6s						
JLU	Jordanelle	99.36	4	IAmb	IAmb	17 43 29.8	
	comp=Z,50nm,1.7s						
RDMU	Red Mountain	99.46	2	P	Pdif	17 43 16.9	-1.2
RDMU				IAmb	IAmb	17 43 29.9	
	comp=Z,76nm,1.5s						
P38A	Dawn	99.54	350	IAmb	IAmb	17 43 27.9	
	comp=Z,39nm,1.6s						
WCI	Wyandotte Cave	99.63	344	IAMs_20	IAMs_20	18 28 49.8	
	comp=Z,1µm,19.0s						
DUG	Dugway, Tooele	99.69	5	Pdiff	Pdif	17 43 19.9	+0.9
	baz=355						
CNNC	Cliffs of the	100.27	336	IAMs_20	IAMs_20	18 28 47.7	
	comp=Z,1µm,19.0s						
CCM	Cathedral Cave	100.73	348	IAMs_20	IAMs_20	18 33 26.0	
	comp=Z,1µm,18.0s						
NVAR	Mina Array Bea	100.93	9	P	Pdif	17 43 25.7	+1.0
	comp=Z,1.0nm,0.5s,baz=347,slow=3.7,SNR=7.0						
NVAR				PP	PP	17 47 34.3	+2.8
	comp=Z,1.4nm,0.9s,baz=353,slow=6.5,SNR=2.4						
NVAR				PKKP	PKKPdf	17 59 38.9	-0.9
	comp=Z,1.5nm,0.9s,baz=177,slow=4.5,SNR=2.1						
CBKS	Cedar Bluff	101.00	354	IAMs_20	IAMs_20	18 33 00.1	
	comp=Z,1µm,19.0s						
R11A	Troy Canyon, C	101.30	7	Pdiff	Pdif	17 43 27.6	+1.3
	baz=353						
WVT	Waverly	101.97	344	Pdiff	Pdif	17 43 29.3	+0.2
	baz=15						
WVT	Waverly	101.97	344	IAMs_20	IAMs_20	18 30 31.8	
	comp=Z,1µm,18.0s						
U40A	Yellville	102.65	349	IAMs_20	IAMs_20	18 34 10.7	
	comp=Z,2µm,20.0s						
OK032	Salt Plains WL	102.87	353	IAMs_20	IAMs_20	18 35 28.5	
	comp=Z,1µm,18.0s						
NHSC	New Hope	102.94	337	IAMs_20	IAMs_20	18 35 35.4	
	comp=Z,1µm,19.0s						
PLAL	Pickwick Lake	103.13	344	IAMs_20	IAMs_20	18 31 15.8	
	comp=Z,1µm,20.0s						
U32A	Winter Ranch,	103.36	354	IAMs_20	IAMs_20	18 34 01.5	
	comp=Z,1µm,19.0s						
TUL1	Leonard	103.49	351	IAMs_20	IAMs_20	18 35 01.0	
	comp=Z,1µm,19.0s						
OK031	S. Brethren Rd	103.57	352	IAMs_20	IAMs_20	18 33 30.1	
	comp=Z,881nm,22.0s						
OK029	Liberty Lake	103.79	352	IAMs_20	IAMs_20	18 34 33.9	
	comp=Z,1µm,19.0s						
X40A	Basin Creek Fa	104.48	348	IAMs_20	IAMs_20	18 32 25.1	
	comp=Z,1µm,20.0s						
WMOK	Wichita Mounta	104.97	353	IAMs_20	IAMs_20	18 35 13.1	
	comp=Z,1µm,20.0s						
MNTX	Cornudas Mount	108.35	359	IAMs_20	IAMs_20	18 38 59.8	
	comp=Z,1µm,19.0s						
ANWB	Willy Bob	108.77	315	IAMs_20	IAMs_20	18 32 26.0	
	comp=Z,1µm,20.0s						
JCT	Junction City	109.28	354	IAMs_20	IAMs_20	18 39 21.3	
	comp=Z,1µm,18.0s						
HKT	Hockley	109.37	350	IAMs_20	IAMs_20	18 40 12.4	
	comp=Z,1µm,18.0s						
SEUS	St. Eustatius	109.56	316	IAMs_20	IAMs_20	18 33 14.8	
	comp=Z,1µm,20.0s						
SABA	Saba	109.59	316	IAMs_20	IAMs_20	18 33 37.7	
	comp=Z,1µm,20.0s						
TXAR	Lajitas Array	110.66	357	Pdiff	Pdif	17 44 11.8	+3.8
	comp=Z,0.3nm,0.6s,baz=343,slow=1.9,SNR=1.5						
TXAR				PP	PP	17 48 44.2	+1.0
	comp=Z,2.1nm,0.9s,baz=22,slow=5.1,SNR=4.2						
TXAR				PKKPbc	PKKPbc	17 59 06.4	+0.4
	comp=Z,2.4nm,0.9s,baz=194,slow=4.6,SNR=8.0						
FDF	Fort de France	110.80	312	IAMs_20	IAMs_20	18 36 41.9	
	comp=Z,1µm,20.0s						
SYO	Syowa Base	111.82	192	⇑ePdiff	Pdif	17 44 13.8	+2.1
SYO	Syowa Base	111.82	192	⇑epPdiff	pPdif	17 44 19.4	+1.4
RIB01	Linhares ES	120.11	270	eP	PKiKP	17 48 26.8	+0.6
BOAV	Boa Vista	120.14	303	eP	PKiKP	17 48 27.0	+0.4
BSFB	Barra de Sao F	120.18	270	eP	PKiKP	17 48 27.0	+0.6
SJMB	Sao Joao De Ma	120.36	271	eP	PKiKP	17 48 27.3	+0.5
JANB	Januaria	120.56	276	eP	PKiKP	17 48 27.8	+0.6
SDV	Santo Domingo	120.78	317	eP	PKiKP	17 48 28.0	-0.1
ALF01	Guarapari-ES	121.12	269	eP	PKiKP	17 48 29.1	+0.9
MC01	Montes Claros	121.28	274	eP	PKiKP	17 48 29.6	+0.9
PEXB	Peixe	121.73	282	eP	PKiKP	17 48 30.1	+0.5
ITTB	Itaituba	121.92	294	eP	PKiKP	17 48 30.4	+0.4
DIAM	Diamantina, MG	122.02	273	eP	PKiKP	17 48 30.4	+0.2
PTGA	Pitinga	122.14	301	IAMs_20	IAMs_20	18 40 22.6	
	comp=Z,862nm,20.0s						
CAM01	Campos-RJ	122.53	268	eP	PKiKP	17 48 31.1	+0.2
TGUH	Tegucigalpa,Un	122.97	337	IAMs_20	IAMs_20	18 45 59.1	
	comp=Z,1µm,21.0s						
DUB01	Friburgo-RJ	123.22	268	eP	PKPdf	17 48 31.9	-0.2
NPGB	Novo Progresso	123.53	292	eP	PKiKP	17 48 33.4	+0.2
SNAA	Sanae	123.58	202	PKKPbc	PKKPbc	17 58 19.2	-1.4
SNAA	Sanae	123.58	202	PKPdf	PKPdf	17 48 30.9	-0.5
SNAA	Sanae	123.58	202	PKIKP	PKPdf	17 48 31.0	-0.3
SNAA				MLR	MLR		
	comp=Z,400nm,21.0s						
SNAA	Sanae	123.58	202		PKPdf	17 48 31.0	-0.3
SNDB	Serra Nova Dou	123.88	284	eP	PKiKP	17 48 34.1	+0.3
VAS01	Vassouras-RJ	124.15	269	eP	PKiKP	17 48 34.5	+0.4
MACA	Manacapuru-AM	124.42	299	eP	PKiKP	17 48 35.4	+0.5
BSCB	Bom Sucesso	124.44	271	eP	PKiKP	17 48 35.0	+0.2
VNA2	Neumayer--Watz	124.59	203	PKPdf	PKiKP	17 48 34.6	+1.1
VNA1	Neumayer--Stat	124.75	204	PKPdf	PKiKP	17 48 34.7	+1.0
MAN01	Angra dos Reis	124.87	268	eP	PKiKP	17 48 35.8	+0.2
IPMB	Ipameri, GO	125.30	276	eP	PKiKP	17 48 36.8	+0.3
VNA3	Neumayer Olymp	125.40	203	PKPdf	PKPdf	17 48 34.8	0.0
HDC	Heredia	125.74	332	IAMs_20	IAMs_20	18 44 26.8	
	comp=Z,764nm,20.0s						
JTS	Las Juntas de	125.77	333	IAMs_20	IAMs_20	18 49 06.4	
	comp=Z,931nm,19.0s						
ROSC	El Rosal	126.11	319	PKP	PKiKP	17 48 39.6	+0.8
	comp=Z,11nm,0.3s,baz=129,slow=5.6,SNR=5.0						
ROSC	El Rosal	126.11	319		pPKPdf	17 48 44.3	-0.6
PARB	Paraibuna	126.40	269	eP	PKiKP	17 48 39.1	+0.5
CLDB	Colider	126.45	289	eP	PKPdf	17 48 38.3	-0.2
ARAG	Araguaiana, MT	126.63	281	eP	PKiKP	17 48 39.0	-0.2
VAO	Valinhos	127.24	270	eP	PKiKP	17 48 40.4	0.0
BB19B	Bebedouro	127.34	273	eP	PKiKP	17 48 40.9	+0.3
RCLB	Rio Claro- Sao	127.35	271	eP	PKiKP	17 48 40.7	+0.1
PDRB	Porto dos Gac	127.63	289	eP	PKiKP	17 48 41.6	+0.3
ITRB	Iturama	127.95	276	eP	PKiKP	17 48 41.9	+0.1
PET01	Itanhaem-SP	128.19	269	eP	PKiKP	17 48 42.3	+0.2
VNDA	Vanda	128.67	164	PKP	PKPdf	17 48 40.6	-0.2
	comp=Z,3.9nm,1.0s,baz=262,slow=4.6,SNR=10						
VNDA	Vanda	128.67	164	PKIKP	PKPdf	17 48 39.8	-1.1
VNDA	Vanda	128.67	164		PKPdf	17 48 39.8	-1.1
FRTB	Fartura	129.42	271	eP	PKiKP	17 48 45.2	+0.5
SALV	Santo Antonio	129.66	284	eP	PKPdf	17 48 44.2	-0.3
PCMB	Pacaembu	129.74	274	eP	PKPdf	17 48 44.6	+0.1
QSPA	South Pole Qui	130.09	180		PKPdf	17 48 42.8	-1.1
QSPA	South Pole Qui	130.09	180	IAMs_20	IAMs_20	18 43 31.9	
	comp=Z,579nm,18.0s						
PP1B	Ponte de Pedra	130.11	281	eP	PKiKP	17 48 46.1	0.0
SAML	Samuel	130.33	297	PKIKP	PKPdf	17 48 44.5	-1.4
SAML	Samuel	130.33	297		PKPdf	17 48 44.5	-1.4
VILB	Vilhena	131.03	290	eP	PKiKP	17 48 48.2	+0.1
TBTG	Tabatinga, AM	131.09	308	eP	PKiKP	17 48 48.3	0.0
TER01	Tubaro-SC	131.81	265	eP	PKiKP	17 48 49.7	+0.4
OTAV	Otavalo	132.13	320	eP	PKPdf	17 48 50.4	+0.5
OTAV	Otavalo	132.13	320	IAMs_20	IAMs_20	18 47 52.7	
	comp=Z,954nm,21.0s						
AQDB	Aquidauana	132.46	279	eP	PKiKP	17 48 50.7	-0.1
ETMB	Extrema	133.01	299	eP	PKiKP	17 48 51.8	-0.3
CNLB	Canela	133.51	266	eP	PKiKP	17 48 53.4	+0.6
CPSB	Cacapava Do Su	136.01	266	eP	PKiKP	17 48 57.0	-0.7
CPUP	Villa Florida	136.96	273	PKP	PKPdf	17 48 57.9	0.0
	comp=Z,8.1nm,0.9s,baz=95,slow=2.6,SNR=11						
CPUP	Villa Florida	136.96	273	PKIKP	PKPdf	17 48 55.9	-2.0
CPUP	Villa Florida	136.96	273		PKPdf	17 48 55.9	-2.0
LPAZ	La Paz	138.90	294	eP	PKPdf	17 49 02.8	+0.3
PB06	IPOC Station P	144.11	288		PKPab	17 49 08.8	+0.1
EFI	East Falkland	144.95	235	PKIKP	PKPab	17 49 10.6	-0.2
EFI	East Falkland	144.95	235		PKPab	17 49 10.6	-0.2
PMSA	Palmer Station	145.40	211		PKPbc	17 49 10.8	-1.0
PMSA				IAMs_20	IAMs_20	18 46 08.6	
	comp=Z,655nm,18.0s						
LCO	Las Campanas	148.50	280	PKIKP	PKPdf	17 49 19.5	+0.9
LCO				MLR	MLR		
	comp=Z,500nm,18.0s						
LCO	Las Campanas	148.50	280		PKPdf	17 49 19.5	+0.9
LCO	Las Campanas	148.50	280	IAMs_20	IAMs_20	19 00 19.3	
	comp=Z,494nm,18.0s						
VA03	San Esteban	150.13	273		PKPdf	17 49 20.0	-0.9
VA03				PKPbc	PKPbc	17 49 26.1	+0.1
VA03				PKPab	PKPab	17 49 32.1	+0.2
MT02	Curacav	150.78	273		PKPbc	17 49 25.1	-2.3
MT02				PKPab	pPKPbc	17 49 33.7	-0.1
PLCA	Paso Flores	152.61	257	PKPbc	PKPbc	17 49 31.3	-0.1
	comp=Z,35nm,1.1s,baz=90,slow=1.3,SNR=16						
PLCA	Paso Flores	152.61	257	eP	PKPdf	17 49 25.6	+1.2
LC01	Cunco	153.21	262	PKPdf	PKPdf	17 49 24.5	-0.7
LC01					pPKPdf	17 49 31.0	-0.7
LC01				PKPab	pPKPbc	17 49 38.4	-0.7
GO09	Cerro Castillo	153.87	234		PKPdf	17 49 25.3	-0.4

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*AEIC **17** 17:36:08±1.9, 59°.21N±0°.02×135°.93W±0°.08, h9^{km}±6^{km}*
Error ellipse: s-maj=5.8km s-min=2.5km az=79.0
*NEIC **17** 17:36:08.1±1.5, 59°.21N±0°.02×135°.93W±0°.07, h5^{km}±8^{km},*
Error ellipse: s-maj=5.4km s-min=3.4km az=72.0
*PGC **17** 17:36:08.2±0.0, 59°.21N×136°.03W, h1^{km}, ML2.6/3, 47km west of Haines, Ak Southeastern Alaska*

ISC 17 17:36:07.8±0.8**, 59°.22N**±0°.03×**135°.95W**±0°.03**, h10**^{km}**, n57, σ1^{s}43**/70**, Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKAG	Skagway	0.40	53		Pg	17 36 15.7	+0.1
SKAG					Sg	17 36 21.4	+0.5
BESE	Bessie Mountai	0.86	138		Pg	17 36 23.8	-0.6
BESE					Sg	17 36 34.9	-0.7
BESE	Bessie Mountai	0.86	138	P	Pg	17 36 23.8	-0.6
BESE				S	Sg	17 36 35.7	+0.1
JIS	Juneau Island	1.25	139		Pn	17 36 30.6	-0.7
JIS					Sn	17 36 48.7	+0.5
JIS	Juneau Island	1.25	139	IAML		17 36 51.0	
	comp=N,329nm,0.5s						
JIS				IAML		17 36 51.4	
	comp=E,267nm,0.4s						
WHY	Whitehorse	1.54	20		Pn	17 36 36.3	+0.9
WHY					Sb	17 36 56.5	+0.5
WHY	Whitehorse	1.54	20	Pn	Pn	17 36 36.3	+0.9
WHY				Sg	Sn	17 36 55.7	+0.2
YUK7	Dusty Glacier	1.71	321		Pn	17 36 39.1	+1.2
YUK7					Sn	17 37 01.0	+1.0
YUK7	Dusty Glacier	1.71	321	Pn	Pn	17 36 38.6	+0.7
YUK7				Sg	Sn	17 37 01.2	+1.3
HYT	Haines Junctio	1.79	335		Pn	17 36 40.0	+1.2
HYT	Haines Junctio	1.79	335	Pn	Pn	17 36 39.9	+1.1
HYT				Sg	Sb	17 37 03.9	+0.7
PNL	Peninsula	1.81	286		Pn	17 36 40.0	+1.0
PNL	Peninsula	1.81	286	Pn	Pn	17 36 39.7	+0.6
PNL				Sg	Sn	17 37 03.6	+1.4
P33M	Teslin, Yukon	1.87	57		Pn	17 36 40.9	+0.9
BCPM	Bancas Point	2.01	293		Pn	17 36 43.2	+1.5
BCPM	Bancas Point	2.01	293	IAML		17 37 14.2	
	comp=E,80nm,0.6s						
YUK6	Outpost Mounta	2.11	326		Pb	17 36 45.6	-0.6
YUK6	Outpost Mounta	2.11	326	Pg	Pb	17 36 45.5	-0.7
YUK6				Sg	Sb	17 37 13.4	+0.9
YUK5	Granite Creek	2.14	334		Pn	17 36 45.4	+1.7
YUK5	Granite Creek	2.14	334	Pg	Pb	17 36 46.0	-0.7
YUK5				Sg	Sb	17 37 14.2	+0.9
SIT	Sitka	2.20	171	Pn	Pn	17 36 45.8	+1.5
N31M	Braeburn, Yuko	2.27	2		Pn	17 36 47.4	+2.0
PCA	Pinnacle	2.35	294		Pn	17 36 48.2	+1.7
PCA	Pinnacle	2.35	294	Pg	Pn	17 36 48.5	+2.0
PCA				Sg	Sb	17 37 19.9	+0.5
YUK4	Talbot Arm	2.52	329	Pg	Pb	17 36 53.6	+0.5
YUK8	Steele Glacier	2.81	319	Pg	Pb	17 36 57.6	-0.6
YUK8				Sg	Sb	17 37 34.0	+1.3
TABL	Table Mountain	2.89	297	Pn	Pn	17 36 55.5	+1.4
TABL				IAML		17 37 58.2	
	comp=N,54nm,2.7s						
TABL				IAML		17 38 35.0	
	comp=E,39nm,2.3s						
LOGN	Logan Glacier	3.00	305	Pn	Pn	17 36 55.9	+0.4
YAH	Yahtse	3.14	294	Pn	Pn	17 36 58.6	+1.1
YAH				IAML		17 37 28.0	
	comp=E,63nm,2.5s						
YAH				IAML		17 38 03.6	
	comp=N,65nm,2.1s						
DLBC	Dease Lake	3.18	102		Pn	17 36 59.5	+1.6
DLBC	Dease Lake	3.18	102	IAML		17 37 49.6	
	comp=E,33nm,0.4s						
DLBC				IAML		17 37 53.7	
	comp=N,32nm,1.9s						
DLBC	Dease Lake	3.18	102	Pn	Pn	17 36 59.6	+1.7
DLBC				Sg	Sg	17 37 47.0	-2.8
MESA	MESA	3.19	290	Pn	Pn	17 36 59.0	+0.9
CTGM	Chitina Glacie	3.21	305	Pn	Pn	17 36 59.6	+1.2
GRNC	Granite Creek	3.29	300	Pn	Pn	17 37 01.3	+1.9
GRNC				IAML		17 37 37.6	
	comp=N,25nm,2.6s						
YUK3	Moose Creek	3.40	321	Pn	Pn	17 37 02.3	+1.3
BARN	Barnard Glacie	3.40	305	Pn	Pn	17 37 01.5	+0.5
BARN				IAML		17 37 59.7	
	comp=E,23nm,2.3s						
WRAK	Wrangell Islan	3.41	144	Pn	Pn	17 37 01.2	+0.3
WRAK				IAML		17 37 45.7	
	comp=E,41nm,4.5s						
WRAK				IAML		17 37 59.6	
	comp=E,43nm,1.5s						
ISLE	Juniper Island	3.50	296	Pn	Pn	17 37 04.4	+2.0
ISLE				IAML		17 37 53.5	
	comp=E,39nm,2.4s						
YUK1	Sand Pete Hill	3.70	325	Sg	Sg	17 38 03.4	-3.1
CRQM	Cirque	3.92	296	Pn	Pn	17 37 09.6	+1.4
CRAG	Craig	4.06	157	Pn	Pn	17 37 10.6	+0.7
BERG	Berg Lake	4.09	290	Pn	Pn	17 37 10.7	+0.4
MMPY	Sheldon Lake,	4.11	32	Pn	Pn	17 37 12.2	+1.6
MMPY				Sg	Sg	17 38 15.8	-3.7
MCARA	McCarthy VSAT	4.13	305	Pn	Pn	17 37 12.1	+1.2
MCARA				IAML		17 37 49.7	
	comp=E,34nm,3.9s						
MCARA				IAML		17 39 36.0	
	comp=N,34nm,2.8s						
VRDI	Verde Repeater	4.25	301	Pn	Pn	17 37 12.0	-0.6
VRDI				IAML		17 39 22.8	
	comp=N,23nm,2.9s						
VRDI				IAML		17 39 56.2	
	comp=E,19nm,2.9s						
M27K	Edge Creek, AK	4.28	320	Pn	Pn	17 37 15.2	+2.1
M27K				IAML		17 38 58.3	
	comp=N,18nm,3.2s						
M27K				IAML		17 39 03.5	
	comp=E,19nm,3.4s						
HMT	Hamilton	4.34	288	Pn	Pn	17 37 16.0	+2.2
KAIM	Kayak Island	4.36	283	Pn	Pn	17 37 14.9	+0.9
TGTN	Hyland Airport	4.46	55	Pn	Pn	17 37 17.2	+1.8
GLB	Gilahina Butte	4.49	303	Pn	Pn	17 37 15.0	-0.9
GLB				IAML		17 39 04.3	
	comp=E,19nm,3.4s						
GLB				IAML		17 39 10.6	
	comp=N,21nm,2.6s						
BMRM	Bremner River	4.67	296	Pn	Pn	17 37 17.0	-1.4
M26K	Nabesna, AK	4.70	316	Pn	Pn	17 37 15.9	-2.7
M26K				IAML		17 39 17.3	
	comp=N,16nm,4.0s						
M26K				IAML		17 39 47.1	
	comp=E,15nm,4.8s						
BCAR	Beaver Creek A	4.78	326	Pn	Pn	17 37 17.8	-2.0
L27K	Beaver Creek,	4.79	326	Pn	Pn	17 37 18.0	-2.0
L27K				IAML		17 39 10.6	
	comp=E,14nm,4.9s						
L27K				IAML		17 40 28.8	
	comp=N,12nm,4.7s						
N25K	Chitina, Valde	4.91	303	Pn	Pn	17 37 19.5	-2.1
N25K				IAML		17 38 13.4	
	comp=E,19nm,3.6s						
N25K				IAML		17 40 09.3	
	comp=N,22nm,3.4s						
L26K	Log Cabin Wild	5.23	320	Pn	Pn	17 37 27.5	+1.5
L26K				IAML		17 38 48.6	
	comp=E,12nm,4.2s						
L26K				IAML		17 40 51.7	
	comp=N,16nm,4.3s						

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*KRNET **17** 17:36:30.2±0.1, 40°.36N×73°.24E, h14^{km}, mb4.2*

ISC 17 17:36:29.4±1.3**, 40°.33N**±0°.03×**73°.26E**±0°.04**, h5**^{km}±13^{km}**, n10, σ0^{s}87**/18**, 16C-4D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	0.37	150	⇑iP	Pb	17 36 38.1	-0.4
	baz=50						
SFK				⇑iS	Sb	17 36 44.0	-0.7
	baz=50						
OHH	Osh	0.41	298	⇑iP	Pg	17 36 37.9	+0.5
	baz=95						
OHH				⇑iS	Sg	17 36 43.6	+0.8
	baz=95						
DRK	Karamyk	1.41	233	⇑iP	Pg	17 36 57.0	+0.6
	baz=32						
DRK				⇑iS	Sn	17 37 16.4	+1.3
	baz=32						
AML	Almayashu	1.83	10	⇑iP	Pg	17 37 03.9	-0.5
	baz=11						
AML				⇑iS	Sg	17 37 28.3	+0.2
	baz=11						
BTK	Batken	1.89	262	⇑iP	Pg	17 37 05.3	-0.3
	baz=61						
BTK				⇑iS	Sg	17 37 30.6	+0.4
	baz=61						
TRKS	Terek-Say	2.00	307	⇑iP	Pb	17 37 05.9	-0.5
	baz=6.0						
TRKS				⇑iS	Sb	17 37 31.5	-0.2
	baz=6.0						
MNAS	Manas	2.23	345	⇑iP	Pb	17 37 09.8	-0.4
	baz=46						
MNAS				⇑iS	Sb	17 37 39.1	+1.0
	baz=46						
AAK	Ala-Archa	2.48	21	⇓Pn	Pg	17 37 17.8	+0.8
	288nm,1.1s						
AAK				⇑Lg	Lg	17 37 47.7	
	448nm,1.1s						
GAR	Garm	2.63	241	⇓iP	Pb	17 37 16.1	-1.0
	baz=40						
GAR				⇓iS	Sb	17 37 49.7	-0.1
	baz=40						
KK31	Karatay Array	3.45	324	⇑Pn	Pg	17 37 33.7	-1.8
	165nm,1.1s,baz=126,slow=17						
KK31				⇓Lg	Lg	17 38 17.9	
	36nm,0.6s,baz=145,slow=29,SNR=4.5						

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*KRNET **17** 17:38:17.0±0.1, 40°.33N×73°.22E, h12^{km}, mb4.1*

ISC 17 17:38:17.3±1.1**, 40°.32N**±0°.03×**73°.22E**±0°.04**, h9**^{km}±14^{km}**, n10, σ0^{s}77**/18**, 16C-4D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	0.38	144	⇑iP	Pg	17 38 24.7	-0.1
	baz=45						
SFK				⇑iS	Sg	17 38 30.1	+0.3
	baz=45						
OHH	Osh	0.39	302	⇑iP	Pg	17 38 24.7	-0.2
	baz=0.0						
OHH				⇑iS	Sg	17 38 30.1	0.0
	baz=0.0						
DRK	Karamyk	1.37	233	⇑iP	Pb	17 38 43.3	0.0
	baz=32						
DRK				⇑iS	Sg	17 39 02.5	+1.0
	baz=32						
AML	Almayashu	1.85	11	⇓iP	Pb	17 38 51.3	-0.1
	baz=11						
AML				⇓iS	Sg	17 39 16.4	-0.3
	baz=11						
BTK	Batken	1.85	263	⇑iP	Pb	17 38 51.7	+0.3
	baz=62						
BTK				⇑iS	Sg	17 39 17.0	+0.1
	baz=62						
TRKS	Terek-Say	1.98	308	⇑iP	Pb	17 38 52.5	-1.1
	baz=7.0						
TRKS				⇑iS	Sb	17 39 18.2	-0.3
	baz=7.0						
MNAS	Manas	2.23	346	⇑iP	Pb	17 38 57.3	-0.5
	baz=46						
MNAS				⇑iS	Sb	17 39 26.4	+0.8
	baz=46						
AAK	Ala-Archa	2.51	22	⇓Pn	Pg	17 39 05.0	-0.3
	8.5nm,0.7s						
AAK				⇓Lg	Lg	17 39 36.8	
	157nm,0.9s						
GAR	Garm	2.60	240	⇑iP	Pb	17 39 02.9	-1.1
	baz=40						
GAR				⇑iS	Sb	17 39 35.9	-0.2
	baz=40						
KK31	Karatay Array	3.44	325	⇑Pg	Pb	17 39 20.1	+1.8
	39nm,0.8s						
KK31				⇑Lg	Lg	17 40 04.3	
	29nm,0.7s,baz=143,slow=30,SNR=4.4						

NOU 17 17:38:28.2, 18°.73S×168°.57E, h89^{km}**, MLv3.6**/9**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTV	Rentapao	0.94	352	P	Pn	17 38 47.7	+0.5
DVP	Devils Point	1.06	340	P	Pn	17 38 48.6	0.0
LIFNC	LIFOU	2.39	211	P	Pn	17 39 05.3	-0.2
MARNC	Mare, Loyalty	2.78	190	P	Pn	17 39 09.6	-1.2
YATNC	Mamie plateau,	3.67	205	P	Pn	17 39 23.0	+0.3
DZM	Mont Dzumac	3.88	211	P	Pn	17 39 26.2	+0.5
PINNC	Pines Island,	4.00	195	P	Pn	17 39 27.5	+0.2

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*IDC **17** 17:40:46.9±0.8, 40°.21N×73°.27E, h0^{km}, mb4.2/16, mb1 4.3/23, mb1mx4.0/71, mbtmp4.2/23, ML3.7/6, Error ellipse: s-maj=15.4km s-min=11.0km az=132.0*
*BJI **17** 17:40:48.5±0.0, 40°.43N×73°.07E, h7^{km}, mb4.3/11, ML4.6/3, Ms7 4.2/1*
*KRNET **17** 17:40:50.5±0.1, 40°.34N×73°.22E, h17^{km}, mb4.8*
*ISU **17** 17:40:50, 40°.30N×73°.20E, h5^{km}*
*KNET **17** 17:40:51.5±0.8, 40°.47N×73°.41E, h4^{km}±5^{km}, ml4.0, Error ellipse: s-maj=9.0km s-min=5.3km az=85.0*
*SOME **17** 17:40:52.0, 40°.53N×73°.33E, h5^{km}*
*MOS **17** 17:40:53.3±0.9, 40°.36N×73°.09E, h18^{km}, mb5.0/4, Error ellipse: s-maj=9.5km s-min=6.3km az=90.5*
*NNC **17** 17:40:54.1±1.0, 40°.58N×73°.24E, h0^{km}, mb5.0, mpv4.6, Error ellipse: s-maj=8.3km s-min=4.0km az=176.0*

NEIC 17 17:40:54.7±2.1, 40.43N±0.04×73.00E±0.07, h52km±9km, mb4.8/26, Error ellipse: s-maj=9.5km s-min=2.1km az=128.0

ISC 17 17:40:49.6±0.6, 40.40N±0.02×73.25E±0.01, h3km±3km, n212, σ2.35/245, mb4.6/34, 44C-21D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	Osh	0.38	290	eP	Pg	17 40 58.0	+1.1
OHH				eS	Sb	17 41 06.0	+0.8
OHH	Osh	0.38	290	⇑iP	Pg	17 40 58.0	+1.1
	baz=99						
OHH				⇑iS	Sg	17 41 03.2	+1.4
	baz=99						
SFK	Sufi-Kurgan	0.43	153	eP	Pg	17 40 58.0	+0.1
SFK				eS	Sg	17 41 04.0	+0.5
SFK	Sufi-Kurgan	0.43	153	⇑iP	Pg	17 40 58.4	+0.5
	baz=46						
SFK				⇑iS	Sg	17 41 04.1	+0.5
	baz=46						
FRG	Fergana	1.12	269	eP	Pg	17 41 12.0	+1.0
FRG				eS	Sg	17 41 27.0	+1.5
NAM	Namangan	1.35	297	eP	Pg	17 41 17.0	+1.6
NAM				eS	Sn	17 41 37.0	+3.3
DRK	Karamyk	1.44	231		Pn	17 41 16.7	-0.1
DRK				Sn	Sb	17 41 35.3	-0.8
DRK	Karamyk	1.44	231	⇑iP	Pn	17 41 16.5	-0.3
	baz=32						
DRK				⇑iS	Sb	17 41 35.1	-0.9
	baz=32						
AML	Almayashu	1.77	11	⇓P	Pb	17 41 23.6	+0.8
	4µm,0.6s,SNR=72						
AML				⇓S	Sg	17 41 47.5	+1.1
	6µm,0.6s						
AML	Almayashu	1.77	11	⇑iP	Pb	17 41 23.9	+1.1
	baz=11						
AML				⇑iS	Sg	17 41 48.2	+1.8
	baz=11						
BTK	Batken	1.89	261	PN	Pn	17 41 22.6	-0.2
BTK	Batken	1.89	261	eP	Pn	17 41 24.0	+1.2
BTK				eS	Sb	17 41 50.0	+1.2
BTK	Batken	1.89	261	Pn	Pn	17 41 22.6	-0.2
BTK	Batken	1.89	261	⇓iP	Pn	17 41 24.6	+1.8
	baz=62						
BTK				⇓iS	Sb	17 41 49.5	+0.7
	baz=62						
TRKS	Terek-Say	1.96	306	⇑eP	Pn	17 41 25.1	+1.3
	baz=6.0						
TRKS				⇑iS	Sb	17 41 50.8	0.0
	baz=6.0						
UCH	Uchtor	2.06	27	⇑P	Pn	17 41 28.1	+2.5
	165nm,0.4s,SNR=77						
UCH				⇑S	Sg	17 41 56.6	+0.6
	761nm,0.5s						
UCH	Uchtor	2.06	27	⇑eP	Pb	17 41 28.4	+0.5
	baz=27						
UCH				⇑iS	Sb	17 41 56.1	+1.9
	baz=27						
MNAS	Manas	2.16	345	⇑eP	Pn	17 41 29.2	+2.6
	baz=46						
MNAS				⇑iS	Sb	17 41 57.9	+1.2
	baz=46						
KSH	Kashi	2.27	112	Pn	Pn	17 41 29.3	+1.2
KSH				Sn	Sn	17 41 57.8	+1.2
KSH				smax	smax		
	comp=N,5µm,1.0s						
KSH				smax	smax		
	comp=E,2µm,0.6s						
EKS2	Erkin-Say	2.30	10	⇓P	Pb	17 41 31.7	-0.1
	224nm,0.5s,SNR=75						
EKS2				⇓S	Sg	17 42 03.7	+0.3
	626nm,0.5s						
EKS2	Erkin-Say	2.30	10	⇓eP	Pb	17 41 31.5	-0.3
	baz=10.0						
EKS2				⇓iS	Sb	17 42 01.5	+0.9
	baz=10.0						
MRKS	Merke	2.35	360	eP	Pb	17 41 33.7	+1.2
	596nm,0.4s						
MRKS				eS	Sg	17 42 04.4	-0.7
	1µm,0.3s						
MRKS	Merke	2.35	360	Pg	Pb	17 41 33.7	+1.2
	596nm,0.4s						
MRKS				Lg	Lg	17 42 04.4	
	1µm,0.3s						
AAK	Ala-Archa	2.43	22	Pn	Pn	17 41 33.4	+3.1
	151nm,0.3s,baz=187,slow=7.2,SNR=102						
AAK				Pg	Pb	17 41 35.5	+1.5
	151nm,0.3s,baz=190,slow=7.2,SNR=22						
AAK				Sn	Sb	17 42 05.0	+0.7
	155nm,0.3s,baz=66,slow=19,SNR=18						
AAK	Ala-Archa	2.43	22	⇓P	Pn	17 41 33.4	+3.1
	319nm,0.3s,SNR=27						
AAK				⇓S	Sb	17 42 05.1	+0.7
	1µm,0.4s						
AAK	Ala-Archa	2.43	22	d iPN	Pn	17 41 33.2	+2.9
AAK	Ala-Archa	2.43	22	Pn	Pb	17 41 35.2	+1.3
	266nm,0.4s						
AAK				Lg	Lg	17 42 06.3	
	688nm,0.5s						
AAK	Ala-Archa	2.43	22	Pn	Pn	17 41 32.7	+2.4
AAK				Sn	Sb	17 42 05.2	+0.9
AAK	Ala-Archa	2.43	22	⇑eP	Pn	17 41 33.4	+3.1
	baz=22						
AAK				⇑iS	Sb	17 42 04.7	+0.4
	baz=22						
KBK	Karagaybulak	2.59	29	⇓P	Pb	17 41 36.8	0.0
	129nm,0.4s,SNR=28						
KBK				⇓S	Sb	17 42 10.5	+1.4
	935nm,0.6s						
KBK	Karagaybulak	2.59	29	⇑eP	Pn	17 41 35.6	+3.0
	baz=29						
KBK				⇑iS	Sb	17 42 08.5	-0.7
	baz=29						
FRU1	Bishkek	2.63	23	PN	Pn	17 41 35.3	+2.4
FRU1	Bishkek	2.63	23		Pn	17 41 35.3	+2.4
FRU1	Bishkek	2.63	23	⇑eP	Pn	17 41 36.1	+3.2
	baz=22						
FRU1				⇑iS	Sb	17 42 09.6	-0.4
	baz=22						
GAR	Garm	2.66	239	Pn	Pn	17 41 35.6	+2.3
GAR	Garm	2.66	239	⇑eP	Pn	17 41 35.2	+1.8
	baz=40						
GAR				⇑iS	Sn	17 42 07.5	+1.4
	baz=40						
CHMS	Chumysh	2.83	23	P	Pn	17 41 38.9	+3.1
	99nm,0.3s,SNR=18						
CHMS	Chumysh	2.83	23	⇑eP	Pn	17 41 38.9	+3.1
	baz=23						
CHMS				⇑iS	Sn	17 42 14.1	+3.7
	baz=23						
DZA	Taraz	2.88	331	eP	Pb	17 41 43.5	+1.9
	386nm,0.5s						
DZA				eS	Sg	17 42 21.3	-0.7
	2µm,0.5s						
DZA	Taraz	2.88	331	Pg	Pb	17 41 43.5	+1.9
	386nm,0.5s						
DZA				Lg	Lg	17 42 21.3	
	2µm,0.5s						
ULHL	Ulahol	2.92	50	⇓P	Pn	17 41 39.3	+2.3
	25nm,0.3s,SNR=22						
ULHL	Ulahol	2.92	50	⇑eP	Pn	17 41 40.1	+3.1
	baz=49						
ULHL				⇑iS	Sn	17 42 16.4	+3.7
	baz=49						
TGS	TashGRES	3.01	291	eP	Pg	17 41 49.0	+1.8
TGS				eS	Sg	17 42 30.0	+3.9
USP	Ospenovka	3.02	18	⇑eP	Pn	17 41 41.6	+3.3
	baz=18						
USP				⇑iS	Sn	17 42 18.5	+3.6
	baz=18						
TKM2	Tokmak 2	3.08	34	PN	Pb	17 41 47.7	+2.6
TKM2	Tokmak 2	3.08	34	⇓Pg	Pb	17 41 47.7	+2.6
	130nm,0.8s						
TKM2				⇑Lg	Lg	17 42 26.5	
	355nm,0.6s						
TKM2	Tokmak 2	3.08	34	⇑eP	Pn	17 41 42.4	+3.2
	baz=34						
TKM2				⇑iS	Sn	17 42 20.0	+3.4
	baz=34						
TAS	Tashkent	3.14	288	eP	Pb	17 41 49.0	+3.0
TAS				eS	Sg	17 42 29.0	-1.4
KST	Kastek	3.34	37	eP	Pb	17 41 51.5	+2.1
	237nm,1.4s						
KST				eS	Sb	17 42 34.4	+3.9
	412nm,0.6s						
KST	Kastek	3.34	37	Pg	Pb	17 41 51.5	+2.1
	237nm,1.4s						
KST				Lg	Lg	17 42 34.4	
	412nm,0.6s						
CHM	Chimkent	3.35	306	eP	Pg	17 41 53.3	-0.5
	662nm,0.5s						
CHM				eS	Sg	17 42 37.6	+0.4
	4µm,0.4s						
KK31	Karatay Array	3.39	324	PN	Pn	17 41 45.0	+1.6
KK31	Karatay Array	3.39	324	⇓Pn	Pn	17 41 44.8	+1.4
	57nm,0.8s,baz=136,slow=12,SNR=190						
KK31				⇑Pg	Pb	17 41 53.2	+2.8
	59nm,0.3s,baz=139,slow=16,SNR=56						
KK31				Lg	Lg	17 42 36.3	
	90nm,0.3s,baz=145,slow=30,SNR=4.0						
KK31	Karatay Array	3.39	324		Pn	17 41 45.0	+1.6
KKAR	Karatay Array	3.39	324	PN	Pn	17 41 44.9	+1.5
KKAR	Karatay Array	3.39	324		Pn	17 41 44.9	+1.5
KKAR	Karatay Array	3.39	324	Pn	Pn	17 41 44.1	+0.7
KKAR	Karatay Array	3.39	324	⇑eP	Pn	17 41 46.3	+2.9
	baz=25						
KKAR				⇑iS	Sn	17 42 26.9	+2.8
	baz=25						
DGS	Degeres	3.41	33	eP	Pb	17 41 54.0	+3.3
	278nm,0.7s						
DGS				eS	Sg	17 42 39.1	-0.1
	436nm,0.7s						
DGS	Degeres	3.41	33	Pg	Pb	17 41 54.0	+3.3
	278nm,0.7s						
DGS				Lg	Lg	17 42 39.1	
	436nm,0.7s						
CHGR	Chuyangaron	3.61	243	Pn	Pn	17 41 47.8	+1.4
CHGR	Chuyangaron	3.61	243	⇓eP	Pn	17 41 48.2	+1.8
	baz=43						
CHGR				⇓iS	Sn	17 42 30.4	+0.9
	baz=43						
MTBS	Maitube	3.62	40	eP	Pb	17 41 57.5	+3.2
	71nm,0.6s						
MTBS				eS	Sg	17 42 44.5	-1.5
	280nm,0.5s						
MTBS	Maitube	3.62	40	Pg	Pb	17 41 57.5	+3.2
	71nm,0.6s						
MTBS				Lg	Lg	17 42 44.4	
	280nm,0.5s						
BRLS	Borolday	3.67	317	eP	Pb	17 41 57.2	+2.2
	276nm,0.5s						
BRLS				eS	Sg	17 42 44.4	-3.0
	867nm,0.4s						
BRLS	Borolday	3.67	317	Pg	Pb	17 41 57.2	+2.2
	276nm,0.5s						
BRLS				Lg	Lg	17 42 44.4	
	867nm,0.4s						
TNSS	Tian-Shan	3.83	45	eP	Pb	17 42 01.4	+3.5
	68nm,0.5s						
TNSS				eS	Sg	17 42 51.2	-1.2
	276nm,0.6s						
TNSS	Tian-Shan	3.83	45	Pg	Pb	17 42 01.5	+3.5
	68nm,0.5s						
TNSS				Lg	Lg	17 42 51.2	
	276nm,0.6s						
AAA	Alma-Ata	3.93	43	eP	Pb	17 42 03.5	+4.0
	167nm,0.5s						
AAA				eS	Sg	17 42 55.3	-0.4
	609nm,0.7s						
AAA	Alma-Ata	3.93	43	Pg	Pb	17 42 03.5	+4.0
	167nm,0.5s						
AAA				Lg	Lg	17 42 55.3	
	609nm,0.7s						
KNDC	Almaty	3.96	43	PN	Pg	17 42 04.8	-0.7
KNDC	Almaty	3.96	43	⇓Pg	Pg	17 42 04.8	-0.7
	247nm,0.8s						
KNDC				⇑Lg	Lg	17 42 56.0	
	482nm,0.8s						
MDOK	Medeo	3.96	45	eP	Pb	17 42 04.2	+4.1
	86nm,0.7s						
MDOK				eS	Sg	17 42 55.7	-1.2
	267nm,0.7s						
MDOK	Medeo	3.96	45	PN	Pb	17 42 02.6	+2.4
MDOK	Medeo	3.96	45	Pg	Pb	17 42 02.6	+2.4
	89nm,0.7s						
MDOK				Lg	Lg	17 42 55.5	
	370nm,0.9s						
MDOK	Medeo	3.96	45	Pg	Pb	17 42 04.2	+4.1
	86nm,0.7s						
MDOK				Lg	Lg	17 42 55.7	
	267nm,0.7s						
KOTS	Kotyrbulak	4.05	44	eP	Pb	17 42 05.8	+4.3
	103nm,0.7s						
KOTS				eS	Sg	17 42 59.1	-0.5
	578nm,0.7s						
KOTS	Kotyrbulak	4.05	44	Pg	Pb	17 42 05.8	+4.3
	103nm,0.7s						
KOTS				Lg	Lg	17 42 59.1	
	578nm,0.7s						
ANVS	Anan'yevo	4.08	53	⇑eP	Pn	17 41 56.4	+3.3
	baz=52						
ANVS				⇑iS	Sn	17 42 44.4	+3.0
	baz=52						
KUU	Kurty	4.18	32	eP	Pb	17 42 07.3	+3.5
	89nm,0.8s						
KUU				eS	Sg	17 43 01.3	-2.6
	214nm,0.8s						
KUU	Kurty	4.18	32	Pg	Pb	17 42 07.3	+3.5
	89nm,0.8s						
KUU				Lg	Lg	17 43 01.3	
	214nm,0.8s						
PRZ	Przheval'sk	4.40	60	PN	Pn	17 42 00.9	+3.5
PRZ	Przheval'sk	4.40	60	Pn	Pn	17 42 00.9	+3.5
BTLS	Baital	4.68	7	eP	Pb	17 42 14.8	+2.5
	32nm,0.5s						
BTLS				eS	Sg	17 43 15.7	-4.1
	129nm,0.3s						
BTLS	Baital	4.68	7	Pg	Pb	17 42 14.8	+2.5
	32nm,0.5s						
BTLS				Lg	Lg	17 43 15.7	
	129nm,0.3s						
SATY	Saty	4.69	54	eP	Pb	17 42 17.1	+4.6
	81nm,0.5s						
SATY				eS	Sg	17 43 18.0	-2.1
	182nm,1.0s						
SATY	Saty	4.69	54	Pg	Pb	17 42 17.1	+4.6
	81nm,0.5s						
SATY				Lg	Lg	17 43 18.0	
	182nm,1.0s						
KPKS	Kokpek	5.08	51	eP	Pb	17 42 24.1	+4.9
	69nm,1.0s						
KPKS				eS	Sg	17 43 30.2	-2.6
	139nm,0.5s						
ARXS	Arharly	5.11	40	eP	Pb	17 42 24.6	+5.0
	70nm,1.2s						
ARXS				eS	Sg	17 43 31.7	-1.8
	99nm,0.5s						
ARXS	Arharly	5.11	40	Pg	Pb	17 42 24.6	+5.0
	70nm,1.2s						
ARXS				Lg	Lg	17 43 31.7	
	99nm,0.5s						
UZB	Uzynbulak	5.12	56	eP	Pb	17 42 24.7	+4.9
	50nm,0.7s						
UZB				eS	Sg	17 43 31.0	-2.9
	116nm,1.3s						
UZB	Uzynbulak	5.12	56	Pg	Pb	17 42 24.7	+4.9
	50nm,0.7s						
UZB				Lg	Lg	17 43 31.0	
	116nm,1.3s						
BLB	Baldybastay	5.36	45	Pg	Pb	17 42 28.2	+4.2
	117nm,0.9s						
BLB				Lg	Lg	17 43 37.6	
	122nm,0.6s						
SHLS	Shalkode	5.40	57	eP	Pg	17 42 36.1	+3.0
	102nm,1.4s						
SHLS				eS	Sg	17 43 50.7	+7.6
	225nm,0.7s						
SHLS	Shalkode	5.40	57	Pg	Pg	17 42 36.1	+3.0
	102nm,1.4s						
SHLS				Lg	Lg	17 43 50.7	
	225nm,0.7s						
PDGK	Podgornoye	5.50	56	Pg	Pb	17 42 31.8	+5.4
	30nm,1.6s						
PDGK				Lg	Lg	17 43 43.3	
	38nm,0.9s						
PDGK	Podgornoye	5.50	56	⇑Pg	Pg	17 42 34.3	-0.8
	56nm,1.0s						
PDGK				⇑Lg	Lg	17 43 46.2	
	142nm,1.0s						
TDK	Taldyqorghan	5.97	38	eP	Pg	17 42 42.5	-1.4
	237nm,1.3s						
TDK				eS	Sg	17 44 01.6	+0.3
	248nm,0.8s						
TDK	Taldyqorghan	5.97	38	Pg	Pg	17 42 42.5	-1.4
	237nm,1.3s						
TDK				Lg	Lg	17 44 01.6	
	248nm,0.8s						
KTMS	Ketmen	6.11	58	eP	Pg	17 42 43.9	-2.8
	49nm,1.4s						
KTMS				eS	Sg	17 44 04.5	-1.4
	42nm,0.7s						
KTMS	Ketmen	6.11	58	Pg	Pg	17 42 43.9	-2.8
	49nm,1.4s						
KTMS				Lg	Lg	17 44 04.5	
	42nm,0.7s						
DJR	Jarkent	6.24	49	eP	Pb	17 42 44.5	+5.6
	79nm,2.1s						
DJR				eS	Sg	17 44 05.4	-4.5
	60nm,1.0s						
DJR	Jarkent	6.24	49	Pg	Pb	17 42 44.5	+5.6
	79nm,2.1s						
DJR				Lg	Lg	17 44 05.4	
	60nm,1.0s						
KAPS	Kapalarasan	6.63	41	eP	Pb	17 42 52.0	+6.4
	51nm,1.4s						
KAPS				eS	Sg	17 44 18.2	-4.4
	60nm,1.7s						
KAPS	Kapalarasan	6.63	41	Pg	Pb	17 42 52.0	+6.4
	51nm,1.4s						
KAPS				Lg	Lg	17 44 18.2	
	60nm,1.7s						
CEP	Cherat	6.65	190	⇓P	Pn	17 42 32.5	+4.3
CHCP	Chirah Chowk	6.72	180	P	Pn	17 42 33.6	+4.4
KBL	Kabul	6.73	211	PN	Pn	17 42 31.1	+1.6
KBL	Kabul	6.73	211		Pn	17 42 31.1	+1.6
NIL	Nilore	6.73	180	PN	Pn	17 42 31.8	+2.5
NIL	Nilore	6.73	180		Pn	17 42 31.8	+2.5
THW	Thamme Wali	7.68	190	P	Pn	17 42 44.5	+2.2
MK31	Makanchi Array	9.16	43	P	Pn	17 43 02.2	-0.3
MK31	Makanchi Array	9.16	43	Pn	Pn	17 43 02.2	-0.3
MKAR	Makanchi Array	9.16	43	Pn	Pn	17 43 04.9	+2.3
	0.2nm,0.3s,baz=221,slow=14,SNR=1.1						
MKAR				Lg	Lg	17 45 36.7	
	0.6nm,0.3s,baz=224,slow=33,SNR=2.0						
HRA	Herat	10.61	239	Pn	Pn	17 43 20.9	-1.8
KURBB	Kurchatov Arra	10.88	18	Pn	Pn	17 43 25.6	-0.4
	baz=208,slow=13,SNR=2.0						
KURBB				Lg	Lg	17 46 31.8	
	0.2nm,0.3s,baz=202,slow=31,SNR=3.8						
KURK	Kurchatov	10.98	18	P	Pn	17 43 25.6	-1.9
WMQ	Urumqi	11.27	68	eP	Pn	17 43 32.6	+1.2
GEYT	Alibeck	12.00	263	Pn	Pn	17 43 40.0	-1.5
	0.6nm,0.3s,baz=93,slow=12,SNR=1.3						
GEYT				Sn	Sn	17 45 48.3	-7.6
	0.7nm,0.3s,baz=80,slow=23,SNR=1.7						
GEYT	Alibeck	12.00	263	Pn	Pn	17 43 40.3	-1.2
GYA0B	ALIBECK ARRAY	12.00	263	Pn	Pn	17 43 40.8	-0.7
BVAR	Borovoye Array	12.78	352	Pn	Pn	17 43 51.4	-0.7
	0.6nm,0.3s,baz=188,slow=20,SNR=1.4						
BRVK	Borovoye	12.83	352	P	Pn	17 43 51.8	-0.9
BRVK	Borovoye	12.83	352	Pn	Pn	17 43 51.8	-0.9
ABKAR	Akbulak array	12.93	318	Pn	Pn	17 43 52.5	-1.6
ABKAR	Akbulak array	12.93	318	Pn	Pn	17 43 52.5	-1.6
AKTO	Aktyubinsk	14.64	318	Pn	Pn	17 44 15.6	-1.8
	0.9nm,0.3s,baz=113,slow=14,SNR=5.3						
PYUN	Piuthan	14.66	144	eP	Pn	17 44 12.9	-5.1
	98nm,0.5s						
DANN	Dangsing	14.81	141	eP	Pn	17 44 14.8	-5.3
	35nm,0.3s						
KOLN	Koldanda	15.22	143	eP	Pn	17 44 20.3	-5.3
	30nm,0.4s						
GKN	Gorkha	15.52	139	eP	Pn	17 44 25.2	-4.3
	27nm,0.3s						
ZAA0	Zalesovo Array	15.64	26	Pn	Pn	17 44 31.3	+0.5
ZAA0				IAmb	IAmb	17 45 06.9	
	comp=Z,93nm,1.6s						
ZALV	Zalesovo Beam	15.64	26	Pn	Pn	17 44 31.9	+1.1
	comp=Z,0.2nm,0.3s,baz=214,slow=12,SNR=1.4						
ZALV	Zalesovo Beam	15.64	26	P	Pn	17 44 32.1	+1.3
ZALV	Zalesovo Beam	15.64	26	Pn	Pn	17 44 32.1	+1.3
KKN	Kakani	16.02	138	eP	Pn	17 44 31.1	-5.0
DMN	Daman	16.08	139	eP	Pn	17 44 30.7	-6.2
GUN	Gumba	16.24	136	eP	Pn	17 44 34.9	-4.1
PKIN	Phulchoki	16.26	138	eP	Pn	17 44 34.1	-5.0
JIRN	Jiri	16.60	136	eP	Pn	17 44 39.1	-4.6
RAMN	Ramite	17.39	136	eP	Pn	17 44 48.0	-5.4
TAPN	Taplejung	17.68	133	eP	Pn	17 44 52.6	-4.4
ODAN	Odare	17.88	135	eP	Pn	17 44 54.9	-4.7
ARU	Arti	18.71	334	Pn	P	17 45 08.4	-0.5
	comp=Z,0.0nm,0.3s,baz=164,slow=11,SNR=2.0						
ARU	Arti	18.71	334	⇑eP	P	17 45 07.0	-1.9
ARU				pmax	pmax		
	comp=Z,158nm,1.4s						
ARU	Arti	18.71	334	P	P	17 45 05.3	-3.5
ARU				IAmb	IAmb	17 45 09.3	
	comp=Z,181nm,1.4s						
UOSS	Minazif	21.00	228	P	P	17 45 29.6	-4.5
BELG	Belogornoye	21.23	313	P	P	17 45 35.7	-0.7
	comp=Z,63nm,0.9s,baz=172,slow=19,SNR=4.2						
SHL	Shillong	21.45	128	P	P	17 45 37.9	-1.3
SHL				pmax	pmax		
	comp=Z,19nm,0.9s						
SHL	Shillong	21.45	128		P	17 45 37.9	-1.3
GNI	Garni	21.72	279	P	P	17 45 38.5	-3.4
GNI				pmax	pmax		
	comp=Z,53nm,1.2s						
GNI	Garni	21.72	279	P	P	17 45 38.5	-3.4
GNI				IAmb	IAmb	17 45 52.8	
	comp=Z,53nm,1.1s						
ONI	Oni	22.38	285	P	P	17 45 45.6	-3.3
ONI				pmax	pmax		
	comp=Z,65nm,1.6s						
ONI	Oni	22.38	285	P	P	17 45 45.6	-3.3
ONI				IAmb	IAmb	17 45 52.5	
	comp=Z,65nm,1.6s						
KIV	Kislovodsk	22.86	289	P	P	17 45 52.3	-1.7
KIV				pmax	pmax		
	comp=Z,105nm,1.8s						
KIV	Kislovodsk	22.86	289	P	P	17 45 52.3	-1.7
KIV				IAmb	IAmb	17 46 09.0	
	comp=Z,105nm,1.8s						
KIRV	Kirov	23.68	328	⇑eP	P	17 46 00.2	-1.8
SONM	Songino Array	24.79	61	P	P	17 46 11.5	-1.2
	comp=Z,8.9nm,1.2s,baz=276,slow=9.6,SNR=1.5						
SONM	Songino Array	24.79	61	P	P	17 46 11.5	-1.2
SONM				pmax	pmax		
	comp=Z,25nm,1.6s						
SONM	Songino Array	24.79	61	IAmb	IAmb	17 46 18.6	
	comp=Z,25nm,1.6s						
RAYN	Ar Rayn	28.76	243	P	P	17 46 46.5	-2.1
RAYN				pmax	pmax		
	comp=Z,18nm,1.7s						
RAYN	Ar Rayn	28.76	243	P	P	17 46 46.5	-2.1
HHC	Hu-ho-hao-te	28.93	76	eP	P	17 46 51.6	+1.6
HHC				pmax	pmax		
	comp=Z,34nm,1.1s						
NRIK	Noril'sk	29.98	10	⇓eP	P	17 47 01.0	+2.1
NRIK				pmax	pmax		
	comp=Z,200nm,1.9s						
AKASG	Malin Array Be	32.07	304	P	P	17 47 16.1	-1.3
	comp=Z,1.1nm,0.5s,baz=71,slow=7.0,SNR=1.3						
PALK	Pallekele	33.65	167	P	P	17 47 30.9	-0.7
PALK				pmax	pmax		
	comp=Z,76nm,1.6s						
PALK	Pallekele	33.65	167	P	P	17 47 30.9	-0.7
FIA1	FINESS Array S	35.35	322	P	P	17 47 42.6	-3.3
FINES	FINESS Array B	35.35	322	P	P	17 47 44.9	-0.9
	comp=Z,5.7nm,0.9s,baz=90,slow=9.5,SNR=4.8						
FINES	FINESS Array B	35.35	322	iP	P	17 47 44.2	-1.6
FINES				pmax	pmax		
	comp=Z,8.0nm,0.9s						
FINES	FINESS Array B	35.35	322	P	P	17 47 42.8	-3.0
NJ2	Nanjing	37.38	88	eP	P	17 48 04.4	+0.9
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
ARCES	ARCESS Array B	38.29	335	P	P	17 48 09.9	-0.8
	comp=Z,7.0nm,0.9s,baz=101,slow=5.1,SNR=8.5						
ARCES	ARCESS Array B	38.29	335	P	P	17 48 09.6	-1.2
MDJ	Mudanjiang	41.05	65	P	P	17 48 33.9	-0.2
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.7s						
HFS	Hagfors	41.19	319	P	P	17 48 33.9	-1.1
	comp=Z,4.3nm,0.7s,baz=98,slow=11,SNR=5.5						
TIXI	Tiksi	41.51	23	P	P	17 48 36.4	-1.0
	comp=Z,2.7nm,0.9s,baz=301,slow=7.0,SNR=1.9						
TIXI	Tiksi	41.51	23	P	P	17 48 36.4	-1.0
TIXI				pmax	pmax		
	comp=Z,37nm,1.8s						
TIXI	Tiksi	41.51	23	IAmb	IAmb	17 49 10.6	
	comp=Z,37nm,1.8s						

GEC2	GERESS Array S	42.24	302	P	P	17 48 40.3	-3.6
GEC2				IAmb	IAmb	17 48 59.0	
	comp=Z,23nm,1.8s						
GERES	GERESS Array B	42.24	302	P	P	17 48 44.4	+0.5
	comp=Z,0.8nm,0.6s,baz=67,slow=10.0,SNR=2.2						
GERES	GERESS Array B	42.24	302	P	P	17 48 40.6	-3.3
NC303	NORSAR Array S	42.34	321	P	P	17 48 42.5	-1.9
NOA	NORSAR Array B	42.42	320	P	P	17 48 43.6	-1.5
	comp=Z,0.8nm,0.7s,baz=91,slow=8.4,SNR=1.6						
TEY	Ternei	45.73	62	⇑*e*P	P	17 49 19.4	+7.6
TEY				pmax	pmax		
	comp=Z,10.0nm,1.2s						
EKA	Eskdalemuir Ar	50.78	314	P	P	17 49 49.0	-1.7
	comp=Z,2.2nm,0.8s,baz=85,slow=8.1,SNR=2.1						
EKA	Eskdalemuir Ar	50.78	314	P	P	17 49 49.0	-1.7
TOLK	Toolik Lake Re	66.71	16	P	P	17 51 40.5	-0.9
TOLK				IAmb	IAmb	17 52 12.9	
	comp=Z,11nm,1.6s						
TORD	Torodi Ar. Bea	67.58	268	P	P	17 51 44.7	-3.0
	comp=Z,1.3nm,0.6s,baz=43,slow=5.2,SNR=6.6						
TORD	Torodi Ar. Bea	67.58	268	P	P	17 51 44.1	-3.6
IMAR	Indian Mountai	67.93	19	P	P	17 51 47.4	-1.7
BMAR	Burnt Mountain	68.74	15	P	P	17 51 53.3	-0.9
J20K	Nowinta River	69.27	20	P	P	17 51 57.9	+0.4
J20K				IAmb	IAmb	17 52 09.7	
	comp=Z,36nm,1.8s						
INK	Inuvik	69.77	10	P	P	17 51 59.5	-1.0
	comp=Z,1.2nm,0.7s,baz=40,slow=1.2,SNR=4.0						
INK	Inuvik	69.77	10	P	P	17 51 57.7	-2.8
K20K	Telida	69.95	21	P	P	17 51 59.7	-2.1
K20K				IAmb	IAmb	17 52 35.6	
	comp=Z,22nm,1.6s						
MDM	Murphy Dome	70.09	17	P	P	17 51 59.2	-3.4
MDM				IAmb	IAmb	17 52 02.8	
	comp=Z,11nm,1.5s						
ILAR	Eielson Array	70.55	17	P	P	17 52 04.2	-1.2
	comp=Z,0.3nm,0.8s,baz=348,slow=4.0,SNR=1.8						
ILAR	Eielson Array	70.55	17	P	P	17 52 03.2	-2.2
PPLA	Purkeypile	70.83	20	P	P	17 52 05.4	-1.9
SCRK	Sand Creek	71.87	16	P	P	17 52 12.0	-1.5
SCRK				IAmb	IAmb	17 52 32.1	
	comp=Z,14nm,1.7s						
GHO	Glory Hole Cre	72.61	20	P	P	17 52 15.4	-2.6
SML	Sawmill	72.74	19	P	P	17 52 16.9	-1.8
SML				pmax	pmax		
	comp=Z,53nm,1.6s						
SML	Sawmill	72.74	19	P	P	17 52 16.9	-1.8
SCM	Sheep Creek Mo	72.96	19	P	P	17 52 18.7	-1.3
SCM				pmax	pmax		
	comp=Z,53nm,1.6s						
SCM	Sheep Creek Mo	72.96	19	P	P	17 52 18.7	-1.3
BCAR	Beaver Creek A	73.15	16	P	P	17 52 20.5	-0.5
DBIC	Dimbokro	76.65	267	P	P	17 52 39.6	-2.4
	comp=Z,1.9nm,0.7s,baz=8.4,slow=6.5,SNR=1.7						
WRA	Warramunga Arr	82.62	124	P	P	17 53 11.6	-2.7
	comp=Z,1.7nm,0.7s,baz=322,slow=4.9,SNR=13						
WRA	Warramunga Arr	82.62	124	*i* P	P	17 53 11.8	-2.5
WRA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ASAR	Alice Springs	85.10	127	P	P	17 53 23.8	-3.1
	comp=Z,1.4nm,0.7s,baz=313,slow=5.1,SNR=9.8						

*KRNET **17** 17:42:44.2±0.1, 40°.39N×73°.22E, h12^{km}, mb4.1*

ISC 17 17:42:43.6±1.2**, 40°.38N**±0°.03×**73°.28E**±0°.03**, h5**^{km}±14^{km}**, n19, σ1^{s}.49**/35**, 25C-13D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	Osh	0.40	291	⇓*i*P	Pg	17 42 51.0	-0.4
	baz=93						
OHH				⇓*i*S	Sg	17 42 56.5	-0.1
	baz=93						
SFK	Sufi-Kurgan	0.41	155	⇑*i*P	Pg	17 42 51.9	+0.4
	baz=50						
SFK				⇑*i*S	Sg	17 42 58.3	+1.4
	baz=50						
DRK	Karamyk	1.45	232	⇑*i*P	Pb	17 43 11.0	-0.2
	baz=31						
DRK				⇑*i*S	Sg	17 43 30.5	+0.3
	baz=31						
AML	Almayashu	1.77	10	⇑*i*P	Pb	17 43 17.5	+0.7
	baz=11						
AML				⇑*i*S	Sg	17 43 41.1	+0.4
	baz=11						
BTK	Batken	1.91	261	⇑*i*P	Pb	17 43 19.2	+0.3
	baz=61						
BTK				⇑*i*S	Sg	17 43 44.2	-0.7
	baz=61						
TRKS	Terek-Say	1.98	306	⇑*i*P	Pb	17 43 18.7	-1.5
	baz=5.0						
TRKS				⇑*i*S	Sb	17 43 44.6	-0.7
	baz=5.0						
UCH	Uchtor	2.07	26	⇓*i*P	Pb	17 43 22.0	+0.2
	baz=27						
UCH				⇓*i*S	Sb	17 43 49.6	+1.6
	baz=27						
MNAS	Manas	2.18	345	⇓*i*P	Pb	17 43 23.5	-0.1
	baz=46						
MNAS				⇓*i*S	Sb	17 43 51.9	+0.9
	baz=46						
EKS2	Erkin-Say	2.31	9	⇑*e*P	Pb	17 43 26.2	+0.4
	baz=10.0						
EKS2				⇑*i*S	Sb	17 43 55.5	+0.9
	baz=10.0						
AAK	Ala-Archa	2.43	22	⇑Pn	Pn	17 43 19.2	-4.9
	111nm,0.8s						
AAK				⇓Lg	Lg	17 44 01.1	
	287nm,0.8s						
AAK	Ala-Archa	2.43	22	⇑*i*P	Pb	17 43 27.1	-0.8
	baz=23						
AAK				⇑*i*S	Sb	17 43 58.2	0.0
	baz=23						
KBK	Karagaybulak	2.60	28	⇓*i*P	Pb	17 43 29.4	-1.3
	baz=29						
KBK				⇓*i*S	Sb	17 44 02.2	-0.8
	baz=29						
FRU1	Bishkek	2.63	22	⇑*e*P	Pb	17 43 30.1	-1.1
	baz=23						
FRU1				⇑*i*S	Sb	17 44 03.2	-0.6
	baz=23						
GAR	Garm	2.67	240	⇑*e*P	Pb	17 43 29.9	-2.0
	baz=39						
GAR				⇑*i*S	Sb	17 44 02.9	-2.1
	baz=39						
CHMS	Chumysh	2.84	22	⇑*i*P	Pb	17 43 32.8	-1.9
	baz=23						
CHMS				⇑*i*S	Sb	17 44 07.8	-2.0
	baz=23						
ULHL	Ulahol	2.91	49	⇓*i*P	Pb	17 43 34.2	-1.8
	baz=50						
ULHL				⇓*i*S	Sb	17 44 11.0	-1.0
	baz=50						
USP	Ospenovka	3.02	17	⇑*i*P	Pb	17 43 35.3	-2.6
	baz=18						
USP				⇑*i*S	Sb	17 44 12.1	-3.0
	baz=18						
TKM2	Tokmak 2	3.08	34	⇑*e*P	Pb	17 43 36.6	-2.3
	baz=34						
TKM2				⇑*i*S	Sb	17 44 14.7	-2.1
	baz=34						
KK31	Karatay Array	3.42	324	⇓Pg	Pn	17 43 40.2	+2.7
	29nm,0.4s,baz=147,slow=15						
KK31				⇓Lg	Lg	17 44 30.2	
	55nm,0.5s,baz=153,slow=27						

IDC 17 17:45:25.4±1.5**, 31°.83N×139°.99E, h0**^{km}**, mb3.6**/3**, mb1 3.6**/5**, mb1mx3.4**/54**, mbtmp3.5**/5**, ML2.9**/2**, Error ellipse: s-maj=76.3km s-min=18.1km az=80.0, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	1.30	352	Pn	Pg	17 45 50.4	+0.1
	12nm,0.3s,baz=233,slow=20,SNR=8.9						
JHJ				Sn	Sn	17 46 08.7	-0.2
	17nm,0.3s,baz=250,slow=23,SNR=1.5						
MJAR	Matsushiro Arr	4.93	343	Pn	Pn	17 46 41.4	+0.6
	0.1nm,0.3s,baz=159,slow=12,SNR=5.1						
MJAR				Sn	Sn	17 47 34.0	-4.5
	0.1nm,0.3s,baz=159,slow=22,SNR=1.7						
JCJ	Chichijima	5.09	157	Pn	Pn	17 46 43.1	+0.2
	2.6nm,0.3s,baz=259,slow=17,SNR=1.6						
JCJ				Sn	Sn	17 47 36.7	-5.7
	2.7nm,0.3s,baz=156,slow=22,SNR=1.1						
KURBB	Kurchatov Arra	48.42	312	P	P	17 54 09.1	-0.2
	0.2nm,0.5s,baz=90,slow=7.9,SNR=1.6						
WRA	Warramunga Arr	51.76	187	P	P	17 54 34.6	-0.2
	0.6nm,0.4s,baz=4.3,slow=7.6,SNR=13						
ASAR	Alice Springs	55.49	187	P	P	17 55 02.0	-0.1
	0.3nm,0.7s,baz=3.9,slow=6.7,SNR=4.8						

KRNET 17 17:46:23.0±0.1**, 40°.36N×73°.22E, h15**^{km}**, mb3.0, 24C-10D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	Osh	0.37	296	⇑*i*P	Pg	17 46 30.1	-0.4
	baz=96						
OHH				⇑*i*S	Sg	17 46 35.3	-0.4
	baz=96						
OHH	Osh	0.37	296	⇓*i*P	Pg	17 46 30.3	-0.2
	baz=95						
OHH				⇓*i*S	Sg	17 46 35.3	-0.4
	baz=95						
SFK	Sufi-Kurgan	0.41	148	⇑*i*P	Pg	17 46 30.7	-0.6
	baz=48						
SFK				⇑*i*S	Sg	17 46 36.6	-0.4
	baz=48						
SFK	Sufi-Kurgan	0.41	148	⇓*i*P	Pg	17 46 31.2	-0.1
	baz=48						
SFK				⇓*i*S	Sg	17 46 37.2	+0.2
	baz=48						
SALK	Salom-Alik	0.69	41	⇓*e*P	Pg	17 46 36.2	-0.3
	baz=41						
SALK				⇓*e*S	Sb	17 46 46.4	+0.1
	baz=41						
SALK	Salom-Alik	0.69	41	⇑*e*P	Pg	17 46 36.6	+0.1
	baz=42						
SALK				⇑*e*S	Sg	17 46 45.8	+0.1
	baz=42						
DRK	Karamyk	1.40	232	⇑*i*P	Pb	17 46 49.0	0.0
	baz=32						
DRK				⇑*i*S	Sg	17 47 08.3	0.0
	baz=32						
DRK	Karamyk	1.40	232	⇑*i*P	Pb	17 46 49.3	+0.3
	baz=31						
DRK				⇑*i*S	Sg	17 47 08.6	+0.3
	baz=31						
AML	Almayashu	1.80	11	⇑*i*P	Pb	17 46 55.9	0.0
	baz=11						
AML				⇑*i*S	Sg	17 47 20.6	-0.5
	baz=11						
AML	Almayashu	1.80	11	⇑*i*P	Pb	17 46 56.7	+0.8
	baz=12						
AML				⇑*i*S	Sg	17 47 19.9	-1.2
	baz=12						
BTK	Batken	1.86	261	⇑*i*P	Pb	17 46 57.4	+0.6
	baz=61						
BTK				⇑*i*S	Sg	17 47 22.3	-0.7
	baz=61						
BTK	Batken	1.86	261	⇑*i*P	Pb	17 46 57.5	+0.7
	baz=61						
BTK				⇑*i*S	Sg	17 47 22.0	-1.0
	baz=61						
TRKS	Terek-Say	1.96	307	⇓*e*P	Pb	17 46 57.6	-0.9
	baz=6.0						
TRKS				⇓*i*S	Sb	17 47 23.3	+0.5
	baz=6.0						
TRKS	Terek-Say	1.96	307	⇓*i*P	Pb	17 46 57.5	-1.0
	baz=6.0						
TRKS				⇓*i*S	Sb	17 47 23.0	+0.2
	baz=6.0						
UCH	Uchtor	2.10	27	⇑*i*P	Pb	17 47 00.7	-0.4
	baz=27						
UCH				⇑*i*S	Sb	17 47 28.0	+0.8
	baz=27						
MNAS	Manas	2.19	346	⇑*i*P	Pb	17 47 01.7	-0.7
	baz=46						
MNAS				⇑*e*S	Sb	17 47 29.8	+0.4
	baz=46						
MNAS	Manas	2.19	346	⇑*i*P	Pb	17 47 01.8	-0.6
	baz=46						
MNAS				⇑*i*S	Sb	17 47 30.1	+0.7
	baz=46						

IDC 17 17:51:22.2±2.7**, 13°.40S×67°.11E, h0**^{km}**, mb3.6**/4**, mb1 3.6**/4**, mb1mx3.4**/42**, mbtmp3.6**/4**, Error ellipse: s-maj=97.8km s-min=43.8km az=58.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	7.78	43	T	T	18 01 37.4	
	baz=225,slow=76,SNR=17						
H08S2	Diego Garcia H	7.79	43	T	T	18 01 37.9	
	baz=225,slow=76,SNR=53						
H08S3	Diego Garcia H	7.79	43	T	T	18 01 40.2	
	baz=225,slow=76,SNR=155						
H01W3	Cape Leeuwin H	47.43	125	T	T	18 51 12.9	
	baz=285,slow=75,SNR=3.3						
H01W2	Cape Leeuwin H	47.43	125	T	T	18 51 11.4	
	baz=285,slow=75,SNR=5.3						
H01W1	Cape Leeuwin H	47.45	125	T	T	18 51 15.8	
	baz=285,slow=75,SNR=4.2						
MKAR	Makanchi Array	61.45	12	P	P	18 01 40.4	-0.1
	0.4nm,0.7s,baz=190,slow=7.2,SNR=2.2						
ASAR	Alice Springs	63.67	110	P	P	18 01 56.2	+0.3
	0.4nm,0.8s,baz=272,slow=6.4,SNR=2.5						
ZALV	Zalesovo Beam	68.76	11	P	P	18 02 28.5	+0.7
	0.9nm,0.6s,baz=210,slow=7.0,SNR=2.7						
SONM	Songino Array	70.28	27	P	P	18 02 36.7	-0.8
	0.2nm,0.6s,baz=206,slow=6.7,SNR=1.9						
PDAR	Pinedale Array	150.60	355	PKPbc	PKPbc	18 11 15.4	-1.3
	0.5nm,0.7s,baz=84,slow=2.8,SNR=4.7						
PDAR				PKPab	PKPab	18 11 23.6	+0.4
	1.0nm,0.7s,baz=72,slow=2.9,SNR=8.2						

IDC 17 17:52:06.0±4.1**, 17°.60S×178°.79W, h565**^{km}±20^{km}**, mb3.0**/4**, mb1 3.2**/5**, mb1mx2.9**/43**, mbtmp3.9**/5**, Error ellipse: s-maj=141.3km s-min=29.9km az=138.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.02	267	P	P	17 53 22.5	0.0
	4.0nm,0.3s,baz=109,slow=3.0,SNR=37						
STKA	Stephens Creek	38.47	241	P	P	17 58 40.8	+0.4
	1.3nm,0.7s,baz=80,slow=8.1,SNR=4.9						
WRA	Warramunga Arr	44.34	259	P	P	17 59 26.2	-0.7
	0.4nm,0.5s,baz=99,slow=7.5,SNR=6.8						
ASAR	Alice Springs	44.53	254	P	P	17 59 28.4	-0.1
	4.5nm,0.6s,baz=89,slow=8.2,SNR=96						
ILAR	Eielson Array	85.67	13	P	P	18 03 45.0	-0.1
	0.3nm,0.6s,baz=227,slow=4.9,SNR=4.7						

KRNET 17 17:54:47.7±0.1**, 40°.35N×73°.22E, h18**^{km}**, mb2.5, 32C-12D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	Osh	0.37	298	⇑*i*P	Pg	17 54 52.4	-3.1
	baz=99						
OHH				⇑*i*S	Sg	17 54 57.6	-3.3
	baz=99						
OHH	Osh	0.37	298	⇑*i*P	Pg	17 54 55.4	-0.1
	baz=98						
OHH				⇑*i*S	Sg	17 55 00.5	-0.4
	baz=98						
SFK	Sufi-Kurgan	0.40	147	⇑*i*P	Pg	17 54 52.8	-3.3
	baz=45						
SFK				⇑*i*S	Sg	17 54 58.4	-3.3
	baz=45						
SFK	Sufi-Kurgan	0.40	147	⇓*i*P	Pg	17 54 55.9	-0.2
	baz=46						
SFK				⇓*i*S	Sg	17 55 01.1	-0.6
	baz=46						
SALK	Salom-Alik	0.70	41	⇑*e*P	Pb	17 54 59.0	-2.5
	baz=40						
SALK				⇑*e*S	Sb	17 55 08.4	-2.5
	baz=40						
SALK	Salom-Alik	0.70	41	⇑*e*P	Pg	17 55 01.6	+0.1
	baz=40						
SALK				⇑*e*S	Sg	17 55 11.1	+0.2
	baz=40						
DRK	Karamyk	1.39	232	⇑*i*P	Pn	17 55 11.1	-1.4
	baz=32						
DRK				⇑*i*S	Sn	17 55 29.5	-1.1
	baz=32						
DRK	Karamyk	1.39	232	⇑*i*P	Pb	17 55 13.5	+0.2
	baz=32						
DRK				⇑*i*S	Sg	17 55 32.2	-0.6
	baz=32						
AML	Almayashu	1.82	11	⇑*i*P	Pn	17 55 19.1	+0.7
	baz=11						
AML				⇑*i*S	Sb	17 55 43.4	+0.2
	baz=11						
AML	Almayashu	1.82	11	⇑*i*P	Pb	17 55 20.9	+0.3
	baz=11						
AML				⇑*i*S	Sg	17 55 44.8	-1.6
	baz=11						
BTK	Batken	1.86	262	⇑*i*P	Pn	17 55 19.4	+0.7
	baz=62						
BTK				⇑*i*S	Sb	17 55 44.6	+0.5
	baz=62						
BTK	Batken	1.86	262	⇑*i*P	Pb	17 55 21.2	0.0
	baz=62						
BTK				⇑*i*S	Sg	17 55 46.4	-1.2
	baz=62						
TRKS	Terek-Say	1.97	308	⇑*i*P	Pn	17 55 20.3	0.0
	baz=7.0						
TRKS				⇑*i*S	Sb	17 55 46.1	-1.2
	baz=7.0						
TRKS	Terek-Say	1.97	308	⇑*i*P	Pb	17 55 22.3	-0.8
	baz=6.0						
TRKS				⇑*i*S	Sb	17 55 47.7	+0.4
	baz=6.0						
UCH	Uchtor	2.12	27	⇑*i*P	Pn	17 55 23.7	+1.1
	baz=27						
UCH				⇑*i*S	Sb	17 55 50.8	-1.1
	baz=27						
UCH	Uchtor	2.12	27	⇓*i*P	Pb	17 55 25.2	-0.6
	baz=27						
UCH				⇓*i*S	Sb	17 55 51.5	-0.4
	baz=27						
MNAS	Manas	2.20	346	⇓*i*P	Pn	17 55 24.4	+0.9
	baz=46						
MNAS				⇓*i*S	Sb	17 55 53.6	-0.5
	baz=46						
MNAS	Manas	2.20	346	⇓*i*P	Pb	17 55 26.2	-0.9
	baz=46						
MNAS				⇓*i*S	Sb	17 55 54.2	+0.1
	baz=46						
EKS2	Erkin-Say	2.35	10	⇓*i*P	Pn	17 55 26.9	+1.4
	baz=10.0						
EKS2				⇓*i*S	Sb	17 55 57.0	-1.3
	baz=10.0						
EKS2	Erkin-Say	2.35	10	⇓*i*P	Pb	17 55 28.8	-0.8
	baz=10.0						
EKS2				⇓*i*S	Sb	17 55 57.9	-0.4
	baz=10.0						
AAK	Ala-Archa	2.48	22	⇑*i*P	Pn	17 55 28.7	+1.4
	baz=22						
AAK				⇑*i*S	Sb	17 55 59.8	-2.3
	baz=22						
AAK	Ala-Archa	2.48	22	⇑*i*P	Pb	17 55 30.9	-0.9
	baz=22						
AAK				⇑*i*S	Sb	17 56 00.7	-1.4
	baz=22						

*IDC **17** 17:57:13.7±1.8, 20°.96S×68°.36W, h115^{km}±18^{km}, mb4.1/4, mb1 3.9/6, mb1mx3.6/29, mbtmp4.4/6, MS3.1/2, Ms1 3.1/2, ms1mx2.7/21, Error ellipse: s-maj=39.7km s-min=18.0km az=126.0*

*VAO **17** 17:57:14.3±0.3, 21°.01S×68°.63W, h130^{km}, mb4.3*

*NEIC **17** 17:57:14.1±1.9, 21°.02S±0°.06×68°.60W±0°.10, h129^{km}±8^{km}, mb4.1/8, ML3.8(GUC), Error ellipse: s-maj=13.0km s-min=8.2km az=91.0*

*GUC **17** 17:57:15.0±0.5, 21°.04S×68°.59W, h130^{km}±3^{km}, ML3.8*

ISC 17 17:57:13.8±0.6**, 21°.00S**±0°.03×**68°.58W**±0°.06**, h129**^{km}±6^{km}**, n105, σ1^{s}.24**/123**, mb4.3**/6**, 14C-1D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB01	IPOC Station P	0.85	267	⇑*i*P	Pn	17 57 35.8	+0.5
PB01				*i* S	Sn	17 57 51.9	+0.1
PB01				IAML		17 57 53.4	
	comp=N,3μm,0.3s						
PB01	IPOC Station P	0.85	267	Pn	Pn	17 57 35.3	-0.1
PB01				Sn	Sn	17 57 51.3	-0.5
PB09	IPOC Station P	1.00	218	⇑*i*P	Pn	17 57 37.8	+0.9
PB09				*i* S	Sn	17 57 55.3	+0.9
PB09	IPOC Station P	1.00	218		Pn	17 57 37.6	+0.8
PB08	IPOC Station P	1.01	328	⇑*i*P	Pn	17 57 38.6	+1.4
PB08				*i* S	Sn	17 57 56.2	+1.3
PB08				IAML		17 57 57.8	
	comp=N,2μm,0.2s						
PB08	IPOC Station P	1.01	328		Pn	17 57 37.9	+0.7
PB02	IPOC Station P	1.27	255	⇑*i*P	Pn	17 57 40.1	+0.6
PB02				*i* S	Sn	17 57 58.8	-0.1
PB02				IAML		17 57 59.7	
	comp=N,4μm,0.3s						
PB07	IPOC Station P	1.42	239	⇑*i*P	Pn	17 57 41.5	+0.4
PB07				*i* S	Sn	17 58 01.6	-0.3
PB07				IAML		17 58 04.0	
	comp=E,1μm,0.2s						
PB07	IPOC Station P	1.42	239		Pn	17 57 40.8	-0.3
PATCX	Punta Patache	1.48	277	⇑*i*P	Pn	17 57 42.4	+0.6
PATCX				*i* S	Sn	17 58 02.9	-0.1
PATCX				IAML		17 58 04.8	
	comp=N,2μm,0.2s						
PATCX	Punta Patache	1.48	277		Pn	17 57 42.2	+0.5
PB03	IPOC Station P	1.51	226	⇑*i*P	Pn	17 57 42.5	+0.4
PB03				*i* S	Sn	17 58 03.2	-0.5
PB03				IAML		17 58 04.0	
	comp=N,1μm,0.4s						
TA01	Diego Aracena	1.56	286	⇑*i*P	Pn	17 57 42.8	+0.2
TA01				*i* S	Sn	17 58 04.0	-0.4
TA01				IAML		17 58 05.1	
	comp=E,1μm,0.2s						
TA01	Diego Aracena	1.56	286		Pn	17 57 42.7	+0.2
PB11	IPOC Station P	1.60	320	⇑*i*P	Pn	17 57 43.8	+0.7
PB11				*i* S	Sn	17 58 06.1	+0.7
PB11				IAML		17 58 06.9	
	comp=N,2μm,0.2s						
PB11	IPOC Station P	1.60	320	Pn	Pn	17 57 43.7	+0.6
TA02	Huaiquique	1.63	296	*e*P	Pn	17 57 43.8	+0.6
TA02				*e*S	Sn	17 58 05.7	0.0
TA02	Huaiquique	1.63	296		Pn	17 57 43.6	+0.3
LVC	Limon Verde	1.63	191	P	Pn	17 57 44.5	+0.8
	comp=N,52nm,0.3s,baz=14,slow=9.8,SNR=218						
LVC				S	Sn	17 58 06.7	+0.2
	comp=N,83nm,0.3s,baz=100,slow=23,SNR=42						
LVC	Limon Verde	1.63	191	⇑*i*P	Pn	17 57 44.5	+0.8
LVC				*i* S	Sn	17 58 07.0	+0.5
LVC	Limon Verde	1.63	191	*e*P	Pn	17 57 44.5	+0.8
LVC				*e*S	Sn	17 58 07.0	+0.5
LVC	Limon Verde	1.63	191	Pn	Pn	17 57 44.3	+0.6
PB06	IPOC Station P	1.93	208	⇑*i*P	Pn	17 57 47.5	+0.5
PB06				*i* S	Sn	17 58 12.3	-0.1
PB06	IPOC Station P	1.93	208		Pn	17 57 47.3	+0.3
PB04	IPOC Station P	1.97	228	⇑*i*P	Pn	17 57 47.7	+0.1
PB04				*i* S	Sn	17 58 12.1	-1.3
PB04				IAML		17 58 18.3	
	comp=E,856nm,0.4s						
PB04	IPOC Station P	1.97	228		Pn	17 57 47.6	0.0
PB15	IPOC Station P	2.35	201	⇑*i*P	Pn	17 57 52.6	+0.4
PB15				*i* S	Sn	17 58 22.0	+0.3
PB15	IPOC Station P	2.35	201		Pn	17 57 52.5	+0.4
PB05	IPOC Station P	2.38	219	⇑*i*P	Pn	17 57 52.5	-0.1
PB05				*i* S	Sn	17 58 20.5	-1.8
PB05				IAML		17 58 31.2	
	comp=N,323nm,0.2s						
PB12	IPOC Station P	2.89	325	*e*P	Pn	17 57 58.5	-0.6
PB12				*e*S	Sn	17 58 33.1	-0.9
PB12				IAML		17 58 39.0	
	comp=E,230nm,0.4s						
PB12	IPOC Station P	2.89	325		Pn	17 57 58.8	-0.3
PB10	IPOC Station P	3.10	216	⇓*e*P	Pn	17 58 01.1	-0.5
PB10				*e*S	Sn	17 58 34.6	-4.0
PB10				IAML		17 58 44.1	
	comp=N,159nm,0.6s						
PB10	IPOC Station P	3.10	216	Pn	Pn	17 58 01.1	-0.5
AP01	Chacalluta	3.10	327	Pn	Pn	17 58 00.6	-1.1
PB14	IPOC Station P	3.98	205	Pn	Pn	17 58 12.4	-1.1
LPAZ	La Paz	4.71	5	*e*P	Pn	17 58 24.8	+1.2
GO03	Copiap	6.73	193	Pn	Pn	17 58 47.6	-2.6
SIV	San Ignacio	8.69	56	P	Pn	17 59 14.6	-2.0
	comp=N,12nm,0.3s,baz=246,slow=11,SNR=91						
SIV				S	Sn	18 00 46.5	-6.6
	baz=308,slow=19,SNR=5.6						
PTLB	Pontes e Lacer	10.53	60	Pn	Pn	17 59 39.2	-2.1
VILB	Vilhena	11.32	46	*e*P	Pn	17 59 53.9	+2.0
VILB	Vilhena	11.32	46	Pn	Pn	17 59 50.9	-1.0

CPUP	Villa Florida	11.59	119	P	Pn	17 59 52.4	-2.9
	comp=N,0.1nm,0.3s,baz=307,slow=10,SNR=3.1						
CPUP				LR	LR	18 04 41.8	
	comp=N,89nm,20.4s,baz=30,slow=39						
NNA	Nana	11.96	317	LR	LR	18 04 59.0	
	comp=N,106nm,21.4s,baz=212,slow=39						
CZSB	Cruzeiro do Su	13.79	343	eP	Pn	18 00 23.2	-0.7
PDRB	Porto dos Gac	14.71	52	eP	Pn	18 00 36.6	+1.0
TRCB	Terra Rica	14.91	100	eP	P	18 00 39.8	-0.7
TRCB	Terra Rica	14.91	100	P	P	18 00 40.7	+0.2
PTGB	Pitanga	15.66	107	eP	P	18 00 49.5	+0.6
CLDB	Colider	15.88	53	eP	P	18 00 51.6	+0.4
PCMB	Pacaembu	16.15	95	eP	P	18 00 55.2	+1.0
CPSB	Cacapava Do Su	16.53	128	eP	P	18 00 58.3	0.0
ARAG	Araguaiana, MT	16.76	74	eP	P	18 01 02.1	+1.1
ITRB	Iturama	17.13	89	eP	Pn	18 01 06.9	+1.4
PLTB	Pedras Altas	17.15	132	eP	Pn	18 01 06.4	+0.9
FRTB	Fartura	17.77	101	eP	Pn	18 01 13.0	-0.1
TIJ01	Guaruva-PR	18.50	107	eP	Pn	18 01 22.2	+0.3
BB19B	Bebedouro	18.72	94	eP	P	18 01 23.1	+0.6
SNDB	Serra Nova Dou	18.83	64	eP	P	18 01 23.7	-0.1
NPGB	Novo Progresso	18.87	45	eP	P	18 01 23.8	-0.4
MACA	Manacapuru-AM	19.33	24	eP	Pn	18 01 31.1	-0.4
IPMB	Ipameri, GO	19.43	85	eP	P	18 01 31.0	+0.7
RCLB	Rio Claro- Sao	19.61	98	eP	P	18 01 31.8	-0.3
PLCA	Paso Flores	19.74	184	P	P	18 01 30.7	-2.7
PLCA				IAmb	IAmb	18 01 43.5	
	comp=Z,7.8nm,1.4s						
VAO	Valinhos	20.14	100	eP	P	18 01 37.8	-0.1
BDFB	Brasilia	20.23	78	P	P	18 01 38.8	-0.2
	comp=Z,6.4nm,0.5s,baz=244,slow=5.7,SNR=10						
BDFB	Brasilia	20.23	78	P	P	18 01 38.0	-1.0
BDFB				IAmb	IAmb	18 02 10.2	
	comp=Z,17nm,1.4s						
ITTB	Itaituba	20.72	39	eP	P	18 01 43.3	-0.7
PEXB	Peixe	21.34	69	eP	P	18 01 52.9	+2.2
PTGA	Pitinga	21.83	24	P	P	18 01 54.9	-1.1
	comp=Z,3.8nm,0.3s,baz=156,slow=6.2,SNR=5.9						
PTGA	Pitinga	21.83	24	IAmb	IAmb	18 02 00.4	
	comp=Z,3.7nm,0.7s						
BSCB	Bom Sucesso	22.22	94	eP	P	18 02 01.0	+0.9
PRPB	Parauapebas	23.41	54	eP	P	18 02 11.2	-0.2
SMTB	Santa Maria do	23.56	62	eP	P	18 02 12.9	+0.1
DIAM	Diamantina, MG	23.60	88	eP	P	18 02 13.4	+0.1
MALB	Monte Alegre	23.60	38	eP	P	18 02 13.4	+0.3
MC01	Montes Claros	23.69	84	eP	P	18 02 13.7	-0.2
JANB	Januaria	23.80	80	eP	P	18 02 14.6	-0.4
SDBA	SAO DESIDERIO	24.21	73	eP	P	18 02 19.5	+0.9
BOAV	Boa Vista	24.56	20	eP	P	18 02 22.6	+1.0
BOAV	Boa Vista	24.56	20	P	P	18 02 22.8	+1.1
BOAV				IAmb	IAmb	18 02 46.1	
	comp=Z,17nm,1.5s						
MCPB	Macapa, AP	26.10	40	eP	P	18 02 36.8	+1.1
BSFB	Barra de Sao F	26.15	90	eP	P	18 02 36.5	+0.4
RIB01	Linhares ES	26.50	91	eP	P	18 02 39.1	-0.2
GUA01	Guaratinga, BA	27.57	86	eP	P	18 02 49.6	+0.8
CMC01	Camacan, BA	28.15	83	eP	P	18 02 55.2	+1.3
NBIT	Itapeh - BA	28.34	83	eP	P	18 02 56.5	+0.8
GDU01	Guandu, BA	28.58	80	eP	P	18 02 57.7	-0.2
NBPN	Ponto Novo - B	29.05	74	eP	P	18 03 02.4	+0.3
NBPS	Pedro II - PI	31.10	62	eP	P	18 03 21.0	+0.7
NBLA	Lagarto - SE	31.17	76	eP	P	18 03 20.6	-0.1
NBPB	Pedra_Branca-C	32.04	65	eP	P	18 03 29.7	+1.3
NBAN	Anadia - AL	33.06	75	eP	P	18 03 38.0	+0.7
NBLV	Livramento - P	33.47	71	eP	P	18 03 42.5	+1.6
NBPA	Parau_RN	34.06	68	eP	P	18 03 47.0	+1.1
NBPV	Pedro Velho	35.33	71	eP	P	18 03 58.5	+1.6
PMSA	Palmer Station	43.85	177	eP	P	18 05 06.6	-0.1
SNAA	Sanae	62.65	161	P	P	18 07 26.1	+1.9
SNAA				IAmb	IAmb	18 07 58.9	
	comp=Z,3.2nm,1.3s						
DBIC	Dimbokro	68.30	73	P	P	18 08 01.4	+0.1
	comp=Z,1.9nm,0.4s,baz=239,slow=6.5,SNR=5.3						
DBIC	Dimbokro	68.30	73	IAmb	IAmb	18 08 01.6	
	comp=Z,6.5nm,1.1s						
QSPA	South Pole Qui	69.19	180	P	P	18 08 08.1	+1.9
QSPA				IAmb	IAmb	18 08 44.2	
	comp=Z,4.8nm,1.4s						
TORD	Torodi Ar. Bea	76.90	70	P	P	18 08 52.5	+0.3
	comp=Z,4.6nm,0.7s,baz=254,slow=5.4,SNR=23						
TORD	Torodi Ar. Bea	76.90	70	P	P	18 08 52.6	+0.4
WRA	Warramunga Arr	133.54	210	PKP	PKiKP	18 16 17.8	+0.8
	comp=Z,0.3nm,0.7s,baz=157,slow=1.9,SNR=5.2						
MKAR	Makanchi Array	145.05	36	PKP	PKPdf	18 16 37.2	+1.4
	comp=Z,0.5nm,0.7s,baz=337,slow=2.2,SNR=2.5						
HHC	Hu-ho-hao-te	160.22	360	eP	PKPdf	18 16 53.8	-4.3

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*DJA **17** 18:00:58.4±0.7, 8˚S±7˚×12˚8E±˚, h159km±21km, M4.0/7, mB4.6/1, mb4.0/7, MLv4.1/5, Mw(mB)3.8/1*

ISC 17 18:00:58.1±1.3,**7°.7S**±0°.1×**128°.01E**±0°.10,**h150km,n13, σ0s.81**/13,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	3.28	95	P	Pn	18 01 49.2	+0.2
SAUI	Saumlaki	3.28	95	P	Pn	18 01 49.4	+0.4
BNDI	Bandanaira	3.69	31	P	Pn	18 01 53.4	-0.9
SOEI	Soe	4.22	241	P	Pn	18 02 01.3	0.0
SOEI	Soe	4.22	241	P	Pn	18 02 01.6	+0.3
BATI	Baumata	4.96	240	P	Pn	18 02 11.4	+0.4
EDFI	Ende, Flores	6.34	260	P	Pn	18 02 29.8	+0.4
	0.0nm4.8nm,0.8s						
FAKI	Fak Fak	6.36	42	P	Pn	18 02 29.2	-0.5
BKSI	Bulukumba	8.18	286	P	Pn	18 02 55.7	+1.7
	22nm,0.8s						
BNSI	Bone	8.51	292	P	Pn	18 02 59.3	+0.9
	12nm,0.8s						
WBSI	Waikabubak, Su	8.73	257	P	Pn	18 03 00.5	-0.8
	16nm,1.1s						
PLAI	Plampang	10.18	263	P	Pn	18 03 20.0	-0.6
	22nm,0.8s						
TWSI	Taliwang, Sumb	11.06	264	P	Pn	18 03 31.9	-0.2

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*KRNET **17** 18:05:34.7±0.1, 40°.40N×73°.25E, h13km, mb3.1*
*ISU **17** 18:05:36, 40°.40N×73°.10E, h5km*
*NNC **17** 18:05:39.1±2.0, 40°.62N×73°.22E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=15.9km s-min=8.7km az=174.0*
*SOME **17** 18:05:39.5, 40°.78N×73°.23E, h0km*

ISC 17 18:05:34.8±0.8,**40°.44N**±0°.03×**73°.34E**±0°.02,**h10km,n44, σ1s.38**/71,**26C-8D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	Osh	0.43	281	eP	Pg	18 05 43.0	-0.3
OHH				eS	Sg	18 05 48.0	-1.0
OHH	Osh	0.43	281	⇑iP	Pg	18 05 42.3	-1.0
	baz=90						
OHH				⇑iS	Sg	18 05 47.3	-1.7
	baz=90						
SFK	Sufi-Kurgan	0.44	164	⇓eP	Pg	18 05 42.7	-0.9
	baz=53						
SFK				⇓eS	Sg	18 05 48.8	-0.7
	baz=53						
DRK	Karamyk	1.52	231	⇑iP	Pn	18 06 01.6	-0.8
	baz=31						
DRK				⇑iS	Sn	18 06 21.4	-1.0
	baz=31						
AML	Almayashu	1.71	9	⇑iP	Pg	18 06 07.3	-0.4
	baz=11						
AML				⇑iS	Sg	18 06 31.5	+1.6
	baz=11						
BTK	Batken	1.97	260	eP	Pn	18 06 01.0	-7.3
BTK				eS	Sb	18 06 36.0	+0.6
BTK	Batken	1.97	260	⇓iP	Pb	18 06 09.8	-1.0
	baz=60						
BTK				⇓iS	Sb	18 06 35.1	-0.3
	baz=60						
TRKS	Terek-Say	1.99	304	⇑iP	Pb	18 06 09.8	-1.4
	baz=5.0						
TRKS				⇑iS	Sb	18 06 35.1	-1.0
	baz=5.0						
MNAS	Manas	2.14	343	⇑iP	Pb	18 06 13.3	-0.5
	baz=45						
MNAS				⇑iS	Sg	18 06 41.7	-1.9
	baz=45						
EKS2	Erkin-Say	2.24	8	⇓eP	Pb	18 06 15.7	+0.2
	baz=10.0						
EKS2				⇓iS	Sg	18 06 45.5	-1.4
	baz=10.0						
MRKS	Merke	2.31	358	eP	Pg	18 06 18.2	-0.8
	16nm,0.4s						
MRKS				eS	Sg	18 06 46.5	-2.4
	36nm,0.3s						
MRKS	Merke	2.31	358	Pg	Pg	18 06 18.2	-0.8
	16nm,0.4s						
MRKS				Lg	Lg	18 06 46.5	
	36nm,0.3s						
AAK	Ala-Archa	2.36	21	Pn	Pg	18 06 19.4	-0.7
	6.5nm,0.4s						
AAK				Lg	Lg	18 06 50.0	
	4.6nm,0.3s						
AAK	Ala-Archa	2.36	21	⇑iP	Pb	18 06 17.7	+0.2
	baz=22						
KBK	Karagaybulak	2.52	28	⇓eP	Pb	18 06 19.5	-0.8
	baz=29						
FRU1	Bishkek	2.56	22	⇑iP	Pb	18 06 20.5	-0.3
	baz=22						
FRU1				⇑iS	Sb	18 06 53.8	+1.4
	baz=22						
GAR	Garm	2.74	239	⇑iP	Pn	18 06 20.6	+1.7
	baz=39						
GAR				⇑iS	Sn	18 06 54.0	+1.8
	baz=39						
CHMS	Chumysh	2.77	22	⇑iP	Pb	18 06 23.2	-1.2
	baz=23						
CHMS				⇑iS	Sb	18 06 58.4	+0.1
	baz=23						
USP	Ospenovka	2.96	17	⇑eP	Pb	18 06 25.5	-2.1
	baz=18						
USP				⇑iS	Sb	18 07 02.7	-1.1
	baz=18						
TKM2	Tokmak 2	3.00	34	⇓Pg	Pg	18 06 30.7	-1.6
	3.0nm,0.6s						
TKM2				⇑Lg	Lg	18 07 09.2	
	6.8nm,0.6s						
KST	Kastek	3.26	36	eP	Pb	18 06 34.3	+1.5
	0.9nm,0.5s						
KST				eS	Sb	18 07 13.4	+0.9
	6.9nm,0.7s						
DGS	Degeres	3.34	32	eP	Pg	18 06 38.0	-0.7
	4.4nm,0.6s						
DGS				eS	Sg	18 07 20.2	-1.8
	8.2nm,0.8s						
DGS	Degeres	3.34	32	Pg	Pg	18 06 38.0	-0.7
	4.4nm,0.6s						
DGS				Lg	Lg	18 07 20.2	
	8.2nm,0.8s						
KK31	Karatay Array	3.40	322	⇑Pg	Pb	18 06 36.8	+1.6
	1.1nm,0.3s,baz=136,slow=16,SNR=17						
KK31				⇑Lg	Lg	18 07 21.5	
	2.7nm,0.3s,baz=146,slow=32,SNR=6.5						
KKAR	Karatay Array	3.40	322	⇑iP	Pn	18 06 30.2	+2.3
	baz=24						
KKAR				⇑iS	Sn	18 07 10.8	+2.5
	baz=24						
MTBS	Maitube	3.54	40	eP	Pg	18 06 42.6	-0.1
	2.1nm,0.2s						
MTBS				eS	Sg	18 07 27.8	-0.8
	8.2nm,0.3s						
MTBS	Maitube	3.54	40	Pg	Pg	18 06 42.6	-0.1
	2.1nm,0.2s						
MTBS				Lg	Lg	18 07 27.8	
	8.2nm,0.3s						
BRLS	Borolday	3.68	316	eP	Pb	18 06 41.5	+1.5
	10nm,0.3s						
BRLS				eS	Sb	18 07 26.4	+1.7
	9.2nm,0.3s						
BRLS	Borolday	3.68	316	Pg	Pb	18 06 41.5	+1.5
	10nm,0.3s						
BRLS				Lg	Lg	18 07 26.4	
	9.2nm,0.3s						
CHGR	Chuyangaron	3.69	242	⇑iP	Pn	18 06 33.8	+1.8
	baz=43						
CHGR				⇑iS	Sn	18 07 16.9	+1.3
	baz=43						
TNSS	Tian-Shan	3.74	45	eP	Pg	18 06 47.0	+0.4
	1.7nm,0.5s						
TNSS				eS	Sg	18 07 35.3	+0.2
	4.2nm,0.6s						
TNSS	Tian-Shan	3.74	45	Pg	Pg	18 06 47.0	+0.4
	1.7nm,0.5s						
TNSS				Lg	Lg	18 07 35.3	
	4.2nm,0.6s						
KOTS	Kotyrbulak	3.97	44	eP	Pg	18 06 51.3	+0.5
	3.1nm,0.3s						
KOTS				eS	Sg	18 07 42.8	+0.6
	30nm,0.7s						
KOTS	Kotyrbulak	3.97	44	Pg	Pg	18 06 51.3	+0.5
	3.1nm,0.3s						
KOTS				Lg	Lg	18 07 42.8	
	30nm,0.7s						
KUU	Kurty	4.11	32	eP	Pg	18 06 51.9	-1.5
	1.3nm,0.4s						
KUU				eS	Sg	18 07 44.4	-2.2
	5.3nm,0.5s						
KUU	Kurty	4.11	32	Pg	Pg	18 06 51.9	-1.5
	1.3nm,0.4s						
KUU				Lg	Lg	18 07 44.4	
	5.3nm,0.5s						
SATY	Saty	4.61	54	eP	Pg	18 07 02.6	-0.4
	2.0nm,0.2s						
SATY				eS	Sg	18 08 02.1	-0.6
	4.3nm,0.3s						
SATY	Saty	4.61	54	Pg	Pg	18 07 02.6	-0.4
	2.0nm,0.2s						
SATY				Lg	Lg	18 08 02.1	
	4.3nm,0.3s						
BTLS	Baital	4.63	6	eP	Pg	18 07 01.3	-2.1
	1.2nm,0.6s						
BTLS				eS	Sg	18 08 00.2	-3.2
	4.5nm,0.4s						
BTLS	Baital	4.63	6	Pg	Pg	18 07 01.3	-2.1
	1.2nm,0.6s						
BTLS				Lg	Lg	18 08 00.2	
	4.5nm,0.4s						
KPKS	Kokpek	5.00	51	eP	Pg	18 07 09.4	-1.2
	2.5nm,0.4s						
KPKS				eS	Sg	18 08 13.9	-1.4
	6.1nm,0.5s						
UZB	Uzynbulak	5.04	56	eP	Pg	18 07 09.5	-1.7
	3.2nm,0.3s						
UZB				eS	Sg	18 08 15.3	-1.2
	4.2nm,0.6s						
UZB	Uzynbulak	5.04	56	Pg	Pg	18 07 09.5	-1.7
	3.2nm,0.3s						
UZB				Lg	Lg	18 08 15.3	
	4.2nm,0.6s						
BLB	Baldybastay	5.28	45	Pg	Pg	18 07 13.4	-2.5
	2.6nm,0.5s						
BLB				Lg	Lg	18 08 20.9	
	8.5nm,0.2s						

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*KRNET **17** 18:06:06.8±0.1, 40°.41N×73°.27E, h14km, mb3.3*
*NNC **17** 18:06:12.3±0.9, 40°.56N×73°.19E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=7.2km s-min=3.8km az=176.0*

ISC 17 18:06:07.9±0.8,**40°.40N**±0°.03×**73°.26E**±0°.03,**h10km,n27, σ1s.38**/45,**29C-9D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	Osh	0.39	290	⇑iP	Pg	18 06 14.7	-0.9
	baz=88						
OHH				⇑iS	Sg	18 06 19.8	-0.9
	baz=88						
SFK	Sufi-Kurgan	0.42	154	⇑eP	Pg	18 06 15.4	-0.9
	baz=55						
SFK				⇑eS	Sg	18 06 21.3	-0.6
	baz=55						
DRK	Karamyk	1.45	231	⇓iP	Pn	18 06 33.9	-0.5
	baz=31						
DRK				⇓iS	Sb	18 06 53.5	-0.2
	baz=31						
AML	Almayashu	1.77	10	⇑iP	Pb	18 06 39.4	-1.2
	baz=11						
AML				⇑iS	Sb	18 07 02.6	-0.4
	baz=11						
BTK	Batken	1.90	261	⇑iP	Pb	18 06 41.8	-0.9
	baz=60						
BTK				⇑iS	Sb	18 07 07.5	+0.9
	baz=60						
TRKS	Terek-Say	1.97	306	⇓iP	Pn	18 06 41.8	+0.3
	baz=4.0						
TRKS				⇓iS	Sb	18 07 07.5	-1.0
	baz=4.0						
UCH	Uchtor	2.06	27	⇑iP	Pn	18 06 43.5	+0.5
	baz=27						
UCH				⇑iS	Sb	18 07 11.1	-0.4
	baz=27						
MNAS	Manas	2.17	345	⇓eP	Pb	18 06 45.4	-1.9
	baz=45						
MNAS				⇓iS	Sb	18 07 13.5	-0.8
	baz=45						
EKS2	Erkin-Say	2.30	10	⇑iP	Pn	18 06 46.9	+0.9
	baz=10.0						
EKS2				⇑iS	Sb	18 07 17.0	-1.0
	baz=10.0						
MRKS	Merke	2.35	359	Pg	Pg	18 06 52.5	-0.4
	24nm,0.3s						
MRKS				Lg	Lg	18 07 22.5	
	44nm,0.2s						
AAK	Ala-Archa	2.42	22	⇑iP	Pn	18 06 48.9	+1.2
	baz=22						
AAK				⇑iS	Sb	18 07 19.8	-1.9
	baz=22						
AAK	Ala-Archa	2.42	22	⇑iS	Pn	18 06 48.8	+1.1
	baz=22						
KBK	Karagaybulak	2.59	29	⇑iP	Pn	18 06 51.2	+1.2
	baz=29						
KBK				⇑iS	Sb	18 07 24.4	-2.1
	baz=29						
KBK	Karagaybulak	2.59	29	⇓iS	Pn	18 06 51.7	+1.7
	baz=29						
GAR	Garm	2.67	239	⇑iP	Pn	18 06 52.5	+1.5
	baz=39						
GAR				⇑iS	Sb	18 07 26.1	-2.5
	baz=39						
ULHL	Ulahol	2.91	50	⇓eP	Pn	18 06 55.4	+1.0
	baz=50						
ULHL				⇓iS	Sn	18 07 31.3	+1.8
	baz=50						
USP	Ospenovka	3.02	17	⇑eP	Pn	18 06 57.0	+1.2
	baz=17						
USP				⇑iS	Sn	18 07 34.2	+2.2
	baz=17						
TKM2	Tokmak 2	3.07	34	⇑eP	Pn	18 06 57.8	+1.1
	baz=34						
TKM2				⇑iS	Sn	18 07 35.2	+1.6
	baz=34						
KKAR	Karatay Array	3.40	324	⇑eP	Pn	18 07 02.7	+1.7
	baz=24						
KKAR				⇑iS	Sn	18 07 43.1	+1.7
	baz=24						
DGS	Degeres	3.41	33	Pg	Pg	18 07 12.9	-0.3
	5.1nm,0.5s						
DGS				Lg	Lg	18 07 57.3	
	4.9nm,0.5s						
CHGR	Chuyangaron	3.62	243	⇑iP	Pn	18 07 05.4	+1.3
	baz=43						
CHGR				⇑iS	Sn	18 07 49.0	+2.1
	baz=43						
MTBS	Maitube	3.62	40	Pg	Pg	18 07 16.4	-0.8
	2.8nm,0.3s						
MTBS				Lg	Lg	18 08 03.2	
	5.8nm,0.2s						
BRLS	Borolday	3.68	317	Pg	Pb	18 07 14.7	+1.8
	10nm,0.3s						
BRLS				Lg	Lg	18 08 01.1	
	12nm,0.3s						
KOTS	Kotyrbulak	4.04	44	Pg	Pg	18 07 25.2	-0.1
	3.9nm,0.5s						
KOTS				Lg	Lg	18 08 18.4	
	10nm,0.6s						
ANVS	Anan'yevo	4.08	53	⇑iP	Pn	18 07 12.4	+2.0
	baz=53						
ANVS				⇑iS	Sn	18 07 59.4	+1.1
	baz=53						
KUU	Kurty	4.18	32	Pg	Pg	18 07 26.9	-1.0
	1.3nm,0.3s						
KUU				Lg	Lg	18 08 21.2	
	5.5nm,0.6s						
BTLS	Baital	4.68	7	Pg	Pg	18 07 35.0	-2.5
	1.8nm,0.5s						
BTLS				Lg	Lg	18 08 35.4	
	3.3nm,0.4s						

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*ISU **17** 18:10:15, 40°.40N×73°.20E, h5km*

KRNET 17 18:10:14.3±0.1,**40°.34N×73°.21E,h13km,mb3.0,33C-2D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	Osh	0.37	300	eP	Pg	18 10 22.0	+0.1
OHH				eS	Sb	18 10 28.0	-0.7
OHH	Osh	0.37	300	⇑iP	Pg	18 10 21.9	0.0
	baz=0.0						
OHH				⇑iS	Sg	18 10 27.1	+0.1
	baz=0.0						
SFK	Sufi-Kurgan	0.40	145	⇑eP	Pg	18 10 22.0	-0.3
	baz=45						
SFK				⇑eS	Sg	18 10 27.9	+0.2
	baz=45						
DRK	Karamyk	1.38	232	⇑iP	Pb	18 10 40.4	+0.2
	baz=32						
DRK				⇑iS	Sg	18 10 59.3	+0.3
	baz=32						
AML	Almayashu	1.83	11	⇑iP	Pb	18 10 48.2	+0.3
	baz=11						
AML				⇑iS	Sg	18 11 13.1	-0.1
	baz=11						
BTK	Batken	1.85	262	eP	Pb	18 10 49.0	+0.9
BTK				eS	Sg	18 11 14.0	0.0
BTK	Batken	1.85	262	⇑iP	Pb	18 10 48.9	+0.8
	baz=62						
BTK				⇑iS	Sg	18 11 14.0	0.0
	baz=62						
TRKS	Terek-Say	1.97	308	⇑iP	Pb	18 10 49.8	-0.3
	baz=7.0						
TRKS				⇑iS	Sb	18 11 15.8	+1.1
	baz=7.0						
UCH	Uchtor	2.13	27	⇑iP	Pb	18 10 52.9	-0.1
	baz=27						
UCH				⇑iS	Sg	18 11 21.3	-1.5
	baz=27						
MNAS	Manas	2.21	346	⇑iP	Pb	18 10 54.2	-0.1
	baz=46						
MNAS				⇑iS	Sg	18 11 23.6	-1.8
	baz=46						
EKS2	Erkin-Say	2.36	10	⇑iP	Pb	18 10 56.3	-0.5
	baz=10.0						
EKS2				⇑iS	Sb	18 11 26.9	+1.1
	baz=10.0						
AAK	Ala-Archa	2.49	22	⇑eP	Pb	18 10 58.1	-0.9
	baz=22						
AAK				⇑iS	Sb	18 11 30.0	+0.3
	baz=22						
GAR	Garm	2.60	240	⇑iP	Pb	18 10 59.6	-1.3
	baz=40						
GAR				⇑iS	Sb	18 11 32.7	-0.2
	baz=40						
KBK	Karagaybulak	2.66	29	⇓iP	Pb	18 11 00.4	-1.5
	baz=29						
KBK				⇓iS	Sb	18 11 34.1	-0.4
	baz=29						
FRU1	Bishkek	2.69	23	⇑iP	Pb	18 11 01.1	-1.2
	baz=22						
FRU1				⇑iS	Sb	18 11 35.3	0.0
	baz=22						
ULHL	Ulahol	2.97	49	⇑eP	Pb	18 11 04.8	-2.5
	baz=49						
ULHL				⇑iS	Sb	18 11 41.6	-2.0
	baz=49						
USP	Ospenovka	3.08	18	⇑eP	Pb	18 11 06.3	-2.7
	baz=18						
TKM2	Tokmak 2	3.14	34	⇑iP	Pb	18 11 07.1	-3.0
	baz=34						
TKM2				⇑iS	Sb	18 11 45.6	-2.8
	baz=34						
KKAR	Karatay Array	3.42	325	⇑iP	Pn	18 11 11.0	+3.6
	baz=25						
KKAR				⇑iS	Sb	18 11 52.2	-4.1
	baz=25						
ANVS	Anan'yevo	4.14	52	⇑iP	Pn	18 11 21.1	+3.7
	baz=52						
ANVS				⇑iS	Sn	18 12 09.7	+3.9
	baz=52						

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*KRNET **17** 18:10:52.0±0.1, 40°.33N×73°.20E, h12km, mb3.5*
*NNC **17** 18:10:55.8±1.1, 40°.52N×73°.23E, h25km±8km, mb4.0, mpv3.7, Error ellipse: s-maj=9.1km s-min=3.9km az=175.0*
*SOME **17** 18:10:55.2, 40°.50N×73°.25E, h5km*

ISC 17 18:10:52.5±1.3,**40°.17N**±0°.03×**73°.15E**±0°.02,**h4km**±11km, **n50,σ1s.51**/83,**42C-5D,Kyrgyzstan**

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

SFK	Sufi-Kurgan	0.31	120	⇑eP	Pb	18 11 00.3	-0.4
	baz=43						
SFK				⇑eS	Sb	18 11 06.1	-0.1
	baz=43						
OHH	Osh	0.45	322	⇑iP	Pg	18 10 59.5	-1.8
	baz=2.0						
OHH				⇑iS	Sg	18 11 04.6	-2.6
	baz=2.0						
DRK	Karamyk	1.25	237	⇑iP	Pg	18 11 17.5	+1.0
	baz=32						
DRK				⇑iS	Sg	18 11 36.2	+3.6
	baz=32						
BTK	Batken	1.79	267	⇑iP	Pb	18 11 26.3	+0.3
	baz=62						
BTK				⇑iS	Sg	18 11 51.8	+1.7
	baz=62						
AML	Almayashu	2.00	12	⇑iP	Pn	18 11 26.2	-1.2
	baz=12						
AML				⇑iS	Sn	18 11 51.6	-1.5
	baz=12						
TRKS	Terek-Say	2.04	312	⇑iP	Pn	18 11 27.9	+0.1
	baz=7.0						
TRKS				⇑iS	Sn	18 11 53.8	0.0
	baz=7.0						
UCH	Uchtor	2.30	26	⇑eP	Pn	18 11 31.1	-0.5
	baz=27						
UCH				⇑iS	Sn	18 11 59.8	-0.7
	baz=27						
MNAS	Manas	2.37	348	⇑iP	Pn	18 11 32.1	-0.1
	baz=47						
MNAS				⇑iS	Sn	18 12 01.8	0.0
	baz=47						
GAR	Garm	2.48	243	⇑iP	Pb	18 11 36.9	-0.8
	baz=40						
GAR				⇑iS	Sb	18 12 09.8	+1.1
	baz=40						
EKS2	Erkin-Say	2.53	10	⇓iP	Pn	18 11 34.1	-0.4
	baz=10.0						
EKS2				⇓iS	Sn	18 12 05.2	-0.7
	baz=10.0						
MRKS	Merke	2.58	1	eP	Pb	18 11 37.4	-1.8
	22nm,0.3s						
MRKS				eS	Sn	18 12 08.2	+1.4
	104nm,0.3s						
MRKS	Merke	2.58	1	Pg	Pb	18 11 37.4	-1.8
	22nm,0.3s						
MRKS				Lg	Lg	18 12 08.2	
	104nm,0.3s						
AAK	Ala-Archa	2.67	22	⇑Pn	Pn	18 11 32.5	-3.9
	23nm,0.4s						
AAK				⇓Lg	Lg	18 12 10.5	
	47nm,0.8s						
AAK	Ala-Archa	2.67	22	⇑eP	Pn	18 11 35.9	-0.4
	baz=22						
AAK				⇑iS	Sn	18 12 08.4	-0.7
	baz=22						
KBK	Karagaybulak	2.83	28	⇑iP	Pn	18 11 37.9	-0.7
	baz=29						
KBK				⇑iS	Sn	18 12 12.1	-1.1
	baz=29						
FRU1	Bishkek	2.86	22	⇑iP	Pn	18 11 38.7	-0.3
	baz=23						
FRU1				⇑iS	Sn	18 12 13.2	-0.7
	baz=23						
DZA	Taraz	3.04	334	eP	Pb	18 11 47.3	0.0
	62nm,0.1s						
DZA				eS	Sb	18 12 24.6	-0.2
	198nm,0.3s						
DZA	Taraz	3.04	334	Pg	Pb	18 11 47.3	0.0
	62nm,0.1s						
DZA				Lg	Lg	18 12 24.6	
	198nm,0.3s						
CHMS	Chumysh	3.07	22	⇑iP	Pn	18 11 41.2	-0.6
	baz=23						
CHMS				⇑iS	Sn	18 12 17.8	-1.2
	baz=23						
ULHL	Ulahol	3.12	47	⇑iP	Pn	18 11 42.5	-0.1
	baz=49						
ULHL				⇑iS	Sn	18 12 19.6	-0.8
	baz=49						
USP	Ospenovka	3.25	18	⇑iP	Pn	18 11 43.9	-0.4
	baz=18						
USP				⇑iS	Sn	18 12 22.1	-1.4
	baz=18						
USP	Ospenovka	3.25	18	⇑iS	Pn	18 11 44.4	+0.1
	baz=18						
TKM2	Tokmak 2	3.31	33	⇑Pg	Pb	18 11 49.0	-2.8
	6.6nm,0.5s						
TKM2				⇓Lg	Lg	18 12 30.6	
	23nm,0.7s						
TKM2	Tokmak 2	3.31	33	⇑iP	Pn	18 11 44.7	-0.5
	baz=34						
TKM2				⇑iS	Sn	18 12 23.8	-1.2
	baz=34						
CHM	Chimkent	3.43	310	eP	Pb	18 11 56.0	+2.1
	3.3nm,0.3s						
CHM				eS	Sb	18 12 39.8	+3.9
	196nm,0.5s						
CHGR	Chuyangaron	3.44	245	⇑eP	Pb	18 11 50.2	-3.9
	baz=43						
CHGR				⇑iS	Sb	18 12 32.9	-3.4
	baz=43						
KK31	Karatay Array	3.54	327	⇑Pg	Pb	18 11 55.0	-0.6
	4.3nm,0.3s,baz=136,slow=16,SNR=7.3						
KK31				⇓Lg	Lg	18 12 38.3	
	10nm,0.4s,baz=138,slow=29,SNR=6.6						
KKAR	Karatay Array	3.54	327	⇑iP	Pn	18 11 49.0	+0.8
	baz=25						
KKAR				⇑iS	Sn	18 12 30.6	+0.2
	baz=25						
KST	Kastek	3.56	35	eP	Pb	18 11 55.8	-0.3
	8.2nm,0.3s						
KST				eS	Sb	18 12 39.6	-0.1
	21nm,0.7s						
KST	Kastek	3.56	35	Pg	Pb	18 11 55.8	-0.3
	8.2nm,0.3s						
KST				Lg	Lg	18 12 39.6	
	21nm,0.7s						
DGS	Degeres	3.64	32	eP	Pb	18 11 57.4	-0.1
	16nm,0.5s						
DGS				eS	Sb	18 12 42.1	0.0
	21nm,1.2s						
DGS	Degeres	3.64	32	Pg	Pb	18 11 57.4	-0.1
	16nm,0.5s						
DGS				Lg	Lg	18 12 42.1	
	21nm,1.2s						
BRLS	Borolday	3.79	320	eP	Pb	18 11 59.6	-0.3
	17nm,0.3s						
BRLS				eS	Sb	18 12 46.0	-0.2
	32nm,0.4s						
BRLS	Borolday	3.79	320	Pg	Pb	18 11 59.6	-0.3
	17nm,0.3s						
BRLS				Lg	Lg	18 12 46.0	
	32nm,0.4s						
MTBS	Maitube	3.84	39	eP	Pb	18 11 59.8	-1.1
	4.2nm,0.3s						
MTBS				eS	Sb	18 12 46.3	-1.5
	22nm,0.6s						
MTBS	Maitube	3.84	39	Pg	Pb	18 11 59.8	-1.1
	4.2nm,0.3s						
MTBS				Lg	Lg	18 12 46.3	
	22nm,0.6s						
TNSS	Tian-Shan	4.04	44	eP	Pb	18 12 04.4	0.0
	4.4nm,0.3s						
TNSS				eS	Sb	18 12 54.6	+0.9
	7.8nm,0.7s						
TNSS	Tian-Shan	4.04	44	Pg	Pb	18 12 04.4	0.0
	4.4nm,0.3s						
TNSS				Lg	Lg	18 12 54.6	
	7.8nm,0.7s						
MDOK	Medeo	4.18	43	eP	Pb	18 12 07.1	+0.5
	5.3nm,0.5s						
MDOK				eS	Sb	18 12 59.0	+1.5
	18nm,0.7s						
MDOK	Medeo	4.18	43	Pg	Pb	18 12 07.1	+0.5
	5.3nm,0.5s						
MDOK				Lg	Lg	18 12 59.0	
	18nm,0.7s						
KOTS	Kotyrbulak	4.26	43	eP	Pb	18 12 08.5	+0.4
	4.8nm,0.3s						
KOTS				eS	Sb	18 13 01.3	+1.4
	35nm,0.6s						
KOTS	Kotyrbulak	4.26	43	Pg	Pb	18 12 08.5	+0.4
	4.8nm,0.3s						
KOTS				Lg	Lg	18 13 01.3	
	35nm,0.6s						
ANVS	Anan'yevo	4.28	51	⇑eP	Pn	18 11 58.8	+0.3
	baz=52						
ANVS				⇑iS	Sn	18 12 47.8	-1.2
	baz=52						
KUU	Kurty	4.41	31	eP	Pb	18 12 10.9	+0.3
	4.0nm,0.4s						
KUU				eS	Sb	18 13 05.2	+1.1
	17nm,0.5s						
KUU	Kurty	4.41	31	Pg	Pb	18 12 10.9	+0.3
	4.0nm,0.4s						
KUU				Lg	Lg	18 13 05.2	
	17nm,0.5s						
BTLS	Baital	4.91	7	eP	Pb	18 12 19.9	+0.8
	2.1nm,0.2s						
BTLS				eS	Sb	18 13 21.0	+2.5
	10nm,0.4s						
BTLS	Baital	4.91	7	Pg	Pb	18 12 19.9	+0.8
	2.1nm,0.2s						
BTLS				Lg	Lg	18 13 21.0	
	10nm,0.4s						
ARXS	Arharly	5.33	39	eP	Pb	18 12 28.4	+2.3
	3.3nm,0.8s						
ARXS				eS	Sb	18 13 35.3	+4.8
	12nm,0.6s						
ARXS	Arharly	5.33	39	Pg	Pb	18 12 28.4	+2.3
	3.3nm,0.8s						
ARXS				Lg	Lg	18 13 35.3	
	12nm,0.6s						
BLB	Baldybastay	5.57	44	Pg	Pb	18 12 32.2	+1.8
	3.0nm,0.3s						
BLB				Lg	Lg	18 13 41.7	
	14nm,0.6s						

*IDC **17** 18:13:19.1±6.9, 27.°89S×178.°02W, h0^{km}, mb3.4/2, mb1 3.7/2, mb1mx3.1/35, mbtmp3.4/2, Error ellipse: s-maj=313.4km s-min=105.8km az=163.0*

ISC 17 18:14:03.2±1.3**, 29.°9S**±0.°1×**179.°4W**±0.°2**, h350^{km}, n16, σ2.^{s}09**/22**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.44	62	P	Pn	18 14 55.3	+4.2
GLKZ				S	S	18 15 30.6	+1.2
MXZ	Matakaoa Point	7.84	194	S	S	18 17 28.2	+1.4
MXZ				P	Pn	18 16 01.2	+5.9
WCZ	Waipu Caves	7.97	220	P	P	18 15 59.0	+2.1
WMGZ	Waiomatatini S	8.07	193	P	P	18 16 02.1	+1.1
WMGZ				S	S	18 17 32.5	+0.9
HAZ	Te Kaha	8.14	196	P	P	18 16 02.1	+0.3
HAZ				S	S	18 17 33.4	+0.1
PKGZ	Pakihiroa	8.20	194	P	P	18 16 05.6	+3.0
RUGZ	Raukumara Rang	8.37	196	P	P	18 16 06.0	+1.5
RUGZ				S	S	18 17 37.1	-1.3
CNGZ	Carnagh Statio	8.75	193	P	P	18 16 10.2	+1.6
URZ	Urewera	8.79	198	P	P	18 16 10.8	+1.8
MUGZ	Murupara	9.09	199	P	P	18 16 14.8	+2.4
RTZ	Ruatahuna	9.16	198	P	P	18 16 12.9	-0.4
RTZ				S	S	18 17 54.1	-1.6
MTHZ	Maungataniwha	9.42	198	P	P	18 16 17.8	+1.6
MTHZ				S	S	18 17 59.6	-1.7
MRHZ	Matea Rd	9.52	200	P	P	18 16 19.0	+1.7
MRHZ				S	S	18 17 58.8	-4.9
ASAR	Alice Springs	41.94	267	P	P	18 21 21.7	+0.5
	0.4nm,1.0s,baz=100,slow=7.0,SNR=2.2						
WRA	Warramunga Arr	42.88	272	P	P	18 21 29.2	+0.6
	0.4nm,0.4s,baz=109,slow=7.7,SNR=15						
FINES	FINESS Array B	144.30	339	PKP	PKPdf	18 32 53.5	-3.6
	2.2nm,1.0s,baz=25,slow=3.7,SNR=5.0						

*NEIC **17** 18:16:56.1±2.8, 17.°32N±0.°08×147.°28E±0.°09, h10^{km}±1^{km}, mb4.7/28, Error ellipse: s-maj=16.1km s-min=11.4km az=136.0*

*IDC **17** 18:17:01.8±3.8, 17.°35N×147.°23E, h51^{km}±33^{km}, mb3.6/13, mb1 3.8/14, mb1mx3.6/48, mbtmp3.9/14, ML4.3/1, MS3.5/1, Ms1 3.7/1, ms1mx3.0/35, Error ellipse: s-maj=31.4km s-min=14.5km az=91.0*

ISC 17 18:16:58.0±0.5**, 17.°32N**±0.°07×**147.°35E**±0.°08**, h26^{km}, n53, σ1.^{s}42**/53**, mb4.4**/24**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANA2	Anatahan	1.84	238		Pn	18 17 26.8	-1.1
ANA2				Sn	Sn	18 17 48.7	-1.7
GUMO	Guam	4.41	213	P	Pn	18 18 06.9	+3.7
	18nm,0.3s,baz=22,slow=11,SNR=6.1						
GUMO				S	Sn	18 18 56.0	+2.2
	28nm,0.3s,baz=163,slow=20,SNR=5.8						
GUMO	Guam	4.41	213		Pn	18 18 02.0	-1.2
GUMO				Sn	Sn	18 18 56.8	+3.0
PATS	Pohnpei	14.94	133	Pn	Pn	18 20 24.4	-3.2
H11N1	WAKE ISLAND Hy	18.69	80	T	T	18 40 25.9	
	baz=265,slow=74,SNR=6.3						
H11N2	WAKE ISLAND Hy	18.69	80	T	T	18 40 22.6	
	baz=265,slow=74,SNR=7.9						
H11N3	WAKE ISLAND Hy	18.71	80	T	T	18 40 25.5	
	baz=265,slow=74,SNR=6.4						
JGF	Kuroka	20.26	336	P	P	18 21 31.3	-0.2
MJAR	Matsushiro Arr	20.79	339	P	P	18 21 38.6	+1.5
	3.1nm,0.8s,baz=165,slow=9.7,SNR=8.6						
MAJO	Matsushiro	20.79	339	P	P	18 21 38.5	+1.3
MAJO				IAmb	IAmb	18 22 01.2	
	comp=Z,31nm,1.6s						
SIJI	Sorong	24.04	223	P	P	18 22 10.4	-0.7
	comp=Z,2.9nm,0.5s,baz=30,slow=20,SNR=3.1						
JEM	Erimo	24.88	353	P	P	18 22 37.6	+19
KSRS	Korea Array	26.35	323	P	P	18 22 31.3	-0.6
	comp=Z,0.8nm,0.6s,baz=151,slow=9.0,SNR=4.3						
PMG	Port Moresby	26.55	180	P	P	18 22 32.3	-1.6
PMG				IAmb	IAmb	18 22 54.9	
	comp=Z,15nm,1.2s						
SBUM	Sibu	37.52	251	P	P	18 24 07.9	-2.2
SBUM				IAmb	IAmb	18 24 45.4	
	comp=Z,13nm,1.3s						
WB0	Warramunga Arr	38.99	200	P	P	18 24 23.2	+0.9
WR0	Warramunga Arr	39.12	199	P	P	18 24 24.0	+0.5
WR0				IAmb	IAmb	18 24 49.6	
	comp=Z,17nm,1.6s						
WRAB	Tennant Creek	39.16	200	P	P	18 24 24.3	+0.5
WRAB				IAmb	IAmb	18 25 41.0	
	comp=Z,13nm,1.4s						
WB2	Warramunga Arr	39.17	200	P	P	18 24 23.5	-0.3
WB2				IAmb	IAmb	18 25 31.0	
	comp=Z,11nm,1.4s						
WRA	Warramunga Arr	39.17	200	P	P	18 24 24.4	+0.5
	comp=Z,2.1nm,0.6s,baz=27,slow=8.8,SNR=30						
WRA				PcP	PcP	18 26 34.6	+1.5
	comp=Z,0.2nm,0.5s,baz=16,slow=3.5,SNR=1.7						
WRA	Warramunga Arr	39.17	200	P	P	18 24 23.3	-0.6
KSM	Kuching	39.66	251	P	P	18 24 27.1	-1.1
KSM				IAmb	IAmb	18 25 35.5	
	comp=Z,29nm,1.5s						
FUNA	Funafuti	40.63	127	P	P	18 24 37.1	+1.0
AS31	Alice Springs	42.80	198	P	P	18 24 53.1	-0.6
ASAR	Alice Springs	42.80	198	P	P	18 24 54.5	+0.8
	comp=Z,0.4nm,0.4s,baz=24,slow=6.8,SNR=17						
ASAR				PcP	PcP	18 26 45.8	+0.9
	comp=Z,0.3nm,0.6s,baz=17,slow=2.8,SNR=1.5						
ASAR	Alice Springs	42.80	198	P	P	18 24 52.8	-1.0
SONM	Songino Array	45.19	322	P	P	18 25 12.4	-0.5
	comp=Z,0.4nm,0.6s,baz=112,slow=4.0,SNR=3.9						
SONM	Songino Array	45.19	322	IAmb	IAmb	18 26 32.8	
	comp=Z,12nm,1.8s						
CMAR	Chiang Mai Arr	45.97	279	P	P	18 25 20.4	+1.1
	comp=Z,0.6nm,0.5s,baz=70,slow=6.5,SNR=5.6						
CMAR				LR	LR	18 42 45.7	
	comp=Z,58nm,21.2s,baz=355,slow=34						
KULM	Kulim	47.20	261	P	P	18 25 29.9	+1.0
KULM				IAmb	IAmb	18 25 49.9	
	comp=Z,14nm,1.3s						
GSI	Gunungsitoli	51.43	257	P	P	18 26 02.2	+0.8
ZALV	Zalesovo Beam	60.06	323	P	P	18 27 03.1	+0.5
	comp=Z,0.4nm,0.4s,baz=84,slow=6.1,SNR=4.3						
MKAR	Makanchi Array	60.54	314	P	P	18 27 06.2	0.0
	comp=Z,0.9nm,0.9s,baz=89,slow=10,SNR=5.3						
MKAR	Makanchi Array	60.54	314	P	P	18 27 05.9	-0.2
K20K	Telida	60.75	26	P	P	18 27 06.5	-0.8
H21K	Melozitna Rive	62.09	24	P	P	18 27 18.8	+2.6
H21K				IAmb	IAmb	18 28 11.9	
	comp=Z,21nm,1.8s						
KTH	Kantishna Hill	62.15	26	P	P	18 27 18.2	+1.4
BPAW	Bear Paw Mtn.	62.30	26	P	P	18 27 19.3	+1.6
PWL	Port Wells	62.57	30	P	P	18 27 19.7	+0.1
KURK	Kurchatov	63.34	318	P	P	18 27 25.1	+0.3
KURK				IAmb	IAmb	18 27 41.8	
	comp=Z,4.3nm,1.1s						
H24K	Noodor Dome	64.08	24	P	P	18 27 30.3	+0.8
H24K				IAmb	IAmb	18 27 44.7	
	comp=Z,23nm,1.7s						
ILAR	Eielson Array	64.19	26	P	P	18 27 30.5	+0.3
	comp=Z,0.4nm,0.6s,baz=252,slow=6.1,SNR=5.0						
ILAR	Eielson Array	64.19	26	P	P	18 27 30.8	+0.6
BMAR	Burnt Mountain	65.76	23	P	P	18 27 41.7	+1.3
TABL	Table Mountain	65.98	31	P	P	18 27 41.2	-0.9
L27K	Beaver Creek,	66.03	28	P	P	18 27 40.8	-1.4
L27K				IAmb	IAmb	18 29 24.4	
	comp=Z,27nm,1.8s						
BCAR	Beaver Creek A	66.05	28	P	P	18 27 42.8	+0.4
ABKAR	Akbulak array	75.41	317	P	P	18 28 37.2	-2.3
ABKAR	Akbulak array	75.41	317	P	P	18 28 37.5	-2.0
ABKAR				IAmb	IAmb	18 28 50.9	
	comp=Z,4.5nm,1.5s						
EUNU	Eureka	78.86	8	P	P	18 28 58.6	+0.2
EUNU				IAmb	IAmb	18 29 18.6	
	comp=Z,9.8nm,1.6s						
NVAR	Mina Array Bea	82.75	52	P	P	18 29 21.6	+1.4
	comp=Z,0.5nm,0.7s,baz=270,slow=3.6,SNR=2.6						
ARCES	ARCESS Array B	84.28	343	P	P	18 29 28.9	+1.7
	comp=Z,1.0nm,0.6s,baz=64,slow=6.3,SNR=1.3						
FINES	FINESS Array B	88.78	336	P	P	18 29 48.8	-0.5
	comp=Z,1.0nm,0.5s,baz=57,slow=7.0,SNR=7.8						

*THE **17** 18:18:05.8, 38.°83N×20.°59E, h8^{km}±1^{km}, ML3.6/11, Error ellipse: s-maj=2.0km s-min=0.7km az=107.0*

*IDC **17** 18:18:06.8±12.0, 38.°88N×20.°69E, h0^{km}, mb3.7/3, mb1 3.7/4, mb1mx3.4/41, mbtmp3.6/4, ML3.7/1, Error ellipse: s-maj=229.2km s-min=32.6km az=34.0*

*ATH **17** 18:18:06.0, 38.°79N×20.°61E, h7^{km}±1^{km}, ML3.4/5, Error ellipse: s-maj=1.6km s-min=0.9km az=297.0*

*BEO **17** 18:18:07.8±2.2, 38.°53N×20.°26E, h60^{km}±5^{km}, ML3.3/7*

ISC 17 18:18:05.8±0.8**, 38.°82N**±0.°02×**20.°58E**±0.°03**, h8^{km}**±4^{km}**, n92, σ1.^{s}49**/128**, mb3.7**/3**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TSLK	Tsoukalades, L	0.06	84	P	Pg	18 18 07.5	-0.1
TSLK				S	Sg	18 18 08.7	-0.2
	145µm,0.3s						
TSLK	Tsoukalades, L	0.06	84	P	Pg	18 18 07.5	-0.1
TSLK				S	Sg	18 18 08.4	-0.5
TSLK				AML	AML	18 18 09.0	
TSLK				AML	AML	18 18 09.5	
LKD2	Lefkada island	0.07	115	P	Pg	18 18 07.4	-0.3
LKD2				S	Sg	18 18 08.6	-0.5
	193µm,0.3s						
LKD2	Lefkada island	0.07	115	P	Pg	18 18 07.4	-0.3
LKD2				S	Sg	18 18 08.2	-0.9
LKD2				AML	AML	18 18 09.0	
LKD2				AML	AML	18 18 09.0	
DRAG	Dragano-Lefkad	0.13	180	P	Pg	18 18 08.8	+0.1
DRAG				S	Sg	18 18 11.7	+1.1
	90µm,0.3s						
DRAG	Dragano-Lefkad	0.13	180	P	Pg	18 18 08.8	+0.1
DRAG				S	Sg	18 18 11.1	+0.4
NYDR	Nydri-Lefkada	0.14	138	P	Pg	18 18 08.6	-0.2
NYDR				S	Sg	18 18 11.0	+0.2
	15µm,0.5s						
NYDR	Nydri-Lefkada	0.14	138	P	Pg	18 18 08.5	-0.2
NYDR				S	Sg	18 18 10.3	-0.5
EVGI	Lefkada island	0.21	162	P	Pg	18 18 09.9	0.0
EVGI				S	Sg	18 18 13.9	+1.1
	29µm,0.2s						
EVGI	Lefkada island	0.21	162	P	Pg	18 18 09.9	0.0
EVGI				S	Sg	18 18 12.4	-0.3
FSK	Fiskardo	0.36	182	P	Pg	18 18 12.9	+0.1
FSK				S	Sg	18 18 19.1	+1.6
	9µm,0.3s						
FSK	Fiskardo	0.36	182	P	Pg	18 18 12.9	+0.1
FSK				S	Sg	18 18 16.6	-0.9
KEF4	Livadi, Kephal	0.57	192	P	Pg	18 18 16.4	-0.4
KEF4				S	Sg	18 18 26.0	+1.7
	26µm,0.3s						
KEF4	Livadi, Kephal	0.57	192	P	Pg	18 18 16.5	-0.3
DMLN	Damoulianata-K	0.60	195	P	Pg	18 18 16.9	-0.4
DMLN				S	Sg	18 18 26.9	+1.7
	5µm,0.4s						
DMLN	Damoulianata-K	0.60	195	P	Pg	18 18 16.9	-0.4
KEF3	Kipouria, Keph	0.64	196	P	Pg	18 18 17.1	-1.0
KEF3				S	Sg	18 18 27.2	+0.8
	8µm,0.4s						
KEF3	Kipouria, Keph	0.64	196	P	Pg	18 18 17.1	-1.0
VLS	Valsamata	0.64	179	P	Pg	18 18 17.6	-0.5
VLS				S	Sg	18 18 27.5	+1.0
	2µm,0.4s						
VLS	Valsamata	0.64	179	P	Pg	18 18 17.4	-0.7
VLS				S	Sg	18 18 26.2	-0.3
VLS				AML	AML	18 18 31.0	
	comp=E,4228µm,0.3s						
VLS				AML	AML	18 18 31.8	
	comp=N,4740µm,0.4s						
ARGA	Argostoli. Kep	0.65	187	P	Pg	18 18 18.3	+0.1
PSDA	Pessada-Kefalo	0.70	179	P	Pg	18 18 18.6	-0.7
PSDA				S	Sg	18 18 29.4	+1.0
	comp=N,430nm,0.3s						
PSDA	Pessada-Kefalo	0.70	179	P	Pg	18 18 18.5	-0.7
IGT	Igoumenitsa	0.74	345	P	Pg	18 18 20.3	+0.3
IGT	Igoumenitsa	0.74	345	P	Pg	18 18 20.8	+0.8
PVO	Paravola	0.77	105	P	Pg	18 18 20.5	0.0
PVO	Paravola	0.77	105	P	Pg	18 18 20.5	0.0
PVO				S	Sg	18 18 30.5	-0.1
JAN	Janina	0.86	14	P	Pg	18 18 21.8	-0.6
JAN				S	Sg	18 18 33.3	-0.3
JAN				AML	AML	18 18 40.6	
	comp=E,3637µm,0.6s						
JAN				AML	AML	18 18 41.3	
	comp=N,2231µm,0.6s						
EVR	Evrytania	0.97	84	P	Pg	18 18 24.2	-0.2
EVR	Evrytania	0.97	84	P	Pg	18 18 24.0	-0.4
EVR				S	Sg	18 18 37.2	+0.3
EVR				AML	AML	18 18 42.3	
	comp=E,1270µm,0.6s						
EVR				AML	AML	18 18 47.4	
	comp=N,1451µm,0.5s						
RLS	Riolos of Patr	1.03	137	P	Pg	18 18 24.5	-1.1
RLS	Riolos of Patr	1.03	137	P	Pg	18 18 24.3	-1.3
ANX	Ano Chora	1.08	102	P	Pg	18 18 26.4	0.0
ANX				S	Sg	18 18 40.0	-0.4
EFP	Efpalio	1.11	110	P	Pg	18 18 26.7	-0.4
EFP	Efpalio	1.11	110	P	Pg	18 18 25.5	-1.6
EFP				S	Sg	18 18 40.3	-1.2
MAKR	Makrakomi, Fth	1.23	80	P	Pb	18 18 29.1	-0.2
LAKA	Lakka	1.24	117	P	Pb	18 18 28.3	-1.2
TRIZ	Trizonia	1.26	111	P	Pn	18 18 28.6	-1.0
OHR	Ohrid	2.30	4	ePn	Pb	18 18 47.1	-0.4
OHR				eSn	Sb	18 19 16.5	+0.4
OHR	Ohrid	2.30	4	i Pn	Pb	18 18 48.6	+1.1
VAY	Valandovo	2.93	31	ePn	Pb	18 18 57.2	-1.1
STIP	Stip	3.13	23	i Pn	Pb	18 19 00.5	-1.1
DRME	Dracevica, Mon	3.53	343	ePn	Pn	18 19 01.5	+0.6
PDG	Podgorica	3.75	345	ePn	Pn	18 19 05.2	+1.3
PDG				eSn	Sn	18 19 47.8	-0.3
PDG	Podgorica	3.75	345	ePn	Pn	18 19 05.0	+1.1
PRVS	Prvonek	3.86	17	ePn	Pn	18 19 08.0	+2.5
BOSS	Bosilegrad	3.95	21	ePn	Pn	18 19 11.2	+4.5
HCY	Herceg Novi	3.96	337	ePn	Pn	18 19 06.7	-0.1
BARS	Barje	4.10	13	ePn	Pn	18 19 09.8	+1.0
BARS				eSn	Sn	18 19 56.7	-0.3
TREB	Trebinje	4.25	337	ePn	Pn	18 19 11.0	+0.3
TREB				eSn	Sn	18 19 57.6	-2.9
TREB	Trebinje	4.25	337	ePn	Pn	18 19 10.8	+0.1
DBRK	Dubrovnik	4.27	335	ePn	Pn	18 19 11.1	0.0
VTS	Vitosha	4.30	27	ePn	Pn	18 19 14.9	+3.3
VTS				eSn	Sn	18 20 02.4	+0.3
BRY	Bratogost	4.36	340	ePn	Pn	18 19 12.8	+0.3
SELS	Selova	4.42	5	ePn	Pn	18 19 16.0	+2.9
SJES	Sjenica	4.46	354	ePn	Pn	18 19 15.8	+2.0
SJES				eSn	Sn	18 20 04.2	-1.8
UPM	Unac-Piva	4.56	344	ePn	Pn	18 19 11.1	-4.1
STON	Ston	4.60	333	ePn	Pn	18 19 15.7	+0.1
STON				eSn	Sn	18 20 05.7	-3.5
STON	Ston	4.60	333	ePn	Pn	18 19 15.7	+0.1
STON	Ston	4.60	333	ePn	Pn	18 19 15.3	-0.3
STON				Sn	Sn	18 20 05.9	-3.3
ZAPS	Zavoj	4.71	19	ePn	Pn	18 19 20.4	+3.2
RUDO	Rudo	4.88	350	ePn	Pn	18 19 19.3	-0.2
BOVS	Bovan	4.89	10	ePn	Pn	18 19 20.7	+1.1

GRUS	Gruza	5.07	1	*e*Pn	Pn	18 19 25.0	+3.0
BBLS	Lazići	5.12	350	*e*Pn	Pn	18 19 24.0	+1.2
BBLS				*e*Sn	Sn	18 20 19.4	-2.8
BBLS	Lazići	5.12	350	*e*Pn	Pn	18 19 25.9	+3.1
MAKA	Makarska	5.21	330	*e*Pn	Pn	18 19 24.3	+0.3
MAKA				Sn	Sn	18 20 22.3	-1.9
DIVS	Divibare	5.29	355	*e*Pn	Pn	18 19 28.6	+3.4
DIVS				*e*Sn	Sn	18 20 24.7	-1.8
DIVS	Divibare	5.29	355	*e*Pn	Pn	18 19 25.5	+0.3
RICI	Ricice	5.34	332	*e*Pn	Pn	18 19 25.8	-0.1
HVAR	Hvar	5.36	326	*e*Pn	Pn	18 19 26.1	+0.1
TRUS	Trudelj	5.40	359	*e*Pn	Pn	18 19 29.9	+3.3
HAPS	Han Pijesak,Bl	5.40	347	*e*Pn	Pn	18 19 27.3	+0.5
KIJV	Kijevo	6.06	330	*e*Pn	Pn	18 19 36.0	+0.3
ZIRJ	Zirje	6.09	324	*e*Pn	Pn	18 19 36.2	+0.1
MORI	Morici	6.23	326	*e*Pn	Pn	18 19 38.7	+0.7
MORI				Sn	Sn	18 20 47.4	-2.0
BLY	Banja Luka	6.44	338	*e*Pn	Pn	18 19 42.3	+1.4
DUGI	Dugi Otok	6.63	323	*e*Pn	Pn	18 19 44.2	+0.7
MRAK	Mrakovica	6.77	337	*e*Pn	Pn	18 19 45.1	-0.4
PLIT	Plitvice	7.09	330	*e*Pn	Pn	18 19 50.6	+0.8
NVLJ	Novalja	7.15	325	*e*Pn	Pn	18 19 51.0	+0.4
RABC	Rab	7.34	326	*e*Pn	Pn	18 19 53.7	+0.5
RIY	Rijeka	7.92	327	*e*Pn	Pn	18 20 02.4	+1.2
CRES	Cresnjev	7.96	333	*e*Pn	Pn	18 20 01.0	-0.8
CEY	Cerknica	8.28	329	*e*Pn	Pn	18 20 07.5	+1.3
SOKA	Soboth comp=N,0.6nm,0.3s	8.85	334	*e*Pn	Pn	18 20 13.6	-0.4
SOKA	comp=N,2.2nm,0.5s			*e*Sn	Sn	18 21 48.0	-5.9
OBKA	Obir comp=N,1.2nm,0.3s	8.87	332	*e*Pn	Pn	18 20 15.5	+1.2
OBKA	comp=N,0.9nm,0.4s			*e*Sn	Sn	18 21 50.0	-4.5
MOTA	Moosalm comp=N,1.6nm,0.3s	10.97	324	*i* Pn	Pn	18 20 43.4	+0.2
GERES	GERESS Array B comp=N,0.2nm,0.3s,baz=153,slow=15,SNR=1.9	11.18	336	Pn	Pn	18 20 48.7	+2.7
FINES	FINESS Array B comp=N,2.2nm,0.8s,baz=182,slow=12,SNR=4.3	22.91	7	P	P	18 23 11.5	+1.7
MKAR	Makanchi Array comp=N,0.3nm,0.7s,baz=274,slow=7.7,SNR=1.9	44.93	59	P	P	18 26 22.3	+1.3
ZALV	Zalesovo Beam comp=N,1.4nm,0.7s,baz=271,slow=8.2,SNR=6.0	45.23	49	P	P	18 26 24.5	+1.2

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*IDC **17** 18:27:07.5±1.8, 35°.19N×141°.61E, h0km, mb3.4/3, mb1 3.5/6, mb1mx3.3/45, mbtmp3.5/6, ML3.4/2, Error ellipse: s-maj=47.2km s-min=23.7km az=77.0*

*JMA **17** 18:27:11.2±0.2, 35°.18N×141°.32E, h15km±4km, M2.6*

ISC 17 18:27:11.7±1.4, **35°.18N**±0°.07×**141°.3E**±0°.2, **h27km, n16, σ1ˢ.21**/11, **mb3.5**/3, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO1	Boso 1	0.60	208	P	Pn	18 27 22.6	-1.3
BSO1				X		18 27 29.6	
CHOJ	Chosi	0.65	324	P	Pb	18 27 23.8	-0.6
BSO3	Boso 3	0.77	241	P	Pn	18 27 25.9	-0.6
JKUC	kamogawauchiur	0.92	269	P	Pn	18 27 28.6	-0.2
JHJ	Hachijo jima 2 6.6nm,0.3s,baz=21,slow=14,SNR=1.8	2.42	212	Pn	Pn	18 27 50.2	+0.8
JHJ	9.7nm,0.3s,baz=262,slow=23,SNR=1.8			Sn	Sn	18 28 17.2	-1.0
MJAR	Matsushiro Arr 0.2nm,0.3s,baz=119,slow=8.0,SNR=12	2.87	299	Pn	Pn	18 27 57.5	+1.8
ASAJ	Asahikawa 0.7nm,0.3s,baz=218,slow=8.2,SNR=6.0	8.98	6	Pn	Pn	18 29 17.7	-1.8
H11N2	WAKE ISLAND Hy baz=309	27.31	118	T	T	19 01 51.3	
H11N1	WAKE ISLAND Hy baz=309	27.32	118	T	T	19 01 37.1	
H11N3	WAKE ISLAND Hy baz=309	27.33	118	T	T	19 01 41.7	
H11S3	WAKE ISLAND Hy baz=312,slow=75,SNR=7.2	27.96	120	T	T	19 02 23.9	
H11S1	WAKE ISLAND Hy baz=312,slow=75,SNR=7.5	27.96	120	T	T	19 02 19.9	
H11S2	WAKE ISLAND Hy baz=312,slow=75,SNR=6.1	27.97	120	T	T	19 02 27.6	
MKAR	Makanchi Array 0.4nm,0.7s,baz=80,slow=9.1,SNR=3.8	45.06	304	P	P	18 35 26.2	+1.0
WRA	Warramunga Arr 0.4nm,0.5s,baz=2.5,slow=7.5,SNR=12	55.22	188	P	P	18 36 42.4	+0.1
ASAR	Alice Springs 0.3nm,0.9s,baz=358,slow=5.8,SNR=1.8	58.95	188	P	P	18 37 09.1	+0.4

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*ISU **17** 18:34:08, 40°.36N×73°.25E, h5km*

*KRNET **17** 18:34:09.5±0.1, 40°.36N×73°.19E, h12km, mb3.5*

*SOME **17** 18:34:11.3, 40°.55N×73°.27E, h0km*

*NNC **17** 18:34:12.0±0.9, 40°.51N×73°.28E, h0km, mb3.8, mpv3.6, Error ellipse: s-maj=8.2km s-min=4.1km az=177.0*

ISC 17 18:34:10.5±0.8, **40°.40N**±0°.03×**73°.25E**±0°.02, **h10km, n65, σ2ˢ.55**/106, **39C-10D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	Osh	0.38	290	*e*P	Pg	18 34 16.0	-1.9
OHH				*e*S	Sg	18 34 22.0	-0.9
OHH	Osh baz=98	0.38	290	⇑*e*P	Pg	18 34 16.3	-1.6
OHH	baz=98			⇑*i*S	Sg	18 34 21.3	-1.6
SFK	Sufi-Kurgan	0.43	153	*e*P	Pg	18 34 17.0	-2.0
SFK	Sufi-Kurgan baz=45	0.43	153	⇑*e*P	Pg	18 34 17.5	-1.5
SFK	baz=45			⇑*e*S	Sg	18 34 23.5	-1.2
FRG	Fergana	1.12	269	*e*P	Pb	18 34 30.0	-1.9
FRG				*e*S	Sb	18 34 46.0	-0.5
NAM	Namangan	1.35	297	*e*P	Pn	18 34 36.0	+0.7
NAM				*e*S	Sg	18 34 56.0	+2.2
DRK	Karamyk baz=31	1.44	231	⇑*i*P	Pn	18 34 35.4	-1.5
DRK	baz=31			⇑*i*S	Sn	18 34 54.4	-1.6
AML	Almayashu baz=12	1.77	11	⇑*i*P	Pb	18 34 42.8	-0.4
AML	baz=12			⇑*i*S	Sg	18 35 07.8	+0.5
BTK	Batken	1.89	260	*e*P	Pn	18 34 43.0	+0.1
BTK				*e*S	Sn	18 35 09.0	+2.2
BTK	Batken baz=61	1.89	260	⇑*i*P	Pn	18 34 43.4	+0.5
BTK	baz=61			⇑*i*S	Sn	18 35 08.5	+1.7
TRKS	Terek-Say baz=6.0	1.96	306	⇑*i*P	Pn	18 34 44.5	+0.6
TRKS	baz=6.0			⇑*i*S	Sn	18 35 09.9	+1.3
UCH	Uchtor baz=28	2.06	27	⇓*i*P	Pb	18 34 47.8	-0.5
UCH	baz=28			⇓*i*S	Sg	18 35 15.6	-1.2
MNAS	Manas baz=47	2.16	345	⇑*i*P	Pb	18 34 48.8	-1.0
MNAS	baz=47			⇑*i*S	Sg	18 35 18.0	-2.0
EKS2	Erkin-Say baz=11	2.30	10	⇓*i*P	Pb	18 34 50.9	-1.2
EKS2	baz=11			⇓*i*S	Sb	18 35 20.6	0.0
MRKS	Merke 34nm,0.2s	2.35	360	*e*P	Pb	18 34 53.2	+0.2
MRKS	82nm,0.3s			*e*S	Sg	18 35 24.1	-1.8
MRKS	Merke 34nm,0.2s	2.35	360	Pg	Pb	18 34 53.2	+0.2
MRKS	82nm,0.3s			Lg	Lg	18 35 24.1	
AAK	Ala-Archa 26nm,0.5s	2.43	22	Pn	Pb	18 34 52.5	-1.8
AAK	20nm,0.4s			Lg	Lg	18 35 26.1	
AAK	Ala-Archa baz=23	2.43	22	⇓*i*P	Pb	18 34 52.7	-1.6
AAK	baz=23			⇓*i*S	Sb	18 35 24.3	-0.1
KBK	Karagaybulak baz=29	2.59	29	⇑*i*P	Pb	18 34 55.1	-2.1
KBK	baz=29			⇑*i*S	Sb	18 35 28.1	-1.1
FRU1	Bishkek baz=23	2.62	23	⇑*e*P	Pb	18 34 55.7	-1.9
FRU1	baz=23			⇑*i*S	Sb	18 35 29.3	-0.7
GAR	Garm baz=39	2.66	239	⇑*i*P	Pn	18 34 54.5	+1.0
GAR	baz=39			⇑*i*S	Sn	18 35 27.2	+1.4
CHMS	Chumysh baz=23	2.83	23	⇑*i*P	Pb	18 34 58.4	-2.8
CHMS	baz=23			⇑*i*S	Sb	18 35 34.0	-1.9
DZA	Taraz 43nm,0.1s	2.88	331	*e*P	Pb	18 35 03.1	+1.2
DZA	136nm,0.3s			*e*S	Sg	18 35 40.6	-2.3
DZA	Taraz 43nm,0.1s	2.88	331	Pg	Pb	18 35 03.1	+1.2
DZA	136nm,0.3s			Lg	Lg	18 35 40.6	
ULHL	Ulahol baz=50	2.92	50	⇑*i*P	Pn	18 34 59.6	+2.5
ULHL	baz=50			⇑*i*S	Sb	18 35 36.3	-2.1
TGS	TashGRES	3.00	291	S	Sg	18 35 48.0	+1.0
USP	Ospenovka baz=18	3.02	18	⇑*i*P	Pn	18 35 00.7	+2.4
USP	baz=18			⇑*i*S	Sb	18 35 37.8	-3.4
TKM2	Tokmak 2 1.6nm,0.4s	3.08	34	⇓Pn	Pn	18 35 01.1	+1.8
TKM2	4.2nm,0.3s			⇑Pg	Pb	18 35 05.4	0.0
TKM2	13nm,0.5s			⇓Lg	Lg	18 35 47.3	
KST	Kastek 9.4nm,0.3s	3.33	37	*e*P	Pg	18 35 12.9	-1.5
KST	31nm,0.5s			*e*S	Sg	18 35 57.0	-0.5
KST	Kastek 9.4nm,0.3s	3.33	37	Pg	Pg	18 35 12.9	-1.5
KST	31nm,0.5s			Lg	Lg	18 35 57.0	
KK31	Karatay Array 1.1nm,0.2s,baz=135,slow=17,SNR=19	3.39	324	⇑Pg	Pb	18 35 11.8	+1.2
KK31	38nm,0.8s,baz=143,slow=30,SNR=9.9			⇓Lg	Lg	18 35 55.4	
KKAR	Karatay Array baz=25	3.39	324	⇑*i*P	Pn	18 35 05.5	+2.0
KKAR	baz=25			⇑*i*S	Sn	18 35 46.8	+3.0
DGS	Degeres 10nm,0.6s	3.41	33	*e*P	Pb	18 35 13.0	+1.9
DGS	27nm,0.8s			*e*S	Sg	18 35 57.3	-2.7
DGS	Degeres 10nm,0.6s	3.41	33	Pg	Pb	18 35 13.0	+1.9
DGS	27nm,0.8s			Lg	Lg	18 35 57.3	
CHGR	Chuyangaron baz=43	3.61	243	⇑*e*P	Pn	18 35 07.6	+1.1
CHGR	baz=43			⇑*i*S	Sn	18 35 50.2	+1.0
MTBS	Maitube 8.2nm,0.5s	3.62	40	*e*P	Pb	18 35 16.6	+2.0
MTBS	16nm,0.5s			*e*S	Sg	18 36 04.1	-2.7
MTBS	Maitube 8.2nm,0.5s	3.62	40	Pg	Pb	18 35 16.6	+2.0
MTBS	16nm,0.5s			Lg	Lg	18 36 04.1	
BRLS	Borolday 8.9nm,0.2s	3.67	317	*e*P	Pb	18 35 16.2	+0.9
BRLS	35nm,0.3s			*e*S	Sb	18 36 02.1	+2.3
BRLS	Borolday 8.9nm,0.2s	3.67	317	Pg	Pb	18 35 16.2	+0.9
BRLS	35nm,0.3s			Lg	Lg	18 36 02.1	
TNSS	Tian-Shan 4.6nm,0.4s	3.83	45	*e*P	Pb	18 35 20.2	+1.9
TNSS	11nm,0.5s			*e*S	Sg	18 36 10.1	-3.2
TNSS	Tian-Shan 4.6nm,0.4s	3.83	45	Pg	Pb	18 35 20.2	+1.9
TNSS	11nm,0.5s			Lg	Lg	18 36 10.1	
KNDC	Almaty 9.7nm,0.3s	3.96	43	⇑Pg	Pb	18 35 22.6	+2.2
KNDC	64nm,0.8s			⇑Lg	Lg	18 36 15.8	
MDOK	Medeo 3.3nm,0.5s	3.96	45	Pn	Pn	18 35 13.1	+1.6
MDOK	7.2nm,0.7s			Pg	Pb	18 35 22.2	+1.7
MDOK	48nm,1.0s			Lg	Lg	18 36 14.6	
KOTS	Kotyrbulak 7.6nm,0.4s	4.05	44	*e*P	Pg	18 35 25.1	-2.8
KOTS	56nm,0.8s			*e*S	Sg	18 36 18.3	-2.2
KOTS	Kotyrbulak 7.6nm,0.4s	4.05	44	Pg	Pg	18 35 25.2	-2.8
KOTS	56nm,0.8s			Lg	Lg	18 36 18.3	
ANVS	Anan'yevo baz=53	4.08	53	⇑*e*P	Pn	18 35 15.9	+2.8
ANVS	baz=53			⇑*i*S	Sn	18 36 04.7	+3.6
KUU	Kurty 4.7nm,0.3s	4.18	32	*e*P	Pb	18 35 26.1	+1.9
KUU	14nm,0.0s			*e*S	Sg	18 36 19.9	-4.9
KUU	Kurty 4.7nm,0.3s	4.18	32	Pg	Pb	18 35 26.1	+1.9
KUU	14nm,0.0s			Lg	Lg	18 36 19.9	
PRZ	Przheval'sk baz=60	4.40	60	⇑*e*P	Pn	18 35 20.7	+3.2
PRZ	baz=60			⇑*i*S	Sn	18 36 12.3	+3.5
SATY	Saty 2.6nm,0.2s	4.69	54	*e*P	Pb	18 35 35.9	+3.1
SATY	22nm,0.6s			*e*S	Sg	18 36 36.9	-4.0
SATY	Saty 2.6nm,0.2s	4.69	54	Pg	Pb	18 35 35.9	+3.1
SATY	22nm,0.6s			Lg	Lg	18 36 36.9	
KPKS	Kokpek 2.9nm,0.3s	5.08	51	*e*P	Pb	18 35 42.7	+3.1
KPKS	20nm,0.7s			*e*S	Sg	18 36 48.3	-5.4
ARXS	Arharly 3.6nm,0.6s	5.11	40	*e*P	Pb	18 35 43.5	+3.6
ARXS	12nm,0.5s			*e*S	Sg	18 36 49.9	-4.4
ARXS	Arharly 3.6nm,0.6s	5.11	40	Pg	Pb	18 35 43.5	+3.6
ARXS	12nm,0.5s			Lg	Lg	18 36 49.9	
UZB	Uzynbulak 3.9nm,0.3s	5.12	56	*e*P	Pb	18 35 43.3	+3.1
UZB	13nm,0.7s			*e*S	Sg	18 36 50.0	-4.7
UZB	Uzynbulak 3.9nm,0.3s	5.12	56	Pg	Pb	18 35 43.3	+3.1
UZB	13nm,0.7s			Lg	Lg	18 36 50.0	
BLB	Baldybastay 4.1nm,0.2s	5.36	45	Pg	Pb	18 35 48.2	+4.0
BLB	23nm,0.4s			Lg	Lg	18 36 57.4	
SHLS	Shalkode	5.40	57	*e*P	Pg	18 35 52.9	-1.1
SHLS				*e*S	Sg	18 37 05.9	+2.0
SHLS	Shalkode	5.40	57	Pg	Pg	18 35 52.9	-1.1
SHLS				Lg	Lg	18 37 05.9	
PDGK	Podgornoye 0.9nm,0.3s	5.50	56	Pg	Pb	18 35 50.4	+3.7
PDGK	4.3nm,1.0s			Lg	Lg	18 37 01.5	
PDGK	Podgornoye 2.0nm,0.7s	5.50	56	⇑Pg	Pb	18 35 50.0	+3.2
PDGK	15nm,1.1s			⇓Lg	Lg	18 37 01.9	
KTMS	Ketmen 0.5nm,0.3s	6.11	58	*e*P	Pb	18 36 01.0	+3.9
KTMS	5.9nm,0.4s			*e*S	Sg	18 37 19.9	-6.7
KTMS	Ketmen 0.5nm,0.3s	6.11	58	Pg	Pb	18 36 01.0	+3.9
KTMS	5.9nm,0.4s			Lg	Lg	18 37 19.9	
DJR	Jarkent 0.5nm,0.1s	6.24	49	*e*P	Pb	18 36 02.8	+3.5
DJR	7.1nm,0.7s			*e*S	Sg	18 37 22.8	-7.9
DJR	Jarkent 0.5nm,0.1s	6.24	49	Pg	Pb	18 36 02.7	+3.5
DJR	7.1nm,0.7s			Lg	Lg	18 37 22.8	

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*TUL **17** 18:34:24.9±1.3, 36°.93N±0°.01×98°.13W±0°.04, h5km±7km, ML2.5, mb_Lg2.2/8(NEIC), Error ellipse: s-maj=4.7km s-min=1.5km az=95.0*

NEIC 17 18:34:25.0±1.2, **36°.92N**±0°.01×**98°.12W**±0°.04, **h11km**±4km, **Error ellipse: s-maj=4.3km s-min=2.0km az=88.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAN14	Manchester OK	0.13	71		Pg	18 34 28.1	-0.1
KAN14				Sg	Sg	18 34 30.4	-0.1
OK032	Salt Plains WL	0.13	214		Pg	18 34 28.0	-0.2
OK032				Sg	Sg	18 34 30.3	-0.2
KAN10	Anthony SW Sta	0.21	5		Pg	18 34 29.2	-0.3
GC02	Grant County #	0.21	107	Pg	Pg	18 34 29.8	+0.3
GC02				Sg	Sg	18 34 33.2	+0.6
KAN05	Bluff City Nor	0.28	45	Pg	Pg	18 34 30.8	+0.1
KAN05				Sg	Sg	18 34 34.6	+0.2
KAN17	Caldwell West	0.31	65		Pg	18 34 31.6	+0.3
KAN17				Sg	Sg	18 34 35.8	+0.3
KAN16	Harper SW Stat	0.31	8	Pg	Pg	18 34 31.1	-0.3
KAN08	Anthony NE Sta	0.33	20		Pg	18 34 31.5	-0.2
KAN08				Sg	Sg	18 34 36.1	-0.1
KAN01	Argonia South	0.37	50	Pg	Pg	18 34 32.5	0.0
KAN01				Sg	Sg	18 34 37.6	+0.2
KAN06	Argonia West S	0.39	32	Pg	Pg	18 34 32.8	-0.1
KAN06				Sg	Sg	18 34 37.7	-0.4
KAN12	Harper NE Stat	0.39	14		Pg	18 34 32.1	-0.8
KAN12				Sg	Sg	18 34 38.1	0.0
CROK	Carrier	0.42	165	Pg	Pg	18 34 33.6	+0.2
CROK				Sg	Sg	18 34 38.5	-0.5
KAN09	Caldwell North	0.46	61		Pg	18 34 33.7	-0.3
KAN13	South Haven SW	0.52	79	Pg	Pg	18 34 35.2	0.0
KS20	Mayfield South	0.55	55	Pg	Pb	18 34 36.3	-0.4
BLOK	Blackwell	0.74	102	Pg	Pg	18 34 39.2	-0.2
BLOK				Sg	Sb	18 34 49.6	-0.4
U32A	Winter Ranch,	0.89	233	Pg	Pg	18 34 41.9	-0.3
OK029	Liberty Lake	1.24	154	Pg	Pn	18 34 48.3	0.0
OK029				Sg	Sn	18 35 05.5	+0.6
T35A	Sooner Cattle	1.29	89		Pb	18 34 49.1	-0.1
QUOK	Quay	1.35	123	Pn	Pb	18 34 50.4	-0.1
OK031	S. Brethren Rd	1.41	133	Pn	Pg	18 34 51.8	-0.3
R32A	Long Quarter,	1.58	343		Pb	18 34 53.7	-0.5
FNO	Franklin	1.75	160	Pn	Pn	18 34 54.8	-0.6
TUL1	Leonard	2.13	117	Pn	Pn	18 35 00.0	-0.5
TUL1	comp=Z,31nm,0.9s			IAmb_Lg		18 35 35.2	
WMOK	Wichita Mounta	2.24	194	Pn	Pn	18 35 02.7	+0.6
CBKS	Cedar Bluff	2.29	326	Pn	Pn	18 35 03.1	+0.3
CBKS	comp=Z,6.7nm,1.1s			IAmb_Lg		18 35 35.5	
X34A	Smith Ranch, M	2.32	174	Pn	Pn	18 35 02.7	-0.5
KSU1	Kansas State U	2.49	28	Pn	Pn	18 35 04.2	-1.3
KSU1	comp=Z,9.3nm,0.9s			IAmb_Lg		18 35 49.4	
U38A	Gravette	3.04	98	Pn	Pn	18 35 12.2	-0.8
X37A	Clayton	3.22	135	Pn	Pn	18 35 16.1	+0.5
HHAR	Hobbs	3.42	99	Pn	Pn	18 35 19.0	+0.7
HHAR	comp=Z,5.6nm,0.9s			IAmb_Lg		18 36 14.6	
AMTX	Amarillo	3.53	236		Pn	18 35 19.4	-0.6
AMTX	comp=Z,14nm,0.8s			IAmb_Lg		18 36 20.6	
S39A	Bolivar	3.90	77	Pn	Pn	18 35 24.1	-0.8
W39A	Magazine	3.91	115	Pn	Pn	18 35 26.1	+1.1
U40A	Yellville	4.27	96	Pn	Pn	18 35 29.4	-0.6
MIAR	Mount Ida	4.38	121	Pn	Pn	18 35 32.6	+1.0
R40A	Maddies Statio	4.84	72	Pn	Pn	18 35 36.7	-1.2
X40A	Basin Creek Fa	4.93	118	Pn	Pn	18 35 38.0	-1.1
WHAR	Wooly Hollow	4.99	107	Pn	Pn	18 35 37.8	-2.0
T25A	Trinidad	5.04	274	Pn	Pn	18 35 38.6	-2.2
WLAR	White Oak Lake	5.21	127	Pn	Pn	18 35 42.7	-0.1
N38A	Joes South For	5.43	43	Pn	Pn	18 35 46.3	+0.4
CCM	Cathedral Cave	5.58	76	Pn	Pn	18 35 46.4	-1.7

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*THE **17** 18:37:39.4, 38°.46N×20°.45E, h11km, ML2.7/12, Error ellipse: s-maj=0.9km s-min=0.5km az=277.0*

ISC 17 18:37:38.8±0.8, **38°.47N**±0°.02×**20°.40E**±0°.04, **h18km**±5km, **n25, σ1ˢ.06**/46, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FSK	Fiskardo	0.13	96	P	Pg	18 37 42.2	-0.4
FSK	36µm,0.2s			S	Sg	18 37 43.9	-1.4
KEF4	Livadi, Kephal	0.21	175	P	Pg	18 37 44.0	+0.1
KEF4				S	Sg	18 37 47.4	+0.1
DMLN	Damoulianata-K	0.23	186	P	Pg	18 37 44.4	+0.2
DMLN	5µm,0.3s			S	Sg	18 37 48.3	+0.4
EVGI	Lefkada island	0.25	53	P	Pg	18 37 44.2	-0.2
EVGI	7µm,0.1s			S	Sg	18 37 47.9	-0.4
DRAG	Dragano-Lefkad	0.25	33	P	Pg	18 37 44.5	0.0
DRAG	23µm,0.4s			S	Sg	18 37 48.8	+0.5
KEF3	Kipouria, Keph	0.27	189	P	Pg	18 37 44.6	-0.2
KEF3				S	Sg	18 37 48.6	-0.3
VLS	Valsamata	0.33	153	P	Pg	18 37 45.3	-0.5
VLS	2µm,0.2s			S	Sg	18 37 50.1	-0.4
NYDR	Nydri-Lefkada	0.33	44	P	Pg	18 37 45.7	-0.1
NYDR	1µm,0.2s			S	Sg	18 37 50.0	-0.7
PSDA	Pessada-Kefalo	0.39	158	P	Pg	18 37 46.0	-0.7
PSDA				S	Sg	18 37 51.7	-0.4
LTHK	Lithakia	0.84	156	P	Pg	18 37 53.8	-1.3
LTHK	455nm,0.4s			S	Sb	18 38 06.5	+0.8
PVO	Paravola	0.89	80	P	Pg	18 37 55.4	-0.7
PVO	438nm,0.3s			S	Sn	18 38 09.1	+0.1
RLS	Riolos of Patr	0.94	116	P	Pg	18 37 55.6	-1.3
RLS	212nm,0.4s			S	Sb	18 38 09.8	+1.3
IGT	Igoumenitsa	1.06	357	P	Pb	18 37 59.3	+0.7
IGT	160nm,0.4s			S	Sn	18 38 15.4	+2.3
DRO	Drossia	1.15	116	P	Pb	18 38 00.4	+0.2
DRO	445nm,0.4s			S	Sn	18 38 16.7	+1.2
EFP	Efpalio	1.18	92	P	Pb	18 37 59.7	-1.0
EFP	582nm,0.6s			S	Sn	18 38 16.9	+0.8
DBRK	Dubrovnik	4.53	338	*e*Pn	Pn	18 38 46.6	+0.1
DBRK				Sn	Sn	18 39 38.5	-0.2
STON	Ston	4.85	336	*e*Pn	Pn	18 38 51.1	+0.3
STON				Sn	Sn	18 39 44.9	-1.7
MAKA	Makarska	5.45	333	*e*Pn	Pn	18 39 00.0	+0.9
MAKA				Sn	Sn	18 40 00.6	-0.8
HVAR	Hvar	5.58	329	*e*Pn	Pn	18 39 00.4	-0.4
HVAR				Sn	Sn	18 40 00.8	-3.6
RICI	Ricice	5.59	335	*e*Pn	Pn	18 39 01.3	+0.2
RICI				Sn	Sn	18 40 04.0	-0.9
KIJV	Kijevo	6.29	333	*e*Pn	Pn	18 39 11.8	+1.1
ZIRJ	Zirje	6.30	327	*e*Pn	Pn	18 39 11.2	+0.4
ZIRJ				Sn	Sn	18 40 20.5	-1.9
MORI	Morici	6.45	328	*e*Pn	Pn	18 39 14.3	+1.5
DUGI	Dugi Otok	6.83	326	*e*Pn	Pn	18 39 18.7	+0.7
NVLJ	Novalja	7.36	327	*e*Pn	Pn	18 39 26.7	+1.3

IDC 17 18:43:34.5±999.0, **62°.79N**×**73°.31E, h0km, Error ellipse: s-maj=719.0km s-min=197.0km az=131.0, Northwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	10.71	141	*i*		19 47 30.0	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=331,slow=336,SNR=9.6						
I34MN	SONGINO INFRAS	23.72	114	*i*		21 09 10.0	
	baz=323,slow=336,SNR=5.5						
I45RU	USSURIYSK INFR	37.92	91	*i*		22 36 30.0	
	baz=321,slow=317,SNR=2.5						

IDC 17 19:03:30.8±12.0, 23°.43S×177°.93E, h433km±269km, mb3.4/3, mb1 3.5/4, mb1mx3.0/37, mbtmp4.2/4, Error ellipse: s-maj=511.4km s-min=90.0km az=93.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.66	1	P	P	19 05 01.1	0.0
	1.1nm,0.3s,baz=180,slow=20,SNR=6.0						
STKA	Stephens Creek	33.15	247	P	P	19 09 29.4	-0.1
	1.4nm,0.6s,baz=68,slow=11,SNR=6.1						
ASAR	Alice Springs	40.24	261	P	P	19 10 28.5	0.0
	3.4nm,0.7s,baz=101,slow=7.1,SNR=48						
WRA	Warramunga Arr	40.54	266	P	P	19 10 30.7	-0.3
	3.5nm,0.4s,baz=102,slow=8.6,SNR=50						

NEIC 17 19:07:43.5±1.9, 8°.31S±0°.06×119°.13E±0°.07, h25km±3km, mb4.2/16, Error ellipse: s-maj=11.4km s-min=7.8km az=57.0

DJA 17 19:07:43.0±0.3, 8°S±4°×11°9E±°, h10km, M4.5/12, mb4.7/2, mB4.8/2, MLv4.3/12, Mw(mB)4.1/2

IDC 17 19:07:45.6±2.5, 8°.21S×119°.28E, h47km±22km, mb3.8/8, mb1 3.9/11, mb1mx3.6/36, mbtmp4.0/11, ML3.7/3, MS3.2/2, Ms1 3.2/2, ms1mx2.6/51, Error ellipse: s-maj=33.6km s-min=10.1km az=62.0

ISC 17 19:07:40.8±0.5, 8°.29S±0°.05×119°.21E±0°.04, h10km, n64, σ2ˢ.07/65, mb4.4/11, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	1.51	249	P	Pn	19 08 08.2	+0.2
PLAI	Plampang	1.51	249	P	Pn	19 08 08.6	+0.6
TWSI	Taliwang, Sumb	2.34	259	P	Pn	19 08 20.4	+1.0
BSSI	Bau Bau, Buton	2.48	31	P	Pn	19 08 21.5	+0.2
MMRI	Maumere	3.02	97	P	Pn	19 08 31.2	+2.5
MMRI	Maumere	3.02	97		Pn	19 08 30.5	+1.7
MMRI	Maumere	3.02	97	P	Pn	19 08 30.8	+2.1
BKSI	Bulukumba	3.08	17	P	Pn	19 08 29.8	+0.2
KAPI	Kappang	3.29	10	P	Pn	19 08 33.3	+0.8
	8.2nm,0.3s,baz=210,slow=4.5,SNR=57						
KAPI				S	Sn	19 09 11.1	-0.7
	5.7nm,0.3s,baz=225,slow=13,SNR=4.2						
KAPI				LR	LR	19 10 05.1	
	comp=Z,422nm,18.5s,baz=220,slow=44						
KAPI	Kappang	3.29	10		Pn	19 08 32.9	+0.4
KAPI	Kappang	3.29	10	P	Pn	19 08 33.2	+0.7
SRBI	Singaraja	3.96	273	P	Pb	19 08 55.7	+5.0
BNSI	Bone	3.96	13	P	Pn	19 08 44.6	+2.9
DNP	Denpasar	3.97	264	P	Pb	19 08 53.4	+2.4
IGBI	Denpasar	4.05	262	P	Pn	19 08 48.9	+6.0
SPSI	Sidrap Palu	4.33	7	P	Pn	19 08 48.7	+2.0
BATI	Baumata	4.80	114	P	Pn	19 08 55.0	+1.8
	0.9nm,0.3s,baz=143,slow=15,SNR=2.1						
BATI				S	Sn	19 09 56.6	+7.7
	5.3nm,0.3s,baz=117,slow=20,SNR=4.2						
BATI	Baumata	4.80	114	P	Pb	19 09 06.0	+0.9
JAGI	Jajag, Banyuwa	5.00	268	P	Pn	19 09 00.8	+4.7
	0.7nm2µm155nm,0.9s						
JAGI	Jajag, Banyuwa	5.00	268		Pn	19 08 55.7	-0.3
JAGI	Jajag, Banyuwa	5.00	268	P	Pn	19 08 56.4	+0.3
SOEI	Soe	5.21	107	P	Pb	19 09 07.8	-4.3
SOEI	Soe	5.21	107		Pn	19 09 01.5	+2.5
SOEI	Soe	5.21	107	P	Pn	19 09 00.8	+1.8
TTSI	Tana Toraja	5.24	7	P	Pn	19 09 02.5	+3.2
LUWI	Luwuk	8.02	26	Pn	Pn	19 09 38.3	+0.7
UGM	Wanagama	8.61	272	Pn	Pn	19 09 45.3	-0.2
UGM	Wanagama	8.61	272	P	Pn	19 09 45.4	-0.2
LEM	Lembang	11.58	276	LR	LR	19 14 57.8	
	comp=Z,114nm,20.8s,baz=70,slow=37						
FITZ	Fitzroy Crossi	11.59	148	P	Pn	19 10 25.1	-1.3
	0.6nm,0.3s,baz=347,slow=9.4,SNR=13						
FITZ				S	Sn	19 12 31.1	-4.9
	1.2nm,0.3s,baz=199,slow=22,SNR=6.2						
FAKI	Fak Fak	14.03	68	Pn	Pn	19 11 04.3	+4.5
WB0	Warramunga Arr	18.62	129	P	P	19 11 56.8	-1.8
WB0				IAmb	IAmb	19 12 09.1	
	comp=Z,9.4nm,0.8s						
WRA	Warramunga Arr	18.68	130	P	P	19 12 00.1	+0.8
	comp=Z,0.4nm,0.3s,baz=301,slow=12,SNR=16						
WRA				S	Sn	19 15 17.0	-12
	baz=307,slow=24,SNR=3.2						
WRA	Warramunga Arr	18.68	130	P	P	19 11 59.9	+0.5
WRAB	Tennant Creek	18.68	130	P	P	19 11 59.2	-0.1
WRAB				IAmb	IAmb	19 12 11.7	
	comp=Z,8.2nm,0.7s						
WB2	Warramunga Arr	18.69	130	P	P	19 12 00.1	+0.7
WR0	Warramunga Arr	18.84	130	P	P	19 12 01.8	+0.7
WR0				IAmb	IAmb	19 12 11.9	
	comp=Z,19nm,1.3s						
AS31	Alice Springs	20.79	139	P	P	19 12 23.2	+0.8
AS31				IAmb	IAmb	19 12 36.9	
	comp=Z,4.7nm,0.5s						
ASAR	Alice Springs	20.79	139	P	P	19 12 23.5	+1.1
	comp=Z,2.4nm,0.6s,baz=322,slow=12,SNR=22						
ASAR				S	S	19 16 12.3	-2.3
	comp=Z,1.5nm,0.8s,baz=312,slow=22,SNR=6.3						
ASAR				ScP	ScP	19 20 04.9	-3.7
	comp=Z,0.5nm,0.7s,baz=320,slow=1.9,SNR=4.4						
ASAR	Alice Springs	20.79	139		S	19 16 10.3	-4.3
STKA	Stephens Creek	31.38	142	P	P	19 14 03.3	+1.3
	comp=Z,2.4nm,0.9s,baz=311,slow=9.8,SNR=3.0						
STKA	Stephens Creek	31.38	142	P	P	19 14 00.8	-1.2
CMAR	Chiang Mai Arr	33.26	323	P	P	19 14 18.5	-0.1
	comp=Z,0.9nm,0.6s,baz=152,slow=6.9,SNR=7.3						
SSE	Sheshan	39.20	3	P	P	19 15 12.7	+3.5
SHL	Shillong	42.88	322	P	P	19 15 40.1	+0.2
KSAR	Wonju Array Be	46.21	10	P	P	19 16 06.1	+0.1
KSRS	Korea Array	46.23	10	P	P	19 16 06.0	-0.1
	comp=Z,4.9nm,1.0s,baz=184,slow=9.8,SNR=7.4						
LSA	Lhasa	46.42	326	P	P	19 16 06.5	-1.9
LSA				IAmb	IAmb	19 16 11.1	
	comp=Z,4.5nm,0.7s						
ULN	Ulaanbaatar	56.93	350	P	P	19 17 26.8	+0.5
SONM	Songino Array	57.01	350	P	P	19 17 26.2	-0.7
	comp=Z,3.6nm,0.9s,baz=162,slow=11,SNR=17						
SONM	Songino Array	57.01	350	P	P	19 17 26.9	-0.1
MK31	Makanchi Array	63.92	333	P	P	19 18 12.9	-1.1
MK31				IAmb	IAmb	19 18 15.4	
	comp=Z,2.2nm,0.8s						
MKAR	Makanchi Array	63.92	333	P	P	19 18 13.3	-0.7
	comp=Z,3.0nm,0.7s,baz=142,slow=7.1,SNR=19						
MKAR	Makanchi Array	63.92	333	P	P	19 18 13.1	-0.9
GAR	Garm	65.33	320	P	P	19 18 23.0	-0.5
KURK	Kurchatov	68.45	334	P	P	19 18 42.3	-0.7
KURK				IAmb	IAmb	19 18 45.6	
	comp=Z,2.4nm,1.0s						
ZAA0	Zalesovo Array	68.45	339	P	P	19 18 42.1	-0.8
ZAA0				IAmb	IAmb	19 18 43.3	
	comp=Z,3.6nm,1.0s						
ZALV	Zalesovo Beam	68.45	339	P	P	19 18 41.4	-1.5
	comp=Z,1.7nm,0.7s,baz=141,slow=5.0,SNR=8.8						
ZALV	Zalesovo Beam	68.45	339	P	P	19 18 41.2	-1.6
VNDA	Vanda	72.66	171	P	P	19 19 08.9	+0.6
	comp=Z,0.3nm,0.6s,baz=267,slow=1.9,SNR=1.5						
VNDA	Vanda	72.66	171	P	P	19 19 08.2	-0.1
VNDA				IAmb	IAmb	19 19 44.4	
	comp=Z,2.5nm,1.4s						
TORD	Torodi Ar. Bea	118.53	280	PKP	PKPdf	19 26 28.7	-1.3
	comp=Z,0.6nm,0.6s,baz=62,slow=1.6,SNR=4.9						
TORD	Torodi Ar. Bea	118.53	280		PKPdf	19 26 28.5	-1.5
CPUP	Villa Florida	145.43	185	PKPbc	PKPbc	19 27 19.4	-0.4
	comp=Z,1.0nm,0.6s,baz=2.0,slow=20,SNR=1.6						

IDC 17 19:15:48.4±2.5, 8°.63S×118°.51E, h0km, mb3.4/3, mb1 3.6/5, mb1mx3.2/52, mbtmp3.5/5, ML2.9/1, MS3.8/1, Ms1 3.8/1, ms1mx2.8/19, Error ellipse: s-maj=204.2km s-min=23.4km az=54.0

DJA 17 19:16:02.4±0.4, 9°S±5°×11°9E±°, h92km±6km, M4.0/12, mb4.2/2, MLv3.9/12

ISC 17 19:16:00.9±0.9, 9°.20S±0°.08×118°.51E±0°.05, h100km, n27, σ2ˢ.03/26, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	0.81	297	P	Pn	19 16 20.8	+1.4
PLAI				S	Sn	19 16 34.7	+1.5
PLAI	Plampang	0.81	297	P	Pn	19 16 21.2	+1.8
TWSI	Taliwang, Sumb	1.67	286	P	Pn	19 16 31.4	+2.1
TWSI	Taliwang, Sumb	1.67	286	P	Pn	19 16 32.0	+2.7
WSI	Waingapu	1.83	105	P	Pn	19 16 33.0	+1.8
DNP	Denpasar	3.30	279	P	Pn	19 16 53.2	+2.6
IGBI	Denpasar	3.34	276	P	Pn	19 16 52.4	+1.2
SRBI	Singaraja	3.44	289	P	Pn	19 16 52.1	-0.4
BSSI	Bau Bau, Buton	3.62	33	P	Pn	19 16 56.9	+1.9
BSSI	Bau Bau, Buton	3.62	33	P	Pn	19 16 57.3	+2.4
MMRI	Maumere	3.73	82	P	Pn	19 16 57.3	+0.9
MMRI	Maumere	3.73	82	P	Pn	19 16 58.1	+1.7
BKSI	Bulukumba	4.17	23	P	Pn	19 17 03.8	+1.4
BKSI	Bulukumba	4.17	23	P	Pn	19 17 05.3	+2.9
JAGI	Jajag, Banyuwa	4.37	279	P	Sn	19 17 55.9	+1.0
JAGI	Jajag, Banyuwa	4.37	279	P	Pn	19 17 05.4	+0.4
BATI	Baumata	5.18	102	P	Pn	19 17 17.4	+1.3
	0.1nm18nm,0.5s						
SOEI	Soe	5.71	96	P	Pn	19 17 24.5	+1.1
SOEI	Soe	5.71	96	P	Pn	19 17 23.2	-0.2
BBKI	Banjar Baru	6.76	327	P	Pn	19 17 45.9	+8.3
AAI	Ambon	11.07	61	P	Pn	19 18 49.9	+14
FITZ	Fitzroy Crossi	11.23	143	Pn	Pn	19 18 36.8	-1.6
	baz=326,slow=12						
WRA	Warramunga Arr	18.66	127	P	P	19 20 11.9	+0.8
	0.0nm,0.3s,baz=302,slow=12,SNR=1.5						
WRA				S	S	19 23 27.2	-11
	0.1nm,0.3s,baz=305,slow=24,SNR=3.6						
ASAR	Alice Springs	20.58	136	P	P	19 20 33.7	+1.7
	0.3nm,0.6s,baz=313,slow=10.0,SNR=5.2						
ASAR				S	S	19 24 19.8	+3.0
	0.3nm,0.6s,baz=309,slow=23,SNR=5.3						
DZM	Mont Dzumac	47.71	111	LR	LR	19 44 32.8	
	comp=Z,105nm,21.6s,baz=180,slow=36						
MKAR	Makanchi Array	64.41	333	P	P	19 26 23.2	-3.2
	0.5nm,0.8s,baz=153,slow=7.4,SNR=2.1						
ZALV	Zalesovo Beam	69.06	339	P	P	19 26 52.4	-3.3
	0.3nm,0.4s,baz=152,slow=6.5,SNR=2.2						

BEO 17 19:23:10.1±2.6, 37°.81N×19°.95E, h73km±8km, ML3.7/12

THE 17 19:23:16.0, 38°.53N×20°.52E, h12km, ML3.4/17, Error ellipse: s-maj=0.9km s-min=0.4km az=285.0

ATH 17 19:23:16.0, 38°.52N×20°.57E, h12km±1km, ML3.6/4, Error ellipse: s-maj=1.9km s-min=0.7km az=281.0

IDC 17 19:23:21.0±2.0, 38°.56N×20°.36E, h73km±25km, mb3.4/5, mb1 3.5/10, mb1mx3.3/57, mbtmp3.7/10, MS3.4/2, Ms1 3.4/2, ms1mx2.5/48, Error ellipse: s-maj=22.2km s-min=16.1km az=147.0

ISC 17 19:23:15.3±0.7, 38°.53N±0°.02×20°.51E±0°.02, h17km±4km, n131, σ1ˢ.74/192, mb3.8/5, 5C-4D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FSK	Fiskardo	0.09	148	P	Pg	19 23 18.6	-0.1
FSK				S	Sg	19 23 20.4	-0.6
FSK	Fiskardo	0.09	148	P	Pg	19 23 18.6	-0.1
FSK				S	Sg	19 23 20.1	-0.9
FSK				AML	AML	19 23 20.9	
	comp=N,63440µm,0.3s						
FSK				AML	AML	19 23 21.1	
EVGI	Lefkada island	0.15	53	P	Pg	19 23 19.2	-0.2
EVGI				S	Sg	19 23 21.8	-0.4
EVGI	Lefkada island	0.15	53	P	Pg	19 23 19.2	-0.2
EVGI				S	Sg	19 23 21.3	-1.0
DRAG	Dragano-Lefkad	0.16	20	P	Pg	19 23 19.5	-0.1
DRAG				S	Sg	19 23 22.4	-0.2
DRAG	Dragano-Lefkad	0.16	20	P	Pg	19 23 19.5	-0.1
DRAG				S	Sg	19 23 22.3	-0.2
NYDR	Nydri-Lefkada	0.24	40	P	Pg	19 23 20.6	-0.1
NYDR				S	Sg	19 23 24.3	-0.1
NYDR	Nydri-Lefkada	0.24	40	P	Pg	19 23 20.6	-0.1
NYDR				S	Sg	19 23 23.5	-0.9
KEF4	Livadi, Kephal	0.28	193	P	Pg	19 23 21.8	+0.4
KEF4				S	Sg	19 23 26.9	+1.3
KEF4	Livadi, Kephal	0.28	193	P	Pg	19 23 21.7	+0.4
KEF4				S	Sg	19 23 26.7	+1.2
LKD2	Lefkada island	0.28	25	P	Pg	19 23 21.4	-0.1
LKD2				S	Sg	19 23 25.8	0.0
LKD2	Lefkada island	0.28	25	P	Pg	19 23 21.6	+0.1
LKD2				S	Sg	19 23 25.3	-0.5
LKD2				AML	AML	19 23 26.4	
	comp=N,35065µm,0.7s						
LKD2				AML	AML	19 23 26.7	
	comp=E,20420µm,0.3s						
DMLN	Damoulianata-K	0.31	199	P	Pg	19 23 22.3	+0.4
DMLN				S	Sg	19 23 27.7	+1.2
DMLN	Damoulianata-K	0.31	199	P	Pg	19 23 22.4	+0.4
DMLN				S	Sg	19 23 27.6	+1.1
TSLK	Tsoukalades, L	0.32	22	P	Pg	19 23 22.3	+0.3
TSLK	Tsoukalades, L	0.32	22	P	Pg	19 23 22.3	+0.3
TSLK				S	Sg	19 23 26.5	-0.1
TSLK				AML	AML	19 23 28.1	
	comp=E,27765µm,0.3s						
TSLK				AML	AML	19 23 30.3	
	comp=N,31285µm,0.7s						
LXRA	Lixouri, Kepha	0.34	189	P	Pb	19 23 22.7	0.0
LXRA				S	Sb	19 23 28.0	+0.2
KEF3	Kipouria, Keph	0.35	201	P	Pb	19 23 22.5	-0.5
KEF3				S	Sb	19 23 28.1	-0.1
KEF3	Kipouria, Keph	0.35	201	P	Pb	19 23 22.5	-0.5
KEF3				S	Sb	19 23 27.9	-0.3
VLS	Valsamata	0.36	169	P	Pb	19 23 22.9	-0.3
VLS				S	Sb	19 23 28.4	-0.1
VLS	Valsamata	0.36	169	P	Pb	19 23 22.9	-0.3
VLS				S	Sb	19 23 27.8	-0.7
VLS				AML	AML	19 23 29.2	
	comp=N,27078µm,0.4s						
VLS				AML	AML	19 23 29.4	
	comp=E,37193µm,0.4s						
PSDA	Pessada-Kefalo	0.42	171	P	Pb	19 23 24.0	-0.2
PSDA				S	Sb	19 23 30.9	+0.6
PSDA	Pessada-Kefalo	0.42	171	P	Pb	19 23 24.0	-0.2
PSDA				S	Sb	19 23 29.8	-0.4
PVO	Paravola	0.81	84	P	Pb	19 23 30.9	+0.1
PVO				S	Sn	19 23 43.6	+0.3
	comp=E,3µm,0.6s						
PVO	Paravola	0.81	84	P	Pb	19 23 30.9	+0.1
VTN	Vitineika	0.81	139	P	Pn	19 23 31.3	-0.6
LTHK	Lithakia	0.86	162	P	Pn	19 23 31.4	-1.1
LTHK				S	Sn	19 23 44.3	-0.4
	comp=E,2µm,0.3s						
LTHK	Lithakia	0.86	162	P	Pn	19 23 31.6	-1.0
RLS	Riolos of Patr	0.89	122	P	Pb	19 23 31.5	-0.8
RLS				S	Sn	19 23 46.6	+1.1
	comp=E,2µm,0.5s						
RLS	Riolos of Patr	0.89	122	P	Pb	19 23 31.6	-0.6
IGT	Igoumenitsa	1.01	352	P	Pg	19 23 34.5	-0.3
IGT				S	Sn	19 23 51.4	+3.0
	comp=E,2µm,0.8s						
IGT	Igoumenitsa	1.01	352	P	Pg	19 23 34.6	-0.3
UPR	University Cam	1.04	103	P	Pb	19 23 34.7	0.0
UPR				S	Sb	19 23 48.9	+0.9
EVR	Evrytania	1.09	69	P	Pg	19 23 35.5	-0.9
EVR				S	Sg	19 23 50.2	-0.5
	comp=E,1µm,0.8s						
EVR	Evrytania	1.09	69	P	Pg	19 23 35.7	-0.7
EFP	Efpalio	1.10	95	P	Pg	19 23 35.3	-1.3
EFP				S	Sn	19 23 53.3	+2.6
	comp=E,2µm,0.6s						
EFP	Efpalio	1.10	95	P	Pg	19 23 35.3	-1.3
ANX	Ano Chora	1.11	86	P	Pg	19 23 35.9	-0.9
ANX				S	Sn	19 23 53.4	+2.3
	comp=E,3µm,1.0s						
ANX	Ano Chora	1.11	86	P	Pg	19 23 35.8	-0.9
DRO	Drossia	1.11	121	P	Pn	19 23 36.1	+0.1
DRO				S	Sn	19 23 53.3	+2.4
	comp=E,4µm,0.3s						
DRO	Drossia	1.11	121	P	Pn	19 23 36.2	+0.1
JAN	Janina	1.16	13	P	Pn	19 23 37.9	+1.2
JAN				S	Sn	19 23 54.7	+2.6
	comp=E,1µm,0.5s						
JAN	Janina	1.16	13	P	Pn	19 23 38.3	+1.6
LAKA	Lakka	1.19	104	P	Pg	19 23 37.0	-1.4
LAKA				S	Sn	19 23 54.1	+1.1
	comp=E,3µm,0.7s						
LAKA	Lakka	1.19	104	P	Pg	19 23 37.0	-1.4
TRIZ	Trizonia	1.24	97	P	Pn	19 23 37.7	0.0
TRIZ				S	Sn	19 23 56.1	+2.0
	comp=E,590nm,0.8s						
TRIZ	Trizonia	1.24	97	P	Pn	19 23 37.8	0.0
ALIK	Aliki, Aigiali	1.29	102	P	Pn	19 23 38.6	+0.1
ALIK				S	Sn	19 23 57.7	+2.4
KEK	Kerkira	1.30	335	P	Pg	19 23 40.5	+0.1
KEK				S	Sn	19 23 58.0	+2.4
	comp=E,1µm,0.7s						
MAKR	Makrakomi, Fth	1.36	69	P	Pb	19 23 40.6	+0.4
MAKR				S	Sb	19 23 58.3	+0.9
	comp=E,3µm,0.9s						
MAKR	Makrakomi, Fth	1.36	69	P	Pb	19 23 40.6	+0.4
KLV	Kalavryta, Ach	1.38	110	P	Pb	19 23 40.1	-0.6
KLV	Kalavryta, Ach	1.38	110	P	Pn	19 23 40.0	+0.2
SRN	Sarande	1.40	344	P	Pb	19 23 41.8	+0.8
SRN				S	Sn	19 23 59.0	+0.9
	comp=E,655nm,0.7s						
AGG	Agios Georgios	1.51	70	P	Pb	19 23 43.2	+0.4
AGG				S	Sn	19 24 02.2	+1.4
	comp=E,2µm,0.8s						
GUR	Goura	1.56	112	P	Pb	19 23 43.1	-0.7
GUR	Goura	1.56	112	P	Pb	19 23 43.0	-0.7
THL	Klokotos Trika	1.56	48	P	Pn	19 23 43.6	+1.4
THL				S	Sg	19 24 06.6	+0.9
	comp=E,1µm,0.6s						
THL	Klokotos Trika	1.56	48	P	Pb	19 23 43.7	0.0
KPRO	Kipourio	1.57	25	P	Pg	19 23 45.8	+0.3
KPRO				S	Sb	19 24 05.4	+1.9
	comp=E,1µm,0.7s						
OHR	Ohrid	2.59	5	*e*Pn	Pn	19 23 59.7	+3.3
OHR				*e*Sn	Sn	19 24 30.8	+3.4
OHR	Ohrid	2.59	5	*i* Pn	Pb	19 23 60.0	-1.2
TIR	Tirane	2.85	350	⇑P	Pn	19 24 02.9	+2.9
TIR	Tirane	2.85	350	*e*Pn	Pn	19 24 01.8	+1.8
TIP	Timpagrande	3.00	284	⇓P	Pn	19 24 04.6	+2.6
VAY	Valandovo	3.21	29	*e*Pn	Pn	19 24 09.1	+4.3
VAY	Valandovo	3.21	29	*i* Pn	Pn	19 24 06.8	+2.0
STIP	Stip	3.41	22	*i* Pn	Pb	19 24 12.5	-2.8
SKO	Skopje	3.51	11	*e*Pn	Pn	19 24 11.9	+2.9
MATE	Matera	3.62	307	⇓P	Pn	19 24 14.6	+4.1
DRME	Dracevica, Mon	3.79	345	*e*Pn	Pn	19 24 14.3	+1.5
PDG	Podgorica	4.01	347	⇑P	Pn	19 24 17.3	+1.5
PDG	Podgorica	4.01	347	*e*Pn	Pn	19 24 17.5	+1.7
PDG				*e*Sn	Sn	19 25 03.1	+0.7
PDG	Podgorica	4.01	347	*e*Pn	Pn	19 24 17.1	+1.3
PRVS	Prvonek	4.15	16	*e*Pn	Pn	19 24 22.2	+4.4
HCY	Herceg Novi	4.20	339	*e*Pn	Pn	19 24 18.8	+0.3
BOSS	Bosilegrad	4.24	20	*e*Pn	Pn	19 24 23.2	+4.2
BARS	Barje	4.39	13	*e*Pn	Pn	19 24 22.6	+1.4
BARS				*e*Sn	Sn	19 25 17.7	+5.8
TREB	Trebinje	4.49	339	*e*Pn	Pn	19 24 23.1	+0.6
TREB				*e*Sn	Sn	19 25 11.9	-2.4
TREB	Trebinje	4.49	339	*e*Pn	Pn	19 24 22.9	+0.4
DBRK	Dubrovnik	4.51	337	*e*Pn	Pn	19 24 22.9	+0.2
DBRK				Sn	Sn	19 25 11.7	-2.9
VTS	Vitosha	4.58	26	P	Pn	19 24 26.8	+2.9
VTS	Vitosha	4.58	26	*e*Pn	Pn	19 24 26.5	+2.7
VTS				*e*Sn	Sn	19 25 20.0	+3.3
BRY	Bratogost	4.61	342	*e*Pn	Pn	19 24 24.7	+0.4
SELS	Selova	4.71	5	*e*Pn	Pn	19 24 26.5	+1.0
SJES	Sjenica	4.74	355	*e*Pn	Pn	19 24 27.7	+1.7
SJES				*e*Sn	Sn	19 25 22.3	+1.7
IDI	Anoyia	4.78	131	P	Pn	19 24 31.0	+4.5
	comp=E,0.1nm,0.3s,baz=306,slow=14,SNR=1.6						
IDI				S	Sn	19 25 19.9	-1.5
	comp=E,0.8nm,0.3s,baz=326,slow=8.4,SNR=1.5						
UPM	Unac-Piva	4.82	346	*e*Pn	Pn	19 24 27.2	0.0
STON	Ston	4.83	335	*e*Pn	Pn	19 24 25.7	-1.4
STON				*e*Sn	Sn	19 25 19.8	-2.8
STON	Ston	4.83	335	*e*Pn	Pn	19 24 27.4	+0.3
STON	Ston	4.83	335	*e*Pn	Pn	19 24 27.3	+0.2
STON				Sn	Sn	19 25 19.3	-3.3
VAE	Valguarnera	4.93	260	P	Pn	19 24 32.0	+3.5
	comp=E,0.6nm,0.3s,baz=355,slow=12,SNR=0.9						
VAE				S	Sn	19 25 28.4	+3.3
	comp=E,1.2nm,0.3s,baz=116,slow=22,SNR=2.0						
RUDO	Rudo	5.15	351	*e*Pn	Pn	19 24 32.1	+0.5
BOVS	Bovan	5.18	10	⇓P	Pn	19 24 33.7	+1.8
BOVS	Bovan	5.18	10	*e*Pn	Pn	19 24 33.4	+1.5
BOVS				*e*Sn	Sn	19 25 35.6	+4.4
BBLS	Lazići	5.39	352	*e*Pn	Pn	19 24 35.8	+0.9
BBLS				*e*Sn	Sn	19 25 37.3	+0.7
BBLS	Lazići	5.39	352	*e*Pn	Pn	19 24 35.5	+0.6
MAKA	Makarska	5.43	332	*e*Pn	Pn	19 24 36.0	+0.6
MAKA				Sn	Sn	19 25 34.8	-2.7
HVAR	Hvar	5.57	328	*e*Pn	Pn	19 24 37.8	+0.5
HVAR				Sn	Sn	19 25 37.0	-3.8
DIVS	Divibare	5.58	356	*e*Pn	Pn	19 24 37.7	+0.3
DIVS				*e*Sn	Sn	19 25 42.7	+1.6
DIVS	Divibare	5.58	356	*e*Pn	Pn	19 24 37.7	+0.3
RICI	Ricice	5.58	334	*e*Pn	Pn	19 24 37.9	+0.6
RICI				Sn	Sn	19 25 38.6	-2.4
HAPS	Han Pijesak,BI	5.67	349	*e*Pn	Pn	19 24 38.6	-0.2
KIJV	Kijevo	6.28	332	*i* Pn	Pn	19 24 48.1	+1.0
KIJV				Sn	Sn	19 25 57.1	-1.3
ZIRJ	Zirje	6.30	326	*i* Pn	Pn	19 24 47.7	+0.5
ZIRJ				Sn	Sn	19 25 55.1	-3.7
MGRS	Mrkonjic Grad	6.42	338	*e*Pn	Pn	19 24 50.5	+1.6
MORI	Morici	6.44	327	*i* Pn	Pn	19 24 50.5	+1.3
MORI				Sn	Sn	19 25 59.7	-2.5
DUGI	Dugi Otok	6.83	325	*e*Pn	Pn	19 24 55.5	+1.0
DUGI				Sn	Sn	19 26 07.8	-4.0
MRAK	Mrakovica	7.01	339	*e*Pn	Pn	19 24 57.8	+0.6
VOIR		7.68	25	⇑P	Pn	19 25 06.7	+0.3
MLR	Muntele Rosu	8.04	28	⇑P	Pn	19 25 18.3	+6.9
MLR	Muntele Rosu	8.04	28	P	Pn	19 25 17.5	+6.1
	comp=E,0.2nm,0.3s,baz=180,slow=8.7,SNR=3.4						
RIY	Rijeka	8.13	328	*e*Pn	Pn	19 25 13.2	+0.7
CRES	Cresnjev	8.19	334	*e*Pn	Pn	19 25 13.7	+0.4
CEY	Cerknica	8.50	330	*e*Pn	Pn	19 25 18.3	+0.8
PLOR	Plostina	8.62	30	⇑P	Pn	19 25 24.2	+5.0
VRI	Vrincioaia	8.66	30	⇓P	Pn	19 25 20.5	+0.8
LJU	Ljubljana	8.71	331	*e*Pn	Pn	19 25 21.5	+1.1
SOKA	Soboth	9.08	335	*i* Pn	Pn	19 25 25.7	+0.1
	comp=E,2.5nm,0.5s,SNR=9.7						
SOKA				*e*Sn	Sn	19 27 01.6	-5.8
	comp=E,1.1nm,0.5s						
OBKA	Obir	9.10	333	*e*Pn	Pn	19 25 27.3	+1.5
	comp=E,0.6nm,0.2s						
OBKA				*e*Sn	Sn	19 27 05.3	-2.5
	comp=E,5.3nm,0.6s						
ABTA	Abfaltersbach	10.10	327	*e*Pn	Pn	19 25 40.2	+0.8
	comp=E,1.6nm,0.5s						
ABTA				*e*Sn	Sn	19 27 29.1	-3.3
	comp=E,3.7nm,0.6s						
MOTA	Moosalm	11.17	325	*e*Pn	Pn	19 25 55.7	+1.5
	comp=E,1.5nm,0.4s						
DAVOX	Davos/Dischmat	11.36	320	P	Pn	19 25 57.7	+0.9
	comp=E,0.2nm,0.3s,baz=139,slow=17,SNR=2.0						
DAVOX				S	Sn	19 27 57.8	-5.5
	comp=E,0.1nm,0.3s,baz=132,slow=17,SNR=2.0						
GERES	GERESS Array B	11.42	337	P	Pn	19 25 58.7	+1.2
	comp=E,0.3nm,0.3s,baz=164,slow=15,SNR=3.9						
GERES				S	Sn	19 28 03.6	-1.0
	comp=E,0.3nm,0.3s,baz=162,slow=22,SNR=4.7						
KVAR	Kislovodsk Arr	17.53	65	LR	LR	19 36 25.3	
	comp=E,96nm,19.6s,baz=92,slow=44						
HFS	Hagfors	22.05	351	P	P	19 28 09.3	+0.4
	comp=E,3.6nm,0.7s,baz=171,slow=12,SNR=2.2						
FINES	FINESS Array B	23.20	7	P	P	19 28 20.3	-0.6
	comp=E,1.8nm,0.5s,baz=160,slow=11,SNR=11						
TORD	Torodi Ar. Bea	30.30	219	P	P	19 29 24.5	-1.1
	comp=E,0.3nm,0.7s,baz=26,slow=9.0,SNR=1.8						
MKAR	Makanchi Array	45.13	59	P	P	19 31 30.5	-0.1
	comp=E,0.4nm,0.5s,baz=274,slow=6.9,SNR=7.0						
ZALV	Zalesovo Beam	45.47	48	P	P	19 31 33.6	+0.5
	comp=E,2.0nm,0.7s,baz=276,slow=8.7,SNR=8.0						
KLR	Kul'dur	73.61	40	LR	LR	20 12 50.5	
	comp=E,34nm,18.1s,baz=84,slow=40						

IDC 17 19:36:43.0±3.0, 32°.56S×177°.70W, h0km, mb4.3/2, mb1 4.5/3, mb1mx3.8/26, mbtmp4.2/3, ML3.6/1, Error ellipse: s-maj=75.5km s-min=45.1km az=132.0

NEIC 17 19:36:44.0±0.8, 32°.7S±0°.1×177°.5W±0°.2, h10km±2km, mb4.6/7, Error ellipse: s-maj=27.1km s-min=21.5km az=141.0

ISC 17 19:36:45.1±2.1, 32°.7S±0°.1×177°.5W±0°.2, h21km, n19, σ0ˢ.77/17, mb4.5/6, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	5.94	214	Pn	Pn	19 38 11.8	+0.1
URZ	Urewera	7.07	217	Pn	Pn	19 38 27.1	-0.1
	1.1nm,0.3s,baz=302,slow=23,SNR=1.9						

URZ				Sn	Sn	19 39 46.4	-0.5
	1.9nm,0.3s,baz=300,slow=23,SNR=5.1						
URZ	Urewera	7.07	217	Pn	Pn	19 38 27.4	+0.1
OUZ	Omahuta	7.78	249	Pn	Pn	19 38 38.0	+0.9
BKZ	Black Stump Fm	8.07	215	Pn	Pn	19 38 41.3	+0.2
BFZ	Birch Farm	9.41	210	Pn	Pn	19 38 59.7	+0.3
SNZO	South Karori	10.60	214	Pn	Pn	19 39 15.2	-0.5
WKZ	Wanaka	16.00	217		Pn	19 40 31.4	+2.5
WKZ				IAmb	IAmb	19 40 52.8	
	comp=Z,100nm,1.4s						
CTAO	Charters Tower	34.60	282	P	P	19 43 32.1	-0.7
CTAO				IAmb	IAmb	19 43 40.2	
	comp=Z,9.1nm,1.1s						
ASAR	Alice Springs	43.42	269	P	P	19 44 46.7	+0.1
	comp=Z,1.2nm,0.6s,baz=108,slow=7.7,SNR=16						
WR0	Warramunga Arr	44.44	274	P	P	19 44 54.7	-0.1
WR0				IAmb	IAmb	19 45 07.7	
	comp=Z,5.9nm,1.2s						
WB2	Warramunga Arr	44.60	274	P	P	19 44 56.1	0.0
WB2				IAmb	IAmb	19 44 56.5	
	comp=Z,6.3nm,0.5s						
WRAB	Tennant Creek	44.61	274	P	P	19 44 56.0	-0.2
WRAB				IAmb	IAmb	19 45 07.2	
	comp=Z,9.0nm,1.4s						
WRA	Warramunga Arr	44.61	274	P	P	19 44 56.0	-0.1
	comp=Z,4.1nm,0.4s,baz=114,slow=7.5,SNR=23						
WB0	Warramunga Arr	44.65	274	P	P	19 44 56.4	0.0
H03S2	Juan Fernandez	78.89	123	T	T	21 17 08.5	
	baz=242,slow=74,SNR=15						
H03S1	Juan Fernandez	78.90	123	T	T	21 17 09.2	
	baz=242,slow=74,SNR=12						
H03S3	Juan Fernandez	78.91	123	T	T	21 17 09.2	
	baz=242,slow=74,SNR=15						
FINES	FINESS Array B	147.42	339	PKPbc	PKPbc	19 56 26.8	+0.2
	comp=Z,4.0nm,0.9s,baz=41,slow=3.8,SNR=10						

KRNET 17 19:38:27.1±0.1,40.°37N×73.°19E,h18^{km},mb1.9,30C-6D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	Osh	0.34	297	⇑iP	Pg	19 38 32.6	-1.9
	baz=96						
OHH				⇑iS	Sg	19 38 37.7	-1.8
	baz=96						
OHH	Osh	0.34	297	⇑iP	Pg	19 38 34.0	-0.5
	baz=97						
OHH				⇑iS	Sg	19 38 39.0	-0.5
	baz=97						
SFK	Sufi-Kurgan	0.43	146	⇑eP	Pg	19 38 34.0	-2.1
	baz=47						
SFK				⇑eS	Sg	19 38 40.3	-1.8
	baz=47						
SFK	Sufi-Kurgan	0.43	146	⇑eP	Pg	19 38 35.4	-0.7
	baz=46						
SFK				⇑eS	Sg	19 38 41.6	-0.5
	baz=46						
SALK	Salom-Alik	0.70	43	⇑eP	Pb	19 38 38.8	-2.1
	baz=43						
SALK				⇑eS	Sb	19 38 48.7	-1.6
	baz=43						
SALK	Salom-Alik	0.70	43	⇑eP	Pb	19 38 40.7	-0.2
	baz=43						
SALK				⇑eS	Sg	19 38 50.6	+0.2
	baz=43						
DRK	Karamyk	1.39	231	⇓iP	Pn	19 38 51.0	-0.9
	baz=31						
DRK				⇓iS	Sb	19 39 10.2	0.0
	baz=31						
DRK	Karamyk	1.39	231	⇑eP	Pb	19 38 52.9	+0.2
	baz=31						
DRK				⇑iS	Sg	19 39 11.6	-0.5
	baz=31						
AML	Almayashu	1.80	12	⇓iP	Pn	19 38 58.3	+0.6
	baz=12						
AML				⇓eS	Sb	19 39 22.5	+0.3
	baz=12						
AML	Almayashu	1.80	12	⇑eP	Pb	19 38 59.8	0.0
	baz=12						
AML				⇑iS	Sg	19 39 24.1	-1.2
	baz=12						
BTK	Batken	1.84	261	⇑iP	Pb	19 38 59.5	-0.8
	baz=61						
BTK				⇑eS	Sb	19 39 24.1	+1.1
	baz=61						
BTK	Batken	1.84	261	⇑eP	Pb	19 39 00.3	0.0
	baz=61						
BTK				⇑iS	Sg	19 39 25.1	-1.4
	baz=61						
TRKS	Terek-Say	1.94	307	⇑iP	Pn	19 39 00.3	+1.0
	baz=6.0						
TRKS				⇑eS	Sb	19 39 25.4	-0.5
	baz=6.0						
TRKS	Terek-Say	1.94	307	⇑iP	Pb	19 39 00.9	-1.1
	baz=6.0						
TRKS				⇑iS	Sb	19 39 26.2	+0.3
	baz=6.0						
UCH	Uchtor	2.11	28	⇓iP	Pn	19 39 03.0	+1.1
	baz=28						
UCH				⇓iS	Sb	19 39 30.1	-1.0
	baz=28						
UCH	Uchtor	2.11	28	⇑eP	Pb	19 39 03.8	-1.3
	baz=28						
UCH				⇑iS	Sb	19 39 31.3	+0.2
	baz=28						
MNAS	Manas	2.18	347	⇑iP	Pn	19 39 04.1	+1.5
	baz=46						
MNAS				⇑iS	Sb	19 39 32.4	-0.4
	baz=46						
MNAS	Manas	2.18	347	⇑iP	Pb	19 39 04.8	-1.3
	baz=47						
MNAS				⇑eS	Sb	19 39 33.6	+0.8
	baz=47						

IDC **17** *19:39:32.4±0.5, 38.°77N×20.°61E, h0^{km}, mb4.1/24, mb1 4.1/38, mb1mx4.0/58, mbtmp4.0/38, ML3.6/13, MS3.3/22, Ms1 3.3/22, ms1mx3.1/66, Error ellipse: s-maj=11.4km s-min=10.0km az=140.0*

MOS **17** *19:39:32.6±1.2, 38.°61N×20.°33E, h15^{km}, mb4.7/12, Error ellipse: s-maj=5.6km s-min=3.0km az=80.5*

BEO **17** *19:39:33.3±0.7, 38.°63N×20.°24E, h0^{km}, ML4.0/18*

TIR **17** *19:39:34.0, 38.°71N×20.°54E, h8^{km}±2^{km}, Ml4.5*

NEIC **17** *19:39:33.9, 38.°71N×20.°50E, h18^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.89; $M_{\theta\theta}$3.12; $M_{\phi\phi}$-2.23; $M_{r\theta}$0.02; $M_{\theta\phi}$-0.36; $M_{\phi r}$-1.30; Fault plane solution: $M_0$3.09000×10^{15} NP1:ϕ_s314.36000°, δ69.79000°, λ-24.25000°. NP2:ϕ_s53.20000°, δ67.33000°, λ-158.01000°. Principal axes: T 3.1439, Plg2.0000°, Azm4.0000°; N -0.1057, Plg59.0000°, Azm97.0000°; P -3.0382, Plg31.0000°, Azm273.0000°;*

NEIC **17** *19:39:34.9±2.6, 38.°71N±0.°05×20.°51E±0.°06, h11^{km}±4^{km}, mb4.4/38, Mwr4.3/18, ML4.5(THE) Error ellipse: s-maj=7.7km s-min=6.9km az=185.0*

ATH **17** *19:39:34.9, 38.°70N×20.°60E, h8^{km}±1^{km}, ML4.5/7, Error ellipse: s-maj=1.9km s-min=0.7km az=304.0*

PDG **17** *19:39:34.4±0.7, 38.°73N×20.°45E, h9^{km}±1^{km}, ML3.8/14, Error ellipse: s-maj=0.9km s-min=0.9km az=0.0*

MED_RC **17** *19:39:34.0±0.6, 38.°69N×20.°58E, h10^{km}, MW4.3/13, Moment Tensor Solution.Mantle waves: s13,c21; Duration: 1.s0 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.60±.24; $M_{\theta\theta}$3.11±.21; $M_{\phi\phi}$-2.51±.16; $M_{r\theta}$-0.99±.62; $M_{\theta\phi}$-0.68±.20; $M_{\phi r}$2.06±.56; Best double couple: $M_0$3.72000×10^{15} NP1:ϕ_s236.00000°, δ53.00000°, λ-169.00000°. NP2:ϕ_s139.00000°, δ81.00000°, λ-38.00000°. Principal axes: T 3.6100, Plg19.0000°, Azm193.0000°; N 0.2200, Plg51.0000°, Azm308.0000°; P -3.8300, Plg32.0000°, Azm90.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

THE **17** *19:39:34.9, 38.°71N×20.°60E, h8^{km}, ML4.5/8 Error ellipse: s-maj=1.1km s-min=0.5km az=287.0*

ISC 17 19:39:34.1±0.5,38.°70N±0.°01×20.°57E±0.°02,h9^{km}±3^{km}, n465,σ1.s55/534,mb4.4/52,MS3.3/12,38C-19D,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRAG	Dragano-Lefkad	0.02	165	P	Pg	19 39 36.4	+0.6
DRAG				S	Sg	19 39 37.2	+0.2
	1390µm,0.3s						
DRAG	Dragano-Lefkad	0.02	165	P	Pg	19 39 36.4	+0.6
DRAG				S	Sg	19 39 37.3	+0.3
NYDR	Nydri-Lefkada	0.10	83	P	Pg	19 39 37.0	+0.3
NYDR	Nydri-Lefkada	0.10	83	P	Pg	19 39 37.0	+0.3
NYDR				S	Sg	19 39 38.1	-0.3
EVGI	Lefkada island	0.11	140	P	Pg	19 39 37.5	+0.8
EVGI				S	Sg	19 39 38.7	+0.1
EVGI	Lefkada island	0.11	140	P	Pg	19 39 37.5	+0.8
EVGI				S	Sg	19 39 38.8	+0.3
LKD2	Lefkada island	0.11	39	P	Pg	19 39 37.2	+0.3
LKD2				S	Sg	19 39 38.9	+0.1
	566µm,0.5s						
LKD2	Lefkada island	0.11	39	P	Pg	19 39 37.2	+0.3
LKD2				S	Sg	19 39 38.6	-0.1
LKD2				AML	AML	19 39 39.5	
LKD2				AML	AML	19 39 39.9	
LKD2	Lefkada island	0.11	39	P	Pg	19 39 37.2	+0.3
	baz=49						
LKD2				S	Sg	19 39 39.1	+0.3
	baz=49						
TSLK	Tsoukalades, L	0.14	29	P	Pg	19 39 37.9	+0.6
TSLK				S	Sg	19 39 40.0	+0.5
	405µm,0.6s						
TSLK	Tsoukalades, L	0.14	29	P	Pg	19 39 37.9	+0.6
TSLK				S	Sg	19 39 39.9	+0.4
TSLK				AML	AML	19 39 41.3	
TSLK				AML	AML	19 39 42.4	
FSK	Fiskardo	0.24	181	P	Pg	19 39 40.3	+1.2
FSK				S	Sg	19 39 43.9	+1.6
	98µm,0.4s						
FSK	Fiskardo	0.24	181	P	Pg	19 39 40.2	+1.2
FSK				S	Sg	19 39 44.0	+1.6
FSK				AML	AML	19 39 44.7	
FSK				AML	AML	19 39 45.6	
KEF4	Livadi, Kephal	0.46	194	P	Pb	19 39 43.8	-0.5
KEF4				S	Sb	19 39 51.0	-0.2
	187µm,0.3s						
KEF4	Livadi, Kephal	0.46	194	P	Pb	19 39 43.8	-0.5
KEF4				S	Sb	19 39 50.5	-0.8
DMLN	Damoulianata-K	0.49	198	P	Pb	19 39 44.3	-0.6
DMLN				S	Sb	19 39 52.0	-0.1
	46µm,0.5s						
DMLN	Damoulianata-K	0.49	198	P	Pb	19 39 44.3	-0.6
LXRA	Lixouri, Kepha	0.51	192	P	Pb	19 39 44.8	-0.5
LXRA				S	Sb	19 39 51.7	-1.0
VLS	Valsamata	0.52	178	P	Pg	19 39 44.5	+0.2
VLS				S	Sb	19 39 53.1	-0.1
	24µm,0.3s						
VLS	Valsamata	0.52	178	P	Pg	19 39 44.7	+0.4
VLS				S	Sb	19 39 52.5	-0.7
VLS	Valsamata	0.52	178	P	Pg	19 39 44.5	+0.2
VLS				S	Sb	19 39 53.1	-0.1
KEF3	Kipouria, Keph	0.53	199	P	Pg	19 39 44.5	+0.1
KEF3				S	Sb	19 39 53.2	0.0
	68µm,0.6s						
KEF3	Kipouria, Keph	0.53	199	P	Pg	19 39 44.5	+0.1
KEF3				S	Sg	19 39 52.1	+0.8
PSDA	Pessada-Kefalo	0.59	179	P	Pg	19 39 45.6	+0.1
PSDA				S	Sb	19 39 55.0	0.0
PSDA	Pessada-Kefalo	0.59	179	P	Pg	19 39 45.9	+0.4
PSDA				S	Sb	19 39 54.7	-0.3
PVO	Paravola	0.75	96	P	Pb	19 39 49.2	-0.2
PVO	Paravola	0.75	96	P	Pb	19 39 49.3	-0.1
PVO				S	Sg	19 39 58.2	-0.3
PVO				AML	AML	19 40 02.6	
	comp=N,72044µm,0.6s						
PVO				AML	AML	19 40 02.8	
	comp=E,74080µm,0.5s						
IGT	Igoumenitsa	0.85	348	P	Pg	19 39 49.9	-0.6
IGT	Igoumenitsa	0.85	348	P	Pg	19 39 49.9	-0.6
IGT	Igoumenitsa	0.85	348	P	Pg	19 39 49.9	-0.6
	baz=349						
IGT				S	Sb	19 40 03.4	+0.8
	baz=349						
VTN	Vitineika	0.92	148	P	Pb	19 39 52.4	+0.1
RLS	Riolos of Patr	0.95	132	P	Pg	19 39 52.4	-0.1
RLS	Riolos of Patr	0.95	132	P	Pb	19 39 52.7	-0.1
RLS				S	Sg	19 40 04.6	-0.3
RLS				AML	AML	19 40 14.3	
	comp=N,33538µm,0.6s						
RLS				AML	AML	19 40 14.8	
	comp=E,48385µm,0.7s						
JAN	Janina	0.98	13	P	Pb	19 39 53.6	+0.3
JAN	Janina	0.98	13	P	Pb	19 39 53.6	+0.3
EVR	Evrytania	0.99	77	P	Pg	19 39 52.6	-0.6
EVR	Evrytania	0.99	77	P	Pg	19 39 53.0	-0.2
LTHK	Lithakia	1.01	168	P	Pg	19 39 52.7	-0.9
LTHK	Lithakia	1.01	168	P	Pg	19 39 52.9	-0.7
UPR	University Cam	1.04	113	P	Pg	19 39 54.1	-0.1
ANX	Ano Chora	1.06	95	P	Pg	19 39 54.0	-0.6
ANX	Ano Chora	1.06	95	P	Pg	19 39 54.3	-0.3
ANX				S	Sg	19 40 08.0	-0.5
ANX				AML	AML	19 40 18.5	
ANX				AML	AML	19 40 18.8	
	comp=E,90319µm,0.7s						
EFP	Efpalio	1.08	104	P	Pg	19 39 54.0	-1.0
EFP	Efpalio	1.08	104	P	Pg	19 39 54.4	-0.5
EFP				S	Sb	19 40 09.5	+0.2
EFP				AML	AML	19 40 18.7	
	comp=E,32200µm,0.4s						
EFP				AML	AML	19 40 18.9	
	comp=N,45037µm,0.5s						
DRO	Drossia	1.17	129	P	Pb	19 39 56.0	-0.5
KEK	Kerkira	1.17	330	P	Pn	19 39 57.1	+0.4
LAKA	Lakka	1.20	112	P	Pb	19 39 56.2	-0.8
TRIZ	Trizonia	1.23	105	P	Pn	19 39 56.7	-0.7
TRIZ	Trizonia	1.23	105	P	Pn	19 39 56.9	-0.5
SRN	Sarande	1.26	340	P	Pg	19 39 59.0	+0.7
	baz=341						
SRN				S	Sn	19 40 16.7	+1.9
	baz=341						
SRN				AMP			
	comp=E,9.3nm,0.5s,baz=341						
MAKR	Makrakomi, Fth	1.26	75	P	Pn	19 39 57.9	0.0
MAKR	Makrakomi, Fth	1.26	75	P	Pb	19 39 58.1	0.0
AGG	Agios Georgios	1.41	76	P	Pn	19 40 00.3	+0.3
AGG	Agios Georgios	1.41	76	P	Pn	19 40 00.1	+0.1
AGG						19 40 22.3	
AGG	Agios Georgios	1.41	76		Pn	19 40 00.1	+0.1
AGG				Sn	Sg	19 40 22.2	+2.7
THL	Klokotos Trika	1.42	52	P	Pb	19 40 00.4	-0.3
LSK	Leskovik	1.45	1	P	Pg	19 40 02.3	+0.4
	baz=1.0						
LSK				S	Sg	19 40 22.6	+1.9
	baz=1.0						
LSK				AMP			
	comp=E,29nm,0.7s,baz=1.0						
DLFA	Delphi	1.53	98	P	Pb	19 40 02.2	-0.5
ITM	Ithomi	1.86	144	Pn	Pb	19 40 07.7	-0.6
KBN	Korca	1.93	5	P	Pb	19 40 09.8	+0.3
KBN	Korca	1.93	5		Pb	19 40 09.8	+0.3
KBN	Korca	1.93	5	P	Pg	19 40 10.4	-0.7
	baz=5.0						
KBN				S	Sg	19 40 38.1	+2.0
	baz=5.0						
KBN				AMP			
	comp=N,11nm,0.9s,baz=5.0						
VLO	Vlora	1.95	335	P	Pn	19 40 08.2	+0.8
VLO	Vlora	1.95	335		Pn	19 40 08.2	+0.8
VLO	Vlora	1.95	335	P	Pg	19 40 12.2	+0.7
	baz=336						
LTK	Loutraki	2.00	109	P	Pb	19 40 10.6	-0.2
SCTE	Santa Cesarea	2.13	311	Pn	Pn	19 40 10.5	+0.6
SCTE	Santa Cesarea	2.13	311	P	Pn	19 40 10.6	+0.8
	baz=312						
FNA	Florina	2.17	16	P	Pb	19 40 12.3	-1.3
FNA	Florina	2.17	16	Pn	Pb	19 40 12.3	-1.3
FNA	Florina	2.17	16	P	Pb	19 40 13.1	-0.6
	baz=17						
OHR	Ohrid	2.41	4	ePn	Pb	19 40 16.8	-1.0
OHR				eSn	Sn	19 40 45.4	+1.9
OHR	Ohrid	2.41	4	P	Pb	19 40 16.5	-1.3
OHR	Ohrid	2.41	4	i Pn	Pb	19 40 16.8	-1.0
GRG	Griva	2.66	31	P	Pb	19 40 20.0	-1.9
THE	Thessaloniki	2.67	43	P	Pb	19 40 20.7	-1.4
TIR	Tirane	2.70	349	⇑P	Pn	19 40 18.0	+0.3
TIR				⇑S	Sn	19 40 44.1	-6.3
TIR	Tirane	2.70	349	ePn	Pn	19 40 19.8	+2.1
TIR	Tirane	2.70	349	P	Pn	19 40 19.7	+2.1
TIR	Tirane	2.70	349		Pn	19 40 19.7	+2.0
TIR	Tirane	2.70	349	P	Pn	19 40 19.9	+2.1
	baz=350						
PAIG	Paliouri	2.71	62	P	Pb	19 40 20.5	-2.2
PHP	Peshkopia	2.98	358	P	Pn	19 40 23.8	+2.2
PHP	Peshkopia	2.98	358	P	Pn	19 40 23.9	+2.2
	baz=359						
PHP				AMP			
	comp=N,3.5nm,1.2s,baz=359						
TIP	Timpagrande	3.01	280	⇓P	Pn	19 40 24.1	+2.1
TIP				⇓S	Sn	19 40 59.7	+1.4
TIP	Timpagrande	3.01	280	Pn	Pn	19 40 22.7	+0.7
SOH	Sokhos	3.02	45	P	Pb	19 40 25.1	-2.9
VAY	Valandovo	3.03	30	ePn	Pn	19 40 24.5	+2.2
VAY				eSn	Sb	19 41 05.1	-0.3
VAY	Valandovo	3.03	30	P	Pb	19 40 26.2	-2.1
VAY	Valandovo	3.03	30	i Pn	Pn	19 40 24.0	+1.7
KNT	Kendrikon	3.04	35	P	Pn	19 40 25.1	+2.7
OUR	Ouranopolis	3.10	57	P	Pb	19 40 27.3	-2.2
STIP	Stip	3.24	22	i Pn	Pb	19 40 28.5	-3.2
SKO	Skopje	3.33	11	P	Pn	19 40 28.7	+2.3
SKO	Skopje	3.33	11	i Pn	Pn	19 40 28.9	+2.5
SRS	Serrai	3.35	43	P	Pn	19 40 29.0	+2.3
ULC	Ulcinj	3.41	343	⇓iPn	Pn	19 40 28.0	+0.5
ULC				i Sn	Sn	19 41 08.8	+0.7
MATE	Matera	3.56	304	⇑P	Pn	19 40 29.5	0.0
MATE				⇑S	Sn	19 41 07.9	-3.8
DRME	Dracevica, Mon	3.64	344	ePn	Pn	19 40 31.6	+1.0
DRME	Dracevica, Mon	3.64	344	⇓iPn	Pn	19 40 31.6	+1.0
DRME				i Sn	Sn	19 41 14.3	+0.7
BCI	Bajram Curri	3.68	354	AMP			
	comp=N,2.3nm,0.7s,baz=355						
CEL	Celeste	3.69	265		Pn	19 40 31.8	+0.4
BUM	Brajici-Budva	3.81	341	⇓iPn	Pn	19 40 33.8	+0.7
BUM				i Sn	Sn	19 41 18.3	+0.2
PDG	Podgorica	3.86	345	⇑P	Pn	19 40 33.6	0.0
PDG				⇑S	Sn	19 41 13.2	-5.8
PDG	Podgorica	3.86	345	ePn	Pn	19 40 34.4	+0.8
PDG				eSn	Sn	19 41 18.1	-0.9
PDG	Podgorica	3.86	345	ePn	Pn	19 40 34.2	+0.6
PDG	Podgorica	3.86	345	Pn	Pn	19 40 34.2	+0.6
TTG	Podgorica	3.86	345	⇓iPn	Pn	19 40 34.6	+1.0
TTG				i Sn	Sn	19 41 19.5	+0.5
PVY	Plav	3.92	353	⇓iPn	Pn	19 40 36.5	+1.9
PVY				i Sn	Sn	19 41 21.3	+0.6
PRVS	Prvonek	3.97	16	ePn	Pn	19 40 36.9	+1.7
CEME	Cevo	4.04	342	⇓iPn	Pn	19 40 36.7	+0.5
CEME				i Sn	Sn	19 41 23.8	+0.1
BOSS	Bosilegrad	4.06	20	ePn	Pn	19 40 38.4	+2.0
HCY	Herceg Novi	4.06	338	P	Pn	19 40 37.0	+0.6
HCY	Herceg Novi	4.06	338	ePn	Pn	19 40 35.8	-0.6
HCY	Herceg Novi	4.06	338	⇓iPn	Pn	19 40 36.4	0.0
HCY				i Sn	Sn	19 41 24.2	+0.1
IVA	Berane	4.20	353	⇓iPn	Pn	19 40 39.7	+1.3
IVA				i Sn	Sn	19 41 27.9	+0.3
BARS	Barje	4.22	13	ePn	Pn	19 40 40.0	+1.4
KOME	Kolasin	4.22	349	ePn	Pn	19 40 39.7	+1.0
KOME				i Sn	Sn	19 41 28.4	+0.2
NKME	Niksic	4.24	344	⇓iPn	Pn	19 40 39.5	+0.5
NKME				i Sn	Sn	19 41 28.7	+0.1
NKY	Niksic	4.28	344	P	Pn	19 40 41.8	+2.3
NKY	Niksic	4.28	344	⇑iPn	Pn	19 40 40.7	+1.2
NKY				i Sn	Sn	19 41 29.5	-0.1
TREB	Trebinje	4.35	338	ePn	Pn	19 40 40.4	0.0
TREB				eSn	Sn	19 41 30.3	-0.9
TREB	Trebinje	4.35	338	ePn	Pn	19 40 40.3	-0.1
DBRK	Dubrovnik	4.37	336	ePn	Pn	19 40 40.6	-0.1
DBRK				Sn	Sn	19 41 29.9	-1.7
VTS	Vitosha	4.41	27	⇓P	Pn	19 40 43.2	+1.8
VTS	Vitosha	4.41	27	ePn	Pn	19 40 43.3	+2.0
VTS				eSn	Sn	19 41 36.1	+3.3
VTS	Vitosha	4.41	27	P	Pn	19 40 43.1	+1.8
VTS	Vitosha	4.41	27	Pn	Pn	19 40 43.1	+1.8
BRY	Bratogost	4.47	340	P	Pn	19 40 42.7	+0.5
BRY	Bratogost	4.47	340	ePn	Pn	19 40 42.3	+0.1
BRY	Bratogost	4.47	340	⇑iPn	Pn	19 40 42.3	+0.1
BRY				i Sn	Sn	19 41 33.7	-0.6
SELS	Selova	4.53	5	ePn	Pn	19 40 43.1	+0.2
SJES	Sjenica	4.58	355	ePn	Pn	19 40 45.0	+1.4
EZN	Ezine	4.61	74	P	Pn	19 40 48.4	+4.5
UPM	Unac-Piva	4.67	345	ePn	Pn	19 40 46.3	+1.3
UPM	Unac-Piva	4.67	345	ePn	Pn	19 40 45.4	+0.4
UPM				i Sn	Sn	19 41 38.9	-0.5
STON	Ston	4.70	333	ePn	Pn	19 40 45.0	-0.2
STON				eSn	Sn	19 41 37.8	-2.0
STON	Ston	4.70	333	ePn	Pn	19 40 45.0	-0.2
STON	Ston	4.70	333	ePn	Pn	19 40 44.9	-0.3
STON				Sn	Sn	19 41 36.4	-3.4
PLE	Pljevlja	4.71	349	P	Pn	19 40 49.3	+3.9
PLE	Pljevlja	4.71	349	ePn	Pn	19 40 46.9	+1.5
PLE				i Sn	Sn	19 41 39.8	-0.4
ALN	Alexandroupoli	4.75	61	P	Pn	19 40 47.5	+1.6
ALN	Alexandroupoli	4.75	61	Pn	Pn	19 40 47.5	+1.6
SGRT	San Giovanni R	4.79	311	Pn	Pn	19 40 47.1	+0.6
ZAPS	Zavoj	4.83	18	ePn	Pn	19 40 48.9	+1.9
IDI	Anoyia	4.86	133	Pn	Pn	19 40 48.9	+1.5
	comp=N,2.2nm,0.3s,baz=221,slow=15,SNR=14						
IDI				Sn	Sn	19 41 43.4	-0.4
	comp=N,7.6nm,0.3s,baz=63,slow=23,SNR=2.1						
IDI				LR	LR	19 42 36.6	
	comp=N,159nm,20.3s,baz=318,slow=38						
IDI	Anoyia	4.86	133		Pn	19 40 48.9	+1.5
RUDO	Rudo	4.99	350	ePn	Pn	19 40 49.2	-0.1
BOVS	Bovan	5.00	10	⇑P	Pn	19 40 49.5	+0.1
BOVS	Bovan	5.00	10	ePn	Pn	19 40 50.0	+0.6
VAE	Valguarnera	5.01	258	Pn	Pn	19 40 51.2	+1.8
	comp=N,1.8nm,0.3s,baz=278,slow=1.5,SNR=4.9						
VAE				Sn	Sn	19 41 44.7	-2.8
	comp=N,2.2nm,0.3s,baz=227,slow=14,SNR=2.1						
VAE				LR	LR	19 43 04.9	
	comp=N,172nm,19.5s,baz=88,slow=42						
RAFF	Raffo Rosso	5.12	255		Pn	19 40 50.7	-0.4
PAOL	Paolisi	5.17	299		Pn	19 40 53.1	+1.4
GRUS	Gruza	5.18	1	ePn	Pn	19 40 52.4	+0.6
BBLS	Lazići	5.23	351	ePn	Pn	19 40 52.1	-0.5
BBLS				eSn	Sn	19 41 53.1	0.0
BBLS	Lazići	5.23	351	ePn	Pn	19 40 52.2	-0.4
ZAGS	Zajecar	5.26	13	ePn	Pn	19 40 53.8	+0.9
MAKA	Makarska	5.31	331	ePn	Pn	19 40 53.4	-0.2
MAKA				Sn	Sn	19 41 52.8	-2.0
DIVS	Divibare	5.41	356	ePn	Pn	19 40 55.3	+0.3
DIVS				eSn	Sn	19 41 57.5	+0.1
DIVS	Divibare	5.41	356	ePn	Pn	19 40 55.0	0.0
DIVS	Divibare	5.41	356		Pn	19 40 54.3	-0.7
RICI	Ricice	5.45	333	ePn	Pn	19 40 55.4	0.0
RICI				Sn	Sn	19 41 57.2	-1.1
HVAR	Hvar	5.45	326	ePn	Pn	19 40 55.0	-0.5
HAPS	Han Pijesak,BI	5.51	348	ePn	Pn	19 40 56.5	0.0
TRUS	Trudelj	5.52	359	ePn	Pn	19 40 56.8	+0.4
PLVB	Pleven	5.59	32	⇑P	Pn	19 41 00.1	+2.7
BALB	Balikesir	5.76	78		Pn	19 41 00.6	+0.9
CORL	Corleone	5.77	264		Pn	19 41 01.0	+1.1
TEKS	Tekeris	5.89	353	ePn	Pn	19 41 00.9	-0.7
TEKS	Tekeris	5.89	353	ePn	Pn	19 40 58.7	-2.9
CLTB	Caltabellotta	5.90	261	Pn	Pn	19 41 03.3	+1.4
VLAD	Vladila	6.03	27	⇑P	Pn	19 41 06.4	+3.0
MDVR	Moldovita	6.13	8	⇑P	Pn	19 41 06.1	+1.2
KIJV	Kijevo	6.15	331	ePn	Pn	19 41 05.5	+0.3
ZIRJ	Zirje	6.19	325	ePn	Pn	19 41 05.3	-0.3
MGRS	Mrkonjic Grad	6.28	337	ePn	Pn	19 41 08.6	+1.7
MORI	Morici	6.33	326	ePn	Pn	19 41 08.1	+0.6
HERR	Herculane	6.33	12	⇑P	Pn	19 41 08.5	+1.0
COPA	Copaceanca	6.45	31	⇑P	Pn	19 41 12.2	+3.0
FRGS	Fruska Gora	6.48	355	⇑P	Pn	19 41 09.1	-0.5
FRGS	Fruska Gora	6.48	355	ePn	Pn	19 41 09.4	-0.2
FRGS				eSn	Sn	19 42 21.6	-2.0
FRGS	Fruska Gora	6.48	355	ePn	Pn	19 41 09.4	-0.2
BLY	Banja Luka	6.55	338	ePn	Pn	19 41 11.9	+1.3
AQU	L'Aquila	6.56	306	P	Pn	19 41 09.6	-1.3
AQU	L'Aquila	6.56	306	ePn	Pn	19 41 13.0	+2.1
AQU	L'Aquila	6.56	306	Pn	Pn	19 41 09.6	-1.3
RAZG	Razgrad	6.61	41	⇑P	Pn	19 41 15.4	+4.0
DUGI	Dugi Otok	6.72	324	ePn	Pn	19 41 12.7	-0.1
UDBI	Udbina	6.84	330	ePn	Pn	19 41 15.9	+1.3
MRAK	Mrakovica	6.87	338	ePn	Pn	19 41 14.9	-0.2
GZR	Gura Zlata	6.88	13	⇑P	Pn	19 41 15.7	+0.4
BZS	Buzias	6.95	6	⇑P	Pn	19 41 17.6	+1.5
BZS	Buzias	6.95	6	ePn	Pn	19 41 17.0	+0.9
BZS	Buzias	6.95	6	P	Pn	19 41 17.6	+1.5
BZS				pmax	pmax		
	comp=Z,18nm,1.2s						
NRCA	Norcia	7.00	308		Pn	19 41 18.2	+1.3
A251A	Rujevac	7.18	335	ePn	Pn	19 41 21.1	+1.9
PLIT	Plitvice	7.19	331	ePn	Pn	19 41 20.5	+1.1
NVLJ	Novalja	7.25	326	ePn	Pn	19 41 20.3	+0.2
RABC	Rab	7.43	326	ePn	Pn	19 41 23.4	+0.7

VOIR		7.51	25	⇓P	Pn	19 41 26.2	+2.4
VOIR		7.51	25	P	Pn	19 41 27.1	+3.3
VOIR				pmax	pmax		
	comp=Z,13nm,0.6s						
MURB	Monte Urbino	7.60	309		Pn	19 41 25.9	+0.8
KOVH	Kovagotottos	7.60	347	eP	Pn	19 41 26.0	+0.9
MORH	Mrgy, Hungar	7.64	350	⇑P	Pn	19 41 24.5	-1.1
MORH	Mrgy, Hungar	7.64	350	eP	Pn	19 41 24.4	-1.1
MORH	Mrgy, Hungar	7.64	350	ePn	Pn	19 41 23.9	-1.7
ELL	Elmali	7.66	102	P	Pn	19 41 32.1	+6.2
ELL	Elmali	7.66	102		Pn	19 41 32.1	+6.2
ISR	Istrita	7.80	33	⇑P	Pn	19 41 31.0	+3.1
ISR	Istrita	7.80	33	P	Pn	19 41 31.8	+3.9
ISR				pmax	pmax		
	comp=Z,61nm,0.8s						
MLR	Muntele Rosu	7.87	29	⇑P	Pn	19 41 30.8	+2.0
MLR	Muntele Rosu	7.87	29	Pn	Pn	19 41 30.1	+1.3
	comp=Z,0.4nm,0.3s,baz=131,slow=6.0,SNR=13						
MLR				Sn	Sn	19 43 03.1	+5.0
	comp=Z,0.4nm,0.3s,baz=169,slow=13,SNR=1.6						
MLR				LR	LR	19 45 05.7	
	comp=Z,288nm,18.6s,baz=206,slow=43						
MLR	Muntele Rosu	7.87	29	P	Pn	19 41 31.0	+2.1
MLR						19 43 03.1	
MLR	Muntele Rosu	7.87	29	Pn	Pn	19 41 31.0	+2.1
MLR	Muntele Rosu	7.87	29		Sn	19 43 03.1	+5.0
OZLJ	Ozalj	7.88	333	ePn	Pn	19 41 30.4	+1.6
SMRN	Sveta Marina	7.93	325	ePn	Pn	19 41 30.0	+0.5
NEHR	Nehoiu	7.95	31	⇑P	Pn	19 41 33.4	+3.4
PTJ	Puntijarka	7.96	336	ePn	Pn	19 41 30.4	+0.3
RIY	Rijeka	8.02	328	ePn	Pn	19 41 30.5	-0.2
RIY	Rijeka	8.02	328	ePn	Pn	19 41 31.6	+0.8
BRJN	Brijuni	8.02	323	ePn	Pn	19 41 31.3	+0.5
KALN	Kalnik	8.02	339	ePn	Pn	19 41 30.9	0.0
CRES	Cresnjev	8.06	334	ePn	Pn	19 41 30.7	-0.7
DOPR	Dopca	8.09	25	⇑P	Pn	19 41 35.0	+3.2
LOBO	Lobor	8.16	337	ePn	Pn	19 41 31.9	-0.7
BISRR	Bisoca	8.22	32	⇑P	Pn	19 41 36.9	+3.3
DRGR		8.24	10	⇑P	Pn	19 41 35.2	+1.4
DRGR		8.24	10	P	Pn	19 41 37.8	+4.0
DRGR				pmax	pmax		
	comp=Z,6.0nm,1.6s						
COVR	Voineasa-Covas	8.27	29	⇑P	Pn	19 41 38.0	+3.8
OZUR		8.33	26	⇑P	Pn	19 41 38.0	+2.9
CEY	Cerknica	8.38	329	ePn	Pn	19 41 35.8	+0.1
MDUB	Mudurnu	8.40	75		Pn	19 41 36.6	+0.6
CASP	Castiglione de	8.42	302	Pn	Pn	19 41 35.6	-0.7
PLOR	Plostina	8.45	30	⇓P	Pn	19 41 40.4	+3.8
PLOR	Plostina	8.45	30	P	Pn	19 41 40.4	+3.8
VRI	Vrincioaia	8.49	31	⇑P	Pn	19 41 40.8	+3.5
VRI	Vrincioaia	8.49	31	P	Pn	19 41 42.4	+5.2
VRI				pmax	pmax		
	comp=Z,45nm,1.2s						
OSSC	Osservatorio P	8.53	307		Pn	19 41 38.3	+0.6
LJU	Ljubljana	8.59	331	ePn	Pn	19 41 39.0	+0.4
VSL	Villasalto	8.74	279	Pn	Pn	19 41 41.8	+1.1
MPLH	Magyarpolny	8.75	346	eP	Pn	19 41 41.1	+0.3
SOKA	Soboth	8.95	335	ePn	Pn	19 41 42.7	-0.9
	comp=Z,12nm,0.9s,SNR=16						
SOKA				eSn	Sn	19 43 20.8	-3.8
	comp=Z,5.4nm,0.7s						
OBKA	Obir	8.97	332	ePn	Pn	19 41 44.7	+0.7
	comp=Z,1.7nm,0.3s,SNR=13						
OBKA				Sn	Sn	19 43 20.4	-4.7
	comp=Z,9.4nm,0.7s						
TESR	Tescani	9.00	28	⇑P	Pn	19 41 46.6	+2.4
ZCCA	Zocca	9.14	311		Pn	19 41 46.8	+0.6
PSZ	Piszkesteto	9.23	357	⇑P	Pn	19 41 47.0	-0.4
PSZ	Piszkesteto	9.23	357	eP	Pn	19 41 50.8	+3.4
PSZ	Piszkesteto	9.23	357	P	Pn	19 41 47.0	-0.4
PSZ	Piszkesteto	9.23	357		Pn	19 41 47.0	-0.4
ARSA	Arzberg	9.31	338	ePn	Pn	19 41 48.2	-0.2
	comp=Z,0.6nm,0.3s						
TEOL	Teolo	9.38	318	Pn	Pn	19 41 49.5	+0.1
VLC	Villacollemand	9.39	309	Pn	Pn	19 41 48.5	-1.0
MYKA	Terra Mystica	9.42	329	ePn	Pn	19 41 50.0	-0.1
	comp=Z,1.6nm,0.3s						
KEST	Kesra	9.43	255	Pn	Pn	19 41 50.4	+0.2
	comp=Z,0.4nm,0.3s,baz=47,slow=11,SNR=4.4						
KEST				LR	LR	19 46 40.0	
	comp=Z,95nm,20.4s,baz=272,slow=45						
KEST	Kesra	9.43	255	Pn	Pn	19 41 51.0	+0.8
STAL	STALIGIAL	9.52	325		Pn	19 41 50.0	-1.4
BURAR	Bucovina Array	9.53	19	⇑P	Pn	19 41 52.9	+1.3
BURAR	Bucovina Array	9.53	19	P	Pn	19 41 53.4	+1.8
BURAR	Bucovina Array	9.53	19	Pn	Pn	19 41 53.4	+1.8
TRPA	Tarpa	9.53	8	eP	Pn	19 41 52.1	+0.7
BUR08	Bucovina Ar. S	9.55	19	Pn	Pn	19 41 52.6	+0.7
ZOU	Zoufplan	9.64	327		Pn	19 41 52.6	-0.5
PRMA	PARMA	9.77	312	Pn	Pn	19 41 54.4	-0.3
CONA	Conrad Observa	9.84	341	ePn	Pn	19 41 56.6	+0.9
	comp=Z,0.9nm,0.3s						
CTI	Castel Tesino	9.87	321	P	Pn	19 41 55.1	-1.1
CTI	Castel Tesino	9.87	321	Pn	Pn	19 41 55.1	-1.1
VYHS	Vyhne	9.87	353	eP	Pn	19 41 49.3	-6.8
VYHS	Vyhne	9.87	353	ePN	Pn	19 41 49.2	-6.9
KBA	Koelnbreinsper	9.90	330	ePn	Pn	19 41 57.1	+0.3
	comp=Z,2.0nm,0.4s,SNR=5.9						
KBA	Koelnbreinsper	9.90	330	P	Pn	19 41 58.3	+1.5
KBA				pmax	pmax		
	comp=Z,13nm,0.7s						
MODS	Modra-Piesok	9.96	347	eP	Pn	19 41 53.8	-3.5
MODS	Modra-Piesok	9.96	347	ePN	Pn	19 41 53.8	-3.5
ABTA	Abfaltersbach	9.98	326	ePn	Pn	19 41 57.8	0.0
	comp=Z,2.6nm,0.6s						
ABTA				eSn	Sn	19 43 46.2	-3.7
	comp=Z,9.8nm,0.6s						
MSSA	Maissana	10.00	308	Pn	Pn	19 41 58.8	+0.8
BR131	Keskin Array S	10.20	80	P	Pn	19 41 59.7	-1.1
BR131	Keskin Array S	10.20	80	Pn	Pn	19 41 59.7	-1.1
BRTR	Keskin Array B	10.20	80	Pn	Pn	19 42 01.1	+0.3
	comp=Z,0.3nm,0.3s,baz=260,slow=14,SNR=1.8						
BRTR				LR	LR	19 47 03.7	
	comp=Z,168nm,20.2s,baz=280,slow=44						
BRTR	Keskin Array B	10.20	80	Pn	Pn	19 42 00.8	0.0
MOA	Molln	10.23	335	ePn	Pn	19 42 02.6	+1.5
	comp=Z,5.4nm,0.6s,SNR=9.6						
NIE	Niedzica	10.72	359	P	Pn	19 42 10.6	+2.9
NIE				pmax	pmax		
	comp=Z,6.0nm,1.1s						
WTTA	Wattenberg	10.76	326	ePn	Pn	19 42 10.3	+1.8
	comp=Z,6.3nm,0.7s						
WTTA				eSn	Sn	19 44 07.3	-1.9
	comp=Z,7.5nm,0.6s						
WTTA	Wattenberg	10.76	326	P	Pn	19 42 10.1	+1.6
WTTA				pmax	pmax		
	comp=Z,18nm,0.8s						
KRUC	Moravsky	10.78	345	ePN	Pn	19 42 08.6	0.0
WATA	Walderalm	10.85	326	ePn	Pn	19 42 10.3	+0.6
	comp=Z,6.3nm,0.4s,SNR=7.6						
WATA				eSn	Sn	19 44 07.8	-3.4
	comp=Z,7.1nm,0.5s						
CSS	Mathiatis	10.89	106	Pn	Pn	19 42 09.8	-0.3
SQTA	Sankt Quirin	10.92	324	ePn	Pn	19 42 10.7	0.0
	comp=Z,2.7nm,0.4s						
VRAC	Vranov	10.98	346	Pn	Pn	19 42 10.8	-0.5
	comp=Z,0.1nm,0.3s,baz=166,slow=21,SNR=4.2						
VRAC				LR	LR	19 46 22.4	
	comp=Z,73nm,21.0s,baz=174,slow=38						
VRAC	Vranov	10.98	346	ePN	Pn	19 42 12.8	+1.5
FETA	Feichten	11.00	322	ePn	Pn	19 42 15.2	+3.4
	comp=Z,0.5nm,0.4s						
MOTA	Moosalm	11.06	324	ePn	Pn	19 42 13.5	+0.8
	comp=Z,6.3nm,0.6s,SNR=6.3						
MOTA				eSn	Sn	19 44 13.8	-2.7
	comp=Z,7.3nm,0.6s						
CKRC	Cesky Krumlov	11.07	338	ePN	Pn	19 42 13.9	+1.3
DAVOX	Davos/Dischmat	11.26	319	Pn	Pn	19 42 13.5	-1.9
	comp=Z,0.1nm,0.3s,baz=151,slow=15,SNR=1.5						
DAVOX				Sn	Sn	19 44 16.2	-5.1
	comp=Z,0.3nm,0.3s,baz=170,slow=22,SNR=1.3						
MORC	Moravsky Berou	11.28	350	P	Pn	19 42 14.5	-1.0
MORC	Moravsky Berou	11.28	350	ePN	Pn	19 42 16.3	+0.8
MORC	Moravsky Berou	11.28	350	Pn	Pn	19 42 14.5	-1.0
GEC2	GERESS Array S	11.28	336	Pn	Pn	19 42 13.6	-2.0
GERES	GERESS Array B	11.28	336	Pn	Pn	19 42 14.4	-1.1
	comp=Z,0.7nm,0.3s,baz=158,slow=14,SNR=9.2						
GERES				Sn	Sn	19 44 15.3	-6.5
	comp=Z,0.2nm,0.3s,baz=144,slow=25,SNR=1.3						
GERES				LR	LR	19 47 22.0	
	comp=Z,182nm,19.6s,baz=9.5,slow=42						
GERES	GERESS Array B	11.28	336	P	Pn	19 42 15.0	-0.6
GERES	GERESS Array B	11.28	336	Pn	Pn	19 42 15.0	-0.6
TUE	Stuetta	11.34	317	Pn	Pn	19 42 16.1	-0.3
KHC	Kasperske Hory	11.57	337	eP	Pn	19 42 19.7	+0.2
KHC				e		19 44 25.0	
KHC	Kasperske Hory	11.57	337	ePN	Pn	19 42 19.7	+0.2
KHC				eSN	Sn	19 44 25.0	-3.8
BNN	Bunyan	11.93	85		Pn	19 42 26.2	+1.7
PRU	Pruhonice	12.07	341	eP	Pn	19 42 26.8	+0.5
PRU	Pruhonice	12.07	341	ePN	Pn	19 42 26.8	+0.5
BNI	Bardonecchia	12.13	306	P	Pn	19 42 25.4	-1.8
BNI	Bardonecchia	12.13	306	Pn	Pn	19 42 25.4	-1.8
SENIN	Lac Senin/Sane	12.41	312	Pn	Pn	19 42 29.9	-1.3
GRFO	Grafenberg	12.86	332	P	Pn	19 42 35.7	-1.3
GRFO	Grafenberg	12.86	332	Pn	Pn	19 42 35.7	-1.3
GRA1	Grafenberg Arr	12.86	332	Pn	Pn	19 42 36.3	-0.7
GRF	Grafenberg Arr	12.86	332	P	Pn	19 42 36.3	-0.7
BRG	Berggiesshubel	13.04	341	eP	P	19 43 02.5	+13
BRG				Amp		19 43 13.1	
	comp=Z,3.8nm,1.0s						
GAZ	Gaziantep	13.23	91	Pn	Pn	19 42 42.0	-0.2
MMAI	Mount Meron Ar	13.30	111	Pn	Pn	19 42 41.7	-1.5
	comp=Z,0.7nm,0.3s,baz=308,slow=13,SNR=3.5						
MMAI				Sn	Sn	19 45 01.2	-10
	comp=Z,0.7nm,0.3s,baz=298,slow=26,SNR=2.0						
MMAI				LR	LR	19 49 47.5	
	comp=Z,51nm,18.4s,baz=350,slow=46						
AKASG	Malin Array Be	13.47	24	Pn	Pn	19 42 44.7	-0.7
	baz=212,slow=13,SNR=0.9						
ECH	Echery	13.59	319	P	Pn	19 42 44.7	-2.3
ECH	Echery	13.59	319	Pn	Pn	19 42 44.7	-2.3
CLL	Collm	13.68	340	ePP	P	19 42 59.0	+1.9
ASF	Jabal al Asfar	14.81	111	Pn	Pn	19 43 03.8	0.0
	comp=Z,0.3nm,0.3s,baz=100,slow=22,SNR=2.4						
EIL	Elat	14.91	123	Pn	Pn	19 43 04.2	-1.0
	comp=Z,0.4nm,0.3s,baz=180,slow=7.4,SNR=1.9						
EIL				Sn	Sn	19 45 36.0	-14
	comp=Z,0.4nm,0.3s,baz=187,slow=10,SNR=1.4						
EIL	Elat	14.91	123		Sn	19 45 36.0	-14
MNK	Minsk	16.57	15	i P	Pn	19 43 23.3	-3.2
MNK				i S	Sn	19 46 27.3	-3.1
MNK				pmax	pmax		
	comp=N,5.0nm,0.8s						
MNK				pmax	pmax		
	comp=E,1.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MNK				MLR	MLR		
	comp=Z,135nm,17.0s						
MNK				MLR	MLR		
	comp=N,207nm,17.0s						
MNK				MLR	MLR		
	comp=E,39nm,17.0s						
MNK	Minsk	16.57	15	i P	Pn	19 43 23.3	-3.2
	comp=E,1.0nm,0.8s						
MNK				i P	Pn	19 43 23.3	-3.2
	comp=N,5.0nm,0.8s						
MNK				i P	Pn	19 43 23.3	-3.2
	comp=Z,10.0nm,0.8s,baz=201						
MNK				i PP	sP	19 43 32.4	-0.4
MNK				i S	Sn	19 46 27.4	-3.0
MNK				i SS	SnSn	19 46 46.8	+3.3
MNK				i LQ	LQ	19 48 39.5	
MNK				i LR	LR	19 49 31.1	
MNK				i LRM	MLR	19 50 08.7	
	comp=Z,135nm,17.1s						
MNK				i LRM	MLR	19 50 38.8	
	comp=E,39nm,17.1s						
MNK				i LRM	MLR	19 50 38.8	
	comp=N,207nm,17.1s						
NACGM	Naroch	16.75	13	i P	P	19 43 31.4	+0.4
GURO	Guroymak-BITLI	16.77	84	Pn	Pn	19 43 27.0	-2.4
PABE	Paberze	16.97	7	eP	P	19 43 33.7	+0.2
PABE	Paberze	16.97	7		Pn	19 43 31.0	-0.5
PABE				IAmb	IAmb	19 43 33.8	
	comp=Z,52nm,1.5s						
SIRT	Sirnak	17.25	87	P	P	19 43 36.5	-0.4
SIRT				IAmb	IAmb	19 43 48.7	
	comp=Z,53nm,0.8s						
ISAL	Salakas	17.29	11	IAmb	IAmb	19 43 55.6	
	comp=Z,8.5nm,1.1s						
NEY	Neytrino	17.32	68	⇓eP	Pn	19 43 36.7	+0.4
KIV	Kislovodsk	17.40	65	eP	Pn	19 43 35.6	-1.6
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,31nm,14.0s						
KIV	Kislovodsk	17.40	65	Pn	Pn	19 43 36.4	-0.8
KBZ	Khabaz	17.52	66	Pn	P	19 43 39.9	+0.3
	comp=Z,0.1nm,0.3s,baz=293,slow=7.5,SNR=7.3						
KBZ	Khabaz	17.52	66	⇑eP	P	19 43 40.5	+0.9
KBZ	Khabaz	17.52	66	P	P	19 43 39.9	+0.3
ONI	Oni	17.78	70	P	P	19 43 42.5	-0.2
ONI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ONI	Oni	17.78	70		P	19 43 42.5	-0.2
VORD	Divnogorie	18.01	41	eP	P	19 43 47.3	+2.3
VORD				pmax	pmax		
	comp=Z,10.0nm,1.2s						
VSR	Storozhevoye	18.09	40	eP	P	19 43 48.2	+2.3
VSR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
GNI	Garni	18.72	78	LR	LR	19 51 49.6	
	comp=Z,52nm,21.3s,baz=291,slow=40						
GNI	Garni	18.72	78	⇓eP	Pn	19 43 55.0	+1.5
GNI				pmax	pmax		
	comp=Z,10.0nm,1.1s						
LPSR	Galich'ya Gora	18.84	37	eP	Pn	19 43 54.4	-0.2
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.4s						
SLIT	Slitere, Latvi	18.97	3	IAmb	IAmb	19 43 42.8	
	comp=Z,292nm,1.3s						
ESDC	Sonseca Array	19.03	281	P	P	19 43 56.2	-0.2
	comp=Z,0.1nm,0.3s,baz=79,slow=11,SNR=11						
ESDC				LR	LR	19 51 29.3	
	comp=Z,58nm,19.6s,baz=60,slow=38						
PAB	San Pablo	19.34	280	P	P	19 43 59.9	+0.1
PAB				pmax	pmax		
	comp=Z,6.0nm,1.0s						
PAB	San Pablo	19.34	280	P	P	19 43 59.9	+0.1
VRH	Novokhopyorsk	19.42	43	eP	Pn	19 44 02.0	+0.4
VRH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
OBN	Obninsk	19.64	28	⇑eP	Pn	19 44 04.7	+0.5
OBN				eS	Sn	19 47 44.5	-0.2
OBN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
OBN				MLR	MLR		
	comp=Z,173nm,17.0s						
VSU	Vasula	20.18	9	eP	Pn	19 44 09.6	-0.9
VSU	Vasula	20.18	9	⇑eP	P	19 44 07.9	-0.7
VSU				pmax	pmax		
	comp=Z,134nm,1.8s						
MOS	Moscow	20.51	28	eP	P	19 44 12.8	+0.5
MOS				eS	S	19 48 03.5	+1.8
MOS				pmax	pmax		
	comp=Z,47nm,0.7s						
AKT	Akhty	20.93	74	⇓eP	P	19 44 17.1	-0.1
AKT				pmax	pmax		
	comp=Z,29nm,1.4s						
MDT	Midelt	21.23	262	P	P	19 44 22.4	+2.0
	comp=Z,1.6nm,0.8s,baz=326,slow=6.4,SNR=4.4						
MDT				LR	LR	19 53 19.4	
	comp=Z,66nm,18.3s,baz=58,slow=39						
MDT	Midelt	21.23	262	P	P	19 44 22.4	+2.0
UPP	Uppsala	21.26	356	eP	P	19 44 21.3	+0.9
PBAR	Barrancos	21.61	277	eP	P	19 44 27.9	+3.6
	comp=Z,18nm,1.8s						
PMRV	Marv??o	21.69	281	eP	P	19 44 27.9	+2.6
MTE	Manteigas	21.71	283	eP	P	19 44 25.6	+0.1
	comp=Z,34nm,1.9s						
HFS	Hagfors	21.89	351	P	P	19 44 26.5	-0.7
	comp=Z,2.7nm,0.5s,baz=163,slow=11,SNR=9.4						
HFS				LR	LR	19 53 54.7	
	comp=Z,113nm,18.3s,baz=187,slow=40						
PESTR	Estremoz	21.92	279	eP	P	19 44 29.1	+1.4
	comp=Z,16nm,1.8s						
EVO	Evora	22.30	279	eP	P	19 44 31.2	-0.6
PMTG	Montargil	22.38	280	eP	P	19 44 35.0	+2.4
NC602	NORSAR Array S	22.77	349	P	P	19 44 35.9	-0.7
NC602				IAmb	IAmb	19 45 04.0	
	comp=Z,38nm,1.4s						
NORES	NORESS Array B	22.77	349	P	P	19 44 39.5	+2.9
PNCL	Nicolau / Gran	22.77	278	eP	P	19 44 39.1	+2.3
	comp=Z,22nm,2.0s						
NAO01	NORSAR Array S	22.98	348	P	P	19 44 38.6	-0.1
NAO01				IAmb	IAmb	19 45 26.4	
	comp=Z,26nm,1.1s						
FINES	FINESS Array B	23.02	7	P	P	19 44 37.2	-2.0
	comp=Z,7.5nm,0.6s,baz=182,slow=9.5,SNR=24						
FINES				LR	LR	19 55 25.7	
	comp=Z,129nm,21.6s,baz=187,slow=42						
FINES	FINESS Array B	23.02	7	P	P	19 44 37.4	-1.8
FINES	FINESS Array B	23.02	7	P	P	19 44 37.4	-1.8
FIA1	FINESS Array S	23.02	7	P	P	19 44 38.2	-0.9
FIA1				IAmb	IAmb	19 44 41.4	
	comp=Z,30nm,1.2s						
EKA	Eskdalemuir Ar	23.02	324	P	P	19 44 37.8	-1.4
	comp=Z,11nm,0.8s,baz=122,slow=11,SNR=14						
ESK	Eskdalemuir	23.04	324	P	P	19 44 39.0	-0.4
ESK				pmax	pmax		
	comp=Z,109nm,1.7s						
ESK	Eskdalemuir	23.04	324	P	P	19 44 39.0	-0.4
NC405	NORSAR Array S	23.11	349	P	P	19 44 39.0	-1.0
NB2	NORSAR Subarra	23.11	348	P	P	19 44 40.6	+0.4
	comp=Z,8.3nm,1.1s,baz=155,slow=10						
NOA	NORSAR Array B	23.11	348	P	P	19 44 38.2	-1.9
	comp=Z,2.0nm,0.8s,baz=156,slow=10,SNR=4.5						
NOA				LR	LR	19 54 31.0	
	comp=Z,38nm,18.3s,baz=355,slow=39						
BELG	Belogornoye	23.20	45	P	P	19 44 40.5	-0.6
	comp=Z,5.4nm,0.3s,baz=219,slow=8.1,SNR=3.8						
KLMR	Klimovskoe	25.14	22	eP	P	19 44 58.5	-0.7
KLMR				pmax	pmax		
	comp=Z,31nm,1.5s						
KLMR	Klimovskoe	25.14	22	eP	P	19 44 58.5	-0.7
KLMR				AMP		19 45 04.9	
	comp=Z,31nm,1.5s						
PRGR	Permogore	27.67	26	eP	P	19 45 22.3	+0.2
PRGR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
AKTO	Aktyubinsk	28.84	54	P	P	19 45 30.3	-2.3
	comp=Z,0.8nm,0.4s,baz=44,slow=6.0,SNR=3.2						
AKTO				LR	LR	19 57 38.5	
	comp=Z,78nm,19.8s,baz=292,slow=38						
GEYT	Alibeck	29.34	80	P	P	19 45 35.6	-1.6
	comp=Z,1.7nm,0.4s,baz=89,slow=11,SNR=3.3						
GEYT				LR	LR	19 58 31.9	
	comp=Z,40nm,18.9s,baz=305,slow=39						
GEYT	Alibeck	29.34	80	P	P	19 45 34.6	-2.6
GEYT				IAmb	IAmb	19 45 44.5	
	comp=Z,5.0nm,0.8s						
GYA0B	ALIBECK ARRAY	29.34	80	P	P	19 45 34.9	-2.3
GYA0B				IAmb	IAmb	19 45 48.5	
	comp=Z,6.7nm,0.7s						
ABKAR	Akbulak array	29.92	56	P	P	19 45 42.5	+0.3
ABKAR	Akbulak array	29.92	56	P	P	19 45 41.5	-0.7
TORD	Torodi Ar. Bea	30.46	218	P	P	19 45 47.7	+0.5
	comp=Z,2.2nm,0.5s,baz=32,slow=9.1,SNR=30						
TORD	Torodi Ar. Bea	30.46	218	P	P	19 45 47.6	+0.3
TORD				IAmb	IAmb	19 46 05.5	
	comp=Z,4.7nm,1.4s						
ARU	Arti	30.64	42	c iP	P	19 45 48.3	-0.2
ARU						19 46 46.8	
ARU				S	S	19 50 52.8	+2.1
ARU				SS	ScP	19 52 30.4	+1.3
ARU				pmax	pmax		
	comp=Z,8.0nm,1.3s						
ARCES	ARCESS Array B	31.01	3	P	P	19 45 50.4	-1.2
	comp=Z,2.5nm,0.9s,baz=189,slow=6.1,SNR=8.4						
ARCES				LR	LR	20 01 26.6	
	comp=Z,144nm,19.0s,baz=200,slow=42						
ARCES	ARCESS Array B	31.01	3	P	P	19 45 52.8	+1.2
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ARCES	ARCESS Array B	31.01	3	P	P	19 45 52.8	+1.2
ARCES				IAmb	IAmb	19 46 33.2	
	comp=Z,2.7nm,0.8s						
KEV	Kevo	31.31	4	P	P	19 45 54.4	+0.2
KEV				pmax	pmax		
	comp=Z,41nm,1.5s						
KEV	Kevo	31.31	4	P	P	19 45 54.4	+0.2
SVE	Sverdlovsk	31.86	42	eP	P	19 46 00.7	+1.5
KOWA	Kowa	32.43	229	P	P	19 46 04.4	-0.2
	comp=Z,2.2nm,0.6s,baz=38,slow=16,SNR=8.0						
KOWA	Kowa	32.43	229	P	P	19 46 04.5	-0.2
KOWA				IAmb	IAmb	19 46 06.3	
	comp=Z,3.2nm,0.8s						
UOSS	Minazif	33.02	104	P	P	19 46 08.9	-0.9
UOSS				IAmb	IAmb	19 46 14.4	
	comp=Z,7.9nm,0.7s						
WSAR	Wadi Sarin	35.81	104	LR	LR	20 04 16.5	
	comp=Z,42nm,18.2s,baz=298,slow=42						
BRVK	Borovoye	36.69	50	⇓eP	P	19 46 42.2	+1.1
BRVK				pmax	pmax		
	comp=Z,11nm,1.7s						
BRVK	Borovoye	36.69	50	P	P	19 46 41.7	+0.6
BRVK				IAmb	IAmb	19 46 46.3	
	comp=Z,6.1nm,1.0s						
BVAR	Borovoye Array	36.75	50	P	P	19 46 40.6	-1.0
	comp=Z,1.9nm,0.6s,baz=270,slow=10,SNR=6.3						
KKAR	Karatay Array	37.55	67	P	P	19 46 49.1	+0.5
KKAR	Karatay Array	37.55	67	P	P	19 46 49.1	+0.5
CHGR	Chuyangaron	37.57	74	P	P	19 46 48.4	-0.5
LODK	Lodwar	37.62	155	P	P	19 46 49.1	-0.3
GAR	Garm	38.35	73	P	P	19 46 56.8	+1.3
BTK	Batken	38.45	72	P	P	19 46 56.6	+0.3
BTK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BTK	Batken	38.45	72	P	P	19 46 56.6	+0.3
BTK				IAmb	IAmb	19 47 01.2	
	comp=Z,4.0nm,0.8s						
DBIC	Dimbokro	39.30	222	P	P	19 47 03.7	+0.2
	comp=Z,2.7nm,0.5s,baz=28,slow=8.0,SNR=7.3						
DBIC	Dimbokro	39.30	222	P	P	19 47 03.9	+0.4
DBIC				pmax	pmax		
	comp=Z,10.0nm,1.1s						
DBIC	Dimbokro	39.30	222	P	P	19 47 03.9	+0.4
DBIC				IAmb	IAmb	19 47 06.5	
	comp=Z,9.8nm,1.1s						
TIC	Toumodi	39.41	223	ePKP1	P	19 47 05.5	+1.1
KIC	Kosan Boka	39.50	222	ePKP1	P	19 47 05.4	+0.2
	comp=Z,4.5nm,0.5s						
SPB2	Spitsbergen Ar	39.62	359	P	P	19 47 06.6	+1.1
SOCY	Socotra	39.72	123	P	P	19 47 05.6	-1.5
SOCY				IAmb	IAmb	19 47 06.0	
	comp=Z,13nm,0.9s						
LIC	Lamto	39.77	222	ePKP1	P	19 47 06.2	-1.2
	comp=Z,10nm,0.5s						
AAK	Ala-Archa	40.51	67	P	P	19 47 14.0	+0.4
AAK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
AAK	Ala-Archa	40.51	67	P	P	19 47 14.0	+0.4
KURBB	Kurchatov Arra	41.89	54	P	P	19 47 23.3	-1.3
	comp=Z,1.1nm,0.5s,baz=279,slow=9.9,SNR=6.6						
KURK	Kurchatov	41.94	54	⇑eP	P	19 47 25.9	+1.0
KURK				pmax	pmax		
	comp=Z,7.0nm,1.7s						
KURK	Kurchatov	41.94	54	P	P	19 47 23.3	-1.6
KURK	Kurchatov	41.94	54	IAmb	IAmb	19 47 59.5	
	comp=Z,5.1nm,1.1s						
KSH	Kashi	42.41	71	P	P	19 47 29.1	-0.1
KSH				pmax	pmax		
	comp=Z,3.0nm,0.4s						
MK31	Makanchi Array	45.00	59	ceP	P	19 47 49.4	-0.3
MK31	Makanchi Array	45.00	59	P	P	19 47 49.0	-0.8
MK31				IAmb	IAmb	19 47 54.7	
	comp=Z,2.3nm,0.7s						
MKAR	Makanchi Array	45.00	59	P	P	19 47 49.2	-0.5
	comp=Z,2.5nm,0.6s,baz=272,slow=7.7,SNR=31						
MKAR				PcP	PcP	19 49 30.9	+0.2
	comp=Z,0.7nm,0.6s,baz=271,slow=5.0,SNR=2.1						
MKAR	Makanchi Array	45.00	59	P	P	19 47 49.2	-0.5
MKAR	Makanchi Array	45.00	59		PcP	19 49 30.9	+0.2
ZAA0	Zalesovo Array	45.31	48	P	P	19 47 51.7	-0.4
ZALV	Zalesovo Beam	45.31	48	P	P	19 47 51.8	-0.3
	comp=Z,6.7nm,0.5s,baz=276,slow=8.5,SNR=26						
ZALV	Zalesovo Beam	45.31	48	P	P	19 47 51.5	-0.6
DGZ	Jazzator, Alta	47.68	54	⇓eP	P	19 48 09.9	-1.1
DGZ				pmax	pmax		
	comp=Z,10.0nm,3.6s						
WMQ	Urumqi	49.47	61	eP	P	19 48 27.8	+3.1
TLY	Talaya	56.91	48	LR	LR	20 14 10.7	
	comp=Z,55nm,19.9s,baz=330,slow=37						
SCHQ	Schefferville	58.10	317	P	P	19 49 26.9	-0.8
	comp=Z,5.9nm,0.9s,baz=9.4,slow=18,SNR=2.6						
SCHQ	Schefferville	58.10	317	P	P	19 49 28.1	+0.5
TIXI	Tiksi	59.15	21	⇑eP	P	19 49 35.4	+0.8
TIXI				pmax	pmax		
	comp=Z,26nm,3.3s						
TIXI	Tiksi	59.15	21	P	P	19 49 36.5	+2.0
TIXI				IAmb	IAmb	19 49 38.0	
	comp=Z,7.7nm,1.5s						

GTA	**Gaotai**	59.55	62	eP	P	19 49 39.8	+1.7
GTA				pP	sP	19 49 45.3	+3.0
GTA				sP	pP	19 49 48.4	+7.3
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SONM	**Songino Array**	60.10	51	P	P	19 49 41.3	-0.5
	comp=Z,1.4nm,0.9s,baz=292,slow=6.9,SNR=6.3						
SONM	**Songino Array**	60.10	51	P	P	19 49 41.6	-0.1
SONM				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SONM	**Songino Array**	60.10	51	P	P	19 49 41.6	-0.1
E62A	**Clayton Lake**	63.24	309	P	P	19 50 04.6	+1.8
LZH	**Lanzhou**	63.94	64	eP	P	19 50 07.4	-0.4
LZH				pP	pP	19 50 11.0	+0.2
LZH				pmax	pmax		
	comp=Z,21nm,1.4s						
HHC	**Hu-ho-hao-te**	66.71	56	eP	P	19 50 25.9	+0.3
HHC				pmax	pmax		
	comp=Z,11nm,1.1s						
HHC				pmax	pmax		
	comp=Z,130nm,5.7s						
BOSA	**Boshof**	67.11	176	P	P	19 50 27.6	-0.5
	comp=Z,1.5nm,0.7s,baz=17,slow=9.3,SNR=3.0						
BOSA				LR	LR	20 20 60.0	
	comp=Z,45nm,18.1s,baz=188,slow=37						
BOSA	**Boshof**	67.11	176	P	P	19 50 28.5	+0.4
BOSA				pmax	pmax		
	comp=Z,27nm,1.6s						
BOSA	**Boshof**	67.11	176	P	P	19 50 28.5	+0.4
CHTO	**Chiang Mai**	69.58	82	P	P	19 50 43.0	-0.8
CHTO				pmax	pmax		
	comp=Z,6.0nm,1.6s						
CHTO	**Chiang Mai**	69.58	82	P	P	19 50 43.0	-0.8
CHTO				IAmb	IAmb	19 50 51.6	
	comp=Z,5.6nm,1.6s						
CMAR	**Chiang Mai Arr**	69.78	82	P	P	19 50 43.6	-1.4
	comp=Z,0.8nm,0.9s,baz=296,slow=8.5,SNR=4.4						
INK	**Inuvik**	71.56	350	P	P	19 50 55.2	+0.2
	comp=Z,1.4nm,1.1s,baz=172,slow=1.5,SNR=1.7						
TKL	**Tuckaleechee C**	78.25	306	LR	LR	20 23 34.1	
	comp=Z,24nm,20.8s,baz=111,slow=34						
KSRS	**Korea Array**	78.97	51	P	P	19 51 37.8	-0.4
	comp=Z,0.9nm,0.7s,baz=327,slow=4.6,SNR=2.0						
KSRS	**Korea Array**	78.97	51	P	P	19 51 37.8	-0.4
MJAR	**Matsushiro Arr**	85.59	46	P	P	19 52 12.5	-0.5
	comp=Z,1.3nm,0.7s,baz=328,slow=4.3,SNR=2.2						
PDAR	**Pinedale Array**	87.14	326	P	P	19 52 20.5	-0.2
	comp=Z,0.1nm,0.3s,baz=35,slow=6.6,SNR=1.5						
CPUP	**Villa Florida**	97.33	242	LR	LR	20 37 53.0	
	comp=Z,23nm,18.9s,baz=30,slow=36						
WRA	**Warramunga Arr**	120.52	92	PKP	PKPdf	19 58 25.9	-0.6
	comp=Z,0.5nm,0.5s,baz=325,slow=1.9,SNR=12						
WRA	**Warramunga Arr**	120.52	92		PKPdf	19 58 25.9	-0.6
ASAR	**Alice Springs**	122.19	96	PKP	PKPdf	19 58 29.5	-0.1
	comp=Z,0.6nm,0.5s,baz=313,slow=1.7,SNR=12						
ASAR	**Alice Springs**	122.19	96		PKPdf	19 58 29.5	-0.1

IDC ***17*** *19:39:36.9±2.3, 61°.26N×3°.24E, h0^{km}, mb1 3.3/5, mb1mx3.1/53, mbtmp3.3/5, ML2.5/5, Error ellipse: s-maj=31.7km s-min=17.5km az=177.0*
NAO ***17*** *19:39:38.6±2.4, 61°.24N×3°.29E, h17^{km}±13^{km}, ML2.1*
BER ***17*** *19:39:39.2±2.9, 61°.27N×3°.05E, h15^{km}±14^{km}, ML2.3, MW2.5, ML2.1(NAO), Confirmed Earthquake*
DNK ***17*** *19:39:40.0±0.5, 61°.11N×3°.66E, h0^{km}, ML2.0(UPP), Suspected explosion*
UPP ***17*** *19:39:43.8±3.2, 61°.04N×4°.04E, h0^{km}, ML1.8, Suspected explosion*
ISC 17 19:39:37.7±1.3**, 61°.27N**±0°.04×**3°.03E**±0°.04**, h30**^{km}±13^{km}**, n59, σ1^{s}.85**/96**, Norwegian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUE	**Sulen**	0.86	103	eP	Pn	19 39 55.0	+1.1
SUE				eS	Sn	19 40 05.7	+0.3
SUE				IAML		19 40 05.9	
	comp=Z,195nm,0.1s						
FOO	**Floro**	1.02	70	Pg	Pn	19 39 56.7	+0.7
FOO				Lg	Lg	19 40 09.2	
FOO	**Floro**	1.02	70	eP	Pn	19 39 56.8	+0.7
FOO				eS	Sb	19 40 08.8	-1.0
FOO				IAML		19 40 09.3	
	comp=Z,281nm,0.2s						
ASK	**Askoy**	1.32	126	eP	Pb	19 40 01.9	+0.1
ASK				eS	Sb	19 40 17.8	-0.5
ASK				IAML		19 40 18.1	
	comp=Z,152nm,0.4s						
ASK				IAML		19 40 18.2	
	comp=Z,160nm,0.4s						
BER	**Bergen**	1.43	127	Pg	Pb	19 40 03.7	-0.1
BER				Lg	Lg	19 40 20.5	
BER	**Bergen**	1.43	127	eP	Pb	19 40 03.9	+0.2
BER				eS	Sb	19 40 20.6	-1.0
BER				IAML		19 40 25.8	
	comp=Z,36nm,0.3s						
HYA	**Hoyanger**	1.53	92	Pg	Pb	19 40 04.4	-1.0
HYA				Lg	Lg	19 40 22.6	
HYA	**Hoyanger**	1.53	92	eP	Pb	19 40 04.4	-1.0
HYA				eS	Sn	19 40 22.2	+0.3
HYA				IAML		19 40 25.9	
	comp=Z,56nm,0.2s						
HYA				IAML		19 40 29.6	
	comp=Z,54nm,0.3s						
AKN	**Aaknes**	2.10	62	Pn	Pb	19 40 13.0	-2.1
AKN				Sn	Sn	19 40 36.2	+0.3
AKN	**Aaknes**	2.10	62	Pn	Pb	19 40 13.0	-2.1
AKN				Sn	Sn	19 40 36.2	+0.3
ODD1	**Odda**	2.23	126	eP	Pb	19 40 14.9	-2.5
ODD1				eS	Sn	19 40 40.2	+0.9
ODD1				IAML		19 40 41.2	
	comp=Z,48nm,0.3s						
KMY	**Karmoy**	2.34	151	eP	Pn	19 40 16.0	+1.9
KMY				eS	Sn	19 40 42.1	+0.3
KMY				IAML		19 40 51.9	
	comp=Z,12nm,0.3s						
KMY				IAML		19 40 52.0	
	comp=Z,19nm,0.8s						
LRW	**Lerwick**	2.36	243	eP	Pn	19 40 16.3	+1.9
LRW				eS	Sn	19 40 41.3	-1.0
LRW				IAML		19 40 55.1	
	comp=Z,167nm,0.3s						
MOL	**Molde**	2.50	57	Pn	Pn	19 40 17.7	+1.3
MOL				Sn	Sn	19 40 46.3	+0.4
MOL				Lg	Lg	19 40 53.3	
MOL	**Molde**	2.50	57	eP	Pn	19 40 17.5	+1.1
MOL				eS	Sn	19 40 46.3	+0.4
MOL				IAML		19 40 57.0	
	comp=Z,32nm,0.4s						
BLS5	**Blasjo**	2.51	136	eP	Pn	19 40 18.6	+2.1
BLS5				eS	Sn	19 40 46.6	+0.4
BLS5				IAML		19 40 48.8	
	comp=Z,14nm,0.2s						
SKAR	**Skarslia**	2.64	101	eP	Pn	19 40 20.3	+2.0
SKAR				eS	Sn	19 40 49.9	+0.6
SKAR				IAML		19 41 04.7	
	comp=Z,29nm,0.3s						
DOMB	**Dombas**	2.98	72	eP	Pn	19 40 25.6	+2.6
DOMB				eS	Sn	19 40 57.9	+0.2
DOMB				IAML		19 41 12.5	
	comp=Z,25nm,0.3s						
SNART	**Snartemo**	3.62	142	eP	Pn	19 40 33.5	+1.8
SNART				eS	Sn	19 41 11.8	-1.4
SNART				IAML		19 41 34.5	
	comp=Z,64nm,1.1s						
KONO	**Kongsberg**	3.63	114	eP	Pn	19 40 33.4	+1.5
KONO				eS	Sn	19 41 13.5	-0.3
KONO				IAML		19 41 33.4	
	comp=Z,16nm,0.6s						
KONO				IAML		19 41 33.5	
	comp=Z,16nm,0.3s						
NAO01	**NORSAR Array S**	3.84	93	eP	Pn	19 40 36.4	+1.6
NAO01				eS	Sn	19 41 17.5	-1.4
NAO01				IAML		19 41 43.7	
	comp=Z,9.5nm,0.5s						
NB2	**NORSAR Subarra**	3.97	90	Pn	Pn	19 40 37.0	+0.4
	baz=279,slow=11						
NB2				Sn	Sn	19 41 19.6	-2.6
	baz=280,slow=22						
NB2				Lg	Lg	19 41 40.3	
	baz=290,slow=37						
NB2	**NORSAR Subarra**	3.97	90	Pn	Pn	19 40 37.0	+0.4
	baz=279,slow=11						
NB2				Sn	Sn	19 41 19.6	-2.6
	baz=280,slow=22						
NB2				Sg	Sb	19 41 40.3	+5.8
	baz=290,slow=37						
NOA	**NORSAR Array B**	3.97	90	Pn	Pn	19 40 36.9	+0.3
	comp=Z,0.1nm,0.3s,baz=281,slow=12,SNR=17						
NOA				Sn	Sn	19 41 16.6	-5.5
	comp=Z,0.2nm,0.3s,baz=325,slow=23,SNR=12						
NOA				Lg	Lg	19 41 36.5	
	comp=Z,0.2nm,0.3s,baz=189,slow=19,SNR=4.5						
HOMB	**Homborsund**	4.08	135	eP	Pn	19 40 39.9	+1.8
HOMB				eS	Sn	19 41 22.8	-2.0
HOMB				IAML		19 41 48.1	
	comp=Z,12nm,0.7s						
NC602	**NORSAR Array S**	4.18	94	eP	Pn	19 40 40.5	+1.1
NC602				eS	Sn	19 41 24.5	-2.6
NC602				IAML		19 41 57.3	
	comp=Z,8.4nm,0.5s						
NRA0	**NORESS Array S**	4.18	94	Pn	Pn	19 40 40.4	+1.0
	baz=295,slow=12						
NRA0				Sn	Sn	19 41 24.6	-2.5
	baz=293,slow=22						
NRA0				Lg	Lg	19 41 48.5	
	baz=287,slow=37						
NRA0	**NORESS Array S**	4.18	94	Pn	Pn	19 40 40.4	+1.0
	baz=295,slow=12						
NRA0				Sn	Sn	19 41 24.6	-2.5
	baz=293,slow=22						
BIGH	**Upper Bighouse**	4.47	235	eP	Pn	19 40 45.3	+1.9
BIGH				eS	Sn	19 41 32.0	-2.3
STRU	**Stroemstad**	4.65	115	P	Pn	19 40 46.8	+1.0
STRU				S	Sn	19 41 36.0	-2.6
STRU	**Stroemstad**	4.65	115	P	Pn	19 40 46.8	+1.0
STRU				S	Sn	19 41 36.0	-2.6
STRU	**Stroemstad**	4.65	115	eP	Pn	19 40 46.5	+0.7
STRU				eS	Sn	19 41 36.1	-2.6
FINU	**Finntorp**	5.05	108	P	Pn	19 40 52.5	+1.2
FINU	**Finntorp**	5.05	108	P	Pn	19 40 52.5	+1.2
DRUM	**Mains of Drumt**	5.21	216	eP	Pn	19 40 55.3	+1.8
DRUM				eS	Sn	19 41 49.7	-2.9
UDD	**Uddeholm**	5.33	98	P	Pn	19 40 56.6	+1.4
VANU	**Vaenersborg**	5.33	117	P	Pn	19 40 56.3	+1.1
VANU	**Vaenersborg**	5.33	117	P	Pn	19 40 56.3	+1.1
HFS	**Hagfors**	5.36	98	Pn	Pn	19 40 56.8	+1.2
	comp=Z,0.4nm,0.3s,baz=272,slow=11,SNR=24						
HFS				Sn	Sn	19 41 53.9	-2.3
	comp=Z,1.1nm,0.3s,baz=284,slow=21,SNR=11						
HFS				Lg	Lg	19 42 24.8	
	comp=Z,0.8nm,0.3s,baz=285,slow=28,SNR=5.8						
HFS	**Hagfors**	5.36	98	Pn	Pn	19 40 56.8	+1.2
	baz=278,slow=12						
HFS				Sn	Sn	19 41 53.2	-3.1
	baz=285,slow=22						
HFS				Lg	Lg	19 42 24.1	
	baz=283,slow=28						
HFS	**Hagfors**	5.36	98	Pn	Pn	19 40 56.8	+1.2
	baz=278,slow=12						
HFS				Sn	Sn	19 41 53.2	-3.1
	baz=285,slow=22						
TJOU	**Tjoern**	5.43	123	P	Pn	19 40 57.7	+1.2
TJOU	**Tjoern**	5.43	123	P	Pn	19 40 57.7	+1.2
NASU	**Vaermlandsnaes**	5.59	110	P	Pn	19 41 00.2	+1.4
NASU	**Vaermlandsnaes**	5.59	110	P	Pn	19 41 00.2	+1.4
KPL	**Plockton**	5.94	232	eP	Pn	19 41 04.4	+0.9
KPL				eS	Sn	19 42 07.7	-2.7
ONAU	**Onsala**	5.98	127	P	Pn	19 41 05.2	+1.2
ONAU	**Onsala**	5.98	127	P	Pn	19 41 05.2	+1.2
BORU	**Boraas**	6.16	122	P	Pn	19 41 07.7	+1.1
BORU	**Boraas**	6.16	122	P	Pn	19 41 07.7	+1.1
NRAU	**Nora**	6.19	101	P	Pn	19 41 08.4	+1.4
NRAU	**Nora**	6.19	101	P	Pn	19 41 08.4	+1.4
FKPU	**Falk**	6.24	115	P	Pn	19 41 08.8	+1.1
FKPU	**Falk**	6.24	115	P	Pn	19 41 08.8	+1.1
EDI	**Edinburgh**	6.26	214	eS	Sn	19 42 16.5	-2.0
EKA	**Eskdalemuir Ar**	6.78	211	Pn	Pn	19 41 17.1	+1.9
	baz=17,slow=12,SNR=5.7						
EKA				Sn	Sn	19 42 29.1	-2.1
	baz=38,slow=22,SNR=10.0						
EDMD	**Edmundbyers**	6.97	205	eP	Pn	19 41 18.8	+1.0
EDMD				eS	Sn	19 42 31.2	-4.8
FINES	**FINESS Array B**	11.05	79	Pn	Pn	19 42 14.7	+1.2
	comp=Z,0.1nm,0.3s,baz=285,slow=16,SNR=2.2						
ARCES	**ARCESS Array B**	12.42	39	Pn	Pn	19 42 32.8	+0.6
	baz=242,slow=15,SNR=1.4						

IDC ***17*** *19:55:01.8±1.4, 40°.28N×73°.61E, h0^{km}, mb3.5/3, mb1 3.6/7, mb1mx3.4/45, mbtmp3.5/7, ML3.2/4, Error ellipse: s-maj=23.6km s-min=16.1km az=119.0*
KRNET ***17*** *19:55:02.1±0.1, 40°.29N×73°.13E, h20^{km}, mb3.9*
SOME ***17*** *19:55:02.8, 40°.53N×73°.30E, h0^{km}*
ISU ***17*** *19:55:03, 40°.28N×73°.17E, h5^{km}*
NNC ***17*** *19:55:05.9±1.0, 40°.54N×73°.32E, h0^{km}, mb4.2, mpv3.9, Error ellipse: s-maj=8.5km s-min=5.5km az=174.0*
ISC 17 19:55:02.9±1.0**, 40°.28N**±0°.02×**73°.16E**±0°.02**, h6**^{km}±8^{km}**, n81, σ1^{s}.83**/129**, mb3.4**/3**, 39C-9D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	0.37	135	eP	Pg	19 55 10.0	-0.2
SFK				eS	Sg	19 55 15.0	-0.1
SFK	**Sufi-Kurgan**	0.37	135	⇑eP	Pg	19 55 10.0	-0.2
	baz=34						
SFK				⇑eS	Sg	19 55 16.3	+1.2
	baz=34						
OHH	**Osh**	0.38	311	eP	Pg	19 55 10.0	-0.4
OHH				eS	Sg	19 55 15.0	-0.4
OHH	**Osh**	0.38	311	⇑iP	Pg	19 55 09.6	-0.8
	baz=11						
OHH				⇑iS	Sg	19 55 14.8	-0.6
	baz=11						
SALK	**Salom-Alik**	0.78	39	⇓eP	Pg	19 55 17.4	-0.6
	baz=41						
SALK				⇓eS	Sg	19 55 28.2	0.0
	baz=41						
FRG	**Fergana**	1.06	276	eP	Pb	19 55 23.0	-0.7
FRG				eS	Sn	19 55 42.0	+2.5
DRK	**Karamyk**	1.32	233	⇑iP	Pn	19 55 26.4	-1.7
	baz=32						
DRK				⇑iS	Sb	19 55 43.9	-1.6
	baz=32						
NAM	**Namangan**	1.35	302	eP	Pg	19 55 29.0	+0.2
NAM				eS	Sg	19 55 49.0	+2.7
BTK	**Batken**	1.81	264	eP	Pb	19 55 36.0	-0.5
BTK				eS	Sg	19 56 07.0	+5.9
BTK	**Batken**	1.81	264	⇑iP	Pn	19 55 34.5	-0.3
	baz=63						
BTK				⇑iS	Sb	19 55 59.0	-0.5
	baz=63						
AML	**Almayashu**	1.90	12	⇑iP	Pn	19 55 36.0	-0.2
	baz=13						
AML				⇑iS	Sn	19 56 00.6	-0.1
	baz=13						
TRKS	**Terek-Say**	1.98	310	⇓iP	Pn	19 55 36.1	-1.1
	baz=9.0						
TRKS				⇓iS	Sn	19 56 01.5	-0.9
	baz=9.0						
UCH	**Uchtor**	2.20	27	⇑eP	Pn	19 55 40.1	-0.3
	baz=28						
UCH				⇑eS	Sn	19 56 08.2	0.0
	baz=28						
MNAS	**Manas**	2.27	348	⇑iP	Pn	19 55 41.1	0.0
	baz=48						
MNAS				⇑eS	Sn	19 56 10.1	+0.7
	baz=48						
EKS2	**Erkin-Say**	2.43	11	⇑iP	Pn	19 55 43.4	+0.1
	baz=11						
EKS2				⇑iS	Sn	19 56 13.5	+0.1
	baz=11						
MRKS	**Merke**	2.47	1	eP	Pb	19 55 45.8	-2.0
	42nm,0.3s						
MRKS				eS	Sb	19 56 17.3	-1.2
	326nm,0.4s						
MRKS	**Merke**	2.47	1	Pg	Pb	19 55 45.7	-2.0
	42nm,0.3s						
MRKS				Lg	Lg	19 56 17.3	
	326nm,0.4s						
GAR	**Garm**	2.54	241	⇑iP	Pn	19 55 44.7	-0.1
	baz=40						
GAR				⇑iS	Sn	19 56 15.8	-0.3
	baz=40						
AAK	**Ala-Archa**	2.56	23	Pn	Pn	19 55 45.8	+0.6
	27nm,0.3s,baz=197,slow=6.6,SNR=162						
AAK				Sn	Sb	19 56 18.6	-2.7
	26nm,0.3s,baz=155,slow=16,SNR=22						
AAK	**Ala-Archa**	2.56	23	⇑Pn	Pn	19 55 46.0	+0.8
	60nm,0.5s						
AAK				⇑Lg	Lg	19 56 19.3	
	240nm,1.0s						
AAK	**Ala-Archa**	2.56	23	⇑iP	Pn	19 55 45.0	-0.2
	baz=23						
AAK				⇑iS	Sn	19 56 16.8	0.0
	baz=23						
KBK	**Karagaybulak**	2.73	29	⇑iP	Pn	19 55 47.4	-0.1
	baz=29						
KBK				⇑iS	Sn	19 56 20.6	-0.3
	baz=29						
FRU1	**Bishkek**	2.76	23	⇓iP	Pn	19 55 48.1	+0.3
	baz=23						
FRU1				⇓iS	Sn	19 56 21.8	+0.3
	baz=23						
CHRV	**Charvak**	2.79	300	eP	Pn	19 55 49.0	+0.8
CHRV				eS	Sg	19 56 33.0	+0.5
DZA	**Taraz**	2.95	333	eP	Pb	19 55 55.6	-0.4
	29nm,0.1s						
DZA				eS	Sb	19 56 33.4	+1.0
	316nm,0.6s						
DZA	**Taraz**	2.95	333	Pg	Pb	19 55 55.6	-0.4
	29nm,0.1s						
DZA				Lg	Lg	19 56 33.4	
	316nm,0.6s						
CHMS	**Chumysh**	2.97	23	⇑eP	Pn	19 55 50.4	-0.2
	baz=24						
CHMS				⇑iS	Sn	19 56 26.2	-0.4
	baz=24						
TGS	**TashGRES**	2.99	294	eP	Pg	19 56 00.0	-0.3
TGS				eS	Sg	19 56 42.0	+3.0
ULHL	**Ulahol**	3.04	49	⇑eP	Pn	19 55 51.6	-0.2
	baz=49						
ULHL				⇑iS	Sn	19 56 28.0	-0.7
	baz=49						
TAS	**Tashkent**	3.12	291	eP	Pg	19 56 01.0	-1.7
TAS				eS	Sg	19 56 43.0	-0.1
USP	**Ospenovka**	3.15	18	⇓iP	Pn	19 55 53.2	0.0
	baz=19						
USP				⇓iS	Sn	19 56 30.7	-0.4
	baz=19						
TKM2	**Tokmak 2**	3.21	34	⇑Pn	Pn	19 55 54.9	+0.8
	36nm,0.8s						
TKM2				⇑Lg	Lg	19 56 37.6	
	86nm,0.9s						
TKM2	**Tokmak 2**	3.21	34	⇑iP	Pn	19 55 54.2	+0.1
	baz=34						
TKM2				⇑iS	Sn	19 56 32.2	-0.6
	baz=34						
CHM	**Chimkent**	3.37	308	eP	Pb	19 56 04.7	+1.6
	6.2nm,0.5s						
CHM				eS	Sg	19 56 49.0	-2.2
	475nm,0.5s						
KST	**Kastek**	3.47	36	eP	Pb	19 56 04.0	-0.8
	21nm,0.6s						
KST				eS	Sb	19 56 48.5	+1.2
	100nm,0.5s						
KST	**Kastek**	3.47	36	Pg	Pb	19 56 04.0	-0.8
	21nm,0.6s						
KST				Lg	Lg	19 56 48.5	
	100nm,0.5s						
CHGR	**Chuyangaron**	3.50	244	⇑iP	Pn	19 55 58.1	+0.2
	baz=43						
CHGR				⇑iS	Sn	19 56 39.1	-0.6
	baz=43						
DGS	**Degeres**	3.55	33	eP	Pb	19 56 05.5	-0.7
	22nm,0.6s						
DGS				eS	Sb	19 56 50.3	+0.7
	144nm,0.9s						
DGS	**Degeres**	3.55	33	Pg	Pb	19 56 05.5	-0.7
	22nm,0.6s						
DGS				Lg	Lg	19 56 50.3	
	144nm,0.9s						
MTBS	**Maitube**	3.76	40	eP	Pb	19 56 09.8	0.0
	19nm,0.5s						
MTBS				eS	Sb	19 56 57.6	+2.1
	43nm,0.5s						
MTBS	**Maitube**	3.76	40	Pg	Pb	19 56 09.8	0.0
	19nm,0.5s						
MTBS				Lg	Lg	19 56 57.6	
	43nm,0.5s						
TNSS	**Tian-Shan**	3.96	45	eP	Pb	19 56 12.6	-0.7
	16nm,0.5s						
TNSS				eS	Sb	19 57 03.1	+1.5
	77nm,0.5s						
TNSS	**Tian-Shan**	3.96	45	Pg	Pb	19 56 12.6	-0.7
	16nm,0.5s						
TNSS				Lg	Lg	19 57 03.1	
	77nm,0.5s						
AAA	**Alma-Ata**	4.06	43	eP	Pb	19 56 15.2	+0.4
	19nm,0.3s						
AAA				eS	Sb	19 57 07.1	+3.0
	195nm,0.7s						
AAA	**Alma-Ata**	4.06	43	Pg	Pb	19 56 15.2	+0.4
	19nm,0.3s						
AAA				Lg	Lg	19 57 07.1	
	195nm,0.7s						
KNDC	**Almaty**	4.09	43	⇑Pn	Pn	19 56 07.2	+1.1
	23nm,0.5s						
KNDC				⇑Lg	Lg	19 57 08.6	
	203nm,0.8s						
MDOK	**Medeo**	4.09	44	eP	Pb	19 56 14.7	-0.8
	21nm,0.8s						
MDOK				eS	Sb	19 57 06.8	+1.5
	102nm,0.8s						
MDOK	**Medeo**	4.09	44	Pn	Pn	19 56 07.0	+0.8
	14nm,0.6s						
MDOK				Lg	Lg	19 57 08.1	
	117nm,0.8s						
MDOK	**Medeo**	4.09	44	Pg	Pb	19 56 14.7	-0.8
	21nm,0.8s						
MDOK				Lg	Lg	19 57 06.8	
	102nm,0.8s						
KOTS	**Kotyrbulak**	4.18	44	eP	Pb	19 56 17.4	+0.5
	19nm,0.8s						
KOTS				eS	Sb	19 57 11.1	+3.3
	216nm,0.8s						
KOTS	**Kotyrbulak**	4.18	44	Pg	Pb	19 56 17.4	+0.5
	19nm,0.8s						
KOTS				Lg	Lg	19 57 11.0	
	216nm,0.8s						
ANVS	**Anan'yevo**	4.21	52	⇑iP	Pn	19 56 07.9	+0.1
	baz=52						
ANVS				⇑iS	Sn	19 56 57.3	0.0
	baz=52						
KUU	**Kurty**	4.32	32	eP	Pb	19 56 19.6	+0.4
	16nm,0.7s						
KUU				eS	Sb	19 57 14.4	+2.8
	70nm,0.8s						
KUU	**Kurty**	4.32	32	Pg	Pb	19 56 19.6	+0.4
	16nm,0.7s						
KUU				Lg	Lg	19 57 14.4	
	70nm,0.8s						
BTLS	**Baital**	4.81	7	eP	Pb	19 56 27.1	-0.4
	5.5nm,0.4s						
BTLS				eS	Sb	19 57 28.1	+2.5
	30nm,0.6s						
BTLS	**Baital**	4.81	7	Pg	Pb	19 56 27.1	-0.4
	5.5nm,0.4s						
BTLS				Lg	Lg	19 57 28.1	
	30nm,0.6s						
SATY	**Saty**	4.81	53	eP	Pb	19 56 28.4	+0.7
	14nm,0.4s						
SATY				eS	Sb	19 57 29.7	+3.8
	90nm,1.0s						
SATY	**Saty**	4.81	53	Pg	Pb	19 56 28.4	+0.7
	14nm,0.4s						
SATY				Lg	Lg	19 57 29.7	
	90nm,1.0s						
KPKS	**Kokpek**	5.21	50	eP	Pb	19 56 34.5	0.0
	7.7nm,0.5s						
KPKS				eS	Sb	19 57 41.1	+3.8
	93nm,0.6s						
UZB	**Uzynbulak**	5.24	55	eP	Pb	19 56 34.4	-0.6
	8.0nm,0.4s						
UZB				eS	Sb	19 57 40.8	+2.6
	54nm,0.9s						
UZB	**Uzynbulak**	5.24	55	Pg	Pb	19 56 34.4	-0.6
	8.0nm,0.4s						
UZB				Lg	Lg	19 57 40.8	
	54nm,0.9s						
ARXS	**Arharly**	5.24	40	eP	Pb	19 56 35.9	+1.0
	11nm,0.7s						
ARXS				eS	Sb	19 57 43.3	+5.1
	34nm,0.7s						
ARXS	**Arharly**	5.24	40	Pg	Pb	19 56 35.9	+1.0
	11nm,0.7s						
ARXS				Lg	Lg	19 57 43.3	

	34nm,0.7s						
BLB	Baldybastay	5.49	44	Pg	Pb	19 56 40.4	+1.1
	9.2nm,0.5s						
BLB				Lg	Lg	19 57 50.2	
	65nm,0.9s						
SHLS	Shalkode	5.52	57	eP	Pg	19 56 44.7	-4.0
	10nm,0.8s						
SHLS				eS	Sg	19 57 58.6	-1.6
	81nm,0.7s						
SHLS	Shalkode	5.52	57	Pg	Pg	19 56 44.7	-4.0
	10nm,0.8s						
SHLS				Lg	Lg	19 57 58.6	
	81nm,0.7s						
PDGK	Podgornoye	5.63	55	Pg	Pb	19 56 42.6	+1.1
	2.9nm,0.5s						
PDGK				Lg	Lg	19 57 54.5	
	19nm,1.0s						
PDGK	Podgornoye	5.63	55	⇑Pg	Pb	19 56 43.4	+1.8
	7.9nm,0.7s						
PDGK				⇓Lg	Lg	19 57 55.3	
	59nm,1.0s						
TDK	Taldyqorghan	6.10	38	eP	Pb	19 56 50.6	+1.0
	8.9nm,0.1s						
TDK				eS	Sb	19 58 08.2	+5.3
	36nm,0.9s						
TDK	Taldyqorghan	6.10	38	Pg	Pb	19 56 50.6	+1.0
	8.9nm,0.1s						
TDK				Lg	Lg	19 58 08.2	
	36nm,0.9s						
DJR	Jarkent	6.37	48	eP	Pb	19 56 55.5	+1.3
	4.2nm,0.9s						
DJR				eS	Sb	19 58 16.3	+5.7
	29nm,0.9s						
DJR	Jarkent	6.37	48	Pg	Pb	19 56 55.5	+1.3
	4.2nm,0.9s						
DJR				Lg	Lg	19 58 16.3	
	29nm,0.9s						
KAPS	Kapalarasan	6.77	40	eP	Pb	19 57 03.0	+2.0
	4.9nm,0.9s						
KAPS				eS	Sb	19 58 29.6	+7.6
	13nm,1.0s						
KAPS	Kapalarasan	6.77	40	Pg	Pb	19 57 03.0	+2.0
	4.9nm,0.9s						
KAPS				Lg	Lg	19 58 29.7	
	13nm,1.0s						
MKAR	Makanchi Array	9.29	42	Pn	Pn	19 57 16.4	-1.0
	0.1nm,0.3s,baz=223,slow=16,SNR=1.7						
MKAR				Lg	Lg	19 59 48.8	
	0.1nm,0.3s,baz=230,slow=26,SNR=3.4						
KURBB	Kurchatov Arra	11.01	18	Lg	Lg	20 00 40.3	
	0.1nm,0.3s,baz=290,slow=11,SNR=5.4						
AKTO	Aktyubinsk	14.69	319	Pn	Pn	19 58 32.5	+1.3
	0.2nm,0.3s,baz=118,slow=15,SNR=5.3						
ZALV	Zalesovo Beam	15.78	26	Pn	Pn	19 58 42.7	-2.9
	0.3nm,0.3s,baz=206,slow=16,SNR=6.9						
SONM	Songino Array	24.90	61	P	P	20 00 25.0	-1.6
	0.6nm,1.0s,baz=264,slow=8.3,SNR=3.0						
TORD	Torodi Ar. Bea	67.52	268	P	P	20 06 02.3	+2.1
	0.1nm,0.4s,baz=59,slow=7.6,SNR=2.0						
WRA	Warramunga Arr	82.61	124	P	P	20 07 24.5	-2.6
	0.9nm,1.0s,baz=312,slow=4.0,SNR=3.2						

KRNET 17 20:02:26.1±0.1, 40°.41N×73°.26E, h20^{km}, mb1.9, 10C-6D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	Osh	0.38	288	⇑eP	Pb	20 02 33.9	-0.3
	baz=88						
OHH				⇑iS	Sb	20 02 39.1	-0.6
	baz=88						
SFK	Sufi-Kurgan	0.44	154	⇓eP	Pb	20 02 34.6	-0.7
	baz=54						
SFK				⇓eS	Sb	20 02 40.9	-0.6
	baz=54						
SALK	Salom-Alik	0.64	42	⇓eP	Pb	20 02 38.4	-0.3
	baz=42						
SALK				⇓eS	Sb	20 02 47.5	+0.2
	baz=42						
DRK	Karamyk	1.45	231	⇑iP	Pb	20 02 53.0	+0.3
	baz=31						
DRK				⇑iS	Sb	20 03 12.5	+1.7
	baz=31						
AML	Almayashu	1.75	11	⇑iP	Pb	20 02 58.3	+0.4
	baz=11						
AML				⇑iS	Sb	20 03 21.5	+1.9
	baz=11						
BTK	Batken	1.90	260	⇑iP	Pb	20 03 00.4	+0.3
	baz=60						
BTK				⇑iS	Sb	20 03 24.6	+1.1
	baz=60						
TRKS	Terek-Say	1.96	306	⇓eP	Pb	20 03 00.3	-0.9
	baz=4.0						
TRKS				⇓iS	Sb	20 03 24.3	-0.9
	baz=4.0						
MNAS	Manas	2.15	345	⇑iP	Pb	20 03 03.9	-0.6
	baz=45						
MNAS				⇑iS	Sb	20 03 31.0	+0.1
	baz=45						

IDC ***17*** *20:03:17.2±1.0, 40°.26N×73°.25E, h0^{km}, mb3.8/10, mb1 3.8/16, mb1mx3.6/53, mbtmp3.7/16, ML2.7/6, MS3.0/2, Ms1 3.0/2, ms1mx2.5/48, Error ellipse: s-maj=16.4km s-min=10.7km az=130.0*

NEIC ***17*** *20:03:19.7±2.9, 40°.38N±0°.04×73°.26E±0°.07, h10^{km}±1^{km}, mb3.9/6, Error ellipse: s-maj=9.2km s-min=7.4km az=110.0*

MOS ***17*** *20:03:19.2±1.2, 40°.31N×73°.16E, h15^{km}, mb4.6/5, Error ellipse: s-maj=9.1km s-min=4.8km az=70.1*

MOS Felt (III-IV) at Kara-Seget, Langar; (III) at Bash-Bulak; (II-III) at Osh.

KRNET ***17*** *20:03:19.8±0.1, 40°.35N×73°.22E, h11^{km}, mb4.0*

ISU ***17*** *20:03:20, 40°.27N×73°.19E, h5^{km}*

KNET ***17*** *20:03:22.1±0.5, 40°.57N×73°.27E, h3^{km}±4^{km}, ml3.5, Error ellipse: s-maj=5.8km s-min=2.8km az=110.0*

BJI ***17*** *20:03:23.2±0.0, 40°.08N×73°.02E, h46^{km}, mB4.6/5, mb4.2/4, ML3.8/4*

SOME ***17*** *20:03:23.7, 40°.63N×73°.23E, h0^{km}*

NNC ***17*** *20:03:24.4±1.1, 40°.58N×73°.26E, h0^{km}, mb4.3, mpv3.9, Error ellipse: s-maj=8.8km s-min=5.7km az=177.0*

ISC 17 20:03:18.3±1.1, 40°.34N±0°.02×73°.31E±0°.02, h2^{km}±8^{km}, n173, σ1^{s}.83/230, mb3.7/13, 40C-37D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	0.36	155	eP	Pg	20 03 27.0	+1.9
SFK				eS	Sb	20 03 33.0	-0.7
SFK	Sufi-Kurgan	0.36	155	⇓eP	Pb	20 03 27.7	+0.2
	baz=47						
SFK				⇓eS	Sb	20 03 33.7	0.0
	baz=47						
OHH	Osh	0.44	295	eP	Pg	20 03 27.0	+0.3
OHH				eS	Sg	20 03 33.0	+0.5
OHH	Osh	0.44	295	⇓iP	Pg	20 03 27.3	+0.6
	baz=97						
OHH				⇓iS	Sg	20 03 32.5	0.0
	baz=97						
SALK	Salom-Alik	0.67	36	⇓eP	Pb	20 03 32.9	+0.1
	baz=41						
SALK				⇓eS	Sb	20 03 42.5	-0.1
	baz=41						
NAM	Namangan	1.41	298	eP	Pg	20 03 47.0	+1.6
NAM				eS	Sg	20 04 07.0	+3.3
DRK	Karamyk	1.44	234		Pg	20 03 46.7	+0.7
DRK				Sn	Sb	20 04 03.9	-1.1
DRK	Karamyk	1.44	234	⇑iP	Pg	20 03 46.6	+0.7
	baz=32						
DRK				⇑iS	Sn	20 04 05.7	+0.3
	baz=32						
AML	Almayashu	1.81	9	⇓P	Pb	20 03 53.5	+1.0
	358nm,0.2s,SNR=561						
AML				⇓S	Sb	20 04 16.2	+0.4
	2µm,0.4s						
AML	Almayashu	1.81	9	i PN	Pn	20 03 51.5	+0.6
AML				i S	Sg	20 04 17.1	+0.5
AML	Almayashu	1.81	9	⇓iP	Pg	20 03 54.1	+1.0
	baz=11						
AML				⇓iS	Sg	20 04 19.0	+2.4
	baz=11						
BTK	Batken	1.93	262	PN	Pb	20 03 53.5	-0.7
BTK	Batken	1.93	262	eP	Pb	20 03 54.0	-0.2
BTK				eS	Sg	20 04 20.0	-0.2
BTK	Batken	1.93	262		Pb	20 03 53.5	-0.7
BTK	Batken	1.93	262	⇓iP	Pb	20 03 54.8	+0.6
	baz=62						
BTK				⇓iS	Sg	20 04 20.0	-0.2
	baz=62						
TRKS	Terek-Say	2.03	307	⇑iP	Pb	20 03 55.3	-0.7
	baz=6.0						
TRKS				⇑iS	Sb	20 04 21.0	-0.7
	baz=6.0						
UCH	Uchtor	2.10	25	⇓P	Pb	20 03 58.2	+0.9
	42nm,0.2s,SNR=47						
UCH				⇓S	Sg	20 04 26.1	+0.5
	394nm,0.6s						
UCH	Uchtor	2.10	25	i PN	Pb	20 03 56.9	-0.4
UCH				i S	Sb	20 04 24.9	+1.0
UCH	Uchtor	2.10	25	⇑iP	Pg	20 03 58.7	+0.3
	baz=27						
UCH				⇑iS	Sg	20 04 27.1	+1.5
	baz=27						
KSH	Kashi	2.21	111	P	Pb	20 03 59.4	+0.4
KSH				S	Sg	20 04 29.3	+0.1
KSH				smax	smax		
	comp=N,2µm,0.8s						
KSH				smax	smax		
	comp=E,1µm,0.5s						
MNAS	Manas	2.23	345	⇓iPN	Pn	20 03 58.2	+1.8
MNAS				i S	Sb	20 04 27.3	-0.2
MNAS	Manas	2.23	345	⇑iP	Pb	20 03 59.0	-0.4
	baz=46						
MNAS				⇑iS	Sb	20 04 28.7	+1.2
	baz=46						
EKS2	Erkin-Say	2.35	8	⇓P	Pb	20 04 01.5	+0.1
	30nm,0.2s,SNR=77						
EKS2				⇓S	Sb	20 04 32.4	+1.5
	98nm,0.3s						
EKS2	Erkin-Say	2.35	8	⇓iPN	Pn	20 03 59.8	+1.8
EKS2				i S	Sb	20 04 30.3	-0.6
EKS2	Erkin-Say	2.35	8	⇓iP	Pb	20 04 02.0	+0.6
	baz=10.0						
EKS2				⇓iS	Sb	20 04 32.6	+1.7
	baz=10.0						
MRKS	Merke	2.41	359	eP	Pg	20 04 04.2	-0.2
	115nm,0.5s						
MRKS				eS	Sb	20 04 33.9	+1.4
	647nm,0.4s						
MRKS	Merke	2.41	359	Pg	Pg	20 04 04.2	-0.2
	115nm,0.5s						
MRKS				Lg	Lg	20 04 33.9	
	647nm,0.4s						
AAK	Ala-Archa	2.46	21	Pn	Pb	20 04 03.2	-0.2
	20nm,0.3s,baz=191,slow=7.9,SNR=124						
AAK				Pg	Pg	20 04 06.0	+0.5
	25nm,0.3s,baz=189,slow=7.2,SNR=94						
AAK				Lg	Lg	20 04 37.4	
	75nm,0.3s,baz=10.0,slow=17,SNR=30						
AAK	Ala-Archa	2.46	21	⇓P	Pb	20 04 03.7	+0.3
	77nm,0.3s,SNR=92						
AAK				⇓S	Sb	20 04 35.8	+1.5
	308nm,0.3s						
AAK	Ala-Archa	2.46	21	d iPN	Pb	20 04 03.5	+0.1
AAK	Ala-Archa	2.46	21	Pn	Pb	20 04 03.6	+0.3
	43nm,0.4s						
AAK				⇑Lg	Lg	20 04 37.4	
	202nm,0.5s						
AAK	Ala-Archa	2.46	21	Pn	Pb	20 04 03.4	0.0
AAK	Ala-Archa	2.46	21	⇑iP	Pb	20 04 03.9	+0.5
	baz=22						
AAK				⇑iS	Sb	20 04 35.5	+1.2
	baz=22						
KBK	Karagaybulak	2.62	27	⇓P	Pb	20 04 06.5	+0.4
	60nm,0.4s,SNR=22						
KBK	Karagaybulak	2.62	27	i PN	Pn	20 04 04.1	+2.3
KBK				i S	Sb	20 04 37.5	-1.4
KBK	Karagaybulak	2.62	27	⇓iP	Pb	20 04 06.1	0.0
	baz=29						
KBK				⇓iS	Sb	20 04 39.8	+0.9
	baz=29						
FRU1	Bishkek	2.66	21	PN	Pn	20 04 03.1	+0.8
FRU1	Bishkek	2.66	21		Pn	20 04 03.1	+0.8
FRU1	Bishkek	2.66	21	⇑iP	Pb	20 04 06.8	+0.1
	baz=22						
FRU1				⇑iS	Sb	20 04 40.7	+0.8
	baz=22						
GAR	Garm	2.67	241	i PN	Pn	20 04 03.9	+1.5
GAR				i S	Sn	20 04 37.3	+1.9
GAR	Garm	2.67	241		Pb	20 04 05.3	-1.5
GAR	Garm	2.67	241	⇓iP	Pb	20 04 05.6	-1.2
	baz=40						
GAR				⇓iS	Sb	20 04 38.8	-1.3
	baz=40						
CHRV	Charvak	2.85	298	eP	Pn	20 04 06.0	+1.1
CHRV				eS	Sb	20 04 47.0	+1.6
CHMS	Chumysh	2.87	22	⇑P	Pb	20 04 09.1	-1.1
	23nm,0.3s,SNR=20						
CHMS	Chumysh	2.87	22	⇓iPN	Pn	20 04 07.4	+2.3
CHMS				i S	Sn	20 04 42.9	+2.7
CHMS	Chumysh	2.87	22	⇑iP	Pb	20 04 09.4	-0.8
	baz=23						
CHMS				⇑iS	Sb	20 04 45.4	-0.4
	baz=23						
ULHL	Ulahol	2.92	48	⇑P	Pb	20 04 09.8	-1.3
	5.8nm,0.2s,SNR=15						
ULHL	Ulahol	2.92	48	⇓ePN	Pn	20 04 08.1	+2.2
ULHL				i S	Sb	20 04 45.1	-2.3
ULHL	Ulahol	2.92	48	⇑eP	Pb	20 04 10.4	-0.8
	baz=49						
ULHL				⇑iS	Sb	20 04 47.4	0.0
	baz=49						
DZA	Taraz	2.95	330	eP	Pg	20 04 14.0	-0.8
	135nm,0.4s						
DZA				eS	Sb	20 04 50.5	+2.3
	564nm,0.3s						
DZA	Taraz	2.95	330	Pg	Pg	20 04 14.0	-0.8
	135nm,0.4s						
DZA				Lg	Lg	20 04 50.5	
	564nm,0.3s						
USP	Ospenovka	3.06	17	⇓P	Pb	20 04 11.3	-2.2
	16nm,0.3s,SNR=18						
USP	Ospenovka	3.06	17	i PN	Pn	20 04 09.8	+2.1
USP				i S	Sn	20 04 48.0	+3.1
USP	Ospenovka	3.06	17	⇑iP	Pb	20 04 12.0	-1.5
	baz=18						
USP				⇑iS	Sb	20 04 49.8	-1.5
	baz=18						
TGS	TashGRES	3.07	292	eP	Pg	20 04 17.0	-0.1
TGS				eS	Sg	20 05 00.0	+3.1
TKM2	Tokmak 2	3.10	33	⇑P	Pb	20 04 12.6	-1.7
	15nm,0.4s,SNR=23						
TKM2	Tokmak 2	3.10	33	PN	Pb	20 04 16.5	+2.3
TKM2	Tokmak 2	3.10	33	⇓Pg	Pb	20 04 16.5	+2.3
	16nm,0.3s						
TKM2				⇑Lg	Lg	20 04 57.7	
	99nm,0.8s						
TKM2	Tokmak 2	3.10	33	⇑eP	Pb	20 04 12.9	-1.3
	baz=34						
TKM2				⇑iS	Sb	20 04 51.5	-1.1
	baz=34						
TAS	Tashkent	3.20	289	eP	Pb	20 04 18.0	+2.2
TAS				eS	Sg	20 05 03.0	+1.9
KST	Kastek	3.35	35	eP	Pg	20 04 24.2	+1.6
	28nm,0.3s						
KST				eS	Sg	20 05 07.7	+1.6
	77nm,0.5s						
KST	Kastek	3.35	35	Pg	Pg	20 04 24.2	+1.6
	28nm,0.3s						
KST				Lg	Lg	20 05 07.7	
	77nm,0.5s						
CHM	Chimkent	3.42	307	eP	Pg	20 04 23.6	-0.2
	77nm,0.4s						
CHM				eS	Sg	20 05 06.6	-1.5
	522nm,0.4s						
DGS	Degeres	3.44	32	eP	Pg	20 04 24.7	+0.6
	46nm,0.7s						
DGS				eS	Sg	20 05 08.6	0.0
	80nm,0.8s						
DGS	Degeres	3.44	32	Pg	Pg	20 04 24.7	+0.6
	46nm,0.7s						
DGS				Lg	Lg	20 05 08.6	
	80nm,0.8s						
KKAR	Karatay Array	3.47	324	PN	Pn	20 04 14.4	+1.1
KKAR	Karatay Array	3.47	324	Pn	Pn	20 04 14.4	+1.1
CHGR	Chuyangaron	3.62	244		Pn	20 04 15.7	+0.2
CHGR	Chuyangaron	3.62	244	⇑eP	Pn	20 04 18.8	+3.3
	baz=43						
CHGR				⇑iS	Sn	20 05 01.7	+2.8
	baz=43						
MTBS	Maitube	3.64	39	eP	Pg	20 04 28.6	+0.6
	12nm,0.3s						
MTBS				eS	Sg	20 05 15.4	+0.3
	69nm,0.6s						
MTBS	Maitube	3.64	39	Pg	Pg	20 04 28.6	+0.6
	12nm,0.3s						
MTBS				Lg	Lg	20 05 15.4	
	69nm,0.6s						
IZV	Izvestkoviy	3.66	41	eP	Pg	20 04 29.3	+0.9
IZV				eS	Sg	20 05 16.6	+0.8
IZV	Izvestkoviy	3.66	41	Pg	Pg	20 04 29.3	+0.9
IZV				Lg	Lg	20 05 16.6	
TNSS	Tian-Shan	3.83	44	eP	Pg	20 04 31.8	+0.1
	14nm,0.3s						
TNSS				eS	Sg	20 05 21.4	0.0
	33nm,0.7s						
TNSS	Tian-Shan	3.83	44	Pg	Pg	20 04 31.8	+0.1
	14nm,0.3s						
TNSS				Lg	Lg	20 05 21.4	
	33nm,0.7s						
KNDC	Almaty	3.97	42	PN	Pb	20 04 25.3	-3.7
KNDC	Almaty	3.97	42	⇑Pn	Pb	20 04 25.3	-3.7
	22nm,0.5s						
KNDC				⇑Lg	Lg	20 05 27.2	
	84nm,0.6s						
MDOK	Medeo	3.97	44	eP	Pg	20 04 34.6	+0.2
	16nm,0.6s						
MDOK				eS	Sg	20 05 25.8	-0.2
	69nm,0.8s						
MDOK	Medeo	3.97	44	PN	Pn	20 04 24.9	+4.5
MDOK	Medeo	3.97	44	Pn	Pn	20 04 24.9	+4.5
	9.7nm,0.4s						
MDOK				Lg	Lg	20 05 27.2	
	57nm,0.6s						
MDOK	Medeo	3.97	44	Pg	Pg	20 04 34.6	+0.2
	16nm,0.6s						
MDOK				Lg	Lg	20 05 25.8	
	69nm,0.8s						
KOTS	Kotyrbulak	4.06	43	eP	Pg	20 04 36.8	+0.7
	27nm,0.4s						
KOTS				eS	Sg	20 05 29.1	+0.5
	94nm,0.6s						
KOTS	Kotyrbulak	4.06	43	Pg	Pg	20 04 36.7	+0.7
	27nm,0.4s						
KOTS				Lg	Lg	20 05 29.1	
	94nm,0.6s						
ANVS	Anan'yevo	4.08	52	⇑eP	Pn	20 04 25.8	+3.9
	baz=52						
ANVS				⇑iS	Sn	20 05 14.4	+4.1
	baz=52						
KUU	Kurty	4.21	31	eP	Pg	20 04 38.0	-0.9
	6.9nm,0.4s						
KUU				eS	Sg	20 05 32.0	-1.4
	56nm,0.4s						
KUU	Kurty	4.21	31	Pg	Pg	20 04 38.0	-0.9
	6.9nm,0.4s						
KUU				Lg	Lg	20 05 32.0	
	56nm,0.4s						
PRZ	Przheval'sk	4.39	59	PN	Pn	20 04 27.7	+1.6
PRZ	Przheval'sk	4.39	59	Pn	Pn	20 04 27.7	+1.6
SATY	Saty	4.69	53	eP	Pg	20 04 47.9	-0.1
	6.6nm,0.4s						
SATY				eS	Sg	20 05 48.0	-0.7
	36nm,0.6s						
SATY	Saty	4.69	53	Pg	Pg	20 04 47.9	-0.1
	6.6nm,0.4s						
SATY				Lg	Lg	20 05 48.0	
	36nm,0.6s						
BTLS	Baital	4.73	6	eP	Pg	20 04 46.5	-2.4
	5.3nm,0.5s						
BTLS				eS	Sg	20 05 46.2	-4.0
	50nm,0.6s						
BTLS	Baital	4.73	6	Pg	Pg	20 04 46.5	-2.4
	5.3nm,0.5s						
BTLS				Lg	Lg	20 05 46.2	
	50nm,0.6s						
KURS	Kuram	4.80	47	eP	Pg	20 04 47.8	-2.5
	7.4nm,0.6s						
KURS				eS	Sg	20 05 48.4	-4.1
	22nm,0.5s						
KURS	Kuram	4.80	47	Pg	Pg	20 04 47.8	-2.5
	7.4nm,0.6s						
KURS				Lg	Lg	20 05 48.4	
	22nm,0.5s						
KPKS	Kokpek	5.08	50	eP	Pg	20 04 54.6	-1.1
	8.8nm,0.5s						
KPKS				eS	Sg	20 05 59.6	-1.9
	41nm,0.6s						
UZB	Uzynbulak	5.11	55	eP	Pg	20 04 55.4	-0.9
	8.6nm,0.3s						
UZB				eS	Sg	20 06 01.8	-0.7
	30nm,0.5s						
UZB	Uzynbulak	5.11	55	Pg	Pg	20 04 55.4	-0.9
	8.6nm,0.3s						
UZB				Lg	Lg	20 06 01.8	
	30nm,0.5s						
BLB	Baldybastay	5.37	44	Pg	Pg	20 04 59.1	-2.0
	8.7nm,0.4s						
BLB				Lg	Lg	20 06 08.0	
	26nm,0.6s						
SHLS	Shalkode	5.40	57	eP	Pg	20 05 05.7	+4.1
	12nm,0.4s						
SHLS				eS	Sg	20 06 18.4	+6.8
	28nm,0.7s						
SHLS	Shalkode	5.40	57	Pg	Pg	20 05 05.7	+4.1
	12nm,0.4s						
SHLS				Lg	Lg	20 06 18.4	
	28nm,0.7s						
PDGK	Podgornoye	5.50	55	PN	Pn	20 04 44.4	+3.1
PDGK				PG	Pg	20 05 02.4	-1.2
PDGK	Podgornoye	5.50	55	⇑Pn	Pn	20 04 44.4	+3.1
	2.3nm,0.6s						
PDGK				⇑Pg	Pg	20 05 02.4	-1.2
	9.9nm,0.8s						
PDGK				⇓Lg	Lg	20 06 13.0	
	29nm,1.0s						
PKMR	Pachkamar	5.65	254	eS	Sg	20 06 16.0	-3.6
KTMS	Ketmen	6.11	57	eP	Pg	20 05 15.1	-0.1
	2.7nm,0.6s						
KTMS				eS	Sg	20 06 35.5	+1.2
	13nm,0.6s						
KTMS	Ketmen	6.11	57	Pg	Pg	20 05 15.1	-0.1
	2.7nm,0.6s						
KTMS				Lg	Lg	20 06 35.5	
	13nm,0.6s						
DJR	Jarkent	6.24	48	eP	Pg	20 05 15.6	-2.3
	2.7nm,0.8s						
DJR				eS	Sg	20 06 35.7	-3.0
	12nm,1.1s						
DJR	Jarkent	6.24	48	Pg	Pg	20 05 15.6	-2.3
	2.7nm,0.8s						
DJR				Lg	Lg	20 06 35.7	
	12nm,1.1s						
KAPS	Kapalarasan	6.65	40	eP	Pg	20 05 23.8	-1.9
	1.7nm,0.6s						
KAPS				eS	Sg	20 06 49.7	-2.0
	9.8nm,0.7s						
KAPS	Kapalarasan	6.65	40	Pg	Pg	20 05 23.8	-1.9
	1.7nm,0.6s						
KAPS				Lg	Lg	20 06 49.7	
	9.8nm,0.7s						
NIL	Nilore	6.68	180	PN	Pn	20 04 58.5	+1.1
NIL	Nilore	6.68	180	Pn	Pn	20 04 58.5	+1.1
KBL	Kabul	6.71	212	PN	Pn	20 05 00.1	+2.1
KBL	Kabul	6.71	212	Pn	Pn	20 05 00.1	+2.1
MAKZ	Makanchi	9.02	41	P	Pn	20 05 32.7	+3.2
MAKZ	Makanchi	9.02	41	⇑Pg	Pg	20 06 07.7	
	2.6nm,1.1s						
MAKZ				⇑Lg	Lg	20 08 10.0	
	3.3nm,0.8s						
MAKZ	Makanchi	9.02	41	Pn	Pn	20 05 32.7	+3.2
MK31	Makanchi Array	9.17	42	⇑eP	Pn	20 05 35.1	+3.5
MK31	Makanchi Array	9.17	42	⇓Pg	Pg	20 06 06.9	
	2.6nm,0.8s,baz=228,slow=12,SNR=4.4						
MK31				⇓Lg	Lg	20 08 13.4	
	6.4nm,0.9s,baz=236,slow=28						
MK31	Makanchi Array	9.17	42	Pn	Pn	20 05 33.9	+2.4
MKAR	Makanchi Array	9.17	42	Pn	Pn	20 05 34.1	+2.5
	0.0nm,0.3s,baz=226,slow=13,SNR=1.0						
MKAR				Pg	Pg	20 06 01.6	
	0.3nm,0.3s,baz=225,slow=14,SNR=5.6						
MKAR				Lg	Lg	20 08 08.6	
	0.2nm,0.3s,baz=242,slow=27,SNR=3.6						
MKAR	Makanchi Array	9.17	42	P	Pn	20 05 32.7	+1.1
MKAR	Makanchi Array	9.17	42	Pn	Pn	20 05 32.7	+1.1
KURBB	Kurchatov Arra	10.91	18	Pn	Pn	20 05 55.5	+0.1
	0.1nm,0.3s,baz=208,slow=13,SNR=3.4						
KURBB				Lg	Lg	20 09 03.9	
	0.1nm,0.3s,baz=220,slow=24,SNR=4.7						

KURK	Kurchatov	11.02	18	P	Pn	20 05 55.5	-1.4
KURK	Kurchatov	11.02	18		Pn	20 05 55.5	-1.4
WMQ	Urumqi	11.24	67	*e*P	Pn	20 06 07.9	+7.9
BVAR	Borovoye Array	12.85	352	Pn	Pn	20 06 20.9	-0.9
	0.2nm,0.3s,baz=167,slow=23,SNR=1.9						
BVAR				Lg	Lg	20 09 59.9	
	0.3nm,0.3s,baz=188,slow=33,SNR=3.8						
BRVK	Borovoye	12.89	352	⇑*e*P	Pn	20 06 25.2	+2.8
BRVK	Borovoye	12.89	352		Pn	20 06 22.0	-0.4
ABKAR	Akbulak array	13.01	318	Pn	Pn	20 06 22.4	-1.6
ABKAR	Akbulak array	13.01	318	Pn	Pn	20 06 22.0	-2.0
DGZ	Jazzator, Alta	13.67	42	⇑*e*P	Pn	20 06 37.2	+4.0
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.4s						
PYUN	Piuthan	14.59	144	*e*P	Pn	20 06 43.3	-2.6
	comp=Z,30nm,0.4s						
AKTO	Aktyubinsk	14.71	318	Pn	Pn	20 06 45.7	-1.6
	comp=Z,0.2nm,0.3s,baz=130,slow=17,SNR=3.7						
DANN	Dangsing	14.73	141	*e*P	Pn	20 06 45.0	-3.0
	comp=Z,10nm,0.3s						
KOLN	Koldanda	15.15	143	*e*P	Pn	20 06 50.9	-2.6
	comp=Z,6.7nm,0.3s						
GKN	Gorkha	15.45	139	*e*P	Pn	20 06 54.8	-2.6
	comp=Z,9.7nm,0.3s						
ZALV	Zalesovo Beam	15.68	26	Pn	Pn	20 07 00.6	+0.6
	comp=Z,0.1nm,0.3s,baz=237,slow=19,SNR=1.5						
ZALV	Zalesovo Beam	15.68	26	*e*P	P	20 07 06.0	+1.7
KKN	Kakani	15.95	138	*e*P	Pn	20 07 01.6	-2.4
	comp=Z,7.8nm,0.5s						
PKIN	Phulchoki	16.18	138	*e*P	Pn	20 07 03.5	-3.6
	comp=Z,6.6nm,0.5s						
JIRN	Jiri	16.53	136	*e*P	Pn	20 07 09.6	-2.0
	comp=Z,13nm,0.4s						
RAMN	Ramite	17.31	136	*e*P	Pn	20 07 18.7	-2.7
	comp=Z,9.0nm,0.4s						
TAPN	Taplejung	17.60	133	*e*P	Pn	20 07 22.4	-2.6
ODAN	Odare	17.81	135	*e*P	Pn	20 07 24.1	-3.4
	comp=Z,8.3nm,0.5s						
ARU	Arti	18.78	334	P	P	20 07 37.9	-0.7
	comp=Z,0.0nm,0.3s,baz=170,slow=9.6,SNR=4.5						
ARU	Arti	18.78	334	⇑*e*P	P	20 07 39.0	+0.4
ARU				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ARU	Arti	18.78	334	IAmb	IAmb	20 07 49.8	
	comp=Z,4.0nm,0.9s						
AKT	Akhty	19.35	282	⇓*e*P	P	20 07 44.1	-1.0
BELG	Belogornoye	21.31	313	P	P	20 08 04.8	-1.3
	comp=Z,12nm,0.8s,baz=102,slow=20,SNR=8.5						
BELG	Belogornoye	21.31	313	⇑*e*P	P	20 08 06.0	-0.1
BELG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GNI	Garni	21.77	279	P	P	20 08 10.9	-0.5
	comp=Z,1.4nm,0.5s,baz=60,slow=20,SNR=1.4						
GNI	Garni	21.77	279	P	P	20 08 10.9	-0.5
GNI				pmax	pmax		
	comp=Z,12nm,1.0s						
ONI	Oni	22.43	286	P	P	20 08 17.2	-1.2
ONI				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ONI	Oni	22.43	286		P	20 08 17.2	-1.2
ONI				IAmb	IAmb	20 08 30.4	
	comp=Z,8.8nm,1.0s						
KVAR	Kislovodsk Arr	22.92	289	P	P	20 08 21.1	-2.4
	comp=Z,10nm,1.1s,baz=17,slow=11,SNR=1.8						
SONM	Songino Array	24.78	61	P	P	20 08 41.8	+0.3
	comp=Z,0.6nm,0.9s,baz=290,slow=9.3,SNR=3.9						
SONM	Songino Array	24.78	61	*e*P	P	20 08 44.1	+2.6
SONM	Songino Array	24.78	61	IAmb	IAmb	20 09 24.6	
	comp=Z,4.5nm,1.9s						
OBN	Obninsk	28.40	314	LR	LR	20 21 07.0	
	comp=Z,20nm,19.1s,baz=216,slow=38						
HHC	Hu-ho-hao-te	28.90	76	*e*P	P	20 09 22.6	+4.0
HHC				pmax	pmax		
	comp=Z,17nm,1.1s						
HHC				pmax	pmax		
	comp=Z,290nm,5.6s						
FINES	FINESS Array B	35.43	323	P	P	20 10 15.0	-0.4
	comp=Z,2.3nm,0.9s,baz=114,slow=20,SNR=1.3						
ARCES	ARCESS Array B	38.36	335	P	P	20 10 40.0	-0.3
	comp=Z,0.9nm,0.5s,baz=90,slow=3.6,SNR=7.2						
ARCES	ARCESS Array B	38.36	335	P	P	20 10 39.1	-1.2
ARCES				pmax	pmax		
	comp=Z,62nm,1.9s						
ARCES	ARCESS Array B	38.36	335	P	P	20 10 39.1	-1.2
NOA	NORSAR Array B	42.49	320	P	P	20 11 13.4	-1.2
	comp=Z,1.1nm,1.0s,baz=88,slow=8.2,SNR=1.8						
JCJ	Chichijima	57.47	80	LR	LR	20 39 15.9	
	comp=Z,18nm,20.1s,baz=103,slow=38						
TORD	Torodi Ar. Bea	67.63	268	P	P	20 14 15.6	-1.3
	comp=Z,0.4nm,1.0s,baz=29,slow=5.2,SNR=2.0						
WRA	Warramunga Arr	82.55	124	P	P	20 15 42.0	-0.8
	comp=Z,0.4nm,0.8s,baz=310,slow=6.3,SNR=5.7						
WRA	Warramunga Arr	82.55	124	*e*P	P	20 15 41.6	-1.2
WRA	Warramunga Arr	82.55	124	IAmb	IAmb	20 15 49.3	
	comp=Z,0.2nm,0.6s						
WRAB	Tennant Creek	82.55	124	⇓*e*P	P	20 15 41.3	-1.5
WRAB				pmax	pmax		
	comp=Z,15nm,2.7s						
ASAR	Alice Springs	85.02	127	P	P	20 15 54.0	-1.4
	comp=Z,0.3nm,0.7s,baz=321,slow=4.4,SNR=4.6						

*SOME **17** 20:06:59.4, 40.°42N×73.°15E, h5^{km}*
*KRNET **17** 20:06:59.2±0.1, 40.°36N×73.°22E, h19^{km}, mb3.1*
*NNC **17** 20:07:03.7±2.5, 40.°56N×73.°32E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=18.9km s-min=16.5km az=150.0*
ISC 17 20:06:58.9±0.9**, 40.°38N**±0.°03×**73.°21E**±0.°03**, h17**^{km}±9^{km}**, n30,** σ1.^{s}**93**/52**, 23C-11D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	Osh	0.35	295	⇑*i*P	Pg	20 07 06.8	+0.4
	baz=96						
OHH				⇑*i*S	Sg	20 07 11.9	+0.5
	baz=96						
SFK	Sufi-Kurgan	0.43	148	⇑*e*P	Pg	20 07 07.5	-0.2
	baz=48						
SFK				⇑*e*S	Sg	20 07 13.7	+0.1
	baz=48						
SALK	Salom-Alik	0.69	43	⇑*e*P	Pb	20 07 12.6	+0.1
	baz=41						
SALK				⇑*e*S	Sg	20 07 22.1	+0.5
	baz=41						
DRK	Karamyk	1.40	231	⇑*i*P	Pn	20 07 24.5	+0.5
	baz=32						
DRK				⇑*i*S	Sg	20 07 44.0	-0.3
	baz=32						
AML	Almayashu	1.79	12	⇑*i*P	Pb	20 07 32.1	+0.6
	baz=11						
AML				⇑*i*S	Sg	20 07 56.3	-0.4
	baz=11						
BTK	Batken	1.86	261	⇑*i*P	Pb	20 07 33.4	+1.0
	baz=61						
BTK				⇑*i*S	Sg	20 07 57.8	-0.9
	baz=61						
TRKS	Terek-Say	1.94	307	⇑*i*P	Pb	20 07 34.1	+0.1
	baz=6.0						
TRKS				⇑*i*S	Sb	20 07 59.0	+1.0
	baz=6.0						
UCH	Uchtor	2.10	28	⇑*i*P	Pb	20 07 36.0	-0.7
	baz=27						
UCH				⇑*i*S	Sb	20 08 03.6	+1.0
	baz=27						
MNAS	Manas	2.17	346	⇓*i*P	Pb	20 07 37.9	0.0
	baz=46						
MNAS				⇓*i*S	Sb	20 08 06.5	+1.9
	baz=46						
EKS2	Erkin-Say	2.32	10	⇓*e*P	Pb	20 07 39.5	-0.9
	baz=10.0						
EKS2				⇓*i*S	Sb	20 08 09.7	+0.8
	baz=10.0						
MRKS	Merke	2.37	0	*e*P	Pb	20 07 42.4	+1.3
	16nm,0.3s						
MRKS				*e*S	Sg	20 08 13.7	-1.3
	75nm,0.4s						
MRKS	Merke	2.37	0	Pg	Pb	20 07 42.4	+1.3
	16nm,0.3s						
MRKS				Lg	Lg	20 08 13.7	
	75nm,0.4s						
AAK	Ala-Archa	2.46	23	⇓Pn	Pb	20 07 44.0	+1.3
	7.5nm,0.5s						
AAK				⇑Lg	Lg	20 08 15.2	
	44nm,0.8s						
AAK	Ala-Archa	2.46	23	⇑*i*P	Pb	20 07 41.0	-1.7
	baz=22						
AAK				⇑*e*S	Sb	20 08 12.7	-0.1
	baz=22						
GAR	Garm	2.62	239	⇑*i*P	Pb	20 07 43.2	-2.2
	baz=40						
GAR				⇑*i*S	Sb	20 08 16.0	-1.4
	baz=40						
KBK	Karagaybulak	2.63	29	⇑*i*P	Pb	20 07 43.4	-2.2
	baz=29						
KBK				⇑*i*S	Sb	20 08 16.3	-1.3
	baz=29						
FRU1	Bishkek	2.66	23	⇓*e*P	Pb	20 07 44.1	-1.9
	baz=22						
FRU1				⇓*i*S	Sb	20 08 17.5	-0.9
	baz=22						
USP	Ospenovka	3.05	18	⇓*i*P	Pn	20 07 49.4	+3.1
	baz=18						
USP				⇓*i*S	Sb	20 08 26.5	-3.1
	baz=18						
TKM2	Tokmak 2	3.11	34	⇓Pg	Pb	20 07 55.0	+1.1
	5.6nm,0.9s						
TKM2				⇓Lg	Lg	20 08 36.7	
	11nm,0.7s						
KST	Kastek	3.37	37	*e*P	Pg	20 08 01.7	-1.8
	3.2nm,0.2s						
KST				*e*S	Sg	20 08 46.8	-0.4
	11nm,0.6s						
KST	Kastek	3.37	37	Pg	Pg	20 08 01.7	-1.8
	3.2nm,0.2s						
KST				Lg	Lg	20 08 46.8	
	11nm,0.6s						
DGS	Degeres	3.45	33	*e*P	Pb	20 08 01.6	+2.1
	2.9nm,0.3s						
DGS				*e*S	Sg	20 08 46.0	-3.5
	11nm,0.6s						
MTBS	Maitube	3.66	40	*e*P	Pg	20 08 07.1	-1.9
	2.2nm,0.3s						
MTBS				*e*S	Sg	20 08 55.8	-0.6
	8.3nm,0.3s						
MTBS	Maitube	3.66	40	Pg	Pg	20 08 07.1	-1.9
	2.2nm,0.3s						
MTBS				Lg	Lg	20 08 55.8	
	8.3nm,0.3s						
TNSS	Tian-Shan	3.86	45	*e*P	Pb	20 08 10.0	+3.2
	3.0nm,0.4s						
TNSS				*e*S	Sg	20 09 00.5	-2.4
	4.7nm,0.8s						
TNSS	Tian-Shan	3.86	45	Pg	Pb	20 08 10.0	+3.2
	3.0nm,0.4s						
TNSS				Lg	Lg	20 09 00.5	
	4.7nm,0.8s						
MDOK	Medeo	4.00	45	*e*P	Pb	20 08 12.4	+3.4
	2.0nm,0.4s						
MDOK				*e*S	Sg	20 09 05.0	-2.3
	13nm,0.7s						
MDOK	Medeo	4.00	45	Pg	Pb	20 08 12.4	+3.4
	2.0nm,0.4s						
MDOK				Lg	Lg	20 09 05.0	
	13nm,0.7s						
KUU	Kurty	4.22	32	*e*P	Pb	20 08 16.2	+3.6
	1.7nm,0.4s						
KUU				*e*S	Sg	20 09 11.4	-2.8
	8.5nm,0.5s						
KUU	Kurty	4.22	32	Pg	Pb	20 08 16.2	+3.6
	1.7nm,0.4s						
KUU				Lg	Lg	20 09 11.4	
	8.5nm,0.5s						

*IDC **17** 20:22:57.0±2.5, 9.°96S×161.°10E, h107^{km}±17^{km}, mb3.1/4, mb1 3.4/5, mb1mx3.2/30, mbtmp3.6/5, Error ellipse: s-maj=32.8km s-min=27.1km az=96.0*
ISC 17 20:22:53.5±1.2**, 10.°2S**±0.°2×**161.°3E**±0.°2**, h85**^{km}**, n6,** σ**0.^{s}58**/7**, mb3.2**/4**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	1.54	297	P	Pn	20 23 19.9	+0.4
	10nm,0.3s,baz=155,slow=14,SNR=2.3						
HNR				S	Sn	20 23 38.7	-0.5
	74nm,0.3s,baz=168,slow=19,SNR=11						
DZM	Mont Dzumac	12.83	158	P	P	20 26 00.1	-0.3
	0.3nm,0.3s,baz=319,slow=20,SNR=2.0						
WRA	Warramunga Arr	27.79	246	P	P	20 28 35.2	+0.5
	0.5nm,0.5s,baz=77,slow=8.9,SNR=5.9						
ASAR	Alice Springs	29.41	239	P	P	20 28 49.4	+0.2
	0.2nm,0.3s,baz=64,slow=10.0,SNR=9.2						
SONM	Songino Array	75.42	325	P	P	20 34 27.7	-0.6
	0.2nm,0.7s,baz=123,slow=4.6,SNR=1.5						
ILAR	Eielson Array	84.09	20	P	P	20 35 15.0	+0.4
	0.3nm,1.0s,baz=228,slow=3.5,SNR=1.0						

*NEIC **17** 20:29:16.8±1.6, 11.°64S±0.°10×166.°7E±0.°2, h229^{km}±9^{km}, mb4.6/16, Error ellipse: s-maj=27.9km s-min=14.1km az=84.0*
*IDC **17** 20:29:20.8±4.2, 11.°72S×166.°64E, h275^{km}±40^{km}, mb3.4/11, mb1 3.6/12, mb1mx3.4/47, mbtmp4.1/12, Error ellipse: s-maj=23.1km s-min=17.6km az=51.0*
ISC 17 20:29:17.1±0.8**, 11.°64S**±0.°08×**166.°9E**±0.°2**, h242**^{km}**, n79,** σ**2.^{s}10**/76**, mb3.9**/16**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	3.79	176		Pn	20 30 16.7	-1.4
SANVU				Sn	S	20 31 01.8	-4.7
LIFNC	LIFOU	9.09	178	Pn	Pn	20 31 23.0	-1.2
MARNC	Mare, Loyalty	9.84	174	Pn	Pn	20 31 33.3	-0.4
YATNC	Mamie plateau,	10.36	180	P	Pn	20 31 42.5	+2.2
DZM	Mont Dzumac	10.38	182	P	Pn	20 31 43.4	+2.7
	5.1nm,0.3s,baz=72,slow=6.4,SNR=38						
DZM				S	S	20 33 38.1	+0.9
	0.2nm,0.3s,baz=325,slow=19,SNR=1.7						
DZM	Mont Dzumac	10.38	182		Pn	20 31 43.9	+3.2
DZM	Mont Dzumac	10.38	182	P	Pn	20 31 44.6	+4.0
NOUC	Port Laguerre	10.42	183	P	Pn	20 31 45.6	+4.6
ONTNC	Ouen Toro	10.62	182	P	Pn	20 31 48.0	+4.5
OUENC	Ouen Island, N	10.72	180	Pn	Pn	20 31 46.2	+1.4
OUENC	Ouen Island, N	10.72	180	P	Pn	20 31 49.3	+4.5
PINNC	Pines Island,	10.92	177	Pn	Pn	20 31 48.5	+1.2
KARZ	Kaharoa	27.56	164	P	P	20 34 49.3	+7.5
MXZ	Matakaoa Point	27.76	160	P	P	20 34 43.4	-0.1
MXZ	Matakaoa Point	27.76	160	P	P	20 34 43.9	+0.4
HAZ	Te Kaha	27.77	161	P	P	20 34 42.8	-0.8
RUGZ	Raukumara Rang	27.93	162	P	P	20 34 46.6	+1.4
PKGZ	Pakihiroa	27.98	161	P	P	20 34 45.0	-0.6
URZ	Urewera	28.03	163	P	P	20 34 47.3	+1.4
	4.4nm,0.3s,baz=307,slow=20,SNR=10.0						
URZ	Urewera	28.03	163	P	P	20 34 47.5	+1.6
URZ	Urewera	28.03	163	IAmb	IAmb	20 34 53.5	
	comp=Z,89nm,2.0s						
PRRZ	Plateau Road	28.05	164	P	P	20 34 53.8	+7.6
MUGZ	Murupara	28.14	163	P	P	20 34 49.2	+2.3
MWZ	Matawai	28.22	162	P	P	20 34 45.4	-2.3
KATZ	Kakaramea	28.32	165	P	P	20 34 51.8	+3.1
RTZ	Ruatahuna	28.32	163	P	P	20 34 50.0	+1.4
TWVZ	Taurewa	28.35	166	P	P	20 34 51.9	+3.0
MRHZ	Matea Rd	28.37	164	P	P	20 34 51.5	+2.5
WTVZ	West Tongariro	28.43	166	P	P	20 34 53.6	+4.0
NGZ	Ngauruhoe	28.49	166	P	P	20 34 54.1	+3.9
OTVZ	Oturere	28.49	166	P	P	20 34 51.9	+1.7
MTHZ	Maungataniwha	28.51	164	P	P	20 34 52.2	+2.1
PKVZ	Pokaka	28.54	166	P	P	20 34 54.9	+4.4
FWVZ	Far West T-bar	28.55	166	P	P	20 34 51.9	+1.0
CNGZ	Carnagh Statio	28.57	161	P	P	20 34 52.0	+1.3
WHVZ	Whangaehu Hut	28.59	166	P	P	20 34 52.7	+1.6
TRVZ	Turoa	28.59	166	P	P	20 34 53.1	+2.0
WNVZ	Wahianoa	28.63	166	P	P	20 34 52.2	+0.8
RAHZ	Arahi	28.63	163	P	P	20 34 53.1	+1.8
RIGZ	Rimuhau	28.64	162	P	P	20 34 52.7	+1.4
BKZ	Black Stump Fm	28.71	164	P	P	20 34 53.1	+1.2
BKZ	Black Stump Fm	28.71	164	P	P	20 34 53.5	+1.5
NMHZ	Naumai	28.73	164	P	P	20 34 54.7	+2.5
MOVZ	Moawhango	28.75	166	P	P	20 34 54.5	+2.2
KNZ	Kokohu	28.90	162	P	P	20 34 52.6	-1.0
KWHZ	Kaweka Forest	28.93	165	P	P	20 34 56.0	+2.0
ARHZ	Aropaoanui	28.93	164	P	P	20 34 54.8	+0.9
MCHZ	McNeill Hill	29.02	164	P	P	20 34 55.0	+0.3
MHGZ	Mahia Peninsul	29.09	162	P	P	20 34 56.6	+1.2
KRHZ	Kereru	29.12	165	P	P	20 34 55.9	+0.3
CKHZ	Cape Kidnapper	29.32	164	P	P	20 34 58.0	+0.7
KAHZ	Kahuranaki	29.40	164	P	P	20 34 57.5	-0.6
KIW	Kapiti Island	29.95	168	P	P	20 35 02.0	-0.8
NNZ	Nelson	30.00	170	P	P	20 35 07.3	+4.1
BFZ	Birch Farm	30.07	166	P	P	20 35 04.1	+0.2
BFZ				IAmb	IAmb	20 35 39.1	
	comp=Z,59nm,1.3s						
MTW	Mount Morrison	30.36	167	P	P	20 35 06.7	+0.3
THZ	Tophouse	30.46	171	P	P	20 35 09.2	+1.8
MSWZ	Moikau Station	30.55	168	P	P	20 35 09.0	+0.9
STKA	Stephens Creek	30.82	225	P	P	20 35 10.6	0.0
	comp=Z,2.5nm,0.7s,baz=55,slow=11,SNR=6.9						
STKA	Stephens Creek	30.82	225	P	P	20 35 10.3	-0.3
LTZ	Lake Taylor	31.37	172	P	P	20 35 15.3	-0.1
LTZ	Lake Taylor	31.37	172	P	P	20 35 16.4	+1.0
LTZ				IAmb	IAmb	20 35 53.7	
	comp=Z,83nm,1.6s						
WR0	Warramunga Arr	32.18	251	P	P	20 35 21.1	-1.6
WR0				IAmb	IAmb	20 36 26.2	
	comp=Z,24nm,1.9s						
WB0	Warramunga Arr	32.28	251	P	P	20 35 22.1	-1.5
WB0				IAmb	IAmb	20 35 22.7	
	comp=Z,4.4nm,0.6s						
MQZ	McQueen's Vall	32.33	172	P	P	20 35 24.6	+1.0
WB2	Warramunga Arr	32.35	251	P	P	20 35 22.7	-1.5
WB2				IAmb	IAmb	20 35 59.0	
	comp=Z,8.8nm,1.4s						
WRA	Warramunga Arr	32.36	251	P	P	20 35 22.4	-1.9
	comp=Z,1.4nm,0.5s,baz=84,slow=9.0,SNR=31						
LBZ	Lake Benmore	32.75	176	P	P	20 35 28.0	+0.7
AS31	Alice Springs	33.56	245	P	P	20 35 32.9	-1.7
ASAR	Alice Springs	33.56	245	P	P	20 35 32.6	-2.0
	comp=Z,1.6nm,0.6s,baz=71,slow=10,SNR=27						
FITZ	Fitzroy Crossi	40.34	256	P	P	20 36 30.8	-0.7
	comp=Z,1.2nm,0.7s,baz=67,slow=8.9,SNR=2.4						
MJAR	Matsushiro Arr	55.03	332	P	P	20 38 22.2	-1.7
	comp=Z,1.2nm,0.9s,baz=199,slow=6.1,SNR=4.2						
MJAR	Matsushiro Arr	55.03	332	IAmb	IAmb	20 39 37.0	
	comp=Z,15nm,1.8s						
VNDA	Vanda	65.92	181	P	P	20 39 35.0	-1.7
	comp=Z,1.1nm,0.8s,baz=354,slow=7.9,SNR=5.9						
QSPA	South Pole Qui	78.37	180	P	P	20 40 51.1	+0.5
	comp=Z,0.8nm,0.2s,baz=76,slow=2.7,SNR=2.1						
QSPA	South Pole Qui	78.37	180	IAmb	IAmb	20 41 45.0	
	comp=Z,7.0nm,1.4s						
SONM	Songino Array	79.82	323	P	P	20 40 59.6	+0.8
	comp=Z,0.3nm,0.7s,baz=142,slow=7.2,SNR=1.6						
ILAR	Eielson Array	83.72	18	P	P	20 41 20.1	+1.7
	comp=Z,0.1nm,0.3s,baz=234,slow=6.2,SNR=6.1						
MKAR	Makanchi Array	94.74	317	P	P	20 42 11.6	+0.5
	comp=Z,0.4nm,0.7s,baz=77,slow=6.0,SNR=2.5						

KRNET 17 20:31:48.5±0.1**, 40.°37N**×**73.°22E, h12**^{km}**, mb2.0, 12C-24D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	Osh	0.36	295	⇓*i*P	Pg	20 31 55.8	0.0
	baz=95						
OHH				⇓*i*S	Sg	20 32 00.9	+0.2
	baz=95						
OHH	Osh	0.36	295	⇓*i*P	Pg	20 31 56.4	+0.6
	baz=89						
OHH				⇓*i*S	Sg	20 32 01.6	+0.9
	baz=89						
SFK	Sufi-Kurgan	0.42	148	⇑*e*P	Pg	20 31 56.6	-0.3
	baz=48						
SFK				⇑*e*S	Sg	20 32 03.1	+0.6
	baz=48						
SFK	Sufi-Kurgan	0.42	148	⇓*e*P	Pb	20 31 57.5	-0.5
	baz=54						
SFK				⇓*e*S	Sb	20 32 03.9	-0.5
	baz=54						
SALK	Salom-Alik	0.69	42	⇑*e*P	Pg	20 32 02.1	+0.2
	baz=42						
SALK				⇑*e*S	Sg	20 32 11.4	+0.5
	baz=42						
SALK	Salom-Alik	0.69	42	⇓*e*P	Pg	20 32 00.9	-1.0
	baz=42						
SALK				⇓*e*S	Sg	20 32 10.2	-0.7
	baz=42						
DRK	Karamyk	1.41	231	⇑*i*P	Pg	20 32 15.3	-0.3
	baz=31						
DRK				⇑*i*S	Sg	20 32 34.4	+0.5
	baz=31						
DRK	Karamyk	1.41	231	⇑*i*P	Pg	20 32 15.9	+0.3
	baz=31						
DRK				⇑*i*S	Sg	20 32 35.4	+1.5
	baz=31						
AML	Almayashu	1.79	11	⇓*e*P	Pb	20 32 21.8	+0.2
	baz=11						
AML				⇓*i*S	Sg	20 32 46.9	+0.6
	baz=11						
AML	Almayashu	1.79	11	⇓*e*P	Pb	20 32 21.8	+0.2
	baz=11						
AML				⇓*i*S	Sg	20 32 46.0	-0.3
	baz=11						
BTK	Batken	1.86	261	⇓*e*P	Pb	20 32 23.3	+0.8
	baz=61						
BTK				⇓*i*S	Sg	20 32 48.4	0.0
	baz=61						
BTK	Batken	1.86	261	⇓*e*P	Pg	20 32 24.1	-0.2
	baz=60						
BTK				⇓*i*S	Sg	20 32 50.0	+1.6
	baz=60						
TRKS	Terek-Say	1.95	307	⇓*i*P	Pb	20 32 24.0	-0.1
	baz=6.0						
TRKS				⇓*i*S	Sb	20 32 49.6	+1.1
	baz=6.0						
TRKS	Terek-Say	1.95	307	⇑*i*P	Pb	20 32 24.1	0.0
	baz=4.0						
TRKS				⇑*i*S	Sg	20 32 50.0	-1.3
	baz=4.0						
UCH	Uchtor	2.10	27	⇓*i*P	Pb	20 32 26.8	0.0
	baz=27						
UCH				⇓*e*S	Sg	20 32 54.9	-1.1
	baz=27						
UCH	Uchtor	2.10	27	⇑*i*P	Pb	20 32 26.0	-0.8
	baz=27						
UCH				⇑*e*S	Sb	20 32 53.0	+0.1
	baz=27						
MNAS	Manas	2.18	346	⇓*e*P	Pb	20 32 28.3	+0.3
	baz=46						
MNAS				⇓*i*S	Sg	20 32 57.4	-1.2
	baz=46						
MNAS	Manas	2.18	346	⇓*i*P	Pb	20 32 28.2	+0.2
	baz=45						
MNAS				⇓*i*S	Sb	20 32 56.2	+1.1
	baz=45						

*KRNET **17** 20:33:43.9±0.1, 40.°36N×73.°24E, h17^{km}, mb3.0*
*ISU **17** 20:33:44, 40.°30N×73.°20E, h5^{km}*
*SOME **17** 20:33:46.8, 40.°53N×73.°30E, h5^{km}*
*NNC **17** 20:33:47.9±1.7, 40.°53N×73.°38E, h0^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=13.7km s-min=8.2km az=175.0*
ISC 17 20:33:42.8±1.2**, 40.°42N**±0.°02×**73.°25E**±0.°02**, h1**^{km}±10^{km}**, n58,** σ1.^{s}**69**/96**, 30C-15D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	Osh	0.37	286	*e*P	Pg	20 33 51.0	+1.1
OHH				*e*S	Sb	20 33 57.0	-1.7
OHH	Osh	0.37	286	⇑*i*P	Pb	20 33 51.5	-0.8
	baz=96						
OHH				⇑*i*S	Sb	20 33 56.7	-2.0
	baz=96						
SFK	Sufi-Kurgan	0.45	155	*e*P	Pg	20 33 51.0	-0.4
SFK				*e*S	Sg	20 33 57.0	-0.2
SFK	Sufi-Kurgan	0.45	155	⇑*e*P	Pg	20 33 51.5	+0.1
	baz=49						
SFK				⇑*e*S	Sg	20 33 57.5	+0.3
	baz=49						
SALK	Salom-Alik	0.63	43	⇑*e*P	Pb	20 33 57.1	+0.3
	baz=40						
SALK				⇑*e*S	Sb	20 34 06.8	+0.6
	baz=40						
FRG	Fergana	1.12	268	*e*P	Pn	20 34 07.0	+1.2
FRG				*e*S	Sn	20 34 22.0	+0.1
DRK	Karamyk	1.46	230	⇑*i*P	Pn	20 34 09.9	-0.7
	baz=32						
DRK				⇑*i*S	Sn	20 34 29.0	-1.6
	baz=32						
AML	Almayashu	1.74	11	⇑*i*P	Pg	20 34 17.1	+0.9
	baz=11						
AML				⇑*i*S	Sg	20 34 41.6	+2.8
	baz=11						
BTK	Batken	1.90	260	*e*P	Pb	20 34 18.0	-0.4
BTK				*e*S	Sg	20 34 44.0	+0.2
BTK	Batken	1.90	260	⇓*i*P	Pb	20 34 17.9	-0.4
	baz=62						
BTK				⇓*i*S	Sb	20 34 42.8	+0.2
	baz=62						

TRKS	Terek-Say	1.95	305	⇓*i*P	Pb	20 34 18.6	-0.6
	baz=6.0						
TRKS				⇓*i*S	Sg	20 34 44.0	-1.3
	baz=6.0						
UCH	Uchtor	2.04	27	⇑*e*P	Pb	20 34 21.3	+0.3
	baz=27						
UCH				⇑*i*S	Sg	20 34 48.5	+0.1
	baz=27						
MNAS	Manas	2.14	345	⇓*e*P	Pg	20 34 22.6	-1.2
	baz=46						
MNAS				⇓*i*S	Sg	20 34 50.8	-0.8
	baz=46						
EKS2	Erkin-Say	2.27	10	⇓*i*P	Pb	20 34 24.6	-0.2
	baz=10.0						
EKS2				⇓*i*S	Sg	20 34 54.1	-1.8
	baz=10.0						
MRKS	Merke	2.32	360	*e*P	Pg	20 34 28.0	+0.7
	6.5nm,0.4s						
MRKS				*e*S	Sg	20 34 58.4	+1.0
	43nm,0.4s						
MRKS	Merke	2.32	360	Pg	Pg	20 34 28.0	+0.7
	13nm,0.3s						
MRKS				Lg	Lg	20 34 58.4	
	43nm,0.4s						
AAK	Ala-Archa	2.40	22	⇓Pn	Pg	20 34 28.7	-0.2
	4.3nm,0.5s						
AAK				Lg	Lg	20 35 01.9	
	14nm,0.5s						
KBK	Karagaybulak	2.57	29	⇑*i*P	Pb	20 34 28.7	-1.2
	baz=29						
KBK				⇑*i*S	Sb	20 35 01.3	-0.8
	baz=29						
FRU1	Bishkek	2.60	23	⇑*i*P	Pb	20 34 29.3	-1.0
	baz=22						
FRU1				⇑*i*S	Sb	20 35 02.3	-0.5
	baz=22						
GAR	Garm	2.67	239	⇑*e*P	Pn	20 34 28.4	+1.3
	baz=40						
GAR				⇑*i*S	Sn	20 35 00.7	+0.4
	baz=40						
CHMS	Chumysh	2.81	23	⇑*i*P	Pb	20 34 31.5	-2.4
	baz=23						
CHMS				⇑*i*S	Sb	20 35 06.7	-2.1
	baz=23						
DZA	Taraz	2.86	330	*e*P	Pg	20 34 38.7	+1.1
	18nm,0.2s						
DZA				*e*S	Sg	20 35 15.9	+1.3
	104nm,0.2s						
DZA	Taraz	2.86	330	Pg	Pg	20 34 38.7	+1.1
	18nm,0.2s						
DZA				Lg	Lg	20 35 15.9	
	104nm,0.2s						
ULHL	Ulahol	2.90	50	⇑*e*P	Pn	20 34 32.6	+2.3
	baz=49						
ULHL				⇑*i*S	Sb	20 35 08.6	-2.9
	baz=49						
USP	Ospenovka	2.99	18	⇑*i*P	Pb	20 34 34.0	-3.0
	baz=18						
USP				⇑*i*S	Sb	20 35 10.6	-3.5
	baz=18						
TKM2	Tokmak 2	3.05	34	⇑Pn	Pb	20 34 36.1	-2.1
	1.6nm,0.3s						
TKM2				⇓Lg	Lg	20 35 18.9	
	8.1nm,0.6s						
TKM2	Tokmak 2	3.05	34	⇑*e*P	Pb	20 34 35.4	-2.7
	baz=34						
TKM2				⇑*i*S	Sb	20 35 12.7	-3.3
	baz=34						
KST	Kastek	3.31	37	*e*P	Pg	20 34 47.4	+1.1
	5.1nm,0.5s						
KST				*e*S	Sg	20 35 31.3	+2.1
	11nm,0.5s						
KST	Kastek	3.31	37	Pg	Pg	20 34 47.4	+1.1
	5.1nm,0.5s						
KST				Lg	Lg	20 35 31.3	
	11nm,0.5s						
CHM	Chimkent	3.34	306	*e*P	Pg	20 34 47.7	+0.9
	27nm,0.2s						
CHM				*e*S	Sg	20 35 31.4	+1.3
	148nm,0.4s						
DGS	Degeres	3.39	33	*e*P	Pg	20 34 48.0	+0.2
	3.7nm,0.5s						
DGS				*e*S	Sg	20 35 32.2	+0.5
	13nm,0.8s						
DGS	Degeres	3.39	33	Pg	Pg	20 34 48.0	+0.2
	3.7nm,0.5s						
DGS				Lg	Lg	20 35 32.2	
	13nm,0.8s						
MTBS	Maitube	3.60	40	*e*P	Pg	20 34 51.8	-0.1
	2.9nm,0.4s						
MTBS				*e*S	Sg	20 35 38.3	-0.2
	7.9nm,0.5s						
MTBS	Maitube	3.60	40	Pg	Pg	20 34 51.8	-0.1
	2.9nm,0.4s						
MTBS				Lg	Lg	20 35 38.3	
	7.9nm,0.5s						
CHGR	Chuyangaron	3.62	242	⇓*i*P	Pn	20 34 41.6	+1.4
	baz=43						
CHGR				⇓*e*S	Sn	20 35 23.9	+0.2
	baz=43						
TNSS	Tian-Shan	3.81	45	*e*P	Pg	20 34 55.2	-0.5
	2.9nm,0.4s						
TNSS				*e*S	Sg	20 35 44.7	-0.4
	6.9nm,0.5s						
TNSS	Tian-Shan	3.81	45	Pg	Pg	20 34 55.2	-0.5
	2.9nm,0.4s						
TNSS				Lg	Lg	20 35 44.7	
	6.9nm,0.5s						
KNDC	Almaty	3.94	44	⇓Pg	Pb	20 34 53.0	-0.1
	14nm,0.7s						
KNDC				⇑Lg	Lg	20 35 44.8	
	16nm,0.6s						
MDOK	Medeo	3.94	45	*e*P	Pg	20 34 57.0	-1.4
	3.1nm,0.4s						
MDOK				*e*S	Sg	20 35 47.7	-1.8
	8.2nm,0.7s						
MDOK	Medeo	3.94	45	Pg	Pb	20 34 53.6	+0.4
	1.6nm,0.5s						
MDOK				Lg	Lg	20 35 49.2	
	11nm,0.8s						
MDOK	Medeo	3.94	45	Pg	Pg	20 34 57.0	-1.4
	3.1nm,0.4s						
MDOK				Lg	Lg	20 35 47.7	
	8.2nm,0.7s						
KOTS	Kotyrbulak	4.03	44	*e*P	Pg	20 34 59.5	-0.5
	2.6nm,0.4s						
KOTS				*e*S	Sg	20 35 51.9	-0.3
	21nm,0.7s						
KOTS	Kotyrbulak	4.03	44	Pg	Pg	20 34 59.5	-0.5
	2.6nm,0.4s						
KOTS				Lg	Lg	20 35 51.9	
	21nm,0.7s						
ANVS	Anan'yevo	4.07	53	⇑*i*P	Pn	20 34 49.1	+2.7
	baz=52						
ANVS				⇑*i*S	Sn	20 35 36.7	+2.0
	baz=52						
KUU	Kurty	4.16	32	*e*P	Pg	20 35 01.4	-1.1
	1.3nm,0.4s						
KUU				*e*S	Sg	20 35 55.2	-1.2
	8.4nm,0.5s						
KUU	Kurty	4.16	32	Pg	Pg	20 35 01.4	-1.1
	1.3nm,0.4s						
KUU				Lg	Lg	20 35 55.2	
	8.4nm,0.5s						
SATY	Saty	4.67	54	*e*P	Pg	20 35 11.1	-1.2
	1.5nm,0.2s						
SATY				*e*S	Sg	20 36 11.5	-1.3
	9.1nm,0.6s						
SATY	Saty	4.67	54	Pg	Pg	20 35 11.1	-1.2
	1.5nm,0.2s						
SATY				Lg	Lg	20 36 11.5	
	9.1nm,0.6s						
KPKS	Kokpek	5.07	51	*e*P	Pg	20 35 18.7	-1.2
	0.8nm,0.2s						
KPKS				*e*S	Sg	20 36 24.3	-1.2
	12nm,0.5s						
ARXS	Arharly	5.08	40	*e*P	Pg	20 35 18.4	-1.9
	2.4nm,0.4s						
ARXS				*e*S	Sg	20 36 24.6	-1.5
	5.2nm,0.6s						
ARXS	Arharly	5.08	40	Pg	Pg	20 35 18.4	-1.9
	2.4nm,0.4s						
ARXS				Lg	Lg	20 36 24.6	
	5.2nm,0.6s						
UZB	Uzynbulak	5.10	56	*e*P	Pg	20 35 18.6	-2.0
	2.7nm,0.2s						
UZB				*e*S	Sg	20 36 24.9	-1.7
	7.3nm,0.7s						
UZB	Uzynbulak	5.10	56	Pg	Pg	20 35 18.6	-2.0
	2.7nm,0.2s						
UZB				Lg	Lg	20 36 24.9	
	7.3nm,0.7s						
BLB	Baldybastay	5.34	45	Pg	Pg	20 35 22.6	-2.5
	1.3nm,0.1s						
BLB				Lg	Lg	20 36 31.5	
	7.7nm,0.3s						
SHLS	Shalkode	5.39	57	*e*P	Pg	20 35 29.2	+3.2
	3.2nm,0.4s						
SHLS				*e*S	Sg	20 36 42.8	+6.9
	10.0nm,0.8s						
SHLS	Shalkode	5.39	57	Pg	Pg	20 35 29.3	+3.2
	3.2nm,0.4s						
SHLS				Lg	Lg	20 36 42.8	
	10.0nm,0.8s						
PDGK	Podgornoye	5.49	56	Pg	Pg	20 35 25.3	-2.6
PDGK				Lg	Lg	20 36 36.4	
PDGK	Podgornoye	5.49	56	⇓Pg	Pb	20 35 22.7	+3.1
	0.8nm,0.6s						
PDGK				⇓Lg	Lg	20 36 33.4	
	8.1nm,1.1s						

IDC 17 20:35:32.1±4.7**, 4°.12S**×**149°.04E, h0**^{km}**, mb3.0**/2**,**
mb1 3.4/2**, mb1mx3.1**/49**, mbtmp3.1**/2**, Error ellipse:**
s-maj=177.9km s-min=55.2km az=109.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	5.58	199	Sn	Sn	20 37 52.5	-8.7
	0.7nm,0.3s,baz=54,slow=19,SNR=1.7						
WRA	Warramunga Arr	21.27	221	P	P	20 40 18.5	-1.8
	0.3nm,0.7s,baz=46,slow=10,SNR=2.7						
ASAR	Alice Springs	24.31	216	P	P	20 40 52.8	+1.2
	0.5nm,0.8s,baz=58,slow=9.1,SNR=5.4						
TORD	Torodi Ar. Bea	146.53	288	PKPbc	PKPdf	20 55 15.5	+0.4
	0.3nm,0.6s,baz=76,slow=1.8,SNR=2.6						

*NEIC **17** 20:42:18, 61°.68N×147°.57W, h42^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M$_{rr}$-2.35; M$_{\theta\theta}$1.34; M$_{\phi\phi}$1.01; M$_{r\theta}$7.95; M$_{\theta\phi}$3.88; M$_{\phi r}$0.08; Fault plane solution: M$_0$9.08000×10^{14} NP1:φ$_s$264.25000°, δ81.97000°, λ-65.01000°. NP2:φ$_s$10.93000°, δ26.17000°, λ-161.54000°. Principal axes: T 8.9099, Plg32.0000°, Azm334.0000°; N 0.3262, Plg25.0000°, Azm81.0000°; P -9.2361, Plg47.0000°, Azm200.0000°;*

*IDC **17** 20:42:19.9±1.5, 61°.69N×148°.07W, h35^{km}±13^{km}, mb3.6/6, mb1 3.8/8, mb1mx3.4/63, mbtmp3.8/8, ML3.6/2, MS3.1/5, Ms1 3.1/5, ms1mx2.8/47 Error ellipse: s-maj=20.9km s-min=11.5km az=104.0*

*NEIC **17** 20:42:20.4±1.1, 61°.69N±0°.02×147°.57W±0°.04, h36^{km}±7^{km}, Error ellipse: s-maj=3.5km s-min=0.6km az=46.0*

*AEIC **17** 20:42:20±1.1, 61°.70N±0°.02×147°.54W±0°.04, h25^{km}±5^{km}, ML3.7, mb4.3/1(NEIC), ML3.9/175(NEIC), Mwr3.9/95(NEIC), Error ellipse: s-maj=3.3km s-min=2.7km az=189.0*

ISC 17 20:42:19.5±0.9**, 61°.69N**±0°.02×**147°.60W**±0°.02**, h33**^{km}±2^{km}**,**
n246, σ1^{s}.**00**/260**, mb3.9**/6**, MS3.1**/3**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCM	Sheep Creek Mo	0.20	41	P	Pn	20 42 26.2	+0.9
	baz=217						
SCM				S	Sb	20 42 31.5	+0.7
	baz=217						
SCM	Sheep Creek Mo	0.20	41		Pn	20 42 25.8	+0.5
SCM				Sg	Sb	20 42 31.4	+0.7
SML	Sawmill	0.37	289	P	Pb	20 42 28.1	-0.2
	baz=106						
SML				S	Sn	20 42 34.8	+0.3
	baz=106						
SML	Sawmill	0.37	289	Pg	Pb	20 42 27.8	-0.4
SML				Sg	Sn	20 42 34.4	0.0
KNK	Knik Glacier	0.49	237	P	Pn	20 42 30.1	-0.2
	baz=56						
KNK				S	Sn	20 42 38.0	+0.3
	baz=56						
KNK	Knik Glacier	0.49	237		Pn	20 42 29.9	-0.4
KNK				IAML		20 42 39.4	
	comp=E,6μm,0.6s						
KNK	Knik Glacier	0.49	237		Sn	20 42 38.0	+0.3
GHO	Glory Hole Cre	0.64	278		Pn	20 42 32.0	-0.2
GHO				IAML		20 42 42.1	
	comp=N,8μm,0.6s						
GHO	Glory Hole Cre	0.64	278		Sn	20 42 41.3	0.0
PMR	Palmer	0.74	263	P	Pn	20 42 33.3	-0.3
	baz=81						
PMR				S	Sn	20 42 43.4	-0.2
	baz=81						
PMR	Palmer	0.74	263		Pn	20 42 33.2	-0.3
PMR				Sn	Sn	20 42 43.1	-0.5
JPK	Jack Peak	0.80	142		Pn	20 42 33.6	-0.8
M24K	Tolsona, Glenn	0.80	57	P	Pn	20 42 34.2	-0.2
	baz=238						
M24K	Tolsona, Glenn	0.80	57		Pn	20 42 34.0	-0.4
M24K				Sn	Sn	20 42 45.1	0.0
M24K				IAML		20 42 46.6	
	comp=N,4μm,0.8s						
M24K				IAML		20 42 47.4	
	comp=E,4μm,0.8s						
KLU	Klutina	0.82	103	P	Pn	20 42 33.9	-0.9
	baz=286						
KLU				S	Sn	20 42 44.4	-1.4
	baz=286						
KLU	Klutina	0.82	103		Pn	20 42 33.7	-1.1
KLU				Sn	Sn	20 42 44.2	-1.6
KLU				IAML		20 42 45.2	
	comp=N,4μm,0.3s						
GLI	Glacier Island	0.84	163	P	Pn	20 42 34.7	-0.3
	baz=346						
GLI	Glacier Island	0.84	163		Pn	20 42 34.7	-0.3
GLI				Sn	Sn	20 42 46.9	+0.6
GLI				IAML		20 42 48.9	
	comp=N,4μm,0.8s						
GLI				IAML		20 42 50.1	
	comp=E,3μm,0.5s						
VMT	TAPS TI Valdez	0.85	135		Pn	20 42 34.0	-1.0
WAT6	Susitna Watana	0.90	356	P	Pn	20 42 34.9	-1.0
	baz=174						
WAT6				S	Sn	20 42 46.3	-1.6
	baz=174						
WAT6	Susitna Watana	0.90	356		Pn	20 42 34.9	-1.0
WAT6					Sn	20 42 46.3	-1.6
PWL	Port Wells	0.90	204	P	Pn	20 42 36.1	+0.3
	baz=24						
PWL				S	Sn	20 42 48.6	+0.9
	baz=24						
PWL	Port Wells	0.90	204		Pn	20 42 36.1	+0.3
PWL				IAML		20 42 51.6	
	comp=E,3μm,0.7s						
PWL				IAML		20 42 52.3	
	comp=N,3μm,0.5s						
PWL	Port Wells	0.90	204		Sn	20 42 48.6	+0.9
DIV	Divide	1.04	122		Pn	20 42 36.6	-1.2
PS11	TAPS Pump St11	1.08	68		Pn	20 42 38.6	+0.4
FID	Port Fidalgo	1.08	150		Pn	20 42 38.1	-0.2
RC01	Rabbit Creek A	1.19	241	P	Pn	20 42 40.9	+1.0
	baz=59						
RC01	Rabbit Creek A	1.19	241		Pn	20 42 40.8	+1.0
RC01				IAML		20 43 00.1	
	comp=E,3μm,0.3s						
PS12	TAPS Pump St12	1.19	99		Pn	20 42 39.2	-0.6
M22K	Willow	1.20	274	P	Pn	20 42 40.7	+0.8
	baz=91						
M22K	Willow	1.20	274		Pn	20 42 40.7	+0.8
WAT1	Susitna Watana	1.23	339	P	Pn	20 42 40.1	-0.3
	baz=157						
WAT1				S	Sn	20 42 55.5	-0.4
	baz=157						
WAT1	Susitna Watana	1.23	339		Pn	20 42 40.1	-0.3
WAT1					Sn	20 42 55.5	-0.4
WAT7	Susitna Watana	1.29	334		Pn	20 42 41.0	-0.3
WAT7					Sn	20 42 57.3	-0.1
HARP	HAARP	1.35	57	P	Pn	20 42 42.5	+0.5
	baz=239						
HARP	HAARP	1.35	57		Pn	20 42 42.5	+0.5
FIS	Fire Island	1.37	248		Pb	20 42 44.2	-0.3
DHY	Denali Highway	1.40	4	P	Pn	20 42 42.7	-0.1
	baz=183						
DHY				S	Sn	20 43 00.0	-0.1
	baz=183						
DHY	Denali Highway	1.40	4		Pn	20 42 42.7	-0.1
DHY				IAML		20 43 01.1	
	comp=N,1μm,0.6s						
DHY	Denali Highway	1.40	4		Sn	20 43 00.0	-0.1
HIN	Hinchinbrook I	1.40	157		Pn	20 42 43.8	+1.1
HIN				IAML		20 43 05.1	
	comp=N,2μm,0.8s						
HIN				IAML		20 43 08.2	
	comp=E,2μm,0.8s						
N25K	Chitina, Valde	1.43	92	P	Pn	20 42 43.0	-0.3
	baz=275						
N25K	Chitina, Valde	1.43	92		Pn	20 42 42.9	-0.3
CUT	Chulitna	1.45	301	P	Pn	20 42 44.2	+0.9
	baz=118						
CUT				S	Sb	20 43 03.2	-0.8
	baz=118						
CUT	Chulitna	1.45	301		Pn	20 42 44.2	+0.9
CUT	Chulitna	1.45	301		Sb	20 43 03.2	-0.8
EYAK	Cordova Ski Ar	1.45	141	P	Pn	20 42 44.1	+0.7
	baz=324						
EYAK	Cordova Ski Ar	1.45	141	Pn	Pn	20 42 43.9	+0.6
SUA	Susitna One	1.52	263	P	Pn	20 42 45.8	+1.3
	baz=80						
SUA	Susitna One	1.52	263	Pn	Pn	20 42 45.4	+0.9
SUA				IAML		20 43 08.0	
	comp=E,2μm,0.8s						
O22K	Cooper Landing	1.59	221	P	Pn	20 42 46.5	+1.2
	baz=40						
O22K	Cooper Landing	1.59	221		Pn	20 42 45.6	+0.3
BMRM	Bremner River	1.61	115	P	Pn	20 42 45.8	+0.2
	baz=299						
BMRM	Bremner River	1.61	115		Pn	20 42 45.7	+0.1
BMRM				IAML		20 43 08.6	
	comp=E,2μm,0.6s						
BMRM				IAML		20 43 12.8	
	comp=N,2μm,0.7s						
PAX	Paxson	1.63	37	P	Pn	20 42 46.2	+0.4
	baz=218						
PAX	Paxson	1.63	37		Pn	20 42 46.0	+0.2
SLKM	Skilak Lake	1.74	228		Pn	20 42 49.0	+1.6
GOAT	Goat Mountain	1.78	127		Pn	20 42 48.8	+0.9
RND	Reindeer	1.82	342		Pn	20 42 49.3	+0.8
SEW	Seward	1.83	211	P	Pn	20 42 50.1	+1.6
	baz=29						
SEW	Seward	1.83	211	Pn	Pn	20 42 49.6	+1.1
GLB	Gilahina Butte	1.83	96		Pn	20 42 48.8	+0.2
SKT	Skwentna	1.89	281	P	Pn	20 42 51.0	+1.6
	baz=97						
SKT	Skwentna	1.89	281		Pn	20 42 50.7	+1.3
SKT				IAML		20 43 17.5	
	comp=E,977nm,0.5s						
RAGM	Ragged Mountai	1.93	131		Pn	20 42 51.0	+1.1
CAPN	Captain Cook N	1.95	243	P	Pb	20 42 53.2	-1.2
	baz=60						
CAPN	Captain Cook N	1.95	243	Pn	Pb	20 42 53.1	-1.2
STLK	Strandline Lak	2.03	267		Pn	20 42 53.3	+1.9
VRDI	Verde Repeater	2.04	101		Pn	20 42 52.0	+0.4
VRDI				IAML		20 43 22.6	
	comp=N,728nm,0.9s						
HMT	Hamilton	2.12	128		Pn	20 42 53.2	+0.7
MCK	McKinley	2.15	344	P	Pn	20 42 54.4	+1.5
	baz=162						
MCK	McKinley	2.15	344		Pn	20 42 54.2	+1.2
MCK				IAML		20 43 31.4	
	comp=N,906nm,1.2s						
SPCG	Spurr Capps Gl	2.16	261		Pn	20 42 54.9	+1.7
TRF	Thorofare Moun	2.17	326	P	Pn	20 42 54.5	+1.1
	baz=143						
TRF	Thorofare Moun	2.17	326		Pn	20 42 54.3	+1.0
TRF				IAML		20 43 26.9	
	comp=N,724nm,0.6s						
TRF				IAML		20 43 31.9	
	comp=E,907nm,0.9s						
SPU	Mount Spurr	2.20	259		Pn	20 42 55.0	+1.2
MENT	Mentasta	2.20	54		Pn	20 42 54.6	+0.9
MENT				IAML		20 43 34.7	
	comp=N,602nm,0.6s						
MENT				IAML		20 43 36.3	
	comp=E,560nm,0.9s						
MCARA	McCarthy VSAT	2.21	96	P	Pn	20 42 55.6	+1.8
	baz=280						
MCARA	McCarthy VSAT	2.21	96		Pn	20 42 54.8	+0.9
SPCN	Chakachatna No	2.25	260		Pn	20 42 56.2	+1.8
SPCR	Spurr Chakacha	2.27	260	P	Pn	20 42 56.1	+1.5
	baz=75						
SPCR	Spurr Chakacha	2.27	260		Pn	20 42 56.1	+1.5
M26K	Nabesna, AK	2.28	70		Pn	20 42 55.6	+0.8
NICHA	Nichawak Mount	2.29	128		Pn	20 42 55.7	+0.8
BERG	Berg Lake	2.30	123		Pn	20 42 55.8	+0.8
SPBG	Spurr Blockage	2.33	262		Pn	20 42 57.2	+1.7
Q23K	Middleton Isla	2.35	164	Pn	Pn	20 42 57.3	+1.6
Q23K				IAML		20 43 34.5	
	comp=N,889nm,1.6s						
Q23K				IAML		20 43 46.3	
	comp=E,687nm,0.8s						
CRQM	Cirque	2.35	111		Pn	20 42 57.1	+1.3
CRQM				IAML		20 43 33.7	
	comp=E,839nm,0.7s						
MID	Middleton Isla	2.35	164	Pn	Pn	20 42 56.8	+1.1
MID				IAML		20 43 34.5	
	comp=N,774nm,1.4s						
MID				IAML		20 44 04.5	
	comp=E,708nm,1.8s						
KAIM	Kayak Island	2.35	137	P	Pn	20 42 56.0	+0.2
	baz=321						
KAIM	Kayak Island	2.35	137	Pn	Pn	20 42 56.2	+0.4
KAIM				IAML		20 43 51.7	
	comp=N,523nm,1.7s						
KAIM				IAML		20 43 60.0	
	comp=E,436nm,2.5s						
CRQE	Cirque	2.37	111	P	Pn	20 42 57.0	+0.9
	baz=296						
L26K	Log Cabin Wild	2.39	54	P	Pn	20 42 58.3	+1.9
	baz=238						
L26K	Log Cabin Wild	2.39	54		Pn	20 42 56.3	-0.1
L26K				IAML		20 43 41.8	
	comp=N,407nm,0.7s						
RIDG	Independent Ri	2.42	30	P	Pn	20 42 58.7	+2.0
	baz=212						
RIDG	Independent Ri	2.42	30		Pn	20 42 57.5	+0.7
RIDG				IAML		20 43 30.5	
	comp=N,826nm,1.0s						
RIDG				IAML		20 43 31.8	
	comp=E,539nm,1.2s						
KTH	Kantishna Hill	2.42	322		Pn	20 42 58.2	+1.4
KTH				IAML		20 43 37.5	
	comp=N,613nm,1.0s						
KTH				IAML		20 43 38.0	
	comp=E,557nm,0.8s						
KHIT	Khitrov Hills	2.45	119		Pn	20 42 58.1	+0.9
PPLA	Purkeypile	2.47	302	P	Pn	20 42 58.6	+1.2
	baz=117						
PPLA	Purkeypile	2.47	302		Pn	20 42 58.3	+0.9
SPNN	North Nagishla	2.47	265		Pn	20 42 59.1	+1.6
SUCK	Suckling Hills	2.47	129		Pn	20 42 58.4	+1.0
SUCK				IAML		20 43 36.6	
	comp=E,557nm,1.2s						
SUCK				IAML		20 43 37.5	
	comp=N,614nm,0.6s						
TGL	Tana Glacier	2.49	110		Pn	20 42 57.5	-0.2
TGL				IAML		20 43 37.4	
	comp=E,822nm,0.7s						
BRSE	Bradley Lake S	2.49	220	P	Pn	20 42 58.6	+0.9
	baz=37						
BRSE	Bradley Lake S	2.49	220		Pn	20 42 58.6	+0.9
BRLK	Bradley Lake	2.52	221		Pn	20 42 59.1	+1.1
BRLK				IAML		20 43 36.8	
	comp=N,413nm,0.6s						
BRLK				IAML		20 43 41.8	
	comp=E,350nm,0.8s						
PTPK	Patty Peak	2.52	99		Pn	20 42 59.2	+1.1
GRIN	Grindle Hills	2.52	122		Pn	20 42 59.5	+1.5
DOT	Dot Lake	2.56	38		Pn	20 42 58.8	+0.2
BALM	Baldy	2.61	102		Pn	20 42 59.9	+0.5
WAX	Waxell Ridge	2.62	116		Pn	20 43 00.6	+1.1
BWN	Browne	2.64	342		Pn	20 43 00.7	+1.1
KIAG	Kiagna River	2.64	105		Pn	20 43 00.3	+0.4
DFR	Drift River	2.70	248		Pn	20 43 01.6	+1.0
CAST	Castle Rocks	2.71	312	P	Pn	20 43 02.0	+1.3
	baz=127						
CAST	Castle Rocks	2.71	312		Pn	20 43 01.8	+1.1
CAST				IAML		20 43 36.9	
	comp=E,370nm,1.0s						
CAST				IAML		20 43 48.8	
	comp=N,357nm,0.9s						
HDA	Harding Lake	2.75	6	P	Pn	20 43 02.5	+1.3

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          baz=186
HDA   Harding Lake       2.75   6              Pn     20 43 02.3 +1.1
HDA                                  IAML             20 43 41.0
          comp=N,564nm,0.7s
HDA                                  IAML             20 43 47.1
          comp=E,498nm,1.2s
ISLE  Juniper Island     2.77 111              Pn     20 43 03.2 +1.5
ISLE                                 IAML             20 43 45.1
          comp=E,478nm,0.8s
ISLE                                 IAML             20 43 50.8
          comp=N,514nm,1.6s
SNH   Sunshine Point     2.77 121    Pn        Pn     20 43 02.5 +1.0
SNH                                  IAML             20 43 43.8
          comp=N,376nm,2.0s
SNH                                  IAML             20 43 58.5
          comp=E,370nm,1.3s
M27K  Edge Creek, AK     2.78  73    P         Pn     20 43 03.9 +2.1
          baz=259
M27K  Edge Creek, AK     2.78  73              Pn     20 43 02.7 +1.0
RDSO  Redoubt South      2.79 246              Pn     20 43 02.9 +1.0
RSO   Redoubt South      2.79 246              Pn     20 43 02.8 +0.8
WRH   Wood River Hil     2.81 356              Pn     20 43 02.5 +0.5
WRH                                  IAML             20 43 48.6
          comp=E,279nm,0.8s
WRH                                  IAML             20 43 48.6
          comp=N,306nm,0.9s
CNPM  China Poot         2.81 221    Pn        Pn     20 43 03.2 +1.1
CNPM                                 IAML             20 43 47.0
          comp=N,272nm,0.6s
CNPM                                 IAML             20 43 48.8
          comp=E,358nm,0.7s
RDWB  Redoubt West       2.82 247              Pn     20 43 03.2 +1.0
RED   Redoubt Volcan     2.82 245              Pn     20 43 03.0 +0.8
NCT   North Crescent     2.82 249              Pn     20 43 03.7 +1.4
SCRK  Sand Creek         2.83  34    P         Pn     20 43 03.1 +0.7
          baz=217
HOM   Homer              2.85 226    P         Pn     20 43 04.2 +1.8
          baz=43
HOM   Homer              2.85 226    Pn        Pn     20 43 04.3 +1.8
BPAW  Bear Paw Mtn.      2.88 329    P         Pn     20 43 04.1 +1.1
          baz=145
BPAW  Bear Paw Mtn.      2.88 329              Pn     20 43 04.1 +1.1
BPAW                                 IAML             20 43 51.0
          comp=E,344nm,1.0s
PS08  TAPS Pump Stn8     2.89   7              Pn     20 43 04.3 +1.1
BARN  Barnard Glacie     2.93 100              Pn     20 43 04.7 +0.9
BARN                                 IAML             20 43 48.6
          comp=N,257nm,0.8s
BARN                                 IAML             20 43 51.7
          comp=E,277nm,0.8s
BAGL  Bagley Icefiel     2.93 112              Pn     20 43 04.8 +1.1
O20K  Slope Mountain     2.94 239    P         Pn     20 43 05.5 +1.6
          baz=55
O20K  Slope Mountain     2.94 239              Pn     20 43 05.5 +1.6
CCB   Clear Creek Bu     2.97 358              Pn     20 43 04.7 +0.4
GRNC  Granite Creek      2.98 106              Pn     20 43 05.3 +0.7
GRNC                                 IAML             20 43 49.0
          comp=N,362nm,0.7s
NEA2  Nenana             2.99 348    P         Pn     20 43 05.3 +0.7
          baz=166
NEA2  Nenana             2.99 348              Pn     20 43 05.2 +0.6
L27K  Beaver Creek,      3.02  60    P         Pn     20 43 06.2 +1.2
          baz=245
L27K  Beaver Creek,      3.02  60              Pn     20 43 06.3 +1.4
BC03                     3.04  60              Pn     20 43 06.5 +1.3
BCAR  Beaver Creek A     3.04  60              Pn     20 43 05.9 +0.6
L20K  Farewell, AK       3.06 288    P         Pn     20 43 06.2 +0.7
          baz=102
L20K  Farewell, AK       3.06 288              Pn     20 43 06.2 +0.7
CHUM  Lake Minchumin     3.09 318    P         Pn     20 43 07.2 +1.4
          baz=133
CHUM  Lake Minchumin     3.09 318              Pn     20 43 07.2 +1.4
CTG   Chitna Glacier     3.10 101    P         Pn     20 43 07.5 +1.3
          baz=287
CTGM  Chitina Glacie     3.10 101              Pn     20 43 06.7 +0.4
IL31                     3.11   6              Pn     20 43 06.4 +0.2
ILAR  Eielson Array      3.11   6    Pn        Pn     20 43 06.5 +0.3
          comp=N,14nm,0.3s,baz=193,slow=13,SNR=510
ILAR                                 Pg        Pb     20 43 15.5 +1.4
          comp=N,12nm,0.3s,baz=198,slow=15,SNR=22
ILAR                                 Lg        Lg     20 43 45.4
          comp=N,18nm,0.3s,baz=182,slow=24,SNR=4.0
ILAR                                 LR        LR     20 44 25.0
          comp=N,252nm,18.9s,baz=189,slow=40
ILAR  Eielson Array      3.11   6              Pn     20 43 06.8 +0.6
IVE   Iliamna Volcan     3.14 240              Pn     20 43 07.7 +1.0
YAH   Yahtse             3.14 112              Pn     20 43 07.3 +0.5
YAH                                  IAML             20 43 56.9
          comp=E,394nm,1.0s
MESA  MESA               3.14 116    P         Pn     20 43 07.4 +0.6
          baz=302
MESA  MESA               3.14 116              Pn     20 43 07.7 +0.9
ILS   Iliamna Low So     3.19 240              Pn     20 43 08.6 +1.2
COLA  College            3.20 358              Pn     20 43 07.8 +0.5
TCOL  CIGO, UAF Yank     3.20 358    P         Pn     20 43 08.6 +1.2
          baz=177
TCOL  CIGO, UAF Yank     3.20 358              Pn     20 43 08.6 +1.2
ILSW  Iliamna Southw     3.21 240              Pn     20 43 08.9 +1.3
YUK2  White River        3.21  85              Pn     20 43 08.5 +0.8
M19K  Big River Lodg     3.23 277    P         Pn     20 43 09.2 +1.3
          baz=91
M19K  Big River Lodg     3.23 277              Pn     20 43 08.7 +0.8
M19K                                 IAML             20 44 08.2
          comp=N,273nm,1.6s
MDM   Murphy Dome        3.30 355              Pn     20 43 09.4 +0.7
MDM                                  IAML             20 44 02.2
          comp=E,287nm,0.8s
MDM                                  IAML             20 44 04.0
          comp=N,338nm,1.0s
LOGN  Logan Glacier      3.30 102              Pn     20 43 09.4 +0.5
LOGN                                 IAML             20 44 07.3
          comp=N,250nm,1.2s
LOGN                                 IAML             20 44 07.3
          comp=E,192nm,1.1s
RKAV  Rock Avalanche     3.35 112              Pn     20 43 10.6 +1.0
J26L  Joseph Creek       3.37  31    P         Pn     20 43 10.5 +0.7
          baz=214
J26L  Joseph Creek       3.37  31              Pn     20 43 10.5 +0.7
YUK1  Sand Pete Hill     3.38  79              Pn     20 43 11.1 +1.2
TABL  Table Mountain     3.38 109              Pn     20 43 10.6 +0.6
TABL                                 IAML             20 44 09.8
          comp=E,204nm,1.0s
TABL                                 IAML             20 44 13.7
          comp=N,212nm,1.0s
YUK3  Moose Creek        3.40  85    P         Pn     20 43 11.2 +0.9
          baz=272
YUK3  Moose Creek        3.40  85              Pn     20 43 11.2 +0.9
K20K  Telida             3.44 302    P         Pn     20 43 11.3 +0.7
          baz=116
K20K  Telida             3.44 302              Pn     20 43 11.3 +0.7
K20K                                 IAML             20 44 09.1
          comp=E,213nm,0.7s
K20K                                 IAML             20 44 12.2
          comp=N,174nm,0.9s
N19K  Bonanza Creek      3.44 258    P         Pn     20 43 11.8 +1.0
          baz=72
N19K  Bonanza Creek      3.44 258              Pn     20 43 11.5 +0.7
P19K  Oil Pt             3.44 236    Pn        Pn     20 43 11.6 +0.8
P19K                                 IAML             20 44 11.0
          comp=E,289nm,0.7s
P19K                                 IAML             20 44 12.8
          comp=N,304nm,1.1s
POKR  Poker Plat Res     3.45   1    P         Pn     20 43 11.9 +1.2
          baz=181
POKR  Poker Plat Res     3.45   1              Pn     20 43 11.6 +0.8
POKR                                 IAML             20 43 56.8
          comp=N,216nm,0.9s
POKR                                 IAML             20 44 08.1
          comp=E,184nm,1.0s
L19K  White Mountain     3.47 281    P         Pn     20 43 12.1 +1.0
          baz=95
CHX   Chaix Hills        3.56 114              Pn     20 43 14.3 +1.8
I23K  Minto, Yukon-K     3.56 348    P         Pn     20 43 13.4 +1.0
          baz=166
I23K  Minto, Yukon-K     3.56 348              Pn     20 43 13.4 +1.0
I23K                                 IAML             20 44 10.8
          comp=E,186nm,1.1s
I23K                                 IAML             20 44 19.4
          comp=N,216nm,0.8s
MLY   Manley             3.64 339    P         Pn     20 43 14.6 +1.1
          baz=155
MLY   Manley             3.64 339              Pn     20 43 14.2 +0.7
MLY                                  IAML             20 44 01.5
          comp=N,140nm,0.7s
AUQ   Augustine Qik'     3.71 233              Pn     20 43 16.3 +1.9
AUW   Augustine West     3.72 234              Pn     20 43 16.2 +1.8
SVW2  Sparrevohn         3.89 265              Pn     20 43 17.5 +0.7
J20K  Nowinta River      3.90 313    P         Pn     20 43 17.9 +0.9
          baz=126
J20K  Nowinta River      3.90 313              Pn     20 43 17.6 +0.7
J20K                                 IAML             20 44 23.6
          comp=E,213nm,0.9s
J20K                                 IAML             20 44 24.6
          comp=N,176nm,0.7s
PCA   Pinnacle           3.92 111              Pn     20 43 17.9 +0.5
PINM  Pinnacle           3.93 111    P         Pn     20 43 18.3 +0.9
          baz=298
PRP   Porcupine Dome     3.96  13    P         Pn     20 43 18.5 +0.6
          baz=194
PRP   Porcupine Dome     3.96  13              Pn     20 43 18.2 +0.3
PRP                                  IAML             20 44 07.9
          comp=N,223nm,0.7s
I21K  Tanana             4.02 333    P         Pn     20 43 19.7 +1.1
          baz=148
I21K  Tanana             4.02 333              Pn     20 43 19.6 +0.9
I21K                                 IAML             20 44 32.2
          comp=N,147nm,0.9s
I21K                                 IAML             20 44 33.8
          comp=E,173nm,1.0s
Q19K  Cape Douglas,      4.09 230    P         Pn     20 43 20.5 +0.9
          baz=45
Q19K  Cape Douglas,      4.09 230    Pn        Pn     20 43 20.3 +0.7
TT01  Tatalina           4.12 291              Pn     20 43 20.2 +0.2
TTA   Tatalina           4.12 291    P         Pn     20 43 20.3 +0.2
          baz=104
TTA   Tatalina           4.12 291    Pn        Pn     20 43 20.3 +0.2
TTA                                  IAML             20 44 29.4
          comp=N,121nm,0.8s
O18K  Koktuh Hills       4.16 247    P         Pn     20 43 20.7 +0.1
          baz=60
O18K  Koktuh Hills       4.16 247              Pn     20 43 21.0 +0.4
H24K  Noodor Dome        4.17 358    P         Pn     20 43 21.7 +0.9
          baz=178
H24K  Noodor Dome        4.17 358              Pn     20 43 21.7 +0.9
H24K                                 IAML             20 44 33.8
          comp=E,140nm,1.4s
EGAK  Eagle              4.25  40              Pn     20 43 22.2 +0.4
EGAK                                 IAML             20 44 35.5
          comp=E,133nm,1.0s
EGAK                                 IAML             20 44 40.0
          comp=E,175nm,1.0s
P18K  Big Mountain,      4.42 242    P         Pn     20 43 24.1  0.0
          baz=55
P18K  Big Mountain,      4.42 242              Pn     20 43 24.1  0.0
DAWY  Dawson             4.45  54    P         Pn     20 43 25.9 +1.4
          baz=241
DAWY  Dawson             4.45  54              Pn     20 43 25.3 +0.7
H21K  Melozitna Rive     4.61 332    P         Pn     20 43 27.7 +1.0
          baz=147
H21K  Melozitna Rive     4.61 332              Pn     20 43 27.8 +1.0
H21K                                 IAML             20 44 51.7
          comp=E,100nm,1.0s
H21K                                 IAML             20 44 51.9
          comp=N,67nm,1.5s
KDAK  Kodiak Island      4.66 215    Pn        Pn     20 43 27.2 -0.2
          comp=N,6.2nm,0.3s,baz=70,slow=5.7,SNR=86
KDAK                                 Pg        Pb     20 43 36.0 -4.4
          comp=N,3.0nm,0.3s,baz=64,slow=18,SNR=4.0
KDAK                                 Sn        Sn     20 44 18.2 -1.9
          comp=N,2.2nm,0.3s,baz=41,slow=19,SNR=6.0
KDAK                                 Lg        Lg     20 44 43.9
          comp=N,2.3nm,0.3s,baz=35,slow=19,SNR=6.5
KDAK  Kodiak Island      4.66 215              Pn     20 43 27.8 +0.4
KDAK  Kodiak Island      4.66 215    IAML             20 44 50.3
          comp=N,76nm,0.8s
KDAK                                 IAML             20 45 10.3
          comp=N,75nm,2.6s
FYU   Fort Yukon         5.01  11              Pn     20 43 32.8 +0.6
KAKN  Katmai Knife C     5.06 231              Pn     20 43 33.5 +0.5
IM03                     5.10 330              Pn     20 43 34.2 +0.8
IMAR  Indian Mountai     5.10 330    Pn        Pn     20 43 33.9 +0.4
PS05  TAPS Pump Stn5     5.32 347              Pn     20 43 37.8 +1.4
OHAK  Old Harbor         5.33 215    P         Pn     20 43 36.4 -0.3
          baz=31
OHAK  Old Harbor         5.33 215              Pn     20 43 36.4 -0.3
OHAK  Old Harbor         5.33 215    IAML             20 45 15.4
          comp=E,56nm,1.9s
OHAK                                 IAML             20 45 16.7
          comp=N,56nm,2.7s
COLD  Coldfoot           5.68 350    P         Pn     20 43 42.7 +1.4
          baz=167
COLD  Coldfoot           5.68 350    Pn        Pn     20 43 42.3 +0.9
BM03  Burnt Mountain     5.90  11              Pn     20 43 45.1 +0.6
BMAR  Burnt Mountain     5.91  11    Pn        Pn     20 43 44.9 +0.3
TOLK  Toolik Lake Re     7.03 354    Pn        Pn     20 44 00.7 +0.7
INK   Inuvik             8.90  36    Pn        Pn     20 44 26.4 +0.9
          comp=N,0.2nm,0.3s,baz=237,slow=16,SNR=6.4
INK                                  LR        LR     20 48 48.9
          comp=N,52nm,20.2s,baz=109,slow=43
YBH   Yreka Blue Hor    24.95 132    LR        LR     20 56 01.1
          comp=N,40nm,21.3s,baz=273,slow=33
PDAR  Pinedale Array    29.40 112    P         P      20 48 20.7 +1.1
          comp=N,0.1nm,0.3s,baz=353,slow=14,SNR=2.6
NVAR  Mina Array Bea    29.46 129    P         P      20 48 23.0 +2.7
          comp=N,0.9nm,0.3s,baz=300,slow=16,SNR=9.6
NVAR  Mina Array Bea    29.46 129    P         P      20 48 27.0 +6.7
ASAJ  Asahikawa         43.25 279    LR        LR     21 08 25.7
          comp=N,24nm,21.0s,baz=135,slow=36
ARCES ARCESS Array B    48.98   3    LR        LR     21 13 05.8
          comp=N,46nm,18.1s,baz=255,slow=38
SONM  Songino Array     55.88 309    P         P      20 51 54.2 +0.7
          comp=N,0.7nm,0.8s,baz=33,slow=7.5,SNR=4.2
SONM  Songino Array     55.88 309    IAmb      IAmb   20 51 54.7
          comp=Z,4.6nm,1.4s
FINES FINESS Array B    57.10   4    P         P      20 52 00.7 -1.1
          comp=Z,2.8nm,0.9s,baz=341,slow=8.0,SNR=2.9
ZALV  Zalesovo Beam     57.51 326    P         P      20 52 03.4 -1.5
          comp=Z,0.7nm,0.6s,baz=26,slow=11,SNR=3.6
MKAR  Makanchi Array    64.68 324    P         P      20 52 51.5 -2.2
          comp=Z,0.4nm,0.5s,baz=41,slow=6.6,SNR=10.0
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*ATH **17** 20:49:53.9, 38.°88N×20.°60E, h15^{km}±1^{km}, ML3.0/15, Error ellipse: s-maj=1.7km s-min=0.9km az=245.0*

*THE **17** 20:49:53.9, 38.°90N×20.°62E, h13^{km}, ML2.8/10, Error ellipse: s-maj=1.0km s-min=0.4km az=238.0*

*IDC **17** 20:49:59.6±3.4, 38.°92N×21.°43E, h0^{km}, mb3.2/3, mb1 3.5/5, mb1mx3.3/47, mbtmp3.3/5, ML2.9/2, Error ellipse: s-maj=64.7km s-min=25.0km az=71.0*

ISC 17 20:49:54.4±0.8**, 38.°89N**±0.°02×**20.°63E**±0.°02**, h12**^{km}±4^{km}**, n66, σ1.ˢ10**/93**, mb3.4**/3**, Greece**

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Code  Station Name        Δ°  AZ°     Phase ID            Time      Res
                                     Op        ISC     h  m  s    ISC
TSLK  Tsoukalades, L     0.06 160    P         Pg     20 49 56.7 -0.2
TSLK                                 S         Sg     20 49 58.6 -0.2
TSLK  Tsoukalades, L     0.06 160    P         Pg     20 49 56.6 -0.4
TSLK                                 S         Sg     20 49 58.8  0.0
TSLK                                 AML       AML    20 49 59.3
          comp=E,37029µm,0.3s
TSLK                                 AML       AML    20 50 01.7
          comp=N,39052µm,0.4s
LKD2  Lefkada island     0.10 166    P         Pg     20 49 57.0 -0.3
LKD2                                 S         Sg     20 49 59.1 -0.4
LKD2  Lefkada island     0.10 166    P         Pg     20 49 57.0 -0.3
LKD2                                 S         Sg     20 49 59.1 -0.4
LKD2                                 AML       AML    20 50 00.2
          comp=E,22654µm,0.7s
LKD2                                 AML       AML    20 50 03.2
          comp=N,30799µm,0.4s
NYDR  Nydri-Lefkada      0.18 162    P         Pg     20 49 58.2 -0.3
NYDR                                 S         Sg     20 50 01.9 +0.6
NYDR  Nydri-Lefkada      0.18 162    P         Pg     20 49 58.2 -0.3
NYDR                                 S         Sg     20 50 01.5 +0.2
DRAG  Dragano-Lefkad     0.20 192    P         Pg     20 49 58.6 -0.3
DRAG                                 S         Sb     20 50 02.8 +0.8
DRAG  Dragano-Lefkad     0.20 192    P         Pg     20 49 58.7 -0.3
DRAG                                 S         Sg     20 50 02.5 +0.5
EVGI  Lefkada island     0.26 175    P         Pg     20 49 58.9 -1.0
EVGI                                 S         Sg     20 50 04.0 +0.4
EVGI  Lefkada island     0.26 175    P         Pg     20 49 59.7 -0.2
FSK   Fiskardo           0.43 187    P         Pg     20 50 02.5 -0.4
FSK                                  S         Sg     20 50 08.8 +0.2
FSK   Fiskardo           0.43 187    P         Pg     20 50 02.6 -0.4
FSK                                  S         Sg     20 50 08.9 +0.2
FSK                                  AML       AML    20 50 10.3
          comp=E,3685µm,0.4s
FSK                                  AML       AML    20 50 11.4
          comp=N,1712µm,0.2s
KEF4  Livadi, Kephal     0.65 194    P         Pg     20 50 06.1 -0.9
KEF4                                 S         Sb     20 50 17.0 +0.5
KEF4  Livadi, Kephal     0.65 194    P         Pg     20 50 06.3 -0.7
DMLN  Damoulianata-K     0.68 197    P         Pg     20 50 06.4 -1.2
IGT   Igoumenitsa        0.69 341    P         Pg     20 50 06.2 -1.6
IGT                                  S         Sb     20 50 16.9 -0.9
          comp=N,412nm,0.9s
IGT   Igoumenitsa        0.69 341    P         Pg     20 50 06.3 -1.4
VLS   Valsamata          0.71 182    P         Pg     20 50 07.0 -1.2
VLS                                  S         Sb     20 50 18.7 +0.4
          comp=N,850nm,0.5s
VLS   Valsamata          0.71 182    P         Pg     20 50 07.1 -1.1
VLS                                  S         Sg     20 50 17.7 +0.3
VLS                                  AML       AML    20 50 21.7
          comp=E,2040µm,0.5s
VLS                                  AML       AML    20 50 22.9
          comp=N,1312µm,0.3s
KEF3  Kipouria, Keph     0.71 198    P         Pg     20 50 06.8 -1.5
PVO   Paravola           0.75 111    P         Pg     20 50 08.2 -0.8
PVO                                  S         Sb     20 50 19.8 +0.2
PVO   Paravola           0.75 111    P         Pg     20 50 08.2 -0.8
PVO                                  S         Sb     20 50 20.3 +0.7
PVO                                  AML       AML    20 50 21.9
          comp=E,3177µm,0.3s
PVO                                  AML       AML    20 50 24.6
          comp=N,4067µm,0.5s
PSDA  Pessada-Kefalo     0.77 183    P         Pg     20 50 08.1 -1.2
PSDA                                 S         Sb     20 50 20.9 +0.8
PSDA  Pessada-Kefalo     0.77 183    P         Pg     20 50 08.1 -1.2
JAN   Janina             0.79  13    P         Pg     20 50 09.0 -0.8
JAN   Janina             0.79  13    P         Pb     20 50 09.3 -0.8
JAN                                  AML       AML    20 50 23.4
          comp=E,2171µm,0.7s
JAN                                  AML       AML    20 50 25.3
          comp=N,1467µm,0.6s
EVR   Evrytania          0.92  88    P         Pg     20 50 11.0 -1.3
EVR                                  S         Sb     20 50 24.7 +0.1
          comp=N,408nm,0.6s
EVR   Evrytania          0.92  88    P         Pg     20 50 11.3 -0.9
EVR                                  AML       AML    20 50 27.3
          comp=E,590µm,0.6s
EVR                                  AML       AML    20 50 28.8
          comp=N,761µm,0.7s
KEK   Kerkira            1.05 322    P         Pb     20 50 12.7 -1.8
KEK                                  S         Sn     20 50 28.8 -0.6
          comp=N,450nm,0.5s
KEK   Kerkira            1.05 322    P         Pb     20 50 13.2 -1.3
ANX   Ano Chora          1.05 106    P         Pb     20 50 12.8 -1.8
ANX                                  S         Sn     20 50 30.2 +0.5
          comp=N,705nm,0.5s
ANX   Ano Chora          1.05 106    P         Pb     20 50 13.3 -1.3
ANX                                  S         Sg     20 50 28.5  0.0
ANX                                  AML       AML    20 50 33.5
          comp=N,1500µm,0.4s
ANX                                  AML       AML    20 50 37.6
          comp=E,1211µm,0.5s
RLS   Riolos of Patr     1.06 141    P         Pb     20 50 13.3 -1.3
RLS                                  S         Sn     20 50 29.1 -0.5
          comp=E,428nm,0.7s
RLS   Riolos of Patr     1.06 141    P         Pb     20 50 13.3 -1.3
RLS                                  AML       AML    20 50 36.1
          comp=N,996µm,0.7s
RLS                                  AML       AML    20 50 36.2
          comp=E,623µm,0.5s
VTN   Vitineika          1.06 155    P         Pb     20 50 14.3 -0.4
EFP   Efpalio            1.10 114    P         Pb     20 50 14.3 -1.1
EFP                                  S         Sn     20 50 31.5 +0.8
          comp=E,888nm,0.5s
EFP   Efpalio            1.10 114    P         Pb     20 50 14.1 -1.3
EFP                                  AML       AML    20 50 37.8
          comp=N,2074µm,0.5s
EFP                                  AML       AML    20 50 38.4
          comp=E,1252µm,0.5s
MAKR  Makrakomi, Fth     1.18  83    P         Pn     20 50 15.5 -1.2
MAKR                                 S         Sn     20 50 32.4 -0.3
          comp=E,1µm,0.9s
MAKR  Makrakomi, Fth     1.18  83    P         Pn     20 50 16.0 -0.7
MAKR                                 AML       AML    20 50 40.0
          comp=N,565µm,0.9s
MAKR                                 AML       AML    20 50 42.1
          comp=E,791µm,0.5s
LTHK  Lithakia           1.19 172    P         Pn     20 50 15.0 -1.7
LTHK                                 S         Sg     20 50 33.2 +0.6
          comp=E,300nm,0.5s
LTHK  Lithakia           1.19 172    P         Pn     20 50 15.2 -1.6
KPRO  Kipourio           1.21  28    P         Pn     20 50 16.2 -1.0
KPRO  Kipourio           1.21  28    P         Pn     20 50 16.2 -1.0
LAKA  Lakka              1.24 121    P         Pn     20 50 16.3 -1.2
LAKA                                 AML       AML    20 50 40.8
          comp=E,2132µm,0.5s
LAKA                                 AML       AML    20 50 41.1
          comp=N,1573µm,0.7s
TRIZ  Trizonia           1.25 114    P         Pn     20 50 16.6 -1.0
TRIZ  Trizonia           1.25 114    P         Pn     20 50 16.6 -1.0
DRO   Drossia            1.26 137    P         Pn     20 50 16.6 -1.3
DRO   Drossia            1.26 137    P         Pn     20 50 16.5 -1.3
DRO                                  AML       AML    20 50 39.6
          comp=E,1383µm,0.4s
DRO                                  AML       AML    20 50 40.7
          comp=N,1234µm,0.6s
THL   Klokotos Trika     1.27  57    P         Pn     20 50 17.1 -0.8
THL                                  AML       AML    20 50 41.0
          comp=N,912µm,1.0s
THL                                  AML       AML    20 50 41.5
          comp=E,946µm,0.6s
AGG   Agios Georgios     1.33  84    P         Pn     20 50 18.5 -0.4
AGG                                  S         Sn     20 50 36.1 -0.5
          comp=E,485nm,0.6s
AGG   Agios Georgios     1.33  84    P         Pn     20 50 18.5 -0.4
AGG                                  AML       AML    20 50 43.9
          comp=E,1047µm,0.6s
AGG                                  AML       AML    20 50 45.1
          comp=N,828µm,0.8s
KLV   Kalavryta, Ach     1.46 125    P         Pn     20 50 19.6 -1.1
GUR   Goura              1.65 125    P         Pn     20 50 22.9 -0.4
FNA   Florina            1.98  17    P         Pb     20 50 30.1 -0.3
ITM   Ithomi             1.99 149    P         Pb     20 50 30.4 -0.1
SCTE  Santa Cesarea      2.05 306    P         Pn     20 50 28.9 +0.2
XOR   Xorichti           2.05  76    P         Pb     20 50 31.5 -0.1
PYL   PYLOS              2.17 156    P         Pb     20 50 32.1 -1.6
OHR   Ohrid              2.23   3  i Pn        Pg     20 50 38.2 +1.1
VAY   Valandovo          2.85  31  i Pn        Pb     20 50 43.3 -2.0
STIP  Stip               3.05  23  i Pn        Pb     20 50 46.8 -1.8
IDI   Anoyia             4.95 135    Pn        Pn     20 51 10.8 +2.1
          comp=N,0.1nm,0.3s,baz=313,slow=18,SNR=2.5
IDI                                  Sn        Sn     20 52 05.3 -0.4
          comp=N,0.5nm,0.3s,baz=306,slow=17,SNR=1.5
MLR   Muntele Rosu       7.69  29    Pn        Pn     20 51 50.3 +4.0
          comp=N,0.1nm,0.3s,baz=225,slow=14,SNR=4.4
NOA   NORSAR Array B    22.94 348    P         P      20 55 06.1 +7.9
          comp=N,0.2nm,0.5s,baz=146,slow=9.6,SNR=2.4
MKAR  Makanchi Array    44.86  59    P         P      20 58 10.4 +2.0
          comp=N,0.4nm,0.7s,baz=264,slow=9.7,SNR=4.5
ZALV  Zalesovo Beam     45.16  49    P         P      20 58 13.6 +3.0
          comp=N,0.4nm,0.3s,baz=278,slow=9.8,SNR=1.6
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*SOME **17** 20:51:39.6, 40.°60N×77.°68E, h5^{km}*

*NNC **17** 20:51:44.0±1.6, 40.°77N×77.°76E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=11.6km s-min=8.4km az=167.0*

ISC 17 20:51:41.1±2.9**, 40.°6N**±0.°1×**77.°62E**±0.°05**, h10**^{km}**, n32, σ1.ˢ32**/45**, 3C-5D, Kyrgyzstan-Xinjiang border region**

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Code  Station Name        Δ°  AZ°     Phase ID            Time      Res
                                     Op        ISC     h  m  s    ISC
TNSS  Tian-Shan          2.48 349   eP         Pb     20 52 26.3 +0.3
          24nm,0.5s
TNSS                                eS         Sg     20 52 59.8 -1.0
          10nm,0.6s
TNSS  Tian-Shan          2.48 349    Pg        Pb     20 52 26.3 +0.3
          24nm,0.5s
TNSS                                 Lg        Lg     20 52 59.8
          10nm,0.6s
SATY  Saty               2.52  13   eP         Pb     20 52 27.4 +0.9
          3.2nm,0.3s
SATY                                eS         Sg     20 53 01.9 -0.2
          12nm,0.6s
SATY  Saty               2.52  13    Pg        Pb     20 52 27.4 +0.9
          3.2nm,0.3s
SATY                                 Lg        Lg     20 53 01.9
          12nm,0.6s
MDOK  Medeo              2.59 351   eP         Pb     20 52 28.0 +0.3
          17nm,0.7s
MDOK                                eS         Sg     20 53 02.9 -1.4
          22nm,0.9s
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MDOK	Medeo	2.59	351	Pn	Pb	20 52 27.6	-0.1
	12nm,0.5s						
MDOK				Lg	Lg	20 53 03.3	
	18nm,0.7s						
MDOK	Medeo	2.59	351	Pg	Pb	20 52 28.0	+0.3
	17nm,0.7s						
MDOK				Lg	Lg	20 53 02.9	
	22nm,0.9s						
KOTS	Kotyrbulak	2.65	352	*e*P	Pb	20 52 29.3	+0.5
	9.6nm,0.3s						
KOTS				*e*S	Sg	20 53 05.2	-1.1
	28nm,0.3s						
KOTS	Kotyrbulak	2.65	352	Pg	Pb	20 52 29.3	+0.5
	9.6nm,0.3s						
KOTS				Lg	Lg	20 53 05.2	
	28nm,0.3s						
KNDC	Almaty	2.65	350	⇓Pn	Pb	20 52 26.8	-2.0
	12nm,0.6s						
KNDC				⇑Lg	Lg	20 53 03.3	
	22nm,0.5s						
MTBS	Maitube	2.67	341	*e*P	Pb	20 52 29.5	+0.4
	6.4nm,0.4s						
MTBS				*e*S	Sg	20 53 05.4	-1.6
	10nm,0.5s						
MTBS	Maitube	2.67	341	Pg	Pb	20 52 29.5	+0.4
	6.4nm,0.4s						
MTBS				Lg	Lg	20 53 05.4	
	10nm,0.5s						
KST	Kastek	2.73	334	*e*P	Pb	20 52 30.9	+0.8
	7.1nm,0.4s						
KST				*e*S	Sg	20 53 07.5	-1.3
	14nm,0.7s						
KST	Kastek	2.73	334	Pg	Pb	20 52 30.9	+0.8
	7.1nm,0.4s						
KST				Lg	Lg	20 53 07.5	
	14nm,0.7s						
UZB	Uzynbulak	2.75	22	*e*P	Pb	20 52 30.9	+0.5
	4.6nm,0.2s						
UZB				*e*S	Sg	20 53 07.5	-1.8
	11nm,0.6s						
UZB	Uzynbulak	2.75	22	Pg	Pb	20 52 30.9	+0.5
	4.6nm,0.2s						
UZB				Lg	Lg	20 53 07.5	
	11nm,0.6s						
TKM2	Tokmak 2	2.76	327	⇑Pg	Pb	20 52 30.6	0.0
	3.5nm,0.6s						
TKM2				⇑Lg	Lg	20 53 10.0	
	5.2nm,0.7s						
SHLS	Shalkode	2.90	28	*e*P	Pg	20 52 35.1	-1.5
	3.7nm,0.5s						
SHLS				*e*S	Sg	20 53 14.8	+0.7
	16nm,0.7s						
SHLS	Shalkode	2.90	28	Pg	Pg	20 52 35.1	-1.5
	3.7nm,0.5s						
SHLS				Lg	Lg	20 53 14.8	
	16nm,0.7s						
KPKS	Kokpek	2.97	15	*e*P	Pb	20 52 34.7	+0.7
	7.0nm,0.2s						
KPKS				*e*S	Sg	20 53 14.3	-2.0
	12nm,0.5s						
DGS	Degeres	2.97	333	*e*P	Pb	20 52 34.9	+0.7
	4.2nm,0.6s						
DGS				*e*S	Sg	20 53 14.9	-1.6
	5.8nm,0.5s						
DGS	Degeres	2.97	333	Pg	Pb	20 52 34.9	+0.7
	4.2nm,0.6s						
DGS				Lg	Lg	20 53 14.9	
	5.8nm,0.5s						
PDGK	Podgornoye	3.06	27	Pg	Pb	20 52 36.0	+0.4
	1.4nm,0.3s						
PDGK				Lg	Lg	20 53 16.6	
	12nm,0.8s						
PDGK	Podgornoye	3.06	27	⇓Pg	Pb	20 52 35.3	-0.3
	2.6nm,0.7s						
PDGK				⇓Lg	Lg	20 53 15.7	
	25nm,0.7s						
AAK	Ala-Archa	3.10	312	⇓Pn	Pb	20 52 37.4	+1.0
	4.7nm,0.5s						
AAK				⇓Lg	Lg	20 53 21.5	
	5.7nm,0.8s						
KTMS	Ketmen	3.49	35	*e*P	Pb	20 52 42.6	-0.4
	1.9nm,0.3s						
KTMS				*e*S	Sb	20 53 28.2	+2.6
	7.8nm,0.5s						
KTMS	Ketmen	3.49	35	Pg	Pb	20 52 42.6	-0.4
	1.9nm,0.3s						
KTMS				Lg	Lg	20 53 28.2	
	7.8nm,0.5s						
BLB	Baldybastay	3.55	10	Pg	Pb	20 52 44.3	+0.3
	2.3nm,0.2s						
BLB				Lg	Lg	20 53 31.1	
	5.9nm,0.3s						
ARXS	Arharly	3.61	2	*e*P	Pb	20 52 45.4	+0.5
	3.0nm,0.4s						
ARXS				*e*S	Sb	20 53 33.0	+4.1
	6.6nm,0.6s						
ARXS	Arharly	3.61	2	Pg	Pb	20 52 45.4	+0.5
	3.0nm,0.4s						
ARXS				Lg	Lg	20 53 33.0	
	6.6nm,0.6s						
DJR	Jarkent	4.05	23	*e*P	Pb	20 52 54.5	+1.9
	0.8nm,0.1s						
DJR				*e*S	Sg	20 53 48.5	-2.7
	2.5nm,0.5s						
DJR	Jarkent	4.05	23	Pg	Pb	20 52 54.5	+1.9
	0.8nm,0.1s						
DJR				Lg	Lg	20 53 48.5	
	2.5nm,0.5s						

BEO ***17*** *20:52:23.1±2.2, 38.°30N×20.°08E, h49^{km}±4^{km}, ML4.0/15*
PDG ***17*** *20:52:26.5±0.6, 38.°90N×20.°56E, h11^{km}±1^{km}, ML3.5/13,*
Error ellipse: s-maj=0.8km s-min=1.0km az=0.0
THE ***17*** *20:52:26.8, 38.°89N×20.°60E, h16^{km}, ML3.8/9, Error*
ellipse: s-maj=0.8km s-min=0.4km az=273.0
ATH ***17*** *20:52:27.1, 38.°89N×20.°62E, h15^{km}, ML3.9/12, Error*
ellipse: s-maj=1.4km s-min=0.6km az=259.0
IDC ***17*** *20:52:27.7±5.0, 38.°97N×20.°57E, h18^{km}±34^{km}, mb3.6/10,*
mb1 3.7/20, mb1mx3.6/55, mbtmp3.7/20, ML3.6/8, MS3.2/12,
Ms1 3.2/12, ms1mx3.0/46, Error ellipse: s-maj=13.6km
s-min=12.7km az=50.0
NEIC ***17*** *20:52:28.1±2.5, 38.°77N±0.°04×20.°52E±0.°07, h15^{km}±7^{km},*
mb4.2/3, ML3.8(THE), Error ellipse: s-maj=7.9km
s-min=4.9km az=67.0
ISC 17 20:52:27.1±0.7**, 38.°89N**±0.°02×**20.°56E**±0.°02**, h13**^{km}±4^{km}**,**
n247, σ1^{s}61/307**, mb3.9**/13**, MS3.2**/4**, 15C-16D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
TSLK	Tsoukalades, L	0.10	130	P	Pg	20 52 29.7	-0.4
TSLK				S	Sg	20 52 32.0	-0.2
TSLK	Tsoukalades, L	0.10	130	P	Pg	20 52 29.7	-0.4
TSLK				S	Sg	20 52 32.0	-0.2
TSLK				AML	AML	20 52 32.4	
TSLK				AML	AML	20 52 32.5	
LKD2	Lefkada island	0.13	142	P	Pg	20 52 30.2	-0.2
LKD2				S	Sg	20 52 32.0	-0.8
LKD2	Lefkada island	0.13	142	P	Pg	20 52 30.2	-0.2
LKD2				S	Sg	20 52 32.8	0.0
LKD2				AML	AML	20 52 33.4	
LKD2				AML	AML	20 52 36.5	
DRAG	Dragano-Lefkad	0.21	176	P	Pg	20 52 31.7	+0.1
DRAG				S	Sb	20 52 35.7	-0.8
DRAG	Dragano-Lefkad	0.21	176	P	Pg	20 52 31.7	+0.1
DRAG				S	Sb	20 52 35.6	-0.8
NYDR	Nydri-Lefkada	0.21	148	P	Pg	20 52 31.3	-0.3
NYDR				S	Sg	20 52 34.5	-0.2
NYDR	Nydri-Lefkada	0.21	148	P	Pg	20 52 31.3	-0.3
NYDR				S	Sg	20 52 34.9	+0.2
EVGI	Lefkada island	0.28	164	P	Pg	20 52 32.8	-0.1
EVGI				S	Sg	20 52 37.2	+0.4
EVGI	Lefkada island	0.28	164	P	Pg	20 52 32.8	-0.1
EVGI				S	Sg	20 52 37.0	+0.3
FSK	Fiskardo	0.43	179	P	Pg	20 52 35.6	0.0
FSK				S	Sb	20 52 42.1	-0.8
FSK	Fiskardo	0.43	179	P	Pg	20 52 35.5	0.0
FSK				S	Sb	20 52 42.4	-0.5
FSK				AML	AML	20 52 48.7	
	comp=N,22322μm,0.4s						
FSK				AML	AML	20 52 52.3	
	comp=E,49160μm,0.8s						
KEF4	Livadi, Kephal	0.64	189	P	Pg	20 52 38.8	-0.7
KEF4				S	Sb	20 52 49.4	+0.5
KEF4	Livadi, Kephal	0.64	189	P	Pg	20 52 38.9	-0.6
KEF4				S	Sb	20 52 49.2	+0.3
IGT	Igoumenitsa	0.67	345	P	Pg	20 52 39.2	-0.8
IGT				S	Sb	20 52 49.6	-0.1
	comp=E,4μm,0.8s						
IGT	Igoumenitsa	0.67	345	P	Pg	20 52 39.4	-0.6
IGT				S	Sb	20 52 49.8	+0.1
IGT				AML	AML	20 52 57.8	
	comp=N,4758μm,0.3s						
IGT				AML	AML	20 53 03.8	
	comp=E,5545μm,0.7s						
DMLN	Damoulianata-K	0.67	192	P	Pg	20 52 38.9	-1.1
DMLN				S	Sb	20 52 50.4	+0.7
	comp=E,13μm,0.5s						
DMLN	Damoulianata-K	0.67	192	P	Pg	20 52 39.5	-0.5
DMLN				S	Sb	20 52 49.6	-0.1
LXRA	Lixouri, Kepha	0.69	188	P	Pg	20 52 40.4	-0.2
KEF3	Kipouria, Keph	0.70	193	P	Pg	20 52 39.5	-1.3
KEF3				S	Sg	20 52 50.3	+0.3
KEF3	Kipouria, Keph	0.70	193	P	Pg	20 52 40.0	-0.8
KEF3				S	Sb	20 52 50.6	-0.2
VLS	Valsamata	0.71	178	P	Pg	20 52 39.8	-1.1
VLS				S	Sb	20 52 51.3	+0.3
	comp=E,13μm,0.3s						
VLS	Valsamata	0.71	178	P	Pg	20 52 40.1	-0.8
VLS				S	Sb	20 52 50.6	-0.5
VLS				AML	AML	20 52 55.4	
	comp=E,29012μm,0.3s						
VLS				AML	AML	20 52 55.4	
	comp=N,24452μm,0.4s						
PSDA	Pessada-Kefalo	0.78	178	P	Pb	20 52 41.0	-1.4
PSDA				S	Sg	20 52 51.9	-0.3
PSDA	Pessada-Kefalo	0.78	178	P	Pb	20 52 41.2	-1.2
PSDA				S	Sb	20 52 52.8	0.0
JAN	Janina	0.80	17	P	Pb	20 52 41.8	-1.1
JAN				S	Sb	20 52 54.0	+0.4
JAN	Janina	0.80	17	P	Pb	20 52 42.2	-0.7
JAN				S	Sg	20 52 53.0	-0.1
JAN				AML	AML	20 52 56.4	
	comp=E,9845μm,0.5s						
JAN				AML	AML	20 52 57.6	
	comp=N,5808μm,0.8s						
PVO	Paravola	0.81	109	P	Pb	20 52 41.4	-1.6
PVO				S	Sg	20 52 52.9	-0.3
	comp=N,15μm,0.7s						
PVO	Paravola	0.81	109	P	Pb	20 52 41.3	-1.6
PVO				S	Sg	20 52 52.6	-0.7
PVO				AML	AML	20 52 55.7	
	comp=N,22337μm,0.5s						
PVO				AML	AML	20 53 01.3	
	comp=E,21232μm,0.6s						
EVR	Evrytania	0.98	88	P	Pb	20 52 44.0	-1.9
EVR				S	Sb	20 52 57.0	-1.8
	comp=E,4μm,1.3s						
EVR	Evrytania	0.98	88	P	Pb	20 52 44.5	-1.5
KASA	Kassiopi	0.98	331	P	Pb	20 52 46.0	+0.1
KEK	Kerkira	1.01	325	P	Pb	20 52 45.9	-0.5
KEK	Kerkira	1.01	325	P	Pb	20 52 46.0	-0.4
KEK				AML	AML	20 53 15.4	
	comp=E,5143μm,0.6s						
KEK				AML	AML	20 53 16.6	
	comp=N,6987μm,0.5s						
SRN	Sarande	1.08	337	P	Pb	20 52 46.7	-0.9
SRN				S	Sn	20 53 03.2	+0.5
VTN	Vitineika	1.09	153	P	Pb	20 52 47.4	-0.4
VTN	Vitineika	1.09	153	P	Pb	20 52 47.3	-0.5
RLS	Riolos of Patr	1.10	139	P	Pb	20 52 46.4	-1.4
RLS				S	Sb	20 53 00.9	-1.2
	comp=N,5μm,0.8s						
RLS	Riolos of Patr	1.10	139	P	Pb	20 52 46.5	-1.4
RLS				AML	AML	20 53 10.0	
	comp=E,8918μm,0.7s						
RLS				AML	AML	20 53 14.4	
	comp=N,10912μm,0.8s						
ANX	Ano Chora	1.11	105	P	Pb	20 52 46.5	-1.6
ANX	Ano Chora	1.11	105	P	Pb	20 52 46.8	-1.4
ANX				AML	AML	20 53 12.1	
	comp=E,12871μm,0.9s						
ANX				AML	AML	20 53 14.2	
	comp=N,9587μm,0.6s						
UPR	University Cam	1.14	122	P	Pb	20 52 47.8	-0.8
EFP	Efpalio	1.15	113	P	Pn	20 52 47.1	-1.8
EFP	Efpalio	1.15	113	P	Pn	20 52 47.1	-1.8
EFP				AML	AML	20 53 10.5	
	comp=N,17964μm,1.1s						
EFP				AML	AML	20 53 17.5	
	comp=E,12070μm,0.5s						
LTHK	Lithakia	1.20	169	P	Pn	20 52 47.9	-1.6
LTHK				S	Sg	20 53 06.3	+0.6
	comp=E,5μm,0.6s						
LTHK	Lithakia	1.20	169	P	Pn	20 52 48.2	-1.3
KPRO	Kipourio	1.23	30	P	Pn	20 52 49.3	-0.8
KPRO	Kipourio	1.23	30	P	Pn	20 52 49.6	-0.5
MAKR	Makrakomi, Fth	1.23	84	P	Pn	20 52 48.7	-1.4
MAKR				S	Sb	20 53 05.6	-0.5
	comp=E,7μm,0.6s						
MAKR	Makrakomi, Fth	1.23	84	P	Pn	20 52 48.7	-1.4
TRIZ	Trizonia	1.30	113	P	Pn	20 52 49.6	-1.3
TRIZ				S	Sn	20 53 07.7	-0.4
	comp=E,2μm,0.7s						
DRO	Drossia	1.30	136	P	Pn	20 52 49.6	-1.4
DRO	Drossia	1.30	136	P	Pn	20 52 49.9	-1.1
THL	Klokotos Trika	1.32	59	P	Pn	20 52 50.2	-1.0
THL	Klokotos Trika	1.32	59	P	Pn	20 52 50.5	-0.7
PENT	Pentalofos	1.38	19	P	Pb	20 52 52.7	-0.1
AGG	Agios Georgios	1.39	84	P	Pn	20 52 51.8	-0.5
AGG				AML	AML	20 53 18.3	
	comp=N,6313μm,0.7s						
AGG				AML	AML	20 53 25.9	
	comp=E,10442μm,0.8s						
AGG	Agios Georgios	1.39	84		Pn	20 52 51.7	-0.5
KLV	Kalavryta, Ach	1.51	124	P	Pn	20 52 52.7	-1.2
GUR	Goura	1.70	124	P	Pn	20 52 56.2	-0.3
KBN	Korca	1.74	6		Pg	20 53 00.5	0.0
VLO	Vlora	1.78	333		Pb	20 53 00.2	+0.7
FNA	Florina	2.00	18	Pn	Pb	20 53 02.2	-1.0
SCTE	Santa Cesarea	2.00	307	Pn	Pn	20 53 01.5	+0.9
ITM	Ithomi	2.02	147	P	Pb	20 53 03.0	-0.7
ITM	Ithomi	2.02	147		Pb	20 53 02.1	-1.6
LTK	Loutraki	2.08	114	P	Pb	20 53 03.8	-0.9
NEO	Neokhori	2.12	78	P	Pn	20 53 03.2	+1.0
OHR	Ohrid	2.23	5	*e*Pn	Pb	20 53 06.6	-0.6
OHR				*e*Sn	Sb	20 53 36.2	+1.5
OHR	Ohrid	2.23	5	*i* Pn	Pb	20 53 06.6	-0.6
TIR	Tirane	2.51	348	⇑P	Pb	20 53 12.5	+0.5
TIR	Tirane	2.51	348	*e*Pn	Pn	20 53 07.0	-0.6
TIR	Tirane	2.51	348		Pn	20 53 08.8	+1.2
VAY	Valandovo	2.88	32	*e*Pn	Pb	20 53 15.1	-3.2
VAY				*e*Sn	Sb	20 53 54.8	+1.4
VAY	Valandovo	2.88	32	*i* Pn	Pn	20 53 14.8	+2.1
TIP	Timpagrande	2.97	277	⇓P	Pb	20 53 17.2	-2.7
TIP	Timpagrande	2.97	277	Pn	Pn	20 53 15.2	+1.2
STIP	Stip	3.07	23	*i* Pn	Pb	20 53 18.2	-3.3
STIP				*i* Pn	Pn	20 53 19.4	+4.2
ULC	Ulcinj	3.23	342	⇓*i*Pn	Pn	20 53 17.8	+0.3
ULC				*i* Sn	Sn	20 53 56.3	+0.5
MATE	Matera	3.45	302	⇑P	Pb	20 53 25.9	-2.0
DRME	Dracevica, Mon	3.46	343	*e*Pn	Pn	20 53 21.5	+0.9
DRME	Dracevica, Mon	3.46	343	⇓*i*Pn	Pn	20 53 21.5	+0.9
DRME				*e*Sn	Sn	20 54 01.5	+0.1
BUM	Brajici-Budva	3.63	340	⇓*i*Pn	Pn	20 53 23.4	+0.3
BUM				*i* Sn	Sn	20 54 06.0	+0.1
PDG	Podgorica	3.67	345	⇑P	Pb	20 53 28.9	-2.9
PDG	Podgorica	3.67	345	*e*Pn	Pn	20 53 24.5	+0.9
PDG				*e*Sn	Sn	20 54 08.5	+1.8
PDG	Podgorica	3.67	345	*e*Pn	Pn	20 53 24.5	+0.9
PDG	Podgorica	3.67	345	Pn	Pn	20 53 24.4	+0.9
TTG	Podgorica	3.67	345	⇓*i*Pn	Pn	20 53 24.5	+0.9
TTG				*e*Sn	Sn	20 54 06.8	+0.1
CEL	Celeste	3.71	262		Pn	20 53 24.1	0.0
PVY	Plav	3.73	353	⇓*i*Pn	Pn	20 53 25.6	+1.1
PVY				*e*Sn	Sn	20 54 08.5	+0.2
PRVS	Prvonek	3.79	17	*e*Pn	Pn	20 53 28.3	+3.0
CEME	Cevo	3.86	342	*e*Pn	Pn	20 53 26.1	-0.1
CEME				*i* Sn	Sn	20 54 11.4	0.0
HCY	Herceg Novi	3.88	337	*e*Pn	Pn	20 53 25.9	-0.6
HCY	Herceg Novi	3.88	337	⇓*i*Pn	Pn	20 53 26.4	-0.1
HCY				*i* Sn	Sn	20 54 11.8	-0.2
BOSS	Bosilegrad	3.89	21	*e*Pn	Pn	20 53 28.2	+1.7
IVA	Berane	4.01	353	⇓*i*Pn	Pn	20 53 29.5	+1.2
IVA				*i* Sn	Sn	20 54 15.1	-0.1
KOME	Kolasin	4.04	349	⇑*i*Pn	Pn	20 53 29.8	+1.2
KOME				*i* Sn	Sn	20 54 15.7	-0.1
BARS	Barje	4.04	13	*e*Pn	Pn	20 53 29.8	+1.2
NKME	Niksic	4.06	343	⇑*i*Pn	Pn	20 53 29.7	+0.8
NKME				*i* Sn	Sn	20 54 16.2	-0.1
NKY	Niksic	4.09	344	⇑*i*Pn	Pn	20 53 30.7	+1.2
NKY				*i* Sn	Sn	20 54 17.1	-0.2
TREB	Trebinje	4.17	337	*e*Pn	Pn	20 53 30.0	-0.5
TREB				*e*Sn	Sn	20 54 17.8	-1.3
TREB	Trebinje	4.17	337	*e*Pn	Pn	20 53 29.6	-0.8
DBRK	Dubrovnik	4.20	335	*e*Pn	Pn	20 53 30.4	-0.3
DBRK				Sn	Sn	20 54 16.2	-3.4
VTS	Vitosha	4.24	28	⇑P	Pn	20 53 33.2	+1.7
VTS	Vitosha	4.24	28	*e*Pn	Pn	20 53 32.8	+1.3
VTS				*e*Sn	Sb	20 54 26.8	-6.0
VTS	Vitosha	4.24	28	Pn	Pn	20 53 32.8	+1.3
BRY	Bratogost	4.29	340	*e*Pn	Pn	20 53 31.6	-0.6
BRY	Bratogost	4.29	340	⇓*i*Pn	Pn	20 53 32.0	-0.2
BRY				*i* Sn	Sn	20 54 21.7	-0.4
SELS	Selova	4.35	5	*e*Pn	Pn	20 53 33.8	+0.9
SJES	Sjenica	4.39	354	*e*Pn	Pn	20 53 36.2	+2.7
SJES				*e*Sn	Sn	20 54 28.6	+4.0
UPM	Unac-Piva	4.49	344	*e*Pn	Pn	20 53 35.8	+0.9
UPM	Unac-Piva	4.49	344	⇑*i*Pn	Pn	20 53 36.2	+1.3
UPM				*e*Sn	Sn	20 54 26.3	-0.8
PLE	Pljevlja	4.52	349	⇑*i*Pn	Pn	20 53 36.5	+1.1
PLE				*i* Sn	Sn	20 54 27.4	-0.5
STON	Ston	4.53	332	*e*Pn	Pn	20 53 35.1	-0.2
STON				*e*Sn	Sn	20 54 24.6	-3.2
STON	Ston	4.53	332	*e*Pn	Pn	20 53 34.9	-0.4
STON	Ston	4.53	332	*e*Pn	Pn	20 53 35.1	-0.2
STON				Sn	Sn	20 54 24.8	-3.0
ZAPS	Zavoj	4.65	19	*e*Pn	Pn	20 53 40.6	+3.5
SGRT	San Giovanni R	4.66	309	Pn	Pn	20 53 38.1	+0.9
ALN	Alexandroupoli	4.67	63	Pn	Pn	20 53 38.5	+1.2
RUDO	Rudo	4.81	350	*e*Pn	Pn	20 53 40.3	+1.1
BOVS	Bovan	4.82	10	*e*Pn	Pn	20 53 39.2	-0.1
IDI	Anoyia	4.99	135	Pn	Pn	20 53 41.7	-0.1
	comp=E,0.7nm,0.3s,baz=330,slow=16,SNR=11						
IDI				Sn	Sn	20 54 38.5	-0.9
	comp=E,3.1nm,0.3s,baz=315,slow=16,SNR=2.3						
IDI				LR	LR	20 55 55.7	
	comp=E,250nm,18.5s,baz=298,slow=41						
GRUS	Gruza	5.00	1	*e*Pn	Pn	20 53 42.7	+1.0
VAE	Valguarnera	5.04	256	Pn	Pn	20 53 45.3	+2.9
	comp=E,0.3nm,0.3s,baz=65,slow=19,SNR=1.3						
VAE				Sn	Sn	20 54 42.4	+1.8
	comp=E,1.7nm,0.3s,baz=29,slow=19,SNR=5.4						
VAE				LR	LR	20 56 24.8	
	comp=E,179nm,18.4s,baz=56,slow=46						
BBLS	Lazići	5.05	350	*e*Pn	Pn	20 53 43.2	+0.7
BBLS	Lazići	5.05	350	*e*Pn	Pn	20 53 42.9	+0.4
PAOL	Paolisi	5.07	297		Pn	20 53 43.5	+0.6
MAKA	Makarska	5.14	330	*e*Pn	Pn	20 53 43.4	-0.3
RAFF	Raffo Rosso	5.16	253	Pn	Pn	20 53 44.2	+0.1
DIVS	Divibare	5.22	356	*e*Pn	Pn	20 53 45.0	+0.1
DIVS				*e*Sn	Sn	20 54 47.7	+2.7
DIVS	Divibare	5.22	356	*e*Pn	Pn	20 53 44.5	-0.4
DIVS	Divibare	5.22	356		Pn	20 53 45.1	+0.1
RICI	Ricice	5.28	332	*e*Pn	Pn	20 53 45.4	-0.2
HVAR	Hvar	5.29	325	*e*Pn	Pn	20 53 45.7	-0.1
HVAR				Sn	Sn	20 54 42.3	-4.3
HAPS	Han Pijesak,Bl	5.33	347	*e*Pn	Pn	20 53 46.8	+0.4
PLVB	Pleven	5.44	33	⇑P	Pn	20 53 51.1	+3.3
BALB	Balikesir	5.73	80		Pn	20 53 52.9	+1.0
CLTB	Caltabellotta	5.92	260	Pn	Pn	20 53 54.6	0.0
MDVR	Moldovita	5.95	8	⇓P	Pn	20 53 58.7	+3.8
KIJV	Kijevo	5.99	330	*e*Pn	Pn	20 53 55.3	0.0
ZIRJ	Zirje	6.03	324	*e*Pn	Pn	20 53 55.5	-0.3
MGRS	Mrkonjic Grad	6.10	336	*e*Pn	Pn	20 53 55.0	-2.0
MORI	Morici	6.17	325	*e*Pn	Pn	20 53 58.4	+0.6
FRGS	Fruska Gora	6.29	355	⇓P	Pn	20 54 03.3	+3.8
FRGS	Fruska Gora	6.29	355	*e*Pn	Pn	20 53 59.6	+0.1
BLY	Banja Luka	6.37	338	*e*Pn	Pn	20 54 01.0	+0.4
BLY				*e*Sn	Sn	20 55 11.5	-1.7
BLY	Banja Luka	6.37	338	*e*Pn	Pn	20 53 59.4	-1.2
AQU	L'Aquila	6.45	305	*e*Pn	Pn	20 54 04.4	+2.7
AQU	L'Aquila	6.45	305	Pn	Pn	20 54 04.0	+2.3
DUGI	Dugi Otok	6.56	323	*e*Pn	Pn	20 54 03.1	-0.1
UDBI	Udbina	6.68	329	*e*Pn	Pn	20 54 05.8	+0.9
MRAK	Mrakovica	6.70	337	*e*Pn	Pn	20 54 04.5	-0.7
BZS	Buzias	6.77	6	⇓P	Pn	20 54 09.3	+3.3
NRCA	Norcia	6.88	307		Pn	20 54 09.3	+1.6
A251A	Rujevac	7.00	334	*e*Pn	Pn	20 54 10.1	+0.8
A251A				Sn	Sn	20 55 25.2	-3.5
PLIT	Plitvice	7.02	330	*e*Pn	Pn	20 54 09.9	+0.3
PLIT				Sn	Sn	20 55 25.3	-4.0
NVLJ	Novalja	7.08	325	*e*Pn	Pn	20 54 10.1	-0.3
RABC	Rab	7.27	325	*e*Pn	Pn	20 54 13.5	+0.6
VOIR		7.34	26	⇓P	Pn	20 54 16.5	+2.5
KOVH	Kovagotottos	7.42	347	*e*PN	Pn	20 54 20.9	+5.9
MORH	Mrgy, Hungar	7.46	350	⇓P	Pn	20 54 20.5	+5.0
MORH	Mrgy, Hungar	7.46	350	*e*PN	Pn	20 54 18.9	+3.5
MORH	Mrgy, Hungar	7.46	350	*e*Pn	Pn	20 54 14.5	-1.0
MURB	Monte Urbino	7.47	308		Pn	20 54 17.8	+1.9
ELL	Elmali	7.71	103		Pn	20 54 23.2	+4.1
OZLJ	Ozalj	7.71	332	*e*Pn	Pn	20 54 19.1	+0.1
MLR	Muntele Rosu	7.71	29	⇑P	Pn	20 54 22.3	+3.2
MLR	Muntele Rosu	7.71	29	Pn	Pn	20 54 21.5	+2.4
	comp=E,0.5nm,0.3s,baz=271,slow=10.0,SNR=11						
MLR				LR	LR	20 57 43.5	
	comp=E,181nm,18.8s,baz=200,slow=41						
MLR	Muntele Rosu	7.71	29	Pn	Pn	20 54 22.9	+3.8
SMRN	Sveta Marina	7.77	324	*e*Pn	Pn	20 54 20.1	+0.3
NEHR	Nehoiu	7.80	31	⇓P	Pn	20 54 23.2	+3.0
RIY	Rijeka	7.86	327	*e*Pn	Pn	20 54 17.6	-3.4
BRJN	Brijuni	7.87	322	*e*Pn	Pn	20 54 21.2	+0.1
CRES	Cresnjev	7.89	333	*e*Pn	Pn	20 54 20.8	-0.7
DOPR	Dopca	7.92	25	⇑P	Pn	20 54 25.2	+3.3
COVR	Voineasa-Covas	8.11	29	⇓P	Pn	20 54 27.1	+2.6
OZUR		8.17	27	⇑P	Pn	20 54 28.6	+3.3
CEY	Cerknica	8.21	328	*e*Pn	Pn	20 54 25.5	-0.4
PLOR	Plostina	8.29	31	⇑P	Pn	20 54 30.1	+3.1
CASP	Castiglione de	8.31	301	Pn	Pn	20 54 29.4	+2.1
VRI	Vrincioaia	8.33	31	⇑P	Pn	20 54 29.5	+1.9
OSSC	Osservatorio P	8.40	306	Pn	Pn	20 54 31.9	+3.3
LJU	Ljubljana	8.42	330	*e*Pn	Pn	20 54 29.4	+0.6
MPLH	Magyarpolny	8.56	346	*e*PN	Pn	20 54 34.0	+3.3
VSL	Villasalto	8.70	277	Pn	Pn	20 54 34.0	+1.3
SOKA	Soboth	8.78	334	*e*Pn	Pn	20 54 33.6	-0.1
	comp=E,0.5nm,0.2s						
OBKA	Obir	8.80	332	*e*Pn	Pn	20 54 35.2	+1.2
	comp=E,0.8nm,0.2s						
OBKA				*e*Sn	Sn	20 56 11.2	-2.0
	comp=E,2.9nm,0.3s						
ZCCA	Zocca	9.01	310	Pn	Pn	20 54 39.3	+2.4
PSZ	Piszkesteto	9.04	357	Pn	Pn	20 54 38.9	+1.6
ARSA	Arzberg	9.13	338	*e*Pn	Pn	20 54 39.2	+0.7
	comp=E,0.6nm,0.3s						
TEOL	Teolo	9.24	317	Pn	Pn	20 54 39.7	-0.2
STAL	STALIGIAL	9.36	324		Pn	20 54 41.0	-0.7
KEST	Kesra	9.47	254	Pn	Pn	20 54 45.8	+2.5
	comp=E,0.0nm,0.3s,baz=90,slow=20,SNR=2.4						
KEST	Kesra	9.47	254	Pn	Pn	20 54 42.6	-0.7
ZOU	Zoufplan	9.47	326	Pn	Pn	20 54 43.0	-0.3
ZST	Bratislava	9.63	346	*e*PN	Pn	20 54 45.5	+0.2
VYHS	Vyhne	9.68	353	*e*PN	Pn	20 54 50.0	+4.0
CTI	Castel Tesino	9.71	320	Pn	Pn	20 54 45.7	-0.9
MODS	Modra-Piesok	9.77	347	*e*PN	Pn	20 54 51.9	+4.6
ABTA	Abfaltersbach	9.82	326	*e*Pn	Pn	20 54 49.2	+1.2
	comp=E,0.2nm,0.2s						
ABTA				*e*Sn	Sn	20 56 38.5	+0.3
	comp=E,3.5nm,0.7s						
SALO	Salr	10.02	315	Pn	Pn	20 54 51.9	+1.2
MOA	Molln	10.05	335	*e*Pn	Pn	20 54 52.4	+1.2
	comp=E,1.0nm,0.2s						
BRTR	Keskin Array B	10.18	81	LR	LR	20 58 51.7	
	comp=E,132nm,20.9s,baz=274,slow=38						
WTTA	Wattenberg	10.61	325	*e*Pn	Pn	20 55 00.8	+2.0
	comp=E,2.1nm,0.3s						
SQTA	Sankt Quirin	10.77	324	*e*Pn	Pn	20 55 06.2	+5.2
	comp=E,2.7nm,0.3s						
VRAC	Vranov	10.80	346	LR	LR	20 59 33.9	
	comp=E,196nm,20.7s,baz=168,slow=40						
FETA	Feichten	10.85	322	*e*Pn	Pn	20 55 09.0	+6.8
	comp=E,0.5nm,0.3s						
CKRC	Cesky Krumlov	10.90	338	*e*PN	Pn	20 55 07.2	+4.5
MOTA	Moosalm	10.91	324	*e*Pn	Pn	20 55 03.9	+0.9
	comp=E,1.8nm,0.4s						
CSS	Mathiatis	10.95	107	Pn	Pn	20 55 04.1	+0.6
MORC	Moravsky Berou	11.10	350	Pn	Pn	20 55 07.2	+1.8
GERES	GERESS Array B	11.11	336	Pn	Pn	20 55 05.6	-0.1
	comp=E,0.2nm,0.3s,baz=161,slow=21,SNR=3.5						
GERES				Sn	Sn	20 57 06.4	-3.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=E,0.3nm,0.3s,baz=151,slow=22,SNR=1.6						
GERES	GERESS Array B	11.11	336	Pn	Pn	20 55 07.5	+1.9
DAVOX	Davos/Dischmat	11.11	319	Pn	Pn	20 55 06.7	+0.9
	comp=E,0.2nm,0.3s,baz=190,slow=13,SNR=2.2						
DAVOX				Sn	Sn	20 57 08.3	-1.6
	comp=E,0.2nm,0.3s,baz=213,slow=20,SNR=1.5						
TUE	Stuetta	11.19	316	Pn	Pn	20 55 07.3	+0.4
KHC	Kasperske Hory	11.40	336	*e*PN	Pn	20 55 13.3	+3.8
KHC				*e*SN	Sn	20 57 15.9	-0.8
MMAI	Mount Meron Ar	13.38	111	Pn	Pn	20 55 35.9	-0.8
	comp=E,0.6nm,0.3s,baz=316,slow=10,SNR=2.9						
GHAJ	Ghor Haditha	14.42	117		Pn	20 55 51.7	+0.9
ASF	Jabal al Asfar	14.89	112	Pn	Pn	20 55 56.7	-0.6
	comp=E,0.1nm,0.3s,baz=335,slow=20,SNR=1.9						
EIL	Elat	15.02	123	Pn	Pn	20 55 58.5	-0.5
	comp=E,0.4nm,0.3s,baz=288,slow=20,SNR=2.0						
GNI	Garni	18.69	78	LR	LR	21 05 24.2	
	comp=E,18nm,21.8s,baz=36,slow=42						
ESDC	Sonseca Array	18.99	280	P	P	20 56 48.4	+0.1
	comp=E,0.1nm,0.3s,baz=46,slow=11,SNR=3.4						
ESDC				LR	LR	21 03 47.2	
	comp=E,58nm,19.3s,baz=100,slow=36						
OBN	Obninsk	19.48	28	LR	LR	21 05 01.6	
	comp=E,85nm,21.6s,baz=48,slow=39						
MDT	Midelt	21.24	261	P	P	20 57 12.1	-0.8
	comp=E,0.9nm,0.8s,baz=16,slow=7.4,SNR=1.5						
HFS	Hagfors	21.70	351	P	P	20 57 15.2	-2.3
	comp=E,2.1nm,0.8s,baz=224,slow=10,SNR=1.5						
NAO01	NORSAR Array S	22.80	348	P	P	20 57 31.8	+2.5
FINES	FINESS Array B	22.84	7	P	P	20 57 28.9	-0.8
	comp=E,4.1nm,1.0s,baz=138,slow=15,SNR=2.1						
FINES	FINESS Array B	22.84	7	P	P	20 57 29.7	+0.1
EKA	Eskdalemuir Ar	22.87	324	P	P	20 57 27.8	-2.2
	comp=E,1.2nm,0.6s,baz=122,slow=11,SNR=2.3						
NB2	NORSAR Subarra	22.93	348	P	P	20 57 33.7	+3.1
	comp=Z,1.1nm,0.6s,baz=161,slow=11						
NOA	NORSAR Array B	22.93	348	P	P	20 57 28.0	-2.6
	comp=Z,0.7nm,0.8s,baz=156,slow=9.4,SNR=2.6						
NOA				LR	LR	21 06 57.6	
	comp=Z,60nm,20.8s,baz=165,slow=38						
BELG	Belogornoye	23.08	45	P	P	20 57 30.8	-1.4
	comp=Z,7.3nm,1.0s,baz=236,slow=9.4,SNR=2.2						
AKTO	Aktyubinsk	28.73	54	LR	LR	21 11 51.3	
	comp=Z,28nm,21.7s,baz=301,slow=41						
GEYT	Alibeck	29.32	80	P	P	20 58 30.6	+1.2
GEYT				IAmb	IAmb	20 58 32.2	
	comp=Z,8.6nm,1.4s						
ABKAR	Akbulak array	29.82	57	P	P	20 58 35.1	+1.4
TORD	Torodi Ar. Bea	30.60	218	P	P	20 58 40.9	0.0
	comp=Z,0.8nm,0.9s,baz=32,slow=8.8,SNR=6.1						
TORD	Torodi Ar. Bea	30.60	218	P	P	20 58 40.6	-0.3
TORD				IAmb	IAmb	20 58 53.7	
	comp=Z,1.9nm,1.0s						
ARCES	ARCESS Array B	30.82	3	P	P	20 58 41.1	-1.2
	comp=Z,2.5nm,0.9s,baz=193,slow=12,SNR=2.0						
MK31	Makanchi Array	44.91	59	P	P	21 00 40.8	-0.6
MK31				IAmb	IAmb	21 01 08.0	
	comp=Z,5.0nm,1.5s						
MKAR	Makanchi Array	44.91	59	P	P	21 00 39.9	-1.5
	comp=Z,0.8nm,0.5s,baz=266,slow=8.5,SNR=4.7						
MKAR				PcP	PcP	21 02 21.1	-1.6
	comp=Z,0.5nm,0.8s,baz=289,slow=3.7,SNR=1.6						
MKAR	Makanchi Array	44.91	59	P	P	21 00 43.2	+1.9
ZALV	Zalesovo Beam	45.20	49	P	P	21 00 41.7	-1.8
	comp=Z,2.3nm,0.5s,baz=285,slow=9.0,SNR=5.1						
ZALV				LR	LR	21 21 49.7	
	comp=Z,52nm,19.6s,baz=353,slow=39						
WMQ	Urumqi	49.39	61	*e*P	P	21 01 20.4	+4.0
HHC	Hu-ho-hao-te	66.61	56	*e*P	P	21 03 17.8	+0.5
HHC				pmax	pmax		
	comp=Z,16nm,1.1s						
HHC				pmax	pmax		
	comp=Z,95nm,5.5s						
JOW	Kunigami	86.07	59	LR	LR	21 48 15.8	
	comp=Z,26nm,18.1s,baz=282,slow=39						
WRA	Warramunga Arr	120.54	92	PKP	PKiKP	21 11 20.3	+1.5
	comp=Z,0.6nm,1.1s,baz=313,slow=3.7,SNR=2.0						
ASAR	Alice Springs	122.22	96	PKP	PKiKP	21 11 23.9	+1.8
	comp=Z,0.5nm,0.8s,baz=261,slow=1.3,SNR=5.9						

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*IDC **17** 20:56:22.3±0.7, 17°.65S×13°.89W, h0^{km}, mb4.2/15, mb1 4.2/15, mb1mx4.0/51, mbtmp4.2/15, MS3.7/21, Ms1 3.7/21, ms1mx3.7/26, Error ellipse: s-maj=23.7km s-min=18.5km az=112.0*

*NEIC **17** 20:56:24.3±1.7, 17°.6S±0°.1×13°.81W±0°.06, h11^{km}±4^{km}, mb4.7/22, Error ellipse: s-maj=17.2km s-min=7.8km az=163.0*

ISC 17 20:56:24.0±0.5**, 17°.7S**±0°.1×**13°.89W**±0°.08**, h14**^{km}**, n59,** σ**1^{s}05**/36**, mb4.4**/19**, MS3.8**/21**, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHEL	Horse Pasture	7.98	79	Pn	Pn	20 58 18.9	-0.8
H10S2	ASCENSION HYDR	8.69	355	T	T	21 07 15.1	
	baz=174,slow=74,SNR=42						
H10S3	ASCENSION HYDR	8.70	355	T	T	21 07 19.4	
	baz=46,slow=74,SNR=56						
H10N1	ASCENSION HYDR	9.78	357	T	T	21 08 39.3	
	baz=179,slow=79,SNR=16						
H10N3	ASCENSION HYDR	9.79	356	T	T	21 08 38.1	
	baz=179,slow=79,SNR=38						
H10N2	ASCENSION HYDR	9.80	357	T	T	21 08 41.0	
	baz=179,slow=79,SNR=16						
DBIC	Dimbokro	25.78	21	P	P	21 01 53.8	-0.9
	4.4nm,1.0s,baz=121,slow=1.2,SNR=3.1						
DBIC				LR	LR	21 09 32.9	
	comp=Z,170nm,20.0s,baz=202,slow=31						
DBIC	Dimbokro	25.78	21	IAmb	IAmb	21 02 16.7	
	comp=Z,23nm,1.4s						
TSUM	Tsumeb	29.88	98	LR	LR	21 12 02.1	
	comp=Z,154nm,21.2s,baz=307,slow=32						
BDFB	Brasilia	32.73	268	LR	LR	21 13 50.3	
	comp=Z,262nm,21.2s,baz=128,slow=32						
KOWA	Kowa	33.41	18	P	P	21 03 01.7	-0.7
	comp=Z,3.2nm,0.7s,baz=189,slow=10,SNR=8.2						
SACV	Santiago Islan	33.82	343	P	P	21 03 04.7	-1.3
TORD	Torodi Ar. Bea	34.27	28	P	P	21 03 10.0	+0.1
	comp=Z,1.9nm,0.7s,baz=213,slow=8.8,SNR=11						
TORD				LR	LR	21 14 29.3	
	comp=Z,230nm,21.1s,baz=210,slow=32						
TORD	Torodi Ar. Bea	34.27	28	P	P	21 03 09.6	-0.3
TORD				IAmb	IAmb	21 03 17.2	
	comp=Z,12nm,1.7s						
LBTB	Lobatse	37.39	108	P	P	21 03 35.4	-1.4
LBTB				IAmb	IAmb	21 04 06.6	
	comp=Z,46nm,1.8s						
BOSA	Boshof	37.45	114	LR	LR	21 16 43.3	
	comp=Z,67nm,20.0s,baz=282,slow=33						
AQDB	Aquidauana	39.54	259	P	P	21 03 54.3	-0.5
LSZ	Lusaka	40.36	93	P	P	21 04 03.2	+1.4
	comp=Z,1.6nm,0.3s,baz=261,slow=5.5,SNR=13						
LSZ	Lusaka	40.36	93	P	P	21 04 01.9	+0.1
LSZ				IAmb	IAmb	21 04 04.2	
	comp=Z,9.9nm,1.1s						
ITQB	Itaqui	40.71	245	P	P	21 04 05.4	+0.9
ITQB				IAmb	IAmb	21 04 12.6	
	comp=Z,19nm,1.2s						
CPUP	Villa Florida	41.03	250	LR	LR	21 17 50.2	
	comp=Z,121nm,20.3s,baz=104,slow=31						
PTLB	Pontes e Lacer	43.35	266	P	P	21 04 27.1	+0.9
PTLB				IAmb	IAmb	21 04 35.1	
	comp=Z,18nm,1.8s						
SIV	San Ignacio	45.11	265	P	P	21 04 41.0	+0.7
	comp=Z,1.0nm,0.8s,baz=131,slow=7.6,SNR=3.6						
PTGA	Pitinga	48.31	285	P	P	21 05 06.5	+1.1
	comp=Z,1.7nm,0.3s,baz=13,slow=2.4,SNR=5.1						
PTGA	Pitinga	48.31	285	IAmb	IAmb	21 05 10.1	
	comp=Z,8.3nm,1.4s						
SAML	Samuel	48.63	274	P	P	21 05 08.7	+0.8
ETMB	Extrema	51.29	271	P	P	21 05 27.9	-0.2
LPAZ	La Paz	51.75	263	LR	LR	21 26 33.1	
	comp=Z,128nm,18.7s,baz=266,slow=35						
KMBO	Kilima Mbogo	52.84	78	LR	LR	21 25 31.1	
	comp=Z,121nm,20.6s,baz=257,slow=33						
PLCA	Paso Flores	53.54	232	LR	LR	21 26 48.3	
	comp=Z,147nm,18.6s,baz=116,slow=34						
LC01	Cunco	54.34	235	P	P	21 05 49.4	-0.9
SNAA	Sanae	54.39	176	P	P	21 05 50.3	+0.1
	comp=Z,1.7nm,1.0s,baz=309,slow=8.5,SNR=6.1						
SNAA	Sanae	54.39	176		P	21 05 50.3	+0.1
SNAA				IAmb	IAmb	21 06 04.2	
	comp=Z,17nm,1.8s						
PFVI	Vila Bisbo	54.72	5	P	P	21 05 53.1	+0.2
KEST	Kesra	57.49	22	P	P	21 06 13.7	+0.8
	comp=Z,3.1nm,1.0s,baz=212,slow=7.2,SNR=2.8						
KEST				LR	LR	21 30 43.4	
	comp=Z,74nm,18.3s,baz=334,slow=36						
KEST	Kesra	57.49	22	P	P	21 06 13.1	+0.2
KEST				IAmb	IAmb	21 06 22.2	
	comp=Z,14nm,1.2s						
ESDC	Sonseca Array	57.79	9	P	P	21 06 16.7	+1.9
	comp=Z,0.5nm,1.0s,baz=192,slow=5.0,SNR=4.1						
ESDC				LR	LR	21 29 23.9	
	comp=Z,54nm,18.9s,baz=10.0,slow=34						
BAUV	El Baul	59.67	292	P	P	21 06 28.3	-0.1
ROSC	El Rosal	63.67	285	LR	LR	21 34 10.6	
	comp=Z,235nm,18.2s,baz=238,slow=36						
BNI	Bardonecchia	65.17	16	P	P	21 07 05.1	+0.4
ZARC	Zaragoza, Cauc	65.19	287	P	P	21 07 03.7	-1.7
ZARC				IAmb	IAmb	21 07 06.7	
	comp=Z,6.5nm,1.0s						
MAW	Mawson	68.76	156	P	P	21 07 27.6	+0.4
	comp=Z,5.8nm,1.0s,baz=262,slow=7.5,SNR=3.4						
MAW	Mawson	68.76	156	IAmb	IAmb	21 07 51.5	
	comp=Z,8.3nm,1.8s						
MMAI	Mount Meron Ar	68.97	43	P	P	21 07 31.1	+2.0
	comp=Z,0.5nm,0.3s,baz=257,slow=5.8,SNR=2.5						
GERES	GERESS Array B	70.63	19	LR	LR	21 36 34.0	
	comp=Z,57nm,21.3s,baz=254,slow=34						
BRTR	Keskin Array B	72.27	37	P	P	21 07 50.5	+1.2
	comp=Z,2.0nm,0.8s,baz=188,slow=7.5,SNR=4.4						
BRTR				LR	LR	21 39 26.4	
	comp=Z,25nm,20.3s,baz=268,slow=36						
MLR	Muntele Rosu	72.51	28	P	P	21 07 48.5	-2.0
AKASG	Malin Array Be	77.89	26	P	P	21 08 19.9	-1.2
	comp=Z,2.0nm,0.7s,baz=224,slow=5.2,SNR=9.3						
AKASG	Malin Array Be	77.89	26	P	P	21 08 19.4	-1.8
KBZ	Khabaz	80.17	38	LR	LR	21 45 33.3	
	comp=Z,27nm,18.2s,baz=195,slow=37						
NOA	NORSAR Array B	80.99	12	LR	LR	21 44 04.5	
	comp=Z,31nm,19.9s,baz=0.0,slow=35						
WSAR	Wadi Sarin	81.66	62	P	P	21 08 43.1	+0.8
	comp=Z,8.3nm,1.0s,baz=265,slow=3.5,SNR=4.6						
VNDA	Vanda	84.97	179	LR	LR	21 45 17.2	
	comp=Z,24nm,18.0s,baz=179,slow=34						
FINES	FINESS Array B	85.03	18	P	P	21 08 59.6	+0.8
	comp=Z,4.1nm,1.0s,baz=210,slow=4.8,SNR=2.5						
FINES				LR	LR	21 45 15.1	
	comp=Z,28nm,18.1s,baz=282,slow=34						
GEYT	Alibeck	87.23	49	LR	LR	21 46 02.4	
	comp=Z,56nm,20.0s,baz=45,slow=34						
ARCES	ARCESS Array B	91.33	13	LR	LR	21 50 05.9	
	comp=Z,32nm,18.3s,baz=290,slow=35						
TXAR	Lajitas Array	98.27	298	LR	LR	21 56 06.1	
	comp=Z,13nm,19.7s,baz=0.0,slow=36						
WRA	Warramunga Arr	131.32	139	PKP	PKPdf	21 15 36.6	-0.1
	comp=Z,0.8nm,1.1s,baz=250,slow=2.4,SNR=3.6						
MJAR	Matsushiro Arr	149.02	47	PKPbc	PKPbc	21 16 11.4	-0.7
	comp=Z,2.3nm,0.9s,baz=289,slow=4.2,SNR=4.9						

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*IDC **17** 21:02:59.1±2.2, 5°.82S×151°.74E, h0^{km}, mb3.5/4, mb1 3.8/5, mb1mx3.5/44, mbtmp3.6/5, ML1.7/1, Error ellipse: s-maj=116.7km s-min=28.0km az=130.0*

ISC 17 21:03:07.7±2.3**, 5°.6S**±0°.6×**151°.2E**±0°.7**, h65**^{km}**, n6,** σ**1^{s}65**/7**, mb3.4**/4**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	5.50	226	Pn	Pn	21 04 26.5	-0.6
	1.3nm,0.3s,baz=300,slow=20,SNR=1.7						
PMG				Sn	Sn	21 05 27.8	-1.2
	0.5nm,0.3s,baz=333,slow=14,SNR=1.3						
WRA	Warramunga Arr	21.72	227	P	P	21 07 53.9	+0.2
	1.2nm,0.7s,baz=53,slow=10.0,SNR=6.3						
ASAR	Alice Springs	24.49	221	P	P	21 08 22.2	+1.2
	0.7nm,0.6s,baz=54,slow=9.4,SNR=10.0						
FITZ	Fitzroy Crossi	27.87	241	P	P	21 08 54.0	+2.5
	0.7nm,0.5s,baz=56,slow=8.2,SNR=6.6						
ILAR	Eielson Array	83.50	22	P	P	21 15 27.4	-0.8
	0.2nm,0.7s,baz=231,slow=4.8,SNR=1.6						
TORD	Torodi Ar. Bea	149.00	286	PKPbc	PKPab	21 22 53.0	-0.8
	0.3nm,0.7s,baz=62,slow=3.8,SNR=2.0						

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*IDC **17** 21:04:45.6±1.0, 36°.92N×71°.57E, h110^{km}±8^{km}, mb3.6/21, mb1 3.7/26, mb1mx3.5/65, mbtmp4.0/26, Error ellipse: s-maj=16.0km s-min=11.2km az=19.0*

*NEIC **17** 21:04:46.8±1.7, 37°.08N±0°.05×71°.45E±0°.06, h109^{km}±5^{km}, mb4.2/25, Error ellipse: s-maj=7.1km s-min=6.2km az=211.0*

*NNC **17** 21:04:46.1±4.8, 37°.33N×70°.89E, h107^{km}±71^{km}, mb4.0, mpv4.7, Error ellipse: s-maj=50.8km s-min=23.6km az=157.0*

ISC 17 21:04:44.7±0.4**, 36°.95N**±0°.04×**71°.50E**±0°.05**, h100**^{km}**, n122,** σ**2^{s}01**/133**, mb4.0**/27**, 12C-12D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAR	Garm	2.25	336		Pn	21 05 21.4	+0.7
CHGR	Chuyangaron	2.52	313	Pn	Pn	21 05 24.4	+0.3
DRK	Karamyk	2.54	5		Pn	21 05 26.5	+1.9
KBL	Kabul	3.13	220	Pn	Pn	21 05 36.0	+3.6
CEP	Cherat	3.14	174	P	Pn	21 05 36.4	+3.9
BTK	Batken	3.15	350		Pn	21 05 34.4	+1.9
CHCP	Chirah Chowk	3.59	156	P	Pn	21 05 42.8	+4.3
NIL	Nilore	3.59	156	Pn	Pn	21 05 42.9	+4.4
THW	Thamme Wali	4.15	177	P	Pn	21 05 48.3	+2.2
AML	Almayashu	5.44	17	P	Pn	21 05 52.1	-12
	SNR=16						
UCH	Uchtor	5.76	23	P	Pn	21 05 55.9	-12
	SNR=8.8						
EKS2	Erkin-Say	5.97	16	P	Pn	21 06 11.8	+1.2
	SNR=72						
AAK	Ala-Archa	6.13	21	P	Pn	21 06 14.2	+1.3
	29nm,0.3s,baz=204,slow=8.7,SNR=296						
AAK				S	Sn	21 07 19.3	-2.3
	10nm,0.3s,baz=123,slow=23,SNR=13						
AAK	Ala-Archa	6.13	21	P	Pn	21 06 01.2	-12
	SNR=5.1						
AAK	Ala-Archa	6.13	21	⇓P	Pn	21 06 13.8	+0.9
	82nm,0.5s						
AAK				⇓S	Sn	21 07 20.3	-1.3
	179nm,1.1s						
AAK	Ala-Archa	6.13	21		Pn	21 06 14.1	+1.2
DHRM	DHARAMSHALA	6.14	138	*e*P	Pn	21 06 15.1	+2.0
DHRM				*e*S	Sn	21 07 20.4	-1.7
DHRM				IAML		21 07 24.1	
	comp=E,1μm,0.7s						
DHRM				IAML		21 07 24.8	
	comp=N,772nm,0.0s						
KKAR	Karatay Array	6.19	353	Pn	Pn	21 06 13.8	+0.2
KBK	Karagaybulak	6.29	24	P	Pn	21 06 16.4	+1.4
	SNR=35						
FRU1	Bishkek	6.33	21		Pn	21 06 17.5	+2.0
ULHL	Ulahol	6.43	33	P	Pn	21 06 18.1	+1.1
	SNR=32						
CHMS	Chumysh	6.54	21	P	Pn	21 06 19.3	+1.1
	SNR=82						
USP	Ospenovka	6.71	19	P	Pn	21 06 21.0	+0.3
	SNR=60						
TKM2	Tokmak 2	6.74	27	P	Pn	21 06 22.2	+1.0
	SNR=90						
TKM2	Tokmak 2	6.74	27	⇑P	Pn	21 06 21.7	+0.4
	comp=N,46nm,0.6s						
TKM2				⇑S	Sn	21 07 35.9	-0.7
	comp=N,50nm,0.8s						
TARG	Taragay, Kyrgy	6.83	44		Pn	21 06 24.4	+1.8
BHK	Bhakra	6.86	142	*e*S	Sn	21 07 36.0	-3.4
SMLA	Simla	7.47	139	*e*P	Pn	21 06 32.4	+1.4
SMLA				*e*S	Sn	21 07 49.6	-4.6
SMLA				IAML		21 07 54.4	
	comp=N,306nm,0.4s						
SMLA				IAML		21 07 55.1	
	comp=E,457nm,0.0s						
MDOK	Medeo	7.52	33	⇓P	Pn	21 06 32.9	+1.1
	comp=E,13nm,0.7s						
MDOK				⇑S	Sn	21 08 00.9	+5.4
KNDC	Almaty	7.53	32	⇓P	Pn	21 06 33.2	+1.4
	comp=E,72nm,0.8s						
KNDC				⇑S	Sn	21 07 53.1	-2.5
	comp=E,152nm,1.2s						
PRZ	Przheval'sk	7.67	42		Pn	21 06 35.0	+1.2
HRA	Herat	7.95	254	Pn	Pn	21 06 40.2	+2.4
PDGK	Podgornoye	8.83	41	⇓P	Pn	21 06 49.5	0.0
	comp=E,11nm,0.6s						
PDGK				⇓S	Sn	21 08 29.3	+1.9
	comp=E,89nm,1.4s						
AYAN	Aya Nagar	9.68	149	*e*P	Pn	21 07 03.7	+2.5
AYAN				*e*S	Sn	21 08 41.9	-6.1
KUDL	Kundal	9.74	153	*e*P	Pn	21 07 02.3	+0.4
KUDL				*e*S	Sn	21 08 43.9	-5.5
GEYT	Alibeck	10.69	279	P	Pn	21 07 11.9	-2.9
	comp=E,2.8nm,0.3s,baz=102,slow=14,SNR=12						
GEYT				S	Sn	21 09 04.2	-8.2
	comp=E,3.7nm,0.3s,baz=196,slow=33,SNR=7.3						
GEYT	Alibeck	10.69	279		Pn	21 07 12.5	-2.3
GYA0B	ALIBECK ARRAY	10.69	279	⇓P	Pn	21 07 10.4	-4.3
GYA0B				⇑S	Sn	21 09 00.6	-12
GYA0B	ALIBECK ARRAY	10.69	279	Pn	Pn	21 07 12.1	-2.7
AJM	Ajmer	10.78	165	*e*P	Pn	21 07 18.9	+2.9
AJM				*e*S	Sn	21 09 11.0	-3.8
OTUK	Ortayu	11.30	3	⇓P	Pn	21 07 19.6	-3.4
	comp=E,14nm,1.1s						
OTUK				⇑S	Sn	21 09 20.0	-7.2
	comp=E,11nm,0.7s						
MAKZ	Makanchi	12.55	35	⇓P	Pn	21 07 39.2	-0.5
	comp=E,5.5nm,0.9s						
MAKZ	Makanchi	12.55	35		Pn	21 07 39.2	-0.5
MK31	Makanchi Array	12.69	36	⇓P	Pn	21 07 40.6	-0.8
	comp=E,1.9nm,0.5s,baz=224,slow=14,SNR=24						
MK31	Makanchi Array	12.69	36		Pn	21 07 41.0	-0.4
MKAR	Makanchi Array	12.69	36	P	Pn	21 07 40.9	-0.6
	comp=E,0.3nm,0.3s,baz=227,slow=16,SNR=16						
MKAR	Makanchi Array	12.69	36		Pn	21 07 40.1	-1.4
PYUN	Piuthan	13.10	129	*e*P	Pn	21 07 45.0	-2.2
	comp=E,101nm,0.3s						
PYUN				*e*S	Sn	21 10 00.8	-11
DANN	Dangsing	13.42	126	*e*P	Pn	21 07 49.3	-2.1
	comp=E,23nm,0.2s						
KOLN	Koldanda	13.72	128	*e*P	Pn	21 07 52.8	-2.4
	comp=E,39nm,0.3s						
GKN	Gorkha	14.22	125	*e*P	Pn	21 08 00.0	-1.7
	comp=E,44nm,0.3s						
KURBB	Kurchatov Arra	14.57	18	P	Pn	21 08 03.4	-2.3
	comp=E,0.1nm,0.3s,baz=211,slow=11,SNR=9.7						
KURBB	Kurchatov Arra	14.57	18	⇓P	Pn	21 08 03.2	-2.6
	comp=E,12nm,0.6s						
KURK	Kurchatov	14.68	18	⇑P	Pn	21 08 03.5	-3.6
	comp=E,7.9nm,0.8s						
KURK	Kurchatov	14.68	18		Pn	21 08 06.5	-0.6
KKN	Kakani	14.79	124	*e*P	Pn	21 08 06.2	-2.8
	comp=E,28nm,0.4s						
AB31	Akbulak array	14.89	329	⇑P	Pn	21 08 06.7	-3.2
	comp=E,1.8nm,0.3s,baz=156,slow=11,SNR=40						
AB31				⇑S	Sn	21 10 40.3	-14
	comp=E,9.9nm,0.8s,baz=157,slow=21,SNR=8.5						
ABKAR	Akbulak array	14.89	329	Pn	Pn	21 08 07.6	-2.3
ABKAR	Akbulak array	14.89	329	Pn	Pn	21 08 08.1	-1.8
PKIN	Phulchoki	15.01	125	*e*P	Pn	21 08 10.2	-1.6
	comp=E,50nm,0.5s						
PKI	Pulchoki	15.02	125	*e*P	Pn	21 08 10.3	-1.7
JIRN	Jiri	15.48	123	*e*P	Pn	21 08 16.0	-1.9
BVAR	Borovoye Array	16.09	358	P	Pn	21 08 23.9	-1.1
	comp=E,0.8nm,0.3s,baz=188,slow=19,SNR=11						
BRVK	Borovoye	16.13	357	⇓P	Pn	21 08 22.7	-2.7
	comp=E,3.3nm,0.5s						
BRVK	Borovoye	16.13	357	P	Pn	21 08 25.2	-0.2
BRVK				IAmb	IAmb	21 08 28.5	
	comp=Z,5.6nm,0.5s						
RAMN	Ramite	16.22	124	*e*P	Pn	21 08 26.3	-0.7
	comp=Z,42nm,0.4s						
AKTO	Aktyubinsk	16.60	329	P	Pn	21 08 30.3	-0.9
	comp=Z,1.0nm,0.3s,baz=135,slow=12,SNR=11						
AKTO				S	Sn	21 11 23.4	-12
	comp=Z,0.4nm,0.3s,baz=207,slow=20,SNR=4.6						
AKTO	Aktyubinsk	16.60	329	⇑P	Pn	21 08 26.6	-4.6
	comp=Z,7.4nm,0.7s						
AKTO				⇑S	Sn	21 11 20.9	-14
	comp=Z,11nm,1.0s						
TAPN	Taplejung	16.72	120	*e*P	Pn	21 08 32.5	-0.7
	comp=Z,28nm,0.4s						
ODAN	Odare	16.81	122	*e*P	Pn	21 08 33.2	-1.1
UOSS	Minazif	17.73	232	P	Pn	21 08 46.1	+0.9
UOSS				IAmb	IAmb	21 09 00.3	
	comp=Z,17nm,1.4s						
LSA	Lhasa	17.93	108	P	Pn	21 08 48.7	+0.7
LSA				IAmb	IAmb	21 08 52.2	
	comp=Z,12nm,0.7s						
ZAA0	Zalesovo Array	19.34	24	⇑P	P	21 09 02.0	0.0
	comp=Z,1.5nm,0.6s						
ZAA0	Zalesovo Array	19.34	24		P	21 09 01.9	0.0
ZAA0				IAmb	IAmb	21 09 04.0	
	comp=Z,8.9nm,0.6s						
ZALV	Zalesovo Beam	19.34	24	P	P	21 09 01.9	-0.1
	comp=Z,2.5nm,0.3s,baz=217,slow=9.8,SNR=35						
SHL	Shillong	20.75	117		P	21 09 19.1	+1.3
SHL				IAmb	IAmb	21 09 19.7	
	comp=Z,17nm,0.9s						
GNI	Garni	21.14	287	P	P	21 09 23.0	+1.3
	comp=Z,1.2nm,0.4s,baz=199,slow=21,SNR=1.1						
ARU	Arti	21.34	340	P	P	21 09 24.8	+1.3
	comp=Z,0.9nm,0.4s,baz=166,slow=8.9,SNR=5.7						
ARU	Arti	21.34	340	P	P	21 09 24.6	+1.1
ARU				IAmb	IAmb	21 09 30.8	
	comp=Z,16nm,1.5s						
KBZ	Khabaz	22.75	296	P	P	21 09 38.6	+0.2
	comp=Z,1.3nm,0.9s,baz=124,slow=3.6,SNR=1.2						
BELG	Belogornoye	22.79	320	P	P	21 09 38.5	-0.2
	comp=Z,5.5nm,0.8s,baz=157,slow=12,SNR=2.2						
KVAR	Kislovodsk Arr	22.93	297	P	P	21 09 40.1	-0.3
	comp=Z,4.1nm,0.9s,baz=172,slow=18,SNR=1.8						
RAYN	Ar Rayn	26.05	246	P	P	21 10 09.2	+0.4
RAYN				IAmb	IAmb	21 10 37.5	
	comp=Z,7.0nm,1.1s						
SONM	Songino Array	27.75	56	P	P	21 10 23.2	-0.8
	comp=Z,2.1nm,0.8s,baz=269,slow=8.5,SNR=12						
SONM	Songino Array	27.75	56	P	P	21 10 24.4	+0.5
ULN	Ulaanbaatar	28.19	56	P	P	21 10 29.1	+1.2
CMAR	Chiang Mai Arr	30.33	120	P	P	21 10 47.5	+0.6
	comp=Z,1.1nm,0.8s,baz=305,slow=8.5,SNR=8.6						
AKASG	Malin Array Be	32.98	308	P	P	21 11 10.1	+0.3
	comp=Z,0.5nm,0.5s,baz=80,slow=6.9,SNR=1.6						
AKASG				pP	pP	21 11 35.0	+1.8
	comp=Z,2.4nm,0.7s,baz=80,slow=7.5,SNR=4.3						
UBPT	Khong Chiam	37.07	117	P	P	21 11 45.3	0.0
UBPT				IAmb	IAmb	21 11 46.3	
	comp=Z,2.7nm,0.5s						
FIA1	FINESS Array S	37.33	326	P	P	21 11 48.0	+0.9
FINES	FINESS Array B	37.33	326	P	P	21 11 48.0	+0.9
	comp=Z,1.9nm,0.8s,baz=123,slow=10,SNR=13						
ARCES	ARCESS Array B	40.88	337	P	P	21 12 17.3	+0.8
	comp=Z,1.9nm,0.7s,baz=115,slow=8.6,SNR=9.5						
ARCES	ARCESS Array B	40.88	337	P	P	21 12 16.7	+0.2
KULM	Kulim	41.28	133	P	P	21 12 21.6	+1.2
HFS	Hagfors	42.96	322	P	P	21 12 34.0	+0.5
	comp=Z,3.2nm,0.7s,baz=84,slow=11,SNR=20						
HFS				pP	pP	21 12 59.4	+1.5
	comp=Z,2.1nm,0.5s,baz=97,slow=12,SNR=2.3						
NB201	NORSAR Array S	44.22	323	P	P	21 12 43.7	0.0
NB2	NORSAR Subarra	44.26	323	P	P	21 12 44.2	+0.2
	comp=Z,0.8nm,0.5s,baz=94,slow=7.9						
NOA	NORSAR Array B	44.26	323	P	P	21 12 44.2	+0.2
	comp=Z,0.7nm,0.6s,baz=104,slow=7.1,SNR=5.0						
KLR	Kul'dur	44.55	54	P	P	21 12 46.4	0.0
	comp=Z,0.7nm,0.4s,baz=260,slow=6.6,SNR=4.2						
TIXI	Tiksi	45.20	22	P	P	21 12 51.1	-0.1
TIXI				IAmb	IAmb	21 12 51.9	
	comp=Z,5.1nm,0.8s						
MYKOM	Kota Tinggi	45.98	132	P	P	21 12 59.9	+1.9
EKA	Eskdalemuir Ar	52.24	316	P	P	21 13 46.1	+0.8
	comp=Z,0.8nm,0.7s,baz=77,slow=6.6,SNR=3.8						
ESDC	Sonseca Array	57.60	298	P	P	21 14 24.5	+0.3
	comp=Z,0.8nm,0.9s,baz=65,slow=7.5,SNR=5.4						
ESDC				pP	pP	21 14 50.6	+0.9
	comp=Z,1.5nm,0.9s,baz=67,slow=8.1,SNR=6.9						
SUMG	Summit	60.76	341	P	P	21 14 47.1	+1.1
TORD	Torodi Ar. Bea	66.13	269	P	P	21 15 21.4	-0.2
	comp=Z,0.3nm,0.4s,baz=47,slow=6.0,SNR=13						
TORD	Torodi Ar. Bea	66.13	269	P	P	21 15 21.4	-0.2
KOWA	Kowa	69.94	273	P	P	21 15 45.6	+0.1
	comp=Z,0.7nm,0.6s,baz=100,slow=13,SNR=2.3						
IMAR	Indian Mountai	71.62	18	P	P	21 15 54.5	-0.4
BMAR	Burnt Mountain	72.41	14	P	P	21 16 00.5	+0.8
J20K	Nowinta River	72.97	19	P	P	21 16 03.4	+0.4
J20K				IAmb	IAmb	21 16 12.7	
	comp=Z,5.6nm,1.2s						
MLY	Manley	73.13	17	P	P	21 16 03.6	-0.4
MLY				IAmb	IAmb	21 16 04.3	
	comp=Z,5.0nm,1.3s						
INK	Inuvik	73.39	9	P	P	21 16 05.7	+0.3
	comp=Z,1.6nm,0.5s,baz=349,slow=4.3,SNR=4.1						
INK	Inuvik	73.39	9	P	P	21 16 05.9	+0.6
INK				IAmb	IAmb	21 16 06.2	

	comp=Z,7.8nm,1.4s						
K20K	Telida	73.65	20	P	P	21 16 07.0	0.0
ILAR	Eielson Array	74.23	16	P	P	21 16 09.2	-1.2
	comp=Z,0.8nm,1.0s,baz=306,slow=3.5,SNR=5.6						
BCAR	Beaver Creek A	76.82	15	P	P	21 16 26.0	+0.7
WB0	Warramunga Arr	81.81	122	P	P	21 16 52.1	-0.8
WB0				IAmb	IAmb	21 17 08.2	
	comp=Z,7.0nm,1.4s						
WRA	Warramunga Arr	81.89	122	P	P	21 16 52.1	-1.2
	comp=Z,1.4nm,0.6s,baz=323,slow=4.7,SNR=32						
WRA	Warramunga Arr	81.89	122	P	P	21 16 52.2	-1.1
AS31	Alice Springs	84.19	125	P	P	21 17 04.8	-0.3
ASAR	Alice Springs	84.19	125	P	P	21 17 04.1	-1.0
	comp=Z,1.4nm,0.6s,baz=309,slow=4.9,SNR=24						
ASAR	Alice Springs	84.19	125		P	21 17 04.4	-0.7

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*IDC **17** 21:11:34.0±1.1, 38°.55N×20°.39E, h0^{km}, mb3.9/9, mb1 3.8/16, mb1mx3.7/48, mbtmp3.7/16, ML3.7/6, MS3.3/2, Ms1 3.4/2, ms1mx2.6/36, Error ellipse: s-maj=18.0km s-min=17.1km az=159.0*

*THE **17** 21:11:36.2, 38°.53N×20°.50E, h14^{km}, ML3.6/10, Error ellipse: s-maj=0.7km s-min=0.3km az=287.0*

*BEO **17** 21:11:36.0±0.7, 38°.58N×20°.25E, h0^{km}, ML3.6/11*

*ATH **17** 21:11:36.6, 38°.53N×20°.54E, h13^{km}±1^{km}, ML3.7/11, Error ellipse: s-maj=1.5km s-min=0.6km az=286.0*

*NEIC **17** 21:11:36.1±1.8, 38°.55N±0°.02×20°.45E±0°.05, h10^{km}±1^{km}, Error ellipse: s-maj=6.3km s-min=2.9km az=107.0*

*PDG **17** 21:11:37.9±0.3, 38°.61N×20°.27E, h32^{km}±1^{km}, ML3.6/13, Error ellipse: s-maj=1.0km s-min=0.9km az=90.0*

ISC 17 21:11:35.7±0.7**, 38°.55N**±0°.01×**20°.46E**±0°.02**, h15**^{km}±4^{km}**, n228, σ1^{s}.29**/305**, mb4.0**/13**, 10C-8D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FSK	Fiskardo	0.12	136	P	Pg	21 11 39.2	0.0
FSK				S	Pb	21 11 41.1	+1.4
FSK	Fiskardo	0.12	136	P	Pg	21 11 39.2	0.0
FSK				S	Pb	21 11 41.0	+1.4
FSK				AML	AML	21 11 41.4	
FSK				AML	AML	21 11 41.5	
FSK	Fiskardo	0.12	136		Pb	21 11 41.1	+1.4
DRAG	Dragano-Lefkad	0.17	33	P	Pg	21 11 40.1	+0.2
DRAG				S	Sg	21 11 43.0	+0.3
DRAG	Dragano-Lefkad	0.17	33		Pg	21 11 40.1	+0.2
DRAG					Sg	21 11 43.0	+0.3
EVGI	Lefkada island	0.17	64	P	Pg	21 11 39.9	-0.1
EVGI				S	Sg	21 11 42.3	-0.5
EVGI	Lefkada island	0.17	64	P	Pg	21 11 39.9	-0.1
EVGI				S	Sg	21 11 42.4	-0.5
EVGI	Lefkada island	0.17	64		Pg	21 11 39.9	-0.1
EVGI					Sg	21 11 42.3	-0.5
NYDR	Nydri-Lefkada	0.25	48	P	Pg	21 11 41.2	0.0
NYDR				S	Sg	21 11 45.0	+0.1
NYDR	Nydri-Lefkada	0.25	48		Pg	21 11 41.2	0.0
NYDR					Sg	21 11 45.0	+0.1
KEF4	Livadi, Kephal	0.29	185	P	Pb	21 11 42.4	-0.1
KEF4				S	Sb	21 11 46.8	-0.3
KEF4	Livadi, Kephal	0.29	185	P	Pb	21 11 42.4	-0.1
KEF4				S	Sb	21 11 47.3	+0.2
KEF4	Livadi, Kephal	0.29	185		Pb	21 11 42.4	-0.1
KEF4					Sb	21 11 46.8	-0.3
LKD2	Lefkada island	0.29	33	P	Pg	21 11 42.1	+0.3
LKD2				S	Sg	21 11 46.0	-0.1
LKD2	Lefkada island	0.29	33	P	Pg	21 11 42.1	+0.3
LKD2				S	Sg	21 11 46.6	+0.5
LKD2				AML	AML	21 11 47.8	
	comp=N,50335µm,0.7s						
LKD2				AML	AML	21 11 52.0	
	comp=E,46459µm,0.3s						
LKD2	Lefkada island	0.29	33		Pg	21 11 42.1	+0.3
LKD2					Sg	21 11 46.0	-0.1
DMLN	Damoulianata-K	0.31	192	P	Pb	21 11 42.9	-0.1
DMLN				S	Sb	21 11 47.9	0.0
DMLN	Damoulianata-K	0.31	192		Pb	21 11 42.9	-0.1
DMLN					Sb	21 11 47.9	0.0
TSLK	Tsoukalades, L	0.32	29	P	Pg	21 11 42.9	+0.6
TSLK				S	Sg	21 11 47.4	+0.5
TSLK	Tsoukalades, L	0.32	29	P	Pg	21 11 42.9	+0.6
TSLK				S	Sb	21 11 47.8	-0.3
TSLK				AML	AML	21 11 49.1	
	comp=N,51373µm,0.5s						
TSLK				AML	AML	21 11 51.1	
	comp=E,63736µm,0.7s						
TSLK	Tsoukalades, L	0.32	29		Pg	21 11 42.9	+0.6
TSLK					Sg	21 11 47.4	+0.5
KEF3	Kipouria, Keph	0.35	194	P	Pg	21 11 43.0	+0.1
KEF3				S	Sg	21 11 48.3	+0.5
KEF3	Kipouria, Keph	0.35	194	P	Pg	21 11 43.1	+0.1
KEF3				S	Sg	21 11 48.5	+0.7
KEF3	Kipouria, Keph	0.35	194		Pg	21 11 43.0	+0.1
KEF3					Sg	21 11 48.3	+0.5
VLS	Valsamata	0.38	164	P	Pg	21 11 43.4	0.0
VLS				S	Sg	21 11 49.0	+0.3
VLS	Valsamata	0.38	164	P	Pg	21 11 43.5	+0.1
VLS				S	Sg	21 11 49.1	+0.3
VLS				AML	AML	21 11 49.5	
	comp=N,51311µm,0.3s						
VLS				AML	AML	21 11 50.2	
	comp=E,56282µm,0.3s						
VLS	Valsamata	0.38	164		Pg	21 11 43.4	0.0
VLS					Sg	21 11 49.0	+0.3
PSDA	Pessada-Kefalo	0.44	167	P	Pg	21 11 44.5	0.0
PSDA				S	Sg	21 11 51.1	+0.6
PSDA	Pessada-Kefalo	0.44	167	P	Pg	21 11 44.7	+0.2
PSDA	Pessada-Kefalo	0.44	167		Pg	21 11 44.5	0.0
PSDA					Sg	21 11 51.1	+0.6
PVO	Paravola	0.84	85	P	Pb	21 11 51.5	-0.4
PVO				S	Sn	21 12 04.4	-0.6
	comp=E,7µm,0.7s						
PVO	Paravola	0.84	85	P	Pb	21 11 51.5	-0.4
PVO				AML	AML	21 12 10.8	
	comp=N,13164µm,0.5s						
PVO				AML	AML	21 12 11.1	
	comp=E,12866µm,0.5s						
PVO	Paravola	0.84	85		Pb	21 11 51.5	-0.4
PVO					Sn	21 12 04.4	-0.6
VTN	Vitineika	0.85	137	P	Pb	21 11 51.9	-0.2
VTN	Vitineika	0.85	137	P	Pb	21 11 51.4	-0.7
LTHK	Lithakia	0.89	160	P	Pb	21 11 51.8	-0.9
LTHK				S	Sb	21 12 04.1	-0.2
	comp=E,4µm,0.5s						
LTHK	Lithakia	0.89	160	P	Pb	21 11 51.8	-0.9
LTHK				S	Sb	21 12 03.9	-0.4
RLS	Riolos of Patr	0.93	121	P	Pb	21 11 52.8	-0.7
RLS				S	Sg	21 12 06.0	+0.1
	comp=E,2µm,0.6s						
RLS	Riolos of Patr	0.93	121	P	Pb	21 11 52.8	-0.7
IGT	Igoumenitsa	0.99	354	P	Pb	21 11 54.8	+0.3
IGT				S	Sn	21 12 09.4	+0.6
	comp=E,3µm,0.7s						
IGT	Igoumenitsa	0.99	354	P	Pb	21 11 54.8	+0.3
IGT				AML	AML	21 12 14.3	
	comp=E,7856µm,0.8s						
IGT				AML	AML	21 12 16.5	
	comp=N,4024µm,0.5s						
UPR	University Cam	1.08	104	P	Pn	21 11 56.4	+0.2
EVR	Evrytania	1.12	70	P	Pb	21 11 56.0	-0.8
EVR				S	Sg	21 12 12.1	+0.1
	comp=N,2µm,0.7s						
EVR	Evrytania	1.12	70	P	Pb	21 11 56.5	-0.3
EVR				AML	AML	21 12 18.1	
	comp=E,3478µm,0.4s						
EVR				AML	AML	21 12 19.7	
	comp=N,3842µm,0.6s						
EFP	Efpalio	1.14	95	P	Pn	21 11 56.0	-1.1
EFP				S	Sg	21 12 13.0	+0.4
	comp=N,3µm,0.5s						
ANX	Ano Chora	1.15	87	P	Pn	21 11 56.5	-0.8
ANX	Ano Chora	1.15	87	P	Pn	21 11 56.5	-0.8
DRO	Drossia	1.15	121	P	Pn	21 11 56.5	-0.7
DRO	Drossia	1.15	121	P	Pn	21 11 56.6	-0.7
DRO				S	Sb	21 12 12.0	0.0
DRO				AML	AML	21 12 15.3	
	comp=E,11812µm,0.4s						
DRO				AML	AML	21 12 15.8	
	comp=N,7535µm,0.5s						
JAN	Janina	1.15	15	P	Pg	21 11 58.6	+0.7
JAN				S	Sg	21 12 14.2	+1.2
	comp=N,3µm,0.4s						
JAN	Janina	1.15	15	P	Pg	21 11 58.8	+0.9
JAN				AML	AML	21 12 19.2	
	comp=N,6239µm,0.3s						
JAN				AML	AML	21 12 22.3	
	comp=E,4603µm,0.5s						
LAKA	Lakka	1.23	104	P	Pn	21 11 57.6	-0.8
LAKA				S	Sg	21 12 15.6	+0.1
	comp=E,5µm,0.6s						
LAKA	Lakka	1.23	104	P	Pn	21 11 57.6	-0.8
LAKA				AML	AML	21 12 20.9	
	comp=N,2256µm,0.6s						
LAKA				AML	AML	21 12 26.1	
	comp=E,2493µm,0.7s						
KEK	Kerkira	1.27	336	P	Pg	21 12 00.8	+0.6
KEK				S	Sg	21 12 18.0	+1.1
	comp=E,1µm,0.9s						
KEK	Kerkira	1.27	336	P	Pg	21 12 00.9	+0.6
TRIZ	Trizonia	1.28	98	P	Pn	21 11 58.5	-0.5
TRIZ	Trizonia	1.28	98	P	Pn	21 11 58.4	-0.5
ALIK	Aliki, Aigiali	1.33	102	P	Pn	21 11 59.3	-0.4
ALIK				S	Sn	21 12 16.9	-0.2
SRN	Sarande	1.38	345	P	Pg	21 12 02.5	+0.3
MAKR	Makrakomi, Fth	1.39	70	P	Pb	21 12 01.3	-0.1
MAKR				S	Sb	21 12 18.9	0.0
	comp=E,5µm,0.7s						
MAKR	Makrakomi, Fth	1.39	70	P	Pb	21 12 01.3	-0.1
MAKR				AML	AML	21 12 29.2	
	comp=E,10272µm,0.8s						
MAKR				AML	AML	21 12 31.0	
	comp=N,9217µm,0.6s						
KLV	Kalavryta, Ach	1.42	110	P	Pn	21 12 00.7	-0.3
KLV	Kalavryta, Ach	1.42	110	P	Pn	21 12 00.8	-0.2
AGG	Agios Georgios	1.54	71	P	Pb	21 12 03.8	-0.1
AGG	Agios Georgios	1.54	71		Pb	21 12 04.0	+0.1
THL	Klokotos Trika	1.58	49	P	Pb	21 12 05.1	+0.5
GUR	Goura	1.60	112	P	Pn	21 12 03.8	+0.3
PENT	Pentalofos	1.73	18	P	Pg	21 12 08.8	-0.1
ITM	Ithomi	1.79	139	P	Pb	21 12 08.2	0.0
ITM	Ithomi	1.79	139		Pb	21 12 08.1	-0.1
NEST	Nestorio	1.92	14	P	Pg	21 12 11.8	-0.8
KZN	Kozani	2.03	30	P	Pb	21 12 12.6	+0.2
VLO	Vlora	2.06	339		Pn	21 12 11.3	+1.6
KBN	Korca	2.09	7		Pb	21 12 12.7	-0.6
SCTE	Santa Cesarea	2.17	315		Pn	21 12 13.1	+1.8
XOR	Xorichti	2.28	68	P	Pb	21 12 15.3	-1.3
FNA	Florina	2.35	17		Pb	21 12 16.2	-1.4
OHR	Ohrid	2.58	6	*e*Pn	Pn	21 12 19.0	+2.1
OHR				*e*Sn	Sb	21 12 52.3	-0.8
OHR	Ohrid	2.58	6	*i* Pn	Pb	21 12 20.4	-1.2
TIR	Tirane	2.84	351	⇑P	Pn	21 12 21.7	+1.3
TIR	Tirane	2.84	351	*e*Pn	Pn	21 12 22.4	+2.0
TIR				*e*Sn	Sn	21 12 53.7	-0.6
TIR	Tirane	2.84	351		Pn	21 12 22.9	+2.5
TIP	Timpagrande	2.96	284	⇑P	Pn	21 12 24.8	+2.7
TIP	Timpagrande	2.96	284		Pn	21 12 23.9	+1.8
VAY	Valandovo	3.21	30	*e*Pn	Pn	21 12 27.5	+1.9
VAY	Valandovo	3.21	30	*i* Pn	Pn	21 12 27.6	+2.1
STIP	Stip	3.41	22	*i* Pn	Pn	21 12 32.1	+3.7
SKO	Skopje	3.50	12	*i* Pn	Pn	21 12 32.3	+2.7
ULC	Ulcinj	3.54	345	⇓*i*Pn	Pn	21 12 30.7	+0.6
ULC				*i* Sn	Sn	21 13 10.4	-1.2
MATE	Matera	3.58	307	⇓P	Pn	21 12 32.5	+2.0
CEL	Celeste	3.60	267	Pn	Pn	21 12 30.9	0.0
DRME	Dracevica, Mon	3.77	345	*e*Pn	Pn	21 12 34.7	+1.5
DRME	Dracevica, Mon	3.77	345	*e*Pn	Pn	21 12 33.7	+0.5
DRME				*i* Sn	Sn	21 13 15.8	-1.4
BUM	Brajici-Budva	3.94	343	⇓*i*Pn	Pn	21 12 36.0	+0.4
BUM				*i* Sn	Sn	21 13 19.8	-1.7
PDG	Podgorica	3.99	347	⇑P	Pn	21 12 37.5	+1.3
PDG	Podgorica	3.99	347	*e*Pn	Pn	21 12 37.6	+1.4
PDG				*e*Sn	Sn	21 13 23.1	+0.5
PDG	Podgorica	3.99	347	*e*Pn	Pn	21 12 37.6	+1.4
PDG	Podgorica	3.99	347	Pn	Pn	21 12 37.8	+1.6
TTG	Podgorica	3.99	347	*e*Pn	Pn	21 12 37.1	+0.9
TTG				*i* Sn	Sn	21 13 21.2	-1.4
PVY	Plav	4.06	355	*e*Pn	Pn	21 12 38.1	+0.7
PVY				*i* Sn	Sn	21 13 23.4	-1.3
PRVS	Prvonek	4.15	17	*e*Pn	Pn	21 12 41.1	+2.7
CEME	Cevo	4.17	344	*e*Pn	Pn	21 12 39.0	+0.3
CEME				*i* Sn	Sn	21 13 25.3	-1.9
HCY	Herceg Novi	4.18	340	*e*Pn	Pn	21 12 39.0	+0.2
HCY	Herceg Novi	4.18	340	*e*Pn	Pn	21 12 39.0	+0.2
HCY				*e*Sn	Sn	21 13 25.3	-2.0
BOSS	Bosilegrad	4.24	21	*e*Pn	Pn	21 12 41.0	+1.3
IVA	Berane	4.34	355	*e*Pn	Pn	21 12 42.2	+1.0
IVA				*e*Sn	Sn	21 13 30.0	-1.6
KOME	Kolasin	4.36	351	*e*Pn	Pn	21 12 41.9	+0.5
KOME				*e*Sn	Sn	21 13 30.2	-1.8
NKME	Niksic	4.37	345	*e*Pn	Pn	21 12 42.0	+0.5
NKME				*i* Sn	Sn	21 13 30.3	-1.9
BARS	Barje	4.39	13	*e*Pn	Pn	21 12 44.1	+2.3
NKY	Niksic	4.41	346	*e*Pn	Pn	21 12 42.4	+0.3
NKY				*i* Sn	Sn	21 13 31.1	-2.1
TREB	Trebinje	4.46	340	*e*Pn	Pn	21 12 43.3	+0.5
TREB				*e*Sn	Sn	21 13 32.5	-1.9
TREB	Trebinje	4.46	340	*e*Pn	Pn	21 12 43.5	+0.7
DBRK	Dubrovnik	4.48	338	*e*Pn	Pn	21 12 43.2	+0.3
DBRK				Sn	Sn	21 13 32.5	-2.3
VTS	Vitosha	4.58	27	⇓P	Pn	21 12 46.7	+2.2
VTS	Vitosha	4.58	27	*e*Pn	Pn	21 12 46.4	+1.8
VTS				*e*Sn	Sn	21 13 39.2	+1.6
VTS	Vitosha	4.58	27	Pn	Pn	21 12 46.6	+2.0
BRY	Bratogost	4.59	342	*e*Pn	Pn	21 12 45.1	+0.5
BRY	Bratogost	4.59	342	*e*Pn	Pn	21 12 44.6	0.0
BRY				*e*Sn	Sn	21 13 35.2	-2.5
SELS	Selova	4.70	6	*e*Pn	Pn	21 12 46.8	+0.8
SJES	Sjenica	4.73	356	*e*Pn	Pn	21 12 47.6	+1.1
SJES				*e*Sn	Sn	21 13 42.3	+1.3
UPM	Unac-Piva	4.80	346	*e*Pn	Pn	21 12 49.3	+1.7
UPM	Unac-Piva	4.80	346	*e*Pn	Pn	21 12 47.8	+0.2
UPM				*e*Sn	Sn	21 13 41.1	-1.9
STON	Ston	4.80	335	*e*Pn	Pn	21 12 48.3	+0.9
STON				*e*Sn	Sn	21 13 42.4	-0.3
STON	Ston	4.80	335	*e*Pn	Pn	21 12 47.8	+0.4
STON	Ston	4.80	335	*e*Pn	Pn	21 12 48.0	+0.6
IDI	Anoyia	4.81	131	Pn	Pn	21 12 49.9	+2.2
	comp=N,0.8nm,0.3s,baz=307,slow=12,SNR=9.4						
IDI				Sn	Sn	21 13 41.6	-1.6
	comp=N,1.7nm,0.3s,baz=324,slow=9.6,SNR=2.1						
SGRT	San Giovanni R	4.83	313		Pn	21 12 49.3	+1.5
PLE	Pljevlja	4.85	351	*e*Pn	Pn	21 12 48.9	+0.7
PLE				*e*Sn	Sn	21 13 41.7	-2.4
VAE	Valguarnera	4.89	259	Pn	Pn	21 12 47.3	-1.4
	comp=N,0.6nm,0.3s,baz=50,slow=7.6,SNR=1.6						
VAE				Sn	Sn	21 13 43.0	-2.1
	comp=N,0.8nm,0.3s,baz=34,slow=12,SNR=2.1						
ALN	Alexandroupoli	4.91	60	Pn	Pn	21 12 50.6	+1.8
RAFF	Raffo Rosso	5.00	257	Pn	Pn	21 12 50.6	+0.5
RUDO	Rudo	5.13	351	*e*Pn	Pn	21 12 52.4	+0.4
BOVS	Bovan	5.17	10	⇓P	Pn	21 12 53.3	+0.8
BOVS	Bovan	5.17	10	*e*Pn	Pn	21 12 53.6	+1.1
BOVS				*e*Sn	Sn	21 13 51.9	+0.1
PAOL	Paolisi	5.17	301		Pn	21 12 54.5	+1.9
BBLS	Lazići	5.38	352	*e*Sn	Sn	21 13 57.3	+0.3
BBLS	Lazići	5.38	352	*e*Pn	Pn	21 12 56.8	+1.5
MAKA	Makarska	5.41	332	*e*Pn	Pn	21 12 56.6	+0.9
MAKA				Sn	Sn	21 13 55.9	-1.7
HVAR	Hvar	5.54	328	*e*Pn	Pn	21 12 57.9	+0.4
RICI	Ricice	5.55	334	*e*Pn	Pn	21 12 58.5	+0.8
DIVS	Divibare	5.56	357	*e*Pn	Pn	21 12 58.6	+0.7
DIVS				*e*Sn	Sn	21 14 00.5	-1.0
DIVS	Divibare	5.56	357	*e*Pn	Pn	21 12 58.7	+0.8
DIVS	Divibare	5.56	357		Pn	21 12 58.6	+0.7
HAPS	Han Pijesak,Bl	5.65	349	*e*Pn	Pn	21 12 59.4	+0.2
CORL	Corleone	5.67	266	Pn	Pn	21 12 58.8	-0.6
TRUS	Trudelj	5.67	360	*e*Pn	Pn	21 13 00.1	+0.7
TRUS				*e*Sn	Sn	21 14 03.2	-1.0
PLVB	Pleven	5.77	32	⇓P	Pn	21 13 03.6	+2.9
CLTB	Caltabellotta	5.80	263	Pn	Pn	21 13 01.6	+0.5
KIJV	Kijevo	6.25	332	*e*Pn	Pn	21 13 08.4	+1.1
KIJV				Sn	Sn	21 14 18.1	-0.3
ZIRJ	Zirje	6.27	326	*e*Pn	Pn	21 13 08.1	+0.6
MDVR	Moldovita	6.30	8	⇑P	Pn	21 13 08.2	+0.2
MGRS	Mrkonjic Grad	6.39	338	*e*Pn	Pn	21 13 10.6	+1.4
MORI	Morici	6.41	328	*e*Pn	Pn	21 13 10.7	+1.2
HERR	Herculane	6.50	12	⇑P	Pn	21 13 11.6	+0.9
AQU	L'Aquila	6.59	307	Pn	Pn	21 13 14.1	+2.1
FRGS	Fruska Gora	6.62	356	⇑P	Pn	21 13 12.7	+0.3
FRGS	Fruska Gora	6.62	356	*e*Pn	Pn	21 13 11.6	-0.9
FRGS	Fruska Gora	6.62	356	*e*Pn	Pn	21 13 12.2	-0.3
BLY	Banja Luka	6.67	339	*e*Pn	Pn	21 13 14.1	+1.1
DUGI	Dugi Otok	6.79	325	*e*Pn	Pn	21 13 15.8	+1.0
UDBI	Udbina	6.94	331	*e*Pn	Pn	21 13 18.8	+2.0
UDBI				Sn	Sn	21 14 35.6	+0.2
MRAK	Mrakovica	6.99	339	*e*Pn	Pn	21 13 17.4	-0.1
NRCA	Norcia	7.03	310		Pn	21 13 20.8	+2.7
GZR	Gura Zlata	7.06	13	⇓P	Pn	21 13 20.6	+2.1
PLIT	Plitvice	7.29	332	*e*Pn	Pn	21 13 23.1	+1.6
PLIT				Sn	Sn	21 14 42.4	-1.6
NVLJ	Novalja	7.33	327	*e*Pn	Pn	21 13 23.1	+1.0
RABC	Rab	7.51	327	*e*Pn	Pn	21 13 25.6	+0.9
MOSL	Moslavina	7.58	340	Sn	Sn	21 14 47.5	-3.7
MURB	Monte Urbino	7.63	311		Pn	21 13 28.5	+2.2
VOIR		7.69	25	⇑P	Pn	21 13 30.0	+2.9
ELL	Elmali	7.71	101	Pn	Pn	21 13 27.6	+0.1
MORH	Mrgy, Hungar	7.78	351	⇑P	Pn	21 13 28.2	-0.1
MORH	Mrgy, Hungar	7.78	351	*e*Pn	Pn	21 13 27.9	-0.4
OZLJ	Ozalj	7.98	334	*e*Pn	Pn	21 13 32.0	+1.1
SMRN	Sveta Marina	8.01	326	*e*Pn	Pn	21 13 32.1	+0.7
MLR	Muntele Rosu	8.05	29	⇓P	Pn	21 13 36.1	+4.0
MLR	Muntele Rosu	8.05	29	Pn	Pn	21 13 35.9	+3.8
	comp=N,0.3nm,0.3s,baz=250,slow=13,SNR=6.7						
MLR				LR	LR	21 17 24.6	
	comp=N,151nm,20.4s,baz=166,slow=44						
MLR	Muntele Rosu	8.05	29	Pn	Pn	21 13 33.1	+1.0
BRJN	Brijuni	8.09	324	*e*Pn	Pn	21 13 32.5	0.0
RIY	Rijeka	8.11	329	*e*Pn	Pn	21 13 33.7	+1.0
RIY	Rijeka	8.11	329	*i* Pn	Pn	21 13 34.0	+1.3
CRES	Cresnjev	8.17	335	*e*Pn	Pn	21 13 33.6	0.0
LOBO	Lobor	8.27	338	*e*Pn	Pn	21 13 35.4	+0.4
CEY	Cerknica	8.47	330	*e*Pn	Pn	21 13 38.8	+1.1
PLOR	Plostina	8.62	30	⇑P	Pn	21 13 42.9	+3.0
VRI	Vrincioaia	8.67	30	⇑P	Pn	21 13 43.1	+2.6
LJU	Ljubljana	8.68	332	*e*Pn	Pn	21 13 41.4	+0.7
SOKA	Soboth	9.06	336	*e*Pn	Pn	21 13 46.0	+0.1
	comp=N,4.1nm,0.7s,SNR=7.7						
SOKA				*e*Sn	Sn	21 15 23.6	-4.0
	comp=N,2.5nm,0.6s						
OBKA	Obir	9.07	333	*e*Pn	Pn	21 13 47.7	+1.6
	comp=N,0.9nm,0.2s						
OBKA				*e*Sn	Sn	21 15 24.2	-3.8
	comp=N,3.5nm,0.6s						
PSZ	Piszkesteto	9.38	358	Pn	Pn	21 13 50.5	+0.3
TEOL	Teolo	9.44	319	Pn	Pn	21 13 50.8	-0.2
STAL	STALIGIAL	9.60	326	Pn	Pn	21 13 53.6	+0.3
BURAR	Bucovina Array	9.71	19	Pn	Pn	21 13 57.0	+2.2
ZOU	Zoufplan	9.72	328	Pn	Pn	21 13 55.7	+0.6
CTI	Castel Tesino	9.93	322	Pn	Pn	21 13 57.8	-0.1
ABTA	Abfaltersbach	10.07	327	*e*Sn	Sn	21 15 49.2	-3.2
	comp=N,4.4nm,0.7s						
ABTA	Abfaltersbach	10.07	327	*e*Pn	Pn	21 14 00.8	+1.1
	comp=N,0.9nm,0.4s						
WTTA	Wattenberg	10.85	326	*e*Pn	Pn	21 14 13.0	+2.6
	comp=N,1.8nm,0.3s						
WTTA				*e*Sn	Sn	21 16 08.2	-3.4
	comp=N,8.2nm,0.8s						
MOTA	Moosalm	11.14	325	*e*Pn	Pn	21 14 15.7	+1.2
	comp=N,1.6nm,0.4s,SNR=5.5						
MOTA				*e*Sn	Sn	21 16 16.9	-2.0
	comp=N,4.8nm,0.7s						
DAVOX	Davos/Dischmat	11.32	320	Pn	Pn	21 14 18.4	+1.4
	comp=N,0.2nm,0.3s,baz=204,slow=16,SNR=1.6						
DAVOX				Sn	Sn	21 16 17.6	-5.7
	comp=N,0.2nm,0.3s,baz=141,slow=22,SNR=2.7						
GERES	GERESS Array B	11.39	337	Pn	Pn	21 14 17.0	-0.8
	comp=N,0.3nm,0.3s,baz=158,slow=14,SNR=4.5						
GERES	GERESS Array B	11.39	337		Pn	21 14 18.6	+0.7
TUE	Stuetta	11.39	318	Pn	Pn	21 14 19.1	+1.2
KHC	Kasperske Hory	11.68	337	*e*PN	Pn	21 14 21.1	-0.7
SENIN	Lac Senin/Sane	12.46	313	Pn	Pn	21 14 33.4	+0.9
MMAI	Mount Meron Ar	13.32	110	Pn	Pn	21 14 43.1	-1.2
	comp=N,0.9nm,0.3s,baz=312,slow=13,SNR=2.4						
ECH	Echery	13.65	319	Pn	Pn	21 14 49.5	+0.8
GHAJ	Ghor Haditha	14.34	116	Pn	Pn	21 14 57.3	-0.7
PABE	Paberze	17.13	7	Pn	P	21 15 35.3	-0.7
ESDC	Sonseca Array	18.98	281	P	P	21 15 56.8	+0.3
	comp=N,0.1nm,0.3s,baz=67,slow=10,SNR=4.1						
HFS	Hagfors	22.03	351	P	P	21 16 30.1	+0.8
	comp=N,2.9nm,0.6s,baz=161,slow=9.4,SNR=11						
EKA	Eskdalemuir Ar	23.10	324	P	P	21 16 41.5	+0.8
	comp=N,1.2nm,0.6s,baz=40,slow=21,SNR=2.3						
FINES	FINESS Array B	23.19	7	P	P	21 16 41.0	-0.6
	comp=N,4.2nm,0.8s,baz=162,slow=11,SNR=14						
FIA1	FINESS Array S	23.19	7	P	P	21 16 41.1	-0.5
FIA1				IAmb	IAmb	21 16 45.2	
	comp=Z,6.9nm,0.9s						
NB201	NORSAR Array S	23.25	349	P	P	21 16 42.4	+0.2
NOA	NORSAR Array B	23.25	349	P	P	21 16 42.2	0.0
	comp=Z,1.0nm,0.8s,baz=160,slow=9.9,SNR=1.9						
BELG	Belogornoye	23.38	45	P	P	21 16 44.6	+1.2
	comp=Z,11nm,0.9s,baz=13,slow=3.4,SNR=4.2						
ABKAR	Akbulak array	30.08	56	P	P	21 17 43.9	-0.3
TORD	Torodi Ar. Bea	30.29	218	P	P	21 17 47.4	+1.1
	comp=Z,0.7nm,0.7s,baz=25,slow=9.6,SNR=6.2						
ARCES	ARCESS Array B	31.17	3	P	P	21 17 55.6	+1.9
	comp=Z,1.7nm,0.8s,baz=188,slow=9.2,SNR=1.8						
KKAR	Karatay Array	37.70	67	P	P	21 18 50.8	+0.4
MK31	Makanchi Array	45.15	59	P	P	21 19 51.1	-0.4
MK31				IAmb	IAmb	21 19 53.4	
	comp=Z,4.0nm,1.4s						
MKAR	Makanchi Array	45.15	59	P	P	21 19 51.2	-0.3
	comp=Z,0.4nm,0.4s,baz=274,slow=7.5,SNR=9.6						
ZAA0	Zalesovo Array	45.48	48	P	P	21 19 53.2	-0.8
ZAA0				IAmb	IAmb	21 20 00.6	
	comp=Z,2.5nm,0.9s						
ZALV	Zalesovo Beam	45.48	48	P	P	21 19 54.0	0.0
	comp=Z,2.1nm,0.5s,baz=275,slow=8.4,SNR=9.3						
ZALV	Zalesovo Beam	45.48	48	P	P	21 19 53.5	-0.6
SHL	Shillong	60.53	80	P	P	21 21 43.4	-2.3
SHL				IAmb	IAmb	21 21 55.4	
	comp=Z,9.3nm,0.9s						
CMAR	Chiang Mai Arr	69.89	82	LR	LR	21 59 04.3	
	comp=Z,23nm,18.1s,baz=202,slow=41						

PRU 17 21:12:39.9±0.0**, 51°.48N**×**16°.27E, h0**^{km}**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHVC	Chvalec	0.90	189	*e*PG	Pg	21 12 56.7	-0.5
CHVC				*e*SG	Sg	21 13 08.7	-0.2
OSTC	Ostas	0.93	182	*e*PG	Pg	21 12 57.6	0.0
OSTC				*e*SG	Sg	21 13 10.1	+0.5
UPC	Upice	0.99	190	*e*PG	Pg	21 12 57.6	-1.2
UPC				*e*SG	Sg	21 13 11.5	-0.1
	comp=Z,6.5nm,0.3s						
DPC	Dobruska-Polom	1.13	178	*e*PG	Pg	21 13 00.9	-0.7
DPC				*e*SG	Sg	21 13 15.4	-0.8
PVCC	Panska Ves	1.44	229	*e*PG	Pn	21 13 06.4	-0.8
PVCC				*e*SG	Sg	21 13 25.8	-0.2

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*IDC **17** 21:23:49.1±0.9, 6°.03S×147°.63E, h0^{km}, mb4.0/11, mb1 4.2/15, mb1mx4.1/30, mbtmp4.0/15, ML3.8/3, MS3.1/9, Ms1 3.1/9, ms1mx2.9/31, Error ellipse: s-maj=29.3km s-min=14.7km az=95.0*

*NEIC **17** 21:23:56.4±1.7, 6°.11S±0°.08×147°.5E±0°.2, h45^{km}±8^{km}, mb4.1/10, Error ellipse: s-maj=24.2km s-min=5.7km az=64.0*

ISC 17 21:23:56.8±0.7**, 6°.12S**±0°.06×**147°.3E**±0°.1**, h50**^{km}**, n33, σ1^{s}.47**/36**, mb4.0**/14**, MS3.0**/6**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.27	183	Pn	Pn	21 24 44.9	-0.8
	23nm,0.3s,baz=20,slow=5.7,SNR=23						
PMG				Sn	Sn	21 25 25.0	+1.6
	28nm,0.3s,baz=10.0,slow=18,SNR=8.4						
PMG				LR	LR	21 26 24.7	
	comp=Z,279nm,20.6s,baz=62,slow=46						
PMG	Port Moresby	3.27	183		Pn	21 24 45.6	-0.1
PMG				Sn	Sn	21 25 25.7	+2.3
JAY	Jayapura	7.51	298	Pn	Pn	21 25 44.3	+0.4
	0.4nm,0.3s,baz=114,slow=23,SNR=1.4						
JAY				LR	LR	21 29 09.9	
	comp=Z,146nm,21.6s,baz=204,slow=42						
CTAO	Charters Tower	13.93	184	Pn	Pn	21 27 12.4	+0.7
SIJI	Sorong	16.85	287	P	Pn	21 27 51.1	+1.7
	0.7nm,0.3s,baz=84,slow=7.5,SNR=8.1						
WR0	Warramunga Arr	18.54	221	P	P	21 28 09.1	-0.4
WR0				IAmb	IAmb	21 28 15.0	
	comp=Z,7.2nm,0.8s						
WRA	Warramunga Arr	18.66	221	P	P	21 28 10.9	+0.1
	comp=Z,0.4nm,0.3s,baz=51,slow=11,SNR=28						
WRA				S	Sn	21 31 33.6	-6.0
	comp=Z,0.1nm,0.3s,baz=52,slow=23,SNR=7.2						

WRA				PcP	**PcP**	**21 32 38.7**	**+0.8**
	comp=Z,0.0nm,0.3s,baz=50,slow=1.6,SNR=4.0						
WRA				LR	LR	21 36 31.3	
	comp=Z,51nm,20.1s,baz=35,slow=40						
WRA	**Warramunga Arr**	**18.66**	**221**	P	**P**	**21 28 09.7**	**-1.1**
AS31	**Alice Springs**	**21.71**	**215**	P	**P**	**21 28 43.8**	**-0.1**
AS31				IAmb	IAmb	21 29 02.0	
	comp=Z,3.2nm,0.5s						
ASAR	**Alice Springs**	**21.71**	**215**	P	**P**	**21 28 44.0**	**+0.1**
	comp=Z,1.6nm,0.4s,baz=52,slow=8.1,SNR=41						
ASAR				S	**S**	**21 32 41.0**	**-0.6**
	comp=Z,1.5nm,1.0s,baz=46,slow=16,SNR=5.6						
ASAR	**Alice Springs**	**21.71**	**215**	P	**P**	**21 28 44.0**	**+0.1**
BATI	**Baumata**	**23.77**	**259**	P	**P**	**21 29 07.7**	**+2.7**
	comp=Z,12nm,0.8s,baz=157,slow=3.5,SNR=1.5						
BATI				LR	LR	21 40 40.5	
	comp=Z,64nm,20.7s,baz=91,slow=42						
FITZ	**Fitzroy Crossi**	**24.28**	**239**	P	**P**	**21 29 10.2**	**+0.6**
	comp=Z,5.4nm,0.7s,baz=358,slow=7.0						
MMRI	**Maumere**	**25.00**	**263**	P	**P**	**21 29 17.5**	**+1.2**
LUWI	**Luwuk**	**25.01**	**281**	P	**P**	**21 29 17.3**	**+1.0**
STKA	**Stephens Creek**	**26.18**	**191**	P	**P**	**21 29 26.2**	**-0.6**
	comp=Z,3.2nm,0.7s,baz=336,slow=8.3,SNR=8.3						
STKA				LR	LR	21 41 28.5	
	comp=Z,46nm,18.1s,baz=24,slow=40						
STKA	**Stephens Creek**	**26.18**	**191**	P	**P**	**21 29 26.3**	**-0.5**
KAPI	**Kappang**	**27.47**	**271**	LR	LR	21 42 55.4	
	comp=Z,13nm,19.3s,baz=90,slow=41						
MJAR	**Matsushiro Arr**	**43.28**	**349**	P	**P**	**21 31 51.5**	**-2.1**
	comp=Z,3.4nm,0.9s,baz=174,slow=8.5,SNR=6.7						
MJAR				LR	LR	21 48 14.1	
	comp=Z,20nm,19.1s,baz=255,slow=34						
KSRS	**Korea Array**	**46.98**	**339**	P	**P**	**21 32 21.6**	**-1.4**
	comp=Z,1.5nm,0.9s,baz=165,slow=10,SNR=3.0						
KSRS				LR	LR	21 49 51.6	
	comp=Z,14nm,22.0s,baz=165,slow=33						
PPT	**Papeete**	**62.55**	**107**	LR	LR	21 58 13.9	
	comp=Z,34nm,19.9s,baz=3.0,slow=33						
SONM	**Songino Array**	**64.66**	**331**	P	**P**	**21 34 30.1**	**+0.5**
	comp=Z,1.2nm,0.9s,baz=84,slow=5.4,SNR=6.1						
SONM	**Songino Array**	**64.66**	**331**	P	**P**	**21 34 30.6**	**+0.9**
SONM				IAmb	IAmb	21 34 45.6	
	comp=Z,0.6nm,1.0s						
VNDA	**Vanda**	**71.78**	**177**	P	**P**	**21 35 13.7**	**+0.2**
	comp=Z,1.0nm,0.7s,baz=330,slow=5.0,SNR=4.7						
VNDA	**Vanda**	**71.78**	**177**	P	**P**	**21 35 13.4**	**-0.2**
VNDA				IAmb	IAmb	21 35 32.0	
	comp=Z,5.5nm,1.5s						
MK31	**Makanchi Array**	**77.79**	**320**	P	**P**	**21 35 49.5**	**+0.7**
MK31				IAmb	IAmb	21 35 56.7	
	comp=Z,2.5nm,1.2s						
MKAR	**Makanchi Array**	**77.79**	**320**	P	**P**	**21 35 48.5**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=98,slow=8.6,SNR=6.2						
MKAR	**Makanchi Array**	**77.79**	**320**	P	**P**	**21 35 49.7**	**+0.8**
ZALV	**Zalesovo Beam**	**79.28**	**328**	P	**P**	**21 35 55.9**	**-1.0**
	comp=Z,0.8nm,0.7s,baz=102,slow=6.1,SNR=2.6						
QSPA	**South Pole Qui**	**83.85**	**180**	P	**P**	**21 36 21.0**	**0.0**
QSPA				IAmb	IAmb	21 36 33.0	
	comp=Z,2.8nm,0.8s						
ILAR	**Eielson Array**	**85.46**	**23**	P	**P**	**21 36 27.9**	**-1.0**
	comp=Z,0.5nm,0.7s,baz=255,slow=5.3,SNR=5.0						
TORD	**Torodi Ar. Bea**	**145.43**	**284**	PKPbc	**PKPdf**	**21 43 30.3**	**-0.1**
	comp=Z,5.6nm,1.0s,baz=77,slow=4.1,SNR=22						
TORD	**Torodi Ar. Bea**	**145.43**	**284**		**PKPdf**	**21 43 30.1**	**-0.3**

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*IDC **17** 21:25:30.6±79.0, 36°.68N×18°.94E, h0^{km}, mb3.8/3, mb1 3.8/3, mb1mx3.5/30, mbtmp3.8/3, Error ellipse: s-maj=1515.0km s-min=71.1km az=41.0*

*ATH **17** 21:25:50.8, 38°.48N×20°.50E, h13^{km}±1^{km}, ML3.1/12, Error ellipse: s-maj=1.5km s-min=0.6km az=285.0*

*BEO **17** 21:25:51.8±0.9, 38°.58N×20°.25E, h0^{km}, ML3.1/6*

*THE **17** 21:25:51.2, 38°.48N×20°.49E, h0^{km}±1^{km}, ML3.1/25, Error ellipse: s-maj=1.4km s-min=0.5km az=253.0*

ISC 17 21:25:50.7±0.8**, 38°.48N**±0°.01×**20°.47E**±0°.02**, h11**^{km}±4^{km}**, n81, σ1^{s}.14**/128**, mb3.8**/3**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FSK	**Fiskardo**	**0.07**	**109**	P	**Pg**	**21 25 52.8**	**-0.2**
FSK				S	**Sg**	**21 25 54.7**	**0.0**
	70µm,0.2s						
FSK	**Fiskardo**	**0.07**	**109**	P	**Pg**	**21 25 52.8**	**-0.2**
FSK				S	**Sg**	**21 25 54.2**	**-0.5**
FSK				AML	AML	21 25 54.5	
FSK				AML	AML	21 25 54.8	
EVGI	**Lefkada island**	**0.20**	**46**	P	**Pg**	**21 25 55.0**	**+0.1**
EVGI				S	**Sg**	**21 25 58.5**	**+0.7**
	37µm,0.3s						
EVGI	**Lefkada island**	**0.20**	**46**	P	**Pg**	**21 25 55.1**	**+0.1**
EVGI				S	**Sg**	**21 25 58.3**	**+0.5**
DRAG	**Dragano-Lefkad**	**0.22**	**22**	P	**Pg**	**21 25 55.3**	**+0.1**
DRAG				S	**Sg**	**21 25 59.3**	**+1.0**
DRAG	**Dragano-Lefkad**	**0.22**	**22**	P	**Pg**	**21 25 55.3**	**+0.1**
DRAG				S	**Sg**	**21 25 59.1**	**+0.8**
KEF4	**Livadi, Kephal**	**0.23**	**190**	P	**Pg**	**21 25 55.6**	**+0.2**
KEF4				S	**Sg**	**21 26 00.1**	**+1.5**
KEF4	**Livadi, Kephal**	**0.23**	**190**	P	**Pg**	**21 25 55.6**	**+0.2**
KEF4				S	**Sg**	**21 25 59.7**	**+1.1**
DMLN	**Damoulianata-K**	**0.26**	**198**	P	**Pg**	**21 25 56.1**	**+0.1**
DMLN				S	**Sg**	**21 26 00.0**	**+0.5**
	11µm,0.5s						
DMLN	**Damoulianata-K**	**0.26**	**198**	P	**Pg**	**21 25 56.0**	**+0.1**
DMLN				S	**Sg**	**21 26 00.5**	**+1.1**
LXRA	**Lixouri, Kepha**	**0.28**	**186**	P	**Pg**	**21 25 56.7**	**+0.3**
NYDR	**Nydri-Lefkada**	**0.29**	**38**	P	**Pg**	**21 25 56.5**	**-0.1**
NYDR				S	**Sg**	**21 26 01.3**	**+0.8**
	9µm,0.2s						
NYDR	**Nydri-Lefkada**	**0.29**	**38**	P	**Pg**	**21 25 56.5**	**-0.1**
NYDR				S	**Sg**	**21 26 00.8**	**+0.3**
KEF3	**Kipouria, Keph**	**0.30**	**199**	P	**Pg**	**21 25 56.3**	**-0.3**
KEF3				S	**Sg**	**21 26 01.4**	**+0.8**
KEF3	**Kipouria, Keph**	**0.30**	**199**	P	**Pg**	**21 25 56.4**	**-0.3**
KEF3				S	**Sg**	**21 26 00.5**	**-0.1**
VLS	**Valsamata**	**0.32**	**163**	P	**Pg**	**21 25 57.0**	**-0.1**
VLS				S	**Sg**	**21 26 02.6**	**+1.2**
	9µm,0.3s						
VLS	**Valsamata**	**0.32**	**163**	P	**Pg**	**21 25 57.0**	**-0.1**
VLS				S	**Sg**	**21 26 02.3**	**+0.9**
VLS				AML	AML	21 26 03.7	
	comp=N,16933µm,0.3s						
VLS				AML	AML	21 26 03.7	
	comp=E,12814µm,0.2s						
LKD2	**Lefkada island**	**0.34**	**25**	P	**Pg**	**21 25 57.5**	**0.0**
LKD2				S	**Sg**	**21 26 02.8**	**+0.8**
LKD2	**Lefkada island**	**0.34**	**25**	P	**Pg**	**21 25 57.4**	**0.0**
LKD2				S	**Sg**	**21 26 02.6**	**+0.6**
LKD2				AML	AML	21 26 03.8	
	comp=E,10458µm,0.2s						
LKD2				AML	AML	21 26 05.6	
	comp=N,8702µm,0.6s						
TSLK	**Tsoukalades, L**	**0.37**	**23**	P	**Pg**	**21 25 58.2**	**+0.1**
TSLK				S	**Sg**	**21 26 04.3**	**+1.3**
	comp=N,8µm,0.6s						
TSLK	**Tsoukalades, L**	**0.37**	**23**	P	**Pg**	**21 25 58.2**	**+0.1**
TSLK				S	**Sg**	**21 26 02.9**	**0.0**
TSLK				AML	AML	21 26 05.5	
	comp=E,16874µm,0.4s						
TSLK				AML	AML	21 26 10.5	
	comp=N,15669µm,0.7s						
PSDA	**Pessada-Kefalo**	**0.38**	**167**	P	**Pg**	**21 25 58.0**	**-0.2**
PSDA				S	**Sg**	**21 26 04.6**	**+1.4**
PSDA	**Pessada-Kefalo**	**0.38**	**167**	P	**Pg**	**21 25 58.0**	**-0.2**
PSDA				S	**Sg**	**21 26 04.1**	**+0.9**
VTN	**Vitineika**	**0.80**	**135**	P	**Pg**	**21 26 06.5**	**+0.4**
VTN				S	**Sg**	**21 26 16.7**	**+0.2**
VTN	**Vitineika**	**0.80**	**135**	P	**Pg**	**21 26 06.4**	**+0.3**
LTHK	**Lithakia**	**0.82**	**159**	P	**Pg**	**21 26 05.8**	**-0.8**
LTHK				S	**Sb**	**21 26 19.5**	**+1.4**
	comp=N,2µm,0.6s						
LTHK	**Lithakia**	**0.82**	**159**	P	**Pg**	**21 26 05.7**	**-0.9**
PVO	**Paravola**	**0.84**	**81**	P	**Pg**	**21 26 06.6**	**-0.2**
PVO				S	**Sg**	**21 26 18.1**	**+0.4**
	comp=N,2µm,0.5s						
PVO	**Paravola**	**0.84**	**81**	P	**Pg**	**21 26 06.4**	**-0.4**
PVO				AML	AML	21 26 26.5	
	comp=E,3168µm,0.4s						
PVO				AML	AML	21 26 27.0	
	comp=N,4430µm,0.6s						
RLS	**Riolos of Patr**	**0.89**	**118**	P	**Pg**	**21 26 07.4**	**-0.5**
RLS				S	**Sg**	**21 26 20.0**	**+0.6**
	comp=N,630nm,0.5s						
RLS	**Riolos of Patr**	**0.89**	**118**	P	**Pg**	**21 26 07.3**	**-0.5**
RLS				AML	AML	21 26 28.1	
	comp=N,1404µm,0.5s						
RLS				AML	AML	21 26 30.6	
	comp=E,1084µm,0.5s						
UPR	**University Cam**	**1.05**	**101**	P	**Pn**	**21 26 11.9**	**+0.5**
UPR				S	**Sn**	**21 26 26.1**	**+0.1**
IGT	**Igoumenitsa**	**1.05**	**354**	P	**Pg**	**21 26 10.1**	**-0.8**
IGT				S	**Sn**	**21 26 26.6**	**+0.5**
	comp=E,678nm,0.5s						
IGT	**Igoumenitsa**	**1.05**	**354**	P	**Pg**	**21 26 09.9**	**-1.0**
DRO	**Drossia**	**1.11**	**118**	P	**Pb**	**21 26 11.2**	**-0.7**
DRO				S	**Sn**	**21 26 27.9**	**+0.4**
	comp=E,1µm,0.6s						
DRO	**Drossia**	**1.11**	**118**	P	**Pb**	**21 26 10.8**	**-1.1**
DRO				AML	AML	21 26 34.8	
	comp=E,2821µm,0.4s						
DRO				AML	AML	21 26 36.4	
	comp=N,2359µm,0.8s						
EFP	**Efpalio**	**1.13**	**92**	P	**Pb**	**21 26 10.8**	**-1.4**
EFP				S	**Sn**	**21 26 28.7**	**+0.8**
	comp=N,752nm,0.6s						
EFP	**Efpalio**	**1.13**	**92**	P	**Pb**	**21 26 10.7**	**-1.5**
EFP				AML	AML	21 26 37.2	
	comp=N,1529µm,0.5s						
EFP				AML	AML	21 26 44.8	
	comp=E,1394µm,0.8s						
EVR	**Evrytania**	**1.13**	**67**	P	**Pb**	**21 26 11.3**	**-1.1**
EVR	**Evrytania**	**1.13**	**67**	P	**Pb**	**21 26 11.3**	**-1.1**
ANX	**Ano Chora**	**1.14**	**84**	P	**Pb**	**21 26 11.6**	**-0.9**
ANX				S	**Sb**	**21 26 27.6**	**+0.2**
	comp=E,942nm,0.6s						
ANX	**Ano Chora**	**1.14**	**84**	P	**Pb**	**21 26 11.5**	**-0.9**
ANX				AML	AML	21 26 36.1	
	comp=N,1906µm,0.5s						
ANX				AML	AML	21 26 37.2	
	comp=E,1303µm,0.8s						
JAN	**Janina**	**1.21**	**14**	P	**Pg**	**21 26 14.5**	**+0.6**
JAN				S	**Sn**	**21 26 31.0**	**+1.0**
	comp=E,718nm,0.6s						
LAKA	**Lakka**	**1.21**	**101**	P	**Pn**	**21 26 12.5**	**-1.1**
LAKA				S	**Sb**	**21 26 30.0**	**+0.8**
	comp=E,1µm,0.8s						
LAKA	**Lakka**	**1.21**	**101**	P	**Pn**	**21 26 12.5**	**-1.1**
LAKA				AML	AML	21 26 38.6	
	comp=E,3091µm,0.7s						
LAKA				AML	AML	21 26 38.8	
	comp=N,2538µm,0.9s						
TRIZ	**Trizonia**	**1.26**	**95**	P	**Pn**	**21 26 13.5**	**-0.8**
TRIZ				S	**Sg**	**21 26 32.2**	**+0.9**
	comp=N,342nm,0.5s						
TRIZ	**Trizonia**	**1.26**	**95**	P	**Pn**	**21 26 13.4**	**-0.9**
KASA	**Kassiopi**	**1.33**	**342**	P	**Pb**	**21 26 16.3**	**+0.7**
KEK	**Kerkira**	**1.33**	**337**	P	**Pn**	**21 26 15.8**	**+0.5**
KEK				S	**Sg**	**21 26 36.5**	**+2.8**
	comp=N,308nm,0.4s						
KEK	**Kerkira**	**1.33**	**337**	P	**Pn**	**21 26 15.5**	**+0.2**
KEK				AML	AML	21 26 41.5	
	comp=E,576µm,0.3s						
KEK				AML	AML	21 26 45.0	
	comp=N,653µm,0.5s						
KLV	**Kalavryta, Ach**	**1.39**	**108**	P	**Pn**	**21 26 15.9**	**-0.2**
KLV				S	**Sg**	**21 26 37.9**	**+2.4**
	comp=N,272nm,0.8s						
KLV	**Kalavryta, Ach**	**1.39**	**108**	P	**Pn**	**21 26 15.6**	**-0.5**
KLV				AML	AML	21 26 44.4	
	comp=E,462µm,1.1s						
KLV				AML	AML	21 26 49.7	
	comp=N,348µm,0.5s						
MAKR	**Makrakomi, Fth**	**1.40**	**67**	P	**Pn**	**21 26 16.7**	**+0.5**
MAKR				S	**Sg**	**21 26 38.0**	**+2.2**
	comp=N,855nm,0.7s						
AGG	**Agios Georgios**	**1.55**	**69**	P	**Pn**	**21 26 18.9**	**+0.6**
AGG				S	**Sg**	**21 26 41.8**	**+1.3**
	comp=N,390nm,0.9s						
GUR	**Goura**	**1.57**	**110**	P	**Pn**	**21 26 18.9**	**+0.2**
GUR				S	**Sg**	**21 26 41.8**	**+0.6**
	comp=N,612nm,0.4s						
GUR	**Goura**	**1.57**	**110**	P	**Pn**	**21 26 18.8**	**+0.2**
THL	**Klokotos Trika**	**1.61**	**48**	P	**Pb**	**21 26 20.9**	**+0.4**
THL				S	**Sb**	**21 26 41.7**	**+0.8**
	comp=N,448nm,0.5s						
ITM	**Ithomi**	**1.74**	**138**	P	**Pb**	**21 26 23.0**	**+0.4**
ITM				S	**Sb**	**21 26 45.9**	**+1.4**
	comp=N,235nm,0.6s						
PYL	**PYLOS**	**1.88**	**147**	P	**Pn**	**21 26 24.4**	**+1.7**
PYL				S	**Sn**	**21 26 47.8**	**+1.4**
	comp=N,105nm,0.7s						
LTK	**Loutraki**	**2.02**	**102**	P	**Pn**	**21 26 26.3**	**+1.6**
LTK				S	**Sb**	**21 26 52.1**	**-0.4**
	comp=N,178nm,0.9s						
OHR	**Ohrid**	**2.64**	**5**	*e*Pn	**Pn**	**21 26 35.4**	**+2.2**
OHR				*e*Sn	**Sn**	**21 27 05.9**	**+0.6**
OHR	**Ohrid**	**2.64**	**5**	*i* Pn	**Pb**	**21 26 36.4**	**-1.6**
TIR	**Tirane**	**2.90**	**351**	*e*Pn	**Pn**	**21 26 38.9**	**+2.1**
VAY	**Valandovo**	**3.26**	**29**	*e*Pn	**Pn**	**21 26 44.7**	**+2.9**
VAY	**Valandovo**	**3.26**	**29**	*e*Pn	**Pn**	**21 26 42.4**	**+0.7**
STIP	**Stip**	**3.47**	**22**	*i* Pn	**Pn**	**21 26 47.8**	**+3.2**
PDG	**Podgorica**	**4.05**	**347**	*e*Pn	**Pn**	**21 26 53.0**	**+0.4**
PDG				*e*Sn	**Sn**	**21 27 39.5**	**-0.5**
PRVS	**Prvonek**	**4.20**	**16**	*e*Pn	**Pn**	**21 26 54.6**	**-0.1**
PRVS				*e*Sn	**Sn**	**21 27 44.9**	**+1.1**
BOSS	**Bosilegrad**	**4.29**	**20**	*e*Pn	**Pn**	**21 26 57.3**	**+1.4**
BARS	**Barje**	**4.45**	**13**	*e*Pn	**Pn**	**21 26 59.5**	**+1.4**
TREB	**Trebinje**	**4.53**	**340**	*e*Pn	**Pn**	**21 26 58.5**	**-0.7**
VTS	**Vitosha**	**4.63**	**26**	*e*Pn	**Pn**	**21 27 02.4**	**+1.6**
STON	**Ston**	**4.86**	**335**	*e*Pn	**Pn**	**21 27 03.1**	**-0.6**
STON				*e*Sn	**Sn**	**21 27 57.6**	**-2.4**
ZAPS	**Zavoj**	**5.06**	**18**	*e*Pn	**Pn**	**21 27 09.0**	**+2.5**
BOVS	**Bovan**	**5.23**	**10**	*e*Pn	**Pn**	**21 27 09.2**	**+0.4**
GRUS	**Gruza**	**5.40**	**2**	*e*Pn	**Pn**	**21 27 11.8**	**+0.6**
SOKA	**Soboth**	**9.12**	**336**	*e*Pn	**Pn**	**21 28 00.9**	**-1.3**
	comp=N,1.7nm,0.5s						
ABTA	**Abfaltersbach**	**10.12**	**327**	*i* Pn	**Pn**	**21 28 20.5**	**+4.5**
	comp=N,0.7nm,0.3s						
FINES	**FINESS Array B**	**23.25**	**7**	P	**P**	**21 30 57.5**	**-0.3**
	comp=N,2.6nm,0.8s,baz=172,slow=11,SNR=6.8						
MKAR	**Makanchi Array**	**45.17**	**59**	P	**P**	**21 34 04.6**	**-2.8**
	comp=N,0.6nm,0.9s,baz=274,slow=9.4,SNR=2.2						
ZALV	**Zalesovo Beam**	**45.52**	**48**	P	**P**	**21 34 08.2**	**-1.8**
	comp=N,0.8nm,0.5s,baz=279,slow=8.9,SNR=3.6						

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*NEIC **17** 21:40:09.5±2.1, 12°.4N±0°.1×144°.2E±0°.2, h10^{km}±2^{km}, mb4.3/8, Error ellipse: s-maj=38.8km s-min=12.3km az=116.0*

*IDC **17** 21:40:14.8±2.1, 12°.28N×144°.37E, h62^{km}±22^{km}, mb3.6/5, mb1 3.8/5, mb1mx3.4/35, mbtmp3.9/5, Error ellipse: s-maj=48.2km s-min=16.6km az=101.0*

ISC 17 21:40:11.4±1.0**, 12°.3N**±0°.1×**144°.3E**±0°.2**, h30**^{km}**, n22, σ0^{s}.81**/21**, mb4.2**/9**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.40**	**25**	P	**Pb**	**21 40 35.9**	**-1.0**
	60nm,0.3s,baz=188,slow=15,SNR=13						
GUMO				S	**Sb**	**21 40 55.8**	**+1.4**
	82nm,0.3s,baz=72,slow=23,SNR=10.0						
GUMO				LR	LR	21 41 26.7	
	comp=Z,124nm,20.1s,baz=310,slow=52						
GUMO	**Guam**	**1.40**	**25**	Pn	**Pn**	**21 40 35.7**	**+0.8**
GUMO				Sn	**Sb**	**21 40 53.6**	**-0.8**
H11N1	**WAKE ISLAND Hy**	**22.94**	**68**	T	T	22 09 11.5	
	baz=255,slow=75,SNR=13						
H11N2	**WAKE ISLAND Hy**	**22.95**	**68**	T	T	22 09 12.1	
	baz=255,slow=75,SNR=10						
H11N3	**WAKE ISLAND Hy**	**22.96**	**68**	T	T	22 09 12.8	
	baz=255,slow=75,SNR=13						
WB0	**Warramunga Arr**	**33.33**	**197**	P	**P**	**21 46 47.2**	**+0.3**
WRA	**Warramunga Arr**	**33.51**	**197**	P	**P**	**21 46 48.2**	**-0.3**
	0.8nm,0.7s,baz=20,slow=9.7,SNR=12						
WRA	**Warramunga Arr**	**33.51**	**197**	P	**P**	**21 46 47.8**	**-0.7**
ASAR	**Alice Springs**	**37.17**	**196**	P	**P**	**21 47 20.7**	**+0.8**
	0.6nm,0.6s,baz=20,slow=11,SNR=9.0						
MK31	**Makanchi Array**	**62.00**	**317**	P	**P**	**21 50 29.4**	**+0.5**
MK31				IAmb	IAmb	21 50 55.1	
	comp=Z,2.4nm,1.1s						
MKAR	**Makanchi Array**	**62.00**	**317**	P	**P**	**21 50 29.5**	**+0.6**
	comp=Z,1.3nm,0.8s,baz=94,slow=8.2,SNR=9.9						
KURK	**Kurchatov**	**65.18**	**320**	P	**P**	**21 50 49.8**	**+0.1**
KURK				IAmb	IAmb	21 51 09.0	
	comp=Z,1.9nm,0.9s						
MLY	**Manley**	**68.46**	**24**	P	**P**	**21 51 10.1**	**-0.4**
MLY				IAmb	IAmb	21 51 20.2	
	comp=Z,4.8nm,1.4s						
SML	**Sawmill**	**68.60**	**28**	P	**P**	**21 51 11.6**	**+0.2**
KKAR	**Karatay Array**	**69.84**	**311**	P	**P**	**21 51 19.7**	**+0.3**
IL31		**69.97**	**25**	P	**P**	**21 51 19.3**	**-0.4**
ILAR	**Eielson Array**	**69.97**	**25**	P	**P**	**21 51 19.3**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=247,slow=5.8,SNR=12						
BMAR	**Burnt Mountain**	**71.50**	**23**	P	**P**	**21 51 30.7**	**+1.6**
ABKAR	**Akbulak array**	**77.09**	**318**	P	**P**	**21 52 01.8**	**-0.1**
ABKAR				IAmb	IAmb	21 52 02.2	
	comp=Z,1.4nm,0.6s						
ABKAR	**Akbulak array**	**77.09**	**318**	P	**P**	**21 52 01.7**	**-0.2**
FINES	**FINESS Array B**	**92.06**	**335**	P	**P**	**21 53 16.3**	**-1.1**
	comp=Z,1.2nm,0.7s,baz=78,slow=6.4,SNR=7.4						
FINES	**FINESS Array B**	**92.06**	**335**	P	**P**	**21 53 16.5**	**-1.0**

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*IDC **17** 22:15:25.9±0.6, 32°.04N×95°.10E, h0^{km}, mb4.2/19, mb1 4.3/23, mb1mx4.1/49, mbtmp4.1/23, ML4.1/4, MS3.6/21, Ms1 3.6/21, ms1mx3.4/39, Error ellipse: s-maj=23.3km s-min=12.8km az=58.0*

*MOS **17** 22:15:26.9±1.0, 32°.04N×94°.99E, h12^{km}, mb4.8/14, Error ellipse: s-maj=9.3km s-min=5.4km az=119.8*

*BJI **17** 22:15:27.9±0.0, 31°.92N×95°.04E, h7^{km}, mB5.0/12, mb4.6/26, ML4.0/10, Ms4.3/32, Ms7 4.1/30*

*NDI **17** 22:15:28.3±1.9, 31°.98N×95°.15E, h10^{km}±126^{km}, ML4.1, mb4.6(NEIC)*

*NEIC **17** 22:15:29.4±1.2, 32°.12N±0°.07×95°.03E±0°.08, h10^{km}±1^{km}, mb4.6/56, Error ellipse: s-maj=13.0km s-min=9.1km az=139.0*

ISC 17 22:15:31.7±0.3**, 31°.98N**±0°.04×**95°.00E**±0°.04**, h35**^{km}**, n189, σ1^{s}.62**/185**, mb4.5**/58**, MS3.7**/20**, 15C-11D, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSA	**Lhasa**	**4.01**	**236**	P	**Pn**	**22 16 31.6**	**+0.4**
LSA	**Lhasa**	**4.01**	**236**	Pn	**Pn**	**22 16 31.6**	**+0.4**
LKP	**Lekhapani**	**4.69**	**171**	*e*P	**Pn**	**22 16 40.8**	**+0.7**
LKP				IAML		22 18 12.5	
	comp=E,642nm,0.4s						
LKP				IAML		22 18 28.5	
	comp=N,405nm,0.4s						
ITAN	**ITANAGAR**	**4.95**	**193**	*e*P	**Pn**	**22 16 43.5**	**-0.1**
ITAN				IAML		22 18 17.9	
	comp=E,500nm,2.6s						
MOKO	**MOKOCHONG**	**5.66**	**184**	*e*P	**Pn**	**22 16 53.9**	**+0.5**
KOHI	**KOHIMA**	**6.29**	**187**	*e*P	**Pn**	**22 17 02.4**	**+0.2**
KOHI				IAML		22 18 56.0	
	comp=E,167nm,0.4s						
SHL	**Shillong**	**6.95**	**204**	P	**Pn**	**22 17 10.3**	**-1.0**
SHL	**Shillong**	**6.95**	**204**	*e*P	**Pn**	**22 17 10.6**	**-0.7**
SHL				*e*S	**Sn**	**22 18 28.0**	**-1.2**
SHL	**Shillong**	**6.95**	**204**	Pn	**Pn**	**22 17 10.3**	**-1.0**
GTK	**Tadong**	**7.25**	**232**	*e*P	**Pn**	**22 17 17.3**	**+2.0**
CD2	**Chengdu**	**7.56**	**96**	Pn	**Pn**	**22 17 22.4**	**+2.9**
CD2				smax	smax		
	comp=E,60nm,1.6s						
CD2				smax	smax		
	comp=E,90nm,1.9s						
GTA	**Gaotai**	**8.38**	**27**	⇓P	**Pn**	**22 17 30.5**	**-0.3**
GTA				pP		22 17 34.1	
GTA				sP		22 17 37.3	
GTA				pmax	pmax		
	comp=E,100nm,6.0s						
GTA				LR	LR		
	comp=E,390nm,10.8s						
GTA				LR	LR		
	comp=E,610nm,12.7s						
GTA				LR	LR		
	comp=E,310nm,10.8s						
LZH	**Lanzhou**	**8.41**	**58**	*e*P	**Pn**	**22 17 35.6**	**+4.4**
LZH				sP		22 17 40.5	
LZH				*e*S	**Sn**	**22 19 10.1**	**+5.1**
LZH				pmax	pmax		
	comp=E,10.0nm,1.2s						
LZH				pmax	pmax		
	comp=E,200nm,5.7s						
LZH				LR	LR		
	comp=E,2µm,9.2s						
LZH				LR	LR		
	comp=E,980nm,9.2s						
LZH				LR	LR		
	comp=E,1µm,9.8s						
GYA	**Guiyang**	**11.58**	**115**	⇑P	**Pn**	**22 18 14.3**	**-0.4**
GYA				sP		22 18 23.4	
GYA				S	**Sn**	**22 20 17.9**	**-4.9**
GYA				pmax	pmax		
	comp=E,24nm,0.8s						
GYA				LR	LR		
	comp=E,800nm,7.4s						
GYA				LR	LR		
	comp=E,1µm,9.1s						
GYA				LR	LR		
	comp=E,2µm,9.5s						
XAN	**Xi'an**	**11.87**	**76**	P	**Pn**	**22 18 17.8**	**-0.7**
XAN				pP		22 18 22.5	
XAN				S	**Sn**	**22 20 32.3**	**+2.5**
XAN				pmax	pmax		
	comp=E,3.0nm,0.6s						
XAN				LR	LR		
	comp=E,460nm,10.6s						
XAN				LR	LR		
	comp=E,1µm,10.6s						
XAN				LR	LR		
	comp=E,2µm,12.9s						
XAN	**Xi'an**	**11.87**	**76**	P	**Pn**	**22 18 19.5**	**+1.0**
XAN	**Xi'an**	**11.87**	**76**		**Pn**	**22 18 19.5**	**+1.0**
ENH	**Enshi**	**12.54**	**94**		**Pn**	**22 18 27.4**	**-0.3**
WMQ	**Urumqi**	**13.14**	**336**	*e*P	**Pn**	**22 18 37.3**	**+1.4**
WMQ				pP	P	22 18 40.1	-5.4
WMQ				sP		22 18 43.6	
WMQ				pmax	pmax		
	comp=E,25nm,0.6s						
WMQ				pmax	pmax		
	comp=E,310nm,4.5s						
WMQ				LR	LR		
	comp=E,890nm,15.5s						
WMQ				LR	LR		
	comp=E,540nm,11.1s						
WMQ				LR	LR		
	comp=E,340nm,13.5s						
WMQ	**Urumqi**	**13.14**	**336**	P	Pn	22 18 30.8	-5.0
WMQ	**Urumqi**	**13.14**	**336**		Pn	22 18 30.8	-5.0
CHTO	**Chiang Mai**	**13.59**	**164**	P	**Pn**	**22 18 42.9**	**+0.9**
CHTO				pmax	pmax		
	comp=Z,2.0nm,1.3s						
CMAR	**Chiang Mai Arr**	**13.93**	**164**	Pn	**Pn**	**22 18 45.6**	**-1.1**
	comp=Z,1.1nm,0.3s,baz=342,slow=12,SNR=3.4						
CMAR				LR	LR	22 24 44.7	
	comp=Z,218nm,18.7s,baz=22,slow=40						
CMAR	**Chiang Mai Arr**	**13.93**	**164**	*ce*P	**P**	**22 18 52.2**	**-2.1**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CMAR	**Chiang Mai Arr**	**13.93**	**164**	Pn	**Pn**	**22 18 49.0**	**+2.3**
HHC	**Hu-ho-hao-te**	**15.99**	**52**	*e*P	**Pn**	**22 19 12.6**	**-1.4**
HHC				pmax	pmax		
	comp=Z,10.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,140nm,5.6s						
HHC				LR	LR		
	comp=Z,710nm,10.5s						
HHC				LR	LR		
	comp=Z,550nm,8.9s						
HHC				LR	LR		
	comp=Z,630nm,11.6s						
WHN	**Wuhan**	**16.61**	**90**	⇑P	**Pn**	**22 19 22.5**	**+0.6**
WHN				S	**Sn**	**22 22 24.8**	**-0.5**
WHN				LR	LR		
	comp=Z,1µm,4.9s						
WHN				LR	LR		
	comp=Z,1µm,8.4s						
WHN				LR	LR		
	comp=Z,2µm,8.3s						
TARG	**Taragay, Kyrgy**	**16.82**	**310**		**Pn**	**22 19 24.5**	**-0.4**
PRZ	**Przheval'sk**	**16.84**	**313**	P	**Pn**	**22 19 24.2**	**-0.7**
PRZ				pmax	pmax		
	comp=Z,41nm,1.0s						
PRZ	**Przheval'sk**	**16.84**	**313**	Pn	**Pn**	**22 19 24.2**	**-0.7**
PRZ				IAmb	IAmb	22 19 33.9	
	comp=Z,41nm,1.0s						
KSH	**Kashi**	**17.16**	**301**	P	**P**	**22 19 32.1**	**+1.9**
KSH				pP	pP	22 19 36.3	-4.4
KSH				sP	sP	22 19 39.1	-6.8
KSH				PP	**PnPn**	**22 19 46.8**	**+7.9**
KSH				pmax	pmax		
	comp=Z,4.0nm,1.4s						

KSH				LR	LR		
	comp=Z,310nm,11.3s						
KSH				LR	LR		
	comp=Z,280nm,14.3s						
KSH				LR	LR		
	comp=Z,920nm,17.2s						
MK31	**Makanchi Array**	**17.72**	**330**	⇑*e*P	**Pn**	**22 19 33.4**	**-2.2**
MK31	**Makanchi Array**	**17.72**	**330**	Pn	**Pn**	**22 19 33.1**	**-2.5**
MKAR	**Makanchi Array**	**17.72**	**330**	P	**Pn**	**22 19 34.2**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=138,slow=11,SNR=18						
MKAR				LR	LR	22 27 15.6	
	comp=Z,130nm,21.5s,baz=148,slow=40						
MKAR	**Makanchi Array**	**17.72**	**330**	*ce*P	**P**	**22 19 36.5**	**+0.3**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MKAR	**Makanchi Array**	**17.72**	**330**	Pn	**Pn**	**22 19 32.9**	**-2.7**
MAKZ	**Makanchi**	**17.86**	**330**	P	**Pn**	**22 19 35.5**	**-1.9**
MAKZ				pmax	pmax		
	comp=Z,11nm,1.0s						
MAKZ	**Makanchi**	**17.86**	**330**	Pn	**Pn**	**22 19 35.5**	**-1.9**
SONM	**Songino Array**	**18.05**	**25**	P	**Pn**	**22 19 39.1**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=215,slow=12,SNR=13						
SONM				LR	LR	22 27 27.4	
	comp=Z,86nm,18.9s,baz=191,slow=40						
SONM	**Songino Array**	**18.05**	**25**		**Pn**	**22 19 37.8**	**-2.0**
ULN	**Ulaanbaatar**	**18.32**	**27**	⇓*e*P	**P**	**22 19 38.6**	**-4.4**
ULN				pmax	pmax		
	comp=Z,2.0nm,1.7s						
ULN	**Ulaanbaatar**	**18.32**	**27**	Pn	**P**	**22 19 39.4**	**-3.6**
NIL	**Nilore**	**18.35**	**281**	P	**P**	**22 19 42.8**	**-0.5**
NIL				pmax	pmax		
	comp=Z,34nm,0.8s						
NIL	**Nilore**	**18.35**	**281**	P	**P**	**22 19 42.8**	**-0.5**
NIL				IAmb	IAmb	22 19 48.6	
	comp=Z,34nm,0.8s						
QIZ	**Qiongzhong**	**18.57**	**130**	P	**Pn**	**22 19 47.1**	**+0.9**
QIZ				S	**S**	**22 23 16.3**	**+0.6**
QIZ				LR	LR		
	comp=Z,400nm,14.4s						
QIZ				LR	LR		
	comp=Z,370nm,17.9s						
QIZ				LR	LR		
	comp=Z,540nm,19.5s						
DGZ	**Jazzator, Alta**	**18.58**	**344**	⇑*e*P	**P**	**22 19 45.1**	**-0.8**
UBPT	**Khong Chiam**	**19.18**	**148**	P	**P**	**22 19 51.9**	**-0.5**
FRU1	**Bishkek**	**19.41**	**310**	P	**P**	**22 19 55.0**	**+0.1**
FRU1				pmax	pmax		
	comp=Z,19nm,1.2s						
FRU1	**Bishkek**	**19.41**	**310**	P	**P**	**22 19 55.0**	**+0.1**
AAK	**Ala-Archa**	**19.42**	**309**	P	**P**	**22 19 55.8**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=111,slow=11,SNR=21						
AAK				LR	LR	22 28 53.9	
	comp=Z,295nm,21.9s,baz=114,slow=42						
AAK	**Ala-Archa**	**19.42**	**309**	⇓*e*P	**P**	**22 19 54.2**	**-0.9**
AAK				pmax	pmax		
	comp=Z,22nm,1.4s						
AAK	**Ala-Archa**	**19.42**	**309**	P	**P**	**22 19 54.6**	**-0.5**
DRK	**Karamyk**	**20.23**	**298**	P	**P**	**22 20 03.8**	**-0.3**
DRK				IAmb	IAmb	22 20 09.7	
	comp=Z,22nm,0.8s						
NJ2	**Nanjing**	**20.23**	**83**	*e*P	**P**	**22 20 02.8**	**-1.0**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
NJ2				LR	LR		
	comp=Z,890nm,17.3s						
NJ2				LR	LR		
	comp=Z,840nm,12.6s						
NJ2				LR	LR		
	comp=Z,490nm,16.7s						
TLY	**Talaya**	**20.68**	**15**	LR	LR	22 28 38.8	
	comp=Z,98nm,20.0s,baz=186,slow=38						
HYB	**Hyderabad**	**20.78**	**230**	*i* P	Pn	22 20 13.0	+0.6
BTK	**Batken**	**21.11**	**299**	P	**P**	**22 20 14.1**	**+0.8**
BTK				pmax	pmax		
	comp=Z,31nm,1.1s						
BTK	**Batken**	**21.11**	**299**	P	**P**	**22 20 14.1**	**+0.8**
BTK				IAmb	IAmb	22 20 24.4	
	comp=Z,31nm,1.1s						
GAR	**Garm**	**21.24**	**296**	P	**P**	**22 20 14.2**	**-0.6**
KBL	**Kabul**	**21.83**	**284**	P	**P**	**22 20 21.0**	**-0.3**
KBL				pmax	pmax		
	comp=Z,88nm,1.1s						
KBL	**Kabul**	**21.83**	**284**	P	**P**	**22 20 21.0**	**-0.3**
CHGR	**Chuyangaron**	**22.07**	**295**	P	**P**	**22 20 22.9**	**-0.8**
KURBB	**Kurchatov Arra**	**22.27**	**332**	P	**P**	**22 20 24.8**	**-0.8**
	comp=Z,25nm,1.1s,baz=139,slow=11,SNR=32						
KKAR	**Karatay Array**	**22.28**	**307**	P	**P**	**22 20 25.2**	**-0.6**
KKAR	**Karatay Array**	**22.28**	**307**	P	**P**	**22 20 25.2**	**-0.6**
KURK	**Kurchatov**	**22.30**	**332**	*d i*P	**P**	**22 20 24.9**	**-1.0**
KURK				pmax	pmax		
	comp=Z,54nm,1.7s						
KURK	**Kurchatov**	**22.30**	**332**	P	**P**	**22 20 25.4**	**-0.5**
KURK				IAmb	IAmb	22 20 31.2	
	comp=Z,32nm,1.1s						
ZAA0	**Zalesovo Array**	**23.14**	**345**	P	**P**	**22 20 33.1**	**-1.6**
ZAA0				IAmb	IAmb	22 20 40.3	
	comp=Z,19nm,1.2s						
ZALV	**Zalesovo Beam**	**23.14**	**345**	P	**P**	**22 20 31.9**	**-2.7**
	comp=Z,3.1nm,0.8s,baz=152,slow=6.7,SNR=12						
ZALV	**Zalesovo Beam**	**23.14**	**345**	*i* P	**P**	**22 20 35.2**	**+0.6**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ZALV	**Zalesovo Beam**	**23.14**	**345**	P	**P**	**22 20 34.0**	**-0.6**
SRIT	**Nakonsritamara**	**23.66**	**169**	P	**P**	**22 20 42.0**	**+1.9**
SRIT				IAmb	IAmb	22 20 45.0	
	comp=Z,23nm,1.2s						
CN2	**Changchun**	**26.62**	**55**	*e*P	**P**	**22 21 07.9**	**+1.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.5s						
HRA	**Herat**	**27.45**	**284**	P	**P**	**22 21 16.7**	**+2.0**
KSRS	**Korea Array**	**27.52**	**69**	LR	LR	22 32 35.2	
	comp=Z,88nm,21.1s,baz=268,slow=38						
BVAR	**Borovoye Array**	**27.53**	**327**	P	**P**	**22 21 15.0**	**+0.1**
	comp=Z,2.8nm,0.7s,baz=172,slow=13,SNR=16						
BRVK	**Borovoye**	**27.60**	**327**	*de*P	**P**	**22 21 16.4**	**+0.9**
BRVK				pmax	pmax		
	comp=Z,12nm,1.0s						
BRVK	**Borovoye**	**27.60**	**327**	P	**P**	**22 21 15.3**	**-0.2**
BRVK				IAmb	IAmb	22 21 21.2	
	comp=Z,8.7nm,0.8s						
PALK	**Pallekele**	**27.96**	**211**	LR	LR	22 33 49.2	
	comp=Z,23nm,20.0s,baz=131,slow=39						
PSI	**Prapat**	**29.26**	**172**	LR	LR	22 33 59.7	
	comp=Z,43nm,19.7s,baz=346,slow=38						
JOW	**Kunigami**	**29.37**	**91**	LR	LR	22 34 19.2	
	comp=Z,204nm,18.2s,baz=24,slow=39						
JNU	**Nakatsue**	**30.18**	**78**	LR	LR	22 34 26.7	
	comp=Z,3µm,20.0s,baz=313,slow=38						
GEYT	**Alibeck**	**30.66**	**291**	P	**P**	**22 21 39.4**	**-3.6**
	comp=Z,4.8nm,0.8s,baz=148,slow=8.5,SNR=3.4						
GEYT				LR	LR	22 36 42.3	
	comp=Z,170nm,18.3s,baz=230,slow=42						
GEYT	**Alibeck**	**30.66**	**291**	P	**P**	**22 21 44.4**	**+1.5**
GEYT				IAmb	IAmb	22 21 49.9	
	comp=Z,8.3nm,1.0s						
GYA0B	**ALIBECK ARRAY**	**30.66**	**291**	P	**P**	**22 21 44.5**	**+1.5**
GYA0B				IAmb	IAmb	22 21 49.9	
	comp=Z,9.1nm,0.9s						
ABKAR	**Akbulak array**	**31.35**	**314**	P	**P**	**22 21 49.5**	**+0.7**
ABKAR	**Akbulak array**	**31.35**	**314**	P	**P**	**22 21 49.8**	**+0.9**
KLR	**Kul'dur**	**32.40**	**47**	⇓*e*P	**P**	**22 21 58.9**	**+0.9**
KLR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AKTO	**Aktyubinsk**	**32.93**	**315**	P	**P**	**22 22 00.4**	**-2.2**
	comp=Z,1.4nm,0.6s,baz=106,slow=12,SNR=2.3						
SVE	**Sverdlovsk**	**34.31**	**327**	⇑*e*P	**P**	**22 22 16.4**	**+1.8**
SVE				pmax	pmax		
	comp=Z,22nm,1.5s						
ARU	**Arti**	**35.10**	**325**	*c i*P	**P**	**22 22 22.6**	**+1.2**
ARU						22 23 35.6	
ARU				S	**S**	**22 27 53.5**	**+1.9**
ARU				SS	**SnSn**	**22 30 03.8**	**-5.7**
ARU				pmax	pmax		
	comp=Z,16nm,1.4s						
ARU	**Arti**	**35.10**	**325**	P	**P**	**22 22 21.5**	**+0.1**
ARU				IAmb	IAmb	22 22 27.9	
	comp=Z,9.6nm,0.9s						
MJAR	**Matsushiro Arr**	**35.78**	**71**	LR	LR	22 38 48.8	
	comp=Z,42nm,19.0s,baz=180,slow=39						
YAK	**Yakutsk**	**37.41**	**26**	⇓*e*P	**P**	**22 22 39.5**	**-1.6**
YAK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NRIK	**Noril'sk**	**37.64**	**356**	P	**P**	**22 22 40.3**	**-2.6**
	comp=Z,1.6nm,0.6s,baz=164,slow=6.1,SNR=2.0						
NRIK	**Noril'sk**	**37.64**	**356**	⇑*e*P	**P**	**22 22 43.3**	**+0.4**
NRIK				pmax	pmax		
	comp=Z,14nm,1.5s						
NRIK	**Noril'sk**	**37.64**	**356**	P	**P**	**22 22 43.1**	**+0.2**
NRIK				IAmb	IAmb	22 22 48.4	
	comp=Z,17nm,1.4s						
DAV	**Davao City (W)**	**37.76**	**124**	LR	LR	22 40 48.8	
	comp=Z,168nm,18.3s,baz=323,slow=40						
KIRV	**Kirov**	**40.49**	**325**	*ce*P	**P**	**22 23 07.6**	**+0.8**
ONI	**Oni**	**41.78**	**300**	P	**P**	**22 23 19.9**	**+2.1**
ONI				pmax	pmax		
	comp=Z,21nm,1.2s						
ONI	**Oni**	**41.78**	**300**	P	**P**	**22 23 19.9**	**+2.1**
ONI				IAmb	IAmb	22 23 25.2	
	comp=Z,21nm,1.2s						
KBZ	**Khabaz**	**42.14**	**302**	LR	LR	22 42 37.3	
	comp=Z,40nm,21.6s,baz=60,slow=39						
KIV	**Kislovodsk**	**42.28**	**302**	*e*P	**P**	**22 23 20.6**	**-1.3**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,65nm,16.0s						
GURO	**Guroymak-BITLI**	**43.24**	**294**	P	**P**	**22 23 30.4**	**+0.6**
GURO				IAmb	IAmb	22 23 36.8	
	comp=Z,11nm,1.4s						
TIXI	**Tiksi**	**43.66**	**15**	P	**P**	**22 23 31.4**	**-1.1**
	comp=Z,2.4nm,0.5s,baz=201,slow=4.1,SNR=8.1						
TIXI	**Tiksi**	**43.66**	**15**	⇓*e*P	**P**	**22 23 31.1**	**-1.4**
TIXI	**Tiksi**	**43.66**	**15**	P	**P**	**22 23 31.7**	**-0.8**
KLMR	**Klimovskoe**	**45.94**	**326**	*e*P	**P**	**22 23 49.0**	**-1.8**
KLMR				pmax	pmax		
	comp=Z,22nm,1.3s						
KLMR	**Klimovskoe**	**45.94**	**326**	*e*P	**P**	**22 23 49.1**	**-1.8**
KLMR				AMP		22 23 56.2	
	comp=Z,22nm,1.3s						
MOS	**Moscow**	**46.06**	**319**	*e*P	**P**	**22 23 51.8**	**-0.1**
PET	**Petropavlovsk**	**49.62**	**45**	⇓*e*P	**P**	**22 24 20.1**	**+0.6**
PET				pmax	pmax		
	comp=Z,63nm,1.7s						
ANTO	**Ankara**	**50.09**	**297**	P	**P**	**22 24 24.7**	**+1.3**
ANTO				pmax	pmax		
	comp=Z,7.0nm,0.6s						
ANTO	**Ankara**	**50.09**	**297**	P	**P**	**22 24 24.6**	**+1.3**
ANTO				IAmb	IAmb	22 24 36.1	
	comp=Z,7.1nm,0.6s						
BATI	**Baumata**	**50.12**	**142**	LR	LR	22 46 03.2	
	comp=Z,38nm,21.4s,baz=241,slow=37						
AKASG	**Malin Array Be**	**51.05**	**312**	P	**P**	**22 24 29.9**	**-0.5**
	comp=Z,2.8nm,0.5s,baz=72,slow=6.8,SNR=10						
AKASG				LR	LR	22 50 24.4	
	comp=Z,118nm,18.1s,baz=40,slow=41						
AKASG	**Malin Array Be**	**51.05**	**312**	*i* P	**P**	**22 24 31.1**	**+0.7**
AKASG				pmax	pmax		
	comp=Z,8.0nm,0.6s						
AKASG	**Malin Array Be**	**51.05**	**312**	P	**P**	**22 24 30.6**	**+0.2**
AKBB	**Malin Array Si**	**51.05**	**312**	⇑*e*P	**P**	**22 24 29.4**	**-1.0**
AKBB	**Malin Array Si**	**51.05**	**312**	P	**P**	**22 24 30.5**	**+0.2**
AKBB				IAmb	IAmb	22 24 35.1	
	comp=Z,5.7nm,0.7s						
FINES	**FINESS Array B**	**52.47**	**326**	P	**P**	**22 24 40.2**	**-0.5**
	comp=Z,2.6nm,0.9s,baz=102,slow=8.2,SNR=5.7						
FINES				LR	LR	22 50 10.0	
	comp=Z,138nm,18.1s,baz=104,slow=40						
FINES	**FINESS Array B**	**52.47**	**326**	*i* P	**P**	**22 24 41.0**	**+0.3**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
FINES	**FINESS Array B**	**52.47**	**326**	P	**P**	**22 24 41.4**	**+0.6**
ARCES	**ARCESS Array B**	**53.26**	**336**	P	**P**	**22 24 46.8**	**+0.3**
	comp=Z,3.5nm,0.8s,baz=90,slow=4.9,SNR=10.0						
ARCES				LR	LR	22 49 28.6	
	comp=Z,95nm,18.1s,baz=250,slow=38						
ARCES	**ARCESS Array B**	**53.26**	**336**	P	**P**	**22 24 46.8**	**+0.3**
ARCES				pmax	pmax		
	comp=Z,8.0nm,1.3s						
ARCES	**ARCESS Array B**	**53.26**	**336**	P	**P**	**22 24 46.8**	**+0.3**
ARCES				IAmb	IAmb	22 24 55.1	
	comp=Z,8.2nm,1.2s						
VRI	**Vrincioaia**	**53.35**	**306**	⇑P	**P**	**22 24 48.1**	**+0.6**
VRI	**Vrincioaia**	**53.35**	**306**	P	**P**	**22 24 49.5**	**+2.0**
VRI				pmax	pmax		
	comp=Z,19nm,2.1s						
PLOR	**Plostina**	**53.41**	**306**	⇑P	**P**	**22 24 49.2**	**+1.2**
PABE	**Paberze**	**53.80**	**318**	P	**P**	**22 24 51.1**	**+0.6**
MLR	**Muntele Rosu**	**53.96**	**306**	⇓P	**P**	**22 24 53.8**	**+1.7**
MLR	**Muntele Rosu**	**53.96**	**306**	P	**P**	**22 24 53.0**	**+0.9**
MLR				pmax	pmax		
	comp=Z,30nm,1.5s						
MLR	**Muntele Rosu**	**53.96**	**306**	P	**P**	**22 24 53.0**	**+0.9**
BURAR	**Bucovina Array**	**54.06**	**308**	⇑P	**P**	**22 24 53.1**	**+0.3**
BURAR	**Bucovina Array**	**54.06**	**308**	P	**P**	**22 24 53.2**	**+0.4**
BUR08	**Bucovina Ar. S**	**54.07**	**308**	P	**P**	**22 24 52.9**	**0.0**
SUW	**Suwalki**	**54.41**	**316**	P	**P**	**22 24 59.6**	**+4.5**
SUW				pmax	pmax		
	comp=Z,41nm,0.9s						
ALN	**Alexandroupoli**	**54.89**	**300**	P	**P**	**22 24 59.4**	**+0.6**
ALN				pmax	pmax		
	comp=Z,10.0nm,1.3s						
ALN	**Alexandroupoli**	**54.89**	**300**	P	**P**	**22 24 59.4**	**+0.6**
ALN				IAmb	IAmb	22 25 04.7	
	comp=Z,9.7nm,1.3s						
KWP	**Kalwaria Pacla**	**55.35**	**311**	P	**P**	**22 25 02.5**	**+0.5**
KWP				pmax	pmax		
	comp=Z,27nm,1.1s						
VTS	**Vitosha**	**56.50**	**303**	P	**P**	**22 25 09.9**	**-0.6**
VTS				pmax	pmax		
	comp=Z,8.0nm,1.5s						
VTS	**Vitosha**	**56.50**	**303**	P	**P**	**22 25 09.9**	**-0.6**
VTS				IAmb	IAmb	22 25 16.4	
	comp=Z,7.8nm,1.5s						
DIVS	**Divibare**	**58.40**	**305**	P	**P**	**22 25 24.0**	**+0.1**
DIVS				IAmb	IAmb	22 25 30.9	
	comp=Z,5.2nm,1.3s						
NOA	**NORSAR Array B**	**59.65**	**326**	P	**P**	**22 25 31.5**	**-0.6**
	comp=Z,2.8nm,0.9s,baz=80,slow=7.2,SNR=3.7						
NOA				LR	LR	22 53 30.0	
	comp=Z,67nm,18.6s,baz=70,slow=38						
CONA	**Conrad Observa**	**60.14**	**310**	*e*P	**P**	**22 25 36.4**	**+0.6**
	comp=Z,6.0nm,0.9s						
CLL	**Collm**	**61.01**	**315**	*e*P	**P**	**22 25 42.0**	**+0.5**
SOKA	**Soboth**	**61.04**	**309**	*e*P	**P**	**22 25 41.9**	**0.0**
	comp=Z,2.8nm,0.7s						
GERES	**GERESS Array B**	**61.27**	**312**	P	**P**	**22 25 43.5**	**+0.1**
	comp=Z,1.3nm,0.6s,baz=68,slow=5.0,SNR=4.9						
GERES				LR	LR	22 54 47.4	
	comp=Z,103nm,18.5s,baz=32,slow=38						
GERES	**GERESS Array B**	**61.27**	**312**	P	**P**	**22 25 44.1**	**+0.6**
GERES	**GERESS Array B**	**61.27**	**312**	P	**P**	**22 25 44.1**	**+0.6**
SQTA	**Sankt Quirin**	**63.36**	**311**	*e*P	**P**	**22 25 57.0**	**-0.5**
	comp=Z,1.7nm,0.6s						
AQU	**L'Aquila**	**63.52**	**305**	P	**P**	**22 25 59.3**	**+0.8**
AQU				pmax	pmax		
	comp=Z,10.0nm,1.2s						
AQU	**L'Aquila**	**63.52**	**305**	P	**P**	**22 25 59.3**	**+0.8**
NRCA	**Norcia**	**63.55**	**306**	P	**P**	**22 25 59.0**	**+0.2**
NRCA				IAmb	IAmb	22 26 09.2	
	comp=Z,6.2nm,1.3s						
KMBO	**Kilima Mbogo**	**63.69**	**251**	P	**P**	**22 26 00.4**	**+0.1**
	comp=Z,2.2nm,0.8s,baz=47,slow=22,SNR=1.8						
KMBO	**Kilima Mbogo**	**63.69**	**251**	*i* P	**P**	**22 26 04.5**	**+4.2**
KMBO				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FETA	**Feichten**	**63.73**	**311**	*e*P	**P**	**22 26 00.0**	**0.0**
	comp=Z,7.5nm,1.8s						
MURB	**Monte Urbino**	**63.81**	**306**	P	**P**	**22 26 01.3**	**+0.8**
WB0	**Warramunga Arr**	**63.82**	**138**	P	**P**	**22 26 01.1**	**+0.5**
WRAB	**Tennant Creek**	**63.92**	**138**	*ce*P	**P**	**22 26 03.8**	**+2.5**
WRAB				pmax	pmax		
	comp=Z,15nm,1.7s						
WRA	**Warramunga Arr**	**63.92**	**138**	P	**P**	**22 26 00.9**	**-0.5**
	comp=Z,6.6nm,0.8s,baz=330,slow=7.4,SNR=37						
WRA	**Warramunga Arr**	**63.92**	**138**	*i* P	**P**	**22 26 02.7**	**+1.4**
WRA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
WB2	**Warramunga Arr**	**63.93**	**138**	P	**P**	**22 26 01.5**	**+0.1**
SENIN	**Lac Senin/Sane**	**66.18**	**311**	P	**P**	**22 26 15.8**	**-0.2**
SENIN				IAmb	IAmb	22 26 26.5	
	comp=Z,7.0nm,1.4s						
AS31	**Alice Springs**	**66.68**	**141**	P	**P**	**22 26 20.9**	**+1.8**
AS31				IAmb	IAmb	22 26 22.8	
	comp=Z,1.7nm,0.6s						
ASAR	**Alice Springs**	**66.68**	**141**	P	**P**	**22 26 18.7**	**-0.5**
	comp=Z,4.6nm,0.7s,baz=327,slow=6.5,SNR=39						
ASAR	**Alice Springs**	**66.68**	**141**	P	**P**	**22 26 20.9**	**+1.8**
ASAR	**Alice Springs**	**66.68**	**141**	P	**P**	**22 26 20.9**	**+1.8**
MBAR	**Mbarara**	**68.68**	**255**	⇓*e*P	**P**	**22 26 33.2**	**+1.0**
MBAR	**Mbarara**	**68.68**	**255**	P	**P**	**22 26 34.8**	**+2.6**
MBAR				IAmb	IAmb	22 26 37.5	
	comp=Z,3.9nm,0.8s						
TOLK	**Toolik Lake Re**	**69.10**	**21**	P	**P**	**22 26 34.0**	**+0.2**
TOLK				IAmb	IAmb	22 26 38.4	
	comp=Z,4.5nm,0.8s						
IMAR	**Indian Mountai**	**69.22**	**24**	P	**P**	**22 26 35.0**	**+0.4**
BPAW	**Bear Paw Mtn.**	**71.24**	**25**	P	**P**	**22 26 48.0**	**+1.0**
BMAR	**Burnt Mountain**	**71.33**	**21**	P	**P**	**22 26 48.4**	**+0.9**
COLA	**College**	**71.88**	**24**	P	**P**	**22 26 50.3**	**-0.4**
ILAR	**Eielson Array**	**72.27**	**23**	P	**P**	**22 26 52.1**	**-1.0**
	comp=Z,2.5nm,1.0s,baz=296,slow=5.6,SNR=15						
ILAR	**Eielson Array**	**72.27**	**23**	P	**P**	**22 26 54.5**	**+1.4**
ILAR	**Eielson Array**	**72.27**	**23**	P	**P**	**22 26 54.5**	**+1.4**
A36M	**Sachs Harbour**	**72.59**	**12**	P	**P**	**22 26 55.4**	**+0.5**
A36M				IAmb	IAmb	22 26 59.3	
	comp=Z,7.3nm,0.8s						
INK	**Inuvik**	**73.74**	**17**	P	**P**	**22 26 59.6**	**-2.1**
	comp=Z,0.9nm,0.8s,baz=336,slow=12,SNR=2.0						
BCAR	**Beaver Creek A**	**75.09**	**23**	P	**P**	**22 27 10.7**	**+0.9**
ESDC	**Sonseca Array**	**76.52**	**308**	P	**P**	**22 27 18.0**	**-0.5**
	comp=Z,0.6nm,1.0s,baz=58,slow=5.2,SNR=2.4						
ESDC				LR	LR	23 05 16.4	
	comp=Z,34nm,19.0s,baz=350,slow=39						
STKA	**Stephens Creek**	**77.31**	**141**	P	**P**	**22 27 22.4**	**-0.2**
	comp=Z,2.6nm,0.6s,baz=304,slow=12,SNR=5.2						
TORD	**Torodi Ar. Bea**	**85.90**	**283**	P	**P**	**22 28 08.1**	**-0.5**
	comp=Z,1.1nm,0.6s,baz=56,slow=4.7,SNR=12						
TORD				LR	LR	23 12 45.6	
	comp=Z,25nm,19.9s,baz=305,slow=40						
TORD	**Torodi Ar. Bea**	**85.90**	**283**	P	**P**	**22 28 08.7**	**+0.2**
TORD				IAmb	IAmb	22 28 14.0	
	comp=Z,3.8nm,0.8s						
KOWA	**Kowa**	**89.87**	**287**	P	**P**	**22 28 30.2**	**+2.7**
KOWA				IAmb	IAmb	22 28 35.0	
	comp=Z,2.1nm,0.8s						
OTAV	**Otavalo**	**147.36**	**348**	PKP2	**PKPbc**	**22 35 12.4**	**-0.5**
OTAV	**Otavalo**	**147.36**	**348**	PKPbc	**PKPbc**	**22 35 12.4**	**-0.5**
SAML	**Samuel**	**149.42**	**314**	PKP2	**PKPbc**	**22 35 17.3**	**-0.5**
SAML	**Samuel**	**149.42**	**314**	PKPbc	**PKPbc**	**22 35 17.3**	**-0.5**

IDC ***17*** *22:33:55.7±1.9, 5°.45S×153°.18E, h0^{km}, mb3.9/8, mb1 4.1/9, mb1mx3.9/32, mbtmp3.9/9, ML2.0/1, MS2.9/2, Ms1 3.0/2, ms1mx2.6/34, Error ellipse: s-maj=63.5km s-min=20.9km az=121.0*

NEIC ***17*** *22:33:57.8±1.6, 5°.43S±0°.08×153°.41E±0°.04, h10^{km}±2^{km}, mb4.0/6, Error ellipse: s-maj=14.1km s-min=6.4km az=162.0*

ISC 17 22:34:01.1±1.0**, 5°.53S**±0°.07×**153°.2E**±0°.1**, h35^{km}, n21, σ1^{s}.35**/23**, mb3.9**/10**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.69**	**322**	Pn	**Pn**	**22 34 26.6**	**-1.7**
RABL				Sn	**Sn**	**22 34 51.4**	**+2.7**
PMG	**Port Moresby**	**7.13**	**237**	Pn	**Pn**	**22 35 41.3**	**-1.7**
	1.6nm,0.3s,baz=357,slow=6.0,SNR=4.8						
PMG				Sn	**Sn**	**22 37 00.1**	**-2.7**
	1.4nm,0.3s,baz=162,slow=21,SNR=2.2						
PMG				LR	LR	22 37 40.9	
	comp=Z,38nm,19.6s,baz=77,slow=32						
PMG	**Port Moresby**	**7.13**	**237**		**Pn**	**22 35 45.1**	**+2.1**
EIDS	**Eidsvold**	**19.83**	**186**	P	**Pn**	**22 38 32.5**	**+1.8**
EIDS				IAmb	IAmb	22 38 47.5	
	comp=Z,9.1nm,1.1s						
MTN	**Manton Dam**	**22.96**	**250**	P	**P**	**22 39 04.3**	**+1.6**
MTN				IAmb	IAmb	22 39 10.0	
	comp=Z,4.2nm,0.9s						
WR0	**Warramunga Arr**	**23.14**	**230**	P	**P**	**22 39 05.1**	**+0.7**
WR0				IAmb	IAmb	22 39 15.9	
	comp=Z,6.2nm,1.0s						
WRA	**Warramunga Arr**	**23.28**	**230**	P	**P**	**22 39 05.3**	**-0.6**
	comp=Z,2.1nm,0.8s,baz=54,slow=9.8,SNR=12						
WRA	**Warramunga Arr**	**23.28**	**230**	P	**P**	**22 39 05.9**	**0.0**
ASAR	**Alice Springs**	**25.90**	**224**	P	**P**	**22 39 30.2**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=60,slow=8.6,SNR=9.1						
ASAR	**Alice Springs**	**25.90**	**224**	P	**P**	**22 39 29.2**	**-0.9**
KNRA	**Kununurra**	**26.03**	**245**	P	**P**	**22 39 32.1**	**+0.9**
FITZ	**Fitzroy Crossi**	**29.68**	**243**	P	**P**	**22 40 04.7**	**+0.8**
PETK	**Petropavlovsk-**	**58.54**	**3**	P	**P**	**22 43 53.5**	**-0.5**
	comp=Z,2.5nm,0.5s,baz=163,slow=6.2,SNR=5.5						
CMAR	**Chiang Mai Arr**	**58.56**	**295**	P	**P**	**22 43 54.9**	**+0.1**
	comp=Z,1.0nm,0.3s,baz=111,slow=4.9,SNR=2.4						
SONM	**Songino Array**	**67.16**	**328**	P	**P**	**22 44 51.2**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=128,slow=4.3,SNR=3.0						
SONM	**Songino Array**	**67.16**	**328**	P	**P**	**22 44 52.1**	**+0.5**
SONM				IAmb	IAmb	22 45 13.1	
	comp=Z,1.1nm,1.2s						
MKAR	**Makanchi Array**	**81.14**	**319**	P	**P**	**22 46 11.8**	**-1.3**
	comp=Z,0.4nm,0.7s,baz=93,slow=8.0,SNR=4.1						
MKAR	**Makanchi Array**	**81.14**	**319**	P	**P**	**22 46 13.5**	**+0.4**
ZALV	**Zalesovo Beam**	**81.98**	**326**	P	**P**	**22 46 16.8**	**-0.5**
	comp=Z,1.7nm,0.8s,baz=106,slow=5.4,SNR=7.3						
ILAR	**Eielson Array**	**82.68**	**22**	P	**P**	**22 46 20.5**	**-0.3**
	comp=Z,0.9nm,0.9s,baz=236,slow=6.4,SNR=4.5						
ILAR				LR	LR	23 17 40.6	
	comp=Z,20nm,21.0s,baz=214,slow=32						
TORD	**Torodi Ar. Bea**	**150.92**	**287**	PKPbc	**PKiKP**	**22 53 51.4**	**-0.5**
	comp=Z,1.1nm,0.7s,baz=50,slow=2.1,SNR=7.5						

NEIC ***17*** *22:49:51.1±1.7, 15°.63S±0°.07×72°.7W±0°.1, h10^{km}±2^{km}, mb4.2/7, ML4.0(ARE), Error ellipse: s-maj=21.5km s-min=12.1km az=276.0*

ARE ***17*** *22:49:51±3.1, 15°.69S±0°.04×72°.13W±0°.07, h7^{km}±5^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=177.0*

IDC ***17*** *22:50:00.5±2.0, 15°.72S×71°.62W, h65^{km}±20^{km}, mb3.5/4, mb1 3.8/8, mb1mx3.6/30, mbtmp3.9/8, MS3.2/11, Ms1 3.2/11, ms1mx3.0/28, Error ellipse: s-maj=25.7km s-min=14.1km az=50.0*

ISC 17 22:50:03.5±0.7**, 15°.95S**±0°.07×**72°.06W**±0°.09**, h114^{km}, n46, σ2^{s}.74**/40**, mb3.9**/7**, 1D, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AP01	**Chacalluta**	**2.91**	**146**	Pn	**Pn**	**22 50 46.8**	**-1.6**
AP01				Sn	**Sn**	**22 51 26.8**	**+3.8**
PB12	**IPOC Station P**	**3.12**	**148**	⇓*i*P	**Pn**	**22 50 48.6**	**-2.7**
PB12	**IPOC Station P**	**3.12**	**148**		**Pn**	**22 50 48.8**	**-2.5**
PB12				Sn	Sn	22 51 33.9	+5.7
PB16	**IPOC Station P**	**3.40**	**135**		**Pn**	**22 50 54.9**	**-0.5**
PB16				Sn	Sn	22 51 43.7	+8.3
LPAZ	**La Paz**	**3.79**	**96**	P	**Pn**	**22 50 59.0**	**-1.6**
	2.6nm,0.3s,baz=359,slow=24,SNR=6.1						
LPAZ	**La Paz**	**3.79**	**96**		**Pn**	**22 50 58.5**	**-2.1**
PB11	**IPOC Station P**	**4.42**	**149**	*e*P	**Pn**	**22 51 05.5**	**-3.2**
PB11	**IPOC Station P**	**4.42**	**149**		**Pn**	**22 51 06.5**	**-2.3**
TA02	**Huaiquique**	**4.67**	**157**		**Pn**	**22 51 08.9**	**-2.9**
TA01	**Diego Aracena**	**4.92**	**159**		**Pn**	**22 51 11.7**	**-3.6**
PB08	**IPOC Station P**	**5.00**	**147**		**Pn**	**22 51 14.6**	**-2.0**
PATCX	**Punta Patache**	**5.17**	**160**		**Pn**	**22 51 15.7**	**-3.0**
PB01	**IPOC Station P**	**5.62**	**155**		**Pn**	**22 51 21.5**	**-3.3**
NNA	**Nana**	**6.09**	**310**	P	**Pn**	**22 51 31.8**	**+0.6**
	2.8nm,0.3s,baz=147,slow=11,SNR=8.9						
NNA				S	**Sn**	**22 52 41.5**	**+1.8**
	0.7nm,0.3s,baz=232,slow=23,SNR=1.3						
NNA				LR	LR	22 53 49.7	
	comp=Z,67nm,20.0s,baz=142,slow=36						
PB07	**IPOC Station P**	**6.10**	**161**		**Pn**	**22 51 28.4**	**-2.9**
PB09	**IPOC Station P**	**6.39**	**156**		**Pn**	**22 51 33.1**	**-2.3**
PB04	**IPOC Station P**	**6.60**	**164**		**Pn**	**22 51 34.6**	**-3.5**
PB06	**IPOC Station P**	**7.12**	**161**		**Pn**	**22 51 41.6**	**-3.5**
LVC	**Limon Verde**	**7.26**	**156**	P	**Pn**	**22 51 44.7**	**-2.6**
	4.6nm,0.3s,baz=345,slow=9.4,SNR=35						
LVC				S	**Sn**	**22 53 08.6**	**+0.3**
	0.7nm,0.3s,baz=217,slow=22,SNR=2.7						
LVC				LR	LR	22 54 47.4	
	comp=Z,150nm,20.5s,baz=336,slow=39						
LVC	**Limon Verde**	**7.26**	**156**		**Pn**	**22 51 44.9**	**-2.3**
PB15	**IPOC Station P**	**7.62**	**162**		**Pn**	**22 51 48.3**	**-3.6**
PB10	**IPOC Station P**	**7.65**	**170**	Pn	**Pn**	**22 51 48.4**	**-3.9**
ETMB	**Extrema**	**8.35**	**44**		Pn	22 51 54.5	-7.2
PB14	**IPOC Station P**	**8.77**	**170**		**Pn**	**22 52 03.1**	**-4.5**
SIV	**San Ignacio**	**10.56**	**92**	P	Pn	22 52 24.6	-7.1
	0.4nm,0.3s,baz=276,slow=14,SNR=8.7						
SIV				LR	LR	22 57 05.9	
	comp=Z,120nm,18.8s,baz=272,slow=42						
AC02	**Maricunga**	**11.17**	**166**	Pn	**Pn**	**22 52 36.8**	**-3.5**
CPUP	**Villa Florida**	**17.17**	**129**	LR	LR	23 01 58.0	
	comp=Z,46nm,18.1s,baz=296,slow=42						
PTGA	**Pitinga**	**19.26**	**39**	P	**P**	**22 54 13.6**	**-5.7**
	0.5nm,0.3s,baz=324,slow=22,SNR=1.6						
PTGA				LR	LR	23 02 20.9	

	comp=Z,108nm,21.2s,baz=206,slow=39						
BOAV	Boa Vista	21.50	33	P	P	22 54 41.6	-1.8
BOAV				IAmb	IAmb	22 54 56.2	
	comp=Z,10nm,1.4s						
BDFB	Brasilia	23.14	93	LR	LR	23 04 39.3	
	comp=Z,110nm,21.4s,baz=280,slow=39						
PLCA	Paso Flores	24.73	177	P	P	22 55 16.4	+2.2
	comp=Z,2.1nm,0.9s,baz=209,slow=4.2,SNR=2.3						
PLCA	Paso Flores	24.73	177	P	P	22 55 16.4	+2.2
PLCA				IAmb	IAmb	22 55 35.6	
	comp=Z,23nm,1.5s						
BAUV	El Baul	25.05	9	P	P	22 55 15.3	-2.0
MDP	Montagnes des	28.41	44	LR	LR	23 07 33.8	
	comp=Z,106nm,18.7s,baz=184,slow=38						
TKL	Tuckaleechee C	52.52	348	LR	LR	23 22 57.8	
	comp=Z,16nm,18.0s,baz=80,slow=38						
PDAR	Pinedale Array	67.84	331	P	P	23 00 51.2	+1.5
	comp=Z,0.2nm,0.4s,baz=134,slow=6.4,SNR=2.3						
SNAA	Sanae	68.46	161	P	P	23 00 56.5	+3.5
SNAA				IAmb	IAmb	23 00 58.8	
	comp=Z,1.7nm,1.1s						
ULM	Lac du Bonnet	69.17	344	LR	LR	23 34 21.3	
	comp=Z,19nm,18.0s,baz=306,slow=38						
QSPA	South Pole Qui	74.21	180	P	P	23 01 31.8	+4.1
QSPA				IAmb	IAmb	23 01 43.0	
	comp=Z,4.8nm,1.4s						
TORD	Torodi Ar. Bea	78.44	73	P	P	23 01 52.0	-0.4
	comp=Z,1.4nm,0.8s,baz=269,slow=4.5,SNR=12						
TORD	Torodi Ar. Bea	78.44	73	P	P	23 01 52.2	-0.1
TORD				IAmb	IAmb	23 01 54.6	
	comp=Z,2.2nm,0.9s						
MDT	Midelt	80.60	52	LR	LR	23 35 24.5	
	comp=Z,28nm,18.2s,baz=350,slow=34						
ESDC	Sonseca Array	84.07	46	P	P	23 02 22.1	+0.5
	comp=Z,0.7nm,0.8s,baz=260,slow=4.0,SNR=7.4						
ESDC				LR	LR	23 35 12.8	
	comp=Z,12nm,21.7s,baz=320,slow=32						
ESDC	Sonseca Array	84.07	46	P	P	23 02 22.9	+1.2
MJAR	Matsushiro Arr	146.21	313	PKPbc	PKiKP	23 09 33.8	-0.3
	comp=Z,0.5nm,0.3s,baz=298,slow=0.6,SNR=4.1						
SONM	Songino Array	148.18	2	PKPbc	PKPab	23 09 39.9	+0.5
	comp=Z,2.1nm,0.7s,baz=318,slow=2.0,SNR=14						

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*GCG **17** 22:54:03.8±0.5, 13°.38N×91°.04W, h9^{km}, MD3.6*
*SNET **17** 22:54:07.6±0.9, 13°.54N×90°.71W, h13^{km}±3^{km}, ML3.0*
ISC 17 22:54:07.1±3.0, **13°.5N**±0°.1×**90°.84W**±0°.09, **h30**^{km}±16^{km}, **n15, σ0^s.75**/26, **1D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCG	Pacaya	0.88	14	eP	Pn	22 54 24.1	+0.4
FUG	Fuego 3	0.91	360	⇓eP	Pn	22 54 24.1	+0.1
NBG	Las Nubes	1.15	24	eP	Pb	22 54 29.4	+0.8
RTR	El Retiro	1.21	72	eP	Pn	22 54 27.7	-0.5
RTR				eS	Sn	22 54 43.3	-0.4
CEVE	Cerro Verde	1.21	76	eP	Pn	22 54 27.5	-0.8
CEVE				eS	Sn	22 54 43.2	-0.6
CEVE				IAML		22 54 45.8	
	comp=Z,1µm,0.2s						
SNJE	San Jose	1.24	74	eP	Pn	22 54 27.8	-0.7
SNJE				eS	Sn	22 54 44.0	-0.4
JAYA	Jayaque - finc	1.35	85	eP	Pn	22 54 29.2	-0.9
JAYA				eS	Sn	22 54 45.9	-1.2
JAYA				IAML		22 54 52.1	
	comp=Z,670nm,0.2s						
STG3	Santiaguito 3,	1.37	329	eP	Pn	22 54 29.6	-0.8
PMON	Piamonte	1.49	83	eP	Pn	22 54 31.4	-0.5
PMON				eS	Sn	22 54 50.5	+0.1
TACO	Tacachico	1.50	73	eP	Pn	22 54 31.7	-0.3
TACO				eS	Sn	22 54 51.0	+0.4
TACO				IAML		22 54 55.8	
	comp=Z,55nm,0.3s						
BOQS	Boqueron	1.52	82	eP	Pn	22 54 33.1	+0.6
BOQS				eS	Sb	22 54 53.0	-0.9
MTO3	Montecristo	1.67	59	eP	Pn	22 54 34.9	+0.4
MTO3				eS	Sb	22 54 57.1	-1.0
LFRS	El Faro	1.73	87	eP	Pn	22 54 35.7	+0.5
LFRS				eS	Sn	22 54 56.9	+0.6
SJTE	Alcalda de S	1.78	87	eP	Pn	22 54 35.7	-0.1
SJTE				eS	Sn	22 54 58.6	+1.0
SJTE				IAML		22 55 00.3	
	comp=Z,83nm,0.3s						
COEG	Centro de Oper	1.90	87	eP	Pn	22 54 38.7	+1.2
COEG				eS	Sn	22 55 01.5	+0.9

THE 17 23:03:52.5, 38°.78N×20°.59E, h10^{km}±1^{km}**, ML2.8**/2**, Error ellipse: s-maj=1.4km s-min=0.5km az=88.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKD2	Lefkada island	0.05	77	P	Pg	23 03 54.3	-0.3
LKD2				S	Sg	23 03 55.9	-0.2
TSLK	Tsoukalades, L	0.07	46	P	Pg	23 03 54.7	0.0
TSLK				S	Sg	23 03 56.5	+0.2
	13µm,0.3s						
DRAG	Dragano-Lefkad	0.09	188	P	Pg	23 03 54.9	-0.1
DRAG				S	Sg	23 03 56.9	+0.1
NYDR	Nydri-Lefkada	0.10	127	P	Pg	23 03 55.0	-0.1
NYDR				S	Sg	23 03 57.1	+0.1
EVGI	Lefkada island	0.16	162	P	Pg	23 03 56.1	0.0
EVGI				S	Sg	23 03 59.0	+0.5
	4µm,0.2s						

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*IDC **17** 23:11:44.8±3.2, 38°.50N×20°.70E, h0^{km}, mb3.7/3, mb1 3.6/4, mb1mx3.4/41, mbtmp3.5/4, ML3.5/1, Error ellipse: s-maj=73.4km s-min=34.6km az=176.0*
*THE **17** 23:11:45.8, 38°.49N×20°.42E, h13^{km}, ML3.1/20, Error ellipse: s-maj=1.3km s-min=0.5km az=284.0*
*ATH **17** 23:11:45.9, 38°.48N×20°.50E, h11^{km}±1^{km}, ML3.1/16, Error ellipse: s-maj=1.6km s-min=0.7km az=289.0*
ISC 17 23:11:45.9±0.8, **38°.49N**±0°.02×**20°.48E**±0°.03, **h12**^{km}±4^{km}, **n62, σ0^s.72**/94, **mb3.7**/3, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FSK	Fiskardo	0.07	113	P	Pg	23 11 48.0	-0.3
FSK				S	Sg	23 11 49.9	-0.2
	59µm,0.6s						
FSK	Fiskardo	0.07	113	P	Pg	23 11 48.0	-0.3
FSK				S	Sg	23 11 49.3	-0.8
FSK				AML	AML	23 11 52.3	
FSK				AML	AML	23 11 53.4	
	comp=N,86190µm,1.0s						
EVGI	Lefkada island	0.19	46	P	Pg	23 11 50.0	-0.1
EVGI				S	Sg	23 11 54.6	+1.6
	comp=N,7µm,0.2s						
EVGI	Lefkada island	0.19	46	P	Pg	23 11 49.9	-0.2
EVGI				S	Sg	23 11 53.1	+0.1
DRAG	Dragano-Lefkad	0.21	20	P	Pg	23 11 50.2	-0.2
DRAG				S	Sg	23 11 55.0	+1.4
	comp=N,42µm,0.4s						
DRAG	Dragano-Lefkad	0.21	20	P	Pg	23 11 50.1	-0.4
DRAG				S	Sg	23 11 54.1	+0.5
KEF4	Livadi, Kephal	0.23	191	P	Pg	23 11 50.6	-0.2
KEF4				S	Sg	23 11 55.3	+1.2
	comp=N,54µm,0.7s						
KEF4	Livadi, Kephal	0.23	191	P	Pg	23 11 50.6	-0.2
KEF4				S	Sg	23 11 54.5	+0.4
DMLN	Damoulianata-K	0.26	199	P	Pg	23 11 51.1	-0.2
DMLN				S	Sb	23 11 56.3	-0.7
	comp=N,11µm,0.7s						
DMLN	Damoulianata-K	0.26	199	P	Pg	23 11 51.1	-0.2
DMLN				S	Sg	23 11 55.2	+0.2
NYDR	Nydri-Lefkada	0.28	37	P	Pg	23 11 51.5	-0.2
NYDR				S	Sb	23 11 57.1	-0.6
	comp=N,3µm,0.5s						
NYDR	Nydri-Lefkada	0.28	37	P	Pg	23 11 51.3	-0.4
NYDR				S	Sg	23 11 56.1	+0.5
LXRA	Lixouri, Kepha	0.29	187	P	Pg	23 11 51.8	0.0
KEF3	Kipouria, Keph	0.30	200	P	Pg	23 11 51.3	-0.7
KEF3				S	Sg	23 11 56.7	+0.6
KEF3	Kipouria, Keph	0.30	200	P	Pg	23 11 51.3	-0.7
KEF3				S	Sg	23 11 56.2	+0.1
ARGA	Argostoli. Kep	0.31	180	P	Pb	23 11 53.0	-0.4
VLS	Valsamata	0.32	164	P	Pg	23 11 52.2	-0.2
VLS				S	Sb	23 11 58.1	-0.6
	comp=N,7µm,0.3s						
VLS	Valsamata	0.32	164	P	Pg	23 11 52.1	-0.3
VLS				S	Sg	23 11 56.6	-0.1
VLS				AML	AML	23 11 58.4	
	comp=E,10580µm,0.3s						
VLS				AML	AML	23 12 00.9	
	comp=N,15312µm,0.3s						
LKD2	Lefkada island	0.33	25	P	Pg	23 11 51.8	-0.9
LKD2				S	Sb	23 11 59.3	+0.2
	comp=N,4µm,0.7s						
LKD2	Lefkada island	0.33	25	P	Pg	23 11 51.8	-0.9
LKD2				S	Sg	23 11 57.6	+0.4
PSDA	Pessada-Kefalo	0.38	168	P	Pg	23 11 53.2	-0.3
PSDA				S	Sb	23 11 59.9	-0.5
	comp=N,1µm,0.3s						
PSDA	Pessada-Kefalo	0.38	168	P	Pg	23 11 53.2	-0.3
VTN	Vitineika	0.80	135	P	Pb	23 12 01.5	-0.1
VTN				S	Sn	23 12 14.9	+0.2
VTN	Vitineika	0.80	135	P	Pg	23 12 01.1	-0.2
LTHK	Lithakia	0.82	160	P	Pg	23 12 00.7	-1.1
LTHK				S	Sb	23 12 14.3	+1.1
	comp=N,2µm,0.5s						
LTHK	Lithakia	0.82	160	P	Pg	23 12 00.8	-1.1
PVO	Paravola	0.83	81	P	Pb	23 12 02.0	-0.3
PVO				S	Sn	23 12 15.8	+0.2
	comp=N,1µm,0.6s						
PVO	Paravola	0.83	81	P	Pb	23 12 01.9	-0.4
PVO				AML	AML	23 12 22.9	
	comp=E,3342µm,0.7s						
PVO				AML	AML	23 12 23.2	
	comp=N,2275µm,0.5s						
RLS	Riolos of Patr	0.89	119	P	Pg	23 12 02.8	-0.2
RLS				S	Sn	23 12 16.5	-0.5
	comp=N,812nm,0.4s						
RLS	Riolos of Patr	0.89	119	P	Pg	23 12 02.5	-0.5
RLS				AML	AML	23 12 21.1	
	comp=E,1658µm,0.4s						
RLS				AML	AML	23 12 24.8	
	comp=N,1588µm,0.4s						
UPR	University Cam	1.05	101	P	Pn	23 12 07.0	+0.6
UPR				S	Sn	23 12 20.8	-0.1
IGT	Igoumenitsa	1.05	354	P	Pb	23 12 05.3	-0.8
IGT				S	Sn	23 12 20.8	-0.3
	comp=N,440nm,0.7s						
IGT	Igoumenitsa	1.05	354	P	Pb	23 12 05.3	-0.8
IGT				AML	AML	23 12 27.1	
	comp=E,1076µm,0.5s						
IGT				AML	AML	23 12 37.5	
	comp=N,596µm,0.6s						
DRO	Drossia	1.11	118	P	Pb	23 12 06.4	-0.6
DRO				S	Sn	23 12 23.1	+0.7
	comp=N,2µm,0.5s						
DRO	Drossia	1.11	118	P	Pb	23 12 06.4	-0.6
DRO				AML	AML	23 12 28.1	
	comp=N,3566µm,0.5s						
DRO				AML	AML	23 12 29.0	
	comp=E,3296µm,0.3s						
EFP	Efpalio	1.12	93	P	Pb	23 12 06.6	-0.7
EFP				S	Sn	23 12 23.6	+0.8
	comp=E,955nm,0.6s						
EFP	Efpalio	1.12	93	P	Pb	23 12 06.5	-0.7
EFP				AML	AML	23 12 31.6	
	comp=E,1810µm,0.7s						
EFP				AML	AML	23 12 32.5	
	comp=N,1882µm,0.5s						
EVR	Evrytania	1.12	67	P	Pb	23 12 06.4	-1.0
EVR				S	Sn	23 12 23.4	+0.4
	comp=N,448nm,0.8s						
EVR	Evrytania	1.12	67	P	Pb	23 12 06.3	-1.0
EVR				AML	AML	23 12 33.5	
	comp=E,879µm,0.7s						
EVR				AML	AML	23 12 43.8	
	comp=N,872µm,0.6s						
ANX	Ano Chora	1.14	84	P	Pb	23 12 07.0	-0.5
ANX				S	Sn	23 12 23.9	+0.6
	comp=N,2µm,0.5s						
ANX	Ano Chora	1.14	84	P	Pb	23 12 06.5	-1.0
ANX				AML	AML	23 12 31.8	
	comp=E,3813µm,0.6s						
ANX				AML	AML	23 12 32.0	
	comp=N,3272µm,0.5s						
LAKA	Lakka	1.20	101	P	Pb	23 12 07.4	-1.2
LAKA				AML	AML	23 12 32.3	
	comp=N,3561µm,0.7s						
LAKA				AML	AML	23 12 32.9	
	comp=E,6041µm,0.6s						
JAN	Janina	1.20	14	P	Pn	23 12 08.5	-0.1
JAN				S	Sn	23 12 26.1	+1.2
	comp=E,475nm,0.8s						
TRIZ	Trizonia	1.26	95	P	Pn	23 12 08.5	-0.7
KEK	Kerkira	1.33	337	P	Pb	23 12 10.9	0.0
KEK				S	Sg	23 12 28.5	-0.4
	comp=E,350nm,0.5s						
KEK	Kerkira	1.33	337	P	Pn	23 12 10.4	+0.1
KEK				AML	AML	23 12 36.7	
	comp=E,635µm,0.4s						
KEK				AML	AML	23 12 40.9	
	comp=N,764µm,0.6s						
KLV	Kalavryta, Ach	1.39	108	P	Pn	23 12 10.8	-0.3
KLV				AML	AML	23 12 42.5	
	comp=E,679µm,0.7s						
KLV				AML	AML	23 12 50.0	
	comp=N,540µm,0.6s						
MAKR	Makrakomi, Fth	1.39	67	P	Pb	23 12 11.6	-0.4
MAKR				AML	AML	23 12 39.3	
	comp=N,842µm,1.4s						
MAKR				AML	AML	23 12 45.7	
	comp=E,1076µm,0.8s						
GUR	Goura	1.57	110	P	Pb	23 12 14.1	-0.8
GUR				AML	AML	23 12 43.2	
	comp=N,1678µm,0.5s						
GUR				AML	AML	23 12 46.3	
	comp=E,1387µm,0.4s						
THL	Klokotos Trika	1.61	47	P	Pb	23 12 15.5	-0.1
THL				AML	AML	23 12 45.4	
	comp=N,1131µm,0.6s						
THL				AML	AML	23 12 49.1	
	comp=E,871µm,0.6s						
ITM	Ithomi	1.74	138	P	Pb	23 12 17.7	-0.1
PYL	PYLOS	1.88	147	P	Pn	23 12 16.9	-0.9
PYL				S	Sn	23 12 41.6	+0.2
	comp=E,145nm,1.0s						
VIL2	Platees	2.21	96	P	Pb	23 12 25.0	-0.8
VIL2				AML	AML	23 13 10.3	
	comp=N,363µm,0.6s						
VIL2				AML	AML	23 13 18.1	
	comp=E,703µm,0.9s						
OHR	Ohrid	2.63	5	ePn	Pb	23 12 31.3	-1.7
VAY	Valandovo	3.26	29	ePn	Pn	23 12 36.7	-0.1
STIP	Stip	3.46	22	ePn	Pn	23 12 41.0	+1.4
SOKA	Soboth	9.12	336	ePn	Pn	23 13 55.8	-1.6
	comp=E,0.8nm,0.3s						
MOA	Molln	10.40	336	ePn	Pn	23 14 16.6	+1.8
	comp=E,0.4nm,0.2s						
ESDC	Sonseca Array	19.00	281	P	Pn	23 16 10.0	+1.8
	comp=E,0.0nm,0.3s,baz=79,slow=12,SNR=2.0						
FINES	FINESS Array B	23.25	7	P	P	23 16 53.1	+0.3
	comp=E,1.9nm,0.8s,baz=165,slow=12,SNR=7.2						
MKAR	Makanchi Array	45.17	59	P	P	23 20 02.0	-0.5
	comp=E,0.3nm,0.5s,baz=276,slow=7.9,SNR=6.4						
ZALV	Zalesovo Beam	45.51	48	P	P	23 20 04.2	-0.7
	comp=E,1.7nm,0.5s,baz=271,slow=8.9,SNR=6.7						

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*IDC **17** 23:16:41.5±3.5, 8°.61S×116°.25E, h123^{km}±31^{km}, mb3.3/6, mb1 3.4/8, mb1mx3.1/42, mbtmp3.7/8, MS1.8/1, Ms1 1.8/1, ms1mx1.7/17, Error ellipse: s-maj=30.6km s-min=14.2km az=55.0*
*DJA **17** 23:16:42.7±0.6, 9°S±12°×11°6E±°, h82^{km}±12^{km}, M3.8/11, MLv3.8/11*
ISC 17 23:16:39.6±0.7, **8°.78S**±0°.07×**116°.23E**±0°.05, **h103**^{km}, **n21, σ2^s.36**/24, **mb3.6**/5, **Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWSI	Taliwang, Sumb	0.65	87	P	Pn	23 16 58.8	+1.9
DNP	Denpasar	1.01	275	P	Pn	23 17 02.7	+2.4
IGBI	Denpasar	1.07	268	P	Pn	23 17 03.3	+2.3
SRBI	Singaraja	1.22	304	P	Pn	23 17 04.4	+1.7
PLAI	Plampang	1.53	92	P	Pn	23 17 08.9	+2.5
ABJI	Asem Bagus	2.20	296	P	Pn	23 17 16.2	+1.3
GMJI	Gumukmas	2.80	280	P	Pn	23 17 24.2	+1.5
BLJI	Banyuglugur	2.80	291	P	Pn	23 17 24.2	+1.4
KMMI	Kalianget	2.82	307	P	Pn	23 17 25.0	+1.9
KAPI	Kappang	5.12	43	P	Pn	23 17 56.0	+1.9
	2.0nm,0.3s,baz=239,slow=7.3,SNR=6.9						
KAPI				S	Sn	23 18 51.6	-0.4
	0.9nm,0.3s,baz=140,slow=16,SNR=6.6						
KAPI				LR	LR	23 20 23.0	
	comp=Z,12nm,21.8s,baz=274,slow=44						
BATI	Baumata	7.47	102	S	Sn	23 19 47.8	-1.4
	1.3nm,0.3s,baz=323,slow=20,SNR=1.2						
FITZ	Fitzroy Crossi	13.02	136	P	Pn	23 19 42.4	+1.7
	baz=327,slow=14						
FITZ				S	Sn	23 21 56.6	-7.5
	0.2nm,0.3s,baz=258,slow=8.8,SNR=2.8						
WRA	Warramunga Arr	20.74	124	P	P	23 21 12.7	+0.5
	0.9nm,0.3s,baz=299,slow=12,SNR=15						
WRA				S	S	23 25 00.1	+1.9
	0.2nm,0.6s,baz=300,slow=20,SNR=1.1						
ASAR	Alice Springs	22.48	133	P	P	23 21 31.2	+0.6
	2.7nm,0.7s,baz=306,slow=8.9,SNR=28						
ASAR				PcP	PcP	23 25 21.1	-0.2
	0.2nm,0.3s,baz=305,slow=1.9,SNR=1.4						
STKA	Stephens Creek	32.91	138	P	P	23 23 04.9	+0.7
	1.0nm,0.5s,baz=323,slow=12,SNR=3.1						
SONM	Songino Array	57.03	352	P	P	23 26 13.7	-1.2
	0.2nm,0.4s,baz=169,slow=8.1,SNR=2.5						
MKAR	Makanchi Array	63.04	335	P	P	23 26 53.2	-2.6
	0.2nm,0.5s,baz=156,slow=6.2,SNR=1.4						
VNDA	Vanda	72.64	171	P	P	23 27 57.4	+1.8
	1.1nm,1.1s,baz=315,slow=4.3,SNR=1.4						
TORD	Torodi Ar. Bea	115.72	280	PKP	PKPdf	23 35 09.3	-1.7
	0.2nm,0.6s,baz=59,slow=2.9,SNR=1.5						
CPUP	Villa Florida	144.55	190	PKP	PKPbc	23 36 04.3	+0.7
	2.6nm,0.5s,baz=237,slow=2.8,SNR=8.5						
BDFB	Brasilia	151.15	213	PKPbc	PKiKP	23 36 22.6	+0.1
	1.6nm,0.4s,baz=180,slow=9.1,SNR=3.5						

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*ISU **17** 23:21:08, 40°.20N×73°.20E, h5^{km}*
*KRNET **17** 23:21:09.2±0.1, 40°.36N×73°.20E, h18^{km}, mb3.2*
*SOME **17** 23:21:11.3, 40°.58N×73°.28E, h0^{km}*
*KNET **17** 23:21:11.7±0.5, 40°.48N×73°.29E, h19^{km}±5^{km}, ml2.9, Error ellipse: s-maj=12.3km s-min=4.1km az=82.0*
*NNC **17** 23:21:15.4±4.6, 40°.55N×73°.67E, h0^{km}, mb3.7, mpv3.3, Error ellipse: s-maj=54.1km s-min=36.0km az=120.0*
ISC 17 23:21:08.9±1.1, **40°.37N**±0°.02×**73°.23E**±0°.02, **h1**^{km}±11^{km}, **n44, σ2^s.16**/82, **34C-21D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	Osh	0.37	295	eP	Pb	23 21 17.0	-1.4
OHH				eS	Sg	23 21 22.0	+1.0
OHH	Osh	0.37	295	⇓iP	Pg	23 21 16.5	+0.4
	baz=98						
OHH				⇓iS	Sg	23 21 21.9	+1.0
	baz=98						
SFK	Sufi-Kurgan	0.41	149	eP	Pg	23 21 17.0	+0.1
SFK				eS	Sg	23 21 23.0	+0.8
SFK	Sufi-Kurgan	0.41	149	⇑eP	Pg	23 21 16.9	+0.1
	baz=45						
SFK				⇑eS	Sg	23 21 23.1	+0.8
	baz=45						
SALK	Salom-Alik	0.68	41	⇑eP	Pb	23 21 22.7	-1.0
	baz=42						
SALK				⇑eS	Sb	23 21 32.3	-1.4
	baz=42						
FRG	Fergana	1.10	271	eP	Pg	23 21 33.0	+2.9
FRG				eS	Sg	23 21 47.0	+2.6
DRK	Karamyk	1.41	231	⇑iP	Pb	23 21 35.2	-1.0
	baz=31						
DRK				⇑iS	Sg	23 21 53.6	-0.7
	baz=31						
AML	Almayashu	1.79	11	P	Pb	23 21 42.7	-0.1
	51nm,0.2s,SNR=162						
AML				⇑S	Sg	23 22 06.8	+0.1
	151nm,0.2s						
AML	Almayashu	1.79	11	⇑iP	Pb	23 21 42.5	-0.3
	baz=12						
AML				⇑iS	Sg	23 22 06.6	0.0
	baz=12						
BTK	Batken	1.87	261	eP	Pb	23 21 43.0	-0.9
BTK				eS	Sg	23 22 09.0	-0.1
BTK	Batken	1.87	261	⇑eP	Pb	23 21 43.0	-0.9
	baz=61						
BTK				⇑iS	Sg	23 22 07.3	-1.8
	baz=61						
TRKS	Terek-Say	1.96	307	⇑iP	Pb	23 21 43.5	-2.0
	baz=6.0						
TRKS				⇑iS	Sb	23 22 08.1	-2.4
	baz=6.0						
UCH	Uchtor	2.09	27	⇓P	Pb	23 21 46.8	-1.1
	9.3nm,0.3s,SNR=24						
UCH				⇓S	Sg	23 22 15.5	-0.7
	54nm,0.3s						
UCH	Uchtor	2.09	27	⇑eP	Pb	23 21 47.4	-0.6
	baz=28						
UCH				⇑iS	Sb	23 22 15.0	+0.4
	baz=28						
MNAS	Manas	2.19	346	⇓iP	Pb	23 21 47.9	-1.4
	baz=47						
MNAS				⇓iS	Sb	23 22 15.8	-1.2
	baz=47						
EKS2	Erkin-Say	2.33	10	⇓P	Pb	23 21 50.7	-1.1
	4.0nm,0.2s,SNR=18						
EKS2				⇓S	Sb	23 22 20.9	-0.1
	29nm,0.3s						
EKS2	Erkin-Say	2.33	10	⇑iP	Pb	23 21 50.1	-1.6
	baz=11						
EKS2				⇑iS	Sb	23 22 19.7	-1.3
	baz=11						
MRKS	Merke	2.37	360	eP	Pb	23 21 52.9	+0.4
	4.5nm,0.3s						
MRKS				eS	Sb	23 22 23.3	+0.9
	86nm,0.4s						
AAK	Ala-Archa	2.46	22	⇓P	Pb	23 21 52.4	-1.5
	21nm,0.4s,SNR=8.8						
AAK				⇓S	Sb	23 22 23.1	-1.7
	59nm,0.3s						
AAK	Ala-Archa	2.46	22	⇓Pn	Pb	23 21 53.9	-0.1
	10nm,0.4s						
AAK				⇓Lg	Lg	23 22 25.0	
	72nm,0.7s						
AAK	Ala-Archa	2.46	22	⇓iP	Pb	23 21 52.0	-2.0
	baz=23						
AAK				⇓iS	Sb	23 22 23.1	-1.7
	baz=23						
KBK	Karagaybulak	2.62	29	⇑P	Pb	23 21 55.2	-1.7
	5.8nm,0.1s,SNR=10						
KBK	Karagaybulak	2.62	29	⇑iP	Pb	23 21 54.5	-2.3
	baz=29						
KBK				⇑iS	Sb	23 22 27.3	-2.3
	baz=29						
GAR	Garm	2.63	240	⇑eP	Pb	23 21 53.7	-3.2
	baz=40						
GAR				⇑iS	Sb	23 22 25.9	-3.8
	baz=40						
FRU1	Bishkek	2.66	23	⇑iP	Pb	23 21 54.6	-2.7
	baz=23						
FRU1				⇑iS	Sb	23 22 27.7	-2.7
	baz=23						
CHRV	Charvak	2.79	298	eP	Pg	23 22 01.0	-1.3
CHRV				eS	Sg	23 22 37.0	-1.4
CHMS	Chumysh	2.86	23	⇑iP	Pb	23 21 57.7	-3.1
	baz=23						
CHMS				⇑iS	Sb	23 22 32.7	-3.7
	baz=23						
DZA	Taraz	2.89	331	eP	Pb	23 22 02.5	+1.1
	8.5nm,0.3s						
DZA				eS	Sg	23 22 39.6	-2.3
	57nm,0.4s						
ULHL	Ulahol	2.94	49	⇑eP	Pb	23 21 59.1	-3.2
	baz=50						
ULHL				⇑iS	Sb	23 22 35.6	-3.3
	baz=50						
USP	Ospenovka	3.05	18	⇑eP	Pb	23 22 00.3	-3.7
	baz=18						
USP				⇑iS	Sb	23 22 37.0	-4.7
	baz=18						
TKM2	Tokmak 2	3.11	34	⇓P	Pb	23 22 01.6	-3.5
	4.1nm,0.2s,SNR=6.9						
TKM2	Tokmak 2	3.11	34	⇓Pg	Pb	23 22 01.6	-3.5
	2.5nm,0.3s						
TKM2				⇑Lg	Lg	23 22 45.7	
	12nm,0.7s						
KST	Kastek	3.37	37	eP	Pb	23 22 10.8	+1.4
	5.5nm,0.7s						
KST				eS	Sg	23 22 54.2	-2.8
	14nm,0.8s						
DGS	Degeres	3.44	33	eP	Pb	23 22 12.3	+1.6
	6.5nm,0.5s						
DGS				eS	Sb	23 22 56.1	+3.0
	13nm,0.6s						
CHGR	Chuyangaron	3.58	243	⇑eP	Pn	23 22 07.1	+1.4
	baz=43						

CHGR				⇑iS	Sn	23 22 49.1	+0.4
	baz=43						
MTBS	Maitube	3.65	40	eP	Pb	23 22 16.0	+1.7
	3.0nm,0.3s						
MTBS				eS	Sg	23 23 03.0	-3.2
	8.3nm,0.5s						
TNSS	Tian-Shan	3.85	45	eP	Pb	23 22 19.7	+1.8
	8.9nm,0.4s						
TNSS				eS	Sg	23 23 09.1	-3.7
	7.0nm,0.8s						
KNDC	Almaty	3.99	43	⇓Pn	Pn	23 22 14.0	+2.8
	10nm,0.5s						
KNDC				⇑Lg	Lg	23 23 11.2	
	18nm,0.6s						
MDOK	Medeo	3.99	44	eP	Pb	23 22 22.1	+2.0
	6.9nm,0.5s						
MDOK				eS	Sg	23 23 13.8	-3.4
	7.6nm,0.5s						
MDOK	Medeo	3.99	44	Pn	Pn	23 22 13.4	+2.0
	4.5nm,0.8s						
MDOK				Pg	Pb	23 22 22.2	+2.0
	6.1nm,0.6s						
MDOK				Lg	Lg	23 23 12.4	
	7.6nm,0.6s						
ANVS	Anan'yevo	4.11	53	⇓eP	Pn	23 22 14.6	+1.6
	baz=53						
ANVS				⇓iS	Sn	23 23 02.3	+0.5
	baz=53						
KUU	Kurty	4.21	32	eP	Pb	23 22 25.5	+1.7
	1.3nm,0.5s						
KUU				eS	Sb	23 23 19.4	+4.2
	8.9nm,0.7s						
BTLS	Baital	4.71	7	eP	Pb	23 22 33.8	+1.6
	2.1nm,0.9s						
BTLS				eS	Sb	23 23 33.5	+4.1
	5.2nm,0.5s						
PDGK	Podgornoye	5.53	56	⇓Pg	Pb	23 22 48.1	+1.7
	2.4nm,0.8s						
PDGK				⇓Lg	Lg	23 24 01.5	
	5.4nm,0.7s						

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*VIE **17** 23:28:08.1±0.6, 50.°16N×19.°41E, h0km, mb3.0/7, ml3.1/5, ms3.9/1, Error ellipse: s-maj=4.8km s-min=4.2km az=94.0 24 km ESE of Sosnowice Suspected Mining induced.*

*MOS **17** 23:28:08.9±2.3, 50.°19N×19.°28E, h7km, mb4.3/2, Error ellipse: s-maj=5.0km s-min=3.8km az=84.3*

*KRSZO **17** 23:28:10.0±0.6, 50.°07N×19.°28E, h8km±4km, ML3.8/26, Error ellipse: s-maj=3.0km s-min=2.5km az=0.0*

*PRU **17** 23:28:09.4±0.0, 50.°12N×19.°27E, h0km, M4.1*

*IPEC **17** 23:28:09.4±0.3, 50.°14N×19.°28E, h1km, ML3.6/3, Error ellipse: s-maj=2.4km s-min=1.9km az=166.0*

*IDC **17** 23:28:10.0±0.6, 49.°99N×19.°23E, h0km, mb3.4/4, mb1 3.7/13, mb1mx3.5/44, mbtmp3.6/13, ML3.4/9, MS2.6/1, Ms1 2.7/1, ms1mx2.0/47, Error ellipse: s-maj=8.6km s-min=5.7km az=153.0*

*LDG **17** 23:28:10.1±0.2, 50.°13N×19.°16E, h1km, Ml4.2/6, Error ellipse: s-maj=5.4km s-min=3.4km az=18.0, Suspected Mining induced.*

*NEIC **17** 23:28:10.0±1.3, 50.°14N±0.°06×19.°25E±0.°03, h6km±5km, mb4.1/5, ML3.8/1(BUC), Error ellipse: s-maj=8.8km s-min=1.6km az=161.0*

*BGR **17** 23:28:11.3±0.6, 50.°08N×19.°26E, h1km, ML3.8/10, Error ellipse: s-maj=6.7km s-min=5.6km az=7.0*

ISC 17 23:28:08.6±0.4**, 50.°13N**±0.°02×**19.°20E**±0.°02**, h0km, n316, σ2.s02**/401**, mb3.5**/6**, 18C-13D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAC	Raciborz	0.65	266	ePG	Pn	23 28 24.3	-0.7
RAC				eSG	Sn	23 28 35.4	-0.6
RAC	Raciborz	0.65	266	eP	Pn	23 28 24.3	-0.7
RAC				e		23 28 35.4	
OKC	Ostrava-Krasne	0.74	247	eP	Pb	23 28 24.1	-0.2
OKC				e		23 28 34.2	
OKC				smax	smax		
	comp=N,372nm,0.4s						
OKC	Ostrava-Krasne	0.74	247	ePG	Pb	23 28 24.1	-0.2
OKC				eSG	Sb	23 28 34.2	-0.8
	comp=N,372nm,0.4s						
OKC	Ostrava-Krasne	0.74	247	ePg	Pb	23 28 25.2	+0.9
OKC				eSg	Sn	23 28 36.9	-1.3
LANS	Liptovska Anna	1.00	170	eP	Pb	23 28 28.4	-0.3
LANS				e		23 28 40.9	
LANS				pmax	pmax		
	comp=N,2µm,0.5s						
LANS	Liptovska Anna	1.00	170	Pg	Pg	23 28 27.9	+0.3
	comp=Z,13nm,SNR=742						
LANS	Liptovska Anna	1.00	170	ePG	Pb	23 28 28.4	-0.3
LANS				eSG	Sg	23 28 40.9	+0.4
LANS				eLG	Lg	23 28 48.0	
NIE	Niedzica	1.01	135	ePg	Pb	23 28 28.4	-0.5
NIE				eSg	Sb	23 28 41.8	-0.9
NIE	Niedzica	1.01	135	P	Pg	23 28 28.0	+0.2
NIE	Niedzica	1.01	135	Pb	Pg	23 28 28.0	+0.2
	comp=Z,1.8nm,SNR=36						
MORC	Moravsky Berou	1.13	252	⇑P	Pn	23 28 32.1	+0.4
MORC				⇑S	Sn	23 28 48.1	+0.3
MORC	Moravsky Berou	1.13	252	P	Pn	23 28 31.8	+0.1
MORC						23 28 48.2	
MORC	Moravsky Berou	1.13	252	ePg	Pn	23 28 31.8	+0.1
	baz=71						
MORC				eSg	Sb	23 28 46.0	-0.2
	comp=Z,705nm,0.7s,baz=71						
MORC	Moravsky Berou	1.13	252	ePg	Pn	23 28 31.8	+0.1
MORC				eSg	Sn	23 28 48.3	+0.4
MORC	Moravsky Berou	1.13	252		Pn	23 28 31.8	+0.1
MORC				Sg	Sn	23 28 47.8	-0.1
MORC	Moravsky Berou	1.13	252		Pn	23 28 32.1	+0.4
MORC					Sn	23 28 48.1	+0.3
STHS	Stebnicka Huta	1.50	118	eP	Pn	23 28 35.9	-0.9
STHS				e		23 28 58.2	
STHS	Stebnicka Huta	1.50	118	Pn	Pg	23 28 39.4	+2.1
	comp=Z,13nm,SNR=156						
STHS	Stebnicka Huta	1.50	118	ePN	Pn	23 28 35.8	-1.0
STHS				eSN	Sn	23 28 58.1	+1.0
KRLC	Kraliky	1.56	269	eP	Pn	23 28 38.0	+0.4
KRLC				e		23 29 00.2	
KRLC				smax	smax		
	comp=N,318nm,0.6s						
KRLC	Kraliky	1.56	269	ePG	Pn	23 28 38.0	+0.4
KRLC				eSG	Sg	23 29 00.2	+1.6
	comp=N,318nm,0.6s						
JAVC	Velka Javorina	1.62	219	ePg	Pb	23 28 39.3	0.0
	baz=39						
JAVC	Velka Javorina	1.62	219	ePG	Pb	23 28 39.4	+0.1
VYHS	Vyhne	1.66	188	eP	Pn	23 28 39.1	+0.2
VYHS				e		23 29 00.0	
VYHS				pmax	pmax		
	comp=N,552nm,0.4s						
VYHS	Vyhne	1.66	188	Pg	Pn	23 28 38.8	0.0
	comp=Z,0.5nm,SNR=27						
VYHS	Vyhne	1.66	188	ePN	Pn	23 28 39.1	+0.2
VYHS				eSN	Sn	23 29 00.0	-0.8
VYHS				eLG	Lg	23 29 01.2	
KECS	Kecovo	1.85	153	eP	Pn	23 28 41.4	-0.1
KECS				e		23 29 06.1	
KECS				pmax	pmax		
	comp=N,632nm,1.1s						
KECS	Kecovo	1.85	153	Pb	Pb	23 28 42.6	-0.6
	comp=Z,15nm,SNR=91						
KECS	Kecovo	1.85	153	ePN	Pn	23 28 41.3	-0.2
KECS				eSN	Sn	23 29 06.1	+0.5
KECS				eLG	Lg	23 29 09.1	
DPC	Dobruska-Polom	1.86	278	eP	Pb	23 28 43.5	0.0
DPC				e		23 29 10.9	
DPC				smax	smax		
	comp=N,261nm,0.5s						
DPC	Dobruska-Polom	1.86	278	ePG	Pb	23 28 43.5	0.0
DPC				eSG	Sg	23 29 10.9	+2.5
	comp=N,261nm,0.5s						
DPC	Dobruska-Polom	1.86	278	ePn	Pb	23 28 43.4	-0.1
DPC				ePg	Pg	23 28 45.5	+1.2
DPC				eSg	Sg	23 29 10.3	+1.9
VRAC	Vranov	1.88	245	⇑P	Pb	23 28 43.1	-0.7
VRAC				⇑S	Sg	23 29 09.1	+0.1
VRAC	Vranov	1.88	245	Pn	Pn	23 28 42.2	+0.3
	comp=N,20nm,0.3s,baz=63,slow=12,SNR=49						
VRAC				Pg	Pg	23 28 44.9	+0.3
	comp=N,22nm,0.3s,baz=66,slow=16,SNR=59						
VRAC				Lg	Lg	23 29 08.9	
	comp=N,27nm,0.3s,baz=74,slow=16,SNR=6.1						
VRAC	Vranov	1.88	245	P	Pb	23 28 43.1	-0.7
VRAC						23 29 09.1	
VRAC	Vranov	1.88	245	ePn	Pb	23 28 43.2	-0.6
	baz=63						
VRAC				eSg	Sg	23 29 09.9	+0.9
	comp=N,316nm,0.8s,baz=63						
VRAC	Vranov	1.88	245		Pb	23 28 43.1	-0.7
VRAC					Sg	23 29 09.1	+0.1
CRVS	Cervenica-Dubn	1.92	129	eP	Pn	23 28 42.2	-0.3
CRVS				e		23 29 09.7	
CRVS				pmax	pmax		
	comp=N,476nm,0.7s						
CRVS	Cervenica-Dubn	1.92	129	Pn	Pn	23 28 42.5	0.0
	comp=Z,0.3nm,SNR=18						
CRVS	Cervenica-Dubn	1.92	129	ePN	Pn	23 28 42.2	-0.3
CRVS				eSG	Sg	23 29 09.7	-0.4
CRVS				eLG	Lg	23 29 19.4	
OSTC	Ostas	1.96	284	ePG	Pb	23 28 44.4	-0.7
OSTC				eSG	Sg	23 29 14.4	+2.9
	comp=Z,182nm,0.7s						
BEL	Belsk	1.98	30	P	Pg	23 28 50.0	+3.5
BEL	Belsk	1.98	30	Pg	Pg	23 28 50.0	+3.5
	comp=Z,2.9nm,SNR=8.3						
KSP	Ksiaz	1.99	292	ePb	Pb	23 28 45.0	-0.6
KSP				ePg	Pg	23 28 47.9	+1.2
KSP				eSg	Sg	23 29 14.9	+2.4
KSP	Ksiaz	1.99	292	P	Pg	23 28 46.6	-0.1
KSP	Ksiaz	1.99	292	ePn	Pb	23 28 45.1	-0.6
KSP				ePg	Pg	23 28 49.5	+2.8
KSP				eSg	Sg	23 29 16.9	+4.4
KSP	Ksiaz	1.99	292	x	Pg	23 28 46.6	-0.1
	comp=Z,1.2nm,SNR=18						
SMOL	Smolenice	1.99	216	eP	Pn	23 28 44.0	+0.5
SMOL				e		23 29 11.1	
SMOL	Smolenice	1.99	216	ePN	Pn	23 28 44.0	+0.5
SMOL				eSN	Sb	23 29 11.1	+0.1
CHVC	Chvalec	2.07	284	ePG	Pb	23 28 46.3	-0.7
CHVC				eSG	Sg	23 29 17.9	+3.0
	comp=Z,165nm,0.7s						
UPC	Upice	2.08	282	eP	Pb	23 28 47.1	0.0
UPC				e		23 29 18.0	
UPC				smax	smax		
	comp=N,183nm,0.7s						
UPC	Upice	2.08	282	ePG	Pb	23 28 47.1	0.0
UPC				eSG	Sg	23 29 18.0	+2.7
	comp=N,183nm,0.7s						
KRUC	Moravsky	2.12	241	P	Pn	23 28 45.6	+0.4
KRUC	Moravsky	2.12	241	ePn	Pb	23 28 46.6	-1.2
	baz=59						
KRUC				eSg	Sg	23 29 17.6	+1.1
	comp=N,309nm,1.0s,baz=59						
MODS	Modra-Piesok	2.16	216	eP	Pn	23 28 45.4	-0.5
MODS				e		23 29 17.0	
MODS				pmax	pmax		
	comp=N,171nm,0.6s						
MODS	Modra-Piesok	2.16	216	ePN	Pn	23 28 45.4	-0.5
MODS				eSG	Sb	23 29 17.0	+1.1
MODS				eLG	Lg	23 29 30.2	
PSZ	Piszkesteto	2.26	168	⇓P	Pn	23 28 48.2	+1.0
PSZ	Piszkesteto	2.26	168	ePN	Pn	23 28 47.4	+0.1
PSZ	Piszkesteto	2.26	168	eP	Pn	23 28 47.9	+0.7
PSZ	Piszkesteto	2.26	168	ePG	Pg	23 28 51.8	-0.1
PSZ	Piszkesteto	2.26	168	Pn	Pn	23 28 47.4	+0.1
	comp=Z,0.9nm,SNR=11						
PSZ				Pg	Pn	23 28 47.9	+0.7
	comp=Z,0.9nm,SNR=11						
PSZ				Pb	Pg	23 28 51.8	-0.1
PSZ	Piszkesteto	2.26	168	Pn	Pn	23 28 46.2	-1.0
PSZ	Piszkesteto	2.26	168		Pn	23 28 48.2	+1.0
KWP	Kalwaria Pacla	2.32	101	P	Pn	23 28 46.8	-1.2
KWP	Kalwaria Pacla	2.32	101	Pb	Pb	23 28 50.8	-0.4
	comp=Z,7.7nm,SNR=3.8						
KWP	Kalwaria Pacla	2.32	101	Pn	Pn	23 28 46.8	-1.2
KOLS	Kolonicke sedl	2.33	120	eP	Pn	23 28 47.7	-0.5
KOLS				e		23 29 17.7	
KOLS	Kolonicke sedl	2.33	120	Pb	Pb	23 28 50.5	-0.9
	comp=Z,135nm,SNR=6.5						
KOLS	Kolonicke sedl	2.33	120	ePN	Pn	23 28 47.7	-0.5
KOLS				eSN	Sn	23 29 17.7	+0.2
ZST	Bratislava	2.38	216	eP	Pg	23 28 57.4	+3.3
ZST				e		23 29 19.9	
ZST	Bratislava	2.38	216	Pb	Pg	23 28 57.7	+3.7
ZST	Bratislava	2.38	216	e	Pg	23 28 57.3	+3.2
ZST	Bratislava	2.38	216	eSN	Sn	23 29 19.9	+1.3
SRO	Srobarova	2.39	195	eP	Pg	23 28 55.2	+0.8
SRO				e		23 29 29.1	
SRO	Srobarova	2.39	195	Pb	Pg	23 28 55.4	+1.1
SRO	Srobarova	2.39	195	e	Pg	23 28 55.2	+0.8
SRO				e		23 29 29.1	
UZH	Uzhgorod	2.52	125	eP	Pb	23 28 54.3	-0.3
UZH				eS	Sn	23 29 23.3	+1.3
TREC	Trest	2.55	252	eP	Pb	23 28 55.4	+0.2
TREC				e		23 29 31.1	
TREC				smax	smax		
	comp=N,166nm,0.6s						
TREC	Trest	2.55	252	ePG	Pb	23 28 55.4	+0.2
TREC				eSG	Sg	23 29 31.1	+0.6
	comp=N,166nm,0.6s						
CSKK	Cskako	2.84	193	ePN	Pn	23 28 56.3	+1.2
CSKK	Cskako	2.84	193	eP	Pn	23 28 56.8	+1.7
CSKK	Cskako	2.84	193	Pn	Pn	23 28 56.3	+1.2
	comp=Z,0.2nm,SNR=31						
CSKK				Pg	Pn	23 28 56.8	+1.7
	comp=Z,0.2nm,SNR=30						
BSZH	Besenyszg	2.92	166	⇓P	Pn	23 28 58.0	+1.8
BSZH	Besenyszg	2.92	166	Pb	Pg	23 29 07.6	+3.1
BSZH	Besenyszg	2.92	166		Pn	23 28 58.0	+1.8
TRPA	Tarpa	2.97	131	⇑P	Pn	23 28 56.2	-0.6
TRPA	Tarpa	2.97	131	eP	Pn	23 28 56.2	-0.6
TRPA	Tarpa	2.97	131	ePN	Pn	23 28 56.2	-0.6
TRPA	Tarpa	2.97	131	Pg	Pn	23 28 56.2	-0.6
	comp=Z,0.3nm,SNR=4.2						
TRPA				Pb	Pb	23 28 56.2	-6.0
TRPA	Tarpa	2.97	131		Pn	23 28 56.2	-0.6
EGYH	Egyhazaskeszo	2.98	205	ePN	Pn	23 28 58.7	+1.6
EGYH	Egyhazaskeszo	2.98	205	eP	Pb	23 29 01.2	-1.4
EGYH	Egyhazaskeszo	2.98	205	Pn	Pn	23 28 58.7	+1.6
	comp=Z,0.5nm,SNR=4.8						
EGYH				Pg	Pb	23 29 01.2	-1.4
	comp=Z,0.5nm,SNR=5.5						
PVCC	Panska Ves	3.00	279	eP	Pn	23 28 59.3	+2.0
PVCC	Panska Ves	3.00	279	ePN	Pn	23 28 59.3	+2.0
PVCC				eSG	Sg	23 29 47.1	+2.4
	comp=Z,127nm,0.4s						
SOP	Sopron	3.01	216	ePN	Pn	23 28 58.2	+0.8
SOP	Sopron	3.01	216	eP	Pn	23 28 59.8	+2.4
SOP	Sopron	3.01	216	P	Pn	23 28 59.7	+2.4
SOP	Sopron	3.01	216	Pn	Pn	23 28 58.2	+0.8
	comp=Z,0.2nm,SNR=4.2						
SOP				Pg	Pn	23 28 59.8	+2.4
	comp=Z,0.2nm,SNR=4.0						
PRU	Pruhonice	3.01	269	eP	Pn	23 28 57.7	+0.3
PRU	Pruhonice	3.01	269	ePN	Pn	23 28 57.7	+0.3
PRU				ePG	Pb	23 29 03.4	+0.5
PRU				eSG	Sg	23 29 46.3	+1.2
	comp=Z,99nm,0.6s						
PRA	Prague	3.07	271	eP	Pn	23 28 59.1	+0.8
PRA	Prague	3.07	271	ePN	Pn	23 28 59.1	+0.8
PRA				eSG	Sg	23 29 48.9	+1.7
	comp=Z,120nm,0.6s						
CONA	Conrad Observa	3.11	226	i Pn	Pn	23 28 59.3	+0.3
	SNR=6.3						
LVV	L'vov	3.13	94	eP	Pn	23 28 58.9	-0.2
LVV				eS	Sn	23 29 37.0	-0.2
MPLH	Magyarpolny	3.16	201	ePN	Pn	23 28 59.5	0.0
MPLH	Magyarpolny	3.16	201	eP	Pb	23 29 03.4	-2.2
MPLH	Magyarpolny	3.16	201	Pn	Pn	23 28 59.5	0.0
	comp=Z,0.2nm,SNR=8.0						
MPLH				Pg	Pb	23 29 03.4	-2.2
	comp=Z,0.2nm,SNR=6.4						
TIH	Tihany	3.35	196	ePN	Pn	23 29 02.8	+0.7
TIH				ePG	Pg	23 29 16.7	+4.0
TIH				eSN	Sn	23 29 45.4	+2.9
TIH	Tihany	3.35	196	Pn	Pn	23 29 02.8	+0.7
	comp=Z,0.8nm,SNR=6.7						
TIH				Pg	Pg	23 29 16.6	+3.9
TIH				Pb	Pb	23 29 16.7	+8.0
TIH				Sn	Sn	23 29 45.4	+2.9
GKP	Gorka Klasztor	3.37	340	eP	Pn	23 29 05.3	+2.9
GKP				eS	Sn	23 29 19.3	-24
GKP	Gorka Klasztor	3.37	340	P	Pb	23 29 08.8	-0.4
GKP	Gorka Klasztor	3.37	340	Pb	Pb	23 29 08.8	-0.4
	comp=Z,1.3nm,SNR=5.7						
BRG	Berggiesshubel	3.44	285	ePn	Pn	23 29 05.6	+2.3
BRG				eSg	Sg	23 30 01.6	+2.7
BRG	Berggiesshubel	3.44	285	Pn	Pn	23 29 06.1	+2.8
BRG				Pg	Pg	23 29 14.6	+0.2
BRG				Sg	Sg	23 29 56.6	-2.4
BRG				Amp		23 30 03.3	
	comp=Z,70nm,0.6s						
CKRC	Cesky Krumlov	3.45	250	ePN	Pn	23 29 04.8	+1.3
CKRC				ePG	Pb	23 29 12.6	+2.1
CKRC				eSG	Sg	23 29 59.7	+0.4
BMR	Baia Mare	3.75	129	⇑P	Pn	23 29 07.0	-0.6
BMR	Baia Mare	3.75	129	P	Pn	23 29 07.0	-0.6
BMR	Baia Mare	3.75	129	x	Pn	23 29 09.9	+2.2
	comp=Z,0.3nm,SNR=9.5						
BMR	Baia Mare	3.75	129		Pn	23 29 07.0	-0.6
ARSA	Arzberg	3.77	222	i Pn	Pn	23 29 09.3	+1.3
	comp=Z,1.7nm,0.3s,SNR=8.1						
ARSA				eSg	Sg	23 30 16.7	+7.0
	comp=Z,18nm,0.5s						
ARSA	Arzberg	3.77	222	Pb	Pb	23 29 14.2	-1.8
	comp=Z,0.1nm,SNR=2.8						
KHC	Kasperske Hory	3.79	257	eP	Pn	23 29 09.2	+1.0
KHC	Kasperske Hory	3.79	257	ePN	Pn	23 29 09.2	+1.0
KHC				eSG	Sg	23 30 11.0	+0.7
	comp=Z,104nm,0.5s						
GEC2	GERESS Array S	3.81	252	ePn	Pn	23 29 10.4	+1.8
GEC2				eSg	Sg	23 30 12.4	+1.5
GEC2	GERESS Array S	3.81	252	Pn	Pn	23 29 09.2	+0.6
GERES	GERESS Array B	3.81	252	Pn	Pn	23 29 09.7	+1.1
	comp=Z,1.1nm,0.3s,baz=65,slow=14,SNR=17						
GERES				Pg	Pb	23 29 16.8	+0.1
	comp=Z,4.3nm,0.3s,baz=61,slow=15,SNR=20						
GERES				Lg	Lg	23 30 10.9	
	comp=Z,7.4nm,0.3s,baz=70,slow=30,SNR=4.4						
GERES	GERESS Array B	3.81	252	P	Pn	23 29 10.7	+2.1
GERES	GERESS Array B	3.81	252	Pn	Pn	23 29 10.7	+2.1
FBE	Freiberg	3.81	284	ePn	Pn	23 29 11.6	+3.1
FBE				eSg	Sg	23 30 14.1	+3.1
MOA	Molln	3.97	237	i Pn	Pn	23 29 11.2	+0.5
	comp=Z,1.1nm,0.1s,SNR=7.3						
DRGR		4.08	144	⇓P	Pn	23 29 12.3	+0.1
DRGR		4.08	144	P	Pn	23 29 12.3	+0.1
DRGR		4.08	144	Pn	Pn	23 29 13.2	+1.0
	comp=Z,0.1nm,SNR=2.2						
DRGR		4.08	144		Pn	23 29 12.3	+0.1
CLL	Collm	4.11	289	P	Pn	23 29 14.5	+1.9
CLL	Collm	4.11	289	i Pn	Pn	23 29 15.7	+3.1
	comp=Z,6.0nm,0.4s						
CLL				i Pg	Pg	23 29 30.6	+3.3
CLL				eSg	Sg	23 30 23.0	+2.4
	comp=Z,96nm,0.6s						
CLL	Collm	4.11	289	ePn	Pn	23 29 13.7	+1.1
CLL				ePg	Pg	23 29 30.6	+3.3
CLL				eSg	Sg	23 30 23.2	+2.6
CLL	Collm	4.11	289	Pn	Pn	23 29 14.4	+1.9
KOVH	Kovagotottos	4.11	191	ePN	Pn	23 29 13.8	+1.2
KOVH				ePG	Pg	23 29 26.5	-0.8
KOVH	Kovagotottos	4.11	191	Pn	Pn	23 29 13.8	+1.2
	comp=Z,0.1nm,SNR=1.9						
KOVH				Pg	Pg	23 29 26.5	-0.8
KOVH				Pb	Pb	23 29 28.1	+6.4
RUE	Ruedersdorf	4.14	307	eP	Pg	23 29 29.2	+1.4
KOGS	Kog	4.18	209	Pn	Pn	23 29 16.1	+2.6
	comp=Z,0.5nm,SNR=2.1						
SIRR	Siria	4.20	156	⇑P	Pn	23 29 14.3	+0.5
SIRR	Siria	4.20	156	Pg	Pn	23 29 14.6	+0.8
	comp=Z,0.1nm,SNR=3.0						
SIRR	Siria	4.20	156		Pn	23 29 14.3	+0.5
WET	Wettzell	4.23	259	P	Pn	23 29 15.6	+1.4
WET	Wettzell	4.23	259	ePn	Pn	23 29 15.6	+1.4
WET				ePg	Pg	23 29 30.3	+0.8
TANN	Tannenbergstha	4.33	276	ePn	Pn	23 29 17.5	+1.8
TANN				eSg	Sg	23 30 28.7	+1.0
SOKA	Soboth	4.43	220	Pn	Pn	23 29 18.6	+1.6
	SNR=7.1						
KLNR	Kaliningrad	4.52	7	deP	Pn	23 29 18.4	+0.2
ARCR	ARCALIA	4.58	130	Pg	Pn	23 29 22.3	+3.3
	comp=Z,0.2nm,SNR=2.5						
SUW	Suwalki	4.60	31	eP	Pn	23 29 21.4	+2.2
SUW	Suwalki	4.60	31	P	Pn	23 29 19.8	+0.6
SUW	Suwalki	4.60	31	Pn	Pn	23 29 19.8	+0.6
BUR08	Bucovina Ar. S	4.67	120	Pn	Pn	23 29 21.0	+0.5
BURAR	Bucovina Array	4.70	120	⇓P	Pn	23 29 21.1	+0.4
BURAR	Bucovina Array	4.70	120	P	Pn	23 29 21.2	+0.4
BURAR	Bucovina Array	4.70	120	Pn	Pn	23 29 21.1	+0.4
PTJ	Puntijarka	4.75	208	P	Pb	23 29 27.3	-5.4
PTJ	Puntijarka	4.75	208	Pn	Pb	23 29 27.4	-5.3
	comp=Z,0.1nm,SNR=1.6						
BZS	Buzias	4.80	159	⇑P	Pn	23 29 22.7	+0.7
BZS	Buzias	4.80	159	P	Pn	23 29 22.7	+0.7
BZS	Buzias	4.80	159	x	Pn	23 29 22.9	+0.9
	comp=Z,0.1nm,SNR=2.7						
BZS	Buzias	4.80	159		Pn	23 29 22.7	+0.7
MOX	Moxa	4.88	279	P	Pn	23 29 25.9	+2.7
MOX	Moxa	4.88	279	ePn	Pn	23 29 25.4	+2.2
MOX				eSg	Sg	23 30 47.9	+2.6
KBA	Koelnbreinsper	4.94	234	ePn	Pn	23 29 25.2	+1.0
	comp=Z,3.1nm,0.4s						
CRES	Cresnjev	4.99	212	ePn	Pn	23 29 24.9	+0.3
FRGS	Fruska Gora	4.99	175	⇑P	Pn	23 29 25.7	+1.0
FRGS	Fruska Gora	4.99	175	ePn	Pn	23 29 25.3	+0.6
FRGS	Fruska Gora	4.99	175		Pn	23 29 25.7	+1.0
LJU	Ljubljana	5.15	219	ePn	Pn	23 29 28.3	+1.4
GRA1	Grafenberg Arr	5.18	268	Pn	Pn	23 29 28.2	+1.0
GRF	Grafenberg Arr	5.18	268	P	Pn	23 29 28.2	+1.0
GRFO	Grafenberg	5.18	268	P	Pn	23 29 28.0	+0.7
GRFO	Grafenberg	5.18	268	Pn	Pn	23 29 27.9	+0.7
GZR	Gura Zlata	5.32	152	⇓P	Pn	23 29 30.2	+1.0
GZR	Gura Zlata	5.32	152	P	Pn	23 29 30.2	+1.0
GZR	Gura Zlata	5.32	152	Pg	Pn	23 29 30.8	+1.5
	comp=Z,0.2nm,SNR=5.9						
	comp=Z,40nm,0.5s						
GZR	Gura Zlata	5.32	152		Pn	23 29 30.2	+1.0
BLJ	Bijeljina	5.35	180	ePn	Pn	23 29 30.1	+0.5
MRAK	Mrakovica	5.35	198	ePn	Pn	23 29 30.0	+0.3
CEY	Cerknica	5.44	218	ePn	Pn	23 29 32.1	+1.2
ZOU	Zoufplan	5.48	232	Pn	Pn	23 29 32.1	+0.5
BLY	Banja Luka	5.55	195	ePn	Pn	23 29 32.6	+0.2
LOT	Lotru	5.60	145	⇑P	Pn	23 29 34.8	+1.6
LOT	Lotru	5.60	145	Pn	Pn	23 29 39.3	+6.1
LOT	Lotru	5.60	145		Pn	23 29 34.8	+1.6
MDVR	Moldovita	5.62	161	⇑P	Pn	23 29 33.6	+0.3
MDVR	Moldovita	5.62	161		Pn	23 29 33.6	+0.3
BSD	Bornholm Skovb	5.63	334	i P	Pn	23 29 34.6	+1.2
BSD				IAML		23 30 38.5	
	comp=Z,5.2nm,0.4s						
BSD				eS	Sn	23 30 38.7	-0.1
HERR	Herculane	5.69	156	⇑P	Pn	23 29 35.0	+0.8
HERR	Herculane	5.69	156		Pn	23 29 35.0	+0.8
WTTA	Wattenberg	5.77	243	ePn	Pn	23 29 39.1	+3.5
	comp=Z,1.3nm,0.3s						
STAL	STALIGIAL	5.82	231	Pn	Pn	23 29 37.2	+1.2
DOPR	Dopca	5.88	133	⇓P	Pn	23 29 37.4	+0.5
DOPR	Dopca	5.88	133		Pn	23 29 37.4	+0.5
OZUR		5.98	130	⇑P	Pn	23 29 38.4	+0.1
OZUR		5.98	130		Pn	23 29 38.4	+0.1
HAPS	Han Pijesak,Bl	6.05	182	ePn	Pn	23 29 40.1	+0.8
DIVS	Divibare	6.06	175	ePn	Pn	23 29 39.9	+0.5
DIVS	Divibare	6.06	175	Pg	Pn	23 29 42.5	+3.0
	comp=Z,0.1nm,SNR=1.6						
	comp=Z,18nm,0.8s						
DIVS	Divibare	6.06	175		Pn	23 29 39.6	+0.2
PABE	Paberze	6.11	26	eP	Pn	23 29 42.7	+2.8
PABE				IAML		23 31 44.2	
	comp=Z,49nm,0.6s						
PABE	Paberze	6.11	26	Pn	Pn	23 29 41.0	+1.0
PBUR	Paburge	6.13	14	eP	Pn	23 29 41.1	+0.9
PBUR				IAML		23 31 48.3	
	comp=Z,58nm,0.5s						
BBLS	Lazići	6.27	179	ePn	Pn	23 29 43.0	+0.7
SORM	Soroca	6.33	105	⇑P	Pn	23 29 41.3	-1.7
SORM	Soroca	6.33	105	P	Pn	23 29 41.3	-1.7
SORM	Soroca	6.33	105		Pn	23 29 41.3	-1.7
COVR	Voineasa-Covas	6.36	130	⇑P	Pn	23 29 44.0	+0.5
COVR	Voineasa-Covas	6.36	130		Pn	23 29 44.0	+0.5
AKASG	Malin Array Be	6.43	81	Pn	Pn	23 29 42.4	-2.1
	comp=Z,1.6nm,0.3s,baz=260,slow=14,SNR=5.3						
AKASG				Sn	Sn	23 30 54.2	-4.2
	comp=Z,4.1nm,0.3s,baz=5.7,slow=25,SNR=4.6						
AKASG				Lg	Lg	23 31 26.8	
	comp=Z,4.8nm,0.3s,baz=260,slow=26,SNR=1.9						
AKASG	Malin Array Be	6.43	81	eP	Pn	23 29 47.2	+2.8
AKASG				pmax	pmax		

	comp=Z,3.0nm,0.3s						
AKASG	Malin Array Be	6.43	81	Pn	Pn	23 29 44.4	0.0
AKBB	Malin Array Si	6.43	81	P	Pn	23 29 45.5	+1.1
AKBB	Malin Array Si	6.43	81	Pn	Pn	23 29 45.5	+1.1
MLR	Muntele Rosu	6.49	133	⇓P	Pn	23 29 46.3	+0.9
MLR	Muntele Rosu	6.49	133	Pn	Pn	23 29 47.6	+2.2
	comp=Z,0.2nm,0.3s,baz=344,slow=15,SNR=2.8						
MLR				Sn	Sn	23 31 00.9	+0.7
	baz=279,slow=21,SNR=1.1						
MLR	Muntele Rosu	6.49	133		Pn	23 29 45.8	+0.4
CTI	Castel Tesino	6.50	234	P	Pn	23 29 44.5	-1.0
CTI	Castel Tesino	6.50	234	Pn	Pn	23 29 44.5	-1.0
BLEU	Blekinge	6.51	343	*e*	Pn	23 29 45.3	-0.2
	baz=166,slow=12						
BLEU				*e*P	Pn	23 29 46.0	+0.5
BLEU				*e*S	Sn	23 30 57.1	-3.3
BLEU				IAML		23 31 00.2	
	comp=Z,1.9nm,0.4s						
RUDO	Rudo	6.52	179	*e*Pn	Pn	23 29 44.4	-1.2
LUNU	Lund	6.52	330	*i* P	Pn	23 29 46.0	+0.4
LUNU				*i* S	Sn	23 30 57.2	-3.4
VRI	Vrincioaia	6.61	127	⇑P	Pn	23 29 47.8	+0.9
VRI	Vrincioaia	6.61	127	P	Pn	23 29 47.8	+0.9
VRI	Vrincioaia	6.61	127		Pn	23 29 47.8	+0.9
NACGM	Naroch	6.65	41	*i* P	Pb	23 30 07.2	+2.3
ISAL	Salakas	6.87	35	*e*P	Pn	23 29 57.0	+6.5
ISAL				IAML		23 32 10.6	
	comp=Z,12nm,0.5s						
MNK	Minsk	6.89	47	*i* P	Pn	23 29 54.3	+3.6
MNK				*i* S	Sn	23 31 14.1	+4.4
MNK				pmax	pmax		
	comp=E,1.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MNK				pmax	pmax		
	comp=N,3.0nm,0.8s						
MNK	Minsk	6.89	47	*i* P	Pn	23 29 54.4	+3.7
	comp=E,1.0nm,0.8s						
MNK				*i* P	Pn	23 29 54.4	+3.7
	comp=N,3.0nm,0.8s,baz=232						
MNK				*i* P	Pn	23 29 54.4	+3.7
	comp=Z,3.0nm,0.8s						
MNK				*i* S	Sn	23 31 14.2	+4.5
TEOL	Teolo	6.97	230	Pn	Pn	23 29 52.7	+0.9
DAVOX	Davos/Dischmat	7.05	245	Pn	Pn	23 29 55.3	+2.2
	comp=Z,1.0nm,0.3s,baz=58,slow=10,SNR=9.9						
DAVOX				Sn	Sn	23 31 14.5	+0.5
	comp=Z,0.4nm,0.3s,baz=58,slow=19,SNR=1.5						
DAVOX				Lg	Lg	23 31 54.6	
	comp=Z,1.3nm,0.3s,baz=352,slow=11,SNR=3.7						
DEL	Delary	7.11	335	*i* P	Pn	23 29 54.5	+0.9
DEL				*e*S	Sn	23 31 11.9	-3.2
DEL				IAML		23 31 16.8	
	comp=Z,4.8nm,0.4s						
TUE	Stuetta	7.52	245	Pn	Pn	23 30 02.7	+3.1
PDG	Podgorica	7.70	180	*e*Pn	Pn	23 30 03.0	+1.1
PDG	Podgorica	7.70	180	Pn	Pn	23 30 02.7	+0.8
SLIT	Slitere, Latvi	7.73	12	*e*P	Pn	23 30 03.5	+1.3
SLIT				*e*S	Sn	23 31 25.4	-5.0
SLIT				IAML		23 31 33.8	
	comp=Z,60nm,0.5s						
DRME	Dracevica, Mon	7.95	180	*e*Pn	Pn	23 30 00.4	-4.8
CDF	Champ du Feu	7.99	262	*e*Pn	Pn	23 30 01.9	-4.0
CDF				*e*S	Sn	23 31 40.6	+3.6
CDF				*e*Sg	Sg	23 32 21.1	-3.9
	comp=Z,58nm,0.9s						
VTS	Vitosha	8.01	158	P	Pn	23 30 06.8	+0.5
VTS	Vitosha	8.01	158	Pn	Pn	23 30 06.8	+0.5
HINF	Hinteralfeld	8.45	259	*e*S	Sn	23 31 51.0	+2.8
HINF				*e*Sg	Sg	23 32 34.6	-5.1
	comp=Z,37nm,1.0s						
HAU	Haudompre	8.71	261	*e*Sg	Sg	23 32 42.2	-5.7
	comp=Z,24nm,0.6s						
SENIN	Lac Senin/Sane	8.79	249	Pn	Pn	23 30 18.4	+1.3
PAGF	Fort de Pagny	8.94	265	*e*Pn	Pn	23 30 18.0	-0.9
MTSE	Matsula	9.01	16	*e*P	Pn	23 30 20.4	+0.7
CABF	La Chapelle	9.41	253	*e*Sg	Sg	23 33 01.5	
	comp=Z,102nm,1.3s						
VSU	Vasula	9.43	25	⇑*e*P	Pn	23 30 27.1	+1.6
SFTF	Sexfontaines	9.48	264	*e*Sg	Sg	23 33 07.2	
	comp=Z,66nm,1.2s						
LPG	La Plagne	9.57	246	*e*Pn	Pn	23 30 26.0	-1.8
LPL	La Plagne	9.57	246	*e*Pn	Pn	23 30 22.3	-5.4
MBDF	Montbardon	10.00	242	*e*P	Pn	23 30 36.5	+2.9
STRU	Stroemstad	10.05	336	*e*P	Pn	23 30 34.1	+0.1
STRU				*e*S	Sn	23 32 21.8	-5.6
AAL	Aland	10.08	2	*e*P	Pn	23 30 34.7	+0.3
ORIF	Oris-en-Rattie	10.40	245	*e*Pn	Pn	23 30 35.8	-3.2
ORIF	Oris-en-Rattie	10.40	245	*e*P	Pn	23 30 43.2	+4.2
ORIF				*e*Sn	Sn	23 32 25.9	-10
HFS	Hagfors	10.50	345	Pn	Pn	23 30 39.3	-1.0
	comp=Z,0.4nm,0.3s,baz=163,slow=16,SNR=2.5						
HFS				Sn	Sn	23 32 34.5	-4.0
	comp=Z,0.5nm,0.3s,baz=167,slow=23,SNR=2.3						
LOR	Lormes	10.54	260	*e*Sg	Sg	23 33 39.6	
	comp=Z,21nm,0.9s						
KONO	Kongsberg	11.01	334	⇓*e*P	Pn	23 30 47.4	+0.3
KONO	Kongsberg	11.01	334	*e*P	Pn	23 30 46.5	-0.7
KONO				*e*S	Sn	23 32 42.4	-8.5
KONO				IAML		23 33 10.4	
	comp=Z,3.5nm,0.8s						
KONO	Kongsberg	11.01	334	Pn	Pn	23 30 47.0	-0.1
NC602	NORSAR Array S	11.47	341	*e*P	Pn	23 30 53.3	-0.2
NC602				*e*S	Sn	23 32 55.6	-6.6
NC602				IAML		23 33 46.1	
	comp=Z,2.9nm,0.5s						
NC602	NORSAR Array S	11.47	341	Pn	Pn	23 30 52.8	-0.7
OBN	Obninsk	11.66	58	Sn	Sn	23 32 59.0	-7.9
	comp=Z,0.5nm,0.3s,baz=175,slow=12,SNR=1.4						
OBN				Lg	Lg	23 34 17.5	
	comp=Z,1.2nm,0.3s,baz=319,slow=19,SNR=2.4						
OBN	Obninsk	11.66	58	⇓*e*P	Pn	23 30 56.5	+0.4
OBN				*e*S	Sn	23 33 12.4	+5.6
OBN				pmax	pmax		
	comp=Z,3.0nm,0.6s						
OBN				MLR	MLR		
	comp=Z,83nm,17.0s						
NAO01	NORSAR Array S	11.71	340	*e*P	Pn	23 30 55.7	-1.0
NB201	NORSAR Array S	11.81	341	*e*P	Pn	23 30 55.7	-2.4
NB201				*e*S	Sn	23 33 03.8	-6.7
NB201				IAML		23 33 41.4	
	comp=Z,1.9nm,0.6s						
NB201	NORSAR Array S	11.81	341	Pn	Pn	23 30 56.0	-2.1
NB2	NORSAR Subarra	11.82	341	P	Pn	23 30 56.3	-1.9
	comp=Z,0.5nm,0.6s,baz=161,slow=11						
NOA	NORSAR Array B	11.82	341	Pn	Pn	23 30 55.7	-2.6
	comp=Z,0.1nm,0.3s,baz=151,slow=12,SNR=18						
NOA				Sn	Sn	23 33 04.0	-6.7
	comp=Z,0.0nm,0.3s,baz=217,slow=18,SNR=1.5						
NOA				LR	LR	23 35 19.7	
	comp=Z,28nm,18.5s,baz=20,slow=36						
NOA	NORSAR Array B	11.82	341	*e*P	Pn	23 30 56.6	-1.6
NC303	NORSAR Array S	11.95	341	*e*P	Pn	23 30 59.5	-0.6
NC303				*e*S	Sn	23 33 06.4	-7.6
NC303				IAML		23 33 26.2	
	comp=Z,2.1nm,0.5s						
FINES	FINESS Array B	11.97	16	Pn	Pn	23 30 58.9	-1.4
	comp=Z,0.8nm,0.3s,baz=195,slow=11,SNR=21						
FINES				Sn	Sn	23 33 06.9	-7.4
	comp=Z,1.1nm,0.3s,baz=197,slow=20,SNR=8.0						
FINES				Lg	Lg	23 34 30.6	
	comp=Z,0.5nm,0.3s,baz=196,slow=25,SNR=2.7						
FIA1	FINESS Array S	11.97	16	Pn	Pn	23 30 58.5	-1.8
NC204	NORSAR Array S	12.13	340	*e*P	Pn	23 31 00.6	-1.8
NC204	NORSAR Array S	12.13	340	Pn	Pn	23 30 59.9	-2.6
SKAR	Skarslia	12.23	334	*e*P	Pn	23 31 04.5	+0.7
SKAR				*e*S	Sn	23 33 14.7	-6.1
SKAR				IAML		23 33 26.6	
	comp=Z,1.8nm,0.6s						
MOS	Moscow	12.44	56	*e*P	Pn	23 31 10.8	+4.2
VALR	Valaam	13.01	26	⇓*e*P	Pn	23 31 13.5	-0.9
VALR				pmax	pmax		
	comp=Z,60nm,0.9s						
DOMB	Dombas	13.19	339	*e*P	Pn	23 31 15.8	-1.2
ANN	Anapa	13.43	106	⇓*e*P	Pn	23 31 21.3	+1.1
ANN				pmax	pmax		
	comp=Z,12nm,1.0s						
EKA	Eskdalemuir Ar	14.48	300	Pn	Pn	23 31 34.5	-0.1
	baz=105,slow=13,SNR=1.1						
NSS	Namsos	14.94	348	*e*P	Pn	23 31 38.5	-2.3
KLMR	Klimovskoe	15.67	39	*e*P	Pn	23 31 47.2	-3.1
KLMR				*e*		23 34 41.7	
KLMR				pmax	pmax		
	comp=Z,13nm,1.0s						
KLMR	Klimovskoe	15.67	39	*e*Pn	Pn	23 31 47.3	-3.1
KLMR				AMP		23 31 49.6	
	comp=Z,13nm,1.0s						
KLMR				*e*Sn	Sn	23 34 41.7	-2.7
KLMR				*e*Sn	Sn	23 34 41.7	-2.7
KLMR				*e*Lg	Lg	23 36 20.6	
MOR8	Moi Rana	16.27	353	*e*P	Pn	23 31 57.0	-1.2
KONS	Konsvik	16.71	352	*e*P	P	23 32 05.1	-1.1
KIV	Kislovodsk	17.12	102	*e*P	Pn	23 32 08.2	-1.0
KIV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
FAUS	Fauske	17.42	355	*e*P	P	23 32 14.2	+0.2
BELG	Belogornoye	17.88	72	Pn	P	23 32 20.3	+1.1
	comp=Z,0.7nm,0.3s,baz=225,slow=19,SNR=5.1						
BELG	Belogornoye	17.88	72	⇓*e*P	P	23 32 19.9	+0.7
BELG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KIRV	Kirov	19.39	53	*i* P	Pn	23 32 36.3	-0.4
TRO	Tromso	19.57	360	*e*P	Pn	23 32 38.5	-0.3
ARA0	ARCESS Array S	19.70	7	*e*P	Pn	23 32 40.6	+0.1
ARCES	ARCESS Array B	19.70	7	Pn	P	23 32 37.4	-1.6
	baz=190,slow=12,SNR=19						
ARCES	ARCESS Array B	19.70	7	*e*P	P	23 32 39.3	+0.2
ARCES	ARCESS Array B	19.70	7	P	P	23 32 39.1	+0.1
ARCES				IAmb	IAmb	23 32 54.0	
	comp=Z,14nm,1.3s						
KEV	Kevo	20.04	8	P	Pn	23 32 44.1	-0.3
KEV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KEV	Kevo	20.04	8	P	Pn	23 32 44.1	-0.3
KEV				IAmb	IAmb	23 33 03.5	
	comp=Z,10nm,1.1s						
HAMF	Hammerfest	20.69	4	*e*P	Pn	23 32 52.4	+0.3
ARU	Arti	24.10	60	P	P	23 33 25.6	+0.1
	comp=Z,0.3nm,0.3s,baz=228,slow=11,SNR=4.0						
ARU	Arti	24.10	60	P	P	23 33 25.3	-0.2
ABKAR	Akbulak array	26.14	76	P	P	23 33 46.2	+2.0
BRVK	Borovoye	31.32	65	⇑*e*P	P	23 34 31.1	+0.9
BRVK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
TORD	Torodi Ar. Bea	39.57	207	P	P	23 35 42.0	+0.7
	comp=Z,0.5nm,0.5s,baz=12,slow=8.8,SNR=8.2						
TORD	Torodi Ar. Bea	39.57	207	P	P	23 35 42.4	+1.0
MAKZ	Makanchi	40.67	70	P	P	23 35 51.5	+1.2
MAKZ				pmax	pmax		
	comp=Z,3.0nm,1.1s						
MAKZ	Makanchi	40.67	70	P	P	23 35 51.5	+1.2
MAKZ				IAmb	IAmb	23 36 04.7	
	comp=Z,3.5nm,1.1s						
MKAR	Makanchi Array	40.86	69	P	P	23 35 52.3	+0.4
	comp=Z,0.1nm,0.3s,baz=306,slow=6.7,SNR=5.3						
WMQ	Urumqi	45.66	70	*e*P	P	23 36 33.4	+2.6
SONM	Songino Array	54.07	56	P	P	23 37 36.5	+1.7
	comp=Z,0.4nm,0.7s,baz=289,slow=11,SNR=2.5						
HHC	Hu-ho-hao-te	61.41	60	*e*P	P	23 38 26.6	+0.2
HHC				pmax	pmax		
	comp=Z,10.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,190nm,5.8s						

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*AEIC **17** 23:52:48±2.3, 51°.32N±0°.09×178°.17W±0°.06, h49^{km}±4^{km}, Error ellipse: s-maj=13.2km s-min=4.9km az=167.0*

*IDC **17** 23:52:49.6±2.2, 51°.50N×178°.32W, h48^{km}±20^{km}, mb4.1/34, mb1 4.3/36, mb1mx4.2/58, mbtmp4.4/36, ML3.7/2, MS3.4/26, Ms1 3.5/26, ms1mx3.3/43, Error ellipse: s-maj=15.1km s-min=8.7km az=169.0*

*NEIC **17** 23:52:50.5±1.7, 51°.46N±0°.09×178°.26W±0°.06, h50^{km}±5^{km}, mb4.7/193, ML4.5(AEIC), Error ellipse: s-maj=13.9km s-min=4.7km az=169.0*

ISC 17 23:52:49.7±1.0**, 51°.37N**±0°.08×**178°.28W**±0°.03**, h50**^{km}±8^{km}**, n394, σ0^{s}90**/358**, mb4.7**/135**, MS3.5**/26**, 11C-3D, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAFL	Tanaga Flats	0.46	31		Pn	23 52 59.6	-0.9
TASE	Tanaga Southea	0.49	18		Pn	23 53 00.8	-0.1
GALAA	Gareloi Lava P	0.50	322		Pn	23 53 01.3	+0.4
GAEA	Gareloi East	0.51	325		Pn	23 53 01.4	+0.4
GANO	Gareloi North	0.56	324		Pn	23 53 01.8	+0.1
TAFP	Tanaga Falls P	0.56	19		Pn	23 53 01.5	-0.2
KIMD	Kanaga Island	0.76	58		Pn	23 53 03.0	-1.2
KIWB	Kanaga Island	0.86	55		Pn	23 53 04.5	-0.9
KIKV	Kanaga Island	0.86	53		Pn	23 53 04.8	-0.8
KICM	Kanaga Island	0.87	50		Pn	23 53 05.2	-0.4
ADK	Adak	1.12	62		Pn	23 53 08.1	-0.9
ADK	Adak	1.12	62		Sn	23 53 22.3	-1.1
CERAA	Semis' Rag'd T	1.38	294		Pn	23 53 13.1	+0.6
CESW	Semis' Southwe	1.45	293		Pn	23 53 13.9	+0.5
CEAP	Semis' Anvil P	1.48	296		Pn	23 53 14.8	+1.0
GSTD	Great Sitkin T	1.50	62		Pn	23 53 13.6	-0.5
GSTD					Sn	23 53 32.0	-0.6
AMKA	Amchitka	1.52	271		Pn	23 53 13.0	-1.3
AMKA					Sn	23 53 33.4	+0.5
GSMY	Great Sitkin M	1.54	63		Pn	23 53 14.2	-0.5
GSTR	Great Sitkin T	1.56	61	Pn	Pn	23 53 15.2	+0.2
LSPA	Little Sitkin	2.05	288		Pn	23 53 22.7	+1.1
LSSA	Little Sitkin	2.08	288		Pn	23 53 22.8	+0.6
LSNW	Little Sitkin	2.08	288		Pn	23 53 22.5	+0.4
ATKA	Atka Island	2.67	70		Pn	23 53 29.0	-1.2
ATKA					Sn	23 54 02.7	+1.5
KOKL	Mount Kliuchef	2.71	68		Pn	23 53 31.5	+0.8
KOFP	Korovin Flat P	2.75	69		Pn	23 53 32.2	+0.9
KOSE	Korovin Southe	2.80	68		Pn	23 53 33.6	+1.7
SMY	Shemya	4.90	289	Pn	Pn	23 54 00.9	+0.3
NIKH	Nikolski High	6.02	71		Pn	23 54 18.3	+2.3
OKWE	Okmok W'ng Wal	6.49	67		Pn	23 54 24.6	+2.0
MAPS	Pakushin South	7.33	66		Pn	23 54 36.0	+2.0
SPIA	Saint Paul Isl	7.48	36	P	Pn	23 54 40.0	+4.0
	baz=223						
UNV	Unalaska Valle	7.59	66	Pn	Pn	23 54 39.2	+1.7
FALS	False Pass	9.59	63	Pn	Pn	23 55 04.6	-0.3
SDPT	Sand Point	11.35	63	Pn	Pn	23 55 26.6	-2.3
CNBA	Chernabura Isl	11.75	66	Pn	Pn	23 55 33.9	-0.5
CHGN	Chignik	12.71	59	Pn	Pn	23 55 47.6	+0.1
PETK	Petropavlovsk-	14.80	286	P	Pn	23 56 16.4	+0.7
	0.2nm,0.3s,baz=96,slow=12,SNR=2.1						
PETK				S	Sn	23 58 55.8	-2.5
	0.1nm,0.3s,baz=164,slow=28,SNR=2.4						
PETK				LR	LR	00 01 44.7	
	comp=Z,228nm,21.6s,baz=85,slow=36						
PETK	Petropavlovsk-	14.80	286	P	P	23 56 20.4	-0.2
ANM	Nome	14.85	22	P	P	23 56 19.2	-1.8
OHAK	Old Harbor	15.67	58	P	Pn	23 56 27.1	+0.3
	baz=259						
SVW2	Sparrevohn	15.86	43		P	23 56 31.2	-1.0
Q19K	Cape Douglas,	15.91	52	Pn	Pn	23 56 30.1	+0.1
Q19K				IAmb	IAmb	23 56 42.4	
	comp=Z,177nm,1.4s						
KDAK	Kodiak Island	16.16	57	P	Pn	23 56 30.6	-2.5
	comp=Z,2.4nm,0.3s,baz=265,slow=5.5,SNR=30						
KDAK				S	Sn	23 59 31.1	+0.1
	comp=Z,0.3nm,0.3s,baz=162,slow=20,SNR=1.6						
N19K	Bonanza Creek	16.21	45		P	23 56 35.6	-0.5
TTA	Tatalina	16.62	37	P	P	23 56 42.2	+1.4
	baz=236						
TTA	Tatalina	16.62	37	P	P	23 56 41.7	+1.0
L19K	White Mountain	16.68	41	P	P	23 56 42.9	+1.5
	baz=240,SNR=6.7						
L19K	White Mountain	16.68	41	P	P	23 56 42.6	+1.2
M19K	Big River Lodg	16.74	42	P	P	23 56 43.3	+1.4
	baz=242						
M19K	Big River Lodg	16.74	42	P	P	23 56 42.7	+0.8
M19K				PcP	PcP	00 01 27.5	+1.3
RSO	Redoubt South	16.86	47	P	P	23 56 45.5	+2.0
L20K	Farewell, AK	17.23	40	P	P	23 56 48.6	+1.2
	baz=241						
CNPM	China Poot	17.27	51	Pn	Pn	23 56 46.4	-0.6
CNPM				IAmb	IAmb	23 56 50.0	
	comp=Z,34nm,1.1s						
BRLK	Bradley Lake	17.51	51		Pn	23 56 49.4	-0.6
K20K	Telida	17.60	38	P	P	23 56 52.7	+1.3
	baz=238						
K20K	Telida	17.60	38	P	P	23 56 52.4	+1.0
SKT	Skwentna	17.99	43	P	Pn	23 56 56.9	+1.2
	baz=246,SNR=8.3						
SKT	Skwentna	17.99	43	P	Pn	23 56 56.8	+1.0
SKT				IAmb	IAmb	23 57 13.9	
	comp=Z,22nm,0.8s						
J20K	Nowinta River	18.02	35	P	Pn	23 56 57.3	+1.3
	baz=236						
J20K	Nowinta River	18.02	35	P	Pn	23 56 57.4	+1.3
PPLA	Purkeypile	18.11	40	P	Pn	23 57 01.9	+4.5
	baz=243,SNR=6.3						
SUA	Susitna One	18.13	45		Pn	23 56 58.5	+0.9
SEW	Seward	18.30	50	P	P	23 56 58.3	-0.8
SEW				IAmb	IAmb	23 57 09.1	
	comp=Z,44nm,1.3s						
BILL	Bilibino	18.35	341	P	Pn	23 57 01.2	+1.2
CAST	Castle Rocks	18.40	39	P	Pn	23 57 01.2	+0.5
	baz=241						
CAST	Castle Rocks	18.40	39	P	Pn	23 57 01.6	+0.8
CAST				IAmb	IAmb	23 57 07.1	
	comp=Z,13nm,0.5s						
RC01	Rabbit Creek A	18.46	47	P	Pn	23 57 03.2	+1.7
CHUM	Lake Minchumin	18.54	38	P	Pn	23 57 03.4	+1.0
	baz=240						
CUT	Chulitna	18.70	43	P	P	23 57 03.5	0.0
CUT				IAmb	IAmb	23 57 04.6	
	comp=Z,25nm,0.6s						
KTH	Kantishna Hill	18.93	39	P	Pn	23 57 06.8	-0.4
KTH				IAmb	IAmb	23 57 08.6	
	comp=Z,30nm,0.9s						
PWL	Port Wells	19.04	48	P	P	23 57 07.5	+0.2
PWL				IAmb	IAmb	23 57 19.5	
	comp=Z,28nm,1.0s						
GHO	Glory Hole Cre	19.06	46	P	P	23 57 07.6	+0.1
TRF	Thorofare Moun	19.13	40	P	Pn	23 57 10.1	+0.4
	baz=244,SNR=7.0						
TRF	Thorofare Moun	19.13	40	P	P	23 57 08.6	+0.2
TRF				IAmb	IAmb	23 57 27.5	
	comp=Z,21nm,0.8s						
KNK	Knik Glacier	19.15	47	P	P	23 57 08.2	-0.3
BPAW	Bear Paw Mtn.	19.16	38	P	Pn	23 57 09.8	0.0
	baz=241,SNR=8.5						
BPAW	Bear Paw Mtn.	19.16	38	P	Pn	23 57 09.5	-0.3
BPAW				PcP	PcP	00 01 30.9	+0.6
IMAR	Indian Mountai	19.22	31	P	Pn	23 57 10.3	-0.2
IMAR				PcP	PcP	00 01 31.3	+1.1
MA2	Magadan	19.22	307	LR	LR	00 04 15.9	
	comp=Z,131nm,21.4s,baz=110,slow=36						
H21K	Melozitna Rive	19.33	33	P	Pn	23 57 12.1	+0.2
	baz=235						
H21K	Melozitna Rive	19.33	33		Pn	23 57 12.0	+0.1
H21K				PcP	PcP	00 01 31.6	+1.1
SML	Sawmill	19.33	46	P	P	23 57 09.9	-0.6
I21K	Tanana	19.35	34	P	Pn	23 57 12.5	+0.5
	baz=237,SNR=9.4						
I21K	Tanana	19.35	34	P	Pn	23 57 12.6	+0.5
I21K				IAmb	IAmb	23 57 15.7	
	comp=Z,26nm,1.2s						
I21K				PcP	PcP	00 01 31.3	+0.8
SEY	Seymchan	19.47	318	LR	LR	00 04 27.7	
	comp=Z,188nm,19.1s,baz=108,slow=36						
WAT1	Susitna Watana	19.60	43	P	P	23 57 12.3	-1.1
	baz=248						
RND	Reindeer	19.70	41	P	P	23 57 14.4	-0.1
RND				IAmb	IAmb	23 57 15.7	
	comp=Z,14nm,0.6s						
MLY	Manley	19.72	36	P	Pn	23 57 15.9	-0.6
	baz=239,SNR=11						
MLY	Manley	19.72	36	P	Pn	23 57 15.6	-0.8
MLY				PcP	PcP	00 01 32.0	+0.8
BWN	Browne	19.78	39	P	Pn	23 57 16.3	-0.9
BWN				IAmb	IAmb	23 57 36.1	
	comp=Z,45nm,1.0s						
SCM	Sheep Creek Mo	19.79	46	P	P	23 57 14.2	-1.3
SCM				IAmb	IAmb	23 57 21.1	
	comp=Z,58nm,1.4s						
MCK	McKinley	19.80	40	P	P	23 57 15.8	+0.2
	baz=245						
MCK	McKinley	19.80	40	P	P	23 57 15.8	+0.2
WAT6	Susitna Watana	19.86	44	P	P	23 57 15.4	-0.9
	baz=250,SNR=6.7						
FID	Port Fidalgo	19.89	50	P	P	23 57 16.1	-0.5
FID				IAmb	IAmb	23 57 18.0	
	comp=Z,107nm,1.4s						
NEA2	Nenana	20.13	38	P	P	23 57 19.6	+0.5
	baz=243,SNR=7.1						
NEA2	Nenana	20.13	38	P	P	23 57 18.7	-0.4
NEA2				IAmb	IAmb	23 57 37.9	
	comp=Z,23nm,1.2s						
DHY	Denali Highway	20.19	43	P	P	23 57 19.8	-0.1
	baz=249						
DHY	Denali Highway	20.19	43	P	P	23 57 19.8	-0.1
DHY				IAmb	IAmb	23 57 21.2	
	comp=Z,33nm,0.5s						
I23K	Minto, Yukon-K	20.28	36	P	P	23 57 21.5	+0.8
	baz=241						
I23K	Minto, Yukon-K	20.28	36	P	P	23 57 20.9	+0.3
I23K				IAmb	IAmb	23 57 26.4	
	comp=Z,10.0nm,0.6s						
KLU	Klutina	20.34	48	P	P	23 57 22.2	+0.8
	baz=255						
KLU	Klutina	20.34	48	P	P	23 57 21.5	0.0
KLU				IAmb	IAmb	23 57 43.0	
	comp=Z,39nm,1.4s						
M24K	Tolsona, Glenn	20.40	46	P	P	23 57 21.4	-0.7
	baz=253						
M24K	Tolsona, Glenn	20.40	46	P	P	23 57 21.6	-0.4
M24K				IAmb	IAmb	23 57 43.2	
	comp=Z,26nm,0.8s						
WRH	Wood River Hil	20.45	39	P	P	23 57 21.8	-0.8
WRH				PcP	PcP	00 01 32.1	-0.4
MDM	Murphy Dome	20.61	37	P	P	23 57 24.7	+0.3
MDM				IAmb	IAmb	23 57 38.5	
	comp=Z,16nm,0.9s						
CCB	Clear Creek Bu	20.64	38	P	P	23 57 23.4	-1.2
CCB				PcP	PcP	00 01 32.6	-0.2
HDA	Harding Lake	20.88	39	P	P	23 57 27.0	-0.2
	baz=246						
HDA	Harding Lake	20.88	39	P	P	23 57 25.9	-1.3
HARP	HAARP	20.94	45	P	P	23 57 27.7	-0.1
	baz=254						
PAX	Paxson	20.97	44	P	P	23 57 28.6	+0.3
	baz=252,SNR=8.1						
PAX	Paxson	20.97	44	P	P	23 57 28.0	-0.3
N25K	Chitina, Valde	20.98	48	P	Pn	23 57 30.1	-1.4
	baz=256						
N25K	Chitina, Valde	20.98	48	P	P	23 57 27.6	-0.8
POKR	Poker Plat Res	20.99	37	P	P	23 57 29.8	+1.4
	baz=244						
IL31		21.05	38	P	P	23 57 27.8	-1.2
ILAR	Eielson Array	21.05	38	P	P	23 57 27.0	-2.0
	comp=Z,1.6nm,0.5s,baz=234,slow=8.7,SNR=31						
ILAR				PcP	PcP	00 01 32.6	-1.1
	comp=Z,1.2nm,0.6s,baz=289,slow=3.6,SNR=13						
ILAR				ScP	ScP	00 05 06.6	+0.6
	comp=Z,0.4nm,0.5s,baz=274,slow=3.5,SNR=9.8						
ILAR				LR	LR	00 06 39.6	
	comp=Z,88nm,20.4s,baz=243,slow=40						
ILAR	Eielson Array	21.05	38	P	P	23 57 27.6	-1.4
ILAR				PcP	PcP	00 01 33.5	-0.2
COLD	Coldfoot	21.10	31	P	P	23 57 30.7	+1.2
	baz=235						
COLD	Coldfoot	21.10	31	P	P	23 57 30.2	+0.7
H24K	Noodor Dome	21.16	35	P	P	23 57 30.4	+0.1
	baz=242						
H24K	Noodor Dome	21.16	35	P	P	23 57 30.3	+0.1
H24K				PcP	PcP	00 01 35.1	+1.2
GLB	Gilahina Butte	21.31	48	P	P	23 57 31.2	-0.7
GLB				IAmb	IAmb	23 57 49.4	
	comp=Z,31nm,1.2s						
RIDG	Independent Ri	21.49	42	P	P	23 57 32.9	-0.8
	baz=251						
RIDG	Independent Ri	21.49	42	P	P	23 57 32.7	-1.1
CRQM	Cirque	21.50	50	P	P	23 57 35.5	+1.5
MENT	Mentasta	21.73	45	P	P	23 57 36.7	+0.4
PRP	Porcupine Dome	21.89	37	P	P	23 57 39.2	+1.0
	baz=246						
PRP	Porcupine Dome	21.89	37	P	P	23 57 39.1	+1.0
M26K	Nabesna, AK	21.91	46	P	P	23 57 38.9	+0.6
	baz=256						
L26K	Log Cabin Wild	21.91	44	P	P	23 57 38.4	+0.1
	baz=254						
SCRK	Sand Creek	21.93	42	P	P	23 57 37.6	-1.0
	baz=251,SNR=7.4						
TOLK	Toolik Lake Re	22.12	28	P	P	23 57 41.1	+0.6
	baz=233,SNR=7.1						
TOLK	Toolik Lake Re	22.12	28	IAmb	IAmb	23 57 43.7	
	comp=Z,20nm,1.1s						
J26L	Joseph Creek	22.27	41	P	P	23 57 42.0	-0.2
	baz=250,SNR=6.9						
CTGM	Chitina Glacie	22.40	50	P	P	23 57 43.2	-0.5
CTGM				IAmb	IAmb	23 58 00.7	
	comp=Z,16nm,1.2s						

M27K	Edge Creek, AK	22.41	47	P	P	23 57 43.9	+0.2
	baz=258						
L27K	Beaver Creek,	22.59	45	P	P	23 57 46.0	+0.4
	baz=256						
L27K	Beaver Creek,	22.59	45	P	P	23 57 44.7	-0.9
BVCY	Beaver Creek	22.88	47	P	P	23 57 47.7	-0.9
	baz=259						
YUK3	Moose Creek	22.95	48	P	P	23 57 49.0	-0.5
	baz=260						
BMAR	Burnt Mountain	23.07	33	P	P	23 57 50.4	0.0
BMAR				PcP	PcP	00 01 38.0	+0.2
EGAK	Eagle	23.34	41	P	P	23 57 53.1	0.0
	baz=253						
EGAK	Eagle	23.34	41	P	P	23 57 51.9	-1.3
EGAK				IAmb	IAmb	23 58 08.3	
	comp=Z,16nm,1.1s						
DAWY	Dawson	23.89	43	P	P	23 57 57.6	-0.8
	baz=256						
DAWY	Dawson	23.89	43	P	P	23 57 57.5	-0.8
DAWY				PcP	PcP	00 01 40.4	+0.9
HYT	Haines Junctio	24.25	51	P	P	23 58 01.8	+0.1
I29M	Ogilvie Camp,	24.67	40	P	P	23 58 04.1	-1.3
	baz=255						
JKA	Kamikawa-asahi	27.03	270	IAmb	IAmb	23 58 29.7	
	comp=Z,29nm,1.0s						
ASAJ	Asahikawa	27.03	270	P	P	23 58 26.6	-0.2
	comp=Z,20nm,0.9s,baz=11,slow=3.3,SNR=4.9						
ASAJ				LR	LR	00 09 39.1	
	comp=Z,40nm,18.7s,baz=86,slow=37						
INK	Inuvik	27.28	35	P	P	23 58 28.3	-0.5
	comp=Z,1.1nm,0.4s,baz=239,slow=7.9,SNR=15						
INK				PcP	PcP	00 01 47.0	0.0
	comp=Z,2.3nm,0.5s,baz=282,slow=4.0,SNR=11						
INK	Inuvik	27.28	35	P	P	23 58 28.5	-0.3
	baz=254						
INK	Inuvik	27.28	35	P	P	23 58 28.3	-0.5
INK				PcP	PcP	00 01 47.0	0.0
DLBC	Dease Lake	28.09	56	LR	LR	00 10 44.7	
	comp=Z,98nm,18.9s,baz=302,slow=38						
YAK	Yakutsk	29.67	311	LR	LR	00 10 57.9	
	comp=Z,116nm,18.2s,baz=90,slow=37						
BBB	Bella Bella	30.55	68	LR	LR	00 10 56.8	
	comp=Z,46nm,18.8s,baz=251,slow=36						
TIXI	Tiksi	30.81	330	PcP	PcP	00 01 55.8	-0.1
	comp=Z,4.1nm,0.6s,baz=110,slow=1.8,SNR=7.6						
A36M	Sachs Harbour	30.94	29	P	P	23 59 01.7	+0.5
	baz=257,SNR=6.4						
A36M	Sachs Harbour	30.94	29	P	P	23 59 01.5	+0.3
A36M				IAmb	IAmb	23 59 03.6	
	comp=Z,9.7nm,0.8s						
A36M				PcP	PcP	00 01 56.6	+0.4
KLR	Kul'dur	31.50	286	P	P	23 59 06.3	-0.1
	comp=Z,8.4nm,0.4s,baz=71,slow=7.8,SNR=40						
USA0B	Ussuriysk Arra	33.62	278	P	P	23 59 25.3	+0.3
USA0B				IAmb	IAmb	23 59 26.5	
	comp=Z,27nm,1.4s						
USRK	Ussuriysk Ar.	33.62	278	P	P	23 59 24.8	-0.3
	comp=Z,10nm,0.6s,baz=59,slow=8.9,SNR=19						
USRK				LR	LR	00 14 32.7	
	comp=Z,28nm,18.5s,baz=24,slow=39						
USRK	Ussuriysk Ar.	33.62	278	P	P	23 59 25.0	0.0
H11N2	WAKE ISLAND Hy	33.66	206	T	T	00 35 21.2	
	baz=17,slow=76,SNR=365						
H11N3	WAKE ISLAND Hy	33.67	206	T	T	00 35 20.3	
	baz=17,slow=76,SNR=311						
H11N1	WAKE ISLAND Hy	33.68	206	T	T	00 35 14.6	
	baz=17,slow=76,SNR=240						
MJAR	Matsushiro Arr	34.10	261	P	P	23 59 29.6	+0.3
	comp=Z,4.0nm,0.6s,baz=54,slow=7.2,SNR=10.0						
MJAR				LR	LR	00 11 28.9	
	comp=Z,51nm,20.9s,baz=55,slow=33						
MAT	Matsushiro	34.11	261	P	P	23 59 30.2	+0.9
H11S1	WAKE ISLAND Hy	34.88	205	T	T	00 36 49.0	
	baz=17,slow=76,SNR=526						
H11S2	WAKE ISLAND Hy	34.89	205	T	T	00 36 46.9	
	baz=17,slow=76,SNR=365						
H11S3	WAKE ISLAND Hy	34.89	205	T	T	00 36 44.8	
	baz=17,slow=76,SNR=315						
YKA	Yellowknife Ar	35.00	47	P	P	23 59 36.2	-0.6
	comp=Z,0.8nm,0.4s,baz=319,slow=3.7,SNR=8.5						
YKA				LR	LR	00 15 33.2	
	comp=Z,70nm,19.4s,baz=0.0,slow=39						
YKA	Yellowknife Ar	35.00	47	P	P	23 59 36.7	-0.1
JGF	Kuroka	35.24	261	P	P	23 59 40.9	+1.8
JGF				IAmb	IAmb	23 59 41.4	
	comp=Z,12nm,0.7s						
MWH	Moku‘aweowe	36.48	142	P	P	23 59 48.9	-1.6
UWB	Uwekahuna B	36.66	142	P	P	23 59 52.5	+1.0
NPH	North Pit	36.67	142	P	P	23 59 52.3	+0.7
RIM	Rim	36.69	142	P	P	23 59 53.7	+2.0
B08A	Colville Reser	37.23	71	P	P	23 59 56.5	+0.4
B08A				IAmb	IAmb	23 59 57.9	
	comp=Z,13nm,0.8s						
L02E	Cave Junction	37.77	82	P	P	00 00 00.0	-0.6
	baz=304						
D08A	Wollman Farm,	38.09	72	P	P	00 00 03.6	+0.4
D08A				IAmb	IAmb	00 00 14.7	
	comp=Z,24nm,1.5s						
JCJ	Chichijima	38.37	246	P	P	00 00 06.9	+1.1
YBH	Yreka Blue Hor	38.56	82	P	P	00 00 09.0	+1.6
	comp=Z,1.7nm,0.6s,baz=293,slow=10,SNR=3.0						
NEW	Newport	38.58	70	P	P	00 00 07.7	+0.3
	comp=Z,14nm,0.8s,baz=292,slow=8.6,SNR=12						
NEW	Newport	38.58	70	P	P	00 00 08.2	+0.8
	baz=298,SNR=5.3						
NEW	Newport	38.58	70	P	P	00 00 08.3	+0.9
NEW				IAmb	IAmb	00 00 08.4	
	comp=Z,12nm,0.8s						
K05A	Summer Lake	39.13	80	P	P	00 00 14.4	+2.1
K05A				IAmb	IAmb	00 00 42.1	
	comp=Z,20nm,1.4s						
RES	Resolute Bay	39.62	24	PcP	PcP	00 02 21.7	+0.1
	comp=Z,2.7nm,0.7s,baz=338,slow=2.3,SNR=4.8						
MOD	Modoc Plateau	39.95	80	P	P	00 00 20.8	+1.7
MOD				IAmb	IAmb	00 00 21.2	
	comp=Z,4.3nm,0.7s						
KSRS	Korea Array	39.96	271	P	P	00 00 20.2	+1.3
	comp=Z,4.1nm,0.8s,baz=51,slow=8.4,SNR=8.4						
KSRS				LR	LR	00 14 05.0	
	comp=Z,42nm,21.5s,baz=43,slow=32						
EUNU	Eureka	40.21	16	P	P	00 00 20.4	-0.2
EUNU				PcP	PcP	00 02 23.5	-0.1
WVOR	Wild Horse Val	40.68	79	P	P	00 00 26.6	+1.5
WVOR				IAmb	IAmb	00 00 27.4	
	comp=Z,7.2nm,0.9s						
MSO	Missoula	41.16	70	P	P	00 00 29.4	+0.4
	baz=301						
MSO	Missoula	41.16	70	P	P	00 00 29.4	+0.4
MSO				IAmb	IAmb	00 00 30.0	
	comp=Z,5.8nm,0.8s						
PNTR	Pine Nut	42.02	83	P	P	00 00 37.6	+1.4
PNTR				IAmb	IAmb	00 00 58.7	
	comp=Z,6.0nm,0.7s						
HLID	Hailey	42.63	74	P	P	00 00 41.7	+0.6
	baz=304						
HLID	Hailey	42.63	74	P	P	00 00 42.4	+1.4
KVN	Kaiserville	42.98	82	P	P	00 00 45.3	+1.4
EGMT	Eagleton	42.98	66	P	P	00 00 44.0	+0.2
	baz=301						
BOZ	Bozeman (W)	43.18	70	P	P	00 00 45.9	+0.5
	baz=303,SNR=5.3						
BOZ	Bozeman (W)	43.18	70	IAmb	IAmb	00 00 46.5	
	comp=Z,8.8nm,0.6s						
NVAR	Mina Array Bea	43.23	83	P	P	00 00 46.1	+0.2
	comp=Z,1.5nm,0.9s,baz=292,slow=7.5,SNR=8.7						
NVAR				PcP	PcP	00 02 35.3	+0.8
	comp=Z,0.1nm,0.5s,baz=268,slow=3.2,SNR=2.0						
NVAR				LR	LR	00 14 49.0	
	comp=Z,30nm,19.2s,baz=288,slow=30						
ELK	Elko	43.74	78	P	P	00 00 50.6	+0.6
	comp=Z,4.1nm,0.8s,baz=307,slow=10.0,SNR=19						
ELK	Elko	43.74	78	P	P	00 00 50.5	+0.4
YHL	Hebgen Lake	43.85	71	IAmb	IAmb	00 01 01.6	
	comp=Z,6.0nm,0.8s						
YHH	Holmes Hill	44.08	71	IAmb	IAmb	00 00 54.2	
	comp=Z,7.3nm,0.6s						
H17A	Grant Village	44.46	71	P	P	00 00 58.1	+2.3
	baz=304,SNR=5.4						
H17A	Grant Village	44.46	71	IAmb	IAmb	00 00 59.5	
	comp=Z,24nm,1.5s						
FLWY	Flagg Ranch	44.57	72	P	P	00 00 57.5	+0.9
FLWY				IAmb	IAmb	00 00 58.7	
	comp=Z,11nm,1.3s						
NRIK	Noril'sk	44.58	330	P	P	00 00 55.9	-0.2
	comp=Z,1.3nm,0.6s,baz=64,slow=6.4,SNR=2.2						
NRIK				PcP	PcP	00 02 38.3	+0.1
	comp=Z,1.8nm,0.9s,baz=144,slow=4.1,SNR=3.9						
NRIK				LR	LR	00 19 38.3	
	comp=Z,55nm,20.9s,baz=12,slow=36						
HVU	Hansel Valley	44.64	76	IAmb	IAmb	00 00 59.6	
	comp=Z,7.1nm,0.7s						
RLMT	Red Lodge	44.83	70	P	P	00 00 59.3	+0.6
	baz=304,SNR=6.6						
RLMT	Red Lodge	44.83	70	P	P	00 00 59.2	+0.6
RLMT				IAmb	IAmb	00 01 00.4	
	comp=Z,15nm,1.1s						
R11A	Troy Canyon, C	44.97	81	P	P	00 01 00.6	+0.8
	baz=308,SNR=5.2						
R11A	Troy Canyon, C	44.97	81	P	P	00 01 00.4	+0.6
DUG	Dugway, Tooele	45.55	77	P	P	00 01 05.3	+0.9
	baz=307,SNR=8.3						
DUG	Dugway, Tooele	45.55	77	P	P	00 01 05.4	+0.9
DUG				IAmb	IAmb	00 01 06.2	
	comp=Z,7.3nm,0.7s						
BJI	Beijing	45.70	282	P	P	00 01 05.8	+0.5
BJI				pmax	pmax		
	comp=Z,8.0nm,1.2s						
PRN	Pahroc Range	45.88	82	P	P	00 01 07.7	+0.6
PRN				IAmb	IAmb	00 01 26.8	
	comp=Z,7.8nm,0.8s						
PSUT	Pine Spring	45.92	80	IAmb	IAmb	00 01 29.3	
	comp=Z,3.7nm,0.7s						
BW06	Boulder Array	46.00	73	P	P	00 01 08.6	+0.6
	baz=306,SNR=9.0						
BW06	Boulder Array	46.00	73	IAmb	IAmb	00 01 09.6	
	comp=Z,6.5nm,0.7s						
PD31	Pinedale Array	46.00	73	IAmb	IAmb	00 01 09.5	
	comp=Z,5.5nm,0.6s						
PDAR	Pinedale Array	46.00	73	P	P	00 01 08.3	+0.3
	comp=Z,5.4nm,0.5s,baz=311,slow=3.4,SNR=46						
PDAR				LR	LR	00 18 26.5	
	comp=Z,62nm,19.4s,baz=297,slow=33						
PDAR	Pinedale Array	46.00	73	P	P	00 01 08.5	+0.4
GSC	Goldstone, Bar	46.12	86	P	P	00 01 09.9	+1.0
	baz=310						
JLU	Jordanelle	46.14	76	IAmb	IAmb	00 01 10.8	
	comp=Z,3.6nm,0.8s						
MPU	Maple Canyon	46.38	77	IAmb	IAmb	00 01 12.6	
	comp=Z,4.6nm,0.7s						
SONM	Songino Array	46.94	297	P	P	00 01 15.3	0.0
	comp=Z,2.5nm,0.8s,baz=57,slow=9.1,SNR=15						
SONM				PcP	PcP	00 02 46.1	-0.9
	comp=Z,1.2nm,0.5s,baz=75,slow=2.1,SNR=7.0						
SONM				LR	LR	00 21 35.1	
	comp=Z,112nm,20.8s,baz=26,slow=37						
SONM	Songino Array	46.94	297	P	P	00 01 15.2	0.0
SONM				PcP	PcP	00 02 47.8	+0.8
MVU	Marysvale	46.95	79	IAmb	IAmb	00 01 17.4	
	comp=Z,16nm,0.9s						
MSU	Marysvale	46.97	79	P	P	00 01 16.4	+0.7
TMUT	Trail Mountain	47.08	77	P	P	00 01 17.4	+0.8
TMUT				IAmb	IAmb	00 01 18.4	
	comp=Z,9.0nm,1.1s						
RDMU	Red Mountain	47.30	75	IAmb	IAmb	00 01 20.4	
	comp=Z,12nm,0.8s						
Q16A	Castle Valley	47.34	78	P	P	00 01 19.5	+1.0
Q16A				IAmb	IAmb	00 01 20.2	
	comp=Z,6.8nm,0.7s						
P18A	Preston Nutter	47.47	76	IAmb	IAmb	00 01 21.4	
	comp=Z,6.3nm,0.9s						
HHC	Hu-ho-hao-te	48.01	286	*e*P	P	00 01 23.3	-0.2
HHC				pmax	pmax		
	comp=Z,10.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,160nm,5.8s						
U15A	North Rim	48.21	81	P	P	00 01 26.0	+0.6
U15A				IAmb	IAmb	00 01 27.1	
	comp=Z,5.8nm,1.0s						
O20A	White River Ci	48.37	75	P	P	00 01 26.7	+0.2
	baz=308,SNR=7.9						
O20A	White River Ci	48.37	75	IAmb	IAmb	00 01 28.3	
	comp=Z,11nm,0.7s						
RSSD	Black Hills	48.46	68	P	P	00 01 26.7	-0.5
	baz=306						
RSSD	Black Hills	48.46	68	P	P	00 01 26.6	-0.5
RSSD				IAmb	IAmb	00 01 27.5	
	comp=Z,4.6nm,0.6s						
PV21	Cone Mtn., Par	48.90	77	IAmb	IAmb	00 01 36.2	
	comp=Z,5.7nm,0.6s						
PV23	Carpenter Ridg	48.95	77	IAmb	IAmb	00 01 38.3	
	comp=Z,5.5nm,0.7s						
PV22	Blue Mesa, Par	49.03	77	IAmb	IAmb	00 01 34.6	
	comp=Z,6.9nm,0.7s						
PV20	West Nyswonger	49.05	77	P	P	00 01 31.9	+0.2
PV20				IAmb	IAmb	00 01 32.6	
	comp=Z,7.1nm,0.7s						
PV04	Paradox Valley	49.05	77	IAmb	IAmb	00 01 32.8	
	comp=Z,10nm,0.7s						
PV19	Morning Glory	49.05	77	IAmb	IAmb	00 01 32.7	
	comp=Z,9.4nm,0.7s						
BTO	Baotou	49.08	287	*e*P	P	00 01 32.9	+1.1
PV16	Nyswonger Mesa	49.09	77	P	P	00 01 32.1	+0.1
PV16				IAmb	IAmb	00 01 33.0	
	comp=Z,8.3nm,0.6s						
PV18	Skein Mesa, Pa	49.14	77	IAmb	IAmb	00 01 34.4	
	comp=Z,10nm,0.7s						
PV12	Saucer Basin,	49.16	77	IAmb	IAmb	00 01 33.8	
	comp=Z,8.4nm,0.8s						
PV03	Paradox Valley	49.17	77	IAmb	IAmb	00 01 33.6	
	comp=Z,11nm,1.0s						
PV07	Paradox Valley	49.18	77	IAmb	IAmb	00 01 35.9	
	comp=Z,5.7nm,0.6s						
PV15	Paradox Valley	49.34	77	IAmb	IAmb	00 01 34.9	
	comp=Z,6.4nm,0.8s						
ULM	Lac du Bonnet	49.42	57	LR	LR	00 23 38.1	
	comp=Z,21nm,20.1s,baz=295,slow=37						
PV01	Paradox Valley	49.42	77	IAmb	IAmb	00 01 35.6	
	comp=Z,10.0nm,0.7s						
SMCO	Snowmass	49.73	75	IAmb	IAmb	00 01 39.5	
	comp=Z,2.5nm,0.6s						
SPITS	Spitsbergen Ar	50.41	356	P	P	00 01 40.3	-1.0
	comp=Z,4.2nm,0.4s,baz=46,slow=5.1,SNR=2.7						
SPB2	Spitsbergen Ar	50.41	356	P	P	00 01 40.9	-0.4
SDCO	Great Sand Dun	51.53	75	P	P	00 01 51.3	+0.8
	baz=310,SNR=5.5						
SDCO	Great Sand Dun	51.53	75	IAmb	IAmb	00 01 52.2	
	comp=Z,2.8nm,0.7s						
B35A	Bob, Littlefor	51.67	58	P	P	00 01 49.4	-1.7
B35A				IAmb	IAmb	00 01 50.9	
	comp=Z,8.1nm,0.9s						
T25A	Trinidad	52.59	75	P	P	00 01 59.6	+1.3
	baz=311,SNR=5.9						
ANMO	Albuquerque	52.78	79	P	P	00 01 59.9	+0.2
	comp=Z,1.4nm,0.8s,baz=298,slow=15,SNR=4.1						
WHN	Wuhan	52.98	274	⇑P	P	00 02 00.9	-0.1
SUMG	Summit	53.23	14	P	P	00 02 02.9	+0.1
SUMG				IAmb	IAmb	00 02 31.8	
	comp=Z,4.6nm,0.9s						
SSLB	Suanglung	53.63	263	P	P	00 02 05.5	-0.5
XAN	Xi'an	53.98	281	P	P	00 02 08.4	0.0
XAN				pmax	pmax		
	comp=Z,16nm,1.1s						
XAN				pmax	pmax		
	comp=Z,160nm,5.0s						
ZALV	Zalesovo Beam	54.27	314	P	P	00 02 10.7	+0.6
	comp=Z,0.3nm,0.3s,baz=57,slow=5.3,SNR=2.7						
ZALV				PcP	PcP	00 03 14.0	+0.2
	comp=Z,3.0nm,0.5s,baz=58,slow=3.7,SNR=11						
ZALV				LR	LR	00 26 36.5	
	comp=Z,46nm,18.7s,baz=47,slow=37						
N35A	Tabor	55.34	66	P	P	00 02 18.3	+0.2
MNTX	Cornudas Mount	55.63	81	P	P	00 02 21.0	+0.7
	baz=314,SNR=6.5						
MNTX	Cornudas Mount	55.63	81	IAmb	IAmb	00 02 21.7	
	comp=Z,3.5nm,0.8s						
LZH	Lanzhou	55.70	287	*e*P	P	00 02 22.3	+1.4
LZH				pP	pP	00 02 31.8	-2.8
LZH				sP	sP	00 02 39.6	-0.8
LZH				pmax	pmax		
	comp=Z,34nm,1.0s						
LZH				pmax	pmax		
	comp=Z,150nm,5.0s						
KSU1	Kansas State U	55.94	68	P	P	00 02 22.1	-0.4
	baz=312						
KSU1	Kansas State U	55.94	68	IAmb	IAmb	00 02 22.7	
	comp=Z,15nm,0.8s						
U32A	Winter Ranch,	56.34	72	IAmb	IAmb	00 02 27.2	
	comp=Z,10nm,0.8s						
E43A	Lone Tree Farm	56.47	56	P	P	00 02 25.6	-0.4
ARCES	ARCESS Array B	58.16	350	P	P	00 02 36.5	-1.1
	comp=Z,1.4nm,0.3s,baz=23,slow=7.1,SNR=40						
ARCES				PcP	PcP	00 03 27.7	-0.9
	comp=Z,2.8nm,0.6s,baz=23,slow=4.1,SNR=5.1						
ARCES				LR	LR	00 30 20.6	
	comp=Z,34nm,18.1s,baz=200,slow=39						
TX31	Lajitas Ar. Si	58.33	82	IAmb	IAmb	00 02 44.0	
	comp=Z,18nm,1.4s						
TX32	Lajitas Array	58.33	82	IAmb	IAmb	00 02 44.0	
	comp=Z,5.1nm,1.4s						
TXAR	Lajitas Array	58.33	82	P	P	00 02 39.1	-0.4
	comp=Z,1.2nm,0.6s,baz=301,slow=5.4,SNR=16						
R40A	Maddies Statio	59.00	66	IAmb	IAmb	00 02 43.2	
	comp=Z,7.5nm,0.7s						
CD2	Chengdu	59.30	282	P	P	00 02 45.3	-0.9
CD2				pmax	pmax		
	comp=Z,20nm,0.7s						
CCM	Cathedral Cave	59.74	66	P	P	00 02 48.1	-1.0
	baz=314						
MGMO	Mountain Grove	59.78	67	IAmb	IAmb	00 02 48.7	
	comp=Z,7.1nm,0.8s						
U40A	Yellville	59.99	68	P	P	00 02 49.9	-0.9
	baz=314,SNR=6.8						
W39A	Magazine	60.24	70	P	P	00 02 52.2	-0.3
	baz=314						
W39A	Magazine	60.24	70	P	P	00 02 52.2	-0.3
W39A				IAmb	IAmb	00 02 53.0	
	comp=Z,21nm,1.5s						
MKAR	Makanchi Array	60.30	309	P	P	00 02 51.9	-0.9
	comp=Z,1.0nm,0.3s,baz=42,slow=6.6,SNR=17						
MKAR				PcP	PcP	00 03 37.0	-0.6
	comp=Z,0.7nm,0.4s,baz=29,slow=4.0,SNR=4.9						
MKAR	Makanchi Array	60.30	309	P	P	00 02 51.9	-0.9
MKAR				PcP	PcP	00 03 37.5	-0.1
SFIN	Lafayette	60.47	61	P	P	00 02 54.1	+0.1
	baz=314						
FCAR	Ozark Folk Cen	60.73	68	IAmb	IAmb	00 02 55.8	
	comp=Z,11nm,0.8s						
MIAR	Mount Ida	60.82	70	P	P	00 02 56.4	0.0
	baz=315						
MIAR	Mount Ida	60.82	70	P	P	00 02 56.8	+0.3
MIAR				IAmb	IAmb	00 02 56.9	
	comp=Z,6.7nm,0.8s						
BRVK	Borovoye	61.13	320	P	P	00 02 58.5	+0.2
BRVK				IAmb	IAmb	00 02 59.2	
	comp=Z,4.2nm,0.5s						
W41B	Gary Mavity, V	61.16	69	P	P	00 02 58.2	-0.6
	baz=315						
P49A	Miami Univ. Ec	62.37	61	P	P	00 03 06.3	-0.5
	baz=315						
WCI	Wyandotte Cave	62.42	63	P	P	00 03 06.8	-0.3
	baz=315						
WCI	Wyandotte Cave	62.42	63	P	P	00 03 08.0	+0.8
WVT	Waverly	63.04	65	P	P	00 03 11.5	+0.1
	baz=316						
O53A	New Philadelph	63.74	58	P	P	00 03 15.9	-0.1
	baz=316						
N54A	Moraine State	63.88	57	P	P	00 03 16.8	0.0
	baz=316						
V48A	Smith Brothers	63.89	65	IAmb	IAmb	00 03 17.6	
	comp=Z,11nm,0.9s						
U49A	Red Boiling Sp	63.93	64	IAmb	IAmb	00 03 18.0	
	comp=Z,10nm,0.8s						
T50A	Nancy	64.09	63	P	P	00 03 18.2	0.0
TZTN	Tazewell	65.15	62	P	P	00 03 25.6	+0.4
	baz=317						
V52A	Sevierville	65.63	63	P	P	00 03 28.6	+0.2
V52A				IAmb	IAmb	00 03 29.3	
	comp=Z,14nm,0.8s						
FINES	FINESS Array B	65.87	347	P	P	00 03 27.9	-1.5
	comp=Z,0.9nm,0.3s,baz=26,slow=5.9,SNR=19						
FINES				LR	LR	00 37 29.3	
	comp=Z,20nm,18.1s,baz=36,slow=41						
FINES	FINESS Array B	65.87	347	P	P	00 03 28.0	-1.4
FINES				PcP	PcP	00 03 59.5	-0.5
W52A	Murphy	65.99	64	IAmb	IAmb	00 03 31.5	
	comp=Z,20nm,1.1s						
V53A	Saluda	66.19	62	IAmb	IAmb	00 03 33.1	
	comp=Z,12nm,0.8s						
Y52A	Lilburn	66.81	65	P	P	00 03 35.5	-0.4
SIJI	Sorong	67.21	237	P	P	00 03 38.2	-0.4
	comp=Z,8.0nm,0.5s,baz=81,slow=19,SNR=5.5						
KMSC	Kings Mountain	67.40	62	P	P	00 03 39.9	+0.2
	baz=318,SNR=7.1						
GOGA	Godfrey	67.48	64	P	P	00 03 39.7	-0.4
	baz=318						
NB2	NORSAR Subarra	67.69	355	P	P	00 03 40.2	-0.8
	comp=Z,0.2nm,0.3s,baz=7.4,slow=6.5						
NOA	NORSAR Array B	67.69	355	P	P	00 03 40.2	-0.8
	comp=Z,0.4nm,0.4s,baz=7.7,slow=6.8,SNR=12						
NOA				LR	LR	00 35 53.2	
	comp=Z,27nm,18.1s,baz=5.0,slow=38						
TAOE	Nuku Hiva Isla	68.40	139	*e*LR	LR	00 24 32.5	
	comp=Z,120nm,24.3s						
TAOE	Nuku Hiva Isla	68.40	139	*e*T	T	01 18 27.9	
	comp=Z,38nm,0.2s						
SHL	Shillong	70.37	286	P	P	00 03 58.9	+0.5
PMOR	Pomariorio Ree	71.20	149	*e*T	T	01 21 56.8	
	comp=Z,14nm,0.2s						
CMAR	Chiang Mai Arr	71.34	276	P	P	00 04 04.5	+0.4
	comp=Z,1.6nm,0.3s,baz=26,slow=6.8,SNR=14						
CMAR				LR	LR	00 38 28.0	
	comp=Z,20nm,19.1s,baz=36,slow=38						
CMAR	Chiang Mai Arr	71.34	276	P	P	00 04 04.1	-0.1
TAPN	Taplejung	71.52	291	*e*P	P	00 04 06.8	+1.3
	comp=Z,124nm,0.8s						
PABE	Paberze	71.90	347	P	P	00 04 05.9	-1.0
PABE				IAmb	IAmb	00 04 06.5	
	comp=Z,16nm,1.2s						
ODAN	Odare	72.07	291	*e*P	P	00 04 09.7	+0.9
	comp=Z,31nm,0.7s						
GUN	Gumba	72.16	292	*e*P	P	00 04 10.7	+1.3
	comp=Z,264nm,0.5s						
JIRN	Jiri	72.17	292	*e*P	P	00 04 10.8	+1.3
	comp=Z,176nm,0.6s						
RAMN	Ramite	72.47	291	*e*P	P	00 04 12.3	+1.2
	comp=Z,191nm,0.5s						
KKN	Kakani	72.60	293	*e*P	P	00 04 13.1	+1.2
	comp=Z,93nm,0.6s						
PKI	Pulchoki	72.69	292	*e*P	P	00 04 13.4	+0.8
	comp=Z,78nm,0.7s						
PKIN	Phulchoki	72.69	292	*e*P	P	00 04 13.4	+0.9
	comp=Z,64nm,0.5s						
GKN	Gorkha	72.81	293	*e*P	P	00 04 13.9	+0.8
	comp=Z,73nm,0.6s						
DMN	Daman	72.84	293	*e*P	P	00 04 14.5	+1.2
	comp=Z,30nm,0.5s						
DANN	Dangsing	73.05	294	*e*P	P	00 04 15.7	+1.1
	comp=Z,109nm,0.9s						
PPT2	Papeete2	73.11	151	*e*LR	LR	00 26 44.5	
	comp=Z,79nm,25.2s						
KOLN	Koldanda	73.58	294	*e*P	P	00 04 18.5	+0.8
	comp=Z,56nm,0.9s						
PYUN	Piuthan	73.68	295	*e*P	P	00 04 19.1	+0.8
	comp=Z,59nm,0.8s						
DZM	Mont Dzumac	74.34	195	*e*LR	LR	00 27 20.8	
	comp=Z,64nm,25.6s						
AKASG	Malin Array Be	75.66	342	P	P	00 04 28.1	-0.9
	comp=Z,1.9nm,0.3s,baz=22,slow=6.3,SNR=14						
AKASG				LR	LR	00 41 47.4	
	comp=Z,20nm,18.6s,baz=335,slow=39						
SORM	Soroca	78.28	342	⇑P	P	00 04 43.5	-0.3
GEYT	Alibeck	78.31	318	LR	LR	00 42 30.2	
	comp=Z,79nm,18.3s,baz=295,slow=38						
KBZ	Khabaz	78.78	331	P	P	00 04 45.6	-1.0
	comp=Z,2.4nm,0.8s,baz=326,slow=5.0,SNR=2.6						
KBZ				LR	LR	00 44 35.0	
	comp=Z,59nm,20.3s,baz=14,slow=40						
TRPA	Tarpa	79.29	346	⇑P	P	00 04 50.2	+0.8
BUR08	Bucovina Ar. S	79.33	344	IAmb	IAmb	00 04 51.0	
	comp=Z,4.6nm,0.8s						
BURAR	Bucovina Array	79.36	344	⇑P	P	00 04 50.3	+0.4
KHC	Kasperske Hory	79.37	352	*e*P	P	00 04 50.5	+0.7
GERES	GERESS Array B	79.64	352	P	P	00 04 51.1	-0.3
	comp=Z,1.4nm,0.6s,baz=39,slow=6.2,SNR=6.1						
GIRR	Girov	79.76	343	⇑P	P	00 04 50.4	-1.6
ARCR	ARCALIA	80.01	345	⇑P	P	00 04 53.5	+0.2
TESR	Tescani	80.16	343	⇑P	P	00 04 54.1	0.0
CONA	Conrad Observa	80.34	350	*e*P	P	00 04 55.1	-0.1
	comp=Z,2.0nm,0.6s						
SIRR	Siria	81.24	346	⇓P	P	00 05 00.2	+0.3
MLR	Muntele Rosu	81.28	343	⇓P	P	00 05 00.7	+0.4
MLR	Muntele Rosu	81.28	343	P	P	00 05 00.5	+0.2
MLR				IAmb	IAmb	00 05 03.2	
	comp=Z,8.7nm,1.1s						
WTTA	Wattenberg	81.38	353	*e*P	P	00 05 01.2	+0.3
	comp=Z,4.4nm,0.6s						
KBA	Koelnbreinsper	81.43	352	*e*P	P	00 05 01.4	+0.3
	comp=Z,9.0nm,0.5s						
SQTA	Sankt Quirin	81.45	353	*e*P	P	00 05 01.0	-0.2
	comp=Z,2.0nm,0.5s						

VOIR		81.49	344	⇑P	P	00 05 02.4	+1.0
SOKA	Soboth	81.67	351	*e*P	P	00 05 02.9	+0.6
	comp=Z,4.4nm,0.5s						
FETA	Feichten	81.69	354	*e*P	P	00 05 02.5	0.0
	comp=Z,4.3nm,1.1s						
ABTA	Abfaltersbach	81.83	353	*e*P	P	00 05 03.2	+0.1
	comp=Z,2.0nm,0.5s						
OBKA	Obir	81.88	351	*e*P	P	00 05 03.6	+0.2
	comp=Z,4.6nm,0.8s						
WRA	Warramunga Arr	82.23	224	P	P	00 05 04.7	-0.6
	comp=Z,0.7nm,0.4s,baz=32,slow=5.9,SNR=7.7						
HERR	Herculane	82.47	345	⇑P	P	00 05 06.6	+0.2
MDVR	Moldovita	82.68	346	⇓P	P	00 05 07.3	-0.2
PLVB	Pleven	83.55	343	⇑P	P	00 05 12.2	+0.2
DIVS	Divibare	83.60	347	IAmb	IAmb	00 05 13.3	
	comp=Z,5.9nm,0.8s						
VTS	Vitosha	84.54	344	IAmb	IAmb	00 05 18.1	
	comp=Z,4.2nm,1.0s						
FITZ	Fitzroy Crossi	84.71	232	P	P	00 05 18.5	+0.5
	comp=Z,6.4nm,0.8s,baz=28,slow=4.0,SNR=8.8						
BRTR	Keskin Array B	85.09	336	P	P	00 05 20.1	0.0
	comp=Z,4.4nm,0.8s,baz=48,slow=1.8,SNR=8.5						
BRTR				LR	LR	00 48 11.3	
	comp=Z,23nm,20.0s,baz=28,slow=39						
BRTR	Keskin Array B	85.09	336	P	P	00 05 19.9	-0.2
PDG	Podgorica	85.34	347	⇑P	P	00 05 21.4	+0.3
ASAR	Alice Springs	85.70	223	P	P	00 05 23.2	+0.3
	comp=Z,1.9nm,0.7s,baz=26,slow=4.8,SNR=22						
ASAR	Alice Springs	85.70	223	P	P	00 05 23.0	+0.1
AQU	L'Aquila	86.11	351	IAmb	IAmb	00 05 31.7	
	comp=Z,12nm,1.0s						
POO	Poona	86.36	295	*e*x	Pn	00 05 25.0	
SGRT	San Giovanni R	86.46	350	P	P	00 05 26.5	-0.2
ESDC	Sonseca Array	89.20	4	P	P	00 05 38.5	-1.3
	comp=Z,1.2nm,0.6s,baz=349,slow=4.1,SNR=26						
ESDC	Sonseca Array	89.20	4	P	P	00 05 38.9	-0.9
STKA	Stephens Creek	90.09	213	P	P	00 05 44.4	+0.7
	comp=Z,4.2nm,0.8s,baz=343,slow=5.1,SNR=7.2						
STKA	Stephens Creek	90.09	213	P	P	00 05 43.9	+0.2
TORD	Torodi Ar. Bea	115.76	0	PKP	PKiKP	00 11 25.6	-1.0
	comp=Z,0.9nm,0.4s,baz=353,slow=2.4,SNR=19						
TORD	Torodi Ar. Bea	115.76	0		PKiKP	00 11 25.8	-0.8
H03N2	Juan Fernandez	120.83	106	T	T	02 24 22.2	
	baz=317,slow=77,SNR=24						
H03N1	Juan Fernandez	120.84	106	T	T	02 24 23.6	
	baz=317,slow=77,SNR=31						
H03N3	Juan Fernandez	120.84	106	T	T	02 24 22.8	
	baz=317,slow=77,SNR=37						
DBIC	Dimbokro	121.92	8	PKP	PKPdf	00 11 38.0	-0.5
	comp=Z,2.4nm,0.3s,baz=30,slow=2.5,SNR=18						
DBIC	Dimbokro	121.92	8		PKPdf	00 11 37.6	-0.8
MAW	Mawson	146.67	218	PKPbc	PKPbc	00 12 23.7	-0.6
	comp=Z,3.6nm,0.9s,baz=81,slow=4.5,SNR=4.3						
BOSA	Boshof	151.22	313	PKPbc	PKPbc	00 12 37.3	0.0
	comp=Z,11nm,0.8s,baz=46,slow=1.8,SNR=18						
BOSA	Boshof	151.22	313		PKPbc	00 12 37.1	-0.2

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*IDC **17** 23:55:05.3±2.0, 5°.77S×151°.75E, h0^{km}, mb3.5/5, mb1 3.7/6, mb1mx3.6/40, mbtmp3.6/6, ML2.0/1, MS2.8/3, Ms1 2.8/3, ms1mx2.5/23, Error ellipse: s-maj=79.0km s-min=24.7km az=123.0*

ISC 17 23:55:11.4±1.9**, 5°.8S**±0°.3×**151°.6E**±0°.4**, h35**^{km}**, n9,** σ1^{s}.**73**/8**,** **mb3.5**/5**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	5.66	230	Pn	Pn	23 56 35.0	+1.9
	2.7nm,0.3s,baz=137,slow=8.0,SNR=1.7						
PMG				Sn	Sn	23 57 34.7	-2.2
	1.0nm,0.3s,baz=356,slow=18,SNR=3.0						
PMG				LR	LR	23 58 39.0	
	comp=Z,50nm,21.1s,baz=24,slow=37						
DZM	Mont Dzumac	21.68	140	LR	LR	00 06 37.4	
	comp=Z,38nm,19.5s,baz=266,slow=32						
WRA	Warramunga Arr	21.88	228	P	P	00 00 00.0	-1.4
	0.3nm,0.4s,baz=54,slow=10,SNR=4.9						
ASAR	Alice Springs	24.60	222	P	P	00 00 29.9	+1.3
	0.7nm,0.7s,baz=56,slow=8.9,SNR=7.7						
STKA	Stephens Creek	27.60	199	LR	LR	00 12 16.7	
	comp=Z,24nm,18.1s,baz=24,slow=37						
FITZ	Fitzroy Crossi	28.11	242	P	P	00 00 59.7	-0.6
	0.4nm,0.3s,baz=62,slow=10						
SONM	Songino Array	66.49	329	P	P	00 05 58.4	+0.8
	0.4nm,0.7s,baz=142,slow=5.4,SNR=2.7						
ILAR	Eielson Array	83.52	22	P	P	00 07 34.2	-1.2
	0.3nm,0.8s,baz=255,slow=5.1,SNR=1.9						
TORD	Torodi Ar. Bea	149.41	286	PKPbc	PKPbc	00 14 57.2	-0.7
	0.8nm,0.5s,baz=81,slow=2.2,SNR=14						

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*IDC **17** 23:56:46.0±6.0, 40°.24N×72°.91E, h0^{km}, mb3.3/1, mb1 3.3/3, mb1mx3.1/55, mbtmp3.3/3, ML2.6/2, MS3.7/1, Ms1 3.7/1, ms1mx2.5/26, Error ellipse: s-maj=235.1km s-min=26.5km az=146.0*
*KRNET **17** 23:56:48.9±0.1, 40°.37N×73°.21E, h14^{km}, mb3.7*
*SOME **17** 23:56:49.3, 40°.45N×73°.27E, h5^{km}*
*ISU **17** 23:56:49, 40°.30N×73°.20E, h5^{km}*
*KNET **17** 23:56:50.3±0.5, 40°.49N×73°.40E, h2^{km}±4^{km}, ml3.2, Error ellipse: s-maj=5.0km s-min=2.0km az=78.0*
*NNC **17** 23:56:52.3±1.0, 40°.54N×73°.26E, h0^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=8.1km s-min=4.8km az=177.0*

ISC 17 23:56:49.3±1.1**, 40°.28N**±0°.02×**73°.18E**±0°.02**, h4**^{km}±9^{km}**, n64,** σ1^{s}.**50**/104**, 43C-17D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	0.36	137	*e*P	Pg	23 56 56.0	-0.4
SFK				*e*S	Sg	23 57 02.0	+0.8
SFK	Sufi-Kurgan	0.36	137	⇓*e*P	Pg	23 56 56.3	-0.1
	baz=47						
SFK				⇓*e*S	Sb	23 57 02.5	-2.0
	baz=47						
OHH	Osh	0.39	309	*e*P	Pg	23 56 57.0	+0.2
OHH				*e*S	Sg	23 57 02.0	0.0
OHH	Osh	0.39	309	⇑*i*P	Pg	23 56 56.1	-0.7
	baz=96						
OHH				⇑*i*S	Sg	23 57 01.2	-0.8
	baz=96						
SALK	Salom-Alik	0.78	39	⇑*e*P	Pg	23 57 02.2	-2.0
	baz=42						
SALK				⇑*e*S	Sg	23 57 11.2	-3.1
	baz=42						
FRG	Fergana	1.07	276	*e*P	Pg	23 57 10.0	+0.2
FRG				*e*S	Sn	23 57 27.0	+0.6
DRK	Karamyk	1.33	234	⇑*i*P	Pb	23 57 15.0	+0.1
	baz=31						
DRK				⇑*i*S	Sn	23 57 33.6	+0.5
	baz=31						
NAM	Namangan	1.36	302	*e*P	Pb	23 57 16.0	+0.7
NAM				*e*S	Sn	23 57 35.0	+1.5
BTK	Batken	1.82	264	*e*P	Pb	23 57 23.0	-0.2
BTK				*e*S	Sg	23 57 50.0	+2.1
BTK	Batken	1.82	264	⇑*i*P	Pb	23 57 23.5	+0.3
	baz=61						
BTK				⇑*i*S	Sg	23 57 48.0	+0.1
	baz=61						
AML	Almayashu	1.89	12	⇑P	Pn	23 57 22.4	-0.3
	282nm,0.2s,SNR=422						
AML				⇓S	Sn	23 57 46.8	-0.4
	1µm,0.4s						
AML	Almayashu	1.89	12	⇑*i*P	Pn	23 57 22.1	-0.6
	baz=12						
AML				⇑*i*S	Sn	23 57 46.1	-1.1
	baz=12						
TRKS	Terek-Say	1.99	310	⇑*e*P	Pn	23 57 23.9	+0.1
	baz=6.0						
TRKS				⇑*i*S	Sn	23 57 48.8	-0.5
	baz=6.0						
UCH	Uchtor	2.19	27	⇑P	Pn	23 57 26.9	-0.1
	13nm,0.2s,SNR=38						
UCH				⇑S	Sn	23 57 55.2	+0.5
	119nm,0.3s						
UCH	Uchtor	2.19	27	⇑*e*P	Pn	23 57 26.8	-0.1
	baz=27						
UCH				⇑*i*S	Sn	23 57 54.4	-0.3
	baz=27						
MNAS	Manas	2.27	347	⇓*e*P	Pn	23 57 28.1	+0.5
	baz=46						
MNAS				⇓*i*S	Sn	23 57 55.8	-0.3
	baz=46						
EKS2	Erkin-Say	2.42	10	⇑P	Pn	23 57 30.5	+0.7
	14nm,0.2s,SNR=36						
EKS2				⇑S	Sn	23 58 02.5	+2.6
	42nm,0.2s						
EKS2	Erkin-Say	2.42	10	⇓*e*P	Pn	23 57 30.3	+0.5
	baz=10.0						
EKS2				⇓*i*S	Sn	23 57 59.8	-0.2
	baz=10.0						
MRKS	Merke	2.47	1	*e*P	Pb	23 57 33.0	-1.2
	74nm,0.4s						
MRKS				*e*S	Sn	23 58 04.1	+3.1
	221nm,0.3s						
MRKS	Merke	2.47	1	Pg	Pn	23 57 32.1	+1.8
	74nm,0.4s						
MRKS				Lg	Lg	23 58 03.5	
	221nm,0.3s						
GAR	Garm	2.55	241	⇑*e*P	Pb	23 57 34.2	-1.5
	baz=39						
GAR				⇑*i*S	Sb	23 58 06.4	-1.1
	baz=39						
AAK	Ala-Archa	2.56	22	P	Pn	23 57 32.5	+0.9
	SNR=58						
AAK	Ala-Archa	2.56	22	⇓Pn	Pn	23 57 32.5	+0.9
	19nm,0.4s						
AAK				⇑Lg	Lg	23 58 05.1	
	54nm,0.4s						
AAK	Ala-Archa	2.56	22	⇑*i*P	Pn	23 57 32.4	+0.7
	baz=23						
AAK				⇑*i*S	Sn	23 58 03.2	-0.1
	baz=23						
KBK	Karagaybulak	2.72	29	⇓P	Pn	23 57 34.8	+0.9
	14nm,0.2s,SNR=30						
KBK				⇓S	Sn	23 58 09.4	+2.0
	144nm,0.3s						
KBK	Karagaybulak	2.72	29	⇓*e*P	Pn	23 57 34.5	+0.5
	baz=29						
KBK				⇓*i*S	Sn	23 58 07.3	-0.1
	baz=29						
FRU1	Bishkek	2.75	23	⇑*e*P	Pn	23 57 35.0	+0.7
	baz=23						
FRU1				⇑*i*S	Sn	23 58 08.4	+0.4
	baz=23						
DZA	Taraz	2.96	333	*e*P	Pb	23 57 42.6	0.0
	32nm,0.2s						
DZA				*e*S	Sb	23 58 20.6	+1.6
	533nm,0.3s						
DZA	Taraz	2.96	333	Pg	Pb	23 57 42.3	-0.3
	39nm,0.1s						
DZA				Lg	Lg	23 58 20.6	
	533nm,0.3s						
CHMS	Chumysh	2.96	23	⇑P	Pn	23 57 37.8	+0.7
	7.1nm,0.2s,SNR=11						
CHMS	Chumysh	2.96	23	⇑*e*P	Pn	23 57 37.6	+0.5
	baz=23						
CHMS				⇑*i*S	Sn	23 58 13.0	-0.1
	baz=23						
TGS	TashGRES	3.00	294	*e*S	Sg	23 58 28.0	+2.3
ULHL	Ulahol	3.03	49	⇑P	Pn	23 57 38.6	+0.4
	3.9nm,0.2s,SNR=8.5						
ULHL	Ulahol	3.03	49	⇑*e*P	Pn	23 57 39.1	+0.9
	baz=50						
ULHL				⇑*i*S	Sn	23 58 15.4	+0.3
	baz=50						
USP	Ospenovka	3.15	18	⇑P	Pn	23 57 39.5	-0.2
	5.1nm,0.2s,SNR=9.0						
USP	Ospenovka	3.15	18	⇑*e*P	Pn	23 57 40.2	+0.6
	baz=18						
USP				⇑*i*S	Sn	23 58 17.0	-0.6
	baz=18						
TKM2	Tokmak 2	3.20	34	⇑P	Pn	23 57 41.5	+0.9
	9.0nm,0.3s,SNR=12						
TKM2	Tokmak 2	3.20	34	⇑Pg	Pb	23 57 46.1	-0.8
	4.1nm,0.3s						
TKM2				⇓Lg	Lg	23 58 26.8	
	32nm,0.4s						
TKM2	Tokmak 2	3.20	34	⇑*e*P	Pn	23 57 41.2	+0.6
	baz=34						
TKM2				⇑*i*S	Sn	23 58 19.1	-0.2
	baz=34						
CHM	Chimkent	3.38	308	*e*P	Pb	23 57 51.3	+1.5
	2.9nm,0.5s						
CHM				*e*S	Sg	23 58 35.5	-2.3
	866nm,0.4s						
CHGR	Chuyangaron	3.51	244	⇓*e*P	Pn	23 57 47.2	+2.5
	baz=43						
CHGR				⇓*i*S	Sn	23 58 29.4	+2.8
	baz=43						
DGS	Degeres	3.54	32	*e*P	Pb	23 57 51.8	-0.7
	18nm,0.7s						
DGS				*e*S	Sb	23 58 37.2	+1.3
	27nm,0.5s						
DGS	Degeres	3.54	32	Pg	Pb	23 57 51.9	-0.6
	18nm,0.7s						
DGS				Lg	Lg	23 58 37.2	
	27nm,0.5s						
MTBS	Maitube	3.75	39	*e*P	Pb	23 57 55.8	-0.2
	11nm,0.5s						
MTBS				*e*S	Sb	23 58 43.3	+1.5
	32nm,0.4s						
MTBS	Maitube	3.75	39	Pg	Pb	23 57 55.8	-0.2
	11nm,0.5s						
MTBS				Lg	Lg	23 58 44.2	
	32nm,0.4s						
TNSS	Tian-Shan	3.95	44	*e*P	Pb	23 57 59.4	-0.2
	10nm,0.4s						
TNSS				*e*S	Sb	23 58 50.5	+2.7
	42nm,0.6s						
TNSS	Tian-Shan	3.95	44	Pg	Pb	23 57 59.4	-0.2
	10nm,0.4s						
TNSS				Lg	Lg	23 58 50.5	
	42nm,0.6s						
KNDC	Almaty	4.08	43	⇑Pg	Pb	23 58 03.5	+1.8
	21nm,0.5s						
KNDC				⇓Lg	Lg	23 58 55.3	
	96nm,0.9s						
MDOK	Medeo	4.09	44	*e*P	Pb	23 58 01.7	-0.2
	9.7nm,0.7s						
MDOK				*e*S	Sb	23 58 53.9	+2.3
	32nm,0.7s						
MDOK	Medeo	4.09	44	Pn	Pn	23 57 53.3	+0.6
	1.9nm,0.4s						
MDOK				Pg	Pb	23 58 02.9	+1.0
	6.8nm,0.5s						
MDOK				Lg	Lg	23 58 54.2	
	27nm,0.6s						
MDOK	Medeo	4.09	44	Pg	Pb	23 58 01.7	-0.2
	9.7nm,0.7s						
MDOK				Lg	Lg	23 58 53.9	
	32nm,0.7s						
KOTS	Kotyrbulak	4.17	44	*e*P	Pb	23 58 03.6	+0.3
	9.7nm,0.6s						
KOTS				*e*S	Sb	23 58 57.7	+3.7
	69nm,0.5s						
KOTS	Kotyrbulak	4.17	44	Pg	Pb	23 58 03.6	+0.3
	9.7nm,0.6s						
KOTS				Lg	Lg	23 58 57.7	
	69nm,0.5s						
ANVS	Anan'yevo	4.20	52	⇑*e*P	Pn	23 57 55.5	+1.3
	baz=53						
ANVS				⇑*i*S	Sn	23 58 43.5	-0.3
	baz=53						
SATY	Saty	4.80	53	*e*P	Pb	23 58 15.4	+1.4
	3.0nm,0.4s						
SATY				*e*S	Sb	23 59 17.3	+5.2
	24nm,0.6s						
SATY	Saty	4.80	53	Pg	Pb	23 58 15.4	+1.4
	3.0nm,0.4s						
SATY				Lg	Lg	23 59 17.3	
	24nm,0.6s						
BTLS	Baital	4.80	7	*e*P	Pb	23 58 13.9	-0.1
	1.6nm,0.4s						
BTLS				*e*S	Sb	23 59 14.7	+2.6
	25nm,0.6s						
ARXS	Arharly	5.23	40	*e*P	Pb	23 58 21.6	+0.3
	4.4nm,0.6s						
ARXS				*e*S	Sb	23 59 28.1	+3.6
	20nm,0.5s						
ARXS	Arharly	5.23	40	Pg	Pb	23 58 21.6	+0.3
	4.4nm,0.6s						
ARXS				Lg	Lg	23 59 28.1	
	20nm,0.5s						
PDGK	Podgornoye	5.62	55	⇑Pg	Pb	23 58 32.5	+4.6
	3.7nm,0.7s						
PDGK				⇓Lg	Lg	23 59 48.7	
	15nm,0.8s						
MKAR	Makanchi Array	9.28	42	Pn	Pn	23 59 04.2	+0.4
	0.1nm,0.3s,baz=226,slow=18,SNR=1.9						
MKAR				Lg	Lg	00 01 38.0	
	0.1nm,0.3s,baz=231,slow=29,SNR=2.4						
ZALV	Zalesovo Beam	15.77	26	Pn	Pn	00 00 30.4	-1.7
	0.1nm,0.3s,baz=212,slow=13,SNR=2.2						
JOW	Kunigami	47.13	89	LR	LR	00 27 03.5	
	comp=Z,88nm,21.4s,baz=134,slow=38						
TORD	Torodi Ar. Bea	67.53	268	P	P	00 07 43.1	-3.8
	0.2nm,0.5s,baz=58,slow=6.1,SNR=1.8						

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*KRNET **18** 00:00:59.6±0.1, 42°.17N×77°.74E, h14^{km}, mb2.1*
*NNC **18** 00:01:00.9±0.9, 42°.30N×77°.78E, h5^{km}±4^{km}, mb2.9, mpv2.7, Error ellipse: s-maj=6.4km s-min=2.0km az=175.0*
*SOME **18** 00:01:00.0, 42°.23N×77°.77E, h10^{km}*

ISC 18 00:00:59.3±1.0**, 42°.18N**±0°.04×**77°.75E**±0°.03**, h14**^{km}±10^{km}**, n23,** σ0^{s}.**62**/43**, 12C-2D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy	0.45	175	⇑*i*P	Pg	00 01 08.2	-0.2
	baz=74						
TARG				⇑*i*S	Sg	00 01 14.3	-0.3
	baz=74						
PRZ	Przheval'sk	0.57	57	⇑*i*P	Pg	00 01 11.1	+0.6
	baz=56						
PRZ				⇑*i*S	Sb	00 01 19.3	+0.1
	baz=56						
ANVS	Anan'yevo	0.61	354	⇑*i*P	Pg	00 01 11.5	+0.2
	baz=55						
ANVS				⇑*i*S	Sb	00 01 20.2	-0.2
	baz=55						
SATY	Saty	1.00	28	*e*P	Pb	00 01 18.1	-0.4
	1.8nm,0.1s						
SATY				*e*S	Sb	00 01 31.1	-0.6
	9.3nm,0.1s						
SATY	Saty	1.00	28	P	Pb	00 01 18.1	-0.4
	1.8nm,0.1s						
SATY				S	Sb	00 01 31.1	-0.6
	9.3nm,0.1s						
TNSS	Tian-Shan	1.04	325	*e*P	Pb	00 01 19.4	-0.1
	2.1nm,0.1s						
TNSS				*e*S	Sg	00 01 33.2	0.0
	2.5nm,0.1s						
TNSS	Tian-Shan	1.04	325	P	Pb	00 01 19.4	-0.1
	2.1nm,0.1s						
TNSS				S	Sg	00 01 33.2	0.0
	2.5nm,0.1s						
MDOK	Medeo	1.11	332	*e*P	Pb	00 01 20.3	-0.2
	0.8nm,0.2s						
MDOK				*e*S	Sb	00 01 34.7	-0.2
	2.5nm,0.1s						
MDOK	Medeo	1.11	332	Pg	Pb	00 01 20.3	-0.2
	0.8nm,0.2s						
MDOK				Lg	Lg	00 01 34.7	
	2.5nm,0.1s						
ULHL	Ulahol	1.13	274	⇑*i*P	Pb	00 01 20.7	0.0
	baz=75						
ULHL				⇑*i*S	Sg	00 01 36.0	+0.2
	baz=75						
UZB	Uzynbulak	1.35	44	*e*P	Pn	00 01 23.7	-0.2
	3.9nm,0.2s						
UZB				*e*S	Sb	00 01 40.5	-1.1
	4.0nm,0.2s						
UZB	Uzynbulak	1.35	44	P	Pn	00 01 23.7	-0.2
	3.9nm,0.2s						
UZB				S	Sb	00 01 40.5	-1.1
	4.0nm,0.2s						
KPKS	Kokpek	1.46	28	*e*P	Pn	00 01 25.5	+0.1
	2.4nm,0.1s						
KPKS				*e*S	Sn	00 01 43.7	-0.6
	6.3nm,0.3s						
KST	Kastek	1.58	304	*e*P	Pb	00 01 29.0	+0.6
	5.8nm,0.5s						
KST				*e*S	Sg	00 01 49.5	-0.7
	7.1nm,0.2s						
KST	Kastek	1.58	304	P	Pb	00 01 29.0	+0.6
	5.8nm,0.5s						
KST				S	Sg	00 01 49.5	-0.7
	7.1nm,0.2s						
PDGK	Podgornoye	1.72	47	P	Pb	00 01 30.7	0.0
	2.2nm,0.8s						
PDGK				S	Sb	00 01 52.7	+0.4
	2.6nm,0.4s						
PDGK	Podgornoye	1.72	47	⇑P	Pb	00 01 30.3	-0.4
	3.5nm,0.8s						
PDGK				⇓S	Sn	00 01 51.1	+0.3
	4.6nm,0.6s						
TKM2	Tokmak 2	1.76	296	⇑P	Pb	00 01 32.4	+0.9
	2.6nm,0.9s						
TKM2				⇓S	Sg	00 01 54.8	-1.1
	1.2nm,0.3s						
TKM2	Tokmak 2	1.76	296	⇑*e*P	Pb	00 01 32.0	+0.5
	baz=96						
TKM2				⇑*i*S	Sg	00 01 55.5	-0.4
	baz=96						
ARXS	Arharly	2.03	1	*e*P	Pb	00 01 36.6	+0.5
	2.3nm,0.5s						
ARXS				*e*S	Sb	00 02 02.5	+1.2
	5.7nm,0.2s						
ARXS	Arharly	2.03	1	Pg	Pb	00 01 36.6	+0.5
	2.3nm,0.5s						
ARXS				Lg	Lg	00 02 02.5	
	5.7nm,0.2s						
KTMS	Ketmen	2.29	56	*e*P	Pb	00 01 41.2	+0.6
	1.3nm,0.2s						
KTMS				*e*S	Sb	00 02 10.6	+1.7
	4.0nm,0.2s						
KTMS	Ketmen	2.29	56	Pg	Pb	00 01 41.2	+0.6
	1.3nm,0.2s						
KTMS				Lg	Lg	00 02 10.6	
	4.0nm,0.2s						

KRNET 18 00:03:06.2±0.1**, 40°.37N**×**73°.24E, h13**^{km}**, mb2.1, 15C-2D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	Osh	0.38	294	⇑*i*P	Pg	00 03 13.7	-0.2
	baz=94						
OHH				⇑*i*S	Sg	00 03 18.8	-0.3
	baz=94						
SFK	Sufi-Kurgan	0.41	151	⇑*e*P	Pg	00 03 13.9	-0.5
	baz=50						
SFK				⇑*e*S	Sg	00 03 19.3	-0.6
	baz=50						
SALK	Salom-Alik	0.67	40	⇑*e*P	Pg	00 03 19.4	0.0
	baz=40						
SALK				⇑*e*S	Sg	00 03 28.6	+0.3
	baz=40						
DRK	Karamyk	1.42	232	⇑*i*P	Pg	00 03 33.2	-0.3
	baz=32						
DRK				⇑*i*S	Sg	00 03 52.3	+0.3
	baz=32						
AML	Almayashu	1.79	11	⇑*i*P	Pb	00 03 39.5	+0.3
	baz=11						
AML				⇑*i*S	Sg	00 04 03.3	-0.7
	baz=11						
BTK	Batken	1.88	261	⇑*i*P	Pb	00 03 41.1	+0.6
	baz=61						
BTK				⇑*i*S	Sg	00 04 05.7	-1.0
	baz=61						
TRKS	Terek-Say	1.97	307	⇑*e*P	Pb	00 03 41.4	-0.6
	baz=6.0						
UCH	Uchtor	2.09	27	⇑*i*P	Pb	00 03 44.1	-0.1
	baz=27						
UCH				⇑*i*S	Sb	00 04 11.5	+1.2
	baz=27						
MNAS	Manas	2.19	346	⇓*i*P	Pb	00 03 45.6	-0.1
	baz=46						
MNAS				⇓*i*S	Sb	00 04 14.0	+1.2
	baz=46						
KSH	Kashi	2.26	111	P	Pg	00 03 50.8	+1.2

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*IDC **18** 00:03:43.7±3.1, 40°.17N×71°.36E, h0^{km}, mb3.6/2, mb1 3.5/4, mb1mx3.3/39, mbtmp3.5/4, ML2.8/2, Error ellipse: s-maj=79.8km s-min=21.7km az=152.0*
*KRNET **18** 00:03:45.8±0.1, 40°.34N×71°.46E, h14^{km}, mb3.5*
*ISU **18** 00:03:46, 40°.33N×71°.37E, h5^{km}*
*SOME **18** 00:03:48.4, 40°.45N×71°.47E, h5^{km}*
*NNC **18** 00:03:50.6±1.0, 40°.60N×71°.39E, h7^{km}±5^{km}, mb3.9, mpv3.5, Error ellipse: s-maj=7.5km s-min=3.8km az=15.0*

ISC 18 00:03:45.0±1.0**, 40°.40N**±0°.02×**71°.51E**±0°.02**, h9**^{km}±9^{km}**, n65,** σ1^{s}.**70**/101**, 40C-14D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NAM	Namangan	0.60	11	*e*P	Pn	00 04 00.0	+0.2
NAM				*e*S	Sn	00 04 11.0	+1.3
BTK	Batken	0.63	237	*e*P	Pg	00 03 57.0	-0.2
BTK				*e*S	Sg	00 04 05.0	-0.5

BTK	Batken	0.63	237	⇑iP	Pg	00 03 56.8	-0.4
	baz=40						
BTK				⇑iS	Sg	00 04 04.9	-0.5
	baz=40						
DRK	Karamyk	0.95	166	⇑iP	Pg	00 04 03.1	-0.1
	baz=62						
DRK				⇑iS	Sg	00 04 15.6	+0.1
	baz=62						
OHH	Osh	0.98	82	⇑iP	Pn	00 04 05.6	+0.5
	baz=79						
OHH				⇑iS	Sn	00 04 19.6	+0.4
	baz=79						
TRKS	Terek-Say	1.16	346	⇑iP	Pn	00 04 07.4	-0.3
	baz=49						
TRKS				⇑iS	Sn	00 04 23.7	-0.1
	baz=49						
TRKS	Terek-Say	1.16	346	⇑iS	Pn	00 04 07.3	-0.4
	baz=6.0						
SFK	Sufi-Kurgan	1.58	104	⇑eP	Pg	00 04 15.8	+0.6
	baz=1.0						
SFK				⇑eS	Sg	00 04 38.1	+2.4
	baz=1.0						
CHMG	Chimgan	1.61	316	eP	Pg	00 04 16.0	0.0
CHMG				eS	Sg	00 04 39.0	+2.1
GAR	Garm	1.67	214	⇑eP	Pb	00 04 15.6	-0.5
	baz=14						
GAR				⇑iS	Sb	00 04 37.6	+0.3
	baz=14						
SALK	Salom-Alik	1.82	74	⇓eP	Pg	00 04 20.6	+0.6
	baz=72						
SALK				⇓eS	Sg	00 04 46.0	+2.4
	baz=72						
KUMR	Kumaryk	1.86	296	eP	Pg	00 04 22.0	+1.4
KUMR				eS	Sg	00 04 46.0	+1.3
TAS	Tashkent	1.92	300	eP	Pg	00 04 22.0	+0.3
TAS				eS	Sg	00 04 47.0	+0.4
MNAS	Manas	2.21	19	⇑eP	Pg	00 04 26.6	-0.9
	baz=20						
MNAS				⇑iS	Sg	00 04 56.7	+0.5
	baz=20						
AML	Almayashu	2.39	43	⇑eP	Pb	00 04 29.2	+0.8
	baz=43						
AML				⇑iS	Sg	00 05 01.0	-0.8
	baz=43						
CHM	Chimkent	2.39	324	eP	Pg	00 04 31.9	+1.0
	4.4nm,0.3s						
CHM				eS	Sg	00 05 03.5	+1.6
	906nm,0.3s						
DZA	Taraz	2.49	357	⇑iP	Pg	00 04 34.1	+1.3
	71nm,0.3s						
DZA				⇑iS	Sg	00 05 07.2	+2.0
	498nm,0.4s						
CHGR	Chuyangaron	2.52	227	⇑eP	Pb	00 04 28.7	-1.7
	baz=27						
CHGR				⇑iS	Sb	00 05 00.3	-1.3
	baz=27						
MRKS	Merke	2.67	28	eP	Pg	00 04 36.9	+0.7
	25nm,0.4s						
MRKS				eS	Sg	00 05 12.0	+1.1
	68nm,0.5s						
MRKS	Merke	2.67	28	Pg	Pg	00 04 36.9	+0.7
	25nm,0.4s						
MRKS				Lg	Lg	00 05 12.0	
	68nm,0.5s						
KK02	Karatay Array	2.80	345	⇑Pn	Pb	00 04 32.7	-2.6
	0.5nm,0.2s						
KK02				⇑Pg	Pg	00 04 37.6	-1.1
	14nm,0.3s						
KK02				⇑Lg	Lg	00 05 12.9	
	31nm,0.5s						
EKS2	Erkin-Say	2.83	36	⇓iP	Pb	00 04 35.2	-0.6
	baz=36						
EKS2				⇓iS	Sb	00 05 11.3	+0.7
	baz=36						
UCH	Uchtor	2.91	50	⇑eP	Pb	00 04 36.3	-1.0
	baz=50						
UCH				⇑iS	Sb	00 05 13.5	+0.3
	baz=50						
AAK	Ala-Archa	3.17	44	⇑Pn	Pb	00 04 40.1	-1.5
	5.6nm,0.8s						
AAK				⇓Pg	Pg	00 04 48.4	+2.7
	4.6nm,0.4s						
AAK				⇑Lg	Lg	00 05 29.6	
	43nm,0.7s						
AAK	Ala-Archa	3.17	44	⇑eP	Pb	00 04 39.8	-1.7
	baz=44						
AAK				⇑iS	Sb	00 05 19.4	-0.9
	baz=44						
KBK	Karagaybulak	3.43	48	⇑eP	Pb	00 04 43.6	-2.4
	baz=47						
KBK				⇑iS	Sb	00 05 25.6	-2.2
	baz=47						
CHMS	Chumysh	3.55	42	⇑iP	Pb	00 04 45.2	-2.9
	baz=42						
CHMS				⇑eS	Sb	00 05 28.6	-2.8
	baz=42						
USP	Ospenovka	3.63	37	⇓eP	Pb	00 04 46.2	-3.2
	baz=37						
USP				⇓iS	Sb	00 05 30.6	-3.0
	baz=37						
TKM2	Tokmak 2	3.96	49	⇓Pn	Pb	00 04 51.4	-3.8
	5.1nm,0.5s						
TKM2				⇑Pg	Pg	00 05 02.9	+1.9
	5.4nm,0.5s						
TKM2				⇓Lg	Lg	00 05 55.8	
	19nm,0.6s						
TKM2	Tokmak 2	3.96	49	⇓eP	Pb	00 04 51.0	-4.2
	baz=49						
TKM2				⇓iS	Sb	00 05 38.6	-4.7
	baz=49						
ULHL	Ulahol	4.01	61	⇑iP	Pb	00 04 51.5	-4.5
	baz=61						
ULHL				⇑iS	Sb	00 05 39.6	-5.1
	baz=61						
KST	Kastek	4.25	50	eP	Pg	00 05 06.2	-0.3
	13nm,0.5s						
KST				eS	Sg	00 06 02.4	+0.9
	44nm,0.8s						
KST	Kastek	4.25	50	Pg	Pg	00 05 06.2	-0.3
	13nm,0.5s						
KST				Lg	Lg	00 06 02.4	
	44nm,0.8s						
DGS	Degeres	4.27	47	eP	Pg	00 05 07.3	+0.6
	11nm,0.7s						
DGS				eS	Sg	00 06 04.2	+2.1
	22nm,0.6s						
DGS	Degeres	4.27	47	Pg	Pg	00 05 07.3	+0.6
	11nm,0.7s						
DGS				Lg	Lg	00 06 04.2	
	22nm,0.6s						
MTBS	Maitube	4.58	52	eP	Pg	00 05 12.0	-0.7
	2.8nm,0.3s						
MTBS				eS	Sg	00 06 12.4	+0.4
	15nm,0.4s						
MTBS	Maitube	4.58	52	Pg	Pg	00 05 12.0	-0.7
	2.8nm,0.3s						
MTBS				Lg	Lg	00 06 12.4	
	15nm,0.4s						
TNSS	Tian-Shan	4.85	55	eP	Pg	00 05 18.4	+0.5
	4.3nm,0.3s						
TNSS				eS	Sg	00 06 23.3	+2.6
	8.2nm,0.4s						
TNSS	Tian-Shan	4.85	55	Pg	Pg	00 05 18.3	+0.5
	4.3nm,0.3s						
TNSS				Lg	Lg	00 06 23.3	
	8.2nm,0.4s						
KNDC	Almaty	4.96	54	⇑Lg	Lg	00 06 28.2	
	73nm,0.8s						
MDOK	Medeo	4.98	55	eP	Pg	00 05 20.1	-0.2
	4.1nm,0.4s						
MDOK				eS	Sg	00 06 26.4	+1.6
	13nm,0.8s						
MDOK	Medeo	4.98	55	Pn	Pn	00 05 05.8	+5.7
	6.2nm,0.5s						
MDOK				⇓Lg	Lg	00 06 28.7	
	18nm,0.9s						
MDOK	Medeo	4.98	55	Pg	Pg	00 05 20.2	-0.2
	4.1nm,0.4s						
MDOK				Lg	Lg	00 06 26.4	
	13nm,0.8s						
BTLS	Baital	5.00	21	eP	Pg	00 05 20.1	-0.6
	5.9nm,0.4s						
BTLS				eS	Sg	00 06 26.5	+1.0
	22nm,0.7s						
BTLS	Baital	5.00	21	Pg	Pg	00 05 20.1	-0.6
	5.9nm,0.4s						
BTLS				Lg	Lg	00 06 26.5	
	22nm,0.7s						
KUU	Kurty	5.01	44	eP	Pg	00 05 19.7	-1.1
	2.1nm,0.3s						
KUU				⇑iS	Sg	00 06 26.0	+0.3
	13nm,0.7s						
KUU	Kurty	5.01	44	Pg	Pg	00 05 19.7	-1.1
	2.1nm,0.3s						
KUU				Lg	Lg	00 06 26.0	
	13nm,0.7s						
SATY	Saty	5.80	61	eP	Pg	00 05 36.5	+0.4
	3.5nm,0.5s						
SATY				eS	Sg	00 06 54.4	+3.1
	8.1nm,0.2s						
SATY	Saty	5.80	61	Pg	Pg	00 05 36.5	+0.4
	3.5nm,0.5s						
SATY				Lg	Lg	00 06 54.4	
	8.1nm,0.2s						
KURS	Kuram	5.85	56	eP	Pg	00 05 36.4	-0.6
	6.4nm,1.1s						
KURS				eS	Sg	00 06 54.3	+1.6
	6.9nm,0.8s						
KURS	Kuram	5.85	56	Pg	Pg	00 05 36.4	-0.6
	6.4nm,1.1s						
KURS				Lg	Lg	00 06 54.3	
	6.9nm,0.8s						
ARXS	Arharly	6.04	49	eP	Pg	00 05 40.0	-0.6
	3.7nm,0.7s						
ARXS				eS	Sg	00 07 00.3	+1.5
	7.9nm,0.4s						
ARXS	Arharly	6.04	49	Pg	Pg	00 05 40.0	-0.6
	3.7nm,0.7s						
ARXS				Lg	Lg	00 07 00.3	
	7.9nm,0.4s						
KPKS	Kokpek	6.17	58	eP	Pg	00 05 42.3	-0.8
	2.0nm,0.4s						
KPKS				eS	Sg	00 07 04.4	+1.5
	10.0nm,0.7s						
BLB	Baldybastay	6.35	52	Pg	Pg	00 05 46.0	-0.7
	6.8nm,0.3s						
BLB				Lg	Lg	00 07 10.7	
	6.3nm,0.5s						
PDGK	Podgornoye	6.64	61	Pg	Pg	00 05 51.2	-0.9
	0.7nm,0.5s						
PDGK				Lg	Lg	00 07 19.6	
	2.9nm,0.5s						
PDGK	Podgornoye	6.64	61	⇓Lg	Lg	00 07 21.3	
	9.8nm,0.9s						
KAPS	Kapalarasan	7.55	47	eP	Pg	00 06 08.3	-1.3
	2.2nm,0.9s						
KAPS				eS	Sg	00 07 49.0	+1.7
	4.9nm,1.1s						
KAPS	Kapalarasan	7.55	47	Pg	Pg	00 06 08.3	-1.3
	2.2nm,0.9s						
KAPS				Lg	Lg	00 07 49.0	
	4.9nm,1.1s						
OTUK	Ortayu	7.87	4	⇓Lg	Lg	00 07 55.3	
	11nm,0.8s						
MKAR	Makanchi Array	10.09	47	Pn	Pn	00 06 13.9	+3.8
	0.1nm,0.3s,baz=234,slow=14,SNR=4.3						
MKAR				Pg		00 06 57.0	
	0.1nm,0.3s,baz=241,slow=14,SNR=2.7						
MKAR				Lg	Lg	00 09 12.6	
	0.1nm,0.3s,baz=236,slow=26,SNR=2.4						
KURBB	Kurchatov Arra	11.34	23	⇑Lg	Lg	00 09 47.2	
	5.0nm,0.7s						
ZALV	Zalesovo Beam	16.26	29	Pn	Pn	00 07 34.5	+1.0
	0.1nm,0.3s,baz=215,slow=17,SNR=2.5						
FINES	FINESS Array B	34.54	323	P	P	00 10 34.7	+1.2
	1.3nm,0.7s,baz=119,slow=11,SNR=3.8						
TORD	Torodi Ar. Bea	66.26	267	P	P	00 14 33.0	-0.8
	0.1nm,0.5s,baz=63,slow=6.4,SNR=1.7						

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*NEIC **18** 00:05:14.5±0.6, 37°.047N±0°.009×97°.92W±0°.01, h5^{km}±1^{km}, Error ellipse: s-maj=2.9km s-min=1.9km az=44.0*

NEIC 18 00:05:14.3±0.9**, 37°.049N**±0°.007×**97°.92W**±0°.01**, h2**^{km}±7^{km}**, mb_Lg2.2**/4**, ML2.2**/23**, Error ellipse: s-maj=1.6km s-min=1.0km az=96.0, Kansas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN05	Bluff City Nor	0.07	32		Pg	00 05 16.2	+0.4
KAN05				Sg	Sg	00 05 17.4	+0.8
KAN14	Manchester OK	0.10	201	Pg	Pg	00 05 16.7	+0.5
KAN14				Sg	Sg	00 05 18.3	+0.8
KAN17	Caldwell West	0.12	92		Pg	00 05 17.2	+0.5
KAN17				Sg	Sg	00 05 19.1	+0.8
KAN10	Anthony SW Sta	0.16	298		Pg	00 05 17.8	+0.4
KAN10				Sg	Sg	00 05 20.2	+0.7
KAN01	Argonia South	0.16	51	Pg	Pg	00 05 17.9	+0.3
KAN01				Sg	Sg	00 05 20.4	+0.7
KAN08	Anthony NE Sta	0.18	347	Pg	Pg	00 05 18.2	+0.3
KAN08				Sg	Sg	00 05 20.9	+0.7
GC02	Grant County #	0.20	167	Pg	Pg	00 05 18.6	+0.4
GC02				Sg	Sg	00 05 21.6	+0.7
KAN06	Argonia West S	0.20	13		Pg	00 05 18.6	+0.3
KAN06				Sg	Sg	00 05 21.6	+0.6
KAN16	Harper SW Stat	0.21	326	Pg	Pg	00 05 18.7	+0.3
KAN16				Sg	Sg	00 05 21.6	+0.4
KAN09	Caldwell North	0.26	70	Pg	Pg	00 05 19.5	+0.3
KAN09				Sg	Sg	00 05 23.2	+0.6
KAN12	Harper NE Stat	0.26	346	Pg	Pg	00 05 19.6	+0.3
KAN12				Sg	Sg	00 05 23.2	+0.6
KS21	Milan North St	0.31	41		Pg	00 05 20.6	+0.3
KS21					Sg	00 05 25.0	+0.6
OK032	Salt Plains WL	0.34	224		Pg	00 05 21.1	+0.3
OK032				Sg	Sg	00 05 25.9	+0.7
KS20	Mayfield South	0.34	58	Pg	Pg	00 05 21.1	+0.2
KS20				Sg	Sg	00 05 25.9	+0.5
KAN13	South Haven SW	0.35	96	Pg	Pg	00 05 21.3	+0.2
KAN13				Sg	Sg	00 05 26.3	+0.5
CROK	Carrier	0.55	186	Pg	Pg	00 05 24.9	+0.1
BLOK	Blackwell	0.63	117	Pg	Pg	00 05 26.4	0.0
BLOK				Sg	Sg	00 05 35.0	+0.3
U32A	Winter Ranch,	1.10	233	Pg	Pg	00 05 34.8	-0.5
U32A				Sg	Sg	00 05 49.5	-0.1
T35A	Sooner Cattle	1.13	96	Pg	Pg	00 05 35.3	-0.7
T35A				Sg	Sg	00 05 50.8	0.0
QUOK	Quay	1.31	132	Pn	Pg	00 05 38.2	-1.2
OK031	S. Brethren Rd	1.40	141	Pn	Pn	00 05 39.7	-1.2
BCOK	Bluff Creek, N	1.41	170	Pn	Pn	00 05 40.5	-0.5
OK030	Cody Creek RV	1.45	140	Pn	Pn	00 05 40.7	-0.8
R32A	Long Quarter,	1.51	336	Pn	Pn	00 05 42.2	-0.3
OKCSW	OKLAHOMA CITY	1.69	167	Pn	Pn	00 05 44.7	-0.2
FNO	Franklin	1.84	167	Pn	Pn	00 05 46.9	0.0
KSU1	Kansas State U	2.29	26	Pn	Pn	00 05 53.3	+0.1
X37A	Clayton	3.21	139	Pn	Pn	00 06 05.0	-0.8
HHAR	Hobbs	3.29	102	IAmb_Lg		00 07 00.0	
	comp=Z,8.1nm,1.2s						
WHAR	Wooly Hollow	4.88	109	Pn	Pn	00 06 28.0	-0.8

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*ATH **18** 00:11:18.6, 38°.46N×20°.47E, h10^{km}±1^{km}, ML3.0/17, Error ellipse: s-maj=1.5km s-min=0.5km az=278.0*

*THE **18** 00:11:18.5, 38°.47N×20°.43E, h10^{km}±2^{km}, ML3.5/3, Error ellipse: s-maj=2.2km s-min=0.5km az=106.0*

*BEO **18** 00:11:33.9±1.3, 39°.59N×19°.32E, h0^{km}, ML2.7/7*

ISC 18 00:11:17.7±0.8**, 38°.46N**±0°.02×**20°.46E**±0°.03**, h15**^{km}±5^{km}**, n77,** σ**0^s.66**/100**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FSK	Fiskardo	0.08	93	P	Pg	00 11 20.7	-0.1
FSK				S	Sg	00 11 22.6	-0.2
	52µm,0.2s						
FSK	Fiskardo	0.08	93	P	Pg	00 11 20.7	-0.1
FSK				S	Sg	00 11 22.2	-0.6
FSK				AML	AML	00 11 22.7	
	comp=N,58102µm,0.2s						
FSK				AML	AML	00 11 23.0	
KEF4	Livadi, Kephal	0.21	188	P	Pg	00 11 22.7	+0.2
KEF4				S	Sb	00 11 26.8	0.0
	comp=N,48µm,0.3s						
KEF4	Livadi, Kephal	0.21	188	P	Pg	00 11 22.6	+0.2
KEF4				S	Sb	00 11 26.4	-0.4
EVGI	Lefkada island	0.22	44	P	Pb	00 11 23.1	-0.3
EVGI				S	Sb	00 11 27.0	-0.2
EVGI	Lefkada island	0.22	44	P	Pg	00 11 22.9	+0.2
EVGI				S	Sg	00 11 26.4	+0.3
DMLN	Damoulianata-K	0.23	197	P	Pg	00 11 23.2	+0.2
DMLN				S	Sb	00 11 27.7	0.0
DMLN	Damoulianata-K	0.23	197	P	Pg	00 11 23.1	+0.2
DMLN				S	Sg	00 11 26.8	+0.3
DRAG	Dragano-Lefkad	0.24	22	P	Pg	00 11 23.1	+0.1
DRAG				S	Sb	00 11 27.6	-0.2
DRAG	Dragano-Lefkad	0.24	22	P	Pg	00 11 23.0	0.0
DRAG				S	Sb	00 11 27.2	-0.6
LXRA	Lixouri, Kepha	0.26	184	P	Pg	00 11 23.7	+0.3
LXRA				S	Sg	00 11 27.6	+0.4
KEF3	Kipouria, Keph	0.28	199	P	Pg	00 11 23.4	-0.2
KEF3				S	Sg	00 11 27.8	+0.2
	comp=N,12µm,0.2s						
KEF3	Kipouria, Keph	0.28	199	P	Pg	00 11 23.3	-0.2
KEF3				S	Sg	00 11 27.7	+0.2
ARGA	Argostoli. Kep	0.29	177	P	Pb	00 11 24.5	-0.1
VLS	Valsamata	0.30	161	P	Pg	00 11 24.2	+0.1
VLS	Valsamata	0.30	161	P	Pg	00 11 24.1	0.0
VLS				S	Sb	00 11 29.1	-0.6
VLS				AML	AML	00 11 30.5	
	comp=N,8099µm,0.3s						
VLS				AML	AML	00 11 33.2	
	comp=E,7812µm,0.2s						
NYDR	Nydri-Lefkada	0.31	37	P	Pg	00 11 24.5	+0.3
NYDR				S	Sb	00 11 30.0	+0.1
NYDR	Nydri-Lefkada	0.31	37	P	Pg	00 11 24.5	+0.3
NYDR				S	Sg	00 11 29.0	+0.3
LKD2	Lefkada island	0.36	25	P	Pb	00 11 25.5	-0.4
LKD2				S	Sg	00 11 30.5	+0.3
LKD2				AML	AML	00 11 32.1	
	comp=N,6764µm,0.5s						
LKD2				AML	AML	00 11 32.9	
	comp=E,5076µm,0.2s						
PSDA	Pessada-Kefalo	0.36	165	P	Pg	00 11 25.3	+0.1
PSDA				S	Sb	00 11 32.2	+0.9
PSDA	Pessada-Kefalo	0.36	165	P	Pg	00 11 25.2	+0.1
PSDA				S	Sb	00 11 31.1	-0.2
TSLK	Tsoukalades, L	0.39	23	P	Pb	00 11 26.2	-0.2
TSLK				S	Sb	00 11 33.1	+0.9
TSLK	Tsoukalades, L	0.39	23	P	Pb	00 11 26.0	-0.3
TSLK				S	Sb	00 11 32.0	-0.3
TSLK				AML	AML	00 11 33.7	
	comp=E,12658µm,0.3s						
TSLK				AML	AML	00 11 36.6	
	comp=N,9096µm,0.5s						
VTN	Vitineika	0.79	134	P	Pn	00 11 34.6	+0.3
VTN	Vitineika	0.79	134	P	Pn	00 11 34.2	-0.1
LTHK	Lithakia	0.81	158	P	Pb	00 11 33.1	-0.4
LTHK				S	Sn	00 11 46.3	0.0
LTHK	Lithakia	0.81	158	P	Pb	00 11 32.9	-0.5
PVO	Paravola	0.85	79	P	Pn	00 11 34.8	-0.4
PVO	Paravola	0.85	79	P	Pn	00 11 34.7	-0.4
PVO				AML	AML	00 11 55.3	
	comp=N,2414µm,0.7s						
PVO				AML	AML	00 11 56.0	
	comp=E,2163µm,0.2s						
RLS	Riolos of Patr	0.89	117	P	Pn	00 11 35.7	+0.1
RLS				AML	AML	00 11 56.3	
	comp=N,1434µm,0.3s						
RLS				AML	AML	00 11 58.6	
	comp=E,1093µm,0.4s						
IGT	Igoumenitsa	1.07	355	P	Pg	00 11 38.7	+0.2
IGT	Igoumenitsa	1.07	355	P	Pg	00 11 38.8	+0.4
IGT				AML	AML	00 11 58.1	
	comp=E,1002µm,0.8s						
IGT				AML	AML	00 11 59.0	
	comp=N,602µm,0.3s						
DRO	Drossia	1.11	117	P	Pg	00 11 39.4	+0.3
DRO				AML	AML	00 12 01.3	
	comp=E,3117µm,0.3s						
DRO				AML	AML	00 12 07.7	
	comp=N,2236µm,0.4s						
EFP	Efpalio	1.13	91	P	Pb	00 11 39.1	+0.1
EFP	Efpalio	1.13	91	P	Pb	00 11 38.9	-0.1
EFP				AML	AML	00 12 02.0	
	comp=E,3939µm,0.8s						
EFP				AML	AML	00 12 02.5	
	comp=N,1412µm,0.5s						
EVR	Evrytania	1.15	66	P	Pg	00 11 39.5	-0.4
EVR	Evrytania	1.15	66	P	Pb	00 11 39.3	0.0
EVR				AML	AML	00 12 02.9	
	comp=E,486µm,0.5s						
EVR				AML	AML	00 12 08.1	
	comp=N,768µm,1.0s						
ANX	Ano Chora	1.15	83	P	Pg	00 11 39.9	-0.1
ANX				AML	AML	00 12 04.2	
	comp=E,1293µm,0.4s						
ANX				AML	AML	00 12 08.2	
	comp=N,1204µm,0.6s						
LAKA	Lakka	1.21	100	P	Pb	00 11 40.3	-0.1
LAKA				AML	AML	00 12 04.1	
	comp=N,3667µm,0.6s						
LAKA				AML	AML	00 12 04.7	
	comp=E,4596µm,0.8s						
JAN	Janina	1.23	14	P	Pg	00 11 42.1	+0.7
JAN				AML	AML	00 12 02.9	
	comp=E,1040µm,0.3s						
JAN				AML	AML	00 12 08.7	
	comp=N,819µm,0.7s						
TRIZ	Trizonia	1.27	94	P	Pb	00 11 41.0	-0.3
KASA	Kassiopi	1.34	342	P	Pg	00 11 43.4	-0.2
KEK	Kerkira	1.35	338	P	Pg	00 11 43.5	-0.2
KLV	Kalavryta, Ach	1.39	107	P	Pb	00 11 43.5	0.0
KLV	Kalavryta, Ach	1.39	107	P	Pb	00 11 43.7	+0.2
MAKR	Makrakomi, Fth	1.42	67	P	Pg	00 11 44.4	-0.6
MAKR				AML	AML	00 12 16.9	
	comp=E,575µm,0.7s						
MAKR				AML	AML	00 12 23.9	
	comp=N,598µm,1.6s						
AGG	Agios Georgios	1.56	69	P	Pb	00 11 46.9	+0.5
GUR	Goura	1.57	109	P	Pb	00 11 46.5	-0.1
GUR	Goura	1.57	109	P	Pb	00 11 46.4	-0.2
GUR				AML	AML	00 12 16.9	
	comp=N,996µm,0.5s						
GUR				AML	AML	00 12 19.9	
	comp=E,850µm,0.4s						
THL	Klokotos Trika	1.64	47	P	Pg	00 11 48.9	-0.2
THL				AML	AML	00 12 16.5	
	comp=N,479µm,0.7s						
THL				AML	AML	00 12 17.3	
	comp=E,606µm,0.6s						
ITM	Ithomi	1.73	137	P	Pb	00 11 49.3	+0.1
ITM				AML	AML	00 12 27.9	
	comp=E,331µm,1.3s						
ITM				AML	AML	00 12 31.8	
	comp=N,476µm,1.2s						
PYL	PYLOS	1.87	147	P	Pn	00 11 49.8	+0.7
OHR	Ohrid	2.66	6	ePn	Pg	00 12 07.8	-0.9
OHR				eSn	Sn	00 12 32.5	+0.5
TIR	Tirane	2.92	351	ePn	Pn	00 12 05.9	+2.3
DRME	Dracevica, Mon	3.84	346	ePn	Pn	00 12 16.1	-0.2
PDG	Podgorica	4.07	347	ePn	Pn	00 12 20.7	+1.3
PDG				eSn	Sn	00 12 55.2	-11
PDG	Podgorica	4.07	347	ePn	Pn	00 12 18.7	-0.7
HCY	Herceg Novi	4.25	340	ePn	Pn	00 12 20.5	-1.4
TREB	Trebinje	4.54	340	ePn	Pn	00 12 25.8	-0.1
TREB	Trebinje	4.54	340	ePn	Pn	00 12 25.8	-0.1
BRY	Bratogost	4.67	342	ePn	Pn	00 12 27.8	0.0
SJES	Sjenica	4.81	356	ePn	Pn	00 12 31.8	+2.1
STON	Ston	4.88	335	ePn	Pn	00 12 30.5	0.0
STON	Ston	4.88	335	ePn	Pn	00 12 29.6	-0.9
UPM	Unac-Piva	4.88	346	ePn	Pn	00 12 32.5	+1.8
RUDO	Rudo	5.21	351	ePn	Pn	00 12 36.2	+1.0
BBLS	Lazići	5.46	352	ePn	Pn	00 12 40.0	+1.5
BBLS	Lazići	5.46	352	ePn	Pn	00 12 39.5	+1.0
DIVS	Divibare	5.64	357	ePn	Pn	00 12 41.3	+0.2
DIVS	Divibare	5.64	357	ePn	Pn	00 12 39.9	-1.2
HAPS	Han Pijesak,Bl	5.73	349	ePn	Pn	00 12 42.7	+0.3
MGRS	Mrkonjic Grad	6.47	338	ePn	Pn	00 12 53.2	+0.8
BLY	Banja Luka	6.74	340	ePn	Pn	00 12 55.9	-0.2
MRAK	Mrakovica	7.06	339	ePn	Pn	00 12 59.8	-0.8
RIY	Rijeka	8.18	329	ePn	Pn	00 13 14.5	-1.3
CRES	Cresnjev	8.24	335	ePn	Pn	00 13 15.1	-1.6
CEY	Cerknica	8.54	330	ePn	Pn	00 13 18.9	-1.9

KRNET 18 00:37:31.2±0.1**, 40°.39N**×**73°.26E, h12**^{km}**, mb2.1, 16C-3D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	Osh	0.38	291	⇑iP	Pg	00 37 38.9	0.0
	baz=91						
OHH				⇑iS	Sg	00 37 44.5	+0.4
	baz=91						
SFK	Sufi-Kurgan	0.42	153	⇑eP	Pg	00 37 39.5	-0.1
	baz=53						
SFK				⇑eS	Sg	00 37 45.5	+0.2
	baz=53						
SALK	Salom-Alik	0.65	41	⇓eP	Pg	00 37 44.2	+0.2

	baz=41						
DRK	Karamyk	1.44	231	⇑iP	Pg	00 37 58.6	-0.3
	baz=31						
DRK				⇑iS	Sg	00 38 18.4	+0.8
	baz=31						
AML	Almayashu	1.77	11	⇑iP	Pb	00 38 04.5	+0.5
	baz=11						
AML				⇑iS	Sg	00 38 28.4	0.0
	baz=11						
BTK	Batken	1.89	261	⇑eP	Pb	00 38 06.5	+0.7
	baz=61						
BTK				⇑iS	Sg	00 38 32.4	+0.2
	baz=61						
TRKS	Terek-Say	1.97	306	⇓iP	Pb	00 38 06.9	-0.2
	baz=5.0						
TRKS				⇓iS	Sb	00 38 32.9	+1.3
	baz=5.0						
UCH	Uchtor	2.07	27	⇑iP	Pg	00 38 10.0	-1.0
	baz=27						
UCH				⇑iS	Sg	00 38 37.4	-0.4
	baz=27						
MNAS	Manas	2.17	345	⇑iP	Pb	00 38 11.1	+0.5
	baz=45						
MNAS				⇑iS	Sg	00 38 40.2	-0.9
	baz=45						
EKS2	Erkin-Say	2.31	10	⇑iP	Pb	00 38 13.0	+0.1
	baz=10.0						
EKS2				⇑iS	Sb	00 38 43.3	+1.9
	baz=10.0						

KRNET 18 00:37:39.8±0.1**, 40°.35N×73°.22E, h13^{km}, mb2.2, 14C-7D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	Osh	0.37	298	⇑iP	Pg	00 37 47.0	-0.4
	baz=98						
OHH				⇑iS	Sg	00 37 52.5	+0.1
	baz=98						
SFK	Sufi-Kurgan	0.40	147	⇓eP	Pg	00 37 47.8	-0.1
	baz=47						
SFK				⇓eS	Sg	00 37 53.4	0.0
	baz=47						
SALK	Salom-Alik	0.70	41	⇓eP	Pg	00 37 53.2	-0.3
	baz=41						
SALK				⇓eS	Sb	00 38 03.4	-0.2
	baz=41						
SALK	Salom-Alik	0.70	41	⇓eS	Pg	00 37 53.3	-0.2
	baz=41						
DRK	Karamyk	1.40	232	⇑iP	Pb	00 38 05.6	-0.3
	baz=32						
DRK				⇑iS	Sg	00 38 25.0	+0.2
	baz=32						
AML	Almayashu	1.81	11	⇑iP	Pb	00 38 13.6	+0.5
	baz=11						
AML				⇑iS	Sg	00 38 38.2	-0.1
	baz=11						
BTK	Batken	1.86	262	⇑iP	Pb	00 38 14.4	+0.7
	baz=62						
BTK				⇑iS	Sg	00 38 39.8	+0.1
	baz=62						
TRKS	Terek-Say	1.97	307	⇑iP	Pb	00 38 15.2	-0.4
	baz=6.0						
TRKS				⇑iS	Sb	00 38 40.8	+0.8
	baz=6.0						
UCH	Uchtor	2.11	27	⇓iP	Pb	00 38 17.9	-0.4
	baz=27						
UCH				⇓iS	Sb	00 38 46.1	+1.5
	baz=27						
MNAS	Manas	2.20	346	⇑iP	Pb	00 38 19.3	-0.3
	baz=46						
MNAS				⇑iS	Sb	00 38 48.5	+1.7
	baz=46						
EKS2	Erkin-Say	2.35	10	⇑iP	Pb	00 38 21.2	-0.8
	baz=10.0						
EKS2				⇑iS	Sb	00 38 51.7	+0.7
	baz=10.0						

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*NIED **18** 00:39:11.2, 40°.23N×142°.31E, h20^{km}, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-0.82; M$_{\theta\theta}$2.04; M$_{\phi\phi}$-1.22; M$_{r\theta}$0.90; M$_{\theta\phi}$-0.12; M$_{\phi r}$-1.26; Fault plane solution: M$_0$2.36000×10^{14} NP1: φ$_s$310.00000°, δ76.00000°, λ-46.00000°. NP2:φ$_s$54.00000°, δ46.00000°, λ-160.00000°.*

JMA 18 00:39:11.1±0.1**, 40°.23N×142°.31E, h20^{km}**±1^{km}**, M3.5, 3C-1D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	Tanohata	0.45	230	P	Pb	00 39 20.2	-0.1
JTH				S	Sb	00 39 27.1	+0.5
JKEN	Kujiedanarisaw	0.46	267	P	Pb	00 39 20.3	-0.2
JKEN				eS	Sb	00 39 26.9	0.0
MIYJ	Miyakonagasawa	0.75	210	⇑P	Pb	00 39 25.1	-0.4
MIYJ				S	Sb	00 39 35.6	+0.3
JKZ	Kuzumaki	0.79	252	⇓P	Pb	00 39 25.8	-0.4
JKZ				eS	Sb	00 39 36.3	-0.2
JARK	Aomorirokkasho	1.06	318	⇑P	Pb	00 39 30.5	-0.2
JARK				S	Sn	00 39 44.6	-0.3
JOM	Ohasama	1.09	226	P	Pn	00 39 30.9	-0.3
JOM				S	Sn	00 39 45.6	-0.1
JTM	Tenmabayashi	1.10	301	⇑P	Pb	00 39 31.4	0.0
JTM				S	Sn	00 39 46.1	+0.2
JAH	Hinai	1.28	269	P	Pb	00 39 34.6	+0.1
JAH				S	Sb	00 39 51.0	+0.4

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*IDC **18** 00:46:36.3±3.4, 18°.73S×169°.25E, h249^{km}±47^{km}, mb3.5/3, mb1 3.5/5, mb1mx3.3/27, mbtmp4.0/5, Error ellipse: s-maj=99.6km s-min=27.4km az=157.0*

*NOU **18** 00:46:39.9, 19°.12S×169°.41E, h225^{km}, ML4.5/10, Vanuatu Islands*

ISC 18 00:46:37.2±1.0**, 19°.07S**±0°.09×**169°.4E**±0°.1**, h246^{km}, n15, σ1^{s}59**/14**, mb3.9**/3**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTV	Rentapao	1.55	325	P	Pn	00 47 17.3	+1.8
DVP	Devils Point	1.74	320	P	Pn	00 47 18.5	+1.5
LIFNC	LIFOU	2.61	229	P	Pn	00 47 26.2	+0.9
MARNC	Mare, Loyalty	2.70	207	P	Pn	00 47 26.6	+0.4
YATNC	Mamie plateau,	3.76	217	P	Pn	00 47 40.5	+2.5
DZM	Mont Dzumac	4.04	222	P	Pn	00 47 42.9	+1.5
	0.5nm,0.3s,baz=59,slow=19,SNR=2.0						
DZM				S	S	00 48 31.8	-0.5
	1.0nm,0.3s,baz=89,slow=23,SNR=1.2						
DZM	Mont Dzumac	4.04	222	P	Pn	00 47 43.2	+1.8
OUENC	Ouen Island, N	4.08	215	P	Pn	00 47 43.8	+2.1
MSVF	Nonsavu	8.36	82	P	Pn	00 48 35.0	-0.2
	0.9nm,0.3s,baz=254,slow=15,SNR=5.1						
STKA	Stephens Creek	28.02	237	P	P	00 52 05.8	0.0
	1.9nm,0.7s,baz=53,slow=11,SNR=5.0						
WRA	Warramunga Arr	32.98	263	P	P	00 52 47.5	-1.9
	0.3nm,0.4s,baz=96,slow=9.2,SNR=6.2						
ASAR	Alice Springs	33.27	256	P	P	00 52 50.5	-1.4
	4.6nm,0.6s,baz=83,slow=9.0,SNR=57						
ASAR				pP	pP	00 53 39.9	0.0
	1.0nm,0.8s,baz=80,slow=9.1,SNR=3.1						
H03S2	Juan Fernandez	96.39	129	T	T	02 47 53.5	
	baz=242,slow=75,SNR=4.9						
H03S1	Juan Fernandez	96.41	129	T	T	02 47 54.6	
	baz=242,slow=75,SNR=5.8						
H03S3	Juan Fernandez	96.41	129	T	T	02 47 53.5	
	baz=242,slow=75,SNR=6.9						

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*BJI **18** 00:59:09.9±0.0, 36°.57N×70°.43E, h199^{km}, mB4.8/9, mb4.4/18*

*MOS **18** 00:59:09.3±0.9, 36°.50N×70°.46E, h202^{km}, mb4.6/28, Error ellipse: s-maj=7.2km s-min=4.3km az=90.7*

*IDC **18** 00:59:10.7±0.5, 36°.44N×70°.40E, h202^{km}±4^{km}, mb3.9/29, mb1 4.0/35, mb1mx3.8/55, mbtmp4.5/35, Error ellipse: s-maj=8.5km s-min=7.7km az=48.0*

*NEIC **18** 00:59:10.9±2.0, 36°.48N±0°.06×70°.40E±0°.08, h202^{km}±5^{km}, mb4.3/71, Error ellipse: s-maj=9.4km s-min=8.4km az=96.0*

*NNC **18** 00:59:13.0±2.1, 37°.02N×70°.38E, h164^{km}±24^{km}, mb4.2, mpv4.9, Error ellipse: s-maj=21.8km s-min=9.8km az=162.0*

ISC 18 00:59:09.8±0.3**, 36°.50N**±0°.03×**70°.47E**±0°.03**, h193^{km}**±3^{km}**, h193^{km}:pP-P, n345, σ1^{s}89**/396**, mb4.3**/79**, 24C-27D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	Kabul	2.28	211	PN	Pn	00 59 51.5	+0.5
KBL	Kabul	2.28	211	P	Pn	00 59 51.6	+0.6
	SNR=208						
KBL				S	Sn	01 00 22.1	-1.0
KBL	Kabul	2.28	211	Pn	Pn	00 59 51.5	+0.5
CHGR	Chuyangaron	2.39	334	Pn	Pn	00 59 52.3	+0.2
GAR	Garm	2.50	357	Pn	Pn	00 59 54.0	+0.8
CEP	Cherat	2.92	156	⇓P	Pn	00 59 59.7	+1.4
DRK	Karamyk	3.15	19	Pn	Pn	01 00 02.4	+1.3
BTK	Batken	3.56	4	PN	Pn	01 00 07.4	+1.5
BTK	Batken	3.56	4		Pn	01 00 07.4	+1.5
CHCP	Chirah Chowk	3.64	140	⇓P	Pn	01 00 08.7	+1.8
NIL	Nilore	3.64	140	PN	Pn	01 00 08.2	+1.3
NIL	Nilore	3.64	140	P	Pn	01 00 08.9	+1.9
NIL	Nilore	3.64	140		Pn	01 00 08.2	+1.3
THW	Thamme Wali	3.84	164	⇓P	Pn	01 00 10.3	+0.9
SARP	Sargodha	4.92	158	⇓P	Pn	01 00 23.1	+0.1
KSH	Kashi	5.28	54	P	Pn	01 00 23.9	-3.8
KSH				S	Sn	01 01 17.3	-12
KSH				smax	smax		
	comp=N,990nm,0.7s						
KSH				smax	smax		
	comp=E,640nm,0.7s						
AML	Almayashu	6.15	23	P	Pn	01 00 39.5	+0.3
	SNR=599						
AML	Almayashu	6.15	23	i P	Pn	01 00 39.5	+0.3
	SNR=1048						
AML	Almayashu	6.15	23	P	Pn	01 00 39.4	+0.2
AML				S	Sn	01 01 47.5	-2.4
DHRM	DHARAMSHALA	6.42	130	eP	Pn	01 00 42.8	+0.2
DHRM				eS	Sn	01 01 53.7	-2.2
DHRM				IAML		01 01 58.3	
	comp=N,652nm,0.5s						
DHRM				IAML		01 01 58.9	
	comp=E,936nm,0.6s						
UCH	Uchtor	6.52	27	P	Pn	01 00 44.5	+0.5
	SNR=199						
KK02	Karatay Array	6.59	0	⇑P	Pn	01 00 43.4	-1.1
	comp=E,21nm,0.3s						
KK02				⇑S	Sn	01 01 49.3	-10
	comp=E,224nm,0.6s						
KKAR	Karatay Array	6.59	0	PN	Pn	01 00 45.0	+0.4
KKAR	Karatay Array	6.59	0	Pn	Pn	01 00 45.0	+0.4
EKS2	Erkin-Say	6.66	21	P	Pn	01 00 46.2	+0.6
	SNR=81						
AAK	Ala-Archa	6.87	26	P	Pn	01 00 48.7	+0.5
	comp=E,23nm,0.3s,baz=193,slow=6.0,SNR=260						
AAK				S	Sn	01 02 04.6	-1.8
	comp=E,21nm,0.3s,baz=10,slow=20,SNR=16						
AAK	Ala-Archa	6.87	26	P	Pn	01 00 49.0	+0.7
	SNR=66						
AAK	Ala-Archa	6.87	26	i P	Pn	01 00 49.0	+0.7
	SNR=145						
AAK	Ala-Archa	6.87	26	c iPN	Pn	01 00 48.8	+0.5
AAK				pmax	pmax		
	comp=Z,79nm,0.5s						
AAK	Ala-Archa	6.87	26	P	Pn	01 00 48.8	+0.5
AAK				S	Sn	01 02 03.5	-2.9
AAK	Ala-Archa	6.87	26	⇓P	Pn	01 00 47.7	-0.6
	comp=Z,28nm,0.4s						
AAK				⇑S	Sn	01 01 59.0	-7.4
	comp=Z,481nm,0.7s						
AAK	Ala-Archa	6.87	26	Pn	Pn	01 00 48.9	+0.6
HRA	Herat	7.04	255	Pn	Pn	01 00 50.3	-0.4
KBK	Karagaybulak	7.05	28	P	Pn	01 00 51.5	+0.8
	SNR=44						
FRU1	Bishkek	7.07	26	PN	Pn	01 00 51.8	+1.0
FRU1	Bishkek	7.07	26	Pn	Pn	01 00 51.8	+1.0
BHK	Bhakra	7.08	134	eP	Pn	01 00 47.8	-3.2
BHK				eS	Sn	01 02 05.6	-5.6
ULHL	Ulahol	7.27	36	P	Pn	01 00 53.7	+0.1
	SNR=16						
CHMS	Chumysh	7.28	26	P	Pn	01 00 54.1	+0.6
	SNR=18						
USP	Ospenovka	7.43	23	P	Pn	01 00 56.0	+0.5
	SNR=86						
TKM2	Tokmak 2	7.53	30	P	Pn	01 00 57.4	+0.5
	SNR=63						
TKM2	Tokmak 2	7.53	30	PN	Pn	01 00 57.2	+0.2
TKM2	Tokmak 2	7.53	30	⇑P	Pn	01 00 56.3	-0.7
	comp=Z,124nm,0.5s						
TKM2				⇓S	Sn	01 02 14.6	-7.4
	comp=Z,151nm,0.8s						
SMLA	Simla	7.73	132	eP	Pn	01 00 59.3	-0.1
SMLA				eS	Sn	01 02 21.2	-5.3
SMLA				IAML		01 02 25.6	
	comp=N,446nm,0.6s						
SMLA				IAML		01 02 28.3	
	comp=E,365nm,0.6s						
TARG	Taragay, Kyrgy	7.73	45		Pn	01 00 59.2	-0.6
MDOK	Medeo	8.36	35	PN	Pn	01 01 08.0	+0.3
MDOK	Medeo	8.36	35	⇓P	Pn	01 01 05.9	-1.8
	comp=E,45nm,1.3s						
MDOK				⇑S	Sn	01 02 35.2	-6.4
KNDC	Almaty	8.36	35	PN	Pn	01 01 08.6	+0.9
KNDC	Almaty	8.36	35	⇑P	Pn	01 01 05.9	-1.8
	comp=E,71nm,0.6s						
KNDC				⇓S	Sn	01 02 34.5	-7.0
	comp=E,63nm,0.7s						
PRZ	Przheval'sk	8.55	43	PN	Pn	01 01 10.4	0.0
PRZ	Przheval'sk	8.55	43		Pn	01 01 10.4	0.0
JASL	Jaisalmer	9.55	178	eP	Pn	01 01 20.7	-2.6
NDI	New Delhi	9.65	142	eP	Pn	01 01 23.7	-0.8
NDI				eP	Pn	01 01 24.0	-0.5
NDI				eS	Sn	01 03 03.9	-8.5
PDGK	Podgornoye	9.71	43	P	Pn	01 01 24.6	-0.8
PDGK	Podgornoye	9.71	43	⇑P	Pn	01 01 24.6	-0.8
	comp=E,11nm,0.7s						
PDGK				⇓S	Sn	01 03 08.2	-5.7
	comp=E,20nm,1.1s						
KUDL	Kundal	9.76	147	eP	Pn	01 01 24.9	-1.1
KUDL				eS	Sn	01 03 06.8	-8.2
AYAN	Aya Nagar	9.77	143	eP	Pn	01 01 25.3	-0.8
AYAN				eS	Sn	01 03 07.9	-7.3
SONA	Sohna	9.94	144	eP	Pn	01 01 27.9	-0.5
SONA				eS	Sn	01 03 11.2	-8.1
GEYT	Alibeck	9.96	282	P	Pn	01 01 26.9	-1.7
	comp=E,1.0nm,0.3s,baz=102,slow=14,SNR=10						
GEYT				S	Sn	01 03 15.0	-4.7
	comp=E,1.8nm,0.3s,baz=76,slow=15,SNR=3.4						
GEYT	Alibeck	9.96	282		Pn	01 01 25.8	-2.8
GYA0	ALIBECK ARRAY	9.96	282	P	Pn	01 01 25.8	-2.8
GYA0				S	Sn	01 03 14.3	-5.4
GYA0B	ALIBECK ARRAY	9.96	282	⇓P	Pn	01 01 25.9	-2.7
GYA0B				⇓S	Sn	01 03 19.8	+0.1
GYA0B	ALIBECK ARRAY	9.96	282		Pn	01 01 25.9	-2.7
AJM	Ajmer	10.60	159	eP	Pn	01 01 36.4	-0.7
OTUK	Ortayu	11.82	6	P	Pn	01 01 51.2	-1.1
OTUK				S	Sn	01 03 56.9	-6.9
OTUK	Ortayu	11.82	6	⇓P	Pn	01 01 49.9	-2.5
	comp=E,19nm,0.7s						
MAKZ	Makanchi	13.40	36	P	Pn	01 02 12.4	0.0
MAKZ	Makanchi	13.40	36	⇓P	Pn	01 02 12.2	-0.2
	comp=E,61nm,0.9s						
MAKZ	Makanchi	13.40	36		Pn	01 02 12.4	0.0
PYUN	Piuthan	13.49	125	eP	Pn	01 02 12.0	-1.8
	comp=E,99nm,0.3s						
MK31	Makanchi Array	13.54	37	c iP	Pn	01 02 14.3	+0.2
MK31	Makanchi Array	13.54	37	⇓P	Pn	01 02 14.0	-0.1
	comp=E,27nm,0.7s,baz=208,slow=31,SNR=112						
MK31	Makanchi Array	13.54	37	Pn	Pn	01 02 14.4	+0.2
MKAR	Makanchi Array	13.54	37	P	Pn	01 02 14.2	0.0
	comp=E,0.6nm,0.3s,baz=213,slow=13,SNR=34						
MKAR				S	S	01 04 48.2	+2.2
	baz=246,slow=18,SNR=1.6						
MKAR	Makanchi Array	13.54	37	P	Pn	01 02 14.3	+0.2
MKAR	Makanchi Array	13.54	37		Pn	01 02 14.3	+0.2
DANN	Dangsing	13.84	122	eP	Pn	01 02 17.7	-0.6
	comp=E,95nm,0.4s						
KOLN	Koldanda	14.11	124	eP	Pn	01 02 20.2	-1.4
	comp=E,46nm,0.4s						
BHPL	Bhopal	14.52	154	eP	Pn	01 02 27.0	+0.6
BHPL				eS	S	01 04 58.2	-11
GKN	Gorkha	14.66	121	eP	Pn	01 02 27.6	-0.7
	comp=E,46nm,0.3s						
AB31	Akbulak array	14.88	332	i P	Pn	01 02 29.1	-1.5
AB31				eS	S	01 05 09.1	-7.4
AB31	Akbulak array	14.88	332	P	Pn	01 02 29.1	-1.5
	comp=E,42nm,0.8s,baz=145,slow=12,SNR=324						
AB31				⇓S	S	01 05 09.1	-7.4
	comp=E,11nm,0.5s,baz=161,slow=22,SNR=7.8						
ABKAR	Akbulak array	14.88	332		Pn	01 02 29.3	-1.3
ABKAR	Akbulak array	14.88	332	Pn	Pn	01 02 28.9	-1.7
WMQ	Urumqi	15.04	56	eP	P	01 02 35.6	+2.1
DMN	Daman	15.23	121	eP	Pn	01 02 35.4	0.0
	comp=E,40nm,0.3s						
KKN	Kakani	15.24	121	eP	Pn	01 02 34.8	-0.6
	comp=E,102nm,0.6s						
KURBB	Kurchatov Arra	15.26	20	P	Pn	01 02 34.8	-0.5
	comp=E,0.4nm,0.3s,baz=210,slow=10,SNR=34						
KURBB				S	S	01 05 24.8	-0.2
	comp=E,0.0nm,0.3s,baz=212,slow=27,SNR=2.7						
KURBB	Kurchatov Arra	15.26	20	P	Pn	01 02 34.4	-0.8
KURBB	Kurchatov Arra	15.26	20	⇓P	Pn	01 02 34.4	-0.8
	comp=E,16nm,0.8s						
KURK	Kurchatov	15.37	20	c iP	Pn	01 02 35.9	-0.7
KURK				pmax	pmax		
	comp=Z,22nm,1.3s						
KURK	Kurchatov	15.37	20	P	Pn	01 02 36.1	-0.4
KURK	Kurchatov	15.37	20	Pn	Pn	01 02 35.3	-1.2
KURK				IAmb	IAmb	01 02 39.6	
	comp=Z,12nm,0.9s						
PKIN	Phulchoki	15.45	121	eP	Pn	01 02 37.4	-0.7
	comp=Z,88nm,0.5s						
PKI	Pulchoki	15.47	121	eP	Pn	01 02 38.3	0.0
	comp=Z,152nm,0.7s						
GUN	Gumba	15.59	119	eP	P	01 02 40.0	0.0
	comp=Z,193nm,1.0s						
JIRN	Jiri	15.96	119	eP	Pn	01 02 44.4	+0.1
	comp=Z,114nm,0.4s						
BANOM	Banah	16.05	233	i P	P	01 02 44.2	-0.5
	SNR=29						
BANOM	Banah	16.05	233	P	P	01 02 44.3	-0.4
	SNR=28						
SHME	Shamm	16.06	234	i P	P	01 02 44.8	0.0
	SNR=12						
SHME	Shamm	16.06	234	P	P	01 02 44.9	+0.1
	SNR=12						
MDH	Madha	16.49	231	i P	P	01 02 48.6	-0.9
	SNR=7.1						
MDH	Madha	16.49	231	P	P	01 02 48.8	-0.8
	SNR=7.1						
BVAR	Borovoye Array	16.52	360	P	Pn	01 02 50.7	+0.3
	comp=Z,5.9nm,0.3s,baz=205,slow=16,SNR=33						
BVAR				S	S	01 05 52.5	+0.2
	comp=Z,1.6nm,0.3s,baz=161,slow=27,SNR=3.6						
MASF	Masafi	16.53	232	P	Pn	01 02 50.9	+0.1
MSFE	Esma-Masafi	16.54	232	i P	Pn	01 02 50.7	-0.2
	SNR=9.5						
BRVK	Borovoye	16.56	360	deP	P	01 02 50.4	+0.4
BRVK				pmax	pmax		
	comp=Z,34nm,0.7s						
BRVK	Borovoye	16.56	360	P	Pn	01 02 50.8	-0.1
BRVK	Borovoye	16.56	360	⇓P	P	01 02 49.3	-0.7
	comp=Z,41nm,0.9s						
BRVK	Borovoye	16.56	360	P	P	01 02 50.4	+0.4
AKTO	Aktyubinsk	16.57	331	P	Pn	01 02 51.0	-0.1
	comp=Z,12nm,0.3s,baz=147,slow=11,SNR=310						
AKTO				S	S	01 05 48.9	-4.4
	comp=Z,0.5nm,0.3s,baz=172,slow=23,SNR=3.5						
AKTO	Aktyubinsk	16.57	331	⇑P	P	01 02 50.4	+0.2
	comp=Z,148nm,0.8s						
AKTO				⇓S	S	01 05 50.0	-3.3
	comp=Z,18nm,0.9s						
RAMN	Ramite	16.68	120	eP	Pn	01 02 52.8	0.0
	comp=Z,67nm,0.5s						
WSAR	Wadi Sarin	16.72	221	P	Pn	01 02 52.9	-0.2
	comp=Z,1.1nm,0.3s,baz=62,slow=11,SNR=17						
WSAR	Wadi Sarin	16.72	221	P	P	01 02 48.8	-3.2
BIDO	Bidbid	16.76	223	P	P	01 02 48.6	-4.0
UOSS	Minazif	16.80	231	i P	P	01 02 53.1	0.0
	SNR=12						
UOSS	Minazif	16.80	231	P	P	01 02 53.0	0.0
UOSS	Minazif	16.80	231	P	P	01 02 52.9	-0.2
UOSS				IAmb	IAmb	01 02 56.7	
	comp=Z,19nm,0.8s						
HATD	Hatta, Dubai	16.94	231	i P	P	01 02 54.4	-0.1
	SNR=8.5						
HATD	Hatta, Dubai	16.94	231	P	Pn	01 02 55.5	-0.1
WBK	Wadi Bani Khal	17.06	219	P	P	01 02 52.3	-3.5
ASHO	Ashiyiah	17.09	230	i P	P	01 02 56.6	+0.5
	SNR=57						
ASHO	Ashiyiah	17.09	230	P	Pn	01 02 56.8	-0.6
	SNR=20						
NAZ	Nazwa, Dubai	17.12	232	P	Pn	01 02 58.1	+0.3
HOQ	Hoqain	17.17	225	P	P	01 02 56.9	-0.1
SMDO	Samad	17.17	222	P	P	01 02 55.4	-1.8
SOHO	SOHO	17.20	228	P	P	01 02 55.7	-1.7
SOHO	SOHO	17.20	228	P	P	01 02 56.8	-0.5
TAPN	Taplejung	17.22	117	eP	Pn	01 02 59.8	+0.5
	comp=Z,76nm,0.8s						
JLN	Jalan Bani Buh	17.23	217	P	Pn	01 02 58.9	-0.2
	SNR=5.2						
ODAN	Odare	17.29	119	eP	Pn	01 03 00.6	+0.5
	comp=Z,68nm,0.6s						
FAQ	Al Faqa, Dubai	17.33	232	P	P	01 02 59.3	+0.5
FAQ	Al Faqa, Dubai	17.33	232	P	Pn	01 02 59.7	-0.6
ASUD	Al Ashush, Dub	17.59	232	i P	P	01 03 01.8	+0.3
	SNR=7.4						
ASUD	Al Ashush, Dub	17.59	232	P	Pn	01 03 03.0	-0.3
	SNR=7.7						
JMDO	Jabal Madar	17.70	221	P	Pn	01 03 04.3	-0.5
ALNE	Al Ain	17.73	230	i P	P	01 03 03.5	+0.4
	SNR=13						
ALNE	Al Ain	17.73	230	P	P	01 03 03.6	+0.4
	SNR=19						
ARQ	Araqi	17.82	226	P	P	01 03 04.4	+0.3
BSY	Bisya	17.89	224	P	Pn	01 03 06.0	-1.0
DGZ	Jazzator, Alta	18.04	38	deP	Pn	01 03 08.3	-0.2
DGZ				pmax	pmax		
	comp=Z,20nm,0.8s						
LSA	Lhasa	18.59	105	P	Pn	01 03 16.3	+0.8
LSA	Lhasa	18.59	105	P	P	01 03 13.4	+0.5
LSA				pmax	pmax		
	comp=Z,9.0nm,0.6s						
LSA	Lhasa	18.59	105	P	P	01 03 13.4	+0.5
LSA				IAmb	IAmb	01 03 18.1	
	comp=Z,8.8nm,0.6s						
JRN	Qarnain Island	19.00	238	P	P	01 03 16.1	-0.8
	SNR=6.6						
GNBR	Gunib	19.06	295	ceP	Pn	01 03 19.2	-1.3
GNBR				pmax	pmax		
	comp=Z,52nm,0.9s						
KHOR	Al-Khor Airpor	19.50	242	P	Pn	01 03 25.3	-0.5
GHWR	Ruwais	19.64	235	P	P	01 03 23.4	-0.4
SHMA	Al-Shehemyia	19.74	243	P	P	01 03 24.1	-0.7
DVE	Vedeno	19.77	297	deP	P	01 03 26.5	+1.4
DVE				pmax	pmax		
	comp=Z,38nm,0.9s						
ZAA0	Zalesovo Array	20.09	25	⇑P	P	01 03 28.8	+0.4
	comp=Z,6.0nm,0.8s						
ZAA0	Zalesovo Array	20.09	25	P	P	01 03 28.8	+0.4
ZALV	Zalesovo Beam	20.09	25	P	P	01 03 28.9	+0.6
	comp=Z,26nm,0.5s,baz=221,slow=11,SNR=144						
ZALV				S	S	01 07 02.4	-0.8
	comp=Z,0.7nm,0.3s,baz=216,slow=16,SNR=2.3						
TRNA	Turayna	20.26	240	P	P	01 03 28.8	-1.6
HYB	Hyderabad	20.31	157	i P	P	01 03 32.0	+1.0
HYB				esP	sP	01 04 31.0	+3.0
HYB				eS	S	01 07 15.0	+6.9
SLWR	Sila	20.37	238	P	P	01 03 31.4	-0.1
GNI	Garni	20.49	288	P	P	01 03 33.0	+0.1
	comp=Z,14nm,0.9s,baz=25,slow=1.0,SNR=7.3						
GNI	Garni	20.49	288	c iP	Pn	01 03 35.8	-2.2
GNI				pmax	pmax		
	comp=Z,16nm,1.3s						
GNI	Garni	20.49	288	P	P	01 03 34.5	+1.6
GNI				IAmb	IAmb	01 03 36.5	
	comp=Z,16nm,0.9s						
SHL	Shillong	21.29	115	P	P	01 03 41.8	+0.2
SHL				pmax	pmax		
	comp=Z,48nm,1.1s						
SHL	Shillong	21.29	115	P	P	01 03 41.8	+0.2
ZEI	Tsey	21.36	295	eP	P	01 03 44.0	+1.9
ZEI				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SVE	Sverdlovsk	21.38	345	⇓eP	P	01 03 42.5	+0.5
SVE				eS	Sn	01 07 39.5	-11
SVE				pmax	pmax		
	comp=Z,46nm,1.2s						
ARU	Arti	21.50	342	P	P	01 03 43.9	+0.7
	comp=Z,18nm,0.6s,baz=160,slow=7.3,SNR=83						
ARU				S	S	01 07 35.7	+7.0
	comp=Z,0.4nm,0.3s,baz=110,slow=24,SNR=1.2						
ARU	Arti	21.50	342	c iP	P	01 03 43.7	+0.5
ARU						01 04 23.5	

ARU				S	**S**	**01 07 29.8**	**+1.1**
ARU				pmax	pmax		
	comp=Z,67nm,0.8s						
ARU	**Arti**	**21.50**	**342**	P	**P**	**01 03 43.3**	**+0.1**
NCK	**Nalchik**	**21.69**	**297**	⇑eP	**P**	**01 03 46.3**	**+1.0**
NCK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PYA1	**Pyatigorsk**	**22.14**	**298**	⇓eP	**P**	**01 03 51.8**	**+2.0**
KBZ	**Khabaz**	**22.22**	**297**	P	**P**	**01 03 50.0**	**-0.5**
	comp=Z,2.7nm,0.8s,baz=116,slow=6.6,SNR=6.7						
KBZ				S	**S**	**01 07 44.6**	**+4.0**
	comp=Z,3.2nm,1.1s,baz=90,slow=20,SNR=1.5						
KBZ	**Khabaz**	**22.22**	**297**	⇑eP	**P**	**01 03 49.7**	**-0.8**
KBZ				pmax	pmax		
	comp=Z,6.0nm,1.4s						
GOF	**Gofitskoye**	**22.38**	**301**	⇑eP	**P**	**01 03 52.1**	**+0.2**
KVAR	**Kislovodsk Arr**	**22.41**	**298**	P	**P**	**01 03 52.6**	**+0.2**
	comp=Z,2.2nm,0.7s,baz=58,slow=19,SNR=1.8						
KVAR				S	S	01 07 58.7	+15
	comp=Z,4.6nm,0.8s,baz=101,slow=16,SNR=1.7						
KIV	**Kislovodsk**	**22.41**	**298**	eP	**P**	**01 03 54.9**	**+2.5**
KIV				eS	**S**	**01 07 47.8**	**+3.9**
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KIV	**Kislovodsk**	**22.41**	**298**	P	**P**	**01 03 51.6**	**-0.8**
KIV				IAmb	IAmb	01 04 17.0	
	comp=Z,11nm,1.0s						
SHAO	**Shalim**	**22.60**	**219**	i P	**P**	**01 03 54.8**	**+0.7**
	SNR=5.7						
BELG	**Belogornoye**	**22.63**	**322**	P	**P**	**01 03 54.5**	**+0.5**
	comp=Z,87nm,0.8s,baz=136,slow=4.9,SNR=42						
BELG				S	**S**	**01 07 46.4**	**-0.5**
	comp=Z,6.4nm,0.8s,baz=127,slow=20,SNR=1.7						
BELG	**Belogornoye**	**22.63**	**322**	deP	**P**	**01 03 54.5**	**+0.5**
BELG				pmax	pmax		
	comp=Z,13nm,0.9s						
DOK	**Doka**	**22.90**	**223**	P	**P**	**01 03 56.8**	**-0.1**
	SNR=19						
DMTO	**DMTO**	**23.20**	**220**	P	**P**	**01 03 59.6**	**0.0**
	SNR=12						
GTA	**Gaotai**	**23.27**	**74**	eP	**P**	**01 04 01.0**	**+0.8**
GTA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
WHFO	**Wadi Hawf**	**23.67**	**223**	P	**P**	**01 04 03.2**	**-0.7**
	SNR=146						
RBK	**Rabkut**	**23.77**	**222**	P	**P**	**01 04 04.4**	**-0.4**
	SNR=6.1						
ABTO	**Aybut**	**24.39**	**223**	P	**P**	**01 04 09.9**	**-0.5**
	SNR=16						
RAYN	**Ar Rayn**	**25.11**	**246**	i P	**P**	**01 04 16.8**	**-0.1**
	SNR=8.4						
RAYN	**Ar Rayn**	**25.11**	**246**	P	**P**	**01 04 16.6**	**-0.4**
RAYN				pmax	pmax		
	comp=Z,17nm,1.1s						
RAYN	**Ar Rayn**	**25.11**	**246**	P	**P**	**01 04 16.6**	**-0.4**
RAYN				IAmb	IAmb	01 04 18.2	
	comp=Z,17nm,1.1s						
VRH	**Novokhopyorsk**	**25.21**	**315**	eP	**P**	**01 04 16.7**	**-0.7**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KIRV	**Kirov**	**26.06**	**335**	P	**P**	**01 04 26.0**	**+1.0**
	comp=Z,26nm,0.5s,baz=124,slow=3.6,SNR=6.8						
KIRV	**Kirov**	**26.06**	**335**	d iP	**P**	**01 04 25.8**	**+0.8**
ANN	**Anapa**	**26.26**	**299**	P	**P**	**01 04 28.2**	**+1.2**
ANN				pmax	pmax		
	comp=Z,18nm,0.8s						
VORD	**Divnogorie**	**26.53**	**313**	eP	**P**	**01 04 28.5**	**-0.8**
VORD				pmax	pmax		
	comp=Z,6.0nm,1.2s						
VSR	**Storozhevoye**	**26.69**	**313**	eP	**P**	**01 04 29.8**	**-1.0**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.6s						
LZH	**Lanzhou**	**26.83**	**81**	eP	**P**	**01 04 27.4**	**-5.0**
LZH				pP	P	01 04 31.1	-1.3
LZH				pmax	pmax		
	comp=Z,19nm,1.3s						
LPSR	**Galich'ya Gora**	**27.36**	**316**	eP	**P**	**01 04 36.3**	**-0.4**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SONM	**Songino Array**	**28.68**	**55**	P	**P**	**01 04 50.9**	**+2.2**
	comp=Z,0.9nm,0.9s,baz=249,slow=8.5,SNR=5.2						
MMAI	**Mount Meron Ar**	**28.93**	**274**	P	**P**	**01 04 51.8**	**+0.9**
	comp=Z,0.6nm,0.6s,baz=93,slow=15,SNR=1.3						
MMAI				PcP	**PcP**	**01 07 55.0**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=90,slow=6.7,SNR=4.2						
PRGR	**Permogore**	**29.60**	**336**	eP	**P**	**01 04 56.5**	**+0.1**
PRGR				pmax	pmax		
	comp=Z,8.0nm,0.4s						
OBN	**Obninsk**	**29.66**	**320**	P	**P**	**01 04 57.9**	**+0.9**
	comp=Z,3.6nm,0.3s,baz=67,slow=5.5,SNR=6.1						
OBN	**Obninsk**	**29.66**	**320**	⇑eP	**P**	**01 04 57.2**	**+0.2**
OBN				e		01 06 02.5	
OBN				eS	**S**	**01 09 38.5**	**+0.5**
OBN				pmax	pmax		
	comp=Z,53nm,2.5s						
OBN	**Obninsk**	**29.66**	**320**	P	**P**	**01 04 57.0**	**0.0**
PALK	**Pallekele**	**30.55**	**160**	P	**P**	**01 05 06.3**	**+0.9**
	comp=Z,4.2nm,0.8s,baz=340,slow=12,SNR=4.4						
PALK	**Pallekele**	**30.55**	**160**	P	**P**	**01 05 06.2**	**+0.8**
PALK				IAmb	IAmb	01 05 16.2	
	comp=Z,10nm,1.1s						
CMAR	**Chiang Mai Arr**	**30.83**	**118**	P	**P**	**01 05 08.4**	**+0.7**
	comp=Z,2.6nm,0.8s,baz=300,slow=8.1,SNR=15						
CMAR				pP	**pP**	**01 05 50.2**	**+1.8**
	comp=Z,0.8nm,0.3s,baz=299,slow=9.7,SNR=1.6						
CMAR	**Chiang Mai Arr**	**30.83**	**118**	ceP	**P**	**01 05 09.3**	**+1.6**
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**30.83**	**118**	P	**P**	**01 05 08.1**	**+0.4**
KLMR	**Klimovskoe**	**31.27**	**331**	eP	**P**	**01 05 09.4**	**-1.7**
KLMR				e*PP	**pP**	**01 05 51.6**	**+0.7**
KLMR				e*SP	**sP**	**01 06 14.5**	**+1.3**
KLMR				e		01 06 21.3	
KLMR				pmax	pmax		
	comp=Z,27nm,1.2s						
KLMR	**Klimovskoe**	**31.27**	**331**	eP	**P**	**01 05 09.4**	**-1.7**
KLMR				AMP		01 05 12.2	
	comp=Z,27nm,1.2s						
KLMR				epP	**pP**	**01 05 51.7**	**+0.8**
KLMR				esP	**sP**	**01 06 14.6**	**+1.3**
KLMR				ePP	**PnPn**	**01 06 21.3**	**-0.8**
HHC	**Hu-ho-hao-te**	**32.16**	**70**	eP	**P**	**01 05 21.8**	**+2.5**
HHC				pmax	pmax		
	comp=Z,28nm,1.0s						
HHC				pmax	pmax		
	comp=Z,200nm,5.4s						
ELL	**Elmali**	**32.39**	**283**	P	**P**	**01 05 21.9**	**+0.6**
ELL				pmax	pmax		
	comp=Z,16nm,0.7s						
ELL	**Elmali**	**32.39**	**283**	P	**P**	**01 05 21.9**	**+0.6**
AKASG	**Malin Array Be**	**32.62**	**309**	P	**P**	**01 05 22.9**	**0.0**
	comp=Z,2.9nm,0.5s,baz=82,slow=6.9,SNR=15						
AKASG	**Malin Array Be**	**32.62**	**309**	ceP	**P**	**01 05 23.1**	**+0.1**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.5s						
AKASG	**Malin Array Be**	**32.62**	**309**	P	**P**	**01 05 22.5**	**-0.4**
AKBB	**Malin Array Si**	**32.62**	**309**	⇑eP	**P**	**01 05 23.4**	**+0.4**
AKBB	**Malin Array Si**	**32.62**	**309**	P	**P**	**01 05 23.1**	**+0.1**
AKBB				IAmb	IAmb	01 05 24.0	
	comp=Z,2.8nm,0.7s						
NRIK	**Noril'sk**	**34.20**	**11**	P	**P**	**01 05 38.1**	**+1.7**
	comp=Z,20nm,0.8s,baz=200,slow=5.8,SNR=36						
NRIK	**Noril'sk**	**34.20**	**11**	d iP	**P**	**01 05 37.8**	**+1.3**
NRIK				pmax	pmax		
	comp=Z,21nm,0.9s						
NRIK	**Noril'sk**	**34.20**	**11**	P	**P**	**01 05 37.6**	**+1.2**
MLR	**Muntele Rosu**	**34.41**	**299**	P	**P**	**01 05 41.1**	**+2.4**
MLR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MLR	**Muntele Rosu**	**34.41**	**299**	P	**P**	**01 05 38.2**	**-0.5**
MLR				IAmb	IAmb	01 05 42.0	
	comp=Z,7.8nm,0.9s						
BURAR	**Bucovina Array**	**34.93**	**303**	P	**P**	**01 05 43.0**	**-0.1**
BURAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BURAR	**Bucovina Array**	**34.93**	**303**	P	**P**	**01 05 44.0**	**+0.9**
BUR08	**Bucovina Ar. S**	**34.94**	**303**	P	**P**	**01 05 43.8**	**+0.6**
PABE	**Paberze**	**36.62**	**316**	P	**P**	**01 05 57.6**	**+0.4**
PABE				IAmb	IAmb	01 05 58.9	
	comp=Z,6.8nm,0.6s						
FIA1	**FINESS Array S**	**37.25**	**326**	P	**P**	**01 06 02.0**	**-0.4**
FINES	**FINESS Array B**	**37.25**	**326**	P	**P**	**01 06 03.0**	**+0.6**
	comp=Z,14nm,0.6s,baz=117,slow=9.2,SNR=68						
FINES	**FINESS Array B**	**37.25**	**326**	P	**P**	**01 06 02.5**	**+0.1**
LVZ	**Lovozero**	**37.30**	**339**	P	**P**	**01 06 03.6**	**+0.7**
LVZ				pmax	pmax		
	comp=Z,21nm,0.7s						
LVZ	**Lovozero**	**37.30**	**339**	P	**P**	**01 06 03.6**	**+0.7**
KEV	**Kevo**	**40.65**	**338**	P	**P**	**01 06 31.2**	**+0.7**
KEV				pmax	pmax		
	comp=Z,26nm,1.0s						
KEV	**Kevo**	**40.65**	**338**		**P**	**01 06 31.1**	**+0.7**
ARA0	**ARCESS Array S**	**40.98**	**338**	eP	**P**	**01 06 34.3**	**+1.0**
ARCES	**ARCESS Array B**	**40.98**	**338**	P	**P**	**01 06 34.2**	**+1.0**
	comp=Z,18nm,0.6s,baz=115,slow=7.7,SNR=115						
ARCES	**ARCESS Array B**	**40.98**	**338**	P	**P**	**01 06 33.3**	**0.0**
KTK1	**Kautokeino**	**41.45**	**336**	eP	**P**	**01 06 37.5**	**+0.5**
HAMF	**Hammerfest**	**42.07**	**339**	eP	**P**	**01 06 43.4**	**+1.3**
PSI	**Prapat**	**42.58**	**135**	P	**P**	**01 06 46.9**	**-0.1**
	comp=Z,3.4nm,0.4s,baz=323,slow=8.6,SNR=5.7						
JETT	**Jettan, Norway**	**42.59**	**337**	eP	**P**	**01 06 48.2**	**+1.8**
RPSI	**Rantau Prapat**	**42.66**	**135**	P	**P**	**01 06 46.9**	**-0.6**
TRO	**Tromso**	**43.10**	**336**	eP	**P**	**01 06 50.9**	**+0.6**
MOR8	**Moi Rana**	**43.61**	**331**	eP	**P**	**01 06 54.5**	**0.0**
STEI	**Steigen**	**43.78**	**333**	eP	**P**	**01 06 56.7**	**+0.9**
NC602	**NORSAR Array S**	**43.94**	**323**	eP	**P**	**01 06 57.2**	**+0.1**
NORES	**NORESS Array B**	**43.94**	**323**	P	**P**	**01 06 57.1**	**0.0**
NC303	**NORSAR Array S**	**44.07**	**323**	P	**P**	**01 06 58.3**	**+0.1**
NB201	**NORSAR Array S**	**44.09**	**323**	P	**P**	**01 06 58.6**	**+0.2**
NB201				IAmb	IAmb	01 06 59.6	
	comp=Z,5.3nm,0.5s						
NB2	**NORSAR Subarra**	**44.12**	**323**	P	**P**	**01 06 58.6**	**-0.1**
	comp=Z,5.0nm,0.5s,baz=98,slow=7.9						
NOA	**NORSAR Array B**	**44.12**	**323**	P	**P**	**01 06 58.0**	**-0.7**
	comp=Z,2.5nm,0.6s,baz=98,slow=7.8,SNR=34						
NOA				pP	**pP**	**01 07 41.1**	**+0.6**
	comp=Z,1.8nm,0.6s,baz=96,slow=8.3,SNR=3.9						
KONS	**Konsvik**	**44.21**	**331**	eP	**P**	**01 06 59.8**	**+0.6**
STOK	**Stokkvaagen**	**44.21**	**331**	i P	**P**	**01 06 59.2**	**0.0**
OSL	**Oslo**	**44.27**	**321**	eP	**P**	**01 06 59.8**	**0.0**
NSS	**Namsos**	**44.27**	**328**	eP	**P**	**01 07 00.1**	**+0.3**
NC204	**NORSAR Array S**	**44.37**	**323**	P	**P**	**01 07 01.1**	**+0.5**
KONO	**Kongsberg**	**44.82**	**321**	P	**P**	**01 07 04.6**	**+0.5**
KONO				pmax	pmax		
	comp=Z,18nm,1.1s						
KONO	**Kongsberg**	**44.82**	**321**	eP	**P**	**01 07 04.4**	**+0.2**
KONO	**Kongsberg**	**44.82**	**321**	P	**P**	**01 07 04.6**	**+0.5**
KONO				IAmb	IAmb	01 07 21.4	
	comp=Z,18nm,1.1s						
TBLU	**Trondheim**	**44.83**	**326**	eP	**P**	**01 07 04.0**	**-0.1**
HOPEN	**Hopen**	**44.90**	**346**	eP	**P**	**01 07 05.8**	**+1.3**
BJO1	**Bjornoya**	**45.14**	**343**	eP	**P**	**01 07 07.6**	**+1.1**
DOMB	**Dombas**	**45.25**	**324**	eP	**P**	**01 07 08.5**	**+1.0**
KLR	**Kul'dur**	**45.48**	**54**	P	**P**	**01 07 11.2**	**+1.7**
	comp=Z,2.3nm,0.8s,baz=284,slow=7.4,SNR=4.1						
SKAR	**Skarslia**	**45.52**	**322**	eP	**P**	**01 07 10.4**	**+0.7**
TIXI	**Tiksi**	**45.93**	**22**	d iP	**P**	**01 07 13.3**	**+0.6**
TIXI	**Tiksi**	**45.93**	**22**	P	**P**	**01 07 13.5**	**+0.8**
TIXI				IAmb	IAmb	01 07 14.3	
	comp=Z,15nm,1.0s						
LODK	**Lodwar**	**46.12**	**233**	P	**P**	**01 07 15.7**	**+0.6**
LODK				IAmb	IAmb	01 07 17.0	
	comp=Z,7.5nm,0.8s						
AKN	**Aaknes**	**46.23**	**324**	eP	**P**	**01 07 14.1**	**-1.1**
BER	**Bergen**	**46.98**	**322**	eP	**P**	**01 07 21.0**	**0.0**
SENIN	**Lac Senin/Sane**	**47.23**	**303**	P	**P**	**01 07 24.0**	**+0.6**
SPB2	**Spitsbergen Ar**	**47.39**	**347**	P	**P**	**01 07 25.7**	**+1.8**
SPB2				IAmb	IAmb	01 07 47.9	
	comp=Z,14nm,0.9s						
SPA0	**Spitsbergen Ar**	**47.40**	**347**	eP	**P**	**01 07 25.5**	**+1.5**
SPITS	**Spitsbergen Ar**	**47.40**	**347**	P	**P**	**01 07 25.6**	**+1.5**
SPITS				pmax	pmax		
	comp=Z,14nm,1.0s						
KBS	**Kingsbay**	**48.52**	**347**	P	**P**	**01 07 33.9**	**+1.3**
KBS				pmax	pmax		
	comp=Z,19nm,0.9s						
KBS	**Kingsbay**	**48.52**	**347**	eP	**P**	**01 07 33.6**	**+1.1**
KBS	**Kingsbay**	**48.52**	**347**	P	**P**	**01 07 33.9**	**+1.3**
KBS				IAmb	IAmb	01 07 34.5	
	comp=Z,19nm,0.9s						
KMBO	**Kilima Mbogo**	**48.52**	**227**	P	**P**	**01 07 34.7**	**+1.0**
	comp=Z,6.5nm,0.6s,baz=55,slow=11,SNR=19						
KMBO	**Kilima Mbogo**	**48.52**	**227**	i P	**P**	**01 07 34.5**	**+0.8**
	SNR=10						
KMBO	**Kilima Mbogo**	**48.52**	**227**	P	**P**	**01 07 33.9**	**+0.2**
KMBO				IAmb	IAmb	01 07 35.2	
	comp=Z,7.4nm,0.6s						
KIBK	**Kibwezi**	**49.04**	**225**	P	**P**	**01 07 37.7**	**+0.2**
KIBK				IAmb	IAmb	01 07 39.0	
	comp=Z,9.8nm,0.6s						
MBAR	**Mbarara**	**52.16**	**234**	c iP	**P**	**01 08 00.8**	**-0.2**
MBAR	**Mbarara**	**52.16**	**234**	P	**P**	**01 08 00.8**	**-0.2**
NOR	**Nord**	**53.72**	**350**	eP	**P**	**01 08 12.1**	**+0.9**
DAG	**Danmarks Havn**	**54.61**	**344**	eP	**P**	**01 08 18.6**	**+1.0**
DAG				IAmb	IAmb	01 08 19.2	
	comp=Z,11nm,0.7s						
ESDC	**Sonseca Array**	**57.08**	**298**	P	**P**	**01 08 35.9**	**0.0**
	comp=Z,0.4nm,0.7s,baz=54,slow=7.2,SNR=7.1						
ESDC				pP	**pP**	**01 09 20.6**	**+0.7**
	comp=Z,1.2nm,0.8s,baz=54,slow=6.9,SNR=6.4						
PETK	**Petropavlovsk-**	**60.26**	**44**	PcP	**PcP**	**01 09 40.9**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=305,slow=5.1,SNR=1.1						
SUMG	**Summit**	**60.92**	**341**	P	**P**	**01 09 03.0**	**+0.9**
SUMG				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SUMG	**Summit**	**60.92**	**341**	i P	**P**	**01 09 03.9**	**+1.7**
SUMG				IAmb	IAmb	01 09 04.6	
	comp=Z,7.7nm,0.7s						
SUMG	**Summit**	**60.92**	**341**	P	**P**	**01 09 03.0**	**+0.9**
SUMG				IAmb	IAmb	01 09 04.8	
	comp=Z,9.6nm,1.0s						
NEEM	**North Greenlan**	**60.94**	**348**	eP	**P**	**01 09 03.4**	**+1.3**
NEEM				IAmb	IAmb	01 09 04.0	
	comp=Z,6.8nm,0.9s						
VOI	**Vohitsoka**	**62.25**	**205**	P	**P**	**01 09 11.6**	**+0.3**
TORD	**Torodi Ar. Bea**	**65.29**	**268**	P	**P**	**01 09 29.2**	**-2.0**
	comp=Z,1.9nm,0.6s,baz=49,slow=5.9,SNR=38						
TORD				pP	**pP**	**01 10 18.0**	**+1.3**
	comp=Z,0.9nm,0.6s,baz=47,slow=5.8,SNR=2.1						
TORD	**Torodi Ar. Bea**	**65.29**	**268**	P	**P**	**01 09 28.8**	**-2.5**
SOEI	**Soe**	**68.32**	**121**	P	P	01 09 58.4	+8.0
KOWA	**Kowa**	**69.14**	**273**	P	**P**	**01 09 53.5**	**-2.0**
KOWA				IAmb	IAmb	01 09 54.9	
	comp=Z,2.4nm,0.6s						
TOLK	**Toolik Lake Re**	**71.03**	**14**	P	**P**	**01 10 06.8**	**+0.6**
TOLK				IAmb	IAmb	01 10 08.3	
	comp=Z,8.6nm,0.7s						
A36M	**Sachs Harbour**	**71.24**	**5**	P	**P**	**01 10 07.7**	**+0.4**
A36M				IAmb	IAmb	01 10 09.4	
	comp=Z,5.7nm,0.8s						
BMAR	**Burnt Mountain**	**73.04**	**13**	P	**P**	**01 10 19.1**	**+1.0**
J20K	**Nowinta River**	**73.67**	**19**	P	**P**	**01 10 22.4**	**+0.6**
MLY	**Manley**	**73.80**	**17**	P	**P**	**01 10 23.7**	**+1.1**
INK	**Inuvik**	**73.97**	**9**	P	**P**	**01 10 24.6**	**+1.1**
	comp=Z,2.3nm,0.4s,baz=346,slow=5.5,SNR=31						
INK				pP	**pP**	**01 11 12.3**	**+2.1**
	comp=Z,1.5nm,0.6s,baz=343,slow=5.0,SNR=2.5						
INK				sP	**sP**	**01 11 34.3**	**+3.1**
	comp=Z,4.7nm,1.2s,baz=284,slow=6.1,SNR=2.6						
INK	**Inuvik**	**73.97**	**9**	P	**P**	**01 10 24.5**	**+1.1**
DBIC	**Dimbokro**	**74.28**	**267**	P	**P**	**01 10 25.9**	**-0.2**
	comp=Z,1.0nm,0.4s,baz=73,slow=5.7,SNR=1.5						
DBIC	**Dimbokro**	**74.28**	**267**	P	**P**	**01 10 25.1**	**-1.0**
DBIC				IAmb	IAmb	01 10 45.8	
	comp=Z,5.1nm,1.1s						
K20K	**Telida**	**74.35**	**19**	P	**P**	**01 10 27.1**	**+1.4**
LBTB	**Lobatse**	**74.40**	**222**	P	**P**	**01 10 26.9**	**+0.3**
LBTB				pmax	pmax		
	comp=Z,12nm,0.8s						
LBTB	**Lobatse**	**74.40**	**222**	P	**P**	**01 10 26.9**	**+0.3**
MDM	**Murphy Dome**	**74.44**	**16**	P	**P**	**01 10 27.8**	**+1.6**
POKR	**Poker Plat Res**	**74.48**	**16**	P	**P**	**01 10 28.2**	**+1.8**
POKR				IAmb	IAmb	01 10 52.6	
	comp=Z,3.1nm,0.8s						
BPAW	**Bear Paw Mtn.**	**74.52**	**18**	P	**P**	**01 10 27.4**	**+0.7**
NEA2	**Nenana**	**74.56**	**17**	P	**P**	**01 10 27.6**	**+0.7**
TSUM	**Tsumeb**	**74.58**	**231**	P	**P**	**01 10 27.1**	**-0.7**
TSUM				IAmb	IAmb	01 10 28.5	
	comp=Z,8.4nm,1.1s						
CCB	**Clear Creek Bu**	**74.80**	**16**	P	**P**	**01 10 29.0**	**+0.7**
BWN	**Browne**	**74.83**	**17**	P	**P**	**01 10 30.6**	**+2.2**
BWN				IAmb	IAmb	01 10 43.2	
	comp=Z,11nm,1.1s						
ILAR	**Eielson Array**	**74.89**	**16**	P	**P**	**01 10 29.0**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=312,slow=5.2,SNR=9.5						
ILAR				pP	**pP**	**01 11 17.4**	**+1.5**
	comp=Z,0.4nm,0.7s,baz=319,slow=3.9,SNR=3.4						
ILAR	**Eielson Array**	**74.89**	**16**	P	**P**	**01 10 29.2**	**+0.3**
ILAR	**Eielson Array**	**74.89**	**16**	P	**P**	**01 10 29.1**	**+0.3**
KTH	**Kantishna Hill**	**75.00**	**18**	P	**P**	**01 10 29.6**	**+0.1**
KTH				IAmb	IAmb	01 10 34.2	
	comp=Z,4.1nm,1.0s						
PPLA	**Purkeypile**	**75.22**	**19**	P	**P**	**01 10 31.4**	**+0.5**
PPLA				IAmb	IAmb	01 10 43.9	
	comp=Z,4.9nm,1.2s						
MCK	**McKinley**	**75.32**	**17**	P	**P**	**01 10 31.1**	**-0.3**
MCK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MCK	**McKinley**	**75.32**	**17**	P	**P**	**01 10 31.1**	**-0.3**
KNRA	**Kununurra**	**75.58**	**122**	P	**P**	**01 10 33.5**	**+0.1**
SKT	**Skwentna**	**76.16**	**19**	P	**P**	**01 10 36.5**	**+0.4**
SKT				IAmb	IAmb	01 10 38.0	
	comp=Z,5.4nm,1.0s						
SCRK	**Sand Creek**	**76.20**	**15**	P	**P**	**01 10 36.5**	**0.0**
DHY	**Denali Highway**	**76.25**	**17**	P	**P**	**01 10 38.1**	**+1.3**
DHY				IAmb	IAmb	01 10 45.5	
	comp=Z,4.1nm,1.0s						
L27K	**Beaver Creek,**	**77.46**	**14**	P	**P**	**01 10 43.3**	**-0.1**
BCAR	**Beaver Creek A**	**77.47**	**14**	P	**P**	**01 10 43.5**	**+0.1**
BOSA	**Boshof**	**77.47**	**220**	P	**P**	**01 10 43.5**	**-0.4**
	comp=Z,3.8nm,0.5s,baz=17,slow=4.0,SNR=24						
BOSA	**Boshof**	**77.47**	**220**	P	**P**	**01 10 43.2**	**-0.7**
M27K	**Edge Creek, AK**	**78.09**	**15**	P	**P**	**01 10 47.8**	**+0.8**
M27K				IAmb	IAmb	01 10 56.8	
	comp=Z,4.6nm,1.1s						
CTGM	**Chitina Glacie**	**79.46**	**15**	P	**P**	**01 10 54.9**	**+0.5**
CTGM				IAmb	IAmb	01 11 22.4	
	comp=Z,6.8nm,1.2s						
ISLE	**Juniper Island**	**79.57**	**16**	P	**P**	**01 10 54.4**	**-0.6**
ISLE				IAmb	IAmb	01 10 57.6	
	comp=Z,16nm,1.1s						
WHY	**Whitehorse**	**80.98**	**12**	P	**P**	**01 11 02.6**	**+0.1**
WHY				IAmb	IAmb	01 11 22.6	
	comp=Z,6.4nm,1.1s						
YKA	**Yellowknife Ar**	**81.26**	**2**	P	**P**	**01 11 04.4**	**+0.6**
	comp=Z,0.8nm,0.7s,baz=349,slow=5.3,SNR=1.5						
YKA				pP	**pP**	**01 11 53.0**	**+1.7**
	comp=Z,1.4nm,0.7s,baz=230,slow=33,SNR=2.9						
WRA	**Warramunga Arr**	**82.35**	**122**	P	**P**	**01 11 08.6**	**-1.6**
	comp=Z,3.7nm,0.7s,baz=320,slow=4.7,SNR=37						
WRA				pP	**pP**	**01 12 00.0**	**+1.3**
	comp=Z,0.7nm,0.6s,baz=323,slow=5.0,SNR=2.4						
WRA	**Warramunga Arr**	**82.35**	**122**	P	**P**	**01 11 07.7**	**-2.4**
WRAB	**Tennant Creek**	**82.35**	**122**	ceP	**P**	**01 11 08.4**	**-1.8**
WRAB				i *PP	**pP**	**01 11 59.9**	**+1.2**
WRAB				pmax	pmax		
	comp=Z,9.0nm,1.7s						
WB2	**Warramunga Arr**	**82.36**	**122**	P	**P**	**01 11 07.8**	**-2.4**
WB2				IAmb	IAmb	01 11 09.5	
	comp=Z,5.5nm,0.8s						
WR0	**Warramunga Arr**	**82.50**	**121**	P	**P**	**01 11 09.3**	**-1.6**
WR0				IAmb	IAmb	01 11 10.0	
	comp=Z,3.5nm,0.8s						
AS31	**Alice Springs**	**84.60**	**125**	P	**P**	**01 11 19.7**	**-1.9**
ASAR	**Alice Springs**	**84.60**	**125**	P	**P**	**01 11 20.3**	**-1.3**
	comp=Z,3.3nm,0.6s,baz=316,slow=5.2,SNR=40						
ASAR	**Alice Springs**	**84.60**	**125**	P	**P**	**01 11 19.6**	**-2.0**
VNA2	**Neumayer--Watz**	**120.24**	**202**	PKPdf	**PKPdf**	**01 17 35.3**	**-1.3**
VNA1	**Neumayer--Stat**	**120.39**	**202**	PKPdf	**PKPdf**	**01 17 35.9**	**-0.9**
VNA3	**Neumayer Olymp**	**121.05**	**202**	PKPdf	**PKPdf**	**01 17 37.2**	**-0.9**
PLCA	**Paso Flores**	**149.43**	**250**	PKPbc	**PKPbc**	**01 18 35.2**	**-0.6**
	comp=Z,2.2nm,0.9s,baz=79,slow=7.1,SNR=2.9						

NOU ***18*** *01:11:09.8, 20.°45S×168.°25E, h0km, MLv4.8/15, Loyalty Islands*

IDC ***18*** *01:11:11.5±1.2, 20.°40S×168.°14E, h0km, mb4.3/8, mb1 4.4/10, mb1mx4.2/35, mbtmp4.2/10, ML4.7/2, MS3.3/7, Ms1 3.2/7, ms1mx3.0/27, Error ellipse: s-maj=44.6km s-min=19.5km az=145.0*

NEIC ***18*** *01:11:12.4±1.8, 20.°57S±0.°02×168.°15E±0.°03, h10km±1km, mb4.4/9, Error ellipse: s-maj=5.0km s-min=2.9km az=116.0*

ISC 18 01:11:11.7±0.6**, 20.°50S**±0.°04×**168.°17E**±0.°05**, h10km, n54,** σ**1.°07**/51**, mb4.3**/12**, MS3.3**/7**, Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIFNC	**LIFOU**	**0.92**	**252**		**Pg**	**01 11 29.1**	**-0.2**
LIFNC				Sg	**Sg**	**01 11 40.5**	**-0.8**
LIFNC	**LIFOU**	**0.92**	**252**	P	**Pg**	**01 11 29.3**	**-0.1**
MARNC	**Mare, Loyalty**	**0.99**	**188**	Pg	**Pg**	**01 11 30.0**	**-0.7**
MARNC				Sg	**Sg**	**01 11 41.8**	**-1.8**
MARNC	**Mare, Loyalty**	**0.99**	**188**	P	**Pg**	**01 11 30.0**	**-0.7**
YATNC	**Mamie plateau,**	**1.96**	**217**	P	**Pn**	**01 11 43.5**	**-1.5**
PINNC	**Pines Island,**	**2.21**	**198**		**Pn**	**01 11 49.1**	**+0.7**
DZM	**Mont Dzumac**	**2.25**	**226**	Pn	**Pn**	**01 11 49.0**	**-0.1**
	27nm,0.3s,baz=116,slow=9.6,SNR=763						
DZM				Sn	**Sn**	**01 12 16.3**	**-0.6**
	34nm,0.3s,baz=304,slow=21,SNR=6.8						
DZM				LR	LR	01 12 37.6	
	comp=Z,377nm,18.3s,baz=22,slow=38						
DZM	**Mont Dzumac**	**2.25**	**226**	ePn	**Pn**	**01 11 49.0**	**-0.1**
	126nm,0.2s						
DZM				eSn	**Sn**	**01 12 13.6**	**-3.3**
	330nm,0.2s						
DZM	**Mont Dzumac**	**2.25**	**226**		**Pn**	**01 11 48.8**	**-0.3**
DZM	**Mont Dzumac**	**2.25**	**226**	P	**Pn**	**01 11 48.9**	**-0.1**
OUENC	**Ouen Island, N**	**2.28**	**213**		**Pn**	**01 11 49.8**	**+0.4**
OUENC	**Ouen Island, N**	**2.28**	**213**	P	**Pn**	**01 11 49.9**	**+0.5**
NOUC	**Port Laguerre**	**2.36**	**227**	P	**Pn**	**01 11 51.1**	**+0.5**
ONTNC	**Ouen Toro**	**2.41**	**221**		**Pn**	**01 11 51.4**	**+0.2**
ONTNC	**Ouen Toro**	**2.41**	**221**	P	**Pn**	**01 11 52.1**	**+0.9**
RTV	**Rentapao**	**2.70**	**5**	P	**Pn**	**01 11 53.3**	**-1.9**
DVP	**Devils Point**	**2.76**	**0**	P	Pn	01 11 53.7	-2.3
KOUNC	**Koumac, New Ca**	**3.65**	**268**	P	**Pn**	**01 12 09.2**	**+1.0**
SANVU	**Saraoutou**	**5.11**	**349**		Pn	01 12 24.8	-3.5
SANVU	**Saraoutou**	**5.11**	**349**	P	**Pn**	**01 12 27.6**	**-0.7**
MSVF	**Nonsavu**	**9.73**	**75**	Pn	**Pn**	**01 13 32.9**	**+1.0**
	0.8nm,0.3s,baz=297,slow=23,SNR=2.6						
MSVF	**Nonsavu**	**9.73**	**75**	P	**Pn**	**01 13 32.9**	**+1.0**
HNR	**Honiara**	**13.57**	**323**	LR	LR	01 19 17.5	
	comp=Z,36nm,18.9s,baz=132,slow=36						
STKA	**Stephens Creek**	**26.34**	**239**	P	**P**	**01 16 49.3**	**+1.4**
	2.4nm,0.7s,baz=78,slow=11,SNR=6.1						
STKA				LR	LR	01 26 24.7	
	comp=Z,68nm,19.4s,baz=32,slow=35						
STKA	**Stephens Creek**	**26.34**	**239**	P	**P**	**01 16 48.9**	**+1.0**
BBOO	**Buckleboo**	**31.09**	**240**	P	**P**	**01 17 31.0**	**+0.7**
WR0	**Warramunga Arr**	**31.53**	**265**	P	**P**	**01 17 33.1**	**-1.2**
WR0				IAmb	IAmb	01 17 34.3	
	comp=Z,4.1nm,1.1s						
WB0	**Warramunga Arr**	**31.70**	**265**	P	**P**	**01 17 34.3**	**-1.5**
WB0				IAmb	IAmb	01 17 35.8	
	comp=Z,6.2nm,1.2s						
WB2	**Warramunga Arr**	**31.71**	**265**	P	**P**	**01 17 35.2**	**-0.7**
WB2				IAmb	IAmb	01 17 57.1	
	comp=Z,3.8nm,1.1s						
WRA	**Warramunga Arr**	**31.72**	**265**	P	**P**	**01 17 35.2**	**-0.8**
	comp=Z,1.1nm,0.5s,baz=92,slow=8.4,SNR=32						
WRA				LR	LR	01 29 39.5	
	comp=Z,60nm,20.2s,baz=120,slow=35						
WRA	**Warramunga Arr**	**31.72**	**265**	P	**P**	**01 17 35.2**	**-0.8**
AS31	**Alice Springs**	**31.87**	**258**	P	**P**	**01 17 37.8**	**+0.5**
AS31				IAmb	IAmb	01 17 38.4	
	comp=Z,4.6nm,0.6s						
ASAR	**Alice Springs**	**31.87**	**258**	P	**P**	**01 17 37.5**	**+0.2**
	comp=Z,8.9nm,0.6s,baz=86,slow=9.1,SNR=103						
ASAR				LR	LR	01 30 13.3	
	comp=Z,91nm,18.8s,baz=94,slow=36						
ASAR	**Alice Springs**	**31.87**	**258**	P	**P**	**01 17 37.0**	**-0.3**
TBI	**Tubuai**	**39.30**	**102**	eLR	LR	01 29 37.8	
	comp=Z,89nm,34.2s						
PPT2	**Papeete2**	**39.96**	**93**	eLR	LR	01 30 10.9	
	comp=Z,81nm,27.0s						
PPT	**Papeete**	**39.97**	**93**	LR	LR	01 31 17.7	
	comp=Z,50nm,20.7s,baz=14,slow=30						
BATI	**Baumata**	**44.00**	**277**	LR	LR	01 37 17.6	
	comp=Z,33nm,18.2s,baz=168,slow=36						
TOLI2	**Tolitoli**	**51.11**	**289**	P	**P**	**01 20 14.5**	**-0.5**
USRK	**Ussuriysk Ar.**	**72.40**	**334**	P	**P**	**01 22 37.0**	**-0.9**
	comp=Z,3.3nm,0.7s,baz=126,slow=3.7,SNR=5.0						
USRK	**Ussuriysk Ar.**	**72.40**	**334**	P	**P**	**01 22 37.5**	**-0.5**
CMAR	**Chiang Mai Arr**	**78.11**	**295**	P	**P**	**01 23 12.6**	**+1.2**
	comp=Z,2.0nm,0.3s,baz=150,slow=4.2,SNR=5.0						
CMAR	**Chiang Mai Arr**	**78.11**	**295**	P	**P**	**01 23 12.0**	**+0.6**
SONM	**Songino Array**	**87.63**	**324**	P	**P**	**01 24 00.6**	**+0.3**
	comp=Z,1.0nm,0.7s,baz=149,slow=3.7,SNR=5.8						
SONM	**Songino Array**	**87.63**	**324**	P	**P**	**01 24 00.4**	**+0.1**
SONM				IAmb	IAmb	01 24 01.0	
	comp=Z,1.9nm,0.9s						
NVAR	**Mina Array Bea**	**90.38**	**49**	P	**P**	**01 24 13.5**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=226,slow=8.6,SNR=3.0						

ILAR	Eielson Array	91.73	18	P	P	01 24 18.2	-0.8
	comp=Z,0.5nm,1.0s,baz=243,slow=4.7,SNR=4.4						
ILAR	Eielson Array	91.73	18	P	P	01 24 19.1	+0.1
ARCES	ARCESS Array B	126.02	345	PKP	PKPdf	01 30 13.4	-0.1
	comp=Z,1.9nm,0.8s,baz=27,slow=4.2,SNR=3.7						
AKASG	Malin Array Be	135.91	323	PKP	PKPdf	01 30 32.8	+0.2
	comp=Z,0.7nm,0.6s,baz=78,slow=1.2,SNR=1.4						
IDI	Anoyia	144.58	302	PKP	PKPab	01 30 47.9	+0.5
	comp=Z,14nm,1.1s,baz=136,slow=21,SNR=2.3						
GERES	GERESS Array B	145.10	330	PKPbc	PKPbc	01 30 49.1	+0.2
	comp=Z,1.2nm,0.7s,baz=355,slow=5.9,SNR=4.0						
GERES	GERESS Array B	145.10	330	PKPbc	PKPbc	01 30 48.5	-0.4
DAVOX	Davos/Dischmat	148.37	331	PKPbc	PKPdf	01 30 58.9	+3.7
	comp=Z,2.9nm,0.6s,baz=189,slow=2.7,SNR=3.4						

JMA 18 01:14:27.4±0.1, 34°.92N×135°.67E, h366km±2km, M2.9, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JWT	Wachi	0.42	329	P	Pn	01 15 13.3	+0.1
JWT				S	S	01 15 49.3	-0.8
JTNC	Tanabenakahech	1.10	183	P	Pn	01 15 15.2	-0.2
JAI	Aioi	1.51	222	P	Pn	01 15 17.2	-0.1
JMN	Monobe	1.90	232	P	Pn	01 15 19.8	+0.2
JHS	Saijyo	2.10	273	P	Pn	01 15 21.3	+0.4
MAT	Matsushiro	2.62	51	P	Pn	01 15 24.7	-0.1
JRY	Ryogami san	2.86	67	P	Pn	01 15 26.7	0.0
JTO	Tosashimizu	3.15	230	P	Pn	01 15 29.6	+0.3

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*FUNV **18** 01:16:02.3, 8°.47N×71°.38W, h1km, MW3.2*

ISC 18 01:16:02.0±1.3, 8°.57N±0°.03×71°.36W±0°.02, h6km±11km, n28, σ1ˢ38/55, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOCV	Socops	0.58	119	eP	Pg	01 16 13.2	+0.1
SOCV				eS	Sg	01 16 20.8	+0.2
SOCV	Socops	0.58	119	eP	Pg	01 16 13.4	+0.3
SOCV				eS	Sg	01 16 20.7	0.0
SDV	Santo Domingo	0.79	66	eP	Pg	01 16 18.6	+1.5
SDV				eS	Sb	01 16 30.4	+1.1
PAMC	Pamplona, Colo	1.80	227	eP	Pn	01 16 33.9	-0.2
PAMC				eS	Sn	01 16 57.4	-0.1
MCQV	Machiques	1.87	322	eP	Pn	01 16 35.2	+0.6
MCQV				eS	Sb	01 17 00.6	+0.3
OCAC	Ocana	1.96	260	eP	Pn	01 16 35.7	-0.3
OCAC				eS	Sn	01 17 00.4	-0.7
TAMC	Tame, Arauca	2.16	191	eP	Pn	01 16 39.3	+0.6
TAMC				eS	Sn	01 17 07.3	+1.4
ELOV	Elorza	2.43	130	eP	Pb	01 16 45.0	-1.2
ELOV				eS	Sb	01 17 17.4	+1.0
ELOV	Elorza	2.43	130	eP	Pn	01 16 40.8	-1.5
ELOV				eS	Sn	01 17 11.3	-1.1
DABV	Dabajuro	2.44	17	eP	Pn	01 16 44.0	+1.5
DABV				eS	Sb	01 17 15.5	-1.4
SIQV	Siquisique	2.57	36	eP	Pn	01 16 45.8	+1.5
SIQV				eS	Sn	01 17 17.1	+1.1
BARC	Barichara	2.67	223	eP	Pb	01 16 48.4	-1.9
BARC				eS	Sb	01 17 23.1	-0.4
SMLC	San Martn de	2.69	275	eP	Pn	01 16 44.9	-1.0
SMLC				eS	Sn	01 17 20.6	+1.9
BRRC	Barranca, Sant	2.74	238	eP	Pb	01 16 49.4	-2.1
BRRC				eS	Sb	01 17 25.6	+0.1
RUSC	La Rusia	3.16	213	eP	Pn	01 16 53.0	+0.2
RUSC				eS	Sn	01 17 31.4	+0.3
BAUV	El Baul	3.30	83	eP	Pn	01 16 55.2	+0.9
BAUV				eS	Sn	01 17 32.7	-1.3
JACV	Jacura	3.53	45	eP	Pn	01 16 58.4	+0.9
JACV				eS	Sn	01 17 39.5	-0.3
ZARC	Zaragoza, Cauc	3.62	253	eP	Pn	01 16 58.1	-0.7
ZARC				eS	Sn	01 17 44.7	+2.8
SMRC	Santa Marta, M	3.82	313	eP	Pn	01 17 00.1	-1.3
SMRC				eS	Sn	01 17 43.5	-3.2
SPBC	San Pablo de B	3.95	223	eP	Pn	01 17 04.9	+1.5
SPBC				eS	Sn	01 17 52.1	+2.0
BENV	Beln	3.96	69	eP	Pn	01 17 03.8	+0.3
BENV				eS	Sn	01 17 49.3	-1.1
SJCC	San Jacinto, C	3.99	290	eP	Pn	01 17 04.6	+0.7
SJCC				eS	Sn	01 17 52.1	+1.1
UREC	San Jos de Ur	4.21	259	eP	Pn	01 17 10.2	+3.4
UREC				eS	Sn	01 17 56.7	+0.4
MOTC	Monteria, Cord	4.26	273	eP	Pn	01 17 07.8	+0.3
MOTC				eS	Sn	01 17 58.0	+0.5
NORC	Norcasia	4.59	230	eP	Pn	01 17 13.2	+1.2
NORC				eS	Sn	01 18 06.2	+0.5
GUY2C	Guyana, Caldas	5.18	230	eP	Pn	01 17 21.1	+0.5
GUY2C				eS	Sn	01 18 23.7	+2.8
CBOC	Ciudad Bolivar	5.34	240	eP	Pn	01 17 25.2	+2.7
ORTC	Ortega, Tolima	6.03	220	eP	Pn	01 17 31.2	-0.6
ORTC				eS	Sn	01 18 39.6	-1.6

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*IDC **18** 01:16:06.6±1.2, 9°.01N×138°.09E, h0km, mb3.8/9, mb1 4.0/10, mb1mx3.8/53, mbtmp3.9/10, ML4.3/1, MS3.2/4, Ms1 3.2/4, ms1mx2.7/50, Error ellipse: s-maj=45.0km s-min=18.3km az=76.0*

*NEIC **18** 01:16:09.5±0.8, 9°.06N±0°.09×138°.07E±0°.06, h10km±1km, mb4.4/6, Error ellipse: s-maj=17.6km s-min=5.5km az=212.0*

ISC 18 01:16:11.2±0.7, 9°.05N±0°.07×138°.1E±0°.1, h29km, n29, σ0ˢ97/24, mb4.1/12, MS3.2/4, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANA2	Anatahan	10.36	45	Pn	Pn	01 18 38.2	+0.2
JAY	Jayapura	11.78	167	Pn	Pn	01 18 57.5	+0.1
	1.8nm,0.3s,baz=355,slow=13,SNR=6.2						
JAY				Sn	Sn	01 21 07.3	-0.7
	2.0nm,0.3s,baz=285,slow=23,SNR=7.8						
JAY				LR	LR	01 22 35.8	
	comp=Z,99nm,19.5s,baz=349,slow=33						
FAKI	Fak Fak	13.25	206	Pn	Pn	01 19 19.1	+1.6
TNTI	Ternate	13.50	233	Pn	Pn	01 19 23.1	+2.2
PMG	Port Moresby	20.43	154	LR	LR	01 27 50.7	
	comp=Z,119nm,18.7s,baz=255,slow=34						
PMG	Port Moresby	20.43	154	P	P	01 20 46.6	+0.3
PMG				IAmb	IAmb	01 20 48.1	
	comp=Z,10nm,0.6s						
KKM	Kota Kinabalu	21.92	264	P	P	01 21 01.4	-1.2
KKM				IAmb	IAmb	01 21 27.8	
	comp=Z,40nm,1.1s						
TATO	Taipei	22.40	317	P	P	01 21 07.3	-0.2
HNR	Honiara	28.45	130	LR	LR	01 31 47.1	
	comp=Z,54nm,18.6s,baz=314,slow=33						
WRA	Warramunga Arr	29.05	187	P	P	01 22 07.1	-2.1
	comp=Z,0.2nm,0.6s,baz=3.1,slow=9.9,SNR=2.0						
H11S3	WAKE ISLAND Hy	29.25	68	T	T	01 53 18.6	
	baz=255,slow=75,SNR=7.3						
H11S1	WAKE ISLAND Hy	29.27	68	T	T	01 53 20.5	
	baz=255,slow=75,SNR=5.2						
H11S2	WAKE ISLAND Hy	29.27	68	T	T	01 53 20.5	
	baz=255,slow=75,SNR=11						
ASAR	Alice Springs	32.78	187	P	P	01 22 41.7	-0.4
	comp=Z,0.3nm,0.6s,baz=16,slow=11,SNR=4.3						
CMAR	Chiang Mai Arr	39.11	288	P	P	01 23 35.6	-0.8
	comp=Z,1.5nm,0.4s,baz=98,slow=6.0,SNR=8.2						
CMAR				LR	LR	01 39 25.2	
	comp=Z,11nm,20.7s,baz=156,slow=36						
CMAR	Chiang Mai Arr	39.11	288	P	P	01 23 35.3	-1.1
CHTO	Chiang Mai	39.16	289	P	P	01 23 36.2	-0.6
SONM	Songino Array	47.04	331	P	P	01 24 40.2	-0.1
	comp=Z,0.8nm,0.8s,baz=134,slow=8.3,SNR=2.9						
MK31	Makanchi Array	60.35	319	P	P	01 26 17.9	+0.2
MK31				IAmb	IAmb	01 26 18.9	
	comp=Z,1.6nm,0.8s						
MKAR	Makanchi Array	60.35	319	P	P	01 26 18.2	+0.5
	comp=Z,2.2nm,0.7s,baz=103,slow=8.7,SNR=17						
MKAR	Makanchi Array	60.35	319	P	P	01 26 18.0	+0.3
MAKZ	Makanchi	60.56	319	P	P	01 26 19.1	+0.1
MAKZ				IAmb	IAmb	01 26 26.3	
	comp=Z,3.1nm,0.9s						
ZALV	Zalesovo Beam	61.64	327	P	P	01 26 25.8	-0.4
	comp=Z,0.5nm,0.5s,baz=131,slow=4.4,SNR=2.2						
KURBB	Kurchatov Arra	63.96	322	P	P	01 26 41.7	0.0
	comp=Z,1.0nm,0.3s,baz=113,slow=5.8,SNR=1.7						
BVAR	Borovoye Array	69.47	323	P	P	01 27 16.8	0.0
	comp=Z,1.5nm,0.6s,baz=184,slow=10,SNR=5.5						
ILAR	Eielson Array	75.47	25	P	P	01 27 52.4	0.0
	comp=Z,0.3nm,0.7s,baz=235,slow=7.5,SNR=1.9						
ABKAR	Akbulak array	75.48	319	P	P	01 27 52.4	-0.4
BMAR	Burnt Mountain	76.82	23	P	P	01 28 01.9	+1.8
QSPA	South Pole Qui	98.92	180	LR	LR	02 10 01.5	
	comp=Z,275nm,20.6s,baz=71,slow=33						

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*DDA **18** 01:17:46.8, 42°.40N×43°.06E, h2km±2km, MW3.9*

*IDC **18** 01:17:47.6±0.7, 42°.31N×42°.91E, h0km, mb3.6/10, mb1 3.8/16, mb1mx3.6/52, mbtmp3.7/16, ML3.9/5, MS2.8/2, Ms1 2.8/2, ms1mx2.3/48, Error ellipse: s-maj=12.9km s-min=7.1km az=66.0*

*NORS **18** 01:17:47.2±0.0, 42°.43N×43°.04E, h1km, MPVA4.6*

*NEIC **18** 01:17:48.9±2.5, 42°.38N±0°.04×43°.03E±0°.05, h4km±6km, mb4.1/8, Error ellipse: s-maj=7.4km s-min=4.3km az=138.0*

*TIF **18** 01:17:48.0, 42°.37N×43°.03E, h14km*

*MOS **18** 01:17:48.3±1.0, 42°.35N×42°.93E, h6km, mb4.1/4, Error ellipse: s-maj=4.4km s-min=3.4km az=94.6*

*ISK **18** 01:17:48.1, 42°.31N×42°.94E, h5km, ML3.8/17*

*CFUSG **18** 01:17:51.5, 42°.36N×43°.04E, h35km, mb3.1/3, MD3.4/3, Caucasus Magtype MSH 2.2 from 4 stations*

ISC 18 01:17:48.2±1.0, 42°.36N±0°.01×43°.02E±0°.01, h3km±7km, n203, σ1ˢ49/304, mb3.8/14, 19C-4D, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONI	Oni	0.39	54	P	Pg	01 17 55.9	0.0
ONI				S	Sb	01 18 02.7	-1.7
ONI	Oni	0.39	54	PG	Pg	01 17 55.9	0.0
ONI				S	Sb	01 18 02.7	-1.7
ONI	Oni	0.39	54	ePg	Pg	01 17 56.0	+0.2
ONI				eSg	Sb	01 18 02.8	-1.6
ONI	Oni	0.39	54	Pg	Pg	01 17 55.9	0.0
ONI				Sg	Sb	01 18 02.3	-2.1
ABS	Abastumani	0.62	194	P	Pg	01 18 00.9	+0.7
ABS				S	Sb	01 18 10.7	-0.4
ABS	Abastumani	0.62	194	PG	Pg	01 18 00.9	+0.7
ABS				S	Sb	01 18 10.7	-0.4
DIGR	Digorskoe uzhe	0.68	37	ePG	Pg	01 18 01.2	-0.1
DIGR				eS	Sb	01 18 12.4	-0.4
DIGR				pmax	pmax		
	comp=Z,272nm,0.6s						
DIGR	Digorskoe uzhe	0.68	37	ePg	Pg	01 18 01.2	-0.1
DIGR				eSg	Sb	01 18 12.5	-0.4
ZEI	Tsey	0.78	56⇓	iPG	Pg	01 18 03.2	0.0
ZEI				eS	Sb	01 18 14.5	-1.1
ZEI	Tsey	0.78	56	i Pg	Pg	01 18 03.1	0.0
ZEI				eSg	Sb	01 18 14.5	-1.1
CHVG	Ch'k'valeri	0.78	298	P	Pg	01 18 03.5	+0.4
CHVG				S	Sb	01 18 15.3	-0.1
CHVG	Ch'k'valeri	0.78	298	PG	Pg	01 18 03.6	+0.4
CHVG				S	Sb	01 18 15.3	-0.1
EPOS	Posof	0.88	194	i P	Pg	01 18 05.7	+0.5
EPOS				i S	Sb	01 18 18.5	-0.1
EPOS				IAML		01 18 29.0	
	comp=E,740nm,0.6s						
EPOS				IAML		01 18 29.0	
	comp=N,2µm,1.1s						
NEY	Neytrino	0.92	346c	iPG	Pg	01 18 05.8	0.0
NEY				eS	Sn	01 18 20.4	-1.6
NEY				pmax	pmax		
	comp=Z,190nm,0.8s						
NEY	Neytrino	0.92	346	ePg	Pb	01 18 06.2	-0.7
NEY				eSg	Sn	01 18 20.5	-1.6
BRNG	Burnasheti	0.95	140	P	Pb	01 18 07.0	-0.4
BRNG				S	Sn	01 18 21.5	-1.3
AKH	Akhalkalaki	1.01	159	P	Pg	01 18 07.9	+0.2
AKH				S	Sb	01 18 22.3	0.0
AKH	Akhalkalaki	1.01	159	PG	Pg	01 18 07.9	+0.2
AKH				S	Sb	01 18 22.3	0.0
AKH	Akhalkalaki	1.01	159	PG	Pg	01 18 07.8	+0.2
AKH				SG	Sb	01 18 22.6	+0.3
KORR	Kora	1.06	46	ePG	Pb	01 18 08.7	-0.6
KORR				eS	Sn	01 18 26.2	+0.9
KORR				pmax	pmax		
	comp=Z,424nm,0.4s						
KORR	Kora	1.06	46	ePg	Pb	01 18 08.8	-0.4
KORR				eSg	Sn	01 18 24.9	-0.5
GUDG	Gudauri	1.08	84	P	Pb	01 18 09.3	-0.4
GUDG	Gudauri	1.08	84	PG	Pb	01 18 09.3	-0.4
LSNR	Lesken	1.09	33	ePG	Pb	01 18 09.2	-0.6
LSNR				eS	Sn	01 18 27.0	+0.8
LSNR				pmax	pmax		
	comp=Z,308nm,0.4s						
LSNR	Lesken	1.09	33	ePg	Pb	01 18 09.5	-0.3
LSNR				eSg	Sn	01 18 26.4	+0.3
TRLG	Trialeti	1.15	135	P	Pg	01 18 10.3	0.0
TRLG				S	Sn	01 18 26.7	-1.0
TRLG	Trialeti	1.15	135	PG	Pg	01 18 10.3	0.0
TRLG				S	Sn	01 18 26.7	-1.0
MTEO	Meteo	1.16	74	P	Pg	01 18 10.1	-0.5
BGD	Bogdanovka	1.18	158	P	Pn	01 18 11.7	-0.1
BGD				S	Sb	01 18 27.5	+0.4
BGD	Bogdanovka	1.18	158	PG	Pn	01 18 11.7	-0.1
BGD				S	Sb	01 18 27.5	+0.4
NCK	Nalchik	1.21	20	ePG	Pn	01 18 12.4	+0.3
NCK				eS	Sn	01 18 31.6	+2.5
NCK	Nalchik	1.21	20	ePg	Pn	01 18 12.4	+0.3
NCK				eSg	Sn	01 18 31.6	+2.5
PNSH	Pansheti	1.21	76	P	Pg	01 18 02.7	-8.8
PNSH	Pansheti	1.21	76	PG	Pg	01 18 02.7	-8.8
STDR	Stavd-Durt	1.27	37	ePG	Pn	01 18 13.8	+1.0
STDR				eS	Sn	01 18 30.9	+0.5
STDR	Stavd-Durt	1.27	37	ePg	Pn	01 18 13.9	+1.0
STDR				eSg	Sn	01 18 33.6	+3.2
DMNI	Dmanisi	1.35	139	P	Pn	01 18 13.2	-0.9
DMNI				S	Sb	01 18 31.9	-0.1
DMNI	Dmanisi	1.35	139	PG	Pn	01 18 13.2	-0.9
DMNI				S	Sb	01 18 31.9	-0.1
KBZ	Khabaz	1.37	356	Pg	Pg	01 18 14.3	-0.2
	comp=Z,37nm,0.3s,baz=182,slow=6.6,SNR=235						
KBZ				Lg	Lg	01 18 34.7	
	comp=Z,35nm,0.3s,baz=270,slow=22,SNR=7.9						
KBZ	Khabaz	1.37	356c	iPG	Pb	01 18 14.1	-0.4
BCA	Borcka	1.39	229	PN	Pn	01 18 13.9	-0.6
BCA				SN	Sn	01 18 33.3	-0.1
VLKR	Vladikavkaz	1.40	60	i PG	Pg	01 18 16.3	+1.2
VLKR				eS	Sn	01 18 38.4	+4.6
VLKR				pmax	pmax		
	comp=Z,347nm,0.6s						
VLKR	Vladikavkaz	1.40	60	i Pg	Pg	01 18 16.3	+1.2
VLKR				eSg	Sn	01 18 37.6	+3.8
SHA1	Shidzhatmaz	1.40	349	ePG	Pg	01 18 15.3	+0.1
SHA1				eS	Sn	01 18 34.4	+0.3
SHA1	Shidzhatmaz	1.40	349	i Pg	Pg	01 18 15.7	+0.5
SHA1				eSg	Sn	01 18 36.4	+2.3
KZRT	Kazreti	1.42	133	P	Pn	01 18 14.2	-0.7
KZRT				S	Sg	01 18 33.5	-0.1
KZRT	Kazreti	1.42	133	i P	Pn	01 18 13.7	-1.3
KZRT				i S	Sb	01 18 32.6	-1.2
KZRT	Kazreti	1.42	133	PG	Pn	01 18 14.2	-0.7
KZRT				S	Sg	01 18 33.6	-0.1
DBOC	Borcka	1.43	225	i P	Pn	01 18 14.4	-0.7
DBOC				i S	Sb	01 18 34.0	-0.2
DBOC				IAML		01 18 40.0	
	comp=E,1µm,0.8s						
SEAG	Tbilisi Sea	1.46	114	P	Pb	01 18 15.5	-0.5
SEAG				S	Sg	01 18 35.9	+0.9
SEAG	Tbilisi Sea	1.46	114	PG	Pb	01 18 15.5	-0.5
SEAG				S	Sg	01 18 35.9	+0.9
KBTC	Kuba-Taba	1.48	11	ePG	Pg	01 18 16.4	-0.3
KBTC				eS	Sg	01 18 36.0	+0.1
BTNK	Botanikuri	1.49	116	P	Pn	01 18 15.7	-0.2
BTNK				S	Sg	01 18 36.1	+0.1
BTNK	Botanikuri	1.49	116	i P	Pn	01 18 14.9	-1.0
BTNK				i S	Sg	01 18 35.8	-0.2
BTNK				IAML		01 18 38.0	
	comp=E,2µm,0.8s						
BTNK	Botanikuri	1.49	116	PG	Pn	01 18 15.7	-0.2
BTNK				S	Sg	01 18 36.1	+0.1
DAGI	Agillar	1.52	213	i P	Pb	01 18 16.8	-0.4
DAGI				i S	Sg	01 18 37.6	+0.3
DAGI				IAML		01 18 42.0	
	comp=N,432nm,1.0s						
DAGI				IAML		01 18 42.0	
	comp=E,560nm,0.8s						
HOPA	Hopa-Artvin	1.53	231	PN	Pn	01 18 15.8	-0.6
HOPA				SN	Sb	01 18 37.2	+0.3
KMGR	Komgaron	1.53	62	ePG	Pg	01 18 18.1	+0.6
KMGR				eS	Sg	01 18 39.2	+1.8
KMGR	Komgaron	1.53	62	ePg	Pg	01 18 18.6	+1.1
KMGR				eSg	Sg	01 18 41.6	+4.2
KVAR	Kislovodsk Arr	1.61	352	Pg	Pg	01 18 19.2	0.0
	baz=94,slow=22,SNR=58						
KIV	Kislovodsk	1.61	351	ePN	Pg	01 18 18.9	-0.3
KIV				eS	Sg	01 18 39.8	-0.3
KIV	Kislovodsk	1.61	351	PN	Pg	01 18 19.2	0.0
KIV	Kislovodsk	1.61	351		Pg	01 18 18.8	-0.3
BEYR	Belyy Ugol+	1.66	355c	ePN	Pg	01 18 19.5	-0.5
DBAD	Bademkaya	1.67	217	i P	Pb	01 18 19.0	-0.6
DBAD				i S	Sn	01 18 39.6	-0.8
DBAD				IAML		01 18 47.0	
	comp=N,921nm,0.7s						
DBAD				IAML		01 18 47.0	
	comp=E,998nm,1.1s						
PRTR	Priterechnaya	1.67	33c	ePN	Pg	01 18 20.0	-0.3
PRTR				pmax	pmax		
	comp=Z,865nm,1.7s						
PRTR	Priterechnaya	1.67	33	ePg	Pg	01 18 21.2	+1.0
PRTR				eSg	Sg	01 18 46.4	+4.4
PYA1	Pyatigorsk	1.70	2c	iPN	Pg	01 18 20.2	-0.7
PYA1				pmax	pmax		
	comp=Z,11nm,0.6s						
EAK	Akyaka	1.73	165	i P	Pb	01 18 20.0	-0.7
EAK				i S	Sn	01 18 42.1	+0.1
EAK				IAML		01 18 44.0	
	comp=N,724nm,0.7s						
EAK				IAML		01 18 57.0	
	comp=E,896nm,0.7s						
KARS	Kars	1.73	179	PN	Pg	01 18 21.3	-0.1
KARS	Kars	1.73	179	Pn	Pg	01 18 21.3	-0.1
TRKR	Terskaya	1.85	42	ePN	Pg	01 18 23.8	0.0
TRKR				eS	Sg	01 18 51.2	+3.4
TRKR				pmax	pmax		
	comp=Z,633nm,0.8s						
TRKR	Terskaya	1.85	42	ePg	Pg	01 18 23.8	0.0
TRKR				eSg	Sg	01 18 51.5	+3.7
SENK	Senkaya-Erzuru	1.87	196	PN	Pn	01 18 21.6	+0.3
DIGO	Kars	1.96	172	i P	Pb	01 18 24.7	0.0
DIGO				i S	Sn	01 18 47.5	-0.3
DIGO				IAML		01 18 56.0	
	comp=N,734nm,0.8s						
DIGO				IAML		01 19 02.0	
	comp=E,1µm,1.0s						
DGRG	David-gareji	1.98	117	P	Pb	01 18 24.8	-0.1
DGRG				S	Sg	01 18 53.3	+1.5
DGRG	David-gareji	1.98	117	PN	Pb	01 18 24.8	-0.1
DGRG				S	Sg	01 18 53.3	+1.5
CHOM	Cayeli-Rize	2.11	234	PN	Pn	01 18 24.7	+0.3
AHMR	Akhmetovskaya	2.31	322	ePN	Pb	01 18 29.5	-1.0
AHMR				eS	Sg	01 19 00.6	-1.7
DVE	Vedeno	2.37	74c	iPN	Pb	01 18 31.9	+0.3
DVE	Vedeno	2.37	74	ePn	Pb	01 18 32.1	+0.5
DVE				eSn	Sg	01 19 05.7	+1.4
NVNR	Nevinnomyssk	2.38	342	ePN	Pg	01 18 32.7	-1.2
NVNR				eS	Sg	01 19 03.4	-1.3
ALER	Alexandrovskoy	2.40	358	ePN	Pb	01 18 31.0	-1.2
ALER				eS	Sb	01 19 00.8	-1.4
RPOR	Krasnaya Polya	2.42	304	ePN	Pb	01 18 30.4	-2.1
RPOR				eS	Sb	01 19 02.5	-0.3
LGD	Lagodekhi	2.45	101	P	Pb	01 18 31.8	-1.2
LGD				S	Sg	01 19 04.9	-2.2
LGD	Lagodekhi	2.45	101	PN	Pb	01 18 31.8	-1.2
LGD				S	Sg	01 19 04.9	-2.2
VSLR	Vesyoloye	2.46	298	ePN	Pb	01 18 31.6	-1.4
VSLR				eS	Sb	01 19 03.0	-0.7
DDFL	Dedoflistskaro	2.49	111	P	Pg	01 18 35.5	-0.4
DDFL				S	Sg	01 19 10.9	+2.8
DDFL	Dedoflistskaro	2.49	111	PN	Pg	01 18 35.5	-0.4
DDFL				S	Sg	01 19 10.9	+2.8
KOPR	Koprukoy-ERZUR	2.52	201	PN	Pn	01 18 30.9	+0.6
EATA	Eleskirt	2.53	189	i P	Pb	01 18 32.3	-2.1
TASB	TASBURUN-IGDIR	2.54	158	PN	Pn	01 18 32.0	+1.5
KOTA	Agri, Merkez-K	2.56	177	i P	Pb	01 18 34.1	-0.8
GNI	Garni	2.56	149	Pg	Pb	01 18 35.6	+0.6
	comp=E,37nm,0.3s,baz=315,slow=6.5,SNR=262						
GNI				Lg	Lg	01 19 10.1	
	comp=E,16nm,0.3s,baz=52,slow=21,SNR=6.7						
GNI				LR	LR	01 19 47.0	
	comp=E,298nm,20.5s,baz=326,slow=46						
GNI	Garni	2.56	149c	ePN	Pb	01 18 33.5	-1.4
GNI	Garni	2.56	149	PN	Pn	01 18 32.4	+1.6
GNI	Garni	2.56	149	Pn	Pb	01 18 33.5	-1.4
KRIK	Erzurum-spir	2.56	219	i P	Pb	01 18 34.0	-0.9
KRIK				i S	Sb	01 19 08.0	+1.0
KRIK				IAML		01 19 17.0	
	comp=E,107nm,0.9s						
KRIK				IAML		01 19 21.0	
	comp=N,73nm,0.8s						
IGDI	IGDIR	2.61	162	i P	Pb	01 18 34.1	-1.7
IGDI				i S	Sb	01 19 09.3	+1.0
IGDI				IAML		01 19 25.0	
	comp=E,119nm,0.9s						
GUZR	Guzeripl'	2.68	309	ePN	Pb	01 18 34.5	-2.4
GUZR				eS	Sb	01 19 07.8	-2.4
GOF	Gofitskoye	2.70	0c	ePN	Pb	01 18 35.0	-2.1
GOF				pmax	pmax		
	comp=Z,31nm,1.0s						
SOC	Sochi	2.72	298	ePN	Pb	01 18 37.2	-0.2
SOC				e		01 19 12.0	
SOC				pmax	pmax		
	comp=Z,116nm,0.9s						
SOC				MLR	MLR		
	comp=Z,145nm,5.0s						
XNZR	Khunzakh	2.73	85	ePN	Pb	01 18 36.5	-1.3
XNZR				eS	Sb	01 19 09.1	-2.7
ERZM	Erzurum	2.75	208	i P	Pb	01 18 36.4	-1.8
DLMR	Dylym	2.75	74	ePN	Pb	01 18 37.2	-0.9
DLMR				eS	Sb	01 19 11.4	-0.8
AGRB	Hanur-Agry	2.78	180	PN	Pn	01 18 35.0	+1.2
EMRE	Erzurum,Aziziy	2.79	214	i P	Pb	01 18 40.2	+1.4
KTUT	Trabzon	2.80	242	PN	Pn	01 18 34.4	+0.5
UNCR	Uncukul	2.81	81	ePN	Pb	01 18 36.9	-2.2
UNCR				eS	Sb	01 19 12.1	-1.8
LABN	Labinsk	2.83	325	ePN	Pn	01 18 36.1	+1.8
LABN				eS	Sn	01 19 09.7	+0.8
EJDE	Erzurum, Palan	2.84	208	i P	Pb	01 18 40.5	+0.8
DBC	Dubki	2.88	75	ePN	Pb	01 18 38.4	-2.0
DBC				eS	Sb	01 19 14.4	-1.7
KRNR	Karanay	2.91	79	ePN	Pn	01 18 37.6	+2.1
KRNR				eS	Sb	01 19 15.1	-1.7
GNBR	Gunib	2.92	88d	ePN	Pb	01 18 38.5	-2.5
BAYT	Aydıntepe-Bayb	2.92	229	PN	Pn	01 18 36.5	+0.7
ARKR	Arakani	2.95	84⇓	iPN	Pb	01 18 39.1	-2.4
ARKR				eS	Sb	01 19 15.2	-2.7
BAYB	BAYBURT	2.96	226	i P	Pb	01 18 39.6	-2.1
BAYB				i S	Sb	01 19 18.8	+0.6
BAYB				IAML		01 19 29.0	
	comp=E,236nm,0.8s						
BAYB				IAML		01 19 36.0	
	comp=N,152nm,0.9s						
KOPT	Kop Dagi	3.02	220	i P	Pb	01 18 40.2	-2.6
KMKR	Kumukh	3.04	93	ePN	Pb	01 18 41.1	-1.9
KMKR				eS	Sb	01 19 17.4	-3.2
BUJR	Buynaksk	3.05	80	ePN	Pb	01 18 39.9	-3.3
BUJR				eS	Sb	01 19 17.7	-3.2
ECAT	Cat-ERZURUM	3.16	210	i P	Pb	01 18 42.4	-2.7
MLAZ	Malazgirt-MUS	3.23	187	PN	Pn	01 18 41.5	+1.4
GOYR	Goytkh	3.26	307	ePN	Pb	01 18 46.0	-0.7
GOYR				eS	Sn	01 19 22.6	+3.0
MAK	Makhachkala	3.36	78	ePN	Pn	01 18 41.2	-0.4
MAK				e		01 18 50.6	
MAK				eS	Sn	01 19 22.4	+0.4
MAK				e		01 19 32.1	
MAK				e		01 19 40.9	
MAK				pmax	pmax		
	comp=Z,70nm,1.0s						
MAK				smax	smax		
	comp=N,430nm,0.9s						
MAK				smax	smax		
	comp=N,380nm,0.7s						
MAK				MLR	MLR		
	comp=Z,200nm,8.0s						
KARO	Karliova-Bingo	3.39	207	PN	Pn	01 18 43.2	+0.9
VRTB	Varto-Mus	3.41	201	PN	Pn	01 18 43.7	+1.3
URKR	Urkarakh	3.43	92	ePN	Pb	01 18 48.2	-1.5
URKR				eS	Sg	01 19 35.4	-3.0
SGKR	Sergokala	3.44	87	ePN	Pn	01 18 45.3	+2.6
SGKR				eS	Sb	01 19 33.4	+1.5
YEDI	Yedisu-Bingol	3.47	214	PN	Pn	01 18 44.5	+1.2
AKT	Akhty	3.62	102c	ePN	Pn	01 18 47.4	+2.1
SLHN	Bingol, Solhan	3.72	205	i P	Pn	01 18 49.1	+2.3
BNGB	Bingl	3.81	209	PN	Pn	01 18 49.3	+1.4

ERBR	Yeremizino-Bor	3.82	332	ePN	Pn	01 18 48.8	+0.9
ERBR				eS	Sn	01 19 34.6	+1.2
GURO	Guroymak-BITLI	3.88	192	PN	Pn	01 18 50.5	+1.6
GURO	Guroymak-BITLI	3.88	192	Pn	Pn	01 18 51.3	+2.4
BINT	Bingol	3.98	210	PN	Pn	01 18 49.7	-0.5
GL1R	Gelendzhik	4.22	303	ePN	Pn	01 18 52.3	-1.1
GL1R				eS	Sn	01 19 42.3	-0.8
ANN	Anapa	4.74	303	ePN	Pn	01 19 03.6	+3.1
ANN				eS	Sn	01 19 58.1	+2.2
ANN				pmax	pmax		
	comp=Z,30nm,0.9s						
ANN				MLR	MLR		
	comp=Z,176nm,5.0s						
SIRT	Sirnak	4.87	185	Pn	Pn	01 19 03.0	+0.5
SNOP	Sinop	5.81	269	Pn	Pn	01 19 14.6	-0.7
SUDU	Sudak	6.35	296	eP	Pn	01 19 24.2	+1.6
SUDU				i S	Sn	01 20 38.8	+3.2
SUDU				pmax	pmax		
	comp=Z,5.0nm,0.5s						
SUDU				smax	smax		
	comp=N,15nm,0.6s						
SUDU				smax	smax		
	comp=E,4.0nm,0.4s						
SUDU	Sudak	6.35	296	eP	Pn	01 19 24.2	+1.6
SUDU				Pm		01 19 25.7	
	comp=Z,5.0nm,0.5s						
SUDU				i S	Sn	01 20 38.8	+3.2
SUDU				Sm		01 20 40.3	
	comp=N,15nm,0.6s						
SUDU				Sm		01 20 45.0	
	comp=E,4.0nm,0.4s						
ALU	Alushta	6.68	293	eP	Pn	01 19 27.7	+0.5
ALU				eS	Sn	01 20 42.5	-1.3
ALU				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ALU				smax	smax		
	comp=N,30nm,0.4s						
ALU				smax	smax		
	comp=E,13nm,0.4s						
ALU	Alushta	6.68	293	eP	Pn	01 19 27.7	+0.5
ALU				Pm		01 19 30.2	
	comp=Z,10.0nm,0.5s						
ALU				eS	Sn	01 20 42.5	-1.3
ALU				Sm		01 20 50.5	
	comp=N,30nm,0.4s,comp=E,13nm,0.4s						
BZK	Bozkurt	6.71	270	Pn	Pn	01 19 28.2	+0.6
SIM	Simferopol'	6.96	295	ex	x	01 19 52.0	
SIM				eS	Sn	01 20 54.0	+3.4
SIM				Sm		01 20 55.7	
	comp=N,2.0nm,0.4s,comp=E,7.0nm,0.4s						
SEV	Sevastopol'	7.15	291	eP	Pn	01 19 33.8	+0.2
SEV				eS	Sn	01 20 54.9	-0.4
SEV				pmax	pmax		
	comp=Z,5.0nm,0.3s						
SEV				smax	smax		
	comp=N,4.0nm,0.4s						
SEV				smax	smax		
	comp=E,2.0nm,0.4s						
SEV	Sevastopol'	7.15	291	eP	Pn	01 19 33.8	+0.2
SEV				Pm		01 19 42.5	
	comp=Z,5.0nm,0.3s						
SEV				eS	Sn	01 20 54.9	-0.4
SEV				Sm		01 21 00.1	
	comp=N,4.0nm,0.4s,comp=E,2.0nm,0.4s						
BRTR	Keskin Array B	7.56	253	LR	LR	01 22 44.3	
	comp=E,52nm,19.9s,baz=82,slow=40						
BELG	Belogornoye	10.51	16	Pn	Pn	01 20 19.2	-0.5
	comp=E,0.3nm,0.3s,baz=284,slow=1.5,SNR=4.3						
BELG	Belogornoye	10.51	16	⇑eP	Pn	01 20 21.1	+1.4
BELG				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TLCR		10.66	290	⇑P	Pn	01 20 20.6	-1.1
TIRR	Tirgusor	10.84	286	⇑P	Pn	01 20 21.8	-2.4
TIRR	Tirgusor	10.84	286	P	Pn	01 20 21.5	-2.7
TIRR	Tirgusor	10.84	286	Pn	Pn	01 20 21.5	-2.7
CFR	Carcaliu	11.13	290	⇑P	Pn	01 20 27.7	-0.5
HARR	Harsova	11.20	287	⇓P	Pn	01 20 24.6	-4.6
AKASG	Malin Array Be	12.63	316	Pn	Pn	01 20 46.4	-2.2
	comp=Z,0.3nm,0.3s,baz=120,slow=13,SNR=1.8						
MLR	Muntele Rosu	12.70	290	⇑P	Pn	01 20 50.2	+0.4
MLR	Muntele Rosu	12.70	290	Pn	Pn	01 20 49.5	-0.3
	comp=Z,0.2nm,0.3s,baz=126,slow=12,SNR=3.7						
MLR	Muntele Rosu	12.70	290	P	Pn	01 20 50.1	+0.2
MLR	Muntele Rosu	12.70	290	Pn	Pn	01 20 50.0	+0.2
AKTO	Aktyubinsk	13.11	47	Pn	Pn	01 20 54.4	-0.8
	comp=Z,0.5nm,0.3s,baz=234,slow=9.3,SNR=6.8						
BURAR	Bucovina Array	13.64	299	⇑P	Pn	01 20 56.7	-5.9
BURAR	Bucovina Array	13.64	299	Pn	Pn	01 20 59.3	-3.3
ABKAR	Akbulak array	13.65	54	Pn	Pn	01 21 00.1	-2.5
BUR08	Bucovina Ar. S	13.66	299	Pn	Pn	01 21 03.0	+0.1
MNK	Minsk	15.72	326	i P	Pn	01 21 30.6	+0.1
MNK				i S	Sn	01 24 24.1	-0.9
MNK				pmax	pmax		
	comp=N,6.0nm,0.9s						
MNK				pmax	pmax		
	comp=E,1.0nm,0.6s						
MNK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MNK	Minsk	15.72	326	i P	Pn	01 21 30.6	+0.2
	comp=E,1.0nm,0.6s						
MNK				i P	Pn	01 21 30.6	+0.2
	comp=N,6.0nm,0.8s						
MNK				i P	Pn	01 21 30.6	+0.2
	comp=Z,5.0nm,1.0s,baz=134						
MNK				i PP	PnPn	01 21 39.0	+0.3
MNK				i S	Sn	01 24 24.1	-0.9
MNK				i SS	S	01 24 40.4	+0.1
MNK				i LQ	LQ	01 26 07.8	
MNK				i LR	LR	01 27 19.6	
KIRV	Kirov	16.73	12	Pn	Pn	01 21 38.5	-4.9
	comp=Z,0.5nm,0.3s,baz=102,slow=1.2,SNR=5.4						
ITM	Ithomi	17.01	259	Pn	Pn	01 21 47.4	+0.3
ITM				IAmb	IAmb	01 21 53.3	
	comp=Z,15nm,0.9s						
ARU	Arti	17.28	30	P	P	01 21 51.5	-0.3
	comp=Z,0.0nm,0.3s,baz=227,slow=12,SNR=5.0						
ARU	Arti	17.28	30c	iP	P	01 21 52.0	+0.2
ARU				S	Sn	01 25 06.4	+3.7
ARU				pmax	pmax		
	comp=Z,15nm,1.9s						
ARU	Arti	17.28	30	Pn	Pn	01 21 49.1	-1.2
SVE	Sverdlovsk	18.36	32	eP	Pn	01 22 01.4	-2.2
SVE				eS	Sn	01 25 25.4	-3.5
SVE				pmax	pmax		
	comp=Z,13nm,1.1s						
SCTE	Santa Cesarea	18.60	271	P	P	01 22 06.3	-0.2
KLMR	Klimovskoe	18.64	355	eP	Pn	01 22 07.9	+0.9
KLMR				pmax	pmax		
	comp=Z,22nm,1.5s						
KLMR	Klimovskoe	18.64	355	ePn	Pn	01 22 08.0	+0.9
KLMR				AMP		01 22 15.5	
	comp=Z,22nm,1.5s						
BRVK	Borovoye	21.11	50	⇑eP	P	01 22 34.9	+1.1
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
BRVK	Borovoye	21.11	50	P	P	01 22 33.6	-0.2
BRVK				IAmb	IAmb	01 22 48.5	
	comp=Z,4.8nm,0.7s						
BVAR	Borovoye Array	21.16	50	P	P	01 22 34.7	+0.4
	comp=Z,2.0nm,0.7s,baz=228,slow=18,SNR=7.2						
GERES	GERESS Array B	21.43	298	P	P	01 22 37.4	0.0
	comp=Z,0.5nm,0.6s,baz=124,slow=14,SNR=2.0						
FINES	FINESS Array B	21.66	338	P	P	01 22 40.1	+0.5
	comp=Z,2.9nm,0.7s,baz=139,slow=13,SNR=7.0						
FINES	FINESS Array B	21.66	338	P	P	01 22 40.6	+1.0
AAK	Ala-Archa	23.14	79	P	P	01 22 57.1	+1.4
	comp=Z,1.7nm,0.7s,baz=256,slow=11,SNR=6.0						
AAK	Ala-Archa	23.14	79c	eP	P	01 22 57.6	+1.8
AAK				pmax	pmax		
	comp=Z,16nm,1.2s						
AAK	Ala-Archa	23.14	79	P	P	01 22 53.2	-2.6
AAK				IAmb	IAmb	01 22 59.2	
	comp=Z,7.5nm,1.2s						
DAVOX	Davos/Dischmat	23.91	292	P	P	01 23 04.0	+0.6
	comp=Z,2.0nm,0.8s,baz=172,slow=10,SNR=3.6						
DAVOX	Davos/Dischmat	23.91	292	P	P	01 23 04.0	+0.6
HFS	Hagfors	25.23	325	P	P	01 23 15.7	+0.6
	comp=Z,3.2nm,0.8s,baz=169,slow=24,SNR=2.1						
KURBB	Kurchatov Arra	25.60	59	P	P	01 23 20.0	+1.5
	comp=Z,0.9nm,0.3s,baz=266,slow=11,SNR=2.1						
KURK	Kurchatov	25.67	59	⇑eP	P	01 23 20.0	+0.9
KURK				pmax	pmax		
	comp=Z,7.0nm,2.3s						
SENIN	Lac Senin/Sane	25.71	291	P	P	01 23 19.9	+0.1
MAKZ	Makanchi	27.90	67	P	P	01 23 40.1	+0.8
MAKZ				pmax	pmax		
	comp=Z,4.0nm,1.1s						
MAKZ	Makanchi	27.90	67	P	P	01 23 40.1	+0.8
MAKZ				IAmb	IAmb	01 24 05.5	
	comp=Z,4.0nm,1.1s						
MK31	Makanchi Array	28.11	67	P	P	01 23 42.1	+0.9
MK31				pmax	pmax		
	comp=Z,2.0nm,1.2s						
MK31	Makanchi Array	28.11	67	P	P	01 23 42.1	+0.9
MKAR	Makanchi Array	28.11	67	P	P	01 23 42.2	+1.0
	comp=Z,0.4nm,0.5s,baz=269,slow=9.3,SNR=6.9						
MKAR	Makanchi Array	28.11	67	P	P	01 23 41.9	+0.7
MKAR	Makanchi Array	28.11	67	P	P	01 23 41.9	+0.7
SONM	Songino Array	43.96	60	P	P	01 25 55.1	-1.4
	comp=Z,0.4nm,0.6s,baz=271,slow=10,SNR=2.3						
TORD	Torodi Ar. Bea	46.06	243	P	P	01 26 12.3	-1.1
	comp=Z,0.5nm,0.9s,baz=44,slow=7.9,SNR=3.0						
BMAR	Burnt Mountain	70.39	3	P	P	01 29 04.7	+1.6

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*BEO **18** 01:19:23.3±6.6, 37°.86N×20°.09E, h101^{km}±6^{km}, ML2.9/4*
*ATH **18** 01:19:26.8, 38°.53N×20°.54E, h14^{km}, ML2.9/19, Error ellipse: s-maj=1.5km s-min=0.6km az=286.0*
*THE **18** 01:19:26.5, 38°.54N×20°.54E, h16^{km}, ML3.5/9, Error ellipse: s-maj=1.2km s-min=0.3km az=287.0*
ISC 18 01:19:26.5±0.8**, 38°.53N**±0°.02×**20°.54E**±0°.03**, h16**^{km}±4^{km}**, n57, σ0ˢ.87**/83**, 3C, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FSK	Fiskardo	0.07	166	P	Pg	01 19 29.5	0.0
FSK				S	Sg	01 19 31.7	+0.2
	61µm,0.2s						
FSK	Fiskardo	0.07	166	P	Pg	01 19 29.5	0.0
FSK				S	Sg	01 19 31.6	+0.1
FSK				AML	AML	01 19 31.7	
	comp=N,79251µm,0.3s						
FSK				AML	AML	01 19 31.9	
EVGI	Lefkada island	0.13	44	P	Pg	01 19 30.1	-0.1
EVGI				S	Sg	01 19 32.8	+0.2
	comp=N,15µm,0.1s						
EVGI	Lefkada island	0.13	44	P	Pg	01 19 30.1	-0.1
EVGI				S	Sg	01 19 32.9	+0.2
DRAG	Dragano-Lefkad	0.16	10	P	Pg	01 19 30.3	-0.3
DRAG				S	Sg	01 19 33.5	+0.2
	comp=N,62µm,0.4s						
DRAG	Dragano-Lefkad	0.16	10	P	Pg	01 19 30.2	-0.3
DRAG				S	Sg	01 19 33.3	0.0
NYDR	Nydri-Lefkada	0.22	34	P	Pg	01 19 31.4	-0.1
NYDR				S	Sg	01 19 35.2	+0.3
	comp=N,5µm,0.2s						
NYDR	Nydri-Lefkada	0.22	34	P	Pg	01 19 31.4	-0.1
NYDR				S	Sg	01 19 34.7	-0.3
LKD2	Lefkada island	0.28	19	P	Pg	01 19 32.2	-0.3
LKD2				S	Sg	01 19 36.9	+0.4
LKD2	Lefkada island	0.28	19	P	Pg	01 19 32.2	-0.3
LKD2				S	Sg	01 19 36.4	-0.1
KEF4	Livadi, Kephal	0.28	199	P	Pg	01 19 32.8	+0.3
KEF4				S	Sb	01 19 37.6	-0.2
	comp=N,64µm,0.3s						
KEF4	Livadi, Kephal	0.28	199	P	Pg	01 19 32.6	+0.1
KEF4				S	Sg	01 19 37.2	+0.6
TSLK	Tsoukalades, L	0.31	17	P	Pg	01 19 33.2	+0.2
TSLK				S	Sg	01 19 37.3	-0.1
	comp=N,4µm,0.6s						
TSLK	Tsoukalades, L	0.31	17	P	Pg	01 19 33.0	0.0
TSLK				S	Sb	01 19 38.2	-0.3
TSLK				AML	AML	01 19 41.5	
	comp=N,9416µm,0.6s						
TSLK				AML	AML	01 19 41.7	
	comp=E,7488µm,0.6s						
DMLN	Damoulianata-K	0.32	204	P	Pg	01 19 33.1	0.0
DMLN				S	Sb	01 19 38.6	-0.2
	comp=E,12µm,0.4s						
DMLN	Damoulianata-K	0.32	204	P	Pg	01 19 33.1	0.0
DMLN				S	Sb	01 19 38.3	-0.4
LXRA	Lixouri, Kepha	0.34	194	P	Pg	01 19 33.5	+0.1
LXRA				S	Sb	01 19 39.1	-0.2
VLS	Valsamata	0.35	174	P	Pg	01 19 33.9	+0.2
VLS				S	Sb	01 19 39.5	-0.3
	comp=E,7µm,0.1s						
VLS	Valsamata	0.35	174	P	Pg	01 19 33.5	-0.2
VLS				S	Sb	01 19 39.5	-0.3
VLS				AML	AML	01 19 39.7	
	comp=E,15849µm,0.2s						
VLS				AML	AML	01 19 40.0	
	comp=N,10886µm,0.1s						
ARGA	Argostoli. Kep	0.35	188	P	Pb	01 19 34.5	+0.1
KEF3	Kipouria, Keph	0.36	205	P	Pg	01 19 33.4	-0.4
KEF3				S	Sg	01 19 38.9	+0.1
	comp=N,18µm,0.2s						
KEF3	Kipouria, Keph	0.36	205	P	Pg	01 19 33.3	-0.6
KEF3				S	Sg	01 19 38.6	-0.2
PSDA	Pessada-Kefalo	0.41	175	P	Pg	01 19 34.9	+0.1
PSDA				S	Sb	01 19 41.6	+0.1
PSDA	Pessada-Kefalo	0.41	175	P	Pg	01 19 34.8	-0.1
PSDA				S	Sb	01 19 41.3	-0.2
PVO	Paravola	0.78	83	P	Pg	01 19 42.0	+0.4
PVO				AML	AML	01 20 01.9	
	comp=E,1675µm,0.6s						
PVO				AML	AML	01 20 08.7	
	comp=N,1578µm,0.6s						
VTN	Vitineika	0.80	140	P	Pg	01 19 42.2	+0.3
LTHK	Lithakia	0.85	164	P	Pb	01 19 42.2	-0.7
LTHK				S	Sg	01 19 54.8	+0.6
LTHK	Lithakia	0.85	164	P	Pb	01 19 42.0	-0.9
RLS	Riolos of Patr	0.87	123	P	Pb	01 19 42.9	-0.3
RLS				AML	AML	01 20 03.9	
	comp=N,1093µm,0.6s						
RLS				AML	AML	01 20 04.2	
	comp=E,1092µm,0.6s						
IGT	Igoumenitsa	1.02	351	P	Pb	01 19 45.3	-0.4
IGT				AML	AML	01 20 03.6	
	comp=E,1178µm,0.5s						
IGT				AML	AML	01 20 04.0	
	comp=N,696µm,0.4s						
EVR	Evrytania	1.06	68	P	Pb	01 19 46.5	-0.1
EVR				AML	AML	01 20 09.9	
	comp=E,643µm,0.9s						
EVR				AML	AML	01 20 20.8	
	comp=N,587µm,0.7s						
EFP	Efpalio	1.08	95	P	Pb	01 19 46.5	-0.3
EFP				AML	AML	01 20 09.5	
	comp=E,2202µm,0.9s						
EFP				AML	AML	01 20 13.6	
	comp=N,1136µm,0.9s						
ANX	Ano Chora	1.08	86	P	Pb	01 19 47.0	0.0
ANX				AML	AML	01 20 11.3	
	comp=N,1269µm,0.9s						
ANX				AML	AML	01 20 18.3	
	comp=E,1169µm,0.5s						
DRO	Drossia	1.09	122	P	Pb	01 19 46.9	-0.1
DRO				AML	AML	01 20 14.5	
	comp=E,1662µm,0.4s						
DRO				AML	AML	01 20 17.3	
	comp=N,2172µm,0.5s						
JAN	Janina	1.15	12	P	Pn	01 19 47.9	-0.1
JAN				AML	AML	01 20 16.1	
	comp=E,836µm,0.4s						
JAN				AML	AML	01 20 17.8	
	comp=N,687µm,0.6s						
LAKA	Lakka	1.17	104	P	Pn	01 19 47.8	-0.4
LAKA				AML	AML	01 20 16.5	
	comp=E,794µm,0.7s						
LAKA				AML	AML	01 20 18.9	
	comp=N,635µm,0.6s						
TRIZ	Trizonia	1.21	97	P	Pn	01 19 48.8	0.0
KEK	Kerkira	1.32	334	P	Pb	01 19 51.2	+0.3
KEK				AML	AML	01 20 17.1	
	comp=E,624µm,0.7s						
KEK				AML	AML	01 20 26.7	
	comp=N,621µm,0.6s						
MAKR	Makrakomi, Fth	1.33	68	P	Pb	01 19 51.4	+0.2
MAKR				AML	AML	01 20 21.5	
	comp=N,1423µm,0.8s						
MAKR				AML	AML	01 20 23.4	
	comp=E,1613µm,0.6s						
KLV	Kalavryta, Ach	1.36	110	P	Pn	01 19 50.9	0.0
KLV				AML	AML	01 20 23.7	
	comp=E,341µm,0.7s						
KLV				AML	AML	01 20 27.8	
	comp=N,382µm,0.8s						
AGG	Agios Georgios	1.48	70	P	Pb	01 19 54.1	+0.3
AGG				AML	AML	01 20 22.2	
	comp=E,1023µm,0.7s						
AGG				AML	AML	01 20 25.7	
	comp=N,725µm,0.9s						
GUR	Goura	1.54	112	P	Pn	01 19 53.9	+0.5
GUR				AML	AML	01 20 28.9	
	comp=N,793µm,0.5s						
GUR				AML	AML	01 20 29.1	
	comp=E,931µm,0.5s						
THL	Klokotos Trika	1.54	48	P	Pg	01 19 55.5	-0.6
THL				AML	AML	01 20 25.5	
	comp=E,583µm,0.8s						
THL				AML	AML	01 20 26.1	
	comp=N,608µm,1.0s						
ITM	Ithomi	1.74	140	P	Pb	01 19 58.6	+0.6
ITM				AML	AML	01 20 27.8	
	comp=N,496µm,0.8s						
ITM				AML	AML	01 20 38.0	
	comp=E,460µm,1.0s						
EPID	Epidavros	2.23	113	P	Pb	01 20 05.7	-0.8
OHR	Ohrid	2.59	4	ePn	Pn	01 20 09.7	+1.9
OHR				eSn	Sn	01 20 41.1	+2.1
TIR	Tirane	2.86	350	ePn	Pn	01 20 14.2	+2.7
TIP	Timpagrande	3.02	284	⇑P	Pb	01 20 19.5	-0.5
STIP	Stip	3.41	21	i Pn	Pb	01 20 24.7	-1.7
MATE	Matera	3.64	307	⇑P	Pg	01 20 36.3	+0.1
PDG	Podgorica	4.02	346	⇑P	Pn	01 20 29.2	+1.8
PDG	Podgorica	4.02	346	ePn	Pn	01 20 29.2	+1.8
PDG				eSn	Sn	01 21 10.0	-4.1
BARS	Barje	4.39	12	ePn	Pn	01 20 34.7	+2.2
TREB	Trebinje	4.50	339	ePn	Pn	01 20 34.0	-0.1
SJES	Sjenica	4.75	355	ePn	Pn	01 20 39.3	+1.8
STON	Ston	4.85	334	ePn	Pn	01 20 38.8	+0.1
DIVS	Divibare	5.58	356	ePn	Pn	01 20 50.4	+1.5

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*IDC **18** 01:20:41.7±1.5, 9°.31N×123°.66E, h0^{km}, mb3.6/7, mb1 3.7/7, mb1mx3.5/55, mbtmp3.6/7, MS3.0/2, Ms1 3.0/2, ms1mx2.5/48, Error ellipse: s-maj=190.2km s-min=19.7km az=67.0*
*MAN **18** 01:20:41.6, 9°.24N×123°.03E, h1^{km}, mb4.7, ML3.5, MS3.4*
ISC 18 01:20:43.2±1.2**, 9°.25N**±0°.05×**123°.18E**±0°.05**, h8**^{km}±7^{km}**, n17, σ1ˢ.20**/20**, mb3.8**/7**, 6C-2D, Negros**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNPH	Sibulan	0.11	32	⇑iP	Pg	01 20 45.6	-0.2
SNPH				i S	Sg	01 20 48.3	+0.7
CNOP	Candoni, Negro	0.78	318	⇑eP	Pg	01 20 57.3	-0.9
CNOP				eS	Sg	01 21 08.4	-0.1
TBP	Tagbilaran	0.81	57	⇓iP	Pb	01 20 59.3	-0.2
LLP	Lapu-Lapu	1.32	36	⇓eP	Pn	01 21 06.8	-1.1
LLP				i S	Sg	01 21 25.0	-0.6
PAGZ	Pagadian	1.41	172	⇑eP	Pn	01 21 01.3	-7.7
PAGZ				eS	Sg	01 21 28.9	+0.5
MSLP	Maasin	1.88	62	⇑eP	Pb	01 21 16.7	-1.0
MSLP				eS	Sg	01 21 44.7	+1.1
JAP	San Jose, Anti	1.92	321	⇑eP	Sn	01 21 38.0	-2.5
RCP	Roxas	2.34	350	⇑eP	Pn	01 21 23.0	+1.1
RCP				eS	Sb	01 21 55.3	+0.7
LEM	Lembang	22.26	225	LR	LR	01 35 04.6	
	comp=Z,40nm,18.9s,baz=48,slow=38						
KSRS	Korea Array	28.41	8	LR	LR	01 38 14.3	
	comp=Z,33nm,20.0s,baz=166,slow=37						
WRA	Warramunga Arr	31.02	159	P	P	01 26 59.8	-1.8
	0.2nm,0.6s,baz=341,slow=9.5,SNR=1.8						
ASAR	Alice Springs	34.35	162	P	P	01 27 30.0	-0.7
	0.9nm,0.6s,baz=342,slow=6.9,SNR=13						
SONM	Songino Array	41.00	343	P	P	01 28 27.5	+0.7
	0.8nm,0.9s,baz=129,slow=3.9,SNR=3.9						
MKAR	Makanchi Array	51.04	325	P	P	01 29 47.4	+1.5
	0.9nm,0.8s,baz=129,slow=8.4,SNR=4.7						
ZALV	Zalesovo Beam	54.10	333	P	P	01 30 08.9	+0.5
	0.5nm,0.6s,baz=127,slow=9.3,SNR=1.9						
KURBB	Kurchatov Arra	55.22	327	P	P	01 30 17.9	+1.3
	0.7nm,0.3s,baz=130,slow=6.2,SNR=1.9						
AKASG	Malin Array Be	85.41	320	P	P	01 33 22.6	+1.3
	0.2nm,0.2s,baz=66,slow=4.5,SNR=4.3						

MRB 18 01:24:24.3±0.4**, 42°.59N**×**1°.05E, h12**^{km}±10^{km}**, ML-0.6**/4**, Error ellipse: s-maj=2.6km s-min=2.0km az=37.0, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEST	Esterri de Car	0.15	87	P	Pg	01 24 27.9	-0.1
CEST				S	Sg	01 24 30.2	-0.3
	1.8nm,0.1s						
CARA	Val d'Aran	0.21	303	P	Pg	01 24 28.8	-0.1
CARA				S	Sg	01 24 32.1	0.0
	4.4nm,0.3s						
CSOR	Sort	0.23	165	P	Pg	01 24 29.4	+0.2
CSOR				S	Sg	01 24 32.4	-0.1
	0.8nm,0.3s						
CTRE	Tremp	0.34	218	P	Pg	01 24 31.0	-0.2
CTRE				S	Sg	01 24 35.8	0.0
	0.4nm,0.2s						
ARBS	La Rabassa	0.39	112	P	Pg	01 24 31.8	-0.5
ARBS				S	Sg	01 24 37.8	+0.2

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*IDC **18** 01:24:41.8±0.9, 38°.75N×20°.45E, h0^{km}, mb3.9/12, mb1 3.9/21, mb1mx3.8/53, mbtmp3.8/21, ML3.6/7, MS2.9/5, Ms1 2.9/5, ms1mx2.6/49, Error ellipse: s-maj=17.1km s-min=13.7km az=178.0*
*PDG **18** 01:24:42.9±0.5, 38°.69N×20°.43E, h11^{km}±1^{km}, ML3.7/13, Error ellipse: s-maj=0.7km s-min=0.8km az=0.0*
*ATH **18** 01:24:43.3, 38°.63N×20°.58E, h11^{km}±1^{km}, ML3.7/13, Error ellipse: s-maj=1.4km s-min=0.7km az=288.0*
*THE **18** 01:24:43.5, 38°.64N×20°.55E, h9^{km}±1^{km}, ML4.1/9, Error ellipse: s-maj=1.4km s-min=0.3km az=70.0*
*NEIC **18** 01:24:43.6±2.3, 38°.67N±0°.05×20°.54E±0°.06, h10^{km}±1^{km}, mb4.2/9, ML3.7(ATH), Error ellipse: s-maj=10.0km s-min=5.1km az=217.0*
*BEO **18** 01:24:44.5±0.6, 38°.75N×20°.41E, h0^{km}, ML3.6/19*
ISC 18 01:24:43.1±0.7**, 38°.65N**±0°.02×**20°.52E**±0°.03**, h11**^{km}±4^{km}**, n232, σ1ˢ.32**/291**, mb4.1**/15**, 22C-11D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRAG	Dragano-Lefkad	0.06	51	P	Pg	01 24 45.2	-0.1
DRAG				S	Sg	01 24 46.5	-0.4
DRAG	Dragano-Lefkad	0.06	51	P	Pg	01 24 45.0	-0.3
DRAG				S	Sg	01 24 46.5	-0.4
EVGI	Lefkada island	0.11	104	P	Pg	01 24 45.6	-0.3
EVGI				S	Sg	01 24 47.2	-0.7
	324µm,0.2s						
EVGI	Lefkada island	0.11	104	P	Pg	01 24 45.4	-0.5
EVGI				S	Sg	01 24 47.0	-1.0
NYDR	Nydri-Lefkada	0.16	65	P	Pg	01 24 46.4	-0.2
NYDR				S	Sg	01 24 48.9	-0.1
	62µm,0.3s						
NYDR	Nydri-Lefkada	0.16	65	P	Pg	01 24 46.3	-0.3
NYDR				S	Sg	01 24 48.7	-0.3
LKD2	Lefkada island	0.18	38	P	Pg	01 24 47.2	+0.2
LKD2				S	Sg	01 24 50.0	+0.3
	135µm,0.2s						
LKD2	Lefkada island	0.18	38	P	Pg	01 24 47.1	+0.2
LKD2				S	Sg	01 24 49.8	+0.1
LKD2				AML	AML	01 24 50.5	
LKD2				AML	AML	01 24 51.4	
FSK	Fiskardo	0.19	169	P	Pg	01 24 47.4	+0.3
FSK				S	Sg	01 24 50.4	+0.4
	88µm,0.4s						
FSK	Fiskardo	0.19	169	P	Pg	01 24 47.2	+0.1
FSK				S	Sg	01 24 50.3	+0.4
FSK				AML	AML	01 24 51.0	
FSK				AML	AML	01 24 51.1	
TSLK	Tsoukalades, L	0.21	31	P	Pg	01 24 48.0	+0.5
TSLK				S	Sg	01 24 51.2	+0.8
	77µm,0.3s						
KEF4	Livadi, Kephal	0.40	191	P	Pg	01 24 51.0	+0.1
KEF4				S	Sg	01 24 56.8	+0.7
	148µm,0.3s						
KEF4	Livadi, Kephal	0.40	191	P	Pg	01 24 50.8	-0.1
KEF4				S	Sg	01 24 56.8	+0.7
DMLN	Damoulianata-K	0.42	196	P	Pg	01 24 51.4	0.0
DMLN				S	Sb	01 24 58.5	-0.5
	35µm,0.4s						
DMLN	Damoulianata-K	0.42	196	P	Pg	01 24 51.4	0.0
DMLN				S	Sg	01 24 57.9	+0.9
LXRA	Lixouri, Kepha	0.45	188	P	Pg	01 24 51.8	-0.1

KEF3	Kipouria, Keph	0.46	197	P	Pg	01 24 51.7	-0.4
KEF3				S	Sg	01 24 58.7	+0.4
	37µm,0.4s						
KEF3	Kipouria, Keph	0.46	197	P	Pg	01 24 51.5	-0.6
KEF3				S	Sg	01 24 58.2	0.0
VLS	Valsamata	0.47	173	P	Pg	01 24 51.9	-0.4
VLS				S	Sg	01 24 59.1	+0.5
	16µm,0.4s						
VLS	Valsamata	0.47	173	P	Pg	01 24 51.8	-0.5
VLS				S	Sg	01 24 58.8	+0.2
VLS				AML	AML	01 24 59.7	
	comp=N,30085µm,0.4s						
VLS				AML	AML	01 25 00.7	
	comp=E,34218µm,0.4s						
PSDA	Pessada-Kefalo	0.54	174	P	Pg	01 24 53.0	-0.5
PSDA				S	Sg	01 25 01.4	+0.9
PSDA	Pessada-Kefalo	0.54	174	P	Pg	01 24 52.9	-0.6
PSDA				S	Sg	01 25 00.6	+0.1
PVO	Paravola	0.79	92	P	Pg	01 24 58.2	-0.1
PVO	Paravola	0.79	92	P	Pg	01 24 58.1	-0.2
PVO				AML	AML	01 25 11.8	
	comp=N,25000µm,0.3s						
PVO				AML	AML	01 25 12.2	
	comp=E,12311µm,0.3s						
IGT	Igoumenitsa	0.90	351	P	Pg	01 24 59.8	-0.5
IGT				AML	AML	01 25 18.8	
	comp=E,5815µm,0.4s						
IGT				AML	AML	01 25 20.9	
	comp=N,7599µm,0.2s						
VTN	Vitineika	0.90	144	P	Pg	01 24 59.5	-0.9
RLS	Riolos of Patr	0.95	128	P	Pg	01 25 00.3	-1.1
RLS	Riolos of Patr	0.95	128	P	Pg	01 25 00.2	-1.2
RLS				AML	AML	01 25 21.9	
	comp=E,9953µm,0.4s						
RLS				AML	AML	01 25 22.0	
	comp=N,7053µm,0.8s						
LTHK	Lithakia	0.97	165	P	Pg	01 24 59.9	-1.8
JAN	Janina	1.04	14	P	Pb	01 25 03.1	0.0
JAN				AML	AML	01 25 22.3	
	comp=E,6046µm,0.4s						
JAN				AML	AML	01 25 26.9	
	comp=N,5904µm,0.5s						
EVR	Evrytania	1.04	75	P	Pg	01 25 02.3	-0.9
ANX	Ano Chora	1.10	92	P	Pb	01 25 03.3	-0.9
ANX				AML	AML	01 25 26.6	
	comp=N,9838µm,0.4s						
ANX				AML	AML	01 25 27.6	
	comp=E,8224µm,0.7s						
EFP	Efpalio	1.11	101	P	Pb	01 25 02.7	-1.6
EFP				AML	AML	01 25 25.9	
	comp=N,7613µm,0.4s						
EFP				AML	AML	01 25 26.8	
	comp=E,7195µm,0.4s						
DRO	Drossia	1.17	126	P	Pb	01 25 04.0	-1.3
DRO				AML	AML	01 25 29.5	
	comp=E,9984µm,0.3s						
DRO				AML	AML	01 25 31.1	
	comp=N,11413µm,0.4s						
KASA	Kassiopi	1.19	338	P	Pg	01 25 06.4	+0.5
KASA				AML	AML	01 25 27.0	
	comp=N,3527µm,0.3s						
KASA				AML	AML	01 25 28.5	
	comp=E,4906µm,0.3s						
KEK	Kerkira	1.20	333	P	Pg	01 25 06.1	0.0
KEK				AML	AML	01 25 30.5	
	comp=N,3187µm,0.5s						
KEK				AML	AML	01 25 31.6	
	comp=E,3767µm,0.3s						
TRIZ	Trizonia	1.25	103	P	Pn	01 25 05.2	-1.3
KLV	Kalavryta, Ach	1.42	115	P	Pn	01 25 07.6	-1.3
KLV				AML	AML	01 25 37.9	
	comp=E,2831µm,0.9s						
KLV				AML	AML	01 25 40.5	
	comp=N,2015µm,0.7s						
AGG	Agios Georgios	1.46	75	P	Pn	01 25 09.7	+0.2
AGG	Agios Georgios	1.46	75		Pn	01 25 09.8	+0.2
GUR	Goura	1.60	116	P	Pn	01 25 10.6	-0.8
ITM	Ithomi	1.84	142	Pn	Pb	01 25 16.0	-0.8
KZN	Kozani	1.92	30	P	Pb	01 25 18.4	+0.3
VLO	Vlora	1.98	337	Pn	Pb	01 25 18.0	-1.2
KBN	Korca	1.98	6	Pn	Pb	01 25 19.2	0.0
LTK	Loutraki	2.02	107	P	Pb	01 25 19.0	-0.9
SCTE	Santa Cesarea	2.13	312	Pn	Pn	01 25 19.4	+0.8
FNA	Florina	2.23	17		Pb	01 25 22.3	-1.2
OHR	Ohrid	2.47	5	*e*Pn	Pb	01 25 26.0	-1.5
OHR				*e*Sn	Sn	01 25 53.2	-0.4
OHR	Ohrid	2.47	5	*i* Pn	Pb	01 25 26.1	-1.5
OHR				*e*Sg	Sb	01 25 57.4	-0.6
TIR	Tirane	2.74	350	⇑P	Pn	01 25 28.9	+1.9
TIR	Tirane	2.74	350	*e*Pn	Pn	01 25 29.4	+2.4
TIR	Tirane	2.74	350	Pn	Pn	01 25 28.2	+1.2
TIP	Timpagrande	2.98	281	⇑P	Pn	01 25 32.0	+1.6
TIP	Timpagrande	2.98	281	Pn	Pn	01 25 31.1	+0.7
VAY	Valandovo	3.10	30	*e*Pn	Pn	01 25 34.2	+2.2
VAY				*e*Sn	Sn	01 26 11.6	+2.6
VAY	Valandovo	3.10	30	*i* Pn	Pn	01 25 34.0	+2.0
STIP	Stip	3.30	22	*i* Pn	Pn	01 25 37.9	+3.2
SKO	Skopje	3.40	12	*i* Pn	Pn	01 25 38.1	+2.1
ULC	Ulcinj	3.45	344	⇓*i*Pn	Pn	01 25 37.1	+0.3
ULC				*i* Sn	Sn	01 26 16.5	-1.2
MATE	Matera	3.56	305	⇑P	Pn	01 25 40.0	+1.8
CEL	Celeste	3.65	265	Pn	Pn	01 25 40.0	+0.4
DRME	Dracevica, Mon	3.68	344	*e*Pn	Pn	01 25 40.2	+0.3
DRME	Dracevica, Mon	3.68	344	*e*Pn	Pn	01 25 40.3	+0.3
DRME				*i* Sn	Sn	01 26 22.9	-0.4
BUM	Brajici-Budva	3.85	342	⇓*i*Pn	Pn	01 25 42.6	+0.2
BUM				*i* Sn	Sn	01 26 27.0	-0.7
PDG	Podgorica	3.90	346	⇑P	Pn	01 25 43.9	+1.0
PDG	Podgorica	3.90	346	*e*Pn	Pn	01 25 44.1	+1.2
PDG				*e*Sn	Sn	01 26 28.9	+0.2
PDG	Podgorica	3.90	346	*e*Pn	Pn	01 25 43.2	+0.3
PDG	Podgorica	3.90	346	Pn	Pn	01 25 43.0	+0.1
TTG	Podgorica	3.90	346	⇑*i*Pn	Pn	01 25 43.4	+0.5
TTG				*i* Sn	Sn	01 26 28.1	-0.6
PVY	Plav	3.96	354	⇑*i*Pn	Pn	01 25 44.4	+0.4
PVY				*i* Sn	Sn	01 26 30.0	-0.5
PRVS	Prvonek	4.03	17	*e*Pn	Pn	01 25 46.0	+1.2
PRVS				*e*Sn	Sn	01 26 33.2	+1.1
CEME	Cevo	4.08	343	⇑*i*Pn	Pn	01 25 45.6	+0.1
CEME				*i* Sn	Sn	01 26 32.4	-0.9
HCY	Herceg Novi	4.10	339	*e*Pn	Pn	01 25 45.2	-0.5
HCY	Herceg Novi	4.10	339	⇓*i*Pn	Pn	01 25 45.2	-0.5
HCY				*i* Sn	Sn	01 26 32.6	-1.0
BOSS	Bosilegrad	4.12	21	*e*Pn	Pn	01 25 48.2	+2.2
IVA	Berane	4.25	354	⇓*i*Pn	Pn	01 25 48.2	+0.4
IVA				*i* Sn	Sn	01 26 36.6	-0.8
KOME	Kolasin	4.27	350	⇑*i*Pn	Pn	01 25 48.5	+0.4
KOME				*i* Sn	Sn	01 26 37.1	-0.8
BARS	Barje	4.28	13	*e*Pn	Pn	01 25 49.5	+1.3
NKME	Niksic	4.28	344	⇑*i*Pn	Pn	01 25 48.5	+0.2
NKME				*i* Sn	Sn	01 26 37.2	-1.1
NKY	Niksic	4.32	345	⇓*i*Pn	Pn	01 25 49.2	+0.4
NKY				*e*Sn	Sn	01 26 38.2	-1.0
TREB	Trebinje	4.39	339	*e*Pn	Pn	01 25 49.7	+0.1
TREB	Trebinje	4.39	339	*e*Pn	Pn	01 25 49.1	-0.5
DBRK	Dubrovnik	4.40	337	*e*Pn	Pn	01 25 48.9	-1.0
DBRK				Sn	Sn	01 26 39.2	-1.9
VTS	Vitosha	4.47	27	⇓P	Pn	01 25 52.9	+2.0
VTS	Vitosha	4.47	27	*e*Pn	Pn	01 25 53.2	+2.2
VTS				*e*Sn	Sn	01 26 41.8	-1.3
VTS	Vitosha	4.47	27	Pn	Pn	01 25 51.9	+0.9
BRY	Bratogost	4.51	341	*e*Pn	Pn	01 25 51.0	-0.4
BRY	Bratogost	4.51	341	⇓*i*Pn	Pn	01 25 51.1	-0.4
BRY				*i* Sn	Sn	01 26 42.5	-1.4
SELS	Selova	4.59	6	*e*Pn	Pn	01 25 52.8	+0.3
SJES	Sjenica	4.63	355	*e*Pn	Pn	01 25 54.8	+1.8
SJES				*e*Sn	Sn	01 26 47.2	+0.4
UPM	Unac-Piva	4.71	345	*e*Pn	Pn	01 25 54.2	0.0
UPM	Unac-Piva	4.71	345	⇑*i*Pn	Pn	01 25 54.3	0.0
UPM				*i* Sn	Sn	01 26 47.5	-1.5
STON	Ston	4.73	334	*e*Pn	Pn	01 25 54.0	-0.3
STON	Ston	4.73	334	*e*Pn	Pn	01 25 53.5	-0.8
PLE	Pljevlja	4.75	350	⇑*i*Pn	Pn	01 25 55.3	+0.5
PLE				*i* Sn	Sn	01 26 48.6	-1.4
SGRT	San Giovanni R	4.79	312	Pn	Pn	01 25 55.6	+0.3
ALN	Alexandroupoli	4.81	60	Pn	Pn	01 25 55.7	+0.2
IDI	Anoyia	4.85	132	Pn	Pn	01 25 57.9	+1.9
	comp=N,0.4nm,0.3s,baz=264,slow=9.3,SNR=12						
IDI				Sn	Sn	01 26 52.6	+0.4
	comp=N,2.0nm,0.3s,baz=96,slow=23,SNR=2.6						
IDI				LR	LR	01 28 22.9	
	comp=N,68nm,20.6s,baz=315,slow=45						
ZAPS	Zavoj	4.89	18	*e*Pn	Pn	01 25 58.1	+1.5
ZAPS				*e*Sn	Sn	01 26 53.7	+0.5
VAE	Valguarnera	4.96	258	Pn	Pn	01 25 58.6	+1.1
	comp=N,0.8nm,0.3s,baz=242,slow=21,SNR=3.1						
VAE				Sn	Sn	01 26 54.7	-0.2
	comp=N,1.9nm,0.3s,baz=184,slow=18,SNR=2.2						
RUDO	Rudo	5.04	350	*e*Pn	Pn	01 25 58.2	-0.4
BOVS	Bovan	5.06	10	⇓P	Pn	01 25 58.3	-0.6
BOVS	Bovan	5.06	10	*e*Pn	Pn	01 25 58.0	-0.9
RAFF	Raffo Rosso	5.07	256	Pn	Pn	01 25 57.1	-1.9
PAOL	Paolisi	5.16	299	Pn	Pn	01 26 01.9	+1.6
GRUS	Gruza	5.24	2	*e*Pn	Pn	01 26 02.4	+1.1
GRUS				*e*Sn	Sn	01 27 01.2	-0.5
BBLS	Lazići	5.28	351	*e*Pn	Pn	01 26 02.9	+0.9
BBLS				*e*Sn	Sn	01 27 01.8	-1.1
BBLS	Lazići	5.28	351	*e*Pn	Pn	01 26 02.0	0.0
MAKA	Makarska	5.34	331	*e*Pn	Pn	01 26 02.5	-0.2
MAKA				Sn	Sn	01 27 01.7	-2.5
DIVS	Divibare	5.46	356	*e*Pn	Pn	01 26 05.0	+0.5
DIVS				*e*Sn	Sn	01 27 04.9	-2.4
DIVS	Divibare	5.46	356	*e*Pn	Pn	01 26 04.2	-0.3
DIVS	Divibare	5.46	356		Pn	01 26 04.0	-0.4
HVAR	Hvar	5.47	327	*e*Pn	Pn	01 26 04.0	-0.6
RICI	Ricice	5.47	333	*e*Pn	Pn	01 26 04.1	-0.5
RICI				Sn	Sn	01 27 04.0	-3.6
HAPS	Han Pijesak,Bl	5.56	348	*e*Pn	Pn	01 26 05.5	-0.4
TRUS	Trudelj	5.57	359	*e*Pn	Pn	01 26 06.7	+0.8
TRUS				*e*Sn	Sn	01 27 08.2	-1.7
PLVB	Pleven	5.66	32	⇑P	Pn	01 26 09.9	+2.8
CORL	Corleone	5.73	265	Pn	Pn	01 26 09.8	+1.7
CLTB	Caltabellotta	5.86	262	Pn	Pn	01 26 11.4	+1.5
TEKS	Tekeris	5.94	353	*e*Pn	Pn	01 26 04.9	-6.1
KIJV	Kijevo	6.18	331	*e*Pn	Pn	01 26 14.3	0.0
KIJV				Sn	Sn	01 27 22.3	-2.7
MDVR	Moldovita	6.19	8	⇑P	Pn	01 26 14.9	+0.4
BLJ	Bijeljina	6.20	352	*e*Pn	Pn	01 26 11.9	-2.6
ZIRJ	Zirje	6.21	325	*e*Pn	Pn	01 26 14.1	-0.6
MGRS	Mrkonjic Grad	6.31	337	*e*Pn	Pn	01 26 16.5	+0.4
DOB	Doboj	6.34	344	*e*Pn	Pn	01 26 13.3	-3.2
MORI	Morici	6.35	327	*e*Pn	Pn	01 26 16.8	+0.2
HERR	Herculane	6.39	12	⇑P	Pn	01 26 19.3	+2.2
FRGS	Fruska Gora	6.53	356	⇑P	Pn	01 26 18.9	-0.1
FRGS	Fruska Gora	6.53	356	*e*Pn	Pn	01 26 18.6	-0.4
FRGS				*e*Sn	Sn	01 27 29.4	-4.1
FRGS	Fruska Gora	6.53	356	*e*Pn	Pn	01 26 18.2	-0.8
AQU	L'Aquila	6.56	307	*e*Pn	Pn	01 26 21.4	+1.8
AQU	L'Aquila	6.56	307	Pn	Pn	01 26 21.2	+1.6
BLY	Banja Luka	6.59	339	*e*Pn	Pn	01 26 20.3	+0.4
BLY				*e*Sn	Sn	01 27 33.6	-1.3
BLY	Banja Luka	6.59	339	*e*Pn	Pn	01 26 20.2	+0.4
DUGI	Dugi Otok	6.74	324	*e*Pn	Pn	01 26 21.6	-0.3
UDBI	Udbina	6.87	330	*e*Pn	Pn	01 26 24.7	+0.9
MRAK	Mrakovica	6.91	338	*e*Pn	Pn	01 26 23.5	-0.8
PRIJ	Prijedor	6.93	337	*e*Pn	Pn	01 26 21.9	-2.7
GZR	Gura Zlata	6.95	13	⇓P	Pn	01 26 25.6	+0.7
NRCA	Norcia	7.00	309	Pn	Pn	01 26 27.6	+1.9
BZS	Buzias	7.01	6	⇑P	Pn	01 26 26.6	+0.9
BZS	Buzias	7.01	6	*e*Pn	Pn	01 26 25.2	-0.5
PLIT	Plitvice	7.22	331	*e*Pn	Pn	01 26 28.5	-0.1
NVLJ	Novalja	7.27	326	*e*Pn	Pn	01 26 29.0	-0.2
RABC	Rab	7.45	327	*e*Pn	Pn	01 26 31.4	-0.3
VOIR		7.58	25	⇑P	Pn	01 26 35.8	+2.3
MURB	Monte Urbino	7.60	310		Pn	01 26 35.9	+2.0
KOVH	Kovagotottos	7.65	347	*e*PN	Pn	01 26 32.6	-1.8
KOVH				*e*SN	Sn	01 27 53.5	-7.5
SIRR	Siria	7.66	6	⇓P	Pn	01 26 35.0	+0.4
MORH	Mrgy, Hungar	7.69	350	*e*Pn	Pn	01 26 32.6	-2.3
OZLJ	Ozalj	7.91	333	*e*Pn	Pn	01 26 37.8	-0.1
ZAG	Zagreb	7.92	336	*e*Pn	Pn	01 26 38.5	+0.4
MLR	Muntele Rosu	7.94	29	⇑P	Pn	01 26 41.7	+3.2
MLR	Muntele Rosu	7.94	29	Pn	Pn	01 26 44.1	+5.6
	comp=N,0.5nm,0.3s,baz=234,slow=11,SNR=8.9						
MLR				LR	LR	01 30 28.0	
	comp=N,75nm,19.9s,baz=136,slow=44						
NEHR	Nehoiu	8.02	31	⇑P	Pn	01 26 42.7	+3.1
BRJN	Brijuni	8.04	323	*e*Pn	Pn	01 26 39.6	-0.2
RIY	Rijeka	8.04	328	*e*Pn	Pn	01 26 38.9	-0.9
RIY	Rijeka	8.04	328	*e*Pn	Pn	01 26 39.2	-0.6
CRES	Cresnjev	8.09	334	*e*Pn	Pn	01 26 39.7	-0.8
DOPR	Dopca	8.15	25	⇑P	Pn	01 26 43.6	+2.2
LOBO	Lobor	8.19	338	*e*Pn	Pn	01 26 41.0	-0.8
OZUR		8.40	26	⇑P	Pn	01 26 47.3	+2.5
CEY	Cerknica	8.40	329	*e*Pn	Pn	01 26 44.3	-0.5
PLOR	Plostina	8.51	30	⇓P	Pn	01 26 50.1	+3.8
OSSC	Osservatorio P	8.53	308	Pn	Pn	01 26 48.1	+1.6
VRI	Vrincioaia	8.55	31	⇑P	Pn	01 26 50.5	+3.6
LJU	Ljubljana	8.62	331	*e*Pn	Pn	01 26 45.8	-1.9
VSL	Villasalto	8.71	279	Pn	Pn	01 26 51.6	+2.6
MPLH	Magyarpolny	8.79	347	*e*PN	Pn	01 26 49.7	-0.4
MPLH				*e*SN	Sn	01 28 25.7	-3.4
SOKA	Soboth	8.98	335	*e*Pn	Pn	01 26 51.9	-0.8
	comp=N,2.0nm,0.3s,SNR=6.1						
SOKA				*e*Sn	Sn	01 28 33.5	-0.5
	comp=N,1.4nm,0.5s						
OBKA	Obir	9.00	333	*e*Pn	Pn	01 26 53.1	+0.1
	comp=N,2.3nm,0.3s						
OBKA				*e*Sn	Sn	01 28 32.9	-1.6
	comp=N,12nm,0.7s						
ZCCA	Zocca	9.15	312	Pn	Pn	01 26 56.4	+1.4
ARSA	Arzberg	9.34	339	*e*Pn	Pn	01 26 58.4	+0.7
	comp=N,2.3nm,0.4s						
KEST	Kesra	9.38	255	Pn	Pn	01 26 57.9	-0.4
	comp=N,0.2nm,0.3s,baz=26,slow=4.3,SNR=4.6						
KEST				Sn	Sn	01 28 42.6	-1.1
	comp=N,0.0nm,0.3s,baz=247,slow=19,SNR=1.1						
VLC	Villacollemand	9.39	309	Pn	Pn	01 26 58.6	+0.2
TEOL	Teolo	9.39	318	Pn	Pn	01 26 58.0	-0.3
MYKA	Terra Mystica	9.45	330	*e*Pn	Pn	01 26 59.0	-0.1
	comp=N,1.7nm,0.4s						
STAL	STALIGIAL	9.54	325		Pn	01 27 00.4	0.0
ZOU	Zoufplan	9.66	327	Pn	Pn	01 27 01.5	-0.7
PRMA	PARMA	9.77	312	Pn	Pn	01 27 04.3	+0.8
CONA	Conrad Observa	9.88	341	*i* Pn	Pn	01 27 05.0	0.0
	comp=N,0.5nm,0.3s						
CTI	Castel Tesino	9.88	321	Pn	Pn	01 27 03.9	-1.3
KBA	Koelnbreinsper	9.93	330	*e*Pn	Pn	01 27 05.6	-0.3
	comp=N,1.4nm,0.3s						
KBA				*e*Sn	Sn	01 28 53.6	-3.7
	comp=N,0.8nm,0.3s						
ABTA	Abfaltersbach	10.01	327	*e*Pn	Pn	01 27 06.5	-0.3
	comp=N,1.7nm,0.3s						
MSSA	Maissana	10.01	308	Pn	Pn	01 27 08.4	+1.6
MOA	Molln	10.26	336	*e*Sn	Sn	01 29 02.5	-2.7
	comp=N,1.3nm,0.5s						
MOA	Molln	10.26	336	*i* Pn	Pn	01 27 09.1	-1.1
	comp=N,2.1nm,0.4s						
WTTA	Wattenberg	10.79	326	*e*Pn	Pn	01 27 18.2	+0.7
	comp=N,1.2nm,0.2s						
WATA	Walderalm	10.87	326	*e*Pn	Pn	01 27 19.2	+0.5
	comp=N,2.0nm,0.2s						
SQTA	Sankt Quirin	10.95	324	*e*Pn	Pn	01 27 20.8	+1.1
	comp=N,1.6nm,0.3s						
FETA	Feichten	11.02	323	*e*Pn	Pn	01 27 21.8	+1.0
	comp=N,1.0nm,0.4s						
FETA				*e*Sn	Sn	01 29 24.6	+0.5
	comp=N,0.9nm,0.3s						
VRAC	Vranov	11.02	346	LR	LR	01 32 58.0	
	comp=N,99nm,20.2s,baz=162,slow=46						
MOTA	Moosalm	11.09	325	*i* Pn	Pn	01 27 22.1	+0.4
	comp=N,3.1nm,0.5s,SNR=6.3						
DAVOX	Davos/Dischmat	11.27	320	Pn	Pn	01 27 23.0	-1.2
	comp=N,0.6nm,0.3s,baz=169,slow=16,SNR=4.1						
GERES	GERESS Array B	11.32	336	Pn	Pn	01 27 23.6	-1.1
	comp=N,0.3nm,0.3s,baz=165,slow=17,SNR=5.4						
GERES				LR	LR	01 33 02.1	
	comp=N,56nm,18.7s,baz=274,slow=45						
TUE	Stuetta	11.35	317	Pn	Pn	01 27 26.3	+1.0
DAVA	Damuels	11.62	321	*e*Pn	Pn	01 27 31.0	+2.0
	comp=N,1.6nm,0.5s						
SENIN	Lac Senin/Sane	12.42	313	Pn	Pn	01 27 40.7	+0.8
MMAI	Mount Meron Ar	13.32	110	Pn	Pn	01 27 54.7	+2.6
	comp=N,0.5nm,0.3s,baz=296,slow=21,SNR=1.9						
AKASG	Malin Array Be	13.54	24	Pn	Pn	01 27 57.0	+2.0
	comp=N,0.4nm,0.3s,baz=212,slow=12,SNR=1.5						
ECH	Echery	13.61	319	Pn	Pn	01 27 55.8	-0.2
SUW	Suwalki	15.48	6	Pn	Pn	01 28 21.1	0.0
SUW				IAmb	IAmb	01 28 25.2	
	comp=Z,12nm,0.6s						
PABE	Paberze	17.02	7	Pn	Pn	01 28 39.6	-1.3
KBZ	Khabaz	17.57	66	P	P	01 28 50.1	+1.2
	comp=Z,0.1nm,0.3s,baz=291,slow=8.6,SNR=2.4						
GNI	Garni	18.77	78	P	Pn	01 29 04.5	+1.6
	comp=Z,0.4nm,0.3s,baz=12,slow=19,SNR=1.8						
GNI	Garni	18.77	78	P	P	01 29 02.5	+0.1
GNI				IAmb	IAmb	01 29 28.0	
	comp=Z,13nm,1.2s						
ESDC	Sonseca Array	19.00	281	P	Pn	01 29 05.8	+0.3
	comp=Z,0.1nm,0.3s,baz=75,slow=11,SNR=7.4						
HFS	Hagfors	21.94	351	P	P	01 29 36.0	-0.4
	comp=Z,3.0nm,0.4s,baz=164,slow=12,SNR=24						
NC602	NORSAR Array S	22.82	349	P	P	01 29 45.3	-0.5
EKA	Eskdalemuir Ar	23.05	324	P	P	01 29 47.9	-0.2
	comp=Z,4.7nm,0.8s,baz=120,slow=12,SNR=9.5						
ESK	Eskdalemuir	23.06	324	P	P	01 29 48.5	+0.3
FINES	FINESS Array B	23.08	7	P	P	01 29 47.1	-1.3
	comp=Z,3.2nm,0.6s,baz=173,slow=12,SNR=21						
FINES				LR	LR	01 39 22.1	
	comp=Z,47nm,21.1s,baz=254,slow=38						
FINES	FINESS Array B	23.08	7	P	P	01 29 46.8	-1.6
FIA1	FINESS Array S	23.08	7	P	P	01 29 47.5	-0.9
NC405	NORSAR Array S	23.15	349	P	P	01 29 48.7	-0.6
NC405				IAmb	IAmb	01 30 06.1	
	comp=Z,7.3nm,0.9s						
NB2	NORSAR Subarra	23.16	348	P	P	01 29 48.6	-0.7
	comp=Z,2.7nm,0.8s,baz=165,slow=11						
NOA	NORSAR Array B	23.16	348	P	P	01 29 48.5	-0.9
	comp=Z,0.4nm,0.5s,baz=156,slow=9.7,SNR=6.3						
BELG	Belogornoye	23.27	45	P	P	01 29 50.0	-0.5
	comp=Z,5.1nm,0.8s,baz=25,slow=15,SNR=1.4						
AKTO	Aktyubinsk	28.90	54	P	P	01 30 42.5	+0.7
	comp=Z,0.7nm,0.4s,baz=127,slow=23,SNR=1.9						
TORD	Torodi Ar. Bea	30.39	218	P	P	01 30 55.2	-0.2
	comp=Z,1.0nm,0.6s,baz=29,slow=9.9,SNR=8.4						
TORD	Torodi Ar. Bea	30.39	218	P	P	01 30 56.1	+0.7
ARCES	ARCESS Array B	31.06	3	P	P	01 31 00.1	-0.7
	comp=Z,1.2nm,0.7s,baz=197,slow=9.1,SNR=4.7						
KURBB	Kurchatov Arra	41.95	54	P	P	01 32 35.2	+1.4
	comp=Z,0.6nm,0.4s,baz=283,slow=8.4,SNR=1.9						
MK31	Makanchi Array	45.06	59	P	P	01 32 58.4	-0.5
MK31				IAmb	IAmb	01 33 21.1	
	comp=Z,2.9nm,1.2s						
MKAR	Makanchi Array	45.06	59	P	P	01 32 58.0	-0.9
	comp=Z,0.5nm,0.4s,baz=282,slow=7.4,SNR=9.6						
MKAR	Makanchi Array	45.06	59	P	P	01 32 57.9	-1.0
ZAA0	Zalesovo Array	45.38	48	P	P	01 33 01.0	-0.3
ZAA0				IAmb	IAmb	01 33 02.9	
	comp=Z,1.9nm,0.5s						
ZALV	Zalesovo Beam	45.38	48	P	P	01 33 00.4	-0.9
	comp=Z,1.8nm,0.5s,baz=279,slow=7.8,SNR=8.6						
ZALV	Zalesovo Beam	45.38	48	P	P	01 33 00.5	-0.8
SCHQ	Schefferville	58.11	317	P	P	01 34 36.7	+0.3
	comp=Z,2.2nm,0.5s,baz=51,slow=4.4,SNR=6.7						

PRU 18 01:26:15.3±0.0**, 49°.78N×18°.52E, h0^{km}, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	Ostrava-Krasne	0.25	284	*e*PG	Pg	01 26 19.9	-0.1
OKC				*e*SG	Sg	01 26 22.8	-0.5
MORC	Moravsky Berou	0.63	270	*e*PG	Pg	01 26 27.3	-0.1
MORC				*e*SG	Sg	01 26 35.5	-0.1
KRLC	Kraliky	1.16	285	*e*SG	Sg	01 26 51.8	-0.8
VRAC	Vranov	1.34	250	*e*SG	Sg	01 26 58.0	-0.3
DPC	Dobruska-Polom	1.53	293	*e*SG	Sg	01 27 02.1	-2.2
KRUC	Moravsky	1.56	243	*e*PG	Pn	01 26 43.8	-0.5
KRUC				*e*SG	Sn	01 27 05.1	-0.2
CHVC	Chvalec	1.78	298	*e*SG	Sn	01 27 11.1	+0.4

PRU ***18*** *01:32:45.6±0.0, 50°.19N×19°.12E, h0^{km}*

ISC 18 01:32:45.2±1.6**, 50°.14N**±0°.09×**19°.14E**±0°.05**, h0^{km}, n11, σ0^{s}.96**/19**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	Ostrava-Krasne	0.71	245	*e*PG	Pg	01 33 00.1	+1.2
OKC				*e*SG	Sg	01 33 08.9	+0.8
LANS	Liptovska Anna	1.02	168	*e*PG	Pg	01 33 04.8	+0.1
LANS				*e*SG	Sg	01 33 18.5	+0.6
LANS				*e*LG	Lg	01 33 18.9	
NIE	Niedzica	1.04	134	*e*Pg	Pg	01 33 05.9	+0.7
NIE				*e*Sg	Sb	01 33 21.3	+0.9
MORC	Moravsky Berou	1.10	251	*e*PG	Pg	01 33 06.8	+0.6
MORC				*e*SG	Sg	01 33 21.5	+1.1
KRLC	Kraliky	1.52	268	*e*SG	Sg	01 33 33.9	-0.2
VYHS	Vyhne	1.66	187	*e*PN	Pn	01 33 14.8	-0.9
VYHS				*e*SN	Sn	01 33 36.3	-1.4
VYHS				*e*LG	Lg	01 33 37.0	
DPC	Dobruska-Polom	1.82	278	*e*PG	Pn	01 33 17.9	0.0
DPC				*e*SG	Sg	01 33 43.9	+0.1
VRAC	Vranov	1.85	244	*e*PN	Pb	01 33 19.9	-0.1
VRAC				*e*SG	Sb	01 33 43.7	0.0
KRUC	Moravsky	2.09	240	*e*PN	Pb	01 33 23.7	-0.3
KRUC				*e*SG	Sb	01 33 51.8	+1.3
PRU	Pruhonice	2.97	269	*e*SG	Sg	01 34 18.6	-2.0
KHC	Kasperske Hory	3.76	256	*e*SG	Sg	01 34 44.8	-1.1

SOME ***18*** *01:35:10.6, 40°.45N×73°.23E, h0^{km}*

KRNET ***18*** *01:35:12.3±0.1, 40°.36N×73°.21E, h15^{km}, mb3.7*

KNET ***18*** *01:35:13.5±0.4, 40°.44N×73°.34E, h4^{km}±3^{km}, ml3.0, Error ellipse: s-maj=4.7km s-min=2.3km az=88.0*

ISU ***18*** *01:35:13, 40°.30N×73°.10E, h5^{km}*

NNC ***18*** *01:35:15.0±1.0, 40°.55N×73°.21E, h0^{km}, mb4.1, mpv3.8, Error ellipse: s-maj=8.8km s-min=4.2km az=178.0*

ISC 18 01:35:13.1±0.8**, 40°.41N**±0°.03×**73°.23E**±0°.02**, h10^{km}, n71, σ2^{s}.06**/116**, 43C-23D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	Osh	0.36	289	*e*P	Pg	01 35 20.0	-0.3
OHH				*e*S	Sg	01 35 25.0	0.0
OHH	Osh	0.36	289	⇑*i*P	Pg	01 35 19.7	-0.6
	baz=98						
OHH				⇑*i*S	Sg	01 35 25.0	0.0
	baz=98						
SFK	Sufi-Kurgan	0.45	152	⇑*e*P	Pg	01 35 19.9	-2.0
	baz=47						
SFK				⇑*e*S	Sg	01 35 25.6	-2.2
	baz=47						
SALK	Salom-Alik	0.65	43	⇓*e*P	Pg	01 35 25.6	-0.2
	baz=41						
SALK				⇓*e*S	Sb	01 35 35.3	-0.6
	baz=41						
FRG	Fergana	1.10	269	*e*P	Pb	01 35 33.0	-1.3
FRG				*e*S	Sg	01 35 48.0	-0.7
DRK	Karamyk	1.44	230	⇑*i*P	Pn	01 35 38.3	-1.2
	baz=32						
DRK				⇑*i*S	Sn	01 35 57.2	-1.3
	baz=32						
AML	Almayashu	1.76	11	⇓P	Pg	01 35 46.0	-0.9
	369nm,0.2s,SNR=1004						
AML				⇓S	Sg	01 36 11.1	+1.4
	206nm,0.4s						
AML	Almayashu	1.76	11	⇑*i*P	Pg	01 35 45.7	-1.2
	baz=11						
AML				⇑*i*S	Sg	01 36 09.9	+0.2
	baz=11						
BTK	Batken	1.88	260	*e*P	Pn	01 35 46.0	+0.6
BTK				*e*S	Sn	01 36 12.0	+2.8
BTK	Batken	1.88	260	⇑*i*P	Pn	01 35 46.3	+0.9
	baz=62						
BTK				⇑*i*S	Sn	01 36 11.0	+1.8
	baz=62						
TRKS	Terek-Say	1.94	306	⇑*i*P	Pn	01 35 46.9	+0.6
	baz=6.0						
TRKS				⇑*i*S	Sb	01 36 12.7	-0.3
	baz=6.0						
UCH	Uchtor	2.06	28	⇓P	Pb	01 35 50.5	-0.4
	31nm,0.2s,SNR=112						
UCH				⇓S	Sg	01 36 20.0	+0.6
	41nm,0.2s						
UCH	Uchtor	2.06	28	⇑*i*P	Pb	01 35 50.5	-0.4
	baz=27						
UCH				⇑*i*S	Sg	01 36 17.9	-1.5
	baz=27						
MNAS	Manas	2.15	346	⇓*i*P	Pb	01 35 51.5	-0.7
	baz=46						
MNAS				⇓*i*S	Sg	01 36 20.3	-1.9
	baz=46						
EKS2	Erkin-Say	2.29	10	⇑P	Pb	01 35 54.4	-0.2
	20nm,0.2s,SNR=84						
EKS2				⇑S	Sg	01 36 25.7	-1.0
	27nm,0.2s						
EKS2	Erkin-Say	2.29	10	⇑*e*P	Pb	01 35 53.7	-0.9
	baz=10.0						

EKS2				⇑*i*S	Sg	01 36 23.6	-3.1
	baz=10.0						
MRKS	Merke	2.34	360	*e*P	Pb	01 35 54.3	-1.1
	38nm,0.4s						
MRKS				*e*S	Sg	01 36 26.1	-2.0
	129nm,0.2s						
MRKS	Merke	2.34	360	Pg	Pb	01 35 54.3	-1.1
	38nm,0.4s						
MRKS				Lg	Lg	01 36 26.2	
	129nm,0.2s						
AAK	Ala-Archa	2.42	23	⇓P	Pb	01 35 56.0	-0.9
	43nm,0.2s,SNR=42						
AAK				⇑S	Sg	01 36 29.2	-1.8
	64nm,0.4s						
AAK	Ala-Archa	2.42	23	⇓Pn	Pb	01 35 56.0	-0.9
	47nm,0.5s						
AAK				⇑Lg	Lg	01 36 29.3	
	29nm,0.4s						
AAK	Ala-Archa	2.42	23	⇑*i*P	Pb	01 35 55.5	-1.4
	baz=22						
AAK				⇑*i*S	Sb	01 36 26.8	-0.1
	baz=22						
KBK	Karagaybulak	2.59	29	⇑P	Pb	01 35 58.4	-1.4
	23nm,0.2s,SNR=36						
KBK	Karagaybulak	2.59	29	⇑*e*P	Pb	01 35 58.0	-1.8
	baz=29						
KBK				⇑*i*S	Sb	01 36 30.9	-0.9
	baz=29						
GAR	Garm	2.65	239	⇑*i*P	Pn	01 35 57.8	+1.8
	baz=40						
GAR				⇑*i*S	Sn	01 36 30.0	+1.8
	baz=40						
CHMS	Chumysh	2.83	23	⇓P	Pb	01 36 01.5	-2.2
	27nm,0.3s,SNR=5.5						
CHMS	Chumysh	2.83	23	⇑*i*P	Pb	01 36 01.2	-2.5
	baz=23						
CHMS				⇑*i*S	Sb	01 36 36.5	-2.0
	baz=23						
DZA	Taraz	2.86	331	*e*P	Pb	01 36 04.6	+0.3
	81nm,0.1s						
DZA				*e*S	Sg	01 36 43.7	-1.3
	416nm,0.2s						
DZA	Taraz	2.86	331	Pg	Pb	01 36 04.6	+0.3
	81nm,0.1s						
DZA				Lg	Lg	01 36 43.7	
	416nm,0.2s						
ULHL	Ulahol	2.92	50	⇑P	Pn	01 36 02.2	+2.4
	14nm,0.1s,SNR=17						
ULHL	Ulahol	2.92	50	⇑*i*P	Pn	01 36 02.7	+2.9
	baz=49						
ULHL				⇑*i*S	Sb	01 36 39.3	-1.9
	baz=49						
USP	Ospenovka	3.01	18	⇑*i*P	Pn	01 36 03.7	+2.8
	baz=18						
USP				⇑*i*S	Sb	01 36 40.9	-2.8
	baz=18						
TKM2	Tokmak 2	3.08	34	⇓P	Pn	01 36 04.9	+2.9
	26nm,0.3s,SNR=11						
TKM2	Tokmak 2	3.08	34	⇑Pn	Pn	01 36 04.7	+2.8
	2.3nm,0.5s						
TKM2				⇓Pg	Pb	01 36 08.9	+0.9
	10nm,0.3s						
TKM2				⇓Lg	Lg	01 36 50.3	
	29nm,0.7s						
TKM2	Tokmak 2	3.08	34	⇓*i*P	Pn	01 36 04.7	+2.8
	baz=34						
TKM2				⇓*i*S	Sb	01 36 42.2	-3.5
	baz=34						
CHM	Chimkent	3.33	306	*e*P	Pb	01 36 12.6	+0.3
	5.3nm,0.4s						
CHM				*e*S	Sg	01 36 57.5	-2.6
	315nm,0.4s						
KK02	Karatay Array	3.38	324	⇑Pn	Pn	01 36 07.7	+1.8
	0.2nm,0.2s						
KK02				⇑Pg	Pb	01 36 14.0	+1.0
	3.1nm,0.3s						
KK02				⇑Lg	Lg	01 36 56.5	
	14nm,0.3s						
DGS	Degeres	3.41	33	*e*P	Pb	01 36 13.8	+0.1
	25nm,0.5s						
DGS				*e*S	Sg	01 36 59.7	-3.0
	26nm,0.7s						
DGS	Degeres	3.41	33	Pg	Pb	01 36 13.8	+0.1
	25nm,0.5s						
DGS				Lg	Lg	01 36 59.7	
	26nm,0.7s						
CHGR	Chuyangaron	3.60	242	⇑*i*P	Pn	01 36 10.8	+1.8
	baz=43						
CHGR				⇑*i*S	Sn	01 36 53.2	+1.5
	baz=43						
MTBS	Maitube	3.62	40	*e*P	Pb	01 36 17.7	+0.4
	16nm,0.3s						
MTBS				*e*S	Sg	01 37 06.2	-3.3
	25nm,0.2s						
MTBS	Maitube	3.62	40	Pg	Pb	01 36 17.7	+0.4
	16nm,0.3s						
MTBS				Lg	Lg	01 37 06.2	
	25nm,0.2s						
BRLS	Borolday	3.65	317	*e*P	Pb	01 36 15.8	-1.9
	12nm,0.2s						
BRLS				*e*S	Sb	01 37 03.2	+1.1
	34nm,0.1s						
BRLS	Borolday	3.65	317	Pg	Pb	01 36 15.8	-1.9
	12nm,0.2s						
BRLS				Lg	Lg	01 37 03.2	
	34nm,0.1s						
TARG	Taragay, Kyrgy	3.70	68	⇑*i*P	Pn	01 36 12.9	+2.1
	baz=67						
TARG				⇑*i*S	Sn	01 36 56.7	+2.0
	baz=67						
TNSS	Tian-Shan	3.83	45	*e*P	Pb	01 36 22.6	+1.6
	25nm,0.4s						
TNSS				*e*S	Sg	01 37 14.6	-1.4
	19nm,0.5s						
TNSS	Tian-Shan	3.83	45	Pg	Pb	01 36 22.6	+1.6
	25nm,0.4s						
TNSS				Lg	Lg	01 37 14.6	
	19nm,0.5s						
AAA	Alma-Ata	3.93	43	*e*P	Pb	01 36 23.9	+1.4
	45nm,0.2s						
AAA				*e*S	Sg	01 37 16.9	-2.4
	100nm,0.4s						
AAA	Alma-Ata	3.93	43	Pg	Pb	01 36 23.9	+1.4
	45nm,0.2s						
AAA				Lg	Lg	01 37 16.9	
	100nm,0.4s						
MDOK	Medeo	3.97	45	*e*P	Pb	01 36 25.0	+1.8
	21nm,0.5s						
MDOK				*e*S	Sg	01 37 18.7	-1.8
	29nm,0.7s						
MDOK	Medeo	3.97	45	⇓Pn	Pn	01 36 17.3	+3.1
	3.8nm,0.5s						
MDOK				⇓Pg	Pb	01 36 25.7	+2.5
	17nm,0.5s						
MDOK				⇓Lg	Lg	01 37 18.4	
	35nm,0.7s						
MDOK	Medeo	3.97	45	Pg	Pb	01 36 25.0	+1.8
	21nm,0.5s						
MDOK				Lg	Lg	01 37 18.7	
	29nm,0.7s						
KOTS	Kotyrbulak	4.05	44	*e*P	Pb	01 36 25.9	+1.3
	30nm,0.5s						
KOTS				*e*S	Sg	01 37 20.1	-3.0
	61nm,0.5s						
KOTS	Kotyrbulak	4.05	44	Pg	Pb	01 36 25.9	+1.3
	30nm,0.5s						
KOTS				Lg	Lg	01 37 20.1	
	61nm,0.5s						
KUU	Kurty	4.18	33	*e*P	Pb	01 36 28.9	+2.1
	7.3nm,0.2s						
KUU				⇑*i*S	Sg	01 37 25.4	-2.0
	11nm,0.4s						
KUU	Kurty	4.18	33	Pg	Pb	01 36 28.9	+2.1
	7.3nm,0.2s						
KUU				Lg	Lg	01 37 25.4	
	11nm,0.4s						
BTLS	Baital	4.67	7	*e*P	Pb	01 36 37.3	+2.2
	3.7nm,0.4s						
BTLS				*e*S	Sg	01 37 39.4	-3.7
	11nm,0.3s						
BTLS	Baital	4.67	7	Pg	Pb	01 36 37.3	+2.2
	3.7nm,0.4s						
BTLS				Lg	Lg	01 37 39.4	
	11nm,0.3s						
SATY	Saty	4.69	54	*e*P	Pb	01 36 37.8	+2.3
	12nm,0.4s						
SATY				*e*S	Sg	01 37 40.6	-3.1
	20nm,0.5s						
SATY	Saty	4.69	54	Pg	Pb	01 36 37.8	+2.3
	12nm,0.4s						
SATY				Lg	Lg	01 37 40.6	
	20nm,0.5s						
KURS	Kuram	4.80	48	*e*P	Pb	01 36 39.4	+2.1
	7.1nm,0.3s						
KURS				*e*S	Sg	01 37 43.7	-3.5
	9.1nm,0.6s						
KURS	Kuram	4.80	48	Pg	Pb	01 36 39.4	+2.1
	7.1nm,0.3s						
KURS				Lg	Lg	01 37 43.7	
	9.1nm,0.6s						
KPKS	Kokpek	5.09	51	*e*P	Pb	01 36 44.3	+2.1
	6.8nm,0.3s						
KPKS				*e*S	Sg	01 37 51.9	-4.6
	18nm,0.4s						
ARXS	Arharly	5.11	40	*e*P	Pb	01 36 45.7	+3.1
	4.4nm,0.3s						
ARXS				*e*S	Sg	01 37 54.2	-2.8
	12nm,0.4s						
ARXS	Arharly	5.11	40	Pg	Pb	01 36 45.7	+3.1
	4.4nm,0.3s						
ARXS				Lg	Lg	01 37 54.2	
	12nm,0.4s						
UZB	Uzynbulak	5.12	56	*e*P	Pb	01 36 45.5	+2.6
	5.7nm,0.4s						
UZB				*e*S	Sg	01 37 54.0	-3.6
	14nm,0.6s						
UZB	Uzynbulak	5.12	56	Pg	Pb	01 36 45.5	+2.6
	5.7nm,0.4s						
UZB				Lg	Lg	01 37 53.9	
	14nm,0.6s						
BLB	Baldybastay	5.36	45	Pg	Pb	01 36 50.0	+3.0
	12nm,0.5s						
BLB				Lg	Lg	01 38 01.7	
	20nm,0.5s						
PDGK	Podgornoye	5.51	56	Pg	Pb	01 36 53.3	+3.8
	1.9nm,0.4s						
PDGK				Lg	Lg	01 38 07.5	
	5.1nm,0.4s						
PDGK	Podgornoye	5.51	56	⇓Pn	Pn	01 36 39.3	+4.0
	3.4nm,0.9s						
PDGK				⇓Pg	Pg	01 36 55.2	-3.5
	3.1nm,0.7s						
PDGK				⇓Lg	Lg	01 38 07.6	
	17nm,1.0s						
OTUK	Ortayu	7.86	356	⇓Lg	Lg	01 39 19.4	
	11nm,0.8s						
AB31	Akbulak array	12.91	318	P	Pn	01 38 17.0	+0.4
	0.3nm,0.3s,baz=125,slow=14,SNR=5.8						

ATH ***18*** *01:35:29.9, 38°.55N×20°.53E, h13km±1km, ML3.3/9, Error ellipse: s-maj=1.7km s-min=0.6km az=284.0*

BEO ***18*** *01:35:30.3±0.7, 38°.63N×20°.26E, h0km, ML3.2/12*

THE ***18*** *01:35:30.0, 38°.55N×20°.52E, h11km±1km, ML3.5/11, Error ellipse: s-maj=1.4km s-min=0.3km az=65.0*

IDC ***18*** *01:35:31.4±1.6, 38°.96N×20°.47E, h0km, mb3.4/6, mb1 3.5/6, mb1mx3.3/33, mbtmp3.5/6, MS3.1/2, Ms1 3.1/2, ms1mx2.5/28, Error ellipse: s-maj=40.0km s-min=27.0km az=112.0*

ISC 18 01:35:29.3±0.7**, 38°.56N**±0°.02×**20°.56E**±0°.04**, h16**km±4km**,**
n100, $\sigma 1^{s}$**11**/127**, mb3.5**/6**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FSK	Fiskardo	0.10	177	P	Pg	01 35 32.7	0.0
FSK				S	Sg	01 35 34.5	-0.3
	27µm,0.4s						
FSK	Fiskardo	0.10	177	P	Pg	01 35 32.6	0.0
FSK				S	Sg	01 35 34.6	-0.3
FSK				AML	AML	01 35 35.0	
	comp=E,68640µm,0.3s						
FSK				AML	AML	01 35 35.8	
	comp=N,39462µm,0.5s						
EVGI	Lefkada island	0.10	50	P	Pb	01 35 33.0	0.0
EVGI				S	Sb	01 35 35.6	+0.2
	comp=N,63µm,0.2s						
EVGI	Lefkada island	0.10	50	P	Pb	01 35 32.9	0.0
EVGI				S	Sb	01 35 35.4	0.0
DRAG	Dragano-Lefkad	0.13	7	P	Pg	01 35 32.9	-0.3
DRAG				S	Sg	01 35 35.9	+0.3
	comp=N,176µm,0.3s						
DRAG	Dragano-Lefkad	0.13	7	P	Pg	01 35 32.8	-0.3
DRAG				S	Sg	01 35 36.0	+0.3
NYDR	Nydri-Lefkada	0.19	35	P	Pb	01 35 34.3	-0.3
NYDR				S	Sb	01 35 37.4	-0.6
	comp=N,9µm,0.3s						
NYDR	Nydri-Lefkada	0.19	35	P	Pb	01 35 34.3	-0.3
NYDR				S	Sb	01 35 37.7	-0.3
LKD2	Lefkada island	0.25	19	P	Pb	01 35 35.2	-0.3
LKD2				S	Sb	01 35 39.2	-0.4
	comp=N,11µm,0.4s						
LKD2	Lefkada island	0.25	19	P	Pb	01 35 35.1	-0.4
LKD2				S	Sb	01 35 39.4	-0.2
LKD2				AML	AML	01 35 40.0	
	comp=E,21212µm,0.5s						
LKD2				AML	AML	01 35 40.2	
	comp=N,21639µm,0.3s						
TSLK	Tsoukalades, L	0.28	16	P	Pb	01 35 35.9	-0.1
TSLK				S	Sb	01 35 40.8	+0.3
	comp=N,13µm,0.4s						
TSLK	Tsoukalades, L	0.28	16	P	Pb	01 35 35.5	-0.5
TSLK				S	Sb	01 35 40.4	-0.2
TSLK				AML	AML	01 35 41.7	
	comp=N,25968µm,0.4s						
TSLK				AML	AML	01 35 43.0	
	comp=E,24976µm,0.4s						
KEF4	Livadi, Kephal	0.31	199	P	Pg	01 35 36.2	+0.3
KEF4				S	Sg	01 35 41.2	+0.8
	comp=E,49µm,0.3s						
KEF4	Livadi, Kephal	0.31	199	P	Pg	01 35 36.1	+0.3
KEF4				S	Sg	01 35 41.1	+0.7
DMLN	Damoulianata-K	0.35	204	P	Pg	01 35 36.8	+0.3
DMLN				S	Sg	01 35 41.5	+0.1
	comp=E,7µm,0.5s						
DMLN	Damoulianata-K	0.35	204	P	Pg	01 35 36.6	+0.1
LXRA	Lixouri, Kepha	0.37	195	P	Pg	01 35 37.1	+0.3
VLS	Valsamata	0.38	176	P	Pb	01 35 37.4	-0.3
VLS				S	Sb	01 35 43.7	+0.4
	comp=E,8µm,0.3s						
VLS	Valsamata	0.38	176	P	Pb	01 35 37.3	-0.3
VLS				S	Sb	01 35 43.2	-0.1
VLS				AML	AML	01 35 43.9	
	comp=E,11131µm,0.3s						
VLS				AML	AML	01 35 44.1	
	comp=N,19118µm,0.3s						
KEF3	Kipouria, Keph	0.39	205	P	Pg	01 35 36.9	-0.3
KEF3				S	Sg	01 35 42.9	+0.3
	comp=N,17µm,0.5s						
KEF3	Kipouria, Keph	0.39	205	P	Pg	01 35 36.8	-0.3
KEF3				S	Sg	01 35 42.6	0.0
PSDA	Pessada-Kefalo	0.44	177	P	Pb	01 35 38.5	-0.3
PSDA				S	Sb	01 35 44.8	-0.2
PSDA	Pessada-Kefalo	0.44	177	P	Pb	01 35 38.4	-0.3
PSDA				S	Sb	01 35 44.9	-0.2
PVO	Paravola	0.76	85	P	Pn	01 35 45.4	-0.1
PVO	Paravola	0.76	85	P	Pn	01 35 45.3	-0.1
PVO				AML	AML	01 36 03.0	
	comp=E,3936µm,0.5s						
PVO				AML	AML	01 36 03.9	
	comp=N,4224µm,0.5s						
LTHK	Lithakia	0.87	165	P	Pn	01 35 45.9	-1.0
LTHK				S	Sn	01 35 58.9	-0.4
	comp=N,1µm,0.4s						
LTHK	Lithakia	0.87	165	P	Pn	01 35 45.6	-1.4
RLS	Riolos of Patr	0.87	124	P	Pn	01 35 47.1	+0.2
RLS	Riolos of Patr	0.87	124	P	Pn	01 35 46.9	0.0
IGT	Igoumenitsa	0.99	350	P	Pb	01 35 48.0	-0.1
EVR	Evrytania	1.04	69	P	Pn	01 35 49.9	+0.4
EVR				AML	AML	01 36 17.1	
	comp=N,1249µm,0.9s						
EVR				AML	AML	01 36 17.3	
	comp=E,1345µm,0.9s						
EFP	Efpalio	1.07	96	P	Pn	01 35 49.7	0.0
EFP				AML	AML	01 36 13.9	
	comp=E,2823µm,0.6s						
EFP				AML	AML	01 36 15.5	
	comp=N,2023µm,0.6s						
ANX	Ano Chora	1.07	88	P	Pn	01 35 50.0	+0.2
ANX				AML	AML	01 36 16.3	
	comp=N,3295µm,0.5s						
ANX				AML	AML	01 36 17.2	
	comp=E,3196µm,0.4s						
DRO	Drossia	1.09	123	P	Pn	01 35 50.7	+0.7
DRO	Drossia	1.09	123	P	Pn	01 35 50.6	+0.6
JAN	Janina	1.12	12	P	Pg	01 35 51.2	+0.1
JAN				AML	AML	01 36 13.2	
	comp=E,3077µm,0.5s						
JAN				AML	AML	01 36 16.4	
	comp=N,1687µm,0.4s						
AGG	Agios Georgios	1.46	71	P	Pg	01 35 56.9	-0.6
THL	Klokotos Trika	1.52	48	P	Pg	01 35 58.1	-0.4
GUR	Goura	1.54	113	P	Pg	01 35 57.2	-1.7
OHR	Ohrid	2.56	4	*e*Pn	Pb	01 36 13.8	-1.1
OHR				*e*Sn	Sn	01 36 43.1	+2.0
OHR	Ohrid	2.56	4	*i* Pn	Pb	01 36 13.9	-1.0
TIR	Tirane	2.84	349	*e*Pn	Pn	01 36 16.3	+2.3
VAY	Valandovo	3.17	29	*e*Pn	Pb	01 36 22.6	-2.7
VAY	Valandovo	3.17	29	*i* Pn	Pb	01 36 22.5	-2.7
STIP	Stip	3.38	21	*i* Pn	Pb	01 36 26.4	-2.4
DRME	Dracevica, Mon	3.78	344	*e*Pn	Pn	01 36 28.1	+1.2
PDG	Podgorica	4.00	346	*e*Pn	Pn	01 36 31.2	+1.3
PDG				*e*Sn	Sn	01 37 16.5	+0.1
PDG	Podgorica	4.00	346	*e*Pn	Pn	01 36 30.6	+0.7
PRVS	Prvonek	4.12	16	*e*Pn	Pn	01 36 33.2	+1.6
PRVS				*e*Sn	Sn	01 37 21.6	+2.2
HCY	Herceg Novi	4.19	339	*e*Pn	Pn	01 36 32.4	-0.2
BARS	Barje	4.36	12	*e*Pn	Pn	01 36 37.1	+2.1
TREB	Trebinje	4.48	339	*e*Pn	Pn	01 36 36.8	+0.2
TREB				*e*Sn	Sn	01 37 26.6	-1.8
TREB	Trebinje	4.48	339	*e*Pn	Pn	01 36 36.6	0.0
DBRK	Dubrovnik	4.50	337	*e*Pn	Pn	01 36 36.9	0.0
VTS	Vitosha	4.54	26	*e*Pn	Pn	01 36 41.2	+3.6
VTS				*e*Sn	Sn	01 37 33.2	+3.1
BRY	Bratogost	4.61	341	*e*Pn	Pn	01 36 37.1	-1.3
SJES	Sjenica	4.72	355	*e*Pn	Pn	01 36 41.6	+1.6
SJES				*e*Sn	Sn	01 37 36.7	+2.2
UPM	Unac-Piva	4.81	345	*e*Pn	Pn	01 36 42.3	+1.0
STON	Ston	4.83	334	*e*Pn	Pn	01 36 41.4	+0.1
RUDO	Rudo	5.14	350	*e*Pn	Pn	01 36 45.6	0.0
BOVS	Bovan	5.15	9	*e*Pn	Pn	01 36 43.1	-2.7
BOVS				*e*Sn	Sn	01 37 45.2	+0.4
GRUS	Gruza	5.33	1	*e*Pn	Pn	01 36 49.8	+1.6
BBLS	Lazići	5.38	351	*e*Pn	Pn	01 36 49.7	+0.7
BBLS				*e*Sn	Sn	01 37 48.7	-1.9
BBLS	Lazići	5.38	351	*e*Pn	Pn	01 36 49.3	+0.3
MAKA	Makarska	5.43	332	*e*Pn	Pn	01 36 50.0	+0.3
DIVS	Divibare	5.55	356	*e*Pn	Pn	01 36 52.3	+0.9
DIVS				*e*Sn	Sn	01 37 53.9	-1.1
DIVS	Divibare	5.55	356	*e*Pn	Pn	01 36 51.9	+0.5
HVAR	Hvar	5.57	327	*e*Pn	Pn	01 36 51.9	+0.4
RICI	Ricice	5.57	333	*e*Pn	Pn	01 36 51.7	+0.2
HAPS	Han Pijesak,Bl	5.66	348	*e*Pn	Pn	01 36 53.3	+0.5
TRUS	Trudelj	5.67	359	*e*Pn	Pn	01 36 54.4	+1.6
KIJV	Kijevo	6.28	331	*e*Pn	Pn	01 37 02.1	+0.8
ZIRJ	Zirje	6.30	326	*e*Pn	Pn	01 37 01.3	-0.2
MGRS	Mrkonjic Grad	6.41	337	*e*Pn	Pn	01 37 02.9	-0.2
MORI	Morici	6.44	327	*e*Pn	Pn	01 37 04.2	+0.7
FRGS	Fruska Gora	6.62	355	*e*Pn	Pn	01 37 06.2	+0.2
BLY	Banja Luka	6.68	339	*e*Pn	Pn	01 37 06.9	+0.1
DUGI	Dugi Otok	6.83	324	*i* Pn	Pn	01 37 09.2	+0.4
UDBI	Udbina	6.96	330	*e*Pn	Pn	01 37 12.2	+1.4
MRAK	Mrakovica	7.01	338	*e*Pn	Pn	01 37 11.2	-0.1
NVLJ	Novalja	7.36	326	*e*Pn	Pn	01 37 16.2	+0.1
RABC	Rab	7.55	327	*e*Pn	Pn	01 37 19.1	+0.4
MORH	Mrgy, Hungar	7.79	350	*e*Pn	Pn	01 37 19.6	-2.3
BRJN	Brijuni	8.13	323	*e*Pn	Pn	01 37 27.0	+0.3
RIY	Rijeka	8.14	328	*e*Pn	Pn	01 37 26.6	-0.1
RIY	Rijeka	8.14	328	*e*Pn	Pn	01 37 26.8	0.0
CRES	Cresnjev	8.19	334	*e*Pn	Pn	01 37 26.8	-0.7
CEY	Cerknica	8.50	330	*e*Pn	Pn	01 37 32.1	+0.4
LJU	Ljubljana	8.71	331	*e*Pn	Pn	01 37 34.7	0.0
SOKA	Soboth	9.08	335	*e*Pn	Pn	01 37 39.4	-0.3
	comp=N,0.6nm,0.3s						
SOKA				*e*Sn	Sn	01 39 16.0	-5.7
	comp=N,0.9nm,0.5s						
OBKA	Obir	9.10	333	*e*Pn	Pn	01 37 41.4	+1.3
	comp=N,0.5nm,0.1s						
MOA	Molln	10.36	336	*e*Pn	Pn	01 37 58.4	+1.2
	comp=N,1.1nm,0.4s						
GERES	GERESS Array B	11.41	337	LR	LR	01 44 00.3	
	comp=N,45nm,20.9s,baz=302,slow=46						
OBN	Obninsk	19.78	28	LR	LR	01 47 57.4	
	comp=N,116nm,18.2s,baz=144,slow=38						
HFS	Hagfors	22.03	351	P	P	01 40 22.6	-0.3
	comp=N,1.8nm,0.6s,baz=165,slow=12,SNR=6.7						
FINES	FINESS Array B	23.17	7	P	P	01 40 35.4	+0.5
	comp=N,4.6nm,1.1s,baz=186,slow=9.8,SNR=5.8						
NOA	NORSAR Array B	23.25	348	P	P	01 40 36.0	+0.2
	comp=N,0.4nm,0.8s,baz=162,slow=11,SNR=1.6						
TORD	Torodi Ar. Bea	30.34	219	P	P	01 41 47.1	+6.8
	comp=N,0.3nm,0.7s,baz=38,slow=9.5,SNR=2.2						
MKAR	Makanchi Array	45.08	59	P	P	01 43 48.2	+3.6
	comp=N,0.2nm,0.6s,baz=284,slow=7.5,SNR=4.2						
ZALV	Zalesovo Beam	45.42	48	P	P	01 43 49.2	+2.1
	comp=N,0.6nm,0.4s,baz=270,slow=7.4,SNR=4.3						

IDC ***18*** *01:47:41.1±1.6, 40°.52N×73°.22E, h0km, mb3.7/5, mb1 3.8/7, mb1mx3.4/56, mbtmp3.6/7, ML3.3/2, Error ellipse: s-maj=35.3km s-min=15.6km az=138.0*

KRNET ***18*** *01:47:43.3±0.1, 40°.52N×73°.46E, h11km, mb3.7*

KNET ***18*** *01:47:44.6±0.7, 40°.65N×73°.57E, h2km±5km, ml3.3, Error ellipse: s-maj=11.4km s-min=3.1km az=71.0*

NNC ***18*** *01:47:45.3±0.9, 40°.60N×73°.43E, h0km, mb4.1, mpv3.8, Error ellipse: s-maj=7.3km s-min=3.8km az=175.0*

SOME ***18*** *01:47:45.0, 40°.70N×73°.47E, h0km*

ISC 18 01:47:42.1±1.1**, 40°.56N**±0°.02×**73°.48E**±0°.02**, h1**km±9km**,**
n88, $\sigma 1^{s}$**39**/135**, mb3.8**/5**, 55C-25D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SALK	Salom-Alik	0.41	38	⇑*e*P	Pb	01 47 52.5	+0.2
	baz=37						
SALK				⇑*e*S	Sb	01 47 58.8	-0.3
	baz=37						
OHH	Osh	0.53	267	⇑*i*P	Pb	01 47 53.5	-0.8
	baz=71						
OHH				⇑*i*S	Sb	01 48 00.8	-1.7
	baz=71						
SFK	Sufi-Kurgan	0.54	178	⇑*e*P	Pg	01 47 53.2	+0.7
	baz=76						
SFK				⇑*e*S	Sg	01 48 00.2	+0.7
	baz=76						
AML	Almayashu	1.58	6	⇓P	Pg	01 48 13.4	+1.0
	198nm,0.2s,SNR=618						
AML				⇓S	Sg	01 48 35.7	+2.8
	646nm,0.3s						
AML	Almayashu	1.58	6	⇑*i*P	Pg	01 48 13.8	+1.4
	baz=6.0						
AML				⇑*i*S	Sg	01 48 36.2	+3.3
	baz=6.0						
DRK	Karamyk	1.68	231	⇑*i*P	Pb	01 48 14.3	+0.3
	baz=31						
DRK				⇑*i*S	Sg	01 48 36.9	+0.8
	baz=31						
UCH	Uchtor	1.84	25	⇓P	Pg	01 48 18.3	+0.9
	29nm,0.2s,SNR=89						
UCH				⇑S	Sg	01 48 43.7	+2.4
	118nm,0.2s						
UCH	Uchtor	1.84	25	⇑*e*P	Pg	01 48 18.6	+1.2
	baz=25						
UCH				⇑*i*S	Sg	01 48 44.2	+3.0
	baz=25						
TRKS	Terek-Say	2.02	300	⇑*i*P	Pg	01 48 20.0	-0.8
	baz=99						
TRKS				⇑*i*S	Sg	01 48 46.9	-0.2
	baz=99						
MNAS	Manas	2.06	339	⇑*i*P	Pg	01 48 21.8	+0.1
	baz=40						
MNAS				⇑*i*S	Sg	01 48 49.9	+1.5
	baz=40						
BTK	Batken	2.10	257	⇓*e*P	Pg	01 48 21.5	-0.8
	baz=58						
BTK				⇓*i*S	Sg	01 48 49.5	0.0
	baz=58						
EKS2	Erkin-Say	2.12	6	⇓P	Pg	01 48 22.6	0.0
	19nm,0.2s,SNR=43						
EKS2				⇓S	Sg	01 48 51.2	+1.1
	98nm,0.4s						
EKS2	Erkin-Say	2.12	6	⇑*i*P	Pg	01 48 22.7	0.0
	baz=6.0						
EKS2				⇑*i*S	Sg	01 48 51.3	+1.3
	baz=6.0						
MRKS	Merke	2.20	355	*e*P	Pg	01 48 24.4	+0.3
	90nm,0.3s						

MRKS				*e*S	Sg	01 48 52.5	-0.1
	268nm,0.2s						
MRKS	**Merke**	2.20	355	Pg	Pg	01 48 24.4	+0.3
	90nm,0.3s						
MRKS				Lg	Lg	01 48 52.5	
	268nm,0.2s						
AAK	**Ala-Archa**	2.21	20	Pn	Pg	01 48 24.2	-0.3
	23nm,0.3s,baz=189,slow=7.5,SNR=137						
AAK				Lg	Lg	01 48 53.9	
	30nm,0.3s,baz=23,slow=16,SNR=32						
AAK	**Ala-Archa**	2.21	20	P	Pg	01 48 24.2	-0.3
	SNR=93						
AAK	**Ala-Archa**	2.21	20	⇑Pn	Pg	01 48 23.9	-0.6
	27nm,0.3s						
AAK				⇑Sn	Sg	01 48 53.7	+0.4
	215nm,0.7s						
AAK	**Ala-Archa**	2.21	20	⇑*e*P	Pg	01 48 24.1	-0.3
	baz=20						
AAK				⇑*i*S	Sg	01 48 53.6	+0.4
	baz=20						
KBK	**Karagaybulak**	2.37	27	⇑P	Pg	01 48 26.8	-0.7
	25nm,0.2s,SNR=42						
KBK				⇑S	Sg	01 48 58.0	-0.1
	379nm,0.4s						
KBK	**Karagaybulak**	2.37	27	⇓*e*P	Pg	01 48 26.0	-1.5
	baz=27						
KBK				⇓*i*S	Sg	01 48 57.5	-0.7
	baz=27						
FRU1	**Bishkek**	2.41	20	⇑*i*P	Pg	01 48 27.0	-1.3
	baz=20						
FRU1				⇑*i*S	Sg	01 48 58.9	-0.6
	baz=20						
CHMS	**Chumysh**	2.62	21	⇑P	Pb	01 48 29.6	-0.1
	26nm,0.3s,SNR=15						
CHMS				⇓S	Sg	01 49 04.5	-1.6
	128nm,0.5s						
CHMS	**Chumysh**	2.62	21	⇑*e*P	Pb	01 48 29.5	-0.3
	baz=21						
CHMS				⇑*i*S	Sg	01 49 03.4	-2.8
	baz=21						
ULHL	**Ulahol**	2.67	50	⇑P	Pb	01 48 29.8	-1.1
	13nm,0.2s,SNR=9.9						
ULHL	**Ulahol**	2.67	50	⇑*i*P	Pb	01 48 30.3	-0.5
	baz=50						
ULHL				⇑*i*S	Sb	01 49 04.9	+0.7
	baz=50						
USP	**Ospenovka**	2.81	15	⇑P	Pb	01 48 31.6	-1.5
	12nm,0.2s,SNR=11						
USP	**Ospenovka**	2.81	15	⇓*i*P	Pb	01 48 32.2	-0.9
	baz=15						
USP				⇓*i*S	Sb	01 49 07.7	-0.3
	baz=15						
DZA	**Taraz**	2.84	326	⇑*i*P	Pg	01 48 36.5	+0.1
	122nm,0.3s						
DZA				⇓*i*S	Sg	01 49 13.6	+0.4
	426nm,0.5s						
DZA	**Taraz**	2.84	326	Pg	Pg	01 48 36.5	+0.1
	122nm,0.3s						
DZA				Lg	Lg	01 49 13.6	
	426nm,0.5s						
TKM2	**Tokmak 2**	2.84	33	⇑P	Pb	01 48 32.7	-1.0
	24nm,0.3s,SNR=22						
TKM2	**Tokmak 2**	2.84	33	⇑Pn	Pb	01 48 32.7	-1.0
	3.7nm,0.5s						
TKM2				⇓Pg	Pg	01 48 37.3	+0.8
	16nm,0.5s						
TKM2				⇑Lg	Lg	01 49 14.9	
	75nm,0.6s						
TKM2	**Tokmak 2**	2.84	33	⇑*i*P	Pb	01 48 32.8	-0.9
	baz=33						
TKM2				⇑*i*S	Sb	01 49 08.9	-0.2
	baz=33						
GAR	**Garm**	2.89	239	⇑*e*P	Pb	01 48 32.6	-1.9
	baz=39						
GAR				⇑*i*S	Sb	01 49 08.2	-2.2
	baz=39						
KST	**Kastek**	3.10	36	*e*P	Pg	01 48 41.4	-0.1
	27nm,0.3s						
KST				*e*S	Sg	01 49 21.7	+0.1
	68nm,0.6s						
KST	**Kastek**	3.10	36	Pg	Pg	01 48 41.4	-0.1
	27nm,0.3s						
KST				Lg	Lg	01 49 21.7	
	68nm,0.6s						
DGS	**Degeres**	3.18	32	*e*P	Pg	01 48 43.0	0.0
	39nm,0.3s						
DGS				*e*S	Sg	01 49 24.5	+0.2
	92nm,0.6s						
DGS	**Degeres**	3.18	32	Pg	Pg	01 48 43.0	0.0
	39nm,0.3s						
DGS				Lg	Lg	01 49 24.5	
	92nm,0.6s						
KK02	**Karatay Array**	3.38	320	⇓Pn	Pb	01 48 37.7	-5.0
	0.4nm,0.2s						
KK02				⇑Pg	Pg	01 48 43.6	-3.2
	10nm,0.4s						
KK02				⇓Lg	Lg	01 49 30.4	
	30nm,0.5s						
MTBS	**Maitube**	3.38	40	*e*P	Pg	01 48 46.1	-0.8
	9.8nm,0.3s						
MTBS				*e*S	Sg	01 49 29.4	-1.3
	54nm,0.5s						
MTBS	**Maitube**	3.38	40	Pg	Pg	01 48 46.1	-0.8
	9.8nm,0.3s						
MTBS				Lg	Lg	01 49 29.4	
	54nm,0.5s						
CHM	**Chimkent**	3.41	302	*e*P	Pg	01 48 47.5	+0.1
	3.8nm,0.3s						
CHM				*e*S	Sg	01 49 32.3	+0.8
	294nm,0.3s						
TARG	**Taragay, Kyrgy**	3.47	69	⇑*e*P	Pn	01 48 41.2	+3.7
	baz=68						
TARG				⇑*i*S	Sb	01 49 23.9	-3.3
	baz=68						
TNSS	**Tian-Shan**	3.58	45	*e*P	Pg	01 48 50.8	0.0
	9.1nm,0.3s						
TNSS				*e*S	Sg	01 49 37.9	+0.7
	50nm,0.4s						
TNSS	**Tian-Shan**	3.58	45	Pg	Pg	01 48 50.7	0.0
	9.1nm,0.3s						
TNSS				Lg	Lg	01 49 37.9	
	50nm,0.4s						
BRLS	**Borolday**	3.68	313	*e*P	Pg	01 48 51.2	-1.4
	20nm,0.6s						
BRLS				*e*S	Sg	01 49 38.8	-1.5
	49nm,0.6s						
BRLS	**Borolday**	3.68	313	Pg	Pg	01 48 51.2	-1.4
	20nm,0.6s						
BRLS				Lg	Lg	01 49 38.8	
	49nm,0.6s						
AAA	**Alma-Ata**	3.69	43	*e*P	Pg	01 48 52.6	-0.1
	44nm,0.2s						
AAA				*e*S	Sg	01 49 41.4	+0.9
	230nm,0.3s						
AAA	**Alma-Ata**	3.69	43	Pg	Pg	01 48 52.6	-0.1
	44nm,0.2s						
AAA				Lg	Lg	01 49 41.4	
	230nm,0.3s						
KNDC	**Almaty**	3.72	43	⇓Pg	Pg	01 48 53.4	+0.1
	40nm,0.5s						
KNDC				⇑Lg	Lg	01 49 43.3	
	301nm,0.7s						
MDOK	**Medeo**	3.72	44	*e*P	Pg	01 48 53.4	-0.1
	9.3nm,0.5s						
MDOK				*e*S	Sg	01 49 42.4	+0.7
	84nm,0.8s						
MDOK	**Medeo**	3.72	44	Pn	Pb	01 48 44.8	-3.9
	6.1nm,0.7s						
MDOK				⇑Pg	Pg	01 48 53.6	+0.1
	11nm,0.6s						
MDOK				⇑Lg	Lg	01 49 43.3	
	108nm,0.8s						
MDOK	**Medeo**	3.72	44	Pg	Pg	01 48 53.4	-0.1
	9.3nm,0.5s						
MDOK				Lg	Lg	01 49 42.4	
	84nm,0.8s						
KOTS	**Kotyrbulak**	3.81	44	*e*P	Pg	01 48 54.5	-0.6
	12nm,0.4s						
KOTS				*e*S	Sg	01 49 44.3	0.0
	135nm,0.6s						
KOTS	**Kotyrbulak**	3.81	44	Pg	Pg	01 48 54.5	-0.6
	12nm,0.4s						
KOTS				Lg	Lg	01 49 44.3	
	135nm,0.6s						
CHGR	**Chuyangaron**	3.84	242	⇑*e*P	Pn	01 48 45.5	+3.1
	baz=42						
CHGR				⇑*i*S	Sn	01 49 30.9	+2.7
	baz=42						
KUU	**Kurty**	3.95	32	⇓*i*P	Pg	01 48 56.6	-1.2
	8.7nm,0.4s						
KUU				⇓*i*S	Sg	01 49 48.3	-0.7
	41nm,0.7s						
KUU	**Kurty**	3.95	32	Pg	Pg	01 48 56.6	-1.2
	8.7nm,0.4s						
KUU				Lg	Lg	01 49 48.3	
	41nm,0.7s						
SATY	**Saty**	4.45	54	⇓*i*P	Pg	01 49 06.3	-1.0
	7.4nm,0.6s						
SATY				⇓*i*S	Sg	01 50 04.5	-0.4
	34nm,0.4s						
SATY	**Saty**	4.45	54	Pg	Pg	01 49 06.3	-1.0
	7.4nm,0.6s						
SATY				Lg	Lg	01 50 04.5	
	34nm,0.4s						
BTLS	**Baital**	4.50	5	*e*P	Pg	01 49 07.2	-1.1
	15nm,0.4s						
BTLS				*e*S	Sg	01 50 06.0	-0.6
	36nm,0.6s						
BTLS	**Baital**	4.50	5	Pg	Pg	01 49 07.2	-1.1
	15nm,0.4s						
BTLS				Lg	Lg	01 50 06.0	
	36nm,0.6s						
KURS	**Kuram**	4.56	48	⇑*i*P	Pg	01 49 08.8	-0.5
	5.1nm,0.5s						
KURS				⇑*i*S	Sg	01 50 09.0	+0.5
	14nm,0.7s						
KURS	**Kuram**	4.56	48	Pg	Pg	01 49 08.8	-0.5
	5.1nm,0.5s						
KURS				Lg	Lg	01 50 09.0	
	14nm,0.7s						
KPKS	**Kokpek**	4.84	51	*e*P	Pg	01 49 12.7	-2.2
	6.6nm,0.7s						
KPKS				*e*S	Sg	01 50 15.7	-1.9
	30nm,0.6s						
ARXS	**Arharly**	4.87	40	*e*P	Pg	01 49 13.8	-1.5
	6.0nm,0.7s						
ARXS				*e*S	Sg	01 50 17.6	-0.8
	27nm,0.6s						
ARXS	**Arharly**	4.87	40	Pg	Pg	01 49 13.8	-1.5
	6.0nm,0.7s						
ARXS				Lg	Lg	01 50 17.7	
	27nm,0.6s						
UZB	**Uzynbulak**	4.88	56	*e*P	Pg	01 49 13.9	-1.7
	5.5nm,0.4s						
UZB				*e*S	Sg	01 50 17.6	-1.2
	18nm,0.3s						
UZB	**Uzynbulak**	4.88	56	Pg	Pg	01 49 13.9	-1.7
	5.5nm,0.4s						
UZB				Lg	Lg	01 50 17.6	
	18nm,0.3s						
BLB	**Baldybastay**	5.12	45	Pg	Pg	01 49 18.7	-1.5
	14nm,0.5s						
BLB				Lg	Lg	01 50 25.6	
	48nm,0.7s						
PDGK	**Podgornoye**	5.27	56	Pg	Pg	01 49 21.2	-1.8
	2.5nm,0.5s						
PDGK				Lg	Lg	01 50 30.2	
	7.1nm,0.9s						
PDGK	**Podgornoye**	5.27	56	⇑Pn	Pn	01 49 05.1	+3.2
	2.7nm,0.9s						
PDGK				⇓Pg	Pg	01 49 21.0	-2.0
	3.6nm,0.5s						
PDGK				⇓Lg	Lg	01 50 31.4	
	18nm,0.7s						
TDK	**Taldyqorghan**	5.73	38	*e*P	Pg	01 49 30.6	-1.2
	53nm,0.4s						
TDK				*e*S	Sg	01 50 46.2	+0.1
	56nm,0.4s						
TDK	**Taldyqorghan**	5.73	38	Pg	Pg	01 49 30.6	-1.2
	53nm,0.4s						
TDK				Lg	Lg	01 50 46.2	
	56nm,0.4s						
KTMS	**Ketmen**	5.88	58	*e*P	Pg	01 49 33.9	-0.7
	3.8nm,0.6s						
KTMS				*e*S	Sg	01 50 52.2	+1.5
	12nm,0.5s						
KTMS	**Ketmen**	5.88	58	Pg	Pg	01 49 33.9	-0.7
	3.8nm,0.6s						
KTMS				Lg	Lg	01 50 52.2	
	12nm,0.5s						
KAPS	**Kapalarasan**	6.40	40	*e*P	Pg	01 49 43.0	-1.6
	1.8nm,0.4s						
KAPS				*e*S	Sg	01 51 07.0	-0.5
	11nm,0.7s						
KAPS	**Kapalarasan**	6.40	40	Pg	Pg	01 49 42.9	-1.6
	1.8nm,0.4s						
KAPS				Lg	Lg	01 51 06.9	
	11nm,0.7s						
OTUK	**Ortayu**	7.73	354	⇑Pg	Pg	01 50 05.9	-4.2
	1.9nm,0.9s						
OTUK				⇓Lg	Lg	01 51 50.0	
	12nm,0.5s						
MK31	**Makanchi Array**	8.92	43	⇑Lg	Lg	01 52 29.3	
	4.1nm,0.8s						
MKAR	**Makanchi Array**	8.92	43	Pn	Pn	01 49 54.9	+2.9
	0.1nm,0.3s,baz=230,slow=15,SNR=6.1						
MKAR				Lg	Lg	01 52 27.7	
	0.2nm,0.3s,baz=231,slow=28,SNR=3.8						
KURBB	**Kurchatov Arra**	10.67	18	Pn	Pn	01 50 18.0	+2.1
	baz=185,slow=12,SNR=1.2						
KURBB				Lg	Lg	01 53 20.8	
	0.1nm,0.3s,baz=201,slow=28,SNR=4.5						
KURBB	**Kurchatov Arra**	10.67	18	⇓Lg	Lg	01 53 23.4	
	14nm,0.8s						
SONM	**Songino Array**	24.55	62	P	P	01 53 03.8	+0.5
	0.4nm,0.6s,baz=267,slow=9.8,SNR=2.7						
FINES	**FINESS Array B**	35.34	322	P	P	01 54 36.6	-1.9
	1.1nm,0.9s,baz=113,slow=14,SNR=0.9						
ARCES	**ARCESS Array B**	38.22	335	P	P	01 55 03.3	+0.3
	4.1nm,1.1s,baz=101,slow=9.5,SNR=4.1						
TORD	**Torodi Ar. Bea**	67.77	268	P	P	01 58 38.4	-3.2
	0.7nm,1.1s,baz=43,slow=4.5,SNR=2.2						
INK	**Inuvik**	69.58	10	P	P	01 58 52.0	-0.2
	0.7nm,0.4s,baz=353,slow=5.6,SNR=8.0						

KRSC 18 01:57:46.2±2.0**, 48.°65N**×**156.°88E, h39**^{km}±43^{km}**, ML3.9,**
East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAU	**Pauzhetka**	2.82	359	*e*P	Pn	01 58 31.2	+2.5
PAU				*e*S	Sn	01 59 03.4	+2.0
KDTR	**Khodutka, Kamc**	3.26	13	*e*P	Pn	01 58 39.0	+4.3
KDTR				*e*S	Sn	01 59 17.8	+5.7
ASAK	**Asacha**	3.80	10	*e*P	Pn	01 58 46.3	+4.1
ASAK				*e*S	Sn	01 59 32.4	+6.8
MTVR	**Mutnovka**	3.93	12	*e*S	Sn	01 59 33.5	+4.6
RUS	**Russkaya**	3.93	15	*e*P	Pn	01 58 49.1	+5.2
RUS				*e*S	Sn	01 59 33.0	+4.3
GRL	**Gorelyy**	3.98	11	*e*S	Sn	01 59 36.3	+6.1
DALK	**Dalny**	4.55	14	*e*S	Sn	01 59 49.2	+5.3
UGLR	**Uglovaya**	4.73	14	*e*P	Pn	01 59 00.5	+5.5
AVH	**Avacha**	4.77	14	*e*P	Pn	01 59 00.9	+5.4
SMAR	**Somma**	4.78	14	*e*P	Pn	01 59 00.8	+5.0
KOK	**Koryaka**	4.78	13	*e*P	Pn	01 59 00.4	+4.7
NLC	**Nalytchevo**	4.79	18	*e*P	Pn	01 59 00.4	+4.7
SDLR	**Sedlovina**	4.81	15	*e*P	Pn	01 59 00.5	+4.4
SPN	**Mys Shipunski**	4.88	23	*e*S	Sn	01 59 56.6	+4.5
MKZ	**Mys Kozlova**	6.64	25	*e*P	Pn	01 59 25.8	+4.7
KBTR	**Krutoberegovo**	8.39	23	*e*P	Pn	01 59 47.9	+2.8

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*BJI **18** 01:58:43.6±0.0, 6.°89S×130.°45E, h139^{km}, mB5.2/38, mb4.9/60*

*NEIC **18** 01:58:47.0±1.9, 6.°46S±0.°04×130.°28E±0.°05, h116^{km}±1^{km}, mb5.4/115, Mwb5.2/16, Mww5.2, Error ellipse: s-maj=10.9km s-min=2.8km az=227.0*

*IDC **18** 01:58:46.4±1.4, 6.°44S×130.°24E, h115^{km}±12^{km}, mb4.8/37, mb1 4.9/42, mb1mx4.8/53, mbtmp5.3/42, MS3.9/22, Ms1 3.9/22, ms1mx3.8/34, Error ellipse: s-maj=9.8km s-min=8.0km az=56.0*

*MOS **18** 01:58:47.2±1.1, 6.°42S×130.°25E, h139^{km}, mb5.2/39, Error ellipse: s-maj=8.7km s-min=5.2km az=119.5*

*DJA **18** 01:58:47.6±0.2, 7°S±2°×13°0E±°, h127^{km}±2^{km}, M5.3/97, mb5.6/97, mB5.7/79, MLv6.2/12, Mw(mB)5.3/79, MwMwp4.8/13, Mwp5.2/13*

*GCMT **18** 01:58:48.0±0.2, 6.°52S±0.°01×130.°35E±0.°01, h136^{km}±1^{km}, MW5.2/129, Moment Tensor Solution. s79,c117; s129,c206; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M$_{rr}$0.44±.01; M$_{\theta\theta}$-0.59±.02; M$_{\phi\phi}$0.15±.02; M$_{r\theta}$0.06±.01; M$_{\theta\phi}$-0.54±.02; M$_{\phi r}$0.46±.01; Best double couple: M$_0$0.88200×10^{17} NP1:φ$_s$278.00000°,δ49.00000°,λ151.00000°. NP2:φ$_s$28.00000°,δ68.00000°,λ45.00000°. Principal axes: T 0.8360, Plg46.0000°, Azm251.0000°; N 0.0900, Plg41.0000°, Azm48.0000°; P -0.9270, Plg12.0000°, Azm149.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **18** 01:58:48, 6.°47S×130.°27E, h116^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.95; M$_{\theta\theta}$-2.21; M$_{\phi\phi}$4.15; M$_{r\theta}$3.68; M$_{\theta\phi}$-3.60; M$_{\phi r}$4.43; Fault plane solution: M$_0$7.69000×10^{16} NP1:φ$_s$300.11000°, δ43.74000°,λ-163.19000°. NP2:φ$_s$197.80000°, δ78.47000°,λ-47.51000°. Principal axes: T 6.8034, Plg22.0000°, Azm257.0000°; N 1.5359, Plg41.0000°, Azm7.0000°; P -8.3393, Plg41.0000°, Azm147.0000°;*

*NEIC **18** 01:58:49, 6.°68S×130.°19E, h140^{km}, Moment Tensor Solution. Duration: 2^{s}0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$4.21; M$_{\theta\theta}$-5.89; M$_{\phi\phi}$1.68; M$_{r\theta}$-1.47; M$_{\theta\phi}$-4.44; M$_{\phi r}$3.65; Fault plane solution: M$_0$7.93000×10^{16} NP1: φ$_s$280.00000°,δ58.00000°,λ144.00000°. NP2: φ$_s$31.00000°,δ60.00000°,λ38.00000°. Principal axes: T 7.9096, Plg47.0000°, Azm246.0000°; N 0.0319, Plg43.0000°, Azm64.0000°; P -7.9416, Plg1.0000°, Azm155.0000°;*

ISC 18 01:58:47.4±0.4**, 6.°49S**±0.°03×**130.°31E**±0.°04**, h130**^{km}±3^{km}**, h130**^{km}**:pP-P, n758, σ1^{s}48**/770**, mb5.3**/178**, 92C-40D, Fault plane solution: NP1:**φ$_s$24.90622°**,**δ69.56380°**,** λ52.83138°. **NP2:**φ$_s$270.17871°**,**δ41.69401°**,**λ148.33588°. **Principal axes:** T Plg50.7958°**,** Azm252.3845°**;** N Plg34.4813°**,** Azm39.7339°**;** P Plg16.3262°**,** Azm141.3397°**; Fault plane solution: NP1:**φ$_s$52.74051°**,** δ57.88983°**,**λ32.77546°. **NP2:**φ$_s$303.84763°**,**δ62.70727°**,** λ143.26347°. **Principal axes:** T Plg44.4347°**,** Azm266.3712°**;** N Plg45.4125°**,** Azm92.2829°**;** P Plg2.9593°**,** Azm359.2766°**; Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	1.78	147	P	Pn	01 59 20.0	+1.3
SAUI	**Saumlaki**	1.78	147		Pn	01 59 19.8	+1.1
SAUI	**Saumlaki**	1.78	147	P	Pn	01 59 20.3	+1.6
BNDI	**Bandanaira**	2.00	348	P	Pn	01 59 23.4	+2.0
MSAI	**Masohi**	3.42	336	P	Pn	01 59 41.9	+2.4
AAI	**Ambon**	3.49	323	P	Pn	01 59 43.1	+2.6
AAI	**Ambon**	3.49	323	P	Pn	01 59 42.7	+2.2
FAKI	**Fak Fak**	4.04	29	P	Pn	01 59 47.0	-0.7
FAKI	**Fak Fak**	4.04	29	Pn	Pn	01 59 47.1	-0.6
FAKI	**Fak Fak**	4.04	29	P	Pn	01 59 47.0	-0.7
SIJI	**Sorong**	5.67	10	P	Pn	02 00 07.2	-2.3
	187nm,0.3s,baz=92,slow=23,SNR=7.2						
SIJI				S	Sn	02 01 07.2	-6.3
	1µm,0.3s,baz=209,slow=16,SNR=25						
SWI	**Sorong**	5.67	10	P	Pn	02 00 08.4	-1.2
SWI				pmax	pmax		
	comp=Z,2µm,0.6s						
SWI	**Sorong**	5.67	10	P	Pn	02 00 08.1	-1.5
	comp=Z,31nmcomp=Z,3µmcomp=Z,52µmcomp=Z,2µm,0.6s						
DRS	**Darwin Rock St**	5.93	174	P	Pn	02 00 11.7	-1.3
	comp=Z,2µm,0.9s						
SANI	**Sanana**	6.17	315	P	Pn	02 00 18.3	+2.0
	comp=Z,4.3nmcomp=Z,13µmcomp=Z,1µm,1.3s						
MTN	**Manton Dam**	6.36	173	P	Pn	02 00 18.0	-0.9
	baz=6.3,SNR=560						
MTN				S	Sn	02 01 25.9	-4.4
	baz=6.3						
MTN	**Manton Dam**	6.36	173	Pn	Pn	02 00 17.7	-1.2
LBMI	**Labuha**	6.46	334	P	Pn	02 00 21.1	+1.0
	comp=Z,8.7nmcomp=Z,3µmcomp=Z,37µmcomp=Z,3µm,1.1s						
KDU	**Kakadu**	6.51	161	P	Pn	02 00 19.4	-1.5
	baz=6.5,SNR=1000						
KDU	**Kakadu**	6.51	161	P	Pn	02 00 18.7	-2.2
	comp=Z,5µm,0.7s						
SOEI	**Soe**	6.81	241	P	Pn	02 00 25.7	+0.8
	comp=Z,23nmcomp=Z,20µmcomp=Z,2µm,0.9s						
SOEI	**Soe**	6.81	241	Pn	Pn	02 00 25.6	+0.6
SOEI	**Soe**	6.81	241	P	Pn	02 00 26.5	+1.6
	comp=Z,2µm,0.9s						
SRPI	**Serui, Papua**	7.48	52	P	Pn	02 00 33.2	-0.8
	comp=Z,6.1nmcomp=Z,10µmcomp=Z,833nm,0.9s						
BATI	**Baumata**	7.54	240	P	Pn	02 00 34.7	0.0
	comp=Z,609nm,0.3s,baz=124,slow=1.8,SNR=137						
BATI				S	Sn	02 01 57.1	-1.8
	comp=Z,562nm,0.3s,baz=105,slow=2.5,SNR=13						
BATI	**Baumata**	7.54	240	P	Pn	02 00 35.2	+0.4
	comp=Z,7.3nmcomp=Z,1µmcomp=Z,19µmcomp=Z,2µm,0.5s						
TNTI	**Ternate**	7.79	338	P	Pn	02 00 38.6	+0.4
	comp=Z,5.3nmcomp=Z,2µmcomp=Z,15µmcomp=Z,1µm,0.8s						
TNTI	**Ternate**	7.79	338	Pn	Pn	02 00 38.5	+0.4
TNTI	**Ternate**	7.79	338	P	Pn	02 00 39.5	+1.4
	comp=Z,1µm,0.9s						
MMRI	**Maumere**	8.28	255	P	Pn	02 00 46.0	+1.3
	comp=Z,7µmcomp=Z,502nm,0.4s						
MMRI	**Maumere**	8.28	255	Pn	Pn	02 00 45.7	+1.0
MMRI	**Maumere**	8.28	255	P	Pn	02 00 46.7	+2.0
	comp=Z,502nm,0.5s						
WAMI	**Wamena**	8.76	73	P	Pn	02 00 52.6	+1.5
	comp=Z,19µmcomp=Z,1µm,0.5s						
EDFI	**Ende, Flores**	8.84	255	P	Pn	02 00 53.0	+0.7
	comp=Z,2µmcomp=Z,237nm,1.1s						
KNRA	**Kununurra**	9.25	189	P	Pn	02 00 55.6	-2.2
	baz=9.2,SNR=1000						
KNRA	**Kununurra**	9.25	189	Pn	Pn	02 00 56.1	-1.7
KNRA	**Kununurra**	9.25	189	P	Pn	02 00 55.0	-2.8
	comp=Z,4µm,0.6s						
LUWI	**Luwuk**	9.27	305	P	Pn	02 01 01.3	+3.3
	comp=Z,10µmcomp=Z,777nm,1.1s						
LUWI	**Luwuk**	9.27	305	Pn	Pn	02 01 01.2	+3.2
KMSI	**Cibinong**	9.44	318	P	Pn	02 01 02.6	+2.2
	comp=Z,353nmcomp=Z,5µmcomp=Z,649nm,1.1s						
SMPI	**Sarmi**	9.49	62	P	Pn	02 01 01.3	+0.3
	comp=Z,2µmcomp=Z,255nm,1.0s						
MNI	**Manado**	9.59	325	P	Pn	02 01 03.4	+1.0
MNI				pmax	pmax		
	comp=Z,454nm,0.9s						
BSSI	**Bau Bau, Buton**	9.77	271	P	Pn	02 01 07.0	+2.3
	comp=Z,3µmcomp=Z,285nm,1.0s						
GTOI	**Gorontalo**	10.16	314	P	Pn	02 01 14.6	+4.6
	comp=Z,1µmcomp=Z,120nm,0.8s						
MMPI	**Merauke**	10.18	102	P	Pn	02 01 09.7	-0.5
	comp=Z,51µmcomp=Z,4µm,0.7s						
BKSI	**Bulukumba**	10.20	276	P	Pn	02 01 12.6	+2.1
	comp=Z,2µmcomp=Z,283nm,1.3s						
APSI	**Ampana**	10.27	302	P	Pn	02 01 15.5	+4.1
	comp=Z,8µmcomp=Z,974nm,1.0s						
BASI	**Baing, Sumba**	10.32	248	P	Pn	02 01 10.9	-1.2
	comp=Z,9µmcomp=Z,616nm,0.8s						
BNSI	**Bone**	10.37	281	P	Pn	02 01 14.8	+2.0
	comp=Z,2µmcomp=Z,222nm,0.6s						
WSI	**Waingapu**	10.40	252	P	Pn	02 01 13.4	+0.1
	comp=Z,28µmcomp=Z,2µm,0.7s						
GENI	**Genyem**	10.56	69	P	Pn	02 01 16.2	+0.9
	comp=Z,5µmcomp=Z,502nm,0.6s						
GENI	**Genyem**	10.56	69	P	Pn	02 01 18.1	+2.8
	comp=Z,500nm,0.6s						
KAPI	**Kappang**	10.61	277	P	Pn	02 01 19.0	+3.0
	comp=Z,1.2nm,0.3s,baz=93,slow=3.8,SNR=26						
KAPI	**Kappang**	10.61	277	P	Pn	02 01 18.7	+2.7
KAPI	**Kappang**	10.61	277	Pn	Pn	02 01 18.7	+2.7
SPSI	**Sidrap Palu**	10.79	283	P	Pn	02 01 21.5	+3.0
	comp=Z,194nm,1.0s						
MRSI	**Marisa**	10.85	309	P	Pn	02 01 21.6	+2.4
	comp=Z,15µmcomp=Z,2µm,1.0s						
TTSI	**Tana Toraja**	11.00	288	P	P	02 01 29.6	-1.0
JAY	**Jayapura**	11.09	70	P	Pn	02 01 22.6	+0.1
	comp=Z,15nm,0.3s,baz=221,slow=12,SNR=42						
JAY				S	Sn	02 03 23.5	-1.3
	comp=Z,5.6nm,0.3s,baz=112,slow=18,SNR=2.4						
JAY				LR	LR	02 06 45.1	
	comp=Z,728nm,19.4s,baz=280,slow=43						
JAY	**Jayapura**	11.09	70	P	Pn	02 01 22.8	+0.4
	comp=Z,1µmcomp=Z,106nm,1.0s						
WBSI	**Waikabubak, Su**	11.26	253	P	Pn	02 01 22.9	-1.8
	comp=Z,9µmcomp=Z,1µm,0.8s						
TOLI2	**Tolitoli**	12.15	308	Pn	Pn	02 01 38.2	+1.9
FITZ	**Fitzroy Crossi**	12.40	201	P	Pn	02 01 36.1	-3.5
	comp=Z,30nm,0.3s,baz=34,slow=9.7,SNR=213						
FITZ				S	Sn	02 03 42.7	-14
	comp=Z,124nm,0.3s,baz=81,slow=19,SNR=14						
FITZ	**Fitzroy Crossi**	12.40	201		Pn	02 01 36.2	-3.4
MPSI	**Mapaga**	12.41	303	P	P	02 01 43.9	-2.5
	comp=Z,1µmcomp=Z,74nm,0.9s						
PLAI	**Plampang**	12.64	259	P	Pn	02 01 40.9	-1.9

	comp=Z,6µmcomp=Z,719nm,0.9s						
PLAI	**Plampang**	12.64	259	P	Pn	02 01 41.7	-1.1
	comp=Z,736nm,0.9s						
TWSI	**Taliwang, Sumb**	13.50	260	P	Pn	02 01 52.5	-1.3
	comp=Z,2µmcomp=Z,171nm,0.7s						
WB0	**Warramunga Arr**	13.78	164		Pn	02 01 52.4	-5.0
WRAB	**Tennant Creek**	13.93	164	P	Pn	02 01 54.2	-5.1
WRAB	**Tennant Creek**	13.93	164		Pn	02 01 54.2	-5.1
WRA	**Warramunga Arr**	13.93	164	P	Pn	02 01 54.8	-4.6
	comp=Z,7.8nm,0.3s,baz=342,slow=13,SNR=372						
WRA				S	Sn	02 04 22.3	-11
	comp=Z,91nm,0.3s,baz=349,slow=22,SNR=14						
WRA				LR	LR	02 08 43.4	
	comp=Z,680nm,18.1s,baz=340,slow=43						
WRA	**Warramunga Arr**	13.93	164	P	Pn	02 01 54.4	-5.0
WRA	**Warramunga Arr**	13.93	164	Pn	Pn	02 01 54.4	-5.0
WB2	**Warramunga Arr**	13.94	164		Pn	02 01 54.3	-5.2
WC3	**Warramunga Arr**	13.96	164	P	Pn	02 01 54.8	-4.9
	baz=14						
WR0	**Warramunga Arr**	14.00	163		Pn	02 01 54.7	-5.6
DAV	**Davao City (W)**	14.28	341	P	Pn	02 02 03.2	-0.6
	comp=Z,132nm,0.3s,baz=112,slow=0.3,SNR=2.8						
DAV				LR	LR	02 09 23.4	
	comp=Z,388nm,18.4s,baz=141,slow=45						
DAV	**Davao City (W)**	14.28	341		Pn	02 02 03.4	-0.4
KCP	**Kidapawan**	14.39	339	⇑*i*P	Pn	02 02 04.7	-0.6
SMKI	**Samarinda**	14.39	294	P	P	02 02 13.4	+5.0
KBKI	**Kotabaru**	14.44	282	P	P	02 02 09.6	+0.6
	comp=Z,3µmcomp=Z,353nm,1.0s						
COEN	**Coen**	14.67	121	P	Pn	02 02 05.4	-3.4
	baz=15						
COEN	**Coen**	14.67	121	Pn	Pn	02 02 05.1	-3.6
SRBI	**Singaraja**	15.06	263	P	Pn	02 02 14.1	+0.4
	comp=Z,3µmcomp=Z,255nm,0.8s						
DNP	**Denpasar**	15.13	261	P	P	02 02 15.7	-0.9
DNP				pmax	pmax		
	comp=Z,509nm,0.6s						
DNP	**Denpasar**	15.13	261	P	P	02 02 16.5	-0.1
	comp=Z,462nm,0.5s						
IGBI	**Denpasar**	15.21	260	P	Pn	02 02 15.7	+0.2
	comp=Z,4µmcomp=Z,228nm,0.6s						
BBKI	**Banjar Baru**	15.70	280	P	P	02 02 25.1	+2.1
	comp=Z,14µmcomp=Z,928nm,1.4s						
ABJI	**Asem Bagus**	16.01	264	P	P	02 02 26.6	+0.3
	comp=Z,4µmcomp=Z,400nm,0.8s						
JAGI	**Jajag, Banyuwa**	16.14	262	Pn	Pn	02 02 23.5	-3.6
JAGI				IAmb	IAmb	02 02 29.9	
	comp=Z,221nm,0.7s						
KMMI	**Kalianget**	16.24	267	P	P	02 02 30.4	+1.5
	comp=Z,3µmcomp=Z,5µmcomp=Z,481nm,1.5s						
MTKI	**Muara Teweh, K**	16.34	289	P	P	02 02 32.2	+2.2
	comp=Z,1µmcomp=Z,157nm,0.8s						
BLJI	**Banyuglugur**	16.64	265	P	P	02 02 33.4	+0.1
	comp=Z,6µmcomp=Z,725nm,0.8s						
QIS	**Mount Isa**	16.64	148	P	Pn	02 02 30.7	-2.4
	baz=17,SNR=338						
GMJI	**Gumukmas**	16.82	263	P	P	02 02 34.4	-0.9
	comp=Z,2µmcomp=Z,180nm,0.9s						
PMG	**Port Moresby**	16.93	101	P	Pn	02 02 37.5	+0.8
	comp=Z,9.3nm,0.3s,baz=276,slow=4.6,SNR=43						
PMG				S	Sn	02 05 35.9	-10
	comp=Z,12nm,0.3s,baz=181,slow=23,SNR=7.7						
PMG				LR	LR	02 10 40.0	
	comp=Z,389nm,21.6s,baz=283,slow=42						
PMG	**Port Moresby**	16.93	101	P	Pn	02 02 37.5	+0.8
PMG				IAmb	IAmb	02 02 42.4	
	comp=Z,284nm,1.0s						
PMG	**Port Moresby**	16.93	101	P	Pn	02 02 38.4	+1.7
	comp=Z,313nm,0.9s						
PMG	**Port Moresby**	16.93	101	P	Pn	02 02 38.4	+1.7
	comp=Z,313nm,0.9s						
TBP	**Tagbilaran**	17.31	338	*i* P	Pn	02 02 41.5	+0.2
TBP				*i* S	S	02 05 50.8	-3.8
AS31	**Alice Springs**	17.42	169	P	P	02 02 41.4	-0.5
AS31				IAmb	IAmb	02 02 45.4	
	comp=Z,178nm,0.6s						
ASAR	**Alice Springs**	17.42	169	P	P	02 02 41.0	-0.9
	comp=Z,33nm,0.3s,baz=328,slow=7.5,SNR=482						
ASAR				S	S	02 05 48.1	-8.7
	comp=Z,28nm,0.3s,baz=354,slow=29,SNR=9.1						
ASAR				LR	LR	02 09 46.6	
	comp=Z,378nm,18.7s,baz=1.5,slow=38						
ASAR	**Alice Springs**	17.42	169	P	P	02 02 41.5	-0.4
ASAR	**Alice Springs**	17.42	169	P	P	02 02 41.5	-0.4
ASPA	**Alice Springs**	17.42	169	P	P	02 02 40.9	-1.0
	baz=17						
BWJI	**Bawean**	17.56	271	P	Pn	02 02 46.4	+2.0
	comp=Z,2µmcomp=Z,820nm,1.4s						
MANU	**Manus Island**	17.57	76	P	Pn	02 02 45.8	+1.4
MBWA	**Marble Bar**	17.82	214	P	Pn	02 02 46.8	-0.6
	comp=Z,412nm,0.9s						
MTSU	**Mount Surprise**	17.90	132	P	Pn	02 02 47.8	-0.5
	baz=18,SNR=158						
MTSU	**Mount Surprise**	17.90	132	P	Pn	02 02 48.4	0.0
	comp=Z,241nm,0.9s						
PSA00	**Pilbara Seismi**	18.09	213	P	P	02 02 49.0	-0.1
PSA00	**Pilbara Seismi**	18.09	213	P	P	02 02 49.5	+0.2
PSA00				IAmb	IAmb	02 02 51.2	
	comp=Z,531nm,0.8s						
PSA00	**Pilbara Seismi**	18.09	213	P	P	02 02 49.1	-0.1
	comp=Z,713nm,0.8s						
WRKA	**Warakurna**	18.54	186	P	P	02 02 54.2	0.0
	baz=19,SNR=1000						
WRKA	**Warakurna**	18.54	186	P	P	02 02 53.8	-0.4
	comp=Z,443nm,0.8s						
NGJI	**Ngawi**	18.73	266	P	Pn	02 02 57.4	-0.8
	comp=Z,1µmcomp=Z,112nm,0.8s						
KKM	**Kota Kinabalu**	18.79	311	P	P	02 02 56.9	-0.2
KKM				IAmb	IAmb	02 02 59.5	
	comp=Z,110nm,0.8s						
KKM	**Kota Kinabalu**	18.79	311	P	Pn	02 02 59.5	+0.5
	comp=Z,167nm,0.9s						
PCJI	**Pacitan**	19.05	264	P	P	02 02 57.9	-1.9
	comp=Z,4µmcomp=Z,377nm,1.3s						
UWJI	**Ujung Watu**	19.24	269	P	P	02 03 02.4	+0.5
	comp=Z,301nm,0.8s						
RCP	**Roxas**	19.45	337	⇑*e*P	Pn	02 03 05.7	-0.8
UGM	**Wanagama**	19.68	265	P	P	02 03 05.5	-1.2
	comp=Z,168nm,0.8s						
UGM	**Wanagama**	19.68	265	P	P	02 03 06.3	-0.4
UGM				IAmb	IAmb	02 03 32.9	
	comp=Z,240nm,1.1s						
UGM	**Wanagama**	19.68	265	P	P	02 03 07.1	+0.4
	comp=Z,168nm,0.8s						
SMRI	**Semarang**	19.74	267	P	P	02 03 07.2	-0.1
	comp=Z,4µmcomp=Z,225nm,1.0s						
SMRI	**Semarang**	19.74	267	P	P	02 03 06.8	-0.5
SMRI				IAmb	IAmb	02 03 36.4	
	comp=Z,210nm,1.0s						
STKI	**Sintang**	19.89	288	P	P	02 03 09.7	+0.8
	comp=Z,49nm,0.8s						
YOGI	**Yogyakarta**	19.91	265	P	P	02 03 08.2	-0.9
	comp=Z,2µmcomp=Z,199nm,1.0s						
SBUM	**Sibu**	20.13	296	P	Pn	02 03 13.0	-1.5
SBUM	**Sibu**	20.13	296	P	P	02 03 12.3	+0.9
SBUM				IAmb	IAmb	02 03 16.0	
	comp=Z,134nm,0.9s						
CTA	**Charters Tower**	20.55	133	P	P	02 03 17.0	+1.2
	comp=Z,490nm,1.1s						
CTAO	**Charters Tower**	20.55	133	P	P	02 03 17.1	+1.2
CTAO				pmax	pmax		
	comp=Z,315nm,0.9s						
CTAO	**Charters Tower**	20.55	133	P	P	02 03 17.1	+1.2
CTAO	**Charters Tower**	20.55	133	P	P	02 03 17.5	+1.6
	comp=Z,413nm,1.1s						
KSM	**Kuching**	21.48	291	P	P	02 03 27.0	+1.1
KSM	**Kuching**	21.48	291	P	P	02 03 26.3	+0.3
CMJI	**Cimerak**	21.73	265	P	P	02 03 25.6	-3.0
	comp=Z,3µmcomp=Z,309nm,0.7s						
OOD	**Oodnadatta**	21.79	167	P	P	02 03 28.4	-0.7
	comp=Z,671nm,0.7s						
LQP	**Lukban**	22.24	337	⇓*e*P	P	02 03 50.5	+16
GIRL	**Giralia**	22.32	222	P	P	02 03 35.5	+0.9
	baz=22,SNR=50						
GIRL	**Giralia**	22.32	222	P	P	02 03 35.1	+0.6
GIRL	**Giralia**	22.32	222	P	P	02 03 34.9	+0.3
	comp=Z,1µm,1.0s						
LEM	**Lembang**	22.54	268	P	P	02 03 35.6	-1.5
	comp=Z,582nm,1.0s,baz=39,slow=8.0,SNR=30						
LEM				LR	LR	02 13 23.3	
	comp=Z,400nm,21.6s,baz=47,slow=39						
TPI	**Tanjungpandan**	22.88	278	P	P	02 03 40.4	+0.3
	comp=Z,3µmcomp=Z,298nm,0.8s						
MEEK	**Meekatharra**	22.93	208	P	P	02 03 40.2	-0.2
	baz=23,SNR=43						
MEEK	**Meekatharra**	22.93	208	P	P	02 03 39.8	-0.7
	comp=Z,152nm,1.3s						
CNJI	**Cibinong**	23.03	267	P	P	02 03 39.1	-2.4
	comp=Z,22µmcomp=Z,3µm,1.1s						
CBJI	**Citeko**	23.31	269	P	P	02 03 42.1	-2.0
	comp=Z,1µm,0.9s						
INKA	**Innaminka**	23.34	156	P	P	02 03 45.9	+1.7
	comp=Z,1µm,1.2s						
DBJI	**Dramaga**	23.41	269	P	P	02 03 43.7	-1.3
	comp=Z,7µmcomp=Z,360nm,0.9s						
MULG	**Mulgathing**	23.93	172	P	P	02 03 49.4	-0.1
	comp=Z,312nm,0.8s						
QLP	**Quilpie**	23.98	148	P	P	02 03 50.7	+0.6
	baz=24,SNR=68						
QLP	**Quilpie**	23.98	148	P	P	02 03 50.6	+0.6
	comp=Z,458nm,0.8s						
SBJI	**Serang**	24.04	270	P	P	02 03 52.7	+2.0
	comp=Z,5µmcomp=Z,207nm,0.7s						
FORT	**Forrest**	24.25	185	P	P	02 03 52.7	+0.3
	baz=24,SNR=125						
FORT	**Forrest**	24.25	185	P	P	02 03 52.0	-0.4
FORT	**Forrest**	24.25	185	P	P	02 03 52.1	-0.4
	comp=Z,343nm,0.8s						
PPBI	**Pangkal Pinang**	24.48	279	P	P	02 03 55.8	+1.1
	comp=Z,18µmcomp=Z,240nm,0.8s						
GUMO	**Guam**	24.64	36	LR	LR	02 14 20.6	
	comp=Z,94nm,20.7s,baz=90,slow=38						
XMIS	**Christmas Isla**	24.70	259	P	P	02 03 56.4	-0.4
XMIS	**Christmas Isla**	24.70	259	P	P	02 03 56.9	+0.1
	comp=Z,434nm,0.9s						
LCRK	**Leigh Creek**	24.96	164	P	P	02 03 59.0	+0.1
	comp=Z,599nm,0.9s						
KLSI		25.52	273	P	P	02 04 07.6	+3.4
	comp=Z,362nmcomp=Z,23nm,0.7s						
RK1H	**Rockhampton Ha**	25.68	133	P	P	02 04 06.3	+0.9
	comp=Z,77nm,0.7s						
KASI	**Kota Agung**	25.69	271	P	P	02 04 04.8	-0.9
	comp=Z,2µmcomp=Z,259nm,0.8s						
PMBI	**Palembang**	25.69	277	P	P	02 04 08.4	+2.6
	comp=Z,2µm,1.0s						
PMBI	**Palembang**	25.69	277	P	P	02 04 07.0	+1.2
MDSI	**Maura Dua**	26.09	273	P	P	02 04 10.7	+1.4
	comp=Z,311nmcomp=Z,29nm,0.9s						
LWLI	**Liwa**	26.16	272	P	P	02 04 11.1	+1.0
	comp=Z,157nm,0.7s						
MORW	**Morawa**	26.19	209	P	P	02 04 10.1	+0.1
	baz=26,SNR=26						
MORW	**Morawa**	26.19	209	P	P	02 04 09.3	-0.7
MORW				IAmb	IAmb	02 04 11.3	
	comp=Z,318nm,1.6s						
MORW	**Morawa**	26.19	209	P	P	02 04 09.7	-0.4
	comp=Z,101nm,1.0s						
DSRI	**Dabo**	26.36	282	P	P	02 04 14.0	+2.2
	comp=Z,14nm,0.5s						
RMQ	**Roma**	26.54	141	P	P	02 04 13.8	+0.6
	baz=27,SNR=14						
RMQ	**Roma**	26.54	141	P	P	02 04 13.6	+0.4
	comp=Z,69nm,0.8s						
BBOO	**Buckleboo**	26.73	169	P	P	02 04 14.9	+0.1
	baz=27,SNR=90						
BBOO	**Buckleboo**	26.73	169	P	P	02 04 14.3	-0.5
BBOO	**Buckleboo**	26.73	169	P	P	02 04 14.3	-0.5
	comp=Z,148nm,0.8s						
LHSI	**Lahat**	26.81	274	P	P	02 04 16.3	+0.5
	comp=Z,216nm,1.0s						
BLDU	**Ballidu**	27.19	206	P	P	02 04 19.2	+0.3
	baz=27,SNR=44						
BLDU	**Ballidu**	27.19	206	P	P	02 04 18.6	-0.4
	comp=Z,101nm,1.3s						
WHYH	**Whyalla**	27.26	167	P	P	02 04 19.9	+0.4
	comp=Z,136nm,0.8s						
MNAI	**Manna**	27.31	273	P	P	02 04 21.3	+1.0
	comp=Z,219nm,1.2s						
EIDS	**Eidsvold**	27.33	136	P	P	02 04 20.1	-0.2
	baz=27,SNR=4.8						
EIDS	**Eidsvold**	27.33	136	P	P	02 04 19.8	-0.5
EIDS				IAmb	IAmb	02 05 05.2	
	comp=Z,90nm,0.9s						
STKA	**Stephens Creek**	27.37	159	P	P	02 04 20.9	+0.4
	comp=Z,36nm,0.6s,baz=333,slow=9.1,SNR=108						
STKA				LR	LR	02 16 34.6	
	comp=Z,777nm,18.3s,baz=313,slow=39						
STKA	**Stephens Creek**	27.37	159	P	P	02 04 20.8	+0.2
	baz=27,SNR=82						
STKA	**Stephens Creek**	27.37	159	P	P	02 04 21.0	+0.4
STKA	**Stephens Creek**	27.37	159	P	P	02 04 20.1	-0.5
STKA	**Stephens Creek**	27.37	159	P	P	02 04 20.4	-0.2
	comp=Z,15nm,0.7s						
KLBR	**Kellerberrin**	27.60	204	P	P	02 04 23.1	+0.5
	baz=28,SNR=82						
KLBR	**Kellerberrin**	27.60	204	P	P	02 04 22.5	-0.1
	comp=Z,471nm,0.9s						
MYKOM	**Kota Tinggi**	27.67	286	P	P	02 04 23.0	-0.4
MYKOM				IAmb	IAmb	02 04 28.6	
	comp=Z,80nm,0.8s						
KSI	**Kapahiang**	27.75	274	P	P	02 04 25.5	+1.2
HTT	**Hallett**	27.97	165	P	P	02 04 26.5	+0.5
	baz=28,SNR=16						
HTT	**Hallett**	27.97	165	P	P	02 04 26.2	+0.2
	comp=Z,125nm,1.1s						
MASI	**Maura Aman, Be**	28.17	275	P	P	02 04 30.3	+2.4
	comp=Z,4µmcomp=Z,179nm,0.9s						
MUN	**Mundaring**	28.57	206	P	P	02 04 31.5	+0.2
	baz=29,SNR=8.6						
MUN	**Mundaring**	28.57	206	P	P	02 04 31.2	-0.1
	comp=Z,64nm,1.1s						
CMSA	**Cobar Meteorol**	28.77	152	P	P	02 04 33.9	+0.9
	baz=29,SNR=67						
CMSA	**Cobar Meteorol**	28.77	152	P	P	02 04 33.6	+0.5
	comp=Z,186nm,0.9s						
NWAO	**Narrogin (SRO)**	28.98	203	P	P	02 04 36.2	+1.3
NWAO	**Narrogin (SRO)**	28.98	203	P	P	02 04 35.6	+0.7
	comp=Z,151nm,1.0s						
HNR	**Honiara**	29.49	98	LR	LR	02 17 31.5	
	comp=Z,315nm,21.0s,baz=267,slow=38						
BKNI	**Bangkinang**	29.99	282	P	P	02 04 51.7	+7.7
BKNI	**Bangkinang**	29.99	282	P	P	02 04 43.6	-0.5
PDSI	**Padang**	30.29	279	P	P	02 04 46.7	0.0
	comp=Z,18nm,0.8s						
PPI	**Padang Panjang**	30.44	280	P	P	02 04 46.9	-1.1
	comp=Z,872nmcomp=Z,106nm,1.0s						
IPM	**Ipoh**	31.20	290	P	P	02 04 54.0	-0.8
IPM	**Ipoh**	31.20	290	P	P	02 04 53.5	-1.2
MNSI	**Mandailing Nat**	31.52	282	P	P	02 04 56.6	-0.9
	comp=Z,126nm,0.9s						
KULM	**Kulim**	31.84	291	P	P	02 04 59.0	-1.3
KULM	**Kulim**	31.84	291	P	P	02 04 58.8	-1.5
KULM				IAmb	IAmb	02 05 04.7	
	comp=Z,64nm,1.1s						
ARPS	**Mount Arapiles**	31.93	162	P	P	02 05 02.1	+1.3
	baz=32,SNR=35						
ARPS	**Mount Arapiles**	31.93	162	P	P	02 05 01.6	+0.8
	comp=Z,90nm,0.5s						
YNG	**Young**	32.33	151	P	P	02 05 05.7	+1.3
	baz=32,SNR=36						
YNG	**Young**	32.33	151	P	P	02 05 05.2	+0.8
	comp=Z,221nm,1.1s						
QIZ	**Qiongzhong**	32.40	322	P	P	02 05 05.3	+0.1
QIZ				pP	pP	02 05 33.8	+1.5
QIZ				sP	sP	02 05 49.3	+2.5
QIZ				S	S	02 10 05.6	-4.6
QIZ				pmax	pmax		
	comp=Z,12nm,1.0s						
QIZ				LR	LR		
	comp=Z,130nm,13.5s						
QIZ				LR	LR		
	comp=Z,110nm,14.7s						
QIZ				LR	LR		
	comp=Z,120nm,9.0s						
PSI	**Prapat**	32.67	285	P	P	02 05 05.8	-1.9
	comp=Z,80nm,1.0s,baz=117,slow=5.4,SNR=34						
UBPT	**Khong Chiam**	32.77	311	P	P	02 05 07.7	-0.7
UBPT				IAmb	IAmb	02 05 10.4	
	comp=Z,42nm,0.9s						
MGCD	**Mangrove Creek**	32.86	147	P	P	02 05 11.1	+2.1
	baz=33,SNR=4.9						
CAN	**Canberra**	33.45	152	P	P	02 05 14.9	+0.8
CAN				pmax	pmax		
	comp=Z,87nm,0.7s						
CAN	**Canberra**	33.45	152	P	P	02 05 14.9	+0.8
CAN	**Canberra**	33.45	152	P	P	02 05 15.5	+1.4
	comp=Z,236nm,1.2s						
GSI	**Gunungsitoli**	33.58	282	P	P	02 05 15.0	-0.5
	comp=Z,109nm,0.8s						
GSI	**Gunungsitoli**	33.58	282	P	P	02 05 12.3	-3.2
GSI				IAmb	IAmb	02 05 18.5	
	comp=Z,89nm,0.9s						
CNB	**Canberra Magne**	33.62	151	P	P	02 05 17.2	+1.5
	baz=34,SNR=18						
CNB	**Canberra Magne**	33.62	151	P	P	02 05 17.0	+1.4
	comp=Z,72nm,1.5s						
WOLH	**Wollongong Har**	33.65	148	P	P	02 05 18.4	+2.6
	comp=Z,110nm,0.7s						
TOO	**Toolangi**	33.88	158	P	P	02 05 19.9	+2.0
	baz=34,SNR=12						
TOO	**Toolangi**	33.88	158	P	P	02 05 19.7	+1.8
TOO				pmax	pmax		
	comp=Z,182nm,1.8s						
TOO	**Toolangi**	33.88	158	P	P	02 05 19.7	+1.8
TOO				IAmb	IAmb	02 06 21.5	
	comp=Z,182nm,1.8s						
TOO	**Toolangi**	33.88	158	P	P	02 05 20.8	+2.9
	comp=Z,41nm,1.6s						
SRIT	**Nakonsritamara**	34.09	296	P	P	02 05 17.9	-2.0
TPTI		34.47	285	P	P	02 05 25.0	+1.8
	comp=Z,7µmcomp=Z,242nmcomp=Z,20nm,1.5s						
MILA	**Mila**	34.94	153	P	P	02 05 28.9	+1.9
	baz=35,SNR=4.1						
LHMI	**Lhok Sumawe**	35.28	289	P	P	02 05 29.2	-0.9
	comp=Z,4µmcomp=Z,445nm,1.0s						
LHMI	**Lhok Sumawe**	35.28	289	P	P	02 05 28.4	-1.7
JCJ	**Chichijima**	35.31	18	P	P	02 05 28.8	-1.4
	comp=Z,32nm,0.3s,baz=282,slow=23,SNR=14						
JCJ	**Chichijima**	35.31	18	P	P	02 05 29.2	-1.0
MLSI	**Meulaboh, Aceh**	35.50	287	P	P	02 05 29.6	-2.4
	comp=Z,2µmcomp=Z,126nm,0.9s						
KOUNC	**Koumac, New Ca**	35.76	116	P	P	02 05 35.1	+0.9
	comp=Z,67nm,0.8s						
SANVU	**Saraoutou**	37.24	107	P	P	02 05 47.4	+0.6
SLVN	**Son La**	37.90	318	P	P	02 05 52.1	-0.2
NOUC	**Port Laguerre**	38.03	118	P	P	02 05 54.8	+1.4
	comp=Z,65nm,1.1s						
DZM	**Mont Dzumac**	38.15	118	P	P	02 05 55.2	+0.7
	comp=Z,27nm,0.6s,baz=266,slow=8.9,SNR=27						
DZM	**Mont Dzumac**	38.15	118	*e*P	P	02 05 54.7	+0.2
	comp=Z,43nm,0.7s						
DZM	**Mont Dzumac**	38.15	118	P	P	02 05 54.9	+0.4
DZM				IAmb	IAmb	02 05 55.8	
	comp=Z,32nm,0.7s						
DZM	**Mont Dzumac**	38.15	118	P	P	02 05 55.4	+0.9
	comp=Z,58nm,0.9s						
ONTNC	**Ouen Toro**	38.23	118	P	P	02 05 55.0	-0.1
ONTNC				IAmb	IAmb	02 05 56.5	
	comp=Z,37nm,0.7s						
LIFNC	**LIFOU**	38.47	115	P	P	02 05 57.5	+0.4
YATNC	**Mamie plateau,**	38.54	117	P	P	02 05 59.5	+1.8
	comp=Z,100nm,1.3s						
OUENC	**Ouen Island, N**	38.61	118	P	P	02 05 59.4	+1.2
	comp=Z,35nm,1.4s						
MOO	**Moorlands**	38.80	160	P	P	02 06 01.9	+2.4
	baz=39,SNR=4.1						
RTV	**Rentapao**	38.83	110	P	P	02 06 01.0	+0.9
	comp=Z,831µm,0.6s						
TAU	**Tasmania Unive**	39.26	160	P	P	02 06 06.2	+2.9
	comp=Z,48nm,1.8s						
MARNC	**Mare, Loyalty**	39.38	116	P	P	02 06 03.6	-1.0
CM31	**Chiang Mai Arr**	39.65	309	P	P	02 06 07.1	+0.2
CM31				IAmb	IAmb	02 06 08.6	
	comp=Z,118nm,1.4s						
CMAR	**Chiang Mai Arr**	39.65	309	P	P	02 06 07.1	+0.2
	comp=Z,18nm,0.6s,baz=139,slow=7.4,SNR=67						
CMAR				PcP	PcP	02 08 12.8	+1.3
	comp=Z,8.8nm,0.7s,baz=158,slow=3.5,SNR=7.2						
CMAR				ScP	ScP	02 11 48.5	+0.1
	comp=Z,1.8nm,0.3s,baz=170,slow=3.4,SNR=6.5						
CMAR				LR	LR	02 25 21.2	
	comp=Z,152nm,19.7s,baz=170,slow=40						
CMAR	**Chiang Mai Arr**	39.65	309	*ce*P	P	02 06 07.5	+0.6
CMAR				pmax	pmax		
	comp=Z,18nm,0.6s						
CHTO	**Chiang Mai**	39.85	310	P	P	02 06 08.7	+0.1
CHTO				pmax	pmax		
	comp=Z,49nm,0.9s						
CHTO	**Chiang Mai**	39.85	310	P	P	02 06 08.7	+0.1
CHTO				IAmb	IAmb	02 06 10.1	
	comp=Z,50nm,0.9s						
NJ2	**Nanjing**	39.85	345	*e*P	P	02 06 10.6	+2.2
NJ2				pmax	pmax		
	comp=Z,17nm,0.9s						
WHN	**Wuhan**	39.88	338	⇓P	P	02 06 07.8	-0.8
WHN				S	S	02 12 01.6	-2.1
KMI	**Kunming**	41.32	321	⇓P	P	02 06 22.0	+1.2
KMI				pP	pP	02 06 50.8	+2.0
KMI				sP	sP	02 07 06.3	+3.2
KMI				S	S	02 12 23.4	-2.4
KMI				SS	SS	02 15 31.9	-2.9
KMI				pmax	pmax		
	comp=Z,28nm,1.3s						
KMI				pmax	pmax		
	comp=Z,130nm,4.0s						
KMI				LR	LR		
	comp=Z,220nm,17.9s						
KMI				LR	LR		
	comp=Z,170nm,14.6s						
KMI				LR	LR		
	comp=Z,300nm,19.5s						
JHS	**Saijyo**	41.35	3	P	P	02 06 22.2	+1.6
JHS				IAmb	IAmb	02 07 03.0	
	comp=Z,94nm,1.3s						
JWT	**Wachi**	41.83	6	P	P	02 06 25.2	+0.8
MJAR	**Matsushiro Arr**	43.44	9	P	P	02 06 37.3	-0.3
	comp=Z,5.7nm,0.7s,baz=189,slow=9.3,SNR=11						
MJAR				LR	LR	02 23 30.7	
	comp=Z,198nm,19.9s,baz=190,slow=34						
MAJO	**Matsushiro**	43.44	9	⇑*e*P	P	02 06 37.8	+0.2
MAJO				pmax	pmax		
	comp=Z,14nm,0.8s						
MAJO	**Matsushiro**	43.44	9	P	P	02 06 38.0	+0.4
MAT	**Matsushiro**	43.44	9	P	P	02 06 39.6	+2.0
KSAR	**Wonju Array Be**	43.76	357	P	P	02 06 41.3	+1.2
KSAR	**Wonju Array Be**	43.76	357	P	P	02 06 41.3	+1.2
KSRS	**Korea Array**	43.77	357	P	P	02 06 40.5	+0.3
	comp=Z,2.0nm,0.5s,baz=179,slow=9.8,SNR=7.1						
KSRS				PcP	PP	02 08 25.6	+0.9
	comp=Z,4.9nm,0.8s,baz=200,slow=3.2,SNR=5.8						
KSRS				ScP	ScP	02 12 03.6	-0.8
	comp=Z,4.6nm,1.1s,baz=202,slow=2.5,SNR=4.1						
KSRS				LR	LR	02 23 03.1	
	comp=Z,187nm,21.9s,baz=153,slow=33						
CD2	**Chengdu**	45.05	327	P	P	02 06 50.3	-0.2
CD2				pP	pwP	02 07 21.3	-2.4
CD2				S	S	02 13 21.0	+1.3
CD2				sS	sS	02 14 15.6	+7.6
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
CD2				pmax	pmax		
	comp=Z,90nm,3.9s						
CD2				LR	LR		
	comp=Z,340nm,14.2s						
CD2				LR	LR		
	comp=Z,540nm,18.0s						
CD2				LR	LR		
	comp=Z,490nm,18.2s						
XAN	**Xi'an**	45.11	335	P	P	02 06 50.3	-0.6
XAN				pP	pwP	02 07 22.6	-1.2
XAN				sP	sP	02 07 36.5	+2.9
XAN				PP	PP	02 08 37.3	-1.8
XAN				S	S	02 13 14.3	-6.3
XAN				pmax	pmax		
	comp=Z,24nm,1.0s						
XAN				pmax	pmax		
	comp=Z,150nm,3.8s						
MSVF	**Nonsavu**	47.86	108	P	P	02 07 13.8	+1.1
	comp=Z,10nm,0.9s,baz=316,slow=20,SNR=5.3						
MSVF	**Nonsavu**	47.86	108	⇑*e*P	P	02 07 13.0	+0.3
MSVF				pmax	pmax		
	comp=Z,29nm,1.4s						
BJT	**Baijiatuau**	48.08	345	P	P	02 07 13.5	-0.4
BJT				pmax	pmax		
	comp=Z,84nm,1.6s						
BJT	**Baijiatuau**	48.08	345	P	P	02 07 13.4	-0.4
BJT				IAmb	IAmb	02 07 15.5	
	comp=Z,84nm,1.6s						
BJI	**Beijing**	48.10	345	P	P	02 07 14.1	+0.1
BJI				pP	pP	02 07 43.3	+0.6
BJI				PcP	PcP	02 08 40.9	+1.2
BJI				S	S	02 14 05.3	+2.4
BJI				pmax	pmax		
	comp=Z,26nm,0.8s						
OUZ	**Omahuta**	48.95	132	P	P	02 07 22.5	+1.8
OUZ				IAmb	IAmb	02 07 45.3	
	comp=Z,72nm,1.4s						
SHL	**Shillong**	49.09	312	P	P	02 07 21.1	-1.0
SHL				pmax	pmax		
	comp=Z,92nm,1.0s						

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SHL   Shillong         49.09 312   P       P        02 07 21.8 -0.3
      SNR=22
SHL   Shillong         49.09 312   P       P        02 07 21.1 -1.0
SHL                                IAmb    IAmb     02 07 23.1
      comp=Z,92nm,1.0s
LZH   Lanzhou          49.11 331  eP       P        02 07 23.3 +1.3
LZH                                pP      pP       02 07 52.4 +1.4
LZH                                sP      sP       02 08 14.5 +9.4
LZH                                ScP     ScP      02 12 27.1 +0.1
LZH                                S       S        02 14 13.8 -3.7
LZH                                pmax    pmax
      comp=Z,39nm,1.0s
LZH                                pmax    pmax
      comp=Z,160nm,5.4s
HHC   Hu-ho-hao-te     50.16 341  eP       P        02 07 33.0 +3.1
HHC                                pmax    pmax
      comp=Z,23nm,1.2s
HHC                                pmax    pmax
      comp=Z,170nm,5.6s
CN2   Changchun        50.25 355  eP       P        02 07 30.1 -0.2
CN2                               ePP      PP       02 09 28.9 +1.8
USRK  Ussuriysk Ar.    50.48   2   P       P        02 07 32.5 +0.5
      comp=Z,3.7nm,0.7s,baz=193,slow=7.7,SNR=12
USRK  Ussuriysk Ar.    50.48   2   P       P        02 07 31.3 -0.7
FOZ   Fox Glacier      50.60 143   P       P        02 07 33.5 +0.5
FOZ                                IAmb    IAmb     02 09 18.9
      comp=Z,65nm,1.1s
MLZ   Mavora Lakes     50.72 146   P       P        02 07 33.9 -0.1
MLZ                                IAmb    IAmb     02 08 40.5
      comp=Z,123nm,1.6s
QRZ   Quartz Range     50.83 139   P       P        02 07 36.8 +1.9
MDJ   Mudanjiang       50.88 359   P       P        02 07 36.0 +1.0
MDJ                                pP      pwP      02 08 06.8 -1.8
MDJ                                sP      sP       02 08 23.0 +4.9
MDJ                                ScP     ScP      02 12 30.8 -3.3
MDJ                                S       S        02 14 45.8 +4.4
MDJ                                sS      sS       02 15 39.5 +8.8
MDJ                                ScS     ScS      02 17 12.3 -0.3
MDJ                                pmax    pmax
      comp=Z,16nm,1.9s
MDJ                                pmax    pmax
      comp=Z,260nm,3.8s
PALK  Pallekele        51.34 285   P       P        02 07 37.8 -1.3
      comp=Z,22nm,0.7s,baz=207,slow=8.0,SNR=14
PALK  Pallekele        51.34 285   P       P        02 07 38.0 -1.1
PALK  Pallekele        51.34 285   P       P        02 07 37.5 -1.6
THZ   Tophouse         51.55 140   P       P        02 07 41.2 +0.9
THZ                                IAmb    IAmb     02 08 42.8
      comp=Z,62nm,1.3s
OXZ   Oxford           51.83 142   P       P        02 07 43.0 +0.7
OXZ                                IAmb    IAmb     02 08 47.5
      comp=Z,26nm,0.7s
LSA   Lhasa            52.05 316   P       P        02 07 45.6 +1.0
LSA   Lhasa            52.05 316   P       P        02 07 45.6 +1.0
LSA   Lhasa            52.05 316   IAmb    IAmb     02 07 46.7
      comp=Z,142nm,1.6s
TUWZ  Tuamarina        52.06 139   P       P        02 07 43.3 -0.7
KHZ   Kahutara         52.29 140   P       P        02 07 45.4 -0.2
BKZ   Black Stump Fm   52.73 135   P       P        02 07 49.2 +0.1
BKZ                                IAmb    IAmb     02 08 35.3
      comp=Z,35nm,1.0s
URZ   Urewera          52.79 134   P       P        02 07 49.4  0.0
      comp=Z,4.4nm,0.5s,baz=303,slow=24,SNR=2.1
URZ   Urewera          52.79 134   P       P        02 07 49.9 +0.5
ODAN  Odare            53.16 311  eP       P        02 07 52.6  0.0
      comp=Z,108nm,0.6s
TAPN  Taplejung        53.18 311  eP       P        02 07 52.9 +0.1
      comp=Z,161nm,0.6s
GTA   Gaotai           53.68 331 ⇑P        P        02 07 56.6 +0.6
GTA                                pP      pP       02 08 26.5 +1.0
GTA                                sP      sP       02 08 44.3 +4.8
GTA                                ScP     ScP      02 12 46.3 -0.3
GTA                                S       S        02 15 16.8 -3.3
GTA                                pmax    pmax
      comp=Z,18nm,1.2s
RAMN  Ramite           53.81 310  eP       P        02 07 57.8 +0.4
      comp=Z,287nm,0.5s
RAMN  Ramite           53.81 310  eP       P        02 07 57.7 +0.4
      comp=Z,287nm,0.5s
JIRN  Jiri             54.49 311  eP       P        02 08 02.4  0.0
      comp=Z,134nm,0.7s
JIRN  Jiri             54.49 311  eP       P        02 08 02.5  0.0
      comp=Z,123nm,0.7s
GUN   Gumba            54.85 311  eP       P        02 08 05.1 +0.1
      comp=Z,270nm,0.7s
GUN   Gumba            54.85 311  eP       P        02 08 05.1 +0.1
      comp=Z,275nm,0.7s
PKI   Pulchoki         55.03 310  eP       P        02 08 06.1 -0.2
      comp=Z,97nm,0.6s
PKI   Pulchoki         55.03 310  eP       P        02 08 06.0 -0.2
PKIN  Phulchoki        55.05 310  eP       P        02 08 06.0 -0.3
      comp=Z,80nm,0.7s
PKIN  Phulchoki        55.05 310  eP       P        02 08 06.0 -0.3
      comp=Z,89nm,0.7s
KKN   Kakani           55.24 310  eP       P        02 08 07.6 -0.1
      comp=Z,121nm,0.7s
KKN   Kakani           55.24 310  eP       P        02 08 07.6 -0.1
      comp=Z,111nm,0.7s
DMN   Daman            55.28 310  eP       P        02 08 08.1 +0.1
      comp=Z,141nm,0.7s
DMN   Daman            55.28 310  eP       P        02 08 08.1 +0.1
      comp=Z,281nm,1.0s
KLR   Kul'dur          55.50   1⇓eP       P        02 08 09.8 +1.0
GKN   Gorkha           55.84 310  eP       P        02 08 12.0 +0.1
      comp=Z,194nm,0.6s
GKN   Gorkha           55.84 310  eP       P        02 08 11.9 +0.1
      comp=Z,229nm,0.7s
HIA   Hailar           56.29 352⇑eP       P        02 08 13.9 -0.6
HIA                                pmax    pmax
      comp=Z,2.0nm,0.7s
HYB   Hyderabad        56.37 296  i P      P        02 08 14.0 -1.6
KOLN  Koldanda         56.52 309  eP       P        02 08 16.9 +0.2
      comp=Z,409nm,1.1s
KOLN  Koldanda         56.52 309  eP       P        02 08 17.0 +0.2
      comp=Z,409nm,1.1s
DANN  Dangsing         56.69 310  eP       P        02 08 17.8 -0.2
      comp=Z,322nm,1.1s
DANN  Dangsing         56.69 310  eP       P        02 08 17.9 -0.1
      comp=Z,322nm,1.1s
PYUN  Piuthan          57.15 309  eP       P        02 08 21.4 +0.2
      comp=Z,614nm,1.0s
ULN   Ulaanbaatar      57.88 342c iP       P        02 08 26.8 +0.9
ULN                               i *PP    pP       02 08 55.5 -0.1
ULN                                pmax    pmax
      comp=Z,68nm,1.7s
ULN   Ulaanbaatar      57.88 342   P       P        02 08 27.1 +1.2
ULN   Ulaanbaatar      57.88 342   P       P        02 08 26.4 +0.5
ULN                                IAmb    IAmb     02 08 28.0
      comp=Z,50nm,1.1s
SONM  Songino Array    58.06 341   P       P        02 08 28.1 +1.0
      comp=Z,8.8nm,0.4s,baz=161,slow=7.2,SNR=96
SONM  Songino Array    58.06 341   P       P        02 08 27.4 +0.4
ZEA   Zeya             60.06 358  eP       P        02 08 41.8 +1.3
ZEA                                pmax    pmax
      comp=N,10.0nm,1.1s
ZEA                                pmax    pmax
      comp=Z,20nm,1.0s
CASY  Casey            61.25 189   P       P        02 08 48.8 +0.4
CASY                               IAmb    IAmb     02 08 50.2
      comp=Z,46nm,0.9s
ZAK   Zakamensk        61.29 341  eP       P        02 08 46.8 -2.3
ZAK                                pmax    pmax
      comp=Z,14nm,1.7s
TLY   Talaya           62.29 342  eP       P        02 08 57.0 +1.3
TLY                               e                 02 09 48.6
TLY                               eS       S        02 17 17.8 +6.2
TLY                                pmax    pmax
      comp=Z,36nm,1.0s
WMQ   Urumqi           63.14 327  eP       P        02 09 01.9 +0.3
WMQ                                pP      pP       02 09 33.3 +1.5
WMQ                                PcP     PcP      02 09 40.3 +2.3
WMQ                                sP      sP       02 09 51.1 +5.5
WMQ                                S       S        02 17 20.6 -2.0
WMQ                                pmax    pmax
      comp=Z,34nm,0.9s
WMQ                                pmax    pmax
      comp=Z,250nm,3.7s
PEA0B Petropavlovsk-   63.75  18   P       P        02 09 04.6 -0.7
PEA0B                              pmax    pmax
      comp=Z,227nm,1.8s
PEA0B Petropavlovsk-   63.75  18   P       P        02 09 04.6 -0.7
PETK  Petropavlovsk-   63.75  18   P       P        02 09 06.4 +1.1
      comp=Z,12nm,0.9s,baz=203,slow=10,SNR=9.7
PETK                               LR      LR       02 32 30.8
      comp=Z,70nm,21.9s,baz=207,slow=32
PETK  Petropavlovsk-   63.75  18   P       P        02 09 05.6 +0.3
PAF   Port-aux-Franc   65.86 218   P       P        02 09 19.3 +0.2
PAF                                pmax    pmax
      comp=Z,428nm,1.3s
PAF   Port-aux-Franc   65.86 218   P       P        02 09 19.3 +0.2
ZSN   Zaisan           67.00 328  eP       P        02 09 24.5 -2.0
      baz=328
ZSN   Zaisan           67.00 328  eP       P        02 09 24.4 -2.0
NIL   Nilore           67.12 311   P       P        02 09 27.4 -0.1
NIL                                pmax    pmax
      comp=Z,35nm,0.8s
NIL   Nilore           67.12 311   P       P        02 09 27.4 -0.1
NIL                                IAmb    IAmb     02 09 28.2
      comp=Z,35nm,0.8s
DGZ   Jazzator, Alta   67.21 331c iP       P        02 09 28.5 +0.7
DGZ                                pmax    pmax
      comp=Z,38nm,1.1s
SHLS  Shalkode         67.51 322  eP       P        02 09 26.9 -2.9
      comp=Z,36nm,1.2s,baz=322
SHLS  Shalkode         67.51 322  eP       P        02 09 26.9 -2.9
SHLS                               pmax    pmax
      comp=Z,36nm,1.2s
UZB   Uzynbulak        67.77 322  eP       P        02 09 31.0 -0.6
      comp=Z,35nm,1.4s,baz=322
UZB   Uzynbulak        67.77 322  eP       P        02 09 30.9 -0.6
UZB                                pmax    pmax
      comp=Z,35nm,1.4s
PRZ   Przheval'sk      67.80 321   P       P        02 09 32.8 +1.1
PRZ                                pmax    pmax
      comp=Z,83nm,1.2s
PRZ   Przheval'sk      67.80 321   P       P        02 09 32.8 +1.1
PRZ                                IAmb    IAmb     02 09 34.8
      comp=Z,83nm,1.2s
KSH   Kashi            67.86 317   P       P        02 09 33.1 +1.0
KSH                                PcP     PcP      02 09 58.8 +1.1
KSH                                pP      pwP      02 10 07.3 +0.2
KSH                                sP      sP       02 10 23.9 +7.6
KSH                                S       S        02 18 19.9 -0.4
KSH                                ScS     SKiKP    02 19 13.5 -2.3
KSH                                pmax    pmax
      comp=Z,32nm,1.1s
MK31  Makanchi Array   67.97 327c iP       P        02 09 32.8 +0.3
MK31  Makanchi Array   67.97 327   P       P        02 09 32.7 +0.2
MK31                               IAmb    IAmb     02 09 34.4
      comp=Z,55nm,1.1s
MKAR  Makanchi Array   67.97 327   P       P        02 09 33.2 +0.7
      comp=Z,60nm,0.8s,baz=112,slow=8.9,SNR=234
MKAR  Makanchi Array   67.97 327ceP        P        02 09 33.2 +0.7
MKAR                               pmax    pmax
      comp=Z,60nm,0.9s
MKAR  Makanchi Array   67.97 327   P       P        02 09 32.5  0.0
SATY  Saty             68.10 322  eP       P        02 09 33.0 -0.6
      comp=Z,29nm,1.0s,baz=322
SATY  Saty             68.10 322  eP       P        02 09 32.9 -0.6
SATY                               pmax    pmax
      comp=Z,29nm,1.0s
KPKS  Kokpek           68.15 322  eP       P        02 09 33.2 -0.6
      comp=Z,48nm,1.4s,baz=322
KPKS  Kokpek           68.15 322  eP       P        02 09 33.2 -0.6
KPKS                               pmax    pmax
      comp=Z,48nm,1.4s
MAKZ  Makanchi         68.15 326   P       P        02 09 33.8 +0.2
MAKZ                               pmax    pmax
      comp=Z,82nm,1.2s
MAKZ  Makanchi         68.15 326   P       P        02 09 33.8 +0.2
MAKZ                               IAmb    IAmb     02 09 35.4
      comp=Z,82nm,1.2s
YAK   Yakutsk          68.32 360  eP       P        02 09 34.6 +0.3
YAK                                pmax    pmax
      comp=Z,85nm,0.9s
YAK                                pmax    pmax
      comp=N,29nm,1.0s
YAK   Yakutsk          68.32 360   P       P        02 09 33.7 -0.6
YAK                                IAmb    IAmb     02 09 35.6
      comp=Z,81nm,0.8s
MDOK  Medeo            69.00 321  eP       P        02 09 37.2 -1.9
      baz=321
MDOK  Medeo            69.00 321  eP       P        02 09 37.2 -1.9
ULHL  Ulahol           69.04 320   P       P        02 09 40.6 +1.1
      SNR=5.9
TDK   Taldyqorghan     69.16 323  eP       P        02 09 39.7 -0.3
      baz=323
TDK   Taldyqorghan     69.16 323  eP       P        02 09 39.6 -0.3
TKM2  Tokmak 2         69.79 320   P       P        02 09 45.0 +0.9
      SNR=37
KUU   Kurty            69.82 321  eP       P        02 09 43.9 -0.2
      comp=Z,92nm,1.0s,baz=322
KUU   Kurty            69.82 321  eP       P        02 09 43.8 -0.2
KUU                                pmax    pmax
      comp=Z,92nm,1.0s
KBK   Karagaybulak     70.07 320   P       P        02 09 47.1 +1.3
      SNR=15
UCH   Uchtor           70.14 319   P       P        02 09 48.0 +1.5
      SNR=48
AAK   Ala-Archa        70.36 320   P       P        02 09 48.2 +0.7
      comp=Z,26nm,0.9s,baz=138,slow=4.9,SNR=56
AAK   Ala-Archa        70.36 320   P       P        02 09 48.8 +1.3
      SNR=30
AAK   Ala-Archa        70.36 320  i P      P        02 09 48.8 +1.3
      SNR=37
AAK   Ala-Archa        70.36 320c iP       P        02 09 48.6 +1.1
AAK                                pmax    pmax
      comp=Z,270nm,1.7s
AAK   Ala-Archa        70.36 320   P       P        02 09 48.6 +1.1
AAK   Ala-Archa        70.36 320   P       P        02 09 48.1 +0.7
AAK                                IAmb    IAmb     02 09 49.9
      comp=Z,74nm,1.2s
CHMS  Chumysh          70.37 320   P       P        02 09 48.2 +0.8
      SNR=8.6
AML   Almayashu        70.63 319   P       P        02 09 50.6 +1.2
      SNR=63
AML   Almayashu        70.63 319  i P      P        02 09 50.7 +1.2
      SNR=63
USP   Ospenovka        70.66 320   P       P        02 09 50.1 +1.0
      SNR=61
SGDS  Sogindy          70.67 320  eP       P        02 09 48.2 -1.0
      comp=Z,20nm,1.4s,baz=320
KBL   Kabul            70.67 310   P       P        02 09 49.2 -0.4
KBL                                pmax    pmax
      comp=Z,58nm,1.1s
KBL   Kabul            70.67 310   P       P        02 09 50.2 +0.6
      SNR=22
KBL   Kabul            70.67 310   P       P        02 09 49.2 -0.4
KBL                                IAmb    IAmb     02 09 51.2
      comp=Z,58nm,1.1s
DRK   Karamyk          70.70 316   IAmb    IAmb     02 09 51.9
      comp=Z,166nm,1.5s
EKS2  Erkin-Say        70.83 319   P       P        02 09 51.8 +1.5
      SNR=35
SEM   Semipalatinsk    71.22 329  eP       P        02 09 50.3 -2.4
      baz=329
SEM   Semipalatinsk    71.22 329  eP       P        02 09 50.2 -2.4
ZAA0  Zalesovo Array   71.27 334   IAmb    IAmb     02 09 53.3
      comp=Z,46nm,1.1s
ZALV  Zalesovo Beam    71.27 334   P       P        02 09 52.0 -0.5
      comp=Z,31nm,0.9s,baz=108,slow=4.8,SNR=91
ZALV                               LR      LR       02 44 09.1
      comp=Z,43nm,18.3s,baz=127,slow=38
ZALV  Zalesovo Beam    71.27 334   P       P        02 09 51.7 -0.8
GAR   Garm             71.53 315   P       P        02 09 54.5 -0.1
BTK   Batken           71.63 316   IAmb    IAmb     02 09 57.3
      comp=Z,184nm,1.8s
BTLS  Baital           71.82 322  eP       P        02 09 55.5 -0.6
      baz=322
BTLS  Baital           71.82 322  eP       P        02 09 55.4 -0.6
KURBB Kurchatov Arra   72.24 328   P       P        02 09 58.7 +0.3
      comp=Z,25nm,0.9s,baz=126,slow=4.8,SNR=9.3
KURK  Kurchatov        72.25 328c iP       P        02 09 58.6 +0.2
KURK                               pmax    pmax
      comp=Z,60nm,1.3s
KURK  Kurchatov        72.25 328   P       P        02 09 58.8 +0.4
KURK  Kurchatov        72.25 328   P       P        02 09 58.3 -0.1
KURK                               IAmb    IAmb     02 09 59.9
      comp=Z,48nm,1.1s
DZA   Taraz            72.53 319  eP       P        02 09 59.5 -0.9
      baz=319
DZA   Taraz            72.53 319  eP       P        02 09 59.4 -0.9
VNDA  Vanda            72.91 173   P       P        02 10 02.6 +0.7
      comp=Z,17nm,0.8s,baz=319,slow=7.6,SNR=52
VNDA                               LR      LR       02 42 07.5
      comp=Z,60nm,18.7s,baz=337,slow=36
VNDA  Vanda            72.91 173   P       P        02 10 02.1 +0.1
KKAR  Karatay Array    73.17 319   P       P        02 10 04.6 +0.5
KKAR  Karatay Array    73.17 319   P       P        02 10 04.6 +0.5
MSEY  Mahe Island      74.44 267   P       P        02 10 12.8 +0.6
JLN   Jalan Bani Buh   74.97 295   P       P        02 10 16.0 +1.0
      SNR=8.2
BRZS  Berezniki        75.07 326  eP       P        02 10 13.5 -1.5
      baz=326
BRZS  Berezniki        75.07 326  eP       P        02 10 13.4 -1.5
WBK   Wadi Bani Khal   75.47 295   P       P        02 10 19.0 +1.1
      SNR=11
MAW   Mawson           75.53 201   P       P        02 10 18.5 +1.2
      comp=Z,69nm,0.9s,baz=80,slow=5.9,SNR=52
MAW                                LR      LR       02 41 20.3
      comp=Z,140nm,20.8s,baz=37,slow=34
MAW   Mawson           75.53 201   P       P        02 10 18.5 +1.2
      baz=76,SNR=33
MAW   Mawson           75.53 201   P       P        02 10 17.7 +0.4
WSAR  Wadi Sarin       75.92 296   P       P        02 10 21.1 +0.7
      comp=Z,29nm,0.7s,baz=128,slow=6.2,SNR=34
WSAR  Wadi Sarin       75.92 296   P       P        02 10 21.5 +1.1
      SNR=18
JMDO  Jabal Madar      76.20 295   P       P        02 10 23.1 +1.1
      SNR=9.0
SMDO  Samad            76.40 296   P       P        02 10 24.0 +0.8
      SNR=9.5
BIDO  Bidbid           76.44 296   P       P        02 10 25.0 +1.7
      SNR=32
BSY   Bisya            77.10 295   P       P        02 10 29.0 +1.9
      SNR=5.1
HOQ   Hoqain           77.18 296   P       P        02 10 29.0 +1.5
      SNR=18
SHAO  Shalim           77.57 290  i P      P        02 10 30.3 +0.6
      SNR=9.2
SHAO  Shalim           77.57 290   P       P        02 10 30.4 +0.7
BVAR  Borovoye Array   77.80 328   P       P        02 10 30.4 +0.1
      comp=Z,20nm,0.9s,baz=193,slow=12,SNR=74
ARQ   Araqi            77.83 295   P       P        02 10 33.0 +1.8
      SNR=7.9
BRVK  Borovoye         77.87 328c iP       P        02 10 30.8 +0.1
BRVK                               pmax    pmax
      comp=Z,67nm,1.7s
BRVK  Borovoye         77.87 328   P       P        02 10 30.8 +0.1
BRVK  Borovoye         77.87 328   P       P        02 10 30.1 -0.6
TIXI  Tiksi            77.99 360deP        P        02 10 30.5 -0.4
TIXI                               pmax    pmax
      comp=Z,16nm,0.8s
TIXI  Tiksi            77.99 360   P       P        02 10 29.9 -1.0
SOHO  SOHO             78.00 296  i P      P        02 10 32.3 +0.3
      SNR=21
SOHO  SOHO             78.00 296   P       P        02 10 32.3 +0.3
SOCY  Socotra          78.10 284   P       P        02 10 32.8  0.0
DMTO  DMTO             78.15 290   P       P        02 10 33.4 +0.4
MDH   Madha            78.46 297  i P      P        02 10 33.9 -0.7
      SNR=5.4
MDH   Madha            78.46 297   P       P        02 10 34.0 -0.6
UOSS  Minazif          78.47 297  i P      P        02 10 34.8 +0.2
      SNR=14
UOSS  Minazif          78.47 297   P       P        02 10 34.8 +0.2
UOSS  Minazif          78.47 297   P       P        02 10 34.3 -0.3
HATD  Hatta, Dubai     78.51 297  i P      P        02 10 35.0 +0.2
      SNR=13
HATD  Hatta, Dubai     78.51 297   P       P        02 10 36.0 +1.2
      SNR=10
MSFE  Esma-Masafi      78.60 297  i P      P        02 10 36.1 +0.7
      SNR=9.6
BANOM Banah            78.60 298  i P      P        02 10 35.8 +0.5
      SNR=37
BANOM Banah            78.60 298   P       P        02 10 37.0 +1.6
      SNR=17
MASF  Masafi           78.60 297   P       P        02 10 36.5 +1.1
      SNR=16
ALNE  Al Ain           78.68 296   P       P        02 10 36.0 +0.3
ALNE  Al Ain           78.68 296   P       P        02 10 36.5 +0.7
      SNR=11
SHME  Shamm            78.77 298  i P      P        02 10 36.8 +0.6
      SNR=35
SHME  Shamm            78.77 298   P       P        02 10 37.3 +1.1
      SNR=15
RBK   Rabkut           78.81 289   P       P        02 10 38.0 +1.3
      SNR=8.2
NAZ   Nazwa, Dubai     78.96 297   P       P        02 10 37.6 +0.3
NAZ   Nazwa, Dubai     78.96 297   P       P        02 10 38.0 +0.7
      SNR=11
FAQ   Al Faqa, Dubai   78.97 297  i P      P        02 10 37.5 +0.2
      SNR=21
FAQ   Al Faqa, Dubai   78.97 297   P       P        02 10 38.0 +0.7
      SNR=10
UMQ   Umm Al-Quwin     79.07 297   P       P        02 10 38.7 +0.8
DOK   Doka             79.08 290   P       P        02 10 38.1  0.0
      SNR=8.8
ASUD  Al Ashush, Dub   79.18 296  i P      P        02 10 39.3 +0.9
      SNR=8.5
ASUD  Al Ashush, Dub   79.18 296   P       P        02 10 40.0 +1.5
      SNR=7.1
WHFO  Wadi Hawf        79.29 290   P       P        02 10 39.2 -0.1
      SNR=10
ABTO  Aybut            79.63 289   P       P        02 10 42.0 +0.8
      SNR=9.3
GEYT  Alibeck          80.12 310   P       P        02 10 44.1 +0.7
      comp=Z,12nm,0.7s,baz=141,slow=5.0,SNR=19
GEYT                               LR      LR       02 51 37.8
      comp=Z,39nm,20.8s,baz=25,slow=40
GEYT  Alibeck          80.12 310   P       P        02 10 44.0 +0.6
GYA0B ALIBECK ARRAY    80.12 310   IAmb    IAmb     02 10 45.2
      comp=Z,73nm,1.6s
NRIK  Noril'sk         81.14 346   P       P        02 10 48.6 +0.6
      comp=Z,30nm,0.8s,baz=130,slow=6.3,SNR=31
NRIK                               LR      LR       02 50 31.5
      comp=Z,72nm,19.1s,baz=148,slow=38
NRIK  Noril'sk         81.14 346ceP        P        02 10 48.4 +0.4
NRIK                               pmax    pmax
      comp=Z,56nm,0.9s
NRIK  Noril'sk         81.14 346   IAmb    IAmb     02 10 51.2
      comp=Z,45nm,0.9s
GHWR  Ruwais           81.23 295   P       P        02 10 49.9 +0.4
JRN   Qarnain Island   81.45 296   P       P        02 10 50.6  0.0
VOI   Vohitsoka        81.61 249   P       P        02 10 51.7 -0.1
VOI                                IAmb    IAmb     02 10 53.4
      comp=Z,83nm,1.4s
VOI   Vohitsoka        81.61 249   P       P        02 10 52.6 +0.9
ABKAR Akbulak array    82.31 321   P       P        02 10 53.8 -0.8
SLWR  Sila             82.32 295   P       P        02 10 55.6 +0.5
TRNA  Turayna          82.87 296   P       P        02 10 57.9 -0.1
SHMA  Al-Shehemyia     83.29 297   P       P        02 11 00.6 +0.4
QSPA  South Pole Qui   83.48 180   P       P        02 11 00.1 -0.4
QSPA                               IAmb    IAmb     02 11 01.7
      comp=Z,59nm,0.9s
AKTO  Aktyubinsk       83.86 322   P       P        02 11 02.6 +0.1
      comp=Z,11nm,0.7s,baz=107,slow=6.4,SNR=24
SYO   Syowa Base       84.25 201⇑iP        P        02 11 05.0 +0.9
SYO   Syowa Base       84.25 201⇑ePcP      PcP      02 11 11.6 +3.9
SVE   Sverdlovsk       84.50 329deP        P        02 11 05.9 +0.3
SVE                                pmax    pmax
      comp=Z,59nm,1.3s
ARU   Arti             85.44 328   P       P        02 11 09.8 -0.5
      comp=Z,11nm,0.8s,baz=113,slow=3.6,SNR=16
ARU   Arti             85.44 328d iP       P        02 11 09.6 -0.7
ARU                                                 02 14 24.4
ARU                                S       S        02 21 21.5 -9.1
ARU                                pmax    pmax
      comp=Z,45nm,1.1s
ARU   Arti             85.44 328   P       P        02 11 09.4 -0.9
ARU                                IAmb    IAmb     02 11 11.2
      comp=Z,46nm,1.1s
RAYN  Ar Rayn          87.83 294  i P      P        02 11 23.1 +0.4
      SNR=59
RAYN  Ar Rayn          87.83 294   P       P        02 11 22.5 -0.3
RAYN                               pmax    pmax
      comp=Z,64nm,0.9s
RAYN  Ar Rayn          87.83 294   P       P        02 11 23.2 +0.4
RAYN  Ar Rayn          87.83 294   P       P        02 11 22.5 -0.3
TTA   Tatalina         88.40  26   P       P        02 11 25.3 +0.7
TTA                                pmax    pmax
      comp=Z,25nm,1.4s
TTA   Tatalina         88.40  26   P       P        02 11 25.8 +1.2
      baz=253
TTA   Tatalina         88.40  26   P       P        02 11 25.3 +0.7
GCSA  Galena City Sc   88.59  24   P       P        02 11 25.7 +0.4
      baz=252
KDAK  Kodiak Island    88.63  31   P       P        02 11 26.2 +0.6
      comp=Z,16nm,0.9s,baz=266,slow=17,SNR=3.7
KDAK  Kodiak Island    88.63  31   P       P        02 11 26.6 +1.0
KDAK                               pmax    pmax
      comp=Z,244nm,2.0s
KDAK  Kodiak Island    88.63  31   P       P        02 11 26.6 +1.0
L19K  White Mountain   88.69  27   P       P        02 11 28.1 +2.2
      baz=254
ATD   Arta Tunnel      88.81 282   P       P        02 11 28.1 +0.6
      comp=Z,27nm,1.0s,baz=272,slow=1.8,SNR=6.7
ATD   Arta Tunnel      88.81 282   IAmb    IAmb     02 11 30.5
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	comp=Z,44nm,1.1s						
M19K	**Big River Lodg**	**88.83**	**27**	P	**P**	**02 11 28.7**	**+2.2**
	baz=254						
L20K	**Farewell, AK**	**89.21**	**27**	P	**P**	**02 11 29.9**	**+1.5**
	baz=254						
K20K	**Telida**	**89.37**	**26**	P	**P**	**02 11 29.9**	**+0.9**
	baz=254						
J20K	**Nowinta River**	**89.56**	**25**	P	**P**	**02 11 30.5**	**+0.6**
	baz=254						
SUA	**Susitna One**	**90.40**	**28**	P	**P**	**02 11 34.6**	**+0.5**
	baz=257						
BELG	**Belogornoye**	**90.64**	**323**	P	**P**	**02 11 33.7**	**-1.5**
	comp=Z,15nm,0.8s,baz=350,slow=5.9,SNR=5.3						
BELG	**Belogornoye**	**90.64**	**323**	*de*P	**P**	**02 11 33.8**	**-1.4**
BELG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
I21K	**Tanana**	**90.72**	**24**	P	**P**	**02 11 35.8**	**+0.6**
	baz=256						
KIRV	**Kirov**	**90.76**	**329**	P	**P**	**02 11 34.1**	**-1.5**
	comp=Z,8.0nm,0.6s,baz=296,slow=1.8,SNR=6.3						
KIRV	**Kirov**	**90.76**	**329**	*d i*P	**P**	**02 11 34.3**	**-1.3**
MLY	**Manley**	**91.19**	**25**	P	**P**	**02 11 37.5**	**-0.1**
	baz=257						
MLY	**Manley**	**91.19**	**25**	IAmb	IAmb	02 12 20.7	
	comp=Z,38nm,2.0s						
WAT1	**Susitna Watana**	**91.69**	**27**	P	**P**	**02 11 40.4**	**+0.5**
	baz=259						
MCK	**McKinley**	**91.69**	**26**	P	**P**	**02 11 39.1**	**-0.8**
	baz=259						
ZEI	**Tsey**	**91.73**	**313**	*e*P	**P**	**02 11 40.2**	**-0.6**
ZEI				pmax	pmax		
	comp=Z,4.0nm,1.3s						
I23K	**Minto, Yukon-K**	**91.79**	**25**	P	**P**	**02 11 39.8**	**-0.4**
	baz=259						
I23K	**Minto, Yukon-K**	**91.79**	**25**	IAmb	IAmb	02 11 41.4	
	comp=Z,28nm,1.2s						
COLD	**Coldfoot**	**91.88**	**23**	P	**P**	**02 11 40.9**	**+0.3**
	baz=258						
KIBK	**Kibwezi**	**91.99**	**267**	P	**P**	**02 11 43.4**	**+1.0**
	SNR=5.3						
KIBK	**Kibwezi**	**91.99**	**267**	P	**P**	**02 11 42.4**	**-0.1**
KIBK				IAmb	IAmb	02 11 44.3	
	comp=Z,20nm,1.2s						
WAT6	**Susitna Watana**	**92.01**	**27**	P	**P**	**02 11 42.5**	**+0.9**
	baz=260						
DHY	**Denali Highway**	**92.26**	**27**	P	**P**	**02 11 42.6**	**-0.1**
	baz=260						
TOLK	**Toolik Lake Re**	**92.41**	**21**	P	**P**	**02 11 43.5**	**+0.4**
	baz=258						
H24K	**Noodor Dome**	**92.53**	**24**	P	**P**	**02 11 43.9**	**+0.2**
	baz=260						
KBZ	**Khabaz**	**92.57**	**314**	P	**P**	**02 11 43.5**	**-0.9**
	comp=Z,4.0nm,1.1s,baz=198,slow=11,SNR=3.1						
KBZ	**Khabaz**	**92.57**	**314**	*ce*P	**P**	**02 11 43.7**	**-0.6**
KBZ				pmax	pmax		
	comp=Z,8.0nm,1.3s						
GURO	**Guroymak-BITLI**	**92.66**	**308**	P	**P**	**02 11 45.5**	**+0.4**
GURO				IAmb	IAmb	02 11 46.9	
	comp=Z,20nm,1.0s						
HDA	**Harding Lake**	**92.67**	**26**	P	**P**	**02 11 43.1**	**-1.2**
	baz=261						
HDA	**Harding Lake**	**92.67**	**26**	IAmb	IAmb	02 12 42.2	
	comp=Z,40nm,1.8s						
KIV	**Kislovodsk**	**92.75**	**314**	*e*P	**P**	**02 11 42.5**	**-2.8**
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,32nm,20.0s						
ILAR	**Eielson Array**	**92.76**	**25**	P	**P**	**02 11 43.4**	**-1.3**
	comp=Z,3.8nm,0.9s,baz=274,slow=4.2,SNR=27						
ILAR				PKKPbc	**PKKPdf**	**02 28 56.2**	**0.0**
	comp=Z,1.0nm,0.8s,baz=22,slow=1.7,SNR=9.1						
ILAR				LR	LR	02 48 59.7	
	comp=Z,35nm,21.9s,baz=289,slow=32						
ILAR	**Eielson Array**	**92.76**	**25**	P	**P**	**02 11 42.8**	**-2.0**
KMBO	**Kilima Mbogo**	**92.91**	**269**	P	**P**	**02 11 47.6**	**+0.7**
	comp=Z,8.4nm,0.9s,baz=64,slow=7.0,SNR=14						
KMBO				LR	LR	02 49 09.5	
	comp=Z,33nm,20.2s,baz=98,slow=33						
KMBO	**Kilima Mbogo**	**92.91**	**269**	*i* P	**P**	**02 11 47.3**	**+0.4**
	SNR=9.5						
KMBO	**Kilima Mbogo**	**92.91**	**269**	*i* P	**P**	**02 11 47.5**	**+0.6**
KMBO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KMBO	**Kilima Mbogo**	**92.91**	**269**	P	**P**	**02 11 47.0**	**0.0**
KMBO				IAmb	IAmb	02 11 48.8	
	comp=Z,18nm,1.2s						
PAX	**Paxson**	**93.11**	**27**	P	**P**	**02 11 47.4**	**+0.9**
	baz=262						
PAX	**Paxson**	**93.11**	**27**	IAmb	IAmb	02 11 47.7	
	comp=Z,28nm,1.4s						
PRGR	**Permogore**	**93.14**	**332**	*e*P	**P**	**02 11 44.2**	**-2.3**
PRGR				pmax	pmax		
	comp=Z,10.0nm,0.5s						
J26L	**Joseph Creek**	**94.14**	**26**	P	**P**	**02 11 51.0**	**-0.2**
	baz=264						
L27K	**Beaver Creek,**	**94.77**	**27**	P	**P**	**02 11 54.7**	**+0.6**
	baz=265						
BCAR	**Beaver Creek A**	**94.79**	**27**	P	**P**	**02 11 54.2**	**0.0**
BCAR				pP	**pP**	**02 12 26.6**	**+0.6**
EGAK	**Eagle**	**95.19**	**25**	P	**P**	**02 11 55.8**	**-0.1**
	baz=266						
DAWY	**Dawson**	**95.92**	**26**	P	**P**	**02 11 59.7**	**+0.4**
	baz=268						
DAWY	**Dawson**	**95.92**	**26**	IAmb	IAmb	02 12 00.7	
	comp=Z,12nm,1.0s						
KLMR	**Klimovskoe**	**96.01**	**331**	*e*P	**P**	**02 11 55.8**	**-3.9**
KLMR				pmax	pmax		
	comp=Z,33nm,1.5s						
KLMR	**Klimovskoe**	**96.01**	**331**	*e*P	**P**	**02 11 55.9**	**-3.8**
KLMR				AMP		02 11 59.3	
	comp=Z,33nm,1.5s						
SNAA	**Sanae**	**96.23**	**193**	P	**P**	**02 12 01.3**	**+0.7**
SNAA	**Sanae**	**96.23**	**193**	*c i*P	**P**	**02 12 01.2**	**+0.5**
SNAA				pmax	pmax		
	comp=Z,31nm,1.0s						
SNAA	**Sanae**	**96.23**	**193**	P	**P**	**02 12 01.1**	**+0.4**
ASF	**Jabal al Asfar**	**96.30**	**302**	P	**P**	**02 12 01.7**	**-0.1**
	comp=Z,8.4nm,0.9s,baz=72,slow=3.6,SNR=12						
OBN	**Obninsk**	**97.42**	**325**	*ce*P	**P**	**02 12 05.0**	**-1.2**
OBN				*e*		02 16 02.1	
OBN				pmax	pmax		
	comp=Z,14nm,1.7s						
MMAI	**Mount Meron Ar**	**97.61**	**302**	P	Pdif	02 12 07.8	0.0
	comp=Z,5.8nm,1.0s,baz=84,slow=8.5,SNR=6.3						
VNA2	**Neumayer--Watz**	**97.79**	**193**	P	Pdif	02 12 08.3	+0.6
	baz=116,slow=4.0						
VNA3	**Neumayer Olymp**	**98.04**	**192**	P	Pdif	02 12 09.0	+0.2
VNA1	**Neumayer--Stat**	**98.19**	**193**	P	Pdif	02 12 10.0	+0.6
INK	**Inuvik**	**98.28**	**22**	P	**P**	**02 12 08.6**	**-1.2**
	comp=Z,2.9nm,1.0s,baz=324,slow=4.3,SNR=4.7						
APA	**Apatity**	**98.60**	**337**	⇓*i*P	P	02 12 04.4	-6.8
APA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
BRTR	**Keskin Array B**	**99.24**	**309**	P	**Pdif**	**02 12 13.9**	**-1.0**
	comp=Z,1.2nm,0.5s,baz=180,slow=4.9,SNR=3.7						
BRTR				LR	LR	03 04 54.2	
	comp=Z,15nm,18.3s,baz=63,slow=40						
BRTR	**Keskin Array B**	**99.24**	**309**	P	**Pdif**	**02 12 14.0**	**-1.0**
MBAR	**Mbarara**	**99.44**	**268**	⇑*e*P	**Pdif**	**02 12 15.0**	**-1.5**
BOSA	**Boshof**	**99.99**	**240**	P	**Pdif**	**02 12 18.5**	**0.0**
	comp=Z,2.4nm,0.8s,baz=131,slow=12,SNR=2.0						
BOSA				LR	LR	02 53 43.9	
	comp=Z,43nm,18.1s,baz=120,slow=33						
ARCES	**ARCESS Array B**	**101.21**	**340**	P	**Pdif**	**02 12 21.9**	**-1.0**
	comp=Z,2.0nm,0.5s,baz=81,slow=7.4,SNR=13						
ARCES				PKiKP	**PKiKP**	**02 16 46.8**	**-0.1**
	comp=Z,6.7nm,1.2s,baz=342,slow=0.3,SNR=6.3						
AKASG	**Malin Array Be**	**102.02**	**320**	PKiKP	**PKiKP**	**02 16 49.6**	**+0.8**
	comp=Z,1.2nm,0.5s,baz=90,slow=2.4,SNR=5.9						
FINES	**FINESS Array B**	**102.47**	**332**	P	**Pdif**	**02 12 27.0**	**-1.5**
	comp=Z,1.9nm,0.7s,baz=62,slow=4.5,SNR=4.9						
FINES				PKiKP	**PKiKP**	**02 16 48.9**	**-0.4**
	comp=Z,3.1nm,0.8s,baz=90,slow=3.8,SNR=5.3						
YKA	**Yellowknife Ar**	**107.16**	**26**	PKiKP	**PKiKP**	**02 16 57.7**	**-0.2**
	comp=Z,1.1nm,0.6s,baz=333,slow=0.7,SNR=4.9						
CRVS	**Cervenica-Dubn**	**107.23**	**319**	*e*P	**Pdif**	**02 12 51.1**	**+1.0**
CRVS	**Cervenica-Dubn**	**107.23**	**319**	*e*PDIFF	**Pdif**	**02 12 51.1**	**+1.0**
VYHS	**Vyhne**	**109.02**	**319**	*e*P	**Pdif**	**02 13 00.0**	**+2.0**
VYHS	**Vyhne**	**109.02**	**319**	*e*PDIFF	**Pdif**	**02 13 00.0**	**+2.0**
NEEM	**North Greenlan**	**109.08**	**0**	*i* P	**PKiKP**	**02 17 02.2**	**+0.7**
NEEM				IAmb	IAmb	02 17 06.0	
	comp=Z,138nm,2.5s						
NVAR	**Mina Array Bea**	**110.74**	**51**	PKiKP	**PKiKP**	**02 17 07.1**	**+1.4**
	comp=Z,0.7nm,0.7s,baz=286,slow=2.1,SNR=5.7						
NVAR				PKKPbc	**PKKPbc**	**02 28 06.2**	**+0.7**
	comp=Z,0.5nm,0.7s,baz=112,slow=4.0,SNR=4.8						
CONA	**Conrad Observa**	**111.08**	**319**	*i* P	**PKiKP**	**02 17 05.3**	**-0.5**
	comp=Z,0.4nm,0.2s						
ARSA	**Arzberg**	**111.47**	**318**	*i* P	**PKiKP**	**02 17 07.4**	**+0.9**
	comp=Z,1.3nm,0.5s						
SOKA	**Soboth**	**111.94**	**318**	*e*P	**PKiKP**	**02 17 07.0**	**-0.5**
	comp=Z,1.2nm,0.6s						
MOA	**Molln**	**112.14**	**319**	*i* P	**PKiKP**	**02 17 07.1**	**-0.7**
	comp=Z,0.8nm,0.5s						
KHC	**Kasperske Hory**	**112.23**	**321**	*e*PKIKP	**PKiKP**	**02 17 03.0**	**-4.9**
KHC	**Kasperske Hory**	**112.23**	**321**	*e*PKP	**PKiKP**	**02 17 03.0**	**-4.9**
GERES	**GERESS Array B**	**112.23**	**320**	PKiKP	**PKiKP**	**02 17 08.1**	**+0.1**
	comp=Z,2.7nm,0.6s,baz=74,slow=1.9,SNR=8.2						
GERES	**GERESS Array B**	**112.23**	**320**		**PKiKP**	**02 17 07.6**	**-0.4**
HLID	**Hailey**	**112.68**	**45**	P	**PKiKP**	**02 17 10.7**	**+1.5**
	baz=283						
ABTA	**Abfaltersbach**	**113.59**	**318**	*i* P	**PKiKP**	**02 17 10.3**	**-0.3**
	comp=Z,4.5nm,0.7s,SNR=6.5						
SUMG	**Summit**	**113.62**	**356**	*i* P	**PKiKP**	**02 17 10.6**	**+0.2**
SUMG				IAmb	IAmb	02 17 12.1	
	comp=Z,5.5nm,0.9s						
UPNV	**Upernavik**	**113.66**	**2**	*e*P	**PKiKP**	**02 17 10.2**	**+0.2**
UPNV				IAmb	IAmb	02 17 10.8	
	comp=Z,9.9nm,0.8s						
WTTA	**Wattenberg**	**114.02**	**319**	*i* P	PKPdf	02 17 11.4	-0.2
	comp=Z,8.4nm,0.3s,SNR=12						
SQTA	**Sankt Quirin**	**114.31**	**319**	*i* P	PKPdf	02 17 11.7	-0.3
	comp=Z,1.9nm,0.4s						
MOTA	**Moosalm**	**114.34**	**319**	*e*P	PKPdf	02 17 11.4	-0.7
	comp=Z,4.5nm,0.5s,SNR=6.9						
RETA	**Reutte**	**114.51**	**320**	*i* P	PKPdf	02 17 11.8	-0.6
	comp=Z,0.5nm,0.3s						
DUG	**Dugway, Tooele**	**114.60**	**49**	P	**PKiKP**	**02 17 13.7**	**+0.9**
	baz=283						
FETA	**Feichten**	**114.68**	**319**	*i* P	**PKiKP**	**02 17 12.6**	**-0.2**
	comp=Z,1.1nm,0.4s						
DAVA	**Damuels**	**115.14**	**320**	*i* P	**PKiKP**	**02 17 13.6**	**-0.2**
	comp=Z,4.8nm,0.3s,SNR=5.6						
TUE	**Stuetta**	**115.75**	**319**		**PKPdf**	**02 17 13.4**	**-1.6**
BW06	**Boulder Array**	**116.31**	**45**	P	**PKiKP**	**02 17 16.4**	**+0.2**
	baz=287						
PDAR	**Pinedale Array**	**116.31**	**45**	PKP	**PKiKP**	**02 17 16.6**	**+0.4**
	comp=Z,1.3nm,0.7s,baz=229,slow=0.7,SNR=13						
PDAR				PKKPbc	**PKKPbc**	**02 27 45.3**	**-1.6**
	comp=Z,1.2nm,0.9s,baz=93,slow=5.2,SNR=5.8						
PDAR	**Pinedale Array**	**116.31**	**45**	PKPdf	**PKiKP**	**02 17 16.2**	**0.0**
P17A	**Butcher Ranch,**	**116.32**	**49**	PKPdf	**PKiKP**	**02 17 16.8**	**+0.5**
WUAZ	**Wupatki**	**116.71**	**54**	P	**PKiKP**	**02 17 18.6**	**+1.5**
	baz=282						
LAO	**LASA Array**	**117.30**	**40**	P	**PKiKP**	**02 17 19.0**	**+1.2**
	baz=291						
TUC	**Tucson**	**117.80**	**57**	P	**PKiKP**	**02 17 20.6**	**+1.3**
	baz=281						
O20A	**White River Ci**	**118.00**	**48**	P	**PKiKP**	**02 17 20.5**	**+0.9**
	baz=286						
KEST	**Kesra**	**118.77**	**307**	PKP	**PKiKP**	**02 17 21.1**	**+0.1**
	comp=Z,6.6nm,1.0s,baz=328,slow=5.5,SNR=5.3						
SFJD	**Kangerlussuaq**	**119.59**	**0**	*i* P	**PKPdf**	**02 17 21.3**	**-0.2**
SFJD				IAmb	IAmb	02 17 22.1	
	comp=Z,11nm,0.9s						
RSSD	**Black Hills**	**119.67**	**42**	PKIKP	**PKPdf**	**02 17 21.8**	**-0.8**
RSSD	**Black Hills**	**119.67**	**42**	P	**PKPdf**	**02 17 22.4**	**-0.2**
	baz=292						
RSSD	**Black Hills**	**119.67**	**42**		**PKPdf**	**02 17 21.8**	**-0.8**
ISCO	**Idaho Springs**	**120.03**	**47**	P	**PKiKP**	**02 17 25.2**	**+1.5**
	baz=288						
DY2G	**Dye2**	**120.07**	**358**	*i* P	**PKiKP**	**02 17 22.8**	**0.0**
DY2G				IAmb	IAmb	02 17 23.6	
	comp=Z,30nm,0.7s						
SDCO	**Great Sand Dun**	**120.73**	**50**	P	**PKiKP**	**02 17 26.0**	**+1.0**
	baz=287						
ANMO	**Albuquerque**	**120.76**	**53**	PKP	**PKiKP**	**02 17 25.5**	**+0.4**
	comp=Z,4.7nm,1.0s,baz=202,slow=3.4,SNR=12						
ANMO	**Albuquerque**	**120.76**	**53**	P	**PKiKP**	**02 17 26.0**	**+0.9**
	baz=285						
ANMO	**Albuquerque**	**120.76**	**53**	PKPdf	**PKPdf**	**02 17 25.0**	**0.0**
E28A	**Huff**	**120.84**	**39**	PKPdf	**PKPdf**	**02 17 23.8**	**-0.8**
T25A	**Trinidad**	**121.74**	**50**	P	**PKiKP**	**02 17 27.5**	**+0.6**
	baz=288						
ULM	**Lac du Bonnet**	**121.85**	**33**	PKP	**PKPdf**	**02 17 25.0**	**-1.3**
	comp=Z,4.6nm,0.6s,baz=267,slow=1.6,SNR=5.2						
ULM	**Lac du Bonnet**	**121.85**	**33**	PKIKP	**PKPdf**	**02 17 25.0**	**-1.3**
MNTX	**Cornudas Mount**	**122.42**	**57**	P	**PKiKP**	**02 17 29.0**	**+0.8**
	baz=284						
MSTX	**Muleshoe**	**123.95**	**53**	P	**PKiKP**	**02 17 31.5**	**+0.2**
	baz=287						
TXAR	**Lajitas Array**	**124.40**	**59**	PKP	**PKiKP**	**02 17 32.8**	**+0.5**
	comp=Z,2.4nm,0.9s,baz=265,slow=1.3,SNR=17						
TXAR				PKKPbc	**PKKPbc**	**02 27 16.5**	**+0.3**
	comp=Z,0.4nm,0.8s,baz=87,slow=5.8,SNR=4.0						
COYC	**Coyhaique**	**124.43**	**161**		**PKPdf**	**02 17 31.5**	**+0.1**
ECSD	**EROS Data Cent**	**124.70**	**40**	P	**PKPdf**	**02 17 31.9**	**-0.1**
	baz=298						
ECSD	**EROS Data Cent**	**124.70**	**40**		**PKPdf**	**02 17 31.4**	**-0.7**
NRS	**Narsarsuaq**	**125.36**	**357**	PKIKP	**PKPdf**	**02 17 31.9**	**-0.8**
NRS	**Narsarsuaq**	**125.36**	**357**	*i* P	**PKiKP**	**02 17 33.2**	**+0.2**
NRS				IAmb	IAmb	02 17 33.7	
	comp=Z,62nm,0.8s						
NRS	**Narsarsuaq**	**125.36**	**357**		**PKPdf**	**02 17 31.9**	**-0.8**
IVI	**Ivigtut**	**125.39**	**359**	*i* P	**PKiKP**	**02 17 33.0**	**-0.1**
IVI				IAmb	IAmb	02 17 34.1	
	comp=Z,31nm,0.8s						
F36A	**Milaca**	**125.53**	**36**		**PKPdf**	**02 17 32.8**	**-0.7**
I37A	**Lemond, Waseca**	**126.58**	**38**		**PKPdf**	**02 17 34.8**	**-0.8**
KSU1	**Kansas State U**	**126.77**	**45**	P	**PKiKP**	**02 17 36.4**	**-0.3**
	baz=295						
WMOK	**Wichita Mounta**	**126.84**	**51**	P	**PKiKP**	**02 17 37.2**	**+0.3**
	baz=290						
JCT	**Junction City**	**127.36**	**56**	P	**PKiKP**	**02 17 38.3**	**+0.3**
	baz=287						
ESDC	**Sonseca Array**	**127.36**	**316**	PKP	**PKiKP**	**02 17 37.6**	**-0.2**
	comp=Z,1.6nm,1.0s,baz=0.5,slow=2.4,SNR=9.3						
ESDC				PP	**PP**	**02 19 38.1**	**-0.3**
	comp=Z,1.9nm,1.0s,baz=58,slow=6.4,SNR=7.0						
ESDC	**Sonseca Array**	**127.36**	**316**	PKPdf	**PKiKP**	**02 17 38.0**	**+0.1**
PBRG	**Braganca**	**128.20**	**320**	*e*PKPdf	**PKiKP**	**02 17 39.7**	**+0.3**
P38A	**Dawn**	**128.67**	**43**		**PKiKP**	**02 17 40.0**	**-0.3**
TORD	**Torodi Ar. Bea**	**129.01**	**282**	PKP	**PKPdf**	**02 17 40.6**	**-0.4**
	comp=Z,7.5nm,0.7s,baz=64,slow=1.7,SNR=45						
TORD				SKPbc	SKPab	02 20 48.3	-1.0
	comp=Z,7.4nm,0.9s,baz=64,slow=3.2,SNR=10.0						
TORD	**Torodi Ar. Bea**	**129.01**	**282**		**PKPdf**	**02 17 41.1**	**+0.1**
POLO	**Lamas de Olo**	**129.10**	**320**	*e*PKPdf	**PKiKP**	**02 17 42.0**	**+0.7**
PVRL	**Vila Real**	**129.10**	**319**	*e*PKPdf	**PKiKP**	**02 17 41.7**	**+0.4**
PLCA	**Paso Flores**	**129.24**	**160**	PKP	**PKiKP**	**02 17 42.1**	**+0.5**
	comp=Z,4.7nm,0.7s,baz=200,slow=2.4,SNR=9.2						
PLCA	**Paso Flores**	**129.24**	**160**		**PKiKP**	**02 17 41.7**	**0.0**
MTE	**Manteigas**	**129.43**	**318**	*e*PKPdf	**PKiKP**	**02 17 42.5**	**+0.5**
MTE				*e*SKP	SKPbc	02 20 50.3	-1.0
PVIS	**Viseu**	**129.50**	**319**	*e*SKP	SKPbc	02 20 50.6	-0.9
PCBR	**Castelo Branco**	**129.67**	**318**	*e*PKPdf	**PKiKP**	**02 17 42.9**	**+0.5**
PCBR				*e*SKP	SKPbc	02 20 50.7	-1.4
S39A	**Bolivar**	**129.71**	**45**		**PKPdf**	**02 17 41.8**	**0.0**
PMRV	**Marv??o**	**129.81**	**317**	*e*PKPdf	**PKiKP**	**02 17 43.0**	**+0.3**
PMRV				*e*SKP	SKPbc	02 20 50.9	-1.7
SCHQ	**Schefferville**	**129.86**	**13**	PKP	**PKPdf**	**02 17 41.9**	**+0.3**
	comp=Z,4.7nm,0.5s,baz=357,slow=0.2,SNR=11						
SCHQ				SKPbc	SKPab	02 20 50.6	-1.2
	comp=Z,18nm,0.9s,baz=334,slow=3.0,SNR=9.7						
R40A	**Maddies Statio**	**130.17**	**44**		**PKPdf**	**02 17 42.6**	**0.0**
PBAR	**Barrancos**	**130.18**	**316**	*e*PKPdf	**PKiKP**	**02 17 43.3**	**-0.1**
PCAS	**Casmilo, Conde**	**130.24**	**319**	*e*SKP	**SKPbc**	**02 20 53.4**	**-0.7**
PMTG	**Montargil**	**130.55**	**317**	*e*SKP	**SKPbc**	**02 20 53.2**	**-2.0**
EVO	**Evora**	**130.68**	**317**	*e*PKPdf	**PKiKP**	**02 17 45.7**	**+1.3**
EVO				*e*SKP	**SKPbc**	**02 20 55.0**	**-0.7**
PBEJ	**Beja**	**130.82**	**316**	*e*SKP	**SKPbc**	**02 20 55.5**	**-0.7**
CCM	**Cathedral Cave**	**130.99**	**44**	PKIKP	**PKiKP**	**02 17 45.1**	**0.0**
CCM	**Cathedral Cave**	**130.99**	**44**	PKPdf	**PKiKP**	**02 17 45.1**	**0.0**
MESJ	**Messejana**	**131.16**	**316**	*e*SKP	**SKPbc**	**02 20 57.0**	**-0.4**
PBDV	**Barranco-do-Ve**	**131.24**	**315**	*e*PKPdf	**PKiKP**	**02 17 47.3**	**+1.6**
MORF	**Marmelete**	**131.71**	**315**	*e*PKPdf	**PKPdf**	**02 17 45.5**	**-0.1**
WVT	**Waverly**	**134.31**	**44**	P	**PKiKP**	**02 17 51.5**	**-0.3**
	baz=301						
KOWA	**Kowa**	**134.46**	**284**	PKPdf	**PKPdf**	**02 17 49.8**	**-1.6**
P49A	**Miami Univ. Ec**	**134.46**	**38**	P	**PKiKP**	**02 17 51.9**	**-0.2**
	baz=307						
KIC	**Kosan Boka**	**135.35**	**272**	*e*PKIKP	**PKPdf**	**02 17 53.5**	**+0.5**
	comp=Z,15nm,0.7s						
DBIC	**Dimbokro**	**135.47**	**273**	PKP	**PKiKP**	**02 17 54.0**	**-0.8**
	comp=Z,8.3nm,0.7s,baz=118,slow=2.0,SNR=9.9						
LIC	**Lamto**	**135.62**	**272**	*e*PKIKP	**PKPdf**	**02 17 53.3**	**-0.2**
	comp=Z,30nm,0.7s						
TIC	**Toumodi**	**135.64**	**273**	*e*PKIKP	**PKPdf**	**02 17 54.1**	**+0.5**
P52A	**Corning**	**135.97**	**37**	P	**PKiKP**	**02 17 54.4**	**-0.8**
	baz=310						
BINY	**Binghamton**	**137.48**	**29**	P	**PKiKP**	**02 17 58.1**	**-0.1**
	baz=320						
SSPA	**Standing Stone**	**137.67**	**32**	P	**PKPdf**	**02 17 57.3**	**+0.7**
	baz=316						
L61B	**Northampton**	**138.81**	**26**	P	**PKPdf**	**02 17 59.5**	**+0.9**
	baz=324						
PLTB	**Pedras Altas**	**141.78**	**175**	*e*P	**PKiKP**	**02 18 08.1**	**+0.8**
PLTB	**Pedras Altas**	**141.78**	**175**	PKPdf	**PKPdf**	**02 18 01.6**	**-2.8**
ITQB	**Itaqui**	**143.43**	**170**	*e*P	**PKiKP**	**02 18 11.2**	**+0.5**
ITQB	**Itaqui**	**143.43**	**170**		PKPbc	02 18 05.0	+0.2
JTS	**Las Juntas de**	**144.92**	**81**	PKP	**PKPdf**	**02 18 11.3**	**+1.0**
	comp=Z,28nm,0.8s,baz=48,slow=4.1,SNR=18						
JTS	**Las Juntas de**	**144.92**	**81**	PKIKP	**PKPdf**	**02 18 10.3**	**0.0**
JTS	**Las Juntas de**	**144.92**	**81**	*e*P	**PKPdf**	**02 18 10.7**	**+0.3**
JTS	**Las Juntas de**	**144.92**	**81**		**PKPdf**	**02 18 10.3**	**0.0**
LVC	**Limon Verde**	**145.50**	**148**	PKPbc	**PKPab**	**02 18 13.8**	**+1.7**
	comp=Z,46nm,0.8s,baz=251,slow=3.4,SNR=29						
LVC	**Limon Verde**	**145.50**	**148**	*e*P	**PKPab**	**02 18 12.4**	**+0.2**
LVC	**Limon Verde**	**145.50**	**148**		**PKPab**	**02 18 12.9**	**+0.7**
ITAB	**Concordia**	**146.39**	**176**	*e*P	**PKPab**	**02 18 15.8**	**+0.8**
CPUP	**Villa Florida**	**146.54**	**168**	PKPbc	**PKPbc**	**02 18 14.6**	**+0.3**
	comp=Z,44nm,0.9s,baz=191,slow=2.3,SNR=48						
CPUP	**Villa Florida**	**146.54**	**168**	PKP2	**PKPbc**	**02 18 14.0**	**-0.4**
CPUP	**Villa Florida**	**146.54**	**168**		**PKPbc**	**02 18 14.0**	**-0.4**
PB08	**IPOC Station P**	**147.34**	**145**		**PKPdf**	**02 18 15.9**	**+1.1**
PB11	**IPOC Station P**	**147.34**	**143**		**PKPdf**	**02 18 15.0**	**+0.6**
NNA	**Nana**	**147.35**	**124**	PKPbc	**PKPab**	**02 18 18.3**	**-0.9**
	comp=Z,28nm,0.8s,baz=254,slow=9.4,SNR=12						
NNA	**Nana**	**147.35**	**124**	*c i*PKP2	**PKPab**	**02 18 18.9**	**-0.3**
NNA				pmax	pmax		
	comp=Z,53nm,1.3s						
NNA	**Nana**	**147.35**	**124**		**PKPbc**	**02 18 17.0**	**0.0**
PB12	**IPOC Station P**	**147.80**	**141**		**PKPdf**	**02 18 16.5**	**+1.3**
ATAH	**Atahualpa**	**148.32**	**115**	PKPbc	**PKPbc**	**02 18 19.1**	**-1.0**
	comp=Z,27nm,0.9s,baz=308,slow=2.2,SNR=8.1						
TIJ01	**Guaruva-PR**	**148.37**	**181**	*e*P	**PKPbc**	**02 18 18.9**	**-0.6**
PTGB	**Pitanga**	**148.90**	**176**	*e*P	**PKPbc**	**02 18 21.1**	**+0.2**
PET01	**Itanhaem-SP**	**149.31**	**184**	*e*P	**PKPbc**	**02 18 19.7**	**-2.2**
PARB	**Paraibuna**	**150.09**	**188**	*e*P	**PKPbc**	**02 18 22.3**	**-1.5**
MAN01	**Angra dos Reis**	**150.29**	**191**	*e*P	**PKPbc**	**02 18 23.4**	**-0.9**
FRTB	**Fartura**	**150.35**	**180**	*e*P	**PKPbc**	**02 18 23.7**	**-0.7**
VAO	**Valinhos**	**150.57**	**185**	*e*P	**PKPbc**	**02 18 24.6**	**-0.4**
OTAV	**Otavalo**	**150.64**	**101**	PKIKP	**PKPdf**	**02 18 22.7**	**+2.3**
OTAV	**Otavalo**	**150.64**	**101**	*e*P	**PKPbc**	**02 18 23.1**	**-2.8**
OTAV	**Otavalo**	**150.64**	**101**	*e*P	**PKPdf**	**02 18 20.7**	**+0.4**
OTAV	**Otavalo**	**150.64**	**101**		**PKPbc**	**02 18 23.9**	**-2.0**
DUB01	**Friburgo-RJ**	**150.71**	**194**	*e*P	**PKiKP**	**02 18 26.3**	**+0.3**
DUB01	**Friburgo-RJ**	**150.71**	**194**	*e*P	**PKPbc**	**02 18 24.5**	**-0.9**
TRCB	**Terra Rica**	**150.75**	**174**	*e*P	**PKPbc**	**02 18 23.9**	**-1.5**
VAS01	**Vassouras-RJ**	**150.76**	**192**	*e*P	**PKPbc**	**02 18 24.4**	**-1.0**
CAM01	**Campos-RJ**	**150.78**	**195**	*e*P	**PKiKP**	**02 18 26.6**	**+0.6**
CAM01	**Campos-RJ**	**150.78**	**195**	*e*P	**PKPbc**	**02 18 25.3**	**-0.1**
LPAZ	**La Paz**	**150.92**	**141**	PKPbc	**PKiKP**	**02 18 27.9**	**+0.6**
	comp=Z,18nm,0.4s,baz=336,slow=25,SNR=67						
LPAZ	**La Paz**	**150.92**	**141**	PKIKP	**PKPdf**	**02 18 22.5**	**+1.6**
LPAZ	**La Paz**	**150.92**	**141**	*e*P	**PKiKP**	**02 18 27.4**	**+0.2**
LPAZ	**La Paz**	**150.92**	**141**	*e*P	**PKPdf**	**02 18 22.9**	**+2.0**
LPAZ	**La Paz**	**150.92**	**141**	PKPdf	**PKPdf**	**02 18 21.9**	**+1.0**
LPAZ					**PKiKP**	**02 18 27.8**	**+0.6**
RCLB	**Rio Claro- Sao**	**151.19**	**184**	*e*P	**PKPdf**	**02 18 20.8**	**+0.3**
ALF01	**Guarapari-ES**	**151.66**	**198**	*e*P	**PKiKP**	**02 18 28.5**	**+0.6**
GCUF	**Volcan Galeras**	**151.92**	**100**	*e*P	**PKiKP**	**02 18 30.0**	**+0.7**
AQDB	**Aquidauana**	**152.56**	**168**	*e*P	**PKPdf**	**02 18 25.0**	**+2.6**
BB19B	**Bebedouro**	**152.59**	**182**	*e*P	**PKPdf**	**02 18 22.1**	**-0.4**
SOTA	**Rioblanco**	**152.82**	**98**	*e*P	**PKPdf**	**02 18 25.2**	**+1.5**
CZSB	**Cruzeiro do Su**	**153.04**	**121**	*e*P	**PKPdf**	**02 18 24.4**	**+1.0**
CZSB	**Cruzeiro do Su**	**153.04**	**121**	*e*P	**PKPdf**	**02 18 24.1**	**+0.8**
PCON	**Cinco Dias**	**153.06**	**98**	*e*P	**PKiKP**	**02 18 32.3**	**+0.6**
YOTC	**Yotoco, Valle**	**153.34**	**94**	*e*P	**PKPdf**	**02 18 24.7**	**+0.7**
PLMC	**San Jos del P**	**153.49**	**92**	*e*P	**PKPdf**	**02 18 25.1**	**+1.0**
CBOC	**Ciudad Bolivar**	**153.82**	**90**	*e*P	**PKPdf**	**02 18 24.9**	**+0.2**
ITRB	**Iturama**	**153.96**	**179**	*e*P	**PKPdf**	**02 18 25.6**	**+1.0**
PTLC	**Puerto Leguiza**	**154.17**	**103**	*e*P	**PKiKP**	**02 18 33.3**	**0.0**
HELC	**Santa Helena**	**154.32**	**89**	*e*P	**PKiKP**	**02 18 34.7**	**+0.6**
ORTC	**Ortega, Tolima**	**154.42**	**94**	*e*P	**PKPdf**	**02 18 25.7**	**+0.3**
GUY2C	**Guyana, Caldas**	**154.43**	**91**	*e*P	**PKPdf**	**02 18 27.2**	**+1.3**
DIAM	**Diamantina, MG**	**154.66**	**193**	*e*P	**PKiKP**	**02 18 35.2**	**+0.9**
SIV	**San Ignacio**	**154.98**	**153**	PKP	**PKPdf**	**02 18 26.6**	**+0.6**
	comp=Z,4.8nm,0.8s,baz=167,slow=0.4,SNR=19						
SIV				PKPab	**PKPab**	**02 18 51.8**	**+1.2**
	comp=Z,6.3nm,0.8s,baz=199,slow=3.1,SNR=11						
ZARC	**Zaragoza, Cauc**	**155.00**	**86**	*e*P	**PKPdf**	**02 18 25.7**	**-0.4**
ROSC	**El Rosal**	**155.44**	**93**	PKPab	**PKPab**	**02 18 55.8**	**+2.4**
	comp=Z,8.0nm,0.6s,baz=343,slow=23,SNR=4.3						
SPBC	**San Pablo de B**	**155.74**	**91**	*e*P	**PKPdf**	**02 18 27.6**	**+0.4**
CMC01	**Camacan, BA**	**156.06**	**205**	*e*P	**PKPdf**	**02 18 32.8**	**+5.3**
MC01	**Montes Claros**	**156.26**	**194**	*e*P	PKPdf	02 18 38.5	+11
ETMB	**Extrema**	**156.90**	**134**	*e*P	**PKPdf**	**02 18 31.3**	**+2.7**
ARAG	**Araguaiana, MT**	**157.85**	**175**	*e*P	**PKPdf**	**02 18 31.0**	**+1.2**
BDFB	**Brasilia**	**157.95**	**184**	PKP	**PKPdf**	**02 18 30.7**	**+0.7**
	comp=Z,5.1nm,0.9s,baz=209,slow=5.0,SNR=5.9						
BDFB				PKPab	**pPKPdf**	**02 19 02.9**	**-0.1**
	comp=Z,10nm,1.0s,baz=177,slow=2.7,SNR=7.5						
SDV	**Santo Domingo**	**159.11**	**82**	PKP	**PKPdf**	**02 18 31.6**	**+0.1**
	comp=Z,6.9nm,0.6s,baz=33,slow=0.4,SNR=8.5						
SDV	**Santo Domingo**	**159.11**	**82**	*e*P	**PKPdf**	**02 18 32.0**	**+0.4**
NBAN	**Anadia - AL**	**159.11**	**220**	*e*P	**PKPdf**	**02 18 36.3**	**+4.9**
NBPN	**Ponto Novo - B**	**160.35**	**209**	*e*P	**PKPdf**	**02 18 38.0**	**+5.2**
PDRB	**Porto dos Gac**	**160.70**	**159**	*e*P	**PKPdf**	**02 18 33.2**	**+0.1**
SNDB	**Serra Nova Dou**	**161.59**	**175**	*e*P	**PKPdf**	**02 18 35.1**	**+1.1**
NBMA	**Muriti-CE**	**162.44**	**219**	*e*P	**PKPdf**	**02 18 40.5**	**+5.5**
NBPS	**Pedro II - PI**	**166.41**	**217**	*e*P	**PKPdf**	**02 18 43.3**	**+4.7**

NOU 18 01:59:14.7, 15°.25S×173°.21W, h110^{km}, MLv4.5/4, Tonga Islands, Tonga Islands

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THE 18 02:14:58.3, 38°.80N×20°.61E, h9^{km}±1^{km}, ML2.5/5, Error ellipse: s-maj=1.8km s-min=0.6km az=84.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LKD2	**Lefkada island**	**0.04**	**104**	P	Pg	02 14 59.9	-0.2
LKD2				S	Sg	02 15 01.2	-0.3
	9µm,0.3s						
TSLK	**Tsoukalades, L**	**0.05**	**57**	P	Pg	02 15 00.2	0.0
TSLK				S	Sg	02 15 01.7	+0.2
	7µm,0.3s						
NYDR	**Nydri-Lefkada**	**0.11**	**139**	P	Pg	02 15 00.8	-0.1
NYDR				S	Sg	02 15 02.8	0.0
	1µm,0.2s						
DRAG	**Dragano-Lefkad**	**0.12**	**192**	P	Pg	02 15 00.9	-0.2
DRAG				S	Sg	02 15 03.0	0.0
	11µm,0.2s						
EVGI	**Lefkada island**	**0.18**	**167**	P	Pg	02 15 02.1	0.0
EVGI				S	Sg	02 15 05.5	+0.8
	2µm,0.2s						

PRU 18 02:24:54.5±0.0, 49°.85N×18°.50E, h0^{km}, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.23**	**267**	*e*PG	Pg	02 24 58.9	0.0
OKC				*e*SG	Sg	02 25 02.5	+0.7
KRLC	**Kraliky**	**1.13**	**282**	*e*PG	Pg	02 25 14.4	-1.8
KRLC				*e*SG	Sg	02 25 29.8	-1.1
DPC	**Dobruska-Polom**	**1.49**	**290**	*e*PG	Pn	02 25 21.3	-1.3
DPC				*e*SG	Sg	02 25 42.0	-0.3

IPEC 18 02:25:02.4±0.1, 49°.74N×17°.27E, h16^{km}, ML-0.4/4, Error ellipse: s-maj=0.2km s-min=0.3km az=127.0, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MUVC	**Mutkov**	**0.06**	**4**	*e*Pg	Pg	02 25 05.4	-0.1
	baz=5.0						
MUVC				*e*Sg	Sg	02 25 07.5	-0.1
	1.4nm,0.1s,baz=5.0						
LOSC	**Losov**	**0.14**	**152**	*e*Pg	Pg	02 25 06.0	-0.3
	baz=152						
LOSC				*e*Sg	Sg	02 25 08.7	-0.1
	1.0nm,0.1s,baz=152						
LIPC	**Lipinka**	**0.18**	**305**	*e*Sg	Sg	02 25 09.6	-0.2
	1.1nm,0.1s,baz=306						
MORC	**Moravsky Berou**	**0.18**	**79**	*e*Pg	Pg	02 25 06.8	-0.1
	baz=79						
MORC				*e*Sg	Sg	02 25 09.8	-0.1
	0.8nm,0.1s,baz=79						

MAN 18 02:25:36.2, 16°.73N×120°.12E, h33^{km}, mb3.7, ML2.4, MS1.9, Luzon

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*SJA **18** 02:32:43.0, 24°.21S×70°.63W, h43^{km}, ML4.2*
*NEIC **18** 02:32:43.3±2.5, 24°.28S±0°.05×70°.2W±0°.1, h49^{km}±5^{km}, mb4.4/8, ML4.2(GUC), Error ellipse: s-maj=13.9km s-min=6.8km az=105.0*
*GUC **18** 02:32:43.9±0.6, 24°.22S×70°.10W, h30^{km}±2^{km}, ML4.1*
*IDC **18** 02:32:44.0±0.8, 24°.45S×69°.95W, h52^{km}±5^{km}, mb4.0/5, mb1 4.0/10, mb1mx3.8/34, mbtmp4.1/10, MS3.1/4, Ms1 3.1/4, ms1mx2.8/24, Error ellipse: s-maj=30.7km s-min=8.3km az=113.0*
ISC 18 02:32:41.6±0.6**, 24°.31S**±0°.03×**70°.05W**±0°.05**, h32**^{km}±4^{km}**, n108,** σ1^{s}**.50**/109**, mb4.3**/5**, 5C-1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB14	IPOC Station P	0.45	226	eP	Pn	02 32 54.1	+1.8
PB14				iS	Sn	02 33 01.9	+2.5
PB14	IPOC Station P	0.45	226		Pn	02 32 54.1	+1.9
PB14					Sn	02 33 01.7	+2.3
PB14	IPOC Station P	0.45	226	iP	Pn	02 32 54.0	+1.8
PB10	IPOC Station P	0.92	330	eP	Pn	02 32 58.2	0.0
PB10				iS	Sn	02 33 10.0	-0.3
PB10				IAML		02 33 15.0	
	comp=E,10μm,0.2s						
PB10	IPOC Station P	0.92	330		Pb	02 32 58.5	-0.5
PB10	IPOC Station P	0.92	330	iP	Pn	02 32 58.0	-0.3
PB15	IPOC Station P	1.22	26	eP	Pb	02 33 04.8	+0.6
PB15				iS	Sb	02 33 20.5	+0.8
PB15	IPOC Station P	1.22	26		Pb	02 33 05.3	+1.1
PB05	IPOC Station P	1.45	354	eP	Pn	02 33 06.7	+0.9
PB05				iS	Sb	02 33 25.7	-0.7
PB05				IAML		02 33 30.1	
	comp=N,2μm,0.1s						
PB05	IPOC Station P	1.45	354	iP	Pn	02 33 06.0	+0.2
PB06	IPOC Station P	1.65	15	eP	Pb	02 33 11.0	-0.6
PB06				iS	Sb	02 33 32.4	+0.3
PB06				IAML		02 33 36.7	
	comp=N,4μm,0.4s						
PB06	IPOC Station P	1.65	15		Pb	02 33 10.8	-0.7
PB06	IPOC Station P	1.65	15	iP	Pb	02 33 11.0	-0.6
PB04	IPOC Station P	1.97	357	iS	Sb	02 33 40.6	-0.5
PB04	IPOC Station P	1.97	357		Pn	02 33 13.5	+0.6
LVC	Limon Verde	1.99	32	P	Pb	02 33 17.1	-0.2
	comp=N,58nm,0.3s,baz=216,slow=10,SNR=347						
LVC				S	Sb	02 33 42.2	+0.3
	comp=N,526nm,0.3s,baz=60,slow=9.1,SNR=56						
LVC				LR	LR	02 34 20.9	
	comp=N,174nm,19.8s,baz=172,slow=47						
LVC	Limon Verde	1.99	32	⇑iP	Pb	02 33 17.2	-0.2
LVC				eS	Sb	02 33 43.5	+1.6
LVC	Limon Verde	1.99	32	Pn	Pb	02 33 16.9	-0.4
LVC	Limon Verde	1.99	32	iP	Pb	02 33 17.0	-0.4
PB03	IPOC Station P	2.26	7	iS	Sb	02 33 48.4	-1.2
PB03	IPOC Station P	2.26	7	iP	Pn	02 33 18.0	+1.0
PB07	IPOC Station P	2.57	3	iS	Sb	02 33 56.5	-2.0
PB07				IAML		02 34 06.3	
	comp=E,2μm,0.4s						
PB07	IPOC Station P	2.57	3		Pn	02 33 21.9	+0.6
PB07	IPOC Station P	2.57	3	iP	Pn	02 33 22.0	+0.8
PB09	IPOC Station P	2.61	17	eP	Pb	02 33 24.8	-3.0
PB09				eS	Sb	02 33 59.4	-0.1
PB09	IPOC Station P	2.61	17	Pn	Pn	02 33 24.4	+2.6
PB09	IPOC Station P	2.61	17	iP	Pn	02 33 24.0	+2.3
AC02	Maricunga	2.65	162		Pb	02 33 28.1	-0.7
PB02	IPOC Station P	2.98	3	⇑iP	Pn	02 33 27.3	+0.6
PB02				⇑eS	Sb	02 34 09.9	-0.2
PB02	IPOC Station P	2.98	3	iP	Pn	02 33 27.0	+0.3
GO03	Copiap	3.28	183	Pn	Pn	02 33 33.2	+2.3
GO03	Copiap	3.28	183	iP	Pn	02 33 34.0	+3.2
PB01	IPOC Station P	3.29	9	⇓iP	Pn	02 33 32.2	+1.2
PB01				eS	Sb	02 34 18.3	-0.7
PB01				IAML		02 34 25.9	
	comp=E,724nm,0.5s						
PB01	IPOC Station P	3.29	9	Pn	Pn	02 33 32.3	+1.2
PB01	IPOC Station P	3.29	9	iP	Pn	02 33 32.0	+1.0
PATCX	Punta Patache	3.47	358		Pn	02 33 32.4	-1.1
PATCX	Punta Patache	3.47	358	iP	Pn	02 33 33.0	-0.5
TA01	Diego Aracena	3.73	358	eP	Pn	02 33 36.2	-0.7
TA01				eS	Sb	02 34 32.0	+0.5
TA01	Diego Aracena	3.73	358	Pn	Pn	02 33 36.1	-0.9
TA01	Diego Aracena	3.73	358	iP	Pn	02 33 37.0	+0.1
AC04	Llanos de Chal	3.99	193	⇑iP	Pn	02 33 40.4	-0.2
AC04	Llanos de Chal	3.99	193	iP	Pn	02 33 40.0	-0.6
TA02	Huaiquique	4.02	359	Pn	Pn	02 33 42.1	+1.1
FSA	Cafayete	4.10	117	iP	Pb	02 33 50.0	-3.2
SLA	San Lorenzo	4.16	97	⇑iP	Pb	02 33 51.8	-2.4
PB08	IPOC Station P	4.23	11	Pn	Pn	02 33 46.3	+2.1
PB08	IPOC Station P	4.23	11	iP	Pn	02 33 45.0	+0.8
HJA	Humahuaca	4.39	76	iP	Pb	02 33 53.0	-5.3
PB11	IPOC Station P	4.54	5	Pn	Pn	02 33 48.1	-0.2
PB11	IPOC Station P	4.54	5	iP	Pn	02 33 48.0	-0.3
VCA	Vinchina	4.71	160	eP	Pn	02 33 56.7	+6.1
VCA				eS	Sb	02 34 57.4	-2.5
VCA	Vinchina	4.71	160	iP	Pn	02 33 57.0	+6.4
LCO	Las Campanas	4.72	187	iP	Pn	02 33 52.0	+1.1
AHML	Horco Molle	4.92	121	iP	Pb	02 34 02.0	-5.1
ALOL	LOMAS DE OLMED	5.57	86	iP	Pn	02 34 10.0	+7.7
PB12	IPOC Station P	5.67	357	Pn	Pn	02 34 02.6	-1.2
PB12	IPOC Station P	5.67	357	iP	Pn	02 34 03.0	-0.8
ACLC	CERRO LA CRUZ	5.80	152	iP	Pn	02 34 10.0	+4.4
GO04	Tololo Observa	5.88	186	Pn	Pn	02 34 07.0	+0.3
PB16	IPOC Station P	5.96	5	Pn	Pn	02 34 07.0	-1.3
ACCO	Cerro Coronel	6.32	172	iP	Pn	02 34 17.0	+4.2
AVFE	Valle Fertil	6.73	161	iP	Pn	02 34 22.0	+3.7
RTLS	Leoncito	7.49	175	iP	Pn	02 34 31.0	+2.0
RTCV	Cerro Valdivia	7.64	170	iP	Pn	02 34 35.0	+4.2
LPAZ	La Paz	8.18	13	P	Pn	02 34 41.8	+3.1
	comp=E,0.7nm,0.3s,baz=18,slow=7.7,SNR=10						
LPAZ	La Paz	8.18	13	Pn	Pn	02 34 41.5	+2.8
ASAL	Salagasta	8.32	173	iP	Pn	02 34 43.0	+2.9
VA03	San Esteban	8.44	183	Pn	Pn	02 34 42.2	+0.4
MT02	Curacav	8.97	186	Pn	Pn	02 34 47.4	-1.6
CPUP	Villa Florida	11.68	103	P	Pn	02 35 26.8	+0.7
	comp=E,0.1nm,0.3s,baz=18,slow=15,SNR=2.7						
CPUP				LR	LR	02 40 30.9	
	comp=E,71nm,18.9s,baz=239,slow=40						
CPUP	Villa Florida	11.68	103		Pn	02 35 27.0	+0.9
SIV	San Ignacio	11.81	47	P	Pn	02 35 28.7	+0.8
	comp=E,1.7nm,0.3s,baz=235,slow=10,SNR=30						
SIV				S	Sn	02 37 38.4	-0.3
	comp=E,0.1nm,0.3s,baz=306,slow=18,SNR=4.4						
H03N1	Juan Fernandez	11.96	218	T	T	02 48 01.5	
	baz=42,slow=72,SNR=142						
H03N2	Juan Fernandez	11.97	219	T	T	02 47 34.7	
	baz=42,slow=72,SNR=80						
H03N3	Juan Fernandez	11.98	218	T	T	02 47 33.6	
	baz=42,slow=72,SNR=102						
PTLB	Pontes e Lacer	13.52	51	Pn	Pn	02 35 53.3	+2.0
NNA	Nana	13.84	331	LR	LR	02 39 46.6	
	comp=E,55nm,20.8s,baz=184,slow=30						
TRCB	Terra Rica	16.04	88		P	02 36 28.1	+0.1
TRCB				IAmb	IAmb	02 36 48.1	
	comp=Z,27nm,0.5s						
PLCA	Paso Flores	16.39	181	P	Pn	02 36 28.0	-1.2
	comp=Z,0.1nm,0.3s,baz=295,slow=9.0,SNR=2.6						
PLCA	Paso Flores	16.39	181		P	02 36 33.6	+1.8
PLCA				IAmb	IAmb	02 36 56.5	
	comp=Z,23nm,1.4s						
BDFB	Brasilia	22.41	71	P	P	02 37 37.1	-0.7
	comp=Z,3.3nm,0.7s,baz=237,slow=5.0,SNR=5.4						
BDFB	Brasilia	22.41	71	P	P	02 37 37.7	-0.1
PTGA	Pitinga	25.39	24	P	P	02 38 05.7	-0.6
	comp=Z,0.7nm,0.3s,baz=198,slow=11,SNR=4.6						
OTAV	Otavalo	25.72	340	P	P	02 38 08.4	-1.4
VNA3	Neumayer Olymp	57.78	161	P	P	02 42 29.7	+0.4
VNA2	Neumayer--Watz	58.38	160	P	P	02 42 33.7	+0.2
	baz=296,slow=8.0						
SNAA	Sanae	59.99	160	P	P	02 42 44.9	+0.2
SNAA	Sanae	59.99	160	P	P	02 42 44.5	-0.2
	comp=Z,2.2nm,0.9s,baz=273,slow=9.5,SNR=14						
SNAA	Sanae	59.99	160	P	P	02 42 44.6	-0.2
SNAA				IAmb	IAmb	02 42 45.9	
	comp=Z,3.2nm,1.0s						
QSPA	South Pole Qui	65.90	180	P	P	02 43 24.3	+0.2
PFO	Pinyon Flats O	72.58	321	LR	LR	03 09 45.8	
	comp=Z,45nm,18.6s,baz=300,slow=30						
TORD	Torodi Ar. Bea	79.28	70	P	P	02 44 43.9	-0.5
	comp=Z,4.2nm,0.6s,baz=257,slow=5.1,SNR=60						
TORD				pP	sP	02 44 59.1	+0.2
	comp=Z,2.0nm,0.8s,baz=256,slow=4.6,SNR=5.9						
TORD	Torodi Ar. Bea	79.28	70	P	P	02 44 44.0	-0.4
TORD				IAmb	IAmb	02 44 44.7	
	comp=Z,3.6nm,0.7s						
BOSA	Boshof	83.06	118	P	P	02 45 04.1	-0.5
	comp=Z,2.6nm,1.0s,baz=198,slow=13,SNR=1.5						
BOSA	Boshof	83.06	118	P	P	02 45 04.0	-0.5
ASAR	Alice Springs	126.95	208	PKP	PKPdf	02 51 41.8	-1.2
	comp=Z,0.4nm,0.7s,baz=188,slow=1.9,SNR=4.2						
ASAR				pPKP	sPKPdf	02 51 57.7	-0.2
	comp=Z,0.5nm,0.7s,baz=132,slow=1.5,SNR=2.4						
ASAR	Alice Springs	126.95	208		PKPdf	02 51 42.5	-0.6
H11S2	WAKE ISLAND Hy	127.14	275	T	T	05 11 24.9	
	baz=107,slow=74,SNR=15						
H11S1	WAKE ISLAND Hy	127.15	275	T	T	05 11 22.2	
	baz=107,slow=74,SNR=40						
H11S3	WAKE ISLAND Hy	127.16	275	T	T	05 11 23.3	
	baz=107,slow=74,SNR=6.9						
H11N3	WAKE ISLAND Hy	127.30	277	T	T	05 11 33.2	
	baz=106,slow=75,SNR=21						
H11N1	WAKE ISLAND Hy	127.31	277	T	T	05 11 31.2	
	baz=106,slow=75,SNR=17						
H11N2	WAKE ISLAND Hy	127.31	277	T	T	05 11 34.3	
	baz=106,slow=75,SNR=23						
WRA	Warramunga Arr	130.01	210	PKP	PKPdf	02 51 48.4	-0.5
	comp=Z,0.5nm,0.8s,baz=108,slow=1.4,SNR=2.9						
WRA				pPKP	sPKPdf	02 52 04.0	+0.2
	comp=Z,0.8nm,0.9s,baz=163,slow=1.7,SNR=3.7						
ZALV	Zalesovo Beam	144.93	26	PKPbc	PKPbc	02 52 14.5	+0.1
	comp=Z,1.2nm,0.4s,baz=319,slow=5.1,SNR=11						
ZALV				pPKPbc	sPKPdf	02 52 29.4	-0.6
	comp=Z,2.5nm,0.7s,baz=306,slow=3.7,SNR=5.0						
ZALV	Zalesovo Beam	144.93	26		PKPdf	02 52 14.8	-0.4
MKAR	Makanchi Array	148.50	38	PKPbc	PKPbc	02 52 24.9	-0.2
	comp=Z,1.2nm,0.7s,baz=328,slow=2.7,SNR=8.2						
MKAR				pPKPbc	sPKPbc	02 52 40.0	0.0
	comp=Z,2.5nm,0.8s,baz=338,slow=2.9,SNR=10						
MKAR	Makanchi Array	148.50	38		PKPbc	02 52 24.6	-0.5

IDC 18 02:41:49.3±3.9**, 17°.16S**×**174°.76W, h284**^{km}±35^{km}**, mb3.7**/3**, mb1 3.7**/5**, mb1mx3.2**/43**, mbtmp4.2**/5**, Error ellipse: s-maj=128.6km s-min=24.8km az=151.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	4.33	42	P	Pn	02 43 00.5	+1.9
	5.8nm,0.3s,baz=51,slow=2.3,SNR=5.3						
AFI				S	S	02 43 53.5	-0.4
	32nm,0.3s,baz=161,slow=8.5,SNR=15						
MSVF	Nonsavu	6.89	264	P	Pn	02 43 29.0	-0.1
	0.7nm,0.3s,baz=109,slow=17,SNR=8.4						
STKA	Stephens Creek	42.04	241	P	P	02 49 13.3	-0.4
	0.9nm,0.3s,baz=77,slow=7.7,SNR=3.6						
WRA	Warramunga Arr	48.19	258	P	P	02 50 01.9	-0.1
	1.1nm,0.3s,baz=97,slow=6.9,SNR=40						
ASAR	Alice Springs	48.34	253	P	P	02 50 03.0	-0.1
	5.8nm,0.5s,baz=89,slow=8.7,SNR=114						

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*IDC **18** 02:43:59.5±1.7, 53°.93N×163°.33W, h0^{km}, mb3.6/4, mb1 3.8/6, mb1mx3.5/55, mbtmp3.6/6, ML3.0/2, MS3.3/2, Ms1 3.3/2, ms1mx2.6/45, Error ellipse: s-maj=32.9km s-min=25.8km az=177.0*
*AEIC **18** 02:44:04.4±1.9, 54°.01N±0°.06×163°.19W±0°.08, h36^{km}±8^{km}, ML3.5/35, mb3.8/5(NEIC), ML3.7/10(NEIC), Error ellipse: s-maj=8.9km s-min=6.4km az=158.0*
*NEIC **18** 02:44:04.1±2.0, 53°.940N±0°.005×163°.13W±0°.07, h35^{km}±2^{km}, Error ellipse: s-maj=7.2km s-min=3.1km az=269.0*
ISC 18 02:44:01.9±3.9**, 53°.92N**±0°.08×**163°.00W**±0°.05**, h16**^{km}±26^{km}**, n80,** σ1^{s}**.34**/77**, mb3.8**/3**, South of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRPK	Brown Peak	0.85	329		Pb	02 44 18.1	-0.1
BRPK					Sb	02 44 28.4	-0.9
ISLZ	Isanotski Laza	0.91	333		Pb	02 44 19.0	-0.3
ISLZ					Sb	02 44 30.0	-1.1
FALS	False Pass	0.97	345	Pn	Pb	02 44 19.9	-0.3
FALS					Sb	02 44 33.4	+0.6
SSLS	Shishaldin Sou	0.99	324		Pb	02 44 20.3	-0.3
SSLS					Sb	02 44 33.5	+0.1
ISNN	Isanotski Nort	1.02	334		Pb	02 44 21.5	+0.3
SSLN	Shishaldin Nor	1.07	327		Pb	02 44 22.0	0.0
SSLN					Sb	02 44 35.3	-0.3
SSBA	Shishaldin	1.08	323		Pn	02 44 21.5	-0.9
WESP	Westdahl Peak	1.16	300		Pn	02 44 22.9	-0.7
WECS	Westdahl Cape	1.21	301		Pn	02 44 23.5	-0.7
WECS					Sb	02 44 37.4	-2.4
WEBT	Westdahl Beart	1.23	304		Pn	02 44 23.7	-0.7
HAG	Hague Volcano	1.54	24		Pn	02 44 29.4	+0.8
PS4A	Pavlof South-4	1.57	24		Pn	02 44 30.1	+1.0
AKSA	Akutan Strait	1.61	279		Pn	02 44 28.6	-1.0
PVV	Pavlof Volcano	1.62	25		Pn	02 44 30.7	+1.0
AKUT	Akutan	1.65	279	Pn	Pn	02 44 28.7	-1.4
AKUT				IAML		02 44 58.7	
	comp=N,443nm,0.6s						
AKBBA	Akutan Broad B	1.74	277		Pn	02 44 31.8	+0.4
AKBBA					Sn	02 44 54.2	+0.9
AKLV	Akutan Long Va	1.76	279		Pn	02 44 31.1	-0.6
ZRO	Akutan Zero	1.77	277		Pn	02 44 31.3	-0.5
AKGG	Akutan Green G	1.79	280		Pn	02 44 31.5	-0.6
AKMO	Akutan Morgan	1.79	277		Pn	02 44 31.9	-0.2
SDPT	Sand Point	2.05	45	Pn	Pn	02 44 37.4	+1.7
SDPT				IAML		02 45 07.5	
	comp=E,934nm,1.0s						
SDPT				IAML		02 45 08.5	
	comp=N,861nm,0.6s						
UNV	Unalaska Valle	2.08	269	Pn	Pn	02 44 35.3	-0.7
MTBL	Makushin Table	2.18	273		Pn	02 44 37.3	-0.2
MNAT	Makushin Natee	2.18	271		Pn	02 44 37.1	-0.4
CNBA	Chernabura Isl	2.19	64	Pn	Pn	02 44 37.7	+0.1
MSW	Makushin Switc	2.24	271		Pn	02 44 38.0	-0.3
MAPS	Pakushin South	2.34	269		Pn	02 44 39.2	-0.5
CHGN	Chignik	3.55	46	Pn	Pn	02 44 57.1	+0.8
CHGN				IAML		02 45 54.7	
	comp=E,182nm,0.6s						
CHGN				IAML		02 45 58.0	
	comp=N,127nm,1.2s						
CHIR	Chirikof Islan	4.67	63	Pn	Pn	02 45 10.9	-0.7
SII	Sitkinak Islan	5.69	59	Pn	Pn	02 45 25.9	+0.2
OHAK	Old Harbor	6.42	55	Pn	Pn	02 45 34.7	-1.0
KDAK	Kodiak Island	7.02	52	Pn	Pn	02 45 43.3	-0.6
	comp=N,0.5nm,0.3s,baz=239,slow=6.5,SNR=10						
KDAK				Sn	Sn	02 46 59.1	-4.2
	comp=N,0.2nm,0.3s,baz=141,slow=20,SNR=1.7						
KDAK				Lg	Lg	02 47 32.9	
	comp=N,1.3nm,0.3s,baz=292,slow=19,SNR=2.2						
KDAK	Kodiak Island	7.02	52		Pn	02 45 43.2	-0.7
Q19K	Cape Douglas,	7.21	42	Pn	Pn	02 45 49.4	+2.8
SVW2	Sparrevohn	8.22	26	Pn	Pn	02 46 02.0	+1.6
N19K	Bonanza Creek	8.29	30	Pn	Pn	02 46 05.6	+4.1
CNPM	China Poot	8.56	44	Pn	Pn	02 46 07.4	+2.4
M19K	Big River Lodg	9.21	26	Pn	Pn	02 46 14.0	0.0
L19K	White Mountain	9.33	24	Pn	Pn	02 46 16.6	+1.0
SEW	Seward	9.63	45	Pn	Pn	02 46 21.2	+1.6
TTA	Tatalina	9.74	19	Pn	Pn	02 46 19.6	-1.7
RC01	Rabbit Creek A	10.11	39	Pn	Pn	02 46 26.6	+0.4
K20K	Telida	10.53	23	Pn	Pn	02 46 32.9	+1.0
GHO	Glory Hole Cre	10.85	38	Pn	Pn	02 46 36.2	-0.2
J20K	Nowinta River	11.23	20	Pn	Pn	02 46 44.5	+2.9
SCM	Sheep Creek Mo	11.48	40	Pn	Pn	02 46 44.7	-0.3
KLU	Klutina	11.84	43	Pn	Pn	02 46 49.3	-0.6
HMT	Hamilton	12.01	50	Pn	Pn	02 46 52.1	-0.1
M24K	Tolsona, Glenn	12.08	41	Pn	Pn	02 46 55.4	+2.2
DHY	Denali Highway	12.25	35	Pn	Pn	02 46 55.2	-0.3
BERG	Berg Lake	12.29	50	Pn	Pn	02 46 56.5	+0.5
N25K	Chitina, Valde	12.44	44	Pn	Pn	02 46 57.7	-0.5
I21K	Tanana	12.57	22	Pn	Pn	02 47 02.0	+2.2
MLY	Manley	12.73	24	Pn	Pn	02 47 04.6	+2.5
GRNC	Granite Creek	13.31	51	Pn	Pn	02 47 09.8	-0.3
TABL	Table Mountain	13.49	52	Pn	Pn	02 47 12.7	+0.1
ILAR	Eielson Array	13.58	30	Pn	Pn	02 47 13.2	-0.4
	comp=N,0.0nm,0.3s,baz=226,slow=13,SNR=1.6						
COLD	Coldfoot	14.70	20	P	P	02 47 35.3	+0.3
HYT	Haines Junctio	15.31	53	P	P	02 47 40.9	-1.0
DAWY	Dawson	15.74	40		Pn	02 47 43.0	+0.3
TOLK	Toolik Lake Re	16.05	18	P	Pn	02 47 48.8	+2.2
TOLK				IAmb	IAmb	02 48 15.8	
	comp=Z,15nm,1.5s						
BMAR	Burnt Mountain	16.17	26		Pn	02 47 49.1	+1.0
WHY	Whitehorse	16.53	55		P	02 47 55.7	+0.3
WHY				IAmb	IAmb	02 48 03.8	
	comp=Z,11nm,1.2s						
INK	Inuvik	19.95	32	P	P	02 48 32.3	-0.5
	comp=Z,0.8nm,0.5s,baz=249,slow=8.3,SNR=4.1						
INK	Inuvik	19.95	32	P	P	02 48 31.9	-0.9
INK				IAmb	IAmb	02 48 48.9	
	comp=Z,6.4nm,1.4s						
PETK	Petropavlovsk-	23.18	284	P	P	02 49 05.4	-2.2
	comp=Z,1.6nm,0.6s,baz=79,slow=13,SNR=4.7						
SEY	Seymchan	24.55	309	LR	LR	02 59 35.3	
	comp=Z,46nm,18.7s,baz=235,slow=38						
NVAR	Mina Array Bea	33.97	99	P	P	02 50 46.9	+2.3
	comp=Z,1.1nm,0.7s,baz=300,slow=8.7,SNR=10						
H11N2	WAKE ISLAND Hy	41.18	226	T	T	03 35 38.2	
	baz=26,slow=76,SNR=43						
H11N3	WAKE ISLAND Hy	41.19	226	T	T	03 35 50.9	
	baz=26,slow=76,SNR=47						
H11N1	WAKE ISLAND Hy	41.20	226	T	T	03 35 51.8	
	baz=26,slow=76,SNR=39						
H11S1	WAKE ISLAND Hy	42.35	225	T	T	03 37 16.0	
	baz=26,slow=76,SNR=66						
H11S2	WAKE ISLAND Hy	42.37	225	T	T	03 37 10.9	
	baz=26,slow=76,SNR=57						
H11S3	WAKE ISLAND Hy	42.37	225	T	T	03 37 17.9	
	baz=26,slow=76,SNR=44						
TXAR	Lajitas Array	48.97	95	P	P	02 52 48.9	+1.4
	comp=Z,0.7nm,0.7s,baz=292,slow=5.9,SNR=8.3						
TXAR	Lajitas Array	48.97	95	P	P	02 52 48.3	+0.8
ZALV	Zalesovo Beam	58.78	320	LR	LR	03 21 25.6	
	comp=Z,32nm,18.2s,baz=118,slow=38						
H03N2	Juan Fernandez	113.02	115	T	T	05 05 45.9	
	baz=323,slow=77,SNR=26						
H03N1	Juan Fernandez	113.04	115	T	T	05 05 46.4	
	baz=323,slow=77,SNR=40						
H03N3	Juan Fernandez	113.04	115	T	T	05 05 44.5	
	baz=323,slow=77,SNR=26						

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*ISU **18** 03:01:04, 40°.30N×73°.20E, h5^{km}*
*KRNET **18** 03:01:04.6±0.1, 40°.36N×73°.18E, h13^{km}, mb3.7*
*SOME **18** 03:01:04.9, 40°.57N×73°.22E, h0^{km}*
*IDC **18** 03:01:05.9±0.6, 39°.91N×73°.74E, h34^{km}±12^{km}, mb3.6/2, mb1 3.5/7, mb1mx3.2/54, mbtmp3.6/7, ML3.2/5, MS2.8/1, Ms1 2.8/1, ms1mx2.3/48, Error ellipse: s-maj=12.4km s-min=3.6km az=119.0*
*NNC **18** 03:01:06.5±0.8, 40°.52N×73°.21E, h0^{km}, mb4.1, mpv3.8, Error ellipse: s-maj=7.1km s-min=3.3km az=177.0*
*KNET **18** 03:01:06.2±0.4, 40°.51N×73°.30E, h3^{km}±3^{km}, ml3.2, Error ellipse: s-maj=6.2km s-min=3.8km az=97.0*
ISC 18 03:01:03.1±1.1**, 40°.41N**±0°.02×**73°.33E**±0°.02**, h1**^{km}±9^{km}**, n81,** σ1^{s}**.36**/125**, 31C-30D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	0.42	162	eP	Pg	03 01 11.0	-0.1
SFK				eS	Sg	03 01 17.0	+0.5
SFK	Sufi-Kurgan	0.42	162	⇓eP	Pg	03 01 12.5	+1.4
	baz=43						
SFK				⇓eS	Sg	03 01 18.5	+2.0
	baz=43						
OHH	Osh	0.43	285	eP	Pg	03 01 12.0	+0.6
OHH				eS	Sg	03 01 17.0	0.0
OHH	Osh	0.43	285	⇓iP	Pg	03 01 11.5	+0.1
	baz=0.0						
OHH				⇓iS	Sg	03 01 16.8	-0.2
	baz=0.0						
SALK	Salom-Alik	0.60	38	eP	Pn	03 01 18.0	-0.9
	baz=43						
SALK				eS	Sn	03 01 27.4	-1.9
	baz=43						
FRG	Fergana	1.18	269	eP	Pn	03 01 27.0	+0.2
FRG				eS	Sb	03 01 42.0	-0.1
DRK	Karamyk	1.50	232	⇑iP	Pn	03 01 30.6	-0.8
	baz=31						
DRK				⇑iS	Sg	03 01 49.0	-2.3
	baz=31						
AML	Almayashu	1.74	9	⇑P	Pg	03 01 37.9	+1.5
	301nm,0.3s,SNR=336						
AML				⇑S	Sg	03 02 02.3	+3.2
	666nm,0.4s						
AML	Almayashu	1.74	9	⇑iP	Pg	03 01 38.2	+1.7
	baz=12						
AML				⇑iS	Sg	03 02 03.0	+3.9
	baz=12						
BTK	Batken	1.96	260	⇑iP	Pn	03 01 38.1	+0.6
	baz=61						
BTK				⇑iS	Sb	03 02 03.3	-1.1
	baz=61						
TRKS	Terek-Say	2.00	305	⇓iP	Pb	03 01 39.2	-1.2
	baz=7.0						
TRKS				⇓iS	Sb	03 02 04.4	-1.4
	baz=7.0						
UCH	Uchtor	2.02	26	⇓P	Pg	03 01 42.6	+0.7
	17nm,0.2s,SNR=40						
UCH				⇓S	Sg	03 02 11.2	+3.0
	122nm,0.3s						
UCH	Uchtor	2.02	26	⇑iP	Pg	03 01 43.1	+1.2
	baz=28						
UCH				⇑iS	Sg	03 02 11.1	+3.0
	baz=28						
MNAS	Manas	2.17	344	⇑iP	Pb	03 01 43.3	+0.1
	baz=47						
MNAS				⇑iS	Sg	03 02 11.9	-0.8
	baz=47						
EKS2	Erkin-Say	2.27	8	⇑P	Pg	03 01 46.4	-0.3
	14nm,0.2s,SNR=22						
EKS2				⇑S	Sg	03 02 17.5	+1.3
	50nm,0.2s						
EKS2	Erkin-Say	2.27	8	⇑eP	Pg	03 01 46.1	-0.6
	baz=11						
EKS2				⇑iS	Sg	03 02 15.6	-0.6
	baz=11						
MRKS	Merke	2.33	358	eP	Pg	03 01 47.7	-0.2
	58nm,0.3s						
MRKS				eS	Sg	03 02 18.6	+0.5
	367nm,0.3s						
MRKS	Merke	2.33	358	Pg	Pg	03 01 47.7	-0.2
	58nm,0.3s						
MRKS				Lg	Lg	03 02 18.6	
	367nm,0.3s						
AAK	Ala-Archa	2.39	21	Pn	Pg	03 01 48.1	-0.8
	9.0nm,0.3s,baz=194,slow=8.2,SNR=63						
AAK				Sn	Sg	03 02 21.4	+1.5
	34nm,0.3s,baz=52,slow=19,SNR=26						
AAK	Ala-Archa	2.39	21	⇑P	Pg	03 01 48.1	-0.8
	24nm,0.2s,SNR=8.7						
AAK				⇑S	Sg	03 02 21.1	+1.2
	140nm,0.3s						
AAK	Ala-Archa	2.39	21	⇓Pn	Pb	03 01 47.6	+0.6
	44nm,0.8s						
AAK				⇓Lg	Lg	03 02 21.5	
	100nm,0.5s						
AAK	Ala-Archa	2.39	21	⇓iP	Pg	03 01 48.1	-0.8
	baz=23						
AAK				⇓iS	Sg	03 02 19.5	-0.4
	baz=23						
KBK	Karagaybulak	2.55	28	⇑P	Pg	03 01 51.0	-1.0
	17nm,0.2s,SNR=13						
KBK				⇓S	Sg	03 02 25.9	+0.9
	229nm,0.6s						
KBK	Karagaybulak	2.55	28	⇓iP	Pb	03 01 50.6	+0.9
	baz=30						
KBK				⇓iS	Sg	03 02 23.6	-1.5
	baz=30						
FRU1	Bishkek	2.59	22	⇑iP	Pb	03 01 50.8	+0.5
	baz=23						
FRU1				⇑iS	Sg	03 02 24.7	-1.5
	baz=23						
GAR	Garm	2.72	240	⇓iP	Pn	03 01 49.2	+1.2
	baz=39						
GAR				⇓iS	Sn	03 02 21.2	-0.3
	baz=39						
DZA	Taraz	2.90	330	eP	Pb	03 01 56.1	+0.5
	102nm,0.4s						
DZA				eS	Sb	03 02 33.1	+1.6
	356nm,0.2s						
DZA	Taraz	2.90	330	Pg	Pb	03 01 56.1	+0.5
	102nm,0.4s						
DZA				Lg	Lg	03 02 33.1	
	356nm,0.2s						
USP	Ospenovka	2.98	17	⇓P	Pb	03 01 55.6	-1.5
	11nm,0.3s,SNR=8.9						

USP	**Ospenovka**	**2.98**	**17**	⇑*e*P	**Pb**	**03 01 56.0**	**-1.1**
	baz=18						
USP				⇑*i*S	**Sb**	**03 02 33.2**	**-0.8**
	baz=18						
TKM2	**Tokmak 2**	**3.03**	**33**	⇑P	**Pb**	**03 01 56.9**	**-1.0**
	6.7nm,0.2s,SNR=13						
TKM2	**Tokmak 2**	**3.03**	**33**	⇓Pg	**Pg**	**03 02 01.3**	**+0.2**
	8.0nm,0.4s						
TKM2				⇓Lg	Lg	03 02 42.3	
	31nm,0.5s						
TKM2	**Tokmak 2**	**3.03**	**33**	⇑*i*P	**Pb**	**03 01 57.5**	**-0.4**
	baz=35						
TKM2				⇑*i*S	**Sb**	**03 02 35.5**	**+0.1**
	baz=35						
KST	**Kastek**	**3.29**	**36**	*e*P	**Pg**	**03 02 05.3**	**-0.8**
	15nm,0.3s						
KST				*e*S	**Sg**	**03 02 48.4**	**-0.3**
	41nm,0.4s						
KST	**Kastek**	**3.29**	**36**	Pg	**Pg**	**03 02 05.3**	**-0.8**
	15nm,0.3s						
KST				Lg	Lg	03 02 48.4	
	41nm,0.4s						
DGS	**Degeres**	**3.37**	**32**	*e*P	**Pg**	**03 02 06.4**	**-1.2**
	31nm,0.5s						
DGS				*e*S	**Sg**	**03 02 50.6**	**-0.6**
	39nm,0.6s						
DGS	**Degeres**	**3.37**	**32**	Pg	**Pg**	**03 02 06.4**	**-1.2**
	31nm,0.5s						
DGS				Lg	Lg	03 02 50.6	
	39nm,0.6s						
CHM	**Chimkent**	**3.39**	**305**	*e*P	**Pb**	**03 02 04.9**	**+0.9**
	5.6nm,0.5s						
CHM				*e*S	**Sb**	**03 02 47.9**	**+2.2**
	477nm,0.2s						
KK02	**Karatay Array**	**3.42**	**323**	⇓Pn	**Pn**	**03 01 59.1**	**+1.6**
	2.0nm,0.3s						
KK02				⇑Pg	**Pg**	**03 02 06.7**	**-1.9**
	11nm,0.3s						
KK02				⇑Lg	Lg	03 02 50.9	
	34nm,0.4s						
MTBS	**Maitube**	**3.57**	**39**	*e*P	**Pg**	**03 02 10.4**	**-1.1**
	10nm,0.5s						
MTBS				*e*S	**Sg**	**03 02 57.5**	**-0.3**
	20nm,0.2s						
MTBS	**Maitube**	**3.57**	**39**	Pg	**Pg**	**03 02 10.4**	**-1.1**
	10nm,0.5s						
MTBS				Lg	Lg	03 02 57.4	
	20nm,0.2s						
TARG	**Taragay, Kyrgy**	**3.63**	**67**	⇓*e*P	**Pb**	**03 02 06.4**	**-1.9**
	baz=67						
TARG				⇓*i*S	**Sb**	**03 02 50.9**	**-2.0**
	baz=67						
BRLS	**Borolday**	**3.70**	**316**	*e*P	**Pb**	**03 02 09.0**	**-0.3**
	47nm,0.2s						
BRLS				*e*S	**Sb**	**03 02 55.1**	**+0.5**
	16nm,0.3s						
BRLS	**Borolday**	**3.70**	**316**	Pg	**Pb**	**03 02 09.0**	**-0.3**
	47nm,0.2s						
BRLS				Lg	Lg	03 02 55.1	
	16nm,0.3s						
TNSS	**Tian-Shan**	**3.77**	**45**	⇓*i*P	**Pg**	**03 02 14.6**	**-0.8**
	11nm,0.2s						
TNSS				*e*S	**Sg**	**03 03 04.8**	**+0.6**
	19nm,0.6s						
TNSS	**Tian-Shan**	**3.77**	**45**	Pg	**Pg**	**03 02 14.6**	**-0.8**
	11nm,0.2s						
TNSS				Lg	Lg	03 03 04.8	
	19nm,0.6s						
MDOK	**Medeo**	**3.91**	**44**	*e*P	**Pg**	**03 02 17.1**	**-0.9**
	10nm,0.5s						
MDOK				*e*S	**Sg**	**03 03 09.0**	**+0.4**
	35nm,0.6s						
MDOK	**Medeo**	**3.91**	**44**	Pg	**Pg**	**03 02 18.3**	**+0.3**
	7.8nm,0.5s						
MDOK				Lg	Lg	03 03 10.4	
	28nm,0.6s						
MDOK	**Medeo**	**3.91**	**44**	Pg	**Pg**	**03 02 17.2**	**-0.9**
	10nm,0.5s						
MDOK				Lg	Lg	03 03 09.0	
	35nm,0.6s						
KOTS	**Kotyrbulak**	**3.99**	**44**	*e*P	**Pg**	**03 02 18.6**	**-1.0**
	12nm,0.4s						
KOTS				*e*S	**Sg**	**03 03 11.5**	**+0.2**
	66nm,0.5s						
KOTS	**Kotyrbulak**	**3.99**	**44**	Pg	**Pg**	**03 02 18.6**	**-1.0**
	12nm,0.4s						
KOTS				Lg	Lg	03 03 11.5	
	66nm,0.5s						
KUU	**Kurty**	**4.14**	**32**	⇓*i*P	**Pg**	**03 02 22.1**	**-0.2**
	5.7nm,0.4s						
KUU				⇓*i*S	**Sg**	**03 03 17.1**	**+1.1**
	28nm,0.6s						
KUU	**Kurty**	**4.14**	**32**	Pg	**Pg**	**03 02 22.1**	**-0.2**
	5.7nm,0.4s						
KUU				Lg	Lg	03 03 17.1	
	28nm,0.6s						
SATY	**Saty**	**4.63**	**53**	⇑*i*P	**Pg**	**03 02 30.5**	**-1.3**
	10.0nm,0.7s						
SATY				⇓*i*S	**Sg**	**03 03 32.2**	**+0.4**
	23nm,0.5s						
SATY	**Saty**	**4.63**	**53**	Pg	**Pg**	**03 02 30.5**	**-1.3**
	10.0nm,0.7s						
SATY				Lg	Lg	03 03 32.2	
	23nm,0.5s						
BTLS	**Baital**	**4.66**	**6**	*e*P	**Pg**	**03 02 29.5**	**-2.8**
	5.2nm,0.3s						
BTLS				*e*S	**Sg**	**03 03 30.4**	**-2.3**
	3.4nm,0.4s						
BTLS	**Baital**	**4.66**	**6**	Pg	**Pg**	**03 02 29.5**	**-2.8**
	5.2nm,0.3s						
BTLS				Lg	Lg	03 03 30.4	
	3.4nm,0.4s						
KURS	**Kuram**	**4.74**	**48**	*e*P	**Pg**	**03 02 32.6**	**-1.4**
	6.4nm,0.4s						
KURS				*e*S	**Sg**	**03 03 35.5**	**+0.1**
	13nm,0.5s						
KURS	**Kuram**	**4.74**	**48**	Pg	**Pg**	**03 02 32.6**	**-1.4**
	6.4nm,0.4s						
KURS				Lg	Lg	03 03 35.5	
	13nm,0.5s						
KPKS	**Kokpek**	**5.03**	**51**	*e*P	**Pg**	**03 02 37.6**	**-1.8**
	7.8nm,0.4s						
KPKS				*e*S	**Sg**	**03 03 44.2**	**-0.3**
	25nm,0.2s						
ARXS	**Arharly**	**5.05**	**40**	*e*P	**Pg**	**03 02 37.8**	**-2.1**
	5.2nm,0.7s						
ARXS				*e*S	**Sg**	**03 03 44.6**	**-0.8**
	18nm,0.3s						
ARXS	**Arharly**	**5.05**	**40**	Pg	**Pg**	**03 02 37.8**	**-2.1**
	5.2nm,0.7s						
ARXS				Lg	Lg	03 03 44.6	
	18nm,0.3s						
UZB	**Uzynbulak**	**5.06**	**55**	*e*P	**Pg**	**03 02 38.2**	**-1.8**
	6.1nm,0.3s						
UZB				*e*S	**Sg**	**03 03 45.3**	**-0.3**
	15nm,0.6s						
UZB	**Uzynbulak**	**5.06**	**55**	Pg	**Pg**	**03 02 38.2**	**-1.8**
	6.1nm,0.3s						
UZB				Lg	Lg	03 03 45.3	
	15nm,0.6s						
BLB	**Baldybastay**	**5.31**	**44**	Pg	**Pg**	**03 02 43.4**	**-1.3**
	14nm,0.4s						
BLB				Lg	Lg	03 03 54.2	
	24nm,0.3s						
PDGK	**Podgornoye**	**5.44**	**56**	Pg	**Pg**	**03 02 46.7**	**-0.6**
	2.8nm,0.7s						
PDGK				Lg	Lg	03 03 59.8	
	7.0nm,0.7s						
PDGK	**Podgornoye**	**5.44**	**56**	⇓Pn	**Pn**	**03 02 28.8**	**+3.4**
	4.2nm,1.1s						
PDGK				⇓Pg	**Pg**	**03 02 46.8**	**-0.6**
	5.1nm,0.7s						
PDGK				⇑Lg	Lg	03 04 00.7	
	17nm,0.8s						
KTMS	**Ketmen**	**6.05**	**58**	*e*P	**Pg**	**03 02 58.4**	**-0.6**
	2.7nm,0.5s						
KTMS				*e*S	**Sg**	**03 04 19.9**	**+2.5**
	7.2nm,0.4s						
KTMS	**Ketmen**	**6.05**	**58**	Pg	**Pg**	**03 02 58.4**	**-0.6**
	2.7nm,0.5s						
KTMS				Lg	Lg	03 04 19.9	
	7.2nm,0.4s						
KAPS	**Kapalarasan**	**6.58**	**40**	*e*P	**Pg**	**03 03 07.0**	**-2.1**
	2.8nm,0.6s						
KAPS				*e*S	**Sg**	**03 04 34.7**	**+0.2**
	7.4nm,0.6s						
KAPS	**Kapalarasan**	**6.58**	**40**	Pg	**Pg**	**03 03 07.0**	**-2.1**
	2.8nm,0.6s						
KAPS				Lg	Lg	03 04 34.7	
	7.4nm,0.6s						
OTUK	**Ortayu**	**7.87**	**355**	⇑Lg	Lg	03 05 14.0	
	25nm,0.9s						
MKAR	**Makanchi Array**	**9.10**	**43**	Pn	**Pn**	**03 03 17.9**	**+2.4**
	0.1nm,0.3s,baz=221,slow=13,SNR=1.5						
KURBB	**Kurchatov Arra**	**10.84**	**18**	Pn	Pn	03 03 45.0	+5.8
	0.1nm,0.3s,baz=211,slow=13,SNR=6.1						
AB31	**Akbulak array**	**12.96**	**317**	P	**Pn**	**03 04 06.6**	**-1.7**
	2.0nm,0.7s,baz=126,slow=14,SNR=34						
AKTO	**Aktyubinsk**	**14.67**	**318**	Pn	**P**	**03 04 38.7**	**+0.6**
	0.6nm,0.3s,baz=121,slow=15,SNR=10						
AKTO	**Aktyubinsk**	**14.67**	**318**	⇓P	**Pn**	**03 04 31.2**	**-0.5**
	2.2nm,0.6s						
ZALV	**Zalesovo Beam**	**15.60**	**26**	Pn	**P**	**03 04 47.4**	**-1.0**
	0.2nm,0.3s,baz=243,slow=6.3,SNR=2.1						
GNI	**Garni**	**21.78**	**279**	LR	LR	03 14 56.8	
	comp=Z,29nm,21.9s,baz=107,slow=38						
ARCES	**ARCESS Array B**	**38.30**	**335**	P	**P**	**03 08 25.5**	**+0.8**
	1.8nm,0.8s,baz=96,slow=8.3,SNR=4.7						
TORD	**Torodi Ar. Bea**	**67.65**	**268**	P	**P**	**03 12 02.8**	**+0.9**
	0.4nm,0.6s,baz=46,slow=5.5,SNR=3.8						

IDC ***18*** *03:06:03.9±0.7, 8°.51S×158°.85E, h0*^{km}*, mb4.1/9, mb1 4.3/11, mb1mx4.1/33, mbtmp4.2/11, ML4.0/2, MS3.3/17, Ms1 3.3/17, ms1mx3.2/33, Error ellipse: s-maj=19.5km s-min=15.3km az=40.0*

NEIC ***18*** *03:06:08.6±1.3, 8°.47S±0°.10×158°.92E±0°.07, h32*^{km}*±5*^{km}*, mb4.6/13, Error ellipse: s-maj=14.3km s-min=9.6km az=198.0*

ISC 18 03:06:08.9±0.6**, 8°.50S**±0°.10×**158°.87E**±0°.09**, h35**^{km}**, n41, σ0**^{s}**.87**/32**, mb4.1**/15**, MS3.3**/15**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.41**	**131**	Pn	**Pn**	**03 06 31.6**	**-0.5**
	372nm,0.3s,baz=282,slow=0.8,SNR=24						
HNR				Sn	**Sn**	**03 06 52.1**	**+2.7**
	2µm,0.3s,baz=118,slow=21,SNR=14						
HNR				LR	LR	03 07 19.1	
	comp=Z,2µm,19.0s,baz=294,slow=53						
HNR	**Honiara**	**1.41**	**131**		**Pn**	**03 06 31.2**	**-0.9**
HNR				Sn	**Sn**	**03 06 48.9**	**-0.6**
PMG	**Port Moresby**	**11.60**	**265**	LR	LR	03 13 08.9	
	comp=Z,209nm,19.6s,baz=171,slow=37						
DZM	**Mont Dzumac**	**15.34**	**152**	Pn	**Pn**	**03 09 43.6**	**+0.7**
	0.1nm,0.3s,baz=91,slow=19,SNR=1.6						
DZM	**Mont Dzumac**	**15.34**	**152**	Pn	**Pn**	**03 09 43.3**	**+0.4**
DZM				IAmb	IAmb	03 10 06.1	
	comp=Z,40nm,1.4s						
JAY	**Jayapura**	**19.02**	**287**	P	**Pn**	**03 10 29.1**	**+0.1**
	comp=Z,2.4nm,0.3s,baz=176,slow=4.3,SNR=7.7						
JAY				LR	LR	03 18 10.4	
	comp=Z,56nm,21.1s,baz=3.0,slow=38						
GUMO	**Guam**	**25.98**	**328**	LR	LR	03 21 06.4	
	comp=Z,82nm,21.3s,baz=114,slow=35						
WR0	**Warramunga Arr**	**26.14**	**242**	P	**P**	**03 11 40.1**	**+0.1**
WR0				IAmb	IAmb	03 12 15.1	
	comp=Z,34nm,2.0s						
WB0	**Warramunga Arr**	**26.20**	**242**	P	**P**	**03 11 40.4**	**-0.2**
WB0				IAmb	IAmb	03 12 12.6	
	comp=Z,6.4nm,1.1s						
WB2	**Warramunga Arr**	**26.30**	**242**	P	**P**	**03 11 41.0**	**-0.4**
WB2				IAmb	IAmb	03 12 10.9	
	comp=Z,4.0nm,0.8s						
WRA	**Warramunga Arr**	**26.31**	**242**	P	**P**	**03 11 41.0**	**-0.5**
	comp=Z,2.3nm,0.8s,baz=65,slow=9.2,SNR=16						
WRA				LR	LR	03 21 38.2	
	comp=Z,50nm,18.6s,baz=60,slow=36						
WRA	**Warramunga Arr**	**26.31**	**242**	P	**P**	**03 11 41.1**	**-0.4**
AS31	**Alice Springs**	**28.25**	**235**	P	**P**	**03 11 59.0**	**0.0**
ASAR	**Alice Springs**	**28.25**	**235**	P	**P**	**03 11 58.4**	**-0.6**
	comp=Z,1.6nm,0.8s,baz=62,slow=8.8,SNR=15						
ASAR	**Alice Springs**	**28.25**	**235**	P	**P**	**03 11 58.0**	**-1.1**
STKA	**Stephens Creek**	**28.26**	**212**	P	**P**	**03 11 59.3**	**+0.4**
	comp=Z,2.0nm,0.6s,baz=37,slow=14,SNR=5.1						
STKA				LR	LR	03 22 54.1	
	comp=Z,37nm,19.4s,baz=27,slow=36						
STKA	**Stephens Creek**	**28.26**	**212**	P	**P**	**03 11 59.6**	**+0.7**
SIJI	**Sorong**	**28.51**	**284**	LR	LR	03 25 24.8	
	comp=Z,64nm,18.3s,baz=170,slow=41						
AFI	**Afiamalu**	**29.28**	**103**	P	**P**	**03 12 07.6**	**-0.6**
	comp=Z,41nm,0.8s,baz=78,slow=23,SNR=4.4						
BBOO	**Buckleboo**	**32.10**	**218**	P	**P**	**03 12 33.0**	**+0.1**
BKZ	**Black Stump Fm**	**34.39**	**155**	P	**P**	**03 12 52.6**	**-0.1**
BATI	**Baumata**	**34.77**	**264**	LR	LR	03 27 46.5	
	comp=Z,86nm,21.4s,baz=90,slow=38						
FORT	**Forrest**	**36.29**	**228**	P	**P**	**03 13 08.5**	**-0.7**
FORT				IAmb	IAmb	03 13 33.3	
	comp=Z,22nm,0.8s						
KAPI	**Kappang**	**38.98**	**273**	LR	LR	03 30 48.2	
	comp=Z,16nm,18.8s,baz=111,slow=38						
JHJ	**Hachijo jima 2**	**45.20**	**337**	LR	LR	03 31 31.9	
	comp=Z,57nm,21.5s,baz=90,slow=34						
MJAR	**Matsushiro Arr**	**48.83**	**338**	LR	LR	03 35 22.0	
	comp=Z,32nm,19.8s,baz=275,slow=36						
PPT	**Papeete**	**50.90**	**106**	LR	LR	03 32 44.1	
	comp=Z,32nm,21.0s,baz=168,slow=31						
KSRS	**Korea Array**	**54.11**	**330**	LR	LR	03 36 50.0	
	comp=Z,18nm,20.5s,baz=185,slow=34						
USRK	**Ussuriysk Ar.**	**57.82**	**337**	P	**P**	**03 15 57.8**	**+1.0**
	comp=Z,2.7nm,0.8s,baz=125,slow=7.0,SNR=4.5						
USRK				LR	LR	03 38 44.9	
	comp=Z,32nm,20.7s,baz=242,slow=34						
PETK	**Petropavlovsk-**	**61.38**	**359**	LR	LR	03 39 46.3	
	comp=Z,14nm,22.0s,baz=143,slow=33						
VNDA	**Vanda**	**69.01**	**179**	P	**P**	**03 17 10.7**	**+0.4**
	comp=Z,3.4nm,0.9s,baz=333,slow=8.1,SNR=5.9						
VNDA				LR	LR	03 43 02.4	
	comp=Z,40nm,18.3s,baz=355,slow=32						
VNDA	**Vanda**	**69.01**	**179**	P	**P**	**03 17 10.8**	**+0.5**
VNDA				IAmb	IAmb	03 18 20.1	
	comp=Z,23nm,1.8s						
SONM	**Songino Array**	**72.70**	**326**	P	**P**	**03 17 34.7**	**+1.3**
	comp=Z,2.8nm,0.8s,baz=143,slow=6.5,SNR=16						
QSPA	**South Pole Qui**	**81.48**	**180**	P	**P**	**03 18 21.7**	**-0.8**
QSPA				IAmb	IAmb	03 18 23.1	
	comp=Z,12nm,1.4s						
ILAR	**Eielson Array**	**83.40**	**20**	P	**P**	**03 18 32.1**	**-0.1**
	comp=Z,0.6nm,1.0s,baz=250,slow=4.8,SNR=10.0						
ILAR				LR	LR	03 50 22.0	
	comp=Z,22nm,20.1s,baz=270,slow=32						
MKAR	**Makanchi Array**	**87.07**	**318**	P	**P**	**03 18 50.0**	**-1.0**
	comp=Z,0.6nm,0.7s,baz=94,slow=6.3,SNR=5.0						
NVAR	**Mina Array Bea**	**89.66**	**51**	P	**P**	**03 19 04.5**	**+0.8**
	comp=Z,0.5nm,0.8s,baz=255,slow=6.7,SNR=3.7						
NVAR	**Mina Array Bea**	**89.66**	**51**	P	**P**	**03 19 01.9**	**-1.8**
NRIK	**Noril'sk**	**91.42**	**340**	LR	LR	04 01 04.0	
	comp=Z,19nm,20.0s,baz=18,slow=36						
SNAA	**Sanae**	**99.08**	**186**	P	**Pdif**	**03 19 45.8**	**-0.3**
CLL	**Collm**	**128.92**	**333**	*e*PKPdf	**PKiKP**	**03 25 14.0**	**+0.4**

IDC 18 03:13:22.2±10.0**, 4°.51S**×**148°.61E, h0**^{km}**, mb3.4**/4**, mb1 3.7**/4**, mb1mx3.5**/25**, mbtmp3.5**/4**, Error ellipse: s-maj=160.4km s-min=78.8km az=32.0, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.71**	**221**	P	P	03 18 03.8	-0.5
	0.2nm,0.3s,baz=40,slow=10,SNR=6.4						
ASAR	**Alice Springs**	**23.75**	**215**	P	P	03 18 37.0	+0.5
	0.2nm,0.4s,baz=50,slow=8.7,SNR=4.7						
FITZ	**Fitzroy Crossi**	**26.22**	**237**	P	P	03 18 59.1	0.0
	0.5nm,0.4s,baz=44,slow=6.6,SNR=7.6						
STKA	**Stephens Creek**	**28.01**	**193**	P	P	03 19 14.9	-0.2
	0.8nm,0.3s,baz=37,slow=10,SNR=3.2						

SOME ***18*** *03:14:13.1, 40°.38N×73°.18E, h5*^{km}

KRNET ***18*** *03:14:15.7±0.1, 40°.38N×73°.25E, h13*^{km}*, mb2.8*

NNC ***18*** *03:14:16.0±1.1, 40°.45N×73°.24E, h0*^{km}*, mb3.6, mpv3.2, Error ellipse: s-maj=8.6km s-min=4.5km az=178.0*

ISC 18 03:14:13.4±1.1**, 40°.39N**±0°.03×**73°.33E**±0°.02**, h16**^{km}±11^{km}**, n48, σ1**^{s}**.48**/75**, 30C-9D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**0.40**	**161**	⇑*e*P	**Pn**	**03 14 23.9**	**-0.7**
	baz=51						
SFK				⇑*e*S	**Sb**	**03 14 29.5**	**+1.4**
	baz=51						
OHH	**Osh**	**0.44**	**288**	⇑*i*P	**Pn**	**03 14 23.4**	**-1.7**
	baz=93						
OHH				⇑*i*S	**Sb**	**03 14 28.8**	**-0.3**
	baz=93						
SALK	**Salom-Alik**	**0.61**	**37**	⇑*e*P	**Pn**	**03 14 28.5**	**+0.9**
	baz=41						
SALK				⇑*e*S	**Sn**	**03 14 38.1**	**+0.9**
	baz=41						
DRK	**Karamyk**	**1.49**	**233**	⇑*i*P	**Pg**	**03 14 42.8**	**+0.8**
	baz=32						
DRK				⇑*i*S	**Sg**	**03 15 02.1**	**+0.7**
	baz=32						
AML	**Almayashu**	**1.76**	**9**	⇑*i*P	**Pg**	**03 14 49.0**	**+1.7**
	baz=11						
AML				⇑*i*S	**Sg**	**03 15 13.2**	**+3.0**
	baz=11						
BTK	**Batken**	**1.95**	**261**	⇓*i*P	**Pg**	**03 14 50.8**	**-0.1**
	baz=61						
BTK				⇓*i*S	**Sg**	**03 15 16.3**	**+0.1**
	baz=61						
TRKS	**Terek-Say**	**2.01**	**305**	⇑*i*P	**Pg**	**03 14 51.2**	**-0.9**
	baz=5.0						
TRKS				⇑*i*S	**Sg**	**03 15 17.0**	**-1.2**
	baz=5.0						
UCH	**Uchtor**	**2.04**	**25**	⇑*i*P	**Pg**	**03 14 54.0**	**+1.4**
	baz=27						
UCH				⇑*i*S	**Sg**	**03 15 21.4**	**+2.2**
	baz=27						
MNAS	**Manas**	**2.19**	**344**	⇑*e*P	**Pg**	**03 14 54.9**	**-0.5**
	baz=45						
MNAS				⇑*i*S	**Sg**	**03 15 24.0**	**+0.3**
	baz=45						
EKS2	**Erkin-Say**	**2.29**	**8**	⇑*e*P	**Pg**	**03 14 56.9**	**-0.5**
	baz=10.0						
EKS2				⇑*i*S	**Sg**	**03 15 27.3**	**+0.1**
	baz=10.0						
MRKS	**Merke**	**2.36**	**358**	*e*P	**Pg**	**03 14 57.3**	**-1.2**
	8.8nm,0.3s						
MRKS				*e*S	**Sg**	**03 15 29.3**	**+0.2**
	42nm,0.4s						
MRKS	**Merke**	**2.36**	**358**	Pg	**Pg**	**03 14 57.3**	**-1.2**
	8.8nm,0.3s						
MRKS				Lg	Lg	03 15 29.3	
	42nm,0.4s						
AAK	**Ala-Archa**	**2.41**	**21**	⇓Pn	**Pg**	**03 14 58.2**	**-1.4**
	3.4nm,0.5s						
AAK				⇑Lg	Lg	03 15 32.4	
	37nm,0.8s						
AAK	**Ala-Archa**	**2.41**	**21**	⇓*i*P	**Pg**	**03 14 59.0**	**-0.6**
	baz=22						
AAK				⇓*i*S	**Sg**	**03 15 30.5**	**-0.4**
	baz=22						
KBK	**Karagaybulak**	**2.57**	**28**	⇑*e*P	**Pg**	**03 15 01.4**	**-1.3**
	baz=29						
KBK				⇑*i*S	**Sg**	**03 15 34.4**	**-1.6**
	baz=29						
GAR	**Garm**	**2.71**	**240**	⇓*i*P	**Pb**	**03 15 01.8**	**+0.3**
	baz=40						
GAR				⇓*i*S	**Sb**	**03 15 35.1**	**+0.6**
	baz=40						
ULHL	**Ulahol**	**2.87**	**49**	⇑*e*P	**Pb**	**03 15 05.4**	**+1.1**
	baz=49						
ULHL				⇑*i*S	**Sb**	**03 15 41.7**	**+2.4**
	baz=49						
TKM2	**Tokmak 2**	**3.05**	**33**	⇓Pg	**Pg**	**03 15 11.4**	**-0.4**
	2.3nm,0.6s						
TKM2				⇓Lg	Lg	03 15 52.5	
	9.5nm,0.6s						
TKM2	**Tokmak 2**	**3.05**	**33**	⇑*i*P	**Pb**	**03 15 07.6**	**+0.3**
	baz=34						
TKM2				⇑*i*S	**Sb**	**03 15 45.8**	**+1.5**
	baz=34						
KST	**Kastek**	**3.30**	**36**	*e*P	**Pg**	**03 15 15.2**	**-1.4**
	2.6nm,0.2s						
KST				*e*S	**Sg**	**03 16 00.1**	**+0.6**
	8.9nm,0.5s						
KST	**Kastek**	**3.30**	**36**	Pg	**Pg**	**03 15 15.3**	**-1.4**
	2.6nm,0.2s						
KST				Lg	Lg	03 16 00.1	
	8.9nm,0.5s						
DGS	**Degeres**	**3.38**	**32**	*e*P	**Pg**	**03 15 16.9**	**-1.3**
	2.7nm,0.6s						
DGS				*e*S	**Sg**	**03 16 02.6**	**+0.5**
	9.0nm,0.7s						
DGS	**Degeres**	**3.38**	**32**	Pg	**Pg**	**03 15 16.9**	**-1.3**
	2.7nm,0.6s						
DGS				Lg	Lg	03 16 02.6	
	9.0nm,0.7s						
KK02	**Karatay Array**	**3.44**	**323**	⇑Pg	**Pg**	**03 15 17.6**	**-1.6**
	1.7nm,0.8s						
KK02				⇑Lg	Lg	03 16 02.3	
	3.6nm,0.5s						
TARG	**Taragay, Kyrgy**	**3.64**	**67**	⇑*i*P	**Pb**	**03 15 16.0**	**-1.5**
	baz=67						
TARG				⇑*i*S	**Sb**	**03 16 01.2**	**-0.3**
	baz=67						
BRLS	**Borolday**	**3.72**	**316**	*e*P	**Pb**	**03 15 18.7**	**+0.1**
	3.4nm,0.8s						
BRLS				*e*S	**Sb**	**03 16 06.2**	**+2.8**
	4.7nm,0.3s						
BRLS	**Borolday**	**3.72**	**316**	Pg	**Pb**	**03 15 18.7**	**+0.1**
	3.4nm,0.8s						
BRLS				Lg	Lg	03 16 06.2	
	4.7nm,0.3s						
TNSS	**Tian-Shan**	**3.78**	**44**	*e*P	**Pg**	**03 15 24.5**	**-1.4**
	2.4nm,0.4s						
TNSS				*e*S	**Sg**	**03 16 15.9**	**+1.0**
	4.0nm,0.6s						
TNSS	**Tian-Shan**	**3.78**	**44**	Pg	**Pg**	**03 15 24.5**	**-1.4**
	2.4nm,0.4s						
TNSS				Lg	Lg	03 16 15.9	
	4.0nm,0.6s						
MDOK	**Medeo**	**3.92**	**44**	*e*P	**Pg**	**03 15 27.8**	**-0.7**
	2.7nm,0.3s						
MDOK				*e*S	**Sg**	**03 16 21.6**	**+2.2**
	8.3nm,0.5s						
MDOK	**Medeo**	**3.92**	**44**	Lg	Lg	03 16 21.7	
	6.4nm,0.5s						
MDOK	**Medeo**	**3.92**	**44**	Pg	**Pg**	**03 15 27.8**	**-0.7**
	2.7nm,0.3s						
MDOK				Lg	Lg	03 16 21.6	
	8.3nm,0.5s						
KOTS	**Kotyrbulak**	**4.01**	**44**	*e*P	**Pg**	**03 15 28.3**	**-1.8**
	2.8nm,0.3s						
KOTS				*e*S	**Sg**	**03 16 22.4**	**+0.3**
	10nm,0.3s						
KOTS	**Kotyrbulak**	**4.01**	**44**	Pg	**Pg**	**03 15 28.3**	**-1.8**
	2.8nm,0.3s						
KOTS				Lg	Lg	03 16 22.4	
	10nm,0.3s						
KUU	**Kurty**	**4.15**	**32**	*e*P	**Pg**	**03 15 31.2**	**-1.7**
	1.6nm,0.1s						
KUU				*e*S	**Sg**	**03 16 27.5**	**+0.8**
	6.6nm,0.4s						
KUU	**Kurty**	**4.15**	**32**	Pg	**Pg**	**03 15 31.2**	**-1.7**
	1.6nm,0.1s						
KUU				Lg	Lg	03 16 27.5	
	6.6nm,0.4s						
SATY	**Saty**	**4.64**	**53**	*e*P	**Pg**	**03 15 40.2**	**-2.0**
	3.0nm,0.5s						
SATY				*e*S	**Sg**	**03 16 43.4**	**+1.0**
	6.8nm,0.5s						
SATY	**Saty**	**4.64**	**53**	Pg	**Pg**	**03 15 40.2**	**-2.0**
	3.0nm,0.5s						
SATY				Lg	Lg	03 16 43.4	
	6.8nm,0.5s						
BTLS	**Baital**	**4.68**	**6**	*e*P	**Pg**	**03 15 40.5**	**-2.5**
	1.5nm,0.2s						
BTLS				*e*S	**Sg**	**03 16 43.5**	**0.0**
	3.4nm,0.4s						
BTLS	**Baital**	**4.68**	**6**	Pg	**Pg**	**03 15 40.5**	**-2.5**
	1.5nm,0.2s						
BTLS				Lg	Lg	03 16 43.5	
	3.4nm,0.4s						
KPKS	**Kokpek**	**5.04**	**51**	*e*P	**Pg**	**03 15 47.4**	**-2.5**
	2.1nm,0.2s						
KPKS				*e*S	**Sg**	**03 16 55.0**	**0.0**
	7.0nm,0.5s						
UZB	**Uzynbulak**	**5.07**	**55**	*e*P	**Pg**	**03 15 48.4**	**-2.1**
	3.2nm,0.4s						
UZB				*e*S	**Sg**	**03 16 57.0**	**+0.9**
	5.3nm,0.8s						
UZB	**Uzynbulak**	**5.07**	**55**	Pg	**Pg**	**03 15 48.4**	**-2.1**
	3.2nm,0.4s						
UZB				Lg	Lg	03 16 57.0	
	5.3nm,0.8s						
ARXS	**Arharly**	**5.07**	**40**	*e*P	**Pg**	**03 15 47.8**	**-2.6**
	1.5nm,0.4s						
ARXS				*e*S	**Sg**	**03 16 56.1**	**+0.1**
	5.1nm,0.4s						

ARXS	Arharly	5.07	40	Pg	Pg	03 15 47.8	-2.6
	1.5nm,0.4s						
ARXS				Lg	Lg	03 16 56.1	
	5.1nm,0.4s						
BLB	Baldybastay	5.32	44	Pg	Pg	03 15 52.4	-2.8
	2.5nm,0.4s						
BLB				Lg	Lg	03 17 03.9	
	4.1nm,0.4s						
PDGK	Podgornoye	5.46	55	Pg	Pg	03 15 56.0	-1.8
	1.0nm,0.8s						
PDGK				Lg	Lg	03 17 10.0	
	2.1nm,0.7s						
PDGK	Podgornoye	5.46	55	⇑Lg	Lg	03 17 09.1	
	4.3nm,0.8s						

TUL ***18*** *03:22:41.9±0.7, 36.°78N±0.°01×97.°76W±0.°04, h6^{km}±7^{km}, ML3.2, mb_Lg2.9/43(NEIC), Error ellipse: s-maj=5.0km s-min=1.6km az=80.0*

NEIC ***18*** *03:22:42.2±0.6, 36.°761N±0.°010×97.°74W±0.°02, h5^{km}±6^{km}, Error ellipse: s-maj=2.3km s-min=1.1km az=118.0*

ANF ***18*** *03:22:42.4±0.3, 36.°77N×97.°76W, h7^{km}, ML3.7/10, Error ellipse: s-maj=3.3km s-min=2.8km az=157.0*

ISC 18 03:22:42.3±1.0**, 36.°76N**±0.°02×**97.°76W**±0.°02**, h5**^{km}±9^{km}**, n75, σ0^{s}45**/75**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GC02	Grant County #	0.12	318	Pg	Pg	03 22 44.7	0.0
GC02				Sg	Sg	03 22 46.3	-0.1
KAN14	Manchester OK	0.25	320		Pg	03 22 47.2	0.0
KAN17	Caldwell West	0.28	359		Pg	03 22 47.8	0.0
KAN17				Sg	Sg	03 22 51.7	+0.2
CROK	Carrier	0.31	215	Pg	Pg	03 22 48.6	+0.2
CROK				Sg	Sg	03 22 53.1	+0.6
KAN13	South Haven SW	0.34	42		Pg	03 22 48.9	0.0
KAN13				Sg	Sg	03 22 53.6	+0.3
KAN05	Bluff City Nor	0.36	345		Pg	03 22 49.1	-0.1
KAN05				Sg	Sg	03 22 53.9	0.0
OK032	Salt Plains WL	0.36	277		Pg	03 22 49.1	-0.2
KAN01	Argonia South	0.39	0	Pg	Pg	03 22 49.7	-0.1
KAN01				Sg	Sg	03 22 55.0	0.0
KAN09	Caldwell North	0.39	17		Pg	03 22 49.8	-0.1
KAN09				Sg	Sg	03 22 55.1	+0.1
BLOK	Blackwell	0.44	90	Pg	Pg	03 22 50.8	0.0
BLOK				Sg	Sg	03 22 56.7	+0.2
KAN10	Anthony SW Sta	0.45	323		Pg	03 22 50.8	-0.1
KAN06	Argonia West S	0.49	351		Pg	03 22 51.5	-0.2
KAN08	Anthony NE Sta	0.49	340		Pg	03 22 51.6	-0.2
KS20	Mayfield South	0.49	19	Pg	Pg	03 22 51.7	-0.2
KAN16	Harper SW Stat	0.52	332	Pg	Pg	03 22 52.2	-0.2
KAN12	Harper NE Stat	0.57	340		Pg	03 22 52.9	-0.3
OK029	Liberty Lake	1.00	166		Pg	03 23 01.1	-0.3
T35A	Sooner Cattle	1.01	81	Pg	Pg	03 23 01.2	-0.5
T35B	Sooner Cattle	1.01	81	P	Pg	03 23 01.2	-0.6
	baz=262						
T35B				S	Sg	03 23 14.3	-0.6
	baz=262						
QUOK	Quay	1.03	125		Pg	03 23 01.7	-0.4
U32A	Winter Ranch,	1.07	249		Pg	03 23 02.1	-0.7
U32A	Winter Ranch,	1.07	249	P	Pg	03 23 02.1	-0.7
	baz=69						
U32A				S	Sg	03 23 16.7	0.0
	baz=69						
OK031	S. Brethren Rd	1.10	137		Pg	03 23 03.0	-0.4
BCOK	Bluff Creek, N	1.11	174	Pg	Pg	03 23 03.0	-0.6
OK030	Cody Creek RV	1.15	136		Pg	03 23 03.7	-0.6
OKCFA	Oklahoma City	1.37	169		Pn	03 23 07.7	-0.3
OKCFA	Oklahoma City	1.37	169	P	Pn	03 23 07.7	-0.3
	baz=350						
OKCFA				S	Sn	03 23 26.7	+0.1
	baz=350						
OKCSW	OKLAHOMA CITY	1.38	169		Pn	03 23 07.8	-0.4
FNO	Franklin	1.53	169		Pn	03 23 10.2	-0.1
TUL1	Leonard	1.80	118	Pn	Pn	03 23 13.7	-0.3
TUL1				IAmb_Lg		03 23 42.7	
	comp=Z,56nm,0.8s						
TUL1	Leonard	1.80	118	P	Pn	03 23 14.2	+0.2
	baz=299						
TUL1				S	Sb	03 23 38.9	+0.2
	baz=299						
R32A	Long Quarter,	1.82	336		Pn	03 23 14.1	-0.2
R32A	Long Quarter,	1.82	336	P	Pn	03 23 14.5	+0.2
	baz=155						
R32A				S	Sb	03 23 38.9	-0.3
	baz=155						
X34A	Smith Ranch, M	2.16	182	Pn	Pn	03 23 19.2	+0.3
X34A				IAmb_Lg		03 23 53.4	
	comp=Z,61nm,0.7s						
WMOK	Wichita Mounta	2.19	203		Pn	03 23 19.6	+0.2
WMOK	Wichita Mounta	2.19	203	P	Pn	03 23 20.1	+0.8
	baz=22						
WMOK				S	Sb	03 23 49.4	-0.3
	baz=22						
KSU1	Kansas State U	2.50	21	Pn	Pn	03 23 23.4	-0.2
KSU1	Kansas State U	2.50	21	P	Pn	03 23 23.6	-0.1
	baz=202						
KSU1				S	Sn	03 23 55.5	+0.8
	baz=202						
CBKS	Cedar Bluff	2.58	323	Pn	Pn	03 23 24.9	+0.2
CBKS	Cedar Bluff	2.58	323	P	Pn	03 23 25.0	+0.3
	baz=142						
U38A	Gravette	2.73	96	Pn	Pn	03 23 26.5	-0.4
U38A	Gravette	2.73	96	P	Pn	03 23 27.4	+0.6
	baz=278						
LOOK	Love County	2.81	170	Pn	Pn	03 23 28.7	+0.9
X37A	Clayton	2.91	137	Pn	Pn	03 23 30.1	+0.8
HHAR	Hobbs	3.12	98	Pn	Pn	03 23 32.2	+0.1
W39A	Magazine	3.58	115	Pn	Pn	03 23 39.8	+1.3
S39A	Bolivar	3.66	74	Pn	Pn	03 23 39.8	+0.3
S39A	Bolivar	3.66	74	P	Pn	03 23 39.8	+0.3
	baz=257						
AMTX	Amarillo	3.70	241	IAmb_Lg		03 24 48.7	
	comp=Z,32nm,0.7s						
U40A	Yellville	3.97	94	Pn	Pn	03 23 43.7	-0.1
U40A				IAmb_Lg		03 24 46.7	
	comp=Z,36nm,1.0s						
MIAR	Mount Ida	4.06	122	Pn	Pn	03 23 46.6	+1.6
MIAR				IAmb_Lg		03 24 52.6	
	comp=Z,18nm,0.9s						
Z38A	Mt. Pleasant	4.17	146	Pn	Pn	03 23 46.7	+0.1
Z38A				IAmb_Lg		03 25 00.8	
	comp=Z,21nm,0.8s						
P38A	Dawn	4.39	48	Pn	Pn	03 23 49.4	-0.1
P38A				IAmb_Lg		03 25 02.1	
	comp=Z,21nm,0.8s						
N35A	Tabor	4.41	21	Pn	Pn	03 23 49.5	-0.4
MGMO	Mountain Grove	4.42	83	Pn	Pn	03 23 49.6	-0.3
MGMO				IAmb_Lg		03 25 13.4	
	comp=Z,20nm,0.7s						
KSCO	Kaye Shedlock'	4.46	302	Pn	Pn	03 23 50.6	-0.1
X40A	Basin Creek Fa	4.61	118	Pn	Pn	03 23 52.3	-0.4
X40A				IAmb_Lg		03 25 14.2	
	comp=Z,16nm,0.8s						
R40A	Maddies Statio	4.62	69	Pn	Pn	03 23 52.5	-0.3
BGNE	Belgrade	4.65	356	P	Pn	03 23 53.1	-0.1
	baz=176						
WHAR	Wooly Hollow	4.67	107	IAmb_Lg		03 25 14.2	
	comp=Z,25nm,1.1s						
WLAR	White Oak Lake	4.89	128	IAmb_Lg		03 25 19.0	
	comp=Z,20nm,1.0s						
MSTX	Muleshoe	4.95	237	Pn	Pn	03 23 56.8	-0.7
P40A	Paris	5.28	57	Pn	Pn	03 24 01.4	-0.5
T25A	Trinidad	5.34	276	IAmb_Lg		03 25 35.9	
	comp=Z,21nm,1.0s						
CCM	Cathedral Cave	5.34	74	IAmb_Lg		03 25 34.4	
	comp=Z,21nm,0.9s						
T42A	Van Buren	5.35	85	IAmb_Lg		03 25 41.4	
	comp=Z,19nm,1.1s						
N38A	Joes South For	5.36	40	IAmb_Lg		03 25 43.9	
	comp=Z,20nm,0.8s						
LCAR	Lake Charles	5.37	95	IAmb_Lg		03 25 37.8	
	comp=Z,18nm,0.8s						
PBMO	Poplar Bluff	5.88	88	IAmb_Lg		03 25 56.5	
	comp=Z,25nm,0.8s						
435B	Jarrell	5.97	179	IAmb_Lg		03 26 08.8	
	comp=Z,18nm,0.8s						
FVM	French Village	5.97	76	IAmb_Lg		03 25 49.1	
	comp=Z,25nm,1.0s						
SCIA	State Center	6.23	33	IAmb_Lg		03 26 14.3	
	comp=Z,20nm,0.7s						
JCT	Junction City	6.49	196	IAmb_Lg		03 26 19.7	
	comp=Z,12nm,0.8s						
O44A	Mansfield	8.04	62	IAmb_Lg		03 27 09.4	
	comp=Z,15nm,0.7s						
PLAL	Pickwick Lake	8.06	100	IAmb_Lg		03 26 53.7	
	comp=Z,7.5nm,0.8s						

JMA ***18*** *03:29:23.9±0.3, 31.°35N×128.°66E, h1^{km}±3^{km}, M4.0*

NIED ***18*** *03:29:23.9, 31.°35N×128.°66E, h1^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.60; M$_{\theta\theta}$0.24; M$_{\phi\phi}$0.36; M$_{r\theta}$0.26; M$_{\theta\phi}$1.01; M$_{\phi r}$-0.22; Fault plane solution: M$_0$1.15000×10^{15} NP1: ϕ_s260.00000°, δ63.00000°, λ-31.00000°. NP2:ϕ_s6.00000°, δ62.00000°, λ-149.00000°.*

IDC ***18*** *03:29:25.9±1.1, 31.°26N×128.°44E, h0^{km}, mb3.6/5, mb1 3.9/7, mb1mx3.5/41, mbtmp3.7/7, ML3.9/2, MS3.5/7, Ms1 3.6/7, ms1mx3.0/36 Error ellipse: s-maj=32.7km s-min=21.4km az=94.0*

ISC 18 03:29:25.0±2.2**, 31.°33N**±0.°07×**128.°75E**±0.°07**, h2**^{km}±14^{km}**, n21, σ0^{s}96**/19**, mb3.6**/5**, MS3.7**/5**, 2D, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.89	67	⇓P	Pg	03 29 42.5	+0.3
JSJ				*e*S	Sg	03 29 54.7	+1.0
JFU	Fukue jima 2	1.32	360	⇓P	Pb	03 29 48.7	-1.8
JSU	Suzuyama	1.47	83	P	Pg	03 29 53.4	+0.3
JSU				*e*S	Sg	03 30 13.6	+1.4
JYAK	Yakushimahirau	1.86	125	P	Pn	03 29 57.2	-0.8
JTN	Tanegashima 3	2.03	109	P	Pn	03 30 00.1	-0.2
JMTN	Minamitane	2.07	116	P	Pn	03 30 01.2	+0.4
JTZ	Takazaki	2.07	74	P	Pb	03 30 01.4	-2.0
JTZ				*e*S	Sb	03 30 28.8	-0.8
JIU3	Izumi3	2.13	55	P	Pn	03 30 01.9	+0.2
JIU3				*e*S	Sn	03 30 29.0	+0.2
JNU	Nakatsue	2.54	45	Pn	Pb	03 30 10.9	-0.4
	58nm,0.3s,baz=149,slow=0.0,SNR=34						
JNU				Sn	Sg	03 30 46.3	-0.3
	40nm,0.3s,baz=279,slow=0.3,SNR=5.5						
JOW	Kunigami	4.50	185	LR	LR	03 32 30.2	
	comp=Z,168nm,18.4s,baz=86,slow=42						
KSRS	Korea Array	6.14	354	Pn	Pn	03 30 57.2	+0.4
	0.9nm,0.3s,baz=175,slow=14,SNR=6.9						
KSRS				Lg	Lg	03 32 36.9	
	2.3nm,0.3s,baz=175,slow=30,SNR=9.0						
ASAJ	Asahikawa	16.79	37	LR	LR	03 38 51.5	
	comp=Z,83nm,19.8s,baz=92,slow=33						
SONM	Songino Array	23.71	320	P	P	03 34 39.0	+0.6
	0.4nm,0.6s,baz=134,slow=12,SNR=3.0						
TLY	Talaya	27.46	325	LR	LR	03 47 15.9	
	comp=Z,105nm,18.1s,baz=170,slow=39						
WRA	Warramunga Arr	51.26	173	P	P	03 38 30.4	0.0
	0.7nm,0.9s,baz=350,slow=8.1,SNR=3.3						
ASAR	Alice Springs	54.91	174	P	P	03 38 58.2	+0.9
	0.6nm,0.9s,baz=7.8,slow=7.5,SNR=4.2						
ASAR				LR	LR	04 02 17.4	
	comp=Z,203nm,21.1s,baz=104,slow=36						
ARCES	ARCESS Array B	65.45	338	LR	LR	04 13 47.5	
	comp=Z,54nm,18.8s,baz=225,slow=41						
FINES	FINESS Array B	68.68	330	P	P	03 40 29.9	+0.2
	3.2nm,1.0s,baz=52,slow=5.4,SNR=2.3						
AKASG	Malin Array Be	71.98	319	LR	LR	04 13 51.3	
	comp=Z,42nm,18.4s,baz=325,slow=37						
NOA	NORSAR Array B	74.96	333	LR	LR	04 17 19.7	
	comp=Z,27nm,18.7s,baz=5.0,slow=38						
NVAR	Mina Array Bea	86.66	46	P	P	03 42 14.8	+4.1
	0.3nm,0.6s,baz=307,slow=5.5,SNR=3.7						

IDC 18 03:30:56.2±2.1**, 3.°12N**×**127.°85E, h0**^{km}**, mb3.5**/4**, mb1 3.7**/4**, mb1mx3.3**/36**, mbtmp3.6**/4**, Error ellipse: s-maj=126.0km s-min=23.0km az=71.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	21.20	186	P	P	03 35 44.7	+1.2
	0.7nm,0.7s,baz=14,slow=13,SNR=1.0						
WRA	Warramunga Arr	23.79	165	P	P	03 36 09.4	-1.4
	0.9nm,0.7s,baz=342,slow=10,SNR=6.9						
ASAR	Alice Springs	27.27	168	P	P	03 36 43.4	+0.9
	0.2nm,0.4s,baz=343,slow=8.9,SNR=2.1						
MKAR	Makanchi Array	58.69	325	P	P	03 40 55.5	-0.1
	0.9nm,0.3s,baz=116,slow=7.4,SNR=22						

IDC ***18*** *03:46:46.8±0.7, 6.°05S×154.°46E, h34^{km}±5^{km}, mb4.1/14, mb1 4.3/16, mb1mx4.1/39, mbtmp4.3/16, ML2.8/1, MS3.7/14, Ms1 3.7/14, ms1mx3.3/36, Error ellipse: s-maj=20.6km s-min=14.6km az=114.0*

NEIC ***18*** *03:46:52.7±1.9, 6.°23S±0.°09×154.°38E±0.°07, h76^{km}±6^{km}, mb4.5/18, Error ellipse: s-maj=14.1km s-min=9.0km az=213.0*

DJA ***18*** *03:46:52.1±0.4, 6°S±5°×15°4E±°, h69^{km}±8^{km}, M4.9/9, mB4.8/2, mb4.4/9, MLv5.2/3, Mw(mB)4.0/2*

ISC 18 03:46:51.2±0.8**, 6.°22S**±0.°06×**154.°37E**±0.°05**, h69**^{km}±6^{km}**, n83, σ1^{s}50**/92**, mb4.7**/31**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	Rabaul	2.98	312		Pn	03 47 38.7	+2.4
RABL				Sn	Sn	03 48 13.8	+2.9
HNR	Honiara	6.38	120	Sn	Sn	03 49 36.9	+2.8
	24nm,0.3s,baz=249,slow=14,SNR=1.5						
HNR				LR	LR	03 50 46.5	
	comp=Z,552nm,21.6s,baz=278,slow=38						
HNR	Honiara	6.38	120	Pn	Pn	03 48 23.4	+0.7
HNR				Sn	Sn	03 49 36.2	+2.0
PMG	Port Moresby	7.81	246	Pn	Pn	03 48 42.3	0.0
	7.9nm,0.3s,baz=51,slow=9.3,SNR=34						
PMG				Sn	Sn	03 50 10.3	+1.1
	4.8nm,0.3s,baz=14,slow=22,SNR=11						
PMG				LR	LR	03 51 46.4	
	comp=Z,611nm,19.8s,baz=52,slow=38						
PMG	Port Moresby	7.81	246	Pn	Pn	03 48 42.7	+0.4
PMG					Sn	03 50 10.2	+0.9
COEN	Coen	13.43	234	Pn	Pn	03 50 01.7	+2.8
JAY	Jayapura	14.11	285	LR	LR	03 55 50.5	
	comp=Z,367nm,19.5s,baz=178,slow=38						
SANVU	Saraoutou	15.58	127	P	P	03 50 28.6	-1.2
SANVU				IAmb	IAmb	03 50 30.5	
	comp=Z,40nm,0.9s						
CTAO	Charters Tower	15.88	209	P	P	03 50 32.6	-0.5
CTAO				IAmb	IAmb	03 50 34.7	
	comp=Z,15nm,0.8s						
EIDS	Eidsvold	19.30	189	P	P	03 51 10.8	+0.2
DZM	Mont Dzumac	19.61	145	P	P	03 51 13.9	-0.3
	comp=Z,1.8nm,0.3s,baz=282,slow=9.2,SNR=14						
DZM				LR	LR	03 57 28.3	
	comp=Z,209nm,21.5s,baz=22,slow=33						
DZM	Mont Dzumac	19.61	145	*e*P	P	03 51 13.0	-1.2
	comp=Z,19nm,0.5s						
DZM				*e*LR	LR	03 55 58.8	
	comp=Z,371nm,24.5s						
DZM	Mont Dzumac	19.61	145	P	Pn	03 51 16.0	-0.2
DZM				IAmb	IAmb	03 51 21.2	
	comp=Z,25nm,1.2s						
OUENC	Ouen Island, N	20.11	144	P	P	03 51 19.2	-0.3
OUENC				IAmb	IAmb	03 51 31.4	
	comp=Z,42nm,1.1s						
GUMO	Guam	21.83	334	LR	LR	03 58 27.7	
	comp=Z,98nm,19.9s,baz=106,slow=32						
WR0	Warramunga Arr	23.61	233	P	P	03 51 55.3	-1.0
WR0				IAmb	IAmb	03 52 11.3	
	comp=Z,24nm,0.8s						
WB0	Warramunga Arr	23.62	233	P	P	03 51 55.7	-0.6
WB0				IAmb	IAmb	03 52 11.3	
	comp=Z,12nm,0.8s						
SWI	Sorong	23.66	282	P	P	03 51 56.2	-0.6
	comp=Z,17nm,0.8s						
WB2	Warramunga Arr	23.75	233	P	P	03 51 56.9	-0.6
WB2				IAmb	IAmb	03 52 12.2	
	comp=Z,18nm,0.9s						
WB2					PcP	03 55 39.6	-0.2
WRA	Warramunga Arr	23.76	233	P	P	03 51 57.0	-0.6
	comp=Z,5.3nm,0.8s,baz=59,slow=9.4,SNR=26						
WRA				pP	pP	03 52 09.2	-2.0
	comp=Z,22nm,1.0s,baz=56,slow=9.3,SNR=18						
WRA				PcP	PcP	03 55 40.4	+0.5
	comp=Z,6.3nm,0.8s,baz=56,slow=2.1,SNR=14						
WRA				ScP	ScP	03 59 16.3	+3.9
	comp=Z,0.9nm,0.9s,baz=54,slow=2.6,SNR=4.5						
WRA				LR	LR	04 01 24.2	
	comp=Z,210nm,20.0s,baz=70,slow=37						
WRA	Warramunga Arr	23.76	233	P	P	03 51 57.5	-0.1
WRA					PcP	03 55 39.8	0.0
MTN	Manton Dam	23.83	252	P	P	03 51 59.2	+1.0
MSVF	Nonsavu	25.80	118	LR	LR	04 01 39.9	
	comp=Z,300nm,18.1s,baz=85,slow=35						
ASAR	Alice Springs	26.23	226	P	P	03 52 19.4	-0.6
	comp=Z,1.6nm,0.7s,baz=60,slow=8.6,SNR=25						
ASAR				pP	pP	03 52 32.1	-1.9
	comp=Z,2.8nm,0.6s,baz=55,slow=9.3,SNR=9.1						
ASAR				PcP	PcP	03 55 45.8	+0.5
	comp=Z,3.5nm,0.8s,baz=54,slow=2.8,SNR=14						
ASAR				ScP	ScP	03 59 23.6	+4.3
	comp=Z,0.9nm,0.7s,baz=49,slow=3.3,SNR=7.6						
ASAR	Alice Springs	26.23	226	P	P	03 52 20.0	0.0
ASAR					PcP	03 55 45.0	-0.4
STKA	Stephens Creek	28.18	203	P	P	03 52 36.5	-0.8
	comp=Z,1.2nm,0.7s,baz=13,slow=12,SNR=3.3						
STKA				pP	pP	03 52 49.4	-2.2
	comp=Z,3.3nm,0.7s,baz=15,slow=13,SNR=5.3						
STKA				PcP	PcP	03 55 49.8	0.0
	comp=Z,4.1nm,0.8s,baz=85,slow=1.0,SNR=7.0						
STKA				LR	LR	04 03 48.4	
	comp=Z,171nm,19.4s,baz=22,slow=36						
STKA	Stephens Creek	28.18	203	P	P	03 52 37.9	+0.6
KNTN	Kanton	33.97	86	P	P	03 53 27.9	-0.6
HAZ	Te Kaha	37.93	149	P	P	03 54 03.9	+1.9
KRVZ	Karewarewa	37.95	153	P	P	03 54 01.7	-0.6
URZ	Urewera	37.98	150	P	P	03 54 02.7	+0.2
ETVZ	East Tongariro	38.01	153	P	P	03 54 02.8	-0.1
RUGZ	Raukumara Rang	38.04	149	P	P	03 54 05.1	+2.0
FWVZ	Far West T-bar	38.04	153	P	P	03 54 07.9	+4.7
TRVZ	Turoa	38.07	153	P	P	03 54 06.8	+3.2
WNVZ	Wahianoa	38.12	153	P	P	03 54 08.9	+5.0
PKGZ	Pakihiroa	38.18	149	P	P	03 54 08.8	+4.5
RTZ	Ruatahuna	38.20	151	P	P	03 54 06.6	+2.2
MWZ	Matawai	38.25	150	P	P	03 54 06.4	+1.7
MTHZ	Maungataniwha	38.32	151	P	P	03 54 05.6	+0.3
TWGZ	Tauwhareparae	38.35	149	P	P	03 54 07.8	+2.1
BKZ	Black Stump Fm	38.40	152	P	P	03 54 06.8	+0.7
BKZ				IAmb	IAmb	03 54 10.3	
	comp=Z,21nm,1.2s						
BHHZ	Black Hill Sta	38.46	153	P	P	03 54 10.8	+4.3
RAHZ	Arahi	38.48	151	P	P	03 54 10.2	+3.5
MJAR	Matsushiro Arr	45.16	342	LR	LR	04 13 54.9	
	comp=Z,8.9nm,18.0s,baz=235,slow=36						
KSRS	Korea Array	49.97	332	P	P	03 55 37.4	-1.1
	comp=Z,3.0nm,0.9s,baz=145,slow=8.2,SNR=4.0						
ENH	Enshi	56.26	313	P	P	03 56 24.7	-0.2
PETK	Petropavlovsk-	59.17	2	P	P	03 56 44.4	-0.4
	comp=Z,4.6nm,0.9s,baz=141,slow=28,SNR=1.4						
PETK				LR	LR	04 18 05.3	
	comp=Z,67nm,21.9s,baz=172,slow=32						
CMAR	Chiang Mai Arr	59.89	295	P	P	03 56 50.0	-0.4
	comp=Z,3.9nm,0.7s,baz=108,slow=4.9,SNR=12						
CMAR	Chiang Mai Arr	59.89	295	P	P	03 56 50.5	0.0
SONM	Songino Array	68.35	327	P	P	03 57 45.4	-0.2
	comp=Z,2.0nm,0.8s,baz=137,slow=6.0,SNR=10						
SONM	Songino Array	68.35	327	P	P	03 57 45.3	-0.2
SONM				IAmb	IAmb	03 57 48.4	
	comp=Z,4.3nm,1.2s						
TAPN	Taplejung	72.47	301	*e*P	P	03 58 11.4	+0.1
	comp=Z,38nm,0.7s						
ODAN	Odare	72.61	301	*e*P	P	03 58 12.3	+0.3
	comp=Z,85nm,0.8s						
RAMN	Ramite	73.31	300	*e*P	P	03 58 16.6	+0.4
	comp=Z,17nm,0.5s						
JIRN	Jiri	73.86	301	*e*P	P	03 58 19.7	+0.2
	comp=Z,35nm,0.8s						
GUN	Gumba	74.19	301	*e*P	P	03 58 21.8	+0.4
PKI	Pulchoki	74.50	301	*e*P	P	03 58 23.2	0.0
PKIN	Phulchoki	74.51	301	*e*P	P	03 58 23.1	-0.1
	comp=Z,32nm,0.8s						
KKN	Kakani	74.67	301	*e*P	P	03 58 24.3	+0.3
	comp=Z,46nm,0.7s						
DMN	Daman	74.77	301	*e*P	P	03 58 25.1	+0.4
	comp=Z,107nm,0.7s						
GKN	Gorkha	75.27	301	*e*P	P	03 58 27.5	0.0
	comp=Z,87nm,0.8s						
KOLN	Koldanda	76.10	300	*e*P	P	03 58 32.2	0.0
	comp=Z,92nm,0.8s						
DANN	Dangsing	76.11	301	*e*P	P	03 58 32.2	-0.2
	comp=Z,67nm,0.7s						
PYUN	Piuthan	76.70	301	*e*P	P	03 58 35.3	-0.4
	comp=Z,124nm,0.8s						
MKAR	Makanchi Array	82.42	319	P	P	03 59 05.0	-1.1
	comp=Z,1.3nm,0.7s,baz=92,slow=7.3,SNR=8.7						
MKAR	Makanchi Array	82.42	319	P	P	03 59 05.3	-0.7
ILAR	Eielson Array	82.89	22	P	P	03 59 05.3	-2.7
	comp=Z,1.4nm,0.8s,baz=246,slow=5.7,SNR=14						
ILAR				LR	LR	04 30 03.7	
	comp=Z,79nm,20.7s,baz=262,slow=31						
ZALV	Zalesovo Beam	83.20	326	P	P	03 59 08.1	-1.8
	comp=Z,0.7nm,0.4s,baz=141,slow=4.2,SNR=3.7						
QSPA	South Pole Qui	83.75	180	P	P	03 59 13.0	+0.3
QSPA				IAmb	IAmb	03 59 13.6	
	comp=Z,10.0nm,0.9s						
INK	Inuvik	89.22	21	P	P	03 59 38.1	-1.0
	comp=Z,0.9nm,0.8s,baz=242,slow=6.4,SNR=2.1						
NVAR	Mina Array Bea	91.73	52	P	P	03 59 52.0	+0.1
	comp=Z,4.4nm,0.9s,baz=254,slow=6.3,SNR=23						
NVAR				LR	LR	04 36 34.9	
	comp=Z,47nm,18.5s,baz=284,slow=33						
NVAR	Mina Array Bea	91.73	52	P	P	03 59 51.3	-0.5
PFO	Pinyon Flats O	92.71	57	P	P	03 59 56.0	-0.3
	comp=Z,1.0nm,0.4s,baz=283,slow=3.9,SNR=6.4						
PFO	Pinyon Flats O	92.71	57	P	P	03 59 56.1	-0.3
YKA	Yellowknife Ar	95.95	28	LR	LR	04 39 47.2	
	comp=Z,24nm,20.4s,baz=0.0,slow=33						
PDAR	Pinedale Array	98.64	48	P	P	04 00 21.4	-1.9
	comp=Z,0.7nm,0.7s,baz=224,slow=2.5,SNR=6.3						
PDAR				LR	LR	04 37 27.9	
	comp=Z,49nm,21.3s,baz=281,slow=31						
BOSA	Boshof	120.01	232	PKP	PKPdf	04 05 34.5	-0.4
	comp=Z,3.3nm,0.6s,baz=123,slow=1.6,SNR=7.7						
BOSA	Boshof	120.01	232	PKPdf	PKPdf	04 05 34.1	-0.8
CLL	Collm	124.84	331	*e*PKPdf	PKiKP	04 05 44.0	+0.4
BDFB	Brasilia	148.96	135	PKPbc	PKPbc	04 06 31.4	-1.1
	comp=Z,2.4nm,0.5s,baz=156,slow=1.7,SNR=5.4						
BDFB	Brasilia	148.96	135	PKPdf	PKPdf	04 06 27.7	-0.7
TORD	Torodi Ar. Bea	152.22	286	PKPbc	PKPbc	04 06 38.9	-1.3
	comp=Z,4.8nm,0.6s,baz=57,slow=2.1,SNR=39						
TORD				pPKPbc	PKPab	04 06 49.7	-0.4
	comp=Z,6.9nm,0.7s,baz=70,slow=4.2,SNR=17						

THE 18 03:49:35.9, 38.°91N×**20.°65E, h13**^{km}**, ML2.6**/4**, Error ellipse: s-maj=2.6km s-min=0.8km az=82.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSLK	Tsoukalades, L	0.09	179	P	Pg	03 49 38.5	-0.1
TSLK				S	Sg	03 49 40.6	0.0
	3μm,0.2s						
LKD2	Lefkada island	0.12	178	P	Pg	03 49 39.0	-0.1
LKD2				S	Sg	03 49 41.5	+0.1
	1μm,0.3s						
NYDR	Nydri-Lefkada	0.20	170	P	Pg	03 49 40.1	-0.2
NYDR				S	Sg	03 49 43.6	+0.3
	880nm,0.1s						
DRAG	Dragano-Lefkad	0.23	195	P	Pg	03 49 40.8	-0.1
EVGI	Lefkada island	0.29	180	P	Pg	03 49 41.8	-0.1

THE ***18*** *03:49:39.5, 38.°46N×20.°53E, h8^{km}±1^{km}, ML2.8/9, Error ellipse: s-maj=1.4km s-min=0.3km az=105.0*

ATH 18 03:49:39.4, 38.°47N×**20.°59E, h9**^{km}±2^{km}**, ML2.4**/4**, Error ellipse: s-maj=2.4km s-min=0.7km az=307.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FSK	Fiskardo	0.03	243	P	Pg	03 49 41.0	0.0
FSK				S	Sg	03 49 42.0	-0.1
	20μm,0.2s						
FSK	Fiskardo	0.03	243	P	Pg	03 49 41.0	0.0
FSK				S	Sg	03 49 41.9	-0.2
FSK				AML	AML	03 49 42.2	
	comp=E,33346μm,0.2s						
FSK				AML	AML	03 49 42.4	
	comp=N,45242μm,0.3s						
EVGI	Lefkada island	0.16	18	P	Pg	03 49 43.1	+0.4
EVGI				S	Sg	03 49 46.2	+1.1
	comp=N,18μm,0.1s						
EVGI	Lefkada island	0.16	18	P	Pg	03 49 42.9	+0.1
EVGI				S	Sg	03 49 45.3	+0.2
EVGI	Lefkada island	0.16	18	S	Sg	03 49 46.2	+1.1
	comp=N,18μm,0.1s						

DRAG	**Dragano-Lefkad**	**0.21**	**356**	P	Pg	03 49 43.8	+0.1
DRAG				S	Sg	03 49 47.7	+1.0
	comp=N,5µm,0.2s						
DRAG	**Dragano-Lefkad**	**0.21**	**356**	P	Pg	03 49 43.9	+0.2
KEF4	**Livadi, Kephal**	**0.25**	**212**	P	Pg	03 49 44.1	-0.3
KEF4				S	Sg	03 49 47.5	-0.3
	comp=N,11µm,0.2s						
KEF4	**Livadi, Kephal**	**0.25**	**212**	P	Pg	03 49 44.2	-0.3
KEF4				S	Sg	03 49 48.5	+0.7
NYDR	**Nydri-Lefkada**	**0.26**	**19**	P	Pg	03 49 45.3	+0.8
DMLN	**Damoulianata-K**	**0.29**	**217**	P	Pg	03 49 44.7	-0.5
DMLN				S	Sg	03 49 48.3	-0.7
DMLN	**Damoulianata-K**	**0.29**	**217**	P	Pg	03 49 44.7	-0.4
DMLN				S	Sg	03 49 49.4	+0.4
VLS	**Valsamata**	**0.29**	**181**	P	Pg	03 49 44.7	-0.5
VLS				S	Sg	03 49 49.7	+0.5
	comp=N,1µm,0.1s						
VLS	**Valsamata**	**0.29**	**181**	P	Pg	03 49 45.0	-0.2
VLS				S	Sg	03 49 49.3	+0.1
VLS				AML	AML	03 49 50.5	
	comp=E,2188µm,0.2s						
VLS				AML	AML	03 49 51.3	
	comp=N,1799µm,0.2s						
LXRA	**Lixouri, Kepha**	**0.30**	**204**	P	Pg	03 49 45.1	-0.2
LXRA				S	Sg	03 49 49.5	+0.2
ARGA	**Argostoli. Kep**	**0.31**	**197**	P	Pg	03 49 45.5	0.0
ARGA				S	Sg	03 49 49.9	+0.3
LKD2	**Lefkada island**	**0.32**	**9**	P	Pg	03 49 45.7	-0.1
LKD2				S	Sg	03 49 51.0	+1.0
	comp=N,768nm,0.3s						
KEF3	**Kipouria, Keph**	**0.33**	**216**	P	Pg	03 49 44.9	-1.0
KEF3				S	Sg	03 49 49.5	-0.8
	comp=N,3µm,0.3s						
KEF3	**Kipouria, Keph**	**0.33**	**216**	P	Pg	03 49 45.4	-0.5
KEF3				S	Sg	03 49 49.8	-0.5
TSLK	**Tsoukalades, L**	**0.36**	**8**	P	Pg	03 49 46.9	+0.5
TSLK				S	Sb	03 49 52.6	-1.1
	comp=N,775nm,0.4s						
PSDA	**Pessada-Kefalo**	**0.36**	**181**	P	Pg	03 49 45.8	-0.6
PSDA				S	Sg	03 49 51.7	+0.6
	comp=N,160nm,0.2s						
PSDA	**Pessada-Kefalo**	**0.36**	**181**	P	Pg	03 49 45.9	-0.5
PSDA				S	Sg	03 49 51.7	+0.6
PVO	**Paravola**	**0.74**	**79**	P	Pg	03 49 53.7	0.0
PVO				S	Sg	03 50 03.2	-0.2
PVO				AML	AML	03 50 08.3	
	comp=E,579µm,0.5s						
PVO				AML	AML	03 50 12.3	
	comp=N,493µm,0.7s						
RLS	**Riolos of Patr**	**0.80**	**121**	P	Pg	03 49 54.3	-0.6
RLS				S	Sg	03 50 05.7	+0.5
RLS				AML	AML	03 50 13.2	
	comp=N,202µm,0.6s						
RLS				AML	AML	03 50 13.4	
	comp=E,164µm,0.6s						

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*IDC **18** 04:03:31.3±1.4, 1°.93N×96°.35E, h0^{km}, mb3.9/5, mb1 3.9/6, mb1mx3.5/44, mbtmp3.8/6, ML3.0/1, MS3.1/2, Ms1 3.1/2, ms1mx2.6/48, Error ellipse: s-maj=28.0km s-min=19.2km az=23.0*

ISC 18 04:03:36.6±1.8**, 2°.1N**±0°.2×**96°.6E**±0°.2**, h28**^{km}**, n10, **σ**0^s.77**/6**, mb3.9**/5**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.41**	**73**	Pn	**Pn**	**04 04 14.3**	**+0.1**
	2.8nm,0.3s,baz=285,slow=12,SNR=6.8						
PSI				Lg	Lg	04 04 57.5	
	4.0nm,0.3s,baz=107,slow=4.3,SNR=6.2						
PSI				LR	LR	04 05 35.6	
	comp=Z,104nm,19.2s,baz=342,slow=46						
BATI	**Baumata**	**29.57**	**115**	LR	LR	04 23 37.0	
	comp=Z,117nm,18.7s,baz=137,slow=40						
H01W3	**Cape Leeuwin H**	**40.30**	**158**	T	T	04 53 52.5	
	baz=333,slow=76,SNR=8.7						
H01W2	**Cape Leeuwin H**	**40.31**	**158**	T	T	04 53 53.5	
	baz=333,slow=76,SNR=11						
H01W1	**Cape Leeuwin H**	**40.31**	**157**	T	T	04 53 53.8	
	baz=333,slow=76,SNR=11						
WRA	**Warramunga Arr**	**43.01**	**122**	P	**P**	**04 11 33.0**	**-1.0**
	0.5nm,0.6s,baz=301,slow=9.2,SNR=7.2						
ASAR	**Alice Springs**	**44.40**	**127**	P	**P**	**04 11 46.1**	**+0.8**
	0.2nm,0.3s,baz=304,slow=8.4,SNR=2.2						
MKAR	**Makanchi Array**	**46.23**	**346**	P	**P**	**04 11 59.2**	**-0.1**
	1.5nm,0.7s,baz=157,slow=9.0,SNR=12						
SONM	**Songino Array**	**46.34**	**9**	P	**P**	**04 12 00.4**	**+0.2**
	0.6nm,0.4s,baz=190,slow=9.2,SNR=7.6						
ZALV	**Zalesovo Beam**	**52.58**	**351**	P	**P**	**04 12 47.5**	**-0.1**
	2.7nm,0.6s,baz=181,slow=7.9,SNR=10						

JMA 18 04:10:14.0±0.2**, 38°.54N×144°.58E, h40**^{km}**, M3.6, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.34**	**284**	P	Pn	04 10 51.3	+1.4
OFUJ				*e*S	Sn	04 11 19.0	+1.6
MIYJ	**Miyakonagasawa**	**2.38**	**297**	P	Pn	04 10 51.5	+0.9
MIYJ				S	Sn	04 11 20.0	+1.4
JKMT	**Kesennumamotoy**	**2.45**	**277**	P	Pn	04 10 52.9	+1.5
JKMT				*e*S	Sn	04 11 21.8	+1.7
JIKH	**Ishinomakikobu**	**2.46**	**266**	P	Pn	04 10 52.9	+1.4
JIKH				*e*S	Sn	04 11 21.8	+1.5
JMK	**Ichinoseki**	**2.66**	**280**	P	Pn	04 10 56.1	+1.8
JMK				*e*S	Sn	04 11 27.3	+2.0
JOM	**Ohasama**	**2.73**	**291**	P	Pn	04 10 57.3	+2.1
JOM				*e*S	Sn	04 11 28.8	+1.8
JYK	**Kaneyama**	**3.32**	**278**	P	Pn	04 11 06.4	+2.9
JYK				*e*S	Sn	04 11 45.2	+3.5
JFT	**Otama**	**3.50**	**254**	P	Pn	04 11 08.3	+2.4
JFT				S	Sn	04 11 48.7	+2.5
JCH	**Churui**	**4.17**	**348**	P	Pn	04 11 14.2	-0.9
JCH				*e*S	Sn	04 12 00.2	-2.4
NEM2	**Nemuro 2**	**4.90**	**10**	P	Pn	04 11 22.1	-3.0
NEM2				*e*S	Sn	04 12 14.1	-6.4
JRY	**Ryogami san**	**5.18**	**243**	P	Pn	04 11 30.3	+1.3
JRY				S	Sn	04 12 27.3	-0.3
JTKR	**Abashiri--Toko**	**5.45**	**355**	*e*S	Sn	04 12 30.7	-3.3

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*DJA **18** 04:14:28.7±0.4, 4°N±4°×12°6E±°, h48^{km}±4^{km}, M4.7/25, mB5.2/10, mb4.8/25, MLv4.8/16, Mw(mB)4.6/10*

*IDC **18** 04:14:29.5±2.4, 3°.42N×126°.00E, h38^{km}±19^{km}, mb4.1/11, mb1 4.3/12, mb1mx4.0/44, mbtmp4.3/12, ML3.8/1, MS3.5/3, Ms1 3.5/3, ms1mx2.9/46, Error ellipse: s-maj=42.9km s-min=10.2km az=79.0*

*NEIC **18** 04:14:30.7±1.5, 3°.39N±0°.06×125°.88E±0°.08, h46^{km}±10^{km}, mb4.6/17, Error ellipse: s-maj=11.1km s-min=7.9km az=76.0*

ISC 18 04:14:30.8±0.5**, 3°.35N**±0°.04×**125°.85E**±0°.06**, h50**^{km}**, n73, **σ**1^s.86**/75**, mb4.3**/20**, 2C-1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**0.46**	**316**	P	**Pn**	**04 14 41.3**	**-0.4**
SGSI				S	**Sn**	**04 14 49.2**	**-0.3**
TNTI	**Ternate**	**2.98**	**149**	P	**Pn**	**04 15 16.0**	**+0.4**
TNTI	**Ternate**	**2.98**	**149**		**Pn**	**04 15 16.4**	**+0.8**
TNTI				Sn	**Sn**	**04 15 51.9**	**+1.8**
TNTI	**Ternate**	**2.98**	**149**	P	**Pn**	**04 15 16.7**	**+1.1**
KMSI	**Cibinong**	**3.33**	**214**	P	**Pn**	**04 15 24.3**	**+3.8**
DAV	**Davao City (W)**	**3.71**	**356**	Pn	**Pn**	**04 15 28.1**	**+2.5**
	44nm,0.3s,baz=66,slow=17,SNR=1.6						
DAV				Sn	**Sn**	**04 16 10.0**	**+1.9**
	203nm,0.3s,baz=234,slow=23,SNR=7.4						
DAV				LR	LR	04 17 14.4	
	comp=Z,652nm,20.3s,baz=149,slow=45						
DAV	**Davao City (W)**	**3.71**	**356**		**Pn**	**04 15 25.0**	**-0.7**
DAV					**Sn**	**04 16 08.5**	**+0.4**
KCP	**Kidapawan**	**3.71**	**348**	⇓*e*P	**Pn**	**04 15 27.9**	**+2.1**
KCP				*i* S	**Sn**	**04 16 11.9**	**+3.6**
GTOI	**Gorontalo**	**3.92**	**227**	P	**Pn**	**04 15 30.4**	**+1.9**
LBMI	**Labuha**	**4.29**	**157**	P	**Pn**	**04 15 34.7**	**+1.0**
BUKP	**Musuan**	**4.57**	**350**	⇑*e*P	Pn	04 15 50.1	+13
BUKP				*e*S	Sn	04 16 40.4	+11
MRSI	**Marisa**	**4.84**	**234**	P	**Pn**	**04 15 43.4**	**+2.2**
	1.7nm5µm210nm,0.6s						
ZCP	**Zamboanga City**	**5.18**	**314**	⇑*e*P	**Pn**	**04 15 47.2**	**+1.4**
ZCP				*e*S	**Sn**	**04 16 42.0**	**-2.3**
LUWI	**Luwuk**	**5.34**	**215**	P	**Pn**	**04 15 51.7**	**+3.6**
	1.6nm461nm,0.8s						
LUWI	**Luwuk**	**5.34**	**215**	Pn	Pn	04 15 53.6	+5.5
SANI	**Sanana**	**5.37**	**179**	P	**Pn**	**04 15 47.5**	**-0.9**
TOLI2	**Tolitoli**	**5.53**	**246**	Pn	**Pn**	**04 15 51.4**	**+0.7**
TOLI2					**Sn**	**04 16 50.8**	**-2.2**
TOLI2	**Tolitoli**	**5.53**	**246**	P	**Pn**	**04 15 51.7**	**+1.0**
APSI	**Ampana**	**5.96**	**225**	P	**Pn**	**04 15 59.6**	**+3.0**
	0.7nm2µm149nm,0.9s						
MPSI	**Mapaga**	**6.66**	**243**	P	**Pn**	**04 16 08.3**	**+2.1**
	0.2nm751nm42nm,0.9s						
SWI	**Sorong**	**6.84**	**128**	P	**Pn**	**04 16 08.6**	**0.0**
	0.2nm1µm24nm,0.7s						
SIJI	**Sorong**	**6.84**	**128**	Pn	**Pn**	**04 16 07.8**	**-0.9**
	1.7nm,0.3s,baz=1.6,slow=10,SNR=4.8						
MSAI	**Masohi**	**7.33**	**155**	P	**Pn**	**04 16 16.5**	**+1.1**
	0.1nm2µm15nm,0.7s						
TTSI	**Tana Toraja**	**8.76**	**224**	P	**Pn**	**04 16 37.5**	**+2.5**
	768nm73nm,1.0s						
FAKI	**Fak Fak**	**8.93**	**134**	P	**Pn**	**04 16 38.0**	**+0.7**
	18nm,0.7s						
FAKI	**Fak Fak**	**8.93**	**134**	Pn	**Pn**	**04 16 35.6**	**-1.7**
FAKI				Sn	**Sn**	**04 18 15.3**	**-1.2**
SPSI	**Sidrap Palu**	**9.47**	**220**	P	**Pn**	**04 16 47.8**	**+3.0**
	21nm,0.8s						
BNSI	**Bone**	**9.60**	**217**	P	**Pn**	**04 16 50.4**	**+3.9**
	33nm,1.0s						
BSSI	**Bau Bau, Buton**	**10.84**	**210**	P	**Pn**	**04 17 06.7**	**+3.2**
	20nm,0.7s						
SAUI	**Saumlaki**	**12.50**	**154**	Pn	**Pn**	**04 17 22.9**	**-3.3**
EDFI	**Ende, Flores**	**12.72**	**199**	P	**Pn**	**04 17 32.6**	**+3.4**
	9.2nm,0.8s						
SOEI	**Soe**	**13.12**	**187**	P	**Pn**	**04 17 37.4**	**+2.7**
	48nm,0.8s						
SOEI	**Soe**	**13.12**	**187**	Pn	**Pn**	**04 17 31.2**	**-3.5**
BATI	**Baumata**	**13.64**	**189**	P	**Pn**	**04 17 44.7**	**+2.9**
	36nm,0.6s						
KSM	**Kuching**	**15.64**	**264**		**P**	**04 18 11.1**	**-0.3**
MTN	**Manton Dam**	**16.92**	**162**	Pn	**Pn**	**04 18 21.1**	**-3.2**
MTN				IAmb	IAmb	04 18 22.9	
	comp=Z,32nm,0.5s						
KNRA	**Kununurra**	**19.12**	**171**		**P**	**04 18 49.6**	**-0.2**
FITZ	**Fitzroy Crossi**	**21.31**	**181**	P	**P**	**04 19 13.9**	**+0.3**
	comp=Z,20nm,0.9s,baz=22,slow=11,SNR=18						
COEN	**Coen**	**24.31**	**135**	P	**P**	**04 19 42.9**	**-1.1**
WB0	**Warramunga Arr**	**24.46**	**160**	P	**P**	**04 19 44.4**	**-0.9**
WB0				IAmb	IAmb	04 19 45.7	
	comp=Z,53nm,1.1s						
WRAB	**Tennant Creek**	**24.60**	**160**	P	**P**	**04 19 46.0**	**-0.5**
WRA	**Warramunga Arr**	**24.60**	**161**	P	**P**	**04 19 45.6**	**-1.0**
	comp=Z,35nm,0.8s,baz=340,slow=11,SNR=150						
WRA				S	**S**	**04 24 08.8**	**+4.3**
	comp=Z,2.7nm,0.6s,baz=346,slow=18,SNR=7.2						
WRA	**Warramunga Arr**	**24.60**	**161**	P	**P**	**04 19 44.7**	**-1.9**
WB2	**Warramunga Arr**	**24.61**	**160**	P	**P**	**04 19 45.8**	**-0.8**
PSA00	**Pilbara Seismi**	**25.46**	**193**	P	**P**	**04 19 54.8**	**+0.5**
AS31	**Alice Springs**	**27.98**	**164**	P	**P**	**04 20 16.7**	**-0.3**
AS31				IAmb	IAmb	04 20 28.2	
	comp=Z,3.9nm,0.5s						
ASAR	**Alice Springs**	**27.98**	**164**	P	**P**	**04 20 16.5**	**-0.5**
	comp=Z,4.8nm,0.7s,baz=341,slow=7.3,SNR=51						
ASAR				S	**S**	**04 24 57.9**	**0.0**
	comp=Z,0.7nm,0.8s,baz=348,slow=17,SNR=4.6						
ASAR				ScP	**ScP**	**04 27 08.3**	**0.0**
	comp=Z,0.8nm,0.8s,baz=344,slow=3.6,SNR=4.1						
ASAR	**Alice Springs**	**27.98**	**164**	P	**P**	**04 20 17.0**	**-0.1**
CMAR	**Chiang Mai Arr**	**30.32**	**302**	LR	LR	04 33 58.6	
	comp=Z,26nm,19.5s,baz=230,slow=38						
KSRS	**Korea Array**	**33.99**	**3**	P	**P**	**04 21 09.8**	**-0.1**
	comp=Z,1.7nm,0.7s,baz=176,slow=9.7,SNR=4.6						
FORT	**Forrest**	**34.00**	**177**	P	**P**	**04 21 10.2**	**+0.2**
XAN	**Xi'an**	**34.37**	**335**	P	P	04 21 24.4	+11
XAN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MJAR	**Matsushiro Arr**	**34.94**	**18**	P	**P**	**04 21 16.1**	**-1.9**
	comp=Z,1.1nm,0.4s,baz=198,slow=10,SNR=4.9						
MJAR	**Matsushiro Arr**	**34.94**	**18**	P	**P**	**04 21 16.7**	**-1.3**
MJAR				IAmb	IAmb	04 21 22.6	
	comp=Z,3.9nm,1.3s						
STKA	**Stephens Creek**	**38.10**	**158**	P	**P**	**04 21 45.0**	**0.0**
	comp=Z,17nm,0.7s,baz=334,slow=8.5,SNR=40						
STKA	**Stephens Creek**	**38.10**	**158**	P	**P**	**04 21 45.2**	**+0.2**
STKA				IAmb	IAmb	04 21 45.9	
	comp=Z,3.6nm,0.8s						
HHC	**Hu-ho-hao-te**	**39.49**	**343**	*e*P	P	04 22 09.1	+12
HHC				pmax	pmax		
	comp=Z,15nm,1.1s						
HHC				pmax	pmax		
	comp=Z,61nm,5.3s						
USRK	**Ussuriysk Ar.**	**41.04**	**7**	P	**P**	**04 22 08.9**	**-0.4**
	comp=Z,6.4nm,0.7s,baz=185,slow=8.0,SNR=8.6						
MDJ	**Mudanjiang**	**41.23**	**4**	P	P	04 22 21.3	+10
MDJ				pmax	pmax		
	comp=Z,10.0nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,210nm,4.1s						
ARMA	**Armidale**	**41.64**	**146**	P	**P**	**04 22 14.9**	**+0.3**
ARMA				IAmb	IAmb	04 22 16.3	
	comp=Z,18nm,0.7s						
KLR	**Kul'dur**	**45.99**	**5**	P	**P**	**04 22 48.5**	**-0.5**
	comp=Z,2.7nm,0.9s,baz=194,slow=5.6,SNR=4.4						
SONM	**Songino Array**	**47.38**	**342**	P	**P**	**04 23 01.0**	**+0.8**
	comp=Z,0.4nm,0.7s,baz=155,slow=7.6,SNR=2.8						
WMQ	**Urumqi**	**52.54**	**326**	*e*P	P	04 23 48.8	+9.5
MKAR	**Makanchi Array**	**57.37**	**326**	P	**P**	**04 24 14.7**	**+0.5**
	comp=Z,0.4nm,0.5s,baz=121,slow=7.8,SNR=2.1						
TIXI	**Tiksi**	**68.23**	**1**	P	**P**	**04 25 23.6**	**-2.3**
	comp=Z,1.8nm,0.5s,baz=193,slow=3.1,SNR=8.9						
TIXI	**Tiksi**	**68.23**	**1**	P	**P**	**04 25 24.7**	**-1.2**
TIXI				IAmb	IAmb	04 25 25.9	
	comp=Z,2.5nm,0.7s						
COLD	**Coldfoot**	**84.58**	**23**	P	**P**	**04 26 58.8**	**+0.3**
COLD				IAmb	IAmb	04 27 01.1	
	comp=Z,11nm,1.2s						
TOLK	**Toolik Lake Re**	**84.92**	**21**	P	**P**	**04 26 59.9**	**-0.4**
TOLK				IAmb	IAmb	04 27 02.1	
	comp=Z,5.4nm,0.9s						
ILAR	**Eielson Array**	**85.82**	**25**	P	**P**	**04 27 03.4**	**-1.4**
	comp=Z,0.5nm,0.6s,baz=248,slow=4.4,SNR=10						
CRVS	**Cervenica-Dubn**	**96.90**	**320**	*e*PDIFF	P	04 28 05.2	+8.3
IDI	**Anoyia**	**97.00**	**306**	LR	LR	05 19 48.6	
	comp=Z,58nm,19.7s,baz=352,slow=40						
TORD	**Torodi Ar. Bea**	**122.20**	**288**	PKP	**PKiKP**	**04 33 21.8**	**+0.4**
	comp=Z,0.1nm,0.4s,baz=90,slow=2.9,SNR=1.4						
TXAR	**Lajitas Array**	**122.52**	**52**	PKP	**PKiKP**	**04 33 22.4**	**+0.5**
	comp=Z,0.3nm,0.8s,baz=340,slow=2.9,SNR=3.6						

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*IDC **18** 04:16:34.0±0.9, 56°.85N×154°.80E, h0^{km}, mb3.6/6, mb1 3.9/9, mb1mx3.6/39, mbtmp3.6/9, ML4.1/2, MS2.8/3, Ms1 2.8/3, ms1mx2.5/50, Error ellipse: s-maj=26.8km s-min=15.1km az=64.0*

*KRSC **18** 04:16:34.9±1.4, 56°.89N×154°.71E, h40^{km}±42^{km}, ML4.4*

*NERS **18** 04:16:36.9±0.0, 56°.50N×153°.33E, h7^{km}*

*NEIC **18** 04:16:38.7±1.3, 56°.91N±0°.08×154°.9E±0°.3, h39^{km}±7^{km}, mb4.0/4, Error ellipse: s-maj=26.1km s-min=7.8km az=68.0*

ISC 18 04:16:36.3±0.7**, 56°.86N**±0°.05×**154°.76E**±0°.05**, h10**^{km}**, n47, **σ**1^s.99**/49**, mb3.6**/8**, Sea of Okhotsk**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESO	**Esso**	**2.38**	**111**	P	**Pn**	**04 17 16.1**	**+0.7**
ESO				S	**Sn**	**04 17 44.3**	**-0.3**
KOZ	**Kozyrevsk**	**2.95**	**104**	P	**Pn**	**04 17 23.3**	**+0.2**
KOZ				S	**Sn**	**04 17 58.0**	**-0.6**
KPT	**Kopyto**	**3.16**	**104**	P	**Pn**	**04 17 27.0**	**+0.8**
KIRR	**Kirishev**	**3.23**	**104**	P	**Pn**	**04 17 27.8**	**+0.6**
KMNR	**Kamenistaya**	**3.25**	**108**	P	**Pn**	**04 17 28.3**	**+1.0**
KRSR	**Krestovskiy**	**3.28**	**99**	P	**Pn**	**04 17 27.6**	**-0.2**
KLY	**Klyuchi**	**3.31**	**97**	P	**Pn**	**04 17 30.2**	**+2.2**
KLY				S	**Sn**	**04 18 11.3**	**+4.0**
BZWR	**Bezymyannyi-We**	**3.31**	**103**	P	**Pn**	**04 17 28.4**	**+0.1**
LGNR	**Loginova**	**3.38**	**101**	P	**Pn**	**04 17 31.0**	**+1.7**
CIRR	**Tsirk**	**3.40**	**100**	P	**Pn**	**04 17 29.8**	**+0.3**
BZGR	**Bezymyannyi-Gr**	**3.43**	**103**	P	**Pn**	**04 17 30.6**	**+0.8**
MA2	**Magadan**	**3.45**	**324**	Pn	**Pn**	**04 17 30.6**	**+0.6**
	5.0nm,0.3s,baz=134,slow=16,SNR=5.8						
MA2				Lg	Lg	04 18 30.1	
	5.9nm,0.3s,baz=357,slow=22,SNR=4.2						
MA2	**Magadan**	**3.45**	**324**	*e*P	**Pn**	**04 17 30.2**	**+0.2**
MA2				*e*Sg	**Sb**	**04 18 22.8**	**+3.5**
MA2				Sgmax		04 18 42.8	
	160nm,0.6s						
MA2				Sgmax		04 18 42.8	
	90nm,0.8s						
MA2	**Magadan**	**3.45**	**324**	Pn	**Pn**	**04 17 29.5**	**-0.5**
SRKR	**Sorokina**	**3.54**	**91**	P	**Pn**	**04 17 32.3**	**+1.1**
PALN	**Palana**	**3.56**	**49**	P	**Pn**	**04 17 31.3**	**-0.3**
BDR	**Baidarnaya**	**3.57**	**92**	P	**Pn**	**04 17 32.1**	**+0.4**
GNL	**Ganaly**	**3.65**	**149**	P	**Pn**	**04 17 31.9**	**-1.0**
SMKR	**Semkarok**	**3.71**	**91**	P	**Pn**	**04 17 33.6**	**0.0**
MGD	**Magadan 1**	**3.84**	**328**	*e*Sg	**Sb**	**04 18 35.6**	**+5.2**
MGD				Sgmax		04 18 53.2	
	10.0nm,0.2s						
MGD				Sgmax		04 18 53.2	
	20nm,0.2s						
PEA0B	**Petropavlovsk-**	**4.12**	**154**	Pn	**Pn**	**04 17 38.7**	**-0.5**
PETK	**Petropavlovsk-**	**4.12**	**154**	Pn	Pn	04 17 36.8	-2.4
	1.6nm,0.3s,baz=347,slow=11,SNR=16						
PETK				Pg	**Pb**	**04 17 49.0**	**+0.2**
	5.7nm,0.3s,baz=332,slow=14,SNR=12						
PETK	**Petropavlovsk-**	**4.12**	**154**		**Pn**	**04 17 37.9**	**-1.3**
APC	**Apacha**	**4.17**	**160**	P	**Pn**	**04 17 41.3**	**+1.4**
SDLR	**Sedlovina**	**4.30**	**145**	P	**Pn**	**04 17 41.0**	**-0.8**
TLAR	**Talaya**	**4.46**	**345**	*e*	**Pb**	**04 17 53.3**	**-1.3**
TLAR				*e*Sg	**Sg**	**04 19 05.3**	**+6.0**
TLAR				Sgmax		04 19 16.8	
	110nm,0.4s						
EVEN	**Evensk**	**5.56**	**22**	*e*S	Pg	04 18 18.0	-4.7
EVEN				*e*S	**Sb**	**04 19 20.5**	**+0.5**
OMS	**Omsukchan**	**5.70**	**5**	*e*	**Sg**	**04 19 38.8**	**-0.3**
SEY	**Seymchan**	**6.21**	**350**	Pn	**Pn**	**04 18 07.2**	**-0.7**
	0.5nm,0.3s,baz=197,slow=20,SNR=4.9						
SEY				Lg	Lg	04 19 56.4	
	1.1nm,0.3s,baz=266,slow=6.5,SNR=5.3						
SEY	**Seymchan**	**6.21**	**350**	*e*	**Pn**	**04 18 06.9**	**-1.0**
SEY				*e*Pg	**Pg**	**04 18 34.4**	**-0.7**
SEY				*e*Sg	**Sg**	**04 19 56.1**	**+0.6**
SEY				Sgmax		04 20 14.8	
	50nm,0.9s						
SUUS	**Susuman**	**6.80**	**334**	*e*P	**Pn**	**04 18 20.6**	**+4.5**
SUUS				*e*Sg	**Sg**	**04 20 08.5**	**-5.9**
SUUS				Sgmax		04 20 30.1	
	80nm,0.8s						
ASAJ	**Asahikawa**	**14.88**	**216**	LR	LR	04 25 45.7	
	comp=Z,11nm,20.1s,baz=141,slow=37						
KLR	**Kul'dur**	**15.74**	**251**	LR	LR	04 26 08.9	
	comp=Z,51nm,19.1s,baz=6.5,slow=36						
USRK	**Ussuriysk Ar.**	**19.12**	**238**	LR	LR	04 28 50.7	
	comp=Z,54nm,20.9s,baz=200,slow=38						
IMAR	**Indian Mountai**	**25.53**	**48**	P	**P**	**04 22 02.2**	**-2.4**
WRH	**Wood River Hil**	**28.09**	**51**	P	P	04 22 25.3	-2.4
ILAR	**Eielson Array**	**28.54**	**50**	P	**P**	**04 22 30.6**	**-1.0**
	0.4nm,0.9s,baz=266,slow=6.2,SNR=4.4						
ILAR	**Eielson Array**	**28.54**	**50**	P	P	04 22 28.7	-2.9
BMAR	**Burnt Mountain**	**28.99**	**44**	P	**P**	**04 22 34.5**	**-1.2**
NVAR	**Mina Array Bea**	**57.30**	**69**	P	**P**	**04 26 23.4**	**-0.8**
	0.4nm,0.7s,baz=291,slow=6.2,SNR=4.3						
TX31	**Lajitas Ar. Si**	**71.88**	**64**	P	P	04 27 57.2	-2.2
TX31				IAmb	IAmb	04 28 01.3	
	comp=Z,1.2nm,0.8s						
TXAR	**Lajitas Array**	**71.88**	**64**	P	**P**	**04 27 59.0**	**-0.5**
	comp=Z,0.4nm,0.8s,baz=282,slow=4.5,SNR=4.1						
WB2	**Warramunga Arr**	**78.40**	**200**	P	**P**	**04 28 35.3**	**-1.5**
WB2				IAmb	IAmb	04 28 53.8	
	comp=Z,2.0nm,0.9s						
WRA	**Warramunga Arr**	**78.40**	**200**	P	**P**	**04 28 36.4**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=15,slow=5.5,SNR=2.7						
WRA	**Warramunga Arr**	**78.40**	**200**	P	**P**	**04 28 36.5**	**-0.2**
ASAR	**Alice Springs**	**82.12**	**199**	P	**P**	**04 28 56.1**	**-0.6**
	comp=Z,0.3nm,0.8s,baz=13,slow=4.4,SNR=1.9						
ESDC	**Sonseca Array**	**82.17**	**344**	P	**P**	**04 28 57.1**	**0.0**
	comp=Z,1.0nm,1.0s,baz=353,slow=4.5,SNR=4.3						

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*JMA **18** 04:38:44.3±0.2, 31°.34N×128°.67E, h8^{km}±2^{km}, M5.0*

JMA Felt I J1.

*NIED **18** 04:38:44.3, 31°.34N×128°.67E, h8^{km}, MW5.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.25; $M_{\theta\theta}$0.94; $M_{\phi\phi}$-0.69; $M_{r\theta}$0.93; $M_{\theta\phi}$1.78; $M_{\phi r}$3.01; Fault plane solution: $M_0$3.71000×10^{16} NP1: ϕ_s196.00000°, δ88.00000°, λ-121.00000°. NP2: ϕ_s102.00000°, δ32.00000°, λ-5.00000°.*

*IDC **18** 04:38:45.7±0.5, 31°.34N×128°.83E, h0^{km}, mb4.5/24, mb1 4.7/31, mb1mx4.5/50, mbtmp4.5/31, ML3.7/5, MS4.4/40, Ms1 4.4/40, ms1mx4.3/57 Error ellipse: s-maj=16.0km s-min=12.5km az=88.0*

*BJI **18** 04:38:48.9±0.0, 31°.21N×128°.81E, h13^{km}, mB5.0/42, mb4.7/69, ML4.9/3, Ms5.2/73, Ms7 4.8/64*

*GCMT **18** 04:38:48.9±0.2, 31°.43N±0°.01×128°.72E±0°.01, h12^{km}, MW4.9/102, Moment Tensor Solution. s34,c40; s102,c151; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.23±.07; $M_{\theta\theta}$1.32±.08; $M_{\phi\phi}$-1.09±.08; $M_{r\theta}$0.12±.21; $M_{\theta\phi}$2.54±.05; $M_{\phi r}$0.62±.20; Best double couple: $M_0$2.88200×10^{16} NP1: ϕ_s103.00000°, δ77.00000°, λ-2.00000°. NP2: ϕ_s193.00000°, δ88.00000°, λ-167.00000°. Principal axes: T 2.9840, Plg8.0000°, Azm327.0000°; N -0.2090, Plg77.0000°, Azm201.0000°; P -2.7800, Plg10.0000°, Azm58.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MOS **18** 04:38:48.3±1.7, 31°.34N×129°.01E, h21^{km}, mb5.2/51, MS5.1/10 Error ellipse: s-maj=7.4km s-min=4.4km az=105.7*

*NEIC **18** 04:38:50.9±1.8, 31°.37N±0°.06×128°.96E±0°.06, h28^{km}±4^{km}, mb5.1/139, Error ellipse: s-maj=8.7km s-min=7.3km az=148.0*

*KMA **18** 04:39:00.5, 32°.20N×128°.00E, h15^{km}*

ISC 18 04:38:48.1±0.3**, 31°.31N**±0°.03×**128°.97E**±0°.03**, h10**^{km}**, n490, **σ**1^s.85**/492**, mb5.0**/153**, MS4.6**/57**, 15C-14D, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	**Shimokoshiki**	**0.74**	**60**	⇓P	**Pg**	**04 39 02.3**	**-0.1**
JSJ				*e*S	**Sn**	**04 39 15.7**	**-0.3**
JSU	**Suzuyama**	**1.29**	**81**	⇓P	**Pg**	**04 39 12.3**	**-0.6**
JSU	**Suzuyama**	**1.29**	**81**		**Pg**	**04 39 12.3**	**-0.6**
JSU				Sn	**Sb**	**04 39 28.7**	**-0.4**
JFU	**Fukue jima 2**	**1.36**	**352**	⇓P	**Pn**	**04 39 08.8**	**-4.3**
JNN	**Nakanoshima**	**1.66**	**152**	P	**Pn**	**04 39 16.2**	**-1.1**
JYAK	**Yakushimahirau**	**1.70**	**128**	P	**Pn**	**04 39 17.3**	**-0.6**
JTN	**Tanegashima 3**	**1.85**	**110**	P	**Pn**	**04 39 20.3**	**+0.4**
JMTN	**Minamitane**	**1.90**	**118**	P	**Pb**	**04 39 21.3**	**-1.5**
JTZ	**Takazaki**	**1.91**	**71**	⇓P	**Pn**	**04 39 21.0**	**+0.3**
JIU3	**Izumi3**	**2.00**	**51**	⇓P	**Pn**	**04 39 21.6**	**-0.4**
JNU	**Nakatsue**	**2.43**	**41**	Pn	**Pn**	**04 39 28.1**	**+0.2**
	48nm,0.3s,baz=75,slow=0.0,SNR=21						
JNU				Lg	Lg	04 40 07.3	
	72nm,0.3s,baz=168,slow=22,SNR=5.7						
JNU	**Nakatsue**	**2.43**	**41**		**Pn**	**04 39 27.3**	**-0.6**
JII	**Iki**	**2.57**	**14**	P	**Pn**	**04 39 27.9**	**-1.8**
KSJJU	**Jeju**	**2.95**	**317**	P	Pn	04 39 30.1	-5.0
	SNR=14						
KSJJU	**Jeju**	**2.95**	**317**	P	**Pb**	**04 39 39.6**	**-1.1**
	SNR=21						
GOS1	**Gosan-ri**	**3.06**	**311**	P	Pn	04 39 31.9	-4.7
	SNR=17						
GOS2	**Gosang-Q330s**	**3.07**	**311**	P	Pn	04 39 32.0	-4.7
	SNR=17						
GMDB	**Geomundo**	**3.07**	**333**	P	**Pn**	**04 39 33.0**	**-3.7**
	SNR=13						
GMDB	**Geomundo**	**3.07**	**333**	P	**Pb**	**04 39 44.0**	**+1.1**
	SNR=12						
HALB	**Hallimjungang-**	**3.09**	**313**	P	Pn	04 39 32.0	-5.0
	SNR=15						
HALB	**Hallimjungang-**	**3.09**	**313**	P	**Pb**	**04 39 42.0**	**-1.2**
	SNR=11						
JTU	**Tsushima**	**3.23**	**6**	Pn	**Pn**	**04 39 39.0**	**+0.2**
CJD	**Chujado**	**3.48**	**320**	P	Pn	04 39 37.3	-5.0
	SNR=21						
CJD	**Chujado**	**3.48**	**320**	P	**Pb**	**04 39 48.0**	**-1.8**
	SNR=16						
KOHB	**KOHEUNG**	**3.60**	**337**	P	**Pn**	**04 39 40.0**	**-3.9**
	SNR=14						
KSNAH	**Namhae**	**3.61**	**346**	P	**Pb**	**04 39 54.8**	**+2.8**
	SNR=10						
BOSB	**Boseong-gun**	**3.75**	**337**	P	**Pn**	**04 39 42.0**	**-4.0**
	SNR=12						
BOSB	**Boseong-gun**	**3.75**	**337**	P	**Pb**	**04 39 55.0**	**+0.6**
	SNR=13						
KSBSA	**Busan_acc**	**3.79**	**1**	P	**Pb**	**04 39 57.5**	**+2.5**
	SNR=18						
HANB	**Haenam**	**3.81**	**329**	P	**Pn**	**04 39 43.0**	**-3.9**
	SNR=13						

HANB	**Haenam**	**3.81**	**329**	P	**Pb**	**04 39 56.0**	**+0.5**
	SNR=7.5						
KSJDO	**Jindo**	**3.86**	**325**	P	**Pn**	**04 39 43.2**	**-4.4**
	SNR=20						
KSMAS	**Masan**	**3.87**	**355**	P	**Pb**	**04 39 58.2**	**+1.7**
	SNR=14						
KSBUS	**Busan**	**3.93**	**2**	P	**Pb**	**04 39 60.0**	**+2.4**
	SNR=24						
KSSCH	**SUNCHEON**	**4.02**	**339**	P	**Pb**	**04 39 59.6**	**+0.7**
	SNR=9.4						
KSKWJ	**Gwangju**	**4.18**	**337**	P	**Pb**	**04 40 01.4**	**-0.4**
	SNR=17						
GGDB	**Gageodo**	**4.24**	**311**	P	Pn	04 39 47.4	-5.3
	SNR=11						
SUCA	**Sunchang**	**4.33**	**340**	P	**Pb**	**04 40 03.0**	**-1.4**
	SNR=26						
HUK2	**Heuksan-myeon**	**4.48**	**320**	P	**Pn**	**04 39 51.6**	**-4.5**
	SNR=18						
GOCB	**Gochang-gun**	**4.49**	**334**	P	**Pb**	**04 40 05.0**	**-2.1**
	SNR=22						
JOW	**Kunigami**	**4.50**	**188**	Pn	**Pn**	**04 39 56.5**	**+0.1**
	3.7nm,0.3s,baz=18,slow=18,SNR=6.8						
JOW				LR	LR	04 41 52.8	
	comp=Z,3µm,18.1s,baz=117,slow=42						
JOW	**Kunigami**	**4.50**	**188**	Pn	**Pn**	**04 39 58.2**	**+1.9**
KSJEU	**Jeongeup**	**4.51**	**338**	P	**Pb**	**04 40 06.9**	**-0.5**
	SNR=13						
JMN	**Monobe**	**4.80**	**59**	Pn	**Pn**	**04 40 01.4**	**+0.8**
KSCPR	**CHUPUNGNYEONG**	**4.97**	**351**	P	**Pn**	**04 40 02.2**	**-0.6**
	SNR=18						
JHS	**Saijyo**	**5.07**	**42**	Pn	**Pn**	**04 40 06.2**	**+2.1**
TJN	**Taejon**	**5.23**	**346**	*i* P	**Pn**	**04 40 04.8**	**-1.6**
KSBON	**Boeun**	**5.27**	**350**	P	**Pn**	**04 40 05.9**	**-1.1**
	SNR=13						
JMZ	**Minamidaito 2**	**5.81**	**160**	Pn	**Pn**	**04 40 17.5**	**+3.1**
KSAR	**Wonju Array Be**	**6.19**	**352**	P	**Pn**	**04 40 20.1**	**+0.6**
KSAR	**Wonju Array Be**	**6.19**	**352**	Pn	**Pn**	**04 40 20.1**	**+0.6**
KSRS	**Korea Array**	**6.19**	**352**	Pn	**Pn**	**04 40 17.7**	**-1.9**
	3.2nm,0.3s,baz=176,slow=14,SNR=39						
KSRS				Lg	Lg	04 41 60.0	
	20nm,0.3s,baz=175,slow=30,SNR=7.7						
KS19	**Wonju Array Si**	**6.25**	**352**	Pn	**Pn**	**04 40 17.8**	**-2.6**
INCN	**Inchon**	**6.46**	**343**	P	**Pn**	**04 40 21.4**	**-1.9**
INCN	**Inchon**	**6.46**	**343**	Pn	**Pn**	**04 40 21.4**	**-1.9**
SSE	**Sheshan**	**6.67**	**270**	Pn	**Pn**	**04 40 25.9**	**-0.2**
SSE				Sn	**Sn**	**04 41 42.0**	**-0.2**
SSE				smax	smax		
	comp=N,660nm,1.2s						
SSE				smax	smax		
	comp=E,330nm,0.9s						
JWT	**Wachi**	**6.69**	**52**	Pn	**Pn**	**04 40 25.4**	**-1.1**
INU	**Inuyama**	**7.85**	**57**	Pn	**Pn**	**04 40 42.6**	**+0.2**
YOJ	**Yonaguni jima**	**8.61**	**219**	P	**Pn**	**04 40 54.0**	**+1.1**
YOJ	**Yonaguni jima**	**8.61**	**219**	Pn	**Pn**	**04 40 54.0**	**+1.1**
NJ2	**Nanjing**	**8.65**	**278**	⇓P	**Pn**	**04 40 53.3**	**0.0**
NJ2				S	**Sn**	**04 42 36.0**	**+5.1**
NJ2				pmax	pmax		
	comp=Z,37nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,190nm,3.5s						
NJ2				LR	LR		
	comp=N,15µm,12.2s						
NJ2				LR	LR		
	comp=E,4µm,15.6s						
MAJO	**Matsushiro**	**9.29**	**53**	*i* P	**Pn**	**04 41 04.8**	**+2.7**
MAJO	**Matsushiro**	**9.29**	**53**		**Pn**	**04 41 02.1**	**0.0**
MAT	**Matsushiro**	**9.29**	**53**	P	**Pn**	**04 41 04.4**	**+2.3**
MAT				*e*S	**Sn**	**04 42 46.6**	**0.0**
MJAR	**Matsushiro Arr**	**9.29**	**53**	Pn	**Pn**	**04 41 02.9**	**+0.8**
	0.3nm,0.3s,baz=239,slow=13,SNR=15						
MJAR	**Matsushiro Arr**	**9.29**	**53**	Pn	**Pn**	**04 41 01.9**	**-0.1**
JHJ	**Hachijo jima 2**	**9.34**	**76**	LR	LR	04 44 45.9	
	comp=Z,2µm,18.9s,baz=269,slow=38						
NACB	**Ninganchiao**	**9.65**	**224**		**Pn**	**04 41 08.2**	**+1.1**
DL2	**Dalian**	**9.67**	**324**	P	Pn	04 41 18.8	+11
DL2				S	Sn	04 43 15.0	+19
DL2				pmax	pmax		
	comp=Z,66nm,0.9s						
DL2				pmax	pmax		
	comp=Z,410nm,4.1s						
DL2				LR	LR		
	comp=N,4µm,8.1s						
DL2				LR	LR		
	comp=E,3µm,9.0s						
DL2				LR	LR		
	comp=Z,9µm,11.2s						
SSLB	**Suanglung**	**10.32**	**225**	Pn	**Pn**	**04 41 17.9**	**+1.5**
YULB	**Yu-li**	**10.42**	**223**		**Pn**	**04 41 17.6**	**0.0**
TPUB	**Ta-pu**	**10.88**	**225**	Pn	**Pn**	**04 41 24.8**	**+0.8**
TIA	**Tai'an**	**11.00**	**300**	*e*P	**Pn**	**04 41 26.0**	**+0.4**
TIA				pmax	pmax		
	comp=Z,11nm,0.8s						
TIA				pmax	pmax		
	comp=Z,180nm,4.4s						
TIA				LR	LR		
	comp=Z,5µm,11.8s						
TIA				LR	LR		
	comp=Z,5µm,12.2s						
TIA				LR	LR		
	comp=Z,5µm,11.2s						
QZH	**Quanzhou**	**11.13**	**238**	⇑*i*P	**Pn**	**04 41 24.4**	**-3.0**
QZH				S	**Sn**	**04 43 35.8**	**+3.9**
QZH				LR	LR		
	comp=Z,2µm,6.6s						
QZH				LR	LR		
	comp=Z,3µm,10.4s						
QZH				LR	LR		
	comp=Z,3µm,10.3s						
SNY	**Shenyang**	**11.36**	**339**	⇑P	Pn	04 41 37.3	+7.0
SNY				pmax	pmax		
	comp=Z,23nm,1.1s						
SNY				pmax	pmax		
	comp=Z,450nm,3.5s						
SNY				LR	LR		
	comp=Z,6µm,10.1s						
SNY				LR	LR		
	comp=Z,7µm,8.0s						
SNY				LR	LR		
	comp=Z,13µm,13.3s						
JCJ	**Chichijima**	**12.29**	**107**	LR	LR	04 45 58.8	
	comp=Z,620nm,21.6s,baz=260,slow=35						
WHN	**Wuhan**	**12.57**	**270**	⇑P	Pn	04 41 54.5	+7.4
WHN				S	Sn	04 44 18.3	+11
WHN				LR	LR		
	comp=N,9µm,9.6s						
WHN				LR	LR		
	comp=E,5µm,12.9s						
WHN				LR	LR		
	comp=Z,8µm,9.1s						
CN2	**Changchun**	**12.78**	**348**	*e*P	**Pn**	**04 41 52.3**	**+2.5**
CN2				*e*PP	**PnPn**	**04 42 03.4**	**+5.6**
CN2				S	**Sn**	**04 44 16.3**	**+4.2**
CN2				*e*sS		04 44 29.3	
CN2				pmax	pmax		
	comp=Z,20nm,1.8s						
CN2				LR	LR		
	comp=Z,3µm,10.0s						
CN2				LR	LR		
	comp=Z,11µm,10.0s						
CN2				LR	LR		
	comp=Z,8µm,12.0s						
USRK	**Ussuriysk Ar.**	**13.09**	**10**	Pn	**Pn**	**04 41 53.9**	**-0.2**
	baz=189,slow=18,SNR=1.0						
USRK				LR	LR	04 46 27.9	
	comp=Z,577nm,19.3s,baz=180,slow=35						
MDJ	**Mudanjiang**	**13.30**	**2**	P	**Pn**	**04 41 58.1**	**+1.2**
MDJ				S	Sn	04 44 34.3	+10
MDJ				pmax	pmax		
	comp=Z,6.0nm,1.7s						
MDJ				pmax	pmax		
	comp=Z,260nm,4.0s						
MDJ				LR	LR		
	comp=Z,2µm,12.4s						
MDJ				LR	LR		
	comp=Z,6µm,11.7s						
MDJ				LR	LR		
	comp=Z,4µm,12.1s						
BJT	**Baijiatuau**	**13.55**	**313**	P	**Pn**	**04 41 59.7**	**-0.6**
BJT	**Baijiatuau**	**13.55**	**313**	Pn	**Pn**	**04 41 59.7**	**-0.6**
BJI	**Beijing**	**13.55**	**314**	P	**Pn**	**04 41 59.4**	**-1.0**
BJI				S	**Sn**	**04 44 32.6**	**+1.5**
BJI				pmax	pmax		
	comp=Z,17nm,1.7s						
BJI				pmax	pmax		
	comp=Z,240nm,5.1s						
TEY	**Ternei**	**14.96**	**21**	⇓*e*P	**P**	**04 42 26.6**	**+1.5**
TEY				pmax	pmax		
	comp=N,20nm,0.9s						
TEY				pmax	pmax		
	comp=N,30nm,0.8s						
TEY				pmax	pmax		
	comp=Z,40nm,0.9s						
TEY				MLR	MLR		
	comp=N,100nm,12.0s						
TEY				MLR	MLR		
	comp=Z,100nm,13.0s						
ASAJ	**Asahikawa**	**16.70**	**36**	Pn	**Pn**	**04 42 41.5**	**-0.6**
	baz=227,slow=15,SNR=15						
ASAJ				LR	LR	04 48 44.5	
	comp=Z,1µm,18.2s,baz=196,slow=36						
ASAJ	**Asahikawa**	**16.70**	**36**	P	**Pn**	**04 42 42.0**	**-0.1**
ASAJ				pmax	pmax		
	comp=Z,120nm,1.0s						
JKA	**Kamikawa-asahi**	**16.70**	**36**		**Pn**	**04 42 42.0**	**-0.2**
JKA				IAmb	IAmb	04 42 43.2	
	comp=Z,120nm,1.0s						
ENH	**Enshi**	**16.77**	**272**		**P**	**04 42 45.0**	**-0.4**
HHC	**Hu-ho-hao-te**	**16.96**	**309**	⇑*i*P	**P**	**04 42 47.5**	**0.0**
HHC				pP	sP	04 42 55.3	+3.9
HHC				sP	pP	04 42 59.9	+10
HHC				S	**Sn**	**04 45 54.1**	**-0.1**
HHC				sS	S	04 46 05.6	+1.2
HHC				SS	**SnSn**	**04 46 12.5**	**+5.1**
HHC				pmax	pmax		
	comp=Z,16nm,1.1s						
HHC				LR	LR		
	comp=Z,4µm,14.5s						
HHC				LR	LR		
	comp=Z,4µm,13.7s						
HHC				LR	LR		
	comp=Z,4µm,15.7s						
XAN	**Xi'an**	**17.09**	**284**	P	**Pn**	**04 42 46.6**	**-0.7**
XAN				pP	sP	04 42 55.8	+3.0
XAN				sP	pP	04 43 00.6	+9.0
XAN				S	**Sn**	**04 45 54.8**	**-2.6**
XAN				sS	S	04 46 06.8	-0.3
XAN				pmax	pmax		
	comp=Z,8.0nm,1.2s						
XAN				pmax	pmax		
	comp=Z,220nm,4.1s						
XAN				LR	LR		
	comp=Z,9µm,12.5s						
XAN				LR	LR		
	comp=Z,4µm,13.1s						
XAN				LR	LR		
	comp=Z,2µm,12.4s						
BTO	**Baotou**	**17.90**	**306**	*e*P	**Pn**	**04 42 55.8**	**-1.4**
BTO				S	**Sn**	**04 46 13.8**	**-3.0**
BTO				LR	LR		
	comp=Z,12µm,13.0s						
BTO				LR	LR		
	comp=Z,11µm,13.7s						
KLR	**Kul'dur**	**18.03**	**6**	P	**P**	**04 42 59.0**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=213,slow=11,SNR=26						
KLR				LR	LR	04 49 12.1	
	comp=Z,326nm,19.6s,baz=182,slow=35						
KLR	**Kul'dur**	**18.03**	**6**	*ce*P	**P**	**04 42 58.9**	**-0.2**
KLR				pmax	pmax		
	comp=Z,22nm,0.9s						
YSS	**Yuzh-Sakhalins**	**18.89**	**30**	*e*P	**Pn**	**04 43 09.3**	**+0.1**
YSS				*e*S	**Sn**	**04 46 34.3**	**-6.3**
YSS				pmax	pmax		
	comp=Z,50nm,0.7s						
YSS				MLR	MLR		
	comp=Z,1µm,15.0s						
YSS				MLR	MLR		
	comp=E,2µm,14.0s						
YSS	**Yuzh-Sakhalins**	**18.89**	**30**	P	**P**	**04 43 06.7**	**-1.9**
YSS				IAmb	IAmb	04 43 15.4	
	comp=Z,101nm,1.2s						
HIA	**Hailar**	**19.24**	**341**	P	**P**	**04 43 11.9**	**-0.6**
HIA				pmax	pmax		
	comp=Z,44nm,1.1s						
HIA	**Hailar**	**19.24**	**341**	P	**P**	**04 43 11.9**	**-0.6**
GYA	**Guiyang**	**20.11**	**262**	⇑*i*P	Pn	04 43 23.8	-0.2
GYA				sP	sP	04 43 37.9	+12
GYA				S	Sn	04 47 09.8	-0.6
GYA				pmax	pmax		
	comp=Z,86nm,1.0s						
GYA				pmax	pmax		
	comp=Z,270nm,3.5s						
GYA				LR	LR		
	comp=Z,2µm,13.4s						
GYA				LR	LR		
	comp=Z,2µm,13.9s						
GYA				LR	LR		
	comp=Z,2µm,13.8s						
QIZ	**Qiongzhong**	**21.15**	**239**	P	**P**	**04 43 35.3**	**+1.9**
QIZ				S	**S**	**04 47 30.6**	**+1.8**
QIZ				pmax	pmax		
	comp=Z,11nm,1.3s						
QIZ				LR	LR		
	comp=Z,2µm,13.7s						
QIZ				LR	LR		
	comp=Z,2µm,11.2s						
QIZ				LR	LR		
	comp=Z,2µm,12.9s						
QIZ	**Qiongzhong**	**21.15**	**239**	P	**P**	**04 43 34.9**	**+1.5**
LZH	**Lanzhou**	**21.41**	**290**	*e*P	**P**	**04 43 39.0**	**+2.6**
LZH				pP	sP	04 43 46.4	+6.2
LZH				sP	pP	04 43 50.0	+11
LZH				S	**S**	**04 47 29.0**	**-5.1**
LZH				sS	sS	04 47 38.3	-0.1
LZH				SS	**SnSn**	**04 47 58.6**	**+1.7**
LZH				pmax	pmax		
	comp=Z,39nm,1.2s						
LZH				pmax	pmax		
	comp=Z,160nm,4.9s						
LZH				LR	LR		
	comp=Z,4µm,14.1s						
LZH				LR	LR		
	comp=Z,4µm,14.6s						
LZH				LR	LR		
	comp=Z,5µm,15.2s						
CD2	**Chengdu**	**21.58**	**276**	⇓*i*P	**P**	**04 43 39.1**	**+1.1**
CD2				pP	sP	04 43 47.3	+5.4
CD2				sP	pP	04 43 52.0	+11
CD2				S	**S**	**04 47 38.3**	**+1.1**
CD2				ScP	**ScP**	**04 51 14.3**	**-2.9**
CD2				pmax	pmax		
	comp=Z,110nm,1.4s						
CD2				pmax	pmax		
	comp=Z,210nm,3.9s						
CD2				LR	LR		
	comp=Z,8µm,12.2s						
CD2				LR	LR		
	comp=Z,6µm,13.9s						
CD2				LR	LR		
	comp=Z,5µm,16.0s						
ZEA	**Zeya**	**22.45**	**357**	*e*P	**P**	**04 43 50.9**	**+3.8**
ZEA				pmax	pmax		
	comp=N,20nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,40nm,1.4s						
ZEA				MLR	MLR		
	comp=E,1µm,9.0s						
ZEA				MLR	MLR		
	comp=N,900nm,15.0s						
ZEA				MLR	MLR		
	comp=Z,1µm,11.0s						
GUMO	**Guam**	**22.90**	**137**	LR	LR	04 51 46.4	
	comp=Z,563nm,18.7s,baz=344,slow=34						
ULN	**Ulaanbaatar**	**23.51**	**321**	*i* P	**P**	**04 43 59.5**	**+1.2**
ULN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ULN	**Ulaanbaatar**	**23.51**	**321**	P	**P**	**04 43 58.2**	**-0.2**
CIT	**Chita**	**23.59**	**336**	*e*P	**P**	**04 44 00.5**	**+1.5**
CIT				*e*		04 44 07.8	
CIT				*e*		04 44 34.9	
CIT				*e*		04 44 40.5	
CIT				*e*		04 48 52.3	
CIT				*e*		04 49 13.8	
CIT				pmax	pmax		
	comp=Z,156nm,1.6s						
SONM	**Songino Array**	**23.85**	**320**	P	**P**	**04 43 58.7**	**-3.0**
	comp=Z,12nm,0.9s,baz=134,slow=7.1,SNR=20						
SONM				LR	LR	04 53 46.2	
	comp=Z,2µm,20.0s,baz=138,slow=38						
SONM	**Songino Array**	**23.85**	**320**	P	**P**	**04 43 58.4**	**-3.2**
KMI	**Kunming**	**23.89**	**262**	⇑P	**P**	**04 44 02.6**	**+0.3**
KMI				pP	sP	04 44 11.0	+4.8
KMI				sP	pP	04 44 14.6	+10
KMI				S	**S**	**04 48 13.3**	**-5.4**
KMI				sS	sS	04 48 28.0	+4.7
KMI				SS	**SnSn**	**04 49 05.4**	**+7.7**
KMI				pmax	pmax		
	comp=Z,56nm,0.9s						
KMI				pmax	pmax		
	comp=Z,150nm,3.9s						
KMI				LR	LR		
	comp=Z,2µm,12.7s						
KMI				LR	LR		
	comp=Z,2µm,15.4s						
KMI				LR	LR		
	comp=Z,2µm,14.0s						
DAV	**Davao City (W)**	**24.32**	**188**	LR	LR	04 53 30.3	
	comp=Z,426nm,19.3s,baz=332,slow=36						
SLVN	**Son La**	**24.51**	**252**	P	**P**	**04 44 06.3**	**-1.6**
GTA	**Gaotai**	**25.03**	**297**	⇓P	**P**	**04 44 11.4**	**-1.1**
GTA				pP	sP	04 44 20.8	+4.3
GTA				sP	pP	04 44 25.3	+10
GTA				S	**S**	**04 48 36.5**	**-0.3**
GTA				pmax	pmax		
	comp=Z,9.0nm,1.8s						
GTA				pmax	pmax		
	comp=Z,140nm,9.2s						
GTA				LR	LR		
	comp=Z,3µm,13.5s						
GTA				LR	LR		
	comp=Z,2µm,13.9s						
GTA				LR	LR		
	comp=Z,3µm,13.5s						
UBPT	**Khong Chiam**	**26.75**	**239**	P	**P**	**04 44 27.4**	**-0.7**
ZAK	**Zakamensk**	**27.00**	**322**	*e*P	**P**	**04 44 26.5**	**-3.7**
ZAK				pmax	pmax		
	comp=Z,12nm,1.2s						
TLY	**Talaya**	**27.58**	**325**	LR	LR	04 56 04.7	
	comp=Z,730nm,20.3s,baz=123,slow=38						
TLY	**Talaya**	**27.58**	**325**	*e*P	**P**	**04 44 31.2**	**-4.1**
TLY				*e*S	**S**	**04 49 15.0**	**-1.6**
TLY				*e*SS	**SnSn**	**04 50 36.9**	**+10**
TLY				pmax	pmax		
	comp=Z,20nm,0.8s						
TLY				MLR	MLR		
	comp=Z,6µm,15.0s						
BOD	**Bodaibo**	**28.44**	**343**	*e*P	**P**	**04 44 45.9**	**+3.1**
BOD				pmax	pmax		
	comp=Z,26nm,1.7s						
CHTO	**Chiang Mai**	**29.80**	**252**	P	**P**	**04 44 55.5**	**+0.2**
CHTO				pmax	pmax		
	comp=Z,18nm,1.4s						
CHTO	**Chiang Mai**	**29.80**	**252**	P	**P**	**04 44 55.5**	**+0.2**
CMAR	**Chiang Mai Arr**	**29.98**	**252**	P	**P**	**04 44 55.5**	**-1.4**
	comp=Z,2.1nm,0.6s,baz=44,slow=7.0,SNR=16						
CMAR				LR	LR	04 58 03.9	
	comp=Z,719nm,19.8s,baz=98,slow=39						
CMAR	**Chiang Mai Arr**	**29.98**	**252**	*i* P	**P**	**04 44 58.7**	**+1.7**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**29.98**	**252**	P	**P**	**04 44 55.4**	**-1.5**
PETK	**Petropavlovsk-**	**30.11**	**35**	LR	LR	04 56 37.9	
	comp=Z,738nm,19.3s,baz=222,slow=36						
TOLI2	**Tolitoli**	**31.02**	**196**	P	**P**	**04 45 04.5**	**-1.5**
TOLI2				IAmb	IAmb	04 45 10.7	
	comp=Z,24nm,1.2s						
MRSI	**Marisa**	**31.38**	**194**	P	**P**	**04 45 09.2**	**0.0**
	comp=Z,29nm,1.0s						
MA2	**Magadan**	**31.84**	**21**	LR	LR	04 58 25.1	
	comp=Z,417nm,19.7s,baz=292,slow=37						
MPSI	**Mapaga**	**31.98**	**197**	P	**P**	**04 45 14.2**	**-0.3**
	comp=Z,1µmcomp=Z,14nm,1.4s						
APSI	**Ampana**	**32.78**	**194**	P	**P**	**04 45 21.4**	**-0.2**
	comp=Z,628nmcomp=Z,33nm,0.6s						
SHL	**Shillong**	**33.00**	**269**	P	**P**	**04 45 22.8**	**-0.9**
SHL				pmax	pmax		
	comp=Z,18nm,1.0s						
SHL	**Shillong**	**33.00**	**269**	P	**P**	**04 45 22.8**	**-0.9**
SHL				IAmb	IAmb	04 45 24.2	
	comp=Z,18nm,1.0s						
SANI	**Sanana**	**33.29**	**185**	P	**P**	**04 45 23.8**	**-2.2**
	comp=Z,13nm,0.9s						
FAKI	**Fak Fak**	**34.18**	**174**	P	**P**	**04 45 33.9**	**+0.2**
	comp=Z,25nm,0.9s						
FAKI	**Fak Fak**	**34.18**	**174**	P	**P**	**04 45 32.9**	**-0.8**
FAKI				IAmb	IAmb	04 45 52.2	
	comp=Z,19nm,0.8s						
WMQ	**Urumqi**	**34.67**	**303**	*e*P	**P**	**04 45 40.1**	**+2.2**
WMQ				pP	sP	04 45 50.1	+8.2
WMQ				pmax	pmax		
	comp=Z,23nm,1.3s						
WMQ				LR	LR		
	comp=Z,2µm,16.5s						
WMQ				LR	LR		
	comp=Z,2µm,12.9s						
WMQ				LR	LR		
	comp=Z,1µm,18.3s						
SEY	**Seymchan**	**35.01**	**18**	P	**P**	**04 45 40.3**	**-0.1**
	comp=Z,14nm,0.9s,baz=228,slow=4.7,SNR=6.8						
SEY				LR	LR	04 59 18.4	
	comp=Z,561nm,18.2s,baz=218,slow=35						
DGZ	**Jazzator, Alta**	**35.98**	**313**	*i* P	**P**	**04 45 49.8**	**+0.6**
DGZ				pmax	pmax		
	comp=Z,12nm,2.9s						
TAPN	**Taplejung**	**36.03**	**274**	*e*P	**P**	**04 45 50.8**	**+0.7**
	comp=Z,32nm,1.0s						
ODAN	**Odare**	**36.45**	**274**	*e*P	**P**	**04 45 53.9**	**+0.3**
	comp=Z,33nm,0.8s						
BBKI	**Banjar Baru**	**37.10**	**204**	P	**P**	**04 45 59.3**	**+0.4**
	comp=Z,33nm,0.5s						
JIRN	**Jiri**	**37.24**	**276**	*e*P	**P**	**04 46 01.1**	**+0.6**
	comp=Z,36nm,1.2s						
GUN	**Gumba**	**37.44**	**276**	*e*P	**P**	**04 46 03.0**	**+0.9**
	comp=Z,102nm,1.0s						
PKI	**Pulchoki**	**37.94**	**276**	*e*P	**P**	**04 46 06.9**	**+0.6**
	comp=Z,71nm,0.9s						
PKIN	**Phulchoki**	**37.94**	**276**	*e*P	**P**	**04 46 06.7**	**+0.4**
	comp=Z,42nm,0.9s						
KKN	**Kakani**	**37.98**	**276**	*e*P	**P**	**04 46 07.6**	**+1.0**
	comp=Z,77nm,1.0s						
DMN	**Daman**	**38.18**	**276**	*e*P	**P**	**04 46 09.4**	**+1.1**
GKN	**Gorkha**	**38.47**	**277**	*e*P	**P**	**04 46 11.7**	**+1.1**
ZAA0	**Zalesovo Array**	**38.73**	**319**	P	**P**	**04 46 12.3**	**0.0**
ZALV	**Zalesovo Beam**	**38.73**	**319**	P	**P**	**04 46 08.5**	**-3.7**
	comp=Z,4.0nm,0.9s,baz=112,slow=6.6,SNR=11						
ZALV				LR	LR	05 03 12.9	
	comp=Z,856nm,19.2s,baz=116,slow=38						
ZALV	**Zalesovo Beam**	**38.73**	**319**	*i* P	**P**	**04 46 11.6**	**-0.6**
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ZALV	**Zalesovo Beam**	**38.73**	**319**	P	**P**	**04 46 12.8**	**+0.6**
MK31	**Makanchi Array**	**38.81**	**307**	*i* P	**P**	**04 46 13.3**	**+0.2**
MK31	**Makanchi Array**	**38.81**	**307**		**P**	**04 46 14.1**	**+1.0**
MKAR	**Makanchi Array**	**38.81**	**307**	P	**P**	**04 46 10.1**	**-3.0**
	comp=Z,6.0nm,1.0s,baz=92,slow=8.6,SNR=12						
MKAR				LR	LR	05 03 10.5	
	comp=Z,448nm,19.5s,baz=94,slow=38						
MKAR	**Makanchi Array**	**38.81**	**307**	*i* P	**P**	**04 46 12.8**	**-0.3**
MKAR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MKAR	**Makanchi Array**	**38.81**	**307**	P	**P**	**04 46 14.4**	**+1.3**
MAKZ	**Makanchi**	**39.03**	**307**	P	**P**	**04 46 16.0**	**+1.1**
MAKZ				pmax	pmax		
	comp=Z,15nm,1.3s						
MAKZ	**Makanchi**	**39.03**	**307**	P	**P**	**04 46 16.0**	**+1.1**
DANN	**Dangsing**	**39.12**	**278**	*e*P	**P**	**04 46 16.9**	**+0.7**
	comp=Z,53nm,1.0s						
KOLN	**Koldanda**	**39.42**	**277**	*e*P	**P**	**04 46 19.7**	**+1.1**
	comp=Z,80nm,1.5s						
PYUN	**Piuthan**	**39.84**	**277**	*e*P	**P**	**04 46 23.5**	**+1.3**
	comp=Z,121nm,1.3s						
TIXI	**Tiksi**	**40.40**	**360**	LR	LR	05 03 17.3	
	comp=Z,586nm,19.1s,baz=206,slow=36						
TIXI	**Tiksi**	**40.40**	**360**	*ce*P	**P**	**04 46 26.7**	**+0.8**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.6s						
TIXI	**Tiksi**	**40.40**	**360**	P	**P**	**04 46 27.0**	**+1.1**
PLAI	**Plampang**	**41.32**	**197**	P	**P**	**04 46 33.2**	**-0.9**
	comp=Z,36nm,0.8s						
KURK	**Kurchatov**	**41.72**	**313**	*ce*P	**P**	**04 46 37.4**	**+0.3**
KURK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KURK	**Kurchatov**	**41.72**	**313**	P	**P**	**04 46 37.7**	**+0.6**
TARG	**Taragay, Kyrgy**	**41.87**	**299**	P	**P**	**04 46 36.2**	**-2.8**
TARG				IAmb	IAmb	04 46 42.6	
	comp=Z,33nm,1.2s						
BILL	**Bilibino**	**42.68**	**20**	⇑*e*P	**P**	**04 46 47.5**	**+2.8**
BILL				*i*		04 46 56.7	

BILL				*e*		04 48 21.9	
BILL				pmax	pmax		
	comp=Z,18nm,1.1s						
BILL				MLR	MLR		
	comp=Z,375nm,15.0s						
BILL	Bilibino	42.68	20	P	P	04 46 46.4	+1.7
DBJI	Dramaga	43.22	213	P	P	04 46 50.1	+0.4
	comp=Z,100nm,1.2s						
KSH	Kashi	43.43	296	P	P	04 46 55.3	+4.0
KSH				pP	sP	04 47 06.3	+11
KSH				S	S	04 53 22.1	+2.4
KSH				pmax	pmax		
	comp=Z,29nm,1.4s						
KSH				LR	LR		
	comp=Z,1µm,14.6s						
KSH				LR	LR		
	comp=Z,640nm,16.1s						
KSH				LR	LR		
	comp=Z,1µm,14.4s						
TKM2	Tokmak 2	43.45	301	P	P	04 46 49.4	-2.1
	SNR=19						
KBK	Karagaybulak	43.94	301	P	P	04 46 57.7	+2.3
	SNR=5.5						
MTN	Manton Dam	43.95	177	P	P	04 46 53.8	-1.6
MTN				IAmb	IAmb	04 47 07.3	
	comp=Z,39nm,1.3s						
CHMS	Chumysh	44.06	301	P	P	04 46 58.9	+2.6
	SNR=5.8						
AAK	Ala-Archa	44.27	301	P	P	04 46 59.7	+1.6
	SNR=6.5						
AAK	Ala-Archa	44.27	301	*i* P	P	04 46 59.6	+1.4
	SNR=6.6						
AAK	Ala-Archa	44.27	301	*i* P	P	04 46 58.3	+0.2
AAK				pmax	pmax		
	comp=Z,19nm,1.2s						
AAK	Ala-Archa	44.27	301	P	P	04 46 56.5	-1.6
UCH	Uchtor	44.29	300	P	P	04 46 56.7	-1.9
	SNR=18						
NRIK	Noril'sk	44.66	340	P	P	04 46 57.9	-2.8
	comp=Z,17nm,0.9s,baz=121,slow=10,SNR=8.6						
NRIK				LR	LR	05 07 34.2	
	comp=Z,428nm,18.4s,baz=120,slow=39						
NRIK	Noril'sk	44.66	340	*i* P	P	04 47 01.9	+1.3
AML	Almayashu	44.90	300	P	P	04 47 06.0	+2.5
	SNR=8.1						
AML	Almayashu	44.90	300	*i* P	P	04 47 04.9	+1.5
	SNR=8.1						
NIL	Nilore	46.58	288	P	P	04 47 15.6	-0.7
NIL				pmax	pmax		
	comp=Z,14nm,1.0s						
NIL	Nilore	46.58	288	P	P	04 47 15.6	-0.7
NIL				IAmb	IAmb	04 47 21.2	
	comp=Z,14nm,0.9s						
KNRA	Kununurra	46.71	180	P	P	04 47 16.5	-0.8
BRVK	Borovoye	47.09	315	*i* P	P	04 47 20.7	+0.7
BRVK				pmax	pmax		
	comp=Z,15nm,1.3s						
KKAR	Karatay Array	47.15	302	P	P	04 47 18.4	-2.3
KKAR	Karatay Array	47.15	302	P	P	04 47 18.4	-2.3
BTK	Batken	47.30	297	P	P	04 47 20.6	-1.4
BTK				pmax	pmax		
	comp=Z,15nm,1.2s						
BTK	Batken	47.30	297	P	P	04 47 20.6	-1.4
BTK				IAmb	IAmb	04 47 33.0	
	comp=Z,15nm,1.1s						
HYB	Hyderabad	47.58	265	*i* P	P	04 47 25.0	+0.7
GAR	Garm	47.85	296	P	P	04 47 23.5	-2.8
CHGR	Chuyangaron	48.80	296	P	P	04 47 31.7	-1.9
KBL	Kabul	49.76	291	P	P	04 47 44.3	+3.1
KBL				pmax	pmax		
	comp=Z,45nm,1.5s						
WB0	Warramunga Arr	51.05	173	P	P	04 47 49.9	-0.7
WRA	Warramunga Arr	51.22	174	P	P	04 47 50.8	-1.1
	comp=Z,5.5nm,0.9s,baz=350,slow=8.3,SNR=24						
WRA				LR	LR	05 08 12.1	
	comp=Z,172nm,22.0s,baz=20,slow=34						
WRA	Warramunga Arr	51.22	174	P	P	04 47 51.2	-0.7
WRA	Warramunga Arr	51.22	174	P	P	04 47 51.2	-0.7
WB2	Warramunga Arr	51.22	173	P	P	04 47 51.1	-0.7
WR0	Warramunga Arr	51.25	173	P	P	04 47 51.3	-0.8
SVE	Sverdlovsk	52.72	320	*e*P	P	04 48 01.6	-1.2
SVE				pmax	pmax		
	comp=Z,40nm,1.1s						
SVE				MLR	MLR		
	comp=Z,3µm,16.0s						
PSA00	Pilbara Seismi	53.30	191	P	P	04 48 06.8	-0.4
PSA00				IAmb	IAmb	04 48 10.8	
	comp=Z,15nm,0.9s						
PSA00	Pilbara Seismi	53.30	191	P	P	04 48 06.9	-0.4
PSA00				IAmb	IAmb	04 48 12.1	
	comp=Z,8.4nm,0.9s						
ABKAR	Akbulak array	53.74	311	P	P	04 48 08.7	-1.7
ABKAR				IAmb	IAmb	04 48 13.6	
	comp=Z,24nm,0.9s						
ARU	Arti	53.88	320	*c i*P	P	04 48 09.1	-2.2
ARU						04 50 07.7	
ARU				S	S	04 55 41.0	-5.3
ARU				SS	SKiKP	04 59 20.2	-4.6
ARU				pmax	pmax		
	comp=Z,20nm,0.7s						
ARU				MLR	MLR		
	comp=Z,2µm,15.0s						
AKTO	Aktyubinsk	54.82	312	LR	LR	05 13 23.2	
	comp=Z,2µm,18.4s,baz=86,slow=38						
AS31	Alice Springs	54.86	174	P	P	04 48 18.4	-0.3
ASAR	Alice Springs	54.87	174	P	P	04 48 18.4	-0.4
	comp=Z,4.8nm,0.9s,baz=359,slow=6.5,SNR=44						
ASAR				LR	LR	05 11 30.8	
	comp=Z,136nm,21.2s,baz=5.0,slow=36						
HRA	Herat	55.22	292	P	P	04 48 21.4	-0.2
HRA				IAmb	IAmb	04 48 25.7	
	comp=Z,13nm,1.0s						
L19K	White Mountain	56.46	33	P	P	04 48 29.7	-0.1
	baz=274						
L19K	White Mountain	56.46	33	P	P	04 48 29.9	0.0
L19K				IAmb	IAmb	04 48 35.9	
	comp=Z,22nm,1.2s						
J20K	Nowinta River	56.64	31	P	P	04 48 31.4	+0.4
	baz=274						
J20K	Nowinta River	56.64	31	P	P	04 48 31.6	+0.5
J20K				IAmb	IAmb	04 48 38.9	
	comp=Z,32nm,1.4s						
IMAR	Indian Mountai	56.71	29	P	P	04 48 29.1	-2.4
K20K	Telida	56.73	32	P	P	04 48 32.2	+0.4
	baz=274						
K20K	Telida	56.73	32	P	P	04 48 32.1	+0.3
K20K				IAmb	IAmb	04 48 37.4	
	comp=Z,17nm,1.1s						
L20K	Farewell, AK	56.89	33	P	P	04 48 33.0	+0.1
	baz=275						
H21K	Melozitna Rive	57.12	29	P	P	04 48 34.3	-0.2
	baz=274						
H21K	Melozitna Rive	57.12	29	P	P	04 48 33.5	-1.0
GEYT	Alibeck	57.41	298	LR	LR	05 16 36.9	
	comp=Z,324nm,21.4s,baz=65,slow=40						
I21K	Tanana	57.50	29	P	P	04 48 37.4	+0.3
	baz=275						
I21K	Tanana	57.50	29	P	P	04 48 37.4	+0.3
I21K				IAmb	IAmb	04 48 42.6	
	comp=Z,23nm,1.0s						
CAST	Castle Rocks	57.62	32	P	P	04 48 38.3	+0.3
	baz=276						
CAST	Castle Rocks	57.62	32	P	P	04 48 38.4	+0.3
PPLA	Purkeypile	57.62	32	P	P	04 48 38.6	+0.4
	baz=276						
RSO	Redoubt South	57.64	35	P	P	04 48 38.5	0.0
MLY	Manley	58.03	30	P	P	04 48 41.0	+0.1
	baz=276						
MLY	Manley	58.03	30	P	P	04 48 40.3	-0.7
MLY				IAmb	IAmb	04 48 46.4	
	comp=Z,18nm,1.2s						
COLD	Coldfoot	58.04	27	P	P	04 48 40.4	-0.5
	baz=275						
TOLK	Toolik Lake Re	58.15	25	P	P	04 48 41.1	-0.7
	baz=275						
TOLK	Toolik Lake Re	58.15	25	P	P	04 48 41.8	0.0
TOLK				IAmb	IAmb	04 48 46.9	
	comp=Z,19nm,1.4s						
SUA	Susitna One	58.47	34	P	P	04 48 44.6	+0.4
	baz=278						
KIRV	Kirov	58.55	323	*i* P	P	04 48 45.9	+1.4
I23K	Minto, Yukon-K	58.60	29	P	P	04 48 44.9	+0.1
	baz=277						
I23K	Minto, Yukon-K	58.60	29	P	P	04 48 45.0	+0.1
I23K				IAmb	IAmb	04 48 50.8	
	comp=Z,16nm,1.3s						

NEA2	Nenana	58.80	30	P	P	04 48 46.2	0.0
	baz=278						
NEA2	Nenana	58.80	30	P	P	04 48 45.7	-0.6
MDM	Murphy Dome	59.10	29	P	P	04 48 48.4	0.0
H24K	Noodor Dome	59.12	28	P	P	04 48 49.0	+0.5
	baz=278						
H24K	Noodor Dome	59.12	28	P	P	04 48 48.2	-0.3
H24K				IAmb	IAmb	04 48 54.6	
	comp=Z,17nm,1.2s						
PMR	Palmer	59.22	33	P	P	04 48 48.0	-1.2
	baz=279						
POKR	Poker Plat Res	59.41	29	P	P	04 48 50.7	+0.2
	baz=279						
POKR	Poker Plat Res	59.41	29	P	P	04 48 50.8	+0.3
KNK	Knik Glacier	59.57	34	P	P	04 48 51.2	-0.5
	baz=280						
WAT6	Susitna Watana	59.70	32	P	P	04 48 52.0	-0.7
	baz=280						
IL31		59.70	30	P	P	04 48 51.5	-1.0
ILAR	Eielson Array	59.70	30	P	P	04 48 50.8	-1.7
	comp=Z,2.0nm,0.8s,baz=268,slow=5.7,SNR=21						
ILAR				LR	LR	05 16 09.5	
	comp=Z,132nm,18.4s,baz=294,slow=38						
ILAR	Eielson Array	59.70	30	P	P	04 48 51.1	-1.4
ILAR	Eielson Array	59.70	30	P	P	04 48 51.1	-1.4
HDA	Harding Lake	59.73	30	P	P	04 48 51.5	-1.3
	baz=280						
HDA	Harding Lake	59.73	30	P	P	04 48 51.9	-0.8
HDA				IAmb	IAmb	04 48 57.1	
	comp=Z,29nm,1.2s						
PRGR	Permogore	59.89	327	*e*P	P	04 48 55.3	+1.5
PRGR				pmax	pmax		
	comp=Z,31nm,1.0s						
PRP	Porcupine Dome	60.14	29	P	P	04 48 55.4	-0.2
	baz=280						
PRP	Porcupine Dome	60.14	29	P	P	04 48 55.5	-0.2
BMAR	Burnt Mountain	60.17	26	P	P	04 48 55.6	-0.1
KLU	Klutina	60.75	33	P	P	04 48 59.9	0.0
	baz=282						
SCRK	Sand Creek	61.09	30	P	P	04 49 01.3	-0.9
	baz=282						
SCRK	Sand Creek	61.09	30	P	P	04 49 00.3	-1.9
SCRK				IAmb	IAmb	04 49 09.1	
	comp=Z,21nm,1.1s						
J26L	Joseph Creek	61.15	30	P	P	04 49 01.2	-1.3
	baz=282						
MENT	Mentasta	61.44	31	P	P	04 49 03.8	-0.7
MENT				IAmb	IAmb	04 49 12.3	
	comp=Z,19nm,0.9s						
M26K	Nabesna, AK	61.89	32	P	P	04 49 07.4	-0.1
	baz=284						
M26K	Nabesna, AK	61.89	32	P	P	04 49 07.0	-0.5
M26K				IAmb	IAmb	04 49 12.6	
	comp=Z,22nm,0.9s						
EGAK	Eagle	62.10	29	P	P	04 49 08.0	-0.7
	baz=284						
EGAK	Eagle	62.10	29	P	P	04 49 08.1	-0.7
L27K	Beaver Creek,	62.24	31	P	P	04 49 10.1	+0.2
	baz=285						
L27K	Beaver Creek,	62.24	31	P	P	04 49 09.6	-0.2
L27K				IAmb	IAmb	04 49 15.2	
	comp=Z,10nm,0.9s						
BCAR	Beaver Creek A	62.26	31	P	P	04 49 09.9	-0.1
TGL	Tana Glacier	62.38	34	P	P	04 49 10.6	-0.3
M27K	Edge Creek, AK	62.40	32	P	P	04 49 11.1	0.0
	baz=285						
M27K	Edge Creek, AK	62.40	32	P	P	04 49 09.9	-1.2
M27K				IAmb	IAmb	04 49 11.4	
	comp=Z,12nm,0.9s						
KLMR	Klimovskoe	62.94	327	*e*P	P	04 49 12.2	-2.2
KLMR				pmax	pmax		
	comp=Z,31nm,1.2s						
KLMR	Klimovskoe	62.94	327	*e*P	P	04 49 12.2	-2.2
KLMR				AMP		04 49 18.7	
	comp=Z,31nm,1.2s						
KLMR				LQ	LQ	05 12 08.1	
KLMR				LQ	LQ	05 12 08.1	
KLMR				LR	LR	05 15 46.8	
BANOM	Banah	62.97	285	P	P	04 49 18.9	+3.6
CTG	Chitna Glacier	63.03	33	P	P	04 49 15.1	-0.1
	baz=286						
DAWY	Dawson	63.03	30	P	P	04 49 14.9	-0.2
DAWY				IAmb	IAmb	04 49 21.7	
	comp=Z,15nm,1.4s						
SHME	Shamm	63.05	285	P	P	04 49 18.0	+2.2
I29M	Ogilvie Camp,	63.11	28	P	P	04 49 15.5	-0.1
	baz=286						
YUK3	Moose Creek	63.20	32	P	P	04 49 16.3	-0.2
	baz=286						
MSFE	Esma-Masafi	63.31	285	P	P	04 49 19.8	+2.2
UOSS	Minazif	63.44	284	P	P	04 49 21.6	+3.2
SOHO	SOHO	63.49	283	*i* P	P	04 49 20.1	+1.4
	SNR=9.0						
APA	Apatity	63.53	335	⇓*i*P	P	04 49 17.5	-0.8
APA				pmax	pmax		
	comp=Z,22nm,0.9s						
APA				MLR	MLR		
	comp=Z,1µm,14.0s						
HATD	Hatta, Dubai	63.55	284	P	P	04 49 21.6	+2.5
MAK	Makhachkala	63.61	306	*e*P	P	04 49 18.1	-1.1
MAK				*e*S	S	04 57 49.8	-3.3
MAK				pmax	pmax		
	comp=Z,175nm,1.1s						
MAK				MLR	MLR		
	comp=Z,511nm,17.0s						
ASHO	Ashiyiah	63.67	284	P	P	04 49 21.8	+1.9
STKA	Stephens Creek	63.97	168	P	P	04 49 20.1	-1.4
	comp=Z,3.3nm,0.8s,baz=339,slow=12,SNR=5.3						
STKA				LR	LR	05 16 34.9	
	comp=Z,67nm,21.8s,baz=13,slow=35						
INK	Inuvik	64.00	24	P	P	04 49 19.8	-1.5
INK				pmax	pmax		
	comp=Z,8.0nm,1.2s						
INK	Inuvik	64.00	24	P	P	04 49 19.8	-1.5
DZM	Mont Dzumac	64.09	141	*e*S	S	04 57 58.5	-1.1
	comp=Z,104nm,30.2s						
DZM	Mont Dzumac	64.09	141	*e*LR	LR	05 08 34.7	
	comp=Z,269nm,24.4s						
YUK4	Talbot Arm	64.16	32	P	P	04 49 22.9	+0.1
	baz=288						
ASUD	Al Ashush, Dub	64.30	284	P	P	04 49 28.2	+4.2
YUK6	Outpost Mounta	64.42	33	P	P	04 49 24.6	+0.1
	baz=288						
HYT	Haines Junctio	64.86	33	P	P	04 49 27.4	+0.2
HYT				IAmb	IAmb	04 49 37.0	
	comp=Z,14nm,1.1s						
A36M	Sachs Harbour	65.23	19	P	P	04 49 28.6	-0.7
	baz=295						
A36M	Sachs Harbour	65.23	19	P	P	04 49 28.2	-1.1
ARCES	ARCESS Array B	65.55	338	P	P	04 49 30.3	-1.1
	comp=Z,8.3nm,0.9s,baz=67,slow=3.2,SNR=7.1						
ARCES				LR	LR	05 21 59.1	
	comp=Z,458nm,18.4s,baz=65,slow=40						
ARCES	ARCESS Array B	65.55	338	P	P	04 49 30.5	-0.9
ARCES				pmax	pmax		
	comp=Z,69nm,1.5s						
ARCES	ARCESS Array B	65.55	338	P	P	04 49 30.5	-0.9
LPSR	Galich'ya Gora	65.83	318	*e*P	P	04 49 32.4	-1.1
LPSR				pmax	pmax		
	comp=Z,40nm,1.5s						
GOF	Gofitskoye	65.93	309	⇑*e*P	P	04 49 37.1	+2.8
GOF				pmax	pmax		
	comp=Z,62nm,1.4s						
ZEI	Tsey	66.16	307	*e*P	P	04 49 30.4	-5.7
ZEI				pmax	pmax		
	comp=Z,8.0nm,1.3s						
VSR	Storozhevoye	66.18	317	*e*P	P	04 49 36.5	+0.7
VSR				pmax	pmax		
	comp=Z,30nm,1.4s						
VORD	Divnogorie	66.19	316	*e*P	P	04 49 35.4	-0.5
VORD				pmax	pmax		
	comp=Z,20nm,1.7s						
FARO	Faro, Yukon	66.22	30	P	P	04 49 36.0	+0.1
	baz=292						
OBN	Obninsk	66.26	321	LR	LR	05 20 45.5	
	comp=Z,212nm,20.1s,baz=56,slow=38						
OBN	Obninsk	66.26	321	⇓*e*P	P	04 49 38.4	+2.2
OBN				*e*		04 52 05.5	
OBN				pmax	pmax		
	comp=Z,79nm,1.7s						
OBN				MLR	MLR		
	comp=Z,851nm,17.0s						
KBZ	Khabaz	66.50	308	P	P	04 49 36.7	-1.2
	comp=Z,20nm,1.1s,baz=51,slow=2.4,SNR=12						
KBZ	Khabaz	66.50	308	*i* P	P	04 49 40.4	+2.4
KBZ				pmax	pmax		

	comp=Z,28nm,1.1s						
GNI	Garni	66.54	304	*i* P	P	04 49 40.1	+1.6
GNI				pmax	pmax		
	comp=Z,42nm,1.9s						
ONI	Oni	66.54	307	P	P	04 49 38.2	-0.2
ONI				pmax	pmax		
	comp=Z,23nm,1.2s						
ONI	Oni	66.54	307	P	P	04 49 38.2	-0.2
ONI				IAmb	IAmb	04 49 43.0	
	comp=Z,23nm,1.2s						
KVAR	Kislovodsk Arr	66.56	308	LR	LR	05 20 45.4	
	comp=Z,365nm,18.5s,baz=50,slow=38						
KIV	Kislovodsk	66.56	308	*i* P	P	04 49 41.4	+2.8
	SNR=6.8						
KIV	Kislovodsk	66.56	308	*e*P	P	04 49 39.9	+1.4
KIV				pmax	pmax		
	comp=Z,43nm,1.1s						
KIV				MLR	MLR		
	comp=Z,275nm,17.0s						
KIV	Kislovodsk	66.56	308	P	P	04 49 37.8	-0.7
AKH	Akhalkalaki	66.95	305	P	P	04 49 45.1	+3.9
SOC	Sochi	68.69	309	*e*P	P	04 49 51.4	-0.4
SOC				*e*		04 52 30.3	
SOC				*e*PPP	PPP	04 54 09.2	
SOC				*e*S	S	04 58 52.2	-2.8
SOC				*e*SS	SS	05 03 18.3	-0.6
SOC				MLR	MLR		
	comp=Z,533nm,16.0s						
TGTN	Hyland Airport	68.70	30	P	P	04 49 51.8	+0.1
	baz=296						
FINES	FINESS Array B	68.79	330	P	P	04 49 50.0	-2.1
	comp=Z,1.5nm,0.8s,baz=65,slow=6.6,SNR=19						
FINES				LR	LR	05 24 43.7	
	comp=Z,382nm,18.4s,baz=32,slow=40						
ANN	Anapa	69.71	311	*e*P	P	04 49 59.0	+0.9
ANN				*e*S	S	04 58 59.8	-7.1
ANN				pmax	pmax		
	comp=Z,46nm,1.2s						
RES	Resolute Bay	70.46	11	P	P	04 50 02.9	+0.7
RES				pmax	pmax		
	comp=Z,11nm,1.0s						
RES	Resolute Bay	70.46	11	P	P	04 50 02.9	+0.7
RES				IAmb	IAmb	04 50 06.4	
	comp=Z,11nm,1.0s						
MNK	Minsk	71.09	323	*i* P	P	04 50 08.5	+2.1
MNK				*i*		04 50 28.4	
MNK				*i*		04 52 45.9	
MNK				*i* PPP	PPP	04 54 29.3	
MNK				*i* S	S	04 59 21.9	-0.8
MNK				pmax	pmax		
	comp=N,17nm,1.1s						
MNK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MNK				pmax	pmax		
	comp=E,1.0nm,0.7s						
MNK				MLR	MLR		
	comp=Z,793nm,15.0s						
MNK				MLR	MLR		
	comp=E,116nm,18.0s						
MNK				MLR	MLR		
	comp=N,475nm,18.0s						
MNK	Minsk	71.09	323	*i* P	P	04 50 08.6	+2.2
	comp=E,1.0nm,0.7s						
MNK				*i* P	P	04 50 08.6	+2.2
	comp=N,17nm,1.1s						
MNK				*i* P	P	04 50 08.6	+2.2
	comp=Z,10.0nm,0.9s,baz=62						
MNK				*i* PcP	PcP	04 50 28.5	+1.9
MNK				*i* PP	PP	04 52 46.0	+2.5
MNK				*i* PPP	PPP	04 54 29.3	
MNK				*i* S	S	04 59 22.0	-0.8
MNK				*i* SS	SS	05 04 12.5	+17
MNK				*i* SSS	SSS	05 07 16.8	
MNK				*i* LQ	LQ	05 16 30.6	
MNK				*i* LR	LR	05 21 47.1	
MNK				*i* LRM	MLR	05 23 56.9	
	comp=E,116nm,17.8s						
MNK				*i* LRM	MLR	05 23 56.9	
	comp=N,475nm,17.8s						
MNK				*i* LRM	MLR	05 23 56.9	
	comp=Z,793nm,15.3s						
NACGM	Naroch	71.47	323	*i* P	P	04 50 10.7	+2.0
ISAL	Salakas	71.49	324	*e*P	P	04 50 11.2	+2.4
TULEG	Thule	71.84	4	P	P	04 50 10.9	+0.3
TULEG				IAmb	IAmb	04 50 14.5	
	comp=Z,17nm,1.3s						
AKASG	Malin Array Be	72.12	319	P	P	04 50 12.7	0.0
	comp=Z,11nm,0.9s,baz=50,slow=6.3,SNR=33						
AKASG				LR	LR	05 23 26.7	
	comp=Z,752nm,18.3s,baz=55,slow=37						
AKASG	Malin Array Be	72.12	319	*ce*P	P	04 50 14.6	+1.9
AKASG				pmax	pmax		
	comp=Z,14nm,1.0s						
AKASG	Malin Array Be	72.12	319	P	P	04 50 12.9	+0.2
AKASG				IAmb	IAmb	04 50 17.0	
	comp=Z,18nm,1.4s						
AKBB	Malin Array Si	72.12	319	*ce*P	P	04 50 15.0	+2.3
AKBB	Malin Array Si	72.12	319	P	P	04 50 13.3	+0.6
AKBB				IAmb	IAmb	04 50 16.6	
	comp=Z,28nm,1.2s						
PABE	Paberze	72.59	325	*e*P	P	04 50 17.8	+2.4
RAYN	Ar Rayn	72.86	287	*i* P	P	04 50 19.8	+2.2
	SNR=6.7						
RAYN	Ar Rayn	72.86	287	P	P	04 50 17.5	-0.2
RAYN				pmax	pmax		
	comp=Z,27nm,1.5s						
RAYN	Ar Rayn	72.86	287	P	P	04 50 17.4	-0.2
RAYN				IAmb	IAmb	04 50 23.1	
	comp=Z,27nm,1.4s						
GAZ	Gaziantep	73.13	303	P	P	04 50 19.4	+0.4
GAZ				IAmb	IAmb	04 50 22.5	
	comp=Z,23nm,1.2s						
PBUR	Paburge	73.32	326	*e*P	P	04 50 21.9	+2.2
YKA	Yellowknife Ar	73.68	26	LR	LR	05 23 43.5	
	comp=Z,91nm,21.9s,baz=0.0,slow=37						
SUW	Suwalki	73.74	324	*e*P	P	04 50 24.9	+2.7
SUW	Suwalki	73.74	324	P	P	04 50 22.5	+0.3
SUW				pmax	pmax		
	comp=Z,75nm,1.2s						
SUW	Suwalki	73.74	324	P	P	04 50 22.5	+0.3
BR131	Keskin Array S	74.46	307	P	P	04 50 26.9	0.0
BR131				pmax	pmax		
	comp=Z,18nm,0.9s						
BR131	Keskin Array S	74.46	307	P	P	04 50 26.9	0.0
BR131				IAmb	IAmb	04 50 31.2	
	comp=Z,18nm,0.9s						
BRTR	Keskin Array B	74.46	307	P	P	04 50 26.0	-0.9
	comp=Z,8.1nm,0.9s,baz=92,slow=4.2,SNR=16						
BRTR	Keskin Array B	74.46	307	*ce*P	P	04 50 29.7	+2.8
BRTR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BRTR	Keskin Array B	74.46	307	P	P	04 50 26.6	-0.3
HFS	Hagfors	74.65	332	P	P	04 50 25.8	-1.6
	comp=Z,2.7nm,0.9s,baz=80,slow=9.2,SNR=2.4						
HFS				LR	LR	05 28 17.3	
	comp=Z,514nm,18.6s,baz=46,slow=40						
NB2	NORSAR Subarra	75.06	334	P	P	04 50 27.4	-2.5
	comp=Z,49nm,1.7s,baz=52,slow=5.9						
NOA	NORSAR Array B	75.06	334	P	P	04 50 27.4	-2.5
	comp=Z,0.9nm,0.6s,baz=50,slow=5.8,SNR=6.6						
LVV	L'vov	75.46	320	*e*P	P	04 50 35.1	+2.8
LVV				MLR	MLR		
	comp=E,800nm,17.0s						
LVV				MLR	MLR		
	comp=N,500nm,16.0s						
LVV				MLR	MLR		
	comp=Z,600nm,17.0s						
BUR08	Bucovina Ar. S	75.92	317	P	P	04 50 35.8	+0.7
BURAR	Bucovina Array	75.93	317	P	P	04 50 35.3	+0.2
VRI	Vrincioaia	75.93	315	P	P	04 50 41.4	+6.3
SUMG	Summit	76.03	356	*i* P	P	04 50 34.0	-1.7
SUMG				IAmb	IAmb	04 50 40.7	
	comp=Z,5.8nm,1.1s						
KWP	Kalwaria Pacla	76.29	320	P	P	04 50 40.0	+2.9
KWP				pmax	pmax		
	comp=Z,189nm,1.0s						
MLR	Muntele Rosu	76.59	315	P	P	04 50 39.1	+0.1
	comp=Z,2.6nm,0.7s,baz=268,slow=22,SNR=2.5						
MLR				LR	LR	05 27 08.4	
	comp=Z,589nm,19.8s,baz=12,slow=38						
UZH	Uzhgorod	77.06	319	*e*P	P	04 50 44.3	+2.9
UZH				*i*		04 50 48.4	
UZH				*e*		04 50 56.5	
CRVS	Cervenica-Dubn	77.37	320	*e*P	P	04 50 45.9	+2.7
CRVS	Cervenica-Dubn	77.37	320	*e*P	P	04 50 45.9	+2.7

EIL	Elat	78.32	298	LR	LR	05 30 44.2	
	comp=Z,189nm,18.6s,baz=72,slow=40						
LANS	Liptovska Anna	78.32	321	*e*P	P	04 50 52.0	+3.5
LANS	Liptovska Anna	78.32	321	*e*P	P	04 50 52.0	+3.5
MORC	Moravsky Berou	78.99	322	P	P	04 50 56.7	+4.5
VYHS	Vyhne	79.04	320	*e*P	P	04 50 55.8	+3.4
VYHS	Vyhne	79.04	320	*e*P	P	04 50 55.8	+3.4
ICESG	Greenland Ices	79.55	356	*e*P	P	04 50 58.4	+3.2
ICESG				IAmb	IAmb	04 50 59.9	
	comp=Z,12nm,1.0s						
VRAC	Vranov	79.76	322	P	P	04 50 57.0	+0.6
	comp=Z,6.2nm,1.1s,baz=63,slow=8.0,SNR=6.2						
VRAC				LR	LR	05 30 23.8	
	comp=Z,600nm,18.1s,baz=105,slow=39						
VRAC	Vranov	79.76	322	P	P	04 50 57.0	+0.6
VTS	Vitosha	79.77	314	P	P	04 50 56.6	-0.1
VTS				pmax	pmax		
	comp=Z,20nm,1.5s						
VTS	Vitosha	79.77	314	P	P	04 50 56.6	-0.1
VTS				IAmb	IAmb	04 51 01.4	
	comp=Z,20nm,1.5s						
MODS	Modra-Piesok	79.95	321	*e*P	P	04 51 00.6	+3.2
MODS	Modra-Piesok	79.95	321	*e*P	P	04 51 00.6	+3.2
EDM	Edmonton	79.98	33	P	P	04 50 57.9	+0.4
EDM				pmax	pmax		
	comp=Z,30nm,1.1s						
EDM	Edmonton	79.98	33	P	P	04 50 57.9	+0.4
EDM				IAmb	IAmb	04 51 03.3	
	comp=Z,30nm,1.1s						
BRG	Berggiesshubel	80.17	324	*e*P	P	04 51 02.1	+3.6
BRG				Amp		04 51 04.6	
	comp=Z,3.3nm,0.8s						
CLL	Collm	80.37	325	*i* P	P	04 51 03.0	+3.5
CLL				MLR	MLR		
	comp=Z,1μm,17.4s						
CLL	Collm	80.37	325	*i* (P)	P	04 51 03.0	+3.5
	comp=Z,26nm,1.4s						
PRU	Pruhonice	80.42	323	*e*P	P	04 51 03.3	+3.5
PRU	Pruhonice	80.42	323	*e*P	P	04 51 03.3	+3.5
DIVS	Divibare	80.91	316	P	P	04 51 03.5	+0.8
NEW	Newport	81.21	38	P	P	04 51 04.0	-0.2
NEW				pmax	pmax		
	comp=Z,16nm,1.2s						
NEW	Newport	81.21	38	P	P	04 51 04.0	-0.2
NEW				IAmb	IAmb	04 51 09.4	
	comp=Z,16nm,1.2s						
KHC	Kasperske Hory	81.44	323	*e*P	P	04 51 11.4	+6.0
KHC	Kasperske Hory	81.44	323	*e*P	P	04 51 11.4	+6.0
WALA	Waterton Lakes	82.37	36	P	P	04 51 09.2	-1.2
DY2G	Dye2	82.46	358	*i* P	P	04 51 14.1	+3.4
DY2G				IAmb	IAmb	04 51 15.2	
	comp=Z,10nm,1.0s						
BMO	Blue Mountains	83.20	41	P	P	04 51 13.9	-0.8
BMO				pmax	pmax		
	comp=Z,9.0nm,1.2s						
BMO	Blue Mountains	83.20	41	P	P	04 51 13.9	-0.8
MOD	Modoc Plateau	83.23	45	P	P	04 51 13.9	-1.2
MOD				IAmb	IAmb	04 51 20.5	
	comp=Z,20nm,1.3s						
ITM	Ithomi	83.64	310	P	P	04 51 16.6	-0.5
ITM				IAmb	IAmb	04 51 19.8	
	comp=Z,24nm,1.2s						
STAL	STALIGIAL	83.70	321	P	P	04 51 17.6	+0.3
STAL				IAmb	IAmb	04 51 21.1	
	comp=Z,12nm,1.2s						
FFC	Flin Flon	83.78	27	P	P	04 51 18.0	+0.6
FFC				pmax	pmax		
	comp=Z,42nm,1.2s						
FFC	Flin Flon	83.78	27	P	P	04 51 18.0	+0.6
MSO	Missoula	83.79	38	P	P	04 51 17.7	0.0
	baz=310						
MSO	Missoula	83.79	38	P	P	04 51 17.2	-0.5
MSO				IAmb	IAmb	04 51 23.3	
	comp=Z,25nm,1.4s						
ORV	Oroville	83.88	47	P	P	04 51 17.8	-0.4
ORV				pmax	pmax		
	comp=Z,13nm,1.5s						
ORV	Oroville	83.88	47	P	P	04 51 17.8	-0.4
ORV				IAmb	IAmb	04 51 22.9	
	comp=Z,13nm,1.4s						
MEM	Membach	84.16	327	*d*PcP	PcP	04 51 22.8	-0.4
CTI	Castel Tesino	84.41	322	P	P	04 51 21.6	+0.7
CTI				pmax	pmax		
	comp=Z,14nm,1.3s						
CTI	Castel Tesino	84.41	322	P	P	04 51 21.6	+0.7
CTI				IAmb	IAmb	04 51 24.9	
	comp=Z,14nm,1.3s						
EKA	Eskdalemuir Ar	84.47	335	P	P	04 51 20.7	-0.2
	comp=Z,1.9nm,0.8s,baz=25,slow=4.1,SNR=4.6						
BFO	Black Forest	84.61	325	P	P	04 51 22.4	+0.6
BFO				pmax	pmax		
	comp=Z,27nm,1.4s						
BFO	Black Forest	84.61	325	P	P	04 51 22.4	+0.6
BFO				IAmb	IAmb	04 51 26.7	
	comp=Z,27nm,1.4s						
WLF	Walferdange	84.74	327	*d*PcP	PcP	04 51 25.7	-0.1
DAVOX	Davos/Dischmat	84.86	323	P	P	04 51 23.9	+0.6
	comp=Z,3.9nm,0.8s,baz=4.4,slow=5.6,SNR=6.2						
MFID	Camas Ranch	84.92	41	P	P	04 51 23.7	+0.1
MFID				IAmb	IAmb	04 51 29.2	
	comp=Z,19nm,1.3s						
BMRD	Maredsous	84.94	328	*d*PcP	PcP	04 51 27.0	+0.3
MPK	Martis Peak	84.95	47	P	P	04 51 23.8	-0.2
MPK				IAmb	IAmb	04 51 29.5	
	comp=Z,20nm,1.2s						
EMB	Emerald Bay	85.09	47	P	P	04 51 24.3	-0.4
PAHR	Pah Rah Range	85.10	46	P	P	04 51 24.5	-0.1
PAHR				IAmb	IAmb	04 51 30.0	
	comp=Z,18nm,1.1s						
EGMT	Eagleton	85.13	35	P	P	04 51 24.6	+0.1
	baz=313						
VCNR	Virginia City	85.18	46	P	P	04 51 25.1	-0.1
VCNR				IAmb	IAmb	04 51 30.6	
	comp=Z,8.4nm,1.0s						
TUE	Stuetta	85.33	323	P	P	04 51 24.6	-1.1
PNTR	Pine Nut	85.34	47	P	P	04 51 25.0	-0.9
PNTR				IAmb	IAmb	04 51 31.5	
	comp=Z,12nm,1.1s						
DLMT	Dillon	85.45	38	P	P	04 51 26.4	+0.1
CMB	Columbia Colle	85.47	48	P	P	04 51 25.9	-0.5
CMB				pmax	pmax		
	comp=Z,9.0nm,1.0s						
CMB	Columbia Colle	85.47	48	P	P	04 51 25.9	-0.5
CMB				IAmb	IAmb	04 51 31.5	
	comp=Z,9.2nm,1.0s						
YERR	Yerington	85.62	47	P	P	04 51 25.2	-2.1
YERR				IAmb	IAmb	04 51 32.7	
	comp=Z,16nm,1.3s						
HLID	Hailey	85.63	41	P	P	04 51 27.8	+0.6
	baz=310						
HLID	Hailey	85.63	41	P	P	04 51 26.9	-0.3
HLID				IAmb	IAmb	04 51 33.0	
	comp=Z,16nm,1.2s						
RYN	Ryan	86.29	46	P	P	04 51 29.8	-0.7
RYN				IAmb	IAmb	04 51 36.1	
	comp=Z,15nm,1.2s						
KVN	Kaiserville	86.29	46	P	P	04 51 28.7	-1.9
KVN				pmax	pmax		
	comp=Z,19nm,1.2s						
KVN	Kaiserville	86.29	46	P	P	04 51 28.7	-1.9
KVN				IAmb	IAmb	04 51 36.1	
	comp=Z,19nm,1.2s						
LHV	Little Huntoon	86.53	47	P	P	04 51 31.3	-0.1
YHL	Hebgen Lake	86.54	38	P	P	04 51 30.2	-1.7
YHL				IAmb	IAmb	04 51 37.6	
	comp=Z,17nm,1.1s						
NVAR	Mina Array Bea	86.54	47	P	P	04 51 31.1	-0.8
	comp=Z,1.8nm,0.7s,baz=304,slow=5.2,SNR=21						
NVAR				LR	LR	05 28 18.1	
	comp=Z,86nm,21.5s,baz=301,slow=34						
NVAR	Mina Array Bea	86.54	47	P	P	04 51 30.9	-1.0
GCMT	Greycliff	86.69	37	P	P	04 51 31.6	-0.8
YMR	Madison River	86.78	38	P	P	04 51 32.8	-0.2
YMR				IAmb	IAmb	04 51 38.9	
	comp=Z,20nm,1.2s						
FLWY	Flagg Ranch	87.31	39	P	P	04 51 35.0	-0.5
TPH	Tonopah	87.43	46	P	P	04 51 34.3	-1.9
TPH				pmax	pmax		
	comp=Z,105nm,1.4s						
TPH	Tonopah	87.43	46	P	P	04 51 34.3	-1.9
FXWY	Fox Creek	87.43	39	P	P	04 51 34.0	-2.1
DGMT	Dagmar	87.46	32	P	P	04 51 36.0	+0.1
	baz=317						
DGMT	Dagmar	87.46	32	P	P	04 51 35.2	-0.7
HVU	Hansel Valley	87.70	41	P	P	04 51 36.3	-1.0
HVU				pmax	pmax		
	comp=Z,14nm,1.3s						
HVU	Hansel Valley	87.70	41	P	P	04 51 36.3	-1.0
HVU				IAmb	IAmb	04 51 43.1	
	comp=Z,14nm,1.3s						
LAO	LASA Array	87.78	34	P	P	04 51 37.9	+0.4
	baz=315						
R11A	Troy Canyon, C	88.27	45	P	P	04 51 40.4	+0.3
	baz=309						
HWUT	Hardware Ranch	88.50	41	P	P	04 51 40.4	-0.8
DUG	Dugway, Tooele	88.72	42	P	P	04 51 41.5	-0.7
DUG				pmax	pmax		
	comp=Z,26nm,1.4s						
DUG	Dugway, Tooele	88.72	42	P	P	04 51 42.8	+0.6
	baz=311						
DUG	Dugway, Tooele	88.72	42	P	P	04 51 41.5	-0.7
PD31	Pinedale Array	88.81	39	P	P	04 51 42.0	-0.7
PD31				IAmb	IAmb	04 51 49.1	
	comp=Z,16nm,1.2s						
PDAR	Pinedale Array	88.81	39	P	P	04 51 42.0	-0.7
	comp=Z,2.8nm,0.8s,baz=326,slow=1.5,SNR=19						
NLU	North Lily Min	89.30	42	P	P	04 51 43.9	-1.1
NLU				IAmb	IAmb	04 51 52.7	
	comp=Z,16nm,1.3s						
MPU	Maple Canyon	89.52	42	P	P	04 51 45.4	-0.6
MPU				IAmb	IAmb	04 51 53.5	
	comp=Z,19nm,1.3s						
ULM	Lac du Bonnet	89.61	27	P	P	04 51 45.4	-0.6
	comp=Z,14nm,0.9s,baz=300,slow=3.9,SNR=5.4						
ULM				LR	LR	05 34 38.4	
	comp=Z,94nm,18.8s,baz=344,slow=37						
ULM	Lac du Bonnet	89.61	27	P	P	04 51 44.8	-1.2
SHPR	Sheep Range	89.70	46	P	P	04 51 46.2	-0.7
SHPR				IAmb	IAmb	04 51 54.7	
	comp=Z,12nm,1.4s						
TUQ	Turquoise Moun	89.89	48	P	P	04 51 48.0	+0.2
	baz=309						
MVU	Marysvale	90.18	43	P	P	04 51 48.4	-0.8
MSU	Marysvale	90.20	43	P	P	04 51 47.8	-1.5
MSU	Marysvale	90.20	43	P	P	04 51 47.8	-1.5
P17A	Butcher Ranch,	90.39	42	P	P	04 51 48.4	-1.7
K22A	Casper	90.50	37	P	P	04 51 50.5	0.0
	baz=315						
MTPU	Mount Pierson	90.50	44	P	P	04 51 50.2	-0.7
Q16A	Castle Valley	90.52	43	P	P	04 51 49.6	-1.2
LCMT	Little Creek M	90.55	45	P	P	04 51 49.7	-1.1
LCMT				IAmb	IAmb	04 51 56.7	
	comp=Z,9.7nm,1.2s						
P18A	Preston Nutter	90.57	42	P	P	04 51 48.2	-2.9
RSSD	Black Hills	90.70	35	P	P	04 51 49.9	-1.6
RSSD				pmax	pmax		
	comp=Z,36nm,1.3s						
RSSD	Black Hills	90.70	35	P	P	04 51 51.5	0.0
	baz=317						
RSSD	Black Hills	90.70	35	P	P	04 51 49.9	-1.6
SRU	San Rafael Swe	90.76	42	P	P	04 51 50.3	-1.5
SRU				pmax	pmax		
	comp=Z,17nm,1.0s						
SRU	San Rafael Swe	90.76	42	P	P	04 51 50.2	-1.5
KNB	Kanab	90.80	45	P	P	04 51 51.4	-0.6
KNB				pmax	pmax		
	comp=Z,22nm,1.1s						
KNB	Kanab	90.80	45	P	P	04 51 51.4	-0.6
W13A	Hualapai Mount	91.39	47	P	P	04 51 52.1	-2.8
U15A	North Rim	91.50	45	P	P	04 51 55.1	-0.3
PPT	Papeete	91.94	109	LR	LR	05 27 17.4	
	comp=Z,45nm,19.7s,baz=302,slow=32						
PPT2	Papeete2	91.95	109	*e*LR	LR	05 21 29.0	
	comp=Z,129nm,24.8s						
KMBO	Kilima Mbogo	92.05	270	LR	LR	05 34 49.5	
	comp=Z,579nm,19.7s,baz=254,slow=37						
N23A	Red Feather La	92.05	38	P	P	04 51 58.7	+0.8
	baz=316						
WUAZ	Wupatki	92.67	45	P	P	04 52 01.6	+0.9
	baz=312						
WUAZ	Wupatki	92.67	45	P	P	04 51 58.8	-1.9
WUAZ				IAmb	IAmb	04 52 06.6	
	comp=Z,12nm,1.1s						
SCHQ	Schefferville	93.14	9	LR	LR	05 35 55.0	
	comp=Z,118nm,20.2s,baz=6.5,slow=37						
X16A	Lo Mia Camp, P	93.36	46	P	P	04 52 02.6	-1.3
X16A				IAmb	IAmb	04 52 09.9	
	comp=Z,6.3nm,1.0s						
TBI	Tubuai	95.08	114	*e*LR	LR	05 22 58.9	
	comp=Z,102nm,24.2s						
I37A	Lemond, Waseca	95.64	29	P	P	04 52 11.9	-2.1
ESDC	Sonseca Array	96.96	325	LR	LR	05 41 04.7	
	comp=Z,415nm,18.1s,baz=350,slow=39						
TXAR	Lajitas Array	101.63	45	P	Pdif	04 52 40.4	-0.8
	comp=Z,0.3nm,0.7s,baz=242,slow=1.9,SNR=3.1						
VNA2	Neumayer--Watz	133.79	198	PKPdf	PKiKP	04 58 07.7	+2.1
VNA3	Neumayer Olymp	134.19	197	PKPdf	PKiKP	04 58 08.2	+1.8
CZSB	Cruzeiro do Su	149.03	45		PKPab	04 58 40.0	-1.3
ETMB	Extrema	154.39	37		PKPab	04 59 01.3	-2.2

ANF 18 04:41:33.3±0.2**, 34°.17N×117°.44W, h9^{km}±3^{km}, ML3.5**/35**, ML3.4**/20**, Error ellipse: s-maj=1.6km s-min=1.4km az=34.0, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBRC	Big Bear Solar	0.44	77	P	Pg	04 41 42.3	+0.4
	baz=258,SNR=28						
BBRC	Big Bear Solar	0.44	77	S	Sb	04 41 49.1	-1.1
	baz=258						
MURC	Murrieta	0.60	160	P	Pg	04 41 44.9	0.0
	baz=341,SNR=29						
MURC	Murrieta	0.60	160	S	Sg	04 41 53.5	+0.7
	baz=341						
DECC	Green Verdugo	0.75	277	P	Pg	04 41 48.0	+0.3
	baz=96						
DECC	Green Verdugo	0.75	277	S	Sb	04 41 58.6	-0.3
	baz=96						
RRX	Edison Barstow	0.80	27	S	Sg	04 41 59.5	+0.4
	baz=208						
RRX	Edison Barstow	0.80	27	P	Pg	04 41 49.0	+0.3
	baz=208						
FMP	Fort Macarthur	0.84	238	P	Pb	04 41 50.0	-0.2
	baz=57						
FMP	Fort Macarthur	0.84	238	S	Sb	04 42 02.2	+0.6
	baz=57						
EDW2	Edwards Air Fo	0.85	327	P	Pg	04 41 49.1	-0.7
	baz=147,SNR=15						
EDW2	Edwards Air Fo	0.85	327	S	Sg	04 42 00.9	0.0
	baz=147						
PFO	Pinyon Flats O	0.98	124	P	Pg	04 41 51.6	-0.6
	baz=305,SNR=6.9						
CIS	Catalina Islan	1.11	227	P	Pb	04 41 54.9	+0.1
	baz=46						
HEC	Hector,Ludlow	1.12	54	P	Pn	04 41 55.3	-0.1
	baz=234						
OSI	Osito Audit: C	1.16	293	P	Pn	04 41 56.0	+0.2
	baz=112						
BELC	Belle Mtn. Jos	1.20	97	P	Pn	04 41 56.7	+0.2
	baz=279,SNR=9.3						
GSC	Goldstone, Bar	1.25	24	P	Pb	04 41 57.1	0.0
	baz=205,SNR=15						
109C	Camp Elliot, M	1.30	168	P	Pn	04 41 57.2	-0.5
	baz=348						
LRMC	Laurel Mtn Rad	1.33	351	Pg	Pg	04 41 59.2	+0.4
	baz=171,SNR=17						
ARVC	Arvin	1.50	310	Pg	Pg	04 42 02.1	0.0
	baz=129						
MONP2	Monument Peak	1.53	146	Pb	Pb	04 42 01.5	-0.4
	baz=327,SNR=7.6						
GMRC	Granite Mounta	1.59	67	Pb	Pb	04 42 03.2	+0.2
	baz=248,SNR=8.0						
TUQ	Turquoise Moun	1.78	44	Pg	Pg	04 42 07.4	0.0
	baz=225						
MPMC	Manual Prospec	1.89	359	Pb	Pb	04 42 08.5	+0.4
	baz=179,SNR=7.0						
IRM	Iron Mountain	1.90	90	Pb	Pg	04 42 09.1	-0.7
	baz=271,SNR=6.1						

*ANF **18** 04:41:47.5±0.2, 34°.17N×117°.43W, h10^{km}, Error ellipse: s-maj=1.5km s-min=1.3km az=32.0*
*NEIC **18** 04:41:48.2±0.8, 34°.18N±0°.02×117°.42W±0°.02, h18^{km}±3^{km}, Error ellipse: s-maj=3.0km s-min=2.1km az=69.0*
*PAS **18** 04:41:48.7±1.2, 34°.175N±0°.009×117°.44W±0°.01, h11^{km}±2^{km}, ML3.5/278, ML3.1/20(NEIC), Error ellipse: s-maj=1.6km s-min=1.3km az=52.0*
ISC 18 04:41:48.3±0.8**, 34°.18N**±0°.02×**117°.44W**±0°.02**, h17^{km}**±6^{km}**, n55, σ0^{s}97**/80**, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CFSC	Central Fire S	0.15	120		Pg	04 41 52.4	-0.1
CFSC					Sg	04 41 55.3	0.0
RSBC	Riverside Bore	0.23	155		Pg	04 41 53.1	-0.5
RSBC	Riverside Bore	0.23	155		Sg	04 41 56.5	-0.7
BBRC	Big Bear Solar	0.44	79	P	Pg	04 41 57.2	-0.1
	baz=258						
BBRC				S	Sg	04 42 03.4	-0.1
	baz=258						
GVRC	Garvey Reservo	0.58	257		Pg	04 41 59.9	+0.1
MURC	Murrieta	0.61	160	P	Pg	04 41 59.8	-0.7
	baz=341						
MURC				S	Sg	04 42 07.9	-0.8
	baz=341						
PASC	Pasadena Art C	0.62	269		Pg	04 42 00.1	-0.4
PASC	Pasadena Art C	0.62	269	IAML		04 42 09.1	
	comp=E,889nm,0.4s						
PASC				IAML		04 42 12.4	
	comp=N,980nm,0.2s						
GR2C	Griffith Obs.	0.71	265		Pg	04 42 02.1	-0.2
DECC	Green Verdugo	0.74	276	P	Pb	04 42 02.5	-0.3
	baz=96,SNR=9.3						
DECC				S	Sb	04 42 12.9	+0.2
	baz=96						
RRX	Edison Barstow	0.78	28	P	Pb	04 42 03.3	-0.2
	baz=207,SNR=10						
RRX				S	Sg	04 42 14.0	0.0
	baz=207						
GVDA	Garner Valley	0.82	128		Pb	04 42 03.7	-0.4
GVDA	Garner Valley	0.82	128		Sb	04 42 14.1	-0.8
EDW2	Edwards Air Fo	0.83	327	P	Pb	04 42 04.0	-0.4
	baz=147						
EDW2				S	Sb	04 42 15.0	-0.3
	baz=147						
DJJ	Donna J Jenkin	0.84	265		Pb	04 42 04.0	-0.5
FMP	Fort Macarthur	0.85	237	P	Pn	04 42 05.3	-0.1
	baz=57,SNR=6.7						
FMP				S	Sb	04 42 15.6	-0.1
	baz=57						
PFO	Pinyon Flats O	0.99	125	P	Pb	04 42 06.8	-0.3
	baz=305						
PFO				S	Sb	04 42 19.5	-0.5
	baz=305						
HEC	Hector,Ludlow	1.12	54	Pg	Pg	04 42 09.7	-0.3
	baz=234						
HEC				S	Sn	04 42 24.4	0.0
	baz=234						
CIS	Catalina Islan	1.12	227	Pg	Pb	04 42 09.5	+0.2
	baz=46,SNR=13						
CIS				S	Sb	04 42 24.2	+0.6
	baz=46						
OSI	Osito Audit: C	1.15	293	Pg	Pg	04 42 10.4	-0.1
	baz=112,SNR=17						
OSI				S	Sg	04 42 25.4	-0.1
	baz=112						
BELC	Belle Mtn. Jos	1.21	98	Pg	Pb	04 42 11.0	+0.2
	baz=279,SNR=45						
BELC				S	Sn	04 42 27.0	+0.4
	baz=279						
GSC	Goldstone, Bar	1.23	25	Pg	Pb	04 42 11.4	+0.2
	baz=205						
GSC				S	Sn	04 42 27.5	+0.3
	baz=205						
LRMC	Laurel Mtn Rad	1.31	351	Pg	Pg	04 42 13.3	-0.4
	baz=171,SNR=15						
109C	Camp Elliot, M	1.32	168	P	Pn	04 42 11.4	-0.5
	baz=348,SNR=18						
109C				S	Sn	04 42 28.6	-0.5
	baz=348						
ARVC	Arvin	1.48	310	Pg	Pb	04 42 16.1	+0.7
	baz=129,SNR=22						
ARVC				Sb	Sb	04 42 35.2	+1.2
	baz=129						
SCI2	San Clemente I	1.51	218	Pg	Pg	04 42 16.9	-0.6
	baz=38,SNR=13						
MONP2	Monument Peak	1.54	146	Pb	Pn	04 42 15.7	+0.6
	baz=327,SNR=16						
MONP2				Sb	Sb	04 42 36.2	+0.4
	baz=327						
GMRC	Granite Mounta	1.59	67	Pg	Pb	04 42 17.7	+0.4
	baz=248,SNR=15						
GMRC				Sb	Sg	04 42 38.6	-1.1
	baz=248						
TJX	Tijuana	1.70	169		Pn	04 42 17.6	+0.4
ISA	Isabella, Lake	1.71	330	Pg	Pb	04 42 20.1	+0.8
	baz=150,SNR=12						
ISA				S	Sb	04 42 39.9	-0.5
	baz=150						
BC3	Big Chuckawall	1.73	107	Pg	Pb	04 42 20.4	+0.7
	baz=288,SNR=20						
BC3				Sb	Sb	04 42 42.3	+1.0
	baz=288						
TUQ	Turquoise Moun	1.77	44	Pg	Pb	04 42 21.3	+1.0
	baz=225,SNR=11						
TUQ				Sb	Sb	04 42 43.7	+1.5
	baz=225						
SWSC	Sam W. Stewart	1.84	132	P	Pn	04 42 18.6	-0.5
	baz=312,SNR=14						
SWSC				Sb	Sb	04 42 45.7	+1.5
	baz=312						
MPMC	Manual Prospec	1.87	359	Pg	Pg	04 42 23.3	-1.1
	baz=179						
IKP	In-Ko-Pah, Jac	1.89	144	Pb	Pb	04 42 22.1	-0.3
	baz=324,SNR=12						
IKP				Sb	Sb	04 42 46.3	+0.6
	baz=324						
IRM	Iron Mountain	1.90	90	Pg	Pb	04 42 23.5	+0.9
	baz=271,SNR=26						
IRM				Sb	Sg	04 42 48.7	-1.0
	baz=271						
SHOC	Shoshone, Teco	1.96	29	Sb	Sg	04 42 50.4	-1.2
	baz=209						
SNCC	San Nicolas Is	1.97	242	Sb	Sb	04 42 49.8	+1.9
	baz=61						
PKM	Mcpherson Peak	2.08	290	Pg	Pg	04 42 27.3	-1.1
	baz=109						
CWC	Cottonwood Cre	2.31	347	Pg	Pg	04 42 31.5	-1.3
	baz=167						
FURC	Furnace Creek,	2.33	12	Pg	Pg	04 42 32.0	-1.0
	baz=192,SNR=18						
SMMC	Simmler	2.39	299	Pb	Pb	04 42 31.4	+0.6
	baz=118,SNR=7.3						
SMMC				Sb	Sb	04 43 01.9	+1.9
	baz=118						
CCX	Cicese	2.40	164		Pn	04 42 27.5	+0.8
CCX				IAML		04 43 06.6	
	comp=E,123nm,0.3s						
NEE2	Needles Airpor	2.40	75	Pg	Pb	04 42 32.5	+1.4
	baz=256,SNR=5.5						
NEE2				Sb	Sg	04 43 04.0	-1.6
	baz=256						
GLA	Glamis	2.46	117	Pg	Pb	04 42 33.5	+1.5
	baz=298,SNR=8.1						
PDMCI	Parker Dam,Lak	2.74	87	Pg	Pb	04 42 38.4	+1.7
	baz=268,SNR=10						
PAGB	Antelope Grade	2.78	305	Pn	Pn	04 42 32.5	+0.5
PAGB				IAML		04 43 36.6	
	comp=E,70nm,1.2s						
PAGB				IAML		04 43 36.7	
	comp=N,64nm,1.1s						
113A	Mohawk Valley,	3.38	114		Pn	04 42 40.6	+0.4
TPH	Tonopah	3.89	3	Pn	Pn	04 42 48.4	+1.0
LHV	Little Huntoon	4.15	348	Pn	Pn	04 42 52.2	+1.4
LHV				IAML		04 44 08.2	
	comp=E,27nm,1.7s						
LHV				IAML		04 44 22.6	
	comp=N,27nm,4.4s						
NV11	Mina Array Sit	4.28	352	Pn	Pn	04 42 54.0	+1.2
NV11				IAML		04 44 22.3	
	comp=E,14nm,4.8s						
NVAR	Mina Array Bea	4.30	351	Pn	Pn	04 42 54.2	+1.1
R11A	Troy Canyon, C	4.42	19	Pg	Pg	04 43 10.8	-2.2
	baz=200						
R11A				Sb	Sg	04 44 06.4	-3.9
	baz=200						
R11A	Troy Canyon, C	4.42	19	Pn	Pn	04 42 55.8	+1.1
R11A				IAML		04 44 10.6	
	comp=E,15nm,3.8s						
RYN	Ryan	4.52	349	Pn	Pn	04 42 57.0	+0.9
RYN				IAML		04 44 29.6	
	comp=E,14nm,4.1s						

*PRU **18** 04:51:08.8±0.0, 51°.51N×16°.20E, h0^{km}*
*VIE **18** 04:51:09.9±1.2, 51°.38N×16°.00E, h0^{km}, mb2.6/3, ml2.9/2,*

Error ellipse: s-maj=13.7km s-min=5.1km az=12.0 77 km WNW of Wroclaw Suspected Mining induced.

*IDC **18** 04:51:10.8±0.8, 51°.39N×15°.90E, h0^{km}, mb1 3.6/8, mb1mx3.4/52, mbtmp3.4/8, ML3.0/8, Error ellipse: s-maj=14.8km s-min=7.9km az=105.0*

ISC 18 04:51:09.0±0.8**, 51°.48N**±0°.04×**16°.14E**±0°.03**, h0^{km}, n33,** σ**1$\overset{s}{.}$47**/57**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.65**	**171**	*i* Pg	**Pg**	**04 51 20.9**	**-0.5**
KSP				*e*	**Pn**	**04 51 25.2**	**-0.3**
KSP				*e*Sg	**Sg**	**04 51 29.5**	**-0.3**
KSP				*e*	**Sb**	**04 51 33.7**	**+0.9**
CHVC	**Chvalec**	**0.90**	**183**	*e*PG	**Pg**	**04 51 25.8**	**-0.4**
CHVC				*e*SG	**Sb**	**04 51 39.2**	**-0.8**
	comp=Z,53nm,0.3s						
OSTC	**Ostas**	**0.93**	**177**	*e*PG	**Pg**	**04 51 26.2**	**-0.6**
OSTC				*e*SG	**Sb**	**04 51 40.1**	**-0.8**
	comp=Z,43nm,0.3s						
UPC	**Upice**	**0.98**	**185**	*e*PG	**Pg**	**04 51 27.1**	**-0.7**
UPC				*e*SG	**Sg**	**04 51 41.0**	**+0.5**
	comp=Z,151nm,0.5s						
DPC	**Dobruska-Polom**	**1.14**	**174**	*e*PG	**Pg**	**04 51 29.8**	**-1.0**
DPC				*e*SG	**Sg**	**04 51 46.0**	**+0.4**
	comp=Z,29nm,0.3s						
PVCC	**Panska Ves**	**1.38**	**227**	*e*PG	**Pg**	**04 51 34.7**	**-0.7**
PVCC				*e*SG	**Sb**	**04 51 53.0**	**-0.8**
	comp=Z,155nm,0.3s						
KRLC	**Kraliky**	**1.47**	**164**	*e*PG	**Pn**	**04 51 36.3**	**-0.5**
KRLC				*e*SG	**Sg**	**04 51 56.2**	**+0.1**
BRG	**Berggiesshubel**	**1.51**	**247**	Pg	**Pn**	**04 51 36.7**	**-0.7**
BRG	**Berggiesshubel**	**1.51**	**247**	Pg	**Pg**	**04 51 40.9**	**+2.9**
BRG				Sg	**Sg**	**04 51 56.7**	**-0.9**
BRG				Amp		04 51 58.4	
	comp=Z,24nm,0.4s						
BRG	**Berggiesshubel**	**1.51**	**247**	Sg	**Sn**	**04 52 01.3**	**+3.5**
BRG				Amp		04 52 01.7	
	comp=Z,62nm,0.4s						
PRU	**Pruhonice**	**1.81**	**215**	*e*PG	**Pb**	**04 51 41.9**	**-1.1**
PRU				*e*SG	**Sg**	**04 52 07.1**	**0.0**
	comp=Z,21nm,0.3s						
MORC	**Moravsky Berou**	**1.93**	**152**	*e*PN	**Pn**	**04 51 41.7**	**-1.4**
MORC				*e*SG	**Sg**	**04 52 11.5**	**+0.6**
CLL	**Collm**	**1.97**	**266**	*e*Pn	**Pn**	**04 51 42.0**	**-1.7**
CLL				*i* Pg	**Pg**	**04 51 46.2**	**-0.6**
CLL				*i*		04 51 49.2	
CLL				*e*Sg	**Sg**	**04 52 16.0**	**+3.6**
	comp=Z,19nm,0.3s						
VRAC	**Vranov**	**2.20**	**172**	Pn	**Pn**	**04 51 47.0**	**+0.2**
	comp=Z,2.1nm,0.3s,baz=348,slow=15,SNR=12						
VRAC				Lg	Lg	04 52 20.4	
	comp=Z,3.9nm,0.3s,baz=269,slow=22,SNR=10.0						
VRAC	**Vranov**	**2.20**	**172**	*e*PN	**Pn**	**04 51 46.9**	**+0.1**
VRAC				*e*SG	**Sg**	**04 52 20.1**	**+0.6**
KRUC	**Moravsky**	**2.43**	**176**	*e*PN	**Pn**	**04 51 49.8**	**-0.2**
KRUC				*e*SG	**Sg**	**04 52 29.3**	**+2.3**
JAVC	**Velka Javorina**	**2.81**	**159**	*e*PN	**Pn**	**04 51 57.0**	**+1.8**
KHC	**Kasperske Hory**	**2.87**	**216**	*e*PN	**Pn**	**04 51 55.2**	**-0.9**
KHC				*e*PG	**Pb**	**04 52 00.2**	**-0.9**
KHC				*e*SG	**Sg**	**04 52 41.6**	**+0.4**
	comp=Z,12nm,0.3s						
GERES	**GERESS Array B**	**3.07**	**212**	Pn	**Pn**	**04 51 58.6**	**-0.2**
	comp=Z,0.7nm,0.3s,baz=27,slow=12,SNR=6.6						
GERES				Pg	**Pb**	**04 52 03.2**	**-1.4**
	comp=Z,2.1nm,0.3s,baz=27,slow=15,SNR=15						
GERES				Lg	Lg	04 52 45.4	
	comp=Z,3.3nm,0.3s,baz=28,slow=27,SNR=6.9						
SMOL	**Smolenice**	**3.09**	**164**	*e*SG	**Sg**	**04 52 52.2**	**+4.1**
LANS	**Liptovska Anna**	**3.16**	**136**	*e*PN	**Pb**	**04 52 03.8**	**-2.3**
LANS				*e*PG	**Pg**	**04 52 11.1**	**+1.5**
LANS				*e*SG	**Sg**	**04 52 52.6**	**+2.0**
MODS	**Modra-Piesok**	**3.20**	**166**	*e*PG	**Pg**	**04 52 11.9**	**+1.6**
MODS	**Modra-Piesok**	**3.20**	**166**	*e*PG	**Pg**	**04 52 12.2**	**+1.9**
MODS				*e*SG	**Sg**	**04 52 52.4**	**+0.7**
KOLL	**Kolacno**	**3.25**	**152**	*e*PG	**Pg**	**04 52 13.4**	**+2.1**
VYHS	**Vyhne**	**3.46**	**149**	*e*PN	**Pn**	**04 52 07.2**	**+3.0**
VYHS				*e*PG	**Pg**	**04 52 15.9**	**+0.6**
VYHS				*e*SG	**Sg**	**04 52 59.2**	**-0.9**
CONA	**Conrad Observa**	**3.56**	**183**	*e*Pn	**Pn**	**04 52 06.1**	**+0.5**
	comp=Z,1.9nm,0.3s						
MOA	**Molln**	**3.83**	**199**	*e*Pn	**Pn**	**04 52 08.4**	**-0.9**
	comp=Z,0.8nm,0.3s						
DAVOX	**Davos/Dischmat**	**6.25**	**224**	Pn	**Pn**	**04 52 43.1**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=0.0,slow=14,SNR=1.3						
AKASG	**Malin Array Be**	**8.28**	**90**	Pn	**Pn**	**04 53 09.6**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=280,slow=11,SNR=1.9						
HFS	**Hagfors**	**8.78**	**352**	Pn	**Pn**	**04 53 17.8**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=165,slow=14,SNR=6.2						
FINES	**FINESS Array B**	**11.38**	**25**	Pn	**Pn**	**04 53 52.2**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=201,slow=12,SNR=5.5						
EKA	**Eskdalemuir Ar**	**12.13**	**296**	Pn	**Pn**	**04 54 02.2**	**-0.8**
	baz=103,slow=13,SNR=3.5						
ARCES	**ARCESS Array B**	**18.65**	**10**	Pn	**P**	**04 55 26.4**	**-1.6**
	baz=200,slow=12,SNR=6.3						

KRNET 18 04:55:03.1±0.1**, 40°.39N×73°.21E, h22^{km}, mb2.1, 24C-12D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**0.35**	**292**	⇑*i*P	Pb	04 55 09.6	-1.1
	baz=89						
OHH				⇑*i*S	Sb	04 55 14.9	-1.1
	baz=89						
OHH	**Osh**	**0.35**	**292**	⇓*i*P	Pb	04 55 10.2	-0.5
	baz=92						
OHH				⇓*i*S	Sb	04 55 15.5	-0.5
	baz=92						
SFK	**Sufi-Kurgan**	**0.44**	**150**	⇓*e*P	Pb	04 55 11.4	-0.9
	baz=51						
SFK				⇓*e*S	Sb	04 55 17.7	-0.8
	baz=51						
SFK	**Sufi-Kurgan**	**0.44**	**150**	⇑*e*P	Pb	04 55 11.8	-0.5
	baz=50						
SFK				⇑*e*S	Sb	04 55 18.1	-0.4
	baz=50						
SALK	**Salom-Alik**	**0.67**	**43**	⇑*e*P	Pb	04 55 15.4	-0.8
	baz=44						
SALK				⇑*e*S	Sb	04 55 24.7	-0.5
	baz=44						
SALK	**Salom-Alik**	**0.67**	**43**	⇓*e*P	Pb	04 55 15.9	-0.3
	baz=43						
SALK				⇓*e*S	Sb	04 55 25.5	+0.3
	baz=43						
DRK	**Karamyk**	**1.42**	**230**	⇑*i*P	Pb	04 55 29.9	+0.9
	baz=30						
DRK				⇑*i*S	Sb	04 55 48.5	+1.7
	baz=30						
DRK	**Karamyk**	**1.42**	**230**	⇑*e*P	Pb	04 55 29.2	+0.2
	baz=30						
DRK				⇑*i*S	Sb	04 55 48.4	+1.6
	baz=30						
AML	**Almayashu**	**1.77**	**12**	⇓*i*P	Pb	04 55 34.6	-0.5
	baz=11						
AML				⇓*i*S	Sb	04 55 58.7	+1.6
	baz=11						
AML	**Almayashu**	**1.77**	**12**	⇑*i*P	Pb	04 55 34.8	-0.3
	baz=12						
AML				⇑*i*S	Sb	04 55 58.6	+1.5
	baz=12						
BTK	**Batken**	**1.86**	**260**	⇑*e*P	Pb	04 55 36.9	+0.4
	baz=60						
BTK				⇑*i*S	Sb	04 56 02.3	+2.9
	baz=60						
BTK	**Batken**	**1.86**	**260**	⇓*i*P	Pb	04 55 36.6	+0.1
	baz=60						
BTK				⇓*e*S	Sb	04 56 00.6	+1.2
	baz=60						
TRKS	**Terek-Say**	**1.94**	**307**	⇑*i*P	Pb	04 55 37.1	-0.7
	baz=5.0						
TRKS				⇑*i*S	Sb	04 56 03.0	+1.4
	baz=5.0						
TRKS	**Terek-Say**	**1.94**	**307**	⇑*i*P	Pb	04 55 36.6	-1.2
	baz=5.0						
TRKS				⇑*i*S	Sb	04 56 00.6	-1.0
	baz=5.0						
UCH	**Uchtor**	**2.08**	**28**	⇑*e*P	Pb	04 55 39.2	-1.1
	baz=28						
UCH				⇑*i*S	Sb	04 56 06.8	+0.9
	baz=28						
UCH	**Uchtor**	**2.08**	**28**	⇑*e*P	Pb	04 55 38.9	-1.4
	baz=28						
UCH				⇑*i*S	Sb	04 56 05.8	-0.1
	baz=28						
MNAS	**Manas**	**2.16**	**346**	⇑*i*P	Pb	04 55 40.9	-0.6
	baz=46						
MNAS				⇑*i*S	Sb	04 56 08.7	+0.8
	baz=46						
MNAS	**Manas**	**2.16**	**346**	⇓*i*P	Pb	04 55 41.0	-0.5
	baz=46						
MNAS				⇓*i*S	Sb	04 56 08.8	+0.9
	baz=46						

IDC 18 04:59:50.6±3.5**, 54°.65N×86°.42E, h0^{km}, mb1 3.1**/2**, mb1mx3.0**/41**, mbtmp3.1**/2**, ML2.4**/2**, Error ellipse: s-maj=26.4km s-min=15.9km az=51.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.18**	**234**	*i*		05 06 20.0	
	baz=54,slow=342,SNR=24						
ZALV	**Zalesovo Beam**	**1.18**	**234**	Pg	Pg	05 00 11.8	-1.3
	0.5nm,0.3s,baz=55,slow=18,SNR=6.1						
ZALV				Lg	Lg	05 00 28.0	
	1.9nm,0.3s,baz=52,slow=29,SNR=7.9						
KURBB	**Kurchatov Arra**	**6.27**	**233**	Pn	Pn	05 01 25.3	+1.0
	0.1nm,0.3s,baz=51,slow=14,SNR=4.8						
KURBB				Lg	Lg	05 03 11.2	
	0.1nm,0.3s,baz=54,slow=32,SNR=6.5						
MKAR	**Makanchi Array**	**8.29**	**200**	Pn	Pn	05 01 52.1	+0.1
	0.1nm,0.3s,baz=24,slow=10,SNR=1.8						
MKAR				Sn	Sn	05 03 27.9	+1.4
	0.1nm,0.3s,baz=27,slow=26,SNR=3.8						
MKAR				Lg	Lg	05 04 15.9	
	0.0nm,0.3s,baz=14,slow=25,SNR=4.3						

*NIED **18** 05:04:30.9, 40°.22N×142°.32E, h20^{km}, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.02; $M_{\theta\theta}$1.84; $M_{\phi\phi}$-0.82; $M_{r\theta}$1.30; $M_{\theta\phi}$0.00; $M_{\phi r}$-1.10; Fault plane solution: $M_0$2.33000×10^{14} NP1: ϕ_s302.00000°, δ74.00000°, λ-59.00000°. NP2: ϕ_s56.00000°, δ35.00000°, λ-152.00000°.*

JMA 18 05:04:30.9, 40°.22N×142°.32E, h20^{km}±1^{km}**, M3.5, 2C-7D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	**0.45**	**231**	⇓P	Pb	05 04 40.0	-0.1
JTH				S	Sb	05 04 46.6	+0.2
JKEN	**Kujiedanarisaw**	**0.47**	**268**	⇓P	Pb	05 04 40.1	-0.3
JKEN				S	Sb	05 04 46.7	-0.2
JANG	**Nango**	**0.63**	**284**	⇓P	Pb	05 04 42.9	-0.4
JANG				S	Sb	05 04 51.4	-0.4
MIYJ	**Miyakonagasawa**	**0.75**	**211**	⇑P	Pb	05 04 44.9	-0.3
MIYJ				S	Sb	05 04 55.2	+0.2
JKZ	**Kuzumaki**	**0.80**	**253**	⇓P	Pb	05 04 45.6	-0.5
JKZ				S	Sb	05 04 56.8	+0.4
JARK	**Aomorirokkasho**	**1.07**	**318**	P	Pb	05 04 50.5	-0.2
JARK				S	Sb	05 05 04.5	+0.2
JOM	**Ohasama**	**1.09**	**227**	⇓P	Pn	05 04 50.6	-0.4
JOM				S	Sb	05 05 05.0	+0.2
JTM	**Tenmabayashi**	**1.11**	**301**	⇓P	Pn	05 04 51.3	0.0
JTM				S	Sn	05 05 05.9	-0.1
OFUJ	**Ofunato**	**1.24**	**204**	⇑P	Pn	05 04 52.7	-0.4
OFUJ				S	Sb	05 05 09.1	-0.2
JAH	**Hinai**	**1.29**	**269**	⇓P	Pn	05 04 54.0	+0.2
JAH				S	Sb	05 05 10.8	+0.2

*IDC **18** 05:18:13.3±0.5, 38°.63N×20°.43E, h0^{km}, mb4.3/25, mb1 4.4/38, mb1mx4.3/62, mbtmp4.3/38, ML3.8/12, MS3.8/32, Ms1 3.8/32, ms1mx3.7/54, Error ellipse: s-maj=11.6km s-min=10.4km az=142.0*

*ATH **18** 05:18:14.0, 38°.50N×20°.52E, h14^{km}±1^{km}, ML4.5/3, Error ellipse: s-maj=2.1km s-min=0.8km az=281.0*

*MOS **18** 05:18:13.1±1.4, 38°.54N×20°.26E, h11^{km}, mb4.7/17, Error ellipse: s-maj=5.3km s-min=2.6km az=82.4*

*BEO **18** 05:18:13.3±0.8, 38°.46N×20°.14E, h0^{km}, ML4.4/14*

*TIR **18** 05:18:13.2, 38°.48N×20°.59E, h21^{km}±12^{km}, Ml5.0*

*THE **18** 05:18:14.5, 38°.50N×20°.52E, h6^{km}±1^{km}, ML4.5/7, Error ellipse: s-maj=2.0km s-min=0.4km az=286.0*

*NEIC **18** 05:18:15.7±2.4, 38°.58N±0°.04×20°.38E±0°.02, h10^{km}±1^{km}, mb4.7/43, ML4.3(ATH), Error ellipse: s-maj=6.3km s-min=3.0km az=166.0*

*MED_RC **18** 05:18:15.0±0.4, 38°.46N×20°.55E, h10^{km}, MW4.6/20, Moment Tensor Solution. Mantle waves: s20,c26; Duration: 1$\overset{s}{.}$0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.30±.06; $M_{\theta\theta}$-0.44±.06; $M_{\phi\phi}$0.14±.05; $M_{r\theta}$0.34±.15; $M_{\theta\phi}$0.96±.04; $M_{\phi r}$-0.09±.15; Best double couple: $M_0$1.05000×10^{16} NP1: ϕ_s352.00000°, δ72.00000°, λ179.00000°. NP2: ϕ_s82.00000°, δ89.00000°, λ18.00000°. Principal axes: T 0.8800, Plg14.0000°, Azm309.0000°; N 0.3300, Plg72.0000°, Azm86.0000°; P -1.2200, Plg12.0000°, Azm216.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*PDG **18** 05:18:16.3±0.2, 38°.75N×20°.29E, h11^{km}±1^{km}, ML4.0/13 Error ellipse: s-maj=1.7km s-min=0.8km az=90.0*

ISC 18 05:18:14.6±0.5**, 38°.52N**±0°.01×**20°.46E**±0°.02**, h10^{km}**±3^{km}**, n483,** σ**1$\overset{s}{.}$77**/520**, mb4.5**/64**, MS4.0**/29**, 45C-27D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FSK	**Fiskardo**	**0.10**	**125**	P	**Pg**	**05 18 16.3**	**-1.0**
FSK	**Fiskardo**	**0.10**	**125**	P	**Pg**	**05 18 16.3**	**-1.0**
EVGI	**Lefkada island**	**0.19**	**57**	P	**Pg**	**05 18 17.9**	**-0.8**
EVGI				S	**Sg**	**05 18 20.2**	**-1.2**
EVGI	**Lefkada island**	**0.19**	**57**	P	**Pg**	**05 18 17.8**	**-0.8**
EVGI				S	**Sg**	**05 18 21.0**	**-0.4**
DRAG	**Dragano-Lefkad**	**0.19**	**29**	P	**Pg**	**05 18 18.1**	**-0.6**
DRAG				S	**Sg**	**05 18 21.8**	**+0.3**
	532μm,0.3s						
DRAG	**Dragano-Lefkad**	**0.19**	**29**	P	**Pg**	**05 18 18.1**	**-0.6**
KEF4	**Livadi, Kephal**	**0.26**	**185**	P	**Pg**	**05 18 19.3**	**-0.6**
KEF4				S	**Sg**	**05 18 23.6**	**+0.1**
KEF4	**Livadi, Kephal**	**0.26**	**185**	P	**Pg**	**05 18 19.2**	**-0.7**
KEF4				S	**Sg**	**05 18 23.4**	**0.0**
NYDR	**Nydri-Lefkada**	**0.27**	**44**	P	**Pg**	**05 18 19.2**	**-0.9**
NYDR				S	**Sg**	**05 18 23.4**	**-0.4**
	58μm,0.6s						
NYDR	**Nydri-Lefkada**	**0.27**	**44**	P	**Pg**	**05 18 19.2**	**-0.9**
DMLN	**Damoulianata-K**	**0.29**	**193**	P	**Pg**	**05 18 19.8**	**-0.7**
DMLN				S	**Sg**	**05 18 24.6**	**+0.3**
	143μm,0.5s						
DMLN	**Damoulianata-K**	**0.29**	**193**	P	**Pg**	**05 18 19.7**	**-0.7**
LKD2	**Lefkada island**	**0.31**	**30**	P	**Pg**	**05 18 20.3**	**-0.6**
LKD2				S	**Sg**	**05 18 25.1**	**0.0**
	51μm,0.7s						
LKD2	**Lefkada island**	**0.31**	**30**	P	**Pg**	**05 18 20.2**	**-0.8**
LKD2				S	**Sg**	**05 18 25.1**	**0.0**
LKD2				AML	AML	05 18 27.0	
	comp=E,63580μm,0.4s						
LKD2				AML	AML	05 18 29.4	
LKD2	**Lefkada island**	**0.31**	**30**	P	**Pg**	**05 18 20.3**	**-0.6**
	baz=10.0						
LKD2				S	**Sg**	**05 18 25.6**	**+0.5**
	baz=10.0						
LXRA	**Lixouri, Kepha**	**0.32**	**183**	P	**Pg**	**05 18 20.2**	**-0.8**
LXRA				S	**Sg**	**05 18 25.4**	**+0.2**
LXRA				AML	AML	05 18 31.1	
LXRA				AML	AML	05 18 31.2	
KEF3	**Kipouria, Keph**	**0.33**	**195**	P	**Pg**	**05 18 20.0**	**-1.2**
KEF3				S	**Sg**	**05 18 25.1**	**-0.4**
	comp=E,207μm,0.5s						
KEF3	**Kipouria, Keph**	**0.33**	**195**	P	**Pg**	**05 18 19.9**	**-1.2**
KEF3				S	**Sg**	**05 18 24.9**	**-0.5**
TSLK	**Tsoukalades, L**	**0.34**	**27**	P	**Pg**	**05 18 21.0**	**-0.5**
TSLK				S	**Sg**	**05 18 26.0**	**-0.1**
	comp=E,98μm,0.8s						
TSLK	**Tsoukalades, L**	**0.34**	**27**	P	**Pg**	**05 18 21.0**	**-0.5**
VLS	**Valsamata**	**0.36**	**163**	P	**Pg**	**05 18 20.6**	**-1.1**
VLS				S	**Sg**	**05 18 25.9**	**-0.5**
	comp=E,149μm,0.2s						
VLS	**Valsamata**	**0.36**	**163**	P	**Pg**	**05 18 20.4**	**-1.3**
VLS				S	**Sg**	**05 18 25.9**	**-0.5**
VLS				AML	AML	05 18 26.7	
VLS				AML	AML	05 18 26.9	
VLS	**Valsamata**	**0.36**	**163**	P	**Pg**	**05 18 20.6**	**-1.1**
VLS				S	**Sg**	**05 18 25.9**	**-0.5**
PSDA	**Pessada-Kefalo**	**0.42**	**166**	P	**Pg**	**05 18 21.6**	**-1.2**
PSDA				S	**Sg**	**05 18 27.7**	**-0.6**
PSDA	**Pessada-Kefalo**	**0.42**	**166**	P	**Pg**	**05 18 21.4**	**-1.3**
PSDA				S	**Sg**	**05 18 27.7**	**-0.6**
ZAK2	**Zakynthos**	**0.81**	**154**	P	**Pg**	**05 18 29.2**	**-1.0**
PVO	**Paravola**	**0.84**	**83**	P	**Pg**	**05 18 29.7**	**-1.2**
PVO	**Paravola**	**0.84**	**83**	P	**Pg**	**05 18 29.5**	**-1.4**
LTHK	**Lithakia**	**0.86**	**159**	P	**Pg**	**05 18 29.0**	**-2.2**
LTHK				S	**Sg**	**05 18 42.1**	**-0.3**
LTHK	**Lithakia**	**0.86**	**159**	P	**Pg**	**05 18 29.0**	**-2.2**
LTHK				S	**Sg**	**05 18 41.1**	**-1.3**
RLS	**Riolos of Patr**	**0.92**	**120**	P	**Pg**	**05 18 30.6**	**-1.7**
RLS	**Riolos of Patr**	**0.92**	**120**	P	**Pg**	**05 18 30.5**	**-1.8**
IGT	**Igoumenitsa**	**1.02**	**355**	P	**Pg**	**05 18 33.6**	**-0.6**
IGT	**Igoumenitsa**	**1.02**	**355**	P	**Pg**	**05 18 33.8**	**-0.4**
IGT	**Igoumenitsa**	**1.02**	**355**	P	**Pg**	**05 18 33.6**	**-0.6**
	baz=350						
IGT				S	**Sn**	**05 18 49.0**	**-0.3**
	baz=350						
DRO	**Drossia**	**1.14**	**119**	P	**Pb**	**05 18 34.2**	**-2.2**
DRO	**Drossia**	**1.14**	**119**	P	**Pb**	**05 18 34.0**	**-2.4**
EFP	**Efpalio**	**1.14**	**94**	P	**Pb**	**05 18 33.7**	**-2.7**
ANX	**Ano Chora**	**1.15**	**86**	P	**Pb**	**05 18 34.8**	**-1.8**
JAN	**Janina**	**1.18**	**15**	P	**Pg**	**05 18 37.3**	**+0.1**
TRIZ	**Trizonia**	**1.28**	**96**	P	**Pn**	**05 18 36.4**	**-2.1**
SRN	**Sarande**	**1.41**	**346**	P	**Pb**	**05 18 40.9**	**0.0**
	baz=343						
SRN				S	**Sg**	**05 19 01.5**	**+1.7**
	baz=343						
SRN				AMP			
	comp=N,20nm,0.9s,baz=343						
AGG	**Agios Georgios**	**1.55**	**70**	P	**Pn**	**05 18 41.5**	**-0.8**
AGG	**Agios Georgios**	**1.55**	**70**	P	**Pg**	**05 18 44.5**	**+0.2**
AGG						05 19 05.9	
AGG	**Agios Georgios**	**1.55**	**70**		**Pg**	**05 18 44.5**	**+0.2**
AGG				Sn	**Sg**	**05 19 05.9**	**+1.4**
THL	**Klokotos Trika**	**1.60**	**49**	P	**Pn**	**05 18 43.1**	**+0.2**
LSK	**Leskovik**	**1.63**	**4**	P	**Pb**	**05 18 44.8**	**0.0**
	baz=0.0						
LSK				S	**Sg**	**05 19 07.6**	**+0.5**
	baz=0.0						
LSK				AMP			
	comp=N,72nm,0.7s,baz=0.0						
ITM	**Ithomi**	**1.77**	**138**		**Pb**	**05 18 47.1**	**-0.1**
ITM				Sn	**Sg**	**05 19 12.0**	**+0.4**
VLO	**Vlora**	**2.08**	**339**	P	**Pn**	**05 18 49.8**	**+0.2**
VLO	**Vlora**	**2.08**	**339**		**Pn**	**05 18 49.8**	**+0.2**
VLO	**Vlora**	**2.08**	**339**	P	**Pn**	**05 18 50.3**	**+0.7**
	baz=338						
VLO				AMP			
	comp=N,37nm,1.1s,baz=338						
KBN	**Korca**	**2.12**	**7**	P	**Pn**	**05 18 51.2**	**+1.1**
KBN						05 19 19.5	
KBN	**Korca**	**2.12**	**7**		**Pn**	**05 18 51.2**	**+1.1**
KBN					**Sb**	**05 19 19.5**	**0.0**
KBN	**Korca**	**2.12**	**7**	P	**Pb**	**05 18 52.3**	**-0.8**
	baz=4.0						
KBN				S	**Sb**	**05 19 20.1**	**+0.7**
	baz=4.0						
KBN				AMP			
	comp=N,19nm,0.9s,baz=4.0						
SCTE	**Santa Cesarea**	**2.19**	**316**		**Pn**	**05 18 51.2**	**+0.2**
SCTE	**Santa Cesarea**	**2.19**	**316**	P	**Pn**	**05 18 51.0**	**0.0**
	baz=315						
FNA	**Florina**	**2.37**	**17**	P	**Pn**	**05 18 55.2**	**+1.6**
FNA						05 19 25.6	
FNA	**Florina**	**2.37**	**17**		**Pn**	**05 18 55.2**	**+1.6**
FNA				Sn	**Sb**	**05 19 25.6**	**-1.2**
FNA	**Florina**	**2.37**	**17**	P	**Pn**	**05 18 55.1**	**+1.6**
	baz=14						
OHR	**Ohrid**	**2.60**	**6**	*e*Pn	**Pb**	**05 18 59.2**	**-2.2**
OHR				*e*Sn	**Sb**	**05 19 31.8**	**-1.6**
OHR	**Ohrid**	**2.60**	**6**	*e*P	**Pb**	**05 18 59.2**	**-2.2**
OHR				*e*S	**Sb**	**05 19 31.8**	**-1.6**
OHR	**Ohrid**	**2.60**	**6**	*i* Pn	**Pb**	**05 18 59.1**	**-2.2**
GRG	**Griva**	**2.86**	**31**	P	**Pn**	**05 19 01.6**	**+1.3**
TIR	**Tirane**	**2.86**	**351**	⇑P	**Pn**	**05 19 01.0**	**+0.7**
TIR	**Tirane**	**2.86**	**351**	*e*Pn	**Pn**	**05 19 01.6**	**+1.3**
TIR				*e*Sn	**Sn**	**05 19 36.1**	**+1.3**
TIR	**Tirane**	**2.86**	**351**	P	**Pn**	**05 19 01.1**	**+0.8**
TIR	**Tirane**	**2.86**	**351**		**Pn**	**05 19 01.1**	**+0.8**
TIR	**Tirane**	**2.86**	**351**	P	**Pn**	**05 19 01.4**	**+1.1**
	baz=350						
THE	**Thessaloniki**	**2.87**	**42**	P	**Pb**	**05 19 03.8**	**-2.0**
PAIG	**Paliouri**	**2.87**	**60**	P	**Pn**	**05 19 03.1**	**+2.7**
TIP	**Timpagrande**	**2.96**	**284**	⇓P	**Pn**	**05 19 02.3**	**+0.6**
TIP				⇑S	**Sn**	**05 19 34.8**	**-2.5**
TIP	**Timpagrande**	**2.96**	**284**	Pn	**Pn**	**05 19 01.9**	**+0.2**
PHP	**Peshkopia**	**3.16**	**360**	P	**Pn**	**05 19 05.7**	**+1.2**
	baz=359						
PHP				AMP			
	comp=N,6.8nm,1.5s,baz=359						
SOH	**Sokhos**	**3.21**	**43**	P	**Pn**	**05 19 06.7**	**+1.6**
VAY	**Valandovo**	**3.24**	**29**	*e*Pn	**Pn**	**05 19 07.0**	**+1.6**
VAY	**Valandovo**	**3.24**	**29**	*e*P	**Pn**	**05 19 07.0**	**+1.6**
VAY	**Valandovo**	**3.24**	**29**	*i* Pn	**Pn**	**05 19 06.5**	**+1.1**
KNT	**Kendrikon**	**3.24**	**35**	P	**Pn**	**05 19 07.1**	**+1.6**
OUR	**Ouranopolis**	**3.28**	**55**	P	**Pb**	**05 19 10.1**	**-2.7**
STIP	**Stip**	**3.44**	**22**	*i* Pn	**Pn**	**05 19 11.0**	**+2.8**
SKO	**Skopje**	**3.53**	**12**	P	**Pn**	**05 19 10.9**	**+1.4**
SKO	**Skopje**	**3.53**	**12**	*i* Pn	**Pn**	**05 19 10.6**	**+1.1**
SRS	**Serrai**	**3.54**	**42**	P	**Pn**	**05 19 11.0**	**+1.3**
ULC	**Ulcinj**	**3.56**	**345**	P	**Pn**	**05 19 09.7**	**-0.2**
ULC	**Ulcinj**	**3.56**	**345**	⇑*i*Pn	**Pn**	**05 19 09.2**	**-0.7**
ULC				*i* Sn	**Sn**	**05 19 50.0**	**-2.1**
CEL	**Celeste**	**3.59**	**267**		**Pn**	**05 19 10.6**	**+0.2**
CEL				Sn	**Sn**	**05 19 50.6**	**-2.3**
MATE	**Matera**	**3.59**	**307**	⇑P	**Pn**	**05 19 09.8**	**-0.5**
DRME	**Dracevica, Mon**	**3.79**	**346**	*e*Pn	**Pn**	**05 19 13.0**	**0.0**
DRME	**Dracevica, Mon**	**3.79**	**346**	⇑*i*Pn	**Pn**	**05 19 12.6**	**-0.4**
DRME				*i* Sn	**Sn**	**05 19 55.3**	**-2.4**
BCI	**Bajram Curri**	**3.85**	**356**	P	**Pn**	**05 19 15.2**	**+1.2**
	baz=355						
BCI				AMP			
	comp=E,7.6nm,1.0s,baz=355						
BUM	**Brajici-Budva**	**3.96**	**343**	*e*Pn	**Pn**	**05 19 14.8**	**-0.7**
BUM				*i* Sn	**Sn**	**05 19 59.3**	**-2.7**
PDG	**Podgorica**	**4.01**	**347**	⇑P	**Pn**	**05 19 15.7**	**-0.4**
PDG				⇑S	**Sn**	**05 19 57.1**	**-6.0**
PDG	**Podgorica**	**4.01**	**347**	*e*Pn	**Pn**	**05 19 15.7**	**-0.4**
PDG				*e*Sn	**Sn**	**05 20 02.7**	**-0.4**
PDG	**Podgorica**	**4.01**	**347**	*e*Pn	**Pn**	**05 19 16.0**	**-0.1**
PDG	**Podgorica**	**4.01**	**347**	Pn	**Pn**	**05 19 15.7**	**-0.4**
TTG	**Podgorica**	**4.01**	**347**	⇑*i*Pn	**Pn**	**05 19 15.6**	**-0.5**
TTG				*i* Sn	**Sn**	**05 20 00.7**	**-2.4**
PVY	**Plav**	**4.09**	**355**	*e*Pn	**Pn**	**05 19 16.7**	**-0.6**
PVY				*i* Sn	**Sn**	**05 20 02.7**	**-2.5**
PRVS	**Prvonek**	**4.17**	**17**	*e*Pn	**Pn**	**05 19 19.7**	**+1.4**
CEME	**Cevo**	**4.19**	**344**	⇑*i*Pn	**Pn**	**05 19 17.6**	**-1.0**
CEME				*i* Sn	**Sn**	**05 20 04.8**	**-2.8**
HCY	**Herceg Novi**	**4.20**	**340**	P	**Pn**	**05 19 17.8**	**-0.9**
HCY	**Herceg Novi**	**4.20**	**340**	*e*Pn	**Pn**	**05 19 17.4**	**-1.2**
HCY	**Herceg Novi**	**4.20**	**340**	⇓*i*Pn	**Pn**	**05 19 17.5**	**-1.2**
HCY				*i* Sn	**Sn**	**05 20 04.9**	**-2.9**
BOSS	**Bosilegrad**	**4.26**	**21**	*e*Pn	**Pn**	**05 19 21.8**	**+2.3**
IVA	**Berane**	**4.37**	**355**	⇑*i*Pn	**Pn**	**05 19 20.7**	**-0.4**
IVA				*i* Sn	**Sn**	**05 20 09.4**	**-2.7**
KOME	**Kolasin**	**4.39**	**351**	⇓*i*Pn	**Pn**	**05 19 20.8**	**-0.5**
KOME				*i* Sn	**Sn**	**05 20 09.7**	**-2.8**
NKME	**Niksic**	**4.39**	**345**	⇑*i*Pn	**Pn**	**05 19 20.8**	**-0.6**
NKME				*i* Sn	**Sn**	**05 20 09.7**	**-2.9**
BARS	**Barje**	**4.42**	**13**	*e*Pn	**Pn**	**05 19 22.6**	**+1.0**
NKY	**Niksic**	**4.43**	**346**	P	**Pn**	**05 19 22.9**	**+0.9**
NKY	**Niksic**	**4.43**	**346**	*e*Pn	**Pn**	**05 19 21.5**	**-0.5**
NKY				*i* Sn	**Sn**	**05 20 10.6**	**-3.0**
TREB	**Trebinje**	**4.49**	**340**	*e*Pn	**Pn**	**05 19 21.7**	**-0.9**
TREB				*e*Sn	**Sn**	**05 20 12.8**	**-2.1**
TREB	**Trebinje**	**4.49**	**340**	*e*Pn	**Pn**	**05 19 21.3**	**-1.3**
DBRK	**Dubrovnik**	**4.50**	**338**	*e*Pn	**Pn**	**05 19 21.6**	**-1.2**
DBRK				Sn	**Sn**	**05 20 12.2**	**-3.1**
VTS	**Vitosha**	**4.61**	**26**	⇑P	**Pn**	**05 19 26.0**	**+1.6**
VTS				⇑S	**Sn**	**05 20 19.1**	**+1.0**
VTS	**Vitosha**	**4.61**	**26**	P	**Pn**	**05 19 25.4**	**+1.0**
VTS	**Vitosha**	**4.61**	**26**	Pn	**Pn**	**05 19 25.4**	**+1.0**
BRY	**Bratogost**	**4.61**	**342**	P	**Pn**	**05 19 23.9**	**-0.6**
BRY	**Bratogost**	**4.61**	**342**	*e*Pn	**Pn**	**05 19 23.5**	**-1.0**
BRY	**Bratogost**	**4.61**	**342**	⇓*i*Pn	**Pn**	**05 19 23.5**	**-1.0**
BRY				*i* Sn	**Sn**	**05 20 14.9**	**-3.3**
SELS	**Selova**	**4.72**	**6**	*e*Pn	**Pn**	**05 19 25.3**	**-0.6**
EZN	**Ezine**	**4.75**	**72**	P	Pn	05 19 31.7	+5.6
SJES	**Sjenica**	**4.75**	**356**	*e*Pn	**Pn**	**05 19 27.0**	**+0.6**
IDI	**Anoyia**	**4.80**	**131**	Pn	**Pn**	**05 19 29.8**	**+2.8**
	comp=E,3.3nm,0.3s,baz=277,slow=10,SNR=9.6						

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IDI                                 Sn     Sn       05 20 22.2 -0.4
      comp=E,14nm,0.3s,baz=286,slow=23,SNR=7.8
UPM   Unac-Piva          4.83 346  ePn     Pn       05 19 27.4  0.0
UPM   Unac-Piva          4.83 346⇑ iPn     Pn       05 19 26.9 -0.5
UPM                                i Sn    Sn       05 20 20.0 -3.4
STON  Ston               4.83 335  ePn     Pn       05 19 26.5 -0.7
STON                               eSn     Sn       05 20 20.8 -2.3
STON  Ston               4.83 335  ePn     Pn       05 19 25.7 -1.5
STON  Ston               4.83 335  ePn     Pn       05 19 25.9 -1.3
PLD   Plovdiv            4.83  41   P      Pn       05 19 32.5 +5.1
SGRT  San Giovanni R     4.85 313   Pn     Pn       05 19 27.0 -0.6
PLE   Pljevlja           4.87 351   P      Pn       05 19 28.9 +0.9
PLE   Pljevlja           4.87 351⇓ iPn     Pn       05 19 27.6 -0.4
PLE                                i Sn    Sn       05 20 21.4 -3.1
VAE   Valguarnera        4.88 260   Pn     Pn       05 19 30.0 +1.9
      comp=E,2.0nm,0.3s,baz=182,slow=9.4,SNR=5.5
VAE                                 Sn     Sn       05 20 26.0 +1.2
      comp=E,3.8nm,0.3s,baz=134,slow=9.9,SNR=3.6
ALN   Alexandroupoli     4.92  59   P      Pn       05 19 30.0 +1.4
ALN   Alexandroupoli     4.92  59   Pn     Pn       05 19 30.0 +1.4
RAFF  Raffo Rosso        4.99 257          Pn       05 19 28.9 -0.7
RUDO  Rudo               5.16 351  ePn     Pn       05 19 30.9 -1.0
PAOL  Paolisi            5.18 301          Pn       05 19 33.5 +1.2
BOVS  Bovan              5.20  10 ⇑P       Pn       05 19 32.1 -0.2
BOVS  Bovan              5.20  10  ePn     Pn       05 19 32.4  0.0
GRUS  Gruza              5.37   2  ePn     Pn       05 19 34.7  0.0
BBLS  Lazi&#263;i        5.40 352  ePn     Pn       05 19 34.4 -0.8
BBLS  Lazi&#263;i        5.40 352  ePn     Pn       05 19 33.9 -1.3
MAKA  Makarska           5.43 332  ePn     Pn       05 19 34.6 -0.9
MAKA                                Sn     Sn       05 20 34.4 -3.6
HVAR  Hvar               5.56 328  ePn     Pn       05 19 36.0 -1.3
HVAR                                Sn     Sn       05 20 37.2 -4.0
RICI  Ricice             5.57 334  ePn     Pn       05 19 36.2 -1.3
DIVS  Divibare           5.59 357  ePn     Pn       05 19 37.2 -0.6
DIVS  Divibare           5.59 357  ePn     Pn       05 19 36.7 -1.1
DIVS  Divibare           5.59 357          Pn       05 19 37.0 -0.8
CORL  Corleone           5.67 266          Pn       05 19 40.1 +1.2
HAPS  Han Pijesak,BI     5.68 349  ePn     Pn       05 19 38.2 -0.9
TRUS  Trudelj            5.70 360  ePn     Pn       05 19 39.3  0.0
CLTB  Caltabellotta      5.79 263   Pn     Pn       05 19 41.3 +0.7
PLVB  Pleven             5.79  32 ⇑P       Pn       05 19 42.5 +2.0
BALB  Balikesir          5.88  77          Pn       05 19 44.7 +2.9
KUBS  Kucevo             5.96   8  ePn     Pn       05 19 44.2 +1.4
TEKS  Tekeris            6.07 354  ePn     Pn       05 19 42.5 -1.8
TEKS  Tekeris            6.07 354  ePn     Pn       05 19 41.9 -2.4
KIJV  Kijevo             6.27 332  ePn     Pn       05 19 46.7 -0.4
ZIRJ  Zirje              6.29 326  ePn     Pn       05 19 46.1 -1.2
ZIRJ                                Sn     Sn       05 20 54.6 -4.5
MDVR  Moldovita          6.33   8 ⇑P       Pn       05 19 47.8 -0.2
MGRS  Mrkonjic Grad      6.41 338  ePn     Pn       05 19 48.7 -0.4
MORI  Morici             6.43 328  ePn     Pn       05 19 48.6 -0.6
HERR  Herculane          6.52  12 ⇑P       Pn       05 19 52.1 +1.5
AQU   L'Aquila           6.60 308   P      Pn       05 19 53.3 +1.5
AQU   L'Aquila           6.60 308  ePn     Pn       05 19 53.5 +1.8
AQU   L'Aquila           6.60 308   Pn     Pn       05 19 53.3 +1.5
FRGS  Fruska Gora        6.65 356 ⇑P       Pn       05 19 51.4 -1.0
FRGS  Fruska Gora        6.65 356  ePn     Pn       05 19 51.3 -1.0
FRGS  Fruska Gora        6.65 356  ePn     Pn       05 19 50.6 -1.8
COPA  Copaceanca         6.66  31 ⇑P       Pn       05 19 55.8 +3.4
BLY   Banja Luka         6.69 340  ePn     Pn       05 19 53.1 +0.3
BLY   Banja Luka         6.69 340  ePn     Pn       05 19 52.2 -0.6
RAZG  Razgrad            6.81  40 ⇓P       Pn       05 19 58.5 +4.0
DUGI  Dugi Otok          6.81 325  ePn     Pn       05 19 53.8 -0.7
UDBI  Udbina             6.96 331  ePn     Pn       05 19 56.8 +0.2
MRAK  Mrakovica          7.01 339  ePn     Pn       05 19 56.3 -1.0
PRIJ  Prijedor           7.03 338  ePn     Pn       05 19 55.4 -2.1
NRCA  Norcia             7.05 310          Pn       05 19 58.4 +0.5
GZR   Gura Zlata         7.08  13 ⇓P       Pn       05 19 58.8 +0.5
BZS   Buzias             7.14   7 ⇑P       Pn       05 19 59.0 -0.1
BZS   Buzias             7.14   7   P      Pn       05 20 00.5 +1.4
BZS                                 pmax   pmax
      comp=Z,18nm,1.3s
NVLJ  Novalja            7.35 327  ePn     Pn       05 20 01.0 -0.8
LOT   Lotru              7.35  19 ⇓P       Pn       05 20 04.9 +2.9
ARR   Arges              7.52  23 ⇑P       Pn       05 20 07.2 +2.9
MTUR  Matau              7.53  26 ⇑P       Pn       05 20 07.0 +2.5
MURB  Monte Urbino       7.65 311          Pn       05 20 07.2 +1.1
VOIR                     7.71  25 ⇓P       Pn       05 20 08.9 +1.9
VOIR                     7.71  25   P      Pn       05 20 09.1 +2.1
VOIR                                pmax   pmax
      comp=Z,21nm,0.8s
KOVH  Kovagotottos       7.76 348  ePN     Pn       05 20 05.6 -1.9
KOVH  Kovagotottos       7.76 348  eP      Pn       05 20 06.3 -1.3
KOVH  Kovagotottos       7.76 348  eSN     Sn       05 21 28.3 -7.1
SIRR  Siria              7.79   6 ⇑P       Pn       05 20 08.7 +0.6
MORH  Mrgy, Hungar       7.81 351  ePN     Pn       05 20 06.2 -1.9
MORH  Mrgy, Hungar       7.81 351  eP      Pn       05 20 06.9 -1.3
MORH  Mrgy, Hungar       7.81 351  eSN     Sn       05 21 28.8 -7.7
MORH  Mrgy, Hungar       7.81 351  ePn     Pn       05 20 06.0 -2.2
BOJS  Bojanci            7.98 333  i Pn    Pn       05 20 09.9 -0.6
BOJS                               eSn     Sn       05 21 37.7 -3.2
OZLJ  Ozalj              8.00 334  ePn     Pn       05 20 10.1 -0.7
ISR   Istrita            8.01  33 ⇑P       Pn       05 20 15.3 +4.3
ISR   Istrita            8.01  33   P      Pn       05 20 16.9 +5.9
ISR                                 pmax   pmax
      comp=Z,89nm,0.9s
SMRN  Sveta Marina       8.03 326  ePn     Pn       05 20 10.2 -1.1
MLR   Muntele Rosu       8.07  29 ⇓P       Pn       05 20 15.8 +3.8
MLR   Muntele Rosu       8.07  29   Pn     Pn       05 20 14.0 +2.0
      comp=Z,0.7nm,0.3s,baz=200,slow=6.7,SNR=19
MLR   Muntele Rosu       8.07  29   P      Pn       05 20 14.0 +2.0
PTJ   Puntijarka         8.10 337   P      Pn       05 20 10.6 -1.7
BRJN  Brijuni            8.11 324  ePn     Pn       05 20 11.5 -0.9
RIY   Rijeka             8.13 329  ePn     Pn       05 20 11.2 -1.3
GBRS  Gornja Briga       8.17 331  i Pn    Pn       05 20 12.7 -0.5
GBRS                               eSn     Sn       05 21 40.6 -4.9
CRES  Cresnjev           8.19 335  ePn     Pn       05 20 11.9 -1.5
DOPR  Dopca              8.29  25 ⇑P       Pn       05 20 18.1 +3.3
LOBO  Lobor              8.29 338  ePn     Pn       05 20 13.3 -1.6
VISS  Visnje             8.39 332  i Pn    Pn       05 20 15.7 -0.4
GRER                     8.40  33 ⇓P       Pn       05 20 20.9 +4.6
BISRR Bisoca             8.42  32 ⇑P       Pn       05 20 21.0 +4.3
DRGR                     8.43  11 ⇓P       Pn       05 20 18.2 +1.4
DRGR                     8.43  11   P      Pn       05 20 18.3 +1.4
DRGR                                pmax   pmax
      comp=Z,6.0nm,0.7s
CASP  Castiglione de     8.45 303          Pn       05 20 17.8 +0.8
COVR  Voineasa-Covas     8.47  28 ⇑P       Pn       05 20 21.1 +3.8
CEY   Cerknica           8.49 330  ePn     Pn       05 20 17.0 -0.6
MDUB  Mudurnu            8.53  73          Pn       05 20 20.7 +2.5
OZUR                     8.54  26 ⇑P       Pn       05 20 20.6 +2.3
OSSC  Osservatorio P     8.57 309          Pn       05 20 20.3 +1.6
TIH   Tihany             8.59 348  ePN     Pn       05 20 13.6 -5.3
TIH   Tihany             8.59 348  eP      Pn       05 20 23.1 +4.3
TIH   Tihany             8.59 348  eSN     Sn       05 21 49.5 -6.2
PLOR  Plostina           8.65  30 ⇓P       Pn       05 20 23.7 +4.0
PLOR  Plostina           8.65  30   P      Pn       05 20 23.7 +4.0
VRI   Vrincioaia         8.69  30 ⇑P       Pn       05 20 24.0 +3.7
VRI   Vrincioaia         8.69  30   P      Pn       05 20 25.9 +5.6
VRI                                 pmax   pmax
      comp=Z,45nm,1.0s
LJU   Ljubljana          8.71 332  ePn     Pn       05 20 19.6 -0.9
LJU   Ljubljana          8.71 332  i Pn    Pn       05 20 20.2 -0.3
CFR   Carcaliu           8.78  38 ⇑P       Pn       05 20 25.4 +3.9
CFR   Carcaliu           8.78  38   P      Pn       05 20 25.1 +3.6
CFR                                 pmax   pmax
      comp=Z,14nm,1.6s
MPLH  Magyarpolny        8.91 347  eP      Pn       05 20 22.7 -0.6
MPLH  Magyarpolny        8.91 347  ePN     Pn       05 20 22.3 -0.9
MPLH                               eSN     Sn       05 21 59.3 -4.3
CSKK  Cskako             8.98 350  ePN     Pn       05 20 26.4 +2.0
SOKA  Soboth             9.08 336  i Pn    Pn       05 20 24.4 -1.3
      comp=Z,58nm,0.8s,SNR=64
SOKA                               eSn     Sn       05 22 03.1 -4.9
      comp=Z,6.0nm,0.5s
OBKA  Obir               9.10 333  i Pn    Pn       05 20 24.8 -1.2
      comp=Z,10nm,0.4s,SNR=13
OBKA                               eSn     Sn       05 22 05.1 -3.3
      comp=Z,30nm,0.6s
TESR  Tescani            9.20  28 ⇑P       Pn       05 20 30.2 +3.0
KEST  Kesra              9.30 256   Pn     Pn       05 20 30.1 +1.4
      comp=Z,0.4nm,0.3s,baz=6.6,slow=8.7,SNR=12
KEST                                LR     LR       05 24 43.5
      comp=Z,224nm,20.1s,baz=68,slow=42
PSZ   Piszkesteto        9.40 358 ⇑P       Pn       05 20 29.4 -0.7
PSZ   Piszkesteto        9.40 358  ePN     Pn       05 20 29.2 -1.0
PSZ   Piszkesteto        9.40 358  eP      Pn       05 20 31.4 +1.2
PSZ   Piszkesteto        9.40 358   Pn     Pn       05 20 29.8 -0.4
ARSA  Arzberg            9.45 339  ePn     Pn       05 20 29.4 -1.3
      comp=Z,4.5nm,0.4s
MYKA  Terra Mystica      9.53 330  ePn     Pn       05 20 31.0 -1.0
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      comp=Z,12nm,0.8s,SNR=5.9
STAL  STALIGIAL          9.62 326          Pn       05 20 32.0 -1.1
TRPA  Tarpa              9.73   8 ⇑P       Pn       05 20 34.3 -0.2
TRPA  Tarpa              9.73   8  ePN     Pn       05 20 32.0 -2.5
TRPA  Tarpa              9.73   8  eP      Pn       05 20 38.1 +3.6
BURAR Bucovina Array     9.73  19 ⇓P       Pn       05 20 36.2 +1.5
BURAR Bucovina Array     9.73  19   P      Pn       05 20 36.2 +1.5
CTI   Castel Tesino      9.95 322   P      Pn       05 20 36.2 -1.5
CTI   Castel Tesino      9.95 322   Pn     Pn       05 20 36.2 -1.5
KECS  Kecovo             9.96   0  eP      Pn       05 20 37.7  0.0
KECS  Kecovo             9.96   0  ePN     Pn       05 20 37.7  0.0
ZST   Bratislava         9.97 347  eSN     Sn       05 22 22.0 -7.8
CONA  Conrad Observa     9.98 342  ePn     Pn       05 20 37.2 -0.9
      comp=Z,2.5nm,0.5s
KBA   Koelnbreinsper    10.02 331  i Pn    Pn       05 20 38.1 -0.5
      comp=Z,3.6nm,0.3s,SNR=9.7
KBA   Koelnbreinsper    10.02 331   P      Pn       05 20 38.4 -0.3
VYHS  Vyhne             10.04 354  eP      Pn       05 20 39.2 +0.4
VYHS                               e                05 22 27.0
VYHS  Vyhne             10.04 354  ePN     Pn       05 20 39.1 +0.3
VYHS                               eSN     Sn       05 22 26.9 -4.5
ABTA  Abfaltersbach     10.09 327  i Pn    Pn       05 20 38.4 -1.2
      comp=Z,18nm,0.7s,SNR=17
MODS  Modra-Piesok      10.12 348  eP      Pn       05 20 39.2 -0.7
MODS                               e                05 22 27.9
MODS  Modra-Piesok      10.12 348  ePN     Pn       05 20 39.2 -0.7
MODS                               eSN     Sn       05 22 27.9 -5.4
BRTR  Keskin Array B    10.32  79   Pn     Pn       05 20 45.6 +2.9
      baz=265,slow=13,SNR=1.8
MOA   Molln             10.36 336  ePn     Pn       05 20 42.0 -1.1
      comp=Z,27nm,0.7s,SNR=15
LANS  Liptovska Anna    10.65 356  eP      Pn       05 20 54.0 +6.8
LANS  Liptovska Anna    10.65 356  ePN     Pn       05 20 54.0 +6.8
WTTA  Wattenberg        10.87 326  ePn     Pn       05 20 49.8 -0.5
      comp=Z,21nm,0.6s,SNR=17
WTTA  Wattenberg        10.87 326   P      Pn       05 20 50.3  0.0
WTTA                                pmax   pmax
      comp=Z,45nm,0.9s
NIE   Niedzica          10.90 359   P      Pn       05 20 52.7 +2.2
NIE                                 pmax   pmax
      comp=Z,8.0nm,1.2s
KRUC  Moravsky          10.94 346   P      Pn       05 20 51.6 +0.5
KRUC                                pmax   pmax
      comp=Z,8.0nm,0.8s
WATA  Walderalm         10.95 326  ePn     Pn       05 20 50.9 -0.5
      comp=Z,46nm,0.9s,SNR=19
WATA                                Sn     Sn       05 22 53.3 -0.6
      comp=Z,22nm,0.8s
SQTA  Sankt Quirin      11.02 325  ePn     Pn       05 20 52.5 +0.1
      comp=Z,13nm,0.8s,SNR=6.6
FETA  Feichten          11.10 323  ePn     Pn       05 20 53.4  0.0
      comp=Z,6.0nm,0.6s
VRAC  Vranov            11.14 347   Pn     Pn       05 20 53.2 -0.6
      comp=Z,0.0nm,0.3s,baz=178,slow=11,SNR=4.8
MOTA  Moosalm           11.16 325  i Pn    Pn       05 20 54.8 +0.5
      comp=Z,64nm,0.8s,SNR=24
CKRC  Cesky Krumlov     11.21 339  ePN     Pn       05 20 54.3 -0.6
CKRC                                AMS    AMS      05 25 50.0
      comp=Z,1µm,9.1s
DAVOX Davos/Dischmat    11.34 320   Pn     Pn       05 20 57.2 +0.4
      comp=Z,0.9nm,0.3s,baz=146,slow=15,SNR=35
DAVOX                               Sn     Sn       05 23 02.1 -1.5
      comp=Z,0.7nm,0.3s,baz=302,slow=16,SNR=1.8
DAVOX                               LR     LR       05 26 46.5
      comp=Z,280nm,18.5s,baz=92,slow=46
TUE   Stuetta           11.41 318   Pn     Pn       05 20 57.3 -0.4
GERES GERESS Array B    11.42 337   Pn     Pn       05 20 56.9 -0.8
      comp=Z,0.7nm,0.3s,baz=158,slow=14,SNR=12
GERES                               Sn     Sn       05 23 04.4 -0.9
      comp=Z,0.5nm,0.3s,baz=162,slow=24,SNR=2.0
GERES                               LR     LR       05 26 36.9
      comp=Z,591nm,18.4s,baz=100,slow=44
RETA  Reutte            11.42 325  ePn     Pn       05 20 57.9 +0.2
      comp=Z,7.6nm,0.7s
MORC  Moravsky Berou    11.45 350 ⇑P       Pn       05 20 57.8 -0.3
MORC  Moravsky Berou    11.45 350   P      Pn       05 20 58.8 +0.7
MORC  Moravsky Berou    11.45 350          Pn       05 20 58.8 +0.7
ISO   Isola             11.55 304   P      Pn       05 21 02.6 +3.1
ISO                                 pmax   pmax
      comp=Z,25nm,1.7s
DAVA  Damuels           11.69 322  ePn     Pn       05 21 01.3 -0.2
      comp=Z,6.2nm,0.5s
DAVA                               eSn     Sn       05 23 08.3 -3.8
      comp=Z,7.0nm,0.7s
KHC   Kasperske Hory    11.71 337  eP      Pn       05 20 59.9 -1.7
KHC                                e                05 23 03.8
KHC                                 MLR    MLR
      comp=Z,900nm,10.7s
KHC   Kasperske Hory    11.71 337  ePN     Pn       05 20 59.9 -1.7
KHC                                eSN     Sn       05 23 03.8 -8.5
KHC                                 AMS    AMS      05 26 10.0
      comp=Z,900nm,10.7s
KRLC  Kraliky           11.85 348   P      Pn       05 21 04.1 +0.5
KRLC                                pmax   pmax
      comp=Z,26nm,0.5s
WET   Wettzell          11.94 335   P      Pn       05 21 02.8 -2.0
WET                                 pmax   pmax
      comp=Z,19nm,0.9s
BNI   Bardonecchia      12.17 307   P      Pn       05 21 13.0 +4.9
BNI                                 pmax   pmax
      comp=Z,14nm,1.4s
DPC   Dobruska-Polom    12.19 347  eP      Pn       05 21 08.9 +0.7
DPC                                 MLR    MLR
      comp=Z,1µm,17.3s
DPC   Dobruska-Polom    12.19 347  ePN     Pn       05 21 08.9 +0.7
DPC                                 AMS    AMS      05 28 40.0
      comp=Z,1µm,17.3s
PRU   Pruhonice         12.22 342  eP      Pn       05 21 08.1 -0.5
PRU                                 MLR    MLR
      comp=Z,1µm,18.9s
PRU   Pruhonice         12.22 342  ePN     Pn       05 21 08.1 -0.5
PRU                                 AMS    AMS      05 29 20.0
      comp=Z,1µm,18.9s
SENIN Lac Senin/Sane    12.47 313   Pn     Pn       05 21 12.7 +0.4
ORIF  Oris-en-Rattie    12.62 305   P      Pn       05 21 17.5 +3.3
ORIF                                pmax   pmax
      comp=Z,19nm,1.7s
BFO   Black Forest      13.17 322   P      Pn       05 21 21.1 -0.5
BFO   Black Forest      13.17 322   Pn     Pn       05 21 21.1 -0.5
MMAI  Mount Meron Ar    13.32 110   Pn     Pn       05 21 26.5 +2.8
      comp=Z,2.4nm,0.3s,baz=277,slow=15,SNR=4.7
MOX   Moxa              13.65 336   P      Pn       05 21 27.0 -1.1
MOX                                 pmax   pmax
      comp=Z,23nm,0.9s
AKASG Malin Array Be    13.67  24   Pn     Pn       05 21 27.0 -1.4
      comp=Z,0.3nm,0.3s,baz=211,slow=12,SNR=2.4
AKBB  Malin Array Si    13.67  24⇑ eP      Pn       05 21 28.8 +0.4
CLL   Collm             13.82 340  ePP     P        05 21 40.0 +1.1
CLL                                i                05 21 43.7
      comp=Z,14nm,1.0s
MALT  Malatya           14.10  85   P      P        05 21 43.5 +1.3
ASF   Jabal al Asfar    14.83 110   Pn     Pn       05 21 45.8 +1.4
      comp=Z,0.2nm,0.3s,baz=327,slow=17,SNR=2.0
WLF   Walferdange       15.13 322  dpP     pP       05 21 55.8 +0.2
WLF   Walferdange       15.13 322   P      Pn       05 21 47.9 -0.3
WLF                                 pmax   pmax
      comp=Z,59nm,1.0s
WLF   Walferdange       15.13 322   Pn     Pn       05 21 47.9 -0.3
SUW   Suwalki           15.61   6  eP      P        05 21 58.6 -0.1
SUW   Suwalki           15.61   6   P      Pn       05 21 52.0 -2.5
SUW                                 pmax   pmax
      comp=Z,41nm,0.8s
SUW   Suwalki           15.61   6   Pn     Pn       05 21 52.0 -2.5
SUW                                 IAmb   IAmb     05 22 04.5
      comp=Z,41nm,0.8s
BTNL  Ternell           15.77 325  dpP     pP       05 22 04.0 +1.2
MEM   Membach           15.84 324  dpP     pP       05 22 04.2 +0.6
BCLA  Clavier           16.04 323  dP      P        05 22 03.7 +0.1
BCLA                               dpP     sP       05 22 06.3 -0.4
KLNR  Kaliningrad       16.09 359  i P     Pn       05 21 58.8 -1.9
BGES  Gesves            16.12 322  dP      P        05 22 03.3 -1.1
BGES                               dpP     sP       05 22 07.2 -0.5
DOU   Dourbes           16.17 321  dP      P        05 22 04.8 -0.2
DOU                                dpP     pP       05 22 07.4 +0.2
DOU                                dPP     PbPb     05 22 56.9 +1.3
MNK   Minsk             16.77  15  eP      Pn       05 22 07.0 -2.3
MNK   Minsk             16.77  15  i P     Pn       05 22 07.1 -2.3
      comp=E,1.0nm,0.7s
MNK                                i P     Pn       05 22 07.1 -2.3
      comp=N,10.0nm,1.1s
MNK                                i P     Pn       05 22 07.1 -2.3
      comp=Z,15nm,0.7s,baz=201
MNK                                i PP    sP       05 22 16.5 +1.2
MNK                                i S     Sn       05 25 10.5 -5.0
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MNK                                i SS    SnSn     05 25 28.9 +0.3
MNK                                i LR    LR       05 27 30.3
MNK                                i LRM   MLR      05 29 42.6
      comp=Z,89nm,14.1s
MNK                                i LRM   MLR      05 29 50.9
      comp=N,244nm,17.9s
MNK                                i LRM   MLR      05 29 53.4
      comp=E,35nm,16.6s
GURO  Guroymak-BITLI    16.88  83   P      P        05 22 14.3 +1.1
NACGM Naroch            16.94  13  i P     P        05 22 13.0 -0.5
PABE  Paberze           17.16   7  eP      Pn       05 22 14.9 +0.7
PABE                                IAmb   IAmb     05 22 23.3
      comp=Z,43nm,1.0s
PABE  Paberze           17.16   7   Pn     Pn       05 22 14.2  0.0
PABE                                IAmb   IAmb     05 22 15.9
      comp=Z,38nm,0.9s
ISAL  Salakas           17.48  11  eP      P        05 22 20.4 +1.0
PBUR  Paburge           17.54   3   IAmb   IAmb     05 22 19.6
      comp=Z,142nm,1.4s
KIV   Kislovodsk        17.56  65  eP      P        05 22 22.8 +2.3
KIV                                 pmax   pmax
      comp=Z,10.0nm,1.1s
KBZ   Khabaz            17.67  66   P      P        05 22 21.4 -0.2
      comp=Z,0.2nm,0.3s,baz=236,slow=11,SNR=6.0
KBZ   Khabaz            17.67  66⇑ iP      P        05 22 23.5 +1.9
KBZ                                 pmax   pmax
      comp=Z,6.0nm,1.1s
NCK   Nalchik           18.14  67  i P     P        05 22 28.4 +1.6
NCK                                 pmax   pmax
      comp=Z,6.0nm,0.6s
VORD  Divnogorie        18.21  41  eP      P        05 22 29.6 +2.1
VORD                                pmax   pmax
      comp=Z,10.0nm,1.0s
VSR   Storozhevoye      18.29  40  eP      P        05 22 29.4 +1.0
VSR                                 pmax   pmax
      comp=Z,8.0nm,0.5s
GNI   Garni             18.85  77   LR     LR       05 29 50.3
      comp=Z,381nm,18.0s,baz=320,slow=37
GNI   Garni             18.85  77⇑ eP      Pn       05 22 35.9 +0.6
GNI                                 pmax   pmax
      comp=Z,9.0nm,0.9s
ESDC  Sonseca Array     18.98 281   P      P        05 22 35.7 -0.5
      comp=Z,0.2nm,0.3s,baz=75,slow=11,SNR=41
LPSR  Galich'ya Gora    19.04  36  eP      P        05 22 36.7 +0.1
LPSR                                pmax   pmax
      comp=Z,20nm,1.1s
PAB   San Pablo         19.29 281   P      P        05 22 39.0 -0.5
PAB                                 pmax   pmax
      comp=Z,8.0nm,0.9s
PAB   San Pablo         19.29 281   P      P        05 22 39.0 -0.5
VRH   Novokhopyorsk     19.61  43  eP      Pn       05 22 44.5 +0.3
VRH                                 pmax   pmax
      comp=Z,50nm,1.8s
OBN   Obninsk           19.85  28   LR     LR       05 31 20.9
      comp=Z,104nm,18.1s,baz=210,slow=40
OBN   Obninsk           19.85  28⇓ eP      P        05 22 44.6 -0.8
OBN                                 pmax   pmax
      comp=Z,12nm,0.9s
OBN                                 MLR    MLR
      comp=Z,336nm,16.0s
MTSE  Matsula           20.33   5  eP      P        05 22 51.1 +0.5
VSU   Vasula            20.37  10  eP      P        05 22 51.6 +0.5
VSU   Vasula            20.37  10deP       P        05 22 50.7 -0.4
VSU                                 pmax   pmax
      comp=Z,63nm,0.8s
GNBR  Gunib             20.51  71⇑ eP      P        05 22 52.3 -0.5
GNBR                                pmax   pmax
      comp=Z,31nm,1.0s
MOS   Moscow            20.71  28  eP      P        05 22 55.6 +0.8
MOS                                e                05 23 13.9
MOS                                 pmax   pmax
      comp=Z,36nm,1.1s
PBRG  Braganca          21.01 288  eP      P        05 22 59.3 +1.1
MVO   Moncorvo          21.24 286  eP      P        05 23 00.9 +0.2
      comp=Z,32nm,2.0s
MVO                                eLQ     LQ       05 32 52.9
MVO                                eLR     LR       05 34 03.2
      comp=Z,713nm,16.0s
UPP   Uppsala           21.44 356  eP      P        05 23 02.5  0.0
PBAR  Barrancos         21.54 278  eP      P        05 23 04.6 +0.7
      comp=Z,28nm,1.8s
PMRV  Marv??o           21.64 281  eP      P        05 23 04.5 -0.5
      comp=Z,38nm,1.7s
PMRV  Marv??o           21.64 281  eLR     LR       05 35 23.5
      comp=Z,718nm,18.0s
PCBR  Castelo Branco    21.66 282  eP      P        05 23 04.9 -0.3
      comp=Z,25nm,1.6s
MTE   Manteigas         21.67 284  eP      P        05 23 05.0 -0.3
      comp=Z,40nm,2.2s
MTE   Manteigas         21.67 284  eLQ     LQ       05 33 37.3
MTE                                eLR     LR       05 36 33.3
      comp=Z,912nm,16.0s
MTE   Manteigas         21.67 284   P      P        05 23 04.2 -1.2
MTE                                 IAmb   IAmb     05 23 05.9
      comp=Z,27nm,1.0s
AAL   Aland             21.68 359  eP      P        05 23 05.0 -0.2
PESTR Estremoz          21.86 280  eP      P        05 23 06.4 -1.0
      comp=Z,23nm,1.3s
PESTR Estremoz          21.86 280   P      P        05 23 06.3 -1.1
PVIS  Viseu             21.91 285  eP      P        05 23 07.7 -0.3
      comp=Z,36nm,1.7s
HFS   Hagfors           22.06 351   P      P        05 23 08.5 -0.7
      comp=Z,16nm,0.6s,baz=163,slow=11,SNR=23
PGAV  Gavieira, Arco    22.15 288  eP      P        05 23 11.7 +1.1
PGAV  Gavieira, Arco    22.15 288  eLQ     LQ       05 33 57.6
PGAV                               eLR     LR       05 35 01.5
      comp=Z,389nm,18.0s
PBEJ  Beja              22.21 278  eP      P        05 23 13.4 +2.3
PVAQ  Vaqueiros         22.21 276  eP      P        05 23 13.7 +2.6
      comp=Z,25nm,1.4s
PVAQ  Vaqueiros         22.21 276  eLQ     LQ       05 34 12.8
PVAQ                               eLR     LR       05 36 23.4
      comp=Z,475nm,16.0s
EVO   Evora             22.24 279  eP      P        05 23 10.3 -1.1
      comp=Z,28nm,1.6s
KONO  Kongsberg         22.25 345⇑ eP      P        05 23 10.5 -0.9
KONO                                pmax   pmax
      comp=Z,11nm,1.1s
PMTG  Montargil         22.33 280  eP      P        05 23 11.3 -1.1
      comp=Z,24nm,1.2s
MESJ  Messejana         22.52 277  eP      P        05 23 15.6 +1.1
MESJ                                IAMs_20 IAMs_20 05 43 51.3
      comp=Z,566nm,12.3s
MESJ  Messejana         22.52 277  eP      P        05 23 15.5 +1.1
MESJ  Messejana         22.52 277  eP      P        05 23 16.6 +2.2
PNCL  Nicolau / Gran    22.71 278  eP      P        05 23 16.4  0.0
      comp=Z,30nm,1.5s
PSBE  So Bento          22.71 282  eP      P        05 23 16.3 -0.2
      comp=Z,42nm,2.2s
NC602 NORSAR Array S    22.93 349   P      P        05 23 18.3 -0.3
NORES NORESS Array B    22.93 349   P      P        05 23 18.6  0.0
EKA   Eskdalemuir Ar    23.12 324   P      P        05 23 19.9 -0.7
      comp=Z,21nm,0.9s,baz=124,slow=10,SNR=20
NAO01 NORSAR Array S    23.14 348   P      P        05 23 20.6 -0.1
FINES FINESS Array B    23.22   7   P      P        05 23 19.9 -1.5
      comp=Z,18nm,0.8s,baz=159,slow=11,SNR=26
FINES FINESS Array B    23.22   7  i P     P        05 23 19.1 -2.3
FINES                               pmax   pmax
      comp=Z,18nm,0.8s
FINES FINESS Array B    23.22   7   P      P        05 23 20.3 -1.1
FIA1  FINESS Array S    23.22   7   P      P        05 23 20.2 -1.2
FIA1                                IAmb   IAmb     05 23 22.6
      comp=Z,28nm,0.9s
NB201 NORSAR Array S    23.27 349   P      P        05 23 22.1  0.0
NB201                               IAmb   IAmb     05 23 27.9
      comp=Z,41nm,1.0s
NB2   NORSAR Subarra    23.27 349   P      P        05 23 21.3 -0.8
      comp=Z,7.9nm,0.7s,baz=159,slow=10
NOA   NORSAR Array B    23.27 349   P      P        05 23 21.7 -0.4
      comp=Z,4.6nm,0.8s,baz=157,slow=12,SNR=24
NBO00 NORSAR Array S    23.34 348   P      P        05 23 21.2 -1.5
BELG  Belogornoye       23.40  45   P      P        05 23 23.2 -0.2
      comp=Z,42nm,0.8s,baz=193,slow=0.5,SNR=14
BELG                                LR     LR       05 33 42.4
      comp=Z,315nm,19.6s,baz=152,slow=40
BELG  Belogornoye       23.40  45c iP      P        05 23 22.9 -0.4
BELG                                pmax   pmax
      comp=Z,3.0nm,0.8s
NC303 NORSAR Array S    23.43 349   P      P        05 23 23.1 -0.5
NC303                               IAmb   IAmb     05 23 29.9
      comp=Z,21nm,0.9s
KLMR  Klimovskoe        25.34  22  eP      P        05 23 39.9 -1.4
KLMR                                pmax   pmax
      comp=Z,20nm,0.9s
KLMR  Klimovskoe        25.34  22  eP      P        05 23 39.9 -1.4
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KLMR				AMP		05 23 47.1	
	comp=Z,20nm,0.9s						
KIRV	**Kirov**	27.40	33	LR	LR	05 35 30.1	
	comp=Z,354nm,18.3s,baz=226,slow=38						
PRGR	**Permogore**	27.88	26	eP	P	05 24 02.2	-2.0
PRGR				pmax	pmax		
	comp=Z,9.0nm,0.4s						
AKTO	**Aktyubinsk**	29.02	53	P	P	05 24 14.1	-0.4
	comp=Z,1.2nm,0.5s,baz=180,slow=2.7,SNR=4.3						
AKTO				LR	LR	05 39 25.7	
	comp=Z,168nm,18.4s,baz=218,slow=44						
GEYT	**Alibeck**	29.46	79	LR	LR	05 36 59.6	
	comp=Z,105nm,18.4s,baz=225,slow=38						
ABKAR	**Akbulak array**	30.09	56	P	P	05 24 24.4	+0.4
TORD	**Torodi Ar. Bea**	30.26	218	P	P	05 24 25.7	-0.1
	comp=Z,1.9nm,0.6s,baz=27,slow=9.1,SNR=11						
ARU	**Arti**	30.84	42	LR	LR	05 38 02.8	
	comp=Z,91nm,19.2s,baz=152,slow=39						
ARCES	**ARCESS Array B**	31.20	3	P	P	05 24 30.9	-2.6
	comp=Z,2.4nm,0.7s,baz=188,slow=8.2,SNR=8.3						
ARCES				LR	LR	05 37 19.2	
	comp=Z,180nm,18.7s,baz=215,slow=37						
ARCES	**ARCESS Array B**	31.20	3	P	P	05 24 31.0	-2.6
KOWA	**Kowa**	32.24	229	P	P	05 24 43.5	+0.2
	comp=Z,1.0nm,0.6s,baz=39,slow=10,SNR=5.6						
BRVK	**Borovoye**	36.88	50	ceP	P	05 25 23.5	+0.5
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BRVK	**Borovoye**	36.88	50	P	P	05 25 24.6	+1.7
BRVK				IAmb	IAmb	05 25 26.3	
	comp=Z,6.5nm,0.9s						
BVAR	**Borovoye Array**	36.94	50	P	P	05 25 22.7	-0.9
	comp=Z,2.2nm,0.7s,baz=241,slow=15,SNR=6.1						
CHGR	**Chuyangaron**	37.71	74	IAmb	IAmb	05 25 34.1	
	comp=Z,19nm,0.8s						
GAR	**Garm**	38.49	73	P	P	05 25 38.8	+1.8
GAR				IAmb	IAmb	05 25 41.4	
	comp=Z,19nm,0.9s						
DBIC	**Dimbokro**	39.11	222	P	P	05 25 43.2	+1.0
	comp=Z,2.5nm,0.6s,baz=6.1,slow=8.4,SNR=3.9						
DBIC				LR	LR	05 43 00.9	
	comp=Z,153nm,18.6s,baz=54,slow=38						
MBAR	**Mbarara**	40.06	164	P	P	05 25 52.8	+2.5
	comp=Z,3.1nm,0.2s,baz=323,slow=5.2,SNR=4.0						
MBAR	**Mbarara**	40.06	164	c iP	P	05 25 52.4	+2.1
MBAR	**Mbarara**	40.06	164	IAmb	IAmb	05 25 54.1	
	comp=Z,8.1nm,1.2s						
AAK	**Ala-Archa**	40.67	66	P	P	05 25 55.7	+0.6
	comp=Z,1.4nm,0.5s,baz=189,slow=7.9,SNR=7.4						
AAK	**Ala-Archa**	40.67	66	ceP	P	05 25 57.5	+2.4
AAK				pmax	pmax		
	comp=Z,12nm,1.0s						
AAK	**Ala-Archa**	40.67	66	P	P	05 25 57.6	+2.5
KURBB	**Kurchatov Arra**	42.07	54	P	P	05 26 06.1	-0.2
	comp=Z,1.0nm,0.3s,baz=280,slow=9.1,SNR=8.3						
KURK	**Kurchatov**	42.12	54	ceP	P	05 26 08.9	+2.2
KURK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KURK	**Kurchatov**	42.12	54	P	P	05 26 06.1	-0.6
KURK	**Kurchatov**	42.12	54	IAmb	IAmb	05 26 19.9	
	comp=Z,5.5nm,0.9s						
ICESG	**Greenland Ices**	44.01	333	eP	P	05 26 20.9	-1.3
SUMG	**Summit**	44.49	338	P	P	05 26 26.6	+0.6
SUMG				pmax	pmax		
	comp=Z,21nm,1.3s						
SUMG	**Summit**	44.49	338	i P	P	05 26 26.0	0.0
SUMG	**Summit**	44.49	338	P	P	05 26 26.6	+0.6
SUMG				IAmb	IAmb	05 26 31.7	
	comp=Z,21nm,1.3s						
NOR	**Nord**	45.14	353	i P	P	05 26 29.0	-1.6
MK31	**Makanchi Array**	45.17	59	i P	P	05 26 30.4	-1.0
MK31	**Makanchi Array**	45.17	59	P	P	05 26 30.9	-0.5
MKAR	**Makanchi Array**	45.17	59	P	P	05 26 29.9	-1.5
	comp=Z,2.9nm,0.7s,baz=278,slow=7.0,SNR=17						
MKAR				LR	LR	05 48 02.7	
	comp=Z,75nm,18.1s,baz=294,slow=40						
MKAR	**Makanchi Array**	45.17	59	P	P	05 26 31.0	-0.4
MKAR	**Makanchi Array**	45.17	59	P	P	05 26 30.9	-0.4
ZAA0	**Zalesovo Array**	45.50	48	IAmb	IAmb	05 26 37.7	
	comp=Z,9.8nm,0.7s						
ZALV	**Zalesovo Beam**	45.50	48	P	P	05 26 32.8	-1.1
	comp=Z,10nm,0.6s,baz=275,slow=8.6,SNR=19						
ZALV				LR	LR	05 47 59.9	
	comp=Z,183nm,18.7s,baz=298,slow=39						
ZALV	**Zalesovo Beam**	45.50	48	P	P	05 26 33.2	-0.7
ZALV	**Zalesovo Beam**	45.50	48	P	P	05 26 33.2	-0.7
DY2G	**Dye2**	46.17	329	eP	P	05 26 38.7	-0.6
NRIK	**Noril'sk**	46.52	27	LR	LR	05 48 45.1	
	comp=Z,234nm,19.3s,baz=304,slow=40						
DGZ	**Jazzator, Alta**	47.86	54	i P	P	05 26 53.4	+0.7
DGZ				pmax	pmax		
	comp=Z,9.0nm,2.4s						
WMQ	**Urumqi**	49.64	61	eP	P	05 27 10.3	+4.0
UPNV	**Upernavik**	49.74	338	eP	P	05 27 06.4	-0.1
TLY	**Talaya**	57.09	47	LR	LR	05 54 43.8	
	comp=Z,167nm,19.9s,baz=348,slow=38						
SCHQ	**Schefferville**	58.17	317	P	P	05 28 07.6	-0.8
	comp=Z,6.9nm,0.7s,baz=98,slow=4.2,SNR=9.5						
SCHQ				LR	LR	05 52 26.6	
	comp=Z,58nm,18.1s,baz=48,slow=35						
SCHQ	**Schefferville**	58.17	317	IAmb	IAmb	05 28 13.3	
	comp=Z,10.0nm,0.9s						
TIXI	**Tiksi**	59.35	20	i P	P	05 28 16.1	-0.2
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GTA	**Gaotai**	59.71	62	eP	P	05 28 21.8	+2.3
GTA				pP	pwP	05 28 25.9	+1.5
GTA				sP	sP	05 28 29.0	+5.6
GTA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
SONM	**Songino Array**	60.28	51	P	P	05 28 22.6	-0.7
	comp=Z,1.8nm,0.9s,baz=282,slow=6.9,SNR=8.0						
SONM				LR	LR	05 56 52.6	
	comp=Z,95nm,18.4s,baz=319,slow=38						
SONM	**Songino Array**	60.28	51	IAmb	IAmb	05 28 26.7	
	comp=Z,3.3nm,1.2s						
ULN	**Ulaanbaatar**	60.67	50	i P	P	05 28 26.7	+0.8
ULN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
LZH	**Lanzhou**	64.10	63	eP	P	05 28 44.1	-5.0
LZH				pP	pP	05 28 47.8	-4.1
LZH				pmax	pmax		
	comp=Z,26nm,1.3s						
YAK	**Yakutsk**	64.84	29	LR	LR	05 59 32.3	
	comp=Z,97nm,21.0s,baz=260,slow=38						
HHC	**Hu-ho-hao-te**	66.88	56	eP	P	05 29 07.9	+0.9
HHC				pmax	pmax		
	comp=Z,16nm,1.1s						
HHC				pmax	pmax		
	comp=Z,230nm,5.6s						
BOSA	**Boshof**	66.93	175	LR	LR	06 01 27.3	
	comp=Z,190nm,18.2s,baz=6.0,slow=39						
A36M	**Sachs Harbour**	67.18	349	P	P	05 29 08.6	+0.4
CMAR	**Chiang Mai Arr**	69.89	82	LR	LR	06 03 46.2	
	comp=Z,41nm,18.1s,baz=5.0,slow=39						
BILL	**Bilibino**	70.70	13	⇓eP	P	05 29 29.2	-0.9
BILL				e		05 32 05.0	
BILL				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BILL				MLR	MLR		
	comp=Z,54nm,15.0s						
INK	**Inuvik**	71.72	350	P	P	05 29 36.3	0.0
	comp=Z,1.2nm,0.8s,baz=14,slow=5.8,SNR=3.4						
INK	**Inuvik**	71.72	350	IAmb	IAmb	05 29 47.5	
	comp=Z,5.5nm,1.4s						
SEY	**Seymchan**	71.84	21	LR	LR	06 03 53.2	
	comp=Z,59nm,18.2s,baz=328,slow=38						
YKA	**Yellowknife Ar**	73.05	340	LR	LR	06 03 09.5	
	comp=Z,72nm,19.8s,baz=0.0,slow=37						
KLR	**Kul'dur**	73.64	40	P	P	05 29 48.0	-0.1
	comp=Z,1.9nm,0.6s,baz=319,slow=7.0,SNR=3.8						
KLR				LR	LR	06 04 42.0	
	comp=Z,38nm,18.6s,baz=330,slow=38						
ULM	**Lac du Bonnet**	75.39	324	P	P	05 29 58.8	+0.6
	comp=Z,4.0nm,0.7s,baz=37,slow=6.8,SNR=5.3						
ULM				LR	LR	06 03 45.3	
	comp=Z,93nm,18.5s,baz=28,slow=36						
H21K	**Melozitna Rive**	76.02	357	P	P	05 30 03.0	+1.4
H21K				IAmb	IAmb	05 30 04.2	
	comp=Z,6.9nm,0.8s						
ILAR	**Eielson Array**	76.56	354	P	P	05 30 04.5	-0.1
	comp=Z,1.3nm,0.9s,baz=1.0,slow=4.9,SNR=11						
ILAR				LR	LR	06 06 13.0	
	comp=Z,34nm,18.8s,baz=352,slow=38						
NJ2	**Nanjing**	76.69	60	eP	P	05 30 05.8	-0.1
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
HDA	**Harding Lake**	76.93	354	P	P	05 30 06.8	+0.1
HDA				IAmb	IAmb	05 30 08.2	
	comp=Z,7.6nm,0.8s						
WRH	**Wood River Hil**	76.95	355	P	P	05 30 07.2	+0.4
WRH				IAmb	IAmb	05 30 08.3	
	comp=Z,7.5nm,0.8s						
USRK	**Ussuriysk Ar.**	77.07	43	P	P	05 30 08.5	+0.6
	comp=Z,2.9nm,0.8s,baz=255,slow=7.5,SNR=4.4						
KSRS	**Korea Array**	79.15	51	LR	LR	06 09 31.5	
	comp=Z,59nm,18.2s,baz=324,slow=39						
SWET	**Sewanee**	79.93	307	P	P	05 30 24.7	+0.8
PETK	**Petropavlovsk-**	81.51	24	LR	LR	06 11 29.1	
	comp=Z,70nm,18.9s,baz=324,slow=39						
R40A	**Maddies Statio**	81.70	313	P	P	05 30 33.8	+0.6
R40A				IAmb	IAmb	05 30 35.5	
	comp=Z,8.8nm,1.1s						
T42A	**Van Buren**	81.87	311	IAmb	IAmb	05 30 35.8	
	comp=Z,6.2nm,0.8s						
KSU1	**Kansas State U**	83.58	316	P	P	05 30 43.6	+0.6
T35A	**Sooner Cattle**	85.08	314	P	P	05 30 50.9	+0.2
MJAR	**Matsushiro Arr**	85.78	46	P	P	05 30 55.4	+1.2
	comp=Z,3.2nm,0.8s,baz=334,slow=3.5,SNR=4.3						
MJAR				LR	LR	06 11 19.3	
	comp=Z,38nm,20.0s,baz=275,slow=37						
MJAR	**Matsushiro Arr**	85.78	46	IAmb	IAmb	05 30 57.3	
	comp=Z,2.9nm,0.9s						
PDAR	**Pinedale Array**	87.24	326	LR	LR	06 11 48.2	
	comp=Z,76nm,18.2s,baz=38,slow=37						
WMOK	**Wichita Mounta**	87.92	314	P	P	05 31 05.1	+0.4
WMOK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WMOK	**Wichita Mounta**	87.92	314	P	P	05 31 05.1	+0.4
WMOK				IAmb	IAmb	05 31 09.2	
	comp=Z,3.7nm,0.8s						
SRU	**San Rafael Swe**	90.61	324	P	P	05 31 17.9	+0.5
SRU				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SRU	**San Rafael Swe**	90.61	324	P	P	05 31 17.9	+0.5
SRU				IAmb	IAmb	05 31 19.0	
	comp=Z,3.3nm,0.9s						
NVAR	**Mina Array Bea**	94.55	329	LR	LR	06 16 07.7	
	comp=Z,70nm,18.6s,baz=12,slow=37						
TXAR	**Lajitas Array**	94.70	314	P	P	05 31 37.6	+1.2
	comp=Z,1.0nm,0.8s,baz=74,slow=5.0,SNR=9.4						
TXAR				LR	LR	06 15 55.4	
	comp=Z,50nm,18.5s,baz=0.0,slow=37						
WRA	**Warramunga Arr**	120.60	92	PKP	PKPdf	05 37 06.1	-0.8
	comp=Z,0.5nm,0.8s,baz=316,slow=2.4,SNR=3.3						
ASAR	**Alice Springs**	122.26	96	PKP	PKPdf	05 37 08.8	-1.2
	comp=Z,0.6nm,0.9s,baz=343,slow=2.9,SNR=4.3						

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*IDC **18** 05:22:00.9±0.7, 26°.28N×142°.37E, h0^{km}, mb4.0/5, mb1 4.1/6, mb1mx3.7/51, mbtmp3.9/6, ML2.9/1, MS3.0/2, Ms1 3.1/2, ms1mx2.5/44, Error ellipse: s-maj=41.2km s-min=6.6km az=83.0*

ISC 18 05:22:05.1±3.2, **26°.4N**±0°.2×**14°3E**±°, **h31**^{km}, **n8**, σ**1^{s}25**/6, **mb4.1**/5, **Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	10.75	341	Pn	Pn	05 24 35.8	-1.1
	0.1nm,0.3s,baz=162,slow=11,SNR=1.5						
KSRS	**Korea Array**	16.57	315	LR	LR	05 31 31.8	
	comp=Z,61nm,19.7s,baz=160,slow=34						
CMAR	**Chiang Mai Arr**	40.94	268	LR	LR	05 47 03.8	
	comp=Z,15nm,18.8s,baz=275,slow=37						
WRA	**Warramunga Arr**	46.78	191	P	P	05 30 30.6	-1.3
	1.6nm,0.7s,baz=11,slow=8.6,SNR=12						
ASAR	**Alice Springs**	50.50	190	P	P	05 31 00.7	+0.2
	0.3nm,0.7s,baz=9.4,slow=14,SNR=2.4						
KURBB	**Kurchatov Arra**	53.75	315	P	P	05 31 24.8	+0.5
	0.6nm,0.3s,baz=96,slow=7.1,SNR=5.8						
BVAR	**Borovoye Array**	58.77	318	P	P	05 32 00.8	+0.6
	2.3nm,0.5s,baz=179,slow=5.9,SNR=9.8						
FINES	**FINESS Array B**	78.70	334	P	P	05 34 05.1	+1.1
	2.2nm,0.4s,baz=68,slow=4.2,SNR=16						

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*BEO **18** 05:23:14.6±3.2, 37°.98N×20°.16E, h57^{km}±2^{km}, ML3.6/12*

*PDG **18** 05:23:16.9±0.4, 38°.51N×20°.45E, h17^{km}, ML3.5/13, Error ellipse: s-maj=0.7km s-min=1.0km az=0.0*

*ATH **18** 05:23:17.9, 38°.50N×20°.53E, h11^{km}±1^{km}, ML3.3/18, Error ellipse: s-maj=1.5km s-min=0.5km az=284.0*

*THE **18** 05:23:17.6, 38°.50N×20°.50E, h12^{km}, ML3.4/12, Error ellipse: s-maj=0.8km s-min=0.3km az=283.0*

ISC 18 05:23:17.0±0.8, **38°.50N**±0°.01×**20°.48E**±0°.02, **h14**^{km}±4^{km}, **n103**, σ**1^{s}02**/159, **5C-6D**, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FSK	**Fiskardo**	0.08	123	P	Pg	05 23 19.9	0.0
FSK				S	Sg	05 23 21.4	-0.5
FSK	**Fiskardo**	0.08	123	P	Pg	05 23 19.8	-0.1
FSK				S	Sg	05 23 21.5	-0.4
FSK				AML	AML	05 23 21.6	
FSK				AML	AML	05 23 21.7	
EVGI	**Lefkada island**	0.18	50	P	Pg	05 23 21.5	+0.2
EVGI				S	Sg	05 23 24.7	+0.5
EVGI	**Lefkada island**	0.18	50	P	Pg	05 23 21.5	+0.2
EVGI				S	Sg	05 23 24.2	0.0
DRAG	**Dragano-Lefkad**	0.20	23	P	Pg	05 23 21.7	+0.2
DRAG				S	Sb	05 23 26.1	+0.1
DRAG	**Dragano-Lefkad**	0.20	23	P	Pg	05 23 21.7	+0.2
DRAG				S	Sg	05 23 25.3	+0.7
KEF4	**Livadi, Kephal**	0.25	189	P	Pg	05 23 22.8	+0.5
KEF4				S	Sg	05 23 27.1	+1.2
KEF4	**Livadi, Kephal**	0.25	189	P	Pg	05 23 22.9	+0.5
KEF4				S	Sg	05 23 27.2	+1.2
NYDR	**Nydri-Lefkada**	0.27	40	P	Pg	05 23 22.9	+0.1
NYDR				S	Sg	05 23 26.8	+0.1
NYDR	**Nydri-Lefkada**	0.27	40	P	Pg	05 23 22.9	+0.1
NYDR				S	Sg	05 23 26.7	0.0
DMLN	**Damoulianata-K**	0.28	197	P	Pg	05 23 23.4	+0.5
DMLN				S	Sg	05 23 27.6	+0.8
DMLN	**Damoulianata-K**	0.28	197	P	Pg	05 23 23.3	+0.5
DMLN				S	Sb	05 23 28.2	-0.1
LXRA	**Lixouri, Kepha**	0.30	186	P	Pg	05 23 23.9	+0.6
LXRA				S	Sg	05 23 28.8	+1.2
KEF3	**Kipouria, Keph**	0.32	198	P	Pg	05 23 23.6	0.0
KEF3				S	Sg	05 23 28.9	+1.0
KEF3	**Kipouria, Keph**	0.32	198	P	Pg	05 23 23.5	0.0
KEF3				S	Sg	05 23 28.7	+0.7
LKD2	**Lefkada island**	0.32	27	P	Pg	05 23 23.9	+0.3
LKD2				S	Sg	05 23 28.8	+0.7
LKD2	**Lefkada island**	0.32	27	P	Pg	05 23 23.9	+0.3
LKD2				S	Sg	05 23 28.4	+0.3
LKD2				AML	AML	05 23 30.0	
	comp=E,19135µm,0.3s						
LKD2				AML	AML	05 23 30.1	
	comp=N,10515µm,0.7s						
ARGA	**Argostoli. Kep**	0.33	179	P	Pb	05 23 24.9	+0.3
VLS	**Valsamata**	0.34	164	P	Pg	05 23 24.1	+0.2
VLS				S	Sg	05 23 29.2	+0.6
VLS	**Valsamata**	0.34	164	P	Pg	05 23 24.1	+0.2
VLS				S	Sg	05 23 29.4	+0.8
VLS				AML	AML	05 23 30.3	
	comp=E,52865µm,0.4s						
VLS				AML	AML	05 23 30.9	
	comp=N,37026µm,0.3s						
TSLK	**Tsoukalades, L**	0.35	24	P	Pg	05 23 24.6	+0.4
TSLK				S	Sb	05 23 30.5	0.0
TSLK	**Tsoukalades, L**	0.35	24	P	Pg	05 23 24.6	+0.4
TSLK				S	Sg	05 23 29.8	+0.7
TSLK				AML	AML	05 23 31.6	
	comp=E,21078µm,0.3s						
TSLK				AML	AML	05 23 35.2	
	comp=N,21913µm,0.5s						
PSDA	**Pessada-Kefalo**	0.40	168	P	Pg	05 23 25.2	+0.2
PSDA				S	Sg	05 23 31.3	+0.9
PSDA	**Pessada-Kefalo**	0.40	168	P	Pg	05 23 25.0	0.0
PSDA				S	Sg	05 23 31.0	+0.6
VTN	**Vitineika**	0.81	136	P	Pb	05 23 32.9	+0.1
VTN	**Vitineika**	0.81	136	P	Pb	05 23 33.0	+0.1
PVO	**Paravola**	0.83	82	P	Pg	05 23 33.4	+0.3
PVO				S	Sn	05 23 46.1	-0.3
	comp=N,3µm,0.8s						
PVO	**Paravola**	0.83	82	P	Pg	05 23 33.5	+0.3
PVO				AML	AML	05 23 51.6	
	comp=N,5772µm,0.7s						
PVO				AML	AML	05 23 54.2	
	comp=E,6488µm,0.6s						
LTHK	**Lithakia**	0.84	160	P	Pb	05 23 32.8	-0.6
LTHK				S	Sn	05 23 45.7	-0.9
	comp=E,3µm,0.8s						
LTHK	**Lithakia**	0.84	160	P	Pb	05 23 32.9	-0.6
RLS	**Riolos of Patr**	0.90	119	P	Pb	05 23 34.1	-0.3
RLS				S	Sg	05 23 46.4	+0.2
	comp=E,952nm,0.5s						
RLS	**Riolos of Patr**	0.90	119	P	Pb	05 23 34.0	-0.3
RLS				AML	AML	05 23 55.4	
	comp=E,1654µm,0.4s						
RLS				AML	AML	05 23 56.4	
	comp=N,2168µm,0.7s						
IGT	**Igoumenitsa**	1.03	354	P	Pn	05 23 37.5	+0.4
IGT				S	Sg	05 23 51.1	+0.6
	comp=N,3µm,0.7s						
IGT	**Igoumenitsa**	1.03	354	P	Pn	05 23 37.5	+0.4
IGT				AML	AML	05 23 55.7	
	comp=E,5582µm,0.6s						
IGT				AML	AML	05 23 57.9	
	comp=N,4596µm,0.6s						
DRO	**Drossia**	1.12	119	P	Pb	05 23 37.2	-0.9
DRO				S	Sg	05 23 53.3	+0.2
	comp=N,2µm,0.6s						
DRO	**Drossia**	1.12	119	P	Pn	05 23 38.3	0.0
DRO				AML	AML	05 24 04.5	
	comp=E,4671µm,0.5s						
DRO				AML	AML	05 24 09.3	
	comp=N,3188µm,0.5s						
EVR	**Evrytania**	1.12	68	P	Pb	05 23 37.9	-0.4
EVR				S	Sn	05 23 53.4	-0.3
	comp=N,940nm,0.5s						
EVR	**Evrytania**	1.12	68	P	Pb	05 23 37.7	-0.5
EVR				AML	AML	05 24 05.3	
	comp=E,1859µm,0.5s						
EVR				AML	AML	05 24 08.0	
	comp=N,1907µm,0.6s						
EFP	**Efpalio**	1.13	93	P	Pb	05 23 38.0	-0.3
EFP	**Efpalio**	1.13	93	P	Pb	05 23 38.0	-0.3
EFP				AML	AML	05 24 00.2	
	comp=N,3743µm,0.7s						
EFP				AML	AML	05 24 01.1	
	comp=E,2853µm,0.7s						
ANX	**Ano Chora**	1.14	85	P	Pn	05 23 38.8	+0.1
ANX	**Ano Chora**	1.14	85	P	Pn	05 23 38.7	+0.1
ANX				AML	AML	05 24 07.0	
	comp=E,2623µm,0.5s						
ANX				AML	AML	05 24 07.3	
	comp=N,3865µm,0.5s						
JAN	**Janina**	1.19	14	P	Pg	05 23 40.8	+0.9
JAN				S	Sg	05 23 56.7	+1.3
	comp=N,2µm,0.6s						
JAN	**Janina**	1.19	14	P	Pb	05 23 40.1	+0.8
JAN				AML	AML	05 24 00.5	
	comp=E,3238µm,0.7s						
JAN				AML	AML	05 24 00.6	
	comp=N,2925µm,0.4s						
LAKA	**Lakka**	1.21	102	P	Pn	05 23 39.0	-0.6
LAKA				S	Sn	05 23 55.4	-0.4
	comp=N,3µm,0.9s						
LAKA	**Lakka**	1.21	102	P	Pn	05 23 39.2	-0.3
LAKA				AML	AML	05 24 02.7	
	comp=N,1378µm,0.9s						
LAKA				AML	AML	05 24 12.3	
	comp=E,2091µm,0.8s						
TRIZ	**Trizonia**	1.26	96	P	Pn	05 23 40.1	-0.1
ALIK	**Aliki, Aigiali**	1.31	100	P	Pn	05 23 41.1	+0.2
KEK	**Kerkira**	1.32	337	P	Pb	05 23 42.4	+0.9
KEK				S	Sg	05 24 00.5	+1.0
	comp=E,808nm,0.6s						
KEK	**Kerkira**	1.32	337	P	Pb	05 23 42.4	+0.9
KEK				AML	AML	05 24 09.0	
	comp=E,1620µm,0.3s						
KEK				AML	AML	05 24 11.9	
	comp=N,1575µm,0.5s						
MAKR	**Makrakomi, Fth**	1.39	68	P	Pb	05 23 43.0	+0.2
MAKR				S	Sb	05 24 00.7	+0.2
	comp=N,2µm,0.5s						
KLV	**Kalavryta, Ach**	1.40	109	P	Pn	05 23 42.2	+0.1
KLV				AML	AML	05 24 09.0	
	comp=E,1189µm,0.8s						
KLV				AML	AML	05 24 12.9	
	comp=N,919µm,0.9s						
AGG	**Agios Georgios**	1.54	70	P	Pg	05 23 46.3	-0.3
AGG				S	Sg	05 24 06.7	+0.1
	comp=N,828nm,0.7s						
AGG	**Agios Georgios**	1.54	70	P	Pb	05 23 46.1	+0.7
AGG				AML	AML	05 24 15.2	
	comp=N,1641µm,0.5s						
AGG				AML	AML	05 24 17.9	
	comp=E,1636µm,0.8s						
GUR	**Goura**	1.58	110	P	Pb	05 23 45.3	-0.7
GUR				AML	AML	05 24 13.7	
	comp=N,2201µm,0.5s						
GUR				AML	AML	05 24 21.3	
	comp=E,2003µm,0.5s						
THL	**Klokotos Trika**	1.60	48	P	Pb	05 23 47.1	+0.8
THL	**Klokotos Trika**	1.60	48	P	Pb	05 23 46.9	+0.6
THL				AML	AML	05 24 17.3	
	comp=E,1464µm,0.5s						
THL				AML	AML	05 24 17.6	
	comp=N,1403µm,0.6s						
LSK	**Leskovik**	1.65	3	P	Pb	05 23 47.4	+0.2
LSK				S	Sb	05 24 08.7	+0.8
	comp=N,2µm,0.6s						
OHR	**Ohrid**	2.62	5	ePn	Pb	05 24 01.9	-1.8
OHR				eSn	Sb	05 24 35.2	-0.5
OHR	**Ohrid**	2.62	5	i Pn	Pb	05 24 02.8	-0.9
TIR	**Tirane**	2.88	351	ePn	Pn	05 24 04.3	+1.8
TIR				eSn	Sb	05 24 40.4	-2.8
VAY	**Valandovo**	3.24	29	ePn	Pn	05 24 10.0	+2.5
VAY	**Valandovo**	3.24	29	i Pn	Pb	05 24 11.3	-3.0
STIP	**Stip**	3.45	22	i Pn	Pb	05 24 14.6	-3.2
SKO	**Skopje**	3.54	12	ePn	Pn	05 24 12.4	+0.8
ULC	**Ulcinj**	3.58	345	⇑iPn	Pn	05 24 12.7	+0.5
ULC				i Sn	Sn	05 24 54.0	-0.3
DRME	**Dracevica, Mon**	3.81	345	⇓iPn	Pn	05 24 15.7	+0.5
DRME				i Sn	Sn	05 24 59.5	-0.3
BUM	**Brajici-Budva**	3.98	343	⇑iPn	Pn	05 24 18.4	+0.7
BUM				i Sn	Sn	05 25 03.6	-0.6
PDG	**Podgorica**	4.03	347	ePn	Pn	05 24 20.3	+2.0
PDG				eSn	Sn	05 25 06.1	+0.8
TTG	**Podgorica**	4.03	347	⇓iPn	Pn	05 24 19.2	+0.9
TTG				i Sn	Sn	05 25 04.9	-0.4
PVY	**Plav**	4.11	355	ePn	Pn	05 24 19.9	+0.5
PVY				i Sn	Sn	05 25 06.9	-0.4
CEME	**Cevo**	4.21	344	⇓iPn	Pn	05 24 21.5	+0.7
CEME				i Sn	Sn	05 25 09.0	-0.8
HCY	**Herceg Novi**	4.22	340	ePn	Pn	05 24 20.5	-0.4
HCY				i Sn	Sn	05 25 09.2	-0.8
BOSS	**Bosilegrad**	4.27	20	ePn	Pn	05 24 25.1	+3.5
IVA	**Berane**	4.39	354	⇑iPn	Pn	05 24 24.0	+0.7
IVA				i Sn	Sn	05 25 13.3	-0.9
KOME	**Kolasin**	4.40	351	⇓iPn	Pn	05 24 24.3	+0.8
KOME				i Sn	Sn	05 25 13.7	-0.9
NKME	**Niksic**	4.41	345	⇓iPn	Pn	05 24 24.1	+0.5
NKME				i Sn	Sn	05 25 14.0	-0.8
BARS	**Barje**	4.43	13	ePn	Pn	05 24 26.4	+2.6
NKY	**Niksic**	4.45	346	ePn	Pn	05 24 25.5	+1.3
NKY				eSn	Sn	05 25 12.9	-2.9
TREB	**Trebinje**	4.51	340	ePn	Pn	05 24 24.6	-0.3
VTS	**Vitosha**	4.62	26	ePn	Pn	05 24 28.9	+2.4
VTS				eSn	Sn	05 25 21.9	+1.9
BRY	**Bratogost**	4.63	342	⇑iPn	Pn	05 24 27.2	+0.5
BRY				i Sn	Sn	05 25 19.0	-1.4
SELS	**Selova**	4.74	6	ePn	Pn	05 24 29.1	+1.1
SJES	**Sjenica**	4.77	356	ePn	Pn	05 24 31.4	+2.9
UPM	**Unac-Piva**	4.84	346	⇓iPn	Pn	05 24 30.2	+0.6
UPM				i Sn	Sn	05 25 24.3	-1.3
STON	**Ston**	4.85	335	ePn	Pn	05 24 29.7	+0.2
PLE	**Pljevlja**	4.89	351	⇑iPn	Pn	05 24 30.9	+0.7
PLE				i Sn	Sn	05 25 25.4	-1.3
BOVS	**Bovan**	5.21	10	ePn	Pn	05 24 35.5	+1.0
GRUS	**Gruza**	5.38	2	ePn	Pn	05 24 38.4	+1.5
MAKA	**Makarska**	5.45	332	ePn	Pn	05 24 38.1	+0.4
HVAR	**Hvar**	5.58	328	ePn	Pn	05 24 38.8	-0.7
RICI	**Ricice**	5.59	334	ePn	Pn	05 24 39.7	0.0
DIVS	**Divibare**	5.60	356	ePn	Pn	05 24 40.1	+0.1
DIVS				eSn	Sn	05 25 44.6	+0.5
TRUS	**Trudelj**	5.71	360	ePn	Pn	05 24 42.6	+1.2
KIJV	**Kijevo**	6.29	332	ePn	Pn	05 24 50.0	+0.6
ZIRJ	**Zirje**	6.31	326	ePn	Pn	05 24 49.6	0.0
ZIRJ				Sn	Sn	05 25 57.5	-3.9
MORI	**Morici**	6.45	328	ePn	Pn	05 24 52.0	+0.5

DUGI	Dugi Otok	6.83	325	ePn	Pn	05 24 57.0	+0.2
DUGI				Sn	Sn	05 26 13.1	-1.3
UDBI	Udbina	6.98	331	ePn	Pn	05 25 00.3	+1.5
NVLJ	Novalja	7.37	327	ePn	Pn	05 25 04.5	+0.4
RABC	Rab	7.56	327	ePn	Pn	05 25 07.2	+0.6
SMRN	Sveta Marina	8.05	326	ePn	Pn	05 25 14.2	+0.7
BRJN	Brijuni	8.13	324	ePn	Pn	05 25 14.9	+0.3

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*KRNET **18** 05:26:34.5±0.1, 40.°37N×73.°21E, h17km, mb4.2*

*IDC **18** 05:26:34.2±1.0, 40.°24N×73.°81E, h0km, mb3.8/7, mb1 3.9/12, mb1mx3.7/60, mbtmp3.8/12, ML3.4/5, MS3.4/1, Ms1 3.4/1, ms1mx2.5/46, Error ellipse: s-maj=18.6km s-min=13.4km az=114.0*

*ISU **18** 05:26:34, 40.°20N×73.°10E, h5km*

*KNET **18** 05:26:35.3±0.4, 40.°48N×73.°28E, h4km±3km, ml3.8, Error ellipse: s-maj=5.9km s-min=2.8km az=93.0*

*SOME **18** 05:26:39.7, 40.°63N×73.°40E, h0km*

*NNC **18** 05:26:39.0±1.4, 40.°56N×73.°31E, h0km, mb4.4, mpv4.2, Error ellipse: s-maj=12.2km s-min=5.8km az=177.0*

ISC 18 05:26:33.5±1.1, **40.°37N**±0.°02×**73.°29E**±0.°02, **h3**km±8km, **n99**, σ**1ˢ88**/142, **mb3.7**/7, **50C-22D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	0.39	155	eP	Pg	05 26 42.0	+1.0
SFK				eS	Sg	05 26 47.0	+0.9
SFK	Sufi-Kurgan	0.39	155	⇑eP	Pg	05 26 42.3	+1.3
	baz=48						
SFK				⇑eS	Sg	05 26 48.4	+2.3
	baz=48						
OHH	Osh	0.41	292	eP	Pg	05 26 42.0	+0.5
OHH				eS	Sg	05 26 47.0	+0.1
OHH	Osh	0.41	292	⇓iP	Pg	05 26 41.6	+0.1
	baz=95						
OHH				⇓iS	Sg	05 26 46.9	+0.1
	baz=95						
SALK	Salom-Alik	0.65	38	⇑eP	Pg	05 26 47.6	+1.6
	baz=42						
SALK				⇑eS	Sg	05 26 57.0	+2.5
	baz=42						
FRG	Fergana	1.15	271	eP	Pn	05 26 55.0	-1.5
FRG				eS	Sg	05 27 11.0	+0.6
DRK	Karamyk	1.45	233	⇓iP	Pb	05 27 00.8	-0.4
	baz=31						
DRK				⇓iS	Sg	05 27 19.5	-0.5
	baz=31						
AML	Almayashu	1.79	10	⇑P	Pb	05 27 07.8	+0.7
	690nm,0.3s,SNR=783						
AML				⇑S	Sg	05 27 32.2	+1.3
	2µm,0.4s						
AML	Almayashu	1.79	10	⇑iP	Pb	05 27 07.9	+0.7
	baz=12						
AML				⇑iS	Sg	05 27 31.3	+0.3
	baz=12						
BTK	Batken	1.92	262	eP	Pb	05 27 08.0	-1.1
BTK				eS	Sg	05 27 34.0	-1.0
BTK	Batken	1.92	262	⇑eP	Pb	05 27 08.0	-1.1
	baz=61						
BTK				⇑iS	Sg	05 27 32.8	-2.2
	baz=61						
TRKS	Terek-Say	2.00	306	⇓iP	Pb	05 27 08.4	-2.2
	baz=6.0						
TRKS				⇓iS	Sb	05 27 33.9	-2.0
	baz=6.0						
UCH	Uchtor	2.08	26	⇑P	Pb	05 27 12.4	+0.4
	108nm,0.5s,SNR=98						
UCH				⇓S	Sg	05 27 41.2	+1.0
	479nm,0.4s						
UCH	Uchtor	2.08	26	⇓iP	Pb	05 27 12.2	+0.2
	baz=27						
UCH				⇓iS	Sb	05 27 38.8	+0.4
	baz=27						
MNAS	Manas	2.20	345	⇓eP	Pb	05 27 13.0	-1.0
	baz=46						
MNAS				⇓iS	Sb	05 27 41.4	-0.2
	baz=46						
EKS2	Erkin-Say	2.32	9	⇑P	Pb	05 27 15.8	-0.2
	16nm,0.2s,SNR=22						
EKS2				⇓S	Sb	05 27 47.0	+1.8
	96nm,0.3s						
EKS2	Erkin-Say	2.32	9	⇓iP	Pb	05 27 15.1	-0.9
	baz=10.0						
EKS2				⇓iS	Sb	05 27 43.7	-1.5
	baz=10.0						
MRKS	Merke	2.38	359	eP	Pg	05 27 19.7	+0.7
	87nm,0.3s						
MRKS				eS	Sg	05 27 49.1	-0.7
	414nm,0.3s						
MRKS	Merke	2.38	359	Pg	Pg	05 27 19.7	+0.7
	87nm,0.3s						
MRKS				Lg	Lg	05 27 49.1	
	414nm,0.3s						
AAK	Ala-Archa	2.44	21	Pn	Pb	05 27 17.9	-0.2
	46nm,0.3s,baz=187,slow=6.4,SNR=116						
AAK				Lg	Lg	05 27 51.4	
	60nm,0.3s,baz=86,slow=14,SNR=24						
AAK	Ala-Archa	2.44	21	⇑P	Pb	05 27 17.9	-0.2
	152nm,0.4s,SNR=86						
AAK				⇓S	Sg	05 27 51.2	-0.8
	308nm,0.4s						
AAK	Ala-Archa	2.44	21	⇑Pn	Pb	05 27 17.7	-0.4
	84nm,0.5s						
AAK				⇑Lg	Lg	05 27 50.6	
	278nm,0.6s						
AAK	Ala-Archa	2.44	21	⇑iP	Pb	05 27 17.3	-0.8
	baz=23						
AAK				⇑iS	Sb	05 27 47.2	-1.5
	baz=23						
KBK	Karagaybulak	2.60	28	⇑P	Pb	05 27 20.6	-0.3
	73nm,0.3s,SNR=51						
KBK				⇑S	Sb	05 27 55.3	+1.9
	285nm,0.3s						
KBK	Karagaybulak	2.60	28	⇑iP	Pb	05 27 19.7	-1.2
	baz=29						
KBK				⇑iS	Sb	05 27 51.6	-1.8
	baz=29						
FRU1	Bishkek	2.64	22	⇑iP	Pb	05 27 20.0	-1.4
	baz=23						
FRU1				⇑iS	Sb	05 27 52.4	-1.9
	baz=23						
CHMS	Chumysh	2.85	22	⇑P	Pb	05 27 23.1	-1.9
	39nm,0.3s,SNR=10						
CHMS	Chumysh	2.85	22	⇑eP	Pb	05 27 22.4	-2.6
	baz=23						
CHMS				⇑iS	Sb	05 27 57.0	-3.2
	baz=23						
ULHL	Ulahol	2.91	49	⇑P	Pb	05 27 24.1	-2.0
	27nm,0.3s,SNR=15						
ULHL	Ulahol	2.91	49	⇑eP	Pb	05 27 24.1	-2.0
	baz=50						
ULHL				⇑iS	Sb	05 27 59.7	-2.5
	baz=50						
DZA	Taraz	2.92	330	eP	Pg	05 27 29.4	+0.1
	178nm,0.1s						
DZA				eS	Sg	05 28 05.4	-1.8
	678nm,0.3s						
DZA	Taraz	2.92	330	Pg	Pg	05 27 29.4	+0.1
	178nm,0.1s						
DZA				Lg	Lg	05 28 05.4	
	678nm,0.3s						
USP	Ospenovka	3.04	17	⇑P	Pb	05 27 25.6	-2.6
	20nm,0.3s,SNR=6.9						
USP	Ospenovka	3.04	17	⇑eP	Pn	05 27 24.9	+2.5
	baz=18						
USP				⇑iS	Sn	05 28 01.0	+1.7
	baz=18						
TGS	TashGRES	3.04	291	eP	Pg	05 27 32.0	+0.2
TGS				eS	Sg	05 28 17.0	+5.7
TKM2	Tokmak 2	3.08	33	⇑P	Pb	05 27 26.7	-2.4
	37nm,0.3s,SNR=30						
TKM2	Tokmak 2	3.08	33	⇑Pn	Pb	05 27 26.4	-2.7
	65nm,0.8s						
TKM2				⇓Lg	Lg	05 28 11.7	
	93nm,0.6s						
TKM2	Tokmak 2	3.08	33	⇑eP	Pb	05 27 26.3	-2.7
	baz=34						
TKM2				⇑iS	Sn	05 28 03.0	+2.3
	baz=34						
TAS	Tashkent	3.18	289	eP	Pg	05 27 32.0	-2.3
TAS				eS	Sg	05 28 14.0	-1.5
KST	Kastek	3.34	36	eP	Pg	05 27 37.4	-0.1
	47nm,0.9s						
KST				eS	Sg	05 28 19.5	-1.2
	80nm,0.7s						
KST	Kastek	3.34	36	Pg	Pg	05 27 37.4	-0.1
	47nm,0.9s						
KST				Lg	Lg	05 28 19.5	
	80nm,0.7s						
CHM	Chimkent	3.39	306	eP	Pg	05 27 38.9	+0.5
	4.8nm,0.3s						
CHM				eS	Sg	05 28 21.1	-1.3
	564nm,0.4s						
DGS	Degeres	3.42	32	eP	Pg	05 27 38.4	-0.6
	48nm,0.5s						
DGS				eS	Sb	05 28 21.0	+4.2
	157nm,0.7s						
DGS	Degeres	3.42	32	Pg	Pg	05 27 38.4	-0.6
	48nm,0.5s						
DGS				Lg	Lg	05 28 21.0	
	157nm,0.7s						
KDJ	Kajisay	3.42	58	⇑eP	Pn	05 27 31.2	+3.3
	baz=58						
KDJ				⇑iS	Sn	05 28 11.9	+2.9
	baz=58						
KK02	Karatay Array	3.43	324	⇓Pn	Pn	05 27 29.7	+1.8
	2.9nm,0.4s						
KK02				⇑Pg	Pb	05 27 36.4	+1.5
	30nm,0.6s						
KK02				⇓Lg	Lg	05 28 24.2	
	92nm,0.6s						
CHGR	Chuyangaron	3.62	243	⇑eP	Pn	05 27 32.0	+1.5
	baz=43						
CHGR				⇑eS	Sn	05 28 13.8	0.0
	baz=43						
MTBS	Maitube	3.62	39	eP	Pg	05 27 43.7	+0.8
	22nm,0.3s						
MTBS				eS	Sg	05 28 29.7	-0.2
	83nm,0.7s						
MTBS	Maitube	3.62	39	Pg	Pg	05 27 43.7	+0.8
	22nm,0.3s						
MTBS				Lg	Lg	05 28 29.7	
	83nm,0.7s						
BRLS	Borolday	3.71	317	eP	Pg	05 27 46.7	+2.2
	80nm,0.5s						
BRLS				eS	Sg	05 28 35.9	+3.3
	129nm,0.4s						
BRLS	Borolday	3.71	317	Pg	Pg	05 27 48.0	+3.4
	80nm,0.5s						
BRLS				Lg	Lg	05 28 37.5	
	129nm,0.4s						
TNSS	Tian-Shan	3.82	45	eP	Pg	05 27 47.1	+0.3
	24nm,0.3s						
TNSS				eS	Sg	05 28 35.4	-0.9
	89nm,0.5s						
TNSS	Tian-Shan	3.82	45	Pg	Pg	05 27 47.1	+0.3
	24nm,0.3s						
TNSS				Lg	Lg	05 28 35.4	
	89nm,0.5s						
AAA	Alma-Ata	3.93	42	eP	Pg	05 27 49.8	+1.1
	52nm,0.1s						
AAA				eS	Sg	05 28 40.0	+0.5
	284nm,0.4s						
AAA	Alma-Ata	3.93	42	Pg	Pg	05 27 49.8	+1.1
	52nm,0.1s						
AAA				Lg	Lg	05 28 40.0	
	284nm,0.4s						
KNDC	Almaty	3.96	43	⇑Pg	Pb	05 27 47.6	+3.7
	109nm,0.8s						
KNDC				⇓Lg	Lg	05 28 40.5	
	500nm,0.9s						
MDOK	Medeo	3.96	44	eP	Pg	05 27 49.8	+0.4
	28nm,0.3s						
MDOK				eS	Sg	05 28 40.2	-0.6
	128nm,0.8s						
MDOK	Medeo	3.96	44	⇑Pn	Pn	05 27 38.9	+3.6
	36nm,0.6s						
MDOK				⇓Lg	Lg	05 28 40.2	
	171nm,0.8s						
MDOK	Medeo	3.96	44	Pg	Pg	05 27 49.8	+0.4
	28nm,0.3s						
MDOK				Lg	Lg	05 28 40.2	
	128nm,0.8s						
KOTS	Kotyrbulak	4.05	44	eP	Pg	05 27 51.3	+0.3
	36nm,0.3s						
KOTS				eS	Sg	05 28 43.2	-0.2
	309nm,0.4s						
KOTS	Kotyrbulak	4.05	44	Pg	Pg	05 27 51.3	+0.3
	36nm,0.3s						
KOTS				Lg	Lg	05 28 43.2	
	309nm,0.4s						
ANVS	Anan'yevo	4.08	52	⇑eP	Pn	05 27 40.1	+3.2
	baz=53						
ANVS				⇑iS	Sn	05 28 27.8	+2.6
	baz=53						
KUU	Kurty	4.19	32	eP	Pg	05 27 53.2	-0.5
	29nm,0.5s						
KUU				eS	Sg	05 28 46.2	-1.8
	156nm,0.5s						
KUU	Kurty	4.19	32	Pg	Pg	05 27 53.2	-0.5
	29nm,0.5s						
KUU				Lg	Lg	05 28 46.2	
	156nm,0.5s						
SATY	Saty	4.68	53	eP	Pg	05 28 01.7	-1.4
	22nm,0.4s						
SATY				eS	Sg	05 29 00.7	-3.1
	133nm,0.8s						
SATY	Saty	4.68	53	Pg	Pg	05 28 01.7	-1.4
	22nm,0.4s						
SATY				Lg	Lg	05 29 00.7	
	133nm,0.8s						
BTLS	Baital	4.70	7	eP	Pg	05 28 01.8	-1.7
	5.7nm,0.8s						
BTLS				eS	Sg	05 29 00.5	-4.0
	27nm,0.5s						
KURS	Kuram	4.79	48	eP	Pg	05 28 05.0	-0.3
	18nm,0.8s						
KURS				eS	Sg	05 29 05.9	-1.5
	52nm,0.9s						
KURS	Kuram	4.79	48	Pg	Pg	05 28 05.0	-0.3
	18nm,0.8s						
KURS				Lg	Lg	05 29 05.9	
	52nm,0.9s						
KPKS	Kokpek	5.08	51	eP	Pg	05 28 09.6	-1.2
	15nm,0.3s						
KPKS				eS	Sg	05 29 13.8	-2.7
	141nm,0.6s						
ARXS	Arharly	5.11	40	eP	Pg	05 28 10.5	-0.8
	14nm,0.7s						
ARXS				eS	Sg	05 29 15.9	-1.6
	57nm,0.9s						
ARXS	Arharly	5.11	40	Pg	Pg	05 28 10.5	-0.8
	14nm,0.7s						
ARXS				Lg	Lg	05 29 15.9	
	57nm,0.9s						
UZB	Uzynbulak	5.11	55	eP	Pg	05 28 09.7	-1.7
	18nm,0.4s						
UZB				eS	Sg	05 29 14.6	-2.9
	77nm,0.9s						
UZB	Uzynbulak	5.11	55	Pg	Pg	05 28 09.7	-1.7
	18nm,0.4s						
UZB				Lg	Lg	05 29 14.6	
	77nm,0.9s						
BLB	Baldybastay	5.36	44	Pg	Pg	05 28 14.5	-1.6
	33nm,0.6s						
BLB				Lg	Lg	05 29 22.3	
	97nm,0.5s						
PDGK	Podgornoye	5.50	55	Pg	Pg	05 28 16.4	-2.3
	6.2nm,0.9s						
PDGK				Lg	Lg	05 29 26.4	
	34nm,0.6s						
PDGK	Podgornoye	5.50	55	⇑Pn	Pn	05 27 58.7	+2.4
	15nm,0.8s						
PDGK				⇓Lg	Lg	05 29 29.2	
	97nm,0.8s						
PKMR	Pachkamar	5.64	253	eP	Pb	05 28 06.0	-6.6
PKMR				eS	Sg	05 29 34.0	-0.6
KTMS	Ketmen	6.10	57	eP	Pg	05 28 27.9	-2.5
	11nm,0.5s						
KTMS				eS	Sg	05 29 45.2	-4.2
	32nm,0.7s						
KTMS	Ketmen	6.10	57	Pg	Pg	05 28 27.9	-2.5
	11nm,0.5s						
KTMS				Lg	Lg	05 29 45.2	
	32nm,0.7s						
KAPS	Kapalarasan	6.64	40	eP	Pb	05 28 35.9	+6.4
	5.7nm,0.7s						
KAPS				eS	Sb	05 29 59.0	+10
	13nm,0.6s						
KAPS	Kapalarasan	6.64	40	Pg	Pb	05 28 35.9	+6.4
	5.7nm,0.7s						
KAPS				Lg	Lg	05 29 59.0	
	13nm,0.6s						
OTUK	Ortayu	7.91	355	⇓Pn	Pn	05 28 32.5	+3.2
	1.4nm,0.7s						
OTUK				⇑Pg	Pb	05 28 57.7	+6.6
	3.2nm,0.8s						
OTUK				⇑Lg	Lg	05 30 41.7	
	48nm,0.8s						
MKAR	Makanchi Array	9.16	42	Pn	Pn	05 28 47.9	+1.4
	0.1nm,0.3s,baz=227,slow=13,SNR=2.3						
MKAR				Lg	Lg	05 31 19.7	
	0.2nm,0.3s,baz=232,slow=25,SNR=2.4						
KURBB	Kurchatov Arra	10.89	18	Pn	Pn	05 29 10.0	-0.2
	0.1nm,0.3s,baz=210,slow=9.9,SNR=1.3						
KURBB				Lg	Lg	05 32 19.1	
	0.1nm,0.3s,baz=198,slow=30,SNR=11						
KURBB	Kurchatov Arra	10.89	18	⇑Lg	Lg	05 32 18.7	
	31nm,0.8s						
BVAR	Borovoye Array	12.82	352	Lg	Lg	05 33 22.3	
	0.2nm,0.3s,baz=160,slow=31,SNR=5.5						
AB31	Akbulak array	12.97	318	P	Pn	05 29 36.6	-1.9
	0.8nm,0.4s,baz=126,slow=14,SNR=44						
AKTO	Aktyubinsk	14.68	318	Pn	P	05 30 05.5	-2.8
	0.4nm,0.3s,baz=110,slow=12,SNR=5.5						
AKTO	Aktyubinsk	14.68	318	⇑P	P	05 30 07.6	-0.7
	3.0nm,0.6s						
ZALV	Zalesovo Beam	15.66	26	Pn	Pn	05 30 16.2	+1.3
	0.3nm,0.3s,baz=219,slow=12,SNR=6.3						
WSAR	Wadi Sarin	21.09	220	LR	LR	05 40 52.1	
	comp=Z,101nm,21.8s,baz=334,slow=40						
BELG	Belogornoye	21.27	313	P	P	05 31 26.1	+5.3
	9.4nm,0.7s,baz=140,slow=4.0,SNR=3.6						
SONM	Songino Array	24.78	61	P	P	05 31 56.7	+0.2
	0.8nm,0.8s,baz=251,slow=8.8,SNR=3.8						
ARCES	ARCESS Array B	38.33	335	P	P	05 33 59.7	+4.7
	2.9nm,0.9s,baz=92,slow=7.3,SNR=5.1						
NOA	NORSAR Array B	42.46	320	P	P	05 34 34.3	+4.9
	0.5nm,0.7s,baz=90,slow=7.9,SNR=2.2						
TORD	Torodi Ar. Bea	67.61	268	P	P	05 37 35.5	+3.7
	1.0nm,0.7s,baz=42,slow=5.8,SNR=6.9						
WRA	Warramunga Arr	82.58	124	P	P	05 38 56.4	-1.6
	0.5nm,0.9s,baz=317,slow=4.6,SNR=4.7						
ASAR	Alice Springs	85.05	127	P	P	05 39 08.4	-2.2
	0.3nm,0.7s,baz=330,slow=5.4,SNR=3.0						

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*IDC **18** 05:36:10.7±0.9, 4.°64S×129.°41E, h0km, mb4.1/8, mb1 4.3/13, mb1mx4.1/37, mbtmp4.1/13, ML3.8/4, MS3.0/5, Ms1 3.0/5, ms1mx2.6/40, Error ellipse: s-maj=31.9km s-min=17.9km az=91.0*

*NEIC **18** 05:36:14.9±1.9, 4.°59S±0.°06×129.°35E±0.°07, h20km±4km, mb4.3/22, Error ellipse: s-maj=10.2km s-min=8.9km az=66.0*

*DJA **18** 05:36:15.1±1.3, 4°S±3°×12°9E±°, h14km±11km, M4.0/8, mb4.1/2, MLv3.9/8*

ISC 18 05:36:13.3±0.5, **4.°50S**±0.°05×**129.°33E**±0.°06, **h10**km, **n56**, σ**1ˢ32**/45, **mb4.4**/16, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.57	93	P	Pg	05 36 25.7	+1.3
MSAI	Masohi	1.21	341	P	Pb	05 36 35.7	-0.6
MSAI				S	Sn	05 36 51.2	-1.6
AAI	Ambon	1.39	305	P	Pn	05 36 38.2	-0.6
FAKI	Fak Fak	3.31	62	P	Pn	05 37 05.9	+0.8
FAKI	Fak Fak	3.31	62		Pn	05 37 05.8	+0.6
FAKI	Fak Fak	3.31	62	P	Pn	05 37 06.3	+1.2
SAUI	Saumlaki	3.98	151	P	Pn	05 37 18.1	+3.7
SIJI	Sorong	4.09	28	Pn	Pn	05 37 16.4	+0.4
	13nm,0.3s,baz=71,slow=23,SNR=17						
SIJI				Sn	Sn	05 38 01.6	-2.2
	15nm,0.3s,baz=53,slow=22,SNR=7.3						
SWI	Sorong	4.09	28	P	Pn	05 37 16.6	+0.7
SANI	Sanana	4.13	306	P	Pn	05 37 17.4	+0.9
SANI	Sanana	4.13	306	P	Pn	05 37 19.8	+3.3
SOEI	Soe	7.25	224	P	Pn	05 38 01.9	+2.4
	0.1nm29nm,0.9s						
SOEI	Soe	7.25	224		Pn	05 38 00.7	+1.2
BATI	Baumata	7.99	224	Pn	Pn	05 38 08.6	-1.0
	18nm,0.3s,baz=116,slow=0.6,SNR=7.2						
MTN	Manton Dam	8.48	168		Pn	05 38 15.7	-0.6
EDFI	Ende, Flores	8.69	241	P	Pn	05 38 19.9	+0.7
KDU	Kakadu	8.71	159	P	Pn	05 38 17.7	-1.7
	11nm,0.7s						
KAPI	Kappang	9.56	267	LR	LR	05 42 11.6	
	comp=Z,32nm,19.8s,baz=102,slow=38						
KNRA	Kununurra	11.12	183		Pn	05 38 49.7	-2.8
DAV	Davao City (W)	12.09	342	LR	LR	05 45 03.9	
	comp=Z,42nm,18.4s,baz=10,slow=44						
FITZ	Fitzroy Crossi	13.99	195	Pn	Pn	05 39 26.6	-5.1
	0.3nm,0.3s,baz=29,slow=11,SNR=11						
WB0	Warramunga Arr	15.96	162	P	Pn	05 39 54.0	-4.1
WRAB	Tennant Creek	16.10	163	Pn	Pn	05 39 56.9	-3.1
WRAB				IAmb	IAmb	05 40 18.7	
	comp=Z,7.4nm,0.6s						
WRA	Warramunga Arr	16.11	163	Pn	Pn	05 39 54.8	-5.2
	comp=Z,0.2nm,0.3s,baz=343,slow=13,SNR=16						
WRA				Sn	Sn	05 42 45.9	-13
	comp=Z,0.1nm,0.3s,baz=329,slow=21,SNR=3.6						
WRA				LR	LR	05 46 14.9	
	comp=Z,47nm,18.5s,baz=290,slow=38						
WRA	Warramunga Arr	16.11	163	Pn	Pn	05 39 55.8	-4.2
WB2	Warramunga Arr	16.11	163	Pn	Pn	05 39 55.2	-4.8
WB2				IAmb	IAmb	05 39 56.1	
	comp=Z,11nm,1.1s						
WR0	Warramunga Arr	16.19	162	Pn	Pn	05 39 56.0	-5.0
PSA00	Pilbara Seismi	19.31	208	P	P	05 40 38.6	0.0
PSA00				IAmb	IAmb	05 41 06.9	
	comp=Z,17nm,1.3s						
AS31	Alice Springs	19.56	167	P	P	05 40 40.3	-1.1
ASAR	Alice Springs	19.56	167	P	P	05 40 40.1	-1.4
	comp=Z,0.3nm,0.3s,baz=344,slow=9.7,SNR=24						
ASAR				LR	LR	05 47 36.5	
	comp=Z,68nm,18.2s,baz=16,slow=35						
LEM	Lembang	21.73	263	LR	LR	05 50 22.5	
	comp=Z,90nm,20.0s,baz=156,slow=39						
CTAO	Charters Tower	22.62	135	P	P	05 41 13.7	-0.8
CTAO				IAmb	IAmb	05 41 16.6	
	comp=Z,9.2nm,0.9s						
FORT	Forrest	26.17	182	P	P	05 41 48.8	+0.8
YOJ	Yonaguni jima	29.43	348	P	P	05 42 17.8	+0.5
STKA	Stephens Creek	29.57	159	P	P	05 42 17.9	-0.5
CMAR	Chiang Mai Arr	37.65	308	P	P	05 43 29.8	+0.9
	comp=Z,2.7nm,0.5s,baz=143,slow=8.1,SNR=15						
CHTO	Chiang Mai	37.85	309	P	P	05 43 30.7	+0.1
CHTO				IAmb	IAmb	05 43 32.0	
	comp=Z,6.3nm,0.8s						
JHJ2	Mitsune	38.70	14	P	P	05 43 36.5	-1.0
JWT	Wachi	39.98	8	P	P	05 43 48.7	+0.6
MJAR	Matsushiro Arr	41.66	11	P	P	05 44 01.5	-0.5
	comp=Z,1.5nm,0.5s,baz=191,slow=9.2,SNR=2.0						
USRK	Ussuriysk Ar.	48.53	3	P	P	05 44 57.0	+0.5
	comp=Z,2.8nm,0.7s,baz=191,slow=7.1,SNR=4.6						
FUNA	Funafuti	49.68	97	P	P	05 45 05.3	-0.6
KLR	Kul'dur	53.55	2	P	P	05 45 34.1	-0.1
	comp=Z,1.7nm,0.8s,baz=313,slow=13,SNR=3.7						
SONM	Songino Array	55.87	342	P	P	05 45 51.2	0.0
	comp=Z,1.3nm,0.9s,baz=152,slow=4.6,SNR=5.9						
SONM	Songino Array	55.87	342	IAmb	IAmb	05 45 52.9	
	comp=Z,2.1nm,1.1s						
MK31	Makanchi Array	65.78	327	P	P	05 46 58.5	-0.2
MK31				IAmb	IAmb	05 47 07.2	
	comp=Z,2.4nm,0.8s						
MKAR	Makanchi Array	65.78	327	P	P	05 46 58.3	-0.4
	comp=Z,1.9nm,0.4s,baz=115,slow=8.3,SNR=29						
MAKZ	Makanchi	65.96	326	P	P	05 46 59.4	-0.4
MAKZ				IAmb	IAmb	05 47 04.4	
	comp=Z,3.5nm,1.0s						
BOOM	Boomskoye usch	67.21	320	P	P	05 47 08.0	-0.1
ZALV	Zalesovo Beam	69.06	334	P	P	05 47 18.7	-0.5
	comp=Z,2.0nm,0.9s,baz=119,slow=8.6,SNR=4.8						
KURK	Kurchatov	70.05	328	P	P	05 47 24.9	-0.5
KURK				IAmb	IAmb	05 47 25.8	
	comp=Z,4.4nm,0.8s						
BRVK	Borovoye	75.68	328	P	P	05 47 58.3	-0.5
BRVK				IAmb	IAmb	05 47 59.3	
	comp=Z,3.7nm,0.9s						
BILL	Bilibino	76.85	13	P	P	05 48 07.2	+2.1
BILL				IAmb	IAmb	05 48 28.1	
	comp=Z,11nm,1.5s						
ABKAR	Akbulak array	80.15	322	IAmb	IAmb	05 48 23.8	
	comp=Z,2.4nm,0.7s						
ILAR	Eielson Array	91.38	25	P	P	05 49 19.4	+0.2
	comp=Z,0.2nm,0.6s,baz=270,slow=4.4,SNR=4.5						
CPUP	Villa Florida	148.68	168	PKPbc	PKPdf	05 55 59.5	+1.6
	comp=Z,1.7nm,0.8s,baz=203,slow=9.2,SNR=4.0						

NIED **18** *05:43:16.3, 31°.39N×128°.72E, h5^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-1.90; M$_{\theta\theta}$2.77; M$_{\phi\phi}$-0.86; M$_{r\theta}$3.05; M$_{\theta\phi}$2.37; M$_{\phi r}$5.72; Fault plane solution: M$_0$7.32000×10^{14} NP1: φ$_s$210.00000°, δ81.00000°, λ-112.00000°. NP2: φ$_s$100.00000°, δ24.00000°, λ-22.00000°.*

JMA **18** *05:43:16.3±0.6, 31°.39N×128°.72E, h5^{km}±3^{km}, M3.7*

IDC **18** *05:43:20.2±1.2, 31°.49N×128°.91E, h0^{km}, mb3.3/4, mb1 3.6/6, mb1mx3.4/57, mbtmp3.4/6, ML3.6/2, MS2.9/1, Ms1 2.9/1, ms1mx2.3/31, Error ellipse: s-maj=34.1km s-min=18.1km az=81.0*

ISC 18 05:43:21.0±1.1**, 31°.57N**±0°.08×**129°.01E**±0°.08**, h10^{km}, n13, σ1^{s}.07**/13**, mb3.3**/4**, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	**Shimokoshiki**	**0.61**	**79**	P	**Pb**	**05 43 33.4**	**-0.5**
JFU	**Fukue jima 2**	**1.11**	**349**	P	**Pb**	**05 43 40.1**	**-2.2**
JFU				*e*S	**Sb**	**05 43 57.4**	**+0.6**
JSU	**Suzuyama**	**1.24**	**92**	P	**Pn**	**05 43 43.9**	**-0.5**
JZO	**Okuchi**	**1.47**	**67**	P	**Pn**	**05 43 47.7**	**+0.1**
JTZ	**Takazaki**	**1.80**	**79**	P	**Pn**	**05 43 52.1**	**-0.1**
JIU3	**Izumi3**	**1.82**	**57**	P	**Pn**	**05 43 52.8**	**+0.4**
JNU	**Nakatsue**	**2.22**	**45**	Pn	**Pb**	**05 44 00.3**	**-0.9**
	36nm,0.3s,baz=38,slow=0.1,SNR=27						
KSRS	**Korea Array**	**5.94**	**352**	Pn	**Pn**	**05 44 49.8**	**+0.7**
	0.9nm,0.3s,baz=173,slow=14,SNR=7.0						
KSRS				Lg	Lg	05 46 28.5	
	1.4nm,0.3s,baz=173,slow=30,SNR=6.9						
JHJ	**Hachijo jima 2**	**9.25**	**78**	LR	LR	05 49 07.9	
	comp=Z,70nm,20.8s,baz=91,slow=37						
SONM	**Songino Array**	**23.68**	**320**	P	**P**	**05 48 34.2**	**+1.4**
	0.4nm,0.7s,baz=134,slow=10,SNR=2.1						
MKAR	**Makanchi Array**	**38.69**	**307**	P	**P**	**05 50 45.6**	**+0.6**
	1.0nm,1.0s,baz=81,slow=11,SNR=2.2						
WRA	**Warramunga Arr**	**51.47**	**174**	P	**P**	**05 52 25.4**	**-1.3**
	0.2nm,0.7s,baz=351,slow=8.0,SNR=1.9						
ASAR	**Alice Springs**	**55.12**	**175**	P	**P**	**05 52 54.2**	**+0.7**
	0.4nm,0.7s,baz=4.3,slow=14,SNR=9.1						

IDC **18** *05:50:32.4±12.0, 14°.42S×164°.92E, h0^{km}, mb4.2/3, mb1 4.3/4, mb1mx3.8/40, mbtmp4.1/4, ML3.3/1, Error ellipse: s-maj=215.6km s-min=35.1km az=52.0*

NOU **18** *05:50:52.9, 15°.48S×167°.58E, h13^{km}, mb4.0/7, Vanuatu Islands*

ISC 18 05:50:15.5±5.1**, 12°.8S**±0°.4×**166°.6E**±0°.4**, h10^{km}, n8, σ1^{s}.93**/7**, mb4.1**/3**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**2.71**	**168**	P	**Pn**	**05 51 01.3**	**+2.2**
DVP	**Devils Point**	**5.14**	**163**	P	**Pn**	**05 51 31.0**	**-1.5**
YATNC	**Mamie plateau,**	**9.23**	**178**	P	**Pn**	**05 52 29.0**	**+0.3**
	27nm,2.3s						
DZM	**Mont Dzumac**	**9.24**	**181**	Pn	**Pn**	**05 52 26.7**	**-2.3**
	0.5nm,0.3s,baz=103,slow=22,SNR=10.0						
DZM				Sn	Sn	05 53 56.2	-17
	0.3nm,0.3s,baz=150,slow=20,SNR=1.8						
DZM	**Mont Dzumac**	**9.24**	**181**	P	**Pn**	**05 52 30.0**	**+1.0**
STKA	**Stephens Creek**	**29.83**	**226**	P	P	05 56 20.2	-2.7
	2.5nm,0.4s,baz=53,slow=9.4,SNR=7.2						
WRA	**Warramunga Arr**	**31.75**	**253**	P	**P**	**05 56 40.8**	**+0.7**
	0.7nm,0.3s,baz=85,slow=9.2,SNR=12						
ASAR	**Alice Springs**	**32.83**	**246**	P	**P**	**05 56 48.8**	**-0.8**
	1.1nm,0.4s,baz=73,slow=9.3,SNR=28						

SNET **18** *06:06:33.2±1.0, 13°.54N×90°.77W, h16^{km}±5^{km}, ML2.7*

GCG **18** *06:06:35.1±0.5, 13°.65N×90°.97W, h38^{km}±164^{km}, MD3.1*

ISC 18 06:06:33.6±6.9**, 13°.5N**±0°.1×**90°.9W**±0°.1**, h37^{km}**±8^{km}**, n21, σ1^{s}.17**/30**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**1.00**	**4**	*e*P	**Pn**	**06 06 50.5**	**-0.8**
NBG	**Las Nubes**	**1.26**	**26**	*e*P	**Pn**	**06 06 55.3**	**+0.3**
NBG				*e*S	**Sn**	**06 07 10.6**	**-0.2**
CEVE	**Cerro Verde**	**1.32**	**73**	*e*P	**Pn**	**06 06 54.1**	**-1.6**
CEVE				*e*S	**Sn**	**06 07 11.2**	**-1.0**
CEVE				IAML		06 07 17.3	
	comp=Z,252nm,0.3s						
RTR	**El Retiro**	**1.32**	**70**	*e*P	**Pn**	**06 06 54.2**	**-1.4**
SNJE	**San Jose**	**1.34**	**72**	*e*P	**Pn**	**06 06 54.4**	**-1.6**
STG3	**Santiaguito 3,**	**1.41**	**333**	*e*P	**Pn**	**06 06 55.9**	**-0.9**
STG3				*e*S	**Sn**	**06 07 12.6**	**-1.6**
UNIC	**Universidad Ca**	**1.44**	**68**	*e*P	**Pn**	**06 06 55.7**	**-1.5**
UNIC				*e*S	**Sn**	**06 07 13.1**	**-1.7**
UNIC				IAML		06 07 15.8	
	comp=Z,42nm,0.2s						
JAYA	**Jayaque - finc**	**1.45**	**82**	*e*P	**Pn**	**06 06 55.8**	**-1.5**
JAYA				*e*S	**Sn**	**06 07 13.2**	**-1.9**
JAYA				IAML		06 07 17.5	
	comp=Z,244nm,0.1s						
CEDA	**San Andres**	**1.52**	**76**	*e*P	**Pn**	**06 06 56.9**	**-1.4**
CEDA				*e*S	**Sn**	**06 07 15.4**	**-1.6**
PMON	**Piamonte**	**1.58**	**80**	*e*P	**Pn**	**06 06 58.2**	**-1.0**
PMON				*e*S	**Sn**	**06 07 18.2**	**-0.3**
TACO	**Tacachico**	**1.61**	**71**	*e*P	**Pn**	**06 06 58.5**	**-1.0**
TACO				*e*S	**Sn**	**06 07 18.2**	**-0.8**
UEES	**Universidad Ev**	**1.66**	**80**	*e*P	**Pn**	**06 06 59.5**	**-0.7**
UEES				IAML		06 07 21.3	
	comp=Z,182nm,0.2s						
UDBS	**Universidad Do**	**1.74**	**81**	*e*P	**Pn**	**06 07 00.5**	**-0.8**
MTO3	**Montecristo**	**1.79**	**58**	*e*P	**Pn**	**06 07 00.6**	**-1.5**
LFRS	**El Faro**	**1.82**	**84**	*e*P	**Pn**	**06 07 02.0**	**-0.4**
LFRS				*e*S	**Sn**	**06 07 23.9**	**-0.4**
SJTE	**Alcalda de S**	**1.87**	**85**	*e*P	**Pn**	**06 07 02.4**	**-0.7**
SJTE				IAML		06 07 28.6	
	comp=Z,40nm,0.2s						
PAVA	**Las Pavas**	**1.95**	**82**	*e*P	**Pn**	**06 07 03.7**	**-0.5**
COEG	**Centro de Oper**	**1.99**	**85**	*e*P	**Pn**	**06 07 04.5**	**-0.3**
SCLA	**Alcaldia de Sa**	**2.15**	**83**	*e*P	**Pn**	**06 07 06.3**	**-0.6**
COEB	**Comit de Eme**	**2.33**	**88**	*e*P	**Pn**	**06 07 09.2**	**-0.2**
LCND	**La Caada**	**2.95**	**92**	*e*P	**Pn**	**06 07 18.0**	**+0.1**
LCND				IAML		06 07 59.0	
	comp=Z,18nm,0.5s						

NEIC **18** *06:13:16.0±2.6, 19°.33S±0°.05×69°.30W±0°.08, h100^{km}±4^{km}, mb4.6/60, Mwr4.7/42, ML4.6(GUC), Error ellipse: s-maj=10.3km s-min=6.8km az=85.0*

NEIC **18** *06:13:16.2, 19°.34S×69°.22W, h104^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.11; M$_{\theta\theta}$-0.10; M$_{\phi\phi}$1.20; M$_{r\theta}$0.22; M$_{\theta\phi}$0.33; M$_{\phi r}$-1.11; Fault plane solution: M$_0$1.65000×10^{16} NP1:φ$_s$212.03000°, δ27.05000°, λ-57.33000°. NP2:φ$_s$356.27000°, δ67.49000°, λ-105.41000°. Principal axes: T 1.6806, Plg21.0000°, Azm98.0000°; N -0.0540, Plg14.0000°, Azm2.0000°; P -1.6266, Plg64.0000°, Azm241.0000°;*

VAO **18** *06:13:16.2±0.3, 19°.26S×69°.06W, h91^{km}, mb4.8*

IDC **18** *06:13:17.3±0.6, 19°.30S×69°.15W, h113^{km}±4^{km}, mb4.1/15, mb1 4.3/19, mb1mx4.2/31, mbtmp4.6/19, MS3.6/5, Ms1 3.6/5, ms1mx3.2/20, Error ellipse: s-maj=14.0km s-min=9.7km az=98.0*

GUC **18** *06:13:17.4±0.6, 19°.34S×69°.39W, h108^{km}±2^{km}, ML4.5*

SJA **18** *06:13:18.0, 19°.37S×69°.47W, h95^{km}, ML4.3*

GCMT **18** *06:13:22.0±0.5, 19°.37S±0°.03×69°.55W±0°.04, h128^{km}±5^{km}, MW4.8/77, Moment Tensor Solution. s12,c13; s77,c92; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.20±.12; M$_{\theta\theta}$0.29±.12; M$_{\phi\phi}$0.90±.15; M$_{r\theta}$0.52±.07; M$_{\theta\phi}$1.08±.19; M$_{\phi r}$-1.76±.11; Best double couple: M$_0$2.36800×10^{16} NP1:φ$_s$245.00000°, δ34.00000°, λ-31.00000°. NP2: φ$_s$2.00000°, δ73.00000°, λ-120.00000°. Principal axes: T 2.1860, Plg22.0000°, Azm114.0000°; N 0.3650, Plg28.0000°, Azm11.0000°; P -2.5490, Plg52.0000°, Azm236.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 06:13:15.8±0.4**, 19°.31S**±0°.03×**69°.32W**±0°.05**, h104^{km}**±4^{km}**, h104^{km}:pP-P, n239, σ1^{s}.34**/243**, mb4.5**/33**, 2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB11	**IPOC Station P**	**0.55**	**215**	*e*P	**Pn**	**06 13 33.5**	**+1.0**
PB11				*i* S	**Sn**	**06 13 46.1**	**+1.1**
PB11				IAML		06 13 48.0	
	comp=E,35µm,0.2s						
PB11	**IPOC Station P**	**0.55**	**215**	Pn	**Pn**	**06 13 33.3**	**+0.8**
PB11	**IPOC Station P**	**0.55**	**215**	*i* P	**Pn**	**06 13 33.0**	**+0.5**
PB08	**IPOC Station P**	**0.84**	**169**	*e*P	**Pn**	**06 13 36.8**	**+1.6**
PB08				*i* S	**Sn**	**06 13 51.9**	**+2.0**
PB08				IAML		06 13 53.1	
	comp=N,27µm,0.4s						
PB08	**IPOC Station P**	**0.84**	**169**		**Pn**	**06 13 36.9**	**+1.6**
PB08	**IPOC Station P**	**0.84**	**169**	*i* P	**Pn**	**06 13 36.0**	**+0.7**
PB16	**IPOC Station P**	**0.99**	**350**		**Pn**	**06 13 37.3**	**+0.2**
PB12	**IPOC Station P**	**1.18**	**306**	*e*P	**Pn**	**06 13 39.3**	**+0.7**
PB12				*i* S	**Sn**	**06 13 56.6**	**+0.8**
PB12	**IPOC Station P**	**1.18**	**306**		**Pn**	**06 13 39.2**	**+0.7**
PB12	**IPOC Station P**	**1.18**	**306**	*i* P	**Pn**	**06 13 39.0**	**+0.4**
TA02	**Huaiquique**	**1.22**	**219**	*e*P	**Pn**	**06 13 39.2**	**+0.3**
TA02				*i* S	**Sn**	**06 13 56.4**	**0.0**
TA02				IAML		06 13 59.8	
	comp=E,22µm,0.1s						
TA02	**Huaiquique**	**1.22**	**219**		**Pn**	**06 13 39.4**	**+0.4**
TA02	**Huaiquique**	**1.22**	**219**	*i* P	**Pn**	**06 13 39.0**	**+0.1**
AP01	**Chacalluta**	**1.35**	**314**	*e*P	**Pn**	**06 13 41.6**	**+1.2**
AP01				*i* S	**Sn**	**06 14 00.2**	**+1.2**
AP01	**Chacalluta**	**1.35**	**314**		**Pn**	**06 13 39.6**	**-0.8**
AP01	**Chacalluta**	**1.35**	**314**	*i* P	**Pn**	**06 13 41.0**	**+0.6**
TA01	**Diego Aracena**	**1.48**	**213**	*e*P	**Pn**	**06 13 42.1**	**+0.1**
TA01				*i* S	**Sn**	**06 14 01.5**	**-0.5**
TA01				IAML		06 14 03.6	
	comp=E,6µm,0.3s						
TA01	**Diego Aracena**	**1.48**	**213**		**Pn**	**06 13 42.1**	**+0.1**
TA01	**Diego Aracena**	**1.48**	**213**	*i* P	**Pn**	**06 13 42.0**	**-0.1**
PATCX	**Punta Patache**	**1.69**	**207**	*e*P	**Pn**	**06 13 44.7**	**0.0**
PATCX				*i* S	**Sn**	**06 14 06.2**	**-0.5**
PATCX				IAML		06 14 17.0	
	comp=E,6µm,0.6s						
PATCX	**Punta Patache**	**1.69**	**207**		**Pn**	**06 13 44.9**	**+0.1**
PATCX	**Punta Patache**	**1.69**	**207**	*i* P	**Pn**	**06 13 45.0**	**+0.3**
PB01	**IPOC Station P**	**1.73**	**185**	*e*P	**Pn**	**06 13 46.1**	**+0.9**
PB01				*i* S	**Sn**	**06 14 08.4**	**+0.9**
PB01				IAML		06 14 09.6	
	comp=E,7µm,0.4s						
PB01	**IPOC Station P**	**1.73**	**185**	Pn	**Pn**	**06 13 46.2**	**+1.0**
PB01	**IPOC Station P**	**1.73**	**185**	*i* P	**Pn**	**06 13 46.0**	**+0.9**
PB02	**IPOC Station P**	**2.07**	**195**	*e*P	**Pn**	**06 13 50.1**	**+0.5**
PB02				*i* S	**Sn**	**06 14 15.6**	**+0.3**
PB02	**IPOC Station P**	**2.07**	**195**	*i* P	**Pn**	**06 13 50.0**	**+0.5**
PB07	**IPOC Station P**	**2.46**	**192**	*e*P	**Pn**	**06 13 55.0**	**+0.3**
PB07	**IPOC Station P**	**2.46**	**192**		**Pn**	**06 13 55.4**	**+0.7**
PB07	**IPOC Station P**	**2.46**	**192**	*i* P	**Pn**	**06 13 55.0**	**+0.3**
PB09	**IPOC Station P**	**2.47**	**178**	⇓*i*P	**Pn**	**06 13 56.7**	**+1.9**
PB09				*e*S	**Sn**	**06 14 26.2**	**+1.5**
PB09				IAML		06 14 30.1	
	comp=E,1µm,0.6s						
PB09	**IPOC Station P**	**2.47**	**178**		**Pn**	**06 13 55.9**	**+1.1**
PB09	**IPOC Station P**	**2.47**	**178**	*i* P	**Pn**	**06 13 56.0**	**+1.2**
PB03	**IPOC Station P**	**2.75**	**188**	*e*P	**Pn**	**06 13 58.5**	**0.0**
PB03	**IPOC Station P**	**2.75**	**188**	*i* P	**Pn**	**06 13 59.0**	**+0.5**
PB04	**IPOC Station P**	**3.10**	**194**		**Pn**	**06 14 03.4**	**+0.2**
PB04	**IPOC Station P**	**3.10**	**194**	*i* P	**Pn**	**06 14 04.0**	**+0.8**
LPAZ	**La Paz**	**3.22**	**21**	P	**Pn**	**06 14 07.8**	**+2.7**
	comp=E,20nm,0.3s,baz=347,slow=9.3,SNR=488						
LPAZ				S	**Sn**	**06 14 45.5**	**+2.4**
	comp=E,10.0nm,0.3s,baz=309,slow=6.9,SNR=5.8						
LPAZ	**La Paz**	**3.22**	**21**	Pn	**Pn**	**06 14 07.6**	**+2.5**
LVC	**Limon Verde**	**3.30**	**173**	P	**Pn**	**06 14 07.9**	**+1.9**
	comp=E,19nm,0.3s,baz=345,slow=9.6,SNR=101						
LVC				S	**Sn**	**06 14 45.0**	**+0.3**
	comp=E,103nm,0.3s,baz=329,slow=12,SNR=20						
LVC	**Limon Verde**	**3.30**	**173**	*e*P	**Pn**	**06 14 05.7**	**-0.3**
LVC	**Limon Verde**	**3.30**	**173**	Pn	**Pn**	**06 14 08.0**	**+2.0**
LVC	**Limon Verde**	**3.30**	**173**	*i* P	**Pn**	**06 14 08.0**	**+2.0**
PB06	**IPOC Station P**	**3.38**	**184**	*e*P	**Pn**	**06 14 07.8**	**+0.9**
PB06	**IPOC Station P**	**3.38**	**184**		**Pn**	**06 14 07.1**	**+0.2**
PB06	**IPOC Station P**	**3.38**	**184**	*i* P	**Pn**	**06 14 08.0**	**+1.1**
PB05	**IPOC Station P**	**3.62**	**193**	*e*P	**Pn**	**06 14 10.2**	**+0.2**
PB05	**IPOC Station P**	**3.62**	**193**	*i* P	**Pn**	**06 14 10.0**	**0.0**
PB15	**IPOC Station P**	**3.88**	**182**	⇓*i*P	**Pn**	**06 14 14.3**	**+0.7**
PB15				*e*S	**Sn**	**06 14 58.9**	**+0.6**
PB15	**IPOC Station P**	**3.88**	**182**		**Pn**	**06 14 14.2**	**+0.6**
PB15	**IPOC Station P**	**3.88**	**182**	*i* P	**Pn**	**06 14 15.0**	**+1.4**
PB10	**IPOC Station P**	**4.33**	**195**		**Pn**	**06 14 18.6**	**-0.9**
PB10	**IPOC Station P**	**4.33**	**195**	*i* P	**Pn**	**06 14 19.0**	**-0.6**
YJA	**Yavi**	**4.56**	**129**	*i* P	**Pn**	**06 14 26.0**	**+3.0**
HJA	**Humahuaca**	**5.32**	**137**	*i* P	**Pn**	**06 14 36.0**	**+2.7**
PB14	**IPOC Station P**	**5.38**	**191**	Pn	**Pn**	**06 14 33.9**	**-0.1**
AZAP	**Zapla**	**6.29**	**142**	*i* P	**Pn**	**06 14 47.0**	**+0.8**
SLA	**San Lorenzo**	**6.44**	**147**	*i* P	**Pn**	**06 14 50.0**	**+1.7**
ASTB	**Santa Barbara**	**6.46**	**136**	*i* P	**Pn**	**06 14 49.0**	**+0.4**
FSA	**Cafayete**	**7.43**	**156**	*i* P	**Pn**	**06 15 05.0**	**+3.2**
AC02	**Maricunga**	**7.49**	**179**	Pn	**Pn**	**06 15 02.3**	**-0.5**
AC02	**Maricunga**	**7.49**	**179**	*i* P	**Pn**	**06 15 02.0**	**-0.8**
GO03	**Copiap**	**8.28**	**186**	Pn	**Pn**	**06 15 12.6**	**-0.6**
AHML	**Horco Molle**	**8.29**	**154**	*i* P	**Pn**	**06 15 16.0**	**+2.7**
SIV	**San Ignacio**	**8.53**	**68**	P	**Pn**	**06 15 15.0**	**-1.6**
	comp=E,15nm,0.3s,baz=260,slow=9.8,SNR=280						
ETMB	**Extrema**	**9.91**	**18**	*e*P	**Pn**	**06 15 33.2**	**-2.0**
ETMB	**Extrema**	**9.91**	**18**	Pn	**Pn**	**06 15 34.4**	**-0.9**
NNA	**Nana**	**10.27**	**314**	P	**Pn**	**06 15 39.5**	**-0.8**
	comp=E,1.1nm,0.3s,baz=174,slow=12,SNR=4.3						
NNA				S	**Sn**	**06 17 28.9**	**-4.6**
	comp=E,4.3nm,0.3s,baz=216,slow=11,SNR=4.5						
PTLB	**Pontes e Lacer**	**10.45**	**70**	*e*P	**Pn**	**06 15 40.2**	**-2.5**
PTLB	**Pontes e Lacer**	**10.45**	**70**		**Pn**	**06 15 40.6**	**-2.1**
VILB	**Vilhena**	**10.80**	**56**	*e*P	**Pn**	**06 15 45.5**	**-2.0**
VILB	**Vilhena**	**10.80**	**56**		**Pn**	**06 15 46.0**	**-1.6**
SAML	**Samuel**	**11.90**	**31**		**Pn**	**06 16 00.8**	**-1.3**
CZSB	**Cruzeiro do Su**	**11.97**	**344**	*e*P	**Pn**	**06 16 03.4**	**+0.3**
AQDB	**Aquidauana**	**12.87**	**97**	*e*P	**Pn**	**06 16 12.9**	**-2.0**
AQDB	**Aquidauana**	**12.87**	**97**		**Pn**	**06 16 13.5**	**-1.4**
CPUP	**Villa Florida**	**13.07**	**124**	P	**Pn**	**06 16 15.6**	**-1.9**
	comp=E,1.0nm,0.3s,baz=298,slow=10,SNR=16						
SALV	**Santo Antonio**	**13.43**	**77**	*e*P	**Pn**	**06 16 18.7**	**-3.6**
VA03	**San Esteban**	**13.44**	**184**	Pn	**Pn**	**06 16 22.2**	**-0.2**
PP1B	**Ponte de Pedra**	**13.81**	**85**	*e*P	**Pn**	**06 16 24.7**	**-2.6**
MT02	**Curacav**	**13.98**	**186**	Pn	**Pn**	**06 16 29.1**	**-0.2**
PDRB	**Porto dos Gac**	**14.34**	**60**	*e*P	**Pn**	**06 16 30.3**	**-3.9**
MT09	**Talagante**	**14.48**	**186**	Pn	**Pn**	**06 16 35.9**	**0.0**
MT01	**Popeta**	**14.59**	**186**		**Pn**	**06 16 37.5**	**+0.3**
TBTG	**Tabatinga, AM**	**15.05**	**358**	*e*P	**Pn**	**06 16 43.5**	**+0.5**
BO01	**Tunca**	**15.10**	**186**	P	**Pn**	**06 16 44.2**	**+0.6**
BO01				IAmb	IAmb	06 16 49.2	
	comp=Z,42nm,0.8s						
BO02	**Sierra Bellavi**	**15.47**	**185**	P	**Pn**	**06 16 49.2**	**+0.9**
ITQB	**Itaqui**	**15.47**	**134**		**P**	**06 16 50.1**	**-0.4**
ITQB				IAmb	IAmb	06 17 10.5	
	comp=Z,42nm,1.2s						
CLDB	**Colider**	**15.51**	**59**	*e*P	**Pn**	**06 16 46.5**	**-2.5**
TRCB	**Terra Rica**	**15.96**	**105**	*e*P	**Pn**	**06 16 53.3**	**-1.2**
TRCB	**Terra Rica**	**15.96**	**105**	P	**Pn**	**06 16 54.7**	**+0.2**
ML02	**Panimavida**	**16.49**	**186**	P	**Pn**	**06 17 00.8**	**0.0**
ML02				IAmb	IAmb	06 17 05.5	
	comp=Z,85nm,1.3s						
PTGB	**Pitanga**	**16.88**	**112**	*e*P	**Pn**	**06 17 05.2**	**-0.6**
PCMB	**Pacaembu**	**17.08**	**101**	*e*P	**Pn**	**06 17 06.1**	**-2.2**
ARAG	**Araguaiana, MT**	**17.08**	**81**	*e*P	**Pn**	**06 17 07.3**	**-1.0**
ITRB	**Iturama**	**17.88**	**94**	*e*P	**P**	**06 17 16.2**	**-1.0**
MACA	**Manacapuru-AM**	**18.14**	**29**	*e*P	**P**	**06 17 18.7**	**-1.3**
MACA	**Manacapuru-AM**	**18.14**	**29**	P	**P**	**06 17 19.1**	**-1.0**
NPGB	**Novo Progresso**	**18.24**	**50**	*e*P	**P**	**06 17 19.3**	**-1.9**
PLTB	**Pedras Altas**	**18.81**	**134**	*e*P	**P**	**06 17 26.2**	**-1.1**
PLTB	**Pedras Altas**	**18.81**	**134**	P	**P**	**06 17 26.7**	**-0.5**
PLTB				IAmb	IAmb	06 17 29.5	
	comp=Z,24nm,1.2s						
SNDB	**Serra Nova Dou**	**18.82**	**70**	*e*P	**P**	**06 17 26.9**	**-0.6**
FRTB	**Fartura**	**18.84**	**106**	*e*P	**P**	**06 17 26.6**	**-1.1**
CNLB	**Canela**	**19.53**	**124**	*e*P	**P**	**06 17 35.7**	**+0.4**
BB19B	**Bebedouro**	**19.59**	**99**	*e*P	**P**	**06 17 35.1**	**-0.9**
LC01	**Cunco**	**19.64**	**186**	P	**P**	**06 17 35.9**	**-0.4**
LC01				IAmb	IAmb	06 17 41.5	
	comp=Z,59nm,1.4s						
TIJ01	**Guaruva-PR**	**19.71**	**111**	*e*P	**Pn**	**06 17 38.4**	**-1.3**
TRQA	**Tornquist**	**19.74**	**163**	P	**P**	**06 17 37.9**	**+0.6**
TRQA				IAmb	IAmb	06 17 41.5	
	comp=Z,21nm,1.1s						
ITTB	**Itaituba**	**19.91**	**43**	*e*P	**P**	**06 17 38.0**	**-1.4**
IPMB	**Ipameri, GO**	**20.05**	**90**	*e*P	**P**	**06 17 40.1**	**-0.8**
TER01	**Tubaro-SC**	**20.59**	**120**	*e*P	**P**	**06 17 45.7**	**-0.9**
RCLB	**Rio Claro- Sao**	**20.59**	**102**	*e*P	**P**	**06 17 45.6**	**-1.2**
PTGA	**Pitinga**	**20.62**	**27**	P	**P**	**06 17 45.5**	**-1.5**
	comp=Z,20nm,0.3s,baz=215,slow=20,SNR=209						
PTGA	**Pitinga**	**20.62**	**27**	P	**P**	**06 17 45.0**	**-2.0**
PTGA				IAmb	IAmb	06 17 46.9	
	comp=Z,29nm,1.1s						
BDFB	**Brasilia**	**20.65**	**83**	P	**P**	**06 17 46.1**	**-1.3**
	comp=Z,18nm,0.4s,baz=260,slow=10,SNR=26						
BDFB	**Brasilia**	**20.65**	**83**	P	**P**	**06 17 46.9**	**-0.6**
BDFB				IAmb	IAmb	06 17 50.1	
	comp=Z,24nm,0.5s						
PET01	**Itanhaem-SP**	**21.05**	**108**	*e*P	**P**	**06 17 50.6**	**-1.0**
VAO	**Valinhos**	**21.16**	**104**	*e*P	**P**	**06 17 51.5**	**-1.4**
PLCA	**Paso Flores**	**21.37**	**183**	P	**P**	**06 17 55.9**	**+1.0**
	comp=Z,20nm,0.9s,baz=360,slow=12,SNR=16						
PLCA				LR	LR	06 27 30.0	
	comp=Z,144nm,19.4s,baz=28,slow=40						
PLCA	**Paso Flores**	**21.37**	**183**	*e*P	**P**	**06 17 56.1**	**+1.1**
PLCA	**Paso Flores**	**21.37**	**183**	P	**P**	**06 17 55.7**	**+0.8**
PLCA				IAmb	IAmb	06 17 59.5	
	comp=Z,54nm,1.3s						
OTAV	**Otavalo**	**21.40**	**334**	*e*P	**P**	**06 18 00.6**	**+4.8**
OTAV	**Otavalo**	**21.40**	**334**	*e*P	**P**	**06 17 59.9**	**+4.1**
OTAV	**Otavalo**	**21.40**	**334**	P	**P**	**06 17 56.8**	**+1.0**
PEXB	**Peixe**	**21.45**	**74**	*e*P	**P**	**06 17 54.5**	**-1.5**
GCUF	**Volcan Galeras**	**21.88**	**338**	*e*P	**P**	**06 18 04.1**	**+3.1**
PARB	**Paraibuna**	**22.43**	**104**	*e*P	**P**	**06 18 03.5**	**-2.8**
SOTA	**Rioblanco**	**22.49**	**341**	*e*P	**P**	**06 18 07.1**	**-0.2**
MALB	**Monte Alegre**	**22.77**	**42**	*e*P	**P**	**06 18 08.0**	**-1.7**
PRPB	**Parauapebas**	**23.04**	**58**	*e*P	**P**	**06 18 10.4**	**-2.0**
BSCB	**Bom Sucesso**	**23.10**	**98**	*e*P	**P**	**06 18 11.4**	**-1.5**
BOAV	**Boa Vista**	**23.24**	**23**	*e*P	**P**	**06 18 14.2**	**0.0**
BOAV	**Boa Vista**	**23.24**	**23**	P	**P**	**06 18 13.6**	**-0.6**
BOAV				IAmb	IAmb	06 18 15.5	
	comp=Z,24nm,0.8s						
SMTB	**Santa Maria do**	**23.47**	**67**	*e*P	**P**	**06 18 16.1**	**-0.2**
ORTC	**Ortega, Tolima**	**23.80**	**345**	*e*P	**P**	**06 18 18.8**	**-0.5**
YOTC	**Yotoco, Valle**	**24.16**	**343**	*e*P	**P**	**06 18 23.2**	**+0.6**
JANB	**Januaria**	**24.26**	**84**	*e*P	**P**	**06 18 21.9**	**-1.5**
MC01	**Montes Claros**	**24.27**	**88**	*e*P	**P**	**06 18 22.9**	**-0.7**
DIAM	**Diamantina, MG**	**24.30**	**92**	*e*P	**P**	**06 18 23.4**	**-0.5**
VAS01	**Vassouras-RJ**	**24.36**	**101**	*e*P	**P**	**06 18 23.9**	**-0.5**
SDBA	**SAO DESIDERIO**	**24.45**	**77**	*e*P	**P**	**06 18 24.4**	**-0.8**
PLMC	**San Jos del P**	**25.02**	**343**	*e*P	**P**	**06 18 31.0**	**+0.6**
GUY2C	**Guyana, Caldas**	**25.10**	**346**	*e*P	**P**	**06 18 31.8**	**+0.2**
RUSC	**La Rusia**	**25.32**	**351**	*e*P	**P**	**06 18 33.9**	**+0.4**
MCPB	**Macapa, AP**	**25.32**	**44**	*e*P	**P**	**06 18 32.2**	**-0.9**
DUB01	**Friburgo-RJ**	**25.35**	**101**	*e*P	**P**	**06 18 32.1**	**-1.2**
CBOC	**Ciudad Bolivar**	**25.87**	**345**	*e*P	**P**	**06 18 38.5**	**+0.3**
CAM01	**Campos-RJ**	**26.01**	**100**	*e*P	**P**	**06 18 39.2**	**0.0**
HELC	**Santa Helena**	**26.07**	**346**	*e*P	**P**	**06 18 39.0**	**-1.2**
SJMB	**Sao Joao De Ma**	**26.60**	**93**	*e*P	**P**	**06 18 44.4**	**-0.2**
TMAB	**Tom-Au,PA,Br**	**26.73**	**54**	*e*P	**P**	**06 18 46.4**	**+0.6**
BSFB	**Barra de Sao F**	**26.91**	**94**	*e*P	**P**	**06 18 46.8**	**-0.6**
ZARC	**Zaragoza, Cauc**	**27.19**	**348**	*e*P	**P**	**06 18 48.4**	**-1.5**
ZARC	**Zaragoza, Cauc**	**27.19**	**348**	P	**P**	**06 18 47.4**	**-2.4**
RIB01	**Linhares ES**	**27.29**	**95**	*e*P	**P**	**06 18 49.9**	**-0.9**
SOCV	**Socops**	**27.46**	**357**	*e*P	**P**	**06 18 51.3**	**-1.0**
NAN01	**Guarapari, ES**	**27.70**	**92**	*e*P	**P**	**06 18 53.7**	**-0.8**
GUA01	**Guaratinga, BA**	**28.20**	**89**	*e*P	**P**	**06 18 58.6**	**-0.3**
SMLC	**San Martn de**	**28.33**	**350**	*e*P	**P**	**06 18 57.5**	**-2.5**
CMC01	**Camacan, BA**	**28.70**	**87**	*e*P	**P**	**06 19 03.0**	**-0.4**
NBIT	**Itapeh - BA**	**28.87**	**86**	*e*P	**P**	**06 19 04.7**	**-0.2**
GDU01	**Guandu, BA**	**29.03**	**84**	*e*P	**P**	**06 19 05.6**	**-0.7**
MDP	**Montagnes des**	**29.30**	**36**	P	**P**	**06 19 07.6**	**-1.1**
	comp=Z,5.7nm,0.6s,baz=207,slow=9.9,SNR=15						
NBPN	**Ponto Novo - B**	**29.32**	**78**	*e*P	**P**	**06 19 08.5**	**-0.4**
ROSB	**Rosrio**	**29.54**	**60**	*e*P	**P**	**06 19 10.2**	**-0.6**
PCRV	**Puerto La Cruz**	**29.66**	**9**	P	**P**	**06 19 11.6**	**-0.3**
	comp=Z,4.7nm,0.4s,baz=310,slow=1.9,SNR=8.6						
NBPS	**Pedro II - PI**	**30.97**	**65**	*e*P	**P**	**06 19 23.5**	**0.0**
NBLA	**Lagarto - SE**	**31.50**	**79**	*e*P	**P**	**06 19 26.6**	**-1.5**
NBMA	**Muriti-CE**	**31.95**	**72**	*e*P	**P**	**06 19 31.7**	**-0.4**
NBPB	**Pedra_Branca-C**	**32.03**	**69**	*e*P	**P**	**06 19 33.0**	**+0.3**
NBMO	**Morrinhos-CE**	**32.73**	**65**	*e*P	**P**	**06 19 38.6**	**-0.3**
NBAN	**Anadia - AL**	**33.34**	**78**	*e*P	**P**	**06 19 43.2**	**-1.1**
NBLV	**Livramento - P**	**33.62**	**74**	*e*P	**P**	**06 19 46.5**	**-0.2**
NBCL	**Cascavel-CE**	**33.78**	**68**	*e*P	**P**	**06 19 47.9**	**-0.1**
NBPA	**Parau_RN**	**34.12**	**71**	*e*P	**P**	**06 19 50.6**	**-0.4**
NBRF	**Rio Formoso -**	**34.75**	**77**	*e*P	**P**	**06 19 55.8**	**-0.6**
NBPV	**Pedro Velho**	**35.48**	**73**	*e*P	**P**	**06 20 02.5**	**-0.1**
MTO3	**Montecristo**	**38.88**	**328**	P	**P**	**06 20 32.4**	**+0.8**
MTO3				IAmb	IAmb	06 20 35.0	
	comp=Z,6.9nm,1.0s						
CMIG	**Matias Romero**	**44.05**	**324**	P	**P**	**06 21 15.1**	**+1.6**
	comp=Z,3.6nm,0.7s,baz=118,slow=2.9,SNR=4.7						
CLTN	**Cedars of Leba**	**57.41**	**344**	P	**P**	**06 22 53.4**	**-0.1**
CLTN					**pP**	**06 23 20.4**	**+0.4**
WVT	**Waverly**	**57.86**	**342**	P	**P**	**06 22 56.3**	**-0.3**
WVT				pP	**pP**	**06 23 18.0**	**-5.3**
T47A	**Sharon Grove**	**58.46**	**343**	P	**P**	**06 23 00.2**	**-0.6**
T47A				pP	**pP**	**06 23 28.8**	**+1.3**
TXAR	**Lajitas Array**	**58.63**	**325**	P	**P**	**06 23 02.9**	**+0.6**
	comp=Z,0.6nm,0.7s,baz=153,slow=9.0,SNR=7.6						
TXAR				pP	**pP**	**06 23 28.7**	**+0.1**
	comp=Z,0.8nm,0.9s,baz=132,slow=7.5,SNR=3.5						
TXAR	**Lajitas Array**	**58.63**	**325**	P	**P**	**06 23 02.6**	**+0.3**
S39A	**Bolivar**	**61.04**	**338**	IAmb	IAmb	06 23 19.0	
	comp=Z,5.1nm,0.7s						
MNTX	**Cornudas Mount**	**61.39**	**325**	IAmb	IAmb	06 23 22.3	
	comp=Z,12nm,1.5s						
KS20	**Mayfield South**	**62.22**	**335**	P	**P**	**06 23 26.2**	**-0.3**
VNA3	**Neumayer Olymp**	**62.26**	**162**	P	**P**	**06 23 27.9**	**+1.5**
VNA2	**Neumayer--Watz**	**62.83**	**161**	P	**P**	**06 23 31.5**	**+1.3**
R32A	**Long Quarter,**	**63.71**	**335**	IAmb	IAmb	06 23 38.7	
	comp=Z,7.6nm,0.8s						
214A	**Organ Pipe Nat**	**65.84**	**320**	IAmb	IAmb	06 23 54.5	
	comp=Z,9.0nm,1.0s						
SDCO	**Great Sand Dun**	**66.18**	**329**	IAmb	IAmb	06 24 22.7	
	comp=Z,5.3nm,0.9s						
X16A	**Lo Mia Camp, P**	**66.79**	**323**	IAmb	IAmb	06 24 01.3	
	comp=Z,6.1nm,1.5s						
WUAZ	**Wupatki**	**67.55**	**324**	P	**P**	**06 24 02.6**	**+1.3**
WUAZ				IAmb	IAmb	06 24 31.5	
	comp=Z,4.0nm,0.9s						
LIC	**Lamto**	**68.17**	**75**	*e*P	**P**	**06 24 04.1**	**-1.4**
	comp=Z,11nm,0.3s						
TIC	**Toumodi**	**68.34**	**74**	*e*P	**P**	**06 24 05.7**	**-0.9**
KIC	**Kosan Boka**	**68.48**	**75**	*e*P	**P**	**06 24 06.5**	**-0.9**
	comp=Z,15nm,0.4s						
DBIC	**Dimbokro**	**68.50**	**74**	P	**P**	**06 24 07.0**	**-0.5**
	comp=Z,9.8nm,0.8s,baz=248,slow=3.9,SNR=22						
DBIC				LR	LR	06 53 01.6	
	comp=Z,54nm,20.1s,baz=316,slow=35						
DBIC	**Dimbokro**	**68.50**	**74**	P	**P**	**06 24 07.3**	**-0.2**
KNB	**Kanab**	**69.44**	**324**	P	**P**	**06 24 14.1**	**+1.1**
P18A	**Preston Nutter**	**69.99**	**327**	IAmb	IAmb	06 24 20.2	
	comp=Z,9.1nm,1.2s						
CCUT	**Cedar City**	**70.12**	**324**	P	**P**	**06 24 17.1**	**-0.3**
P17A	**Butcher Ranch,**	**70.12**	**327**	P	**P**	**06 24 18.4**	**+1.2**
MSU	**Marysvale**	**70.17**	**325**	P	**P**	**06 24 17.3**	**-0.3**
MVU	**Marysvale**	**70.18**	**325**	IAmb	IAmb	06 24 20.2	
	comp=Z,15nm,0.8s						
SHPR	**Sheep Range**	**70.41**	**322**	P	**P**	**06 24 21.6**	**+2.6**
RSSD	**Black Hills**	**70.67**	**334**	P	**P**	**06 24 21.9**	**+1.4**
RSSD				IAmb	IAmb	06 24 22.2	
	comp=Z,4.7nm,0.8s						
QSPA	**South Pole Qui**	**70.87**	**180**	P	**P**	**06 24 22.7**	**+1.3**
	comp=Z,3.0nm,0.6s,baz=260,slow=1.1,SNR=18						
QSPA	**South Pole Qui**	**70.87**	**180**	P	**P**	**06 24 20.8**	**-0.5**
R11A	**Troy Canyon, C**	**71.93**	**323**	P	**P**	**06 24 29.5**	**+1.3**
PDAR	**Pinedale Array**	**72.03**	**330**	P	**P**	**06 24 29.6**	**+0.9**
	comp=Z,0.5nm,0.5s,baz=126,slow=7.1,SNR=5.9						
KOWA	**Kowa**	**72.52**	**67**	P	**P**	**06 24 30.7**	**-1.2**
KOWA				IAmb	IAmb	06 24 36.2	
	comp=Z,6.4nm,0.7s						
ULM	**Lac du Bonnet**	**73.13**	**343**	P	**P**	**06 24 34.3**	**-0.4**
	comp=Z,3.0nm,0.5s,baz=162,slow=6.2,SNR=8.2						
ULM	**Lac du Bonnet**	**73.13**	**343**	IAmb	IAmb	06 24 35.8	
	comp=Z,15nm,1.3s						
NVAR	**Mina Array Bea**	**73.54**	**322**	P	**P**	**06 24 38.0**	**+0.2**
	comp=Z,1.6nm,0.9s,baz=158,slow=6.6,SNR=10.0						
YHH	**Holmes Hill**	**74.18**	**331**	IAmb	IAmb	06 24 44.8	
	comp=Z,6.5nm,0.8s						
HLID	**Hailey**	**75.00**	**328**	P	**P**	**06 24 47.4**	**+1.4**
HLID				IAmb	IAmb	06 24 49.3	
	comp=Z,5.1nm,0.9s						
PAHR	**Pah Rah Range**	**75.02**	**322**	IAmb	IAmb	06 24 49.1	
	comp=Z,6.8nm,0.8s						
MFID	**Camas Ranch**	**75.61**	**327**	IAmb	IAmb	06 24 52.8	
	comp=Z,10nm,1.2s						
ORV	**Oroville**	**76.16**	**321**	IAmb	IAmb	06 24 56.0	
	comp=Z,22nm,1.5s						
PLID	**Pearl Lake**	**76.88**	**328**	P	**P**	**06 24 58.1**	**+1.3**
TORD	**Torodi Ar. Bea**	**77.00**	**71**	P	**P**	**06 24 56.7**	**-1.1**
	comp=Z,5.9nm,0.5s,baz=256,slow=5.2,SNR=58						
TORD				pP	**pP**	**06 25 25.6**	**-0.1**
	comp=Z,5.0nm,0.8s,baz=256,slow=5.4,SNR=4.0						
TORD				LR	LR	06 58 06.6	
	comp=Z,55nm,19.0s,baz=260,slow=35						

TORD	Torodi Ar. Bea	77.00	71	IAmb	IAmb	06 24 59.8	
	comp=Z,9.0nm,0.9s						
EDM	Edmonton	81.63	335	P	P	06 25 22.4	+0.2
ESDC	Sonseca Array	84.56	45	P	P	06 25 38.4	+0.9
	comp=Z,1.4nm,0.8s,baz=251,slow=4.5,SNR=5.9						
ESDC				pP	pP	06 26 06.8	+0.7
	comp=Z,2.1nm,1.0s,baz=247,slow=6.1,SNR=3.6						
ESDC				LR	LR	06 59 02.8	
	comp=Z,19nm,21.9s,baz=325,slow=32						
ESDC	Sonseca Array	84.56	45	P	P	06 25 38.5	+0.9
BOSA	Boshof	84.81	118	LR	LR	07 00 03.1	
	comp=Z,45nm,19.7s,baz=266,slow=33						
YKA	Yellowknife Ar	89.01	341	P	P	06 25 58.3	-0.3
	comp=Z,2.5nm,0.5s,baz=124,slow=6.0,SNR=24						
YKA				pP	pP	06 26 28.6	+1.8
	comp=Z,5.0nm,1.0s,baz=127,slow=5.8,SNR=3.9						
H11S2	WAKE ISLAND Hy	127.19	279	T	T	08 51 36.9	
	baz=100,slow=74,SNR=176						
H11S1	WAKE ISLAND Hy	127.20	279	T	T	08 51 37.5	
	baz=100,slow=74,SNR=132						
H11S3	WAKE ISLAND Hy	127.21	279	T	T	08 51 41.6	
	baz=100,slow=74,SNR=117						
ASAR	Alice Springs	131.65	209	PKhKP	PKPpre	06 32 08.0	
	comp=Z,0.2nm,0.6s,baz=88,slow=1.4,SNR=4.1						
ASAR				PKP	PKPdf	06 32 17.1	-0.2
	comp=Z,0.9nm,0.5s,baz=139,slow=1.7,SNR=19						
WRA	Warramunga Arr	134.61	212	PKhKP	PKPpre	06 32 15.4	
	comp=Z,0.8nm,0.6s,baz=206,slow=1.1,SNR=11						
WRA				PKP	PKiKP	06 32 23.7	-0.7
	comp=Z,1.3nm,0.5s,baz=151,slow=1.7,SNR=21						
WRA				pPKP	pPKPdf	06 32 53.1	+0.7
	comp=Z,1.5nm,1.0s,baz=165,slow=1.5,SNR=3.9						
ZALV	Zalesovo Beam	140.13	24	PKhKP	PKPpre	06 32 26.5	
	comp=Z,0.6nm,0.5s,baz=45,slow=30,SNR=2.0						
ZALV				PKP	PKPdf	06 32 33.2	+1.2
	comp=Z,1.9nm,0.5s,baz=281,slow=3.1,SNR=8.3						
ZALV				pPKP	pPKPdf	06 33 03.0	+1.3
	comp=Z,2.2nm,0.8s,baz=298,slow=3.2,SNR=3.8						
MKAR	Makanchi Array	144.07	34	PKP	PKPbc	06 32 37.7	+0.1
	comp=Z,0.5nm,0.5s,baz=314,slow=3.2,SNR=6.4						
USRK	Ussuriysk Ar.	149.46	329	PKPbc	PKiKP	06 32 54.3	+0.3
	comp=Z,4.1nm,0.6s,baz=215,slow=0.9,SNR=8.3						
MJAR	Matsushiro Arr	150.38	311	PKPbc	PKiKP	06 32 56.7	+0.5
	comp=Z,4.6nm,0.6s,baz=107,slow=3.1,SNR=9.8						
MAT	Matsushiro	150.38	311	PKP	PKiKP	06 32 56.6	+0.4
SONM	Songino Array	151.34	6	PKP	PKPdf	06 32 51.9	+0.5
	comp=Z,0.5nm,0.6s,baz=16,slow=2.2,SNR=3.5						
SONM				PKPbc	PKiKP	06 32 58.3	+0.4
	comp=Z,3.4nm,0.5s,baz=320,slow=1.3,SNR=18						
SONM				pPKPbc	pPKPbc	06 33 28.3	+1.2
	comp=Z,5.5nm,0.9s,baz=321,slow=1.1,SNR=7.2						

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*NNC **18** 06:15:41.9±3.7, 36°.82N×70°.39E, h152^{km}±74^{km}, mb2.6, mpv3.4, Error ellipse: s-maj=33.1km s-min=22.8km az=8.0*

*IDC **18** 06:15:43.6±41.0, 36°.56N×70°.57E, h262^{km}±256^{km}, mb3.3/3, mb1 3.2/4, mb1mx2.8/28, mbtmp3.8/4, ML3.2/1, MS3.2/1, Ms1 3.2/1, ms1mx2.3/27, Error ellipse: s-maj=920.8km s-min=99.6km az=160.0*

ISC 18 06:15:42.4±2.3, **36°.9N**±0°.2×**70°.3E**±0°.1, **h200**^{km}, **n10**, σ**1^{s}11**/12, **4C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK02	Karatay Array	6.22	1	⇑P	Pn	06 17 12.9	+0.5
	0.8nm,0.2s						
KK02				⇑S	Sn	06 18 23.8	0.0
	2.3nm,0.5s						
AAK	Ala-Archa	6.59	28	⇓P	Pn	06 17 16.8	-0.6
	1.2nm,0.4s						
AAK				⇓S	Sn	06 18 32.2	-0.6
	7.8nm,0.6s						
TKM2	Tokmak 2	7.28	32	⇑P	Pn	06 17 25.4	-0.9
	1.1nm,0.6s						
TKM2				⇑S	Sn	06 18 47.8	-1.1
	2.1nm,0.8s						
MK31	Makanchi Array	13.32	38	P	P	06 18 48.0	+1.4
	0.1nm,0.3s,baz=0.0,slow=0.1,SNR=4.5						
MKAR	Makanchi Array	13.32	38	P	Pn	06 18 45.0	+1.2
	0.1nm,0.3s,baz=222,slow=13,SNR=3.2						
AB31	Akbulak array	14.48	332	P	P	06 18 59.6	+0.3
	0.4nm,0.3s,baz=150,slow=12,SNR=33						
ZALV	Zalesovo Beam	19.81	26	P	P	06 19 56.5	-1.0
	1.1nm,0.4s,baz=210,slow=11,SNR=6.0						
BRTR	Keskin Array B	28.79	287	LR	LR	06 36 53.2	
	comp=Z,43nm,18.7s,baz=256,slow=44						
FINES	FINESS Array B	36.86	326	P	P	06 22 29.7	-1.4
	3.3nm,0.9s,baz=104,slow=5.9,SNR=3.0						
ARCES	ARCESS Array B	40.58	338	P	P	06 23 00.7	-1.3
	1.3nm,0.8s,baz=124,slow=7.9,SNR=1.2						

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*NIED **18** 06:18:37.1, 31°.41N×128°.72E, h3^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.40; $M_{\theta\theta}$0.36; $M_{\phi\phi}$1.04; $M_{r\theta}$0.11; $M_{\theta\phi}$3.27; $M_{\phi r}$2.22; Fault plane solution: $M_0$4.08000×10^{14} NP1: ϕ_s184.00000°, δ77.00000°, λ-140.00000°. NP2: ϕ_s84.00000°, δ51.00000°, λ-16.00000°.*

JMA 18 06:18:37.0±0.4, **31°.40N**×**128°.72E**, **h3**^{km}±4^{km}, **M3.6, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	Shimokoshiki	0.89	72	P	Pg	06 18 54.2	0.0
JSJ				*e*S	Sg	06 19 06.5	+0.7
JFU	Fukue jima 2	1.25	1	P	Pg	06 19 00.7	-0.3
JSU	Suzuyama	1.49	85	P	Pn	06 19 04.6	-0.1
JNN	Nakanoshima	1.84	147	P	Pn	06 19 10.2	+0.6
JTN	Tanegashima 3	2.08	110	P	Pn	06 19 12.5	-0.3
JTZ	Takazaki	2.08	75	P	Pn	06 19 13.4	+0.6
JIU3	Izumi3	2.12	57	P	Pn	06 19 13.6	+0.3
JIU3				*e*S	Sn	06 19 40.5	+0.4
JMTN	Minamitane	2.12	118	P	Pn	06 19 12.9	-0.5

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*DDA **18** 06:28:56.2, 37°.83N×26°.35E, h6^{km}±2^{km}, ML2.0*

*ISK **18** 06:28:57.5, 37°.88N×26°.40E, h10^{km}, ML2.4/7*

ISC 18 06:28:57.2±1.7, **37°.87N**±0°.05×**26°.39E**±0°.06, **h7**^{km}±12^{km}, **n14**, σ**0^{s}60**/24, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZEYE	Izmir, Urla-Ze	0.38	14	*i* P	Pg	06 29 04.5	-0.1
ZEYE				IAML		06 29 11.0	
	comp=E,165nm,0.2s						
ZEYE				*i* S	Sb	06 29 11.4	-0.9
DGB	zmir	0.43	65	*i* P	Pg	06 29 05.8	+0.2
DGB				*i* S	Sg	06 29 12.3	+1.0
DGB				IAML		06 29 13.0	
	comp=N,94nm,0.1s						
DGB				IAML		06 29 13.0	
	comp=E,84nm,0.4s						
URLA	Izmir	0.52	19	*i* P	Pg	06 29 07.3	+0.1
URLA				*i* S	Sb	06 29 15.5	-0.8
URLA				IAML		06 29 16.0	
	comp=E,199nm,0.6s						
URLA	Izmir	0.52	19	PG	Pg	06 29 07.5	+0.3
URLA				SG	Sb	06 29 15.8	-0.5
CHOS	Chios island	0.58	333	PG	Pb	06 29 09.2	-0.5
CHOS				SG	Sb	06 29 17.8	-0.4
GCAM	G?zelcaml?	0.69	104	*i* P	Pg	06 29 09.8	-0.7
GCAM				*i* S	Sb	06 29 21.1	-0.2
GCAM	G?zelcaml?	0.69	104	PG	Pb	06 29 11.1	-0.5
GCAM				SG	Sb	06 29 21.4	+0.1
BLCB	Balcova	0.73	45	PG	Pb	06 29 11.8	-0.4
BLCB				SG	Sb	06 29 22.0	-0.4
FOCM	Foa	0.88	18	PG	Pb	06 29 14.8	-0.1
BODT	Bodrum	1.09	137	PN	Pn	06 29 18.6	-0.3
BDRM	Kayabasi	1.16	133	*i* P	Pn	06 29 21.0	+1.1
BDRM				*i* S	Sn	06 29 37.0	+0.9
BDRM				IAML		06 29 37.0	
	comp=N,35nm,0.4s						
BDRM				IAML		06 29 38.0	
	comp=E,27nm,0.4s						
AYDB	Zeytinkoy-Aydi	1.19	86	PN	Pn	06 29 20.5	+0.1
AYDN	Tasoluk	1.20	100	*i* P	Pb	06 29 19.8	-0.5
AYDN				*i* S	Sg	06 29 35.6	-0.2
SIGR	SIGRI	1.40	343	PN	Pb	06 29 23.7	0.0

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*TIR **18** 06:29:38.7, 38°.88N×20°.53E, h10^{km}±3^{km}, Ml3.8*

*THE **18** 06:29:39.3, 38°.91N×20°.65E, h15^{km}, ML3.5/9, Error ellipse: s-maj=1.8km s-min=0.6km az=264.0*

*ATH **18** 06:29:39.5, 38°.90N×20°.62E, h15^{km}±1^{km}, ML3.4/19, Error ellipse: s-maj=1.5km s-min=0.7km az=233.0*

*BEO **18** 06:29:42.5±1.0, 38°.90N×19°.95E, h0^{km}, ML3.4/7*

ISC 18 06:29:39.3±0.8, **38°.89N**±0°.02×**20°.60E**±0°.03, **h15**^{km}±4^{km}, **n78**, σ**1^{s}22**/108, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TSLK	Tsoukalades, L	0.08	148	P	Pg	06 29 42.1	-0.3
TSLK				S	Sg	06 29 44.4	0.0
	45µm,0.4s						
TSLK	Tsoukalades, L	0.08	148	P	Pg	06 29 42.0	-0.3
TSLK				S	Sg	06 29 44.5	0.0
LKD2	Lefkada island	0.11	157	P	Pg	06 29 42.6	-0.2
LKD2				S	Sb	06 29 45.4	-0.3
	31µm,0.2s						
LKD2	Lefkada island	0.11	157	P	Pg	06 29 42.6	-0.2
LKD2				S	Sb	06 29 45.4	-0.3
LKD2				AML	AML	06 29 45.7	
	comp=N,60030µm,0.2s						
LKD2				AML	AML	06 29 46.2	
	comp=E,64313µm,0.2s						
LKD2	Lefkada island	0.11	157	P	Pg	06 29 42.5	-0.2
	baz=132						
LKD2				S	Sg	06 29 45.3	+0.2
	baz=132						
NYDR	Nydri-Lefkada	0.19	157	P	Pg	06 29 43.8	0.0
NYDR				S	Sb	06 29 47.6	-0.3
	comp=E,24µm,0.3s						
NYDR	Nydri-Lefkada	0.19	157	P	Pg	06 29 43.8	0.0
NYDR				S	Sb	06 29 47.9	-0.1
DRAG	Dragano-Lefkad	0.21	186	P	Pg	06 29 44.2	+0.1
DRAG				S	Sb	06 29 48.9	+0.5
	comp=E,51µm,0.5s						
DRAG	Dragano-Lefkad	0.21	186	P	Pg	06 29 44.2	+0.1
DRAG				S	Sb	06 29 48.5	+0.1
EVGI	Lefkada island	0.27	171	P	Pg	06 29 45.2	0.0
EVGI				S	Sb	06 29 50.6	+0.3
	comp=E,19µm,0.3s						
EVGI	Lefkada island	0.27	171	P	Pg	06 29 45.3	+0.2
EVGI				S	Sb	06 29 50.3	0.0
FSK	Fiskardo	0.43	184	P	Pg	06 29 48.1	+0.1
FSK				S	Sb	06 29 55.7	+0.9
	comp=E,6µm,0.3s						
FSK	Fiskardo	0.43	184	P	Pg	06 29 48.0	0.0
FSK				S	Sb	06 29 55.3	+0.5
FSK				AML	AML	06 29 57.0	
	comp=E,15943µm,0.3s						
FSK				AML	AML	06 29 57.6	
	comp=N,8290µm,0.4s						
DSL	Palaion Diasel	0.46	58	P	Pg	06 29 48.2	-0.2
DSL				S	Sb	06 29 55.3	-0.2
KEF4	Livadi, Kephal	0.65	192	P	Pb	06 29 52.2	-0.1
KEF4				S	Sb	06 30 01.4	+0.3
IGT	Igoumenitsa	0.67	342	P	Pg	06 29 51.7	-0.8
IGT				S	Sb	06 30 02.5	+0.7
	comp=N,1µm,0.3s						
IGT	Igoumenitsa	0.67	342	P	Pg	06 29 51.5	-1.0
IGT				AML	AML	06 30 09.3	
	comp=N,2602µm,0.3s						
IGT				AML	AML	06 30 12.7	
	comp=E,2301µm,0.4s						
IGT	Igoumenitsa	0.67	342	P	Pg	06 29 51.7	-0.8
	baz=347						
IGT				S	Sb	06 30 02.1	+0.3
	baz=347						
DMLN	Damoulianata-K	0.68	195	P	Pg	06 29 51.9	-0.6
VLS	Valsamata	0.71	181	P	Pg	06 29 53.0	-0.2
VLS				S	Sb	06 30 04.2	+1.2
	comp=E,4µm,0.3s						
VLS	Valsamata	0.71	181	P	Pg	06 29 53.0	-0.2
VLS				AML	AML	06 30 08.2	
	comp=E,9182µm,0.4s						
VLS				AML	AML	06 30 08.5	
	comp=N,8073µm,0.3s						
KEF3	Kipouria, Keph	0.71	196	P	Pg	06 29 52.8	-0.4
KEF3	Kipouria, Keph	0.71	196	P	Pg	06 29 52.8	-0.4
PVO	Paravola	0.77	110	P	Pg	06 29 53.9	-0.4
PVO	Paravola	0.77	110	P	Pg	06 29 53.9	-0.4
PVO				AML	AML	06 30 07.7	
	comp=E,10276µm,0.4s						
PVO				AML	AML	06 30 09.1	
	comp=N,9805µm,0.4s						
PSDA	Pessada-Kefalo	0.78	181	P	Pg	06 29 54.0	-0.4
PSDA				S	Sn	06 30 06.4	-0.5
	comp=N,505nm,0.3s						
PSDA	Pessada-Kefalo	0.78	181	P	Pg	06 29 53.9	-0.5
JAN	Janina	0.79	14	P	Pg	06 29 54.6	-0.1
JAN				AML	AML	06 30 09.2	
	comp=E,6693µm,0.8s						
JAN				AML	AML	06 30 11.9	
	comp=N,3074µm,0.6s						
EVR	Evrytania	0.94	88	P	Pb	06 29 57.1	-0.2
EVR				S	Sb	06 30 09.6	-0.1
EVR				AML	AML	06 30 14.8	
	comp=N,1917µm,0.7s						
EVR				AML	AML	06 30 17.4	
	comp=E,2645µm,0.4s						
KASA	Kassiopi	1.00	329	P	Pg	06 29 58.6	0.0
KASA				AML	AML	06 30 17.4	
	comp=E,4632µm,0.4s						
KASA				AML	AML	06 30 18.8	
	comp=N,1957µm,0.2s						
KEK	Kerkira	1.03	323	P	Pb	06 29 58.5	-0.3
KEK				AML	AML	06 30 20.2	
	comp=N,2339µm,0.4s						
KEK				AML	AML	06 30 20.5	
	comp=E,2516µm,0.4s						
ANX	Ano Chora	1.07	106	P	Pb	06 29 59.2	-0.4
ANX				AML	AML	06 30 17.5	
	comp=N,5029µm,0.4s						
ANX				AML	AML	06 30 23.6	
	comp=E,3788µm,0.4s						
RLS	Riolos of Patr	1.07	141	P	Pb	06 29 59.1	-0.5
RLS				AML	AML	06 30 22.8	
	comp=E,2227µm,0.8s						
RLS				AML	AML	06 30 28.0	
	comp=N,2305µm,0.8s						
VTN	Vitineika	1.08	155	P	Pg	06 30 00.4	+0.3
SRN	Sarande	1.09	335	P	Pn	06 30 00.2	+0.2
	baz=338						
SRN				S	Sn	06 30 15.6	+0.8
	baz=338						
SRN				AMP			
	comp=E,1.7nm,1.0s,baz=338						
EFP	Efpalio	1.12	114	P	Pb	06 29 59.8	-0.6
EFP				AML	AML	06 30 23.2	
	comp=N,5241µm,1.1s						
EFP				AML	AML	06 30 24.7	
	comp=E,4290µm,0.4s						
LTHK	Lithakia	1.19	171	P	Pg	06 30 02.1	-0.2
MAKR	Makrakomi, Fth	1.20	84	P	Pn	06 30 01.5	0.0
MAKR				AML	AML	06 30 28.1	
	comp=E,7292µm,0.5s						
MAKR				AML	AML	06 30 29.0	
	comp=N,4685µm,0.5s						
KPRO	Kipourio	1.22	29	P	Pn	06 30 01.8	+0.1
KPRO				AML	AML	06 30 33.7	
	comp=E,5106µm,1.2s						
KPRO				AML	AML	06 30 34.0	
	comp=N,6257µm,1.4s						
LSK	Leskovik	1.26	360	P	Pg	06 30 03.4	-0.2
	baz=2.0						
LSK				S	Sg	06 30 21.4	+1.4
	baz=2.0						
LSK				AMP			
	comp=E,5.6nm,0.7s,baz=2.0						
LAKA	Lakka	1.26	121	P	Pn	06 30 02.1	-0.2
LAKA				AML	AML	06 30 29.0	
	comp=N,1124µm,0.4s						
LAKA				AML	AML	06 30 33.8	
	comp=E,2738µm,1.0s						
TRIZ	Trizonia	1.27	114	P	Pb	06 30 02.6	-0.2
TRIZ				S	Sb	06 30 18.1	-0.7
DRO	Drossia	1.28	137	P	Pn	06 30 02.1	-0.5
DRO				AML	AML	06 30 24.7	
	comp=N,4202µm,0.4s						
DRO				AML	AML	06 30 25.2	
	comp=E,5268µm,0.3s						
THL	Klokotos Trika	1.29	58	P	Pb	06 30 03.0	-0.1
THL				AML	AML	06 30 26.8	
	comp=N,2170µm,0.6s						
THL				AML	AML	06 30 27.7	
	comp=E,2706µm,0.5s						
AGG	Agios Georgios	1.35	84	P	Pn	06 30 03.8	+0.2
AGG				AML	AML	06 30 29.8	
	comp=N,2243µm,0.3s						
AGG				AML	AML	06 30 30.2	
	comp=E,2978µm,0.6s						
KLV	Kalavryta, Ach	1.48	124	P	Pn	06 30 05.7	+0.3
KLV				AML	AML	06 30 36.6	
	comp=N,1475µm,1.1s						
KLV				AML	AML	06 30 49.7	
	comp=E,1072µm,1.5s						
KBN	Korca	1.74	5	P	Pg	06 30 13.7	+1.0
	baz=6.0						
KBN				S	Sg	06 30 36.0	+0.8
	baz=6.0						
KBN				AMP			
	comp=N,2.9nm,1.0s,baz=6.0						
FNA	Florina	1.98	17	P	Pb	06 30 15.1	+0.1
	baz=18						
ITM	Ithomi	2.00	148	P	Pb	06 30 16.3	+0.9
SCTE	Santa Cesarea	2.03	306	P	Pb	06 30 14.6	-1.3
	baz=308						
OHR	Ohrid	2.22	4	*e*Pn	Pg	06 30 22.2	+0.3
OHR				*e*Sn	Sg	06 30 49.9	-0.9
OHR	Ohrid	2.22	4	*i* Pn	Pg	06 30 21.4	-0.5
TIR	Tirane	2.52	347	*e*Pn	Pb	06 30 24.6	+0.5
TIR	Tirane	2.52	347	P	Pb	06 30 23.3	-0.8
	baz=349						
PHP	Peshkopia	2.79	358	P	Pn	06 30 25.6	+2.2
	baz=359						
PHP				AMP			
	comp=N,1.0nm,1.4s,baz=359						
VAY	Valandovo	2.86	31	*i* Pn	Pb	06 30 27.6	-2.3
STIP	Stip	3.05	23	*i* Pn	Pb	06 30 31.0	-2.2
BCI	Bajram Curri	3.50	353	P	Pn	06 30 36.9	+3.9
	baz=355						
BCI				AMP			
	comp=E,0.5nm,1.3s,baz=355						
PRVS	Prvonek	3.78	17	*e*Pn	Pb	06 30 44.8	-0.9
TREB	Trebinje	4.19	337	*e*Pn	Pn	06 30 45.1	+2.6
DBRK	Dubrovnik	4.21	335	*e*Pn	Pn	06 30 43.6	+0.8
DBRK				Sn	Sn	06 31 28.4	-3.3
SJES	Sjenica	4.39	354	*e*Pn	Pn	06 30 49.4	+4.0
SJES				*e*Sn	Sn	06 31 40.4	+4.1
STON	Ston	4.54	332	*e*Pn	Pn	06 30 47.9	+0.5
STON				*e*Sn	Sn	06 31 39.2	-0.7
STON	Ston	4.54	332	*e*Pn	Pn	06 30 47.5	+0.1
BOVS	Bovan	4.81	10	*e*Pn	Pn	06 30 56.2	+5.1
GRUS	Gruza	4.99	1	*e*Pn	Pn	06 30 58.7	+5.1
BBLS	Lazići	5.05	350	*e*Pn	Pn	06 30 58.6	+4.1
MAKA	Makarska	5.16	330	*e*Pn	Pn	06 30 56.1	+0.2
MAKA				Sn	Sn	06 31 53.2	-1.8
DIVS	Divibare	5.22	355	*e*Pn	Pn	06 30 59.5	+2.7
RICI	Ricice	5.29	331	*e*Pn	Pn	06 30 58.0	+0.3
RICI				Sn	Sn	06 31 57.1	-1.3
HVAR	Hvar	5.31	325	*e*Pn	Pn	06 30 58.6	+0.6
KIJV	Kijevo	6.00	330	*e*Pn	Pn	06 31 08.0	+0.5
ZIRJ	Zirje	6.05	323	*e*Pn	Pn	06 31 08.0	-0.1
ZIRJ				Sn	Sn	06 32 13.7	-3.3
MORI	Morici	6.18	325	*e*Pn	Pn	06 31 10.7	+0.7
MORI				Sn	Sn	06 32 18.1	-2.2
DUGI	Dugi Otok	6.58	323	*e*Pn	Pn	06 31 16.0	+0.6
UDBI	Udbina	6.69	329	*e*Pn	Pn	06 31 19.6	+2.6
NVLJ	Novalja	7.10	325	*e*Pn	Pn	06 31 22.8	+0.3
BRJN	Brijuni	7.89	322	*e*Pn	Pn	06 31 33.8	+0.5

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*IDC **18** 06:32:42.6±1.4, 31°.20N×128°.54E, h0^{km}, mb3.2/3, mb1 3.6/5, mb1mx3.3/39, mbtmp3.4/5, ML3.8/2, MS2.9/4, Ms1 2.9/4, ms1mx2.5/25, Error ellipse: s-maj=41.5km s-min=19.0km az=86.0*

*JMA **18** 06:32:43.7±0.6, 31°.40N×128°.82E, h10^{km}±4^{km}, M3.8*

*NIED **18** 06:32:43.8, 31°.40N×128°.82E, h10^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.87; $M_{\theta\theta}$1.89; $M_{\phi\phi}$-1.02; $M_{r\theta}$0.77; $M_{\theta\phi}$4.72; $M_{\phi r}$2.88; Fault plane solution: $M_0$5.78000×10^{14} NP1: ϕ_s191.00000°, δ86.00000°, λ-148.00000°. NP2: ϕ_s98.00000°, δ58.00000°, λ-4.00000°.*

ISC 18 06:32:43.3±1.2, **31°.31N**±0°.07×**128°.85E**±0°.09, **h10**^{km}, **n13**, σ**0^{s}63**/10, **mb3.3**/3, **MS2.9**/3, **Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	Shimokoshiki	0.82	64	P	Pg	06 32 59.2	0.0
JFU	Fukue jima 2	1.34	356	P	Pn	06 33 07.2	-0.9
JYAK	Yakushimahirau	1.79	126	P	Pn	06 33 13.5	-0.7
JMTN	Minamitane	1.99	117	P	Pn	06 33 17.1	+0.2
JTZ	Takazaki	2.00	72	P	Pn	06 33 17.5	+0.4
JNU	Nakatsue	2.49	43	Pn	Pb	06 33 27.8	-0.4
	38nm,0.3s,baz=42,slow=0.1,SNR=35						
KSRS	Korea Array	6.17	353	Pn	Pn	06 34 15.2	+0.7
	0.8nm,0.3s,baz=175,slow=14,SNR=6.7						
KSRS				Lg	Lg	06 36 02.7	
	1.6nm,0.3s,baz=175,slow=30,SNR=6.6						
KSRS				LR	LR	06 36 15.7	
	comp=Z,27nm,21.4s,baz=160,slow=34						
SONM	Songino Array	23.78	320	P	P	06 37 56.2	+0.1
	0.5nm,0.5s,baz=134,slow=8.3,SNR=2.6						
TLY	Talaya	27.52	325	LR	LR	06 49 39.2	
	comp=Z,16nm,18.3s,baz=64,slow=37						
ZALV	Zalesovo Beam	38.66	319	LR	LR	06 58 26.4	
	comp=Z,16nm,18.3s,baz=358,slow=40						
WRA	Warramunga Arr	51.23	173	P	P	06 41 46.9	-0.3
	0.3nm,0.8s,baz=348,slow=4.3,SNR=2.0						
ASAR	Alice Springs	54.88	174	P	P	06 42 14.9	+0.8
	0.2nm,0.6s,baz=0.6,slow=14,SNR=5.8						
ARCES	ARCESS Array B	65.50	338	LR	LR	07 16 50.4	
	comp=Z,33nm,18.6s,baz=280,slow=40						

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*NIED **18** 06:46:30.5, 31°.45N×128°.74E, h2^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.48; $M_{\theta\theta}$1.26; $M_{\phi\phi}$-0.78; $M_{r\theta}$1.09; $M_{\theta\phi}$2.43; $M_{\phi r}$1.25; Fault plane solution: $M_0$3.02000×10^{14} NP1:ϕ_s12.00000°, δ86.00000°, λ153.00000°. NP2:ϕ_s104.00000°, δ63.00000°, λ5.00000°.*

JMA 18 06:46:30.4±0.3, **31°.45N**×**128°.74E**, **h2**^{km}±3^{km}, **M3.6, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	Shimokoshiki	0.86	74	P	Pg	06 46 47.2	+0.2
JSJ				S	Sb	06 46 59.2	-0.9
JFU	Fukue jima 2	1.20	0	P	Pg	06 46 53.6	+0.1
JSU	Suzuyama	1.47	87	P	Pn	06 46 57.9	0.0
JTZ	Takazaki	2.05	77	P	Pn	06 47 05.9	0.0
JIU3	Izumi3	2.07	58	P	Pn	06 47 06.8	+0.6

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*NEIC **18** 06:55:11.4±0.9, 19°.65N±0°.09×63°.64W±0°.09, h35^{km}±59^{km}, Error ellipse: s-maj=14.6km s-min=10.4km az=212.0*

*RSPR **18** 06:55:12.0, 19°.64N×63°.62W, h35^{km}±22^{km}, MD3.1/6*

ISC 18 06:55:09.5±2.4, **19°.7N**±0°.1×**63°.52W**±0°.06, **h35**^{km}, **n49**, σ**1^{s}01**/52, **15C, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TBVI	Tortola	1.61	220	⇑*e*P	Pn	06 55 35.1	-0.3
TBVI	Tortola	1.61	220	*e*S	Sn	06 55 54.7	-0.3
SMRT	St. Maarten	1.66	165	Pn	Pn	06 55 39.6	+3.6
SMRT				IAML		06 55 54.6	
	comp=E,215nm,0.3s						
SMRT				IAML		06 55 55.0	
	comp=N,188nm,0.2s						
STVI	Saint Thomas	1.88	226	⇑*e*P	Pn	06 55 39.1	0.0
STVI	Saint Thomas	1.88	226	*e*S	Sn	06 56 00.8	-0.8
STVI	Saint Thomas	1.88	226		Pn	06 55 39.1	0.0
STVI					Sn	06 56 00.8	-0.8
SABA	Saba	2.05	172	Pn	Pn	06 55 42.9	+1.5
CUPR	Culebra, Puert	2.14	231	⇑*e*P	Pn	06 55 42.9	+0.2
CUPR	Culebra, Puert	2.14	231	*e*S	Sn	06 56 07.2	-0.8
CUPR	Culebra, Puert	2.14	231		Pn	06 55 42.9	+0.2
CUPR					Sn	06 56 07.2	-0.8
CDVI	St. Croix	2.23	212	⇑*e*P	Pn	06 55 44.6	+0.5
CDVI	St. Croix	2.23	212	*e*S	Sn	06 56 10.4	+0.1
CDVI	St. Croix	2.23	212	*e*P	Pn	06 55 44.5	+0.5
CDVI	St. Croix	2.23	212		Pn	06 55 44.6	+0.5
CDVI					Sn	06 56 10.4	+0.1
CDVI	St. Croix	2.23	212	IAML		06 56 11.0	
	comp=N,169nm,0.8s						
MTP	Monte Pirata	2.47	231	⇑*e*P	Pn	06 55 47.6	+0.3
MTP	Monte Pirata	2.47	231	*e*S	Sn	06 56 15.7	-0.6

MTP	**Monte Pirata**	**2.47**	**231**		**Pn**	**06 55 47.6**	**+0.3**
MTP					**Sn**	**06 56 15.7**	**-0.6**
MTP	**Monte Pirata**	**2.47**	**231**	IAML		06 56 21.2	
	comp=E,42nm,0.2s						
CBYP	**Canovanas**	**2.60**	**238**	⇑eP	**Pn**	**06 55 49.4**	**+0.3**
CBYP	**Canovanas**	**2.60**	**238**	eS	**Sn**	**06 56 19.8**	**+0.2**
CBYP	**Canovanas**	**2.60**	**238**		**Pn**	**06 55 49.4**	**+0.3**
CBYP					**Sn**	**06 56 19.8**	**+0.2**
CBYP	**Canovanas**	**2.60**	**238**	IAML		06 56 30.0	
	comp=N,109nm,0.2s						
HUMP	**Col San Antoni**	**2.67**	**236**	⇑eP	**Pn**	**06 55 51.1**	**+1.2**
HUMP	**Col San Antoni**	**2.67**	**236**		**Pn**	**06 55 51.1**	**+1.2**
GCPR	**Guaynabo City**	**2.77**	**241**	⇑eP	**Pn**	**06 55 51.4**	**+0.1**
GCPR	**Guaynabo City**	**2.77**	**241**	eS	**Sn**	**06 56 22.8**	**-0.9**
GCPR	**Guaynabo City**	**2.77**	**241**		**Pn**	**06 55 51.4**	**+0.1**
GCPR					**Sn**	**06 56 22.8**	**-0.9**
SJG	**San Juan**	**2.92**	**239**	Pn	**Pn**	**06 55 53.9**	**+0.4**
SJG				IAML		06 57 10.1	
	comp=N,24nm,0.2s						
IGPR	**InterUniversit**	**2.97**	**236**	⇑eP	**Pn**	**06 55 55.4**	**+1.2**
IGPR	**InterUniversit**	**2.97**	**236**	eS	**Sn**	**06 56 27.5**	**-1.1**
ANBD	**Bethesda, Anti**	**3.09**	**147**	eP	**Pn**	**06 55 56.1**	**+0.3**
ANBD				eS	**Sn**	**06 56 28.5**	**-3.0**
CELP	**Cerrillos**	**3.29**	**242**	⇑eP	**Pn**	**06 55 59.0**	**+0.4**
CELP	**Cerrillos**	**3.29**	**242**		**Pn**	**06 55 59.0**	**+0.4**
AOPR	**Arecibo Observ**	**3.32**	**247**	⇑eP	**Pn**	**06 55 59.8**	**+0.8**
AOPR	**Arecibo Observ**	**3.32**	**247**	eP	**Pn**	**06 55 59.1**	**+0.1**
AOPR	**Arecibo Observ**	**3.32**	**247**		**Pn**	**06 55 59.8**	**+0.8**
AOPR	**Arecibo Observ**	**3.32**	**247**	IAML		06 56 44.7	
	comp=E,63nm,0.4s						
OBIP	**Obispado Ponce**	**3.33**	**242**	⇑eP	**Pn**	**06 55 59.9**	**+0.7**
OBIP	**Obispado Ponce**	**3.33**	**242**		**Pn**	**06 55 59.9**	**+0.7**
AGPR	**Aguadilla, PR**	**3.59**	**251**	⇑eP	**Pn**	**06 56 03.3**	**+0.6**
AGPR	**Aguadilla, PR**	**3.59**	**251**		**Pn**	**06 56 03.3**	**+0.6**
LSP	**Las Mesas**	**3.68**	**247**	⇑eP	**Pn**	**06 56 04.9**	**+1.0**
PRSN	**Puerto Rico Se**	**3.72**	**248**	Pn	**Pn**	**06 56 05.1**	**+0.7**
MLPR	**Magueyes Islan**	**3.73**	**244**	Pn	**Pn**	**06 56 05.5**	**+0.9**
CRPR	**Cabo Rojo, PR**	**3.77**	**245**	⇑eP	**Pn**	**06 56 06.2**	**+1.0**
CRPR	**Cabo Rojo, PR**	**3.77**	**245**		**Pn**	**06 56 06.2**	**+1.0**
CBE	**Ff, Capester**	**4.01**	**153**	eS	**Sn**	**06 56 51.9**	**-2.4**
DR12	**Loma Pena Alta**	**5.60**	**262**	Pn	**Pn**	**06 56 31.2**	**+0.9**

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*NOU **18** 06:56:09.3, 38°.44S×178°.42E, h0^{km}, MLv3.8/4, Off E. Coast of N. Island, N.Z.*

WEL 18 06:56:32.6, 39°S±3°×**17°6E**±°**, h38**^{km}±10^{km}**, M2.5**/12, **ML2.9**/12, **MLv2.5**/12, **Error ellipse: s-maj=0.0km s-min=0.0km az=142.9, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKZ	**Black Stump Fm**	**0.11**	**74**	P	Pn	06 56 39.1	-5.1
BKZ	**Black Stump Fm**	**0.11**	**74**	P	Pn	06 56 39.2	-5.0
KWHZ	**Kaweka Forest**	**0.23**	**166**	P	Pn	06 56 40.1	-1.0
MCHZ	**McNeill Hill**	**0.36**	**133**	P	Pn	06 56 41.6	+0.4
MCHZ				S	Sn	06 56 49.8	+1.8
BHHZ	**Black Hill Sta**	**0.37**	**217**	P	Pn	06 56 41.6	+0.3
BHHZ				S	Sn	06 56 49.8	+1.7
HATZ	**Hinemaiaia**	**0.37**	**327**	P	Pn	06 56 41.6	+0.3
HATZ				S	Sn	06 56 48.8	+0.8
MRHZ	**Matea Rd**	**0.37**	**8**	P	Pn	06 56 41.5	+0.1
MRHZ				S	Sn	06 56 49.4	+1.3
NMHZ	**Naumai**	**0.37**	**74**	P	Pn	06 56 41.8	+0.4
NMHZ				S	Sn	06 56 50.2	+2.1
RITZ	**Rihia Road**	**0.44**	**300**	P	Pn	06 56 43.1	+0.8
KRHZ	**Kereru**	**0.45**	**178**	P	Pn	06 56 42.3	-0.1
KRHZ				S	Sn	06 56 50.6	+1.2
ETVZ	**East Tongariro**	**0.50**	**277**	P	Pn	06 56 43.8	+0.4
ARHZ	**Aropaoanui**	**0.51**	**98**	P	Pn	06 56 43.1	-0.1
ARHZ				S	Sn	06 56 52.9	+2.2
MOVZ	**Moawhango**	**0.51**	**246**	P	Pn	06 56 43.4	0.0
MOVZ				S	Sn	06 56 51.9	+0.9
TMVZ	**Te Maari**	**0.51**	**279**	P	Pn	06 56 43.9	+0.4
MTHZ	**Maungataniwha**	**0.51**	**48**	P	Pn	06 56 43.2	-0.3
MTHZ				S	Sn	06 56 52.2	+1.1
NTVZ	**North Tongarir**	**0.54**	**280**	P	Pn	06 56 44.1	+0.3
OTVZ	**Oturere**	**0.54**	**274**	P	Pn	06 56 44.2	+0.3
OTVZ				S	Sn	06 56 53.6	+1.8
TUVZ	**Tukino**	**0.55**	**262**	P	Pn	06 56 44.4	+0.3
SNVZ	**South Ngauruho**	**0.55**	**271**	P	Pn	06 56 44.5	+0.3
KATZ	**Kakaramea**	**0.56**	**293**	P	Pn	06 56 44.5	+0.3
KRVZ	**Karewarewa**	**0.56**	**280**	P	Pn	06 56 44.5	+0.2
NNVZ	**North Ngauruho**	**0.58**	**276**	P	Pn	06 56 44.8	+0.3
NGZ	**Ngauruhoe**	**0.58**	**272**	P	Pn	06 56 44.9	+0.2
NGZ				S	Sn	06 56 54.5	+1.5
WTVZ	**West Tongariro**	**0.60**	**278**	P	Pn	06 56 45.1	+0.3
WHVZ	**Whangaehu Hut**	**0.60**	**262**	P	Pn	06 56 45.0	+0.1
WNVZ	**Wahianoa**	**0.60**	**257**	P	Pn	06 56 44.9	0.0
DRZ	**Dome Shelter**	**0.62**	**263**	P	Pn	06 56 45.3	+0.1
FWVZ	**Far West T-bar**	**0.62**	**265**	P	Pn	06 56 45.2	0.0
TRVZ	**Turoa**	**0.63**	**261**	P	Pn	06 56 45.3	0.0
ALRZ	**Allen Road**	**0.64**	**359**	P	Pn	06 56 44.6	-0.6
RAHZ	**Arahi**	**0.64**	**64**	P	Pn	06 56 45.0	-0.2
RAHZ				S	Sn	06 56 55.6	+1.5
WHHZ	**Waihua**	**0.70**	**80**	P	Pn	06 56 45.8	-0.1
MTVZ	**Mangateitei**	**0.71**	**254**	P	Pn	06 56 46.2	+0.1
KAHZ	**Kahuranaki**	**0.72**	**146**	P	Pn	06 56 46.0	-0.3
TWVZ	**Taurewa**	**0.72**	**280**	P	Pn	06 56 46.2	-0.1
PNHZ	**Pukenui**	**0.72**	**189**	P	Pn	06 56 46.2	-0.1
CKHZ	**Cape Kidnapper**	**0.73**	**129**	P	Pn	06 56 45.7	-0.6
RTZ	**Ruatahuna**	**0.76**	**40**	P	Pn	06 56 46.3	-0.5
PKVZ	**Pokaka**	**0.79**	**263**	P	Pn	06 56 47.4	+0.2
MUGZ	**Murupara**	**0.79**	**25**	P	Pn	06 56 46.1	-1.1
HRRZ	**Handcock Road**	**0.81**	**356**	P	Pn	06 56 47.0	-0.5
WPHZ	**Waipukurau**	**0.87**	**175**	P	Pn	06 56 47.7	-0.6
SNGZ	**Shannon Statio**	**0.88**	**62**	P	Pn	06 56 48.2	-0.1
HSRZ	**Hossack Road**	**0.89**	**355**	P	Pn	06 56 48.3	-0.3
TSZ	**Takapari Road**	**0.91**	**199**	P	Pn	06 56 48.6	-0.2
PXZ	**Pawanui**	**0.92**	**155**	P	Pn	06 56 48.0	-0.9
TARZ	**Mount Tarawera**	**0.97**	**7**	P	Pn	06 56 49.3	-0.4
KNZ	**Kokohu**	**1.04**	**81**	P	Pn	06 56 49.3	-1.3
PRHZ	**Porangahau**	**1.09**	**169**	P	Pn	06 56 50.2	-1.1
DVHZ	**Dannevirke**	**1.11**	**187**	P	Pn	06 56 50.4	-1.2
URZ	**Urewera**	**1.11**	**33**	P	Pn	06 56 50.6	-0.9
WAZ	**Wanganui**	**1.20**	**242**	P	Pn	06 56 53.7	+0.9
RIGZ	**Rimuhau**	**1.21**	**66**	P	Pn	06 56 52.0	-0.9
MHGZ	**Mahia Peninsul**	**1.21**	**88**	P	Pn	06 56 51.8	-1.1
PRGZ	**Paritu Road**	**1.22**	**77**	P	Pn	06 56 51.8	-1.3
VRZ	**Vera Road**	**1.24**	**273**	P	Pn	06 56 53.8	+0.4
MWZ	**Matawai**	**1.26**	**47**	P	Pn	06 56 53.0	-0.6
ANWZ	**Angora Road**	**1.26**	**176**	P	Pn	06 56 52.6	-1.1
POWZ	**Post Office Ro**	**1.27**	**200**	P	Pn	06 56 53.0	-0.8
HIZ	**Hauiti**	**1.35**	**300**	P	Pn	06 56 54.9	+0.1
HIZ	**Hauiti**	**1.35**	**300**	P	Pn	06 56 55.1	+0.2
BFZ	**Birch Farm**	**1.48**	**183**	P	Pn	06 56 54.9	-1.8
BFZ	**Birch Farm**	**1.48**	**183**	P	Pn	06 56 55.1	-1.6
MRZ	**Mangatainoka R**	**1.58**	**202**	P	Pn	06 56 56.5	-1.5
RUGZ	**Raukumara Rang**	**1.61**	**41**	P	Pn	06 56 57.9	-0.6
TIWZ	**Tintock**	**1.62**	**193**	P	Pn	06 56 57.0	-1.5
TWGZ	**Tauwhareparae**	**1.63**	**52**	P	Pn	06 56 58.3	-0.5
NEZ	**North Egmont**	**1.75**	**267**	P	Pn	06 57 02.4	+1.9
HOWZ	**Holdsworth Sta**	**1.81**	**200**	P	Pn	06 56 59.2	-2.1
KHEZ	**Kahui Hut**	**1.82**	**266**	P	Pn	06 57 03.0	+1.7
HAZ	**Te Kaha**	**1.83**	**38**	P	Pn	06 57 00.1	-1.3
PKE	**Pukeiti**	**1.84**	**269**	P	Pn	06 57 02.6	+1.1
KIW	**Kapiti Island**	**2.00**	**213**	P	Pn	06 57 02.3	-1.4
MTW	**Mount Morrison**	**2.06**	**198**	P	Pn	06 57 02.0	-2.7
WMGZ	**Waiomatatini S**	**2.12**	**50**	P	Pn	06 57 04.4	-1.0
CAW	**Cannon Point**	**2.15**	**207**	P	Pn	06 57 03.6	-2.2
PLWZ	**Palliser**	**2.51**	**199**	P	Pn	06 57 07.6	-3.3
TCW	**Tory Channel**	**2.56**	**218**	P	Pn	06 57 09.3	-2.2
TUWZ	**Tuamarina**	**2.89**	**219**	P	Pn	06 57 13.4	-2.6
QRZ	**Quartz Range**	**3.35**	**240**	P	Pn	06 57 23.7	+1.3
QRZ	**Quartz Range**	**3.35**	**240**	P	Pn	06 57 27.6	+5.2

KRNET 18 07:03:31.7±0.1**, 40°.37N**×**73°.21E, h15**^{km}**, mb2.1, 12C-3D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**0.36**	**296**	⇑eP	Pg	07 03 38.6	-0.5
	baz=96						
OHH				⇑iS	Sg	07 03 44.2	0.0
	baz=96						
SFK	**Sufi-Kurgan**	**0.42**	**147**	⇓eP	Pg	07 03 40.0	-0.2
	baz=47						
SFK				⇓eS	Sg	07 03 46.0	0.0
	baz=47						
SALK	**Salom-Alik**	**0.69**	**42**	⇑eP	Pg	07 03 44.9	-0.4
	baz=42						
SALK				⇑eS	Sg	07 03 54.5	0.0
	baz=42						
DRK	**Karamyk**	**1.40**	**231**	⇑iP	Pn	07 03 57.3	+0.3
	baz=31						
DRK				⇑iS	Sg	07 04 16.7	-0.2
	baz=31						
AML	**Almayashu**	**1.80**	**12**	⇑iP	Pb	07 04 05.0	+0.4
	baz=12						
AML				⇑eS	Sg	07 04 29.0	-0.8
	baz=12						
BTK	**Batken**	**1.86**	**261**	⇑iP	Pb	07 04 05.8	+0.4
	baz=61						
BTK				⇑iS	Sg	07 04 30.5	-1.0
	baz=61						
TRKS	**Terek-Say**	**1.95**	**307**	⇑eP	Pb	07 04 06.8	-0.3
	baz=6.0						
TRKS				⇑iS	Sb	07 04 32.2	+0.9
	baz=6.0						
MNAS	**Manas**	**2.18**	**346**	⇓iP	Pb	07 04 10.3	-0.7
	baz=46						

IDC 18 07:06:27.2±6.0**, 47°.71N**×**108°.57E, h0**^{km}**, Error ellipse: s-maj=38.8km s-min=25.0km az=95.0, Mongolia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I34MN	**SONGINO INFRAS**	**1.46**	**275**	i		07 17 40.0	
	baz=91,slow=341,SNR=1.1						
SONM	**Songino Array**	**1.48**	**276**	Pg	Pn	07 06 54.7	-0.4
	16nm,0.3s,baz=98,slow=17,SNR=123						
SONM				Lg	Lg	07 07 13.8	
	9.7nm,0.3s,baz=96,slow=28,SNR=32						
I45RU	**USSURIYSK INFR**	**16.63**	**94**	i		08 45 20.0	
	baz=289,slow=319,SNR=2.0						

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*IDC **18** 07:10:36.3±0.3, 50°.04N×78°.80E, h0^{km}, mb1 2.8/2, mb1mx2.8/41, mbtmp2.8/2, ML2.3/2, Error ellipse: s-maj=9.3km s-min=1.1km az=65.0*

*NNC **18** 07:10:36.4±0.3, 50°.04N×78°.76E, h0^{km}, mb2.9, mpv2.5, Error ellipse: s-maj=5.9km s-min=1.5km az=75.0, Suspected Mining explosion.*

ISC 18 07:10:37.0±1.5**, 50°.03N**±0°.08×**78°.7E**±0°.2**, h0**^{km}**, n17,** σ**0^s.58**/26**, 17C-8D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR07	**Kurchatov Arra**	**0.57**	**349**	⇑P	**Pg**	**07 10 47.6**	**-0.3**
KUR07				⇓S	**Sg**	**07 10 56.0**	**+0.8**
KUR06	**Kurchatov Arra**	**0.58**	**350**	⇑P	**Pg**	**07 10 47.7**	**-0.6**
KUR06				⇓S	**Sg**	**07 10 56.4**	**+0.6**
KUR14	**Kurchatov Arra**	**0.59**	**354**	⇓P	**Pg**	**07 10 47.7**	**-0.7**
KUR14				⇑S	**Sg**	**07 10 56.3**	**+0.3**
KUR15	**Kurchatov Arra**	**0.60**	**353**	⇑P	**Pg**	**07 10 47.8**	**-0.7**
KUR15				⇓S	**Sg**	**07 10 56.6**	**+0.4**
KURBB	**Kurchatov Arra**	**0.60**	**351**	Pg	**Pg**	**07 10 48.1**	**-0.5**
	1.1nm,0.3s,baz=167,slow=17,SNR=68						
KURBB				Lg	Lg	07 10 56.6	
	1.8nm,0.3s,baz=161,slow=34,SNR=34						
KURBB	**Kurchatov Arra**	**0.60**	**351**	⇑P	**Pg**	**07 10 48.1**	**-0.5**
KURBB				⇑S	**Sg**	**07 10 56.8**	**+0.4**
	90nm,0.6s						
KUR16	**Kurchatov Arra**	**0.61**	**349**	⇓P	**Pg**	**07 10 48.2**	**-0.6**
KUR16				⇑S	**Sg**	**07 10 57.1**	**+0.4**
KUR17	**Kurchatov Arra**	**0.62**	**347**	⇑P	**Pg**	**07 10 48.5**	**-0.4**
KUR17				⇓S	**Sg**	**07 10 57.1**	**+0.1**
KUR05	**Kurchatov Arra**	**0.62**	**351**	⇑P	**Pg**	**07 10 48.4**	**-0.6**
KUR05				⇓S	**Sg**	**07 10 57.1**	**+0.1**
KUR04	**Kurchatov Arra**	**0.64**	**352**	⇑P	**Pg**	**07 10 48.8**	**-0.6**
KUR04				⇓S	**Sg**	**07 10 57.9**	**+0.3**
KURK	**Kurchatov**	**0.69**	**357**	⇑P	**Pg**	**07 10 49.4**	**-0.8**
KURK				⇑S	**Sg**	**07 10 59.3**	**+0.1**
	31nm,1.1s						
MAKZ	**Makanchi**	**3.90**	**145**	⇑Lg	Lg	07 12 39.4	
	4.6nm,0.8s						
MK31	**Makanchi Array**	**4.03**	**142**	⇑Pn	**Pn**	**07 11 40.4**	**+0.4**
	0.2nm,0.3s,baz=322,slow=10,SNR=9.1						
MK31				⇑Pg	**Pb**	**07 11 49.6**	**+0.7**
	0.9nm,0.5s,baz=327,slow=15,SNR=9.4						
MK31				⇑Lg	Lg	07 12 42.8	
	2.4nm,0.5s,baz=326,slow=26,SNR=5.4						
MKAR	**Makanchi Array**	**4.03**	**142**	Pn	**Pn**	**07 11 40.5**	**+0.5**
	0.2nm,0.3s,baz=321,slow=10,SNR=12						
MKAR				Pg	**Pb**	**07 11 47.8**	**-1.1**
	0.4nm,0.3s,baz=327,slow=14,SNR=12						
MKAR				Lg	Lg	07 12 42.3	
	1.3nm,0.3s,baz=326,slow=26,SNR=10						
OTUK	**Ortayu**	**4.53**	**249**	⇑Lg	Lg	07 13 02.0	
	4.5nm,0.5s						
ZALV	**Zalesovo Beam**	**5.46**	**42**	Pn	**Pn**	**07 12 00.0**	**+0.5**
	0.5nm,0.3s,baz=233,slow=14,SNR=6.8						
I46RU	**ZALESOVO INFRA**	**5.46**	**42**	i		07 42 50.0	
	baz=220,slow=337,SNR=1.9						

NOU 18 07:33:07.6, 14°.71S×**167°.32E, h0**^{km}**, MLv4.1**/4**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**0.74**	**189**	P	Pg	07 33 22.2	+0.4
SANVU	**Saraoutou**	**0.74**	**189**	P	Pg	07 33 22.0	+0.2

DJA 18 07:33:55.0±0.8**, 7°S**±4°×**10°5E**±°**, h25**^{km}±7^{km}**, M3.0**/7**, mb1.9**/1**, MLv3.5**/7**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CGJI	**Cibinong**	**0.51**	**26**	P	Pb	07 34 05.9	+0.4
SBJI	**Serang**	**1.16**	**35**	P	Pb	07 34 16.9	+0.5
SBJI				S	Sn	07 34 30.1	-0.5
DBJI	**Dramaga**	**1.37**	**68**	P	Pn	07 34 18.9	+0.3
DBJI				S	Sn	07 34 35.9	-0.1
CBJI	**Citeko**	**1.52**	**65**	P	Pn	07 34 21.0	+0.4
CNJI	**Cibinong**	**1.66**	**98**	P	Pn	07 34 22.5	-0.1
CNJI				S	Sn	07 34 43.4	+0.3
KASI	**Kota Agung**	**1.82**	**328**	P	Pn	07 34 25.0	+0.2
KLSI		**2.49**	**343**	P	Pn	07 34 34.5	+0.6
MDSI	**Maura Dua**	**2.88**	**333**	P	Pn	07 34 39.8	+0.5
CMJI	**Cimerak**	**3.04**	**104**	P	Pn	07 34 42.2	+0.7

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*IDC **18** 08:02:59.7±4.4, 18°.85N×145°.34E, h183^{km}±38^{km}, mb3.3/5, mb1 3.6/6, mb1mx3.1/43, mbtmp3.9/6, Error ellipse: s-maj=89.5km s-min=17.6km az=118.0*

ISC 18 08:03:01.6±1.3**, 18°.7N**±0°.2×**145°.5E**±0°.5**, h200**^{km}**, n6,** σ**0^s.80**/7**, mb3.6**/5**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.14**	**187**	P	**Pn**	**08 04 18.7**	**+0.8**
	7.4nm,0.3s,baz=150,slow=20,SNR=1.8						
GUMO				S	**Sn**	**08 05 17.0**	**-1.1**
	16nm,0.3s,baz=11,slow=22,SNR=1.4						
WRA	**Warramunga Arr**	**39.96**	**197**	P	**P**	**08 10 16.8**	**-0.1**
	0.8nm,0.3s,baz=16,slow=8.5,SNR=27						
FITZ	**Fitzroy Crossi**	**41.48**	**209**	P	**P**	**08 10 29.3**	**0.0**
	0.6nm,0.3s,baz=34,slow=8.9,SNR=11						
ASAR	**Alice Springs**	**43.63**	**196**	P	**P**	**08 10 46.5**	**0.0**
	0.2nm,0.4s,baz=17,slow=7.3,SNR=6.1						
ILAR	**Eielson Array**	**63.70**	**26**	P	**P**	**08 13 10.8**	**-0.8**
	0.5nm,0.6s,baz=241,slow=4.7,SNR=8.2						
NVAR	**Mina Array Bea**	**83.25**	**52**	P	**P**	**08 15 06.8**	**+0.5**
	0.8nm,0.7s,baz=264,slow=6.0,SNR=7.0						

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*IDC **18** 08:09:52.5±5.5, 8°.92S×124°.44E, h85^{km}±66^{km}, mb3.6/2, mb1 3.8/5, mb1mx3.3/29, mbtmp3.9/5, ML3.8/3, MS3.6/3, Ms1 3.6/3, ms1mx2.6/38, Error ellipse: s-maj=67.3km s-min=26.6km az=31.0*

ISC 18 08:09:54.4±0.9**, 9°.15S**±0°.08×**124°.28E**±0°.08**, h100**^{km}**, n22,** σ**3^s.53**/21**, mb4.0**/6**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**0.60**	**181**	P	**Pn**	**08 10 13.4**	**+2.3**
BATI	**Baumata**	**1.21**	**210**	P	**Pn**	**08 10 18.9**	**+1.6**
	29nm,0.3s,baz=297,slow=1.3,SNR=14						
BATI				S	**Sn**	**08 10 37.0**	**+2.5**
	76nm,0.3s,baz=74,slow=8.4,SNR=9.5						
KAPI	**Kappang**	**6.09**	**312**	LR	LR	08 14 06.0	
	comp=Z,15nm,18.6s,baz=158,slow=42						
PLAI	**Plampang**	**6.44**	**272**	P	**Pn**	**08 11 24.9**	**-1.7**
DRS	**Darwin Rock St**	**7.27**	**117**	P	Pn	08 11 41.7	+3.7
	7.5nm,0.6s						
MTN	**Manton Dam**	**7.66**	**119**	P	**Pn**	**08 11 45.7**	**+2.4**
	16nm,0.4s						
KDU	**Kakadu**	**8.78**	**114**	P	**Pn**	**08 12 00.0**	**+1.5**
	5.4nm,0.5s						
FITZ	**Fitzroy Crossi**	**8.99**	**172**	P	**Pn**	**08 12 01.5**	**+0.1**
	0.7nm,0.3s,baz=2.0,slow=9.9,SNR=29						
FITZ				S	**Sn**	**08 13 37.4**	**-3.5**
	5.6nm,0.3s,baz=141,slow=4.2,SNR=17						
WRA	**Warramunga Arr**	**14.47**	**139**	P	**Pn**	**08 13 13.8**	**-0.7**
	0.4nm,0.3s,baz=319,slow=13,SNR=17						
WRA				S	**Sn**	**08 15 47.3**	**-6.8**
	1.3nm,0.3s,baz=315,slow=23,SNR=13						
WRAB	**Tennant Creek**	**14.48**	**139**	P	**P**	**08 13 17.9**	**-0.5**
GENI	**Genyem**	**17.09**	**69**	P	**P**	**08 13 45.5**	**-1.8**
ASAR	**Alice Springs**	**17.12**	**149**	P	**P**	**08 13 49.5**	**+1.9**
	0.5nm,0.3s,baz=324,slow=12,SNR=20						
ASAR				S	**Sn**	**08 16 52.0**	**-5.9**
	0.4nm,0.3s,baz=314,slow=19,SNR=14						
QIS	**Mount Isa**	**18.63**	**129**	P	**Pn**	**08 14 08.7**	**+2.9**
	5.7nm,1.0s						
OOD	**Oodnadatta**	**21.44**	**151**	P	**P**	**08 14 40.6**	**+6.1**
	12nm,1.3s						
FORT	**Forrest**	**21.80**	**171**	P	**P**	**08 14 42.3**	**+3.9**
	16nm,1.0s						
MULG	**Mulgathing**	**22.92**	**158**	P	**P**	**08 14 53.3**	**+3.4**
	15nm,2.0s						
BBOO	**Buckleboo**	**25.94**	**157**	P	**P**	**08 15 22.3**	**+4.9**
	10nm,2.0s						
CMAR	**Chiang Mai Arr**	**37.12**	**318**	P	**P**	**08 16 55.1**	**-0.4**
	0.9nm,0.3s,baz=132,slow=7.6,SNR=4.6						
MKAR	**Makanchi Array**	**67.08**	**330**	P	**P**	**08 20 35.5**	**-1.6**
	0.4nm,0.5s,baz=140,slow=6.8,SNR=5.0						
PETK	**Petropavlovsk-**	**68.23**	**21**	LR	LR	08 56 15.8	
	comp=Z,12nm,18.0s,baz=64,slow=41						
AAK	**Ala-Archa**	**68.67**	**323**	LR	LR	08 55 47.0	
	comp=Z,163nm,18.3s,baz=310,slow=40						
KVAR	**Kislovodsk Arr**	**90.28**	**314**	LR	LR	09 09 37.3	
	comp=Z,27nm,21.1s,baz=84,slow=40						

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*NDI **18** 08:25:38.3±2.4, 29°.73N×80°.72E, h6^{km}±8^{km}, ML3.5*

*IDC **18** 08:25:40.4±1.8, 30°.07N×80°.51E, h0^{km}, mb3.7/5, mb1 3.8/5, mb1mx3.4/45, mbtmp3.7/5, MS3.1/2, Ms1 3.1/2, ms1mx2.4/52, Error ellipse: s-maj=78.9km s-min=25.8km az=60.0*

ISC 18 08:25:39.5±1.1**, 29°.70N**±0°.07×**80°.65E**±0°.07**, h10**^{km}**, n14,** σ**2^s.25**/18**, mb3.9**/4**, Nepal-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTH	**Pithoragarh**	**0.41**	**248**	ePG	**Pg**	**08 25 47.2**	**-0.4**
PTH				eSG	**Sg**	**08 25 53.8**	**+0.8**
DDI	**Dehra Dun**	**2.33**	**286**	eP	**Pg**	**08 26 24.2**	**0.0**
DDI				eS	**Sn**	**08 26 46.2**	**-0.6**
DDI				IAML		08 26 53.0	
	comp=N,763nm,0.0s						
DDI				IAML		08 26 55.8	
	comp=E,695nm,0.2s						
NDI	**New Delhi**	**3.17**	**252**	ex	**Pg**	**08 26 41.0**	**+0.7**
NDI				eS	**Sn**	**08 27 09.0**	**+1.7**
SMLA	**Simla**	**3.33**	**296**	eP	**Pn**	**08 26 32.3**	**+0.7**
SMLA				i x	**Pb**	**08 26 39.0**	**+0.4**
SMLA				eS	**Sn**	**08 27 12.0**	**+0.9**
SMLA				IAML		08 27 22.3	
	comp=N,141nm,0.3s						
SMLA				IAML		08 27 23.7	
	comp=E,262nm,0.4s						
DHRM	**DHARAMSHALA**	**4.51**	**305**	eP	**Pn**	**08 26 48.4**	**+0.2**
DHRM				eS	**Sn**	**08 27 37.4**	**-3.5**
DHRM				IAML		08 28 00.5	
	comp=E,71nm,0.4s						
DHRM				IAML		08 28 02.3	
	comp=N,55nm,1.0s						
BHPL	**Bhopal**	**7.05**	**205**	eS	**Sn**	**08 28 37.7**	**-5.6**
MKAR	**Makanchi Array**	**17.11**	**4**	Pn	**Pn**	**08 29 37.2**	**-1.6**
	comp=N,0.2nm,0.3s,baz=178,slow=10,SNR=6.7						
WSAR	**Wadi Sarin**	**20.72**	**257**	LR	LR	08 39 00.4	
	comp=N,17nm,18.1s,baz=300,slow=39						
KURBB	**Kurchatov Arra**	**20.96**	**356**	P	**P**	**08 30 20.6**	**-1.9**
	comp=N,1.4nm,0.6s,baz=182,slow=10,SNR=9.1						
ZALV	**Zalesovo Beam**	**24.42**	**6**	P	**P**	**08 30 57.3**	**-0.7**
	comp=N,0.8nm,0.6s,baz=185,slow=6.9,SNR=3.6						
FINES	**FINESS Array B**	**47.57**	**328**	P	**P**	**08 34 14.3**	**-0.7**
	comp=N,0.9nm,0.4s,baz=116,slow=9.5,SNR=8.5						
ARCES	**ARCESS Array B**	**50.48**	**338**	P	**P**	**08 34 36.9**	**-0.3**
	comp=N,3.6nm,1.0s,baz=109,slow=7.3,SNR=5.1						
WRA	**Warramunga Arr**	**71.49**	**127**	P	**P**	**08 37 05.1**	**+4.4**
	comp=N,0.3nm,0.8s,baz=317,slow=7.1,SNR=2.8						
ASAR	**Alice Springs**	**73.71**	**130**	LR	LR	09 12 58.7	
	comp=N,32nm,20.1s,baz=91,slow=38						

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*IDC **18** 08:39:55.0±1.2, 31°.30N×128°.93E, h0^{km}, mb3.6/5, mb1 3.9/7, mb1mx3.6/38, mbtmp3.6/7, ML3.4/1, MS3.3/14, Ms1 3.3/14, ms1mx3.0/41, Error ellipse: s-maj=41.1km s-min=23.1km az=90.0*

*JMA **18** 08:39:54.0±0.4, 31°.37N×128°.70E, h6^{km}±3^{km}, M3.8*

*NIED **18** 08:39:54.1, 31°.37N×128°.70E, h6^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.72; $M_{\theta\theta}$0.85; $M_{\phi\phi}$-0.13; $M_{r\theta}$0.17; $M_{\theta\phi}$0.63; $M_{\phi r}$-0.52; Fault plane solution: $M_0$1.15000×10^{15} NP1:ϕ_s33.00000°, δ58.00000°, λ-136.00000°. NP2:ϕ_s276.00000°, δ54.00000°, λ-41.00000°.*

ISC 18 08:39:55.7±1.0**, 31°.33N**±0°.06×**128°.82E**±0°.07**, h10**^{km}**, n27,** σ**1^s.06**/18**, mb3.5**/5**, MS3.4**/12**, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	**Shimokoshiki**	**0.84**	**66**	P	**Pb**	**08 40 11.7**	**-0.7**
JSJ				eS	**Sb**	**08 40 24.0**	**+0.2**
JFU	**Fukue jima 2**	**1.32**	**357**	P	**Pn**	**08 40 18.4**	**-1.8**
JSU	**Suzuyama**	**1.41**	**83**	P	**Pb**	**08 40 21.7**	**-0.4**
JYAK	**Yakushimahirau**	**1.82**	**126**	P	**Pn**	**08 40 26.4**	**-0.7**
JTN	**Tanegashima 3**	**1.98**	**109**	P	**Pn**	**08 40 29.2**	**0.0**
JTZ	**Takazaki**	**2.02**	**73**	P	**Pn**	**08 40 30.1**	**+0.3**
JMTN	**Minamitane**	**2.02**	**117**	P	**Pb**	**08 40 31.0**	**-1.5**
JIU3	**Izumi3**	**2.08**	**54**	P	**Pn**	**08 40 30.9**	**+0.1**
JNU	**Nakatsue**	**2.50**	**44**	Pn	**Pn**	**08 40 37.6**	**+1.2**
	baz=53,slow=0.1						
JNU				Sn	**Sg**	**08 41 15.7**	**-0.3**
	25nm,0.3s,baz=282,slow=1.8,SNR=3.9						
JOW	**Kunigami**	**4.51**	**186**	LR	LR	08 43 02.2	
	comp=Z,216nm,19.1s,baz=320,slow=42						
KSRS	**Korea Array**	**6.15**	**353**	Pn	**Pn**	**08 41 27.2**	**+0.6**
	0.9nm,0.3s,baz=173,slow=14,SNR=9.3						
KSRS				Sn	**Sn**	**08 42 35.6**	**-1.5**
	0.8nm,0.3s,baz=184,slow=27,SNR=2.8						
KSRS				LR	LR	08 44 06.9	
	comp=Z,203nm,18.0s,baz=174,slow=41						
SONM	**Songino Array**	**23.75**	**320**	P	**P**	**08 45 10.2**	**+1.9**
	0.3nm,0.4s,baz=131,slow=9.3,SNR=4.1						
SONM				LR	LR	08 54 54.6	
	comp=Z,101nm,18.9s,baz=150,slow=38						
DAV	**Davao City (W)**	**24.33**	**188**	LR	LR	08 54 28.8	
	comp=Z,30nm,21.5s,baz=348,slow=36						
TLY	**Talaya**	**27.49**	**325**	LR	LR	08 57 54.6	
	comp=Z,62nm,18.4s,baz=142,slow=39						
CMAR	**Chiang Mai Arr**	**29.87**	**252**	LR	LR	08 59 02.4	
	comp=Z,28nm,19.0s,baz=55,slow=38						
KAPI	**Kappang**	**37.16**	**195**	LR	LR	09 01 31.2	
	comp=Z,9.8nm,20.4s,baz=48,slow=35						
ZALV	**Zalesovo Beam**	**38.63**	**319**	LR	LR	09 03 57.6	
	comp=Z,28nm,19.3s,baz=138,slow=37						
WRA	**Warramunga Arr**	**51.26**	**173**	P	**P**	**08 48 59.8**	**0.0**
	0.4nm,0.8s,baz=357,slow=7.2,SNR=2.6						
ARU	**Arti**	**53.78**	**320**	LR	LR	09 14 46.2	
	comp=Z,62nm,21.1s,baz=122,slow=39						
AKTO	**Aktyubinsk**	**54.71**	**312**	LR	LR	09 14 32.3	
	comp=Z,96nm,18.6s,baz=74,slow=38						
ASAR	**Alice Springs**	**54.90**	**174**	P	**P**	**08 49 28.0**	**+1.3**
	1.0nm,1.1s,baz=3.3,slow=15,SNR=2.1						
KIRV	**Kirov**	**58.45**	**323**	LR	LR	09 17 42.7	
	comp=Z,71nm,18.0s,baz=4.4,slow=39						
ARCES	**ARCESS Array B**	**65.47**	**338**	LR	LR	09 23 09.1	
	comp=Z,37nm,18.1s,baz=305,slow=40						
FINES	**FINESS Array B**	**68.71**	**330**	LR	LR	09 22 54.3	
	comp=Z,24nm,20.0s,baz=62,slow=38						
AKASG	**Malin Array Be**	**72.02**	**319**	LR	LR	09 25 20.9	
	comp=Z,28nm,18.3s,baz=290,slow=38						
NVAR	**Mina Array Bea**	**86.62**	**46**	P	**P**	**08 52 39.4**	**-0.5**
	0.2nm,0.6s,baz=305,slow=3.2,SNR=2.4						

PDAR	Pinedale Array	88.87	39	P	P	08 52 51.0	+0.4
	0.6nm,0.9s,baz=46,slow=2.6,SNR=3.1						

NNC 18 08:47:23.1±3.8,36°.73N×70°.81E,h102^{km}±104^{km},mb3.2, mpv3.7,4C-1D,Error ellipse: s-maj=35.7km s-min=29.3km az=66.0,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK02	Karatay Array	6.38	358	⇑P	Pn	08 48 55.3	+0.9
	1.6nm,0.3s						
KK02				⇑S	Sn	08 50 06.1	+0.4
	4.7nm,0.5s						
AAK	Ala-Archa	6.55	25	⇑P	Pn	08 48 56.7	-0.3
	3.0nm,0.3s						
AAK				⇑S	Sn	08 50 11.3	+1.0
	5.5nm,0.7s						
TKM2	Tokmak 2	7.20	29	⇓P	Pn	08 49 04.9	-0.9
	2.6nm,0.5s						
AB31	Akbulak array	14.81	331	P	Pn	08 50 47.8	+0.6
	0.5nm,0.6s,baz=151,slow=12,SNR=16						
AB31				S	Sn	08 53 28.9	-1.5
	0.8nm,0.4s,baz=158,slow=24,SNR=3.7						

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*IDC **18** 08:58:34.4±1.5,38°.64N×20°.62E,h0^{km},mb3.8/9, mb1 3.9/9,mb1mx3.6/52,mbtmp3.8/9,MS2.9/2,Ms1 3.0/2, ms1mx2.3/49,Error ellipse: s-maj=29.2km s-min=26.6km az=118.0*

*IASPEI **18** 08:58:36.4±0.8,38°.61N±0°.02×20°.60E±0°.03,h15^{km}±4^{km}, mb3.8/9,Error ellipse: s-maj=4.7km s-min=2.4km az=102.3,GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*BEO **18** 08:58:36.0±1.1,38°.54N×20°.10E,h0^{km},ML3.4/6*

*ATH **18** 08:58:37.0,38°.60N×20°.57E,h12^{km}±1^{km},ML3.4/7,Error ellipse: s-maj=1.6km s-min=0.6km az=290.0*

*THE **18** 08:58:37.0,38°.60N×20°.55E,h11^{km}±1^{km},ML3.6/11,Error ellipse: s-maj=1.1km s-min=0.3km az=5.0*

ISC 18 08:58:36.4±0.7,**38°.61N**±0°.02×**20°.61E**±0°.03,**h15**^{km}±4^{km}, **n71**,σ**0^{s}.82**/98,**mb3.8**/9,**Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EVGI	Lefkada island	0.04	64	P	Pg	08 58 39.4	+0.2
EVGI				S	Sg	08 58 41.3	+0.2
	114µm,0.2s						
EVGI	Lefkada island	0.04	64	P	Pg	08 58 39.4	+0.2
EVGI				S	Sg	08 58 41.1	+0.1
DRAG	Dragano-Lefkad	0.09	339	P	Pg	08 58 39.3	-0.3
DRAG				S	Sg	08 58 41.2	-0.5
	165µm,0.3s						
DRAG	Dragano-Lefkad	0.09	339	P	Pg	08 58 39.2	-0.5
DRAG				S	Sg	08 58 41.3	-0.5
NYDR	Nydri-Lefkada	0.13	31	P	Pb	08 58 40.4	-0.2
NYDR				S	Sb	08 58 43.0	-0.3
	19µm,0.6s						
NYDR	Nydri-Lefkada	0.13	31	P	Pb	08 58 40.3	-0.2
NYDR				S	Sb	08 58 42.9	-0.4
FSK	Fiskardo	0.15	196	P	Pg	08 58 40.6	+0.2
FSK				S	Sg	08 58 43.0	0.0
	30µm,0.4s						
FSK	Fiskardo	0.15	196	P	Pg	08 58 40.5	+0.2
FSK				S	Sg	08 58 42.7	-0.2
FSK				AML	AML	08 58 43.7	
	comp=N,35861µm,0.6s						
FSK				AML	AML	08 58 43.8	
	comp=E,86136µm,0.3s						
LKD2	Lefkada island	0.19	11	P	Pb	08 58 41.2	-0.4
LKD2				S	Sb	08 58 45.0	0.0
	comp=E,12µm,0.4s						
LKD2	Lefkada island	0.19	11	P	Pb	08 58 41.2	-0.4
LKD2				S	Sb	08 58 44.1	-1.0
LKD2				AML	AML	08 58 45.0	
	comp=E,24713µm,0.4s						
LKD2				AML	AML	08 58 45.2	
	comp=N,23976µm,0.4s						
TSLK	Tsoukalades, L	0.22	8	P	Pb	08 58 42.0	-0.2
TSLK				S	Sb	08 58 46.0	0.0
	comp=N,12µm,0.4s						
TSLK	Tsoukalades, L	0.22	8	P	Pb	08 58 41.8	-0.3
TSLK				S	Sb	08 58 45.8	-0.2
KEF4	Livadi, Kephal	0.38	203	P	Pg	08 58 44.3	+0.2
KEF4				S	Sg	08 58 49.8	+0.5
	comp=N,110µm,0.3s						
KEF4	Livadi, Kephal	0.38	203	P	Pg	08 58 43.9	-0.2
KEF4				S	Sg	08 58 49.5	+0.1
DMLN	Damoulianata-K	0.41	207	P	Pg	08 58 44.6	-0.1
DMLN				S	Sg	08 58 50.6	+0.2
	comp=N,21µm,0.4s						
DMLN	Damoulianata-K	0.41	207	P	Pg	08 58 44.0	-0.7
DMLN				S	Sg	08 58 50.7	+0.4
LXRA	Lixouri, Kepha	0.43	199	P	Pg	08 58 44.6	-0.4
LXRA				S	Sb	08 58 51.8	-0.1
VLS	Valsamata	0.43	183	P	Pg	08 58 45.1	0.0
VLS				S	Sb	08 58 52.0	+0.1
	comp=N,13µm,0.1s						
VLS	Valsamata	0.43	183	P	Pg	08 58 45.0	0.0
VLS				S	Sb	08 58 51.8	-0.1
ARGA	Argostoli. Kep	0.44	194	P	Pb	08 58 46.0	+0.2
ARGA				S	Sb	08 58 52.2	0.0
KEF3	Kipouria, Keph	0.45	208	P	Pg	08 58 44.8	-0.7
KEF3				S	Sg	08 58 51.5	-0.1
	comp=N,25µm,0.3s						
KEF3	Kipouria, Keph	0.45	208	P	Pg	08 58 44.7	-0.8
KEF3				S	Sg	08 58 50.5	-1.1
PSDA	Pessada-Kefalo	0.49	183	P	Pg	08 58 46.2	0.0
PSDA				S	Sb	08 58 54.0	+0.3
PSDA	Pessada-Kefalo	0.49	183	P	Pg	08 58 46.1	-0.1
PSDA				S	Sb	08 58 53.6	0.0
PVO	Paravola	0.71	89	P	Pn	08 58 51.8	-0.2
PVO	Paravola	0.71	89	P	Pn	08 58 51.6	-0.4
PVO				AML	AML	08 59 10.9	
	comp=N,4810µm,0.4s						
PVO				AML	AML	08 59 15.2	
	comp=E,4821µm,0.5s						
VTN	Vitineika	0.82	147	P	Pn	08 58 53.3	-0.1
RLS	Riolos of Patr	0.86	129	P	Pn	08 58 53.6	-0.4
RLS	Riolos of Patr	0.86	129	P	Pn	08 58 53.4	-0.6
LTHK	Lithakia	0.91	169	P	Pb	08 58 53.5	-0.4
LTHK				S	Sn	08 59 07.7	+0.2
	comp=E,3µm,0.5s						
LTHK	Lithakia	0.91	169	P	Pb	08 58 53.3	-0.6
IGT	Igoumenitsa	0.95	347	P	Pb	08 58 54.2	-0.4
IGT				AML	AML	08 59 12.9	
	comp=E,2169µm,0.4s						
IGT				AML	AML	08 59 14.8	
	comp=N,1801µm,0.4s						
EVR	Evrytania	0.98	71	P	Pn	08 58 55.8	0.0
ANX	Ano Chora	1.02	90	P	Pn	08 58 56.9	+0.6
ANX				AML	AML	08 59 18.8	
	comp=E,5531µm,0.5s						
ANX				AML	AML	08 59 19.8	
	comp=N,6324µm,0.6s						
EFP	Efpalio	1.03	100	P	Pn	08 58 56.4	+0.1
JAN	Janina	1.07	10	P	Pg	08 58 57.5	+0.4
DRO	Drossia	1.08	127	P	Pg	08 58 57.5	+0.2
DRO	Drossia	1.08	127	P	Pg	08 58 57.7	+0.4
DRO				AML	AML	08 59 23.2	
	comp=N,5348µm,0.5s						
DRO				AML	AML	08 59 23.2	
	comp=E,6680µm,0.3s						
LAKA	Lakka	1.13	108	P	Pg	08 58 58.2	-0.1
TRIZ	Trizonia	1.17	101	P	Pg	08 58 58.7	-0.3
MAKR	Makrakomi, Fth	1.25	71	P	Pg	08 59 00.8	+0.2
KASA	Kassiopi	1.26	335	P	Pg	08 59 00.3	-0.4
KEK	Kerkira	1.27	330	P	Pg	08 59 00.5	-0.5
KLV	Kalavryta, Ach	1.33	114	P	Pb	08 59 01.2	0.0
AGG	Agios Georgios	1.40	72	P	Pg	08 59 03.5	0.0
THL	Klokotos Trika	1.45	48	P	Pg	08 59 04.4	+0.1
GUR	Goura	1.52	116	P	Pg	08 59 04.6	-0.9
GUR				AML	AML	08 59 35.9	
	comp=N,2830µm,0.4s						
GUR				AML	AML	08 59 36.2	
	comp=E,3416µm,0.4s						
VIL2	Platees	2.12	100	P	Pg	08 59 15.4	-1.7
OHR	Ohrid	2.51	3	*e*Pn	Pb	08 59 20.4	-0.8
OHR				*e*Sn	Sb	08 59 52.8	+0.9
OHR	Ohrid	2.51	3	*e*Pn	Pb	08 59 19.8	-1.3
VAY	Valandovo	3.10	28	*e*Pn	Pb	08 59 30.4	-0.8
VAY	Valandovo	3.10	28	*e*Pn	Pb	08 59 28.6	-2.7
STIP	Stip	3.31	21	*e*Pn	Pb	08 59 33.1	-1.7
PDG	Podgorica	3.96	345	*e*Pn	Pn	08 59 38.0	+1.4
PDG				*e*Sn	Sn	09 00 22.9	+0.2
PRVS	Prvonek	4.05	15	*e*Pn	Pn	08 59 40.2	+2.3
BARS	Barje	4.30	12	*e*Pn	Pn	08 59 43.7	+2.4
TREB	Trebinje	4.45	338	*e*Pn	Pn	08 59 43.5	+0.1
VTS	Vitosha	4.48	26	*e*Pn	Pn	08 59 47.7	+3.9
SJES	Sjenica	4.68	354	*e*Pn	Pn	08 59 48.2	+1.7
STON	Ston	4.80	333	*e*Pn	Pn	08 59 47.8	-0.3
STON				*e*Sn	Sn	09 00 41.5	-2.0
DIVS	Divibare	5.51	355	*e*Pn	Pn	08 59 58.5	+0.6
MLR	Muntele Rosu	7.94	28	Pn	Pn	09 00 37.9	+6.5
	comp=E,0.3nm,0.3s,baz=180,slow=15,SNR=2.8						
MLR				LR	LR	09 04 20.4	
	comp=E,112nm,18.5s,baz=281,slow=44						
HFS	Hagfors	21.99	351	P	P	09 03 29.9	+0.2
	comp=E,1.9nm,0.5s,baz=148,slow=8.7,SNR=12						
FINES	FINESS Array B	23.11	7	P	P	09 03 40.6	-0.9
	comp=E,7.1nm,1.0s,baz=175,slow=12,SNR=7.7						
EKA	Eskdalemuir Ar	23.12	324	P	P	09 03 41.8	+0.1
	comp=E,2.5nm,0.8s,baz=120,slow=9.9,SNR=3.6						
NOA	NORSAR Array B	23.21	348	P	P	09 03 42.9	+0.3
	comp=E,0.3nm,0.4s,baz=153,slow=11,SNR=3.7						
NOA				LR	LR	09 13 32.3	
	comp=E,23nm,18.0s,baz=5.0,slow=39						
TORD	Torodi Ar. Bea	30.41	219	P	P	09 04 48.6	+0.5
	comp=E,0.3nm,0.5s,baz=29,slow=9.7,SNR=2.2						
ARCES	ARCESS Array B	31.10	3	P	P	09 04 53.7	0.0
	comp=E,1.7nm,0.8s,baz=185,slow=9.1,SNR=1.5						
KURBB	Kurchatov Arra	41.92	54	P	P	09 06 25.9	-0.2
	comp=E,0.9nm,0.2s,baz=282,slow=9.2,SNR=2.1						
MKAR	Makanchi Array	45.02	59	P	P	09 06 51.5	+0.3
	comp=E,0.3nm,0.4s,baz=278,slow=6.7,SNR=6.9						
ZALV	Zalesovo Beam	45.35	48	P	P	09 06 54.1	+0.4
	comp=E,1.2nm,0.4s,baz=275,slow=6.2,SNR=4.2						

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*JMA **18** 09:03:56.9±0.4,31°.47N×128°.80E,h9^{km}±3^{km},M3.3*

*IDC **18** 09:03:57.3±2.0,31°.30N×128°.85E,h0^{km},mb3.1/2, mb1 3.4/4,mb1mx3.1/57,mbtmp3.2/4,ML3.1/2,MS3.1/2, Ms1 3.1/2,ms1mx2.4/26,Error ellipse: s-maj=71.7km s-min=25.8km az=103.0*

ISC 18 09:03:56.9±1.3,**31°.51N**±0°.09×**128°.90E**±0°.10,**h10**^{km},**n12**, σ**0^{s}.68**/9,**Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.72	76	P	Pb	09 04 12.4	+0.9
JFU	Fukue jima 2	1.15	354	P	Pg	09 04 19.1	0.0
JSU	Suzuyama	1.33	90	P	Pg	09 04 22.7	+0.3
JYAK	Yakushimahirau	1.88	132	P	Pn	09 04 28.2	-0.8
JTZ	Takazaki	1.91	78	P	Pb	09 04 31.2	-0.6
JIU3	Izumi3	1.93	57	P	Pb	09 04 31.5	-0.7
JNU	Nakatsue	2.32	46	Pn	Pb	09 04 39.2	+0.3
	8.1nm,0.3s,baz=237,slow=0.4,SNR=21						
KSRS	Korea Array	5.99	353	Pn	Pn	09 05 29.8	+4.2
	0.4nm,0.3s,baz=175,slow=14,SNR=2.2						
MKAR	Makanchi Array	38.65	307	LR	LR	09 28 04.1	
	comp=Z,28nm,21.4s,baz=343,slow=37						
WRA	Warramunga Arr	51.42	173	P	P	09 13 02.6	+0.4
	0.4nm,0.9s,baz=356,slow=7.8,SNR=1.9						
ASAR	Alice Springs	55.07	174	P	P	09 13 29.5	+0.5
	0.2nm,0.6s,baz=2.9,slow=15,SNR=4.8						
GEYT	Alibeck	57.27	297	LR	LR	09 43 20.1	
	comp=Z,18nm,20.1s,baz=230,slow=41						

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*NIED **18** 09:05:47.2,31°.46N×128°.79E,h8^{km},MW3.6,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.09; $M_{\theta\theta}$1.65; $M_{\phi\phi}$-1.57; $M_{r\theta}$-0.84; $M_{\theta\phi}$2.31; $M_{\phi r}$0.81; Fault plane solution: $M_0$3.04000×10^{14} NP1: ϕ_s106.00000°,δ82.00000°,λ-20.00000°. NP2: ϕ_s199.00000°,δ71.00000°,λ-171.00000°.*

JMA 18 09:05:47.2±0.3,**31°.46N**×**128°.79E**,**h8**^{km}±2^{km},**M3.6**, **Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.82	74	P	Pg	09 06 02.8	-0.2
JFU	Fukue jima 2	1.19	358	P	Pb	09 06 09.7	-0.4
JSU	Suzuyama	1.42	88	P	Pn	09 06 13.0	-0.4
JTZ	Takazaki	2.01	77	P	Pn	09 06 21.4	0.0
JIU3	Izumi3	2.03	57	P	Pn	09 06 22.2	+0.4
JTN	Tanegashima 3	2.04	113	P	Pn	09 06 20.6	-1.3

NNC 18 09:16:43.0±1.5,**37°.26N**×**71°.39E**,**h155**^{km}±34^{km},**mb2.8, mpv3.6,3C-3D,Error ellipse: s-maj=17.3km s-min=9.8km az=25.0,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	5.88	23	⇓P	Pn	09 18 08.1	-0.1
	2.9nm,0.6s						
AAK				⇑S	Sn	09 19 15.5	+0.5
	4.0nm,0.6s						
KK02	Karatay Array	5.88	354	⇑P	Pn	09 18 08.2	+0.2
	2.4nm,0.3s						
KK02				⇓S	Sn	09 19 15.2	+0.4
	2.2nm,0.5s						
TKM2	Tokmak 2	6.51	28	⇓P	Pn	09 18 16.6	-0.1
AB31	Akbulak array	14.59	329	⇑P	Pn	09 20 01.8	0.0
	0.4nm,0.4s,baz=289,slow=15,SNR=20						

JMA 18 09:38:07.5,34°.86N×134°.94E,h12^{km}**,M3.1,Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMIK	Miki	0.11	119	P	Pg	09 38 10.4	0.0
JMIK				*e*S	Sg	09 38 12.3	-0.3
JKS	Kasai	0.14	327	P	Pg	09 38 11.0	0.0
JKS				S	Sg	09 38 13.3	-0.2
JAWN	Awajishima-nag	0.38	185	P	Pg	09 38 15.0	0.0
JAWN				*e*S	Sg	09 38 20.4	+0.4
MAT	Matsushiro	3.15	57	P	Pn	09 38 54.6	-2.3
MAT				*e*S	Sn	09 39 32.0	-2.4

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*NEIC **18** 09:47:13.6±1.0,41°.35N±0°.03×124°.6W±0°.1,h19^{km}±5^{km}, Error ellipse: s-maj=11.9km s-min=4.4km az=83.0*

*ANF **18** 09:47:13.4±0.8,41°.41N×124°.56W,h18^{km},ML3.2/8,Error ellipse: s-maj=8.4km s-min=3.9km az=84.0*

*NCEDC **18** 09:47:14.9±1.7,41°.34N±0°.04×124°.55W±0°.08,h21^{km}±4^{km}, ML3.2/19,ML3.0/38(NEIC),Error ellipse: s-maj=9.2km s-min=5.4km az=84.0*

ISC 18 09:47:13.4±1.5,**41°.35N**±0°.03×**124°.55W**±0°.07,**h21**^{km}±5^{km}, **n40**,σ**0^{s}.76**/47,**Near coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRMB	Red Mountain	0.51	70		Pb	09 47 24.3	+0.5
KRMB				IAML		09 47 31.8	
	comp=E,891nm,0.6s						
JCC	Jacoby Creek,	0.67	143		Pb	09 47 26.6	+0.3
JCC				IAML		09 47 48.2	
	comp=E,1µm,1.1s						
JCC				IAML		09 47 49.1	
	comp=N,518nm,0.6s						
KHMM	Horse Mountain	0.78	127		Pb	09 47 28.7	+0.3
KOMM	Orleans Mounta	0.83	95		Pb	09 47 29.4	+0.2
KBO	Bosley Butte	0.89	16		Pb	09 47 30.3	0.0
L02E	Cave Junction	1.07	41	P	Pn	09 47 32.9	-0.4
	baz=221,SNR=396						
L02E				S	Sb	09 47 47.0	+0.2
	baz=221						
KCRM	Chalk Rock	1.08	149		Pb	09 47 32.8	-0.6
KSMM	Slide Mountain	1.20	166		Pn	09 47 34.6	-0.5
M02C	Callahan	1.28	88	P	Pn	09 47 35.6	-0.5
	baz=268,SNR=325						
KMRM	Mail Ridge	1.30	150		Pn	09 47 36.3	-0.1
KMRM				IAML		09 48 14.8	
	comp=N,212nm,0.8s						
KMRM				IAML		09 48 17.5	
	comp=E,401nm,0.9s						
YBH	Yreka Blue Hor	1.43	74	Pn	Pn	09 47 38.6	+0.3
YBH					Pb	09 47 38.7	-0.7
N02D	Trinity Center	1.45	105	P	Pn	09 47 37.9	-0.6
	baz=285,SNR=35						
N02D				S	Sb	09 47 59.2	+1.6
	baz=285						
K02D	Willamette Mer	1.50	26	P	Pn	09 47 39.2	0.0
	baz=206,SNR=34						
K02D				S	Sn	09 47 56.7	-1.4
	baz=206						
KEBM	Edson Butte	1.53	6	Pn	Pn	09 47 39.1	-0.4
KEBM				IAML		09 48 32.7	
	comp=E,252nm,1.1s						
KEBM				IAML		09 48 36.6	
	comp=N,214nm,1.6s						
KBSM	Bell Springs	1.61	153		Pn	09 47 40.7	0.0
WDC	Whiskeytown Da	1.71	116	Pn	Pn	09 47 42.1	+0.2
WDC					Pb	09 47 42.3	-1.8
WDC				IAML		09 48 17.7	
	comp=N,107nm,1.1s						
HUMO	Hull Mountain	1.73	43		Pn	09 47 42.6	+0.3
HUMO	Hull Mountain	1.73	43		Pn	09 47 42.7	+0.5
HUMO				IAML		09 48 04.3	
	comp=E,210nm,0.4s						
HUMO				IAML		09 48 04.5	
	comp=N,203nm,0.4s						
LHEM	Herd Peak	1.77	80		Pn	09 47 43.7	+0.6
O02D	Mt. Diablo Mer	1.78	131	P	Pb	09 47 44.2	-1.2
	baz=312,SNR=42						
KCPM	Cahto Peak	1.82	156	Pn	Pn	09 47 43.8	+0.2
KCPM				IAML		09 48 12.5	
	comp=N,109nm,0.7s						
KCPM				IAML		09 48 40.1	
	comp=E,141nm,0.9s						
L04D	Klamath Falls	1.89	62	P	Pb	09 47 46.0	-1.3
	baz=243,SNR=8.0						
L04D				S	Sb	09 48 09.9	-0.6
	baz=243						
DBO	Dodson Butte	2.02	28		Pn	09 47 46.9	+0.6
DBO				IAML		09 48 36.9	
	comp=E,79nm,0.9s						
DBO				IAML		09 48 41.2	
	comp=N,96nm,3.1s						
M04C	Macdoel	2.08	77	P	Pn	09 47 48.1	+0.9
	baz=258,SNR=8.8						
GASB	Alder Springs	2.20	140		Pn	09 47 50.2	+1.4
O03E	Paynes Creek	2.34	116	P	Pn	09 47 50.6	-0.1
	baz=298						
I03D	Drain, OR	2.51	20	P	Pn	09 47 53.4	+0.5
	baz=201,SNR=179						
I03D				S	Sn	09 48 23.0	+0.1
	baz=201						
HOPS	Hopland Field	2.62	154	Pn	Pn	09 47 54.9	+0.5
HOPS				IAML		09 49 29.7	
	comp=N,46nm,3.5s						
ORV	Oroville	2.94	127		Pn	09 48 00.0	+1.1
K05A	Summer Lake	3.05	62		Pn	09 48 01.5	+0.9
K05A				IAML		09 49 09.3	
	comp=N,61nm,4.6s						
K05A				IAML		09 49 10.4	
	comp=E,49nm,4.8s						
J05D	Fort Rock, OR	3.13	51	S	Sn	09 48 39.0	+0.5
	baz=233						
MOD	Modoc Plateau	3.23	79		Pn	09 48 03.0	0.0
COR	Corvallis	3.36	15	Pn	Pn	09 48 06.2	+1.5
H04D	Lebanon	3.44	22	S	Sn	09 48 45.5	-0.4
	baz=203						
MCCM	Marconi Confer	3.45	158	Pn	Pn	09 48 06.6	+0.7
MCCM				IAML		09 49 20.3	
	comp=E,77nm,2.0s						
MCCM				IAML		09 50 16.7	
	comp=N,49nm,2.3s						
G03D	McMinnville, O	3.97	13	S	Sn	09 48 58.8	-0.1
	baz=194						
SAO	San Andreas Ge	5.18	151	Pn	Pn	09 48 30.1	+0.4
RYN	Ryan	5.37	118	Pn	Pn	09 48 33.2	+0.7
KVN	Kaiserville	5.45	113	Pn	Pn	09 48 34.0	+0.4
F10A	Beach Ranch, E	7.04	47		Sn	09 50 13.9	-0.7

ZUR 18 09:57:05.9,46°.35N×7°.51E,h2^{km}±1^{km}**,MLh0.6**/7**,5C, Error ellipse: s-maj=2.1km s-min=0.3km az=115.0, Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIEB	Ecole de Borzu	0.05	164	⇑Pg	Pg	09 57 07.1	+0.2
	0.4nm,SNR=3.4						
SIEB				⇑Pg	Pg	09 57 07.1	+0.2
SIEB				Sg	Sg	09 57 08.0	+0.3
LKBD	Leukerbad	0.09	62	Pg	Pg	09 57 08.0	+0.3
	0.3nm,SNR=2.7						
LKBD				Pg	Pg	09 57 08.0	+0.3
LKBD				Sg	Sg	09 57 09.4	+0.5
LKBD2	Leukerbad 2	0.10	72	Pg	Pg	09 57 08.1	+0.3
	0.2nm,SNR=2.4						
LKBD2				Pg	Pg	09 57 08.1	+0.3
LKBD2				Sg	Sg	09 57 09.7	+0.6
SENIN	Lac Senin/Sane	0.15	277	Pg	Pg	09 57 09.0	+0.2
SENIN				Pg	Pg	09 57 09.0	+0.2
	0.1nm,SNR=1.2						
SENIN				Sg	Sg	09 57 11.3	+0.5
SIOV	Sion-Valere	0.15	223	Pg	Pg	09 57 08.9	+0.1
	0.2nm,SNR=1.8						
LAUCH	Lauchernalp	0.19	68	⇑Pg	Pg	09 57 10.0	+0.3
	0.1nm,SNR=1.5						
LAUCH				⇑Pg	Pg	09 57 10.0	+0.3
LAUCH				Sg	Sg	09 57 12.7	+0.5
EMBD	Embd, Matterta	0.26	120	Sg	Sg	09 57 14.1	0.0
DIX	Grande Dixence	0.28	196	⇑Pg	Pg	09 57 11.2	0.0
DIX				Sg	Sg	09 57 14.7	-0.1
GRYON	Gryon	0.29	251	Pg	Pg	09 57 11.7	+0.2
	0.2nm,SNR=1.3						
GRYON				Pg	Pg	09 57 11.7	+0.2
GRYON				Sg	Sg	09 57 15.8	+0.4
SIMPL	Simplonpass	0.37	107	Sg	Sg	09 57 17.9	+0.1
FIESA	Fiescheralp	0.42	77	Pg	Pg	09 57 14.2	+0.1
	0.1nm,SNR=1.5						

VIE 18 09:58:48.1±0.2,**49°.03N**×**16°.29E**,**h0**^{km},**mb1.4**/2,**ml1.7**/2, **Error ellipse: s-maj=2.4km s-min=1.7km az=0.0 34 km SW of Brno Suspected Mining explosion.,Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRUC	Moravsky	0.07	67	*e*PG	Pg	09 58 49.4	-0.1
VRAC	Vranov	0.34	36	*e*PG	Pg	09 58 54.6	0.0
VRAC				*e*SG	Sg	09 58 58.9	-0.1
MORC	Moravsky Berou	1.10	47	*e*PG	Pg	09 59 09.1	-0.1
CONA	Conrad Observa	1.14	195	*e*Pg	Pg	09 59 09.7	-0.3
	1.1nm,0.1s						
CONA				*e*Sg	Sb	09 59 25.9	-0.2
	3.0nm,0.2s						

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*IDC **18** 10:09:10.9±1.8,18°.39S×177°.98W,h611^{km}±22^{km},mb3.4/9, mb1 3.7/11,mb1mx3.4/33,mbtmp4.4/11,Error ellipse: s-maj=41.0km s-min=13.0km az=149.0*

*NOU **18** 10:09:11.3,18°.89S×177°.64W,h609^{km},MLv4.2/11,Fiji Islands Region*

*NEIC **18** 10:09:12.3±1.4,18°.6S±0°.1×177°.9W±0°.2,h628^{km}±10^{km}, mb4.2/31,Error ellipse: s-maj=24.1km s-min=16.5km az=131.0*

ISC 18 10:09:09.9±0.5,**18°.60S**±0°.08×**177°.75W**±0°.09,**h600**^{km}, **n109**,σ**1^{s}.54**/111,**mb4.2**/24,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAVE	Taveuni	2.79	312	P	P	10 10 31.6	+3.6
DGTI	Dogotuki	3.32	313	P	P	10 10 33.9	+2.9
MSVF	Nonsavu	4.09	282	P	P	10 10 39.8	+3.7
	6.1nm,0.3s,baz=161,slow=5.2,SNR=55						
MSVF	Nonsavu	4.09	282	P	P	10 10 39.6	+3.5
AFI	Afiamalu	7.39	52	P	P	10 11 04.8	+1.1
	6.9nm,0.3s,baz=72,slow=1.0,SNR=10						
GLKZ	Green Lake	10.61	181	S	S	10 13 36.6	+3.1
DVP	Devils Point	13.40	272	P	P	10 12 05.2	+2.4
	62µm,0.8s						
MARNC	Mare, Loyalty	13.67	256	P	P	10 12 05.4	-0.1
LIFNC	LIFOU	14.31	259	P	P	10 12 10.8	-0.9
PINNC	Pines Island,	14.43	251	P	P	10 12 12.8	0.0
DZM	Mont Dzumac	15.22	254	P	P	10 12 20.4	+0.2
	1.1nm,0.3s,baz=126,slow=15,SNR=11						
DZM	Mont Dzumac	15.22	254	P	P	10 12 21.1	+0.9
DZM				IAmb	IAmb	10 12 32.4	
	comp=Z,35nm,1.4s						

DZM	Mont Dzumac	15.22	254	P	P	10 12 21.9	+1.7
NOUC	Port Laguerre	15.36	254	P	P	10 12 22.8	+1.4
KNTN	Kanton	16.80	21	P	P	10 12 34.2	-0.5
OUZ	Omahuta	18.25	203	P	P	10 12 50.0	+2.4
OUZ	Omahuta	18.25	203	P	P	10 12 50.4	+2.8
OUZ				IAmb	IAmb	10 12 51.7	
	comp=Z,16nm,0.7s						
WCZ	Waipu Caves	18.63	200	P	P	10 12 52.9	+1.8
KUZ	Kuaotunu	18.96	196	P	P	10 12 55.3	+1.2
WIAZ	Waiheke Island	19.17	198	P	P	10 12 57.4	+1.4
EPAZ	Eden Park BICE	19.36	198	P	P	10 12 59.7	+2.0
ETAZ	East Tamaki Re	19.38	198	P	P	10 12 59.6	+1.8
WMGZ	Waiomatatini S	19.44	189	P	P	10 12 58.0	-0.3
WTAZ	Waiatarua	19.47	199	P	P	10 13 00.4	+1.7
HAZ	Te Kaha	19.48	191	P	P	10 12 58.0	-0.7
PKGZ	Pakihiroa	19.56	190	P	P	10 13 02.7	+3.2
AWAZ	Awhitu Peninsu	19.57	198	P	P	10 13 00.9	+1.4
RUGZ	Raukumara Rang	19.70	191	P	P	10 12 58.9	-2.0
PUZ	Puketiti	19.71	189	P	P	10 13 00.9	0.0
TWGZ	Tauwhareparae	19.86	190	P	P	10 13 02.8	+0.6
MWZ	Matawai	20.09	191	P	P	10 13 02.3	-1.9
URZ	Urewera	20.09	192	P	P	10 13 02.1	-2.1
URZ	Urewera	20.09	192	P	P	10 13 03.3	-1.0
RIGZ	Rimuhau	20.41	190	P	P	10 13 07.9	+0.8
RTZ	Ruatahuna	20.46	192	P	P	10 13 06.3	-1.4
MTHZ	Maungataniwha	20.72	192	P	P	10 13 09.2	-0.8
RAHZ	Arahi	20.73	191	P	P	10 13 09.4	-0.6
BKZ	Black Stump Fm	21.09	193	P	P	10 13 10.0	-3.2
BKZ	Black Stump Fm	21.09	193	P	P	10 13 10.1	-3.2
BKZ				IAmb	IAmb	10 13 33.4	
	comp=Z,21nm,1.2s						
BKZ	Black Stump Fm	21.09	193	P	P	10 13 11.8	-1.5
OTVZ	Oturere	21.27	194	P	P	10 13 13.3	-1.7
MCHZ	McNeill Hill	21.32	192	P	P	10 13 14.2	-1.1
KWHZ	Kaweka Forest	21.35	192	P	P	10 13 15.0	-0.7
TUVZ	Tukino	21.37	194	P	P	10 13 14.4	-1.6
FWVZ	Far West T-bar	21.38	194	P	P	10 13 14.4	-1.7
WNVZ	Wahianoa	21.44	194	P	P	10 13 15.2	-1.4
BHHZ	Black Hill Sta	21.49	193	P	P	10 13 14.3	-2.6
KAHZ	Kahuranaki	21.62	191	P	P	10 13 19.1	+1.0
ANWZ	Angora Road	22.34	192	P	P	10 13 23.5	-0.9
MRZ	Mangatainoka R	22.72	193	P	P	10 13 26.2	-1.5
OGWZ	Otaki Gorge	22.96	194	P	P	10 13 29.4	-0.4
KIW	Kapiti Island	23.06	194	P	P	10 13 27.1	-3.7
CAW	Cannon Point	23.26	194	P	P	10 13 30.8	-1.7
TCW	Tory Channel	23.55	195	P	P	10 13 34.4	-0.6
QRZ	Quartz Range	23.67	199	P	P	10 13 35.9	-0.3
QRZ	Quartz Range	23.67	199	P	P	10 13 36.3	+0.2
THZ	Tophouse	24.42	197	P	P	10 13 42.4	-0.5
THZ	Tophouse	24.42	197	P	P	10 13 43.1	+0.3
KHZ	Kahutara	24.86	195	P	P	10 13 44.9	-1.8
RPZ	Rata Peaks	26.75	198	P	P	10 14 02.5	-0.8
FOZ	Fox Glacier	26.98	200	P	P	10 14 03.8	-1.4
JCZ	Jackson Bay	27.80	201	P	P	10 14 11.8	-0.7
WKZ	Wanaka	28.39	200	P	P	10 14 15.6	-1.9
ARMA	Armidale	30.15	241	P	P	10 14 33.2	+0.2
ARMA				IAmb	IAmb	10 14 48.6	
	comp=Z,14nm,1.4s						
CAN	Canberra	33.79	234	P	P	10 15 03.9	+0.1
CTAO	Charters Tower	33.96	261	P	P	10 15 04.6	-0.7
TOO	Toolangi	37.23	232	P	P	10 15 32.4	+0.4
TOO				IAmb	IAmb	10 15 37.3	
	comp=Z,11nm,1.2s						
COEN	Coen	37.74	271	P	P	10 15 36.4	-0.1
COEN				IAmb	IAmb	10 15 37.0	
	comp=Z,13nm,0.8s						
STKA	Stephens Creek	38.85	242	P	P	10 15 45.1	-0.1
	comp=Z,2.8nm,0.3s,baz=69,slow=3.6,SNR=12						
STKA	Stephens Creek	38.85	242	P	P	10 15 45.4	+0.2
BBOO	Buckleboo	43.63	242	P	P	10 16 22.1	-0.8
WR0	Warramunga Arr	44.94	260	P	P	10 16 31.8	-1.3
WR0				IAmb	IAmb	10 16 32.8	
	comp=Z,2.6nm,0.6s						
WB0	Warramunga Arr	45.10	260	P	P	10 16 33.0	-1.3
WB0				IAmb	IAmb	10 16 33.4	
	comp=Z,6.5nm,0.5s						
WB2	Warramunga Arr	45.12	260	P	P	10 16 33.2	-1.2
WB2				IAmb	IAmb	10 16 33.9	
	comp=Z,12nm,1.4s						
WRAB	Tennant Creek	45.12	260	P	P	10 16 33.1	-1.4
WRAB				IAmb	IAmb	10 16 34.1	
	comp=Z,16nm,1.5s						
WRA	Warramunga Arr	45.13	260	P	P	10 16 33.1	-1.4
	comp=Z,2.9nm,0.4s,baz=98,slow=7.2,SNR=154						
WRA	Warramunga Arr	45.13	260	P	P	10 16 33.2	-1.4
AS31	Alice Springs	45.21	255	P	P	10 16 34.2	-1.0
ASAR	Alice Springs	45.21	255	P	P	10 16 34.1	-1.1
	comp=Z,6.7nm,0.7s,baz=88,slow=8.3,SNR=61						
ASAR				PcP	PcP	10 18 00.8	-1.4
	comp=Z,0.7nm,0.5s,baz=105,slow=3.5,SNR=5.6						
ASAR	Alice Springs	45.21	255	P	P	10 16 33.7	-1.4
ASAR				PcP	PcP	10 18 00.9	-1.4
FORT	Forrest	50.28	245	P	P	10 17 11.3	-1.4
FORT				IAmb	IAmb	10 17 23.6	
	comp=Z,25nm,1.1s						
KNRA	Kununurra	51.05	265	P	P	10 17 17.2	-1.2
KNRA				IAmb	IAmb	10 17 28.6	
	comp=Z,14nm,1.2s						
FITZ	Fitzroy Crossi	53.54	261	P	P	10 17 35.1	-1.1
MJAR	Matsushiro Arr	68.84	323	P	P	10 19 13.6	-2.0
	comp=Z,2.9nm,1.1s,baz=168,slow=6.8,SNR=3.0						
MJAR	Matsushiro Arr	68.84	323	P	P	10 19 14.2	-1.4
QSPA	South Pole Qui	71.45	180	P	P	10 19 30.9	+0.2
PETK	Petropavlovsk-	74.51	345	P	P	10 19 47.7	-0.4
	comp=Z,2.8nm,0.6s,baz=77,slow=6.2,SNR=5.9						
OHAK	Old Harbor	78.26	13	P	P	10 20 08.1	-0.3
HUMO	Hull Mountain	79.06	38	P	P	10 20 14.2	+1.2
HUMO				IAmb	IAmb	10 20 15.8	
	comp=Z,8.0nm,1.3s						
LCH	Last Change Ra	79.27	45	P	P	10 20 15.0	+0.6
NVAR	Mina Array Bea	79.49	43	P	P	10 20 16.1	+0.4
	comp=Z,1.1nm,0.7s,baz=222,slow=8.2,SNR=9.1						
NVAR	Mina Array Bea	79.49	43	P	P	10 20 16.4	+0.8
K05A	Summer Lake	80.34	39	P	P	10 20 21.1	+1.1
K05A				IAmb	IAmb	10 20 28.6	
	comp=Z,19nm,1.5s						
U15A	North Rim	82.52	48	P	P	10 20 32.5	+1.1
U15A				IAmb	IAmb	10 20 33.1	
	comp=Z,3.0nm,0.9s						
PLID	Pearl Lake	84.59	39	P	P	10 20 41.3	0.0
PLID				IAmb	IAmb	10 21 04.5	
	comp=Z,4.4nm,1.3s						
HLID	Hailey	84.74	41	P	P	10 20 41.8	-0.3
HLID				IAmb	IAmb	10 20 53.1	
	comp=Z,2.9nm,1.4s						
TXAR	Lajitas Array	85.84	57	P	P	10 20 48.8	+1.3
	comp=Z,1.8nm,0.7s,baz=221,slow=6.4,SNR=25						
TXAR	Lajitas Array	85.84	57	P	P	10 20 49.0	+1.5
IMAR	Indian Mountai	86.26	10	P	P	10 20 49.6	+1.1
ILAR	Eielson Array	86.42	13	P	P	10 20 47.8	-1.5
	comp=Z,0.7nm,0.4s,baz=232,slow=4.4,SNR=6.6						
PDAR	Pinedale Array	87.42	43	P	P	10 20 54.6	-0.2
	comp=Z,0.6nm,0.6s,baz=206,slow=4.3,SNR=5.5						
PDAR	Pinedale Array	87.42	43	P	P	10 20 54.4	-0.4
SNAA	Sanae	89.89	178	P	P	10 21 04.2	-1.4
VNA3	Neumayer Olymp	90.01	176	P	P	10 21 05.3	-0.8
VNA2	Neumayer--Watz	90.45	177	P	P	10 21 07.3	-0.8
	baz=181,slow=4.5						
VNA1	Neumayer--Stat	90.68	177	P	P	10 21 08.8	-0.3
ARCES	ARCESS Array B	127.11	350	PKP	PKPdf	10 27 04.7	-1.5
	comp=Z,0.7nm,0.4s,baz=18,slow=0.2,SNR=18						
FINES	FINESS Array B	134.03	344	PKP	PKPdf	10 27 18.9	-0.6
	comp=Z,0.4nm,0.4s,baz=82,slow=2.9,SNR=4.6						
CLL	Collm	146.28	348	*i* PKPbc	PKPdf	10 27 42.7	+1.0
	comp=Z,7.0nm,0.5s						

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*NEIC **18** 10:19:53.0±1.4, 71°.2N±0°.1×64°.3W±0°.3, h15km±5km, Error ellipse: s-maj=17.4km s-min=12.4km az=46.0*

*OTT **18** 10:19:53.8±1.3, 71°.19N×64°.35W, h18km, ML4.4/2, Baffin Bay Seismic Zone. 175km northeast from Clyde River, Nu*

ISC 18 10:19:52.2±0.7**, 71°.10N**±0°.07×**64°.42W**±0°.06**, h10**km**, n27, σ1s.22**/29**, mb4.5**/11**, Baffin Bay**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLRN	Clyde River	1.52	248	PN	Pg	10 20 20.2	-1.0
CLRN				SN	Sg	10 20 40.9	0.0
CLRN				Trac		10 20 44.4	
	comp=Z,26nm,0.1s						
TULEG	Thule	5.61	349	Pn	Pn	10 21 14.4	-1.0
FRB	Frobisher Bay	7.55	194	PN	Pn	10 21 43.0	+0.9
FRB				SN	Sn	10 23 04.6	-3.1
FRB				Trac		10 23 55.8	
	comp=Z,48nm,1.1s						
RES	Resolute Bay	9.58	306	Pn	Pn	10 22 09.4	-0.5
RES	Resolute Bay	9.58	306	PN	Pn	10 22 12.3	+2.4
RES				Trac		10 24 38.0	
	comp=Z,59nm,1.4s						
IVI	Ivigtut	11.85	139	Pn	Pn	10 22 41.9	+1.0
NRS	Narsarsuaq	12.51	133	Pn	Pn	10 22 51.3	+1.3
EPYK	Eagle Plains	25.16	295	P	P	10 25 15.4	-1.7
EPYK				IAmb	IAmb	10 25 33.9	
	comp=Z,12nm,1.5s						
LMN	Caledonia Moun	25.32	181	P	P	10 25 19.1	+0.5
LMN				IAmb	IAmb	10 25 21.3	
	comp=Z,33nm,1.4s						
ULM	Lac du Bonnet	25.40	231	P	P	10 25 20.4	+1.0
ULM				IAmb	IAmb	10 25 46.4	
	comp=Z,18nm,1.4s						
MNTQ	Montreal, Queb	26.06	195	P	P	10 25 27.2	+1.9
MNTQ				IAmb	IAmb	10 25 38.6	
	comp=Z,15nm,1.2s						
GGN	Saint George	26.08	184	P	P	10 25 27.0	+1.4
GGN				IAmb	IAmb	10 25 45.4	
	comp=Z,31nm,1.5s						
FRNY	Flat Rock	26.72	195	P	P	10 25 32.3	+1.0
FRNY				IAmb	IAmb	10 25 33.4	
	comp=Z,11nm,1.2s						
WVL	Waterville	26.73	188	P	P	10 25 31.1	-0.3
WVL				IAmb	IAmb	10 25 58.7	
	comp=Z,12nm,1.1s						
A21K	Barrow	27.01	315	P	P	10 25 33.6	0.0
LBNH	Lisbon	27.18	192	P	P	10 25 34.2	-1.3
LBNH				IAmb	IAmb	10 25 39.0	
	comp=Z,13nm,1.2s						
DAWY	Dawson	27.59	294	P	P	10 25 39.5	+0.3
NCB	Newcomb	27.63	195	P	P	10 25 39.6	+0.1
NCB				IAmb	IAmb	10 25 57.0	
	comp=Z,12nm,1.2s						
F42A	Maple Grove Fa	27.88	217	P	P	10 25 42.2	+0.5
F42A				IAmb	IAmb	10 26 05.0	
	comp=Z,22nm,1.1s						
PRP	Porcupine Dome	28.31	300	P	P	10 25 45.9	+0.3
L27K	Beaver Creek,	29.07	294	P	P	10 25 52.1	-0.2
WVNY	West Valley, N	29.63	202	P	P	10 25 58.5	+1.2
NC204	NORSAR Array S	29.77	70	P	P	10 25 57.8	-0.6
KSCT	Kent School, K	29.80	194	P	P	10 25 57.6	-1.2
KSCT				IAmb	IAmb	10 26 12.2	
	comp=Z,10nm,1.2s						
ESK	Eskdalemuir	30.07	89	P	P	10 26 00.3	-0.8
SNOW	Snow King Moun	35.72	244	P	P	10 26 51.5	+0.6
JTS	Las Juntas de	62.09	203	P	P	10 30 12.3	-0.6

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*IDC **18** 10:35:45.3±0.8, 37°.86N×29°.35E, h0km, mb4.1/11, mb1 4.1/18, mb1mx4.0/55, mbtmp4.1/18, ML4.2/7, MS3.1/11, Ms1 3.1/11, ms1mx2.8/56, Error ellipse: s-maj=15.0km s-min=13.5km az=154.0*

*THE **18** 10:35:46.1, 37°.91N×29°.46E, h0km±1km, ML4.2/1, Error ellipse: s-maj=5.6km s-min=1.3km az=72.0*

*DDA **18** 10:35:46.0, 37°.83N×29°.30E, h17km±1km, MW4.1*

*NEIC **18** 10:35:47.1±1.6, 37°.80N±0°.05×29°.44E±0°.03, h10km±1km, Error ellipse: s-maj=7.8km s-min=4.4km az=354.0*

ISC 18 10:35:46.9±1.0**, 37°.82N**±0°.02×**29°.38E**±0°.02**, h11**km±7km**, n143, σ1s.56**/195**, mb4.1**/18**, MS3.1**/6**, 22C-18D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAVA	DENIZLI_Tavas	0.51	226	⇑ *i* P	Pg	10 35 55.5	-1.3
TAVA				*i* S	Sg	10 36 03.0	-0.6
PASA	Karahalli, USA	0.54	9	⇑ *i* P	Pg	10 35 55.9	-1.4
PASA				*i* S	Sg	10 36 04.3	-0.2
BRDR	BURDUR-Merkez	0.56	103	⇑ *i* P	Pb	10 35 57.5	-1.2
BRDR				*i* S	Sn	10 36 07.8	-2.3
CAEL	Denizli, Camel	0.70	184	⇑ *i* P	Pg	10 35 59.3	-1.1
CAEL				*i* S	Sb	10 36 11.2	+0.4
KZIL	AFYON_Kizioren	0.74	54	⇑ *i* P	Pb	10 36 00.8	-1.2
KZIL				*i* S	Sn	10 36 13.4	-1.5
KULA	Kula-Manisa	0.90	321	P	Pg	10 36 02.7	-1.4
KULA				S	Sb	10 36 17.2	+0.7
ISP	Isparta	0.91	89	Pg	Pb	10 36 03.8	-0.9
ISP					Sn	10 36 19.1	+0.3
MANT	Manisa	0.93	316	⇑ *i* P	Pg	10 36 03.5	-1.4
MANT				*i* S	Sb	10 36 18.2	+0.5
USAK	Uak-Merkez	0.94	343	⇑ *i* P	Pg	10 36 03.7	-1.2
USAK				*i* S	Sn	10 36 18.4	-1.1
MULA	Mugla, Merkez-	1.01	237	⇑ *i* P	Pg	10 36 04.6	-1.7
MULA				*i* S	Sg	10 36 19.3	-0.2
BUCA	Burdur, Bucak-	1.06	117	*i* P	Pn	10 36 07.0	-0.7
BUCA				*i* S	Sn	10 36 24.2	+1.7
KORT	Korkueli	1.13	136	*i* P	Pn	10 36 08.2	-0.6
KORT				*i* S	Sn	10 36 26.9	+2.6
BAGO	Egridir - ISPA	1.13	81	⇑ *i* P	Pn	10 36 07.4	-1.3
BAGO				*i* S	Sn	10 36 26.6	+2.3
ELL	Elmali	1.15	158		Pb	10 36 07.4	-1.4
DALY	Dalyan (Mula)	1.16	210	⇑ *i* P	Pb	10 36 07.5	-1.3
DALY				*i* S	Sb	10 36 23.8	0.0
AYDN	Tasoluk	1.20	263	⇑ *i* P	Pn	10 36 08.3	-1.4
AYDN				*i* S	Sb	10 36 23.7	-1.5
FETY	Fethiye	1.21	191	P	Pn	10 36 08.9	-0.8
FETY				S	Sn	10 36 28.1	+2.0
FETY	Fethiye	1.21	191	⇑ *i* P	Pn	10 36 08.3	-1.4
FETY				*i* S	Sn	10 36 29.7	+3.7
AFYO	Afyonkarahisar	1.21	37	⇑ *i* P	Pn	10 36 08.8	-1.0
AFYO				*i* S	Sn	10 36 31.3	+5.0
GDZ	Gediz	1.27	4	⇑ *i* P	Pn	10 36 09.5	-1.2
GDZ				*i* S	Sn	10 36 28.0	+0.2
DEMI	Demirci	1.33	337	⇓ *i* P	Pn	10 36 10.4	-1.0
DEMI				*i* S	Sb	10 36 28.4	-0.6
YVAC	Isparta, Yalva	1.54	72	⇓ *i* P	Pg	10 36 14.9	-1.5
YVAC				*i* S	Sg	10 36 41.5	+5.2
AKAS	Kas	1.59	173	*i* P	Pb	10 36 16.4	0.0
AKAS				*i* S	Sg	10 36 42.3	+4.2
AKHS	Akhisar	1.62	311	⇓ *i* P	Pn	10 36 14.2	-1.2
AKHS				*i* S	Sg	10 36 40.6	+1.6
KSL	Kastellorizon	1.67	174	P	Pg	10 36 18.2	-0.8
AKUM	Antalya-Kumluc	1.68	152	*i* P	Pg	10 36 18.9	-0.3
AKUM				*i* S	Sg	10 36 45.2	+4.2
GCAM	G?zelcaml?	1.70	267	*i* P	Pn	10 36 15.3	-1.2
GCAM				*i* S	Sb	10 36 40.5	+0.9
AUKIR	Kırka- Seyitga	1.71	31	*i* P	Pg	10 36 18.7	-1.1
AUKIR				*i* S	Sg	10 36 44.9	+2.9
BDRM	Kayabasi	1.71	245	*i* P	Pn	10 36 16.2	-0.5
BDRM				*i* S	Sn	10 36 38.0	-0.6
DDIM	Aydin, Didim	1.73	259	*i* P	Pn	10 36 16.1	-0.8
DDIM				*i* S	Sb	10 36 42.2	+1.7
ANDZ	Kutahya, Merke	1.74	13	⇓ *i* P	Pn	10 36 16.5	-0.6
ANDZ				*i* S	Sg	10 36 43.9	+1.2
DAT	Datca	1.80	233	P	Pn	10 36 18.4	+0.4
DAT				S	Sg	10 36 44.7	-0.1
DAT	Datca	1.80	233	*i* P	Pn	10 36 17.7	-0.3
DAT				*i* S	Sg	10 36 48.9	+4.1
BODT	Bodrum	1.81	246	P	Pn	10 36 17.7	-0.3
BODT				S	Sb	10 36 44.2	+1.4
DOGA	KONYA_Doganhis	1.83	80	*i* P	Pb	10 36 19.1	-1.4
DOGA				*i* S	Sg	10 36 49.4	+3.6
ARG	Arkhangelos	1.89	212	P	Pb	10 36 20.6	-0.8
ARG				S	Sb	10 36 46.2	+1.2
	4μm,1.1s						
DURS	Dursunbey	1.91	339	⇓ *i* P	Pn	10 36 18.9	-0.7
DURS				*i* S	Sg	10 36 50.4	+2.0
SEDI	Konya, Seydise	1.92	100	*i* P	Pb	10 36 20.6	-1.4
SEDI				*i* S	Sg	10 36 46.3	-2.4
BLCB	Balcova	1.93	288	P	Pn	10 36 18.7	-0.9
DGB	zmir	1.99	277	*i* P	Pn	10 36 19.3	-1.1
DGB				*i* S	Sg	10 36 54.0	+3.3
SMG	Samos	2.02	268	P	Pn	10 36 19.7	-1.2
STEP	BALIKESIR_Sava	2.03	321	*i* P	Pn	10 36 20.1	-0.9
STEP				*i* S	Sg	10 36 52.3	+0.3
SGAZ	Eskisehir, Sey	2.06	33	*i* P	Pb	10 36 22.9	-1.4
SGAZ				*i* S	Sg	10 36 57.0	+4.1
ZEDA	zmir-Bergama	2.14	303	*i* P	Pn	10 36 21.6	-1.0
ZEDA				*i* S	Sg	10 36 55.3	-0.4
AUBOZ	BOZOYUK	2.15	14	*i* P	Pb	10 36 24.9	-1.0
AUBOZ				*i* S	Sg	10 37 00.1	+4.1
BALB	Balikesir	2.16	328		Pn	10 36 23.0	+0.1
KOSK	Kos Island	2.19	242	P	Pn	10 36 23.0	-0.2
BORA	Eskisehir	2.22	22	*i* P	Pn	10 36 23.7	-0.1
BORA				*i* S	Sg	10 37 01.8	+3.5
URLA	Izmir	2.26	285	*i* P	Pn	10 36 23.1	-1.2
URLA				*i* S	Sg	10 37 00.5	+1.0
ZEYE	Izmir, Urla-Ze	2.31	281	*i* P	Pn	10 36 23.9	-1.0
ZEYE				*i* S	Sg	10 37 00.9	-0.1
BALY	Balya	2.36	325	*i* P	Pn	10 36 25.1	-0.6
BALY				*i* S	Sg	10 37 03.8	+1.1
BILE	Bilecik/Merkez	2.37	9	*i* P	Pn	10 36 25.4	-0.4
BILE				*i* S	Sg	10 37 07.2	+4.2
IGD	Bursa	2.44	357	*i* P	Pn	10 36 26.1	-0.7
IGD				*i* S	Sg	10 37 08.4	+2.9
BUHA	Balikesir, Bur	2.46	314	*i* P	Pn	10 36 26.5	-0.5
BUHA				*i* S	Sg	10 37 06.8	+0.8
CHOS	Chios island	2.68	283	P	Pn	10 36 30.0	-0.1
PRK	Paraskevi	2.82	301	P	Pn	10 36 32.5	+0.6
MDUB	Mudurnu	3.00	28		Pn	10 36 35.1	+0.6
SIGR	SIGRI	3.09	298	P	Pn	10 36 34.9	-0.7
EZN	Ezine	3.11	311	P	Pn	10 36 35.5	-0.4
BR231	Keskin MP Arra	3.33	52		Pn	10 36 38.6	-0.5
ANTO	Ankara	3.36	51		Pn	10 36 40.0	+0.6
SANT	Santorini	3.45	246	⇓P	Pb	10 36 50.7	+2.7
SANT				⇓S	Sg	10 37 38.8	+1.1
SANT	Santorini	3.45	246		Pn	10 36 44.1	+3.5
GADA	Gvkgeada	3.60	312	P	Pn	10 36 42.4	-0.2
BR131	Keskin Array S	3.83	59	Pn	Pn	10 36 47.2	+1.2
BRTR	Keskin Array B	3.83	59	Pn	Pn	10 36 46.8	+0.8
	3.8nm,0.3s,baz=241,slow=16,SNR=40						
BRTR				Sn	Sn	10 37 32.5	+1.4
	3.6nm,0.3s,baz=230,slow=25,SNR=5.5						
BRTR	Keskin Array B	3.83	59	Pn	Pn	10 36 46.4	+0.4
ENEZ	Enez	3.84	320	P	Pn	10 36 45.9	0.0
LIA	Limnos Island	3.88	304	P	Pn	10 36 46.2	-0.2
LEF	Lefka	3.91	133	⇑P	Pn	10 36 49.7	+2.9
LEF				⇓S	Sb	10 37 39.6	-3.5
SMTH	Samothraki Isl	4.00	313	P	Pn	10 36 47.6	-0.5
ALN	Alexandroupoli	4.01	321	P	Pn	10 36 48.2	-0.1
ALN	Alexandroupoli	4.01	321	Pn	Pn	10 36 48.1	-0.2
CSS	Mathiatis	4.28	131	Pn	Pn	10 36 52.0	0.0
IDI	Anoyia	4.41	236	Pn	Pn	10 36 54.7	+0.9
	5.0nm,0.3s,baz=35,slow=10,SNR=22						
IDI				Sn	Sn	10 37 46.6	+1.4
	4.3nm,0.3s,baz=134,slow=16,SNR=4.4						
RDO	Rodhopi	4.46	319	P	Pn	10 36 54.3	-0.1
AGG	Agios Georgios	5.66	284	Pn	Pn	10 37 11.9	+0.9
ITM	Ithomi	5.96	266	Pn	Pn	10 37 15.9	+0.8
PLVB	Pleven	6.63	328	⇓P	Pn	10 37 24.9	+0.6
TIRR	Tirgusor	6.67	354	⇑P	Pn	10 37 24.0	-0.8
TIRR	Tirgusor	6.67	354	Pn	Pn	10 37 24.9	+0.1
VTS	Vitosha	6.71	317	⇑P	Pn	10 37 25.6	+0.1
VTS	Vitosha	6.71	317	Pn	Pn	10 37 25.9	+0.4
MMAI	Mount Meron Ar	6.87	132	Pn	Pn	10 37 28.1	+0.6
	27nm,0.3s,baz=318,slow=12,SNR=49						
MMAI				Sn	Sn	10 38 43.0	-2.8
	9.2nm,0.3s,baz=314,slow=25,SNR=6.8						
MMAI				LR	LR	10 40 28.4	
	comp=Z,71nm,20.0s,baz=300,slow=41						
FNA	Florina	6.88	298		Pn	10 37 27.1	-0.6
TPGR	Topolog	7.07	354	⇓P	Pn	10 37 30.1	-0.1
CFR	Carcaliu	7.41	353	⇓P	Pn	10 37 32.7	-2.2
MLR	Muntele Rosu	8.08	343	⇑P	Pn	10 37 43.8	-0.5
MLR	Muntele Rosu	8.08	343	Pn	Pn	10 37 45.2	+0.9
	1.6nm,0.3s,baz=206,slow=13,SNR=9.1						
MLR				LR	LR	10 41 22.0	
	comp=Z,202nm,19.2s,baz=152,slow=42						
BOVS	Bovan	8.22	317	⇓P	Pn	10 37 46.4	+0.3
VOIR		8.27	338	⇓P	Pn	10 37 46.9	0.0
PLOR	Plostina	8.28	347	⇓P	Pn	10 37 47.2	+0.3
VRI	Vrincioaia	8.28	347	⇑P	Pn	10 37 46.6	-0.3
ASF	Jabal al Asfar	8.35	130	Pn	Pn	10 37 49.5	+1.6
	1.3nm,0.3s,baz=271,slow=13,SNR=7.5						
ASF				Sn	Sn	10 39 24.4	+2.0
	0.5nm,0.3s,baz=294,slow=20,SNR=2.1						
DOPR	Dopca	8.67	341	⇓P	Pn	10 37 52.8	+0.6
OZUR		8.69	343	⇑P	Pn	10 37 52.3	-0.3
HERR	Herculane	8.78	326	⇑P	Pn	10 37 53.1	-0.6
TESR	Tescani	8.92	348	⇓P	Pn	10 37 54.9	-0.8
PDG	Podgorica	9.02	304	Pn	Pn	10 37 58.7	+1.8
MDVR	Moldovita	9.03	323	⇓P	Pn	10 37 56.6	-0.7
GZR	Gura Zlata	9.04	329	⇑P	Pn	10 37 56.8	-0.5
EIL	Elat	9.36	149	Pn	Pn	10 38 00.5	-1.2
	2.7nm,0.3s,baz=230,slow=4.7,SNR=10						
EIL				Sn	Sn	10 39 43.3	-3.6
	2.9nm,0.3s,baz=65,slow=8.8,SNR=7.3						
TIP	Timpagrande	9.99	282		Pn	10 38 11.5	+1.1
BURAR	Bucovina Array	10.26	344	⇓P	Pn	10 38 14.6	+0.5
BURAR	Bucovina Array	10.26	344	Pn	Pn	10 38 14.1	+0.1
BUR08	Bucovina Ar. S	10.29	344		Pn	10 38 14.8	+0.3
AKASG	Malin Array Be	12.88	360	Pn	Pn	10 38 48.1	-1.7
	1.1nm,0.3s,baz=177,slow=12,SNR=3.5						
MURB	Monte Urbino	13.91	298	Pn	Pn	10 39 04.0	-0.1
VRAC	Vranov	14.73	325	LR	LR	10 45 14.8	
	comp=Z,45nm,18.9s,baz=110,slow=39						
GERES	GERESS Array B	15.82	319	Pn	P	10 39 34.7	+1.2
	baz=122,slow=11,SNR=9.0						
GERES				LR	LR	10 45 50.4	
	comp=Z,104nm,19.9s,baz=248,slow=38						
KEST	Kesra	16.19	269	Pn	P	10 39 37.1	-0.4
	0.2nm,0.3s,baz=351,slow=6.5,SNR=4.1						
DAVOX	Davos/Dischmat	16.94	308	LR	LR	10 46 51.4	
	comp=Z,92nm,19.3s,baz=128,slow=39						
NACGM	Naroch	17.18	355	*i* P	P	10 39 47.3	-1.0
GEYT	Alibeck	22.65	81	P	P	10 40 45.2	-2.9
GEYT				IAmb	IAmb	10 41 14.7	
	comp=Z,5.6nm,1.1s						
FINES	FINESS Array B	23.74	356	P	P	10 40 58.0	-0.8
	comp=Z,6.3nm,1.0s,baz=154,slow=13,SNR=5.8						
FINES				LR	LR	10 51 12.5	
	comp=Z,78nm,19.0s,baz=156,slow=39						
KLMR	Klimovskoe	23.93	12	*e*	P	10 40 59.1	-1.5
KLMR				AMP		10 41 02.9	
	comp=Z,13nm,1.0s						
AKTO	Aktyubinsk	23.95	49	P	P	10 41 00.6	-0.4
	comp=Z,4.1nm,0.9s,baz=258,slow=8.2,SNR=9.7						
AKTO				LR	LR	10 53 16.5	
	comp=Z,17nm,20.4s,baz=223,slow=44						
HFS	Hagfors	24.46	341	P	P	10 41 05.0	-0.6
	comp=Z,6.1nm,0.9s,baz=155,slow=8.2,SNR=4.1						
HFS				LR	LR	10 51 20.9	
	comp=Z,76nm,19.1s,baz=137,slow=38						
ABKAR	Akbulak array	24.76	53	P	P	10 41 06.2	-2.2
ABKAR				IAmb	IAmb	10 41 13.1	
	comp=Z,2.4nm,0.9s						
ABKAR	Akbulak array	24.76	53	P	P	10 41 07.3	-1.1
NOA	NORSAR Array B	25.89	340	P	P	10 41 17.8	-0.8
	comp=Z,2.3nm,1.2s,baz=146,slow=8.8,SNR=4.0						
NOA				LR	LR	10 53 09.1	
	comp=Z,44nm,19.2s,baz=155,slow=40						
ESDC	Sonseca Array	25.99	285	P	P	10 41 19.2	-0.5
	comp=Z,1.0nm,0.8s,baz=72,slow=9.7,SNR=6.3						
ARU	Arti	26.90	37	P	P	10 41 28.9	+1.2
	comp=Z,2.5nm,0.2s,baz=219,slow=5.5,SNR=7.8						
CHGR	Chuyangaron	31.09	76	P	P	10 42 04.9	-0.4
KKAR	Karatay Array	31.50	67	P	P	10 42 09.1	+0.3
ARCES	ARCESS Array B	31.84	357	LR	LR	10 55 45.0	
	comp=Z,46nm,18.3s,baz=135,slow=38						
BRVK	Borovoye	31.99	48	P	P	10 42 13.0	+0.1
BRVK				IAmb	IAmb	10 42 24.7	
	comp=Z,4.0nm,1.4s						
TORD	Torodi Ar. Bea	34.80	232	P	P	10 42 37.5	-0.3
	comp=Z,2.8nm,0.5s,baz=35,slow=9.1,SNR=20						
TORD	Torodi Ar. Bea	34.80	232	P	P	10 42 37.6	-0.1
KSH	Kashi	36.11	72	P	P	10 42 48.0	-1.0
KSH				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KURK	Kurchatov	36.87	53	P	P	10 42 55.4	+0.3
KURK				IAmb	IAmb	10 42 56.1	
	comp=Z,4.2nm,0.9s						
MK31	Makanchi Array	39.49	60	P	P	10 43 17.5	+0.2
MKAR	Makanchi Array	39.49	60	P	P	10 43 17.6	+0.3
	comp=Z,1.8nm,0.7s,baz=274,slow=8.0,SNR=13						
MKAR	Makanchi Array	39.49	60	P	P	10 43 17.3	0.0
ZAA0	Zalesovo Array	40.71	48	P	P	10 43 26.7	-0.6
ZAA0				IAmb	IAmb	10 43 29.9	
	comp=Z,1.8nm,0.7s						
ZALV	Zalesovo Beam	40.71	48	P	P	10 43 27.0	-0.3
	comp=Z,1.2nm,0.5s,baz=263,slow=7.0,SNR=4.7						
ZALV				LR	LR	11 04 10.0	
	comp=Z,26nm,19.4s,baz=313,slow=42						
ZALV	Zalesovo Beam	40.71	48	P	P	10 43 26.8	-0.5
WMQ	Urumqi	43.75	63	*e*P	P	10 43 53.9	+1.6
SONM	Songino Array	55.17	53	P	P	10 45 19.7	+0.1
	comp=Z,0.8nm,0.8s,baz=288,slow=6.6,SNR=5.0						
HHC	Hu-ho-hao-te	61.35	59	*e*P	P	10 46 03.6	+0.8
HHC				pmax	pmax		
	comp=Z,12nm,1.1s						
HHC				pmax	pmax		
	comp=Z,78nm,5.3s						
HHC				pmax	pmax		

	comp=Z,11nm,1.1s						
HHC				pmax	pmax		
	comp=Z,200nm,5.7s						
F62A	Pittston Farm,	69.68	313	P	P	10 46 56.2	-0.3
KSAR	Wonju Array Be	73.95	55	P	P	10 47 22.1	-0.2
KSRS	Korea Array	73.97	55	P	P	10 47 22.4	+0.1
	comp=Z,2.8nm,0.8s,baz=318,slow=5.5,SNR=5.7						

DJA ***18*** *10:36:55.9±0.1, 5°S±2°×10°4E±°, h112km±1km, M4.8/50, mB5.3/38, mb4.9/50, MLv5.3/31, Mw(mB)4.7/38*
NEIC ***18*** *10:36:56.7±2.0, 4°.67S±0°.06×103°.59E±0°.04, h114km±4km, mb5.0/87, Error ellipse: s-maj=9.2km s-min=6.0km az=177.0*
IDC ***18*** *10:36:56.1±0.6, 4°.53S×103°.72E, h110km±4km, mb4.5/38, mb1 4.5/41, mb1mx4.4/53, mbtmp4.8/41, MS3.2/10, Ms1 3.2/10, ms1mx2.9/40, Error ellipse: s-maj=10.3km s-min=7.5km az=52.0*
KLM ***18*** *10:36:58, 4°.61S×103°.38E, h119km, mb5.1*
ISC 18 10:36:55.9±0.4, **4°.62S**±0°.04×**103°.66E**±0°.04, **h111**km±3km, **h112**km**:pP-P, n394,** σ1ˢ**30**/408, **mb5.0**/89, **1C, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MDSI	Maura Dua	0.54	76	P	Pn	10 37 14.1	+0.9
MDSI				S	Sn	10 37 26.9	+0.8
LWLI	Liwa	0.56	134	P	Pn	10 37 14.0	+0.5
LWLI				S	Sn	10 37 27.6	+0.9
MNAI	Manna	0.74	290	P	Pn	10 37 15.6	+0.8
MNAI	Manna	0.74	290		Pn	10 37 15.6	+0.8
MNAI				Sn	Sn	10 37 29.8	+0.8
MNAI	Manna	0.74	290	P	Pn	10 37 15.9	+1.1
LHSI	Lahat	0.80	351	P	Pn	10 37 17.7	+2.4
LHSI				S	Sn	10 37 32.5	+2.6
KLSI		1.07	94	P	Pn	10 37 19.4	+1.4
KLSI				S	Sn	10 37 36.9	+2.2
KLI	Kotabumi	1.22	101	P	Pn	10 37 21.0	+1.4
KLI				S	Sn	10 37 39.4	+1.9
KASI	Kota Agung	1.23	137	P	Pn	10 37 19.8	+0.1
KASI				S	Sn	10 37 37.3	-0.3
KSI	Kapahiang	1.43	312	P	Pn	10 37 22.7	+0.6
BLSI	Bandar Lampung	1.75	115	P	Pn	10 37 26.8	+1.0
PMBI	Palembang	2.02	34	P	Pn	10 37 31.5	+2.3
PMBI	Palembang	2.02	34		Pn	10 37 32.0	+2.8
PMBI	Palembang	2.02	34	P	Pn	10 37 32.2	+3.0
MASI	Maura Aman, Be	2.04	316	P	Pn	10 37 30.3	+0.8
SBJI	Serang	2.88	121	P	Pn	10 37 41.3	+0.9
JMBI	JAMBI	2.97	360	P	Pn	10 37 43.3	+1.7
TNG	Tangerang	3.35	117	P	Pn	10 37 47.9	+1.3
TNG				P	Pn	10 37 47.9	+1.3
PPBI	Pangkal Pinang	3.48	45	P	Pn	10 37 51.1	+2.8
DBJI	Dramaga	3.63	122	P	Pn	10 37 51.4	+1.0
PPSI	Pulau Pagai	4.08	297	P	Pn	10 37 56.0	-0.4
DSRI	Dabo	4.22	13	P	Pn	10 38 00.6	+2.4
CNJI	Cibinong	4.37	128	P	Pn	10 37 59.3	-0.9
TPI	Tanjungpandan	4.40	65	P	Pn	10 38 03.2	+2.5
LEM	Lembang	4.51	119	P	Pn	10 38 04.3	+2.0
	80nm,0.3s,baz=343,slow=6.4,SNR=57						
LEM	Lembang	4.51	119	P	Pn	10 38 03.5	+1.2
PDSI	Padang	4.87	319	P	Pn	10 38 07.1	0.0
PPI	Padang Panjang	5.26	322	P	Pn	10 38 12.1	-0.2
	4µm236nm,0.4s						
BKNI	Bangkinang	5.57	332	P	Pn	10 38 17.2	+0.8
	5.2nm14µm1µm,0.8s						
BKNI	Bangkinang	5.57	332		Pn	10 38 18.1	+1.7
BKNI	Bangkinang	5.57	332	P	Pn	10 38 18.4	+2.0
SISI	Saibi	5.61	306	P	Pn	10 38 16.5	-0.5
	3.1nm12µm722nm,0.7s						
CMJI	Cimerak	5.71	124	P	Pn	10 38 17.6	-0.7
	2.9nm11µm486nm,0.8s						
XMI	Christmas Isla	6.13	161	P	Pn	10 38 17.2	-6.9
	1µm,0.5s						
XMIS	Christmas Isla	6.15	161		Pn	10 38 17.1	-7.2
XMIS	Christmas Isla	6.15	161	P	Pn	10 38 17.1	-7.2
	717nm,0.7s						
MYKOM	Kota Tinggi	6.37	2		Pn	10 38 30.5	+3.2
MNSI	Mandailing Nat	6.75	323	P	Pn	10 38 31.9	-0.5
	1.0nm4µm205nm,0.9s						
SMRI	Semarang	7.17	110	P	Pn	10 38 39.1	+0.9
	1.3nm391nm,1.1s						
SMRI	Semarang	7.17	110	Pn	Pn	10 38 41.1	+2.9
SMRI	Semarang	7.17	110	P	Pn	10 38 41.4	+3.2
YOGI	Yogyakarta	7.33	116	P	Pn	10 38 39.8	-0.5
	0.9nm3µm281nm,0.9s						
UWJI	Ujung Watu	7.48	104	P	Pn	10 38 44.2	+1.9
	0.6nm3µm132nm,0.6s						
UGM	Wanagama	7.57	116	P	Pn	10 38 44.3	+0.7
	2.2nm7µm538nm,0.6s						
UGM	Wanagama	7.57	116	Pn	Pn	10 38 43.9	+0.3
UGM	Wanagama	7.57	116	P	Pn	10 38 43.9	+0.3
NGJI	Ngawi	8.23	110	P	Pn	10 38 54.1	+1.6
	1µm86nm,1.1s						
PCJI	Pacitan	8.28	116	P	Pn	10 38 53.6	+0.4
	4µm222nm,0.5s						
GSI	Gunungsitoli	8.46	314	P	Pn	10 38 53.9	-1.8
	10µm1µm,0.5s						
GSI	Gunungsitoli	8.46	314	Pn	Pn	10 38 53.6	-2.0
GSI	Gunungsitoli	8.46	314	P	Pn	10 38 53.9	-1.8
JRMM	Jerantut	8.53	352	P	Pn	10 38 59.0	+2.3
RPSI	Rantau Prapat	8.67	327		Pn	10 38 57.7	-0.8
PSI	Prapat	8.76	327	P	Pn	10 38 57.7	-2.2
	5.0nm,0.3s,baz=156,slow=9.6,SNR=19						
PSI				LR	LR	10 42 55.9	
	comp=Z,176nm,18.2s,baz=146,slow=42						
KSM	Kuching	8.99	48	Pn	Pn	10 39 05.5	+2.6
STKI	Sintang	9.10	59	P	Pn	10 39 12.3	+8.0
IPM	Ipoh	9.41	344	P	Pn	10 39 11.0	+2.3
IPM	Ipoh	9.41	344		Pn	10 39 09.8	+1.2
IPM	Ipoh	9.41	344	P	Pn	10 39 10.9	+2.3
KULM	Kulim	10.29	343	P	Pn	10 39 21.0	+0.5
KULM	Kulim	10.29	343		Pn	10 39 20.9	+0.3
BLJI	Banyuglugur	10.36	108	P	Pn	10 39 22.5	+1.1
	3µm141nm,0.4s						
GMJI	Gumukmas	10.38	111	P	Pn	10 39 23.3	+1.6
	3µm155nm,0.5s						
KMMI	Kalianget	10.54	104	P	Pn	10 39 25.3	+1.4
	94nm,1.0s						
ABJI	Asem Bagus	10.98	107	P	Pn	10 39 31.3	+1.5
	9µm753nm,0.5s						
SBUM	Sibu	11.07	51	P	P	10 39 37.0	-4.1
SBUM	Sibu	11.07	51		P	10 39 36.9	-4.1
JAGI	Jajag, Banyuwa	11.11	111	P	Pn	10 39 31.7	+0.2
	7µm415nm,0.6s						
JAGI	Jajag, Banyuwa	11.11	111	Pn	Pn	10 39 31.4	-0.1
BBKI	Banjar Baru	11.22	85	P	P	10 39 47.6	+4.9
MLSI	Meulaboh, Aceh	11.42	321	P	Pn	10 39 32.6	-3.1
MTKI	Muara Teweh, K	11.81	72	P	P	10 39 55.6	+6.3
SRBI	Singaraja	11.99	107	P	Pn	10 39 44.8	+1.5
	2µm170nm,0.5s						
IGBI	Denpasar	12.15	111	P	Pn	10 39 43.5	-1.9
	3µm122nm,0.5s						
DNP	Denpasar	12.16	110	P	Pn	10 39 46.9	+1.3
	28µm376nm,0.5s						
KBKI	Kotabaru	12.55	84	P	P	10 39 56.9	-0.8
TWSI	Taliwang, Sumb	13.76	108	P	Pn	10 40 06.9	+0.5
	914nm27nm,0.6s						
PLAI	Plampang	14.63	107	P	Pn	10 40 16.0	-1.6
	2µm140nm,0.7s						
KAPI	Kappang	16.05	92	P	P	10 40 36.5	0.0
	2.1nm,0.3s,baz=280,slow=17,SNR=4.8						
KAPI	Kappang	16.05	92	P	P	10 40 37.4	+0.8
BKSI	Bulukumba	16.42	93	P	P	10 40 41.8	+1.1
	576nm72nm,0.6s						
MPSI	Mapaga	16.96	74	P	P	10 40 48.8	+2.2
	50nm,0.9s						
BASI	Baing, Sumba	17.67	109	P	Pn	10 40 55.8	+0.6
	2µm150nm,1.1s						
TOLI2	Tolitoli	18.04	72	P	Pn	10 41 00.1	+0.6
TOLI2				IAmb	IAmb	10 41 03.4	
	comp=Z,56nm,1.0s						
EDFI	Ende, Flores	18.37	104	P	P	10 41 01.5	-0.8
	comp=Z,427nmcomp=Z,25nm,0.5s						
MMRI	Maumere	18.88	103	P	P	10 41 07.1	-0.7
	comp=Z,111nm,0.7s						
MMRI	Maumere	18.88	103	P	P	10 41 06.7	-1.1
MMRI				IAmb	IAmb	10 41 09.5	
	comp=Z,82nm,0.6s						
MRSI	Marisa	18.96	75	P	Pn	10 41 10.7	+0.2
	comp=Z,1µmcomp=Z,114nm,0.7s						
PBA	Port Blair	19.48	326	P	P	10 41 13.9	-0.3
PBA				IAmb	IAmb	10 41 26.7	
	comp=Z,55nm,0.8s						
UBPT	Khong Chiam	19.86	5		P	10 41 19.5	+1.2
UBPT				IAmb	IAmb	10 41 20.8	
	comp=Z,89nm,0.7s						
GTOI	Gorontalo	20.03	75	P	P	10 41 21.2	+1.0
	comp=Z,340nmcomp=Z,28nm,0.8s						
BATI	Baumata	20.60	107	P	P	10 41 27.1	+0.8
	comp=Z,98nm,0.3s,baz=232,slow=3.0,SNR=18						
BATI				S	S	10 45 02.8	-7.9
	comp=Z,71nm,0.5s,baz=288,slow=20,SNR=3.3						
BATI	Baumata	20.60	107	P	P	10 41 27.7	+1.4
	comp=Z,1µmcomp=Z,66nm,0.7s						
GIRL	Giralia	20.63	151	P	Pn	10 41 31.8	+1.8
	baz=21,SNR=58						
SOEI	Soe	21.07	105	P	P	10 41 32.3	+0.7
	comp=Z,1µmcomp=Z,71nm,0.7s						
SOEI	Soe	21.07	105	P	P	10 41 30.8	-0.8
SOEI				IAmb	IAmb	10 41 42.9	
	comp=Z,55nm,0.8s						
SANI	Sanana	22.44	84	P	P	10 41 45.4	-0.5
	comp=Z,65nm,0.7s						
PSA00	Pilbara Seismi	23.04	138	P	P	10 41 51.6	0.0
PSA00				IAmb	IAmb	10 42 08.1	
	comp=Z,58nm,0.8s						
CM31	Chiang Mai Arr	23.40	349	P	P	10 41 54.6	-0.4
CM31				IAmb	IAmb	10 41 56.1	
	comp=Z,28nm,0.8s						
CMAR	Chiang Mai Arr	23.40	349	P	P	10 41 54.8	-0.2
	comp=Z,18nm,0.6s,baz=180,slow=9.8,SNR=71						
CMAR				PcP	PcP	10 45 39.6	+1.2
	comp=Z,2.3nm,0.6s,baz=203,slow=2.8,SNR=6.4						
CMAR				ScP	ScP	10 49 06.2	-0.4
	comp=Z,7.2nm,0.9s,baz=206,slow=3.5,SNR=30						
CMAR	Chiang Mai Arr	23.40	349	P	P	10 41 55.0	0.0
CHTO	Chiang Mai	23.75	349	P	P	10 41 57.5	-0.6
LBMI	Labuha	24.14	81	P	P	10 42 03.6	+1.8
	comp=Z,1µmcomp=Z,146nm,0.9s						
TNTI	Ternate	24.29	78	P	P	10 42 04.9	+1.8
	comp=Z,44nm,0.6s						
TNTI	Ternate	24.29	78	P	P	10 42 03.1	-0.1
TNTI				IAmb	IAmb	10 42 21.3	
	comp=Z,32nm,0.5s						
FITZ	Fitzroy Crossi	25.33	124	P	P	10 42 12.6	0.0
	comp=Z,22nm,0.6s,baz=307,slow=6.0,SNR=108						
FITZ				LR	LR	10 51 19.4	
	comp=Z,30nm,19.8s,baz=328,slow=34						
FITZ	Fitzroy Crossi	25.33	124	P	P	10 42 12.6	0.0
	baz=25,SNR=70						
FITZ	Fitzroy Crossi	25.33	124	P	P	10 42 12.3	-0.3
FITZ				IAmb	IAmb	10 42 15.8	
	comp=Z,28nm,0.9s						
PALK	Pallekele	25.77	297	P	P	10 42 18.7	+2.0
	comp=Z,14nm,0.8s,baz=216,slow=8.6,SNR=8.6						
PALK	Pallekele	25.77	297	P	P	10 42 16.3	-0.3
SLVN	Son La	25.80	1	P	P	10 42 16.8	0.0
MEEK	Meekatharra	26.15	148	P	P	10 42 20.6	+0.7
	baz=26,SNR=4.7						
KNRA	Kununurra	27.01	116	P	P	10 42 26.7	-0.9
	baz=27,SNR=59						
KNRA	Kununurra	27.01	116	P	P	10 42 26.9	-0.8
KNRA				IAmb	IAmb	10 42 33.1	
	comp=Z,25nm,0.6s						
SIJI	Sorong	27.82	83	P	P	10 42 34.0	-1.0
	comp=Z,14nm,0.5s,baz=189,slow=21,SNR=10.0						
MTN	Manton Dam	28.34	109	P	P	10 42 38.0	-1.5
	baz=28,SNR=17						
MTN	Manton Dam	28.34	109	P	P	10 42 38.2	-1.4
MTN				IAmb	IAmb	10 42 43.8	
	comp=Z,19nm,0.5s						
FAKI	Fak Fak	28.58	88	P	P	10 42 41.3	-0.5
	comp=Z,30nm,0.8s						
FAKI	Fak Fak	28.58	88	P	P	10 42 41.5	-0.3
FAKI				IAmb	IAmb	10 42 42.6	
	comp=Z,23nm,0.9s						
MUN	Mundaring	29.65	158	P	P	10 42 52.5	+1.5
	baz=30,SNR=4.5						
KLBR	Kellerberrin	29.92	155	P	P	10 42 53.8	+0.4
	baz=30,SNR=5.0						
H08S2	Diego Garcia H	31.12	263	T	T	11 13 59.6	
	baz=84,slow=74,SNR=59						
H08S3	Diego Garcia H	31.13	263	T	T	11 14 06.0	
	baz=84,slow=74,SNR=93						
H08S1	Diego Carcia H	31.14	263	T	T	11 14 06.0	
	baz=84,SNR=6.6						
WRKA	Warakurna	31.18	133	P	P	10 43 05.1	+0.5
	baz=31,SNR=35						
H01W3	Cape Leeuwin H	31.64	163	T	T	11 16 38.6	
	baz=341,slow=76,SNR=46						
H01W1	Cape Leeuwin H	31.65	163	T	T	11 16 39.6	
	baz=341,slow=76,SNR=70						
H01W2	Cape Leeuwin H	31.65	163	T	T	11 16 39.6	
	baz=341,slow=76,SNR=59						
SHL	Shillong	32.11	340	P	P	10 43 11.7	-1.2
SHL				IAmb	IAmb	10 43 13.0	
	comp=Z,22nm,0.5s						
WB0	Warramunga Arr	33.51	119	P	P	10 43 24.8	-0.2
WRA	Warramunga Arr	33.53	120	P	P	10 43 25.0	-0.2
	comp=Z,37nm,0.4s,baz=301,slow=9.1,SNR=431						
WRA				PcP	PcP	10 46 03.8	+0.1
	comp=Z,4.4nm,0.6s,baz=302,slow=2.3,SNR=5.6						
WRA				S	S	10 48 37.0	-2.4
	comp=Z,8.9nm,0.9s,baz=292,slow=16,SNR=13						
WRA				ScP	ScP	10 49 37.2	-1.0
	comp=Z,1.1nm,0.6s,baz=300,slow=3.2,SNR=2.6						
WRA				LR	LR	10 59 20.6	
	comp=Z,19nm,18.9s,baz=315,slow=40						
WRA	Warramunga Arr	33.53	120	P	P	10 43 22.6	-2.7
WRAB	Tennant Creek	33.54	120	P	P	10 43 24.8	-0.5
WB2	Warramunga Arr	33.54	120	P	P	10 43 24.9	-0.4
WR0	Warramunga Arr	33.71	120	P	P	10 43 26.4	-0.4
FORT	Forrest	34.72	141	P	P	10 43 36.3	+1.0
	baz=35,SNR=11						
FORT	Forrest	34.72	141	P	P	10 43 35.2	-0.1
FORT				IAmb	IAmb	10 44 01.4	
	comp=Z,23nm,0.9s						
ASAR	Alice Springs	34.77	126	P	P	10 43 36.4	+0.4
	comp=Z,29nm,0.7s,baz=298,slow=7.4,SNR=548						
ASAR				PcP	PcP	10 46 07.7	+0.4
	comp=Z,5.8nm,0.5s,baz=304,slow=2.1,SNR=11						
ASAR				S	S	10 48 55.5	-3.0
	comp=Z,10.0nm,1.0s,baz=298,slow=16,SNR=20						
ASAR				ScP	ScP	10 49 42.5	-0.1
	comp=Z,2.1nm,0.7s,baz=312,slow=3.6,SNR=4.7						
ASAR	Alice Springs	34.77	126	P	P	10 43 36.0	0.0
AS31	Alice Springs	34.77	126	P	P	10 43 36.0	0.0
AS31				IAmb	IAmb	10 43 36.9	
	comp=Z,11nm,0.5s						
CD2	Chengdu	35.33	0	P	P	10 43 42.0	+1.4
CD2				pmax	pmax		
	comp=Z,40nm,1.6s						
LSA	Lhasa	36.17	341	P	P	10 43 48.8	+0.5
LSA	Lhasa	36.17	341	P	P	10 43 48.3	0.0
LSA				IAmb	IAmb	10 43 49.3	
	comp=Z,21nm,1.1s						
PKI	Pulchoki	36.53	332	*e*P	P	10 43 50.4	-0.8
	comp=Z,26nm,0.6s						
PKIN	Phulchoki	36.54	332	*e*P	P	10 43 50.2	-1.1
	comp=Z,27nm,0.7s						
GUN	Gumba	36.61	333	*e*P	P	10 43 51.5	-0.4
	comp=Z,107nm,0.5s						
GUN	Gumba	36.61	333	*e*P	P	10 43 51.7	-0.2
	comp=Z,184nm,0.6s						
DMN	Daman	36.71	332	*e*P	P	10 43 52.0	-0.6
KKN	Kakani	36.78	332	*e*P	P	10 43 52.5	-0.7
	comp=Z,65nm,0.7s						
GKN	Gorkha	37.26	332	*e*P	P	10 43 56.6	-0.6
	comp=Z,68nm,0.7s						
DANN	Dangsing	37.97	331	*e*P	P	10 44 02.8	-0.6
	comp=Z,108nm,0.6s						
QIS	Mount Isa	38.36	118	P	P	10 44 06.6	+0.1
	baz=38,SNR=87						
XAN	Xi'an	38.77	7	P	P	10 44 09.4	-0.3
XAN				pP	pP	10 44 34.1	-0.9
XAN				sP	sP	10 44 47.0	-0.8
XAN				S	S	10 49 59.3	+0.4
XAN				pmax	pmax		
	comp=Z,10.0nm,0.5s						
XAN				pmax	pmax		
	comp=Z,66nm,3.6s						
NJ2	Nanjing	39.23	21	*e*P	P	10 44 16.3	+2.8
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
COEN	Coen	40.03	106	P	P	10 44 19.0	-1.4
COEN				IAmb	IAmb	10 44 19.6	
	comp=Z,14nm,0.6s						
BBOO	Buckleboo	41.25	137	P	P	10 44 30.4	+0.3
	baz=41,SNR=41						
BBOO	Buckleboo	41.25	137	P	P	10 44 30.5	+0.3
BBOO				IAmb	IAmb	10 44 31.3	
	comp=Z,16nm,0.7s						
NDI	New Delhi	41.75	324	*e*P	P	10 44 34.5	+0.2
MTSU	Mount Surprise	41.94	112	P	P	10 44 36.1	0.0
	baz=42,SNR=19						
PMG	Port Moresby	43.41	99	P	P	10 44 47.8	-0.2
PMG				IAmb	IAmb	10 44 48.2	
	comp=Z,25nm,0.6s						
HTT	Hallett	43.58	136	P	P	10 44 50.0	+0.9
	baz=44,SNR=20						
JSU	Suzuyama	44.08	34	P	P	10 44 54.0	+0.9
CTAO	Charters Tower	44.20	114	P	P	10 44 54.4	+0.2
CTAO				IAmb	IAmb	10 44 55.5	
	comp=Z,34nm,0.8s						
QLP	Quilpie	44.47	124	P	P	10 44 57.5	+1.2
	baz=44,SNR=8.8						
STKA	Stephens Creek	44.70	132	P	P	10 44 58.7	+0.8
	comp=Z,41nm,0.7s,baz=308,slow=7.6,SNR=116						
STKA				PcP	PcP	10 46 39.0	+0.3
	comp=Z,5.5nm,0.5s,baz=237,slow=1.7,SNR=3.0						
STKA				S	S	10 51 25.5	-0.9
	comp=Z,2.2nm,0.9s,baz=188,slow=20,SNR=5.0						
STKA	Stephens Creek	44.70	132	P	P	10 44 58.8	+0.8
	baz=45,SNR=74						
STKA	Stephens Creek	44.70	132	P	P	10 44 58.8	+0.8
GUMO	Guam	44.73	66	P	P	10 44 57.3	-1.1
HHC	Hu-ho-hao-te	45.83	8	*e*P	P	10 45 09.9	+3.0
ARPS	Mount Arapiles	47.40	138	P	P	10 45 20.9	+1.8
	baz=48,SNR=12						
KSRS	Korea Array	47.57	26	P	P	10 45 21.4	+1.1
	comp=Z,6.3nm,0.6s,baz=226,slow=7.2,SNR=23						
CMSA	Cobar Meteorol	47.64	129	P	P	10 45 22.2	+1.1
	baz=48,SNR=22						
NIL	Nilore	47.70	325	P	P	10 45 20.4	-1.2
RMQ	Roma	48.24	122	P	P	10 45 27.1	+1.3
	baz=48,SNR=27						
JCJ	Chichijima	48.78	48	P	P	10 45 28.0	-1.9
EIDS	Eidsvold	49.90	119	P	P	10 45 39.2	+0.7
	baz=50,SNR=7.3						
EIDS	Eidsvold	49.90	119	P	P	10 45 38.6	+0.2
TOO	Toolangi	50.31	136	P	P	10 45 43.7	+2.3
	baz=50,SNR=11						
WMQ	Urumqi	50.32	345	⇑P	P	10 45 42.1	+0.7
WMQ				pP	pP	10 46 11.9	+4.0
WMQ				sP	sP	10 46 21.8	+1.3
WMQ				pmax	pmax		
	comp=Z,34nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,140nm,6.1s						
KSH	Kashi	50.80	332	P	P	10 45 43.3	-1.8
KSH				PcP	PcP	10 46 58.5	-2.0
KSH				S	S	10 52 48.3	-4.3
KSH				pmax	pmax		
	comp=Z,25nm,0.8s						
KBL	Kabul	50.80	323	P	P	10 45 44.4	-0.9
YNG	Young	50.87	131	P	P	10 45 46.1	+0.4
	baz=51,SNR=9.1						
TARG	Taragay, Kyrgy	51.80	335	P	P	10 45 52.9	0.0
TARG				IAmb	IAmb	10 45 54.0	
	comp=Z,8.8nm,0.5s						
ARMA	Armidale	51.92	125	P	P	10 45 53.9	+0.2
	baz=52,SNR=11						
ARMA	Armidale	51.92	125	P	P	10 45 54.9	+1.3
ARMA				IAmb	IAmb	10 45 56.6	
	comp=Z,34nm,1.1s						
WSAR	Wadi Sarin	51.93	304	P	P	10 45 55.4	+1.7
	comp=Z,3.5nm,0.5s,baz=145,slow=6.1,SNR=4.8						
CN2	Changchun	52.05	20	*e*P	P	10 45 52.8	-1.4
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
MAT	Matsushiro	52.14	35	P	P	10 45 54.6	-0.4
MJAR	Matsushiro Arr	52.14	35	P	P	10 45 54.8	-0.3
	comp=Z,3.5nm,0.5s,baz=264,slow=7.6,SNR=4.3						
MJAR				LR	LR	11 08 52.0	
	comp=Z,16nm,18.9s,baz=70,slow=37						
MJAR	Matsushiro Arr	52.14	35	P	P	10 45 53.6	-1.4
PRZ	Przheval'sk	52.19	336	P	P	10 45 56.1	+0.6
PRZ				IAmb	IAmb	10 45 57.2	
	comp=Z,14nm,0.8s						
SONM	Songino Array	52.29	2	P	P	10 45 57.0	+1.0
	comp=Z,6.6nm,0.7s,baz=180,slow=9.3,SNR=39						
SONM				pP	pP	10 46 22.2	-0.5
	comp=Z,8.4nm,0.8s,baz=179,slow=8.8,SNR=7.3						
SONM				PcP	PcP	10 47 06.2	+0.3
	comp=Z,5.9nm,0.5s,baz=184,slow=4.1,SNR=17						
SONM				ScP	ScP	10 50 50.9	-2.0
	comp=Z,2.9nm,0.8s,baz=173,slow=3.6,SNR=9.9						
SONM	Songino Array	52.29	2	P	P	10 45 57.1	+1.0
SONM				IAmb	IAmb	10 46 26.0	
	comp=Z,6.7nm,0.8s						
KDJ	Kajisay	52.39	335	P	P	10 45 56.8	-0.2
DRK	Karamyk	52.80	329	P	P	10 46 00.0	-0.2
DRK				IAmb	IAmb	10 46 02.2	
	comp=Z,16nm,0.7s						
GAR	Garm	53.22	328	P	P	10 46 01.3	-1.8
GAR				IAmb	IAmb	10 46 03.9	
	comp=Z,34nm,1.2s						
CHGR	Chuyangaron	53.60	327	P	P	10 46 04.0	-1.8
UCH	Uchtor	53.63	333	P	P	10 46 06.5	+0.1
	SNR=9.1						
TKM2	Tokmak 2	53.71	335	P	P	10 46 06.3	-0.4
	SNR=44						
BTK	Batken	53.74	329	P	P	10 46 06.4	-0.4
BTK				IAmb	IAmb	10 46 07.5	
	comp=Z,13nm,0.8s						
KBK	Karagaybulak	53.78	334	P	P	10 46 07.3	+0.1
	SNR=16						
AML	Almayashu	53.92	333	P	P	10 46 08.4	-0.1
	SNR=18						
AAK	Ala-Archa	53.96	334	P	P	10 46 08.7	+0.3
	SNR=5.1						
AAK	Ala-Archa	53.96	334	P	P	10 46 07.8	-0.6
FRU1	Bishkek	54.04	334	P	P	10 46 08.8	-0.1
EKS2	Erkin-Say	54.30	333	P	P	10 46 11.2	+0.3
	SNR=33						
USP	Ospenovka	54.46	334	P	P	10 46 11.6	-0.4
	SNR=7.9						
MK31	Makanchi Array	54.57	342	P	P	10 46 12.1	-0.6
MK31				IAmb	IAmb	10 46 13.4	
	comp=Z,8.3nm,0.8s						
MKAR	Makanchi Array	54.57	342	P	P	10 46 12.4	-0.3
	comp=Z,6.7nm,0.4s,baz=152,slow=9.0,SNR=91						
UOSS	Minazif	54.67	305	P	P	10 46 13.7	0.0
MAKZ	Makanchi	54.68	342	P	P	10 46 12.8	-0.6
USA0B	Ussuriysk Arra	54.87	25	P	P	10 46 15.3	+0.6
USA0B				IAmb	IAmb	10 46 16.3	
	comp=Z,19nm,0.7s						
USRK	Ussuriysk Ar.	54.87	25	P	P	10 46 15.4	+0.7
	comp=Z,17nm,0.5s,baz=211,slow=4.2,SNR=72						
USRK				pP	pP	10 46 40.5	-1.2
	comp=Z,11nm,0.7s,baz=218,slow=7.2,SNR=6.8						
USRK	Ussuriysk Ar.	54.87	25	P	P	10 46 15.2	+0.4
TLY	Talaya	56.08	360	LR	LR	11 12 24.0	
	comp=Z,25nm,18.5s,baz=219,slow=38						
KKAR	Karatay Array	56.17	331	P	P	10 46 23.0	-1.1
OPO	Ambohidratompo	56.79	251	P	P	10 46 31.0	+1.8
	comp=Z,5.7nm,0.8s,baz=98,slow=5.7,SNR=6.7						
KURK	Kurchatov	59.18	342	P	P	10 46 44.5	-0.5
KURK				IAmb	IAmb	10 46 45.4	
	comp=Z,9.0nm,0.8s						
GEYT	Alibeck	59.79	319	P	P	10 46 49.3	-0.3
	comp=Z,3.3nm,0.4s,baz=174,slow=15,SNR=4.8						
GEYT				LR	LR	11 15 25.7	
	comp=Z,16nm,18.9s,baz=85,slow=39						
GEYT	Alibeck	59.79	319	P	P	10 46 48.9	-0.7
GEYT				IAmb	IAmb	10 46 50.2	
	comp=Z,7.0nm,0.9s						
ASAJ	Asahikawa	59.81	32	P	P	10 46 50.3	+0.8
	comp=Z,26nm,0.6s,baz=222,slow=5.7						
JKA	Kamikawa-asahi	59.81	32	P	P	10 46 50.0	+0.5
ZAA0	Zalesovo Array	60.46	347	P	P	10 46 53.3	-0.4
ZAA0				IAmb	IAmb	10 46 54.4	
	comp=Z,19nm,1.0s						
ZALV	Zalesovo Beam	60.46	347	P	P	10 46 53.4	-0.3
	comp=Z,9.5nm,0.4s,baz=154,slow=6.0,SNR=49						
ZALV				PKPPKP	P'P'df	11 16 12.6	-0.7
	comp=Z,0.8nm,0.7s,baz=294,slow=1.5,SNR=3.9						
ZALV	Zalesovo Beam	60.46	347	P	P	10 46 53.2	-0.5
DZM	Mont Dzumac	63.08	112	P	P	10 47 12.1	-0.1
DZM				IAmb	IAmb	10 47 18.1	
	comp=Z,17nm,1.0s						
ONTNC	Ouen Toro	63.12	113	P	P	10 47 13.0	+0.8
OUENC	Ouen Island, N	63.49	113	P	P	10 47 15.6	+1.0
BRVK	Borovoye	63.98	338	P	P	10 47 16.6	-0.7
BRVK				IAmb	IAmb	10 47 17.2	
	comp=Z,6.0nm,0.6s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KIBK	Kibwezi	65.51	270	P	P	10 47 29.1	+1.0
KIBK				IAmb	IAmb	10 47 30.4	
	comp=Z,8.0nm,0.6s						
KMBO	Kilima Mbogo	66.39	271	P	P	10 47 35.1	+1.2
	comp=Z,3.9nm,0.6s,baz=59,slow=6.8,SNR=4.9						
AKTO	Aktyubinsk	67.41	330	P	P	10 47 38.1	-1.2
	comp=Z,1.2nm,0.4s,baz=112,slow=3.1,SNR=7.0						
DCZ	Deep Cove	68.29	137	P	P	10 47 46.1	+1.1
DCZ				IAmb	IAmb	10 47 46.5	
	comp=Z,33nm,1.1s						
LODK	Lodwar	68.70	275	P	P	10 47 50.8	+2.5
MAW	Mawson	68.71	196	P	P	10 47 48.9	+1.8
	comp=Z,11nm,0.7s,baz=50,slow=4.6,SNR=14						
MAW	Mawson	68.71	196	P	P	10 47 47.5	+0.3
	baz=69,SNR=9.7						
MAW	Mawson	68.71	196	P	P	10 47 49.1	+2.0
MLZ	Mavora Lakes	68.92	137	P	P	10 47 49.3	+0.3
WHZ	Wether Hill Ro	68.94	138	P	P	10 47 49.5	+0.4
WHZ				IAmb	IAmb	10 48 10.9	
	comp=Z,36nm,1.5s						
YAK	Yakutsk	69.41	13	P	P	10 47 51.1	-0.4
	comp=Z,5.5nm,0.3s,baz=212,slow=1.1,SNR=3.1						
YAK	Yakutsk	69.41	13	IAmb	IAmb	10 47 51.6	
	comp=Z,20nm,0.7s						
YAK				P	P	10 47 51.9	+0.4
LBZ	Lake Benmore	70.10	136	P	P	10 47 56.3	+0.1
LBZ				IAmb	IAmb	10 48 01.6	
	comp=Z,33nm,0.9s						
RPZ	Rata Peaks	70.56	135	P	P	10 47 59.5	+0.5
QRZ	Quartz Range	71.05	132	P	P	10 48 03.0	+1.0
ARU	Arti	71.07	335	P	P	10 48 00.7	-1.1
	comp=Z,2.0nm,0.2s,baz=302,slow=2.2,SNR=4.9						
ARU	Arti	71.07	335	P	P	10 48 01.6	-0.2
THZ	Tophouse	71.50	132	P	P	10 48 05.0	+0.2
NNZ	Nelson	71.75	132	P	P	10 48 05.9	-0.4
BSWZ	Blackbirch Sta	72.21	132	P	P	10 48 09.2	+0.2
TUWZ	Tuamarina	72.21	132	P	P	10 48 08.4	-0.6
VRZ	Vera Road	72.46	129	P	P	10 48 12.0	+1.5
KBZ	Khabaz	72.67	318	P	P	10 48 12.4	+0.8
	comp=Z,2.3nm,0.3s,baz=129,slow=5.5,SNR=8.4						
WAZ	Wanganui	72.73	130	P	P	10 48 13.4	+1.3
CAW	Cannon Point	72.99	131	P	P	10 48 13.4	-0.2
TRVZ	Turoa	73.09	130	P	P	10 48 15.3	+0.7
WTVZ	West Tongariro	73.10	129	P	P	10 48 15.6	+1.1
NGZ	Ngauruhoe	73.11	129	P	P	10 48 15.6	+1.0
KRVZ	Karewarewa	73.13	129	P	P	10 48 15.7	+1.1
SNVZ	South Ngauruho	73.15	129	P	P	10 48 15.8	+1.0
ETVZ	East Tongariro	73.19	129	P	P	10 48 16.1	+1.0
PETK	Petropavlovsk-	73.20	31	P	P	10 48 13.8	-0.7
	comp=Z,2.6nm,0.6s,baz=247,slow=4.0,SNR=5.6						
PETK	Petropavlovsk-	73.20	31	P	P	10 48 14.7	+0.2
PLWZ	Palliser	73.20	132	P	P	10 48 14.8	-0.1
PAWZ	Paruwai Farm	73.30	132	P	P	10 48 16.1	+0.6
TRWZ	Traveller	73.50	132	P	P	10 48 17.2	+0.6
BHHZ	Black Hill Sta	73.51	130	P	P	10 48 17.0	+0.2
PRWZ	Pori Road	73.59	131	P	P	10 48 17.9	+0.7
DVHZ	Dannevirke	73.70	131	P	P	10 48 18.6	+0.7
BKZ	Black Stump Fm	73.80	129	P	P	10 48 18.7	+0.2
BELG	Belogornoye	73.86	328	P	P	10 48 18.5	+0.1
	comp=Z,10nm,0.6s,baz=136,slow=4.5,SNR=2.6						
KIRV	Kirov	76.29	334	P	P	10 48 33.1	+0.9
	comp=Z,11nm,0.6s,baz=58,slow=1.3,SNR=2.6						
SEY	Seymchan	76.72	21	P	P	10 48 34.5	-0.1
	comp=Z,4.0nm,0.7s,baz=230,slow=3.9,SNR=9.3						
LBTB	Lobatse	77.24	246	P	P	10 48 39.4	+0.9
	comp=Z,3.0nm,0.6s,baz=105,slow=7.0,SNR=4.7						
LBTB	Lobatse	77.24	246	P	P	10 48 39.6	+1.1
BOSA	Boshof	77.62	242	P	P	10 48 41.4	+0.8
	comp=Z,6.5nm,0.6s,baz=100,slow=4.1,SNR=20						
BOSA				LR	LR	11 20 04.6	
	comp=Z,17nm,18.7s,baz=16,slow=33						
BOSA	Boshof	77.62	242	P	P	10 48 41.7	+1.1
BRTR	Keskin Array B	77.77	312	P	P	10 48 40.5	-0.6
	comp=Z,3.0nm,0.6s,baz=152,slow=5.6,SNR=6.7						
BRTR				pP	pP	10 49 07.7	-2.2
	comp=Z,3.1nm,0.8s,baz=110,slow=6.7,SNR=4.4						
BRTR	Keskin Array B	77.77	312	P	P	10 48 40.8	-0.4
TIXI	Tiksi	77.89	8	P	P	10 48 39.2	-1.7
	comp=Z,1.9nm,0.3s,baz=164,slow=2.8						
TIXI	Tiksi	77.89	8	P	P	10 48 40.2	-0.7
VNDA	Vanda	78.91	169	P	P	10 48 47.4	+0.8
	comp=Z,4.6nm,0.6s,baz=316,slow=6.4,SNR=22						
VNDA				LR	LR	11 20 33.4	
	comp=Z,15nm,21.2s,baz=266,slow=33						
VNDA	Vanda	78.91	169	P	P	10 48 47.5	+1.0
SUR	Sutherland	81.50	238	P	P	10 49 03.4	+1.8
SUR				IAmb	IAmb	10 49 20.9	
	comp=Z,49nm,1.4s						
KLMR	Klimovskoe	81.77	334	eP	P	10 49 02.0	-0.1
KLMR				AMP		10 49 04.0	
	comp=Z,19nm,1.2s						
AKASG	Malin Array Be	83.78	322	P	P	10 49 12.1	-0.6
	comp=Z,2.7nm,0.6s,baz=89,slow=5.4,SNR=7.9						
AKASG				pP	pP	10 49 39.4	-2.6
	comp=Z,4.5nm,0.8s,baz=88,slow=5.3,SNR=4.5						
QSPA	South Pole Qui	85.36	180	P	P	10 49 21.0	+0.5
	comp=Z,4.9nm,0.8s,baz=276,slow=1.1,SNR=82						
QSPA	South Pole Qui	85.36	180	P	P	10 49 21.2	+0.7
MNK	Minsk	85.53	325	i P	P	10 49 19.2	-2.2
	comp=E,1.0nm,0.7s						
MNK				i P	P	10 49 19.2	-2.2
	comp=N,6.0nm,0.7s						
MNK				i P	P	10 49 19.2	-2.2
	comp=Z,9.0nm,0.7s,baz=104						
MNK				i pP	pP	10 49 47.7	-3.1
MNK				i sP	sP	10 49 59.7	-3.2
MNK				i PP	PP	10 52 40.1	-1.3
MNK				i PPP	PPP	10 54 33.1	
MNK				i S	SKSac	10 59 33.4	-2.9
MNK				i sS	pS	11 00 25.2	+5.0
MNK				i SS	SS	11 05 22.0	0.0
MNK				i SSS	SSS	11 08 54.0	
MNK				i LR	LR	11 25 03.2	
MNK				i LRM	MLR	11 28 58.1	
	comp=Z,128nm,18.7s						
MNK				i LRM	MLR	11 29 01.4	
	comp=E,164nm,18.1s						
MNK				i LRM	MLR	11 29 04.6	
	comp=N,193nm,14.8s						
BURAR	Bucovina Array	85.63	318	P	P	10 49 23.9	+1.7
BUR08	Bucovina Ar. S	85.64	318	P	P	10 49 24.0	+1.7
KOLS	Kolonicke sedl	87.80	319	eP	P	10 49 34.4	+1.8
FIA1	FINESS Array S	88.12	332	P	P	10 49 34.0	+0.2
FIA1				IAmb	IAmb	10 49 50.7	
	comp=Z,29nm,1.5s						
FINES	FINESS Array B	88.12	332	P	P	10 49 34.0	+0.2
	comp=Z,3.0nm,0.4s,baz=103,slow=5.2,SNR=33						
FINES	FINESS Array B	88.12	332	P	P	10 49 33.9	+0.1
DIVS	Divibare	88.64	314	P	P	10 49 36.1	-0.7
DIVS				IAmb	IAmb	10 49 38.6	
	comp=Z,13nm,1.5s						
PDG	Podgorica	88.96	313	P	P	10 49 38.9	+0.8
PDG				IAmb	IAmb	10 49 38.9	
	comp=Z,6.5nm,0.7s						
ARCES	ARCESS Array B	90.17	340	P	P	10 49 42.9	-0.4
	comp=Z,1.4nm,0.6s,baz=102,slow=5.8,SNR=12						
ARCES				LR	LR	11 38 22.0	
	comp=Z,24nm,18.3s,baz=310,slow=41						
ARCES	ARCESS Array B	90.17	340	P	P	10 49 42.6	-0.6
ARCES				IAmb	IAmb	10 49 52.5	
	comp=Z,21nm,1.4s						
SNAA	Sanae	90.78	198	P	P	10 49 48.5	+2.3
SNAA	Sanae	90.78	198	P	P	10 49 48.6	+2.3
SNAA				IAmb	IAmb	10 49 49.6	
	comp=Z,20nm,1.2s						
VNA2	Neumayer--Watz	92.41	198	P	P	10 49 55.8	+2.1
	baz=97,slow=4.6						
VNA2	Neumayer--Watz	92.41	198	PKiKP	PKiKP	10 54 42.2	+0.1
VNA1	Neumayer--Stat	92.78	198	P	P	10 49 58.3	+2.9
VNA3	Neumayer Olymp	92.98	197	P	P	10 49 58.0	+1.7
VNA3	Neumayer Olymp	92.98	197	PKiKP	PKiKP	10 54 42.7	-0.3
GERES	GERESS Array B	93.41	319	P	P	10 49 59.4	+0.6
	comp=Z,0.7nm,0.5s,baz=104,slow=4.1,SNR=2.1						
HFS	Hagfors	93.95	330	P	P	10 50 02.1	+1.2
	comp=Z,1.4nm,0.7s,baz=83,slow=4.5,SNR=4.1						
NOA	NORSAR Array B	95.20	331	LR	LR	11 40 22.4	
	comp=Z,5.5nm,19.7s,baz=315,slow=40						
A21K	Barrow	97.47	19	P	P	10 50 16.5	-0.2
	baz=278						
ILAR	Eielson Array	102.39	24	PKKPbc	PKKPbc	11 06 40.6	-2.1
	comp=Z,1.3nm,0.8s,baz=130,slow=1.9,SNR=10.0						
TORD	Torodi Ar. Bea	102.67	282	PKiKP	PKiKP	10 55 00.4	-1.4
	comp=Z,0.3nm,0.4s,baz=35,slow=2.3,SNR=4.7						
TORD				PKKPbc	PKKPbc	11 06 40.6	+0.5
	comp=Z,0.2nm,0.4s,baz=294,slow=3.9,SNR=4.1						
B05A	Bryant	121.62	34	P	PKiKP	10 55 37.2	+0.4
	baz=303						
EDM	Edmonton	122.86	26		PKPdf	10 55 38.8	-0.2
H04D	Lebanon	123.21	38	P	PKiKP	10 55 40.8	+0.7
	baz=300						
I03D	Drain, OR	123.24	39	P	PKiKP	10 55 40.9	+0.7
	baz=299						
K02D	Willamette Mer	123.52	41	P	PKiKP	10 55 41.3	+0.4
	baz=299						
I04A	Tendick Farm,	123.78	39	P	PKiKP	10 55 41.2	-0.1
	baz=300						
NEW	Newport	124.33	32	P	PKiKP	10 55 42.5	+0.2
	baz=308						
L04D	Klamath Falls	124.63	40	P	PKiKP	10 55 43.3	+0.1
	baz=300						
M02C	Callahan	124.67	42	P	PKiKP	10 55 43.8	+0.6
	baz=298						
J05D	Fort Rock, OR	124.78	39	P	PKiKP	10 55 44.2	+0.8
	baz=301						
N02D	Trinity Center	124.97	42	P	PKiKP	10 55 44.6	+0.8
	baz=298						
M04C	Macdoel	125.15	41	P	PKiKP	10 55 44.6	+0.4
	baz=300						
O02D	Mt. Diablo Mer	125.29	43	P	PKiKP	10 55 45.0	+0.6
	baz=298						
O03E	Paynes Creek	125.90	42	P	PKPdf	10 55 45.5	+0.2
	baz=299						
MSO	Missoula	126.90	32	P	PKPdf	10 55 47.2	+0.2
	baz=311						
MSO	Missoula	126.90	32	PKPdf	PKPdf	10 55 47.2	+0.2
HLID	Hailey	128.71	35	P	PKiKP	10 55 52.0	+0.7
	baz=308						
BOZ	Bozeman (W)	128.92	31	P	PKiKP	10 55 51.7	0.0
	baz=312						
NVAR	Mina Array Bea	129.18	43	PKP	PKiKP	10 55 52.6	+0.2
	comp=Z,2.0nm,0.5s,baz=303,slow=2.5,SNR=23						
NVAR				SKPab	SKPab	10 59 02.4	+0.2
	comp=Z,2.2nm,0.7s,baz=274,slow=3.5,SNR=7.4						
SCHQ	Schefferville	129.35	353	PKP	PKPdf	10 55 51.1	-0.2
	comp=Z,3.4nm,0.5s,baz=2.1,slow=3.5,SNR=7.8						
SCHQ	Schefferville	129.35	353		PKPdf	10 55 51.4	+0.1
CWC	Cottonwood Cre	130.33	45	P	PKiKP	10 55 54.7	-0.1
	baz=300						
MPMC	Manual Prospec	130.93	45	P	PKiKP	10 55 56.3	+0.3
	baz=300						
R11A	Troy Canyon, C	131.03	41	P	PKiKP	10 55 56.9	+0.7
	baz=303						
LRMC	Laurel Mtn Rad	131.08	46	P	PKiKP	10 55 56.6	+0.3
	baz=299						
EDW2	Edwards Air Fo	131.14	47	P	PKiKP	10 55 56.9	+0.6
	baz=298						
ULM	Lac du Bonnet	131.64	17	PKP	PKPdf	10 55 54.3	-1.4
	comp=Z,6.0nm,0.6s,baz=315,slow=5.1,SNR=7.8						
ULM				SKPbc	SKPbc	10 59 08.9	-2.4
	comp=Z,5.5nm,0.5s,baz=319,slow=3.9,SNR=7.3						
DUG	Dugway, Tooele	131.72	38	P	PKiKP	10 55 57.9	+0.4
	baz=308						
GSC	Goldstone, Bar	131.79	45	P	PKiKP	10 55 58.0	+0.3
	baz=300						
SHOC	Shoshone, Teco	131.86	44	P	PKiKP	10 55 58.2	+0.6
	baz=301						
BW06	Boulder Array	131.93	33	P	PKPdf	10 55 57.1	+0.2
	baz=313						
PDAR	Pinedale Array	131.93	33	PKP	PKPdf	10 55 56.4	-0.5
	comp=Z,1.3nm,0.5s,baz=134,slow=0.8,SNR=17						
PDAR				SKPbc	SKPbc	10 59 11.2	-1.7
	comp=Z,1.8nm,0.7s,baz=22,slow=1.0,SNR=13						
PDAR	Pinedale Array	131.93	33		PKPdf	10 55 56.8	-0.1
GMRC	Granite Mounta	132.86	45	P	PKiKP	10 56 00.4	+0.5
	baz=301						
PFO	Pinyon Flats O	132.86	47	P	PKiKP	10 56 00.6	+0.7
	baz=299						
IRM	Iron Mountain	133.54	46	P	PKiKP	10 56 01.7	+0.5
	baz=301						
BC3	Big Chuckawall	133.57	47	P	PKiKP	10 56 02.2	+0.9
	baz=300						
RSSD	Black Hills	133.72	28	P	PKPdf	10 55 59.9	-0.3
	baz=320						
O20A	White River Ci	134.44	35	P	PKiKP	10 56 02.6	-0.4
	baz=313						
PLCA	Paso Flores	134.56	186	PKP	PKiKP	10 56 03.8	+0.7
	comp=Z,1.7nm,0.5s,baz=197,slow=2.2,SNR=9.8						
WUAZ	Wupatki	135.41	42	P	PKiKP	10 56 04.7	-0.4
	baz=306						
W18A	Petrified Fore	136.73	41	P	PKiKP	10 56 07.7	-0.1
	baz=307						
S22A	4UR Ranch, Cre	136.86	36	P	PKPdf	10 56 07.2	+0.8
	baz=312						
ECSD	EROS Data Cent	137.13	22	P	PKPdf	10 56 06.2	0.0
	baz=330						
T25A	Trinidad	138.68	35	P	PKPdf	10 56 10.6	+1.0
	baz=315						
ANMO	Albuquerque	138.94	39	P	PKPdf	10 56 11.1	+1.0
	baz=311						
MNTX	Cornudas Mount	141.69	42	P	PKPdf	10 56 15.7	+0.8
	baz=309						
MNTX	Cornudas Mount	141.69	42		PKPdf	10 56 13.2	-1.7
M54A	Oil Creek Stat	143.15	4	P	PKPab	10 56 13.4	+0.4
	baz=354						
WMOK	Wichita Mounta	143.53	32	P	PKPab	10 56 14.9	+0.2
	baz=320						
N54A	Moraine State	143.67	5	P	PKPbc	10 56 15.5	-0.4
	baz=354						
N59A	State Game Lan	143.86	359	P	PKPbc	10 56 16.2	-0.3
	baz=1.0						
ACSO	Alum Creek Sta	144.05	9	P	PKPbc	10 56 16.8	-0.2
	baz=349,SNR=8.5						
CCM	Cathedral Cave	144.05	20	P	PKPab	10 56 16.2	-0.3
	baz=334						
TUL1	Leonard	144.07	27	P	PKPab	10 56 16.5	-0.2
	baz=326						
TUL1	Leonard	144.07	27	PKPdf	PKPab	10 56 16.7	+0.1
SSPA	Standing Stone	144.12	2	P	PKPab	10 56 16.7	0.0
	baz=357						
CPUP	Villa Florida	144.14	210	PKP	PKPdf	10 56 18.6	-0.7
	comp=Z,20nm,0.7s,baz=157,slow=2.3,SNR=34						
O53A	New Philadelph	144.26	6	P	PKPbc	10 56 17.5	-0.1
	baz=352,SNR=9.7						
TXAR	Lajitas Array	144.32	43	PKP	PKPbc	10 56 19.0	+0.7
	comp=Z,3.7nm,0.5s,baz=277,slow=1.0,SNR=64						
TXAR				SKPbc	SKPbc	10 59 48.4	-0.4
	comp=Z,1.0nm,0.5s,baz=212,slow=1.4,SNR=8.8						
P49A	Miami Univ. Ec	144.43	11	P	PKPab	10 56 17.8	-0.1
	baz=346						
O56A	Blue Knob Stat	144.46	3	P	PKPbc	10 56 18.2	-0.1
	baz=356,SNR=10						
P52A	Corning	144.75	8	P	PKPab	10 56 18.7	-0.4
	baz=350,SNR=12						
U40A	Yellville	144.96	24	P	PKPbc	10 56 19.3	-0.7
	baz=331						
P60A	Greenville	144.96	359	P	PKPbc	10 56 19.5	-0.3
	baz=1.3,SNR=7.0						
MCWV	Mont Chateau	144.98	5	P	PKPbc	10 56 19.8	-0.1
	baz=354,SNR=10.0						
WCI	Wyandotte Cave	145.34	14	P	PKPbc	10 56 20.9	-0.2
	baz=342						
BDFB	Brasilia	145.47	234	PKPbc	PKPab	10 56 23.1	+0.5
	comp=Z,13nm,0.6s,baz=142,slow=3.5,SNR=17						
W39A	Magazine	145.57	26	P	PKPdf	10 56 21.5	-0.1
	baz=328						
JCT	Junction City	146.08	38	P	PKPbc	10 56 23.3	-0.4
	baz=315						
MIAR	Mount Ida	146.21	26	P	PKPab	10 56 25.0	+0.3
	baz=328						
W41B	Gary Mavity, V	146.23	24	P	PKPbc	10 56 24.2	+0.3
	baz=331						
CBN	Corbin Frederi	146.56	1	P	PKPbc	10 56 24.7	-0.1
	baz=358						
X40A	Basin Creek Fa	146.58	25	P	PKPbc	10 56 25.2	+0.2
	baz=329						
WVT	Waverly	146.91	17	P	PKPbc	10 56 25.7	-0.2
	baz=339						
BLA	Blacksburg	147.35	6	P	PKPbc	10 56 26.1	-1.1
	baz=352						
TZTN	Tazewell	147.55	11	P	PKPbc	10 56 27.3	-0.4
	baz=347						
833A	Chaparral WMA,	147.82	40	P	PKPbc	10 56 27.2	-1.4
	baz=313						
KMSC	Kings Mountain	149.28	8	P	PKPbc	10 56 31.7	-0.5
	baz=350						
VBMS	Vicksburg	149.50	24	P	PKPbc	10 56 33.1	+0.3
	baz=331						
GOGA	Godfrey	150.60	12	P	PKPbc	10 56 35.4	+0.1
	baz=346						
BRAL	Brewton	151.74	20	P	PKiKP	10 56 38.9	+0.5
	baz=337						
LPAZ	La Paz	157.69	201	PKPab	PKPab	10 57 16.1	+2.5
	comp=Z,8.2nm,0.6s,baz=239,slow=4.8,SNR=21						

LDG ***18*** *10:59:14.4±0.1, 48°.81N×1°.02W, h5^{km}, Md2.8/2, Ml2.9/18,*
Error ellipse: s-maj=2.6km s-min=1.4km az=22.0
BGS ***18*** *10:59:16.2±0.2, 48°.86N×1°.09W, h5^{km}±16^{km}, ML2.0*
ISC 18 10:59:14.2±1.0**, 48°.79N**±0°.03×**0°.97W**±0°.02**, h19^{km}**±9^{km}**,**
n37, σ1^{s}69/51**, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FLN	La Foliniere	0.32	95	eP	Pb	10 59 22.5	+1.1
	baz=282						
FLN				eSg	Sg	10 59 26.5	+0.5
	282nm,0.2s,baz=275						
GRR	Gorron	0.41	170	eP	Pb	10 59 23.7	+0.8
GRR				eSg	Sg	10 59 28.6	+0.1
	162nm,0.3s						
LDF	La Druitiere	0.59	109	eP	Pb	10 59 27.5	+1.6
LDF				eSg	Sg	10 59 34.6	+0.5
	21nm,0.2s						
JDC	Jersey Dam (Cr	0.81	299	eP	Pb	10 59 30.2	+0.5
JDC				IAML		10 59 43.2	
	comp=E,149nm,0.1s						
JDC				IAML		10 59 43.4	
	comp=N,262nm,0.2s						
JQE	Queens East	0.82	300	eP	Pb	10 59 30.2	+0.4
JDG	Jersey Dam (Ga	0.82	300	eP	Pb	10 59 30.2	+0.4
JDG				IAML		10 59 31.5	
	comp=Z,34nm,0.7s						
JDG				eS	Sb	10 59 40.5	+0.1
JDG				IAML		10 59 43.1	
	comp=N,27nm,0.3s						
JRS	Jersey	0.84	299	eP	Pb	10 59 30.6	+0.4
JRS				IAML		10 59 43.7	
	comp=N,37nm,0.2s						
JRS				IAML		10 59 43.8	
	comp=E,44nm,0.2s						
JLP	Les Platons	0.88	301	eP	Pb	10 59 31.2	+0.5
JSA	Saint Aubin	0.89	297	eP	Pb	10 59 31.3	+0.3
JSA				eS	Sg	10 59 42.4	-0.9
JSA				IAML		10 59 44.9	
	comp=N,44nm,0.2s						
JSA				IAML		10 59 45.2	
	comp=E,32nm,0.2s						
JVM	Valle D.L. Mar	0.92	298	eP	Pb	10 59 31.9	+0.3
SGMF	Saint Gilles	1.19	244	ePg	Pg	10 59 36.4	-0.8
SGMF	Saint Gilles	1.19	244	eP	Pn	10 59 37.6	+1.8
SGMF				eSn	Sg	10 59 51.7	-1.1
	comp=E,27nm,0.3s						
ROSF	Rostrenen	1.60	254	eP	Pb	10 59 44.0	+0.9
ROSF	Rostrenen	1.60	254	ePg	Pb	10 59 43.6	+0.5
ROSF				eSn	Sn	11 00 01.8	+0.3
	comp=E,54nm,0.3s						
QUIF	Quistinic	1.71	240	ePn	Pn	10 59 43.4	+0.5
QUIF	Quistinic	1.71	240	eP	Pn	10 59 45.1	+2.2
QUIF	Quistinic	1.71	240	ePg	Pb	10 59 45.8	+0.8
QUIF				eSn	Sn	11 00 04.0	-0.2
	comp=E,19nm,0.2s						
MFF	Saint Martin d	2.26	166	ePn	Pn	10 59 50.7	+0.2
MFF	Saint Martin d	2.26	166	ePg	Pb	10 59 56.8	+2.4
MFF				eSg	Sb	11 00 26.2	+4.3
	comp=E,17nm,0.3s						
HYF	Humbligny	2.86	121	ePg	Pg	11 00 08.4	-0.7
TCF	Toulx Ste Croi	3.30	138	ePn	Pn	11 00 05.8	+0.9
TCF	Toulx Ste Croi	3.30	138	ePg	Pg	11 00 16.4	-1.1
TCF				eSg	Sg	11 00 58.5	-1.8
	comp=E,2.8nm,0.2s						
BGF	Bois d'Agland	3.41	130	eSg	Sg	11 01 01.8	-1.9
	comp=E,14nm,0.4s						
SSF	Saint Saulge	3.47	118	ePn	Pn	11 00 07.9	+0.7
SSF	Saint Saulge	3.47	118	ePg	Pg	11 00 20.4	-0.3
SSF				eSg	Sg	11 01 04.2	-1.4
	comp=E,3.0nm,0.2s						
AVF	Avril sur Loir	3.53	123	eP	Pn	11 00 11.8	+3.8
AVF	Avril sur Loir	3.53	123	ePg	Pg	11 00 21.2	-0.7
LOR	Lormes	3.58	113	ePn	Pn	11 00 09.5	+0.8
	baz=292						
LOR	Lormes	3.58	113	ePg	Pg	11 00 21.4	-1.4
	baz=293						
LOR				eSg	Sg	11 01 07.2	-1.9
	comp=E,4.6nm,0.3s						
BAIF	Baives	3.61	67	eSg	Sg	11 01 09.1	-0.9
	comp=E,3.3nm,0.2s						
RJF	Les Rejaudoux	3.88	153	eSn	Sn	11 00 54.8	-3.0
RJF				eSg	Sg	11 01 16.3	-2.5
	comp=E,7.0nm,0.3s						
SMF	Signal de Mont	3.89	122	ePn	Pn	11 00 13.8	+0.8
SMF	Signal de Mont	3.89	122	ePg	Pg	11 00 28.2	-0.6
SMF				eSg	Sg	11 01 16.9	-2.2
	comp=E,2.9nm,0.3s						
LFF	La Frestale	4.03	162	eSg	Sg	11 01 20.1	-3.4
	comp=E,12nm,0.4s						
CAF	Calviac	4.39	151	eSn	Sn	11 01 07.0	-3.5
CAF				eSg	Sg	11 01 32.6	-2.5
	comp=E,4.2nm,0.3s						
HAU	Haudompre	4.94	96	eSg	Sg	11 01 50.0	-2.6
	comp=E,4.0nm,0.2s						
LASF	Ste Croix	5.78	143	eSn	Sn	11 01 39.1	-5.4
	comp=E,1.3nm,0.2s						

EAF ***18*** *11:05:01.9±3.2, 21°.69S×25°.88E, h10^{km}, MD3.5*
BUL 18 11:05:03.4±0.9**, 21°.81S×26°.09E, h10^{km}, MD3.7,**
Botswana

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATP	Matopo	2.64	59	eP	Pn	11 05 45.8	-0.4
MATP				eS	Sn	11 06 17.1	-1.3
MATP	Matopo	2.64	59	eP	Pn	11 05 45.8	-0.4
MATP				eS	Sn	11 06 17.1	-1.3
BLWY	Bulawayo	2.89	55	eP	Pn	11 05 48.6	-1.0
BLWY				eS	Sn	11 06 22.9	-1.6
BLWY	Bulawayo	2.89	55	eP	Pn	11 05 48.6	-1.0
BLWY				eS	Sn	11 06 22.9	-1.6
LBTB	Lobatse	3.22	188	eP	Pn	11 05 54.3	+0.2
LBTB				eS	Sn	11 06 30.8	-1.8
LBTB	Lobatse	3.22	188	eP	Pn	11 05 54.3	+0.2
LBTB				eS	Sn	11 06 30.8	-1.8
MSNA	Messina	3.69	99	eP	Pn	11 06 00.4	-0.2
MSNA				eS	Sn	11 06 41.9	-2.2
MSNA	Messina	3.69	99	eP	Pn	11 06 00.4	-0.2
MSNA				eS	Sn	11 06 41.9	-2.2
MOPA	Mopani	5.19	110	eP	Pn	11 06 24.1	+2.9
MOPA				eS	Sn	11 07 24.7	+3.5
MOPA	Mopani	5.19	110	eP	Pn	11 06 24.1	+2.9
MOPA				eS	Sn	11 07 24.7	+3.5
KRI	Karoi	5.97	35	eP	Pn	11 06 28.7	-3.4
KRI				eS	Sn	11 07 30.4	-10
KRI	Karoi	5.97	35	eP	Pn	11 06 28.7	-3.4
KRI				eS	Sn	11 07 30.4	-10
BOSA	Boshof	6.81	186	eP	Pn	11 06 41.9	-1.6
BOSA				eS	Sn	11 07 55.0	-6.3
BOSA	Boshof	6.81	186	eP	Pn	11 06 41.9	-1.6
BOSA				eS	Sn	11 07 55.0	-6.3

WEL 18 11:05:29.5, 39°S±7°×**17°5E**±°**, h155^{km}**±12^{km}**, M2.5**/39**,**
mB4.8/1**, ML2.0**/10**, MLv2.5**/39**, Mw(mB)4.1**/1**, Error**
ellipse: s-maj=0.0km s-min=0.0km az=96.1, North
Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PKVZ	Pokaka	0.22	138	P	Pn	11 05 50.8	+0.4
TWVZ	Taurewa	0.22	76	P	Pn	11 05 50.6	+0.1
VRZ	Vera Road	0.31	270	P	Pn	11 05 50.4	-0.1
FWVZ	Far West T-bar	0.33	113	P	Pn	11 05 51.4	+0.4
WTVZ	West Tongariro	0.34	88	P	Pn	11 05 51.2	+0.4
NGZ	Ngauruhoe	0.35	98	P	Pn	11 05 51.3	+0.4
TRVZ	Turoa	0.35	120	P	Pn	11 05 51.6	+0.6
MTVZ	Mangateitei	0.35	137	P	Pn	11 05 51.4	+0.6
NNVZ	North Ngauruho	0.35	91	P	Pn	11 05 51.3	+0.4
WHVZ	Whangaehu Hut	0.37	115	P	Pn	11 05 51.6	+0.6
KRVZ	Karewarewa	0.38	85	P	Pn	11 05 51.3	+0.3
SNVZ	South Ngauruho	0.38	99	P	Pn	11 05 51.6	+0.5
OTVZ	Oturere	0.40	96	P	Pn	11 05 51.8	+0.7
WNVZ	Wahianoa	0.40	121	P	Pn	11 05 51.6	+0.5
NTVZ	North Tongarir	0.40	86	P	Pn	11 05 51.5	+0.4
TUVZ	Tukino	0.41	110	P	Pn	11 05 51.8	+0.7
TMVZ	Te Maari	0.42	89	P	Pn	11 05 51.8	+0.7
ETVZ	East Tongariro	0.43	92	P	Pn	11 05 51.9	+0.7
KATZ	Kakaramea	0.44	70	P	Pn	11 05 51.5	+0.3
MOVZ	Moawhango	0.54	122	P	Pn	11 05 51.8	+0.2

WATZ	Wairara	0.61	47	P	Pn	11 05 51.5	-0.5
WAZ	Wanganui	0.64	192	P	Pn	11 05 52.9	+0.8
HIZ	Hauiti	0.66	339	P	Pn	11 05 51.2	-1.1
LREZ	Lake Rotokare	0.68	240	P	Pn	11 05 52.7	+0.4
DREZ	Durham Road	0.75	265	P	Pn	11 05 47.5	-5.3
BHHZ	Black Hill Sta	0.79	118	P	Pn	11 05 53.3	+0.2
BHHZ				P	Pn	11 05 53.3	+0.2
PREZ	Palmer Road	0.81	254	P	Pn	11 05 53.3	0.0
KUTZ	Kaahu Road	0.82	39	P	Pn	11 05 52.8	-0.5
NEZ	North Egmont	0.84	260	P	Pn	11 05 53.4	-0.1
TLZ	Tolley Road	0.85	21	P	Pn	11 05 52.3	-1.2
KHEZ	Kahui Hut	0.91	259	P	Pn	11 05 53.8	-0.2
PKE	Pukeiti	0.91	265	P	Pn	11 05 53.8	-0.2
KWHZ	Kaweka Forest	1.02	107	P	Pn	11 05 55.6	+0.7
BKZ	Black Stump Fm	1.04	93	P	Pn	11 05 54.9	-0.2
KRHZ	Kereru	1.07	119	P	Pn	11 05 55.9	+0.6
OHWZ	Ohakea	1.08	174	P	Pn	11 05 56.5	+1.1
TSZ	Takapari Road	1.12	147	P	Pn	11 05 56.6	+0.9
PNHZ	Pukenui	1.13	135	P	Pn	11 05 56.4	+0.6
MCHZ	McNeill Hill	1.23	105	P	Pn	11 05 57.6	+0.9
NMHZ	Naumai	1.28	89	P	Pn	11 05 57.8	+0.5
MTHZ	Maungataniwha	1.34	79	P	Pn	11 05 56.9	-0.9
POWZ	Post Office Ro	1.35	160	P	Pn	11 05 58.0	+0.2
WPHZ	Waipukurau	1.36	134	P	Pn	11 05 58.4	+0.5
DVHZ	Dannevirke	1.41	147	P	Pn	11 05 58.6	+0.2
MUGZ	Murupara	1.42	63	P	Pn	11 05 56.8	-1.7
TOZ	Tahuroa Road	1.42	11	P	Pn	11 05 56.6	-1.9
KAHZ	Kahuranaki	1.49	117	P	Pn	11 05 59.8	+0.5
RTZ	Ruatahuna	1.51	71	P	Pn	11 05 58.3	-1.2
RAHZ	Arahi	1.52	83	P	Pn	11 05 59.4	-0.2
PRWZ	Pori Road	1.56	157	P	Pn	11 06 00.4	+0.4
MRZ	Mangatainoka R	1.57	168	P	Pn	11 05 60.0	-0.1
PXZ	Pawanui	1.60	125	P	Pn	11 06 00.6	+0.2
PRHZ	Porangahau	1.61	135	P	Pn	11 06 00.9	+0.4
ANWZ	Angora Road	1.67	143	P	Pn	11 06 01.6	+0.4
OGWZ	Otaki Gorge	1.69	180	P	Pn	11 06 01.4	+0.1
TIWZ	Tintock	1.74	162	P	Pn	11 06 01.8	-0.2
KIW	Kapiti Island	1.74	186	P	Pn	11 06 01.5	-0.4
URZ	Urewera	1.76	61	P	Pn	11 05 59.9	-2.2
BFZ	Birch Farm	1.77	152	P	Pn	11 06 02.1	-0.1
HOWZ	Holdsworth Sta	1.79	171	P	Pn	11 06 02.2	-0.3
DUWZ	D'Urville Isla	1.93	209	P	Pn	11 06 03.0	-1.0
CAW	Cannon Point	1.98	182	P	Pn	11 06 04.1	-0.5
MWZ	Matawai	2.02	68	P	Pn	11 06 03.1	-2.0
MTW	Mount Morrison	2.05	173	P	Pn	11 06 04.5	-0.8
TMWZ	Te Maipa	2.06	164	P	Pn	11 06 04.9	-0.6
RIGZ	Rimuhau	2.07	79	P	Pn	11 06 04.5	-1.3
PRGZ	Paritu Road	2.13	85	P	Pn	11 06 05.3	-1.2
MHGZ	Mahia Peninsul	2.14	92	P	Pn	11 06 05.7	-0.8
WEL	Wellington	2.18	188	P	Pn	11 06 06.0	-0.9
TCW	Tory Channel	2.19	198	P	Pn	11 06 06.2	-0.8
TKGZ	Te Karaka	2.21	73	P	Pn	11 06 05.8	-1.5
PAWZ	Paruwai Farm	2.26	175	P	Pn	11 06 06.9	-1.1
RUGZ	Raukumara Rang	2.29	60	P	Pn	11 06 05.1	-3.3
TRWZ	Traveller	2.31	170	P	Pn	11 06 07.5	-0.9
TWGZ	Tauwhareparae	2.40	68	P	Pn	11 06 07.8	-1.9
KUZ	Kuaotunu	2.42	11	P	Pn	11 06 06.9	-2.9
PLWZ	Palliser	2.44	178	P	Pn	11 06 08.7	-1.4
CNGZ	Carnagh Statio	2.47	76	P	Pn	11 06 08.9	-1.5
HAZ	Te Kaha	2.47	57	P	Pn	11 06 07.0	-3.4
TUWZ	Tuamarina	2.48	202	P	Pn	11 06 09.2	-1.3
NNZ	Nelson	2.49	213	P	Pn	11 06 08.7	-2.0
PKGZ	Pakihiroa	2.60	63	P	Pn	11 06 09.4	-2.7
QRZ	Quartz Range	2.64	229	P	Pn	11 06 09.6	-2.9
PUZ	Puketiti	2.65	68	P	Pn	11 06 09.9	-2.7
BSWZ	Blackbirch Sta	2.77	200	P	Pn	11 06 12.8	-1.2
WMGZ	Waiomatatini S	2.87	64	P	Pn	11 06 12.4	-3.0
THZ	Tophouse	3.15	212	P	Pn	11 06 16.4	-2.4
KHZ	Kahutara	3.51	200	P	Pn	11 06 21.5	-1.9
DSZ	Denniston Nort	3.66	223	P	Pn	11 06 21.7	-3.7
GVZ	Greta Valley S	4.16	202	P	Pn	11 06 29.0	-2.9
LTZ	Lake Taylor	4.26	210	P	Pn	11 06 30.0	-3.1
INZ	Inchbonnie	4.56	217	P	Pn	11 06 34.2	-2.9
OXZ	Oxford	4.81	208	P	Pn	11 06 35.6	-4.8
MHCZ	Mount Hutt	5.17	210	P	Pn	11 06 40.9	-4.2
TMZ	Timaru	6.10	209	P	Pn	11 06 53.3	-4.2

STR ***18*** *11:10:00.3±0.4, 42°N±4°×°±°, h0km, mb3.5/1, MLv3.3/17,*
preliminary
MRB ***18*** *11:10:00.6±0.3, 42°.33N×1°.95E, h6km±3km, ML3.0/21,*
Error ellipse: s-maj=0.9km s-min=0.8km az=189.0
LDG ***18*** *11:10:01.5±0.1, 42°.33N×1°.97E, h3km, Md3.3/3, Ml3.6/43,*
Error ellipse: s-maj=1.7km s-min=1.3km az=153.0
MDD ***18*** *11:10:01.1±0.2, 42°.33N×1°.96E, h2km±2km, mbLg3.2/39,*
Error ellipse: s-maj=1.6km s-min=1.5km az=110.0,
PRXIMO
MDD EMS: II INTENSIDAD MAXIMA.

ISC 18 11:09:59.4±0.8**, 42°.38N**±0°.01×**2°.00E**±0°.01**, h15**^{km}±6^{km}**,**
n182,σ1^{s}**73**/297**, 4C-2D, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CLLI	Llivia	0.10	349	P	Pb	11 10 03.9	+0.6
CLLI				S	Sb	11 10 06.4	+0.6
	4µm,0.2s						
CLLI	Llivia	0.10	349	⇑Pg	Pb	11 10 03.8	+0.6
	225nm,0.1s,SNR=18						
CLLI				Lg	Lg	11 10 06.1	
	6µm,0.2s,SNR=14						
CBRU	Bruguera	0.16	124	P	Pb	11 10 04.1	-0.1
CBRU				S	Sg	11 10 06.9	+0.5
	4µm,0.2s						
CBRU	Bruguera	0.16	124	P	Pb	11 10 04.0	-0.1
CBRU				S	Sb	11 10 07.2	-0.1
	2µm,0.2s						
ARBS	La Rabassa	0.34	282	P	Pb	11 10 07.1	-0.3
ARBS				S	Sb	11 10 12.2	-0.5
	2µm,0.4s						
PAND	Andorre	0.37	294	Pg	Pb	11 10 07.5	-0.3
PAND				Sg	Sg	11 10 12.3	+0.1
CORI	Orista	0.40	175	P	Pg	11 10 07.5	-0.1
CORI				S	Sg	11 10 12.6	-0.5
	1µm,0.2s						
CORI	Orista	0.40	175	P	Pg	11 10 07.4	-0.1
CORI				S	Sg	11 10 12.6	-0.5
	1µm,0.2s						
FILF	Fillols	0.45	66	P	Pg	11 10 08.5	-0.1
FILF				S	Sg	11 10 14.4	-0.3
	438nm,0.2s						
CBEU	Beuda	0.52	103	P	Pb	11 10 11.0	+0.7
CBEU				S	Sb	11 10 18.5	+1.1
	1µm,0.4s						
CBEU	Beuda	0.52	103	P	Pb	11 10 10.9	+0.7
CBEU				S	Sb	11 10 19.0	+1.5
	1µm,0.4s						
CORG	Organya	0.53	254	P	Pg	11 10 09.7	-0.2
CORG				S	Sg	11 10 16.7	-0.2
	279nm,0.3s						
CORG	Organya	0.53	254	P	Pg	11 10 09.7	-0.2
CORG				S	Sb	11 10 17.2	-0.6
	140nm,0.3s						
FNEB	Nbias	0.53	9	Pg	Pn	11 10 11.9	-0.7
FNEB				Sg	Sn	11 10 20.3	-1.0
FNEB	Nbias	0.53	9	P	Pn	11 10 11.8	-0.7
FNEB				S	Sb	11 10 19.7	+1.6
FNEB	Nbias	0.53	9	P	Pn	11 10 12.4	-0.1
FNEB				S	Sn	11 10 20.8	-0.5
EMIR	Miracle	0.58	218	Pg	Pg	11 10 10.5	-0.3
EMIR	Miracle	0.58	218	⇑Pg	Pg	11 10 10.5	-0.3
	42nm,0.2s,SNR=18						
EMIR				Lg	Lg	11 10 17.7	
	624nm,0.1s,SNR=15						
CEST	Esterri de Car	0.59	292	P	Pb	11 10 11.5	-0.1
CEST				S	Sb	11 10 19.5	-0.3
	474nm,0.3s						
CEST	Esterri de Car	0.59	292	P	Pb	11 10 11.4	-0.1
CEST				S	Sg	11 10 19.2	+0.1
	474nm,0.3s						
CSOR	Sort	0.64	270	P	Pg	11 10 12.0	0.0
CSOR				S	Sg	11 10 20.6	+0.1
	552nm,0.4s						
CSOR	Sort	0.64	270	Pg	Pb	11 10 12.3	-0.1
	10nm,0.1s,SNR=407						
CSOR				Lg	Lg	11 10 21.2	
	542nm,0.2s						
EJON	La Jonquera	0.66	83	Pg	Pn	11 10 13.7	-0.6
EJON				Lg	Lg	11 10 23.2	
EJON	La Jonquera	0.66	83	⇑Pg	Pn	11 10 13.6	-0.6
	1.9nm,0.1s,SNR=18						
EJON				Lg	Lg	11 10 23.2	
	134nm,0.1s						
SJAF	Saint Jean de	0.66	80	Pg	Pn	11 10 13.5	-0.7
SJAF	Saint Jean de	0.66	80	P	Pn	11 10 13.6	-0.7
SJAF				S	Sn	11 10 23.7	-0.7
	257nm,0.2s						
SJAF	Saint Jean de	0.66	80	Pg	Pn	11 10 13.7	-0.6
	2.8nm,0.1s,SNR=7.9						
SJAF				Lg	Lg	11 10 23.2	
	62nm,0.1s,SNR=7.9						
CFON	Fontmartina	0.69	152	P	Pb	11 10 13.2	-0.1
CFON				S	Sb	11 10 22.9	+0.3
	702nm,0.2s						
CFON	Fontmartina	0.69	152	⇓Pg	Pb	11 10 13.1	-0.1
	11nm,0.1s,SNR=18						
CFON				Lg	Lg	11 10 22.7	
	636nm,0.2s,SNR=20						
CCAS	Cassa de la Se	0.83	126	P	Pn	11 10 16.3	-0.3
CCAS				S	Sn	11 10 27.7	-0.9
	374nm,0.3s						
CCAS	Cassa de la Se	0.83	126	P	Pn	11 10 16.3	-0.3
CCAS				S	Sn	11 10 28.3	-0.2
	374nm,0.3s						
CPAL	Palau Saverder	0.86	94	P	Pn	11 10 17.1	+0.1
CPAL				S	Sn	11 10 29.9	+0.5
	375nm,0.3s						
CPAL	Palau Saverder	0.86	94	P	Pn	11 10 17.1	+0.1
CPAL				S	Sn	11 10 29.8	+0.5
	375nm,0.3s						
CTRE	Tremp	0.91	267	P	Pb	11 10 16.8	-0.2
CTRE				S	Sg	11 10 29.0	-0.1
	157nm,0.2s						
CTRE	Tremp	0.91	267	P	Pb	11 10 16.7	-0.2
CTRE				S	Sn	11 10 30.0	-0.7
	157nm,0.2s						
CARA	Val d'Aran	0.93	291	P	Pn	11 10 17.8	-0.3
CARA				S	Sn	11 10 30.5	-0.8
	612nm,0.2s						
MTLF	Montolieu	0.98	9	*e*Pn	Pn	11 10 20.3	+1.7
MTLF				*e*Sg	Sn	11 10 33.5	+1.3
	251nm,0.2s						
MTLF	Montolieu	0.98	9	Pg	Pn	11 10 20.1	+1.5
MTLF	Montolieu	0.98	9	Pn	Pn	11 10 20.3	+1.7
MTLF				Lg	Lg	11 10 33.5	
	126nm,0.2s						
CAVN	Les Avellanes	1.05	242	P	Pn	11 10 19.3	-0.3
CAVN				S	Sb	11 10 32.5	-0.4
	935nm,0.2s						
CAVN	Les Avellanes	1.05	242	P	Pg	11 10 19.5	-0.2
CAVN				S	Sb	11 10 32.5	-0.4
	468nm,0.2s						
EPOB	Poblet	1.23	214	S	Sb	11 10 37.7	-0.4
	428nm,0.3s						
EPOB	Poblet	1.23	214	⇑Pg	Pb	11 10 22.4	0.0
	1.3nm,0.0s,SNR=18						
EPOB				Lg	Lg	11 10 37.8	
	276nm,0.2s,SNR=7.9						
FMON	Montouss	1.35	301	S	Sg	11 10 43.2	0.0
	106nm,0.3s						
ECHI	Chisagues Biel	1.37	283	Pn	Pg	11 10 25.4	-0.4
ECHI	Chisagues Biel	1.37	283	P	Pg	11 10 25.4	-0.4
ECHI				S	Sg	11 10 43.7	+0.2
	180nm,0.2s						
ECHI	Chisagues Biel	1.37	283	Pn	Pg	11 10 25.5	-0.2
	3.0nm,0.1s,SNR=7.9						
ECHI				Pg	Pb	11 10 26.5	+1.7
	28nm,0.1s,SNR=7.9						
ECHI				Lg	Lg	11 10 44.3	
	179nm,0.2s,SNR=7.9						
EPF	Esparros	1.39	299	*e*Pn	Pg	11 10 25.7	-0.4
EPF	Esparros	1.39	299	*e*P	Pg	11 10 28.1	+2.0
EPF				*e*Sn	Sg	11 10 43.6	-0.6
	81nm,0.2s						
EPF				*e*Sg	Sb	11 10 46.2	+3.6
	276nm,0.2s						
EPF	Esparros	1.39	299	Pn	Pg	11 10 25.7	-0.4
EPF	Esparros	1.39	299	Pn	Pg	11 10 25.7	-0.4
EPF				Sn	Sg	11 10 43.6	-0.6
	41nm,0.2s						
EPF				Lg	Lg	11 10 46.2	
	138nm,0.2s						
VIEF	Viey	1.54	290	Pn	Pg	11 10 28.5	-0.6
VIEF				Sn	Sg	11 10 49.9	+0.7
ERTA	Horta de San J	1.89	222	⇓Pn	Pb	11 10 32.8	-0.8
	6.7nm,0.2s,SNR=18						
ERTA				Pg	Pg	11 10 35.5	-0.2
	41nm,0.4s,SNR=36						
ERTA				Sn	Sn	11 10 55.1	+0.4
	46nm,0.4s,SNR=7.9						
ERTA				Lg	Lg	11 10 58.7	
	170nm,0.2s,SNR=7.9						
ETSF	Etsaut	1.96	286	*e*Pg	Pg	11 10 38.2	+1.2
ETSF				*e*Sg	Sg	11 11 02.9	+0.4
	205nm,0.3s						
ETSF	Etsaut	1.96	286	Pg	Pg	11 10 38.2	+1.2
ETSF				Lg	Lg	11 11 02.9	
	102nm,0.3s						
MONQ	Montcuq	2.08	344	Pn	Pb	11 10 36.5	-0.2
ATE	Arette	2.11	291	Pn	Pg	11 10 39.1	-0.8
ATE				Pg	Pb	11 10 40.9	+3.5
ATE	Arette	2.11	291	Pg	Pg	11 10 39.1	-0.8
	4.0nm,0.8s,SNR=7.9						
ATE				Lg	Lg	11 11 08.4	
	146nm,0.2s,SNR=7.9						
LASF	Ste Croix	2.17	38	*e*Pn	Pb	11 10 37.2	-1.3
LASF	Ste Croix	2.17	38	*e*Pg	Pg	11 10 42.6	+1.5
LASF				*e*Sg	Sg	11 11 10.9	+1.6
	50nm,0.2s						
LASF	Ste Croix	2.17	38	Pn	Pb	11 10 37.2	-1.3
LASF				Pg	Pg	11 10 42.6	+1.5
LASF				Lg	Lg	11 11 10.9	
	25nm,0.2s						
TRBF	Trabuc cave	2.24	39	Pn	Pb	11 10 38.3	-1.3
SJPF	Ste Jean	2.49	288	*e*P	Pb	11 10 43.8	0.0
SJPF	Ste Jean	2.49	288	*e*Pg	Pg	11 10 48.6	+1.5
SJPF				*e*Sg	Sg	11 11 19.7	+0.4
	134nm,0.3s						
SJPF	Ste Jean	2.49	288	Lg	Lg	11 11 19.7	
	67nm,0.3s						
EORO	Oroz-Betelu	2.50	283	Pn	Pb	11 10 42.9	-1.1
	0.1nm,0.2s,SNR=9.5						
EORO				Pg	Pg	11 10 47.0	-0.2
	0.1nm,0.1s,SNR=20						
EORO				Lg	Lg	11 11 20.7	
	98nm,0.2s,SNR=5.0						
CAF	Calviac	2.55	1	*e*Pn	Pb	11 10 42.9	-1.9
CAF	Calviac	2.55	1	*e*Pg	Pg	11 10 49.5	+1.2
CAF				*e*Sg	Sg	11 11 22.4	+1.1
	124nm,0.3s						
CAF	Calviac	2.55	1	Pn	Pb	11 10 42.9	-1.9
CAF				Pg	Pg	11 10 49.5	+1.2
CAF				Lg	Lg	11 11 22.4	
	62nm,0.3s						
EARA	Aranguren	2.67	280	Pn	Pn	11 10 42.9	+1.0
	2.8nm,0.1s,SNR=5.4						
EARA				Lg	Lg	11 11 26.3	
	30nm,0.2s,SNR=7.9						
ETOS	Mallorca	2.68	166	Pn	Pn	11 10 42.9	+1.0
	0.7nm,0.0s,SNR=7.9						
ETOS				Sn	Sn	11 11 12.8	-1.3
	SNR=7.9						
ETOS				Lg	Lg	11 11 24.3	
	2.5nm,0.1s,SNR=7.9						
EALK	Alkurruntz	2.71	289	Pn	Pb	11 10 46.7	-1.0
EALK				Pg	Pg	11 10 52.8	+1.4
EALK	Alkurruntz	2.71	289	Pn	Pb	11 10 45.6	-2.1
	1.3nm,0.5s,SNR=7.9						
EALK				Pg	Pg	11 10 50.2	-1.3
	8.3nm,0.1s,SNR=7.9						
EALK				Sn	Sb	11 11 19.2	-1.6
	96nm,0.3s,SNR=7.9						
EALK				Lg	Lg	11 11 25.8	
	193nm,0.3s,SNR=7.9						
LFF	La Frestale	2.72	341	*e*Pn	Pb	11 10 45.2	-2.5
LFF	La Frestale	2.72	341	*e*Pg	Pg	11 10 52.0	+0.4
LFF				*e*Sg	Sg	11 11 27.6	+0.8
	257nm,0.4s						
LFF	La Frestale	2.72	341	Pn	Pb	11 10 45.2	-2.5
LFF				Pg	Pg	11 10 52.0	+0.4
LFF				Lg	Lg	11 11 27.6	
	129nm,0.4s						
EMOS	Mosqueruela	2.74	224	Pn	Pn	11 10 44.4	+1.5
	0.1nm,0.1s,SNR=7.9						
EMOS				Pg	Pg	11 10 50.6	-1.4
	1.6nm,0.2s,SNR=7.9						
EMOS				Sn	Sn	11 11 17.2	+1.4
	SNR=7.9						
EMOS				Lg	Lg	11 11 25.3	
	24nm,0.2s,SNR=7.9						
RJF	Les Rejaudoux	2.95	353	*e*Pn	Pn	11 10 48.4	+2.7
RJF	Les Rejaudoux	2.95	353	*e*Pg	Pg	11 10 56.8	+0.9
RJF				*e*Sg	Sg	11 11 35.0	+0.9
	83nm,0.3s						
RJF	Les Rejaudoux	2.95	353	Pn	Pn	11 10 48.4	+2.7
RJF				Pg	Pg	11 10 56.8	+0.9
RJF				Lg	Lg	11 11 35.0	
	42nm,0.3s						
RUSF	Rustrel	2.99	57	Pn	Pn	11 10 49.0	+2.7
MAHO	Mahon	3.01	145	P	Pn	11 10 47.4	+0.9
MAHO				S	Sn	11 11 20.6	-1.6
ARTF	Artigues	3.04	65	Pn	Pn	11 10 49.4	+2.4
SMRF	Simiane la Rot	3.06	57	*e*Pn	Pn	11 10 49.9	+2.6
SMRF	Simiane la Rot	3.06	57	*e*Pg	Pg	11 10 59.9	+1.8
SMRF				*e*Sn	Sn	11 11 25.2	+1.5
	11nm,0.3s						
SMRF	Simiane la Rot	3.06	57	Pn	Pn	11 10 49.9	+2.6
SMRF				Pg	Pg	11 10 59.9	+1.8
SMRF				Sn	Sn	11 11 25.2	+1.5
	11nm,0.3s						
VIVF	Saint-Julien-l	3.15	37	*e*Pn	Pn	11 10 50.9	+2.5
VIVF	Saint-Julien-l	3.15	37	*e*Pg	Pg	11 11 00.3	+0.6
VIVF				*e*Sg	Sg	11 11 41.2	+0.7
	26nm,0.2s						
VIVF	Saint-Julien-l	3.15	37	Pn	Pn	11 10 50.9	+2.5
VIVF				Pg	Pg	11 11 00.3	+0.6
MLYF	Mely	3.19	58	Pn	Pn	11 10 52.4	+3.3
BLAF	les Blancs	3.35	61	Pn	Pn	11 10 54.6	+3.4
EIBI	Ibiza	3.38	189	Pn	Pn	11 10 52.3	+0.7
	7.0nm,0.8s,SNR=7.9						
EIBI				Sn	Sn	11 11 30.3	-1.2
	2.7nm,0.2s,SNR=7.9						
ETOR	Torete	3.42	244	Pn	Pn	11 10 54.8	+2.6
	1.1nm,0.4s,SNR=24						
ETOR				Sn	Sn	11 11 32.5	+0.1
	16nm,0.2s,SNR=7.9						
ETOR				Lg	Lg	11 11 48.2	
	189nm,0.3s,SNR=8.1						
LMR	La Mourre	3.45	72	*e*Pn	Pn	11 10 54.9	+2.4
LMR				*e*Sn	Sn	11 11 34.0	+0.9
	25nm,0.3s						
LMR	La Mourre	3.45	72	Pn	Pn	11 10 54.9	+2.4
LMR				Sn	Sn	11 11 34.0	+0.9
	13nm,0.3s						
PYM	Petit Puy Mans	3.45	12	Pn	Pn	11 10 56.0	+3.4
ECHE	Chera	3.58	220	Pn	Pn	11 10 56.2	+1.9
	1.9nm,0.3s,SNR=7.9						
ECHE				Sn	Sn	11 11 32.9	-3.4
	0.6nm,0.2s,SNR=7.9						
ECHE				Lg	Lg	11 11 51.0	
	16nm,0.5s,SNR=7.9						
OGDI	Digne	3.59	60	Pn	Pn	11 10 57.7	+3.2
FRF	La Foret Royal	3.61	69	*e*Pn	Pn	11 10 57.0	+2.3
FRF				*e*Sn	Sn	11 11 38.4	+1.3
	18nm,0.2s						
FRF	La Foret Royal	3.61	69	Pn	Pn	11 10 57.0	+2.3
FRF				Sn	Sn	11 11 38.4	+1.3
	9.0nm,0.2s						
AGO	Saint Agoulin	3.77	12	Pn	Pn	11 10 59.9	+3.0
ORIF	Oris-en-Rattie	3.79	47	*e*Pn	Pn	11 11 00.4	+3.0
ORIF	Oris-en-Rattie	3.79	47	*e*P	Pb	11 11 02.7	-3.4
ORIF	Oris-en-Rattie	3.79	47	Pn	Pn	11 11 00.9	+3.6
ORIF	Oris-en-Rattie	3.79	47	Pn	Pn	11 11 00.4	+3.0
CALF	Calern	3.86	67	Pn	Pn	11 11 00.8	+2.5
TCF	Toulx Ste Croi	3.91	2	*e*Pn	Pn	11 11 01.3	+2.3
TCF	Toulx Ste Croi	3.91	2	*e*Pg	Pg	11 11 14.5	+0.1
TCF				*e*Sg	Sg	11 12 04.8	-0.3
	39nm,0.3s						
TCF	Toulx Ste Croi	3.91	2	Pn	Pn	11 11 01.3	+2.3
TCF				Pg	Pg	11 11 14.5	+0.1
MVIF	Mont Vial	4.07	66	Pn	Pn	11 11 03.7	+2.6
SURF	Saint Ours	4.09	57	Pn	Pn	11 11 05.3	+3.8
ELAN	Lanestosa	4.09	284	Pn	Pn	11 11 04.7	+3.3
	0.9nm,0.5s,SNR=7.9						
ELAN				Pg	Pg	11 11 17.0	-0.7
	4.5nm,0.5s,SNR=7.9						
ELAN				Sn	Sn	11 11 50.8	+1.8
	1.2nm,0.2s,SNR=4.5						
ELAN				Lg	Lg	11 12 09.2	
	17nm,0.4s,SNR=5.0						
ISO	Isola	4.11	62	Pn	Pn	11 11 04.8	+3.2
SPIF	crte de Spivo	4.18	65	Pn	Pn	11 11 05.5	+2.8
MBDF	Montbardon	4.19	54	*e*Pn	Pn	11 11 06.1	+3.3
MBDF				*e*Sn	Sn	11 11 51.9	+0.3
	18nm,0.6s						
MBDF	Montbardon	4.19	54	Pn	Pn	11 11 06.1	+3.3
MBDF				Sn	Sn	11 11 51.9	+0.3
	8.9nm,0.6s						
OGSM	Saint Maurice	4.19	38	Pn	Pn	11 11 06.0	+3.3
BGF	Bois d'Agland	4.22	8	*e*Pn	Pn	11 11 06.2	+3.0
BGF	Bois d'Agland	4.22	8	*e*Pg	Pg	11 11 20.5	+0.2
BGF				*e*Sg	Sg	11 12 14.7	-0.3
	162nm,0.4s						
BGF	Bois d'Agland	4.22	8	Pn	Pn	11 11 06.2	+3.0
BGF				Pg	Pg	11 11 20.5	+0.2
SBF	Sospel	4.25	68	*e*Pn	Pn	11 11 06.5	+2.9
SBF	Sospel	4.25	68	*e*P	Pn	11 11 08.7	+5.1
SBF				*e*Sn	Sn	11 11 53.3	+0.4
	23nm,0.3s						
SBF	Sospel	4.25	68	Pn	Pn	11 11 06.5	+2.9
SBF				Sn	Sn	11 11 53.3	+0.4
	12nm,0.3s						
TURF	col de Turini	4.25	66	Pn	Pn	11 11 06.5	+2.7
UCM	Universidad Co	4.46	244	P	Pb	11 11 19.1	+1.8
UCM				S	Sb	11 12 13.6	+2.8
SMF	Signal de Mont	4.47	17	*e*Pn	Pn	11 11 08.7	+2.2
SMF	Signal de Mont	4.47	17	*e*Pg	Pg	11 11 24.9	0.0
SMF				*e*Sn	Sn	11 11 59.3	+1.1
SMF				*e*Sg	Sg	11 12 22.1	-0.7
	29nm,0.4s						
SMF	Signal de Mont	4.47	17	Pn	Pn	11 11 08.7	+2.2
SMF				Pg	Pg	11 11 24.9	0.0
SMF				Sn	Sn	11 11 59.3	+1.1
MFF	Saint Martin d	4.50	341	*e*Pn	Pn	11 11 10.1	+3.2
MFF	Saint Martin d	4.50	341	*e*Pg	Pg	11 11 25.2	-0.3
MFF				*e*Sn	Sn	11 11 58.6	-0.3
MFF				*e*Sg	Sg	11 12 22.4	-1.3
	28nm,0.4s						
MFF	Saint Martin d	4.50	341	Pn	Pn	11 11 10.1	+3.2
MFF				Pg	Pg	11 11 25.2	-0.3
MFF				Sn	Sn	11 11 58.6	-0.3
AVF	Avril sur Loir	4.52	12	*e*Pn	Pn	11 11 10.0	+2.8
AVF	Avril sur Loir	4.52	12	*e*Pg	Pg	11 11 25.6	-0.3
AVF				*e*Sg	Sg	11 12 23.8	-0.6
	23nm,0.4s						
AVF	Avril sur Loir	4.52	12	Pn	Pn	11 11 10.0	+2.8
AVF				Pg	Pg	11 11 25.6	-0.3
ETOB	Tobarra	4.60	217	Pn	Pn	11 11 10.1	+1.6
	0.9nm,0.5s,SNR=7.9						
ETOB				Lg	Lg	11 12 26.7	
	6.2nm,0.4s,SNR=7.9						
LPL	La Plagne	4.64	46	*e*P	Pn	11 11 14.0	+4.9
SSF	Saint Saulge	4.81	12	*e*Pn	Pn	11 11 13.3	+2.1
SSF	Saint Saulge	4.81	12	*e*Pg	Pg	11 11 30.4	-1.0
SSF				*e*Sg	Sg	11 12 31.5	-2.1
	25nm,0.4s						
SSF	Saint Saulge	4.81	12	Pn	Pn	11 11 13.3	+2.1
SSF				Pg	Pg	11 11 30.4	-1.0
HYF	Humbligny	4.91	5	*e*Pg	Pg	11 11 33.2	-0.3
HYF				*e*Sg	Sg	11 12 35.5	-1.6
HYF	Humbligny	4.91	5	Pg	Pg	11 11 33.2	-0.3
LOR	Lormes	5.07	14	*e*Pg	Pg	11 11 35.7	-0.7
	baz=194						
LOR				*e*Sg	Sg	11 12 39.5	-2.5
	15nm,0.3s						
LOR	Lormes	5.07	14	Pg	Pg	11 11 35.7	-0.7
CABF	La Chapelle	5.14	33	*e*Pn	Pn	11 11 17.8	+1.9
CABF	La Chapelle	5.14	33	*e*Pg	Pg	11 11 37.0	-0.9
CABF				*e*Sg	Sg	11 12 43.9	-0.6
	20nm,0.6s						
CABF	La Chapelle	5.14	33	Pn	Pn	11 11 17.8	+1.9
CABF				Pg	Pg	11 11 37.0	-0.9
GIMEL	St. Georges /	5.16	35	Pn	Pn	11 11 19.5	+3.4
PGF	Pioggiola	5.18	86	*e*Pn	Pn	11 11 17.0	+0.6
PGF				*e*Sn	Sn	11 12 13.2	-2.8
	9.4nm,0.3s						
PGF	Pioggiola	5.18	86	Pn	Pn	11 11 17.0	+0.6
ESDC	Sonseca Array	5.26	241	Pn	Pn	11 11 17.4	0.0
	0.8nm,0.3s,baz=59,slow=14,SNR=9.2						
ESDC				Sn	Sn	11 12 14.5	-3.3
	baz=59,slow=24,SNR=7.9						
ESDC				Lg	Lg	11 12 42.4	

	baz=53,slow=30,SNR=7.9						
EARI	Arriondas	5.38	282	Pn	Pn	11 11 21.6	+2.5
	0.2nm,0.3s,SNR=7.9						
EARI				Sn	Sn	11 12 20.3	-0.6
	0.1nm,0.3s,SNR=7.6						
PAB	San Pablo	5.58	242	Pn	Pn	11 11 22.9	+1.1
	0.7nm,0.3s,SNR=7.9						
PAB				Sn	Sn	11 12 23.4	-2.2
	0.9nm,0.3s,SNR=7.9						
PAB				Lg	Lg	11 12 52.7	
	6.6nm,0.3s,SNR=7.9						
SFTF	Sexfontaines	6.21	19	ePn	Pn	11 11 31.6	+1.1
SFTF				eSg	Sg	11 13 17.7	-0.9
	12nm,0.4s						
GRR	Gorron	6.34	342	ePn	Pn	11 11 34.3	+2.1
GRR	Gorron	6.34	342	eP	Pn	11 11 39.0	+6.8
GRR	Gorron	6.34	342	ePg	Pg	11 11 59.1	-1.6
GRR				eSn	Sn	11 12 42.9	-1.4
GRR				eSg	Sg	11 13 20.8	-2.0
	8.0nm,0.3s						
LDF	La Druitiere	6.39	347	ePn	Pn	11 11 35.1	+2.1
LDF	La Druitiere	6.39	347	eP	Pn	11 11 39.3	+6.3
LDF	La Druitiere	6.39	347	ePg	Pg	11 12 01.1	-0.7
LDF				eSn	Sn	11 12 44.1	-1.5
LDF				eSg	Sg	11 13 22.5	-2.0
	20nm,0.5s						
HAU	Haudompre	6.41	27	ePg	Pg	11 12 00.5	-1.6
HAU				eSg	Sg	11 13 23.4	-1.7
	12nm,0.4s						
HINF	Hinteralfeld	6.43	31	ePn	Pn	11 11 34.9	+1.3
HINF	Hinteralfeld	6.43	31	ePg	Pg	11 12 01.4	-1.1
HINF				eSg	Sg	11 13 23.5	-2.2
	6.6nm,0.4s						
MEZF	Maizieres J'vi	6.49	18	ePn	Pn	11 11 36.0	+1.7
MEZF				eSg	Sg	11 13 24.1	-3.5
	32nm,0.5s						
ECAL	Calabor	6.51	269	Pn	Pn	11 11 36.2	+1.5
	0.1nm,0.4s,SNR=4.6						
ECAL				Sn	Sn	11 12 47.1	-1.5
	0.4nm,0.1s,SNR=7.9						
EPLA	Plasencia	6.51	252	Pn	Pn	11 11 35.5	+0.8
	0.3nm,0.4s,SNR=7.9						
EPLA				Sn	Sn	11 12 46.1	-2.6
	0.2nm,0.5s,SNR=7.9						
EADA	Adamuz	6.55	232	Pn	Pn	11 11 36.7	+1.5
	0.1nm,0.3s,SNR=7.9						
EADA				Sn	Sn	11 12 46.2	-3.5
	3.5nm,0.4s,SNR=5.0						
EADA				Lg	Lg	11 13 24.1	
	3.7nm,0.4s,SNR=7.9						
SAVF	Savonnieres en	6.61	18	eSg	Sg	11 13 28.5	-3.0
	13nm,0.6s						
FLN	La Foliniere	6.62	346	ePn	Pn	11 11 36.5	+0.4
	baz=166						
FLN	La Foliniere	6.62	346	eP	Pn	11 11 42.6	+6.5
FLN				eSn	Sn	11 12 49.1	-2.1
FLN				eSg	Sg	11 13 28.8	-2.9
	15nm,0.5s						
QUIF	Quistinic	6.63	328	ePn	Pn	11 11 39.2	+2.9
QUIF	Quistinic	6.63	328	eP	Pn	11 11 42.2	+5.9
QUIF				eSn	Sn	11 12 49.8	-1.7
	3.7nm,0.3s						
QUIF				eSg	Sg	11 13 29.1	-3.1
	11nm,0.5s						
SGMF	Saint Gilles	6.70	333	ePn	Pn	11 11 40.0	+2.9
SGMF	Saint Gilles	6.70	333	ePg	Pg	11 12 05.2	-2.4
SGMF				eSn	Sn	11 12 51.5	-1.6
SGMF				eSg	Sg	11 13 32.3	-1.9
	5.5nm,0.3s						
PAGF	Fort de Pagny	6.71	22	ePg	Pg	11 12 05.8	-2.0
PAGF				eSg	Sg	11 13 30.6	-4.0
	22nm,0.7s						
EPON	Pontenova	6.79	281	Pn	Pn	11 11 40.4	+2.0
	0.4nm,0.8s,SNR=7.9						
EPON				Sn	Sn	11 12 54.9	-0.6
	SNR=7.9						
MVO	Moncorvo	6.86	263	ePn	Pn	11 11 41.3	+1.9
MVO				eSn	Sn	11 12 56.8	-0.4
MVO				eSg	Sg	11 13 42.3	+2.9
MVO				A	A	11 13 48.7	
	6.8nm,0.6s						
ROSF	Rostrenen	7.02	330	ePn	Pn	11 11 43.8	+2.2
ROSF	Rostrenen	7.02	330	eP	Pn	11 11 48.1	+6.5
ROSF				eSn	Sn	11 12 59.1	-2.0
	5.0nm,0.2s						
ROSF				eSg	Sg	11 13 42.5	-2.1
CDF	Champ du Feu	7.09	30	eSg	Sg	11 13 42.0	-4.7
	7.6nm,0.6s						
ECAB	El Cabril	7.12	235	Pn	Pn	11 11 43.8	+0.9
	0.6nm,0.5s,SNR=7.9						
ECAB				Lg	Lg	11 13 43.0	
	5.0nm,0.5s,SNR=7.9						
POLO	Lamas de Olo	7.38	265	eSn	Sn	11 13 07.6	-2.5
POLO				A	A	11 14 17.8	
	1.8nm,0.5s						
MTE	Manteigas	7.44	258	eSg	Sg	11 13 54.0	-4.2
MTE				A	A	11 14 01.1	
	7.5nm,0.4s						

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*IDC **18** 11:20:40.9±1.4, 24°.84N×126°.74E, h0^{km}, mb3.9/4, mb1 3.9/5, mb1mx3.5/56, mbtmp3.8/5, ML2.8/1, MS3.4/6, Ms1 3.4/6, ms1mx2.7/49, Error ellipse: s-maj=41.5km s-min=26.1km az=76.0*

*JMA **18** 11:20:44.8±0.1, 24°.88N×126°.93E, h72^{km}±5^{km}, M3.3*

ISC 18 11:20:43.9±2.0**, 24°.72N**±0°.07×**127°.06E**±0°.04**, h37**^{km}±2^{km}**, n32,** $\sigma 0^{s}.82$/39**, mb3.6**/4**, MS3.7**/5**, Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOGS	Gusukube	1.50	272	P	Pn	11 21 08.9	+0.6
JOGS				eS	Sn	11 21 26.3	-0.3
JJT3	Tamagusuku3	1.57	25	P	Pn	11 21 09.9	+0.7
JJT3				eS	Sn	11 21 28.2	-0.1
JMJ2	Miyako jima3	1.57	271	P	Pn	11 21 09.7	+0.4
JMJ2				eS	Sn	11 21 28.4	+0.1
JKE	Kume jima 2	1.62	351	P	Pn	11 21 09.6	-0.4
JIKM	Ikemajima	1.66	278	P	Pn	11 21 10.6	+0.2
JIKM				S	Sn	11 21 29.9	-0.5
JIRB	Irabujima	1.71	274	P	Pn	11 21 11.4	+0.2
JIRB				eS	Sn	11 21 31.3	-0.6
JAGN	Aguni-jima	1.87	5	P	Pn	11 21 13.6	+0.2
JAGN				S	Sn	11 21 34.7	-1.1
JNTH	Nagotoyohara	2.00	26	P	Pn	11 21 15.6	+0.5
JNTH				eS	Sn	11 21 39.2	+0.3
JTJ	Tarama	2.14	269	P	Pn	11 21 17.5	+0.4
JTJ				eS	Sn	11 21 41.7	-0.7
JOW	Kunigami	2.38	27	Pn	Pn	11 21 21.3	+0.9
	3.6nm,0.3s,baz=202,slow=16,SNR=11						
JOW				Sn	Sn	11 21 47.4	-0.9
	16nm,0.3s,baz=244,slow=26,SNR=7.7						
JOW	Kunigami	2.38	27	P	Pn	11 21 21.2	+0.8
JIH	Iheya	2.45	19	P	Pn	11 21 21.9	+0.5
JIH				eS	Sn	11 21 49.9	-0.2
JISG	Ishigakijimahi	2.50	268	P	Pn	11 21 21.8	-0.2
JYRO	Yoronjima	2.62	28	P	Pn	11 21 25.5	+1.8
JIJ	Ishigaki jima	2.67	263	P	Pn	11 21 24.6	+0.1
JIJ				eS	Sn	11 21 54.2	-1.4
JKRS	Kuro-shima	2.82	261	P	Pn	11 21 27.1	+0.7
JOKE	Okinoerabujima	2.97	27	P	Pn	11 21 29.4	+0.9
IRIF	Iriomote-Funau	3.05	264	P	Pn	11 21 31.0	+1.4
JTK	Tokunoshima	3.50	29	P	Pn	11 21 36.4	+0.6
JTK				eS	Sn	11 22 15.2	-0.8
YOJ	Yonaguni jima	3.69	267	P	Pn	11 21 39.4	+1.0
JYNG	Yonagunijimaku	3.75	267	P	Pn	11 21 40.6	+1.4
JMZ	Minamidaito 2	3.93	73	P	Pn	11 21 42.2	+0.5
JMZ				eS	Sn	11 22 25.0	-1.5
JKDJ	Kitadaitoujima	4.03	71	P	Pn	11 21 43.5	+0.4
JKDJ				S	Sn	11 22 28.0	-1.0
JHJ	Hachijo jima 2	13.93	50	LR	LR	11 28 10.1	
	comp=Z,46nm,18.6s,baz=346,slow=32						
SONM	Songino Array	28.29	330	P	P	11 26 33.9	0.0
	0.4nm,0.4s,baz=152,slow=11,SNR=3.5						
SONM				LR	LR	11 38 14.8	
	comp=Z,19nm,18.8s,baz=170,slow=38						
MKAR	Makanchi Array	41.77	313	P	P	11 28 29.2	-0.6
	0.8nm,0.4s,baz=96,slow=9.8,SNR=14						
ZALV	Zalesovo Beam	42.83	324	LR	LR	11 47 58.4	
	comp=Z,21nm,18.1s,baz=162,slow=38						
WRA	Warramunga Arr	44.95	170	P	P	11 28 59.1	+3.6
	0.4nm,0.7s,baz=351,slow=9.2,SNR=6.0						
AAK	Ala-Archa	46.48	306	LR	LR	11 49 22.6	
	comp=Z,330nm,21.3s,baz=300,slow=37						
CTA	Charters Tower	48.30	156	LR	LR	11 49 08.9	
	comp=Z,82nm,21.8s,baz=180,slow=35						
FINES	FINESS Array B	73.65	331	P	P	11 32 15.2	+1.8
	1.3nm,0.8s,baz=74,slow=6.5,SNR=4.2						
RAR	Rarotonga	84.49	116	LR	LR	12 01 26.5	
	comp=Z,49nm,21.7s,baz=97,slow=29						

NOU 18 11:27:16.9, 17°.84S×167°.24E, h0^{km}, MLv5.1/7**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	0.91	83	P	Pg	11 27 34.4	0.0
RTV	Rentapao	1.13	88	P	Pg	11 27 38.3	-0.3
SANVU	Saraoutou	2.38	359	P	Pn	11 27 57.2	0.0

MDD 18 11:49:36.1±0.5**, 42°.32N×1°.97E, h0**^{km}**, mbLg1.2**/3**, Error ellipse: s-maj=4.5km s-min=3.2km az=89.0, PRXIMO, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLLI	Llivia	0.16	1	Pg	Pg	11 49 38.7	-0.5
	1.1nm,0.1s,SNR=7.9						
CLLI				Lg	Lg	11 49 41.2	
	13nm,0.1s,SNR=30						
EMIR	Miracle	0.52	219	Lg	Lg	11 49 52.9	
	2.4nm,0.1s,SNR=7.9						
CSOR	Sort	0.62	275	Pg	Pg	11 49 47.7	-0.3
	0.3nm,0.1s,SNR=7.9						
CSOR				Lg	Lg	11 49 55.9	
	0.8nm,0.1s,SNR=7.9						
CFON	Fontmartina	0.66	148	Pg	Pg	11 49 48.3	-0.4
	0.3nm,0.1s,SNR=7.9						
CFON				Lg	Lg	11 49 56.3	
	1.4nm,0.1s,SNR=7.9						
EJON	La Jonquera	0.69	79	Pg	Pg	11 49 48.9	-0.4
	0.4nm,0.1s,SNR=7.9						
EJON				Lg	Lg	11 49 58.4	
	0.5nm,0.1s,SNR=7.9						

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*STR **18** 11:49:38.7±0.4, 43°N±3°×°±°, h0^{km}, MLv2.3/5, preliminary*

*MRB **18** 11:49:38.8±0.4, 42°.88N×0°.29W, h0^{km}±3^{km}, ML2.5/22, Error ellipse: s-maj=2.5km s-min=1.1km az=196.0*

*MDD **18** 11:49:39.7±0.2, 42°.89N×0°.28W, h0^{km}, mbLg2.5/24, Error ellipse: s-maj=3.2km s-min=1.7km az=19.0, PRXIMO*

*LDG **18** 11:49:39.4±0.1, 42°.87N×0°.27W, h2^{km}, Md2.9/3, Ml3.0/8, Error ellipse: s-maj=1.8km s-min=1.4km az=22.0*

ISC 18 11:49:39.4±0.8**, 42°.90N**±0°.02×**0°.28W**±0°.01**, h13**^{km}±6^{km}**, n106,** $\sigma 1^{s}.52$/169**, 2C, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETSF	Etsaut	0.20	270	ePg	Pg	11 49 43.0	-1.0
ETSF				eSg	Sg	11 49 45.9	-1.2
	270nm,0.2s						
ETSF	Etsaut	0.20	270	Pg	Pg	11 49 43.0	-1.0
ETSF				Sg	Sg	11 49 45.9	-1.2
ETSF	Etsaut	0.20	270	Pg	Pg	11 49 43.0	-1.0
ETSF				Lg	Lg	11 49 45.9	
	135nm,0.2s						
VIEF	Viey	0.23	94	Pg	Pg	11 49 43.6	-0.7
VIEF				Sg	Sg	11 49 46.8	-0.9
PYLO	Lourdes	0.26	41	Pg	Pg	11 49 44.8	-0.1
PYLO				Sg	Sg	11 49 48.8	+0.1
ATE	Arette	0.36	301	Pg	Pg	11 49 46.2	-0.5
ATE				Sg	Sg	11 49 51.6	+0.1
ATE	Arette	0.36	301	P	Pg	11 49 46.2	-0.5
ATE				S	Sg	11 49 51.6	+0.1
	120nm,0.2s						
ATE	Arette	0.36	301	⇑Pg	Pg	11 49 46.2	-0.5
	17nm,0.2s,SNR=18						
ATE				Lg	Lg	11 49 51.4	
	97nm,0.1s,SNR=7.9						
ECHI	Chisagues Biel	0.42	124	Pg	Pg	11 49 46.8	-1.1
ECHI				Sg	Sg	11 49 52.0	-1.6
ECHI	Chisagues Biel	0.42	124	P	Pg	11 49 46.8	-1.1
ECHI	Chisagues Biel	0.42	124	⇑Pg	Pg	11 49 46.8	-1.1
	21nm,0.1s,SNR=18						
ECHI				Lg	Lg	11 49 52.0	
	245nm,0.1s,SNR=7.9						
EPF	Esparros	0.48	74	ePg	Pg	11 49 48.6	-0.2
EPF				eSg	Sg	11 49 55.7	+0.5
	122nm,0.2s						
EPF	Esparros	0.48	74	Pg	Pg	11 49 48.6	-0.2
EPF				Sg	Sg	11 49 55.7	+0.5
EPF	Esparros	0.48	74	Pg	Pg	11 49 48.6	-0.2
EPF				Lg	Lg	11 49 55.7	
	61nm,0.2s						
FMON	Montouss	0.54	72	P	Pg	11 49 49.7	-0.3
FMON				S	Sg	11 49 57.6	+0.4
	62nm,0.4s						
SJPF	Ste Jean	0.72	287	ePg	Pg	11 49 53.5	0.0
SJPF				eSg	Sg	11 50 02.7	-0.3
	66nm,0.2s						
SJPF	Ste Jean	0.72	287	Pg	Pg	11 49 53.5	0.0
SJPF	Ste Jean	0.72	287	Pg	Pg	11 49 53.5	0.0
SJPF				Lg	Lg	11 50 02.7	
	33nm,0.2s						
EORO	Oroz-Betelu	0.75	270	Pg	Pg	11 49 53.5	-0.6
EORO	Oroz-Betelu	0.75	270	Pg	Pg	11 49 53.5	-0.6
	3.7nm,0.2s,SNR=26						
EORO				Lg	Lg	11 50 04.4	
	22nm,0.2s,SNR=13						
CARA	Val d'Aran	0.83	103	P	Pg	11 49 55.0	-0.6
CARA				S	Sg	11 50 06.2	-0.3
	103nm,0.2s						
EALK	Alkurruntz	0.95	290	Pg	Pg	11 49 57.0	-0.8
EALK				Sg	Sg	11 50 10.9	+0.6
EALK	Alkurruntz	0.95	290	Pg	Pg	11 49 57.1	-0.8
	0.5nm,0.1s,SNR=12						
EALK				Lg	Lg	11 50 10.8	
	49nm,0.2s,SNR=15						
EARA	Aranguren	0.96	263	Pg	Pn	11 50 00.7	+2.0
	2.5nm,0.1s						
EARA				Lg	Lg	11 50 15.3	
	34nm,0.1s,SNR=7.9						
CTRE	Tremp	0.97	126	P	Pg	11 49 56.9	-1.3
CTRE				S	Sg	11 50 10.8	0.0
	55nm,0.2s						
CTRE	Tremp	0.97	126	P	Pg	11 49 56.9	-1.3
CTRE				S	Sg	11 50 10.8	0.0
	55nm,0.2s						
CSOR	Sort	1.17	116	P	Pg	11 50 00.8	-1.2
CSOR				S	Sb	11 50 17.4	+0.7
	96nm,0.2s						
CSOR	Sort	1.17	116	Pn	Pg	11 50 00.8	-1.2
	2.6nm,0.1s,SNR=6.8						
CSOR				Pg	Pn	11 50 03.7	+2.1
	1.7nm,0.1s,SNR=41						
CSOR				Sn	Sg	11 50 17.0	-0.2
	31nm,0.3s,SNR=12						
CSOR				Lg	Lg	11 50 21.0	
	60nm,0.1s,SNR=31						
CEST	Esterri de Car	1.17	104	P	Pg	11 50 01.2	-0.8
CEST				S	Sg	11 50 17.2	-0.1
	44nm,0.2s						
CEST	Esterri de Car	1.17	104	P	Pg	11 50 01.2	-0.8
CEST				S	Sg	11 50 17.1	-0.1
	44nm,0.2s						
CAVN	Les Avellanes	1.27	143	P	Pg	11 50 02.8	-1.1
CAVN	Les Avellanes	1.27	143	P	Pg	11 50 02.8	-1.1
CORG	Organya	1.36	119	P	Pg	11 50 04.4	-1.1
CORG				S	Sg	11 50 22.6	-0.7
	21nm,0.2s						
CORG	Organya	1.36	119	P	Pg	11 50 04.4	-1.1
CORG				S	Sg	11 50 22.5	-0.7
	10nm,0.2s						
ARBS	La Rabassa	1.43	108	P	Pg	11 50 04.9	-1.9
ARBS				S	Sg	11 50 24.6	-0.8
	70nm,0.3s						
EMIR	Miracle	1.66	126	Pg	Pg	11 50 11.3	-0.1
	4.9nm,0.3s,SNR=7.2						
EMIR				Lg	Lg	11 50 32.2	
	26nm,0.1s,SNR=5.0						
CLLI	Llivia	1.72	103	P	Pn	11 50 10.1	+0.9
CLLI				S	Sn	11 50 32.3	+1.2
	15nm,0.2s						
CLLI	Llivia	1.72	103	Pn	Pn	11 50 09.2	0.0
	0.9nm,0.1s,SNR=7.9						
CLLI				Pg	Pg	11 50 12.8	+0.4
	1.2nm,0.1s,SNR=9.3						
CLLI				Lg	Lg	11 50 35.0	
	8.2nm,0.1s,SNR=5.0						
EPOB	Poblet	1.85	146	P	Pn	11 50 11.8	+0.8
EPOB				S	Sn	11 50 36.2	+1.9
	22nm,0.3s						
EPOB	Poblet	1.85	146	Pg	Pb	11 50 13.1	0.0
	1.1nm,0.1s,SNR=12						
EPOB				Lg	Lg	11 50 36.6	
	24nm,0.2s,SNR=5.0						
MTLF	Montolieu	1.88	76	ePn	Pn	11 50 11.7	+0.3
MTLF	Montolieu	1.88	76	eP	Pn	11 50 13.8	+2.4
MTLF				eSn	Sn	11 50 34.9	-0.1
	29nm,0.2s						
MTLF				eSg	Sg	11 50 39.7	-0.3
MTLF	Montolieu	1.88	76	Pn	Pn	11 50 11.7	+0.3
MTLF				Sn	Sn	11 50 34.9	-0.1
	15nm,0.2s						
MTLF				Lg	Lg	11 50 39.7	
CORI	Orista	1.96	117	P	Pn	11 50 13.2	+0.8
CORI				S	Sn	11 50 38.7	+1.8
	32nm,0.2s						
CORI	Orista	1.96	117	P	Pn	11 50 13.9	+1.5
CORI				S	Sn	11 50 38.7	+1.8
	32nm,0.2s						
ERTA	Horta de San J	2.00	166	Pg	Pb	11 50 16.0	+0.3
	1.4nm,0.3s,SNR=32						
ERTA				Lg	Lg	11 50 41.0	
	16nm,0.2s,SNR=8.0						
LFF	La Frestale	2.17	20	ePn	Pn	11 50 15.9	+0.6
LFF	La Frestale	2.17	20	ePg	Pb	11 50 20.1	+1.5
LFF				eSg	Sg	11 50 49.7	+0.6
	33nm,0.4s						
LFF	La Frestale	2.17	20	Pn	Pn	11 50 15.9	+0.6
LFF				Pg	Pb	11 50 20.1	+1.5
LFF				Lg	Lg	11 50 49.7	
	16nm,0.4s						
CMAS	Mas de Barbera	2.22	168	P	Pn	11 50 16.4	+0.4
CMAS	Mas de Barbera	2.22	168	P	Pn	11 50 16.3	+0.4
CFON	Fontmartina	2.31	119	P	Pn	11 50 17.7	+0.4
CFON	Fontmartina	2.31	119	Pn	Pn	11 50 18.8	+1.4
	8.8nm,0.5s,SNR=8.9						
CFON				Pg	Pb	11 50 21.3	+0.2
	0.9nm,0.2s,SNR=9.9						
CFON				Lg	Lg	11 50 51.5	
	73nm,0.3s,SNR=8.5						
ELAN	Lanestosa	2.33	279	Pn	Pn	11 50 19.7	+2.1
	0.6nm,0.2s,SNR=4.5						
ELAN				Pg	Pb	11 50 23.2	+1.8
	0.9nm,0.3s,SNR=5.6						
ELAN				Sn	Sn	11 50 46.0	-0.1
	2.8nm,0.3s,SNR=5.0						
ELAN				Lg	Lg	11 50 51.1	
	4.8nm,0.2s,SNR=7.9						
SJAF	Saint Jean de	2.37	99	Pg	Pb	11 50 23.4	+1.4
	1.6nm,0.3s,SNR=7.9						
SJAF				Lg	Lg	11 50 55.1	
	20nm,0.3s,SNR=7.9						
EJON	La Jonquera	2.38	100	Pg	Pg	11 50 24.2	-0.9
	0.6nm,0.3s,SNR=7.9						
EJON				Lg	Lg	11 50 55.3	
	13nm,0.2s,SNR=8.8						
ETOR	Torete	2.46	213	Pn	Pn	11 50 20.6	+1.1
	6.2nm,0.3s,SNR=18						
ETOR				Sn	Sn	11 50 49.4	-0.1
	15nm,0.4s,SNR=7.1						
ETOR				Lg	Lg	11 50 58.9	
	26nm,0.2s,SNR=5.6						
EMOS	Mosqueruela	2.54	183	P	Pn	11 50 20.6	0.0
EMOS	Mosqueruela	2.54	183	Pn	Pn	11 50 21.6	+1.1
	6.1nm,0.4s,SNR=9.6						
EMOS				Sn	Sn	11 50 52.1	+0.6
	0.5nm,0.1s,SNR=4.0						
EMOS				Lg	Lg	11 50 57.5	
	7.3nm,0.2s,SNR=6.2						
CCAS	Cassa de la Se	2.57	112	P	Pn	11 50 21.5	+0.7
CCAS	Cassa de la Se	2.57	112	P	Pn	11 50 22.1	+1.3
CPAL	Palau Saverder	2.61	102	P	Pn	11 50 22.3	+0.9
CPAL	Palau Saverder	2.61	102	P	Pn	11 50 23.3	+1.9
CAF	Calviac	2.64	39	ePn	Pn	11 50 21.4	-0.4
CAF	Calviac	2.64	39	ePg	Pb	11 50 28.3	+1.7
CAF				eSn	Sn	11 50 52.6	-1.2
	8.3nm,0.2s						
CAF	Calviac	2.64	39	Pn	Pn	11 50 21.4	-0.4
CAF				Pg	Pb	11 50 28.3	+1.7
RJF	Les Rejaudoux	2.73	28	ePn	Pn	11 50 23.2	+0.2
RJF	Les Rejaudoux	2.73	28	Pn	Pn	11 50 23.2	+0.2
RJF				Pg	Pb	11 50 30.3	+2.1
RJF				Sn	Sn	11 50 55.5	-0.4
	5.4nm,0.2s						
LASF	Ste Croix	3.23	67	ePn	Pn	11 50 30.1	+0.1
LASF				eSn	Sn	11 51 07.1	-1.3
	8.9nm,0.3s						
LASF				eSg	Sb	11 51 20.2	+4.2
LASF	Ste Croix	3.23	67	Pn	Pn	11 50 30.1	+0.1
LASF				Sn	Sn	11 51 07.1	-1.3
	4.4nm,0.3s						
ECHE	Chera	3.35	189	Pn	Pn	11 50 31.9	+0.3
	0.5nm,0.2s,SNR=7.9						
ECHE				Pg	Pg	11 50 41.8	-1.7
	2.5nm,0.5s,SNR=7.9						
ECHE				Lg	Lg	11 51 23.2	
	1.4nm,0.2s,SNR=7.9						
EARI	Arriondas	3.63	278	Pn	Pn	11 50 36.8	+1.4
	0.4nm,0.2s,SNR=7.9						
EARI				Sn	Sn	11 51 19.2	+1.1
	5.8nm,0.7s,SNR=7.9						
MFF	Saint Martin d	3.70	1	ePn	Pn	11 50 35.5	-0.9
MFF	Saint Martin d	3.70	1	ePg	Pb	11 50 47.9	+3.2
MFF				eSg	Sg	11 51 36.2	-2.1
	3.2nm,0.3s						
MFF	Saint Martin d	3.70	1	Pn	Pn	11 50 35.5	-0.9
MFF				Pg	Pb	11 50 47.9	+3.2
TCF	Toulx Ste Croi	3.83	27	ePn	Pn	11 50 38.5	+0.4
TCF	Toulx Ste Croi	3.83	27	ePg	Pb	11 50 50.3	+3.5
TCF				eSn	Sn	11 51 21.3	-1.7
TCF				eSg	Sg	11 51 40.7	-1.6
ETOS	Mallorca	3.90	142	Pn	Pn	11 50 38.6	-0.6
	0.1nm,0.1s,SNR=7.9						
ETOS				Sn	Sn	11 51 22.8	-2.0
	11nm,1.1s,SNR=7.9						
EIBI	Ibiza	4.06	162	Sn	Sn	11 51 25.1	-3.6
	1.7nm,1.2s,SNR=7.9						
VIVF	Saint-Julien-l	4.08	60	eP	Pn	11 50 44.7	+3.1
VIVF	Saint-Julien-l	4.08	60	ePg	Pg	11 50 55.3	-2.3
VIVF				eSn	Sn	11 51 26.1	-3.2
VIVF				eSg	Sg	11 51 47.3	-3.1
	3.5nm,0.4s						
VIVF	Saint-Julien-l	4.08	60	Pg	Pg	11 50 55.3	-2.3
ESDC	Sonseca Array	4.25	222	Pn	Pn	11 50 43.8	-0.2
	2.9nm,0.3s,baz=42,slow=13,SNR=9.1						
ESDC				Sn	Sn	11 51 30.3	-3.2
	1.5nm,0.3s,baz=44,slow=24,SNR=4.1						
ESDC				Lg	Lg	11 51 55.8	
	1.0nm,0.2s,baz=46,slow=29,SNR=3.9						
BGF	Bois d'Agland	4.28	30	ePn	Pn	11 50 45.0	+0.7
BGF				eSn	Sn	11 51 33.2	-1.0
BGF				eSg	Sg	11 51 53.4	-3.5
BGF	Bois d'Agland	4.28	30	Pn	Pn	11 50 45.0	+0.7
BGF				Sn	Sn	11 51 33.2	-1.0
PAB	San Pablo	4.54	224	Sn	Sn	11 51 38.5	-2.2
	0.3nm,0.6s,SNR=7.9						
PAB				Lg	Lg	11 51 59.7	
	0.7nm,0.2s,SNR=4.0						
AVF	Avril sur Loir	4.67	32	ePn	Pn	11 50 47.8	-1.8
SMF	Signal de Mont	4.76	37	ePn	Pn	11 50 52.4	+1.5
SMF	Signal de Mont	4.76	37	Pn	Pn	11 50 52.4	+1.5
ECAL	Calabor	4.87	261	Pn	Pn	11 50 53.4	+0.9
	0.7nm,0.1s,SNR=5.6						
SSF	Saint Saulge	4.95	32	ePn	Pn	11 50 52.3	-1.2
SSF	Saint Saulge	4.95	32	Pn	Pn	11 50 52.3	-1.2
EPON	Pontenova	5.04	277	Pn	Pn	11 50 56.2	+1.4
	1.1nm,0.2s,SNR=7.9						
EPON				Sn	Sn	11 51 52.7	-0.2
	0.8nm,0.2s,SNR=7.9						
EPLA	Plasencia	5.20	239	Pn	Pn	11 50 57.6	+0.7
	0.5nm,0.1s,SNR=7.9						
QUIF	Quistinic	5.41	339	ePn	Pn	11 51 01.1	+1.3
QUIF	Quistinic	5.41	339	ePg	Pg	11 51 20.7	-2.3
QUIF				eSn	Sn	11 51 57.6	-4.3
QUIF	Quistinic	5.41	339	Pn	Pn	11 51 01.1	+1.3
GRR	Gorron	5.50	356	eSn	Sn	11 52 00.2	-4.0
GRR	Gorron	5.50	356	Sn	Sn	11 52 00.2	-4.0
SGMF	Saint Gilles	5.59	344	ePn	Pn	11 51 01.9	-0.3
SGMF	Saint Gilles	5.59	344	Pn	Pn	11 51 01.9	-0.3
LDF	La Druitiere	5.70	1	ePn	Pn	11 51 02.7	-1.0

LDF				eSn	Sn	11 52 04.9	-4.0
EADA	Adamuz	5.75	216	Pn	Pn	11 51 04.9	+0.4
	0.2nm,0.1s,SNR=7.9						
ROSF	Rostrenen	5.83	340	ePn	Pn	11 51 04.6	-0.9
ROSF				eSn	Sn	11 52 08.0	-4.2
ELOB	Lobios	5.85	262	Pn	Pn	11 51 06.2	+0.2
	0.3nm,0.1s,SNR=7.9						
ELOB				Sn	Sn	11 52 10.6	-2.4
	0.9nm,0.2s,SNR=7.9						
ECAB	El Cabril	6.21	221	Pn	Pn	11 51 10.6	-0.2
	0.4nm,0.2s,SNR=7.9						

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*NEIC **18** 12:08:39.9±1.2, 36°.13N±0°.01×97°.67W±0°.05, h3^{km}±8^{km}, Error ellipse: s-maj=6.4km s-min=0.8km az=77.0*

*IDC **18** 12:08:39.3±1.0, 36°.27N×97°.87W, h0^{km}, mb1 3.7/5, mb1mx3.4/85, mbtmp3.4/5, ML3.4/5, Error ellipse: s-maj=13.4km s-min=11.2km az=132.0*

*ANF **18** 12:08:40.5±0.3, 36°.10N×97°.63W, h5^{km}, ML4.7/17, Error ellipse: s-maj=3.5km s-min=2.9km az=0.0*

*TUL **18** 12:08:40±1.2, 36°.12N±0°.02×97°.64W±0°.05, h5^{km}±7^{km}, ML4.0, mb_Lg3.8/103(NEIC), Mwr3.4/32(NEIC), Error ellipse: s-maj=6.3km s-min=2.3km az=68.0*

*NEIC **18** 12:08:40, 36°.12N×97°.64W, h4^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M$_{rr}$-0.19; M$_{\theta\theta}$1.15; M$_{\phi\phi}$-0.96; M$_{r\theta}$-0.54; M$_{\theta\phi}$1.00; M$_{\phi r}$0.36; Fault plane solution: M$_0$1.60000×10^{14} NP1:ϕ_s204.65000°, δ65.89000°, λ-172.83000°. NP2:ϕ_s111.71000°, δ83.46000°, λ-24.28000°. Principal axes: T 1.6264, Plg12.0000°, Azm160.0000°; N -0.0615, Plg65.0000°, Azm278.0000°; P -1.5648, Plg22.0000°, Azm66.0000°;*

ISC 18 12:08:39.7±1.0, **36°.13N**±0°.02×**97°.69W**±0°.02, **h10**^{km}±8^{km}, **n187**, σ1^s.**47**/193, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK029	Liberty Lake	0.38	150	Pg	Pg	12 08 47.3	0.0
OK029				Sg	Sg	12 08 52.4	+0.1
CROK	Carrier	0.45	328	Pg	Pg	12 08 49.5	+1.0
CROK				Sg	Sb	12 08 56.2	-0.1
BCOK	Bluff Creek, N	0.47	172	Pg	Pg	12 08 49.2	+0.3
BCOK				Sg	Sg	12 08 55.8	+0.6
OK009	Oakdale Elemen	0.59	158		Pg	12 08 51.2	+0.1
OK005	Luther M Schoo	0.62	139		Pg	12 08 51.6	-0.1
OK005				Sg	Sg	12 08 59.9	0.0
OK031	S. Brethren Rd	0.71	104		Pg	12 08 53.1	-0.4
OK031				Sg	Sg	12 09 02.3	-0.5
GC02	Grant County #	0.73	349	Pg	Pg	12 08 54.5	+0.6
OKCFA	Oklahoma City	0.74	165		Pg	12 08 53.9	0.0
OKCFA	Oklahoma City	0.74	165	P	Pg	12 08 53.9	0.0
	baz=348						
BLOK	Blackwell	0.74	31		Pg	12 08 54.1	+0.2
OKCSW	OKLAHOMA CITY	0.75	164		Pg	12 08 54.2	+0.1
OK030	Cody Creek RV	0.76	105		Pg	12 08 54.0	-0.4
OK030				Sg	Sg	12 09 03.9	-0.5
OK032	Salt Plains WL	0.80	328		Pg	12 08 55.7	+0.7
QUOK	Quay	0.80	87	Pg	Pg	12 08 54.6	-0.4
KAN14	Manchester OK	0.86	345		Pg	12 08 56.6	+0.4
FNO	Franklin	0.90	165	Pg	Pg	12 08 56.8	-0.2
KAN17	Caldwell West	0.92	356		Pg	12 08 57.7	+0.3
KAN05	Bluff City Nor	0.99	352		Pg	12 08 59.1	+0.3
KAN09	Caldwell North	1.01	3		Pg	12 08 59.2	+0.1
KAN01	Argonia South	1.02	357		Pg	12 08 59.6	+0.2
KAN10	Anthony SW Sta	1.05	342		Pg	12 08 59.9	+0.1
U32A	Winter Ranch,	1.09	284		Pg	12 09 01.2	+0.5
U32A	Winter Ranch,	1.09	284	P	Pb	12 09 01.4	+0.8
	baz=102,SNR=204						
U32A				S	Sb	12 09 16.7	+1.9
	baz=102						
KS20	Mayfield South	1.10	6		Pg	12 09 01.0	+0.1
KAN08	Anthony NE Sta	1.12	348		Pg	12 09 01.4	+0.2
KAN06	Argonia West S	1.13	353		Pg	12 09 01.5	+0.1
KAN16	Harper SW Stat	1.14	345		Pg	12 09 01.5	0.0
KAN12	Harper NE Stat	1.19	348		Pg	12 09 02.7	0.0
T35A	Sooner Cattle	1.23	50	Pg	Pg	12 09 02.8	-0.6
T35B	Sooner Cattle	1.23	50	P	Pg	12 09 02.7	-0.7
	baz=229,SNR=589						
T35B				S	Sg	12 09 19.1	-0.3
	baz=229						
X34A	Smith Ranch, M	1.53	184		Pb	12 09 08.6	+0.5
TUL1	Leonard	1.55	97	P	Pn	12 09 07.4	+0.1
	baz=279,SNR=102						
TUL1				S	Sn	12 09 28.2	+0.6
	baz=279						
TUL1	Leonard	1.55	97	Pn	Pn	12 09 07.3	0.0
TUL1				IAmb_Lg		12 09 30.4	
	comp=Z,505nm,1.0s						
TUL1	Leonard	1.55	97	P	Pn	12 09 07.3	0.0
	baz=279,SNR=267						
TUL1				S	Sn	12 09 28.0	+0.5
	baz=279						
WMOK	Wichita Mounta	1.65	213	P	Pn	12 09 09.8	+1.0
	baz=34,SNR=106						
WMOK				S	Sb	12 09 32.3	+1.4
	baz=34						
WMOK	Wichita Mounta	1.65	213	Pn	Pn	12 09 09.7	+1.0
WMOK	Wichita Mounta	1.65	213	P	Pn	12 09 09.7	+1.0
	baz=34,SNR=465						
WMOK				S	Sb	12 09 32.2	+1.2
	baz=34						
LOOK	Love County	2.17	169		Pn	12 09 17.4	+1.6
LOOK				IAmb_Lg		12 09 53.3	
	comp=Z,288nm,0.8s						
R32A	Long Quarter,	2.43	341		Pn	12 09 20.9	+1.4
R32A	Long Quarter,	2.43	341	P	Pn	12 09 20.9	+1.4
	baz=159						
X37A	Clayton	2.44	128		Pn	12 09 20.8	+1.2
X37A				IAmb_Lg		12 10 01.4	
	comp=Z,529nm,0.8s						
X37A	Clayton	2.44	128	P	Pn	12 09 20.7	+1.2
	baz=310,SNR=234						
U38A	Gravette	2.69	82	Pn	Pn	12 09 23.7	+0.7
U38A	Gravette	2.69	82	P	Pn	12 09 23.7	+0.7
	baz=264,SNR=91						
Z35A	Perchaven, San	2.81	173		Pn	12 09 25.4	+0.7
Z35A	Perchaven, San	2.81	173	P	Pn	12 09 26.3	+1.6
	baz=354,SNR=31						
HHAR	Hobbs	3.04	86		Pn	12 09 28.3	+0.6
KSU1	Kansas State U	3.09	16	P	Pn	12 09 30.1	+1.6
	baz=196,SNR=15						
KSU1	Kansas State U	3.09	16		Pn	12 09 29.8	+1.3
CBKS	Cedar Bluff	3.14	329	Pn	Pn	12 09 31.4	+2.2
	baz=148,SNR=36						
CBKS				Pb	Pb	12 09 38.0	+2.5
	baz=148						
CBKS	Cedar Bluff	3.14	329	Pn	Pn	12 09 31.4	+2.2
CBKS	Cedar Bluff	3.14	329	P	Pn	12 09 31.4	+2.2
	baz=148						
W39A	Magazine	3.31	105	P	Pn	12 09 32.5	+0.9
	baz=288,SNR=12						
W39A	Magazine	3.31	105		Pn	12 09 32.4	+0.9
W39A				IAmb_Lg		12 10 32.5	
	comp=Z,348nm,0.9s						
W39A	Magazine	3.31	105	P	Pn	12 09 32.2	+0.7
	baz=288,SNR=45						
AMTX	Amarillo	3.48	250	P	Pn	12 09 36.4	+2.4
	baz=68						
AMTX	Amarillo	3.48	250	Pn	Pn	12 09 36.2	+2.2
Z38A	Mt. Pleasant	3.63	141	Pn	Pn	12 09 36.7	+0.9
Z38A				IAmb_Lg		12 10 43.1	
	comp=Z,231nm,0.8s						
MIAR	Mount Ida	3.71	114	P	Pn	12 09 38.3	+1.3
	baz=297,SNR=20						
MIAR				S	Sn	12 10 21.9	+1.1
	baz=297						
MIAR	Mount Ida	3.71	114	Pn	Pn	12 09 38.3	+1.3
MIAR				IAmb_Lg		12 10 44.4	
	comp=Z,210nm,0.8s						
MIAR	Mount Ida	3.71	114	P	Pn	12 09 38.4	+1.3
	baz=297,SNR=125						
MIAR				S	Sn	12 10 22.4	+1.6
	baz=297						
S39A	Bolivar	3.83	65	IAmb_Lg		12 10 39.9	
	comp=Z,149nm,0.7s						
S39A	Bolivar	3.83	65	P	Pn	12 09 39.6	+0.9
	baz=247,SNR=70						
ABTX	Abilene, Hawle	3.85	205	P	Pn	12 09 40.5	+1.6
	baz=25,SNR=19						
ABTX	Abilene, Hawle	3.85	205		Pn	12 09 40.0	+1.1
ABTX				IAmb_Lg		12 10 41.7	
	comp=Z,115nm,0.9s						
U40A	Yellville	3.92	85	P	Pn	12 09 40.4	+0.5
	baz=268,SNR=22						
U40A	Yellville	3.92	85		Pn	12 09 39.9	+0.1
WHTX	Lake Whitney,	4.13	177	P	Pn	12 09 44.2	+1.4
	baz=358,SNR=10						
WHTX				Sb	Sb	12 10 46.5	+4.1
	baz=358						
WHTX	Lake Whitney,	4.13	177	Pn	Pn	12 09 43.8	+1.1
WHTX	Lake Whitney,	4.13	177	P	Pn	12 09 44.2	+1.4
	baz=358,SNR=17						
X40A	Basin Creek Fa	4.29	111	P	Pn	12 09 46.4	+1.3
	baz=294						
X40A				Sb	Sg	12 10 53.1	-4.5
	baz=294						
X40A	Basin Creek Fa	4.29	111		Pn	12 09 45.5	+0.5
X40A				IAmb_Lg		12 10 57.9	
	comp=Z,232nm,0.8s						
X40A	Basin Creek Fa	4.29	111	P	Pn	12 09 46.3	+1.3
	baz=294,SNR=32						
X40A				P	Pn	12 09 46.3	+1.3
	baz=294,SNR=32						
237A	Washetta, Mont	4.40	159		Pn	12 09 46.1	-0.4
237A	Washetta, Mont	4.40	159	P	Pn	12 09 47.1	+0.6
	baz=340,SNR=14						
WHAR	Wooly Hollow	4.47	99	Pn	Pn	12 09 48.2	+0.7
WHAR				IAmb_Lg		12 11 06.3	
	comp=Z,187nm,0.9s						
MGMO	Mountain Grove	4.48	75		Pn	12 09 48.6	+1.0
MGMO				IAmb_Lg		12 11 00.5	
	comp=Z,142nm,1.0s						
WLAR	White Oak Lake	4.48	122	Pn	Pn	12 09 47.6	0.0
WLAR				IAmb_Lg		12 11 07.7	
	comp=Z,137nm,0.8s						
FCAR	Ozark Folk Cen	4.52	91		Pn	12 09 47.5	-0.6
FCAR				IAmb_Lg		12 11 04.3	
	comp=Z,141nm,0.7s						
W41B	Gary Mavity, V	4.53	101	P	Pn	12 09 48.8	+0.4
	baz=284						
W41B				Sb	Sb	12 10 58.7	+4.7
	baz=284						
W41B	Gary Mavity, V	4.53	101	P	Pn	12 09 48.7	+0.4
	baz=284,SNR=29						
N33A	J Bar K, Exete	4.61	2		Pn	12 09 50.0	+0.6
N33A				IAmb_Lg		12 11 19.3	
	comp=Z,142nm,0.7s						
MSTX	Muleshoe	4.69	244	P	Pn	12 09 52.3	+1.7
	baz=61,SNR=10.0						
MSTX	Muleshoe	4.69	244	Pn	Pn	12 09 51.7	+1.1
P38A	Dawn	4.80	42		Pn	12 09 52.0	0.0
P38A				IAmb_Lg		12 11 21.0	
	comp=Z,105nm,0.7s						
R40A	Maddies Statio	4.84	62	Pn	Pn	12 09 52.8	+0.4
R40A	Maddies Statio	4.84	62	P	Pn	12 09 53.1	+0.7
	baz=245,SNR=36						
KSCO	Kaye Shedlock'	4.87	308	P	Pn	12 09 56.2	+3.2
	baz=125						
KSCO	Kaye Shedlock'	4.87	308	Pn	Pn	12 09 54.0	+1.0
Z41A	Richland Creek	4.94	124	P	Pn	12 09 55.8	+1.9
	baz=307						
Z41A				S	Sn	12 10 50.0	-1.0
	baz=307						
N35A	Tabor	4.99	18		Pn	12 09 55.6	+1.0
NATX	Nacogdoches	5.03	149		Pn	12 09 57.3	+2.1
BGNE	Belgrade	5.29	356	P	Pn	12 09 59.2	+0.6
	baz=176,SNR=9.9						
BGNE	Belgrade	5.29	356		Pn	12 09 59.6	+0.9
BGNE				IAmb_Lg		12 11 32.6	
	comp=Z,138nm,0.7s						
BGNE	Belgrade	5.29	356	P	Pn	12 09 59.4	+0.7
	baz=176,SNR=9.6						
LCAR	Lake Charles	5.29	89		Pn	12 09 58.8	+0.1
LCAR				IAmb_Lg		12 11 28.9	
	comp=Z,114nm,0.8s						
435B	Jarrell	5.33	179	P	Pn	12 10 00.2	+0.9
	baz=360						
435B	Jarrell	5.33	179		Pn	12 10 00.2	+0.9
435B				IAmb_Lg		12 11 39.1	
	comp=Z,158nm,0.8s						
CCAR	Cane Creek	5.33	113	Pn	Pn	12 09 58.2	-1.1
T42A	Van Buren	5.38	78		Pn	12 10 01.6	+1.6
T42A	Van Buren	5.38	78	P	Pn	12 10 00.2	+0.2
	baz=262,SNR=16						
T25A	Trinidad	5.50	283	Sb	Sg	12 11 30.7	-5.6
	baz=98						
T25A	Trinidad	5.50	283		Pn	12 10 03.5	+1.7
T25A				IAmb_Lg		12 11 38.2	
	comp=Z,168nm,0.8s						
CCM	Cathedral Cave	5.50	68	P	Pn	12 10 02.6	+1.0
	baz=251						
CCM	Cathedral Cave	5.50	68	Pn	Pn	12 10 01.6	0.0
CCM				IAmb_Lg		12 11 42.0	
	comp=Z,79nm,0.8s						
P40A	Paris	5.61	51		Pn	12 10 03.1	0.0
N38A	Joes South For	5.82	36		Pn	12 10 06.8	+0.8
N38A				IAmb_Lg		12 12 00.2	
	comp=Z,164nm,0.7s						
PBMO	Poplar Bluff	5.89	82		Pn	12 10 07.2	+0.3
OGNE	Ogallala	5.89	326	P	Pn	12 10 09.4	+2.4
	baz=143						
OGNE				S	Sn	12 11 17.1	+2.4
	baz=143						
OGNE	Ogallala	5.89	326	Pn	Pn	12 10 09.1	+2.1
OGNE				IAmb_Lg		12 11 56.0	
	comp=Z,140nm,0.8s						
JCT	Junction City	5.90	198	P	Pn	12 10 08.4	+1.2
	baz=17						
JCT				Sb	Sg	12 11 43.5	-5.8
	baz=17						
JCT	Junction City	5.90	198	Pn	Pn	12 10 08.1	+0.9
L34A	Svendsen Farm,	5.92	10		Pn	12 10 09.2	+1.8
FVM	French Village	6.10	70		Pn	12 10 09.0	-0.9
FVM				IAmb_Lg		12 11 53.9	
	comp=Z,100nm,0.8s						
FVM	French Village	6.10	70	P	Pn	12 10 10.4	+0.6
	baz=254,SNR=10						
143A	Socs Landing,	6.22	122	IAmb_Lg		12 12 07.3	
	comp=Z,122nm,0.8s						
PARMO	Parma	6.42	83	IAmb_Lg		12 12 04.2	
	comp=Z,159nm,0.8s						
SDCO	Great Sand Dun	6.46	287	P	Pn	12 10 18.0	+2.9
	baz=102						
SDCO	Great Sand Dun	6.46	287		Pn	12 10 16.6	+1.5
SDCO				IAmb_Lg		12 12 12.4	
	comp=Z,81nm,1.0s						
K31A	O'Neill	6.54	353		Pn	12 10 16.9	+1.0
SCIA	State Center	6.74	30	S	Sn	12 11 37.2	+1.8
	baz=212						
SCIA	State Center	6.74	30		Pn	12 10 18.7	+0.1
HALT	Halls	6.77	89	IAmb_Lg		12 12 15.1	
	comp=Z,163nm,0.8s						
S44A	Carbondale	6.94	74		Pn	12 10 20.5	-0.8
S44A				IAmb_Lg		12 12 19.3	
	comp=Z,108nm,0.8s						
SIUC	Southern Illin	6.97	74		Pn	12 10 21.8	0.0
SIUC				IAmb_Lg		12 12 20.2	
	comp=Z,152nm,0.9s						
W45A	Hickory Valley	6.99	95	IAmb_Lg		12 12 28.0	
	comp=Z,170nm,0.7s						
N41A	Harden Midland	7.05	48		Pn	12 10 22.6	-0.2
N41A				IAmb_Lg		12 12 28.8	
	comp=Z,132nm,0.8s						
Y45A	Yeager Farm, C	7.06	106	IAmb_Lg		12 12 42.6	
	comp=Z,142nm,1.1s						
VBMS	Vicksburg	7.11	121	IAmb_Lg		12 12 36.6	
	comp=Z,56nm,0.9s						
ANMO	Albuquerque	7.24	263	Pn	Pn	12 10 23.9	-1.9
	comp=Z,0.1nm,0.3s,baz=41,slow=9.6,SNR=2.2						
ANMO				Pg	Pb	12 10 48.3	+2.7
	comp=Z,0.5nm,0.3s,baz=76,slow=18,SNR=6.3						
ANMO				Lg	Lg	12 12 24.5	
	comp=Z,2.5nm,0.3s,baz=75,slow=12,SNR=3.8						
ISCO	Idaho Springs	7.25	303		Pn	12 10 23.6	-2.3
ISCO				IAmb_Lg		12 12 43.8	
	comp=Z,64nm,0.9s						
T45A	Paducah	7.33	80	IAmb_Lg		12 12 33.1	
	comp=Z,156nm,0.8s						
P43A	Skaggs, Pawnee	7.35	59	Pn	Pn	12 10 27.3	+0.3
P43A				IAmb_Lg		12 12 49.5	
	comp=Z,94nm,0.8s						
P43A	Skaggs, Pawnee	7.35	59	P	Pn	12 10 27.3	+0.3
	baz=244,SNR=10						
Q44A	Meyer Farm, Va	7.43	66	Pn	Pn	12 10 29.1	+1.1
Q44A				IAmb_Lg		12 12 38.0	
	comp=Z,102nm,0.9s						
ECSD	EROS Data Cent	7.64	6	P	Pn	12 10 30.5	-0.5
	baz=186,SNR=6.1						
ECSD				S	Sn	12 11 56.0	-1.6
	baz=186						
ECSD	EROS Data Cent	7.64	6	Pn	Pn	12 10 30.6	-0.5
ECSD	EROS Data Cent	7.64	6	P	Pn	12 10 30.5	-0.5
	baz=186,SNR=6.6						
MNTX	Cornudas Mount	7.77	238	P	Pn	12 10 35.1	+2.3
	baz=53						
MNTX	Cornudas Mount	7.77	238	Pn	Pn	12 10 34.1	+1.3
L40A	Anamosa	7.77	38		Pn	12 10 34.2	+1.5
L40A				IAmb_Lg		12 12 48.7	
	comp=Z,114nm,0.8s						
Y22D	IRIS PASSCAL I	7.84	258	IAmb_Lg		12 13 08.0	
	comp=Z,112nm,0.9s						
146A	Union	7.94	114	IAmb_Lg		12 13 10.3	
	comp=Z,53nm,0.7s						
HDIL	Hopedale	7.94	54	Pn	Pn	12 10 36.8	+1.7
WVT	Waverly	7.98	87	Pn	Pn	12 10 33.8	-1.8
WVT				IAmb_Lg		12 12 55.1	
	comp=Z,45nm,0.8s						
OLIL	Olney	8.06	68	IAmb_Lg		12 13 06.9	
	comp=Z,71nm,0.9s						
O44A	Mansfield	8.30	58	IAmb_Lg		12 13 07.2	
	comp=Z,66nm,0.7s						
SUSD	Miller	8.36	354	S	Sn	12 12 12.2	-3.1
	baz=173						
SUSD	Miller	8.36	354	Pn	Pn	12 10 40.9	0.0
SUSD				IAmb_Lg		12 13 16.5	
	comp=Z,81nm,0.8s						
TX31	Lajitas Ar. Si	8.44	218		Pn	12 10 42.7	+0.6
TX32	Lajitas Array	8.44	218	Pn	Pn	12 10 42.5	+0.5
TXAR	Lajitas Array	8.44	218	Pn	Pn	12 10 42.0	-0.1
	comp=Z,0.3nm,0.3s,baz=38,slow=11,SNR=26						
TXAR				Lg	Lg	12 13 01.0	
	comp=Z,2.0nm,0.3s,baz=37,slow=32,SNR=2.6						
TXAR	Lajitas Array	8.44	218		Pn	12 10 42.8	+0.7
I37A	Lemond, Waseca	8.54	21	IAmb_Lg		12 13 20.2	
	comp=Z,73nm,0.7s						
T47A	Sharon Grove	8.56	81	Pn	Pn	12 10 44.2	+0.6
L42A	Oliver, Polo	8.56	44	Pn	Pn	12 10 43.9	+0.3
L42A				IAmb_Lg		12 13 15.6	
	comp=Z,81nm,0.8s						
JFWS	Jewell Farm	8.88	38	P	Pn	12 10 49.7	+1.7
	baz=222						
JFWS				S	Sn	12 12 23.4	-4.8
	baz=222						
JFWS	Jewell Farm	8.88	38	Pn	Pn	12 10 48.2	+0.1
JFWS				IAmb_Lg		12 13 29.4	
	comp=Z,88nm,0.8s						
M44A	Midewin, Midew	9.18	52	IAmb_Lg		12 13 29.9	
	comp=Z,112nm,1.3s						
WCI	Wyandotte Cave	9.33	74	P	Pn	12 10 55.6	+1.4
	baz=260						
RSSD	Black Hills	9.34	331	P	Pn	12 10 56.7	+2.2
	baz=146						
RSSD	Black Hills	9.34	331	Pn	Pn	12 10 55.9	+1.3
SFIN	Lafayette	9.35	60	Pn	Pn	12 10 53.9	-0.5
K22A	Casper	9.44	316	IAmb_Lg		12 14 03.3	
	comp=Z,75nm,1.0s						
I40A	Norwalk	9.46	33		Pn	12 10 55.6	-0.4
I40A				IAmb_Lg		12 13 56.1	
	comp=Z,63nm,0.9s						
HQIL	Hanson Quary C	9.52	51	IAmb_Lg		12 13 34.7	
	comp=Z,93nm,1.1s						
F33A	5 Mile Ranch,	9.76	6		Pn	12 11 00.2	+0.2
K43A	Burlington	9.77	45	IAmb_Lg		12 13 58.5	
	comp=Z,100nm,0.9s						
SPMN	Marine on St.	9.81	21	Pn	Pn	12 11 00.3	-0.5
SPMN				IAmb_Lg		12 14 04.5	
	comp=Z,49nm,0.9s						
I42A	Draeger Farm,	10.26	38	Pn	Pn	12 11 07.3	+0.4
G40A	Rib Lake	10.75	30	Pn	Pn	12 11 13.6	-0.1
V51A	Loudon	10.82	88	Pn	Pn	12 11 14.6	0.0
O49A	Covington	11.27	65	Pn	Pn	12 11 20.4	-0.3
TKL	Tuckaleechee C	11.30	88	Pn	Pn	12 11 23.5	+2.4
	comp=Z,0.2nm,0.3s,baz=233,slow=5.1,SNR=1.5						
TKL				Lg	Lg	12 14 30.9	
	comp=Z,1.9nm,0.3s,baz=247,slow=13,SNR=7.9						
PD31	Pinedale Array	11.31	309	Pn	Pn	12 11 21.9	+0.4
PDAR	Pinedale Array	11.31	309	Pn	Pn	12 11 20.6	-1.0
	comp=Z,0.2nm,0.3s,baz=118,slow=15,SNR=7.9						
PDAR				Lg	Lg	12 14 26.7	
	comp=Z,0.4nm,0.3s,baz=120,slow=34,SNR=1.6						
PDAR	Pinedale Array	11.31	309	Pn	Pn	12 11 22.1	+0.6
S51A	Beattyville	11.39	78	Pn	Pn	12 11 21.6	-0.8
Q51A	Peebles	11.74	71	Pn	Pn	12 11 26.6	-0.6
L48A	N Adams	11.83	57	Pn	Pn	12 11 27.4	-1.0
COWI	Conover	11.86	30	Pn	Pn	12 11 28.9	+0.1
AGMN	Agassiz Nation	12.24	6	Pn	Pn	12 11 32.1	-1.8
B35A	Bob, Littlefor	12.57	12	Pn	Pn	12 11 36.1	-2.4
EYMN	Ely	12.67	19	Pn	Pn	12 11 37.1	-2.7
E43A	Lone Tree Farm	13.01	35	Pn	Pn	12 11 42.5	-1.9
ULM	Lac du Bonnet	14.18	5	Pn	Pn	12 11 54.3	-6.1
	comp=Z,0.3nm,0.3s,baz=194,slow=12,SNR=1.1						
ULM				Sn	Sn	12 14 24.2	-13
	comp=Z,0.2nm,0.3s,baz=160,slow=15,SNR=1.2						
ULM				Lg	Lg	12 15 52.2	
	comp=Z,0.4nm,0.3s,baz=219,slow=7.1,SNR=2.1						
SADO	Sadowa	16.52	53	Lg	Lg	12 17 10.4	
	comp=Z,0.3nm,0.3s,baz=274,slow=14,SNR=1.2						

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*NAO **18** 12:11:19.9±1.2, 67°.60N×33°.85E, ML2.8*

*HEL **18** 12:11:20.1±0.3, 67°.66N×33°.78E, h0^{km}, ML2.2, Explosion*

*IDC **18** 12:11:21.7±2.0, 67°.78N×33°.57E, h0^{km}, mb1 3.6/5, mb1mx3.2/88, mbtmp3.6/5, ML2.7/5, Error ellipse: s-maj=22.3km s-min=9.8km az=76.0*

ISC 18 12:11:18.6±1.7, **67°.67N**±0°.04×**33°.91E**±0°.09, **h0**^{km}, **n35**, σ1^s.**29**/58, **Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APZ9	Apatity	0.22	244	Pg	Pg	12 11 23.3	+0.5
APZ9				Lg	Lg	12 11 27.4	
APZ9	Apatity	0.22	244	Pg	Pg	12 11 23.3	+0.5
APZ9				Sg	Sg	12 11 27.4	+1.8
APA0	Apatity Array	0.36	261	Pg	Pg	12 11 25.6	+0.2
	baz=90,slow=16						
APA0				Lg	Lg	12 11 30.1	
	baz=90,slow=37						
APA0				Rg	Rg	12 11 31.2	
	baz=78,slow=37						
APA0	Apatity Array	0.36	261	Pg	Pg	12 11 25.6	+0.2
	baz=90,slow=16						
APA0				Sg	Sg	12 11 30.1	0.0
	baz=90,slow=37						
VRF	Varrio	1.64	275	PG	Pn	12 11 48.8	0.0
VRF				MSG		12 12 07.8	
	comp=Z,26nm,0.2s						
VRF				SG	Sn	12 12 09.4	-1.2
KU6	Riekki	2.29	226	PB	Pn	12 11 59.1	+1.5
	baz=41						
KU6				MSG		12 12 26.7	
	comp=Z,10nm,0.2s						
KU6				SG	Sb	12 12 29.4	-0.1
MSF	Maaselka	2.61	230	PB	Pn	12 12 04.2	+2.1
MSF				SG	Sb	12 12 40.0	+1.1
SGF	Sodankyl	2.84	269	PN	Pn	12 12 06.1	+0.9
SGF				SG	Sb	12 12 44.6	-0.8
RNF	Rovaniemi	3.26	255	PN	Pn	12 12 11.9	+0.9
	baz=71						
KEV	Kevo	3.28	313	Pn	Pn	12 12 12.9	+1.7
KEV				Sn	Sn	12 12 51.4	+0.6
KEV				Lg	Lg	12 12 58.4	
KEV	Kevo	3.28	313	eP	Pn	12 12 13.0	+1.8
KEV				eS	Sn	12 12 50.8	0.0
KEV	Kevo	3.28	313	PN	Pn	12 12 12.9	+1.7
	baz=123						
KEV				SN	Sn	12 12 51.4	+0.6
ARA0	ARCESS Array S	3.61	305	Pn	Pn	12 12 16.5	+0.8
	baz=122,slow=16						
ARA0				Pg	Pb	12 12 25.2	+2.0
	baz=117,slow=16						
ARA0				Sn	Sn	12 12 58.5	-0.5
	baz=121,slow=28						
ARA0				Lg	Lg	12 13 09.1	
	baz=110,slow=37						
ARA0	ARCESS Array S	3.61	305	Pn	Pn	12 12 16.5	+0.8
	baz=122,slow=16						
ARA0				Pg	Pb	12 12 25.2	+2.0
	baz=117,slow=16						
ARA0				Sn	Sn	12 12 58.5	-0.5
	baz=121,slow=28						
ARA0				IAML		12 13 10.4	
	comp=Z,11nm,0.5s						
ARCES	ARCESS Array B	3.61	305	Pn	Pn	12 12 16.6	+0.9
	baz=121,slow=15,SNR=12						

ARCES				Pg	**Pb**	**12 12 22.0**	**-1.2**
	baz=114,slow=14,SNR=20						
ARCES				Sn	**Sn**	**12 12 57.7**	**-1.3**
	baz=115,slow=26,SNR=11						
ARCES				Lg	Lg	12 13 08.1	
	baz=112,slow=28,SNR=12						
KLF	**Kolari**	**3.86**	**268**	PN	**Pn**	**12 12 20.0**	**+0.9**
	baz=84						
KLF				SG	**Sb**	**12 13 16.8**	**+2.1**
HEF	**Hetta**	**3.92**	**286**	Pn	**Pn**	**12 12 20.4**	**+0.4**
HEF				Sn	**Sn**	**12 13 05.2**	**-1.6**
HEF				Lg	Lg	12 13 18.3	
HEF	**Hetta**	**3.92**	**286**	*e*P	**Pn**	**12 12 20.6**	**+0.5**
HEF				*e*S	**Sn**	**12 13 05.0**	**-1.7**
HEF	**Hetta**	**3.92**	**286**	PN	**Pn**	**12 12 20.3**	**+0.2**
	baz=99						
TOF	**Tornio**	**4.10**	**252**	PG	**Pb**	**12 12 31.3**	**-0.3**
OUL	**Oulu**	**4.14**	**235**	PB	**Pb**	**12 12 29.4**	**-2.8**
	baz=44						
PAJU	**Pajala**	**4.23**	**266**	PN	**Pn**	**12 12 24.4**	**+0.1**
PAJU				SN	**Sn**	**12 13 13.7**	**-0.5**
LANU	**Lannavaara**	**4.53**	**280**	PN	**Pn**	**12 12 28.7**	**+0.3**
KALU	**Kalix**	**4.56**	**251**	PG	**Pb**	**12 12 41.4**	**+2.1**
	baz=60						
HAMF	**Hammerfest**	**4.72**	**314**	*e*P	**Pn**	**12 12 30.9**	**0.0**
HAMF				*e*S	**Sn**	**12 13 24.9**	**-1.4**
KIF	**Kilpisjarvi**	**5.04**	**291**	Pn	**Pn**	**12 12 35.9**	**+0.6**
KIF				Sn	**Sn**	**12 13 31.7**	**-2.5**
KIF	**Kilpisjarvi**	**5.04**	**291**	*e*P	**Pn**	**12 12 35.7**	**+0.4**
KIF				*e*S	**Sn**	**12 13 32.0**	**-2.2**
FIA0	**FINESS Array S**	**7.09**	**212**	Pn	**Pn**	**12 13 03.9**	**+0.4**
	baz=27,slow=18						
FIA0	**FINESS Array S**	**7.09**	**212**	Pn	**Pn**	**12 13 03.9**	**+0.4**
	baz=27,slow=18						
FINES	**FINESS Array B**	**7.09**	**212**	Pn	**Pn**	**12 13 03.7**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=29,slow=18,SNR=4.5						
FINES				Sn	**Sn**	**12 14 24.1**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=26,slow=23,SNR=1.5						
FINES				Lg	Lg	12 14 56.0	
	comp=Z,0.5nm,0.3s,baz=32,slow=27,SNR=11						
HFS	**Hagfors**	**11.62**	**239**	Pn	**Pn**	**12 14 04.6**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=46,slow=12,SNR=1.6						
HFS				Lg	Lg	12 17 16.9	
	comp=Z,0.1nm,0.3s,baz=45,slow=22,SNR=1.8						
SPA0	**Spitsbergen Ar**	**11.66**	**342**	Pn	**Pn**	**12 14 04.4**	**-1.6**
	baz=133,slow=16						
SPA0	**Spitsbergen Ar**	**11.66**	**342**	Pn	**Pn**	**12 14 04.4**	**-1.6**
	baz=133,slow=16						
SPITS	**Spitsbergen Ar**	**11.66**	**342**	Pn	**Pn**	**12 14 04.0**	**-1.9**
	baz=142,slow=16,SNR=1.9						
NOA	**NORSAR Array B**	**11.80**	**247**	Pn	**Pn**	**12 14 05.6**	**-2.4**
	comp=Z,0.0nm,0.3s,baz=45,slow=11,SNR=1.4						
NOA				Lg	Lg	12 17 25.6	
	comp=Z,0.0nm,0.3s,baz=43,slow=25,SNR=4.7						

MDD ***18*** *12:13:46.0±0.4, 42°.33N×1°.96E, h0^{km}, mbLg1.8/8, Error ellipse: s-maj=3.7km s-min=3.1km az=132.0, PRXIMO*

LDG ***18*** *12:13:45.6±0.1, 42°.33N×1°.98E, h2^{km}, Ml2.1/7, Error ellipse: s-maj=1.6km s-min=1.3km az=133.0*

MRB ***18*** *12:13:45.1±0.4, 42°.33N×1°.95E, h2^{km}±3^{km}, ML1.2/17, Error ellipse: s-maj=1.3km s-min=1.1km az=198.0*

STR ***18*** *12:13:45.2±1.0, 42°N±6°×°±°, h0^{km}, MLv1.1/4, preliminary*

ISC 18 12:13:45.3±0.9**, 42°.34N**±0°.02×**1°.96E**±0°.02**, h10**^{km}±7^{km}**, n38, σ0^{s}.91**/64**, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CLLI	**Llivia**	**0.14**	**3**	P	**Pg**	**12 13 47.9**	**-0.7**
CLLI				S	**Sg**	**12 13 50.4**	**-0.6**
	87nm,0.2s						
CLLI	**Llivia**	**0.14**	**3**	Pg	**Pg**	**12 13 48.4**	**-0.2**
	3.0nm,0.1s,SNR=7.9						
CLLI				Lg	Lg	12 13 50.9	
	97nm,0.1s,SNR=7.9						
CBRU	**Bruguera**	**0.17**	**108**	P	**Pg**	**12 13 48.7**	**-0.4**
CBRU				S	**Sg**	**12 13 51.4**	**-0.3**
	89nm,0.2s						
ARBS	**La Rabassa**	**0.33**	**290**	P	**Pg**	**12 13 51.7**	**-0.2**
ARBS				S	**Sg**	**12 13 56.7**	**+0.4**
	56nm,0.2s						
PAND	**Andorre**	**0.36**	**301**	Pg	**Pg**	**12 13 52.2**	**-0.3**
PAND				Sg	**Sg**	**12 13 57.4**	**+0.1**
CORI	**Orista**	**0.37**	**170**	P	**Pg**	**12 13 52.2**	**-0.4**
CORI				S	**Sg**	**12 13 57.3**	**-0.2**
	17nm,0.2s						
CORG	**Organya**	**0.49**	**257**	P	**Pg**	**12 13 54.3**	**-0.6**
CORG				S	**Sg**	**12 14 01.5**	**+0.1**
	5.0nm,0.4s						
FILF	**Fillols**	**0.49**	**63**	P	**Pg**	**12 13 53.3**	**-1.7**
FILF				S	**Sg**	**12 13 59.2**	**-2.3**
EMIR	**Miracle**	**0.53**	**218**	Pg	**Pg**	**12 13 55.9**	**+0.2**
	0.2nm,0.2s,SNR=7.9						
EMIR				Lg	Lg	12 14 02.4	
	9.6nm,0.1s,SNR=7.9						
CBEU	**Beuda**	**0.54**	**99**	P	**Pg**	**12 13 55.4**	**-0.3**
CBEU				S	**Sg**	**12 14 03.1**	**+0.3**
FNEB	**Nbias**	**0.57**	**11**	Pg	**Pg**	**12 13 56.9**	**+0.4**
FNEB				Sg	**Sg**	**12 14 05.2**	**+1.1**
CEST	**Esterri de Car**	**0.59**	**297**	P	**Pg**	**12 13 56.2**	**-0.5**
CEST				S	**Sg**	**12 14 04.1**	**-0.3**
	9.2nm,0.2s						
CSOR	**Sort**	**0.62**	**274**	P	**Pg**	**12 13 56.6**	**-0.7**
CSOR				S	**Sg**	**12 14 05.9**	**+0.5**
	13nm,0.2s						
CSOR	**Sort**	**0.62**	**274**	Pg	**Pg**	**12 13 57.4**	**+0.1**
	0.1nm,0.1s,SNR=7.9						
CSOR				Lg	Lg	12 14 05.6	
	12nm,0.2s,SNR=13						
CFON	**Fontmartina**	**0.68**	**148**	P	**Pg**	**12 13 57.8**	**-0.6**
CFON	**Fontmartina**	**0.68**	**148**	Pg	**Pg**	**12 13 58.0**	**-0.3**
	2.4nm,0.2s,SNR=5.8						
CFON				Lg	Lg	12 14 07.6	
	8.7nm,0.1s,SNR=5.9						
EJON	**La Jonquera**	**0.69**	**81**	Pg	**Pg**	**12 13 58.6**	**-0.2**
	1.1nm,0.2s,SNR=7.9						
EJON				Lg	Lg	12 14 08.2	
	2.1nm,0.1s,SNR=7.9						
SJAF	**Saint Jean de**	**0.70**	**78**	P	**Pg**	**12 13 58.4**	**-0.4**
SJAF				S	**Sg**	**12 14 08.6**	**+0.7**
	3.2nm,0.2s						
SJAF	**Saint Jean de**	**0.70**	**78**	Pg	**Pg**	**12 13 58.9**	**+0.1**
	0.1nm,0.3s,SNR=7.9						
SJAF				Lg	Lg	12 14 08.5	
	3.7nm,0.1s,SNR=7.9						
CCAS	**Cassa de la Se**	**0.83**	**123**	P	**Pg**	**12 14 01.2**	**-0.2**
CCAS				S	**Sg**	**12 14 12.2**	**-0.1**
	4.7nm,0.3s						
CTRE	**Tremp**	**0.88**	**269**	P	**Pg**	**12 14 01.8**	**-0.6**
CTRE				S	**Sg**	**12 14 13.4**	**-0.4**
	4.5nm,0.4s						
CPAL	**Palau Saverder**	**0.89**	**91**	P	**Pg**	**12 14 02.3**	**-0.2**
CPAL				S	**Sg**	**12 14 14.4**	**+0.3**
	5.7nm,0.2s						
CARA	**Val d'Aran**	**0.92**	**294**	S	**Sg**	**12 14 15.2**	**+0.1**
	11nm,0.2s						
CAVN	**Les Avellanes**	**1.01**	**244**	P	**Pg**	**12 14 04.2**	**-0.5**
CAVN				S	**Sg**	**12 14 17.2**	**-0.6**
	10nm,0.1s						
MTLF	**Montolieu**	**1.02**	**10**	*e*Pg	**Pb**	**12 14 05.8**	**+0.7**
MTLF				*e*Sg	**Sg**	**12 14 16.9**	**-1.3**
	5.3nm,0.3s						
MTLF	**Montolieu**	**1.02**	**10**	Pg	**Pg**	**12 14 05.4**	**+0.5**
MTLF				Pn	**Pn**	**12 14 06.7**	**+1.0**
EPOB	**Poblet**	**1.19**	**214**	P	**Pg**	**12 14 07.4**	**-0.6**
EPOB				S	**Sg**	**12 14 22.9**	**-0.6**
	5.0nm,0.2s						
EPOB	**Poblet**	**1.19**	**214**	Pg	**Pg**	**12 14 07.5**	**-0.6**
	0.2nm,0.1s,SNR=6.7						
EPOB				Lg	Lg	12 14 22.9	
	8.1nm,0.2s,SNR=14						
ECHI	**Chisagues Biel**	**1.35**	**285**	P	**Pg**	**12 14 10.1**	**-1.1**
ECHI				S	**Sg**	**12 14 28.2**	**-0.5**
	3.0nm,0.2s						
ECHI	**Chisagues Biel**	**1.35**	**285**	Pg	**Pg**	**12 14 11.4**	**+0.2**
	0.8nm,0.2s,SNR=7.9						
ECHI				Lg	Lg	12 14 28.7	
	2.0nm,0.1s,SNR=7.9						
EPF	**Esparros**	**1.38**	**301**	*e*Pg	**Pb**	**12 14 13.1**	**+1.8**
EPF				*e*Sg	**Sg**	**12 14 27.5**	**-2.3**
	3.8nm,0.3s						
ETSF	**Etsaut**	**1.94**	**288**	*e*Pn	**Pn**	**12 14 18.0**	**-0.5**
ETSF				*e*Sn	**Sn**	**12 14 41.7**	**-1.3**
ETSF				*e*Sg	**Sb**	**12 14 47.2**	**+2.0**
	5.2nm,0.5s						
LASF	**Ste Croix**	**2.22**	**38**	*e*Pn	**Pn**	**12 14 21.1**	**-1.2**
LASF	**Ste Croix**	**2.22**	**38**	*e*Pg	**Pb**	**12 14 26.9**	**+1.3**
LASF				*e*Sg	**Sb**	**12 14 54.8**	**+1.6**
	1.0nm,0.3s						
SJPF	**Ste Jean**	**2.47**	**289**	*e*Pg	**Pg**	**12 14 32.8**	**+0.1**
SJPF				*e*Sg	**Sg**	**12 15 03.8**	**-1.0**
	3.2nm,0.3s						
CAF	**Calviac**	**2.59**	**2**	*e*Pn	**Pn**	**12 14 26.4**	**-0.9**
CAF	**Calviac**	**2.59**	**2**	*e*Pg	**Pg**	**12 14 34.4**	**-0.5**
CAF				*e*Sn	**Sn**	**12 14 56.6**	**-2.3**
RJF	**Les Rejaudoux**	**2.98**	**354**	*e*Sg	**Sg**	**12 15 20.3**	**-0.8**

LDG ***18*** *12:15:23.6±0.1, 42°.31N×1°.99E, h2^{km}, Ml2.6/10, Error ellipse: s-maj=1.6km s-min=1.2km az=134.0*

STR ***18*** *12:15:23.4±1.4, 42°N±7°×°±°, h7^{km}, MLv1.6/3, preliminary*

MDD ***18*** *12:15:23.9±0.2, 42°.34N×1°.98E, h6^{km}±3^{km}, mbLg1.9/24, Error ellipse: s-maj=2.1km s-min=1.8km az=34.0, PRXIMO*

MRB ***18*** *12:15:23.6±0.2, 42°.32N×1°.95E, h2^{km}±4^{km}, ML1.7/14, Error ellipse: s-maj=2.2km s-min=1.0km az=49.0*

ISC 18 12:15:23.5±0.8**, 42°.34N**±0°.02×**1°.98E**±0°.01**, h14**^{km}±5^{km}**, n59, σ0^{s}.84**/105**, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CLLI	**Llivia**	**0.14**	**359**	P	**Pg**	**12 15 26.9**	**-0.4**
CLLI				S	**Sg**	**12 15 29.4**	**-0.4**
	223nm,0.2s						
CLLI	**Llivia**	**0.14**	**359**	Pg	**Pg**	**12 15 26.8**	**-0.5**
	9.2nm,0.2s,SNR=7.9						
CLLI				Lg	Lg	12 15 28.7	
	196nm,0.1s,SNR=20						
CBRU	**Bruguera**	**0.16**	**110**	P	**Pg**	**12 15 27.0**	**-0.5**
CBRU				S	**Sg**	**12 15 29.8**	**-0.5**
	238nm,0.2s						
CBRU	**Bruguera**	**0.16**	**110**	P	**Pg**	**12 15 27.0**	**-0.5**
CBRU				S	**Sg**	**12 15 29.7**	**-0.5**
	119nm,0.2s						
ARBS	**La Rabassa**	**0.34**	**289**	P	**Pg**	**12 15 30.0**	**-0.4**
ARBS				S	**Sg**	**12 15 35.1**	**-0.1**
	145nm,0.2s						
PAND	**Andorre**	**0.37**	**300**	Pg	**Pg**	**12 15 30.5**	**-0.5**
PAND				Sg	**Sg**	**12 15 35.6**	**-0.6**
CORI	**Orista**	**0.37**	**172**	P	**Pg**	**12 15 30.6**	**-0.3**
CORI				S	**Sg**	**12 15 35.6**	**-0.5**
	34nm,0.3s						
CORI	**Orista**	**0.37**	**172**	P	**Pg**	**12 15 30.6**	**-0.3**
CORI				S	**Sg**	**12 15 35.5**	**-0.5**
	34nm,0.3s						
CORG	**Organya**	**0.50**	**258**	S	**Sg**	**12 15 39.9**	**-0.2**
CORG	**Organya**	**0.50**	**258**	S	**Sg**	**12 15 39.9**	**-0.2**
CBEU	**Beuda**	**0.53**	**99**	P	**Pg**	**12 15 33.6**	**-0.3**
CBEU				S	**Sg**	**12 15 41.4**	**+0.6**
	55nm,0.4s						
CBEU	**Beuda**	**0.53**	**99**	P	**Pg**	**12 15 33.5**	**-0.3**
CBEU				S	**Sg**	**12 15 41.4**	**+0.6**
	55nm,0.4s						
EMIR	**Miracle**	**0.54**	**219**	Pg	**Pg**	**12 15 34.4**	**+0.3**
	6.9nm,0.3s,SNR=7.9						
EMIR				Lg	Lg	12 15 41.0	
	15nm,0.1s,SNR=7.9						
FNEB	**Nbias**	**0.57**	**10**	Pg	**Pg**	**12 15 34.8**	**+0.1**
FNEB				Sg	**Sg**	**12 15 43.5**	**+1.2**
CEST	**Esterri de Car**	**0.59**	**296**	P	**Pg**	**12 15 34.7**	**-0.5**
CEST				S	**Sg**	**12 15 42.8**	**-0.3**
	26nm,0.4s						
CEST	**Esterri de Car**	**0.59**	**296**	P	**Pg**	**12 15 34.6**	**-0.5**
CEST				S	**Sg**	**12 15 42.8**	**-0.3**
	26nm,0.4s						
CSOR	**Sort**	**0.63**	**274**	P	**Pg**	**12 15 34.8**	**-0.9**
CSOR				S	**Sg**	**12 15 43.9**	**-0.2**
	34nm,0.2s						
CSOR	**Sort**	**0.63**	**274**	Pg	**Pb**	**12 15 36.5**	**+0.2**
	0.1nm,0.1s,SNR=7.9						
CSOR				Lg	Lg	12 15 44.2	
	26nm,0.2s,SNR=7.9						
CFON	**Fontmartina**	**0.67**	**149**	P	**Pg**	**12 15 36.1**	**-0.4**
CFON				S	**Sb**	**12 15 45.9**	**-0.2**
	27nm,0.3s						
CFON	**Fontmartina**	**0.67**	**149**	Pg	**Pg**	**12 15 36.1**	**-0.4**
	3.0nm,0.4s,SNR=7.9						
CFON				Lg	Lg	12 15 46.1	
	21nm,0.1s,SNR=7.9						
EJON	**La Jonquera**	**0.68**	**81**	Pg	**Pg**	**12 15 34.5**	**-2.3**
	4.0nm,0.1s,SNR=7.9						
EJON				Lg	Lg	12 15 46.3	
	13nm,0.2s,SNR=7.9						
SJAF	**Saint Jean de**	**0.69**	**77**	Pg	**Pg**	**12 15 35.0**	**-1.8**
	0.2nm,0.2s,SNR=7.9						
SJAF				Lg	Lg	12 15 46.0	
	2.5nm,0.1s,SNR=7.9						
CCAS	**Cassa de la Se**	**0.83**	**123**	P	**Pg**	**12 15 39.4**	**-0.1**
CCAS				S	**Sb**	**12 15 51.1**	**+0.5**
CCAS	**Cassa de la Se**	**0.83**	**123**	P	**Pg**	**12 15 39.4**	**-0.1**
CCAS				S	**Sb**	**12 15 51.1**	**+0.5**
CPAL	**Palau Saverder**	**0.88**	**91**	P	**Pg**	**12 15 40.6**	**0.0**
CPAL				S	**Sb**	**12 15 53.1**	**+1.0**
	14nm,0.2s						
CPAL	**Palau Saverder**	**0.88**	**91**	P	**Pg**	**12 15 40.5**	**0.0**
CPAL				S	**Sb**	**12 15 53.1**	**+1.0**
	14nm,0.2s						
CTRE	**Tremp**	**0.89**	**269**	P	**Pg**	**12 15 40.2**	**-0.6**
CTRE				S	**Sg**	**12 15 52.7**	**+0.1**
	10nm,0.2s						
CTRE	**Tremp**	**0.89**	**269**	P	**Pg**	**12 15 40.1**	**-0.6**
CTRE				S	**Sg**	**12 15 52.6**	**+0.1**
	10nm,0.2s						
CARA	**Val d'Aran**	**0.93**	**294**	P	**Pg**	**12 15 40.7**	**-0.8**
CARA				S	**Sg**	**12 15 53.8**	**+0.1**
	34nm,0.3s						
MTLF	**Montolieu**	**1.02**	**10**	*e*Pg	**Pg**	**12 15 42.7**	**-0.4**
MTLF				*e*Sg	**Sg**	**12 15 57.1**	**+0.8**
	22nm,0.3s						
MTLF	**Montolieu**	**1.02**	**10**	Pn	**Pb**	**12 15 44.1**	**+1.2**
MTLF				Sg	**Sg**	**12 15 57.2**	**+0.8**
MTLF	**Montolieu**	**1.02**	**10**	Pg	**Pg**	**12 15 42.7**	**-0.4**
MTLF				Lg	Lg	12 15 57.1	
	11nm,0.3s						
CAVN	**Les Avellanes**	**1.02**	**244**	P	**Pg**	**12 15 42.3**	**-0.8**
CAVN				S	**Sg**	**12 15 55.6**	**-0.9**
	20nm,0.2s						
CAVN	**Les Avellanes**	**1.02**	**244**	P	**Pg**	**12 15 42.3**	**-0.8**
CAVN				S	**Sg**	**12 15 55.5**	**-0.9**
	9.8nm,0.2s						
EPOB	**Poblet**	**1.19**	**215**	S	**Sg**	**12 16 01.2**	**-0.8**
	24nm,0.2s						
EPOB	**Poblet**	**1.19**	**215**	Pg	**Pg**	**12 15 46.1**	**-0.4**
	2.4nm,0.1s,SNR=7.9						
EPOB				Lg	Lg	12 16 01.1	
	14nm,0.2s,SNR=7.9						
ECHI	**Chisagues Biel**	**1.36**	**284**	S	**Sb**	**12 16 07.0**	**+0.9**
	8.3nm,0.4s						
ECHI	**Chisagues Biel**	**1.36**	**284**	Pg	**Pg**	**12 15 49.9**	**+0.3**
	0.1nm,0.0s,SNR=7.9						
ECHI				Lg	Lg	12 16 07.3	
	2.0nm,0.1s,SNR=7.9						
EPF	**Esparros**	**1.39**	**300**	*e*Pn	**Pn**	**12 15 48.7**	**+0.2**
EPF				*e*Sn	**Sb**	**12 16 07.3**	**+0.4**
	13nm,0.3s						
EPF	**Esparros**	**1.39**	**300**	Pn	**Pn**	**12 15 48.7**	**+0.2**
EPF				Sn	**Sb**	**12 16 07.3**	**+0.4**
	6.4nm,0.3s						
ERTA	**Horta de San J**	**1.85**	**222**	Pg	**Pb**	**12 15 57.2**	**+0.1**
	0.8nm,0.2s,SNR=7.9						
ERTA				Lg	Lg	12 16 21.4	
	5.2nm,0.2s,SNR=7.9						
ETSF	**Etsaut**	**1.95**	**287**	*e*Pn	**Pn**	**12 15 56.7**	**+0.4**
ETSF				*e*Sn	**Sn**	**12 16 20.1**	**-0.6**
	12nm,0.4s						
ETSF				*e*Sg	**Sb**	**12 16 24.9**	**+1.8**
ETSF	**Etsaut**	**1.95**	**287**	Pn	**Pn**	**12 15 56.7**	**+0.4**
ETSF				Sn	**Sn**	**12 16 20.1**	**-0.6**
	6.1nm,0.4s						
ETSF				Lg	Lg	12 16 24.9	
ATE	**Arette**	**2.11**	**292**	Lg	Lg	12 16 31.0	
	9.3nm,0.2s,SNR=7.9						
LASF	**Ste Croix**	**2.21**	**38**	*e*Pg	**Pb**	**12 16 04.8**	**+1.5**
LASF				*e*Sg	**Sg**	**12 16 33.8**	**-0.8**
	2.8nm,0.2s						
LASF	**Ste Croix**	**2.21**	**38**	Pg	**Pb**	**12 16 04.8**	**+1.5**
LASF				Lg	Lg	12 16 33.8	
	1.4nm,0.2s						
SJPF	**Ste Jean**	**2.48**	**289**	*e*Pn	**Pn**	**12 16 03.7**	**+0.2**
SJPF	**Ste Jean**	**2.48**	**289**	*e*P	**Pn**	**12 16 05.7**	**+2.2**
SJPF				*e*Sn	**Sn**	**12 16 33.6**	**0.0**
SJPF				*e*Sg	**Sg**	**12 16 42.2**	**-1.1**
	5.2nm,0.3s						
SJPF	**Ste Jean**	**2.48**	**289**	Pn	**Pn**	**12 16 03.7**	**+0.2**
SJPF				Sn	**Sn**	**12 16 33.6**	**0.0**
SJPF				Lg	Lg	12 16 42.2	
	2.6nm,0.3s						
CAF	**Calviac**	**2.59**	**1**	*e*Pn	**Pn**	**12 16 05.0**	**+0.1**
CAF	**Calviac**	**2.59**	**1**	*e*P	**Pn**	**12 16 07.8**	**+2.9**
CAF				*e*Sn	**Sn**	**12 16 35.3**	**-0.9**
CAF				*e*Sg	**Sg**	**12 16 45.5**	**-1.0**
	8.5nm,0.4s						
CAF	**Calviac**	**2.59**	**1**	Pn	**Pn**	**12 16 05.0**	**+0.1**
CAF				Sn	**Sn**	**12 16 35.3**	**-0.9**
CAF				Lg	Lg	12 16 45.5	
	4.2nm,0.4s						
LFF	**La Frestale**	**2.75**	**341**	*e*Pg	**Pg**	**12 16 15.6**	**-0.6**
LFF				*e*Sn	**Sn**	**12 16 39.4**	**-0.7**
LFF				*e*Sg	**Sg**	**12 16 51.3**	**-0.5**
	13nm,0.5s						
LFF	**La Frestale**	**2.75**	**341**	Pg	**Pg**	**12 16 15.6**	**-0.6**
LFF				Sn	**Sn**	**12 16 39.4**	**-0.7**
LFF				Lg	Lg	12 16 51.3	
	6.3nm,0.5s						
RJF	**Les Rejaudoux**	**2.98**	**354**	*e*Pn	**Pn**	**12 16 10.0**	**-0.4**
RJF	**Les Rejaudoux**	**2.98**	**354**	*e*Pg	**Pg**	**12 16 19.4**	**-1.2**
RJF				*e*Sn	**Sn**	**12 16 44.9**	**-1.0**
RJF				*e*Sg	**Sg**	**12 16 58.2**	**-1.0**
	4.7nm,0.3s						
RJF	**Les Rejaudoux**	**2.98**	**354**	Pn	**Pn**	**12 16 10.0**	**-0.4**
RJF				Pg	**Pg**	**12 16 19.4**	**-1.2**
RJF				Sn	**Sn**	**12 16 44.9**	**-1.0**
RJF				Lg	Lg	12 16 58.2	
	2.3nm,0.3s						
VIVF	**Saint-Julien-l**	**3.19**	**37**	*e*Pn	**Pn**	**12 16 12.7**	**-0.5**
VIVF				*e*Sn	**Sn**	**12 16 49.7**	**-1.3**
VIVF				*e*Sg	**Sg**	**12 17 03.6**	**-2.2**
	2.0nm,0.3s						
VIVF	**Saint-Julien-l**	**3.19**	**37**	Pn	**Pn**	**12 16 12.7**	**-0.5**
VIVF				Sn	**Sn**	**12 16 49.7**	**-1.3**
VIVF				Lg	Lg	12 17 03.6	
	1.0nm,0.3s						

BEO ***18*** *12:15:33.1±2.5, 38°.17N×20°.28E, h64^{km}±6^{km}, ML5.3/16*

HLW ***18*** *12:15:33.8, 38°.73N×20°.69E, h3^{km}±24^{km}, Md5.0*

BJI ***18*** *12:15:34.0±0.0, 38°.90N×20°.50E, h5^{km}, mB5.3/19, mb4.8/36, Ms5.1/19, Ms7 4.9/19*

TIR ***18*** *12:15:36.7, 38°.82N×20°.42E, h12^{km}±4^{km}, Ml5.4*

IDC ***18*** *12:15:36.2±0.4, 38°.93N×20°.74E, h0^{km}, mb4.7/48, mb1 4.7/62, mb1mx4.6/89, mbtmp4.6/62, ML4.5/12, MS4.3/48, Ms1 4.3/48, ms1mx4.2/68, Error ellipse: s-maj=9.1km s-min=8.3km az=152.0*

PDG ***18*** *12:15:37.8±1.2, 38°.92N×20°.50E, h7^{km}±1^{km}, MD5.0/7, ML5.0/10, Error ellipse: s-maj=1.0km s-min=1.4km az=0.0*

MOS ***18*** *12:15:37.0±1.4, 38°.83N×20°.53E, h18^{km}, mb5.3/41, MS4.5/22, Error ellipse: s-maj=3.9km s-min=2.2km az=77.7*

THE ***18*** *12:15:37.9, 38°.86N×20°.59E, h16^{km}, ML4.8/9, Error ellipse: s-maj=1.2km s-min=0.6km az=92.0*

IASPEI ***18*** *12:15:37.9±0.8, 38°.85N±0°.02×20°.59E±0°.03, h17^{km}±4^{km}, mb4.9/132, MS4.4/46, Error ellipse: s-maj=4.2km s-min=2.5km az=80.6, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

NEIC ***18*** *12:15:38.0±1.9, 38°.84N±0°.04×20°.56E±0°.04, h10^{km}±1^{km}, mb5.1/98, Mwr5.0/44, Mww5.0, ML4.9(ATH), ML4.8(THE), Error ellipse: s-maj=7.5km s-min=3.8km az=212.0*

UPSL ***18*** *12:15:38.0, 38°.84N×20°.59E, h17^{km}, Mw5.0, Moment Tensor Solution. s8 Moment tensor: M_{rr}-0.18; $M_{\theta\theta}$1.62; $M_{\phi\phi}$-1.44; $M_{r\theta}$-0.90; $M_{\theta\phi}$2.84; $M_{\phi r}$0.68; Fault plane solution: NP1:ϕ_s195.00000°, δ72.00000°, λ-172.00000°. NP2:ϕ_s103.00000°, δ83.00000°, λ-18.00000°.*

MED_RC ***18*** *12:15:38.0±0.2, 38°.87N×20°.61E, h19^{km}±1^{km}, MW5.0/38, Moment Tensor Solution. Body waves: s4,c4;Mantle waves: s38,c60; Duration: 1^{s}.3 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.46±.18; $M_{\theta\theta}$2.30±.16; $M_{\phi\phi}$-1.85±.14; $M_{r\theta}$-1.14±.28; $M_{\theta\phi}$4.02±.12; $M_{\phi r}$-0.53±.28; Best double couple: $M_0$4.67000×10^{16} NP1:ϕ_s193.00000°, δ79.00000°, λ172.00000°. NP2:ϕ_s284.00000°, δ83.00000°, λ11.00000°. Principal axes: T 5.0300, Plg13.0000°, Azm149.0000°; N -0.7400, Plg77.0000°, Azm319.0000°; P -4.3000, Plg2.0000°, Azm58.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=35s.*

ATH ***18*** *12:15:38.0, 38°.84N×20°.59E, h17^{km}±1^{km}, ML4.9/5 Error ellipse: s-maj=1.3km s-min=0.9km az=104.0*

NEIC ***18*** *12:15:39, 38°.86N×20°.57E, h17^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-0.16; $M_{\theta\theta}$2.14; $M_{\phi\phi}$-1.98; $M_{r\theta}$-0.86; $M_{\theta\phi}$3.32; $M_{\phi r}$0.81; Fault plane solution: $M_0$4.09000×10^{16} NP1:ϕ_s196.94000°, δ75.26000°, λ-172.29000°. NP2:ϕ_s104.96000°, δ82.55000°, λ-14.87000°. Principal axes: T 4.0202, Plg5.0000°, Azm152.0000°; N 0.1273, Plg73.0000°, Azm259.0000°; P -4.1474, Plg16.0000°, Azm60.0000°;*

GCMT ***18*** *12:15:39.0±0.2, 38°.76N±0°.01×20°.55E±0°.01, h13^{km}±1^{km}, MW5.0/109, Moment Tensor Solution. s43,c52; s109,c177; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.55±.09; $M_{\theta\theta}$2.11±.10; $M_{\phi\phi}$-1.56±.09; $M_{r\theta}$-0.48±.21; $M_{\theta\phi}$3.55±.09; $M_{\phi r}$0.07±.21; Best double couple: $M_0$4.02600×10^{16} NP1:ϕ_s194.00000°, δ83.00000°, λ-179.00000°. NP2:ϕ_s104.00000°, δ89.00000°, λ-7.00000°. Principal axes: T 4.3000, Plg4.0000°, Azm149.0000°; N -0.5510, Plg83.0000°, Azm277.0000°; P -3.7520, Plg6.0000°, Azm58.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BGR ***18*** *12:15:41.7±0.7, 38°.97N×20°.50E, h10^{km} Error ellipse: s-maj=34.5km s-min=14.5km az=56.0*

NEIC ***18*** *12:15:42, 38°.97N×20°.69E, h16^{km}, Moment Tensor Solution. Duration: 6^{s}.0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.70; $M_{\theta\theta}$1.46; $M_{\phi\phi}$-0.76; $M_{r\theta}$-0.23; $M_{\theta\phi}$3.82; $M_{\phi r}$-0.06; Fault plane solution: $M_0$4.03000×10^{16} NP1: ϕ_s188.00000°, δ87.00000°, λ179.00000°. NP2: ϕ_s278.00000°, δ89.00000°, λ3.00000°. Principal axes: T 4.3345, Plg3.0000°, Azm143.0000°; N -0.7041, Plg87.0000°, Azm288.0000°; P -3.6304, Plg2.0000°, Azm53.0000°;*

ISC 18 12:15:38.6±0.5**, 38°.85N**±0°.01×**20°.62E**±0°.02**, h14**^{km}±2^{km}**, n904, σ2^{s}.12**/971**, mb4.9**/132**, MS4.4**/46**, 184C-157D, Fault plane solution: NP1:**ϕ_s282.75971°**,** δ84.93333°**,** λ-26.89805°. **NP2:**ϕ_s15.32490°**,** δ63.21546°**,** λ-174.32250°. **Principal axes:** T Plg14.8447°**,** Azm332.0384°**;** N Plg62.6639°**,** Azm92.8839°**;** P Plg22.4016°**,** Azm235.7661°**; Fault plane solution: NP1:**ϕ_s114.66861°**,** δ81.79652°**,** λ-14.42988°. **NP2:** ϕ_s206.77132°**,** δ75.72092°**,** λ-171.53311°. **Principal axes:** T Plg4.2155°**,** Azm161.3025°**;** N Plg73.4444°**,** Azm265.6587°**;** P Plg15.9799°**,** Azm70.0930°**; Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
LKD2	**Lefkada island**	**0.07**	**153**	P	**Pg**	**12 15 41.1**	**-0.4**
LKD2				S	**Sg**	**12 15 43.1**	**-0.4**
LKD2	**Lefkada island**	**0.07**	**153**	P	**Pg**	**12 15 41.1**	**-0.4**
LKD2				S	**Sg**	**12 15 43.1**	**-0.4**
LKD2	**Lefkada island**	**0.07**	**153**	P	**Pg**	**12 15 41.2**	**-0.4**
	baz=99						
LKD2				S	**Sg**	**12 15 43.2**	**-0.4**
	baz=99						
NYDR	**Nydri-Lefkada**	**0.15**	**155**	P	**Pg**	**12 15 42.2**	**-0.3**
NYDR				S	**Sg**	**12 15 45.1**	**0.0**
	591µm,0.5s						
NYDR	**Nydri-Lefkada**	**0.15**	**155**	P	**Pg**	**12 15 42.2**	**-0.3**
NYDR				S	**Sg**	**12 15 45.0**	**0.0**
DRAG	**Dragano-Lefkad**	**0.17**	**192**	P	**Pg**	**12 15 42.4**	**-0.4**
DRAG				S	**Sg**	**12 15 45.7**	**+0.2**
	1529µm,0.6s						
DRAG	**Dragano-Lefkad**	**0.17**	**192**	P	**Pg**	**12 15 42.4**	**-0.4**
EVGI	**Lefkada island**	**0.23**	**173**	P	**Pg**	**12 15 43.5**	**-0.2**
EVGI				S	**Sg**	**12 15 47.4**	**+0.2**

	304µm,0.5s						
EVGI	Lefkada island	0.23	173	P	Pg	12 15 43.5	-0.2
FSK	Fiskardo	0.39	186	P	Pg	12 15 46.3	-0.3
FSK				S	Sb	12 15 52.7	-0.5
	71µm,0.5s						
KEF4	Livadi, Kephal	0.61	194	P	Pg	12 15 49.5	-1.1
KEF4				S	Sb	12 15 59.6	+0.1
	353µm,0.3s						
KEF4	Livadi, Kephal	0.61	194	P	Pg	12 15 49.5	-1.1
DMLN	Damoulianata-K	0.64	198	P	Pg	12 15 50.1	-1.1
DMLN				S	Sb	12 16 00.4	0.0
	70µm,0.6s						
DMLN	Damoulianata-K	0.64	198	P	Pg	12 15 50.0	-1.1
LXRA	Lixouri, Kepha	0.67	192	P	Pg	12 15 50.9	-0.7
VLS	Valsamata	0.67	182	P	Pg	12 15 50.6	-1.2
VLS				S	Sb	12 16 01.4	+0.1
	150µm,0.3s						
VLS	Valsamata	0.67	182	P	Pg	12 15 50.6	-1.2
VLS				S	Sb	12 16 01.4	+0.1
KEF3	Kipouria, Keph	0.68	198	P	Pg	12 15 50.3	-1.6
KEF3				S	Sg	12 16 00.6	-0.3
	109µm,0.4s						
KEF3	Kipouria, Keph	0.68	198	P	Pg	12 15 50.3	-1.6
IGT	Igoumenitsa	0.72	342	P	Pg	12 15 51.1	-1.5
IGT				S	Sg	12 16 02.0	-0.1
	53µm,0.6s						
IGT	Igoumenitsa	0.72	342	P	Pg	12 15 51.1	-1.5
IGT				S	Sg	12 16 01.5	-0.5
IGT				AML	AML	12 16 06.6	
IGT				AML	AML	12 16 08.3	
IGT	Igoumenitsa	0.72	342	P	Pg	12 15 51.1	-1.5
IGT				S	Sg	12 16 01.5	-0.5
IGT	Igoumenitsa	0.72	342	P	Pg	12 15 51.1	-1.5
	baz=355						
IGT				S	Sg	12 16 01.7	-0.3
	baz=355						
PSDA	Pessada-Kefalo	0.74	182	P	Pg	12 15 51.6	-1.4
PSDA				S	Sb	12 16 03.0	-0.1
PSDA	Pessada-Kefalo	0.74	182	P	Pg	12 15 51.6	-1.4
PVO	Paravola	0.75	108	P	Pg	12 15 52.8	-0.4
PVO	Paravola	0.75	108	P	Pg	12 15 52.7	-0.4
PVO				S	Sg	12 16 03.0	-0.1
PVO				AML	AML	12 16 06.1	
PVO				AML	AML	12 16 08.1	
JAN	Janina	0.82	13	P	Pg	12 15 53.9	-0.8
JAN				S	Sg	12 16 05.3	-0.3
JAN				AML	AML	12 16 09.2	
JAN				AML	AML	12 16 10.1	
JAN	Janina	0.82	13	P	Pg	12 15 53.8	-0.8
JAN				S	Sg	12 16 05.2	-0.3
RLS	Riolos of Patr	1.03	140	P	Pb	12 15 57.2	-1.1
KASA	Kassiopi	1.04	330	P	Pb	12 15 57.1	-1.3
KEK	Kerkira	1.07	324	⇑P	Pb	12 15 57.2	-1.7
EFP	Efpalio	1.09	112	P	Pb	12 15 57.9	-1.4
SRN	Sarande	1.13	335	P	Pb	12 15 58.1	-1.9
	baz=344						
SRN				S	Sb	12 16 14.8	+0.3
	baz=344						
SRN				AMP			
	comp=N,81nm,0.7s,baz=344						
LTHK	Lithakia	1.15	171	P	Pn	12 15 58.6	-1.6
LTHK				S	Sb	12 16 14.2	-0.9
LTHK				AML	AML	12 16 25.6	
	comp=E,41596µm,0.5s						
LTHK				AML	AML	12 16 29.9	
	comp=N,46847µm,0.8s						
MAKR	Makrakomi, Fth	1.19	82	P	Pn	12 16 00.1	-0.8
MAKR				S	Sb	12 16 15.4	-0.9
MAKR				AML	AML	12 16 23.4	
MAKR				AML	AML	12 16 27.1	
	comp=E,67496µm,0.7s						
DRO	Drossia	1.24	136	P	Pn	12 16 00.6	-1.0
KPRO	Kipourio	1.24	27	P	Pn	12 16 00.6	-1.0
LSK	Leskovik	1.30	359	P	Pn	12 16 01.5	-0.9
	baz=5.0						
LSK				S	Sg	12 16 20.1	-0.5
	baz=5.0						
LSK				AMP			
	comp=N,411nm,0.8s,baz=5.0						
AGG	Agios Georgios	1.35	82	P	Pn	12 16 02.6	-0.4
AGG	Agios Georgios	1.35	82	P	Pb	12 16 03.8	+0.2
AGG						12 16 22.7	
AGG	Agios Georgios	1.35	82	⇓P	Pn	12 16 02.7	-0.3
AGG	Agios Georgios	1.35	82		Pb	12 16 03.8	+0.2
AGG				Sn	Sg	12 16 22.7	+0.6
KZN	Kozani	1.71	31	P	Pb	12 16 09.6	-0.2
KBN	Korca	1.77	4	P	Pb	12 16 10.5	-0.5
KBN	Korca	1.77	4		Pb	12 16 10.5	-0.5
KBN	Korca	1.77	4	P	Pg	12 16 13.0	+0.3
	baz=8.0						
KBN				S	Sb	12 16 33.4	+0.3
	baz=8.0						
KBN				AMP			
	comp=N,117nm,1.1s,baz=8.0						
VLO	Vlora	1.83	332	P	Pn	12 16 10.5	+0.8
VLO	Vlora	1.83	332		Pn	12 16 10.4	+0.8
VLO	Vlora	1.83	332	P	Pn	12 16 10.7	+1.0
	baz=337						
VLO				AMP			
	comp=E,157nm,0.6s,baz=337						
ITM	Ithomi	1.96	148	⇑P	Pb	12 16 13.1	-1.1
ITM	Ithomi	1.96	148	Pn	Pb	12 16 13.2	-0.9
ITM				Sn	Sn	12 16 35.8	-0.1
FNA	Florina	2.02	17	P	Pb	12 16 14.1	-1.0
FNA	Florina	2.02	17	⇓P	Pb	12 16 13.9	-1.2
FNA	Florina	2.02	17		Pb	12 16 14.1	-1.0
FNA	Florina	2.02	17	P	Pb	12 16 14.0	-1.0
	baz=20						
FNA				S	Sg	12 16 43.0	-0.5
	baz=20						
SCTE	Santa Cesarea	2.06	307	Pn	Pn	12 16 13.0	+0.2
SCTE	Santa Cesarea	2.06	307	P	Pn	12 16 13.0	+0.2
	baz=311						
OHR	Ohrid	2.26	3	*e*Pn	Pb	12 16 18.3	-1.0
OHR				*e*Sn	Sb	12 16 48.3	+1.2
OHR	Ohrid	2.26	3	*e*P	Pb	12 16 18.3	-1.0
OHR				*e*S	Sb	12 16 48.3	+1.2
OHR	Ohrid	2.26	3	*i* Pn	Pb	12 16 17.8	-1.4
GRG	Griva	2.51	33	P	Pn	12 16 20.3	+1.3
THE	Thessaloniki	2.54	45	P	Pn	12 16 20.8	+1.5
THE	Thessaloniki	2.54	45	P	Pn	12 16 20.2	+0.8
	baz=46						
THE				S	Sg	12 17 05.4	+5.2
	baz=46						
TIR	Tirane	2.56	347	⇑P	Pn	12 16 20.8	+1.1
TIR	Tirane	2.56	347	*e*Pn	Pn	12 16 21.7	+2.0
TIR				*e*Sn	Sb	12 16 53.7	-1.9
TIR	Tirane	2.56	347	P	Pn	12 16 20.7	+1.1
TIR	Tirane	2.56	347	⇑P	Pn	12 16 20.8	+1.1
TIR	Tirane	2.56	347		Pn	12 16 20.7	+1.1
TIR	Tirane	2.56	347	P	Pn	12 16 20.8	+1.1
	baz=351						
TIR				AMP			
	comp=E,36nm,1.1s,baz=351						
ATH	Athens Observa	2.59	109	P	Pb	12 16 23.1	-1.7
PAIG	Paliouri	2.60	65	P	Pn	12 16 22.1	+1.9
PLG	Polygyros	2.66	54	P	Pn	12 16 22.4	+1.3
PHP	Peshkopia	2.83	357	P	Pn	12 16 25.3	+1.8
PHP	Peshkopia	2.83	357	AMP			
	comp=N,33nm,1.0s,baz=0.0						
SOH	Sokhos	2.88	46	P	Pn	12 16 25.6	+1.5
VAY	Valandovo	2.89	31	*e*Pn	Pn	12 16 25.3	+1.2
VAY	Valandovo	2.89	31	P	Pn	12 16 24.9	+0.8
VAY	Valandovo	2.89	31	*i* Pn	Pn	12 16 25.3	+1.2
KNT	Kendrikon	2.90	36	P	Pn	12 16 25.6	+1.3
OUR	Ouranopolis	2.99	59	P	Pn	12 16 27.5	+1.9
TIP	Timpagrande	3.02	277	⇓P	Pn	12 16 26.2	+0.2
TIP	Timpagrande	3.02	277	⇓P	Pn	12 16 26.4	+0.3
TIP	Timpagrande	3.02	277	Pn	Pn	12 16 26.3	+0.2
STIP	Stip	3.08	22	*i* Pn	Pn	12 16 29.7	+2.8
SKO	Skopje	3.18	11	P	Pn	12 16 29.3	+1.1
SKO	Skopje	3.18	11	*i* Pn	Pn	12 16 29.5	+1.3
SRS	Serrai	3.22	44	P	Pn	12 16 29.8	+1.1
ULC	Ulcinj	3.28	342	P	Pn	12 16 29.5	-0.1
ULC	Ulcinj	3.28	342	⇑*i*Pn	Pn	12 16 29.4	-0.1
ULC				*i* Sn	Sn	12 17 06.7	-1.7
NOCI	Noci	3.35	306	P	Pn	12 16 30.3	-0.3
	baz=309						
DRME	Dracevica, Mon	3.51	342	⇑*i*Pn	Pn	12 16 32.7	0.0
DRME				*i* Sn	Sn	12 17 13.4	-0.5
MATE	Matera	3.51	302	⇑P	Pn	12 16 32.4	-0.3
MATE	Matera	3.51	302	⇑P	Pn	12 16 32.2	-0.5
BCI	Bajram Curri	3.54	353	P	Pn	12 16 34.6	+1.5
	baz=356						
BCI				AMP			
	comp=E,48nm,1.3s,baz=356						
KKB	Krupnik	3.55	31	P	Pn	12 16 34.1	+0.8
KKB				S	Sn	12 17 17.5	+2.4
MMB	Musomiste	3.63	40	P	Pn	12 16 35.6	+1.3
BUM	Brajici-Budva	3.69	340	⇑*i*Pn	Pn	12 16 34.7	-0.5
BUM				*i* Sn	Sn	12 17 17.3	-1.2
PDG	Podgorica	3.72	344	⇑P	Pn	12 16 35.6	0.0
PDG	Podgorica	3.72	344	*e*Pn	Pn	12 16 35.7	0.0
PDG				*e*Sn	Sn	12 17 19.2	0.0
PDG	Podgorica	3.72	344	⇑*i*Pn	Pn	12 16 35.6	0.0
PDG	Podgorica	3.72	344	⇑P	Pn	12 16 35.5	0.0
PDG	Podgorica	3.72	344	Pn	Pn	12 16 35.5	0.0
TTG	Podgorica	3.72	344	⇑*i*Pn	Pn	12 16 35.6	0.0
TTG				*i* Sn	Sn	12 17 18.6	-0.6
CEL	Celeste	3.75	262	⇓P	Pn	12 16 36.1	0.0
CEL	Celeste	3.75	262		Pn	12 16 36.0	-0.1
PVY	Plav	3.77	353	⇓*i*Pn	Pn	12 16 36.6	+0.1
PVY				*i* Sn	Sn	12 17 20.2	-0.5
PRVS	Prvonek	3.82	16	*e*Pn	Pn	12 16 38.2	+1.2
BOSS	Bosilegrad	3.91	21	*e*Pn	Pn	12 16 39.5	+1.3
HCY	Herceg Novi	3.94	336	P	Pn	12 16 37.8	-0.8
HCY	Herceg Novi	3.94	336	⇑*i*Pn	Pn	12 16 37.6	-1.0
HCY				*i* Sn	Sn	12 17 22.9	-1.7
MRVN	Minervino Murg	4.05	304	⇑P	Pn	12 16 40.1	-0.1
MRVN	Minervino Murg	4.05	304	P	Pn	12 16 40.6	+0.4
	baz=306						
IVA	Berane	4.05	352	⇑*i*Pn	Pn	12 16 40.5	+0.2
IVA				*i* Sn	Sn	12 17 26.0	-1.6
BARS	Barje	4.06	13	*e*Pn	Pn	12 16 41.5	+1.2
BARS	Barje	4.06	13	*e*Pn	Pg	12 16 58.3	+1.8
NKME	Niksic	4.11	343	⇑*i*Pn	Pn	12 16 40.5	-0.5
NKME				*i* Sn	Sn	12 17 27.9	-1.0
NKY	Niksic	4.14	343	P	Pn	12 16 41.8	+0.3
NKY	Niksic	4.14	343	⇑*i*Pn	Pn	12 16 40.4	-1.1
NKY				*e*Sn	Sn	12 17 27.4	-2.4
TREB	Trebinje	4.23	337	*e*Pn	Pn	12 16 41.9	-0.7
TREB				*e*Sn	Sn	12 17 29.7	-2.0
TREB	Trebinje	4.23	337	*e*Pn	Pn	12 16 41.4	-1.2
DBRK	Dubrovnik	4.25	335	*e*Pn	Pn	12 16 41.5	-1.4
VTS	Vitosha	4.26	27	⇓P	Pn	12 16 44.5	+1.4
VTS	Vitosha	4.26	27	*e*Pn	Pn	12 16 44.7	+1.6
VTS				*e*Sn	Sn	12 17 34.6	+2.0
VTS	Vitosha	4.26	27	P	Pn	12 16 44.2	+1.1
VTS	Vitosha	4.26	27	⇓P	Pn	12 16 44.3	+1.1
VTS	Vitosha	4.26	27	Pn	Pn	12 16 44.2	+1.1
SOF	Sofiya	4.35	27	P	Pn	12 16 48.6	+4.3
SELS	Selova	4.38	5	*e*Pn	Pn	12 16 45.4	+0.7
RDO	Rodhopi	4.42	57	⇑P	Pn	12 16 45.6	+0.4
SJES	Sjenica	4.43	354	*e*Pn	Pn	12 16 46.4	+0.9
PLD	Plovdiv	4.50	42	P	Pn	12 16 48.3	+2.0
EZN	Ezine	4.53	76	P	Pn	12 16 48.8	+2.1
UPM	Unac-Piva	4.54	344	*e*Pn	Pn	12 16 45.9	-1.1
UPM				*e*Sn	Sn	12 17 37.1	-2.5
PLE	Pljevlja	4.57	349	P	Pn	12 16 48.3	+0.9
PLE	Pljevlja	4.57	349	⇑*i*Pn	Pn	12 16 46.4	-1.0
PLE				*e*Sn	Sn	12 17 38.1	-2.2
SANT	Santorini	4.57	121	⇑P	Pn	12 16 51.3	+4.0
SANT	Santorini	4.57	121	⇑P	Pn	12 16 48.0	+0.7
SANT	Santorini	4.57	121	Pn	Pn	12 16 48.8	+1.4
PGB	Panagyurishte	4.57	35	P	Pn	12 16 48.5	+1.1
STON	Ston	4.58	332	*e*Pn	Pn	12 16 46.0	-1.4
STON				*e*Sn	Sn	12 17 38.2	-2.3
STON	Ston	4.58	332	⇑*i*Pn	Pn	12 16 46.1	-1.4
STON	Ston	4.58	332	*e*Pn	Pn	12 16 46.1	-1.4
KDZ	Kurdzhali	4.61	51	P	Pn	12 16 48.4	+0.5
ALN	Alexandroupoli	4.65	62	P	Pn	12 16 49.2	+0.9
ALN	Alexandroupoli	4.65	62	⇓P	Pn	12 16 49.3	+0.9
ALN	Alexandroupoli	4.65	62		Pn	12 16 49.2	+0.9
SGRT	San Giovanni R	4.72	309	Pn	Pn	12 16 49.1	-0.4
SGRT	San Giovanni R	4.72	309	P	Pn	12 16 49.0	-0.4
	baz=311						
BOVS	Bovan	4.85	9	⇓P	Pn	12 16 51.8	+0.7
BOVS	Bovan	4.85	9	*e*Pn	Pn	12 16 51.3	+0.2
RUDO	Rudo	4.86	349	*e*Pn	Pn	12 16 50.5	-0.7
DIM	Dimitrovgrad	4.93	48	P	Pn	12 16 52.8	+0.6
IDI	Anoyia	4.93	135	Pn	Pn	12 16 52.1	-0.2
	comp=E,4.2nm,0.3s,baz=308,slow=13,SNR=22						
IDI				Sn	Sn	12 17 48.1	-1.0
	comp=E,24nm,0.3s,baz=69,slow=23,SNR=6.8						
GRUS	Gruza	5.03	1	*e*Pn	Pn	12 16 53.8	+0.2
VAE	Valguarnera	5.08	256	Pn	Pn	12 16 57.4	+3.0
	comp=E,4.0nm,0.3s,baz=334,slow=8.7,SNR=5.9						
VAE				Sn	Sn	12 17 57.8	+5.0
	comp=E,27nm,0.3s,baz=306,slow=21,SNR=6.4						
VAE				LR	LR	12 18 36.6	
	comp=E,1µm,21.6s,baz=48,slow=34						
BBLS	Lazići	5.09	350	*e*Pn	Pn	12 16 54.2	-0.3
BBLS	Lazići	5.09	350	*e*Pn	Pn	12 16 53.4	-1.1
ZAGS	Zajecar	5.10	13	*e*Pn	Pn	12 16 56.2	+1.6
PAOL	Paolisi	5.13	297		Pn	12 16 56.2	+1.1
RAFF	Raffo Rosso	5.20	254		Pn	12 16 54.5	-1.4
MAKA	Makarska	5.20	330	*e*Pn	Pn	12 16 54.5	-1.4
DIVS	Divibare	5.26	355	*e*Pn	Pn	12 16 57.0	+0.1
DIVS	Divibare	5.26	355	⇑*i*Pn	Pn	12 16 56.2	-0.7
DIVS	Divibare	5.26	355	⇑P	Pn	12 16 56.4	-0.5
DIVS	Divibare	5.26	355		Pn	12 16 56.1	-0.8
RICI	Ricice	5.33	332	*e*Pn	Pn	12 16 56.5	-1.2
HVAR	Hvar	5.35	325	*e*Pn	Pn	12 16 56.9	-1.1
HAPS	Han Pijesak,BI	5.38	347	⇑*i*Pn	Pn	12 16 57.8	-0.7
PLVB	Pleven	5.45	32	⇓P	Pn	12 17 01.2	+1.9
KUBS	Kucevo	5.61	8	*e*Pn	Pn	12 17 01.3	-0.3
BALB	Balikesir	5.69	80		Pn	12 17 05.1	+2.4
PUNG	Punghina	5.69	17	⇓P	Pn	12 17 04.0	+1.3
TEKS	Tekeris	5.75	352	*e*Pn	Pn	12 17 02.3	-1.2
TEKS	Tekeris	5.75	352	*e*Pn	Pn	12 17 01.5	-2.0
EDC	Edincik	5.79	73	P	Pn	12 17 06.6	+2.5
CORL	Corleone	5.83	263		Pn	12 17 04.8	+0.2
VLAD	Vladila	5.88	28	⇑P	Pn	12 17 07.4	+2.2
BEO	Beograd	5.96	359	P	Pn	12 17 09.0	+2.7
BEO				pmax	pmax		
	comp=Z,45nm,1.0s						
CLTB	Caltabellotta	5.97	260	⇓P	Pn	12 17 08.7	+2.1
CLTB	Caltabellotta	5.97	260		Pn	12 17 07.0	+0.4
MDVR	Moldovita	5.98	8	⇑P	Pn	12 17 07.3	+0.6
KIJV	Kijevo	6.04	330	*e*Pn	Pn	12 17 06.6	-0.9
ZIRJ	Zirje	6.09	324	*e*Pn	Pn	12 17 06.7	-1.4
SRE	Strehaia	6.12	18	⇑P	Pn	12 17 09.6	+1.0
SRE	Strehaia	6.12	18	P	Pn	12 17 09.5	+1.0
MGRS	Mrkonjic Grad	6.16	336	*e*Pn	Pn	12 17 09.3	+0.2
HERR	Herculane	6.17	12	⇑P	Pn	12 17 10.2	+0.9
MORI	Morici	6.22	325	*e*Pn	Pn	12 17 09.2	-0.8
YER	Yerkesik	6.29	103	P	Pn	12 17 16.2	+5.2
COPA	Copaceanca	6.31	32	⇓P	Pn	12 17 12.7	+1.6
FRGS	Fruska Gora	6.33	355	⇑P	Pn	12 17 11.1	-0.4
FRGS	Fruska Gora	6.33	355	*e*Pn	Pn	12 17 10.8	-0.7
FRGS	Fruska Gora	6.33	355	⇑*i*Pn	Pn	12 17 10.3	-1.2
BLY	Banja Luka	6.43	338	*e*Pn	Pn	12 17 12.1	-0.7
BLY	Banja Luka	6.43	338	⇑*i*Pn	Pn	12 17 12.0	-0.7
BLY	Banja Luka	6.43	338	⇑P	Pn	12 17 12.1	-0.7
RAZG	Razgrad	6.47	41	⇑P	Pn	12 17 16.0	+2.6
AQU	L'Aquila	6.51	305	P	Pn	12 17 14.8	+0.8
AQU	L'Aquila	6.51	305	⇑*i*Pn	Pn	12 17 14.9	+0.9
AQU	L'Aquila	6.51	305	⇑P	Pn	12 17 15.1	+1.1
AQU	L'Aquila	6.51	305	Pn	Pn	12 17 14.8	+0.9
ARG	Arkhangelos	6.52	111	⇑P	Pn	12 17 18.4	+4.3
ARG	Arkhangelos	6.52	111	⇑P	Pn	12 17 18.4	+4.3
HUMR	Humele	6.54	29	⇓P	Pn	12 17 16.2	+1.8
DUGI	Dugi Otok	6.62	323	*e*Pn	Pn	12 17 14.3	-1.1
SGRR	Singureni	6.70	35	⇑P	Pn	12 17 19.3	+2.8
PRD	Provadia	6.72	48	P	Pn	12 17 19.4	+2.6
GZR	Gura Zlata	6.73	13	⇓P	Pn	12 17 17.6	+0.6
UDBI	Udbina	6.73	329	*e*Pn	Pn	12 17 17.2	+0.2
MRAK	Mrakovica	6.75	337	⇑*i*Pn	Pn	12 17 16.3	-1.0
BZS	Buzias	6.80	6	⇑P	Pn	12 17 19.1	+1.1
BZS	Buzias	6.80	6	*e*Pn	Pn	12 17 18.9	+1.0
BZS	Buzias	6.80	6	P	Pn	12 17 18.7	+0.8
BZS				pmax	pmax		
	comp=Z,62nm,0.7s						
AVR	AVREN	6.83	49	P	Pn	12 17 21.2	+2.9
NRCA	Norcia	6.94	307		Pn	12 17 20.4	+0.5
A251A	Rujevac	7.06	334	*e*Pn	Pn	12 17 20.5	-0.9
PLIT	Plitvice	7.08	330	*e*Pn	Pn	12 17 21.2	-0.6
NVLJ	Novalja	7.14	325	*e*Pn	Pn	12 17 21.7	-0.9
ARR	Arges	7.16	23	⇑P	Pn	12 17 24.1	+1.2
MTUR	Matau	7.18	26	⇑P	Pn	12 17 25.9	+2.8
SULR		7.18	34	⇑P	Pn	12 17 25.7	+2.6
LEHL	Lehliu	7.29	38	⇑P	Pn	12 17 26.8	+2.3
RABC	Rab	7.33	325	*e*Pn	Pn	12 17 24.3	-0.8
MOSL	Moslavina	7.34	338	*e*Pn	Pn	12 17 23.4	-1.9
VOIR		7.36	25	⇑P	Pn	12 17 27.5	+1.9
VOIR		7.36	25	P	Pn	12 17 27.2	+1.6
VOIR				pmax	pmax		
	comp=Z,164nm,0.9s						
SECR		7.39	32	⇓P	Pn	12 17 28.9	+2.8
SIRR	Siria	7.45	6	⇑P	Pn	12 17 27.5	+0.7
PSN	Preselentsi	7.47	47	P	Pn	12 17 30.4	+3.4
KOVH	Kovagotottos	7.47	346	*e*PN	Pn	12 17 25.7	-1.3
KOVH				*e*SN	Sn	12 18 45.1	-6.4
MORH	Mrgy, Hungar	7.50	349	⇑P	Pn	12 17 27.5	0.0
MORH	Mrgy, Hungar	7.50	349	*e*P	Pn	12 17 26.8	-0.7
MORH	Mrgy, Hungar	7.50	349	*e*PN	Pn	12 17 26.6	-0.9
MORH				*e*SN	Sn	12 18 47.0	-5.3
MORH	Mrgy, Hungar	7.50	349	*e*Pn	Pn	12 17 26.0	-1.5
ICOR	Ion Corvin	7.53	43	⇑P	Pn	12 17 31.0	+3.1
MURB	Monte Urbino	7.54	308		Pn	12 17 29.4	+1.3
MGAB	Montegabbione	7.61	305	⇑P	Pn	12 17 30.5	+1.4
AMRR	Amara	7.64	39	⇓P	Pn	12 17 32.5	+3.2
ISR	Istrita	7.66	33	⇑P	Pn	12 17 32.7	+3.0
ISR	Istrita	7.66	33	P	Pn	12 17 32.7	+3.0
ISR				pmax	pmax		
	comp=Z,1µm,1.1s						
MLR	Muntele Rosu	7.72	29	⇑P	Pn	12 17 33.3	+2.6
MLR	Muntele Rosu	7.72	29	Pn	Pn	12 17 31.9	+1.2
	comp=Z,15nm,0.3s,baz=303,slow=5.6,SNR=45						
MLR				LR	LR	12 20 56.4	
	comp=Z,3µm,18.6s,baz=204,slow=42						
MLR	Muntele Rosu	7.72	29	Pn	Pn	12 17 31.6	+0.9
BOJS	Bojanci	7.75	331	*i* Pn	Pn	12 17 30.0	-0.9
BOJS				*e*Sn	Sn	12 18 53.3	-5.1
OZLJ	Ozalj	7.76	332	*e*Pn	Pn	12 17 29.8	-1.3
ZAG	Zagreb	7.77	335	*e*Pn	Pn	12 17 26.7	-4.5
MANR	Mangalia	7.78	48	⇓P	Pn	12 17 34.1	+2.8
NEHR	Nehoiu	7.81	31	⇑P	Pn	12 17 34.7	+2.9
SMRN	Sveta Marina	7.83	324	*e*Pn	Pn	12 17 30.6	-1.5
ISP	Isparta	7.85	94	P	Pn	12 17 34.9	+2.4
ISP	Isparta	7.85	94		Pn	12 17 34.9	+2.4
KALN	Kalnik	7.90	338	*e*Pn	Pn	12 17 31.1	-1.9
MFTR	Murfatlar	7.91	45	⇑P	Pn	12 17 36.6	+3.5
RIY	Rijeka	7.91	327	⇑*i*Pn	Pn	12 17 32.2	-0.9
RIY	Rijeka	7.91	327	*e*Pn	Pn	12 17 32.2	-0.9
BRJN	Brijuni	7.92	322	*e*Pn	Pn	12 17 31.9	-1.4
DOPR	Dopca	7.94	25	⇓P	Pn	12 17 34.7	+1.2
GBRS	Gornja Briga	7.94	329	*i* Pn	Pn	12 17 33.0	-0.6
GBRS				*e*Sn	Sn	12 18 57.9	-5.4
GBRS				*i*		12 20 04.1	
CRES	Cresnjev	7.95	333	⇑*i*Pn	Pn	12 17 32.4	-1.2
CRES	Cresnjev	7.95	333	*i* Pn	Pn	12 17 32.4	-1.2
TLBR	Topalu	7.95	42	⇓P	Pn	12 17 35.3	+1.7
HARR	Harsova	7.99	41	⇑P	Pn	12 17 36.5	+2.2
HARR	Harsova	7.99	41	P	Pn	12 17 36.4	+2.2
LOBO	Lobor	8.03	337	*e*Pn	Pn	12 17 32.9	-1.9
GRER		8.05	34	⇑P	Pn	12 17 37.9	+2.8
BISRR	Bisoca	8.07	32	⇑P	Pn	12 17 38.4	+2.9
DRGR		8.08	10	P	Pn	12 17 37.3	+1.7
DRGR				pmax	pmax		
	comp=Z,25nm,0.6s						
TIRR	Tirgusor	8.09	44	⇑P	Pn	12 17 37.2	+1.6
TIRR	Tirgusor	8.09	44	P	Pn	12 17 36.2	+0.7
TIRR	Tirgusor	8.09	44	⇑P	Pn	12 17 36.5	+1.0
TIRR	Tirgusor	8.09	44		Pn	12 17 36.2	+0.7
COVR	Voineasa-Covas	8.12	29	⇓P	Pn	12 17 38.5	+2.5
CJR	Cluj-Napoca	8.16	15	⇑P	Pn	12 17 38.0	+1.4
CJR	Cluj-Napoca	8.16	15	P	Pn	12 17 38.0	+1.4
OZUR		8.18	26	⇑P	Pn	12 17 38.5	+1.6
SLUM	Salum	8.25	152	P	Pn	12 17 37.0	-0.8
	baz=151						
CEY	Cerknica	8.27	328	⇑*i*Pn	Pn	12 17 37.3	-0.8
TIH	Tihany	8.29	347	*e*PN	Pn	12 17 37.5	-0.8
TIH	Tihany	8.29	347	*e*P	Pn	12 17 42.3	+4.0
SKDS	Skadanscina	8.29	326	*i* Pn	Pn	12 17 36.8	-1.6
PLOR	Plostina	8.30	31	⇓P	Pn	12 17 41.2	+2.7
PLOR	Plostina	8.30	31	P	Pn	12 17 41.2	+2.7
MDUB	Mudurnu	8.32	75		Pn	12 17 40.1	+1.2
VRI	Vrincioaia	8.34	31	⇑P	Pn	12 17 42.0	+3.0
VRI	Vrincioaia	8.34	31	P	Pn	12 17 41.6	+2.6
VRI				pmax	pmax		
	comp=Z,492nm,0.9s						
TPGR	Topolog	8.36	42	⇑P	Pn	12 17 40.8	+1.5
CASP	Castiglione de	8.38	301		Pn	12 17 39.2	-0.3
CFR	Carcaliu	8.44	39	⇑P	Pn	12 17 43.1	+2.7
CFR	Carcaliu	8.44	39	P	Pn	12 17 42.1	+1.7
CFR				pmax	pmax		
	comp=Z,55nm,0.8s						
OSSC	Osservatorio P	8.47	306		Pn	12 17 41.8	+1.0
LJU	Ljubljana	8.48	330	⇑*i*Pn	Pn	12 17 39.7	-1.2
LJU	Ljubljana	8.48	330	*e*Pn	Pn	12 17 39.5	-1.5
JURR	Jurilovca	8.54	44	⇑P	Pn	12 17 43.7	+2.0
MPLH	Magyarpolny	8.61	346	*e*PN	Pn	12 17 41.7	-1.1
MPLH	Magyarpolny	8.61	346	*e*P	Pn	12 17 42.1	-0.6
MPLH	Magyarpolny	8.61	346	*e*SN	Sn	12 19 16.7	-3.0
ARCR	ARCALIA	8.67	17	⇓P	Pn	12 17 45.4	+1.9
VSL	Villasalto	8.76	278	⇑P	Pn	12 17 47.5	+2.8
VSL	Villasalto	8.76	278		Pn	12 17 44.7	0.0
SOKA	Soboth	8.83	334	*i* Pn	Pn	12 17 44.5	-1.4
	comp=Z,44nm,0.4s,SNR=70						
SOKA				*e*Sn	Sn	12 19 27.0	+1.8
	comp=Z,46nm,0.7s						
TESR	Tescani	8.85	28	⇑P	Pn	12 17 48.6	+2.6
OBKA	Obir	8.86	332	*e*Sn	Sn	12 19 23.7	-2.1
	comp=Z,92nm,0.4s						
OBKA	Obir	8.86	332	*i* Pn	Pn	12 17 44.7	-1.5
	comp=Z,96nm,0.7s,SNR=55						
BMR	Baia Mare	9.06	12	P	Pn	12 17 54.5	+5.6
BMR				pmax	pmax		
	comp=Z,92nm,1.1s						
ZCCA	Zocca	9.07	310		Pn	12 17 49.6	+0.5
PSZ	Piszkesteto	9.08	357	⇑P	Pn	12 17 49.6	+0.4
PSZ	Piszkesteto	9.08	357	*e*PN	Pn	12 17 49.6	+0.4
PSZ	Piszkesteto	9.08	357	*e*P	Pn	12 17 52.0	+2.8
PSZ	Piszkesteto	9.08	357	P	Pn	12 17 49.2	0.0
PSZ	Piszkesteto	9.08	357	⇑P	Pn	12 17 51.4	+2.2
PSZ	Piszkesteto	9.08	357		Pn	12 17 49.2	0.0
ARSA	Arzberg	9.18	338	*i* Pn	Pn	12 17 49.1	-1.5
	comp=Z,24nm,0.5s,SNR=26						
PTCC	Patocco-Chiusa	9.25	327	⇓P	Pn	12 17 49.0	-2.6
TEOL	Teolo	9.30	317		Pn	12 17 50.3	-1.8
SOP	Sopron	9.31	343	*e*PN	Pn	12 17 52.0	-0.3
SOP	Sopron	9.31	343	*e*P	Pn	12 17 56.7	+4.4
SOP	Sopron	9.31	343	P	Pn	12 17 51.9	-0.4
SOP				pmax	pmax		
	comp=Z,67nm,0.8s						
MYKA	Terra Mystica	9.31	329	*i* Pn	Pn	12 17 51.5	-0.9
	comp=Z,26nm,0.6s,SNR=17						
MYKA				*e*Sn	Sn	12 19 35.0	-1.9
	comp=Z,28nm,0.4s						
VLC	Villacollemand	9.33	308	⇑P	Pn	12 17 52.9	+0.3
BURAR	Bucovina Array	9.38	19	⇓P	Pn	12 17 55.7	+2.3
BURAR	Bucovina Array	9.38	19	P	Pn	12 17 55.6	+2.3
TRPA	Tarpa	9.38	8	*e*PN	Pn	12 17 54.6	+1.4
TRPA	Tarpa	9.38	8	*e*P	Pn	12 17 56.3	+3.1
BUR08	Bucovina Ar. S	9.40	19		Pn	12 17 54.8	+1.1
ANTO	Ankara	9.49	80	P	Pn	12 17 55.2	+0.4
ANTO	Ankara	9.49	80	P	Pn	12 17 54.9	0.0
ANTO	Ankara	9.49	80		Pn	12 17 55.2	+0.4
KEST	Kesra	9.51	254	Pn	Pn	12 17 57.1	+2.0
	comp=Z,0.8nm,0.3s,baz=13,slow=9.4,SNR=9.5						
KEST				LR	LR	12 22 35.1	
	comp=Z,1µm,20.8s,baz=26,slow=44						
KEST	Kesra	9.51	254	P	Pn	12 17 58.0	+2.9
	SNR=11						
KEST	Kesra	9.51	254		Pn	12 17 54.9	-0.2
ZOU	Zoufplan	9.53	326		Pn	12 17 54.2	-1.3
PGF	Pioggiola	9.56	296	P	Pn	12 17 58.3	+2.4
PGF				pmax	pmax		
	comp=Z,147nm,0.7s						
PGF	Pioggiola	9.56	296	P	Pn	12 17 57.5	+1.6
KECS	Kecovo	9.63	359	*e*P	Pn	12 17 58.3	+1.6
KECS	Kecovo	9.63	359	*e*PN	Pn	12 17 58.3	+1.6
ZST	Bratislava	9.68	346	*e*P	Pn	12 18 00.8	+3.4
ZST				*e*		12 19 38.5	
ZST	Bratislava	9.68	346	*e*PN	Pn	12 18 00.8	+3.4
ZST				*e*SN	Sn	12 19 38.5	-7.4
PRMA	PARMA	9.70	311		Pn	12 17 56.9	-0.6
CONA	Conrad Observa	9.71	341	*e*Pn	Pn	12 17 56.6	-1.3
	comp=Z,7.9nm,0.5s						
VYHS	Vyhne	9.72	353	*e*P	Pn	12 17 57.1	-0.9
VYHS	Vyhne	9.72	353	*e*PN	Pn	12 17 57.1	-0.9
CTI	Castel Tesino	9.78	320	P	Pn	12 17 56.8	-2.0
CTI	Castel Tesino	9.78	320	Pn	Pn	12 17 56.8	-2.0
KBA	Koelnbreinsper	9.79	329	*i* Pn	Pn	12 17 58.5	-0.6

	comp=Z,1.5nm,0.1s,SNR=26						
KBA				eSn	Sn	12 19 42.4	-6.5
	comp=Z,30nm,0.5s						
KBA	Koelnbreinsper	9.79	329	P	Pn	12 17 58.4	-0.7
KBA				pmax	pmax		
	comp=Z,105nm,1.3s						
MODS	Modra-Piesok	9.82	347	eP	Pn	12 17 58.4	-0.9
MODS				e		12 19 42.7	
MODS				MLR	MLR		
	comp=Z,5µm,22.4s						
MODS	Modra-Piesok	9.82	347	ePN	Pn	12 17 58.4	-0.9
MODS				eSN	Sn	12 19 42.7	-6.6
MODS				eL	L	12 22 00.1	
UZH	Uzhgorod	9.85	7	eP	Pn	12 18 04.4	+4.7
UZH				eS	Sn	12 19 56.4	+6.4
UZH				MLR	MLR		
	comp=Z,300nm,11.0s						
KOLL	Kolacno	9.86	351	ePN	Pn	12 18 01.5	+1.7
KOLL				eSN	Sn	12 19 46.8	-3.3
ABTA	Abfaltersbach	9.88	326	eSn	Sn	12 19 45.7	-5.2
	comp=Z,185nm,0.9s						
ABTA	Abfaltersbach	9.88	326	i Pn	Pn	12 17 59.1	-1.2
	SNR=27						
SMOL	Smolenice	9.93	348	eP	Pn	12 18 04.9	+4.1
SMOL	Smolenice	9.93	348	ePN	Pn	12 18 04.9	+4.1
MSSA	Maissana	9.95	307		Pn	12 17 59.8	-1.3
MILM	Milestii Mici	10.05	34	c iP	Pn	12 18 03.7	+1.2
MILM				eS	Sn	12 20 02.0	+7.1
MILM				pmax	pmax		
	comp=Z,20nm,0.6s						
MILM				MLR	MLR		
	comp=N,6µm,14.0s						
MILM				MLR	MLR		
	comp=E,4µm,12.0s						
MILM				MLR	MLR		
	comp=Z,4µm,12.0s						
CRVS	Cervenica-Dubn	10.07	3	eP	Pn	12 18 03.7	+1.0
CRVS				MLR	MLR		
	comp=Z,3µm,19.2s						
CRVS	Cervenica-Dubn	10.07	3	ePN	Pn	12 18 03.7	+1.0
CRVS				eL	L	12 21 47.4	
SALO	Salr	10.08	315	Pn	Pn	12 18 01.3	-1.6
MOA	Molln	10.11	335	ePn	Pn	12 18 02.6	-0.7
	comp=Z,43nm,0.8s,SNR=28						
MOA				eSn	Sn	12 19 52.0	-4.4
	comp=Z,33nm,0.6s						
KIS	Kishinev	10.12	34	eP	Pn	12 18 02.9	-0.4
KIS				eS	Sn	12 20 03.0	+6.5
KIS				eLq	LQ	12 21 30.0	
	comp=Z,2µm,12.5s						
KIS				LRM	MLR	12 23 05.0	
	comp=Z,2µm,12.0s						
KIS	Kishinev	10.12	34	eP	Pn	12 18 03.0	-0.4
KIS				eS	Sn	12 20 03.0	+6.5
KIS				MLR	MLR		
	comp=N,2µm,12.5s						
KIS				MLR	MLR		
	comp=Z,2µm,12.0s						
KIS				MLR	MLR		
	comp=E,2µm,11.0s						
BR131	Keskin Array S	10.13	81	P	Pn	12 18 04.4	+0.6
BR131	Keskin Array S	10.13	81	P	Pn	12 18 07.1	+3.4
	SNR=14						
BR131	Keskin Array S	10.13	81	Pn	Pn	12 18 04.4	+0.6
BRTR	Keskin Array B	10.13	81	Pn	Pn	12 18 07.8	+4.1
	comp=E,1.6nm,0.3s,baz=265,slow=12,SNR=14						
BRTR				Sn	Sn	12 19 55.8	-1.4
	comp=E,0.2nm,0.3s,baz=259,slow=13,SNR=0.9						
BRTR				LR	LR	12 22 03.8	
	comp=E,2µm,21.6s,baz=278,slow=39						
KOLS	Kolonicke sedl	10.15	6	eP	Pn	12 18 08.1	+4.2
KOLS	Kolonicke sedl	10.15	6	ePN	Pn	12 18 08.0	+4.2
BOB	Bobbio (Coli)	10.22	309	⇓P	Pn	12 18 05.8	+1.0
JAVC	Velka Javorina	10.23	349	ePN	Pn	12 18 04.4	-0.5
LANS	Liptovska Anna	10.33	356	eP	Pn	12 18 10.1	+3.8
LANS	Liptovska Anna	10.33	356	ePN	Pn	12 18 10.1	+3.8
SWA2		10.39	156	P	Pn	12 18 05.1	-2.0
	baz=156						
SWA2				S	Sn	12 19 51.5	-12
	baz=156						
NIE	Niedzica	10.57	359	eP	Pn	12 18 17.6	+8.0
STHS	Stebnicka Huta	10.57	2	eP	Pn	12 18 14.0	+4.4
STHS	Stebnicka Huta	10.57	2	ePN	Pn	12 18 14.0	+4.4
KRUC	Moravsky	10.65	345	P	Pn	12 18 11.0	+0.4
KRUC				pmax	pmax		
	comp=Z,25nm,0.8s						
KRUC	Moravsky	10.65	345	ePN	Pn	12 18 10.2	-0.4
WTTA	Wattenberg	10.66	325	i Pn	Pn	12 18 11.1	+0.1
	comp=Z,23nm,0.4s,SNR=26						
WTTA				eSn	Sn	12 20 05.8	-4.4
	comp=Z,88nm,0.5s						
WTTA	Wattenberg	10.66	325	P	Pn	12 18 10.4	-0.6
WTTA				pmax	pmax		
	comp=Z,165nm,0.8s						
BZK	Bozkurt	10.67	69		Pn	12 18 11.1	+0.2
WATA	Walderalm	10.74	325	i Pn	Pn	12 18 12.0	-0.1
	comp=Z,88nm,0.6s,SNR=46						
WATA				eSn	Sn	12 20 06.8	-5.4
	comp=Z,114nm,0.9s						
SQTA	Sankt Quirin	10.83	324	i Pn	Pn	12 18 13.6	+0.4
	comp=Z,28nm,0.4s,SNR=23						
VRAC	Vranov	10.85	346	Pn	Pn	12 18 12.0	-1.3
	comp=Z,1.0nm,0.3s,baz=180,slow=11,SNR=6.5						
VRAC				LR	LR	12 22 35.9	
	comp=Z,3µm,21.8s,baz=171,slow=39						
VRAC	Vranov	10.85	346	ePN	Pn	12 18 12.1	-1.3
KWP	Kalwaria Pacla	10.88	7	P	Pn	12 18 15.7	+1.9
CSS	Mathiatis	10.89	107	⇓P	Pn	12 18 17.8	+3.7
CSS	Mathiatis	10.89	107		Pn	12 18 13.7	-0.3
FETA	Feichten	10.91	322	i Pn	Pn	12 18 14.0	-0.3
	comp=Z,13nm,0.7s,SNR=11						
CKRC	Cesky Krumlov	10.95	338	ePN	Pn	12 18 14.0	-0.8
CKRC				AMS	AMS	12 23 00.0	
	comp=Z,5µm,10.8s						
MOTA	Moosalm	10.97	324	i Pn	Pn	12 18 15.3	+0.2
	comp=Z,188nm,0.7s,SNR=77						
MOTA				eSn	Sn	12 20 13.0	-4.6
	comp=Z,148nm,0.8s						
PART	Garmisch-Parte	11.07	324	ePn	Pn	12 18 17.5	+1.0
PART				eSn	Sn	12 20 14.2	-5.9
ZUGS	Zugspitze, Sch	11.08	324	ePn	Pn	12 18 17.7	+0.9
ZUGS				eSn	Sn	12 20 17.3	-3.2
MORC	Moravsky Berou	11.14	350	P	Pn	12 18 16.9	-0.5
MORC	Moravsky Berou	11.14	350	ePN	Pn	12 18 18.3	+0.9
MORC	Moravsky Berou	11.14	350	⇑P	Pn	12 18 18.6	+1.2
MORC	Moravsky Berou	11.14	350		Pn	12 18 16.9	-0.5
GEC2	GERESS Array S	11.16	336	ePn	Pn	12 18 16.4	-1.3
GEC2				eSn	Sn	12 20 16.3	-6.0
GEC2	GERESS Array S	11.16	336		Pn	12 18 16.1	-1.7
GERES	GERESS Array B	11.16	336	Pn	Pn	12 18 15.8	-2.0
	comp=Z,3.1nm,0.3s,baz=156,slow=14,SNR=23						
GERES				Sn	Sn	12 20 15.9	-6.4
	comp=Z,5.2nm,0.3s,baz=151,slow=24,SNR=6.7						
GERES	GERESS Array B	11.16	336	P	Pn	12 18 16.5	-1.3
GERES	GERESS Array B	11.16	336	Pn	Pn	12 18 16.5	-1.3
DAVOX	Davos/Dischmat	11.17	319	Pn	Pn	12 18 18.4	+0.4
	comp=Z,3.5nm,0.3s,baz=148,slow=19,SNR=25						
DAVOX				Sn	Sn	12 20 19.8	-2.9
	comp=Z,2.9nm,0.3s,baz=301,slow=17,SNR=5.4						
DAVOX				LR	LR	12 23 06.3	
	comp=Z,1µm,20.1s,baz=140,slow=40						
RETA	Reutte	11.23	323	i Pn	Pn	12 18 18.9	+0.2
	comp=Z,21nm,0.6s,SNR=11						
RETA				eSn	Sn	12 20 19.5	-4.4
	comp=Z,60nm,0.7s						
LVV	L'vov	11.23	11	eP	Pn	12 18 20.5	+1.9
LVV				eS	Sn	12 20 25.5	+1.6
LVV				pmax	pmax		
	comp=Z,90nm,1.2s						
TUE	Stuetta	11.26	316	⇓P	Pn	12 18 18.8	-0.4
TUE	Stuetta	11.26	316	Pn	Pn	12 18 19.0	-0.2
KHC	Kasperske Hory	11.45	336	eP	Pn	12 18 19.6	-2.1
KHC				e		12 20 21.9	
KHC				MLR	MLR		
	comp=Z,4µm,11.6s						
KHC	Kasperske Hory	11.45	336	ePN	Pn	12 18 19.6	-2.1
KHC				eSN	Sn	12 20 21.9	-7.4
KHC				AMS	AMS	12 23 40.0	
	comp=Z,4µm,11.6s						
KHC	Kasperske Hory	11.45	336	⇓P	Pn	12 18 19.8	-1.9
ISO	Isola	11.48	302	P	Pn	12 18 24.7	+2.6
ISO				pmax	pmax		
	comp=Z,36nm,1.5s						
DAVA	Damuels	11.51	321	Pn	Pn	12 18 23.0	+0.4
	comp=Z,15nm,0.7s,SNR=7.9						
PLONS	Plons/SG	11.61	319	ePn	Pn	12 18 25.5	+1.6
WET	Wettzell	11.69	334	P	Pn	12 18 22.6	-2.4
WET				pmax	pmax		
	comp=Z,56nm,0.8s						
WET	Wettzell	11.69	334	ePn	Pn	12 18 23.9	-1.1
WET				eSn	Sn	12 20 29.6	-5.6
SIM	Simferopol'	11.75	54	eP	Pn	12 18 27.7	+1.9
SIM				pmax	pmax		
	comp=Z,48nm,1.2s						
PRU	Pruhonice	11.95	341	eP	Pn	12 18 27.7	-0.7
PRU				MLR	MLR		
	comp=Z,4µm,13.9s						
PRU	Pruhonice	11.95	341	ePN	Pn	12 18 27.7	-0.7
PRU				AMS	AMS	12 24 10.0	
	comp=Z,4µm,13.9s						
BNI	Bardonecchia	12.08	305	P	Pn	12 18 34.4	+4.0
BNI				pmax	pmax		
	comp=Z,37nm,0.9s						
WALHA	Wallhausen, DE	12.21	320	ePn	Pn	12 18 31.3	-0.6
NORI	Noerdlinger Ri	12.21	327	ePn	Pn	12 18 29.6	-2.4
SENIN	Lac Senin/Sane	12.34	312	Pn	Pn	12 18 34.1	+0.1
HNAT	Natroun	12.36	135	P	Pn	12 18 31.4	-2.8
	baz=135						
KSP	Ksiaz	12.37	347	P	Pn	12 18 36.0	+1.8
EMING	Emmingen-Lipti	12.44	320	ePn	Pn	12 18 34.7	-0.5
SLE	Schleitheim	12.53	319	P	Pn	12 18 37.4	+1.0
SLE				pmax	pmax		
	comp=Z,44nm,0.9s						
SLE	Schleitheim	12.53	319	ePn	Pn	12 18 37.2	+0.8
SLE				eSn	Sn	12 20 48.2	-7.5
METMA	Mettma DE	12.62	319	ePn	Pn	12 18 36.6	-1.0
METMA				eSn	Sn	12 20 49.0	-8.8
BERGE	Lenzkirch (DE)	12.76	319	ePn	Pn	12 18 41.2	+1.6
BERGE				eSn	Sn	12 20 53.5	-7.9
NKC	Novy Kostel	12.77	336	eP	Pn	12 18 40.8	+1.1
NKC				MLR	MLR		
	comp=Z,4µm,11.2s						
NKC	Novy Kostel	12.77	336	ePN	Pn	12 18 40.8	+1.1
NKC				AMS	AMS	12 24 30.0	
	comp=Z,4µm,11.2s						
STU	Stuttgart	12.88	324	P	Pn	12 18 43.1	+1.9
STU				pmax	pmax		
	comp=Z,194nm,1.0s						
BRG	Berggiesshubel	12.91	341	P	Pn	12 18 44.1	+2.5
BRG				pmax	pmax		
	comp=Z,25nm,0.9s						
BRG	Berggiesshubel	12.91	341	eP	Pn	12 18 44.0	+2.4
BRG				Amp		12 18 45.4	
	comp=Z,12nm,1.0s						
BRG	Berggiesshubel	12.91	341	P	P	12 18 51.6	-0.7
BRG				Amp		12 18 52.3	
	comp=Z,9.7nm,0.8s						
BRG	Berggiesshubel	12.91	341	P	P	12 18 57.6	+5.4
BRG				Amp		12 18 59.8	
	comp=Z,17nm,0.9s						
BRG				Amp		12 23 36.0	
	comp=E,6.0nm,11.5s						
BRG				Amp		12 23 37.0	
	comp=Z,3.6nm,8.6s						
BRG				Amp		12 23 41.0	
	comp=N,4.7nm,12.5s						
BFO	Black Forest	12.99	321	P	Pn	12 18 41.1	-1.5
BFO	Black Forest	12.99	321	ePn	Pn	12 18 41.2	-1.4
BFO				eSn	Sn	12 20 55.9	-11
BFO	Black Forest	12.99	321	P	Pn	12 18 41.3	-1.3
BFO	Black Forest	12.99	321	Pn	Pn	12 18 41.1	-1.5
MMAI	Mount Meron Ar	13.31	111	Pn	Pn	12 18 44.8	-2.4
	comp=N,4.1nm,0.3s,baz=317,slow=12,SNR=16						
MMAI				Sn	Sn	12 21 10.1	-5.0
	comp=N,3.1nm,0.3s,baz=308,slow=27,SNR=3.9						
AKASG	Malin Array Be	13.32	24	Pn	Pn	12 18 44.5	-2.6
	comp=N,2.0nm,0.3s,baz=210,slow=13,SNR=7.0						
AKASG				LR	LR	12 23 57.3	
	comp=N,524nm,21.8s,baz=200,slow=38						
AKBB	Malin Array Si	13.32	24	i P	Pn	12 18 45.6	-1.5
HFRF	Wahat Farafira	13.33	149	P	Pn	12 18 44.1	-3.2
	baz=149						
MOX	Moxa	13.40	335	P	Pn	12 18 45.9	-2.4
MOX				pmax	pmax		
	comp=Z,56nm,1.1s						
MOX	Moxa	13.40	335	ePn	Pn	12 18 47.7	-0.5
MOX				eSn	Sn	12 21 07.6	-9.4
SUZ	Suez	13.50	128	P	Pn	12 18 46.3	-3.4
	baz=128						
ECH	Echery	13.51	318	P	Pn	12 18 50.3	+0.6
ECH				pmax	pmax		
	comp=Z,419nm,1.1s						
ECH	Echery	13.51	318	ePn	Pn	12 18 50.2	+0.4
ECH				eSn	Sn	12 21 09.1	-10
ECH	Echery	13.51	318	⇓P	Pn	12 18 48.8	-1.0
CLL	Collm	13.56	339	i P	Pn	12 18 51.1	+0.8
CLL				pmax	pmax		
	comp=Z,470nm,1.2s						
CLL				MLR	MLR		
	comp=Z,2µm,19.2s						
CLL	Collm	13.56	339	i P	Pn	12 18 51.1	+0.8
	comp=Z,47nm,1.2s						
CLL				i (sP)	P	12 18 56.6	-2.8
	comp=Z,7.0nm,0.6s						
CLL				i (sPP)		12 19 04.6	
	comp=Z,47nm,1.2s						
CLL				LmV		12 24 00.0	
	comp=Z,2µm,19.2s						
ANN	Anapa	13.87	59	eP	Pn	12 18 55.2	+0.6
ANN				eS	Sn	12 21 26.6	-1.7
ANN				pmax	pmax		
	comp=Z,38nm,0.8s						
ANN				MLR	MLR		
	comp=Z,2µm,13.0s						
TAMRE	El Minia	14.07	139	P	Pn	12 18 54.1	-3.3
	baz=139						
TNS	Taunus Mts	14.28	327	ePn	Pn	12 18 57.8	-2.5
TNS				eSn	Sn	12 21 28.4	-10
GRB	Gharib	14.62	133	P	Pn	12 19 01.6	-3.5
	baz=132						
ASF	Jabal al Asfar	14.83	112	Pn	Pn	12 19 07.7	-0.2
	comp=Z,0.3nm,0.3s,baz=270,slow=6.1,SNR=10						
ASF				Sn	Sn	12 21 49.6	-2.4
	comp=Z,0.3nm,0.3s,baz=229,slow=20,SNR=1.0						
WLF	Walferdange	14.95	321	dP	P	12 19 16.4	+1.5
WLF				dPP	PbPb	12 19 58.9	+0.5
WLF	Walferdange	14.95	321	P	Pn	12 19 09.6	+0.3
WLF	Walferdange	14.95	321		Pn	12 19 09.6	+0.3
EIL	Elat	14.96	123	Pn	Pn	12 19 06.0	-3.6
	comp=Z,1.8nm,0.3s,baz=322,slow=5.9,SNR=9.9						
EIL				Sn	Sn	12 21 41.1	-14
	comp=Z,2.6nm,0.3s,baz=64,slow=1.2,SNR=5.4						
EIL				LR	LR	12 26 30.2	
	comp=Z,487nm,20.0s,baz=306,slow=44						
SOC	Sochi	15.12	66	eP	P	12 19 15.4	-1.4
SOC				e		12 22 06.7	
SOC				pmax	pmax		
	comp=Z,41nm,1.6s						
SOC				MLR	MLR		
	comp=Z,620nm,12.0s						
SUW	Suwalki	15.27	6	eP	P	12 19 16.8	-1.5
SUW	Suwalki	15.27	6	eP	P	12 19 19.4	+1.0
SUW	Suwalki	15.27	6	P	Pn	12 19 14.1	+0.6
SUW				pmax	pmax		
	comp=Z,184nm,1.0s						
SUW	Suwalki	15.27	6		Pn	12 19 14.1	+0.6
BTNL	Ternell	15.58	324	dx	P	12 19 21.8	-0.1
BTNL				dPP	PnPn	12 19 26.1	+0.1
MEM	Membach	15.65	323	dP	P	12 19 24.0	+1.3
MEM				dPP	sP	12 19 28.7	+0.2
MEM	Membach	15.65	323	P	P	12 19 22.7	+0.1
MEM				pmax	pmax		
	comp=Z,63nm,0.9s						
BCLA	Clavier	15.86	322	dPP	P	12 19 31.6	+6.7
BGES	Gesves	15.94	321	dP	Pn	12 19 22.6	+0.3
BGES				dx	P	12 19 27.1	+1.2
DOU	Dourbes	16.00	320	dP	Pn	12 19 23.1	0.0
DOU				dpP	P	12 19 25.3	-1.2
DOU				dPP	sP	12 19 32.0	-0.3
BMRD	Maredsous	16.04	321	dx	P	12 19 26.5	-0.5
BMRD				dPP	PnPn	12 19 32.2	0.0
MNK	Minsk	16.41	15	i P	Pn	12 19 23.6	-4.8
MNK				i S	Sn	12 22 26.1	-4.1
MNK				pmax	pmax		
	comp=E,2.0nm,0.8s						
MNK				pmax	pmax		
	comp=N,31nm,0.8s						
MNK				pmax	pmax		
	comp=Z,78nm,0.8s						
MNK				MLR	MLR		
	comp=E,308nm,15.0s						
MNK				MLR	MLR		
	comp=N,658nm,15.0s						
MNK				MLR	MLR		
	comp=Z,1µm,18.0s						
MNK	Minsk	16.41	15	i LRM	MLR	12 26 09.8	
	comp=Z,1µm,17.8s						
MNK	Minsk	16.41	15	i P	Pn	12 19 23.6	-4.7
	comp=Z,78nm,0.8s,baz=202						
MNK	Minsk	16.41	15	i P	Pn	12 19 23.6	-4.7
	comp=E,2.0nm,0.8s						
MNK	Minsk	16.41	15	i P	Pn	12 19 23.6	-4.7
	comp=N,31nm,0.8s						
MNK	Minsk	16.41	15	i PP	P	12 19 32.6	+1.5
MNK	Minsk	16.41	15	i S	Sn	12 22 26.2	-4.0
MNK	Minsk	16.41	15	i SS	S	12 22 40.6	-1.8
MNK	Minsk	16.41	15	i LR	LR	12 24 34.7	
MNK	Minsk	16.41	15	i LRM	MLR	12 26 03.4	
	comp=E,308nm,14.7s						
MNK	Minsk	16.41	15	i LRM	MLR	12 26 04.7	
	comp=N,658nm,14.9s						
NACGM	Naroch	16.59	13	i P	P	12 19 32.1	-0.9
BSEG	Bad Segeberg	16.65	338	P	P	12 19 34.6	+0.9
BSEG				pmax	pmax		
	comp=Z,83nm,0.9s						
GURO	Guroymak-BITLI	16.72	84	P	P	12 19 34.3	-0.5
PABE	Paberze	16.81	7	eP	P	12 19 36.6	+1.1
PABE				IAmb	IAmb	12 19 58.9	
	comp=Z,179nm,1.3s						
PABE	Paberze	16.81	7		Pn	12 19 31.7	-1.7
PABE				IAmb	IAmb	12 19 36.9	
	comp=Z,225nm,1.3s						
ISAL	Salakas	17.13	11	eP	P	12 19 39.4	+0.4
PBUR	Paburge	17.20	2	IAmb	IAmb	12 19 55.1	
	comp=Z,353nm,1.5s						
SIRT	Sirnak	17.21	88	P	P	12 19 39.8	-0.3
KIV	Kislovodsk	17.31	66	eP	Pn	12 19 40.3	+0.5
KIV				eS	Sn	12 22 55.3	+3.2
KIV				pmax	pmax		
	comp=Z,41nm,1.0s						
KIV	Kislovodsk	17.31	66	P	Pn	12 19 39.7	-0.1
KIV	Kislovodsk	17.31	66	P	P	12 19 40.8	-0.3
KIV				IAmb	IAmb	12 20 00.6	
	comp=Z,124nm,1.5s						
KARS	Kars	17.36	77	P	P	12 19 42.3	+0.4
KARS				pmax	pmax		
	comp=Z,244nm,1.1s						
KARS	Kars	17.36	77	P	P	12 19 42.3	+0.4
KARS				IAmb	IAmb	12 20 01.6	
	comp=Z,244nm,1.1s						
KBZ	Khabaz	17.42	67	P	Pn	12 19 40.7	-0.4
	comp=Z,0.4nm,0.3s,baz=277,slow=8.2,SNR=14						
KBZ				LR	LR	12 27 23.6	
	comp=Z,488nm,20.1s,baz=255,slow=41						
KBZ	Khabaz	17.42	67	ceP	P	12 19 42.2	-0.1
GOF	Gofitskoye	17.77	62	⇑eP	P	12 19 50.9	+4.7
GOF				pmax	pmax		
	comp=Z,59nm,0.9s						
NCK	Nalchik	17.89	68	i P	Pn	12 19 46.8	-0.2
NCK				pmax	pmax		
	comp=Z,37nm,0.8s						
VSR	Storozhevoye	17.96	40	eP	Pn	12 19 47.2	-0.4
VSR				pmax	pmax		
	comp=Z,60nm,1.0s						
VSR				MLR	MLR		
	comp=Z,2µm,12.0s						
ZEI	Tsey	18.04	70	eP	P	12 19 49.8	+0.4
ZEI				pmax	pmax		
	comp=Z,13nm,0.9s						
VORR	Voronezh	18.25	39	eP	Pn	12 19 50.0	-1.2
VORR				pmax	pmax		
	comp=Z,250nm,2.0s						
GNI	Garni	18.65	78	P	P	12 19 56.0	-0.1
	comp=Z,2.6nm,0.3s,baz=357,slow=2.5,SNR=4.8						
GNI				LR	LR	12 28 35.5	
	comp=Z,479nm,18.3s,baz=276,slow=42						
GNI	Garni	18.65	78	ceP	Pn	12 19 57.6	+1.2
GNI				pmax	pmax		
	comp=Z,33nm,1.0s						
GNI	Garni	18.65	78	P	Pn	12 19 57.8	+1.3
GNI	Garni	18.65	78	P	Pn	12 19 57.1	+0.7
GNI				IAmb	IAmb	12 20 18.5	
	comp=Z,111nm,1.2s						
LPSR	Galich'ya Gora	18.70	37	eP	P	12 19 55.5	-0.8
LPSR				pmax	pmax		
	comp=Z,130nm,0.8s						
LPSR				MLR	MLR		
	comp=Z,2µm,12.0s						
ESBB	Sonseca Array	19.04	280	P	P	12 20 00.3	+0.1
ESDC	Sonseca Array	19.04	280	P	Pn	12 20 01.2	+0.1
	comp=Z,0.5nm,0.3s,baz=76,slow=11,SNR=30						
ESDC				LR	LR	12 26 59.4	
	comp=Z,750nm,20.9s,baz=60,slow=36						
ESDC	Sonseca Array	19.04	280	P	P	12 19 59.8	-0.5
VRH	Novokhopyorsk	19.28	43	eP	Pn	12 20 04.1	+0.4
VRH				pmax	pmax		
	comp=Z,90nm,0.8s						
VRH				MLR	MLR		
	comp=Z,1µm,12.0s						
PAB	San Pablo	19.35	280	P	P	12 20 03.1	-0.6
PAB				pmax	pmax		
	comp=Z,25nm,0.9s						
PAB	San Pablo	19.35	280	⇓P	Pn	12 20 06.8	+2.0
PAB	San Pablo	19.35	280	P	P	12 20 03.1	-0.6
OBN	Obninsk	19.49	28	P	P	12 20 03.9	-1.0
	comp=Z,1.1nm,0.3s,baz=196,slow=9.5,SNR=5.1						
OBN				LR	LR	12 27 58.0	
	comp=Z,186nm,18.9s,baz=208,slow=38						
OBN	Obninsk	19.49	28	⇑eP	P	12 20 04.3	-0.7
OBN				eS	Sn	12 23 41.8	-2.8
OBN				pmax	pmax		
	comp=Z,97nm,1.2s						
OBN				MLR	MLR		
	comp=Z,1µm,14.0s						
OBN	Obninsk	19.49	28	P	P	12 20 04.4	-0.6
OBN				IAmb	IAmb	12 20 17.2	
	comp=Z,57nm,0.7s						
MTSE	Matsula	19.99	5	eP	Pn	12 20 11.5	-0.6
VSU	Vasula	20.02	9	eP	P	12 20 10.3	-0.4
VSU	Vasula	20.02	9	i P	P	12 20 09.2	-1.5
VSU				pmax	pmax		
	comp=Z,109nm,0.7s						
MOS	Moscow	20.36	28	eP	P	12 20 12.1	-2.3
MOS				e		12 20 31.5	
MOS				eS	Sn	12 24 05.0	-0.5
MOS				eSS	SnSn	12 24 27.9	+7.9
MOS				pmax	pmax		
	comp=Z,211nm,1.3s						
MOS				MLR	MLR		
	comp=Z,2µm,13.0s						
STRD	Stroud	20.48	317	eP	Pn	12 20 17.1	-0.8
STRD				IAmb	IAmb	12 20 22.6	
	comp=Z,140nm,0.9s						
MAK	Makhachkala	20.70	70	eP	P	12 20 12.6	-5.6
MAK				eS	S	12 24 02.0	-6.8
MAK				pmax	pmax		
	comp=Z,119nm,0.4s						
HOMB	Homborsund	20.96	342	eP	P	12 20 21.9	+1.0
PBRG	Braganca	21.03	287	eP	P	12 20 24.7	+2.8
	comp=Z,83nm,2.1s						
MCH1	Michaelchurch	21.04	316	eP	P	12 20 25.4	+3.6
MCH1				IAmb	IAmb	12 20 27.8	
	comp=Z,105nm,1.0s						
UPP	Uppsala	21.11	356	eP	P	12 20 23.4	+0.9
HLM1	Long Mynd	21.23	318	eP	P	12 20 23.8	-0.2
MVO	Moncorvo	21.27	285	eP	P	12 20 27.6	+3.1
	comp=Z,65nm,1.9s						
MVO				eLQ	LQ	12 24 22.8	
MVO				eLR	LR	12 25 27.8	
	comp=Z,652nm,18.0s						
MDT	Midelt	21.29	261	P	P	12 20 26.7	+1.9
	comp=Z,14nm,0.9s,baz=69,slow=3.6,SNR=22						
MDT				LR	LR	12 29 11.4	
	comp=Z,283nm,19.5s,baz=76,slow=38						
SNART	Snartemo	21.35	340	eP	P	12 20 25.5	+0.5
AAL	Aland	21.35	359	eP	P	12 20 25.8	+0.7
FOEL	Foel Wylfa	21.59	318	eP	P	12 20 28.6	+0.8
PBAR	Barrancos	21.62	277	eP	P	12 20 30.8	+2.5
	comp=Z,152nm,1.7s						
PMRV	Marv??o	21.70	280	eP	P	12 20 29.6	+0.5
	comp=Z,127nm,1.7s						
PMRV				eLQ	LQ	12 24 33.3	
PMRV				eLR	LR	12 25 14.6	
	comp=Z,553nm,16.0s						

MTE	**Manteigas**	21.71	283	*e*P	P	12 20 31.9	+2.6
	comp=Z,74nm,1.3s						
MTE				*e*LQ	LQ	12 24 35.5	
MTE				*e*LR	LR	12 25 36.0	
	comp=Z,828nm,16.0s						
MTE	**Manteigas**	21.71	283	⇑P	P	12 20 32.1	+2.8
MTE	**Manteigas**	21.71	283	P	P	12 20 28.0	-1.3
PCBR	**Castelo Branco**	21.72	282	*e*P	P	12 20 29.6	+0.4
	comp=Z,71nm,1.6s						
HFS	**Hagfors**	21.75	351	P	P	12 20 28.1	-1.3
	comp=Z,24nm,0.5s,baz=153,slow=10.0,SNR=47						
HFS				LR	LR	12 29 11.3	
	comp=Z,1µm,20.9s,baz=168,slow=38						
PUL	**Pulkovo**	21.83	13	*i* P	P	12 20 29.8	-0.4
PUL				pmax	pmax		
	comp=Z,72nm,0.6s						
POLO	**Lamas de Olo**	21.84	286	*e*P	P	12 20 35.6	+5.0
	comp=Z,24nm,1.7s						
PESTR	**Estremoz**	21.94	279	*e*P	P	12 20 32.4	+0.8
	comp=Z,99nm,1.8s						
PESTR	**Estremoz**	21.94	279	⇓P	P	12 20 31.8	+0.1
PESTR	**Estremoz**	21.94	279	P	P	12 20 29.6	-2.0
PVIS	**Viseu**	21.95	284	*e*P	P	12 20 34.3	+2.5
	comp=Z,82nm,1.5s						
KONO	**Kongsberg**	21.97	345	*ce*P	P	12 20 34.1	+2.4
KONO				pmax	pmax		
	comp=Z,34nm,0.7s						
KONO	**Kongsberg**	21.97	345	*e*P	P	12 20 33.2	+1.5
KONO	**Kongsberg**	21.97	345	⇓P	P	12 20 34.9	+3.2
KONO	**Kongsberg**	21.97	345	P	P	12 20 30.6	-1.1
KONO				IAmb	IAmb	12 20 39.0	
	comp=Z,86nm,1.1s						
RSBS	**Rosebush, Pemb**	21.97	315	*e*P	P	12 20 35.8	+4.0
RSBS				IAmb	IAmb	12 20 38.2	
	comp=Z,366nm,2.0s						
OSL	**Oslo**	22.02	347	*e*P	P	12 20 32.5	+0.3
EDMD	**Edmundbyers**	22.07	324	*e*P	P	12 20 31.2	-1.7
EDMD				IAmb	IAmb	12 20 40.0	
	comp=Z,99nm,1.2s						
PGAV	**Gavieira, Arco**	22.17	287	*e*LQ	LQ	12 24 51.6	
PGAV				*e*LR	LR	12 25 45.1	
	comp=Z,573nm,18.0s						
PBEJ	**Beja**	22.29	277	*e*P	P	12 20 36.4	+0.9
	comp=Z,90nm,2.2s						
PVAQ	**Vaqueiros**	22.30	275	*e*P	P	12 20 36.8	+1.2
	comp=Z,50nm,1.7s						
PVAQ				*e*LQ	LQ	12 24 44.1	
PVAQ				*e*LR	LR	12 25 34.5	
	comp=Z,457nm,18.0s						
PVAQ	**Vaqueiros**	22.30	275	P	P	12 20 34.6	-0.9
EVO	**Evora**	22.32	278	*e*P	P	12 20 35.8	+0.1
	comp=Z,66nm,1.6s						
COI	**Coimbra**	22.39	283	IAmb	IAmb	12 20 44.6	
	comp=Z,42nm,0.9s						
PMTG	**Montargil**	22.39	280	*e*P	P	12 20 37.6	+1.1
	comp=Z,80nm,1.8s						
PCAS	**Casmilo, Conde**	22.48	282	*e*P	P	12 20 39.8	+2.4
	comp=Z,71nm,1.5s						
BLS5	**Blasjo**	22.48	341	*e*P	P	12 20 38.7	+1.4
PBDV	**Barranco-do-Ve**	22.51	275	*e*P	P	12 20 38.6	+0.8
	comp=Z,48nm,2.2s						
PCVE	**Castro Verde**	22.51	276	*e*P	P	12 20 39.1	+1.4
	comp=Z,51nm,1.6s						
MESJ	**Messejana**	22.61	277	*e*P	P	12 20 39.5	+0.8
MESJ				IAmb	IAmb	12 20 42.1	
	comp=Z,83nm,1.6s						
MESJ	**Messejana**	22.61	277	*e*P	P	12 20 39.5	+0.8
MESJ	**Messejana**	22.61	277	*e*P	P	12 20 40.2	+1.4
	comp=Z,75nm,1.5s						
KMY	**Karmoy**	22.62	339	*e*P	P	12 20 39.7	+0.9
NC602	**NORSAR Array S**	22.63	348	*e*P	P	12 20 37.6	-1.2
NC602	**NORSAR Array S**	22.63	348	P	P	12 20 38.0	-0.8
NORES	**NORESS Array B**	22.63	348	P	P	12 20 37.8	-1.1
PNCL	**Nicolau / Gran**	22.79	277	*e*P	P	12 20 41.4	+0.7
	comp=Z,126nm,2.0s						
ODD1	**Odda**	22.87	342	*e*P	P	12 20 41.4	+0.1
FINES	**FINESS Array B**	22.87	7	P	P	12 20 39.7	-1.6
	comp=Z,23nm,0.7s,baz=164,slow=9.9,SNR=42						
FINES				PcP	PcP	12 24 31.6	-0.1
	comp=Z,4.1nm,0.7s,baz=196,slow=3.6,SNR=4.9						
FINES				LR	LR	12 29 28.6	
	comp=Z,450nm,18.8s,baz=190,slow=36						
FINES	**FINESS Array B**	22.87	7	*i* P	P	12 20 41.0	-0.4
FINES				pmax	pmax		
	comp=Z,23nm,0.7s						
FINES	**FINESS Array B**	22.87	7	P	P	12 20 40.9	-0.4
FIA1	**FINESS Array S**	22.87	7	P	P	12 20 40.6	-0.7
FIA1				IAmb	IAmb	12 20 49.7	
	comp=Z,69nm,0.9s						
EKA	**Eskdalemuir Ar**	22.93	324	P	P	12 20 41.4	-0.6
	comp=Z,36nm,0.7s,baz=122,slow=10,SNR=80						
EKA				LR	LR	12 31 30.4	
	comp=Z,643nm,19.3s,baz=115,slow=42						
ESK	**Eskdalemuir**	22.94	324	P	P	12 20 41.8	-0.3
ESK				pmax	pmax		
	comp=Z,122nm,0.9s						
ESK	**Eskdalemuir**	22.94	324	⇓P	P	12 20 41.5	-0.6
ESK	**Eskdalemuir**	22.94	324	P	P	12 20 41.8	-0.3
NC405	**NORSAR Array S**	22.97	349	P	P	12 20 41.1	-1.2
NB201	**NORSAR Array S**	22.97	348	P	P	12 20 42.0	-0.4
NB2	**NORSAR Subarra**	22.98	348	P	P	12 20 41.8	-0.7
	comp=Z,42nm,0.9s,baz=161,slow=11						
NOA	**NORSAR Array B**	22.98	348	P	P	12 20 41.5	-1.0
	comp=Z,20nm,0.8s,baz=159,slow=9.4,SNR=23						
NOA				LR	LR	12 30 20.4	
	comp=Z,1µm,18.3s,baz=165,slow=39						
NBO00	**NORSAR Array S**	23.04	348	P	P	12 20 41.9	-1.2
PTEO	**Sao Teotonio**	23.06	276	*e*P	P	12 20 47.0	+3.5
	comp=Z,81nm,1.5s						
BELG	**Belogornoye**	23.07	45	P	P	12 20 42.4	-1.1
	comp=Z,53nm,0.8s,baz=202,slow=0.2,SNR=34						
BELG				LR	LR	12 30 40.5	
	comp=Z,1µm,19.4s,baz=232,slow=39						
BELG	**Belogornoye**	23.07	45	*i* P	P	12 20 42.9	-0.6
BELG				pmax	pmax		
	comp=Z,31nm,0.9s						
EBL	**Broad Law**	23.14	325	*e*P	P	12 20 43.4	-0.8
SKAR	**Skarslia**	23.18	345	*e*P	P	12 20 44.6	+0.1
NC204	**NORSAR Array S**	23.27	348	P	P	12 20 45.3	-0.2
EDI	**Edinburgh**	23.29	325	*e*P	P	12 20 45.2	-0.5
EDI				IAmb	IAmb	12 20 53.5	
	comp=Z,151nm,1.4s						
VALR	**Valaam**	23.42	12	*i* P	P	12 20 45.3	-1.6
VALR				pmax	pmax		
	comp=Z,53nm,0.8s						
BER	**Bergen**	23.60	341	*e*P	P	12 20 50.1	+1.4
ASK	**Askoy**	23.72	341	*e*P	P	12 20 50.9	+1.0
INVG	**Invergeldie, C**	23.98	325	*e*P	P	12 20 54.1	+1.7
HYA	**Hoyanger**	24.08	343	*e*P	P	12 20 54.6	+1.4
DOMB	**Dombas**	24.28	347	*e*P	P	12 20 55.9	+0.8
FOO	**Floro**	24.72	342	*e*P	P	12 21 00.4	+1.3
MDO	**Dochfour**	24.73	327	*e*P	P	12 21 01.6	+2.3
AKN	**Aaknes**	24.80	345	*e*P	P	12 21 01.3	+1.4
KLMR	**Klimovskoe**	24.99	22	*e*P	P	12 20 59.1	-2.4
KLMR				*e*S	S	12 25 22.5	-2.1
KLMR				pmax	pmax		
	comp=Z,61nm,1.3s						
KLMR				MLR	MLR		
	comp=Z,1µm,12.0s						
KLMR	**Klimovskoe**	24.99	22	*e*P	P	12 20 59.2	-2.3
KLMR				AMP		12 21 14.3	
	comp=Z,61nm,1.3s						
KLMR				*e*S	S	12 25 22.6	-2.1
KLMR				*e*S	S	12 25 22.6	-2.1
KLMR				LQ	LQ	12 28 39.6	
KLMR				LQ	LQ	12 28 39.6	
KLMR				LR	LR	12 29 37.5	
KLMR				AMP		12 32 20.8	
	comp=Z,1µm,11.8s						
MOL	**Molde**	25.05	346	*e*P	P	12 21 03.1	+1.1
RAYN	**Ar Rayn**	26.09	119	P	P	12 21 12.0	+0.1
RAYN				pmax	pmax		
	comp=Z,23nm,1.0s						
RAYN	**Ar Rayn**	26.09	119	P	P	12 21 16.5	+4.5
RAYN	**Ar Rayn**	26.09	119	⇑P	P	12 21 17.3	+5.3
RAYN	**Ar Rayn**	26.09	119	P	P	12 21 12.0	+0.1
RAYN				IAmb	IAmb	12 21 19.2	
	comp=Z,23nm,1.0s						
NSS	**Namsos**	26.22	352	*e*P	P	12 21 12.4	-0.2
KIRV	**Kirov**	27.05	34	P	P	12 21 17.3	-2.9
	comp=Z,16nm,0.6s,baz=315,slow=3.8,SNR=5.3						
KIRV				LR	LR	12 32 31.8	
	comp=Z,1µm,18.9s,baz=236,slow=38						
KIRV	**Kirov**	27.05	34	*ce*P	P	12 21 18.5	-1.7
PRGR	**Permogore**	27.52	26	*e*P	P	12 21 23.4	-1.0
PRGR				pmax	pmax		
	comp=Z,46nm,0.8s						
MOR8	**Moi Rana**	27.59	355	*e*P	P	12 21 27.1	+2.1
KONS	**Konsvik**	28.02	354	*e*P	P	12 21 30.3	+1.5
SHMA	**Al-Shehemyia**	28.58	108	P	P	12 21 38.2	+4.1
AKTO	**Aktyubinsk**	28.72	54	P	P	12 21 33.0	-2.3
	comp=Z,9.9nm,0.6s,baz=262,slow=8.7,SNR=35						
AKTO				LR	LR	12 35 14.2	
	comp=Z,557nm,18.5s,baz=271,slow=41						
AKTO	**Aktyubinsk**	28.72	54	*i* P	P	12 21 33.6	-1.6
AKTO				pmax	pmax		
	comp=Z,47nm,1.2s						
FAUS	**Fauske**	28.74	356	*e*P	P	12 21 35.8	+0.6
GEYT	**Alibeck**	29.27	80	P	P	12 21 39.1	-1.2
	comp=Z,9.7nm,0.7s,baz=247,slow=18,SNR=13						
GEYT				LR	LR	12 35 50.6	
	comp=Z,424nm,20.8s,baz=290,slow=42						
GEYT	**Alibeck**	29.27	80	P	P	12 21 39.7	-0.6
GEYT				IAmb	IAmb	12 21 45.7	
	comp=Z,75nm,1.4s						
GYA0B	**ALIBECK ARRAY**	29.27	80	P	P	12 21 39.7	-0.6
GYA0B				IAmb	IAmb	12 21 54.5	
	comp=Z,39nm,0.9s						
STEI	**Steigen**	29.29	356	*e*P	P	12 21 40.8	+0.8
APA	**Apatity**	29.64	10	⇓*i*P	P	12 21 42.6	-0.6
APA				*i*		12 22 36.1	
APA				pmax	pmax		
	comp=Z,15nm,1.1s						
APA				MLR	MLR		
	comp=Z,2µm,14.0s						
AB31	**Akbulak array**	29.80	57	*e*P	P	12 21 43.6	-1.3
ABKAR	**Akbulak array**	29.80	57	⇑P	P	12 21 43.7	-1.2
ABKAR	**Akbulak array**	29.80	57	P	P	12 21 43.6	-1.2
ABKAR	**Akbulak array**	29.80	57	P	P	12 21 43.9	-0.9
ABKAR				IAmb	IAmb	12 21 53.4	
	comp=Z,16nm,1.1s						
JRN	**Qarnain Island**	30.50	107	P	P	12 21 54.9	+3.6
ARU	**Arti**	30.51	42	P	P	12 21 49.4	-1.6
	comp=Z,2.6nm,0.3s,baz=220,slow=4.3,SNR=10						
ARU				LR	LR	12 33 56.3	
	comp=Z,386nm,20.4s,baz=232,slow=36						
ARU	**Arti**	30.51	42	*d i*P	P	12 21 49.2	-1.7
ARU						12 24 46.5	
ARU				S	S	12 26 53.6	+1.9
ARU				SS	ScP	12 28 30.8	-0.8
ARU				pmax	pmax		
	comp=Z,42nm,1.8s						
ARU				MLR	MLR		
	comp=Z,931nm,14.0s						
ARU	**Arti**	30.51	42	P	P	12 21 49.3	-1.7
ARU				IAmb	IAmb	12 22 00.1	
	comp=Z,29nm,0.9s						
TORD	**Torodi Ar. Bea**	30.60	218	P	P	12 21 52.1	-0.1
	comp=Z,11nm,0.8s,baz=29,slow=9.0,SNR=26						
TORD				PcP	PcP	12 24 50.7	+0.1
	comp=Z,0.6nm,0.7s,baz=4.8,slow=4.6,SNR=1.2						
TORD	**Torodi Ar. Bea**	30.60	218	P	P	12 21 51.3	-0.9
JETT	**Jettan, Norway**	30.77	360	*e*P	P	12 21 54.7	+1.5
ARA0	**ARCESS Array S**	30.86	3	*e*P	P	12 21 53.5	-0.5
ARCES	**ARCESS Array B**	30.86	3	P	P	12 21 52.1	-1.8
	comp=Z,2.7nm,0.5s,baz=189,slow=10.0,SNR=19						
ARCES				PcP	PcP	12 24 49.8	-0.6
	comp=Z,3.6nm,0.8s,baz=197,slow=0.9,SNR=6.4						
ARCES				LR	LR	12 36 45.3	
	comp=Z,573nm,18.4s,baz=175,slow=41						
ARCES	**ARCESS Array B**	30.86	3	P	P	12 21 52.8	-1.1
ARCES				pmax	pmax		
	comp=Z,20nm,1.1s						
ARCES	**ARCESS Array B**	30.86	3	P	P	12 21 52.8	-1.1
ARCES				IAmb	IAmb	12 22 04.2	
	comp=Z,20nm,1.1s						
TRO	**Tromso**	30.86	359	*e*P	P	12 21 53.7	-0.2
GHWR	**Ruwais**	31.09	109	P	P	12 22 00.2	+3.8
KEV	**Kevo**	31.15	4	P	P	12 21 56.8	+0.3
KEV				pmax	pmax		
	comp=Z,25nm,1.0s						
KEV	**Kevo**	31.15	4	P	P	12 21 56.8	+0.3
KEV				IAmb	IAmb	12 22 04.5	
	comp=Z,25nm,1.0s						
SVE	**Sverdlovsk**	31.72	42	*de*P	P	12 22 01.0	-0.7
SVE				pmax	pmax		
	comp=Z,74nm,1.3s						
SVE				MLR	MLR		
	comp=Z,1µm,14.0s						
HAMF	**Hammerfest**	31.90	2	*e*P	P	12 22 04.8	+1.7
MZWR	**Madinat Zayed**	31.95	108	P	P	12 22 07.3	+3.3
AJN	**Ajban**	32.31	106	P	P	12 22 11.9	+4.7
SHME	**Shamm**	32.38	103	P	P	12 22 11.1	+3.4
ASUD	**Al Ashush, Dub**	32.54	106	P	P	12 22 13.5	+4.4
KOWA	**Kowa**	32.56	229	P	P	12 22 08.9	-0.4
	comp=Z,10nm,0.8s,baz=34,slow=9.5,SNR=28						
KOWA	**Kowa**	32.56	229	⇑P	P	12 22 12.3	+3.0
KOWA	**Kowa**	32.56	229	P	P	12 22 09.0	-0.4
KOWA				IAmb	IAmb	12 22 13.3	
	comp=Z,11nm,0.8s						
BANOM	**Banah**	32.56	103	P	P	12 22 13.1	+3.6
BANOM				P	P	12 22 13.1	+3.6
NAZ	**Nazwa, Dubai**	32.59	105	P	P	12 22 13.5	+3.9
	SNR=6.4						
NAZ				P	P	12 22 13.5	+3.9
	SNR=6.4						
FAQ	**Al Faqa, Dubai**	32.67	105	P	P	12 22 14.1	+3.8
MASF	**Masafi**	32.75	104	P	P	12 22 14.7	+3.6
MASF				P	P	12 22 14.7	+3.6
MDH	**Madha**	32.90	104	P	P	12 22 16.3	+3.9
UOSS	**Minazif**	33.02	104	P	P	12 22 16.8	+3.4
UOSS	**Minazif**	33.02	104	⇑P	P	12 22 13.3	-0.1
UOSS	**Minazif**	33.02	104	P	P	12 22 13.6	+0.1
UOSS				IAmb	IAmb	12 22 26.8	
	comp=Z,22nm,0.8s						
HATD	**Hatta, Dubai**	33.03	104	P	P	12 22 17.2	+3.6
	SNR=7.6						
ASHO	**Ashiyiah**	33.05	105	P	P	12 22 17.1	+3.4
	SNR=6.8						
ALNE	**Al Ain**	33.17	106	P	P	12 22 18.6	+3.9
	SNR=13						
HRA	**Herat**	33.50	85	P	P	12 22 17.0	-0.7
HRA				IAmb	IAmb	12 22 21.9	
	comp=Z,15nm,0.9s						
UMZA	**Um Al Zommool**	33.52	109	P	P	12 22 21.7	+4.0
UMZA				P	P	12 22 21.7	+4.0
ATD	**Arta Tunnel**	33.65	138	LR	LR	12 36 50.2	
	comp=Z,216nm,20.8s,baz=7.5,slow=38						
SOHO	**SOHO**	33.72	105	P	P	12 22 23.0	+3.5
SOHO				P	P	12 22 23.0	+3.5
ARQ	**Araqi**	34.16	106	P	P	12 22 27.4	+4.0
	SNR=9.1						
HOQ	**Hoqain**	34.62	105	P	P	12 22 30.4	+3.0
HOQ				P	P	12 22 30.4	+3.0
BSY	**Bisya**	35.02	106	P	P	12 22 34.5	+3.7
BSY				P	P	12 22 34.5	+3.7
BIDO	**Bidbid**	35.27	105	P	P	12 22 35.8	+2.9
DOK	**Doka**	35.35	115	P	P	12 22 37.6	+4.0
SMDO	**Samad**	35.47	105	P	P	12 22 37.9	+3.1
	SNR=7.0						
JMIC	**Jan Mayen**	35.53	344	LR	LR	12 36 32.3	
	comp=Z,298nm,21.1s,baz=68,slow=35						
BORG	**Borgarnes**	35.56	330	LR	LR	12 38 47.9	
	comp=Z,378nm,19.6s,baz=133,slow=39						
WHFO	**Wadi Hawf**	35.56	116	P	P	12 22 40.6	+5.1
ABTO	**Aybut**	35.62	118	P	P	12 22 40.9	+4.8
ABTO				P	P	12 22 40.9	+4.8
WSAR	**Wadi Sarin**	35.81	104	P	P	12 22 37.3	-0.3
	comp=Z,4.6nm,0.8s,baz=314,slow=10.0,SNR=5.1						
WSAR				LR	LR	12 39 15.0	
	comp=Z,555nm,20.6s,baz=320,slow=40						
WSAR	**Wadi Sarin**	35.81	104	P	P	12 22 41.7	+4.1
JMDO	**Jabal Madar**	35.91	106	P	P	12 22 43.1	+4.6
	SNR=6.2						
RBK	**Rabkut**	36.15	117	P	P	12 22 45.5	+5.0
WBK	**Wadi Bani Khal**	36.42	105	P	P	12 22 47.0	+4.2
DMTO	**DMTO**	36.53	115	P	P	12 22 48.3	+4.6
DMTO				P	P	12 22 48.3	+4.6
BRVK	**Borovoye**	36.57	51	*i* P	P	12 22 42.7	-1.0
BRVK				pmax	pmax		
	comp=Z,92nm,1.6s						
BRVK	**Borovoye**	36.57	51	⇓P	P	12 22 43.2	-0.6
BRVK	**Borovoye**	36.57	51	P	P	12 22 43.3	-0.5
BRVK				IAmb	IAmb	12 22 48.0	
	comp=Z,45nm,0.8s						
BVAR	**Borovoye Array**	36.63	51	P	P	12 22 43.6	-0.7
	comp=Z,12nm,0.7s,baz=249,slow=12,SNR=54						
SHAO	**Shalim**	36.80	114	P	P	12 22 50.3	+4.2
SHAO				P	P	12 22 50.3	+4.2
DQM	**DQM**	36.97	110	P	P	12 22 50.8	+3.3
DQM				P	P	12 22 50.8	+3.3
JLN	**Jalan Bani Buh**	37.02	105	P	P	12 22 52.1	+4.1
	SNR=6.7						
JLN				P	P	12 22 52.1	+4.1
	SNR=6.7						
KKAR	**Karatay Array**	37.46	67	P	P	12 22 50.9	-0.6
KKAR	**Karatay Array**	37.46	67	P	P	12 22 50.9	-0.6
CHGR	**Chuyangaron**	37.49	75	P	P	12 22 51.6	-0.3
LODK	**Lodwar**	37.74	155	P	P	12 23 01.7	+7.6
LODK	**Lodwar**	37.74	155	P	P	12 22 53.6	-0.5
OTUK	**Ortayu**	38.00	58	P	P	12 22 55.6	-0.4
GAR	**Garm**	38.27	74	P	P	12 22 58.9	+0.4
BTK	**Batken**	38.36	72	P	P	12 22 58.2	-1.1
BTK				pmax	pmax		
	comp=Z,35nm,0.9s						
BTK	**Batken**	38.36	72	P	P	12 22 58.2	-1.1
BTK				IAmb	IAmb	12 23 06.0	
	comp=Z,35nm,0.8s						
KBL	**Kabul**	38.71	81	P	P	12 23 02.0	-0.3
KBL				pmax	pmax		
	comp=Z,13nm,0.7s						
KBL	**Kabul**	38.71	81	P	P	12 23 02.0	-0.3
DBIC	**Dimbokro**	39.44	222	P	P	12 23 08.8	+0.5
	comp=Z,8.4nm,0.8s,baz=30,slow=9.2,SNR=6.9						
DBIC				LR	LR	12 40 26.5	
	comp=Z,727nm,19.1s,baz=46,slow=38						
DBIC	**Dimbokro**	39.44	222	⇓P	P	12 23 11.2	+2.9
SPITS	**Spitsbergen Ar**	39.48	359	P	P	12 23 07.7	-0.3
	comp=Z,8.3nm,0.8s,baz=144,slow=11,SNR=1.3						
SPITS				LR	LR	12 40 18.9	
	comp=Z,1µm,21.9s,baz=175,slow=38						
TIC	**Toumodi**	39.55	222	*e*PKP2	P	12 23 11.0	+1.7
KIC	**Kosan Boka**	39.64	222	*e*PKP2	P	12 23 10.3	+0.3
	comp=Z,28nm,0.9s						
SOCY	**Socotra**	39.77	123	P	P	12 23 14.5	+3.4
EKS2	**Erkin-Say**	39.90	67	P	P	12 23 11.9	-0.2
	SNR=26						
LIC	**Lamto**	39.91	222	*e*PKP2	P	12 23 11.4	-0.8
	comp=Z,72nm,1.1s						
AML	**Almayashu**	39.96	68	P	P	12 23 12.5	-0.4
	SNR=9.3						
MBAR	**Mbarara**	40.35	164	P	P	12 23 16.2	+0.2
	comp=Z,2.9nm,0.2s,baz=338,slow=8.4,SNR=5.6						
MBAR	**Mbarara**	40.35	164	*i* P	P	12 23 17.1	+1.1
MBAR	**Mbarara**	40.35	164	P	P	12 23 15.3	-0.8
AAK	**Ala-Archa**	40.42	67	P	P	12 23 15.5	-1.0
	comp=Z,9.3nm,0.6s,baz=254,slow=8.3,SNR=12						
AAK				LR	LR	12 42 47.6	
	comp=Z,278nm,19.8s,baz=296,slow=40						
AAK	**Ala-Archa**	40.42	67	P	P	12 23 21.0	+4.5
	SNR=19						
AAK	**Ala-Archa**	40.42	67	*i* P	P	12 23 15.9	-0.6
AAK				pmax	pmax		
	comp=Z,49nm,0.7s						
AAK	**Ala-Archa**	40.42	67	⇑P	P	12 23 16.1	-0.3
AAK				⇑P	pP	12 23 17.1	-3.9
AAK	**Ala-Archa**	40.42	67	P	P	12 23 15.9	-0.6
AAK				IAmb	IAmb	12 23 23.1	
	comp=Z,30nm,0.9s						
FRU1	**Bishkek**	40.48	67	P	P	12 23 16.8	-0.1
FRU1				pmax	pmax		
	comp=Z,77nm,1.0s						
FRU1	**Bishkek**	40.48	67	P	P	12 23 16.8	-0.1
CHMS	**Chumysh**	40.52	66	P	P	12 23 20.8	+3.7
	SNR=7.3						
UCH	**Uchtor**	40.53	67	P	P	12 23 17.7	0.0
	SNR=25						
TKM2	**Tokmak 2**	41.14	66	P	P	12 23 24.9	+2.4
	SNR=7.4						
TKM2	**Tokmak 2**	41.14	66	*i* P	P	12 23 23.0	+0.5
TKM2				pmax	pmax		
	comp=Z,18nm,1.4s						
BOOM	**Boomskoye usch**	41.49	67	P	P	12 23 25.3	0.0
BOOM				pmax	pmax		
	comp=Z,36nm,1.2s						
BOOM	**Boomskoye usch**	41.49	67	P	P	12 23 25.2	0.0
BOOM				IAmb	IAmb	12 23 30.8	
	comp=Z,36nm,1.2s						
ULHL	**Ulahol**	41.77	67	P	P	12 23 31.0	+3.4
	SNR=6.2						
KURBB	**Kurchatov Arra**	41.77	54	P	P	12 23 25.8	-1.5
	comp=Z,8.0nm,0.6s,baz=284,slow=9.2,SNR=5.5						
KURBB				PcP	PcP	12 25 22.7	-0.6
	comp=Z,3.2nm,0.9s,baz=274,slow=3.9,SNR=3.3						
KURK	**Kurchatov**	41.82	54	*ce*P	P	12 23 25.4	-2.2
KURK				pmax	pmax		
	comp=Z,117nm,2.5s						
KURK	**Kurchatov**	41.82	54	⇓P	P	12 23 26.3	-1.3
KURK	**Kurchatov**	41.82	54	P	P	12 23 26.4	-1.3
MDOK	**Medeo**	42.12	65	P	P	12 23 31.4	+1.0
NIL	**Nilore**	42.28	80	P	P	12 23 31.5	-0.2
NIL				pmax	pmax		
	comp=Z,38nm,0.9s						
NIL	**Nilore**	42.28	80	P	P	12 23 31.5	-0.2
NIL				IAmb	IAmb	12 23 39.7	
	comp=Z,38nm,0.8s						
KSH	**Kashi**	42.33	71	P	P	12 23 30.3	-1.8
KSH				pP	pP	12 23 34.4	-2.2
KSH				sP	sP	12 23 37.1	-1.3
KSH				PcP	PcP	12 25 25.4	-0.1
KSH				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KSH				pmax	pmax		
	comp=Z,320nm,5.8s						
KSH				LR	LR		
	comp=Z,530nm,14.1s						
KSH				LR	LR		
	comp=Z,900nm,15.1s						
KSH				LR	LR		
	comp=Z,750nm,16.8s						
KDJ	**Kajisay**	42.47	67	P	P	12 23 32.5	-0.8
KDJ				pmax	pmax		
	comp=Z,41nm,1.2s						
KDJ	**Kajisay**	42.47	67	P	P	12 23 32.5	-0.8
KDJ				IAmb	IAmb	12 23 38.6	
	comp=Z,41nm,1.1s						
KMBO	**Kilima Mbogo**	42.62	155	LR	LR	12 44 53.6	
	comp=Z,292nm,19.1s,baz=60,slow=41						
KMBO	**Kilima Mbogo**	42.62	155	*i* P	P	12 23 36.4	+1.6
KMBO				pmax	pmax		
	comp=Z,2.0nm,0.3s						
PDGK	**Podgornoye**	43.80	64	P	P	12 23 42.0	-2.0
SUMG	**Summit**	44.22	338	P	P	12 23 47.3	0.0
SUMG				pmax	pmax		
	comp=Z,15nm,1.1s						
SUMG	**Summit**	44.22	338	*i* P	P	12 23 47.8	+0.5
SUMG	**Summit**	44.22	338	P	P	12 23 47.3	0.0
MAKZ	**Makanchi**	44.67	59	P	P	12 23 49.6	-1.2
MAKZ	**Makanchi**	44.67	59	⇓P	P	12 23 49.6	-1.2
MAKZ	**Makanchi**	44.67	59	P	P	12 23 49.5	-1.4
MAKZ				IAmb	IAmb	12 23 54.5	
	comp=Z,18nm,0.9s						
NOR	**Nord**	44.82	353	*i* P	P	12 23 50.9	-0.7
MK31	**Makanchi Array**	44.89	59	*i* P	P	12 23 50.9	-1.6
MK31				pmax	pmax		
	comp=Z,17nm,0.7s						
MK31	**Makanchi Array**	44.89	59	IAmb	IAmb	12 23 56.1	
	comp=Z,18nm,0.8s						
MKAR	**Makanchi Array**	44.89	59	P	P	12 23 51.1	-1.4
	comp=Z,18nm,0.8s,baz=281,slow=6.7,SNR=65						
MKAR				ScP	ScP	12 29 24.2	-1.6
	comp=Z,0.9nm,0.7s,baz=270,slow=5.8,SNR=4.0						
MKAR				LR	LR	12 45 28.0	
	comp=Z,429nm,18.4s,baz=281,slow=40						
ZALV	**Zalesovo Beam**	45.19	49	P	P	12 23 53.4	-1.3
	comp=Z,39nm,0.6s,baz=278,slow=8.7,SNR=149						
NRIK	**Noril'sk**	46.16	27	P	P	12 24 01.0	-1.3
	comp=Z,3.3nm,0.4s,baz=233,slow=4.2,SNR=7.0						
NRIK	**Noril'sk**	46.16	27	*ce*P	P	12 24 02.1	-0.1
NRIK				pmax	pmax		
	comp=Z,4.0nm,0.5s						
NRIK	**Noril'sk**	46.16	27	P	P	12 24 02.2	0.0
NRIK				IAmb	IAmb	12 24 22.1	
	comp=Z,25nm,1.2s						
DGZ	**Jazzator, Alta**	47.56	54	*i* P	P	12 24 12.7	-1.0
DGZ				pmax	pmax		
	comp=Z,22nm,0.9s						
SFJD	**Kangerlussuaq**	47.69	330	LR	LR	12 44 51.9	
	comp=Z,386nm,20.2s,baz=88,slow=37						
WMQ	**Urumqi**	49.37	61	*e*P	P	12 24 30.9	+3.3
WMQ				pP	sP	12 24 35.5	+1.6
WMQ				pmax	pmax		
	comp=Z,16nm,1.3s						
WMQ				pmax	pmax		

	comp=Z,280nm,4.5s						
WMQ				LR	LR		
	comp=Z,1µm,15.5s						
WMQ				LR	LR		
	comp=Z,400nm,17.3s						
EUNU	**Eureka**	**54.87**	**348**	P	**P**	**12 25 07.8**	**-0.2**
TLY	**Talaya**	**56.78**	**48**	P	**P**	**12 25 21.7**	**-0.3**
	comp=Z,5.4nm,0.7s,baz=276,slow=19,SNR=2.2						
TLY	**Talaya**	**56.78**	**48**	P	**P**	**12 25 21.1**	**-0.9**
TLY				IAmb	IAmb	12 25 26.8	
	comp=Z,17nm,1.0s						
ZAK	**Zakamensk**	**57.06**	**49**	*e*P	**P**	**12 25 23.2**	**-0.9**
ZAK				pmax	pmax		
	comp=Z,14nm,1.5s						
LSA	**Lhasa**	**57.70**	**76**	P	**P**	**12 25 31.4**	**+2.0**
LSA	**Lhasa**	**57.70**	**76**	IAmb	IAmb	12 25 32.9	
	comp=Z,11nm,0.9s						
SCHQ	**Schefferville**	**58.02**	**317**	P	**P**	**12 25 30.8**	**+0.1**
	comp=Z,10nm,0.8s,baz=354,slow=3.4,SNR=6.9						
SCHQ				LR	LR	12 48 59.7	
	comp=Z,264nm,20.0s,baz=70,slow=34						
TIXI	**Tiksi**	**58.99**	**21**	P	**P**	**12 25 36.2**	**-1.0**
	comp=Z,2.4nm,0.6s,baz=308,slow=5.9,SNR=12						
TIXI	**Tiksi**	**58.99**	**21**	*ce*P	**P**	**12 25 36.3**	**-0.9**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TIXI	**Tiksi**	**58.99**	**21**	P	**P**	**12 25 36.3**	**-0.9**
TIXI				IAmb	IAmb	12 25 48.0	
	comp=Z,12nm,0.9s						
BOD	**Bodaibo**	**59.80**	**38**	*e*P	**P**	**12 25 40.9**	**-2.0**
SONM	**Songino Array**	**59.97**	**51**	P	**P**	**12 25 43.3**	**-1.2**
	comp=Z,6.4nm,0.9s,baz=288,slow=7.6,SNR=9.1						
SONM				LR	LR	12 54 15.5	
	comp=Z,336nm,18.2s,baz=304,slow=39						
SONM	**Songino Array**	**59.97**	**51**	P	**P**	**12 25 43.6**	**-0.9**
SONM				pmax	pmax		
	comp=Z,15nm,1.3s						
SONM	**Songino Array**	**59.97**	**51**	P	**P**	**12 25 43.6**	**-0.9**
SONM				IAmb	IAmb	12 25 48.4	
	comp=Z,15nm,1.3s						
ULN	**Ulaanbaatar**	**60.36**	**51**	*ce*P	**P**	**12 25 46.2**	**-1.0**
ULN				pmax	pmax		
	comp=Z,21nm,1.7s						
ULN	**Ulaanbaatar**	**60.36**	**51**	P	**P**	**12 25 46.1**	**-1.1**
ULN				IAmb	IAmb	12 25 51.0	
	comp=Z,13nm,1.1s						
PQI	**Presque Isle**	**62.24**	**309**	IAmb	IAmb	12 26 05.4	
	comp=Z,19nm,1.0s						
PALK	**Pallekele**	**62.30**	**104**	P	**P**	**12 25 59.5**	**-1.0**
	comp=Z,5.0nm,0.7s,baz=339,slow=14,SNR=3.1						
PKME	**Peaks-Kenny Pk**	**63.69**	**308**	P	**P**	**12 26 13.4**	**+4.1**
	baz=60						
LZH	**Lanzhou**	**63.83**	**64**	*e*P	**P**	**12 26 14.8**	**+4.1**
LZH				sP	sP	12 26 20.6	+3.5
LZH				pmax	pmax		
	comp=Z,24nm,1.1s						
YAK	**Yakutsk**	**64.49**	**30**	*e*P	**P**	**12 26 12.7**	**-1.6**
YAK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
TRQ	**Mont Tremblant**	**66.38**	**311**	IAmb	IAmb	12 26 33.6	
	comp=Z,29nm,1.2s						
HHC	**Hu-ho-hao-te**	**66.59**	**56**	*e*P	**P**	**12 26 29.6**	**+1.1**
HHC				pmax	pmax		
	comp=Z,12nm,1.1s						
HHC				pmax	pmax		
	comp=Z,190nm,5.3s						
A36M	**Sachs Harbour**	**66.88**	**349**	P	**P**	**12 26 29.5**	**-0.1**
A36M				IAmb	IAmb	12 26 41.0	
	comp=Z,16nm,0.8s						
L61B	**Northampton**	**67.24**	**307**	P	**P**	**12 26 36.5**	**+4.0**
	baz=58						
BOSA	**Boshof**	**67.25**	**176**	LR	LR	12 59 01.4	
	comp=Z,886nm,18.2s,baz=3.0,slow=39						
ZEA	**Zeya**	**68.30**	**38**	*i* P	**P**	**12 26 39.2**	**+0.3**
XAN	**Xi'an**	**68.45**	**63**	P	**P**	**12 26 43.6**	**+3.3**
XAN				sP	sP	12 26 50.1	+3.5
XAN				pmax	pmax		
	comp=Z,25nm,1.0s						
XAN				LR	LR		
	comp=Z,320nm,17.2s						
XAN				LR	LR		
	comp=Z,220nm,17.7s						
NBPA	**Parau_RN**	**69.35**	**244**	*e*P	P	12 26 51.4	+5.5
BINY	**Binghamton**	**69.43**	**308**	P	**P**	**12 26 50.9**	**+4.7**
	baz=56						
CHTO	**Chiang Mai**	**69.52**	**82**	P	**P**	**12 26 45.4**	**-1.7**
CHTO				pmax	pmax		
	comp=Z,8.0nm,1.0s						
CHTO	**Chiang Mai**	**69.52**	**82**	P	**P**	**12 26 45.4**	**-1.7**
CHTO				IAmb	IAmb	12 26 54.0	
	comp=Z,8.3nm,0.9s						
CMAR	**Chiang Mai Arr**	**69.72**	**82**	P	**P**	**12 26 46.5**	**-1.7**
	comp=Z,4.8nm,0.8s,baz=304,slow=7.6,SNR=12						
CMAR				LR	LR	13 02 21.4	
	comp=Z,152nm,20.3s,baz=330,slow=40						
CMAR	**Chiang Mai Arr**	**69.72**	**82**	*i* P	**P**	**12 26 49.7**	**+1.4**
CMAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**69.72**	**82**	P	**P**	**12 26 46.8**	**-1.5**
SADO	**Sadowa**	**69.87**	**312**	P	**P**	**12 26 49.8**	**+1.0**
	comp=Z,14nm,0.7s,baz=73,slow=5.0,SNR=6.4						
BILL	**Bilibino**	**70.34**	**13**	*e*P	**P**	**12 26 50.8**	**-0.5**
BILL				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BILL				MLR	MLR		
	comp=Z,251nm,18.0s						
NBLV	**Livramento - P**	**70.35**	**243**	*e*P	P	12 26 58.7	+6.5
GYA	**Guiyang**	**71.03**	**71**	⇑P	**P**	**12 26 58.8**	**+2.5**
GYA				pmax	pmax		
	comp=Z,13nm,1.6s						
INK	**Inuvik**	**71.42**	**350**	P	**P**	**12 26 56.8**	**-0.9**
	comp=Z,1.9nm,0.8s,baz=6.1,slow=4.1,SNR=7.1						
SEY	**Seymchan**	**71.48**	**21**	P	**P**	**12 26 57.3**	**-1.0**
	comp=Z,5.6nm,0.7s,baz=288,slow=4.9,SNR=9.3						
SEY				LR	LR	13 00 17.1	
	comp=Z,374nm,20.0s,baz=326,slow=38						
SSPA	**Standing Stone**	**71.50**	**307**	P	**P**	**12 27 01.0**	**+2.2**
	baz=54						
NBPS	**Pedro II - PI**	**71.51**	**248**	*e*P	P	12 27 06.0	+6.7
M55A	**Ridgway**	**71.55**	**309**	IAmb	IAmb	12 27 05.8	
	comp=Z,20nm,0.8s						
NBAN	**Anadia - AL**	**71.56**	**241**	*e*P	P	12 27 06.3	+6.9
NBMA	**Muriti-CE**	**71.65**	**244**	*e*P	P	12 27 07.2	+7.2
TOLK	**Toolik Lake Re**	**72.58**	**356**	P	**P**	**12 27 06.0**	**+1.1**
	baz=8.1						
YKA	**Yellowknife Ar**	**72.78**	**340**	P	**P**	**12 27 05.4**	**-0.6**
	comp=Z,2.1nm,0.8s,baz=53,slow=7.1,SNR=2.6						
KLR	**Kul'dur**	**73.31**	**40**	P	**P**	**12 27 08.0**	**-1.4**
	comp=Z,3.0nm,0.9s,baz=278,slow=6.4,SNR=4.9						
KLR	**Kul'dur**	**73.31**	**40**	*i* P	**P**	**12 27 07.8**	**-1.6**
KLR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MA2	**Magadan**	**73.65**	**24**	P	**P**	**12 27 10.6**	**-0.7**
	comp=Z,29nm,0.7s,baz=330,slow=6.9,SNR=11						
MA2	**Magadan**	**73.65**	**24**	P	**P**	**12 27 11.8**	**+0.5**
MA2				pmax	pmax		
	comp=Z,57nm,1.0s						
MA2	**Magadan**	**73.65**	**24**	P	**P**	**12 27 11.8**	**+0.5**
EPYK	**Eagle Plains**	**73.66**	**351**	P	**P**	**12 27 11.6**	**+0.3**
	baz=18						
EPYK	**Eagle Plains**	**73.66**	**351**	P	**P**	**12 27 11.0**	**-0.3**
EPYK				IAmb	IAmb	12 27 15.6	
	comp=Z,12nm,1.1s						
MDP	**Montagnes des**	**73.79**	**263**	LR	LR	12 55 32.1	
	comp=Z,93nm,22.0s,baz=112,slow=32						
COLD	**Coldfoot**	**74.02**	**356**	P	**P**	**12 27 14.1**	**+0.8**
	baz=7.5						
COLD	**Coldfoot**	**74.02**	**356**	P	**P**	**12 27 13.4**	**+0.1**
I29M	**Ogilvie Camp,**	**74.83**	**351**	P	**P**	**12 27 18.4**	**+0.3**
	baz=17						
ULM	**Lac du Bonnet**	**75.20**	**324**	P	**P**	**12 27 21.2**	**+0.7**
	comp=Z,13nm,0.7s,baz=43,slow=6.1,SNR=15						
ULM				LR	LR	13 00 07.9	
	comp=Z,361nm,21.5s,baz=49,slow=36						
ULM	**Lac du Bonnet**	**75.20**	**324**	IAmb	IAmb	12 27 26.5	
	comp=Z,15nm,0.8s						
PRP	**Porcupine Dome**	**75.41**	**354**	P	**P**	**12 27 22.6**	**+1.1**
	baz=11						
H21K	**Melozitna Rive**	**75.70**	**357**	P	**P**	**12 27 24.8**	**+1.8**
	baz=5.3						
H21K	**Melozitna Rive**	**75.70**	**357**	IAmb	IAmb	12 27 40.1	
	comp=Z,12nm,1.1s						
DAWY	**Dawson**	**76.21**	**351**	P	**P**	**12 27 27.0**	**+0.9**
	baz=16						
DAWY	**Dawson**	**76.21**	**351**	IAmb	IAmb	12 27 50.6	
	comp=Z,33nm,1.5s						
J26L	**Joseph Creek**	**76.23**	**353**	P	**P**	**12 27 26.9**	**+0.7**
	baz=13						
ILAR	**Eielson Array**	**76.25**	**355**	P	**P**	**12 27 26.1**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=330,slow=1.9,SNR=16						
ILAR				LR	LR	13 00 56.7	
	comp=Z,170nm,21.4s,baz=10.0,slow=36						
NJ2	**Nanjing**	**76.41**	**60**	*e*P	**P**	**12 27 27.4**	**-0.3**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
HDA	**Harding Lake**	**76.61**	**354**	P	**P**	**12 27 28.5**	**+0.2**
	baz=10.0						
HDA	**Harding Lake**	**76.61**	**354**	IAmb	IAmb	12 27 37.1	
	comp=Z,8.8nm,0.9s						
USRK	**Ussuriysk Ar.**	**76.74**	**43**	P	**P**	**12 27 27.5**	**-1.8**
	comp=Z,4.3nm,0.8s,baz=258,slow=5.6,SNR=4.2						
USRK				LR	LR	13 04 35.2	
	comp=Z,427nm,18.3s,baz=314,slow=38						
SCRK	**Sand Creek**	**76.79**	**353**	IAmb	IAmb	12 27 56.8	
	comp=Z,16nm,1.4s						
BPAW	**Bear Paw Mtn.**	**77.17**	**356**	P	**P**	**12 27 31.6**	**+0.1**
	baz=6.8						
MCK	**McKinley**	**77.42**	**355**	P	**P**	**12 27 33.6**	**+0.7**
	baz=8.4						
L27K	**Beaver Creek,**	**77.46**	**352**	IAmb	IAmb	12 27 58.1	
	comp=Z,18nm,1.4s						
DHY	**Denali Highway**	**77.96**	**354**	P	**P**	**12 27 36.5**	**+0.5**
	baz=9.6						
DHY	**Denali Highway**	**77.96**	**354**	IAmb	IAmb	12 27 46.8	
	comp=Z,15nm,1.0s						
BVCY	**Beaver Creek**	**77.98**	**351**	P	**P**	**12 27 37.2**	**+1.2**
	baz=15						
WAT1	**Susitna Watana**	**78.29**	**355**	P	**P**	**12 27 40.2**	**+2.5**
	baz=8.7						
YUK3	**Moose Creek**	**78.55**	**351**	P	**P**	**12 27 40.3**	**+0.9**
	baz=15						
KSAR	**Wonju Array Be**	**78.83**	**51**	P	**P**	**12 27 40.2**	**-0.9**
KSAR	**Wonju Array Be**	**78.83**	**51**	P	**P**	**12 27 40.2**	**-0.9**
KSRS	**Korea Array**	**78.84**	**51**	P	**P**	**12 27 39.8**	**-1.4**
	comp=Z,5.5nm,0.7s,baz=311,slow=4.9,SNR=9.0						
KSRS				LR	LR	13 07 22.7	
	comp=Z,258nm,18.1s,baz=318,slow=40						
KULM	**Kulim**	**78.94**	**92**	P	**P**	**12 27 46.0**	**+4.0**
PSI	**Prapat**	**79.14**	**95**	P	**P**	**12 27 43.1**	**-0.2**
	comp=Z,4.7nm,0.6s,baz=307,slow=8.9,SNR=5.9						
L19K	**White Mountain**	**79.25**	**358**	P	**P**	**12 27 43.5**	**+0.5**
T47A	**Sharon Grove**	**79.40**	**309**	IAmb	IAmb	12 27 49.3	
	comp=Z,30nm,1.0s						
MALB	**Monte Alegre**	**79.43**	**259**	*e*P	P	12 27 51.3	+6.6
IPM	**Ipoh**	**79.73**	**93**	P	**P**	**12 27 46.0**	**-0.4**
RC01	**Rabbit Creek A**	**80.10**	**355**	P	**P**	**12 27 48.1**	**+0.5**
	baz=7.7						
YSS	**Yuzh-Sakhalins**	**80.18**	**36**	*e*P	**P**	**12 27 47.5**	**-0.7**
YSS				*e*		12 30 48.8	
YSS				*e*S	**S**	**12 37 50.6**	**-1.9**
YSS				pmax	pmax		
	comp=Z,30nm,0.9s						
YSS				pmax	pmax		
	comp=Z,200nm,2.5s						
X48A	**Hartselle**	**81.02**	**307**	IAmb	IAmb	12 27 59.7	
	comp=Z,23nm,1.0s						
JRMM	**Jerantut**	**81.23**	**92**	P	**P**	**12 27 57.0**	**+2.6**
PET	**Petropavlovsk**	**81.54**	**24**	*e*P	P	12 28 04.0	+8.6
PET				*e*S	**S**	**12 38 01.0**	**-5.5**
PET				MLR	MLR		
	comp=Z,400nm,16.0s						
BOAV	**Boa Vista**	**81.60**	**266**	*e*P	P	12 28 02.8	+6.5
PEXB	**Peixe**	**81.69**	**247**	*e*P	P	12 28 02.8	+6.1
ITTB	**Itaituba**	**82.16**	**258**	*e*P	P	12 28 04.3	+5.0
ASAJ	**Asahikawa**	**82.21**	**38**	P	**P**	**12 27 58.1**	**-1.1**
	comp=Z,9.2nm,0.9s,baz=287,slow=17,SNR=1.9						
PPI	**Padang Panjang**	**82.32**	**97**	P	**P**	**12 27 59.7**	**-0.4**
	comp=Z,22nm,0.8s						
PDSI	**Padang**	**82.66**	**97**	P	**P**	**12 28 02.0**	**+0.1**
	comp=Z,25nm,0.9s						
PTGA	**Pitinga**	**83.12**	**264**	P	**P**	**12 28 05.0**	**+0.7**
	comp=Z,1.0nm,0.7s,baz=348,slow=9.3,SNR=1.5						
KDAK	**Kodiak Island**	**83.56**	**356**	P	**P**	**12 28 05.8**	**0.0**
	comp=Z,9.1nm,0.9s,baz=42,slow=4.6,SNR=8.2						
KDAK	**Kodiak Island**	**83.56**	**356**	P	**P**	**12 28 04.5**	**-1.4**
YUK	**Yuzh-Kuril'sk**	**83.81**	**36**	*e*P	**P**	**12 28 06.6**	**-0.8**
YUK				*e*		12 31 20.3	
YUK				*e*S	**S**	**12 38 28.1**	**-2.0**
YUK				MLR	MLR		
	comp=Z,417nm,13.0s						
BDFB	**Brasilia**	**83.88**	**244**	P	**P**	**12 28 09.1**	**+1.0**
	comp=Z,3.8nm,0.6s,baz=155,slow=17,SNR=3.1						
W39A	**Magazine**	**84.59**	**311**	P	P	12 28 16.8	+5.2
	baz=46						
T35A	**Sooner Cattle**	**84.94**	**314**	P	**P**	**12 28 15.2**	**+1.8**
MAT	**Matsushiro**	**85.46**	**46**	P	**P**	**12 28 15.1**	**-0.8**
MJAR	**Matsushiro Arr**	**85.46**	**46**	P	**P**	**12 28 15.2**	**-0.8**
	comp=Z,16nm,1.1s,baz=338,slow=3.4,SNR=13						
MJAR	**Matsushiro Arr**	**85.46**	**46**	P	**P**	**12 28 15.5**	**-0.4**
MJAR				pmax	pmax		
	comp=Z,16nm,1.1s						
MJAR	**Matsushiro Arr**	**85.46**	**46**	P	**P**	**12 28 15.5**	**-0.4**
MJAR				IAmb	IAmb	12 28 20.8	
	comp=Z,16nm,1.1s						
NEW	**Newport**	**85.49**	**333**	P	**P**	**12 28 20.2**	**+4.3**
	baz=32						
IPMB	**Ipameri, GO**	**85.60**	**243**	*e*P	**P**	**12 28 21.2**	**+4.4**
KSI	**Kapahiang**	**86.03**	**98**	P	**P**	**12 28 19.5**	**+0.4**
CLDB	**Colider**	**86.38**	**253**	*e*P	**P**	**12 28 24.4**	**+3.6**
ARAG	**Araguaiana, MT**	**86.62**	**247**	*e*P	**P**	**12 28 26.4**	**+4.6**
LHSI	**Lahat**	**86.86**	**97**	P	**P**	**12 28 23.5**	**+0.4**
	comp=Z,78nm,0.5s						
PDAR	**Pinedale Array**	**87.04**	**326**	P	**P**	**12 28 23.6**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=57,slow=5.5,SNR=3.6						
PDAR				LR	LR	13 06 42.7	
	comp=Z,177nm,21.9s,baz=39,slow=35						
PDRB	**Porto dos Gac**	**87.56**	**253**	*e*P	**P**	**12 28 30.5**	**+4.1**
MDSI	**Maura Dua**	**87.78**	**98**	P	**P**	**12 28 26.9**	**-0.6**
	comp=Z,19nm,0.8s						
KSM	**Kuching**	**88.84**	**89**	P	P	12 28 38.0	+5.4
TPI	**Tanjungpandan**	**89.40**	**94**	P	**P**	**12 28 35.5**	**+0.3**
	comp=Z,384nmcomp=Z,36nm,0.8s						
SBUM	**Sibu**	**89.73**	**87**	P	P	12 28 42.0	+5.2
PCMB	**Pacaembu**	**90.16**	**242**	*e*P	**P**	**12 28 42.0**	**+3.5**
FRTB	**Fartura**	**90.16**	**240**	*e*P	P	12 28 44.7	+6.1
ROSC	**El Rosal**	**90.84**	**277**	LR	LR	13 06 04.2	
	comp=Z,82nm,21.0s,baz=283,slow=33						
VILB	**Vilhena**	**91.01**	**254**	*e*P	P	12 28 47.7	+5.0
TIJ01	**Guaruva-PR**	**91.13**	**238**	*e*P	P	12 28 48.0	+5.0
PTLB	**Pontes e Lacer**	**91.80**	**252**	*e*P	**P**	**12 28 50.6**	**+4.3**
NVAR	**Mina Array Bea**	**94.33**	**329**	P	**P**	**12 28 58.5**	**+0.4**
	comp=Z,0.4nm,0.7s,baz=108,slow=35,SNR=1.9						
NVAR				LR	LR	13 14 36.9	
	comp=Z,136nm,19.7s,baz=34,slow=38						
NVAR	**Mina Array Bea**	**94.33**	**329**	P	**P**	**12 28 56.0**	**-2.0**
TXAR	**Lajitas Array**	**94.56**	**314**	P	**P**	**12 29 00.5**	**+1.4**
	comp=Z,0.9nm,0.8s,baz=72,slow=3.9,SNR=8.3						
TXAR				LR	LR	13 11 54.3	
	comp=Z,199nm,20.0s,baz=0.0,slow=36						
CZSB	**Cruzeiro do Su**	**97.37**	**266**	*e*P	Pdif	12 29 16.0	+4.1
CPUP	**Villa Florida**	**97.43**	**242**	LR	LR	13 15 14.1	
	comp=Z,230nm,18.3s,baz=52,slow=37						
CPUP	**Villa Florida**	**97.43**	**242**	*e*P	Pdif	12 29 17.2	+5.4
ITQB	**Itaqui**	**99.07**	**239**	*e*P	**Pdif**	**12 29 23.9**	**+4.8**
LPAZ	**La Paz**	**99.08**	**256**	*e*P	**Pdif**	**12 29 23.3**	**+3.1**
WRA	**Warramunga Arr**	**120.49**	**92**	PKP	**PKPdf**	**12 34 29.1**	**-0.9**
	comp=Z,2.2nm,0.6s,baz=327,slow=2.1,SNR=29						
WRA				PKKP	**PKKPdf**	**12 45 12.6**	**+4.8**
	comp=Z,0.5nm,0.8s,baz=127,slow=2.3,SNR=5.8						
WRA	**Warramunga Arr**	**120.49**	**92**	PKPdf	**PKPdf**	**12 34 29.0**	**-1.0**
ASAR	**Alice Springs**	**122.17**	**96**	PKP	**PKPdf**	**12 34 32.6**	**-0.6**
	comp=Z,3.3nm,0.6s,baz=310,slow=1.7,SNR=23						
QSPA	**South Pole Qui**	**128.70**	**180**	PKP	**PKiKP**	**12 34 44.7**	**-0.3**
	comp=Z,2.7nm,0.7s,baz=253,slow=1.6,SNR=21						
STKA	**Stephens Creek**	**132.09**	**101**	PKP	**PKPdf**	**12 34 51.5**	**-0.3**
	comp=Z,1.3nm,0.6s,baz=286,slow=1.2,SNR=6.4						
DZM	**Mont Dzumac**	**146.37**	**70**	PKPbc	**PKPbc**	**12 35 18.9**	**-0.4**
	comp=Z,12nm,0.7s,baz=250,slow=8.9,SNR=6.8						
MSVF	**Nonsavu**	**151.20**	**49**	PKPbc	**PKPbc**	**12 35 31.9**	**0.0**
	comp=Z,6.7nm,0.9s,baz=107,slow=19,SNR=3.0						

PRU 18 12:16:51.8±0.0, 50°.62N×15°.80E, h0^{km}, Janske Lazne, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHVC	**Chvalec**	**0.17**	**101**	*e*PG	Pg	12 16 54.4	-0.6
CHVC				*e*SG	Sg	12 16 56.7	-0.4
	comp=Z,95nm,0.7s						
UPC	**Upice**	**0.18**	**130**	*e*PG	Pg	12 16 55.3	+0.1
UPC				*e*SG	Sg	12 16 57.6	+0.2
	comp=Z,116nm,1.0s						
OSTC	**Ostas**	**0.27**	**103**	*e*PG	Pg	12 16 56.9	-0.1
OSTC				*e*SG	Sg	12 17 01.3	+0.8
	comp=Z,31nm,0.8s						
DPC	**Dobruska-Polom**	**0.43**	**129**	*e*PG	Pg	12 16 59.6	-0.4
DPC				*e*SG	Sg	12 17 05.1	-0.4
	comp=Z,6.1nm,0.2s						

ROM 18 12:17:17.7±0.1, 38°.507N±0°.004×14°.786E±0°.003, h9^{km}, Md2.6/7, Error ellipse: s-maj=0.4km s-min=0.2km az=12.0, Sicily

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LLI	**Lipari**	**0.14**	**116**	P	Pg	12 17 21.4	+0.6
LLI				S	Sg	12 17 24.2	+1.2
LLI				END			
IFIL	**Filicudi I Eol**	**0.18**	**288**	P	Pg	12 17 21.9	+0.4
IFIL				S	Sg	12 17 25.1	+1.0
IFIL				END			
VPL	**Vulcano Piano**	**0.20**	**129**	P	Pg	12 17 22.6	+0.7
VPL				S	Sg	12 17 25.4	+0.7
VPL				END			
IACL	**Alicudi**	**0.34**	**275**	P	Pb	12 17 25.2	-0.7
IACL				S	Sb	12 17 30.3	-1.0
MILZ	**Milazzo**	**0.42**	**124**	P	Pg	12 17 26.5	+0.6
MILZ				S	Sb	12 17 33.0	-0.7
MILZ				AML	AML		
	comp=E,5700µm,0.5s						
MILZ				AML	AML		
	comp=N,3115µm,0.5s						
ISTR	**Stromboli Gino**	**0.42**	**49**	P	Pg	12 17 26.5	+0.5
ISTR				S	Sb	12 17 32.8	-1.0
ISTR				AML	AML		
	comp=N,11550µm,0.9s						
ISTR				AML	AML		
	comp=E,8550µm,0.3s						
ISTR				END			
IST3	**Stromboli F**	**0.45**	**50**	P	Pb	12 17 27.5	-0.4
IST3				S	Sb	12 17 34.4	-0.3
IST3				AML	AML		
	comp=E,3980µm,0.7s						
IST3				AML	AML		
	comp=N,4880µm,0.2s						
MUCR	**Ucria**	**0.47**	**172**	P	Pg	12 17 27.3	+0.4
MUCR				S	Sb	12 17 34.5	-0.7
MUCR				END			
MSFR	**San Fratello**	**0.50**	**198**	P	Pb	12 17 28.2	-0.5
MSFR				S	Sb	12 17 35.2	-0.8
MSFR				AML	AML		
	comp=E,1405µm,0.6s						
MSFR				AML	AML		
	comp=N,1765µm,0.5s						
MSFR				END			
NOV	**Novara**	**0.55**	**150**	P	Pg	12 17 28.7	+0.3
NOV				S	Sb	12 17 37.4	-0.2
NOV				AML	AML		
	comp=E,6050µm,0.8s						
NOV				AML	AML		
	comp=N,7770µm,0.3s						
MCSR	**Castroreale**	**0.57**	**140**	P	Pg	12 17 28.8	0.0
MCSR				S	Sg	12 17 36.8	+0.5
MCSR				AML	AML		
	comp=N,10035µm,0.3s						
MCSR				AML	AML		
	comp=E,7305µm,1.4s						
MCSR				END			
MPNC	**Port Mandanici**	**0.57**	**129**	P	Pg	12 17 28.9	+0.1
MPNC				S	Sb	12 17 37.5	-0.6
MPNC				AML	AML		
	comp=E,7245µm,1.1s						
MPNC				AML	AML		
	comp=N,8585µm,0.9s						
MNO	**Monte Soro**	**0.58**	**187**	P	Pb	12 17 29.9	-0.2
MNO				S	Sb	12 17 37.6	-0.9
EPZF	**Pizzo Felice**	**0.68**	**175**	P	Pg	12 17 31.1	+0.2
GIB	**Gibilmanna**	**0.79**	**229**	P	Pg	12 17 33.0	+0.1
GIB				S	Sg	12 17 43.6	+0.4
CSLB	**Castelbuono**	**0.81**	**225**	P	Pg	12 17 33.1	-0.2
CSLB				S	Sb	12 17 44.7	-0.2

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*NIED **18** 12:18:01.5, 31°.12N×128°.35E, h0^{km}, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-8.24; M$_{\theta\theta}$2.61; M$_{\phi\phi}$5.63; M$_{r\theta}$-0.86; M$_{\theta\phi}$5.28; M$_{\phi r}$-2.02; Fault plane solution: M$_0$9.20000×10^{15} NP1:φ$_s$33.00000°, δ52.00000°, λ-95.00000°. NP2:φ$_s$221.00000°, δ38.00000°, λ-83.00000°.*

*JMA **18** 12:18:02.3±0.2, 31°.11N×128°.34E, h9^{km}, M4.7*

*IDC **18** 12:18:03.1±0.5, 31°.09N×128°.35E, h0^{km}, mb4.4/24, mb1 4.5/29, mb1mx4.2/84, mbtmp4.4/29, ML3.4/5, MS3.8/20, Ms1 3.8/20, ms1mx3.6/61, Error ellipse: s-maj=16.9km s-min=9.9km az=82.0*

*NEIC **18** 12:18:04.6±1.8, 31°.09N±0°.06×128°.51E±0°.06, h10^{km}±1^{km}, mb4.7/35, Error ellipse: s-maj=10.2km s-min=8.4km az=143.0*

ISC 18 12:18:04.0±0.3, 31°.12N±0°.03×128°.47E±0°.03, h10^{km}, n142, σ1^{s}45/129, mb4.6/40, MS3.8/16, 2C, Northwest of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	**Shimokoshiki**	**1.20**	**62**	P	**Pn**	**12 18 26.2**	**-0.7**
JSJ				*e*S	**Sb**	**12 18 43.4**	**+0.9**
JFU	**Fukue jima 2**	**1.55**	**9**	P	**Pn**	**12 18 30.9**	**-0.8**
JFU				*e*S	**Sn**	**12 18 51.2**	**-0.7**
JKC	**Kuchinoerabu**	**1.62**	**113**	P	**Pb**	**12 18 33.7**	**-0.3**
JSU	**Suzuyama**	**1.74**	**77**	P	**Pn**	**12 18 34.7**	**+0.4**
JSU	**Suzuyama**	**1.74**	**77**		**Pn**	**12 18 35.1**	**+0.8**
JSU				Sn	**Sn**	**12 18 57.9**	**+1.3**
JNN	**Nakanoshima**	**1.75**	**136**	P	**Pn**	**12 18 34.1**	**-0.4**
JYAK	**Yakushimahirau**	**1.96**	**116**	P	**Pn**	**12 18 37.0**	**-0.3**
JTAJ	**Takarajima**	**2.06**	**162**	P	**Pn**	**12 18 37.6**	**-1.0**
JTN	**Tanegashima 3**	**2.20**	**101**	P	**Pn**	**12 18 41.0**	**+0.3**
JMTN	**Minamitane**	**2.21**	**108**	P	**Pn**	**12 18 41.2**	**+0.4**
JTZ	**Takazaki**	**2.37**	**70**	P	**Pn**	**12 18 43.8**	**+0.9**
JIU3	**Izumi3**	**2.45**	**54**	P	**Pn**	**12 18 44.9**	**+0.8**
JNU	**Nakatsue**	**2.86**	**45**	Pn	**Pn**	**12 18 52.0**	**+2.3**
	baz=180,slow=20						
JNU	**Nakatsue**	**2.86**	**45**		**Pn**	**12 18 49.8**	**+0.1**
GOS2	**Gosang-Q330s**	**2.90**	**319**	P	**Pg**	**12 18 58.2**	**-1.4**
GMDB	**Geomundo**	**3.08**	**341**	P	**Pb**	**12 18 57.7**	**-1.3**
JTU	**Tsushima**	**3.49**	**13**	Pn	**Pn**	**12 18 59.4**	**+1.1**
YKDB	**Yokjido**	**3.50**	**357**	P	**Pg**	**12 19 07.1**	**-4.0**
KOHB	**KOHEUNG**	**3.63**	**344**	P	**Pb**	**12 19 04.3**	**-4.1**
BOSB	**Boseong-gun**	**3.79**	**344**	P	**Pb**	**12 19 08.1**	**-2.8**
GGDB	**Gageodo**	**4.07**	**317**	P	Pb	12 19 09.1	-6.6
KSBUS	**Busan**	**4.16**	**7**	P	**Pg**	**12 19 23.5**	**-0.2**
EURB	**Uiryeong-eup**	**4.20**	**358**	P	**Pg**	**12 19 23.5**	**-1.0**
KSKWJ	**Gwangju**	**4.22**	**343**	P	**Pg**	**12 19 21.9**	**-2.9**
JOW	**Kunigami**	**4.27**	**182**	Pn	**Pn**	**12 19 09.1**	**-0.1**
	7.2nm,0.3s,baz=119,slow=18,SNR=14						
JOW				LR	LR	12 20 52.6	
	comp=Z,1µm,20.6s,baz=130,slow=40						
HUK2	**Heuksan-myeon**	**4.38**	**325**	P	**Pn**	**12 19 10.6**	**+0.1**
NAWB	**Namwon**	**4.39**	**348**	P	**Pb**	**12 19 22.0**	**+0.8**
HAMB	**Hamyang**	**4.42**	**352**	P	**Pg**	**12 19 25.6**	**-3.2**
KSDAG	**Daegu**	**4.65**	**4**	P	**Pb**	**12 19 26.5**	**+0.8**
KSJEO	**Jeonju**	**4.91**	**349**	P	Pg	12 19 32.5	-5.5
KSPHA	**Pohang**	**5.12**	**8**	P	**Pb**	**12 19 31.5**	**-2.1**
EUSB	**Uiseong**	**5.23**	**2**	P	**Pb**	**12 19 36.1**	**+0.6**
JMN	**Monobe**	**5.26**	**59**	Pn	**Pn**	**12 19 22.5**	**-0.3**
KSULJ	**Uljin**	**5.62**	**8**	P	**Pg**	**12 19 53.7**	**+1.9**
JMZ	**Minamidaito 2**	**5.80**	**155**	Pn	**Pn**	**12 19 29.7**	**-0.5**
KSYOW	**Yeongwol**	**6.04**	**360**	P	**Pg**	**12 19 59.5**	**-0.3**
IMWB	**Imwonan-gil**	**6.15**	**6**	P	Pg	12 20 05.9	+4.1
SSE	**Sheshan**	**6.25**	**272**	Pn	**Pn**	**12 19 36.6**	**+0.3**
SSE				Sn	**Sn**	**12 20 48.8**	**+1.0**
SSE				LR	LR		
	comp=N,1µm,10.3s						
KSAR	**Wonju Array Be**	**6.33**	**356**	Pn	**Pn**	**12 19 38.9**	**+1.6**
KSRS	**Korea Array**	**6.34**	**356**	Pn	**Pn**	**12 19 38.0**	**+0.5**
	1.2nm,0.3s,baz=176,slow=14,SNR=13						
KSRS				Lg	Lg	12 21 22.9	
	5.3nm,0.3s,baz=174,slow=27,SNR=5.0						
KSRS				LR	LR	12 22 23.9	
	comp=Z,656nm,21.3s,baz=178,slow=41						
KS19	**Wonju Array Si**	**6.39**	**356**		**Pn**	**12 19 39.2**	**+1.0**
OKEB	**Okgye-meyeon**	**6.50**	**4**	P	Pn	12 19 45.0	+5.3
INCN	**Inchon**	**6.53**	**347**		**Pn**	**12 19 41.8**	**+1.6**

JWT	**Wachi**	**7.14**	**53**	Pn	**Pn**	**12 19 48.4**	**-0.2**
YOJ	**Yonaguni jima**	**8.21**	**217**	Pn	**Pn**	**12 20 03.1**	**-0.1**
INU	**Inuyama**	**8.31**	**57**	Pn	**Pn**	**12 20 04.2**	**-0.4**
JGF	**Kuroka**	**8.67**	**57**	Pn	**Pn**	**12 20 08.1**	**-1.5**
JSG	**Sagara**	**8.90**	**64**	Pn	**Pn**	**12 20 10.7**	**-2.0**
YHNB	**Yeheng**	**8.98**	**226**	Pn	**Pn**	**12 20 14.0**	**+0.1**
NACB	**Ninganchiao**	**9.22**	**223**	Pn	**Pn**	**12 20 17.9**	**+0.8**
MJAR	**Matsushiro Arr**	**9.74**	**54**	Pn	**Pn**	**12 20 26.9**	**+2.7**
	0.1nm,0.3s,baz=251,slow=13,SNR=2.8						
MJAR	**Matsushiro Arr**	**9.74**	**54**		**Pn**	**12 20 23.8**	**-0.3**
JHJ	**Hachijo jima 2**	**9.80**	**75**	LR	LR	12 23 59.7	
	comp=Z,299nm,21.4s,baz=312,slow=36						
SSLB	**Suanglung**	**9.89**	**224**	Pn	**Pn**	**12 20 26.8**	**+0.4**
YULB	**Yu-li**	**9.99**	**221**		**Pn**	**12 20 26.3**	**-1.5**
TPUB	**Ta-pu**	**10.45**	**224**	Pn	**Pn**	**12 20 34.0**	**-0.1**
TWG	**Pinlang**	**10.57**	**220**	Pn	**Pn**	**12 20 35.8**	**+0.1**
TIA	**Tai'an**	**10.73**	**301**	P	Pn	12 20 43.6	+5.8
TIA				pmax	pmax		
	comp=Z,11nm,0.9s						
TIA				LR	LR		
	comp=N,2µm,11.1s						
TIA				LR	LR		
	comp=E,3µm,11.6s						
TIA				LR	LR		
	comp=Z,4µm,12.4s						
JCJ	**Chichijima**	**12.64**	**105**	LR	LR	12 25 19.3	
	comp=Z,429nm,21.9s,baz=262,slow=34						
CN2	**Changchun**	**12.89**	**350**	*e*P	**Pn**	**12 21 08.3**	**+1.1**
CN2				*e*PP	**PnPn**	**12 21 18.8**	**+3.7**
CN2				S	**Sn**	**12 23 33.9**	**+3.2**
CN2				LR	LR		
	comp=N,1µm,12.0s						
CN2				LR	LR		
	comp=E,6µm,12.0s						
CN2				LR	LR		
	comp=Z,2µm,12.0s						
USRK	**Ussuriysk Ar.**	**13.35**	**11**	LR	LR	12 25 28.3	
	comp=Z,124nm,21.8s,baz=179,slow=33						
BJT	**Baijiatuau**	**13.38**	**315**		P	12 21 16.4	-7.1
BJI	**Beijing**	**13.38**	**315**	P	**P**	**12 21 24.1**	**+0.5**
BJI				pmax	pmax		
	comp=Z,13nm,1.4s						
BJI				LR	LR		
	comp=N,4µm,14.1s						
BJI				LR	LR		
	comp=E,1µm,12.5s						
BJI				LR	LR		
	comp=Z,3µm,13.5s						
ENH	**Enshi**	**16.36**	**272**		**P**	**12 21 57.7**	**+1.0**
XAN	**Xi'an**	**16.74**	**285**	P	**P**	**12 22 01.5**	**+0.6**
XAN				pP	sP	12 22 07.3	+2.4
XAN				pmax	pmax		
	comp=Z,13nm,1.4s						
XAN				pmax	pmax		
	comp=Z,260nm,4.0s						
XAN				LR	LR		
	comp=N,2µm,10.7s						
XAN				LR	LR		
	comp=E,3µm,12.7s						
XAN				LR	LR		
	comp=Z,3µm,13.6s						
ASAJ	**Asahikawa**	**17.10**	**37**	P	**P**	**12 22 03.6**	**-1.2**
	0.2nm,0.3s,baz=238,slow=9.2,SNR=3.3						
ASAJ				LR	LR	12 28 14.9	
	comp=Z,299nm,18.8s,baz=216,slow=36						
JKA	**Kamikawa-asahi**	**17.10**	**37**	P	**P**	**12 22 03.3**	**-1.6**
JKA				IAmb	IAmb	12 22 16.6	
	comp=Z,38nm,1.1s						
KLR	**Kul'dur**	**18.26**	**7**	P	**P**	**12 22 19.5**	**+1.9**
	comp=Z,0.2nm,0.3s,baz=208,slow=7.4,SNR=13						
HIA	**Hailar**	**19.29**	**342**	P	**Pn**	**12 22 29.4**	**-0.6**
GYA	**Guiyang**	**19.66**	**262**	⇑P	**Pn**	**12 22 34.9**	**+0.2**
GYA				S	**S**	**12 26 12.0**	**-3.2**
GYA				pmax	pmax		
	comp=Z,17nm,0.8s						
GYA				LR	LR		
	comp=Z,520nm,5.4s						
GYA				LR	LR		
	comp=Z,900nm,8.2s						
GYA				LR	LR		
	comp=Z,1µm,8.9s						
LZH	**Lanzhou**	**21.08**	**290**	*e*P	**P**	**12 22 50.5**	**+1.8**
LZH				sP	sP	12 23 00.4	+7.7
LZH				S	Sn	12 26 49.8	0.0
LZH				sS	pS	12 26 57.3	+6.0
LZH				SS	SnSn	12 27 18.6	+14
LZH				pmax	pmax		
	comp=Z,14nm,1.3s						
LZH				pmax	pmax		
	comp=Z,120nm,5.4s						
LZH				LR	LR		
	comp=Z,1µm,14.6s						
LZH				LR	LR		
	comp=Z,3µm,11.9s						
LZH				LR	LR		
	comp=Z,2µm,14.7s						
GUMO	**Guam**	**23.06**	**136**	LR	LR	12 30 27.7	
	comp=Z,262nm,20.7s,baz=12,slow=32						
GUMO	**Guam**	**23.06**	**136**	P	**P**	**12 23 07.9**	**-1.9**
ULN	**Ulaanbaatar**	**23.39**	**322**	P	**P**	**12 23 14.2**	**+1.1**
ULN				IAmb	IAmb	12 23 19.0	
	comp=Z,22nm,1.2s						
SONM	**Songino Array**	**23.73**	**321**	P	**P**	**12 23 16.4**	**+0.1**
	comp=Z,8.8nm,0.8s,baz=139,slow=9.4,SNR=23						
SONM				LR	LR	12 33 17.3	
	comp=Z,490nm,20.1s,baz=137,slow=39						
SONM	**Songino Array**	**23.73**	**321**	P	**P**	**12 23 16.7**	**+0.3**
SLVN	**Son La**	**24.05**	**252**	P	**P**	**12 23 20.2**	**+0.6**
SLVN				IAmb	IAmb	12 23 21.6	
	comp=Z,21nm,1.5s						
DAV	**Davao City (W)**	**24.08**	**187**	LR	LR	12 34 15.4	
	comp=Z,129nm,18.6s,baz=344,slow=40						
GTA	**Gaotai**	**24.74**	**297**	⇑P	**P**	**12 23 26.0**	**+0.1**
GTA				pP	sP	12 23 30.4	+0.4
GTA				sP	pP	12 23 33.6	+4.8
GTA				S	**S**	**12 27 55.1**	**+7.1**
GTA				pmax	pmax		
	comp=Z,120nm,5.2s						
GTA				LR	LR		
	comp=Z,790nm,15.5s						
GTA				LR	LR		
	comp=Z,990nm,15.9s						
GTA				LR	LR		
	comp=Z,1µm,13.5s						
TLY	**Talaya**	**27.50**	**326**	LR	LR	12 36 15.0	
	comp=Z,615nm,19.5s,baz=127,slow=40						
TLY	**Talaya**	**27.50**	**326**	P	**P**	**12 23 50.4**	**-0.1**
TLY				IAmb	IAmb	12 24 03.6	
	comp=Z,8.3nm,0.9s						
CHTO	**Chiang Mai**	**29.34**	**252**	P	**P**	**12 24 07.1**	**-0.1**
CMAR	**Chiang Mai Arr**	**29.52**	**252**	P	**P**	**12 24 09.2**	**+0.4**
	comp=Z,0.6nm,0.4s,baz=54,slow=6.6,SNR=8.3						
CMAR				LR	LR	12 37 09.8	
	comp=Z,75nm,21.2s,baz=85,slow=39						
PETK	**Petropavlovsk-**	**30.51**	**35**	LR	LR	12 35 59.8	
	comp=Z,131nm,20.9s,baz=200,slow=35						
SIJI	**Sorong**	**31.92**	**175**	LR	LR	12 37 40.4	
	comp=Z,118nm,18.2s,baz=67,slow=37						
LSA	**Lhasa**	**32.12**	**277**	P	**P**	**12 24 33.2**	**+1.0**
LSA				IAmb	IAmb	12 24 34.4	
	comp=Z,7.8nm,1.1s						
JAY	**Jayapura**	**35.42**	**159**	LR	LR	12 38 23.3	
	comp=Z,178nm,18.4s,baz=14,slow=34						
MK31	**Makanchi Array**	**38.59**	**307**	P	**P**	**12 25 27.4**	**+0.2**
MK31				IAmb	IAmb	12 25 39.0	
	comp=Z,12nm,1.1s						
MKAR	**Makanchi Array**	**38.59**	**307**	P	**P**	**12 25 27.3**	**+0.2**
	comp=Z,8.9nm,0.9s,baz=92,slow=12,SNR=5.3						
MAKZ	**Makanchi**	**38.81**	**307**	P	**P**	**12 25 29.3**	**+0.4**
MAKZ				IAmb	IAmb	12 25 37.7	
	comp=Z,13nm,0.9s						
BATI	**Baumata**	**41.34**	**187**	P	**P**	**12 25 48.6**	**-1.6**
	comp=Z,9.8nm,0.4s,baz=333,slow=2.4,SNR=4.8						
KURK	**Kurchatov**	**41.54**	**313**	IAmb	IAmb	12 25 51.8	
	comp=Z,9.8nm,1.0s						
KURK				P	**P**	**12 25 52.1**	**+0.6**
KURBB	**Kurchatov Arra**	**41.58**	**313**	P	**P**	**12 25 51.5**	**-0.4**
	comp=Z,3.9nm,0.7s,baz=103,slow=8.8,SNR=4.6						
LEM	**Lembang**	**42.68**	**211**	P	**P**	**12 26 01.0**	**-0.4**
	comp=Z,34nm,0.6s,baz=132,slow=21,SNR=6.7						
MTN	**Manton Dam**	**43.78**	**176**	P	**P**	**12 26 10.0**	**0.0**
PMG	**Port Moresby**	**44.10**	**153**	LR	LR	12 42 52.3	
	comp=Z,146nm,20.8s,baz=318,slow=34						
KNRA	**Kununurra**	**46.52**	**180**	P	**P**	**12 26 30.5**	**-1.3**
BVAR	**Borovoye Array**	**46.87**	**315**	P	**P**	**12 26 34.6**	**+0.4**
	comp=Z,13nm,0.7s,baz=168,slow=7.6,SNR=16						
KKAR	**Karatay Array**	**46.89**	**302**	P	**P**	**12 26 35.0**	**+0.4**
BRVK	**Borovoye**	**46.93**	**315**	P	**P**	**12 26 35.3**	**+0.6**
CHGR	**Chuyangaron**	**48.50**	**296**	P	**P**	**12 26 47.8**	**+0.6**
FITZ	**Fitzroy Crossi**	**49.01**	**184**	P	**P**	**12 26 51.6**	**+0.6**
	comp=Z,9.1nm,0.8s,baz=7.8,slow=7.1,SNR=16						
FITZ	**Fitzroy Crossi**	**49.01**	**184**		**P**	**12 26 52.0**	**+1.0**
FITZ				IAmb	IAmb	12 26 53.2	
	comp=Z,10nm,0.8s						
KBL	**Kabul**	**49.44**	**291**	P	**P**	**12 26 56.1**	**+1.5**
KBL				IAmb	IAmb	12 27 25.0	
	comp=Z,4.6nm,0.6s						
WRA	**Warramunga Arr**	**51.08**	**173**	P	**P**	**12 27 06.7**	**-0.1**
	comp=Z,3.4nm,0.9s,baz=354,slow=8.2,SNR=17						
WRA				LR	LR	12 48 26.2	
	comp=Z,53nm,21.6s,baz=140,slow=36						
WRA	**Warramunga Arr**	**51.08**	**173**		**P**	**12 27 06.2**	**-0.6**
WR0	**Warramunga Arr**	**51.12**	**173**		**P**	**12 27 07.6**	**+0.5**
WR0				IAmb	IAmb	12 27 13.3	
	comp=Z,9.2nm,1.1s						
PSA00	**Pilbara Seismi**	**53.04**	**190**	P	**P**	**12 27 22.8**	**+1.5**
PSA00				IAmb	IAmb	12 27 23.2	
	comp=Z,13nm,0.7s						
ABKAR	**Akbulak array**	**53.55**	**311**	P	**P**	**12 27 25.0**	**+0.1**
ABKAR				IAmb	IAmb	12 27 26.2	
	comp=Z,16nm,1.2s						
ABKAR	**Akbulak array**	**53.55**	**311**	P	**P**	**12 27 24.9**	**+0.1**
CTA	**Charters Tower**	**53.70**	**159**	P	**P**	**12 27 27.4**	**+1.2**
	baz=268,slow=11						
ARU	**Arti**	**53.76**	**320**	P	**P**	**12 27 27.1**	**+0.8**
	comp=Z,2.3nm,0.2s,baz=46,slow=3.5,SNR=5.6						
ARU				LR	LR	12 52 38.0	
	comp=Z,417nm,19.2s,baz=98,slow=39						
ARU	**Arti**	**53.76**	**320**	P	**P**	**12 27 26.4**	**+0.1**
AKTO	**Aktyubinsk**	**54.63**	**312**	P	**P**	**12 27 33.8**	**+1.0**
	comp=Z,3.5nm,0.9s,baz=63,slow=14,SNR=2.8						
AKTO				LR	LR	12 52 40.3	
	comp=Z,779nm,19.2s,baz=73,slow=38						
AS31	**Alice Springs**	**54.72**	**174**	P	**P**	**12 27 33.9**	**+0.3**
ASAR	**Alice Springs**	**54.72**	**174**	P	**P**	**12 27 34.9**	**+1.2**
	comp=Z,2.2nm,0.6s,baz=2.1,slow=14,SNR=42						
ASAR				LR	LR	12 49 30.4	
	comp=Z,32nm,21.7s,baz=22,slow=34						
ASAR	**Alice Springs**	**54.72**	**174**		**P**	**12 27 33.9**	**+0.2**
HRA	**Herat**	**54.90**	**292**	P	**P**	**12 27 36.0**	**+0.8**
HRA				IAmb	IAmb	12 27 55.9	
	comp=Z,4.1nm,0.5s						
ILAR	**Eielson Array**	**60.07**	**29**	P	**P**	**12 28 12.2**	**+1.2**
	comp=Z,1.0nm,0.8s,baz=284,slow=7.1,SNR=8.5						
STKA	**Stephens Creek**	**63.87**	**168**	P	**P**	**12 28 37.7**	**+0.9**
	comp=Z,3.6nm,0.9s,baz=332,slow=7.0,SNR=5.7						
STKA				LR	LR	12 56 24.2	
	comp=Z,63nm,20.4s,baz=20,slow=36						
STKA	**Stephens Creek**	**63.87**	**168**	IAmb	IAmb	12 28 43.0	
	comp=Z,1.7nm,1.1s						
SPITS	**Spitsbergen Ar**	**64.11**	**348**	P	**P**	**12 28 40.0**	**+2.1**
	comp=Z,4.1nm,0.6s,baz=39,slow=5.5,SNR=5.4						
ARCES	**ARCESS Array B**	**65.56**	**338**	P	**P**	**12 28 48.7**	**+1.3**
	comp=Z,1.7nm,0.8s,baz=57,slow=4.5,SNR=4.6						
ARCES	**ARCESS Array B**	**65.56**	**338**	IAmb	IAmb	12 29 04.6	
	comp=Z,10nm,1.2s						
KBZ	**Khabaz**	**66.29**	**308**	P	**P**	**12 28 53.2**	**+0.7**
	comp=Z,7.1nm,0.9s,baz=65,slow=3.5,SNR=6.7						
FINES	**FINESS Array B**	**68.75**	**330**	P	**P**	**12 29 07.2**	**-0.5**
	comp=Z,3.5nm,0.6s,baz=146,slow=7.9,SNR=9.4						
AKASG	**Malin Array Be**	**71.99**	**319**	P	**P**	**12 29 27.3**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=55,slow=5.3,SNR=5.7						
AKASG	**Malin Array Be**	**71.99**	**319**	IAmb	IAmb	12 29 33.2	
	comp=Z,4.6nm,1.4s						
BRTR	**Keskin Array B**	**74.24**	**307**	P	**P**	**12 29 41.9**	**+0.3**
	comp=Z,6.9nm,0.9s,baz=93,slow=4.9,SNR=11						
BRTR	**Keskin Array B**	**74.24**	**307**	P	**P**	**12 29 41.2**	**-0.3**
HFS	**Hagfors**	**74.62**	**332**	P	**P**	**12 29 43.2**	**0.0**
	comp=Z,6.2nm,1.0s,baz=342,slow=8.0,SNR=2.9						
NOA	**NORSAR Array B**	**75.05**	**333**	P	**P**	**12 29 45.5**	**-0.2**
	comp=Z,1.4nm,0.8s,baz=51,slow=5.7,SNR=3.1						
CLL	**Collm**	**80.28**	**325**	*e*(P)	P	12 30 19.0	+4.0
	comp=Z,7.0nm,0.8s						
DLMT	**Dillon**	**85.86**	**38**	P	**P**	**12 30 43.1**	**-1.1**
DLMT				IAmb	IAmb	12 30 47.0	
	comp=Z,11nm,1.1s						
NVAR	**Mina Array Bea**	**86.98**	**46**	P	**P**	**12 30 50.8**	**+0.9**
	comp=Z,1.1nm,0.6s,baz=298,slow=4.3,SNR=7.1						
YMP	**Mirror Lake Pl**	**87.56**	**38**	P	**P**	**12 30 51.0**	**-1.8**
H17A	**Grant Village**	**87.57**	**38**	P	P	12 30 47.5	-5.3
DGMT	**Dagmar**	**87.84**	**32**	P	**P**	**12 30 51.0**	**-2.7**
HVU	**Hansel Valley**	**88.12**	**41**	P	**P**	**12 30 53.8**	**-1.5**
HVU				IAmb	IAmb	12 30 58.2	
	comp=Z,6.3nm,1.4s						
CLTB	**Caltabellotta**	**88.77**	**314**	P	**P**	**12 30 57.5**	**-0.8**
PDAR	**Pinedale Array**	**89.22**	**39**	P	**P**	**12 31 01.4**	**+0.9**
	comp=Z,1.2nm,0.8s,baz=331,slow=0.9,SNR=6.5						
PTGA	**Pitinga**	**148.74**	**16**	PKPbc	**PKiKP**	**12 37 52.6**	**-1.2**
	baz=352,slow=2.3						

IDC ***18*** *12:24:01.2±1.1, 38°.75N×20°.52E, h0^{km}, mb3.8/6, mb1 3.9/8, mb1mx3.6/68, mbtmp3.8/8, ML3.5/2, Error ellipse: s-maj=26.6km s-min=21.2km az=95.0*

BEO ***18*** *12:24:01.4±0.9, 38°.58N×19°.86E, h0^{km}, ML3.7/10*

IASPEI ***18*** *12:24:02.3±0.8, 38°.72N±0°.02×20°.62E±0°.03, h8^{km}±4^{km}, mb3.8/6, Error ellipse: s-maj=4.1km s-min=2.9km az=114.9, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

THE ***18*** *12:24:02.7, 38°.72N×20°.60E, h6^{km}±1^{km}, ML3.9/10, Error ellipse: s-maj=1.6km s-min=0.6km az=332.0*

ATH ***18*** *12:24:02.9, 38°.71N×20°.63E, h6^{km}±1^{km}, ML3.7/11, Error ellipse: s-maj=1.9km s-min=0.8km az=278.0*

ISC 18 12:24:02.3±0.7**, 38°.73N**±0°.02×**20°.61E**±0°.02**, h8**^{km}±4^{km}**, n85,** σ1^{s}**11**/114**, mb3.8**/6**, 6C-6D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRAG	**Dragano-Lefkad**	**0.05**	**215**	P	**Pg**	**12 24 03.9**	**-0.2**
DRAG				S	**Sg**	**12 24 05.0**	**-0.4**
	1182µm,0.2s						
DRAG	**Dragano-Lefkad**	**0.05**	**215**	P	**Pg**	**12 24 03.9**	**-0.2**
DRAG				S	**Sg**	**12 24 04.9**	**-0.5**
NYDR	**Nydri-Lefkada**	**0.07**	**101**	P	**Pg**	**12 24 04.3**	**0.0**
NYDR				S	**Sg**	**12 24 05.8**	**+0.2**
	274µm,0.3s						
NYDR	**Nydri-Lefkada**	**0.07**	**101**	P	**Pg**	**12 24 04.3**	**0.0**
NYDR				S	**Sg**	**12 24 05.9**	**+0.2**
LKD2	**Lefkada island**	**0.07**	**29**	P	**Pg**	**12 24 04.4**	**+0.1**
LKD2				S	**Sg**	**12 24 06.0**	**+0.1**
	122µm,0.4s						
LKD2	**Lefkada island**	**0.07**	**29**	P	**Pg**	**12 24 04.5**	**+0.1**
LKD2				S	**Sg**	**12 24 05.9**	**0.0**
LKD2				AML	AML	12 24 06.4	
LKD2				AML	AML	12 24 06.6	
EVGI	**Lefkada island**	**0.11**	**162**	P	**Pg**	**12 24 05.1**	**+0.2**
EVGI				S	**Sg**	**12 24 07.2**	**+0.5**
	136µm,0.4s						
EVGI	**Lefkada island**	**0.11**	**162**	P	**Pg**	**12 24 05.2**	**+0.2**
EVGI				S	**Sg**	**12 24 06.9**	**+0.2**
FSK	**Fiskardo**	**0.27**	**189**	P	**Pg**	**12 24 08.1**	**+0.4**
FSK				S	**Sg**	**12 24 12.1**	**+0.8**
	43µm,0.3s						
FSK	**Fiskardo**	**0.27**	**189**	P	**Pg**	**12 24 08.1**	**+0.4**
FSK				S	**Sg**	**12 24 12.2**	**+0.9**
FSK				AML	AML	12 24 13.5	
	comp=N,55564µm,0.3s						
FSK				AML	AML	12 24 14.0	
KEF4	**Livadi, Kephal**	**0.49**	**198**	P	**Pg**	**12 24 11.7**	**-0.1**
KEF4				S	**Sb**	**12 24 19.7**	**-0.8**
KEF4	**Livadi, Kephal**	**0.49**	**198**	P	**Pg**	**12 24 11.7**	**-0.1**
KEF4				S	**Sg**	**12 24 19.2**	**+0.9**
DMLN	**Damoulianata-K**	**0.52**	**201**	P	**Pg**	**12 24 12.2**	**-0.2**
DMLN				S	**Sb**	**12 24 20.8**	**-0.6**
	comp=N,11µm,0.4s						
DMLN	**Damoulianata-K**	**0.52**	**201**	P	**Pg**	**12 24 12.2**	**-0.2**
DMLN				S	**Sg**	**12 24 20.2**	**+0.9**
LXRA	**Lixouri, Kepha**	**0.54**	**195**	P	**Pg**	**12 24 12.6**	**-0.2**
VLS	**Valsamata**	**0.55**	**182**	P	**Pg**	**12 24 12.4**	**-0.6**
VLS				S	**Sg**	**12 24 21.1**	**+1.0**
	comp=N,7µm,0.4s						
VLS	**Valsamata**	**0.55**	**182**	P	**Pg**	**12 24 12.6**	**-0.4**
VLS				S	**Sg**	**12 24 20.3**	**+0.2**
VLS				AML	AML	12 24 22.8	
	comp=N,15123µm,0.4s						
VLS				AML	AML	12 24 24.5	
	comp=E,13560µm,0.3s						
ARGA	**Argostoli. Kep**	**0.56**	**191**	P	**Pg**	**12 24 13.7**	**+0.6**
ARGA				S	**Sg**	**12 24 21.0**	**+0.6**
KEF3	**Kipouria, Keph**	**0.56**	**202**	P	**Pg**	**12 24 12.4**	**-0.8**
KEF3				S	**Sg**	**12 24 20.6**	**0.0**
	comp=E,19µm,0.5s						
KEF3	**Kipouria, Keph**	**0.56**	**202**	P	**Pg**	**12 24 12.4**	**-0.8**
PSDA	**Pessada-Kefalo**	**0.61**	**182**	P	**Pg**	**12 24 13.6**	**-0.5**
PSDA				S	**Sg**	**12 24 22.7**	**+0.6**
	comp=E,2µm,0.3s						
PSDA	**Pessada-Kefalo**	**0.61**	**182**	P	**Pg**	**12 24 13.8**	**-0.3**
PSDA				S	**Sg**	**12 24 22.4**	**+0.3**
PVO	**Paravola**	**0.72**	**98**	P	**Pg**	**12 24 17.0**	**+0.8**
PVO	**Paravola**	**0.72**	**98**	P	**Pg**	**12 24 17.1**	**+0.8**
PVO				S	**Sg**	**12 24 26.7**	**+1.0**
PVO				AML	AML	12 24 30.8	
	comp=E,18764µm,0.5s						
PVO				AML	AML	12 24 31.0	
	comp=N,13286µm,0.5s						
IGT	**Igoumenitsa**	**0.83**	**345**	P	**Pg**	**12 24 18.6**	**+0.2**
IGT	**Igoumenitsa**	**0.83**	**345**	P	**Pg**	**12 24 18.6**	**+0.2**
IGT				S	**Sb**	**12 24 30.6**	**+0.2**
IGT				AML	AML	12 24 36.5	
	comp=E,7652µm,0.5s						
IGT				AML	AML	12 24 36.7	
	comp=N,7698µm,0.6s						
VTN	**Vitineika**	**0.93**	**151**	P	**Pg**	**12 24 20.2**	**+0.1**
RLS	**Riolos of Patr**	**0.95**	**135**	P	**Pg**	**12 24 20.1**	**-0.4**
RLS	**Riolos of Patr**	**0.95**	**135**	P	**Pg**	**12 24 19.9**	**-0.6**
RLS				AML	AML	12 24 43.5	
	comp=E,6014µm,0.6s						
RLS				AML	AML	12 24 45.5	
	comp=N,7324µm,0.5s						
JAN	**Janina**	**0.95**	**11**	P	**Pb**	**12 24 21.5**	**+0.5**
JAN	**Janina**	**0.95**	**11**	P	**Pb**	**12 24 21.7**	**+0.7**
EVR	**Evrytania**	**0.95**	**78**	P	**Pg**	**12 24 20.8**	**+0.1**
EVR	**Evrytania**	**0.95**	**78**	P	**Pg**	**12 24 20.7**	**0.0**
EVR				AML	AML	12 24 42.7	
	comp=N,2494µm,0.5s						
EVR				AML	AML	12 24 44.2	
	comp=E,2883µm,0.4s						
LTHK	**Lithakia**	**1.03**	**170**	P	**Pg**	**12 24 20.9**	**-1.2**
LTHK	**Lithakia**	**1.03**	**170**	P	**Pg**	**12 24 20.8**	**-1.3**
LTHK				AML	AML	12 24 44.2	
	comp=E,8109µm,0.4s						
LTHK				AML	AML	12 24 47.1	
	comp=N,9180µm,0.5s						
ANX	**Ano Chora**	**1.03**	**97**	P	**Pg**	**12 24 21.9**	**-0.3**
ANX	**Ano Chora**	**1.03**	**97**	P	**Pg**	**12 24 21.9**	**-0.3**
ANX				AML	AML	12 24 47.4	
	comp=N,13584µm,0.5s						
ANX				AML	AML	12 24 48.2	
	comp=E,12405µm,0.6s						
EFP	**Efpalio**	**1.06**	**106**	P	**Pg**	**12 24 22.1**	**-0.5**
EFP				S	**Sn**	**12 24 38.8**	**+0.5**
	comp=E,6µm,0.4s						
EFP	**Efpalio**	**1.06**	**106**	P	**Pg**	**12 24 21.9**	**-0.7**
EFP				S	**Sg**	**12 24 36.3**	**0.0**
EFP				AML	AML	12 24 45.2	
	comp=E,11295µm,0.5s						
EFP				AML	AML	12 24 45.4	
	comp=N,11111µm,0.4s						
KASA	**Kassiopi**	**1.15**	**333**	P	**Pn**	**12 24 25.5**	**+0.9**
DRO	**Drossia**	**1.16**	**132**	P	**Pg**	**12 24 23.8**	**-0.8**
DRO	**Drossia**	**1.16**	**132**	P	**Pg**	**12 24 23.7**	**-0.8**
KEK	**Kerkira**	**1.17**	**328**	P	**Pb**	**12 24 25.3**	**+0.5**
KEK				AML	AML	12 24 49.7	
	comp=E,2689µm,0.5s						
KEK				AML	AML	12 24 58.2	
	comp=N,2101µm,0.6s						
LAKA	**Lakka**	**1.18**	**114**	P	**Pg**	**12 24 24.0**	**-0.9**
TRIZ	**Trizonia**	**1.20**	**107**	P	**Pg**	**12 24 24.7**	**-0.7**
AGG	**Agios Georgios**	**1.37**	**77**	P	**Pn**	**12 24 28.6**	**+0.8**
THL	**Klokotos Trika**	**1.37**	**52**	P	**Pn**	**12 24 28.1**	**+0.4**
GUR	**Goura**	**1.57**	**120**	P	**Pn**	**12 24 30.5**	**-0.1**
OHR	**Ohrid**	**2.39**	**3**	*e*Pn	**Pb**	**12 24 45.0**	**-0.6**
OHR				*e*Sn	**Sg**	**12 25 18.2**	**-0.8**
TIR	**Tirane**	**2.68**	**348**	⇑P	**Pn**	**12 24 47.8**	**+2.1**
TIR	**Tirane**	**2.68**	**348**	*e*Pn	**Pn**	**12 24 47.9**	**+2.1**
VAY	**Valandovo**	**3.00**	**29**	*e*Pn	**Pb**	**12 24 56.5**	**+0.6**
VAY				*e*Sn	**Sg**	**12 25 37.5**	**-1.0**
TIP	**Timpagrande**	**3.04**	**280**	⇑P	**Pn**	**12 24 51.1**	**+0.3**
MATE	**Matera**	**3.58**	**304**	⇓P	**Pn**	**12 24 59.2**	**+1.2**
PDG	**Podgorica**	**3.84**	**345**	⇓P	**Pn**	**12 25 02.2**	**+0.6**
PDG	**Podgorica**	**3.84**	**345**	*e*Pn	**Pn**	**12 25 01.7**	**0.0**
PDG				*e*Sn	**Sn**	**12 25 46.5**	**-0.5**
PRVS	**Prvonek**	**3.94**	**16**	*e*Pn	**Pn**	**12 25 06.6**	**+3.5**
BOSS	**Bosilegrad**	**4.02**	**20**	*e*Pn	**Pb**	**12 25 10.0**	**-3.5**
BARS	**Barje**	**4.19**	**12**	*e*Pn	**Pn**	**12 25 09.5**	**+3.0**
TREB	**Trebinje**	**4.34**	**337**	*e*Pn	**Pn**	**12 25 08.3**	**-0.3**
VTS	**Vitosha**	**4.37**	**26**	⇑P	**Pn**	**12 25 10.8**	**+1.7**
VTS	**Vitosha**	**4.37**	**26**	*e*Pn	**Pn**	**12 25 13.0**	**+3.9**
VTS				*e*Sn	**Sb**	**12 26 08.2**	**-4.1**
SELS	**Selova**	**4.50**	**5**	*e*Pn	**Pn**	**12 25 12.8**	**+1.9**
SJES	**Sjenica**	**4.56**	**354**	*e*Pn	**Pn**	**12 25 12.6**	**+1.0**
STON	**Ston**	**4.69**	**333**	*e*Pn	**Pn**	**12 25 13.1**	**-0.3**
IDI	**Anoyia**	**4.85**	**134**	Pn	**Pn**	**12 25 16.3**	**+0.7**
	comp=N,0.9nm,0.3s,baz=330,slow=14,SNR=3.0						
IDI				Sn	**Sn**	**12 26 11.3**	**-0.6**
	comp=N,1.4nm,0.3s,baz=315,slow=18,SNR=2.2						
BOVS	**Bovan**	**4.97**	**9**	⇓P	**Pn**	**12 25 17.8**	**+0.5**
BOVS	**Bovan**	**4.97**	**9**	*e*Pn	**Pn**	**12 25 19.5**	**+2.3**
BBLS	**Lazići**	**5.21**	**350**	*e*Pn	**Pn**	**12 25 19.6**	**-1.0**
DIVS	**Divibare**	**5.39**	**355**	*e*Pn	**Pn**	**12 25 24.1**	**+1.1**
GZR	**Gura Zlata**	**6.85**	**13**	⇓P	**Pn**	**12 25 44.1**	**+1.0**
VOIR		**7.47**	**25**	⇑P	**Pn**	**12 25 53.3**	**+1.7**
MLR	**Muntele Rosu**	**7.83**	**29**	⇑P	**Pn**	**12 25 58.0**	**+1.4**
MLR	**Muntele Rosu**	**7.83**	**29**	Pn	**Pn**	**12 25 57.8**	**+1.1**
	comp=N,0.3nm,0.3s,baz=217,slow=14,SNR=2.8						
BISRR	**Bisoca**	**8.18**	**32**	⇑P	**Pn**	**12 26 03.6**	**+2.2**
PLOR	**Plostina**	**8.41**	**30**	⇓P	**Pn**	**12 26 05.6**	**+1.2**
VRI	**Vrincioaia**	**8.45**	**30**	⇓P	**Pn**	**12 26 05.7**	**+0.8**
HFS	**Hagfors**	**21.87**	**351**	P	**P**	**12 28 55.4**	**+0.2**
	comp=N,2.3nm,0.5s,baz=172,slow=12,SNR=7.4						
EKA	**Eskdalemuir Ar**	**23.02**	**324**	P	**P**	**12 29 06.4**	**-1.2**
	comp=N,9.0nm,1.0s,baz=131,slow=10,SNR=6.0						
NOA	**NORSAR Array B**	**23.10**	**348**	P	**P**	**12 29 08.7**	**+0.4**
	comp=N,0.7nm,0.5s,baz=152,slow=10,SNR=2.1						
TORD	**Torodi Ar. Bea**	**30.50**	**218**	P	**P**	**12 30 15.4**	**-0.5**
	comp=N,0.5nm,0.7s,baz=24,slow=9.5,SNR=2.8						
MKAR	**Makanchi Array**	**44.95**	**59**	P	**P**	**12 32 18.2**	**+0.5**
	comp=N,0.5nm,0.4s,baz=275,slow=7.0,SNR=5.0						
ZALV	**Zalesovo Beam**	**45.27**	**49**	P	**P**	**12 32 20.3**	**+0.2**
	comp=N,1.8nm,0.5s,baz=280,slow=8.1,SNR=7.7						
WRA	**Warramunga Arr**	**120.49**	**92**	PKP	**PKiKP**	**12 42 55.7**	**+0.9**
	comp=N,0.4nm,0.9s,baz=309,slow=2.4,SNR=2.2						
ASAR	**Alice Springs**	**122.16**	**96**	PKP	**PKPdf**	**12 42 58.4**	**+0.5**
	comp=N,0.3nm,0.6s,baz=296,slow=1.7,SNR=4.9						

NOU 18 12:26:17.7, 15°.10S×172°.98W, h0^{km}**, MLv3.7**/4**, Samoa Islands Region, Samoa Islands region**

NEIC ***18*** *12:40:03.1±1.0, 19°.1S±0°.2×177°.5W±0°.1, h573^{km}±8^{km}, mb4.1/12, Error ellipse: s-maj=25.4km s-min=16.0km az=142.0*

IDC ***18*** *12:40:03.9±3.2, 19°.60S×177°.61W, h568^{km}±21^{km}, mb3.0/3, mb1 3.2/6, mb1mx3.0/41, mbtmp4.1/6, Error ellipse: s-maj=55.7km s-min=27.8km az=59.0*

NOU ***18*** *12:40:03.4, 19°.33S×177°.46W, h572^{km}, mb4.6/10, Fiji Islands Region*

ISC 18 12:40:02.5±0.7**, 19°.2S**±0°.1×**177°.4W**±0°.1**, h570**^{km}**, n44,** σ1^{s}**18**/44**, mb3.9**/8**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKBA	**Tubou, Lakemba**	**1.61**	**305**	P	**P**	**12 41 14.2**	**+1.7**
TAVE	**Taveuni**	**3.39**	**315**	P	**P**	**12 41 24.1**	**+2.4**
DGTI	**Dogotuki**	**3.92**	**316**	P	**P**	**12 41 26.6**	**+1.3**
MSVF	**Nonsavu**	**4.52**	**288**	P	**P**	**12 41 31.1**	**+1.2**
	7.1nm,0.3s,baz=175,slow=4.5,SNR=58						
MSVF	**Nonsavu**	**4.52**	**288**	P	**P**	**12 41 31.3**	**+1.5**
MSVF	**Nonsavu**	**4.52**	**288**	P	**P**	**12 41 31.2**	**+1.3**
AFI	**Afiamalu**	**7.52**	**47**	P	**P**	**12 41 56.7**	**+0.3**
	8.1nm,0.3s,baz=193,slow=2.1,SNR=11						
AFI				S	**S**	**12 43 28.6**	**-0.9**
	3.8nm,0.3s,baz=307,slow=22,SNR=1.4						
MARNC	**Mare, Loyalty**	**13.84**	**258**	P	**P**	**12 42 59.3**	**-0.7**
PINNC	**Pines Island,**	**14.55**	**254**	P	**P**	**12 43 06.7**	**-0.4**
SANVU	**Saraoutou**	**15.13**	**282**	P	**P**	**12 43 12.3**	**-0.7**
SANVU				IAmb	IAmb	12 43 20.6	

	comp=Z,40nm,1.1s						
DZM	**Mont Dzumac**	**15.38**	**256**	P	**P**	**12 43 14.2**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=18,slow=20,SNR=1.4						
KNTN	**Kanton**	**17.21**	**20**	P	**P**	**12 43 31.9**	**-0.5**
OUZ	**Omahuta**	**17.87**	**205**	P	**P**	**12 43 37.8**	**-0.3**
KUZ	**Kuaotunu**	**18.53**	**198**	P	**P**	**12 43 44.9**	**+0.8**
WIAZ	**Waiheke Island**	**18.75**	**199**	P	**P**	**12 43 47.0**	**+0.9**
MBAZ	**Motutapu North**	**18.80**	**199**	P	**P**	**12 43 48.0**	**+1.4**
ETAZ	**East Tamaki Re**	**18.96**	**199**	P	**P**	**12 43 48.1**	**+0.1**
AWAZ	**Awhitu Peninsu**	**19.15**	**200**	P	**P**	**12 43 50.7**	**+0.9**
MWZ	**Matawai**	**19.61**	**192**	P	**P**	**12 43 53.0**	**-0.9**
URZ	**Urewera**	**19.62**	**193**	P	**P**	**12 43 50.9**	**-3.1**
	comp=Z,2.8nm,0.3s,baz=298,slow=23,SNR=9.4						
URZ	**Urewera**	**19.62**	**193**	P	**P**	**12 43 52.5**	**-1.4**
URZ	**Urewera**	**19.62**	**193**	P	**P**	**12 43 52.3**	**-1.7**
PRRZ	**Plateau Road**	**20.01**	**194**	P	P	12 43 48.3	-9.3
SNGZ	**Shannon Statio**	**20.08**	**192**	P	**P**	**12 44 00.2**	**+2.1**
BKZ	**Black Stump Fm**	**20.62**	**194**	P	**P**	**12 44 01.6**	**-1.6**
OTVZ	**Oturere**	**20.82**	**195**	P	**P**	**12 44 03.9**	**-1.1**
QRZ	**Quartz Range**	**23.25**	**200**	P	**P**	**12 44 26.5**	**0.0**
KHZ	**Kahutara**	**24.42**	**196**	P	**P**	**12 44 35.5**	**-1.4**
KHZ	**Kahutara**	**24.42**	**196**	P	**P**	**12 44 35.8**	**-1.1**
WHZ	**Wether Hill Ro**	**29.28**	**201**	P	**P**	**12 45 20.3**	**+0.9**
STKA	**Stephens Creek**	**38.87**	**243**	P	**P**	**12 46 38.8**	**-1.1**
	comp=Z,1.7nm,0.6s,baz=107,slow=11,SNR=4.3						
MLOA	**Mauna Loa Obse**	**44.02**	**30**	P	P	12 47 14.6	-6.4
WR0	**Warramunga Arr**	**45.15**	**261**	P	**P**	**12 47 28.9**	**-0.3**
WR0				IAmb	IAmb	12 47 30.2	
	comp=Z,7.2nm,1.5s						
WB0	**Warramunga Arr**	**45.31**	**261**	P	**P**	**12 47 29.8**	**-0.7**
WB2	**Warramunga Arr**	**45.33**	**261**	P	**P**	**12 47 30.0**	**-0.7**
WB2				IAmb	IAmb	12 47 38.1	
	comp=Z,2.7nm,0.6s						
WRAB	**Tennant Creek**	**45.33**	**261**	P	**P**	**12 47 30.0**	**-0.7**
WRAB				IAmb	IAmb	12 47 50.1	
	comp=Z,7.1nm,1.4s						
WRA	**Warramunga Arr**	**45.34**	**261**	P	**P**	**12 47 29.9**	**-0.8**
	comp=Z,0.5nm,0.4s,baz=98,slow=7.7,SNR=31						
WRA				PcP	**PcP**	**12 48 58.5**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=98,slow=3.5,SNR=4.0						
AS31	**Alice Springs**	**45.37**	**255**	P	**P**	**12 47 30.7**	**-0.2**
ASAR	**Alice Springs**	**45.37**	**255**	P	**P**	**12 47 30.2**	**-0.7**
	comp=Z,1.4nm,0.7s,baz=87,slow=7.7,SNR=15						
ASAR				PcP	**PcP**	**12 48 58.6**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=97,slow=4.0,SNR=5.6						
ASAR	**Alice Springs**	**45.37**	**255**	P	**P**	**12 47 30.7**	**-0.3**
QSPA	**South Pole Qui**	**70.91**	**180**	P	**P**	**12 50 24.0**	**+1.4**
QSPA				IAmb	IAmb	12 50 25.1	
	comp=Z,10.0nm,1.4s						
WVOR	**Wild Horse Val**	**81.76**	**40**	P	**P**	**12 51 22.1**	**-0.3**
L19K	**White Mountain**	**83.02**	**10**		pP	12 53 26.3	-3.0
SNAA	**Sanae**	**89.33**	**178**	P	**P**	**12 51 58.8**	**+0.5**
SNAA				IAmb	IAmb	12 52 14.2	
	comp=Z,1.8nm,1.2s						

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*HLW **18** 13:03:02.6, 40°.03N×21°.22E, h24^{km}±12^{km}, Md5.0*

*TIR **18** 13:03:08.5, 38°.48N×20°.42E, h2^{km}±11^{km}, Ml5.4*

*BJI **18** 13:03:12.0±0.0, 38°.70N×20°.50E, h5^{km}, mB5.2/24, mb4.6/40, Ms5.0/16, Ms7 4.6/18*

*IDC **18** 13:03:12.6±0.5, 38°.81N×20°.65E, h0^{km}, mb4.5/31, mb1 4.5/45, mb1mx4.4/62, mbtmp4.4/45, ML4.2/12, MS4.2/42, Ms1 4.2/42, ms1mx4.2/57, Error ellipse: s-maj=10.3km s-min=9.8km az=124.0*

*MOS **18** 13:03:13.4±1.1, 38°.69N×20°.43E, h13^{km}, mb5.0/30, MS4.3/15, Error ellipse: s-maj=4.5km s-min=2.3km az=79.8*

*IASPEI **18** 13:03:14.2±0.8, 38°.73N±0°.02×20°.60E±0°.03, h11^{km}±4^{km}, mb4.7/90, MS4.3/37, Error ellipse: s-maj=4.2km s-min=2.8km az=95.9, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*ATH **18** 13:03:15.0, 38°.72N×20°.63E, h8^{km}±1^{km}, ML4.6/20, Error ellipse: s-maj=1.3km s-min=0.6km az=275.0*

*THE **18** 13:03:14.5, 38°.74N×20°.60E, h10^{km}±1^{km}, ML4.8/6, Error ellipse: s-maj=1.6km s-min=0.6km az=100.0*

*UPSL **18** 13:03:15.0, 38°.72N×20°.63E, h8^{km}, Mw4.9, Moment Tensor Solution. s7 Moment tensor: M_{rr}0.41; $M_{\theta\theta}$1.06; $M_{\phi\phi}$-1.47; $M_{r\theta}$-1.27; $M_{\theta\phi}$2.21; $M_{\phi r}$0.68; Fault plane solution: NP1:ϕ_s286.00000°, δ89.00000°, λ29.00000°. NP2:ϕ_s196.00000°, δ61.00000°, λ179.00000°.*

*PDG **18** 13:03:14.2±0.7, 38°.75N×20°.46E, h9^{km}±1^{km}, MD4.8/5, ML4.8/13 Error ellipse: s-maj=0.7km s-min=0.9km az=0.0*

*GCMT **18** 13:03:14.9±0.2, 38°.63N±0°.01×20°.53E±0°.02, h18^{km}±1^{km}, MW4.9/105, Moment Tensor Solution. s31,c34; s105,c167; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.33±.09; $M_{\theta\theta}$2.53±.10; $M_{\phi\phi}$-2.21±.08; $M_{r\theta}$-0.04±.20; $M_{\theta\phi}$1.66±.07; $M_{\phi r}$0.50±.21; Best double couple: $M_0$2.94300×10^{16} NP1:ϕ_s117.00000°, δ81.00000°, λ-7.00000°. NP2:ϕ_s208.00000°, δ84.00000°, λ-171.00000°. Principal axes: T 3.0570, Plg2.0000°, Azm342.0000°; N -0.2340, Plg79.0000°, Azm243.0000°; P -2.8280, Plg11.0000°, Azm73.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BEO **18** 13:03:14.1±2.0, 38°.36N×20°.23E, h55^{km}±3^{km}, ML4.9/13*

*NEIC **18** 13:03:15.5±2.0, 38°.73N±0°.05×20°.57E±0°.02, h10^{km}±1^{km}, Error ellipse: s-maj=9.3km s-min=2.8km az=196.0*

*MED_RC **18** 13:03:15.0±0.2, 38°.67N×20°.56E, h10^{km}, MW4.9/35, Moment Tensor Solution.Mantle waves: s35,c57; Duration: 1^{s}1 Moment tensor: Scale 10^{16}Nm; M_{rr}0.09±.10; $M_{\theta\theta}$2.11±.09; $M_{\phi\phi}$-2.21±.09; $M_{r\theta}$-0.68±.30; $M_{\theta\phi}$1.76±.08; $M_{\phi r}$-0.69±.32; Best double couple: $M_0$2.95000×10^{16} NP1:ϕ_s296.00000°, δ72.00000°, λ6.00000°. NP2:ϕ_s205.00000°, δ84.00000°, λ162.00000°. Principal axes: T 3.0000, Plg17.0000°, Azm159.0000°; N -0.1100, Plg71.0000°, Azm7.0000°; P -2.9000, Plg8.0000°, Azm252.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*NEIC **18** 13:03:16.3, 38°.76N×20°.50E, h21^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-0.60; $M_{\theta\theta}$2.69; $M_{\phi\phi}$-2.09; $M_{r\theta}$-0.74; $M_{\theta\phi}$0.91; $M_{\phi r}$-1.43; Fault plane solution: $M_0$3.06000×10^{16} NP1:ϕ_s37.90000°, δ81.01000°, λ-146.58000°. NP2:ϕ_s302.01000°, δ57.04000°, λ-10.73000°. Principal axes: T 3.1354, Plg16.0000°, Azm166.0000°; N -0.1527, Plg56.0000°, Azm51.0000°; P -2.9827, Plg30.0000°, Azm265.0000°;*

ISC 18 13:03:14.6±0.6, **38°.71N**±0°.01×**20°.57E**±0°.02, **h10**^{km}±3^{km}, **n589**, σ**1^{s}80**/667, **mb4.7**/90, **MS4.3**/37, **110C-68D, Fault plane solution: NP1:**ϕ_s268.73468°, δ68.11166°, λ-15.72322°. **NP2:**ϕ_s4.72605°, δ75.43635°, λ-157.34540°. **Principal axes:** T Plg4.9222°, Azm135.6430°; N Plg63.2771°, Azm35.7935°; P Plg26.1942°, Azm228.0711°; **Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRAG	**Dragano-Lefkad**	**0.03**	**176**	P	**Pg**	**13 03 16.5**	**0.0**
DRAG				S	**Sg**	**13 03 17.8**	**-0.1**
DRAG	**Dragano-Lefkad**	**0.03**	**176**	P	**Pg**	**13 03 16.6**	**0.0**
DRAG				S	**Sg**	**13 03 17.7**	**-0.2**
NYDR	**Nydri-Lefkada**	**0.10**	**90**	P	**Pg**	**13 03 16.6**	**-0.7**
NYDR				S	**Sg**	**13 03 18.3**	**-0.8**
NYDR	**Nydri-Lefkada**	**0.10**	**90**	P	**Pg**	**13 03 16.5**	**-0.7**
NYDR				S	**Sg**	**13 03 18.1**	**-1.0**
LKD2	**Lefkada island**	**0.10**	**42**	P	**Pg**	**13 03 16.6**	**-0.8**
LKD2				S	**Sg**	**13 03 18.1**	**-1.2**
LKD2	**Lefkada island**	**0.10**	**42**	P	**Pg**	**13 03 16.5**	**-0.8**
LKD2				S	**Sg**	**13 03 18.3**	**-0.9**
EVGI	**Lefkada island**	**0.11**	**145**	P	**Pg**	**13 03 17.6**	**+0.1**
EVGI				S	**Sg**	**13 03 20.2**	**+0.7**
	1140μm,0.4s						
EVGI	**Lefkada island**	**0.11**	**145**	P	**Pg**	**13 03 17.5**	**+0.1**
EVGI				S	**Sg**	**13 03 19.7**	**+0.2**
TSLK	**Tsoukalades, L**	**0.13**	**30**	P	**Pg**	**13 03 17.2**	**-0.5**
TSLK				S	**Sg**	**13 03 19.6**	**-0.3**
TSLK	**Tsoukalades, L**	**0.13**	**30**	P	**Pg**	**13 03 17.3**	**-0.4**
TSLK				S	**Sg**	**13 03 19.8**	**-0.1**
FSK	**Fiskardo**	**0.25**	**182**	P	**Pg**	**13 03 20.5**	**+0.7**
FSK				S	**Sb**	**13 03 25.4**	**-0.3**
	180μm,0.3s						
FSK	**Fiskardo**	**0.25**	**182**	P	**Pg**	**13 03 20.3**	**+0.5**
FSK				S	**Sb**	**13 03 24.7**	**-1.0**
FSK				AML	AML	13 03 26.3	
FSK				AML	AML	13 03 36.1	
KEF4	**Livadi, Kephal**	**0.47**	**194**	P	**Pg**	**13 03 24.1**	**+0.3**
KEF4				S	**Sb**	**13 03 32.3**	**+0.4**
	639μm,0.7s						
KEF4	**Livadi, Kephal**	**0.47**	**194**	P	**Pg**	**13 03 24.0**	**+0.3**
KEF4				S	**Sb**	**13 03 31.0**	**-0.9**
DMLN	**Damoulianata-K**	**0.50**	**198**	P	**Pg**	**13 03 24.6**	**+0.3**
DMLN	**Damoulianata-K**	**0.50**	**198**	P	**Pg**	**13 03 24.6**	**+0.3**
DMLN				S	**Sb**	**13 03 32.4**	**-0.4**
LXRA	**Lixouri, Kepha**	**0.52**	**192**	P	**Pg**	**13 03 25.0**	**+0.2**
LXRA				S	**Sb**	**13 03 33.2**	**-0.2**
VLS	**Valsamata**	**0.54**	**179**	P	**Pg**	**13 03 24.9**	**-0.2**
VLS				S	**Sb**	**13 03 33.7**	**-0.1**
	52μm,0.3s						
VLS	**Valsamata**	**0.54**	**179**	P	**Pg**	**13 03 24.8**	**-0.2**
VLS				S	**Sg**	**13 03 32.3**	**+0.2**
VLS				AML	AML	13 03 36.6	
VLS				AML	AML	13 03 41.1	
	comp=E,96135μm,0.4s						
VLS	**Valsamata**	**0.54**	**179**	P	**Pg**	**13 03 24.9**	**-0.2**
VLS				S	**Sb**	**13 03 33.7**	**-0.1**
KEF3	**Kipouria, Keph**	**0.54**	**199**	P	**Pg**	**13 03 24.8**	**-0.4**
KEF3				S	**Sb**	**13 03 33.8**	**-0.1**
	comp=E,207μm,0.6s						
KEF3	**Kipouria, Keph**	**0.54**	**199**	P	**Pg**	**13 03 24.7**	**-0.4**
KEF3				S	**Sb**	**13 03 33.4**	**-0.5**
ARGA	**Argostoli. Kep**	**0.54**	**188**	P	**Pb**	**13 03 26.1**	**0.0**
ARGA				S	**Sb**	**13 03 34.1**	**+0.2**
PSDA	**Pessada-Kefalo**	**0.60**	**179**	P	**Pg**	**13 03 26.0**	**-0.2**
PSDA				S	**Sb**	**13 03 35.5**	**-0.1**
	comp=E,7μm,0.5s						
PSDA	**Pessada-Kefalo**	**0.60**	**179**	P	**Pg**	**13 03 26.2**	**0.0**
PSDA				S	**Sg**	**13 03 34.8**	**+0.7**
PVO	**Paravola**	**0.75**	**97**	P	**Pg**	**13 03 29.0**	**-0.1**
PVO	**Paravola**	**0.75**	**97**	P	**Pg**	**13 03 29.1**	**-0.1**
PVO				S	**Sg**	**13 03 38.4**	**-0.6**
PVO				AML	AML	13 03 43.0	
PVO				AML	AML	13 03 43.0	
IGT	**Igoumenitsa**	**0.84**	**347**	P	**Pg**	**13 03 29.4**	**-1.4**
IGT	**Igoumenitsa**	**0.84**	**347**	P	**Pg**	**13 03 30.8**	**-0.1**
IGT	**Igoumenitsa**	**0.84**	**347**	P	**Pg**	**13 03 29.4**	**-1.4**
IGT	**Igoumenitsa**	**0.84**	**347**	P	**Pg**	**13 03 29.5**	**-1.4**
	baz=357						
IGT				S	**Sn**	**13 03 44.1**	**-0.7**
	baz=357						
VTN	**Vitineika**	**0.93**	**149**	P	**Pg**	**13 03 32.6**	**+0.1**
VTN	**Vitineika**	**0.93**	**149**	P	**Pb**	**13 03 32.8**	**0.0**
RLS	**Riolos of Patr**	**0.96**	**133**	P	**Pg**	**13 03 32.4**	**-0.7**
RLS	**Riolos of Patr**	**0.96**	**133**	P	**Pg**	**13 03 32.2**	**-0.9**
RLS				AML	AML	13 03 54.6	
RLS				AML	AML	13 03 55.6	
	comp=E,98910μm,0.6s						
JAN	**Janina**	**0.97**	**13**	P	**Pg**	**13 03 32.9**	**-0.3**
JAN	**Janina**	**0.97**	**13**	P	**Pg**	**13 03 32.8**	**-0.5**
JAN				AML	AML	13 03 50.1	
JAN				AML	AML	13 03 54.7	
	comp=N,65336μm,1.0s						
JAN	**Janina**	**0.97**	**13**	P	**Pg**	**13 03 32.9**	**-0.3**
EVR	**Evrytania**	**0.99**	**78**	P	**Pg**	**13 03 32.2**	**-1.4**
EVR				AML	AML	13 03 54.7	
	comp=N,57172μm,1.0s						
EVR				AML	AML	13 03 57.7	
	comp=E,34184μm,0.5s						
LTHK	**Lithakia**	**1.02**	**168**	P	**Pg**	**13 03 33.0**	**-1.3**
LTHK	**Lithakia**	**1.02**	**168**	P	**Pg**	**13 03 33.0**	**-1.3**
ANX	**Ano Chora**	**1.06**	**96**	P	**Pg**	**13 03 34.1**	**-1.0**
ANX				AML	AML	13 04 00.9	
	comp=E,81561μm,0.7s						
ANX				AML	AML	13 04 02.9	
	comp=N,99441μm,1.1s						
EFP	**Efpalio**	**1.08**	**105**	P	**Pb**	**13 03 34.7**	**-0.7**
EFP				AML	AML	13 03 57.9	
	comp=N,81607μm,0.4s						
EFP				AML	AML	13 04 04.2	
	comp=E,79776μm,0.6s						
KASA	**Kassiopi**	**1.14**	**335**	P	**Pn**	**13 03 36.6**	**0.0**
KEK	**Kerkira**	**1.17**	**329**	P	**Pg**	**13 03 37.3**	**+0.2**
KEK				AML	AML	13 03 59.4	
	comp=N,35091μm,0.6s						
KEK				AML	AML	13 04 02.5	
	comp=E,38006μm,0.9s						
DRO	**Drossia**	**1.17**	**130**	P	**Pb**	**13 03 36.0**	**-1.0**
DRO				AML	AML	13 04 01.6	
DRO				AML	AML	13 04 02.8	
LAKA	**Lakka**	**1.20**	**113**	P	**Pb**	**13 03 36.6**	**-0.9**
LAKA				AML	AML	13 04 04.7	
LAKA				AML	AML	13 04 05.5	
TRIZ	**Trizonia**	**1.23**	**106**	P	**Pn**	**13 03 36.8**	**-1.0**
SRN	**Sarande**	**1.25**	**339**	P	**Pn**	**13 03 37.2**	**-0.9**
	baz=347						
SRN				S	**Sn**	**13 03 58.6**	**+3.8**
	baz=347						
MAKR	**Makrakomi, Fth**	**1.25**	**76**	P	**Pn**	**13 03 37.5**	**-0.7**
MAKR				AML	AML	13 04 03.5	
	comp=E,45990μm,1.7s						
MAKR				AML	AML	13 04 19.5	
	comp=N,28722μm,2.3s						
KPRO	**Kipourio**	**1.38**	**26**	P	**Pn**	**13 03 39.1**	**-0.9**
AGG	**Agios Georgios**	**1.41**	**77**	P	**Pn**	**13 03 40.4**	**+0.1**
AGG	**Agios Georgios**	**1.41**	**77**		**Pn**	**13 03 40.4**	**+0.1**
THL	**Klokotos Trika**	**1.41**	**52**	P	**Pn**	**13 03 39.7**	**-0.6**
THL				AML	AML	13 04 07.4	
	comp=N,40028μm,0.7s						
THL				AML	AML	13 04 09.2	
	comp=E,34030μm,1.4s						
KLV	**Kalavryta, Ach**	**1.41**	**118**	P	**Pn**	**13 03 39.6**	**-0.8**
KLV				AML	AML	13 04 08.5	
	comp=N,29080μm,0.8s						
KLV				AML	AML	13 04 18.3	
	comp=E,35298μm,0.9s						
LSK	**Leskovik**	**1.44**	**1**	P	**Pg**	**13 03 42.3**	**+0.1**
	baz=4.0						
LSK				S	**Sg**	**13 04 06.2**	**+5.3**
	baz=4.0						
DLFA	**Delphi**	**1.52**	**98**	P	**Pn**	**13 03 42.2**	**+0.3**
PENT	**Pentalofos**	**1.54**	**16**	P	**Pb**	**13 03 43.6**	**+0.2**
GUR	**Goura**	**1.59**	**119**	P	**Pn**	**13 03 43.1**	**+0.2**
GUR				AML	AML	13 04 14.5	
	comp=N,88415μm,0.7s						
GUR				AML	AML	13 04 17.8	
	comp=E,73751μm,0.9s						
THAL	**Thalero**	**1.78**	**112**	P	**Pb**	**13 03 46.7**	**-0.6**
THAL				AML	AML	13 04 24.4	
	comp=E,60124μm,0.9s						
THAL				AML	AML	13 04 29.8	
	comp=N,50487μm,0.6s						
KZN	**Kozani**	**1.84**	**30**	P	**Pb**	**13 03 48.2**	**-0.2**
KZN				AML	AML	13 04 21.1	
	comp=E,21069μm,1.3s						
KZN				AML	AML	13 04 30.7	
	comp=N,16503μm,1.0s						
KZN	**Kozani**	**1.84**	**30**	P	**Pb**	**13 03 48.7**	**+0.3**
ITM	**Ithomi**	**1.87**	**145**	P	**Pb**	**13 03 48.6**	**-0.3**
ITM				AML	AML	13 04 30.1	
	comp=E,23411μm,1.5s						
ITM				AML	AML	13 04 37.0	
	comp=N,19355μm,1.1s						
ITM	**Ithomi**	**1.87**	**145**	Pn	**Pb**	**13 03 48.0**	**-0.9**
LKR	**Lokris**	**1.90**	**91**	P	**Pb**	**13 03 48.3**	**-1.0**
LKR				AML	AML	13 04 33.7	
	comp=N,13582μm,1.4s						
LKR				AML	AML	13 04 35.9	
	comp=E,13884μm,1.4s						
KBN	**Korca**	**1.92**	**5**	P	**Pb**	**13 03 48.6**	**-1.1**
KBN	**Korca**	**1.92**	**5**		**Pb**	**13 03 48.5**	**-1.1**
KBN	**Korca**	**1.92**	**5**	P	**Pb**	**13 03 50.3**	**+0.7**
	baz=7.0						
VLO	**Vlora**	**1.94**	**335**	P	**Pn**	**13 03 48.7**	**+1.1**
VLO	**Vlora**	**1.94**	**335**		**Pn**	**13 03 48.6**	**+1.1**
VLO	**Vlora**	**1.94**	**335**	P	**Pb**	**13 03 50.8**	**+0.7**
	baz=341						
VLO				AMP			
	comp=E,78nm,1.0s,baz=341						
SCTE	**Santa Cesarea**	**2.12**	**310**	Pn	**Pn**	**13 03 50.3**	**+0.2**
SCTE	**Santa Cesarea**	**2.12**	**310**	P	**Pn**	**13 03 50.6**	**+0.5**
	baz=318						
FNA	**Florina**	**2.16**	**16**	P	**Pb**	**13 03 52.6**	**-1.2**
FNA	**Florina**	**2.16**	**16**	Pn	**Pb**	**13 03 52.6**	**-1.2**
FNA	**Florina**	**2.16**	**16**	P	**Pb**	**13 03 52.6**	**-1.2**
	baz=17						
FNA				S	**Sb**	**13 04 20.3**	**-0.3**
	baz=17						
VIL2	**Platees**	**2.17**	**102**	P	**Pb**	**13 03 53.4**	**-0.7**
VIL2				AML	AML	13 04 37.5	
	comp=N,14914μm,0.6s						
VIL2				AML	AML	13 04 46.1	
	comp=E,21686μm,0.9s						
OHR	**Ohrid**	**2.40**	**4**	*e*Pn	**Pb**	**13 03 56.3**	**-1.6**
OHR				*e*Sn	**Sb**	**13 04 27.3**	**-0.3**
OHR	**Ohrid**	**2.40**	**4**	*e*P	**Pb**	**13 03 56.3**	**-1.6**
OHR				*e*S	**Sb**	**13 04 27.3**	**-0.3**
OHR	**Ohrid**	**2.40**	**4**	*i* Pn	**Pb**	**13 03 56.3**	**-1.6**
GRG	**Griva**	**2.65**	**32**	P	**Pn**	**13 03 58.8**	**+1.4**
THE	**Thessaloniki**	**2.66**	**43**	P	**Pn**	**13 03 59.7**	**+2.2**
TIR	**Tirane**	**2.69**	**349**	⇑P	**Pn**	**13 03 59.2**	**+1.2**
TIR				⇓S	**Sn**	**13 04 30.1**	**-0.3**
TIR	**Tirane**	**2.69**	**349**	*e*Pn	**Pn**	**13 03 58.8**	**+0.9**
TIR				*e*Sn	**Sn**	**13 04 30.7**	**+0.3**
TIR	**Tirane**	**2.69**	**349**	P	**Pn**	**13 03 59.1**	**+1.2**
TIR	**Tirane**	**2.69**	**349**		**Pn**	**13 03 59.1**	**+1.2**
TIR	**Tirane**	**2.69**	**349**	P	**Pn**	**13 03 59.6**	**+1.7**
	baz=352						
TIR				AMP			
	comp=N,15nm,1.3s,baz=352						
PAIG	**Paliouri**	**2.70**	**62**	P	**Pn**	**13 04 00.2**	**+2.2**
PHP	**Peshkopia**	**2.97**	**358**	P	**Pn**	**13 04 03.5**	**+1.7**
	baz=0.0						
SOH	**Sokhos**	**3.00**	**45**	P	**Pn**	**13 04 04.0**	**+1.7**
TIP	**Timpagrande**	**3.01**	**280**	⇓P	**Pn**	**13 04 02.8**	**+0.4**
TIP				⇓S	**Sn**	**13 04 39.4**	**+0.9**
TIP	**Timpagrande**	**3.01**	**280**	Pn	**Pn**	**13 04 03.0**	**+0.7**
VAY	**Valandovo**	**3.02**	**30**	*e*Pn	**Pn**	**13 04 04.5**	**+2.0**
VAY	**Valandovo**	**3.02**	**30**	*e*P	**Pn**	**13 04 04.5**	**+2.0**
VAY	**Valandovo**	**3.02**	**30**	*i* Pn	**Pn**	**13 04 03.2**	**+0.7**
KNT	**Kendrikon**	**3.03**	**35**	P	**Pn**	**13 04 04.4**	**+1.8**
OUR	**Ouranopolis**	**3.09**	**57**	P	**Pn**	**13 04 06.0**	**+2.6**
STIP	**Stip**	**3.22**	**22**	*i* Pn	**Pn**	**13 04 08.1**	**+2.8**
SKO	**Skopje**	**3.32**	**11**	P	**Pn**	**13 04 09.4**	**+2.8**
SKO	**Skopje**	**3.32**	**11**	*i* Pn	**Pn**	**13 04 08.3**	**+1.7**
SRS	**Serrai**	**3.34**	**43**	P	**Pn**	**13 04 08.4**	**+1.5**
ULC	**Ulcinj**	**3.40**	**343**	⇑*i*Pn	**Pn**	**13 04 07.6**	**-0.1**
ULC				*i* Sn	**Sn**	**13 04 47.2**	**-0.9**
NOCI	**Noci**	**3.41**	**309**	P	**Pn**	**13 04 08.5**	**+0.7**
	baz=313						
MATE	**Matera**	**3.56**	**304**	⇓P	**Pn**	**13 04 11.0**	**+1.2**
DRME	**Dracevica, Mon**	**3.63**	**343**	⇑*i*Pn	**Pn**	**13 04 11.0**	**+0.2**
DRME	**Dracevica, Mon**	**3.63**	**343**	⇓*i*Pn	**Pn**	**13 04 09.7**	**-1.1**
DRME				*i* Sn	**Sn**	**13 04 53.4**	**-0.2**
BCI	**Bajram Curri**	**3.67**	**354**	P	**Pn**	**13 04 13.1**	**+1.7**
	baz=357						
KKB	**Krupnik**	**3.69**	**31**	P	**Pn**	**13 04 12.5**	**+0.8**
CEL	**Celeste**	**3.70**	**264**		**Pn**	**13 04 12.3**	**+0.5**
MMB	**Musomiste**	**3.75**	**39**	P	**Pn**	**13 04 14.1**	**+1.5**
BUM	**Brajici-Budva**	**3.81**	**341**	⇑*i*Pn	**Pn**	**13 04 12.1**	**-1.2**
BUM				*i* Sn	**Sn**	**13 04 54.2**	**-3.9**
PDG	**Podgorica**	**3.85**	**345**	⇑P	**Pn**	**13 04 13.9**	**+0.1**
PDG				⇓S	**Sn**	**13 04 59.2**	**+0.2**
PDG	**Podgorica**	**3.85**	**345**	*e*Pn	**Pn**	**13 04 14.9**	**+1.1**
PDG				*e*Sn	**Sn**	**13 04 58.9**	**-0.1**
PDG	**Podgorica**	**3.85**	**345**	⇑*i*Pn	**Pn**	**13 04 13.8**	**+0.1**
PDG	**Podgorica**	**3.85**	**345**	Pn	**Pn**	**13 04 14.1**	**+0.3**
TTG	**Podgorica**	**3.85**	**345**	⇓*i*Pn	**Pn**	**13 04 14.2**	**+0.4**
TTG				*i* Sn	**Sn**	**13 04 58.7**	**-0.3**
PVY	**Plav**	**3.91**	**353**	⇑*i*Pn	**Pn**	**13 04 15.1**	**+0.4**
PVY				*i* Sn	**Sn**	**13 05 00.3**	**-0.4**
PRVS	**Prvonek**	**3.96**	**16**	*e*Pn	**Pn**	**13 04 17.2**	**+1.8**
PRVS				*e*Sn	**Sn**	**13 05 03.9**	**+2.0**
CEME	**Cevo**	**4.03**	**342**	⇑*i*Pn	**Pn**	**13 04 16.0**	**-0.4**
CEME				*i* Sn	**Sn**	**13 05 02.2**	**-1.5**
HCY	**Herceg Novi**	**4.05**	**338**	P	**Pn**	**13 04 16.2**	**-0.4**
HCY	**Herceg Novi**	**4.05**	**338**	⇑*i*Pn	**Pn**	**13 04 15.6**	**-1.0**
HCY	**Herceg Novi**	**4.05**	**338**	⇑*i*Pn	**Pn**	**13 04 15.7**	**-0.9**
HCY				*i* Sn	**Sn**	**13 05 02.2**	**-1.9**
IVA	**Berane**	**4.19**	**353**	⇑*i*Pn	**Pn**	**13 04 19.0**	**+0.4**
IVA				*i* Sn	**Sn**	**13 05 07.1**	**-0.4**
BARS	**Barje**	**4.21**	**13**	*e*Pn	**Pn**	**13 04 19.8**	**+1.0**
BARS	**Barje**	**4.21**	**13**	*e*Pn	**Pg**	**13 04 38.2**	**+3.0**
BARS				*e*Sn	**Sn**	**13 05 08.4**	**+0.5**
KOME	**Kolasin**	**4.21**	**349**	⇑*i*Pn	**Pn**	**13 04 19.3**	**+0.4**
KOME				*i* Sn	**Sn**	**13 05 07.5**	**-0.6**
NKME	**Niksic**	**4.23**	**344**	⇑*i*Pn	**Pn**	**13 04 19.5**	**+0.3**
NKME				*i* Sn	**Sn**	**13 05 07.8**	**-0.8**
NKY	**Niksic**	**4.27**	**344**	P	**Pn**	**13 04 20.6**	**+0.9**
NKY	**Niksic**	**4.27**	**344**	⇓*i*Pn	**Pn**	**13 04 19.8**	**+0.1**
NKY				*i* Sn	**Sn**	**13 05 08.7**	**-0.9**
TREB	**Trebinje**	**4.34**	**338**	*e*Pn	**Pn**	**13 04 19.9**	**-0.7**
TREB				*e*Sn	**Sn**	**13 05 08.5**	**-2.7**
TREB	**Trebinje**	**4.34**	**338**	⇑*i*Pn	**Pn**	**13 04 19.8**	**-0.8**
DBRK	**Dubrovnik**	**4.36**	**336**	*e*Pn	**Pn**	**13 04 20.4**	**-0.5**
DBRK				Sn	**Sn**	**13 05 08.2**	**-3.5**
VTS	**Vitosha**	**4.39**	**27**	⇓P	**Pn**	**13 04 22.9**	**+1.3**
VTS	**Vitosha**	**4.39**	**27**	*e*Pn	**Pn**	**13 04 23.1**	**+1.6**
VTS				*e*Sn	**Sn**	**13 05 12.5**	**-0.3**
VTS	**Vitosha**	**4.39**	**27**	P	**Pn**	**13 04 22.8**	**+1.3**
VTS	**Vitosha**	**4.39**	**27**	Pn	**Pn**	**13 04 22.8**	**+1.3**
BRY	**Bratogost**	**4.46**	**340**	P	**Pn**	**13 04 22.1**	**-0.3**
BRY	**Bratogost**	**4.46**	**340**	⇑*i*Pn	**Pn**	**13 04 21.4**	**-1.0**
BRY	**Bratogost**	**4.46**	**340**	⇓*i*Pn	**Pn**	**13 04 21.8**	**-0.6**
BRY				*i* Sn	**Sn**	**13 05 13.2**	**-1.2**
SELS	**Selova**	**4.52**	**5**	*e*Pn	**Pn**	**13 04 23.3**	**+0.2**
SANT	**Santorini**	**4.53**	**120**	⇓P	**Pn**	**13 04 27.9**	**+4.6**
SANT	**Santorini**	**4.53**	**120**		**Pn**	**13 04 26.4**	**+3.1**
SJES	**Sjenica**	**4.57**	**354**	*e*Pn	**Pn**	**13 04 25.4**	**+1.6**
SJES				*e*Sn	**Sn**	**13 05 14.0**	**-2.9**
EZN	**Ezine**	**4.60**	**74**	P	**Pn**	**13 04 26.5**	**+2.3**
PLD	**Plovdiv**	**4.63**	**42**	P	**Pn**	**13 04 27.8**	**+3.3**
UPM	**Unac-Piva**	**4.66**	**345**	*e*Pn	**Pn**	**13 04 26.0**	**+0.8**
UPM	**Unac-Piva**	**4.66**	**345**	⇓*i*Pn	**Pn**	**13 04 25.4**	**+0.2**
UPM				*i* Sn	**Sn**	**13 05 18.1**	**-1.3**
STON	**Ston**	**4.69**	**333**	*e*Pn	**Pn**	**13 04 24.7**	**-0.7**
STON				*e*Sn	**Sn**	**13 05 17.0**	**-2.8**
STON	**Ston**	**4.69**	**333**	⇑*i*Pn	**Pn**	**13 04 24.2**	**-1.2**
STON	**Ston**	**4.69**	**333**	*e*Pn	**Pn**	**13 04 24.2**	**-1.2**
PLE	**Pljevlja**	**4.70**	**349**	P	**Pn**	**13 04 27.1**	**+1.5**
PLE	**Pljevlja**	**4.70**	**349**	⇓*i*Pn	**Pn**	**13 04 26.0**	**+0.4**
PLE				*i* Sn	**Sn**	**13 05 19.1**	**-1.1**
PGB	**Panagyurishte**	**4.71**	**34**	P	**Pn**	**13 04 26.7**	**+1.0**
ALN	**Alexandroupoli**	**4.75**	**61**	P	**Pn**	**13 04 27.3**	**+1.2**
ALN	**Alexandroupoli**	**4.75**	**61**	Pn	**Pn**	**13 04 27.3**	**+1.2**
SGRT	**San Giovanni R**	**4.78**	**311**	Pn	**Pn**	**13 04 27.4**	**+0.7**
SGRT	**San Giovanni R**	**4.78**	**311**	P	**Pn**	**13 04 27.2**	**+0.4**
	baz=314						
ZAPS	**Zavoj**	**4.81**	**18**	*e*Pn	**Pn**	**13 04 29.8**	**+2.6**
IDI	**Anoyia**	**4.86**	**133**	Pn	**Pn**	**13 04 28.0**	**+0.2**
	comp=N,3.0nm,0.3s,baz=345,slow=20,SNR=1.4						
IDI				Sn	**Sn**	**13 05 22.5**	**-1.7**
	comp=N,16nm,0.3s,baz=115,slow=18,SNR=3.1						
IDI				LR	LR	13 06 16.3	
	comp=N,2μm,18.0s,baz=320,slow=38						
RUDO	**Rudo**	**4.98**	**350**	*e*Pn	**Pn**	**13 04 30.6**	**+1.2**
BOVS	**Bovan**	**4.99**	**10**	*e*Pn	**Pn**	**13 04 29.4**	**-0.1**
VAE	**Valguarnera**	**5.01**	**258**	Pn	**Pn**	**13 04 31.6**	**+1.6**
	comp=N,1.2nm,0.3s,baz=90,slow=21,SNR=3.5						
VAE				Sn	**Sn**	**13 05 28.9**	**+1.0**
	comp=N,6.6nm,0.3s,baz=203,slow=17,SNR=5.1						
VAE				LR	LR	13 06 44.7	
	comp=N,2μm,19.9s,baz=56,slow=41						
DIM	**Dimitrovgrad**	**5.04**	**47**	P	Pn	13 04 35.6	+5.3
RAFF	**Raffo Rosso**	**5.13**	**255**		**Pn**	**13 04 31.1**	**-0.3**
PAOL	**Paolisi**	**5.17**	**299**		**Pn**	**13 04 33.8**	**+1.8**
GRUS	**Gruza**	**5.17**	**1**	*e*Pn	**Pn**	**13 04 32.0**	**0.0**
BBLS	**Lazići**	**5.22**	**351**	*e*Pn	**Pn**	**13 04 33.2**	**+0.4**
BBLS				*e*Sn	**Sn**	**13 05 31.3**	**-1.8**
BBLS	**Lazići**	**5.22**	**351**	*e*Pn	**Pn**	**13 04 32.4**	**-0.4**
ZAGS	**Zajecar**	**5.25**	**13**	*e*Pn	**Pn**	**13 04 33.9**	**+0.9**
MAKA	**Makarska**	**5.30**	**331**	*e*Pn	**Pn**	**13 04 33.1**	**-0.6**
DIVS	**Divibare**	**5.40**	**356**	*e*Pn	**Pn**	**13 04 35.3**	**+0.1**
DIVS				*e*Sn	**Sn**	**13 05 32.5**	**-4.9**
DIVS	**Divibare**	**5.40**	**356**	⇑*i*Pn	**Pn**	**13 04 34.6**	**-0.6**
DIVS	**Divibare**	**5.40**	**356**		**Pn**	**13 04 35.2**	**0.0**
RICI	**Ricice**	**5.44**	**333**	*e*Pn	**Pn**	**13 04 34.8**	**-0.8**
HVAR	**Hvar**	**5.44**	**326**	*e*Pn	**Pn**	**13 04 34.9**	**-0.8**
HVAR				Sn	**Sn**	**13 05 33.2**	**-5.2**
HAPS	**Han Pijesak,Bl**	**5.50**	**348**	*e*Pn	**Pn**	**13 04 37.9**	**+1.2**
PLVB	**Pleven**	**5.58**	**32**	⇓P	**Pn**	**13 04 39.6**	**+2.0**
BALB	**Balikesir**	**5.75**	**78**		**Pn**	**13 04 42.8**	**+2.8**
CORL	**Corleone**	**5.78**	**264**		**Pn**	**13 04 40.7**	**+0.3**
EDC	**Edincik**	**5.87**	**72**	P	Pn	13 04 46.8	+5.2
TEKS	**Tekeris**	**5.88**	**353**	*e*Pn	**Pn**	**13 04 40.6**	**-1.2**
TEKS	**Tekeris**	**5.88**	**353**	*e*Pn	**Pn**	**13 04 40.0**	**-1.8**
CLTB	**Caltabellotta**	**5.91**	**261**	Pn	**Pn**	**13 04 44.5**	**+2.3**
BEO	**Beograd**	**6.09**	**359**	P	**Pn**	**13 04 45.3**	**+0.7**
MDVR	**Moldovita**	**6.12**	**8**	⇓P	**Pn**	**13 04 44.9**	**-0.2**

KIJV	Kijevo	6.15	331	ePn	Pn	13 04 44.9	-0.5
ZIRJ	Zirje	6.18	325	ePn	Pn	13 04 44.9	-0.9
SRE	Strehaia	6.26	17	⇑P	Pn	13 04 48.4	+1.4
SRE	Strehaia	6.26	17	P	Pn	13 04 48.3	+1.4
MGRS	Mrkonjic Grad	6.27	336	ePn	Pn	13 04 47.2	+0.1
HERR	Herculane	6.32	12	⇑P	Pn	13 04 50.4	+2.7
MORI	Morici	6.32	326	ePn	Pn	13 04 47.6	-0.2
FRGS	Fruska Gora	6.46	355	⇑P	Pn	13 04 49.4	-0.3
FRGS	Fruska Gora	6.46	355	ePn	Pn	13 04 49.5	-0.3
FRGS				eSn	Sn	13 05 59.3	-4.3
FRGS	Fruska Gora	6.46	355	ePn	Pn	13 04 48.4	-1.4
BLY	Banja Luka	6.54	338	ePn	Pn	13 04 50.6	-0.2
BLY				eSn	Sn	13 05 58.7	-6.7
BLY	Banja Luka	6.54	338	ePn	Pn	13 04 50.2	-0.6
AQU	L'Aquila	6.56	306	P	Pn	13 04 53.1	+1.9
AQU	L'Aquila	6.56	306	ePn	Pn	13 04 52.9	+1.8
AQU	L'Aquila	6.56	306	Pn	Pn	13 04 53.1	+1.9
DUGI	Dugi Otok	6.71	324	ePn	Pn	13 04 53.4	+0.3
UDBI	Udbina	6.83	330	ePn	Pn	13 04 55.4	+0.5
MRAK	Mrakovica	6.87	338	⇑iPn	Pn	13 04 54.5	-0.8
GZR	Gura Zlata	6.87	13	⇓P	Pn	13 04 55.7	+0.3
BZS	Buzias	6.94	6	⇑P	Pn	13 04 57.3	+0.9
BZS	Buzias	6.94	6	ePn	Pn	13 04 58.7	+2.4
BZS				eSn	Sn	13 06 15.8	+0.5
BZS	Buzias	6.94	6	P	Pn	13 04 57.2	+0.9
BZS				pmax	pmax		
	comp=Z,29nm,1.0s						
NRCA	Norcia	7.00	308		Pn	13 04 58.1	+1.0
PLIT	Plitvice	7.18	331	ePn	Pn	13 04 59.7	0.0
NVLJ	Novalja	7.24	326	ePn	Pn	13 04 59.6	-0.7
ARR	Arges	7.30	23	⇑P	Pn	13 05 02.5	+1.1
MTUR	Matau	7.32	26	⇑P	Pn	13 05 04.9	+3.4
DEV	Deva	7.37	13	P	Pn	13 05 05.7	+3.5
DEV				pmax	pmax		
	comp=Z,32nm,1.2s						
RABC	Rab	7.42	326	i Pn	Pn	13 05 01.9	-1.0
VOIR		7.50	25	⇑P	Pn	13 05 05.7	+1.6
VOIR		7.50	25	P	Pn	13 05 05.9	+1.9
VOIR				pmax	pmax		
	comp=Z,43nm,1.1s						
SIRR	Siria	7.59	6	⇑P	Pn	13 05 07.8	+2.6
KOVH	Kovagotottos	7.59	347	ePN	Pn	13 05 03.8	-1.4
KOVH	Kovagotottos	7.59	347	eP	Pn	13 05 05.3	+0.1
KOVH	Kovagotottos	7.59	347	eSN	Sn	13 06 24.9	-6.4
MURB	Monte Urbino	7.59	309		Pn	13 05 07.0	+1.7
MORH	Mrgy, Hungar	7.63	350	⇓P	Pn	13 05 05.7	0.0
MORH	Mrgy, Hungar	7.63	350	ePN	Pn	13 05 04.9	-0.8
MORH	Mrgy, Hungar	7.63	350	eP	Pn	13 05 05.9	+0.1
MORH	Mrgy, Hungar	7.63	350	eSN	Sn	13 06 25.8	-6.5
MORH	Mrgy, Hungar	7.63	350	ePn	Pn	13 05 04.4	-1.3
ELL	Elmali	7.65	102	P	Pn	13 05 09.7	+3.5
ELL	Elmali	7.65	102		Pn	13 05 09.7	+3.5
ISR	Istrita	7.79	33	⇓P	Pn	13 05 11.6	+3.6
ISR	Istrita	7.79	33	P	Pn	13 05 11.2	+3.1
ISR				pmax	pmax		
	comp=Z,163nm,1.5s						
BOJS	Bojanci	7.85	331	i Pn	Pn	13 05 08.2	-0.6
MLR	Muntele Rosu	7.86	29	⇓P	Pn	13 05 11.5	+2.4
MLR	Muntele Rosu	7.86	29	Pn	Pn	13 05 08.3	-0.8
	comp=Z,1.0nm,0.3s,baz=222,slow=8.5,SNR=21						
MLR				Sn	Sn	13 06 33.8	-4.3
	baz=276,slow=7.6,SNR=0.8						
MLR				LR	LR	13 08 13.8	
	comp=Z,2μm,18.9s,baz=195,slow=39						
MLR	Muntele Rosu	7.86	29	P	Pn	13 05 11.4	+2.4
MLR	Muntele Rosu	7.86	29	Pn	Pn	13 05 11.4	+2.3
SMRN	Sveta Marina	7.92	325	ePn	Pn	13 05 09.4	-0.4
PTJ	Puntijarka	7.96	336	P	Pn	13 05 10.3	0.0
PTJ	Puntijarka	7.96	336	ePn	Pn	13 05 08.5	-1.8
RIY	Rijeka	8.01	328	⇑iPn	Pn	13 05 10.2	-0.8
RIY	Rijeka	8.01	328	ePn	Pn	13 05 10.1	-0.9
BRJN	Brijuni	8.01	323	ePn	Pn	13 05 10.2	-0.7
KALN	Kalnik	8.01	339	ePn	Pn	13 05 09.2	-1.9
GBRS	Gornja Briga	8.04	330	i Pn	Pn	13 05 11.2	-0.3
GBRS				i		13 05 14.0	
GBRS				eSn	Sn	13 06 37.9	-4.6
CRES	Cresnjev	8.05	334	⇑iPn	Pn	13 05 10.4	-1.2
DOPR	Dopca	8.08	25	⇑P	Pn	13 05 14.4	+2.4
SLUM	Salum	8.14	151	P	Pn	13 05 13.5	+0.6
	baz=158						
LOBO	Lobor	8.15	337	ePn	Pn	13 05 11.2	-1.6
BISRR	Bisoca	8.21	32	⇑P	Pn	13 05 17.5	+3.8
TIRR	Tirgusor	8.21	43	⇑P	Pn	13 05 17.8	+4.1
TIRR	Tirgusor	8.21	43	P	Pn	13 05 19.0	+5.3
TIRR				pmax	pmax		
	comp=Z,75nm,0.7s						
TIRR	Tirgusor	8.21	43		Pn	13 05 12.8	-0.9
DRGR		8.22	10	⇑P	Pn	13 05 16.0	+2.0
DRGR		8.22	10	P	Pn	13 05 15.8	+1.8
DRGR				pmax	pmax		
	comp=Z,17nm,2.0s						
COVR	Voineasa-Covas	8.26	29	⇑P	Pn	13 05 17.1	+2.7
VISS	Visnje	8.26	331	ePn	Pn	13 05 13.7	-0.7
VISS				i		13 05 16.2	
VISS				eSn	Sn	13 06 43.7	-4.1
CEY	Cerknica	8.37	329	⇑iPn	Pn	13 05 15.3	-0.6
MDUB	Mudurnu	8.39	75		Pn	13 05 18.0	+1.7
TIH	Tihany	8.41	347	ePN	Pn	13 05 16.7	+0.1
TIH	Tihany	8.41	347	eP	Pn	13 05 18.8	+2.3
CASP	Castiglione de	8.42	302		Pn	13 05 17.6	+1.0
PLOR	Plostina	8.43	30	⇑P	Pn	13 05 19.7	+2.9
PLOR	Plostina	8.43	30	P	Pn	13 05 19.7	+2.9
VRI	Vrincioaia	8.48	31	⇓P	Pn	13 05 20.7	+3.3
VRI	Vrincioaia	8.48	31	P	Pn	13 05 20.7	+3.3
VRI				pmax	pmax		
	comp=Z,155nm,1.1s						
OSSC	Osservatorio P	8.52	307		Pn	13 05 20.4	+2.4
LJU	Ljubljana	8.58	331	ePn	Pn	13 05 17.9	-0.9
MPLH	Magyarpolny	8.74	346	ePN	Pn	13 05 21.4	+0.4
MPLH	Magyarpolny	8.74	346	eP	Pn	13 05 22.2	+1.2
MPLH	Magyarpolny	8.74	346	eSN	Sn	13 06 57.9	-1.6
VSL	Villasalto	8.74	279		Pn	13 05 22.0	+1.0
SOKA	Soboth	8.94	335	i Pn	Pn	13 05 23.0	-0.8
	comp=Z,35nm,0.6s,SNR=41						
SOKA				eSn	Sn	13 06 58.9	-5.6
	comp=Z,21nm,0.5s						
OBKA	Obir	8.96	332	i Pn	Pn	13 05 25.3	+1.1
	comp=Z,29nm,0.5s,SNR=15						
OBKA				eSn	Sn	13 07 02.8	-2.4
	comp=Z,34nm,0.4s						
TESR	Tescani	8.99	28	⇑P	Pn	13 05 27.7	+3.3
ZCCA	Zocca	9.13	311		Pn	13 05 27.7	+1.2
PSZ	Piszkesteto	9.21	357	⇑P	Pn	13 05 29.3	+1.8
PSZ	Piszkesteto	9.21	357	eP	Pn	13 05 29.5	+1.9
PSZ	Piszkesteto	9.21	357	eSN	Sn	13 07 05.2	-6.1
PSZ	Piszkesteto	9.21	357	P	Pn	13 05 28.3	+0.7
PSZ	Piszkesteto	9.21	357		Pn	13 05 28.3	+0.7
ARSA	Arzberg	9.30	338	i Pn	Pn	13 05 27.9	-0.7
	comp=Z,14nm,0.6s,SNR=16						
TEOL	Teolo	9.38	318		Pn	13 05 30.6	+0.9
VLC	Villacollemand	9.38	309		Pn	13 05 31.2	+1.4
MYKA	Terra Mystica	9.41	329	i Pn	Pn	13 05 30.1	-0.1
	comp=Z,8.1nm,0.6s,SNR=5.1						
MYKA				eSn	Sn	13 07 13.3	-2.8
	comp=Z,17nm,0.5s						
SOP	Sopron	9.43	343	ePN	Pn	13 05 31.4	+1.0
SOP	Sopron	9.43	343	eP	Pn	13 05 33.1	+2.7
SOP	Sopron	9.43	343	P	Pn	13 05 31.8	+1.4
SOP				pmax	pmax		
	comp=Z,25nm,0.8s						
KEST	Kesra	9.44	255	Pn	Pn	13 05 31.6	+1.0
	comp=Z,0.5nm,0.3s,baz=327,slow=5.4,SNR=9.2						
KEST				Sn	Sn	13 07 09.9	-6.8
	baz=245,slow=18,SNR=1.0						
KEST				LR	LR	13 10 20.4	
	comp=Z,1μm,21.6s,baz=18,slow=45						
KEST	Kesra	9.44	255		Pn	13 05 32.6	+2.0
STAL	STALIGIAL	9.51	325		Pn	13 05 31.4	-0.2
BURAR	Bucovina Array	9.52	19	⇓P	Pn	13 05 35.1	+3.3
BURAR	Bucovina Array	9.52	19	P	Pn	13 05 35.0	+3.3
BURAR	Bucovina Array	9.52	19		Pn	13 05 33.1	+1.3
TRPA	Tarpa	9.52	8	ePN	Pn	13 05 32.7	+1.0
TRPA	Tarpa	9.52	8	eP	Pn	13 05 36.0	+4.3
BUR08	Bucovina Ar. S	9.54	19		Pn	13 05 34.4	+2.3
PGF	Pioggiola	9.59	297	P	Pn	13 05 35.6	+2.8
PGF				pmax	pmax		
	comp=Z,29nm,0.7s						
ZOU	Zoufplan	9.63	327		Pn	13 05 33.5	+0.2
KECS	Kecovo	9.77	360	eP	Pn	13 05 37.3	+2.3
KECS	Kecovo	9.77	360	ePN	Pn	13 05 37.3	+2.3
ZST	Bratislava	9.81	346	eP	Pn	13 05 36.1	+0.5
ZST				e		13 07 22.6	
ZST	Bratislava	9.81	346	ePN	Pn	13 05 36.1	+0.5
ZST				eSN	Sn	13 07 22.5	-3.2
CONA	Conrad Observa	9.83	341	i Pn	Pn	13 05 36.4	+0.5
	comp=Z,6.8nm,0.5s,SNR=7.5						
CTI	Castel Tesino	9.86	321	P	Pn	13 05 35.4	-1.0
CTI	Castel Tesino	9.86	321	Pn	Pn	13 05 35.4	-1.0
VYHS	Vyhne	9.86	353	eP	Pn	13 05 37.6	+1.3
VYHS				e		13 07 23.5	
VYHS				MLR	MLR		
	comp=Z,4μm,17.6s						
VYHS	Vyhne	9.86	353	ePN	Pn	13 05 37.6	+1.3
VYHS				eSN	Sn	13 07 23.5	-3.5
VYHS				eL	L	13 10 05.3	
KBA	Koelnbreinsper	9.89	330	ePn	Pn	13 05 39.1	+2.1
	comp=Z,11nm,0.4s						
KBA	Koelnbreinsper	9.89	330	P	Pn	13 05 38.6	+1.6
KBA				pmax	pmax		
	comp=Z,31nm,1.1s						
MODS	Modra-Piesok	9.95	347	eP	Pn	13 05 37.7	+0.2
MODS				e		13 07 22.4	
MODS				MLR	MLR		
	comp=Z,7μm,15.3s						
MODS	Modra-Piesok	9.95	347	ePN	Pn	13 05 37.7	+0.2
MODS				eSN	Sn	13 07 22.4	-6.8
MODS				eL	L	13 10 12.4	
ABTA	Abfaltersbach	9.98	326	i Pn	Pn	13 05 39.2	+1.2
	comp=Z,6.4nm,0.3s,SNR=12						
ABTA				eSn	Sn	13 07 29.7	-0.3
	comp=Z,92nm,0.9s						
KOLL	Kolacno	9.99	352	ePN	Pn	13 05 39.2	+1.2
KOLL				eSN	Sn	13 07 24.3	-5.8
UZH	Uzhgorod	9.99	7	eP	Pn	13 05 40.0	+1.9
UZH				eS	Sn	13 07 33.0	+2.8
UZH				MLR	MLR		
	comp=Z,700nm,11.0s						
MSSA	Maissana	10.00	308		Pn	13 05 39.1	+0.8
SMOL	Smolenice	10.06	348	eP	Pn	13 05 41.3	+2.3
SMOL				e		13 07 26.7	
SMOL	Smolenice	10.06	348	ePN	Pn	13 05 41.3	+2.3
SMOL				eSN	Sn	13 07 26.7	-5.1
SALO	Salr	10.15	316	Pn	Pn	13 05 41.1	+0.7
MILM	Milestii Mici	10.19	34	eP	Pn	13 05 43.0	+2.2
MILM				eS	Sn	13 07 46.0	+11
MILM				MLR	MLR		
	comp=N,4μm,12.0s						
MILM				MLR	MLR		
	comp=Z,2μm,9.0s						
BR131	Keskin Array S	10.19	80	P	Pn	13 05 42.5	+1.5
BR131	Keskin Array S	10.19	80		Pn	13 05 42.5	+1.5
BRTR	Keskin Array B	10.19	80	Pn	Pn	13 05 42.9	+1.8
	comp=Z,1.1nm,0.3s,baz=261,slow=12,SNR=11						
BRTR				LR	LR	13 10 23.1	
	comp=Z,2μm,20.1s,baz=271,slow=42						
BRTR	Keskin Array B	10.19	80		Pn	13 05 42.1	+1.1
CRVS	Cervenica-Dubn	10.21	3	eP	Pn	13 05 41.7	+0.6
CRVS				MLR	MLR		
	comp=Z,2μm,20.2s						
CRVS	Cervenica-Dubn	10.21	3	ePN	Pn	13 05 41.7	+0.6
CRVS				eL	L	13 09 28.3	
MOA	Molln	10.22	335	i Pn	Pn	13 05 41.1	-0.2
	comp=Z,18nm,0.6s,SNR=24						
KIS	Kishinev	10.25	33	eP	Pn	13 05 43.0	+1.3
KIS	Kishinev	10.25	33	ePP	PnPn	13 05 53.0	+3.7
KIS				eLq	LQ	13 08 19.0	
	comp=Z,2μm,18.0s						
KIS				LRM	MLR	13 10 46.0	
	comp=Z,800nm,9.0s						
KIS	Kishinev	10.25	33	eP	Pn	13 05 43.0	+1.3
KIS				MLR	MLR		
	comp=N,2μm,12.0s						
KIS				MLR	MLR		
	comp=Z,800nm,9.0s						
SWA2		10.28	155	P	Pn	13 05 41.2	-0.8
	baz=160						
KOLS	Kolonicke sedl	10.29	6	eP	Pn	13 05 42.5	+0.3
KOLS	Kolonicke sedl	10.29	6	ePN	Pn	13 05 42.5	+0.3
JAVC	Velka Javorina	10.36	349	ePN	Pn	13 05 43.4	+0.2
LANS	Liptovska Anna	10.46	356	e	Pn	13 05 55.4	+11
NIE	Niedzica	10.70	359	P	Pn	13 05 52.0	+4.1
NIE				pmax	pmax		
	comp=Z,29nm,1.5s						
WTTA	Wattenberg	10.76	325	i Pn	Pn	13 05 50.7	+2.0
	comp=Z,14nm,0.4s,SNR=19						
WTTA	Wattenberg	10.76	325	P	Pn	13 05 50.5	+1.7
WTTA				pmax	pmax		
	comp=Z,59nm,1.3s						
KRUC	Moravsky	10.77	345	P	Pn	13 05 49.3	+0.5
KRUC				pmax	pmax		
	comp=Z,455nm,0.6s						
KRUC	Moravsky	10.77	345	ePN	Pn	13 05 49.1	+0.3
WATA	Walderalm	10.84	326	i Pn	Pn	13 05 50.4	+0.6
	comp=Z,22nm,0.4s,SNR=25						
VRAC	Vranov	10.97	346	Pn	Pn	13 05 50.8	-0.7
	comp=Z,0.8nm,0.3s,baz=171,slow=14,SNR=9.2						
VRAC				Sn	Sn	13 07 46.7	-7.5
	comp=Z,0.5nm,0.3s,baz=120,slow=8.9,SNR=2.2						
VRAC				LR	LR	13 11 33.3	
	comp=Z,3μm,18.4s,baz=183,slow=46						
VRAC	Vranov	10.97	346	P	Pn	13 05 52.8	+1.3
VRAC				pmax	pmax		
	comp=Z,21nm,0.8s						
VRAC	Vranov	10.97	346	ePN	Pn	13 05 51.8	+0.3
FETA	Feichten	11.00	322	ePn	Pn	13 05 54.1	+2.0
	comp=Z,7.5nm,0.5s						
MOTA	Moosalm	11.06	324	i Pn	Pn	13 05 55.7	+2.8
	comp=Z,24nm,0.6s,SNR=18						
CKRC	Cesky Krumlov	11.07	338	ePN	Pn	13 05 52.8	0.0
CKRC				AMS	AMS	13 11 00.0	
	comp=Z,4μm,9.9s						
DAVOX	Davos/Dischmat	11.25	319	Pn	Pn	13 05 55.6	+0.1
	comp=Z,0.7nm,0.3s,baz=145,slow=16,SNR=6.2						
DAVOX				Sn	Sn	13 07 56.4	-5.0
	comp=Z,0.6nm,0.3s,baz=147,slow=22,SNR=2.1						
DAVOX				LR	LR	13 10 54.5	
	comp=Z,1μm,20.9s,baz=130,slow=41						
MORC	Moravsky Berou	11.27	350	P	Pn	13 05 55.9	+0.2
MORC	Moravsky Berou	11.27	350	ePN	Pn	13 05 56.4	+0.7
MORC	Moravsky Berou	11.27	350		Pn	13 05 55.9	+0.2
GEC2	GERESS Array S	11.27	336		Pn	13 05 55.3	-0.5
GERES	GERESS Array B	11.27	336	Pn	Pn	13 05 54.0	-1.8
	comp=Z,2.9nm,0.3s,baz=152,slow=14,SNR=12						
GERES				Sn	Sn	13 07 50.1	-12
	comp=Z,0.4nm,0.3s,baz=161,slow=22,SNR=1.2						
GERES				LR	LR	13 10 53.8	
	comp=Z,1μm,19.2s,baz=166,slow=41						
GERES	GERESS Array B	11.27	336	P	Pn	13 05 55.1	-0.7
GERES	GERESS Array B	11.27	336	Pn	Pn	13 05 55.1	-0.7
TUE	Stuetta	11.33	317		Pn	13 05 57.9	+1.3
LVV	L'vov	11.38	11	eP	Pn	13 06 01.0	+4.0
LVV				eS	Sn	13 08 06.9	+2.8
LVV				pmax	pmax		
	comp=Z,80nm,1.5s						
ISO	Isola	11.52	303	P	Pn	13 06 03.2	+4.1
ISO				pmax	pmax		
	comp=Z,24nm,1.3s						
KHC	Kasperske Hory	11.56	336	eP	Pn	13 06 00.0	+0.3
KHC				e		13 08 01.9	
KHC				MLR	MLR		
	comp=Z,3μm,9.1s						
KHC	Kasperske Hory	11.56	336	ePN	Pn	13 06 00.0	+0.3
KHC				eSN	Sn	13 08 01.9	-6.9
KHC				AMS	AMS	13 11 30.0	
	comp=Z,3μm,9.1s						
DAVA	Damuels	11.60	321	ePn	Pn	13 06 02.0	+1.8
	comp=Z,5.6nm,0.4s						
WET	Wettzell	11.80	335	P	Pn	13 06 03.0	+0.1
WET				pmax	pmax		
	comp=Z,28nm,1.4s						
PRU	Pruhonice	12.06	341	eP	Pn	13 06 07.6	+1.1
PRU				MLR	MLR		
	comp=Z,5μm,11.4s						
PRU	Pruhonice	12.06	341	ePN	Pn	13 06 07.6	+1.1
PRU				AMS	AMS	13 11 40.0	
	comp=Z,5μm,11.4s						
SENIN	Lac Senin/Sane	12.41	312	Pn	Pn	13 06 12.3	+0.9
RYAN	Fayoum	12.53	137	P	Pn	13 06 11.0	-1.9
	baz=143						
GLL	Jalalah	12.96	131	P	Pn	13 06 16.1	-2.7
	baz=137						
STU	Stuttgart	12.97	324	P	Pn	13 06 18.4	-0.5
STU	Stuttgart	12.97	324	Pn	Pn	13 06 18.4	-0.5
BRG	Berggiesshubel	13.03	341	P	Pn	13 06 20.4	+0.7
BRG				pmax	pmax		
	comp=Z,12nm,1.1s						
BRG	Berggiesshubel	13.03	341	eP	Pn	13 06 20.4	+0.7
BRG				Amp		13 06 22.8	
	comp=Z,11nm,1.1s						
BRG	Berggiesshubel	13.03	341	P	P	13 06 32.9	+2.8
BRG				Amp		13 06 34.5	
	comp=Z,16nm,1.2s						
BRG				Amp		13 12 31.0	
	comp=Z,4.9nm,10.9s						
BRG				Amp		13 12 34.0	
	comp=E,2.5nm,9.2s						
BRG				Amp		13 12 34.0	
	comp=N,3.0nm,12.7s						
BFO	Black Forest	13.07	321	P	Pn	13 06 21.6	+1.3
BFO	Black Forest	13.07	321		Pn	13 06 21.6	+1.3
HFRF	Wahat Farafira	13.23	148	P	Pn	13 06 20.2	-2.3
	baz=153						
MMAI	Mount Meron Ar	13.30	111	Pn	Pn	13 06 22.7	-0.8
	comp=N,2.6nm,0.3s,baz=306,slow=14,SNR=5.3						
MMAI				Sn	Sn	13 08 39.2	-12
	comp=N,16nm,0.3s,baz=322,slow=39,SNR=4.3						
NBNS	Bani Suef	13.44	135	P	Pn	13 06 23.2	-2.2
	baz=141						
AKASG	Malin Array Be	13.46	24	Pn	Pn	13 06 23.6	-1.9
	comp=N,0.9nm,0.3s,baz=210,slow=12,SNR=11						
AKASG				LR	LR	13 11 38.0	
	comp=N,451nm,21.4s,baz=195,slow=38						
AKASG	Malin Array Be	13.46	24	i P	Pn	13 06 27.1	+1.6
AKASG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
AKBB	Malin Array Si	13.46	24	ceP	Pn	13 06 26.2	+0.8
AKBB	Malin Array Si	13.46	24	Pn	Pn	13 06 26.3	+0.8
MOX	Moxa	13.51	335	P	Pn	13 06 25.5	-0.7
MOX				pmax	pmax		
	comp=Z,16nm,1.6s						
ECH	Echery	13.59	319	P	Pn	13 06 28.1	+0.8
ECH	Echery	13.59	319		Pn	13 06 28.1	+0.8
CLL	Collm	13.67	340	ePP	P	13 06 36.0	-1.3
CLL				i		13 06 40.3	
	comp=Z,131nm,1.5s						
ANN	Anapa	13.97	59	eP	Pn	13 06 36.0	+3.5
ANN				pmax	pmax		
	comp=Z,62nm,1.9s						
RUE	Ruedersdorf	14.55	343	eP	P	13 06 47.9	+0.9
ASF	Jabal al Asfar	14.81	111	Pn	Pn	13 06 42.0	-2.2
	comp=Z,0.2nm,0.3s,baz=284,slow=6.3,SNR=4.5						
EIL	Elat	14.92	123	Pn	Pn	13 06 41.2	-4.3
	comp=Z,0.4nm,0.3s,baz=102,slow=12,SNR=2.8						
EIL				Sn	Sn	13 09 16.1	-15
	comp=Z,0.5nm,0.3s,baz=44,slow=17,SNR=4.2						
EIL				LR	LR	13 14 28.4	
	comp=Z,327nm,21.2s,baz=304,slow=45						
WLF	Walferdange	15.03	321	dx	P	13 06 56.0	+3.6
SOC	Sochi	15.21	65	i P	Pn	13 06 51.1	+1.7
SOC				e		13 09 44.2	
SOC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
SOC				MLR	MLR		
	comp=Z,460nm,14.0s						
SUW	Suwalki	15.41	6	P	Pn	13 06 52.7	+0.9
SUW				pmax	pmax		
	comp=Z,66nm,0.8s						
SUW	Suwalki	15.41	6		Pn	13 06 52.7	+0.9
SUW				IAmb	IAmb	13 06 58.3	
	comp=Z,66nm,0.8s						
BTNL	Ternell	15.67	324	dP	P	13 07 02.9	+3.5
MEM	Membach	15.74	324	dx	P	13 07 04.1	+3.9
DOU	Dourbes	16.08	320	dx	P	13 07 07.7	+3.7
MNK	Minsk	16.56	15	i P	Pn	13 07 05.3	-1.4
MNK				i S	Sn	13 10 09.4	-1.0
MNK				pmax	pmax		
	comp=E,3.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,51nm,0.9s						
MNK				pmax	pmax		
	comp=Z,67nm,0.9s						
MNK				MLR	MLR		
	comp=E,277nm,18.0s						
MNK				MLR	MLR		
	comp=N,895nm,18.0s						
MNK				MLR	MLR		
	comp=Z,1μm,18.0s						
MNK	Minsk	16.56	15	i P	Pn	13 07 05.3	-1.4
	comp=E,3.0nm,0.9s						
MNK				i P	Pn	13 07 05.3	-1.4
	comp=N,51nm,0.9s,baz=201						
MNK				i P	P	13 07 05.7	-3.5
	comp=Z,67nm,0.9s						
MNK				i PP	PnPn	13 07 14.8	-1.0
MNK				i S	Sn	13 10 09.4	-1.0
MNK				i SS	SnSn	13 10 23.9	+0.4
MNK				i LR	LR	13 12 40.1	
MNK				i LRM	MLR	13 13 55.1	
	comp=E,277nm,18.1s						
MNK				i LRM	MLR	13 13 57.0	
	comp=N,895nm,18.1s						
MNK				i LRM	MLR	13 13 57.5	
	comp=Z,1μm,18.1s						
NACGM	Naroch	16.73	13	i P	P	13 07 10.4	-0.8
BSEG	Bad Segeberg	16.76	339	P	P	13 07 10.4	-1.1
BSEG				pmax	pmax		
	comp=Z,72nm,1.5s						
GURO	Guroymak-BITLI	16.77	84	P	P	13 07 12.7	+0.9
PABE	Paberze	16.95	7	eP	P	13 07 13.0	-0.6
CART	Cartagena	17.01	273	Pn	Pn	13 07 12.0	-0.5
ISAL	Salakas	17.27	11	eP	P	13 07 17.4	+0.3
NEY	Neytrino	17.31	68	i P	P	13 07 20.1	+2.2
PBUR	Paburge	17.34	3	IAmb	IAmb	13 07 17.2	
	comp=Z,246nm,1.3s						
KIV	Kislovodsk	17.40	65	eP	P	13 07 20.2	+1.5
KIV				eS	Sn	13 10 34.9	+3.9
KIV				pmax	pmax		
	comp=Z,27nm,1.1s						
KIV				MLR	MLR		
	comp=Z,317nm,14.0s						
KIV	Kislovodsk	17.40	65	P	P	13 07 19.6	+0.8
KBZ	Khabaz	17.51	66	P	Pn	13 07 17.2	-1.5
	baz=236,slow=11,SNR=3.0						
KBZ	Khabaz	17.51	66	ceP	P	13 07 19.9	+0.1
KBZ				pmax	pmax		
	comp=Z,17nm,1.1s						
GOF	Gofitskoye	17.86	62	⇑eP	P	13 07 30.4	+6.6
GOF				pmax	pmax		
	comp=Z,27nm,0.9s						
VORD	Divnogorie	18.00	41	eP	P	13 07 25.4	+0.2
VORD				pmax	pmax		
	comp=Z,20nm,1.0s						
VSR	Storozhevoye	18.08	40	eP	P	13 07 26.2	+0.1
VSR				pmax	pmax		
	comp=Z,30nm,1.0s						
VSR				MLR	MLR		
	comp=Z,2μm,10.0s						
ZEI	Tsey	18.12	70	eP	P	13 07 29.4	+2.5
ZEI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
VORR	Voronezh	18.38	39	eP	P	13 07 30.0	+0.6
VORR				pmax	pmax		
	comp=Z,250nm,2.0s						
GNI	Garni	18.72	78	LR	LR	13 16 02.7	
	comp=Z,824nm,20.6s,baz=264,slow=41						
GNI	Garni	18.72	78	i P	Pn	13 07 34.8	+1.1
LPSR	Galich'ya Gora	18.83	37	eP	Pn	13 07 35.6	+0.8
LPSR				pmax	pmax		
	comp=Z,50nm,0.8s						
LPSR				MLR	MLR		
	comp=Z,2μm,17.0s						
SLIT	Slitere, Latvi	18.96	3	IAmb	IAmb	13 07 01.2	
	comp=Z,435nm,1.3s						
ESBB	Sonseca Array	19.03	281	P	P	13 07 36.6	-0.1
ESDC	Sonseca Array	19.03	281	P	P	13 07 37.0	+0.3
	comp=Z,0.3nm,0.3s,baz=75,slow=11,SNR=31						
ESDC	Sonseca Array	19.03	281	P	P	13 07 37.1	+0.3
PAB	San Pablo	19.34	280	P	P	13 07 40.2	+0.1
PAB				pmax	pmax		
	comp=Z,20nm,0.9s						
PAB	San Pablo	19.34	280	P	P	13 07 40.2	+0.1
VRH	Novokhopyorsk	19.41	43	eP	Pn	13 07 43.4	+1.6
VRH				pmax	pmax		
	comp=Z,30nm,0.8s						
VRH				MLR	MLR		
	comp=Z,1μm,16.0s						
OBN	Obninsk	19.63	28	P	P	13 07 42.5	-0.6
	comp=Z,0.9nm,0.3s,baz=41,slow=2.6,SNR=11						
OBN				LR	LR	13 14 59.1	
	comp=Z,157nm,20.5s,baz=208,slow=36						
OBN	Obninsk	19.63	28	⇑eP	Pn	13 07 45.0	+0.6

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OBN                                  eS     Sn      13 11 29.2 +4.6
OBN                                   pmax  pmax
       comp=Z,111nm,1.7s
OBN                                   MLR   MLR
       comp=Z,476nm,14.0s
OBN    Obninsk            19.63  28   P     Pn      13 07 44.6 +0.2
OBN                                   IAmb  IAmb    13 07 45.9
       comp=Z,86nm,1.3s
MTSE   Matsula            20.13   5  eP     Pn      13 07 49.8 -0.4
VSU    Vasula             20.16   9  eP     Pn      13 07 50.0 -0.7
VSU    Vasula             20.16   9  i P    P       13 07 47.5 -1.3
VSU                                   pmax  pmax
       comp=Z,128nm,0.7s
MOS    Moscow             20.50  28  eP     P       13 07 51.2 -1.3
MOS                                  e              13 08 09.8
MOS                                  eS     S       13 11 39.3 -2.3
MOS                                  eSS    SnSn    13 12 00.8 +0.7
MOS                                   pmax  pmax
       comp=Z,123nm,1.2s
MOS                                   pmax  pmax
       comp=N,48nm,0.7s
MOS                                   MLR   MLR
       comp=Z,1µm,13.0s
MAK    Makhachkala        20.78  70  eP     P       13 07 50.5 -5.1
MAK                                  eS     S       13 11 40.4 -7.0
MAK                                   pmax  pmax
       comp=Z,212nm,1.2s
PBRG   Braganca           21.04 287  eP     P       13 08 01.7 +3.1
       comp=Z,44nm,1.9s
MDT    Midelt             21.23 262   P     P       13 08 01.1 +0.3
       comp=Z,5.8nm,0.9s,baz=96,slow=8.3,SNR=9.0
MDT                                   LR    LR      13 17 24.8
       comp=Z,288nm,19.6s,baz=63,slow=40
UPP    Uppsala            21.25 356  eP     P       13 08 01.6 +1.1
MVO    Moncorvo           21.27 285  eP     P       13 08 02.3 +1.2
       comp=Z,49nm,2.0s
MVO                                  eLQ    LQ      13 12 57.5
MVO                                  eLR    LR      13 15 30.1
       comp=Z,582nm,20.0s
AAL    Aland              21.49 359  eP     P       13 08 04.0 +0.9
PBAR   Barrancos          21.61 277  eP     P       13 08 05.5 +0.9
       comp=Z,101nm,1.5s
PMRV   Marv??o            21.69 281  eP     P       13 08 05.7 +0.1
       comp=Z,114nm,1.3s
PMRV                                 eLQ    LQ      13 13 13.9
PMRV                                 eLR    LR      13 15 09.7
       comp=Z,379nm,16.0s
MTE    Manteigas          21.71 283  eP     P       13 08 06.4 +0.6
       comp=Z,91nm,1.6s
MTE                                  eLQ    LQ      13 12 38.5
MTE                                  eLR    LR      13 15 17.8
       comp=Z,692nm,18.0s
PCBR   Castelo Branco     21.71 282  eP     P       13 08 06.5 +0.8
       comp=Z,63nm,1.5s
POLO   Lamas de Olo       21.84 286  eP     P       13 08 07.9 +0.7
       comp=Z,21nm,1.6s
HFS    Hagfors            21.88 351   P     P       13 08 06.2 -1.1
       comp=Z,21nm,0.8s,baz=165,slow=12,SNR=45
HFS                                   LR    LR      13 18 33.2
       comp=Z,763nm,19.5s,baz=168,slow=42
PESTR  Estremoz           21.92 279  eP     P       13 08 07.4 -0.6
       comp=Z,89nm,1.3s
PESTR  Estremoz           21.92 279   P     P       13 08 07.2 -0.8
PESTR                                 IAmb  IAmb    13 08 10.3
       comp=Z,30nm,1.1s
PVIS   Viseu              21.95 284  eP     P       13 08 09.1 +0.7
       comp=Z,79nm,1.5s
PUL    Pulkovo            21.97  13  i P    P       13 08 08.9 +0.6
PUL                                   pmax  pmax
       comp=Z,136nm,1.2s
KONO   Kongsberg          22.09 345ceP      P       13 08 10.5 +0.9
KONO                                  pmax  pmax
       comp=Z,134nm,2.5s
PGAV   Gavieira, Arco     22.18 288  eP     P       13 08 12.3 +1.5
       comp=Z,72nm,1.7s
PGAV                                 eLQ    LQ      13 13 20.6
PGAV                                 eLR    LR      13 15 38.0
       comp=Z,446nm,16.0s
PBEJ   Beja               22.27 277  eP     P       13 08 13.0 +1.2
       comp=Z,55nm,1.6s
PVAQ   Vaqueiros          22.28 276  eP     P       13 08 12.9 +1.0
       comp=Z,39nm,1.4s
PVAQ                                 eLQ    LQ      13 12 56.5
PVAQ                                 eLR    LR      13 16 16.2
       comp=Z,278nm,18.0s
PVAQ   Vaqueiros          22.28 276   P     P       13 08 12.3 +0.4
EVO    Evora              22.30 279  eP     P       13 08 11.8 -0.3
PMTG   Montargil          22.38 280  eP     P       13 08 12.0 -0.9
       comp=Z,86nm,1.3s
COI    Coimbra            22.39 283   P     P       13 08 13.0  0.0
COI                                   pmax  pmax
       comp=Z,31nm,0.7s
COI    Coimbra            22.39 283  eP     P       13 08 13.8 +0.8
       comp=Z,58nm,1.4s
COI    Coimbra            22.39 283   P     P       13 08 13.0  0.0
COI                                   IAmb  IAmb    13 08 16.1
       comp=Z,31nm,0.7s
PCAS   Casmilo, Conde     22.47 283  eP     P       13 08 12.0 -1.9
       comp=Z,59nm,1.6s
PCVE   Castro Verde       22.48 276  eP     P       13 08 18.5 +4.4
       comp=Z,49nm,1.5s
MESJ   Messejana          22.59 277  eP     P       13 08 15.5 +0.4
       comp=Z,48nm,1.8s
PSBE   So Bento           22.76 281  eP     P       13 08 14.0 -3.0
NC602  NORSAR Array S     22.76 349   P     P       13 08 16.6 -0.1
NORES  NORESS Array B     22.76 349   P     P       13 08 19.0 +2.2
PNCL   Nicolau / Gran     22.77 278  eP     P       13 08 16.8 -0.3
       comp=Z,93nm,1.7s
NAO01  NORSAR Array S     22.97 348   P     P       13 08 18.8 -0.1
FINES  FINESS Array B     23.01   7   P     P       13 08 17.2 -2.1
       comp=Z,34nm,0.7s,baz=171,slow=10,SNR=39
FINES                                 LR    LR      13 17 09.2
       comp=Z,409nm,21.5s,baz=190,slow=36
FINES  FINESS Array B     23.01   7  i P    P       13 08 17.6 -1.7
FINES                                 pmax  pmax
       comp=Z,34nm,0.7s
FINES  FINESS Array B     23.01   7   P     P       13 08 19.3  0.0
FIA1   FINESS Array S     23.01   7   P     P       13 08 19.3  0.0
EKA    Eskdalemuir Ar     23.02 324   P     P       13 08 18.9 -0.6
       comp=Z,50nm,0.8s,baz=122,slow=11,SNR=33
ESK    Eskdalemuir        23.03 324   P     P       13 08 21.0 +1.4
ESK                                   pmax  pmax
       comp=Z,81nm,0.9s
ESK    Eskdalemuir        23.03 324   P     P       13 08 21.0 +1.4
PTEO   Sao Teotonio       23.04 276  eP     P       13 08 15.9 -3.9
       comp=Z,57nm,1.4s
NB2    NORSAR Subarra     23.10 348   P     P       13 08 19.6 -0.8
       comp=Z,20nm,1.1s,baz=161,slow=11
NOA    NORSAR Array B     23.10 348   P     P       13 08 19.2 -1.2
       comp=Z,31nm,1.0s,baz=159,slow=9.6,SNR=30
NOA                                   LR    LR      13 18 50.0
       comp=Z,522nm,21.6s,baz=170,slow=41
BELG   Belogornoye        23.20  45   P     P       13 08 19.7 -1.6
       comp=Z,57nm,0.9s,baz=62,slow=4.5,SNR=26
BELG                                  LR    LR      13 17 26.2
       comp=Z,476nm,22.0s,baz=241,slow=37
BELG   Belogornoye        23.20  45  i P    P       13 08 20.0 -1.3
BELG                                  pmax  pmax
       comp=Z,37nm,1.5s
VALR   Valaam             23.56  12  i P    P       13 08 26.4 +1.5
VALR                                  pmax  pmax
       comp=Z,211nm,1.0s
KLMR   Klimovskoe         25.13  22  eP     P       13 08 38.9 -0.5
KLMR                                 e              13 12 08.3
KLMR                                  pmax  pmax
       comp=Z,75nm,1.4s
KLMR   Klimovskoe         25.13  22  eP     P       13 08 38.9 -0.5
KLMR                                  AMP           13 08 44.1
       comp=Z,75nm,1.4s
KLMR                                 ePcP   PcP     13 12 08.4 -4.8
KLMR                                  LQ    LQ      13 16 21.6
KLMR                                  LQ    LQ      13 16 21.6
KLMR                                  LR    LR      13 18 25.9
RAYN   Ar Rayn            26.06 118   P     P       13 08 49.8 +1.6
RAYN                                  pmax  pmax
       comp=Z,21nm,1.3s
RAYN   Ar Rayn            26.06 118   P     P       13 08 49.8 +1.6
RAYN                                  IAmb  IAmb    13 09 00.6
       comp=Z,21nm,1.2s
KIRV   Kirov              27.19  34   P     P       13 08 56.8 -1.2
       comp=Z,7.8nm,0.6s,baz=234,slow=11,SNR=7.8
KIRV                                  LR    LR      13 20 21.5
       comp=Z,1µm,19.9s,baz=236,slow=38
KIRV   Kirov              27.19  34ceP      P       13 08 58.6 +0.6
PRGR   Permogore          27.66  26  eP     P       13 09 01.3 -0.9
PRGR                                  pmax  pmax
       comp=Z,6.0nm,0.5s
AKTO   Aktyubinsk         28.83  54   P     P       13 09 11.1 -1.7
       comp=Z,3.4nm,0.6s,baz=243,slow=8.6,SNR=12
AKTO                                  LR    LR      13 21 30.3
       comp=Z,521nm,21.9s,baz=280,slow=38
GEYT   Alibeck            29.34  80   P     P       13 09 15.9 -1.6
       comp=Z,5.3nm,0.5s,baz=310,slow=6.8,SNR=3.1
GEYT                                  LR    LR      13 23 38.5
       comp=Z,306nm,21.7s,baz=305,slow=42
GEYT   Alibeck            29.34  80   P     P       13 09 18.3 +0.8
ABKAR  Akbulak array      29.91  56   P     P       13 09 22.9 +0.5
ABKAR                                 IAmb  IAmb    13 09 24.3
       comp=Z,12nm,1.3s
ABKAR  Akbulak array      29.91  56   P     P       13 09 22.8 +0.4
TORD   Torodi Ar. Bea     30.47 218   P     P       13 09 28.0 +0.4
       comp=Z,6.7nm,1.0s,baz=30,slow=9.0,SNR=15
TORD   Torodi Ar. Bea     30.47 218   P     P       13 09 28.5 +0.9
TORD                                  IAmb  IAmb    13 09 32.9
       comp=Z,13nm,1.4s
ARU    Arti               30.63  42c iP     P       13 09 28.1 -0.6
ARU                                   S     S       13 14 30.4 -0.3
ARU                                   pmax  pmax
       comp=Z,36nm,1.5s
ARU    Arti               30.63  42   P     P       13 09 27.9 -0.9
ARU                                   IAmb  IAmb    13 09 31.0
       comp=Z,22nm,1.1s
ARCES  ARCESS Array B     31.00   3   P     P       13 09 30.4 -1.4
       comp=Z,9.3nm,0.9s,baz=192,slow=9.4,SNR=21
ARCES                                 LR    LR      13 22 09.5
       comp=Z,608nm,20.1s,baz=175,slow=37
SVE    Sverdlovsk         31.85  42  eP     P       13 09 39.3 -0.1
SVE                                   pmax  pmax
       comp=Z,62nm,1.5s
SVE                                   MLR   MLR
       comp=Z,506nm,11.0s
BRVK   Borovoye           36.68  50ceP      P       13 10 21.7 +0.4
BRVK                                  pmax  pmax
       comp=Z,16nm,1.1s
BRVK   Borovoye           36.68  50   P     P       13 10 22.0 +0.7
KKAR   Karatay Array      37.55  67   P     P       13 10 29.1 +0.3
KKAR   Karatay Array      37.55  67   P     P       13 10 29.1 +0.3
CHGR   Chuyangaron        37.56  74   P     P       13 10 29.3 +0.2
CHGR                                  IAmb  IAmb    13 10 41.0
       comp=Z,27nm,0.9s
GAR    Garm               38.34  73   P     P       13 10 36.5 +0.8
GAR                                   IAmb  IAmb    13 10 44.6
       comp=Z,19nm,0.9s
BTK    Batken             38.44  72   P     P       13 10 36.3 -0.2
BTK                                   pmax  pmax
       comp=Z,9.0nm,0.8s
BTK    Batken             38.44  72   P     P       13 10 36.3 -0.2
BTK                                   IAmb  IAmb    13 10 48.3
       comp=Z,9.2nm,0.8s
DBIC   Dimbokro           39.31 222   P     P       13 10 43.5 -0.3
       comp=Z,2.1nm,0.5s,baz=35,slow=9.0,SNR=7.3
DBIC                                  LR    LR      13 27 50.9
       comp=Z,609nm,19.7s,baz=46,slow=38
TIC    Toumodi            39.42 223  ePKIKP P       13 10 45.8 +1.0
KIC    Kosan Boka         39.51 222  ePKIKP P       13 10 46.2 +0.6
       comp=Z,6.2nm,0.6s
LIC    Lamto              39.78 222  ePKIKP P       13 10 46.1 -1.7
       comp=Z,79nm,1.5s
MBAR   Mbarara            40.23 164   P     P       13 10 51.7  0.0
       comp=Z,3.6nm,0.2s,baz=348,slow=4.8,SNR=5.7
MBAR   Mbarara            40.23 164   IAmb  IAmb    13 10 54.5
       comp=Z,11nm,1.4s
AAK    Ala-Archa          40.51  67ceP      P       13 10 53.8  0.0
AAK                                   pmax  pmax
       comp=Z,4.0nm,0.3s
AAK    Ala-Archa          40.51  67   P     P       13 10 54.7 +0.9
AAK                                   IAmb  IAmb    13 11 11.7
       comp=Z,15nm,1.1s
BOOM   Boomskoye usch     41.58  66   P     P       13 11 03.3 +0.6
BOOM                                  pmax  pmax
       comp=Z,10.0nm,0.7s
BOOM   Boomskoye usch     41.58  66   P     P       13 11 03.3 +0.6
BOOM                                  IAmb  IAmb    13 11 08.2
       comp=Z,9.7nm,0.7s
KURBB  Kurchatov Arra     41.88  54   P     P       13 11 03.5 -1.3
       baz=283,slow=9.3
KURBB                                 PcP   PcP     13 12 59.3 -1.0
       comp=Z,1.6nm,0.7s,baz=285,slow=4.8,SNR=4.1
KURK   Kurchatov          41.93  54ceP      P       13 11 05.0 -0.1
KURK                                  pmax  pmax
       comp=Z,28nm,1.5s
NIL    Nilore             42.34  80   P     P       13 11 09.6 +0.8
NIL                                   pmax  pmax
       comp=Z,13nm,0.8s
NIL    Nilore             42.34  80   P     P       13 11 09.6 +0.8
NIL                                   IAmb  IAmb    13 11 14.9
       comp=Z,13nm,0.8s
KSH    Kashi              42.41  71   P     P       13 11 09.6 +0.2
KSH                                   pP    sP      13 11 13.4 -0.7
KSH                                   sP    pP      13 11 16.3 +3.6
KSH                                   pmax  pmax
       comp=Z,8.0nm,1.3s
KSH                                   LR    LR
       comp=Z,520nm,13.2s
KSH                                   LR    LR
       comp=Z,250nm,13.2s
KSH                                   LR    LR
       comp=Z,280nm,21.0s
KMBO   Kilima Mbogo       42.52 155   LR    LR      13 30 03.3
       comp=Z,243nm,21.0s,baz=72,slow=38
MAKZ   Makanchi           44.78  59   P     P       13 11 29.1 +0.8
MAKZ                                  pmax  pmax
       comp=Z,8.0nm,1.2s
MAKZ   Makanchi           44.78  59   P     P       13 11 29.1 +0.8
MK31   Makanchi Array     44.99  59  i P    P       13 11 28.6 -1.4
MK31   Makanchi Array     44.99  59   P     P       13 11 29.2 -0.7
MK31                                  IAmb  IAmb    13 11 39.8
       comp=Z,4.7nm,0.6s
MKAR   Makanchi Array     44.99  59   P     P       13 11 28.9 -1.1
       comp=Z,3.4nm,0.5s,baz=281,slow=7.5,SNR=41
MKAR                                  PcP   PcP     13 13 10.1 -0.9
       comp=Z,2.6nm,0.8s,baz=265,slow=3.9,SNR=2.4
MKAR                                  ScP   ScP     13 17 03.3 -0.1
       comp=Z,1.4nm,0.8s,baz=286,slow=4.4,SNR=5.4
MKAR                                  LR    LR      13 33 56.7
       comp=Z,257nm,19.1s,baz=283,slow=41
MKAR   Makanchi Array     44.99  59   P     P       13 11 29.6 -0.3
ZAA0   Zalesovo Array     45.30  48   P     P       13 11 31.6 -0.7
ZALV   Zalesovo Beam      45.30  48   P     P       13 11 31.2 -1.1
       comp=Z,10.0nm,0.5s,baz=278,slow=8.6,SNR=28
ZALV                                  LR    LR      13 32 50.3
       comp=Z,550nm,18.5s,baz=287,slow=39
NRIK   Noril'sk           46.30  27   P     P       13 11 38.6 -1.3
       comp=Z,4.0nm,0.5s,baz=253,slow=8.2,SNR=3.6
NRIK                                  LR    LR      13 31 55.2
       comp=Z,546nm,21.5s,baz=264,slow=37
NRIK   Noril'sk           46.30  27ceP      P       13 11 41.2 +1.2
NRIK                                  pmax  pmax
       comp=Z,13nm,1.4s
NRIK   Noril'sk           46.30  27   P     P       13 11 40.8 +0.9
DGZ    Jazzator, Alta     47.67  54  i P    P       13 11 51.1 -0.1
DGZ                                   pmax  pmax
       comp=Z,6.0nm,0.6s
WMQ    Urumqi             49.47  61  eP     P       13 12 06.4 +1.5
WMQ                                   pP    sP      13 12 13.1 +3.5
WMQ                                   pmax  pmax
       comp=Z,16nm,0.9s
WMQ                                   pmax  pmax
       comp=Z,140nm,4.7s
WMQ                                   LR    LR
       comp=Z,490nm,14.7s
WMQ                                   LR    LR
       comp=Z,530nm,13.5s
WMQ                                   LR    LR
       comp=Z,200nm,16.3s
EUNU   Eureka             55.00 348   P     P       13 12 47.4 +1.8
EUNU                                  IAmb  IAmb    13 12 48.3
       comp=Z,18nm,1.4s
ZAK    Zakamensk          57.18  49  eP     P       13 12 58.4 -3.2
ZAK                                   pmax  pmax
       comp=Z,9.0nm,1.6s
SCHQ   Schefferville      58.09 317   P     P       13 13 07.3 -0.6
       comp=Z,4.8nm,0.5s,baz=2.4,slow=4.3,SNR=12
SCHQ                                  LR    LR      13 38 15.7
       comp=Z,195nm,18.4s,baz=72,slow=36
SCHQ   Schefferville      58.09 317   IAmb  IAmb    13 13 11.8
       comp=Z,22nm,1.2s
TIXI   Tiksi              59.14  21ceP      P       13 13 16.1 +1.3
TIXI                                  pmax  pmax
       comp=Z,8.0nm,1.2s
TIXI   Tiksi              59.14  21   P     P       13 13 16.5 +1.7
GTA    Gaotai             59.54  62  eP     P       13 13 19.3 +1.0
GTA                                   pP    sP      13 13 23.5 +0.5
GTA                                   sP    pP      13 13 26.3 +4.6
GTA                                   pmax  pmax
       comp=Z,3.0nm,1.1s
GTA                                   pmax  pmax
       comp=Z,110nm,6.0s
GTA                                   LR    LR
       comp=Z,210nm,13.5s
GTA                                   LR    LR
       comp=Z,350nm,14.3s
GTA                                   LR    LR
       comp=Z,230nm,19.5s
SONM   Songino Array      60.09  51   P     P       13 13 21.0 -1.0
       comp=Z,2.9nm,0.9s,baz=290,slow=9.3,SNR=13
SONM                                  LR    LR      13 41 56.7
       comp=Z,377nm,18.5s,baz=308,slow=39
SONM   Songino Array      60.09  51   P     P       13 13 22.3 +0.3
SONM                                  pmax  pmax
       comp=Z,9.0nm,1.3s
SONM   Songino Array      60.09  51   P     P       13 13 22.3 +0.3
SONM                                  IAmb  IAmb    13 13 24.0
       comp=Z,8.8nm,1.3s
ULN    Ulaanbaatar        60.47  51ceP      P       13 13 26.5 +1.9
ULN                                   pmax  pmax
       comp=Z,4.0nm,1.0s
YAK    Yakutsk            64.62  30   P     P       13 13 50.5 -1.3
       comp=Z,3.4nm,0.3s,baz=237,slow=1.8,SNR=1.2
YAK    Yakutsk            64.62  30ceP      P       13 13 53.2 +1.3
YAK                                   pmax  pmax
       comp=Z,28nm,1.3s
CD2    Chengdu            66.54  68   P     P       13 14 05.3 +0.5
HHC    Hu-ho-hao-te       66.70  56  eP     P       13 14 07.9 +2.1
HHC                                   pmax  pmax
       comp=Z,15nm,1.0s
HHC                                   pmax  pmax
       comp=Z,110nm,5.4s
BOSA   Boshof             67.12 176   P     P       13 14 09.7 +1.3
       comp=Z,1.6nm,0.6s,baz=126,slow=19,SNR=1.8
XAN    Xi'an              68.55  63   P     P       13 14 11.3 -6.2
XAN                                   sP    pP      13 14 18.4 -2.6
XAN                                   pmax  pmax
       comp=Z,5.0nm,0.5s
XAN                                   pmax  pmax
       comp=Z,120nm,5.8s
CHTO   Chiang Mai         69.57  82   P     P       13 14 27.5 +3.5
CHTO                                  pmax  pmax
       comp=Z,5.0nm,1.1s
CMAR   Chiang Mai Arr     69.78  82   P     P       13 14 24.3 -1.0
       comp=Z,1.7nm,0.6s,baz=300,slow=8.3,SNR=12
CMAR                                  LR    LR      13 49 36.6
       comp=Z,142nm,21.1s,baz=345,slow=40
BJI    Beijing            70.09  54   P     P       13 14 28.3 +1.4
BJI                                   pmax  pmax
       comp=Z,7.0nm,0.9s
BILL   Bilibino           70.49  13ceP      P       13 14 29.3 +0.5
BILL                                 e              13 14 45.3
BILL                                 e              13 17 04.8
BILL                                  pmax  pmax
       comp=Z,6.0nm,1.3s
BILL                                  MLR   MLR
       comp=Z,217nm,18.0s
BILL   Bilibino           70.49  13   P     P       13 14 29.8 +1.0
BILL                                  IAmb  IAmb    13 14 31.4
       comp=Z,12nm,1.1s
INK    Inuvik             71.54 350   P     P       13 14 35.2  0.0
       comp=Z,1.2nm,0.9s,baz=343,slow=21,SNR=2.3
INK    Inuvik             71.54 350   IAmb  IAmb    13 14 43.5
       comp=Z,6.2nm,1.4s
SEY    Seymchan           71.62  21   LR    LR      13 47 56.4
       comp=Z,281nm,18.6s,baz=328,slow=38
TOLK   Toolik Lake Re     72.71 356   P     P       13 14 43.9 +1.6
YKA    Yellowknife Ar     72.90 340   LR    LR      13 48 19.8
       comp=Z,183nm,19.0s,baz=0.0,slow=37
KLR    Kul'dur            73.44  40   P     P       13 14 45.6 -1.3
       comp=Z,2.1nm,0.8s,baz=297,slow=6.7,SNR=4.1
KLR                                   LR    LR      13 50 28.7
       comp=Z,262nm,18.3s,baz=317,slow=39
KLR    Kul'dur            73.44  40  i P    P       13 14 47.3 +0.4
KLR                                   pmax  pmax
       comp=Z,2.0nm,0.8s
CN2    Changchun          73.49  47  eP     P       13 14 48.1 +0.8
CN2                                   pmax  pmax
       comp=Z,10.0nm,1.5s
BMAR   Burnt Mountain     73.58 354   P     P       13 14 47.9 +0.5
ULM    Lac du Bonnet      75.29 324   P     P       13 14 56.9 -0.7
       comp=Z,3.6nm,0.8s,baz=39,slow=5.8,SNR=2.5
ULM                                   LR    LR      13 50 01.1
       comp=Z,143nm,19.1s,baz=38,slow=37
IMAR   Indian Mountai     75.54 358   P     P       13 14 59.5 +0.7
H21K   Melozitna Rive     75.83 357   P     P       13 15 01.1 +0.6
DAWY   Dawson             76.34 351   P     P       13 15 04.3 +0.8
DAWY                                  IAmb  IAmb    13 15 06.5
       comp=Z,16nm,1.4s
ILAR   Eielson Array      76.38 355   P     P       13 15 03.0 -0.6
       comp=Z,1.4nm,1.0s,baz=342,slow=2.7,SNR=9.4
ILAR                                  LR    LR      13 48 27.6
       comp=Z,115nm,21.2s,baz=2.5,slow=36
ILAR   Eielson Array      76.38 355   P     P       13 15 03.0 -0.6
NJ2    Nanjing            76.51  60  eP     P       13 15 05.5 +0.6
NJ2                                   pmax  pmax
       comp=Z,10.0nm,0.5s
USRK   Ussuriysk Ar.      76.86  43   P     P       13 15 05.2 -1.5
       comp=Z,3.3nm,0.9s,baz=256,slow=5.7,SNR=5.0
USRK                                  LR    LR      13 51 31.2
       comp=Z,301nm,18.0s,baz=317,slow=38
SCRK   Sand Creek         76.92 353   P     P       13 15 08.1 +1.3
SCRK                                  IAmb  IAmb    13 15 15.0
       comp=Z,14nm,1.5s
KSRS   Korea Array        78.96  51   P     P       13 15 17.5 -0.9
       comp=Z,0.5nm,0.3s,baz=310,slow=4.1,SNR=4.2
PSI    Prapat             79.16  95   P     P       13 15 19.2 -0.9
       comp=Z,2.6nm,0.6s,baz=323,slow=10,SNR=2.2
YSS    Yuzh-Sakhalins     80.31  36  eP     P       13 15 26.6 +1.0
YSS                                   pmax  pmax
       comp=Z,30nm,1.3s
YSS                                   MLR   MLR
       comp=Z,700nm,16.0s
PETK   Petropavlovsk-     81.30  25   LR    LR      13 55 55.3
       comp=Z,187nm,18.4s,baz=318,slow=39
BDFB   Brasilia           83.78 244   LR    LR      13 54 40.7
       comp=Z,124nm,18.2s,baz=249,slow=37
MAT    Matsushiro         85.58  46   P     P       13 15 53.0 -0.2
MJAR   Matsushiro Arr     85.58  46   P     P       13 15 52.6 -0.6
       comp=Z,5.6nm,0.9s,baz=313,slow=5.1,SNR=8.5
PDAR   Pinedale Array     87.13 326   P     P       13 16 00.6 -0.4
       comp=Z,0.3nm,0.6s,baz=53,slow=4.8,SNR=2.6
PDAR                                  LR    LR      13 58 34.4
       comp=Z,109nm,18.1s,baz=36,slow=38
ROSC   El Rosal           90.82 277   LR    LR      13 53 55.5
       comp=Z,78nm,21.4s,baz=8.5,slow=34
NVAR   Mina Array Bea     94.43 329   LR    LR      14 03 34.8
       comp=Z,217nm,19.7s,baz=28,slow=38
TXAR   Lajitas Array      94.63 314   P     P       13 16 36.2 +0.1
       comp=Z,0.9nm,1.1s,baz=2.8,slow=5.5,SNR=2.4
TXAR                                  LR    LR      13 59 22.0
       comp=Z,130nm,20.6s,baz=0.0,slow=36
CPUP   Villa Florida      97.33 242   LR    LR      14 02 39.6
       comp=Z,276nm,18.2s,baz=48,slow=37
WRA    Warramunga Arr    120.52  92   PKP   PKPdf   13 22 06.0 -0.7
       comp=Z,0.8nm,0.6s,baz=317,slow=1.8,SNR=14
ASAR   Alice Springs     122.19  96   PKP   PKPdf   13 22 09.1 -0.8
       comp=Z,1.2nm,0.5s,baz=305,slow=1.4,SNR=18
STKA   Stephens Creek    132.10 101   PKP   PKPdf   13 22 28.0 -0.5
       comp=Z,0.7nm,0.3s,baz=9.0,slow=19,SNR=2.2
DZM    Mont Dzumac       146.45  70   PKPbc PKPbc   13 22 55.9 -0.4
       comp=Z,8.1nm,0.9s,baz=336,slow=10.0,SNR=2.1
MSVF   Nonsavu           151.32  50   PKPbc PKPbc   13 23 08.8 -0.1
       comp=Z,4.0nm,0.9s,baz=126,slow=14,SNR=1.7
```

IDC 18 13:09:11.4±1.9**,3°.30N**×**128°.33E,h0**km**,mb3.5**/3**, mb1 3.8**/3**,mb1mx3.4**/44**,mbtmp3.6**/3 **Error ellipse: s-maj=132.0km s-min=27.3km az=68.0,North of Halmahera**

```
Code   Station Name         Δ°   AZ°    Phase ID          Time       Res
                                      Op    ISC        h  m  s     ISC
WRA    Warramunga Arr     23.84 166   P     P         13 14 26.4 -0.1
       0.5nm,0.3s,baz=346,slow=11,SNR=26
ASAR   Alice Springs      27.34 169   P     P         13 14 58.6 +0.2
       0.3nm,0.4s,baz=350,slow=7.7,SNR=15
ASAR                                  PcP   PcP       13 18 17.3 -0.7
       0.4nm,0.9s,baz=351,slow=1.9,SNR=6.4
MKAR   Makanchi Array     58.82 325   P     P         13 19 11.8  0.0
       0.3nm,0.4s,baz=119,slow=8.8,SNR=3.1
```

CNRM ***18*** *13:13:14.2, 36°.75N×7°.18W, h30^{km}, ml2.8*

INMG ***18*** *13:13:15.0±1.4, 36°.77N×7°.19W, h19^{km}±3^{km}, MD3.0, ML2.8, Error ellipse: s-maj=2.6km s-min=2.2km az=57.0*

IGIL ***18*** *13:13:15.1, 36°.73N×7°.22W, h24^{km}, ML2.9*

MDD ***18*** *13:13:15.9±0.9, 36°.83N×7°.19W, h29^{km}±14^{km}, mbLg3.0/37, Error ellipse: s-maj=7.0km s-min=3.3km az=26.0, PRXIMO*

ISC 18 13:13:12.1±0.7**, 36°.80N**±0°.02×**7°.16W**±0°.02**, h10**^{km}**, n112,** σ**2^{s}.39**/206**, 10D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARNO	**Arenosillo**	**0.46**	**49**	P	**Pn**	**13 13 25.5**	**+0.8**
ARNO				S	**Sb**	**13 13 32.8**	**+3.6**
PVAQ	**Vaqueiros**	**0.75**	**324**	⇓*e*P	**Pb**	**13 13 29.0**	**+1.7**
PVAQ				*e*S	**Sb**	**13 13 39.0**	**+1.4**
PVAQ				A	A	13 13 39.4	
	645nm,0.4s						
PVAQ	**Vaqueiros**	**0.75**	**324**	P	**Pb**	**13 13 29.0**	**+1.7**
PVAQ				S	**Sb**	**13 13 39.5**	**+2.0**
PVAQ	**Vaqueiros**	**0.75**	**324**	P	**Pb**	**13 13 29.0**	**+1.7**
PBDV	**Barranco-do-Ve**	**0.76**	**306**	⇓*e*P	**Pg**	**13 13 29.0**	**+2.2**
PBDV				*e*S	**Sg**	**13 13 38.9**	**+2.2**
PBDV				A	A	13 13 44.5	
	176nm,0.3s						
EGRO	**El Granado**	**0.78**	**341**	⇓P	**Pb**	**13 13 29.5**	**+1.8**
	43nm,0.0s,SNR=18						
EGRO				S	**Sb**	**13 13 40.2**	**+1.8**
	250nm,0.1s,SNR=16						
SFS	**San Fernando**	**0.84**	**113**	S	**Sb**	**13 13 42.4**	**+2.4**
CNIL	**Conil**	**0.99**	**115**	P	**Pn**	**13 13 34.1**	**+2.1**
CNIL				S	**Sg**	**13 13 42.3**	**-1.6**
EMIN	**Mina Concepcio**	**1.05**	**22**	P	**Pg**	**13 13 33.1**	**+0.8**
	2.4nm,0.1s,SNR=128						
EMIN				S	**Sg**	**13 13 45.7**	**-0.2**
	94nm,0.1s,SNR=19						
ESPR	**Espera**	**1.05**	**86**	P	**Pg**	**13 13 33.6**	**+1.3**
	44nm,0.1s,SNR=116						
ESPR				S	**Sg**	**13 13 47.2**	**+1.3**
	185nm,0.2s,SNR=30						
PCVE	**Castro Verde**	**1.09**	**320**	⇓*e*P	**Pg**	**13 13 33.7**	**+0.7**
PCVE				*e*S	**Sg**	**13 13 48.4**	**+1.2**
PCVE				A	A	13 14 04.7	
	78nm,0.4s						
ALJ	**Aljibe**	**1.25**	**102**	P	**Pn**	**13 13 37.4**	**+1.8**
ALJ				S	**Sb**	**13 13 48.7**	**-3.1**
MORF	**Marmelete**	**1.29**	**294**	*e*P	**Pn**	**13 13 36.0**	**-0.3**
MORF				*e*S	**Sb**	**13 13 51.4**	**-1.9**
MORF				IAML		13 13 52.4	
	comp=N,211nm,0.1s						
MORF	**Marmelete**	**1.29**	**294**	⇓*e*P	**Pn**	**13 13 36.0**	**-0.3**
MORF				*e*S	**Sb**	**13 13 51.7**	**-1.6**
MORF				A	A	13 13 52.0	
	comp=N,166nm,0.2s						
MORF	**Marmelete**	**1.29**	**294**	P	**Pn**	**13 13 36.0**	**-0.3**
MORF				S	**Sb**	**13 13 51.4**	**-1.9**
MESJ	**Messejana**	**1.34**	**321**	*e*P	**Pn**	**13 13 37.2**	**+0.3**
MESJ				*e*S	**Sb**	**13 13 53.3**	**-1.2**
MESJ				IAML		13 13 58.1	
	comp=N,101nm,0.3s						
MESJ	**Messejana**	**1.34**	**321**	⇓*e*P	**Pn**	**13 13 37.2**	**+0.3**
MESJ				*e*S	**Sb**	**13 13 54.7**	**+0.2**
MESJ				A	A	13 13 58.3	
	comp=N,87nm,0.4s						
MESJ	**Messejana**	**1.34**	**321**	P	**Pn**	**13 13 37.2**	**+0.3**
MESJ				S	**Sb**	**13 13 53.3**	**-1.2**
PBEJ	**Beja**	**1.35**	**336**	*e*P	**Pn**	**13 13 37.3**	**+0.3**
PBEJ				*e*S	**Sb**	**13 13 55.9**	**+1.1**
PBEJ				A	A	13 14 06.1	
	comp=N,69nm,0.5s						
PFVI	**Vila Bisbo**	**1.37**	**285**	*e*P	**Pn**	**13 13 37.2**	**-0.1**
PFVI				*e*S	**Sb**	**13 13 52.8**	**-2.7**
PFVI				A	A	13 13 53.4	
	comp=N,60nm,0.2s						
PFVI	**Vila Bisbo**	**1.37**	**285**	P	**Pn**	**13 13 37.0**	**-0.3**
	comp=N,9.6nm,0.1s,SNR=29						
PFVI				S	**Sb**	**13 13 52.6**	**-2.9**
	comp=N,130nm,0.2s,SNR=12						
PFVI	**Vila Bisbo**	**1.37**	**285**	P	**Pn**	**13 13 36.9**	**-0.3**
PFVI				S	**Sb**	**13 13 51.9**	**-3.6**
PFVI	**Vila Bisbo**	**1.37**	**285**	P	**Pn**	**13 13 36.9**	**-0.3**
EJIF	**Jimena Fronter**	**1.41**	**104**	P	**Pn**	**13 13 39.0**	**+1.3**
	SNR=7.9						
EJIF				S	**Sn**	**13 13 57.6**	**+1.3**
	SNR=7.9						
LIJA	**Lijar**	**1.42**	**85**	P	**Pn**	**13 13 39.0**	**+1.0**
PTEO	**Sao Teotonio**	**1.45**	**301**	⇓*e*P	**Pn**	**13 13 38.8**	**+0.4**
PTEO				*e*S	**Sn**	**13 13 56.3**	**-1.2**
PTEO				A	A	13 14 16.3	
	comp=N,59nm,0.3s						
ECEU	**Ceuta**	**1.70**	**121**	P	**Pn**	**13 13 43.0**	**+1.2**
	comp=N,16nm,0.1s,SNR=26						
ECEU				S	**Sn**	**13 14 04.1**	**+0.6**
	comp=N,21nm,0.2s,SNR=4.7						
CEU	**Ceuta**	**1.70**	**121**	P	**Pn**	**13 13 43.6**	**+1.8**
CEU				S	**Sn**	**13 14 05.1**	**+1.5**
PNCL	**Nicolau / Gran**	**1.71**	**321**	⇓*e*Pn	**Pn**	**13 13 42.2**	**+0.3**
PNCL				*e*Sn	**Sn**	**13 14 02.8**	**-0.9**
PNCL				*e*Sg	**Sg**	**13 14 09.3**	**+2.4**
PNCL				A	A	13 14 12.7	
	comp=N,51nm,0.4s						
EVO	**Evora**	**1.86**	**339**	P	**Pn**	**13 13 44.5**	**+0.5**
EVO				S	**Sn**	**13 14 06.5**	**-1.1**
EVO	**Evora**	**1.86**	**339**	*e*Pn	**Pn**	**13 13 44.5**	**+0.5**
EVO				*e*Sn	**Sn**	**13 14 06.9**	**-0.7**
EVO				A	A	13 14 16.3	
	comp=N,102nm,0.5s						
EVO	**Evora**	**1.86**	**339**	P	**Pn**	**13 13 44.5**	**+0.5**
EVO				S	**Sn**	**13 14 06.5**	**-1.1**
ECAB	**El Cabril**	**1.89**	**47**	P	**Pn**	**13 13 44.7**	**+0.3**
	comp=N,1.6nm,0.1s,SNR=47						
ECAB				S	**Sn**	**13 14 05.3**	**-3.0**
	comp=N,9.3nm,0.1s,SNR=14						
EMIJ	**Mijas**	**1.94**	**96**	P	**Pn**	**13 13 46.2**	**+1.1**
	comp=N,2.5nm,0.3s,SNR=7.9						
EMIJ				S	**Sn**	**13 14 06.7**	**-2.8**
	comp=N,9.0nm,0.1s,SNR=6.0						
EBAD	**Badajoz**	**1.96**	**3**	⇓P	**Pn**	**13 13 45.7**	**+0.3**
	comp=N,12nm,0.1s,SNR=18						
EBAD				S	**Sn**	**13 14 07.7**	**-2.4**
	comp=N,37nm,0.1s,SNR=7.9						
PESTR	**Estremoz**	**2.10**	**351**	*e*Pn	**Pn**	**13 13 47.5**	**+0.2**
PESTR				*e*Sn	**Sn**	**13 14 12.2**	**-1.2**
PESTR				*e*Sg	**Sg**	**13 14 21.5**	**+2.0**
PESTR				A	A	13 14 24.0	
	comp=N,38nm,0.6s						
PESTR	**Estremoz**	**2.10**	**351**	P	**Pn**	**13 13 47.3**	**+0.1**
PESTR				S	**Sg**	**13 14 19.9**	**+0.5**
PESTR	**Estremoz**	**2.10**	**351**	P	**Pn**	**13 13 47.3**	**+0.1**
EMAL	**Malaga-Limoner**	**2.20**	**90**	S	**Sn**	**13 14 14.7**	**-1.1**
CHEFC	**Chefchaouen**	**2.24**	**138**	P	**Pn**	**13 13 50.6**	**+1.3**
CHEFC				S	**Sn**	**13 14 12.8**	**-4.3**
PMTG	**Montargil**	**2.42**	**340**	*e*Pn	**Pn**	**13 13 52.1**	**+0.4**
PMTG				*e*Sn	**Sn**	**13 14 20.6**	**-0.8**
PMTG				*e*Sg	**Sg**	**13 14 30.2**	**+0.3**
PMTG				A	A	13 14 37.1	
	comp=N,45nm,0.3s						
EGOR	**Sierra Gorda,**	**2.47**	**82**	P	**Pn**	**13 13 54.3**	**+1.8**
	comp=N,0.5nm,0.1s,SNR=7.9						
EGOR				S	**Sn**	**13 14 22.4**	**-0.4**
	comp=N,16nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**2.47**	**56**	P	**Pn**	**13 13 53.5**	**+1.0**
	comp=N,1.5nm,0.1s,SNR=18						
EADA				S	**Sn**	**13 14 19.4**	**-3.3**
	comp=N,18nm,0.1s,SNR=4.7						
PMST	**Lisbon--Monsan**	**2.51**	**321**	*e*Pn	**Pn**	**13 13 54.2**	**+1.2**
PMRV	**Marv??o**	**2.63**	**356**	⇓*e*Pn	**Pn**	**13 13 55.1**	**+0.4**
PMRV				*e*Sn	**Sn**	**13 14 25.6**	**-1.1**
PMRV				*e*Sg	**Sg**	**13 14 37.0**	**+0.3**
PMRV				A	A	13 14 43.1	
	comp=N,57nm,0.4s						
PMAFR	**Mafra**	**2.73**	**323**	*e*Pn	**Pn**	**13 13 56.8**	**+0.8**
PMAFR				*e*Sn	**Sn**	**13 14 28.1**	**-1.0**
PMAFR				A	A	13 14 29.1	
	comp=N,44nm,0.2s						
PMAFR	**Mafra**	**2.73**	**323**	P	**Pn**	**13 13 56.8**	**+0.8**
	comp=N,21nm,0.1s,SNR=44						
PMAFR				S	**Sn**	**13 14 27.8**	**-1.3**
	comp=N,42nm,0.1s,SNR=6.8						
PVLZ	**Peæn de**	**2.83**	**124**	P	**Pn**	**13 13 57.5**	**+0.2**
PVLZ				S	**Sn**	**13 14 29.5**	**-2.0**
ELGU	**Los Guajares,**	**2.84**	**87**	P	**Pn**	**13 14 00.4**	**+2.9**
	comp=N,4.0nm,0.1s,SNR=7.9						
ELGU				S	**Sn**	**13 14 31.4**	**-0.4**
	comp=N,60nm,0.3s,SNR=7.9						
PSBE	**So Bento**	**3.00**	**335**	*e*Pn	**Pn**	**13 14 00.5**	**+0.7**
PSBE				*e*Sn	**Sn**	**13 14 34.6**	**-1.2**
PSBE				*e*Sg	**Sg**	**13 14 48.4**	**-0.2**
PSBE				A	A	13 15 03.0	
	comp=N,30nm,0.5s						
EQUE	**Quentar**	**3.01**	**81**	P	**Pn**	**13 14 01.2**	**+1.3**
	comp=N,0.3nm,0.1s,SNR=7.9						
EQUE				S	**Sn**	**13 14 35.5**	**-0.6**
	comp=N,10nm,0.2s,SNR=6.4						
PCBR	**Castelo Branco**	**3.05**	**355**	*e*Pn	**Pn**	**13 14 00.8**	**+0.4**
PCBR				*e*Sn	**Sn**	**13 14 35.1**	**-1.8**
PCBR				*e*Sg	**Sg**	**13 14 51.1**	**+1.0**
PCBR				A	A	13 14 57.0	
	comp=N,18nm,0.5s						
PALE	**Palemas**	**3.05**	**120**	P	**Pn**	**13 14 00.3**	**-0.1**
PALE				S	**Sn**	**13 14 34.3**	**-2.8**
GORA	**Gorafe**	**3.36**	**77**	S	**Sn**	**13 14 45.0**	**+0.2**
	comp=N,15nm,0.1s,SNR=7.9						
ZHG	**ZHG**	**3.37**	**173**	P	**Pn**	**13 14 05.0**	**+0.1**
ZHG				S	**Sn**	**13 14 42.7**	**-2.2**
ZHG	**ZHG**	**3.37**	**173**	P	**Pn**	**13 14 06.0**	**+1.1**
EPLA	**Plasencia**	**3.37**	**14**	P	**Pn**	**13 14 05.1**	**+0.3**
	comp=N,3.0nm,0.1s,SNR=29						
EPLA				S	**Sn**	**13 14 42.0**	**-3.0**
	comp=N,19nm,0.3s,SNR=12						
EQES	**Quesada**	**3.42**	**72**	P	**Pn**	**13 14 06.0**	**+0.5**
	comp=N,0.3nm,0.0s,SNR=7.9						
EQES				S	**Sn**	**13 14 43.7**	**-2.4**
	comp=N,4.1nm,0.1s,SNR=5.0						
PCAS	**Casmilo, Conde**	**3.42**	**343**	*e*Pn	**Pn**	**13 14 06.1**	**+0.7**
PCAS				*e*Sn	**Sn**	**13 14 44.5**	**-1.5**
PCAS				*e*Sg	**Sg**	**13 15 03.1**	**+1.3**
PCAS				A	A	13 15 10.2	
	comp=N,27nm,0.5s						
EBER	**Berja**	**3.43**	**87**	P	**Pn**	**13 14 07.7**	**+1.9**
	comp=N,1.3nm,0.2s,SNR=7.9						
EBER				S	**Sn**	**13 14 46.9**	**+0.3**
	comp=N,6.9nm,0.2s,SNR=7.9						
AVE	**Averroes**	**3.50**	**183**	S	**Sn**	**13 14 44.4**	**-3.5**
PAB	**San Pablo**	**3.53**	**38**	P	**Pn**	**13 14 07.9**	**+0.9**
	comp=N,2.1nm,0.1s,SNR=7.9						
PAB				S	**Sn**	**13 14 44.1**	**-4.8**
	comp=N,14nm,0.1s,SNR=7.9						
PAB	**San Pablo**	**3.53**	**38**	P	**Pn**	**13 14 08.0**	**+0.9**
MTE	**Manteigas**	**3.61**	**355**	*e*Pn	**Pn**	**13 14 08.5**	**+0.3**
MTE				*e*Sn	**Sn**	**13 14 48.8**	**-2.1**
MTE				*e*Sg	**Sg**	**13 15 08.2**	**+0.1**
MTE				A	A	13 15 25.2	
	comp=N,26nm,0.8s						
LCRM	**LCR**	**3.63**	**148**	P	**Pn**	**13 14 07.9**	**-0.6**
LCRM				S	**Sn**	**13 14 47.9**	**-3.5**
ESDC	**Sonseca Array**	**3.82**	**40**	P	**Pn**	**13 14 11.7**	**+0.7**
	comp=N,1.1nm,0.3s,baz=227,slow=13,SNR=18						
ESDC				S	**Sn**	**13 14 50.6**	**-5.4**
	comp=N,3.4nm,0.1s,baz=226,slow=23,SNR=7.0						
SESP	**Santiago Espad**	**3.91**	**69**	P	**Pn**	**13 14 12.6**	**+0.3**
	comp=N,2.4nm,0.1s,SNR=7.9						
SESP				S	**Sn**	**13 14 55.4**	**-2.8**
	comp=N,13nm,0.1s,SNR=7.9						
PVIS	**Viseu**	**3.96**	**352**	*e*Pn	**Pn**	**13 14 13.2**	**+0.3**
PVIS				*e*Sn	**Sn**	**13 14 56.9**	**-2.5**
PVIS				*e*Sg	**Sg**	**13 15 19.6**	**+0.5**
PVIS				A	A	13 15 28.8	
	comp=N,10nm,0.5s						
ENIJ	**Nijar**	**3.98**	**86**	S	**Sn**	**13 14 57.1**	**-2.7**
	comp=N,7.2nm,0.3s,SNR=7.9						
CZD	**Col de Zad**	**4.14**	**154**	P	**Pn**	**13 14 14.7**	**-0.9**
CZD				S	**Sn**	**13 15 00.3**	**-3.9**
CHAS	**Isla Isabel II**	**4.16**	**111**	P	**Pn**	**13 14 14.4**	**-1.2**
CHAS				S	Sn	13 14 55.3	-9.0
SRHM	**Skhour des Reh**	**4.36**	**188**	P	**Pn**	**13 14 18.0**	**-0.4**
MVO	**Moncorvo**	**4.37**	**1**	*e*Pn	**Pn**	**13 14 18.9**	**+0.4**
MVO				*e*Sn	**Sn**	**13 15 06.2**	**-3.3**
MVO				*e*Sg	**Sg**	**13 15 34.5**	**+2.3**
MVO				A	A	13 15 42.0	
	comp=N,18nm,0.6s						
MVO	**Moncorvo**	**4.37**	**1**	P	**Pn**	**13 14 18.9**	**+0.4**
	comp=N,12nm,0.1s,SNR=16						
MVO				S	**Sn**	**13 15 05.6**	**-3.9**
	comp=N,19nm,0.2s,SNR=7.9						
MD31	**MD31**	**4.39**	**153**	P	**Pn**	**13 14 18.0**	**-0.9**
MD31				S	**Sn**	**13 15 04.9**	**-5.2**
JBK	**JBK**	**4.48**	**122**	P	**Pn**	**13 14 19.9**	**-0.3**
JBK				S	**Sn**	**13 15 10.1**	**-2.4**
JBK	**JBK**	**4.48**	**122**	P	**Pn**	**13 14 20.1**	**-0.1**
JBK				S	**Sn**	**13 15 09.0**	**-3.5**
MDT	**Midelt**	**4.49**	**151**	P	**Pn**	**13 14 19.9**	**-0.4**
MDT				S	**Sn**	**13 15 09.3**	**-3.4**
MDT	**Midelt**	**4.49**	**151**	P	**Pn**	**13 14 19.9**	**-0.4**
MDT				S	**Sn**	**13 15 09.3**	**-3.4**
PVRL	**Vila Real**	**4.50**	**355**	*e*Pn	**Pn**	**13 14 20.4**	**+0.1**
PVRL				*e*Sn	**Sn**	**13 15 08.7**	**-3.9**
PVRL				A	A	13 15 46.5	
	comp=N,13nm,0.3s						
POLO	**Lamas de Olo**	**4.60**	**354**	*e*Pn	**Pn**	**13 14 22.0**	**+0.3**
POLO				*e*Sn	**Sn**	**13 15 12.0**	**-3.3**
POLO				A	A	13 15 13.4	
	comp=N,4.3nm,0.3s						
UCM	**Universidad Co**	**4.66**	**40**	S	**Sn**	**13 15 12.2**	**-4.6**
ETOB	**Tobarra**	**4.82**	**66**	P	**Pn**	**13 14 24.6**	**-0.1**
	comp=N,1.1nm,0.1s,SNR=8.9						
ETOB				S	**Sn**	**13 15 16.5**	**-4.1**
	comp=N,6.2nm,0.1s,SNR=7.3						
EMUR	**La Murta**	**4.83**	**76**	S	**Sn**	**13 15 17.2**	**-3.8**
	comp=N,3.0nm,0.3s,SNR=7.9						
PCAB	**Cabril**	**4.95**	**352**	*e*Pn	**Pn**	**13 14 26.8**	**+0.2**
PCAB				*e*Sn	**Sn**	**13 15 17.7**	**-6.2**
PCAB				A	A	13 15 46.5	
	comp=N,10nm,0.1s						
PCAB				*e*Sg	**Sg**	**13 15 52.6**	**+1.5**
PBRG	**Braganca**	**5.01**	**4**	*e*Pn	**Pn**	**13 14 27.7**	**+0.3**
PBRG				*e*Sn	**Sn**	**13 15 21.7**	**-3.7**
PBRG				A	A	13 15 59.6	
	comp=N,8.6nm,0.5s						
ELOB	**Lobios**	**5.11**	**352**	P	**Pn**	**13 14 28.9**	**+0.1**
	comp=N,1.1nm,0.1s,SNR=10						
ELOB				S	**Sn**	**13 15 22.6**	**-5.3**
	comp=N,2.1nm,0.1s,SNR=7.9						
ECAL	**Calabor**	**5.15**	**4**	P	**Pn**	**13 14 29.6**	**+0.3**
	comp=N,2.6nm,0.1s,SNR=22						
ECAL				S	**Sn**	**13 15 24.4**	**-4.4**
	comp=N,10nm,0.2s,SNR=7.4						
PGAV	**Gavieira, Arco**	**5.23**	**351**	*e*Pn	**Pn**	**13 14 30.7**	**+0.2**
PGAV				*e*Sn	**Sn**	**13 15 29.0**	**-1.9**
PGAV				A	A	13 16 14.9	
	comp=N,7.6nm,0.7s						
GOLM	**Goulmima**	**5.40**	**160**	P	**Pn**	**13 14 31.0**	**-1.8**
GOLM				S	**Sn**	**13 15 34.0**	**-1.0**
EZAM	**Zamans**	**5.48**	**348**	P	**Pn**	**13 14 33.2**	**-0.5**
	comp=N,2.8nm,0.1s,SNR=7.9						
EZAM				S	**Sn**	**13 15 32.5**	**-4.3**
	comp=N,0.5nm,0.2s,SNR=7.9						
AFON	**Font Roja**	**5.57**	**68**	S	**Sn**	**13 15 33.9**	**-5.4**
	comp=N,8.0nm,0.4s,SNR=7.9						
OUK	**Oukaimeden**	**5.60**	**186**	P	**Pn**	**13 14 34.9**	**-0.9**
OUK				S	Sn	13 15 33.3	-7.1
OUK	**Oukaimeden**	**5.60**	**186**	P	**Pn**	**13 14 35.5**	**-0.3**
ECHE	**Chera**	**5.62**	**58**	P	**Pn**	**13 14 36.3**	**+0.5**
	comp=N,0.3nm,0.1s,SNR=7.9						
ECHE				S	**Sn**	**13 15 34.7**	**-5.7**
	comp=N,2.7nm,0.3s,SNR=7.9						
TDRA	**Tendrara**	**5.64**	**130**	P	**Pn**	**13 14 36.1**	**0.0**
TDRA				S	**Sn**	**13 15 40.1**	**-1.1**
ETOR	**Torete**	**5.66**	**43**	P	**Pn**	**13 14 37.2**	**+0.9**
	comp=N,4.2nm,0.2s,SNR=12						
ETOR				S	**Sn**	**13 15 35.7**	**-5.8**
	comp=N,14nm,0.2s,SNR=5.0						
EBEN2	**Beniarda presa**	**5.84**	**69**	P	**Pn**	**13 14 38.5**	**-0.2**
	comp=N,0.5nm,0.1s,SNR=7.9						
EBEN2				S	**Sn**	**13 15 41.8**	**-3.9**
	comp=N,4.9nm,0.2s,SNR=7.9						
OUZM	**OUZ**	**5.88**	**177**	P	**Pn**	**13 14 38.1**	**-1.3**
OUZM	**OUZ**	**5.88**	**177**	P	**Pn**	**13 14 40.0**	**+0.6**
TZRR	**Tazzarine**	**6.14**	**167**	P	**Pn**	**13 14 42.2**	**-0.8**
TZRR				S	**Sn**	**13 15 51.1**	**-2.1**
EMAZ	**Mazaricos**	**6.30**	**348**	P	**Pn**	**13 14 45.3**	**+0.2**
	comp=N,1.0nm,0.1s,SNR=7.9						
EMAZ				S	**Sn**	**13 15 50.7**	**-6.4**
	comp=N,1.8nm,0.2s,SNR=7.9						
TTIG	**Tnine Tigouga,**	**6.32**	**190**	P	Pn	13 14 41.4	-4.0
EMOS	**Mosqueruela**	**6.34**	**54**	P	**Pn**	**13 14 47.3**	**+1.5**
	comp=N,0.3nm,0.3s,SNR=7.9						
EMOS				S	**Sn**	**13 15 52.6**	**-5.7**
	comp=N,2.9nm,0.4s,SNR=7.9						
EPON	**Pontenova**	**6.52**	**0**	P	Pn	13 14 43.5	-4.7
	comp=N,0.3nm,0.2s,SNR=7.9						
EPON				S	**Sn**	**13 15 56.5**	**-6.1**
	comp=N,0.0nm,0.1s,SNR=7.9						
EARI	**Arriondas**	**6.67**	**12**	P	Pn	13 14 45.0	-5.2
	comp=N,0.0nm,0.2s,SNR=7.9						
EARI				S	**Sn**	**13 16 00.1**	**-6.1**
	comp=N,0.5nm,0.1s,SNR=7.9						
ELAN	**Lanestosa**	**7.04**	**23**	P	**Pn**	**13 14 55.5**	**+0.3**
	comp=N,0.3nm,0.2s,SNR=7.9						
ELAN				S	**Sn**	**13 16 08.2**	**-7.1**
	comp=N,1.1nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	**7.08**	**69**	S	**Sn**	**13 16 10.4**	**-6.0**
	comp=N,1.6nm,0.2s,SNR=7.9						
EORO	**Oroz-Betelu**	**7.57**	**35**	P	**Pn**	**13 15 04.0**	**+1.4**
	comp=N,0.2nm,0.1s,SNR=7.9						
EORO				S	**Sn**	**13 16 21.3**	**-7.2**
	comp=N,1.9nm,0.3s,SNR=7.9						
EALK	**Alkurruntz**	**7.75**	**32**	P	**Pn**	**13 15 06.1**	**+1.2**
	comp=N,1.2nm,0.2s,SNR=7.9						
EALK				S	**Sn**	**13 16 26.0**	**-6.7**
	comp=N,11nm,0.2s,SNR=6.0						
ATE	**Arette**	**8.01**	**36**	S	Sn	13 16 31.3	-7.7
	comp=N,1.5nm,0.2s,SNR=7.9						
ECHI	**Chisagues Biel**	**8.15**	**42**	P	**Pn**	**13 15 11.5**	**+0.9**
	comp=N,0.1nm,0.2s,SNR=7.9						
ECHI				S	Sn	13 16 35.4	-7.4
	comp=N,1.2nm,0.2s,SNR=7.9						

JMA 18 13:17:11.5±0.2**, 38°.60N**×**144°.58E, h41**^{km}**, M3.6, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.32**	**283**	P	Pn	13 17 48.6	+1.4
OFUJ				S	Sn	13 18 16.3	+1.8
MIYJ	**Miyakonagasawa**	**2.36**	**295**	P	Pn	13 17 48.8	+1.1
MIYJ				*e*S	Sn	13 18 16.8	+1.4
JKMT	**Kesennumamotoy**	**2.44**	**276**	P	Pn	13 17 50.3	+1.5
JKMT				S	Sn	13 18 19.3	+1.9
JIKH	**Ishinomakikobu**	**2.46**	**264**	*e*S	Sn	13 18 18.7	+0.8
JMK	**Ichinoseki**	**2.65**	**279**	P	Pn	13 17 53.5	+1.8
JMK				*e*S	Sn	13 18 24.7	+2.1
JOM	**Ohasama**	**2.71**	**290**	P	Pn	13 17 54.2	+1.7
JOM				*e*S	Sn	13 18 26.0	+2.1
JANG	**Nango**	**2.96**	**308**	P	Pn	13 17 56.9	+0.9
JYK	**Kaneyama**	**3.31**	**277**	P	Pn	13 18 03.4	+2.6
JYK				*e*S	Sn	13 18 42.4	+3.4
JFT	**Otama**	**3.52**	**253**	P	Pn	13 18 05.7	+2.0
JFT				S	Sn	13 18 45.7	+1.6
JOT	**Ohata**	**3.88**	**317**	*e*S	Sn	13 18 53.1	+0.1
JCH	**Churui**	**4.12**	**347**	P	Pn	13 18 11.2	-0.6
JCH				*e*S	Sn	13 18 56.6	-2.1
JKB	**Kayabe**	**4.26**	**322**	*e*S	Sn	13 19 03.0	+0.8
NEM2	**Nemuro 2**	**4.84**	**10**	P	Pn	13 18 19.4	-2.4
NEM2				*e*S	Sn	13 19 11.2	-5.3
JRY	**Ryogami san**	**5.21**	**242**	P	Pn	13 18 27.7	+0.8
JRY				*e*S	Sn	13 19 25.3	-0.4
JOSM	**Okushiri--Mats**	**5.23**	**313**	P	Pn	13 18 29.4	+2.3
JTKR	**Abashiri--Toko**	**5.39**	**355**	P	Pn	13 18 28.6	-0.7
JTKR				*e*S	Sn	13 19 27.0	-3.0

EAF ***18*** *13:36:56.6±1.2, 25°.77S×28°.67E, h10^{km}, MD3.6*

BUL 18 13:36:56.8±1.1**, 25°.76S**×**28°.65E, h10**^{km}**, MD3.8, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBTB	**Lobatse**	**2.86**	**284**	*e*P	Pn	13 37 42.2	-0.4
LBTB				*e*S	Sn	13 38 15.5	-1.7
LBTB	**Lobatse**	**2.86**	**284**	*e*P	Pn	13 37 42.2	-0.4
LBTB				*e*S	Sn	13 38 15.5	-1.7
MOPA	**Mopani**	**3.35**	**49**	*e*P	Pn	13 37 48.8	-0.5
MOPA				*e*S	Sn	13 38 26.0	-3.2
MOPA	**Mopani**	**3.35**	**49**	*e*P	Pn	13 37 48.8	-0.5
MOPA				*e*S	Sn	13 38 26.0	-3.2
MSNA	**Messina**	**3.63**	**20**	*e*P	Pn	13 37 52.7	-0.4
MSNA	**Messina**	**3.63**	**20**	*e*P	Pn	13 37 52.7	-0.4
BOSA	**Boshof**	**4.15**	**226**	*e*P	Pn	13 38 00.7	+0.4
BOSA				*e*S	Sn	13 38 44.9	-4.0
BOSA	**Boshof**	**4.15**	**226**	*e*P	Pn	13 38 00.7	+0.4
BOSA				*e*S	Sn	13 38 44.9	-4.0
MATP	**Matopo**	**5.32**	**358**	*e*P	Pn	13 38 16.2	-0.2
MATP				*e*S	Sn	13 39 12.7	-5.1
MATP	**Matopo**	**5.32**	**358**	*e*P	Pn	13 38 16.2	-0.2
MATP				*e*S	Sn	13 39 12.7	-5.1
BLWY	**Bulawayo**	**5.60**	**360**	*e*P	Pn	13 38 20.6	+0.3
BLWY				*e*S	Sn	13 39 19.9	-4.9
BLWY	**Bulawayo**	**5.60**	**360**	*e*P	Pn	13 38 20.6	+0.3
BLWY				*e*S	Sn	13 39 19.9	-4.9
KRI	**Karoi**	**8.93**	**6**	*e*P	Pn	13 38 56.7	-9.4
KRI				*e*S	Sn	13 40 25.1	-22
KRI	**Karoi**	**8.93**	**6**	*e*P	Pn	13 38 56.7	-9.4
KRI				*e*S	Sn	13 40 25.1	-22

MOS ***18*** *13:42:32.1±1.0, 38°.59N×142°.08E, h58^{km}, mb4.8/17, Error ellipse: s-maj=8.5km s-min=5.5km az=91.7*

IDC ***18*** *13:42:33.9±2.0, 38°.53N×141°.77E, h53^{km}±18^{km}, mb3.9/19, mb1 4.0/24, mb1mx3.9/38, mbtmp4.1/24, ML3.3/5, MS3.2/8, Ms1 3.2/8, ms1mx2.9/51, Error ellipse: s-maj=18.5km s-min=11.0km az=95.0*

NIED ***18*** *13:42:34.2, 38°.62N×141°.90E, h48^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.78; $M_{\theta\theta}$-0.46; $M_{\phi\phi}$-1.33; $M_{r\theta}$0.57; $M_{\theta\phi}$-0.55; $M_{\phi r}$1.61; Fault plane solution: $M_0$2.40000×10^{15} NP1:ϕ_s21.00000°, δ68.00000°, λ87.00000°. NP2:ϕ_s209.00000°, δ22.00000°, λ97.00000°.*

JMA ***18*** *13:42:34.2, 38°.62N×141°.90E, h48^{km}±1^{km}, M4.1 Broadband fault plane solution: P waves. NP1: ϕ_s209.00000°, δ31.00000°, λ86.00000°. NP2:ϕ_s34.00000°, δ59.00000°, λ92.00000°. Principal axes: T Plg76.0000°, Azm310.0000°; N Plg2.0000°, Azm212.0000°; P Plg14.0000°, Azm122.0000°;*

JMA Felt II J1.

NEIC ***18*** *13:42:35.8±1.8, 38°.57N±0°.07×141°.9E±0°.1, h63^{km}±7^{km}, mb4.6/19 Error ellipse: s-maj=14.0km s-min=8.2km az=116.0*

ISC 18 13:42:32.4±1.0**, 38°.56N**±0°.05×**142°.15E**±0°.05**, h44**^{km}±8^{km}**, n133,** σ**1^{s}.52**/140**, mb4.4**/47**, MS3.4**/5**, 9C-13D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKMT	**Kesennumamotoy**	**0.59**	**296**	⇓P	**Pn**	**13 42 44.1**	**-0.3**
JKMT				S	**Sn**	**13 42 50.8**	**-2.3**
JIKH	**Ishinomakikobu**	**0.59**	**246**	⇑P	**Pn**	**13 42 44.8**	**+0.3**
JIKH				S	**Sn**	**13 42 52.1**	**-1.0**
JIO	**Ouri**	**0.64**	**261**	⇓P	**Pn**	**13 42 44.9**	**-0.2**
JIO				S	**Sn**	**13 42 52.1**	**-2.1**
OFUJ	**Ofunato**	**0.65**	**324**	⇓P	**Pn**	**13 42 45.3**	**+0.1**
OFUJ				S	**Sn**	**13 42 53.1**	**-1.3**
JMK	**Ichinoseki**	**0.83**	**299**	⇓P	**Pn**	**13 42 47.1**	**-0.6**
JMK				S	**Sn**	**13 42 56.2**	**-2.6**
JOM	**Ohasama**	**1.14**	**324**	⇓P	**Pn**	**13 42 51.7**	**-0.1**
JOM				S	**Sn**	**13 43 05.1**	**-1.1**
JOU	**Okura**	**1.19**	**261**	⇓P	**Pn**	**13 42 52.0**	**-0.5**
JOU				S	**Sn**	**13 43 05.3**	**-2.2**
JMM	**Marumori**	**1.27**	**238**	⇓P	**Pn**	**13 42 53.5**	**-0.2**
JMM				S	**Sn**	**13 43 07.7**	**-1.9**
JMM	**Marumori**	**1.27**	**238**		**Pn**	**13 42 53.8**	**+0.1**
JYK	**Kaneyama**	**1.45**	**285**	⇓P	**Pn**	**13 42 55.4**	**-0.7**
JRG	**Rokugo**	**1.45**	**306**	⇓P	**Pn**	**13 42 55.5**	**-0.6**
JFK	**Kawauchi**	**1.56**	**221**	⇓P	**Pn**	**13 42 58.3**	**+0.6**
JFK				S	**Sn**	**13 43 15.9**	**-0.8**
JYS	**Shirataka**	**1.68**	**259**	⇓P	**Pn**	**13 42 59.0**	**-0.2**
JTM	**Tenmabayashi**	**2.38**	**340**		**Pn**	**13 43 10.1**	**+1.3**
JYT	**Yasato**	**2.80**	**214**		**Pn**	**13 43 16.4**	**+1.8**
JSD	**Sado**	**3.11**	**262**		**Pn**	**13 43 18.4**	**-0.4**
ERM	**Erimo**	**3.54**	**12**	*ce*P	**Pn**	**13 43 27.1**	**+2.3**
ERM				pmax	pmax		
	comp=Z,371nm,1.0s						
ERM	**Erimo**	**3.54**	**12**	Pn	**Pn**	**13 43 27.3**	**+2.5**
MJAR	**Matsushiro Arr**	**3.72**	**239**	P	**Pn**	**13 43 26.9**	**-0.5**
	comp=Z,1.2nm,0.3s,baz=65,slow=10,SNR=49						
MJAR				LR	LR	13 45 14.4	
	comp=Z,190nm,18.9s,baz=55,slow=47						
MJAR	**Matsushiro Arr**	**3.72**	**239**	P	**Pn**	**13 43 28.5**	**+1.1**

MJAR	Matsushiro Arr	3.72	239		Pn	13 43 28.5	+1.1
MAJO	Matsushiro	3.73	239	*i* P	Pn	13 43 29.2	+1.8
MAJO	Matsushiro	3.73	239		Pn	13 43 29.1	+1.7
MAT	Matsushiro	3.73	239	P	Pn	13 43 28.2	+0.8
MAT				S	Sn	13 44 15.8	+5.8
INU	Inuyama	5.21	234		Pn	13 43 50.6	+2.8
NMR	Nemuro--Hokkai	5.52	28	⇓*i*P	Pn	13 43 52.5	+0.6
NMR				*e*S	Sn	13 44 51.6	-2.4
ASAJ	Asahikawa	5.56	3	P	Pn	13 43 53.6	+1.0
	comp=Z,2.1nm,0.3s,baz=212,slow=12,SNR=20						
ASAJ				S	Sn	13 44 54.7	-0.5
	comp=Z,2.7nm,0.3s,baz=102,slow=16,SNR=4.6						
ASAJ				LR	LR	13 46 01.5	
	comp=Z,109nm,21.4s,baz=145,slow=37						
JKA	Kamikawa-asahi	5.56	3		Pn	13 43 53.6	+1.0
JHJ	Hachijo jima 2	5.76	200	P	Pn	13 43 56.0	+0.8
	comp=Z,6.8nm,0.3s,baz=248,slow=14,SNR=1.6						
JHJ				S	Sn	13 44 56.1	-3.9
	comp=Z,11nm,0.3s,baz=109,slow=22,SNR=1.5						
JHJ				LR	LR	13 46 29.2	
	comp=Z,144nm,20.6s,baz=108,slow=42						
GLVR	Golovnino	5.77	25	*e*P	Pn	13 43 56.5	+1.2
GLVR				*e*S	Sn	13 44 58.7	-1.4
GLVR				smax	smax		
	comp=E,366nm,0.2s						
GLVR				smax	smax		
	comp=N,539nm,0.4s						
RUSJ	Misakicho	6.01	22	*e*P	Pn	13 44 00.0	+1.3
RUSJ				*e*S	Sn	13 45 05.1	-1.1
GRPR	Tuman	6.08	25	*e*P	Pn	13 44 00.1	+0.5
GRPR				*e*S	Sn	13 45 04.3	-3.5
GRPR				pmax	pmax		
	comp=Z,107nm,0.2s						
GRPR				pmax	pmax		
	comp=N,54nm,0.1s						
GRPR				pmax	pmax		
	comp=E,51nm,0.1s						
GRPR				smax	smax		
	comp=N,297nm,0.3s						
GRPR				smax	smax		
	comp=E,384nm,0.4s						
YUK	Yuzh-Kuril'sk	6.14	26	*e*P	Pn	13 44 01.3	+0.8
YUK				*e*S	Sn	13 45 05.6	-3.8
YUK				pmax	pmax		
	comp=N,32nm,0.2s						
YUK				pmax	pmax		
	comp=E,39nm,0.2s						
YUK				pmax	pmax		
	comp=Z,128nm,0.2s						
YUK				smax	smax		
	comp=N,441nm,0.3s						
YUK				smax	smax		
	comp=E,224nm,0.4s						
JWT	Wachi	6.32	241	Pn	Pn	13 44 06.4	+3.5
KUR	Kuril'sk	7.91	31	P	Pn	13 44 26.1	+1.3
KUR				*e*S	Sn	13 45 50.7	-2.2
KUR				smax	smax		
	comp=N,29nm,0.3s						
KUR				smax	smax		
	comp=E,65nm,0.3s						
JMN	Monobe	8.24	237	Pn	Pn	13 44 30.9	+1.4
YSS	Yuzh-Sakhalins	8.40	3	*e*P	Pn	13 44 33.6	+2.1
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
YSS				MLR	MLR		
	comp=Z,800nm,15.0s						
USA0B	Ussuriysk Arra	9.49	310	P	Pn	13 44 49.6	+3.2
USA0B	Ussuriysk Arra	9.49	310		Pn	13 44 49.5	+3.2
USRK	Ussuriysk Ar.	9.49	310	P	Pn	13 44 46.3	-0.1
	baz=124,slow=14,SNR=14						
USRK	Ussuriysk Ar.	9.49	310	P	Pn	13 44 49.1	+2.7
USRK	Ussuriysk Ar.	9.49	310		Pn	13 44 49.1	+2.7
JNU	Nakatsue	10.63	243		Pn	13 45 03.5	+1.3
KSRS	Korea Array	11.28	269	P	Pn	13 45 12.6	+1.7
	comp=Z,0.3nm,0.3s,baz=74,slow=14,SNR=5.6						
KLR	Kul'dur	13.03	328	P	Pn	13 45 34.8	+0.1
	comp=Z,0.1nm,0.3s,baz=135,slow=16,SNR=1.7						
KLR	Kul'dur	13.03	328	*i* P	P	13 45 40.4	-3.7
ZEA	Zeya	18.30	331	*e*P	P	13 46 41.7	-0.8
YAK	Yakutsk	24.73	346	P	P	13 47 49.3	+0.1
	comp=Z,4.9nm,0.3s,baz=44,slow=0.5,SNR=2.0						
YAK	Yakutsk	24.73	346	*ce*P	P	13 47 48.7	-0.5
YAK				pmax	pmax		
	comp=Z,64nm,2.5s						
YAK	Yakutsk	24.73	346	IAmb	IAmb	13 47 54.4	
	comp=Z,22nm,1.0s						
SEY	Seymchan	25.19	11	P	P	13 47 55.1	+1.7
	comp=Z,5.9nm,0.8s,baz=201,slow=5.8,SNR=5.9						
ULN	Ulaanbaatar	27.02	302	*i* P	P	13 48 10.8	+0.4
ULN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SONM	Songino Array	27.46	301	P	P	13 48 12.4	-1.9
	comp=Z,1.0nm,0.7s,baz=107,slow=8.6,SNR=6.6						
SONM	Songino Array	27.46	301	IAmb	IAmb	13 48 19.9	
	comp=Z,1.2nm,0.9s						
ENH	Enshi	28.07	263	P	P	13 48 19.8	0.0
ENH				IAmb	IAmb	13 48 24.3	
	comp=Z,19nm,0.6s						
H11N2	WAKE ISLAND Hy	28.47	124	T	T	14 18 54.5	
	baz=317,slow=75,SNR=1195						
H11N1	WAKE ISLAND Hy	28.48	124	T	T	14 18 44.5	
	baz=317,slow=75,SNR=931						
H11N3	WAKE ISLAND Hy	28.49	124	T	T	14 18 45.2	
	baz=317,slow=75,SNR=600						
H11S1	WAKE ISLAND Hy	29.24	126	T	T	14 19 38.2	
	baz=318,slow=76,SNR=133						
H11S3	WAKE ISLAND Hy	29.24	126	T	T	14 19 39.4	
	baz=318,slow=76,SNR=167						
H11S2	WAKE ISLAND Hy	29.25	126	T	T	14 19 41.3	
	baz=318,slow=76,SNR=126						
ZAK	Zakamensk	29.82	306	*e*P	P	13 48 33.0	-2.2
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
TIXI	Tiksi	33.85	352	*i* P	P	13 49 09.8	-0.4
DGZ	Jazzator, Alta	40.00	304	⇑*i*P	P	13 50 03.4	+0.6
DGZ				pmax	pmax		
	comp=Z,26nm,0.8s						
ZAA0	Zalesovo Array	41.34	311	P	P	13 50 12.9	-0.7
ZAA0				IAmb	IAmb	13 50 14.0	
	comp=Z,9.1nm,1.1s						
ZALV	Zalesovo Beam	41.34	311	P	P	13 50 13.0	-0.6
	comp=Z,3.4nm,0.5s,baz=86,slow=8.0,SNR=24						
ZALV				PcP	PcP	13 52 11.6	+0.3
	comp=Z,1.3nm,0.4s,baz=89,slow=3.3,SNR=4.6						
NRIK	Noril'sk	42.14	334	P	P	13 50 18.9	-1.1
	comp=Z,2.0nm,0.5s,baz=126,slow=3.9,SNR=4.2						
CHTO	Chiang Mai	42.25	255	P	P	13 50 20.1	-1.4
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CMAR	Chiang Mai Arr	42.46	254	P	P	13 50 20.6	-2.6
	comp=Z,0.3nm,0.3s,baz=44,slow=9.0,SNR=1.3						
MK31	Makanchi Array	43.82	301	*i* P	P	13 50 33.2	-0.7
MK31	Makanchi Array	43.82	301	P	P	13 50 33.5	-0.4
MKAR	Makanchi Array	43.82	301	P	P	13 50 33.1	-0.8
	comp=Z,4.8nm,0.9s,baz=86,slow=9.3,SNR=20						
MKAR	Makanchi Array	43.82	301	*c i*P	P	13 50 33.7	-0.3
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MKAR	Makanchi Array	43.82	301	P	P	13 50 33.7	-0.3
MAKZ	Makanchi	44.03	301	P	P	13 50 35.1	-0.5
MAKZ				pmax	pmax		
	comp=Z,13nm,1.5s						
MAKZ	Makanchi	44.03	301	P	P	13 50 35.1	-0.5
MAKZ				IAmb	IAmb	13 50 36.4	
	comp=Z,12nm,1.4s						
K20K	Telida	44.74	35	P	P	13 50 44.6	+3.5
K20K				IAmb	IAmb	13 50 53.0	
	comp=Z,6.8nm,1.3s						
KURK	Kurchatov	45.47	307	*ce*P	P	13 50 46.6	-0.3
KURK				pmax	pmax		
	comp=Z,26nm,1.0s						
KURK	Kurchatov	45.47	307	P	P	13 50 46.5	-0.5
ODAN	Odare	46.92	273	*e*P	P	13 50 59.0	+0.1
	comp=Z,14nm,0.8s						
JIRN	Jiri	47.48	274	*e*P	P	13 51 03.4	0.0
RAMN	Ramite	47.49	273	*e*P	P	13 51 03.4	0.0
	comp=Z,15nm,0.5s						
GUN	Gumba	47.60	275	*e*P	P	13 51 04.5	+0.1
ILAR	Eielson Array	47.90	33	P	P	13 51 08.1	+2.3
	comp=Z,0.9nm,0.7s,baz=268,slow=5.9,SNR=10						
KKN	Kakani	48.13	275	*e*P	P	13 51 08.4	+0.1
	comp=Z,16nm,0.7s						
PKI	Pulchoki	48.13	275	*e*P	P	13 51 07.8	-0.7
PKIN	Phulchoki	48.14	275	*e*P	P	13 51 08.1	-0.3
TARG	Taragay, Kyrgy	48.27	295	P	P	13 51 09.4	-0.1
TARG				IAmb	IAmb	13 51 11.4	
	comp=Z,4.3nm,0.8s						
DMN	Daman	48.35	275	*e*P	P	13 51 09.6	-0.5
GKN	Gorkha	48.53	275	*e*P	P	13 51 11.5	+0.2
DANN	Dangsing	49.05	276	*e*P	P	13 51 15.5	0.0
	comp=Z,18nm,0.5s						
SCRK	Sand Creek	49.22	34	P	P	13 51 18.6	+2.5
SCRK				IAmb	IAmb	13 51 38.4	
	comp=Z,4.9nm,1.2s						
BOOM	Boomskoye usch	49.34	297	P	P	13 51 17.4	0.0
BOOM				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BOOM	Boomskoye usch	49.34	297	P	P	13 51 17.4	0.0
BOOM				IAmb	IAmb	13 51 22.4	
	comp=Z,4.6nm,0.9s						
KOLN	Koldanda	49.45	276	*e*P	P	13 51 18.4	0.0
PYUN	Piuthan	49.77	276	*e*P	P	13 51 20.9	0.0
	comp=Z,13nm,0.5s						
BRVK	Borovoye	50.05	312	*ce*P	P	13 51 22.1	-0.3
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BRVK	Borovoye	50.05	312	P	P	13 51 22.3	-0.1
BRVK				IAmb	IAmb	13 51 23.0	
	comp=Z,4.6nm,0.9s						
AAK	Ala-Archa	50.30	297	*ce*P	P	13 51 24.2	-0.4
AAK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
INK	Inuvik	52.77	28	P	P	13 51 44.5	+2.0
	comp=Z,1.5nm,0.8s,baz=300,slow=7.4,SNR=3.8						
KKAR	Karatay Array	52.88	299	P	P	13 51 43.1	-0.7
KKAR	Karatay Array	52.88	299	P	P	13 51 43.1	-0.7
SVE	Sverdlovsk	54.40	318	*e*P	P	13 51 54.8	+0.2
SVE				pmax	pmax		
	comp=Z,11nm,0.9s						
NIL	Nilore	54.71	288	P	P	13 51 57.5	+0.3
NIL				pmax	pmax		
	comp=Z,11nm,0.8s						
CHGR	Chuyangaron	55.55	295	P	P	13 52 02.8	-0.5
CHGR				IAmb	IAmb	13 52 06.9	
	comp=Z,14nm,1.0s						
ARU	Arti	55.62	318	*d i*P	P	13 52 03.5	+0.1
ARU						13 53 01.6	
ARU						13 54 03.9	
ARU				S	S	13 59 45.9	0.0
ARU				SS	SS	14 03 30.1	-0.7
ARU				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ABKAR	Akbulak array	57.41	310	P	P	13 52 15.9	-0.4
ABKAR	Akbulak array	57.41	310	P	P	13 52 16.0	-0.4
ABKAR				IAmb	IAmb	13 52 16.5	
	comp=Z,3.8nm,0.7s						
KBL	Kabul	57.43	290	P	P	13 52 16.6	-0.3
KBL				pmax	pmax		
	comp=Z,4.0nm,0.6s						
AKTO	Aktyubinsk	58.10	311	LR	LR	14 20 12.6	
	comp=Z,32nm,18.6s,baz=24,slow=39						
WRA	Warramunga Arr	58.65	189	P	P	13 52 25.8	+0.7
	comp=Z,1.4nm,0.7s,baz=4.6,slow=7.1,SNR=15						
KIRV	Kirov	59.39	323	*ce*P	P	13 52 28.7	-1.2
ASAR	Alice Springs	62.38	189	P	P	13 52 51.2	+0.6
	comp=Z,0.5nm,0.7s,baz=19,slow=5.0,SNR=10.0						
ARCES	ARCESS Array B	62.78	339	P	P	13 52 52.9	+0.1
	comp=Z,2.4nm,0.8s,baz=50,slow=8.4,SNR=4.1						
OBN	Obninsk	67.23	323	LR	LR	14 26 07.0	
	comp=Z,9.5nm,18.6s,baz=212,slow=39						
FINES	FINESS Array B	67.74	332	P	P	13 53 23.9	-1.0
	comp=Z,2.0nm,0.7s,baz=46,slow=8.2,SNR=5.2						
SUMG	Summit	69.16	0	P	P	13 53 35.3	+1.1
SUMG				pmax	pmax		
	comp=Z,11nm,1.7s						
KIV	Kislovodsk	70.35	311	*e*P	P	13 53 39.7	-1.9
KIV				pmax	pmax		
	comp=Z,12nm,1.0s						
KBZ	Khabaz	70.36	311	P	P	13 53 41.3	-0.1
	comp=Z,3.6nm,0.8s,baz=334,slow=1.5,SNR=7.2						
HFS	Hagfors	72.94	336	LR	LR	14 27 41.3	
	comp=Z,20nm,18.5s,baz=76,slow=37						
NB2	NORSAR Subarra	73.01	337	P	P	13 53 57.7	+0.5
	comp=Z,1.1nm,0.6s,baz=38,slow=6.2						
NOA	NORSAR Array B	73.01	337	P	P	13 53 56.4	-0.8
	comp=Z,2.7nm,0.9s,baz=38,slow=6.1,SNR=6.3						
NOA				LR	LR	14 28 25.2	
	comp=Z,21nm,21.7s,baz=5.0,slow=38						
AKASG	Malin Array Be	73.45	322	P	P	13 53 58.2	-1.7
	comp=Z,0.8nm,0.4s,baz=44,slow=6.2,SNR=4.9						
NVAR	Mina Array Bea	73.61	54	LR	LR	14 18 47.7	
	comp=Z,37nm,21.5s,baz=10,slow=29						
PDAR	Pinedale Array	76.19	46	P	P	13 54 18.4	+2.3
	comp=Z,0.6nm,0.7s,baz=241,slow=1.4,SNR=5.7						
MORC	Moravsky Berou	79.40	327	P	P	13 54 34.0	+0.3
MORC				pmax	pmax		
	comp=Z,6.0nm,2.5s						
CLL	Collm	80.07	330	*i* P	P	13 54 38.1	+0.9
CLL				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CLL	Collm	80.07	330	*i* P	P	13 54 38.1	+0.9
	comp=Z,4.0nm,0.7s						
SCHQ	Schefferville	83.71	16	P	P	13 54 57.5	+1.2
	comp=Z,4.2nm,0.8s,baz=249,slow=10,SNR=2.2						
SCHQ	Schefferville	83.71	16	IAmb	IAmb	13 54 58.5	
	comp=Z,27nm,1.5s						
TXAR	Lajitas Array	88.73	53	P	P	13 55 22.4	+0.8
	comp=Z,0.2nm,0.5s,baz=308,slow=4.1,SNR=4.5						
QSPA	South Pole Qui	128.30	180	PKP	PKPdf	14 01 33.1	+0.2
	comp=Z,0.6nm,0.7s,baz=238,slow=1.4,SNR=7.8						
SNAA	Sanae	142.37	197	PKhKP	PKPpre	14 01 54.8	
	comp=Z,1.3nm,0.9s,baz=244,slow=3.0,SNR=1.9						

IDC ***18*** *13:54:07.6±2.8, 8°.08S×118°.92E, h135^{km}±21^{km}, mb3.4/4, mb1 3.5/5, mb1mx3.3/25, mbtmp3.8/5, Error ellipse: s-maj=76.7km s-min=12.6km az=49.0*

DJA ***18*** *13:54:09.0±0.4, 9°S±6°×11°8E±°, h116^{km}±5^{km}, M3.7/8, MLv3.7/8*

ISC 18 13:54:08.2±0.8**, 8°.64S**±0°.08×**118°.31E**±0°.05**, h150**^{km}**, n16,** σ1^{s}.**70**/20**, mb3.7**/4**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	0.56	251	P	Pn	13 54 28.1	-1.8
PLAI				S	Sn	13 54 43.2	-3.1
TWSI	Taliwang, Sumb	1.42	266	P	Pn	13 54 36.1	-0.8
TWSI				S	Sn	13 54 57.2	-1.6
WSI	Waingapu	2.21	118	P	Pn	13 54 44.6	-1.3
IGBI	Denpasar	3.13	267	P	Pn	13 54 58.3	+1.0
BSSI	Bau Bau, Buton	3.29	41	P	Pn	13 54 58.3	-1.1
EDFI	Ende, Flores	3.34	92	P	Pn	13 54 59.3	-0.8
BKSI	Bulukumba	3.76	29	P	Pn	13 55 05.7	+0.3
JAGI	Jajag, Banyuwa	4.12	272	P	Pn	13 55 09.7	-0.3
BNSI	Bone	4.58	23	P	Pn	13 55 30.8	+15
SOEI	Soe	5.99	101	P	Pn	13 55 40.4	+5.5
WRA	Warramunga Arr	19.15	128	P	P	13 58 20.6	+0.4
	0.3nm,0.3s,baz=301,slow=13,SNR=21						
WRA				S	S	14 01 48.4	-1.0
	0.1nm,0.3s,baz=332,slow=28,SNR=5.6						
WRA				ScP	ScP	14 06 01.3	+1.4
	0.0nm,0.3s,baz=338,slow=1.7,SNR=1.4						
ASAR	Alice Springs	21.12	137	P	P	13 58 42.2	+0.9
	1.8nm,0.5s,baz=310,slow=8.9,SNR=96						
ASAR				S	S	14 02 31.2	+3.4
	0.3nm,0.8s,baz=307,slow=22,SNR=2.7						
ASAR				ScP	ScP	14 06 07.3	+2.8
	0.8nm,1.1s,baz=336,slow=2.0,SNR=5.0						
STKA	Stephens Creek	31.66	140	P	P	14 00 17.1	-0.4
	1.0nm,0.5s,baz=314,slow=11,SNR=4.1						
MKAR	Makanchi Array	63.83	333	P	P	14 04 24.4	-0.2
	0.3nm,0.5s,baz=125,slow=6.1,SNR=4.4						
ZALV	Zalesovo Beam	68.47	339	P	P	14 04 52.8	-1.1
	0.6nm,0.5s,baz=134,slow=4.7,SNR=2.6						
CPUP	Villa Florida	144.98	187	PKPbc	PKPdf	14 13 30.4	+2.0
	2.3nm,0.9s,baz=124,slow=0.2,SNR=3.6						

IDC ***18*** *14:06:56.2±1.6, 57°.70N×17°.07E, h0^{km}, mb1 3.7/3, mb1mx3.2/44, mbtmp3.6/3, ML2.6/3, Error ellipse: s-maj=23.2km s-min=12.5km az=34.0*

UPP ***18*** *14:07:03.8±0.1, 58°.46N×17°.37E, h0^{km}, ML3.1, Explosion*

HEL ***18*** *14:07:04.6±0.0, 58°.46N×17°.37E, h0^{km}, ML2.4, ML3.1(UPP), Explosion*

DNK ***18*** *14:07:04.3±2.2, 58°.49N×17°.28E, h0^{km}, ML2.7, Explosion*

NAO ***18*** *14:07:05.3±1.8, 58°.58N×17°.33E, ML2.2*

BER ***18*** *14:07:06.4±3.8, 58°.57N×17°.38E, h0^{km}, ML2.1, ML2.2(NAO), Explosion*

ISC 18 14:07:03.3±0.7**, 58°.45N**±0°.02×**17°.36E**±0°.02**, h0**^{km}**, n144,** σ1^{s}.**53**/203**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VIKU	Vikbolandet	0.35	279	P	Pg	14 07 10.6	+0.7
VIKU				S	Sg	14 07 15.4	+0.9
VIKU	Vikbolandet	0.35	279	P	Pg	14 07 10.6	+0.7
VIKU				S	Sg	14 07 15.4	+0.9
VIKU	Vikbolandet	0.35	279	*i* P	Pg	14 07 10.6	+0.7
VIKU				*i* S	Sg	14 07 15.4	+0.9
NYNU	Nynaeshamn	0.65	31	P	Pg	14 07 15.8	+0.1
NYNU				S	Sg	14 07 23.8	-0.3
NYNU	Nynaeshamn	0.65	31	P	Pg	14 07 15.8	+0.1
NYNU				S	Sg	14 07 23.8	-0.3
NYNU	Nynaeshamn	0.65	31	*i* P	Pg	14 07 15.8	+0.1
NYNU				*i* S	Sg	14 07 23.8	-0.3
VSTU	Vaestervik	0.91	209	P	Pg	14 07 21.0	+0.5
VSTU	Vaestervik	0.91	209	P	Pg	14 07 21.0	+0.5
VSTU	Vaestervik	0.91	209	*e*P	Pg	14 07 21.0	+0.5
ESKU	Eskilstuna	0.93	328	P	Pg	14 07 21.2	+0.1
ESKU	Eskilstuna	0.93	328	P	Pg	14 07 21.2	+0.1
ESKU	Eskilstuna	0.93	328	*e*P	Pg	14 07 21.2	+0.1
GOTU	Gotland	1.00	139	P	Pg	14 07 22.5	+0.1
GOTU	Gotland	1.00	139	P	Pg	14 07 22.5	+0.1
GOTU	Gotland	1.00	139	*e*P	Pg	14 07 22.6	+0.1
GOTU				*e*S	Sg	14 07 35.9	+0.6
LNKU	Linkoeping	1.00	258	P	Pg	14 07 22.6	+0.1
LNKU	Linkoeping	1.00	258	P	Pg	14 07 22.6	+0.1
LNKU	Linkoeping	1.00	258	*e*P	Pg	14 07 22.6	+0.1
BYXU	Byxelkrok	1.18	189	P	Pg	14 07 26.1	+0.3
BYXU	Byxelkrok	1.18	189	P	Pg	14 07 26.1	+0.3
BYXU	Byxelkrok	1.18	189	*e*P	Pg	14 07 26.1	+0.3
NRTU	Norrtaelje	1.40	28	P	Pn	14 07 29.4	-0.5
NRTU	Norrtaelje	1.40	28	P	Pn	14 07 29.4	-0.5
NRTU	Norrtaelje	1.40	28	*e*P	Pn	14 07 29.5	-0.5
NRTU				*e*S	Sg	14 07 47.1	-0.9
ASKU	Askersund	1.40	290	P	Pn	14 07 29.5	-0.4
ASKU	Askersund	1.40	290	P	Pn	14 07 29.5	-0.4
ASKU	Askersund	1.40	290	*e*P	Pn	14 07 29.5	-0.4
EKSU	Eksjoe	1.41	232	P	Pn	14 07 29.7	-0.4
EKSU	Eksjoe	1.41	232	P	Pn	14 07 29.7	-0.4
EKSU	Eksjoe	1.41	232	*e*P	Pn	14 07 29.7	-0.4
BACU	Backbrunna	1.42	355	P	Pn	14 07 29.9	-0.3
BACU	Backbrunna	1.42	355	P	Pn	14 07 29.9	-0.3
BACU	Backbrunna	1.42	355	*e*P	Pn	14 07 29.9	-0.3
UPP	Uppsala	1.42	5	*e*P	Pn	14 07 30.1	-0.2
UPP				*e*S	Sg	14 07 47.8	-1.0
UPP	Uppsala	1.42	5	P	Pn	14 07 30.2	0.0
UPP	Uppsala	1.42	5	*e*P	Pn	14 07 30.2	0.0
FIBU	Brunna	1.46	360	P	Pn	14 07 30.6	-0.1
FIBU	Brunna	1.46	360	P	Pn	14 07 30.6	-0.1
NRAU	Nora	1.64	314	P	Pn	14 07 33.8	+0.4
NRAU	Nora	1.64	314	P	Pn	14 07 33.8	+0.4
NRAU	Nora	1.64	314	*e*P	Pn	14 07 33.8	+0.4
OSTU	Oestervaala	1.79	356	P	Pb	14 07 36.4	-0.5
OSTU	Oestervaala	1.79	356	P	Pb	14 07 36.4	-0.5
OSTU	Oestervaala	1.79	356	*e*P	Pb	14 07 36.4	-0.5
FKPU	Falk	1.94	263	P	Pb	14 07 38.9	-0.5
FKPU	Falk	1.94	263	P	Pb	14 07 38.9	-0.5
FKPU	Falk	1.94	263	*e*P	Pb	14 07 38.9	-0.5
GRAU	Graesoe	1.98	17	P	Pb	14 07 39.3	-0.9
GRAU	Graesoe	1.98	17	P	Pb	14 07 39.3	-0.9
GRAU	Graesoe	1.98	17	*e*P	Pb	14 07 39.3	-0.9
VXJU	Vaexsjoe	2.01	221	P	Pb	14 07 40.0	-0.7
VXJU	Vaexsjoe	2.01	221	P	Pb	14 07 40.0	-0.7
VXJU	Vaexsjoe	2.01	221	*e*P	Pb	14 07 40.0	-0.7
FALU	Falun	2.19	340	P	Pn	14 07 42.3	+1.3
FALU	Falun	2.19	340	P	Pn	14 07 42.3	+1.3
FALU	Falun	2.19	340	*e*P	Pn	14 07 42.3	+1.3
AAL	Aland	2.20	37	*e*P	Pb	14 07 42.4	-1.4
AAL				*e*S	Sb	14 08 11.2	-0.3
AAL	Aland	2.20	37	P	Pn	14 07 42.1	+1.2
AAL	Aland	2.20	37	*e*PB	Pb	14 07 42.7	-1.1
AAL				*e*SG	Sb	14 08 11.5	-0.1
BLEU	Blekinge	2.31	202	P	Pn	14 07 44.0	+1.5
BLEU				*i* P	Pn	14 07 44.0	+1.5
BLEU	Blekinge	2.31	202	P	Pn	14 07 44.0	+1.5
BLEU	Blekinge	2.31	202	*e*P	Pn	14 07 44.0	+1.5
HFC2	Hagfors New Ar	2.53	313	*e*P	Pn	14 07 46.9	+1.4
HFC2				*e*SB	Sb	14 08 20.6	-0.5
HFS	Hagfors	2.53	313	Pn	Pn	14 07 47.0	+1.5
	baz=130,slow=16						
HFS				Lg	Lg	14 08 20.3	
	baz=135,slow=37						
HFS	Hagfors	2.53	313	Pn	Pn	14 07 47.0	+1.5
	baz=130,slow=16						
HFS				Sg	Sb	14 08 20.3	-0.7
	baz=135,slow=37						
HFS	Hagfors	2.53	313	Pn	Pn	14 07 47.0	+1.5
	baz=130,slow=16						
HFS				Sg	Sb	14 08 20.3	-0.7
	baz=135,slow=37						
BORU	Boraas	2.57	253	*i* P	Pb	14 07 48.9	-1.4
DEL	Delary	2.74	225	*i* P	Pn	14 07 49.6	+1.3
SLIT	Slitere, Latvi	2.75	105	*e*P	Pn	14 07 49.5	+1.0
SLIT				IAML		14 08 36.6	
	comp=Z,406nm,0.1s						
SLIT	Slitere, Latvi	2.75	105	*e*P	Pn	14 07 49.6	+1.1
SLIT				*e*SB	Sb	14 08 26.9	-0.4
TJOU	Tjoern	3.06	265	*i* P	Pn	14 07 54.8	+2.0
ONAU	Onsala	3.09	252	*i* P	Pn	14 07 55.6	+2.4
STRU	Stroemstad	3.27	283	*e*P	Pn	14 07 57.2	+1.5
MTSE	Matsula	3.39	83	*e*P	Pn	14 07 58.0	+0.6
MTSE	Matsula	3.39	83	*e*P	Pn	14 07 58.1	+0.8
MTSE				*e*S	Sn	14 08 37.8	-0.4
RAF	Rauma	3.41	39	*e*P	Pn	14 07 59.2	+1.6
RAF				*e*S	Sn	14 08 39.8	+1.1
RAF				MSG		14 08 54.4	
	comp=Z,11nm,0.1s						
PBUR	Paburge	3.48	132	*e*P	Pn	14 08 01.4	+2.9
PBUR				*e*		14 09 00.1	
LUNU	Lund	3.54	219	*i* P	Pn	14 08 00.2	+0.7
BSD	Bornholm Skovb	3.60	203	*i* P	Pn	14 08 00.7	+0.4
NC602	NORSAR Array S	3.74	310	*e*P	Pn	14 08 03.0	+0.8
NC602				*e*S	Sn	14 08 45.0	-1.9
NC602				IAML		14 09 01.9	
	comp=Z,7.1nm,0.2s						
NC602	NORSAR Array S	3.74	310	*e*P	Pn	14 08 03.0	+0.8
NC602				*e*S	Sn	14 08 45.0	-1.9
NC602				IAML		14 09 01.9	
	comp=Z,7.1nm,0.2s						
NRA0	NORESS Array S	3.74	310	Pn	Pn	14 08 02.7	+0.5
	baz=120,slow=12						
NRA0				Pg	Pb	14 08 11.2	+1.1
	baz=120,slow=14						
NRA0				Lg	Lg	14 08 58.8	
	baz=122,slow=28						
NRA0	NORESS Array S	3.74	310	Pn	Pn	14 08 02.7	+0.5
	baz=120,slow=12						
NRA0				Pg	Pb	14 08 11.2	+1.1
	baz=120,slow=14						
NRA0				Sg	Sb	14 08 58.8	+2.8
	baz=122,slow=28						
NRA0	NORESS Array S	3.74	310	Pn	Pn	14 08 02.7	+0.5
	baz=120,slow=12						
NRA0				Pg	Pb	14 08 11.2	+1.1
	baz=120,slow=14						
NRA0				Sg	Sb	14 08 58.8	+2.8
	baz=122,slow=28						
MEF	Metsahovi	4.02	61	*e*P	Pn	14 08 07.2	+1.3
MEF				*e*SG	Sb	14 09 06.5	+2.7
MEF				MSG		14 09 12.9	
	comp=Z,9.5nm,0.2s						
NB2	NORSAR Subarra	4.05	312	Pn	Pn	14 08 07.4	+0.9
	baz=134,slow=14						
NB2				Pg	Pb	14 08 16.4	+1.0
NB2				Lg	Lg	14 09 08.9	
	baz=130,slow=28						
NB2	NORSAR Subarra	4.05	312	Pn	Pn	14 08 07.4	+0.9
	baz=134,slow=14						
NB2				Pg	Pb	14 08 16.4	+1.0
NB2				Sg	Sb	14 09 08.9	+4.0
	baz=130,slow=28						
NB2	NORSAR Subarra	4.05	312	Pn	Pn	14 08 07.4	+0.9
	baz=134,slow=14						
NB2				Pg	Pb	14 08 16.4	+1.0
NB2				Sg	Sb	14 09 08.9	+4.0
	baz=130,slow=28						
NOA	NORSAR Array B	4.05	312	Pn	Pn	14 08 04.8	-1.7
	comp=Z,0.1nm,0.3s,baz=135,slow=16,SNR=17						
NOA				Sn	Sn	14 08 55.7	+1.1
	comp=Z,0.1nm,0.3s,baz=109,slow=19,SNR=1.8						

NOA				Lg	Lg	14 09 07.9	
	comp=Z,0.2nm,0.3s,baz=35,slow=22,SNR=3.1						
NAO01	**NORSAR Array S**	**4.07**	**309**	*e*P	**Pn**	**14 08 07.8**	**+1.1**
NAO01	**NORSAR Array S**	**4.07**	**309**	*e*P	**Pn**	**14 08 07.8**	**+1.1**
NC303	**NORSAR Array S**	**4.11**	**315**	*e*P	**Pn**	**14 08 08.2**	**+0.9**
NC303	**NORSAR Array S**	**4.11**	**315**	*e*P	**Pn**	**14 08 08.2**	**+0.9**
KON	**Kongsberg**	**4.18**	**290**	Pn	**Pn**	**14 08 08.2**	**0.0**
KON				Sn	**Sn**	**14 08 58.2**	**+0.4**
KON				Lg	Lg	14 09 14.3	
KONO	**Kongsberg**	**4.18**	**290**	*e*P	**Pn**	**14 08 08.3**	**0.0**
KONO	**Kongsberg**	**4.18**	**290**	*e*P	**Pn**	**14 08 08.3**	**0.0**
NBO00	**NORSAR Array S**	**4.22**	**311**	*e*P	**Pn**	**14 08 08.4**	**-0.4**
NBO00	**NORSAR Array S**	**4.22**	**311**	*e*P	**Pn**	**14 08 08.4**	**-0.4**
NUR	**Nurmijrvi**	**4.25**	**58**	*e*P	**Pn**	**14 08 10.2**	**+1.0**
NUR				*e*SG	**Sb**	**14 09 14.7**	**+4.1**
NUR				MSG		14 09 17.5	
	comp=Z,4.9nm,0.2s						
HEMU	**Hemsoen**	**4.25**	**4**	*e*P	**Pn**	**14 08 09.5**	**+0.3**
HEMU				*e*S	**Sn**	**14 08 58.2**	**-1.2**
NC204	**NORSAR Array S**	**4.37**	**313**	*e*P	**Pn**	**14 08 12.0**	**+1.2**
NC204	**NORSAR Array S**	**4.37**	**313**	*e*P	**Pn**	**14 08 12.0**	**+1.2**
ARBE	**Arbavere**	**4.58**	**74**	*e*P	**Pn**	**14 08 13.7**	**+0.1**
ARBE				*e*S	**Sn**	**14 09 04.8**	**-2.6**
PABE	**Paberze**	**4.67**	**126**	*e*P	**Pn**	**14 08 17.4**	**+2.5**
PABE	**Paberze**	**4.67**	**126**	*e*P	**Pn**	**14 08 17.5**	**+2.7**
PABE				*e*SG	**Sg**	**14 09 29.6**	**-3.4**
HOMB	**Homborsund**	**4.67**	**272**	*e*P	**Pn**	**14 08 14.3**	**-0.5**
HOMB				*i* P	**Pn**	**14 08 14.3**	**-0.5**
HOMB				*e*S	**Sn**	**14 09 05.8**	**-3.9**
HOMB	**Homborsund**	**4.67**	**272**	*e*P	**Pn**	**14 08 14.3**	**-0.5**
HOMB				*e*S	**Sn**	**14 09 05.8**	**-3.9**
VSU	**Vasula**	**4.92**	**86**	*e*P	**Pn**	**14 08 18.3**	**-0.2**
VSU				*e*S	**Sb**	**14 09 35.2**	**+5.3**
VSU				IAML		14 09 41.1	
	comp=Z,39nm,0.2s						
VSU	**Vasula**	**4.92**	**86**	Pn	**Pn**	**14 08 19.3**	**+0.9**
VSU				Sn	**Sn**	**14 09 17.0**	**+1.0**
VSU				Lg	Lg	14 09 35.0	
VSU	**Vasula**	**4.92**	**86**	Pn	**Pn**	**14 08 19.3**	**+0.9**
VSU				Sn	**Sn**	**14 09 17.0**	**+1.0**
VSU				Sg	**Sb**	**14 09 35.0**	**+5.0**
VSU	**Vasula**	**4.92**	**86**	*e*P	**Pn**	**14 08 18.2**	**-0.2**
VSU				*e*S	**Sn**	**14 09 15.7**	**-0.3**
SKAR	**Skarslia**	**5.12**	**300**	*e*P	**Pn**	**14 08 21.6**	**+0.4**
SKAR				*e*S	**Sn**	**14 09 19.8**	**-1.1**
SKAR				IAML		14 09 48.5	
	comp=Z,4.8nm,0.2s						
SKAR	**Skarslia**	**5.12**	**300**	*e*P	**Pn**	**14 08 21.6**	**+0.4**
SKAR				*e*S	**Sn**	**14 09 19.8**	**-1.1**
SKAR				IAML		14 09 48.5	
	comp=Z,4.8nm,0.2s						
FIA0	**FINESS Array S**	**5.31**	**52**	Pn	**Pn**	**14 08 24.8**	**+1.0**
	baz=245,slow=14						
FIA0				Sn	**Sn**	**14 09 23.9**	**-1.6**
	baz=240,slow=22						
FIA0				Lg	Lg	14 09 45.8	
	baz=241,slow=28						
FIA0	**FINESS Array S**	**5.31**	**52**	Pn	**Pn**	**14 08 24.8**	**+1.0**
	baz=245,slow=14						
FIA0				Sn	**Sn**	**14 09 23.9**	**-1.6**
	baz=240,slow=22						
FIA0				Sg	**Sb**	**14 09 45.8**	**+4.8**
	baz=241,slow=28						
FIA0	**FINESS Array S**	**5.31**	**52**	Pn	**Pn**	**14 08 24.8**	**+1.0**
	baz=245,slow=14						
FIA0				Sn	**Sn**	**14 09 23.9**	**-1.6**
	baz=240,slow=22						
FIA0				Sg	**Sb**	**14 09 45.8**	**+4.8**
	baz=241,slow=28						
FIA0	**FINESS Array S**	**5.31**	**52**	*e*P	**Pn**	**14 08 25.0**	**+1.2**
FIA0				*e*S	**Sn**	**14 09 25.1**	**-0.4**
FIA0				MSG		14 09 50.4	
	comp=Z,3.4nm,0.2s						
FINES	**FINESS Array B**	**5.31**	**52**	Pn	**Pn**	**14 08 24.9**	**+1.2**
	comp=Z,0.6nm,0.3s,baz=238,slow=13,SNR=24						
FINES				Sn	**Sn**	**14 09 23.9**	**-1.6**
	comp=Z,1.2nm,0.3s,baz=250,slow=22,SNR=9.2						
FINES				Lg	Lg	14 09 45.5	
	comp=Z,1.6nm,0.3s,baz=245,slow=25,SNR=9.4						
SNART	**Snartemo**	**5.34**	**273**	*e*P	**Pn**	**14 08 25.2**	**+1.1**
SNART				*e*S	**Sn**	**14 09 22.6**	**-3.7**
SNART	**Snartemo**	**5.34**	**273**	*e*P	**Pn**	**14 08 25.2**	**+1.1**
SNART				*e*S	**Sn**	**14 09 22.6**	**-3.7**
DOMB	**Dombas**	**5.48**	**315**	*e*P	**Pn**	**14 08 26.6**	**+0.5**
DOMB	**Dombas**	**5.48**	**315**	*e*P	**Pn**	**14 08 26.6**	**+0.5**
ODD1	**Odda**	**5.71**	**289**	*e*P	**Pn**	**14 08 29.9**	**+0.7**
ODD1				*e*S	**Sn**	**14 09 31.1**	**-4.4**
ODD1				IAML		14 10 03.7	
	comp=Z,4.0nm,0.7s						
ODD1	**Odda**	**5.71**	**289**	*e*P	**Pn**	**14 08 29.9**	**+0.7**
ODD1				*e*S	**Sn**	**14 09 31.1**	**-4.4**
ODD1				IAML		14 10 03.7	
	comp=Z,4.0nm,0.7s						
BLS5	**Blasjo**	**5.73**	**284**	*e*P	**Pn**	**14 08 29.4**	**-0.2**
BLS5	**Blasjo**	**5.73**	**284**	*e*P	**Pn**	**14 08 29.4**	**-0.2**
HYA	**Hoyanger**	**6.26**	**301**	*e*P	**Pn**	**14 08 37.1**	**+0.4**
HYA				*e*S	**Sn**	**14 09 47.0**	**-1.8**
HYA				IAML		14 10 02.8	
	comp=Z,3.9nm,0.8s						
HYA	**Hoyanger**	**6.26**	**301**	*e*P	**Pn**	**14 08 37.1**	**+0.4**
HYA				*e*S	**Sn**	**14 09 47.0**	**-1.8**
HYA				IAML		14 10 02.8	
	comp=Z,3.9nm,0.8s						
KMY	**Karmoy**	**6.34**	**282**	*e*P	**Pn**	**14 08 37.7**	**0.0**
KMY	**Karmoy**	**6.34**	**282**	*e*P	**Pn**	**14 08 37.7**	**0.0**
AKN	**Aaknes**	**6.36**	**310**	*e*P	**Pn**	**14 08 37.3**	**-0.8**
AKN				IAML		14 09 51.8	
	comp=Z,4.0nm,0.9s						
AKN	**Aaknes**	**6.36**	**310**	*e*P	**Pn**	**14 08 37.3**	**-0.8**
AKN				IAML		14 09 51.8	
	comp=Z,4.0nm,0.9s						
ASK	**Askoy**	**6.53**	**293**	*e*P	**Pn**	**14 08 39.8**	**-0.6**
ASK	**Askoy**	**6.53**	**293**	*e*P	**Pn**	**14 08 39.8**	**-0.6**
SUE	**Sulen**	**6.88**	**298**	*e*P	**Pn**	**14 08 45.0**	**-0.2**
SUE				IAML		14 10 20.4	
	comp=Z,5.2nm,0.6s						
SUE	**Sulen**	**6.88**	**298**	*e*P	**Pn**	**14 08 45.0**	**-0.2**
SUE				IAML		14 10 20.4	
	comp=Z,5.2nm,0.6s						
MOR8	**Moi Rana**	**7.87**	**351**	*e*P	**Pn**	**14 09 00.1**	**+1.3**
KONS	**Konsvik**	**8.31**	**348**	*e*P	**Pn**	**14 09 04.8**	**0.0**
FAUS	**Fauske**	**9.02**	**355**	*e*P	**Pn**	**14 09 13.8**	**-0.7**
AKASG	**Malin Array Be**	**10.36**	**133**	Pn	Pn	14 09 15.7	-17
	comp=Z,0.8nm,0.3s,baz=316,slow=12,SNR=1.7						
ARA0	**ARCESS Array S**	**11.67**	**14**	Pn	**Pn**	**14 09 48.5**	**-2.3**
	baz=197,slow=14						
ARA0	**ARCESS Array S**	**11.67**	**14**	Pn	**Pn**	**14 09 48.5**	**-2.3**
	baz=197,slow=14						
ARA0	**ARCESS Array S**	**11.67**	**14**	Pn	**Pn**	**14 09 48.5**	**-2.3**
	baz=197,slow=14						
ARCES	**ARCESS Array B**	**11.67**	**14**	Pn	**Pn**	**14 09 49.0**	**-1.8**
	baz=198,slow=14,SNR=12						

IDC ***18*** *14:14:09.7±0.9, 31°.40N×128°.50E, h0^{km}, mb3.6/9, mb1 3.7/13, mb1mx3.5/74, mbtmp3.6/13, ML2.9/4, MS3.5/19, Ms1 3.6/19, ms1mx3.3/49, Error ellipse: s-maj=28.9km s-min=17.8km az=78.0*

NIED ***18*** *14:14:10.5, 31°.42N×128°.75E, h7^{km}, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.76; $M_{\theta\theta}$2.05; $M_{\phi\phi}$-1.28; $M_{r\theta}$-1.84; $M_{\theta\phi}$2.10; $M_{\phi r}$0.61; Fault plane solution: $M_0$3.36000×10^{15} NP1: ϕ_s105.00000°, δ81.00000°, λ-38.00000°. NP2: ϕ_s201.00000°, δ52.00000°, λ-169.00000°.*

JMA ***18*** *14:14:10.4±0.3, 31°.42N×128°.75E, h7^{km}±2^{km}, M4.2*

ISC 18 14:14:10.5±0.8**, 31°.38N**±0°.07×**128°.72E**±0°.06**, h10^{km}, n35, σ1^{s}23**/22**, mb3.6**/9**, MS3.5**/15**, 1D, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	**Shimokoshiki**	**0.90**	**70**	⇓P	**Pg**	**14 14 26.9**	**-0.9**
JSJ				S	**Sg**	**14 14 38.7**	**-0.9**
JFU	**Fukue jima 2**	**1.27**	**1**	P	**Pn**	**14 14 33.6**	**-0.7**
JSU	**Suzuyama**	**1.49**	**85**	P	**Pb**	**14 14 37.3**	**-0.9**
JYAK	**Yakushimahirau**	**1.91**	**126**	P	**Pn**	**14 14 41.5**	**-1.6**
JTN	**Tanegashima 3**	**2.07**	**110**	P	**Pn**	**14 14 44.8**	**-0.5**
JTZ	**Takazaki**	**2.09**	**75**	P	**Pn**	**14 14 45.7**	**+0.2**
JMTN	**Minamitane**	**2.11**	**117**	P	**Pn**	**14 14 46.3**	**+0.4**
JIU3	**Izumi3**	**2.13**	**56**	P	**Pn**	**14 14 46.3**	**+0.2**
JOW	**Kunigami**	**4.55**	**185**	Pn	**Pn**	**14 15 20.1**	**+0.8**
	1.8nm,0.3s,baz=192,slow=17,SNR=1.4						
JOW				LR	LR	14 17 17.4	
	comp=Z,552nm,19.2s,baz=76,slow=41						
KSRS	**Korea Array**	**6.10**	**354**	Pn	**Pn**	**14 15 41.8**	**+1.1**
	0.5nm,0.3s,baz=173,slow=13,SNR=8.8						
KSRS				Lg	Lg	14 17 16.5	
	1.6nm,0.3s,baz=178,slow=27,SNR=5.2						
MJAR	**Matsushiro Arr**	**9.41**	**54**	Pn	**Pn**	**14 16 29.1**	**+3.0**
	0.0nm,0.3s,baz=246,slow=12,SNR=2.0						
JCJ	**Chichijima**	**12.51**	**107**	LR	LR	14 21 12.3	
	comp=Z,86nm,19.1s,baz=138,slow=33						
USRK	**Ussuriysk Ar.**	**13.06**	**10**	LR	LR	14 21 52.7	
	comp=Z,115nm,21.1s,baz=189,slow=35						
KLR	**Kul'dur**	**17.98**	**6**	P	**P**	**14 18 20.9**	**-0.1**
	0.0nm,0.3s,baz=270,slow=14,SNR=2.3						
KLR				LR	LR	14 24 58.2	
	comp=Z,94nm,19.0s,baz=177,slow=36						
GUMO	**Guam**	**23.10**	**136**	LR	LR	14 27 10.2	
	comp=Z,63nm,19.3s,baz=54,slow=34						
SONM	**Songino Array**	**23.66**	**320**	P	**P**	**14 19 22.0**	**-0.1**
	0.8nm,0.8s,baz=139,slow=9.0,SNR=3.8						
DAV	**Davao City (W)**	**24.36**	**188**	LR	LR	14 29 15.7	
	comp=Z,73nm,21.3s,baz=347,slow=37						
CMAR	**Chiang Mai Arr**	**29.81**	**252**	LR	LR	14 33 17.8	
	comp=Z,94nm,18.7s,baz=100,slow=39						
PETK	**Petropavlovsk-**	**30.18**	**36**	LR	LR	14 32 11.3	
	comp=Z,104nm,18.7s,baz=223,slow=36						
YAK	**Yakutsk**	**30.67**	**1**	LR	LR	14 32 15.4	
	comp=Z,68nm,18.1s,baz=278,slow=35						
ZALV	**Zalesovo Beam**	**38.54**	**319**	LR	LR	14 38 37.4	
	comp=Z,124nm,18.8s,baz=110,slow=38						
MKAR	**Makanchi Array**	**38.60**	**307**	LR	LR	14 38 25.8	
	comp=Z,65nm,18.7s,baz=96,slow=38						
KURBB	**Kurchatov Arra**	**41.56**	**312**	P	**P**	**14 21 57.0**	**-1.1**
	0.2nm,0.5s,baz=95,slow=8.5,SNR=1.4						
AAK	**Ala-Archa**	**44.06**	**301**	P	**P**	**14 22 17.5**	**-1.2**
	0.4nm,0.4s,baz=76,slow=8.3,SNR=1.3						
BVAR	**Borovoye Array**	**46.83**	**315**	P	**P**	**14 22 39.9**	**-0.5**
	0.7nm,0.8s,baz=139,slow=11,SNR=2.5						
WRA	**Warramunga Arr**	**51.31**	**173**	P	**P**	**14 23 14.1**	**-0.8**
	0.4nm,0.7s,baz=354,slow=8.1,SNR=2.9						
WRA				LR	LR	14 44 39.2	
	comp=Z,21nm,20.7s,baz=55,slow=36						
ASAR	**Alice Springs**	**54.96**	**174**	P	**P**	**14 23 44.1**	**+2.3**
	0.8nm,0.8s,baz=1.6,slow=14,SNR=6.8						
ASAR				LR	LR	14 47 15.0	
	comp=Z,22nm,20.6s,baz=12,slow=36						
KDAK	**Kodiak Island**	**58.17**	**38**	LR	LR	14 49 51.7	
	comp=Z,72nm,19.1s,baz=240,slow=37						
ILAR	**Eielson Array**	**59.74**	**30**	P	**P**	**14 24 15.6**	**+0.5**
	0.4nm,0.8s,baz=266,slow=7.2,SNR=2.4						
FINES	**FINESS Array B**	**68.63**	**330**	P	**P**	**14 25 13.9**	**+0.5**
	1.0nm,0.7s,baz=80,slow=8.3,SNR=1.0						
FINES				LR	LR	14 57 30.9	
	comp=Z,66nm,19.3s,baz=65,slow=38						
AKASG	**Malin Array Be**	**71.93**	**319**	LR	LR	14 59 00.5	
	comp=Z,94nm,18.2s,baz=35,slow=38						
NOA	**NORSAR Array B**	**74.91**	**333**	LR	LR	15 01 54.9	
	comp=Z,37nm,18.5s,baz=155,slow=38						
DAVOX	**Davos/Dischmat**	**84.67**	**323**	LR	LR	15 09 19.2	
	comp=Z,78nm,18.9s,baz=99,slow=39						
PDAR	**Pinedale Array**	**88.89**	**39**	P	**P**	**14 27 07.0**	**+1.5**
	0.3nm,0.5s,baz=350,slow=3.5,SNR=3.5						
ESDC	**Sonseca Array**	**96.78**	**325**	LR	LR	15 16 37.5	
	comp=Z,46nm,18.0s,baz=290,slow=39						

PRE ***18*** *14:14:24.5±1.0, 25°.50S×28°.78E, h5^{km}, ML2.5*

EAF ***18*** *14:14:25.1±1.1, 25°.74S×28°.74E, h10^{km}, MD3.7*

BUL ***18*** *14:14:25.6±1.2, 25°.71S×28°.71E, h10^{km}, MD4.0*

ISC 18 14:14:25.1±1.4**, 25°.54S**±0°.04×**28°.75E**±0°.03**, h5^{km}**±11^{km}**, n17, σ1^{s}13**/30**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLR	**Silverton**	**0.47**	**245**	*e*P	**Pg**	**14 14 34.0**	**-0.2**
SLR				*e*S	**Sg**	**14 14 41.2**	**+0.9**
SLR				IAML		14 14 46.5	
	comp=Z,581nm,0.4s						
HRAO	**HartRAO**	**1.02**	**250**	*e*P	**Pb**	**14 14 45.3**	**-0.2**
HRAO				*e*S	**Sg**	**14 14 58.8**	**+0.8**
HRAO				IAML		14 15 01.9	
	comp=Z,85nm,0.3s						
CRLN	**Carolina, Mapu**	**1.23**	**112**	*e*P	**Pg**	**14 14 47.5**	**-1.2**
CRLN				*e*S	**Sb**	**14 15 04.3**	**-1.0**
CRLN				IAML		14 15 15.4	
	comp=Z,28nm,0.8s						
KSR	**Koster**	**1.70**	**259**	*e*P	**Pn**	**14 14 55.8**	**+0.1**
KSR				*e*S	**Sb**	**14 15 19.4**	**+0.5**
KSR				IAML		14 15 23.4	
	comp=Z,227nm,0.2s						
NWCL	**Newcastle**	**2.41**	**155**	*e*P	**Pn**	**14 15 06.4**	**+1.0**
NWCL				*e*S	**Sn**	**14 15 35.9**	**+0.4**
NWCL				IAML		14 15 45.5	
	comp=Z,25nm,0.4s						
LBTB	**Lobatse**	**2.90**	**280**	*e*P	**Pn**	**14 15 11.8**	**-0.4**
LBTB				*e*S	**Sn**	**14 15 45.3**	**-2.2**
LBTB	**Lobatse**	**2.90**	**280**	*e*P	**Pn**	**14 15 11.8**	**-0.4**
LBTB				*e*S	**Sn**	**14 15 45.3**	**-2.2**
MOPA	**Mopani**	**3.14**	**51**	*e*P	**Pn**	**14 15 14.9**	**-0.4**
MOPA				*e*S	**Sn**	**14 15 51.3**	**-2.0**
MOPA				IAML		14 16 10.6	
	comp=Z,12nm,0.3s						
MOPA	**Mopani**	**3.14**	**51**	*e*P	**Pn**	**14 15 16.8**	**+1.5**
MOPA				*e*S	**Sn**	**14 15 53.5**	**+0.3**
MOPA	**Mopani**	**3.14**	**51**	*e*P	**Pn**	**14 15 16.8**	**+1.5**
MOPA				*e*S	**Sn**	**14 15 53.5**	**+0.3**
POGA	**Pongola**	**3.20**	**125**	*e*P	**Pn**	**14 15 16.2**	**0.0**
POGA				*e*S	**Sn**	**14 15 54.7**	**-0.1**
POGA				IAML		14 16 21.3	
	comp=Z,19nm,1.2s						
MSNA	**Messina**	**3.39**	**20**	*e*P	**Pn**	**14 15 19.1**	**+0.3**
MSNA				*e*S	**Sn**	**14 16 01.1**	**+1.8**
MSNA	**Messina**	**3.39**	**20**	*e*P	**Pn**	**14 15 19.1**	**+0.3**
MSNA				*e*S	**Sn**	**14 16 01.1**	**+1.8**
SWZ	**Schweizer**	**3.48**	**241**	*e*P	**Pn**	**14 15 21.3**	**+1.2**
SWZ				*e*S	**Sn**	**14 16 02.5**	**+0.8**
SWZ				IAML		14 16 27.7	
	comp=Z,24nm,1.4s						
BOSA	**Boshof**	**4.37**	**225**	*e*P	**Pn**	**14 15 33.2**	**+0.9**
BOSA				*e*S	**Sn**	**14 16 23.3**	**-0.4**
BOSA				IAML		14 17 08.0	
	comp=Z,18nm,3.2s						
KRI	**Karoi**	**8.70**	**5**	*e*P	Pn	14 16 24.8	-7.1
KRI				*e*S	Sn	14 17 53.1	-18
KRI	**Karoi**	**8.70**	**5**	*e*P	Pn	14 16 24.8	-7.1
KRI				*e*S	Sn	14 17 53.1	-18

ANF ***18*** *14:15:04.6±0.6, 46°.54N×121°.54W, h1^{km}, ML3.1/8, Error ellipse: s-maj=5.7km s-min=3.2km az=87.0*

PGC ***18*** *14:15:05.6, 46°.51N×121°.62W, h3^{km}, ML2.7, ML2.7/9, 132km Sse of Seattle, Wa Washington*

SEA ***18*** *14:15:06.1±0.9, 46°.537N±0°.010×121°.61W±0°.02, h0^{km}±7^{km}, ML2.7/89, ML2.7(OTT), ML2.5/30(NEIC), Error ellipse: s-maj=2.2km s-min=1.2km az=111.0*

NEIC ***18*** *14:15:06.2±1.4, 46°.549N±0°.007×121°.63W±0°.02, h6^{km}±6^{km}, Error ellipse: s-maj=2.4km s-min=0.6km az=113.0*

PNSN ***18*** *14:15:06.1, 46°.54N×121°.61W, h1^{km}, MD2.5, Fault plane solution: NP1: ϕ_s20.00000°, δ55.00000°, λ-100.00000°.*

ISC 18 14:15:05.6±1.1**, 46°.53N**±0°.01×**121°.63W**±0°.02**, h3^{km}**±9^{km}**, n123, σ0^{s}94**/156**, Washington**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WPW	**White Pass**	**0.18**	**19**		**Pg**	**14 15 09.4**	**+0.2**
WPW					**Sg**	**14 15 12.5**	**+0.9**
LON	**Longmire**	**0.25**	**331**		**Pg**	**14 15 10.9**	**+0.3**
LON					**Sg**	**14 15 14.6**	**+0.7**
REMR	**Mount Rainier-**	**0.33**	**334**		**Pg**	**14 15 12.2**	**+0.3**
REMR					**Sg**	**14 15 17.0**	**+0.8**
PANH	**Panhandle Gap,**	**0.33**	**359**		**Pg**	**14 15 12.1**	**0.0**
PANH					**Sg**	**14 15 17.0**	**+0.5**
RCS	**Mount Rainier-**	**0.35**	**349**		**Pg**	**14 15 12.5**	**+0.1**
RCS					**Sg**	**14 15 17.6**	**+0.5**
SR41	**SR410 Landslid**	**0.36**	**10**		**Pg**	**14 15 12.8**	**0.0**
SR41					**Sg**	**14 15 18.0**	**+0.5**
ASR	**Mount Adams--S**	**0.38**	**176**		**Pb**	**14 15 14.0**	**-1.1**
OBSR	**Observation Ro**	**0.39**	**341**		**Pg**	**14 15 13.6**	**+0.3**
FMW	**Mount Fremont**	**0.41**	**356**		**Pg**	**14 15 13.7**	**+0.2**
FMW	**Mount Fremont**	**0.41**	**356**	P	**Pg**	**14 15 13.7**	**+0.2**
B202	**Windy Ridge, M**	**0.45**	**231**		**Pg**	**14 15 14.8**	**+0.5**
B202					**Sb**	**14 15 22.0**	**-1.4**
SOSW	**Source of Smit**	**0.45**	**231**		**Pg**	**14 15 14.9**	**+0.6**
BOLM	**Sugar Bowl**	**0.49**	**230**		**Pb**	**14 15 16.0**	**-0.9**
B201	**Coldwater, Mou**	**0.49**	**243**		**Pg**	**14 15 15.5**	**+0.4**
VALT	**Mount Saint He**	**0.50**	**231**		**Pg**	**14 15 16.1**	**+0.9**
STD	**Studebaker Rid**	**0.50**	**235**		**Pg**	**14 15 15.8**	**+0.6**
SEPW	**September Lobe**	**0.51**	**230**		**Pg**	**14 15 16.1**	**+0.8**
JLK	**June Lake**	**0.53**	**224**		**Pg**	**14 15 16.4**	**+0.7**
JLK					**Sb**	**14 15 24.5**	**-1.0**
SWF2	**Southwest Flan**	**0.54**	**229**		**Pg**	**14 15 16.6**	**+0.7**
SHW	**Mount Saint He**	**0.54**	**232**		**Pg**	**14 15 16.6**	**+0.7**
ERK	**Elk Rock**	**0.54**	**246**		**Pg**	**14 15 16.4**	**+0.4**
FL2	**Flat Top 2**	**0.60**	**237**		**Pg**	**14 15 17.6**	**+0.5**
B203	**Quarry, Mount**	**0.60**	**234**		**Pg**	**14 15 17.6**	**+0.4**
GULW	**Guler Mountain**	**0.60**	**178**		**Pb**	**14 15 18.3**	**-0.6**
B941	**Kapowsin**	**0.61**	**319**		**Pg**	**14 15 17.6**	**+0.2**
E04D	**Cinebar**	**0.65**	**273**	P	**Pg**	**14 15 18.8**	**+0.8**
	baz=91,SNR=6.1						
E04D				S	**Sb**	**14 15 28.6**	**-0.3**
	baz=91						
E04D	**Cinebar**	**0.65**	**273**		**Pg**	**14 15 18.8**	**+0.8**
F05D	**White Salmon**	**0.65**	**169**	P	**Pb**	**14 15 19.2**	**-0.4**
	baz=351						
F05D				S	**Sb**	**14 15 29.5**	**+0.3**
	baz=351						
D05A	**Enumclaw**	**0.70**	**340**		**Pg**	**14 15 19.4**	**+0.3**
D05A	**Enumclaw**	**0.70**	**340**	P	**Pg**	**14 15 19.5**	**+0.3**
LVP	**Lakeview Peak**	**0.71**	**230**		**Pg**	**14 15 19.5**	**+0.3**
TRW	**Toppenish Ridg**	**0.79**	**107**		**Pb**	**14 15 21.5**	**-0.5**
F04A	**Amboy**	**0.81**	**223**		**Pg**	**14 15 21.3**	**+0.2**
EBG	**Ellensburg**	**0.83**	**62**		**Pg**	**14 15 21.9**	**+0.5**
RVW	**Rose Valley**	**0.86**	**244**		**Pg**	**14 15 22.1**	**0.0**
RATT	**Rattlesnake La**	**0.91**	**353**		**Pg**	**14 15 22.8**	**-0.2**
TBM	**Table Mountain**	**0.96**	**47**		**Pg**	**14 15 24.4**	**+0.4**
LTY	**Liberty**	**0.98**	**42**		**Pg**	**14 15 24.2**	**-0.3**
LTY				IAML		14 15 37.9	
	comp=E,167nm,0.3s						
LTY	**Liberty**	**0.98**	**42**	P	**Pg**	**14 15 23.4**	**-1.1**
D04E	**Lakebay**	**1.02**	**310**	P	**Pg**	**14 15 25.4**	**+0.2**
	baz=129,SNR=11						
D04E				S	**Sb**	**14 15 40.6**	**+1.0**
	baz=129						
F04D	**Rainier, OR**	**1.05**	**246**	P	**Pg**	**14 15 25.7**	**-0.1**
	baz=64,SNR=10.0						
F04D				S	**Sb**	**14 15 41.2**	**+0.5**
	baz=64						
F04D	**Rainier, OR**	**1.05**	**246**		**Pg**	**14 15 25.9**	**+0.1**
HIYU	**Hiyu Mountain**	**1.10**	**186**		**Pb**	**14 15 27.2**	**-0.1**
CPW	**Capitol Peak**	**1.13**	**294**	P	**Pg**	**14 15 26.6**	**-0.6**
CPW				S	**Sb**	**14 15 42.9**	**0.0**
C05A	**Tolt Reservoir**	**1.17**	**358**		**Pg**	**14 15 27.2**	**-0.8**
C05A	**Tolt Reservoir**	**1.17**	**358**	P	**Pg**	**14 15 26.9**	**-1.1**
BLTW	**Bickleton**	**1.18**	**121**		**Pn**	**14 15 28.7**	**-0.3**
HOOD	**Mount Hood Mea**	**1.21**	**181**		**Pn**	**14 15 29.1**	**-0.4**
HOOD				IAML		14 15 49.6	
	comp=N,84nm,1.1s						
HOOD				IAML		14 16 00.2	
	comp=E,84nm,1.2s						
E07A	**Sunnyside**	**1.23**	**88**		**Pg**	**14 15 29.0**	**-0.1**
E07A				IAML		14 15 47.9	
	comp=E,97nm,0.6s						
E07A				IAML		14 15 49.2	
	comp=N,96nm,0.5s						
BVW	**Beverly**	**1.24**	**76**		**Pg**	**14 15 29.4**	**0.0**
TDH	**Tom, Dick, Har**	**1.24**	**185**		**Pb**	**14 15 29.4**	**-0.4**
HTW	**Haystack Looko**	**1.28**	**356**		**Pg**	**14 15 29.1**	**-1.0**
MDW	**Midway**	**1.29**	**86**		**Pg**	**14 15 30.0**	**-0.4**
GNW	**Green Mountain**	**1.32**	**322**		**Pn**	**14 15 29.5**	**-1.4**
GNW	**Green Mountain**	**1.32**	**322**	P	**Pn**	**14 15 29.2**	**-1.7**
BENWA	**Benson Ranch**	**1.32**	**90**		**Pg**	**14 15 30.4**	**-0.5**
E03A	**Lebam**	**1.33**	**271**	Pn	**Pn**	**14 15 30.3**	**-0.8**
E03A				IAML		14 15 52.6	
	comp=N,128nm,1.9s						
E03A				IAML		14 15 57.7	
	comp=E,125nm,0.6s						
E03A	**Lebam**	**1.33**	**271**	P	**Pn**	**14 15 29.5**	**-1.6**
F07A	**Phinny Hill Vi**	**1.34**	**118**		**Pb**	**14 15 31.5**	**+0.2**
F07A				IAML		14 15 54.2	
	comp=E,88nm,0.6s						
GBB	**Gable Butte**	**1.39**	**86**		**Pb**	**14 15 31.9**	**-0.2**
ETW	**Entiat**	**1.40**	**39**		**Pn**	**14 15 31.2**	**-0.9**
D03D	**Eldon**	**1.42**	**316**	P	**Pn**	**14 15 31.3**	**-1.0**
	baz=134,SNR=5.7						
D03D				S	**Sb**	**14 15 50.6**	**-0.6**
	baz=134						
RSW	**Rattlesnake Hi**	**1.42**	**95**		**Pn**	**14 15 30.7**	**-1.6**
WRW	**Wenatchee Ridg**	**1.43**	**21**		**Pg**	**14 15 33.7**	**+0.8**
WAH2	**Wahluke Slope**	**1.44**	**80**		**Pb**	**14 15 32.8**	**-0.3**
HAWA	**Hanford**	**1.46**	**95**		**Pn**	**14 15 32.5**	**-0.3**
C06D	**Leavenworth**	**1.48**	**20**	S	**Sn**	**14 15 51.7**	**-1.4**
	baz=200						
HDW	**Hoodsport**	**1.48**	**320**	P	**Pn**	**14 15 31.7**	**-1.6**
HDW				S	**Sn**	**14 15 51.8**	**-1.4**
GBL	**Gable Mountain**	**1.50**	**87**		**Pn**	**14 15 33.5**	**+0.1**
FHE	**Frenchman Hill**	**1.53**	**73**		**Pb**	**14 15 34.4**	**-0.2**
LOCW	**Locke Island**	**1.53**	**82**		**Pb**	**14 15 34.2**	**-0.3**
H2OWA	**Water**	**1.53**	**94**		**Pn**	**14 15 33.8**	**-0.1**
REDWA	**Red Mountain**	**1.54**	**98**		**Pn**	**14 15 34.0**	**+0.1**
VTHM	**Trough**	**1.54**	**151**		**Pg**	**14 15 35.2**	**0.0**
B013	**Quilcene**	**1.55**	**326**		**Pn**	**14 15 33.6**	**-0.5**
MJ2	**May Junction 2**	**1.57**	**88**		**Pb**	**14 15 34.8**	**-0.5**
KMOR	**Kings Mountain**	**1.57**	**236**		**Pn**	**14 15 34.2**	**-0.2**
CRF	**Corfu**	**1.57**	**78**		**Pb**	**14 15 35.1**	**-0.2**
WISH	**Wishkah**	**1.58**	**293**	Pn	**Pn**	**14 15 34.7**	**+0.2**
CROR	**Criterion Ridg**	**1.61**	**164**		**Pg**	**14 15 36.1**	**-0.3**
EPH	**Ephrata**	**1.62**	**59**		**Pn**	**14 15 35.4**	**+0.2**
GPW	**Glacier Peak**	**1.63**	**12**		**Pn**	**14 15 36.0**	**+0.7**
GPW	**Glacier Peak**	**1.63**	**12**	P	**Pn**	**14 15 35.7**	**+0.3**
WTV	**Waterville**	**1.64**	**44**		**Pn**	**14 15 35.9**	**+0.5**
OT3	**Othello 3**	**1.66**	**84**		**Pn**	**14 15 36.0**	**+0.4**
JCW	**Jim Creek**	**1.68**	**353**		**Pn**	**14 15 36.1**	**+0.2**
JCW	**Jim Creek**	**1.68**	**353**	P	**Pn**	**14 15 35.9**	**0.0**
JCW				S	**Sn**	**14 15 57.2**	**-0.8**
G03D	**McMinnville, O**	**1.74**	**221**	P	**Pn**	**14 15 37.1**	**+0.4**
	baz=40,SNR=18						
G03D				S	**Sg**	**14 16 00.8**	**-0.7**
	baz=40						
B05A	**Bryant**	**1.77**	**350**	Pb	**Pn**	**14 15 37.6**	**+0.6**
	baz=169,SNR=9.2						
B05A				S	**Sn**	**14 16 00.5**	**+0.5**
	baz=169						
E08A	**Dider Farm, El**	**1.78**	**90**		**Pn**	**14 15 37.6**	**+0.4**
E08A				IAML		14 16 03.5	
	comp=E,44nm,0.3s						
E08A				IAML		14 16 03.8	
	comp=N,38nm,0.9s						
NLW	**Nelson Butte**	**1.78**	**29**		**Pn**	**14 15 38.3**	**+0.9**
OSD	**Olympics--Snow**	**1.92**	**313**	P	**Pn**	**14 15 39.3**	**-0.1**
RPW	**Rockport**	**1.92**	**2**		**Pb**	**14 15 40.8**	**-0.6**
RPW	**Rockport**	**1.92**	**2**	P	**Pn**	**14 15 39.3**	**0.0**
RPW				S	**Sn**	**14 16 04.3**	**+0.3**
CMW	**Cultus Mountai**	**1.93**	**350**	P	**Pn**	**14 15 40.4**	**+1.1**
CMW				S	**Sb**	**14 16 05.8**	**-0.1**
D08A	**Wollman Farm,**	**1.94**	**73**		**Pb**	**14 15 40.5**	**-1.1**
D08A				IAML		14 16 09.7	
	comp=E,46nm,0.6s						
HEBO	**Mount Hebo**	**1.98**	**229**	Pn	**Pn**	**14 15 41.1**	**+1.0**
VIPM	**Ingram Point**	**2.14**	**160**		**Pn**	**14 15 43.3**	**+0.9**
H04D	**Lebanon**	**2.15**	**202**	Pb	**Pb**	**14 15 44.4**	**-0.8**
	baz=21,SNR=15						
H04D				Sb	**Sg**	**14 16 13.5**	**-1.1**
	baz=21						
VGZ	**Gonzales**	**2.21**	**329**	P	**Pn**	**14 15 43.7**	**+0.6**
VGZ				S	**Sn**	**14 16 12.2**	**+1.3**
G08A	**Pilot Rock**	**2.24**	**123**		**Pb**	**14 15 45.0**	**-1.7**
G08A				IAML		14 16 14.6	
	comp=E,24nm,3.8s						
MBW	**Mount Baker**	**2.27**	**356**	P	**Pb**	**14 15 45.9**	**-1.3**
MBW				S	**Sb**	**14 16 15.5**	**-0.2**
MCW	**Mount Constitu**	**2.30**	**340**	P	**Pn**	**14 15 46.1**	**+1.6**
MCW				S	**Sb**	**14 16 15.5**	**-1.1**
BROR	**Big Rock Looko**	**2.33**	**195**		**Pb**	**14 15 47.5**	**-0.8**
B08A	**Colville Reser**	**2.41**	**40**		**Pn**	**14 15 46.2**	**+0.3**
B08A				IAML		14 16 22.4	
	comp=E,21nm,0.6s						
B08A				IAML		14 16 23.3	
	comp=N,20nm,0.9s						
B08A	**Colville Reser**	**2.41**	**40**	P	**Pn**	**14 15 46.0**	**+0.1**
B011	**North Saanich**	**2.45**	**331**	P	**Pn**	**14 15 47.0**	**+0.5**
B009	**North Saanich**	**2.45**	**331**	P	**Pn**	**14 15 46.9**	**+0.4**
B009				S	**Sb**	**14 16 19.4**	**-1.6**
B010	**North Saanich**	**2.46**	**331**	P	**Pn**	**14 15 47.6**	**+1.1**
B010				S	**Sn**	**14 16 19.0**	**+2.0**
PGC	**Sidney**	**2.46**	**331**	P	**Pn**	**14 15 47.4**	**+0.9**

PGC				S	Sn	14 16 19.0	+2.0
SNB	Saturna Island	2.48	336	P	Pn	14 15 48.9	+2.0
SNB				S	Sb	14 16 20.1	-1.6
A05A	Maple Falls	2.49	353	P	Pn	14 15 48.9	+1.9
VDB	Vedder Mountai	2.52	353	P	Pn	14 15 49.2	+1.7
VDB				S	Sn	14 16 19.6	+0.9
C09A	Chrisman Ranch	2.62	60	P	Pn	14 15 48.9	+0.1
GOBB	Galiano Island	2.73	333	P	Pn	14 15 52.0	+1.7
GOBB				S	Sn	14 16 26.3	+2.4
I04A	Tendick Farm,	2.79	192	Pb	Pb	14 15 55.0	-1.1
	baz=11,SNR=6.8						
I04A				Sb	Sb	14 16 32.5	+1.9
	baz=11						
I07A	Izee	2.87	148	Pn	Pn	14 15 53.4	+1.0
I03D	Drain, OR	3.08	204	Pb	Pb	14 15 58.8	-2.2
	baz=23,SNR=11						
I03D				Sb	Sb	14 16 38.7	-0.2
	baz=23						
PNT	Penticton	3.10	25	P	Pb	14 15 59.9	-1.5
PNT				Sg	Sb	14 16 40.0	+0.3
NLLB	Nanaimo Lost L	3.13	330	S	Sb	14 16 38.3	-2.2
SHB	Sechelt	3.42	335	S	Sn	14 16 44.0	+3.0
NEW	Newport	3.52	59	Pn	Pn	14 16 00.8	-0.4
NEW				IAML		14 17 02.5	
	comp=N,11nm,3.7s						
NEW				IAML		14 18 12.0	
	comp=N,12nm,4.2s						
LLLB	Lillooet	4.09	358	P	Pn	14 16 11.7	+2.7

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*IDC **18** 14:18:25.0±1.4, 23.°78S×66.°51W, h195^{km}±16^{km}, mb3.6/1, mb1 3.4/6, mb1mx3.2/34, mbtmp3.9/6, MS3.1/2, Ms1 3.1/2, ms1mx2.6/25, Error ellipse: s-maj=29.4km s-min=18.1km az=174.0*

*GUC **18** 14:18:27.5±0.5, 23.°72S×67.°11W, h251^{km}±7^{km}, ML4.2*

ISC 18 14:18:25.3±0.8**, 23.°85S**±0.°05×**66.°77W**±0.°06**, h216**^{km}±8^{km}**, n24,** σ1ˢ**62**/36**, 8C, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLA	San Lorenzo	1.44	127	*e*P	Pn	14 19 00.5	+0.4
SLA				*i* S	S	14 19 26.2	-0.9
LVC	Limon Verde	2.33	302	P	Pn	14 19 10.0	+1.3
	32nm,0.3s,baz=128,slow=7.0,SNR=514						
LVC				S	S	14 19 43.1	+0.8
	29nm,0.3s,baz=208,slow=23,SNR=32						
LVC	Limon Verde	2.33	302	⇑*i*P	Pn	14 19 09.9	+1.3
LVC				*i* S	S	14 19 42.4	+0.2
PB15	IPOC Station P	2.56	284	⇑*i*P	Pn	14 19 12.3	+1.2
PB15				*i* S	S	14 19 46.9	+0.4
PB06	IPOC Station P	2.82	293	⇑*i*P	Pn	14 19 15.1	+1.2
PB06				*i* S	S	14 19 50.9	-0.7
PB06				IAML		14 19 54.9	
	comp=E,479nm,0.3s						
PB09	IPOC Station P	3.06	311	⇑*i*P	Pn	14 19 18.2	+1.5
PB09				*i* S	S	14 19 56.7	+0.1
PB09				IAML		14 20 01.2	
	comp=N,211nm,0.2s						
PB04	IPOC Station P	3.46	295	⇑*i*P	Pn	14 19 22.1	+0.8
PB04				*i* S	S	14 20 03.5	-1.4
PB10	IPOC Station P	3.49	275	⇑*i*P	Pn	14 19 22.4	+0.9
PB10				*i* S	S	14 20 03.2	-2.0
PB10				IAML		14 20 12.1	
	comp=N,87nm,0.4s						
PB07	IPOC Station P	3.57	306	⇑*i*P	Pn	14 19 23.3	+0.6
PB07				*i* S	S	14 20 05.5	-1.8
PB01	IPOC Station P	3.76	317	*e*P	Pn	14 19 25.5	+0.6
PB01				*i* S	S	14 20 09.0	-2.4
PB02	IPOC Station P	3.83	310	⇑*e*P	Pn	14 19 26.1	+0.3
PB02				*i* S	S	14 20 10.6	-2.4
PB08	IPOC Station P	4.30	329	*e*P	Pn	14 19 33.3	+1.5
PB08				*i* S	S	14 20 23.9	0.0
PATCX	Punta Patache	4.35	313	*e*P	Pn	14 19 31.9	-0.2
PATCX				*i* S	S	14 20 21.5	-2.9
TA01	Diego Aracena	4.55	315	*e*P	Pn	14 19 35.3	+0.9
TA01				*e*S	S	14 20 25.6	-3.2
GO03	Copiap	4.86	219	*i* Pg	Pn	14 19 37.9	-0.5
GO03				*e*S	S	14 20 32.7	-3.3
CPUP	Villa Florida	8.90	108	P	Pn	14 20 26.9	-3.3
	comp=N,0.1nm,0.3s,baz=296,slow=14,SNR=3.2						
SIV	San Ignacio	9.48	35	P	Pn	14 20 35.3	-2.4
	comp=N,0.8nm,0.3s,baz=208,slow=13,SNR=3.7						
PLCA	Paso Flores	17.13	190	P	P	14 22 12.9	+2.4
	comp=N,0.1nm,0.3s,baz=311,slow=20,SNR=1.7						
BDFB	Brasilia	19.43	69	P	P	14 22 34.1	-1.7
	comp=N,0.5nm,0.3s,baz=230,slow=14,SNR=6.3						
ATAH	Atahualpa	20.02	324	LR	LR	14 31 34.1	
	comp=N,68nm,19.7s,baz=68,slow=39						
PTGA	Pitinga	23.91	17	LR	LR	14 32 09.2	
	comp=N,35nm,18.0s,baz=72,slow=35						
TORD	Torodi Ar. Bea	76.32	69	P	P	14 29 51.6	+0.7
	comp=N,0.9nm,0.6s,baz=259,slow=5.4,SNR=12						
ASAR	Alice Springs	128.68	204	PKP	PKiKP	14 37 09.5	+1.3
	comp=N,0.3nm,0.7s,baz=168,slow=2.1,SNR=4.2						
WRA	Warramunga Arr	131.85	207	PKP	PKiKP	14 37 15.6	+1.0
	comp=N,0.2nm,0.5s,baz=153,slow=2.0,SNR=5.8						

IDC 18 14:31:56.8±4.6**, 17.°71S**×**174.°60W, h256**^{km}±28^{km}**, mb3.2**/3**, mb1 3.5**/5**, mb1mx3.0**/40**, mbtmp3.9**/5**, Error ellipse: s-maj=126.0km s-min=20.6km az=147.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	4.65	36	P	Pn	14 33 08.1	-0.6
	9.6nm,0.3s,baz=195,slow=2.0,SNR=16						
AFI				S	S	14 33 59.4	-6.7
	20nm,0.3s,baz=27,slow=22,SNR=11						
MSVF	Nonsavu	7.01	269	P	Pn	14 33 39.1	+1.3
	0.6nm,0.3s,baz=30,slow=22,SNR=6.1						
WRA	Warramunga Arr	48.24	259	P	P	14 40 11.4	-1.0
	0.4nm,0.4s,baz=96,slow=7.0,SNR=27						
ASAR	Alice Springs	48.34	254	P	P	14 40 13.2	+0.1
	1.7nm,0.5s,baz=88,slow=9.2,SNR=68						
ASAR				PcP	PcP	14 41 36.6	+0.9
	0.2nm,0.4s,baz=103,slow=3.9,SNR=2.1						
ILAR	Eielson Array	84.92	12	P	P	14 44 02.9	+0.3
	0.3nm,0.6s,baz=219,slow=6.3,SNR=7.7						

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*TUL **18** 14:33:38.7±0.7, 36.°120N±0.°008×97.°64W±0.°02, h6^{km}±7^{km}, ML2.8, mb_Lg2.6/29(NEIC), Error ellipse: s-maj=2.6km s-min=1.1km az=83.0*

NEIC 18 14:33:38.7±0.8**, 36.°122N**±0.°006×**97.°62W**±0.°02**, h7**^{km}±7^{km}**, Error ellipse: s-maj=2.7km s-min=0.4km az=73.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK029	Liberty Lake	0.35	157	Pg	Pg	14 33 45.9	+0.4
OK029				Sg	Sg	14 33 51.2	+1.0
BCOK	Bluff Creek, N	0.47	179	Pg	Pg	14 33 47.9	+0.2
BCOK				Sg	Sg	14 33 54.6	+0.8
CROK	Carrier	0.48	323	Pg	Pg	14 33 48.1	+0.1
CROK				Sg	Sg	14 33 55.1	+0.8
OK030	Cody Creek RV	0.71	106		Pg	14 33 52.6	+0.3
OK030				Sg	Sg	14 34 01.8	+0.3
BLOK	Blackwell	0.72	27	Pg	Pg	14 33 52.6	+0.2
BLOK				Sg	Sg	14 34 02.4	+0.6
QUOK	Quay	0.74	86		Pg	14 33 53.1	+0.2
GC02	Grant County #	0.75	345		Pg	14 33 53.0	-0.2
GC02				Sg	Sg	14 34 03.0	0.0
OK032	Salt Plains WL	0.83	325		Pg	14 33 54.4	-0.2
KAN14	Manchester OK	0.88	342		Pg	14 33 55.2	-0.4
FNO	Franklin	0.88	168		Pg	14 33 55.3	-0.3
KAN09	Caldwell North	1.01	0		Pg	14 33 58.1	0.0
KAN01	Argonia South	1.03	354		Pg	14 33 58.4	-0.2
KS20	Mayfield South	1.11	3	Pg	Pg	14 33 59.6	-0.4
KAN08	Anthony NE Sta	1.14	346		Pg	14 34 00.1	-0.5
KAN06	Argonia West S	1.14	350		Pg	14 34 00.1	-0.5
U32A	Winter Ranch,	1.14	283		Pg	14 33 60.0	-0.7
T35A	Sooner Cattle	1.20	48	Pg	Pg	14 34 01.4	-0.2
TUL1	Leonard	1.50	98	IAmb_Lg		14 34 29.3	
	comp=Z,30nm,0.8s						
WMOK	Wichita Mounta	1.67	215	Pn	Pn	14 34 08.3	-0.3
LOOK	Love County	2.15	170	IAmb_Lg		14 34 48.3	
	comp=Z,17nm,0.9s						
X37A	Clayton	2.39	129	IAmb_Lg		14 34 57.2	
	comp=Z,32nm,0.7s						
KSU1	Kansas State U	3.08	15	IAmb_Lg		14 35 16.0	
	comp=Z,14nm,1.0s						
CBKS	Cedar Bluff	3.17	329	IAmb_Lg		14 35 19.3	
	comp=Z,12nm,0.8s						
W39A	Magazine	3.26	105	IAmb_Lg		14 35 27.5	
	comp=Z,21nm,0.8s						
AMTX	Amarillo	3.53	251	IAmb_Lg		14 35 38.8	
	comp=Z,13nm,1.0s						
MIAR	Mount Ida	3.66	114	IAmb_Lg		14 35 41.7	
	comp=Z,18nm,1.0s						
S39A	Bolivar	3.79	64	IAmb_Lg		14 35 39.7	
	comp=Z,13nm,0.7s						
U40A	Yellville	3.86	85	IAmb_Lg		14 35 42.9	
	comp=Z,25nm,0.8s						
X40A	Basin Creek Fa	4.24	111	IAmb_Lg		14 35 58.3	
	comp=Z,17nm,0.8s						
KSCO	Kaye Shedlock'	4.91	307	IAmb_Lg		14 36 25.8	
	comp=Z,8.7nm,0.7s						
T25A	Trinidad	5.55	283	IAmb_Lg		14 36 45.0	
	comp=Z,6.8nm,0.8s						
JCT	Junction City	5.92	199	IAmb_Lg		14 36 49.8	
	comp=Z,14nm,1.1s						
L34A	Svendsen Farm,	5.92	9	IAmb_Lg		14 37 02.0	
	comp=Z,15nm,0.8s						

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*IDC **18** 14:37:33.5±2.9, 28.°96N×142.°67E, h0^{km}, mb3.5/4, mb1 3.6/5, mb1mx3.3/54, mbtmp3.5/5, ML2.9/1, MS2.8/2, Ms1 2.9/2, ms1mx2.3/31, Error ellipse: s-maj=101.6km s-min=19.1km az=80.0*

ISC 18 14:37:37.0±2.6**, 29.°00N**±0.°09×**142.°7E**±0.°6**, h27**^{km}**, n8,** σ**0ˢ84**/7**, mb3.6**/4**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	1.95	194	Pn	Pn	14 38 08.5	+0.1
	4.4nm,0.3s,baz=334,slow=22,SNR=14						
JCJ				Sn	Sn	14 38 31.9	-0.1
	28nm,0.3s,baz=292,slow=23,SNR=7.8						
MJAR	Matsushiro Arr	8.42	334	Pn	Pn	14 39 36.5	-0.7
	0.1nm,0.3s,baz=166,slow=12,SNR=7.5						
KSRS	Korea Array	14.96	308	LR	LR	14 46 32.1	
	comp=Z,30nm,18.3s,baz=132,slow=36						
CMAR	Chiang Mai Arr	41.21	265	LR	LR	15 03 36.1	
	comp=Z,12nm,18.8s,baz=120,slow=38						
ZALV	Zalesovo Beam	48.37	318	P	P	14 46 17.6	+1.3
	0.3nm,0.4s,baz=99,slow=7.8,SNR=2.0						
WRA	Warramunga Arr	49.32	190	P	P	14 46 24.2	+0.3
	0.4nm,0.3s,baz=7.7,slow=7.8,SNR=21						
MKAR	Makanchi Array	49.64	308	P	P	14 46 26.4	+0.2
	0.3nm,0.6s,baz=83,slow=7.6,SNR=2.3						
ASAR	Alice Springs	53.04	190	P	P	14 46 51.1	-0.7
	0.2nm,0.8s,baz=10,slow=6.6,SNR=6.0						

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*IDC **18** 14:50:18.5±4.6, 18.°08S×174.°46W, h222^{km}±32^{km}, mb3.1/5, mb1 3.4/7, mb1mx3.2/32, mbtmp3.7/7, Error ellipse: s-maj=104.4km s-min=17.9km az=147.0*

ISC 18 14:50:16.2±1.4**, 18.°2S**±0.°2×**174.°3W**±0.°2**, h200**^{km}**, n7,** σ**2ˢ10**/9**, mb3.1**/5**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	4.85	30	P	Pn	14 51 31.3	+2.4
	1.9nm,0.3s,baz=40,slow=22,SNR=2.3						
AFI				S	Sn	14 52 22.7	-3.3
	5.5nm,0.3s,baz=202,slow=18,SNR=8.3						
MSVF	Nonsavu	7.32	272	P	Pn	14 52 01.9	+1.2
	0.3nm,0.3s,baz=154,slow=22,SNR=2.1						
STKA	Stephens Creek	41.98	242	P	P	14 57 48.0	+0.1
	1.4nm,0.7s,baz=66,slow=10,SNR=3.2						
WRA	Warramunga Arr	48.45	259	P	P	14 58 36.9	-2.0
	0.3nm,0.3s,baz=97,slow=6.8,SNR=15						
ASAR	Alice Springs	48.51	254	P	P	14 58 38.1	-1.2
	2.7nm,0.7s,baz=90,slow=8.3,SNR=38						
ASAR				PcP	PcP	15 00 00.9	-1.3
	0.3nm,0.9s,baz=104,slow=3.9,SNR=1.8						
NVAR	Mina Array Bea	76.92	42	P	P	15 01 47.4	+0.6
	0.1nm,0.4s,baz=218,slow=4.2,SNR=2.1						
ILAR	Eielson Array	85.29	11	P	P	15 02 30.4	+0.4
	0.1nm,0.5s,baz=222,slow=5.5,SNR=4.3						

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*IDC **18** 14:55:38.5±0.7, 37.°81N×29.°36E, h0^{km}, mb4.1/19, mb1 4.2/24, mb1mx4.0/46, mbtmp4.1/24, ML4.3/5, MS3.1/11, Ms1 3.1/11, ms1mx2.8/49, Error ellipse: s-maj=16.6km s-min=13.0km az=157.0*

*ISK **18** 14:55:39.4, 37.°82N×29.°31E, h8^{km}, ML4.3/69*

*DDA **18** 14:55:40.0, 37.°80N×29.°32E, h15^{km}±1^{km}, MW4.1*

*NEIC **18** 14:55:41.1±2.4, 37.°77N±0.°04×29.°38E±0.°06, h8^{km}±5^{km}, Error ellipse: s-maj=6.6km s-min=6.3km az=142.0*

*THE **18** 14:55:42.2, 37.°84N×29.°18E, h0^{km}±1^{km}, ML4.1/2, Error ellipse: s-maj=3.5km s-min=1.2km az=75.0*

*CFUSG **18** 14:55:47.1, 38.°10N×29.°90E, h10^{km}, mb3.1/3, MD3.5/2, Southwest Turkey Magtype MSH 3.4 from 2 stations*

ISC 18 14:55:41.1±0.9**, 37.°81N**±0.°02×**29.°32E**±0.°02**, h15**^{km}±6^{km}**, n229,** σ1ˢ**15**/266**, mb4.1**/20**, MS3.0**/8**, 35C-11D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAVA	DENIZLI_Tavas	0.48	223	⇑*i*P	Pg	14 55 49.5	-1.1
TAVA				IAML		14 55 57.0	
	comp=E,10μm,0.5s						
TAVA				*i* S	Sg	14 55 57.1	+0.1
TAVA				IAML		14 55 58.0	
	comp=N,17μm,0.4s						
KHL	Karahalli	0.53	17	PG	Pg	14 55 51.4	-0.3
PASA	Karahalli, USA	0.55	14	⇑*i*P	Pg	14 55 50.2	-1.7
PASA				*i* S	Sg	14 55 59.7	+0.4
BASM	Basmaki-Afyon	0.58	79	PG	Pg	14 55 51.2	-1.4
BASM				SG	Sg	14 55 59.7	-0.7
BRDR	BURDUR-Merkez	0.60	101	⇓*i*P	Pg	14 55 51.5	-1.3
BRDR				*i* S	Sb	14 56 01.2	-0.3
BRDR				IAML		14 56 04.0	
	comp=N,9μm,0.5s						
BRDR				IAML		14 56 07.0	
	comp=E,10μm,0.4s						
CAEL	Denizli, Camel	0.69	180	⇑*i*P	Pg	14 55 53.1	-1.5
CAEL				*i* S	Sg	14 56 03.8	+0.1
CAEL				IAML		14 56 10.0	
	comp=E,13μm,0.5s						
CAEL				IAML		14 56 12.0	
	comp=N,13μm,0.6s						
KZIL	AFYON_Kizioren	0.78	55	⇑*i*P	Pg	14 55 55.0	-1.3
KZIL				*i* S	Sn	14 56 08.6	-0.5
KZIL				IAML		14 56 18.0	
	comp=N,7μm,0.7s						
KZIL				IAML		14 56 18.0	
	comp=E,7μm,0.5s						
CAME	Cameli-Denizli	0.87	181	PG	Pb	14 55 56.0	-1.9
CAME				SG	Sb	14 56 09.3	-0.1
KULA	Kula-Manisa	0.87	323	P	Pb	14 55 57.0	-1.0
KULA				S	Sg	14 56 10.4	+0.9
KULA	Kula-Manisa	0.87	323	PG	Pb	14 55 56.9	-1.0
MANT	Manisa	0.91	318	⇑*i*P	Pb	14 55 57.7	-0.9
MANT				*i* S	Sg	14 56 10.8	+0.1
MANT				IAML		14 56 15.0	
	comp=N,6μm,0.3s						
MANT				IAML		14 56 15.0	
	comp=E,7μm,0.4s						
USAK	Uak-Merkez	0.93	345	⇑*i*P	Pb	14 55 58.0	-1.0
USAK				*i* S	Sn	14 56 13.1	+0.4
USAK				IAML		14 56 16.0	
	comp=N,4μm,0.6s						
USAK				IAML		14 56 16.0	
	comp=E,9μm,0.4s						
ISP	Isparta	0.95	89	PG	Pb	14 55 57.9	-1.4
ISP				SG	Sg	14 56 11.9	0.0
ISP	Isparta	0.95	89	Pg	Pb	14 55 57.8	-1.4
MULA	Mugla, Merkez-	0.97	235	⇑*i*P	Pb	14 55 58.6	-1.0
MULA				*i* S	Sg	14 56 12.7	+0.1
MULA				IAML		14 56 17.0	
	comp=E,5μm,0.4s						
BCK	Bucak	1.06	109	PG	Pb	14 56 00.6	-0.6
BCK				SG	Sn	14 56 15.9	-0.1
YER	Yerkesik	1.07	231	P	Pb	14 56 00.6	-0.7
YER				S	Sn	14 56 16.5	+0.4
YER	Yerkesik	1.07	231	PG	Pb	14 56 00.6	-0.7
BUCA	Burdur, Bucak-	1.09	116	*i* P	Pb	14 56 00.8	-0.9
BUCA				*i* S	Sn	14 56 18.3	+1.5
DALY	Dalyan (Mula)	1.13	208	⇑*i*P	Pb	14 56 01.2	-1.0
DALY				*i* S	Sg	14 56 18.3	+0.7
DALY				IAML		14 56 22.0	
	comp=N,6μm,0.9s						
DALY				IAML		14 56 24.0	
	comp=E,6μm,0.9s						
DALY	Dalyan (Mula)	1.13	208	PN	Pb	14 56 01.2	-1.0
AYDB	Zeytinkoy-Aydi	1.14	277	PN	Pb	14 56 01.6	-0.9
KORT	Korkueli	1.15	134	*i* P	Pb	14 56 02.1	-0.6
KORT				*i* S	Sg	14 56 19.8	+1.4
KORT	Korkueli	1.15	134	PN	Pb	14 56 02.2	-0.6
AYDN	Tasoluk	1.16	263	⇑*i*P	Pn	14 56 02.5	-0.2
AYDN				*i* S	Sb	14 56 17.7	+0.1
ELL	Elmali	1.16	156	PN	Pn	14 56 01.2	-1.7
ELL	Elmali	1.16	156		Pn	14 56 01.1	-1.7
BAGO	Egridir - ISPA	1.17	81	⇑*i*P	Pn	14 56 01.6	-1.4
BAGO				*i* S	Sg	14 56 20.6	+1.5
FETY	Fethiye	1.19	189	P	Pn	14 56 03.0	-0.2
FETY				S	Sg	14 56 21.8	+2.2
FETY	Fethiye	1.19	189	⇑*i*P	Pn	14 56 02.3	-0.9
FETY				*i* S	Sg	14 56 21.5	+2.0
FETY				IAML		14 56 24.0	
	comp=E,4μm,0.6s						
FETY	Fethiye	1.19	189	PN	Pn	14 56 01.9	-1.3
SHAP	Saphane-Kutahy	1.21	356	PN	Pn	14 56 02.9	-0.6
SHUT	Suhut-Afyon	1.22	52	PN	Pn	14 56 02.8	-0.8
GEDZ	Gediz	1.23	3	PN	Pn	14 56 03.4	-0.4
AFYO	Afyonkarahisar	1.24	38	⇑*i*P	Pn	14 56 03.0	-1.0
AFYO				*i* S	Sg	14 56 24.0	+2.8
AFYO				IAML		14 56 33.0	
	comp=N,8μm,1.0s						
AFYO				IAML		14 56 37.0	
	comp=E,6μm,1.1s						
GDZ	Gediz	1.28	5	⇑*i*P	Pn	14 56 03.8	-0.7
GDZ				*i* S	Sg	14 56 24.0	+1.5
SIMA	Simav-Kutahya	1.30	348	PN	Pn	14 56 04.5	-0.2
SMAA	Simav-Kutahya	1.31	348	PN	Pn	14 56 04.5	-0.4
DEMI	Demirci	1.32	339	⇓*i*P	Pn	14 56 04.8	-0.2
DEMI				*i* S	Sg	14 56 23.5	-0.2
MLSB	Milas	1.33	248	PN	Pn	14 56 05.4	+0.3
TURN	Turunc	1.35	220	PN	Pn	14 56 05.1	-0.2
ANTB	Antalya	1.40	130	PN	Pb	14 56 07.2	+0.4
YVAC	Isparta, Yalva	1.58	73	⇓*i*P	Pn	14 56 08.9	+0.3
YVAC				*i* S	Sg	14 56 33.9	+1.8
AKAS	Kas	1.59	172	*i* P	Pb	14 56 10.1	-0.1
AKAS				*i* S	Sg	14 56 35.6	+3.2
AKAS	Kas	1.59	172	PN	Pn	14 56 09.3	+0.5
AKHS	Akhisar	1.59	312	⇓*i*P	Pn	14 56 08.4	-0.3
AKHS				*i* S	Sg	14 56 35.1	+2.7
AKS	Akhisar	1.59	312	PN	Pn	14 56 08.2	-0.5
TVSB	Tavsanli	1.64	4	PN	Pn	14 56 09.3	-0.1
GCAM	G?zelcaml?	1.66	267	*i* P	Pn	14 56 09.5	-0.1
GCAM				*i* S	Sg	14 56 38.0	+3.4
GCAM	G?zelcaml?	1.66	267	PN	Pn	14 56 08.7	-0.9
BDRM	Kayabasi	1.67	244	*i* P	Pn	14 56 10.2	+0.5
BDRM				*i* S	Sg	14 56 36.2	+1.3
KSL	Kastellorizon	1.67	173	P	Pb	14 56 12.2	+0.7
KSL				S	Sg	14 56 36.5	+1.6
	comp=E,3μm,0.5s						
DDIM	Aydin, Didim	1.69	258	*i* P	Pn	14 56 10.3	+0.3
DDIM				*i* S	Sg	14 56 37.8	+2.3
AKUM	Antalya-Kumluc	1.70	151	*i* P	Pb	14 56 12.6	+0.7
AKUM				*i* S	Sg	14 56 39.1	+3.4
AUKIR	Kırka- Seyitga	1.74	33	*i* P	Pb	14 56 12.0	-0.7
AUKIR				*i* S	Sg	14 56 40.1	+3.0
ANDZ	Kutahya, Merke	1.75	15	⇓*i*P	Pn	14 56 10.9	-0.1
ANDZ				*i* S	Sg	14 56 37.2	-0.3
DAT	Datca	1.76	233	P	Pn	14 56 11.9	+0.8
DAT	Datca	1.76	233	*i* P	Pn	14 56 12.1	+1.0
DAT				*i* S	Sg	14 56 37.1	-0.8
DAT	Datca	1.76	233	PN	Pn	14 56 11.8	+0.7
BODT	Bodrum	1.77	246	P	Pn	14 56 11.8	+0.6
BODT	Bodrum	1.77	246	PN	Pn	14 56 11.7	+0.6
ARG	Arkhangelos	1.86	211	P	Pb	14 56 14.6	-0.1
ARG				S	Sb	14 56 38.3	+0.5
	comp=E,5μm,0.5s						
ARG	Arkhangelos	1.86	211	PN	Pn	14 56 12.3	0.0
DOGA	KONYA_Doganhis	1.88	80	*i* P	Pn	14 56 13.3	+0.6
DOGA				*i* S	Sg	14 56 43.0	+1.6
BLCB	Balcova	1.89	288	P	Pn	14 56 12.8	+0.1
BLCB	Balcova	1.89	288	PN	Pn	14 56 12.8	+0.1
DURS	Dursunbey	1.91	340	⇓*i*P	Pn	14 56 13.1	+0.1
DURS				*i* S	Sb	14 56 40.6	+1.5
SMG	Samos	1.97	268	P	Pn	14 56 13.9	0.0
STEP	BALIKESIR_Sava	2.00	322	*i* P	Pn	14 56 14.6	+0.2
STEP				*i* S	Sg	14 56 47.3	+1.8
SEYD	Seydisehir-KON	2.04	101	PN	Pn	14 56 15.6	+0.7
CIFT	Cifteler, Eski	2.06	41	PN	Pn	14 56 15.1	-0.1
NIS1	Nisyros Isl.	2.10	235	P	Pn	14 56 16.5	+0.9
NIS1	Nisyros Isl.	2.10	235	PN	Pn	14 56 15.8	+0.2
ZEDA	zmir-Bergama	2.11	304	*i* P	Pn	14 56 16.0	+0.2
ZEDA				*i* S	Sg	14 56 49.5	+0.6
BALB	Balikesir	2.15	329	PN	Pn	14 56 16.7	+0.4
BALB	Balikesir	2.15	329		Pn	14 56 17.0	+0.7
KOSK	Kos Island	2.15	241	PN	Pn	14 56 16.5	+0.2
AUBOZ	BOZOYUK	2.17	15	PN	Pn	14 56 17.1	+0.5
URLA	Izmir	2.22	285	PN	Pn	14 56 17.3	0.0
BORA	Eskisehir	2.25	23	PN	Pn	14 56 17.4	-0.3
ORLT	Orhaneli	2.25	352	PN	Pn	14 56 17.9	+0.1
KIZT	Kizilcal	2.27	61	PN	Pn	14 56 18.6	+0.4
DKL	Dikili	2.28	304	PN	Pn	14 56 18.5	+0.4
SVRH	Sivrihisar-ESK	2.37	46	PN	Pn	14 56 19.9	+0.4
AUSIV	SIVRIHISAR	2.38	46	PN	Pn	14 56 19.9	+0.3
KONT	Konya--Tatoy	2.41	86	PN	Pn	14 56 20.9	+1.0
CAVI	Cavuskoy	2.42	9	PN	Pn	14 56 20.5	+0.4
LADK	Ladik-KONYA	2.43	80	PN	Pn	14 56 20.8	+0.5
SRCK	Saricakaya, Es	2.45	24	PN	Pn	14 56 20.9	+0.5
KCTX	Karacabey (Bur	2.56	343	PN	Pn	14 56 22.2	+0.2
GONE	Gonen-Balikesi	2.57	331	PN	Pn	14 56 22.4	+0.3
GEMT	Gemlik	2.62	358	PN	Pn	14 56 23.0	+0.2
CHOS	Chios island	2.64	284	P	Pn	14 56 24.2	+1.0
CHOS	Chios island	2.64	284	PN	Pn	14 56 23.7	+0.5
HDMB	Hadim	2.66	108	PN	Pn	14 56 23.9	+0.4
ARMT	Armutlu	2.77	353	PN	Pn	14 56 24.6	-0.3
GULT	Gulveren	2.77	19	PN	Pn	14 56 25.2	+0.2
PRK	Paraskevi	2.79	302	P	Pn	14 56 26.8	+1.7
TRML	Termal-Yalova	2.79	358	PN	Pn	14 56 25.1	-0.1
GAZI	Gazipasa	2.87	122	PN	Pn	14 56 26.9	+0.7
CHBY	Cihanbeyli	2.91	74	PN	Pn	14 56 27.9	+1.0
HRT	Hereke	3.02	5	PN	Pn	14 56 27.9	-0.4
KRBG	Karabiga-Canak	3.02	329	PN	Pn	14 56 28.6	+0.3
MDUB	Mudurnu	3.03	28	PN	Pn	14 56 28.3	-0.2
MDUB	Mudurnu	3.03	28		Pn	14 56 30.5	+2.0
SIGR	SIGRI	3.06	298	P	Pn	14 56 29.2	+0.5
SIGR	SIGRI	3.06	298	PN	Pn	14 56 29.3	+0.5
EZN	Ezine	3.09	312	P	Pn	14 56 29.7	+0.5
EZN	Ezine	3.09	312	PN	Pn	14 56 29.7	+0.5
MRMT	Marmara Adasi	3.09	335	PN	Pn	14 56 29.7	+0.3
YUVA	Yuva-Kibriscik	3.16	35	PN	Pn	14 56 31.2	+0.8
LPK	Lapseki	3.24	323	PN	Pn	14 56 32.1	+0.8
KAVV	Kandilli-Istan	3.25	356	PN	Pn	14 56 32.4	+0.9
ISK	Istanbul-Kandi	3.25	356	PN	Pn	14 56 31.6	+0.1
BOZC	Bozcaada	3.26	309	PN	Pn	14 56 31.9	+0.3
MAR2	Marsite Statio	3.29	332	PN	Pn	14 56 32.7	+0.7
MAR6	Marsite Statio	3.30	332	PN	Pn	14 56 32.9	+0.8
RKY	Sarkoy-Tekirda	3.32	331	PN	Pn	14 56 32.3	-0.2
MAR3	Marsite Statio	3.32	332	PN	Pn	14 56 32.9	+0.4
SILT	Sile	3.34	4	PN	Pn	14 56 32.9	+0.2
MAR4	Marsite Statio	3.36	333	PN	Pn	14 56 33.2	+0.2
BR231	Keskin MP Arra	3.37	52		Pn	14 56 34.7	+1.5
ANTO	Ankara	3.40	52		Pn	14 56 35.8	+2.2
GELI	Tayfur-Gelibol	3.40	320	PN	Pn	14 56 34.5	+1.0
SANT	Santorini	3.41	246	⇑P	Pb	14 56 38.2	-2.9
SANT	Santorini	3.41	246		Pn	14 56 36.4	+2.8
KLYT	Kilyos	3.44	356	PN	Pn	14 56 33.9	-0.2
GADA	Gvkgeada	3.57	313	P	Pn	14 56 36.5	+0.6
ERIK	Erikli-Kesan	3.59	323	PN	Pn	14 56 36.7	+0.6
AKKU	Akkuyu-Mersin	3.77	115	PN	Pn	14 56 40.1	+1.6
ENEZ	Enez	3.82	321	P	Pn	14 56 40.3	+1.1
LIA	Limnos Island	3.84	304	P	Pn	14 56 40.4	+0.8
KDZE	Karadeniz Ereo	3.86	24	⇑P	Pn	14 56 40.7	+0.9
BRTR	Keskin Array B	3.88	59	Pn	Pn	14 56 41.0	+0.9
	comp=E,4.6nm,0.3s,baz=250,slow=15,SNR=56						
BRTR				Sn	Sn	14 57 27.1	+1.6
	comp=E,3.5nm,0.3s,baz=229,slow=25,SNR=4.2						
BR131	Keskin Array S	3.88	59	Pn	Pn	14 56 40.9	+0.7
LEF	Lefka	3.94	132	⇑P	Pn	14 56 40.4	-0.5
SMTH	Samothraki Isl	3.97	313	P	Pn	14 56 41.8	+0.5
ALN	Alexandroupoli	3.99	321	Pn	Pn	14 56 42.2	+0.5
CSS	Mathiatis	4.31	130	Pn	Pn	14 56 47.4	+1.4
IDI	Anoyia	4.37	236	Pn	Pn	14 56 49.0	+2.1
	comp=E,2.7nm,0.3s,baz=56,slow=13,SNR=17						
IDI				Sn	Sn	14 57 37.5	-0.1
	comp=E,5.5nm,0.3s,baz=147,slow=9.4,SNR=6.5						
IDI	Anoyia	4.37	236	P	Pn	14 56 48.9	+2.0
RDO	Rodhopi	4.43	320	P	Pn	14 56 48.7	+1.0
EDRB	Edirne	4.49	335	P	Pn	14 56 48.9	+0.4

THAS	Thassos island	4.54	309	P	Pn	14 56 49.3	+0.2
OUR	Ouranopolis	4.86	303	P	Pn	14 56 54.4	+0.9
KAVA	Kavala	4.90	312	P	Pn	14 56 54.5	+0.4
AGG	Agios Georgios	5.62	285		Pn	14 57 07.3	+3.2
VAY	Valandovo	6.28	306	iP	Pn	14 57 15.2	+2.1
GAZ	Gaziantep	6.30	93	Pn	Pn	14 57 13.3	-0.2
DQRL	Deir Qamar	6.53	127	eP	Pn	14 57 17.6	+1.1
PLVB	Pleven	6.62	329	⇑P	Pn	14 57 18.6	+0.9
TIRR	Tirgusor	6.67	354	⇑P	Pn	14 57 19.2	+0.8
TIRR	Tirgusor	6.67	354	Pn	Pn	14 57 18.9	+0.4
VTS	Vitosha	6.69	318	⇑P	Pn	14 57 20.1	+1.3
VTS	Vitosha	6.69	318	Pn	Pn	14 57 20.1	+1.3
STIP	Stip	6.73	307	iP	Pn	14 57 19.2	-0.1
RCY	Rachaya	6.83	127	eP	Pn	14 57 21.4	+0.6
FNA	Florina	6.84	298	Pn	Pn	14 57 23.2	+2.3
MMAI	Mount Meron Ar	6.89	132	Pn	Pn	14 57 21.9	+0.2
	comp=E,17nm,0.3s,baz=318,slow=12,SNR=46						
MMAI				Sn	Sn	14 58 37.7	-2.1
	comp=E,10nm,0.3s,baz=311,slow=25,SNR=7.4						
HARR	Harsova	6.95	352	⇑P	Pn	14 57 23.7	+1.4
TPGR	Topolog	7.07	355	⇑P	Pn	14 57 24.4	+0.4
TLCR		7.38	357	⇑P	Pn	14 57 29.2	+1.1
CFR	Carcaliu	7.41	353	⇓P	Pn	14 57 28.8	+0.2
SEV	Sevastopol'	7.48	25	⇓eP	Pn	14 57 29.6	+0.1
SEV				Pm		14 57 32.1	
	comp=Z,6.0nm,0.3s						
SEV				eS	Pb	14 57 50.3	-0.1
SEV				Sm		14 57 55.4	
	comp=N,6.0nm,0.3s,comp=E,3.0nm,0.3s						
SCTR	Scanteiesti	7.92	353	⇑P	Pn	14 57 36.2	+0.7
MLR	Muntele Rosu	8.08	343	⇑P	Pn	14 57 39.5	+1.7
MLR	Muntele Rosu	8.08	343	Pn	Pn	14 57 39.4	+1.5
	comp=E,3.0nm,0.3s,baz=168,slow=4.6,SNR=10						
BOVS	Bovan	8.20	318	⇑P	Pn	14 57 40.5	+1.1
SUDU	Sudak	8.26	29	eP	Pn	14 57 39.7	-0.5
SUDU				Pm		14 57 47.3	
	comp=Z,6.0nm,0.4s						
VOIR		8.26	339	⇑P	Pn	14 57 40.5	+0.2
PLOR	Plostina	8.28	347	⇓P	Pn	14 57 41.2	+0.7
VRI	Vrincioaia	8.28	347	⇑P	Pn	14 57 41.9	+1.5
ARR	Arges	8.32	337	⇓P	Pn	14 57 43.1	+1.9
COVR	Voineasa-Covas	8.36	345	⇑P	Pn	14 57 42.4	+0.8
ASF	Jabal al Asfar	8.38	130	Pn	Pn	14 57 43.9	+1.9
	comp=Z,2.0nm,0.3s,baz=321,slow=18,SNR=7.8						
ASF				Sn	Sn	14 59 15.8	-0.6
	comp=Z,0.2nm,0.3s,baz=296,slow=18,SNR=1.8						
DOPR	Dopca	8.66	341	⇑P	Pn	14 57 47.2	+1.5
OZUR		8.68	343	⇑P	Pn	14 57 47.5	+1.4
SCTE	Santa Cesarea	8.76	288	Pn	Pn	14 57 49.3	+2.3
HERR	Herculane	8.76	326	⇓P	Pn	14 57 46.9	-0.2
TESR	Tescani	8.92	348	⇑P	Pn	14 57 50.4	+1.2
PDG	Podgorica	8.98	304	Pn	Pn	14 57 53.0	+2.8
MDVR	Moldovita	9.01	323	⇑P	Pn	14 57 50.9	+0.3
GZR	Gura Zlata	9.02	329	⇑P	Pn	14 57 50.9	+0.2
EIL	Elat	9.37	148	Pn	Pn	14 57 54.7	-0.9
	comp=Z,2.0nm,0.3s,baz=221,slow=7.6,SNR=7.9						
EIL				Sn	Sn	14 59 37.5	-3.2
	comp=Z,2.7nm,0.3s,baz=71,slow=8.1,SNR=7.1						
TIP	Timpagrande	9.95	282	Pn	Pn	14 58 04.9	+1.5
BURAR	Bucovina Array	10.25	344	⇑P	Pn	14 58 09.4	+1.8
BURAR	Bucovina Array	10.25	344	Pn	Pn	14 58 09.4	+1.8
BUR08	Bucovina Ar. S	10.28	344		Pn	14 58 09.5	+1.5
SORM	Soroca	10.34	356	⇑P	Pn	14 58 08.5	-0.2
GNI	Garni	12.22	74	LR	LR	15 04 24.6	
	comp=Z,22nm,20.0s,baz=291,slow=43						
AKASG	Malin Array Be	12.89	360	Pn	Pn	14 58 40.1	-3.4
	comp=Z,0.5nm,0.3s,baz=178,slow=11,SNR=4.9						
VRAC	Vranov	14.71	325	LR	LR	15 05 57.7	
	comp=Z,124nm,19.6s,baz=102,slow=42						
GEC2	GERESS Array S	15.80	319	P	Pn	14 59 24.1	+1.1
GEC2				IAmb	IAmb	14 59 35.2	
	comp=Z,11nm,1.1s						
GERES	GERESS Array B	15.80	319	Pn	Pn	14 59 21.5	-1.4
	comp=Z,0.1nm,0.3s,baz=249,slow=36,SNR=2.1						
KHC	Kasperske Hory	16.04	320	eP	P	14 59 31.0	+1.6
STU	Stuttgart	18.24	313	P	P	14 59 55.3	+1.7
ECH	Echery	19.19	310	P	Pn	15 00 05.2	+0.1
ECH				IAmb	IAmb	15 00 13.0	
	comp=Z,9.9nm,1.2s						
BELG	Belogornoye	19.40	35	P	P	15 00 04.3	-1.9
	comp=Z,0.2nm,0.3s,baz=144,slow=5.7,SNR=2.9						
BELG				LR	LR	15 09 37.6	
	comp=Z,35nm,19.2s,baz=333,slow=43						
FINES	FINESS Array B	23.74	356	P	P	15 00 51.5	-0.9
	comp=Z,2.0nm,0.6s,baz=155,slow=10,SNR=5.5						
KLMR	Klimovskoe	23.94	12	e	P	15 00 53.2	-1.1
KLMR				AMP		15 00 54.3	
	comp=Z,7.0nm,0.9s						
AKTO	Aktyubinsk	23.98	49	P	P	15 00 53.7	-1.1
	comp=Z,1.7nm,0.6s,baz=257,slow=11,SNR=6.8						
HFS	Hagfors	24.45	341	P	P	15 00 58.7	-0.3
	comp=Z,4.9nm,0.9s,baz=151,slow=3.3,SNR=3.4						
HFS				LR	LR	15 12 02.8	
	comp=Z,69nm,19.9s,baz=148,slow=40						
KIRV	Kirov	24.54	26	LR	LR	15 11 46.2	
	comp=Z,39nm,19.9s,baz=251,slow=40						
NOA	NORSAR Array B	25.88	340	P	P	15 01 12.0	0.0
	comp=Z,1.4nm,0.9s,baz=146,slow=9.0,SNR=4.0						
NOA				LR	LR	15 12 40.8	
	comp=Z,50nm,18.8s,baz=150,slow=40						
ESDC	Sonseca Array	25.95	285	P	P	15 01 13.2	+0.4
	comp=Z,1.7nm,0.9s,baz=77,slow=10.0,SNR=9.1						
ARU	Arti	26.93	37	P	P	15 01 20.5	-0.9
	comp=Z,1.0nm,0.4s,baz=1.2,slow=22,SNR=2.5						
ARU	Arti	26.93	37	P	P	15 01 23.1	+1.7
MDT	Midelt	28.04	270	LR	LR	15 14 57.8	
	comp=Z,32nm,19.4s,baz=3.5,slow=41						
ATD	Arta Tunnel	28.84	152	LR	LR	15 14 30.7	
	comp=Z,22nm,18.5s,baz=52,slow=39						
WSAR	Wadi Sarin	28.98	112	LR	LR	15 15 07.9	
	comp=Z,26nm,19.0s,baz=342,slow=40						
TORD	Torodi Ar. Bea	34.76	232	P	P	15 02 31.0	+0.1
	comp=Z,4.1nm,0.6s,baz=37,slow=9.4,SNR=23						
TORD	Torodi Ar. Bea	34.76	232	P	P	15 02 31.7	+0.8
KURBB	Kurchatov Arra	36.85	54	P	P	15 02 48.9	+0.5
	comp=Z,3.2nm,0.5s,baz=277,slow=8.7,SNR=18						
KURK	Kurchatov	36.91	53	P	P	15 02 50.0	+1.1
KURK				IAmb	IAmb	15 02 52.4	
	comp=Z,4.6nm,0.9s						
MKAR	Makanchi Array	39.53	60	P	P	15 03 11.9	+0.7
	comp=Z,1.9nm,0.5s,baz=272,slow=9.9,SNR=2.5						
ZALV	Zalesovo Beam	40.74	48	P	P	15 03 21.0	0.0
	comp=Z,1.9nm,0.6s,baz=262,slow=9.0,SNR=6.7						
ZALV				LR	LR	15 24 16.6	
	comp=Z,27nm,19.7s,baz=346,slow=42						
DBIC	Dimbokro	43.84	234	P	P	15 03 46.5	-0.2
	comp=Z,2.3nm,0.8s,baz=144,slow=4.8,SNR=4.5						
DBIC	Dimbokro	43.84	234	IAmb	IAmb	15 03 47.2	
	comp=Z,6.2nm,1.0s						
NRIK	Noril'sk	44.05	26	P	P	15 03 48.6	+0.8
	comp=Z,3.0nm,0.6s,baz=12,slow=3.6,SNR=4.9						
SONM	Songino Array	55.21	53	P	P	15 05 13.8	+0.5
	comp=Z,0.8nm,0.8s,baz=297,slow=9.8,SNR=5.4						
TIXI	Tiksi	57.49	22	P	P	15 05 29.1	+0.2
	comp=Z,0.9nm,0.7s,baz=282,slow=6.6,SNR=4.7						
TIXI	Tiksi	57.49	22	IAmb	IAmb	15 05 48.1	
	comp=Z,3.7nm,1.4s						
CMAR	Chiang Mai Arr	63.00	87	P	P	15 06 06.1	-1.4
	comp=Z,0.5nm,0.6s,baz=71,slow=26,SNR=2.8						
SCHQ	Schefferville	63.33	320	P	P	15 06 09.0	-0.2
	comp=Z,7.1nm,0.8s,baz=74,slow=3.7,SNR=4.4						
KSRS	Korea Array	74.01	55	P	P	15 07 15.5	-0.6
	comp=Z,3.1nm,0.9s,baz=304,slow=5.3,SNR=4.5						
KSRS				LR	LR	15 42 26.5	
	comp=Z,20nm,18.5s,baz=10.0,slow=38						
MJAR	Matsushiro Arr	81.06	50	P	P	15 07 54.2	-1.3
	comp=Z,3.1nm,0.9s,baz=297,slow=5.2,SNR=3.2						
MJAR	Matsushiro Arr	81.06	50	IAmb	IAmb	15 07 59.7	
	comp=Z,3.8nm,1.0s						
PDAR	Pinedale Array	91.51	331	P	P	15 08 46.7	-0.5
	comp=Z,0.2nm,0.4s,baz=40,slow=7.2,SNR=2.1						
ASAR	Alice Springs	115.25	101	PKP	PKPdf	15 14 21.7	-0.4
	comp=Z,0.2nm,0.8s,baz=302,slow=1.3,SNR=1.4						

*ISU **18** 14:57:45, 40°.30N×73°.22E, h10^{km}*
*KRNET **18** 14:57:45.7±0.1, 40°.31N×73°.15E, h23^{km}, mb3.8*
*SOME **18** 14:57:46.2, 40°.50N×73°.18E, h0^{km}*
*KNET **18** 14:57:46.2±0.5, 40°.45N×73°.31E, h5^{km}±3^{km}, ml3.3, Error ellipse: s-maj=5.6km s-min=3.4km az=98.0*
*NNC **18** 14:57:47.7±0.8, 40°.50N×73°.19E, h0^{km}, mb4.0, mpv3.7, Error ellipse: s-maj=7.0km s-min=3.6km az=175.0*
ISC 18 14:57:46.2±1.1, **40°.31N**±0°.03×**73°.10E**±0°.02, **h9**^{km}±9^{km}, **n67**, σ1^{s}**38**/114, **32C-39D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	Osh	0.32	312	eP	Pg	14 57 53.0	+0.4
OHH				eS	Sb	14 57 58.0	-1.5
OHH	Osh	0.32	312	⇑iP	Pg	14 57 53.0	+0.4
	baz=8.0						
OHH				⇑iS	Sb	14 57 58.2	-1.3
	baz=8.0						
SFK	Sufi-Kurgan	0.43	134	eP	Pg	14 57 53.0	-1.6
SFK	Sufi-Kurgan	0.43	134	⇓eP	Pg	14 57 53.5	-1.1
	baz=37						
SFK				⇓eS	Sg	14 57 59.5	-0.8
	baz=37						
ANR	Andizhan	0.72	308	eP	Pb	14 58 01.0	+0.1
ANR				eS	Sn	14 58 12.0	-1.7
FRG	Fergana	1.01	274	eP	Pn	14 58 09.0	+2.5
FRG				eS	Sn	14 58 22.0	+1.1
DRK	Karamyk	1.30	231	⇑iP	Pn	14 58 10.6	-0.2
	baz=32						
DRK				⇑iS	Sb	14 58 27.9	+0.1
	baz=32						
BTK	Batken	1.77	263	eP	Pb	14 58 19.0	+0.2
BTK				eS	Sg	14 58 44.0	+1.0
BTK	Batken	1.77	263	⇓iP	Pb	14 58 18.2	-0.6
	baz=63						
BTK				⇓iS	Sb	14 58 40.8	-0.3
	baz=63						
AML	Almayashu	1.87	14	⇓P	Pn	14 58 18.8	0.0
	340nm,0.2s,SNR=766						
AML				⇑S	Sb	14 58 43.3	-1.2
	757nm,0.4s						
AML	Almayashu	1.87	14	⇓iP	Pn	14 58 19.0	+0.2
	baz=13						
AML				⇓iS	Sb	14 58 43.1	-1.4
	baz=13						
TRKS	Terek-Say	1.92	310	⇓iP	Pn	14 58 19.1	-0.1
	baz=8.0						
TRKS				⇓iS	Sb	14 58 43.2	-2.5
	baz=8.0						
UCH	Uchtor	2.19	29	⇓P	Pn	14 58 23.4	+0.2
	18nm,0.2s,SNR=59						
UCH				⇓S	Sb	14 58 52.9	-0.8
	160nm,0.3s						
UCH	Uchtor	2.19	29	⇓iP	Pn	14 58 23.6	+0.4
	baz=28						
UCH				⇓iS	Sn	14 58 50.3	-0.4
	baz=28						
MNAS	Manas	2.22	349	⇓iP	Pn	14 58 24.2	+0.9
	baz=48						
MNAS				⇓iS	Sb	14 58 51.5	-2.8
	baz=48						
EKS2	Erkin-Say	2.40	12	⇓P	Pn	14 58 26.9	+1.1
	24nm,0.2s,SNR=79						
EKS2				⇓S	Sb	14 58 59.0	-0.5
	44nm,0.2s						
EKS2	Erkin-Say	2.40	12	⇑iP	Pn	14 58 26.3	+0.5
	baz=11						
EKS2				⇑iS	Sn	14 58 55.2	-0.3
	baz=11						
MRKS	Merke	2.44	2	eP	Pb	14 58 29.4	-0.8
	50nm,0.4s						
MRKS				eS	Sb	14 59 01.0	+0.6
	388nm,0.5s						
MRKS	Merke	2.44	2	Pg	Pb	14 58 29.2	-1.0
	59nm,0.3s						
MRKS				Lg	Lg	14 59 00.6	
	388nm,0.5s						
GAR	Garm	2.52	240	⇓iP	Pn	14 58 28.3	+0.9
	baz=40						
GAR				⇓iS	Sn	14 58 58.8	+0.6
	baz=40						
AAK	Ala-Archa	2.55	24	⇑P	Pn	14 58 28.6	+0.7
	72nm,0.3s,SNR=20						
AAK				⇓S	Sb	14 59 01.2	-2.5
	188nm,0.3s						
AAK	Ala-Archa	2.55	24	⇑Pn	Pn	14 58 28.7	+0.8
	58nm,0.8s						
AAK				⇑Lg	Lg	14 59 02.9	
	230nm,0.6s						
AAK	Ala-Archa	2.55	24	⇓iP	Pn	14 58 28.1	+0.2
	baz=23						
AAK				⇓iS	Sn	14 58 58.7	-0.4
	baz=23						
KBK	Karagaybulak	2.73	30	⇑P	Pn	14 58 32.0	+1.7
	31nm,0.2s,SNR=33						
KBK	Karagaybulak	2.73	30	⇓iP	Pn	14 58 30.8	+0.5
	baz=29						
KBK				⇓iS	Sn	14 59 02.7	-0.7
	baz=29						
FRU1	Bishkek	2.75	24	⇑iP	Pn	14 58 31.0	+0.5
	baz=23						
FRU1				⇑iS	Sn	14 59 03.5	-0.4
	baz=23						
DZA	Taraz	2.90	333	eP	Pb	14 58 38.9	+0.8
	97nm,0.4s						
DZA				eS	Sg	14 59 16.8	-2.6
	499nm,0.3s						
DZA	Taraz	2.90	333	Pg	Pb	14 58 38.3	+0.2
	51nm,0.1s						
DZA				Lg	Lg	14 59 16.4	
	526nm,0.2s						
TGS	TashGRES	2.93	293	eP	Pg	14 58 43.0	+0.6
TGS				eS	Sg	14 59 23.0	+2.6
CHMS	Chumysh	2.96	24	⇓P	Pn	14 58 34.4	+1.1
	33nm,0.3s,SNR=6.5						
CHMS	Chumysh	2.96	24	⇑iP	Pn	14 58 33.9	+0.6
	baz=24						
CHMS				⇑iS	Sn	14 59 08.4	-0.6
	baz=24						
BOOM	Boomskoye usch	3.05	44	⇑iP	Pn	14 58 35.1	+0.3
	baz=43						
BOOM				⇑iS	Sn	14 59 10.7	-0.8
	baz=43						
ULHL	Ulahol	3.06	50	⇓P	Pn	14 58 35.0	+0.1
	4.4nm,0.2s,SNR=12						
ULHL	Ulahol	3.06	50	⇓iP	Pn	14 58 35.2	+0.3
	baz=49						
ULHL				⇓iS	Sn	14 59 10.7	-1.0
	baz=49						
TAS	Tashkent	3.06	291	eP	Pb	14 58 42.0	+1.2
TAS				eS	Sg	14 59 25.0	+0.5
TAS	Tashkent	3.06	291	⇓eP	Pn	14 58 36.2	+1.5
	baz=90						
TAS				⇓eS	Sn	14 59 12.6	+1.1
	baz=90						
USP	Ospenovka	3.13	19	⇓iP	Pn	14 58 36.4	+0.6
	baz=18						
USP				⇓iS	Sn	14 59 12.8	-0.6
	baz=18						
TKM2	Tokmak 2	3.21	35	⇑P	Pn	14 58 37.7	+0.7
	12nm,0.2s,SNR=12						
TKM2	Tokmak 2	3.21	35	⇑Pn	Pn	14 58 37.4	+0.4
	3.8nm,0.8s						
TKM2				⇑Pg	Pb	14 58 42.9	-0.6
	13nm,0.4s						
TKM2				⇑Lg	Lg	14 59 24.1	
	31nm,0.5s						
TKM2	Tokmak 2	3.21	35	⇑eP	Pn	14 58 37.2	+0.2
	baz=34						
TKM2				⇑iS	Sn	14 59 14.3	-1.2
	baz=34						
KK02	Karatay Array	3.40	326	⇓Pn	Pn	14 58 40.1	+0.7
	2.0nm,0.2s						
KK02				⇑Pg	Pb	14 58 47.6	+1.0
	30nm,0.6s						
KK02				⇑Lg	Lg	14 59 31.7	
	56nm,0.6s						
CHGR	Chuyangaron	3.47	243	⇑iP	Pn	14 58 41.3	+0.9
	baz=43						
CHGR				⇑iS	Sn	14 59 21.6	-0.1
	baz=43						
KST	Kastek	3.47	37	eP	Pb	14 58 47.5	-0.4
	23nm,0.4s						
KST				eS	Sb	14 59 31.7	+1.5
	40nm,0.4s						
KST	Kastek	3.47	37	Pg	Pb	14 58 47.5	-0.4
	23nm,0.4s						
KST				Lg	Lg	14 59 31.7	
	40nm,0.4s						
DGS	Degeres	3.55	33	eP	Pb	14 58 49.2	0.0
	42nm,0.6s						
DGS				eS	Sb	14 59 34.5	+2.2
	54nm,0.5s						
DGS	Degeres	3.55	33	Pg	Pb	14 58 49.2	0.0
	42nm,0.6s						
DGS				Lg	Lg	14 59 34.5	
	54nm,0.5s						
KDJ	Kajisay	3.57	58	⇓iP	Pn	14 58 42.2	+0.2
	baz=58						
KDJ				⇓iS	Sn	14 59 23.1	-1.3
	baz=58						
MTBS	Maitube	3.76	40	eP	Pb	14 58 52.5	-0.2
	12nm,0.5s						
MTBS				eS	Sb	14 59 40.2	+1.7
	38nm,0.5s						
MTBS	Maitube	3.76	40	Pg	Pb	14 58 52.6	-0.2
	12nm,0.5s						
MTBS				Lg	Lg	14 59 40.2	
	38nm,0.5s						
TNSS	Tian-Shan	3.96	45	eP	Pb	14 58 56.7	+0.2
	8.0nm,0.4s						
TNSS				eS	Sb	14 59 47.5	+2.8
	18nm,0.6s						
TNSS	Tian-Shan	3.96	45	Pg	Pb	14 58 56.7	+0.2
	8.0nm,0.4s						
TNSS				Lg	Lg	14 59 47.5	
	18nm,0.6s						
AAA	Alma-Ata	4.07	43	eP	Pb	14 58 58.5	+0.5
	20nm,0.2s						
AAA				eS	Sb	14 59 50.2	+3.0
	57nm,0.8s						
KNDC	Almaty	4.10	44	⇓Lg	Lg	14 59 53.0	
	82nm,0.6s						
MDOK	Medeo	4.11	45	eP	Pb	14 58 58.7	0.0
	5.3nm,0.6s						
MDOK				eS	Sb	14 59 50.9	+2.4
	32nm,0.5s						
MDOK	Medeo	4.11	45	⇓Pn	Pn	14 58 50.2	+0.9
	2.5nm,0.4s						
MDOK				Pg	Pb	14 59 00.4	+1.7
	14nm,0.8s						
MDOK				⇑Lg	Lg	14 59 52.0	
	50nm,1.0s						
MDOK	Medeo	4.11	45	Pg	Pb	14 58 58.7	0.0
	5.3nm,0.6s						
MDOK				Lg	Lg	14 59 50.9	
	32nm,0.5s						
KOTS	Kotyrbulak	4.19	44	eP	Pb	14 59 00.6	+0.5
	7.1nm,0.3s						
KOTS				eS	Sb	14 59 54.8	+4.0
	102nm,0.6s						
KOTS	Kotyrbulak	4.19	44	Pg	Pb	14 59 00.6	+0.5
	7.1nm,0.3s						
KOTS				Lg	Lg	14 59 54.8	
	102nm,0.6s						
ANVS	Anan'yevo	4.22	53	⇓iP	Pn	14 58 51.4	+0.5
	baz=52						
ANVS				⇓eS	Sn	14 59 39.1	-1.3
	baz=52						
KUU	Kurty	4.32	33	eP	Pb	14 59 02.1	-0.1
	11nm,0.5s						
KUU				eS	Sb	14 59 56.8	+2.4
	40nm,0.8s						
KUU	Kurty	4.32	33	Pg	Pb	14 59 02.1	-0.1
	11nm,0.5s						
KUU				Lg	Lg	14 59 56.8	
	40nm,0.8s						
BTLS	Baital	4.78	8	eP	Pb	14 59 11.0	+0.9
	4.7nm,0.4s						
BTLS				eS	Sb	15 00 12.0	+4.3
	24nm,0.5s						
ARXS	Arharly	5.25	40	eP	Pb	14 59 18.8	+0.8
	4.8nm,0.5s						
ARXS				eS	Sb	15 00 25.0	+3.9
	23nm,0.6s						
ARXS	Arharly	5.25	40	Pg	Pb	14 59 18.8	+0.8
	4.8nm,0.5s						
ARXS				Lg	Lg	15 00 25.0	
	23nm,0.6s						
BLB	Baldybastay	5.50	45	Pg	Pb	14 59 24.0	+1.5
	6.9nm,0.4s						
BLB				Lg	Lg	15 00 33.9	
	26nm,0.7s						
PDGK	Podgornoye	5.65	56	⇑Pn	Pn	14 59 11.0	+0.6
	2.2nm,0.7s						
PDGK				⇑Pg	Pb	14 59 28.9	+3.9
	5.1nm,0.8s						
PDGK				⇑Lg	Lg	15 00 41.6	
	30nm,0.9s						
AB31	Akbulak array	12.92	318	⇑P	Pn	15 00 47.2	-2.7
	0.5nm,0.3s,baz=126,slow=14,SNR=60						

IDC 18 15:33:11.9±2.2, **1°.75N**×**126°.09E, h0**^{km}**, mb3.2**/3, **mb1 3.4**/3, **mb1mx3.0**/43, **mbtmp3.2**/3, **Error ellipse: s-maj=180.6km s-min=28.0km az=65.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	23.03	160	P	P	15 38 18.3	-0.5
	0.4nm,0.5s,baz=338,slow=11,SNR=10.0						
ASAR	Alice Springs	26.39	164	P	P	15 38 50.8	+0.5
	0.1nm,0.5s,baz=337,slow=8.3,SNR=5.5						
MKAR	Makanchi Array	58.82	326	P	P	15 43 12.1	-0.1
	0.2nm,0.3s,baz=118,slow=7.4,SNR=2.0						

IDC 18 15:38:29.4±2.0, **7°.93S**×**125°.28E, h0**^{km}**, mb3.2**/1, **mb1 3.6**/5, **mb1mx3.3**/39, **mbtmp3.4**/5, **ML3.3**/4, **Error ellipse: s-maj=53.3km s-min=27.8km az=75.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	2.76	215	Pn	Pn	15 39 15.6	+0.6
	4.1nm,0.3s,baz=224,slow=1.5,SNR=6.8						
FITZ	Fitzroy Crossi	10.11	178	Pn	Pn	15 40 54.0	-1.9
	0.1nm,0.3s,baz=2.0,slow=12,SNR=6.5						
FITZ				Sn	Sn	15 42 37.5	-13
	0.1nm,0.3s,baz=302,slow=3.3,SNR=2.2						
WRA	Warramunga Arr	14.82	145	Pn	Pn	15 41 59.6	-0.9
	0.1nm,0.3s,baz=320,slow=13,SNR=4.2						
WRA				Sn	Sn	15 44 32.3	-13
	0.0nm,0.3s,baz=320,slow=26,SNR=1.8						
ASAR	Alice Springs	17.70	153	P	P	15 42 38.8	+0.3
	0.1nm,0.3s,baz=323,slow=10,SNR=22						
ASAR				S	Sn	15 45 44.9	-11
	0.0nm,0.3s,baz=312,slow=21,SNR=2.2						
MKAR	Makanchi Array	66.53	329	P	P	15 49 21.2	+0.1
	0.2nm,0.6s,baz=115,slow=9.7,SNR=1.8						

*IDC **18** 16:09:55.6±1.2, 31°.40N×128°.31E, h0^{km}, mb3.8/3, mb1 3.8/4, mb1mx3.4/39, mbtmp3.6/4, ML2.9/1, MS2.8/6, Ms1 2.8/6, ms1mx2.6/40, Error ellipse: s-maj=35.9km s-min=17.7km az=95.0*
*NIED **18** 16:09:56.2, 31°.41N×128°.74E, h4^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.20; $M_{\theta\theta}$2.70; $M_{\phi\phi}$-1.50; $M_{r\theta}$-1.01; $M_{\theta\phi}$3.88; $M_{\phi r}$2.07; Fault plane solution: $M_0$5.09000×10^{14} NP1: ϕ_s198.00000°, δ71.00000°, λ-156.00000°. NP2: ϕ_s100.00000°, δ68.00000°, λ-21.00000°.*
*JMA **18** 16:09:56.2±0.3, 31°.41N×128°.74E, h4^{km}±3^{km}, M4.0*
*NEIC **18** 16:09:60.0±2.4, 31°.37N±0°.04×128°.97E±0°.07, h10^{km}±1^{km}, mb4.2/4, Error ellipse: s-maj=12.1km s-min=4.5km az=303.0*
ISC 18 16:09:57.2±0.9, **31°.41N**±0°.04×**128°.76E**±0°.06, **h10**^{km}**, n34,** σ**1**^{s}**63**/32, **mb4.2**/5, **MS2.9**/3, **1D, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	Shimokoshiki	0.86	72	⇓P	Pg	16 10 13.1	-0.7
JSJ				eS	Sb	16 10 24.9	-0.9
JFU	Fukue jima 2	1.24	360	P	Pn	16 10 19.5	-1.1
JFU				eS	Sg	16 10 36.1	-1.1
JSU	Suzuyama	1.45	86	P	Pn	16 10 23.2	-0.4
JSU	Suzuyama	1.45	86	Pn	Pb	16 10 23.7	-0.6
JNN	Nakanoshima	1.84	148	P	Pb	16 10 29.2	-1.7
JYAK	Yakushimahirau	1.91	127	P	Pn	16 10 29.3	-0.5
JTZ	Takazaki	2.04	76	P	Pn	16 10 31.8	+0.1
JTN	Tanegashima 3	2.05	111	P	Pn	16 10 31.3	-0.5
JIU3	Izumi3	2.08	56	P	Pn	16 10 32.4	+0.2
JMTN	Minamitane	2.10	118	P	Pn	16 10 32.5	+0.1
JMTN				eS	Sb	16 10 59.8	-1.7
JNU	Nakatsue	2.48	46	Pn	Pb	16 10 41.0	-0.9
	baz=233,slow=20						
JNU				Sn	Sg	16 11 18.1	+1.2
	baz=90,slow=20						
JNU	Nakatsue	2.48	46	Pn	Pb	16 10 39.3	-2.6
JTU	Tsushima	3.15	10	Pn	Pb	16 10 50.9	-2.4
JMN	Monobe	4.90	61	Pn	Pn	16 11 11.7	+0.7

JHS	Saijyo	5.11	44		Pn	16 11 15.6	+1.7
KSAR	Wonju Array Be	6.06	353	Pn	Pn	16 11 29.8	+3.0
KSRS	Korea Array	6.07	354	Pn	Pn	16 11 25.2	-1.8
	0.3nm,0.3s,baz=178,slow=15,SNR=5.1						
KSRS				Lg	Lg	16 13 06.6	
	2.2nm,0.3s,baz=175,slow=30,SNR=8.9						
KSRS				LR	LR	16 13 26.1	
	comp=Z,27nm,18.9s,baz=170,slow=35						
KS19	Wonju Array Si	6.12	353	Pn	Pn	16 11 29.9	+2.1
JWT	Wachi	6.77	53	Pn	Pn	16 11 37.3	+0.7
INU	Inuyama	7.94	58	Pn	Pn	16 11 55.3	+2.6
MJAR	Matsushiro Arr	9.37	54	LR	LR	16 16 24.2	
	comp=Z,52nm,20.5s,baz=250,slow=40						
ASAJ	Asahikawa	16.72	37	LR	LR	16 19 54.6	
	comp=Z,22nm,19.2s,baz=171,slow=35						
SONM	Songino Array	23.66	320	LR	LR	16 24 47.2	
	comp=Z,47nm,18.6s,baz=192,slow=38						
TLY	Talaya	27.40	325	LR	LR	16 27 38.9	
	comp=Z,33nm,21.5s,baz=164,slow=39						
CMAR	Chiang Mai Arr	29.85	251	LR	LR	16 29 12.1	
	comp=Z,20nm,21.3s,baz=176,slow=39						
WB0	Warramunga Arr	51.17	173	P	P	16 19 04.4	+3.7
WB0				IAmb	IAmb	16 19 14.2	
	comp=Z,4.0nm,1.2s						
WRA	Warramunga Arr	51.34	173	P	P	16 19 01.3	-0.6
	comp=Z,0.7nm,0.8s,baz=352,slow=8.1,SNR=8.2						
WB2	Warramunga Arr	51.34	173	P	P	16 19 04.4	+2.5
WB2				IAmb	IAmb	16 19 13.8	
	comp=Z,4.2nm,1.4s						
ABKAR	Akbulak array	53.54	311	P	P	16 19 22.2	+4.2
AS31	Alice Springs	54.98	174	P	P	16 19 29.9	+1.1
ASAR	Alice Springs	54.99	174	P	P	16 19 29.3	+0.5
	comp=Z,0.3nm,0.6s,baz=2.4,slow=11,SNR=21						
BPAW	Bear Paw Mtn.	58.03	31	P	P	16 19 51.0	+1.0
BCAR	Beaver Creek A	62.26	31	P	P	16 20 20.4	+1.3
FINES	FINESS Array B	68.61	330	P	P	16 20 59.5	-0.6
	comp=Z,3.2nm,1.0s,baz=52,slow=9.0,SNR=2.3						

FUNV ***18*** *16:24:56.9, 8°.49N×71°.35W, h5^{km}, MW3.2*

ISC 18 16:24:55.2±1.3**, 8°.51N**±0°.04×**71°.38W**±0°.03**, h7**^{km}±11^{km}**,**
n20, σ**0^{s}.94**/31**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.56	113	*e*P	Pg	16 25 05.5	-0.6
SOCV				*e*S	Sg	16 25 13.8	+0.3
SOCV	Socops	0.56	113	*e*P	Pg	16 25 05.8	-0.3
SOCV				*e*S	Sb	16 25 14.7	-1.1
SDV	Santo Domingo	0.83	63	*e*P	Pg	16 25 11.0	-0.1
SDV				*e*S	Sg	16 25 22.6	+0.7
CAPV	Capacho	1.13	235	*e*S	Sb	16 25 33.1	+0.9
PAMC	Pamplona, Colo	1.75	228	*e*P	Pn	16 25 26.5	0.0
PAMC				*e*S	Sb	16 25 51.3	+0.9
OCAC	Ocana	1.94	262	*e*P	Pn	16 25 28.5	-0.3
OCAC				*e*S	Sn	16 25 54.0	+0.5
TAMC	Tame, Arauca	2.10	191	*e*P	Pn	16 25 32.0	+1.1
TAMC				*e*S	Sg	16 26 02.0	-0.8
ELOV	Elorza	2.41	128	*e*P	Pn	16 25 36.3	+1.3
ELOV				*e*S	Sn	16 26 04.7	-0.1
BARC	Barichara	2.61	223	*e*P	Pb	16 25 42.2	-0.3
SIQV	Siquisique	2.63	36	*e*P	Pn	16 25 39.8	+1.6
SIQV				*e*S	Sn	16 26 10.7	+0.2
SMLC	San Martn de	2.68	276	*e*P	Pn	16 25 38.0	-0.8
SMLC				*e*S	Sn	16 26 10.4	-1.2
RUSC	La Rusia	3.10	213	*e*P	Pn	16 25 45.9	+0.8
BAUV	El Baul	3.33	82	*e*P	Pn	16 25 48.2	+0.4
BAUV				*e*S	Sn	16 26 26.7	-0.9
ZARC	Zaragoza, Cauc	3.59	254	*e*S	Sb	16 26 42.9	-0.1
MONV	Montecano	3.69	22	*e*P	Pn	16 25 53.5	+0.7
MONV				*e*S	Sn	16 26 35.7	-0.9
BENV	Beln	4.00	69	*e*P	Pn	16 25 57.9	+0.8
BENV				*e*S	Sn	16 26 42.5	-1.9
UREC	San Jos de Ur	4.18	260	*e*P	Pn	16 26 01.1	+1.6
MOTC	Monteria, Cord	4.25	274	*e*P	Pn	16 26 00.8	+0.4
GUY2C	Guyana, Caldas	5.13	231	*e*P	Pn	16 26 14.3	+1.3
CAPC	Capurgana	5.91	272	*e*P	Pn	16 26 29.7	+6.4

KMA 18 16:42:55.1±0.2**, 36°.20N**×**127°.05E, h14**^{km}±2^{km}**, Error ellipse: s-maj=1.1km s-min=0.9km az=70.0, South Korea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUYB	Buyeo	0.13	304	P	Pg	16 42 58.7	+0.2
	SNR=80						
BUYB				S	Sg	16 43 00.8	0.0
IKSA	Iksan Acc Bore	0.14	177	P	Pg	16 42 59.0	+0.3
KOJ2	Gongju-si	0.28	16	P	Pg	16 43 01.1	+0.2
KOJ2				S	Sg	16 43 05.0	+0.2
KSJEO	Jeonju	0.33	143	P	Pg	16 43 01.9	+0.2
	SNR=35						
KSJEO				S	Sg	16 43 06.6	+0.3
PORA	Boryeong	0.42	288	P	Pg	16 43 03.5	+0.1
OKCB	Cheongsan-myeo	0.62	76	P	Pg	16 43 07.2	0.0
	SNR=14						
MNYD	Munyeodo	0.65	232	P	Pg	16 43 07.5	-0.1
	SNR=13						
SMKB	Mukjeong-gil	0.65	218	P	Pg	16 43 07.7	-0.1
	SNR=18						
KSBON	Boeun	0.67	64	P	Pb	16 43 08.6	-0.1
	SNR=15						
KSJEU	Jeongeup	0.71	188	P	Pg	16 43 08.9	-0.1
	SNR=10						
KSSES	Seosan	0.76	321	P	Pg	16 43 09.7	-0.1
	SNR=9.7						
NAWB	Namwon	0.83	160	P	Pg	16 43 11.0	-0.1
	SNR=9.0						

IDC ***18*** *16:47:03.2±0.6, 6°.20S×103°.80E, h0^{km}, mb4.8/22, mb1 4.9/24, mb1mx4.6/34, mbtmp4.8/24, ML4.2/2, MS3.8/15, Ms1 3.8/15, ms1mx3.5/40, Error ellipse: s-maj=19.9km s-min=12.2km az=46.0*

NEIC ***18*** *16:47:07.4±2.0, 6°.33S±0°.06×103°.66E±0°.06, h30^{km}±3^{km}, mb5.1/67, Error ellipse: s-maj=9.9km s-min=8.0km az=217.0*

DJA ***18*** *16:47:07.5±0.3, 6°S±3°×10°4E±°, h52^{km}±4^{km}, M4.6/33, mb5.0/33, mB5.1/26, MLv5.0/25, Mw(mB)4.5/26*

BJI ***18*** *16:47:07.0±0.0, 6°.40S×103°.70E, h50^{km}, mB5.1/31, mb5.2/59, Ms4.4/18, Ms7 4.3/17*

ISC 18 16:47:07.2±0.7**, 6°.38S**±0°.05×**103°.71E**±0°.04**, h33**^{km}±4^{km}**,**
n299, σ**1^{s}.38**/301**, mb5.1**/76**, MS3.8**/16**, 10C-4D, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KASI	Kota Agung	1.16	43	P	Pn	16 47 27.6	+0.5
KASI				S	Sb	16 47 44.6	+1.2
LWLI	Liwa	1.40	14	P	Pb	16 47 32.0	-0.8
LWLI				S	Sb	16 47 51.6	+1.2
BLSI	Bandar Lampung	1.83	57	P	Pb	16 47 38.4	-1.7
KLI	Kotabumi	1.89	37	P	Pb	16 47 39.4	-1.7
MDSI	Maura Dua	1.94	14	P	Pn	16 47 39.1	+1.2
KLSI		1.96	31	P	Pn	16 47 40.2	+2.0
MNAI	Manna	2.14	340	P	Pn	16 47 41.9	+1.2
MNAI	Manna	2.14	340		Pn	16 47 41.8	+1.2
MNAI	Manna	2.14	340	P	Pn	16 47 42.1	+1.4
SBJI	Serang	2.42	84	P	Pn	16 47 46.1	+1.6
LHSI	Lahat	2.54	356	P	Pn	16 47 48.3	+2.1
TNG	Tangerang	2.93	86	P	Pn	16 47 52.7	+1.2
KSI	Kapahiang	2.93	338	P	Pn	16 47 53.1	+1.5
DBJI	Dramaga	3.03	93	P	Pn	16 47 54.5	+1.6
CBJI	Citeko	3.12	91	P	Pn	16 47 57.4	+3.2
CNJI	Cibinong	3.52	105	P	Pn	16 47 59.7	+0.1
MASI	Maura Aman, Be	3.54	336	P	Pn	16 48 01.5	+1.6
PMBI	Palembang	3.59	17	P	Pn	16 48 02.8	+2.2
PMBI	Palembang	3.59	17	Pn	Pn	16 48 02.8	+2.2
PMBI	Palembang	3.59	17	P	Pn	16 48 03.1	+2.5
LEM	Lembang	3.91	97	Pn	Pn	16 48 07.0	+1.8
	36nm,0.3s,baz=183,slow=17,SNR=36						
LEM				Sn	Sn	16 48 52.6	+2.5
	22nm,0.3s,baz=186,slow=18,SNR=2.9						
LEM				LR	LR	16 50 00.8	
	comp=Z,1µm,20.1s,baz=282,slow=46						
LEM	Lembang	3.91	97	P	Pn	16 48 06.3	+1.2
JMBI	JAMBI	4.72	359	P	Pn	16 48 18.0	+1.9
PPBI	Pangkal Pinang	4.84	30	P	Pn	16 48 19.5	+1.7
CMJI	Cimerak	4.91	107	P	Pn	16 48 19.1	+0.4
PPSI	Pulau Pagai	5.15	314	P	Pn	16 48 22.6	+0.6
	5.9nm4µm324nm,0.6s						
TPI	Tanjungpandan	5.33	48	P	Pn	16 48 26.0	+1.4
DSRI	Dabo	5.93	8	P	Pn	16 48 35.1	+2.3
	0.2nm758nm51nm,0.6s						
RGRI	Rengat	6.15	347	P	Pn	16 48 37.0	+1.2
PDSI	Padang	6.33	329	P	Pn	16 48 37.7	-0.6
	0.4nm1µm44nm,0.4s						
YOGI	Yogyakarta	6.69	103	P	Pn	16 48 44.6	+1.3
	0.5nm118nm,0.8s						
SMRI	Semarang	6.72	96	Pn	Pn	16 48 46.4	+2.7
SISI	Saibi	6.81	317	P	Pn	16 48 45.2	+0.3
	0.6nm931nm51nm,0.6s						
UGM	Wanagama	6.93	103	P	Pn	16 48 48.1	+1.5
	1.6nm5µm401nm,0.5s						
UGM	Wanagama	6.93	103	Pn	Pn	16 48 48.0	+1.5
UGM	Wanagama	6.93	103	P	Pn	16 48 49.0	+2.4
PCJI	Pacitan	7.63	104	P	Pn	16 48 57.1	+1.0
	1.1nm3µm285nm,0.4s						
NGJI	Ngawi	7.76	98	P	Pn	16 49 09.1	+11
MYKOM	Kota Tinggi	8.12	1	Pn	Pn	16 49 04.3	+1.4
MNSI	Mandailing Nat	8.23	330	P	Pn	16 49 05.8	+1.4
COCO	West Island	8.90	229	Pn	Pn	16 49 12.8	-0.8
GSI	Gunungsitoli	9.79	321	P	Pn	16 49 24.9	-0.8
	37nm,0.5s						
GSI	Gunungsitoli	9.79	321	Pn	Pn	16 49 24.1	-1.6
GSI	Gunungsitoli	9.79	321	P	Pn	16 49 24.1	-1.6
GMJI	Gumukmas	9.84	102	P	Pn	16 49 27.9	+1.4
	818nm36nm,0.5s						
BLJI	Banyuglugur	9.91	98	P	Pn	16 49 28.4	+1.0
	1µm54nm,0.5s						
STKI	Sintang	10.06	51	P	Pn	16 49 36.8	+7.3
	5µm20nm,0.8s						
RPSI	Rantau Prapat	10.20	332		Pn	16 49 29.6	-1.9
KMMI	Kalianget	10.21	94	P	Pn	16 49 32.5	+0.9
	60nm,0.9s						
KSM	Kuching	10.21	40	Pn	Pn	16 49 33.4	+1.8
PSI	Prapat	10.30	332	Pn	Pn	16 49 29.6	-3.3
	1.8nm,0.3s,baz=150,slow=22,SNR=5.7						
ABJI	Asem Bagus	10.54	98	P	Pn	16 49 40.8	+4.7
	3µm369nm,0.8s						
JAGI	Jajag, Banyuwa	10.56	102	P	Pn	16 49 36.2	-0.2
	2µm66nm,0.4s						
JAGI	Jajag, Banyuwa	10.56	102	Pn	Pn	16 49 36.3	-0.2
JAGI	Jajag, Banyuwa	10.56	102	P	Pn	16 49 37.4	+1.0
SRBI	Singaraja	11.54	99	P	Pn	16 49 50.8	+1.0
	2µm112nm,0.6s						
IGBI	Denpasar	11.59	103	P	Pn	16 49 51.1	+0.6
	1µm82nm,0.6s						
DNP	Denpasar	11.63	102	P	Pn	16 49 51.7	+0.7
	189nm,0.7s						
MTKI	Muara Teweh, K	12.40	65	P	P	16 50 16.6	+3.5
KBKI	Kotabaru	12.79	77	P	P	16 50 16.0	-1.4
TWSI	Taliwang, Sumb	13.27	101	P	Pn	16 50 11.6	-1.8
	435nm25nm,0.6s						
TWSI				S	Pn	16 50 11.8	-1.6
	435nm25nm,0.6s						
PLAI	Plampang	14.16	101	P	Pn	16 50 23.2	-2.3
	650nm86nm,0.9s						
SMKI	Samarinda	14.71	67	P	P	16 50 43.2	+4.4
KAPI	Kappang	16.02	86	Pn	Pn	16 50 50.1	-0.2
	1.0nm,0.3s,baz=305,slow=8.7,SNR=4.4						
KAPI				LR	LR	16 57 42.9	
	comp=Z,215nm,19.0s,baz=273,slow=40						
KAPI	Kappang	16.02	86		Pn	16 50 50.5	+0.2
BKSI	Bulukumba	16.36	87	P	Pn	16 50 55.1	+0.5
	536nm61nm,1.0s						
TTSI	Tana Toraja	16.39	79	P	P	16 50 56.4	-1.1
	601nm25nm,1.0s						
BNSI	Bone	16.45	84	P	P	16 50 57.0	-1.1
	536nm49nm,1.3s						
BSSI	Bau Bau, Buton	16.69	90	P	Pn	16 50 58.4	-0.3
	11nm,1.1s						
WSI	Waingapu	16.75	102	P	P	16 51 09.3	+7.8
MPSI	Mapaga	17.48	68	P	P	16 51 09.8	+0.2
	23nm,0.7s						
KKM	Kota Kinabalu	17.56	46	P	Pn	16 51 09.5	-0.1
KKM	Kota Kinabalu	17.56	46	P	P	16 51 13.3	+2.8
	22nm,0.9s						
MMRI	Maumere	18.51	98	P	P	16 51 20.9	0.0
	4µm137nm,0.8s						
MMRI	Maumere	18.51	98	P	P	16 51 19.1	-1.8
MMRI				IAmb	IAmb	16 51 22.6	
	comp=Z,119nm,1.0s						
TOLI2	Tolitoli	18.60	67		Pn	16 51 22.9	+0.6
TOLI2	Tolitoli	18.60	67	P	Pn	16 51 23.3	+0.9
APSI	Ampana	18.71	74	P	Pn	16 51 23.4	-0.3
	comp=Z,684nmcomp=Z,86nm,1.0s						
MRSI	Marisa	19.43	70	P	P	16 51 31.3	+0.2
	comp=Z,1µmcomp=Z,125nm,0.6s						
LUWI	Luwuk	19.74	75	P	P	16 51 34.4	-0.1
	comp=Z,849nmcomp=Z,96nm,1.1s						
LUWI	Luwuk	19.74	75	P	P	16 51 35.1	+0.7
LUWI				IAmb	IAmb	16 51 39.6	
	comp=Z,97nm,1.1s						
LUWI	Luwuk	19.74	75	P	Pn	16 51 35.7	-0.4
BATI	Baumata	20.11	102	P	P	16 51 38.9	+0.5
	comp=Z,90nm,0.3s,baz=267,slow=1.8,SNR=67						
BATI				S	S	16 55 14.3	-8.5
	comp=Z,12nm,0.5s,baz=265,slow=21,SNR=2.0						
BATI	Baumata	20.11	102	P	P	16 51 38.5	0.0
	comp=Z,1µmcomp=Z,131nm,0.8s						
GTOI	Gorontalo	20.49	71	P	P	16 51 42.2	-0.4
	comp=Z,11nm,0.6s						
SOEI	Soe	20.63	101	P	P	16 51 43.4	-0.8
	comp=Z,3µmcomp=Z,382nm,0.8s						
SOEI	Soe	20.63	101	P	P	16 51 43.8	-0.4
SOEI	Soe	20.63	101	P	P	16 51 43.5	-0.8
PBA	Port Blair	20.98	329	P	P	16 51 47.6	-0.2
PBA				IAmb	IAmb	16 51 52.2	
	comp=Z,80nm,1.1s						
UBPT	Khong Chiam	21.59	5	P	P	16 51 52.4	-2.0
SANI	Sanana	22.63	80	P	P	16 52 05.3	-0.3
	comp=Z,10nm,0.9s						
FITZ	Fitzroy Crossi	24.36	121	P	P	16 52 22.9	+0.4
	comp=Z,3.1nm,0.5s,baz=284,slow=1.6,SNR=10						
FITZ				LR	LR	17 02 48.1	
	comp=Z,185nm,19.0s,baz=345,slow=39						
FITZ	Fitzroy Crossi	24.36	121	P	P	16 52 22.4	-0.1
	baz=25,SNR=11						
LBMI	Labuha	24.41	77	P	P	16 52 23.1	+0.1
	comp=Z,31nm,0.9s						
MEEK	Meekatharra	24.65	146	P	P	16 52 23.2	-1.8
	baz=25,SNR=3.4						
CM31	Chiang Mai Arr	25.12	349	P	P	16 52 27.8	-1.6
CM31				IAmb	IAmb	16 52 30.6	
	comp=Z,54nm,0.7s						
CMAR	Chiang Mai Arr	25.12	349	P	P	16 52 28.4	-1.0
	comp=Z,43nm,0.8s,baz=182,slow=9.0,SNR=187						
CMAR				PcP	PcP	16 56 05.0	+1.8
	comp=Z,2.2nm,0.8s,baz=206,slow=3.6,SNR=8.6						
CMAR				LR	LR	17 03 56.4	
	comp=Z,154nm,18.0s,baz=211,slow=41						
CMAR	Chiang Mai Arr	25.12	349	P	P	16 52 28.0	-1.3
CHTO	Chiang Mai	25.47	349	P	P	16 52 30.8	-1.7
CHTO				IAmb	IAmb	16 52 33.7	
	comp=Z,25nm,0.8s						
CHTO	Chiang Mai	25.47	349	P	P	16 52 31.4	-1.1
DAV	Davao City (W)	25.59	59	LR	LR	17 03 47.2	
	comp=Z,84nm,20.4s,baz=228,slow=40						
QIZ	Qiongzhong	25.96	13	P	P	16 52 38.6	+1.6
QIZ				S	S	16 57 07.9	+2.4
QIZ				LR	LR		
	comp=Z,260nm,16.2s						
QIZ				LR	LR		
	comp=Z,90nm,14.9s						
KNRA	Kununurra	26.24	113	P	P	16 52 39.3	-0.2
	baz=26,SNR=8.1						
PALK	Pallekele	26.66	300	LR	LR	17 02 49.6	
	comp=Z,141nm,19.1s,baz=228,slow=36						
LQP	Lukban	26.98	41	⇑*e*P	P	16 52 46.0	-0.4
SLVN	Son La	27.54	0	P	P	16 52 50.9	-0.4
MTN	Manton Dam	27.77	105	P	P	16 52 52.8	-0.5
	baz=28,SNR=23						
FAKI	Fak Fak	28.65	84	P	P	16 53 01.3	+0.1
	comp=Z,13nm,1.2s						
KDU	Kakadu	29.03	105	P	P	16 53 03.4	-1.2
	baz=29,SNR=5.0						
H01W3	Cape Leeuwin H	29.95	163	T	T	17 24 26.1	
	baz=340,slow=76,SNR=22						
H01W2	Cape Leeuwin H	29.96	163	T	T	17 24 27.5	
	baz=340,slow=76,SNR=22						
H01W1	Cape Leeuwin H	29.96	163	T	T	17 24 27.4	
	baz=340,slow=76,SNR=24						
WRKA	Warakurna	29.97	131	P	P	16 53 13.6	+0.7
	baz=30,SNR=3.9						
H08S2	Diego Garcia H	31.00	266	T	T	17 25 38.5	
	baz=90,slow=75,SNR=16						
H08S3	Diego Garcia H	31.01	266	T	T	17 25 43.7	
	baz=90,slow=75,SNR=23						
H08S1	Diego Carcia H	31.02	266	T	T	17 25 41.3	
	baz=90,slow=75,SNR=12						
WB0	Warramunga Arr	32.64	117	P	P	16 53 35.8	-0.6
WRA	Warramunga Arr	32.65	117	P	P	16 53 37.0	+0.5
	comp=Z,10nm,0.6s,baz=286,slow=12,SNR=125						
WRA				PcP	PcP	16 56 23.0	+0.8
	comp=Z,0.8nm,0.6s,baz=311,slow=2.2,SNR=2.5						
WRA				LR	LR	17 08 02.2	
	comp=Z,137nm,20.8s,baz=285,slow=39						
WRA	Warramunga Arr	32.65	117	P	P	16 53 36.2	-0.3
WRAB	Tennant Creek	32.66	117	P	P	16 53 36.6	0.0
WRAB				IAmb	IAmb	16 53 37.9	
	comp=Z,17nm,0.7s						
WRAB	Tennant Creek	32.66	117	P	P	16 53 36.7	+0.1
WB2	Warramunga Arr	32.66	117	P	P	16 53 36.7	+0.1
WB2				IAmb	IAmb	16 53 37.9	
	comp=Z,16nm,0.7s						
WR0	Warramunga Arr	32.83	117	P	P	16 53 38.3	+0.2
WR0				IAmb	IAmb	16 53 39.6	
	comp=Z,14nm,0.7s						
AS31	Alice Springs	33.73	124	P	P	16 53 45.6	-0.3
ASAR	Alice Springs	33.73	124	P	P	16 53 46.5	+0.7
	comp=Z,7.0nm,0.8s,baz=304,slow=7.9,SNR=122						
ASAR				LR	LR	17 08 32.0	
	comp=Z,174nm,20.2s,baz=303,slow=38						
ASAR	Alice Springs	33.73	124	P	P	16 53 45.9	0.0
SHL	Shillong	33.77	341	P	P	16 53 45.4	-0.9
TPUB	Ta-pu	33.82	29	P	P	16 53 45.8	-0.8
TPUB				IAmb	IAmb	16 53 48.4	
	comp=Z,38nm,1.5s						
TPUB	Ta-pu	33.82	29	P	P	16 53 46.7	+0.1
YULB	Yu-li	34.22	30	P	P	16 53 50.1	+0.1
YULB				IAmb	IAmb	16 53 56.7	
	comp=Z,17nm,1.2s						
SSLB	Suanglung	34.39	29	P	P	16 53 51.0	-0.5
SSLB	Suanglung	34.39	29	P	P	16 53 51.2	-0.4
YHNB	Yeheng	35.34	29	P	P	16 54 00.3	+0.5
ODAN	Odare	36.63	335	*e*P	P	16 54 11.4	+0.4
	comp=Z,145nm,0.6s						
ENH	Enshi	36.86	8	P	P	16 54 11.1	-1.6
ENH				IAmb	IAmb	16 54 13.4	
	comp=Z,27nm,0.7s						
TAPN	Taplejung	36.93	336	*e*P	P	16 54 14.5	+0.8
	comp=Z,154nm,0.7s						
RAMN	Ramite	37.05	334	*e*P	P	16 54 15.6	+1.0
	comp=Z,81nm,0.5s						
CD2	Chengdu	37.08	0	P	P	16 54 15.4	+0.8
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
CD2				LR	LR		
	comp=Z,330nm,16.9s						
CD2				LR	LR		
	comp=Z,370nm,23.1s						
CD2				LR	LR		
	comp=Z,370nm,12.8s						
QIS	Mount Isa	37.53	116	P	P	16 54 18.4	-0.2
	baz=38,SNR=3.7						
JIRN	Jiri	37.84	334	*e*P	P	16 54 22.3	+0.8
	comp=Z,160nm,0.7s						
LSA	Lhasa	37.85	342	P	P	16 54 22.4	+0.8
LSA				pmax	pmax		
	comp=Z,120nm,0.8s						
LSA	Lhasa	37.85	342	P	P	16 54 21.8	+0.2
LSA				IAmb	IAmb	16 54 23.4	
	comp=Z,26nm,0.7s						
PKI	Pulchoki	38.11	333	*e*P	P	16 54 23.9	+0.2
	comp=Z,41nm,0.7s						
PKIN	Phulchoki	38.12	333	*e*P	P	16 54 23.8	+0.1
	comp=Z,41nm,0.6s						
GUN	Gumba	38.20	334	*e*P	P	16 54 25.2	+0.8
	comp=Z,210nm,0.6s						
DMN	Daman	38.28	333	*e*P	P	16 54 25.8	+0.8
	comp=Z,29nm,0.5s						
KKN	Kakani	38.36	333	*e*P	P	16 54 25.9	+0.3
	comp=Z,109nm,0.7s						
GKN	Gorkha	38.83	333	*e*P	P	16 54 30.1	+0.6
	comp=Z,73nm,0.4s						
KOLN	Koldanda	39.12	331	*e*P	P	16 54 32.7	+0.7
	comp=Z,88nm,0.7s						
DANN	Dangsing	39.53	332	*e*P	P	16 54 36.1	+0.6
	comp=Z,165nm,0.6s						
PYUN	Piuthan	39.69	331	*e*P	P	16 54 37.4	+0.6
	comp=Z,98nm,0.5s						
XAN	Xi'an	40.50	7	P	P	16 54 42.0	-1.2
XAN				pP	pwP	16 54 55.3	+0.5
XAN				pmax	pmax		
	comp=Z,30nm,0.8s						
XAN				pmax	pmax		
	comp=Z,150nm,4.8s						
NJ2	Nanjing	40.86	20	*e*P	P	16 54 47.0	+0.9
NJ2				pmax	pmax		
	comp=Z,22nm,0.5s						
MTSU	Mount Surprise	41.27	110	P	P	16 54 49.8	0.0
	baz=42,SNR=9.8						
HTT	Hallett	42.30	134	P	P	16 54 57.5	-0.6
	baz=42,SNR=6.4						
PMG	Port Moresby	43.12	97	P	P	16 55 04.6	-0.4
PMG	Port Moresby	43.12	97	P	P	16 55 05.2	+0.2
PMG	Port Moresby	43.12	97	P	P	16 55 05.2	+0.2
NDI	New Delhi	43.21	325	*e*P	P	16 55 05.0	-0.4
QLP	Quilpie	43.48	122	P	P	16 55 07.3	-0.4
	baz=44,SNR=4.9						
STKA	Stephens Creek	43.50	131	P	P	16 55 08.9	+1.2
	comp=Z,15nm,0.6s,baz=308,slow=8.0,SNR=59						
STKA				LR	LR	17 14 31.8	
	comp=Z,93nm,21.0s,baz=353,slow=38						
STKA	Stephens Creek	43.50	131	P	P	16 55 07.9	+0.1
	baz=44,SNR=34						
STKA	Stephens Creek	43.50	131	P	P	16 55 07.8	+0.1
JSU	Suzuyama	45.52	33	P	P	16 55 23.2	-0.7
JSU				IAmb	IAmb	16 55 24.1	
	comp=Z,32nm,1.1s						
GTA	Gaotai	45.70	356	⇑P	P	16 55 25.8	+0.5
GTA				PcP	PcP	16 57 04.0	+1.1
GTA				pmax	pmax		
	comp=Z,18nm,1.0s						
GTA				pmax	pmax		
	comp=Z,120nm,6.4s						
GTA				LR	LR		
	comp=Z,130nm,17.9s						
GTA				LR	LR		
	comp=Z,220nm,16.3s						
GTA				LR	LR		
	comp=Z,210nm,19.5s						
CMSA	Cobar Meteorol	46.51	128	P	P	16 55 31.5	-0.2
	baz=47,SNR=14						
BTO	Baotou	47.12	7	*e*P	P	16 55 33.9	-2.4
HHC	Hu-ho-hao-te	47.55	8	⇓*i*P	P	16 55 40.6	+0.9
HHC				pmax	pmax		
	comp=Z,21nm,0.9s						
HHC				pmax	pmax		
	comp=Z,190nm,5.1s						
BJT	Baijiatuau	47.58	13	P	P	16 55 39.7	-0.1
BJT				IAmb	IAmb	16 55 40.8	
	comp=Z,23nm,0.8s						
BJI	Beijing	47.60	13	P	P	16 55 39.8	-0.2
BJI				sP	sP	16 55 53.6	+0.8
BJI				pmax	pmax		
	comp=Z,37nm,0.7s						
KSAR	Wonju Array Be	49.09	26	P	P	16 55 51.6	0.0
KSRS	Korea Array	49.12	26	P	P	16 55 51.7	0.0
	comp=Z,14nm,0.7s,baz=220,slow=7.6,SNR=43						
KS19	Wonju Array Si	49.14	25	P	P	16 55 51.5	-0.4
KS19				IAmb	IAmb	16 55 53.0	
	comp=Z,25nm,0.8s						
NIL	Nilore	49.17	326	P	P	16 55 50.4	-1.9
NIL				IAmb	IAmb	16 56 07.1	
	comp=Z,20nm,0.8s						
JHS	Saijyo	49.63	32	P	P	16 55 55.5	-0.2
CAN	Canberra	50.56	131	P	P	16 56 04.7	+1.8
CAN				IAmb	IAmb	16 56 21.4	
	comp=Z,33nm,1.2s						
JWT	Wachi	51.07	34	P	P	16 56 05.9	-0.7
WMQ	Urumqi	52.03	345	⇑P	P	16 56 14.3	+0.6
WMQ				pP	sP	16 56 27.8	+1.2
WMQ				sP	pwP	16 56 34.0	+8.7
WMQ				PcP	PcP	16 57 28.3	+2.6
WMQ				pmax	pmax		
	comp=Z,52nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,74nm,4.7s						
KSH	Kashi	52.37	333	P	P	16 56 15.3	-1.1
KSH				pP	sP	16 56 29.1	-0.4
KSH				sP	pwP	16 56 33.3	+5.4

KSH				pmax	pmax		
	comp=Z,29nm,0.7s						
TARG	Taragay, Kyrgy	53.42	336	P	P	16 56 24.7	+0.3
TARG				IAmb	IAmb	16 56 40.3	
	comp=Z,20nm,1.3s						
MAT	Matsushiro	53.55	35	P	P	16 56 22.6	-2.4
MJAR	Matsushiro Arr	53.55	35	P	P	16 56 23.1	-1.9
	comp=Z,4.8nm,0.6s,baz=204,slow=7.7,SNR=12						
MJAR	Matsushiro Arr	53.55	35	P	P	16 56 23.4	-1.6
CN2	Changchun	53.68	19	*e*P	P	16 56 24.3	-1.5
CN2				*e*pP	pwP	16 56 36.8	-0.8
CN2				pmax	pmax		
	comp=Z,30nm,1.1s						
KDJ	Kajisay	54.01	336	P	P	16 56 28.7	+0.3
SONM	Songino Array	54.03	2	P	P	16 56 29.2	+0.7
	comp=Z,23nm,0.7s,baz=180,slow=9.2,SNR=139						
SONM				PcP	PcP	16 57 33.6	+0.4
	comp=Z,14nm,1.2s,baz=191,slow=4.1,SNR=8.1						
SONM				LR	LR	17 22 43.4	
	comp=Z,123nm,18.4s,baz=181,slow=40						
SONM	Songino Array	54.03	2	P	P	16 56 28.4	0.0
ULN	Ulaanbaatar	54.09	3	P	P	16 56 28.7	-0.2
ULN				IAmb	IAmb	16 56 30.3	
	comp=Z,16nm,0.8s						
DRK	Karamyk	54.33	330	P	P	16 56 31.3	+0.3
DRK				IAmb	IAmb	16 56 47.7	
	comp=Z,15nm,0.7s						
JSD	Sado	54.65	33	P	P	16 56 32.0	-0.9
GAR	Garm	54.73	328	P	P	16 56 32.6	-1.2
GAR				IAmb	IAmb	16 56 34.9	
	comp=Z,17nm,0.6s						
BOOM	Boomskoye usch	54.82	335	P	P	16 56 33.3	-1.0
BOOM				IAmb	IAmb	16 56 35.4	
	comp=Z,11nm,0.7s						
CHGR	Chuyangaron	55.09	327	P	P	16 56 34.8	-1.6
CHGR				IAmb	IAmb	16 56 39.2	
	comp=Z,20nm,0.9s						
UCH	Uchtor	55.22	334	P	P	16 56 37.9	+0.3
	SNR=9.9						
BTK	Batken	55.27	330	P	P	16 56 37.8	+0.2
BTK				IAmb	IAmb	16 56 52.8	
	comp=Z,12nm,0.7s						
TKM2	Tokmak 2	55.32	335	P	P	16 56 38.7	+0.7
	SNR=8.7						
KBK	Karagaybulak	55.38	334	P	P	16 56 39.2	+0.8
	SNR=20						
AML	Almayashu	55.50	333	P	P	16 56 39.9	+0.3
	SNR=24						
AAK	Ala-Archa	55.56	334	P	P	16 56 40.3	+0.7
	SNR=5.6						
AAK	Ala-Archa	55.56	334	P	P	16 56 38.6	-1.0
HNR	Honiara	55.74	97	P	P	16 56 41.3	0.0
MDJ	Mudanjiang	55.85	22	P	P	16 56 40.4	-1.1
MDJ				pP	pP	16 56 50.8	-0.1
MDJ				PcS	PcS	17 01 36.8	-3.5
MDJ				S	S	17 04 29.3	+2.5
MDJ				sS	sS	17 04 45.9	+3.7
MDJ				pmax	pmax		
	comp=Z,9.0nm,2.0s						
MDJ				pmax	pmax		
	comp=Z,420nm,4.3s						
MDJ				LR	LR		
	comp=Z,200nm,4.8s						
MDJ				LR	LR		
	comp=Z,250nm,4.7s						
MDJ				LR	LR		
	comp=Z,250nm,5.7s						
EKS2	Erkin-Say	55.89	334	P	P	16 56 42.7	+0.7
	SNR=47						
JMM	Marumori	55.94	35	P	P	16 56 41.6	-0.7
USP	Ospenovka	56.06	335	P	P	16 56 43.0	-0.2
	SNR=12						
MK31	Makanchi Array	56.26	342	P	P	16 56 44.0	-0.4
MK31				IAmb	IAmb	16 56 46.7	
	comp=Z,11nm,0.8s						
MKAR	Makanchi Array	56.26	342	P	P	16 56 44.3	-0.1
	comp=Z,13nm,0.5s,baz=149,slow=9.2,SNR=259						
MKAR	Makanchi Array	56.26	342	P	P	16 56 43.9	-0.5
OPO	Ambohidratompo	56.29	252	P	P	16 56 47.7	+2.3
	comp=Z,2.4nm,0.7s,baz=131,slow=11,SNR=2.1						
MAKZ	Makanchi	56.36	342	P	P	16 56 44.3	-0.9
USA0B	Ussuriysk Arra	56.44	24	P	P	16 56 44.5	-1.2
USRK	Ussuriysk Ar.	56.44	24	P	P	16 56 45.5	-0.3
	comp=Z,23nm,0.6s,baz=208,slow=5.8,SNR=80						
USRK	Ussuriysk Ar.	56.44	24	P	P	16 56 44.5	-1.2
KKAR	Karatay Array	57.73	332	P	P	16 56 53.1	-1.8
JTM	Tenmabayashi	58.13	33	P	P	16 56 56.1	-1.6
ERM	Erimo	60.11	33	P	P	16 57 10.9	-0.5
KURK	Kurchatov	60.86	342	P	P	16 57 16.5	+0.2
KURK				IAmb	IAmb	16 57 18.5	
	comp=Z,14nm,0.8s						
GEYT	Alibeck	61.16	320	P	P	16 57 19.7	+1.0
	comp=Z,6.5nm,0.7s,baz=169,slow=8.9,SNR=7.1						
GEYT	Alibeck	61.16	320	P	P	16 57 19.1	+0.3
GEYT				IAmb	IAmb	16 57 20.5	
	comp=Z,7.2nm,0.8s						
ASAJ	Asahikawa	61.28	31	LR	LR	17 22 58.2	
	comp=Z,40nm,19.6s,baz=338,slow=35						
JKA	Kamikawa-asahi	61.28	31	P	P	16 57 18.4	-0.9
JKA				IAmb	IAmb	16 57 19.2	
	comp=Z,17nm,0.8s						
ZAA0	Zalesovo Array	62.17	348	P	P	16 57 24.1	-1.1
ZALV	Zalesovo Beam	62.17	348	P	P	16 57 24.7	-0.4
	comp=Z,13nm,0.4s,baz=158,slow=4.8,SNR=73						
ZALV				LR	LR	17 27 22.8	
	comp=Z,120nm,18.9s,baz=162,slow=39						
ZALV	Zalesovo Beam	62.17	348	P	P	16 57 23.9	-1.3
BRVK	Borovoye	65.63	339	P	P	16 57 46.7	-1.3
BRVK				IAmb	IAmb	16 57 48.5	
	comp=Z,12nm,0.8s						
MAW	Mawson	67.04	196	LR	LR	17 21 56.6	
	comp=Z,148nm,19.9s,baz=31,slow=31						
ABKAR	Akbulak array	67.24	331	P	P	16 57 58.1	-0.2
ARU	Arti	72.69	336	P	P	16 58 31.4	-0.2
ARU				IAmb	IAmb	16 58 32.9	
	comp=Z,19nm,1.0s						
KBZ	Khabaz	74.02	319	P	P	16 58 40.8	+1.1
	comp=Z,11nm,0.8s,baz=113,slow=5.3,SNR=26						
PETK	Petropavlovsk-	74.68	30	P	P	16 58 42.3	-1.1
	comp=Z,4.3nm,0.9s,baz=238,slow=8.2,SNR=2.3						
PETK	Petropavlovsk-	74.68	30	P	P	16 58 42.9	-0.6
PET	Petropavlovsk	75.12	31	P	P	16 58 45.2	-0.7
NRIK	Noril'sk	76.37	354	P	P	16 58 52.3	-0.4
	comp=Z,6.3nm,0.3s,baz=140,slow=3.3,SNR=23						
NRIK				LR	LR	17 35 42.2	
	comp=Z,92nm,19.3s,baz=158,slow=38						
NRIK	Noril'sk	76.37	354	P	P	16 58 52.4	-0.4
NRIK				IAmb	IAmb	16 58 53.3	
	comp=Z,11nm,0.9s						
BOSA	Boshof	76.85	242	P	P	16 58 57.9	+1.3
	comp=Z,2.4nm,0.9s,baz=97,slow=3.7,SNR=3.9						
BOSA	Boshof	76.85	242	P	P	16 58 57.7	+1.1
BOSA				IAmb	IAmb	16 59 17.8	
	comp=Z,45nm,1.8s						
VNDA	Vanda	77.18	169	LR	LR	17 30 17.2	
	comp=Z,48nm,19.6s,baz=330,slow=34						
BRTR	Keskin Array B	78.99	312	P	P	16 59 09.2	+0.9
	comp=Z,1.8nm,0.6s,baz=142,slow=6.3,SNR=4.7						
BRTR	Keskin Array B	78.99	312	P	P	16 59 08.4	+0.1
KLMR	Klimovskoe	83.36	334	*e*P	P	16 59 27.7	-3.1
KLMR				AMP		16 59 33.8	
	comp=Z,24nm,1.5s						
KLMR				*e*pP	sP	16 59 44.5	+0.3
KLMR				*e*PP	PP	17 02 36.8	-6.2
QSPA	South Pole Qui	83.61	180	P	P	16 59 33.2	+1.1
SORM	Soroca	85.05	319	⇑P	P	16 59 40.8	+1.1
AKASG	Malin Array Be	85.19	322	P	P	16 59 40.7	+0.4
	comp=Z,4.5nm,0.6s,baz=94,slow=4.6,SNR=26						
AKASG				PP	PP	17 02 58.0	-0.2
	comp=Z,0.4nm,0.5s,baz=87,slow=6.7,SNR=4.1						
AKASG	Malin Array Be	85.19	322	P	P	16 59 39.8	-0.5
AKBB	Malin Array Si	85.19	322	P	P	16 59 40.0	-0.2
AKBB				IAmb	IAmb	16 59 41.6	
	comp=Z,7.0nm,0.7s						
VRI	Vrincioaia	85.56	317	⇑P	P	16 59 44.0	+1.7
TESR	Tescani	85.76	318	⇑P	P	16 59 45.0	+1.7
MLR	Muntele Rosu	86.00	316	⇑P	P	16 59 42.6	-2.0
PRAR	RASCA	86.25	318	⇓P	P	16 59 47.2	+1.6
BURAR	Bucovina Array	86.97	318	⇑P	P	16 59 51.4	+2.1
BURAR	Bucovina Array	86.97	318	P	P	16 59 50.8	+1.5
BURAR				IAmb	IAmb	16 59 52.7	
	comp=Z,8.9nm,0.7s						
BUR08	Bucovina Ar. S	86.99	318		P	16 59 51.2	+1.8
BUR08				IAmb	IAmb	16 59 52.6	
	comp=Z,8.0nm,0.8s						
NACGM	Naroch	87.72	326	*i* P	P	16 59 53.1	+0.5
DEV	Deva	88.17	316	⇑P	P	16 59 57.0	+2.0
HERR	Herculane	88.32	315	⇓P	P	16 59 52.8	-2.9
MDVR	Moldovita	88.79	315	⇓P	P	16 59 59.2	+1.2
BZS	Buzias	89.01	316	⇑P	P	17 00 00.1	+1.2
SNAA	Sanae	89.13	198	P	P	17 00 00.2	+1.1
KOLS	Kolonicke sedl	89.16	319	*e*P	P	17 00 01.7	+2.1
FINES	FINESS Array B	89.69	332	P	P	17 00 02.8	+1.0
	comp=Z,3.1nm,0.6s,baz=111,slow=6.3,SNR=19						
VNA2	Neumayer--Watz	90.77	198	P	P	17 00 09.5	+2.8
ARCES	ARCESS Array B	91.83	340	P	P	17 00 11.6	+0.1
	comp=Z,2.3nm,0.8s,baz=106,slow=5.5,SNR=12						
NVAR	Mina Array Bea	130.42	44	PKP	PKiKP	17 06 15.8	-0.2
	comp=Z,0.7nm,0.6s,baz=285,slow=1.3,SNR=4.1						
NVAR	Mina Array Bea	130.42	44		PKPdf	17 06 14.7	-0.5
SCHQ	Schefferville	131.09	353	PKP	PKiKP	17 06 16.9	+0.3
	comp=Z,2.7nm,0.6s,baz=11,slow=5.2,SNR=1.7						
PLCA	Paso Flores	132.82	186	PKP	PKiKP	17 06 22.1	+1.4
	comp=Z,1.6nm,1.0s,baz=333,slow=2.3,SNR=1.7						
PDAR	Pinedale Array	133.37	34	PKP	PKiKP	17 06 21.4	-0.5
	comp=Z,0.4nm,0.6s,baz=49,slow=2.0,SNR=4.6						
PDAR	Pinedale Array	133.37	34	PKPdf	PKPdf	17 06 19.2	-1.4
T35A	Sooner Cattle	144.44	28	PKPdf	PKPab	17 06 38.9	0.0
SFIN	Lafayette	144.79	14	P	PKPbc	17 06 40.3	+0.2
	baz=341						
M54A	Oil Creek Stat	144.89	4	P	PKPab	17 06 40.2	-0.2
	baz=354						
QUOK	Quay	144.94	29	PKPdf	PKPab	17 06 40.0	-0.8
WMOK	Wichita Mounta	144.98	33	P	PKPab	17 06 40.9	-0.1
	baz=319						
WMOK	Wichita Mounta	144.98	33	PKPdf	PKPab	17 06 40.5	-0.5
R40A	Maddies Statio	145.09	22		PKPbc	17 06 39.6	-1.5
N54A	Moraine State	145.41	5	P	PKPbc	17 06 42.2	0.0
	baz=354						
PAL	Palisades	145.46	357	P	PKPdf	17 06 42.3	0.0
	baz=4.2						
TXAR	Lajitas Array	145.54	45	PKPbc	PKPab	17 06 44.1	+0.8
	comp=Z,16nm,0.7s,baz=292,slow=1.3,SNR=154						
TXAR	Lajitas Array	145.54	45		PKPab	17 06 43.8	+0.5
TUL1	Leonard	145.59	29	P	PKPab	17 06 43.7	+0.6
	baz=324						
N59A	State Game Lan	145.61	359	P	PKPab	17 06 43.1	0.0
	baz=1.0						
CCM	Cathedral Cave	145.67	21	P	PKPdf	17 06 42.7	0.0
	baz=333						
CCM	Cathedral Cave	145.67	21		PKPdf	17 06 42.8	0.0
SSPA	Standing Stone	145.86	2	P	PKPbc	17 06 43.8	+0.2
	baz=357						
ABTX	Abilene, Hawle	146.02	37	P	PKPab	17 06 45.2	+0.3
	baz=315						
O56A	Blue Knob Stat	146.20	3	P	PKPbc	17 06 44.8	+0.1
	baz=356						
P52A	Corning	146.48	8	P	PKPbc	17 06 44.9	-0.6
	baz=350						
U40A	Yellville	146.53	25	P	PKPbc	17 06 45.5	-0.2
	baz=329						
P60A	Greenville	146.71	359	P	PKPbc	17 06 46.3	+0.2
	baz=1.3						
MCWV	Mont Chateau	146.72	5	P	PKPab	17 06 47.0	-0.3
	baz=354						
WCI	Wyandotte Cave	147.02	15	P	PKPbc	17 06 46.8	-0.3
	baz=342						
JCT	Junction City	147.41	40	P	PKPbc	17 06 49.0	+0.6
	baz=313						
MIAR	Mount Ida	147.75	27	P	PKPbc	17 06 49.4	+0.2
	baz=327						
MIAR	Mount Ida	147.75	27	PKPbc	PKPbc	17 06 49.3	+0.1
R53A	Hurricane	147.78	8	PKPbc	PKPbc	17 06 48.0	-1.2
WVT	Waverly	148.56	18	P	PKPbc	17 06 51.4	+0.2
	baz=338						
WVT	Waverly	148.56	18	PKPbc	PKPbc	17 06 50.6	-0.6
KMSC	Kings Mountain	151.00	9	P	PKPbc	17 06 57.5	+0.2
	baz=350						
GOGA	Godfrey	152.29	13	P	PKiKP	17 07 00.7	+0.1
	baz=345						

*TAP **18** 17:00:20.7, 24°.78N×122°.26E, h15^{km}, ML2.9, C*
*JMA **18** 17:00:21.7, 24°.74N×122°.26E, h35^{km}, M1.9*
ISC 18 17:00:20.0±1.0**, 24°.79N**±0°.02×**122°.30E**±0°.02**, h15**^{km}±8^{km}**,**
n64, σ0^{s}.58/118**, 1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EGS		0.34	280	*i* P	Pg	17 00 27.1	+0.1
	baz=283						
EGS				*i* S	Sb	17 00 32.4	-0.5
	baz=283						
TWB1	Santiao Chiao	0.36	308	*i* P	Pg	17 00 27.3	-0.1
	baz=313						
TWB1				*i* S	Sg	17 00 31.5	-0.9
	baz=313						
NTC	Toucheng	0.43	279	*e*P	Pg	17 00 28.7	0.0
	baz=282						
NTC				S	Sb	17 00 35.3	-0.3
	baz=282						
TWC	Suao	0.44	247	*i* P	Pg	17 00 28.9	0.0
	baz=254						
TWC				*i* S	Sg	17 00 34.3	-0.6
	baz=254						
TIPB	Shuangxi	0.47	294	*i* P	Pg	17 00 29.6	+0.2
	baz=301						
TIPB				*i* S	Sg	17 00 36.0	+0.3
	baz=301						
ILA	Ilan	0.50	268	*i* P	Pb	17 00 30.7	+0.2
	baz=270						
ILA				*i* S	Sb	17 00 37.3	-0.3
	baz=270						
NWF	Wu-fen Shan	0.55	301	*i* P	Pn	17 00 32.3	-1.1
	baz=303						
NWF				*i* S	Sb	17 00 40.0	+0.8
	baz=303						
WFSB	Wu-fen Shan	0.55	301	P	Pn	17 00 32.3	-1.0
	baz=303						
WFSB				S	Sb	17 00 40.1	+1.1
	baz=303						
NDS	Dongshan	0.55	254	*i* P	Pb	17 00 31.2	-0.1
	baz=251						
NDS				*i* S	Sg	17 00 37.8	-0.4
	baz=251						
TWE	Neicheng	0.58	264	*i* P	Pg	17 00 31.2	-0.2
	baz=266						
TWE				S	Sb	17 00 39.6	-0.2
	baz=266						
EWUT	Wuta	0.58	235	P	Pg	17 00 31.5	+0.1
	baz=236						
EWUT				*i* S	Sg	17 00 38.9	-0.3
	baz=236						
ENA	Nanau	0.62	235	*i* P	Pg	17 00 32.2	+0.1
	baz=234						
ENA				S	Sg	17 00 39.9	-0.5
	baz=234						
JYNG	Yonagunijimaku	0.68	119	P	Pn	17 00 34.8	-0.2
JYNG				*e*S	Sn	17 00 44.3	-1.0
TWA	Mucha	0.68	287	⇓*i*P	Pn	17 00 34.5	-0.6
	baz=280						
TWA				S	Sb	17 00 43.4	+0.6
	baz=280						
ENTT	Nioudou	0.68	258	*i* P	Pb	17 00 33.6	0.0
	baz=258						
ENTT				*i* S	Sb	17 00 43.0	+0.2
	baz=258						
NWLT	Wulai	0.72	270	P	Pg	17 00 34.3	+0.1
	baz=271						
NWLT				*i* S	Sb	17 00 43.6	-0.5
	baz=271						
NHDH	Xindian Distri	0.72	284	*i* P	Pn	17 00 35.7	0.0
	baz=278						
NHDH				S	Sn	17 00 45.5	-1.0
	baz=278						
YOJ	Yonaguni jima	0.72	116	P	Pn	17 00 35.6	0.0
	baz=114						
YOJ				S	Sn	17 00 46.1	-0.4
	baz=114						
YOJ	Yonaguni jima	0.72	116	P	Pn	17 00 35.7	0.0
YOJ				*e*S	Sn	17 00 46.2	-0.4
NDT	Datong Townshi	0.74	256	*i* P	Pg	17 00 34.6	+0.2
	baz=263						
NDT				S	Sg	17 00 44.5	+0.4
	baz=263						
YM01	YM01	0.75	299	P	Pn	17 00 35.5	-0.7
	baz=300						
YM01				S	Sg	17 00 45.6	+1.0
	baz=300						
TWY	Chenhua	0.80	308	*i* P	Pn	17 00 36.4	-0.3
	baz=309						
TWY				*i* S	Sn	17 00 47.3	-1.1
	baz=309						
ANP	Anpu	0.81	300	*e*P	Pn	17 00 36.9	-0.1
	baz=301						
ANP				*e*S	Sb	17 00 46.5	-0.2
	baz=301						
YHNB	Yeheng	0.85	262	P	Pb	17 00 36.5	0.0
	baz=275						
YHNB				S	Sg	17 00 48.0	+0.4
	baz=275						
NTST	Danshui	0.86	296	*e*P	Pn	17 00 37.9	+0.4
	baz=307						
NTST				*e*S	Sn	17 00 49.5	-0.3
	baz=307						
NSK	Sanguang	0.86	263	*i* P	Pb	17 00 36.5	-0.2
	baz=275						
NSK				S	Sb	17 00 47.9	-0.2
	baz=275						
PCYT	Pengchaiyu	0.86	346	*e*P	Pb	17 00 36.6	-0.2
	baz=347						
PCYT				S	Sg	17 00 49.0	+0.8
	baz=347						
ETL	Fush Village	0.88	225	P	Pb	17 00 36.8	-0.1
	baz=235						
ETL				S	Sg	17 00 48.7	+0.1
	baz=235						
NACB	Ninganchiao	0.88	227	P	Pb	17 00 37.0	-0.1
	baz=227						
NACB				S	Sb	17 00 47.9	-0.8
	baz=227						
NNSB	Datong	0.91	247	*e*P	Pb	17 00 37.5	0.0
	baz=238						
NNSB				S	Sb	17 00 49.2	-0.2
	baz=238						
NNS	Nan Shan	0.91	248	*i* P	Pg	17 00 37.7	0.0
	baz=239						
NNS				S	Sg	17 00 50.0	+0.4
	baz=239						
ETLH	Xiulin Townshi	0.94	232	P	Pg	17 00 38.4	+0.1
	baz=233						
ETLH				S	Sg	17 00 50.6	0.0
	baz=233						
HWA	Hwalien	1.02	218	P	Pg	17 00 40.0	+0.2
	baz=232						
HWA				*e*S	Sn	17 00 56.4	+2.6
	baz=232						
FUSS	Fushou	1.10	241	*i* P	Pg	17 00 41.9	+0.6
	baz=243						
FUSS				*i* S	Sg	17 00 56.0	+0.2
	baz=243						
WHF	Hehuan Shan	1.14	236	*i* P	Pn	17 00 41.8	0.0
	baz=238						
WHF				S	Sb	17 00 56.4	0.0
	baz=238						
TWT	Tachien	1.15	243	*i* P	Pg	17 00 42.7	+0.4
	baz=236						
TWT				S	Sg	17 00 57.9	+0.6
	baz=236						
TDCB	Techi	1.17	243	P	Pg	17 00 42.9	+0.4
	baz=236						
TDCB				S	Sg	17 00 57.9	+0.1
	baz=236						
LIOB	Emei	1.18	263	P	Pg	17 00 42.9	+0.2
	baz=257						
LIOB				*e*S	Sg	17 00 59.0	+1.0
	baz=257						
NSTT	Nanjuang	1.19	263	P	Pg	17 00 43.1	+0.1
	baz=256						
NSTT				S	Sg	17 00 59.8	+1.3
	baz=256						
SBCB	Hsinchu	1.19	271	*e*P	Pb	17 00 42.6	+0.2
	baz=291						
SBCB				*e*S	Sg	17 00 58.4	-0.2
	baz=291						
ESL	Shilin	1.25	219	P	Pb	17 00 43.6	+0.3
	baz=239						
ESL				S	Sg	17 01 00.6	+0.3
	baz=239						
CHGB	Renai	1.25	235	P	Pg	17 00 44.2	0.0
	baz=238						
CHGB				*e*S	Sg	17 01 00.2	-0.4
	baz=238						
OWD	Renai	1.32	231	P	Pg	17 00 45.6	+0.2
	baz=242						
OWD				S	Sg	17 01 01.9	-0.6
	baz=242						
WHP	Taichung City	1.33	248	P	Pg	17 00 45.5	-0.2
	baz=251						
WHP				S	Sg	17 01 03.1	0.0
	baz=251						
EGFH	Guangfu	1.37	216	*e*P	Pn	17 00 44.6	+0.1
	baz=198						
IRIF	Iriomote-Funau	1.38	109	P	Pb	17 00 45.7	+0.2
NMLH	Miaoli	1.39	260	*e*P	Pg	17 00 47.7	+0.9
	baz=263						
NMLH				*e*S	Sg	17 01 06.6	+1.6
	baz=263						
TWQ1	Liyutan	1.46	253	P	Pb	17 00 47.2	+0.4
	baz=256						
TWQ1				*e*S	Sb	17 01 05.8	+0.6
	baz=256						
WCS	Beigang Elemen	1.46	240	*e*P	Pg	17 00 47.7	-0.4
	baz=244						
WCS				*e*S	Sb	17 01 06.0	+0.8
	baz=244						
HGSD	Ruisui	1.52	212	P	Pb	17 00 48.2	+0.4
	baz=195						
HGSD				*e*S	Sb	17 01 06.6	-0.2
	baz=195						
EHY	Hungye	1.56	215	P	Pb	17 00 48.1	-0.5
	baz=195						
EHY				*e*S	Sb	17 01 07.4	-0.6
	baz=195						
SMLT	Sun Moon Lake	1.56	235	*e*P	Pb	17 00 48.5	-0.1
	baz=238						
SMLT				*e*S	Sb	17 01 08.4	+0.1
	baz=238						
SSLB	Suanglung	1.58	231	P	Pg	17 00 49.7	-0.7
	baz=233						
TYC	Yuchr	1.58	237	*e*P	Pb	17 00 49.5	+0.6
	baz=240						
TYC				*e*S	Sb	17 01 08.7	0.0
	baz=240						
JKRS	Kuro-shima	1.65	109	P	Pn	17 00 48.8	+0.3
YULB	Yu-li	1.66	214	*e*P	Pn	17 00 48.5	-0.1
	baz=214						
YULB				*e*S	Sb	17 01 10.8	-0.3
	baz=214						
JIJ	Ishigaki jima	1.73	104	P	Pb	17 00 51.8	+0.3
JIJ				*e*S	Sb	17 01 13.1	0.0
FULB	Fuli	1.83	210	*e*P	Pn	17 00 51.8	+0.8
	baz=193						
ALS	Alishan	1.86	227	*e*P	Pb	17 00 54.0	+0.1
	baz=210						
CHN5	Tsauling	1.89	232	*e*P	Pb	17 00 54.5	+0.2
	baz=233						
ELDTW	Lidau	1.97	217	*e*P	Pn	17 00 54.2	+1.2
	baz=202						
EDH	Donghe	2.02	207	*e*P	Pn	17 00 53.1	-0.5
	baz=191						
EDH				*e*S	Sn	17 01 18.2	-0.3
	baz=191						
TPUB	Ta-pu	2.12	226	*e*P	Pb	17 00 57.4	-0.8
	baz=210						
WTP	Ta-pu	2.17	225	*e*P	Pb	17 00 57.6	-1.5
	baz=210						

*KRSC **18** 17:11:53.5±0.8, 56°.17N×162°.84E, h35^{km}±9^{km}, ML4.6*
*MOS **18** 17:11:55.1±0.8, 56°.27N×162°.72E, h46^{km}, mb4.3/8, Error ellipse: s-maj=8.8km s-min=4.3km az=69.7*
*NEIC **18** 17:11:59.2±1.5, 56°.2N±0°.1×162°.2E±0°.2, h57^{km}±9^{km}, mb4.2/19, Error ellipse: s-maj=20.8km s-min=14.3km az=142.0*
*IDC **18** 17:12:00.0±3.5, 56°.23N×162°.28E, h63^{km}±33^{km}, mb3.4/10, mb1 3.6/13, mb1mx3.4/46, mbtmp3.8/13, ML4.0/3, MS3.1/5, Ms1 3.1/5, ms1mx2.8/40, Error ellipse: s-maj=22.5km s-min=19.1km az=127.0*
ISC 18 17:11:55.9±0.7**, 56°.22N**±0°.03×**162°.64E**±0°.03**, h26**^{km}±5^{km}**,**
n146, σ1^{s}.57/170**, mb4.1**/23**, 1C-2D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBG	Krutoberegovo	0.05	47	PN	Pb	17 12 00.0	-0.4
KBG	Krutoberegovo	0.05	47	*e*P	Pb	17 12 00.0	-0.4
KBG				*e*S	Sb	17 12 04.0	+0.5

KBTR	Krutoberegovo	0.10	98	PN	Pb	17 12 00.3	-0.4
KBTR	Krutoberegovo	0.10	98	*e*P	Pb	17 12 00.3	-0.4
SMKR	Semkarok	0.75	299	PN	Pb	17 12 09.3	-1.0
SMKR	Semkarok	0.75	299	*e*P	Pb	17 12 09.3	-1.0
BDR	Baidarnaya	0.87	294	PN	Pn	17 12 11.6	-0.8
BDR	Baidarnaya	0.87	294	*i* P	Pn	17 12 11.6	-0.8
SRKR	Sorokina	0.93	298	PN	Pn	17 12 12.3	-0.9
SRKR	Sorokina	0.93	298	*e*P	Pn	17 12 12.3	-0.9
ZLN	Zelenaya	1.05	259	PN	Pn	17 12 14.9	0.0
ZLN	Zelenaya	1.05	259	*e*P	Pn	17 12 14.9	0.0
CIRR	Tsirk	1.06	265	PN	Pn	17 12 14.9	-0.3
CIRR	Tsirk	1.06	265	*e*P	Pn	17 12 14.9	-0.3
LGNR	Loginova	1.10	263	PN	Pn	17 12 15.6	-0.2
LGNR	Loginova	1.10	263	*e*P	Pn	17 12 15.6	-0.2
KLY	Klyuchi	1.11	275	PN	Pn	17 12 13.4	-2.3
KLY				S	Sn	17 12 27.7	-2.4
KLY	Klyuchi	1.11	275	*e*P	Pn	17 12 13.4	-2.3
KLY				*e*S	Sn	17 12 27.7	-2.4
BZGR	Bezymyannyi-Gr	1.13	256	PN	Pn	17 12 15.8	-0.2
BZGR				S	Sn	17 12 30.7	0.0
BZGR	Bezymyannyi-Gr	1.13	256	*i* P	Pn	17 12 15.8	-0.2
BZGR				*e*S	Sn	17 12 30.7	0.0
BZWR	Bezymyannyi-We	1.23	259	PN	Pn	17 12 17.3	-0.2
BZWR	Bezymyannyi-We	1.23	259	*e*P	Pn	17 12 17.3	-0.2
KIRR	Kirishev	1.32	259	PN	Pn	17 12 18.6	0.0
KIRR				S	Sb	17 12 36.7	+0.2
KIRR	Kirishev	1.32	259	*e*P	Pn	17 12 18.6	0.0
KIRR				*e*S	Sb	17 12 36.7	+0.2
KPT	Kopyto	1.38	260	PN	Pn	17 12 19.5	0.0
KPT				S	Sb	17 12 38.8	+0.5
KPT	Kopyto	1.38	260	*e*P	Pn	17 12 19.5	0.0
KPT				*e*S	Sb	17 12 38.8	+0.5
KMNR	Kamenistaya	1.43	252	PN	Pn	17 12 20.5	+0.4
KMNR				S	Sn	17 12 39.6	+1.5
KMNR	Kamenistaya	1.43	252	*e*P	Pn	17 12 20.5	+0.4
KMNR				*e*S	Sn	17 12 39.6	+1.5
KOZ	Kozyrevsk	1.56	265	PN	Pn	17 12 22.8	+1.0
KOZ				S	Sb	17 12 44.1	+0.8
KOZ	Kozyrevsk	1.56	265	*e*P	Pn	17 12 22.8	+1.0
KOZ				*e*S	Sb	17 12 44.1	+0.8
TUMR	Tumrok	1.70	237	PN	Pn	17 12 24.6	+0.8
TUMR				S	Sb	17 12 46.8	-0.6
TUMR	Tumrok	1.70	237	*e*P	Pn	17 12 24.6	+0.8
TUMR				*e*S	Sb	17 12 46.8	-0.6
MKZ	Mys Kozlova	1.75	198	PN	Pn	17 12 24.2	-0.2
MKZ				S	Sn	17 12 44.4	-1.4
MKZ	Mys Kozlova	1.75	198	*e*P	Pn	17 12 24.2	-0.2
MKZ				*e*S	Sn	17 12 44.4	-1.4
BKI	Bering	2.14	117	PN	Pn	17 12 29.0	-0.8
BKI				S	Sn	17 12 53.9	-1.6
BKI	Bering	2.14	117	*e*P	Pn	17 12 29.0	-0.8
BKI				*e*S	Sn	17 12 53.9	-1.6
ESO	Esso	2.23	264	PN	Pb	17 12 37.1	+1.7
ESO	Esso	2.23	264	*e*P	Pb	17 12 37.1	+1.7
KII	Karymskiy	2.86	221	PN	Pn	17 12 41.1	+1.4
KII	Karymskiy	2.86	221	*e*P	Pn	17 12 41.1	+1.4
OSSR	Ossora	3.04	4	PN	Pn	17 12 42.8	+0.6
OSSR				S	Sn	17 13 18.8	+1.1
OSSR	Ossora	3.04	4	*e*P	Pn	17 12 42.8	+0.6
OSSR				*e*S	Sn	17 13 18.8	+1.1
PALN	Palana	3.21	335	PN	Pn	17 12 46.5	+2.0
PALN	Palana	3.21	335	*e*P	Pn	17 12 46.5	+2.0
SPN	Mys Shipunski	3.48	207	PN	Pn	17 12 47.7	-0.5
SPN				S	Sn	17 13 29.0	+0.5
SPN	Mys Shipunski	3.48	207	*e*P	Pn	17 12 47.7	-0.5
SPN				*e*S	Sn	17 13 29.0	+0.5
NLC	Nalytchevo	3.61	213	PN	Pn	17 12 51.5	+1.6
NLC				S	Sn	17 13 33.0	+1.4
NLC	Nalytchevo	3.61	213	*e*P	Pn	17 12 51.5	+1.6
NLC				*e*S	Sn	17 13 33.0	+1.4
SDLR	Sedlovina	3.67	218	PN	Pn	17 12 52.1	+1.2
SDLR	Sedlovina	3.67	218	*e*P	Pn	17 12 52.1	+1.2
KRER	Koryakskii	3.69	219	PN	Pn	17 12 53.0	+1.7
KRER	Koryakskii	3.69	219	*e*P	Pn	17 12 53.0	+1.7
SMAR	Somma	3.71	218	PN	Pn	17 12 52.6	+1.1
SMAR	Somma	3.71	218	*e*P	Pn	17 12 52.6	+1.1
GNL	Ganaly	3.71	229	PN	Pn	17 12 53.1	+1.6
GNL	Ganaly	3.71	229	*e*P	Pn	17 12 53.1	+1.6
AVH	Avacha	3.73	219	PN	Pn	17 12 53.4	+1.7
AVH	Avacha	3.73	219	*e*P	Pn	17 12 53.4	+1.7
KOK	Koryaka	3.74	220	PN	Pn	17 12 53.7	+1.8
KOK	Koryaka	3.74	220	*e*P	Pn	17 12 53.7	+1.8
UGLR	Uglovaya	3.75	218	PN	Pn	17 12 53.4	+1.4
UGLR	Uglovaya	3.75	218	*e*P	Pn	17 12 53.4	+1.4
DALK	Dalny	3.92	217	PN	Pn	17 12 55.1	+0.9
DALK				S	Sn	17 13 40.3	+1.1
DALK	Dalny	3.92	217	*e*P	Pn	17 12 55.1	+0.9
DALK				*e*S	Sn	17 13 40.3	+1.1
PET	Petropavlovsk	3.96	218	⇓*i*PN	Pn	17 12 56.2	+1.5
PET				*e*S	Sn	17 13 41.8	+1.6
PET				pmax	pmax		
	comp=Z,189nm,0.7s						
PET				smax	smax		
	comp=N,370nm,0.7s						
PET				smax	smax		
	comp=E,425nm,0.6s						
PET				MLR	MLR		
	comp=Z,200nm,15.0s						
PET	Petropavlovsk	3.96	218	*e*P	Pn	17 12 56.2	+1.5
PET				*e*S	Sn	17 13 41.9	+1.7
PET	Petropavlovsk	3.96	218		Pn	17 12 55.8	+1.1
PEA0B	Petropavlovsk-	4.24	225	⇓*e*PN	Pn	17 13 00.2	+1.5
PEA0B	Petropavlovsk-	4.24	225		Pn	17 13 00.3	+1.7
PETK	Petropavlovsk-	4.24	225	P	Pn	17 12 59.3	+0.6
	comp=Z,7.0nm,0.3s,baz=67,slow=15,SNR=154						
PETK				S	Sn	17 13 52.2	+5.0
	comp=Z,1.4nm,0.3s,baz=293,slow=38,SNR=1.2						
PETK				LR	LR	17 15 01.5	
	comp=Z,152nm,18.6s,baz=46,slow=44						
PETK	Petropavlovsk-	4.24	225	*e*PN	Pn	17 12 59.5	+0.8
PETK				pmax	pmax		
	comp=Z,7.0nm,0.3s						
KRMR	Karymshinskiy	4.30	220	PN	Pn	17 13 01.6	+2.2
KRMR	Karymshinskiy	4.30	220	*e*P	Pn	17 13 01.6	+2.2
RUS	Russkaya	4.50	214	PN	Pn	17 13 03.2	+1.0
RUS				S	Sn	17 13 54.6	+1.0
RUS	Russkaya	4.50	214	*e*P	Pn	17 13 03.2	+1.0
RUS				*e*S	Sn	17 13 54.6	+1.0
GRL	Gorelyy	4.54	218	PN	Pn	17 13 05.7	+2.7
GRL	Gorelyy	4.54	218	*e*P	Pn	17 13 05.7	+2.7
MTVR	Mutnovka	4.56	217	PN	Pn	17 13 05.8	+2.5
MTVR	Mutnovka	4.56	217	*e*P	Pn	17 13 05.8	+2.5
APC	Apacha	4.59	226	PN	Pn	17 13 04.4	+0.9
APC	Apacha	4.59	226	*e*P	Pn	17 13 04.4	+0.9
TILK	Tilichiki	4.62	22	PN	Pn	17 13 05.4	+1.6
TILK				S	Sn	17 14 00.3	+3.8
TILK	Tilichiki	4.62	22	*e*P	Pn	17 13 05.4	+1.6
TILK				*e*S	Sn	17 14 00.3	+3.8
KDTR	Khodutka, Kamc	5.18	213	PN	Pn	17 13 12.3	+0.8
KDTR	Khodutka, Kamc	5.18	213	*e*P	Pn	17 13 12.3	+0.8
KDTR				*e*S	Sn	17 14 11.4	+1.1
KMSK	Kamenskaya	6.52	15	PN	Pn	17 13 32.1	+2.2
KMSK	Kamenskaya	6.52	15	*e*P	Pn	17 13 32.1	+2.2
SKR	Severo-Kuril’s	6.78	218	*i* PN	Pn	17 13 34.9	+1.4
SEY	Seymchan	8.50	327	LR	LR	17 17 35.8	
	comp=Z,144nm,19.3s,baz=106,slow=40						
ASAJ	Asahikawa	17.57	235	P	P	17 15 59.5	0.0
	comp=Z,0.3nm,0.3s,baz=92,slow=26,SNR=1.9						
YAK	Yakutsk	17.74	303	P	Pn	17 16 00.4	-0.1
	comp=Z,0.1nm,0.3s,baz=55,slow=21,SNR=4.6						
YAK				LR	LR	17 23 14.2	
	comp=Z,84nm,19.1s,baz=214,slow=38						
YAK	Yakutsk	17.74	303	*i* P	Pn	17 15 59.3	-1.3
YAK				pmax	pmax		
	comp=Z,11nm,0.9s						
YAK	Yakutsk	17.74	303	IAmb	IAmb	17 16 02.4	
	comp=Z,13nm,0.9s						
ERM	Erimo	19.00	230	*i* P	Pn	17 16 16.6	+0.5
TIXI	Tiksi	20.96	331	P	P	17 16 37.0	+0.7
	comp=Z,1.4nm,0.5s,baz=118,slow=15,SNR=3.0						
TIXI	Tiksi	20.96	331	*i* P	P	17 16 36.6	+0.3
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.2s						
TIXI	Tiksi	20.96	331	P	P	17 16 36.8	+0.5
TIXI				IAmb	IAmb	17 16 48.8	
	comp=Z,6.3nm,0.7s						
J20K	Nowinta River	22.48	52	P	P	17 16 53.7	+1.0
J20K				IAmb	IAmb	17 16 56.4	
	comp=Z,15nm,1.3s						
IMAR	Indian Mountai	22.73	47	P	P	17 16 58.1	+2.7
USRK	Ussuriysk Ar.	22.80	251	P	P	17 17 00.2	+4.0
	comp=Z,2.4nm,0.6s,baz=44,slow=12,SNR=3.8						
JMM	Marumori	23.46	228	P	P	17 17 02.3	-0.7
BPAW	Bear Paw Mtn.	23.87	52	P	P	17 17 09.6	+2.8
TOLK	Toolik Lake Re	24.59	41	P	P	17 17 14.6	+1.3
TOLK				IAmb	IAmb	17 17 23.8	
	comp=Z,7.2nm,0.8s						
NEA2	Nenana	24.68	50	P	P	17 17 14.9	+0.8
WRH	Wood River Hil	25.11	51	P	P	17 17 19.9	+1.9
WRH				IAmb	IAmb	17 17 28.2	
	comp=Z,5.0nm,0.8s						
CCB	Clear Creek Bu	25.22	50	P	P	17 17 21.3	+2.3
CCB				IAmb	IAmb	17 17 29.1	
	comp=Z,7.9nm,1.1s						
ILAR	Eielson Array	25.61	50	P	P	17 17 24.5	+2.0
	comp=Z,1.2nm,0.9s,baz=257,slow=7.3,SNR=12						
ILAR	Eielson Array	25.61	50	*e*P	P	17 17 24.7	+2.2
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
SCM	Sheep Creek Mo	25.79	57	P	P	17 17 26.7	+2.4
SCM				pmax	pmax		
	comp=Z,20nm,1.1s						
SCM	Sheep Creek Mo	25.79	57	P	P	17 17 26.7	+2.4
SCM				IAmb	IAmb	17 17 39.8	
	comp=Z,20nm,1.1s						
BMAR	Burnt Mountain	26.41	44	P	P	17 17 32.6	+2.8
BCAR	Beaver Creek A	28.08	53	P	P	17 17 46.0	+1.1
KSRS	Korea Array	29.82	246	LR	LR	17 31 13.4	
	comp=Z,36nm,18.1s,baz=256,slow=39						
SONM	Songino Array	34.71	280	P	P	17 18 42.4	-1.0
	comp=Z,0.9nm,0.6s,baz=63,slow=8.0,SNR=8.3						
H11N2	WAKE ISLAND Hy	36.58	173	T	T	17 57 48.1	
	baz=357,slow=76,SNR=217						
H11N3	WAKE ISLAND Hy	36.59	173	T	T	17 57 55.3	
	baz=357,slow=76,SNR=114						
H11N1	WAKE ISLAND Hy	36.59	173	T	T	17 57 59.2	
	baz=357,slow=76,SNR=89						
H11S1	WAKE ISLAND Hy	37.78	174	T	T	17 59 23.3	
	baz=14,slow=75,SNR=9.3						
H11S3	WAKE ISLAND Hy	37.79	174	T	T	17 59 23.3	
	baz=14,slow=75,SNR=7.7						
H11S2	WAKE ISLAND Hy	37.79	174	T	T	17 59 23.5	
	baz=14,slow=75,SNR=5.5						
DGZ	Jazzator, Alta	43.66	295	*i* P	P	17 19 56.9	-1.2
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GTA	Gaotai	43.77	275	⇑P	P	17 19 58.1	-0.9
GTA				pP	pP	17 20 03.0	-4.0
GTA				sP	sP	17 20 05.5	-4.7
GTA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KURK	Kurchatov	47.37	301	*i* P	P	17 20 25.2	-2.0
KURK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KURK	Kurchatov	47.37	301	P	P	17 20 25.0	-2.2
KURK				IAmb	IAmb	17 20 25.9	
	comp=Z,2.5nm,0.7s						
MK31	Makanchi Array	48.16	295	*i* P	P	17 20 31.1	-2.3
MK31	Makanchi Array	48.16	295	P	P	17 20 31.2	-2.2
MK31				IAmb	IAmb	17 20 43.2	
	comp=Z,1.7nm,0.9s						
MKAR	Makanchi Array	48.16	295	P	P	17 20 31.1	-2.4
	comp=Z,0.5nm,0.4s,baz=63,slow=7.0,SNR=5.9						
BRVK	Borovoye	49.65	308	*i* P	P	17 20 43.1	-1.6
BRVK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
AAK	Ala-Archa	55.03	296	P	P	17 21 22.7	-2.3
AAK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
AAK	Ala-Archa	55.03	296	P	P	17 21 22.6	-2.3
AAK				IAmb	IAmb	17 21 36.6	
	comp=Z,3.7nm,1.1s						
KKAR	Karatay Array	56.66	299	P	P	17 21 34.2	-2.3
KKAR	Karatay Array	56.66	299	P	P	17 21 34.2	-2.3
ABKAR	Akbulak array	56.90	310	P	P	17 21 36.1	-1.8
ABKAR				IAmb	IAmb	17 21 43.0	
	comp=Z,2.8nm,1.4s						
FINES	FINESS Array B	57.82	337	P	P	17 21 44.4	0.0
	comp=Z,1.5nm,0.6s,baz=28,slow=7.9,SNR=8.8						
BTK	Batken	58.80	296	P	P	17 21 49.6	-2.0
BTK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BTK	Batken	58.80	296	P	P	17 21 49.5	-2.0
CHGR	Chuyangaron	60.70	296	P	P	17 22 02.4	-2.3
NOA	NORSAR Array B	60.93	345	P	P	17 22 04.5	-1.4
	comp=Z,0.8nm,0.9s,baz=15,slow=5.8,SNR=2.0						
SIJI	Sorong	62.33	216	LR	LR	17 46 16.2	
	comp=Z,20nm,20.1s,baz=318,slow=33						
AKASG	Malin Array Be	66.67	330	P	P	17 22 42.3	-1.4
	comp=Z,0.4nm,0.3s,baz=29,slow=6.6,SNR=5.4						
AKASG	Malin Array Be	66.67	330	IAmb	IAmb	17 22 43.5	
	comp=Z,0.8nm,0.9s						
TUL1	Leonard	66.83	60	P	P	17 22 46.5	+1.5
TXAR	Lajitas Array	68.11	70	P	P	17 22 54.2	+0.9
	comp=Z,0.4nm,0.7s,baz=306,slow=5.4,SNR=3.4						
TXAR	Lajitas Array	68.11	70	*e*P	P	17 22 56.1	+2.8
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA	Warramunga Arr	79.55	207	P	P	17 24 00.1	+0.1
	comp=Z,0.4nm,0.8s,baz=16,slow=5.7,SNR=2.0						
ASAR	Alice Springs	83.23	206	P	P	17 24 18.5	-1.0
	comp=Z,0.4nm,0.8s,baz=19,slow=4.8,SNR=8.0						

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*IDC **18** 17:33:50.9±3.1, 6°.34S×103°.64E, h0^{km}, mb3.9/7, mb1 4.0/7, mb1mx3.6/43, mbtmp3.9/7, MS2.6/2, Ms1 2.7/2, ms1mx2.3/38, Error ellipse: s-maj=138.9km s-min=17.5km az=55.0*

*NEIC **18** 17:33:57.8±0.5, 6°.4S±0°.1×103°.7E±0°.1, h48^{km}±12^{km}, mb4.2/7, Error ellipse: s-maj=24.6km s-min=9.0km az=55.0*

*DJA **18** 17:33:57.5±0.8, 6°S±6°×10°4E±°, h10^{km}, M3.5/7, MLv3.5/7*

ISC 18 17:33:53.0±0.9**, 6°.41S**±0°.06×**103°.67E**±0°.08**, h10^{km}, n41, σ1^{s}.16**/30**, mb4.3**/20**, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KASI	Kota Agung	1.20	43	P	Pg	17 34 15.3	-0.8
KASI				S	Sn	17 34 32.0	-0.2
LWLI	Liwa	1.43	16	P	Pn	17 34 19.8	+0.7
LWLI				S	Sn	17 34 39.3	+1.2
BLSI	Bandar Lampung	1.88	57	P	Pb	17 34 29.4	+2.0
MDSI	Maura Dua	1.97	15	P	Pn	17 34 27.9	+1.4
MDSI				S	Sb	17 34 53.5	-0.2
KLSI		2.00	32	P	Pn	17 34 28.3	+1.4
KLSI				S	Sg	17 34 56.0	-1.5
MNAI	Manna	2.15	341	Pn	Pn	17 34 30.5	+1.5
LHSI	Lahat	2.56	357	P	Pn	17 34 37.6	+3.0
CBJI	Citeko	3.16	90	P	Pg	17 35 00.4	+6.8
UGM	Wanagama	6.96	103	Pn	Pn	17 35 37.2	+2.1
KAPI	Kappang	16.06	86	LR	LR	17 44 10.1	
	comp=Z,20nm,19.7s,baz=287,slow=38						
SOEI	Soe	20.66	101	P	P	17 38 32.0	-1.3
CMAR	Chiang Mai Arr	25.14	349	P	P	17 39 16.6	-1.9
	2.7nm,0.8s,baz=183,slow=9.2,SNR=19						
CMAR				LR	LR	17 48 55.8	
	comp=Z,16nm,19.5s,baz=10.0,slow=36						
H08S2	Diego Garcia H	30.96	266	T	T	18 12 47.2	
	baz=98						
H08S3	Diego Garcia H	30.97	266	T	T	18 12 28.7	
	baz=98						
H08S1	Diego Carcia H	30.98	266	T	T	18 12 51.3	
	baz=98						
WRA	Warramunga Arr	32.67	117	P	P	17 40 24.8	-0.9
	0.6nm,0.6s,baz=287,slow=12,SNR=10						
WR0	Warramunga Arr	32.86	117	P	P	17 40 26.7	-0.6
WR0				IAmb	IAmb	17 40 33.0	
	comp=Z,8.5nm,1.5s						
ASAR	Alice Springs	33.74	124	P	P	17 40 34.6	-0.5
	comp=Z,0.5nm,0.9s,baz=308,slow=7.8,SNR=11						
ODAN	Odare	36.64	335	*e*P	P	17 40 59.6	-0.5
	comp=Z,8.0nm,0.5s						
TAPN	Taplejung	36.94	336	*e*P	P	17 41 02.5	-0.3
	comp=Z,8.9nm,0.7s						
RAMN	Ramite	37.05	334	*e*P	P	17 41 03.8	+0.1
	comp=Z,6.6nm,0.4s						
JIRN	Jiri	37.85	334	*e*P	P	17 41 10.4	-0.1
	comp=Z,12nm,0.7s						
PKI	Pulchoki	38.11	333	*e*P	P	17 41 12.3	-0.5
PKIN	Phulchoki	38.12	333	*e*P	P	17 41 12.1	-0.7
GUN	Gumba	38.20	334	*e*P	P	17 41 13.1	-0.4
	comp=Z,15nm,0.5s						
DMN	Daman	38.28	333	*e*P	P	17 41 13.5	-0.6
KKN	Kakani	38.36	333	*e*P	P	17 41 14.0	-0.7
	comp=Z,7.4nm,0.4s						
GKN	Gorkha	38.83	333	*e*P	P	17 41 18.3	-0.3
	comp=Z,5.4nm,0.4s						
KOLN	Koldanda	39.12	331	*e*P	P	17 41 21.1	0.0
	comp=Z,3.3nm,0.4s						
DANN	Dangsing	39.53	332	*e*P	P	17 41 24.5	-0.1
	comp=Z,12nm,0.5s						
PYUN	Piuthan	39.69	331	*e*P	P	17 41 26.2	+0.4
	comp=Z,7.0nm,0.4s						
STKA	Stephens Creek	43.51	131	P	P	17 41 57.3	+0.4
	comp=Z,1.4nm,0.7s,baz=312,slow=9.2,SNR=4.2						
STKA	Stephens Creek	43.51	131	IAmb	IAmb	17 42 22.2	
	comp=Z,1.7nm,1.2s						
SONM	Songino Array	54.06	2	P	P	17 43 17.5	-0.3
	comp=Z,1.7nm,0.8s,baz=179,slow=11,SNR=12						
SONM	Songino Array	54.06	2	IAmb	IAmb	17 43 18.1	
	comp=Z,2.1nm,0.9s						
MK31	Makanchi Array	56.27	342	P	P	17 43 32.5	-1.2
MK31				IAmb	IAmb	17 44 01.1	
	comp=Z,3.3nm,1.4s						
MKAR	Makanchi Array	56.27	342	P	P	17 43 32.5	-1.2
	comp=Z,0.8nm,0.5s,baz=147,slow=9.1,SNR=20						
ZALV	Zalesovo Beam	62.19	348	P	P	17 44 13.1	-1.4
	comp=Z,0.8nm,0.4s,baz=151,slow=6.4,SNR=5.5						
ABKAR	Akbulak array	67.24	331	P	P	17 44 46.5	-1.1
ABKAR				IAmb	IAmb	17 44 48.5	
	comp=Z,5.6nm,1.4s						
ABKAR	Akbulak array	67.24	331	P	P	17 44 46.3	-1.3
TXAR	Lajitas Array	145.58	45	PKPbc	PKPbc	17 53 32.2	-0.4
	comp=Z,1.3nm,0.7s,baz=274,slow=1.2,SNR=9.6						

IDC 18 17:36:36.0±5.5**, 30°.40S**×**178°.49W, h0^{km}, mb3.3**/2**, mb1 3.6**/2**, mb1mx3.1**/31**, mbtmp3.3**/2**, Error ellipse: s-maj=158.1km s-min=27.7km az=139.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.25	23	Pn	Pn	17 37 00.6	0.0
	37nm,0.3s,baz=86,slow=19,SNR=1.5						
RAO				Sn	Sb	17 37 16.6	-0.4
	170nm,0.3s,baz=191,slow=19,SNR=7.1						
ASAR	Alice Springs	42.69	267	P	P	17 44 34.8	0.0
	0.2nm,0.6s,baz=105,slow=7.4,SNR=6.2						
WRA	Warramunga Arr	43.68	272	P	P	17 44 42.5	-0.3
	0.2nm,0.3s,baz=110,slow=8.1,SNR=8.9						
FINES	FINESS Array B	145.00	340	PKPbc	PKPbc	17 56 13.0	-0.7
	3.8nm,1.1s,baz=61,slow=6.5,SNR=5.3						

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*TUL **18** 17:46:29.4±1.1, 35°.79N±0°.01×97°.25W±0°.02, h5^{km}±7^{km}, ML2.5, mb_Lg3.0/7(NEIC), Error ellipse: s-maj=2.3km s-min=1.3km az=127.0*

NEIC 18 17:46:29.3±0.5**, 35°.81N**±0°.01×**97°.28W**±0°.02**, h5^{km}**±2^{km}**, Error ellipse: s-maj=3.0km s-min=2.9km az=128.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK029	Liberty Lake	0.15	264		Pg	17 46 31.9	-0.4
OK001	Jones High Sch	0.25	183	Pg	Pg	17 46 34.3	+0.1
OK001				Sg	Sg	17 46 37.8	+0.4
BCOK	Bluff Creek, N	0.31	241		Pg	17 46 35.9	+0.5
OK031	S. Brethren Rd	0.38	68		Pg	17 46 36.9	+0.2
OK030	Cody Creek RV	0.42	74		Pg	17 46 37.5	+0.2
OK030					Sg	17 46 42.9	+0.1
OKCFA	Oklahoma City	0.42	200	Pg	Pg	17 46 37.5	+0.1
OKCSW	OKLAHOMA CITY	0.43	198	Pg	Pg	17 46 37.9	+0.3
FNO	Franklin	0.56	191	Pg	Pg	17 46 40.1	0.0
QUOK	Quay	0.58	52		Pg	17 46 40.8	+0.2
CROK	Carrier	0.90	321		Pg	17 46 46.8	+0.2
BLOK	Blackwell	0.95	3	Pg	Pg	17 46 47.6	+0.1
TUL1	Leonard	1.21	85	Pg	Pg	17 46 50.9	-1.6
KAN13	South Haven SW	1.21	352	Pg	Pg	17 46 52.3	-0.3
OK032	Salt Plains WL	1.25	323	Pg	Pg	17 46 53.2	0.0
T35A	Sooner Cattle	1.26	29		Pg	17 46 52.5	-1.0
T35A				Sg	Sg	17 47 10.0	+0.1
X34A	Smith Ranch, M	1.29	201	Pn	Pn	17 46 53.7	-0.4
KAN17	Caldwell West	1.29	342	Pn	Pn	17 46 53.8	-0.2
KAN09	Caldwell North	1.35	348	Pn	Pn	17 46 55.0	+0.1
KAN01	Argonia South	1.40	344		Pn	17 46 55.4	-0.1
KS20	Mayfield South	1.43	351	Pn	Pn	17 46 55.4	-0.7
WMOK	Wichita Mounta	1.63	229	Pn	Pn	17 46 58.6	-0.1
X37A	Clayton	1.98	127	Pn	Pn	17 47 03.2	-0.2
X37A				IAmb_Lg		17 47 32.9	
	comp=Z,14nm,0.9s						
U38A	Gravette	2.42	74	Pn	Pn	17 47 10.8	+1.2
KSU1	Kansas State U	3.33	9	IAmb_Lg		17 48 16.8	
	comp=Z,37nm,1.2s						
N35A	Tabor	5.20	14	IAmb_Lg		17 49 24.1	
	comp=Z,24nm,0.8s						
441A	DeRidder	6.10	145	IAmb_Lg		17 49 49.1	
	comp=Z,44nm,1.1s						
L34A	Svendsen Farm,	6.19	6	IAmb_Lg		17 49 48.8	
	comp=Z,29nm,1.2s						

IDC 18 18:05:12.7±45.0**, 16°.04S**×**175°.13W, h0^{km}, mb4.3**/3**, mb1 4.4**/3**, mb1mx3.8**/28**, mbtmp4.3**/3**, Error ellipse: s-maj=844.6km s-min=168.0km az=78.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	42.27	240	P	P	18 13 08.4	+0.2
	1.4nm,0.7s,baz=92,slow=6.7,SNR=4.8						
WRA	Warramunga Arr	48.07	257	P	P	18 13 54.4	-0.2
	1.1nm,0.5s,baz=94,slow=6.9,SNR=58						
ASAR	Alice Springs	48.33	252	P	P	18 13 56.0	-0.4
	7.8nm,0.6s,baz=87,slow=8.7,SNR=296						

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*EAF **18** 18:25:40.9±2.9, 1°.03S×29°.56E, h11^{km}±27^{km}, MD3.1*

*ECGS **18** 18:25:42.4, 1°.07S±0°.10×29°.90E±0°.08, h4^{km}±5^{km}, ML2.5, Error ellipse: s-maj=17.7km s-min=12.4km az=151.7, smi:local/6ca5bd83-52c8-421f-ae05-307b1857d2ba Note: Depth/Latitude/Longitude errors are calculated from covariance matrix as 1D marginal (Lon/Lat errors as great circle degrees) while OriginUncertainty min/max horizontal errors are calculated from 2D error ellipsoid and are therefore seemingly higher compared to 1D errors. Error estimates can be reconstructed from the following original NonLinLoc error statistics line:STATISTICS ExpectX 99.9836 Y 49.0084 Z 8.79184 CovXX 82.3104 XY -29.0548 XZ -2.08725 YY 120.731 YZ 3.43199 ZZ 31.9298 EllAz1 322.689 Dip1 -87.7758 Len1 10.5908 Az2 241.716 Dip2 0.349125 Len2 15.3433 Len3 2.195142e+01*

ISC 18 18:25:40.8±0.9**, 1°.06S**±0°.07×**29°.87E**±0°.06**, h10^{km}, n14, σ0^{s}.71**/17**, Lake Tanganyika region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RGB	Rumangabo	0.58	241	*i* P	Pg	18 25 52.8	+0.6
SAHA	Sahara	0.60	214	*i* P	Pb	18 25 52.9	-0.6
BUTK	Butaka	0.68	225	*i* P	Pb	18 25 54.8	-0.2
KBTI	Kibati	0.78	229	*i* P	Pb	18 25 56.6	-0.1
RSY	Rusayo	0.86	233	*i* P	Pb	18 25 58.4	+0.4
GOM	Goma	0.90	226	*i* P	Pb	18 25 58.6	0.0
MBAR	Mbarara	0.98	62	*e*P	Pb	18 25 59.6	-0.3
MBAR	Mbarara	0.98	62	*i* S	Sg	18 26 11.7	-0.8
MBAR	Mbarara	0.98	62	*e*P	Pn	18 26 00.3	-0.5
MBAR				*e*S	Sb	18 26 12.3	-0.7
KIL	Kilembe	1.26	6	*e*P	Pn	18 26 04.7	+0.1
KIL				*e*S	Sb	18 26 20.7	-0.3
IDJ	Idjwi	1.29	219	*i* P	Pg	18 26 05.5	-0.2
LWI	Lwiro	1.59	222	*i* P	Pg	18 26 11.2	-0.2
LWI	Lwiro	1.59	222	*i* S	Sg	18 26 31.3	-0.7
TEBE	Entebbe	2.82	67	*e*P	Pn	18 26 27.7	+1.5
TEBE				*e*S	Sb	18 27 07.5	+1.3

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*TIR **18** 18:30:05.0, 38°.65N×20°.73E, h7^{km}, Md4.5*

*MOS **18** 18:30:05.9±1.2, 38°.67N×20°.33E, h16^{km}, mb4.6/10, Error ellipse: s-maj=6.3km s-min=3.3km az=86.6*

*BEO **18** 18:30:05.7±0.8, 38°.61N×20°.14E, h0^{km}, ML4.3/17*

*IDC **18** 18:30:06.1±0.6, 38°.83N×20°.51E, h0^{km}, mb4.3/18, mb1 4.2/30, mb1mx4.1/53, mbtmp4.1/30, ML3.8/12, MS3.3/10, Ms1 3.3/10, ms1mx3.2/75, Error ellipse: s-maj=11.9km s-min=10.5km az=66.0*

*NEIC **18** 18:30:06.7±2.2, 38°.75N±0°.03×20°.50E±0°.07, h1^{km}±4^{km}, Error ellipse: s-maj=7.6km s-min=4.4km az=75.0*

IASPEI ***18*** *18:30:07.0±0.8, 38.°72N±0.°02×20.°61E±0.°03, h7^{km}±4^{km}, mb4.5/43, Error ellipse: s-maj=4.0km s-min=2.3km az=95.4, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

THE ***18*** *18:30:07.2, 38.°73N×20.°60E, h5^{km}±1^{km}, ML4.3/10, Error ellipse: s-maj=1.6km s-min=0.4km az=81.0*

PDG ***18*** *18:30:07.2±0.6, 38.°80N×20.°32E, h11^{km}±1^{km}, MD4.5/1, ML4.4/14, Error ellipse: s-maj=0.9km s-min=1.0km az=0.0*

MED_RC ***18*** *18:30:07.0±0.3, 38.°72N×20.°37E, h12^{km}±2^{km}, MW4.4/17, Moment Tensor Solution.Mantle waves: s17,c25; Duration: 1.^{s}0 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.97±.37; M$_{\theta\theta}$3.73±.47; M$_{\phi\phi}$-2.76±.25; M$_{r\theta}$-4.45±1.33; M$_{\theta\phi}$1.86±.18; M$_{\phi r}$0.49±.53; Best double couple: M$_0$5.66000×10^{15} NP1:φ$_s$207.00000°, δ37.00000°, λ-170.00000°. NP2:φ$_s$109.00000°, δ84.00000°, λ-54.00000°. Principal axes: T 6.6100, Plg30.0000°, Azm170.0000°; N -1.8900, Plg36.0000°, Azm285.0000°; P -4.7100, Plg40.0000°, Azm52.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

ATH ***18*** *18:30:07.3, 38.°72N×20.°63E, h6^{km}±1^{km}, ML4.1/14 Error ellipse: s-maj=1.6km s-min=0.6km az=287.0*

ISC 18 18:30:07.0±0.6**, 38.°72N**±0.°01×**20.°58E**±0.°02**, h6**^{km}±4^{km}**, n407, σ1.^{s}64**/483**, mb4.5**/43**, 19C-21D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRAG	Dragano-Lefkad	0.03	181	P	Pg	18 30 08.7	+0.4
DRAG				S	Sg	18 30 09.7	+0.5
	1929µm,0.6s						
DRAG	Dragano-Lefkad	0.03	181	P	Pg	18 30 08.7	+0.4
DRAG				S	Sg	18 30 09.7	+0.5
LKD2	Lefkada island	0.10	42	P	Pg	18 30 08.8	-0.4
LKD2				S	Sg	18 30 09.7	-1.0
	321µm,0.4s						
LKD2	Lefkada island	0.10	42	P	Pg	18 30 08.7	-0.5
LKD2				S	Sg	18 30 10.1	-0.6
LKD2				AML	AML	18 30 10.9	
LKD2				AML	AML	18 30 10.9	
LKD2	Lefkada island	0.10	42	P	Pg	18 30 08.7	-0.5
	baz=339						
LKD2				S	Sg	18 30 10.6	0.0
	baz=339						
NYDR	Nydri-Lefkada	0.10	92	P	Pg	18 30 08.8	-0.3
NYDR				S	Sg	18 30 10.2	-0.4
	216µm,0.3s						
NYDR	Nydri-Lefkada	0.10	92	P	Pg	18 30 08.8	-0.3
NYDR				S	Sg	18 30 09.9	-0.7
EVGI	Lefkada island	0.12	147	P	Pg	18 30 09.8	+0.4
EVGI				S	Sg	18 30 12.1	+1.0
	222µm,0.3s						
EVGI	Lefkada island	0.12	147	P	Pg	18 30 09.8	+0.4
EVGI				S	Sg	18 30 11.9	+0.8
TSLK	Tsoukalades, L	0.12	30	P	Pg	18 30 09.6	0.0
TSLK				S	Sg	18 30 11.2	-0.2
	379µm,0.8s						
TSLK	Tsoukalades, L	0.12	30	P	Pg	18 30 09.6	0.0
TSLK				S	Sg	18 30 11.8	+0.4
TSLK				AML	AML	18 30 13.6	
TSLK				AML	AML	18 30 15.6	
FSK	Fiskardo	0.26	182	P	Pg	18 30 12.8	+0.8
FSK				S	Sg	18 30 16.1	+0.7
	70µm,0.5s						
FSK	Fiskardo	0.26	182	P	Pg	18 30 12.8	+0.8
FSK				S	Sg	18 30 16.7	+1.2
FSK				AML	AML	18 30 20.6	
FSK				AML	AML	18 30 20.8	
KEF4	Livadi, Kephal	0.47	194	P	Pg	18 30 16.5	+0.4
KEF4				S	Sb	18 30 24.2	-0.7
	170µm,0.8s						
KEF4	Livadi, Kephal	0.47	194	P	Pg	18 30 16.6	+0.4
KEF4				S	Sb	18 30 23.7	-1.2
DMLN	Damoulianata-K	0.50	198	P	Pg	18 30 17.0	+0.3
DMLN				S	Sb	18 30 24.9	-0.9
	37µm,0.7s						
DMLN	Damoulianata-K	0.50	198	P	Pg	18 30 16.9	+0.3
DMLN				S	Sb	18 30 25.1	-0.6
LXRA	Lixouri, Kepha	0.53	192	P	Pg	18 30 17.4	+0.3
LXRA				S	Sb	18 30 25.9	-0.5
VLS	Valsamata	0.54	179	P	Pg	18 30 17.5	+0.1
VLS				S	Sb	18 30 26.4	-0.4
	19µm,0.4s						
VLS	Valsamata	0.54	179	P	Pg	18 30 17.2	-0.2
VLS				S	Sg	18 30 24.9	+0.5
VLS				AML	AML	18 30 31.4	
	comp=E,31878µm,0.4s						
VLS				AML	AML	18 30 33.9	
	comp=N,42739µm,0.4s						
VLS	Valsamata	0.54	179	P	Pg	18 30 17.5	+0.1
VLS				S	Sb	18 30 26.4	-0.4
KEF3	Kipouria, Keph	0.54	199	P	Pg	18 30 17.1	-0.4
KEF3				S	Sb	18 30 25.8	-1.1
	comp=N,62µm,0.8s						
KEF3	Kipouria, Keph	0.54	199	P	Pg	18 30 17.0	-0.4
KEF3				S	Sg	18 30 25.4	+0.8
ARGA	Argostoli. Kep	0.55	188	P	Pb	18 30 18.5	-0.4
PSDA	Pessada-Kefalo	0.60	179	P	Pg	18 30 18.5	-0.1
PSDA				S	Sb	18 30 28.0	-0.6
PSDA	Pessada-Kefalo	0.60	179	P	Pg	18 30 18.2	-0.4
PSDA				S	Sb	18 30 27.5	-1.1
PVO	Paravola	0.75	97	P	Pg	18 30 21.6	+0.2
PVO	Paravola	0.75	97	P	Pg	18 30 21.4	0.0
PVO				AML	AML	18 30 38.6	
	comp=N,22710µm,0.7s						
PVO				AML	AML	18 30 39.3	
	comp=E,21620µm,0.3s						
IGT	Igoumenitsa	0.83	347	P	Pg	18 30 22.9	-0.1
IGT	Igoumenitsa	0.83	347	P	Pg	18 30 22.3	-0.7
IGT				S	Sb	18 30 35.2	-0.1
IGT				AML	AML	18 30 42.2	
	comp=E,32383µm,0.6s						
IGT				AML	AML	18 30 43.1	
	comp=N,33023µm,0.7s						
IGT	Igoumenitsa	0.83	347	P	Pg	18 30 22.9	-0.1
IGT	Igoumenitsa	0.83	347	P	Pg	18 30 22.4	-0.7
	baz=341						
IGT				S	Sn	18 30 38.6	+0.8
	baz=341						
VTN	Vitineika	0.93	149	P	Pg	18 30 24.6	-0.2
JAN	Janina	0.96	13	P	Pg	18 30 25.6	+0.2
JAN	Janina	0.96	13	P	Pb	18 30 26.2	+0.1
RLS	Riolos of Patr	0.96	133	P	Pg	18 30 24.7	-0.7
RLS	Riolos of Patr	0.96	133	P	Pg	18 30 24.6	-0.8
RLS				AML	AML	18 30 48.6	
	comp=N,20289µm,0.7s						
RLS				AML	AML	18 30 50.4	
	comp=E,22071µm,0.9s						
EVR	Evrytania	0.98	78	P	Pg	18 30 25.0	-0.8
LTHK	Lithakia	1.03	168	P	Pg	18 30 25.4	-1.3
LTHK				AML	AML	18 30 48.4	
	comp=E,14001µm,0.6s						
LTHK				AML	AML	18 30 48.6	
	comp=N,22251µm,0.8s						
ANX	Ano Chora	1.06	96	P	Pg	18 30 26.2	-1.1
ANX				AML	AML	18 30 54.4	
	comp=N,28612µm,0.7s						
ANX				AML	AML	18 30 54.9	
	comp=E,22684µm,0.6s						
EFP	Efpalio	1.08	105	P	Pg	18 30 26.6	-1.2
EFP	Efpalio	1.08	105	P	Pg	18 30 26.5	-1.2
EFP				AML	AML	18 30 51.5	
	comp=E,13919µm,0.7s						
EFP				AML	AML	18 30 54.0	
	comp=N,24534µm,0.7s						
KASA	Kassiopi	1.14	334	P	Pg	18 30 28.7	-0.2
KEK	Kerkira	1.16	329	P	Pn	18 30 29.5	-0.3
KEK	Kerkira	1.16	329	P	Pb	18 30 29.3	-0.1
DRO	Drossia	1.18	130	P	Pg	18 30 28.5	-1.0
DRO	Drossia	1.18	130	P	Pg	18 30 28.1	-1.4
DRO				AML	AML	18 30 54.5	
	comp=N,32279µm,0.7s						
DRO				AML	AML	18 30 56.4	
	comp=E,23894µm,0.5s						
LAKA	Lakka	1.20	113	P	Pg	18 30 28.6	-1.4
TRIZ	Trizonia	1.23	106	P	Pg	18 30 29.3	-1.2
SRN	Sarande	1.24	339	P	Pn	18 30 31.0	+0.2
	baz=336						
SRN				S	Sn	18 30 49.6	+1.7
	baz=336						
MAKR	Makrakomi, Fth	1.25	76	P	Pn	18 30 30.5	-0.5
THL	Klokotos Trika	1.40	52	P	Pn	18 30 32.6	-0.4
THL				AML	AML	18 31 00.9	
	comp=E,8252µm,1.1s						
THL				AML	AML	18 31 01.7	
	comp=N,9510µm,0.8s						
AGG	Agios Georgios	1.40	77	P	Pn	18 30 33.0	0.0
AGG	Agios Georgios	1.40	77	P	Pb	18 30 33.5	-0.1
AGG	Agios Georgios	1.40	77	Pn	Pb	18 30 33.5	-0.1
KLV	Kalavryta, Ach	1.41	118	P	Pn	18 30 31.8	-1.3
KLV				AML	AML	18 31 02.8	
	comp=N,5642µm,0.9s						
KLV				AML	AML	18 31 05.6	
	comp=E,11917µm,1.0s						
LSK	Leskovik	1.43	1	P	Pg	18 30 34.6	+0.2
	baz=357						
LSK				S	Sg	18 30 57.0	+4.0
	baz=357						
DLFA	Delphi	1.52	98	P	Pn	18 30 34.6	-0.2
PENT	Pentalofos	1.54	16	P	Pb	18 30 36.0	0.0
GUR	Goura	1.59	119	P	Pn	18 30 34.9	-0.9
THAL	Thalero	1.78	112	P	Pb	18 30 40.1	+0.2
THAL				AML	AML	18 31 23.0	
	comp=N,16900µm,1.0s						
THAL				AML	AML	18 31 24.0	
	comp=E,16226µm,0.8s						
KZN	Kozani	1.84	30	P	Pg	18 30 42.6	+0.4
ITM	Ithomi	1.87	145	P	Pb	18 30 40.8	-0.7
ITM	Ithomi	1.87	145	Pn	Pn	18 30 40.2	+0.7
KBN	Korca	1.91	5	P	Pn	18 30 40.0	-0.1
KBN	Korca	1.91	5	Pn	Pn	18 30 40.0	-0.1
KBN	Korca	1.91	5	P	Pg	18 30 43.2	-0.4
	baz=1.0						
KBN				S	Sg	18 31 10.6	+2.2
	baz=1.0						
VLO	Vlora	1.94	335	P	Pn	18 30 41.1	+0.7
VLO	Vlora	1.94	335		Pn	18 30 41.1	+0.7
VLO	Vlora	1.94	335	P	Pb	18 30 41.3	-1.3
	baz=333						
VLO				S	Sg	18 31 13.1	+3.9
	baz=333						
LTK	Loutraki	2.00	110	P	Pb	18 30 42.9	-0.9
SCTE	Santa Cesarea	2.12	310	Pn	Pn	18 30 42.8	-0.1
NEO	Neokhori	2.15	73	P	Pb	18 30 45.0	-1.2
FNA	Florina	2.15	16	P	Pb	18 30 45.0	-1.4
FNA	Florina	2.15	16		Pb	18 30 45.0	-1.4
FNA	Florina	2.15	16	P	Pb	18 30 45.1	-1.3
	baz=13						
FNA				S	Sg	18 31 17.3	+1.2
	baz=13						
VIL2	Platees	2.17	103	P	Pb	18 30 46.0	-0.7
OHR	Ohrid	2.40	4	*e*Pn	Pb	18 30 49.7	-0.8
OHR				*e*Sn	Sb	18 31 20.1	-0.3
OHR	Ohrid	2.40	4	*e*P	Pb	18 30 49.7	-0.8
OHR				*e*S	Sb	18 31 20.1	-0.3
OHR	Ohrid	2.40	4	*i* Pn	Pn	18 30 48.4	+1.6
GRG	Griva	2.64	32	P	Pn	18 30 52.2	+2.1
TIR	Tirane	2.68	349	⇓P	Pn	18 30 52.0	+1.4
TIR				⇑S	Sn	18 31 22.6	-0.8
TIR	Tirane	2.68	349	*e*Pn	Pn	18 30 51.5	+0.9
TIR	Tirane	2.68	349	P	Pn	18 30 51.3	+0.7
TIR	Tirane	2.68	349		Pn	18 30 51.3	+0.7
TIR	Tirane	2.68	349	P	Pn	18 30 52.7	+2.1
	baz=347						
TIR				S	Sb	18 31 29.3	+0.8
	baz=347						
PHP	Peshkopia	2.97	358	P	Pn	18 30 55.8	+1.2
	baz=356						
PHP				S	Sb	18 31 36.3	-0.4
	baz=356						
TIP	Timpagrande	3.01	280		Pn	18 30 55.4	+0.1
VAY	Valandovo	3.02	30	*e*Pn	Pb	18 31 00.2	-0.9
VAY	Valandovo	3.02	30	*i* Pn	Pn	18 30 56.8	+1.6
STIP	Stip	3.22	22	*i* Pn	Pn	18 31 00.7	+2.6
SKO	Skopje	3.32	11	*i* Pn	Pn	18 31 01.4	+2.0
ULC	Ulcinj	3.40	343	⇓*i*Pn	Pn	18 30 59.7	-0.8
ULC				*i* Sn	Sn	18 31 39.0	-2.1
MATE	Matera	3.56	304	⇓P	Pn	18 31 02.9	+0.3
DRME	Dracevica, Mon	3.62	343	⇓*i*Pn	Pn	18 31 02.9	-0.7
DRME				*i* Sn	Sn	18 31 44.4	-2.3
BCI	Bajram Curri	3.67	354	P	Pn	18 31 05.7	+1.5
	baz=353						
BCI				S	Sb	18 31 54.2	-2.7
	baz=353						
CEL	Celeste	3.70	264		Pn	18 31 04.3	-0.4
BUM	Brajici-Budva	3.80	341	⇓*i*Pn	Pn	18 31 05.1	-1.0
BUM				*i* Sn	Sn	18 31 48.7	-2.4
PDG	Podgorica	3.84	345	⇓P	Pn	18 31 06.7	+0.1
PDG				⇑S	Sn	18 31 51.5	-0.5
PDG	Podgorica	3.84	345	*e*Pn	Pn	18 31 07.6	+1.0
PDG				*e*Sn	Sn	18 31 51.9	-0.1
PDG	Podgorica	3.84	345	*e*Pn	Pn	18 31 06.8	+0.3
PDG	Podgorica	3.84	345	Pn	Pn	18 31 06.8	+0.3
TTG	Podgorica	3.84	345	⇑*i*Pn	Pn	18 31 05.8	-0.8
TTG				*i* Sn	Sn	18 31 50.0	-2.0
PVY	Plav	3.90	353	*e*Pn	Pn	18 31 07.2	-0.3
PVY				*i* Sn	Sn	18 31 51.9	-1.8
PRVS	Prvonek	3.96	16	*e*Pn	Pn	18 31 10.2	+2.0
CEME	Cevo	4.03	342	⇑*i*Pn	Pn	18 31 08.4	-0.8
CEME				*i* Sn	Sn	18 31 54.4	-2.3
BOSS	Bosilegrad	4.04	20	*e*Pn	Pn	18 31 10.5	+1.1
HCY	Herceg Novi	4.05	338	P	Pn	18 31 10.5	+1.1
HCY	Herceg Novi	4.05	338	*e*Pn	Pn	18 31 08.1	-1.3
HCY	Herceg Novi	4.05	338	⇑*i*Pn	Pn	18 31 08.6	-0.8
HCY				*i* Sn	Sn	18 31 54.6	-2.5
IVA	Berane	4.18	353	⇓*i*Pn	Pn	18 31 10.7	-0.6
IVA				*i* Sn	Sn	18 31 58.9	-1.6
BARS	Barje	4.20	13	*e*Pn	Pn	18 31 12.6	+1.1
BARS	Barje	4.20	13	*e*Pn	Pg	18 31 31.4	+3.9
KOME	Kolasin	4.21	349	⇑*i*Pn	Pn	18 31 10.9	-0.8
KOME				*i* Sn	Sn	18 31 59.1	-2.0
NKME	Niksic	4.23	344	⇓*i*Pn	Pn	18 31 11.1	-0.8
NKME				*i* Sn	Sn	18 31 59.4	-2.2
NKY	Niksic	4.26	344	⇑*i*Pn	Pn	18 31 12.6	+0.1
NKY				*i* Sn	Sn	18 32 00.3	-2.3
TREB	Trebinje	4.34	338	*e*Pn	Pn	18 31 12.4	-1.0
TREB	Trebinje	4.34	338	*e*Pn	Pn	18 31 12.2	-1.2
DBRK	Dubrovnik	4.36	336	*e*Pn	Pn	18 31 12.0	-1.6
DBRK				Sn	Sn	18 32 01.5	-3.2
VTS	Vitosha	4.39	27	⇑P	Pn	18 31 15.2	+0.9
VTS				⇓S	Sn	18 32 07.6	+1.8
VTS	Vitosha	4.39	27	*e*Pn	Pn	18 31 16.0	+1.7
VTS				*e*Sn	Sn	18 32 09.5	+3.8
VTS	Vitosha	4.39	27	P	Pn	18 31 14.9	+0.6
VTS	Vitosha	4.39	27	Pn	Pn	18 31 14.9	+0.6
BRY	Bratogost	4.46	340	*e*Pn	Pn	18 31 14.1	-1.1
BRY	Bratogost	4.46	340	⇓*i*Pn	Pn	18 31 14.2	-0.9
BRY				*i* Sn	Sn	18 32 04.2	-3.2
SELS	Selova	4.52	5	*e*Pn	Pn	18 31 15.4	-0.5
SANT	Santorini	4.53	120	⇑P	Pn	18 31 21.0	+4.9
SANT	Santorini	4.53	120	Pn	Pn	18 31 16.2	+0.1
SJES	Sjenica	4.56	354	*e*Pn	Pn	18 31 17.4	+0.8
EZN	Ezine	4.60	74	P	Pn	18 31 20.4	+3.5
PLD	Plovdiv	4.62	42	P	Pn	18 31 21.0	+3.7
UPM	Unac-Piva	4.66	345	*e*Pn	Pn	18 31 18.4	+0.5
UPM	Unac-Piva	4.66	345	⇓*i*Pn	Pn	18 31 17.1	-0.8
UPM				*i* Sn	Sn	18 32 08.8	-3.6
STON	Ston	4.69	333	*e*Pn	Pn	18 31 17.1	-1.1
STON				*e*Sn	Sn	18 32 09.9	-2.9
STON	Ston	4.69	333	*e*Pn	Pn	18 31 17.0	-1.1
STON	Ston	4.69	333	*e*Pn	Pn	18 31 16.8	-1.3
STON				Sn	Sn	18 32 06.2	-6.6
PLE	Pljevlja	4.69	349	*e*Pn	Pn	18 31 17.7	-0.7
PLE				*i* Sn	Sn	18 32 11.2	-2.0
ALN	Alexandroupoli	4.74	61	P	Pn	18 31 21.3	+2.3
ALN	Alexandroupoli	4.74	61	Pn	Pn	18 31 21.2	+2.3
SGRT	San Giovanni R	4.78	311	Pn	Pn	18 31 19.5	-0.1
ZAPS	Zavoj	4.81	18	*e*Pn	Pn	18 31 21.3	+1.4
IDI	Anoyia	4.86	133	Pn	Pn	18 31 22.5	+1.8
	comp=E,1.9nm,0.3s,baz=322,slow=14,SNR=19						
IDI				Sn	Sn	18 32 19.3	+2.0
	comp=E,3.7nm,0.3s,baz=337,slow=9.6,SNR=12						
RUDO	Rudo	4.98	350	*e*Pn	Pn	18 31 18.4	-3.8
BOVS	Bovan	4.99	9	⇓P	Pn	18 31 22.5	+0.2
BOVS	Bovan	4.99	9	*e*Pn	Pn	18 31 24.2	+1.9
VAE	Valguarnera	5.02	258	Pn	Pn	18 31 27.6	+4.8
	baz=133,slow=3.9,SNR=4.7						
VAE				Sn	Sn	18 32 23.7	+2.6
	comp=E,3.3nm,0.3s,baz=181,slow=17,SNR=4.9						
VAE				LR	LR	18 33 09.4	
	comp=E,73nm,20.3s,baz=58,slow=36						
RAFF	Raffo Rosso	5.13	255		Pn	18 31 22.4	-1.9
GRUS	Gruza	5.17	1	*e*Pn	Pn	18 31 24.6	-0.2
PAOL	Paolisi	5.17	298		Pn	18 31 25.9	+1.1
BBLS	Lazići	5.22	351	*e*Pn	Pn	18 31 25.2	-0.4
BBLS	Lazići	5.22	351	*e*Pn	Pn	18 31 25.4	-0.2
ZAGS	Zajecar	5.24	13	*e*Pn	Pn	18 31 26.8	+1.0
MAKA	Makarska	5.30	331	*e*Pn	Pn	18 31 25.7	-0.9
MAKA				Sn	Sn	18 32 23.2	-4.7
DIVS	Divibare	5.39	356	*e*Pn	Pn	18 31 27.4	-0.6
DIVS	Divibare	5.39	356	*e*Pn	Pn	18 31 27.2	-0.8
DIVS	Divibare	5.39	356	Pn	Pn	18 31 27.0	-1.0
RICI	Ricice	5.43	333	*e*Pn	Pn	18 31 27.3	-1.1
RICI				Sn	Sn	18 32 28.3	-3.0
HVAR	Hvar	5.44	326	*e*Pn	Pn	18 31 27.8	-0.8
HVAR				Sn	Sn	18 32 26.3	-5.1
HAPS	Han Pijesak,Bl	5.50	348	*e*Pn	Pn	18 31 28.9	-0.6
TRUS	Trudelj	5.50	359	*e*Pn	Pn	18 31 29.0	-0.4
BALB	Balikesir	5.75	78		Pn	18 31 33.8	+1.0
CORL	Corleone	5.78	264	Pn	Pn	18 31 31.6	-1.7
EDC	Edincik	5.87	72	P	Pn	18 31 38.4	+4.0
TEKS	Tekeris	5.88	353	*e*Pn	Pn	18 31 33.8	-0.8
CLTB	Caltabellotta	5.91	261	Pn	Pn	18 31 33.8	-1.3
MDVR	Moldovita	6.12	8	⇓P	Pn	18 31 37.9	0.0
KIJV	Kijevo	6.14	331	*e*Pn	Pn	18 31 37.3	-0.9
ZIRJ	Zirje	6.18	325	*e*Pn	Pn	18 31 37.3	-1.3
ZIRJ				Sn	Sn	18 32 44.7	-4.8
MGRS	Mrkonjic Grad	6.27	336	*e*Pn	Pn	18 31 39.8	-0.1
HERR	Herculane	6.31	12	⇑P	Pn	18 31 41.3	+0.8
MORI	Morici	6.32	326	*e*Pn	Pn	18 31 39.9	-0.7
MORI				Sn	Sn	18 32 49.3	-3.6
FRGS	Fruska Gora	6.46	355	⇑P	Pn	18 31 42.0	-0.6
FRGS	Fruska Gora	6.46	355	*e*Pn	Pn	18 31 41.8	-0.8
BLY	Banja Luka	6.54	338	*e*Pn	Pn	18 31 41.9	-1.7
BLY	Banja Luka	6.54	338	*e*Pn	Pn	18 31 42.8	-0.8
AQU	L'Aquila	6.56	306	P	Pn	18 31 41.8	-2.2
AQU	L'Aquila	6.56	306	*e*Pn	Pn	18 31 45.3	+1.3
AQU	L'Aquila	6.56	306	Pn	Pn	18 31 41.8	-2.2
DUGI	Dugi Otok	6.71	324	*e*Pn	Pn	18 31 44.6	-1.3
DUGI				Sn	Sn	18 32 58.3	-4.3
UDBI	Udbina	6.83	330	*e*Pn	Pn	18 31 47.9	+0.2
MRAK	Mrakovica	6.86	338	*e*Pn	Pn	18 31 47.5	-0.6
GZR	Gura Zlata	6.87	13	⇓P	Pn	18 31 48.7	+0.5
GZR	Gura Zlata	6.87	13	P	Pn	18 31 49.7	+1.5
BZS	Buzias	6.94	6	⇑P	Pn	18 31 49.0	-0.1
BZS	Buzias	6.94	6	*e*Pn	Pn	18 31 48.8	-0.3
BZS	Buzias	6.94	6	P	Pn	18 31 50.3	+1.2
BZS				pmax	pmax		
	comp=Z,27nm,1.3s						
NRCA	Norcia	7.00	308		Pn	18 31 50.0	0.0
PLIT	Plitvice	7.18	331	*e*Pn	Pn	18 31 51.8	-0.7
NVLJ	Novalja	7.23	326	*e*Pn	Pn	18 31 52.2	-0.9
ARR	Arges	7.30	23	⇑P	Pn	18 31 55.2	+1.1
RABC	Rab	7.42	326	*e*Pn	Pn	18 31 55.2	-0.5
VOIR		7.49	25	⇓P	Pn	18 31 59.0	+2.2
VOIR		7.49	25	P	Pn	18 31 59.2	+2.4
VOIR				pmax	pmax		
	comp=Z,13nm,0.9s						
SIRR	Siria	7.59	6	⇓P	Pn	18 31 58.7	+0.7
KOVH	Kovagotottos	7.59	347	*e*P	Pn	18 31 56.4	-1.7
MURB	Monte Urbino	7.59	309		Pn	18 31 58.5	+0.3
MORH	Mrgy, Hungar	7.63	350	*e*PN	Pn	18 31 57.1	-1.4
MORH				*e*SN	Sn	18 33 19.2	-6.0
MORH	Mrgy, Hungar	7.63	350	*e*Pn	Pn	18 31 56.5	-2.0
ELL	Elmali	7.65	102	P	Pn	18 31 59.7	+0.7
ELL	Elmali	7.65	102		Pn	18 31 59.7	+0.7
ISR	Istrita	7.79	33	⇓P	Pn	18 32 01.8	+1.0
ISR	Istrita	7.79	33	P	Pn	18 32 04.6	+3.8
ISR				pmax	pmax		
	comp=Z,49nm,0.7s						
BOJS	Bojanci	7.85	331	*i* Pn	Pn	18 32 01.1	-0.5
BOJS				*e*Sn	Sn	18 33 27.9	-2.8
MLR	Muntele Rosu	7.86	29	⇓P	Pn	18 32 03.3	+1.5
MLR	Muntele Rosu	7.86	29	Sn	Sn	18 33 34.9	+3.9
	comp=Z,0.3nm,0.3s,baz=183,slow=8.3,SNR=1.2						
MLR				LR	LR	18 35 37.4	
	comp=Z,551nm,18.5s,baz=54,slow=43						
MLR	Muntele Rosu	7.86	29	P	Pn	18 32 05.0	+3.2
MLR				pmax	pmax		
	comp=Z,48nm,1.1s						
MLR	Muntele Rosu	7.86	29	Pn	Pn	18 32 03.4	+1.5
OZLJ	Ozalj	7.87	333	*e*Pn	Pn	18 32 00.5	-1.3
SMRN	Sveta Marina	7.92	325	*e*Pn	Pn	18 32 01.0	-1.6
PTJ	Puntijarka	7.95	336	*e*Pn	Pn	18 32 01.5	-1.6
RIY	Rijeka	8.01	327	*e*Pn	Pn	18 32 00.7	-3.0
KALN	Kalnik	8.01	339	*e*Pn	Pn	18 32 01.9	-1.9
GBRS	Gornja Briga	8.04	330	*i* Pn	Pn	18 32 04.1	-0.2
CRES	Cresnjev	8.05	334	*e*Pn	Pn	18 32 03.4	-1.0
CRES	Cresnjev	8.05	334	*i* Pn	Pn	18 32 03.4	-1.0
DOPR	Dopca	8.07	25	⇑P	Pn	18 32 06.4	+1.7
LOBO	Lobor	8.14	337	*e*Pn	Pn	18 32 04.2	-1.4
COVR	Voineasa-Covas	8.25	29	⇑P	Pn	18 32 08.6	+1.5
VISS	Visnje	8.26	331	*i* Pn	Pn	18 32 06.5	-0.7
VISS				*e*Sn	Sn	18 33 37.5	-3.2
CEY	Cerknica	8.37	329	*e*Pn	Pn	18 32 07.8	-0.9
MDUB	Mudurnu	8.39	75	Pn	Pn	18 32 10.7	+1.6
CASP	Castiglione de	8.42	302	Pn	Pn	18 32 09.6	+0.1
PLOR	Plostina	8.43	30	⇓P	Pn	18 32 11.3	+1.7
VRI	Vrincioaia	8.47	31	⇑P	Pn	18 32 11.8	+1.7
VRI	Vrincioaia	8.47	31	P	Pn	18 32 13.3	+3.1
VRI				pmax	pmax		
	comp=Z,43nm,1.1s						
OSSC	Osservatorio P	8.52	307		Pn	18 32 11.3	+0.5
CFR	Carcaliu	8.56	39	⇑P	Pn	18 32 12.9	+1.5
LJU	Ljubljana	8.58	331	*e*Pn	Pn	18 32 11.2	-0.4
MPLH	Magyarpolny	8.74	346	*e*PN	Pn	18 32 12.8	-0.9
MPLH				*e*SN	Sn	18 33 47.6	-4.9
SOKA	Soboth	8.94	335	Pn	Pn	18 32 15.5	-1.1
	comp=Z,23nm,0.8s,SNR=22						
SOKA				*e*Sn	Sn	18 33 51.3	-6.3
	comp=Z,17nm,0.6s						
OBKA	Obir	8.96	332	Pn	Pn	18 32 16.9	0.0
	comp=Z,9.2nm,0.4s,SNR=8.7						
OBKA				*e*Sn	Sn	18 33 56.6	-1.6
	comp=Z,24nm,0.7s						
TESR	Tescani	8.98	28	⇓P	Pn	18 32 18.4	+1.3
ZCCA	Zocca	9.13	311		Pn	18 32 16.2	-3.0
PSZ	Piszkesteto	9.21	357	*e*PN	Pn	18 32 20.0	-0.3
PSZ	Piszkesteto	9.21	357	*e*P	Pn	18 32 22.1	+1.8
PSZ	Piszkesteto	9.21	357	*e*SN	Sn	18 33 58.1	-6.1
PSZ	Piszkesteto	9.21	357	Pn	Pn	18 32 20.2	-0.2
ARSA	Arzberg	9.29	338	*i* Pn	Pn	18 32 21.0	-0.4
	comp=Z,5.3nm,0.6s,SNR=6.7						
MYKA	Terra Mystica	9.41	329	*e*Pn	Pn	18 32 23.1	+0.1
	comp=Z,2.6nm,0.4s						
MYKA				*e*Sn	Sn	18 34 08.2	-0.9
	comp=Z,7.0nm,0.6s						
KEST	Kesra	9.44	255	Pn	Pn	18 32 25.1	+1.7
	comp=Z,0.3nm,0.3s,baz=240,slow=18,SNR=2.4						
KEST				Sn	Sn	18 34 07.3	-2.7
	comp=Z,0.1nm,0.3s,baz=56,slow=22,SNR=1.7						
KEST				LR	LR	18 37 12.1	
	comp=Z,215nm,21.1s,baz=351,slow=45						
STAL	STALIGIAL	9.51	325		Pn	18 32 22.6	-1.8
BURAR	Bucovina Array	9.52	19	⇓P	Pn	18 32 25.7	+1.2
TRPA	Tarpa	9.52	8	⇑P	Pn	18 32 24.9	+0.4
TRPA	Tarpa	9.52	8	*e*PN	Pn	18 32 24.8	+0.4
ZOU	Zoufplan	9.63	327		Pn	18 32 24.6	-1.5
ZST	Bratislava	9.80	346	*e*P	Pn	18 32 29.1	+0.7
ZST	Bratislava	9.80	346	*e*PN	Pn	18 32 29.0	+0.7
ZST				*e*SS		19 09 55.0	
CONA	Conrad Observa	9.82	341	*i* Pn	Pn	18 32 28.9	+0.2
	comp=Z,2.3nm,0.4s						
VYHS	Vyhne	9.85	353	*e*P	Pn	18 32 29.7	+0.6
VYHS				*e*		18 34 15.3	
VYHS	Vyhne	9.85	353	*e*PN	Pn	18 32 29.7	+0.6
VYHS				*e*SN	Sn	18 34 15.3	-4.7
CTI	Castel Tesino	9.86	321	P	Pn	18 32 27.1	-2.1
CTI	Castel Tesino	9.86	321	Pn	Pn	18 32 27.1	-2.1
MODS	Modra-Piesok	9.94	347	*e*P	Pn	18 32 28.9	-1.4
MODS				*e*		18 34 15.8	
MODS	Modra-Piesok	9.94	347	*e*PN	Pn	18 32 28.9	-1.4
MODS				*e*SN	Sn	18 34 15.8	-6.4
ABTA	Abfaltersbach	9.97	326	Pn	Pn	18 32 30.1	-0.7
	comp=Z,6.1nm,0.5s,SNR=5.5						
ABTA				*e*Sn	Sn	18 34 21.6	-1.4
	comp=Z,13nm,0.7s						
SALO	Salr	10.15	316	Pn	Pn	18 32 31.0	-2.3
BRTR	Keskin Array B	10.19	80	Pn	Pn	18 32 38.4	+4.5
	comp=Z,0.2nm,0.3s,baz=267,slow=11,SNR=3.0						
BRTR				LR	LR	18 37 14.5	
	comp=Z,354nm,20.6s,baz=269,slow=42						
MOA	Molln	10.22	335	*i* Pn	Pn	18 32 33.9	-0.1
	comp=Z,3.7nm,0.3s,SNR=12						

JAVC	Velka Javorina	10.35	349	ePN	Pn	18 32 36.7	+0.8
NIE	Niedzica	10.70	359	P	Pn	18 32 43.9	+3.2
NIE				pmax	pmax		
	comp=Z,8.0nm,1.1s						
WTTA	Wattenberg	10.75	325	Pn	Pn	18 32 42.1	+0.5
	comp=Z,6.1nm,0.6s,SNR=4.4						
WTTA				eSn	Sn	18 34 41.1	-1.2
	comp=Z,25nm,0.8s						
WTTA	Wattenberg	10.75	325	P	Pn	18 32 41.8	+0.2
WTTA				pmax	pmax		
	comp=Z,21nm,1.2s						
KRUC	Moravsky	10.77	345	ePN	Pn	18 32 41.0	-0.6
WATA	Walderalm	10.84	326	i Pn	Pn	18 32 44.1	+1.5
	comp=Z,6.8nm,0.4s,SNR=13						
WATA				eSn	Sn	18 34 43.6	-0.6
	comp=Z,17nm,0.8s						
SQTA	Sankt Quirin	10.91	324	ePn	Pn	18 32 45.0	+1.3
	comp=Z,3.8nm,0.4s						
SQTA				eSn	Sn	18 34 42.8	-3.3
	comp=Z,10nm,0.6s						
VRAC	Vranov	10.97	346	Pn	Pn	18 32 43.4	-0.9
	comp=Z,0.3nm,0.3s,baz=186,slow=13,SNR=5.8						
VRAC				LR	LR	18 37 43.2	
	comp=Z,370nm,20.1s,baz=178,slow=42						
VRAC	Vranov	10.97	346	ePN	Pn	18 32 42.3	-2.0
FETA	Feichten	10.99	322	ePn	Pn	18 32 46.4	+1.6
	comp=Z,3.9nm,0.7s						
FETA				eSn	Sn	18 34 50.4	+2.2
	comp=Z,5.7nm,0.7s						
MOTA	Moosalm	11.05	324	i Pn	Pn	18 32 46.3	+0.6
	comp=Z,14nm,0.8s,SNR=11						
MOTA				eSn	Sn	18 34 48.0	-1.6
	comp=Z,21nm,0.7s						
CKRC	Cesky Krumlov	11.06	338	ePN	Pn	18 32 45.0	-0.6
CKRC				AMS	AMS	18 37 50.0	
	comp=Z,800nm,14.4s						
DAVOX	Davos/Dischmat	11.25	319	Pn	Pn	18 32 50.6	+2.3
	comp=Z,0.4nm,0.3s,baz=132,slow=20,SNR=3.7						
DAVOX				Sn	Sn	18 34 44.6	-10
	comp=Z,0.2nm,0.3s,baz=150,slow=8.8,SNR=1.9						
DAVOX				LR	LR	18 37 56.6	
	comp=Z,189nm,18.4s,baz=133,slow=42						
MORC	Moravsky Berou	11.27	350	⇑P	Pn	18 32 48.8	+0.3
MORC	Moravsky Berou	11.27	350	P	Pn	18 32 48.7	+0.3
MORC	Moravsky Berou	11.27	350	ePN	Pn	18 32 48.6	+0.1
MORC	Moravsky Berou	11.27	350		Pn	18 32 48.7	+0.3
GEC2	GERESS Array S	11.27	336		Pn	18 32 47.1	-1.5
GERES	GERESS Array B	11.27	336	Pn	Pn	18 32 46.7	-1.9
	comp=Z,0.9nm,0.3s,baz=156,slow=13,SNR=19						
GERES				Sn	Sn	18 34 49.1	-5.7
	comp=Z,0.4nm,0.3s,baz=155,slow=22,SNR=1.6						
GERES				LR	LR	18 37 46.7	
	comp=Z,209nm,21.0s,baz=224,slow=41						
GERES	GERESS Array B	11.27	336	P	Pn	18 32 47.2	-1.3
GERES	GERESS Array B	11.27	336	Pn	Pn	18 32 47.2	-1.3
TUE	Stuetta	11.33	317	Pn	Pn	18 32 47.9	-1.5
KHC	Kasperske Hory	11.56	336	eP	Pn	18 32 51.7	-0.8
KHC				e		18 34 53.4	
KHC				MLR	MLR		
	comp=Z,800nm,7.4s						
KHC	Kasperske Hory	11.56	336	ePN	Pn	18 32 51.7	-0.8
KHC				eSN	Sn	18 34 53.4	-8.4
KHC				AMS	AMS	18 39 10.0	
	comp=Z,800nm,7.4s						
DAVA	Damuels	11.59	321	ePn	Pn	18 32 54.2	+1.1
	comp=Z,2.2nm,0.5s						
DAVA				eSn	Sn	18 35 03.0	+0.2
	comp=Z,6.5nm,0.5s						
KRLC	Kraliky	11.67	348	P	Pn	18 32 54.4	+0.4
KRLC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
WET	Wettzell	11.80	335	P	Pn	18 32 54.3	-1.4
WET				pmax	pmax		
	comp=Z,12nm,1.1s						
BNN	Bunyan	11.92	85		Pn	18 32 57.4	-0.2
PRU	Pruhonice	12.06	341	eP	Pn	18 32 59.2	-0.1
PRU				MLR	MLR		
	comp=Z,1µm,7.7s						
PRU	Pruhonice	12.06	341	ePN	Pn	18 32 59.2	-0.1
PRU				AMS	AMS	18 38 30.0	
	comp=Z,1µm,7.7s						
SENIN	Lac Senin/Sane	12.41	312	Pn	Pn	18 33 04.3	+0.1
STU	Stuttgart	12.97	324	P	Pn	18 33 10.7	-1.0
STU	Stuttgart	12.97	324	Pn	Pn	18 33 10.7	-1.0
BRG	Berggiesshubel	13.03	341	P	Pn	18 33 11.6	-0.8
BRG				pmax	pmax		
	comp=Z,7.0nm,2.4s						
BRG	Berggiesshubel	13.03	341	eP	P	18 33 24.9	+1.9
BRG				Amp		18 33 25.9	
	comp=Z,5.1nm,0.9s						
BRG				Amp		18 39 24.0	
	comp=Z,0.9nm,12.0s						
BRG				Amp		18 39 26.0	
	comp=E,0.3nm,12.3s						
BRG				Amp		18 39 27.0	
	comp=N,0.5nm,16.4s						
GAZ	Gaziantep	13.22	92		Pn	18 33 16.1	+0.8
MMAI	Mount Meron Ar	13.30	111	Pn	Pn	18 33 15.5	-0.8
	comp=N,0.6nm,0.3s,baz=330,slow=12,SNR=3.6						
MMAI				Sn	Sn	18 35 32.3	-12
	comp=N,0.4nm,0.3s,baz=283,slow=29,SNR=1.1						
AKASG	Malin Array Be	13.46	24	Pn	Pn	18 33 17.9	-0.4
	comp=N,0.3nm,0.3s,baz=211,slow=13,SNR=6.1						
CLL	Collm	13.67	340	P	Pn	18 33 21.9	+0.7
CLL	Collm	13.67	340	eP	Pn	18 33 22.0	+0.7
CLL				i PP	P	18 33 31.8	+1.7
	comp=Z,28nm,1.4s						
CLL	Collm	13.67	340	Pn	Pn	18 33 21.9	+0.7
ASF	Jabal al Asfar	14.81	111	Pn	Pn	18 33 36.7	-0.3
	comp=Z,0.3nm,0.3s,baz=319,slow=6.9,SNR=3.5						
EIL	Elat	14.92	123	Pn	Pn	18 33 38.5	+0.1
	comp=Z,0.4nm,0.3s,baz=325,slow=20,SNR=4.7						
EIL				Sn	Sn	18 36 14.3	-10
	comp=Z,0.3nm,0.3s,baz=142,slow=19,SNR=2.0						
EIL				LR	LR	18 41 09.4	
	comp=Z,54nm,21.2s,baz=281,slow=44						
WLF	Walferdange	15.03	321	P	P	18 33 44.3	-1.0
WLF				pmax	pmax		
	comp=Z,50nm,1.2s						
WLF	Walferdange	15.03	321	P	P	18 33 44.3	-1.0
WLF				IAmb	IAmb	18 33 49.9	
	comp=Z,50nm,1.2s						
NACGM	Naroch	16.73	13	i P	Pn	18 34 02.5	+0.8
BSEG	Bad Segeberg	16.76	339	P	Pn	18 34 02.8	+0.7
BSEG				pmax	pmax		
	comp=Z,35nm,1.4s						
GURO	Guroymak-BITLI	16.77	84		P	18 34 05.3	+0.5
CART	Cartagena	17.01	273	P	Pn	18 34 05.5	+0.1
SIRT	Sirnak	17.25	87		P	18 34 11.2	+1.1
SIRT				IAmb	IAmb	18 34 17.7	
	comp=Z,55nm,0.9s						
ISAL	Salakas	17.27	11	IAmb	IAmb	18 34 49.3	
	comp=Z,7.9nm,1.1s						
PBUR	Paburge	17.34	3	IAmb	IAmb	18 34 51.2	
	comp=Z,223nm,1.4s						
KIV	Kislovodsk	17.39	65	eP	P	18 34 12.1	+0.5
KIV				pmax	pmax		
	comp=Z,12nm,1.1s						
KIV				MLR	MLR		
	comp=Z,54nm,15.0s						
KIV	Kislovodsk	17.39	65		Pn	18 34 10.8	+0.5
KBZ	Khabaz	17.51	66	P	P	18 34 13.4	+0.7
	comp=Z,0.1nm,0.3s,baz=286,slow=8.4,SNR=14						
ZEI	Tsey	18.12	70	eP	Pn	18 34 10.1	-9.3
ZEI				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ESDC	Sonseca Array	19.03	281	P	P	18 34 29.0	-0.7
	comp=Z,0.2nm,0.3s,baz=80,slow=10,SNR=14						
OBN	Obninsk	19.63	28	P	P	18 34 36.3	+0.4
	comp=Z,0.6nm,0.3s,baz=52,slow=9.9,SNR=3.2						
OBN				LR	LR	18 42 31.9	
	comp=Z,33nm,18.9s,baz=208,slow=38						
OBN	Obninsk	19.63	28	eP	P	18 34 30.0	-5.9
OBN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
OBN	Obninsk	19.63	28	IAmb	IAmb	18 34 52.0	
	comp=Z,14nm,0.5s						
MTSE	Matsula	20.12	5	eP	Pn	18 34 42.4	-0.7
VSU	Vasula	20.16	9	eP	P	18 34 42.4	+0.7
VSU	Vasula	20.16	9	P	P	18 34 41.9	+0.2
VSU				pmax	pmax		
	comp=Z,84nm,0.7s						
UPP	Uppsala	21.24	356	eP	P	18 34 53.4	0.0
AAL	Aland	21.48	359	eP	P	18 34 55.3	-0.7
PMRV	Marv??o	21.69	281	eP	P	18 34 57.8	-0.7
	comp=Z,27nm,1.4s						
MTE	Manteigas	21.71	283	eP	P	18 34 58.1	-0.6
PCBR	Castelo Branco	21.71	282	eP	P	18 34 58.6	-0.1
HFS	Hagfors	21.88	351	P	P	18 34 59.2	-1.0
	comp=Z,7.9nm,0.7s,baz=164,slow=12,SNR=12						
HFS				LR	LR	18 43 44.5	
	comp=Z,175nm,18.1s,baz=182,slow=38						
PESTR	Estremoz	21.92	279	eP	P	18 35 00.0	-1.0
	comp=Z,21nm,1.6s						
PVAQ	Vaqueiros	22.28	276	eP	P	18 35 06.8	+2.0
EVO	Evora	22.30	279	eP	P	18 35 03.6	-1.4
	comp=Z,22nm,1.9s						
PMTG	Montargil	22.38	280	eP	P	18 35 04.3	-1.6
	comp=Z,24nm,1.3s						
PBDV	Barranco-do-Ve	22.48	275	eP	P	18 35 07.7	+0.7
	comp=Z,45nm,1.5s						
NC602	NORSAR Array S	22.76	348	P	P	18 35 09.3	-0.4
PNCL	Nicolau / Gran	22.77	278	eP	P	18 35 09.8	-0.2
	comp=Z,38nm,1.4s						
FINES	FINESS Array B	23.01	7	P	P	18 35 11.6	-0.6
	comp=Z,15nm,0.8s,baz=163,slow=7.2,SNR=25						
FINES	FINESS Array B	23.01	7	P	P	18 35 11.7	-0.5
FIA1	FINESS Array S	23.01	7	P	P	18 35 12.6	+0.4
FIA1				IAmb	IAmb	18 35 13.6	
	comp=Z,22nm,0.8s						
EKA	Eskdalemuir Ar	23.02	324	P	P	18 35 11.4	-0.9
	comp=Z,37nm,1.0s,baz=122,slow=11,SNR=19						
ESK	Eskdalemuir	23.03	324	P	P	18 35 12.0	-0.5
ESK				pmax	pmax		
	comp=Z,69nm,1.1s						
ESK	Eskdalemuir	23.03	324	P	P	18 35 12.0	-0.5
NC405	NORSAR Array S	23.09	349	P	P	18 35 12.0	-1.2
NB201	NORSAR Array S	23.09	348	P	P	18 35 12.6	-0.7
NB2	NORSAR Subarra	23.10	348	P	P	18 35 12.4	-0.9
	comp=Z,33nm,1.2s,baz=158,slow=10						
NOA	NORSAR Array B	23.10	348	P	P	18 35 12.2	-1.1
	comp=Z,2.8nm,0.8s,baz=159,slow=9.6,SNR=16						
NBO00	NORSAR Array S	23.16	348	P	P	18 35 12.0	-1.9
BELG	Belogornoye	23.19	45	P	P	18 35 14.5	+0.3
	comp=Z,19nm,0.8s,baz=85,slow=14,SNR=7.6						
NC303	NORSAR Array S	23.25	349	P	P	18 35 14.9	+0.1
NC204	NORSAR Array S	23.39	348	P	P	18 35 16.1	-0.2
NC204				IAmb	IAmb	18 35 30.8	
	comp=Z,41nm,1.4s						
KLMR	Klimovskoe	25.12	22	eP	P	18 35 31.5	-0.8
KLMR				pmax	pmax		
	comp=Z,12nm,1.0s						
KLMR	Klimovskoe	25.12	22	e	P	18 35 31.5	-0.8
KLMR				AMP		18 35 32.5	
	comp=Z,12nm,1.0s						
RAYN	Ar Rayn	26.06	118	P	P	18 35 42.1	+0.9
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
RAYN	Ar Rayn	26.06	118	P	P	18 35 42.1	+0.9
RAYN				IAmb	IAmb	18 35 47.9	
	comp=Z,4.7nm,0.9s						
AKTO	Aktyubinsk	28.82	54	P	P	18 36 04.8	-1.0
	comp=Z,2.0nm,0.7s,baz=259,slow=9.5,SNR=9.4						
GEYT	Alibeck	29.33	80	P	P	18 36 11.2	+0.7
	comp=Z,4.0nm,0.7s,baz=45,slow=26,SNR=4.6						
GEYT	Alibeck	29.33	80	IAmb	IAmb	18 36 16.3	
	comp=Z,3.8nm,0.8s						
ABKAR	Akbulak array	29.91	56	P	P	18 36 15.0	-0.3
ABKAR	Akbulak array	29.91	56	P	P	18 36 14.5	-0.8
TORD	Torodi Ar. Bea	30.48	218	P	P	18 36 20.4	-0.3
	comp=Z,1.6nm,0.5s,baz=31,slow=8.3,SNR=9.4						
TORD	Torodi Ar. Bea	30.48	218	P	P	18 36 19.7	-1.0
ARU	Arti	30.63	42	LR	LR	18 50 20.5	
	comp=Z,1µm,18.9s,baz=190,slow=40						
ARCES	ARCESS Array B	30.99	3	P	P	18 36 23.9	-0.8
	comp=Z,3.3nm,0.7s,baz=181,slow=8.4,SNR=8.6						
ARCES	ARCESS Array B	30.99	3	IAmb	IAmb	18 36 28.9	
	comp=Z,20nm,1.4s						
KOWA	Kowa	32.44	229	P	P	18 36 38.9	+0.9
	comp=Z,1.1nm,0.4s,baz=65,slow=7.5,SNR=5.1						
KOWA	Kowa	32.44	229	IAmb	IAmb	18 36 59.9	
	comp=Z,7.2nm,1.5s						
BRVK	Borovoye	36.68	50	P	P	18 37 14.4	+0.1
BRVK				pmax	pmax		
	comp=Z,10.0nm,1.2s						
BRVK	Borovoye	36.68	50	P	P	18 37 14.4	+0.1
BRVK				IAmb	IAmb	18 37 16.1	
	comp=Z,9.5nm,1.1s						
KKAR	Karatay Array	37.54	67	P	P	18 37 22.4	+0.6
KKAR	Karatay Array	37.54	67	P	P	18 37 22.4	+0.6
CHGR	Chuyangaron	37.56	74	P	P	18 37 23.4	+1.3
CHGR				IAmb	IAmb	18 37 25.8	
	comp=Z,13nm,0.7s						
GAR	Garm	38.34	73	P	P	18 37 29.4	+0.8
GAR				IAmb	IAmb	18 37 33.4	
	comp=Z,14nm,0.8s						
BTK	Batken	38.44	72	P	P	18 37 30.6	+1.1
BTK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BTK	Batken	38.44	72	P	P	18 37 30.6	+1.1
BTK				IAmb	IAmb	18 37 40.9	
	comp=Z,5.7nm,1.1s						
DBIC	Dimbokro	39.32	222	P	P	18 37 36.4	-0.5
	comp=Z,5.3nm,1.1s,baz=31,slow=10.0,SNR=5.0						
DBIC	Dimbokro	39.32	222	IAmb	IAmb	18 37 55.9	
	comp=Z,10nm,1.2s						
AAK	Ala-Archa	40.50	67	P	P	18 37 47.5	+0.7
AAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
AAK	Ala-Archa	40.50	67	P	P	18 37 47.5	+0.7
FRU1	Bishkek	40.56	66	P	P	18 37 45.9	-1.2
FRU1				pmax	pmax		
	comp=Z,13nm,0.4s						
FRU1	Bishkek	40.56	66	P	P	18 37 45.9	-1.2
BOOM	Boomskoye usch	41.58	67	P	P	18 37 56.6	+1.0
BOOM				pmax	pmax		
	comp=Z,6.0nm,1.3s						
BOOM	Boomskoye usch	41.58	67	P	P	18 37 56.6	+1.0
KURK	Kurchatov	41.92	54	P	P	18 37 58.3	+0.2
KURK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
KURK	Kurchatov	41.92	54	P	P	18 37 58.3	+0.2
KURK				IAmb	IAmb	18 38 09.9	
	comp=Z,7.3nm,1.3s						
NIL	Nilore	42.34	80	P	P	18 38 02.8	+1.1
NIL				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NIL	Nilore	42.34	80	P	P	18 38 02.8	+1.1
NIL				IAmb	IAmb	18 38 04.7	
	comp=Z,10nm,1.0s						
KSH	Kashi	42.40	71	P	P	18 38 02.1	-0.2
KSH				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MK31	Makanchi Array	44.98	59	P	P	18 38 23.0	+0.1
MK31				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MK31	Makanchi Array	44.98	59	P	P	18 38 23.0	+0.1
MKAR	Makanchi Array	44.98	59	P	P	18 38 21.8	-1.1
	comp=Z,1.7nm,0.6s,baz=271,slow=6.3,SNR=18						
MKAR				PcP	PcP	18 40 05.1	+1.1
	comp=Z,1.7nm,0.7s,baz=291,slow=3.3,SNR=6.1						
MKAR	Makanchi Array	44.98	59	P	P	18 38 22.6	-0.3
MKAR	Makanchi Array	44.98	59	P	P	18 38 22.6	-0.3
ZAA0	Zalesovo Array	45.30	49	P	P	18 38 24.4	-0.9
ZAA0				IAmb	IAmb	18 38 29.5	
	comp=Z,12nm,1.2s						
ZALV	Zalesovo Beam	45.30	49	P	P	18 38 24.2	-1.1
	comp=Z,3.8nm,0.5s,baz=276,slow=8.8,SNR=21						
ZALV	Zalesovo Beam	45.30	49	P	P	18 38 24.5	-0.8
ZALV	Zalesovo Beam	45.30	49	P	P	18 38 24.5	-0.8
WMQ	Urumqi	49.46	61	eP	P	18 38 59.6	+1.7
SCHQ	Schefferville	58.09	317	P	P	18 40 00.3	-0.5
	comp=Z,10nm,1.1s,baz=78,slow=2.9,SNR=6.3						
SCHQ	Schefferville	58.09	317	P	P	18 40 01.5	+0.7
SCHQ				IAmb	IAmb	18 40 02.1	
	comp=Z,11nm,1.0s						
SONM	Songino Array	60.08	51	P	P	18 40 14.5	-0.4
	comp=Z,0.8nm,0.8s,baz=276,slow=9.2,SNR=5.7						
HHC	Hu-ho-hao-te	66.69	56	eP	P	18 40 57.6	-1.2
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,63nm,5.4s						
BOSA	Boshof	67.12	176	P	P	18 41 03.5	+2.0
	comp=Z,3.2nm,0.8s,baz=299,slow=19,SNR=3.8						
CMAR	Chiang Mai Arr	69.77	82	P	P	18 41 18.4	+0.2
	comp=Z,0.8nm,0.7s,baz=310,slow=7.9,SNR=8.0						
ILAR	Eielson Array	76.38	355	P	P	18 41 57.6	+1.0
	comp=Z,0.8nm,1.0s,baz=15,slow=2.0,SNR=5.3						
NJ2	Nanjing	76.51	60	eP	P	18 41 58.5	+0.6
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
TXAR	Lajitas Array	94.63	314	P	P	18 43 28.4	-0.7
TXAR	Lajitas Array	94.63	314	P	P	18 43 28.4	-0.7
PETF	Flores	94.67	296	P	P	18 43 27.8	-1.5
MDPB	Devils Postpil	95.43	329	P	P	18 43 31.8	-1.0

IDC ***18*** *18:31:02.1±0.3, 8°.94S×158°.35E, h0^{km}, mb5.8/26, mb1 5.9/28, mb1mx5.8/29, mbtmp5.8/28, ML4.8/2, MS6.7/40, Ms1 6.7/40, ms1mx6.7/44, Error ellipse: s-maj=12.3km s-min=9.8km az=21.0*

MOS ***18*** *18:31:02.2±0.9, 8°.91S×158°.31E, h12^{km}, mb6.3/45, MS6.9/84, Error ellipse: s-maj=6.2km s-min=5.0km az=114.0*

BJI ***18*** *18:31:03.0±0.0, 8°.95S×158°.45E, h10^{km}, mB6.5/67, mb5.8/74, Ms6.9/99, Ms7 6.8/89*

NEIC ***18*** *18:31:04.3, 8°.95S×158°.42E, h15^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M_{rr}0.62; $M_{\theta\theta}$-0.20; $M_{\phi\phi}$-0.42; $M_{r\theta}$0.24; $M_{\theta\phi}$0.89; $M_{\phi r}$-0.81; Fault plane solution: $M_0$1.34000×10^{19} NP1:ϕ_s165.04000°, δ71.50000°, λ120.99000°. NP2:ϕ_s282.89000°, δ35.62000°, λ33.01000°. Principal axes: T 1.1146, Plg53.0000°, Azm112.0000°; N 0.3779, Plg29.0000°, Azm334.0000°; P -1.4925, Plg21.0000°, Azm232.0000°;*

NEIC ***18*** *18:31:04.6±1.7, 8°.90S±0°.08×158°.42E±0°.06, h13^{km}±2^{km}, mb6.4/388, Ms_20 7.0/437, Mwb6.7/37, Mww6.8, Mwc6.8(GCMT) Error ellipse: s-maj=11.3km s-min=8.9km az=200.0*

NEIC ***18*** *18:31:11, 9°.10S×158°.49E, h19^{km}, Moment Tensor Solution. Duration: 12^{s}8 Moment tensor: Scale 10^{19}Nm; M_{rr}1.36; $M_{\theta\theta}$-0.44; $M_{\phi\phi}$-0.92; $M_{r\theta}$0.14; $M_{\theta\phi}$1.04; $M_{\phi r}$-1.67; Fault plane solution: $M_0$2.31000×10^{19} NP1: ϕ_s297.00000°, δ29.00000°, λ45.00000°. NP2: ϕ_s166.00000°, δ70.00000°, λ111.00000°. Principal axes: T 2.2939, Plg59.0000°, Azm106.0000°; N 0.0326, Plg20.0000°, Azm338.0000°; P -2.3265, Plg22.0000°, Azm240.0000°;*

GCMT ***18*** *18:31:11.6±0.0, 9°.11S×158°.44E, h22^{km}, MW6.8/165, Moment Tensor Solution. s165,c444; s161,c740; Duration: 6^{s}4 Moment tensor: Scale 10^{19}Nm; M_{rr}1.35±.01; $M_{\theta\theta}$-0.45±.01; $M_{\phi\phi}$-0.89±.01; $M_{r\theta}$0.22±.01; $M_{\theta\phi}$1.02±.00; $M_{\phi r}$-1.63±.02; Best double couple: $M_0$2.27100×10^{19} NP1:ϕ_s297.00000°, δ28.00000°, λ47.00000°. NP2:ϕ_s164.00000°, δ70.00000°, λ110.00000°. Principal axes: T 2.2390, Plg60.0000°, Azm103.0000°; N 0.0640, Plg19.0000°, Azm337.0000°; P -2.3030, Plg22.0000°, Azm239.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***18*** *18:31:13, 9°.10S×158°.32E, h24^{km}, Moment Tensor Solution. Duration: 18^{s}0 Moment tensor: Scale 10^{19}Nm; M_{rr}1.46; $M_{\theta\theta}$-0.56; $M_{\phi\phi}$-0.90; $M_{r\theta}$0.36; $M_{\theta\phi}$1.09; $M_{\phi r}$-1.54; Fault plane solution: $M_0$2.31000×10^{19} NP1: ϕ_s297.00000°, δ28.00000°, λ52.00000°. NP2: ϕ_s159.00000°, δ68.00000°, λ108.00000°. Principal axes: T 2.2317, Plg62.0000°, Azm98.0000°; N 0.1464, Plg17.0000°, Azm332.0000°; P -2.3781, Plg21.0000°, Azm235.0000°;*

ISC 18 18:31:03.9±0.4**, 8°.99S**±0°.03×**158°.45E**±0°.03**, h11**^{km}±2^{km}**, h13**^{km}**:pP-P, n2010,** σ1^{s}**89**/2200**, mb6.4**/335**, MS7.0**/342**, 220C-109D, Fault plane solution: NP1:**ϕ_s336.84647°**,** δ50.06088°**,** λ84.31403°. **NP2:**ϕ_s165.66245°**,** δ40.27463°**,** λ96.74839°. **Principal axes:** T Plg83.4306°**,** Azm209.0864°**;** N Plg4.3566°**,** Azm340.5038°**;** P Plg4.9075°**,** Azm70.8786°**; Fault plane solution: NP1:** ϕ_s278.99463°**,** δ57.49189°**,** λ53.41318°. **NP2:** ϕ_s153.09073°**,** δ47.37914°**,** λ133.08534°. **Principal axes:** T Plg59.1850°**,** Azm133.6345°**;** N Plg30.1755°**,** Azm300.7432°**;** P Plg5.6701°**,** Azm34.0527°**;**

Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.54	107	Pn	Pb	18 31 32.0	-0.5
	9µm,0.3s,baz=231,slow=3.8,SNR=852						
HNR	Honiara	1.54	107	P	Pn	18 31 31.1	-0.3
HNR	Honiara	1.54	107	⇑P	Pn	18 31 31.3	-0.1
HNR	Honiara	1.54	107		Pn	18 31 31.1	-0.3
HNR	Honiara	1.54	107	P	Pn	18 31 31.6	+0.3
SANVU	Saraoutou	10.69	128	⇑P	Pn	18 33 38.0	+0.9
SANVU	Saraoutou	10.69	128		Pn	18 33 37.4	+0.3
SANVU	Saraoutou	10.69	128	P	Pn	18 33 39.5	+2.4
PMG	Port Moresby	11.15	267	Pn	Pn	18 33 48.1	+4.7
	2.2nm,0.3s,baz=79,slow=8.5,SNR=30						
PMG				LR	LR	18 37 57.2	
	comp=Z,419µm,19.8s,baz=94,slow=38						
PMG	Port Moresby	11.15	267	⇓P	Pn	18 33 47.1	+3.6
PMG	Port Moresby	11.15	267	Pn	Pn	18 33 47.2	+3.8
KOUNC	Koumac, New Ca	12.80	155	⇑P	Pn	18 34 07.1	+1.2
KOUNC	Koumac, New Ca	12.80	155	P	Pn	18 34 08.9	+3.0
DVP	Devils Point	12.85	134	P	Pn	18 34 09.3	+2.8
	97µm,1.5s						
RTV	Rentapao	13.06	133	P	Pn	18 34 12.4	+2.9
	462µm,1.7s						
LIFNC	LIFOU	14.46	145	Pn	Pn	18 34 29.7	+1.0
DZM	Mont Dzumac	15.11	150	Pn	Pn	18 34 39.6	+2.1
	1.5nm,0.3s,baz=359,slow=15,SNR=37						
DZM				LR	LR	18 40 03.9	
	comp=Z,1424µm,18.1s,baz=326,slow=36						
DZM	Mont Dzumac	15.11	150	ePn	Pn	18 34 39.7	+2.2
	3µm,1.2s						
DZM				eLR	LR	18 38 11.3	
	comp=Z,894µm,23.2s						
DZM	Mont Dzumac	15.11	150	⇑P	Pn	18 34 39.4	+1.9
DZM	Mont Dzumac	15.11	150	Pn	Pn	18 34 39.2	+1.7
ONTNC	Ouen Toro	15.31	151	Pn	Pn	18 34 41.2	+1.1
MARNC	Mare, Loyalty	15.47	144	⇑P	Pn	18 34 43.4	+1.3
MARNC	Mare, Loyalty	15.47	144		Pn	18 34 42.3	+0.1
OUENC	Ouen Island, N	15.60	150	Pn	Pn	18 34 44.2	+0.4
PATS	Pohnpei	15.72	360	Pn	Pn	18 34 45.5	-0.1
PATS	Pohnpei	15.72	360	P	Pn	18 34 44.9	-0.6
PINNC	Pines Island,	16.06	149		Pn	18 34 50.5	+0.6
CTAO	Charters Tower	16.14	226	P	Pn	18 34 49.0	-2.0
CTAO				pmax	pmax		
	comp=Z,4µm,2.0s						
CTAO	Charters Tower	16.14	226	⇓P	Pn	18 34 49.2	-1.7
CTAO	Charters Tower	16.14	226	Pn	Pn	18 34 49.0	-2.0
CTAO	Charters Tower	16.14	226	P	Pn	18 34 49.5	-1.4
MTSU	Mount Surprise	16.46	235	P	Pn	18 34 55.6	+0.6
	baz=16,SNR=20						
TARA	Tarawa	17.71	55	⇑P	P	18 35 11.5	0.0
TARA	Tarawa	17.71	55	P	Pn	18 35 10.1	-0.7
TARA				IAmb	IAmb	18 35 29.1	
	comp=Z,5µm,1.1s						
EIDS	Eidsvold	17.73	202	P	P	18 35 11.7	0.0
	baz=18,SNR=53						
MMPI	Merauke	17.86	270	P	P	18 35 27.1	+14
JAY	Jayapura	18.78	289	P	P	18 35 23.5	+0.1
	comp=Z,9.1nm,0.3s,baz=100,slow=4.5,SNR=33						
JAY				LR	LR	18 43 22.7	
	comp=Z,161µm,18.0s,baz=84,slow=40						
JAY	Jayapura	18.78	289	P	Pn	18 35 24.6	+0.7
	comp=Z,199µmcomp=Z,25µmcomp=Z,810nm,1.0s						
RMQ	Roma	19.68	207	P	Pn	18 35 35.1	+0.6
	baz=20,SNR=201						
KWAJ	Kwajalein Atol	19.89	28	P	P	18 35 34.1	-1.4
KWAJ				pmax	pmax		
	comp=Z,19µm,1.7s						
KWAJ	Kwajalein Atol	19.89	28	⇑P	Pn	18 35 37.9	+0.7
KWAJ	Kwajalein Atol	19.89	28		P	18 35 34.1	-1.4
KWAJ	Kwajalein Atol	19.89	28	P	Pn	18 35 38.0	+0.8
FUNA	Funafuti	20.51	90	P	Pn	18 35 43.4	-1.1
FUNA				IAMs_20	IAMs_20	18 42 07.6	
	comp=Z,601µm,19.0s						
SMPI	Sarmi	20.83	288	P	Pn	18 35 47.4	-0.8
	comp=Z,208µmcomp=Z,46µmcomp=Z,3µm,1.8s						
MSVF	Nonsavu	20.94	117	P	Pn	18 35 49.3	-0.2
	comp=Z,699nm,1.0s,baz=273,slow=7.8,SNR=107						
MSVF				LR	LR	18 43 13.8	
	comp=Z,500µm,18.0s,baz=301,slow=35						
MSVF	Nonsavu	20.94	117	⇑iP	Pn	18 35 49.0	-0.5
MSVF				pmax	pmax		
	comp=Z,2µm,1.6s						
MSVF				MLR	MLR		
	comp=Z,477µm,15.0s						
MSVF	Nonsavu	20.94	117	⇑P	Pn	18 35 49.3	-0.3
MSVF	Nonsavu	20.94	117	P	Pn	18 35 49.2	-0.4

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MSVF  Nonsavu          20.94 117   IAMs_20 IAMs_20 18 43 03.5
      comp=Z,465µm,18.0s
MSVF  Nonsavu          20.94 117   P       Pn      18 35 50.6 +1.1
QIS   Mount Isa        21.52 236   P       P       18 35 53.8 +0.6
      baz=22,SNR=146
NFK   Norfolk Island   21.85 157   P       P       18 35 57.4 +0.9
      baz=22,SNR=3.7
QLP   Quilpie          22.08 216   P       P       18 35 59.5 +0.4
      baz=22,SNR=74
ARMA  Armidale         22.25 196   P       P       18 36 01.7 +0.7
      baz=22,SNR=111
LHI   Lord Howe Isla   22.42 179   P       P       18 36 03.5 +0.8
      baz=22,SNR=5.9
SRPI  Serui, Papua     23.20 286   P       P       18 36 15.6 +4.5
      comp=Z,139µmcomp=Z,16µmcomp=Z,373nm,0.9s
MGCD  Mangrove Creek   25.04 195   P       P       18 36 29.9 +1.8
      baz=25,SNR=33
CMSA  Cobar Meteorol   25.38 206   P       P       18 36 31.7 +0.5
      baz=25,SNR=110
WR0   Warramunga Arr   25.55 242   P       P       18 36 31.7 -1.3
WR0                                IAmb    IAmb    18 36 49.8
      comp=Z,1µm,1.2s
WB0   Warramunga Arr   25.61 243   P       P       18 36 32.3 -1.3
RIV   Riverview        25.61 194   P       P       18 36 34.4 +1.0
      baz=26,SNR=14
WRAB  Tennant Creek    25.71 242ceP    P       18 36 33.9 -0.5
WRAB                               pmax    pmax
      comp=Z,1µm,1.1s
WRAB                               MLR     MLR
      comp=Z,255µm,19.0s
WRAB  Tennant Creek    25.71 242 ⇓P    P       18 36 33.7 -0.7
WRAB  Tennant Creek    25.71 242   P       P       18 36 33.1 -1.3
WRAB                               IAmb    IAmb    18 36 47.8
      comp=Z,780nm,1.0s
WRAB  Tennant Creek    25.71 242   P       P       18 36 33.7 -0.7
WB2   Warramunga Arr   25.71 242   P       P       18 36 33.4 -1.0
WB2                                IAmb    IAmb    18 36 47.9
      comp=Z,952nm,1.1s
WRA   Warramunga Arr   25.72 242   P       P       18 36 33.9 -0.7
      comp=Z,198nm,1.0s,baz=66,slow=8.9,SNR=191
WRA                                PcP     PcP     18 40 05.6 +0.7
      comp=Z,57nm,1.1s,baz=71,slow=2.7,SNR=1.1
WRA                                LR      LR      18 46 24.9
      comp=Z,270µm,20.4s,baz=70,slow=36
WRA                                P3KPbc          19 09 33.6
      comp=Z,1.2nm,0.9s,baz=265,slow=2.4,SNR=6.3
WRA   Warramunga Arr   25.72 242   P       P       18 36 32.5 -2.1
KDU   Kakadu           25.77 259   P       P       18 36 34.5 -0.5
      baz=26,SNR=197
GUMO  Guam             26.17 329   P       P       18 36 39.1 +0.5
      comp=Z,461nm,1.2s,baz=109,slow=4.4,SNR=5.3
GUMO                               LR      LR      18 46 08.7
      comp=Z,67µm,21.7s,baz=146,slow=35
GUMO  Guam             26.17 329   P       P       18 36 35.5 -3.1
GUMO                               pmax    pmax
      comp=Z,2µm,1.3s
GUMO  Guam             26.17 329 ⇑P    P       18 36 38.4 -0.2
GUMO  Guam             26.17 329   P       P       18 36 35.5 -3.1
GUMO  Guam             26.17 329   P       P       18 36 38.9 +0.3
FAKI  Fak Fak          26.73 281 ⇓P    P       18 36 43.5 -0.3
FAKI  Fak Fak          26.73 281   P       P       18 36 47.5 +3.7
      comp=Z,153µmcomp=Z,20µmcomp=Z,315nm,1.0s
FAKI  Fak Fak          26.73 281   P       P       18 36 42.9 -0.9
FAKI  Fak Fak          26.73 281   P       P       18 36 44.5 +0.7
YNG   Young            26.83 199   P       P       18 36 45.8 +1.4
      baz=27,SNR=74
SAUI  Saumlaki         26.87 270 ⇓P    P       18 36 45.8 +0.8
SAUI  Saumlaki         26.87 270   P       P       18 36 48.9 +3.9
      comp=Z,290µmcomp=Z,68µmcomp=Z,2µm,1.5s
SAUI  Saumlaki         26.87 270   P       P       18 36 45.1 +0.1
SAUI  Saumlaki         26.87 270   P       P       18 36 45.7 +0.7
MTN   Manton Dam       27.09 259   P       P       18 36 46.6 -0.3
      baz=27,SNR=30
CNB   Canberra Magne   27.49 196   P       P       18 36 51.5 +1.2
      baz=28,SNR=71
CAN   Canberra         27.59 197   P       P       18 36 51.4 +0.1
CAN                                pmax    pmax
      comp=Z,512nm,1.2s
CAN                                MLR     MLR
      comp=Z,151µm,22.0s
CAN   Canberra         27.59 197 ⇓P    P       18 36 52.4 +1.1
CAN   Canberra         27.59 197   P       P       18 36 51.4 +0.1
CAN   Canberra         27.59 197   P       P       18 36 51.7 +0.4
STKA  Stephens Creek   27.63 212   P       P       18 36 51.8 +0.2
      comp=Z,136nm,0.8s,baz=22,slow=8.6,SNR=76
STKA                               LR      LR      18 47 46.3
      comp=Z,362µm,18.0s,baz=31,slow=36
STKA                               P3KPbc          19 09 23.9
      comp=Z,3.3nm,0.9s,baz=32,slow=14,SNR=3.7
STKA  Stephens Creek   27.63 212   P       P       18 36 51.8 +0.2
      baz=28,SNR=182
STKA  Stephens Creek   27.63 212   P       P       18 36 51.0 -0.6
AS31  Alice Springs    27.64 235   P       P       18 36 49.7 -2.2
ASAR  Alice Springs    27.64 235   P       P       18 36 50.5 -1.4
      comp=Z,86nm,1.0s,baz=63,slow=9.1,SNR=224
ASAR                               PcP     PcP     18 40 09.7 +0.4
      comp=Z,35nm,1.0s,baz=90,slow=2.5,SNR=4.1
ASAR                               LR      LR      18 47 35.6
      comp=Z,246µm,19.6s,baz=41,slow=36
ASAR                               P3KPbc          19 09 24.1
      comp=Z,1.9nm,1.1s,baz=245,slow=4.7,SNR=5.9
ASAR  Alice Springs    27.64 235   P       P       18 36 50.2 -1.6
ANA2  Anatahan         28.15 333   P       P       18 36 53.6 -2.7
ANA2                               IAmb    IAmb    18 37 45.4
      comp=Z,846nm,1.6s
SIJI  Sorong           28.24 285   P       P       18 36 57.1 -0.2
      comp=Z,30nm,0.7s,baz=78,slow=6.6,SNR=25
SIJI                               S       S       18 41 41.2 -2.1
      comp=Z,12nm,1.0s,baz=74,slow=12,SNR=1.4
SWI   Sorong           28.24 285   P       P       18 36 58.8 +1.5
SWI                                pmax    pmax
      comp=Z,298nm,1.2s
SWI   Sorong           28.24 285   P       P       18 36 58.9 +1.6
      comp=Z,115µmcomp=Z,15µmcomp=Z,297nm,1.2s
H11S3 WAKE ISLAND Hy   28.50  17   T       T       19 05 55.9
      baz=194,slow=76,SNR=775
H11S2 WAKE ISLAND Hy   28.50  17   T       T       19 05 30.8
      baz=194,slow=76,SNR=649
H11S1 WAKE ISLAND Hy   28.51  17   T       T       19 05 51.3
      baz=194,slow=76,SNR=556
BNDI  Bandanaira       28.68 277 ⇓P    P       18 37 00.8 -0.4
BNDI  Bandanaira       28.68 277   P       P       18 37 01.9 +0.7
MILA  Mila             29.18 195   P       P       18 37 06.9 +1.5
      baz=29,SNR=10
OUZ   Omahuta          29.55 154 ⇑P    P       18 37 10.4 +1.8
OUZ   Omahuta          29.55 154   P       P       18 37 09.8 +1.1
OUZ                                IAmb    IAmb    18 37 15.8
      comp=Z,778nm,1.3s
OUZ   Omahuta          29.55 154   P       P       18 37 10.1 +1.4
AFI   Afiamalu         29.57 102   P       P       18 37 10.2 +1.0
      comp=Z,491nm,1.0s,baz=245,slow=2.2,SNR=33
AFI                                LR      LR      18 47 13.1
      comp=Z,513µm,18.5s,baz=288,slow=33
H11N1 WAKE ISLAND Hy   29.71  16   T       T       19 07 17.9
      baz=195,slow=76,SNR=723
H11N3 WAKE ISLAND Hy   29.72  16   T       T       19 07 15.8
      baz=195,slow=76,SNR=597
KNRA  Kununurra        29.73 254   P       P       18 37 10.4 -0.1
      baz=30,SNR=58
H11N2 WAKE ISLAND Hy   29.73  16   T       T       19 07 30.4
      baz=195,slow=76,SNR=625
MSAI  Masohi           29.87 279   P       P       18 37 14.4 +2.7
      comp=Z,516nmcomp=Z,34nm,1.2s
RAO   Raoul Island     29.96 135   LR      LR      18 47 12.7
      comp=Z,178µm,19.6s,baz=318,slow=32
RAO   Raoul Island     29.96 135   P       P       18 37 12.6 +0.2
RAO                                pmax    pmax
      comp=Z,4µm,1.3s
RAO                                MLR     MLR
      comp=Z,217µm,18.0s
RAO   Raoul Island     29.96 135 ⇑P    P       18 37 13.2 +0.8
RAO   Raoul Island     29.96 135   P       P       18 37 12.6 +0.2
HTT   Hallett          30.26 214   P       P       18 37 15.2 +0.1
      baz=30,SNR=49
KNTN  Kanton           30.30  80 ⇓P    P       18 37 15.7 +0.1
KNTN  Kanton           30.30  80   P       P       18 37 15.1 -0.5
KNTN  Kanton           30.30  80   P       P       18 37 16.2 +0.7
AAI   Ambon            30.52 278   P       P       18 37 17.0 -0.5
AAI                                pmax    pmax
      comp=Z,295nm,0.8s
AAI   Ambon            30.52 278   P       P       18 37 17.5  0.0
      comp=Z,124µmcomp=Z,12µmcomp=Z,296nm,0.8s
TOO   Toolangi         30.77 200   P       P       18 37 20.5 +1.0
      baz=31,SNR=33
BBOO  Buckleboo        31.47 218   P       P       18 37 25.6 -0.1
      baz=32,SNR=153
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ARPS  Mount Arapiles   31.50 206   P       P       18 37 27.1 +1.3
      baz=32,SNR=48
LBMI  Labuha           31.91 283   P       P       18 37 32.9 +3.1
      comp=Z,62µmcomp=Z,13µmcomp=Z,781nm,1.6s
NIUE  Niue             32.22 112   P       P       18 37 33.0 +0.6
      baz=32,SNR=17
TNTI  Ternate          32.45 286 ⇓P    P       18 37 34.9 +0.4
TNTI  Ternate          32.45 286   P       P       18 37 36.9 +2.4
      comp=Z,58µmcomp=Z,7µmcomp=Z,195nm,1.5s
TNTI  Ternate          32.45 286   P       P       18 37 33.2 -1.2
TNTI                               IAmb    IAmb    18 38 09.2
      comp=Z,741nm,1.7s
WRKA  Warakurna        32.84 237   P       P       18 37 36.3 -1.5
      baz=33,SNR=116
HIZ   Hauiti           32.89 156   P       P       18 37 38.6 +0.5
HIZ   Hauiti           32.89 156   P       P       18 37 40.2 +2.1
SANI  Sanana           33.02 280 ⇓P    P       18 37 39.1 -0.4
SANI  Sanana           33.02 280   P       P       18 37 39.8 +0.3
      comp=Z,91µmcomp=Z,14µmcomp=Z,742nm,1.1s
SANI  Sanana           33.02 280   P       P       18 37 39.2 -0.3
FITZ  Fitzroy Crossi   33.10 251   P       P       18 37 38.9 -1.3
      comp=Z,38nm,0.6s,baz=74,slow=7.4,SNR=62
FITZ                               LR      LR      18 50 22.8
      comp=Z,111µm,21.8s,baz=75,slow=35
MXZ   Matakaoa Point   33.63 151   P       P       18 37 45.3 +0.7
MXZ                                IAMs_20 IAMs_20 18 48 27.2
      comp=Z,408µm,22.0s
URZ   Urewera          33.64 153   P       P       18 37 45.5 +0.9
      comp=Z,202nm,1.1s,baz=301,slow=21,SNR=36
URZ                                S       S       18 43 23.0  +16
      comp=Z,35nm,1.1s,baz=149,slow=23,SNR=3.4
URZ                                LR      LR      18 48 52.2
      comp=Z,463µm,21.4s,baz=18,slow=32
URZ   Urewera          33.64 153 ⇑P    P       18 37 45.4 +0.8
URZ   Urewera          33.64 153   P       P       18 37 45.5 +0.9
URZ                                IAMs_20 IAMs_20 18 48 41.3
      comp=Z,468µm,21.0s
URZ   Urewera          33.64 153   P       P       18 37 45.6 +1.0
SOEI  Soe              33.73 266 ⇓P    P       18 37 46.0 +0.2
SOEI  Soe              33.73 266   P       P       18 37 46.7 +0.9
      comp=Z,133µmcomp=Z,13µmcomp=Z,465nm,1.1s
SOEI  Soe              33.73 266   P       P       18 37 45.5 -0.3
QRZ   Quartz Range     34.08 161   P       P       18 37 49.2 +0.8
QRZ                                IAmb    IAmb    18 37 59.7
      comp=Z,670nm,1.5s
QRZ   Quartz Range     34.08 161   P       P       18 37 50.0 +1.6
BKZ   Black Stump Fm   34.12 155   P       P       18 37 49.2 +0.4
BKZ   Black Stump Fm   34.12 155   P       P       18 37 49.4 +0.5
BATI  Baumata          34.31 265   P       P       18 37 50.8  0.0
      comp=Z,311nm,1.2s,baz=119,slow=5.1,SNR=43
BATI                               P3KPbc          19 08 56.2
      comp=Z,14nm,0.9s,baz=347,slow=2.1,SNR=5.3
BATI  Baumata          34.31 265   P       P       18 37 52.2 +1.4
      comp=Z,70µmcomp=Z,9µmcomp=Z,399nm,1.4s
NNZ   Nelson           34.71 160   P       P       18 37 53.3 -0.6
MOO   Moorlands        34.76 195   P       P       18 37 56.7 +2.4
      baz=35,SNR=8.0
THZ   Tophouse         35.05 161   P       P       18 37 56.9 +0.1
THZ                                IAmb    IAmb    18 38 18.1
      comp=Z,472nm,1.0s
TUWZ  Tuamarina        35.09 160   P       P       18 37 57.4 +0.2
SGSI  Sangihe          35.15 290   P       P       18 38 00.7 +2.7
      comp=Z,11µmcomp=Z,965nm,1.1s
TAU   Tasmania Unive   35.17 194   P       P       18 37 58.9 +1.1
TAU                                pmax    pmax
      comp=Z,888nm,1.5s
TAU                                MLR     MLR
      comp=Z,106µm,18.0s
TAU   Tasmania Unive   35.17 194 ⇑P    P       18 37 59.5 +1.7
TAU   Tasmania Unive   35.17 194   P       P       18 37 58.9 +1.1
TAU                                IAmb    IAmb    18 38 12.4
      comp=Z,888nm,1.5s
TAU   Tasmania Unive   35.17 194   P       P       18 37 59.9 +2.1
SNZO  South Karori     35.26 159   P       P       18 37 58.9 +0.4
SNZO                               IAmb    IAmb    18 38 22.3
      comp=Z,964nm,1.2s
SNZO  South Karori     35.26 159   P       P       18 38 00.0 +1.4
BFZ   Birch Farm       35.30 156   P       P       18 37 58.6 -0.3
BFZ                                IAMs_20 IAMs_20 18 51 36.2
      comp=Z,375µm,18.0s
BFZ   Birch Farm       35.30 156   P       P       18 37 59.4 +0.4
BSWZ  Blackbirch Sta   35.32 160   P       P       18 37 59.2 +0.1
BHW   Baring Head      35.40 158   P       P       18 37 58.8 -1.1
CMWZ  Cape Campbell    35.47 159   P       P       18 37 59.1 -1.3
MSWZ  Moikau Station   35.55 158   P       P       18 38 00.5 -0.6
KMSI  Cibinong         35.62 284   P       P       18 38 04.0 +1.9
      comp=Z,1µmcomp=Z,11µmcomp=Z,1µm,1.0s
FORT  Forrest          35.66 228   P       P       18 38 01.8 -0.4
      baz=36,SNR=31
PLWZ  Palliser         35.68 158   P       P       18 38 01.7 -0.6
LTZ   Lake Taylor      35.78 162   P       P       18 38 03.1  0.0
LTZ                                IAmb    IAmb    18 38 14.2
      comp=Z,921nm,1.4s
LTZ                                IAMs_20 IAMs_20 18 50 08.9
      comp=Z,201µm,20.0s
MMRI  Maumere          35.78 268 ⇑P    P       18 38 02.4 -1.1
MMRI  Maumere          35.78 268   P       P       18 38 02.8 -0.6
      comp=Z,131µmcomp=Z,19µmcomp=Z,2µm,1.1s
MMRI  Maumere          35.78 268   P       P       18 38 02.0 -1.4
FOZ   Fox Glacier      35.81 166   P       P       18 38 02.8 -0.5
FOZ                                IAmb    IAmb    18 38 13.5
      comp=Z,518nm,1.0s
FOZ                                IAMs_20 IAMs_20 18 50 45.8
      comp=Z,249µm,19.0s
KHZ   Kahutara         35.84 161 ⇑P    P       18 38 03.2 -0.4
KHZ   Kahutara         35.84 161   P       P       18 38 02.9 -0.7
KHZ                                IAMs_20 IAMs_20 18 50 04.6
      comp=Z,226µm,22.0s
KHZ   Kahutara         35.84 161   P       P       18 38 03.1 -0.4
OXZ   Oxford           36.21 163   P       P       18 38 06.3 -0.4
OXZ                                IAmb    IAmb    18 38 17.0
      comp=Z,769nm,1.2s
OXZ                                IAMs_20 IAMs_20 18 54 04.3
      comp=Z,223µm,18.0s
RPZ   Rata Peaks       36.30 164   P       P       18 38 07.2 -0.3
RPZ                                IAmb    IAmb    18 38 13.9
      comp=Z,962nm,1.5s
RPZ                                IAMs_20 IAMs_20 18 54 04.6
      comp=Z,185µm,18.0s
LUWI  Luwuk            36.38 281 ⇓P    P       18 38 08.8 +0.2
LUWI  Luwuk            36.38 281   P       P       18 38 10.2 +1.6
      comp=Z,81µmcomp=Z,14µmcomp=Z,1µm,1.2s
LUWI  Luwuk            36.38 281   P       P       18 38 07.1 -1.5
DAV   Davao City (W)   36.44 295   P       P       18 38 08.8 -0.2
DAV                                P       P       18 38 08.8 -0.2
DAV   Davao City (W)   36.44 295   P       P       18 38 09.0 -0.1
DAV                                IAmb    IAmb    18 38 56.2
      comp=Z,693nm,1.1s
LBZ   Lake Benmore     36.70 166   P       P       18 38 10.8 -0.2
LBZ                                IAMs_20 IAMs_20 18 51 24.4
      comp=Z,254µm,19.0s
MQZ   McQueen's Vall   36.73 163   P       P       18 38 10.9 -0.3
WKZ   Wanaka           36.86 167   P       P       18 38 11.8 -0.5
WKZ                                IAmb    IAmb    18 39 15.0
      comp=Z,1µm,1.5s
DCZ   Deep Cove        37.11 170   P       P       18 38 14.0 -0.3
DCZ                                IAMs_20 IAMs_20 18 52 27.1
      comp=Z,175µm,18.0s
MLZ   Mavora Lakes     37.19 169   P       P       18 38 14.1 -1.0
MLZ                                IAmb    IAmb    18 38 38.7
      comp=Z,1µm,1.6s
MLZ                                IAMs_20 IAMs_20 18 52 34.3
      comp=Z,301µm,18.0s
ODZ   Otahua Downs     37.44 166 ⇑P    P       18 38 17.9 +0.8
ODZ   Otahua Downs     37.44 166   P       P       18 38 17.0 -0.1
ODZ                                IAMs_20 IAMs_20 18 52 36.8
      comp=Z,207µm,19.0s
APSI  Ampana           37.50 280   P       P       18 38 19.7 +1.6
      comp=Z,47µmcomp=Z,9µmcomp=Z,582nm,1.0s
MRSI  Marisa           37.56 283   P       P       18 38 19.6 +1.0
      comp=Z,60µmcomp=Z,7µmcomp=Z,350nm,1.1s
WHZ   Wether Hill Ro   37.66 169   P       P       18 38 18.6 -0.5
WHZ                                IAmb    IAmb    18 38 56.5
      comp=Z,1µm,1.8s
WHZ                                IAMs_20 IAMs_20 18 52 37.8
      comp=Z,246µm,18.0s
PYZ   Puysegur Point   37.71 171   IAMs_20 IAMs_20 18 53 45.0
      comp=Z,199µm,18.0s
BSSI  Bau Bau, Buton   37.72 272   P       P       18 38 19.8 -0.2
      comp=Z,40µmcomp=Z,13µmcomp=Z,915nm,1.5s
BKSI  Bulukumba        38.19 273   P       P       18 38 24.1 +0.2
      comp=Z,67µmcomp=Z,12µmcomp=Z,473nm,1.2s
BNSI  Bone             38.34 274   P       P       18 38 25.5 +0.3
      comp=Z,77µmcomp=Z,15µmcomp=Z,745nm,1.4s
KAPI  Kappang          38.60 273   P       P       18 38 27.4 +0.1
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      comp=Z,212nm,1.1s,baz=114,slow=6.2,SNR=55
KAPI  Kappang          38.60 273   P       P       18 38 26.5 -0.9
KAPI                               P       P       18 38 26.5 -0.9
KAPI                               P       P       18 38 26.5 -0.9
KAPI                               S       S       18 44 28.1 +4.3
KAPI                               S       S       18 44 28.1 +4.3
KAPI                               S       S       18 44 28.1 +4.3
SPSI  Sidrap Palu      38.74 275   P       P       18 38 29.2 +0.6
      comp=Z,68µmcomp=Z,9µmcomp=Z,329nm,1.1s
TTSI  Tana Toraja      38.84 276   P       P       18 38 32.0 +2.5
      comp=Z,58µmcomp=Z,10µmcomp=Z,393nm,1.3s
TOLI2 Tolitoli         38.85 283   P       P       18 38 27.4 -2.0
MBWA  Marble Bar       39.18 248   P       P       18 38 34.0 +1.8
MBWA                               P       P       18 38 34.0 +1.8
MBWA                               S       S       18 44 32.1 -0.4
MBWA                               S       S       18 44 32.1 -0.4
MBWA  Marble Bar       39.18 248 ⇓P    P       18 38 31.0 -1.2
JCJ   Chichijima       39.19 337   P       P       18 38 34.4 +2.3
      comp=Z,42nm,0.6s,baz=146,slow=18,SNR=3.6
JCJ                                LR      LR      18 55 43.9
      comp=Z,6µm,18.6s,baz=148,slow=38
JCJ   Chichijima       39.19 337           P       18 38 30.3 -1.8
JCJ                                IAmb    IAmb    18 39 15.7
      comp=Z,1µm,1.5s
MPSI  Mapaga           39.50 282   P       P       18 38 34.3 -0.6
      comp=Z,53µmcomp=Z,8µmcomp=Z,453nm,1.0s
PLAI  Plampang         40.17 267   P       P       18 38 39.5 -1.0
      comp=Z,62µmcomp=Z,15µmcomp=Z,934nm,0.9s
JOHN  Johnston Islan   40.70  51   IAMs_20 IAMs_20 18 54 56.2
      comp=Z,209µm,19.0s
TWSI  Taliwang, Sumb   41.05 267   P       P       18 38 46.9 -1.0
      comp=Z,33µmcomp=Z,7µmcomp=Z,200nm,1.2s
MEEK  Meekatharra      41.56 240   P       P       18 38 51.6 -0.3
      baz=42,SNR=77
RAR   Rarotonga        41.99 112   LR      LR      18 53 03.8
      comp=Z,184µm,21.6s,baz=284,slow=31
RAR   Rarotonga        41.99 112   P       P       18 38 56.0 +0.6
RAR                                pmax    pmax
      comp=Z,849nm,1.6s
RAR                                MLR     MLR
      comp=Z,159µm,21.0s
RAR   Rarotonga        41.99 112 ⇓P    P       18 38 57.0 +1.6
RAR   Rarotonga        41.99 112   P       P       18 38 56.0 +0.6
RAR   Rarotonga        41.99 112   IAMs_20 IAMs_20 18 52 52.7
      comp=Z,159µm,21.0s
KBKI  Kotabaru         42.39 275   P       P       18 39 00.9 +2.1
      comp=Z,3µmcomp=Z,300nm,1.3s
IGBI  Denpasar         42.76 267   P       P       18 39 02.1 +0.3
JMZ   Minamidaito 2    43.58 323 ⇑P    P       18 39 08.3 +0.2
MIDW  Midway           43.76  32 ⇑P    P       18 39 11.7 +2.1
MIDW  Midway           43.76  32   P       P       18 39 08.2 -1.4
MIDW                               IAMs_20 IAMs_20 18 54 14.0
      comp=Z,169µm,20.0s
JAGI  Jajag, Banyuwa   43.77 267 ⇓P    P       18 39 07.7 -2.3
JAGI  Jajag, Banyuwa   43.77 267   P       P       18 39 07.2 -2.8
JAGI                               IAmb    IAmb    18 39 19.7
      comp=Z,796nm,0.9s
KLBR  Kellerberrin     43.94 233   P       P       18 39 10.6 -0.5
      baz=44,SNR=16
SPMM  Sapulut          44.01 286   P       P       18 39 12.0  0.0
BLDU  Ballidu          44.42 235   P       P       18 39 14.4 -0.6
      baz=44,SNR=16
MORW  Morawa           44.47 237   P       P       18 39 15.3 -0.2
      baz=44,SNR=37
GIRL  Giralia          44.48 247   P       P       18 39 16.0 +0.4
      baz=44,SNR=5.0
KKM   Kota Kinabalu    44.67 288 ⇑P    P       18 39 16.6 -0.7
KKM   Kota Kinabalu    44.67 288   P       P       18 39 15.3 -2.0
KKM                                IAmb    IAmb    18 39 30.1
      comp=Z,714nm,1.0s
NWAO  Narrogin (SRO)   44.85 232   P       P       18 39 19.6 +1.2
NWAO                               P       P       18 39 19.6 +1.2
NWAO                               P       P       18 39 19.6 +1.2
NWAO                               S       S       18 45 51.6 -4.4
NWAO                               S       S       18 45 51.6 -4.4
NWAO                               S       S       18 45 51.6 -4.4
NWAO  Narrogin (SRO)   44.85 232   IAMs_20 IAMs_20 18 57 51.5
      comp=Z,180µm,20.0s
NWAO  Narrogin (SRO)   44.85 232   P       P       18 39 18.0 -0.4
XMAS  Kiritimati       45.30  78 ⇑P    P       18 39 23.5 +1.3
XMAS  Kiritimati       45.30  78   P       P       18 39 21.9 -0.3
XMAS                               IAmb    IAmb    18 39 33.8
      comp=Z,971nm,1.6s
MUN   Mundaring        45.30 233   P       P       18 39 22.3 +0.3
      baz=45,SNR=19
JOW   Kunigami         46.10 321   P       P       18 39 33.4 +5.1
      comp=Z,49nm,0.9s,baz=126,slow=11,SNR=5.1
JOW   Kunigami         46.10 321   P       P       18 39 27.6 -0.7
UGM   Wanagama         47.39 268   P       P       18 39 37.1 -1.6
SBUM  Sibu             47.45 282 ⇑P    P       18 39 39.7 +0.6
SBUM  Sibu             47.45 282   P       P       18 39 40.0 +0.8
SBUM  Sibu             47.45 282   P       P       18 39 37.9 -1.2
SBUM                               IAmb    IAmb    18 40 41.9
      comp=Z,428nm,1.6s
JSG   Sagara           47.48 337   P       P       18 39 37.2 -1.8
SMRI  Semarang         47.55 269 ⇓P    P       18 39 40.6 +0.7
SMRI  Semarang         47.55 269   P       P       18 39 38.9 -1.0
YOJ   Yonaguni jima    47.97 315   P       P       18 39 44.9 +2.0
YOJ                                pmax    pmax
      comp=Z,589nm,1.1s
YOJ   Yonaguni jima    47.97 315 ⇓P    P       18 39 46.5 +3.5
YOJ   Yonaguni jima    47.97 315   P       P       18 39 44.9 +2.0
YOJ                                IAmb    IAmb    18 40 27.4
      comp=Z,589nm,1.1s
JYT   Yasato           48.15 340   P       P       18 39 42.1 -2.0
JYT                                IAmb    IAmb    18 40 26.2
      comp=Z,348nm,1.0s
TWG   Pinlang          48.36 311   P       P       18 39 43.8 -2.3
JSU   Suzuyama         48.37 328 ⇓P    P       18 39 46.3 +0.3
JSU   Suzuyama         48.37 328   P       P       18 39 44.1 -1.9
JSU                                IAmb    IAmb    18 40 01.4
      comp=Z,460nm,1.3s
JMN   Monobe           48.48 332 ⇑P    P       18 39 46.7 -0.1
JMN   Monobe           48.48 332   P       P       18 39 44.5 -2.3
INU   Inuyama          48.53 337 ⇓P    P       18 39 47.4 +0.4
INU   Inuyama          48.53 337   P       P       18 39 45.0 -2.0
YULB  Yu-li            48.54 312   P       P       18 39 45.5 -1.9
YULB                               IAMs_20 IAMs_20 18 56 12.2
      comp=Z,133µm,22.0s
JGF   Kuroka           48.61 337   P       P       18 39 46.2 -1.6
NACB  Ninganchiao      48.80 313   P       P       18 39 47.1 -2.2
NACB                               IAmb    IAmb    18 40 41.8
      comp=Z,430nm,1.1s
TPUB  Ta-pu            48.97 312   P       P       18 39 48.8 -1.9
TPUB                               IAmb    IAmb    18 40 42.5
      comp=Z,528nm,1.3s
SSLB  Suanglung        49.03 312   P       P       18 39 49.6 -1.6
SSLB                               IAMs_20 IAMs_20 18 56 28.2
      comp=Z,181µm,21.0s
KSM   Kuching          49.08 280 ⇓P    P       18 39 51.3 -0.4
KSM   Kuching          49.08 280   P       P       18 39 53.0 +1.3
KSM   Kuching          49.08 280   P       P       18 39 50.1 -1.6
KSM                                IAmb    IAmb    18 40 13.2
      comp=Z,361nm,1.2s
JWT   Wachi            49.12 335 ⇓P    P       18 39 51.8 +0.1
JWT   Wachi            49.12 335   P       P       18 39 50.2 -1.4
MJAR  Matsushiro Arr   49.13 338   P       P       18 39 51.7  0.0
      comp=Z,17nm,0.8s,baz=162,slow=8.6,SNR=24
MJAR                               LR      LR      18 59 12.5
      comp=Z,22µm,21.9s,baz=145,slow=34
MJAR  Matsushiro Arr   49.13 338   P       P       18 39 50.7 -1.0
MJAR                               pmax    pmax
      comp=Z,60nm,1.0s
MJAR  Matsushiro Arr   49.13 338   P       P       18 39 50.7 -1.0
MAJO  Matsushiro       49.13 338⇑eP    P       18 39 51.8 +0.1
MAJO                               pmax    pmax
      comp=Z,71nm,0.8s
MAJO  Matsushiro       49.13 338 ⇑P    P       18 39 51.2 -0.5
MAJO  Matsushiro       49.13 338   P       P       18 39 51.1 -0.5
MAT   Matsushiro       49.13 338   P       P       18 39 50.9 -0.8
MAT                                S       S       18 46 40.2  -17
MJB9  Matsu-Tunnel     49.13 338   P       P       18 39 48.5 -3.2
YHNB  Yeheng           49.26 314   P       P       18 39 51.7 -1.3
YHNB                               IAmb    IAmb    18 40 37.4
      comp=Z,508nm,1.2s
TATO  Taipei           49.37 314   P       P       18 39 57.4 +3.7
TATO                               P       P       18 39 57.4 +3.7
TATO                               S       S       18 47 01.0 +0.4
TATO                               S       S       18 47 01.0 +0.4
JNU   Nakatsue         49.43 329 ⇑P    P       18 39 54.7 +0.6
JNU   Nakatsue         49.43 329   P       P       18 39 53.2 -0.9
JNU                                IAmb    IAmb    18 40 14.5
      comp=Z,377nm,1.1s
JMM   Marumori         49.45 342   P       P       18 39 51.0 -3.1
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JMM				IAmb	IAmb	18 41 17.8	
	comp=Z,704nm,1.7s						
JHS	**Saijyo**	**49.88**	**333**	⇓P	**P**	**18 39 59.0**	**+1.5**
JHS	**Saijyo**	**49.88**	**333**	P	**P**	**18 39 56.0**	**-1.5**
JHS				IAmb	IAmb	18 40 25.6	
	comp=Z,801nm,1.8s						
JSD	**Sado**	**50.44**	**339**	⇑P	**P**	**18 40 02.2**	**+0.5**
JSD	**Sado**	**50.44**	**339**	P	**P**	**18 39 59.5**	**-2.2**
PAE	**Paea**	**51.16**	**105**	*e*P	**P**	**18 40 09.5**	**+2.0**
	comp=Z,76nm,1.0s						
PPT	**Papeete**	**51.16**	**105**	P	**P**	**18 40 10.4**	**+2.9**
	comp=Z,326nm,1.0s,baz=319,slow=6.0,SNR=13						
PPT				LR	LR	18 57 44.0	
	comp=Z,162µm,20.4s,baz=258,slow=31						
PPT2	**Papeete2**	**51.16**	**105**	*e*P	**P**	**18 40 09.9**	**+2.3**
	comp=Z,574nm,1.3s						
PPT2				*e*S	**S**	**18 47 30.1**	**+4.0**
	comp=Z,85µm,28.5s						
PPT2				*e*LQ	LQ	18 52 44.4	
	comp=Z,186µm,28.2s						
PPT2				*e*LR	LR	18 54 49.9	
	comp=Z,393µm,23.2s,baz=271						
PPTF	**Pamatai, Papee**	**51.18**	**105**	⇓P	**P**	**18 40 10.4**	**+2.8**
PPTF	**Pamatai, Papee**	**51.18**	**105**	P	**P**	**18 40 08.0**	**+0.3**
PPTF				IAmb	IAmb	18 40 24.1	
	comp=Z,527nm,1.1s						
PPTF				IAMs_20	IAMs_20	18 57 23.1	
	comp=Z,165µm,21.0s						
TIAR	**Tiarei**	**51.38**	**105**	*e*P	**P**	**18 40 11.2**	**+2.0**
	comp=Z,1.2nm,1.1s						
QZH	**Quanzhou**	**51.44**	**312**	⇑*i*P	**P**	**18 40 10.3**	**+0.9**
QZH				S	**S**	**18 47 30.3**	**+0.8**
QZH				pmax	pmax		
	comp=Z,110nm,1.4s						
QZH				pmax	pmax		
	comp=Z,9µm,11.0s						
QZH				LR	LR		
	comp=Z,38µm,21.8s						
QZH				LR	LR		
	comp=Z,33µm,20.4s						
QZH				LR	LR		
	comp=Z,64µm,24.2s						
TBI	**Tubuai**	**51.75**	**113**	*e*P	**P**	**18 40 13.9**	**+2.1**
	comp=Z,1µm,1.2s						
TBI				*e*S	**S**	**18 47 38.1**	**+4.2**
	comp=Z,64µm,29.8s						
TBI				*e*LQ	LQ	18 52 59.7	
	comp=Z,483µm,31.5s						
TBI				*e*LR	LR	18 55 06.2	
	comp=Z,322µm,25.5s,baz=288						
JTM	**Tenmabayashi**	**52.06**	**343**	⇑P	**P**	**18 40 13.5**	**-0.2**
HON	**Honolulu**	**52.31**	**54**	P	**P**	**18 40 15.1**	**-0.8**
HON				pmax	pmax		
	comp=Z,1µm,1.6s						
HON	**Honolulu**	**52.31**	**54**	P	**P**	**18 40 15.1**	**-0.8**
HON				IAmb	IAmb	18 41 13.9	
	comp=Z,1µm,1.6s						
KIP	**Kipapa**	**52.35**	**54**	*ce*P	**P**	**18 40 17.7**	**+1.5**
KIP				pmax	pmax		
	comp=Z,824nm,1.7s						
KIP				MLR	MLR		
	comp=Z,159µm,17.0s						
KIP	**Kipapa**	**52.35**	**54**	P	**P**	**18 40 14.2**	**-2.1**
KIP				IAmb	IAmb	18 40 19.8	
	comp=Z,1µm,1.5s						
KIP	**Kipapa**	**52.35**	**54**	IAMs_20	IAMs_20	19 02 59.0	
	comp=Z,160µm,18.0s						
DHH	**Diamond Head**	**52.44**	**54**	P	**P**	**18 40 18.5**	**+1.6**
DHH	**Diamond Head**	**52.44**	**54**	P	**P**	**18 40 18.5**	**+1.6**
WMR	**Waimanalo Ridg**	**52.56**	**54**	P	**P**	**18 40 17.3**	**-0.6**
MEH	**Mehetia**	**52.62**	**106**	*e*P	**P**	**18 40 20.6**	**+2.2**
	comp=Z,140nm,1.1s						
ERM	**Erimo**	**52.66**	**346**	IAMs_20	IAMs_20	18 58 58.7	
	comp=Z,112µm,20.0s						
PMOR	**Pomariorio Ree**	**52.72**	**102**	*e*P	**P**	**18 40 21.6**	**+2.5**
	comp=Z,711nm,1.0s						
VAH	**Vaihoa**	**52.98**	**102**	*e*P	**P**	**18 40 23.0**	**+2.0**
	comp=Z,451nm,1.1s						
KHLU	**Kahalu`u**	**53.19**	**57**	P	**P**	**18 40 21.0**	**-1.6**
KHLU				IAmb	IAmb	18 40 50.4	
	comp=Z,719nm,1.1s						
HUH	**Hualalai**	**53.28**	**57**	P	**P**	**18 40 22.6**	**-0.8**
KHLH	**Kahului Airpor**	**53.37**	**56**	P	**P**	**18 40 23.9**	**+0.1**
MWH	**Moku‘aweowe**	**53.38**	**58**	P	**P**	**18 40 24.3**	**-0.3**
HKC	**Hong Kong Obse**	**53.38**	**306**	⇑P	**P**	**18 40 24.0**	**+0.1**
MLOA	**Mauna Loa Obse**	**53.42**	**58**	P	**P**	**18 40 24.4**	**-0.4**
MLOA				IAmb	IAmb	18 40 47.1	
	comp=Z,730nm,1.2s						
AIN	**Ainahou**	**53.45**	**58**	P	**P**	**18 40 24.2**	**-0.4**
HLK	**Haleakala**	**53.45**	**56**	P	**P**	**18 40 24.4**	**-0.3**
SSE	**Sheshan**	**53.51**	**320**	P	**P**	**18 40 26.0**	**+1.3**
SSE				S	**S**	**18 47 58.0**	**+0.4**
SSE				pmax	pmax		
	comp=Z,40nm,0.8s						
SSE				pmax	pmax		
	comp=Z,3µm,11.4s						
SSE				LR	LR		
	comp=Z,10µm,21.8s						
SSE				LR	LR		
	comp=Z,5µm,22.4s						
HMH	**Humu‘ula Sheep**	**53.53**	**58**	P	**P**	**18 40 25.3**	**-0.1**
HLP	**Hilina Pali**	**53.54**	**58**	P	**P**	**18 40 25.2**	**0.0**
HPAH	**Hawaii Prepara**	**53.55**	**57**	P	**P**	**18 40 24.9**	**-0.3**
HPAH				IAmb	IAmb	18 40 42.8	
	comp=Z,608nm,1.0s						
MLH	**Mauna Loa**	**53.56**	**58**	P	**P**	**18 40 25.5**	**-0.1**
POHA	**Pohakuloa**	**53.56**	**57**	⇓P	**P**	**18 40 26.9**	**+1.3**
POHA	**Pohakuloa**	**53.56**	**57**	P	**P**	**18 40 25.2**	**-0.3**
PUH	**Pauahi**	**53.65**	**58**	P	**P**	**18 40 25.5**	**-0.6**
PUH				IAmb	IAmb	18 40 43.5	
	comp=Z,543nm,1.0s						
TJN	**Taejon**	**53.77**	**329**	*i* P	**P**	**18 40 25.9**	**-0.5**
MCO	**Taipa Grande**	**53.78**	**306**	P	**P**	**18 40 27.0**	**+0.2**
JEW	**Eniwo**	**53.87**	**345**	⇑P	**P**	**18 40 28.2**	**+1.2**
YUK	**Yuzh-Kuril'sk**	**54.00**	**349**	*d i*P	**P**	**18 40 27.2**	**-0.7**
YUK				*e*		18 41 33.0	
YUK				*e*		18 42 29.7	
YUK				*e*PPP	PPP	18 43 34.9	
YUK				*e*S	**S**	**18 48 06.5**	**+2.8**
YUK				*e*SS	**SKiKP**	**18 51 41.7**	**+0.5**
YUK				*e*SSS	SSS	18 53 36.4	
YUK				pmax	pmax		
	comp=Z,716nm,1.2s						
YUK				pmax	pmax		
	comp=N,658nm,1.1s						
YUK				pmax	pmax		
	comp=E,157nm,0.7s						
YUK				pmax	pmax		
	comp=Z,992nm,1.6s						
KSRS	**Korea Array**	**54.33**	**330**	P	**P**	**18 40 30.2**	**-0.2**
	comp=Z,223nm,1.2s,baz=149,slow=7.2,SNR=86						
KSRS				LR	LR	19 01 32.8	
	comp=Z,36µm,20.8s,baz=122,slow=34						
KSRS				PKPPKP	**P'P'df**	**19 10 41.8**	**-0.8**
	comp=Z,0.8nm,0.8s,baz=357,slow=2.5,SNR=4.1						
KSRS				PKP2ab	**P'P'ab**	**19 11 18.6**	**-0.3**
	comp=Z,2.1nm,0.8s,baz=289,slow=7.6,SNR=4.7						
KSAR	**Wonju Array Be**	**54.34**	**330**	P	**P**	**18 40 29.6**	**-1.0**
KSAR	**Wonju Array Be**	**54.34**	**330**	P	**P**	**18 40 29.6**	**-1.0**
KS19	**Wonju Array Si**	**54.39**	**330**	P	**P**	**18 40 30.1**	**-0.9**
KS19				IAmb	IAmb	18 40 51.2	
	comp=Z,469nm,1.3s						
JKA	**Kamikawa-asahi**	**54.78**	**346**	P	**P**	**18 40 33.9**	**+0.2**
ASAJ	**Asahikawa**	**54.78**	**346**	LR	LR	19 04 22.6	
	comp=Z,59µm,19.2s,baz=181,slow=37						
ASAJ				PKPPKP	**P'P'df**	**19 10 44.2**	**+3.3**
	comp=Z,10nm,0.9s,baz=113,slow=4.4,SNR=4.1						
ASAJ	**Asahikawa**	**54.78**	**346**	P	**P**	**18 40 33.9**	**+0.2**
ASAJ				pmax	pmax		
	comp=Z,299nm,1.2s						
KUR	**Kuril'sk**	**54.81**	**351**	*c i*P	**P**	**18 40 34.9**	**+1.1**
KUR				*e*		18 42 37.7	
KUR				*i* S	**S**	**18 48 16.1**	**+1.5**
KUR				pmax	pmax		
	comp=Z,8µm,13.7s						
KUR				pmax	pmax		
	comp=Z,925nm,1.5s						
KUR				pmax	pmax		
	comp=E,405nm,1.6s						
KUR				pmax	pmax		
	comp=N,180nm,1.2s						
KUR				MLR	MLR		
	comp=Z,42µm,16.0s						
KUR				MLR	MLR		
	comp=N,18µm,13.0s						
KUR				MLR	MLR		
	comp=E,30µm,16.0s						
INCN	**Inchon**	**54.99**	**329**	P	**P**	**18 40 35.0**	**-0.4**
INCN				pmax	pmax		
	comp=Z,556nm,1.1s						
INCN	**Inchon**	**54.99**	**329**	P	P	18 40 27.4	-7.9
INCN				P	P	18 40 27.4	-7.9
INCN				P	P	18 40 27.4	-7.9
INCN	**Inchon**	**54.99**	**329**	⇑P	**P**	**18 40 35.6**	**+0.2**
INCN	**Inchon**	**54.99**	**329**	P	**P**	**18 40 35.0**	**-0.4**
INCN				IAmb	IAmb	18 40 56.3	
	comp=Z,556nm,1.1s						
QIZ	**Qiongzhong**	**55.41**	**300**	P	**P**	**18 40 38.6**	**-0.1**
QIZ				S	**S**	**18 48 24.8**	**+1.1**
QIZ				SS	**SS**	**18 52 10.6**	**+1.9**
QIZ				pmax	pmax		
	comp=Z,54nm,1.6s						
QIZ				pmax	pmax		
	comp=Z,6µm,10.9s						
QIZ				LR	LR		
	comp=Z,37µm,27.5s						
QIZ				LR	LR		
	comp=Z,74µm,24.3s						
QIZ				LR	LR		
	comp=Z,139µm,24.8s						
QIZ	**Qiongzhong**	**55.41**	**300**	P	**P**	**18 40 37.9**	**-0.9**
QIZ				IAmb	IAmb	18 40 53.2	
	comp=Z,425nm,1.3s						
QIZ	**Qiongzhong**	**55.41**	**300**	IAMs_20	IAMs_20	19 00 36.9	
	comp=Z,134µm,22.0s						
MYKOM	**Kota Tinggi**	**55.45**	**278**	⇑P	**P**	**18 40 39.2**	**+0.1**
MYKOM	**Kota Tinggi**	**55.45**	**278**	P	**P**	**18 40 40.0**	**+0.9**
MYKOM	**Kota Tinggi**	**55.45**	**278**	P	**P**	**18 40 37.8**	**-1.3**
NJ2	**Nanjing**	**55.64**	**319**	⇓P	**P**	**18 40 40.8**	**+0.7**
NJ2				pP	**pwP**	**18 40 45.0**	**-0.2**
NJ2				sP	**sP**	**18 40 47.5**	**+3.2**
NJ2				ScP	**ScP**	**18 45 33.4**	**-5.4**
NJ2				S	**S**	**18 48 27.6**	**+1.4**
NJ2				sS	**sS**	**18 48 34.8**	**+3.1**
NJ2				ScS	**ScS**	**18 50 25.6**	**-4.1**
NJ2				SS	**SS**	**18 52 09.6**	**-2.2**
NJ2				pmax	pmax		
	comp=Z,39nm,1.5s						
NJ2				pmax	pmax		
	comp=Z,10µm,12.0s						
NJ2				LR	LR		
	comp=Z,44µm,21.6s						
NJ2				LR	LR		
	comp=Z,37µm,18.7s						
NJ2				LR	LR		
	comp=Z,58µm,23.4s						
MSHR	**Mys Shultsa**	**57.06**	**336**	*i* P	**P**	**18 40 49.8**	**-0.2**
MSHR				pmax	pmax		
	comp=Z,124nm,1.3s						
MSHR				MLR	MLR		
	comp=Z,22µm,18.0s						
JRMM	**Jerantut**	**57.24**	**280**	P	**P**	**18 40 53.0**	**+1.1**
TEY	**Ternei**	**57.27**	**342**	⇑*e*P	**P**	**18 40 47.1**	**-4.4**
TEY				*e*		18 48 48.4	
TEY				pmax	pmax		
	comp=Z,4µm,11.0s						
TEY				pmax	pmax		
	comp=N,2µm,14.9s						
TEY				pmax	pmax		
	comp=E,1µm,12.0s						
YSS	**Yuzh-Sakhalins**	**57.43**	**347**	*c i*P	**P**	**18 40 51.3**	**-1.2**
YSS				*e*S	**S**	**18 48 43.3**	**-6.1**
YSS				*e*		18 50 35.2	
YSS				pmax	pmax		
	comp=Z,7µm,10.6s						
YSS				pmax	pmax		
	comp=N,3µm,8.9s						
YSS				pmax	pmax		
	comp=Z,180nm,1.0s						
YSS	**Yuzh-Sakhalins**	**57.43**	**347**	⇑P	**P**	**18 40 52.6**	**+0.1**
YSS	**Yuzh-Sakhalins**	**57.43**	**347**	P	**P**	**18 40 52.4**	**-0.1**
YSS				IAmb	IAmb	18 41 12.1	
	comp=Z,281nm,0.9s						
WHN	**Wuhan**	**57.76**	**315**	P	**P**	**18 40 57.0**	**+1.8**
WHN				sP	**pwP**	**18 41 06.4**	**+6.1**
WHN				S	**S**	**18 48 56.1**	**+1.8**
WHN				pmax	pmax		
	comp=Z,10µm,11.2s						
WHN				LR	LR		
	comp=Z,73µm,19.4s						
WHN				LR	LR		
	comp=Z,104µm,22.1s						
WHN				LR	LR		
	comp=Z,212µm,22.3s						
UBPT	**Khong Chiam**	**57.77**	**294**	⇓P	**P**	**18 40 56.0**	**+0.5**
UBPT	**Khong Chiam**	**57.77**	**294**	P	**P**	**18 40 54.5**	**-1.0**
USA0B	**Ussuriysk Arra**	**58.12**	**338**	P	**P**	**18 40 57.1**	**-0.4**
USA0B				pmax	pmax		
	comp=Z,347nm,1.2s						
USA0B	**Ussuriysk Arra**	**58.12**	**338**	P	**P**	**18 40 57.0**	**-0.4**
USA0B				IAmb	IAmb	18 41 25.3	
	comp=Z,347nm,1.1s						
USRK	**Ussuriysk Ar.**	**58.12**	**338**	P	**P**	**18 40 58.0**	**+0.5**
	comp=Z,59nm,1.2s,baz=145,slow=7.0,SNR=38						
USRK				LR	LR	19 04 12.2	
	comp=Z,25µm,20.4s,baz=132,slow=34						
USRK				PKPPKP	**P'P'df**	**19 10 38.1**	**+1.6**
	comp=Z,3.2nm,0.8s,baz=20,slow=2.8,SNR=7.4						
USRK	**Ussuriysk Ar.**	**58.12**	**338**	P	**P**	**18 40 57.1**	**-0.4**
USRK	**Ussuriysk Ar.**	**58.12**	**338**	P	**P**	**18 40 57.0**	**-0.4**
DL2	**Dalian**	**58.67**	**327**	⇑*i*P	**P**	**18 41 00.5**	**-1.0**
DL2				S	**S**	**18 49 05.4**	**-0.6**
DL2				pmax	pmax		
	comp=Z,100nm,1.0s						
DL2				pmax	pmax		
	comp=Z,2µm,6.9s						
DL2				LR	LR		
	comp=Z,24µm,19.9s						
DL2				LR	LR		
	comp=Z,10µm,14.2s						
DL2				LR	LR		
	comp=Z,44µm,21.0s						
IPM	**Ipoh**	**58.78**	**281**	P	**P**	**18 41 04.0**	**+1.2**
IPM	**Ipoh**	**58.78**	**281**	P	**P**	**18 41 01.6**	**-1.2**
KULM	**Kulim**	**59.34**	**282**	⇑P	**P**	**18 41 05.9**	**-0.7**
KULM	**Kulim**	**59.34**	**282**	P	**P**	**18 41 08.0**	**+1.4**
KULM	**Kulim**	**59.34**	**282**	P	**P**	**18 41 05.8**	**-0.7**
MDJ	**Mudanjiang**	**59.39**	**336**	P	**P**	**18 41 06.4**	**+0.1**
MDJ				pP	sP	18 41 15.6	+5.0
MDJ				sP	pP	18 41 21.1	+12
MDJ				ScP	**ScP**	**18 45 50.8**	**-4.3**
MDJ				PcS	**PcS**	**18 45 52.3**	**-3.7**
MDJ				S	**S**	**18 49 17.6**	**+2.5**
MDJ				ScS	**ScS**	**18 50 55.9**	**-0.6**
MDJ				pmax	pmax		
	comp=Z,150nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,7µm,11.7s						
MDJ				LR	LR		
	comp=Z,61µm,21.5s						
MDJ				LR	LR		
	comp=Z,54µm,21.2s						
MDJ				LR	LR		
	comp=Z,73µm,21.7s						
TIA	**Tai'an**	**59.43**	**322**	⇑P	**P**	**18 41 06.6**	**-0.2**
TIA				ScP	**ScP**	**18 45 59.1**	**+3.6**
TIA				S	**S**	**18 49 21.8**	**+5.9**
TIA				LR	LR		
	comp=Z,36µm,18.1s						
TIA				LR	LR		
	comp=Z,24µm,24.5s						
TIA				LR	LR		
	comp=Z,58µm,21.1s						
SKR	**Severo-Kuril’s**	**59.46**	**358**	*e*P	**P**	**18 41 03.1**	**-3.6**
SKR				*e*		18 43 15.8	
SKR				*e*PPP	PPP	18 44 39.7	
SKR				*e*S	**S**	**18 49 07.6**	**-8.2**
SKR				pmax	pmax		
	comp=Z,108nm,1.4s						
SKR				pmax	pmax		
	comp=Z,6µm,13.8s						
SKR				pmax	pmax		
	comp=Z,4µm,5.5s						
UGL	**Uglegorsk**	**59.59**	**348**	*e*P	**P**	**18 41 08.6**	**+1.0**
UGL				*e*S	**S**	**18 49 20.5**	**+3.0**
UGL				pmax	pmax		
	comp=Z,8µm,10.0s						
UGL				pmax	pmax		
	comp=Z,300nm,1.0s						
UGL				smax	smax		
	comp=N,11µm,14.0s						
SNY	**Shenyang**	**59.83**	**330**	⇓P	**P**	**18 41 09.4**	**0.0**
SNY				pmax	pmax		
	comp=N,36nm,1.4s						
SNY				pmax	pmax		
	comp=N,7µm,11.1s						
SNY				LR	LR		
	comp=N,47µm,16.8s						
SNY				LR	LR		
	comp=N,33µm,19.8s						
SNY				LR	LR		
	comp=N,60µm,22.2s						
RPSI	**Rantau Prapat**	**60.45**	**278**	P	**P**	**18 41 12.8**	**-1.4**
PSI	**Prapat**	**60.47**	**278**	P	**P**	**18 41 12.8**	**-1.7**
	comp=N,9.9nm,0.8s,baz=163,slow=4.2,SNR=18						
PSI				PKPPKP	**P'P'df**	**19 10 35.0**	**-3.1**
	comp=N,1.7nm,0.3s,baz=314,slow=3.7,SNR=4.8						
CN2	**Changchun**	**60.48**	**333**	*e*P	**P**	**18 41 13.3**	**-0.5**
CN2				*e*sP	sP	18 41 22.4	+4.3
CN2				*e*PP	**PP**	**18 43 28.9**	**+1.6**
CN2				S	**S**	**18 49 26.8**	**-2.3**
CN2				SS	**SS**	**18 53 26.3**	**-1.2**
CN2				pmax	pmax		
	comp=N,210nm,1.2s						
CN2				pmax	pmax		
	comp=N,7µm,12.0s						
CN2				LR	LR		
	comp=N,49µm,18.0s						
CN2				LR	LR		
	comp=N,29µm,18.0s						
CN2				LR	LR		
	comp=N,42µm,20.0s						
TAOE	**Nuku Hiva Isla**	**60.59**	**95**	*e*P	**P**	**18 41 17.7**	**+2.4**
	comp=N,672nm,1.1s						
TAOE				*e*S	**S**	**18 49 33.9**	**+2.0**
	comp=N,87µm,30.1s						
TAOE				*e*LQ	LQ	18 56 40.0	
	comp=N,51µm,22.6s						
TAOE				*e*LR	LR	18 59 11.0	
	comp=N,225µm,21.7s,baz=268						
TAOE	**Nuku Hiva Isla**	**60.59**	**95**	*e*T	T	19 44 24.5	
	comp=N,61nm,0.2s						
TAOE	**Nuku Hiva Isla**	**60.59**	**95**	⇑P	**P**	**18 41 17.5**	**+2.1**
TAOE	**Nuku Hiva Isla**	**60.59**	**95**	P	**P**	**18 41 14.3**	**-1.0**
TAOE				IAmb	IAmb	18 42 03.3	
	comp=Z,298nm,1.0s						
ENH	**Enshi**	**61.10**	**312**	P	**P**	**18 41 16.4**	**-2.1**
SRIT	**Nakonsritamara**	**61.16**	**285**	P	**P**	**18 41 18.1**	**-0.9**
TYV	**Tymovskoe**	**61.16**	**349**	*e*P	**P**	**18 41 19.7**	**+1.4**
TYV				*e*S	**S**	**18 49 42.0**	**+4.4**
TYV				pmax	pmax		
	comp=Z,180nm,1.3s						
TYV				pmax	pmax		
	comp=Z,8µm,9.2s						
TYV				smax	smax		
	comp=N,31nm,1.8s						
TYV				smax	smax		
	comp=N,10µm,11.7s						
TYV				smax	smax		
	comp=E,21µm,11.7s						
GYA	**Guiyang**	**61.38**	**307**	⇓*i*P	**P**	**18 41 20.8**	**+0.3**
GYA				pP	pwP	18 41 28.0	+2.4
GYA				S	**S**	**18 49 42.0**	**+0.4**
GYA				sS	sS	18 49 48.8	+1.7
GYA				pmax	pmax		
	comp=E,45nm,1.3s						
GYA				pmax	pmax		
	comp=E,7µm,11.5s						
GYA				LR	LR		
	comp=E,36µm,21.3s						
GYA				LR	LR		
	comp=E,76µm,21.0s						
GYA				LR	LR		
	comp=E,107µm,21.2s						
SLVN	**Son La**	**61.44**	**300**	P	**P**	**18 41 20.3**	**-0.6**
SLVN				IAmb	IAmb	18 41 34.7	
	comp=Z,395nm,1.5s						
SLVN				IAMs_20	IAMs_20	19 03 40.4	
	comp=Z,104µm,22.0s						
GSI	**Gunungsitoli**	**61.50**	**276**	⇓P	**P**	**18 41 20.3**	**-1.1**
PET	**Petropavlovsk**	**61.77**	**0**	*c i*P	**P**	**18 41 21.3**	**-1.1**
PET				*e*		18 42 02.0	
PET				*e*		18 43 39.4	
PET				*e*S	**S**	**18 49 40.9**	**-4.3**
PET				*e*		18 51 06.9	
PET				*e*SS	**SS**	**18 53 45.3**	**-2.1**
PET				pmax	pmax		
	comp=Z,332nm,1.4s						
PET				pmax	pmax		
	comp=Z,16µm,14.4s						
PET				pmax	pmax		
	comp=Z,14µm,15.1s						
PET				smax	smax		
	comp=E,41µm,20.1s						
PET	**Petropavlovsk**	**61.77**	**0**	⇑P	**P**	**18 41 22.9**	**+0.5**
PET	**Petropavlovsk**	**61.77**	**0**	P	**P**	**18 41 22.2**	**-0.2**
PET				IAmb	IAmb	18 42 03.0	
	comp=Z,408nm,1.2s						
PEA0B	**Petropavlovsk-**	**61.86**	**359**	*ce*P	**P**	**18 41 23.6**	**+0.6**
PEA0B	**Petropavlovsk-**	**61.86**	**359**	P	**P**	**18 41 21.7**	**-1.3**
PETK	**Petropavlovsk-**	**61.86**	**359**	P	**P**	**18 41 23.2**	**+0.2**
	comp=Z,300nm,1.2s,baz=100,slow=6.2,SNR=42						
PETK				LR	LR	19 04 38.3	
	comp=Z,95µm,21.8s,baz=168,slow=33						
PETK				PKP2bc	**P'P'bc**	**19 10 38.9**	**+0.7**
	comp=Z,7.0nm,1.0s,baz=51,slow=12,SNR=3.9						
PETK	**Petropavlovsk-**	**61.86**	**359**	P	**P**	**18 41 22.1**	**-0.9**
PETK	**Petropavlovsk-**	**61.86**	**359**	P	**P**	**18 41 22.1**	**-0.9**
PBKT	**Sadao Pong**	**62.27**	**294**	P	**P**	**18 41 25.8**	**-0.6**
BJT	**Baijiatuau**	**62.49**	**324**	P	**P**	**18 41 25.3**	**-2.2**
BJT				pmax	pmax		
	comp=Z,171nm,1.2s						
BJT	**Baijiatuau**	**62.49**	**324**	P	**P**	**18 41 25.3**	**-2.2**
BJI	**Beijing**	**62.51**	**324**	P	**P**	**18 41 29.0**	**+1.4**
BJI				pP	**pwP**	**18 41 32.3**	**-0.4**
BJI				PP	**PP**	**18 43 44.8**	**-0.5**
BJI				S	**S**	**18 49 54.4**	**-0.6**
BJI				SS	**SS**	**18 54 04.6**	**+5.2**
BJI				pmax	pmax		
	comp=Z,49nm,1.4s						
BJI				pmax	pmax		
	comp=Z,8µm,12.2s						
BJI				LR	LR		
	comp=Z,29µm,17.7s						
BJI				LR	LR		
	comp=Z,16µm,22.4s						
BJI				LR	LR		
	comp=Z,80µm,24.5s						
GRNR	**Gornyy**	**62.51**	**344**	⇑*i*P	P	18 41 20.6	-6.9
GRNR				*e*S	S	18 49 45.3	-9.5
GRNR				pmax	pmax		
	comp=E,9.0nm,0.5s						
GRNR				pmax	pmax		
	comp=N,10.0nm,0.6s						
GRNR				pmax	pmax		
	comp=Z,10.0nm,0.4s						
GRNR				smax	smax		
	comp=N,1.0nm,1.0s						
KLR	**Kul'dur**	**62.53**	**341**	LR	LR	19 07 13.3	
	comp=N,46µm,20.4s,baz=151,slow=35						
KLR				PKPPKP	**P'P'df**	**19 10 34.0**	**+4.5**
	comp=N,4.5nm,1.0s,baz=283,slow=3.5,SNR=4.9						
KLR	**Kul'dur**	**62.53**	**341**	*ce*P	**P**	**18 41 27.6**	**0.0**
KLR				pmax	pmax		
	comp=Z,287nm,1.4s						
AMKA	**Amchitka**	**62.77**	**15**	P	**P**	**18 41 28.7**	**-0.4**
LHMI	**Lhok Sumawe**	**62.91**	**281**	P	**P**	**18 41 29.1**	**-1.7**
LHMI				IAmb	IAmb	18 42 07.1	
	comp=Z,503nm,1.5s						
TIY	**Taiyuan**	**63.29**	**320**	⇑P	**P**	**18 41 32.6**	**-0.4**
TIY				S	**S**	**18 50 10.4**	**+5.2**
TIY				pmax	pmax		
	comp=Z,420nm,2.0s						
TIY				pmax	pmax		
	comp=Z,4µm,9.9s						
TIY				LR	LR		
	comp=Z,32µm,15.9s						
TIY				LR	LR		
	comp=Z,28µm,15.8s						
TIY				LR	LR		
	comp=Z,57µm,17.6s						
XAN	**Xi'an**	**63.52**	**315**	P	**P**	**18 41 33.3**	**-1.2**
XAN				pP	pwP	18 41 39.4	-0.3
XAN				sP	sP	18 41 42.8	+4.0
XAN				PcP	**PcP**	**18 42 14.0**	**+2.9**
XAN				PP	**PP**	**18 43 55.6**	**+1.2**

XAN				S	**S**	**18 50 06.8**	**-1.3**
XAN				sS	sS	18 50 16.8	+3.2
XAN				SS	**SS**	**18 54 15.4**	**-0.2**
XAN				pmax	pmax		
	comp=Z,39nm,1.2s						
XAN				pmax	pmax		
	comp=Z,3µm,8.4s						
XAN				LR	LR		
	comp=Z,39µm,21.8s						
XAN				LR	LR		
	comp=Z,51µm,20.4s						
XAN				LR	LR		
	comp=Z,101µm,22.5s						
NKL	**Nikolayevsk**	**63.73**	**348**	*e*P	**P**	**18 41 33.0**	**-2.4**
NKL				*e*S	**S**	**18 50 14.3**	**+4.5**
NKL				pmax	pmax		
	comp=E,6.0nm,1.4s						
NKL				pmax	pmax		
	comp=N,880nm,0.9s						
NKL				pmax	pmax		
	comp=Z,243nm,1.2s						
NKL				smax	smax		
	comp=E,4.0nm,6.2s						
NKL				smax	smax		
	comp=N,2µm,3.2s						
KMI	**Kunming**	**63.96**	**304**	⇑P	**P**	**18 41 38.5**	**+0.6**
KMI				pP	pwP	18 41 44.0	+1.0
KMI				sP	sP	18 41 46.3	+4.2
KMI				PcP	**PcP**	**18 42 14.0**	**+0.6**
KMI				S	**S**	**18 50 13.5**	**-0.8**
KMI				sS	sS	18 50 21.8	+2.0
KMI				pmax	pmax		
	comp=N,71nm,1.3s						
KMI				LR	LR		
	comp=N,34µm,21.2s						
KMI				LR	LR		
	comp=N,41µm,20.8s						
KMI				LR	LR		
	comp=N,80µm,23.9s						
KIWB	**Kanaga Island**	**64.14**	**17**	P	**P**	**18 41 38.6**	**+0.4**
ADK	**Adak**	**64.30**	**17**	P	**P**	**18 41 39.2**	**0.0**
ADK				pmax	pmax		
	comp=Z,1µm,1.6s						
ADK				MLR	MLR		
	comp=Z,64µm,18.0s						
ADK	**Adak**	**64.30**	**17**	⇑P	**P**	**18 41 39.9**	**+0.7**
ADK	**Adak**	**64.30**	**17**	P	**P**	**18 41 39.2**	**0.0**
GSTR	**Great Sitkin T**	**64.67**	**17**	P	**P**	**18 41 41.7**	**0.0**
CM31	**Chiang Mai Arr**	**64.72**	**295**	P	**P**	**18 41 42.5**	**-0.2**
CM31				P	**P**	**18 41 42.5**	**-0.2**
CM31				S	**S**	**18 50 25.6**	**+2.1**
CM31				S	**S**	**18 50 25.6**	**+2.1**
CM31	**Chiang Mai Arr**	**64.72**	**295**	P	**P**	**18 41 42.0**	**-0.7**
CM31				IAmb	IAmb	18 41 57.2	
	comp=Z,473nm,1.2s						
CMAR	**Chiang Mai Arr**	**64.72**	**295**	P	**P**	**18 41 43.0**	**+0.3**
	comp=Z,141nm,1.2s,baz=115,slow=4.3,SNR=141						
CMAR				LR	LR	19 08 11.4	
	comp=Z,28µm,21.6s,baz=154,slow=34						
CMAR				PKPPKP	P'P'df	19 10 17.1	-13
	comp=Z,4.9nm,1.1s,baz=283,slow=3.2,SNR=6.3						
CMAR	**Chiang Mai Arr**	**64.72**	**295**	P	**P**	**18 41 42.3**	**-0.5**
CHTO	**Chiang Mai**	**64.84**	**296**	P	**P**	**18 41 43.3**	**-0.2**
CHTO				pmax	pmax		
	comp=Z,634nm,1.4s						
CHTO				MLR	MLR		
	comp=Z,62µm,22.0s						
CHTO	**Chiang Mai**	**64.84**	**296**	P	**P**	**18 41 43.9**	**+0.5**
CHTO				P	**P**	**18 41 43.9**	**+0.5**
CHTO				P	**P**	**18 41 43.9**	**+0.5**
CHTO				S	**S**	**18 50 22.4**	**-2.6**
CHTO				S	**S**	**18 50 22.4**	**-2.6**
CHTO				S	**S**	**18 50 22.4**	**-2.6**
CHTO	**Chiang Mai**	**64.84**	**296**	⇑P	**P**	**18 41 43.3**	**-0.2**
CHTO	**Chiang Mai**	**64.84**	**296**	P	**P**	**18 41 43.3**	**-0.2**
ATKA	**Atka Island**	**65.32**	**18**	⇑P	**P**	**18 41 46.7**	**+0.9**
CD2	**Chengdu**	**65.71**	**310**	⇑*i*P	**P**	**18 41 48.5**	**-0.4**
CD2				pP	sP	18 41 52.8	-0.4
CD2				sP	pwP	18 41 54.3	+0.2
CD2				S	**S**	**18 50 35.8**	**+0.5**
CD2				sS	sS	18 50 42.4	+1.6
CD2				SS	**SS**	**18 54 51.3**	**+1.4**
CD2				pmax	pmax		
	comp=Z,130nm,1.3s						
CD2				pmax	pmax		
	comp=Z,12µm,14.1s						
CD2				LR	LR		
	comp=Z,75µm,24.7s						
CD2				LR	LR		
	comp=Z,89µm,25.9s						
CD2				LR	LR		
	comp=Z,98µm,23.3s						
HHC	**Hu-ho-hao-te**	**65.73**	**323**	⇓*i*P	**P**	**18 41 51.1**	**+2.1**
HHC				pP	pwP	18 41 56.0	+1.9
HHC				sP	sP	18 41 58.3	+5.1
HHC				S	**S**	**18 50 35.8**	**+0.5**
HHC				sS	sS	18 50 43.4	+2.5
HHC				SS	**SS**	**18 54 51.8**	**+1.8**
HHC				pmax	pmax		
	comp=Z,58nm,1.2s						
HHC				pmax	pmax		
	comp=Z,6µm,9.9s						
HHC				LR	LR		
	comp=Z,54µm,20.1s						
HHC				LR	LR		
	comp=Z,22µm,17.8s						
HHC				LR	LR		
	comp=Z,64µm,23.1s						
CASY	**Casey**	**65.80**	**199**	⇑P	**P**	**18 41 49.4**	**+0.6**
CASY	**Casey**	**65.80**	**199**	P	**P**	**18 41 49.6**	**+0.8**
CASY				IAmb	IAmb	18 42 16.3	
	comp=Z,263nm,1.2s						
CASY	**Casey**	**65.80**	**199**	IAMs_20	IAMs_20	19 07 49.1	
	comp=Z,133µm,19.0s						
BTO	**Baotou**	**66.52**	**322**	*e*P	**P**	**18 41 55.0**	**+1.0**
BTO				S	**S**	**18 50 50.3**	**+5.4**
BTO				LR	LR		
	comp=Z,153µm,19.8s						
BTO				LR	LR		
	comp=Z,126µm,22.2s						
HIA	**Hailar**	**67.19**	**334**	P	**P**	**18 41 57.6**	**-0.4**
HIA				pmax	pmax		
	comp=Z,188nm,1.0s						
HIA	**Hailar**	**67.19**	**334**	P	**P**	**18 41 57.6**	**-0.4**
NIKH	**Nikolski High**	**67.72**	**21**	P	**P**	**18 42 01.1**	**-0.1**
	baz=215						
NIKH				S	**S**	**18 50 59.2**	**+0.5**
	baz=215						
ZEA	**Zeya**	**67.85**	**341**	*e*P	**P**	**18 42 02.3**	**+0.3**
ZEA				*e*S	**S**	**18 51 03.0**	**+2.9**
ZEA				pmax	pmax		
	comp=E,1µm,12.1s						
ZEA				pmax	pmax		
	comp=N,2µm,9.8s						
ZEA				pmax	pmax		
	comp=Z,4µm,10.3s						
ZEA				pmax	pmax		
	comp=N,140nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,260nm,1.1s						
ZEA				smax	smax		
	comp=E,9µm,15.1s						
LZH	**Lanzhou**	**68.14**	**315**	⇑P	**P**	**18 42 04.8**	**+0.4**
LZH				sP	pwP	18 42 10.5	+0.9
LZH				S	**S**	**18 51 05.0**	**+0.3**
LZH				SS	**SS**	**18 55 29.3**	**+1.7**
LZH				pmax	pmax		
	comp=E,200nm,1.5s						
LZH				pmax	pmax		
	comp=E,2µm,6.6s						
LZH				LR	LR		
	comp=E,42µm,17.4s						
LZH				LR	LR		
	comp=E,48µm,19.5s						
LZH				LR	LR		
	comp=E,46µm,20.1s						
PBA	**Port Blair**	**68.47**	**286**	P	**P**	**18 42 06.6**	**-0.2**
PBA				S	**S**	**18 51 08.5**	**-0.5**
PBA	**Port Blair**	**68.47**	**286**	P	**P**	**18 42 04.6**	**-2.1**
PBA				IAmb	IAmb	18 42 48.3	
	comp=Z,430nm,1.3s						
VNDA	**Vanda**	**68.53**	**179**	P	**P**	**18 42 06.7**	**+0.7**
	comp=Z,69nm,0.9s,baz=342,slow=6.4,SNR=80						
VNDA				LR	LR	19 06 24.0	
	comp=Z,74µm,21.9s,baz=4.0,slow=31						
VNDA				PKP2bc	**P'P'df**	**19 10 25.6**	**+1.9**
	comp=Z,6.8nm,1.1s,baz=113,slow=1.6,SNR=3.5						
VNDA	**Vanda**	**68.53**	**179**	P	**P**	**18 42 06.6**	**+0.6**
VNDA				pmax	pmax		
	comp=Z,454nm,1.4s						
VNDA	**Vanda**	**68.53**	**179**	P	**P**	**18 42 06.6**	**+0.6**
VNDA				IAmb	IAmb	18 42 32.9	
	comp=Z,454nm,1.4s						
MA2	**Magadan**	**68.62**	**356**	LR	LR	19 08 04.6	
	comp=Z,28µm,21.3s,baz=172,slow=32						
MA2	**Magadan**	**68.62**	**356**	⇓*e*P	**P**	**18 42 05.7**	**-1.0**
MA2				pmax	pmax		
	comp=Z,91nm,1.1s						
MA2	**Magadan**	**68.62**	**356**	⇑P	**P**	**18 42 06.0**	**-0.7**
MA2	**Magadan**	**68.62**	**356**	P	**P**	**18 42 06.2**	**-0.5**
MA2				IAmb	IAmb	18 42 19.9	
	comp=Z,384nm,1.1s						
DGPR	**DIGLIPUR**	**68.68**	**288**	*e*P	**P**	**18 42 09.2**	**+1.2**
UNV	**Unalaska Valle**	**69.26**	**21**	P	**P**	**18 42 10.9**	**+0.1**
	baz=217,SNR=18						
UNV				S	**S**	**18 51 22.0**	**+5.2**
	baz=217						
UNV	**Unalaska Valle**	**69.26**	**21**	P	**P**	**18 42 10.5**	**-0.3**
UNV				IAmb	IAmb	18 42 18.0	
	comp=Z,216nm,0.8s						
PTCN	**Pitcairn Islan**	**69.49**	**113**	IAMs_20	IAMs_20	19 05 49.6	
	comp=Z,84µm,21.0s						
AKUT	**Akutan**	**69.75**	**22**	⇓P	**P**	**18 42 14.5**	**+0.7**
AKUT	**Akutan**	**69.75**	**22**	P	**P**	**18 42 14.2**	**+0.4**
AKUT				IAmb	IAmb	18 42 16.6	
	comp=Z,410nm,1.0s						
LKP	**Lekhapani**	**70.52**	**303**	*e*P	**P**	**18 42 18.8**	**-0.4**
SPIA	**Saint Paul Isl**	**70.76**	**17**	P	**P**	**18 42 20.4**	**+0.4**
	baz=213						
FALS	**False Pass**	**71.18**	**22**	P	**P**	**18 42 22.4**	**-0.2**
	baz=220,SNR=17						
FALS				S	**S**	**18 51 43.1**	**+3.7**
	baz=220						
FALS	**False Pass**	**71.18**	**22**	P	**P**	**18 42 22.1**	**-0.4**
MOKO	**MOKOCHONG**	**71.27**	**302**	*e*P	**P**	**18 42 23.2**	**-0.7**
KOHI	**KOHIMA**	**71.41**	**301**	*e*P	**P**	**18 42 23.8**	**-1.0**
SEY	**Seymchan**	**71.86**	**357**	LR	LR	19 13 37.3	
	comp=Z,41µm,19.3s,baz=164,slow=36						
CIT	**Chita**	**71.92**	**333**	*e*P	**P**	**18 42 27.7**	**+0.5**
CIT				*e*		18 42 36.6	
CIT				*e*		18 42 49.6	
CIT				*e*		18 46 54.7	
CIT				*e*S	**S**	**18 51 50.9**	**+2.7**
CIT				pmax	pmax		
	comp=Z,920nm,1.5s						
ITAN	**ITANAGAR**	**72.22**	**302**	*e*P	**P**	**18 42 30.8**	**+1.3**
ULN	**Ulaanbaatar**	**72.53**	**327**	*ce*P	**P**	**18 42 31.5**	**+0.5**
ULN				pmax	pmax		
	comp=Z,312nm,1.2s						
ULN				MLR	MLR		
	comp=Z,25µm,18.0s						
ULN	**Ulaanbaatar**	**72.53**	**327**	P	**P**	**18 42 32.2**	**+1.1**
ULN				P	**P**	**18 42 32.2**	**+1.1**
ULN				S	**S**	**18 51 59.4**	**+3.9**
ULN				S	**S**	**18 51 59.4**	**+3.9**
ULN	**Ulaanbaatar**	**72.53**	**327**	⇑P	**P**	**18 42 31.6**	**+0.5**
ULN	**Ulaanbaatar**	**72.53**	**327**	P	**P**	**18 42 31.6**	**+0.5**
ULN				IAmb	IAmb	18 42 38.7	
	comp=Z,628nm,1.2s						
GTA	**Gaotai**	**72.53**	**316**	⇑P	**P**	**18 42 31.4**	**+0.1**
GTA				pP	pwP	18 42 36.1	-0.3
GTA				sP	sP	18 42 39.3	+3.7
GTA				S	**S**	**18 51 55.8**	**-0.1**
GTA				pmax	pmax		
	comp=Z,30nm,1.4s						
GTA				pmax	pmax		
	comp=Z,3µm,8.0s						
GTA				LR	LR		
	comp=Z,22µm,19.1s						
GTA				LR	LR		
	comp=Z,36µm,23.1s						
GTA				LR	LR		
	comp=Z,50µm,21.1s						
CNBA	**Chernabura Isl**	**72.63**	**24**	P	**P**	**18 42 31.6**	**+0.3**
CNBA				IAmb	IAmb	18 42 34.0	
	comp=Z,896nm,1.8s						
CHNA	**Chernabura Isl**	**72.64**	**24**	P	**P**	**18 42 30.9**	**-0.5**
	baz=224,SNR=7.9						
CHNA				S	**S**	**18 51 54.4**	**-1.7**
	baz=224						
SDPT	**Sand Point**	**72.67**	**23**	P	**P**	**18 42 31.3**	**-0.2**
	baz=223,SNR=10						
SDPT				S	**S**	**18 51 54.2**	**-2.3**
	baz=223						
SDPT	**Sand Point**	**72.67**	**23**	P	**P**	**18 42 30.8**	**-0.7**
SDPT				IAmb	IAmb	18 42 33.7	
	comp=Z,492nm,1.1s						
SONM	**Songino Array**	**72.87**	**326**	P	**P**	**18 42 33.4**	**+0.3**
	comp=Z,203nm,1.0s,baz=139,slow=4.9,SNR=205						
SONM				PKPPKP	**P'P'df**	**19 10 10.6**	**-2.7**
	comp=Z,7.8nm,1.2s,baz=304,slow=2.1,SNR=6.9						
SONM				LR	LR	19 16 08.8	
	comp=Z,18µm,18.1s,baz=121,slow=37						
SHL	**Shillong**	**73.25**	**300**	P	**P**	**18 42 35.0**	**-0.8**
SHL				pmax	pmax		
	comp=Z,1µm,1.3s						
SHL	**Shillong**	**73.25**	**300**	*e*P	**P**	**18 42 35.4**	**-0.4**
SHL	**Shillong**	**73.25**	**300**	P	**P**	**18 42 35.8**	**0.0**
SHL	**Shillong**	**73.25**	**300**	P	**P**	**18 42 35.0**	**-0.8**
CHGN	**Chignik**	**74.16**	**23**	P	**P**	**18 42 40.1**	**-0.2**
	baz=225,SNR=15						
CHGN				S	**SKiKP**	**18 52 10.6**	**+2.4**
	baz=225						
CHGN	**Chignik**	**74.16**	**23**	P	**P**	**18 42 40.4**	**+0.1**
YAK	**Yakutsk**	**74.26**	**346**	LR	LR	19 11 27.0	
	comp=Z,23µm,21.4s,baz=146,slow=33						
YAK	**Yakutsk**	**74.26**	**346**	*e*P	**P**	**18 42 40.3**	**-0.4**
YAK				*e*S	**S**	**18 52 13.4**	**-0.8**
YAK				pmax	pmax		
	comp=Z,277nm,1.1s						
YAK				pmax	pmax		
	comp=N,95nm,1.2s						
YAK				pmax	pmax		
	comp=E,40nm,1.2s						
YAK	**Yakutsk**	**74.26**	**346**	⇑P	**P**	**18 42 40.3**	**-0.4**
YAK	**Yakutsk**	**74.26**	**346**	P	**P**	**18 42 40.4**	**-0.4**
YAK				IAmb	IAmb	18 43 00.4	
	comp=Z,328nm,0.7s						
CHIR	**Chirikof Islan**	**74.95**	**25**	P	**P**	**18 42 45.3**	**+0.4**
	baz=227						
CHIR				S	**S**	**18 52 23.4**	**+1.2**
	baz=227						
CHIR	**Chirikof Islan**	**74.95**	**25**	P	**P**	**18 42 44.5**	**-0.4**
CHIR				IAMs_20	IAMs_20	19 12 16.7	
	comp=Z,71µm,19.0s						
LSA	**Lhasa**	**75.22**	**304**	P	**P**	**18 42 48.3**	**+0.7**
LSA				S	**S**	**18 52 29.4**	**+2.2**
LSA				pmax	pmax		
	comp=Z,170nm,1.3s						
LSA				LR	LR		
	comp=Z,27µm,14.3s						
LSA				LR	LR		
	comp=Z,39µm,18.2s						
LSA	**Lhasa**	**75.22**	**304**	P	**P**	**18 42 47.1**	**-0.5**
LSA				pmax	pmax		
	comp=Z,271nm,1.2s						
LSA				MLR	MLR		
	comp=Z,62µm,22.0s						
LSA	**Lhasa**	**75.22**	**304**	P	**P**	**18 42 48.1**	**+0.4**
LSA				P	**P**	**18 42 48.1**	**+0.4**
LSA				S	**S**	**18 52 32.3**	**+5.1**
LSA				S	**S**	**18 52 32.3**	**+5.1**
LSA	**Lhasa**	**75.22**	**304**	P	**P**	**18 42 47.1**	**-0.5**
BOD	**Bodaibo**	**75.74**	**337**	*e*P	**P**	**18 42 49.1**	**-0.3**
BOD				pmax	pmax		
	comp=Z,389nm,1.4s						
ZAK	**Zakamensk**	**76.00**	**327**	*e*P	**P**	**18 42 50.9**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,408nm,1.3s						
GAMB	**Gambell**	**76.02**	**13**	P	**P**	**18 42 51.9**	**+1.1**
	baz=210						
GAMB				S	**S**	**18 52 34.4**	**+0.7**
	baz=210						
GAMB	**Gambell**	**76.02**	**13**	P	**P**	**18 42 50.3**	**-0.6**
GAMB				IAMs_20	IAMs_20	19 12 30.2	
	comp=Z,96µm,20.0s						
SII	**Sitkinak Islan**	**76.05**	**25**	P	**P**	**18 42 51.8**	**+0.6**
	baz=228,SNR=30						
SII				S	**S**	**18 52 31.4**	**-3.0**
	baz=228						
SII	**Sitkinak Islan**	**76.05**	**25**	P	**P**	**18 42 51.3**	**+0.1**
SII				IAMs_20	IAMs_20	19 13 00.6	
	comp=Z,73µm,20.0s						
IRK	**Irkutsk**	**76.52**	**329**	*e*P	**P**	**18 42 52.6**	**-1.4**
IRK				*e*S	**S**	**18 52 41.8**	**+2.0**
IRK				pmax	pmax		
	comp=Z,376nm,1.6s						
TLY	**Talaya**	**76.53**	**328**	*c i*P	**P**	**18 42 53.6**	**-0.5**
TLY				*e*S	**S**	**18 52 35.7**	**-4.2**
TLY				*e*		18 53 08.6	
TLY				pmax	pmax		
	comp=Z,625nm,1.2s						
TLY				MLR	MLR		
	comp=Z,72µm,19.0s						
TLY	**Talaya**	**76.53**	**328**	P	**P**	**18 42 53.4**	**-0.6**
TLY				P	**P**	**18 42 53.4**	**-0.6**
TLY				S	**S**	**18 52 36.8**	**-3.1**
TLY				S	**S**	**18 52 36.8**	**-3.1**
TLY	**Talaya**	**76.53**	**328**	⇑P	**P**	**18 42 54.0**	**-0.1**
TLY				⇑P	**pP**	**18 42 54.6**	**-2.7**
TLY	**Talaya**	**76.53**	**328**	P	**P**	**18 42 53.6**	**-0.5**
GTK	**Tadong**	**76.59**	**301**	*e*P	**P**	**18 42 55.9**	**+0.8**
GTK				IAmb	IAmb	18 43 05.2	
	comp=Z,668nm,1.4s						
OHAK	**Old Harbor**	**76.86**	**25**	P	**P**	**18 42 56.1**	**+0.4**
	baz=229,SNR=37						
OHAK				S	**S**	**18 52 38.6**	**-4.5**
	baz=229						
OHAK	**Old Harbor**	**76.86**	**25**	P	**P**	**18 42 55.9**	**+0.2**
OHAK				IAmb	IAmb	18 43 01.7	
	comp=Z,286nm,0.9s						
BILL	**Bilibino**	**77.04**	**3**	*d i*P	**P**	**18 42 56.4**	**-0.2**
BILL				*i*		18 43 06.5	
BILL				*e*		18 45 47.2	
BILL				*e*S	**S**	**18 52 52.5**	**+7.7**
BILL				*e*SS	**SS**	**18 57 39.3**	**-3.0**
BILL				pmax	pmax		
	comp=Z,710nm,1.3s						
BILL	**Bilibino**	**77.04**	**3**	P	**P**	**18 42 56.4**	**-0.2**
TAPN	**Taplejung**	**77.36**	**301**	*e*P	**P**	**18 42 59.2**	**-0.4**
	comp=Z,1µm,1.1s						
AIS	**Amsterdam Isla**	**77.36**	**233**	P	**P**	**18 42 59.6**	**+0.5**
AIS				IAMs_20	IAMs_20	19 13 41.7	
	comp=Z,61µm,21.0s						
ODAN	**Odare**	**77.49**	**300**	*e*P	**P**	**18 42 59.9**	**-0.4**
	comp=Z,2µm,1.5s						
KDAK	**Kodiak Island**	**77.51**	**24**	LR	LR	19 16 35.5	
	comp=Z,35µm,18.1s,baz=248,slow=35						
KDAK	**Kodiak Island**	**77.51**	**24**	P	**P**	**18 42 59.8**	**+0.5**
	baz=230						
KDAK				S	**S**	**18 52 52.5**	**+2.2**
	baz=230						
KDAK	**Kodiak Island**	**77.51**	**24**	IAMs_20	IAMs_20	19 15 58.2	
	comp=Z,56µm,19.0s						
P18K	**Big Mountain,**	**77.55**	**22**	P	**P**	**18 42 58.8**	**-0.9**
	baz=227,SNR=20						
P18K				S	**S**	**18 52 52.7**	**+2.0**
	baz=227						
P18K	**Big Mountain,**	**77.55**	**22**	P	**P**	**18 42 58.7**	**-0.9**
P18K				IAmb	IAmb	18 43 32.1	
	comp=Z,321nm,1.1s						
Q19K	**Cape Douglas,**	**77.84**	**23**	P	**P**	**18 43 00.9**	**-0.4**
	baz=229,SNR=37						
Q19K				S	**S**	**18 52 57.0**	**+3.1**
	baz=229						
Q19K	**Cape Douglas,**	**77.84**	**23**	P	**P**	**18 43 00.5**	**-0.8**
O18K	**Koktuh Hills**	**77.87**	**22**	P	**P**	**18 43 01.5**	**+0.1**
	baz=227						
O18K				S	**S**	**18 52 58.9**	**+4.8**
	baz=227						
O18K	**Koktuh Hills**	**77.87**	**22**	IAMs_20	IAMs_20	19 12 51.5	
	comp=Z,58µm,21.0s						
MOY	**Mondy**	**77.91**	**328**	*e*P	**P**	**18 43 02.4**	**+0.5**
MOY				pmax	pmax		
	comp=Z,334nm,1.5s						
RAMN	**Ramite**	**78.19**	**300**	*e*P	**P**	**18 43 03.6**	**-0.6**
	comp=Z,84nm,0.6s						
ANM	**Nome**	**78.21**	**15**	P	**P**	**18 43 03.7**	**+0.5**
ANM				pmax	pmax		
	comp=Z,637nm,1.4s						
ANM				MLR	MLR		
	comp=Z,50µm,20.0s						
ANM	**Nome**	**78.21**	**15**	P	**P**	**18 43 04.2**	**+1.0**
	baz=217,SNR=12						
ANM				S	**S**	**18 52 58.6**	**+1.0**
	baz=217						
ANM	**Nome**	**78.21**	**15**	P	**P**	**18 43 03.7**	**+0.5**
ANM				IAmb	IAmb	18 43 07.3	
	comp=Z,637nm,1.4s						
TNA	**Tin City**	**78.40**	**14**	P	**P**	**18 43 04.5**	**+0.3**
	baz=214,SNR=14						
TNA				S	**S**	**18 53 00.1**	**+0.5**
	baz=214						
TNA	**Tin City**	**78.40**	**14**	⇓P	**P**	**18 43 05.0**	**+0.8**
TNA				⇓P	**pP**	**18 43 05.1**	**-2.3**
TNA	**Tin City**	**78.40**	**14**	P	**P**	**18 43 04.6**	**+0.3**
TNA				IAmb	IAmb	18 43 07.1	
	comp=Z,381nm,1.3s						
O19K	**Port Alsworth**	**78.43**	**22**	P	**P**	**18 43 04.4**	**0.0**
	baz=228,SNR=12						
O19K				S	**S**	**18 52 58.5**	**-1.6**
	baz=228						
O19K	**Port Alsworth**	**78.43**	**22**	P	**P**	**18 43 04.2**	**-0.3**
O19K				IAmb	IAmb	18 43 34.8	
	comp=Z,655nm,1.8s						
P19K	**Oil Pt**	**78.47**	**23**	P	**P**	**18 43 04.9**	**+0.1**
	baz=229,SNR=20						
P19K				S	**S**	**18 52 59.2**	**-1.6**
	baz=229						
P19K	**Oil Pt**	**78.47**	**23**	P	**P**	**18 43 04.2**	**-0.6**
P19K				IAmb	IAmb	18 43 19.5	
	comp=Z,224nm,0.7s						
SVW2	**Sparrevohn**	**78.59**	**21**	P	**P**	**18 43 06.0**	**+0.7**
SVW2				IAmb	IAmb	18 43 39.7	
	comp=Z,402nm,1.0s						
JIRN	**Jiri**	**78.74**	**301**	*e*P	**P**	**18 43 07.2**	**-0.2**
	comp=Z,1µm,1.6s						
N19K	**Bonanza Creek**	**78.79**	**21**	P	**P**	**18 43 06.6**	**0.0**
	baz=228,SNR=25						
N19K				S	**S**	**18 53 04.4**	**+0.3**
	baz=228						
N19K	**Bonanza Creek**	**78.79**	**21**	P	**P**	**18 43 06.6**	**0.0**
N19K				IAMs_20	IAMs_20	19 13 21.8	
	comp=Z,67µm,21.0s						
O20K	**Slope Mountain**	**78.99**	**23**	P	**P**	**18 43 07.1**	**-0.6**
	baz=229,SNR=13						
O20K				S	**S**	**18 53 03.7**	**-2.5**
	baz=229						
GUN	**Gumba**	**79.07**	**301**	*e*P	**P**	**18 43 08.8**	**-0.4**
	comp=Z,1µm,1.3s						
HOM	**Homer**	**79.09**	**23**	P	**P**	**18 43 08.8**	**+0.6**
	baz=230,SNR=19						
HOM				S	**S**	**18 53 11.4**	**+4.2**
	baz=230						
HOM	**Homer**	**79.09**	**23**	P	**P**	**18 43 08.0**	**-0.1**
HOM				IAMs_20	IAMs_20	19 15 55.9	
	comp=Z,57µm,19.0s						
PALK	**Pallekele**	**79.14**	**279**	P	**P**	**18 43 09.6**	**+0.2**
PALK				pmax	pmax		
	comp=Z,1µm,1.8s						
PALK				MLR	MLR		
	comp=Z,15µm,22.0s						
PALK	**Pallekele**	**79.14**	**279**	P	**P**	**18 43 10.4**	**+1.0**
PALK				S	**S**	**18 53 09.2**	**-0.4**
PALK	**Pallekele**	**79.14**	**279**	P	**P**	**18 43 09.6**	**+0.2**
PALK				IAmb	IAmb	18 43 27.7	
	comp=Z,1µm,1.8s						
CNPM	**China Poot**	**79.17**	**24**	P	**P**	**18 43 08.6**	**0.0**
CNPM				IAMs_20	IAMs_20	19 15 30.0	
	comp=Z,97µm,20.0s						
RSO	**Redoubt South**	**79.19**	**22**	P	**P**	**18 43 07.6**	**-1.3**
PKI	**Pulchoki**	**79.38**	**300**	*e*P	**P**	**18 43 10.2**	**-0.7**
	comp=Z,1µm,1.3s						
PKIN	**Phulchoki**	**79.39**	**300**	*e*P	**P**	**18 43 10.2**	**-0.6**
	comp=Z,2µm,1.5s						
BRLK	**Bradley Lake**	**79.46**	**23**	P	**P**	**18 43 10.3**	**+0.1**
BRLK				IAmb	IAmb	18 43 16.1	
	comp=Z,328nm,1.0s						
BRLK				IAMs_20	IAMs_20	19 15 58.3	
	comp=Z,101µm,20.0s						
BRSE	**Bradley Lake S**	**79.50**	**24**	P	**P**	**18 43 10.7**	**+0.4**
	baz=231,SNR=41						
BRSE				S	**S**	**18 53 10.9**	**-0.7**
	baz=231						
KKN	**Kakani**	**79.55**	**300**	*e*P	**P**	**18 43 11.1**	**-0.5**
	comp=Z,998nm,1.4s						

M19K	Big River Lodg	79.56	21	P	P	18 43 11.9	+1.2
	baz=227						
M19K				S	S	18 53 13.9	+1.8
	baz=227						
M19K	Big River Lodg	79.56	21	P	P	18 43 10.1	-0.6
M19K				IAmb	IAmb	18 43 17.3	
	comp=Z,459nm,0.9s						
M19K				IAMs_20	IAMs_20	19 14 22.2	
	comp=Z,52µm,20.0s						
L19K	White Mountain	79.59	20	P	P	18 43 11.9	+1.0
	baz=227,SNR=90						
L19K				S	S	18 53 13.6	+1.1
	baz=227						
L19K	White Mountain	79.59	20	P	P	18 43 11.5	+0.6
L19K				IAmb	IAmb	18 43 14.8	
	comp=Z,428nm,1.1s						
L19K				IAMs_20	IAMs_20	19 18 15.0	
	comp=Z,67µm,19.0s						
DMN	Daman	79.65	300	eP	P	18 43 12.1	-0.1
	comp=Z,2µm,1.2s						
TTA	Tatalina	79.72	19	P	P	18 43 12.0	+0.4
TTA				pmax	pmax		
	comp=Z,429nm,1.4s						
TTA	Tatalina	79.72	19	P	P	18 43 12.4	+0.8
	baz=226,SNR=80						
TTA				S	S	18 53 18.3	+4.4
	baz=226						
TTA	Tatalina	79.72	19	⇑P	P	18 43 12.1	+0.6
TTA				⇑P	P	18 43 12.2	+0.6
TTA	Tatalina	79.72	19	P	P	18 43 12.0	+0.4
TTA				IAmb	IAmb	18 43 15.3	
	comp=Z,429nm,1.4s						
SPCR	Spurr Chakacha	79.87	22	P	P	18 43 13.3	+0.9
	baz=230,SNR=11						
SPCR				S	S	18 53 17.8	+2.2
	baz=230						
SPU	Mount Spurr	79.92	22	P	P	18 43 13.1	+0.4
CAPN	Captain Cook N	79.99	23	P	P	18 43 15.3	+2.3
	baz=231						
CAPN				S	S	18 53 19.0	+2.4
	baz=231						
CAPN	Captain Cook N	79.99	23	IAMs_20	IAMs_20	19 21 40.7	
	comp=Z,48µm,18.0s						
L20K	Farewell, AK	80.12	20	P	P	18 43 14.8	+1.1
	baz=228						
L20K				S	S	18 53 19.2	+1.0
	baz=228						
GKN	Gorkha	80.15	300	eP	P	18 43 14.2	-0.6
	comp=Z,3µm,1.5s						
SEW	Seward	80.23	24	P	P	18 43 14.6	+0.3
	baz=232,SNR=44						
SEW				S	S	18 53 18.4	-0.8
	baz=232						
SEW	Seward	80.23	24	P	P	18 43 14.2	-0.1
SEW				IAmb	IAmb	18 43 23.1	
	comp=Z,368nm,0.9s						
O22K	Cooper Landing	80.36	23	P	P	18 43 15.4	+0.4
	baz=232,SNR=38						
O22K				S	S	18 53 18.7	-1.9
	baz=232						
O22K	Cooper Landing	80.36	23	P	P	18 43 15.0	0.0
O22K				IAMs_20	IAMs_20	19 16 36.6	
	comp=Z,83µm,20.0s						
SUA	Susitna One	80.58	22	P	P	18 43 15.8	-0.5
	baz=231,SNR=15						
SUA				S	S	18 53 21.2	-2.0
	baz=231						
SUA	Susitna One	80.58	22	P	P	18 43 15.8	-0.5
SKT	Skwentna	80.63	22	P	P	18 43 15.6	-0.8
	baz=230,SNR=6.9						
SKT				S	S	18 53 20.5	-2.9
	baz=230						
SKT	Skwentna	80.63	22	P	P	18 43 15.9	-0.6
SKT				IAMs_20	IAMs_20	19 16 17.5	
	comp=Z,56µm,20.0s						
K20K	Telida	80.65	20	P	P	18 43 17.5	+0.9
	baz=228,SNR=87						
K20K				S	S	18 53 25.1	+1.5
	baz=228						
K20K	Telida	80.65	20	P	P	18 43 17.2	+0.6
K20K				IAmb	IAmb	18 43 20.7	
	comp=Z,644nm,1.5s						
K20K				IAMs_20	IAMs_20	19 15 16.1	
	comp=Z,65µm,21.0s						
GCSA	Galena City Sc	80.73	18	P	P	18 43 17.5	+0.6
	baz=225						
GCSA				S	S	18 53 24.6	+0.4
	baz=225						
RC01	Rabbit Creek A	80.73	23	P	P	18 43 17.2	+0.2
	baz=232,SNR=47						
RC01				S	S	18 53 21.5	-3.0
	baz=232						
RC01	Rabbit Creek A	80.73	23	P	P	18 43 16.9	-0.1
KOLN	Koldanda	80.98	300	eP	P	18 43 18.6	-0.7
	comp=Z,3µm,1.4s						
PPLA	Purkeypile	80.99	21	P	P	18 43 19.7	+1.2
	baz=229,SNR=27						
PPLA				S	S	18 53 26.0	-1.4
	baz=229						
PPLA	Purkeypile	80.99	21	P	P	18 43 18.4	-0.2
PPLA				IAmb	IAmb	18 43 22.2	
	comp=Z,809nm,1.8s						
DANN	Dangsing	80.99	301	eP	P	18 43 18.4	-1.1
	comp=Z,3µm,1.4s						
QSPA	South Pole Qui	81.00	180	P	P	18 43 18.7	+0.1
QSPA	South Pole Qui	81.00	180	IAMs_20	IAMs_20	19 18 41.8	
	comp=Z,86µm,18.0s						
M22K	Willow	81.00	22	P	P	18 43 17.9	-0.5
	baz=232						
M22K				S	S	18 53 24.7	-2.5
	baz=232						
Q23K	Middleton Isla	81.10	25	S	S	18 53 31.4	+3.1
	baz=235						
PWL	Port Wells	81.13	23	P	P	18 43 19.4	+0.3
	baz=233,SNR=52						
PWL				S	S	18 53 26.7	-2.0
	baz=233						
PWL	Port Wells	81.13	23	P	P	18 43 19.1	0.0
PWL				IAmb	IAmb	18 43 27.2	
	comp=Z,475nm,0.9s						
PWL				IAMs_20	IAMs_20	19 17 09.0	
	comp=Z,65µm,19.0s						
J20K	Nowinta River	81.19	19	P	P	18 43 20.3	+1.0
	baz=227,SNR=136						
J20K				S	S	18 53 30.1	+1.0
	baz=227						
J20K	Nowinta River	81.19	19	P	P	18 43 20.0	+0.6
J20K				IAMs_20	IAMs_20	19 14 23.3	
	comp=Z,73µm,21.0s						
PMR	Palmer	81.27	23	P	P	18 43 19.8	0.0
PMR				pmax	pmax		
	comp=Z,1µm,1.9s						
PMR	Palmer	81.27	23	P	P	18 43 19.8	0.0
	baz=232,SNR=41						
PMR				S	S	18 53 29.7	-0.3
	baz=232						
PMR	Palmer	81.27	23	P	P	18 43 19.8	0.0
CUT	Chulitna	81.36	22	P	P	18 43 19.6	-0.7
	baz=231,SNR=35						
CUT				S	S	18 53 28.8	-2.1
	baz=231						
CUT	Chulitna	81.36	22	P	P	18 43 19.2	-1.1
CUT				IAmb	IAmb	18 44 34.1	
	comp=Z,585nm,1.2s						
CUT				IAMs_20	IAMs_20	19 17 00.8	
	comp=Z,50µm,20.0s						
CAST	Castle Rocks	81.36	20	P	P	18 43 20.0	-0.4
	baz=229,SNR=123						
CAST				S	S	18 53 28.9	-2.2
	baz=229						
CAST	Castle Rocks	81.36	20	P	P	18 43 19.8	-0.6
CAST				IAMs_20	IAMs_20	19 15 38.9	
	comp=Z,76µm,20.0s						
KNK	Knik Glacier	81.42	23	P	P	18 43 21.1	+0.4
	baz=233,SNR=44						
KNK				S	S	18 53 30.0	-1.7
	baz=233						
KNK	Knik Glacier	81.42	23	P	P	18 43 20.8	+0.1
KNK				IAMs_20	IAMs_20	19 17 32.4	
	comp=Z,83µm,19.0s						
GHO	Glory Hole Cre	81.46	22	P	P	18 43 21.0	0.0
GHO				IAmb	IAmb	18 43 44.5	
	comp=Z,322nm,0.9s						
GHO				IAMs_20	IAMs_20	19 24 03.5	
	comp=Z,53µm,18.0s						
PYUN	Piuthan	81.58	300	eP	P	18 43 21.3	-1.2
	comp=Z,2µm,1.3s						
CHUM	Lake Minchumin	81.59	20	P	P	18 43 21.9	+0.4
	baz=229,SNR=108						
CHUM				S	S	18 53 31.8	-1.5
	baz=229						
HIN	Hinchinbrook I	81.59	24	P	P	18 43 21.4	-0.3
HIN				IAmb	IAmb	18 43 24.9	
	comp=Z,364nm,1.1s						
HIN				IAMs_20	IAMs_20	19 14 20.2	
	comp=Z,89µm,20.0s						
RDOG	Red Dog Mine	81.60	14	P	P	18 43 27.9	+6.4
	baz=219,SNR=85						
RDOG				S	S	18 53 37.2	+3.9
	baz=219						
RDOG	Red Dog Mine	81.60	14	IAMs_20	IAMs_20	19 15 59.7	
	comp=Z,67µm,20.0s						
GLI	Glacier Island	81.64	24	P	P	18 43 22.1	+0.3
	baz=234,SNR=11						
GLI				S	S	18 53 32.9	-1.0
	baz=234						
GLI	Glacier Island	81.64	24	P	P	18 43 21.5	-0.3
GLI				IAmb	IAmb	18 43 24.9	
	comp=Z,306nm,1.0s						
SML	Sawmill	81.71	23	P	P	18 43 22.7	+0.5
	baz=233,SNR=108						
SML				S	S	18 53 33.7	-1.0
	baz=233						
FID	Port Fidalgo	81.81	24	P	P	18 43 22.2	-0.5
FID				IAmb	IAmb	18 43 25.8	
	comp=Z,513nm,1.4s						
FID				IAMs_20	IAMs_20	19 17 41.2	
	comp=Z,93µm,19.0s						
KTH	Kantishna Hill	81.85	20	P	P	18 43 21.9	-1.1
KTH				IAmb	IAmb	18 43 25.4	
	comp=Z,810nm,1.4s						
KTH				IAMs_20	IAMs_20	19 15 53.8	
	comp=Z,70µm,21.0s						
EYAK	Cordova Ski Ar	81.99	24	P	P	18 43 24.4	+0.8
	baz=236						
EYAK				S	S	18 53 37.0	-0.5
	baz=236						
EYAK	Cordova Ski Ar	81.99	24	P	P	18 43 23.9	+0.3
TRF	Thorofare Moun	82.01	21	P	P	18 43 23.2	-0.7
	baz=231,SNR=48						
TRF				S	S	18 53 36.2	-1.8
	baz=231						
TRF	Thorofare Moun	82.01	21	P	P	18 43 23.3	-0.7
TRF				IAMs_20	IAMs_20	19 15 58.9	
	comp=Z,76µm,20.0s						
PAF	Port-aux-Franc	82.10	221	IAMs_20	IAMs_20	19 16 36.0	
	comp=Z,81µm,18.0s						
SCM	Sheep Creek Mo	82.11	23	P	P	18 43 23.8	-0.6
SCM				pmax	pmax		
	comp=Z,342nm,1.0s						
SCM				MLR	MLR		
	comp=Z,61µm,19.0s						
SCM	Sheep Creek Mo	82.11	23	P	P	18 43 24.9	+0.6
	baz=234,SNR=58						
SCM				S	S	18 53 36.7	-2.2
	baz=234						
SCM	Sheep Creek Mo	82.11	23	P	P	18 43 23.8	-0.6
SCM				IAmb	IAmb	18 43 30.2	
	comp=Z,342nm,1.0s						
SCM				IAMs_20	IAMs_20	19 17 51.6	
	comp=Z,61µm,19.0s						
BPAW	Bear Paw Mtn.	82.18	20	P	P	18 43 24.0	-0.7
	baz=230,SNR=88						
BPAW				S	S	18 53 37.1	-2.4
	baz=230						
BPAW	Bear Paw Mtn.	82.18	20	P	P	18 43 23.9	-0.7
BPAW				IAmb	IAmb	18 43 27.2	
	comp=Z,429nm,1.4s						
BPAW				IAMs_20	IAMs_20	19 16 13.4	
	comp=Z,55µm,20.0s						
KAIM	Kayak Island	82.19	25	P	P	18 43 25.0	+0.2
	baz=237						
KAIM				S	S	18 53 48.7	+9.1
	baz=237						
KAIM	Kayak Island	82.19	25	P	P	18 43 24.0	-0.8
KAIM				IAmb	IAmb	18 43 28.6	
	comp=Z,679nm,1.6s						
KAIM				IAMs_20	IAMs_20	19 22 53.1	
	comp=Z,65µm,18.0s						
WAT1	Susitna Watana	82.24	22	P	P	18 43 25.0	0.0
	baz=233						
DIV	Divide	82.31	24	P	P	18 43 25.1	-0.3
RAGM	Ragged Mountai	82.34	25	P	P	18 43 26.2	+0.7
RAGM				IAmb	IAmb	18 43 38.0	
	comp=Z,386nm,1.4s						
RAGM				IAMs_20	IAMs_20	19 18 00.9	
	comp=Z,86µm,19.0s						
WAT6	Susitna Watana	82.39	22	P	P	18 43 26.1	+0.1
	baz=234,SNR=180						
KLU	Klutina	82.45	24	P	P	18 43 26.7	+0.5
	baz=235,SNR=56						
KLU	Klutina	82.45	24	P	P	18 43 26.2	0.0
KLU				IAmb	IAmb	18 43 29.9	
	comp=Z,468nm,1.3s						
KLU				IAMs_20	IAMs_20	19 18 24.9	
	comp=Z,54µm,19.0s						
HMT	Hamilton	82.48	25	P	P	18 43 25.8	-0.5
HMT				IAmb	IAmb	18 43 40.9	
	comp=Z,880nm,1.8s						
HMT				IAMs_20	IAMs_20	19 17 34.7	
	comp=Z,66µm,20.0s						
RND	Reindeer	82.49	21	P	P	18 43 25.3	-1.0
RND				pmax	pmax		
	comp=Z,916nm,1.3s						
RND				MLR	MLR		
	comp=Z,55µm,21.0s						
RND	Reindeer	82.49	21	P	P	18 43 25.3	-1.0
RND				IAMs_20	IAMs_20	19 15 42.5	
	comp=Z,55µm,21.0s						
IMAR	Indian Mountai	82.54	18	P	P	18 43 26.0	-0.4
SUCK	Suckling Hills	82.54	25	P	P	18 43 26.2	-0.4
SUCK				IAmb	IAmb	18 43 42.4	
	comp=Z,646nm,1.7s						
SUCK				IAMs_20	IAMs_20	19 22 55.3	
	comp=Z,74µm,18.0s						
I21K	Tanana	82.55	19	P	P	18 43 27.2	+0.7
	baz=229,SNR=122						
I21K	Tanana	82.55	19	P	P	18 43 26.4	-0.1
I21K				IAMs_20	IAMs_20	19 15 25.2	
	comp=Z,62µm,20.0s						
H21K	Melozitna Rive	82.61	18	P	P	18 43 27.7	+0.9
	baz=228						
H21K	Melozitna Rive	82.61	18	P	P	18 43 25.2	-1.6
H21K				IAmb	IAmb	18 43 42.5	
	comp=Z,459nm,1.4s						
H21K				IAMs_20	IAMs_20	19 15 37.6	
	comp=Z,49µm,20.0s						
WMQ	Urumqi	82.61	316	P	P	18 43 25.3	-2.1
WMQ				pP	PcP	18 43 32.8	+0.4
WMQ				sP	sP	18 43 35.8	+4.0
WMQ				S	S	18 53 45.4	+0.6
WMQ				SS	SS	18 59 09.9	+3.0
WMQ				pmax	pmax		
	comp=Z,270nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,8µm,5.1s						
WMQ				LR	LR		
	comp=Z,38µm,21.9s						
WMQ				LR	LR		
	comp=Z,30µm,20.5s						
WMQ				LR	LR		
	comp=Z,44µm,21.9s						
MCK	McKinley	82.66	21	P	P	18 43 26.4	-0.8
MCK				pmax	pmax		
	comp=Z,2µm,1.3s						
MCK				MLR	MLR		
	comp=Z,73µm,21.0s						
MCK	McKinley	82.66	21	P	P	18 43 26.8	-0.3
	baz=232,SNR=326						
MCK	McKinley	82.66	21	P	P	18 43 26.4	-0.8
MCK				IAMs_20	IAMs_20	19 16 09.1	
	comp=Z,73µm,21.0s						
BMRM	Bremner River	82.69	24	P	P	18 43 27.6	+0.2
	baz=237,SNR=20						
BMRM	Bremner River	82.69	24	P	P	18 43 25.2	-2.2
BMRM				IAMs_20	IAMs_20	19 18 34.2	
	comp=Z,62µm,19.0s						
M24K	Tolsona, Glenn	82.71	23	P	P	18 43 28.5	+1.0
	baz=235,SNR=92						
M24K	Tolsona, Glenn	82.71	23	P	P	18 43 27.6	+0.1
BWN	Browne	82.74	20	P	P	18 43 26.6	-0.9
BWN				IAMs_20	IAMs_20	19 16 32.9	
	comp=Z,67µm,20.0s						
BERG	Berg Lake	82.75	25	P	P	18 43 27.0	-0.6
BERG				IAmb	IAmb	18 43 40.8	
	comp=Z,379nm,1.0s						
BERG				IAMs_20	IAMs_20	19 15 57.8	
	comp=Z,64µm,20.0s						
BGLC	Bering Glacier	82.78	25	P	P	18 43 28.8	+1.0
	baz=238						
DHY	Denali Highway	82.82	22	P	P	18 43 28.5	+0.3
	baz=234						
DHY	Denali Highway	82.82	22	P	P	18 43 27.4	-0.7
DHY				IAmb	IAmb	18 43 31.6	
	comp=Z,690nm,1.6s						
DHY				IAMs_20	IAMs_20	19 21 41.5	
	comp=Z,45µm,18.0s						
TIXI	Tiksi	82.83	351	LR	LR	19 17 07.7	
	comp=Z,16µm,21.9s,baz=137,slow=33						
TIXI	Tiksi	82.83	351	ceP	P	18 43 26.9	-0.9
TIXI				pmax	pmax		
	comp=Z,272nm,1.6s						
TIXI	Tiksi	82.83	351	⇑P	P	18 43 26.8	-1.0
TIXI				⇑P	P	18 43 26.9	-0.9
TIXI	Tiksi	82.83	351	P	P	18 43 25.2	-2.6
MLY	Manley	82.86	19	P	P	18 43 28.4	+0.2
	baz=230,SNR=97						
MLY	Manley	82.86	19	P	P	18 43 27.1	-1.1
MLY				IAMs_20	IAMs_20	19 17 26.2	
	comp=Z,64µm,20.0s						
SNH	Sunshine Point	83.00	25	P	P	18 43 26.3	-2.7
SNH				IAmb	IAmb	18 43 33.0	
	comp=Z,281nm,1.1s						
SNH				IAMs_20	IAMs_20	19 18 56.4	
	comp=Z,85µm,18.0s						
N25K	Chitina, Valde	83.04	24	P	P	18 43 29.9	+0.6
	baz=237,SNR=56						
N25K	Chitina, Valde	83.04	24	P	P	18 43 27.6	-1.6
N25K				IAMs_20	IAMs_20	19 16 28.7	
	comp=Z,57µm,20.0s						
WAX	Waxell Ridge	83.13	25	P	P	18 43 27.4	-2.3
WAX				IAMs_20	IAMs_20	19 23 15.0	
	comp=Z,75µm,18.0s						
NEA2	Nenana	83.14	20	P	P	18 43 29.0	-0.6
	baz=232,SNR=228						
NEA2	Nenana	83.14	20	P	P	18 43 28.3	-1.3
NEA2				IAMs_20	IAMs_20	19 16 52.8	
	comp=Z,52µm,21.0s						
HYB	Hyderabad	83.15	289	i P	P	18 43 29.0	-1.7
	comp=Z,140nm,1.0s						
HYB				esP	pwP	18 43 37.0	+1.1
HYB				ePP	PP	18 46 45.0	+2.9
HYB				ePPP	PPP	18 48 44.0	
HYB				eS	S	18 53 50.0	-1.2
HYB				eSP	SPn	18 54 40.0	-0.7
HYB				eSSP	SSP	18 59 24.0	
HYB				eLR	LR		
	comp=Z,24nm,24.0s						
HYB	Hyderabad	83.15	289	eP	P	18 43 30.2	-0.6
HYB				IAmb	IAmb	18 43 36.6	
	comp=Z,645nm,1.8s						
CRQM	Cirque	83.18	25	P	P	18 43 30.3	+0.2
CRQM				IAmb	IAmb	18 43 35.9	
	comp=Z,243nm,0.9s						
CRQM				IAMs_20	IAMs_20	19 25 51.6	
	comp=Z,57µm,18.0s						
CRQE	Cirque	83.19	25	P	P	18 43 30.4	+0.3
	baz=238,SNR=36						
HARP	HAARP	83.27	23	P	P	18 43 30.8	+0.4
	baz=236,SNR=34						
GLB	Gilahina Butte	83.27	24	P	P	18 43 29.3	-1.1
GLB				IAmb	IAmb	18 43 33.9	
	comp=Z,518nm,1.3s						
GLB				IAMs_20	IAMs_20	19 14 52.5	
	comp=Z,57µm,21.0s						
VRDI	Verde Repeater	83.30	24	P	P	18 43 29.7	-1.0
VRDI				IAMs_20	IAMs_20	19 18 43.3	
	comp=Z,70µm,19.0s						
TGL	Tana Glacier	83.31	25	P	P	18 43 29.8	-0.9
TGL				IAmb	IAmb	18 43 45.8	
	comp=Z,526nm,1.5s						
TGL				IAMs_20	IAMs_20	19 23 32.5	
	comp=Z,62µm,18.0s						
MESA	MESA	83.38	26	P	P	18 43 32.0	+0.8
	baz=239,SNR=11						
MESA	MESA	83.38	26	P	P	18 43 30.6	-0.5
MESA				IAMs_20	IAMs_20	19 19 07.4	
	comp=Z,83µm,18.0s						
I23K	Minto, Yukon-K	83.39	20	P	P	18 43 30.6	-0.3
	baz=232,SNR=79						
I23K	Minto, Yukon-K	83.39	20	P	P	18 43 29.2	-1.6
I23K				IAmb	IAmb	18 43 40.5	
	comp=Z,282nm,1.3s						
I23K				IAMs_20	IAMs_20	19 18 49.3	
	comp=Z,62µm,19.0s						
WRH	Wood River Hil	83.40	21	P	P	18 43 29.5	-1.5
WRH				IAMs_20	IAMs_20	19 16 51.8	
	comp=Z,57µm,20.0s						
ISLE	Juniper Island	83.43	25	P	P	18 43 30.4	-1.0
ISLE				IAmb	IAmb	18 43 34.7	
	comp=Z,365nm,1.2s						
ISLE				IAMs_20	IAMs_20	19 23 24.8	
	comp=Z,64µm,18.0s						
PAX	Paxson	83.47	22	P	P	18 43 30.1	-1.3
PAX				pmax	pmax		
	comp=Z,305nm,1.4s						
PAX	Paxson	83.47	22	P	P	18 43 31.6	+0.1
	baz=236,SNR=50						
PAX	Paxson	83.47	22	P	P	18 43 30.1	-1.3
PAX				IAmb	IAmb	18 44 01.2	
	comp=Z,305nm,1.4s						
MCARA	McCarthy VSAT	83.56	24	P	P	18 43 32.4	+0.5
	baz=238,SNR=50						
MCARA	McCarthy VSAT	83.56	24	IAMs_20	IAMs_20	19 18 42.3	
	comp=Z,69µm,19.0s						
YAH	Yahtse	83.56	26	P	P	18 43 31.1	-1.0
YAH				IAmb	IAmb	18 43 35.9	
	comp=Z,578nm,1.5s						
YAH				IAMs_20	IAMs_20	19 19 22.1	
	comp=Z,73µm,18.0s						
CCB	Clear Creek Bu	83.61	20	P	P	18 43 30.7	-1.3
CCB				IAmb	IAmb	18 43 34.4	
	comp=Z,488nm,1.3s						
CCB				IAMs_20	IAMs_20	19 21 42.1	
	comp=Z,64µm,18.0s						
MDM	Murphy Dome	83.65	20	P	P	18 43 30.9	-1.4
MDM				IAMs_20	IAMs_20	19 21 16.3	
	comp=Z,54µm,19.0s						
TCOL	CIGO, UAF Yank	83.72	20	P	P	18 43 32.2	-0.4
	baz=233,SNR=76						
TCOL	CIGO, UAF Yank	83.72	20	P	P	18 43 31.4	-1.2
TCOL				IAMs_20	IAMs_20	19 21 28.2	
	comp=Z,58µm,19.0s						
COLA	College	83.73	20	c iP	P	18 43 31.9	-0.6
COLA				pmax	pmax		
	comp=Z,677nm,1.0s						
COLA				MLR	MLR		
	comp=Z,54µm,18.0s						
COLA	College	83.73	20	P	P	18 43 32.1	-0.5
	baz=233						
COLA	College	83.73	20	⇑P	P	18 43 32.0	-0.6
COLA				⇑P	P	18 43 32.1	-0.5
COLA	College	83.73	20	P	P	18 43 31.1	-1.4
COLA	College	83.73	20	IAMs_20	IAMs_20	19 21 28.2	
	comp=Z,55µm,19.0s						
GRNC	Granite Creek	83.75	25	P	P	18 43 32.8	-0.3
GRNC				IAMs_20	IAMs_20	19 23 33.1	
	comp=Z,48µm,18.0s						
HDA	Harding Lake	83.76	21	P	P	18 43 32.4	-0.5
	baz=234,SNR=392						
HDA	Harding Lake	83.76	21	P	P	18 43 32.3	-0.5
HDA				IAMs_20	IAMs_20	19 16 42.3	
	comp=Z,79µm,20.0s						
TABL	Table Mountain	83.86	26	P	P	18 43 33.6	0.0
TABL				IAmb	IAmb	18 43 37.2	
	comp=Z,397nm,1.1s						
TABL				IAMs_20	IAMs_20	19 19 31.1	
	comp=Z,66µm,19.0s						
MAW	Mawson	83.88	203	P	P	18 43 34.4	+1.0
	comp=Z,196nm,1.2s,baz=88,slow=6.3,SNR=52						
MAW				LR	LR	19 19 08.8	
	comp=Z,37µm,18.2s,baz=92,slow=34						
MAW	Mawson	83.88	203	P	P	18 43 34.0	+0.6
	baz=84,SNR=42						
BARN	Barnard Glacie	83.95	25	P	P	18 43 33.8	-0.3
BARN				IAMs_20	IAMs_20	19 23 51.6	
	comp=Z,54µm,18.0s						
IL31		84.00	21	P	P	18 43 32.7	-1.3
ILAR	Eielson Array	84.00	21	P	P	18 43 33.0	-1.0
	comp=Z,334nm,1.2s,baz=251,slow=4.6,SNR=214						

ILAR				PKKP	PKKPdf	19 01 47.9	+4.0
	comp=Z,1.4nm,0.6s,baz=344,slow=2.0,SNR=19						
ILAR				LR	LR	19 17 41.8	
	comp=Z,55µm,19.9s,baz=248,slow=33						
ILAR	Eielson Array	84.00	21	P	P	18 43 32.7	-1.3
ILAR	Eielson Array	84.00	21	P	P	18 43 32.7	-1.3
POKR	Poker Plat Res	84.01	20	P	P	18 43 33.4	-0.7
	baz=234,SNR=71						
POKR	Poker Plat Res	84.01	20	P	P	18 43 32.8	-1.3
POKR				IAmb	IAmb	18 43 36.4	
	comp=Z,402nm,1.3s						
POKR				IAMs_20	IAMs_20	19 21 36.9	
	comp=Z,62µm,19.0s						
CTG	Chitna Glacier	84.04	25	P	P	18 43 35.2	+0.8
	baz=240,SNR=45						
CTGM	Chitina Glacie	84.04	25	P	P	18 43 33.6	-0.9
CTGM				IAmb	IAmb	18 43 38.1	
	comp=Z,433nm,1.2s						
CTGM				IAMs_20	IAMs_20	19 20 34.9	
	comp=Z,49µm,19.0s						
PCA	Pinnacle	84.07	26	P	P	18 43 34.5	-0.1
PINM	Pinnacle	84.07	26	P	P	18 43 35.1	+0.6
	baz=241,SNR=22						
LOGN	Logan Glacier	84.11	25	P	P	18 43 34.7	-0.1
LOGN				IAmb	IAmb	18 43 38.4	
	comp=Z,358nm,1.2s						
M26K	Nabesna, AK	84.11	24	P	P	18 43 35.4	+0.7
	baz=238						
M26K	Nabesna, AK	84.11	24	IAMs_20	IAMs_20	19 19 06.7	
	comp=Z,54µm,20.0s						
MENT	Mentasta	84.12	23	P	P	18 43 34.9	+0.2
MENT				IAmb	IAmb	18 43 43.1	
	comp=Z,159nm,0.7s						
RIDG	Independent Ri	84.14	22	P	P	18 43 35.1	+0.3
	baz=236,SNR=164						
RIDG	Independent Ri	84.14	22	P	P	18 43 34.2	-0.6
RIDG				IAMs_20	IAMs_20	19 21 54.4	
	comp=Z,72µm,19.0s						
PNL	Peninsula	84.24	27	P	P	18 43 36.3	+0.9
	baz=241,SNR=8.9						
BCPM	Bancas Point	84.27	27	P	P	18 43 34.2	-1.3
BCPM				IAMs_20	IAMs_20	19 14 26.1	
	comp=Z,58µm,21.0s						
H24K	Noodor Dome	84.30	19	P	P	18 43 35.9	+0.4
	baz=233						
H24K	Noodor Dome	84.30	19	P	P	18 43 34.2	-1.4
H24K				IAmb	IAmb	18 44 20.4	
	comp=Z,284nm,1.4s						
H24K				IAMs_20	IAMs_20	19 19 36.4	
	comp=Z,62µm,20.0s						
L26K	Log Cabin Wild	84.31	23	P	P	18 43 36.5	+0.9
	baz=238,SNR=117						
L26K	Log Cabin Wild	84.31	23	P	P	18 43 35.9	+0.2
L26K				IAmb	IAmb	18 43 39.4	
	comp=Z,230nm,1.0s						
DOT	Dot Lake	84.38	22	P	P	18 43 35.9	-0.1
COLD	Coldfoot	84.42	18	P	P	18 43 37.0	+0.9
	baz=231,SNR=64						
COLD	Coldfoot	84.42	18	P	P	18 43 36.6	+0.4
M27K	Edge Creek, AK	84.53	24	P	P	18 43 38.2	+1.2
	baz=239,SNR=142						
M27K	Edge Creek, AK	84.53	24	P	P	18 43 38.0	+1.0
M27K				IAMs_20	IAMs_20	19 19 24.9	
	comp=Z,49µm,20.0s						
SCRK	Sand Creek	84.59	22	P	P	18 43 37.6	+0.4
	baz=237,SNR=201						
SCRK	Sand Creek	84.59	22	P	P	18 43 37.3	+0.1
SCRK				IAmb	IAmb	18 43 51.9	
	comp=Z,331nm,1.1s						
SCRK				IAMs_20	IAMs_20	19 21 40.1	
	comp=Z,59µm,18.0s						
DGZ	Jazzator, Alta	84.80	322	*c* *i*P	P	18 43 38.0	-0.6
DGZ				pmax	pmax		
	comp=Z,242nm,1.3s						
YUK3	Moose Creek	84.81	25	P	P	18 43 39.2	+0.7
	baz=240,SNR=44						
PRP	Porcupine Dome	84.90	20	P	P	18 43 37.3	-1.4
	baz=235,SNR=68						
PRP	Porcupine Dome	84.90	20	P	P	18 43 36.9	-1.8
PRP				IAMs_20	IAMs_20	19 22 22.4	
	comp=Z,73µm,18.0s						
L27K	Beaver Creek,	84.92	23	P	P	18 43 39.8	+1.0
	baz=239,SNR=104						
L27K	Beaver Creek,	84.92	23	P	P	18 43 38.4	-0.3
L27K				IAmb	IAmb	18 43 42.9	
	comp=Z,366nm,1.3s						
L27K				IAMs_20	IAMs_20	19 20 01.0	
	comp=Z,51µm,19.0s						
DGAR	Diego Garcia	84.93	263	*de*P	P	18 43 41.9	+2.1
DGAR				pmax	pmax		
	comp=Z,370nm,1.3s						
DGAR				MLR	MLR		
	comp=Z,25µm,19.0s						
DGAR	Diego Garcia	84.93	263	P	P	18 43 41.9	+2.1
DGAR				S	S	18 54 06.2	-3.0
BCAR	Beaver Creek A	84.94	23	P	P	18 43 38.6	-0.2
BVCY	Beaver Creek	84.97	24	P	P	18 43 40.2	+1.2
	baz=240,SNR=48						
SIT	Sitka	84.98	30	P	P	18 43 40.6	+1.5
SIT				pmax	pmax		
	comp=Z,354nm,1.4s						
SIT	Sitka	84.98	30	P	P	18 43 40.1	+1.0
	baz=245,SNR=8.0						
SIT	Sitka	84.98	30	P	P	18 43 40.5	+1.5
SIT				IAmb	IAmb	18 43 43.1	
	comp=Z,354nm,1.4s						
J26L	Joseph Creek	85.03	22	P	P	18 43 40.0	+0.7
	baz=237,SNR=91						
MOBC	Moresby Island	85.20	35	P	P	18 43 40.9	+0.5
MOBC				IAmb	IAmb	18 44 32.4	
	comp=Z,672nm,1.7s						
YUK6	Outpost Mounta	85.30	26	P	P	18 43 42.1	+1.2
	baz=242,SNR=57						
BHPL	Bhopal	85.36	294	*e*P	P	18 43 40.8	-1.1
BHPL				IAmb	IAmb	18 43 47.3	
	comp=Z,326nm,1.3s						
YUK4	Talbot Arm	85.36	26	P	P	18 43 43.0	+1.7
	baz=242,SNR=93						
CRAG	Craig	85.46	32	P	P	18 43 43.5	+2.0
	baz=247						
TOLK	Toolik Lake Re	85.50	17	P	P	18 43 42.4	+0.8
	baz=231,SNR=86						
TOLK	Toolik Lake Re	85.50	17	P	P	18 43 41.6	0.0
TOLK				IAmb	IAmb	18 43 45.4	
	comp=Z,216nm,1.1s						
TOLK				IAMs_20	IAMs_20	19 19 15.1	
	comp=Z,63µm,20.0s						
A21K	Barrow	85.51	13	P	P	18 43 41.6	+0.1
	baz=224						
A21K	Barrow	85.51	13	P	P	18 43 41.2	-0.3
A21K				IAMs_20	IAMs_20	19 19 15.0	
	comp=Z,63µm,20.0s						
KAAM	Kaadhehdhoo	85.58	271	P	P	18 43 43.8	+0.7
KAAM				S	S	18 54 15.7	0.0
KAAM	Kaadhehdhoo	85.58	271	⇑P	P	18 43 47.5	+4.4
FYU	Fort Yukon	85.60	19	P	P	18 43 41.8	-0.2
FYU				IAmb	IAmb	18 43 45.9	
	comp=Z,603nm,1.7s						
FYU				IAMs_20	IAMs_20	19 22 56.7	
	comp=Z,64µm,19.0s						
HYT	Haines Junctio	85.61	26	P	P	18 43 43.7	+1.3
	baz=243,SNR=143						
ZSN	Zaisan	85.67	319	⇑*i*P	P	18 43 41.5	-1.3
	baz=319						
ZSN				*e*S	SKSac	18 54 07.5	-1.0
	baz=319						
ZSN	Zaisan	85.67	319	*c* *i*P	P	18 43 41.5	-1.3
ZSN				*e*S	SKSac	18 54 07.4	-1.0
BESE	Bessie Mountai	85.84	29	P	P	18 43 44.0	+0.5
JIS	Juneau Island	85.95	29	P	P	18 43 44.7	+0.8
JIS				IAmb	IAmb	18 43 48.1	
	comp=Z,464nm,1.4s						
SKAG	Skagway	85.99	28	P	P	18 43 45.4	+1.3
	baz=245,SNR=89						
SKAG	Skagway	85.99	28	P	P	18 43 44.6	+0.5
EGAK	Eagle	86.05	22	P	P	18 43 45.2	+0.9
	baz=239						
EGAK	Eagle	86.05	22	IAMs_20	IAMs_20	19 17 42.9	
	comp=Z,61µm,20.0s						
WRAK	Wrangell Islan	86.23	31	P	P	18 43 47.5	+2.1
	baz=248,SNR=8.5						
WRAK	Wrangell Islan	86.23	31	P	P	18 43 45.1	-0.2
WRAK	Wrangell Islan	86.23	31	IAMs_20	IAMs_20	19 14 46.3	
	comp=Z,73µm,20.0s						
BMAR	Burnt Mountain	86.30	19	P	P	18 43 46.2	+0.7
DAWY	Dawson	86.36	23	P	P	18 43 47.0	+1.1
	baz=241,SNR=145						
DAWY	Dawson	86.36	23	P	P	18 43 45.9	-0.1
DAWY				IAmb	IAmb	18 43 50.4	
	comp=Z,545nm,1.4s						
JCC	Jacoby Creek,	86.51	48	IAMs_20	IAMs_20	19 19 21.1	
	comp=Z,41µm,18.0s						
RUBB	Prince Rupert	86.58	34	P	P	18 43 46.5	-0.6
KMRM	Mail Ridge	86.59	49	P	P	18 43 47.7	0.0
KMRM				IAmb	IAmb	18 44 04.0	
	comp=Z,273nm,1.0s						
N31M	Braeburn, Yuko	86.66	26	P	P	18 43 48.8	+1.3
	baz=244,SNR=134						
AYAN	Aya Nagar	86.70	299	*e*P	P	18 43 48.0	-0.3
WHY	Whitehorse	86.70	27	P	P	18 43 48.5	+0.7
	baz=245,SNR=62						
WHY	Whitehorse	86.70	27	P	P	18 43 47.6	-0.2
WHY				IAmb	IAmb	18 44 02.5	
	comp=Z,625nm,1.6s						
MCCM	Marconi Confer	86.70	51	IAMs_20	IAMs_20	19 18 56.5	
	comp=Z,50µm,19.0s						
M30M	Minto, Yukon	86.71	25	P	P	18 43 48.6	+0.9
	baz=244						
KBO	Bosley Butte	86.73	47	P	P	18 43 48.4	+0.1
KBO				IAmb	IAmb	18 44 04.7	
	comp=Z,460nm,1.3s						
HOPS	Hopland Field	86.76	50	P	P	18 43 50.1	+1.6
HOPS				IAmb	IAmb	18 44 17.7	
	comp=Z,360nm,1.4s						
GDXM	Geysers	86.93	50	P	P	18 43 50.3	+1.0
J29M	Klondike Camp	87.00	23	P	P	18 43 50.8	+1.7
	baz=242,SNR=73						
BBB	Bella Bella	87.08	36	LR	LR	19 16 54.6	
	comp=Z,60µm,19.9s,baz=255,slow=32						
MK31	Makanchi Array	87.16	318	*i* P	P	18 43 49.3	-0.9
MK31				pmax	pmax		
	comp=Z,186nm,1.3s						
MK31	Makanchi Array	87.16	318	P	P	18 43 48.7	-1.5
MKAR	Makanchi Array	87.16	318	P	P	18 43 49.4	-0.9
	comp=Z,26nm,0.7s,baz=99,slow=1.7,SNR=121						
MKAR				PKKP	PKKPbc	19 01 41.4	-2.4
	comp=Z,5.8nm,1.0s,baz=272,slow=2.7,SNR=9.9						
MKAR				PKPPKP	P'P'df	19 09 51.2	+3.0
	comp=Z,3.7nm,1.1s,baz=314,slow=4.0,SNR=5.4						
MKAR				LR	LR	19 22 25.2	
	comp=Z,22µm,20.9s,baz=100,slow=35						
MKAR	Makanchi Array	87.16	318	P	P	18 43 48.7	-1.5
L02E	Cave Junction	87.16	47	P	P	18 43 52.7	+2.4
	baz=255,SNR=6.7						
SMLA	Simla	87.22	302	*e*P	P	18 43 49.8	-1.0
GOA	Goa	87.25	286	*e*P	P	18 43 51.9	+0.7
K02D	Willamette Mer	87.25	46	P	P	18 43 52.1	+1.3
	baz=255,SNR=6.1						
O02D	Mt. Diablo Mer	87.27	49	P	P	18 43 52.8	+1.8
	baz=256,SNR=32						
TLCB	Telegraph Cove	87.33	38	P	P	18 43 51.1	+0.3
MAKZ	Makanchi	87.37	318	P	P	18 43 49.8	-1.4
MAKZ				pmax	pmax		
	comp=Z,175nm,1.1s						
MAKZ				MLR	MLR		
	comp=Z,21µm,19.0s						
MAKZ	Makanchi	87.37	318	P	P	18 43 49.8	-1.4
I29M	Ogilvie Camp,	87.39	22	P	P	18 43 51.4	+0.5
	baz=242,SNR=265						
P33M	Teslin, Yukon	87.46	28	P	P	18 43 52.0	+0.6
	baz=247,SNR=22						
M02C	Callahan	87.51	48	P	P	18 43 54.0	+1.9
	baz=256,SNR=34						
N02D	Trinity Center	87.52	48	P	P	18 43 53.9	+1.7
	baz=256,SNR=29						
WDC	Whiskeytown Da	87.55	48	P	P	18 43 50.7	-1.5
WDC				pmax	pmax		
	comp=Z,429nm,1.7s						
WDC				MLR	MLR		
	comp=Z,49µm,20.0s						
WDC	Whiskeytown Da	87.55	48	P	P	18 43 50.7	-1.5
WDC				IAmb	IAmb	18 44 06.9	
	comp=Z,429nm,1.7s						
WDC				IAMs_20	IAMs_20	19 15 22.6	
	comp=Z,49µm,20.0s						
M31M	Drury Creek, Y	87.56	26	P	P	18 43 52.5	+0.8
	baz=246,SNR=90						
YBH	Yreka Blue Hor	87.70	47	P	P	18 43 50.1	-2.9
YBH				pmax	pmax		
	comp=Z,304nm,1.5s						
YBH				MLR	MLR		
	comp=Z,42µm,21.0s						
YBH	Yreka Blue Hor	87.70	47	P	P	18 43 50.1	-2.9
YBH				IAmb	IAmb	18 44 30.0	
	comp=Z,304nm,1.5s						
I03D	Drain, OR	87.73	45	P	P	18 43 54.8	+1.9
	baz=255						
HUMO	Hull Mountain	87.74	46	P	P	18 43 52.1	-0.9
ZAA0	Zalesovo Array	87.75	325	P	P	18 43 50.3	-2.5
ZALV	Zalesovo Beam	87.75	325	P	P	18 43 51.0	-1.8
	comp=Z,20nm,0.9s,baz=108,slow=4.8,SNR=56						
ZALV				PKKP	PKKPbc	19 01 40.2	-2.3
	comp=Z,2.4nm,0.5s,baz=302,slow=2.3,SNR=6.4						
ZALV				PKPPKP	P'P'df	19 09 45.2	-1.3
	comp=Z,2.2nm,0.8s,baz=267,slow=3.0,SNR=6.1						
ZALV				LR	LR	19 21 45.6	
	comp=Z,29µm,21.8s,baz=100,slow=35						
ZALV	Zalesovo Beam	87.75	325	*i* P	P	18 43 51.0	-1.8
ZALV				pmax	pmax		
	comp=Z,20nm,0.9s						
ZALV	Zalesovo Beam	87.75	325	P	P	18 43 50.4	-2.4
POO	Poona	87.75	289	*e*P	P	18 43 52.7	-1.0
POO				IAmb	IAmb	18 43 58.8	
	comp=Z,276nm,1.5s						
RPN	Rapa Nui	87.92	117	LR	LR	19 15 35.1	
	comp=Z,71µm,20.4s,baz=274,slow=30						
RPN	Rapa Nui	87.92	117	IAMs_20	IAMs_20	19 15 41.9	
	comp=Z,62µm,20.0s						
COR	Corvallis	87.99	44	IAMs_20	IAMs_20	19 15 45.9	
	comp=Z,83µm,21.0s						
FARO	Faro, Yukon	88.02	26	P	P	18 43 54.9	+0.9
	baz=247,SNR=85						
FARO				S	S	18 54 38.0	+0.6
	baz=247						
O03E	Paynes Creek	88.03	49	P	P	18 43 56.0	+1.4
	baz=257,SNR=42						
ORV	Oroville	88.08	50	P	P	18 43 54.5	-0.3
ORV				pmax	pmax		
	comp=Z,298nm,1.6s						
ORV				MLR	MLR		
	comp=Z,37µm,18.0s						
ORV	Oroville	88.08	50	P	P	18 43 54.5	-0.3
ORV				IAmb	IAmb	18 44 09.1	
	comp=Z,298nm,1.6s						
CBB	Campbell River	88.08	39	P	P	18 43 54.9	+0.3
L04D	Klamath Falls	88.11	47	P	P	18 43 56.2	+1.2
	baz=256,SNR=12						
DLBC	Dease Lake	88.13	30	LR	LR	19 16 30.0	
	comp=Z,98µm,20.6s,baz=258,slow=31						
DLBC	Dease Lake	88.13	30	P	P	18 43 54.8	+0.1
G03D	McMinnville, O	88.17	44	P	P	18 43 55.3	+0.3
	baz=256						
DHRM	DHARAMSHALA	88.17	303	*e*P	P	18 43 54.4	-1.3
DHRM				IAmb	IAmb	18 44 03.8	
	comp=Z,165nm,0.8s						
PDGK	Podgornoye	88.17	314	P	P	18 43 54.2	-1.1
SNCC	San Nicolas Is	88.28	56	P	P	18 43 57.7	+1.8
	baz=258						
SNCC				S	S	18 54 39.8	-1.2
	baz=258						
E03A	Lebam	88.31	42	P	P	18 43 56.1	+0.5
E03A				IAmb	IAmb	18 44 10.6	
	comp=Z,197nm,1.2s						
SMMC	Simmler	88.32	54	P	P	18 43 57.9	+1.8
	baz=258,SNR=9.6						
SMMC				S	S	18 54 40.6	-0.8
	baz=258						
NLWA	Neilton Lookou	88.32	42	IAMs_20	IAMs_20	19 16 23.6	
	comp=Z,71µm,20.0s						
SCZ2	Santa Cruz Isl	88.34	55	P	P	18 43 57.7	+1.5
	baz=258,SNR=6.6						
SCZ2				S	S	18 54 43.2	+1.6
	baz=258						
M04C	Macdoel	88.35	47	P	P	18 43 57.7	+1.6
	baz=256,SNR=19						
M04C				S	S	18 54 44.6	+3.0
	baz=256						
H04D	Lebanon	88.36	45	P	P	18 43 58.1	+2.2
	baz=256						
SBC	Santa Barbara	88.37	55	P	P	18 43 58.1	+1.9
	baz=258						
PKM	Mcpherson Peak	88.38	54	P	P	18 43 58.6	+2.0
	baz=258,SNR=15						
I04A	Tendick Farm,	88.41	45	P	P	18 43 58.6	+2.3
	baz=256						
I04A				S	S	18 54 42.3	+0.4
	baz=256						
EPYK	Eagle Plains	88.44	21	P	P	18 43 56.5	+0.6
	baz=244,SNR=194						
EPYK				S	S	18 54 45.1	+3.8
	baz=244						
EPYK	Eagle Plains	88.44	21	P	P	18 43 56.3	+0.4
EPYK				IAMs_20	IAMs_20	19 19 17.0	
	comp=Z,51µm,20.0s						
UZB	Uzynbulak	88.46	314	⇑*i*P	P	18 43 55.5	-1.2
	comp=Z,78nm,1.5s,baz=314						
UZB				*i* S	SKSac	18 54 21.8	-4.3
	baz=314						
UZB	Uzynbulak	88.46	314	*c* *i*P	P	18 43 55.5	-1.2
UZB				*i* S	SKSac	18 54 21.7	-4.3
UZB				pmax	pmax		
	comp=Z,78nm,1.5s						
AJM	Ajmer	88.47	297	*e*P	P	18 43 56.1	-0.9
J04D	Umpqua Nationa	88.49	46	P	P	18 43 58.0	+1.1
	baz=256,SNR=10						
J04D				S	S	18 54 47.2	+4.1
	baz=256						
CLRS	Cowichan Lake	88.53	40	P	P	18 43 54.6	-2.0
F04D	Rainier, OR	88.56	43	P	P	18 43 56.6	-0.2
	baz=256						
CMB	Columbia Colle	88.59	51	P	P	18 43 56.9	-0.4
CMB				pmax	pmax		
	comp=Z,471nm,1.9s						
CMB				MLR	MLR		
	comp=Z,63µm,19.0s						
CMB	Columbia Colle	88.59	51	P	P	18 43 56.9	-0.4
CMB				IAmb	IAmb	18 44 11.6	
	comp=Z,471nm,1.9s						
CMB				IAMs_20	IAMs_20	19 19 01.6	
	comp=Z,63µm,19.0s						
K04D	Chiloquin, OR	88.60	47	P	P	18 43 58.5	+1.2
	baz=257						
K04D				S	S	18 54 48.3	+4.3
	baz=257						
B04A	Port Angeles	88.73	41	P	P	18 43 56.7	-0.9
PRZ	Przheval'sk	88.75	313	P	P	18 43 56.6	-1.5
PRZ	Przheval'sk	88.75	313	P	P	18 43 56.6	-1.5
KPKS	Kokpek	88.78	314	⇑*i*P	P	18 43 56.2	-1.9
	comp=Z,81nm,1.5s,baz=314						
KPKS				*e*S	SKSac	18 54 23.9	-3.8
	comp=Z,961nm,7.8s,baz=314						
KPKS	Kokpek	88.78	314	*c* *i*P	P	18 43 56.2	-1.9
KPKS				*e*S	SKSac	18 54 23.9	-3.8
KPKS				pmax	pmax		
	comp=Z,81nm,1.5s						
KPKS				smax	smax		
	comp=E,961nm,7.8s						
D03D	Eldon	88.87	42	P	P	18 44 00.7	+2.4
	baz=256						
D03D				S	S	18 54 54.0	+8.1
	baz=256						
SATY	Saty	88.88	314	⇑*i*P	P	18 43 57.6	-1.0
	comp=E,52nm,1.3s,baz=314						
SATY				*e*S	SKSac	18 54 26.9	-1.6
	baz=314						
SATY	Saty	88.88	314	*c* *i*P	P	18 43 57.6	-1.0
SATY				*e*S	SKSac	18 54 26.8	-1.6
SATY				pmax	pmax		
	comp=Z,52nm,1.3s						
PGC	Sidney	88.92	40	P	P	18 43 58.0	-0.5
F04A	Amboy	88.92	43	P	P	18 43 57.1	-1.5
F04A				IAmb	IAmb	18 44 14.3	
	comp=Z,283nm,1.6s						
E04D	Cinebar	88.98	43	P	P	18 43 59.7	+0.9
	baz=256,SNR=5.4						
E04D				S	S	18 54 50.1	+3.1
	baz=256						
EMB	Emerald Bay	89.01	50	P	P	18 44 00.3	+0.8
VOG	Valley Oaks Go	89.02	53	P	P	18 43 59.9	+0.7
	baz=258						
SCI2	San Clemente I	89.03	57	P	P	18 44 00.3	+0.9
	baz=259,SNR=8.7						
SCI2				S	S	18 54 52.2	+4.1
	baz=259						
MMPY	Sheldon Lake,	89.06	26	P	P	18 43 59.8	+0.9
	baz=248,SNR=65						
J05D	Fort Rock, OR	89.13	46	P	P	18 44 01.6	+1.8
	baz=257,SNR=20						
MPK	Martis Peak	89.14	50	P	P	18 44 00.3	+0.2
VES	Vestal, Richgr	89.16	54	P	P	18 44 00.7	+0.8
	baz=258,SNR=9.4						
OSI	Osito Audit: C	89.20	55	P	P	18 44 02.0	+1.7
	baz=259						
CIS	Catalina Islan	89.22	56	P	P	18 44 01.5	+1.2
	baz=259,SNR=19						
ARVC	Arvin	89.22	54	P	P	18 44 01.9	+1.6
	baz=259,SNR=11						
K05A	Summer Lake	89.24	47	P	P	18 43 59.4	-1.0
K05A				IAmb	IAmb	18 44 43.1	
	comp=Z,422nm,1.4s						
I05D	Terrebonne, OR	89.29	45	P	P	18 44 01.4	+1.0
	baz=257,SNR=6.9						
I05D				S	S	18 54 53.4	+3.2
	baz=257						
WTLY	Watson Lake, Y	89.30	29	P	P	18 44 01.2	+1.2
	baz=251,SNR=6.7						
WTLY				S	S	18 54 49.7	+0.1
	baz=251						
HOOD	Mount Hood Mea	89.30	44	P	P	18 44 01.7	+1.1
TDK	Taldyqorghan	89.33	316	*e*P	P	18 43 58.9	-1.6
	comp=Z,184nm,1.7s,baz=316						
TDK				*e*S	SKSac	18 54 27.0	-3.7
	baz=316						
TDK				*e*LR	LR	19 19 57.2	
	comp=Z,27µm,21.5s,baz=316						
TDK	Taldyqorghan	89.33	316	*e*P	P	18 43 58.9	-1.6
TDK				*e*S	SKSac	18 54 27.0	-3.7
TDK				pmax	pmax		
	comp=Z,183nm,1.7s						
TDK				MLR	MLR		
	comp=Z,27µm,22.0s						
FMP	Fort Macarthur	89.38	56	P	P	18 44 02.3	+1.3
	baz=259						
FMP				S	S	18 54 53.8	+2.5
	baz=259						
A04D	Lummi Island	89.42	41	P	P	18 44 02.0	+1.2
	baz=256,SNR=5.7						
A04D				S	S	18 54 54.7	+3.7
	baz=256						
PNTR	Pine Nut	89.42	50	P	P	18 44 01.8	+0.4
PNTR				IAmb	IAmb	18 44 16.1	
	comp=Z,399nm,1.3s						
VCNR	Virginia City	89.42	50	P	P	18 44 02.2	+0.8
VCNR				IAmb	IAmb	18 44 16.2	
	comp=Z,273nm,1.5s						
SEM	Semipalatinsk	89.43	321	*i* P	P	18 43 58.8	-2.4
	comp=Z,73nm,1.5s,baz=321						
SEM				*i* S	SKSac	18 54 25.6	-5.9
	baz=321						
SEM	Semipalatinsk	89.43	321	*i* P	P	18 43 58.7	-2.4
SEM				*i* S	SKSac	18 54 25.6	-5.9
SEM				pmax	pmax		
	comp=Z,73nm,1.5s						
DECC	Green Verdugo	89.45	55	P	P	18 44 02.4	+1.1
	baz=259						
DECC				S	S	18 54 54.8	+2.7
	baz=259						
PINE	Pine Mountain	89.45	46	P	P	18 44 02.1	+0.8
PINE				IAmb	IAmb	18 45 03.8	
	comp=Z,523nm,1.9s						
MOD	Modoc Plateau	89.49	48	P	P	18 44 01.8	+0.2
MOD				IAmb	IAmb	18 44 37.7	
	comp=Z,430nm,1.6s						
MOD				IAMs_20	IAMs_20	19 18 45.0	
	comp=Z,44µm,20.0s						
D05A	Enumclaw	89.51	42	P	P	18 44 01.3	0.0
G05D	Wamic, OR	89.51	44	P	P	18 44 02.9	+1.5
	baz=257						
G05D				S	S	18 54 56.4	+4.2
	baz=257						
MDPB	Devils Postpil	89.52	52	P	P	18 44 02.2	+0.3
MDPB				IAmb	IAmb	18 44 31.4	
	comp=Z,314nm,1.4s						
LON	Longmire	89.53	43	P	P	18 44 02.0	+0.5
LON				pmax	pmax		
	comp=Z,84nm,1.5s						
LON	Longmire	89.53	43	P	P	18 44 01.9	+0.5
PASC	Pasadena Art C	89.55	55	P	P	18 44 01.7	-0.1
PASC				IAmb	IAmb	18 44 23.9	
	comp=Z,345nm,1.4s						

KDJ	**Kajisay**	89.56	313	P	P	18 44 01.1	-0.8
KDJ				pmax	pmax		
	comp=Z,192nm,1.3s						
KDJ	**Kajisay**	89.56	313	P	P	18 44 01.1	-0.8
F05D	**White Salmon**	89.56	43	P	P	18 44 02.8	+1.2
	baz=257						
F05D				S	S	18 54 55.3	+2.8
	baz=257						
ISA	**Isabella, Lake**	89.61	54	P	P	18 44 02.3	+0.1
ISA				pmax	pmax		
	comp=Z,672nm,2.0s						
ISA	**Isabella, Lake**	89.61	54	P	P	18 44 03.7	+1.5
	baz=259,SNR=38						
ISA				S	S	18 54 54.9	+1.3
	baz=259						
ISA	**Isabella, Lake**	89.61	54	P	P	18 44 02.2	+0.1
ISA				IAmb	IAmb	18 44 16.6	
	comp=Z,672nm,1.9s						
MWC	**Mount Wilson**	89.67	55	P	P	18 44 03.4	+0.8
MWC				pmax	pmax		
	comp=Z,668nm,1.4s						
MWC	**Mount Wilson**	89.67	55	P	P	18 44 03.4	+0.8
YERR	**Yerington**	89.67	51	P	P	18 44 03.4	+0.8
YERR				IAmb	IAmb	18 44 17.9	
	comp=Z,349nm,1.5s						
B05A	**Bryant**	89.70	41	P	P	18 44 03.3	+1.2
	baz=256,SNR=11						
B05A				S	S	18 54 56.0	+2.3
	baz=256						
MLAC	**Mammoth, Mammo**	89.71	52	P	P	18 44 05.4	+2.7
	baz=258,SNR=9.8						
MLAC				S	S	18 54 56.6	+1.8
	baz=258						
PAHR	**Pah Rah Range**	89.71	50	P	P	18 44 03.4	+0.8
PAHR				IAmb	IAmb	18 44 18.1	
	comp=Z,456nm,1.4s						
EDW2	**Edwards Air Fo**	89.84	55	P	P	18 44 05.2	+2.0
	baz=259,SNR=60						
EDW2				S	S	18 54 57.9	+2.1
	baz=259						
MDOK	**Medeo**	89.87	314	*e*P	P	18 44 01.5	-1.8
	baz=314						
MDOK				*i* S	SKSac	18 54 30.5	-3.8
	baz=314						
MDOK				*e*LR	LR	19 21 35.8	
	comp=Z,13µm,19.4s,baz=314						
MDOK	**Medeo**	89.87	314	P	P	18 44 03.7	+0.4
KSH	**Kashi**	89.91	310	P	P	18 44 04.4	+0.9
KSH				pP	pwP	18 44 08.8	+0.1
KSH				sP	sP	18 44 10.5	+2.6
KSH				PP	PP	18 47 41.8	+5.4
KSH				SKS	SKSac	18 54 33.3	-1.3
KSH				S	S	18 54 56.0	-0.3
KSH				SS	SS	19 00 58.9	+4.7
KSH				pmax	pmax		
	comp=Z,100nm,1.3s						
KSH				pmax	pmax		
	comp=Z,6µm,12.4s						
KSH				LR	LR		
	comp=Z,28µm,19.9s						
KSH				LR	LR		
	comp=Z,25µm,19.1s						
KSH				LR	LR		
	comp=Z,43µm,19.9s						
TNSS	**Tian-Shan**	89.92	314	*e*P	P	18 44 02.1	-1.8
	baz=313						
AAA	**Alma-Ata**	89.98	314	*e*P	P	18 44 01.3	-2.4
	baz=314						
AAA				*e*S	SKSac	18 54 33.7	-1.1
	baz=314						
AAA				*e*LR	LR	19 21 51.9	
	comp=Z,24µm,19.0s,baz=314						
AAA	**Alma-Ata**	89.98	314	*e*P	P	18 44 01.3	-2.4
AAA				*e*S	SKSac	18 54 33.6	-1.1
AAA				MLR	MLR		
	comp=Z,24µm,19.0s						
TGTN	**Hyland Airport**	90.00	27	P	P	18 44 04.4	+1.0
	baz=251,SNR=46						
TGTN				S	S	18 54 56.8	+0.7
	baz=251						
CWC	**Cottonwood Cre**	90.07	53	P	P	18 44 06.1	+1.6
	baz=259						
CWC				S	S	18 55 00.9	+2.8
	baz=259						
TIN	**Tinemaha, Big**	90.07	53	P	P	18 44 06.0	+1.6
	baz=259,SNR=26						
TIN				S	S	18 55 02.1	+4.2
	baz=259						
LHV	**Little Huntoon**	90.09	51	P	P	18 44 04.9	+0.7
LHV				IAmb	IAmb	18 44 24.8	
	comp=Z,462nm,1.3s						
RYN	**Ryan**	90.15	51	P	P	18 44 05.7	+1.0
RYN				IAmb	IAmb	18 44 20.1	
	comp=Z,436nm,1.5s						
B06A	**Marblemount**	90.15	41	P	P	18 44 03.8	-0.5
109C	**Camp Elliot, M**	90.20	57	P	P	18 44 07.0	+2.1
	baz=260,SNR=8.7						
109C				S	S	18 55 02.1	+3.1
	baz=260						
LRMC	**Laurel Mtn Rad**	90.21	54	P	P	18 44 06.4	+1.4
	baz=259,SNR=80						
LRMC				S	S	18 55 02.8	+3.5
	baz=259						
MURC	**Murrieta**	90.25	56	P	P	18 44 06.4	+1.2
	baz=260,SNR=8.8						
MURC				S	S	18 54 59.8	+0.2
	baz=260						
ULHL	**Ulahol**	90.26	313	P	P	18 44 05.6	+0.3
	SNR=42						
NVAR	**Mina Array Bea**	90.28	51	P	P	18 44 06.6	+1.2
	comp=Z,80nm,1.0s,baz=245,slow=5.6,SNR=136						
NVAR				PKKP	PKKPbc	19 01 37.8	+1.9
	comp=Z,1.7nm,0.8s,baz=74,slow=1.2,SNR=5.3						
NVAR				PKPPKP		19 09 48.2	
	comp=Z,4.4nm,1.0s,baz=96,slow=2.8,SNR=8.1						
NVAR				LR	LR	19 20 21.6	
	comp=Z,62µm,18.9s,baz=272,slow=33						
NVAR	**Mina Array Bea**	90.28	51	P	P	18 44 05.8	+0.4
INK	**Inuvik**	90.39	20	PKKP	PKKPdf	19 01 33.8	+1.1
	comp=Z,8.7nm,1.1s,baz=329,slow=4.9,SNR=6.4						
INK				LR	LR	19 25 01.7	
	comp=Z,41µm,18.4s,baz=233,slow=36						
INK	**Inuvik**	90.39	20	P	P	18 44 04.3	-0.6
INK				pmax	pmax		
	comp=Z,373nm,1.4s						
INK	**Inuvik**	90.39	20	P	P	18 44 05.0	+0.1
	baz=246,SNR=138						
INK				S	S	18 54 57.3	-1.9
	baz=246						
INK	**Inuvik**	90.39	20	P	P	18 44 04.3	-0.6
INK				IAmb	IAmb	18 44 08.4	
	comp=Z,373nm,1.4s						
LLLB	**Lillooet**	90.39	39	P	P	18 44 04.7	-0.7
NV11	**Mina Array Sit**	90.39	51	P	P	18 44 05.6	-0.2
NV11				IAmb	IAmb	18 44 22.0	
	comp=Z,356nm,1.1s						
C06D	**Leavenworth**	90.40	42	P	P	18 44 07.3	+1.8
	baz=257						
C06D				S	S	18 55 01.2	+0.8
	baz=257						
LTY	**Liberty**	90.40	42	P	P	18 44 04.7	-0.9
MPMC	**Manual Prospec**	90.47	54	P	P	18 44 07.6	+1.3
	baz=259,SNR=76						
MPMC				S	S	18 55 03.3	+1.5
	baz=259						
KURK	**Kurchatov**	90.51	321	*c i*P	P	18 44 05.1	-0.8
KURK				pmax	pmax		
	comp=Z,185nm,1.5s						
KURK				MLR	MLR		
	comp=Z,35µm,22.0s						
KURK	**Kurchatov**	90.51	321	P	P	18 44 04.6	-1.3
KURK				P	P	18 44 04.6	-1.3
KURK				S	SKSac	18 54 29.7	-7.6
KURK				S	SKSac	18 54 29.7	-7.6
KURK	**Kurchatov**	90.51	321	P	P	18 44 03.8	-2.0
BAR	**Barrett**	90.52	57	P	P	18 44 05.6	-0.9
BAR				IAmb	IAmb	18 44 20.9	
	comp=Z,484nm,1.8s						
I07A	**Izee**	90.52	46	P	P	18 44 06.5	+0.2
I07A				IAmb	IAmb	18 44 20.6	
	comp=Z,333nm,1.7s						
BOOM	**Boomskoye usch**	90.53	313	P	P	18 44 05.1	-1.3
BOOM				pmax	pmax		
	comp=Z,148nm,1.3s						
BOOM	**Boomskoye usch**	90.53	313	P	P	18 44 05.1	-1.3
KUU	**Kurty**	90.53	314	⇑*i*P	P	18 44 04.3	-2.0
	comp=Z,189nm,1.3s,baz=314						
KUU				*e*S	SKSac	18 54 34.9	-2.9
	comp=Z,4µm,8.1s,baz=314						
KUU	**Kurty**	90.53	314	*c i*P	P	18 44 04.2	-2.0
KUU				*e*S	SKSac	18 54 34.9	-2.9
KUU				pmax	pmax		
	comp=Z,189nm,1.3s						
KUU				smax	smax		
	comp=E,4µm,8.1s						
KURBB	**Kurchatov Arra**	90.55	321	P	P	18 44 05.2	-0.8
KVN	**Kaiserville**	90.56	51	P	P	18 44 05.3	-1.3
KVN				pmax	pmax		
	comp=Z,567nm,1.4s						
KVN	**Kaiserville**	90.56	51	P	P	18 44 05.3	-1.3
LCH	**Last Change Ra**	90.56	53	P	P	18 44 06.1	-0.6
LCH				IAmb	IAmb	18 44 35.9	
	comp=Z,373nm,1.8s						
BBRC	**Big Bear Solar**	90.60	56	P	P	18 44 08.5	+1.5
	baz=260						
F07A	**Phinny Hill Vi**	90.61	44	P	P	18 44 06.9	+0.5
RRX	**Edison Barstow**	90.65	55	P	P	18 44 08.7	+1.7
	baz=260						
MONP2	**Monument Peak**	90.77	57	P	P	18 44 09.2	+1.4
	baz=260,SNR=51						
E07A	**Sunnyside**	90.80	43	P	P	18 44 06.6	-0.8
WVOR	**Wild Horse Val**	90.81	47	P	P	18 44 07.7	0.0
WVOR				pmax	pmax		
	comp=Z,475nm,1.5s						
WVOR				MLR	MLR		
	comp=Z,46µm,20.0s						
WVOR	**Wild Horse Val**	90.81	47	P	P	18 44 07.7	0.0
WVOR				IAMs_20	IAMs_20	19 18 59.0	
	comp=Z,46µm,20.0s						
PFO	**Pinyon Flats O**	90.86	56	P	P	18 44 08.7	+0.6
PFO				pmax	pmax		
	comp=Z,374nm,1.7s						
PFO				MLR	MLR		
	comp=Z,214µm,20.0s						
PFO	**Pinyon Flats O**	90.86	56	P	P	18 44 09.3	+1.2
	baz=260,SNR=28						
PFO				S	S	18 55 09.6	+4.2
	baz=260						
PFO	**Pinyon Flats O**	90.86	56	P	P	18 44 08.7	+0.6
PFO				IAmb	IAmb	18 45 09.1	
	comp=Z,374nm,1.6s						
TKM2	**Tokmak 2**	90.86	313	P	P	18 44 07.3	-0.8
	SNR=46						
TKM2	**Tokmak 2**	90.86	313	*i* P	P	18 44 07.0	-1.0
TKM2				pmax	pmax		
	comp=Z,74nm,1.4s						
TPFO	**Pinon Flats**	90.86	56	S	S	18 55 09.6	+4.2
	baz=260						
GSC	**Goldstone, Bar**	90.88	55	P	P	18 44 09.2	+1.1
GSC				pmax	pmax		
	comp=Z,456nm,1.8s						
GSC	**Goldstone, Bar**	90.88	55	P	P	18 44 09.6	+1.5
	baz=260,SNR=30						
GSC	**Goldstone, Bar**	90.88	55	P	P	18 44 09.2	+1.1
GSC				IAmb	IAmb	18 44 22.7	
	comp=Z,456nm,1.8s						
QSM	**Queen of Sheba**	90.95	54	P	P	18 44 08.6	+0.3
QSM				IAmb	IAmb	18 44 23.5	
	comp=Z,175nm,1.1s						
NIL	**Nilore**	90.95	304	P	P	18 44 05.9	-2.5
NIL				pmax	pmax		
	comp=Z,247nm,1.5s						
NIL				MLR	MLR		
	comp=Z,31µm,22.0s						
NIL	**Nilore**	90.95	304	P	P	18 44 06.4	-2.0
NIL	**Nilore**	90.95	304	P	P	18 44 05.9	-2.5
NIL				IAmb	IAmb	18 44 21.7	
	comp=Z,247nm,1.4s						
HAWA	**Hanford**	90.98	43	P	P	18 44 08.2	0.0
IKP	**In-Ko-Pah, Jac**	90.98	57	P	P	18 44 10.7	+2.1
	baz=260,SNR=24						
RMX	**La Rumorosa**	91.00	57	P	P	18 44 09.4	+0.6
FURC	**Furnace Creek,**	91.04	53	P	P	18 44 10.5	+1.9
	baz=260,SNR=15						
TPH	**Tonopah**	91.05	52	P	P	18 44 09.3	+0.3
TPH				pmax	pmax		
	comp=Z,1µm,1.3s						
TPH	**Tonopah**	91.05	52	P	P	18 44 09.3	+0.3
J08A	**Circle Bar Ran**	91.11	46	P	P	18 44 08.4	-0.7
GWY	**Greenwater Val**	91.15	54	P	P	18 44 09.5	+0.1
GWY				IAmb	IAmb	18 44 39.6	
	comp=Z,477nm,1.7s						
G08A	**Pilot Rock**	91.15	44	P	P	18 44 09.2	+0.1
HEC	**Hector,Ludlow**	91.18	55	P	P	18 44 10.6	+1.1
	baz=260,SNR=44						
KBK	**Karagaybulak**	91.28	313	P	P	18 44 09.7	-0.2
	SNR=28						
SWSC	**Sam W. Stewart**	91.29	57	P	P	18 44 11.7	+1.7
	baz=260,SNR=20						
BELC	**Belle Mtn. Jos**	91.31	56	P	P	18 44 11.6	+1.4
	baz=260,SNR=62						
BELC				S	S	18 55 11.6	+2.2
	baz=260						
E08A	**Dider Farm, El**	91.32	43	P	P	18 44 08.0	-1.8
E08A				IAmb	IAmb	18 44 24.5	
	comp=Z,253nm,1.6s						
SHOC	**Shoshone, Teco**	91.41	54	P	P	18 44 11.5	+1.1
	baz=260,SNR=8.4						
SHOC				S	S	18 55 13.4	+3.4
	baz=260						
BMN	**Battle Mountai**	91.48	49	P	P	18 44 11.9	+1.0
BMN				pmax	pmax		
	comp=Z,333nm,1.4s						
BMN	**Battle Mountai**	91.48	49	P	P	18 44 11.9	+1.0
BMN				IAmb	IAmb	18 44 26.4	
	comp=Z,333nm,1.4s						
CHMS	**Chumysh**	91.49	313	P	P	18 44 10.3	-0.3
	SNR=37						
UCH	**Uchtor**	91.52	312	P	P	18 44 11.9	+0.5
	SNR=55						
B08A	**Colville Reser**	91.52	41	P	P	18 44 08.8	-1.9
D08A	**Wollman Farm,**	91.53	43	P	P	18 44 09.6	-1.1
PNT	**Penticton**	91.53	40	P	P	18 44 01.8	-8.9
PNT				pmax	pmax		
	comp=Z,399nm,1.3s						
FRU1	**Bishkek**	91.54	313	P	P	18 44 09.3	-1.7
FRU1				pmax	pmax		
	comp=Z,128nm,1.3s						
FRU1	**Bishkek**	91.54	313	P	P	18 44 09.2	-1.7
SYO	**Syowa Base**	91.54	198	⇓*e*X	P	18 44 08.2	-2.2
SYO	**Syowa Base**	91.54	198	⇓*i*PcP	PcP	18 44 11.6	+0.3
AAK	**Ala-Archa**	91.61	313	P	P	18 44 11.2	-0.2
	SNR=36						
AAK	**Ala-Archa**	91.61	313	*i* P	P	18 44 10.7	-0.7
AAK				pmax	pmax		
	comp=Z,156nm,1.3s						
AAK				MLR	MLR		
	comp=Z,70µm,19.0s						
AAK	**Ala-Archa**	91.61	313	P	P	18 44 10.5	-0.9
AAK				P	P	18 44 10.5	-0.9
AAK				S	SKSac	18 54 41.7	-2.7
AAK				S	SKSac	18 54 41.7	-2.7
AAK	**Ala-Archa**	91.61	313	P	P	18 44 09.0	-2.4
TUQ	**Turquoise Moun**	91.61	55	P	P	18 44 13.0	+1.4
	baz=260,SNR=22						
TUQ				S	S	18 55 15.0	+2.8
	baz=260						
SGDS	**Sogindy**	91.66	314	⇑*i*P	P	18 44 09.8	-1.7
	baz=314						
SGDS				*i* S	SKSac	18 54 43.1	-1.3
	baz=314						
BC3	**Big Chuckawall**	91.69	56	P	P	18 44 13.8	+1.8
	baz=260,SNR=44						
GMRC	**Granite Mounta**	91.72	55	P	P	18 44 13.4	+1.3
	baz=260,SNR=56						
USP	**Ospenovka**	91.72	313	P	P	18 44 11.4	-0.3
	SNR=50						
NRIK	**Noril'sk**	91.74	340	P	P	18 44 09.4	-1.7
	comp=Z,59nm,1.1s,baz=108,slow=5.2,SNR=29						
NRIK				PKPPKP	P'P'df	19 09 49.0	+11
	comp=Z,1.5nm,0.7s,baz=274,slow=1.4,SNR=4.0						
NRIK				LR	LR	19 24 32.8	
	comp=Z,38µm,21.9s,baz=106,slow=35						
NRIK	**Noril'sk**	91.74	340	*c i*P	P	18 44 09.8	-1.4
NRIK				pmax	pmax		
	comp=Z,111nm,1.4s						
NRIK				MLR	MLR		
	comp=Z,40µm,19.0s						
NRIK	**Noril'sk**	91.74	340	P	P	18 44 09.1	-2.1
SFX	**San Felipe**	91.77	59	P	P	18 44 11.9	-0.2
SFX				IAmb	IAmb	18 44 57.8	
	comp=Z,179nm,1.3s						
E09A	**Wood Farm, Sta**	91.95	43	P	P	18 44 12.4	-0.3
E09A				IAmb	IAmb	18 44 27.8	
	comp=Z,263nm,1.4s						
IRM	**Iron Mountain**	92.03	56	P	P	18 44 15.1	+1.7
	baz=261,SNR=63						
IRM				S	S	18 55 17.5	+1.8
	baz=261						
AML	**Almayashu**	92.10	312	P	P	18 44 14.2	+0.2
	SNR=75						
C09A	**Chrisman Ranch**	92.10	42	P	P	18 44 13.0	-0.4
GLA	**Glamis**	92.11	57	P	P	18 44 15.3	+1.5
GLA				pmax	pmax		
	comp=Z,279nm,1.4s						
GLA	**Glamis**	92.11	57	P	P	18 44 15.8	+2.0
	baz=261,SNR=19						
GLA	**Glamis**	92.11	57	P	P	18 44 15.3	+1.5
GLA				IAmb	IAmb	18 44 44.7	
	comp=Z,279nm,1.4s						
EKS2	**Erkin-Say**	92.13	313	P	P	18 44 13.9	+0.1
	SNR=42						
BMO	**Blue Mountains**	92.22	45	P	P	18 44 13.9	-0.2
BMO				pmax	pmax		
	comp=Z,328nm,1.4s						
BMO				MLR	MLR		
	comp=Z,89µm,20.0s						
BMO	**Blue Mountains**	92.22	45	P	P	18 44 13.9	-0.2
BMO				IAmb	IAmb	18 44 28.6	
	comp=Z,328nm,1.4s						
BTLS	**Baital**	92.36	315	⇑*i*P	P	18 44 13.1	-1.5
	comp=Z,48nm,1.5s,baz=315						
BTLS				*i* S	SKSac	18 54 40.7	-7.4
	baz=315						
BTLS	**Baital**	92.36	315	*c i*P	P	18 44 13.1	-1.5
BTLS				*i* S	SKSac	18 54 40.7	-7.4
BTLS				pmax	pmax		
	comp=Z,48nm,1.5s						
R11A	**Troy Canyon, C**	92.37	52	P	P	18 44 16.2	+1.1
	baz=260,SNR=146						
R11A				S	S	18 55 20.4	+1.4
	baz=260						
R11A	**Troy Canyon, C**	92.37	52	P	P	18 44 15.7	+0.7
R11A				IAmb	IAmb	18 44 52.8	
	comp=Z,190nm,1.2s						
SHPR	**Sheep Range**	92.40	54	P	P	18 44 16.5	+1.2
SHPR				IAmb	IAmb	18 44 31.0	
	comp=Z,359nm,1.5s						
F10A	**Beach Ranch, E**	92.47	44	P	P	18 44 15.2	0.0
F10A				IAmb	IAmb	18 44 29.5	
	comp=Z,328nm,1.4s						
NEE2	**Needles Airpor**	92.56	55	P	P	18 44 17.5	+1.7
	baz=261						
NEE2				S	S	18 55 21.2	+0.8
	baz=261						
PRN	**Pahroc Range**	92.63	53	P	P	18 44 17.0	+0.7
WRGLY	**Wrigley**	92.64	26	P	P	18 44 16.4	+0.9
	baz=255,SNR=8.9						
WRGLY				S	S	18 55 20.4	+0.5
	baz=255						
PDMCI	**Parker Dam,Lak**	92.88	56	P	P	18 44 18.8	+1.6
	baz=261,SNR=19						
PDMCI				S	S	18 55 25.2	+2.0
	baz=261						
NEW	**Newport**	92.95	42	P	P	18 44 17.0	-0.3
NEW				pmax	pmax		
	comp=Z,87nm,1.3s						
NEW				MLR	MLR		
	comp=Z,86µm,20.0s						
NEW	**Newport**	92.95	42	P	P	18 44 17.5	+0.2
	baz=260,SNR=24						
NEW				S	S	18 55 25.6	+2.2
	baz=260						
NEW	**Newport**	92.95	42	P	P	18 44 17.0	-0.3
113A	**Mohawk Valley,**	92.95	57	P	P	18 44 18.1	+0.4
MFID	**Camas Ranch**	93.02	47	IAMs_20	IAMs_20	19 20 17.3	
	comp=Z,54µm,20.0s						
ELK	**Elko**	93.02	49	P	P	18 44 18.5	+0.4
ELK				pmax	pmax		
	comp=Z,241nm,1.4s						
ELK				MLR	MLR		
	comp=Z,30µm,20.0s						
ELK	**Elko**	93.02	49	P	P	18 44 18.5	+0.4
ELK				IAmb	IAmb	18 44 33.4	
	comp=Z,241nm,1.4s						
DRK	**Karamyk**	93.08	309	P	P	18 44 17.1	-1.4
DRK				IAmb	IAmb	18 44 33.8	
	comp=Z,198nm,1.2s						
PLID	**Pearl Lake**	93.17	45	P	P	18 44 17.5	-1.2
PLID				IAMs_20	IAMs_20	19 18 42.1	
	comp=Z,80µm,20.0s						
W13A	**Hualapai Mount**	93.20	55	P	P	18 44 18.9	-0.1
W13A				IAmb	IAmb	18 44 43.8	
	comp=Z,322nm,1.9s						
SPR3	**Spring Creek 3**	93.44	51	P	P	18 44 20.9	+0.8
214A	**Organ Pipe Nat**	93.63	58	P	P	18 44 22.8	+1.9
	baz=262,SNR=13						
214A				S	S	18 55 35.7	+5.6
	baz=262						
PSUT	**Pine Spring**	93.74	52	P	P	18 44 22.6	+1.2
PSUT				IAmb	IAmb	18 44 37.0	
	comp=Z,176nm,1.2s						
BTK	**Batken**	93.91	310	P	P	18 44 20.1	-1.9
BTK				pmax	pmax		
	comp=Z,208nm,1.4s						
BTK	**Batken**	93.91	310	P	P	18 44 20.1	-1.9
BTK				IAmb	IAmb	18 44 40.3	
	comp=Z,208nm,1.4s						
DZA	**Taraz**	93.94	313	*e*P	P	18 44 20.1	-2.0
	baz=313						
DZA				*i* S	SKSac	18 54 53.4	-3.7
	baz=313						
DZA	**Taraz**	93.94	313	*e*P	P	18 44 20.0	-2.0
DZA				*i* S	SKSac	18 54 53.3	-3.7
CCUT	**Cedar City**	93.98	53	P	P	18 44 22.6	+0.1
CCUT				IAmb	IAmb	18 44 37.8	
	comp=Z,327nm,1.7s						
LCMT	**Little Creek M**	94.00	53	P	P	18 44 23.0	+0.4
LCMT				IAmb	IAmb	18 44 37.4	
	comp=Z,254nm,1.7s						
OTUK	**Ortayu**	94.05	318	P	P	18 44 20.7	-1.7
HLID	**Hailey**	94.06	47	P	P	18 44 23.9	+1.2
	baz=262,SNR=73						
HLID				S	S	18 55 37.0	+3.3
	baz=262						
HLID	**Hailey**	94.06	47	P	P	18 44 23.2	+0.5
HLID				IAmb	IAmb	18 44 38.1	
	comp=Z,263nm,1.6s						
HLID				IAMs_20	IAMs_20	19 26 18.8	
	comp=Z,66µm,18.0s						
BRZS	**Berezniki**	94.10	320	⇑*e*P	P	18 44 19.9	-2.7
	baz=320						
BRZS	**Berezniki**	94.10	320	*ce*P	P	18 44 19.9	-2.7
GAR	**Garm**	94.14	309	P	P	18 44 21.9	-1.3
GAR				IAmb	IAmb	18 45 10.6	
	comp=Z,297nm,1.6s						
A36M	**Sachs Harbour**	94.29	18	P	P	18 44 23.1	+0.3
	baz=254						
A36M				S	S	18 55 32.3	-1.7
	baz=254						
A36M	**Sachs Harbour**	94.29	18	P	P	18 44 23.2	+0.3
KNB	**Kanab**	94.33	53	P	P	18 44 25.8	+1.6
KNB				pmax	pmax		
	comp=Z,366nm,1.6s						
KNB	**Kanab**	94.33	53	P	P	18 44 25.8	+1.6
KNB				IAmb	IAmb	18 45 24.8	
	comp=Z,366nm,1.6s						
KBL	**Kabul**	94.54	304	P	P	18 44 23.7	-1.5
KBL				P	P	18 44 23.7	-1.5
KBL				S	SKSac	18 55 04.5	+3.5
KBL				S	SKSac	18 55 04.5	+3.5
KKAR	**Karatay Array**	94.57	313	P	P	18 44 22.6	-2.3
KKAR	**Karatay Array**	94.57	313	P	P	18 44 22.6	-2.3
U15A	**North Rim**	94.68	54	P	P	18 44 24.9	-1.0
BGU	**Big Grassy Mou**	94.70	49	P	P	18 44 24.8	-0.9
BGU				IAmb	IAmb	18 44 40.2	
	comp=Z,172nm,1.4s						
CRZF	**Crozet Islands**	94.76	222	IAMs_20	IAMs_20	19 22 56.7	
	comp=Z,56µm,19.0s						
DUG	**Dugway, Tooele**	94.77	50	P	P	18 44 26.8	+0.8
DUG				pmax	pmax		
	comp=Z,99nm,1.1s						
DUG				MLR	MLR		
	comp=Z,51µm,18.0s						
DUG	**Dugway, Tooele**	94.77	50	P	P	18 44 27.6	+1.6
	baz=262,SNR=17						
DUG				S	S	18 55 41.5	+1.6
	baz=262						

DUG	**Dugway, Tooele**	**94.77**	**50**	P	**P**	**18 44 26.8**	**+0.8**
DUG				IAMs_20	IAMs_20	19 27 18.0	
	comp=Z,51µm,18.0s						
MSO	**Missoula**	**94.85**	**44**	P	**P**	**18 44 27.8**	**+1.6**
	baz=262						
MSO				S	**S**	**18 55 38.7**	**-1.6**
	baz=262						
BCYI	**Bear Canyon**	**94.89**	**46**	P	**P**	**18 44 27.1**	**+0.6**
CHGR	**Chuyangaron**	**94.99**	**308**	P	**P**	**18 44 25.4**	**-1.6**
HVU	**Hansel Valley**	**95.01**	**49**	P	**P**	**18 44 26.9**	**-0.2**
HVU				pmax	pmax		
	comp=Z,335nm,1.4s						
HVU	**Hansel Valley**	**95.01**	**49**	P	**P**	**18 44 26.9**	**-0.2**
HVU				IAmb	IAmb	18 44 42.4	
	comp=Z,335nm,1.4s						
MSU	**Marysvale**	**95.04**	**52**	P	**P**	**18 44 28.6**	**+1.2**
MSU	**Marysvale**	**95.04**	**52**	P	**P**	**18 44 28.6**	**+1.2**
CHM	**Chimkent**	**95.13**	**312**	*e*P	**P**	**18 44 25.5**	**-2.0**
	baz=312						
CHM				*e*S	**SKSac**	**18 54 59.9**	**-3.5**
	baz=312						
CHM	**Chimkent**	**95.13**	**312**	*e*P	**P**	**18 44 25.4**	**-2.0**
CHM				*e*S	**SKSac**	**18 54 59.9**	**-3.5**
WALA	**Waterton Lakes**	**95.17**	**41**	P	**P**	**18 44 25.9**	**-1.8**
WALA				IAmb	IAmb	18 45 12.3	
	comp=Z,216nm,1.8s						
SPUT	**South Promonto**	**95.19**	**49**	P	**P**	**18 44 27.3**	**-0.6**
SPUT				IAmb	IAmb	18 44 42.4	
	comp=Z,216nm,1.5s						
WUAZ	**Wupatki**	**95.30**	**55**	P	**P**	**18 44 31.4**	**+2.9**
	baz=263,SNR=5.8						
WUAZ				S	**S**	**18 55 50.2**	**+5.5**
	baz=263						
NLU	**North Lily Min**	**95.30**	**51**	P	**P**	**18 44 28.3**	**-0.3**
MCMT	**McKenzie Canyo**	**95.35**	**46**	P	**P**	**18 44 29.4**	**+0.7**
TUC	**Tucson**	**95.38**	**58**	P	**P**	**18 44 29.1**	**+0.2**
TUC				pmax	pmax		
	comp=Z,24nm,1.2s						
TUC				MLR	MLR		
	comp=Z,122µm,19.0s						
TUC	**Tucson**	**95.38**	**58**	P	**P**	**18 44 31.1**	**+2.2**
	baz=263						
TUC				S	**S**	**18 55 51.2**	**+5.8**
	baz=263						
TUC	**Tucson**	**95.38**	**58**	P	**P**	**18 44 29.1**	**+0.2**
DLMT	**Dillon**	**95.59**	**45**	P	**P**	**18 44 29.4**	**-0.3**
DLMT				IAmb	IAmb	18 45 13.8	
	comp=Z,245nm,1.6s						
CTU	**Camp Tracy**	**95.64**	**50**	P	**P**	**18 44 30.3**	**+0.3**
MPU	**Maple Canyon**	**95.64**	**51**	P	**P**	**18 44 30.4**	**+0.2**
MPU				IAmb	IAmb	18 44 45.6	
	comp=Z,194nm,1.4s						
LRM	**Limekiln Ridge**	**95.75**	**45**	P	**P**	**18 44 30.1**	**-0.4**
JLU	**Jordanelle**	**95.85**	**50**	P	**P**	**18 44 31.1**	**0.0**
JLU				IAmb	IAmb	18 44 46.3	
	comp=Z,158nm,1.3s						
Q16A	**Castle Valley**	**95.87**	**52**	P	**P**	**18 44 30.9**	**-0.2**
HWUT	**Hardware Ranch**	**95.89**	**49**	P	**P**	**18 44 30.5**	**-0.6**
TCUT	**Toone Canyon**	**95.95**	**49**	P	**P**	**18 44 30.6**	**-0.9**
TCUT				IAmb	IAmb	18 45 14.6	
	comp=Z,245nm,1.4s						
BRVK	**Borovoye**	**96.01**	**323***c*	*i*P	**P**	**18 44 29.4**	**-1.8**
BRVK				pmax	pmax		
	comp=Z,68nm,1.1s						
BRVK				MLR	MLR		
	comp=Z,38µm,21.0s						
BRVK	**Borovoye**	**96.01**	**323**	P	**P**	**18 44 29.9**	**-1.3**
BRVK				P	**P**	**18 44 29.9**	**-1.3**
BRVK				S	**SKSac**	**18 55 03.2**	**-4.3**
BRVK				S	**SKSac**	**18 55 03.2**	**-4.3**
BRVK	**Borovoye**	**96.01**	**323**	P	**P**	**18 44 28.0**	**-3.2**
EDM	**Edmonton**	**96.05**	**37**	P	**P**	**18 44 30.5**	**-0.9**
EDM				pmax	pmax		
	comp=Z,239nm,1.3s						
EDM	**Edmonton**	**96.05**	**37**	P	**P**	**18 44 30.5**	**-0.9**
EDM				IAmb	IAmb	18 44 44.9	
	comp=Z,239nm,1.3s						
P17A	**Butcher Ranch,**	**96.27**	**51**	P	**P**	**18 44 32.3**	**-0.7**
P17A				IAmb	IAmb	18 44 48.4	
	comp=Z,172nm,1.5s						
BOZ	**Bozeman (W)**	**96.29**	**45**	P	**P**	**18 44 31.7**	**-1.2**
BOZ				pmax	pmax		
	comp=Z,42nm,1.1s						
BOZ				MLR	MLR		
	comp=Z,77µm,20.0s						
BOZ	**Bozeman (W)**	**96.29**	**45**	P	**P**	**18 44 33.5**	**+0.7**
	baz=264,SNR=26						
BOZ				S	**S**	**18 55 54.1**	**+1.2**
	baz=264						
BOZ	**Bozeman (W)**	**96.29**	**45**	P	**P**	**18 44 31.7**	**-1.2**
BOZ				IAMs_20	IAMs_20	19 23 09.8	
	comp=Z,77µm,20.0s						
AHID	**Auburn Hatcher**	**96.36**	**48**	P	**P**	**18 44 33.4**	**+0.1**
AHID				IAMs_20	IAMs_20	19 31 34.8	
	comp=Z,36µm,18.0s						
YKA	**Yellowknife Ar**	**96.49**	**28**	P	**P**	**18 44 32.7**	**-0.4**
	comp=Z,73nm,1.2s,baz=252,slow=3.4,SNR=44						
YKA				PKKP	**PKKPbc**	**19 01 17.5**	**-2.7**
	comp=Z,7.5nm,1.0s,baz=89,slow=4.0,SNR=9.8						
YKA				LR	LR	19 22 34.3	
	comp=Z,76µm,20.4s,baz=0.0,slow=32						
YKA	**Yellowknife Ar**	**96.49**	**28**	P	**P**	**18 44 31.8**	**-1.3**
YKA	**Yellowknife Ar**	**96.49**	**28**	P	**P**	**18 44 31.8**	**-1.3**
FXWY	**Fox Creek**	**96.51**	**47**	P	**P**	**18 44 33.8**	**-0.2**
FXWY				IAmb	IAmb	18 44 48.3	
	comp=Z,187nm,1.9s						
FXWY				IAMs_20	IAMs_20	19 20 19.6	
	comp=Z,52µm,21.0s						
TPAW	**Teton Pass**	**96.55**	**47**	P	**P**	**18 44 32.6**	**-1.6**
TPAW				IAmb	IAmb	18 44 48.6	
	comp=Z,180nm,1.8s						
TPAW				IAMs_20	IAMs_20	19 23 29.7	
	comp=Z,54µm,20.0s						
W18A	**Petrified Fore**	**96.58**	**56**	P	**P**	**18 44 36.3**	**+1.8**
	baz=264						
W18A				S	**S**	**18 56 01.1**	**+5.2**
	baz=264						
REDW	**Red Top Meadow**	**96.61**	**47**	P	**P**	**18 44 34.0**	**-0.4**
REDW				IAmb	IAmb	18 44 48.7	
	comp=Z,235nm,1.7s						
REDW				IAMs_20	IAMs_20	19 23 22.2	
	comp=Z,59µm,20.0s						
YMR	**Madison River**	**96.66**	**46**	P	**P**	**18 44 34.8**	**+0.2**
YMR				IAmb	IAmb	18 44 49.3	
	comp=Z,185nm,1.7s						
SNOW	**Snow King Moun**	**96.69**	**47**	P	**P**	**18 44 33.2**	**-1.6**
SNOW				IAmb	IAmb	18 44 49.3	
	comp=Z,250nm,1.8s						
SNOW				IAMs_20	IAMs_20	19 23 25.4	
	comp=Z,53µm,19.0s						
MOOW	**Moose Ponds**	**96.72**	**47**	P	**P**	**18 44 34.1**	**-0.9**
MOOW				IAMs_20	IAMs_20	19 20 28.3	
	comp=Z,52µm,21.0s						
FLWY	**Flagg Ranch**	**96.79**	**47**	P	**P**	**18 44 33.9**	**-1.3**
FLWY				IAMs_20	IAMs_20	19 20 42.1	
	comp=Z,65µm,22.0s						
LOHW	**Long Hollow**	**96.81**	**47**	P	**P**	**18 44 34.7**	**-0.6**
LOHW				IAmb	IAmb	18 44 49.4	
	comp=Z,162nm,1.7s						
LOHW				IAMs_20	IAMs_20	19 23 39.7	
	comp=Z,55µm,20.0s						
H17A	**Grant Village**	**96.91**	**46**	P	**P**	**18 44 38.4**	**+2.6**
	baz=264						
RDMU	**Red Mountain**	**97.28**	**50**	P	**P**	**18 44 36.1**	**-1.4**
RDMU				IAmb	IAmb	18 44 53.8	
	comp=Z,112nm,1.1s						
BW06	**Boulder Array**	**97.49**	**48**	P	**P**	**18 44 38.5**	**0.0**
	baz=265						
BW06				S	**S**	**18 56 03.2**	**-0.3**
	baz=265						
BW06	**Boulder Array**	**97.49**	**48**	P	**P**	**18 44 38.0**	**-0.5**
BW06				IAMs_20	IAMs_20	19 24 05.7	
	comp=Z,61µm,20.0s						
PD31	**Pinedale Array**	**97.49**	**48**	P	**P**	**18 44 37.6**	**-0.9**
PDAR	**Pinedale Array**	**97.49**	**48**	P	Pdif	18 44 38.9	+0.3
	comp=Z,8.0nm,0.8s,baz=236,slow=1.6,SNR=36						
PDAR				PKKP	**PKKPdf**	**19 01 20.0**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=125,slow=4.2,SNR=4.4						
PDAR				PKPPKP	**P'P'df**	**19 09 35.1**	**+5.3**
	comp=Z,1.3nm,0.9s,baz=209,slow=1.5,SNR=4.8						
PDAR				LR	LR	19 24 45.8	
	comp=Z,53µm,19.3s,baz=280,slow=33						
PDAR	**Pinedale Array**	**97.49**	**48**	P	**P**	**18 44 36.6**	**-1.8**
MVCO	**Mesa Verde**	**97.79**	**54**	P	Pdif	18 44 41.5	+1.5
	baz=265,SNR=6.4						
MVCO	**Mesa Verde**	**97.79**	**54**	IAMs_20	IAMs_20	19 25 46.2	
	comp=Z,60µm,19.0s						
EGMT	**Eagleton**	**97.81**	**43**	P	Pdif	18 44 40.4	+0.7
	baz=265						
EGMT				S	**S**	**18 56 04.7**	**-1.0**
	baz=265						
EGMT	**Eagleton**	**97.81**	**43**	P	**P**	**18 44 36.9**	**-2.7**
EGMT				IAMs_20	IAMs_20	19 24 46.6	
	comp=Z,44µm,20.0s						
RLMT	**Red Lodge**	**97.91**	**46**	P	Pdif	18 44 41.5	+1.2
	baz=265						
RLMT				S	**S**	**18 56 08.9**	**+2.0**
	baz=265						
RLMT	**Red Lodge**	**97.91**	**46**	P	**P**	**18 44 38.0**	**-2.2**
RLMT				IAMs_20	IAMs_20	19 22 07.5	
	comp=Z,70µm,20.0s						
O20A	**White River Ci**	**98.25**	**51**	P	Pdif	18 44 44.2	+2.3
	baz=265,SNR=16						
O20A				S	**S**	**18 56 12.3**	**+2.3**
	baz=265						
O20A	**White River Ci**	**98.25**	**51**	P	**P**	**18 44 41.5**	**-0.4**
O20A				IAmb	IAmb	18 45 20.6	
	comp=Z,187nm,1.6s						
SNAA	**Sanae**	**98.55**	**186**	Pdiff	Pdif	18 44 42.6	+0.1
SNAA	**Sanae**	**98.55**	**186***ce*	P	**P**	**18 44 41.7**	**-0.8**
SNAA				pmax	pmax		
	comp=Z,115nm,1.2s						
SNAA				MLR	MLR		
	comp=Z,53µm,17.0s						
SNAA	**Sanae**	**98.55**	**186**	P	**P**	**18 44 40.4**	**-2.1**
SNAA				IAmb	IAmb	18 44 45.2	
	comp=Z,116nm,1.2s						
SNAA				IAMs_20	IAMs_20	19 28 06.9	
	comp=Z,71µm,19.0s						
Y22D	**IRIS PASSCAL I**	**98.79**	**57**	Pdiff	Pdif	18 44 46.6	+2.2
	baz=265						
RWWY	**Rawlins**	**99.14**	**49**	IAMs_20	IAMs_20	19 27 48.6	
	comp=Z,49µm,19.0s						
S22A	**4UR Ranch, Cre**	**99.16**	**53**	Pdiff	**Pdif**	**18 44 49.3**	**+3.1**
	baz=266						
S22A				S	**S**	**18 56 23.3**	**+5.3**
	baz=266						
ANMO	**Albuquerque**	**99.24**	**56**	PP	**PP**	**18 48 43.9**	**-5.4**
	comp=Z,7.7nm,1.1s,baz=271,slow=3.3,SNR=3.2						
ANMO				PKPPKP	**P'P'df**	**19 09 33.7**	**+6.5**
	comp=Z,0.8nm,0.6s,baz=84,slow=6.4,SNR=4.2						
ANMO	**Albuquerque**	**99.24**	**56**	*i* P	**Pdif**	**18 44 47.6**	**+1.1**
ANMO				pmax	pmax		
	comp=Z,16nm,1.4s						
ANMO				MLR	MLR		
	comp=Z,81µm,18.0s						
ANMO	**Albuquerque**	**99.24**	**56**	Pdiff	**Pdif**	**18 44 48.0**	**+1.5**
	baz=266						
VNA3	**Neumayer Olymp**	**99.54**	**184**	PKKPbc	PKKPbc	19 01 12.3	+0.6
VNA3	**Neumayer Olymp**	**99.54**	**184**	Pdiff	**Pdif**	**18 44 46.8**	**-0.1**
VNA2	**Neumayer--Watz**	**99.69**	**185**	PKKPbc	PKKPbc	19 01 13.5	+2.2
VNA2	**Neumayer--Watz**	**99.69**	**185**	Pdiff	**Pdif**	**18 44 47.8**	**+0.3**
K22A	**Casper**	**99.71**	**48**	Pdiff	**Pdif**	**18 44 49.2**	**+0.9**
	baz=267						
MNTX	**Cornudas Mount**	**99.89**	**59**	Pdiff	**Pdif**	**18 44 50.7**	**+1.5**
	baz=266						
PMSA	**Palmer Station**	**99.89**	**163**	IAMs_20	IAMs_20	19 25 32.8	
	comp=Z,36µm,20.0s						
VNA1	**Neumayer--Stat**	**100.02**	**184**	Pdiff	**Pdif**	**18 44 49.2**	**+0.3**
N23A	**Red Feather La**	**100.05**	**50**	Pdiff	**Pdif**	**18 44 51.4**	**+1.4**
	baz=267						
LAO	**LASA Array**	**100.12**	**44**	Pdiff	**Pdif**	**18 44 51.8**	**+1.9**
	baz=268						
SDCO	**Great Sand Dun**	**100.21**	**53**	Pdiff	**Pdif**	**18 44 53.9**	**+3.1**
	baz=267						
SDCO	**Great Sand Dun**	**100.21**	**53**	IAMs_20	IAMs_20	19 33 57.2	
	comp=Z,57µm,18.0s						
ISCO	**Idaho Springs**	**100.24**	**51**	Pdiff	**Pdif**	**18 44 54.1**	**+3.2**
	baz=267						
Q24A	**Divide**	**100.55**	**52**	Pdiff	**Pdif**	**18 44 55.4**	**+3.0**
	baz=267						
T25A	**Trinidad**	**101.04**	**54**	Pdiff	**Pdif**	**18 44 58.2**	**+3.8**
	baz=267						
TXAR	**Lajitas Array**	**101.19**	**62**	P	**Pdif**	**18 44 56.0**	**+0.9**
	comp=Z,0.8nm,0.7s,baz=242,slow=2.7,SNR=13						
TXAR				PP	**PP**	**18 49 02.9**	**-1.3**
	comp=Z,14nm,1.1s,baz=248,slow=6.6,SNR=7.8						
TXAR				PKKP	**PKKPbc**	**19 01 09.0**	**+3.0**
	comp=Z,5.1nm,0.7s,baz=108,slow=4.3,SNR=9.4						
TXAR	**Lajitas Array**	**101.19**	**62**		PKKPdf	19 01 07.4	-4.9
DGMT	**Dagmar**	**101.54**	**42**	Pdiff	**Pdif**	**18 44 56.5**	**+0.4**
	baz=270						
DGMT	**Dagmar**	**101.54**	**42**	IAMs_20	IAMs_20	19 32 07.3	
	comp=Z,43µm,18.0s						
RSSD	**Black Hills**	**101.58**	**47**	Pdiff	**Pdif**	**18 44 57.5**	**+0.8**
	baz=269						
RSSD	**Black Hills**	**101.58**	**47**	IAMs_20	IAMs_20	19 25 26.9	
	comp=Z,55µm,20.0s						
JLN	**Jalan Bani Buh**	**101.66**	**291**	P	**Pdif**	**18 44 56.6**	**-0.6**
SVE	**Sverdlovsk**	**101.74**	**326**	*e*P	**Pdif**	**18 44 55.1**	**-1.7**
SVE				*e*S	**SKSac**	**18 55 34.0**	**-2.1**
SVE				*e*		18 56 22.7	
SVE				*e*		18 58 13.7	
SVE				*e*		19 03 31.8	
SVE				pmax	pmax		
	comp=Z,39nm,1.8s						
SVE				MLR	MLR		
	comp=E,18µm,18.0s						
SVE				MLR	MLR		
	comp=Z,22µm,18.0s						
WBK	**Wadi Bani Khal**	**102.10**	**291**	P	**Pdif**	**18 45 00.5**	**+1.2**
MSTX	**Muleshoe**	**102.22**	**57**	Pdiff	**Pdif**	**18 45 00.7**	**+1.1**
	baz=267						
AB31	**Akbulak array**	**102.30**	**318**	*i* P	**Pdif**	**18 44 57.2**	**-2.2**
WSAR	**Wadi Sarin**	**102.47**	**292**	PKKP	**PKKPbc**	**19 01 02.6**	**+0.7**
	comp=Z,9.0nm,0.7s,baz=74,slow=0.8,SNR=7.2						
WSAR	**Wadi Sarin**	**102.47**	**292**	P	**Pdif**	**18 44 59.9**	**-0.9**
KSCO	**Kaye Shedlock'**	**102.52**	**52**	Pdiff	**Pdif**	**18 45 02.0**	**+1.2**
	baz=269						
FFC	**Flin Flon**	**102.81**	**36**	IAMs_20	IAMs_20	19 26 53.3	
	comp=Z,65µm,20.0s						
ARU	**Arti**	**102.91**	**326**	P	**Pdif**	**18 44 59.8**	**-2.2**
	comp=Z,0.9nm,0.3s,baz=81,slow=3.3,SNR=9.9						
ARU				PP	**PP**	**18 49 15.5**	**-0.6**
	comp=Z,5.1nm,1.0s,baz=38,slow=3.3,SNR=5.0						
ARU	**Arti**	**102.91**	**326***c*	*i*P	**Pdif**	**18 44 59.4**	**-2.5**
ARU						18 49 10.4	
ARU				PPP	PPP	18 51 24.1	
ARU				S	**SKSac**	**18 55 38.9**	**-2.7**
ARU				SP	SP	18 58 15.4	-6.8
ARU				PS	PS	18 59 12.5	+48
ARU				pmax	pmax		
	comp=Z,20nm,1.3s						
ARU				MLR	MLR		
	comp=Z,25µm,20.0s						
ARU	**Arti**	**102.91**	**326**	Pdif	**Pdif**	**18 44 59.2**	**-2.7**
RES	**Resolute Bay**	**103.00**	**15**	PKKP	**PKKPbc**	**19 01 05.1**	**+3.3**
	comp=Z,9.3nm,0.8s,baz=102,slow=4.8,SNR=5.6						
RES	**Resolute Bay**	**103.00**	**15**	Pdif	**Pdif**	**18 45 00.6**	**-1.4**
OGNE	**Ogallala**	**103.01**	**50**	Pdiff	**Pdif**	**18 45 05.0**	**+2.0**
	baz=269						
OGNE	**Ogallala**	**103.01**	**50**	IAMs_20	IAMs_20	19 27 22.0	
	comp=Z,62µm,20.0s						
AMTX	**Amarillo**	**103.16**	**56**	Pdiff	**Pdif**	**18 45 04.1**	**+0.3**
	baz=268						
AKTO	**Aktyubinsk**	**103.52**	**320**	Pdiff	**Pdif**	**18 45 02.5**	**-2.4**
	comp=Z,4.2nm,1.0s,baz=61,slow=8.5,SNR=7.9						
AKTO				PP	PP	18 49 11.4	-9.5
	comp=Z,9.0nm,1.2s,baz=67,slow=12,SNR=3.6						
JCT	**Junction City**	**104.60**	**61**	Pdiff	**Pdif**	**18 45 11.6**	**+1.5**
	baz=268						
JCT	**Junction City**	**104.60**	**61**	IAMs_20	IAMs_20	19 30 57.2	
	comp=Z,50µm,18.0s						
ALE	**Alert**	**104.61**	**5**	IAMs_20	IAMs_20	19 32 46.1	
	comp=Z,38µm,19.0s						
MDND	**Maddock**	**104.63**	**43**	Pdiff	**Pdif**	**18 45 11.7**	**+1.8**
	baz=273						
CBKS	**Cedar Bluff**	**104.77**	**52**	Pdiff	**Pdif**	**18 45 12.4**	**+1.6**
	baz=270						
CBKS	**Cedar Bluff**	**104.77**	**52**	IAMs_20	IAMs_20	19 25 07.9	
	comp=Z,53µm,22.0s						
ABTX	**Abilene, Hawle**	**104.79**	**59**	Pdiff	**Pdif**	**18 45 11.7**	**+0.8**
	baz=269						
833A	**Chaparral WMA,**	**104.88**	**63**	Pdiff	**Pdif**	**18 45 13.7**	**+2.3**
	baz=268						
SUSD	**Miller**	**105.23**	**46**	Pdiff	**Pdif**	**18 45 14.0**	**+1.3**
	baz=272						
WMOK	**Wichita Mounta**	**105.54**	**56**	Pdiff	**Pdif**	**18 45 16.0**	**+1.7**
	baz=270						
BGNE	**Belgrade**	**105.94**	**50**	Pdiff	**Pdif**	**18 45 16.9**	**+1.0**
	baz=272						
435B	**Jarrell**	**106.52**	**61**	Pdiff	**Pdif**	**18 45 20.7**	**+2.0**
	baz=269						
WHTX	**Lake Whitney,**	**106.64**	**59**	Pdiff	**Pdif**	**18 45 18.2**	**-1.0**
	baz=270						
ULM	**Lac du Bonnet**	**106.88**	**40**	Pdiff	**Pdif**	**18 45 19.6**	**-0.2**
	comp=Z,5.5nm,0.9s,baz=268,slow=6.8,SNR=3.7						
OPO	**Ambohidratompo**	**106.90**	**248**	PKKPbc	PKKPbc	19 00 51.0	+2.3
	comp=Z,5.1nm,0.8s,baz=50,slow=3.8,SNR=4.3						
ECSD	**EROS Data Cent**	**106.95**	**47**	Pdiff	**Pdif**	**18 45 19.3**	**-1.0**
	baz=274						
ECSD				P	**PKiKP**	**18 49 28.1**	**-1.9**
	baz=274						
ECSD	**EROS Data Cent**	**106.95**	**47**	IAMs_20	IAMs_20	19 28 24.0	
	comp=Z,36µm,20.0s						
AGMN	**Agassiz Nation**	**107.10**	**42**	Pdiff	**Pdif**	**18 45 19.8**	**-1.0**
	baz=276						
AGMN				P	**PKiKP**	**18 49 29.5**	**-0.7**
	baz=276						
AGMN	**Agassiz Nation**	**107.10**	**42**	IAMs_20	IAMs_20	19 35 46.3	
	comp=Z,48µm,18.0s						
KSU1	**Kansas State U**	**107.20**	**52**	Pdiff	**Pdif**	**18 45 24.0**	**+2.5**
	baz=272						
KSU1	**Kansas State U**	**107.20**	**52**	IAMs_20	IAMs_20	19 26 22.2	
	comp=Z,67µm,22.0s						
TULEG	**Thule**	**107.94**	**10**	IAMs_20	IAMs_20	19 33 44.5	
	comp=Z,45µm,21.0s						
TUL1	**Leonard**	**107.97**	**55**	Pdiff	**Pdif**	**18 45 25.4**	**+0.4**
	baz=272						
CMIG	**Matias Romero**	**108.44**	**75**	PKKPbc	PKKPbc	19 00 50.6	+7.0
	comp=Z,3.2nm,0.7s,baz=90,slow=4.5,SNR=6.4						
PRGR	**Permogore**	**108.63**	**332**	*e*P	**Pdif**	**18 45 25.3**	**-2.0**
PRGR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
NATX	**Nacogdoches**	**109.02**	**60**	Pdiff	**Pdif**	**18 45 32.4**	**+2.7**
	baz=271						
SPMN	**Marine on St.**	**109.53**	**45**	Pdiff	**Pdif**	**18 45 32.1**	**+0.4**
	baz=277						
SCIA	**State Center**	**109.59**	**49**	Pdiff	**Pdif**	**18 45 32.6**	**+0.5**
	baz=276						
W39A	**Magazine**	**109.63**	**56**	Pdiff	**Pdif**	**18 45 35.1**	**+2.7**
	baz=273						
BELG	**Belogornoye**	**109.75**	**323**	Pdiff	**Pdif**	**18 45 30.8**	**-1.6**
	comp=Z,8.2nm,0.8s,baz=249,slow=1.6,SNR=5.2						
MIAR	**Mount Ida**	**109.83**	**57**	Pdiff	**Pdif**	**18 45 36.1**	**+2.8**
	baz=273						
EYMN	**Ely**	**110.04**	**42**	Pdiff	**Pdif**	**18 45 34.7**	**+0.7**
	baz=279						
EYMN	**Ely**	**110.04**	**42**	IAMs_20	IAMs_20	19 37 51.2	
	comp=Z,52µm,18.0s						
U40A	**Yellville**	**110.32**	**55**	PKiKP	**Pdif**	**18 45 36.6**	**+1.1**
	baz=274						
U40A				P	**PKiKP**	**18 49 35.8**	**-0.8**
	baz=274						
X40A	**Basin Creek Fa**	**110.45**	**57**	Pdiff	**Pdif**	**18 45 36.8**	**+0.8**
	baz=273						
Z41A	**Richland Creek**	**110.54**	**58**	Pdiff	**Pdif**	**18 45 37.9**	**+1.5**
	baz=273						
PAYG	**Puerto Ayora**	**110.88**	**94**	IAMs_20	IAMs_20	19 30 51.4	
	comp=Z,35µm,18.0s						
W41B	**Gary Mavity, V**	**110.89**	**56**	Pdiff	**Pdif**	**18 45 39.9**	**+2.0**
	baz=274						
W41B				P	**PKiKP**	**18 49 37.1**	**-0.6**
	baz=274						
APA	**Apatity**	**111.17**	**340**⇓	*i*PKIKP	**PKiKP**	**18 49 35.9**	**-1.3**
APA				*i*		18 50 15.4	
APA				*i*		18 56 12.0	
APA				*i* PS	PKKPbc	18 59 40.0	-56
APA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MAK	**Makhachkala**	**111.39**	**313**	*e*P	**Pdif**	**18 45 30.8**	**-9.2**
MAK				*e*		18 56 10.4	
MAK				*e*PS	**SP**	**18 59 46.1**	**-2.9**
MAK				*e*SSS	SSS	19 09 55.1	
MAK				pmax	pmax		
	comp=Z,57nm,0.7s						
MAK				MLR	MLR		
	comp=N,32µm,17.0s						
MAK				MLR	MLR		
	comp=E,42µm,22.0s						
MAK				MLR	MLR		
	comp=Z,19µm,19.0s						
CCM	**Cathedral Cave**	**111.47**	**53**	PKiKP	**Pdif**	**18 45 43.7**	**+3.3**
	baz=276						
CCM				P	**PKiKP**	**18 49 39.1**	**+0.4**
	baz=276						
JFWS	**Jewell Farm**	**111.66**	**47**	Pdiff	**Pdif**	**18 45 41.8**	**+0.6**
	baz=278						
KLMR	**Klimovskoe**	**111.67**	**333**	*e*P	**Pdif**	**18 45 37.9**	**-2.9**
KLMR				*i*		18 49 35.4	
KLMR				*e*		18 50 17.6	
KLMR				*e*		18 56 17.8	
KLMR				*e*PS	**SP**	**18 59 50.2**	**-0.2**
KLMR				*e*SS	**SS**	**19 05 52.5**	**-2.8**
KLMR				pmax	pmax		
	comp=Z,32nm,1.5s						
KLMR	**Klimovskoe**	**111.67**	**333**	*e*Pdif	**Pdif**	**18 45 37.9**	**-2.9**
KLMR				AMP		18 45 44.6	
	comp=Z,32nm,1.5s						
KLMR				*e*PKiKP	**PKiKP**	**18 49 35.4**	**-3.0**
KLMR				*e*PP	**PP**	**18 50 17.7**	**-2.4**
KLMR				*e*SKP		18 53 09.9	
KLMR				*e*SKSac	**SKSac**	**18 56 17.9**	**-1.8**
KLMR				*e*SKSac	**SKSac**	**18 56 17.9**	**-1.8**
KLMR				*e*SKKSac	**SKKSac**	**18 57 18.1**	**-4.7**
KLMR				*e*SKKSac	**SKKSac**	**18 57 18.1**	**-4.7**
KLMR				*e*PS	**SP**	**18 59 50.3**	**-0.2**
KLMR				*e*PS	**SP**	**18 59 50.3**	**-0.2**
KLMR				*e*PKKPbc	**PKKPbc**	**19 00 30.2**	**-4.1**
KLMR				*e*PKKPab	**PKKPab**	**19 00 39.4**	**-1.8**
KLMR				*e*SKKP		19 04 30.2	
KLMR				*e*SS	**SS**	**19 05 52.5**	**-2.8**
KLMR				*e*SS	**SS**	**19 05 52.5**	**-2.8**
KLMR				*e*SSS	SSS	19 09 55.6	
KLMR				*e*SSS	SSS	19 09 55.6	
KLMR				LQ	LQ	19 26 14.1	
KLMR				LQ	LQ	19 26 14.1	
KLMR				LR	LR	19 36 52.9	
KLMR				AMP		19 40 15.0	
	comp=Z,24µm,19.6s						
DAG	**Danmarks Havn**	**112.23**	**359**	*i* P	**PKiKP**	**18 49 39.7**	**+0.6**
DAG				IAmb	IAmb	18 49 40.4	
	comp=Z,9.8nm,1.0s						
DAG				IAMs_20	IAMs_20	19 42 18.8	
	comp=Z,22µm,18.5s						
ARCES	**ARCESS Array B**	**112.46**	**344**	PKKPbc	PKKPbc	19 00 29.9	-2.1
	comp=Z,11nm,0.9s,baz=259,slow=1.2,SNR=18						
ARCES	**ARCESS Array B**	**112.46**	**344**	PKKPbc	PKKPbc	19 00 29.1	-2.8
VBMS	**Vicksburg**	**112.52**	**59**	Pdiff	**Pdif**	**18 45 47.6**	**+2.3**
	baz=274						
HDIL	**Hopedale**	**112.69**	**50**	Pdiff	**Pdif**	**18 45 48.3**	**+2.5**
	baz=278						
PLCA	**Paso Flores**	**113.05**	**141**	PKKPbc	PKKPbc	19 00 27.7	-1.6
	comp=Z,19nm,1.2s,baz=38,slow=7.3,SNR=8.1						
PLCA	**Paso Flores**	**113.05**	**141**		PKKPbc	19 00 28.8	-0.5
L44A	**Lake County Fo**	**113.47**	**48**	Pdiff	**Pdif**	**18 45 55.7**	**+6.4**
	baz=280						
VRH	**Novokhopyorsk**	**113.59**	**322**	*i* PKIKP	**PKiKP**	**18 49 40.8**	**-1.5**
VRH				*e*SP	SP	18 59 58.7	-10
VRH				*e*SSS	SSS	19 10 34.2	
VRH				pmax	pmax		
	comp=Z,20nm,0.7s						
VRH				MLR	MLR		
	comp=Z,24µm,21.0s						
SNET	**Serv Nac Est T**	**113.65**	**79**	IAMs_20	IAMs_20	19 30 40.4	
	comp=Z,48µm,20.0s						
GNI	**Garni**	**113.84**	**310**	*i* PKIKP	**PKiKP**	**18 49 42.9**	**-0.5**
GNI				MLR	MLR		
	comp=Z,13µm,23.0s						
ZEI	**Tsey**	**114.03**	**313**	*i* PKIKP	**PKiKP**	**18 49 46.0**	**+2.3**
ZEI				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GOF	**Gofitskoye**	**114.20**	**315**⇑	*e*PKIKP	**PKiKP**	**18 49 44.2**	**+0.5**
GOF				pmax	pmax		
	comp=Z,30nm,1.0s						
SFIN	**Lafayette**	**114.37**	**50**	Pdiff	**Pdif**	**18 45 56.6**	**+3.3**
	baz=279						
SFIN				P	**PKiKP**	**18 49 44.6**	**+0.4**
	baz=279						
WVT	**Waverly**	**114.39**	**54**	Pdiff	**Pdif**	**18 45 55.8**	**+2.3**
	baz=277						
MOS	**Moscow**	**114.48**	**328**	*e*P	**Pdif**	**18 45 50.7**	**-2.7**
MOS				*i*		18 49 41.3	
MOS				*e*		18 50 38.0	
MOS				*e*PPP	PPP	18 53 00.9	
MOS				*e*PS	**PS**	**19 00 07.8**	**-11**
MOS				*e*SS	SS	19 06 26.4	-6.2
KBZ	**Khabaz**	**114.57**	**314**	PKP	PKPdf	18 49 44.0	-0.5
	comp=Z,1.4nm,0.9s,baz=97,slow=10,SNR=3.6						

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KBZ                                 PP        PP        18 50 37.4 -4.0
      comp=Z,8.3nm,1.0s,baz=279,slow=4.2,SNR=4.1
KBZ                                 PKKPbc    PKKPbc    19 00 24.8 +0.8
      comp=Z,7.5nm,0.8s,baz=219,slow=4.7,SNR=8.5
KBZ   Khabaz             114.57 314 i PKIKP   PKiKP     18 49 44.6 +0.2
KIV   Kislovodsk         114.68 314 ⇓P        PKiKP     18 49 45.5 +0.7
KIV   Kislovodsk         114.68 314 eP        Pdif      18 45 51.0 -3.7
KIV                                 i                   18 49 44.6
KIV                                 e                   18 50 41.0
KIV                                 e                   18 56 33.1
KIV                                 ePS       PKKPbc    19 00 20.1 -3.7
KIV                                 eSS       SS        19 06 35.4 -1.0
KIV                                 eSSS      SSS       19 10 50.9
KIV                                   pmax    pmax
      comp=Z,13nm,1.1s
KIV                                   MLR     MLR
      comp=Z,17µm,22.0s
DBG   Daneborg           114.72 360 eP        PKiKP     18 49 43.5 -0.4
DBG                                   IAmb    IAmb      18 49 45.4
      comp=Z,18nm,1.2s
DBG                                   IAMs_20 IAMs_20   19 32 34.6
      comp=Z,21µm,23.0s
LPSR  Galich'ya Gora     114.83 324 i PKIKP   PKiKP     18 49 43.8 -0.8
LPSR                                eSP       SP        19 00 21.6 +1.8
LPSR                                eSS       SS        19 06 30.7 -6.8
LPSR                                eSSS      SSS       19 10 45.7
LPSR                                  pmax    pmax
      comp=Z,40nm,1.2s
LPSR                                  MLR     MLR
      comp=Z,23µm,20.0s
VORR  Voronezh           114.96 323 ePKIKP    PKiKP     18 49 41.0 -3.9
VORR                                  pmax    pmax
      comp=Z,300nm,2.0s
VSR   Storozhevoye       115.13 323 i PKIKP   PKiKP     18 49 43.6 -1.7
VSR                                 eSS       SS        19 06 32.6 -8.9
VSR                                 eSSS      SSS       19 10 51.4
VSR                                   pmax    pmax
      comp=Z,30nm,1.2s
VSR                                   MLR     MLR
      comp=Z,16µm,22.0s
VORD  Divnogorie         115.13 322 ePKIKP    PKiKP     18 49 43.5 -1.8
VORD                                  pmax    pmax
      comp=Z,10.0nm,1.2s
OBN   Obninsk            115.27 327 ⇑P        PKiKP     18 49 45.2 -0.2
OBN   Obninsk            115.27 327 ⇓iPKIKP   PKiKP     18 49 44.8 -0.6
OBN                                 e                   18 50 52.9
OBN                                 e                   18 56 34.7
OBN                                 ePS       PKKPbc    19 00 20.9 -1.1
OBN                                   pmax    pmax
      comp=Z,30nm,1.5s
OBN   Obninsk            115.27 327   IAMs_20 IAMs_20   19 41 58.7
      comp=Z,33µm,19.0s
GLMI  Grayling           115.31  45   Pdiff   Pdif      18 46 00.8 +3.4
      baz=283
GLMI  Grayling           115.31  45   IAMs_20 IAMs_20   19 45 08.9
      comp=Z,34µm,18.0s
WCI   Wyandotte Cave     115.32  52 i PKIKP   PKiKP     18 49 43.6 -2.5
WCI                                   MLR     MLR
      comp=Z,80µm,20.0s
WCI   Wyandotte Cave     115.32  52   Pdiff   Pdif      18 46 00.3 +2.7
      baz=279
WCI                                   P       PKiKP     18 49 45.3 -0.8
      baz=279
WCI   Wyandotte Cave     115.32  52   PKiKP   PKiKP     18 49 43.6 -2.5
N47A  Urbana             115.34  49           PKiKP     18 49 45.2 -0.8
TGUH  Tegucigalpa,Un     115.57  79   IAMs_20 IAMs_20   19 33 44.3
      comp=Z,38µm,19.0s
CLTN  Cedars of Leba     115.59  54           PKPdf     18 49 44.4 -2.3
SUMG  Summit             115.65   6   PKIKP   PKiKP     18 49 44.8 -1.4
SUMG                                  MLR     MLR
      comp=Z,32µm,20.0s
SUMG  Summit             115.65   6 i P       PKiKP     18 49 46.2  0.0
SUMG                                  IAmb    IAmb      18 49 48.5
      comp=Z,44nm,1.2s
SUMG  Summit             115.65   6           PKiKP     18 49 44.8 -1.4
SUMG                                  IAMs_20 IAMs_20   19 37 09.9
      comp=Z,32µm,20.0s
HOPE  Hope Point         115.72 170   IAMs_20 IAMs_20   19 42 32.8
      comp=Z,48µm,18.0s
P48A  Milroy             115.79  51           PKPdf     18 49 45.6 -1.3
BCA   Borcka             115.95 312 ⇑P        PKPdf     18 49 47.2  0.0
U49A  Red Boiling Sp     115.98  54           PKPdf     18 49 45.3 -2.1
SWET  Sewanee            116.03  55           PKPdf     18 49 46.6 -1.0
L48A  N Adams            116.06  48           PKPdf     18 49 45.2 -2.1
PUL   Pulkovo            116.27 334 i PKIKP   PKPdf     18 49 49.0 +1.8
PUL                                   pmax    pmax
      comp=Z,46nm,0.7s
PUL                                   MLR     MLR
      comp=Z,35µm,22.0s
P49A  Miami Univ. Ec     116.32  50   P       PKPdf     18 49 47.0 -1.0
      baz=281
P49A  Miami Univ. Ec     116.32  50           PKPdf     18 49 46.7 -1.3
N49A  Columbus Grove     116.45  49   PKPdf   PKPdf     18 49 46.7 -1.5
O49A  Covington          116.48  50   PKPdf   PKPdf     18 49 45.4 -2.9
W50A  Signal Mountai     116.54  55   PKPdf   PKPdf     18 49 45.0 -3.5
AAM   Ann Arbor          116.55  47   Pdiff   Pdif      18 46 03.5 +0.5
      baz=283
T50A  Nancy              116.65  53           PKPdf     18 49 47.1 -1.6
MT09  Talagante          116.69 135   PKPdf   PKPdf     18 49 48.4 -0.7
R50A  Paris              116.84  52           PKPdf     18 49 47.4 -1.5
SOC   Sochi              116.86 314 eP        Pdif      18 46 04.7 +0.4
SOC                                 i                   18 49 48.3
SOC                                 e                   18 50 59.3
SOC                                 ePPP      PPP       18 53 22.5
SOC                                 ePS       PS        19 00 40.4 -0.6
SOC                                 eSS       SS        19 07 03.1 -1.6
SOC                                   MLR     MLR
      comp=Z,19µm,20.0s
ILULI Ilulissat          116.86  11   PKIKP   PKPdf     18 49 46.5 -1.6
ILULI                                 MLR     MLR
      comp=Z,35µm,21.0s
ILULI Ilulissat          116.86  11 eP        PKPdf     18 49 47.2 -0.8
ILULI                                 IAmb    IAmb      18 49 49.6
      comp=Z,128nm,1.2s
ILULI                                 IAMs_20 IAMs_20   19 39 18.1
      comp=Z,34µm,19.7s
ILULI Ilulissat          116.86  11           PKPdf     18 49 46.5 -1.6
ILULI                                 IAMs_20 IAMs_20   19 39 18.3
      comp=Z,35µm,21.0s
Z51A  Franklin           116.90  57           PKPdf     18 49 46.4 -2.8
BOAB  BOACO BROADBAN117.03  81        PKPdf   PKPdf     18 49 48.1 -1.9
FINES FINESS Array B     117.13 336   PKP     PKPdf     18 49 48.2 -0.6
      comp=Z,14nm,0.9s,baz=11,slow=3.6,SNR=12
FINES                                 PKKPbc  PKKPbc    19 00 14.8 -0.8
      comp=Z,3.7nm,0.7s,baz=184,slow=2.9,SNR=9.1
M50A  Fremont            117.19  48           PKPdf     18 49 47.9 -1.7
V51A  Loudon             117.23  54           PKPdf     18 49 47.7 -2.1
PEL   Peldehue           117.24 134   IAMs_20 IAMs_20   19 36 21.7
      comp=Z,31µm,18.0s
152A  Waverly Hall       117.36  58           PKPdf     18 49 49.1 -1.0
Q51A  Peebles            117.46  51           PKPdf     18 49 48.6 -1.5
ACSO  Alum Creek Sta     117.49  49   Pdiff   Pdif      18 46 09.1 +1.9
      baz=282
ACSO  Alum Creek Sta     117.49  49           PKPdf     18 49 47.3 -2.9
S51A  Beattyville        117.52  52           PKPdf     18 49 49.0 -1.3
JTS   Las Juntas de      117.57  83   PKP     PKPdf     18 49 49.6 -1.5
      comp=Z,16nm,1.0s,baz=306,slow=3.8,SNR=6.7
JTS                                   PP      PP        18 51 02.0 -1.5
      comp=Z,9.9nm,0.9s,baz=286,slow=3.0,SNR=3.9
JTS   Las Juntas de      117.57  83 eP        PKiKP     18 49 54.9 +3.8
P51A  Williamsport       117.58  50           PKPdf     18 49 48.6 -1.7
W52A  Murphy             117.68  55           PKPdf     18 49 49.1 -1.7
TKL   Tuckaleechee C     117.71  54   PKP     PKPdf     18 49 49.4 -1.4
      comp=Z,34nm,1.0s,baz=201,slow=1.8,SNR=9.3
TKL                                   PP      PP        18 51 01.9 -1.8
      comp=Z,13nm,0.9s,baz=276,slow=7.1,SNR=4.0
TKL   Tuckaleechee C     117.71  54   PKIKP   PKPdf     18 49 48.4 -2.3
TKL   Tuckaleechee C     117.71  54           PKPdf     18 49 48.4 -2.3
TZTN  Tazewell           117.75  53   Pdiff   Pdif      18 46 09.9 +1.5
      baz=280
TZTN                                  P       PKPdf     18 49 50.4 -0.4
      baz=280
TZTN  Tazewell           117.75  53   PKPdf   PKPdf     18 49 49.2 -1.6
N51A  Ashland            117.79  48   PKPdf   PKPdf     18 49 49.5 -1.3
V52A  Sevierville        117.83  54   PKPdf   PKPdf     18 49 47.5 -3.5
ANN   Anapa              118.13 316 i PKIKP   PKPdf     18 49 49.3 -1.9
ANN                                 e                   18 51 06.3
ANN                                 e                   18 56 45.8
ANN                                 eSP       SP        19 00 49.7 -0.6
ANN                                 eSS       SS        19 07 19.6 -1.5
ANN                                   pmax    pmax
      comp=Z,64nm,1.3s
P52A  Corning            118.25  50   Pdiff   Pdif      18 46 12.8 +2.2
      baz=282,SNR=6.2
P52A                                  P       PKPdf     18 49 50.3 -1.3
      baz=282
P52A  Corning            118.25  50           PKPdf     18 49 49.0 -2.7
Q52A  Bidwell            118.29  51           PKPdf     18 49 50.5 -1.3
GOGA  Godfrey            118.30  57   Pdiff   Pdif      18 46 14.8 +3.9
      baz=278
GOGA                                  P       PKPdf     18 49 50.6 -1.3
      baz=278
V53A  Saluda             118.48  54           PKPdf     18 49 49.7 -2.6
VSU   Vasula             118.53 333 eP        PKiKP     18 49 52.6 +1.0
SCO   Scoresbysund       118.57   0   PKIKP   PKPdf     18 49 48.6 -2.7
SCO                                   MLR     MLR
      comp=Z,30µm,19.0s
SCO   Scoresbysund       118.57   0 i P       PKiKP     18 49 51.7 +0.3
SCO                                   IAmb    IAmb      18 49 53.6
      comp=Z,43nm,1.2s
SCO   Scoresbysund       118.57   0   PKPdf   PKPdf     18 49 48.6 -2.7
SCO                                   IAMs_20 IAMs_20   19 44 48.0
      comp=Z,30µm,19.0s
O53A  New Philadelph     118.81  49   Pdiff   Pdif      18 46 17.0 +4.0
      baz=284,SNR=7.6
O53A                                  P       PKPdf     18 49 51.8 -0.9
      baz=284
O53A  New Philadelph     118.81  49           PKPdf     18 49 51.7 -1.0
ICESG Greenland Ices     118.82   7 i P       PKPdf     18 49 51.4 -1.0
ICESG                                 IAmb    IAmb      18 49 53.1
      comp=Z,93nm,1.4s
SFJD  Kangerlussuaq      118.83  13   PKP     PKPdf     18 49 50.1 -1.8
      comp=Z,58nm,1.1s,baz=348,slow=1.8,SNR=8.4
SFJD                                  PKKPbc  PKKPab    19 00 07.6 -1.9
      comp=Z,29nm,1.2s,baz=184,slow=4.9,SNR=3.5
SFJD  Kangerlussuaq      118.83  13   PKIKP   PKPdf     18 49 49.6 -2.3
SFJD                                  MLR     MLR
      comp=Z,26µm,20.0s
SFJD  Kangerlussuaq      118.83  13 i P       PKPdf     18 49 51.0 -0.9
SFJD                                  IAmb    IAmb      18 49 52.6
      comp=Z,58nm,1.2s
SFJD                                  IAMs_20 IAMs_20   19 40 07.5
      comp=Z,27µm,19.5s
SFJD  Kangerlussuaq      118.83  13   PKPdf   PKPdf     18 49 49.6 -2.3
P53A  Whipple            118.85  50           PKPdf     18 49 51.3 -1.5
M53A  Wl Miller and      118.92  47   Pdiff   Pdif      18 46 15.3 +1.7
      baz=284,SNR=6.6
M53A                                  P       PKPdf     18 49 52.1 -0.8
      baz=284
M53A  Wl Miller and      118.92  47   PKPdf   PKPdf     18 49 51.9 -1.0
N53A  Lisbon             118.95  48           PKPdf     18 49 51.3 -1.7
SADO  Sadowa             119.09  43   PKP     PKPdf     18 49 52.0 -1.1
      comp=Z,30nm,1.0s,baz=292,slow=2.0,SNR=6.4
VLDQ  Val d'Or           119.10  39   PKPdf   PKPdf     18 49 50.9 -2.1
S54A  Dingess, Beckl     119.27  52           PKPdf     18 49 52.8 -0.9
Q54A  Coxs Mills         119.38  50           PKPdf     18 49 52.1 -1.8
LCO   Las Campanas       119.41 130   IAMs_20 IAMs_20   19 30 02.8
      comp=Z,33µm,21.0s
O54A  Avella             119.44  49           PKPdf     18 49 53.4 -0.6
N54A  Moraine State      119.54  48   P       PKPdf     18 49 53.5 -0.6
      baz=285
N54A  Moraine State      119.54  48           PKPdf     18 49 53.1 -1.0
KIBK  Kibwezi            119.55 262   IAMs_20 IAMs_20   19 38 30.0
      comp=Z,29µm,20.0s
M54A  Oil Creek Stat     119.63  47   P       PKPdf     18 49 53.6 -0.7
      baz=285
M54A  Oil Creek Stat     119.63  47           PKPdf     18 49 52.4 -2.0
MTSE  Matsula            119.65 335 eP        PKPdf     18 49 53.6 -0.1
V55A  Taylorsville       119.73  54           PKPdf     18 49 53.2 -1.4
KMSC  Kings Mountain     119.77  55   P       PKPdf     18 49 54.5 -0.2
      baz=281
KMSC  Kings Mountain     119.77  55           PKPdf     18 49 53.3 -1.4
J54A  Appleton           119.88  45           PKPdf     18 49 53.6 -1.0
TETE  Tete               119.99 246 i P       PKiKP     18 50 09.1  +13
MNK   Minsk              120.06 329 i PKIKP   PKPdf     18 49 52.6 -2.0
MNK                                 i                   18 51 13.9
MNK                                 i PPP     PPP       18 53 51.1
MNK                                 i                   18 57 04.7
MNK                                 i PS      PS        19 01 07.2 -2.1
MNK                                 i SS      SS        19 07 45.2 +0.1
MNK                                   pmax    pmax
      comp=E,1.0nm,0.9s
MNK                                   pmax    pmax
      comp=N,4.0nm,0.9s
MNK                                   pmax    pmax
      comp=Z,23nm,0.9s
MNK   Minsk              120.06 329 i PKP     PKPdf     18 49 52.7 -2.0
      comp=E,1.0nm,0.9s
MNK                                 i PKP     PKPdf     18 49 52.7 -2.0
      comp=N,4.0nm,0.9s
MNK                                 i PKP     PKPdf     18 49 52.7 -2.0
      comp=Z,23nm,0.9s,baz=60
MNK                                 i PP      PP        18 51 14.0 -5.0
MNK                                 i SKP               18 53 22.3
MNK                                 i PKS               18 53 29.4
MNK                                 i PPP     PPP       18 53 51.1
MNK                                 i SKS     SKSdf     18 57 04.7 -1.9
MNK                                 i PS      PS        19 01 07.2 -2.1
MNK                                 i SS      SS        19 07 45.2 +0.1
MNK                                 i SSS     SSS       19 11 36.7
MNK                                 i LQ      LQ        19 33 56.9
MNK                                 i LR      LR        19 38 34.7
MNK                                 i LRM     MLR       19 44 53.5
      comp=Z,35µm,19.6s
MNK                                 i LRM     MLR       19 44 56.0
      comp=N,18µm,19.6s
MNK                                 i LRM     MLR       19 44 57.3
      comp=E,4µm,19.6s
R55A  Marlinton          120.08  51   PKPdf   PKPdf     18 49 53.5 -1.8
BLA   Blacksburg         120.08  52   PKIKP   PKPdf     18 49 54.0 -1.3
BLA                                   MLR     MLR
      comp=Z,114µm,21.0s
BLA   Blacksburg         120.08  52   P       PKPdf     18 49 54.7 -0.6
      baz=282
BLA   Blacksburg         120.08  52           PKPdf     18 49 54.0 -1.3
DY2G  Dye2               120.16  11 eP        PKPdf     18 49 53.9 -0.9
DY2G                                  IAmb    IAmb      18 49 56.5
      comp=Z,380nm,1.4s
DY2G                                  IAMs_20 IAMs_20   19 38 55.5
      comp=Z,29µm,19.7s
GAZ   Gaziantep          120.17 308   PKPdf   PKPdf     18 49 53.9 -1.6
DELO  Deloro Mine        120.20  43   PKPdf   PKPdf     18 49 53.7 -1.6
AAL   Aland              120.27 337 eP        PKPdf     18 49 53.6 -1.2
M55A  Ridgway            120.30  47           PKPdf     18 49 53.6 -2.0
SIM   Simferopol'        120.33 317 i PKIKP   PKPdf     18 49 48.8 -6.7
SIM                                 e                   18 51 22.0
ISAL  Salakas            120.37 331 eP        PKiKP     18 49 55.7 +0.4
PLVO  Plevna             120.40  43   PKPdf   PKPdf     18 49 54.2 -1.4
NACGM Naroch             120.40 330 i PKP     PKiKP     18 49 56.0 +0.6
J55A  Hilton             120.45  45   PKPdf   PKPdf     18 49 53.6 -2.1
MMNY  Mt. Morris Dam     120.55  45           PKPdf     18 49 54.2 -1.8
BIRD  Birdtown, Kers     120.56  55   PKPdf   PKPdf     18 49 55.3 -0.9
KMBO  Kilima Mbogo       120.57 263   PKP     PKPdf     18 49 57.0 -0.2
      comp=Z,5.6nm,0.8s,baz=334,slow=1.8,SNR=6.7
KMBO                                  PKKPbc  PKKPab    19 00 03.6 -0.3
      comp=Z,4.6nm,0.8s,baz=332,slow=4.8,SNR=5.7
KMBO  Kilima Mbogo       120.57 263           PKKPbc    19 00 04.8 +2.7
KMBO  Kilima Mbogo       120.57 263   Pdif    Pdif      18 46 30.7 +8.9
KMBO                                i P       PKPdf     18 49 56.0 -1.2
Q56A  Snyder Ridge,      120.61  50   PKPdf   PKPdf     18 49 54.9 -1.3
DWPF  Disney Wildern     120.71  63   IAMs_20 IAMs_20   19 34 42.0
      comp=Z,46µm,22.0s
O56A  Blue Knob Stat     120.76  48   P       PKPdf     18 49 56.0 -0.5
      baz=286
O56A  Blue Knob Stat     120.76  48           PKPdf     18 49 55.5 -1.1
BNN   Bunyan             120.84 310   PKPdf   PKPdf     18 49 55.2 -1.7
W57A  Gilead             120.84  54   PKPdf   PKPdf     18 49 55.6 -1.1
NUUK  Nuuk               120.90  15 i P       PKPdf     18 49 55.9  0.0
NUUK                                  IAmb    IAmb      18 49 58.1
      comp=Z,109nm,1.1s
L56A  Greenwood          120.97  46   PKPdf   PKPdf     18 49 55.3 -1.6
T57A  Hurt               121.04  52   PKPdf   PKPdf     18 49 56.1 -1.0
S57A  Dark Hollow, R     121.10  51           PKPdf     18 49 55.4 -1.8
J56A  Wolcott            121.11  45           PKPdf     18 49 55.7 -1.3
AKASG Malin Array Be     121.14 325   PKP     PKPdf     18 49 55.7 -1.1
      comp=Z,11nm,0.6s,baz=56,slow=2.3,SNR=41
AKASG                                 PP      PP        18 51 38.6  +12
      comp=Z,7.1nm,1.0s,baz=64,slow=3.2,SNR=4.7
AKASG                                 PKKPbc  PKKPbc    19 00 00.8 +0.1
      comp=Z,3.9nm,0.8s,baz=257,slow=3.8,SNR=18
AKASG                                 SKKPbc  SKKPbc    19 03 53.3 +2.9
      comp=Z,2.2nm,0.9s,baz=277,slow=3.2,SNR=4.0
AKASG Malin Array Be     121.14 325   PKIKP   PKPdf     18 49 55.2 -1.6
AKASG Malin Array Be     121.14 325   PKPdf   PKPdf     18 49 55.2 -1.6
AKBB  Malin Array Si     121.14 325   PKIKP   PKPdf     18 49 55.4 -1.5
AKBB  Malin Array Si     121.14 325   PKPdf   PKPdf     18 49 55.4 -1.5
SSPA  Standing Stone     121.16  48   P       PKPdf     18 49 56.7 -0.6
      baz=286
SSPA  Standing Stone     121.16  48   PKPdf   PKPdf     18 49 56.0 -1.3
BZK   Bozkurt            121.34 314 ⇓P        PKPdf     18 49 55.9 -1.6
BOSA  Boshof             121.37 229   PKP     PKPdf     18 49 58.2 +0.1
      comp=Z,12nm,1.0s,baz=114,slow=1.2,SNR=11
BOSA                                  PKKPbc  PKKPab    19 00 00.9 +0.2
      comp=Z,4.7nm,0.9s,baz=313,slow=3.1,SNR=4.8
BOSA  Boshof             121.37 229   PKIKP   PKPdf     18 49 56.8 -1.4
BOSA  Boshof             121.37 229   PKPdf   PKPdf     18 49 56.8 -1.4
ASF   Jabal al Asfar     121.38 302   PKKPbc  PKKPbc    19 00 01.1 +1.7
      comp=Z,11nm,0.9s,baz=197,slow=2.4,SNR=10
ASF                                   SKKPbc  SKKPbc    19 03 47.2 -1.5
      comp=Z,4.6nm,1.0s,baz=60,slow=3.1,SNR=3.3
P57A  Homestead Farm     121.38  49           PKPdf     18 49 56.7 -1.0
PABE  Paberze            121.43 332 eP        PKiKP     18 49 57.8 +0.4
PABE  Paberze            121.43 332   PKPdf   PKPdf     18 49 56.6 -0.6
PABE                                  IAMs_20 IAMs_20   19 45 59.4
      comp=Z,27µm,20.0s
M57A  Sunshine Farm,     121.51  47           PKPdf     18 49 56.9 -1.0
K57A  Scipio Center      121.52  45           PKPdf     18 49 56.5 -1.4
TRQ   Mont Tremblant     121.63  41   PKPdf   PKPdf     18 49 56.5 -1.6
J57A  Williamstown       121.67  44           PKPdf     18 49 56.8 -1.3
R58B  Mineral            121.87  51           PKPdf     18 49 57.3 -1.3
SCHQ  Schefferville      121.92  29   PKKPbc  PKKPbc    18 59 58.6 +0.7
      comp=Z,7.5nm,0.9s,baz=117,slow=4.1,SNR=5.0
SCHQ  Schefferville      121.92  29   PKPdf   PKPdf     18 49 56.8 -1.5
JSRW  J. Sargeant Re     121.94  51           PKPdf     18 49 57.3 -1.5
N58A  Sunbury            121.96  47           PKPdf     18 49 56.9 -1.8
BINY  Binghamton         122.06  45   P       PKPdf     18 49 58.5 -0.4
      baz=289,SNR=7.5
BINY  Binghamton         122.06  45           PKPdf     18 49 57.7 -1.3
PAGS  Pennsylvania G     122.13  48           PKPdf     18 49 57.5 -1.5
J58A  Remsen             122.17  44           PKPdf     18 49 58.3 -0.8
CBN   Corbin Frederi     122.20  50   P       PKPdf     18 49 59.2 -0.1
      baz=285
LONY  Lake Ozonia        122.20  42   P       PKPdf     18 49 58.4 -0.8
      baz=291,SNR=14
LONY  Lake Ozonia        122.20  42   PKPdf   PKPdf     18 49 57.3 -1.9
LONY                                  IAMs_20 IAMs_20   19 37 59.0
      comp=Z,47µm,20.0s
BR131 Keskin Array S     122.26 312   PKIKP   PKPdf     18 49 58.3 -1.3
BR131 Keskin Array S     122.26 312   PKPdf   PKPdf     18 49 58.3 -1.3
BRTR  Keskin Array B     122.26 312   PKP     PKPdf     18 49 58.5 -1.0
      comp=Z,20nm,1.2s,baz=116,slow=2.9,SNR=20
BRTR                                  PKKPbc  PKKPbc    18 59 56.8 +0.5
      comp=Z,7.8nm,0.9s,baz=190,slow=3.4,SNR=10.0
BRTR                                  SKKPbc  SKKPbc    19 03 49.1 +2.8
      comp=Z,6.5nm,1.1s,baz=249,slow=3.4,SNR=4.9
BRTR  Keskin Array B     122.26 312   PKIKP   PKPdf     18 49 58.3 -1.3
BRTR  Keskin Array B     122.26 312   PKPdf   PKPdf     18 49 58.3 -1.3
BRTR                                          PKKPab    18 59 55.7 +0.3
SDMD  Soldier’s Deli     122.28  49   PKPdf   PKPdf     18 49 58.5 -0.9
SUR   Sutherland         122.33 222   IAMs_20 IAMs_20   19 39 25.7
      comp=Z,41µm,19.0s
PAC1  Pacto, Paraso      122.36  95 eP        PKPdf     18 50 00.6 +0.1
T59A  Double "B" Far     122.37  52   PKPdf   PKPdf     18 49 58.7 -0.9
KSPA  Keystone Colle     122.42  46           PKPdf     18 49 58.2 -1.4
MMAI  Mount Meron Ar     122.47 303   PKKPbc  PKKPbc    18 59 57.2 +2.0
      comp=Z,12nm,1.0s,baz=261,slow=1.6,SNR=8.6
MMAI                                  SKKPbc  SKKPbc    19 03 40.4 -4.8
      comp=Z,6.8nm,1.0s,baz=256,slow=10.0,SNR=4.5
MVL   Millersville       122.47  48   PKPdf   PKPdf     18 49 58.6 -1.1
NC303 NORSAR Array S     122.49 342           PKPdf     18 49 58.0 -1.2
BCIP  Isla Barro Col     122.50  85   PKIKP   PKPdf     18 49 59.3 -1.2
BCIP                                  MLR     MLR
      comp=Z,60µm,20.0s
BCIP  Isla Barro Col     122.50  85 eP        PKiKP     18 50 01.7 +1.0
BCIP  Isla Barro Col     122.50  85   PKPdf   PKPdf     18 49 59.3 -1.2
MNTQ  Montreal, Queb     122.51  41           PKPdf     18 49 58.0 -1.7
PURM  Purcari            122.52 320 ⇑P        PKPdf     18 49 59.2 -0.5
N59A  State Game Lan     122.62  47   P       PKPdf     18 49 59.4 -0.7
      baz=288,SNR=17
N59A  State Game Lan     122.62  47           PKPdf     18 49 59.0 -1.0
SUW   Suwalki            122.65 330 ePKiKP    PKiKP     18 50 00.6 +0.8
SUW                                 eSKSac    SKSdf     18 57 16.9 +5.4
SUW                                 eSP       SP        19 01 37.6 +7.7
SUW                                 eSS       SS        19 08 35.1  +17
SUW                                 eL        L         19 48 19.6
      comp=Z,27µm,23.4s
SUW   Suwalki            122.65 330 eP        PKiKP     18 50 00.1 +0.3
SUW   Suwalki            122.65 330   PKIKP   PKPdf     18 49 59.0 -0.7
SUW                                   MLR     MLR
      comp=Z,28µm,20.0s
SUW   Suwalki            122.65 330           PKPdf     18 49 59.0 -0.7
SUW                                   IAMs_20 IAMs_20   19 48 08.8
      comp=Z,28µm,20.0s
J59A  Piesco             122.67  44   PKPdf   PKPdf     18 49 58.4 -1.7
NCB   Newcomb            122.68  43   PKPdf   PKPdf     18 49 59.1 -0.9
NB2   NORSAR Subarra122.68 342        PKPdf   PKPdf     18 49 58.0 -1.6
      comp=Z,3.2nm,0.5s,baz=40,slow=1.8
NOA   NORSAR Array B     122.68 342   PKP     PKiKP     18 49 59.9 +0.1
      comp=Z,0.9nm,0.6s,baz=126,slow=13,SNR=17
NOA                                   PKKPbc  PKKPbc    18 59 58.3 +3.2
      comp=Z,5.0nm,0.8s,baz=218,slow=4.1,SNR=8.4
OTAV  Otavalo            122.69  96 eP        PKPdf     18 50 01.0 -0.5
L59A  Walton             122.73  45           PKPdf     18 49 59.0 -1.3
CUSE  Cuicocha Este      122.75  95 eP        PKPdf     18 49 55.8 -5.9
FRNY  Flat Rock          122.78  42           PKPdf     18 49 58.5 -1.7
SORM  Soroca             122.79 322 ⇓P        PKPdf     18 49 59.1 -1.0
SORM  Soroca             122.79 322 ⇓PKIKP    PKPdf     18 49 59.1 -1.0
NC602 NORSAR Array S     122.81 341   PKPdf   PKPdf     18 49 59.4 -0.4
NBO00 NORSAR Array S     122.82 342           PKPdf     18 49 57.9 -1.9
ANTO  Ankara             122.84 312   PKIKP   PKPdf     18 49 59.6 -1.0
ANTO                                  MLR     MLR
      comp=Z,15µm,21.0s
ANTO  Ankara             122.84 312           PKPdf     18 49 59.6 -1.0
LBTB  Lobatse            122.97 232 i P       PKiKP     18 50 06.8 +5.2
KIS   Kishinev           122.99 321 ePKP      PKPdf     18 50 00.0 -0.5
      comp=Z,50nm,1.5s
KIS   Kishinev           122.99 321 ePP       PP        18 51 34.0 -5.3
      comp=Z,1µm,13.7s
KIS                                 eSKS      SKSac     18 57 04.0 +2.2
KIS                                 eSKKS     SKKSac    18 58 42.0 +3.4
KIS   Kishinev           122.99 321 ePS       PS        19 01 41.0 +5.3
KIS                                 eLQ       LQ        19 28 51.0
      comp=Z,9µm,21.0s
KIS                                   LRM     MLR       19 41 07.0
      comp=Z,6µm,23.0s
KIS   Kishinev           122.99 321 ePKIKP    PKPdf     18 50 00.0 -0.5
KIS                                 e                   18 50 04.0
KIS                                 e                   18 51 34.0
KIS                                 e                   18 57 04.0
KIS                                   pmax    pmax
      comp=Z,50nm,1.5s
KIS                                   pmax    pmax
      comp=Z,1µm,13.7s
LUPA  Lehigh Univers     123.00  47           PKPdf     18 49 59.5 -1.3
MILM  Milestii Mici      123.03 321 ⇓P        PKPdf     18 49 59.7 -0.9
MILM  Milestii Mici      123.03 321 ePKIKP    PKPdf     18 49 59.0 -1.6
MILM                                e                   18 57 00.0
MILM                                ePS       PS        19 01 40.0 +3.9
MILM                                  pmax    pmax
      comp=Z,190nm,1.4s
WUPA  West Chester U     123.04  48   PKPdf   PKPdf     18 49 59.4 -1.4
P60A  Greenville         123.05  48   P       PKPdf     18 50 00.4 -0.5
      baz=288
P60A  Greenville         123.05  48           PKPdf     18 50 00.0 -0.9
ACCN  Adirondack Com     123.27  43   PKPdf   PKPdf     18 49 59.3 -1.9
ODNJ  Ogdensburg         123.40  46   PKPdf   PKPdf     18 50 00.3 -1.2
PB06  IPOC Station P     123.41 125   IAMs_20 IAMs_20   19 34 35.3
      comp=Z,26µm,19.0s
EIL   Elat               123.43 300   PKP     PKPdf     18 50 01.9 -0.1
      comp=Z,53nm,1.2s,baz=122,slow=4.2,SNR=3.6
EIL                                   PKKPbc  PKKPbc    18 59 53.3 +2.1
      comp=Z,27nm,1.1s,baz=139,slow=1.4,SNR=12
EIL                                   SKKPbc  SKKPbc    19 03 52.0  +10
      comp=Z,6.6nm,1.0s,baz=148,slow=0.7,SNR=3.9
MOQ   Mont Orford        123.47  41           PKPdf     18 49 60.0 -1.7
TRY   Troy               123.50  44   PKPdf   PKPdf     18 50 00.8 -0.8
VT1   Waterbury          123.53  42           PKPdf     18 50 00.8 -0.9
VT1                                   IAMs_20 IAMs_20   19 39 57.2
      comp=Z,48µm,19.0s
BRNJ  Basking Ridge      123.56  47   PKPdf   PKPdf     18 50 01.1 -0.7
PB07  IPOC Station P     123.61 123   IAMs_20 IAMs_20   19 31 32.7
      comp=Z,34µm,22.0s
TRNY  Table Rock, Ra     123.65  46           PKPdf     18 50 00.6 -1.4
LMQ   La Malbaie         123.73  38   PKPdf   PKPdf     18 50 00.0 -1.9
CSS   Mathiatis          123.73 306   PKPdf   PKPdf     18 50 01.6 -0.8
TLCR                     123.74 319 ⇓P        PKPdf     18 50 01.7 -0.3
TLCR                     123.74 319 ⇓PKIKP    PKPdf     18 50 01.7 -0.3
VASR  Vaslui             123.78 321 ⇓P        PKPdf     18 50 02.1  0.0
PATCX Punta Patache      123.80 122   IAMs_20 IAMs_20   19 31 56.9
      comp=Z,46µm,21.0s
MDUB  Mudurnu            123.82 313   PKPdf   PKPdf     18 50 00.5 -2.0
PAL   Palisades          123.93  46   PKIKP   PKPdf     18 50 02.0 -0.5
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PAL				MLR	MLR		
	comp=Z,110µm,19.0s						
PAL	**Palisades**	**123.93**	**46**	P	**PKPdf**	**18 50 02.4**	**-0.1**
	baz=290,SNR=10						
PAL	**Palisades**	**123.93**	**46**	PKPdf	**PKPdf**	**18 50 01.9**	**-0.5**
VLDR	**Vladesti**	**123.94**	**320**	⇑P	**PKiKP**	**18 50 02.7**	**0.0**
GCUF	**Volcan Galeras**	**123.95**	**95**	*e*P	**PKPdf**	**18 50 00.3**	**-3.7**
CPNY	**Central Park**	**123.96**	**46**		**PKPdf**	**18 50 01.6**	**-1.0**
KSCT	**Kent School, K**	**123.98**	**45**		**PKPdf**	**18 50 01.5**	**-1.1**
LVC	**Limon Verde**	**123.99**	**125**	IAMs_20	IAMs_20	19 34 54.6	
	comp=Z,31µm,19.0s						
J61A	**Chester**	**124.04**	**43**		**PKPdf**	**18 50 02.3**	**-0.4**
LEF	**Lefka**	**124.05**	**306**	⇑P	**PKPdf**	**18 50 03.0**	**+0.1**
VARL	**Varlezi**	**124.06**	**320**	⇓P	**PKiKP**	**18 50 03.0**	**+0.1**
SCTR	**Scanteiesti**	**124.06**	**320**	⇓P	**PKiKP**	**18 50 02.9**	**0.0**
PB09	**IPOC Station P**	**124.10**	**124**	IAMs_20	IAMs_20	19 36 01.8	
	comp=Z,32µm,20.0s						
LBNH	**Lisbon**	**124.11**	**42**	PKIKP	**PKPdf**	**18 50 02.0**	**-0.8**
LBNH				MLR	MLR		
	comp=Z,46µm,19.0s						
LBNH	**Lisbon**	**124.11**	**42**	P	**PKPdf**	**18 50 02.8**	**0.0**
	baz=293,SNR=15						
LBNH	**Lisbon**	**124.11**	**42**	PKPdf	**PKPdf**	**18 50 02.0**	**-0.8**
LBNH				IAMs_20	IAMs_20	19 40 33.4	
	comp=Z,46µm,19.0s						
TPGR	**Topolog**	**124.13**	**319**	⇓P	**PKPdf**	**18 50 02.7**	**-0.1**
CFR	**Carcaliu**	**124.18**	**319**	⇓P	**PKPdf**	**18 50 01.8**	**-1.0**
CFR	**Carcaliu**	**124.18**	**319**	⇓PKIKP	**PKPdf**	**18 50 01.8**	**-1.0**
SCHL	**Schela**	**124.24**	**320**	⇓P	**PKiKP**	**18 50 03.2**	**0.0**
SLCR	**Slobozia Conac**	**124.24**	**320**	⇓P	**PKiKP**	**18 50 03.1**	**-0.1**
PB01	**IPOC Station P**	**124.25**	**123**	IAMs_20	IAMs_20	19 32 01.8	
	comp=Z,49µm,22.0s						
IZVR	**Izvoarele**	**124.26**	**320**	⇓P	**PKPdf**	**18 50 02.5**	**-0.5**
KONO	**Kongsberg**	**124.27**	**341**	IAMs_20	IAMs_20	19 44 10.8	
	comp=Z,41µm,21.0s						
WSPT	**Westport, CT**	**124.28**	**46**		**PKPdf**	**18 50 02.6**	**-0.5**
L61B	**Northampton**	**124.28**	**44**	P	**PKPdf**	**18 50 02.9**	**-0.2**
	baz=292,SNR=19						
TIRR	**Tirgusor**	**124.29**	**318**	⇓P	**PKPdf**	**18 50 02.9**	**-0.2**
TIRR	**Tirgusor**	**124.29**	**318**	⇓PKIKP	**PKPdf**	**18 50 02.9**	**-0.2**
TIRR	**Tirgusor**	**124.29**	**318**	PKPdf	**PKPdf**	**18 50 02.9**	**-0.2**
TIRR				IAMs_20	IAMs_20	19 49 22.3	
	comp=Z,43µm,20.0s						
IVI	**Ivigtut**	**124.30**	**15**	*i* P	**PKPdf**	**18 50 01.7**	**-0.9**
IVI				IAmb	IAmb	18 50 03.8	
	comp=Z,140nm,1.1s						
IVI				IAMs_20	IAMs_20	19 46 16.2	
	comp=Z,44µm,17.9s						
IVI	**Ivigtut**	**124.30**	**15**	PKPdf	**PKPdf**	**18 50 01.9**	**-0.7**
IVI				IAMs_20	IAMs_20	19 46 27.1	
	comp=Z,44µm,18.0s						
MFTR	**Murfatlar**	**124.40**	**318**	⇓P	**PKPdf**	**18 50 03.1**	**-0.2**
PRAR	**RASCA**	**124.41**	**322**	⇑P	**PKPdf**	**18 50 03.2**	**-0.1**
LPA	**La Plata**	**124.42**	**144**	PKIKP	**PKiKP**	**18 50 10.1**	**+6.1**
LPA				PP	**PP**	**18 51 45.2**	**-3.4**
LPA				pPP		18 51 59.6	
LPA				SKIKP		18 53 40.4	
LPA				SSKS		18 57 07.1	
LPA				SKIKP		18 57 18.3	
LPA				SDIFF		18 59 50.0	
LPA				PS	**PS**	**19 01 44.5**	**-3.7**
LPA				PPS	PPS	19 03 26.4	
LPA				PPP	PPP	19 07 15.5	
LPA				SS	**SS**	**19 08 38.5**	**-2.2**
LPA				SSS	SSS	19 13 13.6	
MANR	**Mangalia**	**124.43**	**318**	⇓P	**PKPdf**	**18 50 02.6**	**-0.8**
LVV	**L'vov**	**124.48**	**326**	*i* PKIKP	**PKPdf**	**18 50 03.0**	**-0.3**
LVV				*e*		18 51 52.0	
LVV				*e*		18 57 03.0	
LVV				*e*PS	**PS**	**19 01 47.0**	**-1.8**
LVV				*e*SS	SS	19 08 41.0	-0.7
H62A	**Milan**	**124.48**	**41**		**PKPdf**	**18 50 03.3**	**-0.2**
TLBR	**Topalu**	**124.50**	**319**	⇓P	**PKiKP**	**18 50 03.7**	**-0.1**
PIZC	**Pizarro, Choco**	**124.50**	**90**	*e*P	**PKPdf**	**18 50 02.9**	**-1.5**
K62A	**Royalston**	**124.51**	**44**		**PKPdf**	**18 50 03.2**	**-0.4**
YLE	**Yale**	**124.51**	**46**		**PKPdf**	**18 50 02.9**	**-0.7**
HARR	**Harsova**	**124.52**	**319**	⇓P	**PKPdf**	**18 50 03.6**	**+0.1**
HARR	**Harsova**	**124.52**	**319**	⇓PKIKP	**PKPdf**	**18 50 03.6**	**+0.1**
TESR	**Tescani**	**124.54**	**321**	⇑P	**PKPdf**	**18 50 02.6**	**-0.9**
QUA2	**Belchertown**	**124.57**	**44**		**PKPdf**	**18 50 02.9**	**-0.8**
G62A	**West of Eustis**	**124.62**	**40**	PKPdf	**PKPdf**	**18 50 02.9**	**-0.9**
PB12	**IPOC Station P**	**124.62**	**120**	PKPdf	**PKPdf**	**18 50 03.9**	**-0.7**
PB12				IAMs_20	IAMs_20	19 32 54.9	
	comp=Z,30µm,22.0s						
E62A	**Clayton Lake**	**124.64**	**38**	PKPdf	**PKPdf**	**18 50 02.9**	**-0.8**
I62A	**Tamworth**	**124.65**	**42**	PKPdf	**PKPdf**	**18 50 03.3**	**-0.5**
F62A	**Pittston Farm,**	**124.68**	**39**		**PKPdf**	**18 50 02.6**	**-1.3**
PB11	**IPOC Station P**	**124.69**	**122**	PKPdf	**PKPdf**	**18 50 03.8**	**-1.0**
D62A	**Allapoint, All**	**124.71**	**38**	PKPdf	**PKPdf**	**18 50 02.6**	**-1.2**
VRI	**Vrincioaia**	**124.78**	**321**	⇑P	**PKPdf**	**18 50 03.0**	**-1.1**
VRI	**Vrincioaia**	**124.78**	**321**	⇑PKIKP	**PKPdf**	**18 50 03.0**	**-1.1**
ICOR	**Ion Corvin**	**124.83**	**318**	⇑P	**PKPdf**	**18 50 04.1**	**-0.1**
UCCT	**U. Connecticut**	**124.84**	**45**	PKPdf	**PKPdf**	**18 50 03.0**	**-1.2**
PLOR	**Plostina**	**124.84**	**321**	⇓P	**PKPdf**	**18 50 04.2**	**0.0**
PLOR	**Plostina**	**124.84**	**321**	⇓PKIKP	**PKPdf**	**18 50 04.2**	**0.0**
BUR08	**Bucovina Ar. S**	**124.90**	**323**	PKPdf	**PKPdf**	**18 50 03.2**	**-1.1**
BURAR	**Bucovina Array**	**124.90**	**323**	⇑P	**PKiKP**	**18 50 04.9**	**+0.2**
BURAR	**Bucovina Array**	**124.90**	**323**	⇑PKIKP	**PKiKP**	**18 50 04.9**	**+0.2**
CAPC	**Capurgana**	**124.91**	**86**	*e*P	**PKPdf**	**18 50 04.7**	**-0.5**
AMRR	**Amara**	**124.93**	**319**	⇓P	**PKiKP**	**18 50 04.7**	**+0.1**
AMRR	**Amara**	**124.93**	**319**	⇓PKIKP	**PKiKP**	**18 50 04.7**	**+0.1**
PB08	**IPOC Station P**	**124.94**	**122**	IAMs_20	IAMs_20	19 32 41.2	
	comp=Z,40µm,21.0s						
MTDJ	**Mount Denham**	**125.00**	**74**	IAMs_20	IAMs_20	19 42 40.8	
	comp=Z,31µm,18.0s						
NRS	**Narsarsuaq**	**125.02**	**14**	PKIKP	**PKPdf**	**18 50 02.7**	**-1.2**
NRS				MLR	MLR		
	comp=Z,57µm,21.0s						
NRS	**Narsarsuaq**	**125.02**	**14**	*i* P	**PKPdf**	**18 50 03.3**	**-0.7**
NRS				IAmb	IAmb	18 50 04.6	
	comp=Z,344nm,1.5s						
NRS				IAMs_20	IAMs_20	19 40 19.1	
	comp=Z,58µm,19.7s						
NRS	**Narsarsuaq**	**125.02**	**14**		**PKPdf**	**18 50 02.7**	**-1.2**
HRV	**Adam Dziewonsk**	**125.03**	**44**	PKIKP	**PKPdf**	**18 50 03.5**	**-1.1**
HRV				MLR	MLR		
	comp=Z,77µm,20.0s						
HRV	**Adam Dziewonsk**	**125.03**	**44**	P	**PKPdf**	**18 50 04.4**	**-0.2**
	baz=293						
HRV	**Adam Dziewonsk**	**125.03**	**44**		**PKPdf**	**18 50 03.5**	**-1.1**
I63A	**Otisfield**	**125.07**	**42**	PKPdf	**PKPdf**	**18 50 03.6**	**-1.0**
BEL	**Belsk**	**125.09**	**329**	*e*PKiKP	**PKPdf**	**18 50 04.4**	**0.0**
BEL				*e*PP	**PP**	**18 52 00.4**	**+7.4**
BEL				*e*SS	SS	19 08 59.9	+11
BEL				*e*L	L	19 46 08.0	
	comp=Z,27µm,20.3s						
M63A	**Gales Ferry**	**125.10**	**45**	PKPdf	**PKPdf**	**18 50 03.9**	**-0.8**
COVR	**Voineasa-Covas**	**125.12**	**321**	⇓P	**PKPdf**	**18 50 04.2**	**-0.5**
LSZ	**Lusaka**	**125.13**	**244**	PKP	**PKiKP**	**18 50 06.0**	**0.0**
	comp=Z,12nm,0.8s,baz=202,slow=0.9,SNR=1.3						
LSZ				SKKPbc	SKKPbc	19 03 19.5	-16
	comp=Z,2.4nm,0.3s,baz=304,slow=3.8,SNR=3.7						
LSZ	**Lusaka**	**125.13**	**244**	PKIKP	**PKPdf**	**18 50 04.5**	**-1.2**
LSZ				MLR	MLR		
	comp=Z,29µm,20.0s						
LSZ	**Lusaka**	**125.13**	**244**		**PKPdf**	**18 50 04.5**	**-1.2**
LSZ	**Lusaka**	**125.13**	**244**	IAMs_20	IAMs_20	19 40 50.4	
	comp=Z,29µm,20.0s						
LSZ	**Lusaka**	**125.13**	**244**	*i* P	**PKiKP**	**18 50 10.8**	**+4.8**
RASA	**Rasa**	**125.22**	**319**	⇑P	**PKPdf**	**18 50 04.8**	**-0.1**
ISR	**Istrita**	**125.23**	**320**	⇓P	**PKiKP**	**18 50 05.2**	**-0.1**
ISR	**Istrita**	**125.23**	**320**	⇓PKIKP	**PKiKP**	**18 50 05.2**	**-0.1**
WES	**Weston**	**125.24**	**44**	PKIKP	**PKPdf**	**18 50 03.8**	**-1.2**
WES				MLR	MLR		
	comp=Z,95µm,19.0s						
WES	**Weston**	**125.24**	**44**		**PKPdf**	**18 50 03.8**	**-1.2**
NEHR	**Nehoiu**	**125.25**	**320**	⇓P	**PKPdf**	**18 50 04.5**	**-0.5**
OZUR		**125.27**	**321**	⇑P	**PKiKP**	**18 50 05.3**	**-0.1**
BRYW	**Bryant College**	**125.27**	**44**		**PKPdf**	**18 50 04.1**	**-1.0**
F63A	**Nahmakanta, Br**	**125.31**	**39**	PKPdf	**PKPdf**	**18 50 03.9**	**-1.2**
YOTC	**Yotoco, Valle**	**125.37**	**91**	*e*P	**PKPdf**	**18 50 05.2**	**-1.1**
PKME	**Peaks-Kenny Pk**	**125.39**	**40**	P	**PKPdf**	**18 50 05.1**	**0.0**
	baz=296,SNR=17						
PKME	**Peaks-Kenny Pk**	**125.39**	**40**		**PKPdf**	**18 50 04.3**	**-0.8**
MLR	**Muntele Rosu**	**125.44**	**320**	⇑P	**PKPdf**	**18 50 05.4**	**-0.1**
MLR	**Muntele Rosu**	**125.44**	**320**	PKIKP	**PKPdf**	**18 50 04.3**	**-1.2**
MLR				MLR	MLR		
	comp=Z,29µm,22.0s						
MLR	**Muntele Rosu**	**125.44**	**320**	PKPdf	**PKPdf**	**18 50 04.3**	**-1.2**
MLR				IAMs_20	IAMs_20	19 42 59.4	
	comp=Z,29µm,22.0s						
PB16	**IPOC Station P**	**125.44**	**120**	IAMs_20	IAMs_20	19 33 43.1	
	comp=Z,27µm,20.0s						
WVL	**Waterville**	**125.46**	**41**		**PKPdf**	**18 50 04.5**	**-0.8**
PQI	**Presque Isle**	**125.53**	**38**		**PKPdf**	**18 50 04.3**	**-1.1**
PQI				IAMs_20	IAMs_20	19 40 55.4	
	comp=Z,50µm,20.0s						
PLMC	**San Jos del P**	**125.56**	**90**	*e*P	**PKPdf**	**18 50 02.9**	**-3.6**
SECR		**125.57**	**320**	⇓P	**PKPdf**	**18 50 05.2**	**-0.4**
DOPR	**Dopca**	**125.57**	**321**	⇓P	**PKPdf**	**18 50 05.4**	**-0.1**
SULR		**125.60**	**319**	⇑P	**PKiKP**	**18 50 06.2**	**+0.3**
ARCR	**ARCALIA**	**125.67**	**323**	⇓P	**PKPdf**	**18 50 05.9**	**+0.2**
F64A	**Sherman**	**125.71**	**39**	PKPdf	**PKPdf**	**18 50 04.7**	**-1.1**
L64A	**Middleborough**	**125.74**	**44**		**PKPdf**	**18 50 04.9**	**-1.1**
BMR	**Baia Mare**	**125.88**	**324**	⇑P	**PKiKP**	**18 50 06.4**	**-0.1**
BMR	**Baia Mare**	**125.88**	**324**	⇑PKIKP	**PKiKP**	**18 50 06.4**	**-0.1**
GKP	**Gorka Klasztor**	**125.92**	**332**	*e*PKiKP	**PKPdf**	**18 50 05.8**	**-0.1**
GKP				*e*PP	**PP**	**18 52 05.7**	**+7.3**
GKP				*e*SS	SS	19 09 06.9	+7.6
GKP				*e*L	L	19 47 14.0	
	comp=Z,49µm,20.6s						
GKP	**Gorka Klasztor**	**125.92**	**332**	*e*P	**PKPdf**	**18 50 05.5**	**-0.4**
KOLS	**Kolonicke sedl**	**125.92**	**326**	*e*PKIKP	**PKiKP**	**18 50 06.9**	**+0.4**
KOLS				*e*		18 51 55.5	
KOLS				*e*SS	SS	19 08 59.6	-0.3
KOLS				MLR	MLR		
	comp=Z,36µm,24.3s						
KOLS	**Kolonicke sedl**	**125.92**	**326**	*e*PKP	**PKiKP**	**18 50 06.9**	**+0.4**
KOLS				*e*PP	**PP**	**18 51 55.5**	**-3.3**
KOLS				*e*SS	SS	19 08 59.6	-0.3
KOLS				*e*L	L	19 43 58.7	
GARC	**Garzon, Huila**	**125.94**	**94**	*e*P	**PKPdf**	**18 50 04.7**	**-2.8**
CBOC	**Ciudad Bolivar**	**125.94**	**89**	*e*P	**PKPdf**	**18 50 04.7**	**-2.7**
VOIR		**126.03**	**321**	⇑P	**PKPdf**	**18 50 06.5**	**0.0**
VOIR		**126.03**	**321**	⇑PKIKP	**PKPdf**	**18 50 06.5**	**0.0**
BETC	**Betania**	**126.07**	**93**	*e*P	**PKPdf**	**18 50 02.9**	**-4.6**
UZH	**Uzhgorod**	**126.08**	**325**	⇑*i*PKIKP	**PKiKP**	**18 50 07.2**	**+0.4**
UZH				*e*		18 50 11.7	
UZH				*e*		18 52 04.4	
UZH				*e*		18 57 05.6	
UZH				*i* SS	SS	19 09 05.6	+3.9
TRPA	**Tarpa**	**126.20**	**325**	⇓P	**PKPdf**	**18 50 06.1**	**-0.6**
PTLC	**Puerto Leguiza**	**126.27**	**96**	*e*P	**PKPdf**	**18 50 02.9**	**-4.9**
ARR	**Arges**	**126.32**	**321**	⇓P	**PKiKP**	**18 50 07.6**	**+0.1**
ANIL	**Santa Ana**	**126.37**	**91**	*e*P	**PKPdf**	**18 50 05.4**	**-3.0**
CRVS	**Cervenica-Dubn**	**126.39**	**326**	*e*PKIKP	**PKiKP**	**18 50 07.6**	**+0.1**
CRVS				*e*		18 52 02.5	
CRVS				*e*SS	SS	19 09 05.9	+0.2
CRVS	**Cervenica-Dubn**	**126.39**	**326**	*e*PKP	**PKiKP**	**18 50 07.6**	**+0.1**
CRVS				*e*PP	**PP**	**18 52 02.5**	**+0.6**
CRVS				*e*SS	SS	19 09 05.9	+0.2
BATG	**Bathurst New B**	**126.40**	**36**	PKPdf	**PKPdf**	**18 50 06.2**	**-0.8**
ORTC	**Ortega, Tolima**	**126.45**	**92**	*e*P	**PKPdf**	**18 50 08.2**	**0.0**
HELC	**Santa Helena**	**126.46**	**89**	*e*P	**PKPdf**	**18 50 04.7**	**-3.9**
MESR	**Meseseni**	**126.47**	**323**	⇓P	**PKiKP**	**18 50 07.5**	**-0.2**
HUMR	**Humele**	**126.48**	**320**	⇑P	**PKPdf**	**18 50 07.0**	**-0.3**
G65A	**Princeton**	**126.50**	**39**		**PKPdf**	**18 50 06.7**	**-0.6**
GUY2C	**Guyana, Caldas**	**126.51**	**90**	*e*P	**PKPdf**	**18 50 04.7**	**-4.2**
COPA	**Copaceanca**	**126.51**	**319**	⇑P	**PKPdf**	**18 50 07.5**	**+0.1**
MOTC	**Monteria, Cord**	**126.58**	**86**	*e*P	**PKPdf**	**18 50 04.7**	**-3.7**
MOTC	**Monteria, Cord**	**126.58**	**86**	PKPdf	**PKPdf**	**18 50 05.6**	**-2.8**
UREC	**San Jos de Ur**	**126.62**	**87**	*e*P	**PKPdf**	**18 50 06.4**	**-2.1**
NIE	**Niedzica**	**126.74**	**327**	*e*PKiKP	**PKiKP**	**18 50 08.8**	**+0.6**
NIE				*e*PP	PP	18 52 13.0	+8.9
NIE				*e*SP	SP	19 02 12.6	+6.5
NIE				*e*SS	**SS**	**19 09 19.4**	**+9.4**
NIE				*e*L	L	19 44 19.6	
	comp=Z,14µm,23.7s						
RGN	**Rugen**	**126.75**	**335**	IAMs_20	IAMs_20	19 47 53.9	
	comp=Z,28µm,20.0s						
PRAC	**Prado**	**126.77**	**92**	*e*P	**PKPdf**	**18 50 04.7**	**-4.2**
DRGR		**126.79**	**323**	⇓P	**PKPdf**	**18 50 07.8**	**-0.2**
DRGR		**126.79**	**323**	⇓PKIKP	**PKPdf**	**18 50 07.8**	**-0.2**
EMMW	**East Machias**	**126.80**	**40**	PKPdf	**PKPdf**	**18 50 06.8**	**-1.1**
LOT	**Lotru**	**126.82**	**321**	⇓P	**PKPdf**	**18 50 07.3**	**-0.8**
GGN	**Saint George**	**126.99**	**39**	PKPdf	**PKPdf**	**18 50 06.2**	**-2.1**
NORC	**Norcasia**	**127.04**	**90**	*e*P	**PKPdf**	**18 50 08.2**	**-1.1**
MBAR	**Mbarara**	**127.06**	**262**	PKP	**PKPdf**	**18 50 08.3**	**-1.2**
	comp=Z,3.4nm,0.2s,baz=87,slow=6.4,SNR=11						
MBAR	**Mbarara**	**127.06**	**262**	*i* P	**PKPdf**	**18 50 09.0**	**-0.5**
SJCC	**San Jacinto, C**	**127.14**	**84**	*e*P	**PKPdf**	**18 50 09.4**	**-0.1**
GTBY	**Guantanamo Bay**	**127.21**	**72**	IAMs_20	IAMs_20	19 37 05.1	
	comp=Z,43µm,21.0s						
ZARC	**Zaragoza, Cauc**	**127.26**	**87**	*e*P	**PKPdf**	**18 50 08.3**	**-1.4**
ZARC	**Zaragoza, Cauc**	**127.26**	**87**		**PKPdf**	**18 50 08.3**	**-1.4**
ALN	**Alexandroupoli**	**127.32**	**315**	PKIKP	**PKPdf**	**18 50 08.4**	**-0.6**
ALN	**Alexandroupoli**	**127.32**	**315**	PKPdf	**PKPdf**	**18 50 08.4**	**-0.6**
LANS	**Liptovska Anna**	**127.34**	**327**	*e*PKIKP	**PKiKP**	**18 50 10.0**	**+0.6**
LANS	**Liptovska Anna**	**127.34**	**327**	*e*PKP	**PKiKP**	**18 50 10.0**	**+0.6**
GZR	**Gura Zlata**	**127.45**	**322**	⇓P	**PKPdf**	**18 50 08.7**	**-0.5**
GZR	**Gura Zlata**	**127.45**	**322**	⇓PKIKP	**PKPdf**	**18 50 08.7**	**-0.5**
ROSC	**El Rosal**	**127.49**	**91**	PKP	**PKPdf**	**18 50 10.2**	**-0.4**
	comp=Z,69nm,0.9s,baz=76,slow=5.0,SNR=20						
ROSC	**El Rosal**	**127.49**	**91**	*e*P	**PKPdf**	**18 50 09.9**	**-0.7**
ROSC	**El Rosal**	**127.49**	**91**	PKPdf	**PKPdf**	**18 50 10.3**	**-0.3**
LPAZ	**La Paz**	**127.50**	**118**	PKP	**PKiKP**	**18 50 11.4**	**0.0**
	comp=Z,68nm,0.9s,baz=134,slow=1.3,SNR=44						
LPAZ	**La Paz**	**127.50**	**118**	*e*P	**PKPdf**	**18 50 09.7**	**-1.1**
MACC	**Macarena, Meta**	**127.56**	**94**	*e*P	**PKPdf**	**18 50 08.2**	**-2.1**
OKC	**Ostrava-Krasne**	**127.62**	**329**	*e*PKIKP	**PKiKP**	**18 50 10.1**	**+0.2**
OKC				*e*		18 52 15.4	
OKC				MLR	MLR		
	comp=Z,21µm,18.0s						
OKC	**Ostrava-Krasne**	**127.62**	**329**	*e*PKPDF	**PKiKP**	**18 50 10.1**	**+0.2**
OKC				*e*PP	**PP**	**18 52 15.4**	**+5.5**
OKC				*e*SS	SS	19 09 28.9	+8.0
OKC				AMS	AMS	19 50 00.0	
	comp=Z,21µm,18.0s						
SIRR	**Siria**	**127.68**	**323**	⇓P	**PKPdf**	**18 50 09.5**	**-0.1**
PSZ	**Piszkesteto**	**127.81**	**326**	⇑P	**PKPdf**	**18 50 09.5**	**-0.4**
PSZ	**Piszkesteto**	**127.81**	**326**	PKIKP	**PKPdf**	**18 50 07.7**	**-2.1**
PSZ				MLR	MLR		
	comp=Z,29µm,20.0s						
PSZ	**Piszkesteto**	**127.81**	**326**	PKPdf	**PKPdf**	**18 50 07.7**	**-2.1**
PSZ				IAMs_20	IAMs_20	19 49 01.5	
	comp=Z,29µm,20.0s						
SPBC	**San Pablo de B**	**127.84**	**90**	*e*P	**PKPdf**	**18 50 09.2**	**-1.7**
LMN	**Caledonia Moun**	**127.87**	**37**	PKPdf	**PKPdf**	**18 50 08.8**	**-1.2**
PUNG	**Punghina**	**127.90**	**320**	⇑P	**PKPdf**	**18 50 10.1**	**+0.1**
KSP	**Ksiaz**	**127.93**	**330**	*e*PKiKP	**PKPdf**	**18 50 09.8**	**0.0**
KSP				*e*PP	PP	18 52 20.1	+8.2
KSP				*e*SS	SS	19 09 31.9	+7.4
KSP				*e*L	L	19 51 28.6	
	comp=Z,21µm,20.2s						
HERR	**Herculane**	**127.93**	**321**	⇓P	**PKPdf**	**18 50 09.3**	**-0.7**
MORC	**Moravsky Berou**	**127.97**	**329**	⇑P	**PKiKP**	**18 50 10.7**	**0.0**
MORC	**Moravsky Berou**	**127.97**	**329**	PKIKP	**PKPdf**	**18 50 09.5**	**-0.6**
MORC	**Moravsky Berou**	**127.97**	**329**	*e*PKP	**PKPdf**	**18 50 09.7**	**-0.4**
MORC	**Moravsky Berou**	**127.97**	**329**	PKPdf	**PKPdf**	**18 50 09.5**	**-0.6**
RUE	**Ruedersdorf**	**128.01**	**333**	*e*P	**PKiKP**	**18 50 11.0**	**+0.4**
RUE	**Ruedersdorf**	**128.01**	**333**	*e*PKPdf	**PKiKP**	**18 50 10.8**	**+0.3**
	baz=45,slow=1.9						
VILC	**Villavicencio,**	**128.01**	**92**	*e*P	**PKPdf**	**18 50 10.5**	**-0.8**
BZS	**Buzias**	**128.05**	**322**	⇑P	**PKPdf**	**18 50 09.7**	**-0.6**
BZS	**Buzias**	**128.05**	**322**	⇑PKIKP	**PKPdf**	**18 50 09.7**	**-0.6**
VYHS	**Vyhne**	**128.06**	**327**	*e*PKIKP	**PKiKP**	**18 50 10.6**	**-0.2**
VYHS				*e*		18 52 15.2	
VYHS				*e*SS	SS	19 09 27.8	+1.4
VYHS	**Vyhne**	**128.06**	**327**	*e*PKP	**PKiKP**	**18 50 10.6**	**-0.2**
VYHS				*e*PP	**PP**	**18 52 15.2**	**+2.3**
VYHS				*e*SS	SS	19 09 27.8	+1.4
SMRC	**Santa Marta, M**	**128.15**	**83**	*e*P	**PKPdf**	**18 50 10.9**	**-0.4**
OSTC	**Ostas**	**128.15**	**330**	*e*PKPDF	**PKiKP**	**18 50 11.1**	**+0.1**
OSTC				*e*PP	**PP**	**18 52 18.1**	**+4.7**
OSTC				*e*SKS	PKSab	18 53 27.8	-1.3
OSTC				*e*SS	SS	19 09 30.2	+2.9
OSTC				AMS	AMS	19 44 30.0	
	comp=Z,34µm,21.7s						
SMLC	**San Martn de**	**128.15**	**86**	*e*P	**PKPdf**	**18 50 09.3**	**-2.0**
KRLC	**Kraliky**	**128.17**	**329**	*e*PKIKP	**PKPdf**	**18 50 10.7**	**+0.3**
KRLC				*e*		18 52 21.2	
KRLC				MLR	MLR		
	comp=Z,18µm,21.6s						
KRLC	**Kraliky**	**128.17**	**329**	*e*PKPDF	**PKPdf**	**18 50 10.7**	**+0.3**
KRLC				*e*PP	**PP**	**18 52 21.2**	**+7.6**
KRLC				*e*SKS	PKSab	18 53 27.5	-1.8
KRLC				*e*SS	SS	19 09 38.6	+11
KRLC				AMS	AMS	19 44 30.0	
	comp=Z,18µm,21.6s						
CHVC	**Chvalec**	**128.21**	**330**	*e*PKPDF	**PKiKP**	**18 50 11.3**	**+0.2**
CHVC				*e*PP	PP	18 52 22.7	+9.0
CHVC				*e*SKS	PKSab	18 53 28.6	-0.8
CHVC				*e*SS	SS	19 09 35.1	+7.0
CHVC				AMS	AMS	19 45 20.0	
	comp=Z,32µm,20.4s						
DPC	**Dobruska-Polom**	**128.23**	**330**	*e*PKIKP	**PKiKP**	**18 50 10.9**	**-0.3**
DPC				*e*		18 52 20.8	
DPC				*e*SS	SS	19 09 31.1	+2.7
DPC				MLR	MLR		
	comp=Z,31µm,23.2s						
DPC	**Dobruska-Polom**	**128.23**	**330**	*e*PKPDF	**PKiKP**	**18 50 10.9**	**-0.3**
DPC				*e*PP	**PP**	**18 52 20.8**	**+6.9**
DPC				*e*SKS	PKSab	18 53 28.7	-0.8
DPC				*e*SS	SS	19 09 31.1	+2.7
DPC				AMS	AMS	19 44 20.0	
	comp=Z,31µm,23.2s						
KOLL	**Kolacno**	**128.24**	**327**	*e*PKP	**PKiKP**	**18 50 11.1**	**-0.1**
BRRC	**Barranca, Sant**	**128.35**	**88**	*e*P	**PKPdf**	**18 50 04.7**	**-7.1**
BSEG	**Bad Segeberg**	**128.41**	**337**	*e*PKPdf	**PKiKP**	**18 50 11.6**	**+0.3**
	baz=45,slow=1.9						
MDVR	**Moldovita**	**128.41**	**321**	⇓P	**PKPdf**	**18 50 10.9**	**-0.1**
JAVC	**Velka Javorina**	**128.46**	**328**	*e*PKP	**PKiKP**	**18 50 12.0**	**+0.3**
VTS	**Vitosha**	**128.48**	**318**	⇑P	**PKPdf**	**18 50 11.3**	**-0.2**
VTS	**Vitosha**	**128.48**	**318**	PKIKP	**PKPdf**	**18 50 10.5**	**-0.9**
VTS	**Vitosha**	**128.48**	**318**	PKPdf	**PKPdf**	**18 50 10.5**	**-0.9**
SRO	**Srobarova**	**128.74**	**326**	*e*PKIKP	**PKiKP**	**18 50 12.5**	**+0.3**
SRO	**Srobarova**	**128.74**	**326**	*e*PKP	**PKiKP**	**18 50 12.5**	**+0.3**
VRAC	**Vranov**	**128.75**	**329**	⇑P	**PKiKP**	**18 50 11.9**	**-0.3**
VRAC	**Vranov**	**128.75**	**329**	⇑PKIKP	**PKiKP**	**18 50 11.9**	**-0.3**
VRAC	**Vranov**	**128.75**	**329**	*e*PKP	**PKPdf**	**18 50 11.1**	**-0.4**
SMOL	**Smolenice**	**128.80**	**328**	*e*PKIKP	**PKiKP**	**18 50 12.4**	**+0.1**
SMOL	**Smolenice**	**128.80**	**328**	*e*PKP	**PKiKP**	**18 50 12.4**	**+0.1**
BARC	**Barichara**	**128.82**	**89**	*e*P	**PKPdf**	**18 50 09.9**	**-3.0**
ITQB	**Itaqui**	**128.84**	**140**	PKPdf	**PKPdf**	**18 50 12.4**	**+0.1**
RUSC	**La Rusia**	**128.84**	**90**	*e*P	**PKPdf**	**18 50 09.9**	**-3.4**
OCAC	**Ocana**	**128.84**	**87**	*e*P	**PKPdf**	**18 50 08.2**	**-4.7**
MODS	**Modra-Piesok**	**128.97**	**327**	*e*PKIKP	**PKPdf**	**18 50 12.0**	**0.0**
MODS				*e*		18 52 20.8	
MODS				*e*SS	SS	19 09 38.8	+1.2
MODS	**Modra-Piesok**	**128.97**	**327**	*e*PKP	**PKPdf**	**18 50 12.0**	**0.0**
MODS				*e*PP	**PP**	**18 52 20.8**	**+2.0**
MODS				*e*SS	SS	19 09 38.8	+1.2
PVCC	**Panska Ves**	**128.97**	**331**	*e*PKIKP	**PKiKP**	**18 50 12.5**	**0.0**
PVCC				*e*		18 52 28.0	
PVCC				*e*SS	SS	19 09 36.7	-0.6
PVCC				MLR	MLR		
	comp=Z,27µm,19.7s						
PVCC	**Panska Ves**	**128.97**	**331**	*e*PKPDF	**PKiKP**	**18 50 12.5**	**0.0**
PVCC				*e*PP	PP	18 52 28.0	+9.4
PVCC				*e*SKS	PKSab	18 53 31.8	-0.9
PVCC				*e*SS	SS	19 09 36.7	-0.6
PVCC				AMS	AMS	19 49 00.0	
	comp=Z,27µm,19.7s						
BOVS	**Bovan**	**128.99**	**320**	⇓P	**PKPdf**	**18 50 11.4**	**-0.7**
KRUC	**Moravsky**	**129.00**	**329**	*e*PKP	**PKPdf**	**18 50 11.4**	**-0.6**
LL6C	**La Loma 6 Bece**	**129.00**	**85**	*e*P	**PKPdf**	**18 50 09.8**	**-3.1**
BRG	**Berggiesshubel**	**129.03**	**332**	*e*PKPdf	**PKiKP**	**18 50 12.8**	**+0.2**
	baz=45,slow=1.9						
BRG	**Berggiesshubel**	**129.03**	**332**	*e*PKP	**PKPdf**	**18 50 12.3**	**+0.3**
BRG				Amp		18 50 15.8	
	comp=Z,172nm,1.4s						
BRG	**Berggiesshubel**	**129.03**	**332**	P	PKiKP	18 50 24.4	+12
BRG				Amp		18 50 27.2	
	comp=Z,89nm,1.2s						
BRG	**Berggiesshubel**	**129.03**	**332**	PP	PP	18 52 25.0	+6.0
BRG	**Berggiesshubel**	**129.03**	**332**	SKS	**SKSdf**	**18 57 29.0**	**+5.3**
BRG	**Berggiesshubel**	**129.03**	**332**	SS	SS	19 09 42.0	+3.9
BRG				Amp		19 46 24.0	
	comp=Z,31nm,20.1s						
BRG				Amp		19 46 26.0	
	comp=E,13nm,18.9s						
BRG				Amp		19 46 27.0	
	comp=N,20nm,23.0s						
CLL	**Collm**	**129.17**	**333**	PKIKP	**PKPdf**	**18 50 11.5**	**-0.7**
CLL				MLR	MLR		
	comp=Z,38µm,20.0s						
CLL	**Collm**	**129.17**	**333**	*e*Pdif	**Pdif**	**18 47 01.0**	**+2.1**
CLL				*i* PKPdf	**PKPdf**	**18 50 11.9**	**-0.3**
	comp=Z,106nm,1.5s						
CLL				*i*		18 50 23.9	
CLL				*e*PP	**PP**	**18 52 24.0**	**+4.1**
CLL				*e*PP	**PP**	**18 52 24.0**	**+4.1**
	comp=E,2µm,18.3s						
CLL				*e*PP	**PP**	**18 52 24.0**	**+4.1**
	comp=Z,3µm,14.4s						
CLL				*e*		18 53 32.0	
CLL				*e*PKSdf	PKSdf	18 53 48.0	-0.6
CLL				*e*PPP	PPP	18 55 03.0	
CLL				*e*SKSac	**SKSac**	**18 57 24.0**	**+3.4**
CLL				*e*PS	PS	19 02 24.0	-5.6
CLL				*e*PPS	PPS	19 04 06.0	
CLL				*e*SS	**SS**	**19 09 40.0**	**+0.3**
CLL				*e*		19 12 18.0	
CLL				Lmax		19 49 00.0	
CLL				LmV		19 49 00.0	
	comp=Z,38µm,21.4s						
CLL	**Collm**	**129.17**	**333**	*e*PKPdf	**PKiKP**	**18 50 12.8**	**-0.1**
	baz=45,slow=1.9						
CLL	**Collm**	**129.17**	**333**	PKPdf	**PKPdf**	**18 50 11.5**	**-0.7**
CLL				IAMs_20	IAMs_20	19 49 31.9	
	comp=Z,38µm,20.0s						
FLTG	**Flechtingen**	**129.22**	**335**	*e*PKPdf	**PKiKP**	**18 50 12.9**	**-0.1**
	baz=45,slow=1.9						
HAL	**Halifax**	**129.24**	**38**	PKIKP	**PKPdf**	**18 50 11.7**	**-0.9**
HAL	**Halifax**	**129.24**	**38**	PKPdf	**PKPdf**	**18 50 11.7**	**-0.9**
FBE	**Freiberg**	**129.27**	**332**	*e*PKPdf	**PKiKP**	**18 50 13.5**	**+0.3**
	baz=45,slow=1.9						
TREC	**Trest**	**129.32**	**329**	*e*PKIKP	**PKiKP**	**18 50 13.3**	**0.0**
TREC				*e*		18 52 24.6	
TREC				MLR	MLR		
	comp=Z,27µm,21.6s						
TREC	**Trest**	**129.32**	**329**	*e*PKPDF	**PKiKP**	**18 50 13.3**	**0.0**
TREC				*e*PP	**PP**	**18 52 24.6**	**+3.5**
TREC				*e*SKS	SKPab	18 53 33.5	+0.2
TREC				*e*SS	**SS**	**19 09 51.2**	**+9.4**
TREC				AMS	AMS	19 45 00.0	
	comp=Z,27µm,21.6s						
PRA	**Prague**	**129.33**	**331**	*e*PP	PP	18 52 27.3	+6.2
PRA				*e*SKS	SKPbc	18 53 35.3	+1.1
PRA				*e*SS	SS	19 09 53.9	+12
PRA				AMS	AMS	19 45 50.0	
	comp=Z,28µm,21.3s						
PRU	**Pruhonice**	**129.34**	**331**	*e*PKIKP	**PKiKP**	**18 50 13.1**	**-0.2**
PRU				*e*		18 52 23.9	
PRU				*e*SS	SS	19 09 39.8	-2.1
PRU				MLR	MLR		
	comp=Z,34µm,20.4s						
PRU	**Pruhonice**	**129.34**	**331**	*e*PKPDF	**PKiKP**	**18 50 13.1**	**-0.2**
PRU				*e*PP	**PP**	**18 52 23.9**	**+2.8**
PRU				*e*SKS	SKPbc	18 53 35.7	+1.4
PRU				*e*SS	**SS**	**19 09 39.8**	**-2.1**
PRU				*e*SS	SS	19 09 49.9	+8.0
PRU				AMS	AMS	19 45 50.0	
	comp=Z,34µm,20.4s						
FRGS	**Fruska Gora**	**129.37**	**323**	⇓P	**PKPdf**	**18 50 12.9**	**+0.1**
FRGS	**Fruska Gora**	**129.37**	**323**	*e*P	**PKPdf**	**18 50 11.7**	**-1.1**
PAMC	**Pamplona, Colo**	**129.38**	**88**	*e*P	**PKPdf**	**18 50 08.2**	**-6.1**
SANT	**Santorini**	**129.44**	**310**	⇑P	**PKPdf**	**18 50 12.7**	**-0.6**
MORH	**Mrgy, Hungar**	**129.47**	**325**	⇑P	**PKPdf**	**18 50 13.1**	**+0.2**
MORH	**Mrgy, Hungar**	**129.47**	**325**	*e*P	**PKPdf**	**18 50 12.2**	**-0.7**
PTGC	**Puerto Gaitan,**	**129.56**	**92**	*e*P	**PKPdf**	**18 50 09.9**	**-4.1**
NRDL	**Niedersach Rie**	**129.57**	**335**	*e*PKPdf	**PKiKP**	**18 50 14.0**	**+0.4**
	baz=45,slow=1.9						
ASSE	**Asse, Remlinge**	**129.60**	**335**	*e*PKPdf	**PKiKP**	**18 50 13.9**	**+0.2**
	baz=45,slow=1.9						
RETH	**Rethem/Aller,**	**129.69**	**336**	*e*PKPdf	**PKiKP**	**18 50 14.2**	**+0.3**
	baz=45,slow=1.9						
NEUB	**Neuenburg**	**129.79**	**333**	*e*PKPdf	**PKiKP**	**18 50 14.2**	**0.0**
	baz=45,slow=1.9						
DIVS	**Divibare**	**129.82**	**322**	*e*P	**PKPdf**	**18 50 12.9**	**-0.9**
MDO	**Dochfour**	**129.86**	**348**	*e*P	**PKiKP**	**18 50 14.6**	**+0.4**
CLZ	**Clausthal**	**129.94**	**335**	*e*PKPdf	**PKiKP**	**18 50 14.7**	**+0.2**
	baz=45,slow=1.9						
CONA	**Conrad Observa**	**129.99**	**328**	*i* P	**PKiKP**	**18 50 14.7**	**-0.1**
	comp=Z,79nm,1.4s,SNR=22						
TANN	**Tannenbergstha**	**130.03**	**332**	*e*PKPdf	**PKiKP**	**18 50 14.8**	**0.0**
	baz=45,slow=1.9						
TBTG	**Tabatinga, AM**	**130.05**	**103**	*e*P	**PKPdf**	**18 50 14.1**	**-0.9**
GBN	**Guysborough**	**130.06**	**36**	PKPdf	**PKPdf**	**18 50 13.6**	**-0.4**
WERD	**Werda**	**130.08**	**332**	*e*PKPdf	**PKiKP**	**18 50 14.8**	**0.0**
	baz=45,slow=1.9						
PLN	**Plauen**	**130.12**	**332**	*e*PKPdf	**PKiKP**	**18 50 14.9**	**0.0**
	baz=45,slow=1.9						
GUNZ	**Gunzen**	**130.13**	**332**	*e*PKPdf	**PKiKP**	**18 50 15.1**	**+0.1**
	baz=45,slow=1.9						
WERN	**Wernitzgruen**	**130.16**	**332**	*e*PKPdf	**PKiKP**	**18 50 15.2**	**+0.1**
	baz=45,slow=1.9						

NKC	**Novy Kostel**	**130.16**	**332**	ePKIKP	**PKiKP**	**18 50 15.2**	**+0.2**
NKC				e		18 52 35.7	
NKC				eSS	SS	19 09 55.1	+3.0
NKC				MLR	MLR		
	comp=Z,36µm,23.5s						
NKC	**Novy Kostel**	**130.16**	**332**	ePKPDF	**PKiKP**	**18 50 15.2**	**+0.2**
NKC				ePP	PP	18 52 35.7	+9.2
NKC				eSKS	**SKPbc**	**18 53 43.6**	**+6.4**
NKC				eSS	**SS**	**19 09 55.1**	**+3.0**
NKC				AMS	AMS	19 47 40.0	
	comp=Z,36µm,23.5s						
TAMC	**Tame, Arauca**	**130.18**	**89**	eP	**PKPdf**	**18 50 15.6**	**+0.3**
PGA4	**Puerto Gaitan**	**130.22**	**93**	eP	**PKPdf**	**18 50 11.1**	**-4.2**
CKRC	**Cesky Krumlov**	**130.22**	**330**	ePKPDF	**PKPdf**	**18 50 14.5**	**+0.2**
CKRC				ePP	**PP**	**18 52 32.9**	**+6.0**
CKRC				eSKS	**SKPbc**	**18 53 43.1**	**+5.7**
CKRC				eSS	SS	19 09 33.8	-19
CKRC				AMS	AMS	19 46 20.0	
	comp=Z,35µm,21.3s						
IDI	**Anoyia**	**130.26**	**309**	PKP	**PKPdf**	**18 50 14.5**	**-0.4**
	comp=Z,41nm,1.2s						
MOX	**Moxa**	**130.26**	**333**	ePKPdf	**PKiKP**	**18 50 15.2**	**0.0**
	baz=45,slow=1.9						
MOX				eL	L	19 55 22.8	
	comp=Z,20µm,19.2s						
BBLS	**Lazići**	**130.30**	**322**	eP	**PKPdf**	**18 50 14.1**	**-0.6**
GTTG	**Gottingen**	**130.33**	**335**	ePKPdf	**PKiKP**	**18 50 15.4**	**+0.2**
	baz=45,slow=1.9						
KHC	**Kasperske Hory**	**130.37**	**330**	ePKIKP	**PKPdf**	**18 50 14.8**	**+0.1**
KHC				e		18 52 33.2	
KHC				MLR	MLR		
	comp=Z,45µm,22.0s						
KHC	**Kasperske Hory**	**130.37**	**330**	ePKPDF	**PKPdf**	**18 50 14.8**	**+0.1**
KHC				ePP	**PP**	**18 52 33.2**	**+5.3**
KHC				eSKS	**SKPbc**	**18 53 43.3**	**+5.3**
KHC				AMS	AMS	19 47 00.0	
	comp=Z,45µm,22.0s						
RUDO	**Rudo**	**130.46**	**321**	eP	**PKPdf**	**18 50 11.4**	**-3.5**
HAPS	**Han Pijesak,BI**	**130.46**	**322**	eP	**PKPdf**	**18 50 13.9**	**-1.2**
MANZ	**Manzenberg**	**130.49**	**332**	ePKPdf	**PKiKP**	**18 50 15.7**	**0.0**
	baz=45,slow=1.9						
GEC2	**GERESS Array S**	**130.50**	**330**	ePKPdf	**PKiKP**	**18 50 15.6**	**-0.2**
	baz=45,slow=1.9						
GEC2	**GERESS Array S**	**130.50**	**330**		**PKPdf**	**18 50 14.5**	**-0.5**
GERES	**GERESS Array B**	**130.50**	**330**	PKP	**PKPdf**	**18 50 14.8**	**-0.1**
	comp=Z,9.7nm,0.7s,baz=80,slow=1.5,SNR=43						
GERES	**GERESS Array B**	**130.50**	**330**	PKIKP	**PKPdf**	**18 50 14.6**	**-0.4**
GERES	**GERESS Array B**	**130.50**	**330**	PKPdf	**PKPdf**	**18 50 14.6**	**-0.4**
FNA	**Florina**	**130.56**	**317**	PKIKP	**PKPdf**	**18 50 14.7**	**-0.6**
FNA	**Florina**	**130.56**	**317**	PKPdf	**PKPdf**	**18 50 14.7**	**-0.6**
ARSA	**Arzberg**	**130.59**	**327**	i P	**PKiKP**	**18 50 16.4**	**+0.5**
	comp=Z,30nm,1.6s,SNR=7.5						
CPUP	**Villa Florida**	**130.60**	**136**	PKP	**PKPdf**	**18 50 14.8**	**-0.9**
	comp=Z,84nm,1.1s,baz=249,slow=1.9,SNR=37						
CPUP				PKKP	**PKKPdf**	**19 00 11.1**	**-5.1**
	comp=Z,5.2nm,1.0s,baz=342,slow=2.8,SNR=3.4						
CPUP	**Villa Florida**	**130.60**	**136**	PKPdf	**PKPdf**	**18 50 15.9**	**+0.2**
ROTZ	**Rotzenmuhle**	**130.60**	**332**	ePKPdf	**PKiKP**	**18 50 15.8**	**-0.1**
	baz=45,slow=1.9						
IBBN	**Ibbenburen**	**130.65**	**337**	ePKPdf	**PKiKP**	**18 50 16.0**	**+0.1**
	baz=45,slow=1.9						
KOGS	**Kog**	**130.68**	**326**	ePKPdf	**PKPdf**	**18 50 14.7**	**-0.6**
KOGS				ePP	**PP**	**18 52 34.2**	**+4.2**
KOGS				e		18 53 39.2	
KOGS				eSS	SS	19 10 03.1	+4.4
KOGS				i		19 12 21.0	
KOGS				e		19 34 22.6	
AGG	**Agios Georgios**	**130.69**	**315**	PKIKP	**PKPdf**	**18 50 14.4**	**-1.2**
AGG	**Agios Georgios**	**130.69**	**315**	PKPdf	**PKPdf**	**18 50 14.4**	**-1.2**
WET	**Wettzell**	**130.71**	**331**	ePKPdf	**PKiKP**	**18 50 16.1**	**0.0**
	baz=45,slow=1.9						
INVG	**Invergeldie, C**	**130.73**	**347**	eP	**PKPdf**	**18 50 15.3**	**+0.3**
WIN	**Windhoek**	**130.83**	**230**	PKIKP	**PKPdf**	**18 50 14.6**	**-2.0**
WIN	**Windhoek**	**130.83**	**230**		**PKPdf**	**18 50 14.6**	**-2.0**
WIN	**Windhoek**	**130.83**	**230**	i P	**PKiKP**	**18 50 18.0**	**+0.6**
UBBA	**Unterbreizbach**	**130.85**	**334**	ePKPdf	**PKiKP**	**18 50 16.3**	**+0.1**
	baz=45,slow=1.9						
MOA	**Molln**	**130.87**	**329**	i P	**PKiKP**	**18 50 16.1**	**-0.4**
	comp=Z,31nm,1.6s,SNR=6.6						
ESY	**Stoneypath**	**130.87**	**346**	eP	**PKPdf**	**18 50 14.7**	**-0.6**
SDDR	**Presa de Saban**	**130.87**	**73**	eP	**PKPdf**	**18 50 10.4**	**-6.0**
SDDR	**Presa de Saban**	**130.87**	**73**	IAMs_20	IAMs_20	19 44 16.3	
	comp=Z,40µm,18.0s						
UPM	**Unac-Piva**	**130.96**	**321**	eP	**PKPdf**	**18 50 15.8**	**-0.3**
GRA1	**Grafenberg Arr**	**131.11**	**332**	IAMs_20	IAMs_20	19 48 17.3	
	comp=Z,32µm,22.0s						
GRF	**Grafenberg Arr**	**131.11**	**332**	ePKPdf	**PKiKP**	**18 50 16.9**	**-0.1**
	baz=45,slow=1.9						
GRF				eL	L	19 48 17.5	
	comp=Z,31µm,21.9s						
GRFO	**Grafenberg**	**131.11**	**332**	IAMs_20	IAMs_20	19 48 17.3	
	comp=Z,32µm,21.0s						
PDG	**Podgorica**	**131.15**	**320**	⇓P	**PKPdf**	**18 50 14.6**	**-1.6**
PDG	**Podgorica**	**131.15**	**320**	PKPdf	**PKPdf**	**18 50 13.8**	**-2.5**
BLY	**Banja Luka**	**131.15**	**324**	eP	**PKPdf**	**18 50 14.5**	**-1.7**
MRAK	**Mrakovica**	**131.16**	**324**	eP	**PKPdf**	**18 50 15.3**	**-1.0**
PERS	**Pernice**	**131.19**	**327**	ePKPdf	**PKPdf**	**18 50 15.5**	**-0.8**
PERS				e		18 53 42.8	
SOKA	**Soboth**	**131.21**	**327**	i P	**PKPdf**	**18 50 15.3**	**-1.1**
	comp=Z,79nm,1.4s,SNR=36						
SOCV	**Socops**	**131.28**	**87**	eP	**PKPdf**	**18 50 15.4**	**-2.0**
TIR	**Tirane**	**131.30**	**318**	⇑P	**PKiKP**	**18 50 17.5**	**0.0**
TIR	**Tirane**	**131.30**	**318**	⇑PKIKP	**PKiKP**	**18 50 17.5**	**0.0**
DRME	**Dracevica, Mon**	**131.32**	**320**	eP	**PKiKP**	**18 50 17.7**	**+0.2**
BRY	**Bratogost**	**131.35**	**321**	eP	**PKPdf**	**18 50 13.2**	**-3.6**
CRES	**Cresnjev**	**131.50**	**326**	eP	**PKPdf**	**18 50 16.4**	**-0.5**
BUG	**Bochum--Univer**	**131.51**	**336**	ePKPdf	**PKiKP**	**18 50 17.4**	**-0.2**
	baz=45,slow=1.9						
SDV	**Santo Domingo**	**131.54**	**86**	PKP	**PKPdf**	**18 50 17.8**	**-0.3**
	comp=Z,233nm,1.1s,baz=260,slow=0.8,SNR=51						
SDV	**Santo Domingo**	**131.54**	**86**	eP	**PKPdf**	**18 50 17.0**	**-1.0**
OBKA	**Obir**	**131.57**	**327**	i P	**PKPdf**	**18 50 16.8**	**-0.2**
	comp=Z,37nm,1.4s,SNR=10						
RJOB	**Jochberg**	**131.69**	**329**	ePKPdf	**PKPdf**	**18 50 17.6**	**+0.3**
	baz=45,slow=1.9						
DBRK	**Dubrovnik**	**131.72**	**321**	i P	**PKPdf**	**18 50 14.5**	**-2.8**
ETMB	**Extrema**	**131.77**	**112**		**PKPdf**	**18 50 17.7**	**-0.5**
KBA	**Koelnbreinsper**	**131.84**	**328**	i P	**PKiKP**	**18 50 18.7**	**0.0**
	comp=Z,41nm,1.3s,SNR=5.9						
LJU	**Ljubljana**	**131.88**	**327**	eP	**PKPdf**	**18 50 16.7**	**-0.9**
LJU	**Ljubljana**	**131.88**	**327**	ePKPdf	**PKiKP**	**18 50 18.1**	**-0.5**
LJU				e		18 53 45.3	
LJU				eSS	SS	19 10 23.1	+10
LJU				e		19 45 19.5	
STON	**Ston**	**131.89**	**321**	eP	**PKPdf**	**18 50 16.1**	**-1.5**
STON	**Ston**	**131.89**	**321**	i P	**PKPdf**	**18 50 13.1**	**-4.5**
RICI	**Ricice**	**131.89**	**322**	i P	PKPpre	18 50 08.8	
TNS	**Taunus Mts**	**131.96**	**334**	ePKPdf	**PKiKP**	**18 50 18.6**	**0.0**
	baz=45,slow=1.9						
MYKA	**Terra Mystica**	**131.98**	**328**	i P	**PKiKP**	**18 50 19.3**	**+0.4**
	comp=Z,24nm,1.1s,SNR=8.9						
CEY	**Cerknica**	**132.12**	**326**	eP	**PKPdf**	**18 50 16.1**	**-2.0**
FUR	**Furstenfeldbru**	**132.15**	**331**	ePKPdf	**PKiKP**	**18 50 18.8**	**-0.3**
	baz=45,slow=1.9						
AHRW	**Bad Neuenahr-A**	**132.29**	**336**	ePKPdf	**PKiKP**	**18 50 19.2**	**0.0**
	baz=45,slow=1.9						
TSUM	**Tsumeb**	**132.33**	**234**	PKPdf	**PKPdf**	**18 50 18.0**	**-1.3**
TSUM	**Tsumeb**	**132.33**	**234**	i P	**PKiKP**	**18 50 22.8**	**+2.3**
RIY	**Rijeka**	**132.35**	**326**	eP	**PKiKP**	**18 50 19.3**	**-0.2**
ABTA	**Abfaltersbach**	**132.49**	**329**	eP	**PKiKP**	**18 50 20.6**	**+0.7**
	comp=Z,62nm,1.6s						
ELOV	**Elorza**	**132.52**	**89**	eP	**PKPdf**	**18 50 16.5**	**-3.1**
WATA	**Walderalm**	**132.57**	**330**	i P	**PKPdf**	**18 50 18.7**	**-0.3**
	comp=Z,6.8nm,0.7s,SNR=11						
WATA				eP	**pPKPdf**	**18 50 21.3**	**-1.0**
	comp=Z,74nm,1.3s						
WTTA	**Wattenberg**	**132.59**	**330**	i P	**PKPdf**	**18 50 18.3**	**-0.8**
	comp=Z,113nm,1.3s,SNR=14						
BTNL	**Ternell**	**132.63**	**336**	dx	**PKPdf**	**18 50 21.1**	**+2.2**
MEM	**Membach**	**132.66**	**336**	dx	**PKPdf**	**18 50 21.3**	**+2.4**
ZIRJ	**Zirje**	**132.69**	**323**	i P	PKPpre	18 50 10.6	
STU	**Stuttgart**	**132.70**	**333**	ePKPdf	**PKiKP**	**18 50 19.9**	**-0.3**
	baz=45,slow=1.9						
STAL	**STALIGIAL**	**132.71**	**328**		**PKPdf**	**18 50 17.8**	**-1.3**
MOTA	**Moosalm**	**132.80**	**330**	eP	**PKPdf**	**18 50 17.6**	**-1.9**
	comp=Z,8.7nm,1.0s						
MOTA				i P	**PKiKP**	**18 50 21.4**	**+0.8**
	comp=Z,66nm,1.1s,SNR=12						
SQTA	**Sankt Quirin**	**132.83**	**330**	i P	**PKiKP**	**18 50 21.6**	**+1.0**
	comp=Z,67nm,1.2s,SNR=16						
BHOU	**Houvegnez**	**132.86**	**336**	dx	**PKPdf**	**18 50 21.8**	**+2.5**
RETA	**Reutte**	**132.87**	**330**	i P	**PKPdf**	**18 50 19.6**	**+0.1**
	comp=Z,42nm,1.6s,SNR=7.7						
UBR	**Ueberruh**	**133.05**	**331**	ePKPdf	**PKPdf**	**18 50 20.3**	**+0.5**
	baz=45,slow=1.9						
BCLA	**Clavier**	**133.09**	**337**	dx	**PKPdf**	**18 50 19.1**	**-0.5**
FETA	**Feichten**	**133.21**	**330**	eP	**PKPdf**	**18 50 16.0**	**-4.3**
	comp=Z,3.1nm,1.0s						
FETA				i P	**PKiKP**	**18 50 19.8**	**-1.6**
	comp=Z,49nm,1.2s,SNR=8.2						
HATO	**Hato, Curacao**	**133.34**	**82**	IAMs_20	IAMs_20	19 41 08.2	
	comp=Z,26µm,20.0s						
WLF	**Walferdange**	**133.34**	**335**	dx	**PKPdf**	**18 50 21.9**	**+1.7**
WLF	**Walferdange**	**133.34**	**335**	ePKPdf	**PKPdf**	**18 50 21.8**	**+1.7**
	baz=45,slow=1.9						
WLF	**Walferdange**	**133.34**	**335**	IAMs_20	IAMs_20	19 49 20.1	
	comp=Z,30µm,21.0s						
CWF	**Charnwood Fore**	**133.38**	**343**	eP	**PKPdf**	**18 50 19.5**	**-0.6**
BMRD	**Maredsous**	**133.39**	**337**	dx	**PKPdf**	**18 50 23.0**	**+2.7**
CTI	**Castel Tesino**	**133.40**	**328**	PKIKP	**PKPdf**	**18 50 17.9**	**-2.7**
CTI	**Castel Tesino**	**133.40**	**328**	PKPdf	**PKPdf**	**18 50 17.9**	**-2.7**
BFO	**Black Forest**	**133.41**	**333**	ePKPdf	**PKiKP**	**18 50 21.1**	**-0.5**
	baz=45,slow=1.9						
DAVA	**Damuels**	**133.44**	**331**	eP	**PKiKP**	**18 50 23.1**	**+1.2**
	comp=Z,37nm,1.2s						
DOU	**Dourbes**	**133.62**	**337**	dx	**PKPdf**	**18 50 23.5**	**+2.8**
MATE	**Matera**	**133.71**	**319**	⇓P	**PKPdf**	**18 50 20.6**	**-0.6**
SGRT	**San Giovanni R**	**133.71**	**321**	PKPdf	**PKPdf**	**18 50 19.9**	**-1.4**
FOEL	**Foel Wylfa**	**133.76**	**345**	eP	**PKiKP**	**18 50 22.5**	**+0.3**
BBSR	**BB Station**	**133.84**	**53**	IAMs_20	IAMs_20	19 43 41.6	
	comp=Z,36µm,21.0s						
TEOL	**Teolo**	**133.85**	**328**	PKPdf	**PKPdf**	**18 50 19.8**	**-1.5**
HLM1	**Long Mynd**	**134.01**	**344**	eP	**PKPdf**	**18 50 21.8**	**+0.4**
ECH	**Echery**	**134.02**	**333**	IAMs_20	IAMs_20	19 50 57.2	
	comp=Z,28µm,21.0s						
TUE	**Stuetta**	**134.27**	**330**		PKPpre	18 50 12.6	
TUE				IAMs_20	IAMs_20	19 54 16.2	
	comp=Z,29µm,19.0s						
MCH1	**Michaelchurch**	**134.51**	**344**	eP	**PKiKP**	**18 50 23.8**	**+0.1**
NRCA	**Norcia**	**134.66**	**324**		**PKPdf**	**18 50 21.5**	**-1.5**
MURB	**Monte Urbino**	**134.73**	**325**		PKPpre	18 50 10.4	
AQU	**L'Aquila**	**134.78**	**323**	PKIKP	**PKPdf**	**18 50 19.7**	**-3.5**
AQU				MLR	MLR		
	comp=Z,35µm,21.0s						
AQU	**L'Aquila**	**134.78**	**323**	eP	**PKPdf**	**18 50 22.0**	**-1.2**
AQU	**L'Aquila**	**134.78**	**323**	PKPdf	**PKPdf**	**18 50 19.7**	**-3.5**
AQU				IAMs_20	IAMs_20	19 50 17.2	
	comp=Z,35µm,21.0s						
PAOL	**Paolisi**	**134.85**	**321**		**PKPdf**	**18 50 21.0**	**-2.3**
SAML	**Samuel**	**134.87**	**112**	PKHKP	PKPpre	18 50 09.9	
SAML	**Samuel**	**134.87**	**112**		PKPpre	18 50 09.9	
CRPR	**Cabo Rojo, PR**	**134.91**	**74**	PKPdf	**PKPdf**	**18 50 20.4**	**-3.6**
AOPR	**Arecibo Observ**	**135.21**	**73**		PKPpre	18 50 12.2	
OSSC	**Osservatorio P**	**135.28**	**326**		PKPpre	18 50 14.3	
VLC	**Villacollemand**	**135.33**	**327**	IAMs_20	IAMs_20	19 50 31.4	
	comp=Z,33µm,22.0s						
SENIN	**Lac Senin/Sane**	**135.33**	**332**		**PKPdf**	**18 50 19.7**	**-4.6**
OBIP	**Obispado Ponce**	**135.38**	**73**		**PKPdf**	**18 50 21.7**	**-3.2**
CELP	**Cerrillos**	**135.40**	**73**	PKPdf	**PKPdf**	**18 50 23.1**	**-1.8**
AQDB	**Aquidauana**	**135.44**	**131**	PKPdf	**PKPdf**	**18 50 22.0**	**-3.0**
PTLB	**Pontes e Lacer**	**135.54**	**123**		PKPpre	18 50 11.6	
SJG	**San Juan**	**135.81**	**73**	PKhKP	PKPpre	18 50 16.4	
	comp=Z,33nm,0.8s,baz=146,slow=0.5,SNR=6.1						
SJG				PKP	**PKPdf**	**18 50 24.6**	**-1.0**
	comp=Z,50nm,0.8s,baz=283,slow=3.1,SNR=17						
SJG	**San Juan**	**135.81**	**73**	PKIKP	**PKPdf**	**18 50 23.8**	**-1.9**
SJG				MLR	MLR		
	comp=Z,35µm,20.0s						
SJG	**San Juan**	**135.81**	**73**		**PKPdf**	**18 50 23.8**	**-1.9**
SJG	**San Juan**	**135.81**	**73**	IAMs_20	IAMs_20	19 43 54.0	
	comp=Z,35µm,20.0s						
VILB	**Vilhena**	**135.85**	**119**		**PKPdf**	**18 50 23.0**	**-2.9**
CASP	**Castiglione de**	**135.97**	**325**		PKPpre	18 50 11.7	
CLF	**Chambon-Foret**	**136.20**	**337**	IAMs_20	IAMs_20	19 53 36.6	
	comp=Z,29µm,21.0s						
BNI	**Bardonecchia**	**136.59**	**331**	IAMs_20	IAMs_20	19 54 21.5	
	comp=Z,22µm,20.0s						
STVI	**Saint Thomas**	**136.91**	**73**		**PKPdf**	**18 50 25.5**	**-2.2**
RAFF	**Raffo Rosso**	**137.07**	**317**		PKPpre	18 50 14.2	
CDVI	**St. Croix**	**137.15**	**74**		PKPpre	18 50 14.2	
PCRV	**Puerto La Cruz**	**137.52**	**85**	PKhKP	PKPpre	18 50 23.3	
	comp=Z,34nm,1.1s,baz=330,slow=4.2,SNR=4.0						
PCRV				SKKPbc	SKKPbc	19 03 01.5	+11
	comp=Z,19nm,1.0s,baz=2.4,slow=14,SNR=3.4						
CLTB	**Caltabellotta**	**137.65**	**318**	IAMs_20	IAMs_20	20 01 43.8	
	comp=Z,22µm,20.0s						
SABA	**Saba**	**138.61**	**74**	eP	PKPpre	18 50 21.5	
SABA	**Saba**	**138.61**	**74**	IAMs_20	IAMs_20	19 45 40.4	
	comp=Z,33µm,20.0s						
SMRT	**St. Maarten**	**138.72**	**73**	eP	PKPpre	18 50 18.6	
SMRT	**St. Maarten**	**138.72**	**73**	IAMs_20	IAMs_20	19 48 35.2	
	comp=Z,32µm,20.0s						
SEUS	**St. Eustatius**	**138.87**	**74**	eP	PKPpre	18 50 19.6	
VSL	**Villasalto**	**138.94**	**323**	PKPdf	**PKPdf**	**18 50 30.1**	**-0.8**
MACA	**Manacapuru-AM**	**139.17**	**105**		PKPpre	18 50 21.6	
ANWB	**Willy Bob**	**139.98**	**73**	IAMs_20	IAMs_20	19 46 12.8	
	comp=Z,27µm,21.0s						
TDBA	**Terre de Bas,**	**140.32**	**76**	eP	PKPpre	18 50 22.4	
GRGR	**Grenville**	**140.48**	**82**	PKPdf	**PKPdf**	**18 50 30.9**	**-3.5**
GRGR				IAMs_20	IAMs_20	19 47 11.5	
	comp=Z,36µm,20.0s						
PTGA	**Pitinga**	**140.53**	**102**	PKhKP	PKPpre	18 50 29.2	
	comp=Z,6.1nm,0.6s,baz=247,slow=4.0,SNR=13						
PTGA	**Pitinga**	**140.53**	**102**		PKPpre	18 50 25.9	
PTGA				IAMs_20	IAMs_20	19 47 31.4	
	comp=Z,29µm,20.0s						
GCMP	**Grenada, Carri**	**140.70**	**81**	eP	PKPpre	18 50 20.7	
BOAV	**Boa Vista**	**140.70**	**97**		PKPpre	18 50 26.7	
DLPL	**La Plaine**	**140.73**	**77**	eP	**PKPdf**	**18 50 33.8**	**-1.0**
SVB	**Belmont**	**140.84**	**80**	eP	PKPpre	18 50 23.2	
SVN	**Savane Anatole**	**140.85**	**78**		**PKPdf**	**18 50 31.3**	**-3.7**
SVN				IAMs_20	IAMs_20	19 51 22.0	
	comp=Z,27µm,20.0s						
FDF	**Fort de France**	**140.87**	**78**	PKHKP	PKPpre	18 50 26.0	
FDF				MLR	MLR		
	comp=Z,28µm,20.0s						
FDF	**Fort de France**	**140.87**	**78**	eP	PKPpre	18 50 27.0	
FDF	**Fort de France**	**140.87**	**78**		PKPpre	18 50 26.0	
FDF				IAMs_20	IAMs_20	19 51 22.7	
	comp=Z,29µm,20.0s						
BIM	**Bigot**	**140.96**	**78**	eP	PKPpre	18 50 25.4	
ILAM	**Ilet Lapin Mar**	**141.13**	**78**	eP	PKPpre	18 50 24.7	
MPOM	**Morne Pois Mar**	**141.17**	**78**		PKPpre	18 50 24.2	
KEST	**Kesra**	**141.26**	**318**	PKhKP	PKPpre	18 50 31.1	
	comp=Z,24nm,1.1s,baz=197,slow=3.0,SNR=6.0						
KEST	**Kesra**	**141.26**	**318**		PKPpre	18 50 28.0	
TOSP	**Speyside**	**141.58**	**83**	eP	PKPpre	18 50 26.9	
TOSP	**Speyside**	**141.58**	**83**		PKPpre	18 50 26.7	
BBGH	**Gun Hill**	**142.50**	**80**	eP	PKPpre	18 50 28.9	
BDFB	**Brasilia**	**144.14**	**133**	PKP	PKPbc	18 50 39.3	+0.3
	comp=Z,282nm,1.0s,baz=225,slow=1.1,SNR=86						
BDFB	**Brasilia**	**144.14**	**133**	PKIKP	**PKPab**	**18 50 38.3**	**-0.3**
BDFB	**Brasilia**	**144.14**	**133**	PKPdf	**PKPab**	**18 50 38.3**	**-0.3**
PBRG	**Braganca**	**144.80**	**341**	ePKP	**PKPab**	**18 50 39.7**	**-0.5**
UCM	**Universidad Co**	**144.81**	**335**	PKP	**PKPab**	**18 50 38.2**	**-2.1**
UCM				SS	SS	19 12 45.5	-0.3
PGAV	**Gavieira, Arco**	**145.13**	**343**	ePKP	**PKPbc**	**18 50 41.2**	**-0.3**
PGAV	**Gavieira, Arco**	**145.13**	**343**	eSS	SS	19 12 50.4	+1.2
PGAV	**Gavieira, Arco**	**145.13**	**343**	eLQ	LQ	19 31 03.0	
PGAV	**Gavieira, Arco**	**145.13**	**343**	eLR	LR	19 43 39.6	
	comp=Z,28µm,20.0s						
PCAB	**Cabril**	**145.29**	**342**	ePKP	**PKPbc**	**18 50 41.4**	**-0.5**
MVO	**Moncorvo**	**145.47**	**340**	ePKP	**PKPdf**	**18 50 42.6**	**0.0**
MVO	**Moncorvo**	**145.47**	**340**	eSS	SS	19 12 44.1	-9.0
MVO	**Moncorvo**	**145.47**	**340**	eLQ	LQ	19 33 18.7	
MVO	**Moncorvo**	**145.47**	**340**	eLR	LR	19 46 11.8	
	comp=Z,27µm,18.0s						
POLO	**Lamas de Olo**	**145.53**	**342**	ePKP	**PKPdf**	**18 50 42.6**	**-0.1**
PVRL	**Vila Real**	**145.59**	**341**	ePKP	**PKPdf**	**18 50 42.6**	**-0.2**
ESDC	**Sonseca Array**	**145.64**	**336**	PKPbc	**PKPdf**	**18 50 42.6**	**-0.3**
	comp=Z,160nm,1.2s,baz=16,slow=2.9,SNR=176						
ESDC	**Sonseca Array**	**145.64**	**336**	PKPdf	**PKPdf**	**18 50 42.2**	**-0.7**
PAB	**San Pablo**	**145.91**	**336**	IAMs_20	IAMs_20	20 02 09.6	
	comp=Z,25µm,20.0s						
PAB	**San Pablo**	**145.91**	**336**	P	**PKPdf**	**18 50 43.7**	**+0.3**
CART	**Cartagena**	**146.01**	**330**	PKP	**PKPdf**	**18 50 40.9**	**-2.6**
CART				SS	SS	19 13 09.4	+10
CART	**Cartagena**	**146.01**	**330**	P	**PKPdf**	**18 50 43.6**	**+0.1**
PVIS	**Viseu**	**146.16**	**341**	ePKP	**PKPbc**	**18 50 44.5**	**-0.2**
MTE	**Manteigas**	**146.33**	**341**	ePKP	**PKPbc**	**18 50 44.7**	**-0.5**
MTE	**Manteigas**	**146.33**	**341**	eSS	SS	19 12 56.2	-6.6
MTE	**Manteigas**	**146.33**	**341**	eLQ	LQ	19 33 05.9	
MTE	**Manteigas**	**146.33**	**341**	eLR	LR	19 44 48.7	
	comp=Z,21µm,20.0s						
MTE	**Manteigas**	**146.33**	**341**	PKPdf	**PKPdf**	**18 50 43.4**	**-0.7**
MTE				IAMs_20	IAMs_20	19 57 39.4	
	comp=Z,25µm,21.0s						
PCBR	**Castelo Branco**	**146.81**	**340**	ePKP	**PKPbc**	**18 50 46.5**	**0.0**
PCAS	**Casmilo, Conde**	**146.95**	**341**	ePKP	**PKPbc**	**18 50 46.6**	**-0.3**
PMRV	**Marv??o**	**147.15**	**340**	ePKP	**PKPbc**	**18 50 47.3**	**-0.2**
PMRV	**Marv??o**	**147.15**	**340**	eSS	SS	19 13 12.2	+0.1
PMRV	**Marv??o**	**147.15**	**340**	eLQ	LQ	19 32 48.8	
PMRV	**Marv??o**	**147.15**	**340**	eLR	LR	19 45 29.7	
	comp=Z,23µm,20.0s						
PSBE	**So Bento**	**147.53**	**341**	ePKP	**PKPdf**	**18 50 46.4**	**+0.3**
PESTR	**Estremoz**	**147.72**	**339**	ePKP	**PKPbc**	**18 50 48.8**	**-0.3**
PESTR	**Estremoz**	**147.72**	**339**	PKPdf	**PKPdf**	**18 50 45.1**	**-1.2**
PESTR	**Estremoz**	**147.72**	**339**	P	**PKPbc**	**18 50 48.2**	**-0.9**
PMTG	**Montargil**	**147.75**	**340**	ePKP	**PKPdf**	**18 50 47.0**	**+0.6**
PBAR	**Barrancos**	**148.14**	**338**	ePKP	**PKPdf**	**18 50 48.3**	**+1.2**
EVO	**Evora**	**148.17**	**340**	PKP	**PKPdf**	**18 50 45.7**	**-1.4**
EVO				SS	SS	19 13 15.0	-8.5
EVO	**Evora**	**148.17**	**340**	ePKP	**PKPdf**	**18 50 47.9**	**+0.8**
PMAFR	**Mafra**	**148.20**	**342**	ePKP	**PKPbc**	**18 50 49.3**	**-1.1**
H07N1	**FLORES T-PHASE**	**148.26**	**14**	ePKP	**PKPbc**	**18 50 50.7**	**+0.1**
EMAL	**Malaga-Limoner**	**148.29**	**333**	PKP	**PKPdf**	**18 50 45.3**	**-2.0**
EMAL				SS	SS	19 13 37.3	+12
PMST	**Lisbon--Monsan**	**148.37**	**341**	ePKP	**PKPbc**	**18 50 50.5**	**-0.3**
LIS	**Lisbon**	**148.38**	**341**	ePKPdf	**PKPdf**	**18 50 46.9**	**-0.6**
LIS				eSS	SS	19 13 28.1	+2.4
LIS				IAMs_20	IAMs_20	20 08 16.2	
	comp=Z,35µm,19.1s						
LIS	**Lisbon**	**148.38**	**341**	ePKIKP	**PKPdf**	**18 50 46.8**	**-0.6**
H07S1	**FLORES T-PHASE**	**148.53**	**14**	ePKP	**PKPbc**	**18 50 50.9**	**-0.4**
PBEJ	**Beja**	**148.57**	**339**	ePKP	**PKPdf**	**18 50 49.4**	**+1.6**
LIJA	**Lijar**	**148.59**	**335**	PKP	**PKPdf**	**18 50 49.2**	**+1.3**
CHAS	**Isla Isabel II**	**148.61**	**329**	PKP	**PKPdf**	**18 50 43.1**	**-4.7**
CHAS				SS	SS	19 13 39.6	+11
PNCL	**Nicolau / Gran**	**148.72**	**340**	ePKP	**PKPdf**	**18 50 49.5**	**+1.5**
MESJ	**Messejana**	**148.86**	**339**	ePKPdf	**PKPdf**	**18 50 47.5**	**-0.7**
MESJ				eSS	SS	19 13 33.5	+2.2
MESJ				IAMs_20	IAMs_20	20 09 05.4	
	comp=Z,36µm,19.7s						
MESJ	**Messejana**	**148.86**	**339**	ePKIKP	**PKPdf**	**18 50 47.5**	**-0.7**
MESJ	**Messejana**	**148.86**	**339**	ePKP	**PKPdf**	**18 50 49.6**	**+1.4**
TAF	**Taforalt**	**148.89**	**329**	P	**PKPdf**	**18 50 50.0**	**+1.5**
MDP	**Montagnes des**	**148.91**	**95**	PKP	**PKPdf**	**18 50 49.5**	**+0.5**
	comp=Z,186nm,0.9s,baz=304,slow=1.6,SNR=23						
MDP				PKPbc	**sPKPdf**	**18 50 53.2**	**-0.2**
	comp=Z,186nm,0.8s,baz=234,slow=4.2,SNR=27						
ARNO	**Arenosillo**	**148.96**	**337**	PKP	**PKPdf**	**18 50 49.5**	**+1.1**
PCVE	**Castro Verde**	**148.98**	**339**	ePKP	**PKPdf**	**18 50 49.0**	**+0.6**
PVAQ	**Vaqueiros**	**149.07**	**338**	ePKP	**PKPdf**	**18 50 49.7**	**+1.1**
PVAQ	**Vaqueiros**	**149.07**	**338**	eSS	SS	19 13 35.3	+1.6
PVAQ	**Vaqueiros**	**149.07**	**338**	eLQ	LQ	19 32 24.8	
PVAQ	**Vaqueiros**	**149.07**	**338**	eLR	LR	19 45 08.8	
	comp=Z,32µm,18.0s						
PVAQ	**Vaqueiros**	**149.07**	**338**		**PKPdf**	**18 50 48.0**	**-0.6**
PVAQ	**Vaqueiros**	**149.07**	**338**	P	**PKPdf**	**18 50 50.3**	**+1.8**
PBDV	**Barranco-do-Ve**	**149.29**	**338**	ePKP	**PKPdf**	**18 50 50.4**	**+1.4**
PTEO	**Sao Teotonio**	**149.30**	**340**	ePKP	**PKPdf**	**18 50 51.0**	**+2.1**
SFS	**San Fernando**	**149.30**	**335**	PKP2	**PKPbc**	**18 50 52.1**	**-1.2**
SFS				MLR	MLR		
	comp=Z,52µm,18.0s						
SFS	**San Fernando**	**149.30**	**335**	PKP	**PKPdf**	**18 50 47.2**	**-1.8**
SFS	**San Fernando**	**149.30**	**335**		**PKPbc**	**18 50 52.1**	**-1.2**
CNIL	**Conil**	**149.32**	**335**	PKP	**PKiKP**	**18 50 54.0**	**-0.5**
PALE	**Palemas**	**149.33**	**331**	P	**PKPbc**	**18 50 52.1**	**-1.4**
JBK	**JBK**	**149.34**	**328**	P	**PKPdf**	**18 50 51.0**	**+1.6**
CEU	**Ceuta**	**149.42**	**334**	PKP	**PKPdf**	**18 50 46.4**	**-2.8**
CEU				SS	SS	19 13 37.3	-0.6
MORF	**Marmelete**	**149.49**	**339**	ePKPdf	**PKPdf**	**18 50 48.7**	**-0.7**
MORF				IAMs_20	IAMs_20	19 59 06.5	
	comp=Z,40µm,17.3s						
MORF	**Marmelete**	**149.49**	**339**	ePKIKP	**PKPdf**	**18 50 48.6**	**-0.7**
MORF	**Marmelete**	**149.49**	**339**	ePKP	**PKPdf**	**18 50 51.2**	**+1.9**
SRBC	**Serra Branca**	**149.52**	**10**	ePKP	**PKiKP**	**18 50 55.2**	**+0.3**
PGRA	**Graciosa**	**149.54**	**10**	ePKP	**PKiKP**	**18 50 54.9**	**0.0**
PFVI	**Vila Bisbo**	**149.71**	**340**	ePKP	**PKPdf**	**18 50 50.3**	**+0.7**
PFVI	**Vila Bisbo**	**149.71**	**340**		**PKPdf**	**18 50 48.2**	**-1.4**
ROSA	**Rosais**	**149.80**	**10**	ePKP	**PKPbc**	**18 50 53.1**	**-1.4**
PCED	**Cedros**	**149.80**	**11**	ePKP	**PKiKP**	**18 50 55.8**	**+0.4**
CALA	**Caldeira**	**149.84**	**11**	ePKP	**PKPbc**	**18 50 54.6**	**-0.1**
PMAN	**Manadas**	**149.91**	**10**	ePKP	**PKPbc**	**18 50 54.8**	**+0.1**
PAGU	**Agualva, Azore**	**149.92**	**9**	ePKP	**PKPbc**	**18 50 54.9**	**+0.1**
PICO	**Pico**	**149.97**	**11**	ePKP	**PKPbc**	**18 50 55.2**	**+0.2**
PCAN	**Candelaria**	**150.00**	**11**	ePKP	**PKPbc**	**18 50 55.4**	**+0.4**
TDRA	**Tendrara**	**150.03**	**326**	P	**PKPdf**	**18 50 53.0**	**+2.4**
CHEFC	**Chefchaouen**	**150.07**	**333**	P	**PKPdf**	**18 50 52.0**	**+1.6**
FIGM	**Figuig**	**150.26**	**324**	P	**PKPdf**	**18 50 52.0**	**+1.1**
SHEL	**Horse Pasture**	**150.68**	**212**	PKIKP	**PKPdf**	**18 50 49.2**	**-2.6**
SHEL				MLR	MLR		
	comp=Z,29µm,20.0s						
SHEL	**Horse Pasture**	**150.68**	**212**		**PKPdf**	**18 50 49.2**	**-2.6**
SHEL	**Horse Pasture**	**150.68**	**212**	IAMs_20	IAMs_20	19 52 49.7	
	comp=Z,29µm,20.0s						
LCRM	**LCR**	**151.01**	**330**	P	**PKPdf**	**18 50 54.0**	**+2.0**
PSET	**Sete Cidades**	**151.05**	**7**	ePKP	**PKPbc**	**18 50 56.0**	**-1.5**
PCALD	**Caldeiras da R**	**151.10**	**6**	ePKP	**PKPbc**	**18 50 55.6**	**-2.0**
GRON	**Grota Negra**	**151.13**	**7**	ePKP	**PKPbc**	**18 50 57.6**	**-0.1**
CMLA	**Cha da Macela**	**151.13**	**7**	ePKP	**PKPbc**	**18 50 55.4**	**-2.3**
BART	**Pico Bartolome**	**151.16**	**6**	ePKP	**PKPbc**	**18 50 57.8**	**0.0**
IFR	**Ifrane**	**151.28**	**331**	PKP	**PKPdf**	**18 50 52.1**	**-0.3**
IFR				SS	SS	19 14 08.5	+9.3
MDT	**Midelt**	**151.58**	**329**	PKP	**PKPdf**	**18 50 53.2**	**+0.4**
	comp=Z,22nm,1.2s,baz=49,slow=0.9,SNR=24						
MDT				PKPbc	**PKiKP**	**18 50 59.4**	**0.0**
	comp=Z,125nm,1.2s,baz=29,slow=2.5,SNR=44						
MDT	**Midelt**	**151.58**	**329**	P	**PKPdf**	**18 50 54.0**	**+1.2**
CZD	**Col de Zad**	**151.63**	**330**	P	**PKPdf**	**18 50 56.0**	**+2.9**
PSMN	**Pico do Norte,**	**151.93**	**6**	ePKP	**PKPdf**	**18 50 55.2**	**+2.1**
PSMA	**Santa Maria**	**151.94**	**6**	ePKP	**PKPbc**	**18 50 58.9**	**-0.6**
ZHG	**ZHG**	**152.05**	**333**	P	**PKPdf**	**18 50 56.0**	**+2.5**
AVE	**Averroes**	**152.52**	**334**	PKP	**PKPdf**	**18 50 50.2**	**-3.8**
AVE				SS	SS	19 14 01.0	-11
GOLM	**Goulmima**	**152.64**	**328**	P	**PKPdf**	**18 50 57.0**	**+2.5**
TZRR	**Tazzarine**	**153.69**	**328**	P	**PKPdf**	**18 50 58.0**	**+2.1**
OUZM	**OUZ**	**154.20**	**330**	P	**PKPdf**	**18 50 59.0**	**+2.2**
ZGR	**Zagora**	**154.24**	**327**	P	**PKPdf**	**18 50 59.0**	**+2.2**
OUK	**Oukaimeden**	**154.49**	**332**	P	**PKPdf**	**18 50 59.1**	**+1.7**
PMPST	**Porto Santo, M**	**155.55**	**349**	ePKP	**PKPdf**	**18 50 58.6**	**+0.3**
PMPS	**Porto Santo**	**155.57**	**349**	ePKP	**PKPdf**	**18 51 03.3**	**+5.0**
PMOZ	**Porto Moniz, M**	**155.94**	**351**	ePKP	**PKPdf**	**18 51 00.2**	**+1.2**
PMOZ	**Porto Moniz, M**	**155.94**	**351**	eSS	SS	19 14 54.1	+5.1
PMOZ	**Porto Moniz, M**	**155.94**	**351**	eLQ	LQ	19 35 37.2	
PMOZ	**Porto Moniz, M**	**155.94**	**351**	eLR	LR	19 49 31.6	
	comp=Z,18µm,18.0s						
PMAR	**Madeira**	**156.00**	**350**	ePKP	**PKPdf**	**18 50 59.9**	**+0.7**
TORD	**Torodi Ar. Bea**	**156.82**	**282**	PKP	**PKPdf**	**18 50 59.9**	**-0.6**
	comp=Z,21nm,1.1s,baz=9.1,slow=1.5,SNR=32						
TORD				PKPab	**PKPab**	**18 51 30.3**	**+0.1**
	comp=Z,64nm,1.2s,baz=68,slow=3.2,SNR=11						
TORD				PP	**PP**	**18 55 14.2**	**+5.6**
	comp=Z,7.3nm,1.0s,baz=76,slow=6.3,SNR=3.5						
TORD				SKKPbc		19 01 30.1	
	comp=Z,10.0nm,1.1s,baz=276,slow=2.9,SNR=4.7						
TORD	**Torodi Ar. Bea**	**156.82**	**282**	PKPdf	**PKPdf**	**18 50 58.4**	**-2.1**
KUKU	**Kukurantumi**	**158.82**	**264**	i P	**PKPdf**	**18 51 00.3**	**-2.8**
KOWA	**Kowa**	**161.99**	**289**	PKP	**PKPdf**	**18 51 06.2**	**-0.3**
	comp=Z,30nm,1.2s,baz=60,slow=1.3,SNR=4.7						
KOWA				PKPab	**PKPab**	**18 51 51.1**	**-1.5**
	comp=Z,58nm,1.1s,baz=69,slow=2.0,SNR=8.5						
KOWA				SKKPbc		19 01 08.0	
	comp=Z,12nm,1.1s,baz=288,slow=3.6,SNR=4.9						
KOWA	**Kowa**	**161.99**	**289**	PKPdf	**PKPdf**	**18 51 04.9**	**-1.6**
KOWA	**Kowa**	**161.99**	**289**	P	**PKPdf**	**18 51 08.0**	**+1.5**
KIC	**Kosan Boka**	**163.14**	**262**	ePKP1	**PKPdf**	**18 51 07.4**	**-0.3**
	comp=Z,118nm,1.1s						
DBIC	**Dimbokro**	**163.30**	**263**	PKP	**PKPdf**	**18 51 07.4**	**-0.4**
	comp=Z,15nm,1.1s,baz=206,slow=1.3,SNR=9.1						
DBIC				PKPab	**PKPab**	**18 51 57.6**	**-0.8**
	comp=Z,45nm,1.1s,baz=105,slow=1.9,SNR=3.2						
LIC	**Lamto**	**163.39**	**262**	ePKP1	**PKPdf**	**18 51 06.6**	**-1.3**
	comp=Z,315nm,1.4s						
TIC	**Toumodi**	**163.46**	**263**	ePKP1	**PKPdf**	**18 51 07.7**	**-0.3**

IDC ***18*** *18:41:17.2±1.0, 9°.17S×158°.47E, h0km, mb4.2/6, mb1 4.5/7, mb1mx4.0/34, mbtmp4.3/7, ML4.2/1 Error ellipse: s-maj=33.5km s-min=18.1km az=4.0*

NEIC ***18*** *18:41:18.8±1.9, 9°.1S±0°.2×158°.57E±0°.10, h10km±1km, mb4.3/4, Error ellipse: s-maj=32.5km s-min=16.2km az=186.0*

ISC 18 18:41:18.4±0.7**, 9°.2S**±0°.2×**158°.50E**±0°.06**, h10km, n13, σ0s.82**/14**, mb4.2**/8**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.45**	**100**	Pn	**Pg**	**18 41 45.8**	**-0.4**
	346nm,0.3s,baz=200,slow=10,SNR=7.1						

HNR				Sn	Sg	18 42 06.2	+1.1
	526nm,0.3s,baz=12,slow=22,SNR=4.2						
HNR	Honiara	1.45	100		Pn	18 41 44.3	-0.4
JAY	Jayapura	18.89	289	P	Pn	18 45 40.6	+0.7
	0.8nm,0.3s,baz=127,slow=15,SNR=4.6						
WR0	Warramunga Arr	25.50	243	P	P	18 46 48.2	+1.0
WB2	Warramunga Arr	25.66	243	P	P	18 46 49.5	+0.9
WB2				IAmb	IAmb	18 47 13.1	
	comp=Z,25nm,1.4s						
WRA	Warramunga Arr	25.67	243	P	P	18 46 48.6	-0.1
	comp=Z,5.7nm,0.8s,baz=68,slow=9.2,SNR=4.2						
STKA	Stephens Creek	27.49	212	P	P	18 47 05.2	+0.2
STKA				IAmb	IAmb	18 47 18.2	
	comp=Z,3.5nm,1.2s						
ASAR	Alice Springs	27.56	236	P	P	18 47 06.0	+0.2
	comp=Z,2.8nm,0.8s,baz=70,slow=8.6,SNR=4.5						
JAGI	Jajag, Banyuwa	43.80	267	P	P	18 49 23.4	-1.5
CMAR	Chiang Mai Arr	64.85	295	P	P	18 51 58.9	+0.6
	comp=Z,1.8nm,1.0s,baz=114,slow=4.2,SNR=6.1						
SONM	Songino Array	73.06	326	P	P	18 52 49.5	+0.6
	comp=Z,8.0nm,0.9s,baz=138,slow=5.5,SNR=12						
ILAR	Eielson Array	84.17	21	P	P	18 53 49.4	-0.1
	comp=Z,0.8nm,0.7s,baz=263,slow=3.7,SNR=1.7						
MKAR	Makanchi Array	87.34	318	P	P	18 54 05.0	-0.7
	comp=Z,0.7nm,0.6s,baz=91,slow=6.1,SNR=4.7						

NEIC 18 18:42:09.3±1.2**, 35°.80N**±0°.02×**97°.26W**±0°.02**, h5**^{km}±2^{km}**,**
mb_Lg2.6/15**, Error ellipse: s-maj=3.5km s-min=3.0km**
az=127.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK029	Liberty Lake	0.16	270	Pg	Pg	18 42 13.0	+0.5
BCOK	Bluff Creek, N	0.32	244	Pg	Pg	18 42 15.9	+0.4
OK031	S. Brethren Rd	0.37	65	Pg	Pg	18 42 17.0	+0.5
OK030	Cody Creek RV	0.40	71		Pg	18 42 17.7	+0.5
OKCFA	Oklahoma City	0.41	203	Pg	Pg	18 42 17.7	+0.4
FNO	Franklin	0.55	192	Pg	Pg	18 42 19.9	0.0
QUOK	Quay	0.58	50	Pg	Pg	18 42 20.8	+0.3
CROK	Carrier	0.92	320	Pg	Pg	18 42 26.9	-0.1
BLOK	Blackwell	0.96	2	Pg	Pg	18 42 27.5	-0.2
GC02	Grant County #	1.16	335	Pg	Pg	18 42 31.2	-0.3
TUL1	Leonard	1.19	84	Pg	Pg	18 42 31.0	-1.2
KAN13	South Haven SW	1.23	352	Pg	Pg	18 42 32.4	-0.4
OK032	Salt Plains WL	1.27	323	Pg	Pg	18 42 32.9	-0.7
T35A	Sooner Cattle	1.27	28	Pg	Pg	18 42 32.8	-0.8
X34A	Smith Ranch, M	1.28	202	Pn	Pn	18 42 33.5	-0.4
KAN14	Manchester OK	1.29	334		Pn	18 42 33.7	-0.4
KAN17	Caldwell West	1.31	342	Pn	Pn	18 42 34.1	-0.1
KAN09	Caldwell North	1.37	348	Pn	Pn	18 42 35.1	0.0
KAN08	Anthony NE Sta	1.54	338	Pn	Pn	18 42 36.5	-0.9
KAN08				IAmb_Lg		18 42 58.1	
	comp=Z,34nm,0.9s						
WMOK	Wichita Mounta	1.64	230	Pn	Pb	18 42 39.4	-0.6
X37A	Clayton	1.96	127	Pn	Pn	18 42 44.2	+1.0
HHAR	Hobbs	2.73	79	Pn	Pn	18 42 53.9	+0.1
X40A	Basin Creek Fa	3.85	109	IAmb_Lg		18 44 18.4	
	comp=Z,6.1nm,0.7s						
T42A	Van Buren	5.12	74	IAmb_Lg		18 44 57.4	
	comp=Z,5.7nm,1.1s						
T25A	Trinidad	5.92	285	IAmb_Lg		18 45 31.7	
	comp=Z,11nm,1.3s						
W45A	Hickory Valley	6.62	93	IAmb_Lg		18 45 58.4	
	comp=Z,13nm,0.7s						
SDCO	Great Sand Dun	6.90	289	IAmb_Lg		18 45 49.2	
	comp=Z,3.1nm,1.2s						
ANMO	Albuquerque	7.57	266	IAmb_Lg		18 46 18.6	
	comp=Z,13nm,1.3s						
ISCO	Idaho Springs	7.73	304	IAmb_Lg		18 46 15.4	
	comp=Z,8.4nm,1.3s						
MNTX	Cornudas Mount	7.91	241	IAmb_Lg		18 46 32.6	
	comp=Z,5.9nm,1.3s						

IDC ***18*** *18:53:53.9±0.5, 9°.07S×158°.55E, h0^{km}, mb4.8/28,*
mb1 4.9/29, mb1mx4.6/58, mbtmp4.8/29, ML4.4/2, Error
ellipse: s-maj=13.8km s-min=12.4km az=139.0
BJI ***18*** *18:53:53.6±0.0, 8°.85S×158°.55E, h7^{km}, mb4.8/49*
NEIC ***18*** *18:53:55.8±1.5, 9°.05S±0°.09×158°.51E±0°.07, h10^{km}±1^{km},*
mb5.1/66, Error ellipse: s-maj=16.0km s-min=10.3km
az=201.0

ISC 18 18:53:55.4±0.3**, 9°.08S**±0°.06×**158°.49E**±0°.05**, h10**^{km}**, n259,**
σ**0^{s}92**/249**, mb5.1**/86**, 1C-3D, Bougainville-Solomon**
Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	1.48	104	Pn	Pn	18 54 21.1	-1.0
	2µm,0.3s,baz=226,slow=4.2,SNR=50						
HNR				Sn	Sg	18 54 43.5	+0.5
	2µm,0.3s,baz=119,slow=23,SNR=6.1						
HNR	Honiara	1.48	104		Pn	18 54 21.0	-1.1
SANVU	Saraoutou	10.61	128	Pn	Pn	18 56 28.2	+0.7
PATS	Pohnpei	15.81	359	Pn	Pn	18 57 38.3	+0.1
CTA	Charters Tower	16.12	226	Pn	Pn	18 57 42.7	+0.4
	0.5nm,0.3s,baz=90,slow=12,SNR=2.4						
CTAO	Charters Tower	16.12	226	Pn	Pn	18 57 41.5	-0.7
MTSU	Mount Surprise	16.45	235	P	Pn	18 57 47.7	+1.2
	baz=16,SNR=8.9						
EIDS	Eidsvold	17.67	203	P	Pn	18 58 02.8	+1.0
	baz=18,SNR=4.0						
JAY	Jayapura	18.85	289	P	Pn	18 58 17.1	+0.7
	2.3nm,0.3s,baz=132,slow=2.2,SNR=14						
JAY	Jayapura	18.85	289	P	Pn	18 58 16.6	+0.2
	58nm,1.0s						
RMQ	Roma	19.62	207	P	P	18 58 24.2	0.0
	baz=20,SNR=13						
MSVF	Nonsavu	20.86	116	P	Pn	18 58 41.1	+0.8
	29nm,0.9s,baz=273,slow=7.6,SNR=14						
MSVF	Nonsavu	20.86	116		P	18 58 38.1	+0.3
SMPI	Sarmi	20.90	289	P	Pn	18 58 40.3	-0.4
	67nm,0.8s						
QIS	Mount Isa	21.51	236	P	P	18 58 43.9	-0.7
	baz=22,SNR=11						
QLP	Quilpie	22.04	216	P	P	18 58 50.4	+0.1
	baz=22,SNR=7.3						
ARMA	Armidale	22.18	196	P	P	18 58 52.4	+0.5
	baz=22,SNR=13						
CMSA	Cobar Meteorol	25.32	206	P	P	18 59 23.0	+0.6
	baz=25,SNR=18						
WR0	Warramunga Arr	25.55	242	P	P	18 59 24.4	-0.3
WR0				IAmb	IAmb	18 59 53.5	
	comp=Z,31nm,1.0s						
WB0	Warramunga Arr	25.61	243	P	P	18 59 24.6	-0.6
WB0				IAmb	IAmb	18 59 53.4	
	comp=Z,39nm,1.1s						
WRAB	Tennant Creek	25.71	243	P	P	18 59 25.7	-0.4
WB2	Warramunga Arr	25.71	242	P	P	18 59 26.1	0.0
WRA	Warramunga Arr	25.72	243	P	P	18 59 26.2	0.0
	comp=Z,14nm,1.0s,baz=70,slow=9.7,SNR=16						
KDU	Kakadu	25.80	260	P	P	18 59 27.1	+0.2
	baz=26,SNR=8.4						
MTN	Manton Dam	27.11	260	P	P	18 59 39.1	+0.2
	baz=27,SNR=4.2						
CNB	Canberra Magne	27.42	196	P	P	18 59 42.7	+1.2
	baz=28,SNR=6.3						
STKA	Stephens Creek	27.58	212	P	P	18 59 44.0	+1.1
	comp=Z,8.0nm,0.5s,baz=52,slow=15,SNR=15						
STKA	Stephens Creek	27.58	212	P	P	18 59 43.5	+0.6
	baz=28,SNR=19						
STKA	Stephens Creek	27.58	212	P	P	18 59 42.8	-0.1
AS31	Alice Springs	27.63	235	P	P	18 59 42.9	-0.6
ASAR	Alice Springs	27.63	235	P	P	18 59 42.9	-0.6
	comp=Z,7.5nm,0.9s,baz=66,slow=9.0,SNR=47						
ASAR				ScP	ScP	19 06 45.0	+3.1
	comp=Z,1.2nm,0.8s,baz=75,slow=3.9,SNR=4.2						
H11S3	WAKE ISLAND Hy	28.56	16	T	T	19 28 27.9	
	baz=195,slow=76,SNR=120						
H11S2	WAKE ISLAND Hy	28.56	16	T	T	19 28 40.2	
	baz=195,slow=76,SNR=121						
H11S1	WAKE ISLAND Hy	28.58	16	T	T	19 28 35.0	
	baz=195,slow=76,SNR=100						
KNRA	Kununurra	29.75	254	P	P	19 00 02.6	+0.3
	baz=30,SNR=4.6						
H11N1	WAKE ISLAND Hy	29.78	16	T	T	19 30 16.2	
	baz=195,slow=76,SNR=82						
H11N3	WAKE ISLAND Hy	29.79	16	T	T	19 30 11.4	
	baz=195,slow=76,SNR=71						
H11N2	WAKE ISLAND Hy	29.80	16	T	T	19 30 17.6	
	baz=195,slow=76,SNR=84						
HTT	Hallett	30.22	214	P	P	19 00 07.0	+0.6
	baz=30,SNR=5.9						
AAI	Ambon	30.57	278	P	P	19 00 11.7	+2.1
BBOO	Buckleboo	31.43	218	P	P	19 00 17.3	+0.3
	baz=32,SNR=24						
ARPS	Mount Arapiles	31.44	206	P	P	19 00 16.4	-0.7
	baz=32,SNR=8.9						
LBMI	Labuha	31.97	283	P	P	19 00 24.6	+2.6
	comp=Z,29nm,1.0s						
WRKA	Warakurna	32.83	237	P	P	19 00 28.5	-0.9
	baz=33,SNR=17						
SANI	Sanana	33.07	280	P	P	19 00 33.7	+2.0
	comp=Z,26nm,1.1s						
URZ	Urewera	33.55	153	P	P	19 00 34.1	-1.4
URZ				IAmb	IAmb	19 01 00.5	
	comp=Z,44nm,1.4s						
SOEI	Soe	33.76	266	P	P	19 00 39.1	+1.3
	comp=Z,52nm,1.6s						
SOEI	Soe	33.76	266	P	P	19 00 37.4	-0.4
SOEI				IAmb	IAmb	19 01 03.5	
	comp=Z,35nm,1.1s						
BKZ	Black Stump Fm	34.03	155	P	P	19 00 39.8	+0.1
BKZ				IAmb	IAmb	19 00 41.1	
	comp=Z,27nm,1.1s						
BATI	Baumata	34.35	265	P	P	19 00 44.2	+1.4
	comp=Z,26nm,1.0s,baz=174,slow=5.4,SNR=6.3						
BATI	Baumata	34.35	265	P	P	19 00 44.4	+1.6
	comp=Z,21nm,1.0s						
TUWZ	Tuamarina	35.00	160	P	P	19 00 48.3	+0.3
PLWZ	Palliser	35.59	158	P	P	19 00 53.8	+0.6
LTZ	Lake Taylor	35.68	163	P	P	19 00 54.5	+0.5
MMRI	Maumere	35.82	268	P	P	19 00 56.0	+0.6
	comp=Z,111nm,1.2s						
MMRI	Maumere	35.82	268	P	P	19 00 54.5	-1.0
LUWI	Luwuk	36.44	281	P	P	19 01 01.9	+1.2
	comp=Z,44nm,0.9s						
GTOI	Gorontalo	36.63	283	P	P	19 01 04.3	+1.9
KAPI	Kappang	38.64	273	P	P	19 01 19.6	+0.2
	comp=Z,6.0nm,0.3s,baz=36,slow=3.8,SNR=13						
KAPI	Kappang	38.64	273	P	P	19 01 19.5	0.0
KAPI				IAmb	IAmb	19 01 21.4	
	comp=Z,37nm,1.1s						
TOLI2	Tolitoli	38.91	283	P	P	19 01 19.8	-1.9
MEEK	Meekatharra	41.56	240	P	P	19 01 42.1	-1.5
	baz=42,SNR=6.3						
JAGI	Jajag, Banyuwa	43.81	267	P	P	19 01 59.9	-2.0
MORW	Morawa	44.47	238	P	P	19 02 05.2	-1.8
	baz=44,SNR=3.4						
SBUM	Sibu	47.51	282	P	P	19 02 32.0	+0.7
KSM	Kuching	49.13	280	P	P	19 02 44.0	+0.2
MJAR	Matsushiro Arr	49.22	338	P	P	19 02 44.6	+0.5
	comp=Z,5.4nm,0.8s,baz=171,slow=8.5,SNR=8.9						
MAT	Matsushiro	49.22	338	P	P	19 02 44.3	+0.2
LEM	Lembang	50.41	269	P	P	19 02 53.9	+0.1
	comp=Z,43nm,0.9s,baz=82,slow=7.4,SNR=9.0						
KSRS	Korea Array	54.42	330	P	P	19 03 23.4	+0.6
	comp=Z,11nm,1.1s,baz=151,slow=7.2,SNR=15						
KSAR	Wonju Array Be	54.43	330	P	P	19 03 22.1	-0.8
NJ2	Nanjing	55.73	319	*e*P	P	19 03 33.0	+0.6
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.6s						
JRMM	Jerantut	57.30	281	P	P	19 03 43.0	-1.0
USRK	Ussuriysk Ar.	58.21	338	P	P	19 03 51.0	+1.3
	comp=Z,6.9nm,0.9s,baz=128,slow=7.4,SNR=8.9						
USRK	Ussuriysk Ar.	58.21	338	P	P	19 03 49.8	0.0
KULM	Kulim	59.40	282	P	P	19 03 57.0	-1.7
MDJ	Mudanjiang	59.48	336	P	P	19 03 59.4	+0.8
MDJ				pmax	pmax		
	comp=Z,5.0nm,2.1s						
CN2	Changchun	60.57	333	*e*P	P	19 04 05.5	-0.6
CN2				*e*sP	sP	19 04 12.8	+2.7
CN2				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA	Guiyang	61.46	307	⇓P	P	19 04 13.3	+0.6
GYA				pP	sP	19 04 17.5	+0.9
GYA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
PETK	Petropavlovsk-	61.94	359	P	P	19 04 16.0	+0.8
	comp=Z,11nm,0.9s,baz=176,slow=11,SNR=11						
BJI	Beijing	62.60	324	P	P	19 04 20.1	+0.2
BJI				pmax	pmax		
	comp=Z,12nm,1.1s						
KLR	Kul'dur	62.62	341	P	P	19 04 20.4	+0.5
	comp=Z,2.7nm,0.9s,baz=18,slow=1.0,SNR=5.1						
XAN	Xi'an	63.61	315	P	P	19 04 27.0	+0.2
XAN				sP	sP	19 04 33.6	+2.8
XAN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KMI	Kunming	64.05	304	⇓P	P	19 04 31.5	+1.4
KMI				pP	sP	19 04 35.6	+1.6
KMI				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CM31	Chiang Mai Arr	64.80	295	P	P	19 04 33.9	-1.0
CM31				IAmb	IAmb	19 04 36.7	
	comp=Z,22nm,1.1s						
CMAR	Chiang Mai Arr	64.80	295	P	P	19 04 35.9	+1.0
	comp=Z,9.5nm,0.9s,baz=116,slow=5.0,SNR=44						
CMAR				PcP	PcP	19 05 09.2	+0.8
	comp=Z,3.2nm,0.9s,baz=118,slow=4.9,SNR=4.4						
CMAR	Chiang Mai Arr	64.80	295	P	P	19 04 34.3	-0.6
CHTO	Chiang Mai	64.92	296	P	P	19 04 35.1	-0.6
CHTO				IAmb	IAmb	19 04 37.2	
	comp=Z,22nm,1.1s						
HHC	Hu-ho-hao-te	65.82	323	*e*P	P	19 04 43.1	+1.9
HHC				pmax	pmax		
	comp=Z,16nm,1.1s						
HIA	Hailar	67.28	334	P	P	19 04 50.3	0.0
VNDA	Vanda	68.44	179	P	P	19 04 57.2	+0.1
	comp=Z,7.7nm,1.0s,baz=0.8,slow=6.6,SNR=6.6						
PBA	Port Blair	68.53	286	P	P	19 04 58.4	-0.4
MA2	Magadan	68.70	356	P	P	19 04 59.0	0.0
	comp=Z,19nm,0.8s,baz=104,slow=7.0,SNR=3.6						
MA2	Magadan	68.70	356	IAmb	IAmb	19 05 03.4	
	comp=Z,24nm,0.9s						
SEY	Seymchan	71.95	357	P	P	19 05 18.1	-0.6
	comp=Z,19nm,1.2s,baz=150,slow=10,SNR=5.4						
ULN	Ulaanbaatar	72.62	327	P	P	19 05 23.6	+0.3
GTA	Gaotai	72.62	316	⇑P	P	19 05 24.3	+0.8
GTA				pP	sP	19 05 28.4	+0.9
GTA				sP	pP	19 05 31.8	+5.4
GTA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SONM	Songino Array	72.96	326	P	P	19 05 26.0	+0.7
	comp=Z,36nm,0.8s,baz=136,slow=5.6,SNR=124						
SHL	Shillong	73.33	300	P	P	19 05 27.5	-0.5
YAK	Yakutsk	74.35	346	P	P	19 05 32.5	-0.4
	comp=Z,24nm,0.7s,baz=333,slow=2.0,SNR=11						
YAK	Yakutsk	74.35	346	P	P	19 05 31.6	-1.4
LSA	Lhasa	75.30	304	P	P	19 05 40.0	+0.2
LSA				IAmb	IAmb	19 05 41.6	
	comp=Z,10nm,1.0s						
OHAK	Old Harbor	76.91	25	P	P	19 05 48.2	+0.6
	baz=229						
BILL	Bilibino	77.12	3	P	P	19 05 48.8	+0.1
TAPN	Taplejung	77.44	301	*e*P	P	19 05 51.6	-0.1
	comp=Z,35nm,1.1s						
KDAK	Kodiak Island	77.56	24	P	P	19 05 51.2	-0.1
	comp=Z,15nm,0.9s,baz=256,slow=10,SNR=5.8						
KDAK	Kodiak Island	77.56	24	P	P	19 05 51.6	+0.2
	baz=230						
KDAK	Kodiak Island	77.56	24	IAmb	IAmb	19 05 52.8	
	comp=Z,18nm,0.9s						
ODAN	Odare	77.57	300	*e*P	P	19 05 52.3	-0.1
	comp=Z,53nm,1.0s						
P18K	Big Mountain,	77.60	22	P	P	19 05 52.2	+0.6
	baz=227						
Q19K	Cape Douglas,	77.89	23	P	P	19 05 53.4	+0.2
	baz=228						
RAMN	Ramite	78.27	300	*e*P	P	19 05 56.0	-0.3
JIRN	Jiri	78.82	301	*e*P	P	19 05 59.5	0.0
	comp=Z,17nm,0.9s						
GUN	Gumba	79.15	301	*e*P	P	19 06 01.1	-0.2
	comp=Z,42nm,0.9s						
PALK	Pallekele	79.19	279	P	P	19 06 02.0	+0.6
	comp=Z,14nm,1.0s,baz=220,slow=9.3,SNR=6.0						
PALK	Pallekele	79.19	279	P	P	19 06 01.9	+0.5
PALK				IAmb	IAmb	19 06 03.7	
	comp=Z,14nm,0.9s						
PKI	Pulchoki	79.46	300	*e*P	P	19 06 02.6	-0.4
	comp=Z,72nm,1.5s						
PKIN	Phulchoki	79.47	300	*e*P	P	19 06 02.4	-0.5
	comp=Z,26nm,1.0s						
M19K	Big River Lodg	79.62	21	P	P	19 06 04.1	+1.5
	baz=227						
M19K	Big River Lodg	79.62	21	P	P	19 06 03.8	+1.1
M19K				IAmb	IAmb	19 06 04.8	
	comp=Z,19nm,0.9s						
KKN	Kakani	79.63	300	*e*P	P	19 06 03.4	-0.3
	comp=Z,27nm,1.1s						
L19K	White Mountain	79.65	20	P	P	19 06 04.2	+1.3
	baz=227						
L19K	White Mountain	79.65	20	P	P	19 06 02.3	-0.5
L19K				IAmb	IAmb	19 06 04.6	
	comp=Z,17nm,0.9s						
DMN	Daman	79.73	300	*e*P	P	19 06 04.3	0.0
	comp=Z,70nm,1.1s						
TTA	Tatalina	79.78	19	P	P	19 06 04.7	+1.1
	baz=226						
TTA	Tatalina	79.78	19	P	P	19 06 04.0	+0.4
L20K	Farewell, AK	80.19	20	P	P	19 06 06.8	+1.0
	baz=228						
GKN	Gorkha	80.23	300	*e*P	P	19 06 06.6	-0.3
	comp=Z,79nm,1.2s						
SEW	Seward	80.29	24	P	P	19 06 06.7	+0.4
	baz=232						
SUA	Susitna One	80.64	22	P	P	19 06 08.7	+0.4
	baz=231						
K20K	Telida	80.72	20	P	P	19 06 09.7	+1.1
	baz=227						
RC01	Rabbit Creek A	80.79	23	P	P	19 06 09.2	+0.2
	baz=232						
GCSA	Galena City Sc	80.79	18	P	P	19 06 08.8	0.0
	baz=225						
QSPA	South Pole Qui	80.91	180	P	P	19 06 09.8	-0.1
QSPA				IAmb	IAmb	19 06 11.3	
	comp=Z,32nm,1.1s						
KOLN	Koldanda	81.06	300	*e*P	P	19 06 10.6	-0.8
	comp=Z,73nm,1.1s						
DANN	Dangsing	81.07	301	*e*P	P	19 06 10.6	-1.0
	comp=Z,71nm,1.3s						
PWL	Port Wells	81.19	23	P	P	19 06 11.9	+0.8
	baz=233						
J20K	Nowinta River	81.25	19	P	P	19 06 12.5	+1.1
	baz=227						
PMR	Palmer	81.33	23	P	P	19 06 12.1	+0.2
	baz=232						
CAST	Castle Rocks	81.43	20	P	P	19 06 12.1	-0.3
	baz=229						
CAST	Castle Rocks	81.43	20	P	P	19 06 11.7	-0.7
CHUM	Lake Minchumin	81.65	20	P	P	19 06 14.2	+0.7
	baz=229						
PYUN	Piuthan	81.66	300	*e*P	P	19 06 13.7	-0.9
	comp=Z,55nm,1.0s						
RDOG	Red Dog Mine	81.67	14	P	P	19 06 20.5	+6.9
	baz=218						
SML	Sawmill	81.77	23	P	P	19 06 15.1	+0.9
	baz=233						
KTH	Kantishna Hill	81.91	20	P	P	19 06 13.8	-1.2
KTH				IAmb	IAmb	19 06 15.2	
	comp=Z,25nm,1.2s						
TRF	Thorofare Moun	82.07	21	P	P	19 06 15.7	-0.2
	baz=231						
SCM	Sheep Creek Mo	82.16	23	P	P	19 06 17.1	+0.8
	baz=234						
WAT1	Susitna Watana	82.30	22	P	P	19 06 17.2	+0.2
	baz=233						
WAT6	Susitna Watana	82.45	22	P	P	19 06 18.0	+0.1
	baz=233						
RND	Reindeer	82.55	21	P	P	19 06 17.7	-0.6
RND				IAmb	IAmb	19 06 26.1	
	comp=Z,26nm,1.2s						
IMAR	Indian Mountai	82.60	18	P	P	19 06 18.4	-0.1
I21K	Tanana	82.61	19	P	P	19 06 19.4	+0.9
	baz=229						
I21K	Tanana	82.61	19	P	P	19 06 18.7	+0.2
I21K				IAmb	IAmb	19 06 30.2	
	comp=Z,9.6nm,0.9s						
H21K	Melozitna Rive	82.67	18	P	P	19 06 19.9	+1.1
	baz=228						
WMQ	Urumqi	82.70	316	*e*P	P	19 06 19.8	+0.2
WMQ				sP	PcP	19 06 28.3	+3.8
WMQ				pmax	pmax		
	comp=Z,26nm,1.1s						
MCK	McKinley	82.72	21	P	P	19 06 19.0	-0.1
	baz=232						
MCK	McKinley	82.72	21	P	P	19 06 18.4	-0.7
BMRM	Bremner River	82.74	24	P	P	19 06 19.0	-0.4
	baz=236						
DHY	Denali Highway	82.88	22	P	P	19 06 21.1	+0.9
	baz=234						
TIXI	Tiksi	82.92	351	P	P	19 06 19.7	-0.2
	comp=Z,2.6nm,0.8s,baz=121,slow=6.1,SNR=7.0						
TIXI	Tiksi	82.92	351	P	P	19 06 19.0	-1.0
MLY	Manley	82.92	19	P	P	19 06 19.0	-1.2
	baz=230						
MLY	Manley	82.92	19	P	P	19 06 19.4	-0.8
MLY				IAmb	IAmb	19 06 21.2	
	comp=Z,19nm,1.1s						
NEA2	Nenana	83.20	20	P	P	19 06 21.2	-0.4
	baz=232						
NEA2	Nenana	83.20	20	P	P	19 06 20.4	-1.2
NEA2				IAmb	IAmb	19 06 22.5	
	comp=Z,25nm,1.1s						
I23K	Minto, Yukon-K	83.45	20	P	P	19 06 23.1	+0.3
	baz=232						
WRH	Wood River Hil	83.46	21	P	P	19 06 22.0	-0.9
WRH				IAmb	IAmb	19 06 23.2	
	comp=Z,22nm,1.1s						
MDM	Murphy Dome	83.71	20	P	P	19 06 23.9	-0.4
MDM				IAmb	IAmb	19 06 25.2	
	comp=Z,26nm,1.2s						
TCOL	CIGO, UAF Yank	83.78	20	P	P	19 06 24.2	-0.3
	baz=233						
TCOL	CIGO, UAF Yank	83.78	20	P	P	19 06 23.7	-0.9
COLA	College	83.79	20	P	P	19 06 23.7	-0.9
MAW	Mawson	83.82	203	P	P	19 06 25.5	+0.7
	comp=Z,13nm,1.1s,baz=105,slow=7.7,SNR=6.1						
HDA	Harding Lake	83.82	21	P	P	19 06 24.7	-0.1
	baz=234						
HDA	Harding Lake	83.82	21	P	P	19 06 24.0	-0.8
HDA				IAmb	IAmb	19 06 25.5	
	comp=Z,23nm,1.2s						
IL31		84.06	21	P	P	19 06 25.1	-0.8
IL31				IAmb	IAmb	19 06 26.3	
	comp=Z,14nm,1.1s						
ILAR	Eielson Array	84.06	21	P	P	19 06 25.0	-1.0
	comp=Z,11nm,1.1s,baz=260,slow=4.2,SNR=28						
ILAR	Eielson Array	84.06	21	P	P	19 06 24.5	-1.5
POKR	Poker Plat Res	84.08	20	P	P	19 06 25.8	-0.3
	baz=234						
M26K	Nabesna, AK	84.17	24	P	P	19 06 27.4	+0.8
	baz=238						
MENT	Mentasta	84.18	23	P	P	19 06 26.8	+0.1
MENT				IAmb	IAmb	19 06 30.3	
	comp=Z,12nm,1.1s						
RIDG	Independent Ri	84.20	22	P	P	19 06 27.2	+0.5
	baz=236						
RIDG	Independent Ri	84.20	22	P	P	19 06 26.7	-0.1
H24K	Noodor Dome	84.36	19	P	P	19 06 28.1	+0.6
	baz=233						
L26K	Log Cabin Wild	84.37	23	P	P	19 06 28.1	+0.5
	baz=237						
DOT	Dot Lake	84.44	22	P	P	19 06 28.2	+0.3
DOT				IAmb	IAmb	19 06 29.2	
	comp=Z,17nm,0.9s						
COLD	Coldfoot	84.49	18	P	P	19 06 29.0	+0.8
	baz=231						
M27K	Edge Creek, AK	84.59	24	P	P	19 06 30.0	+1.1
	baz=239						
M27K	Edge Creek, AK	84.59	24	P	P	19 06 28.4	-0.5
M27K				IAmb	IAmb	19 06 30.9	
	comp=Z,19nm,1.1s						
SCRK	Sand Creek	84.64	22	P	P	19 06 29.7	+0.6
	baz=237						
SCRK	Sand Creek	84.64	22	P	P	19 06 28.2	-0.9
SCRK				IAmb	IAmb	19 06 40.0	
	comp=Z,14nm,1.0s						
YUK3	Moose Creek	84.87	25	P	P	19 06 31.8	+1.3
	baz=240						
PRP	Porcupine Dome	84.96	20	P	P	19 06 32.7	+2.0
	baz=235						
L27K	Beaver Creek,	84.97	23	P	P	19 06 31.8	+1.1
	baz=239						
L27K	Beaver Creek,	84.97	23	P	P	19 06 30.6	-0.1
L27K				IAmb	IAmb	19 06 32.7	
	comp=Z,12nm,1.1s						
J26L	Joseph Creek	85.09	22	P	P	19 06 32.4	+1.0
	baz=237						
YUK4	Talbot Arm	85.42	25	P	P	19 06 35.0	+1.9
	baz=242						
TOLK	Toolik Lake Re	85.57	17	P	P	19 06 34.5	+0.9
	baz=231						
TOLK	Toolik Lake Re	85.57	17	P	P	19 06 34.2	+0.6
TOLK				IAmb	IAmb	19 06 35.3	
	comp=Z,9.9nm,0.9s						
A21K	Barrow	85.58	13	P	P	19 06 34.5	+1.1
	baz=224						

HYT	**Haines Junctio**	**85.67**	**26**	P	**P**	**19 06 36.1**	**+1.8**
	baz=243						
HYT	**Haines Junctio**	**85.67**	**26**	P	**P**	**19 06 35.8**	**+1.5**
EGAK	**Eagle**	**86.11**	**22**	P	**P**	**19 06 37.4**	**+1.1**
	baz=239						
DAWY	**Dawson**	**86.42**	**23**	P	**P**	**19 06 39.2**	**+1.3**
	baz=241						
N31M	**Braeburn, Yuko**	**86.71**	**26**	P	**P**	**19 06 40.9**	**+1.5**
	baz=244						
M30M	**Minto, Yukon**	**86.76**	**25**	P	**P**	**19 06 40.1**	**+0.5**
	baz=243						
MK31	**Makanchi Array**	**87.25**	**318**	P	**P**	**19 06 42.6**	**+0.3**
MKAR	**Makanchi Array**	**87.25**	**318**	P	**P**	**19 06 42.4**	**+0.1**
	comp=Z,3.7nm,0.8s,baz=102,slow=6.1,SNR=18						
I29M	**Ogilvie Camp,**	**87.45**	**22**	P	**P**	**19 06 43.7**	**+0.8**
	baz=242						
ZALV	**Zalesovo Beam**	**87.84**	**325**	P	**P**	**19 06 43.4**	**-1.5**
	comp=Z,2.6nm,0.8s,baz=109,slow=5.7,SNR=8.4						
FARO	**Faro, Yukon**	**88.07**	**26**	P	**P**	**19 06 46.6**	**+0.7**
	baz=246						
EPYK	**Eagle Plains**	**88.50**	**21**	P	**P**	**19 06 48.8**	**+1.0**
	baz=243						
EPYK	**Eagle Plains**	**88.50**	**21**	P	**P**	**19 06 48.3**	**+0.4**
PRZ	**Przheval'sk**	**88.84**	**313**	P	**P**	**19 06 49.9**	**-0.3**
PRZ				IAmb	IAmb	19 06 52.6	
	comp=Z,19nm,1.0s						
KSH	**Kashi**	**89.99**	**310**	P	**P**	**19 06 56.6**	**+1.0**
KSH				pP	sP	19 07 01.1	+1.5
KSH				sP	pP	19 07 03.0	+4.4
KSH				pmax	pmax		
	comp=Z,6.0nm,1.1s						
CWC	**Cottonwood Cre**	**90.09**	**53**	P	**P**	**19 06 58.5**	**+2.3**
	baz=259						
NVAR	**Mina Array Bea**	**90.30**	**51**	P	**P**	**19 06 58.5**	**+1.3**
	comp=Z,3.9nm,0.8s,baz=239,slow=7.3,SNR=15						
NVAR	**Mina Array Bea**	**90.30**	**51**	P	**P**	**19 06 56.4**	**-0.7**
INK	**Inuvik**	**90.45**	**20**	P	**P**	**19 06 55.8**	**-1.0**
	comp=Z,4.2nm,1.1s,baz=199,slow=5.3,SNR=3.1						
KVN	**Kaiserville**	**90.57**	**51**	P	**P**	**19 06 57.9**	**-0.5**
KVN				IAmb	IAmb	19 07 01.4	
	comp=Z,7.3nm,1.0s						
KURK	**Kurchatov**	**90.61**	**321**	P	**P**	**19 06 56.5**	**-1.4**
WVOR	**Wild Horse Val**	**90.84**	**47**	P	**P**	**19 06 58.6**	**-0.9**
SYO	**Syowa Base**	**91.48**	**198**⇓	*e*PP	PP	19 10 41.0	+1.9
NRIK	**Noril'sk**	**91.83**	**340**	P	**P**	**19 07 01.9**	**-1.4**
	comp=Z,1.5nm,0.5s,baz=123,slow=4.8,SNR=4.0						
PRN	**Pahroc Range**	**92.65**	**53**	P	**P**	**19 07 07.1**	**-0.9**
PRN				IAmb	IAmb	19 07 31.4	
	comp=Z,10nm,1.3s						
SPR3	**Spring Creek 3**	**93.46**	**51**	P	**P**	**19 07 13.0**	**+1.1**
SPR3				IAmb	IAmb	19 07 31.6	
	comp=Z,12nm,1.2s						
DUG	**Dugway, Tooele**	**94.79**	**50**	P	**P**	**19 07 14.5**	**-3.3**
DUG				IAmb	IAmb	19 07 30.1	
	comp=Z,6.5nm,0.7s						
YKA	**Yellowknife Ar**	**96.55**	**28**	P	**P**	**19 07 25.7**	**+0.7**
	comp=Z,0.7nm,0.7s,baz=263,slow=3.7,SNR=1.8						
SNAA	**Sanae**	**98.48**	**186**	P	Pdif	19 07 34.6	+0.8
VNA3	**Neumayer Olymp**	**99.47**	**184**	Pdiff	**Pdif**	**19 07 37.8**	**-0.4**
VNA2	**Neumayer--Watz**	**99.61**	**185**	Pdiff	**Pdif**	**19 07 38.9**	**+0.1**
VNA1	**Neumayer--Stat**	**99.94**	**184**	Pdiff	**Pdif**	**19 07 40.4**	**+0.1**
AKASG	**Malin Array Be**	**121.23**	**325**	PKP	**PKPdf**	**19 12 47.4**	**-1.3**
	comp=Z,1.1nm,0.6s,baz=57,slow=3.0,SNR=4.2						
BOSA	**Boshof**	**121.34**	**229**	PKP	**PKiKP**	**19 12 50.4**	**+0.4**
	comp=Z,1.7nm,0.7s,baz=173,slow=8.7,SNR=3.6						
NOA	**NORSAR Array B**	**122.77**	**342**	PKP	**PKPdf**	**19 12 50.6**	**-0.8**
	comp=Z,0.9nm,0.7s,baz=46,slow=1.8,SNR=4.5						
CRVS	**Cervenica-Dubn**	**126.48**	**326**	*e*PKP	**PKPdf**	**19 12 58.6**	**-0.3**
CRVS				*e*L	L	19 48 04.5	
LPAZ	**La Paz**	**127.43**	**118**	PKP	**PKPdf**	**19 13 02.5**	**+0.1**
	comp=Z,5.8nm,0.9s,baz=120,slow=5.0,SNR=3.8						
CPUP	**Villa Florida**	**130.51**	**136**	PKP	**PKPdf**	**19 13 06.9**	**-0.3**
	comp=Z,1.0nm,0.5s,baz=293,slow=2.7,SNR=4.3						
GERES	**GERESS Array B**	**130.60**	**330**	PKP	**PKPdf**	**19 13 06.1**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=309,slow=8.4,SNR=3.7						
BDFB	**Brasilia**	**144.05**	**133**	PKP	**PKPab**	**19 13 30.4**	**+0.4**
	comp=Z,5.0nm,0.7s,baz=218,slow=5.2,SNR=8.1						
BDFB	**Brasilia**	**144.05**	**133**		**PKPab**	**19 13 29.9**	**0.0**
PBRG	**Braganca**	**144.89**	**341**	*e*PKP	**PKPab**	**19 13 31.8**	**-0.5**
PGAV	**Gavieira, Arco**	**145.22**	**343**	*e*PKP	**PKPbc**	**19 13 33.0**	**-0.4**
PCAB	**Cabril**	**145.38**	**342**	*e*PKP	**PKPbc**	**19 13 33.9**	**0.0**
MVO	**Moncorvo**	**145.56**	**341**	*e*PKP	**PKPdf**	**19 13 34.7**	**+0.3**
POLO	**Lamas de Olo**	**145.62**	**342**	*e*PKP	**PKPdf**	**19 13 34.9**	**+0.4**
ESDC	**Sonseca Array**	**145.74**	**336**	PKPbc	**PKPdf**	**19 13 34.4**	**-0.3**
	comp=Z,5.5nm,1.0s,baz=18,slow=3.6,SNR=24						
ESDC	**Sonseca Array**	**145.74**	**336**		**PKPdf**	**19 13 33.6**	**-1.2**
PVIS	**Viseu**	**146.25**	**341**	*e*PKP	**PKPbc**	**19 13 36.6**	**0.0**
MTE	**Manteigas**	**146.42**	**341**	*e*PKP	**PKPbc**	**19 13 37.2**	**0.0**
PCBR	**Castelo Branco**	**146.90**	**340**	*e*PKP	**PKPbc**	**19 13 38.8**	**+0.3**
PMRV	**Marv??o**	**147.24**	**340**	*e*PKP	**PKPbc**	**19 13 39.1**	**-0.4**
PMTG	**Montargil**	**147.85**	**340**	*e*PKP	**PKPbc**	**19 13 40.9**	**-0.2**
EVO	**Evora**	**148.26**	**340**	*e*PKP	**PKPbc**	**19 13 41.9**	**-0.3**
PNCL	**Nicolau / Gran**	**148.81**	**340**	*e*PKP	**PKPbc**	**19 13 42.9**	**-0.8**
TORD	**Torodi Ar. Bea**	**156.88**	**282**	PKP	**PKPdf**	**19 13 51.6**	**-0.6**
	comp=Z,3.3nm,0.9s,baz=34,slow=1.4,SNR=4.6						
KIC	**Kosan Boka**	**163.17**	**262**	*e*PKP1	**PKPab**	**19 14 48.9**	**-0.6**
	comp=Z,23nm,1.3s						
LIC	**Lamto**	**163.43**	**261**	*e*PKP1	**PKPab**	**19 14 48.1**	**-2.5**
	comp=Z,49nm,1.4s						
TIC	**Toumodi**	**163.49**	**263**	*e*PKP1	**PKPab**	**19 14 48.6**	**-2.4**

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*IDC **18** 18:56:40.9±1.0, 9°.18S×158°.43E, h0^{km}, mb4.1/7, mb1 4.3/7, mb1mx3.9/57, mbtmp4.1/7, Error ellipse: s-maj=32.2km s-min=19.9km az=2.0*

ISC 18 18:56:42.3±0.9**, 9°.2S**±0°.2×**158°.45E**±0°.08**, h10**^{km}**, n8, σ0^{s}.69**/9**, mb4.1**/7**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.49**	**99**	Pn	**Pb**	**18 57 09.3**	**-0.9**
	378nm,0.3s,baz=224,slow=3.4,SNR=2.0						
HNR				Sn	**Sg**	**18 57 31.5**	**+1.1**
	744nm,0.3s,baz=17,slow=7.7,SNR=3.2						
WRA	**Warramunga Arr**	**25.63**	**243**	P	**P**	**19 02 12.2**	**-0.2**
	4.0nm,0.8s,baz=71,slow=9.3,SNR=3.9						
ASAR	**Alice Springs**	**27.52**	**236**	P	**P**	**19 02 29.4**	**0.0**
	2.7nm,0.8s,baz=61,slow=9.4,SNR=4.1						
KSRS	**Korea Array**	**54.51**	**330**	P	**P**	**19 06 10.0**	**-0.4**
	2.3nm,1.0s,baz=132,slow=7.3,SNR=3.6						
CMAR	**Chiang Mai Arr**	**64.82**	**295**	P	**P**	**19 07 22.2**	**+0.3**
	1.7nm,0.9s,baz=119,slow=5.0,SNR=4.3						
SONM	**Songino Array**	**73.05**	**326**	P	**P**	**19 08 13.3**	**+0.6**
	3.1nm,0.7s,baz=132,slow=5.6,SNR=4.7						
ILAR	**Eielson Array**	**84.19**	**21**	P	**P**	**19 09 13.2**	**-0.4**
	0.8nm,0.7s,baz=245,slow=5.0,SNR=3.9						
MKAR	**Makanchi Array**	**87.32**	**318**	P	**P**	**19 09 30.0**	**+0.4**
	0.8nm,0.7s,baz=93,slow=6.8,SNR=3.1						

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*IDC **18** 19:06:19.0±0.9, 9°.07S×158°.37E, h0^{km}, mb4.2/8, mb1 4.3/8, mb1mx3.9/41, mbtmp4.2/8, MS5.4/2, Ms1 5.4/2, ms1mx4.9/27, Error ellipse: s-maj=24.4km s-min=17.8km az=170.0*

*NEIC **18** 19:06:19.3±0.5, 8°.9S±0°.2×158°.56E±0°.08, h10^{km}±1^{km}, mb4.0/3, Error ellipse: s-maj=30.8km s-min=6.1km az=22.0*

ISC 18 19:06:19.5±0.7**, 9°.0S**±0°.1×**158°.46E**±0°.06**, h10**^{km}**, n25, σ1^{s}.28**/24**, mb4.1**/8**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.53**	**106**	Pn	**Pg**	**19 06 48.5**	**-0.5**
	100nm,0.3s,baz=190,slow=0.3,SNR=7.8						
HNR				Sn	**Sg**	**19 07 10.0**	**+1.1**
	308nm,0.3s,baz=253,slow=21,SNR=15						
HNR	**Honiara**	**1.53**	**106**		**Pn**	**19 06 45.7**	**-1.2**
CTA	**Charters Tower**	**16.14**	**226**	LR	LR	19 14 57.5	
	comp=Z,12µm,21.9s,baz=179,slow=32						
RMQ	**Roma**	**19.68**	**207**	P	**P**	**19 10 50.4**	**+1.5**
	baz=20,SNR=4.2						
WR0	**Warramunga Arr**	**25.55**	**242**	P	**P**	**19 11 48.7**	**-0.1**
WB0	**Warramunga Arr**	**25.61**	**243**	P	**P**	**19 11 49.5**	**+0.2**
WRAB	**Tennant Creek**	**25.71**	**242**	P	**P**	**19 11 50.5**	**+0.2**
WB2	**Warramunga Arr**	**25.71**	**242**	P	**P**	**19 11 50.5**	**+0.2**
WRA	**Warramunga Arr**	**25.72**	**242**	P	**P**	**19 11 50.4**	**0.0**
	5.1nm,0.8s,baz=67,slow=9.1,SNR=12						
KDU	**Kakadu**	**25.77**	**259**	P	**P**	**19 11 48.8**	**-2.0**
	baz=26,SNR=3.5						
STKA	**Stephens Creek**	**27.63**	**212**	P	**P**	**19 12 08.1**	**+0.7**
	3.3nm,0.6s,baz=44,slow=14,SNR=8.3						
STKA	**Stephens Creek**	**27.63**	**212**	P	**P**	**19 12 10.9**	**+3.5**
	baz=28,SNR=6.1						
STKA	**Stephens Creek**	**27.63**	**212**	P	**P**	**19 12 07.7**	**+0.2**
STKA				IAmb	IAmb	19 12 27.8	
	comp=Z,2.1nm,1.5s						
ASAR	**Alice Springs**	**27.64**	**235**	P	**P**	**19 12 07.2**	**-0.4**
	comp=Z,2.4nm,0.8s,baz=68,slow=8.9,SNR=17						
BBOO	**Buckleboo**	**31.47**	**218**	P	**P**	**19 12 41.8**	**+0.3**
	baz=32,SNR=7.9						
WRKA	**Warakurna**	**32.84**	**237**	P	**P**	**19 12 52.9**	**-0.8**
	baz=33,SNR=5.4						
FITZ	**Fitzroy Crossi**	**33.11**	**251**	P	**P**	**19 12 55.9**	**-0.2**
	comp=Z,2.3nm,0.8s,baz=104,slow=4.2,SNR=20						
JAGI	**Jajag, Banyuwa**	**43.77**	**267**	P	**P**	**19 14 24.5**	**-1.3**
USRK	**Ussuriysk Ar.**	**58.12**	**338**	LR	LR	19 42 15.1	
	comp=Z,4µm,18.0s,baz=130,slow=37						
CMAR	**Chiang Mai Arr**	**64.73**	**295**	P	**P**	**19 16 59.6**	**+1.1**
	comp=Z,1.1nm,0.9s,baz=124,slow=5.0,SNR=7.8						
SONM	**Songino Array**	**72.88**	**326**	P	**P**	**19 17 50.1**	**+1.1**
	comp=Z,2.7nm,0.7s,baz=138,slow=5.7,SNR=17						
SONM	**Songino Array**	**72.88**	**326**	P	**P**	**19 17 48.6**	**-0.3**
SONM				IAmb	IAmb	19 17 50.7	
	comp=Z,2.6nm,0.8s						
ILAR	**Eielson Array**	**84.00**	**21**	P	**P**	**19 18 51.7**	**+1.9**
	comp=Z,0.6nm,0.5s,baz=228,slow=5.8,SNR=5.2						
ILAR	**Eielson Array**	**84.00**	**21**	P	**P**	**19 18 48.1**	**-1.7**
MKAR	**Makanchi Array**	**87.17**	**318**	P	**P**	**19 19 06.8**	**+0.8**
	comp=Z,0.6nm,0.6s,baz=79,slow=6.3,SNR=4.5						

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*IDC **18** 19:08:05.4±1.1, 53°.66N×165°.51W, h0^{km}, mb4.0/13, mb1 4.2/15, mb1mx3.9/59, mbtmp4.0/15, ML3.3/2, Error ellipse: s-maj=28.7km s-min=17.1km az=11.0*

*AEIC **18** 19:08:09.8±1.8, 53°.54N±0°.06×165°.25W±0°.07, h54^{km}±6^{km}, Error ellipse: s-maj=9.3km s-min=5.2km az=150.0*

*NEIC **18** 19:08:09.5±1.6, 53°.46N±0°.06×165°.22W±0°.03, h30^{km}±8^{km}, mb4.3/7, ML4.0/5, ML4.1/43(AEIC), Error ellipse: s-maj=8.7km s-min=1.9km az=165.0*

ISC 18 19:08:08.9±1.5**, 53°.46N**±0°.07×**165°.20W**±0°.04**, h27**^{km}±10^{km}**, n111, σ1^{s}.28**/111**, mb4.2**/15**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKSA	**Akutan Strait**	**0.74**	**337**		**Pn**	**19 08 23.5**	**-0.1**
AKSA	**Akutan Strait**	**0.74**	**337**		**Pn**	**19 08 23.3**	**-0.3**
AKSA					**Sn**	**19 08 33.9**	**-0.1**
AKUT	**Akutan**	**0.76**	**334**		**Pn**	**19 08 23.8**	**0.0**
AKUT					**Sn**	**19 08 34.9**	**+0.4**
AKUT	**Akutan**	**0.76**	**334**	IAML		19 08 35.5	
	comp=N,7µm,0.5s						
AKBBA	**Akutan Broad B**	**0.78**	**326**		**Pn**	**19 08 24.0**	**0.0**
AKBBA					**Sn**	**19 08 35.2**	**+0.3**
ZRO	**Akutan Zero**	**0.79**	**324**		**Pn**	**19 08 24.2**	**0.0**
AKMO	**Akutan Morgan**	**0.80**	**323**		**Pn**	**19 08 24.3**	**-0.1**
AKMO					**Sn**	**19 08 35.3**	**-0.1**
AKLV	**Akutan Long Va**	**0.84**	**328**		**Pb**	**19 08 24.8**	**0.0**
AKRB	**Akutan Reef Bi**	**0.85**	**323**		**Pn**	**19 08 25.1**	**0.0**
UNV	**Unalaska Valle**	**0.87**	**297**	P	**Pb**	**19 08 25.0**	**-0.3**
	baz=112						
UNV				S	**Sb**	**19 08 36.6**	**+0.1**
	baz=112						
UNV	**Unalaska Valle**	**0.87**	**297**		**Pb**	**19 08 25.0**	**-0.3**
UNV					**Sb**	**19 08 36.6**	**+0.1**
AKGG	**Akutan Green G**	**0.88**	**328**		**Pn**	**19 08 25.5**	**0.0**
MNAT	**Makushin Natee**	**0.98**	**296**		**Pn**	**19 08 27.0**	**+0.1**
MNAT					**Sb**	**19 08 39.8**	**0.0**
MTBL	**Makushin Table**	**1.02**	**301**		**Pn**	**19 08 27.7**	**+0.2**
MSW	**Makushin Switc**	**1.05**	**297**		**Pn**	**19 08 27.9**	**+0.1**
WESP	**Westdahl Peak**	**1.08**	**15**		**Pb**	**19 08 28.3**	**-0.6**
MAPS	**Pakushin South**	**1.10**	**289**		**Pn**	**19 08 28.5**	**+0.1**
MAPS					**Sn**	**19 08 42.8**	**0.0**
WECS	**Westdahl Cape**	**1.10**	**13**		**Pb**	**19 08 29.0**	**-0.4**
WECS					**Sb**	**19 08 42.8**	**-0.5**
WEBT	**Westdahl Beart**	**1.17**	**13**		**Pb**	**19 08 29.9**	**-0.5**
SSLS	**Shishaldin Sou**	**1.44**	**29**		**Pn**	**19 08 33.0**	**-0.2**
SSBA	**Shishaldin**	**1.46**	**25**		**Pn**	**19 08 33.4**	**-0.1**
SSLN	**Shishaldin Nor**	**1.53**	**27**		**Pn**	**19 08 34.8**	**+0.3**
ISLZ	**Isanotski Laza**	**1.54**	**34**		**Pn**	**19 08 34.0**	**-0.6**
ISNN	**Isanotski Nort**	**1.61**	**31**		**Pn**	**19 08 36.0**	**+0.4**
OKFG	**Magazine Ridge**	**1.62**	**269**		**Pn**	**19 08 36.0**	**+0.3**
OKFG					**Sb**	**19 08 57.5**	**-0.6**
OKTU	**Okmok Mt. Tuli**	**1.70**	**269**		**Pn**	**19 08 37.3**	**+0.5**
FALS	**False Pass**	**1.75**	**36**	P	**Pn**	**19 08 37.2**	**-0.2**
	baz=220						
FALS				S	**Sn**	**19 08 59.5**	**+0.7**
	baz=220						
FALS	**False Pass**	**1.75**	**36**		**Pn**	**19 08 37.2**	**-0.2**
FALS					**Sn**	**19 08 59.5**	**+0.7**
OKNC	**Okmok New Cone**	**1.75**	**271**		**Pn**	**19 08 38.5**	**+1.1**
OKCE	**Okmok Cone E**	**1.77**	**270**		**Pn**	**19 08 39.0**	**+1.2**
OKSP	**Okmok Steeple**	**1.87**	**265**		**Pn**	**19 08 39.0**	**-0.1**
NIKH	**Nikolski High**	**2.25**	**259**	P	**Pn**	**19 08 45.5**	**+1.2**
	baz=74						
NIKH	**Nikolski High**	**2.25**	**259**		**Pn**	**19 08 45.5**	**+1.2**
DT1	**Dutton Round H**	**2.38**	**45**		**Pn**	**19 08 46.9**	**+0.8**
HAG	**Hague Volcano**	**2.68**	**45**		**Pn**	**19 08 52.0**	**+1.8**
PS4A	**Pavlof South-4**	**2.72**	**45**		**Pn**	**19 08 52.6**	**+1.8**
SDPT	**Sand Point**	**3.35**	**54**	P	**Pn**	**19 09 00.2**	**+0.8**
	baz=239						
SDPT	**Sand Point**	**3.35**	**54**		**Pn**	**19 09 00.2**	**+0.8**
SDPT	**Sand Point**	**3.35**	**54**	IAML		19 09 57.0	
	comp=E,376nm,0.9s						
SDPT				IAML		19 10 02.5	
	comp=N,367nm,1.4s						
CHGN	**Chignik**	**4.84**	**51**	Pn	**Pn**	**19 09 21.1**	**+1.2**
SII	**Sitkinak Islan**	**7.05**	**59**	Pn	**Pn**	**19 09 50.4**	**+0.1**
OHAK	**Old Harbor**	**7.77**	**56**	Pn	**Pn**	**19 09 59.9**	**0.0**
KDAK	**Kodiak Island**	**8.35**	**54**	Pn	**Pn**	**19 10 07.9**	**-0.1**
	comp=N,0.7nm,0.3s,baz=221,slow=4.5,SNR=21						
KDAK				Sn	**Sn**	**19 11 37.1**	**-4.1**
	baz=163,slow=20,SNR=1.8						
O18K	**Koktuh Hills**	**8.44**	**37**	Pn	**Pn**	**19 10 11.5**	**+2.2**
Q19K	**Cape Douglas,**	**8.45**	**45**	Pn	**Pn**	**19 10 10.9**	**+1.5**
SVW2	**Sparrevohn**	**9.25**	**30**	Pn	**Pn**	**19 10 21.7**	**+1.3**
N19K	**Bonanza Creek**	**9.38**	**34**		**Pn**	**19 10 25.6**	**+3.3**
CNPM	**China Poot**	**9.81**	**46**	Pn	**Pn**	**19 10 28.8**	**+0.7**
BRLK	**Bradley Lake**	**10.09**	**46**	Pn	**Pn**	**19 10 33.3**	**+1.4**
M19K	**Big River Lodg**	**10.24**	**30**	Pn	**Pn**	**19 10 36.2**	**+2.3**
L19K	**White Mountain**	**10.33**	**28**	Pn	**Pn**	**19 10 36.3**	**+1.2**
O22K	**Cooper Landing**	**10.97**	**44**	Pn	**Pn**	**19 10 43.8**	**-0.1**
SUA	**Susitna One**	**11.15**	**38**	Pn	**Pn**	**19 10 47.1**	**+0.7**
K20K	**Telida**	**11.49**	**26**		**Pn**	**19 10 52.8**	**+1.8**
PWL	**Port Wells**	**11.75**	**44**	Pn	**Pn**	**19 10 54.0**	**-0.6**
GHO	**Glory Hole Cre**	**12.03**	**40**	Pn	**Pn**	**19 10 56.9**	**-1.6**
J20K	**Nowinta River**	**12.15**	**23**	Pn	**Pn**	**19 11 02.0**	**+2.0**
TNA	**Tin City**	**12.22**	**355**	Pn	**Pn**	**19 11 03.9**	**+3.0**
FID	**Port Fidalgo**	**12.49**	**47**	Pn	**Pn**	**19 11 02.7**	**-1.9**
TRF	**Thorofare Moun**	**12.66**	**32**	Pn	**Pn**	**19 11 08.4**	**+1.4**
KLU	**Klutina**	**13.08**	**44**		**Pn**	**19 11 11.5**	**-1.3**
RAGM	**Ragged Mountai**	**13.14**	**50**	Pn	**Pn**	**19 11 13.0**	**-0.6**
M24K	**Tolsona, Glenn**	**13.29**	**42**	Pn	**Pn**	**19 11 13.1**	**-2.5**
HMT	**Hamilton**	**13.31**	**51**	Pn	**Pn**	**19 11 14.6**	**-1.3**
DHY	**Denali Highway**	**13.39**	**37**	Pn	**Pn**	**19 11 14.6**	**-2.5**
BERG	**Berg Lake**	**13.59**	**51**	Pn	**Pn**	**19 11 18.2**	**-1.5**
N25K	**Chitina, Valde**	**13.70**	**45**	Pn	**Pn**	**19 11 20.0**	**-1.2**
SNH	**Sunshine Point**	**13.92**	**52**	Pn	**Pn**	**19 11 24.5**	**+0.3**
GLB	**Gilahina Butte**	**13.96**	**47**	Pn	**Pn**	**19 11 23.1**	**-1.6**
VRDI	**Verde Repeater**	**14.03**	**48**	Pn	**Pn**	**19 11 24.4**	**-1.3**
PAX	**Paxson**	**14.04**	**39**	Pn	**Pn**	**19 11 24.6**	**-1.2**
WRH	**Wood River Hil**	**14.07**	**32**	Pn	**Pn**	**19 11 24.6**	**-1.5**
TGL	**Tana Glacier**	**14.13**	**50**	Pn	**Pn**	**19 11 26.2**	**-0.9**
ISLE	**Juniper Island**	**14.30**	**51**	Pn	**Pn**	**19 11 27.4**	**-2.0**
YAH	**Yahtse**	**14.50**	**52**	Pn	**Pn**	**19 11 31.6**	**-0.6**
GRNC	**Granite Creek**	**14.61**	**51**		**Pn**	**19 11 33.0**	**-0.8**
ILAR	**Eielson Array**	**14.65**	**32**	Pn	**Pn**	**19 11 32.1**	**-2.0**
	comp=N,0.1nm,0.3s,baz=227,slow=13,SNR=1.6						
MENT	**Mentasta**	**14.70**	**41**	Pn	**Pn**	**19 11 33.0**	**-1.8**
RIDG	**Independent Ri**	**14.71**	**38**	Pn	**Pn**	**19 11 33.9**	**-0.9**
M26K	**Nabesna, AK**	**14.73**	**44**	Pn	**Pn**	**19 11 32.8**	**-2.4**
TABL	**Table Mountain**	**14.81**	**52**	Pn	**Pn**	**19 11 35.7**	**-0.7**
EGAK	**Eagle**	**16.62**	**38**	P	**P**	**19 12 02.6**	**+0.7**
EGAK				IAmb	IAmb	19 12 08.3	
	comp=Z,15nm,1.3s						
DAWY	**Dawson**	**16.95**	**41**	P	**P**	**19 12 08.2**	**+2.6**
DLBC	**Dease Lake**	**20.15**	**62**	P	Pn	19 12 41.6	-1.1
	comp=Z,7.3nm,1.1s,baz=334,slow=18,SNR=3.1						
DLBC	**Dease Lake**	**20.15**	**62**	IAmb	IAmb	19 12 59.0	
	comp=Z,18nm,1.4s						
INK	**Inuvik**	**21.05**	**33**	P	**P**	**19 12 49.6**	**-0.7**
	comp=Z,1.5nm,0.3s,baz=251,slow=9.6,SNR=1.4						
WVOR	**Wild Horse Val**	**32.52**	**91**	P	**P**	**19 14 39.7**	**+2.4**
WVOR				IAmb	IAmb	19 14 40.9	
	comp=Z,9.5nm,1.0s						
NVAR	**Mina Array Bea**	**35.21**	**96**	P	**P**	**19 15 03.4**	**+2.6**
	comp=Z,2.2nm,0.7s,baz=302,slow=8.3,SNR=13						
MDPB	**Devils Postpil**	**35.27**	**98**	P	**P**	**19 14 59.3**	**-2.1**
YHH	**Holmes Hill**	**35.81**	**81**	P	**P**	**19 15 07.2**	**+1.1**
YHH				IAmb	IAmb	19 15 08.4	
	comp=Z,4.2nm,0.8s						
PDAR	**Pinedale Array**	**37.74**	**83**	P	**P**	**19 15 24.1**	**+1.7**
	comp=Z,1.4nm,0.9s,baz=322,slow=4.5,SNR=6.2						
H11N2	**WAKE ISLAND Hy**	**39.93**	**223**	T	T	19 58 27.1	
	baz=25,slow=76,SNR=167						
H11N3	**WAKE ISLAND Hy**	**39.94**	**223**	T	T	19 58 30.9	
	baz=25,slow=76,SNR=174						
H11N1	**WAKE ISLAND Hy**	**39.95**	**223**	T	T	19 58 22.9	
	baz=25,slow=76,SNR=138						
O20A	**White River Ci**	**40.13**	**86**	P	**P**	**19 15 42.3**	**-0.1**
O20A				IAmb	IAmb	19 15 44.5	
	comp=Z,6.2nm,0.8s						
H11S1	**WAKE ISLAND Hy**	**41.11**	**223**	T	T	19 59 51.0	
	baz=25,slow=76,SNR=66						
H11S2	**WAKE ISLAND Hy**	**41.12**	**223**	T	T	19 59 58.4	
	baz=25,slow=76,SNR=34						
H11S3	**WAKE ISLAND Hy**	**41.13**	**223**	T	T	19 59 58.5	
	baz=25,slow=76,SNR=33						
TXAR	**Lajitas Array**	**50.24**	**93**	P	**P**	**19 17 04.5**	**+1.9**
	comp=Z,2.8nm,0.8s,baz=300,slow=5.5,SNR=22						
ARCES	**ARCESS Array B**	**57.07**	**356**	P	**P**	**19 17 51.0**	**-1.0**
	comp=Z,2.7nm,0.8s,baz=7.9,slow=6.8,SNR=14						
MKAR	**Makanchi Array**	**64.85**	**315**	P	**P**	**19 18 43.7**	**-1.4**
	comp=Z,0.7nm,0.9s,baz=52,slow=6.0,SNR=13						
FINES	**FINESS Array B**	**65.10**	**354**	P	**P**	**19 18 45.5**	**-1.0**
	comp=Z,2.5nm,0.6s,baz=7.2,slow=8.4,SNR=8.6						
NB2	**NORSAR Subarra**	**65.81**	**2**	P	**P**	**19 18 50.4**	**-0.8**
	comp=Z,1.1nm,0.8s,baz=360,slow=6.9						
NOA	**NORSAR Array B**	**65.81**	**2**	P	**P**	**19 18 50.5**	**-0.7**
	comp=Z,1.0nm,0.7s,baz=359,slow=6.6,SNR=4.3						
AKASG	**Malin Array Be**	**75.51**	**351**	P	**P**	**19 19 49.4**	**-0.9**
	comp=Z,0.4nm,0.3s,baz=13,slow=5.8,SNR=5.3						
GERES	**GERESS Array B**	**78.07**	**1**	P	**P**	**19 20 04.5**	**-0.4**
	comp=Z,0.8nm,0.8s,baz=0.0,slow=8.8,SNR=2.8						
CMAR	**Chiang Mai Arr**	**78.80**	**286**	P	**P**	**19 20 09.3**	**+0.1**
	comp=Z,1.8nm,1.1s,baz=15,slow=6.0,SNR=6.4						
BRTR	**Keskin Array B**	**85.77**	**346**	P	**P**	**19 20 46.0**	**+0.3**
	comp=Z,1.8nm,0.9s,baz=285,slow=5.5,SNR=4.0						
H03N2	**Juan Fernandez**	**114.02**	**114**	T	T	21 31 19.7	
	baz=322,slow=77,SNR=48						
H03N1	**Juan Fernandez**	**114.03**	**114**	T	T	21 31 24.4	
	baz=322,slow=77,SNR=48						
H03N3	**Juan Fernandez**	**114.03**	**114**	T	T	21 31 20.1	
	baz=322,slow=77,SNR=61						

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*NOU **18** 19:08:17.4, 21°.66S×177°.63W, h386^{km}, mb4.7/5, Fiji Islands Region*

*NEIC **18** 19:08:20.7±1.1, 21°.4S±0°.2×178°.0W±0°.2, h396^{km}±7^{km}, mb4.3/8, Error ellipse: s-maj=31.3km s-min=20.6km az=187.0*

*IDC **18** 19:08:20.9±3.2, 21°.40S×177°.98W, h402^{km}±27^{km}, mb3.6/11, mb1 3.8/12, mb1mx3.5/36, mbtmp4.4/12, Error ellipse: s-maj=42.6km s-min=16.1km az=153.0*

ISC 18 19:08:20.7±0.9**, 21°.4S**±0°.2×**178°.0W**±0°.1**, h400**^{km}**, n35, σ0^{s}.61**/32**, mb3.8**/13**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAVE	**Taveuni**	**5.00**	**338**	P	**Pn**	**19 09 42.9**	**+0.1**
MSVF	**Nonsavu**	**5.22**	**314**	P	**Pn**	**19 09 45.5**	**+0.4**
	10nm,0.3s,baz=158,slow=7.6,SNR=44						
MSVF	**Nonsavu**	**5.22**	**314**		**Pn**	**19 09 45.1**	**0.0**
MSVF	**Nonsavu**	**5.22**	**314**	P	**Pn**	**19 09 45.7**	**+0.6**
DGTI	**Dogotuki**	**5.51**	**337**	P	**Pn**	**19 09 48.3**	**+0.2**
PMG	**Port Moresby**	**35.56**	**284**	P	**P**	**19 14 43.0**	**+0.7**
	15nm,0.7s,baz=165,slow=7.2,SNR=3.9						
PMG	**Port Moresby**	**35.56**	**284**	P	**P**	**19 14 41.5**	**-0.8**
PMG				IAmb	IAmb	19 14 43.7	
	comp=Z,25nm,0.9s						
STKA	**Stephens Creek**	**37.41**	**245**	P	**P**	**19 14 57.9**	**+0.2**
	comp=Z,3.0nm,0.5s,baz=87,slow=11,SNR=7.4						
STKA	**Stephens Creek**	**37.41**	**245**	P	**P**	**19 14 57.8**	**+0.2**
WR0	**Warramunga Arr**	**44.30**	**263**	P	**P**	**19 15 52.4**	**-0.8**
WR0				IAmb	IAmb	19 17 34.1	
	comp=Z,30nm,1.7s						
AS31	**Alice Springs**	**44.33**	**258**	P	**P**	**19 15 53.3**	**-0.1**
ASAR	**Alice Springs**	**44.33**	**258**	P	**P**	**19 15 53.4**	**0.0**
	comp=Z,4.7nm,0.7s,baz=99,slow=7.9,SNR=53						
ASAR	**Alice Springs**	**44.33**	**258**	P	**P**	**19 15 53.2**	**-0.2**
JAY	**Jayapura**	**44.34**	**289**	P	**P**	**19 15 54.0**	**+0.4**
	comp=Z,11nm,0.6s,baz=110,slow=3.1,SNR=8.3						
WRAB	**Tennant Creek**	**44.48**	**263**	P	**P**	**19 15 53.4**	**-1.2**
WRA	**Warramunga Arr**	**44.49**	**263**	P	**P**	**19 15 54.0**	**-0.6**
	comp=Z,2.9nm,0.8s,baz=96,slow=7.4,SNR=11						
SIJI	**Sorong**	**53.48**	**286**	P	**P**	**19 17 01.6**	**-0.5**
	comp=Z,10.0nm,0.8s,baz=47,slow=3.7,SNR=9.5						
TOLI2	**Tolitoli**	**63.80**	**282**	P	**P**	**19 18 11.8**	**-0.5**
TOLI2				IAmb	IAmb	19 19 34.3	
	comp=Z,6.0nm,0.9s						
TPUB	**Ta-pu**	**74.47**	**303**	P	**P**	**19 19 17.0**	**+0.2**
NVAR	**Mina Array Bea**	**81.67**	**43**	P	**P**	**19 19 56.0**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=219,slow=7.8,SNR=5.3						
TXAR	**Lajitas Array**	**87.53**	**57**	P	**P**	**19 20 25.5**	**+0.6**
	comp=Z,1.0nm,0.8s,baz=225,slow=5.8,SNR=8.3						
NEW	**Newport**	**88.09**	**36**	P	**P**	**19 20 27.0**	**0.0**
ILAR	**Eielson Array**	**89.18**	**13**	P	**P**	**19 20 30.4**	**-1.2**
	comp=Z,0.5nm,0.5s,baz=216,slow=5.7,SNR=4.9						
ILAR	**Eielson Array**	**89.18**	**13**	P	**P**	**19 20 31.4**	**-0.2**
PDAR	**Pinedale Array**	**89.61**	**43**	P	**P**	**19 20 34.1**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=241,slow=3.1,SNR=4.8						
CMAR	**Chiang Mai Arr**	**90.42**	**290**	P	**P**	**19 20 39.9**	**+1.5**
	comp=Z,1.3nm,0.8s,baz=134,slow=3.3,SNR=8.0						
ARCES	**ARCESS Array B**	**129.80**	**349**	PKP	**PKPdf**	**19 26 42.0**	**-0.5**
	comp=Z,1.2nm,0.6s,baz=345,slow=3.8,SNR=5.3						
FINES	**FINESS Array B**	**136.63**	**343**	PKP	**PKiKP**	**19 26 56.6**	**-0.7**
	comp=Z,5.1nm,1.1s,baz=333,slow=2.1,SNR=4.0						
AKASG	**Malin Array Be**	**143.80**	**331**	PKP	PKPab	19 27 06.3	-0.9
	comp=Z,2.3nm,0.6s,baz=43,slow=4.4,SNR=18						
AKASG	**Malin Array Be**	**143.80**	**331**		PKPab	19 27 06.0	-1.2
AKBB	**Malin Array Si**	**143.80**	**331**		PKPbc	19 27 07.6	+0.3
BRTR	**Keskin Array B**	**147.44**	**311**	PKPbc	**PKPbc**	**19 27 19.1**	**+0.4**
	comp=Z,2.4nm,0.8s,baz=131,slow=3.4,SNR=4.7						
BRTR	**Keskin Array B**	**147.44**	**311**		**PKPbc**	**19 27 18.8**	**+0.2**
CLL	**Collm**	**148.93**	**347**	*i* PKPbc	**PKiKP**	**19 27 23.1**	**+0.2**
	comp=Z,7.0nm,0.6s						
GERES	**GERESS Array B**	**151.06**	**344**	PKPbc	**PKPbc**	**19 27 26.8**	**-0.4**
	comp=Z,1.4nm,0.7s,baz=11,slow=1.4,SNR=6.3						

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*IDC **18** 19:11:55.9±0.8, 9°.09S×158°.49E, h0^{km}, mb4.2/8, mb1 4.4/8, mb1mx4.1/30, mbtmp4.2/8, Error ellipse: s-maj=23.3km s-min=17.6km az=176.0*

*NEIC **18** 19:11:57.9±1.1, 9°.1S±0°.2×158°.47E±0°.05, h10^{km}±1^{km}, mb4.4/10, Error ellipse: s-maj=26.3km s-min=8.4km az=0.0*

ISC 18 19:11:57.2±0.7**, 9°.0S**±0°.1×**158°.46E**±0°.07**, h10**^{km}**, n32, σ1^{s}.19**/26**, mb4.3**/13**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.52**	**105**	Pn	**Pn**	**19 12 23.6**	**-0.9**
	263nm,0.3s,baz=219,slow=9.3,SNR=18						
HNR				Sn	**Sb**	**19 12 45.0**	**+0.1**
	984nm,0.3s,baz=237,slow=23,SNR=19						
HNR	**Honiara**	**1.52**	**105**		**Pn**	**19 12 23.3**	**-1.2**
RMQ	**Roma**	**19.65**	**207**	P	**Pn**	**19 16 29.4**	**+1.7**
	baz=21,SNR=7.6						
QIS	**Mount Isa**	**21.51**	**236**	P	**P**	**19 16 46.5**	**0.0**
	baz=22,SNR=4.6						
WR0	**Warramunga Arr**	**25.55**	**242**	P	**P**	**19 17 26.3**	**-0.1**
WR0				IAmb	IAmb	19 17 30.9	
	comp=Z,5.6nm,0.8s						
WB0	**Warramunga Arr**	**25.60**	**243**	P	**P**	**19 17 26.4**	**-0.5**
WB0				IAmb	IAmb	19 17 28.0	
	comp=Z,10nm,1.0s						
WRAB	**Tennant Creek**	**25.70**	**242**	P	**P**	**19 17 27.0**	**-0.9**
WRAB				IAmb	IAmb	19 17 40.5	
	comp=Z,6.4nm,0.8s						
WB2	**Warramunga Arr**	**25.70**	**242**	P	**P**	**19 17 27.8**	**-0.1**
WB2				IAmb	IAmb	19 17 40.7	
	comp=Z,3.8nm,0.9s						
WRA	**Warramunga Arr**	**25.71**	**242**	P	**P**	**19 17 28.1**	**+0.1**
	comp=Z,6.1nm,0.8s,baz=67,slow=9.0,SNR=18						
KDU	**Kakadu**	**25.77**	**260**	P	**P**	**19 17 24.6**	**-3.9**
	baz=26,SNR=4.4						
STKA	**Stephens Creek**	**27.61**	**212**	P	**P**	**19 17 45.3**	**+0.3**
	comp=Z,3.7nm,0.5s,baz=48,slow=17,SNR=12						
STKA	**Stephens Creek**	**27.61**	**212**	P	**P**	**19 17 45.8**	**+0.9**
	baz=29,SNR=8.9						
STKA	**Stephens Creek**	**27.61**	**212**	P	**P**	**19 17 45.2**	**+0.3**
AS31	**Alice Springs**	**27.63**	**235**	P	**P**	**19 17 44.5**	**-0.8**

ASAR	**Alice Springs**	**27.63**	**235**	P	**P**	**19 17 44.8**	**-0.5**
	comp=Z,2.8nm,0.9s,baz=63,slow=9.0,SNR=11						
H11S3	**WAKE ISLAND Hy**	**28.53**	**17**	T	T	19 46 28.4	
	baz=198,slow=76,SNR=7.1						
H11S2	**WAKE ISLAND Hy**	**28.53**	**17**	T	T	19 46 29.1	
	baz=198,slow=76,SNR=8.5						
H11S1	**WAKE ISLAND Hy**	**28.54**	**17**	T	T	19 46 31.2	
	baz=198,slow=76,SNR=4.1						
H11N1	**WAKE ISLAND Hy**	**29.74**	**16**	T	T	19 48 09.3	
	baz=195,slow=76,SNR=5.3						
H11N3	**WAKE ISLAND Hy**	**29.75**	**16**	T	T	19 48 19.9	
	baz=195,slow=76,SNR=5.7						
H11N2	**WAKE ISLAND Hy**	**29.76**	**16**	T	T	19 48 10.7	
	baz=195,slow=76,SNR=7.7						
BBOO	**Buckleboo**	**31.45**	**218**	P	**P**	**19 18 19.2**	**+0.2**
	baz=32,SNR=11						
WRKA	**Warakurna**	**32.83**	**237**	P	**P**	**19 18 30.8**	**-0.5**
	baz=34,SNR=4.1						
MMRI	**Maumere**	**35.79**	**268**	P	**P**	**19 18 56.1**	**-0.9**
JAGI	**Jajag, Banyuwa**	**43.78**	**267**		**P**	**19 20 01.2**	**-2.3**
CMAR	**Chiang Mai Arr**	**64.75**	**295**	P	**P**	**19 22 37.2**	**+0.8**
	comp=Z,1.1nm,0.8s,baz=128,slow=5.0,SNR=7.7						
SONM	**Songino Array**	**72.91**	**326**	P	**P**	**19 23 27.8**	**+1.0**
	comp=Z,3.8nm,0.8s,baz=139,slow=5.6,SNR=19						
SONM	**Songino Array**	**72.91**	**326**	IAmb	IAmb	19 23 28.7	
	comp=Z,3.9nm,0.8s						
QSPA	**South Pole Qui**	**80.96**	**180**	P	**P**	**19 24 12.2**	**+0.3**
QSPA				IAmb	IAmb	19 24 12.7	
	comp=Z,12nm,1.4s						
ILAR	**Eielson Array**	**84.03**	**21**	P	**P**	**19 24 28.2**	**+0.5**
	comp=Z,0.8nm,0.5s,baz=244,slow=5.1,SNR=11						
MKAR	**Makanchi Array**	**87.19**	**318**	P	**P**	**19 24 44.6**	**+0.8**
	comp=Z,0.5nm,0.5s,baz=91,slow=5.9,SNR=9.5						
ZALV	**Zalesovo Beam**	**87.78**	**325**	P	**P**	**19 24 46.8**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=124,slow=7.2,SNR=1.8						

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*IDC **18** 19:17:47.7±0.9, 9°.15S×158°.56E, h0^{km}, mb3.9/6, mb1 4.1/6, mb1mx3.8/26, mbtmp3.9/6, Error ellipse: s-maj=31.8km s-min=17.8km az=5.0*

ISC 18 19:17:49.3±0.9, **9°.2S**±0°.2×**158°.54E**±0°.09, **h10**^{km}, **n7**, σ**0^{s}.55**/8, **mb3.9**/6, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.42**	**101**	Pn	**Pn**	**19 18 14.5**	**-0.7**
	110nm,0.3s,baz=268,slow=6.3,SNR=15						
HNR				Sn	**Sb**	**19 18 34.9**	**+0.8**
	432nm,0.3s,baz=219,slow=12,SNR=7.2						
WRA	**Warramunga Arr**	**25.72**	**243**	P	**P**	**19 23 20.4**	**+0.2**
	1.3nm,0.7s,baz=68,slow=8.8,SNR=7.3						
ASAR	**Alice Springs**	**27.62**	**236**	P	**P**	**19 23 37.1**	**-0.2**
	0.6nm,0.9s,baz=67,slow=9.0,SNR=5.5						
CMAR	**Chiang Mai Arr**	**64.87**	**295**	P	**P**	**19 28 29.7**	**+0.5**
	0.9nm,0.8s,baz=127,slow=5.0,SNR=10						
SONM	**Songino Array**	**73.05**	**326**	P	**P**	**19 29 19.9**	**+0.2**
	4.0nm,0.7s,baz=137,slow=5.5,SNR=25						
ILAR	**Eielson Array**	**84.12**	**21**	P	**P**	**19 30 20.2**	**0.0**
	0.6nm,1.0s,baz=226,slow=4.8,SNR=2.6						
MKAR	**Makanchi Array**	**87.33**	**318**	P	**P**	**19 30 36.2**	**-0.4**
	0.5nm,0.5s,baz=94,slow=6.4,SNR=5.8						

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*IDC **18** 19:21:13.3±0.9, 9°.23S×158°.51E, h0^{km}, mb3.7/7, mb1 3.9/7, mb1mx3.7/26, mbtmp3.7/7, Error ellipse: s-maj=27.9km s-min=17.6km az=171.0*

ISC 18 19:21:15.0±0.8, **9°.2S**±0°.2×**158°.48E**±0°.09, **h10**^{km}, **n11**, σ**0^{s}.68**/9, **mb3.7**/7, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.46**	**98**	Pn	**Pn**	**19 21 40.5**	**-0.8**
	192nm,0.3s,baz=197,slow=8.4,SNR=10						
HNR				Sn	**Sn**	**19 22 01.7**	**+1.1**
	492nm,0.3s,baz=173,slow=12,SNR=12						
WRA	**Warramunga Arr**	**25.64**	**243**	P	**P**	**19 26 45.1**	**+0.1**
	0.5nm,0.3s,baz=70,slow=8.3,SNR=21						
STKA	**Stephens Creek**	**27.45**	**212**	P	**P**	**19 27 01.4**	**+0.2**
	1.2nm,0.5s,baz=48,slow=15,SNR=5.6						
ASAR	**Alice Springs**	**27.53**	**236**	P	**P**	**19 27 01.9**	**-0.2**
	0.5nm,0.7s,baz=69,slow=10.0,SNR=6.7						
H11S2	**WAKE ISLAND Hy**	**28.72**	**16**	T	T	19 56 45.0	
	baz=195,slow=76,SNR=27						
H11S3	**WAKE ISLAND Hy**	**28.72**	**16**	T	T	19 56 18.6	
	baz=195,slow=76,SNR=22						
H11S1	**WAKE ISLAND Hy**	**28.73**	**16**	T	T	19 56 50.3	
	baz=195,slow=76,SNR=11						
CMAR	**Chiang Mai Arr**	**64.86**	**295**	P	**P**	**19 31 55.2**	**+0.4**
	0.2nm,0.4s,baz=120,slow=6.4,SNR=1.4						
SONM	**Songino Array**	**73.09**	**326**	P	**P**	**19 32 46.2**	**+0.5**
	0.8nm,0.8s,baz=119,slow=5.6,SNR=3.1						
ILAR	**Eielson Array**	**84.21**	**21**	P	**P**	**19 33 46.1**	**-0.2**
	0.5nm,0.5s,baz=234,slow=5.6,SNR=9.1						
MKAR	**Makanchi Array**	**87.36**	**318**	P	**P**	**19 34 01.9**	**-0.5**
	0.3nm,0.7s,baz=123,slow=5.3,SNR=2.2						

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*IDC **18** 19:21:54.3±0.9, 9°.08S×158°.59E, h0^{km}, mb4.1/7, mb1 4.3/7, mb1mx4.0/26, mbtmp4.1/7, Error ellipse: s-maj=24.4km s-min=18.2km az=1.0*

*NEIC **18** 19:21:56.2±1.2, 9°.1S±0°.2×158°.67E±0°.07, h10^{km}±1^{km}, mb4.2/8, Error ellipse: s-maj=31.6km s-min=7.3km az=197.0*

ISC 18 19:21:55.7±0.8, **9°.1S**±0°.2×**158°.61E**±0°.07, **h10**^{km}, **n17**, σ**0^{s}.75**/18, **mb4.1**/11, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.36**	**104**	Pn	**Pb**	**19 22 21.0**	**-0.3**
	741nm,0.3s,baz=60,slow=17,SNR=5.2						
HNR				Sn	**Sg**	**19 22 40.9**	**+1.2**
	2µm,0.3s,baz=43,slow=20,SNR=9.6						
HNR	**Honiara**	**1.36**	**104**	Sn	**Sb**	**19 22 37.8**	**-1.0**
WR0	**Warramunga Arr**	**25.64**	**242**	P	**P**	**19 27 25.6**	**-0.2**
WB0	**Warramunga Arr**	**25.70**	**243**		**P**	**19 27 26.5**	**+0.2**
WB0				IAmb	IAmb	19 27 44.0	
	comp=Z,4.2nm,1.2s						
WRAB	**Tennant Creek**	**25.80**	**243**		**P**	**19 27 26.5**	**-0.7**
WRAB				IAmb	IAmb	19 27 43.8	
	comp=Z,8.7nm,1.5s						
WB2	**Warramunga Arr**	**25.80**	**243**	P	**P**	**19 27 25.6**	**-1.7**
WB2				IAmb	IAmb	19 27 46.4	
	comp=Z,2.4nm,0.8s						
WRA	**Warramunga Arr**	**25.81**	**243**	P	**P**	**19 27 27.3**	**0.0**
	comp=Z,1.1nm,0.6s,baz=68,slow=9.2,SNR=8.2						
STKA	**Stephens Creek**	**27.63**	**212**	P	**P**	**19 27 44.2**	**+0.7**
	comp=Z,1.8nm,0.4s,baz=46,slow=15,SNR=8.8						
STKA	**Stephens Creek**	**27.63**	**212**	P	**P**	**19 27 44.3**	**+0.7**
ASAR	**Alice Springs**	**27.71**	**235**	P	**P**	**19 27 43.9**	**-0.6**
	comp=Z,0.7nm,0.6s,baz=65,slow=9.6,SNR=7.1						
CMAR	**Chiang Mai Arr**	**64.91**	**295**	P	**P**	**19 32 36.5**	**+0.6**
	comp=Z,2.6nm,0.8s,baz=119,slow=4.6,SNR=15						
CHTO	**Chiang Mai**	**65.03**	**296**	P	**P**	**19 32 36.3**	**-0.3**
ULN	**Ulaanbaatar**	**72.70**	**326**	P	**P**	**19 33 24.5**	**+0.4**
ULN				IAmb	IAmb	19 33 26.4	
	comp=Z,3.9nm,1.0s						
SONM	**Songino Array**	**73.04**	**326**	P	**P**	**19 33 26.5**	**+0.5**
	comp=Z,5.3nm,0.7s,baz=136,slow=5.6,SNR=17						
SONM	**Songino Array**	**73.04**	**326**	P	**P**	**19 33 26.3**	**+0.3**
ILAR	**Eielson Array**	**84.04**	**21**	P	**P**	**19 34 26.1**	**0.0**
	comp=Z,0.3nm,0.5s,baz=245,slow=4.5,SNR=5.6						
MKAR	**Makanchi Array**	**87.34**	**318**	P	**P**	**19 34 42.6**	**-0.4**
	comp=Z,0.9nm,0.5s,baz=98,slow=5.6,SNR=11						

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*JMA **18** 19:24:16.5±0.2, 22°.94N×122°.96E, h57^{km}, M2.9*

*TAP **18** 19:24:17.2, 22°.90N×122°.92E, h74^{km}±1^{km}, ML3.4, D*

ISC 18 19:24:17.2±1.2, **22°.91N**±0°.04×**122°.98E**±0°.03, **h50**^{km}, **n101**, σ**1^{s}.33**/166, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HATJ	**Hateruma jima**	**1.37**	**33**	P	**Pn**	**19 24 39.9**	**0.0**
HATJ				*e*S	**Sn**	**19 24 56.0**	**-0.9**
LDUT	**Ludao**	**1.42**	**261**	*e*P	**Pn**	**19 24 39.5**	**-1.1**
	baz=267						
LDUT				S	**Sn**	**19 24 55.4**	**-2.8**
	baz=267						
ECBN	**Changbin**	**1.47**	**286**	*e*P	**Pn**	**19 24 39.0**	**-2.3**
	baz=288						
ECBN				S	**Sn**	**19 24 56.8**	**-2.5**
	baz=288						
CHKT	**Chengkung**	**1.50**	**277**	*e*P	**Pn**	**19 24 40.4**	**-1.3**
	baz=282						
CHKT				*e*S	**Sn**	**19 24 57.0**	**-3.2**
	baz=282						
JYNG	**Yonagunijimaku**	**1.53**	**359**	P	**Pn**	**19 24 42.2**	**0.0**
JYNG				*e*S	**Sn**	**19 25 00.7**	**-0.2**
YOJ	**Yonaguni jima**	**1.54**	**1**	*e*P	**Pn**	**19 24 42.4**	**+0.1**
	baz=2.0						
YOJ				S	**Sn**	**19 25 02.2**	**+1.0**
	baz=2.0						
YOJ	**Yonaguni jima**	**1.54**	**1**	P	**Pn**	**19 24 42.1**	**-0.2**
YOJ				*e*S	**Sn**	**19 25 00.3**	**-0.9**
HGSD	**Ruisui**	**1.54**	**292**	P	**Pn**	**19 24 40.9**	**-1.5**
	baz=294						
HGSD				*e*S	**Sn**	**19 24 59.0**	**-2.3**
	baz=294						
EDH	**Donghe**	**1.55**	**272**	*e*P	**Pn**	**19 24 41.4**	**-1.0**
	baz=275						
EDH				*e*S	**Sn**	**19 24 59.2**	**-2.1**
	baz=275						
IRIF	**Iriomote-Funau**	**1.57**	**26**	P	**Pn**	**19 24 42.7**	**0.0**
IRIF				*e*S	**Sn**	**19 25 00.9**	**-1.0**
FULB	**Fuli**	**1.58**	**281**	*e*P	**Pn**	**19 24 41.6**	**-1.2**
	baz=288						
FULB				*e*S	**Sn**	**19 24 59.9**	**-2.3**
	baz=288						
LAY	**Lan-yu**	**1.58**	**237**	P	**Pn**	**19 24 42.1**	**-0.9**
	baz=236						
LAY				*e*S	**Sn**	**19 25 01.1**	**-1.2**
	baz=236						
EYUL	**Yuli**	**1.59**	**286**	P	**Pn**	**19 24 42.0**	**-1.0**
	baz=287						
EYUL				S	**Sn**	**19 25 00.9**	**-1.5**
	baz=287						
TWF1	**Yuli**	**1.61**	**286**	*e*P	**Pn**	**19 24 42.3**	**-1.0**
	baz=287						
TWF1				*e*S	**Sn**	**19 25 01.5**	**-1.5**
	baz=287						
EGFH	**Guangfu**	**1.61**	**298**	*e*P	**Pn**	**19 24 43.2**	**-0.1**
	baz=307						
JKRS	**Kuro-shima**	**1.62**	**35**	P	**Pn**	**19 24 43.6**	**+0.2**
JKRS				*e*S	**Sn**	**19 25 02.5**	**-0.6**
YULB	**Yu-li**	**1.62**	**287**	*e*P	**Pn**	**19 24 42.6**	**-0.9**
	baz=289						
YULB				*e*S	**Sn**	**19 25 01.6**	**-1.6**
	baz=289						
ECS	**Chishang**	**1.63**	**277**	*e*S	**Sn**	**19 25 03.3**	**-0.2**
	baz=284						
EHY	**Hungye**	**1.64**	**291**	*e*P	**Pn**	**19 24 42.9**	**-0.7**
	baz=293						
EHY				*e*S	**Sn**	**19 25 02.2**	**-1.4**
	baz=293						
ESL	**Shilin**	**1.68**	**302**	*e*P	**Pn**	**19 24 43.0**	**-1.2**
	baz=304						
ESL				*e*S	**Sn**	**19 25 01.9**	**-2.7**
	baz=304						
TTN	**Taitung**	**1.70**	**265**	*e*S	**Sn**	**19 25 04.1**	**-0.9**
	baz=265						
LONT	**Longtian**	**1.71**	**270**	*e*P	**Pn**	**19 24 44.8**	**+0.2**
	baz=266						
LONT				*e*S	**Sn**	**19 25 04.7**	**-0.6**
	baz=266						
TWD	**Chiawan**	**1.72**	**313**	*e*P	**Pn**	**19 24 43.4**	**-1.4**
	baz=308						
TWGBT	**Beinan**	**1.76**	**267**	P	**Pn**	**19 24 45.4**	**+0.2**
	baz=264						
TWGBT				S	**Sn**	**19 25 05.5**	**-1.0**
	baz=264						
TWG	**Pinlang**	**1.76**	**267**	P	**Pn**	**19 24 45.5**	**+0.1**
	baz=264						
TWG				S	**Sn**	**19 25 05.3**	**-1.3**
	baz=264						
NACB	**Ninganchiao**	**1.79**	**315**	*e*P	**Pn**	**19 24 44.8**	**-0.9**
	baz=311						
NACB				S	**Sn**	**19 25 04.7**	**-2.5**
	baz=311						
JIJ	**Ishigaki jima**	**1.79**	**36**	P	**Pn**	**19 24 45.4**	**-0.4**
JIJ				*e*S	**Sn**	**19 25 06.1**	**-1.3**
ELDTW	**Lidau**	**1.83**	**279**	*e*P	**Pn**	**19 24 45.4**	**-0.9**
	baz=287						
ELDTW				*e*S	**Sn**	**19 25 06.2**	**-2.2**
	baz=287						
ETLH	**Xiulin Townshi**	**1.88**	**313**	*e*P	**Pn**	**19 24 46.5**	**-0.6**
	baz=312						
ETLH				*e*S	**Sn**	**19 25 08.5**	**-1.2**
	baz=312						
VWDT	**VWDT**	**1.89**	**297**	*e*P	**Pn**	**19 24 47.8**	**+0.8**
	baz=304						
ENA	**Nanau**	**1.89**	**323**	*e*P	**Pn**	**19 24 47.2**	**+0.2**
	baz=325						
ECL	**Taimali**	**1.90**	**261**	*e*P	**Pn**	**19 24 47.0**	**-0.2**
	baz=261						
ECL				*e*S	**Sn**	**19 25 08.4**	**-1.6**
	baz=261						
OWD	**Renai**	**1.96**	**302**	*e*P	**Pn**	**19 24 47.9**	**-0.2**
	baz=311						
WHF	**Hehuan Shan**	**2.00**	**308**	*e*P	**Pn**	**19 24 48.5**	**-0.4**
	baz=310						
CHGB	**Renai**	**2.01**	**305**	*e*P	**Pn**	**19 24 48.8**	**-0.2**
	baz=313						
CHGB				*e*S	**Sn**	**19 25 11.4**	**-1.7**
	baz=313						
EAST	**Anshuo**	**2.04**	**255**	*e*P	**Pn**	**19 24 49.9**	**+0.8**
	baz=262						
STYH	**Taoyuan**	**2.05**	**278**	*e*P	**Pn**	**19 24 49.9**	**+0.6**
	baz=284						
SSLB	**Suanglung**	**2.06**	**295**	*e*P	**Pn**	**19 24 48.2**	**-1.2**
	baz=303						
JISG	**Ishigakijimahi**	**2.06**	**36**	P	**Pn**	**19 24 49.1**	**-0.4**
JISG				*e*S	**Sn**	**19 25 13.6**	**-0.4**
STYT	**Tauyuan**	**2.06**	**277**	*e*P	**Pn**	**19 24 49.8**	**+0.3**
	baz=281						
STYT				*e*S	**Sn**	**19 25 13.5**	**-0.6**
	baz=281						
NDS	**Dongshan**	**2.07**	**326**	*e*P	**Pn**	**19 24 50.3**	**+0.7**
	baz=335						
NDS				*e*S	**Sn**	**19 25 13.5**	**-0.6**
	baz=335						
FUSS	**Fushou**	**2.08**	**310**	*e*P	**Pn**	**19 24 49.8**	**-0.1**
	baz=312						
FUSS				*e*S	**Sn**	**19 25 13.3**	**-1.3**
	baz=312						
ALS	**Alishan**	**2.09**	**287**	*e*P	**Pn**	**19 24 50.8**	**+0.7**
	baz=288						
ALS				*e*S	**Sn**	**19 25 14.7**	**-0.4**
	baz=288						
NNSB	**Datong**	**2.10**	**316**	*e*P	**Pn**	**19 24 50.0**	**-0.1**
	baz=312						
NNSB				*e*S	**Sn**	**19 25 13.9**	**-1.2**
	baz=312						
NNS	**Nan Shan**	**2.12**	**316**	*e*P	**Pn**	**19 24 50.3**	**0.0**
	baz=312						
NNS				*e*S	**Sn**	**19 25 14.7**	**-0.9**
	baz=312						
TWT	**Tachien**	**2.13**	**309**	*e*P	**Pn**	**19 24 50.8**	**+0.3**
	baz=310						
TWT				*e*S	**Sn**	**19 25 14.8**	**-1.0**
	baz=310						
SLIU	**Shizi**	**2.13**	**251**	*e*P	**Pn**	**19 24 51.0**	**+0.6**
	baz=251						
TDCB	**Techi**	**2.14**	**309**	*e*P	**Pn**	**19 24 50.8**	**+0.1**
	baz=310						
TDCB				*e*S	**Sn**	**19 25 15.0**	**-1.1**
	baz=310						
SMLT	**Sun Moon Lake**	**2.14**	**297**	*e*P	**Pn**	**19 24 51.1**	**+0.4**
	baz=303						
ENTT	**Nioudou**	**2.15**	**323**	*e*P	**Pn**	**19 24 51.0**	**+0.3**
	baz=325						
NDT	**Datong Townshi**	**2.15**	**322**	*e*P	**Pn**	**19 24 51.5**	**+0.8**
	baz=318						
NDT				*e*S	**Sn**	**19 25 16.3**	**+0.1**
	baz=318						
SLGT	**Liugui**	**2.15**	**273**	*e*P	**Pn**	**19 24 51.8**	**+1.1**
	baz=276						
TWE	**Neicheng**	**2.17**	**326**	*e*P	**Pn**	**19 24 50.8**	**-0.1**
	baz=335						
TWE				*e*S	**Sn**	**19 25 16.3**	**-0.1**
	baz=335						
TSMG	**Majia**	**2.17**	**265**	*e*P	**Pn**	**19 24 52.0**	**+1.2**
	baz=261						
SSD	**Sandimen**	**2.17**	**266**	*e*P	**Pn**	**19 24 50.9**	**-0.1**
	baz=263						
SSD				*e*S	**Sn**	**19 25 16.0**	**-0.7**
	baz=263						
TSEB	**Hengchuen, Pin**	**2.17**	**243**	*e*S	**Sn**	**19 25 18.0**	**+1.3**
	baz=251						
TYC	**Yuchr**	**2.19**	**297**	*e*P	**Pn**	**19 24 51.5**	**+0.3**
	baz=303						
MASBT	**Mashibuluo**	**2.19**	**263**	*e*P	**Pn**	**19 24 50.8**	**-0.4**
	baz=259						
MASBT				*e*S	**Sn**	**19 25 17.1**	**0.0**
	baz=259						
DPDB	**Guoxing**	**2.19**	**301**	*e*P	**Pn**	**19 24 51.8**	**+0.5**
	baz=307						
TPUB	**Ta-pu**	**2.20**	**281**	*e*P	**Pn**	**19 24 52.7**	**+1.3**
	baz=286						
TPUB				*e*S	**Sn**	**19 25 18.1**	**+0.7**
	baz=286						
WTP	**Ta-pu**	**2.21**	**279**	*e*P	**Pn**	**19 24 53.1**	**+1.7**
	baz=285						
WTP				*e*S	**Sn**	**19 25 19.4**	**+1.8**
	baz=285						
WCS	**Beigang Elemen**	**2.21**	**301**	*e*P	**Pn**	**19 24 52.0**	**+0.5**
	baz=307						
WCS				*e*S	**Sn**	**19 25 16.5**	**-1.2**
	baz=307						
SGST	**Jiashian**	**2.22**	**275**	*e*P	**Pn**	**19 24 52.5**	**+1.0**
	baz=283						
SGST				*e*S	**Sn**	**19 25 19.5**	**+1.7**
	baz=283						
CHN5	**Tsauling**	**2.23**	**288**	*e*P	**Pn**	**19 24 53.6**	**+1.9**
	baz=292						
CHN5				*e*S	**Sn**	**19 25 19.1**	**+1.0**
	baz=292						
TWKBT	**Hengchun**	**2.23**	**245**	*e*P	**Pn**	**19 24 52.3**	**+0.5**
	baz=244						
TWKBT				*e*S	**Sn**	**19 25 16.9**	**-1.1**
	baz=244						
TWK1	**Hengchun**	**2.23**	**245**	*e*S	**Sn**	**19 25 17.0**	**-1.2**
	baz=244						
CHN4	**Tsaushan**	**2.24**	**282**	*e*P	**Pn**	**19 24 52.1**	**+0.2**
	baz=284						
CHN4				*e*S	**Sn**	**19 25 19.2**	**+0.8**
	baz=284						
SCZT	**Fangliau**	**2.25**	**257**	*e*P	**Pn**	**19 24 54.0**	**+2.0**
	baz=260						
HEN	**Hengchun**	**2.26**	**247**	*e*P	**Pn**	**19 24 53.1**	**+0.9**
	baz=241						
HEN				*e*S	**Sn**	**19 25 18.9**	**0.0**
	baz=241						
CHN1	**Nanshi**	**2.28**	**277**	*e*P	**Pn**	**19 24 54.5**	**+2.1**
	baz=282						
CHN1				*e*S	**Sn**	**19 25 20.9**	**+1.6**
	baz=282						
YHNB	**Yeheng**	**2.28**	**320**	*e*P	**Pn**	**19 24 53.3**	**+0.7**
	baz=322						
YHNB				*e*S	**Sn**	**19 25 18.6**	**-1.0**
	baz=322						
NWLT	**Wulai**	**2.30**	**324**	*e*P	**Pn**	**19 24 54.1**	**+1.4**
	baz=333						
NWLT				*e*S	**Sn**	**19 25 19.8**	**0.0**
	baz=333						
NSK	**Sanguang**	**2.30**	**320**	*e*P	**Pn**	**19 24 53.4**	**+0.6**
	baz=322						
TIPB	**Shuangxi**	**2.31**	**333**	*e*P	**Pn**	**19 24 53.3**	**+0.5**
	baz=341						
TIPB				*e*S	**Sn**	**19 25 18.9**	**-1.1**
	baz=341						
SNST	**Tainan City**	**2.31**	**278**	*e*P	**Pn**	**19 24 55.6**	**+2.7**
	baz=282						
WHP	**Taichung City**	**2.31**	**306**	*e*P	**Pn**	**19 24 54.4**	**+1.4**
	baz=313						
WNT	**Mingjian**	**2.32**	**295**	*e*P	**Pn**	**19 24 54.9**	**+1.9**
	baz=303						
TWK	**Hsinying**	**2.32**	**279**	*e*P	**Pn**	**19 24 55.0**	**+2.0**
	baz=280						
TWK				*e*S	**Sn**	**19 25 22.5**	**+2.0**
	baz=280						
JTJ	**Tarama**	**2.33**	**42**	P	**Pn**	**19 24 53.2**	**+0.1**
JTJ				*e*S	**Sn**	**19 25 20.0**	**-0.6**
TWM1	**Shoushan**	**2.36**	**268**	*e*P	**Pn**	**19 24 57.2**	**+3.6**
	baz=267						
WDLH	**Douliu**	**2.38**	**289**	*e*P	**Pn**	**19 24 56.1**	**+2.4**
	baz=291						
NWF	**Wu-fen Shan**	**2.41**	**333**	*e*P	**Pn**	**19 24 54.6**	**+0.3**
	baz=345						
NWF				*e*S	**Sn**	**19 25 21.8**	**-0.9**
	baz=345						
WFSB	**Wu-fen Shan**	**2.41**	**333**	*e*P	**Pn**	**19 24 55.7**	**+1.5**
	baz=344						
WFSB				*e*S	**Sn**	**19 25 22.5**	**-0.1**
	baz=344						
CHN3	**Shinhua**	**2.42**	**274**	*e*P	**Pn**	**19 24 58.2**	**+3.9**
	baz=275						
TATO	**Taipei**	**2.46**	**327**	*e*P	**Pn**	**19 24 58.8**	**+3.9**
	baz=334						
TATO				*e*S	**Sn**	**19 25 24.2**	**+0.3**
	baz=334						
WLCH	**Liuqiu**	**2.47**	**257**	*e*P	**Pn**	**19 24 58.2**	**+3.2**
	baz=249						
TWQ1	**Liyutan**	**2.48**	**306**	*e*P	**Pn**	**19 24 57.2**	**+2.0**
	baz=314						
LIOB	**Emei**	**2.49**	**314**	*e*P	**Pn**	**19 24 57.3**	**+1.9**
	baz=322						
NSTT	**Nanjuang**	**2.49**	**314**	*e*P	**Pn**	**19 24 57.6**	**+2.2**
	baz=310						
WTK	**Tuku**	**2.50**	**288**	*e*P	**Pn**	**19 24 56.5**	**+1.0**
	baz=290						
WCHH	**Zhanghua**	**2.51**	**298**	*e*P	**Pn**	**19 24 58.4**	**+2.9**
	baz=308						
ICHU	**Yijhu**	**2.53**	**281**	*e*P	**Pn**	**19 24 57.0**	**+1.2**
	baz=282						
YM01	**YM01**	**2.57**	**330**	*e*P	**Pn**	**19 24 58.9**	**+2.4**
	baz=341						
YM01				*e*S	**Sn**	**19 25 27.1**	**+0.6**
	baz=341						
YM08	**YM08**	**2.60**	**331**	*e*S	**Sn**	**19 25 27.5**	**+0.3**
	baz=341						
JIRB	**Irabujima**	**2.77**	**46**	P	**Pn**	**19 24 58.9**	**-0.2**
JIRB				S	**Sn**	**19 25 30.9**	**-0.4**
JMJ2	**Miyako jima3**	**2.81**	**49**	P	**Pn**	**19 24 59.6**	**-0.2**
JMJ2				*e*S	**Sn**	**19 25 32.2**	**-0.3**
JIKM	**Ikemajima**	**2.88**	**46**	P	**Pn**	**19 25 00.6**	**-0.1**
JIKM				*e*S	**Sn**	**19 25 32.9**	**-1.2**
JOGS	**Gusukube**	**2.88**	**50**	P	**Pn**	**19 25 00.9**	**+0.2**
JOGS				*e*S	**Sn**	**19 25 34.4**	**+0.3**
PHUB	**P'eng-hu**	**3.19**	**281**	*e*P	**Pn**	**19 25 05.4**	**+0.5**
	baz=282						
PHUB				*e*S	**Sn**	**19 25 41.9**	**+0.1**
	baz=282						
VCHM	**Qimei**	**3.29**	**276**	*e*P	**Pn**	**19 25 07.9**	**+1.7**
	baz=276						
VCHM				*e*S	**Sn**	**19 25 43.9**	**-0.2**
	baz=276						
PTMZ	**Houxiangcun**	**4.12**	**302**	*e*P	**Pn**	**19 25 18.8**	**+1.2**
	baz=303						
PTMZ				*e*S	**Sn**	**19 26 02.3**	**-2.2**
	baz=303						

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*IDC **18** 19:31:57.4±0.7, 9°.16S×158°.48E, h0^{km}, mb4.1/10, mb1 4.3/11, mb1mx4.0/41, mbtmp4.1/11, ML4.1/1, Error ellipse: s-maj=23.4km s-min=15.9km az=171.0*

*NEIC **18** 19:31:58.9±1.6, 9°.1S±0°.2×158°.52E±0°.08, h10^{km}±1^{km}, mb4.5/9, Error ellipse: s-maj=31.4km s-min=11.7km az=190.0*

ISC 18 19:31:58.6±0.6, **9°.2S**±0°.2×**158°.48E**±0°.07, **h10**^{km}, **n24**, σ**1^{s}.01**/25, **mb4.1**/15, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.47**	**99**	Pn	**Pn**	**19 32 24.6**	**-0.7**
	343nm,0.3s,baz=197,slow=3.1,SNR=36						
HNR				Sn	**Sg**	**19 32 46.5**	**+0.5**
	306nm,0.3s,baz=275,slow=21,SNR=11						
HNR	**Honiara**	**1.47**	**99**		**Pn**	**19 32 24.4**	**-0.8**
JAY	**Jayapura**	**18.87**	**290**	P	**P**	**19 36 19.6**	**+0.2**
	0.5nm,0.3s,baz=163,slow=17,SNR=1.3						
WR0	**Warramunga Arr**	**25.48**	**243**	P	**P**	**19 37 26.9**	**-0.3**
WR0				IAmb	IAmb	19 37 37.1	
	comp=Z,10nm,1.0s						
WB0	**Warramunga Arr**	**25.54**	**243**	P	**P**	**19 37 27.7**	**-0.1**
WB0				IAmb	IAmb	19 37 38.9	
	comp=Z,10nm,1.1s						
WRAB	**Tennant Creek**	**25.64**	**243**	P	**P**	**19 37 28.5**	**-0.2**
WRAB				IAmb	IAmb	19 37 39.2	
	comp=Z,9.3nm,1.1s						
WB2	**Warramunga Arr**	**25.64**	**243**	P	**P**	**19 37 28.8**	**+0.1**
WB2				IAmb	IAmb	19 37 39.3	
	comp=Z,11nm,1.1s						
WRA	**Warramunga Arr**	**25.65**	**243**	P	**P**	**19 37 28.9**	**+0.1**
	comp=Z,3.2nm,0.7s,baz=70,slow=9.6,SNR=16						
WRA				PcP	**PcP**	**19 40 59.7**	**+0.1**
	comp=Z,1.0nm,1.0s,baz=65,slow=2.0,SNR=4.2						
STKA	**Stephens Creek**	**27.47**	**212**	P	**P**	**19 37 46.0**	**+0.9**
	comp=Z,5.6nm,1.0s,baz=34,slow=13,SNR=7.4						
STKA	**Stephens Creek**	**27.47**	**212**	IAmb	IAmb	19 37 49.4	

	comp=Z,2.6nm,1.2s						
AS31	Alice Springs	27.54	236	P	P	19 37 44.9	-1.1
ASAR	Alice Springs	27.55	236	P	P	19 37 46.3	+0.3
	comp=Z,4.3nm,1.1s,baz=65,slow=9.5,SNR=13						
ASAR				PcP	PcP	19 41 04.2	+0.2
	comp=Z,0.4nm,0.7s,baz=59,slow=2.7,SNR=2.6						
FITZ	Fitzroy Crossi	33.06	251	P	P	19 38 34.8	0.0
	comp=Z,1.3nm,0.6s,baz=103,slow=14,SNR=1.9						
KAPI	Kappang	38.63	273	P	P	19 39 20.9	-1.7
KAPI				IAmb	IAmb	19 39 28.9	
	comp=Z,17nm,1.1s						
JAGI	Jajag, Banyuwa	43.78	267	P	P	19 40 05.8	+0.8
CMAR	Chiang Mai Arr	64.84	295	P	P	19 42 39.4	+1.0
	comp=Z,0.8nm,0.8s,baz=124,slow=5.2,SNR=4.3						
SONM	Songino Array	73.05	326	P	P	19 43 29.3	+0.2
	comp=Z,2.9nm,0.8s,baz=134,slow=4.3,SNR=10						
SONM	Songino Array	73.05	326	IAmb	IAmb	19 43 35.8	
	comp=Z,9.7nm,1.5s						
ILAR	Eielson Array	84.18	21	P	P	19 44 28.9	-1.0
	comp=Z,1.4nm,1.0s,baz=257,slow=4.0,SNR=7.3						
MKAR	Makanchi Array	87.33	318	P	P	19 44 45.5	-0.5
	comp=Z,0.8nm,0.7s,baz=94,slow=7.3,SNR=5.9						
ZALV	Zalesovo Beam	87.93	325	P	P	19 44 48.9	+0.4
	comp=Z,0.4nm,0.4s,baz=116,slow=8.2,SNR=2.2						
NVAR	Mina Array Bea	90.39	51	P	P	19 45 03.0	+2.2
	comp=Z,0.9nm,0.8s,baz=251,slow=4.5,SNR=4.6						
ESDC	Sonseca Array	145.84	336	PKPbc	PKPab	19 51 39.1	0.0
	comp=Z,0.7nm,0.9s,baz=7.4,slow=4.0,SNR=4.0						
ESDC	Sonseca Array	145.84	336		PKPdf	19 51 35.4	-2.8

IDC 18 19:38:58.1±7.1**,2°.99N×127°.10E,h0^{km},mb3.6**/3**,**
mb1 3.8/3**,mb1mx3.4**/37**,mbtmp3.7**/3**,Error ellipse:**
s-maj=172.3km s-min=111.1km az=75.0,Northern
Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.88	163	P	P	19 44 13.6	0.0
	1.9nm,0.6s,baz=342,slow=10,SNR=25						
ASAR	Alice Springs	27.32	166	P	P	19 44 44.7	-0.1
	0.3nm,0.8s,baz=348,slow=7.5,SNR=7.2						
STKA	Stephens Creek	37.31	159	P	P	19 46 12.3	0.0
	0.9nm,0.6s,baz=342,slow=7.7,SNR=4.3						

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*IDC **18** 19:43:22.0±1.1, 33°.68N×141°.75E, h0^{km}, mb3.5/7,*
mb1 3.7/10, mb1mx3.6/43, mbtmp3.6/10, ML2.9/2, Error
ellipse: s-maj=23.1km s-min=17.5km az=86.0
*JMA **18** 19:43:25.9±0.5, 33°.93N×141°.44E, h39^{km}, M3.2*
ISC 18 19:43:24.8±0.8**,33°.88N**±0°.04×**141°.47E**±0°.07**,h24^{km},n23,**
σ2^{s}.23/24**,mb3.5**/7**,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	0.88	332	P	Pn	19 43 41.1	-0.1
BSO3	Boso 3	1.22	319	P	Pb	19 43 46.4	-0.6
BSO4	Boso 4	1.45	320	P	Pb	19 43 50.2	-0.9
JMKN	Mikurajimanish	1.56	271	P	Pb	19 43 51.7	-1.4
JHJ2	Mitsune	1.58	242	P	Pb	19 43 52.6	-0.8
JHJ	Hachijo jima 2	1.60	242	Pn	Pb	19 43 52.8	-0.9
	62nm,0.3s,baz=104,slow=22,SNR=16						
JHJ				Sn	Sb	19 44 16.2	+2.7
	74nm,0.3s,baz=263,slow=23,SNR=8.8						
JKUC	kamogawauchiur	1.66	321	P	Pb	19 43 52.8	-1.8
JKUC				*e*S	Sn	19 44 12.3	-0.6
JIZS	Izushimoda	2.31	292	P	Pb	19 44 02.5	-3.2
JOD2	Odawara 2	2.40	306	P	Pn	19 44 03.3	+0.6
MJAR	Matsushiro Arr	3.77	316	Pn	Pn	19 44 23.6	+2.1
	0.2nm,0.3s,baz=148,slow=9.2,SNR=11						
MJAR				Sn	Sb	19 45 14.4	-1.5
	0.4nm,0.3s,baz=318,slow=20,SNR=5.2						
MAT	Matsushiro	3.77	316	P	Pn	19 44 23.3	+1.8
MAT				*e*S	Sn	19 44 59.9	-5.2
JCJ	Chichijima	6.79	175	Pn	Pn	19 45 00.6	-2.4
	4.8nm,0.3s,baz=344,slow=20,SNR=1.9						
JCJ				Sn	Sn	19 46 16.9	-2.6
	5.7nm,0.3s,baz=107,slow=19,SNR=1.8						
ASAJ	Asahikawa	10.26	5	Pn	Pn	19 45 52.9	+2.3
	0.2nm,0.3s,baz=207,slow=16,SNR=1.4						
ASAJ				Sn	Sn	19 47 43.1	-1.7
	0.3nm,0.3s,baz=165,slow=20,SNR=1.7						
H11N2	WAKE ISLAND Hy	26.62	115	T	T	20 16 52.1	
	baz=310						
H11N1	WAKE ISLAND Hy	26.62	116	T	T	20 16 52.1	
	baz=310						
H11N3	WAKE ISLAND Hy	26.64	116	T	T	20 16 52.1	
	baz=310						
SONM	Songino Array	29.69	309	P	P	19 49 31.6	+2.7
	0.2nm,0.4s,baz=120,slow=7.6,SNR=1.4						
CMAR	Chiang Mai Arr	40.84	259	P	P	19 51 08.3	+3.4
	0.5nm,0.8s,baz=51,slow=7.4,SNR=5.0						
MKAR	Makanchi Array	45.89	305	P	P	19 51 48.2	+2.8
	0.8nm,0.7s,baz=89,slow=10,SNR=6.1						
ILAR	Eielson Array	52.15	31	P	P	19 52 33.9	+1.0
	0.4nm,0.7s,baz=248,slow=6.7,SNR=3.3						
WRA	Warramunga Arr	53.95	188	P	P	19 52 44.8	-1.9
	0.3nm,0.4s,baz=6.3,slow=7.7,SNR=5.0						
ASAR	Alice Springs	57.68	188	P	P	19 53 13.8	+0.4
	0.1nm,0.6s,baz=7.1,slow=6.0,SNR=1.7						
AKASG	Malin Array Be	76.83	323	P	P	19 55 18.4	+4.0
	0.4nm,0.6s,baz=49,slow=6.2,SNR=2.2						

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*IDC **18** 19:52:20.5±0.9, 9°.02S×158°.48E, h0^{km}, mb4.0/7,*
mb1 4.2/7, mb1mx3.9/43, mbtmp4.0/7, Error ellipse:
s-maj=25.1km s-min=17.8km az=172.0
ISC 18 19:52:22.1±0.8**,9°.0S**±0°.2×**158°.46E**±0°.08**,h10^{km},n8,**
σ0^{s}.83/9**,mb4.0**/7**,Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.53	106	Pn	Pn	19 52 48.3	-1.1
	161nm,0.3s,baz=229,slow=9.3,SNR=23						
HNR				Sn	Sb	19 53 11.2	+1.2
	384nm,0.3s,baz=66,slow=20,SNR=7.6						
WRA	Warramunga Arr	25.71	242	P	P	19 57 52.9	+0.1
	1.8nm,0.7s,baz=70,slow=10,SNR=11						
STKA	Stephens Creek	27.61	212	P	P	19 58 10.3	+0.5
	3.0nm,0.4s,baz=48,slow=14,SNR=22						
ASAR	Alice Springs	27.63	235	P	P	19 58 09.7	-0.5
	0.8nm,0.7s,baz=66,slow=9.3,SNR=13						
FITZ	Fitzroy Crossi	33.10	251	P	P	19 58 58.5	-0.1
	1.3nm,0.5s,baz=51,slow=6.5,SNR=1.7						
SONM	Songino Array	72.89	326	P	P	20 03 52.4	+0.8
	2.2nm,0.7s,baz=141,slow=5.4,SNR=7.9						
ILAR	Eielson Array	84.02	21	P	P	20 04 51.9	-0.6
	0.4nm,0.5s,baz=240,slow=5.0,SNR=5.9						
MKAR	Makanchi Array	87.18	318	P	P	20 05 08.8	+0.2
	0.5nm,0.5s,baz=91,slow=5.9,SNR=6.8						

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*KMA **18** 19:56:41.2, 30°.59N×129°.16E, h15^{km}*
*JMA **18** 19:56:45.4±0.2, 31°.15N×128°.85E, h3^{km}±2^{km}, M4.3*
JMA Felt I J1.
*MOS **18** 19:56:47.8±1.0, 31°.16N×128°.97E, h16^{km}, mb4.6/13, Error*
ellipse: s-maj=12.7km s-min=6.1km az=105.0
*BJI **18** 19:56:47.7±0.0, 31°.05N×129°.08E, h21^{km}, mB5.0/1,*
mb4.4/38, Ms5.0/3, Ms7 4.9/3
*IDC **18** 19:56:47.5±0.6, 31°.15N×128°.91E, h0^{km}, mb4.1/21,*
mb1 4.2/25, mb1mx4.1/73, mbtmp4.1/25, ML3.1/5, Error
ellipse: s-maj=17.8km s-min=11.9km az=79.0
*NEIC **18** 19:56:49.2±1.1, 31°.21N±0°.04×128°.99E±0°.05, h10^{km}±1^{km},*
mb4.5/35, Error ellipse: s-maj=8.8km s-min=5.5km
az=313.0
ISC 18 19:56:48.2±1.6**,31°.18N**±0°.04×**128°.99E**±0°.04**,h6^{km}**±9^{km}**,**
n147,σ1^{s}.21/159**,mb4.4**/47**,15C,Northwest of Ryukyu**
Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.80	51	P	Pg	19 57 02.9	-0.7
JSJ				S	Sb	19 57 15.3	-0.3
JKC	Kuchinoerabu	1.26	124	P	Pn	19 57 10.6	-1.8
JKC				*e*S	Sb	19 57 28.3	-0.5
JSU	Suzuyama	1.29	75	P	Pn	19 57 12.0	-1.0
JSU				S	Sg	19 57 30.9	+1.0
JSU	Suzuyama	1.29	75	Pn	Pn	19 57 12.3	-0.7
JSU				Sn	Sn	19 57 30.5	-0.1
JFU	Fukue jima 2	1.49	352	P	Pn	19 57 13.5	-2.1
JFU				*e*S	Sn	19 57 32.9	-2.5
JNN	Nakanoshima	1.53	150	P	Pn	19 57 14.4	-1.8
JYAK	Yakushimahirau	1.61	125	⇑P	Pn	19 57 15.6	-1.6
JTN	Tanegashima 3	1.79	106	P	Pn	19 57 18.8	-0.9
JMTN	Minamitane	1.82	115	P	Pn	19 57 18.9	-1.2
JTZ	Takazaki	1.93	67	P	Pn	19 57 21.4	-0.3
JNU	Nakatsue	2.52	39	Pn	Pb	19 57 34.8	+0.9
	20nm,0.3s,baz=354,slow=0.0,SNR=33						
JNU				Sn	Sb	19 58 04.8	-0.3
	61nm,0.3s,baz=108,slow=20,SNR=1.5						
JNU	Nakatsue	2.52	39	Pn	Pn	19 57 28.4	-1.4
JNU				Pg	Pb	19 57 34.2	+0.4
KSSGP	Seogwipo	2.96	315	P	Pn	19 57 34.7	-1.2
	SNR=12						
GOS1	Gosan-ri	3.17	313	P	Pn	19 57 37.9	-0.8
	SNR=7.2						
GOS2	Gosang-Q330s	3.17	313	P	Pn	19 57 38.0	-0.8
	SNR=7.2						
GMDB	Geomundo	3.20	334	P	Pn	19 57 40.0	+0.9
	SNR=8.2						
HALB	Hallimjungang-	3.20	315	P	Pn	19 57 38.0	-1.1
	SNR=22						
JTU	Tsushima	3.36	6	Pn	Pn	19 57 39.2	-2.1
JTU					Pb	19 57 46.7	-1.5
YKDB	Yokjido	3.49	350	P	Pn	19 57 43.0	-0.1
	SNR=13						
CJD	Chujado	3.59	321	P	Pn	19 57 44.0	-0.5
	SNR=21						
KOHB	KOHEUNG	3.72	338	P	Pn	19 57 46.0	-0.3
	SNR=22						
BOSB	Boseong-gun	3.88	338	P	Pn	19 57 48.0	-0.4
	SNR=17						
JOW	Kunigami	4.37	188	Pn	Pn	19 57 54.4	-0.9
	0.8nm,0.3s,baz=48,slow=15,SNR=2.0						
JOW	Kunigami	4.37	188	Pn	Pn	19 57 59.3	+4.1
HUK2	Heuksan-myeon	4.60	321	P	Pn	19 57 58.0	-0.3
	SNR=29						
JMN	Monobe	4.85	57	Pn	Pn	19 58 01.1	-0.8
KSJEO	Jeonju	4.96	344	P	Pn	19 58 05.0	+1.7
	SNR=5.9						
JHS	Saijyo	5.15	41		Pn	19 58 04.7	-1.3
OKCB	Cheongsan-myeo	5.25	349	P	Pn	19 58 09.0	+1.6
	SNR=8.0						
TJN	Taejon	5.36	346	*ce*P	Pn	19 58 09.4	+0.6
KSBON	Boeun	5.40	350	P	Pn	19 58 11.0	+1.6
	SNR=5.6						
KSBON	Boeun	5.40	350	P	Pn	19 58 11.3	+1.9
	SNR=7.3						
JMZ	Minamidaito 2	5.69	159	Pn	Pn	19 58 13.5	+0.2
KSAR	Wonju Array Be	6.32	352	P	Pn	19 58 21.7	-0.3
KSAR	Wonju Array Be	6.32	352	Pn	Pn	19 58 21.7	-0.3
KSRS	Korea Array	6.33	352	Pn	Pn	19 58 22.9	+0.9
	1.3nm,0.3s,baz=177,slow=14,SNR=15						
KSRS				Sn	Sn	19 59 34.0	-0.6
	3.1nm,0.3s,baz=172,slow=25,SNR=4.6						
KSRS				Lg	Lg	20 00 06.7	
	2.1nm,0.3s,baz=174,slow=30,SNR=5.8						
KS19	Wonju Array Si	6.38	352	Pn	Pn	19 58 22.4	-0.4
INCN	Inchon	6.59	343	P	Pn	19 58 25.2	-0.5
INCN	Inchon	6.59	343	Pn	Pn	19 58 25.2	-0.5
JWT	Wachi	6.75	51	Pn	Pn	19 58 27.6	-0.3
INU	Inuyama	7.90	56	Pn	Pn	19 58 44.1	+0.4
NJ2	Nanjing	8.69	278	*e*P	Pn	19 58 55.4	+0.9
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
MJAR	Matsushiro Arr	9.35	53	Pn	Pn	19 59 06.8	+3.3
	0.1nm,0.3s,baz=239,slow=12,SNR=2.8						
MDJ	Mudanjiang	13.43	2	P	Pn	19 59 59.8	+0.5
BJI	Beijing	13.66	314	P	Pn	20 00 01.6	-0.9
BJI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ASAJ	Asahikawa	16.79	36	Pn	P	20 00 45.8	-0.4
	0.2nm,0.3s,baz=224,slow=12,SNR=1.7						
ENH	Enshi	16.80	272	P	P	20 00 47.6	+1.1
HHC	Hu-ho-hao-te	17.06	309	*e*P	Pn	20 00 47.9	+0.4
HHC				pmax	pmax		
	comp=Z,13nm,1.2s						
XAN	Xi'an	17.15	285	P	Pn	20 00 49.4	+0.8
XAN				pP	pP	20 00 53.3	+1.6
XAN				pmax	pmax		
	comp=Z,8.0nm,1.2s						
KLR	Kul'dur	18.15	6	P	P	20 01 02.5	+1.2
	0.2nm,0.3s,baz=210,slow=8.2,SNR=7.0						
KLR	Kul'dur	18.15	6	*i* P	P	20 01 02.2	+0.9
KLR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
HIA	Hailar	19.37	341	P	P	20 01 14.8	+0.1
HIA				pmax	pmax		
	comp=Z,18nm,1.3s						
HIA	Hailar	19.37	341	P	P	20 01 14.8	+0.1
HIA				IAmb	IAmb	20 01 19.9	
	comp=Z,18nm,1.3s						
GYA	Guiyang	20.11	262	⇑*i*P	P	20 01 24.3	+1.3
GYA				pP	sP	20 01 27.9	+2.8
GYA				pmax	pmax		
	comp=Z,24nm,0.8s						
LZH	Lanzhou	21.48	290	*e*P	P	20 01 42.3	+4.5
LZH				pP	sP	20 01 47.3	+7.4
LZH				sP	pP	20 01 49.9	+11
LZH				pmax	pmax		
	comp=Z,19nm,1.3s						
CD2	Chengdu	21.61	276	P	P	20 01 39.8	+0.6
CD2				pP	pP	20 01 41.8	+1.2
CD2				pmax	pmax		
	comp=Z,30nm,1.1s						
ZEA	Zeya	22.58	357	*e*P	P	20 01 53.3	+4.0
ULN	Ulaanbaatar	23.62	321	*ce*P	P	20 02 00.7	+0.5
ULN				pmax	pmax		
	comp=Z,17nm,1.9s						
ULN	Ulaanbaatar	23.62	321	P	P	20 01 59.9	-0.3
ULN				IAmb	IAmb	20 02 01.8	
	comp=Z,7.7nm,1.1s						
KMI	Kunming	23.89	262	⇑P	P	20 02 03.1	0.0
KMI				pP	pP	20 02 05.3	+0.7
KMI				pmax	pmax		
	comp=Z,18nm,0.9s						
SONM	Songino Array	23.96	320	P	P	20 02 03.3	-0.2
	comp=Z,3.5nm,0.9s,baz=139,slow=10,SNR=22						
SONM	Songino Array	23.96	320	P	P	20 02 02.6	-0.9
GTA	Gaotai	25.11	297	⇑P	P	20 02 14.1	+0.1
GTA				pP	sP	20 02 18.3	+2.1
GTA				sP	pP	20 02 22.0	+6.5
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CMAR	Chiang Mai Arr	29.96	252	P	P	20 02 57.3	-0.3
	comp=Z,0.7nm,0.7s,baz=48,slow=8.7,SNR=6.7						
CMAR	Chiang Mai Arr	29.96	252	*ce*P	P	20 03 00.0	+2.4
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WMQ	Urumqi	34.76	303	*e*P	P	20 03 40.0	+0.5
WMQ				pP	pP	20 03 42.8	+1.8
WMQ				sP	sP	20 03 46.4	+4.8
WMQ				pmax	pmax		
	comp=Z,19nm,1.1s						
ZALV	Zalesovo Beam	38.84	319	P	P	20 04 13.7	-0.3
	comp=Z,1.2nm,0.9s,baz=99,slow=9.5,SNR=3.7						
ZALV				PcP	PcP	20 06 24.5	-0.5
	comp=Z,2.2nm,0.9s,baz=98,slow=5.0,SNR=6.4						
ZALV	Zalesovo Beam	38.84	319	*i* P	P	20 04 13.3	-0.7
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ZALV	Zalesovo Beam	38.84	319		PcP	20 06 24.1	-0.9
MK31	Makanchi Array	38.91	307	P	P	20 04 14.3	-0.4
MK31				pmax	pmax		
	comp=Z,4.0nm,1.2s						
MK31	Makanchi Array	38.91	307	P	P	20 04 14.3	-0.4
MKAR	Makanchi Array	38.91	307	P	P	20 04 14.4	-0.4
	comp=Z,1.7nm,0.8s,baz=92,slow=10,SNR=11						
MKAR				PcP	PcP	20 06 25.1	-0.4
	comp=Z,1.3nm,0.8s,baz=46,slow=3.5,SNR=4.8						
MKAR	Makanchi Array	38.91	307	P	P	20 04 14.7	0.0
MKAR	Makanchi Array	38.91	307	P	P	20 04 14.7	0.0
TIXI	Tiksi	40.53	360	P	P	20 04 28.4	+0.6
	comp=Z,0.8nm,0.3s,baz=152,slow=11,SNR=4.1						
TIXI	Tiksi	40.53	360	*i* P	P	20 04 28.1	+0.3
TIXI				pmax	pmax		
	comp=Z,9.0nm,2.3s						
TIXI	Tiksi	40.53	360	IAmb	IAmb	20 04 32.0	
	comp=Z,4.6nm,1.2s						
KURK	Kurchatov	41.83	313	*ce*P	P	20 04 38.5	-0.3
KURK				pmax	pmax		
	comp=Z,6.0nm,1.7s						
KURK	Kurchatov	41.83	313	P	P	20 04 38.5	-0.3
KURBB	Kurchatov Arra	41.87	313	P	P	20 04 38.9	-0.2
	comp=Z,1.5nm,0.7s,baz=100,slow=8.7,SNR=10						
KURBB				PcP	PcP	20 06 34.2	-0.7
	comp=Z,1.1nm,0.9s,baz=94,slow=3.3,SNR=6.5						
BILL	Bilibino	42.79	20	*e*P	P	20 04 46.2	-0.2
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KSH	Kashi	43.51	296	P	P	20 04 56.3	+3.5
KSH				pmax	pmax		
	comp=Z,7.0nm,1.0s						
AAK	Ala-Archa	44.36	301	P	P	20 04 59.7	+0.1
	comp=Z,0.3nm,0.4s,baz=148,slow=8.1,SNR=4.8						
AAK	Ala-Archa	44.36	301	*ce*P	P	20 04 59.9	+0.3
AAK				pmax	pmax		
	comp=Z,13nm,1.5s						
AAK	Ala-Archa	44.36	301	IAmb	IAmb	20 05 03.9	
	comp=Z,2.6nm,1.2s						
NRIK	Noril'sk	44.79	341	*ce*P	P	20 05 01.1	-1.4
NRIK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
NRIK	Noril'sk	44.79	341	P	P	20 05 00.3	-2.2
NRIK				IAmb	IAmb	20 05 04.0	
	comp=Z,10nm,1.4s						
BVAR	Borovoye Array	47.14	315	P	P	20 05 21.3	+0.1
	comp=Z,4.4nm,0.7s,baz=169,slow=8.5,SNR=25						
BVAR				PcP	PcP	20 06 52.6	-0.3
	comp=Z,1.8nm,0.7s,baz=238,slow=8.5,SNR=5.1						
BRVK	Borovoye	47.20	315	*ce*P	P	20 05 21.8	+0.1
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BRVK	Borovoye	47.20	315	P	P	20 05 21.4	-0.3
KKAR	Karatay Array	47.24	302	P	P	20 05 22.0	-0.2
KKAR	Karatay Array	47.24	302	P	P	20 05 22.0	-0.2
CHGR	Chuyangaron	48.88	296	P	P	20 05 35.0	0.0
CHGR				IAmb	IAmb	20 05 35.8	
	comp=Z,8.0nm,0.7s						
HNR	Honiara	50.11	139	P	P	20 05 44.0	-0.4
HNR	Honiara	50.11	139	P	P	20 05 44.0	-0.4
WRAB	Tennant Creek	51.08	174	P	P	20 05 50.6	-1.1
WRAB				pmax	pmax		
	comp=Z,11nm,1.5s						
WRAB	Tennant Creek	51.08	174	P	P	20 05 50.6	-1.1
WRAB				IAmb	IAmb	20 06 16.7	
	comp=Z,11nm,1.4s						
WRA	Warramunga Arr	51.08	174	P	P	20 05 51.4	-0.4
	comp=Z,2.4nm,0.7s,baz=355,slow=7.9,SNR=18						
WRA				PcP	PcP	20 07 07.2	-0.3
	comp=Z,1.0nm,1.0s,baz=298,slow=2.5,SNR=2.6						
WRA	Warramunga Arr	51.08	174	P	P	20 05 51.3	-0.4
WB2	Warramunga Arr	51.09	174	P	P	20 05 51.2	-0.5
WB2				IAmb	IAmb	20 05 54.4	
	comp=Z,4.7nm,0.9s						
SVE	Sverdlovsk	52.84	320	*e*P	P	20 06 03.7	-0.7
SVE				pmax	pmax		
	comp=Z,9.0nm,1.1s						
ABKAR	Akbulak array	53.84	311	P	P	20 06 11.9	-0.1
ABKAR	Akbulak array	53.84	311	P	P	20 06 11.8	-0.2
ABKAR				IAmb	IAmb	20 06 12.7	
	comp=Z,2.2nm,0.8s						
ARU	Arti	54.00	320	*c i*P	P	20 06 13.5	+0.5
ARU				S	S	20 13 51.5	+2.4
ARU				SS	SS	20 17 29.2	-0.8
ARU				pmax	pmax		
	comp=Z,11nm,1.2s						
ARU	Arti	54.00	320	P	P	20 06 12.5	-0.5
ARU				IAmb	IAmb	20 06 17.3	
	comp=Z,14nm,1.3s						
AS31	Alice Springs	54.73	174	P	P	20 06 18.7	0.0
ASAR	Alice Springs	54.73	174	P	P	20 06 18.4	-0.3
	comp=Z,2.3nm,0.6s,baz=2.4,slow=9.5,SNR=42						
ASAR	Alice Springs	54.73	174	P	P	20 06 18.1	-0.5
HRA	Herat	55.29	292	P	P	20 06 21.7	-1.3
HRA				IAmb	IAmb	20 06 24.6	
	comp=Z,3.3nm,0.9s						
IMAR	Indian Mountai	56.81	28	P	P	20 06 33.0	-0.1
NEA2	Nenana	58.90	30	P	P	20 06 47.2	-0.5
NEA2				IAmb	IAmb	20 06 52.9	
	comp=Z,12nm,1.1s						
MDM	Murphy Dome	59.20	29	P	P	20 06 51.0	+1.1
MDM				IAmb	IAmb	20 06 51.5	
	comp=Z,7.6nm,0.8s						
ILAR	Eielson Array	59.80	30	P	P	20 06 53.7	-0.3
	comp=Z,1.0nm,0.7s,baz=283,slow=8.4,SNR=14						
BELG	Belogornoye	60.93	316	P	P	20 07 02.0	+0.1
	comp=Z,5.8nm,0.9s,baz=263,slow=3.6,SNR=4.3						
BELG	Belogornoye	60.93	316	P	P	20 07 02.0	+0.1
SCRK	Sand Creek	61.19	30	P	P	20 07 03.5	-0.1
SCRK				IAmb	IAmb	20 07 04.4	
	comp=Z,6.5nm,1.2s						
BCAR	Beaver Creek A	62.36	31		P	20 07 09.1	-2.4
STKA	Stephens Creek	63.84	168	P	P	20 07 21.5	0.0
	comp=Z,1.4nm,0.7s,baz=327,slow=10.0,SNR=4.9						
STKA				PP	PP	20 09 38.7	-3.5
	comp=Z,0.5nm,0.5s,baz=302,slow=3.7,SNR=2.9						
STKA	Stephens Creek	63.84	168	IAmb	IAmb	20 07 22.4	
	comp=Z,0.4nm,0.8s						
INK	Inuvik	64.11	24	P	P	20 07 23.4	+0.5
	comp=Z,2.0nm,0.9s,baz=308,slow=13,SNR=3.7						
ZEI	Tsey	66.25	307	*e*P	P	20 07 32.2	-5.4
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KBZ	Khabaz	66.60	308	P	P	20 07 39.9	+0.5
	comp=Z,6.2nm,0.9s,baz=71,slow=1.7,SNR=15						
KBZ	Khabaz	66.60	308	*ce*P	P	20 07 40.6	+1.2
KIV	Kislovodsk	66.66	308	*e*P	P	20 07 41.3	+1.3
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KIV	Kislovodsk	66.66	308	P	P	20 07 39.7	-0.3
FINES	FINESS Array B	68.92	330	P	P	20 07 53.4	-0.4
	comp=Z,1.9nm,0.7s,baz=64,slow=8.2,SNR=5.9						
FINES	FINESS Array B	68.92	330	*i* P	P	20 07 53.7	0.0
FINES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GURO	Guroymak-BITLI	69.18	303	P	P	20 07 55.9	-0.1
GURO				IAmb	IAmb	20 07 58.0	
	comp=Z,4.3nm,0.9s						
AKASG	Malin Array Be	72.24	319	P	P	20 08 13.8	-0.4
	comp=Z,0.3nm,0.3s,baz=52,slow=5.0,SNR=5.1						
AKASG	Malin Array Be	72.24	319	*ce*P	P	20 08 13.3	-0.9
AKASG	Malin Array Be	72.24	319	IAmb	IAmb	20 08 13.8	
	comp=Z,2.4nm,1.3s						
AKBB	Malin Array Si	72.24	319	*ce*P	P	20 08 15.3	+1.1
GAZ	Gaziantep	73.22	304	P	P	20 08 19.1	-1.3
GAZ				IAmb	IAmb	20 08 21.3	
	comp=Z,6.7nm,0.7s						
BRTR	Keskin Array B	74.56	307	P	P	20 08 28.7	+0.4
	comp=Z,3.3nm,0.9s,baz=90,slow=2.5,SNR=7.8						
BRTR	Keskin Array B	74.56	307	P	P	20 08 28.2	-0.1
NOA	NORSAR Array B	75.19	334	P	P	20 08 30.6	-0.8
	comp=Z,1.5nm,0.8s,baz=49,slow=5.6,SNR=4.1						
NVAR	Mina Array Bea	86.62	47	P	P	20 09 34.0	+0.9
	comp=Z,0.8nm,0.6s,baz=309,slow=4.2,SNR=7.4						
AHID	Auburn Hatcher	88.06	40	P	P	20 09 40.9	+0.8
PD31	Pinedale Array	88.90	39	P	P	20 09 44.6	+0.6
PDAR	Pinedale Array	88.90	39	P	P	20 09 43.2	-0.8
CTU	Camp Tracy	89.08	42	P	P	20 09 43.8	-1.0
JLU	Jordanelle	89.31	41	P	P	20 09 44.5	-1.5
ULM	Lac du Bonnet	89.72	27	P	P	20 09 47.8	+0.4
	comp=Z,8.3nm,1.0s,baz=308,slow=4.2,SNR=5.1						
E28A	Huff	90.55	32	P	P	20 09 50.7	-0.7
SNAA	Sanae	132.03	199	PKiKP	PKiKP	20 16 07.2	+4.3
VNA2	Neumayer--Watz	133.67	198	PKPdf	PKPdf	20 16 05.6	+0.6
VNA3	Neumayer Olymp	134.07	197	PKPdf	PKiKP	20 16 06.9	-0.2

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*NEIC **18** 20:07:05.9±0.9, 23°.7S±0°.2×178°.8W±0°.3, h532^{km}±25^{km},*
mb4.5/12, Error ellipse: s-maj=37.9km s-min=24.9km
az=65.0
*IDC **18** 20:07:08.4±4.0, 23°.67S×179°.13W, h538^{km}±31^{km}, mb3.6/6,*
mb1 3.6/9, mb1mx3.3/35, mbtmp4.5/9, Error ellipse:
s-maj=83.0km s-min=33.9km az=90.0
ISC 18 20:07:05.6±1.8**,23°.6S**±0°.1×**178°.7W**±0°.2**,h550^{km},n28,**
σ1^{s}.59/26**,mb4.2**/11**,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	6.53	332	P	P	20 08 51.6	+2.2
	1.2nm,0.3s,baz=221,slow=4.7,SNR=10						
MSVF	Nonsavu	6.53	332	P	P	20 08 49.6	+0.2
MARNC	Mare, Loyalty	12.40	277	P	P	20 09 46.7	-1.7
PINNC	Pines Island,	12.75	272	P	P	20 09 50.9	-1.0
LIFNC	LIFOU	13.28	279	P	P	20 09 54.3	-3.1
OUENC	Ouen Island, N	13.33	272	P	P	20 09 53.7	-4.2
DZM	Mont Dzumac	13.74	273	P	P	20 10 01.1	-1.2
	0.5nm,0.3s,baz=147,slow=3.7,SNR=3.3						
URZ	Urewera	15.07	193	P	P	20 10 14.8	-0.9
	0.5nm,0.3s,baz=302,slow=23,SNR=1.6						
URZ	Urewera	15.07	193	P	P	20 10 14.6	-1.0
FUNA	Funafuti	15.08	352	P	P	20 10 13.6	-2.4
TUWZ	Tuamarina	18.84	197	P	P	20 10 51.5	+0.5

THZ	Tophouse	19.45	199	P	P	20 10 55.5	-1.0
THZ				IAmb	IAmb	20 11 01.3	
	comp=Z,27nm,1.2s						
KHZ	Kahutara	19.87	197	P	P	20 11 00.1	-0.2
LTZ	Lake Taylor	20.57	199	P	P	20 11 05.8	-0.8
CTAO	Charters Tower	32.63	269	P	P	20 12 53.5	+0.7
CTAO				IAmb	IAmb	20 12 53.9	
	comp=Z,11nm,0.5s						
STKA	Stephens Creek	35.92	248	P	P	20 13 20.6	+0.6
	comp=Z,2.3nm,0.6s,baz=94,slow=9.3,SNR=8.4						
STKA	Stephens Creek	35.92	248	IAmb	IAmb	20 13 21.2	
	comp=Z,0.7nm,0.8s						
AS31	Alice Springs	43.23	260	P	P	20 14 19.3	+0.4
ASAR	Alice Springs	43.23	260	P	P	20 14 19.4	+0.5
	comp=Z,3.9nm,0.7s,baz=92,slow=7.3,SNR=46						
WR0	Warramunga Arr	43.39	265	P	P	20 14 20.2	0.0
WR0				IAmb	IAmb	20 14 48.1	
	comp=Z,8.2nm,1.3s						
WB2	Warramunga Arr	43.57	265	P	P	20 14 21.6	0.0
WB2				IAmb	IAmb	20 14 22.0	
	comp=Z,7.4nm,0.5s						
WB0	Warramunga Arr	43.57	266	P	P	20 14 21.6	0.0
WB0				IAmb	IAmb	20 14 22.2	
	comp=Z,7.2nm,0.7s						
WRAB	Tennant Creek	43.58	265	P	P	20 14 21.5	-0.1
WRAB				IAmb	IAmb	20 14 21.9	
	comp=Z,6.6nm,0.5s						
WRA	Warramunga Arr	43.58	265	P	P	20 14 21.7	0.0
	comp=Z,6.0nm,0.5s,baz=101,slow=8.5,SNR=167						
WRA	Warramunga Arr	43.58	265	IAmb	IAmb	20 14 22.3	
	comp=Z,0.5nm,0.7s						
FITZ	Fitzroy Crossi	52.01	265	P	P	20 15 26.0	+1.4
	comp=Z,1.8nm,0.5s,baz=122,slow=7.5						
SIJI	Sorong	53.43	288	P	P	20 15 35.2	+0.4
	comp=Z,6.9nm,0.6s,baz=101,slow=10,SNR=6.9						
BATI	Baumata	56.36	273	P	P	20 15 58.0	+2.7
	comp=Z,5.6nm,0.4s,baz=95,slow=2.5,SNR=2.7						

JMA 18 20:10:33.9±0.3, 24°.07N×123°.56E, h18km±2km, M1.2, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HATJ	Hateruma jima	0.22	93	P	Pg	20 10 39.1	-0.1
HATJ				*e*S	Sg	20 10 42.7	-0.1
IRIF	Iriomote-Funau	0.31	30	P	Pg	20 10 40.4	-0.2
IRIF				*e*S	Sg	20 10 45.0	-0.1
JKRS	Kuro-shima	0.44	68	P	Pg	20 10 42.9	0.0
JKRS				S	Sb	20 10 49.3	-0.2
JIJ	Ishigaki jima	0.61	61	P	Pb	20 10 45.3	-0.7
JIJ				*e*S	Sg	20 10 53.1	-1.0
JISG	Ishigakijimahi	0.86	53	P	Pb	20 10 49.9	-0.3
JISG				*e*S	Sb	20 11 01.2	-0.2

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*IDC **18** 20:10:37.9±1.2, 9°.00S×158°.37E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.7/33, mbtmp3.7/5, Error ellipse: s-maj=39.3km s-min=19.0km az=178.0*

ISC 18 20:10:39.5±1.0, 9°.0S±0°.2×158°.34E±0°.09, h10km, n6, σ1.s10/7, mb3.7/5, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.64	105	Pn	Pn	20 11 07.3	-1.1
	337nm,0.3s,baz=318,slow=0.9,SNR=8.2						
HNR				Sn	Sb	20 11 31.9	+1.3
	379nm,0.3s,baz=222,slow=22,SNR=14						
WRA	Warramunga Arr	25.62	242	P	P	20 16 09.9	+0.5
	1.5nm,0.9s,baz=66,slow=9.3,SNR=5.4						
ASAR	Alice Springs	27.54	235	P	P	20 16 26.4	-0.4
	0.5nm,0.7s,baz=68,slow=9.0,SNR=3.6						
FITZ	Fitzroy Crossi	33.00	251	P	P	20 17 15.2	+0.1
	0.8nm,0.5s,baz=64,slow=11						
ILAR	Eielson Array	84.05	21	P	P	20 23 09.4	-0.6
	0.5nm,0.9s,baz=237,slow=5.0,SNR=2.2						
MKAR	Makanchi Array	87.10	318	P	P	20 23 26.8	+1.1
	0.5nm,0.9s,baz=89,slow=6.1,SNR=1.3						

TAP 18 20:11:11.8, 24°.77N×122°.54E, h115km, ML2.6, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.53	125	*e*P	Pn	20 11 29.0	-0.3
	baz=125						
TWB1	Santiao Chiao	0.55	296	*e*P	Pn	20 11 29.7	+0.2
	baz=290						
TWC	Suao	0.65	256	*e*P	Pn	20 11 30.2	0.0
	baz=253						
TIPB	Shuangxi	0.68	288	*e*S	Sn	20 11 44.7	+0.1
	baz=283						
WFSB	Wu-fen Shan	0.75	294	*e*S	Sn	20 11 45.7	+0.1
	baz=288						
NDS	Dongshan	0.76	260	*e*P	Pn	20 11 31.1	0.0
	baz=258						
NDS				S	Sn	20 11 45.3	-0.4
	baz=258						
EWUT	Wuta	0.76	245	*e*P	Pn	20 11 31.6	+0.4
	baz=243						
EWUT				*e*S	Sn	20 11 46.0	+0.3
	baz=243						
TWE	Neicheng	0.79	267	P	Pn	20 11 31.7	+0.3
	baz=266						
TWE				S	Sn	20 11 46.0	-0.1
	baz=266						
ENA	Nanau	0.80	245	P	Pn	20 11 31.9	+0.4
	baz=243						
ENA				*e*S	Sn	20 11 46.8	+0.5
	baz=243						
ENTT	Nioudou	0.89	262	*e*P	Pn	20 11 33.2	+0.9
	baz=265						
ENTT				*e*S	Sn	20 11 48.8	+1.0
	baz=265						
NWLT	Wulai	0.94	271	*e*P	Pn	20 11 33.5	+0.7
	baz=276						
NWLT				*e*S	Sn	20 11 47.5	-1.1
	baz=276						
NDT	Datong Townshi	0.95	260	*e*P	Pn	20 11 34.1	+1.3
	baz=264						
YM01	YM01	0.96	293	*e*P	Pn	20 11 33.3	+0.3
	baz=285						
YM01				S	Sn	20 11 49.1	+0.1
	baz=285						
ETL	Fush Village	1.03	234	*e*P	Pn	20 11 34.2	+0.5
	baz=229						
NACB	Ninganchiao	1.04	236	*e*S	Sn	20 11 49.7	-0.7
	baz=231						
YHNB	Yeheng	1.06	265	S	Sn	20 11 51.4	+0.5
	baz=270						
NSK	Sanguang	1.08	265	P	Pn	20 11 34.6	+0.3
	baz=270						
NSK				*e*S	Sn	20 11 51.0	-0.2
	baz=270						
NNSB	Datong	1.10	252	*e*S	Sn	20 11 51.3	-0.5
	baz=248						
NNS	Nan Shan	1.11	253	*e*P	Pn	20 11 34.9	+0.3
	baz=249						
NNS				*e*S	Sn	20 11 51.5	-0.4
	baz=249						
ETLH	Xiulin Townshi	1.11	240	*e*P	Pn	20 11 34.6	-0.1
	baz=235						
ETLH				*e*S	Sn	20 11 52.1	+0.2
	baz=235						
FUSS	Fushou	1.29	247	*e*P	Pn	20 11 37.2	+0.5
	baz=243						
WHF	Hehuan Shan	1.31	242	*e*P	Pn	20 11 37.3	+0.1
	baz=242						
WHF				*e*S	Sn	20 11 56.1	-0.3
	baz=242						
TWT	Tachien	1.34	248	*e*P	Pn	20 11 38.2	+0.9
	baz=242						
TWT				*e*S	Sn	20 11 56.8	+0.3
	baz=242						
TDCB	Techi	1.36	248	P	Pn	20 11 38.2	+0.8
	baz=242						
TDCB				*e*S	Sn	20 11 56.6	-0.2
	baz=242						
LIOB	Emei	1.39	265	*e*P	Pn	20 11 37.9	+0.3
	baz=265						
LIOB				*e*S	Sn	20 11 56.9	-0.3
	baz=265						
NSTT	Nanjuang	1.41	265	*e*S	Sn	20 11 57.2	-0.3
	baz=264						
CHGB	Renai	1.43	241	*e*S	Sn	20 11 57.9	-0.5
	baz=235						
OWD	Renai	1.48	237	*e*P	Pn	20 11 39.1	+0.3
	baz=232						
WHP	Taichung City	1.53	252	*e*P	Pn	20 11 40.3	+1.0
	baz=260						
WHP				*e*S	Sn	20 12 00.7	+0.5
	baz=260						
WCS	Beigang Elemen	1.64	245	*e*P	Pn	20 11 41.8	+1.2
	baz=244						
EHY	Hungye	1.68	222	*e*P	Pn	20 11 41.0	0.0
	baz=229						
SSLB	Suanglung	1.74	236	*e*P	Pn	20 11 42.9	+1.0
	baz=233						
SSLB				*e*S	Sn	20 12 05.0	+0.2
	baz=233						
TYC	Yuchr	1.76	241	*e*P	Pn	20 11 43.0	+1.0
	baz=240						
YULB	Yu-li	1.78	220	*e*P	Pn	20 11 41.0	-1.2
	baz=227						
FULB	Fuli	1.93	216	*e*P	Pn	20 11 41.9	-2.3
	baz=212						
ALS	Alishan	2.02	232	*e*P	Pn	20 11 46.4	+0.9
	baz=227						
CHN5	Tsauling	2.06	236	*e*P	Pn	20 11 46.9	+1.0
	baz=244						

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*IDC **18** 20:13:32.4±2.5, 1°.45N×127°.55E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.4/31, mbtmp3.4/3, Error ellipse: s-maj=217.8km s-min=25.6km az=67.0*
*DJA **18** 20:13:41.3±0.7, 1°N±3°×12°7E±°, h26km±6km, M4.0/6, mb5.3/1, MLv3.3/6*

ISC 18 20:13:39.7±1.3, 1°.2N±0°.1×126°.8E±0°.1, h35km, n8, σ2.s14/9, mb3.4/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.74	127	P	Pn	20 13 54.6	+0.9
TNTI				S	Sn	20 14 04.6	+0.8
LBMI	Labuha	1.98	158	P	Pn	20 14 11.9	+1.1
LBMI				S	Sn	20 14 35.2	+0.8
SANI	Sanana	3.34	194	P	Pn	20 14 29.6	+0.1
MTKI	Muara Teweh, K	12.06	260	P	Pn	20 16 18.1	-11
PBKI	Pangkalan Bun	15.59	256	P	P	20 17 23.1	+2.2
WRA	Warramunga Arr	22.30	161	P	P	20 18 30.1	-4.2
	0.4nm,0.7s,baz=342,slow=11,SNR=8.5						
ASAR	Alice Springs	25.69	165	P	P	20 19 05.6	-1.1
	0.4nm,0.3s,baz=346,slow=11,SNR=11						
MKAR	Makanchi Array	59.64	326	P	P	20 23 40.0	-0.4
	0.2nm,0.3s,baz=127,slow=7.7,SNR=6.0						

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*SOME **18** 20:29:31.6, 40°.42N×73°.12E, h0km*
*ISU **18** 20:29:35, 40°.32N×73°.18E, h5km*
*KRNET **18** 20:29:35.1±0.1, 40°.35N×73°.21E, h19km, mb3.1*
*NNC **18** 20:29:36.9±1.8, 40°.53N×73°.20E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=14.8km s-min=8.1km az=178.0*

ISC 18 20:29:34.5±1.1, 40°.35N±0°.03×73°.24E±0°.02, h4km±10km, n56, σ1.s99/87, 26C-18D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	Osh	0.39	297	*e*P	Pg	20 29 42.0	0.0
OHH				*e*S	Sg	20 29 47.0	-0.1
OHH	Osh	0.39	297	⇓*i*P	Pg	20 29 42.5	+0.5
	baz=99						
OHH				⇓*i*S	Sg	20 29 47.8	+0.7
	baz=99						
SFK	Sufi-Kurgan	0.39	148	*e*P	Pg	20 29 42.0	-0.1
SFK				*e*S	Sg	20 29 48.0	+0.7
SFK	Sufi-Kurgan	0.39	148	⇑*e*P	Pg	20 29 42.7	+0.6
	baz=46						
SFK				⇑*e*S	Sg	20 29 49.0	+1.7
	baz=46						
ANR	Andizhan	0.78	302	*e*P	Pg	20 29 50.0	+0.5
ANR				*e*S	Sn	20 30 02.0	-2.5
NAM	Namangan	1.36	299	*e*P	Pg	20 30 02.0	+1.4
NAM				*e*S	Sg	20 30 21.0	+2.7
DRK	Karamyk	1.40	232	⇑*i*P	Pb	20 30 00.7	-0.8
	baz=32						
DRK				⇑*i*S	Sg	20 30 19.2	-0.4
	baz=32						
AML	Almayashu	1.82	11	P	Pb	20 30 08.4	-0.1
	SNR=284						
AML	Almayashu	1.82	11	⇓*i*P	Pb	20 30 08.4	-0.1
	baz=12						
AML				⇓*i*S	Sg	20 30 32.6	-0.3
	baz=12						
BTK	Batken	1.87	262	*e*P	Pb	20 30 09.0	-0.4
BTK				*e*S	Sg	20 30 34.0	-0.7
BTK	Batken	1.87	262	⇓*i*P	Pb	20 30 08.6	-0.8
	baz=62						
BTK				⇓*i*S	Sg	20 30 33.0	-1.7
	baz=62						
TRKS	Terek-Say	1.98	307	⇓*i*P	Pb	20 30 09.5	-1.7
	baz=6.0						
TRKS				⇓*i*S	Sb	20 30 34.4	-1.9
	baz=6.0						
UCH	Uchtor	2.11	27	P	Pb	20 30 13.3	-0.3
	SNR=25						
UCH	Uchtor	2.11	27	⇑*i*P	Pb	20 30 12.8	-0.8
	baz=27						
UCH				⇑*i*S	Sb	20 30 39.9	-0.5
	baz=27						
MNAS	Manas	2.21	346	⇑*i*P	Pb	20 30 13.4	-1.7
	baz=46						
MNAS				⇑*e*S	Sb	20 30 41.3	-1.5
	baz=46						
EKS2	Erkin-Say	2.35	10	P	Pb	20 30 17.1	-0.4
	SNR=21						
EKS2	Erkin-Say	2.35	10	⇓*i*P	Pb	20 30 15.5	-2.0
	baz=10.0						
EKS2				⇓*i*S	Sb	20 30 45.0	-1.9
	baz=10.0						
MRKS	Merke	2.40	360	*e*P	Pb	20 30 16.4	-1.8
	6.1nm,0.2s						
MRKS				*e*S	Sb	20 30 49.4	+1.2
	43nm,0.2s						
MRKS	Merke	2.40	360	Pg	Pb	20 30 16.4	-1.8
	6.1nm,0.2s						
MRKS				Lg	Lg	20 30 49.4	
	43nm,0.2s						
AAK	Ala-Archa	2.48	22	P	Pb	20 30 18.2	-1.4
	SNR=29						
AAK	Ala-Archa	2.48	22	⇑Pn	Pb	20 30 18.0	-1.6
	10nm,0.5s						
AAK				⇓Lg	Lg	20 30 52.1	
	13nm,0.4s						
AAK	Ala-Archa	2.48	22	⇑*e*P	Pb	20 30 17.5	-2.2
	baz=23						
AAK				⇑*i*S	Sb	20 30 48.1	-2.5
	baz=23						
GAR	Garm	2.62	240	⇓*i*P	Pb	20 30 19.3	-2.9
	baz=40						
GAR				⇓*i*S	Sb	20 30 51.1	-3.7
	baz=40						
KBK	Karagaybulak	2.64	29	P	Pb	20 30 21.2	-1.3
	SNR=9.3						
KBK	Karagaybulak	2.64	29	⇑*e*P	Pb	20 30 19.7	-2.8
	baz=29						
KBK				⇑*i*S	Sb	20 30 52.3	-3.1
	baz=29						
FRU1	Bishkek	2.67	23	⇑*i*P	Pb	20 30 20.4	-2.6
	baz=23						
FRU1				⇑*e*S	Sb	20 30 53.4	-2.8
	baz=23						
DZA	Taraz	2.92	331	*e*P	Pb	20 30 25.0	-2.1
	12nm,0.3s						
DZA				*e*S	Sb	20 31 03.5	+0.4
	66nm,0.6s						
DZA	Taraz	2.92	331	Pg	Pb	20 30 25.0	-2.1
	12nm,0.3s						
DZA				Lg	Lg	20 31 03.5	
	66nm,0.6s						
ULHL	Ulahol	2.95	49	P	Pb	20 30 25.0	-2.9
	SNR=7.7						
ULHL	Ulahol	2.95	49	⇑*e*P	Pn	20 30 24.2	+1.8
	baz=49						
ULHL				⇑*i*S	Sb	20 31 00.1	-4.3
	baz=49						
USP	Ospenovka	3.07	18	P	Pb	20 30 30.8	+1.1
	SNR=5.8						
USP	Ospenovka	3.07	18	⇑*i*P	Pn	20 30 25.6	+1.8
	baz=18						
USP				⇑*i*S	Sn	20 31 02.3	+1.4
	baz=18						
TKM2	Tokmak 2	3.12	34	P	Pb	20 30 27.4	-3.3
	SNR=7.4						
TKM2	Tokmak 2	3.12	34	⇓Pn	Pn	20 30 27.0	+2.2
	2.3nm,0.3s						
TKM2				⇓Lg	Lg	20 31 12.9	
	6.9nm,0.7s						
TKM2	Tokmak 2	3.12	34	⇑*i*P	Pn	20 30 26.7	+2.0
	baz=34						
TKM2				⇑*e*S	Sn	20 31 04.0	+1.5
	baz=34						
KST	Kastek	3.38	36	*e*P	Pb	20 30 33.6	-1.5
	4.4nm,0.8s						
KST				*e*S	Sb	20 31 18.3	+1.7
	4.4nm,0.6s						
KST	Kastek	3.38	36	Pg	Pb	20 30 33.6	-1.5
	4.4nm,0.8s						
KST				Lg	Lg	20 31 18.3	
	4.4nm,0.6s						
KK02	Karatay Array	3.43	324	⇓Pg	Pb	20 30 37.5	+1.7
	1.0nm,0.3s						
KK02				⇓Lg	Lg	20 31 20.6	
	2.6nm,0.3s						
DGS	Degeres	3.46	32	*e*P	Pb	20 30 35.7	-0.7
	3.8nm,0.3s						
DGS				*e*S	Sb	20 31 21.7	+2.9
	6.2nm,0.7s						
DGS	Degeres	3.46	32	Pg	Pb	20 30 35.7	-0.7
	3.8nm,0.3s						
DGS				Lg	Lg	20 31 21.7	
	6.2nm,0.7s						
MTBS	Maitube	3.67	40	*e*P	Pb	20 30 39.9	0.0
	2.4nm,0.3s						
MTBS				*e*S	Sg	20 31 28.7	-3.5
	5.8nm,0.4s						
TNSS	Tian-Shan	3.87	45	*e*P	Pb	20 30 43.8	+0.3
	4.2nm,0.3s						
TNSS				*e*S	Sg	20 31 36.2	-2.5
	5.6nm,0.5s						
TNSS	Tian-Shan	3.87	45	Pg	Pb	20 30 43.8	+0.3
	4.2nm,0.3s						
TNSS				Lg	Lg	20 31 36.2	
	5.6nm,0.5s						
KNDC	Almaty	4.00	43	⇑Lg	Lg	20 31 41.3	
	24nm,0.8s						
MDOK	Medeo	4.01	44	*e*P	Pb	20 30 46.6	+0.9
	4.3nm,0.4s						
MDOK				*e*S	Sg	20 31 40.9	-2.3
	7.7nm,0.9s						
MDOK	Medeo	4.01	44	⇑Pn	Pn	20 30 39.4	+2.6
	1.7nm,0.5s						
MDOK				⇑Pg	Pb	20 30 48.3	+2.5
	2.9nm,0.5s						
MDOK				⇑Lg	Lg	20 31 40.0	
	9.9nm,1.0s						
MDOK	Medeo	4.01	44	Pg	Pb	20 30 46.6	+0.9
	4.3nm,0.4s						
MDOK				Lg	Lg	20 31 40.9	
	7.7nm,0.9s						
KOTS	Kotyrbulak	4.09	44	*e*P	Pb	20 30 48.2	+1.1
	4.6nm,0.6s						
KOTS				*e*S	Sg	20 31 43.3	-2.5
	15nm,0.7s						
KOTS	Kotyrbulak	4.09	44	Pg	Pb	20 30 48.2	+1.1
	4.6nm,0.6s						
KOTS				Lg	Lg	20 31 43.3	
	15nm,0.7s						
KUU	Kurty	4.23	32	*e*P	Pb	20 30 50.0	+0.6
	2.4nm,0.7s						
KUU				*e*S	Sg	20 31 47.0	-3.3
	7.7nm,0.7s						
KUU	Kurty	4.23	32	Pg	Pb	20 30 50.0	+0.6
	2.4nm,0.7s						
KUU				Lg	Lg	20 31 47.0	
	7.7nm,0.7s						
SATY	Saty	4.72	53	*e*P	Pb	20 30 59.4	+1.4
	1.1nm,0.4s						
SATY				*e*S	Sg	20 32 02.2	-4.1
	4.3nm,0.5s						
BTLS	Baital	4.73	7	*e*P	Pb	20 30 58.2	+0.2
	1.5nm,0.7s						
BTLS				*e*S	Sb	20 32 00.1	+4.9
	3.5nm,0.6s						
UZB	Uzynbulak	5.15	55	*e*P	Pb	20 31 08.0	+2.7
	1.0nm,0.4s						
UZB				*e*S	Sg	20 32 17.1	-2.9
	3.5nm,1.2s						
PDGK	Podgornoye	5.54	55	⇓Lg	Lg	20 32 29.1	
	6.4nm,1.1s						
OTUK	Ortayu	7.92	356	⇑Lg	Lg	20 33 43.0	
	0.4nm,0.5s						

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*IDC **18** 20:35:42.0±3.0, 8°.72S×118°.61E, h0km, mb3.1/2, mb1 3.3/3, mb1mx3.2/39, mbtmp3.1/3, ML3.1/1, Error ellipse: s-maj=236.6km s-min=29.5km az=51.0*
*DJA **18** 20:35:48.2±1.5, 9°S±9°×11°8E±°, h15km±9km, M3.8/7, MLv3.8/7*

ISC 18 20:35:47.5±1.2, 9°.51S±0°.10×117°.97E±0°.08, h35km, n11, σ2.s26/12, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	0.70	345	P	Pn	20 36 02.0	+1.1
PLAI				S	Sn	20 36 10.6	+0.1
TWSI	Taliwang, Sumb	1.31	305	P	Pn	20 36 11.2	+1.8
DNP	Denpasar	2.84	287	P	Pn	20 36 33.2	+2.8
IGBI	Denpasar	2.87	284	P	Pn	20 36 32.9	+2.2
JAGI	Jajag, Banyuwa	3.90	285	P	Pn	20 36 47.5	+2.5
BSSI	Bau Bau, Buton	4.17	37	P	Pn	20 36 50.5	+1.7
BKSI	Bulukumba	4.67	27	P	Pn	20 36 58.7	+3.1
PBKI	Pangkalan Bun	9.21	317	P	Pn	20 37 57.4	-0.5
WRA	Warramunga Arr	18.91	125	P	P	20 40 04.3	-1.1
	0.1nm,0.3s,baz=301,slow=13,SNR=5.2						
ASAR	Alice Springs	20.74	135	P	P	20 40 25.6	+0.2
	0.3nm,0.5s,baz=315,slow=9.7,SNR=7.8						
MKAR	Makanchi Array	64.45	334	P	P	20 46 17.4	-3.0
	0.4nm,0.8s,baz=152,slow=6.5,SNR=1.9						

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*IDC **18** 20:41:04.9±1.8, 38°.72N×20°.58E, h0km, mb3.7/6, mb1 3.7/11, mb1mx3.5/44, mbtmp3.6/11, ML3.1/5, Error ellipse: s-maj=36.7km s-min=17.6km az=41.0*
*IASPEI **18** 20:41:06.9±0.8, 38°.61N±0°.02×20°.60E±0°.03, h16km±4km, mb3.7/6, Error ellipse: s-maj=4.5km s-min=2.3km az=104.0, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*
*THE **18** 20:41:07.5, 38°.61N×20°.57E, h13km, ML3.5/10, Error ellipse: s-maj=0.9km s-min=0.3km az=298.0*
*ATH **18** 20:41:07.7, 38°.60N×20°.60E, h13km, ML3.3/19, Error ellipse: s-maj=1.5km s-min=0.6km az=287.0*
*BEO **18** 20:41:08.8±2.2, 38°.45N×20°.38E, h46km±4km, ML3.3/9*

ISC 18 20:41:06.8±0.7, 38°.61N±0°.01×20°.60E±0°.02, h16km±4km, n106, σ1.s07/144, mb3.7/6, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EVGI	Lefkada island	0.05	82	P	Pg	20 41 10.1	+0.3
EVGI				S	Sg	20 41 11.8	0.0
EVGI	Lefkada island	0.05	82	P	Pg	20 41 10.0	+0.2
EVGI				S	Sg	20 41 11.8	0.0
DRAG	Dragano-Lefkad	0.07	347	P	Pg	20 41 10.2	+0.1
DRAG				S	Sg	20 41 12.1	-0.1
DRAG	Dragano-Lefkad	0.07	347	P	Pg	20 41 10.1	+0.1
DRAG				S	Sg	20 41 12.0	-0.1
NYDR	Nydri-Lefkada	0.13	39	P	Pb	20 41 11.0	+0.1
NYDR				S	Sb	20 41 13.6	0.0
	42μm,0.2s						
NYDR	Nydri-Lefkada	0.13	39	P	Pb	20 41 11.0	+0.1
NYDR				S	Sb	20 41 13.4	-0.2
FSK	Fiskardo	0.16	189	P	Pb	20 41 11.4	0.0
FSK				S	Sb	20 41 14.1	-0.3
	28μm,0.4s						
FSK	Fiskardo	0.16	189	P	Pb	20 41 11.4	0.0
FSK				S	Sb	20 41 13.8	-0.6
FSK				AML	AML	20 41 14.5	
	comp=N,49421μm,0.6s						
FSK				AML	AML	20 41 14.7	
	comp=E,63668μm,0.3s						
LKD2	Lefkada island	0.18	16	P	Pb	20 41 11.9	0.0
LKD2				S	Sb	20 41 15.1	-0.1
	comp=E,17μm,0.4s						
LKD2	Lefkada island	0.18	16	P	Pb	20 41 11.8	0.0

LKD2				S	**Sb**	**20 41 15.3**	**+0.1**
LKD2				AML	AML	20 41 15.9	
	comp=E,37152µm,0.2s						
LKD2				AML	AML	20 41 16.0	
	comp=N,30379µm,0.5s						
TSLK	**Tsoukalades, L**	**0.22**	**13**	P	**Pb**	**20 41 12.7**	**+0.2**
TSLK				S	**Sb**	**20 41 16.3**	**+0.1**
	comp=N,25µm,0.4s						
TSLK	**Tsoukalades, L**	**0.22**	**13**	P	**Pb**	**20 41 12.6**	**+0.2**
TSLK				S	**Sb**	**20 41 16.7**	**+0.5**
TSLK				AML	AML	20 41 17.2	
	comp=E,49281µm,0.4s						
TSLK				AML	AML	20 41 17.4	
	comp=N,50916µm,0.4s						
KEF4	**Livadi, Kephal**	**0.38**	**201**	P	**Pb**	**20 41 14.9**	**-0.3**
KEF4				S	**Sb**	**20 41 20.8**	**0.0**
KEF4	**Livadi, Kephal**	**0.38**	**201**	P	**Pb**	**20 41 14.8**	**-0.4**
KEF4				S	**Sb**	**20 41 20.8**	**0.0**
DMLN	**Damoulianata-K**	**0.41**	**205**	P	**Pg**	**20 41 15.3**	**+0.1**
DMLN				S	**Sb**	**20 41 21.5**	**-0.3**
	comp=N,5µm,0.5s						
DMLN	**Damoulianata-K**	**0.41**	**205**	P	**Pg**	**20 41 15.3**	**+0.1**
DMLN				S	**Sg**	**20 41 20.8**	**-0.1**
LXRA	**Lixouri, Kepha**	**0.43**	**197**	P	**Pb**	**20 41 15.7**	**-0.4**
LXRA				S	**Sb**	**20 41 22.5**	**+0.2**
VLS	**Valsamata**	**0.44**	**181**	P	**Pg**	**20 41 15.7**	**0.0**
VLS				S	**Sb**	**20 41 22.6**	**+0.1**
	comp=N,7µm,0.1s						
VLS	**Valsamata**	**0.44**	**181**	P	**Pg**	**20 41 15.7**	**0.0**
VLS				S	**Sb**	**20 41 22.2**	**-0.2**
VLS				AML	AML	20 41 22.9	
	comp=N,10048µm,0.1s						
VLS				AML	AML	20 41 22.9	
	comp=E,16228µm,0.1s						
ARGA	**Argostoli. Kep**	**0.45**	**192**	P	**Pb**	**20 41 16.8**	**+0.5**
ARGA				S	**Sb**	**20 41 23.0**	**+0.3**
KEF3	**Kipouria, Keph**	**0.45**	**205**	P	**Pg**	**20 41 15.6**	**-0.4**
KEF3				S	**Sb**	**20 41 22.7**	**-0.2**
	comp=E,10µm,0.1s						
KEF3	**Kipouria, Keph**	**0.45**	**205**	P	**Pg**	**20 41 15.6**	**-0.4**
KEF3				S	**Sg**	**20 41 21.8**	**-0.3**
PSDA	**Pessada-Kefalo**	**0.50**	**181**	P	**Pg**	**20 41 16.8**	**0.0**
PSDA				S	**Sb**	**20 41 24.5**	**+0.3**
PSDA	**Pessada-Kefalo**	**0.50**	**181**	P	**Pg**	**20 41 16.8**	**0.0**
PSDA				S	**Sb**	**20 41 24.0**	**-0.3**
PVO	**Paravola**	**0.73**	**90**	P	**Pn**	**20 41 21.9**	**-0.5**
PVO				S	**Sn**	**20 41 32.3**	**-1.0**
	comp=E,3µm,0.4s						
PVO	**Paravola**	**0.73**	**90**	P	**Pn**	**20 41 22.0**	**-0.5**
PVO				AML	AML	20 41 40.6	
	comp=N,5369µm,0.5s						
PVO				AML	AML	20 41 40.6	
	comp=E,5312µm,0.4s						
VTN	**Vitineika**	**0.84**	**146**	P	**Pn**	**20 41 23.7**	**-0.2**
VTN	**Vitineika**	**0.84**	**146**	P	**Pn**	**20 41 23.7**	**-0.2**
RLS	**Riolos of Patr**	**0.88**	**129**	P	**Pg**	**20 41 24.0**	**0.0**
RLS				S	**Sn**	**20 41 37.7**	**+0.7**
	comp=E,2µm,0.5s						
RLS	**Riolos of Patr**	**0.88**	**129**	P	**Pg**	**20 41 23.9**	**0.0**
RLS				AML	AML	20 41 44.8	
	comp=E,4782µm,0.6s						
RLS				AML	AML	20 41 45.6	
	comp=N,4364µm,0.4s						
LTHK	**Lithakia**	**0.92**	**168**	P	**Pb**	**20 41 23.9**	**-0.5**
LTHK				AML	AML	20 41 43.3	
	comp=E,2647µm,0.5s						
LTHK				AML	AML	20 41 44.1	
	comp=N,3904µm,0.5s						
IGT	**Igoumenitsa**	**0.94**	**348**	P	**Pb**	**20 41 24.7**	**0.0**
IGT				AML	AML	20 41 43.1	
	comp=E,3327µm,0.5s						
IGT				AML	AML	20 41 44.5	
	comp=N,1350µm,0.3s						
EVR	**Evrytania**	**1.00**	**72**	P	**Pn**	**20 41 26.2**	**0.0**
ANX	**Ano Chora**	**1.04**	**91**	P	**Pn**	**20 41 27.0**	**+0.2**
ANX				AML	AML	20 41 49.0	
	comp=E,6368µm,0.6s						
ANX				AML	AML	20 41 49.9	
	comp=N,8625µm,0.5s						
EFP	**Efpalio**	**1.04**	**100**	P	**Pg**	**20 41 26.6**	**-0.5**
EFP				S	**Sn**	**20 41 42.9**	**+1.8**
	comp=N,3µm,0.5s						
EFP	**Efpalio**	**1.04**	**100**	P	**Pb**	**20 41 26.4**	**-0.1**
EFP				AML	AML	20 41 49.0	
	comp=N,3713µm,0.5s						
EFP				AML	AML	20 41 49.4	
	comp=E,8040µm,0.6s						
JAN	**Janina**	**1.06**	**11**	P	**Pg**	**20 41 28.2**	**+0.8**
JAN				AML	AML	20 41 47.9	
	comp=E,2105µm,0.6s						
JAN				AML	AML	20 41 49.5	
	comp=N,1393µm,0.5s						
DRO	**Drossia**	**1.10**	**127**	P	**Pg**	**20 41 27.8**	**-0.3**
DRO	**Drossia**	**1.10**	**127**	P	**Pn**	**20 41 27.5**	**-0.1**
DRO				AML	AML	20 41 51.2	
	comp=N,6165µm,0.4s						
DRO				AML	AML	20 41 52.6	
	comp=E,6632µm,0.6s						
LAKA	**Lakka**	**1.15**	**109**	P	**Pb**	**20 41 28.1**	**-0.2**
LAKA	**Lakka**	**1.15**	**109**	P	**Pb**	**20 41 28.1**	**-0.2**
LAKA				AML	AML	20 41 58.8	
	comp=N,1204µm,0.6s						
LAKA				AML	AML	20 42 01.3	
	comp=E,1462µm,0.5s						
TRIZ	**Trizonia**	**1.19**	**102**	P	**Pb**	**20 41 28.9**	**0.0**
KASA	**Kassiopi**	**1.24**	**336**	P	**Pg**	**20 41 31.4**	**+0.6**
KASA				AML	AML	20 41 54.2	
	comp=N,1095µm,0.4s						
KASA				AML	AML	20 41 56.3	
	comp=E,1805µm,0.5s						
KEK	**Kerkira**	**1.26**	**331**	P	**Pg**	**20 41 31.3**	**+0.1**
KEK				AML	AML	20 41 57.1	
	comp=N,1049µm,0.5s						
KEK				AML	AML	20 42 01.9	
	comp=E,1021µm,0.4s						
MAKR	**Makrakomi, Fth**	**1.27**	**71**	P	**Pg**	**20 41 31.4**	**+0.2**
MAKR				AML	AML	20 41 58.7	
	comp=E,4534µm,0.3s						
MAKR				AML	AML	20 41 58.9	
	comp=N,4276µm,0.4s						
KLV	**Kalavryta, Ach**	**1.35**	**114**	P	**Pb**	**20 41 31.6**	**-0.1**
KLV				AML	AML	20 42 01.7	
	comp=E,1102µm,0.8s						
KLV				AML	AML	20 42 06.4	
	comp=N,928µm,0.8s						
AGG	**Agios Georgios**	**1.42**	**73**	P	**Pg**	**20 41 34.0**	**-0.1**
AGG				AML	AML	20 42 02.5	
	comp=E,3160µm,0.6s						
AGG				AML	AML	20 42 03.5	
	comp=N,2324µm,0.5s						
THL	**Klokotos Trika**	**1.46**	**49**	P	**Pg**	**20 41 34.7**	**-0.2**
THL				AML	AML	20 41 59.7	
	comp=E,2122µm,0.7s						
THL				AML	AML	20 42 00.1	
	comp=N,2385µm,0.7s						
GUR	**Goura**	**1.53**	**116**	P	**Pb**	**20 41 34.6**	**-0.3**
KZN	**Kozani**	**1.92**	**28**	P	**Pg**	**20 41 42.5**	**-1.2**
VIL2	**Platees**	**2.14**	**100**	P	**Pb**	**20 41 45.7**	**+0.5**
NEO	**Neokhori**	**2.16**	**71**	P	**Pb**	**20 41 45.8**	**+0.2**
OHR	**Ohrid**	**2.50**	**4**	*e*Pn	**Pb**	**20 41 50.4**	**-1.0**
OHR				*e*Sn	**Sn**	**20 42 17.9**	**+0.8**
OHR	**Ohrid**	**2.50**	**4**	*i* Pn	**Pb**	**20 41 50.4**	**-1.0**
VAY	**Valandovo**	**3.10**	**29**	*e*Pn	**Pn**	**20 41 57.7**	**+2.6**
VAY				*e*Sn	**Sn**	**20 42 35.4**	**+3.6**
VAY	**Valandovo**	**3.10**	**29**	*i* Pn	**Pn**	**20 41 57.7**	**+2.6**
STIP	**Stip**	**3.31**	**21**	*i* Pn	**Pb**	**20 42 02.0**	**-3.1**
DRME	**Dracevica, Mon**	**3.73**	**344**	*e*Pn	**Pn**	**20 42 05.1**	**+1.4**
PDG	**Podgorica**	**3.95**	**345**	*e*Pn	**Pn**	**20 42 08.2**	**+1.5**
PDG				*e*Sn	**Sn**	**20 42 52.8**	**+0.2**
PDG	**Podgorica**	**3.95**	**345**	*e*Pn	**Pn**	**20 42 07.7**	**+1.0**
PRVS	**Prvonek**	**4.05**	**16**	*e*Pn	**Pn**	**20 42 10.4**	**+2.2**
BOSS	**Bosilegrad**	**4.13**	**20**	*e*Pn	**Pn**	**20 42 12.4**	**+3.1**
HCY	**Herceg Novi**	**4.15**	**338**	*e*Pn	**Pn**	**20 42 09.6**	**+0.1**
BARS	**Barje**	**4.30**	**12**	*e*Pn	**Pn**	**20 42 13.8**	**+2.2**
BARS				*e*Sn	**Sn**	**20 43 02.5**	**+1.1**
TREB	**Trebinje**	**4.44**	**338**	*e*Pn	**Pn**	**20 42 13.9**	**+0.4**
TREB				*e*Sn	**Sn**	**20 43 03.1**	**-1.7**
TREB	**Trebinje**	**4.44**	**338**	*e*Pn	**Pn**	**20 42 13.5**	**0.0**
VTS	**Vitosha**	**4.48**	**26**	*e*Pn	**Pn**	**20 42 16.7**	**+2.6**
VTS				*e*Sn	**Sn**	**20 43 04.8**	**-1.1**
BRY	**Bratogost**	**4.56**	**341**	*e*Pn	**Pn**	**20 42 15.2**	**-0.1**
SELS	**Selova**	**4.62**	**5**	*e*Pn	**Pn**	**20 42 16.9**	**+0.9**
SJES	**Sjenica**	**4.67**	**354**	*e*Pn	**Pn**	**20 42 18.6**	**+1.9**
UPM	**Unac-Piva**	**4.76**	**345**	*e*Pn	**Pn**	**20 42 19.4**	**+1.3**
IDI	**Anoyia**	**4.78**	**133**	Pn	**Pn**	**20 42 20.1**	**+1.9**
	comp=N,0.4nm,0.3s,baz=335,slow=12,SNR=5.7						
IDI				Sn	**Sn**	**20 43 15.0**	**+1.6**
	comp=N,1.6nm,0.3s,baz=133,slow=18,SNR=6.4						
STON	**Ston**	**4.79**	**334**	*e*Pn	**Pn**	**20 42 18.6**	**+0.4**
STON				*e*Sn	**Sn**	**20 43 10.8**	**-2.5**
STON	**Ston**	**4.79**	**334**	*e*Pn	**Pn**	**20 42 18.2**	**0.0**
ZAPS	**Zavoj**	**4.90**	**18**	*e*Pn	**Pn**	**20 42 23.2**	**+3.3**
VAE	**Valguarnera**	**5.01**	**259**	Sn	**Sn**	**20 43 21.7**	**+2.7**
	comp=N,0.6nm,0.3s,baz=39,slow=9.9,SNR=1.7						
RUDO	**Rudo**	**5.08**	**350**	*e*Pn	**Pn**	**20 42 22.6**	**+0.2**
BOVS	**Bovan**	**5.09**	**9**	*e*Pn	**Pn**	**20 42 23.7**	**+1.3**
GRUS	**Gruza**	**5.27**	**1**	*e*Pn	**Pn**	**20 42 26.2**	**+1.3**
BBLS	**Lazići**	**5.32**	**351**	*e*Pn	**Pn**	**20 42 26.6**	**+0.9**
BBLS				*e*Sn	**Sn**	**20 43 24.9**	**-1.8**
BBLS	**Lazići**	**5.32**	**351**	*e*Pn	**Pn**	**20 42 26.1**	**+0.4**
DIVS	**Divibare**	**5.50**	**355**	*e*Pn	**Pn**	**20 42 29.0**	**+0.9**
DIVS				*e*Sn	**Sn**	**20 43 30.7**	**-0.3**
DIVS	**Divibare**	**5.50**	**355**	*e*Pn	**Pn**	**20 42 28.6**	**+0.5**
HAPS	**Han Pijesak,Bl**	**5.61**	**348**	*e*Pn	**Pn**	**20 42 30.2**	**+0.6**
MGRS	**Mrkonjic Grad**	**6.37**	**337**	*e*Pn	**Pn**	**20 42 41.0**	**+1.0**
AQU	**L'Aquila**	**6.63**	**307**	*e*Pn	**Pn**	**20 42 46.0**	**+2.3**
BLY	**Banja Luka**	**6.64**	**338**	*e*Pn	**Pn**	**20 42 44.0**	**+0.3**
MORH	**Mrgy, Hungar**	**7.73**	**350**	*e*Pn	**Pn**	**20 42 57.3**	**-1.4**
RIY	**Rijeka**	**8.10**	**328**	*e*Pn	**Pn**	**20 43 04.2**	**+0.4**
CRES	**Cresnjev**	**8.15**	**334**	*e*Pn	**Pn**	**20 43 04.2**	**-0.2**
CEY	**Cerknica**	**8.46**	**329**	*e*Pn	**Pn**	**20 43 09.1**	**+0.4**
SOKA	**Soboth**	**9.04**	**335**	Pn	**Pn**	**20 43 16.5**	**-0.2**
	comp=N,4.0nm,0.6s,SNR=8.5						
OBKA	**Obir**	**9.06**	**332**	*i* Pn	**Pn**	**20 43 17.1**	**+0.1**
	comp=N,2.1nm,0.5s,SNR=6.0						
OBKA				*e*Sn	**Sn**	**20 45 00.0**	**+1.3**
	comp=N,2.4nm,0.6s						
KBA	**Koelnbreinsper**	**9.99**	**330**	*e*Pn	**Pn**	**20 43 30.8**	**+1.0**
	comp=N,2.7nm,0.5s						
MOA	**Molln**	**10.32**	**336**	Pn	**Pn**	**20 43 35.0**	**+0.9**
	comp=N,2.1nm,0.4s,SNR=5.6						
MOTA	**Moosalm**	**11.15**	**325**	*i* Pn	**Pn**	**20 43 47.1**	**+1.4**
	comp=N,4.8nm,0.9s						
DAVOX	**Davos/Dischmat**	**11.34**	**319**	Pn	**Pn**	**20 43 45.6**	**-2.6**
	comp=N,0.1nm,0.3s,baz=171,slow=8.6,SNR=1.5						
GERES	**GERESS Array B**	**11.37**	**336**	Pn	**Pn**	**20 43 47.4**	**-1.2**
	comp=N,0.2nm,0.3s,baz=156,slow=15,SNR=4.6						
MMAI	**Mount Meron Ar**	**13.25**	**110**	Pn	**Pn**	**20 44 12.9**	**-1.4**
	comp=N,0.2nm,0.3s,baz=307,slow=14,SNR=2.4						
ESDC	**Sonseca Array**	**19.07**	**281**	P	**Pn**	**20 45 29.2**	**-0.1**
	comp=N,0.0nm,0.3s,baz=74,slow=11,SNR=4.9						
HFS	**Hagfors**	**21.98**	**351**	P	**P**	**20 45 59.9**	**+0.1**
	comp=N,1.2nm,0.4s,baz=162,slow=10,SNR=9.4						
FINES	**FINESS Array B**	**23.11**	**7**	P	**P**	**20 46 11.2**	**-0.6**
	comp=N,2.6nm,0.6s,baz=166,slow=12,SNR=13						
NOA	**NORSAR Array B**	**23.20**	**348**	P	**P**	**20 46 12.4**	**-0.4**
	comp=N,0.8nm,0.9s,baz=166,slow=11,SNR=3.3						
ARCES	**ARCESS Array B**	**31.09**	**3**	P	**P**	**20 47 23.8**	**-0.2**
	comp=N,0.7nm,0.5s,baz=191,slow=9.2,SNR=4.0						
MKAR	**Makanchi Array**	**45.02**	**59**	P	**P**	**20 49 21.7**	**+0.1**
	comp=N,0.3nm,0.5s,baz=295,slow=6.5,SNR=5.1						
ZALV	**Zalesovo Beam**	**45.36**	**48**	P	**P**	**20 49 24.4**	**+0.4**
	comp=N,1.8nm,0.5s,baz=273,slow=8.2,SNR=10						

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*IDC **18** 20:48:38.9±0.8, 9°.13S×158°.51E, h0^{km}, mb4.0/7, mb1 4.2/8, mb1mx3.9/41, mbtmp4.1/8, ML4.3/1, Error ellipse: s-maj=24.9km s-min=16.0km az=3.0*

*NEIC **18** 20:48:40.5±0.8, 9°.3S±0°.2×158°.55E±0°.07, h10^{km}±2^{km}, mb4.1/8, Error ellipse: s-maj=33.3km s-min=5.8km az=16.0*

ISC 18 20:48:40.1±0.7, **9°.2S**±0°.2×**158°.51E**±0°.07, **h10**^{km}, **n19**, σ**0^s.86**/19, **mb4.0**/9, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.44**	**99**	Pn	**Pb**	**20 49 06.5**	**-0.5**
	232nm,0.3s,baz=259,slow=4.9,SNR=19						
HNR				Sn	**Sg**	**20 49 27.6**	**+1.2**
	642nm,0.3s,baz=119,slow=22,SNR=13						
HNR	**Honiara**	**1.44**	**99**		**Pn**	**20 49 05.8**	**-0.4**
JAY	**Jayapura**	**18.91**	**289**	P	**P**	**20 53 01.6**	**+0.4**
	0.9nm,0.3s,baz=172,slow=20,SNR=3.2						
MSVF	**Nonsavu**	**20.79**	**116**	P	Pn	20 53 23.0	-1.2
	3.8nm,0.7s,baz=261,slow=23,SNR=1.3						
MSVF	**Nonsavu**	**20.79**	**116**	IAmb	IAmb	20 53 33.2	
	comp=Z,9.2nm,1.1s						
WR0	**Warramunga Arr**	**25.50**	**243**	P	**P**	**20 54 08.1**	**-0.9**
WB0	**Warramunga Arr**	**25.57**	**243**	P	**P**	**20 54 07.8**	**-1.7**
WB0				IAmb	IAmb	20 54 20.6	
	comp=Z,4.1nm,0.9s						
WRAB	**Tennant Creek**	**25.66**	**243**	P	**P**	**20 54 09.5**	**-0.9**
WRAB				IAmb	IAmb	20 54 21.5	
	comp=Z,5.5nm,0.9s						
WB2	**Warramunga Arr**	**25.66**	**243**	P	**P**	**20 54 10.9**	**+0.5**
WB2				IAmb	IAmb	20 54 29.5	
	comp=Z,4.6nm,0.9s						
WRA	**Warramunga Arr**	**25.68**	**243**	P	**P**	**20 54 11.1**	**+0.5**
	comp=Z,1.8nm,0.7s,baz=70,slow=9.7,SNR=12						
WRA				PcP	**PcP**	**20 57 41.0**	**-0.1**
	comp=Z,0.6nm,1.0s,baz=69,slow=2.6,SNR=2.2						
WRA	**Warramunga Arr**	**25.68**	**243**	P	**P**	**20 54 10.3**	**-0.2**
STKA	**Stephens Creek**	**27.48**	**212**	P	**P**	**20 54 28.2**	**+1.5**
	comp=Z,1.8nm,0.6s,baz=51,slow=15,SNR=7.2						
STKA	**Stephens Creek**	**27.48**	**212**	P	**P**	**20 54 25.9**	**-0.9**
ASAR	**Alice Springs**	**27.57**	**236**	P	**P**	**20 54 27.4**	**-0.2**
	comp=Z,1.5nm,0.9s,baz=64,slow=9.2,SNR=12						
ASAR				PcP	**PcP**	**20 57 45.9**	**+0.3**
	comp=Z,0.9nm,1.1s,baz=86,slow=2.6,SNR=2.9						
CMAR	**Chiang Mai Arr**	**64.87**	**295**	P	**P**	**20 59 20.8**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=128,slow=4.7,SNR=1.4						
SONM	**Songino Array**	**73.08**	**326**	P	**P**	**21 00 11.3**	**+0.6**
	comp=Z,2.6nm,0.8s,baz=143,slow=6.2,SNR=9.6						
SONM	**Songino Array**	**73.08**	**326**	IAmb	IAmb	21 00 12.9	
	comp=Z,2.4nm,0.9s						
ILAR	**Eielson Array**	**84.17**	**21**	P	**P**	**21 01 10.4**	**-0.9**
	comp=Z,0.4nm,0.5s,baz=255,slow=4.9,SNR=5.4						
ESDC	**Sonseca Array**	**145.86**	**336**	PKPbc	**PKPdf**	**21 08 19.5**	**-0.2**
	comp=Z,0.4nm,0.8s,baz=25,slow=2.9,SNR=2.4						

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*IDC **18** 20:54:31.3±1.0, 39°.62N×76°.99E, h0^{km}, mb3.6/10, mb1 3.8/16, mb1mx3.6/57, mbtmp3.7/16, ML3.2/6, Error ellipse: s-maj=20.4km s-min=17.8km az=56.0*

*KRNET **18** 20:54:34.8±0.1, 39°.90N×77°.14E, h10^{km}, mb4.4*

*NEIC **18** 20:54:35.0±2.8, 39°.72N±0°.08×77°.16E±0°.07, h10^{km}±2^{km}, mb4.0/6, Error ellipse: s-maj=16.2km s-min=3.1km az=144.0*

*MOS **18** 20:54:34.2±1.4, 39°.70N×77°.11E, h24^{km}, mb4.4/6, Error ellipse: s-maj=9.9km s-min=5.2km az=92.5*

*BJI **18** 20:54:36.0±0.0, 39°.97N×77°.10E, h6^{km}, mb3.8/15, ML4.2/8*

*SOME **18** 20:54:36.7, 40°.10N×77°.00E, h0^{km}*

*NNC **18** 20:54:37.3±1.1, 40°.05N×76°.98E, h0^{km}, mb4.5, mpv4.2, Error ellipse: s-maj=8.6km s-min=6.9km az=151.0*

ISC 18 20:54:35.4±1.6, **39°.88N**±0°.04×**77°.17E**±0°.03, **h1**^{km}±10^{km}, **n168**, σ**1^s.82**/206, **mb4.0**/16, **42C-28D**, **Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**0.99**	**249**	Pg	Pn	20 55 01.8	+5.2
KSH				Sg	Sn	20 55 20.9	+10
KSH				smax	smax		
	comp=N,3µm,0.9s						
KSH				smax	smax		
	comp=E,3µm,0.9s						
TARG	**Taragay, Kyrgy**	**1.91**	**14**	Pn	**Pn**	**20 55 09.7**	**+0.1**
KDJ	**Kajisay**	**2.25**	**0**	PN	**Pn**	**20 55 15.4**	**+1.4**
KDJ						20 55 42.7	
KDJ	**Kajisay**	**2.25**	**0**	Pn	**Pn**	**20 55 15.4**	**+1.4**
KDJ				Sn	**Sn**	**20 55 42.7**	**+0.1**
KDJ	**Kajisay**	**2.25**	**0**	⇓*i*P	**Pn**	**20 55 14.9**	**+0.9**
	baz=1.0						
KDJ				⇓*i*S	**Sn**	**20 55 43.9**	**+1.3**
	baz=1.0						
ULHL	**Ulahol**	**2.47**	**344**	P	**Pn**	**20 55 19.2**	**+2.2**
	SNR=104						
ULHL	**Ulahol**	**2.47**	**344**	⇑*i*P	**Pn**	**20 55 18.0**	**+1.0**
	baz=44						
ULHL				⇑*i*S	**Sn**	**20 55 49.7**	**+1.7**
	baz=44						
PRZ	**Przheval'sk**	**2.77**	**19**	PN	**Pn**	**20 55 20.0**	**-1.1**
PRZ				S	**Sg**	**20 56 02.0**	**-2.3**
PRZ	**Przheval'sk**	**2.77**	**19**	Pn	**Pn**	**20 55 22.9**	**+1.8**
PRZ					**Sg**	**20 56 02.0**	**-2.3**
PRZ	**Przheval'sk**	**2.77**	**19**	⇑*i*P	**Pn**	**20 55 22.3**	**+1.2**
	baz=20						
PRZ				⇑*i*S	**Sn**	**20 55 57.0**	**+1.7**
	baz=20						
BOOM	**Boomskoye usch**	**2.77**	**341**	PN	**Pn**	**20 55 22.9**	**+1.7**
BOOM	**Boomskoye usch**	**2.77**	**341**		**Pn**	**20 55 22.9**	**+1.7**
BOOM				Sn	**Sb**	**20 55 59.0**	**-1.5**
BOOM	**Boomskoye usch**	**2.77**	**341**	⇑*i*P	**Pn**	**20 55 22.3**	**+1.1**
	baz=41						
BOOM				⇑*i*S	**Sn**	**20 55 57.0**	**+1.6**
	baz=41						
SFK	**Sufi-Kurgan**	**2.82**	**274**	⇑*e*P	**Pn**	**20 55 23.0**	**+1.1**
	baz=74						
SFK				⇑*e*S	**Sn**	**20 55 58.4**	**+1.7**
	baz=74						
ANVS	**Anan'yevo**	**2.93**	**7**	⇑*i*P	**Pn**	**20 55 24.3**	**+1.0**
	baz=8.0						
ANVS				⇑*i*S	**Sn**	**20 56 00.3**	**+1.0**
	baz=8.0						
UCH	**Uchtor**	**3.09**	**320**	P	**Pn**	**20 55 27.7**	**+1.9**
	SNR=50						
UCH	**Uchtor**	**3.09**	**320**	⇑*i*P	**Pn**	**20 55 26.9**	**+1.1**
	baz=20						
UCH				⇑*i*S	**Sn**	**20 56 05.0**	**+1.4**
	baz=20						
TNSS	**Tian-Shan**	**3.16**	**357**	*e*P	**Pb**	**20 55 32.2**	**-0.5**
	82nm,0.5s						
TNSS				*e*S	**Sb**	**20 56 12.4**	**+0.5**
	196nm,1.2s						
TNSS	**Tian-Shan**	**3.16**	**357**	Pg	**Pn**	**20 55 30.0**	**+3.2**
	82nm,0.5s						
TNSS				Lg	Lg	20 56 11.7	
	196nm,1.2s						
IZV	**Izvestkoviy**	**3.19**	**353**	*e*P	**Pb**	**20 55 32.9**	**-0.1**
	84nm,0.5s						
IZV				*e*S	**Sb**	**20 56 13.7**	**+1.3**
	166nm,0.2s						
IZV	**Izvestkoviy**	**3.19**	**353**	Pg	**Pb**	**20 55 31.5**	**-1.4**
	84nm,0.5s						
IZV				Lg	Lg	20 56 13.7	
	166nm,0.2s						
KBK	**Karagaybulak**	**3.24**	**330**	P	**Pn**	**20 55 29.8**	**+2.2**
	SNR=55						
KBK	**Karagaybulak**	**3.24**	**330**	⇓*i*P	**Pn**	**20 55 29.1**	**+1.5**
	baz=30						
KBK				⇓*i*S	**Sn**	**20 56 08.2**	**+1.2**
	baz=30						
TKM2	**Tokmak 2**	**3.26**	**339**	P	**Pn**	**20 55 30.0**	**+2.0**
	SNR=123						
TKM2	**Tokmak 2**	**3.26**	**339**	PN	**Pn**	**20 55 29.3**	**+1.3**
TKM2	**Tokmak 2**	**3.26**	**339**	⇑Pn	**Pn**	**20 55 29.3**	**+1.3**
	63nm,0.6s						
TKM2				⇓Lg	Lg	20 56 15.5	
	247nm,1.1s						
TKM2	**Tokmak 2**	**3.26**	**339**	⇑*e*P	**Pn**	**20 55 29.4**	**+1.4**
	baz=39						
TKM2				⇑*i*S	**Sn**	**20 56 09.0**	**+1.4**
	baz=39						
MDOK	**Medeo**	**3.29**	**358**	*e*P	**Pb**	**20 55 35.1**	**+0.4**
	81nm,0.4s						
MDOK				*e*S	**Sb**	**20 56 16.9**	**+1.8**
	357nm,0.8s						
MDOK	**Medeo**	**3.29**	**358**	PN	**Pb**	**20 55 33.8**	**-0.8**
MDOK	**Medeo**	**3.29**	**358**	⇓Pg	**Pb**	**20 55 33.8**	**-0.8**
	69nm,0.6s						
MDOK				⇓Lg	Lg	20 56 16.7	
	821nm,0.7s						
KST	**Kastek**	**3.29**	**344**	*e*P	**Pb**	**20 55 34.4**	**-0.3**
	92nm,0.6s						
KST				*e*S	**Sb**	**20 56 16.0**	**+0.7**
	211nm,0.9s						
KST	**Kastek**	**3.29**	**344**	Pg	**Pb**	**20 55 33.4**	**-1.3**
	92nm,0.6s						
KST				Lg	Lg	20 56 17.0	
	211nm,0.9s						
MTBS	**Maitube**	**3.30**	**351**	*e*P	**Pb**	**20 55 34.9**	**+0.1**
	48nm,0.4s						
MTBS				*e*S	**Sb**	**20 56 16.5**	**+1.0**
	314nm,0.5s						
MTBS	**Maitube**	**3.30**	**351**	Pg	**Pb**	**20 55 32.8**	**-2.1**
	48nm,0.4s						
MTBS				Lg	Lg	20 56 15.9	
	314nm,0.5s						
SATY	**Saty**	**3.31**	**16**	*e*P	**Pb**	**20 55 35.5**	**+0.4**
	169nm,0.7s						
SATY				*e*S	**Sb**	**20 56 18.4**	**+2.4**
	335nm,0.5s						
SATY	**Saty**	**3.31**	**16**	Pg	**Pb**	**20 55 34.2**	**-0.9**
	169nm,0.7s						
SATY				Lg	Lg	20 56 18.4	
	335nm,0.5s						
AAA	**Alma-Ata**	**3.34**	**357**	*e*P	**Pb**	**20 55 35.9**	**+0.5**
	144nm,0.5s						
AAA				*e*S	**Sb**	**20 56 18.9**	**+2.3**
	25nm,0.6s						
AAA	**Alma-Ata**	**3.34**	**357**	Pg	**Pb**	**20 55 34.6**	**-0.9**
	144nm,0.5s						
AAA				Lg	Lg	20 56 18.9	
	25nm,0.6s						
KNDC	**Almaty**	**3.34**	**357**	PN	**Pb**	**20 55 35.0**	**-0.5**
KNDC	**Almaty**	**3.34**	**357**	⇑Pg	**Pb**	**20 55 35.0**	**-0.5**
	172nm,0.6s						
KNDC				⇓Lg	Lg	20 56 18.3	
	3µm,0.8s						
KOTS	**Kotyrbulak**	**3.36**	**359**	*e*P	**Pb**	**20 55 36.4**	**+0.5**
	78nm,0.4s						
KOTS				*e*S	**Sg**	**20 56 20.0**	**-3.3**
	1µm,1.0s						
KOTS	**Kotyrbulak**	**3.36**	**359**	Pg	**Pb**	**20 55 35.0**	**-0.8**
	78nm,0.4s						
KOTS				Lg	Lg	20 56 20.0	
	1µm,1.0s						
AAK	**Ala-Archa**	**3.42**	**325**	Pn	**Pn**	**20 55 31.9**	**+1.9**
	3.2nm,0.3s,baz=149,slow=9.5,SNR=69						
AAK				Lg	Lg	20 56 18.7	
	19nm,0.3s,baz=238,slow=22,SNR=17						
AAK	**Ala-Archa**	**3.42**	**325**	P	**Pn**	**20 55 32.0**	**+1.9**
	SNR=36						
AAK	**Ala-Archa**	**3.42**	**325**	*i* PN	**Pn**	**20 55 31.5**	**+1.4**
AAK	**Ala-Archa**	**3.42**	**325**	⇑Pn	**Pn**	**20 55 30.5**	**+0.5**
	73nm,0.7s						
AAK				⇓Lg	Lg	20 56 19.4	
	570nm,1.1s						
AAK	**Ala-Archa**	**3.42**	**325**	Pn	**Pn**	**20 55 31.2**	**+1.2**
AAK	**Ala-Archa**	**3.42**	**325**	⇑*i*P	**Pn**	**20 55 31.4**	**+1.4**
	baz=25						
AAK				⇑*i*S	**Sn**	**20 56 12.0**	**+0.7**
	baz=25						
OHH	**Osh**	**3.42**	**282**	⇓*e*P	**Pn**	**20 55 31.4**	**+1.4**
	baz=82						
OHH				⇓*i*S	**Sn**	**20 56 12.4**	**+1.2**
	baz=82						
AML	**Almayashu**	**3.46**	**312**	P	**Pn**	**20 55 32.5**	**+1.6**
	SNR=375						
AML	**Almayashu**	**3.46**	**312**	⇑*i*P	**Pn**	**20 55 31.9**	**+1.1**
	baz=12						
AML				⇑*i*S	**Sn**	**20 56 13.5**	**+0.8**
	baz=12						
FRU1	**Bishkek**	**3.50**	**328**	PN	**Pn**	**20 55 31.8**	**+0.7**
FRU1	**Bishkek**	**3.50**	**328**		**Pn**	**20 55 31.8**	**+0.7**
FRU1	**Bishkek**	**3.50**	**328**	⇓*i*P	**Pn**	**20 55 32.6**	**+1.5**
	baz=28						
FRU1				⇓*i*S	**Sn**	**20 56 14.4**	**+1.2**
	baz=28						
DGS	**Degeres**	**3.52**	**343**	*e*P	**Pb**	**20 55 39.1**	**+0.5**
	74nm,0.8s						
DGS				*e*S	**Sb**	**20 56 24.7**	**+2.7**
	241nm,1.1s						
DGS	**Degeres**	**3.52**	**343**	Pg	**Pb**	**20 55 37.7**	**-0.9**
	96nm,0.8s						
DGS				Lg	Lg	20 56 24.7	
	241nm,1.1s						
UZB	**Uzynbulak**	**3.55**	**22**	*e*P	**Pb**	**20 55 40.1**	**+1.0**
	157nm,0.7s						
UZB				*e*S	**Sg**	**20 56 26.1**	**-3.5**
	171nm,0.9s						
UZB	**Uzynbulak**	**3.55**	**22**	*e*PN	**Pb**	**20 55 39.7**	**+0.5**
UZB	**Uzynbulak**	**3.55**	**22**	Pg	**Pb**	**20 55 39.4**	**+0.2**
	157nm,0.7s						
UZB				Lg	Lg	20 56 27.0	
	171nm,0.9s						
CHMS	**Chumysh**	**3.61**	**331**	P	**Pn**	**20 55 34.3**	**+1.7**
	SNR=49						
CHMS	**Chumysh**	**3.61**	**331**	⇓*e*P	**Pn**	**20 55 33.9**	**+1.3**
	baz=31						
CHMS				⇓*i*S	**Sn**	**20 56 16.4**	**+0.5**
	baz=31						
KURS	**Kuram**	**3.69**	**11**	*e*P	**Pb**	**20 55 41.5**	**+0.1**
	142nm,1.0s						
KURS				*e*S	**Sb**	**20 56 27.8**	**+1.2**
	173nm,1.2s						

KPKS	Kokpek	3.76	17	eP	Pb	20 55 44.3	+1.6
	85nm,0.7s						
KPKS				eS	Sg	20 56 32.7	-3.6
	404nm,0.7s						
EKS2	Erkin-Say	3.78	319	P	Pn	20 55 37.0	+2.0
	SNR=158						
EKS2	Erkin-Say	3.78	319	⇓iP	Pn	20 55 36.3	+1.4
	baz=18						
EKS2				⇓iS	Sn	20 56 20.6	+0.5
	baz=18						
PDGK	Podgornoye	3.87	26	PN	Pn	20 55 37.7	+1.6
PDGK				PG	Pb	20 55 46.2	+1.7
PDGK	Podgornoye	3.87	26	⇑Pn	Pn	20 55 37.7	+1.6
	12nm,0.6s						
PDGK				⇑Pg	Pb	20 55 46.2	+1.7
	103nm,0.9s						
PDGK				⇑Lg	Lg	20 56 36.3	
	235nm,0.9s						
USP	Ospenovka	3.94	330	P	Pn	20 55 39.2	+2.2
	SNR=11						
USP	Ospenovka	3.94	330	⇓eP	Pn	20 55 38.4	+1.4
	baz=30						
USP				⇓iS	Sn	20 56 24.2	+0.3
	baz=30						
KUU	Kurty	4.06	352	eP	Pb	20 55 47.8	0.0
	33nm,1.0s						
KUU				eS	Sb	20 56 39.2	+1.9
	415nm,1.2s						
MRKS	Merke	4.13	315	eP	Pb	20 55 49.0	+0.1
	61nm,0.7s						
MRKS				eS	Sb	20 56 41.0	+1.6
	164nm,0.7s						
MRKS	Merke	4.13	315	Pg	Pb	20 55 47.5	-1.5
	61nm,0.7s						
MRKS				Lg	Lg	20 56 40.9	
	164nm,0.7s						
DRK	Karamyk	4.16	266		Pn	20 55 39.5	-0.9
DRK	Karamyk	4.16	266	⇑iP	Pn	20 55 41.6	+1.2
	baz=66						
DRK				⇑iS	Sn	20 56 30.3	+0.5
	baz=66						
ARXS	Arharly	4.36	6	eP	Pb	20 55 54.2	+1.3
	53nm,0.6s						
ARXS				eS	Sb	20 56 50.1	+4.1
	94nm,0.7s						
ARXS	Arharly	4.36	6	ePN	Pb	20 55 54.8	+1.9
ARXS	Arharly	4.36	6	Pg	Pb	20 55 52.3	-0.7
	53nm,0.6s						
ARXS				Lg	Lg	20 56 50.2	
	94nm,0.7s						
MNAS	Manas	4.38	308	⇑iP	Pn	20 55 44.4	+1.2
	baz=8.0						
MNAS				⇑iS	Sn	20 56 35.6	+0.6
	baz=8.0						
TRKS	Terek-Say	4.87	292	⇓iP	Pn	20 55 50.7	+0.7
	baz=91						
TRKS				⇓iS	Sn	20 56 46.1	-1.0
	baz=91						
BTK	Batken	4.88	274	PN	Pn	20 55 48.5	-1.6
BTK	Batken	4.88	274	Pn	Pn	20 55 48.5	-1.6
BTK	Batken	4.88	274	⇑iP	Pn	20 55 51.4	+1.3
	baz=74						
BTK				⇑iS	Sn	20 56 47.0	-0.3
	baz=74						
TDK	Taldyqorghan	5.20	10	eP	Pb	20 56 10.1	+2.9
	112nm,0.9s						
TDK				eS	Sg	20 57 16.6	-6.0
	239nm,0.7s						
TDK	Taldyqorghan	5.20	10	Pg	Pb	20 56 08.3	+1.1
	112nm,0.9s						
TDK				Lg	Lg	20 57 16.6	
	239nm,0.7s						
DZA	Taraz	5.32	306	eP	Pb	20 56 11.5	+2.2
	22nm,0.4s						
DZA				eS	Sb	20 57 19.4	+5.7
	92nm,0.9s						
DZA	Taraz	5.32	306	Pg	Pb	20 56 09.9	+0.6
	26nm,0.5s						
DZA				Lg	Lg	20 57 19.4	
	92nm,0.9s						
GAR	Garm	5.38	263		Pn	20 55 54.8	-2.1
KAPS	Kapalarasan	5.64	16	eP	Pb	20 56 19.4	+4.7
	12nm,0.7s						
KAPS				eS	Sg	20 57 32.8	-3.8
	72nm,1.3s						
KAPS	Kapalarasan	5.64	16	Pg	Pb	20 56 17.0	+2.2
	17nm,0.7s						
KAPS				Lg	Lg	20 57 32.8	
	72nm,1.3s						
BTLS	Baital	5.65	337	eP	Pb	20 56 17.0	+2.1
	6.8nm,0.8s						
BTLS				eS	Sb	20 57 28.7	+5.6
	46nm,0.9s						
BTLS	Baital	5.65	337	Pg	Pb	20 56 15.3	+0.5
	6.8nm,0.8s						
BTLS				Lg	Lg	20 57 28.7	
	46nm,0.9s						
KK02	Karatay Array	5.95	305	⇑Pn	Pn	20 56 04.2	-0.4
	2.0nm,0.7s						
KK02				⇑Pg	Pb	20 56 21.1	+1.2
	39nm,0.8s						
KK02				⇑Lg	Lg	20 57 42.6	
	26nm,0.8s						
KKAR	Karatay Array	5.95	305	PN	Pn	20 56 02.5	-2.1
KKAR	Karatay Array	5.95	305		Pn	20 56 02.5	-2.1
CHGR	Chuyangaron	6.33	261	Pn	Pn	20 56 07.8	-2.2
CHCP	Chirah Chowk	6.95	208	⇑P	Pn	20 56 20.4	+1.9
NIL	Nilore	6.96	208	PN	Pn	20 56 19.9	+1.3
NIL	Nilore	6.96	208	Pn	Pn	20 56 19.9	+1.3
CEP	Cherat	7.36	217	P	Pn	20 56 27.0	+2.8
DHRM	DHARAMSHALA	7.64	186	eP	Pn	20 56 30.4	+2.2
DHRM				eS	Sn	20 57 51.3	-4.2
DHRM				IAML		20 58 00.1	
	comp=E,353nm,0.9s						
DHRM				IAML		20 58 01.3	
	comp=N,161nm,0.5s						
MAKZ	Makanchi	7.76	25	P	Pn	20 56 30.7	+1.1
MAKZ	Makanchi	7.76	25	⇑Pn	Pn	20 56 31.4	+1.8
	comp=N,3.6nm,0.9s						
MAKZ				⇓Pg	Pb	20 56 57.7	+6.9
	comp=N,13nm,1.1s						
MAKZ	Makanchi	7.76	25	Pn	Pn	20 56 30.7	+1.1
MK31	Makanchi Array	7.86	27	i P	Pn	20 56 30.8	-0.1
MK31	Makanchi Array	7.86	27	⇓Pn	Pn	20 56 30.3	-0.5
	comp=N,2.1nm,0.6s,baz=219,slow=31,SNR=18						
MK31				⇑Pg	Pb	20 56 59.3	+6.9
	comp=N,2.9nm,0.6s,baz=209,slow=17,SNR=4.4						
MK31				⇑Lg	Lg	20 58 43.2	
	comp=N,23nm,0.8s						
MK31	Makanchi Array	7.86	27		Pn	20 56 30.9	+0.1
MKAR	Makanchi Array	7.86	27	Pn	Pn	20 56 31.9	+1.0
	comp=N,0.3nm,0.3s,baz=209,slow=15,SNR=13						
MKAR				Lg	Lg	20 58 45.1	
	comp=N,0.6nm,0.3s,baz=210,slow=26,SNR=5.0						
MKAR	Makanchi Array	7.86	27	P	Pn	20 56 32.1	+1.2
MKAR	Makanchi Array	7.86	27	Pn	Pn	20 56 32.1	+1.2
THW	Thamme Wali	8.31	213	P	Pn	20 56 38.2	+1.1
KBL	Kabul	8.39	233	P	Pn	20 56 35.6	-2.7
KBL	Kabul	8.39	233	Pn	Pn	20 56 35.6	-2.7
SMLA	Simla	8.73	180	eP	Pn	20 56 44.5	+1.7
SMLA				eS	Sn	20 58 16.9	-5.0
SMLA				IAML		20 58 23.7	
	comp=E,47nm,0.3s						
SMLA				IAML		20 58 23.9	
	comp=N,56nm,0.6s						
WMQ	Urumqi	8.79	60	eP	Pn	20 56 46.8	+3.1
WMQ				S	Sn	20 58 24.1	+0.7
WMQ				smax	smax		
	comp=N,28nm,0.9s						
WMQ				smax	smax		
	comp=N,58nm,1.1s						
OTUK	Ortayu	9.06	339	P	Pn	20 56 47.7	+0.4
OTUK	Ortayu	9.06	339	⇓Pn	Pn	20 56 47.7	+0.4
	comp=N,3.5nm,1.0s						
OTUK				⇑Lg	Lg	20 59 17.4	
	comp=N,77nm,1.1s						
KURBB	Kurchatov Arra	10.79	5	Pn	Pn	20 57 09.8	-1.2
	comp=N,0.1nm,0.3s,baz=193,slow=12,SNR=12						
KURBB				Lg	Lg	21 00 12.0	
	comp=N,0.2nm,0.3s,baz=190,slow=28,SNR=7.4						
KURBB	Kurchatov Arra	10.79	5	P	Pn	20 57 12.1	+1.1
KURBB	Kurchatov Arra	10.79	5	⇑Pn	Pn	20 57 12.1	+1.1
	comp=N,5.7nm,0.7s						
KURBB				⇓Lg	Lg	21 00 15.7	
	comp=N,17nm,0.3s						
KURK	Kurchatov	10.89	5	i P	Pn	20 57 12.6	+0.3
KURK	Kurchatov	10.89	5	⇑Pn	Pn	20 57 12.9	+0.6
	comp=N,6.7nm,0.9s						
KURK				⇓Lg	Lg	21 00 18.5	
	comp=N,44nm,1.1s						
KURK	Kurchatov	10.89	5	Pn	Pn	20 57 13.2	+0.9
KUDL	Kundal	11.72	183	eP	Pn	20 57 24.9	+1.2
KUDL				ex	x	20 59 25.5	
DGZ	Jazzator, Alta	12.22	33	i P	Pn	20 57 31.8	+1.1
HRA	Herat	13.10	250	Pn	Pn	20 57 39.1	-3.7
BVAR	Borovoye Array	13.95	343	Pn	Pn	20 57 52.0	-2.1
	comp=N,0.2nm,0.3s,baz=184,slow=21,SNR=13						
BVAR				Lg	Lg	21 01 49.6	
	comp=N,0.1nm,0.3s,baz=141,slow=30,SNR=6.2						
BVAR	Borovoye Array	13.95	343	P	Pn	20 57 52.0	-2.1
BRVK	Borovoye	14.00	343	i P	Pn	20 57 53.0	-1.9
BRVK	Borovoye	14.00	343	⇓Pn	Pn	20 57 55.9	+1.0
	comp=N,9.7nm,1.1s						
BRVK	Borovoye	14.00	343	Pn	Pn	20 57 52.6	-2.2
ZAA0	Zalesovo Array	15.00	18		Pn	20 58 09.5	+1.0
ZAA0				IAmb	IAmb	20 58 16.2	
	comp=Z,3.8nm,0.8s						
ZALV	Zalesovo Beam	15.00	18	Pn	Pn	20 58 09.0	+0.5
	comp=Z,0.1nm,0.3s,baz=187,slow=10,SNR=4.2						
ZALV	Zalesovo Beam	15.00	18	P	Pn	20 58 09.0	+0.5
ZALV	Zalesovo Beam	15.00	18		Pn	20 58 07.4	-1.0
AB31	Akbulak array	15.42	313	P	Pn	20 58 12.3	-1.7
AB31	Akbulak array	15.42	313	⇑Pn	Pn	20 58 12.4	-1.7
	comp=Z,2.0nm,0.7s,baz=124,slow=11,SNR=17						
ABKAR	Akbulak array	15.42	313	Pn	Pn	20 58 11.9	-2.1
AKTO	Aktyubinsk	17.09	314	P	Pn	20 58 31.6	-3.9
	comp=Z,0.1nm,0.3s,baz=113,slow=11,SNR=11						
AKTO	Aktyubinsk	17.09	314	⇑Pn	Pn	20 58 33.6	-1.9
	comp=Z,6.3nm,0.9s						
GTA	Gaotai	17.45	84	eP	P	20 58 45.1	+3.6
GTA				pP		20 58 50.3	
GTA				sP		20 58 53.8	
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ARU	Arti	20.59	330	P	P	20 59 12.5	-3.1
	comp=Z,0.2nm,0.3s,baz=162,slow=20,SNR=7.8						
ARU				Lg	Lg	21 05 23.9	
	comp=Z,1.3nm,0.9s,baz=225,slow=20,SNR=3.3						
ARU	Arti	20.59	330	d iP	P	20 59 14.8	-0.8
ARU						20 59 31.6	
ARU				S	S	21 03 05.1	-1.2
ARU				SS	SnSn	21 03 23.5	-1.3
ARU				pmax	pmax		
	comp=Z,11nm,1.2s						
ARU	Arti	20.59	330	P	P	20 59 14.6	-1.0
ARU				IAmb	IAmb	20 59 18.9	
	comp=Z,7.2nm,1.0s						
LZH	Lanzhou	21.34	92	eP	P	20 59 28.3	+4.2
LZH				pP		20 59 32.9	
LZH				pmax	pmax		
	comp=Z,26nm,1.5s						
TLY	Talaya	21.78	48	i P	P	20 59 28.8	+0.2
TLY				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SONM	Songino Array	22.43	60	P	P	20 59 34.4	-1.3
	comp=Z,0.4nm,0.6s,baz=261,slow=11,SNR=1.8						
SONM	Songino Array	22.43	60	P	P	20 59 34.8	-0.9
SONM				pmax	pmax		
	comp=Z,5.0nm,1.2s						
SONM	Songino Array	22.43	60	P	P	20 59 34.8	-0.9
ULN	Ulaanbaatar	22.87	60	i P	P	20 59 42.7	+2.3
ULN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ULN	Ulaanbaatar	22.87	60	P	P	20 59 43.3	+2.9
ULN				IAmb	IAmb	20 59 46.1	
	comp=Z,4.5nm,1.1s						
BELG	Belogornoye	23.81	312	P	P	20 59 45.1	-4.4
	comp=Z,2.4nm,0.8s,baz=198,slow=20,SNR=1.5						
BELG	Belogornoye	23.81	312	i P	P	20 59 51.2	+1.6
BELG				pmax	pmax		
	comp=Z,1.0nm,0.9s						
HHC	Hu-ho-hao-te	26.13	77	eP	P	21 00 11.9	+0.8
HHC				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KLMR	Klimovskoe	31.23	325	P	P	21 00 56.8	+0.7
KLMR				pmax	pmax		
	comp=Z,17nm,1.5s						
KLMR	Klimovskoe	31.23	325	P	P	21 00 56.9	+0.8
KLMR				AMP		21 00 59.0	
	comp=Z,17nm,1.5s						
RAYN	Ar Rayn	31.28	248	P	P	21 00 53.6	-3.5
RAYN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
RAYN	Ar Rayn	31.28	248	P	P	21 00 53.6	-3.5
RAYN				IAmb	IAmb	21 01 02.0	
	comp=Z,4.4nm,0.9s						
FINES	FINESS Array B	37.60	322	P	P	21 01 46.6	-4.7
	comp=Z,3.3nm,1.0s,baz=104,slow=8.0,SNR=4.8						
FINES	FINESS Array B	37.60	322	i P	P	21 01 50.2	-1.1
FINES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ARCES	ARCESS Array B	40.03	335	P	P	21 02 07.7	-3.9
	comp=Z,3.6nm,1.0s,baz=110,slow=11,SNR=1.9						
TIXI	Tiksi	40.82	22	P	P	21 02 16.8	-1.3
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.7s						
TIXI	Tiksi	40.82	22	P	P	21 02 16.8	-1.3
GERES	GERESS Array B	45.05	303	P	P	21 02 48.2	-4.5
	comp=Z,0.5nm,0.6s,baz=72,slow=10,SNR=3.6						
ILAR	Eielson Array	70.13	18	P	P	21 05 47.0	-2.1
	comp=Z,0.4nm,0.8s,baz=310,slow=2.9,SNR=3.2						
ILAR	Eielson Array	70.13	18	P	P	21 05 47.0	-2.1
TORD	Torodi Ar. Bea	70.59	271	P	P	21 05 49.0	-3.6
	comp=Z,1.4nm,0.7s,baz=45,slow=5.2,SNR=12						
WRA	Warramunga Arr	79.87	127	P	P	21 06 41.5	-4.4
	comp=Z,0.3nm,0.9s,baz=330,slow=6.8,SNR=1.7						
ASAR	Alice Springs	82.41	129	P	P	21 06 55.1	-4.3
	comp=Z,0.2nm,0.5s,baz=330,slow=5.8,SNR=2.3						

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*IDC **18** 20:56:16.3±1.0, 9°.05S×158°.51E, h0^{km}, mb3.6/6, mb1 3.8/6, mb1mx3.7/34, mbtmp3.6/6, Error ellipse: s-maj=29.0km s-min=19.0km az=178.0*

ISC 18 20:56:17.8±0.9, **9°.1S**±0°.2×**158°.50E**±0°.10, **h10**^{km}, **n7**, σ**0^{s}.55**/8, **mb3.6**/6, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	1.48	105	Pn	Pn	20 56 44.2	-0.4
	241nm,0.3s,baz=187,slow=6.6,SNR=14						
HNR				Sn	Sn	20 57 04.2	+0.3
	522nm,0.3s,baz=261,slow=22,SNR=7.5						
WRA	Warramunga Arr	25.73	242	P	P	21 01 49.0	+0.2
	0.9nm,0.7s,baz=69,slow=9.4,SNR=7.3						
STKA	Stephens Creek	27.61	212	P	P	21 02 06.0	+0.5
	0.7nm,0.5s,baz=40,slow=17,SNR=1.7						
ASAR	Alice Springs	27.64	235	P	P	21 02 05.6	-0.4
	0.4nm,0.8s,baz=62,slow=9.8,SNR=3.4						
SONM	Songino Array	72.95	326	P	P	21 07 48.0	+0.3
	0.2nm,0.4s,baz=122,slow=7.5,SNR=2.4						
ILAR	Eielson Array	84.04	21	P	P	21 08 48.8	+0.5
	0.4nm,0.7s,baz=233,slow=5.1,SNR=6.3						
MKAR	Makanchi Array	87.24	318	P	P	21 09 03.9	-0.8
	0.2nm,0.6s,baz=90,slow=4.9,SNR=1.3						

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*NEIC **18** 21:36:38.5±1.7, 2°.70N±0°.06×127°.88E±0°.07, h101^{km}±6^{km}, mb4.5/45, Error ellipse: s-maj=11.2km s-min=8.6km az=66.0*

*DJA **18** 21:36:38.8±0.4, 3°N±3°×12°8E±°, h40^{km}±9^{km}, M4.7/19, mb4.8/19, mB5.2/7, MLv4.8/17, Mw(mB)4.6/7, MwMwp5.8/1, Mwp5.9/1*

*IDC **18** 21:36:38.6±0.5, 2°.62N×127°.96E, h109^{km}±4^{km}, mb3.9/24, mb1 4.1/28, mb1mx3.9/47, mbtmp4.4/28, Error ellipse: s-maj=15.9km s-min=7.0km az=71.0*

ISC 18 21:36:38.0±0.3, **2°.65N**±0°.04×**127°.88E**±0°.05, **h100**^{km}, **n141**, σ**1^{s}.71**/155, **mb4.4**/51, **1C-1D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.94	195	P	Pn	21 37 10.9	+1.1
TNTI	Ternate	1.94	195	Pn	Pn	21 37 10.5	+0.8
TNTI				Sn	Sn	21 37 38.1	+4.1
SGSI	Sangihe	2.56	294	P	Pn	21 37 16.0	-1.9
LBMI	Labuha	3.29	187	P	Pn	21 37 29.7	+2.1
KMSI	Cibinong	4.41	242	P	Pn	21 37 43.6	+0.9
KMSI				S	Sn	21 38 33.8	+0.9
SWI	Sorong	4.86	136	P	Pn	21 37 50.1	+1.3
SWI				S	Sn	21 38 45.3	+1.3
SIJI	Sorong	4.87	136	P	Pn	21 37 49.2	+0.2
	47nm,0.3s,baz=336,slow=16,SNR=106						
SIJI				S	Sn	21 38 44.4	+0.2
	8.0nm,0.3s,baz=0.0,slow=20,SNR=8.1						
DAV	Davao City (W)	4.95	333	P	Pn	21 37 52.4	+2.3
	60nm,0.3s,baz=66,slow=14,SNR=6.0						
DAV				S	Sn	21 38 50.5	+4.4
	50nm,0.3s,baz=65,slow=21,SNR=1.7						
DAV	Davao City (W)	4.95	333	Pn	Pn	21 37 49.2	-0.9
SANI	Sanana	5.04	202	P	Pn	21 37 50.2	-1.0
KCP	Kidapawan	5.14	327	⇑iP	Pn	21 37 53.0	+0.3
GTOI	Gorontalo	5.26	248	P	Pn	21 37 55.5	+1.3
	0.6nm2μm118nm,0.5s						
LUWI	Luwuk	6.29	234	P	Pn	21 38 10.2	+2.0
	1.7nm96nm,0.6s						
LUWI				S	Sn	21 39 22.7	+4.1
	1.7nm96nm,0.6s						
LUWI	Luwuk	6.29	234	Pn	Pn	21 38 09.1	+1.0
AAI	Ambon	6.30	177	P	Pn	21 38 11.7	+3.2
	0.2nm52nm,1.0s						
MRSI	Marisa	6.31	250	P	Pn	21 38 09.6	+1.0
	1.0nm3μm282nm,0.9s						
FAKI	Fak Fak	7.05	142	P	Pn	21 38 20.3	+1.7
	0.3nm98nm,1.0s						
FAKI	Fak Fak	7.05	142	Pn	Pn	21 38 19.5	+0.9
APSI	Ampana	7.16	240	P	Pn	21 38 24.3	+4.2
	0.5nm923nm69nm,0.6s						
TOLI2	Tolitoli	7.25	258	Pn	Pn	21 38 20.2	-1.2
MPSI	Mapaga	8.30	254	P	Pn	21 38 37.2	+1.6
	5μm23nm,0.7s						
BAKI	Biak	9.07	115	P	Pn	21 38 50.7	+4.6
	170nm,0.8s						
SRPI	Serui, Papua	9.49	118	P	Pn	21 38 59.0	+7.2
TTSI	Tana Toraja	9.84	235	P	Pn	21 38 56.0	-0.6
	32nm,0.7s						
SPSI	Sidrap Palu	10.43	231	P	Pn	21 39 06.9	+2.3
	21nm,0.6s						
BNSI	Bone	10.46	228	P	Pn	21 39 07.8	+2.8
	15nm,0.7s						
BKSI	Bulukumba	11.08	224	P	Pn	21 39 15.7	+2.3
	14nm,0.6s						
KAPI	Kappang	11.13	227	P	Pn	21 39 15.9	+1.8
	3.3nm,0.3s,baz=127,slow=5.6,SNR=1.9						
KAPI				S	Sn	21 41 11.3	-5.4
	1.4nm,0.3s,baz=44,slow=11,SNR=2.0						
KAPI	Kappang	11.13	227	Pn	Pn	21 39 15.4	+1.3
BSSI	Bau Bau, Buton	11.43	220	P	Pn	21 39 30.1	+12
KKM	Kota Kinabalu	12.11	287	Pn	Pn	21 39 26.2	-1.0
EDFI	Ende, Flores	12.90	209	P	Pn	21 39 41.8	+4.1
	12nm,0.8s						
LQP	Lukban	12.99	332	⇓eP	Pn	21 39 40.1	+1.0
BATI	Baumata	13.45	198	P	Pn	21 39 46.2	+1.4
	3.6nm,0.3s,baz=106,slow=7.4,SNR=2.7						
JAY	Jayapura	13.81	112	P	P	21 39 53.8	-0.9
	0.5nm,0.3s,baz=276,slow=23,SNR=2.6						
PLAI	Plampang	15.21	221	P	P	21 40 12.1	+1.9
	72nm,1.2s						
SBUM	Sibu	15.64	270	Pn	Pn	21 40 12.6	-0.3
TWSI	Taliwang, Sumb	15.75	224	P	P	21 40 18.7	+2.5
	26nm,1.1s						
JAGI	Jajag, Banyuwa	17.59	231	P	Pn	21 40 44.3	+7.4
JAGI	Jajag, Banyuwa	17.59	231	P	P	21 40 37.2	+0.7
JAGI				IAmb	IAmb	21 40 45.0	
	comp=Z,16nm,0.8s						
KSM	Kuching	17.59	267	P	P	21 40 36.4	-0.2
FITZ	Fitzroy Crossi	20.74	186	P	P	21 41 08.9	-1.8
	comp=Z,1.4nm,0.3s,baz=4.7,slow=6.8,SNR=17						
YULB	Yu-li	21.58	343	P	P	21 41 19.1	-0.6
TPUB	Ta-pu	21.69	342	P	P	21 41 20.3	-0.7
TPUB				IAmb	IAmb	21 41 47.7	
	comp=Z,27nm,0.9s						
WB0	Warramunga Arr	23.18	164	P	P	21 41 35.2	-0.9
WB0				IAmb	IAmb	21 41 37.1	
	comp=Z,30nm,1.1s						
WRA	Warramunga Arr	23.33	164	P	P	21 41 36.6	-0.9
	comp=Z,8.7nm,0.4s,baz=346,slow=10,SNR=123						
WRA				PcP	PcP	21 45 22.2	+0.4
	comp=Z,0.7nm,0.8s,baz=329,slow=2.1,SNR=1.6						
WRA				S	S	21 45 42.2	-0.5
	comp=Z,0.3nm,0.7s,baz=43,slow=20,SNR=2.1						
WRA				ScP	ScP	21 48 49.9	-1.1
	comp=Z,0.6nm,1.0s,baz=342,slow=3.0,SNR=2.1						
WRA	Warramunga Arr	23.33	164	P	P	21 41 35.4	-2.2
WR0	Warramunga Arr	23.41	164	P	P	21 41 37.6	-0.6
WR0				IAmb	IAmb	21 41 39.4	
	comp=Z,14nm,0.8s						
JOW	Kunigami	24.05	1	P	P	21 41 44.5	+0.6
	comp=Z,8.7nm,0.6s,baz=206,slow=11,SNR=1.7						
AS31	Alice Springs	26.81	168	P	P	21 42 08.7	-0.3
ASAR	Alice Springs	26.81	168	P	P	21 42 08.2	-0.9
	comp=Z,1.4nm,0.3s,baz=346,slow=7.5,SNR=23						
ASAR				pP	pP	21 42 30.4	-0.7
	comp=Z,1.9nm,0.6s,baz=346,slow=8.2,SNR=4.7						
ASAR				PcP	PcP	21 45 29.9	+0.4
	comp=Z,0.8nm,0.4s,baz=352,slow=2.2,SNR=5.2						
ASAR				ScP	ScP	21 49 00.5	-0.4
	comp=Z,0.3nm,0.6s,baz=4.3,slow=3.7,SNR=2.5						
ASAR	Alice Springs	26.81	168	P	P	21 42 08.4	-0.6
CMAR	Chiang Mai Arr	32.40	301	P	P	21 42 59.1	+0.5
	comp=Z,1.0nm,0.7s,baz=114,slow=7.0,SNR=9.4						
CMAR				pP	pwP	21 43 24.9	+1.3
	comp=Z,1.1nm,0.8s,baz=112,slow=7.2,SNR=3.4						
KSRS	Korea Array	34.63	0	P	P	21 43 16.4	-1.2
	comp=Z,1.9nm,0.9s,baz=179,slow=9.3,SNR=2.9						
MJAR	Matsushiro Arr	35.05	15	P	P	21 43 20.0	-1.3
	comp=Z,1.0nm,0.6s,baz=184,slow=10,SNR=4.0						
XAN	Xi'an	35.89	333	P	P	21 43 29.1	+0.5
XAN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
STKA	Stephens Creek	36.73	160	P	P	21 43 34.8	-0.9
	comp=Z,11nm,0.6s,baz=334,slow=9.5,SNR=34						
STKA	Stephens Creek	36.73	160	P	P	21 43 35.7	0.0
STKA				IAmb	IAmb	21 43 40.8	
	comp=Z,2.5nm,0.6s						
LZH	Lanzhou	40.01	329	eP	P	21 44 04.9	+1.6
LZH				sP	pP	21 44 10.6	-15
LZH				pmax	pmax		
	comp=Z,12nm,1.1s						
HHC	Hu-ho-hao-te	40.78	341	eP	P	21 44 11.4	+1.9
HHC				pmax	pmax		
	comp=Z,14nm,1.1s						
HHC				pmax	pmax		
	comp=Z,810nm,5.4s						
H11S3	WAKE ISLAND Hy	41.13	65	T	T	22 27 50.2	
	baz=255,slow=74						
H11S2	WAKE ISLAND Hy	41.15	65	T	T	22 28 01.3	
	baz=255,slow=74						
H11S1	WAKE ISLAND Hy	41.15	65	T	T	22 27 51.0	
	baz=255,slow=74						
SHL	Shillong	41.43	307	P	P	21 44 15.0	-0.2
SHL				IAmb	IAmb	21 44 18.6	
	comp=Z,8.3nm,0.9s						
USRK	Ussuriysk Ar.	41.53	4	P	P	21 44 16.1	+0.6
	comp=Z,3.4nm,0.7s,baz=218,slow=9.1,SNR=5.6						
USRK	Ussuriysk Ar.	41.53	4	P	P	21 44 14.1	-1.4
H11N1	WAKE ISLAND Hy	41.70	63	T	T	22 28 22.9	
	baz=250,slow=75,SNR=4.6						
H11N2	WAKE ISLAND Hy	41.71	63	T	T	22 28 26.1	
	baz=250,slow=75,SNR=4.3						
H11N3	WAKE ISLAND Hy	41.72	63	T	T	22 28 29.6	
	baz=250,slow=75,SNR=6.2						
MDJ	Mudanjiang	41.82	2	P	P	21 44 18.8	+1.0
MDJ				pP	pP	21 44 29.3	-11
MDJ				ScP	ScP	21 50 02.4	+8.9
MDJ				PcS	PcS	21 50 07.3	+3.7
MDJ				S	S	21 50 32.9	+4.9
MDJ				sS	sS	21 50 50.5	-16
MDJ	Mudanjiang	41.82	2	ScS	ScS	21 54 20.3	+10
MDJ				pmax	pmax		
	comp=Z,11nm,2.0s						
MDJ				pmax	pmax		
	comp=Z,230nm,4.4s						
ASAJ	Asahikawa	43.30	15	P	P	21 44 30.5	+0.7
	comp=Z,1.5nm,0.3s,baz=232,slow=15,SNR=6.2						
LSA	Lhasa	44.01	312	P	P	21 44 35.7	-0.6
GTA	Gaotai	44.60	329	eP	P	21 44 41.6	+1.1
GTA				pP	pP	21 45 03.3	+0.1
GTA				sP	sP	21 45 15.1	+1.0
GTA				pmax	pmax		
	comp=Z,4.0nm,1.4s						
ODAN	Odare	45.62	306	eP	P	21 44 49.8	+0.9
KLR	Kul'dur	46.52	3	P	P	21 44 55.1	-0.2
	comp=Z,1.2nm,0.5s,baz=220,slow=4.7,SNR=5.7						
JIRN	Jiri	46.93	306	eP	P	21 44 58.7	-0.6
	comp=Z,4.5nm,0.5s						
GUN	Gumba	47.28	306	eP	P	21 45 02.1	+0.1
	comp=Z,12nm,0.5s						
PKI	Pulchoki	47.52	306	eP	P	21 45 04.3	+0.4

PKIN	**Phulchoki**	**47.53**	**306**	*e*P	**P**	**21 45 03.8**	**-0.1**
KKN	**Kakani**	**47.72**	**306**	*e*P	**P**	**21 45 04.8**	**-0.4**
GKN	**Gorkha**	**48.32**	**306**	*e*P	**P**	**21 45 09.0**	**-0.8**
ULN	**Ulaanbaatar**	**48.49**	**341**	P	**P**	**21 45 09.1**	**-1.7**
SONM	**Songino Array**	**48.68**	**341**	P	**P**	**21 45 12.7**	**+0.6**
	comp=Z,0.7nm,0.4s,baz=156,slow=7.3,SNR=3.7						
SONM				pP	**pwP**	**21 45 38.7**	**-0.4**
	comp=Z,1.5nm,0.6s,baz=153,slow=8.9,SNR=3.0						
SONM				PP	**PP**	**21 47 04.3**	**-1.9**
	comp=Z,0.4nm,0.3s,baz=145,slow=4.2,SNR=1.6						
SONM	**Songino Array**	**48.68**	**341**	P	**P**	**21 45 12.6**	**+0.4**
KOLN	**Koldanda**	**49.08**	**305**	*e*P	**P**	**21 45 15.5**	**-0.1**
	comp=Z,19nm,0.7s						
DANN	**Dangsing**	**49.17**	**306**	*e*P	**P**	**21 45 16.0**	**-0.5**
	comp=Z,17nm,0.6s						
MSVF	**Nonsavu**	**53.43**	**114**	P	**P**	**21 45 46.8**	**-1.4**
	comp=Z,3.6nm,0.8s,baz=136,slow=23,SNR=2.5						
MSVF	**Nonsavu**	**53.43**	**114**	P	**P**	**21 45 49.4**	**+1.3**
WMQ	**Urumqi**	**54.26**	**325**	*e*P	**P**	**21 45 55.5**	**+1.7**
PEA0B	**Petropavlovsk-**	**56.00**	**21**	P	**P**	**21 46 06.7**	**+0.6**
PETK	**Petropavlovsk-**	**56.00**	**21**	P	**P**	**21 46 05.7**	**-0.4**
	comp=Z,5.1nm,0.7s,baz=208,slow=2.8,SNR=5.2						
PETK				pP	**pwP**	**21 46 31.5**	**-2.2**
	comp=Z,3.5nm,0.8s,baz=258,slow=2.8,SNR=2.2						
PETK	**Petropavlovsk-**	**56.00**	**21**	P	**P**	**21 46 06.0**	**0.0**
MK31	**Makanchi Array**	**59.09**	**325**	P	**P**	**21 46 28.1**	**+0.2**
MK31				IAmb	IAmb	21 46 28.7	
	comp=Z,2.9nm,0.6s						
MKAR	**Makanchi Array**	**59.09**	**325**	P	**P**	**21 46 27.7**	**-0.2**
	comp=Z,3.2nm,0.4s,baz=113,slow=8.0,SNR=86						
MKAR				pP	**pwP**	**21 46 55.1**	**-0.4**
	comp=Z,3.3nm,0.6s,baz=121,slow=8.8,SNR=4.9						
MKAR	**Makanchi Array**	**59.09**	**325**	P	**P**	**21 46 28.0**	**+0.1**
PRZ	**Przheval'sk**	**59.27**	**319**	P	**P**	**21 46 30.6**	**+1.2**
MAKZ	**Makanchi**	**59.27**	**325**	P	**P**	**21 46 29.2**	**0.0**
KSH	**Kashi**	**59.61**	**315**	P	**P**	**21 46 33.0**	**+1.3**
KSH				pP	pP	21 46 57.0	+1.7
KSH				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KDJ	**Kajisay**	**59.91**	**318**	P	**P**	**21 46 34.2**	**+0.4**
LBZ	**Lake Benmore**	**60.16**	**146**	P	**P**	**21 46 35.2**	**0.0**
ZAA0	**Zalesovo Array**	**62.06**	**333**	P	**P**	**21 46 47.5**	**-0.4**
ZAA0				IAmb	IAmb	21 47 16.3	
	comp=Z,4.6nm,1.4s						
ZALV	**Zalesovo Beam**	**62.06**	**333**	P	**P**	**21 46 46.7**	**-1.2**
	comp=Z,0.9nm,0.5s,baz=132,slow=7.3,SNR=4.8						
DRK	**Karamyk**	**62.58**	**314**	P	**P**	**21 46 51.6**	**-0.4**
DRK				IAmb	IAmb	21 46 59.5	
	comp=Z,4.4nm,0.9s						
KBL	**Kabul**	**63.08**	**308**	P	**P**	**21 46 54.4**	**-1.0**
KBL				IAmb	IAmb	21 47 01.7	
	comp=Z,3.6nm,0.6s						
KURK	**Kurchatov**	**63.26**	**327**	P	**P**	**21 46 55.4**	**-0.5**
KURK				IAmb	IAmb	21 47 24.0	
	comp=Z,7.5nm,0.8s						
BTK	**Batken**	**63.49**	**314**	P	**P**	**21 46 57.8**	**+0.1**
BTK				IAmb	IAmb	21 47 20.9	
	comp=Z,4.7nm,1.1s						
GAR	**Garm**	**63.49**	**313**	P	**P**	**21 46 57.5**	**-0.4**
GAR				IAmb	IAmb	21 46 58.9	
	comp=Z,9.6nm,1.0s						
KKAR	**Karatay Array**	**64.80**	**317**	P	**P**	**21 47 05.5**	**-0.7**
HRA	**Herat**	**68.49**	**306**	P	**P**	**21 47 29.2**	**-0.9**
HRA				IAmb	IAmb	21 47 50.4	
	comp=Z,3.1nm,0.6s						
TIXI	**Tiksi**	**68.90**	**0**	P	**P**	**21 47 31.0**	**-0.6**
TIXI				IAmb	IAmb	21 47 31.8	
	comp=Z,9.4nm,1.4s						
BRVK	**Borovoye**	**68.91**	**327**	P	**P**	**21 47 31.1**	**-1.0**
BRVK				IAmb	IAmb	21 47 59.8	
	comp=Z,6.3nm,0.9s						
SOCY	**Socotra**	**73.70**	**282**	P	**P**	**21 47 60.0**	**-1.8**
ABKAR	**Akbulak array**	**73.70**	**321**	P	**P**	**21 48 00.4**	**-0.6**
ABKAR	**Akbulak array**	**73.70**	**321**	P	**P**	**21 48 00.1**	**-0.9**
ABKAR				IAmb	IAmb	21 48 06.0	
	comp=Z,2.6nm,1.2s						
ARU	**Arti**	**76.45**	**328**	P	**P**	**21 48 15.4**	**-1.2**
ARU				IAmb	IAmb	21 48 45.0	
	comp=Z,3.4nm,0.5s						
N19K	**Bonanza Creek**	**81.67**	**29**	P	**P**	**21 48 45.5**	**+0.4**
N19K				IAmb	IAmb	21 48 49.0	
	comp=Z,13nm,1.1s						
RAYN	**Ar Rayn**	**81.96**	**293**	P	**P**	**21 48 46.1**	**-1.3**
KDAK	**Kodiak Island**	**82.19**	**32**	P	**P**	**21 48 48.5**	**+0.8**
VNDA	**Vanda**	**82.22**	**173**	P	**P**	**21 48 47.5**	**-0.1**
	comp=Z,4.4nm,1.1s,baz=300,slow=4.5,SNR=6.5						
VNDA	**Vanda**	**82.22**	**173**	P	**P**	**21 48 47.2**	**-0.3**
VNDA				IAmb	IAmb	21 48 50.8	
	comp=Z,13nm,1.4s						
J20K	**Nowinta River**	**82.39**	**26**	P	**P**	**21 48 49.9**	**+1.2**
J20K				IAmb	IAmb	21 48 50.9	
	comp=Z,4.1nm,0.8s						
IMAR	**Indian Mountai**	**82.86**	**24**	P	**P**	**21 48 52.2**	**+1.1**
MAW	**Mawson**	**83.15**	**200**	P	**P**	**21 48 52.4**	**0.0**
	comp=Z,3.6nm,0.8s,baz=80,slow=9.6,SNR=3.1						
H21K	**Melozitna Rive**	**83.19**	**24**	P	**P**	**21 48 53.8**	**+1.0**
H21K				IAmb	IAmb	21 48 55.9	
	comp=Z,12nm,1.2s						
BRLK	**Bradley Lake**	**83.30**	**30**	P	**P**	**21 48 53.7**	**+0.1**
COLD	**Coldfoot**	**84.43**	**23**	P	**P**	**21 48 59.8**	**+0.7**
COLD				IAmb	IAmb	21 49 02.2	
	comp=Z,9.7nm,1.0s						
KBZ	**Khabaz**	**84.55**	**313**	P	**P**	**21 48 59.8**	**-0.3**
	comp=Z,1.1nm,0.6s,baz=360,slow=7.5,SNR=2.8						
SML	**Sawmill**	**84.73**	**28**	P	**P**	**21 49 01.2**	**+0.4**
GURO	**Guroymak-BITLI**	**85.11**	**308**	P	**P**	**21 49 03.4**	**+0.1**
ILAR	**Eielson Array**	**85.58**	**25**	P	**P**	**21 49 03.9**	**-1.1**
	comp=Z,0.4nm,0.6s,baz=242,slow=4.9,SNR=5.4						
ILAR				pP	**pwP**	**21 49 32.5**	**-2.3**
	comp=Z,0.4nm,0.8s,baz=262,slow=4.8,SNR=2.2						
BMAR	**Burnt Mountain**	**86.62**	**23**	P	**P**	**21 49 10.5**	**+0.5**
BCAR	**Beaver Creek A**	**87.81**	**27**	P	**P**	**21 49 16.0**	**+0.1**
QSPA	**South Pole Qui**	**92.57**	**180**	P	**P**	**21 49 36.4**	**-1.6**
	comp=Z,0.5nm,0.3s,baz=16,slow=0.4,SNR=5.3						
QSPA	**South Pole Qui**	**92.57**	**180**	P	**P**	**21 49 37.5**	**-0.5**
FINES	**FINESS Array B**	**93.31**	**332**	P	**P**	**21 49 39.9**	**-1.5**
	comp=Z,2.9nm,1.0s,baz=44,slow=4.4,SNR=4.0						
FINES				pP	**pwP**	**21 50 09.5**	**-1.8**
	comp=Z,0.8nm,0.6s,baz=52,slow=10,SNR=1.3						
AKASG	**Malin Array Be**	**93.44**	**321**	P	**P**	**21 49 40.4**	**-1.9**
	comp=Z,0.3nm,0.4s,baz=61,slow=2.0,SNR=1.5						
YKA	**Yellowknife Ar**	**100.00**	**25**	P	**Pdif**	**21 50 09.6**	**-2.0**
	comp=Z,0.9nm,0.9s,baz=32,slow=3.6,SNR=2.7						
TORD	**Torodi Ar. Bea**	**124.34**	**288**	PKP	**PKPdf**	**21 55 26.0**	**-0.3**
	comp=Z,0.6nm,0.3s,baz=72,slow=1.7,SNR=20						
TORD				pPKP	**pPKPdf**	**21 55 54.8**	**+2.1**
	comp=Z,0.5nm,0.7s,baz=32,slow=1.2,SNR=2.4						
TORD	**Torodi Ar. Bea**	**124.34**	**288**		**PKPdf**	**21 55 25.7**	**-0.6**
JTS	**Las Juntas de**	**144.88**	**68**	PKP	**PKPdf**	**21 56 03.9**	**-0.5**
	comp=Z,9.3nm,0.8s,baz=344,slow=4.4,SNR=6.4						

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*IDC **18** 21:41:38.4±1.2, 12°.01N×143°.83E, h0km, mb3.8/9, mb1 4.1/9, mb1mx3.7/51, mbtmp3.8/9, Error ellipse: s-maj=34.2km s-min=21.8km az=130.0*

ISC 18 21:41:43.1±0.8**, 12°.1N**±0°.1×**143°.8E**±0°.1**, h26km, n11, σ1s.10**/12**, mb3.8**/10**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.79**	**36**	Pn	**Pn**	**21 42 12.8**	**+0.5**
	58nm,0.3s,baz=211,slow=5.0,SNR=10						
GUMO				Sn	**Sb**	**21 42 37.0**	**-0.3**
	42nm,0.3s,baz=180,slow=20,SNR=7.6						
WRA	**Warramunga Arr**	**33.20**	**196**	P	**P**	**21 48 16.4**	**-1.6**
	0.4nm,0.8s,baz=354,slow=10,SNR=3.5						
CMAR	**Chiang Mai Arr**	**43.63**	**284**	P	**P**	**21 49 45.9**	**+0.1**
	0.6nm,0.9s,baz=73,slow=6.7,SNR=2.4						
STKA	**Stephens Creek**	**43.80**	**183**	P	**P**	**21 49 48.4**	**+1.6**
	0.6nm,0.5s,baz=306,slow=17,SNR=1.5						
SONM	**Songino Array**	**47.34**	**326**	P	**P**	**21 50 15.7**	**+0.8**
	0.3nm,0.4s,baz=153,slow=7.4,SNR=2.5						
MKAR	**Makanchi Array**	**61.82**	**317**	P	**P**	**21 51 59.9**	**0.0**
	0.8nm,0.8s,baz=91,slow=7.4,SNR=4.5						
ZALV	**Zalesovo Beam**	**62.21**	**325**	P	**P**	**21 52 02.9**	**+0.6**
	0.4nm,0.3s,baz=122,slow=7.0,SNR=2.1						
ILAR	**Eielson Array**	**70.33**	**25**	P	**P**	**21 52 52.6**	**-1.6**
	0.5nm,0.9s,baz=257,slow=5.4,SNR=5.3						
ARCES	**ARCESS Array B**	**88.15**	**342**	P	**P**	**21 54 31.0**	**-0.3**
	3.3nm,0.9s,baz=38,slow=6.1,SNR=3.7						
NVAR	**Mina Array Bea**	**88.65**	**51**	P	**P**	**21 54 35.6**	**+0.9**
	0.6nm,0.6s,baz=259,slow=4.2,SNR=6.6						
FINES	**FINESS Array B**	**92.04**	**335**	P	**P**	**21 54 48.6**	**-1.0**
	1.1nm,0.8s,baz=42,slow=4.3,SNR=5.2						

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*IDC **18** 21:47:01.8±1.1, 13°.06S×167°.60E, h0km, mb3.9/7, mb1 4.1/7, mb1mx3.7/50, mbtmp3.9/7, Error ellipse: s-maj=39.4km s-min=26.8km az=139.0*

*NEIC **18** 21:47:26.6±1.9, 13°.1S±0°.1×167°.1E±0°.2, h192km±12km, mb4.3/11, Error ellipse: s-maj=25.7km s-min=9.2km az=59.0*

ISC 18 21:47:26.7±0.9**, 13°.2S**±0°.1×**167°.2E**±0°.2**, h200km, n27, σ1s.33**/25**, mb4.1**/12**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**2.27**	**180**	Pn	**Pn**	**21 48 07.9**	**-0.1**
SANVU				Sn	**Sn**	**21 48 37.9**	**-2.6**
MARNC	**Mare, Loyalty**	**8.31**	**175**	Pn	**Pn**	**21 49 23.9**	**-0.1**
DZM	**Mont Dzumac**	**8.89**	**185**		**Pn**	**21 49 33.4**	**+1.8**
OUENC	**Ouen Island, N**	**9.21**	**182**	Pn	**Pn**	**21 49 38.3**	**+2.6**
ARMA	**Armidale**	**22.40**	**217**	P	**P**	**21 52 08.8**	**0.0**
ARMA				IAmb	IAmb	21 52 27.4	
	comp=Z,6.9nm,1.1s						
THZ	**Tophouse**	**28.93**	**171**	P	**P**	**21 53 09.2**	**+2.0**
STKA	**Stephens Creek**	**29.98**	**227**	P	**P**	**21 53 16.5**	**0.0**
	comp=Z,2.4nm,0.4s,baz=54,slow=10.0,SNR=7.9						
STKA	**Stephens Creek**	**29.98**	**227**	P	**P**	**21 53 16.5**	**0.0**
WB0	**Warramunga Arr**	**32.10**	**254**	P	**P**	**21 53 34.3**	**-1.0**
WB0				IAmb	IAmb	21 53 54.5	
	comp=Z,7.8nm,1.4s						
WRA	**Warramunga Arr**	**32.17**	**253**	P	**P**	**21 53 34.5**	**-1.4**
	comp=Z,0.4nm,0.5s,baz=84,slow=8.5,SNR=6.9						
AS31	**Alice Springs**	**33.19**	**247**	P	**P**	**21 53 43.1**	**-1.7**
ASAR	**Alice Springs**	**33.19**	**247**	P	**P**	**21 53 43.5**	**-1.4**
	comp=Z,0.9nm,0.5s,baz=75,slow=9.0,SNR=24						
BBOO	**Buckleboo**	**34.50**	**230**	P	**P**	**21 53 55.0**	**-0.9**
KNRA	**Kununurra**	**37.28**	**261**	P	**P**	**21 54 19.2**	**-0.4**
KNRA				IAmb	IAmb	21 54 19.9	
	comp=Z,17nm,1.2s						
FORT	**Forrest**	**40.05**	**238**	P	**P**	**21 54 41.5**	**-1.0**
FORT				IAmb	IAmb	21 55 03.3	
	comp=Z,23nm,1.3s						
PSA00	**Pilbara Seismi**	**45.82**	**253**	P	**P**	**21 55 29.2**	**+0.2**
PSA00				IAmb	IAmb	21 55 45.4	
	comp=Z,5.4nm,1.4s						
PSA00	**Pilbara Seismi**	**45.82**	**253**	P	**P**	**21 55 28.9**	**-0.1**
PSA00				IAmb	IAmb	21 55 50.5	
	comp=Z,28nm,1.4s						
CMAR	**Chiang Mai Arr**	**74.25**	**294**	P	**P**	**21 58 43.4**	**+1.0**
	comp=Z,0.7nm,0.8s,baz=110,slow=4.9,SNR=4.4						
QSPA	**South Pole Qui**	**76.86**	**180**	P	**P**	**21 58 56.0**	**-0.4**
	comp=Z,2.1nm,0.6s,baz=3.5,slow=0.6,SNR=7.8						
QSPA	**South Pole Qui**	**76.86**	**180**	P	**P**	**21 58 56.2**	**-0.2**
QSPA				IAmb	IAmb	21 58 58.9	
	comp=Z,4.8nm,1.0s						
NVAR	**Mina Array Bea**	**86.31**	**49**	P	**P**	**21 59 44.4**	**-2.1**
	comp=Z,0.1nm,0.4s,baz=231,slow=12,SNR=1.9						
MKAR	**Makanchi Array**	**96.02**	**317**	P	**P**	**22 00 32.4**	**+1.2**
	comp=Z,0.6nm,0.9s,baz=91,slow=7.2,SNR=1.8						
H03S2	**Juan Fernandez**	**101.70**	**129**	T	T	23 53 03.8	
	baz=242,slow=74,SNR=7.3						
H03S1	**Juan Fernandez**	**101.71**	**129**	T	T	23 53 04.9	
	baz=242,slow=74,SNR=10						
H03S3	**Juan Fernandez**	**101.72**	**129**	T	T	23 53 03.7	
	baz=242,slow=74,SNR=12						
ARCES	**ARCESS Array B**	**118.72**	**346**	PKP	**PKiKP**	**22 05 51.0**	**+0.5**
	comp=Z,3.4nm,0.9s,baz=55,slow=2.4,SNR=7.0						
ESDC	**Sonseca Array**	**152.46**	**345**	PKPbc	**PKiKP**	**22 07 00.4**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=40,slow=2.2,SNR=2.7						

IDC 18 21:47:53.5±5.3**, 49°.17S**×**108°.91E, h0km, mb3.9**/4**, mb1 4.1**/4**, mb1mx3.8**/39**, mbtmp3.9**/4**, Error ellipse: s-maj=172.4km s-min=30.4km az=100.0, Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**32.16**	**47**	P	P	21 54 23.1	+0.2
	1.1nm,0.9s,baz=209,slow=8.2,SNR=7.7						
FITZ	**Fitzroy Crossi**	**33.82**	**29**	P	P	21 54 36.9	-0.4
	1.4nm,1.0s,baz=180,slow=12						
VNDA	**Vanda**	**34.67**	**162**	P	P	21 54 44.1	0.0
	2.8nm,0.9s,baz=310,slow=6.8,SNR=2.3						
WRA	**Warramunga Arr**	**35.57**	**44**	P	P	21 54 52.6	+0.1
	1.1nm,0.8s,baz=208,slow=8.5,SNR=6.7						

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*NEIC **18** 21:49:57.6±1.8, 19°.21S±0°.06×169°.0E±0°.1, h101km±11km, mb4.2/6, Error ellipse: s-maj=16.6km s-min=7.7km az=79.0*

*IDC **18** 21:49:57.7±4.5, 19°.48S×169°.22E, h125km±47km, mb3.4/5, mb1 3.6/6, mb1mx3.3/44, mbtmp3.8/6, Error ellipse: s-maj=98.9km s-min=34.5km az=146.0*

*NOU **18** 21:50:01.0, 19°.33S×168°.91E, h62km, MLv4.2/14, Vanuatu Islands*

ISC 18 21:49:55.9±1.1**, 19°.28S**±0°.05×**169°.2E**±0°.1**, h100km, n33, σ1s.61**/38**, mb3.9**/8**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTV	**Rentapao**	**1.64**	**334**	P	**Pn**	**21 50 26.2**	**+2.3**
DVP	**Devils Point**	**1.81**	**329**	P	**Pn**	**21 50 28.4**	**+2.4**
LIFNC	**LIFOU**	**2.35**	**230**	Pn	**Pn**	**21 50 33.7**	**+0.7**
LIFNC				Sn	**Sn**	**21 51 00.3**	**-1.1**
LIFNC	**LIFOU**	**2.35**	**230**	P	**Pn**	**21 50 33.7**	**+0.7**
MARNC	**Mare, Loyalty**	**2.44**	**206**	Pn	**Pn**	**21 50 35.4**	**+1.2**
MARNC				Sn	**Sn**	**21 51 03.1**	**-0.4**
MARNC	**Mare, Loyalty**	**2.44**	**206**	P	**Pn**	**21 50 35.4**	**+1.2**
YATNC	**Mamie plateau,**	**3.50**	**217**	P	**Pn**	**21 50 49.3**	**+1.0**
PINNC	**Pines Island,**	**3.69**	**206**		**Pn**	**21 50 52.8**	**+1.9**
PINNC				Sn	**Sn**	**21 51 33.6**	**+0.1**
PINNC	**Pines Island,**	**3.69**	**206**	P	**Pn**	**21 50 53.5**	**+2.6**
DZM	**Mont Dzumac**	**3.77**	**222**	P	**Pn**	**21 50 53.8**	**+1.7**
	2.7nm,0.3s,baz=61,slow=19,SNR=22						
DZM				S	**Sn**	**21 51 35.7**	**+0.1**
	14nm,0.3s,baz=137,slow=22,SNR=14						
DZM	**Mont Dzumac**	**3.77**	**222**		**Pn**	**21 50 54.2**	**+2.1**
DZM				Sn	**Sn**	**21 51 35.8**	**+0.1**
DZM	**Mont Dzumac**	**3.77**	**222**	P	**Pn**	**21 50 54.2**	**+2.1**
OUENC	**Ouen Island, N**	**3.81**	**214**	Pn	**Pn**	**21 50 55.3**	**+2.8**
OUENC	**Ouen Island, N**	**3.81**	**214**	P	**Pn**	**21 50 55.0**	**+2.5**
NOUC	**Port Laguerre**	**3.89**	**223**	P	**Pn**	**21 50 55.7**	**+2.2**
ONTNC	**Ouen Toro**	**3.94**	**220**	Pn	**Pn**	**21 50 56.2**	**+1.9**
ONTNC	**Ouen Toro**	**3.94**	**220**	P	**Pn**	**21 50 57.0**	**+2.7**
SANVU	**Saraoutou**	**4.25**	**333**	Pn	**Pn**	**21 50 59.2**	**+0.8**
KOUNC	**Koumac, New Ca**	**4.77**	**254**	P	**Pn**	**21 51 07.7**	**+2.2**
STKA	**Stephens Creek**	**27.77**	**238**	P	**P**	**21 55 34.9**	**-0.5**
	1.4nm,0.8s,baz=86,slow=15,SNR=3.6						
STKA	**Stephens Creek**	**27.77**	**238**	P	**P**	**21 55 35.3**	**-0.1**
STKA				IAmb	IAmb	21 55 57.1	
	comp=Z,0.8nm,1.1s						
WB0	**Warramunga Arr**	**32.75**	**263**	P	**P**	**21 56 17.9**	**-1.6**
WB0				IAmb	IAmb	21 56 20.7	
	comp=Z,8.4nm,1.4s						
WRA	**Warramunga Arr**	**32.78**	**263**	P	**P**	**21 56 18.3**	**-1.5**
	comp=Z,0.5nm,0.8s,baz=81,slow=6.0,SNR=7.7						
WRA	**Warramunga Arr**	**32.78**	**263**	P	**P**	**21 56 18.4**	**-1.5**
AS31	**Alice Springs**	**33.05**	**256**	P	**P**	**21 56 21.6**	**-0.5**
AS31				IAmb	IAmb	21 56 22.2	
	comp=Z,1.9nm,0.5s						
ASAR	**Alice Springs**	**33.06**	**256**	P	**P**	**21 56 21.7**	**-0.5**
	comp=Z,2.7nm,0.5s,baz=84,slow=8.8,SNR=41						
ASAR	**Alice Springs**	**33.06**	**256**	P	**P**	**21 56 20.7**	**-1.5**
KNRA	**Kununurra**	**38.65**	**269**	P	**P**	**21 57 09.1**	**-0.8**
KNRA				IAmb	IAmb	21 57 37.8	
	comp=Z,19nm,1.3s						
MBWA	**Marble Bar**	**46.28**	**259**	P	**P**	**21 58 11.5**	**-0.3**
SONM	**Songino Array**	**87.21**	**323**	P	**P**	**22 02 32.5**	**+1.4**
	comp=Z,0.2nm,0.4s,baz=123,slow=5.3,SNR=1.9						
ILAR	**Eielson Array**	**90.29**	**17**	P	**P**	**22 02 43.3**	**-1.7**
	comp=Z,0.4nm,0.9s,baz=235,slow=5.1,SNR=1.6						
GERES	**GERESS Array B**	**144.50**	**332**	PKP	**PKPab**	**22 09 19.0**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=48,slow=4.4,SNR=4.1						
GERES	**GERESS Array B**	**144.50**	**332**		**PKPab**	**22 09 19.7**	**+0.5**

KRNET 18 22:04:31.3±0.1**, 40°.38N**×**73°.19E, h12km, mb1.9, 20C-8D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	**Osh**	**0.34**	**295**	⇑*i*P	Pb	22 04 40.6	+1.2
	baz=91						
OHH				⇑*i*S	Sb	22 04 45.8	+1.0
	baz=91						
OHH	**Osh**	**0.34**	**295**	⇑*i*P	Pg	22 04 38.0	-0.2
	baz=95						
OHH				⇑*i*S	Sg	22 04 43.1	+0.3
	baz=95						
SFK	**Sufi-Kurgan**	**0.44**	**147**	⇑*e*P	Pb	22 04 41.4	+0.2
	baz=52						
SFK				⇑*e*S	Sb	22 04 47.5	-0.3
	baz=52						
SFK	**Sufi-Kurgan**	**0.44**	**147**	⇑*e*P	Pg	22 04 40.1	0.0
	baz=47						
SFK				⇑*e*S	Sg	22 04 46.3	+0.3
	baz=47						
DRK	**Karamyk**	**1.40**	**230**	⇓*e*P	Pg	22 05 00.1	+1.9
	baz=31						
DRK				⇓*i*S	Sg	22 05 19.4	+3.0
	baz=31						
DRK	**Karamyk**	**1.40**	**230**	⇓*i*P	Pg	22 04 57.9	-0.3
	baz=30						
DRK				⇓*i*S	Sg	22 05 17.1	+0.7
	baz=30						
AML	**Almayashu**	**1.79**	**12**	⇓*i*P	Pg	22 05 06.3	+0.7
	baz=11						
AML				⇓*i*S	Sg	22 05 29.8	+0.9
	baz=11						
AML	**Almayashu**	**1.79**	**12**	⇑*e*P	Pb	22 05 04.9	+0.7
	baz=12						
AML				⇑*e*S	Sg	22 05 29.1	+0.2
	baz=12						
BTK	**Batken**	**1.85**	**261**	⇑*i*P	Pg	22 05 07.7	+1.0
	baz=61						
BTK				⇑*i*S	Sg	22 05 32.6	+1.9
	baz=61						
BTK	**Batken**	**1.85**	**261**	⇑*e*P	Pb	22 05 05.6	+0.6
	baz=61						
BTK				⇑*i*S	Sg	22 05 31.0	+0.3
	baz=61						
TRKS	**Terek-Say**	**1.93**	**307**	⇑*i*P	Pg	22 05 08.2	-0.1
	baz=5.0						
TRKS				⇑*e*S	Sg	22 05 33.4	0.0
	baz=5.0						
TRKS	**Terek-Say**	**1.93**	**307**	⇓*e*P	Pb	22 05 06.1	-0.4
	baz=6.0						
TRKS				⇓*e*S	Sb	22 05 31.7	+1.1
	baz=6.0						
UCH	**Uchtor**	**2.10**	**28**	*i* P	Pg	22 05 11.2	-0.3
	baz=27						
UCH				*e*S	Sg	22 05 38.3	-0.4
	baz=27						
UCH	**Uchtor**	**2.10**	**28**	*i* P	Pb	22 05 09.7	+0.2
	baz=28						
UCH				*i* S	Sg	22 05 37.9	-0.8
	baz=28						
MNAS	**Manas**	**2.17**	**346**	⇑*e*P	Pg	22 05 11.9	-0.9
	baz=46						
MNAS				⇑*i*S	Sg	22 05 40.0	-0.9
	baz=46						
MNAS	**Manas**	**2.17**	**346**	⇑*i*P	Pb	22 05 11.1	+0.6
	baz=46						
MNAS				⇑*i*S	Sg	22 05 39.5	-1.4
	baz=46						

IDC 18 22:06:18.3±6.9**, 9°.42S**×**158°.98E, h0km, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.5**/26**, mbtmp3.4**/3**, MS4.1**/2**, Ms1 4.1**/2**, ms1mx3.7**/19**, Error ellipse: s-maj=201.0km s-min=52.3km az=117.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.99**	**244**	P	P	22 11 52.3	-0.8
	0.5nm,0.7s,baz=72,slow=9.6,SNR=3.1						
ASAR	**Alice Springs**	**27.83**	**236**	P	P	22 12 10.6	+0.9
	0.4nm,0.7s,baz=69,slow=8.0,SNR=2.6						
ASAJ	**Asahikawa**	**55.32**	**346**	LR	LR	22 38 21.9	
	comp=Z,214nm,18.9s,baz=72,slow=35						
MA2	**Magadan**	**69.08**	**356**	LR	LR	22 44 25.7	
	comp=Z,113nm,19.9s,baz=146,slow=33						
MKAR	**Makanchi Array**	**87.83**	**318**	P	P	22 19 09.6	-0.1
	0.1nm,0.5s,baz=107,slow=4.5,SNR=1.4						

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*IDC **18** 22:08:27.2±1.6, 44°.11N×105°.81W, h0km, mb4.2/2, mb1 4.2/4, mb1mx3.7/37, mbtmp4.1/4, ML3.7/2, Error ellipse: s-maj=61.4km s-min=8.0km az=146.0*

*NEIC **18** 22:08:27.3±1.7, 43°.74N±0°.05×105°.30W±0°.05, h0km±2km, ML3.2/44, Error ellipse: s-maj=7.8km s-min=6.4km az=172.0*

ISC 18 22:08:26.5±1.0**, 43°.75N**±0°.07×**105°.29W**±0°.07**, h0km, n40, σ1s.07**/40**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.98**	**67**	Pg	**Pg**	**22 08 45.5**	**+0.2**
K22A	**Casper**	**1.42**	**220**	Pn	**Pn**	**22 08 51.2**	**-2.5**
RWWY	**Rawlins**	**2.50**	**215**	Pn	**Pn**	**22 09 09.2**	**+0.6**
RLMT	**Red Lodge**	**3.16**	**297**		**Pn**	**22 09 18.1**	**+0.3**
RLMT				IAML		22 10 13.5	
	71nm,0.3s						
RLMT				IAML		22 10 15.6	
	58nm,0.3s						
PD31	**Pinedale Array**	**3.27**	**254**	Pn	**Pn**	**22 09 18.9**	**-0.3**
PDAR	**Pinedale Array**	**3.27**	**254**	Pn	**Pn**	**22 09 19.2**	**0.0**
	5.4nm,0.3s,baz=69,slow=15,SNR=64						
PDAR				Lg	Lg	22 10 03.0	
	22nm,0.3s,baz=63,slow=30,SNR=12						
PDAR	**Pinedale Array**	**3.27**	**254**	Pn	**Pn**	**22 09 18.9**	**-0.3**
YMP	**Mirror Lake Pl**	**3.63**	**288**	Pn	**Pn**	**22 09 25.1**	**+0.8**
OGNE	**Ogallala**	**3.70**	**138**		**Pn**	**22 09 25.6**	**+0.6**
GCMT	**Greycliff**	**3.73**	**305**	Pn	**Pn**	**22 09 25.9**	**+0.4**
LOHW	**Long Hollow**	**3.86**	**270**		**Pn**	**22 09 29.1**	**+1.7**
LOHW				IAML		22 10 35.1	
	26nm,0.9s						
H17A	**Grant Village**	**3.86**	**281**		**Pn**	**22 09 29.5**	**+2.0**
H17A				IAML		22 10 31.5	
	comp=N,28nm,0.3s						
H17A				IAML		22 10 32.5	
	comp=E,24nm,0.3s						
FLWY	**Flagg Ranch**	**3.92**	**277**	Pn	**Pn**	**22 09 29.1**	**+0.9**
FLWY				IAML		22 10 40.7	
	comp=E,56nm,1.0s						
ISCO	**Idaho Springs**	**3.95**	**184**		**Pn**	**22 09 28.8**	**+0.2**
ISCO				IAML		22 10 35.1	
	comp=E,23nm,0.9s						
MOOW	**Moose Ponds**	**3.95**	**272**	Pn	**Pn**	**22 09 30.1**	**+1.5**
REDW	**Red Top Meadow**	**4.06**	**266**	Pn	**Pn**	**22 09 31.1**	**+1.0**
REDW				IAML		22 10 35.2	
	comp=E,42nm,0.7s						
REDW				IAML		22 10 48.5	
	comp=E,48nm,1.0s						
YHH	**Holmes Hill**	**4.13**	**287**		**Pn**	**22 09 31.0**	**-0.1**
O20A	**White River Ci**	**4.23**	**212**		**Pn**	**22 09 32.5**	**+0.1**
O20A				IAML		22 10 46.8	
	comp=E,42nm,0.8s						
O20A				IAML		22 10 50.9	
	comp=N,41nm,1.2s						
E28A	**Huff**	**4.31**	**47**	Pn	**Pn**	**22 09 34.6**	**+1.3**
AHID	**Auburn Hatcher**	**4.36**	**259**	Pn	**Pn**	**22 09 34.9**	**+0.7**
AHID				IAML		22 10 50.9	
	comp=N,34nm,0.9s						
AHID				IAML		22 11 05.4	
	comp=N,42nm,1.0s						
RDMU	**Red Mountain**	**4.49**	**227**	Pn	**Pn**	**22 09 36.4**	**+0.3**
RDMU				IAML		22 10 51.9	
	comp=E,34nm,0.9s						
RDMU				IAML		22 10 52.4	
	comp=N,31nm,0.9s						
DGMT	**Dagmar**	**4.79**	**9**	Pn	**Pn**	**22 09 41.5**	**+1.6**
BOZ	**Bozeman (W)**	**4.88**	**294**		**Pn**	**22 09 41.5**	**+0.1**
BOZ				IAML		22 11 12.8	
	comp=N,12nm,1.3s						
BOZ				IAML		22 11 37.5	
	comp=N,11nm,4.4s						
HWUT	**Hardware Ranch**	**5.09**	**247**		**Pn**	**22 09 44.5**	**+0.2**
HWUT				IAML		22 11 28.0	
	comp=N,21nm,0.9s						
KSCO	**Kaye Shedlock'**	**5.14**	**156**		**Pn**	**22 09 44.3**	**-0.5**
LRM	**Limekiln Ridge**	**5.50**	**295**		**Pn**	**22 09 51.0**	**+1.1**
JLU	**Jordanelle**	**5.55**	**238**	Pn	**Pn**	**22 09 51.3**	**+0.7**
BGNE	**Belgrade**	**5.77**	**111**	Pn	**Pn**	**22 09 54.8**	**+1.4**
SDCO	**Great Sand Dun**	**6.00**	**182**	Pn	**Pn**	**22 09 57.9**	**+1.1**
ECSD	**EROS Data Cent**	**6.29**	**87**	Pn	**Pn**	**22 10 00.8**	**+0.3**
CBKS	**Cedar Bluff**	**6.46**	**138**	Pn	**Pn**	**22 10 04.8**	**+1.8**
DUG	**Dugway, Tooele**	**6.63**	**240**		**Pn**	**22 10 05.3**	**-0.1**
T25A	**Trinidad**	**6.63**	**174**	Pn	**Pn**	**22 10 07.3**	**+1.9**
JTMT	**Jette**	**7.45**	**306**	Pn	**Pn**	**22 10 18.0**	**+1.4**

WALA	Waterton Lakes	7.98	315	Pn	Pn	22 10 23.6	-0.2
AGMN	Agassiz Nation	7.98	52	Pn	Pn	22 10 23.9	+0.1
F36A	Milaca	8.63	72	Pn	Pn	22 10 32.6	0.0
ULM	Lac du Bonnet	9.14	41	Pn	Pn	22 10 38.1	-1.6
	comp=N,3.1nm,0.3s,baz=226,slow=12,SNR=17						
ULM				Lg	Lg	22 13 10.3	
	comp=N,0.4nm,0.3s,baz=162,slow=22,SNR=1.5						
ARCES	ARCESS Array B	61.41	18	P	P	22 18 42.9	-1.1
	comp=N,2.8nm,1.0s,baz=329,slow=6.8,SNR=0.9						
FINES	FINESS Array B	68.03	23	P	P	22 19 26.8	-0.4
	comp=N,3.7nm,1.2s,baz=330,slow=8.0,SNR=4.4						

*NEIC **18** 22:28:08.6±1.1, 8°.56N±0°.09×126°.9E±0°.1, h10^{km}±1^{km}, mb4.4/19, Error ellipse: s-maj=19.0km s-min=13.4km az=122.0*

*MAN **18** 22:28:09.8, 8°.46N×127°.16E, h33^{km}, mb4.8, ML3.7, MS3.7*

*IDC **18** 22:28:15.7±5.2, 8°.48N×126°.93E, h76^{km}±46^{km}, mb3.8/9, mb1 3.9/9, mb1mx3.6/49, mbtmp4.1/9, Error ellipse: s-maj=47.0km s-min=18.6km az=64.0*

ISC 18 22:28:08.7±2.0**, 8°.46N**±0°.04×**126°.94E**±0°.07**, h14**^{km}±12^{km}**, n42, σ1^{s}43**/49**, mb4.3**/20**, 4C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BIPH	Bislig	0.64	244	⇓iP	Pn	22 28 26.0	+2.7
BIPH				iS	Sn	22 28 33.8	+0.5
DAV	Davao City (W)	1.94	224	P	Pg	22 28 45.0	-0.9
	79nm,0.3s,baz=40,slow=8.7,SNR=8.1						
DAV				S	Sg	22 29 11.5	+0.5
	53nm,0.3s,baz=65,slow=20,SNR=2.2						
DAV	Davao City (W)	1.94	224		Pb	22 28 43.4	-0.3
DAV				Sn	Sb	22 29 07.2	-0.6
KCP	Kidapawan	2.34	232	⇑eP	Pn	22 28 48.6	+1.9
KCP				iS	Sb	22 29 18.5	-0.9
MSLP	Maasin	2.64	309	⇑eP	Pb	22 28 54.5	-1.3
MSLP				eS	Sb	22 29 27.7	-0.4
TBP	Tagbilaran	3.28	292	⇑eP	Pn	22 29 02.8	+3.2
TBP				iS	Sn	22 29 41.5	+3.1
LLP	Lapu-Lapu	3.47	302	⇓eP	Pn	22 29 05.3	+3.1
LLP				eS	Sb	22 29 51.4	-0.5
RCP	Roxas	5.15	307	⇑eP	Pn	22 29 28.8	+3.3
FAKI	Fak Fak	12.48	155	Pn	Pn	22 31 07.4	+1.3
KNRA	Kununurra	24.05	176	P	P	22 33 23.0	-0.6
KNRA				IAmb	IAmb	22 33 35.3	
	comp=Z,24nm,1.4s						
FITZ	Fitzroy Crossi	26.42	183	P	P	22 33 45.0	-0.1
	comp=Z,1.8nm,0.7s,baz=351,slow=9.0,SNR=3.2						
CMAR	Chiang Mai Arr	28.94	293	P	P	22 34 07.7	-0.1
	comp=Z,1.7nm,0.2s,baz=112,slow=6.9,SNR=7.1						
CMAR	Chiang Mai Arr	28.94	293	P	P	22 34 07.0	-0.8
WB0	Warramunga Arr	29.00	165	P	P	22 34 08.3	+0.1
WB0				IAmb	IAmb	22 34 12.8	
	comp=Z,4.1nm,1.1s						
WRA	Warramunga Arr	29.15	166	P	P	22 34 09.8	+0.2
	comp=Z,0.3nm,0.7s,baz=343,slow=9.0,SNR=1.8						
WRA	Warramunga Arr	29.15	166	P	P	22 34 10.4	+0.8
AS31	Alice Springs	32.65	168	P	P	22 34 41.5	+1.0
ASAR	Alice Springs	32.65	168	P	P	22 34 41.4	+0.9
	comp=Z,0.2nm,0.3s,baz=345,slow=7.3,SNR=4.2						
ASAR	Alice Springs	32.65	168	P	P	22 34 40.9	+0.5
USA0B	Ussuriysk Arra	35.87	6	P	P	22 35 08.0	-0.1
USA0B				IAmb	IAmb	22 35 21.8	
	comp=Z,11nm,1.4s						
USRK	Ussuriysk Ar.	35.87	6	P	P	22 35 07.8	-0.3
SHL	Shillong	37.42	301	P	P	22 35 21.1	-0.7
SHL				IAmb	IAmb	22 35 29.6	
	comp=Z,5.2nm,1.2s						
BBOO	Buckleboo	41.95	168	P	P	22 35 59.1	0.0
MK31	Makanchi Array	53.86	323	P	P	22 37 31.0	-0.4
MK31				IAmb	IAmb	22 37 35.5	
	comp=Z,4.6nm,1.4s						
MKAR	Makanchi Array	53.86	323	P	P	22 37 30.7	-0.7
	comp=Z,0.5nm,0.3s,baz=110,slow=7.6,SNR=22						
MAKZ	Makanchi	54.05	323	P	P	22 37 31.8	-1.0
MAKZ				IAmb	IAmb	22 37 40.0	
	comp=Z,6.6nm,1.1s						
NIL	Nilore	55.30	305	P	P	22 37 41.1	-1.0
AAK	Ala-Archa	57.07	316	P	P	22 37 53.7	-1.0
KURK	Kurchatov	57.92	326	P	P	22 37 59.9	-0.5
KURK				IAmb	IAmb	22 38 01.2	
	comp=Z,3.5nm,1.2s						
GAR	Garm	58.96	311	P	P	22 38 07.1	-0.9
KKAR	Karatay Array	59.99	315	P	P	22 38 14.2	-0.8
TIXI	Tiksi	63.14	1	P	P	22 38 36.4	+0.8
	comp=Z,1.2nm,0.4s,baz=180,slow=5.1,SNR=1.9						
BRVK	Borovoye	63.59	326	P	P	22 38 38.3	-0.7
BRVK				IAmb	IAmb	22 38 39.0	
	comp=Z,2.7nm,0.8s						
ABKAR	Akbulak array	68.67	320	P	P	22 39 10.5	-1.2
ABKAR	Akbulak array	68.67	320	P	P	22 39 10.4	-1.3
ABKAR				IAmb	IAmb	22 39 17.5	
	comp=Z,2.1nm,1.4s						
ARU	Arti	71.09	327	P	P	22 39 25.0	-1.4
ARU				IAmb	IAmb	22 39 35.9	
	comp=Z,4.2nm,1.0s						
KDAK	Kodiak Island	77.81	33	P	P	22 40 07.0	+1.6
L27K	Beaver Creek,	83.08	27	P	P	22 40 35.7	+2.0
L27K				IAmb	IAmb	22 40 53.5	
	comp=Z,2.6nm,1.2s						
BCAR	Beaver Creek A	83.10	27	P	P	22 40 36.1	+2.3
ARCES	ARCESS Array B	86.11	340	P	P	22 40 48.6	-0.3
	comp=Z,6.2nm,1.1s,baz=81,slow=6.7,SNR=6.8						
FINES	FINESS Array B	87.79	332	P	P	22 40 55.7	-1.5
	comp=Z,4.2nm,1.1s,baz=83,slow=4.5,SNR=14						
AKASG	Malin Array Be	88.37	321	P	P	22 40 57.9	-2.3
	comp=Z,0.2nm,0.2s,baz=63,slow=5.3,SNR=2.3						

*IDC **18** 22:32:25.9±1.4, 29°.11S×178°.87W, h0^{km}, mb3.9/3, mb1 4.1/3, mb1mx3.8/30, mbtmp3.9/3, Error ellipse: s-maj=44.2km s-min=20.9km az=2.0*

ISC 18 22:32:26.1±1.0**, 29°.9S**±0°.2×**178°.6W**±0°.2**, h10**^{km}**, n9, σ1^{s}06**/8**, mb4.0**/3**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	0.89	45	Pn	Pn	22 32 45.1	+0.4
	60nm,0.3s,baz=279,slow=19,SNR=2.3						
STKA	Stephens Creek	34.05	256	P	P	22 39 11.0	+0.4
	1.6nm,0.8s,baz=101,slow=10,SNR=1.8						
ASAR	Alice Springs	42.58	267	P	P	22 40 22.2	-0.4
	1.2nm,0.8s,baz=107,slow=8.2,SNR=8.4						
WRA	Warramunga Arr	43.52	272	P	P	22 40 30.8	+0.6
	2.2nm,0.9s,baz=111,slow=8.0,SNR=7.5						
SNAA	Sanae	78.68	179	P	P	22 44 26.0	-2.1
VNA3	Neumayer Olymp	78.85	176	P	P	22 44 28.8	-0.3
VNA2	Neumayer--Watz	79.28	177	P	P	22 44 31.2	-0.2
VNA1	Neumayer--Stat	79.51	177	P	P	22 44 33.7	+1.1
FINES	FINESS Array B	144.47	340	PKP	PKPdf	22 52 00.1	-1.9
	1.6nm,0.8s,baz=90,slow=1.4,SNR=4.9						

IDC 18 22:32:48.2±4.8, 29°.35S×178°.74W, h0^{km}, mb3.5/2, mb1 3.8/2, mb1mx3.6/29, mbtmp3.5/2, Error ellipse: s-maj=257.1km s-min=59.9km az=162.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	42.53	266	P	P	22 40 44.6	-1.2
	0.4nm,0.7s,baz=103,slow=7.7,SNR=1.6						
WRA	Warramunga Arr	43.42	271	P	P	22 40 53.8	+0.8
	1.7nm,1.1s,baz=111,slow=7.9,SNR=4.9						
FINES	FINESS Array B	143.95	340	PKP	PKPbc	22 52 23.4	+0.8
	2.3nm,0.9s,baz=48,slow=2.8,SNR=3.5						
AKASG	Malin Array Be	150.08	323	PKPbc	PKPbc	22 52 40.4	-0.1
	0.4nm,0.5s,baz=60,slow=2.6,SNR=1.6						

IDC 18 22:33:00.4±5.3, 28°.99S×178°.39W, h0^{km}, mb4.0/3, mb1 4.2/3, mb1mx3.8/31, mbtmp4.0/3, Error ellipse: s-maj=176.2km s-min=83.0km az=155.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	34.49	255	P	P	22 39 50.5	+0.3
	4.3nm,1.0s,baz=103,slow=8.3,SNR=4.8						
ASAR	Alice Springs	42.86	266	P	P	22 41 00.2	-0.5
	1.1nm,0.7s,baz=106,slow=7.2,SNR=6.1						
WRA	Warramunga Arr	43.72	271	P	P	22 41 07.5	-0.1
	2.3nm,0.9s,baz=111,slow=7.8,SNR=9.3						
FINES	FINESS Array B	143.71	340	PKP	PKPdf	22 52 36.2	-0.5
	2.9nm,0.9s,baz=60,slow=3.4,SNR=5.5						

IDC 18 22:33:40.6±3.7, 30°.27S×178°.19W, h0^{km}, mb4.2/3, mb1 4.4/3, mb1mx3.9/30, mbtmp4.2/3, Error ellipse: s-maj=192.7km s-min=48.7km az=158.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	34.35	257	P	P	22 40 30.1	+0.9
	6.9nm,0.9s,baz=102,slow=8.5,SNR=7.9						
ASAR	Alice Springs	42.95	267	P	P	22 41 41.0	-0.5
	1.6nm,0.8s,baz=105,slow=7.6,SNR=4.3						
WRA	Warramunga Arr	43.93	272	P	P	22 41 48.3	-1.2
	2.7nm,0.9s,baz=114,slow=6.5,SNR=5.4						
FINES	FINESS Array B	144.97	340	PKP	PKPab	22 53 16.7	-1.6
	6.9nm,1.1s,baz=60,slow=3.4,SNR=3.7						
AKASG	Malin Array Be	151.10	323	PKPbc	PKiKP	22 53 36.6	+0.8
	0.2nm,0.3s,baz=61,slow=1.9,SNR=1.8						

*IDC **18** 22:34:06.2±1.0, 29°.10S×178°.78W, h0^{km}, mb4.3/3, mb1 4.4/3, mb1mx4.0/31, mbtmp4.3/3, Error ellipse: s-maj=73.4km s-min=18.7km az=3.0*

ISC 18 22:34:07.0±1.1**, 28°.9S**±0°.4×**178°.7W**±0°.2**, h10**^{km}**, n7, σ1^{s}04**/7**, mb4.1**/3**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	0.79	118	Pn	Pn	22 34 24.2	0.0
	200nm,0.3s,baz=221,slow=3.2,SNR=5.0						
STKA	Stephens Creek	34.24	255	P	P	22 40 53.8	+0.6
	6.0nm,0.8s,baz=92,slow=10.0,SNR=7.1						
ASAR	Alice Springs	42.58	266	P	P	22 42 02.3	-1.2
	2.1nm,0.7s,baz=106,slow=7.8,SNR=7.3						
WRA	Warramunga Arr	43.43	271	P	P	22 42 10.4	+0.1
	2.5nm,0.7s,baz=111,slow=7.9,SNR=8.6						
FINES	FINESS Array B	143.51	340	PKP	PKPdf	22 53 40.1	-1.1
	5.1nm,0.9s,baz=46,slow=4.0,SNR=3.8						
NOA	NORSAR Array B	147.16	351	PKPbc	PKPbc	22 53 50.0	+0.2
	1.5nm,0.9s,baz=14,slow=4.3,SNR=3.7						
AKASG	Malin Array Be	149.72	324	PKPbc	PKiKP	22 53 58.8	+1.1
	2.4nm,0.8s,baz=55,slow=2.7,SNR=5.8						

IDC 18 22:34:53.5±2.4, 29°.11S×178°.92W, h0^{km}, mb4.2/3, mb1 4.4/3, mb1mx4.0/30, mbtmp4.2/3, MS3.9/1, Ms1 3.9/1, ms1mx3.1/34, Error ellipse: s-maj=145.3km s-min=46.2km az=167.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	16.51	25	LR	LR	22 44 44.9	
	comp=Z,358nm,18.1s,baz=194,slow=36						
STKA	Stephens Creek	34.01	255	P	P	22 41 39.8	+0.6
	7.1nm,0.8s,baz=93,slow=11,SNR=3.7						
ASAR	Alice Springs	42.39	266	P	P	22 42 49.4	-0.6
	2.7nm,0.8s,baz=110,slow=8.2,SNR=4.6						
WRA	Warramunga Arr	43.26	271	P	P	22 42 56.7	-0.4
	1.7nm,0.6s,baz=112,slow=8.0,SNR=5.6						
FINES	FINESS Array B	143.66	340	PKP	PKPbc	22 54 28.1	+0.9
	2.2nm,0.8s,baz=48,slow=2.8,SNR=4.0						
AKASG	Malin Array Be	149.79	323	PKPbc	PKPbc	22 54 45.4	+0.3
	0.6nm,0.5s,baz=65,slow=2.4,SNR=2.5						
TORD	Torodi Ar. Bea	164.11	182	PKP	PKPdf	22 54 58.6	-1.0
	1.9nm,1.0s,baz=187,slow=4.5,SNR=5.1						

*KRSC **18** 22:37:27.7±1.4, 55°.49N×160°.63E, h188^{km}±13^{km}, ML4.1*

*IDC **18** 22:37:28.5±1.9, 55°.64N×160°.08E, h186^{km}±22^{km}, mb3.2/10, mb1 3.4/11, mb1mx3.2/47, mbtmp3.7/11, Error ellipse: s-maj=24.5km s-min=15.3km az=174.0*

ISC 18 22:37:28.3±0.7**, 55°.52N**±0°.04×**160°.44E**±0°.05**, h189**^{km}±5^{km}**, n49, σ1^{s}12**/70**, mb3.3**/9**, Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMNR	Kamenistaya	0.27	335	iP	Pn	22 37 53.5	0.0
KMNR				eS	Sn	22 38 13.2	+0.1
TUMR	Tumrok	0.29	215	iP	Pn	22 37 54.2	+0.6
TUMR				eS	Sn	22 38 14.0	+1.0
KIRR	Kirishev	0.44	353	eP	Pn	22 37 53.6	-0.4
KIRR				eS	Sn	22 38 13.6	-0.5
BZGR	Bezymyannyi-Gr	0.45	19	eP	Pn	22 37 53.8	-0.2
BZWR	Bezymyannyi-We	0.45	4	iP	Pn	22 37 54.1	0.0
KPT	Kopyto	0.47	345	eP	Pn	22 37 53.6	-0.4
ZLN	Zelenaya	0.54	22	iP	Pn	22 37 54.9	+0.5
LGNR	Loginova	0.59	14	eP	Pn	22 37 55.2	+0.4
CIRR	Tsirk	0.63	16	iP	Pn	22 37 55.1	+0.3
KOZ	Kozyrevsk	0.63	330	eP	Pn	22 37 54.0	-0.6
KRSR	Krestovskiy	0.71	6	eP	Pn	22 37 54.6	-0.5
KRSR				eS	Sn	22 38 15.3	-0.8
KLY	Klyuchi	0.81	9	eP	Pn	22 37 55.6	+0.1
KLY				eS	Sn	22 38 17.1	+0.3
ESO	Esso	1.06	293	eP	Pn	22 38 01.8	+4.5
ESO				eS	Sn	22 38 23.2	+3.3
BDR	Baidarnaya	1.14	22	iP	Pn	22 37 58.1	+0.1
BDR				eS	Sn	22 38 21.4	+0.3
SRKR	Sorokina	1.21	20	eP	Pn	22 37 58.3	-0.2
SRKR				eS	Sn	22 38 21.1	-1.0
SMKR	Semkarok	1.22	28	eP	Pn	22 37 58.4	-0.1
SMKR				eS	Sn	22 38 21.0	-1.2
MKZ	Mys Kozlova	1.22	142	eP	Pn	22 37 58.3	-0.2
MKZ				eS	Sn	22 38 21.4	-0.4
KBG	Krutoberegovo	1.48	59	eP	Pn	22 38 00.7	0.0
KBG				eS	Sn	22 38 25.3	-0.6
KBTR	Krutoberegovo	1.51	62	eP	Pn	22 38 00.8	-0.2
KBTR				eS	Sn	22 38 25.3	-1.2
KII	Karymskiy	1.59	201	eP	Pn	22 38 02.5	+0.6
GNL	Ganaly	2.33	219	eP	Pn	22 38 10.0	+0.3
GNL				eS	Sn	22 38 43.2	+1.4
SDLR	Sedlovina	2.42	203	eP	Pn	22 38 11.6	+0.9
SDLR				eS	Sn	22 38 44.7	+1.1
KRER	Koryakskii	2.43	205	eP	Pn	22 38 11.6	+0.8
NLC	Nalytchevo	2.44	196	eP	Pn	22 38 10.8	+0.1
NLC				eS	Sn	22 38 42.6	-1.1
SPN	Mys Shipunski	2.44	186	eP	Pn	22 38 09.5	-1.2
SPN				eS	Sn	22 38 41.2	-2.5
SMAR	Somma	2.45	204	eP	Pn	22 38 12.2	+1.1
AVH	Avacha	2.46	204	eP	Pn	22 38 12.6	+1.5
KOK	Koryaka	2.46	206	eP	Pn	22 38 12.7	+1.5
UGLR	Uglovaya	2.50	203	iP	Pn	22 38 12.5	+1.0
DALK	Dalny	2.68	202	eP	Pn	22 38 14.0	+0.5
DALK				eS	Sn	22 38 48.8	+0.1
PET	Petropavlovsk	2.71	203	eP	Pn	22 38 14.6	+0.8
PET				eS	Sn	22 38 49.0	-0.3
PETK	Petropavlovsk-	2.90	215	P	Pn	22 38 16.2	+0.1
	4.3nm,0.3s,baz=79,slow=15,SNR=69						
PETK				S	Sn	22 39 04.5	+11
	0.9nm,0.3s,baz=41,slow=14,SNR=1.3						
KRMR	Karymshinskiy	3.01	208	eP	Pn	22 38 17.8	+0.4
KRMR				eS	Sn	22 38 56.4	+0.6
BKI	Bering	3.18	93	eP	Pn	22 38 20.6	+1.3
BKI				eS	Sn	22 38 59.0	-0.3
APC	Apacha	3.23	218	eP	Pn	22 38 21.3	+1.2
GRL	Gorelyy	3.28	206	eP	Pn	22 38 21.8	+1.0
RUS	Russkaya	3.29	201	eP	Pn	22 38 20.7	-0.1
RUS				eS	Sn	22 38 59.7	-2.1
MTVR	Mutnovka	3.32	205	eP	Pn	22 38 22.1	+0.8
MTVR				eS	Sn	22 39 02.3	-0.4
KDTR	Khodutka, Kamc	3.97	202	eS	Sn	22 39 13.3	-3.7
TIXI	Tiksi	20.99	332	P	P	22 41 55.3	-1.1
	1.4nm,0.4s,baz=121,slow=5.9,SNR=2.1						
KDAK	Kodiak Island	25.52	65	P	P	22 42 40.2	+1.3
	3.9nm,0.9s,baz=298,slow=2.3,SNR=6.1						
ILAR	Eielson Array	27.01	49	P	P	22 42 52.9	+0.7
	0.7nm,0.8s,baz=265,slow=8.1,SNR=7.0						
SONM	Songino Array	33.61	280	P	P	22 43 48.6	-1.9
	0.2nm,0.4s,baz=54,slow=9.3,SNR=2.0						
MKAR	Makanchi Array	47.32	294	P	P	22 45 41.5	-1.1
	0.3nm,0.4s,baz=49,slow=6.4,SNR=11						
PDAR	Pinedale Array	56.19	62	P	P	22 46 50.2	+1.7
	0.3nm,0.4s,baz=340,slow=1.8,SNR=4.6						
FINES	FINESS Array B	57.98	336	P	P	22 46 59.1	-1.2
	2.8nm,1.0s,baz=28,slow=8.0,SNR=12						
TXAR	Lajitas Array	69.52	68	P	P	22 48 18.4	+2.1
	0.3nm,0.5s,baz=311,slow=6.9,SNR=2.1						
WRA	Warramunga Arr	78.37	205	P	P	22 49 08.0	+0.6
	0.4nm,1.0s,baz=29,slow=6.3,SNR=1.3						
ESDC	Sonseca Array	84.25	348	P	P	22 49 38.0	-0.3
	0.3nm,0.6s,baz=354,slow=4.2,SNR=2.3						

NOU 18 22:39:18.3, 18°.19S×169°.08E, h0^{km}, MLv3.9/8, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTV	Rentapao	0.74	302	P	Pg	22 39 32.3	-0.2
MARNC	Mare, Loyalty	3.42	197	P	Pn	22 40 13.2	+0.3
YATNC	Mamie plateau,	4.36	208	P	Pn	22 40 24.5	-1.4
DZM	Mont Dzumac	4.59	212	P	Pn	22 40 29.1	0.0
NOUC	Port Laguerre	4.68	213	P	Pn	22 40 30.7	+0.4
OUENC	Ouen Island, N	4.70	206	P	Pn	22 40 30.6	+0.1
ONTNC	Ouen Toro	4.78	211	P	Pn	22 40 31.5	-0.1

*IDC **18** 22:44:14.7±0.8, 32°.37S×178°.12W, h0^{km}, mb4.7/4, mb1 4.7/8, mb1mx4.3/39, mbtmp4.6/8, ML4.9/3, MS4.2/4, Ms1 4.2/4, ms1mx3.7/37, Error ellipse: s-maj=28.1km s-min=23.0km az=115.0*

*NEIC **18** 22:44:16.7±2.2, 32°.32S±0°.05×178°.0W±0°.1, h10^{km}±1^{km}, mb4.9/20, Error ellipse: s-maj=22.0km s-min=5.1km az=108.0*

ISC 18 22:44:17.0±0.6**, 32°.38S**±0°.05×**177°.95W**±0°.09**, h20**^{km}**, n117, σ1^{s}71**/140**, mb4.9**/14**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	3.10	0	P	Pn	22 45 02.4	-2.4
GLKZ				S	Sn	22 45 37.8	-3.6
RAO	Raoul Island	3.12	1	Pn	Pn	22 45 04.1	-0.9
	94nm,0.3s,baz=114,slow=10,SNR=6.9						
RAO				Sn	Sn	22 45 39.6	-2.0
	311nm,0.3s,baz=96,slow=20,SNR=7.0						
RAO	Raoul Island	3.12	1		Pn	22 45 04.0	-1.0
RIZ	Raoul Island	3.12	0	P	Pn	22 45 03.6	-1.5
RIZ				S	Sn	22 45 38.4	-3.4
MXZ	Matakaoa Point	6.02	210	P	Pn	22 45 43.1	-1.7
MXZ				S	Sn	22 46 51.8	-1.3
MXZ	Matakaoa Point	6.02	210	Pn	Pn	22 45 42.9	-2.0
WMGZ	Waiomatatini S	6.19	208	P	Pn	22 45 47.8	+0.6
WMGZ				S	Sn	22 46 56.4	-1.1
PKGZ	Pakihiroa	6.39	210	P	Pn	22 45 48.8	-1.3
PKGZ				S	Sn	22 46 59.2	-3.2
HAZ	Te Kaha	6.41	212	P	Pn	22 45 49.6	-0.6
HAZ				S	Sn	22 47 02.8	+0.1
PUZ	Puketiti	6.47	208	P	Pn	22 45 49.5	-1.6
PUZ				S	Sn	22 47 04.7	+0.2
RUGZ	Raukumara Rang	6.62	211	P	Pn	22 45 52.5	-0.9
RUGZ				S	Sn	22 47 06.5	-1.8
TWGZ	Tauwhareparae	6.67	209	P	Pn	22 45 51.3	-2.6
TWGZ				S	Sn	22 47 08.3	-1.1
KUZ	Kuaotunu	6.80	228	P	Pn	22 45 58.5	+2.9
CNGZ	Carnagh Statio	6.85	206	P	Pn	22 45 54.7	-1.6
CNGZ				S	Sn	22 47 12.9	-0.8
WHRZ	Whale Island	6.87	216	P	Pn	22 45 56.5	-0.1
WHRZ				S	Sn	22 47 12.9	-1.2
TKGZ	Te Karaka	6.95	208	P	Pn	22 45 58.0	+0.3
TKGZ				S	Sn	22 47 14.7	-1.5
MWZ	Matawai	7.00	211	P	Pn	22 45 54.9	-3.5
MWZ				S	Sn	22 47 14.7	-2.6
OPRZ	Ohinepanea	7.07	218	P	Pn	22 46 01.8	+2.4
OPRZ				S	Sn	22 47 18.6	-0.5
MARZ	Manawahe	7.12	217	P	Pn	22 46 00.9	+0.9
MARZ				S	Sn	22 47 21.1	+0.8
URZ	Urewera	7.12	213	Pn	Pn	22 45 58.7	-1.3
	15nm,0.3s,baz=304,slow=22,SNR=25						
URZ				Sn	Sn	22 47 17.7	-2.7
	18nm,0.3s,baz=19,slow=22,SNR=5.4						
URZ	Urewera	7.12	213	P	Pn	22 45 58.7	-1.3
URZ				S	Sn	22 47 19.3	-1.0
URZ	Urewera	7.12	213		Pn	22 45 58.9	-1.2
RIGZ	Rimuhau	7.22	208	P	Pn	22 45 59.4	-1.9
RIGZ				S	Sn	22 47 21.1	-1.6
PRGZ	Paritu Road	7.36	206	P	Pn	22 46 00.7	-2.6
PRGZ				S	Sn	22 47 22.0	-4.2
MUGZ	Murupara	7.46	214	P	Pn	22 46 02.3	-2.4
MUGZ				S	Sn	22 47 25.3	-3.3
RTZ	Ruatahuna	7.47	212	P	Pn	22 46 03.4	-1.5
MTHZ	Maungataniwha	7.73	212	S	Sn	22 47 33.8	-1.5
ARHZ	Aropaoanui	8.00	209	P	Pn	22 46 11.8	-0.3
ARHZ				S	Sn	22 47 38.5	-3.5
BKZ	Black Stump Fm	8.14	212	P	Pn	22 46 11.9	-2.2
KATZ	Kakaramea	8.37	216	P	Pn	22 46 18.8	+1.6
TMVZ	Te Maari	8.47	216	P	Pn	22 46 17.4	-1.3
NTVZ	North Tongarir	8.47	216	P	Pn	22 46 18.0	-0.7
KRVZ	Karewarewa	8.49	216	P	Pn	22 46 21.1	+2.3
KAHZ	Kahuranaki	8.50	208	P	Pn	22 46 14.2	-4.9
NNVZ	North Ngauruho	8.53	216	P	Pn	22 46 19.5	+0.1
OTVZ	Oturere	8.53	216	P	Pn	22 46 20.1	+0.6
WTVZ	West Tongariro	8.53	216	P	Pn	22 46 20.1	+0.6
SNVZ	South Ngauruho	8.56	216	P	Pn	22 46 19.2	-0.7
NGZ	Ngauruhoe	8.57	216	P	Pn	22 46 20.4	+0.3
KRHZ	Kereru	8.59	211	P	Pn	22 46 17.6	-2.6
BHHZ	Black Hill Sta	8.60	213	P	Pn	22 46 19.0	-1.3
TUVZ	Tukino	8.61	215	P	Pn	22 46 21.2	+0.6
FWVZ	Far West T-bar	8.65	216	P	Pn	22 46 21.0	-0.3
MOVZ	Moawhango	8.68	214	P	Pn	22 46 20.7	-0.8
WNVZ	Wahianoa	8.69	215	P	Pn	22 46 21.7	0.0
TRVZ	Turoa	8.69	216	P	Pn	22 46 21.8	0.0
PXZ	Pawanui	8.71	207	P	Pn	22 46 20.2	-1.6
PNHZ	Pukenui	8.88	211	P	Pn	22 46 21.7	-2.5
VRZ	Vera Road	8.97	219	P	Pn	22 46 28.3	+2.9
DVHZ	Dannevirke	9.22	209	P	Pn	22 46 26.8	-2.0
BFZ	Birch Farm	9.51	208	P	Pn	22 46 27.8	-5.0
MRZ	Mangatainoka R	9.77	210	P	Pn	22 46 33.0	-3.3
HOWZ	Holdsworth Sta	9.99	210	P	Pn	22 46 36.7	-2.7
TMWZ	Te Maipa	10.01	208	P	Pn	22 46 35.3	-4.5
KIW	Kapiti Island	10.22	212	P	Pn	22 46 38.2	-4.4
NNZ	Nelson	11.22	216	P	Pn	22 46 57.1	+0.9
KHZ	Kahutara	12.08	212	P	Pn	22 47 06.4	-1.6
LTZ	Lake Taylor	12.95	214	P	Pn	22 47 16.0	-3.9
INZ	Inchbonnie	13.31	216	P	Pn	22 47 25.5	+0.8
GCSZ	Gaunt Creek Bo	14.30	217	P	Pn	22 47 36.1	-2.2
ARCZ	Arundel	14.36	213	P	Pn	22 47 36.0	-3.0
MSVF	Nonsavu	15.02	345	Pn	Pn	22 47 48.1	-0.2
	0.3nm,0.3s,baz=183,slow=23,SNR=4.0						
MSVF	Nonsavu	15.02	345		Pn	22 47 47.4	-0.9
DZM	Mont Dzumac	17.24	303	P	Pn	22 48 16.5	-0.3
	0.1nm,0.3s,baz=98,slow=17,SNR=1.6						
DZM				LR	LR	22 54 00.2	
	comp=Z,1µm,18.1s,baz=148,slow=34						
DZM	Mont Dzumac	17.24	303		Pn	22 48 16.6	-0.2
RAR	Rarotonga	19.64	60	LR	LR	22 56 58.3	
	comp=Z,374nm,18.2s,baz=290,slow=39						
ARMA	Armidale	26.00	266	P	P	22 49 50.2	+1.4
ARMA				IAmb	IAmb	22 49 56.5	
	comp=Z,39nm,1.4s						
EIDS	Eidsvold	27.94	276	P	P	22 50 07.3	+1.3
EIDS				IAmb	IAmb	22 50 21.4	
	comp=Z,15nm,1.0s						
PPT	Papeete	29.53	67	LR	LR	23 01 44.0	
	comp=Z,360nm,18.0s,baz=188,slow=35						
TOO	Toolangi	30.27	250	P	P	22 50 28.7	+1.9
STKA	Stephens Creek	34.12	260	P	P	22 51 00.4	-0.2
	comp=Z,5.8nm,1.0s,baz=91,slow=9.7,SNR=8.5						
STKA				LR	LR	23 04 45.2	
	comp=Z,513nm,18.2s,baz=107,slow=36						
STKA	Stephens Creek	34.12	260	P	P	22 51 00.9	+0.3
CTAO	Charters Tower	34.20	282	P	P	22 51 02.1	+0.7
CTAO				IAmb	IAmb	22 51 26.0	
	comp=Z,20nm,1.0s						
BBOO	Buckleboo	38.51	257	P	P	22 51 37.3	-0.8
BBOO				IAmb	IAmb	22 51 39.1	
	comp=Z,16nm,1.1s						
COEN	Coen	39.89	288	P	P	22 51 50.7	+1.0
COEN				IAmb	IAmb	22 52 05.7	
	comp=Z,20nm,1.3s						
AS31	Alice Springs	43.08	269	P	P	22 52 15.6	-0.3
ASAR	Alice Springs	43.08	269	P	P	22 52 15.3	-0.6
	comp=Z,12nm,0.8s,baz=112,slow=7.3,SNR=6.5						
ASAR				S	S	22 58 38.6	-2.5
	comp=Z,1.2nm,1.0s,baz=106,slow=16,SNR=5.2						
ASAR	Alice Springs	43.08	269	P	P	22 52 15.4	-0.5
WR0	Warramunga Arr	44.07	274	P	P	22 52 23.3	-0.6
WR0				IAmb	IAmb	22 52 25.6	
	comp=Z,12nm,0.6s						
WRA	Warramunga Arr	44.25	274	P	P	22 52 24.7	-0.6
	comp=Z,8.8nm,0.4s,baz=114,slow=7.7,SNR=175						
WRA				ScP	ScP	22 58 02.4	+1.8
	comp=Z,0.9nm,1.0s,baz=102,slow=4.7,SNR=3.4						
WRA				S	S	22 58 53.9	-4.2
	comp=Z,1.1nm,0.9s,baz=132,slow=15,SNR=5.3						

WRA	Warramunga Arr	44.25	274	P	P	22 52 24.1	-1.2
WB0	Warramunga Arr	44.28	274	P	P	22 52 24.8	-0.8
WB0				IAmb	IAmb	22 52 40.6	
	comp=Z,28nm,1.1s						
FORT	Forrest	45.61	257	P	P	22 52 35.2	-0.8
MTN	Manton Dam	50.36	281	P	P	22 53 12.1	-0.8
MTN				IAmb	IAmb	22 53 18.0	
	comp=Z,12nm,0.8s						
KNRA	Kununurra	50.92	276	P	P	22 53 16.7	-0.4
KNRA				IAmb	IAmb	22 53 17.9	
	comp=Z,16nm,0.9s						
CASY	Casey	53.42	209	P	P	22 53 36.2	+1.1
MORW	Morawa	56.03	255	P	P	22 53 54.7	+0.1
MORW				IAmb	IAmb	22 54 15.0	
	comp=Z,27nm,1.4s						
SOEI	Soe	57.70	279	P	P	22 54 06.9	+0.2
QSPA	South Pole Qui	57.74	180	P	P	22 54 08.0	+1.7
SNAA	Sanae	76.18	178	P	P	22 56 04.6	+1.3
SNAA	Sanae	76.18	178	P	P	22 56 04.4	+1.0
VNA3	Neumayer Olymp	76.33	176	P	P	22 56 05.3	+1.1
VNA2	Neumayer--Watz	76.77	177	P	P	22 56 08.0	+1.4
	baz=176,slow=4.4						
VNA1	Neumayer--Stat	77.00	176	P	P	22 56 08.6	+0.8
PETK	Petropavlovsk-	87.73	346	P	P	22 57 05.2	+1.3
	comp=Z,2.9nm,0.7s,baz=97,slow=6.0,SNR=2.9						
MKAR	Makanchi Array	119.06	309	PKP	PKPdf	23 03 04.1	0.0
	comp=Z,1.3nm,0.9s,baz=61,slow=0.7,SNR=4.8						
MKAR	Makanchi Array	119.06	309		PKPdf	23 03 03.4	-0.7
ZALV	Zalesovo Beam	119.53	318	PKP	PKiKP	23 03 05.2	+0.4
	comp=Z,0.5nm,0.5s,baz=64,slow=3.4,SNR=2.0						
BOOM	Boomskoye usch	122.16	303		PKiKP	23 03 11.2	+0.7
KURK	Kurchatov	122.43	313		PKPdf	23 03 10.1	-0.3
KURBB	Kurchatov Arra	122.47	313	PKP	PKiKP	23 03 11.2	+0.6
	comp=Z,1.5nm,0.7s,baz=107,slow=1.9,SNR=11						
AAK	Ala-Archa	123.23	303	PKP	PKiKP	23 03 13.8	+1.1
	comp=Z,0.5nm,0.3s,baz=95,slow=4.6,SNR=5.8						
KKAR	Karatay Array	126.18	302		PKiKP	23 03 18.4	+0.1
ARCES	ARCESS Array B	140.52	347	PKP	PKPdf	23 03 44.7	+0.8
	comp=Z,4.1nm,0.8s,baz=0.0,slow=5.0,SNR=4.1						
ARCES	ARCESS Array B	140.52	347		PKPdf	23 03 44.9	+0.9
KBZ	Khabaz	146.21	302	PKPbc	PKPab	23 03 56.6	+0.1
	comp=Z,3.9nm,1.0s,baz=155,slow=3.8,SNR=6.7						
FINES	FINESS Array B	147.01	339	PKPbc	PKPbc	23 03 57.6	+0.1
	comp=Z,13nm,0.7s,baz=49,slow=3.8,SNR=69						
NB2	NORSAR Subarra	150.71	351	PKP	PKPbc	23 04 07.2	+0.2
	comp=Z,10.0nm,1.0s,baz=26,slow=2.2						
NOA	NORSAR Array B	150.71	351	PKPbc	PKiKP	23 04 07.6	-0.1
	comp=Z,2.4nm,0.7s,baz=14,slow=4.1,SNR=11						
AKASG	Malin Array Be	152.87	320	PKPbc	PKiKP	23 04 12.8	+0.4
	comp=Z,2.4nm,0.7s,baz=53,slow=2.6,SNR=10						
AKASG	Malin Array Be	152.87	320		PKiKP	23 04 12.6	+0.2
BRTR	Keskin Array B	153.53	295	PKPbc	PKiKP	23 04 14.7	+0.3
	comp=Z,3.3nm,0.9s,baz=117,slow=4.4,SNR=8.1						
BRTR				PKPab	PKPab	23 04 26.5	-0.2
	comp=Z,3.1nm,0.8s,baz=131,slow=3.4,SNR=6.6						
DBIC	Dimbokro	153.62	164	PKPab	PKPab	23 04 29.3	+1.9
	comp=Z,3.9nm,0.8s,baz=236,slow=1.8,SNR=4.2						
CLL	Collm	159.44	340	*i* PKPab	PKPab	23 04 51.8	+0.3
	comp=Z,5.0nm,0.9s						
TORD	Torodi Ar. Bea	160.86	179	PKP	PKPdf	23 04 18.1	+1.8
	comp=Z,0.2nm,0.6s,baz=33,slow=0.0,SNR=1.6						
TORD				PKPab	PKPab	23 04 58.0	-0.4
	comp=Z,1.1nm,0.7s,baz=179,slow=3.3,SNR=7.7						
TORD	Torodi Ar. Bea	160.86	179		PKPab	23 04 59.0	+0.6
GERES	GERESS Array B	161.36	335	PKPab	PKPab	23 05 00.3	+0.2
	comp=Z,0.2nm,0.4s,baz=106,slow=2.1,SNR=4.5						

*SJA **18** 22:52:28.6±0.9, 31°.42S×72°.41W, h10^{km}, ML3.9, MW4.1*
*GUC **18** 22:52:34.8±0.7, 31°.56S×72°.06W, h39^{km}±4^{km}, ML3.8*
*IDC **18** 22:52:46.4±3.2, 32°.14S×71°.38W, h122^{km}±34^{km}, mb3.2/2, mb1 3.5/6, mb1mx3.3/32, mbtmp3.6/6, Error ellipse: s-maj=48.4km s-min=26.1km az=104.0*
ISC 18 22:52:32.4±0.9**, 31°.50S**±0°.03×**72°.19W**±0°.06**, h10**^{km}**, n61, σ2^{s}32**/69**, 1C-2D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.95	30	⇓ *i*P	Pg	22 52 49.4	-1.4
CO06				*e*S	Sg	22 53 00.0	-3.2
VA06	Catapilco	1.30	144	⇓ *i*P	Pn	22 52 56.0	-0.7
VA06				*i* S	Sb	22 53 11.3	-2.5
VA06				IAML		22 53 15.8	
	comp=E,4µm,0.2s						
VA01	Torpederas	1.58	163	*e*P	Pn	22 53 00.8	+0.3
VA01	Torpederas	1.58	163	*e*P	Pn	22 53 01.2	+0.7
ROCH	El Roble	1.77	146	*e*P	Pn	22 53 03.4	0.0
ROCH				*i* S	Sn	22 53 25.1	-1.1
ROCH				IAML		22 53 34.2	
	comp=N,2µm,0.5s						
ROC1	El Roble	1.78	146	*e*P	Pn	22 52 58.0	-5.5
CO05	La Serena	1.78	28	*e*P	Pn	22 53 02.5	-0.8
GO04	Tololo Observa	1.79	42	*e*P	Pn	22 53 01.9	-1.7
VA03	San Esteban	1.88	133	⇑ *i*P	Pn	22 53 04.5	-0.2
VA03				*i* S	Sn	22 53 27.6	-0.9
VA03				IAML		22 53 35.5	
	comp=E,2µm,0.5s						
VA03	San Esteban	1.88	133	*e*P	Pn	22 53 05.5	+0.8
VA03				IAML		22 53 36.4	
	comp=Z,940nm,0.8s						
MT02	Curacav	1.97	153	*e*P	Pn	22 53 05.8	0.0
MT02	Curacav	1.97	153	*e*P	Pn	22 53 01.5	-4.3
MT02				IAML		22 53 38.9	
	comp=Z,639nm,0.7s						
VA05	Santo Domingo	2.20	167	*e*P	Pn	22 53 09.4	+0.3
VA05				*e*S	Sn	22 53 32.6	-3.8
VA05				IAML		22 53 47.9	
	comp=N,1µm,0.5s						
MT05	Renca	2.25	147	*e*P	Pn	22 53 10.3	+0.5
MT05				*i* S	Sn	22 53 36.2	-1.5
MT05				IAML		22 53 44.4	
	comp=N,1µm,0.5s						
MT05	Renca	2.25	147	*e*P	Pn	22 53 11.0	+1.2
MT05				IAML		22 53 47.1	
	comp=Z,568nm,0.5s						
MT09	Talagante	2.48	156	*e*P	Pn	22 53 14.1	+1.0
MT09				*i* S	Sn	22 53 42.1	-1.5
MT09				IAML		22 53 52.7	
	comp=N,646nm,0.4s						
MT01	Popeta	2.49	162	*e*P	Pn	22 53 13.2	+0.2
MT01				*e*S	Sn	22 53 39.3	-4.1
MT01				IAML		22 53 56.0	
	comp=E,483nm,0.7s						
MT01	Popeta	2.49	162	*e*P	Pn	22 53 13.4	+0.5
MT01				IAML		22 53 58.4	
	comp=Z,277nm,0.6s						
RTLS	Leoncito	2.49	98	*e*P	Pb	22 53 15.2	-2.2
RTLS				IAML		22 53 56.9	
	comp=Z,388nm,0.6s						
AUSP	Uspallata	2.49	108	*e*P	Pn	22 53 09.0	-4.3
LCO	Las Campanas	2.80	28	*e*P	Pn	22 53 18.7	+1.1
LCO				*e*S	Sn	22 53 51.1	-0.4
LCO	Las Campanas	2.80	28	*e*P	Pn	22 53 17.0	-0.5
BO04	La Punta	2.82	152	*e*P	Pn	22 53 18.4	+0.8
BO04				*e*S	Sn	22 53 50.1	-1.5
ACCO	Cerro Coronel	2.83	72	*e*P	Pn	22 53 19.6	+1.6
LMEL	Las Melosas	2.88	145	IAML		22 54 04.9	
	comp=E,352nm,0.7s						
ACDV	Cuesta del Vie	2.96	64	*e*P	Pb	22 53 23.9	-1.4
ACDV				*e*S	Sg	22 54 07.0	-0.5
ACDV				IAML		22 54 15.1	
	comp=Z,201nm,1.2s						
ZON	Zonda	3.00	92	*e*P	Pn	22 53 21.6	+1.4
ZON				IAML		22 54 19.6	
	comp=Z,161nm,0.6s						
BO01	Tunca	3.03	162	*e*P	Pn	22 53 21.0	+0.5
BO01				*e*S	Sn	22 53 53.9	-2.9
BO01				IAML		22 54 11.6	
	comp=E,158nm,0.5s						
BO01	Tunca	3.03	162	*e*P	Pn	22 53 21.2	+0.8
BO01				*e*S	Sb	22 54 03.5	0.0
BO01				IAML		22 54 11.2	
	comp=Z,265nm,0.9s						
ASAL	Salagasta	3.05	112	*e*P	Pn	22 53 23.5	+2.7
RTCV	Cerro Valdivia	3.13	98	*e*P	Pn	22 53 23.9	+1.9
RTLL	Cerro Villicun	3.18	88	*e*P	Pn	22 53 24.4	+1.8
RTLL				*e*S	Sg	22 54 12.5	-2.2
AAGR	Agrelo	3.26	120	*e*P	Pn	22 53 25.5	+1.8
BO02	Sierra Bellavi	3.49	161	*e*P	Pn	22 53 27.3	+0.5
BO02				*i* S	Sn	22 54 05.5	-2.8
BO02	Sierra Bellavi	3.49	161	*e*P	Pn	22 53 28.0	+1.2
BO02				IAML		22 54 26.7	
	comp=Z,280nm,0.7s						
GO05	Huala	3.50	176	*e*P	Pn	22 53 26.9	-0.1
GO05				*e*S	Sn	22 54 03.6	-5.0
GO05				IAML		22 54 43.6	
	comp=E,97nm,0.5s						
GO05	Huala	3.50	176	*e*P	Pn	22 53 27.0	-0.1
AVFE	Valle Fertil	4.15	80	*e*P	Pn	22 53 37.7	+1.7
AVFE				IAML		22 54 47.2	
	comp=Z,162nm,2.3s						
VCA	Vinchina	4.42	52	*e*P	Pn	22 53 38.0	-1.7
VCA				*e*S	Sb	22 54 42.5	-1.2
VCA				IAML		22 55 10.9	
	comp=Z,162nm,1.6s						
RFA	San Rafael	4.52	137	*e*P	Pn	22 53 38.0	-3.0
RFA				*e*S	Sb	22 54 50.5	+4.1
RFA				*e*S	Sg	22 54 51.0	-6.5
RFA				IAML		22 54 57.4	
	comp=Z,91nm,1.2s						
ACHE	Chepes	4.74	87	*e*P	Pn	22 53 47.0	+2.8
ACLC	CERRO LA CRUZ	4.97	67	*e*P	Pn	22 53 42.5	-4.9
ACLC				*e*P	Pn	22 53 48.1	+0.7
ACLC				IAML		22 54 52.8	
	comp=Z,170nm,0.8s						
APLL	PUNTA DE LOS L	4.99	79	*e*P	Pn	22 53 48.6	+1.2
AC02	Maricunga	5.37	31	*e*P	Pn	22 53 51.0	-2.0
H03N1	Juan Fernandez	6.00	249	T	T	23 00 46.5	
	baz=78,slow=72						
H03N3	Juan Fernandez	6.01	249	T	T	23 00 41.9	
	baz=78,slow=72						
H03N2	Juan Fernandez	6.01	249	T	T	23 00 43.0	
	baz=78,slow=72						
PLCA	Paso Flores	9.31	172	P	Pn	22 54 47.9	+1.2
	comp=Z,0.3nm,0.3s,baz=335,slow=12,SNR=8.7						
PLCA	Paso Flores	9.31	172	*e*P	Pn	22 54 50.0	+3.3
LVC	Limon Verde	9.33	19	P	Pn	22 55 03.3	+16
	comp=Z,0.3nm,0.3s,baz=197,slow=14,SNR=1.9						
CPUP	Villa Florida	14.00	72	P	Pn	22 55 54.2	+3.3
	comp=Z,0.1nm,0.3s,baz=270,slow=11,SNR=1.8						
SIV	San Ignacio	18.47	36	P	Pn	22 56 54.4	+5.8
	comp=Z,0.1nm,0.3s,baz=203,slow=13,SNR=4.8						
VNA3	Neumayer Olymp	51.72	159	P	P	23 01 42.5	+3.1
VNA2	Neumayer--Watz	52.36	158	P	P	23 01 47.1	+2.9
	baz=291,slow=8.9						
SNAA	Sanae	53.95	159	P	P	23 01 58.6	+2.6
TXAR	Lajitas Array	67.50	330	P	P	23 03 34.4	+5.5
	comp=Z,0.3nm,0.6s,baz=155,slow=6.9,SNR=3.6						
NVAR	Mina Array Bea	81.77	325	P	P	23 04 57.7	+6.1
	comp=Z,0.4nm,0.6s,baz=144,slow=5.2,SNR=3.3						
H11S2	WAKE ISLAND Hy	125.64	271	T	T	01 30 23.5	
	baz=116,slow=75,SNR=4.3						
H11S1	WAKE ISLAND Hy	125.65	271	T	T	01 30 20.8	
	baz=116,slow=75,SNR=4.9						
H11S3	WAKE ISLAND Hy	125.66	271	T	T	01 30 25.8	
	baz=116,slow=75,SNR=4.1						
ZALV	Zalesovo Beam	152.16	30	PKPbc	PKPbc	23 12 26.8	-0.9
	comp=Z,0.7nm,0.4s,baz=333,slow=1.9,SNR=3.8						

*IDC **18** 22:53:32.5±1.1, 29°.26S×178°.88W, h0^{km}, mb4.1/4, mb1 4.3/4, mb1mx3.7/39, mbtmp4.1/4, Error ellipse: s-maj=53.1km s-min=18.9km az=176.0*
ISC 18 22:53:33.3±1.2**, 29°.0S**±0°.5×**178°.8W**±0°.1**, h10**^{km}**, n7, σ0^{s}51**/8**, mb4.1**/4**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	0.84	108	Pn	Pn	22 53 51.5	+0.3
	72nm,0.3s,baz=270,slow=20,SNR=4.4						
RAO				Sn	Sb	22 54 01.1	-0.2
	138nm,0.3s,baz=115,slow=17,SNR=4.2						
STKA	Stephens Creek	34.11	255	P	P	23 00 18.1	-0.2
	3.5nm,0.8s,baz=90,slow=10,SNR=6.2						
ASAR	Alice Springs	42.47	266	P	P	23 01 28.9	0.0
	1.4nm,0.7s,baz=108,slow=7.6,SNR=10						
WRA	Warramunga Arr	43.33	271	P	P	23 01 36.1	+0.3
	2.8nm,1.0s,baz=111,slow=8.0,SNR=8.6						
FITZ	Fitzroy Crossi	51.65	269	P	P	23 02 40.6	+0.1
	3.7nm,1.0s,baz=115,slow=7.5,SNR=3.6						
FINES	FINESS Array B	143.58	340	PKP	PKPdf	23 13 06.8	-0.9
	3.6nm,1.0s,baz=332,slow=4.7,SNR=4.0						
AKASG	Malin Array Be	149.75	324	PKPbc	PKiKP	23 13 24.6	+0.5
	0.2nm,0.3s,baz=46,slow=1.9,SNR=4.1						

IDC 18 22:56:03.5±6.1**, 29°.11S**×**178°.55W, h0**^{km}**, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.5**/37**, mbtmp3.7**/3**, MS3.7**/1**, Ms1 3.7**/1**, ms1mx3.0**/40**, Error ellipse: s-maj=308.4km s-min=91.7km az=165.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	9.81	200	LR	LR	23 01 32.8	
	comp=Z,465nm,20.3s,baz=31,slow=34						
ASAR	Alice Springs	42.71	266	P	P	23 04 01.6	-1.0
	0.5nm,0.9s,baz=96,slow=7.5,SNR=2.8						
WRA	Warramunga Arr	43.58	271	P	P	23 04 09.8	+0.2
	0.6nm,0.7s,baz=111,slow=7.6,SNR=2.6						
FITZ	Fitzroy Crossi	51.89	269	P	P	23 05 14.6	+0.4
	2.7nm,1.0s,baz=122,slow=9.5,SNR=2.7						
FINES	FINESS Array B	143.77	340	PKP	PKPdf	23 15 39.3	-0.6
	2.5nm,1.0s,baz=80,slow=3.1,SNR=3.5						

*THE **18** 23:16:48.7, 38°.54N×20°.52E, h16^{km}±1^{km}, ML3.0/8, Error ellipse: s-maj=1.9km s-min=0.4km az=58.0*
*BEO **18** 23:16:49.0±1.3, 38°.55N×20°.12E, h0^{km}, ML3.0/4*
*ATH **18** 23:16:49.0, 38°.55N×20°.53E, h15^{km}±3^{km}, ML2.9/2, Error ellipse: s-maj=4.0km s-min=1.0km az=94.0*
ISC 18 23:16:48.8±0.8**, 38°.55N**±0°.03×**20°.49E**±0°.06**, h14**^{km}±6^{km}**, n22, σ0^{s}62**/44**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FSK	Fiskardo	0.10	145	P	Pg	23 16 51.6	-0.4
FSK				S	Sg	23 16 53.5	-0.7
FSK				AML	AML	23 16 53.7	
	comp=E,35550µm,0.2s						
FSK				AML	AML	23 16 53.8	
	comp=N,18683µm,0.3s						
EVGI	Lefkada island	0.15	61	P	Pg	23 16 52.5	-0.1
EVGI				S	Sg	23 16 55.0	-0.3
	comp=N,19µm,0.1s						
EVGI	Lefkada island	0.15	61	P	Pg	23 16 52.6	-0.1
EVGI				S	Sg	23 16 55.2	-0.1
DRAG	Dragano-Lefkad	0.15	27	P	Pg	23 16 52.7	+0.1
DRAG				S	Sg	23 16 55.5	+0.2
	comp=N,34µm,0.2s						
DRAG	Dragano-Lefkad	0.15	27	P	Pg	23 16 52.8	+0.1
DRAG				S	Sg	23 16 55.7	+0.4
NYDR	Nydri-Lefkada	0.24	45	P	Pg	23 16 53.9	0.0
NYDR				S	Sg	23 16 57.5	+0.1
	comp=N,2µm,0.4s						
KEF4	Livadi, Kephal	0.29	190	P	Pg	23 16 54.8	-0.1
KEF4				S	Sb	23 16 59.9	-0.5
	comp=N,13µm,0.3s						
KEF4	Livadi, Kephal	0.29	190	P	Pg	23 16 55.1	+0.2
KEF4				S	Sb	23 17 00.1	-0.3
DMLN	Damoulianata-K	0.32	196	P	Pg	23 16 55.3	-0.1
DMLN				S	Sg	23 17 00.6	+0.8
	comp=N,1µm,0.4s						
DMLN	Damoulianata-K	0.32	196	P	Pg	23 16 55.1	-0.2
DMLN				S	Sg	23 17 00.7	+0.8
LXRA	Lixouri, Kepha	0.35	186	P	Pg	23 16 56.0	+0.2
LXRA				S	Sb	23 17 01.8	-0.2
KEF3	Kipouria, Keph	0.36	198	P	Pg	23 16 55.4	-0.7
KEF3				S	Sg	23 17 01.5	+0.5
	comp=N,3µm,0.4s						
KEF3	Kipouria, Keph	0.36	198	P	Pg	23 16 55.6	-0.4
KEF3				S	Sg	23 17 01.6	+0.6
ARGA	Argostoli. Kep	0.37	181	P	Pb	23 16 57.2	+0.1
ARGA				S	Sb	23 17 03.0	+0.4
VLS	Valsamata	0.38	167	P	Pg	23 16 56.1	-0.3
VLS				S	Sg	23 17 01.5	-0.1
	comp=N,2µm,0.3s						
VLS	Valsamata	0.38	167	P	Pg	23 16 56.0	-0.4
VLS				S	Sg	23 17 02.0	+0.5
VLS				AML	AML	23 17 02.6	
	comp=E,2655µm,0.4s						
VLS				AML	AML	23 17 02.9	
	comp=N,3327µm,0.4s						
PSDA	Pessada-Kefalo	0.44	170	P	Pg	23 16 57.1	-0.4
PSDA				S	Sg	23 17 04.0	+0.6
	comp=N,198nm,0.3s						
PSDA	Pessada-Kefalo	0.44	170	P	Pg	23 16 57.3	-0.2
PSDA				S	Sb	23 17 04.3	-0.4
TREB	Trebinje	4.47	339	*e*Pn	Pn	23 17 56.3	+0.2
TREB				*e*Sn	Sn	23 18 46.7	-1.2
SJES	Sjenica	4.73	355	*e*Pn	Pn	23 18 01.1	+1.4
SJES				*e*Sn	Sn	23 18 55.5	+1.2
STON	Ston	4.81	335	*e*Pn	Pn	23 18 00.2	-0.5
STON				*e*Sn	Sn	23 18 54.6	-1.6
DIVS	Divibare	5.56	356	*e*Pn	Pn	23 18 12.2	+1.1
DIVS				*e*Sn	Sn	23 19 13.7	-1.1

*NEIC **18** 23:30:07.3±1.0, 39°.69N±0°.05×141°.71E±0°.10, h58^{km}±9^{km}, mb4.1/11, Error ellipse: s-maj=11.2km s-min=7.6km az=91.0*
*JMA **18** 23:30:07.6, 39°.65N×141°.87E, h66^{km}±1^{km}, M3.9 Broadband fault plane solution: P waves. NP1: ϕ_s105.00000°, δ34.00000°, λ170.00000°. NP2: ϕ_s204.00000°, δ84.00000°, λ57.00000°. Principal axes: T Plg41.0000°, Azm83.0000°; N Plg33.0000°, Azm208.0000°; P Plg31.0000°, Azm321.0000°;*
JMA Felt II J1.
*IDC **18** 23:30:08.8±2.2, 39°.66N×141°.83E, h80^{km}±19^{km}, mb3.5/11, mb1 3.6/14, mb1mx3.5/56, mbtmp3.8/14 Error ellipse: s-maj=22.3km s-min=14.4km az=104.0*
ISC 18 23:30:07.3±0.7**, 39°.66N**±0°.03×**141°.86E**±0°.06**, h66**^{km}±5^{km}**, n64, σ1^{s}13**/73**, mb4.0**/16**, 9C-3D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	0.09	201	⇑P	Pn	23 30 17.6	+0.6
MIYJ				S	Sn	23 30 24.7	+0.6
JTH	Tanohata	0.28	0	⇑P	Pn	23 30 18.4	+0.5
JTH				S	Sn	23 30 26.1	+0.5
JOM	Ohasama	0.48	247	⇑P	Pn	23 30 19.9	+0.4
JOM				S	Sn	23 30 29.0	+0.5
JKZ	Kuzumaki	0.52	309	⇑P	Pn	23 30 20.6	+0.6
JKZ				S	Sn	23 30 29.9	+0.5
OFUJ	Ofunato	0.60	195	⇓P	Pn	23 30 21.1	+0.3
OFUJ				S	Sn	23 30 31.0	+0.4
JANG	Nango	0.76	340	⇑P	Pn	23 30 22.9	+0.3
JANG				S	Sn	23 30 34.4	+0.4
JMK	Ichinoseki	0.86	215	⇑P	Pn	23 30 24.2	+0.3
JMK				S	Sn	23 30 36.7	+0.6
JRG	Rokugo	0.98	255	⇑P	Pn	23 30 25.8	+0.4
JRG				S	Sn	23 30 40.3	+1.5
JAH	Hinai	1.08	300	⇑P	Pn	23 30 27.3	+0.7
JAH				S	Sn	23 30 42.3	+1.3
JIO	Ouri	1.27	199	⇓P	Pn	23 30 29.2	+0.2
JIO				S	Sn	23 30 45.5	+0.2
JTM	Tenmabayashi	1.28	332	⇓P	Pn	23 30 29.7	+0.5
JTM				S	Sn	23 30 46.5	+0.9
JTM	Tenmabayashi	1.28	332	Pn	Pn	23 30 29.7	+0.5
JTM				Sn	Sn	23 30 45.7	+0.1
JYK	Kaneyama	1.38	238	⇑P	Pn	23 30 31.1	+0.6
JYK				S	Sn	23 30 49.2	+1.2
JMM	Marumori	1.98	205		Pn	23 30 38.6	+0.1
ERM	Erimo	2.55	22	Pn	Pn	23 30 46.9	+0.6
JSD	Sado	3.25	241	Pn	Pn	23 30 55.7	-0.1
JYT	Yasato	3.67	202	Pn	Pn	23 31 01.0	-0.6
MAJO	Matsushiro	4.24	224		Pn	23 31 08.9	-0.5
MAT	Matsushiro	4.24	224	P	Pn	23 31 12.0	+2.6
MAT				*e*S	Sn	23 32 02.6	+4.9
MJAR	Matsushiro Arr	4.24	224	P	Pn	23 31 11.0	+1.6
	0.4nm,0.3s,baz=39,slow=13,SNR=14						
MJAR	Matsushiro Arr	4.24	224		Pn	23 31 10.1	+0.7
JKA	Kamikawa-asahi	4.49	7		Pn	23 31 12.8	+0.1
ASAJ	Asahikawa	4.49	7	P	Pn	23 31 13.2	+0.5
	1.9nm,0.3s,baz=232,slow=18,SNR=4.2						
ASAJ				S	Sn	23 32 05.5	+1.9
	1.5nm,0.3s,baz=251,slow=30,SNR=1.4						
JWT	Wachi	6.74	232	Pn	Pn	23 31 42.1	-1.5
JHS	Saijyo	8.37	239	Pn	Pn	23 32 04.6	-1.3
USA0B	Ussuriysk Arra	8.64	305	Pn	Pn	23 32 09.3	-0.3
USRK	Ussuriysk Ar.	8.64	305	P	Pn	23 32 12.1	+2.6
	baz=114,slow=14,SNR=11						
USRK	Ussuriysk Ar.	8.64	305		Pn	23 32 09.4	-0.1
KSRS	Korea Array	11.14	263	P	Pn	23 32 48.6	+5.1
	0.9nm,0.3s,baz=88,slow=15,SNR=4.9						
BJT	Baijiatuau	19.72	279	P	P	23 34 27.6	-3.7
BJT				IAmb	IAmb	23 34 34.0	
	comp=Z,4.8nm,0.9s						
SONM	Songino Array	26.70	300	P	P	23 35 39.8	-0.5
	comp=Z,0.9nm,0.6s,baz=93,slow=8.9,SNR=6.0						
SONM	Songino Array	26.70	300	P	P	23 35 39.2	-1.1
SONM				IAmb	IAmb	23 35 41.8	
	comp=Z,2.0nm,1.4s						
H11N2	WAKE ISLAND Hy	29.29	125	T	T	00 06 41.5	
	baz=318,slow=75,SNR=254						
H11N1	WAKE ISLAND Hy	29.29	125	T	T	00 06 51.8	
	baz=318,slow=75,SNR=248						
H11N3	WAKE ISLAND Hy	29.30	125	T	T	00 06 48.7	
	baz=318,slow=75,SNR=166						
H11S1	WAKE ISLAND Hy	30.08	127	T	T	00 07 49.4	
	baz=319,slow=76,SNR=31						
H11S3	WAKE ISLAND Hy	30.08	127	T	T	00 07 47.2	
	baz=319,slow=76,SNR=40						
H11S2	WAKE ISLAND Hy	30.10	127	T	T	00 07 47.6	
	baz=319,slow=76,SNR=19						
ZAA0	Zalesovo Array	40.45	310	P	P	23 37 38.8	-0.2
ZAA0				IAmb	IAmb	23 37 39.5	
	comp=Z,4.5nm,0.7s						
ZALV	Zalesovo Beam	40.45	310	P	P	23 37 39.1	+0.1
	comp=Z,5.3nm,0.6s,baz=94,slow=8.5,SNR=27						
ZALV	Zalesovo Beam	40.45	310	P	P	23 37 38.7	-0.3
MK31	Makanchi Array	43.07	300	P	P	23 37 60.0	-0.6
MK31				IAmb	IAmb	23 38 01.2	
	comp=Z,2.2nm,0.8s						
MKAR	Makanchi Array	43.07	300	P	P	23 38 00.4	-0.2
	comp=Z,1.8nm,0.6s,baz=84,slow=11,SNR=21						
MKAR	Makanchi Array	43.07	300	P	P	23 37 59.9	-0.6
MAKZ	Makanchi	43.28	300	P	P	23 38 01.7	-0.6
MAKZ				IAmb	IAmb	23 38 28.8	
	comp=Z,7.4nm,1.4s						
KURK	Kurchatov	44.63	306	P	P	23 38 12.1	-0.8
KURK				IAmb	IAmb	23 38 13.4	
	comp=Z,4.4nm,0.9s						
IL31		47.10	34	P	P	23 38 33.5	+1.3
ILAR	Eielson Array	47.10	34	P	P	23 38 33.2	+1.0
	comp=Z,0.4nm,0.8s,baz=256,slow=5.3,SNR=4.5						
ILAR	Eielson Array	47.10	34	P	P	23 38 34.0	+1.8
KKAR	Karatay Array	52.15	298	P	P	23 39 10.9	-0.1
ARU	Arti	54.65	317	P	P	23 39 28.7	-0.2
ABKAR	Akbulak array	56.54	309	P	P	23 39 42.3	-0.4
ABKAR	Akbulak array	56.54	309	P	P	23 39 42.3	-0.4
WR0	Warramunga Arr	59.70	188	P	P	23 40 04.8	-0.1
WR0				IAmb	IAmb	23 40 12.0	
	comp=Z,6.7nm,1.4s						
WRA	Warramunga Arr	59.70	188	P	P	23 40 04.0	-1.0
	comp=Z,0.4nm,0.8s,baz=5.5,slow=7.4,SNR=6.4						
WRA	Warramunga Arr	59.70	188	P	P	23 40 04.4	-0.6
ASAR	Alice Springs	63.43	188	P	P	23 40 30.7	+0.6
	comp=Z,0.4nm,0.7s,baz=9.1,slow=8.2,SNR=2.3						
FINES	FINESS Array B	66.66	332	P	P	23 40 50.1	-0.5
	comp=Z,1.6nm,0.7s,baz=33,slow=4.5,SNR=4.9						
FINES	FINESS Array B	66.66	332	P	P	23 40 50.2	-0.4
KBZ	Khabaz	69.47	310	P	P	23 41 08.9	+0.4
	comp=Z,2.0nm,0.9s,baz=180,slow=2.8,SNR=4.1						
NOA	NORSAR Array B	71.91	337	P	P	23 41 22.4	-0.7
	comp=Z,0.4nm,0.6s,baz=36,slow=4.5,SNR=1.0						
AKASG	Malin Array Be	72.44	322	P	P	23 41 25.8	-0.6
	comp=Z,0.3nm,0.3s,baz=46,slow=6.3,SNR=2.1						
PDAR	Pinedale Array	75.59	46	P	P	23 41 45.4	+0.2
	comp=Z,0.1nm,0.4s,baz=356,slow=3.6,SNR=1.4						
CLL	Collm	79.00	330	*e*P	P	23 42 05.0	+1.2
CLL				*e*PcP	PcP	23 42 12.0	-0.1

*IDC **18** 23:38:59.8±0.6, 32°.19N×139°.97E, h119^{km}±4^{km}, mb3.6/16, mb1 3.8/18, mb1mx3.6/50, mbtmp4.0/18, Error ellipse: s-maj=16.5km s-min=8.7km az=76.0*
*JMA **18** 23:39:00.8±0.1, 32°.35N×140°.21E, h124^{km}±2^{km}, M4.0*
*NEIC **18** 23:39:00.0±2.8, 32°.24N±0°.05×140°.24E±0°.10, h120^{km}±4^{km}, mb4.5/34, Error ellipse: s-maj=12.7km s-min=7.0km az=71.0*
ISC 18 23:39:00.1±0.7**, 32°.27N**±0°.05×**140°.15E**±0°.06**, h124**^{km}±5^{km}**, n100, σ1^{s}01**/110**, mb4.3**/31**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	0.38	300	P	Pn	23 39 18.6	+0.8
JAOM				*e*S	Sn	23 39 32.0	+0.8
JHCJ	Hachijojimakas	0.85	340	*e*S	Sn	23 39 37.1	+0.2
JHJ2	Mitsune	0.88	341	P	Pn	23 39 21.9	+0.6
JHJ2				S	Sn	23 39 37.6	+0.2

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JHJ2  Mitsune            0.88 341          Pn     23 39 21.9 +0.6
JHJ2                                 Sn    Sn     23 39 37.6 +0.2
JHJ   Hachijo jima 2     0.90 340    P     Pn     23 39 22.0 +0.6
      698nm,0.3s,baz=1.1,slow=18,SNR=94
JHJ                                  S     Sn     23 39 37.6  -0.1
      805nm,0.3s,baz=65,slow=21,SNR=17
JMKN  Mikurajimanish     1.68 344    P     Pn     23 39 29.8  0.0
JMKN                                 eS    Sn     23 39 52.4  -0.2
BSO1  Boso 1             2.47  16    P     Pn     23 39 39.2 +0.1
BSO1                                 eS    Sn     23 40 09.0  -0.2
JIM2  Oshima 3           2.51 346    P     Pn     23 39 40.4 +0.3
JIM2                                 eS    Sn     23 40 10.1  -0.9
BSO3  Boso 3             2.54   7    P     Pn     23 39 40.4 +0.2
BSO3                                 eS    Sn     23 40 10.8  -0.4
TK02  Tokai 2            2.61 310    P     Pn     23 39 42.2 +1.0
JIZS  Izushimoda         2.66 337    P     Pn     23 39 42.6 +0.6
JOD2  Odawara 2          3.11 344    P     Pn     23 39 48.3 +0.4
JOD2                                 eS    Sn     23 40 24.6  -0.3
JRY   Ryogami san        3.88 345    P     Pn     23 39 58.7 +0.7
JRY                                  eS    Sn     23 40 42.1  -0.8
JYT   Yasato             3.95   0    Pn    Pn     23 39 58.0  -0.8
INU   Inuyama            4.03 320    Pn    Pn     23 40 00.8 +0.9
JGF   Kuroka             4.05 326    Pn    Pn     23 40 01.2 +0.9
JTNC  Tanabenakahech     4.11 293    P     Pn     23 40 01.6 +0.4
JTNC                                 S     Sn     23 40 47.7  -0.9
MJAR  Matsushiro Arr     4.55 340    P     Pn     23 40 08.6 +1.6
      0.4nm,0.3s,baz=165,slow=12,SNR=3.3
MJAR                                 S     Sn     23 40 58.3  -0.7
      0.6nm,0.3s,baz=134,slow=16,SNR=6.8
MAT   Matsushiro         4.55 340    P     Pn     23 40 09.2 +2.2
MAT                                  S     Sn     23 40 58.1  -1.0
JWT   Wachi              4.97 308    Pn    Pn     23 40 13.8 +1.3
JCJ   Chichijima         5.45 161    P     Pn     23 40 18.9  -0.2
      6.7nm,0.3s,baz=351,slow=20,SNR=6.3
JCJ                                  S     Sn     23 41 18.9  -1.9
      21nm,0.3s,baz=273,slow=23,SNR=9.0
JCJ   Chichijima         5.45 161          Pn     23 40 17.6  -1.6
JMN   Monobe             5.47 287          Pn     23 40 19.8 +0.5
JMM   Marumori           5.61   5          Pn     23 40 19.6  -1.5
JSD   Sado               5.96 345    Pn    Pn     23 40 25.0  -0.9
JHS   Saijyo             6.47 297    Pn    Pn     23 40 34.6 +1.8
JTM   Tenmabayashi       8.53   5    Pn    Pn     23 40 58.3  -2.2
ERM   Erimo             10.02  13    Pn    Pn     23 41 18.2  -2.3
USA0B Ussuriysk Arra    13.52 334    Pn    Pn     23 42 05.9  -0.8
KLR   Kul'dur           18.08 342    P     P      23 42 60.0  -1.9
      0.5nm,0.3s,baz=142,slow=12,SNR=8.7
YHNB  Yeheng            18.15 250    P     P      23 43 02.5  -0.4
YHNB                                 IAmb  IAmb   23 43 04.0
      comp=Z,66nm,1.4s
YULB  Yu-li             18.86 247          P      23 43 11.1 +0.5
YULB                                 IAmb  IAmb   23 43 27.9
      comp=Z,23nm,1.2s
TPUB  Ta-pu             19.42 247    P     P      23 43 17.6 +0.8
TPUB                                 IAmb  IAmb   23 43 27.1
      comp=Z,27nm,1.2s
H11N2 WAKE ISLAND Hy    27.00 111    T     T      00 13 30.3
H11N1 WAKE ISLAND Hy    27.01 111    T     T      00 13 30.3
H11N3 WAKE ISLAND Hy    27.02 111    T     T      00 13 29.1
      SNR=6.4
H11S3 WAKE ISLAND Hy    27.53 113    T     T      00 13 42.2
      baz=305,slow=75,SNR=9.0
H11S1 WAKE ISLAND Hy    27.53 113    T     T      00 13 41.5
      baz=305,slow=75,SNR=11
H11S2 WAKE ISLAND Hy    27.55 113    T     T      00 13 43.7
      baz=305,slow=75,SNR=4.0
SONM  Songino Array     29.87 311    P     P      23 44 57.1 +1.3
      comp=Z,0.3nm,0.5s,baz=120,slow=8.8,SNR=2.4
CMAR  Chiang Mai Arr    39.45 260    P     P      23 46 17.2  -1.2
      comp=Z,0.5nm,0.3s,baz=44,slow=7.0,SNR=4.1
ZALV  Zalesovo Beam     44.48 316    P     P      23 46 59.1 +0.3
      comp=Z,0.5nm,0.4s,baz=117,slow=8.3,SNR=2.6
ZALV                                 PcP   PcP    23 48 39.8  -0.2
      comp=Z,1.5nm,0.7s,baz=67,slow=3.9,SNR=5.6
MTN   Manton Dam        45.68 192    P     P      23 47 07.3  -1.3
MTN                                  IAmb  IAmb   23 47 09.3
      comp=Z,14nm,1.4s
MK31  Makanchi Array    45.91 306    P     P      23 47 09.4  -0.8
MKAR  Makanchi Array    45.91 306    P     P      23 47 09.4  -0.8
      comp=Z,0.7nm,0.8s,baz=88,slow=9.0,SNR=6.4
MKAR  Makanchi Array    45.91 306    P     P      23 47 09.2  -1.0
MAKZ  Makanchi          46.13 306    P     P      23 47 11.1  -0.9
MAKZ                                 IAmb  IAmb   23 47 35.6
      comp=Z,11nm,1.4s
SDPT  Sand Point        46.95  42    P     P      23 47 17.9  -0.2
CHGN  Chignik           48.17  41    P     P      23 47 27.5  0.0
GSI   Gunungsitoli      50.53 241    P     P      23 47 44.7  -1.3
Q19K  Cape Douglas,     50.83  38    P     P      23 47 47.9 +0.2
WB0   Warramunga Arr    52.04 187    P     P      23 47 56.4  -0.6
WB0                                  IAmb  IAmb   23 47 57.9
      comp=Z,5.4nm,1.0s
WRA   Warramunga Arr    52.22 187    P     P      23 47 57.5  -0.9
      comp=Z,0.8nm,0.3s,baz=2.3,slow=7.7,SNR=24
WRA   Warramunga Arr    52.22 187    P     P      23 47 57.5  -0.9
GHO   Glory Hole Cre    53.19  34    P     P      23 48 06.4 +1.1
IL31                    54.09  30    P     P      23 48 11.9 +0.3
IL31                                 IAmb  IAmb   23 48 13.4
      comp=Z,12nm,1.5s
ILAR  Eielson Array     54.09  30    P     P      23 48 12.2 +0.5
      comp=Z,1.5nm,0.7s,baz=261,slow=6.6,SNR=18
ILAR                                 PcP   PcP    23 49 14.6  -0.2
      comp=Z,0.4nm,0.6s,baz=258,slow=3.4,SNR=4.6
ILAR  Eielson Array     54.09  30    P     P      23 48 11.7 +0.1
KKAR  Karatay Array     54.71 303    P     P      23 48 15.2  -1.3
BMAR  Burnt Mountain    55.02  27    P     P      23 48 20.3 +1.9
ASAR  Alice Springs     55.94 187    P     P      23 48 24.6  -0.8
      comp=Z,0.7nm,0.7s,baz=17,slow=11,SNR=8.2
ASAR  Alice Springs     55.94 187    P     P      23 48 25.1  -0.3
CHGR  Chuyangaron       56.87 298    P     P      23 48 31.1  -0.9
INK   Inuvik            59.10  26    P     P      23 48 48.1 +1.1
      comp=Z,1.6nm,0.5s,baz=300,slow=7.6,SNR=8.0
ARU   Arti              59.29 320    P     P      23 48 48.0  -0.5
ARU                                  IAmb  IAmb   23 48 49.1
      comp=Z,2.1nm,0.6s
ABKAR Akbulak array     60.28 312    P     P      23 48 54.6  -0.7
ABKAR Akbulak array     60.28 312    P     P      23 48 54.6  -0.7
FORT  Forrest           63.75 192    P     P      23 49 18.8 +0.2
STKA  Stephens Creek    63.82 179    P     P      23 49 19.5 +0.5
      comp=Z,0.8nm,0.3s,baz=11,slow=10,SNR=2.0
BBOO  Buckleboo         64.85 184    P     P      23 49 26.4 +0.7
BBOO                                 IAmb  IAmb   23 49 39.6
      comp=Z,13nm,1.4s
ARCES ARCESS Array B    68.09 340    P     P      23 49 46.2 +0.3
      comp=Z,3.2nm,1.0s,baz=53,slow=6.8,SNR=14
ARCES ARCESS Array B    68.09 340    P     P      23 49 46.3 +0.3
ARCES                                IAmb  IAmb   23 50 14.7
      comp=Z,9.3nm,1.2s
TOO   Toolangi          69.66 175    P     P      23 49 56.0  0.0
TOO                                  IAmb  IAmb   23 49 56.9
      comp=Z,7.9nm,0.9s
FIA1  FINESS Array S    72.54 333    P     P      23 50 12.8  -0.4
FIA1                                 IAmb  IAmb   23 50 14.8
      comp=Z,14nm,1.3s
FINES FINESS Array B    72.54 333    P     P      23 50 13.1  -0.1
      comp=Z,1.9nm,0.5s,baz=49,slow=6.7,SNR=26
KBZ   Khabaz            73.23 311    P     P      23 50 18.0 +0.4
      comp=Z,1.6nm,0.8s,baz=62,slow=4.5,SNR=4.4
PINE  Pine Mountain     74.25  48    P     P      23 50 25.5 +1.7
PINE                                 IAmb  IAmb   23 50 27.5
      comp=Z,7.8nm,0.8s
K05A  Summer Lake       74.81  49    P     P      23 50 28.9 +1.8
K05A                                 IAmb  IAmb   23 50 30.2
      comp=Z,8.1nm,0.9s
SUMG  Summit            75.43 360    P     P      23 50 31.8 +1.5
SUMG                                 IAmb  IAmb   23 50 32.6
      comp=Z,3.0nm,0.7s
WALA  Waterton Lakes    75.69  41    P     P      23 50 33.6 +1.7
BMO   Blue Mountains    75.96  46    P     P      23 50 35.2 +1.7
JTMT  Jette             76.19  42    P     P      23 50 36.5 +1.7
JTMT                                 IAmb  IAmb   23 50 52.9
      comp=Z,14nm,1.2s
PABE  Paberze           77.04 328    P     P      23 50 39.4 +0.2
AKASG Malin Array Be    77.43 323    P     P      23 50 40.9  -0.5
      comp=Z,0.6nm,0.4s,baz=48,slow=6.4,SNR=5.6
NC405 NORSAR Array S    77.95 337    P     P      23 50 43.4  -0.8
NC405                                IAmb  IAmb   23 50 44.7
      comp=Z,15nm,0.9s
NB2   NORSAR Subarra    78.17 337    P     P      23 50 45.3  -0.2
      comp=Z,1.5nm,0.6s,baz=42,slow=5.6
NOA   NORSAR Array B    78.17 337    P     P      23 50 45.2  -0.2
      comp=Z,2.0nm,0.6s,baz=43,slow=5.5,SNR=12
LRM   Limekiln Ridge    78.30  43    P     P      23 50 48.1 +1.3
NVAR  Mina Array Bea    78.71  52    P     P      23 50 50.9 +1.8
      comp=Z,1.2nm,0.7s,baz=283,slow=5.4,SNR=12
NVAR  Mina Array Bea    78.71  52    P     P      23 50 50.4 +1.3
ELK   Elko              79.45  48    P     P      23 50 54.6 +1.5
BURAR Bucovina Array    81.39 322    P     P      23 51 03.5 +0.3
RAYN  Ar Rayn           81.50 292    P     P      23 51 03.7  -0.4
PDAR  Pinedale Array    81.77  44    P     P      23 51 06.8 +1.4
      comp=Z,0.6nm,0.5s,baz=266,slow=1.6,SNR=6.9
PDAR  Pinedale Array    81.77  44    P     P      23 51 06.3 +0.9
SRU   San Rafael Swe    83.35  48    P     P      23 51 14.8 +1.2
SRU                                  IAmb  IAmb   23 51 16.1
      comp=Z,4.4nm,0.9s
CLL   Collm             84.69 330    eP    P      23 51 19.0  -0.9
TXAR  Lajitas Array     93.86  52    P     P      23 52 05.4 +1.5
      comp=Z,1.7nm,0.6s,baz=294,slow=2.8,SNR=22
TORD  Torodi Ar. Bea   119.84 312    PKP   PKPdf  23 57 36.0  -0.4
      comp=Z,0.2nm,0.5s,baz=31,slow=1.8,SNR=2.3
LPAZ  La Paz           149.83  65    PKPbc PKiKP  23 58 38.5 +0.7
      comp=Z,1.8nm,0.5s,baz=304,slow=25,SNR=5.6
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SOME ***19*** *00:00:39.6, 41°.15N×78°.73E, h5^{km}, MS3.3*
IDC ***19*** *00:00:39.1±0.7, 41°.01N×78°.77E, h0^{km}, mb3.9/13, mb1 3.9/19, mb1mx3.8/56, mbtmp3.8/19, ML3.1/6, MS3.8/1, Ms1 3.8/1, ms1mx2.7/62, Error ellipse: s-maj=13.6km s-min=10.7km az=54.0*
NEIC ***19*** *00:00:41.1±1.8, 41°.17N±0°.05×78°.84E±0°.05, h10^{km}±1^{km}, mb4.3/10, Error ellipse: s-maj=8.9km s-min=5.7km az=189.0*
KRNET ***19*** *00:00:41.1±0.1, 41°.15N×78°.78E, h15^{km}, mb4.3*
NNC ***19*** *00:00:43.4±0.9, 41°.25N×78°.74E, h0^{km}, mb4.7, mpv4.3, Error ellipse: s-maj=6.9km s-min=5.0km az=155.0*
ISC 19 00:00:42.8±1.2**, 41°.26N**±0°.03×**78°.76E**±0°.03**, h16**^{km}±8^{km}**, n145,** σ1^{s}.**87**/174**, mb4.1**/14**, 20C-27D,**
Kyrgyzstan-Xinjiang border region

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Code  Station Name       Δ°   AZ°    Phase ID         Time      Res
                                   Op     ISC       h  m  s    ISC
TARG  Taragay, Kyrgy     0.86 304         Pb        00 00 59.0  -0.7
TARG                                      Sg        00 01 12.0 +0.9
PRZ   Przheval'sk        1.26 348         Pb        00 01 06.7 +0.5
PRZ                                Sn     Sg        00 01 24.9 +1.4
PRZ   Przheval'sk        1.26 348⇓iP      Pb        00 01 06.8 +0.5
      baz=48
PRZ                                ⇓iS    Sg        00 01 25.7 +2.2
      baz=48
KDJ   Kajisay            1.47 307         Pb        00 01 09.8  -0.2
KDJ                                Sn     Sg        00 01 29.9  -0.4
KDJ   Kajisay            1.47 307⇑iP      Pb        00 01 09.7  -0.2
      baz=10.0
KDJ                                ⇑iS    Sg        00 01 30.2  -0.2
      baz=10.0
ANVS  Anan'yevo          1.73 332⇓iP      Pb        00 01 15.1 +0.8
      baz=33
ANVS                               ⇓iS    Sg        00 01 39.5 +0.9
      baz=33
SATY  Saty               1.82 352  eS     Sg        00 01 42.8 +1.3
      2μm,0.9s
SATY  Saty               1.82 352  Pg     Pb        00 01 16.6 +0.7
      167nm,0.5s
SATY                               Lg     Lg        00 01 43.6
      2μm,0.9s
SATY  Saty               1.82 352  eP     Pb        00 01 16.8 +0.9
      baz=52
SATY                               eS     Sg        00 01 42.8 +1.3
      baz=52
SATY  Saty               1.82 352  eP     Pb        00 01 16.8 +0.9
      167nm,0.5s
UZB   Uzynbulak          1.90   6  eS     Sg        00 01 45.3 +1.2
      1μm,0.8s
UZB   Uzynbulak          1.90   6  Pg     Pb        00 01 17.7 +0.5
      165nm,0.4s
UZB                                Lg     Lg        00 01 45.3
UZB   Uzynbulak          1.90   6  eP     Pb        00 01 17.7 +0.5
      baz=5.0
UZB                                eS     Sg        00 01 45.3 +1.2
      baz=5.0
UZB   Uzynbulak          1.90   6  eP     Pb        00 01 17.7 +0.5
      165nm,0.4s
ULHL  Ulahol             2.13 299  P      Pb        00 01 21.2  0.0
      SNR=138
ULHL  Ulahol             2.13 299⇓eP      Pb        00 01 20.6  -0.5
      baz=1.0
ULHL                               ⇓iS    Sb        00 01 48.6 +1.2
      baz=1.0
PDGK  Podgornoye         2.14  14  Pg     Pb        00 01 21.4 +0.1
      73nm,0.3s
PDGK                               Lg     Lg        00 01 51.8
      1μm,0.6s
PDGK  Podgornoye         2.14  14 ⇓Pn     Pb        00 01 21.6 +0.2
      166nm,0.4s
PDGK                              ⇑Lg     Lg        00 01 53.0
      3μm,0.7s
KPKS  Kokpek             2.21 359  eS     Sg        00 01 54.2 +0.2
      3μm,0.6s
KPKS  Kokpek             2.21 359  eP     Pb        00 01 22.9 +0.4
      63nm,0.3s
TNSS  Tian-Shan          2.23 323  eP     Pb        00 01 23.2 +0.2
      215nm,0.4s
TNSS                               eS     Sg        00 01 55.0 +0.3
      1μm,0.8s
TNSS  Tian-Shan          2.23 323  Pg     Pb        00 01 23.2 +0.2
      215nm,0.4s
TNSS                               Lg     Lg        00 01 55.0
      1μm,0.8s
KURS  Kuram              2.27 349  eS     Sg        00 01 57.0 +1.1
      534nm,0.6s
KURS  Kuram              2.27 349  Pg     Pb        00 01 24.6 +1.1
      116nm,0.8s
KURS                               Lg     Lg        00 01 57.0
      534nm,0.6s
KURS  Kuram              2.27 349  eP     Pb        00 01 24.6 +1.1
      116nm,0.8s
MDOK  Medeo              2.29 327  eP     Pb        00 01 24.1 +0.2
      314nm,0.2s
MDOK                               eS     Sg        00 01 56.3  -0.3
      1μm,0.6s
MDOK  Medeo              2.29 327 ⇓Pn     Pb        00 01 23.6  -0.3
      229nm,0.5s
MDOK                              ⇑Lg     Lg        00 01 56.6
      1μm,0.7s
MDOK  Medeo              2.29 327  Pg     Pb        00 01 24.0 +0.2
      314nm,0.2s
MDOK                               Lg     Lg        00 01 56.3
      1μm,0.6s
KOTS  Kotyrbulak         2.33 329  eP     Pb        00 01 24.9 +0.5
      348nm,0.2s
KOTS                               eS     Sg        00 01 57.9 +0.3
      3μm,0.4s
KOTS  Kotyrbulak         2.33 329  Pg     Pb        00 01 24.9 +0.5
      348nm,0.2s
KOTS                               Lg     Lg        00 01 57.9
      3μm,0.4s
KNDC  Almaty             2.37 326 ⇑Pn     Pb        00 01 25.2 +0.1
      620nm,0.6s
KNDC                              ⇑Lg     Lg        00 02 00.1
      4μm,0.6s
AAA   Alma-Ata           2.38 326  eS     Sg        00 02 00.5 +1.0
      4μm,0.7s
AAA   Alma-Ata           2.38 326  Pg     Pb        00 01 26.6 +1.1
      937nm,0.4s
AAA                                Lg     Lg        00 02 00.5
      4μm,0.7s
AAA   Alma-Ata           2.38 326  eP     Pb        00 01 26.6 +1.1
      937nm,0.4s
BOOM  Boomskoye usch     2.44 301         Pn        00 01 24.1 +1.9
BOOM  Boomskoye usch     2.44 301⇑iP      Pb        00 01 24.5  -1.9
      baz=3.0
BOOM                               ⇑iS    Sb        00 01 56.3  0.0
      baz=3.0
KTMS  Ketmen             2.49  28  eS     Sg        00 02 02.4  -0.4
      1μm,0.6s
KTMS  Ketmen             2.49  28  Pg     Pb        00 01 27.7 +0.5
      154nm,0.4s
KTMS                               Lg     Lg        00 02 02.4
      1μm,0.6s
KTMS  Ketmen             2.49  28  eP     Pb        00 01 27.7 +0.5
      154nm,0.4s
MTBS  Maitube            2.55 318  eS     Sg        00 02 03.9  -0.9
      630nm,0.4s
MTBS  Maitube            2.55 318  Pg     Pb        00 01 28.6 +0.4
      42nm,0.3s
MTBS                               Lg     Lg        00 02 03.9
      630nm,0.4s
MTBS  Maitube            2.55 318  eP     Pb        00 01 28.6 +0.4
      42nm,0.3s
KSH   Kashi              2.75 232  Pn     Pg        00 01 36.0 +0.5
KSH                                Sn     Sg        00 02 15.5 +4.4
KSH                                pmax   pmax
      comp=Z,150nm,0.9s
KSH                                smax   smax
      comp=N,190nm,0.8s
KSH                                smax   smax
      comp=E,360nm,1.0s
BLB   Baldybastay        2.85 356  Pg     Pb        00 01 34.1 +0.7
      comp=E,199nm,0.4s
BLB                                Lg     Lg        00 02 13.6
      comp=E,1μm,0.2s
TKM2  Tokmak 2           2.88 306  P      Pb        00 01 31.6  -2.4
      SNR=39
TKM2  Tokmak 2           2.88 306 ⇓Pn     Pb        00 01 31.4  -2.6
      comp=E,44nm,0.6s
TKM2                              ⇓Lg     Lg        00 02 14.2
      comp=E,280nm,0.6s
TKM2  Tokmak 2           2.88 306⇑iP      Pn        00 01 31.0 +2.7
      baz=8.0
TKM2                               ⇑iS    Sb        00 02 07.2  -1.9
      baz=8.0
DGS   Degeres            2.98 313  eP     Pb        00 01 36.0 +0.5
      comp=E,34nm,0.6s
DGS                                eS     Sg        00 02 16.8  -1.7
      comp=E,316nm,0.9s
DGS   Degeres            2.98 313  Pg     Pb        00 01 36.0 +0.5
      comp=E,34nm,0.6s
DGS                                Lg     Lg        00 02 16.8
      comp=E,316nm,0.9s
ARXS  Arharly            3.04 347  eS     Sg        00 02 20.2  -0.1
      comp=E,1μm,0.6s
ARXS  Arharly            3.04 347  Pg     Pb        00 01 37.9 +1.4
      comp=E,96nm,0.7s
ARXS                               Lg     Lg        00 02 20.2
      comp=E,1μm,0.6s
ARXS  Arharly            3.04 347  eP     Pb        00 01 37.9 +1.4
      comp=E,96nm,0.7s
DJR   Jarkent            3.17  14  eS     Sg        00 02 22.7  -1.9
      comp=E,399nm,0.4s
DJR   Jarkent            3.17  14  Pg     Pb        00 01 39.4 +0.6
      comp=E,31nm,0.4s
DJR                                Lg     Lg        00 02 22.7
      comp=E,399nm,0.4s
DJR   Jarkent            3.17  14  eP     Pb        00 01 39.4 +0.6
      comp=E,31nm,0.4s
KBK   Karagaybulak       3.17 297  P      Pn        00 01 35.5 +3.3
      SNR=19
KBK   Karagaybulak       3.17 297⇓eP      Pn        00 01 34.5 +2.3
      baz=99
KBK                                ⇓iS    Sn        00 02 13.5 +3.8
      baz=99
KUU   Kurty              3.19 327  eP     Pb        00 01 39.6 +0.6
      comp=E,72nm,0.9s
KUU                                eS     Sg        00 02 23.2  -1.9
      comp=E,492nm,0.5s
KUU   Kurty              3.19 327  Pg     Pb        00 01 39.6 +0.6
      comp=E,72nm,0.9s
KUU                                Lg     Lg        00 02 23.2
      comp=E,492nm,0.5s
UCH   Uchtor             3.32 288  P      Pn        00 01 36.5 +2.0
      SNR=14
UCH   Uchtor             3.32 288⇓eP      Pn        00 01 36.8 +2.3
      baz=90
UCH                                ⇓iS    Sn        00 02 17.3 +3.4
      baz=90
FRU1  Bishkek            3.44 298         Pn        00 01 37.1 +1.2
FRU1  Bishkek            3.44 298⇑iP      Pn        00 01 38.9 +3.0
      baz=0.0
FRU1                               ⇑iS    Sn        00 02 20.8 +4.4
      baz=0.0
CHMS  Chumysh            3.45 302  P      Pb        00 01 44.2 +0.6
      SNR=13
CHMS  Chumysh            3.45 302⇑iP      Pn        00 01 38.8 +2.8
      baz=3.0
CHMS                               ⇑iS    Sn        00 02 20.4 +3.9
      baz=3.0
AAK   Ala-Archa          3.47 295  Pn     Pn        00 01 39.4 +3.1
      comp=E,1.6nm,0.3s,baz=124,slow=9.3,SNR=47
AAK                                Pg     Pb        00 01 45.3 +1.3
      comp=E,9.3nm,0.3s,baz=126,slow=8.8,SNR=32
AAK                                Lg     Lg        00 02 33.3
      comp=E,8.1nm,0.3s,baz=198,slow=20,SNR=9.7
AAK   Ala-Archa          3.47 295  P      Pn        00 01 39.6 +3.3
      SNR=15
AAK   Ala-Archa          3.47 295 ⇑Pn     Pn        00 01 39.5 +3.3
      comp=E,9.5nm,0.7s
AAK                               ⇓Pg     Pb        00 01 45.3 +1.3
      comp=E,43nm,0.7s
AAK                               ⇓Lg     Lg        00 02 32.2
      comp=E,209nm,0.8s
AAK   Ala-Archa          3.47 295  Pn     Pn        00 01 38.0 +1.8
AAK   Ala-Archa          3.47 295⇓iP      Pn        00 01 39.0 +2.7
      baz=96
AAK                                ⇓iS    Sn        00 02 20.8 +3.7
      baz=96
USP   Ospenovka          3.75 304  P      Pb        00 01 50.6 +2.0
      SNR=14
USP   Ospenovka          3.75 304⇓eP      Pn        00 01 42.8 +2.8
      baz=5.0
USP                                ⇓iS    Sn        00 02 27.3 +3.5
      baz=5.0
TDK   Taldyqorghan       3.75 356  eS     Sg        00 02 41.9  -1.4
      comp=E,614nm,0.5s
TDK   Taldyqorghan       3.75 356  Pg     Pb        00 01 50.6 +1.8
      comp=E,98nm,0.9s
TDK                                Lg     Lg        00 02 41.9
      comp=E,614nm,0.5s
TDK   Taldyqorghan       3.75 356  eP     Pb        00 01 50.5 +1.8
      comp=E,98nm,0.9s
AML   Almayashu          3.89 285  P      Pn        00 01 44.9 +2.5
      SNR=7.0
AML   Almayashu          3.89 285⇓iP      Pn        00 01 44.6 +2.3
      baz=86
AML                                ⇓iS    Sn        00 02 30.7 +2.8
      baz=86
EKS2  Erkin-Say          3.97 292  P      Pn        00 01 46.4 +3.2
      SNR=9.8
EKS2  Erkin-Say          3.97 292⇑iP      Pn        00 01 45.8 +2.6
      baz=94
EKS2                               ⇑iS    Sn        00 02 32.8 +3.3
      baz=94
KAPS  Kapalarasan        4.05   6  eS     Sg        00 02 51.2  -1.7
      comp=E,474nm,0.8s
KAPS  Kapalarasan        4.05   6  Pg     Pb        00 01 56.1 +2.3
      comp=E,31nm,0.7s
KAPS                               Lg     Lg        00 02 51.2
      comp=E,474nm,0.8s
KAPS  Kapalarasan        4.05   6  eP     Pb        00 01 56.1 +2.3
      comp=E,31nm,0.7s
MRKS  Merke              4.38 292  eP     Pb        00 02 02.5 +3.0
      comp=E,27nm,0.7s
MRKS                               eS     Sg        00 03 02.2  -1.4
      comp=E,54nm,0.6s
MRKS  Merke              4.38 292  Pg     Pb        00 02 02.5 +3.0
      comp=E,27nm,0.7s
MRKS                               Lg     Lg        00 03 02.2
      comp=E,54nm,0.6s
BTLS  Baital             5.12 319  eP     Pb        00 02 14.4 +2.5
      comp=E,11nm,0.5s
BTLS                               eS     Sg        00 03 22.9  -4.2
      comp=E,38nm,0.8s
BTLS  Baital             5.12 319  Pg     Pb        00 02 14.5 +2.5
      comp=E,11nm,0.5s
BTLS                               Lg     Lg        00 03 22.9
      comp=E,38nm,0.8s
DRK   Karamyk            5.60 254  Pn     Pn        00 02 05.9 +0.2
MAKZ  Makanchi           6.02  22 ⇓Pn     Pn        00 02 15.5 +4.4
      comp=E,7.5nm,0.6s
MAKZ                              ⇓Lg     Lg        00 03 51.7
      comp=E,24nm,0.5s
MAKZ  Makanchi           6.02  22  Pn     Pn        00 02 13.0 +1.8
MK31  Makanchi Array     6.09  23  Pn     Pn        00 02 14.2 +2.0
      comp=E,1.7nm,0.3s,baz=201,slow=10,SNR=124
MK31                               Lg     Lg        00 04 00.7
      comp=E,68nm,1.0s,baz=207,slow=30,SNR=4.2
MK31  Makanchi Array     6.09  23  Pn     Pn        00 02 12.9 +0.7
MKAR  Makanchi Array     6.09  23  Pn     Pn        00 02 14.4 +2.2
      comp=E,0.9nm,0.3s,baz=204,slow=13,SNR=39
MKAR                               Sn     Sn        00 03 24.9 +3.4
      comp=E,4.7nm,0.3s,baz=212,slow=26,SNR=4.5
MKAR                               Lg     Lg        00 03 58.1
      comp=E,8.1nm,0.3s,baz=206,slow=30,SNR=3.8
MKAR  Makanchi Array     6.09  23  Pn     Pn        00 02 13.9 +1.7
KKAR  Karatay Array      6.40 289  Pn     Pn        00 02 15.8  -0.6
KK07  Karatay Array      6.40 289 ⇓Pg     Pg        00 02 45.8 +0.5
      comp=E,12nm,0.6s
KK07                              ⇑Lg     Lg        00 04 03.0
      comp=E,28nm,0.8s
GAR   Garm               6.85 254         Pn        00 02 22.3  -0.4
BRLS  Borolday           6.87 288  eS     Sg        00 04 23.6 +0.5
```

	comp=E,13nm,0.6s						
BRLS	Borolday	6.87	288	Pg	Pg	00 02 49.9	-4.3
	comp=E,1.8nm,0.1s						
BRLS	Borolday	6.87	288	*e*P	Pg	00 02 49.9	-4.3
	comp=E,1.8nm,0.1s						
WMQ	Urumqi	7.08	66	*e*Pn	Pn	00 02 27.3	+1.5
WMQ				Sn	Sn	00 03 47.8	+1.9
WMQ				smax	smax		
	comp=N,77nm,1.1s						
WMQ				smax	smax		
	comp=E,85nm,1.1s						
ZSN	Zaisan	7.58	33	Pg	Pb	00 03 00.1	+6.2
	comp=E,8.3nm,0.6s						
ZSN	Zaisan	7.58	33	*e*P	Pb	00 03 00.1	+6.2
	comp=E,8.3nm,0.6s						
CHGR	Chuyangaron	7.82	254	Pn	Pn	00 02 36.0	+0.1
OTUK	Ortayu	8.35	329	⇑Pn	Pn	00 02 45.5	+2.3
	comp=E,5.3nm,0.9s						
OTUK				⇓Lg	Lg	00 05 06.1	
	comp=E,83nm,1.1s						
CHCP	Chirah Chowk	8.75	212	P	Pn	00 02 51.5	+2.8
NIL	Nilore	8.76	212		Pn	00 02 48.2	-0.7
CEP	Cherat	9.20	218	P	Pn	00 02 58.1	+3.2
CEP				S	Sn	00 04 39.0	+0.9
KURBB	Kurchatov Arra	9.37	359	Pn	Pn	00 02 59.6	+2.5
	comp=E,0.1nm,0.3s,baz=187,slow=12,SNR=11						
KURBB				Sn	Sn	00 04 42.5	+0.5
	comp=E,0.1nm,0.3s,baz=195,slow=28,SNR=2.1						
KURBB				Lg	Lg	00 05 42.9	
	comp=E,0.5nm,0.3s,baz=157,slow=36,SNR=10.0						
KURBB	Kurchatov Arra	9.37	359	⇑Pg	Pn	00 03 39.2	+42
	comp=E,7.3nm,1.0s						
KURBB				⇓Lg	Lg	00 05 40.9	
	comp=E,99nm,0.7s						
KURK	Kurchatov	9.46	359		Pn	00 02 59.0	+0.7
KBL	Kabul	10.19	232	Pn	Pn	00 03 07.3	-1.3
BVAR	Borovoye Array	13.07	337	Pn	Pn	00 03 48.6	+0.9
	comp=E,0.2nm,0.3s,baz=170,slow=17,SNR=2.4						
BVAR				Lg	Lg	00 07 39.0	
	comp=E,0.3nm,0.3s,baz=152,slow=33,SNR=6.1						
ZAA0	Zalesovo Array	13.33	16	Pn	Pn	00 03 50.6	-0.7
ZALV	Zalesovo Beam	13.33	16	Pn	Pn	00 03 54.5	+3.2
	comp=E,0.2nm,0.3s,baz=202,slow=14,SNR=5.1						
ZALV				Sn	Sn	00 06 20.6	+1.6
	comp=E,0.2nm,0.3s,baz=180,slow=15,SNR=2.1						
ZALV	Zalesovo Beam	13.33	16		Pn	00 03 50.4	-0.8
ABKAR	Akbulak array	15.45	308		Pn	00 04 19.2	-0.8
ABKAR	Akbulak array	15.45	308	Pn	Pn	00 04 18.4	-1.5
AKTO	Aktyubinsk	17.07	310	P	P	00 04 42.5	+0.1
	comp=E,0.1nm,0.3s,baz=112,slow=12,SNR=2.4						
AKTO				Lg	Lg	00 09 46.6	
	baz=198,slow=20,SNR=1.8						
ARU	Arti	20.06	326	P	Pn	00 05 16.9	-0.1
	comp=E,0.7nm,0.6s,baz=102,slow=20,SNR=1.5						
SONM	Songino Array	20.70	62	P	P	00 05 22.9	+0.6
	comp=E,3.6nm,0.8s,baz=256,slow=11,SNR=27						
SONM	Songino Array	20.70	62	P	P	00 05 22.4	+0.1
SONM				IAmb	IAmb	00 05 24.1	
	comp=Z,2.5nm,0.8s						
BELG	Belogornoye	23.85	308	P	P	00 05 55.2	+0.2
	comp=Z,16nm,0.9s,baz=124,slow=3.6,SNR=4.1						
NRIK	Noril'sk	28.53	7	P	P	00 06 40.1	+2.9
	comp=Z,0.6nm,0.3s,baz=140,slow=7.9,SNR=3.1						
CMAR	Chiang Mai Arr	28.55	137	P	P	00 06 35.6	-2.2
	comp=Z,0.5nm,0.4s,baz=299,slow=8.1,SNR=1.3						
FIA1	FINESS Array S	37.27	321	P	P	00 07 53.1	-0.4
FIA1				IAmb	IAmb	00 07 54.1	
	comp=Z,11nm,1.1s						
FINES	FINESS Array B	37.27	321	P	P	00 07 54.0	+0.5
	comp=Z,1.9nm,0.7s,baz=92,slow=9.5,SNR=7.3						
FINES	FINESS Array B	37.27	321	P	P	00 07 53.0	-0.5
ARCES	ARCESS Array B	39.32	334	P	P	00 08 10.4	-0.3
	comp=Z,1.7nm,0.6s,baz=112,slow=9.6,SNR=11						
ARCES	ARCESS Array B	39.32	334	P	P	00 08 10.4	-0.3
ARCES				IAmb	IAmb	00 08 30.5	
	comp=Z,15nm,1.3s						
NC602	NORSAR Array S	44.31	320	P	P	00 08 50.8	-0.7
NB2	NORSAR Subarra	44.44	320	P	P	00 08 52.2	-0.4
	comp=Z,4.3nm,0.8s,baz=86,slow=7.9						
NOA	NORSAR Array B	44.44	320	P	P	00 08 52.5	-0.2
	comp=Z,0.9nm,0.6s,baz=86,slow=7.9,SNR=4.3						
JMIC	Jan Mayen	50.77	335	LR	LR	00 30 22.5	
	comp=Z,110nm,20.4s,baz=266,slow=35						
ESDC	Sonseca Array	60.56	298	P	P	00 10 51.3	-1.2
	comp=Z,0.2nm,0.6s,baz=46,slow=5.5,SNR=2.4						
IMAR	Indian Mountai	65.70	21	P	P	00 11 25.0	-1.0
J20K	Nowinta River	66.96	22	P	P	00 11 33.5	-0.7
J20K				IAmb	IAmb	00 11 34.1	
	comp=Z,7.6nm,1.5s						
ILAR	Eielson Array	68.43	19	P	P	00 11 42.2	-1.2
	comp=Z,0.4nm,0.8s,baz=324,slow=5.9,SNR=3.4						
SCM	Sheep Creek Mo	70.72	21	P	P	00 11 56.5	-1.2
TORD	Torodi Ar. Bea	71.77	272	P	P	00 12 02.0	-2.6
	comp=Z,0.7nm,0.9s,baz=58,slow=5.3,SNR=4.2						
TORD	Torodi Ar. Bea	71.77	272	P	P	00 12 02.0	-2.6
TORD				IAmb	IAmb	00 12 09.9	
	comp=Z,1.2nm,1.1s						
WB0	Warramunga Arr	79.63	128	P	P	00 12 47.5	-1.9
WB0				IAmb	IAmb	00 12 53.1	
	comp=Z,2.9nm,1.1s						
WRA	Warramunga Arr	79.73	128	P	P	00 12 48.4	-1.6
	comp=Z,1.3nm,0.6s,baz=329,slow=5.5,SNR=20						
WRA	Warramunga Arr	79.73	128	P	P	00 12 48.2	-1.8
ASAR	Alice Springs	82.36	131	P	P	00 13 02.2	-1.8
	comp=Z,1.6nm,0.7s,baz=319,slow=5.5,SNR=17						
ASAR	Alice Springs	82.36	131	P	P	00 13 02.4	-1.6

IDC 19 00:26:22.5±2.0**, 0°.90N**×**127°.26E, h0^{km}, mb3.7**/4**, mb1 3.9**/4**, mb1mx3.5**/51**, mbtmp3.7**/4**, Error ellipse: s-maj=198.8km s-min=21.3km az=67.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.84	162	P	P	00 31 15.7	-1.1
	1.2nm,0.6s,baz=340,slow=11,SNR=13						
ASAR	Alice Springs	25.26	166	P	P	00 31 51.4	+0.8
	1.1nm,0.7s,baz=346,slow=11,SNR=14						
MKAR	Makanchi Array	60.17	326	P	P	00 36 31.6	-0.7
	1.5nm,1.1s,baz=123,slow=7.2,SNR=8.2						
KURBB	Kurchatov Arra	64.40	328	P	P	00 37 01.1	+0.7
	0.8nm,0.9s,baz=123,slow=5.6,SNR=4.6						

NOU 19 00:47:05.9, 19°.19S×**168°.89E, h0^{km}, MLv4.1**/10**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTV	Rentapao	1.46	342	P	Pn	00 47 32.9	-0.6
DVP	Devils Point	1.60	335	P	Pn	00 47 34.7	-0.8
LIFNC	LIFOU	2.21	224	P	Pn	00 47 43.8	-0.1
MARNC	Mare, Loyalty	2.42	199	P	Pn	00 47 46.4	-0.3
YATNC	Mamie plateau,	3.41	213	P	Pn	00 47 58.8	-1.6
DZM	Mont Dzumac	3.67	218	P	Pn	00 48 03.6	-0.4
OUENC	Ouen Island, N	3.74	210	P	Pn	00 48 06.0	+1.1
NOUC	Port Laguerre	3.78	219	P	Pn	00 48 05.5	+0.1
ONTNC	Ouen Toro	3.85	216	P	Pn	00 48 06.7	+0.3

MAN 19 01:03:31.8, 7°.34N×**125°.54E, h30^{km}, mb4.3, ML3.2, MS2.9, 1C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DMPH	Davao City--Mi	0.26	186	⇑*e*P	Pn	01 03 40.1	+0.4
KCP	Kidapawan	0.55	233	⇓*e*P	Pn	01 03 43.9	+0.1
KCP				*i* S	Sn	01 03 53.6	+1.6

*DJA **19** 01:07:58.8±0.5, 1°N±3°×12°7E±°, h10^{km}, M3.3/5, MLv3.3/5*
IDC 19 01:08:00.8±2.1**, 0°.68N**×**127°.18E, h0^{km}, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.6**/34**, mbtmp3.7**/3**, Error ellipse: s-maj=159.9km s-min=26.6km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.21	65	P	Pg	01 08 05.6	+0.8
LBMI	Labuha	1.35	166	P	Pb	01 08 28.7	+1.7
SGSI	Sangihe	3.41	331	P	Pn	01 08 48.3	-6.9
WRA	Warramunga Arr	21.67	161	P	P	01 12 52.9	-0.3
	2.0nm,0.6s,baz=340,slow=11,SNR=23						
ASAR	Alice Springs	25.07	165	P	P	01 13 27.4	+0.2
	1.3nm,0.6s,baz=342,slow=11,SNR=18						
MKAR	Makanchi Array	60.31	326	P	P	01 18 11.3	-0.1
	0.3nm,0.6s,baz=134,slow=6.5,SNR=4.3						

NOU 19 01:10:27.3, 17°.50S×**168°.88E, h194^{km}, MLv4.5**/11**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTV	Rentapao	0.52	236	P	Pn	01 10 54.8	+1.0
DVP	Devils Point	0.70	251	P	Pn	01 10 55.7	+1.1
LIFNC	LIFOU	3.61	205	P	Pn	01 11 22.1	-1.9
MARNC	Mare, Loyalty	4.04	191	P	Pn	01 11 28.4	-1.0
YATNC	Mamie plateau,	4.91	202	P	Pn	01 11 39.7	-0.7
DZM	Mont Dzumac	5.09	206	P	Pn	01 11 43.3	+0.5
NOUC	Port Laguerre	5.18	208	P	Pn	01 11 44.4	+0.5
OUENC	Ouen Island, N	5.25	201	P	Pn	01 11 45.8	+1.0
PINNC	Pines Island,	5.26	195	P	Pn	01 11 45.8	+0.9

*NNC **19** 01:13:16.9±1.4, 45°.44N×78°.87E, h0^{km}, mb2.5, mpv2.4, Error ellipse: s-maj=9.7km s-min=4.3km az=164.0*
*SOME **19** 01:13:16.6, 45°.42N×78°.88E, h0^{km}*
ISC 19 01:13:15.8±2.4**, 45°.5N**±0°.1×**78°.85E**±0°.05**, h9^{km}**±12^{km}**, n16, σ0^{s}.43**/23**, 2D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPS	Kapalarasan	0.40	117	*e*P	Pg	01 13 23.6	0.0
	0.2nm,0.0s						
KAPS				*e*S	Sg	01 13 28.5	-0.5
	7.2nm,0.1s						
KAPS	Kapalarasan	0.40	117	P	Pg	01 13 24.0	+0.4
	0.7nm,0.2s						
KAPS				S	Sg	01 13 29.0	0.0
	7.2nm,0.1s						
TDK	Taldyqorghan	0.56	214	*e*P	Pb	01 13 27.6	-0.2
TDK				*e*S	Sb	01 13 35.2	-0.7
DJR	Jarkent	1.32	149	*e*P	Pg	01 13 41.4	+0.3
	0.7nm,0.2s						
DJR				*e*S	Sn	01 13 58.6	+0.5
	2.8nm,0.4s						
DJR	Jarkent	1.32	149	P	Pg	01 13 41.3	+0.3
	0.7nm,0.2s						
DJR				S	Sn	01 13 58.6	+0.5
	2.8nm,0.4s						
BLB	Baldybastay	1.40	191	P	Pg	01 13 42.8	+0.3
	1.7nm,0.1s						
BLB				S	Sg	01 14 01.2	+0.5
	0.9nm,0.1s						
ARXS	Arharly	1.45	210	*e*S	Sg	01 14 02.7	+0.3
	2.2nm,0.2s						
ARXS	Arharly	1.45	210	P	Pg	01 13 43.6	+0.1
	0.3nm,0.1s						
ARXS				S	Sg	01 14 02.7	+0.3
	2.2nm,0.2s						
ARXS	Arharly	1.45	210	*e*P	Pg	01 13 43.6	+0.1
	0.3nm,0.1s						
KPKS	Kokpek	2.00	183	*e*S	Sg	01 14 20.6	+0.4
	4.6nm,0.3s						
KPKS	Kokpek	2.00	183	*e*P	Pg	01 13 54.2	0.0
	1.5nm,0.2s						
PDGK	Podgornoye	2.19	168	Pg	Pg	01 13 57.6	-0.1
	0.3nm,0.2s						
PDGK				Lg	Lg	01 14 26.4	
	0.7nm,0.3s						
PDGK	Podgornoye	2.19	168	⇓Pg	Pg	01 13 56.7	-0.9
	0.3nm,0.2s						
PDGK				⇓Lg	Lg	01 14 25.7	
	1.0nm,0.2s						
UZB	Uzynbulak	2.32	177	*e*S	Sg	01 14 30.2	-0.1
	0.8nm,0.2s						
UZB	Uzynbulak	2.32	177	Pg	Pg	01 13 59.9	-0.4
	1.1nm,0.1s						
UZB				Lg	Lg	01 14 30.2	
	0.8nm,0.2s						
UZB	Uzynbulak	2.32	177	*e*P	Pg	01 13 59.9	-0.4
	1.1nm,0.1s						

*KRNET **19** 01:16:50.9±0.1, 40°.33N×73°.20E, h14^{km}, mb3.3*
*KNET **19** 01:16:51.8±0.4, 40°.45N×73°.31E, h5^{km}±2^{km}, ml2.8, Error ellipse: s-maj=5.9km s-min=2.3km az=81.0*
*NNC **19** 01:16:52.1±1.4, 40°.45N×73°.24E, h0^{km}, mb3.7, mpv3.3, Error ellipse: s-maj=9.8km s-min=6.6km az=177.0*
*SOME **19** 01:16:54.5, 40°.63N×73°.23E, h0^{km}*
ISC 19 01:16:51.2±1.1**, 40°.24N**±0°.04×**73°.08E**±0°.03**, h7^{km}**±10^{km}**, n46, σ1^{s}.24**/75**, 34C-12D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	Osh	0.36	321	⇑*i*P	Pg	01 16 57.9	-0.5
	baz=1.0						
OHH				⇑*i*S	Sg	01 17 03.2	0.0
	baz=1.0						
SFK	Sufi-Kurgan	0.39	125	⇑*e*P	Pg	01 16 58.2	-0.8
	baz=44						
SFK				⇑*e*S	Sg	01 17 04.2	+0.1
	baz=44						
BTK	Batken	1.75	265	⇑*i*P	Pg	01 17 24.9	+0.2
	baz=62						
BTK				⇑*i*S	Sg	01 17 49.6	+2.2
	baz=62						
AML	Almayashu	1.94	13	⇓P	Pn	01 17 24.4	-0.8
	98nm,0.1s,SNR=194						
AML				⇓S	Sn	01 17 49.3	-0.7
	330nm,0.5s						
AML	Almayashu	1.94	13	⇑*i*P	Pn	01 17 24.8	-0.3
	baz=12						
AML				⇑*i*S	Sn	01 17 49.5	-0.5
	baz=12						
TRKS	Terek-Say	1.96	312	⇑*i*P	Pb	01 17 25.9	-1.5
	baz=7.0						
TRKS				⇑*i*S	Sb	01 17 50.9	-1.2
	baz=7.0						
UCH	Uchtor	2.26	28	⇓P	Pn	01 17 29.0	-0.5
	8.8nm,0.1s,SNR=16						
UCH	Uchtor	2.26	28	⇓*i*P	Pn	01 17 29.2	-0.3
	baz=27						
UCH				⇓*i*S	Sn	01 17 56.7	-1.2
	baz=27						
MNAS	Manas	2.29	349	⇑*i*P	Pn	01 17 29.9	+0.3
	baz=47						
MNAS				⇑*i*S	Sn	01 17 58.4	+0.3
	baz=47						
GAR	Garm	2.47	241	⇑*i*P	Pb	01 17 35.3	-0.8
	baz=40						
GAR				⇑*i*S	Sb	01 18 07.3	+0.5
	baz=40						
EKS2	Erkin-Say	2.47	12	⇑P	Pn	01 17 32.5	+0.3
	4.8nm,0.1s,SNR=15						
EKS2				⇓S	Sn	01 18 04.2	+1.4
	16nm,0.2s						
EKS2	Erkin-Say	2.47	12	⇑*i*P	Pn	01 17 32.1	-0.1
	baz=10.0						
EKS2				⇑*i*S	Sn	01 18 01.9	-0.8
	baz=10.0						
MRKS	Merke	2.50	2	*e*P	Pb	01 17 34.9	-1.8
	24nm,0.5s						
MRKS				*e*S	Sn	01 18 05.4	+1.9
	92nm,0.3s						
MRKS	Merke	2.50	2	Lg	Lg	01 18 04.8	
	92nm,0.3s						
AAK	Ala-Archa	2.62	23	⇓P	Pn	01 17 34.4	+0.2
	11nm,0.2s,SNR=29						
AAK				⇑S	Sn	01 18 07.5	+1.2
	62nm,0.3s						
AAK	Ala-Archa	2.62	23	⇑Pg	Pb	01 17 36.4	-2.2
	8.7nm,0.5s						
AAK				⇑Lg	Lg	01 18 08.7	
	24nm,0.3s						
AAK	Ala-Archa	2.62	23	⇑*i*P	Pn	01 17 34.0	-0.2
	baz=22						
AAK				⇑*i*S	Sn	01 18 05.2	-1.1
	baz=22						
KBK	Karagaybulak	2.79	30	⇑*e*P	Pn	01 17 36.4	-0.2
	baz=29						
KBK				⇑*i*S	Sn	01 18 09.3	-1.3
	baz=29						
CHMS	Chumysh	3.03	24	⇑*i*P	Pn	01 17 39.5	-0.2
	baz=23						
CHMS				⇑*i*S	Sn	01 18 14.6	-1.6
	baz=23						
BOOM	Boomskoye usch	3.11	43	⇑*i*P	Pn	01 17 40.9	0.0
	baz=43						
BOOM				⇑*i*S	Sn	01 18 16.9	-1.6
	baz=43						
ULHL	Ulahol	3.11	49	⇓*i*P	Pn	01 17 40.8	-0.2
	baz=49						
ULHL				⇓*i*S	Sn	01 18 16.8	-1.8
	baz=49						
USP	Ospenovka	3.20	19	⇑*e*P	Pn	01 17 42.0	-0.1
	baz=18						
USP				⇑*i*S	Sn	01 18 18.9	-1.7
	baz=18						
TKM2	Tokmak 2	3.27	34	⇓P	Pn	01 17 43.1	-0.1
	2.8nm,0.2s,SNR=7.3						
TKM2	Tokmak 2	3.27	34	⇓Pg	Pb	01 17 50.6	+0.8
	3.1nm,0.4s						
TKM2				⇓Lg	Lg	01 18 29.0	
	13nm,0.5s						
TKM2	Tokmak 2	3.27	34	⇑*i*P	Pn	01 17 42.9	-0.3
	baz=34						
TKM2				⇑*i*S	Sn	01 18 20.6	-2.0
	baz=34						
KK07	Karatay Array	3.44	327	⇑Pg	Pb	01 17 53.7	+1.1
	5.2nm,0.4s,baz=141,slow=16						
KK07				⇑Lg	Lg	01 18 36.1	
	9.4nm,0.3s,baz=142,slow=29						
DGS	Degeres	3.61	33	*e*P	Pb	01 17 55.2	-0.3
	11nm,0.6s						
DGS				*e*S	Sb	01 18 39.6	0.0
	16nm,0.7s						
DGS	Degeres	3.61	33	Pg	Pb	01 17 53.4	-2.1
	11nm,0.6s						
DGS				Lg	Lg	01 18 39.6	
	16nm,0.7s						
MTBS	Maitube	3.82	40	*e*P	Pb	01 17 58.8	-0.3
	3.8nm,0.3s						
MTBS				*e*S	Sb	01 18 46.5	+0.8
	12nm,0.5s						
MTBS	Maitube	3.82	40	Pg	Pb	01 17 57.4	-1.7
	3.8nm,0.3s						
MTBS				Lg	Lg	01 18 46.5	
	12nm,0.5s						
TNSS	Tian-Shan	4.02	45	*e*P	Pb	01 18 03.0	+0.3
	3.9nm,0.5s						
TNSS				*e*S	Sb	01 18 53.2	+1.5
	8.7nm,0.3s						
TNSS	Tian-Shan	4.02	45	Pg	Pb	01 18 01.3	-1.4
	4.0nm,0.4s						
TNSS				Lg	Lg	01 18 53.2	
	8.7nm,0.3s						
MDOK	Medeo	4.16	44	*e*P	Pb	01 18 04.5	-0.5
	2.1nm,0.2s						
MDOK				*e*S	Sb	01 18 56.2	+0.7
	7.2nm,0.6s						
MDOK	Medeo	4.16	44	Pg	Pb	01 18 03.3	-1.6
	2.1nm,0.2s						
MDOK				Lg	Lg	01 18 57.1	
	7.2nm,0.6s						
KOTS	Kotyrbulak	4.25	44	*e*P	Pb	01 18 08.1	+1.8
	5.5nm,0.6s						
KOTS				*e*S	Sb	01 19 00.8	+2.9
	17nm,0.4s						
KOTS	Kotyrbulak	4.25	44	Pg	Pb	01 18 05.7	-0.6
	5.5nm,0.6s						
KOTS				Lg	Lg	01 19 00.8	
	17nm,0.4s						
KUU	Kurty	4.38	33	*e*P	Pb	01 18 08.9	+0.3
	1.7nm,0.3s						
KUU				*e*S	Sb	01 19 02.6	+1.0
	12nm,0.6s						
KUU	Kurty	4.38	33	Pg	Pb	01 18 07.0	-1.6
	1.7nm,0.3s						
KUU				Lg	Lg	01 19 03.0	
	12nm,0.6s						
BTLS	Baital	4.85	8	*e*P	Pb	01 18 16.8	+0.3
	1.4nm,0.5s						
BTLS				*e*S	Sb	01 19 16.7	+1.6
	9.6nm,0.3s						
BTLS	Baital	4.85	8	Pg	Pb	01 18 15.2	-1.4
	2.2nm,0.6s						
BTLS				Lg	Lg	01 19 17.5	
	9.6nm,0.3s						
SATY	Saty	4.88	53	*e*P	Pb	01 18 18.0	+0.8
	2.3nm,0.6s						
SATY				*e*S	Sb	01 19 18.8	+2.7
	5.8nm,0.6s						
SATY	Saty	4.88	53	Pg	Pb	01 18 16.4	-0.7
	2.3nm,0.6s						
SATY				Lg	Lg	01 19 18.8	
	5.8nm,0.6s						
KPKS	Kokpek	5.28	51	*e*P	Pb	01 18 23.4	-0.5
	1.4nm,0.2s						
KPKS				*e*S	Sb	01 19 28.1	+0.5
	8.2nm,0.6s						
UZB	Uzynbulak	5.31	55	*e*P	Pb	01 18 25.8	+1.4
	2.1nm,0.2s						
UZB				*e*S	Sb	01 19 31.9	+3.5
	4.9nm,0.7s						
UZB	Uzynbulak	5.31	55	Pg	Pb	01 18 23.9	-0.6
	1.6nm,0.2s						
UZB				Lg	Lg	01 19 31.9	
	4.9nm,0.7s						
PDGK	Podgornoye	5.70	55	Pg	Pb	01 18 31.7	+0.6
	0.7nm,0.5s						
PDGK				Lg	Lg	01 19 44.9	
	1.6nm,1.2s						

NOU 19 01:19:58.7, 17°.12S×**167°.53E, h28^{km}, MLv4.9**/17**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	0.87	134	P	Pb	01 20 15.5	+0.3
DVP	Devils Point	0.87	134	P	Pn	01 20 15.0	-0.1
RTV	Rentapao	1.08	128	P	Pb	01 20 18.7	-0.2
RTV	Rentapao	1.08	128	P	Pn	01 20 18.1	+0.1
SANVU	Saraoutou	1.69	349	P	Pn	01 20 26.8	+0.4
SANVU	Saraoutou	1.69	349	P	Pn	01 20 26.4	0.0
MARNC	Mare, Loyalty	4.36	174	P	Pn	01 21 02.6	-0.6
KOUNC	Koumac, New Ca	4.59	221	P	Pn	01 21 06.8	+0.5
KOUNC	Koumac, New Ca	4.59	221	P	Pn	01 21 06.7	+0.4
YATNC	Mamie plateau,	4.95	187	P	Pn	01 21 10.2	-1.0
DZM	Mont Dzumac	5.03	192	*e*Pn	Pn	01 21 12.3	-0.1
	82nm,0.3s						
DZM				*e*Sn	Sn	01 22 03.8	-5.9
	54nm,0.2s						
DZM	Mont Dzumac	5.03	192	P	Pn	01 21 12.6	+0.2
DZM	Mont Dzumac	5.03	192	P	Pn	01 21 12.6	+0.2
NOUC	Port Laguerre	5.09	193	P	Pn	01 21 13.5	+0.4
ONTNC	Ouen Toro	5.26	191	P	Pn	01 21 16.0	+0.5
OUENC	Ouen Island, N	5.31	187	P	Pn	01 21 16.2	0.0
PINNC	Pines Island,	5.46	181	P	Pn	01 21 19.2	+0.9

*IDC **19** 01:26:03.0±1.1, 0°.92N×127°.33E, h0^{km}, mb4.1/5, mb1 4.2/8, mb1mx3.8/42, mbtmp4.1/8, ML3.3/2, Error ellipse: s-maj=33.8km s-min=18.5km az=63.0*
*DJA **19** 01:26:05.7±0.2, 1°N±2°×12°8E±°, h10^{km}, M4.1/12, mB5.5/3, mb4.4/9, MLv3.9/12, Mw(mB)5.0/3, MwMwp6.0/1, Mwp6.1/1*
*NEIC **19** 01:26:07.2±0.4, 0°.9N±0°.2×127°.3E±0°.3, h20^{km}±7^{km}, mb4.2/12, Error ellipse: s-maj=48.6km s-min=14.7km az=64.0*
ISC 19 01:26:05.3±0.7**, 0°.97N**±0°.06×**127°.48E**±0°.06**, h10^{km}, n34, σ1^{s}.19**/38**, mb4.2**/11**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.22	210	P	Pg	01 26 10.0	0.0
TNTI				S	Sg	01 26 14.3	+1.2
TNTI	Ternate	0.22	210		Pg	01 26 10.2	+0.3
TNTI					Sg	01 26 14.4	+1.3
LBMI	Labuha	1.59	179	P	Pn	01 26 33.9	+0.3
LBMI				S	Sb	01 26 55.1	-0.1
SANI	Sanana	3.35	206	P	Pn	01 26 56.8	-0.9
KMSI	Cibinong	3.52	264	P	Pn	01 27 01.3	+1.2
SWI	Sorong	4.20	116	P	Pn	01 27 09.7	+0.3
SIJI	Sorong	4.21	116	Pn	Pn	01 27 09.4	-0.1
	2.1nm,0.3s,baz=287,slow=19,SNR=2.4						
SIJI				Sn	Sn	01 28 02.4	+3.6
	0.8nm,0.3s,baz=285,slow=23,SNR=1.3						
MSAI	Masohi	4.52	161	P	Pn	01 27 14.2	+0.3
MRSI	Marisa	5.56	265	P	Pn	01 27 29.0	+0.8
	0.3nm21nm,0.6s						
APSI	Ampana	6.12	252	P	Pn	01 27 37.2	+1.3
	0.1nm16nm,0.6s						
DAV	Davao City (W)	6.35	343	Pn	Pn	01 27 39.8	+0.8
MPSI	Mapaga	7.61	265	P	Pn	01 27 58.4	+2.1
	0.0nm9.3nm,0.7s						
BKSI	Bulukumba	9.64	230	P	Pn	01 28 25.3	+1.0
	493nm11nm,0.8s						
KAPI	Kappang	9.74	232	Pn	Pn	01 28 23.1	-2.5
	8.3nm,0.3s,baz=202,slow=14,SNR=5.6						

FITZ	Fitzroy Crossi	19.03	185	P	P	01 30 25.9	-1.8
	0.1nm,0.3s,baz=354,slow=9.2,SNR=2.6						
WB0	Warramunga Arr	21.69	162	P	P	01 30 56.2	-0.4
WB0				IAmb	IAmb	01 31 01.7	
	comp=Z,15nm,1.2s						
WRAB	Tennant Creek	21.84	162	P	P	01 30 58.3	+0.1
WRAB				IAmb	IAmb	01 30 59.0	
	comp=Z,6.9nm,0.6s						
WRA	Warramunga Arr	21.84	162	P	P	01 30 57.1	-1.1
	comp=Z,7.4nm,0.6s,baz=340,slow=11,SNR=72						
WRA	Warramunga Arr	21.84	162	P	P	01 30 57.7	-0.5
WB2	Warramunga Arr	21.85	162	P	P	01 30 57.7	-0.6
WB2				IAmb	IAmb	01 30 59.0	
	comp=Z,8.7nm,0.7s						
CBJI	Citeko	21.86	250	P	P	01 30 59.7	+1.3
	comp=Z,11µmcomp=Z,210nm,0.6s						
WR0	Warramunga Arr	21.92	162	P	P	01 30 58.5	-0.6
WR0				IAmb	IAmb	01 31 01.9	
	comp=Z,14nm,1.3s						
AS31	Alice Springs	25.27	166	P	P	01 31 31.0	-1.0
AS31				IAmb	IAmb	01 31 34.7	
	comp=Z,2.8nm,0.8s						
ASAR	Alice Springs	25.27	166	P	P	01 31 31.2	-0.8
	comp=Z,8.2nm,0.8s,baz=347,slow=8.6,SNR=43						
BBOO	Buckleboo	34.56	167	P	P	01 32 53.2	-1.1
STKA	Stephens Creek	35.30	159	P	P	01 32 59.9	-0.8
	comp=Z,2.8nm,0.8s,baz=332,slow=8.1,SNR=6.7						
STKA	Stephens Creek	35.30	159	P	P	01 32 59.9	-0.8
SONM	Songino Array	50.14	342	P	P	01 35 00.1	-1.0
	comp=Z,0.6nm,0.9s,baz=132,slow=8.8,SNR=2.7						
SONM	Songino Array	50.14	342	P	P	01 35 00.6	-0.5
MSVF	Nonsavu	53.12	113	P	P	01 35 23.8	0.0
MK31	Makanchi Array	60.24	326	P	P	01 36 13.2	-0.6
MK31				IAmb	IAmb	01 36 17.7	
	comp=Z,3.5nm,1.1s						
MKAR	Makanchi Array	60.24	326	P	P	01 36 12.7	-1.2
	comp=Z,1.0nm,0.7s,baz=125,slow=8.5,SNR=5.9						
MKAR	Makanchi Array	60.24	326	P	P	01 36 12.4	-1.5
KURK	Kurchatov	64.46	328	P	P	01 36 42.1	+0.2

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*IDC **19** 01:27:05.5±21.0, 42°.13N×141°.56E, h0^{km}, mb3.9/3, mb1 3.9/3, mb1mx3.3/47, mbtmp3.9/3, MS3.2/2, Ms1 3.2/2, ms1mx2.5/44, Error ellipse: s-maj=475.9km s-min=98.1km az=158.0*

*JMA **19** 01:27:31.1±0.1, 42°.57N×140°.46E, h157^{km}±1^{km}, M2.7*

ISC 19 01:27:30.4±1.0**, 42°.53N**±0°.07×**140°.45E**±0°.06**, h165**^{km}±7^{km}**, n19, σ0^{s}.56**/27**, mb3.9**/3**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSH	Shimam	0.32	290	P	Pn	01 27 52.7	+0.1
JSH				eS	Sn	01 28 09.4	-0.3
JYM2	Yakumo 2	0.42	188	P	Pn	01 27 53.3	+0.2
JYM2				eS	Sn	01 28 09.8	-0.5
JNB	Noboribetsu	0.44	98	P	Pn	01 27 53.0	-0.1
JNB				eS	Sn	01 28 09.8	-0.7
JKB	Kayabe	0.78	146	P	Pn	01 27 55.0	+0.1
JKB				eS	Sn	01 28 13.8	+0.1
JSK	Shakotan	0.82	1	P	Pn	01 27 55.0	-0.1
JOSM	Okushiri--Mats	0.85	238	P	Pn	01 27 55.7	+0.3
JOSM				eS	Sn	01 28 14.0	-0.5
JSR	Shiriuchi	1.00	181	P	Pn	01 27 57.0	+0.4
JOMM	Oshimamatsumae	1.06	198	P	Pn	01 27 57.8	+0.8
JOMM				eS	Sn	01 28 17.6	+0.2
JIAM	Iburiatsuma	1.09	85	P	Pn	01 27 57.9	+0.7
JIAM				eS	Sn	01 28 18.7	+0.8
JOT	Ohata	1.23	158	P	Pn	01 27 58.8	+0.3
JBT2	Biratori 2	1.44	80	eS	Sn	01 28 24.0	+0.5
JNBK	Urakawa-nobuka	1.73	98	P	Pn	01 28 03.6	+0.3
JNBK				eS	Sn	01 28 28.3	-0.5
JCH	Churui	2.15	87	P	Pn	01 28 08.5	+0.4
JCH				eS	Sn	01 28 36.1	-1.2
JANG	Nango	2.30	159	P	Pn	01 28 09.9	0.0
JANG				eS	Sn	01 28 39.4	-1.0
JOW	Kunigami	18.56	216	LR	LR	01 38 51.9	
	comp=Z,44nm,18.3s,baz=340,slow=38						
ZALV	Zalesovo Beam	37.82	307	P	P	01 34 30.8	+0.2
	0.9nm,0.4s,baz=97,slow=9.0,SNR=4.8						
MKAR	Makanchi Array	40.77	297	P	P	01 34 55.7	+0.5
	0.3nm,0.4s,baz=82,slow=8.6,SNR=5.4						
FINES	FINESS Array B	63.63	331	P	P	01 37 42.8	-0.5
	2.7nm,0.9s,baz=38,slow=9.6,SNR=6.0						
STKA	Stephens Creek	74.05	179	LR	LR	02 11 07.7	
	comp=Z,21nm,19.1s,baz=35,slow=36						

IDC 19 01:33:09.7±1.6**, 3°.03S**×**128°.59E, h0**^{km}**, mb3.4**/3**, mb1 3.6**/4**, mb1mx3.2**/45**, mbtmp3.5**/4**, ML3.3**/1**, MS3.1**/1**, Ms1 3.1**/1**, ms1mx2.3**/21**, Error ellipse: s-maj=126.6km s-min=25.1km az=71.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	Jayapura	12.11	88	LR	LR	01 42 49.2	
	comp=Z,76nm,18.5s,baz=202,slow=48						
WRA	Warramunga Arr	17.73	162	P	P	01 37 19.1	0.0
	0.1nm,0.3s,baz=340,slow=11,SNR=5.1						
ASAR	Alice Springs	21.15	166	P	P	01 37 54.9	-1.7
	0.7nm,0.7s,baz=349,slow=11,SNR=5.6						
SONM	Songino Array	54.25	342	P	P	01 42 37.2	-0.4
	0.5nm,0.8s,baz=167,slow=6.8,SNR=3.2						
MKAR	Makanchi Array	64.16	327	P	P	01 43 46.9	+0.8
	0.6nm,0.6s,baz=136,slow=6.6,SNR=4.9						

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*NEIC **19** 01:40:02.8±2.4, 41°.88N±0°.03×119°.56W±0°.04, h10^{km}±5^{km}, Error ellipse: s-maj=4.8km s-min=3.7km az=160.0*

*IDC **19** 01:40:02.6±0.6, 41°.91N×119°.69W, h0^{km}, mb3.7/8, mb1 3.8/14, mb1mx3.7/49, mbtmp3.6/14, ML3.2/4, MS3.3/15, Ms1 3.3/15, ms1mx3.1/49, Error ellipse: s-maj=10.2km s-min=6.2km az=10.0*

*NEIC **19** 01:40:02.6, 41°.87N×119°.62W, h10^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-1.69; $M_{\theta\theta}$-0.87; $M_{\phi\phi}$2.56; $M_{r\theta}$-0.35; $M_{\theta\phi}$-0.32; $M_{\phi r}$-2.12; Fault plane solution: $M_0$3.13000×10^{15} NP1:ϕ_s8.75000°, δ68.65000°, λ-75.46000°. NP2:ϕ_s153.28000°, δ25.64000°, λ-122.71000°. Principal axes: T 3.4452, Plg22.0000°, Azm88.0000°; N -0.7707, Plg14.0000°, Azm183.0000°; P -2.6744, Plg64.0000°, Azm302.0000°;*

*REN **19** 01:40:02.5±2.3, 41°.87N±0°.04×119°.62W±0°.04, h13^{km}±5^{km}, ML4.2/5, ML3.9/116(NEIC), Mwr4.3/99(NEIC) Error ellipse: s-maj=5.7km s-min=4.2km az=188.0*

*ANF **19** 01:40:03.4±0.4, 41°.81N×119°.66W, h12^{km}, ML4.3/22, Error ellipse: s-maj=3.7km s-min=2.7km az=92.0*

ISC 19 01:40:03.5±0.6**, 41°.89N**±0°.03×**119°.58W**±0°.02**, h10**^{km}**, n128, σ1^{s}.65**/150**, mb3.7**/8**, MS3.4**/6**, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOD	Modoc Plateau	0.54	272	Pg	Pg	01 40 13.0	-1.0
MOD				Sg	Sg	01 40 20.1	-1.0
MOD				IAML		01 40 22.2	
	comp=E,12µm,0.6s						
MOD				IAML		01 40 25.1	
	comp=N,8µm,0.6s						
WVOR	Wild Horse Val	0.89	52		Pb	01 40 20.1	-1.0
WVOR				Sn	Sb	01 40 32.6	-0.4
WVOR				IAML		01 40 37.4	
	comp=N,4µm,1.1s						
WVOR				IAML		01 40 42.8	
	comp=N,3µm,0.7s						
K05A	Summer Lake	1.28	311		Pn	01 40 26.9	-0.7
K05A				Sn	Sb	01 40 44.3	-0.1
J08A	Circle Bar Ran	1.68	29		Pn	01 40 32.6	-0.4
M04C	Macdoel	1.69	267	P	Pn	01 40 31.9	-1.2
	baz=86,SNR=454						
M04C				Pb	Pb	01 40 33.4	-1.3
	baz=86						
M04C				Sg	Sg	01 40 57.2	-0.5
	baz=86						
K04D	Chiloquin, OR	1.77	295	Pn	Pn	01 40 33.6	-0.6
	baz=115,SNR=346						
K04D				Pb	Pb	01 40 35.1	-1.0
	baz=115						
K04D				Sg	Sg	01 41 00.6	+0.3
	baz=115						
J05D	Fort Rock, OR	1.85	319	Pn	Pn	01 40 35.2	-0.2
	baz=139						
J05D				Pb	Pb	01 40 36.8	-0.6
	baz=139						
J05D				Sb	Sg	01 41 02.1	-0.9
	baz=139						
L04D	Klamath Falls	2.05	280	P	Pn	01 40 36.8	-1.4
	baz=99,SNR=243						
L04D				Sb	Sb	01 41 07.2	+0.6
	baz=99						
PINE	Pine Mountain	2.15	333		Pn	01 40 39.2	-0.3
PINE				Sn	Sn	01 41 04.7	-1.7
PAHR	Pah Rah Range	2.19	176		Pn	01 40 39.0	-1.1
I07A	Izee	2.19	1		Pn	01 40 39.2	-0.8
I07A				IAML		01 41 22.6	
	comp=N,714nm,0.8s						
I07A				IAML		01 41 23.4	
	comp=E,780nm,2.0s						
LCMM	Colby Mountain	2.28	221		Pn	01 40 41.2	-0.1
BMN	Battle Mountai	2.30	128	Pn	Pn	01 40 40.9	-0.7
BMN				IAML		01 41 21.5	
	comp=N,490nm,1.1s						
J04D	Umpqua Nationa	2.30	307	Pn	Pn	01 40 41.6	-0.1
	baz=126						
J04D				Pb	Pb	01 40 45.1	-0.1
	baz=126,SNR=34						
J04D				Sb	Sb	01 41 15.5	+1.7
	baz=126						
O03E	Paynes Creek	2.31	227	Pn	Pn	01 40 40.9	-0.8
	baz=46,SNR=190						
O03E				Pb	Pb	01 40 43.9	-1.5
	baz=46						
YBH	Yreka Blue Hor	2.34	267	Pn	Pn	01 40 40.8	-1.3
	comp=N,12nm,0.3s,baz=70,slow=11,SNR=48						
YBH				Pg	Pb	01 40 44.0	-1.8
	comp=N,14nm,0.3s,baz=89,slow=11,SNR=79						
YBH				Lg	Lg	01 41 14.2	
	comp=N,37nm,0.3s,baz=48,slow=15,SNR=7.0						
YBH				LR	LR	01 41 32.9	
	comp=N,166nm,19.9s,baz=138,slow=40						
YBH	Yreka Blue Hor	2.34	267	Pn	Pn	01 40 40.9	-1.3
YBH				IAML		01 41 25.9	
	comp=N,400nm,2.0s						
M02C	Callahan	2.50	260	Pn	Pn	01 40 42.8	-1.5
	baz=78,SNR=48						
M02C				Pb	Pb	01 40 45.5	-3.0
	baz=78						
N02D	Trinity Center	2.52	250	Pn	Pn	01 40 42.8	-1.7
	baz=68,SNR=46						
N02D				Pb	Pb	01 40 47.2	-1.6
	baz=68						
N02D				Sb	Sb	01 41 20.9	+1.0
	baz=68						
WDC	Whiskeytown Da	2.59	241	Pn	Pn	01 40 43.8	-1.6
VCNR	Virginia City	2.59	181		Pn	01 40 44.1	-1.6
VCNR				IAML		01 41 27.5	
	comp=E,525nm,0.8s						
VCNR				IAML		01 41 30.0	
	comp=N,478nm,1.0s						
HUMO	Hull Mountain	2.60	287	Pn	Pn	01 40 44.3	-1.3
HUMO				IAML		01 41 30.6	
	comp=E,488nm,1.0s						
HUMO				IAML		01 41 32.7	
	comp=N,680nm,1.6s						
MPK	Martis Peak	2.61	188	Pn	Pn	01 40 44.4	-1.6
MPK				IAML		01 41 39.0	
	comp=E,464nm,1.4s						
MPK				IAML		01 41 46.6	
	comp=N,381nm,1.9s						
ORV	Oroville	2.75	213		Pn	01 40 45.2	-2.4
I05D	Terrebonne, OR	2.76	333	Pb	Pb	01 40 52.8	-0.1
	baz=152,SNR=59						
I05D				Sb	Sg	01 41 30.6	-1.7
	baz=152						
PNTR	Pine Nut	2.80	180	Pn	Pn	01 40 46.2	-2.3
PNTR				IAML		01 41 47.6	
	comp=E,436nm,0.8s						
PNTR				IAML		01 41 48.5	
	comp=N,405nm,1.3s						
I04A	Tendick Farm,	2.82	313	Pb	Pb	01 40 53.8	-0.2
	baz=132,SNR=18						
I04A				Sb	Sg	01 41 31.9	-2.0
	baz=132						
RUBR	Rubicon Trail	2.87	189		Pn	01 40 47.5	-2.0
RUBR				IAML		01 41 51.7	
	comp=E,295nm,1.8s						
RUBR				IAML		01 41 55.9	
	comp=N,298nm,1.2s						
YERR	Yerington	2.91	175		Pn	01 40 48.8	-1.3
YERR				IAML		01 41 38.8	
	comp=N,344nm,0.8s						
YERR				IAML		01 41 42.3	
	comp=E,367nm,1.1s						
EMB	Emerald Bay	2.94	188		Pn	01 40 49.0	-1.4
O02D	Mt. Diablo Mer	2.97	236	Pn	Pn	01 40 50.0	-0.6
	baz=54						
O02D				Pb	Pb	01 40 55.5	-1.0
	baz=54						
O02D				Sb	Sb	01 41 34.0	+1.2
	baz=54						
DBO	Dodson Butte	2.97	296		Pn	01 40 50.1	-0.7
DBO				IAML		01 41 41.6	
	comp=N,439nm,2.9s						
DBO				IAML		01 41 43.1	
	comp=E,383nm,1.9s						
L02E	Cave Junction	3.01	276	P	Pn	01 40 51.5	+0.4
	baz=94,SNR=73						
KVN	Kaiserville	3.05	158		Pn	01 40 52.4	+0.5
K02D	Willamette Mer	3.13	286	P	Pn	01 40 52.5	-0.5
	baz=104,SNR=321						
K02D				Sb	Sb	01 41 39.4	+1.8
	baz=104						
MFID	Camas Ranch	3.16	60	Pn	Pn	01 40 53.6	+0.2
KRMB	Red Mountain	3.26	265		Pn	01 40 53.7	-1.0
KRMB				IAML		01 41 52.4	
	comp=N,237nm,1.9s						
KHMM	Horse Mountain	3.28	253	Pn	Pn	01 40 55.6	+0.6
KHMM				IAML		01 42 00.9	
	comp=E,302nm,2.0s						
KHMM				IAML		01 42 06.0	
	comp=N,297nm,1.3s						
I03D	Drain, OR	3.31	304	Pb	Pg	01 41 04.3	-2.5
	baz=122						
I03D				Sb	Sg	01 41 46.3	-3.3
	baz=122						
RYN	Ryan	3.36	166		Pn	01 40 55.6	-0.5
RYN				IAML		01 41 56.2	
	comp=E,177nm,0.6s						
BMO	Blue Mountains	3.40	29		Pn	01 40 57.3	+0.7
G08A	Pilot Rock	3.43	7	Pn	Pn	01 40 56.7	-0.4
J01E	Myrtle Point	3.46	293	Pg	Pg	01 41 10.3	+0.6
	baz=111						
ELK	Elko	3.47	108	Pn	Pn	01 40 59.8	+2.1
	comp=E,4.7nm,0.3s,baz=303,slow=8.1,SNR=24						
ELK				Sn	Sn	01 41 39.9	+1.0
	comp=E,6.3nm,0.3s,baz=288,slow=12,SNR=1.6						
ELK				Lg	Lg	01 41 50.4	
	comp=E,46nm,0.3s,baz=22,slow=22,SNR=9.4						
ELK	Elko	3.47	108	Pn	Pn	01 40 56.7	-1.0
KBO	Bosley Butte	3.47	277	Pn	Pn	01 40 56.2	-1.4
H04D	Lebanon	3.50	320	Pb	Pb	01 41 06.4	+0.9
	baz=138						
H04D				Sb	Sg	01 41 52.2	-3.6
	baz=138						
JCC	Jacoby Creek,	3.51	254		Pn	01 40 58.0	-0.1
JCC				IAML		01 42 09.4	
	comp=N,244nm,3.0s						
JCC				IAML		01 42 14.0	
	comp=E,239nm,3.0s						
KMRM	Mail Ridge	3.54	243	Pn	Pn	01 40 57.2	-1.3
KMRM				IAML		01 42 08.1	
	comp=E,332nm,1.8s						
G05D	Wamic, OR	3.58	340	Pb	Pb	01 41 08.6	+1.7
	baz=159,SNR=5.9						
G05D				Sb	Sg	01 41 55.4	-3.0
	baz=159						
NVAR	Mina Array Bea	3.59	164	Pn	Pn	01 41 01.5	+2.1
	comp=E,1.1nm,0.3s,baz=344,slow=13,SNR=28						
NVAR				Lg	Lg	01 41 57.2	
	comp=E,7.7nm,0.3s,baz=244,slow=18,SNR=4.4						
NVAR				LR	LR	01 42 48.4	
	comp=E,916nm,18.4s,baz=336,slow=45						
NVAR	Mina Array Bea	3.59	164		Pn	01 40 58.2	-1.2
NV11	Mina Array Sit	3.62	162		Pn	01 40 58.4	-1.4
KEBM	Edson Butte	3.65	287	Pn	Pn	01 41 00.2	+0.1
LHV	Little Huntoon	3.73	167		Pn	01 41 01.3	+0.3
LHV				IAML		01 42 07.3	
	comp=N,242nm,1.1s						
LHV				IAML		01 42 17.2	
	comp=E,173nm,1.3s						
HOOD	Mount Hood Mea	3.75	337	Pn	Pn	01 41 00.6	-0.8
HOOD				IAML		01 42 06.2	
	comp=N,236nm,1.0s						
HOOD				IAML		01 42 10.2	
	comp=E,209nm,1.1s						
KCPM	Cahto Peak	3.75	235	Pn	Pn	01 40 59.8	-1.6
KCPM				IAML		01 42 26.3	
	comp=E,161nm,1.3s						
KCPM				IAML		01 42 31.5	
	comp=N,193nm,1.9s						
COR	Corvallis	3.83	316	Pn	Pn	01 41 02.1	-0.3
COR				IAML		01 42 15.8	
	comp=N,247nm,1.7s						
I02E	Swisshome, OR	3.83	307	Pg	Pg	01 41 16.1	-0.8
	baz=124						
CMB	Columbia Colle	3.90	189	Pn	Pn	01 41 06.5	+3.1
HOPS	Hopland Field	3.93	224	Pn	Pn	01 41 03.2	-0.6
F07A	Phinny Hill Vi	4.01	357		Pn	01 41 06.0	+1.0
F07A				IAML		01 42 20.6	
	comp=E,221nm,0.9s						
F07A				IAML		01 42 22.0	
	comp=N,152nm,1.5s						
PLID	Pearl Lake	4.12	38	Pn	Pn	01 41 06.0	-0.7
PLID				IAML		01 42 26.9	
	comp=N,88nm,1.6s						
PLID				IAML		01 42 28.6	
	comp=N,97nm,2.1s						
HLID	Hailey	4.16	65	P	Pn	01 41 08.1	+1.0
	baz=248						
HLID				Sb	Sg	01 42 13.1	-3.8
	baz=248						
HLID	Hailey	4.16	65	Pn	Pn	01 41 05.0	-2.2
HLID				IAML		01 42 33.6	
	comp=N,161nm,1.4s						
F05D	White Salmon	4.22	342	Sb	Sg	01 42 14.4	-4.4
	baz=161						
G03D	McMinnville, O	4.26	322	Pg	Pg	01 41 24.5	-0.6
	baz=140						
MDPB	Devils Postpil	4.27	175		Pn	01 41 11.3	+2.5
F10A	Beach Ranch, E	4.42	22		Pn	01 41 14.4	+3.7
F10A				IAML		01 42 38.9	
	comp=E,137nm,1.9s						
F10A				IAML		01 42 49.0	
	comp=N,138nm,1.4s						
HAWA	Hanford	4.50	0		Pn	01 41 13.3	+1.6
HAWA				IAML		01 42 49.8	
	comp=N,61nm,1.2s						
HAWA				IAML		01 42 55.6	
	comp=N,82nm,1.4s						
F04A	Amboy	4.53	334		Pn	01 41 13.9	+1.8
F04A				IAML		01 42 36.4	
	comp=N,96nm,1.9s						
F04A				IAML		01 42 40.7	
	comp=E,130nm,1.5s						
E08A	Dider Farm, El	4.62	5		Pn	01 41 13.7	+0.5
E08A				IAML		01 42 36.9	
	comp=E,142nm,1.2s						
R11A	Troy Canyon, C	4.68	138	P	Pn	01 41 17.2	+2.9
	baz=320						
R11A				Sb	Sg	01 42 30.0	-3.7
	baz=320						
R11A	Troy Canyon, C	4.68	138		Pn	01 41 14.0	-0.3
R11A				IAML		01 42 35.5	
	comp=N,64nm,0.6s						
R11A				IAML		01 42 39.4	
	comp=E,89nm,1.8s						
E09A	Wood Farm, Sta	4.74	12	Pn	Pn	01 41 13.2	-1.7
E09A				IAML		01 42 46.7	
	comp=N,66nm,1.2s						
E09A				IAML		01 42 50.0	
	comp=E,99nm,1.7s						
SPR3	Spring Creek 3	4.94	124	Pn	Pn	01 41 21.4	+3.4
BGU	Big Grassy Mou	5.02	99		Pn	01 41 21.1	+2.1
HVU	Hansel Valley	5.09	89		Pn	01 41 22.0	+2.1
LON	Longmire	5.11	343		Pn	01 41 19.0	-1.1
LON				IAML		01 42 58.8	
	comp=N,53nm,2.7s						
D08A	Wollman Farm,	5.19	5	Pn	Pn	01 41 19.7	-1.4
D08A				IAML		01 42 53.9	
	comp=E,69nm,1.2s						
SPUT	South Promonto	5.38	94		Pn	01 41 24.2	+0.3
DUG	Dugway, Tooele	5.39	106	P	Pn	01 41 26.4	+2.3
	baz=290						
DUG	Dugway, Tooele	5.39	106		Pn	01 41 23.8	-0.2
PSUT	Pine Spring	5.52	126		Pn	01 41 27.8	+1.9
MCMT	McKenzie Canyo	5.72	57		Pn	01 41 27.2	-1.5
MSO	Missoula	6.38	37	P	Pn	01 41 40.0	+2.4
	baz=221						
MSO				Sb	Sg	01 43 23.9	-4.3
	baz=221						
MSO	Missoula	6.38	37	Pn	Pn	01 41 37.1	-0.5
ICU	Indian Springs	6.45	135		Pn	01 41 42.2	+3.6
CCUT	Cedar City	6.46	130	Pn	Pn	01 41 36.5	-2.3
FXWY	Fox Creek	6.54	72	Pn	Pn	01 41 38.5	-1.3
TPAW	Teton Pass	6.56	73	Pn	Pn	01 41 38.5	-1.8
NEW	Newport	6.61	14	Pn	Pn	01 41 40.1	-0.5
REDW	Red Top Meadow	6.61	74	Pn	Pn	01 41 41.4	+0.6
QLMT	Earthquake Lak	6.63	61	Pn	Pn	01 41 40.6	-0.5
SNOW	Snow King Moun	6.69	73	Pn	Pn	01 41 40.2	-1.9
MOOW	Moose Ponds	6.76	71		Pn	01 41 43.7	+0.8
YHL	Hebgen Lake	6.80	61		Pn	01 41 44.2	+0.7
LOHW	Long Hollow	6.83	72		Pn	01 41 42.9	-1.0
FLWY	Flagg Ranch	6.87	68		Pn	01 41 46.1	+1.7
LCMT	Little Creek M	6.91	133		Pn	01 41 45.9	+0.9
YHH	Holmes Hill	6.99	63		Pn	01 41 44.7	-1.5
H17A	Grant Village	7.05	66	Pn	Pn	01 41 46.7	-0.1
YNR	Norris Junctio	7.08	64	Pn	Pn	01 41 45.4	-1.9
KNB	Kanab	7.14	131		Pn	01 41 46.8	-1.3
HRY	Holter Researc	7.36	46	Pn	Pn	01 41 49.2	-1.8
P18A	Preston Nutter	7.44	105		Pn	01 41 50.6	-1.7
BW06	Boulder Array	7.48	80		Pn	01 41 51.3	-1.5
PDAR	Pinedale Array	7.48	80	Pn	Pn	01 41 57.3	+4.5
	baz=263,slow=12,SNR=5.7						
PDAR				Pg	Pb	01 42 11.4	-2.0
	comp=E,0.3nm,0.3s,baz=276,slow=15,SNR=6.8						
PDAR				Lg	Lg	01 43 57.3	
	comp=E,0.2nm,0.3s,baz=222,slow=14,SNR=2.1						
PDAR				LR	LR	01 45 34.3	
	comp=E,106nm,19.9s,baz=262,slow=44						
PFO	Pinyon Flats O	8.63	162	Lg	Lg	01 44 32.9	
	comp=E,0.1nm,0.3s,baz=317,slow=22,SNR=1.5						
PFO				LR	LR	01 44 47.5	
	comp=E,58nm,20.7s,baz=342,slow=33						
BBB	Bella Bella	11.82	334	LR	LR	01 46 37.9	
	comp=E,82nm,21.0s,baz=110,slow=34						
ANMO	Albuquerque	12.40	120	Pn	Pn	01 43 02.9	+2.7
	comp=E,0.1nm,0.3s,baz=319,slow=4.6,SNR=1.7						
ANMO				Lg	Lg	01 46 38.4	
	comp=E,0.1nm,0.3s,baz=227,slow=19,SNR=2.2						
ANMO				LR	LR	01 48 33.6	
	comp=E,324nm,20.9s,baz=306,slow=41						
DLBC	Dease Lake	17.83	342	LR	LR	01 51 48.0	
	comp=E,269nm,18.2s,baz=126,slow=40						
TXAR	Lajitas Array	17.98	129	P	P	01 44 15.5	+1.4
	baz=320,slow=8.3,SNR=2.5						
TXAR				S	Sn	01 47 32.2	-1.9
	comp=E,0.1nm,0.3s,baz=51,slow=16,SNR=1.5						
TXAR				Lg	Lg	01 49 25.9	
	comp=E,0.1nm,0.3s,baz=43,slow=26,SNR=6.2						
TXAR				LR	LR	01 52 12.7	
	comp=E,139nm,19.4s,baz=0.0,slow=40						
ULM	Lac du Bonnet	18.39	55	LR	LR	01 50 58.8	
	comp=E,51nm,18.5s,baz=156,slow=36						
YKA	Yellowknife Ar	20.85	6	P	P	01 44 45.3	+0.2
	comp=E,0.5nm,0.7s,baz=228,slow=15,SNR=2.9						
KDAK	Kodiak Island	26.21	319	LR	LR	01 54 17.7	
	comp=E,133nm,19.4s,baz=129,slow=33						
INK	Inuvik	27.51	349	P	P	01 45 50.2	+0.6
	comp=E,1.6nm,1.0s,baz=124,slow=7.5,SNR=2.6						
INK				LR	LR	01 58 46.6	
	comp=E,159nm,18.3s,baz=145,slow=41						
ILAR	Eielson Array	27.70	335	P	P	01 45 53.3	+1.8
	comp=E,0.9nm,0.7s,baz=152,slow=8.7,SNR=17						
ILAR				LR	LR	01 56 48.5	
	comp=E,80nm,18.5s,baz=138,slow=36						
TKL	Tuckaleechee C	28.46	91	LR	LR	01 58 32.2	
	comp=E,45nm,20.2s,baz=313,slow=39						
SADO	Sadowa	29.35	71	LR	LR	01 58 37.4	
	comp=E,96nm,21.3s,baz=208,slow=38						
SDV	Santo Domingo	54.08	113	LR	LR	02 15 31.1	
	comp=E,52nm,19.9s,baz=295,slow=39						
FINES	FINESS Array B	73.31	16	P	P	01 51 39.5	+4.8
	comp=E,3.6nm,1.1s,baz=270,slow=4.0,SNR=3.3						
ESDC	Sonseca Array	79.99	45	P	P	01 52 15.6	+2.7
	comp=E,0.2nm,0.8s,baz=299,slow=6.0,SNR=1.8						
SONM	Songino Array	81.84	331	P	P	01 52 24.3	+1.5
	comp=E,0.4nm,0.9s,baz=62,slow=3.4,SNR=1.3						
ZALV	Zalesovo Beam	82.26	346	P	P	01 52 25.4	+0.7

	comp=E,0.2nm,0.3s,baz=3.7,slow=4.5,SNR=2.6						
BVAR	**Borovoye Array**	**85.07**	**354**	P	**P**	**01 52 39.8**	**+0.6**
	comp=E,0.5nm,0.5s,baz=47,slow=5.5,SNR=2.1						
KURBB	**Kurchatov Arra**	**86.52**	**349**	P	**P**	**01 52 46.4**	**+0.1**
	comp=E,0.6nm,0.4s,baz=16,slow=4.9,SNR=4.1						
WMQ	**Urumqi**	**91.22**	**341**	*e*P	**P**	**01 53 08.1**	**-0.8**

*IDC **19** 01:50:16.6±0.8, 41.°94N×119.°69W, h0^{km}, mb3.6/1, mb1 3.7/5, mb1mx3.5/50, mbtmp3.3/5, ML3.2/4, MS2.9/4, Ms1 2.9/4, ms1mx2.7/50, Error ellipse: s-maj=11.2km s-min=6.1km az=10.0*

*REN **19** 01:50:17.4±1.8, 41.°87N±0.°04×119.°62W±0.°06, h12^{km}±7^{km}, ML4.0/5, ML3.5/104(NEIC), Mwr3.9/123(NEIC), Error ellipse: s-maj=6.9km s-min=4.8km az=48.0*

*NEIC **19** 01:50:17.4±1.8, 41.°86N±0.°04×119.°58W±0.°07, h10^{km}±3^{km}, Error ellipse: s-maj=7.6km s-min=5.7km az=95.0*

*NEIC **19** 01:50:17.4, 41.°87N×119.°62W, h10^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-5.69; $M_{\theta\theta}$-1.80; $M_{\phi\phi}$7.49; $M_{r\theta}$-2.52; $M_{\theta\phi}$0.33; $M_{\phi r}$-5.95; Fault plane solution: $M_0$9.37000×10^{14} NP1:ϕ_s18.48000°, δ68.19000°, λ-74.20000°. NP2:ϕ_s161.18000°, δ26.70000°, λ-124.24000°. Principal axes: T 9.9089, Plg22.0000°, Azm97.0000°; N -1.2017, Plg15.0000°, Azm192.0000°; P -8.7072, Plg63.0000°, Azm314.0000°;*

*ANF **19** 01:50:18.2±0.6, 41.°84N×119.°63W, h12^{km}, ML4.0/19 Error ellipse: s-maj=5.0km s-min=4.7km az=147.0*

ISC 19 01:50:18.0±0.7**, 41.°87N**±0.°03×**119.°61W**±0.°02**, h10**^{km}**, n109, σ1^{s}60**/128**, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOD	**Modoc Plateau**	**0.52**	**274**		**Pg**	**01 50 27.9**	**-0.4**
MOD					**Sg**	**01 50 35.3**	**+0.2**
MOD	**Modoc Plateau**	**0.52**	**274**	IAML		01 50 42.5	
	comp=N,6µm,0.9s						
WVOR	**Wild Horse Val**	**0.92**	**51**		**Pb**	**01 50 35.1**	**-1.0**
WVOR					**Sb**	**01 50 47.7**	**-0.7**
M04C	**Macdoel**	**1.67**	**268**	P	**Pn**	**01 50 46.8**	**-0.7**
	baz=86,SNR=626						
M04C				Sb	**Sg**	**01 51 11.5**	**-0.2**
	baz=86						
K04D	**Chiloquin, OR**	**1.77**	**296**	Pn	**Pn**	**01 50 48.1**	**-0.7**
	baz=115						
K04D				Pb	**Pb**	**01 50 49.6**	**-1.0**
	baz=115,SNR=74						
K04D				Sb	**Sg**	**01 51 15.2**	**+0.4**
	baz=115						
J05D	**Fort Rock, OR**	**1.86**	**320**	Pn	**Pn**	**01 50 49.6**	**-0.5**
	baz=139						
J05D				Pb	**Pb**	**01 50 51.5**	**-0.7**
	baz=139						
J05D				Sb	**Sg**	**01 51 17.2**	**-0.6**
	baz=139						
L04D	**Klamath Falls**	**2.04**	**281**	Pn	**Pn**	**01 50 51.6**	**-0.9**
	baz=99,SNR=663						
L04D				Pb	**Pb**	**01 50 54.9**	**-0.4**
	baz=99						
L04D				Sb	**Sg**	**01 51 22.4**	**-1.2**
	baz=99						
PAHR	**Pah Rah Range**	**2.16**	**175**	Pn	**Pn**	**01 50 55.0**	**+0.8**
I07A	**Izee**	**2.22**	**2**	Pn	**Pn**	**01 50 54.9**	**-0.1**
I07A				IAML		01 51 28.3	
	comp=N,336nm,0.6s						
I07A				IAML		01 51 42.5	
	comp=E,301nm,0.7s						
LCMM	**Colby Mountain**	**2.25**	**221**		**Pn**	**01 50 56.2**	**+0.7**
O03E	**Paynes Creek**	**2.29**	**227**	Pn	**Pn**	**01 50 55.8**	**0.0**
	baz=45						
O03E				Pb	**Pb**	**01 50 58.6**	**-0.7**
	baz=45,SNR=120						
BMN	**Battle Mountai**	**2.30**	**128**	Pn	**Pn**	**01 50 55.2**	**-1.0**
BMN				IAML		01 51 34.5	
	comp=N,214nm,1.1s						
BMN				IAML		01 51 37.6	
	comp=E,238nm,0.6s						
J04D	**Umpqua Nationa**	**2.31**	**307**	Pb	**Pb**	**01 50 59.8**	**0.0**
	baz=126,SNR=74						
J04D				Sb	**Sg**	**01 51 30.7**	**-1.4**
	baz=126						
YBH	**Yreka Blue Hor**	**2.33**	**268**	Pn	**Pn**	**01 50 55.3**	**-1.1**
	comp=E,7.7nm,0.3s,baz=70,slow=9.4,SNR=88						
YBH				Lg	Lg	01 51 27.6	
	comp=E,22nm,0.3s,baz=349,slow=12,SNR=7.2						
YBH	**Yreka Blue Hor**	**2.33**	**268**	Pn	**Pn**	**01 50 54.9**	**-1.6**
YBH				IAML		01 51 40.6	
	comp=N,193nm,2.0s						
M02C	**Callahan**	**2.48**	**260**	Pn	**Pn**	**01 50 57.3**	**-1.2**
	baz=78,SNR=28						
M02C				Pb	**Pb**	**01 51 00.4**	**-2.3**
	baz=78						
M02C				Pg	**Pg**	**01 51 04.3**	**-1.3**
	baz=78						
M02C				Sb	**Sg**	**01 51 35.6**	**-2.1**
	baz=78						
N02D	**Trinity Center**	**2.50**	**250**	P	**Pn**	**01 50 57.4**	**-1.3**
	baz=68,SNR=11						
N02D				Sb	**Sg**	**01 51 36.8**	**-1.4**
	baz=68						
WDC	**Whiskeytown Da**	**2.56**	**241**	Pn	**Pn**	**01 50 58.3**	**-1.2**
VCNR	**Virginia City**	**2.57**	**181**	Pn	**Pn**	**01 50 58.9**	**-1.0**
VCNR				IAML		01 51 44.3	
	comp=N,294nm,0.9s						
VCNR				IAML		01 51 52.4	
	comp=E,336nm,1.1s						
MPK	**Martis Peak**	**2.59**	**187**		**Pn**	**01 50 59.5**	**-0.7**
MPK				IAML		01 51 43.9	
	comp=N,170nm,0.9s						
MPK				IAML		01 51 48.4	
	comp=E,191nm,1.6s						
ORV	**Oroville**	**2.72**	**213**	Pn	**Pn**	**01 51 00.9**	**-0.9**
PNTR	**Pine Nut**	**2.77**	**180**	Pn	**Pn**	**01 51 03.4**	**+0.7**
PNTR				IAML		01 51 49.9	
	comp=E,247nm,1.0s						
PNTR				IAML		01 52 07.8	
	comp=N,283nm,1.2s						
I05D	**Terrebonne, OR**	**2.78**	**333**	Pb	**Pb**	**01 51 07.5**	**-0.3**
	baz=152,SNR=55						
I05D				Sb	**Sg**	**01 51 44.8**	**-2.5**
	baz=152						
RUBR	**Rubicon Trail**	**2.84**	**189**	Pn	**Pn**	**01 51 05.7**	**+2.0**
RUBR				IAML		01 52 13.8	
	comp=E,134nm,1.5s						
RUBR				IAML		01 52 18.6	
	comp=N,180nm,1.4s						
YERR	**Yerington**	**2.89**	**174**		**Pb**	**01 51 07.1**	**-2.7**
YERR				IAML		01 51 53.1	
	comp=E,175nm,1.3s						
YERR				IAML		01 52 00.3	
	comp=N,219nm,1.2s						
EMB	**Emerald Bay**	**2.91**	**188**		**Pn**	**01 51 05.3**	**+0.7**
O02D	**Mt. Diablo Mer**	**2.94**	**236**	Pb	**Pb**	**01 51 10.6**	**+0.1**
	baz=54						
O02D				Sb	**Sg**	**01 51 49.4**	**-3.0**
	baz=54						
L02E	**Cave Junction**	**2.99**	**277**	P	**Pn**	**01 51 07.0**	**+1.5**
	baz=94,SNR=53						
KVN	**Kaiserville**	**3.04**	**157**	Pn	**Pn**	**01 51 06.8**	**+0.5**
K02D	**Willamette Mer**	**3.12**	**287**	P	**Pn**	**01 51 07.9**	**+0.5**
	baz=104,SNR=132						
K02D				Sb	**Sb**	**01 51 53.9**	**+2.1**
	baz=104						
MFID	**Camas Ranch**	**3.19**	**60**	Pn	**Pn**	**01 51 07.1**	**-1.3**
KRMB	**Red Mountain**	**3.24**	**265**	Pn	**Pn**	**01 51 09.0**	**0.0**
KRMB				IAML		01 52 14.9	
	comp=E,88nm,1.7s						
KRMB				IAML		01 52 20.1	
	comp=N,138nm,2.7s						
KHMM	**Horse Mountain**	**3.26**	**254**	Pn	**Pn**	**01 51 08.8**	**-0.6**
KHMM				IAML		01 52 15.7	
	comp=E,164nm,1.8s						
KHMM				IAML		01 52 16.4	
	comp=N,168nm,1.6s						
I03D	**Drain, OR**	**3.31**	**305**	Pg	**Pg**	**01 51 21.1**	**-0.3**
	baz=122						
I03D				Sb	**Sb**	**01 51 59.6**	**+2.6**
	baz=122						
RYN	**Ryan**	**3.34**	**165**	Pn	**Pn**	**01 51 09.3**	**-1.1**
RYN				IAML		01 52 14.2	
	comp=E,102nm,1.0s						
RYN				IAML		01 52 14.3	
	comp=N,96nm,1.0s						
BMO	**Blue Mountains**	**3.42**	**29**	Pn	**Pn**	**01 51 12.1**	**+0.5**
BMO				IAML		01 52 16.9	
	comp=N,110nm,2.1s						
J01E	**Myrtle Point**	**3.45**	**293**	Pg	**Pg**	**01 51 24.6**	**+0.5**
	baz=111						
G08A	**Pilot Rock**	**3.46**	**8**		**Pn**	**01 51 12.4**	**+0.4**
KBO	**Bosley Butte**	**3.46**	**277**	Pn	**Pn**	**01 51 10.9**	**-1.1**
ELK	**Elko**	**3.47**	**107**	Pn	**Pn**	**01 51 15.0**	**+2.6**
	comp=N,2.7nm,0.3s,baz=298,slow=15,SNR=23						
ELK				Sn	**Sn**	**01 51 54.0**	**+0.3**
	comp=N,4.4nm,0.3s,baz=191,slow=19,SNR=3.8						
ELK				Lg	Lg	01 52 06.2	
	comp=N,16nm,0.3s,baz=269,slow=11,SNR=7.0						
ELK	**Elko**	**3.47**	**107**	Pn	**Pn**	**01 51 11.9**	**-0.4**
JCC	**Jacoby Creek,**	**3.49**	**254**	Pn	**Pn**	**01 51 11.8**	**-0.5**
JCC				IAML		01 52 22.4	
	comp=N,155nm,2.7s						
H04D	**Lebanon**	**3.51**	**320**	Sb	**Sg**	**01 52 06.6**	**-4.0**
	baz=138						
KMRM	**Mail Ridge**	**3.51**	**243**	Pn	**Pn**	**01 51 13.1**	**+0.4**
NVAR	**Mina Array Bea**	**3.57**	**163**	Pn	**Pn**	**01 51 15.9**	**+2.2**
	comp=N,0.5nm,0.3s,baz=341,slow=12,SNR=11						
NVAR				Sn	**Sn**	**01 51 57.8**	**+1.7**
	comp=N,3.3nm,0.3s,baz=346,slow=15,SNR=5.2						
NVAR				Lg	Lg	01 52 12.3	
	comp=N,6.1nm,0.3s,baz=344,slow=19,SNR=6.0						
NVAR				LR	LR	01 53 04.5	
	comp=N,245nm,20.7s,baz=342,slow=45						
NVAR	**Mina Array Bea**	**3.57**	**163**		**Pn**	**01 51 13.1**	**-0.6**
G05D	**Wamic, OR**	**3.60**	**340**	Sb	**Sg**	**01 52 09.8**	**-3.7**
	baz=159						
NV11	**Mina Array Sit**	**3.60**	**162**		**Pn**	**01 51 12.9**	**-1.2**
NV11				IAML		01 52 28.1	
	comp=E,62nm,1.6s						
KEBM	**Edson Butte**	**3.65**	**288**	Pn	**Pn**	**01 51 14.7**	**+0.2**
LHV	**Little Huntoon**	**3.71**	**166**	Pn	**Pn**	**01 51 17.4**	**+2.1**
LHV				IAML		01 52 23.0	
	comp=N,129nm,1.3s						
KCPM	**Cahto Peak**	**3.72**	**236**	Pn	**Pn**	**01 51 13.4**	**-2.2**
KCPM				IAML		01 52 30.4	
	comp=E,106nm,1.1s						
KCPM				IAML		01 52 41.4	
	comp=N,87nm,2.2s						
HOOD	**Mount Hood Mea**	**3.76**	**337**	Pn	**Pn**	**01 51 14.3**	**-1.9**
HOOD				IAML		01 52 20.6	
	comp=N,112nm,0.9s						
HOOD				IAML		01 52 37.4	
	comp=E,122nm,1.1s						
COR	**Corvallis**	**3.83**	**316**	Pn	**Pn**	**01 51 14.2**	**-2.8**
COR				IAML		01 52 43.7	
	comp=E,120nm,1.4s						
CMB	**Columbia Colle**	**3.87**	**189**		**Pn**	**01 51 16.9**	**-0.7**
F07A	**Phinny Hill Vi**	**4.04**	**357**	Pn	**Pn**	**01 51 18.4**	**-1.4**
F07A				IAML		01 52 35.0	
	comp=E,98nm,0.8s						
F07A				IAML		01 52 36.9	
	comp=N,63nm,1.1s						
PLID	**Pearl Lake**	**4.15**	**38**	Pn	**Pn**	**01 51 22.1**	**+0.4**
PLID				IAML		01 52 40.6	
	comp=N,40nm,0.9s						
HLID	**Hailey**	**4.18**	**64**	Pn	**Pn**	**01 51 23.1**	**+1.0**
	baz=248						
HLID				Pb	**Pb**	**01 51 30.2**	**-1.7**
	baz=248						
HLID				Sb	**Sb**	**01 52 26.2**	**+3.7**
	baz=248						
HLID	**Hailey**	**4.18**	**64**	Pn	**Pn**	**01 51 22.3**	**+0.3**
HLID				IAML		01 52 42.3	
	comp=N,82nm,1.2s						
TPH	**Tonopah**	**4.21**	**153**		**Pn**	**01 51 21.6**	**-0.8**
MDPB	**Devils Postpil**	**4.25**	**174**	Pn	**Pn**	**01 51 23.2**	**+0.2**
F10A	**Beach Ranch, E**	**4.45**	**22**	Pn	**Pn**	**01 51 24.4**	**-1.3**
F10A				IAML		01 53 03.4	
	comp=N,60nm,1.8s						
F10A				IAML		01 53 03.6	
	comp=E,54nm,2.0s						
HAWA	**Hanford**	**4.53**	**1**		**Pn**	**01 51 28.4**	**+1.9**
HAWA				IAML		01 53 02.3	
	comp=E,36nm,1.1s						
F04A	**Amboy**	**4.55**	**334**		**Pn**	**01 51 24.3**	**-2.5**
F04A				IAML		01 52 45.2	
	comp=E,42nm,0.9s						
F04A				IAML		01 52 52.7	
	comp=N,53nm,0.9s						
E08A	**Dider Farm, El**	**4.64**	**5**	Pn	**Pn**	**01 51 27.5**	**-0.7**
E08A				IAML		01 52 51.2	
	comp=E,48nm,1.2s						
R11A	**Troy Canyon, C**	**4.67**	**137**	Sg	**Sg**	**01 52 47.0**	**-1.0**
	baz=320						
R11A	**Troy Canyon, C**	**4.67**	**137**		**Pn**	**01 51 27.0**	**-1.8**
R11A				IAML		01 52 50.5	
	comp=E,42nm,1.3s						
R11A				IAML		01 52 54.8	
	comp=N,32nm,2.0s						
E09A	**Wood Farm, Sta**	**4.76**	**12**	Pn	**Pn**	**01 51 28.3**	**-1.5**
E09A				IAML		01 53 00.9	
	comp=E,32nm,0.9s						
LCH	**Last Change Ra**	**4.87**	**161**		**Pn**	**01 51 30.4**	**-1.0**
LCH				IAML		01 53 19.4	
	comp=E,25nm,1.1s						
SPR3	**Spring Creek 3**	**4.94**	**124**	Pn	**Pn**	**01 51 32.2**	**-0.4**
BGU	**Big Grassy Mou**	**5.03**	**99**		**Pn**	**01 51 33.0**	**-0.7**
HVU	**Hansel Valley**	**5.11**	**89**	Pn	**Pn**	**01 51 36.7**	**+2.0**
LON	**Longmire**	**5.13**	**343**	Pn	**Pn**	**01 51 35.0**	**0.0**
LON				IAML		01 53 02.6	
	comp=E,21nm,3.6s						
BCYI	**Bear Canyon**	**5.16**	**60**		**Pn**	**01 51 36.5**	**+1.0**
SPUT	**South Promonto**	**5.39**	**94**	Pn	**Pn**	**01 51 38.4**	**-0.3**
DUG	**Dugway, Tooele**	**5.40**	**106**	P	**Pn**	**01 51 41.2**	**+2.4**
	baz=290						
DUG	**Dugway, Tooele**	**5.40**	**106**		**Pn**	**01 51 41.1**	**+2.4**
PSUT	**Pine Spring**	**5.52**	**125**		**Pn**	**01 51 40.9**	**+0.5**
PRN	**Pahroc Range**	**5.67**	**140**		**Pn**	**01 51 41.3**	**-1.2**
MCMT	**McKenzie Canyo**	**5.75**	**57**		**Pn**	**01 51 42.7**	**-0.8**
NLU	**North Lily Min**	**6.01**	**106**		**Pn**	**01 51 47.0**	**-0.2**
HWUT	**Hardware Ranch**	**6.02**	**90**		**Pn**	**01 51 47.0**	**-0.3**
CTU	**Camp Tracy**	**6.03**	**99**		**Pn**	**01 51 46.1**	**-1.4**
GWY	**Greenwater Val**	**6.11**	**157**		**Pn**	**01 51 47.8**	**-0.8**
DLMT	**Dillon**	**6.17**	**53**		**Pn**	**01 51 48.7**	**-0.7**
ECR	**Eagle Creek**	**6.21**	**76**	Pn	**Pn**	**01 51 49.1**	**-0.8**
JLU	**Jordanelle**	**6.28**	**99**		**Pn**	**01 51 49.1**	**-1.7**
SHPR	**Sheep Range**	**6.37**	**146**		**Pn**	**01 51 51.0**	**-1.1**
AHID	**Auburn Hatcher**	**6.37**	**79**	Pn	**Pn**	**01 51 48.9**	**-3.2**
MSO	**Missoula**	**6.41**	**37**	P	Pn	01 51 58.0	+5.4
	baz=221						
ICU	**Indian Springs**	**6.44**	**135**		**Pn**	**01 51 56.9**	**+3.9**
LRM	**Limekiln Ridge**	**6.51**	**50**		**Pn**	**01 51 52.8**	**-1.3**
FXWY	**Fox Creek**	**6.56**	**71**	Pn	**Pn**	**01 51 53.8**	**-1.0**
MVU	**Marysvale**	**6.58**	**118**		**Pn**	**01 51 53.9**	**-1.2**
MSU	**Marysvale**	**6.60**	**118**		**Pn**	**01 51 54.5**	**-0.8**
REDW	**Red Top Meadow**	**6.63**	**74**		**Pn**	**01 51 53.7**	**-2.0**
MTPU	**Mount Pierson**	**6.86**	**121**		**Pn**	**01 51 56.9**	**-2.1**
YHH	**Holmes Hill**	**7.02**	**62**	Pn	**Pn**	**01 51 59.0**	**-2.1**
KNB	**Kanab**	**7.14**	**130**	Pn	**Pn**	**01 52 01.1**	**-1.6**
P18A	**Preston Nutter**	**7.45**	**104**		**Pn**	**01 52 04.3**	**-2.7**
BW06	**Boulder Array**	**7.50**	**80**	Pn	**Pn**	**01 52 05.5**	**-2.1**
PDAR	**Pinedale Array**	**7.50**	**80**	Pn	**Pn**	**01 52 11.3**	**+3.6**
	comp=E,0.1nm,0.3s,baz=266,slow=13,SNR=9.4						
PDAR				Lg	Lg	01 54 14.9	
	comp=E,0.1nm,0.3s,baz=258,slow=28,SNR=1.5						
PDAR				LR	LR	01 54 41.4	
	comp=E,55nm,19.6s,baz=241,slow=35						
RDMU	**Red Mountain**	**7.68**	**96**	Pn	**Pn**	**01 52 07.4**	**-2.7**
U15A	**North Rim**	**7.86**	**131**		**Pn**	**01 52 11.2**	**-1.4**
O20A	**White River Ci**	**8.77**	**98**		**Pn**	**01 52 23.4**	**-1.6**
BBB	**Bella Bella**	**11.83**	**334**	LR	LR	01 57 59.6	
	comp=E,98nm,19.8s,baz=45,slow=40						
ANMO	**Albuquerque**	**12.40**	**120**	LR	LR	01 57 36.6	
	comp=E,44nm,18.4s,baz=311,slow=35						
TXAR	**Lajitas Array**	**17.97**	**129**	P	**P**	**01 54 32.9**	**+4.3**
	comp=E,0.0nm,0.3s,baz=342,slow=8.5,SNR=5.5						
ILAR	**Eielson Array**	**27.72**	**335**	P	**P**	**01 56 07.0**	**+0.8**
	comp=E,0.7nm,0.8s,baz=148,slow=9.6,SNR=8.4						
ILAR	**Eielson Array**	**27.72**	**335**	P	**P**	**01 56 05.4**	**-0.8**

*BEO **19** 01:59:03.5±3.0, 38.°27N×20.°38E, h55^{km}±1^{km}, ML3.6/13*

*IDC **19** 01:59:04.9±1.1, 38.°96N×20.°70E, h0^{km}, mb3.6/6, mb1 3.6/13, mb1mx3.5/46, mbtmp3.5/13, ML3.4/6, MS2.6/2, Ms1 2.6/2, ms1mx2.1/56, Error ellipse: s-maj=18.6km s-min=14.5km az=51.0*

*PDG **19** 01:59:05.4±0.4, 38.°82N×20.°53E, h12^{km}±1^{km}, ML3.5/14, Error ellipse: s-maj=0.8km s-min=1.0km az=0.0*

*ATH **19** 01:59:06.3, 38.°79N×20.°62E, h11^{km}±1^{km}, ML3.4/4, Error ellipse: s-maj=1.4km s-min=0.9km az=276.0*

*THE **19** 01:59:06.5, 38.°79N×20.°57E, h6^{km}±1^{km}, ML3.4/17, Error ellipse: s-maj=1.7km s-min=0.4km az=89.0*

ISC 19 01:59:05.6±0.7**, 38.°80N**±0.°02×**20.°55E**±0.°02**, h11**^{km}±4^{km}**, n156, σ1^{s}10**/198**, mb3.7**/6**, 13C-8D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKD2	**Lefkada island**	**0.08**	**98**	P	**Pg**	**01 59 07.8**	**-0.3**
LKD2				S	**Sg**	**01 59 09.3**	**-0.6**
	88µm,0.4s						
LKD2	**Lefkada island**	**0.08**	**98**	P	**Pg**	**01 59 07.8**	**-0.3**
LKD2				S	**Sg**	**01 59 09.3**	**-0.6**
LKD2				AML	AML	01 59 09.6	
LKD2				AML	AML	01 59 10.0	
TSLK	**Tsoukalades, L**	**0.08**	**74**	P	**Pg**	**01 59 07.9**	**-0.2**
TSLK				S	**Sg**	**01 59 09.7**	**-0.2**
	58µm,0.5s						
TSLK	**Tsoukalades, L**	**0.08**	**74**	P	**Pg**	**01 59 07.9**	**-0.2**
TSLK				S	**Sg**	**01 59 09.8**	**-0.2**
TSLK				AML	AML	01 59 10.2	
TSLK				AML	AML	01 59 10.3	
	comp=N,91903µm,0.6s						
DRAG	**Dragano-Lefkad**	**0.12**	**171**	P	**Pb**	**01 59 09.2**	**-0.8**
NYDR	**Nydri-Lefkada**	**0.14**	**127**	P	**Pg**	**01 59 08.9**	**0.0**
NYDR				S	**Sg**	**01 59 11.4**	**+0.1**
	comp=N,32µm,0.4s						
NYDR	**Nydri-Lefkada**	**0.14**	**127**	P	**Pg**	**01 59 09.0**	**+0.1**
NYDR				S	**Sg**	**01 59 11.3**	**+0.1**
EVGI	**Lefkada island**	**0.20**	**156**	P	**Pb**	**01 59 10.3**	**-1.0**
EVGI				S	**Sg**	**01 59 13.6**	**+0.9**
	comp=N,33µm,0.2s						
EVGI	**Lefkada island**	**0.20**	**156**	P	**Pg**	**01 59 10.1**	**+0.3**
EVGI				S	**Sg**	**01 59 13.2**	**+0.5**
FSK	**Fiskardo**	**0.34**	**179**	P	**Pb**	**01 59 13.1**	**-0.6**
FSK				S	**Sb**	**01 59 18.6**	**-0.5**
	comp=N,6µm,0.4s						
FSK	**Fiskardo**	**0.34**	**179**	P	**Pb**	**01 59 13.1**	**-0.6**
FSK				S	**Sb**	**01 59 17.9**	**-1.2**
FSK				AML	AML	01 59 19.3	
	comp=N,11584µm,0.6s						
FSK				AML	AML	01 59 19.4	
	comp=E,13160µm,0.3s						
DMLN	**Damoulianata-K**	**0.58**	**194**	P	**Pb**	**01 59 17.1**	**-0.7**
DMLN				S	**Sb**	**01 59 25.9**	**-0.1**
	comp=E,3µm,0.4s						
DMLN	**Damoulianata-K**	**0.58**	**194**	P	**Pb**	**01 59 17.3**	**-0.5**
LXRA	**Lixouri, Kepha**	**0.61**	**189**	P	**Pb**	**01 59 17.9**	**-0.3**
KEF3	**Kipouria, Keph**	**0.62**	**195**	P	**Pg**	**01 59 17.6**	**0.0**
KEF3				S	**Sb**	**01 59 27.0**	**-0.1**
	comp=E,5µm,0.4s						
KEF3	**Kipouria, Keph**	**0.62**	**195**	P	**Pg**	**01 59 17.2**	**-0.4**
VLS	**Valsamata**	**0.62**	**177**	P	**Pg**	**01 59 17.6**	**-0.1**
VLS				S	**Sb**	**01 59 27.3**	**0.0**
	comp=E,2µm,0.3s						
VLS	**Valsamata**	**0.62**	**177**	P	**Pg**	**01 59 17.7**	**-0.1**
VLS				S	**Sb**	**01 59 26.9**	**-0.5**
VLS				AML	AML	01 59 29.9	
	comp=N,3736µm,0.3s						
VLS				AML	AML	01 59 33.0	
	comp=E,4946µm,0.3s						
ARGA	**Argostoli. Kep**	**0.63**	**185**	P	**Pn**	**01 59 19.3**	**-1.2**
PSDA	**Pessada-Kefalo**	**0.69**	**178**	P	**Pg**	**01 59 18.8**	**-0.1**
PSDA	**Pessada-Kefalo**	**0.69**	**178**	P	**Pg**	**01 59 18.4**	**-0.5**
IGT	**Igoumenitsa**	**0.75**	**347**	P	**Pb**	**01 59 20.6**	**-0.1**
IGT				S	**Sn**	**01 59 33.0**	**-0.6**
	comp=E,2µm,0.3s						
IGT	**Igoumenitsa**	**0.75**	**347**	P	**Pb**	**01 59 20.5**	**-0.1**
PVO	**Paravola**	**0.78**	**103**	P	**Pb**	**01 59 20.7**	**-0.6**
PVO				S	**Sn**	**01 59 32.7**	**-1.7**
	comp=E,3µm,0.5s						
PVO	**Paravola**	**0.78**	**103**	P	**Pb**	**01 59 20.7**	**-0.6**
JAN	**Janina**	**0.89**	**15**	P	**Pb**	**01 59 23.3**	**+0.3**
JAN				S	**Sn**	**01 59 36.2**	**-0.8**
	comp=E,4µm,0.7s						
JAN	**Janina**	**0.89**	**15**	P	**Pn**	**01 59 23.7**	**-0.3**
EVR	**Evrytania**	**0.99**	**83**	P	**Pg**	**01 59 24.0**	**-0.6**
EVR	**Evrytania**	**0.99**	**83**	P	**Pg**	**01 59 23.9**	**-0.8**
VTN	**Vitineika**	**1.01**	**150**	P	**Pg**	**01 59 24.6**	**-0.5**
RLS	**Riolos of Patr**	**1.03**	**136**	P	**Pg**	**01 59 24.8**	**-0.7**
RLS				S	**Sn**	**01 59 41.3**	**+0.8**
	comp=E,1µm,0.7s						
RLS	**Riolos of Patr**	**1.03**	**136**	P	**Pg**	**01 59 24.7**	**-0.8**
KASA	**Kassiopi**	**1.06**	**333**	P	**Pn**	**01 59 26.9**	**+0.5**
KEK	**Kerkira**	**1.08**	**328**	P	**Pn**	**01 59 27.1**	**+0.4**
KEK	**Kerkira**	**1.08**	**328**	P	**Pn**	**01 59 27.2**	**+0.5**
ANX	**Ano Chora**	**1.09**	**101**	P	**Pg**	**01 59 25.4**	**-1.2**
LTHK	**Lithakia**	**1.11**	**168**	P	**Pb**	**01 59 25.9**	**-1.0**
EFP	**Efpalio**	**1.12**	**109**	P	**Pb**	**01 59 26.0**	**-1.1**
EFP				S	**Sn**	**01 59 44.4**	**+1.6**
	comp=E,2µm,0.6s						
EFP	**Efpalio**	**1.12**	**109**	P	**Pb**	**01 59 26.0**	**-1.1**
SRN	**Sarande**	**1.16**	**339**	P	**Pg**	**01 59 29.3**	**+1.4**
SRN				S	**Sn**	**01 59 46.4**	**+2.8**
	comp=E,565nm,0.7s						
DRO	**Drossia**	**1.24**	**133**	P	**Pn**	**01 59 28.4**	**-0.6**
DRO				S	**Sn**	**01 59 46.9**	**+1.1**
	comp=E,2µm,0.5s						
DRO	**Drossia**	**1.24**	**133**	P	**Pn**	**01 59 28.2**	**-0.8**
MAKR	**Makrakomi, Fth**	**1.25**	**80**	P	**Pb**	**01 59 29.0**	**-0.3**
LAKA	**Lakka**	**1.25**	**116**	P	**Pn**	**01 59 28.1**	**-1.0**
LAKA				S	**Sn**	**01 59 46.8**	**+0.8**
	comp=E,3µm,0.9s						
LAKA	**Lakka**	**1.25**	**116**	P	**Pn**	**01 59 28.2**	**-0.9**
TRIZ	**Trizonia**	**1.27**	**110**	P	**Pn**	**01 59 28.7**	**-0.6**
KPRO	**Kipourio**	**1.31**	**28**	P	**Pg**	**01 59 30.4**	**-0.4**
THL	**Klokotos Trika**	**1.37**	**56**	P	**Pn**	**01 59 30.6**	**-0.1**
THL	**Klokotos Trika**	**1.37**	**56**	P	**Pn**	**01 59 30.5**	**-0.2**
AGG	**Agios Georgios**	**1.41**	**80**	P	**Pb**	**01 59 31.2**	**-0.7**
AGG				S	**Sg**	**01 59 51.8**	**+1.0**
	comp=E,720nm,0.8s						
AGG	**Agios Georgios**	**1.41**	**80**	P	**Pb**	**01 59 31.4**	**-0.5**
PENT	**Pentalofos**	**1.47**	**18**	P	**Pg**	**01 59 34.6**	**+0.9**
KLV	**Kalavryta, Ach**	**1.47**	**121**	P	**Pn**	**01 59 31.6**	**-0.5**
GUR	**Goura**	**1.65**	**121**	P	**Pb**	**01 59 35.1**	**-1.0**
GUR	**Goura**	**1.65**	**121**	P	**Pb**	**01 59 35.0**	**-1.2**
THAL	**Thalero**	**1.83**	**114**	P	**Pb**	**01 59 38.8**	**-0.2**
OHR	**Ohrid**	**2.31**	**5**	*e*Pn	**Pb**	**01 59 47.3**	**-0.1**
OHR				*e*Sn	**Sb**	**02 00 16.9**	**+0.8**
OHR	**Ohrid**	**2.31**	**5**	*i* Pn	**Pb**	**01 59 46.8**	**-0.7**
TIR	**Tirane**	**2.60**	**349**	⇓P	**Pb**	**01 59 50.1**	**-2.0**
TIR	**Tirane**	**2.60**	**349**	*e*Pn	**Pn**	**01 59 49.5**	**+1.9**
TIR				*e*Sn	**Sb**	**02 00 22.3**	**-1.8**
VAY	**Valandovo**	**2.96**	**31**	*e*Pn	**Pn**	**01 59 54.2**	**+1.7**
VAY	**Valandovo**	**2.96**	**31**	*i* Pn	**Pn**	**01 59 53.9**	**+1.4**
TIP	**Timpagrande**	**2.98**	**278**	⇑P	**Pn**	**01 59 54.2**	**+1.3**
STIP	**Stip**	**3.15**	**23**	*i* Pn	**Pb**	**01 59 58.6**	**-2.9**
ULC	**Ulcinj**	**3.31**	**343**	⇑*i*Pn	**Pn**	**01 59 58.2**	**+0.8**
ULC				*e*Sn	**Sn**	**02 00 37.1**	**+0.3**
MATE	**Matera**	**3.49**	**303**	⇑P	**Pg**	**02 00 11.0**	**-1.5**
DRME	**Dracevica, Mon**	**3.54**	**343**	*e*Pn	**Pn**	**02 00 01.4**	**+0.9**
DRME	**Dracevica, Mon**	**3.54**	**343**	⇑*i*Pn	**Pn**	**02 00 01.3**	**+0.8**
DRME				*i* Sn	**Sn**	**02 00 42.4**	**0.0**
BUM	**Brajici-Budva**	**3.72**	**341**	⇓*i*Pn	**Pn**	**02 00 03.7**	**+0.7**
BUM				*e*Sn	**Sn**	**02 00 46.5**	**-0.3**
PDG	**Podgorica**	**3.76**	**345**	⇑P	**Pn**	**02 00 05.2**	**+1.6**
PDG	**Podgorica**	**3.76**	**345**	*e*Pn	**Pn**	**02 00 05.1**	**+1.6**
PDG	**Podgorica**	**3.76**	**345**	*e*Pn	**Pn**	**02 00 04.3**	**+0.8**
TTG	**Podgorica**	**3.76**	**345**	⇑*i*Pn	**Pn**	**02 00 04.4**	**+0.9**
TTG				*i* Sn	**Sn**	**02 00 48.2**	**+0.5**
PVY	**Plav**	**3.82**	**353**	⇑*i*Pn	**Pn**	**02 00 05.2**	**+0.8**
PVY				*e*Sn	**Sn**	**02 00 49.6**	**+0.2**
PRVS	**Prvonek**	**3.88**	**17**	*e*Pn	**Pn**	**02 00 06.7**	**+1.5**
CEME	**Cevo**	**3.94**	**342**	*e*Pn	**Pn**	**02 00 06.8**	**+0.7**
CEME				*e*Sn	**Sn**	**02 00 51.9**	**-0.5**
HCY	**Herceg Novi**	**3.96**	**337**	*e*Pn	**Pn**	**02 00 05.9**	**-0.5**
HCY	**Herceg Novi**	**3.96**	**337**	⇓*i*Pn	**Pn**	**02 00 06.5**	**+0.1**
HCY				*e*Sn	**Sn**	**02 00 52.1**	**-0.8**
BOSS	**Bosilegrad**	**3.97**	**21**	*e*Pn	**Pn**	**02 00 08.9**	**+2.4**
IVA	**Berane**	**4.10**	**353**	⇓*i*Pn	**Pn**	**02 00 09.1**	**+0.8**
IVA				*e*Sn	**Sn**	**02 00 55.7**	**-0.6**
KOME	**Kolasin**	**4.12**	**349**	⇓*i*Pn	**Pn**	**02 00 09.8**	**+1.2**
KOME				*i* Sn	**Sn**	**02 00 56.4**	**-0.4**
NKME	**Niksic**	**4.14**	**343**	⇓*i*Pn	**Pn**	**02 00 09.7**	**+0.8**
NKME				*e*Sn	**Sn**	**02 00 57.1**	**-0.2**
NKY	**Niksic**	**4.18**	**344**	⇑*i*Pn	**Pn**	**02 00 10.1**	**+0.7**
NKY				*i* Sn	**Sn**	**02 00 57.7**	**-0.6**
TREB	**Trebinje**	**4.25**	**338**	*e*Pn	**Pn**	**02 00 10.9**	**+0.6**
TREB	**Trebinje**	**4.25**	**338**	*e*Pn	**Pn**	**02 00 10.4**	**+0.1**
DBRK	**Dubrovnik**	**4.27**	**335**	*e*Pn	**Pn**	**02 00 10.3**	**-0.3**
VTS	**Vitosha**	**4.32**	**27**	⇑P	**Pn**	**02 00 13.6**	**+2.1**
VTS	**Vitosha**	**4.32**	**27**	*e*Pn	**Pn**	**02 00 13.2**	**+1.8**
VTS				*e*Sn	**Sn**	**02 01 03.4**	**+1.5**

BRY	**Bratogost**	4.37	340	ePn	Pn	02 00 12.4	+0.3
BRY	**Bratogost**	4.37	340	ePn	Pn	02 00 12.1	0.0
BRY				i Sn	Sn	02 01 01.4	-1.7
SELS	**Selova**	4.43	5	ePn	Pn	02 00 13.9	+1.0
SJES	**Sjenica**	4.48	355	ePn	Pn	02 00 16.1	+2.6
UPM	**Unac-Piva**	4.57	345	ePn	Pn	02 00 14.2	-0.7
UPM	**Unac-Piva**	4.57	345	⇓iPn	Pn	02 00 15.1	+0.2
UPM				i Sn	Sn	02 01 07.1	-1.0
STON	**Ston**	4.61	333	ePn	Pn	02 00 15.3	+0.2
STON	**Ston**	4.61	333	ePn	Pn	02 00 14.6	-0.5
STON	**Ston**	4.61	333	ePn	Pn	02 00 15.1	-0.1
PLE	**Pljevlja**	4.61	349	⇓iPn	Pn	02 00 16.2	+0.9
PLE				i Sn	Sn	02 01 08.1	-0.8
LSTV	**Lastovo**	4.84	326	ePn	Pn	02 00 18.2	-0.2
RUDO	**Rudo**	4.89	350	ePn	Pn	02 00 18.1	-1.0
BOVS	**Bovan**	4.91	10	⇑P	Pn	02 00 20.3	+1.0
BOVS	**Bovan**	4.91	10	ePn	Pn	02 00 22.2	+2.9
IDI	**Anoyia**	4.93	134	Pn	Pn	02 00 21.0	+1.2
	comp=E,0.4nm,0.3s,baz=310,slow=18,SNR=12						
IDI				Sn	Sn	02 01 17.9	+1.1
	comp=E,0.8nm,0.3s,baz=343,slow=19,SNR=2.5						
IDI				LR	LR	02 02 14.9	
	comp=E,32nm,18.6s,baz=280,slow=38						
VAE	**Valguarnera**	5.02	257	Pn	Pn	02 00 25.9	+5.0
	comp=E,0.2nm,0.3s,baz=13,slow=18,SNR=2.0						
VAE				Sn	Sn	02 01 16.9	-2.0
	comp=E,0.6nm,0.3s,baz=32,slow=20,SNR=2.4						
GRUS	**Gruza**	5.08	1	ePn	Pn	02 00 23.1	+1.4
BBLS	**Lazići**	5.13	351	ePn	Pn	02 00 23.3	+0.8
BBLS	**Lazići**	5.13	351	ePn	Pn	02 00 23.3	+0.8
MAKA	**Makarska**	5.22	330	ePn	Pn	02 00 23.7	+0.2
DIVS	**Divibare**	5.31	356	ePn	Pn	02 00 25.8	+0.9
DIVS	**Divibare**	5.31	356	ePn	Pn	02 00 22.2	-2.7
RICI	**Ricice**	5.35	332	ePn	Pn	02 00 25.6	+0.2
HAPS	**Han Pijesak,BI**	5.42	348	ePn	Pn	02 00 26.7	+0.3
TRUS	**Trudelj**	5.42	359	ePn	Pn	02 00 27.6	+1.3
KIJV	**Kijevo**	6.06	330	ePn	Pn	02 00 35.8	+0.6
ZIRJ	**Zirje**	6.10	324	ePn	Pn	02 00 35.8	+0.2
MGRS	**Mrkonjic Grad**	6.18	336	ePn	Pn	02 00 35.8	-1.1
MORI	**Morici**	6.24	326	ePn	Pn	02 00 38.3	+0.8
FRGS	**Fruska Gora**	6.38	355	⇑P	Pn	02 00 38.0	-1.5
FRGS	**Fruska Gora**	6.38	355	ePn	Pn	02 00 40.4	+0.9
FRGS	**Fruska Gora**	6.38	355	ePn	Pn	02 00 39.6	+0.1
BLY	**Banja Luka**	6.45	338	ePn	Pn	02 00 42.2	+1.7
BLY	**Banja Luka**	6.45	338	ePn	Pn	02 00 36.5	-4.0
AQU	**L'Aquila**	6.50	305	ePn	Pn	02 00 39.8	-1.4
DUGI	**Dugi Otok**	6.63	323	ePn	Pn	02 00 43.2	+0.3
UDBI	**Udbina**	6.75	329	ePn	Pn	02 00 45.9	+1.2
MRAK	**Mrakovica**	6.78	337	ePn	Pn	02 00 44.7	-0.4
NVLJ	**Novalja**	7.16	325	ePn	Pn	02 00 50.4	+0.2
RABC	**Rab**	7.34	326	ePn	Pn	02 00 53.1	+0.4
VOIR		7.42	25	⇑P	Pn	02 00 54.3	+0.3
MORH	**Mrgy, Hungar**	7.54	350	ePn	Pn	02 00 53.9	-1.6
MLR	**Muntele Rosu**	7.79	29	⇑P	Pn	02 01 00.5	+1.5
MLR	**Muntele Rosu**	7.79	29	Pn	Pn	02 00 59.7	+0.7
	comp=E,0.2nm,0.3s,baz=124,slow=16,SNR=1.5						
RIY	**Rijeka**	7.93	327	ePn	Pn	02 01 00.8	+0.1
RIY	**Rijeka**	7.93	327	ePn	Pn	02 01 01.1	+0.3
CRES	**Cresnjev**	7.97	333	ePn	Pn	02 01 01.2	-0.1
CEY	**Cerknica**	8.29	329	ePn	Pn	02 01 05.5	-0.2
SOKA	**Soboth**	8.86	335	Pn	Pn	02 01 13.5	-0.1
	comp=E,1.8nm,0.4s,SNR=7.1						
OBKA	**Obir**	8.88	332	ePn	Pn	02 01 14.6	+0.7
	comp=E,2.2nm,0.3s						
KBA	**Koelnbreinsper**	9.81	330	i Pn	Pn	02 01 27.9	+1.1
	comp=E,1.2nm,0.3s						
ABTA	**Abfaltersbach**	9.89	326	ePn	Pn	02 01 27.9	+0.1
	comp=E,1.4nm,0.4s						
MOA	**Molln**	10.13	335	ePn	Pn	02 01 31.7	+0.6
	comp=E,1.8nm,0.3s						
WTTA	**Wattenberg**	10.68	325	ePn	Pn	02 01 39.9	+1.4
	comp=E,0.8nm,0.2s						
WATA	**Walderalm**	10.76	325	i Pn	Pn	02 01 41.0	+1.3
	comp=E,1.3nm,0.4s						
MOTA	**Moosalm**	10.98	324	ePn	Pn	02 01 43.5	+0.8
	comp=E,4.7nm,0.6s						
DAVOX	**Davos/Dischmat**	11.18	319	Pn	Pn	02 01 46.7	+1.3
	comp=E,0.2nm,0.3s,baz=176,slow=17,SNR=2.0						
DAVOX				Sn	Sn	02 03 49.7	-0.7
	comp=E,0.1nm,0.3s,baz=211,slow=23,SNR=2.1						
GERES	**GERESS Array B**	11.19	336	Pn	Pn	02 01 45.4	-0.1
	comp=E,0.3nm,0.3s,baz=149,slow=16,SNR=5.0						
GERES				Sn	Sn	02 03 45.7	-4.8
	comp=E,0.1nm,0.3s,baz=146,slow=24,SNR=1.7						
KHC	**Kasperske Hory**	11.48	336	ePN	Pn	02 01 49.4	0.0
MMAI	**Mount Meron Ar**	13.35	111	Pn	Pn	02 02 14.5	-0.6
	comp=E,0.3nm,0.3s,baz=288,slow=10,SNR=1.4						
ESDC	**Sonseca Array**	19.00	280	P	Pn	02 03 30.6	+2.6
	comp=E,0.0nm,0.3s,baz=77,slow=11,SNR=2.6						
MDT	**Midelt**	21.23	261	LR	LR	02 12 55.2	
	comp=E,27nm,18.3s,baz=302,slow=39						
HFS	**Hagfors**	21.79	351	P	P	02 03 58.3	+1.0
	comp=E,3.5nm,0.8s,baz=176,slow=22,SNR=2.5						
FINES	**FINESS Array B**	22.93	7	P	P	02 04 09.9	+0.5
	comp=E,2.4nm,0.9s,baz=168,slow=9.8,SNR=6.2						
EKA	**Eskdalemuir Ar**	22.94	324	P	P	02 04 09.3	-0.3
	comp=E,2.2nm,0.7s,baz=130,slow=10,SNR=4.4						
TORD	**Torodi Ar. Bea**	30.53	218	P	P	02 05 21.0	+1.9
	comp=E,0.2nm,0.8s,baz=42,slow=8.5,SNR=1.8						
MKAR	**Makanchi Array**	44.96	59	P	P	02 07 19.6	-1.0
	comp=E,0.3nm,0.5s,baz=267,slow=8.5,SNR=7.6						
ZALV	**Zalesovo Beam**	45.26	49	P	P	02 07 21.3	-1.5
	comp=E,0.8nm,0.4s,baz=290,slow=4.4,SNR=4.8						

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*GUC **19** 02:04:38.5±0.5, 29°.63S×72°.93W, h20^{km}, ML3.9*
*IDC **19** 02:04:45.9±1.3, 29°.75S×72°.68W, h0^{km}, mb3.9/3, mb1 4.0/6, mb1mx3.8/25, mbtmp3.9/6, ML3.7/3, MS2.9/1, Ms1 2.9/1, ms1mx2.5/23, Error ellipse: s-maj=39.4km s-min=29.3km az=113.0*
ISC 19 02:04:45.2±4.5**, 29°.69S**±0°.04×**72°.66W**±0°.06**, h4^{km}**±29^{km}**, n26, σ2^{s}.35**/37**, mb4.1**/3**, 4C, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	**La Serena**	1.26	101	⇑iP	Pn	02 05 09.1	-0.4
CO05				eS	Sb	02 05 23.9	-2.0
CO05				IAML		02 05 26.5	
	comp=N,911nm,0.4s						
CO06	**Fray Jorge**	1.33	138	⇑eP	Pn	02 05 09.8	-0.7
CO06				i S	Sb	02 05 25.5	-2.5
CO06				IAML		02 05 26.9	
	comp=N,2µm,0.2s						
GO04	**Tololo Observa**	1.69	107	eP	Pn	02 05 15.9	+0.3
GO04				i S	Sn	02 05 36.5	-1.3
GO04				IAML		02 05 40.1	
	comp=N,3µm,0.6s						
LCO	**Las Campanas**	1.84	69	eP	Pn	02 05 17.4	-0.3
LCO				eS	Sn	02 05 39.7	-1.9
AC04	**Llanos de Chal**	2.03	44	⇑iP	Pn	02 05 19.1	-1.0
AC04				eS	Sn	02 05 42.5	-3.4
GO03	**Copiap**	2.98	46	eP	Pn	02 05 33.5	+0.2
GO03				eS	Sn	02 06 06.5	-3.1
GO03				IAML		02 06 09.0	
	comp=E,172nm,0.3s						
VA06	**Catapilco**	3.10	158	eP	Pn	02 05 35.0	+0.2
VA06				i S	Sn	02 06 08.6	-3.6
VA06				IAML		02 06 12.6	
	comp=N,287nm,0.4s						
VA03	**San Esteban**	3.56	150	eP	Pn	02 05 42.7	+1.4
VA03				eS	Sn	02 06 22.5	-1.4
ROCH	**El Roble**	3.57	157	⇑eP	Pn	02 05 42.1	+0.6
ROCH				i S	Sn	02 06 20.8	-3.4
VCA	**Vinchina**	4.01	77	eP	Pn	02 05 52.6	+5.1
VCA				eS	Sn	02 06 40.0	+5.0
MT09	**Talagante**	4.32	161	eP	Pn	02 05 53.0	+1.3
MT09				eS	Sn	02 06 39.4	-3.3
BO04	**La Punta**	4.63	158	eP	Pn	02 05 57.3	+1.3
BO04				eS	Sn	02 06 47.0	-3.2
H03N1	**Juan Fernandez**	6.52	233	Pn	Pn	02 06 20.4	-1.2
	baz=110,slow=17,SNR=26						
H03N2	**Juan Fernandez**	6.53	233	Pn	Pn	02 06 20.6	-1.1
	baz=110,slow=17,SNR=18						
H03N3	**Juan Fernandez**	6.53	233	Pn	Pn	02 06 20.4	-1.4
	baz=110,slow=17,SNR=27						
H03S3	**Juan Fernandez**	6.74	231	Pn	Pn	02 06 22.5	-2.0
H03S1	**Juan Fernandez**	6.74	230	Pn	Pn	02 06 22.0	-2.6
H03S2	**Juan Fernandez**	6.75	231	Pn	Pn	02 06 22.5	-2.3
LVC	**Limon Verde**	7.81	26	Pn	Pn	02 06 39.8	-0.1
	comp=N,0.4nm,0.3s,baz=229,slow=9.3,SNR=1.9						
LVC				Sn	Sn	02 08 03.5	-5.4
	comp=N,0.7nm,0.3s,baz=334,slow=22,SNR=2.0						
LVC				Lg	Lg	02 08 44.9	
	comp=N,1.0nm,0.3s,baz=140,slow=18,SNR=1.8						
PLCA	**Paso Flores**	11.16	172	Pn	Pn	02 07 26.0	+0.5
	comp=N,0.2nm,0.3s,baz=357,slow=14,SNR=8.4						
CPUP	**Villa Florida**	13.95	80	LR	LR	02 14 44.0	
	comp=N,40nm,18.2s,baz=240,slow=43						
SIV	**San Ignacio**	17.30	41	P	P	02 08 49.6	+0.5
	comp=N,0.3nm,0.3s,baz=216,slow=11,SNR=18						
BDFB	**Brasilia**	26.62	64	P	P	02 10 27.4	+2.4
	comp=N,3.2nm,0.7s,baz=232,slow=12,SNR=4.4						
TXAR	**Lajitas Array**	65.73	330	P	P	02 15 33.5	+2.3
	comp=N,0.3nm,0.8s,baz=156,slow=6.9,SNR=3.7						
TORD	**Torodi Ar. Bea**	83.27	71	P	P	02 17 15.2	+1.8
	comp=N,1.1nm,0.7s,baz=255,slow=4.0,SNR=6.7						
WRA	**Warramunga Arr**	124.22	211	PKP	PKiKP	02 23 46.2	+0.1
	comp=N,0.2nm,0.3s,baz=164,slow=1.6,SNR=6.2						

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*IDC **19** 02:07:28.6±1.5, 38°.77N×20°.55E, h0^{km}, mb3.6/6, mb1 3.7/8, mb1mx3.5/46, mbtmp3.6/8, ML3.5/2, Error ellipse: s-maj=30.3km s-min=24.0km az=73.0*
*BEO **19** 02:07:28.3±2.4, 38°.22N×20°.37E, h73^{km}±6^{km}, ML3.5/10*
*THE **19** 02:07:30.1, 38°.72N×20°.57E, h8^{km}±1^{km}, ML3.7/16, Error ellipse: s-maj=1.1km s-min=0.4km az=96.0*
*ATH **19** 02:07:30.2, 38°.71N×20°.63E, h10^{km}, ML3.8/4, Error ellipse: s-maj=1.5km s-min=0.7km az=291.0*
ISC 19 02:07:29.8±0.7**, 38°.72N**±0°.02×**20°.57E**±0°.02**, h10^{km}**±4^{km}**, n125, σ1^{s}.20**/159**, mb3.5**/6**, 9C-1D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRAG	**Dragano-Lefkad**	0.04	176	P	Pg	02 07 31.6	-0.1
DRAG				S	Sg	02 07 32.8	-0.3
	461µm,0.4s						
DRAG	**Dragano-Lefkad**	0.04	176	P	Pg	02 07 31.7	-0.1
DRAG				S	Sg	02 07 33.2	+0.1
LKD2	**Lefkada island**	0.09	46	P	Pg	02 07 32.2	-0.2
LKD2				S	Sg	02 07 34.0	-0.2
LKD2	**Lefkada island**	0.09	46	P	Pg	02 07 32.2	-0.2
LKD2				S	Sg	02 07 34.0	-0.2
LKD2				AML	AML	02 07 34.4	
LKD2				AML	AML	02 07 34.6	
NYDR	**Nydri-Lefkada**	0.10	95	P	Pg	02 07 32.2	-0.2
NYDR				S	Sg	02 07 33.8	-0.4
	182µm,0.2s						
NYDR	**Nydri-Lefkada**	0.10	95	P	Pg	02 07 32.2	-0.2
NYDR				S	Sg	02 07 33.9	-0.4
TSLK	**Tsoukalades, L**	0.12	33	P	Pg	02 07 32.9	+0.1
TSLK				S	Sg	02 07 35.1	+0.3
	143µm,0.4s						
TSLK	**Tsoukalades, L**	0.12	33	P	Pg	02 07 32.9	+0.1
TSLK				S	Sg	02 07 35.5	+0.7
TSLK				AML	AML	02 07 35.6	
TSLK				AML	AML	02 07 35.9	
EVGI	**Lefkada island**	0.12	147	P	Pg	02 07 32.8	+0.1
EVGI				S	Sg	02 07 34.6	-0.2
	107µm,0.2s						
EVGI	**Lefkada island**	0.12	147	P	Pg	02 07 32.8	+0.1
FSK	**Fiskardo**	0.26	182	P	Pg	02 07 35.6	+0.5
FSK				S	Sg	02 07 39.8	+1.1
	30µm,0.2s						
FSK	**Fiskardo**	0.26	182	P	Pg	02 07 35.6	+0.5
FSK				S	Sg	02 07 39.5	+0.8
FSK				AML	AML	02 07 40.9	
	comp=E,97138µm,0.2s						
FSK				AML	AML	02 07 41.7	
	comp=N,22972µm,0.2s						
DMLN	**Damoulianata-K**	0.51	198	P	Pg	02 07 39.7	0.0
DMLN				S	Sb	02 07 48.1	-0.2
	comp=N,10µm,0.4s						
DMLN	**Damoulianata-K**	0.51	198	P	Pg	02 07 39.7	0.0
LXRA	**Lixouri, Kepha**	0.53	191	P	Pg	02 07 40.2	0.0
VLS	**Valsamata**	0.55	178	P	Pg	02 07 39.9	-0.5
VLS				S	Sg	02 07 48.1	+0.5
	comp=N,5µm,0.2s						
VLS	**Valsamata**	0.55	178	P	Pg	02 07 40.1	-0.3
VLS				S	Sg	02 07 48.6	+1.0
VLS				AML	AML	02 07 49.9	
	comp=E,10056µm,0.2s						
VLS				AML	AML	02 07 50.3	
	comp=N,11041µm,0.2s						
KEF3	**Kipouria, Keph**	0.55	199	P	Pg	02 07 39.8	-0.7
KEF3				S	Sg	02 07 48.0	+0.3
	comp=N,16µm,0.4s						
KEF3	**Kipouria, Keph**	0.55	199	P	Pg	02 07 40.0	-0.5
KEF3				S	Sg	02 07 48.3	+0.6
ARGA	**Argostoli. Kep**	0.55	188	P	Pg	02 07 40.8	+0.3
ARGA				S	Sg	02 07 48.8	+1.0
PSDA	**Pessada-Kefalo**	0.61	179	P	Pg	02 07 41.1	-0.5
PSDA				S	Sb	02 07 50.9	-0.3
	comp=N,902nm,0.2s						
PSDA	**Pessada-Kefalo**	0.61	179	P	Pg	02 07 41.2	-0.4
PVO	**Paravola**	0.76	98	P	Pg	02 07 44.4	0.0
PVO				S	Sb	02 07 56.0	+0.6
	comp=N,6µm,0.3s						
PVO	**Paravola**	0.76	98	P	Pg	02 07 44.3	0.0
IGT	**Igoumenitsa**	0.83	347	P	Pg	02 07 45.4	-0.4
IGT				S	Sb	02 07 57.5	-0.1
	comp=N,3µm,0.4s						
VTN	**Vitineika**	0.94	149	P	Pg	02 07 47.7	-0.2
JAN	**Janina**	0.96	13	P	Pg	02 07 48.4	+0.2
JAN				S	Sn	02 08 03.1	0.0
	comp=N,2µm,0.6s						
JAN	**Janina**	0.96	13	P	Pg	02 07 48.5	+0.2
RLS	**Riolos of Patr**	0.97	133	P	Pg	02 07 47.6	-0.9
RLS	**Riolos of Patr**	0.97	133	P	Pg	02 07 47.5	-0.9
ZAK2	**Zakynthos**	0.97	164	P	Pg	02 07 48.2	-0.3
EVR	**Evrytania**	0.99	78	P	Pg	02 07 47.9	-0.9
EVR	**Evrytania**	0.99	78	P	Pg	02 07 48.2	-0.6
LTHK	**Lithakia**	1.03	168	P	Pg	02 07 48.0	-1.7
LTHK	**Lithakia**	1.03	168	P	Pg	02 07 48.2	-1.5
EFP	**Efpalio**	1.09	105	P	Pg	02 07 49.4	-1.3
EFP				S	Sn	02 08 07.1	+0.9
	comp=N,3µm,0.4s						
EFP	**Efpalio**	1.09	105	P	Pg	02 07 49.9	-0.9
KASA	**Kassiopi**	1.14	334	P	Pg	02 07 51.9	+0.3
KEK	**Kerkira**	1.16	329	P	Pn	02 07 52.7	+0.6
KEK				S	Sn	02 08 09.6	+1.6
	comp=N,845nm,0.7s						
KEK	**Kerkira**	1.16	329	P	Pn	02 07 52.7	+0.6
DRO	**Drossia**	1.18	130	P	Pb	02 07 51.3	-1.0
DRO				S	Sn	02 08 09.4	+0.8
	comp=N,4µm,0.4s						
DRO	**Drossia**	1.18	130	P	Pb	02 07 51.2	-1.2
LAKA	**Lakka**	1.21	113	P	Pb	02 07 51.6	-1.2
LAKA				S	Sn	02 08 09.7	+0.5
	comp=N,5µm,0.6s						
LAKA	**Lakka**	1.21	113	P	Pb	02 07 51.6	-1.2
TRIZ	**Trizonia**	1.23	106	P	Pn	02 07 52.2	-0.9
MAKR	**Makrakomi, Fth**	1.25	76	P	Pn	02 07 53.0	-0.4
KPRO	**Kipourio**	1.38	26	P	Pn	02 07 55.7	+0.5
AGG	**Agios Georgios**	1.41	77	P	Pn	02 07 56.0	+0.4
KLV	**Kalavryta, Ach**	1.41	118	P	Pn	02 07 54.7	-1.0
KLV	**Kalavryta, Ach**	1.41	118	P	Pn	02 07 54.7	-1.0
GUR	**Goura**	1.60	119	P	Pn	02 07 57.9	-0.4
GUR	**Goura**	1.60	119	P	Pn	02 07 57.8	-0.5
ITM	**Ithomi**	1.88	145	P	Pb	02 08 03.5	-0.7
VIL2	**Platees**	2.18	103	P	Pb	02 08 08.6	-0.7
OHR	**Ohrid**	2.39	4	ePn	Pb	02 08 12.0	-1.0
OHR				eSn	Sn	02 08 39.8	+1.2
OHR	**Ohrid**	2.39	4	i Pn	Pb	02 08 11.7	-1.3
TIR	**Tirane**	2.68	349	⇑P	Pn	02 08 15.5	+2.5
TIR	**Tirane**	2.68	349	ePn	Pn	02 08 15.5	+2.5
TIP	**Timpagrande**	3.01	280	⇑P	Pn	02 08 18.9	+1.3
VAY	**Valandovo**	3.02	30	ePn	Pn	02 08 19.7	+2.1
VAY				eSn	Sn	02 08 53.9	+0.1
VAY	**Valandovo**	3.02	30	i Pn	Pn	02 08 18.9	+1.3
STIP	**Stip**	3.21	22	i Pn	Pn	02 08 23.5	+3.1
MATE	**Matera**	3.55	304	⇑P	Pb	02 08 35.1	+2.4
DRME	**Dracevica, Mon**	3.62	343	ePn	Pn	02 08 26.5	+0.6
PDG	**Podgorica**	3.84	345	⇓P	Pn	02 08 29.6	+0.6
PDG	**Podgorica**	3.84	345	ePn	Pn	02 08 29.5	+0.6
PDG				eSn	Sn	02 09 12.6	-1.5
PDG	**Podgorica**	3.84	345	ePn	Pn	02 08 29.0	+0.1
PRVS	**Prvonek**	3.95	16	ePn	Pn	02 08 32.1	+1.6
BOSS	**Bosilegrad**	4.04	20	ePn	Pn	02 08 33.2	+1.5
HCY	**Herceg Novi**	4.04	338	ePn	Pn	02 08 31.3	-0.5
BARS	**Barje**	4.20	13	ePn	Pn	02 08 35.5	+1.6
TREB	**Trebinje**	4.33	338	ePn	Pn	02 08 35.1	-0.7
TREB				eSn	Sn	02 09 23.5	-2.8
TREB	**Trebinje**	4.33	338	ePn	Pn	02 08 35.2	-0.6
DBRK	**Dubrovnik**	4.35	336	ePn	Pn	02 08 35.6	-0.4
DBRK				Sn	Sn	02 09 24.4	-2.4
VTS	**Vitosha**	4.39	27	⇑P	Pn	02 08 37.1	+0.5
VTS	**Vitosha**	4.39	27	ePn	Pn	02 08 38.2	+1.6
VTS				eSn	Sn	02 09 27.2	-0.7
BRY	**Bratogost**	4.45	340	ePn	Pn	02 08 37.1	-0.4
SELS	**Selova**	4.51	5	ePn	Pn	02 08 38.8	+0.6
SJES	**Sjenica**	4.56	354	ePn	Pn	02 08 40.4	+1.5
SJES				eSn	Sn	02 09 32.1	+0.1
UPM	**Unac-Piva**	4.65	345	ePn	Pn	02 08 41.5	+1.2
STON	**Ston**	4.68	333	ePn	Pn	02 08 40.3	-0.2
STON				eSn	Sn	02 09 32.2	-2.7
STON	**Ston**	4.68	333	ePn	Pn	02 08 39.9	-0.7
STON	**Ston**	4.68	333	ePn	Pn	02 08 39.8	-0.7
ZAPS	**Zavoj**	4.81	18	ePn	Pn	02 08 44.8	+2.5
LSTV	**Lastovo**	4.91	327	ePn	Pn	02 08 43.0	-0.7
LSTV				Sn	Sn	02 09 37.1	-3.5
RUDO	**Rudo**	4.97	350	ePn	Pn	02 08 43.7	-0.9
BOVS	**Bovan**	4.98	10	⇑P	Pn	02 08 44.8	+0.1
BBLS	**Lazići**	5.21	351	ePn	Pn	02 08 51.5	+3.6
ZAGS	**Zajecar**	5.24	13	ePn	Pn	02 08 50.5	+2.3
MAKA	**Makarska**	5.29	331	ePn	Pn	02 08 48.6	-0.3
MAKA				Sn	Sn	02 09 47.6	-2.3
DIVS	**Divibare**	5.39	356	ePn	Pn	02 08 51.0	+0.7
DIVS				eSn	Sn	02 09 49.5	-3.0
DIVS	**Divibare**	5.39	356	ePn	Pn	02 08 50.6	+0.3
RICI	**Ricice**	5.43	333	ePn	Pn	02 08 50.1	-0.7
HVAR	**Hvar**	5.43	326	ePn	Pn	02 08 50.4	-0.5
HAPS	**Han Pijesak,BI**	5.50	348	ePn	Pn	02 08 52.0	+0.2
KIJV	**Kijevo**	6.14	331	ePn	Pn	02 09 00.6	0.0
ZIRJ	**Zirje**	6.17	325	ePn	Pn	02 09 00.5	-0.5
MGRS	**Mrkonjic Grad**	6.26	336	ePn	Pn	02 09 02.9	+0.6
MORI	**Morici**	6.31	326	ePn	Pn	02 09 02.8	-0.1
BLY	**Banja Luka**	6.53	338	ePn	Pn	02 09 06.8	+0.9
AQU	**L'Aquila**	6.55	306	ePn	Pn	02 09 08.4	+2.1
DUGI	**Dugi Otok**	6.70	324	ePn	Pn	02 09 07.7	-0.5
UDBI	**Udbina**	6.83	330	ePn	Pn	02 09 09.7	-0.4
MRAK	**Mrakovica**	6.86	338	ePn	Pn	02 09 09.1	-1.4
GZR	**Gura Zlata**	6.86	13	⇑P	Pn	02 08 56.7	-14
NVLJ	**Novalja**	7.23	326	ePn	Pn	02 09 15.4	-0.1
RABC	**Rab**	7.42	326	ePn	Pn	02 09 18.5	+0.5
VOIR		7.49	25	⇑P	Pn	02 09 23.0	+3.8
MORH	**Mrgy, Hungar**	7.62	350	ePn	Pn	02 09 17.7	-3.2
MLR	**Muntele Rosu**	7.85	29	⇑P	Pn	02 09 32.4	+8.2
RIY	**Rijeka**	8.00	327	ePn	Pn	02 09 25.4	-0.7
CRES	**Cresnjev**	8.04	334	ePn	Pn	02 09 25.8	-0.9
CEY	**Cerknica**	8.36	329	ePn	Pn	02 09 30.6	-0.5
PLOR	**Plostina**	8.43	30	⇑P	Pn	02 09 33.8	+1.8
LJU	**Ljubljana**	8.57	331	ePn	Pn	02 09 36.5	+2.6
SOKA	**Soboth**	8.93	335	i Pn	Pn	02 09 38.4	-0.6
	comp=N,1.5nm,0.5s						
OBKA	**Obir**	8.96	332	i Pn	Pn	02 09 41.8	+2.5
	comp=N,1.5nm,0.6s						
GERES	**GERESS Array B**	11.27	336	Pn	Pn	02 10 10.7	-0.2
	comp=N,0.2nm,0.3s,baz=160,slow=18,SNR=2.6						
MMAI	**Mount Meron Ar**	13.30	111	Pn	Pn	02 10 39.0	+0.2
	comp=N,0.2nm,0.3s,baz=306,slow=10,SNR=2.5						
HFS	**Hagfors**	21.87	351	P	P	02 12 22.9	+0.3
	comp=N,1.9nm,0.8s,baz=174,slow=14,SNR=1.6						
FINES	**FINESS Array B**	23.00	7	P	P	02 12 33.2	-1.3
	comp=N,3.2nm,0.9s,baz=167,slow=13,SNR=6.7						
NOA	**NORSAR Array B**	23.09	348	P	P	02 12 36.9	+1.4
	comp=N,1.0nm,0.9s,baz=157,slow=10,SNR=2.0						
TORD	**Torodi Ar. Bea**	30.48	218	P	P	02 13 43.4	+0.4
	comp=N,0.2nm,0.6s,baz=50,slow=9.3,SNR=1.6						
MKAR	**Makanchi Array**	44.98	59	P	P	02 15 46.0	+0.8
	comp=N,0.3nm,0.5s,baz=296,slow=6.2,SNR=1.5						
ZALV	**Zalesovo Beam**	45.30	49	P	P	02 15 47.0	-0.5
	comp=N,1.0nm,0.4s,baz=272,slow=8.3,SNR=2.9						

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*IDC **19** 02:17:11.9±0.7, 25°.59N×105°.90E, h0^{km}, mb4.0/18, mb1 4.1/19, mb1mx3.9/51, mbtmp4.0/19, ML4.1/1, MS3.3/8, Ms1 3.3/8, ms1mx2.9/64, Error ellipse: s-maj=20.1km s-min=14.8km az=68.0*
*NEIC **19** 02:17:13.6±1.7, 25°.44N±0°.07×105°.85E±0°.09, h16^{km}±4^{km}, mb4.6/26, Error ellipse: s-maj=13.4km s-min=8.6km az=123.0*
*BJI **19** 02:17:13.5±0.0, 25°.49N×105°.77E, h8^{km}, mB4.8/10, mb4.4/27, ML4.1/16, Ms4.1/20, Ms7 3.9/19*
ISC 19 02:17:13.3±0.4**, 25°.52N**±0°.05×**105°.76E**±0°.04**, h10^{km}, n87, σ1^{s}.58**/91**, mb4.5**/33**, MS3.3**/7**, 3C, Southeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GYA	**Guiyang**	1.24	41	⇑Pg	Pn	02 17 36.3	-0.5
GYA				Sg	Sb	02 17 52.9	-0.1
GYA				smax	smax		
	comp=N,5µm,0.9s						
GYA				smax	smax		
	comp=E,4µm,1.3s						
KMI	**Kunming**	2.76	262	⇑Pn	Pn	02 17 59.0	+1.2
KMI				Pg	Pg	02 18 07.2	+1.0
KMI				Sn	Sn	02 18 34.0	+2.7
KMI				Sg	Sg	02 18 43.5	+1.5
KMI				smax	smax		
	comp=N,540nm,0.8s						
KMI				smax	smax		
	comp=E,320nm,1.0s						
SLVN	**Son La**	4.50	203	Pn	Pn	02 18 21.4	-0.2
SLVN				Sn	Sn	02 19 13.7	-0.4
CD2	**Chengdu**	5.65	342	Pn	Pn	02 18 38.5	+1.1
CD2				smax	smax		
	comp=N,350nm,1.2s						
CD2				smax	smax		
	comp=E,660nm,1.0s						
CD2				LR	LR		
	comp=N,2µm,8.6s						
CD2				LR	LR		
	comp=Z,2µm,10.8s						
ENH	**Enshi**	5.77	34	Pn	Pn	02 18 39.2	+0.2
QIZ	**Qiongzhong**	7.48	149	P	Pn	02 19 03.1	+0.6
QIZ				S	Sn	02 20 29.3	+1.8
QIZ				LR	LR		
	comp=N,470nm,12.9s						
QIZ				LR	LR		
	comp=E,590nm,8.3s						
QIZ				LR	LR		
	comp=Z,660nm,10.3s						
QIZ	**Qiongzhong**	7.48	149	Pn	Pn	02 19 03.9	+1.4
QIZ				Sn	Sn	02 20 29.6	+2.1
QIZ				LR	LR		
	comp=Z,100nm,0.8s						
QIZ				LR	LR		
	comp=Z,98nm,0.9s						
QIZ				LR	LR		
	comp=Z,660nm,10.5s						
QIZ	**Qiongzhong**	7.48	149		Pn	02 18 59.7	-2.8
XAN	**Xi'an**	8.92	17	P	Pn	02 19 22.9	+0.6
XAN				pmax	pmax		
	comp=Z,43nm,0.7s						
XAN				LR	LR		
	comp=Z,1µm,4.3s						
XAN				LR	LR		
	comp=Z,280nm,5.5s						
WHN	**Wuhan**	9.09	55	⇑P	Pn	02 19 28.3	+3.8
WHN				LR	LR		
	comp=Z,1µm,4.4s						
WHN				LR	LR		
	comp=Z,600nm,6.8s						
WHN				LR	LR		
	comp=Z,920nm,5.1s						
CMAR	**Chiang Mai Arr**	9.45	223	Pn	Pn	02 19 31.0	+1.4
	comp=Z,0.6nm,0.3s,baz=38,slow=12,SNR=1.9						
CMAR				Pg		02 20 08.6	
	comp=Z,1.0nm,0.3s,baz=42,slow=17,SNR=16						
CMAR				Lg	Lg	02 22 15.6	
	comp=Z,0.8nm,0.3s,baz=52,slow=29,SNR=6.3						
CMAR				LR	LR	02 23 32.5	
	comp=Z,35nm,21.2s,baz=65,slow=40						
CMAR	**Chiang Mai Arr**	9.45	223		Pn	02 19 28.3	-1.2
LSA	**Lhasa**	13.61	291	P	Pn	02 20 28.3	+1.5
LSA	**Lhasa**	13.61	291	P	Pn	02 20 28.4	+1.6
LSA				pmax	pmax		
	comp=Z,110nm,0.9s						
LSA				pmax	pmax		
	comp=Z,110nm,0.8s						
LSA	**Lhasa**	13.61	291	Pn	Pn	02 20 27.6	+0.8
NACB	**Ninganchiao**	14.44	92	Pn	Pn	02 20 33.0	-4.8
GTA	**Gaotai**	14.73	342	eP	Pn	02 20 45.9	+4.1
GTA				sP	P	02 20 51.8	+3.9
GTA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
GTA				pmax	pmax		
	comp=Z,110nm,7.6s						

GTA				LR	LR		
	comp=Z,300nm,10.0s						
GTA				LR	LR		
	comp=Z,180nm,9.6s						
GTA				LR	LR		
	comp=Z,400nm,12.0s						
BTO	Baotou	15.46	12	eP	Pn	02 20 54.2	+2.7
BTO				S	S	02 23 51.8	-7.1
BTO				LR	LR		
	comp=Z,1µm,7.4s						
BTO				LR	LR		
	comp=Z,890nm,8.8s						
TAPN	Taplejung	16.27	280	eP	Pn	02 21 00.5	-1.8
	comp=Z,26nm,0.9s						
ODAN	Odare	16.55	279	eP	Pn	02 21 04.0	-1.7
BJI	Beijing	16.90	29	P	P	02 21 13.4	+1.5
BJI				pmax	pmax		
	comp=Z,11nm,0.9s						
RAMN	Ramite	17.25	279	eP	Pn	02 21 13.6	-1.0
	comp=Z,13nm,0.5s						
JIRN	Jiri	17.63	281	eP	Pn	02 21 17.4	-2.1
	comp=Z,23nm,0.6s						
GUN	Gumba	17.92	282	eP	Pn	02 21 20.9	-2.1
	comp=Z,48nm,0.9s						
PKI	Pulchoki	18.32	281	eP	Pn	02 21 25.8	-2.2
	comp=Z,20nm,0.8s						
PKIN	Phulchoki	18.34	281	eP	Pn	02 21 25.9	-2.2
	comp=Z,13nm,0.5s						
KKN	Kakani	18.45	282	eP	P	02 21 27.3	-2.0
DMN	Daman	18.59	281	eP	P	02 21 28.9	-2.1
	comp=Z,48nm,1.0s						
GKN	Gorkha	19.02	282	eP	P	02 21 34.0	-1.6
DANN	Dangsing	19.81	283	eP	P	02 21 43.1	-1.3
	comp=Z,38nm,0.5s						
KOLN	Koldanda	19.93	281	eP	P	02 21 45.0	-0.6
	comp=Z,23nm,0.9s						
PYUN	Piuthan	20.48	282	eP	P	02 21 50.9	-0.7
	comp=Z,25nm,0.6s						
LHMI	Lhok Sumawe	21.87	204	P	P	02 22 05.6	-0.7
KSRS	Korea Array	22.27	52	P	P	02 22 09.7	-0.9
	comp=Z,1.0nm,0.4s,baz=243,slow=11,SNR=2.8						
SONM	Songino Array	22.28	1	P	P	02 22 11.2	+0.5
	comp=Z,2.6nm,0.7s,baz=179,slow=10,SNR=22						
SONM	Songino Array	22.28	1	P	P	02 22 10.9	+0.2
WMQ	Urumqi	23.45	326	eP	P	02 22 24.5	+1.6
WMQ				pmax	pmax		
	comp=Z,14nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,230nm,6.5s						
CN2	Changchun	24.29	36	eP	P	02 22 32.1	+1.4
CN2				pmax	pmax		
	comp=Z,20nm,0.7s						
MK31	Makanchi Array	28.27	325	P	P	02 23 05.5	-1.2
MKAR	Makanchi Array	28.27	325	P	P	02 23 07.5	+0.9
	comp=Z,2.4nm,0.7s,baz=134,slow=9.3,SNR=4.6						
MKAR				LR	LR	02 35 23.6	
	comp=Z,61nm,18.5s,baz=27,slow=39						
MKAR	Makanchi Array	28.27	325	P	P	02 23 07.8	+1.1
KSH	Kashi	28.58	307	P	P	02 23 12.1	+2.4
KSH				pP	sP	02 23 16.3	+1.9
KSH				sP	pP	02 23 19.2	+6.2
KSH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
NIL	Nilore	29.32	294	P	P	02 23 14.5	-1.7
NIL				IAmb	IAmb	02 23 23.9	
	comp=Z,6.0nm,0.4s						
BOOM	Boomskoye usch	29.75	312	P	P	02 23 20.7	+0.6
AAK	Ala-Archa	30.79	312	P	P	02 23 30.8	+1.6
	comp=Z,1.1nm,0.4s,baz=120,slow=1.8,SNR=4.8						
AAK				LR	LR	02 37 27.4	
	comp=Z,68nm,18.1s,baz=296,slow=39						
AAK	Ala-Archa	30.79	312	P	P	02 23 28.6	-0.7
DRK	Karamyk	31.64	305	P	P	02 23 37.7	+0.7
LEM	Lembang	32.20	177	LR	LR	02 37 22.4	
	comp=Z,50nm,18.4s,baz=150,slow=38						
ZAA0	Zalesovo Array	32.39	337	P	P	02 23 42.3	-0.7
ZAA0				IAmb	IAmb	02 23 44.1	
	comp=Z,8.9nm,1.0s						
ZALV	Zalesovo Beam	32.39	337	P	P	02 23 42.8	-0.2
	comp=Z,6.7nm,0.7s,baz=140,slow=8.2,SNR=15						
ZALV				LR	LR	02 37 52.9	
	comp=Z,74nm,20.5s,baz=124,slow=38						
ZALV	Zalesovo Beam	32.39	337	P	P	02 23 42.6	-0.4
BTK	Batken	32.53	305	P	P	02 23 43.9	-0.6
GAR	Garm	32.63	303	P	P	02 23 44.6	-0.9
GAR				IAmb	IAmb	02 23 46.8	
	comp=Z,11nm,1.3s						
KURK	Kurchatov	32.66	327	P	P	02 23 45.7	+0.4
KURK				IAmb	IAmb	02 23 46.9	
	comp=Z,9.0nm,0.8s						
KBL	Kabul	32.89	295	P	P	02 23 46.8	-1.1
KKAR	Karatay Array	33.68	310	P	P	02 23 55.1	+0.7
BVAR	Borovoye Array	38.14	326	P	P	02 24 32.6	+0.1
	comp=Z,0.7nm,0.6s,baz=158,slow=9.0,SNR=3.9						
GEYT	Alibeck	41.95	299	P	P	02 25 05.8	+1.3
	comp=Z,6.7nm,0.8s,baz=79,slow=15,SNR=9.2						
GEYT				LR	LR	02 45 39.0	
	comp=Z,60nm,21.3s,baz=250,slow=41						
GEYT	Alibeck	41.95	299	P	P	02 25 04.5	0.0
GEYT				IAmb	IAmb	02 25 07.2	
	comp=Z,8.3nm,0.9s						
GYA0B	ALIBECK ARRAY	41.95	299	P	P	02 25 04.5	+0.1
GYA0B				IAmb	IAmb	02 25 07.1	
	comp=Z,9.5nm,0.9s						
ABKAR	Akbulak array	42.58	316	P	P	02 25 10.2	+0.8
AKTO	Aktyubinsk	44.11	317	P	P	02 25 22.4	+0.7
	comp=Z,1.0nm,0.7s,baz=106,slow=12,SNR=5.9						
NRIK	Noril'sk	45.16	351	P	P	02 25 29.9	+0.2
	comp=Z,4.7nm,0.7s,baz=144,slow=6.3,SNR=8.8						
NRIK	Noril'sk	45.16	351	P	P	02 25 30.2	+0.4
NRIK				IAmb	IAmb	02 25 30.5	
	comp=Z,5.4nm,0.8s						
TIXI	Tiksi	47.96	10	P	P	02 25 49.8	-1.9
	comp=Z,1.0nm,0.2s,baz=241,slow=6.8,SNR=3.2						
TIXI	Tiksi	47.96	10	P	P	02 25 51.4	-0.3
TIXI				IAmb	IAmb	02 25 51.6	
	comp=Z,2.5nm,0.8s						
WRA	Warramunga Arr	53.04	146	P	P	02 26 30.6	-0.1
	comp=Z,1.2nm,0.5s,baz=332,slow=8.7,SNR=20						
KIV	Kislovodsk	53.71	307	P	P	02 26 34.5	-1.0
KIV				IAmb	IAmb	02 26 50.0	
	comp=Z,6.7nm,1.1s						
RAYN	Ar Rayn	54.44	282	P	P	02 26 39.9	-1.3
RAYN				IAmb	IAmb	02 26 41.9	
	comp=Z,4.8nm,0.7s						
ASAR	Alice Springs	55.98	149	P	P	02 26 52.5	+0.5
	comp=Z,0.5nm,0.5s,baz=323,slow=6.8,SNR=10						
OBN	Obninsk	57.65	321	LR	LR	02 53 15.3	
	comp=Z,20nm,20.1s,baz=98,slow=38						
GAZ	Gaziantep	58.55	299	P	P	02 27 08.8	-1.5
GAZ				IAmb	IAmb	02 27 10.7	
	comp=Z,3.8nm,0.6s						
MMAI	Mount Meron Ar	60.82	295	LR	LR	02 56 10.2	
	comp=Z,26nm,18.8s,baz=235,slow=38						
AKASG	Malin Array Be	62.33	316	P	P	02 27 35.3	-0.5
	comp=Z,1.1nm,0.6s,baz=72,slow=5.8,SNR=4.7						
ARCES	ARCESS Array B	62.94	337	P	P	02 27 40.1	+0.5
	comp=Z,6.5nm,1.1s,baz=90,slow=8.1,SNR=4.4						
FINES	FINESS Array B	63.03	328	P	P	02 27 40.1	-0.1
	comp=Z,1.2nm,0.5s,baz=99,slow=6.0,SNR=18						
SANT	Santorini	67.92	301	P	P	02 28 11.0	-1.4
VTS	Vitosha	67.92	308	P	P	02 28 11.5	-0.9
VTS				IAmb	IAmb	02 28 13.8	
	comp=Z,3.5nm,0.9s						
AGG	Agios Georgios	69.56	304	P	P	02 28 21.4	-1.2
AGG				IAmb	IAmb	02 28 30.2	
	comp=Z,4.0nm,1.1s						
NOA	NORSAR Array B	70.16	329	P	P	02 28 24.8	-1.1
	comp=Z,1.8nm,1.0s,baz=77,slow=6.0,SNR=3.3						
GERES	GERESS Array B	72.53	316	P	P	02 28 41.0	+0.5
	comp=Z,0.4nm,0.6s,baz=41,slow=6.7,SNR=2.1						
ILAR	Eielson Array	74.24	25	P	P	02 28 49.2	-0.9
	comp=Z,0.2nm,0.5s,baz=283,slow=4.0,SNR=1.1						
ILAR	Eielson Array	74.24	25	P	P	02 28 49.9	-0.3
NEEM	North Greenlan	76.33	355	i P	P	02 29 03.4	+1.0
NEEM				IAmb	IAmb	02 29 04.7	
	comp=Z,5.2nm,0.6s						
SUMG	Summit	79.18	350	i P	P	02 29 19.1	+0.6
SUMG				IAmb	IAmb	02 29 19.8	
	comp=Z,2.5nm,0.6s						
TXAR	Lajitas Array	118.58	29	PKP	PKPdf	02 36 02.1	0.0
	comp=Z,0.2nm,0.3s,baz=252,slow=2.4,SNR=6.3						
TXAR	Lajitas Array	118.58	29		PKPdf	02 36 01.2	-0.9

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*MOS **19** 02:26:03.1±1.3, 48°.44N×154°.57E, h60^{km}, mb4.7/24, Error ellipse: s-maj=8.5km s-min=3.5km az=70.3*

*SKHL **19** 02:26:04.8±0.4, 48°.40N×154°.90E, h79^{km}±2^{km}, mb5.1/8, msha5.9/6*

*KRSC **19** 02:26:06.0±1.7, 48°.44N×156°.41E, h30^{km}±28^{km}, ML4.9*

*NEIC **19** 02:26:06.0±1.0, 48°.6N±0°.1×154°.4E±0°.1, h60^{km}±6^{km}, mb4.6/45, Error ellipse: s-maj=18.3km s-min=10.3km az=139.0*

*IDC **19** 02:26:08.2±2.0, 48°.50N×154°.46E, h88^{km}±17^{km}, mb3.9/27, mb1 4.1/33, mb1mx4.0/61, mbtmp4.3/33, MS3.5/30, Ms1 3.6/30, ms1mx3.4/54, Error ellipse: s-maj=15.2km s-min=8.9km az=143.0*

ISC 19 02:26:04.5±0.6, **48°.37N**±0°.06×**154°.75E**±0°.05, **h59**^{km}±4^{km}, **h59**^{km}**:pP-P, n277,** σ**1^{s}61**/290, **mb4.5**/78, **MS3.7**/23, **18C-3D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	2.48	21	ePN	Pn	02 26 41.3	-1.1
SKR				eS	Sn	02 27 09.1	-2.3
SKR				pmax	pmax		
	comp=Z,289nm,0.3s						
SKR				smax	smax		
	comp=E,4µm,0.4s						
SKR				smax	smax		
	comp=N,3µm,0.4s						
SKR				MLR	MLR		
	comp=Z,4µm,12.0s						
SKR	Severo-Kuril's	2.48	21	eP	Pn	02 26 42.0	-0.4
SKR				eS	Sn	02 27 10.5	-0.9
SKR	Severo-Kuril's	2.48	21	eP	Pn	02 26 41.8	-0.6
SKR				AMB	AMB	02 26 43.0	
	comp=Z,290nm,0.3s						
SKR				eS	Sn	02 27 10.2	-1.2
SKR				A	A	02 27 14.0	
	comp=Z,3µm,0.4s						
SKR				A	A	02 27 14.0	
	comp=Z,4µm,0.4s						
PAU	Pauzhetka	3.37	23	PN	Pn	02 26 55.0	+0.4
PAU				S	Sn	02 27 32.6	-0.7
PAU	Pauzhetka	3.37	23	eP	Pn	02 26 55.0	+0.4
PAU				eS	Sn	02 27 32.6	-0.7
PAU	Pauzhetka	3.37	23	eP	Pn	02 26 55.5	+0.9
PAU				AMB	AMB	02 27 00.7	
	comp=Z,170nm,0.5s						
PAU				eS	Sn	02 27 33.3	0.0
PAU				A	A	02 27 37.9	
	comp=Z,480nm,0.3s						
PAU				A	A	02 27 37.9	
	comp=Z,700nm,0.3s						
KDTR	Khodutka, Kamc	4.05	31	PN	Pn	02 27 03.1	-0.8
KDTR	Khodutka, Kamc	4.05	31	eP	Pn	02 27 03.1	-0.8
KDTR				eS	Sn	02 27 45.2	-4.8
ASAK	Asacha	4.49	25	PN	Pn	02 27 10.0	0.0
ASAK	Asacha	4.49	25	eP	Pn	02 27 10.0	0.0
MTVR	Mutnovka	4.66	27	PN	Pn	02 27 13.2	+0.8
MTVR				S	Sn	02 28 02.2	-3.0
MTVR	Mutnovka	4.66	27	eP	Pn	02 27 13.2	+0.8
MTVR				eS	Sn	02 28 02.2	-3.0
GRL	Gorelyy	4.69	26	PN	Pn	02 27 13.5	+0.7
GRL	Gorelyy	4.69	26	eP	Pn	02 27 13.5	+0.7
RUS	Russkaya	4.72	29	PN	Pn	02 27 12.0	-1.1
RUS	Russkaya	4.72	29	eP	Pn	02 27 12.0	-1.1
RUS				eS	Sn	02 28 01.4	-5.1
APC	Apacha	4.81	18	PN	Pn	02 27 16.7	+2.5
APC	Apacha	4.81	18	eP	Pn	02 27 16.7	+2.5
PEA0B	Petropavlovsk-	5.10	20c	ePN	Pn	02 27 19.5	+1.3
PEA0B	Petropavlovsk-	5.10	20	Pn	Pn	02 27 19.6	+1.3
PETK	Petropavlovsk-	5.10	20	P	Pn	02 27 19.7	+1.5
	comp=Z,3.4nm,0.3s,baz=190,slow=14,SNR=25						
PETK				S	Sn	02 28 21.1	+5.4
	baz=162,slow=20,SNR=1.8						
PETK				LR	LR	02 29 27.3	
	comp=Z,581nm,20.7s,baz=197,slow=39						
PETK	Petropavlovsk-	5.10	20	Pn	Pn	02 27 18.6	+0.4
PET	Petropavlovsk	5.28	27	ePN	Pn	02 27 21.9	+1.3
PET				eS	Sn	02 28 19.3	-0.7
PET				pmax	pmax		
	comp=Z,96nm,0.6s						
PET				smax	smax		
	comp=E,346nm,0.6s						
PET				smax	smax		
	comp=N,293nm,0.6s						
PET	Petropavlovsk	5.28	27	eP	Pn	02 27 21.9	+1.3
PET				AMB	AMB	02 27 28.7	
	comp=N,96nm,0.6s						
PET				eS	Sn	02 28 19.3	-0.7
PET				A	A	02 28 25.8	
	comp=N,290nm,0.6s						
PET				A	A	02 28 25.8	
	comp=N,340nm,0.6s						
PET	Petropavlovsk	5.28	27		Pn	02 27 21.8	+1.2
DALK	Dalny	5.31	27	PN	Pn	02 27 20.8	-0.3
DALK	Dalny	5.31	27	eP	Pn	02 27 20.8	-0.3
DALK				eS	Sn	02 28 17.2	-3.7
UGLR	Uglovaya	5.49	27	PN	Pn	02 27 24.6	+1.0
UGLR	Uglovaya	5.49	27	eP	Pn	02 27 24.6	+1.0
KOK	Koryaka	5.51	25	PN	Pn	02 27 25.6	+1.7
KOK	Koryaka	5.51	25	eP	Pn	02 27 25.6	+1.7
KOK	Koryaka	5.51	25	eP	Pn	02 27 25.6	+1.7
AVH	Avacha	5.51	26	PN	Pn	02 27 25.2	+1.3
AVH	Avacha	5.51	26	eP	Pn	02 27 25.2	+1.3
SMAR	Somma	5.53	26	PN	Pn	02 27 25.8	+1.5
SMAR	Somma	5.53	26	eP	Pn	02 27 25.8	+1.5
KRER	Koryakskii	5.55	26	PN	Pn	02 27 25.3	+0.7
KRER	Koryakskii	5.55	26	eP	Pn	02 27 25.3	+0.7
SDLR	Sedlovina	5.57	27	PN	Pn	02 27 24.4	-0.3
SDLR	Sedlovina	5.57	27	eP	Pn	02 27 24.4	-0.3
NLC	Nalytchevo	5.62	30	PN	Pn	02 27 24.4	-0.9
NLC	Nalytchevo	5.62	30	eP	Pn	02 27 24.4	-0.9
NLC				eS	Sn	02 28 23.8	-4.6
KUR	Kuril'sk	5.67	239⇑	ePN	Pn	02 27 28.4	+2.3
KUR				eS	Sn	02 28 31.5	+1.7
KUR				pmax	pmax		
	comp=Z,363nm,0.5s						
KUR				pmax	pmax		
	comp=E,67nm,0.3s						
KUR				pmax	pmax		
	comp=N,53nm,0.2s						
KUR				smax	smax		
	comp=N,306nm,0.5s						
KUR				smax	smax		
	comp=E,67nm,0.6s						
KUR	Kuril'sk	5.67	239	eP	Pn	02 27 28.1	+2.0
KUR				AMB	AMB	02 27 29.0	
	comp=E,363nm,0.6s						
KUR				eS	Sn	02 28 30.8	+1.0
KUR				A	A	02 28 37.0	
	comp=E,320nm,0.5s						
KUR				A	A	02 28 37.0	
	comp=E,300nm,0.5s						
GNL	Ganaly	5.70	19	eP	Pn	02 27 28.1	+1.6
SPN	Mys Shipunski	5.79	33	PN	Pn	02 27 27.0	-0.7
SPN	Mys Shipunski	5.79	33	eP	Pn	02 27 27.0	-0.7
SPN				eS	Sn	02 28 26.4	-6.3
YUK	Yuzh-Kuril'sk	7.54	238	i PN	Pn	02 27 52.5	+0.9
YUK	Yuzh-Kuril'sk	7.54	238	eP	Pn	02 27 52.3	+0.7
YUK				AMB	AMB	02 27 52.7	
	comp=E,620nm,0.4s						
YUK				eS	Sn	02 29 15.2	-0.4
YUK				A	A	02 29 17.4	
	comp=E,250nm,0.7s						
YUK				A	A	02 29 17.4	
	comp=E,210nm,0.7s						
MKZ	Mys Kozlova	7.57	33	PN	Pn	02 27 49.8	-2.2
MKZ	Mys Kozlova	7.57	33	eP	Pn	02 27 49.8	-2.2
MKZ				eS	Sn	02 29 07.4	-8.8
TUMR	Tumrok	7.68	24	PN	Pn	02 27 54.8	+1.1
TUMR	Tumrok	7.68	24	eP	Pn	02 27 54.8	+1.1
KMNR	Kamenistaya	8.13	22	PN	Pn	02 28 02.1	+2.4
KMNR	Kamenistaya	8.13	22	eP	Pn	02 28 02.1	+2.4
YSS	Yuzh-Sakhalins	8.22	265	ePN	Pn	02 28 02.7	+1.7
YSS				eS	Sn	02 29 32.9	+0.6
YSS				pmax	pmax		
	comp=Z,70nm,0.6s						
YSS	Yuzh-Sakhalins	8.22	265	eP	Pn	02 28 02.7	+1.7
YSS				AMB	AMB	02 28 04.0	
	comp=Z,70nm,0.6s						
YSS				eS	Sn	02 29 32.0	-0.3
YSS	Yuzh-Sakhalins	8.22	265	Pn	Pn	02 28 00.8	-0.1
TYV	Tymovskoe	8.24	292	ePN	Pn	02 28 04.9	+3.7
TYV				eS	Sn	02 29 35.1	+2.4
TYV				pmax	pmax		
	comp=Z,36nm,1.2s						
TYV				pmax	pmax		
	comp=Z,100nm,3.4s						
TYV				smax	smax		
	comp=N,27nm,1.5s						
TYV				smax	smax		
	comp=N,400nm,3.3s						
TYV	Tymovskoe	8.24	292	eP	Pn	02 28 03.6	+2.4
TYV				AMB	AMB	02 28 07.2	
	comp=N,10.0nm,0.7s						
TYV				eS	Sn	02 29 33.7	+1.0
TYV				A	A	02 29 36.2	
	comp=N,10.0nm,0.3s						
TYV				A	A	02 29 36.2	
	comp=N,10.0nm,0.3s						
KPT	Kopyto	8.31	22	PN	Pn	02 28 03.9	+1.6
KPT	Kopyto	8.31	22	eP	Pn	02 28 03.9	+1.6
KIRR	Kirishev	8.33	22	PN	Pn	02 28 03.9	+1.3
KIRR	Kirishev	8.33	22	eP	Pn	02 28 03.9	+1.3
UGL	Uglegorsk	8.42	280	ePN	Pn	02 28 06.0	+2.4
UGL				pmax	pmax		
	comp=Z,110nm,1.4s						
UGL	Uglegorsk	8.42	280	eP	Pn	02 28 06.0	+2.4
UGL				AMB	AMB	02 28 10.5	
	comp=Z,110nm,1.0s						
ZLN	Zelenaya	8.51	24	PN	Pn	02 28 06.1	+1.2
ZLN	Zelenaya	8.51	24	P	Pn	02 28 06.1	+1.2
SRKR	Sorokina	9.17	23	PN	Pn	02 28 13.8	-0.1
SRKR	Sorokina	9.17	23	eP	Pn	02 28 13.8	-0.1
SMKR	Semkarok	9.18	24	PN	Pn	02 28 13.6	-0.5
SMKR	Semkarok	9.18	24	eP	Pn	02 28 13.6	-0.5
KBTR	Krutoberegovo	9.27	29	PN	Pn	02 28 15.4	+0.2
KBTR	Krutoberegovo	9.27	29	eP	Pn	02 28 15.4	+0.2
JKA	Kamikawa-asahi	9.43	248	eP	Pn	02 28 19.7	+2.2
JKA	Kamikawa-asahi	9.43	248	Pn	Pn	02 28 18.6	+1.0
ASAJ	Asahikawa	9.43	248	P	Pn	02 28 19.7	+2.2
	comp=Z,5.2nm,0.3s,baz=79,slow=14,SNR=40						
ASAJ				LR	LR	02 31 32.9	
	comp=Z,293nm,21.2s,baz=40,slow=35						
ERM	Erimo	10.35	236	i PN	Pn	02 28 27.8	-2.3
MA2	Magadan	11.46	350	P	Pn	02 28 45.4	+0.2
	comp=Z,2.3nm,0.3s,baz=145,slow=13,SNR=4.5						
MA2				LR	LR	02 33 00.1	
	comp=Z,195nm,20.5s,baz=179,slow=36						
MA2	Magadan	11.46	350		Pn	02 28 44.3	-0.9
SEY	Seymchan	14.65	356	P	Pn	02 29 30.0	+1.9
	comp=Z,0.2nm,0.3s,baz=184,slow=19,SNR=1.8						
SEY				LR	LR	02 34 53.3	
	comp=Z,192nm,20.2s,baz=151,slow=36						
KLR	Kul'dur	15.17	282	P	Pn	02 29 36.3	+1.4
	comp=Z,0.4nm,0.3s,baz=70,slow=11,SNR=10						
KLR				LR	LR	02 35 12.2	
	comp=Z,216nm,21.8s,baz=70,slow=36						
KLR	Kul'dur	15.17	282c	eP	Pn	02 29 35.7	+0.8
KLR	Kul'dur	15.17	282	eP	Pn	02 29 35.7	+0.8
USA0B	Ussuriysk Arra	16.26	264	P	Pn	02 29 47.5	-1.3
USA0B				pmax	pmax		
	comp=Z,19nm,1.4s						
USA0B	Ussuriysk Arra	16.26	264	Pn	Pn	02 29 47.5	-1.3
USRK	Ussuriysk Ar.	16.26	264	P	Pn	02 29 49.5	+0.6
	baz=67,slow=13,SNR=16						
USRK				LR	LR	02 35 46.3	
	comp=Z,70nm,18.5s,baz=46,slow=36						
USRK	Ussuriysk Ar.	16.26	264	eP	P	02 29 52.5	+1.6
USRK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
USRK	Ussuriysk Ar.	16.26	264	P	Pn	02 29 48.5	-0.3
MJA0	Matsu Arr-Jizo	16.93	232	eP	Pn	02 29 54.4	-2.9
MJAR	Matsushiro Arr	16.95	232	P	Pn	02 29 53.8	-3.7
	comp=Z,0.2nm,0.3s,baz=30,slow=13,SNR=10						
MJAR				LR	LR	02 36 31.5	
	comp=Z,46nm,20.5s,baz=70,slow=37						
MJAR	Matsushiro Arr	16.95	232	eP	Pn	02 29 54.4	-3.1
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MAJO	Matsushiro	16.95	232	i P	Pn	02 29 54.5	-3.0
INU	Inuyama	18.48	232	P	P	02 30 15.2	-0.2
INU				IAmb	IAmb	02 30 16.1	
	comp=Z,65nm,1.4s						
YAK	Yakutsk	19.61	323	LR	LR	02 37 39.3	
	comp=Z,136nm,21.8s,baz=89,slow=36						
BILL	Bilibino	20.56	12⇑	eP	P	02 30 35.9	-2.0
BILL				e		02 30 56.4	
BILL				e		02 31 13.9	
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BILL	Bilibino	20.56	12	eP	P	02 30 35.9	-2.0
BILL	Bilibino	20.56	12	P	P	02 30 38.5	+0.6
CN2	Changchun	20.76	268	eP	P	02 30 36.6	-3.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KSRS	Korea Array	22.36	251	P	P	02 30 57.2	-0.2
	comp=Z,7.2nm,0.6s,baz=47,slow=10,SNR=20						
KSRS				LR	LR	02 39 12.6	
	comp=Z,106nm,18.9s,baz=48,slow=35						
KSRS	Korea Array	22.36	251	eP	P	02 30 57.2	-0.2
KSRS				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KSAR	Wonju Array Be	22.39	251	P	P	02 30 55.7	-2.0
KSAR	Wonju Array Be	22.39	251	P	P	02 30 55.7	-2.0
TJN	Taejon	23.38	249c	eP	P	02 31 08.5	+0.7
TIK	Tiksi	26.23	342	eP	P	02 31 32.7	-0.7
TIXI	Tiksi	26.25	342	P	P	02 31 33.9	+0.4
	comp=Z,2.4nm,0.7s,baz=135,slow=7.1,SNR=4.0						
TIXI				LR	LR	02 43 11.1	
	comp=Z,96nm,18.9s,baz=224,slow=39						
TIXI	Tiksi	26.25	342	i P	P	02 31 32.7	-0.8
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.9s						
H11N2	WAKE ISLAND Hy	30.21	157	T	T	03 03 57.1	
	baz=345,slow=76,SNR=296						
H11N1	WAKE ISLAND Hy	30.23	157	T	T	03 03 50.1	
	baz=345,slow=76,SNR=491						
H11N3	WAKE ISLAND Hy	30.23	157	T	T	03 03 48.0	
	baz=345,slow=76,SNR=238						
H11S1	WAKE ISLAND Hy	31.34	158	T	T	03 05 17.8	
	baz=345,slow=76,SNR=6277						
H11S3	WAKE ISLAND Hy	31.34	158	T	T	03 05 16.0	
	baz=345,slow=76,SNR=4441						
H11S2	WAKE ISLAND Hy	31.35	158	T	T	03 05 23.5	
	baz=345,slow=76,SNR=3642						
ULN	Ulaanbaatar	31.44	287c	eP	P	02 32 18.9	-1.2
ULN				pmax	pmax		
	comp=Z,9.0nm,2.5s						
ULN	Ulaanbaatar	31.44	287	eP	P	02 32 18.9	-1.2
SONM	Songino Array	31.87	288	P	P	02 32 22.5	-1.4
	comp=Z,1.1nm,0.8s,baz=74,slow=8.8,SNR=5.4						
SONM				PcP	PcP	02 35 13.2	+0.1
	comp=Z,1.8nm,0.8s,baz=90,slow=2.1,SNR=9.4						
SONM				LR	LR	02 46 33.4	
	comp=Z,173nm,18.2s,baz=83,slow=39						
A21K	Barrow	32.06	27	P	P	02 32 25.8	+0.8
KDAK	Kodiak Island	32.23	53	LR	LR	02 46 21.7	
	comp=Z,92nm,20.8s,baz=266,slow=38						
TLY	Talaya	32.45	295	LR	LR	02 46 43.7	
	comp=Z,141nm,19.5s,baz=15,slow=38						
TLY	Talaya	32.45	295c	iP	P	02 32 26.8	-2.0
TLY				pmax	pmax		
	comp=Z,6.0nm,0.8s						
TLY	Talaya	32.45	295	eP	P	02 32 26.8	-2.0
NEA2	Nenana	33.65	40	P	P	02 32 40.9	+1.8
NEA2				IAmb	IAmb	02 32 41.5	
	comp=Z,7.0nm,0.7s						
MDM	Murphy Dome	34.02	40	P	P	02 32 43.3	+1.0
TCOL	CIGO, UAF Yank	34.17	40	P	P	02 32 44.9	+1.3
COLA	College	34.18	40	P	P	02 32 45.1	+1.5
COLA				pmax	pmax		
	comp=Z,18nm,1.0s						
COLA	College	34.18	40	P	P	02 32 45.1	+1.5
CCB	Clear Creek Bu	34.20	40	P	P	02 32 45.2	+1.4
POKR	Poker Plat Res	34.36	39	P	P	02 32 44.6	-0.6
POKR				IAmb	IAmb	02 32 47.8	
	comp=Z,8.4nm,0.8s						
ILAR	Eielson Array	34.59	40	P	P	02 32 47.0	-0.2
	comp=Z,1.5nm,0.8s,baz=248,slow=6.9,SNR=20						
ILAR				LR	LR	02 49 24.6	
	comp=Z,47nm,18.2s,baz=273,slow=40						
ILAR	Eielson Array	34.59	40	eP	P	02 32 48.0	+0.8
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ILAR	Eielson Array	34.59	40	P	P	02 32 46.7	-0.5
PRP	Porcupine Dome	35.16	39	P	P	02 32 53.4	+1.2
PRP				IAmb	IAmb	02 32 55.0	
	comp=Z,8.9nm,1.0s						
L27K	Beaver Creek,	36.93	43	P	P	02 33 09.1	+1.8

L27K				IAmb	IAmb	02 33 09.9	
	comp=Z,6.9nm,0.8s						
BCAR	Beaver Creek A	36.95	43	P	P	02 33 09.1	+1.7
EGAK	Eagle	37.04	40	P	P	02 33 08.5	+0.4
EGAK				IAmb	IAmb	02 33 09.7	
	comp=Z,5.7nm,0.8s						
NRIK	Noril'sk	37.96	328	LR	LR	02 50 38.1	
	comp=Z,55nm,18.4s,baz=36,slow=39						
INK	Inuvik	39.68	34	P	P	02 33 31.3	+1.1
	comp=Z,2.1nm,0.6s,baz=306,slow=6.3,SNR=9.8						
INK	Inuvik	39.68	34	P	P	02 33 31.6	+1.4
ZALV	Zalesovo Beam	42.58	305	P	P	02 33 52.9	-1.3
	comp=Z,0.7nm,0.4s,baz=71,slow=5.3,SNR=3.3						
ZALV				PcP	PcP	02 35 45.9	+0.5
	comp=Z,4.3nm,0.8s,baz=67,slow=3.9,SNR=14						
ZALV				LR	LR	02 51 57.2	
	comp=Z,80nm,21.6s,baz=74,slow=37						
ZALV	Zalesovo Beam	42.58	305	eP	P	02 33 57.4	+3.2
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV	Zalesovo Beam	42.58	305	P	P	02 33 53.4	-0.8
DGZ	Jazzator, Alta	42.80	298	i P	P	02 33 55.6	-0.6
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KMI	Kunming	46.63	259	⇓P	P	02 34 27.1	0.0
KMI				pmax	pmax		
	comp=Z,25nm,0.8s						
MK31	Makanchi Array	47.19	297	i P	P	02 34 29.6	-1.4
MKAR	Makanchi Array	47.19	297	P	P	02 34 29.2	-1.7
	comp=Z,3.7nm,0.6s,baz=69,slow=8.2,SNR=23						
MKAR				PcP	PcP	02 36 01.6	+0.1
	comp=Z,1.8nm,0.8s,baz=46,slow=5.2,SNR=3.7						
MKAR				LR	LR	02 55 35.0	
	comp=Z,86nm,20.2s,baz=44,slow=38						
MKAR	Makanchi Array	47.19	297	eP	P	02 34 29.7	-1.3
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MKAR	Makanchi Array	47.19	297	eP	P	02 34 29.7	-1.3
MKAR	Makanchi Array	47.19	297	P	P	02 34 29.1	-1.8
KURK	Kurchatov	47.40	303	ceP	P	02 34 30.9	-1.5
KURK				pmax	pmax		
	comp=Z,11nm,1.7s						
KURK	Kurchatov	47.40	303	eP	P	02 34 30.9	-1.5
KURK	Kurchatov	47.40	303	P	P	02 34 31.4	-1.0
KURK				IAmb	IAmb	02 34 31.8	
	comp=Z,6.0nm,0.7s						
KURBB	Kurchatov Arra	47.49	303	P	P	02 34 31.4	-1.7
	comp=Z,6.1nm,0.7s,baz=67,slow=8.4,SNR=17						
KURBB				PcP	PcP	02 36 02.6	+0.1
	comp=Z,1.0nm,0.6s,baz=57,slow=3.5,SNR=4.6						
SLVN	Son La	48.54	255	P	P	02 34 41.5	-0.3
SLVN				IAmb	IAmb	02 34 43.0	
	comp=Z,6.3nm,0.9s						
RES	Resolute Bay	48.94	19	P	P	02 34 44.6	+0.6
	comp=Z,4.3nm,0.8s,baz=192,slow=1.9,SNR=2.8						
YKA	Yellowknife Ar	48.96	38	P	P	02 34 45.3	+1.0
	comp=Z,2.5nm,0.8s,baz=303,slow=6.3,SNR=7.3						
YKA	Yellowknife Ar	48.96	38	eP	P	02 34 45.9	+1.6
YKA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
YKA	Yellowknife Ar	48.96	38	P	P	02 34 45.7	+1.4
BRVK	Borovoye	50.73	309	i P	P	02 34 55.8	-2.1
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BRVK	Borovoye	50.73	309	eP	P	02 34 55.8	-2.1
BRVK	Borovoye	50.73	309	P	P	02 34 56.5	-1.4
BRVK				IAmb	IAmb	02 34 57.1	
	comp=Z,2.9nm,0.6s						
BOOM	Boomskoye usch	53.33	295	P	P	02 35 16.3	-1.3
BOOM				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BOOM	Boomskoye usch	53.33	295	P	P	02 35 16.3	-1.3
BOOM				IAmb	IAmb	02 35 17.6	
	comp=Z,4.2nm,0.8s						
CHTO	Chiang Mai	53.57	257	P	P	02 35 19.1	-0.3
CHTO				pmax	pmax		
	comp=Z,14nm,0.8s						
CHTO	Chiang Mai	53.57	257	P	P	02 35 19.1	-0.3
CMAR	Chiang Mai Arr	53.83	257	P	P	02 35 22.0	+0.7
	comp=Z,8.9nm,0.6s,baz=33,slow=7.2,SNR=32						
CMAR				LR	LR	02 59 29.7	
	comp=Z,49nm,18.1s,baz=138,slow=37						
CMAR	Chiang Mai Arr	53.83	257	P	P	02 35 21.0	-0.3
AAK	Ala-Archa	54.11	296	P	P	02 35 22.6	-0.7
	comp=Z,3.4nm,0.8s,baz=101,slow=6.2,SNR=9.3						
AAK	Ala-Archa	54.11	296	ceP	P	02 35 22.1	-1.2
AAK				pmax	pmax		
	comp=Z,11nm,0.8s						
AAK	Ala-Archa	54.11	296	eP	P	02 35 22.1	-1.2
AAK	Ala-Archa	54.11	296	P	P	02 35 22.1	-1.2
EDM	Edmonton	54.40	48	P	P	02 35 26.6	+1.6
EDM				pmax	pmax		
	comp=Z,9.0nm,0.6s						
EDM	Edmonton	54.40	48	P	P	02 35 26.6	+1.6
ARU	Arti	54.57	317	c iP	P	02 35 23.9	-2.3
ARU				*PP	sP	02 35 47.4	-0.7
ARU						02 37 23.6	
ARU				S	S	02 42 58.5	-2.3
ARU				SS	SKiKP	02 46 34.1	+5.1
ARU				pmax	pmax		
	comp=Z,8.0nm,1.4s						
KSH	Kashi	55.06	292	P	P	02 35 32.3	+2.1
KSH				pmax	pmax		
	comp=Z,4.0nm,0.5s						
JIRN	Jiri	55.92	275	eP	P	02 35 36.4	-0.4
	comp=Z,20nm,0.7s						
GUN	Gumba	55.96	275	eP	P	02 35 36.7	-0.3
RAMN	Ramite	56.12	274	eP	P	02 35 37.2	-0.8
	comp=Z,14nm,0.5s						
PKI	Pulchoki	56.50	275	eP	P	02 35 40.2	-0.6
	comp=Z,10nm,0.7s						
PKIN	Phulchoki	56.50	275	eP	P	02 35 40.2	-0.6
	comp=Z,10.0nm,0.5s						
DMN	Daman	56.67	275	eP	P	02 35 41.9	-0.1
	comp=Z,22nm,0.7s						
ARCES	ARCESS Array B	56.68	341	LR	LR	03 03 44.9	
	comp=Z,77nm,20.3s,baz=25,slow=40						
GKN	Gorkha	56.73	276	eP	P	02 35 42.0	-0.2
	comp=Z,21nm,0.7s						
DANN	Dangsing	57.08	277	eP	P	02 35 44.9	0.0
	comp=Z,25nm,0.7s						
KIRV	Kirov	57.15	323	LR	LR	03 01 47.7	
	comp=Z,61nm,18.5s,baz=36,slow=38						
BMO	Blue Mountains	57.26	58	P	P	02 35 47.6	+1.9
BMO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BMO	Blue Mountains	57.26	58	P	P	02 35 47.6	+1.9
BMO				IAmb	IAmb	02 35 48.5	
	comp=Z,3.9nm,0.9s						
KOLN	Koldanda	57.57	277	eP	P	02 35 48.0	-0.2
	comp=Z,24nm,0.8s						
PYUN	Piuthan	57.75	277	eP	P	02 35 50.0	+0.5
	comp=Z,38nm,0.9s						
PLID	Pearl Lake	57.85	57	P	P	02 35 50.8	+0.8
MSO	Missoula	57.90	54	P	P	02 35 51.0	+0.7
PMG	Port Moresby	57.92	189	LR	LR	02 56 24.5	
	comp=Z,27nm,20.0s,baz=234,slow=31						
ABKAR	Akbulak array	58.24	310	P	P	02 35 51.0	-1.3
AKTO	Aktyubinsk	58.47	312	LR	LR	03 04 16.2	
	comp=Z,48nm,18.2s,baz=40,slow=39						
GAR	Garm	58.83	295	P	P	02 35 55.6	-1.2
CHGR	Chuyangaron	59.75	295	P	P	02 36 02.4	-0.7
BOZ	Bozeman (W)	59.93	54	P	P	02 36 06.3	+2.0
BOZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BOZ	Bozeman (W)	59.93	54	P	P	02 36 06.3	+2.0
BOZ				IAmb	IAmb	02 36 07.2	
	comp=Z,5.7nm,0.9s						
KVN	Kaiserville	60.43	63	P	P	02 36 09.8	+1.9
KVN				pmax	pmax		
	comp=Z,7.0nm,1.3s						
KVN	Kaiserville	60.43	63	P	P	02 36 09.8	+1.9
KVN				IAmb	IAmb	02 36 10.8	
	comp=Z,7.4nm,1.3s						
NIL	Nilore	60.44	288	P	P	02 36 07.3	-0.6
NIL				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NIL	Nilore	60.44	288	P	P	02 36 07.3	-0.6
NVAR	Mina Array Bea	60.71	64	P	P	02 36 11.8	+1.9
	comp=Z,1.6nm,0.7s,baz=299,slow=7.6,SNR=6.9						
NVAR				LR	LR	02 58 59.3	
	comp=Z,31nm,20.0s,baz=317,slow=32						
NVAR	Mina Array Bea	60.71	64	P	P	02 36 11.5	+1.7
YHH	Holmes Hill	60.87	54	P	P	02 36 12.1	+1.2
YHH				IAmb	IAmb	02 36 26.3	
	comp=Z,3.0nm,0.8s						
REDW	Red Top Meadow	61.80	56	P	P	02 36 19.4	+2.3
REDW				IAmb	IAmb	02 36 23.1	
	comp=Z,7.5nm,1.1s						
DUG	Dugway, Tooele	62.78	59	P	P	02 36 25.5	+1.8
DUG				pmax	pmax		
	comp=Z,6.0nm,1.1s						
DUG	Dugway, Tooele	62.78	59	P	P	02 36 25.5	+1.8
DUG				IAmb	IAmb	02 36 26.8	
	comp=Z,6.0nm,1.1s						
BW06	Boulder Array	62.90	55	P	P	02 36 26.2	+1.6
BW06				IAmb	IAmb	02 36 43.9	
	comp=Z,4.3nm,1.1s						
PD31	Pinedale Array	62.90	55	P	P	02 36 26.0	+1.4
PDAR	Pinedale Array	62.90	55	P	P	02 36 25.9	+1.4
	comp=Z,2.2nm,0.8s,baz=332,slow=1.9,SNR=18						
PDAR				LR	LR	03 05 43.0	
	comp=Z,13nm,18.2s,baz=330,slow=38						
PDAR	Pinedale Array	62.90	55	P	P	02 36 26.4	+1.8
FINES	FINESS Array B	63.04	335	P	P	02 36 23.6	-1.2
	comp=Z,1.6nm,0.7s,baz=35,slow=7.0,SNR=6.5						
FINES				LR	LR	03 05 29.4	
	comp=Z,94nm,18.1s,baz=27,slow=38						
FINES	FINESS Array B	63.04	335	eP	P	02 36 23.9	-0.9
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
RDMU	Red Mountain	64.37	57	P	P	02 36 35.7	+1.5
RDMU				IAmb	IAmb	02 36 49.8	
	comp=Z,7.8nm,0.7s						
ULM	Lac du Bonnet	64.57	42	P	P	02 36 35.3	+0.2
	comp=Z,4.2nm,0.9s,baz=277,slow=8.1,SNR=2.1						
ULM	Lac du Bonnet	64.57	42	P	P	02 36 36.1	+1.0
ULM				pmax	pmax		
	comp=Z,11nm,1.2s						
ULM	Lac du Bonnet	64.57	42	P	P	02 36 36.1	+1.0
ULM				IAmb	IAmb	02 36 39.0	
	comp=Z,11nm,1.1s						
OBN	Obninsk	64.59	326	⇓eP	P	02 36 35.2	+0.1
OBN				*PP	pP	02 36 51.0	+0.1
OBN				e*SP	sP	02 36 57.7	+0.3
OBN				e		02 37 07.9	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
OBN	Obninsk	64.59	326	eP	P	02 36 35.2	+0.1
LCMT	Little Creek M	64.66	62	P	P	02 36 37.3	+1.2
KNB	Kanab	64.90	62	P	P	02 36 39.6	+1.9
KNB				pmax	pmax		
	comp=Z,11nm,1.2s						
KNB	Kanab	64.90	62	P	P	02 36 39.6	+1.9
KNB				IAmb	IAmb	02 36 53.5	
	comp=Z,11nm,1.2s						
PSI	Prapat	65.78	245	P	P	02 36 43.8	+0.4
	comp=Z,2.0nm,0.4s,baz=329,slow=7.1,SNR=6.5						
RPSI	Rantau Prapat	65.86	245	P	P	02 36 43.9	0.0
NOA	NORSAR Array B	67.04	342	P	P	02 36 50.2	-0.6
	comp=Z,1.5nm,0.8s,baz=26,slow=6.5,SNR=3.5						
NOA				LR	LR	03 10 21.6	
	comp=Z,41nm,19.4s,baz=20,slow=40						
WRAB	Tennant Creek	70.40	200	ceP	P	02 37 12.3	+0.2
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.6s						
WRA	Warramunga Arr	70.42	200	P	P	02 37 12.2	0.0
	comp=Z,7.9nm,0.8s,baz=19,slow=6.6,SNR=13						
WRA	Warramunga Arr	70.42	200	eP	P	02 37 12.5	+0.3
WRA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
WRA	Warramunga Arr	70.42	200	P	P	02 37 12.7	+0.5
KIV	Kislovodsk	70.45	315	eP	P	02 37 09.6	-2.8
KIV				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KIV				MLR	MLR		
	comp=Z,40nm,17.0s						
KBZ	Khabaz	70.52	314	P	P	02 37 10.3	-2.4
	comp=Z,1.8nm,0.8s,baz=185,slow=6.1,SNR=3.6						
KBZ				LR	LR	03 10 47.9	
	comp=Z,65nm,20.8s,baz=40,slow=38						
AKASG	Malin Array Be	70.80	327	P	P	02 37 12.5	-1.8
	comp=Z,1.0nm,0.6s,baz=33,slow=5.8,SNR=2.8						
DZM	Mont Dzumac	70.90	169	LR	LR	03 01 11.2	
	comp=Z,86nm,20.1s,baz=168,slow=30						
FITZ	Fitzroy Crossi	71.10	209	P	P	02 37 16.5	+0.2
	comp=Z,3.3nm,0.8s,baz=13,slow=14						
SCHQ	Schefferville	71.38	24	P	P	02 37 17.9	+0.1
	comp=Z,3.2nm,0.6s,baz=303,slow=6.3,SNR=11						
ASAR	Alice Springs	74.11	200	P	P	02 37 35.1	+1.0
	comp=Z,2.6nm,0.6s,baz=14,slow=5.7,SNR=12						
TRPA	Tarpa	75.33	329	⇑P	P	02 37 41.2	+0.1
CLL	Collm	75.43	336	eP	P	02 37 41.0	-0.6
	comp=Z,8.0nm,1.2s						
CLL				epP	pP	02 37 59.0	+1.2
TXAR	Lajitas Array	75.74	62	P	P	02 37 45.2	+1.4
	comp=Z,1.4nm,0.8s,baz=297,slow=4.0,SNR=10						
DRGR		76.42	328	⇑P	P	02 37 46.8	-0.6
VOIR		76.74	326	⇑P	P	02 37 50.1	+0.8
ARR	Arges	76.95	326	⇑P	P	02 37 49.5	-1.0
KHC	Kasperske Hory	77.25	335	eP	P	02 37 52.4	+0.4
KHC				e		02 38 10.9	
KHC	Kasperske Hory	77.25	335	eP	P	02 37 52.4	+0.4
KHC				epP	pP	02 38 10.9	+2.7
CKRC	Cesky Krumlov	77.32	334	eP	P	02 37 55.7	+3.3
GERES	GERESS Array B	77.47	335	P	P	02 37 52.9	-0.4
	comp=Z,0.4nm,0.5s,baz=36,slow=8.5,SNR=1.9						
GERES				LR	LR	03 14 42.0	
	comp=Z,70nm,19.0s,baz=354,slow=38						
GERES	GERESS Array B	77.47	335	P	P	02 37 52.5	-0.8
GZR	Gura Zlata	77.61	328	⇑P	P	02 37 54.2	+0.1
BZS	Buzias	77.82	328	⇓P	P	02 37 55.2	0.0
SOKA	Soboth	79.03	333	eP	P	02 37 58.8	-3.1
	comp=Z,5.0nm,1.1s						
KBA	Koelnbreinsper	79.17	334	eP	P	02 38 03.6	+0.8
	comp=Z,5.5nm,0.8s						
WATA	Walderalm	79.44	335	eP	P	02 38 05.3	+1.1
	comp=Z,4.4nm,0.7s						
WTTA	Wattenberg	79.49	335	eP	P	02 38 05.6	+1.1
	comp=Z,12nm,1.3s						
MOTA	Moosalm	79.56	336	eP	P	02 38 05.1	+0.2
	comp=Z,7.2nm,1.0s						
SQTA	Sankt Quirin	79.64	336	eP	P	02 38 06.5	+1.2
	comp=Z,7.2nm,1.1s						
DIVS	Divibare	79.71	329	P	P	02 38 03.9	-1.8
VTS	Vitosha	79.83	326	⇑P	P	02 38 06.8	+0.3
VTS	Vitosha	79.83	326	P	P	02 38 05.9	-0.6
VTS				pmax	pmax		
	comp=Z,7.0nm,1.1s						
VTS	Vitosha	79.83	326	P	P	02 38 05.8	-0.6
VTS				IAmb	IAmb	02 38 07.2	
	comp=Z,7.3nm,1.1s						
FETA	Feichten	79.96	336	P	P	02 38 06.4	-0.7
	comp=Z,3.0nm,1.0s						
STKA	Stephens Creek	80.75	191	eP	P	02 38 14.0	+3.0
STKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
PDG	Podgorica	81.44	328	⇑P	P	02 38 13.3	-1.5
NRCA	Norcia	83.09	333	P	P	02 38 23.6	0.0
NRCA				IAmb	IAmb	02 38 24.6	
	comp=Z,6.9nm,0.9s						
RAYN	Ar Rayn	84.60	299	P	P	02 38 31.4	-0.2
RAYN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
RAYN	Ar Rayn	84.60	299	P	P	02 38 31.4	-0.2
RAYN				IAmb	IAmb	02 38 32.4	
	comp=Z,7.6nm,0.8s						
656A	Willston	87.19	47	P	P	02 38 45.9	+1.7
ESDC	Sonseca Array	90.32	344	P	P	02 38 57.3	-1.6
	comp=Z,1.1nm,1.0s,baz=26,slow=3.5,SNR=5.9						
ESDC				LR	LR	03 23 45.7	
	comp=Z,34nm,21.0s,baz=300,slow=38						
TORD	Torodi Ar. Bea	114.24	331	PKP	PKiKP	02 44 36.6	-0.8
	comp=Z,0.4nm,1.0s,baz=9.4,slow=2.5,SNR=1.9						
H03N2	Juan Fernandez	137.64	90	T	T	05 18 39.4	
	baz=310,slow=77,SNR=160						
H03N1	Juan Fernandez	137.66	90	T	T	05 18 39.8	
	baz=310,slow=77,SNR=144						
H03N3	Juan Fernandez	137.66	90	T	T	05 18 39.1	
	baz=310,slow=77,SNR=190						
PLCA	Paso Flores	147.23	94	PKPbc	PKPdf	02 45 40.7	+2.5
	comp=Z,4.9nm,0.8s,baz=270,slow=3.0,SNR=12						
PLCA	Paso Flores	147.23	94	PKPdf	PKPdf	02 45 40.1	+1.9
SNAA	Sanae	154.42	196	PKPdf	PKPbc	02 45 56.2	-0.5
VNA2	Neumayer--Watz	155.85	194	PKPdf	PKPdf	02 46 00.1	+10
VNA3	Neumayer Olymp	155.92	192	PKPdf	PKPdf	02 45 59.4	+9.1
VNA1	Neumayer--Stat	156.23	194	PKPdf	PKPdf	02 46 00.8	+10

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*IDC **19** 02:28:44.6±8.1, 5°.95S×130°.39E, h141^{km}±81^{km}, mb3.5/4, mb1 3.8/8, mb1mx3.4/46, mbtmp4.1/8, Error ellipse: s-maj=65.2km s-min=21.1km az=50.0*

*DJA **19** 02:28:48.7±0.4, 6°S±2°×13°0E±°, h169^{km}±8^{km}, M4.5/9, mb4.3/9, mB5.5/2, MLv4.5/9, Mw(mB)5.0/2*

ISC 19 02:28:47.1±0.7, **5°.94S**±0°.05×**130°.35E**±0°.07, **h150**^{km}, **n26**, σ**3**^{s}**.09**/28, **mb3.7**/4, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.48	343	P	Pn	02 29 22.0	+5.5
SAUI	Saumlaki	2.23	155	P	Pn	02 29 27.8	+2.8
SAUI				S	Sn	02 30 01.4	+7.1
MSAI	Masohi	2.94	331	P	Pn	02 29 36.9	+3.1
MSAI				S	Sn	02 30 13.0	+3.1
FAKI	Fak Fak	3.55	32	P	Pn	02 29 43.8	+2.2
FAKI				S	Sn	02 30 25.2	+1.3
FAKI	Fak Fak	3.55	32	P	Pn	02 29 44.3	+2.7
SIJI	Sorong	5.12	10	S	Sn	02 30 58.1	-2.8
	baz=287,slow=19						
SWI	Sorong	5.13	10	P	Pn	02 30 03.4	+1.1
	1.0nm4µm35nm,0.7s						
SANI	Sanana	5.82	311	P	Pn	02 30 13.3	+1.9
	0.2nm47nm,0.8s						
SANI	Sanana	5.82	311	P	Pn	02 30 14.0	+2.6
LBMI	Labuha	5.99	332	P	Pn	02 30 16.6	+2.9
	0.3nm60nm,0.8s						
DRS	Darwin Rock St	6.47	175	P	Pn	02 30 21.7	+1.6
	8.8nm,0.5s						
KDU	Kakadu	7.02	163	P	Pn	02 30 26.9	-0.6
	17nm,0.8s						
SOEI	Soe	7.11	237	P	Pn	02 30 25.4	-3.4
	0.3nm30nm,0.7s						
SOEI	Soe	7.11	237	P	Pn	02 30 30.0	+1.2
	32nm,0.6s						
BATI	Baumata	7.86	237	P	Pn	02 30 36.2	-2.4
	13nm,0.3s,baz=86,slow=2.3,SNR=6.3						
BATI				S	Sn	02 32 04.0	-2.3
	9.1nm,0.3s,baz=300,slow=23,SNR=7.6						
BATI	Baumata	7.86	237	P	Pn	02 30 40.2	+1.5
	0.1nm34nm,0.8s						
EDFI	Ende, Flores	9.03	251	P	Pn	02 30 58.2	+3.8
	10nm,1.0s						
MRSI	Marisa	10.54	307	P	Pn	02 31 16.5	+2.2
	44nm,0.7s						
FITZ	Fitzroy Crossi	12.93	200	P	Pn	02 31 43.1	-2.3
	baz=360,slow=9.7						
FITZ				S	Sn	02 33 56.3	-12
	0.6nm,0.3s,baz=109,slow=16,SNR=3.9						
WRA	Warramunga Arr	14.45	165	P	Pn	02 32 02.5	-2.2
	0.3nm,0.3s,baz=349,slow=12,SNR=16						
WRA				S	Sn	02 34 33.8	-11
	0.5nm,0.3s,baz=350,slow=21,SNR=5.4						
BBKI	Banjar Baru	15.65	278	P	P	02 32 24.6	+4.0
ASAR	Alice Springs	17.95	169	P	P	02 32 45.7	-0.2
	1.7nm,0.3s,baz=351,slow=9.8,SNR=88						
ASAR				S	S	02 35 57.5	-6.9
	0.1nm,0.3s,baz=354,slow=24,SNR=6.1						
STKA	Stephens Creek	27.86	159	P	P	02 34 20.3	-2.5
	1.6nm,0.7s,baz=338,slow=16,SNR=3.2						
SONM	Songino Array	57.56	341	P	P	02 38 20.4	-0.7
	0.3nm,0.7s,baz=163,slow=5.6,SNR=2.1						
MKAR	Makanchi Array	67.54	326	P	P	02 39 26.1	-1.2
	2.9nm,0.6s,baz=124,slow=7.9,SNR=22						
ILAR	Eielson Array	92.25	25	P	P	02 41 36.2	-3.5
	0.3nm,0.8s,baz=264,slow=3.6,SNR=2.4						

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*IDC **19** 02:40:25.0±1.4, 7°.92S×76°.03W, h122^{km}±17^{km}, mb3.3/5, mb1 3.7/10, mb1mx3.5/35, mbtmp4.0/10, Error ellipse: s-maj=22.2km s-min=9.9km az=57.0*

*VAO **19** 02:40:43.7±0.8, 7°.69S×74°.40W, h163^{km}±5^{km}, mbR4.2*

ISC 19 02:40:24.5±0.6, **7°.86S**±0°.06×**76°.00W**±0°.06, **h100**^{km}, **n53**, σ**1**^{s}**.98**/54, **mb3.5**/5, **Northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAH	Atahualpa	2.48	287	P	Pn	02 41 06.1	+2.4
	88nm,0.3s,baz=195,slow=8.1,SNR=737						
ATAH				S	Sn	02 41 35.9	+2.1
	78nm,0.3s,baz=300,slow=18,SNR=12						
CZSB	Cruzeiro do Su	3.27	88	eP	Pn	02 41 16.5	+2.6
NNA	Nana	4.18	191	P	Pn	02 41 27.8	+1.6
	9.6nm,0.3s,baz=14,slow=4.0,SNR=32						
NNA				S	Sn	02 42 12.9	-1.2
	67nm,0.3s,baz=227,slow=16,SNR=6.4						
TBTG	Tabatinga, AM	7.07	59	eP	Pn	02 42 06.1	+0.7
PTLC	Puerto Leguiza	8.07	9	eP	Pn	02 42 15.1	-3.9
TULM	Tulcn-Chalpat	8.70	348	eP	Pn	02 42 29.5	+1.5
GCUF	Volcan Galeras	9.13	352	eP	Pn	02 42 35.5	+1.6
ETMB	Extrema	9.87	102	eP	Pn	02 42 40.6	-2.8
SOTA	Rioblanco	9.95	356	eP	Pn	02 42 45.7	+0.7
PCON	Cinco Dias	10.13	358	eP	Pn	02 42 49.9	+2.3
MACC	Macarena, Meta	10.17	12	eP	Pn	02 42 46.8	-0.7
PRAC	Prado	11.55	6	eP	Pn	02 43 08.2	+1.8
ORTC	Ortega, Tolima	11.72	4	eP	Pn	02 43 09.3	+0.8
VILC	Villavicencio,	12.12	11	eP	Pn	02 43 14.7	+0.8
GUY2C	Guyana, Caldas	13.01	3	eP	P	02 43 34.5	+1.8
RUSC	La Rusia	13.97	12	eP	Pn	02 43 39.8	+1.3
ZARC	Zaragoza, Cauc	15.29	4	eP	Pn	02 43 58.6	+3.6
MACA	Manacapuru-AM	15.94	74	eP	Pn	02 44 00.0	-3.2
SMLC	San Martn de	16.66	7	eP	Pn	02 44 12.5	+0.4
SIV	San Ignacio	16.68	120	P	Pn	02 44 12.2	-0.2
	0.8nm,0.3s,baz=311,slow=11,SNR=12						
SIV				S	Sn	02 47 19.6	+1.9
	0.3nm,0.3s,baz=270,slow=20,SNR=3.1						
SOCV	Socops	16.84	18	eP	Pn	02 44 13.6	-0.6
SDV	Santo Domingo	17.48	18	P	P	02 44 21.7	-0.2
	1.4nm,0.3s,baz=226,slow=4.5,SNR=2.3						
PTGA	Pitinga	17.48	67	P	P	02 44 20.2	-1.6
	1.6nm,0.3s,baz=245,slow=12,SNR=11						
PTLB	Pontes e Lacer	18.15	116	eP	P	02 44 28.5	-0.6
BOAV	Boa Vista	18.50	57	eP	P	02 44 32.8	-0.2
PDRB	Porto dos Gac	19.36	103	eP	P	02 44 40.1	-2.3
CLDB	Colider	20.16	100	eP	P	02 44 49.7	-1.3
ITTB	Itaituba	20.45	81	eP	P	02 44 52.5	-1.7
NPGB	Novo Progresso	20.49	89	eP	P	02 44 52.6	-2.0
SALV	Santo Antonio	21.40	114	eP	P	02 45 05.3	+0.9
MALB	Monte Alegre	22.46	76	eP	P	02 45 14.1	-1.4
PP1B	Ponte de Pedra	22.74	117	eP	P	02 45 20.0	+1.6
SNDB	Serra Nova Dou	24.67	102	eP	P	02 45 34.4	-1.8
MCPB	Macapa, AP	25.00	74	eP	P	02 45 38.1	-1.2
CPUP	Villa Florida	25.55	138	eP	P	02 45 50.3	+6.2
PRPB	Parauapebas	26.04	88	eP	P	02 45 46.9	-1.8
PEXB	Peixe	27.60	101	eP	P	02 46 02.9	+0.3
BDFB	Brasilia	28.45	108	P	P	02 46 08.6	-1.7
	2.5nm,0.7s,baz=296,slow=8.7,SNR=3.8						
IPMB	Ipameri, GO	28.85	113	eP	P	02 46 12.8	-1.0
VAO	Valinhos	31.69	122	eP	P	02 46 41.2	+2.4
JANB	Januaria	31.84	106	eP	P	02 46 40.9	+0.6
PET01	Itanhaem-SP	31.97	124	eP	P	02 46 44.5	+3.4
PLCA	Paso Flores	33.09	172	P	P	02 46 50.1	-0.8
	2.8nm,1.0s,baz=342,slow=14,SNR=2.1						
DUB01	Friburgo-RJ	35.32	117	eP	P	02 47 12.7	+2.3
GDU01	Guandu, BA	36.22	102	eP	P	02 47 16.5	-1.6
NAN01	Guarapari, ES	36.29	109	eP	P	02 47 18.5	-0.1
NBLA	Lagarto - SE	37.81	98	eP	P	02 47 32.2	+0.6
NBAN	Anadia - AL	39.29	96	eP	P	02 47 42.2	-1.8
TXAR	Lajitas Array	45.58	325	P	P	02 48 33.6	-1.2
	0.4nm,0.5s,baz=146,slow=7.4,SNR=14						
PDAR	Pinedale Array	58.93	332	P	P	02 50 11.3	-2.3
	0.1nm,0.4s,baz=143,slow=11,SNR=1.7						
TORD	Torodi Ar. Bea	79.92	75	P	P	02 52 21.0	-2.1
	0.3nm,0.7s,baz=270,slow=4.9,SNR=4.2						
ASAR	Alice Springs	137.15	222	PKP	PKPdf	02 59 34.0	-2.9
	0.3nm,0.5s,baz=119,slow=2.1,SNR=2.7						
WRA	Warramunga Arr	139.31	227	PKP	PKPdf	02 59 38.1	-2.9
	0.4nm,0.3s,baz=121,slow=2.0,SNR=10						

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*NEIC **19** 02:43:25.3±0.8, 1°.2N±0°.2×126°.3E±0°.1, h50^{km}±24^{km}, mb3.9/3, Error ellipse: s-maj=31.2km s-min=8.8km az=204.0*

*DJA **19** 02:43:33.2±0.5, 1°N±5°×12°6E±°, h10^{km}, M3.9/5, MLv3.9/5*

ISC 19 02:43:23.9±1.6, **1°.2N**±0°.2×**126°.2E**±0°.1, **h44**^{km}, **n6**, σ**0**^{s}**.29**/8, **mb3.8**/3, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.20	109	P	Pn	02 43 43.9	-0.3
TNTI				S	Sn	02 43 59.6	+0.3
TNTI	Ternate	1.20	109	Pn	Pn	02 43 44.1	-0.1
TNTI				Sn	Sn	02 43 59.2	0.0
WB2	Warramunga Arr	22.44	160	P	P	02 48 19.5	+0.2
WB2				IAmb	IAmb	02 48 27.6	

	comp=Z,4.4nm,1.2s						
WR0	Warramunga Arr	22.52	159	P	P	02 48 20.4	+0.2
WR0				IAmb	IAmb	02 48 25.6	
	comp=Z,5.7nm,1.4s						
YULB	Yu-li	22.61	348	P	P	02 48 21.1	+0.1
YULB				IAmb	IAmb	02 48 23.5	
	comp=Z,31nm,1.3s						
ASAR	Alice Springs	25.79	164	P	P	02 48 50.7	-0.3

IDC ***19*** *02:43:44.5±2.1, 0°.17N×127°.27E, $h0^{km}$, mb3.7/3, mb1 4.0/3, mb1mx3.5/39, mbtmp3.8/3, MS2.7/2, Ms1 2.7/2, ms1mx2.3/41, Error ellipse: s-maj=164.3km s-min=26.3km az=66.0*

ISC 19 02:43:46.2±1.7**, 0°.1N**±0°.1×**127°.0E**±0°.2**, $h10^{km}$, n8, $\sigma 0^{s}.89$**/5**, mb3.7**/3**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBMI	Labuha	0.91	145	P	Pn	02 44 08.7	+3.6
SANI	Sanana	2.36	205	P	Pg	02 44 32.0	+0.4
KMSI	Cibinong	3.03	279	P	Pn	02 44 33.7	-0.6
SIJI	Sorong	4.40	103	LR	LR	02 46 30.2	
	comp=Z,80nm,18.6s,baz=260,slow=40						
LEM	Lembang	20.51	250	LR	LR	02 58 46.9	
	comp=Z,19nm,19.1s,baz=192,slow=43						
WRA	Warramunga Arr	21.20	161	P	P	02 48 31.4	-0.7
	1.6nm,0.6s,baz=340,slow=11,SNR=15						
ASAR	Alice Springs	24.57	165	P	P	02 49 06.3	-0.3
	1.2nm,0.6s,baz=344,slow=11,SNR=16						
MKAR	Makanchi Array	60.67	326	P	P	02 53 58.4	+0.7
	0.8nm,0.6s,baz=126,slow=8.2,SNR=5.0						

IDC 19 02:44:10.3±2.1**, 0°.27N×127°.20E, $h0^{km}$, mb3.9**/3**, mb1 4.2**/3**, mb1mx3.7**/39**, mbtmp4.0**/3**, Error ellipse: s-maj=161.0km s-min=27.5km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.27	161	P	P	02 48 57.8	-0.6
	2.9nm,0.6s,baz=340,slow=11,SNR=10						
ASAR	Alice Springs	24.67	165	P	P	02 49 33.5	+0.5
	3.0nm,0.8s,baz=347,slow=11,SNR=9.0						
MKAR	Makanchi Array	60.66	326	P	P	02 54 23.3	-0.1
	1.2nm,0.7s,baz=120,slow=7.2,SNR=4.0						

BEO ***19*** *02:47:04.7±1.1, 38°.49N×20°.34E, $h0^{km}$, ML3.9/7*

IDC ***19*** *02:47:05.9±0.8, 38°.78N×20°.50E, $h0^{km}$, mb4.0/11, mb1 4.0/24, mb1mx3.9/51, mbtmp3.9/24, ML3.7/12, MS2.9/4, Ms1 2.9/4, ms1mx2.6/55, Error ellipse: s-maj=13.7km s-min=12.6km az=28.0*

TIR ***19*** *02:47:07.1, 38°.70N×20°.61E, $h25^{km}$, Md3.6*

PDG ***19*** *02:47:07.4±0.6, 38°.84N×20°.47E, $h4^{km}\pm1^{km}$, ML3.8/14, Error ellipse: s-maj=0.8km s-min=0.9km az=0.0*

NEIC ***19*** *02:47:08.7±2.0, 38°.69N±0°.04×20°.50E±0°.05, $h17^{km}\pm5^{km}$, Error ellipse: s-maj=6.6km s-min=5.6km az=211.0*

THE ***19*** *02:47:08.6, 38°.73N×20°.58E, $h8^{km}$, ML4.0/9, Error ellipse: s-maj=0.8km s-min=0.4km az=296.0*

ATH ***19*** *02:47:08.4, 38°.72N×20°.63E, $h10^{km}$, ML4.0/4, Error ellipse: s-maj=1.3km s-min=0.8km az=282.0*

ISC 19 02:47:07.7±0.6**, 38°.71N**±0°.02×**20°.53E**±0°.02**, $h13^{km}\pm3^{km}$, n257, $\sigma 1^{s}.27$**/318**, mb4.1**/13**, 33C-23D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRAG	Dragano-Lefkad	0.04	128	P	Pg	02 47 10.3	+0.2
DRAG				S	Sg	02 47 11.7	-0.1
	319µm,0.4s						
DRAG	Dragano-Lefkad	0.04	128	P	Pg	02 47 10.3	+0.2
DRAG				S	Sg	02 47 11.8	-0.1
LKD2	Lefkada island	0.13	51	P	Pg	02 47 10.6	-0.4
LKD2				S	Sg	02 47 12.2	-1.2
LKD2	Lefkada island	0.13	51	P	Pg	02 47 10.6	-0.4
LKD2				S	Sg	02 47 12.2	-1.2
LKD2				AML	AML	02 47 12.6	
LKD2				AML	AML	02 47 12.8	
LKD2	Lefkada island	0.13	51	P	Pg	02 47 10.7	-0.4
	baz=22						
LKD2				S	Sg	02 47 12.7	-0.8
	baz=22						
NYDR	Nydri-Lefkada	0.13	89	P	Pg	02 47 10.5	-0.5
NYDR				S	Sg	02 47 12.1	-1.3
	276µm,0.4s						
NYDR	Nydri-Lefkada	0.13	89	P	Pg	02 47 10.5	-0.5
NYDR				S	Sg	02 47 12.1	-1.3
EVGI	Lefkada island	0.13	133	P	Pg	02 47 11.3	+0.2
EVGI	Lefkada island	0.13	133	P	Pg	02 47 11.2	+0.1
TSLK	Tsoukalades, L	0.15	40	P	Pg	02 47 11.2	-0.1
TSLK				S	Sg	02 47 13.1	-0.8
	196µm,0.3s						
TSLK	Tsoukalades, L	0.15	40	P	Pg	02 47 11.2	-0.1
TSLK				S	Sg	02 47 13.4	-0.5
TSLK				AML	AML	02 47 13.8	
TSLK				AML	AML	02 47 15.0	
FSK	Fiskardo	0.25	175	P	Pb	02 47 14.0	0.0
FSK				S	Sb	02 47 18.5	+0.2
	25µm,0.3s						
FSK	Fiskardo	0.25	175	P	Pb	02 47 14.2	+0.1
FSK				S	Sb	02 47 17.7	-0.6
FSK				AML	AML	02 47 19.0	
	comp=N,48656µm,0.4s						
FSK				AML	AML	02 47 20.4	
	comp=E,52773µm,0.3s						
LXRA	Lixouri, Kepha	0.52	188	P	Pb	02 47 18.5	-0.1
ARGA	Argostoli. Kep	0.53	185	P	Pb	02 47 19.4	+0.5
VLS	Valsamata	0.53	175	P	Pb	02 47 18.7	-0.2
VLS				S	Sb	02 47 26.8	+0.3
VLS				AML	AML	02 47 28.7	
	comp=E,12280µm,0.3s						
VLS				AML	AML	02 47 32.8	
	comp=N,16675µm,0.4s						
PSDA	Pessada-Kefalo	0.60	176	P	Pg	02 47 19.6	+0.2
PVO	Paravola	0.78	97	P	Pg	02 47 22.5	-0.3
PVO				S	Sb	02 47 34.4	+0.8
	comp=N,25µm,0.3s						
PVO	Paravola	0.78	97	P	Pg	02 47 22.5	-0.3
PVO				S	Sg	02 47 31.2	-1.9
IGT	Igoumenitsa	0.84	349	P	Pg	02 47 23.7	-0.2
IGT	Igoumenitsa	0.84	349	P	Pg	02 47 23.6	-0.2
	baz=346						
IGT				S	Sn	02 47 37.1	-0.2
	baz=346						
JAN	Janina	0.98	15	P	Pg	02 47 26.4	-0.2
JAN	Janina	0.98	15	P	Pg	02 47 26.4	-0.2
RLS	Riolos of Patr	0.98	131	P	Pg	02 47 26.0	-0.6
RLS	Riolos of Patr	0.98	131	P	Pg	02 47 25.7	-0.9
EVR	Evrytania	1.02	78	P	Pg	02 47 26.2	-1.1
EVR				S	Sb	02 47 41.6	+1.1
	comp=N,3µm,0.6s						
EVR	Evrytania	1.02	78	P	Pg	02 47 26.0	-1.4
EVR				S	Sg	02 47 39.3	-1.3
LTHK	Lithakia	1.03	166	P	Pg	02 47 26.8	-0.7
EFP	Efpalio	1.11	104	P	Pg	02 47 27.6	-1.5
KASA	Kassiopi	1.13	336	P	Pn	02 47 29.8	+0.6
KEK	Kerkira	1.15	331	P	Pn	02 47 30.2	+0.7
KEK	Kerkira	1.15	331	P	Pn	02 47 30.4	+0.9
DRO	Drossia	1.20	129	P	Pb	02 47 29.5	-0.7
DRO	Drossia	1.20	129	P	Pb	02 47 29.2	-1.0
LAKA	Lakka	1.23	112	P	Pn	02 47 29.9	-0.6
LAKA				S	Sn	02 47 48.1	+1.1
	comp=N,10µm,0.5s						
LAKA	Lakka	1.23	112	P	Pn	02 47 29.5	-1.0
SRN	Sarande	1.24	341	P	Pg	02 47 31.2	-0.3
SRN	Sarande	1.24	341	P	Pg	02 47 32.2	+0.7
	baz=339						
SRN				S	Sn	02 47 49.1	+1.9
	baz=339						
TRIZ	Trizonia	1.26	105	P	Pn	02 47 30.2	-0.7
TRIZ				S	Sn	02 47 49.6	+2.0
	comp=N,2µm,0.3s						
TRIZ	Trizonia	1.26	105	P	Pn	02 47 30.1	-0.7
MAKR	Makrakomi, Fth	1.28	76	P	Pn	02 47 30.9	-0.4
MAKR	Makrakomi, Fth	1.28	76	P	Pn	02 47 31.0	-0.4
KPRO	Kipourio	1.40	27	P	Pb	02 47 33.8	+0.1
KPRO	Kipourio	1.40	27	P	Pn	02 47 33.6	+0.7
THL	Klokotos Trika	1.43	53	P	Pn	02 47 33.2	-0.1
THL	Klokotos Trika	1.43	53	P	Pn	02 47 33.6	+0.3
KLV	Kalavryta, Ach	1.44	117	P	Pn	02 47 33.1	-0.3
KLV	Kalavryta, Ach	1.44	117	P	Pn	02 47 33.0	-0.4
AGG	Agios Georgios	1.44	77	P	Pn	02 47 34.0	+0.6
AGG				S	Sg	02 47 54.0	0.0
	comp=N,3µm,0.6s						
AGG	Agios Georgios	1.44	77	P	Pn	02 47 33.9	+0.5
AGG	Agios Georgios	1.44	77	Pn	Pn	02 47 33.7	+0.3
AGG				Sn	Sn	02 47 53.2	+1.1
LSK	Leskovik	1.44	2	P	Pg	02 47 35.5	+0.2
	baz=0.0						
LSK				S	Sg	02 47 55.6	+1.6
	baz=0.0						
PENT	Pentalofos	1.56	17	P	Pb	02 47 36.9	+0.5
GUR	Goura	1.62	118	P	Pn	02 47 36.4	+0.4
GUR	Goura	1.62	118	P	Pn	02 47 36.3	+0.4
THAL	Thalero	1.81	111	P	Pn	02 47 39.6	+1.2
ITM	Ithomi	1.88	144	P	Pb	02 47 42.4	+0.5
ITM	Ithomi	1.88	144	Pn	Pn	02 47 40.1	+0.6
ITM				Sn	Sn	02 48 04.4	+1.2
KBN	Korca	1.92	6		Pn	02 47 41.5	+1.4
KBN	Korca	1.92	6	P	Pb	02 47 43.4	+0.8
	baz=4.0						
KBN				S	Sg	02 48 08.3	-1.2
	baz=4.0						
VLO	Vlora	1.93	336		Pn	02 47 40.9	+0.7
VLO	Vlora	1.93	336	P	Pb	02 47 42.7	0.0
	baz=335						
VLO				S	Sg	02 48 09.6	-0.2
	baz=335						
LKR	Lokris	1.93	91	P	Pn	02 47 41.8	+1.6
LTK	Loutraki	2.03	109	P	Pb	02 47 44.2	-0.2
SCTE	Santa Cesarea	2.10	311	Pn	Pn	02 47 43.4	+0.9
FNA	Florina	2.17	17	Pn	Pb	02 47 45.6	-1.3
FNA	Florina	2.17	17	P	Pb	02 47 46.0	-0.8
	baz=15						
FNA				S	Sb	02 48 15.0	+1.3
	baz=15						
VIL2	Platees	2.21	102	P	Pn	02 47 46.3	+2.3
OHR	Ohrid	2.41	5	*e*Pn	Pb	02 47 50.1	-0.8
OHR				*e*Sn	Sb	02 48 20.6	+0.1
OHR	Ohrid	2.41	5	*i* Pn	Pb	02 47 49.6	-1.3
TIR	Tirane	2.68	349	⇓S	Sn	02 48 23.5	+0.6
TIR	Tirane	2.68	349	*e*Pn	Pn	02 47 53.0	+2.5
TIR	Tirane	2.68	349	Pn	Pn	02 47 51.6	+1.0
TIR	Tirane	2.68	349	P	Pn	02 47 52.7	+2.1
	baz=349						
TIR				S	Sb	02 48 27.9	-0.5
	baz=349						
PHP	Peshkopia	2.97	359	P	Pn	02 47 56.6	+2.1
	baz=358						
PHP				S	Sn	02 48 33.8	+3.7
	baz=358						
TIP	Timpagrande	2.98	280	⇑P	Pn	02 47 56.4	+1.8
TIP				⇑S	Sn	02 48 31.2	+1.0
TIP	Timpagrande	2.98	280		Pn	02 47 55.2	+0.5
VAY	Valandovo	3.04	30	*e*Pn	Pn	02 47 56.9	+1.4
VAY				*e*Sn	Sb	02 48 38.7	+0.1
VAY	Valandovo	3.04	30	*i* Pn	Pn	02 47 56.8	+1.4
STIP	Stip	3.24	22	*i* Pn	Pn	02 48 01.2	+3.0
SKO	Skopje	3.33	12	*i* Pn	Pn	02 48 01.5	+2.1
ULC	Ulcinj	3.40	344	⇓*i*Pn	Pn	02 48 00.4	+0.1
ULC				*i* Sn	Sn	02 48 39.4	-1.1
MATE	Matera	3.53	304	⇑P	Pn	02 48 03.5	+1.4
DRME	Dracevica, Mon	3.62	344	⇑*i*Pn	Pn	02 48 04.2	+0.8
DRME	Dracevica, Mon	3.62	344	⇑*i*Pn	Pn	02 48 04.3	+0.8
DRME				*i* Sn	Sn	02 48 44.8	-1.2
CEL	Celeste	3.67	264	Pn	Pn	02 48 05.3	+1.2
BCI	Bajram Curri	3.67	355	P	Pn	02 48 06.5	+2.4
	baz=354						
BCI				S	Sn	02 48 51.4	+4.2
	baz=354						
BUM	Brajici-Budva	3.80	341	⇑*i*Pn	Pn	02 48 06.1	+0.2
BUM				*i* Sn	Sn	02 48 49.0	-1.5
PDG	Podgorica	3.84	346	⇑P	Pn	02 48 07.2	+0.8
PDG				⇑S	Sn	02 48 51.4	0.0
PDG	Podgorica	3.84	346	*e*Pn	Pn	02 48 07.8	+1.4
PDG	Podgorica	3.84	346	⇑*i*Pn	Pn	02 48 07.1	+0.7
PDG	Podgorica	3.84	346	Pn	Pn	02 48 07.4	+1.0
TTG	Podgorica	3.84	346	⇑*i*Pn	Pn	02 48 06.8	+0.4
TTG				*i* Sn	Sn	02 48 50.1	-1.3
PVY	Plav	3.91	354	⇓*i*Pn	Pn	02 48 09.5	+2.1
PVY				*e*Sn	Sn	02 48 51.5	-1.7
CEME	Cevo	4.02	343	⇑*i*Pn	Pn	02 48 09.3	+0.3
CEME				*i* Sn	Sn	02 48 54.4	-1.6
HCY	Herceg Novi	4.04	338	⇓*i*Pn	Pn	02 48 09.1	-0.1
HCY	Herceg Novi	4.04	338	⇓*i*Pn	Pn	02 48 09.2	0.0
HCY				*i* Sn	Sn	02 48 54.8	-1.6
BOSS	Bosilegrad	4.06	21	*e*Pn	Pn	02 48 11.1	+1.6
IVA	Berane	4.19	354	⇓*i*Pn	Pn	02 48 11.5	+0.2
IVA				*i* Sn	Sn	02 48 58.3	-1.7
KOME	Kolasin	4.21	350	⇓*i*Pn	Pn	02 48 12.3	+0.7
KOME				*i* Sn	Sn	02 48 58.8	-1.8
BARS	Barje	4.22	13	*e*Pn	Pn	02 48 12.8	+1.2
NKME	Niksic	4.23	344	⇓*i*Pn	Pn	02 48 12.4	+0.6
NKME				*i* Sn	Sn	02 48 59.2	-1.8
NKY	Niksic	4.26	345	⇓*i*Pn	Pn	02 48 13.1	+0.8
NKY				*i* Sn	Sn	02 49 00.0	-2.0
TREB	Trebinje	4.33	338	*e*Pn	Pn	02 48 13.2	0.0
TREB	Trebinje	4.33	338	⇑*i*Pn	Pn	02 48 13.1	-0.1
DBRK	Dubrovnik	4.35	336	*e*Pn	Pn	02 48 13.2	-0.2
VTS	Vitosha	4.41	27	⇑P	Pn	02 48 15.8	+1.4
VTS	Vitosha	4.41	27	*e*Pn	Pn	02 48 16.0	+1.6
VTS				*e*Sn	Sn	02 49 08.8	+3.1
VTS	Vitosha	4.41	27	Pn	Pn	02 48 14.7	+0.3
BRY	Bratogost	4.45	341	⇓*i*Pn	Pn	02 48 14.8	-0.2
BRY	Bratogost	4.45	341	⇓*i*Pn	Pn	02 48 15.0	0.0
BRY				*i* Sn	Sn	02 49 04.5	-2.2
SELS	Selova	4.53	5	*e*Pn	Pn	02 48 17.1	+1.2
SANT	Santorini	4.56	119	⇑P	Pn	02 48 19.1	+2.8
SJES	Sjenica	4.57	355	*e*Pn	Pn	02 48 18.6	+2.1
UPM	Unac-Piva	4.65	345	⇑*i*Pn	Pn	02 48 19.3	+1.5
UPM	Unac-Piva	4.65	345	⇓*i*Pn	Pn	02 48 17.9	+0.1
UPM				*e*Sn	Sn	02 49 09.3	-2.4
STON	Ston	4.68	334	*e*Pn	Pn	02 48 18.1	+0.2
STON	Ston	4.68	334	⇑*i*Pn	Pn	02 48 17.5	-0.4
STON	Ston	4.68	334	*i* Pn	Pn	02 48 17.6	-0.3
PLE	Pljevlja	4.70	350	*e*Pn	Pn	02 48 18.5	+0.2
PLE				*e*Sn	Sn	02 49 10.5	-2.2
SGRT	San Giovanni R	4.76	311	Pn	Pn	02 48 20.4	+1.3
ALN	Alexandroupoli	4.78	61		Pn	02 48 21.1	+1.9
IDI	Anoyia	4.88	133	Pn	Pn	02 48 23.1	+2.3
	comp=N,1.2nm,0.3s,baz=77,slow=8.9,SNR=15						
IDI				Sn	Sn	02 49 15.1	-2.1
	comp=N,2.4nm,0.3s,baz=296,slow=16,SNR=3.7						
IDI				LR	LR	02 50 19.2	
	comp=N,50nm,19.8s,baz=290,slow=39						
LSTV	Lastovo	4.91	327	*e*Pn	Pn	02 48 20.6	-0.5
RUDO	Rudo	4.98	350	⇑*i*Pn	Pn	02 48 22.0	-0.1
VAE	Valguarnera	4.98	258	Pn	Pn	02 48 24.6	+2.4
	comp=N,0.2nm,0.3s,baz=44,slow=18,SNR=3.1						
VAE				Sn	Sn	02 49 20.8	+1.1
	comp=N,3.4nm,0.3s,baz=42,slow=9.4,SNR=5.2						
BOVS	Bovan	5.00	10	⇓P	Pn	02 48 22.3	0.0
BOVS	Bovan	5.00	10	*e*Pn	Pn	02 48 22.5	+0.2
RAFF	Raffo Rosso	5.10	255		Pn	02 48 24.2	+0.5
PAOL	Paolisi	5.14	299		Pn	02 48 23.9	-0.4
GRUS	Gruza	5.18	1	*e*Pn	Pn	02 48 25.6	+0.8
BBLS	Lazići	5.22	351	*e*Pn	Pn	02 48 26.1	+0.6
BBLS	Lazići	5.22	351	⇑*i*Pn	Pn	02 48 25.6	+0.1
MAKA	Makarska	5.29	331	*e*Pn	Pn	02 48 26.2	-0.1
DIVS	Divibare	5.40	356	*e*Pn	Pn	02 48 28.5	+0.6
DIVS	Divibare	5.40	356	⇑*i*Pn	Pn	02 48 28.0	+0.1
DIVS	Divibare	5.40	356	Pn	Pn	02 48 28.2	+0.3
RICI	Ricice	5.42	333	*e*Pn	Pn	02 48 28.0	-0.2
HVAR	Hvar	5.43	327	*e*Pn	Pn	02 48 28.3	0.0
HAPS	Han Pijesak,BI	5.50	348	⇑*i*Pn	Pn	02 48 29.6	+0.3
TRUS	Trudelj	5.51	359	*e*Pn	Pn	02 48 30.0	+0.6
SVIS	Svilajnac	5.57	5	*e*Pn	Pn	02 48 30.7	+0.5
BALB	Balikesir	5.79	78	Pn	Pn	02 48 33.5	+0.4
TEKS	Tekeris	5.88	353	*e*Pn	Pn	02 48 34.2	-0.3
TEKS	Tekeris	5.88	353	⇑*i*Pn	Pn	02 48 33.3	-1.2
MDVR	Moldovita	6.13	8	⇓P	Pn	02 48 38.0	+0.1
KIJV	Kijevo	6.13	331	*e*Pn	Pn	02 48 38.3	+0.4
ZIRJ	Zirje	6.16	325	*e*Pn	Pn	02 48 38.2	-0.1
MGRS	Mrkonjic Grad	6.26	337	⇓*i*Pn	Pn	02 48 40.7	+1.0
DOB	Doboj	6.29	344	*e*Pn	Pn	02 48 39.2	-0.8
MORI	Morici	6.30	326	*e*Pn	Pn	02 48 40.9	+0.7
MORI				Sn	Sn	02 49 49.3	-2.8
HERR	Herculane	6.32	12	⇓P	Pn	02 48 41.2	+0.6
FRGS	Fruska Gora	6.46	355	*e*Pn	Pn	02 48 42.7	+0.2
FRGS	Fruska Gora	6.46	355	⇑*i*Pn	Pn	02 48 41.9	-0.6
BLY	Banja Luka	6.53	339	*e*Pn	Pn	02 48 44.2	+0.8
BLY	Banja Luka	6.53	339	⇑*i*Pn	Pn	02 48 43.3	-0.1
AQU	L'Aquila	6.54	306	*e*Pn	Pn	02 48 46.3	+2.8
AQU	L'Aquila	6.54	306	Pn	Pn	02 48 44.6	+1.0
DUGI	Dugi Otok	6.69	324	*e*Pn	Pn	02 48 45.8	+0.2
UDBI	Udbina	6.82	330	*e*Pn	Pn	02 48 48.5	+1.1
MRAK	Mrakovica	6.86	338	⇑*i*Pn	Pn	02 48 47.7	-0.2
PRIJ	Prijedor	6.88	337	⇑*i*Pn	Pn	02 48 47.9	-0.2
GZR	Gura Zlata	6.88	13	⇓P	Pn	02 48 48.9	+0.6
NRCA	Norcia	6.97	309		Pn	02 48 49.8	+0.2
NVLJ	Novalja	7.22	326	*e*Pn	Pn	02 48 52.8	0.0
ARR	Arges	7.32	23	⇑P	Pn	02 48 55.1	+0.9
RABC	Rab	7.41	326	*e*Pn	Pn	02 48 55.4	0.0
VOIR		7.51	25	⇓P	Pn	02 48 58.6	+1.6
MURB	Monte Urbino	7.57	309		Pn	02 48 58.1	+0.3
KOVH	Kovagotottos	7.59	347	*e*PN	Pn	02 48 56.9	-1.0
KOVH	Kovagotottos	7.59	347	*e*P	Pn	02 48 58.3	+0.5
KOVH	Kovagotottos	7.59	347	*e*SN	Sn	02 50 17.2	-6.6
SIRR	Siria	7.60	6	⇓P	Pn	02 48 58.8	+0.8
MORH	Mrgy, Hungar	7.63	350	⇑*i*Pn	Pn	02 48 57.1	-1.3
MLR	Muntele Rosu	7.88	29	⇓P	Pn	02 49 02.4	+0.4
MLR	Muntele Rosu	7.88	29	Pn	Pn	02 49 04.0	+2.0
	comp=N,0.7nm,0.3s,baz=220,slow=16,SNR=4.7						
MLR	Muntele Rosu	7.88	29	Pn	Pn	02 49 02.0	0.0
NEHR	Nehoiu	7.96	31	⇓P	Pn	02 49 04.6	+1.6
RIY	Rijeka	8.00	328	⇑*i*Pn	Pn	02 49 03.4	-0.1
RIY	Rijeka	8.00	328	*e*Pn	Pn	02 49 03.4	-0.1
CRES	Cresnjev	8.04	334	⇑*i*Pn	Pn	02 49 03.7	-0.4
COVR	Voineasa-Covas	8.28	29	⇓P	Pn	02 49 09.7	+2.4
CEY	Cerknica	8.36	329	⇑*i*Pn	Pn	02 49 08.5	+0.1
TIH	Tihany	8.41	348	*e*PN	Pn	02 49 08.7	-0.5
TIH	Tihany	8.41	348	*e*P	Pn	02 49 11.5	+2.4
PLOR	Plostina	8.45	30	⇑P	Pn	02 49 11.2	+1.5
VRI	Vrincioaia	8.49	31	⇓P	Pn	02 49 12.2	+1.9
OSSC	Osservatorio P	8.50	307		Pn	02 49 11.4	+1.1
LJU	Ljubljana	8.57	331	⇑*i*Pn	Pn	02 49 11.8	+0.5
MPLH	Magyarpolny	8.73	346	*e*P	Pn	02 49 13.9	+0.3
MPLH	Magyarpolny	8.73	346	*e*PN	Pn	02 49 13.2	-0.4
MPLH				*e*SN	Sn	02 50 49.0	-2.9
SOKA	Soboth	8.93	335	Pn	Pn	02 49 15.9	-0.4
	comp=N,20nm,0.8s,SNR=26						
OBKA	Obir	8.95	332	Pn	Pn	02 49 17.4	+0.7
	comp=N,3.7nm,0.3s,SNR=12						
PSZ	Piszkesteto	9.22	357	Pn	Pn	02 49 19.8	-0.5
ARSA	Arzberg	9.29	338	Pn	Pn	02 49 21.2	0.0
	comp=N,5.5nm,0.4s,SNR=8.7						
TEOL	Teolo	9.36	318		Pn	02 49 21.5	-0.6
MYKA	Terra Mystica	9.40	330	*e*Pn	Pn	02 49 23.1	+0.3
	comp=N,3.6nm,0.4s						
KEST	Kesra	9.40	255	Pn	Pn	02 49 24.6	+1.7
	comp=N,0.1nm,0.3s,baz=34,slow=11,SNR=2.0						
KEST				Sn	Sn	02 51 05.9	-2.6
	comp=N,0.1nm,0.3s,baz=73,slow=18,SNR=1.6						
KEST	Kesra	9.40	255		Pn	02 49 22.8	-0.1
STAL	STALIGIAL	9.50	325		Pn	02 49 23.3	-0.8
ZOU	Zoufplan	9.61	327	Pn	Pn	02 49 25.8	-0.1
CONA	Conrad Observa	9.82	341	*e*Pn	Pn	02 49 29.6	+1.1
	comp=N,1.0nm,0.3s						
CTI	Castel Tesino	9.84	321	Pn	Pn	02 49 28.3	-0.6
VYHS	Vyhne	9.86	353	*e*PN	Pn	02 49 29.0	0.0
KBA	Koelnbreinsper	9.88	330	Pn	Pn	02 49 29.9	+0.4
	comp=N,4.1nm,0.4s,SNR=11						
MODS	Modra-Piesok	9.94	347	*e*PN	Pn	02 49 29.9	-0.3
ABTA	Abfaltersbach	9.96	326	Pn	Pn	02 49 30.2	-0.2
	comp=N,6.1nm,0.6s,SNR=12						
SALO	Salr	10.13	316	Pn	Pn	02 49 33.8	+1.0
MOA	Molln	10.21	335	Pn	Pn	02 49 33.9	+0.1
	comp=N,7.6nm,0.4s,SNR=19						
WTTA	Wattenberg	10.74	326	*e*Pn	Pn	02 49 42.1	+0.9
	comp=N,4.3nm,0.4s						
WATA	Walderalm	10.82	326	*i* Pn	Pn	02 49 43.0	+0.7
	comp=N,7.5nm,0.4s,SNR=11						
SQTA	Sankt Quirin	10.90	324	*i* Pn	Pn	02 49 44.9	+1.5
	comp=N,3.4nm,0.3s,SNR=8.4						
VRAC	Vranov	10.97	346	Pn	Pn	02 49 44.2	0.0
	comp=N,0.1nm,0.3s,baz=158,slow=7.0,SNR=5.3						
VRAC				LR	LR	02 54 06.6	
	comp=N,77nm,18.6s,baz=162,slow=39						
FETA	Feichten	10.98	322	*e*Pn	Pn	02 49 48.0	+3.5
	comp=N,0.9nm,0.4s						
MOTA	Moosalm	11.04	324	*i* Pn	Pn	02 49 46.7	+1.3
	comp=N,8.2nm,0.5s,SNR=14						
CKRC	Cesky Krumlov	11.06	338	*e*PN	Pn	02 49 45.0	-0.4
DAVOX	Davos/Dischmat	11.23	319	Pn	Pn	02 49 49.0	+1.0
	comp=N,0.4nm,0.3s,baz=154,slow=18,SNR=3.1						
DAVOX				Sn	Sn	02 51 48.8	-4.7
	baz=143,slow=20						
GEC2	GERESS Array S	11.26	336		Pn	02 49 47.9	-0.4
GERES	GERESS Array B	11.26	336	Pn	Pn	02 49 47.7	-0.6
	comp=N,1.0nm,0.3s,baz=157,slow=14,SNR=18						
GERES				Sn	Sn	02 51 50.3	-3.8
	comp=N,0.4nm,0.3s,baz=159,slow=23,SNR=2.2						
GERES	GERESS Array B	11.26	336		Pn	02 49 47.9	-0.4
RETA	Reutte	11.30	324	*e*Pn	Pn	02 49 51.3	+2.4
	comp=N,1.3nm,0.4s						
KHC	Kasperske Hory	11.55	337	*e*PN	Pn	02 49 50.5	-1.7
DAVA	Damuels	11.58	321	*e*Pn	Pn	02 49 54.2	+1.5
	comp=N,2.5nm,0.6s						
PRU	Pruhonice	12.06	341	*e*PN	Pn	02 49 57.9	-1.2
SENIN	Lac Senin/Sane	12.39	312	Pn	Pn	02 50 04.6	+0.8
MMAI	Mount Meron Ar	13.33	111	Pn	Pn	02 50 17.9	+1.3
	comp=N,0.6nm,0.3s,baz=305,slow=10.0,SNR=5.7						
MMAI				Sn	Sn	02 52 35.5	-9.1
	comp=N,0.5nm,0.3s,baz=297,slow=19,SNR=1.6						
AKASG	Malin Array Be	13.47	24	Pn	Pn	02 50 18.5	+0.1
	comp=N,0.5nm,0.3s,baz=211,slow=12,SNR=1.6						
CLL	Collm	13.66	340	*e*PP	P	02 50 32.0	+2.2
EIL	Elat	14.94	123	Pn	Pn	02 50 39.5	+1.0
	comp=N,0.2nm,0.3s,baz=203,slow=6.8,SNR=1.7						
EIL				Sn	Sn	02 53 11.9	-12
	comp=N,0.2nm,0.3s,baz=35,slow=23,SNR=1.2						
EIL				LR	LR	02 59 14.2	
	comp=N,40nm,18.6s,baz=128,slow=49						
MNK	Minsk	16.57	15	*i* P	Pn	02 50 60.0	+0.5
	comp=Z,13nm,0.8s,baz=201						
MNK				*i* P	P	02 51 00.2	-1.8
	comp=E,1.0nm,1.1s						
MNK				*i* P	P	02 51 00.2	-1.8
	comp=N,17nm,1.6s						
MNK				*i* PP	PnPn	02 51 09.1	+0.5
MNK				*i* PPP	PPP	02 51 16.8	
MNK				*i* S	Sn	02 54 05.7	+2.6
MNK				*i* SS	SnSn	02 54 20.1	+3.9
MNK				*i* SSS	SSS	02 54 32.3	
MNK				*i* PcP	PcP	02 55 50.6	+1.0
MNK				*i* LQ	LQ	02 55 53.0	
MNK				*i* LR	LR	02 57 08.4	
MNK				*i* LRM	MLR	02 58 42.4	
	comp=E,5.0nm,10.8s						
MNK				*i* LRM	MLR	02 58 43.7	
	comp=Z,97nm,15.3s						
MNK				*i* LRM	MLR	02 58 48.2	
	comp=N,123nm,16.0s						
KVAR	Kislovodsk Arr	17.43	65	P	P	02 51 12.1	+0.3
	baz=266,slow=15,SNR=1.7						
KBZ	Khabaz	17.54	66	P	Pn	02 51 12.1	+0.4
	comp=N,0.1nm,0.3s,baz=282,slow=11,SNR=2.8						
ESDC	Sonseca Array	19.00	281	P	Pn	02 51 30.6	+0.9
	comp=N,0.0nm,0.3s,baz=83,slow=12,SNR=6.5						
VSU	Vasula	20.17	9	*e*P	P	02 51 42.4	+0.8
UPP	Uppsala	21.25	356	*e*P	P	02 51 53.4	+0.2
AAL	Aland	21.49	359	⇑*e*P	P	02 51 55.6	-0.2
HFS	Hagfors	21.88	351	P	P	02 51 59.5	-0.5
	comp=N,4.8nm,0.7s,baz=169,slow=12,SNR=23						
EKA	Eskdalemuir Ar	23.00	324	P	P	02 52 11.7	-0.2
	comp=N,8.9nm,0.9s,baz=121,slow=11,SNR=14						
FINES	FINESS Array B	23.02	7	P	P	02 52 09.8	-2.2
	comp=N,3.8nm,0.5s,baz=149,slow=8.9,SNR=23						
NB2	NORSAR Subarra	23.10	348	P	P	02 52 12.1	-0.9
	comp=Z,1.9nm,0.6s,baz=157,slow=10						
NOA	NORSAR Array B	23.10	348	P	P	02 52 12.3	-0.6
	comp=Z,3.7nm,0.7s,baz=158,slow=9.3,SNR=14						
AKTO	Aktyubinsk	28.86	54	P	P	02 53 06.8	+1.1
	comp=Z,0.6nm,0.4s,baz=261,slow=14,SNR=3.6						
ABKAR	Akbulak array	29.94	56	P	P	02 53 15.2	-0.1
ABKAR				IAmb	IAmb	02 53 32.8	
	comp=Z,2.6nm,1.4s						
TORD	Torodi Ar. Bea	30.45	218	P	P	02 53 19.6	-0.5
	comp=Z,0.5nm,0.5s,baz=31,slow=9.2,SNR=8.0						
TORD	Torodi Ar. Bea	30.45	218	P	P	02 53 17.8	-2.3
ARCES	ARCESS Array B	31.00	3	P	P	02 53 23.5	-0.9
	comp=Z,2.0nm,0.6s,baz=188,slow=11,SNR=16						
ARCES	ARCESS Array B	31.00	3	P	P	02 53 23.9	-0.6
ARCES				IAmb	IAmb	02 53 34.1	
	comp=Z,9.1nm,1.4s						
KKAR	Karatay Array	37.58	67	P	P	02 54 21.3	-0.4
DBIC	Dimbokro	39.29	222	LR	LR	03 13 19.5	
	comp=Z,37nm,18.3s,baz=136,slow=40						

MKAR	Makanchi Array	45.02	59	P	P	02 55 22.3	-0.5
	comp=Z,0.6nm,0.4s,baz=275,slow=7.3,SNR=9.5						
ZAA0	Zalesovo Array	45.33	48	P	P	02 55 24.4	-0.7
ZAA0				IAmb	IAmb	02 55 30.3	
	comp=Z,4.5nm,0.5s						
ZALV	Zalesovo Beam	45.33	48	P	P	02 55 24.4	-0.8
	comp=Z,2.6nm,0.4s,baz=278,slow=8.7,SNR=12						
SCHQ	Schefferville	58.08	317	P	P	02 57 00.8	+0.5
	comp=Z,2.3nm,0.5s,baz=62,slow=5.8,SNR=11						
SCHQ	Schefferville	58.08	317	P	P	02 57 00.6	+0.3
SCHQ				IAmb	IAmb	02 57 19.5	
	comp=Z,20nm,1.4s						
SONM	Songino Array	60.11	51	P	P	02 57 14.4	-0.4
	comp=Z,1.2nm,1.1s,baz=301,slow=8.9,SNR=3.8						
FYU	Fort Yukon	74.48	354	P	P	02 58 45.9	+0.7
WRA	Warramunga Arr	120.55	92	PKP	PKPdf	03 05 57.7	-1.6
	comp=Z,0.3nm,0.7s,baz=329,slow=1.7,SNR=1.5						

*JMA **19** 02:59:43.2±0.2, 22°.23N×122°.25E, h40^{km}, M3.6*
*TAP **19** 02:59:44.4, 22°.24N×122°.18E, h44^{km}, ML3.4, D*
ISC 19 02:59:43.2±1.4**, 22°.25N**±0°.04×**122°.23E**±0°.03**, h24**^{km}±14^{km}**,**
n75, σ0ˢ.96/118**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	Lan-yu	0.66	251	eP	Pb	02 59 56.2	+0.2
	baz=250						
LAY				eS	Sb	03 00 04.6	-0.3
	baz=250						
LDUT	Ludao	0.82	301	eP	Pb	02 59 58.7	0.0
	baz=313						
LDUT				eS	Sb	03 00 09.0	-0.3
	baz=313						
EDH	Donghe	1.11	310	P	Pn	03 00 02.9	-0.3
	baz=312						
EDH				eS	Sn	03 00 16.5	-1.4
	baz=312						
CHKT	Chengkung	1.16	317	P	Pn	03 00 03.4	-0.5
	baz=325						
CHKT				eS	Sn	03 00 17.5	-1.5
	baz=325						
TWGBT	Beinan	1.20	298	eP	Pn	03 00 04.7	+0.3
	baz=305						
TWGBT				eS	Sn	03 00 19.7	-0.3
	baz=305						
LONT	Longtian	1.21	303	eP	Pb	03 00 05.3	0.0
	baz=309						
LONT				eS	Sn	03 00 19.7	-0.4
	baz=309						
TWG	Pinlang	1.21	298	P	Pn	03 00 04.6	0.0
	baz=305						
TWG				S	Sn	03 00 19.5	-0.7
	baz=305						
ECL	Taimali	1.23	287	P	Pn	03 00 05.3	+0.5
	baz=287						
TAW	Tawu	1.24	275	eP	Pn	03 00 05.4	+0.5
	baz=275						
TAW				S	Sn	03 00 20.1	-0.7
	baz=275						
ECS	Chishang	1.25	312	eP	Pn	03 00 05.4	+0.2
	baz=321						
ECS				eS	Sb	03 00 22.1	+0.2
	baz=321						
FULB	Fuli	1.28	318	eP	Pn	03 00 05.3	-0.2
	baz=326						
FULB				eS	Sn	03 00 20.7	-1.2
	baz=326						
TSEB	Hengchuen, Pin	1.28	254	eP	Pb	03 00 06.8	+0.3
	baz=254						
TSEB				S	Sb	03 00 23.4	+0.9
	baz=254						
ECBN	Changbin	1.28	326	eP	Pn	03 00 05.5	-0.1
	baz=328						
ECBN				eS	Sn	03 00 21.2	-0.7
	baz=328						
EAST	Anshuo	1.28	276	eP	Pn	03 00 06.0	+0.3
	baz=276						
EAST				S	Sn	03 00 21.1	-0.9
	baz=276						
SLIU	Shizi	1.32	269	eP	Pn	03 00 06.4	+0.2
	baz=269						
TWKBT	Hengchun	1.35	257	eP	Pb	03 00 07.2	-0.5
	baz=256						
TWKBT				S	Sn	03 00 23.2	-0.3
	baz=256						
TWK1	Hengchun	1.35	257	eP	Pb	03 00 07.3	-0.5
	baz=256						
TWK1				S	Sn	03 00 23.4	-0.3
	baz=256						
EYUL	Yuli	1.38	323	eP	Pn	03 00 06.9	+0.1
	baz=329						
EYUL				eS	Sn	03 00 24.8	+0.5
	baz=329						
TWF1	Yuli	1.39	322	P	Pn	03 00 07.1	0.0
	baz=328						
TWF1				S	Sn	03 00 24.1	-0.6
	baz=328						
YULB	Yu-li	1.42	323	eP	Pn	03 00 07.7	+0.2
	baz=329						
YULB				eS	Sn	03 00 25.1	-0.4
	baz=329						
HGSD	Ruisui	1.44	329	eP	Pn	03 00 07.5	-0.3
	baz=331						
ELDTW	Lidau	1.46	310	eP	Pn	03 00 08.0	0.0
	baz=312						
ELDTW				S	Sn	03 00 25.6	-0.8
	baz=312						
SCZT	Fangliau	1.49	275	eP	Pb	03 00 09.5	-0.7
	baz=275						
EHY	Hungye	1.50	326	P	Pn	03 00 08.9	+0.3
	baz=332						
MASBT	Mashibuluo	1.52	284	eP	Pb	03 00 10.0	-0.6
	baz=295						
TSMG	Majia	1.53	288	eP	Pb	03 00 10.1	-0.8
	baz=293						
SSD	Sandimen	1.55	289	eP	Pn	03 00 09.8	+0.5
	baz=289						
TEGC	Jichi Village	1.58	337	eP	Pn	03 00 10.0	+0.3
	baz=338						
TEGC				S	Sn	03 00 29.1	-0.3
	baz=338						
EGFH	Guangfu	1.59	333	eP	Pn	03 00 10.1	+0.3
	baz=341						
EGFH				S	Sn	03 00 29.3	-0.4
	baz=341						
STYH	Taoyuan	1.62	305	eP	Pn	03 00 11.2	+0.9
	baz=312						
SLGT	Liugui	1.64	297	eP	Pb	03 00 12.1	-0.6
	baz=298						
TEYL	Yanliau Villag	1.71	340	eP	Pn	03 00 12.4	+0.9
	baz=342						
TEYL				S	Sn	03 00 33.2	+0.7
	baz=342						
WLCH	Liuqiu	1.71	274	eP	Pb	03 00 14.9	+1.0
	baz=274						
ESL	Shilin	1.72	335	P	Pn	03 00 11.9	+0.3
	baz=345						
ESL				eS	Sn	03 00 32.6	-0.2
	baz=345						
WTP	Ta-pu	1.79	304	eP	Pb	03 00 14.6	-0.7
	baz=311						
VWDT	VWDT	1.80	326	eP	Pn	03 00 14.0	+1.3
	baz=334						
TPUB	Ta-pu	1.81	306	eP	Pb	03 00 14.9	-0.7
	baz=314						
TPUB				eS	Sb	03 00 37.7	-0.1
	baz=314						
ALS	Alishan	1.81	314	eP	Pb	03 00 14.8	-1.0
	baz=323						
CHN1	Nanshi	1.82	301	P	Pb	03 00 15.7	-0.2
	baz=290						
ETM	Tongmen	1.83	339	eP	Pn	03 00 13.6	+0.4
	baz=347						
ETM				eS	Sn	03 00 35.6	-0.1
	baz=347						
TWK	Hsinying	1.90	303	P	Pb	03 00 16.5	-0.6
	baz=289						
TWD	Chiawan	1.91	342	eP	Pn	03 00 15.2	+0.9
	baz=344						
TWD				eS	Sn	03 00 37.2	-0.3
	baz=344						
SSLB	Suanglung	1.93	323	eP	Pn	03 00 15.4	+1.0
	baz=330						
OWD	Renai	1.95	331	P	Pn	03 00 15.6	+0.7
	baz=340						
CHN5	Tsauling	1.96	314	eP	Pb	03 00 17.6	-0.6
	baz=321						
NACB	Ninganchiao	2.00	343	eP	Pn	03 00 16.2	+0.7
	baz=351						
NACB				eS	Sn	03 00 39.5	-0.2
	baz=351						
SMLT	Sun Moon Lake	2.03	323	eP	Pn	03 00 17.8	+1.8
	baz=330						
CHGB	Renai	2.04	332	eP	Pn	03 00 17.5	+1.2
	baz=340						
ETLH	Xiulin Townshi	2.06	341	eP	Pn	03 00 17.1	+0.7
	baz=350						
ETLH				eS	Sn	03 00 41.0	-0.4
	baz=350						
TYC	Yuchr	2.07	323	eP	Pb	03 00 18.9	-1.2
	baz=328						
WHF	Hehuan Shan	2.08	335	eP	Pn	03 00 17.6	+0.6
	baz=346						
WHF				eS	Sn	03 00 41.6	-0.8
	baz=346						
WCS	Beigang Elemen	2.17	326	eP	Pb	03 00 20.5	-1.2
	baz=335						
ENA	Nanau	2.21	348	P	Pn	03 00 19.3	+1.0
	baz=350						
ENA				eS	Sn	03 00 45.1	+0.1
	baz=350						
TDCB	Techi	2.22	334	eP	Pn	03 00 19.7	+1.1
	baz=344						
TDCB				S	Sn	03 00 45.0	-0.4
	baz=344						
EWUT	Wuta	2.22	349	eP	Pn	03 00 19.9	+1.4
	baz=351						
EWUT				eS	Sn	03 00 45.6	+0.4
	baz=351						
NNSB	Datong	2.30	341	eP	Pn	03 00 20.7	+1.0
	baz=342						
NNSB				eS	Sn	03 00 47.1	-0.3
	baz=342						
HATJ	Hateruma jima	2.31	39	P	Pn	03 00 20.4	+0.7
HATJ				eS	Sn	03 00 46.6	-0.8
WHP	Taichung City	2.34	330	eP	Pb	03 00 23.4	-1.3
	baz=336						
TWC	Suao	2.37	352	eP	Pn	03 00 22.2	+1.7
	baz=2.0						
NDS	Dongshan	2.42	349	P	Pn	03 00 22.7	+1.5
	baz=350						
NDS				eS	Sn	03 00 49.9	-0.1
	baz=350						
ENTT	Nioudou	2.45	346	eP	Pn	03 00 23.6	+1.9
	baz=347						
IRIF	Iriomote-Funau	2.49	33	P	Pn	03 00 23.1	+0.9
IRIF				eS	Sn	03 00 52.2	+0.3
YHNB	Yeheng	2.53	342	eP	Pn	03 00 24.6	+1.8
	baz=352						
NSK	Sanguang	2.54	342	eP	Pn	03 00 24.5	+1.5
	baz=343						
NSK				eS	Sn	03 00 53.2	0.0
	baz=343						
JKRS	Kuro-shima	2.57	39	P	Pn	03 00 24.2	+0.9
JKRS				S	Sn	03 00 52.8	-1.0
EGS		2.60	354	eP	Pn	03 00 26.3	+2.7
	baz=355						
NWLT	Wulai	2.60	345	eP	Pn	03 00 26.0	+2.3
	baz=346						
NWLT				eS	Sn	03 00 54.8	+0.1
	baz=346						
TIPB	Shuangxi	2.73	352	eP	Pn	03 00 27.9	+2.3
	baz=2.0						
TIPB				eS	Sn	03 00 59.4	+1.5
	baz=2.0						
JIJ	Ishigaki jima	2.74	40	P	Pn	03 00 26.1	+0.4
JIJ				eS	Sn	03 00 56.3	-1.8
NWF	Wu-fen Shan	2.84	352	eP	Pn	03 00 29.5	+2.4
	baz=353						
WFSB	Wu-fen Shan	2.84	352	eP	Pn	03 00 29.5	+2.5
	baz=353						
YM01	YM01	2.94	348	eP	Pn	03 00 30.6	+2.1
	baz=349						
JISG	Ishigakijimahi	3.01	39	P	Pn	03 00 29.7	+0.3
JISG				S	Sn	03 01 03.2	-1.5
JTJ	Tarama	3.29	43	P	Pn	03 00 33.9	+0.7
JTJ				S	Sn	03 01 10.9	-0.7
JIRB	Irabujima	3.73	46	eS	Sn	03 01 21.2	-1.2

*IDC **19** 03:18:32.3±4.2, 43°.56N×145°.19E, h0^{km}, mb3.6/5, mb1 3.8/5, mb1mx3.5/33, mbtmp3.6/5, MS3.1/1, Ms1 3.1/1, ms1mx2.4/54, Error ellipse: s-maj=123.5km s-min=30.4km az=174.0*
*NIED **19** 03:18:36.7, 43°.75N×144°.73E, h0^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.32; $M_{\theta\theta}$3.92; $M_{\phi\phi}$-2.60; $M_{r\theta}$0.58; $M_{\theta\phi}$-0.47; $M_{\phi r}$-2.35; Fault plane solution: $M_0$4.23000×10^{14} NP1: ϕ_s313.00000°, δ72.00000°, λ-35.00000°. NP2: ϕ_s56.00000°, δ57.00000°, λ-158.00000°.*
*MOS **19** 03:18:36.0±1.5, 43°.66N×144°.79E, h26^{km}, mb4.2/1 Error ellipse: s-maj=17.2km s-min=13.4km az=47.5*
*JMA **19** 03:18:36.6, 43°.75N×144°.73E, h0^{km}, M3.8*
JMA Felt II J1.
*SKHL **19** 03:18:37.1±0.9, 43°.70N×144°.80E, h26^{km}±1^{km}, mb4.4/4*
ISC 19 03:18:36.3±1.0**, 43°.67N**±0°.03×**144°.79E**±0°.03**, h20**^{km}±3^{km}**,**
n34, σ1ˢ.05/44**, mb3.5**/5**, 3C-4D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNK	Nakash	0.10	214	⇑P	Pg	03 18 40.0	-0.2
JNSB	Nemuroshibetsu	0.19	55	⇓P	Pg	03 18 41.1	-0.1
JNSB				eS	Sg	03 18 44.5	-0.1
JRA	Rausu	0.36	41	P	Pg	03 18 43.5	-0.4
JRA				eS	Sg	03 18 48.2	-1.0
GLVR	Golovnino	0.53	82	ePN	Pb	03 18 47.9	+1.0
GLVR				eS	Sn	03 18 56.3	-0.8
GLVR				pmax	pmax		
	comp=Z,5µm,0.3s						
GLVR				smax	smax		
	comp=N,9µm,0.2s						
GLVR				smax	smax		
	comp=E,3µm,0.1s						
GLVR	Golovnino	0.53	82	eP	Pb	03 18 47.0	+0.1
GLVR				AMB	AMB	03 18 48.0	
	comp=E,460nm,0.3s						
GLVR				eS	Sn	03 18 56.0	-1.1
GLVR				A	A	03 18 56.0	
	comp=E,2µm,0.4s						
GLVR				A	A	03 18 56.0	
	comp=E,3µm,0.4s						
RUSJ	Misakicho	0.55	37	ePN	Pg	03 18 46.9	-0.4
RUSJ				eS	Sb	03 18 55.2	+0.6
JKHN	Kushirohamanak	0.64	155	⇑P	Pn	03 18 50.6	+0.3
JKHN				S	Sn	03 19 01.0	+1.1
AKK	Akkeshi	0.65	177	eP	Pn	03 18 50.5	+0.1
AKK				eS	Sn	03 19 00.7	+0.6
JAK	Akkeshi	0.68	186	⇑P	Pn	03 18 50.7	0.0
JAK				S	Sn	03 19 01.3	+0.6
JTKR	Abashiri--Toko	0.71	296	⇓P	Pb	03 18 48.8	-1.1
JTKR				S	Sb	03 18 57.4	-1.9
NMR	Nemuro--Hokkai	0.74	113	⇓iPN	Pn	03 18 51.8	+0.2
NMR				i S	Sn	03 19 03.0	+0.7
NMR	Nemuro--Hokkai	0.74	113	i P	Pn	03 18 51.8	+0.2
NMR				i S	Sn	03 19 02.0	-0.3
NEM2	Nemuro 2	0.75	113	P	Pn	03 18 51.7	-0.1
GRPR	Tuman	0.78	65	ePN	Pb	03 18 51.0	-0.2
GRPR				eS	Sb	03 19 01.3	0.0
GRPR				pmax	pmax		
	comp=Z,1µm,0.3s						
GRPR				smax	smax		
	comp=N,2µm,0.3s						
GRPR				smax	smax		
	comp=E,1µm,0.2s						
GRPR	Tuman	0.78	65	eP	Pb	03 18 51.0	-0.2
GRPR				AMB	AMB	03 18 52.0	
	comp=E,110nm,0.3s						
GRPR				eS	Sb	03 19 01.0	-0.3
GRPR				A	A	03 19 02.0	
	comp=E,2µm,0.3s						
GRPR				A	A	03 19 02.0	
	comp=E,1µm,0.3s						
JAR	Ashorobuto	0.83	244	⇓P	Pb	03 18 52.3	+0.2
YUK	Yuzh-Kuril'sk	0.85	64	ePN	Pg	03 18 53.1	+0.1
YUK				eS	Sn	03 19 04.8	-0.4
YUK				pmax	pmax		
	comp=E,410nm,0.2s						
YUK				pmax	pmax		
	comp=Z,2µm,0.2s						
YUK				pmax	pmax		
	comp=N,152nm,0.1s						
YUK				smax	smax		
	comp=N,5µm,0.2s						
YUK				smax	smax		
	comp=E,1µm,0.2s						
YUK	Yuzh-Kuril'sk	0.85	64	eP	Pb	03 18 52.5	+0.1
YUK				AMB	AMB	03 18 53.5	
	comp=E,100nm,0.3s						
YUK				eS	Sb	03 19 02.3	-1.2
YUK				A	A	03 19 05.0	
	comp=E,3µm,0.3s						
YUK				A	A	03 19 05.0	
	comp=E,900nm,0.3s						
KUR	Kuril'sk	2.70	54	ePN	Pn	03 19 21.0	+2.4
KUR				pmax	pmax		
	comp=Z,108nm,0.4s						
KUR				pmax	pmax		
	comp=N,50nm,0.2s						
KUR	Kuril'sk	2.70	54	eP	Pn	03 19 20.1	+1.5
KUR				AMB	AMB	03 19 25.0	
	comp=N,130nm,0.4s						
KUR				eS	Sn	03 19 49.4	-1.3
KUR				A	A	03 19 50.0	
	comp=N,250nm,0.5s						
KUR				A	A	03 19 50.0	
	comp=N,190nm,0.5s						
YSS	Yuzh-Sakhalins	3.59	337	ePN	Pn	03 19 33.0	+2.2
YSS				eS	Sn	03 20 13.9	+1.4
YSS				smax	smax		
	comp=N,30nm,0.7s						
YSS	Yuzh-Sakhalins	3.59	337	eP	Pn	03 19 30.7	-0.1
YSS				erx	rx	03 20 29.5	
YAK	Yakutsk	20.44	339	LR	LR	03 30 29.6	
	comp=N,48nm,20.3s,baz=92,slow=35						
SONM	Songino Array	26.92	292	P	P	03 24 18.6	+2.4
	comp=N,0.9nm,0.7s,baz=89,slow=8.8,SNR=3.7						
H11N2	WAKE ISLAND Hy	30.20	135	T	T	03 55 50.0	
	baz=328,slow=75,SNR=196						
H11N1	WAKE ISLAND Hy	30.21	135	T	T	03 55 50.9	
	baz=328,slow=75,SNR=122						
H11N3	WAKE ISLAND Hy	30.22	135	T	T	03 55 52.1	
	baz=328,slow=75,SNR=110						
H11S1	WAKE ISLAND Hy	31.13	137	T	T	03 57 01.0	
	baz=328,slow=76,SNR=284						
H11S3	WAKE ISLAND Hy	31.14	137	T	T	03 57 01.6	
	baz=328,slow=76,SNR=303						
H11S2	WAKE ISLAND Hy	31.15	137	T	T	03 57 00.1	
	baz=328,slow=76,SNR=222						
ILAR	Eielson Array	42.56	36	P	P	03 26 29.1	-1.2
	comp=N,0.6nm,0.9s,baz=271,slow=6.6,SNR=8.4						
MKAR	Makanchi Array	43.10	297	P	P	03 26 36.6	+1.6
	comp=N,0.4nm,0.8s,baz=77,slow=6.4,SNR=1.4						
FINES	FINESS Array B	64.16	332	P	P	03 29 08.7	-0.2
	comp=N,2.9nm,1.0s,baz=28,slow=6.3,SNR=1.8						
TXAR	Lajitas Array	84.10	55	P	P	03 31 04.2	-1.8
	comp=N,0.3nm,1.0s,baz=297,slow=6.0,SNR=1.6						

*NNC **19** 03:27:36.4±6.8, 37°.00N×71°.05E, h0^{km}, mb3.9, mpv3.7, Error ellipse: s-maj=55.8km s-min=43.1km az=157.0*
ISC 19 03:27:36.8±3.7**, 36°.7N**±0°.2×**70°.8E**±0°.1**, h100**^{km}**, n9,**
σ0ˢ.87/12**, 4C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	Almayashu	5.82	21	P	Pn	03 29 01.2	+0.2
	SNR=51						
UCH	Uchtor	6.17	26	P	Pn	03 29 06.9	+1.1
	SNR=9.4						
KK07	Karatay Array	6.35	358	⇓P	Pn	03 29 08.4	+0.7
	1.1nm,0.3s,baz=175,slow=12						
KK07				⇑S	Sn	03 30 18.9	+0.2
	3.3nm,0.5s,baz=170,slow=22						
AAK	Ala-Archa	6.53	24	P	Pn	03 29 11.0	+0.7
	SNR=7.2						
AAK	Ala-Archa	6.53	24	⇑P	Pn	03 29 10.5	+0.2
	2.9nm,0.4s						
AAK				⇑S	Sn	03 30 23.1	-0.3
	13nm,0.8s						
KBK	Karagaybulak	6.71	27	P	Pn	03 29 14.4	+1.7
	SNR=5.0						
TKM2	Tokmak 2	7.18	29	P	Pn	03 29 19.6	+0.4
	SNR=21						
TKM2	Tokmak 2	7.18	29	⇑P	Pn	03 29 18.5	-0.7
	7.6nm,0.5s						
TKM2				⇓S	Sn	03 30 38.6	-0.7
	3.9nm,0.9s						
AB31	Akbulak array	14.81	331	P	Pn	03 31 00.2	-0.7
	0.3nm,0.5s,baz=150,slow=13,SNR=14						

KMA 19 03:29:19.7±0.9**, 38°.65N×126°.22E, h0**^{km}±3^{km}**, Error ellipse: s-maj=16.9km s-min=1.2km az=337.0, North Korea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSMUS	Musan	0.87	150	P	Pb	03 29 37.6	0.0
YPDB	Yeonpyeongdo	1.11	201	P	Pg	03 29 40.2	-0.7
	SNR=30						
YPDB				S	Sb	03 29 57.2	+0.4
KSCWO	Cheorwon	1.16	118	P	Pg	03 29 42.0	0.0
	SNR=8.7						
HWCB	Hwacheon	1.22	110	P	Pg	03 29 42.2	-0.7
	SNR=12						
KSBAR	Backryungdo	1.36	241	P	Pg	03 29 42.9	-2.8
KSCHC	Chuncheon	1.53	124	P	Pn	03 29 46.7	-1.5
	SNR=12						
SEHB	SEOHWA	1.64	103	P	Pn	03 29 49.7	-0.1
	SNR=9.4						

*IPEC **19** 03:33:02.3±0.3, 50°.20N×19°.22E, h1^{km}, ML3.2/3, Error ellipse: s-maj=2.6km s-min=1.9km az=170.0*
*KRSZO **19** 03:33:03.8±0.7, 50°.15N×19°.14E, h11^{km}, ML3.4/19, Error ellipse: s-maj=4.5km s-min=3.2km az=34.0*
*PRU **19** 03:33:03.6±0.0, 50°.14N×19°.09E, h0^{km}*
*LDG **19** 03:33:03.7±0.4, 50°.11N×19°.04E, h1^{km}, Ml3.7/3, Error ellipse: s-maj=12.7km s-min=5.1km az=15.0, Suspected Mining induced.*
*BGR **19** 03:33:04.4±0.7, 50°.14N×19°.12E, h1^{km}, ML3.4/9, Error ellipse: s-maj=8.9km s-min=8.9km az=61.0*
*IDC **19** 03:33:06.5±0.8, 50°.46N×18°.41E, h0^{km}, mb1 3.4/6, mb1mx3.2/64, mbtmp3.3/6, ML2.8/6, Error ellipse: s-maj=15.8km s-min=6.8km az=138.0*
ISC 19 03:33:01.9±0.7**, 50°.22N**±0°.03×**19°.08E**±0°.02**, h0**^{km}**, n109,**
σ2ˢ.00/159**, 8C-6D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAC	Raciborz	0.59	257	ePG	Pn	03 33 16.5	-1.0
RAC				eSG	Sb	03 33 24.8	+0.9
OKC	Ostrava-Krasne	0.71	238	ePG	Pg	03 33 15.8	+0.3
OKC				eSG	Sg	03 33 24.5	-0.3
	comp=Z,170nm,0.6s						
OKC	Ostrava-Krasne	0.71	238	ePg	Pb	03 33 17.8	+0.6
OKC				eSg	Sb	03 33 28.1	+0.6
MORC	Moravsky Berou	1.09	247	⇓P	Pn	03 33 25.0	+0.6
MORC				⇑S	Sn	03 33 40.3	+0.1
MORC	Moravsky Berou	1.09	247	ePg	Pn	03 33 24.3	-0.1
	baz=68						
MORC				eSg	Sb	03 33 38.8	+0.5
	396nm,0.6s,baz=68						
MORC	Moravsky Berou	1.09	247	ePg	Pn	03 33 24.4	0.0
MORC				eSg	Sn	03 33 40.4	+0.2
LANS	Liptovska Anna	1.10	167	Pg	Pg	03 33 23.0	+0.1
	comp=Z,4.1nm,SNR=233						
LANS	Liptovska Anna	1.10	167	ePG	Pg	03 33 22.9	0.0
LANS				eSG	Sg	03 33 36.7	-0.4
LANS				eLG	Lg	03 33 38.5	
NIE	Niedzica	1.12	135	ePg	Pb	03 33 23.9	-0.3
NIE				eSg	Sb	03 33 38.8	-0.6
NIE	Niedzica	1.12	135	Pg	Pg	03 33 23.7	+0.3
	comp=Z,0.4nm,SNR=18						
KRLC	Kraliky	1.49	265	ePG	Pb	03 33 30.5	+0.1
KRLC				eSG	Sn	03 33 51.3	+1.3
	comp=Z,220nm,0.6s						
STHS	Stebnicka Huta	1.61	119	Pg	Pg	03 33 38.2	+5.4
	comp=Z,1.8nm,SNR=18						
STHS	Stebnicka Huta	1.61	119	ePN	Pb	03 33 32.3	-0.3
STHS				eSN	Sg	03 33 53.8	+0.1
JAVC	Velka Javorina	1.64	215	ePn	Pb	03 33 32.8	-0.3
	baz=36						
VYHS	Vyhne	1.73	185	ePN	Pn	03 33 33.1	-0.2

VYHS				*e*SN	Sn	03 33 54.8	-1.3
VYHS				*e*LG	Lg	03 33 57.2	
DPC	Dobruska-Polom	1.77	275	*e*PG	Pg	03 33 36.0	+0.1
DPC				*e*SG	Sg	03 34 00.4	+1.5
	comp=Z,214nm,0.6s						
DPC	Dobruska-Polom	1.77	275	*e*Pn	Pg	03 33 35.9	0.0
DPC				*e*Pg	Pb	03 33 37.7	+2.3
DPC				*e*Sg	Sg	03 34 00.7	+1.8
VRAC	Vranov	1.85	241	⇑P	Pg	03 33 37.5	+0.2
VRAC				⇑S	Sg	03 34 01.8	+0.4
VRAC	Vranov	1.85	241	Pg	Pg	03 33 37.6	+0.2
	comp=Z,8.6nm,0.3s,baz=53,slow=15,SNR=54						
VRAC				Lg	Lg	03 33 59.5	
	comp=Z,6.4nm,0.3s,baz=327,slow=9.0,SNR=3.9						
VRAC	Vranov	1.85	241	*e*Pn	Pb	03 33 36.0	-0.6
	baz=61						
VRAC				*e*Sg	Sg	03 34 02.3	+0.9
	comp=Z,167nm,0.8s,baz=61						
OSTC	Ostas	1.86	282	*e*PG	Pb	03 33 36.8	0.0
OSTC				*e*SG	Sg	03 34 04.0	+2.2
	comp=Z,177nm,0.8s						
KSP	Ksiaz	1.89	290	*e*Pn	Pb	03 33 36.5	-0.7
KSP				*e*Pg	Pg	03 33 40.4	+2.3
KSP				*e*Sg	Sg	03 34 05.4	+3.0
KSP	Ksiaz	1.89	290	*e*Pn	Pb	03 33 36.9	-0.2
KSP				*e*Pg	Pg	03 33 40.5	+2.5
KSP				*e*Sg	Sg	03 34 05.8	+3.3
KSP	Ksiaz	1.89	290	Pb	Pg	03 33 39.9	+1.9
BEL	Belsk	1.94	33	Pg	Pg	03 33 50.1	+11
	comp=Z,0.6nm,SNR=3.7						
KECS	Kecovo	1.96	152	Pn	Pn	03 33 35.9	-0.6
	comp=Z,3.6nm,SNR=22						
KECS	Kecovo	1.96	152	*e*PN	Pn	03 33 35.7	-0.7
KECS				*e*SN	Sn	03 33 59.1	-2.7
CHVC	Chvalec	1.97	282	*e*PG	Pb	03 33 38.5	-0.2
CHVC				*e*SG	Sg	03 34 07.9	+2.7
	comp=Z,144nm,1.0s						
UPC	Upice	1.99	280	*e*PG	Pg	03 33 40.4	+0.5
UPC				*e*SG	Sg	03 34 07.4	+1.7
	comp=Z,107nm,0.7s						
CRVS	Cervenica-Dubn	2.04	129	Pn	Pn	03 33 37.6	+0.2
	comp=Z,0.1nm,SNR=5.8						
CRVS	Cervenica-Dubn	2.04	129	*e*PN	Pn	03 33 37.9	+0.5
KRUC	Moravsky	2.10	237	*e*Pn	Pn	03 33 39.1	+0.9
	baz=57						
KRUC				*e*Sg	Sg	03 34 09.8	+0.7
	comp=Z,99nm,0.6s,baz=57						
MODS	Modra-Piesok	2.19	213	*e*PN	Pn	03 33 38.8	-0.8
PSZ	Piszkesteto	2.36	167	⇓P	Pn	03 33 42.1	+0.1
PSZ				⇓S	Sn	03 34 09.3	-2.4
PSZ	Piszkesteto	2.36	167	*e*PN	Pn	03 33 41.8	-0.2
PSZ				*e*PG	Pb	03 33 46.1	+0.8
PSZ	Piszkesteto	2.36	167	Pn	Pn	03 33 41.8	-0.2
	comp=Z,0.3nm,SNR=6.7						
PSZ				Pg	Pb	03 33 46.1	+0.8
ZST	Bratislava	2.40	213	Pg	Pg	03 33 52.3	+4.4
	comp=Z,2.4nm,SNR=2.1						
ZST	Bratislava	2.40	213	*e*PG	Pg	03 33 48.9	+1.0
KWP	Kalwaria Pacla	2.42	103	Pn	Pn	03 33 43.0	+0.3
	comp=Z,2.9nm,SNR=1.8						
KOLS	Kolonicke sedl	2.44	121	Pg	Pg	03 33 48.0	-0.7
	comp=Z,75nm,SNR=8.2						
KOLS				Pb	Pb	03 33 50.1	+3.4
	comp=Z,75nm,SNR=8.1						
KOLS	Kolonicke sedl	2.44	121	*e*PG	Pg	03 33 48.4	-0.3
SRO	Srobarova	2.46	192	Pg	Pg	03 33 51.7	+2.7
	comp=Z,1.5nm,SNR=16						
SRO	Srobarova	2.46	192	*e*PG	Pg	03 33 51.9	+2.9
SRO2	Moca	2.50	191	*e*PG	Pg	03 33 54.4	+4.6
TREC	Trest	2.51	250	*e*PN	Pn	03 33 44.2	+0.3
TREC				*e*SG	Sg	03 34 22.6	+0.2
	comp=Z,58nm,0.6s						
BUD	Budapest	2.74	181	*e*PG	Pg	03 33 54.7	+0.4
BUD	Budapest	2.74	181	Pg	Pg	03 33 54.7	+0.4
	comp=Z,0.2nm,SNR=3.3						
BUD				Pb	Pb	03 33 55.7	+4.1
	comp=Z,0.2nm,SNR=3.2						
PVCC	Panska Ves	2.91	278	*e*PG	Pg	03 33 56.9	-0.6
PVCC				*e*SG	Sg	03 34 37.0	+1.8
	comp=Z,219nm,1.3s						
CSKK	Cskako	2.91	191	*e*PN	Pn	03 33 49.9	+0.5
CSKK	Cskako	2.91	191	*e*S	Sn	03 34 23.3	-1.8
CSKK	Cskako	2.91	191	Pn	Pn	03 33 49.9	+0.5
	comp=Z,0.1nm,SNR=14						
CSKK				Sn	Sn	03 34 23.3	-1.8
PRU	Pruhonice	2.93	267	*e*PN	Pn	03 33 50.6	+0.9
PRU				*e*SG	Sg	03 34 36.3	+0.3
	comp=Z,60nm,0.7s						
PRA	Prague	2.99	269	*e*PG	Pb	03 33 56.5	+0.5
PRA				*e*SG	Sg	03 34 39.7	+1.7
	comp=Z,65nm,0.7s						
EGYH	Egyhazaskeszo	3.03	203	*e*PG	Pg	03 34 01.4	+1.5
EGYH	Egyhazaskeszo	3.03	203	Pg	Pg	03 34 01.4	+1.5
	comp=Z,0.2nm,SNR=3.1						
EGYH				Pb	Pb	03 34 06.5	+10
SOP	Sopron	3.03	214	*e*PN	Pn	03 33 52.2	+1.1
SOP	Sopron	3.03	214	Pn	Pn	03 33 52.2	+1.1
	comp=Z,0.1nm,SNR=2.4						
TRPA	Tarpa	3.08	131	⇓P	Pn	03 33 53.2	+1.4
TRPA	Tarpa	3.08	131	*e*PN	Pn	03 33 51.5	-0.3
TRPA	Tarpa	3.08	131	Pg	Pn	03 33 51.5	-0.3
	comp=Z,0.1nm,SNR=2.5						
CONA	Conrad Observa	3.12	224	*i* Pn	Pn	03 33 53.0	+0.6
	comp=Z,1.1nm,0.4s						
CONA				*e*Sn	Sn	03 34 32.5	+2.1
	comp=Z,12nm,0.4s						
MPLH	Magyarpolny	3.22	199	*e*PN	Pn	03 33 54.1	+0.4
MPLH	Magyarpolny	3.22	199	Pn	Pn	03 33 54.1	+0.4
	comp=Z,0.1nm,SNR=2.2						
BRG	Berggiesshubel	3.34	283	*e*Pg	Pg	03 34 06.4	+0.5
BRG				*e*Sg	Sg	03 34 52.8	+3.6
BRG	Berggiesshubel	3.34	283	Pg	Pg	03 34 05.9	0.0
BRG				Sg	Sg	03 34 52.4	+3.2
BRG				Amp		03 34 58.1	
	comp=Z,43nm,0.5s						
CKRC	Cesky Krumlov	3.41	248	*e*PN	Pn	03 33 57.4	+1.1
CKRC				*e*PG	Pb	03 34 04.0	+0.8
CKRC				*e*SG	Sg	03 34 50.9	-0.5
TIH	Tihany	3.41	194	Pg	Pg	03 34 16.2	+8.9
FBE	Freiberg	3.72	283	*e*Pg	Pg	03 34 15.1	+2.0
FBE				*e*Sg	Sg	03 35 04.7	+3.4
KHC	Kasperske Hory	3.74	255	*e*PN	Pn	03 34 02.0	+1.2
KHC				*e*SG	Sg	03 35 02.5	+0.7
	comp=Z,65nm,0.6s						
GEC2	GERESS Array S	3.76	251	*e*Pn	Pn	03 34 03.4	+2.2
GEC2				*e*Pg	Pg	03 34 14.1	+0.1
GEC2				*e*Sg	Sg	03 35 00.6	-2.1
GERES	GERESS Array B	3.76	251	Pn	Pn	03 34 02.5	+1.2
	comp=Z,0.7nm,0.3s,baz=57,slow=14,SNR=12						
GERES				Pg	Pb	03 34 08.8	-0.4
	comp=Z,1.0nm,0.3s,baz=65,slow=15,SNR=12						
GERES				Lg	Lg	03 34 56.5	
	comp=Z,3.7nm,0.3s,baz=61,slow=32,SNR=5.5						
ARSA	Arzberg	3.79	220	*e*Pn	Pg	03 34 17.5	+3.0
	comp=Z,3.7nm,0.5s						
ARSA				*e*Sg	Sg	03 35 08.1	+4.5
	comp=Z,17nm,0.6s						
BMR	Baia Mare	3.87	130	⇑P	Pn	03 34 04.1	+1.6
MOA	Molln	3.96	235	*i* Pn	Pn	03 34 04.7	+0.8
	comp=Z,0.7nm,0.2s						
MOA				*i* Sg	Sg	03 35 07.5	-1.4
	comp=Z,23nm,0.5s						
CLL	Collm	4.01	288	*e*Pg	Pg	03 34 21.0	+2.3
CLL				*i* Sg	Sg	03 35 12.7	+2.1
	comp=Z,41nm,0.9s						
WET	Wettzell	4.17	257	*e*Pn	Pn	03 34 08.0	+1.2
WET				*e*Sg	Sg	03 35 15.5	-0.2
KOGS	Kog	4.22	208	Pg	Pg	03 34 35.3	+13
NKC	Novy Kostel	4.26	273	*e*SG	Sg	03 35 19.4	+0.8
	comp=Z,52nm,0.9s						
SIRR	Siria	4.31	155	⇓P	Pn	03 34 08.8	+0.1
SIRR	Siria	4.31	155	Pn	Pn	03 34 08.8	+0.1
	comp=Z,0.1nm,SNR=1.7						
CJR	Cluj-Napoca	4.62	138	⇓P	Pn	03 34 13.7	+0.7
BURAR	Bucovina Array	4.81	120	⇑P	Pn	03 34 16.0	+0.3
BZS	Buzias	4.91	159	⇑P	Pn	03 34 16.9	0.0
KBA	Koelnbreinsper	4.93	233	*e*Pn	Pn	03 34 19.4	+2.0
	comp=Z,1.1nm,0.4s						
KBA				*e*Sn	Sn	03 35 16.6	+1.4
	comp=Z,4.3nm,0.5s						
KBA				*e*Sg	Sg	03 35 41.1	+0.8
	comp=Z,11nm,0.7s						
FRGS	Fruska Gora	5.09	174	⇑P	Pn	03 34 19.8	+0.4
GZR	Gura Zlata	5.43	151	⇑P	Pn	03 34 24.8	+0.6
GZR	Gura Zlata	5.43	151	Pn	Pn	03 34 24.7	+0.6
	comp=Z,8.3nm,1.1s,SNR=2.1						
RETA	Reutte	6.13	247	*e*Sg	Sg	03 36 19.1	+0.3
	comp=Z,29nm,0.7s						
AKASG	Malin Array Be	6.50	82	Pn	Pn	03 34 44.5	+5.9
	comp=Z,0.6nm,0.3s,baz=266,slow=15,SNR=2.4						
AKASG				Sn	Sn	03 36 02.1	+8.7
	comp=Z,1.3nm,0.3s,baz=268,slow=24,SNR=2.0						
DAVA	Damuels	6.75	248	*e*Sg	Sg	03 36 41.4	+2.7
	comp=Z,28nm,0.9s						
DAVOX	Davos/Dischmat	7.01	244	Pn	Pn	03 34 47.2	+1.2
	comp=Z,0.7nm,0.3s,baz=45,slow=14,SNR=10						
DAVOX				Sn	Sn	03 36 05.8	-0.7
	comp=Z,0.3nm,0.3s,baz=129,slow=23,SNR=1.7						
DAVOX				Lg	Lg	03 36 45.6	
	comp=Z,0.4nm,0.3s,baz=319,slow=23,SNR=2.1						
CDF	Champ du Feu	7.92	261	*e*Pn	Pn	03 34 57.6	-0.8
CDF				*e*Sg	Sg	03 37 14.4	-1.8
HINF	Hinteralfeld	8.39	258	*e*Pn	Pn	03 35 02.6	-2.1
HINF				*e*Sg	Sg	03 37 23.5	-7.6
	comp=Z,12nm,0.8s						
HAU	Haudompre	8.64	260	*e*Pn	Pn	03 35 06.2	-2.0
HAU				*e*Sg	Sg	03 37 30.5	-8.7
	comp=Z,9.1nm,0.6s						
MEZF	Maizieres J'vi	9.32	265	*e*Pn	Pn	03 35 15.9	-1.5
CABF	La Chapelle	9.36	252	*e*Sg	Sg	03 37 51.6	
	comp=Z,35nm,1.3s						
SFTF	Sexfontaines	9.41	263	*e*Pn	Pn	03 35 17.5	-1.2
LPG	La Plagne	9.54	245	*e*Pn	Pn	03 35 19.5	-1.1
LPG	La Plagne	9.54	245	*e*P	Pn	03 35 23.8	+3.2
LPL	La Plagne	9.54	245	*e*Pn	Pn	03 35 18.5	-2.1
BAIF	Baives	9.56	275	*e*Pn	Pn	03 35 19.7	-0.9
MBDF	Montbardon	9.98	241	*e*Pn	Pn	03 35 25.9	-0.7
MBDF	Montbardon	9.98	241	*e*P	Pn	03 35 30.3	+3.7
PGF	Pioggiola	10.35	226	*e*Pn	Pn	03 35 31.1	-0.6
ORIF	Oris-en-Rattie	10.37	244	*e*Pn	Pn	03 35 29.1	-2.8
HFS	Hagfors	10.40	345	Pn	Pn	03 35 26.7	-5.5
	comp=Z,0.1nm,0.3s,baz=167,slow=15,SNR=1.8						
HFS				Sn	Sn	03 37 23.8	-5.5
	comp=Z,0.1nm,0.3s,baz=156,slow=22,SNR=2.0						
LOR	Lormes	10.48	259	*e*Pn	Pn	03 35 31.1	-2.2
FINES	FINESS Array B	11.91	16	Pn	Pn	03 35 50.3	-2.4
	comp=Z,0.2nm,0.3s,baz=210,slow=11,SNR=7.6						
FINES				Sn	Sn	03 37 55.6	-11
	comp=Z,0.1nm,0.3s,baz=210,slow=22,SNR=1.4						
ARCES	ARCESS Array B	19.62	7	Pn	P	03 37 31.6	0.0
	baz=190,slow=10,SNR=1.2						

ANF 19 03:33:44.6±0.9**, 43°.07N**×**126°.22W, h5^{km}, ML3.5**/6**, Error ellipse: s-maj=8.5km s-min=5.4km az=70.0, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
J01E	Myrtle Point	1.68	86	P	Pn	03 34 13.5	-1.1
	baz=268,SNR=43						
J01E				S	Sn	03 34 37.0	+0.4
	baz=268						
K02D	Willamette Mer	1.92	100	P	Pn	03 34 17.1	-0.9
	baz=282,SNR=181						
K02D				S	Sb	03 34 43.6	-0.7
	baz=282						
I02E	Swisshome, OR	2.01	58	P	Pn	03 34 18.0	-1.1
	baz=240,SNR=14						
I02E				S	Sn	03 34 45.1	+0.4
	baz=240						
L02E	Cave Junction	2.14	114	P	Pn	03 34 20.5	-0.5
	baz=296,SNR=67						
L02E				S	Sn	03 34 48.7	+0.8
	baz=296						
I03D	Drain, OR	2.19	72	P	Pn	03 34 20.7	-0.9
	baz=254,SNR=109						
I03D				S	Sn	03 34 50.0	+1.0
	baz=254						
I04A	Tendick Farm,	2.87	74	P	Pn	03 34 31.7	+0.7
	baz=257						
H04D	Lebanon	2.91	59	P	Pn	03 34 32.0	+0.4
	baz=241,SNR=17						
M02C	Callahan	3.01	123	P	Pn	03 34 33.1	+0.1
	baz=305,SNR=7.2						
J04D	Umpqua Nationa	3.02	85	P	Pn	03 34 34.6	+1.5
	baz=268,SNR=18						
L04D	Klamath Falls	3.02	105	P	Pn	03 34 35.0	+1.9
	baz=288,SNR=37						
G03D	McMinnville, O	3.02	44	P	Pn	03 34 32.6	-0.4
	baz=226,SNR=13						
G03D				S	Sn	03 35 10.7	+1.2
	baz=226						
J05D	Fort Rock, OR	3.66	85	P	Pn	03 34 42.8	+0.9
	baz=268,SNR=28						
I05D	Terrebonne, OR	3.76	69	P	Pn	03 34 43.7	+0.5
	baz=252,SNR=6.4						
F04D	Rainier, OR	3.78	36	P	Pn	03 34 43.3	-0.3
	baz=218						
G05D	Wamic, OR	4.14	57	P	Pn	03 34 49.0	+0.5
	baz=240						
E04D	Cinebar	4.35	35	P	Pn	03 34 51.6	+0.3
	baz=218,SNR=25						
F05D	White Salmon	4.42	49	P	Pn	03 34 52.8	+0.5
	baz=232,SNR=12						
D04E	Lakebay	4.78	30	P	Pn	03 34 56.8	-0.4
	baz=212						

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*ANF **19** 03:34:05.7±0.3, 36°.28N×97°.71W, h5^{km}, ML3.6/11, Error ellipse: s-maj=2.8km s-min=2.3km az=162.0*

*TUL **19** 03:34:05.5±0.9, 36°.28N±0°.01×97°.71W±0°.02, h6^{km}±7^{km}, ML3.0, mb_Lg3.0/62(NEIC), Error ellipse: s-maj=3.1km s-min=1.7km az=61.0*

*NEIC **19** 03:34:05.5±0.7, 36°.28N±0°.01×97°.71W±0°.01, h4^{km}±7^{km}, Error ellipse: s-maj=1.8km s-min=1.2km az=150.0*

*IDC **19** 03:34:05.6±2.8, 36°.19N×97°.62W, h0^{km}, mb3.3/1, mb1 3.4/2, mb1mx3.0/58, mbtmp3.0/2, ML3.4/1, MS2.9/1, Ms1 2.9/1, ms1mx2.3/18, Error ellipse: s-maj=37.5km s-min=18.5km az=91.0*

ISC 19 03:34:05.5±1.2**, 36°.28N**±0°.02×**97°.71W**±0°.02**, h3^{km}**±11^{km}**, n87, σ0^{s}.56**/78**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CROK	Carrier	0.32	315	Pg	Pg	03 34 11.9	+0.3
CROK				Sg	Sg	03 34 16.2	+0.4
OK029	Liberty Lake	0.52	157	Pg	Pg	03 34 15.6	+0.1
GC02	Grant County #	0.59	348	Pg	Pg	03 34 16.8	+0.1
GC02				Sg	Sg	03 34 25.1	+0.7
BLOK	Blackwell	0.62	39		Pg	03 34 17.0	-0.4
BCOK	Bluff Creek, N	0.62	173	Pg	Pg	03 34 17.4	0.0
OK032	Salt Plains WL	0.66	322		Pg	03 34 18.2	0.0
KAN14	Manchester OK	0.71	343		Pg	03 34 19.1	0.0
KAN14				Sg	Sg	03 34 28.5	+0.2
KAN13	South Haven SW	0.76	14		Pg	03 34 19.6	-0.4
KAN17	Caldwell West	0.77	356	Pg	Pg	03 34 19.7	-0.5
OK031	S. Brethren Rd	0.77	115		Pg	03 34 20.1	-0.2
OK031				Sg	Sg	03 34 30.5	+0.2
QUOK	Quay	0.81	97	Pg	Pg	03 34 21.1	+0.1
OK030	Cody Creek RV	0.82	115		Pg	03 34 21.1	-0.2
OK030				Sg	Sg	03 34 32.3	+0.3
KAN05	Bluff City Nor	0.84	351		Pg	03 34 21.2	-0.4
KAN05				Sg	Sg	03 34 33.4	+0.9
KAN09	Caldwell North	0.86	5		Pg	03 34 21.3	-0.7
KAN09				Sg	Sg	03 34 33.8	+0.7
KAN01	Argonia South	0.88	357	Pg	Pg	03 34 21.6	-0.7
OKCFA	Oklahoma City	0.89	166		Pg	03 34 22.5	+0.1
OKCFA	Oklahoma City	0.89	166	P	Pg	03 34 22.5	+0.1
	baz=348,SNR=22						
OKCFA				S	Sb	03 34 34.8	-0.9
	baz=348						
OKCSW	OKLAHOMA CITY	0.90	166	Pg	Pg	03 34 22.1	-0.6
KAN10	Anthony SW Sta	0.90	340		Pg	03 34 21.8	-1.0
KS20	Mayfield South	0.96	7		Pg	03 34 22.9	-1.0
KAN08	Anthony NE Sta	0.97	347		Pg	03 34 23.4	-0.7
KAN06	Argonia West S	0.98	353		Pg	03 34 23.2	-1.0
KAN16	Harper SW Stat	0.99	343	Pg	Pg	03 34 23.2	-1.2
KAN12	Harper NE Stat	1.04	347		Pg	03 34 24.5	-1.0
FNO	Franklin	1.05	166		Pg	03 34 25.3	-0.2
FNO				IAmb_Lg		03 34 38.5	
	comp=Z,90nm,1.0s						
U32A	Winter Ranch,	1.05	276	Pg	Pg	03 34 25.2	-0.5
U32A	Winter Ranch,	1.05	276	P	Pg	03 34 25.2	-0.5
	baz=94						
U32A				S	Sb	03 34 40.0	-0.6
	baz=94						
T35A	Sooner Cattle	1.15	56		Pg	03 34 27.2	-0.4
T35B	Sooner Cattle	1.15	56	P	Pg	03 34 27.2	-0.4
	baz=237						
T35B				S	Sg	03 34 42.9	+0.3
	baz=237						
TUL1	Leonard	1.59	103	Pn	Pn	03 34 34.2	-0.3
TUL1				IAmb_Lg		03 34 57.9	
	comp=Z,124nm,1.0s						
TUL1	Leonard	1.59	103	P	Pn	03 34 34.3	-0.3
	baz=284,SNR=85						
TUL1				S	Sn	03 34 55.9	+0.2
	baz=284						
X34A	Smith Ranch, M	1.68	184	Pn	Pn	03 34 35.3	-0.4
X34A				IAmb_Lg		03 35 00.4	
	comp=Z,132nm,1.1s						
WMOK	Wichita Mounta	1.77	210		Pn	03 34 36.8	-0.3
WMOK	Wichita Mounta	1.77	210	P	Pn	03 34 37.0	-0.1
	baz=30,SNR=118						
WMOK				S	Sb	03 35 00.9	-0.4
	baz=30						
R32A	Long Quarter,	2.29	340		Pn	03 34 43.6	-0.6
R32A	Long Quarter,	2.29	340	P	Pn	03 34 45.7	+1.5
	baz=159,SNR=7.1						
LOOK	Love County	2.32	169		Pn	03 34 44.4	-0.2
LOOK				IAmb_Lg		03 35 22.0	
	comp=Z,45nm,0.7s						
X37A	Clayton	2.54	131		Pn	03 34 47.5	-0.2
X37A				IAmb_Lg		03 35 28.0	
	comp=Z,61nm,0.9s						
X37A	Clayton	2.54	131	P	Pn	03 34 48.3	+0.6
	baz=313,SNR=27						
U38A	Gravette	2.68	86		Pn	03 34 49.4	-0.2
KSU1	Kansas State U	2.95	17	Pn	Pn	03 34 52.9	-0.4
KSU1	Kansas State U	2.95	17	P	Pn	03 34 53.6	+0.3
	baz=197						
CBKS	Cedar Bluff	3.00	328	Pn	Pn	03 34 54.0	-0.1
HHAR	Hobbs	3.04	89	Pn	Pn	03 34 54.5	-0.1
W39A	Magazine	3.37	108	Pn	Pn	03 34 58.9	-0.1
W39A	Magazine	3.37	108	P	Pn	03 34 59.3	+0.3
	baz=290						
AMTX	Amarillo	3.53	248	Pn	Pn	03 35 01.1	-0.2
AMTX				IAmb_Lg		03 36 02.5	
	comp=Z,31nm,0.8s						
Z38A	Mt. Pleasant	3.75	143		Pn	03 35 03.9	-0.4
S39A	Bolivar	3.78	67	Pn	Pn	03 35 04.5	-0.2
S39A				IAmb_Lg		03 36 04.4	
	comp=Z,27nm,0.9s						
S39A	Bolivar	3.78	67	P	Pn	03 35 05.0	+0.3
	baz=249,SNR=11						
MIAR	Mount Ida	3.79	116	Pn	Pn	03 35 04.8	0.0
MIAR	Mount Ida	3.79	116	P	Pn	03 35 05.7	+0.9
	baz=299,SNR=21						
U40A	Yellville	3.92	87	Pn	Pn	03 35 06.6	0.0
U40A				IAmb_Lg		03 36 13.0	
	comp=Z,55nm,0.8s						
ABTX	Abilene, Hawle	3.98	204	Pn	Pn	03 35 06.7	-0.8
ABTX				IAmb_Lg		03 36 13.8	
	comp=Z,28nm,0.8s						
WHTX	Lake Whitney,	4.28	177	Pn	Pn	03 35 11.4	-0.2
X40A	Basin Creek Fa	4.36	113	Pn	Pn	03 35 12.6	0.0
X40A				IAmb_Lg		03 36 28.8	
	comp=Z,26nm,0.8s						
MGMO	Mountain Grove	4.45	77	IAmb_Lg		03 36 27.5	
	comp=Z,26nm,0.8s						
WHAR	Wooly Hollow	4.51	101	Pn	Pn	03 35 14.1	-0.7
WHAR				IAmb_Lg		03 36 38.2	
	comp=Z,51nm,1.1s						
FCAR	Ozark Folk Cen	4.54	93	IAmb_Lg		03 36 40.3	
	comp=Z,18nm,0.9s						
237A	Washetta, Mont	4.55	159	IAmb_Lg		03 36 26.9	
	comp=Z,50nm,1.1s						
WLAR	White Oak Lake	4.57	123	Pn	Pn	03 35 14.9	-0.6
WLAR				IAmb_Lg		03 36 35.7	
	comp=Z,30nm,0.9s						
P38A	Dawn	4.70	43	Pn	Pn	03 35 16.9	-0.3
P38A				IAmb_Lg		03 36 40.7	
	comp=Z,18nm,0.8s						
MSTX	Muleshoe	4.75	242	Pn	Pn	03 35 17.6	-0.5
KSCO	Kaye Shedlock'	4.76	306	IAmb_Lg		03 36 47.2	
	comp=Z,30nm,0.8s						
R40A	Maddies Statio	4.78	64	Pn	Pn	03 35 18.4	0.0
R40A				IAmb_Lg		03 36 33.8	
	comp=Z,27nm,0.8s						
R40A	Maddies Statio	4.78	64	P	Pn	03 35 17.8	-0.6
	baz=247,SNR=6.8						
NATX	Nacogdoches	5.17	150	IAmb_Lg		03 37 00.2	
	comp=Z,15nm,0.8s						
LCAR	Lake Charles	5.30	90	IAmb_Lg		03 37 00.1	
	comp=Z,20nm,1.1s						
CCM	Cathedral Cave	5.46	69	IAmb_Lg		03 37 01.1	
	comp=Z,15nm,0.7s						
T25A	Trinidad	5.46	281	IAmb_Lg		03 37 01.4	
	comp=Z,22nm,0.8s						
435B	Jarrell	5.48	179	IAmb_Lg		03 37 08.8	
	comp=Z,24nm,0.9s						
N38A	Joes South For	5.71	36	IAmb_Lg		03 37 10.8	
	comp=Z,37nm,0.7s						
OGNE	Ogallala	5.76	325	IAmb_Lg		03 37 10.7	
	comp=Z,40nm,1.0s						
FVM	French Village	6.06	72	Pn	Pn	03 35 35.5	-0.5
143A	Socs Landing,	6.31	123	IAmb_Lg		03 37 28.2	
	comp=Z,22nm,0.8s						
SCIA	State Center	6.62	30	IAmb_Lg		03 37 47.7	
	comp=Z,36nm,0.7s						
S44A	Carbondale	6.91	76	IAmb_Lg		03 37 48.3	
	comp=Z,19nm,0.8s						
SIUC	Southern Illin	6.94	76	IAmb_Lg		03 37 42.3	
	comp=Z,25nm,1.1s						
ANMO	Albuquerque	7.25	262	Pg	Pb	03 36 17.5	+5.3
	comp=Z,0.1nm,0.3s,baz=84,slow=17,SNR=2.3						
ANMO				Lg	Lg	03 37 50.7	
	comp=Z,0.5nm,0.3s,baz=35,slow=6.7,SNR=2.7						
P43A	Skaggs, Pawnee	7.28	60	IAmb_Lg		03 38 08.8	
	comp=Z,22nm,0.7s						
Q44A	Meyer Farm, Va	7.38	67	IAmb_Lg		03 38 10.7	
	comp=Z,30nm,0.9s						
L40A	Anamosa	7.66	39	IAmb_Lg		03 38 14.5	
	comp=Z,21nm,0.8s						
TXAR	Lajitas Array	8.55	218	Pn	Pn	03 36 08.9	-1.4
	comp=Z,0.1nm,0.3s,baz=46,slow=11,SNR=9.2						
TXAR				Pg	Pg	03 36 32.5	-17
	comp=Z,0.2nm,0.3s,baz=36,slow=18,SNR=4.5						
TXAR				Lg	Lg	03 38 28.6	
	comp=Z,0.4nm,0.3s,baz=51,slow=32,SNR=2.6						
TXAR	Lajitas Array	8.55	218		Pn	03 36 09.9	-0.3
PDAR	Pinedale Array	11.21	309	Pg	Pg	03 37 30.1	
	comp=Z,0.1nm,0.3s,baz=120,slow=16,SNR=4.6						
PDAR				Lg	Lg	03 39 58.9	
	comp=Z,0.2nm,0.3s,baz=121,slow=32,SNR=6.9						
PDAR				LR	LR	03 41 54.5	
	comp=Z,66nm,21.0s,baz=286,slow=41						
TKL	Tuckaleechee C	11.31	89	Lg	Lg	03 39 55.0	
	comp=Z,0.3nm,0.3s,baz=313,slow=18,SNR=1.7						
ILAR	Eielson Array	40.66	330	P	P	03 41 47.7	+1.1
	comp=Z,0.4nm,0.9s,baz=120,slow=6.4,SNR=2.6						

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*NEIC **19** 03:39:22.8±1.6, 37°.07N±0°.04×141°.2E±0°.1, h48^{km}±8^{km}, mb4.3/4, Error ellipse: s-maj=12.6km s-min=1.5km az=112.0*

*IDC **19** 03:39:23.4±0.7, 37°.09N×141°.06E, h55^{km}±6^{km}, mb3.7/17, mb1 3.8/22, mb1mx3.7/52, mbtmp4.0/22, MS2.7/5, Ms1 2.7/5, ms1mx2.6/55, Error ellipse: s-maj=15.7km s-min=11.3km az=99.0*

*NIED **19** 03:39:23.6, 37°.11N×141°.11E, h53^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$5.62; M$_{\theta\theta}$-1.08; M$_{\phi\phi}$-4.54; M$_{r\theta}$4.09; M$_{\theta\phi}$-1.85; M$_{\phi r}$6.36; Fault plane solution: M$_0$9.33000×10^{14} NP1:φ$_s$31.00000°, δ72.00000°, λ94.00000°. NP2:φ$_s$197.00000°, δ18.00000°, λ77.00000°.*

*JMA **19** 03:39:23.5±0.1, 37°.11N×141°.11E, h53^{km}±1^{km}, M4.0 Broadband fault plane solution: P waves. NP1: φ$_s$210.00000°, δ13.00000°, λ94.00000°. NP2:φ$_s$26.00000°, δ77.00000°, λ89.00000°. Principal axes: T Plg58.0000°, Azm295.0000°; N Plg1.0000°, Azm26.0000°; P Plg32.0000°, Azm117.0000°;*

JMA Felt III J1.

ISC 19 03:39:22.8±0.6**, 37°.08N**±0°.04×**141°.17E**±0°.06**, h53^{km}**±5^{km}**, n69, σ0^{s}.90**/78**, mb4.2**/19**, 10D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.30	274	⇓P	Pn	03 39 32.5	+0.3

ONAJ				S	Sn	03 39 38.6	-0.4
JFK	Kawauchi	0.37	320	⇓P	Pn	03 39 33.0	+0.1
JFK				S	Sn	03 39 39.5	-0.6
JFFD	Fukushimafurud	0.49	271	⇓P	Pn	03 39 34.3	+0.2
JFFD				S	Sn	03 39 41.8	-0.5
JHO	Hitachi	0.68	226	⇓P	Pn	03 39 36.5	+0.2
JHO				S	Sn	03 39 45.6	-0.6
JFT	Otama	0.80	303	⇓P	Pn	03 39 38.6	+0.7
JFT				S	Sn	03 39 49.2	+0.2
JMM	Marumori	0.84	339	⇓P	Pn	03 39 38.5	+0.1
JMM				S	Sn	03 39 49.6	-0.3
JMM	Marumori	0.84	339		Pn	03 39 38.5	+0.1
JMM				Sn	Sn	03 39 49.4	-0.5
JYT	Yasato	1.16	223		Pn	03 39 42.7	0.0
JYT				Sn	Sn	03 39 56.3	-1.2
JFY	Yanaizu	1.22	286	P	Pn	03 39 43.7	+0.2
JOU	Okura	1.34	343	⇓P	Pn	03 39 45.4	+0.2
JIO	Ouri	1.38	6	⇓P	Pn	03 39 45.8	+0.2
JIO				*e*S	Sn	03 40 02.5	-0.3
JYS	Shirataka	1.44	323	⇓P	Pn	03 39 47.1	+0.6
JAG	Ashikaga	1.53	245	⇓P	Pn	03 39 48.0	+0.3
JAG				*e*S	Sn	03 40 06.6	+0.1
MJAR	Matsushiro Arr	2.44	258	P	Pn	03 40 00.6	+0.5
	2.6nm,0.3s,baz=83,slow=15,SNR=56						
MJAR				LR	LR	03 41 16.3	
	comp=Z,150nm,18.7s,baz=0.0,slow=48						
MJAR	Matsushiro Arr	2.44	258		Pn	03 40 00.8	+0.6
MAJO	Matsushiro	2.44	258	Pn	Pn	03 40 01.4	+1.2
MAT	Matsushiro	2.44	258	P	Pn	03 40 01.5	+1.3
MAT				*e*S	Sn	03 40 29.3	+0.4
MJB9	Matsu-Tunnel	2.44	258		Pn	03 39 59.4	-0.8
JSD	Sado	2.50	293	Pn	Pn	03 40 00.7	-0.3
JGF	Kuroka	3.42	246		Pn	03 40 15.9	+2.3
JTM	Tenmabayashi	3.70	359	Pn	Pn	03 40 19.1	+1.7
INU	Inuyama	3.78	244		Pn	03 40 19.0	+0.4
JHJ	Hachijo jima 2	4.12	196	P	Pn	03 40 24.9	+1.7
	38nm,0.3s,baz=260,slow=23,SNR=1.5						
JHJ				S	Sn	03 41 09.8	-0.2
	76nm,0.3s,baz=44,slow=21,SNR=2.0						
JWT	Wachi	5.00	251		Pn	03 40 37.1	+1.8
ERM	Erimo	5.16	17	Pn	Pn	03 40 37.9	+0.5
ASAJ	Asahikawa	7.11	8	P	Pn	03 41 03.9	-0.3
	1.7nm,0.3s,baz=240,slow=9.4,SNR=8.5						
ASAJ				S	Sn	03 42 20.1	-3.4
	baz=130,slow=33,SNR=1.5						
ASAJ				LR	LR	03 44 01.4	
	comp=Z,53nm,18.3s,baz=339,slow=39						
JKA	Kamikawa-asahi	7.11	8		Pn	03 41 04.0	-0.1
USRK	Ussuriysk Ar.	9.96	318	P	Pn	03 41 43.0	-0.1
	baz=134,slow=13,SNR=1.9						
USRK				LR	LR	03 45 10.7	
	comp=Z,71nm,19.8s,baz=154,slow=35						
USRK	Ussuriysk Ar.	9.96	318		Pn	03 41 43.4	+0.3
JCJ	Chichijima	9.99	175	P	Pn	03 41 41.2	-2.5
	6.1nm,0.3s,baz=355,slow=21,SNR=6.5						
JCJ				S	Sn	03 43 25.3	-9.1
	7.5nm,0.3s,baz=292,slow=19,SNR=1.9						
JCJ	Chichijima	9.99	175	Pn	Pn	03 41 42.5	-1.3
KSRS	Korea Array	10.57	276	P	Pn	03 41 52.4	+0.9
	0.2nm,0.3s,baz=82,slow=14,SNR=1.9						
KSRS				LR	LR	03 45 40.0	
	comp=Z,54nm,18.6s,baz=96,slow=36						
KLR	Kul'dur	13.94	334	LR	LR	03 46 43.5	
	comp=Z,23nm,20.8s,baz=15,slow=32						
SONM	Songino Array	27.60	304	P	P	03 45 03.6	-1.6
	1.3nm,0.5s,baz=96,slow=8.4,SNR=9.2						
SONM	Songino Array	27.60	304	P	P	03 45 04.3	-0.8
H11N2	WAKE ISLAND Hy	28.34	121	T	T	04 15 14.8	
	baz=314,slow=75,SNR=173						
H11N1	WAKE ISLAND Hy	28.34	121	T	T	04 15 17.9	
	baz=314,slow=75,SNR=180						
H11N3	WAKE ISLAND Hy	28.36	121	T	T	04 15 22.7	
	baz=314,slow=75,SNR=152						
H11S1	WAKE ISLAND Hy	29.05	123	T	T	04 16 11.0	
	baz=315,slow=75,SNR=118						
H11S3	WAKE ISLAND Hy	29.05	123	T	T	04 16 11.1	
	baz=315,slow=75,SNR=102						
H11S2	WAKE ISLAND Hy	29.06	123	T	T	04 15 59.2	
	baz=315,slow=75,SNR=79						
CMAR	Chiang Mai Arr	41.32	255	PcP	PcP	03 49 01.6	+0.4
	1.5nm,0.3s,baz=36,slow=3.4,SNR=5.8						
ZAA0	Zalesovo Array	41.74	312	P	P	03 47 06.6	+0.1
ZAA0				IAmb	IAmb	03 47 07.7	
	comp=Z,4.1nm,0.6s						
ZALV	Zalesovo Beam	41.74	312	P	P	03 47 06.8	+0.4
	comp=Z,3.7nm,0.5s,baz=92,slow=7.1,SNR=15						
ZALV				PcP	PcP	03 49 01.7	-0.2
	comp=Z,0.6nm,0.5s,baz=96,slow=1.4,SNR=2.3						
MKAR	Makanchi Array	43.93	302	P	P	03 47 24.4	+0.1
	comp=Z,1.2nm,0.6s,baz=83,slow=10,SNR=12						
MKAR	Makanchi Array	43.93	302	P	P	03 47 24.9	+0.6
KURK	Kurchatov	45.75	308	P	P	03 47 38.6	-0.1
KURK				IAmb	IAmb	03 47 40.2	
	comp=Z,2.7nm,0.6s						
KURBB	Kurchatov Arra	45.82	308	P	P	03 47 39.4	+0.1
	comp=Z,2.0nm,0.4s,baz=81,slow=7.7,SNR=14						
ILAR	Eielson Array	49.56	32	P	P	03 48 09.0	+1.0
	comp=Z,0.6nm,0.7s,baz=266,slow=5.9,SNR=7.9						
BVAR	Borovoye Array	50.40	312	P	P	03 48 14.7	+0.1
	comp=Z,1.3nm,0.5s,baz=346,slow=41,SNR=3.3						
INK	Inuvik	54.43	27	P	P	03 48 44.9	+0.8
	comp=Z,0.6nm,0.5s,baz=289,slow=4.2,SNR=4.4						
ARU	Arti	56.20	318	P	P	03 48 56.8	-0.3
	comp=Z,1.6nm,0.4s,baz=46,slow=5.0,SNR=5.3						
WRA	Warramunga Arr	57.08	188	P	P	03 49 03.4	-0.3
	comp=Z,0.6nm,0.6s,baz=4.3,slow=7.1,SNR=9.6						
WRA				PcP	PcP	03 49 58.7	+0.6
	comp=Z,0.4nm,0.5s,baz=0.4,slow=4.7,SNR=1.9						
ABKAR	Akbulak array	57.76	310	P	P	03 49 08.1	-0.2
AKTO	Aktyubinsk	58.50	312	P	P	03 49 13.2	-0.2
	comp=Z,0.9nm,0.4s,baz=74,slow=16,SNR=3.8						
ARCES	ARCESS Array B	63.88	339	P	P	03 49 49.9	+0.4
	comp=Z,1.8nm,0.8s,baz=65,slow=8.6,SNR=7.5						
ARCES				pP	pP	03 50 02.9	-1.2
	comp=Z,5.4nm,1.1s,baz=53,slow=8.0,SNR=1.7						
FINES	FINESS Array B	68.68	332	P	P	03 50 19.4	-0.9
	comp=Z,1.0nm,0.4s,baz=38,slow=9.3,SNR=11						
FINES				pP	pP	03 50 36.5	+1.5
	comp=Z,2.2nm,0.7s,baz=36,slow=7.1,SNR=2.6						
NB2	NORSAR Subarra	74.07	337	P	P	03 50 53.0	+0.1
	comp=Z,0.3nm,0.4s,baz=42,slow=6.2						
NOA	NORSAR Array B	74.07	337	P	P	03 50 52.7	-0.1
	comp=Z,0.6nm,0.6s,baz=101,slow=15,SNR=3.9						
AKASG	Malin Array Be	74.14	322	P	P	03 50 53.0	-0.4
	comp=Z,1.2nm,0.3s,baz=47,slow=5.8,SNR=12						
PDAR	Pinedale Array	77.77	45	P	P	03 51 14.9	+0.3
	comp=Z,0.7nm,1.1s,baz=284,slow=4.5,SNR=1.9						
PDAR				pP	pP	03 51 30.6	+1.2
	comp=Z,0.2nm,0.3s,baz=48,slow=1.3,SNR=2.6						
GERES	GERESS Array B	82.57	328	P	P	03 51 39.6	-0.4
	comp=Z,0.6nm,0.5s,baz=43,slow=7.3,SNR=4.8						
TXAR	Lajitas Array	90.24	52	P	P	03 52 18.6	+0.5
	comp=Z,0.2nm,0.6s,baz=316,slow=3.8,SNR=2.3						
TXAR				pP	pP	03 52 35.0	+1.7
	comp=Z,0.2nm,0.6s,baz=327,slow=4.8,SNR=3.2						
TORD	Torodi Ar. Bea	117.16	315	PKP	PKPdf	03 58 02.4	-0.1
	comp=Z,0.2nm,0.7s,baz=9.8,slow=3.3,SNR=1.7						
TORD	Torodi Ar. Bea	117.16	315	PKPdf	PKPdf	03 58 02.0	-0.5
LPAZ	La Paz	146.83	59	PKPbc	PKPab	03 59 01.7	0.0
	comp=Z,1.6nm,0.6s,baz=320,slow=25,SNR=5.6						
H03N2	Juan Fernandez	147.22	96	T	T	06 43 57.5	
	baz=291,slow=76,SNR=70						
H03N3	Juan Fernandez	147.23	96	T	T	06 43 59.7	
	baz=291,slow=76,SNR=106						
H03N1	Juan Fernandez	147.24	96	T	T	06 43 59.9	
	baz=291,slow=76,SNR=79						

IDC 19 03:44:02.0±1.8**,0°.88N×127°.08E,h0^{km},mb3.6**/4**,**
mb1 3.9/4**,mb1mx3.3**/44**,mbtmp3.7**/4**,Error ellipse:**
s-maj=161.6km s-min=22.4km az=67.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.88	161	P	P	03 48 57.3	+0.6
	1.9nm,0.6s,baz=340,slow=11,SNR=21						
ASAR	Alice Springs	25.28	165	P	P	03 49 29.9	-0.4
	1.0nm,0.6s,baz=346,slow=9.0,SNR=14						
MKAR	Makanchi Array	60.09	326	P	P	03 54 11.1	-0.1
	0.2nm,0.5s,baz=115,slow=6.5,SNR=1.4						
KURBB	Kurchatov Arra	64.32	328	P	P	03 54 39.6	+0.1
	0.8nm,0.9s,baz=126,slow=6.0,SNR=4.3						

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*NOU **19** 03:47:29.6,32°.64S×176°.56W,h20^{km},mb5.3/48,South of Kermadec Islands*

*NEIC **19** 03:47:31.8±1.2,32°.53S±0°.05×176°.7W±0°.2,h40^{km}±7^{km}, mb5.1/27,Error ellipse: s-maj=20.1km s-min=7.2km az=100.0*

*GCMT **19** 03:47:41.8±0.4,32°.39S±0°.03×177°.58W±0°.04,h28^{km}±1^{km}, MW5.0/65,Moment Tensor Solution. s34,c36; s65,c82; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.71±.23; $M_{\theta\theta}$-0.24±.14; $M_{\phi\phi}$-2.47±.15; $M_{r\theta}$0.40±.24; $M_{\theta\phi}$-0.59±.11; $M_{\phi r}$2.79±.23; Best double couple: $M_0$3.87800×10^{16} NP1:ϕ_s198.00000°,δ22.00000°,λ97.00000°. NP2: ϕ_s10.00000°,δ68.00000°,λ87.00000°. Principal axes: T 3.9310, Plg67.0000°, Azm275.0000°; N -0.1030, Plg3.0000°, Azm11.0000°; P -3.8250, Plg23.0000°, Azm102.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **19** 03:47:41.4±2.2,32°.18S×178°.23W,h34^{km}±15^{km},mb4.5/15, mb1 4.6/19,mb1mx4.6/26,mbtmp4.7/19,ML5.2/3,MS4.5/19, Ms1 4.5/19,ms1mx4.3/33 Error ellipse: s-maj=14.6km s-min=14.0km az=137.0*

ISC 19 03:47:37.9±0.3**,32°.39S**±0°.04×**178°.03W**±0°.06**,h20^{km},**
n296,σ**2^{s}.13**/282**,mb5.1**/53**,MS4.3**/19**,13C-3D,South of**
Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.12	2	P	Pn	03 48 23.0	-3.0
RAO	Raoul Island	3.13	2	Pn	Pn	03 48 23.9	-2.2
	280nm,0.3s,baz=109,slow=9.5,SNR=11						
RAO				Sn	Sn	03 48 58.6	-4.2
	319nm,0.3s,baz=291,slow=23,SNR=4.8						
RAO	Raoul Island	3.13	2		Pn	03 48 23.2	-2.9
RAO	Raoul Island	3.13	2	P	Pn	03 48 23.5	-2.6
RIZ	Raoul Island	3.14	2	P	Pn	03 48 23.7	-2.5
RIZ				S	Sn	03 49 00.5	-2.5
MXZ	Matakaoa Point	5.97	209	P	Pn	03 49 02.6	-2.6
MXZ				S	Sn	03 50 11.5	-1.4
MXZ	Matakaoa Point	5.97	209		Pn	03 49 04.2	-1.0
WMGZ	Waiomatatini S	6.15	207	P	Pn	03 49 06.1	-1.5
WMGZ				S	Sn	03 50 17.4	0.0
PKGZ	Pakihiroa	6.35	209	P	Pn	03 49 08.8	-1.6
HAZ	Te Kaha	6.36	212	P	Pn	03 49 09.2	-1.3
URZ	Urewera	7.08	213	Pn	Pn	03 49 18.8	-1.5
	6.0nm,0.3s,baz=122,slow=24,SNR=42						
URZ				Sn	Sn	03 50 38.1	-2.0
	61nm,0.3s,baz=205,slow=22,SNR=9.9						
URZ	Urewera	7.08	213		Pn	03 49 18.2	-2.1
URZ	Urewera	7.08	213	P	Pn	03 49 19.4	-0.9
OUZ	Omahuta	7.52	246		Pn	03 49 31.3	+4.8
OUZ	Omahuta	7.52	246	P	Pn	03 49 31.1	+4.7
KWHZ	Kaweka Forest	8.34	211	P	Pn	03 49 35.6	-2.1
KWHZ				S	Sn	03 51 09.5	-1.8
ETVZ	East Tongariro	8.44	215	P	Pn	03 49 38.5	-0.6
ETVZ				S	Sn	03 51 10.6	-3.2
KRVZ	Karewarewa	8.44	216	S	Sn	03 51 12.2	-1.7
KRHZ	Kereru	8.54	211	P	Pn	03 49 37.2	-3.3
KRHZ				S	Sn	03 51 12.6	-3.6
MOVZ	Moawhango	8.63	214	P	Pn	03 49 39.7	-2.0
MOVZ				S	Sn	03 51 13.3	-5.2
WNVZ	Wahianoa	8.64	215	P	Pn	03 49 39.9	-2.0
WNVZ				S	Sn	03 51 14.9	-4.0
BFZ	Birch Farm	9.47	207	Pn	Pn	03 49 49.9	-3.2
QRZ	Quartz Range	11.33	219	P	Pn	03 50 19.5	+0.9
CTZ	Chatham Island	11.38	175	P	Pn	03 50 16.1	-3.2
CTZ				S	Sn	03 52 12.4	-13
THZ	Tophouse	11.82	215	P	Pn	03 50 25.8	+0.4
THZ				S	Sn	03 52 28.4	-8.4
KHZ	Kahutara	12.04	211	P	Pn	03 50 26.9	-1.4
NFK	Norfolk Island	12.53	282	P	P	03 50 43.9	-2.7
INZ	Inchbonnie	13.26	216	P	Pn	03 50 43.3	-1.7
INZ				S	Sn	03 52 59.4	-12
WVZ	Waitaha Valley	13.87	217	P	Pn	03 50 52.0	-1.3
WVZ				S	Sn	03 53 12.8	-14
GCSZ	Gaunt Creek Bo	14.25	217	P	Pn	03 50 57.9	-0.7
GCSZ				S	Sn	03 53 20.8	-15
ARCZ	Arundel	14.31	213	P	Pn	03 50 55.9	-3.5
ARCZ				S	Sn	03 53 22.1	-15
FOZ	Fox Glacier	14.67	217	P	Pn	03 51 01.9	-2.3
FOZ				S	Sn	03 53 30.2	-16
TMZ	Timaru	14.72	212	P	Pn	03 50 59.9	-5.1
TMZ				S	Sn	03 53 31.5	-16
MSVF	Nonsavu	15.02	345	Pn	Pn	03 51 07.2	-1.9
	0.7nm,0.3s,baz=148,slow=14,SNR=9.3						
MSVF				LR	LR	03 55 59.6	
	comp=Z,1μm,18.3s,baz=173,slow=34						
MSVF	Nonsavu	15.02	345		Pn	03 51 06.2	-2.9
MSVF	Nonsavu	15.02	345	P	Pn	03 51 09.2	+0.1
LBZ	Lake Benmore	15.11	214	P	P	03 51 12.9	-2.4
LBZ				S	Sn	03 53 40.9	-16
NIUE	Niue	15.12	31	Pn	Pn	03 50 54.7	-16
ODZ	Otahua Downs	15.40	212	P	Pn	03 51 10.4	-3.6
ODZ				S	Sn	03 53 48.7	-15
JCZ	Jackson Bay	15.58	218	P	Pn	03 51 12.1	-4.3
JCZ				S	Sn	03 53 53.8	-15
PINNC	Pines Island,	16.14	304	P	P	03 51 30.7	+3.9
EAZ	Earnscleugh	16.16	214	P	P	03 51 27.6	+0.8
MSZ	Milford Sound	16.44	218	P	P	03 51 29.6	-0.4
MARNC	Mare, Loyalty	16.49	308		P	03 51 32.0	+1.3
MARNC	Mare, Loyalty	16.49	308	P	P	03 51 35.3	+4.6
	2.2nm,1.2s						
OUENC	Ouen Island, N	16.69	303		P	03 51 34.9	+1.9
OUENC				IAmb	IAmb	03 51 39.0	
	comp=Z,152nm,1.0s						
OUENC	Ouen Island, N	16.69	303	P	P	03 51 38.1	+5.2
MLZ	Mavora Lakes	16.83	216	P	Pn	03 51 33.4	+1.1
YATNC	Mamie plateau,	16.89	304	P	P	03 51 39.1	+4.0
ONTNC	Ouen Toro	17.04	302	P	P	03 51 39.5	+2.8
ONTNC				IAmb	IAmb	03 51 43.7	
	comp=Z,109nm,0.9s						
ONTNC	Ouen Toro	17.04	302	P	P	03 51 40.7	+4.0
DZM	Mont Dzumac	17.20	303	Pn	P	03 51 40.3	+1.7
	comp=Z,2.3nm,0.3s,baz=136,slow=16,SNR=19						
DZM				LR	LR	03 57 13.6	
	comp=Z,3μm,18.6s,baz=128,slow=34						
DZM	Mont Dzumac	17.20	303	*e*P	P	03 51 41.6	+3.0
	comp=Z,159nm,1.1s						
DZM				*e*LR	LR	03 56 01.6	
	comp=Z,2μm,22.4s						
DZM	Mont Dzumac	17.20	303	P	P	03 51 41.0	+2.3
DZM	Mont Dzumac	17.20	303	P	P	03 51 42.3	+3.7
SYZ	Scrubby Hill	17.22	211	P	Pn	03 51 36.8	-0.3
NOUC	Port Laguerre	17.28	302	P	P	03 51 44.3	+4.9
WHZ	Wether Hill Ro	17.29	215	P	Pn	03 51 37.6	-0.4
LIFNC	LIFOU	17.51	308	P	P	03 51 44.2	+2.2
LIFNC				IAmb	IAmb	03 51 47.5	
	comp=Z,100nm,0.8s						
APZ	The Paps	17.96	213	P	Pn	03 51 46.0	-0.4
AFI	Afiamalu	19.26	19	P	P	03 52 01.3	-0.1
	comp=Z,4.6nm,0.3s,baz=147,slow=5.9,SNR=5.4						
RAR	Rarotonga	19.70	60	P	P	03 52 06.6	+0.6
	comp=Z,0.6nm,0.3s,baz=278,slow=4.0,SNR=5.0						
RAR				LR	LR	04 00 10.3	
	comp=Z,1μm,18.3s,baz=238,slow=38						
KOUNC	Koumac, New Ca	19.71	302	P	Pn	03 52 12.1	+4.4
SANVU	Saraoutou	21.56	318	P	P	03 52 26.9	+0.6
SANVU				IAmb	IAmb	03 52 37.5	
	comp=Z,45nm,0.7s						
MGCD	Mangrove Creek	25.91	260	P	P	03 53 10.4	+1.7
	baz=27,SNR=5.7						
MGCD	Mangrove Creek	25.91	260	P	P	03 53 13.7	+5.0
ARMA	Armidale	25.94	266	P	P	03 53 12.6	+3.5
	baz=27,SNR=6.2						
ARMA	Armidale	25.94	266	P	P	03 53 10.8	+1.7
ARMA				IAmb	IAmb	03 53 17.1	
	comp=Z,29nm,1.0s						
ARMA	Armidale	25.94	266	P	P	03 53 14.2	+5.1
TBI	Tubuai	26.75	78	*e*LR	LR	03 59 53.7	
	comp=Z,799nm,21.5s						
CNB	Canberra Magne	27.17	255	P	P	03 53 22.5	+2.3
	baz=28,SNR=10						
MCQ	Macquarie Isla	27.47	210	P	P	03 53 13.8	-8.7
	baz=28,SNR=3.7						
EIDS	Eidsvold	27.88	277	P	P	03 53 28.7	+2.3
	baz=29,SNR=5.3						
EIDS	Eidsvold	27.88	277	P	P	03 53 27.6	+1.2
EIDS				IAmb	IAmb	03 53 44.7	
	comp=Z,31nm,0.9s						
EIDS	Eidsvold	27.88	277	P	P	03 53 28.7	+2.3
	comp=Z,35nm,0.9s						
YNG	Young	28.05	257	P	P	03 53 29.9	+2.0
	baz=29,SNR=4.7						
RK1H	Rockhampton Ha	29.15	280	P	P	03 53 41.2	+3.4
	comp=Z,34nm,0.9s						
RMQ	Roma	29.44	273	P	P	03 53 43.0	+2.6
	baz=31,SNR=4.7						
RMQ	Roma	29.44	273	P	P	03 53 43.8	+3.4
	comp=Z,44nm,1.0s						
PAE	Paea	29.54	67	*e*T	T	04 24 00.0	
	comp=Z,2.8nm,0.3s						
PPT2	Papeete2	29.58	67	*e*S	S	03 58 29.6	-6.4
	comp=Z,75nm,22.8s						
PPT2				*e*LR	LR	04 01 21.7	
	comp=Z,591nm,20.5s						
PPT2	Papeete2	29.58	67	*e*T	T	04 24 04.9	
	comp=Z,7.3nm,0.3s						
PPT	Papeete	29.59	67	LR	LR	04 04 37.5	
	comp=Z,926nm,18.3s,baz=244,slow=34						
HNR	Honiara	30.61	313	LR	LR	04 05 07.0	
	comp=Z,792nm,18.6s,baz=172,slow=34						
CMSA	Cobar Meteorol	30.70	262	P	P	03 53 53.7	+2.3
	baz=32,SNR=58						
CMSA	Cobar Meteorol	30.70	262	P	P	03 53 53.8	+2.3
	comp=Z,98nm,0.9s						
BRAT	Ballarat	31.45	250	P	P	03 54 01.2	+3.2
	comp=Z,11nm,1.0s						
VAH	Vaihoa	32.47	65	*e*T	T	04 27 41.0	
	comp=Z,7.3nm,0.3s						
ARPS	Mount Arapiles	33.16	251	P	P	03 54 14.6	+1.6
	baz=34,SNR=7.8						
ARPS	Mount Arapiles	33.16	251	P	P	03 54 14.9	+1.9
	comp=Z,83nm,0.8s						
QLP	Quilpie	33.24	270	P	P	03 54 15.7	+1.9
	baz=35,SNR=5.8						
QLP	Quilpie	33.24	270	P	P	03 54 15.9	+2.1
	comp=Z,57nm,1.2s						
STKA	Stephens Creek	34.06	260	P	P	03 54 21.2	+0.3
	comp=Z,8.0nm,0.8s,baz=99,slow=10,SNR=20						
STKA				LR	LR	04 08 06.5	
	comp=Z,2μm,18.0s,baz=83,slow=36						
STKA	Stephens Creek	34.06	260	P	P	03 54 22.9	+2.0
	baz=35,SNR=13						
STKA	Stephens Creek	34.06	260	P	P	03 54 21.8	+0.9
STKA	Stephens Creek	34.06	260	P	P	03 54 23.0	+2.1
	comp=Z,2.8nm,1.2s						
CTA	Charters Tower	34.14	282	P	P	03 54 24.7	+2.9
	comp=Z,59nm,1.1s						
CTAO	Charters Tower	34.14	282	P	P	03 54 22.9	+1.1
CTAO	Charters Tower	34.14	282	P	P	03 54 24.5	+2.7
INKA	Innaminka	35.82	266	P	P	03 54 38.9	+2.8
	comp=Z,120nm,1.0s						
HTT	Hallett	35.97	256	P	P	03 54 38.5	+1.0
	baz=37,SNR=9.3						
HTT	Hallett	35.97	256	P	P	03 54 38.8	+1.4
	comp=Z,16nm,1.0s						
MTSU	Mount Surprise	36.69	284	P	P	03 54 46.2	+2.5
	baz=38,SNR=8.1						
MTSU	Mount Surprise	36.69	284	P	P	03 54 46.0	+2.3
	comp=Z,44nm,0.9s						
WHYH	Whyalla	37.15	257	P	P	03 54 48.6	+1.2
	comp=Z,46nm,0.6s						
LCRK	Leigh Creek	37.20	261	P	P	03 54 49.0	+1.1
	comp=Z,446nm,0.7s						
BBOO	Buckleboo	38.45	257	P	P	03 54 58.4	-0.1
	baz=40,SNR=14						
BBOO	Buckleboo	38.45	257	P	P	03 54 58.3	-0.1
BBOO				IAmb	IAmb	03 54 59.6	
	comp=Z,40nm,1.1s						
BBOO	Buckleboo	38.45	257	P	P	03 54 58.9	+0.5
	comp=Z,37nm,1.2s						
PMG	Port Moresby	39.47	298	LR	LR	04 09 52.2	
	comp=Z,351nm,18.5s,baz=130,slow=34						
QIS	Mount Isa	39.48	277	P	P	03 55 08.5	+1.3
	baz=41,SNR=9.6						
QIS	Mount Isa	39.48	277	P	P	03 55 08.5	+1.3
	comp=Z,25nm,1.3s						
COEN	Coen	39.83	288	P	P	03 55 11.8	+1.6
	baz=41						
COEN	Coen	39.83	288	P	P	03 55 09.2	-1.0
COEN				IAmb	IAmb	03 55 20.9	
	comp=Z,22nm,0.8s						
COEN	Coen	39.83	288	P	P	03 55 12.6	+2.4
	comp=Z,31nm,1.8s						
OOD	Oodnadatta	40.07	264	P	P	03 55 13.5	+1.5
	comp=Z,142nm,0.9s						
MULG	Mulgathing	40.71	260	P	P	03 55 17.6	+0.3
	comp=Z,107nm,0.8s						
TAOE	Nuku Hiva Isla	42.14	65	*e*LR	LR	04 07 10.2	
	comp=Z,437nm,23.7s						
AS31	Alice Springs	43.02	269	P	P	03 55 36.3	0.0
AS31				IAmb	IAmb	03 55 38.8	
	comp=Z,11nm,0.7s						
ASAR	Alice Springs	43.02	269	P	P	03 55 36.7	+0.4
	comp=Z,27nm,0.6s,baz=106,slow=7.5,SNR=201						
ASAR				S	S	04 01 58.8	-2.2
	comp=Z,2.0nm,1.0s,baz=120,slow=15,SNR=5.4						
ASAR	Alice Springs	43.02	269	P	P	03 55 35.7	-0.6
ASPA	Alice Springs	43.02	269	P	P	03 55 36.9	+0.6
	baz=44						
WR0	Warramunga Arr	44.01	274	P	P	03 55 44.4	+0.2
WB2	Warramunga Arr	44.17	274	P	P	03 55 45.2	-0.5
WB2				IAmb	IAmb	03 55 59.4	
	comp=Z,41nm,0.8s						
WRAB	Tennant Creek	44.18	274	P	P	03 55 44.8	-0.8
WRAB				IAmb	IAmb	03 56 02.3	
	comp=Z,37nm,0.8s						
WRAB	Tennant Creek	44.18	274	P	P	03 55 45.8	+0.1
WRA	Warramunga Arr	44.19	274	P	P	03 55 45.9	+0.1
	comp=Z,26nm,0.5s,baz=114,slow=7.7,SNR=466						
WRA				ScP	ScP	04 01 20.3	-0.9
	comp=Z,1.4nm,1.0s,baz=118,slow=4.1,SNR=3.8						
WRA				S	S	04 02 14.5	-3.6
	comp=Z,1.1nm,0.9s,baz=110,slow=15,SNR=4.3						
WRA	Warramunga Arr	44.19	274	P	P	03 55 45.4	-0.3
WB0	Warramunga Arr	44.22	274	P	P	03 55 46.0	+0.1
FORT	Forrest	45.55	257	P	P	03 55 56.2	-0.2
	baz=47,SNR=59						
FORT	Forrest	45.55	257	P	P	03 55 55.9	-0.5
FORT	Forrest	45.55	257	P	P	03 55 56.3	-0.1
	comp=Z,265nm,0.7s						
VNDA	Vanda	46.12	186	P	P	03 56 03.0	+2.7
	comp=Z,3.0nm,1.0s,baz=0.5,slow=11,SNR=3.0						
VNDA				LR	LR	04 11 59.6	
	comp=Z,376nm,19.8s,baz=15,slow=32						
WRKA	Warakurna	47.24	265	P	P	03 56 09.2	-0.6
	baz=49,SNR=40						
WRKA	Warakurna	47.24	265	P	P	03 56 09.2	-0.6
	comp=Z,86nm,0.9s						
JAY	Jayapura	48.81	299	LR	LR	04 17 16.6	
	comp=Z,188nm,18.2s,baz=181,slow=37						
KDU	Kakadu	49.27	282	P	P	03 56 25.2	-0.3
	baz=51,SNR=12						
KDU	Kakadu	49.27	282	P	P	03 56 25.4	-0.1
MTN	Manton Dam	50.30	281	P	P	03 56 33.2	-0.1
	baz=52,SNR=6.8						
MTN	Manton Dam	50.30	281	P	P	03 56 32.7	-0.6
MTN				IAmb	IAmb	03 56 49.9	
	comp=Z,25nm,0.7s						
MTN	Manton Dam	50.30	281	P	P	03 56 33.4	0.0
DRS	Darwin Rock St	50.71	281	P	P	03 56 36.5	+0.1
KNRA	Kununurra	50.86	276	P	P	03 56 37.9	+0.3
	baz=52,SNR=3.4						
KNRA	Kununurra	50.86	276	P	P	03 56 37.0	-0.6
KNRA				IAmb	IAmb	03 56 38.9	
	comp=Z,34nm,0.9s						
KNRA	Kununurra	50.86	276	P	P	03 56 38.1	+0.5
FITZ	Fitzroy Crossi	52.36	271	LR	LR	04 19 23.3	
	comp=Z,1μm,18.1s,baz=126,slow=36						
FITZ	Fitzroy Crossi	52.36	271	P	P	03 56 48.5	-0.3
	baz=54						
KLBR	Kellerberrin	53.71	252	P	P	03 56 57.8	-0.8
	baz=55,SNR=13						
KLBR	Kellerberrin	53.71	252	P	P	03 56 58.9	+0.3
MEEK	Meekatharra	54.74	258	P	P	03 57 05.7	-0.6
	baz=56,SNR=3.4						
PSA00	Pilbara Seismi	55.73	265	P	P	03 57 11.6	-1.9
MORW	Morawa	55.96	255	P	P	03 57 14.1	-0.9
	baz=57,SNR=3.1						
MORW	Morawa	55.96	255	P	P	03 57 13.9	-1.1
MORW				IAmb	IAmb	03 57 28.8	
	comp=Z,11nm,0.8s						
SOEI	Soe	57.64	279	P	P	03 57 29.6	+2.4
	comp=Z,47nm,0.9s						
SOEI	Soe	57.64	279	P	P	03 57 24.8	-2.3
SOEI	Soe	57.64	279	P	P	03 57 29.6	+2.4
	comp=Z,47nm,0.9s						
QSPA	South Pole Qui	57.73	180	P	P	03 57 30.1	+3.0
	comp=Z,6.2nm,0.8s,baz=0.6,slow=1.3,SNR=19						
QSPA				LR	LR	04 20 24.2	

	comp=Z,454nm,18.4s,baz=42,slow=34						
BATI	Baumata	57.90	279	P	P	03 57 35.8	+6.9
MMRI	Maumere	59.92	279	P	P	03 57 44.3	+1.3
EDFI	Ende, Flores	60.32	279	P	P	03 57 45.9	+0.1
	comp=Z,8.5nm,1.0s						
SANI	Sanana	60.53	288	P	P	03 57 47.2	+0.1
	comp=Z,15nm,1.4s						
SANI	Sanana	60.53	288	P	P	03 57 47.2	+0.1
	comp=Z,14nm,0.8s						
PLAI	Plampang	63.56	276	P	P	03 58 07.9	+0.4
	comp=Z,40nm,0.9s						
PLAI	Plampang	63.56	276	P	P	03 58 07.9	+0.4
	comp=Z,41nm,0.9s						
KAPI	Kappang	63.95	281	P	P	03 58 06.3	-3.7
KAPI				IAmb	IAmb	03 58 23.7	
	comp=Z,12nm,1.1s						
TWSI	Taliwang, Sumb	64.36	276	P	P	03 58 13.1	+0.4
	comp=Z,23nm,0.8s						
GTOI	Gorontalo	64.51	288	P	P	03 58 15.9	+2.2
	comp=Z,7.6nm,0.7s						
GMJI	Gumukmas	67.50	274	P	P	03 58 33.4	+0.5
	comp=Z,32nm,1.0s						
MAW	Mawson	70.44	201	P	P	03 58 51.3	+1.0
	comp=Z,8.7nm,0.8s,baz=91,slow=4.4,SNR=3.9						
MAW				LR	LR	04 28 05.6	
	comp=Z,536nm,20.7s,baz=98,slow=34						
LEM	Lembang	73.17	273	LR	LR	04 29 51.5	
	comp=Z,157nm,19.8s,baz=148,slow=35						
SBUM	Sibu	74.34	283	P	P	03 59 10.8	-3.7
SYO	Syowa Base	75.18	193	⇑eP	P	03 59 09.4	-9.0
SYO	Syowa Base	75.18	193	⇑epP	P	03 59 19.8	+1.4
SYO	Syowa Base	75.18	193	⇑ePcP	P	03 59 23.8	+5.4
SNAA	Sanae	76.17	178	P	P	03 59 25.8	+1.6
SNAA	Sanae	76.17	178	PcP	PcP	03 59 36.6	+0.4
VNA3	Neumayer Olymp	76.33	176	P	P	03 59 26.4	+1.4
VNA3	Neumayer Olymp	76.33	176	PcP	PcP	03 59 37.5	+0.7
VNA2	Neumayer--Watz	76.76	177	P	P	03 59 29.2	+1.7
	baz=173,slow=4.8						
VNA2	Neumayer--Watz	76.76	177	PcP	PcP	03 59 40.3	+1.6
VNA1	Neumayer--Stat	76.99	177	P	P	03 59 30.4	+1.7
VNA1	Neumayer--Stat	76.99	177	PcP	PcP	03 59 41.7	+2.1
MDSI	Maura Dua	77.31	273	P	P	03 59 30.3	-1.2
H03S2	Juan Fernandez	79.39	123	T	T	05 28 37.6	
	baz=236						
H03S1	Juan Fernandez	79.40	123	T	T	05 28 54.7	
	baz=236						
H03S3	Juan Fernandez	79.41	123	T	T	05 28 44.8	
	baz=236						
MJAR	Matsushiro Arr	79.86	326	P	P	03 59 44.7	-0.3
	comp=Z,6.4nm,1.1s,baz=165,slow=4.6,SNR=4.6						
PLCA	Paso Flores	81.17	133	P	P	03 59 54.8	+2.5
	comp=Z,2.4nm,0.9s,baz=270,slow=3.4,SNR=4.7						
PLCA				LR	LR	04 29 08.4	
	comp=Z,277nm,18.6s,baz=226,slow=30						
KSRS	Korea Array	85.85	320	P	P	04 00 15.8	-0.1
	comp=Z,2.8nm,0.8s,baz=139,slow=5.7,SNR=7.9						
VES	Vestal, Richgr	87.49	44	pP	P	04 00 25.9	+1.9
	baz=225						
NJ2	Nanjing	87.52	311	eP	P	04 00 21.6	-2.7
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
ISA	Isabella, Lake	87.72	45	pP	P	04 00 27.6	+2.3
	baz=226						
PETK	Petropavlovsk-	87.73	346	P	P	04 00 25.6	+0.8
	comp=Z,18nm,1.0s,baz=116,slow=6.8,SNR=7.2						
LRMC	Laurel Mtn Rad	88.07	45	pP	P	04 00 29.5	+2.4
	baz=226						
O02D	Mt. Diablo Mer	88.45	39	pP	pP	04 00 31.5	-1.9
	baz=223						
HEC	Hector,Ludlow	88.45	46	pP	P	04 00 31.1	+2.3
	baz=227						
GSC	Goldstone, Bar	88.48	46	pP	P	04 00 31.1	+2.1
	baz=227						
MPMC	Manual Prospec	88.58	45	pP	pP	04 00 32.4	-1.9
	baz=226						
IRM	Iron Mountain	88.75	48	pP	pP	04 00 33.2	-1.8
	baz=228						
USRK	Ussuriysk Ar.	88.80	327	P	P	04 00 30.4	+0.3
	comp=Z,4.8nm,0.9s,baz=120,slow=3.8,SNR=8.7						
USRK				LR	LR	04 36 12.4	
	comp=Z,102nm,19.9s,baz=144,slow=33						
GMRC	Granite Mounta	88.84	47	pP	P	04 00 33.3	+2.6
	baz=227						
TUQ	Turquoise Moun	89.11	46	pP	P	04 00 33.8	+1.9
	baz=227						
NVAR	Mina Array Bea	89.71	43	P	P	04 00 36.3	+1.5
	comp=Z,3.5nm,0.9s,baz=221,slow=7.3,SNR=12						
CN2	Changchun	91.71	323	eP	P	04 00 44.4	+0.7
CN2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
TXAR	Lajitas Array	93.48	57	P	P	04 00 52.4	+0.1
	comp=Z,1.0nm,1.1s,baz=258,slow=4.6,SNR=3.9						
TXAR				LR	LR	04 37 52.9	
	comp=Z,276nm,18.1s,baz=0.0,slow=32						
CMAR	Chiang Mai Arr	94.03	289	PP	PP	04 04 39.6	-2.0
	comp=Z,2.2nm,0.3s,baz=133,slow=6.6,SNR=6.7						
XAN	Xi'an	95.29	307	P	P	04 00 58.4	-2.1
XAN				pP	sP	04 01 09.3	+2.2
XAN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
LPAZ	La Paz	97.35	114	LR	LR	04 40 55.4	
	comp=Z,91nm,18.2s,baz=4.5,slow=33						
PDAR	Pinedale Array	97.59	44	P	P	04 01 11.1	+0.2
	comp=Z,0.2nm,0.7s,baz=230,slow=2.2,SNR=1.9						
SEY	Seymchan	97.90	347	P	Pdif	04 01 13.1	+1.5
	comp=Z,2.9nm,0.7s						
CPUP	Villa Florida	98.77	129	LR	LR	04 43 27.1	
	comp=Z,202nm,18.2s,baz=229,slow=34						
ILAR	Eielson Array	99.86	13	PKKP	PKKPdf	04 17 48.8	+1.3
	comp=Z,0.2nm,0.5s,baz=20,slow=2.9,SNR=5.0						
ILAR				LR	LR	04 46 33.1	
	comp=Z,96nm,18.2s,baz=217,slow=35						
WMQ	Urumqi	114.43	308	ePKP	PKPdf	04 06 08.8	-7.4
BOSA	Boshof	115.42	203	PKP	PKPdf	04 06 21.1	+2.3
	comp=Z,3.2nm,1.1s,baz=282,slow=3.3,SNR=2.4						
MKAR	Makanchi Array	119.02	309	PKP	PKPdf	04 06 24.5	-0.4
	comp=Z,2.9nm,0.9s,baz=46,slow=3.5,SNR=7.2						
ZALV	Zalesovo Beam	119.49	318	PKP	PKiKP	04 06 26.2	+0.6
	comp=Z,0.6nm,0.4s,baz=147,slow=3.0,SNR=3.7						
KSH	Kashi	121.22	300	PKP	PKPdf	04 06 23.1	-6.4
KURBB	Kurchatov Arra	122.43	313	PKP	PKiKP	04 06 31.7	+0.2
	comp=Z,5.3nm,0.9s,baz=105,slow=2.0,SNR=23						
AAK	Ala-Archa	123.18	303	PKP	PKiKP	04 06 34.1	+0.7
	comp=Z,1.8nm,0.6s,baz=216,slow=4.3,SNR=7.0						
BVAR	Borovoye Array	127.80	315	PKP	PKiKP	04 06 42.0	-0.1
	comp=Z,4.0nm,0.8s,baz=208,slow=8.4,SNR=14						
KMBO	Kilima Mbogo	132.85	232	PKP	PKiKP	04 06 54.3	+0.5
	comp=Z,1.0nm,0.3s,baz=221,slow=19,SNR=2.1						
KMBO				SKPbc	SKPbc	04 10 17.8	-1.3
	comp=Z,0.9nm,0.3s,baz=112,slow=3.3,SNR=1.6						
SPITS	Spitsbergen Ar	133.68	356	PKP	PKPdf	04 06 52.4	+0.3
	comp=Z,3.9nm,0.7s,baz=351,slow=8.0,SNR=1.5						
GEYT	Alibeck	134.35	293	PKP	PKPdf	04 06 54.2	-0.3
	comp=Z,0.9nm,0.3s,baz=90,slow=5.8,SNR=2.2						
HOPEN	Hopen	134.51	353	epPKPdf	pPKPdf	04 06 57.7	-0.8
ARU	Arti	134.60	319	PKP	PKPdf	04 06 53.1	-1.2
	comp=Z,0.8nm,0.3s,baz=184,slow=2.8,SNR=4.6						
ARU				SKPab	SKPab	04 10 25.0	-1.5
	comp=Z,0.9nm,0.3s,baz=148,slow=7.5,SNR=5.4						
AKTO	Aktyubinsk	135.40	311	PKP	PKPdf	04 06 55.4	-0.5
	comp=Z,4.4nm,0.8s,baz=135,slow=1.2,SNR=10						
AKTO				SKPab	SKPab	04 10 29.0	-1.3
	comp=Z,3.0nm,0.8s,baz=100,slow=5.9,SNR=5.0						
ARA0	ARCESS Array S	140.52	347	epPKPdf	pPKPdf	04 07 09.4	-0.5
ARCES	ARCESS Array B	140.52	347	PKP	PKPdf	04 07 04.3	-0.5
	comp=Z,2.3nm,0.7s,baz=45,slow=2.1,SNR=7.3						
BELG	Belogornoye	141.60	315	PKP	PKPdf	04 07 08.0	+0.8
	comp=Z,16nm,0.9s,baz=97,slow=3.0,SNR=5.0						
KLMR	Klimovskoe	142.49	331	ePKPdf	PKPdf	04 07 03.5	-5.0
KLMR				AMP		04 07 15.0	
	comp=Z,15nm,1.2s						
KLMR				eSKKSac	SKKSac	04 16 48.2	-20
KLMR				eSKKSac	SKKSac	04 16 48.2	-20
LOF	Lofoten	143.59	353	epPKPdf	PKiKP	04 07 13.0	-0.6
FAUS	Fauske	144.10	351	epPKPdf	PKiKP	04 07 15.2	+0.4
GNI	Garni	144.93	295	PKP	PKPbc	04 07 13.3	+0.3
	comp=Z,4.0nm,0.6s,baz=188,slow=8.6,SNR=4.5						
KONS	Konsvik	145.21	352	epPKPbc	PKiKP	04 07 16.9	-0.1
MOR8	Moi Rana	145.36	351	ePKPdf	PKPbc	04 07 04.4	-9.0
AKH	Akhalkalaki	145.87	297	⇑P	PKPab	04 07 17.2	+0.7
KBZ	Khabaz	146.16	301	PKPbc	PKPbc	04 07 16.9	+0.4
	comp=Z,14nm,1.0s,baz=109,slow=1.8,SNR=20						
KIV	Kislovodsk	146.29	302	⇓P	PKiKP	04 07 24.8	+4.7
OBN	Obninsk	146.77	323	⇑P	PKPab	04 07 19.3	+0.2
OBN	Obninsk	146.77	323	PKPbc	PKPbc	04 07 18.4	+0.6
	comp=Z,8.4nm,0.5s,baz=95,slow=4.4,SNR=15						
CHVG	Ch'k'valeri	146.85	300	⇓P	PKPab	04 07 19.6	-0.4
FINES	FINESS Array B	147.00	339	PKPbc	PKPbc	04 07 18.9	+0.5
	comp=Z,44nm,0.7s,baz=64,slow=4.4,SNR=77						
NSS	Namsos	147.24	352	epPKPdf	PKPbc	04 07 19.8	+0.8
BCA	Borcka	147.28	297	⇓P	PKPbc	04 07 20.6	+0.8
KTUT	Trabzon	148.70	297	⇑P	PKiKP	04 07 25.1	+0.1
VSU	Vasula	149.02	335	eP	PKiKP	04 07 24.8	-0.3
AAL	Aland	149.75	342	eP	PKiKP	04 07 27.3	+0.8
MTSE	Matsula	149.84	337	eP	PKiKP	04 07 26.5	-0.3
UPP	Uppsala	150.62	344	eP	PKiKP	04 07 28.9	+0.6
NB2	NORSAR Subarra	150.71	351	PKP	PKPbc	04 07 27.9	0.0
	comp=Z,2.5nm,0.5s,baz=17,slow=2.6						
NOA	NORSAR Array B	150.71	351	PKPbc	PKiKP	04 07 28.5	-0.1
	comp=Z,4.2nm,0.6s,baz=14,slow=4.1,SNR=18						
GAZ	Gaziantep	150.78	289		PKiKP	04 07 29.6	0.0
NC602	NORSAR Array S	150.96	350	ePKPab	PKiKP	04 07 29.0	0.0
HFS	Hagfors	151.18	348	PKPbc	PKPbc	04 07 29.2	+0.1
	comp=Z,68nm,1.3s,baz=70,slow=4.9,SNR=24						
SKAR	Skarslia	151.40	353	ePKPab	PKiKP	04 07 30.6	+0.5
NACGM	Naroch	151.49	329	i PKP	PKiKP	04 07 30.6	+0.3
BNN	Bunyan	151.83	293		PKiKP	04 07 32.5	+0.7
PABE	Paberze	152.22	333	eP	PKiKP	04 07 32.3	+0.5
PABE	Paberze	152.22	333		PKiKP	04 07 32.7	+0.9
KONO	Kongsberg	152.26	352	ePKPab	PKiKP	04 07 32.9	+1.1
PBUR	Paburge	152.58	335	eP	PKiKP	04 07 34.8	+2.2
AKASG	Malin Array Be	152.84	320	PKPbc	PKiKP	04 07 33.9	+0.6
	comp=Z,6.9nm,0.8s,baz=60,slow=2.3,SNR=19						
LIC	Lamto	153.16	164	ePKP2	PKiKP	04 07 35.4	+0.3
	comp=Z,40nm,1.2s						
KIC	Kosan Boka	153.35	165	ePKP2	PKiKP	04 07 36.6	+1.1
	comp=Z,15nm,0.7s						
BRTR	Keskin Array B	153.47	295	PKPbc	PKPbc	04 07 35.1	+0.1
	comp=Z,7.6nm,0.9s,baz=131,slow=3.6,SNR=16						
BRTR				PKPab	PKPab	04 07 46.8	-0.6
	comp=Z,5.8nm,0.9s,baz=82,slow=4.3,SNR=7.7						
TIC	Toumodi	153.57	164	ePKP2	PKiKP	04 07 36.6	+0.7
SUW	Suwalki	153.62	331	eP	PKiKP	04 07 37.1	+2.4
DBIC	Dimbokro	153.63	165	PKPbc	PKiKP	04 07 37.5	+1.5
	comp=Z,2.1nm,0.6s,baz=123,slow=0.8,SNR=3.2						
MILM	Milestii Mici	154.91	313	⇑P	PKiKP	04 07 39.8	+2.2
TESR	Tescani	156.42	314	⇑P	PKPab	04 08 01.2	+1.6
VRI	Vrincioaia	156.67	312	⇑P	PKPab	04 08 03.2	+2.5
BURAR	Bucovina Array	156.71	318	⇑P	PKPab	04 07 54.8	-6.1
PLOR	Plostina	156.72	312	⇑P	PKPab	04 08 02.2	+1.2
DOPR	Dopca	157.45	314	⇑P	PKPab	04 08 05.6	+1.6
VOIR		157.91	313	⇑P	PKPab	04 08 08.7	+2.6
CRVS	Cervenica-Dubn	157.95	324	ePKP	PKPab	04 08 06.6	+0.5
LANS	Liptovska Anna	158.74	327	ePKP	PKPab	04 08 10.8	+1.3
CHVC	Chvalec	159.04	334	ePKP	PKPab	04 08 02.8	-7.9
UPC	Upice	159.13	334	ePKP	PKPab	04 08 12.0	+0.9
DPC	Dobruska-Polom	159.14	334	ePKP	PKPab	04 08 11.9	+0.7
KRLC	Kraliky	159.18	332	ePKP	PKPab	04 08 12.3	+0.9
CLL	Collm	159.43	340	ePKPdf	PKPdf	04 07 28.0	-6.5
CLL				i pPKPab	PKPab	04 08 12.2	-0.1
	comp=Z,20nm,1.3s						
CLL				e		04 08 23.0	
VYHS	Vyhne	159.50	327	ePKP	PKPab	04 08 13.7	+0.9
BRG	Berggiesshubel	159.53	338	ePKP	PKPab	04 08 13.6	+0.8
BRG				Amp		04 08 14.9	
	comp=Z,8.0nm,0.9s						
BRG	Berggiesshubel	159.53	338	P	PKPab	04 08 25.6	+13
BRG				Amp		04 08 26.6	
	comp=Z,5.0nm,0.9s						
BRG	Berggiesshubel	159.53	338	P	PKPab	04 08 33.8	+21
BRG				Amp		04 08 35.6	
	comp=Z,11nm,1.1s						
VRAC	Vranov	159.86	331	PKPab	PKPab	04 08 15.1	+0.8
	comp=Z,1.9nm,0.5s,baz=348,slow=17,SNR=4.1						
MODS	Modra-Piesok	160.29	329	ePKP	PKPab	04 08 16.4	+0.2
TORD	Torodi Ar. Bea	160.84	179	PKP	PKPdf	04 07 39.3	+2.1
	comp=Z,0.9nm,1.0s,baz=45,slow=0.7,SNR=4.3						
TORD				PKPab	PKPab	04 08 20.9	+1.6
	comp=Z,2.3nm,0.7s,baz=186,slow=2.8,SNR=14						
TORD				PP	PP	04 12 03.4	+2.7
	comp=Z,1.4nm,1.2s,baz=193,slow=2.0,SNR=3.6						
CKRC	Cesky Krumlov	161.15	334	ePKP	PKPab	04 08 20.9	+1.0
CONA	Conrad Observa	161.25	330	eP	PKPab	04 08 21.2	+0.7
	comp=Z,8.6nm,0.8s						
GERES	GERESS Array B	161.34	335	PKPab	PKPab	04 08 21.0	+0.1
	comp=Z,2.4nm,0.8s,baz=32,slow=5.8,SNR=9.0						
ARSA	Arzberg	161.91	329	eP	PKPab	04 08 23.5	+0.1
	comp=Z,2.4nm,0.7s						
MOA	Molln	161.96	332	eP	PKPab	04 08 24.6	+1.1
	comp=Z,3.3nm,0.8s						
DAVOX	Davos/Dischmat	164.40	339	PKPab	PKPab	04 08 34.3	-0.2
	comp=Z,5.9nm,1.0s,baz=51,slow=3.8,SNR=7.3						
ESDC	Sonseca Array	171.29	32	PKPab	PKPab	04 09 05.0	+0.1
	comp=Z,1.6nm,1.2s,baz=343,slow=4.0,SNR=2.7						

MOS **19** *04:15:49.8±1.0, 27°.78N×85°.59E, h10^{km}, mb5.2/58, Error ellipse: s-maj=7.3km s-min=3.3km az=127.2*

DMN **19** *04:15:50.7±0.1, 27°.89N×85°.75E, h10^{km}, Ml5.4/2, Error ellipse: s-maj=3.8km s-min=1.4km az=9.0*

IDC **19** *04:15:50.5±0.5, 27°.76N×85°.64E, h0^{km}, mb4.5/27, mb1 4.6/30, mb1mx4.6/41, mbtmp4.5/30, ML4.5/3, MS3.7/17, Ms1 3.7/17, ms1mx3.5/46, Error ellipse: s-maj=13.4km s-min=11.2km az=47.0*

BJI **19** *04:15:51.5±0.0, 28°.02N×85°.87E, h3^{km}, mB4.9/31, mb4.6/53, Ms4.3/38, Ms7 4.0/34*

NEIC **19** *04:15:52.6±1.6, 27°.85N±0°.07×85°.68E±0°.05, h17^{km}±3^{km}, mb5.0/115, Error ellipse: s-maj=10.8km s-min=6.6km az=165.0*

BGR **19** *04:15:52.3±0.0, 27°.18N×85°.31E, h13^{km}, mb5.2, Ms4.1*

NDI **19** *04:15:53.0±1.8, 27°.68N×85°.60E, h10^{km}, mb4.9, ML4.6, mb5.0(NEIC)*

ISC 19 04:15:51.8±0.4, **27°.80N**±0°.03×**85°.69E**±0°.02, **h10**^{km}±2^{km}, **h10**^{km}**:pP-P, n622, σ1**^{s}**42**/657, **mb5.0**/167, **MS3.8**/24, **65C-27D, Nepal**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
GUN	Gumba	0.21	56	ePg	Pg	04 15 53.8	-2.5
PKI	Pulchoki	0.33	228	ePg	Pb	04 15 59.6	-0.4
PKI				eSg	Sb	04 16 05.2	-0.3
PKIN	Phulchoki	0.34	230	ePg	Pb	04 15 59.7	-0.3
KKN	Kakani	0.36	269	ePg	Pb	04 15 59.5	-0.9
KKN				eSg	Sb	04 16 05.1	-1.1
JIRN	Jiri	0.47	107	ePg	Pg	04 15 59.7	-1.3
DMN	Daman	0.55	250	ePg	Pb	04 16 03.4	-0.2
DMN				eSg	Sb	04 16 12.5	+0.9
GKN	Gorkha	0.95	283	ePg	Pg	04 16 09.8	-0.4
GKN				eSg	Sb	04 16 22.7	-0.5
	10µm,0.3s						
RAMN	Ramite	1.17	136	ePg	Pb	04 16 13.0	-1.2
ODAN	Odare	1.78	121	ePg	Pb	04 16 24.4	-0.2
ODAN				eSg	Sn	04 16 46.5	+1.0
DANN	Dangsing	1.79	288	ePg	Pb	04 16 24.8	0.0
DANN				eSg	Sg	04 16 48.9	-0.5
	5µm,0.3s						
KOLN	Koldanda	1.85	270	ePg	Pg	04 16 26.2	-1.1
KOLN				eSg	Sg	04 16 51.7	+0.4
TAPN	Taplejung	1.85	103	ePg	Pb	04 16 25.3	-0.6
TAPN				eSg	Sb	04 16 49.8	+0.6
PYUN	Piuthan	2.41	278	ePg	Pn	04 16 33.0	+1.6
PYUN	Piuthan	2.41	278	ePg	Pb	04 16 35.9	+0.6
PYUN				eSg	Sg	04 17 07.6	-1.5
GTK	Tadong	2.63	100	eP	Pn	04 16 36.8	+2.4
GTK				eS	Sb	04 17 10.0	-1.5
GTK				IAML		04 17 13.2	
	comp=N,5µm,0.7s						
PTH	Pithoragarh	5.12	291	ePN	Pn	04 17 09.9	+1.3
LSA	Lhasa	5.16	67	Pg	Pn	04 17 13.4	+3.9
LSA	Lhasa	5.16	67	P	Pn	04 17 10.1	+0.6
LSA	Lhasa	5.16	67	Pn	Pn	04 17 10.1	+0.6
SHL	Shillong	5.97	110	P	Pn	04 17 20.6	+0.2
SHL	Shillong	5.97	110	eP	Pn	04 17 20.7	+0.2
SHL	Shillong	5.97	110	P	Pn	04 17 20.5	+0.2
	SNR=63						
SHL	Shillong	5.97	110	Pn	Pn	04 17 20.6	+0.2
NDI	New Delhi	7.52	279	eP	Pn	04 17 42.1	+0.6
IMP	Imphal	7.98	110	eP	Pn	04 17 49.5	+1.6
IMP				IAmb	IAmb	04 17 52.6	
	comp=Z,111nm,0.8s						
MOKO	MOKOCHONG	8.01	99	eP	Pn	04 17 48.0	-0.3
SMLA	Simla	8.14	296	eP	Pn	04 17 50.6	+0.7
BHPL	Bhopal	8.73	241	eP	Pn	04 17 56.7	-1.5
DHRM	DHARAMSHALA	9.27	301	eP	Pn	04 18 05.9	+0.2
AJM	Ajmer	9.93	265	eP	Pn	04 18 14.0	-0.5
AJM				ex	x	04 20 00.4	
CHCP	Chirah Chowk	12.18	302	P	Pn	04 18 43.8	-1.5
NIL	Nilore	12.18	302	P	Pn	04 18 43.3	-2.1
NIL	Nilore	12.18	302	Pn	Pn	04 18 43.3	-2.1
HYB	Hyderabad	12.25	214	i P	Pn	04 18 44.0	-2.3
HYB				eS	Sn	04 21 07.0	+4.0
HYB	Hyderabad	12.25	214	eP	Pn	04 18 44.7	-1.6
HYB				IAmb	IAmb	04 18 46.5	
	comp=Z,15nm,0.7s						
THW	Thamme Wali	13.04	296	P	Pn	04 18 53.8	-3.3
KSH	Kashi	14.20	328	P	Pn	04 19 08.8	-4.3
KSH				sP	P	04 19 15.5	-5.1
KSH				pmax	pmax		
	comp=Z,35nm,0.8s						
KSH				pmax	pmax		
	comp=Z,230nm,5.5s						
KSH				LR	LR		
	comp=Z,630nm,14.4s						
KSH				LR	LR		
	comp=Z,2µm,13.6s						
KSH				LR	LR		
	comp=Z,990nm,10.6s						
POO	Poona	14.26	232	ex	x	04 19 10.0	
	comp=Z,20nm,1.0s						
POO				eP	Pn	04 19 11.4	-2.5
POO				IAmb	IAmb	04 19 13.7	
	comp=Z,63nm,0.3s						
KAD	Karad	14.88	228	⇑iP	Pn	04 19 20.0	-2.4
KAD				i x	x	04 21 55.3	
CHTO	Chiang Mai	15.10	123	P	Pn	04 19 25.2	0.0
CHTO				pmax	pmax		
	comp=Z,40nm,1.2s						
CHTO	Chiang Mai	15.10	123	P	Pn	04 19 25.3	0.0
CHTO	Chiang Mai	15.10	123	Pn	Pn	04 19 25.2	0.0
CM31	Chiang Mai Arr	15.32	125	Pn	Pn	04 19 28.7	+0.5
CMAR	Chiang Mai Arr	15.32	125	Pn	Pn	04 19 26.2	-2.0
	comp=Z,0.7nm,0.3s,baz=303,slow=13,SNR=18						
CMAR				LR	LR	04 25 30.8	
	comp=Z,184nm,21.9s,baz=20,slow=38						
CMAR	Chiang Mai Arr	15.32	125	i P	Pn	04 19 28.1	-0.1
CMAR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
CMAR	Chiang Mai Arr	15.32	125	P	Pn	04 19 28.5	+0.4
TARG	Taragay, Kyrgy	15.32	337		Pn	04 19 27.1	-1.4
TARG				IAmb	IAmb	04 19 31.7	
	comp=Z,44nm,1.0s						
KMI	Kunming	15.50	96	⇑P	Pn	04 19 30.8	+0.1
KMI				pP	P	04 19 35.0	-0.2
KMI				sP	pP	04 19 37.6	-1.0
KMI				PP	sP	04 19 45.1	+4.9
KMI				pmax	pmax		
	comp=Z,15nm,1.0s						
KMI				pmax	pmax		
	comp=Z,91nm,3.7s						
KMI				LR	LR		
	comp=Z,230nm,14.4s						
KMI				LR	LR		
	comp=Z,590nm,13.9s						
KMI				LR	LR		
	comp=Z,670nm,15.2s						
KBL	Kabul	15.74	299	P	Pn	04 19 30.1	-3.7
KBL				pmax	pmax		
	comp=Z,121nm,1.0s						
KBL	Kabul	15.74	299	P	Pn	04 19 30.8	-3.1
	SNR=60						
KBL	Kabul	15.74	299	Pn	Pn	04 19 30.1	-3.7
KBL				IAmb	IAmb	04 19 39.7	
	comp=Z,121nm,0.9s						
KDJ	Kajisay	15.90	336	P	Pn	04 19 33.8	-1.9
KDJ				pmax	pmax		
	comp=Z,34nm,0.7s						
KDJ	Kajisay	15.90	336	Pn	Pn	04 19 33.8	-1.9
DGPR	DIGLIPUR	16.04	154	eP	Pn	04 19 38.4	+0.9
DGPR				IAmb	IAmb	04 19 41.2	
	comp=Z,57nm,0.3s						
CD2	Chengdu	16.06	75	P	Pn	04 19 38.4	+0.6
CD2				S	Sn	04 22 39.6	+3.7
CD2				pmax	pmax		
	comp=Z,40nm,0.9s						
CD2				LR	LR		
	comp=Z,980nm,12.9s						
CD2				LR	LR		
	comp=Z,1µm,12.9s						
CD2				LR	LR		
	comp=Z,2µm,10.1s						
WMQ	Urumqi	16.07	5	eP	Pn	04 19 37.3	-0.6
WMQ				pP	pP	04 19 43.1	-1.6
WMQ				sP	sP	04 19 46.1	-0.3
WMQ				PP	PnPn	04 19 51.5	+4.8
WMQ				pmax	pmax		
	comp=Z,30nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,200nm,4.9s						
PDGK	Podgornoye	16.29	344	P	Pn	04 19 38.1	-2.6
ULHL	Ulahol	16.34	334	P	P	04 19 47.0	+2.6
	SNR=12						
DRK	Karamyk	16.39	319	Pn	Pn	04 19 37.1	-5.1
DRK				IAmb	IAmb	04 19 46.1	
	comp=Z,54nm,0.7s						
GTA	Gaotai	16.49	42	⇓P	P	04 19 46.1	+0.1
GTA				pP	sP	04 19 50.3	-0.8
GTA				sP	pP	04 19 53.1	+3.6
GTA				pmax	pmax		
	comp=Z,15nm,1.0s						
GTA				pmax	pmax		
	comp=Z,170nm,7.2s						
GTA				LR	LR		
	comp=Z,660nm,14.7s						
GTA				LR	LR		
	comp=Z,570nm,14.7s						
GTA				LR	LR		
	comp=Z,190nm,14.7s						
BOOM	Boomskoye usch	16.67	334	P	Pn	04 19 43.3	-2.3
BOOM				pmax	pmax		
	comp=Z,20nm,0.9s						
BOOM	Boomskoye usch	16.67	334		Pn	04 19 43.2	-2.3
MDOK	Medeo	16.86	338	P	P	04 19 51.4	+1.4
GAR	Garm	16.99	315		Pn	04 19 45.6	-4.1
GAR				IAmb	IAmb	04 19 53.0	
	comp=Z,327nm,1.6s						
UCH	Uchtor	17.04	331	P	Pn	04 19 48.5	-2.0
	SNR=23						
TKM2	Tokmak 2	17.17	334	P	Pn	04 19 51.2	-0.7
	SNR=13						
TKM2	Tokmak 2	17.17	334	i P	Pn	04 19 51.2	-0.7
TKM2				pmax	pmax		
	comp=Z,12nm,0.8s						
KBK	Karagaybulak	17.20	332	P	P	04 19 56.1	+2.1
	SNR=42						
AML	Almayashu	17.33	329	P	Pn	04 19 51.5	-2.6
	SNR=16						
BTK	Batken	17.34	319	P	Pn	04 19 49.7	-4.3
BTK				pmax	pmax		
	comp=Z,77nm,0.8s						
BTK	Batken	17.34	319		Pn	04 19 49.7	-4.3
BTK				IAmb	IAmb	04 19 57.4	
	comp=Z,77nm,0.8s						
AAK	Ala-Archa	17.38	331	P	Pn	04 19 54.8	+0.3
	comp=Z,0.9nm,0.3s,baz=177,slow=8.4,SNR=29						
AAK				LR	LR	04 27 22.0	
	comp=Z,311nm,19.2s,baz=142,slow=40						
AAK	Ala-Archa	17.38	331	P	P	04 19 55.6	-0.2
	SNR=15						
AAK	Ala-Archa	17.38	331	i P	Pn	04 19 54.6	+0.1
AAK				pmax	pmax		
	comp=Z,24nm,1.0s						
AAK	Ala-Archa	17.38	331	P	Pn	04 19 54.8	+0.3
AAK				P	Pn	04 19 54.8	+0.3
AAK	Ala-Archa	17.38	331	P	Pn	04 19 54.1	-0.4
FRU1	Bishkek	17.46	332	P	Pn	04 19 55.0	-0.5
FRU1				pmax	pmax		
	comp=Z,72nm,1.3s						
FRU1	Bishkek	17.46	332	P	Pn	04 19 55.0	-0.5
LZH	Lanzhou	17.47	57	eP	Pn	04 19 53.5	-2.2
LZH				pP	P	04 19 58.6	+1.7
LZH				pmax	pmax		
	comp=Z,30nm,1.3s						
LZH				LR	LR		
	comp=Z,960nm,14.1s						
LZH				LR	LR		
	comp=Z,810nm,14.6s						
LZH				LR	LR		
	comp=Z,560nm,15.4s						
CHGR	Chuyangaron	17.54	312	Pn	Pn	04 19 50.8	-5.7
CHMS	Chumysh	17.57	333	P	Pn	04 19 54.8	-1.9
	SNR=5.7						
EKS2	Erkin-Say	17.71	330	P	P	04 20 00.4	+0.9
	SNR=16						

SLVN	Son La	17.77	107	P	Pn	04 19 59.4	0.0
USP	Ospenovka	17.89	333	P	Pn	04 20 00.8	+0.1
	SNR=10						
GYA	Guiyang	18.72	89	⇑P	P	04 20 10.3	-0.4
GYA				S	Sn	04 23 35.6	-5.0
GYA				pmax	pmax		
	comp=Z,22nm,0.9s						
GYA				pmax	pmax		
	comp=Z,270nm,4.2s						
GYA				LR	LR		
	comp=Z,330nm,13.8s						
GYA				LR	LR		
	comp=Z,380nm,11.4s						
GYA				LR	LR		
	comp=Z,570nm,14.1s						
MK31	Makanchi Array	19.15	353	*i* P	P	04 20 15.5	+0.3
MK31				pmax	pmax		
	comp=Z,30nm,0.9s						
MK31	Makanchi Array	19.15	353	P	P	04 20 12.6	-2.6
MKAR	Makanchi Array	19.15	353	P	P	04 20 15.4	+0.2
	comp=Z,2.0nm,0.3s,baz=174,slow=11,SNR=58						
MKAR				LR	LR	04 28 53.4	
	comp=Z,351nm,18.7s,baz=173,slow=41						
MKAR	Makanchi Array	19.15	353	*ce*P	P	04 20 15.3	+0.1
MKAR				pmax	pmax		
	comp=Z,16nm,0.7s						
MKAR	Makanchi Array	19.15	353	P	P	04 20 13.7	-1.5
MAKZ	Makanchi	19.20	352	P	P	04 20 16.0	+0.3
MAKZ	Makanchi	19.20	352	P	P	04 20 15.2	-0.5
KKAR	Karatay Array	19.60	325	P	P	04 20 18.6	-1.5
KKAR	Karatay Array	19.60	325	P	P	04 20 18.6	-1.5
XAN	Xi'an	20.86	67	P	P	04 20 34.4	+0.5
XAN				pP	sP	04 20 38.3	-0.5
XAN				S	Sn	04 24 30.0	-2.0
XAN				pmax	pmax		
	comp=Z,34nm,0.8s						
XAN				pmax	pmax		
	comp=Z,210nm,3.8s						
XAN				LR	LR		
	comp=Z,210nm,11.0s						
XAN				LR	LR		
	comp=Z,440nm,13.9s						
XAN				LR	LR		
	comp=Z,420nm,12.5s						
ENH	Enshi	20.95	78	P	P	04 20 34.2	-0.6
ENH				IAmb	IAmb	04 20 39.8	
	comp=Z,63nm,1.1s						
PALK	Pallekele	20.95	194	P	P	04 20 33.6	-1.3
	comp=Z,1.2nm,0.3s,baz=304,slow=3.6,SNR=1.5						
PALK				LR	LR	04 28 25.9	
	comp=Z,137nm,21.1s,baz=117,slow=36						
PALK	Pallekele	20.95	194	P	P	04 20 33.2	-1.7
PALK				IAmb	IAmb	04 20 50.9	
	comp=Z,64nm,1.8s						
HRA	Herat	21.10	294	P	P	04 20 34.0	-2.7
DGZ	Jazzator, Alta	21.91	3	*i* P	P	04 20 45.8	+0.6
DGZ				pmax	pmax		
	comp=Z,24nm,1.0s						
OTUK	Ortayu	22.90	337	P	P	04 20 55.4	-0.2
KURBB	Kurchatov Arra	23.44	348	P	P	04 21 01.0	0.0
	comp=Z,7.5nm,0.6s,baz=169,slow=10,SNR=61						
KURBB	Kurchatov Arra	23.44	348	P	P	04 21 00.4	-0.6
KURK	Kurchatov	23.51	349	*ce*P	P	04 21 02.2	+0.5
KURK				pmax	pmax		
	comp=Z,42nm,1.3s						
KURK	Kurchatov	23.51	349	P	P	04 21 01.8	+0.1
KURK				P	P	04 21 01.8	+0.1
KURK				S	S	04 25 14.2	-1.2
KURK				S	S	04 25 14.2	-1.2
KURK	Kurchatov	23.51	349	P	P	04 21 02.0	+0.3
KURK				IAmb	IAmb	04 21 06.3	
	comp=Z,28nm,0.9s						
QIZ	Qiongzhong	23.79	106	P	P	04 21 04.4	-0.3
QIZ				IAmb	IAmb	04 21 09.5	
	comp=Z,24nm,1.0s						
JLN	Jalan Bani Buh	24.45	263	P	P	04 21 12.9	+2.0
	SNR=12						
JLN				P	P	04 21 12.9	+2.0
	SNR=12						
WBK	Wadi Bani Khal	24.70	264	P	P	04 21 15.6	+2.5
	SNR=8.8						
WBK				P	P	04 21 15.6	+2.5
	SNR=8.8						
WSAR	Wadi Sarin	24.81	266	P	P	04 21 15.9	+1.7
	comp=Z,10.0nm,0.7s,baz=112,slow=8.5,SNR=12						
WSAR				LR	LR	04 32 44.7	
	comp=Z,96nm,19.2s,baz=90,slow=41						
WSAR	Wadi Sarin	24.81	266	P	P	04 21 16.0	+1.8
	SNR=10						
WHN	Wuhan	25.15	77	⇓P	P	04 21 18.8	+1.7
WHN				S	S	04 25 47.4	+5.3
WHN				LR	LR		
	comp=Z,1µm,14.3s						
WHN				LR	LR		
	comp=Z,510nm,12.7s						
WHN				LR	LR		
	comp=Z,950nm,12.4s						
GEYT	Alibeck	25.19	301	P	P	04 21 20.1	+2.6
	comp=Z,10.0nm,0.9s,baz=228,slow=20,SNR=10.0						
GEYT	Alibeck	25.19	301	P	P	04 21 18.8	+1.3
GEYT				IAmb	IAmb	04 21 23.1	
	comp=Z,41nm,1.4s						
GYA0B	ALIBECK ARRAY	25.19	301	P	P	04 21 17.6	+0.1
GYA0B				IAmb	IAmb	04 21 23.1	
	comp=Z,47nm,1.4s						
SMDO	Samad	25.38	266	P	P	04 21 21.5	+2.1
	SNR=11						
JMDO	Jabal Madar	25.53	264	P	P	04 21 22.9	+2.2
	SNR=6.0						
SONM	Songino Array	25.70	33	P	P	04 21 23.1	+1.0
	comp=Z,16nm,0.7s,baz=217,slow=9.5,SNR=38						
SONM	Songino Array	25.70	33	P	P	04 21 22.7	+0.6
SONM				pmax	pmax		
	comp=Z,22nm,0.8s						
SONM	Songino Array	25.70	33	P	P	04 21 22.7	+0.6
SONM				IAmb	IAmb	04 21 27.3	
	comp=Z,22nm,0.8s						
HOQ	Hoqain	25.89	267	P	P	04 21 26.3	+2.3
ULN	Ulaanbaatar	26.04	34	*ce*P	P	04 21 25.9	+0.6
ULN				pmax	pmax		
	comp=Z,12nm,0.7s						
ULN	Ulaanbaatar	26.04	34	P	P	04 21 25.8	+0.6
ULN				IAmb	IAmb	04 21 30.4	
	comp=Z,38nm,1.2s						
ZAA0	Zalesovo Array	26.14	359	P	P	04 21 25.9	+0.1
ZALV	Zalesovo Beam	26.14	359	P	P	04 21 25.9	+0.1
	comp=Z,4.8nm,0.3s,baz=184,slow=9.7,SNR=29						
ZALV				LR	LR	04 33 24.2	
	comp=Z,222nm,18.3s,baz=188,slow=40						
ZALV	Zalesovo Beam	26.14	359	*i* P	P	04 21 26.2	+0.4
ZALV				pmax	pmax		
	comp=Z,12nm,0.6s						
ZALV	Zalesovo Beam	26.14	359	P	P	04 21 26.1	+0.2
BSY	Bisya	26.22	265	P	P	04 21 29.2	+2.2
	SNR=5.6						
BSY				P	P	04 21 29.2	+2.2
	SNR=5.6						
ZAK	Zakamensk	26.24	26	*e*P	P	04 21 27.0	+0.1
ZAK				pmax	pmax		
	comp=Z,14nm,1.0s						
KULM	Kulim	26.52	145	P	P	04 21 31.0	+1.3
KULM	Kulim	26.52	145	P	P	04 21 29.6	0.0
KULM				IAmb	IAmb	04 21 34.1	
	comp=Z,28nm,0.7s						
ARQ	Araqi	26.65	267	P	P	04 21 31.1	+0.2
	SNR=5.9						
ASHO	Ashiyiah	26.73	270	P	P	04 21 33.7	+2.2
	SNR=6.5						
NAZ	Nazwa, Dubai	27.01	271	P	P	04 21 36.7	+2.6
	SNR=5.7						
NAZ				P	P	04 21 36.7	+2.6
	SNR=5.7						
BVAR	Borovoye Array	27.64	340	P	P	04 21 39.6	+0.2
	comp=Z,1.4nm,0.4s,baz=189,slow=17,SNR=9.3						
BRVK	Borovoye	27.71	340	*ce*P	P	04 21 39.9	-0.1
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRVK	Borovoye	27.71	340	P	P	04 21 38.9	-1.1
PSI	Prapat	27.89	151	P	P	04 21 43.9	+1.8
	comp=Z,1.3nm,0.3s,baz=112,slow=18,SNR=1.7						
PSI				LR	LR	04 34 55.4	
	comp=Z,103nm,21.4s,baz=45,slow=41						
BJI	Beijing	27.95	56	P	P	04 21 45.3	+3.0
BJI				S	S	04 26 20.3	-5.9
BJI				pmax	pmax		
	comp=Z,8.0nm,1.3s						
BJI				LR	LR		
	comp=Z,360nm,11.0s						
BJI				LR	LR		
	comp=Z,340nm,8.2s						
NJ2	Nanjing	28.99	73	*e*P	P	04 21 52.3	+0.6
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
NJ2				LR	LR		
	comp=Z,360nm,12.2s						
NJ2				LR	LR		
	comp=Z,380nm,9.8s						
NJ2				LR	LR		
	comp=Z,710nm,11.8s						
AB31	Akbulak array	29.16	324	*e*P	P	04 21 53.7	+0.7
ABKAR	Akbulak array	29.16	324	P	P	04 21 53.1	+0.2
YULB	Yu-li	32.34	90	P	P	04 22 20.8	-0.6
YULB				IAmb	IAmb	04 22 28.3	
	comp=Z,31nm,1.1s						
SVE	Sverdlovsk	34.04	335	*e*P	P	04 22 36.6	+0.8
MAK	Makhachkala	34.29	306	*e*P	P	04 22 32.1	-6.0
MAK				*e*S	S	04 27 55.7	-10
MAK				pmax	pmax		
	comp=Z,46nm,0.4s						
MAK				MLR	MLR		
	comp=Z,134nm,15.0s						
ARU	Arti	34.54	333	*d i*P	P	04 22 40.8	+0.6
ARU						04 23 50.2	
ARU				S	S	04 28 11.9	+3.1
ARU				SS	SnSn	04 30 19.4	-0.6
ARU				pmax	pmax		
	comp=Z,13nm,0.6s						
ARU	Arti	34.54	333	P	P	04 22 40.7	+0.6
ARU				IAmb	IAmb	04 22 41.5	
	comp=Z,17nm,0.6s						
LGD	Lagodekhi	34.97	304	P	P	04 22 45.6	+1.5
DDFL	Dedoflistskaro	34.99	303	P	P	04 22 48.7	+4.4
CN2	Changchun	35.61	53	*e*P	P	04 22 50.8	+1.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GNI	Garni	35.82	301	P	P	04 22 49.8	-1.8
GNI				pmax	pmax		
	comp=Z,26nm,1.2s						
GNI	Garni	35.82	301	P	P	04 22 49.8	-1.8
GNI				IAmb	IAmb	04 23 02.5	
	comp=Z,26nm,1.1s						
RAYN	Ar Rayn	36.36	273	P	P	04 22 55.8	-0.5
RAYN				pmax	pmax		
	comp=Z,15nm,1.3s						
RAYN	Ar Rayn	36.36	273	P	P	04 22 55.8	-0.5
KSRS	Korea Array	36.59	64	P	P	04 22 59.6	+1.6
	comp=Z,2.1nm,0.6s,baz=260,slow=8.8,SNR=6.3						
BGD	Bogdanovka	36.83	303	P	P	04 23 04.2	+3.9
ZEI	Tsey	36.85	305	*e*P	P	04 23 00.6	+0.2
ZEI				pmax	pmax		
	comp=Z,12nm,1.3s						
AKH	Akhalkalaki	36.93	303	P	P	04 23 03.6	+2.5
KARS	Kars	37.14	301	P	P	04 23 01.3	-1.6
KARS				pmax	pmax		
	comp=Z,137nm,0.9s						
KARS	Kars	37.14	301	P	P	04 23 01.2	-1.6
SPMM	Sapulut	37.21	123	P	P	04 23 07.0	+3.5
SIRT	Sirnak	37.40	296	P	P	04 23 04.2	-0.9
BELG	Belogornoye	37.44	322	⇓*e*P	P	04 23 04.4	-0.6
BELG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KBZ	Khabaz	37.74	306	P	P	04 23 08.9	+1.3
	comp=Z,5.3nm,0.8s,baz=142,slow=8.6,SNR=8.7						
KBZ				LR	LR	04 41 25.2	
	comp=Z,75nm,20.2s,baz=116,slow=41						
KBZ	Khabaz	37.74	306	*ce*P	P	04 23 07.8	+0.2
KBZ				pmax	pmax		
	comp=Z,5.0nm,0.7s						
GURO	Guroymak-BITLI	37.77	298	P	P	04 23 06.9	-1.3
KIV	Kislovodsk	37.93	307	*e*P	P	04 23 09.3	-0.1
KIV				pmax	pmax		
	comp=Z,11nm,1.1s						
KIV				MLR	MLR		
	comp=Z,46nm,16.0s						
KIV	Kislovodsk	37.93	307	P	P	04 23 07.6	-1.9
KIV				IAmb	IAmb	04 23 13.7	
	comp=Z,29nm,1.6s						
KIRV	Kirov	39.71	331	*ce*P	P	04 23 24.8	+0.8
USRK	Ussuriysk Ar.	40.32	53	P	P	04 23 31.7	+2.4
	comp=Z,1.8nm,0.7s,baz=297,slow=4.7,SNR=3.1						
MALT	Malatya	40.59	297	P	P	04 23 34.0	+2.2
KLR	Kul'dur	41.13	46	*ce*P	P	04 23 36.9	+1.0
KLR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GAZ	Gaziantep	41.57	296	P	P	04 23 38.7	-1.1
GAZ				IAmb	IAmb	04 23 41.7	
	comp=Z,40nm,1.2s						
NRIK	Noril'sk	41.59	1	P	P	04 23 40.4	+1.0
	comp=Z,12nm,0.6s,baz=126,slow=5.5,SNR=12						
NRIK				LR	LR	04 43 01.0	
	comp=Z,150nm,19.1s,baz=154,slow=39						
NRIK	Noril'sk	41.59	1	⇑*e*P	P	04 23 40.5	+1.1
NRIK				pmax	pmax		
	comp=Z,19nm,0.7s						
NRIK	Noril'sk	41.59	1	P	P	04 23 37.7	-1.7
NRIK				IAmb	IAmb	04 23 47.6	
	comp=Z,27nm,1.1s						
ANN	Anapa	41.78	307	*e*P	P	04 23 39.4	-1.9
ANN				*e**PP	pP	04 23 43.4	-1.5
ANN				*e*		04 25 16.5	
ANN				*e*S	S	04 29 57.3	-1.3
ANN				pmax	pmax		
	comp=Z,116nm,1.2s						
BNN	Bunyan	42.62	298	P	P	04 23 46.0	-2.4
BNN				IAmb	IAmb	04 24 14.3	
	comp=Z,21nm,0.8s						
TOLI2	Tolitoli	42.81	122	P	P	04 23 49.8	-0.2
PRGR	Permogore	43.00	333	*e*P	P	04 23 48.5	-2.5
PRGR				pmax	pmax		
	comp=Z,12nm,1.0s						
GHAJ	Ghor Haditha	43.45	287	P	P	04 23 53.5	-1.5
SIM	Simferopol'	44.14	307	*ce*P	P	04 24 00.9	+0.4
SIM				PPP	PPP	04 26 17.0	
SIM				S	S	04 30 40.0	+6.7
SIM				pmax	pmax		
	comp=Z,45nm,0.9s						
MOS	Moscow	44.16	323	*e*P	P	04 23 59.3	-1.1
BR131	Keskin Array S	44.32	299	P	P	04 24 00.5	-1.6
BR131				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BR131	Keskin Array S	44.32	299	P	P	04 24 00.5	-1.6
BRTR	Keskin Array B	44.32	299	P	P	04 24 02.5	+0.4
	comp=Z,2.5nm,0.8s,baz=130,slow=6.7,SNR=8.7						
BRTR				LR	LR	04 47 25.3	
	comp=Z,42nm,19.5s,baz=56,slow=43						
BRTR	Keskin Array B	44.32	299	*i* P	P	04 24 02.2	+0.1
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRTR	Keskin Array B	44.32	299	P	P	04 24 02.3	+0.1
OBN	Obninsk	44.54	322	*ce*P	P	04 24 03.4	0.0
OBN				*i* *PP	pP	04 24 06.2	-0.8
OBN				*SP	sP	04 24 10.0	+1.6
OBN				pmax	pmax		
	comp=Z,55nm,1.3s						
OBN				MLR	MLR		
	comp=Z,196nm,18.0s						
OBN	Obninsk	44.54	322	P	P	04 24 02.1	-1.3
MJAR	Matsushiro Arr	44.84	65	P	P	04 24 07.6	+1.4
	comp=Z,2.1nm,0.7s,baz=266,slow=10,SNR=5.5						
MJAR	Matsushiro Arr	44.84	65	P	P	04 24 04.9	-1.3
MJAR				pmax	pmax		
	comp=Z,12nm,1.7s						
MJAR	Matsushiro Arr	44.84	65	P	P	04 24 04.9	-1.3
KLMR	Klimovskoe	45.19	330	*e*P	P	04 24 07.4	-1.1
KLMR				*e*		04 25 48.6	
KLMR				pmax	pmax		
	comp=Z,21nm,0.8s						
KLMR	Klimovskoe	45.19	330	*e*P	P	04 24 07.5	-1.1
KLMR				AMP		04 24 09.4	
	comp=Z,21nm,0.8s						
KLMR				*e*PcP	PcP	04 25 48.6	0.0
KAPI	Kappang	46.30	129	LR	LR	04 45 54.3	
	comp=Z,49nm,19.6s,baz=308,slow=39						
KAPI	Kappang	46.30	129	P	P	04 24 21.3	+3.4
PURM	Purcari	47.22	309	⇑P	P	04 24 25.1	+0.4
ELL	Elmali	47.43	296	P	P	04 24 27.0	+0.3
ELL				pmax	pmax		
	comp=Z,202nm,0.9s						
ELL	Elmali	47.43	296	P	P	04 24 27.0	+0.3
TLCR		47.91	307	⇑P	P	04 24 30.8	+0.7
TLCR		47.91	307	⇑P	P	04 24 30.8	+0.7
MILM	Milestii Mici	47.97	309	⇑P	P	04 24 30.6	+0.1
MILM	Milestii Mici	47.97	309	⇑P	P	04 24 30.6	+0.1
AKASG	Malin Array Be	47.99	314	P	P	04 24 30.1	-0.6
	comp=Z,9.5nm,0.7s,baz=76,slow=7.3,SNR=42						
AKASG				PP	PP	04 26 22.1	-0.5
	comp=Z,1.8nm,0.7s,baz=86,slow=10.0,SNR=7.5						
AKASG	Malin Array Be	47.99	314	P	P	04 24 29.2	-1.5
AKBB	Malin Array Si	47.99	314	*ce*P	P	04 24 30.4	-0.3
AKBB	Malin Array Si	47.99	314	P	P	04 24 29.6	-1.1
TPGR	Topolog	48.18	307	⇑P	P	04 24 33.3	+1.1
TIRR	Tirgusor	48.18	306	⇑P	P	04 24 32.3	+0.1
TIRR	Tirgusor	48.18	306	⇑P	P	04 24 32.3	+0.1
SORM	Soroca	48.34	311	⇑P	P	04 24 32.2	-1.2
SORM	Soroca	48.34	311	⇑P	P	04 24 32.2	-1.2
CFR	Carcaliu	48.39	307	⇑P	P	04 24 33.5	-0.3
CFR	Carcaliu	48.39	307	⇑P	P	04 24 33.5	-0.3
VLDR	Vladesti	48.44	308	⇓P	P	04 24 34.8	+0.6
TLBR	Topalu	48.45	306	⇑P	P	04 24 35.3	+1.0
SCTR	Scanteiesti	48.49	308	⇓P	P	04 24 35.7	+1.0
HARR	Harsova	48.53	306	⇑P	P	04 24 35.5	+0.6
HARR	Harsova	48.53	306	⇑P	P	04 24 35.5	+0.6
ICOR	Ion Corvin	48.62	306	⇑P	P	04 24 36.8	+1.1
ODBI	Odobesti	49.15	308	⇑P	P	04 24 42.3	+2.6
MNK	Minsk	49.30	319	*i* P	P	04 24 39.8	-0.9
MNK				*i*		04 26 03.7	
MNK				*i*		04 26 34.7	
MNK				*i* PPP	PPP	04 27 25.8	
MNK				*i* S	S	04 31 45.5	-1.3
MNK				*i*		04 34 31.6	
MNK				*i* SSS	SSS	04 36 36.7	
MNK				pmax	pmax		
	comp=N,20nm,0.9s						
MNK				pmax	pmax		
	comp=Z,36nm,0.9s						
MNK				pmax	pmax		
	comp=E,3.0nm,0.8s						
MNK				MLR	MLR		
	comp=N,128nm,15.0s						
MNK				MLR	MLR		
	comp=Z,232nm,17.0s						
MNK				MLR	MLR		
	comp=E,44nm,17.0s						
MNK	Minsk	49.30	319	*i* P	P	04 24 39.9	-0.8
	comp=E,3.0nm,0.8s						
MNK				*i* P	P	04 24 39.9	-0.8
	comp=N,20nm,0.9s						
MNK				*i* P	P	04 24 39.9	-0.8
	comp=Z,36nm,0.9s,baz=98						
MNK				*i* PcP	PcP	04 26 03.8	+0.4
MNK				*i* PP	PP	04 26 34.7	+0.3
MNK				*i* PPP	PPP	04 27 25.9	
MNK				*i* S	S	04 31 45.5	-1.3
MNK				*i* SS	SS	04 35 20.5	+2.5
MNK				*i* SSS	SSS	04 36 36.8	
MNK				*i* LQ	LQ	04 41 53.4	
MNK				*i* LR	LR	04 45 39.6	
MNK				*i* LRM	MLR	04 48 34.0	
	comp=N,128nm,15.3s						
MNK				*i* LRM	MLR	04 48 37.2	
	comp=Z,232nm,16.6s						
MNK				*i* LRM	MLR	04 48 39.8	
	comp=E,44nm,17.2s						
VRI	Vrincioaia	49.38	308	⇓P	P	04 24 42.7	+1.2
VRI	Vrincioaia	49.38	308	⇓P	P	04 24 42.7	+1.2
PLOR	Plostina	49.44	308	⇓P	P	04 24 43.1	+1.1
PLOR	Plostina	49.44	308	⇓P	P	04 24 43.1	+1.1
TESR	Tescani	49.44	309	⇑P	P	04 24 42.1	+0.2
NEHR	Nehoiu	49.69	307	⇑P	P	04 24 46.2	+2.4
COVR	Voineasa-Covas	49.75	308	⇓P	P	04 24 45.1	+0.8
TIXI	Tiksi	49.86	16	*ce*P	P	04 24 44.6	-0.1
TIXI	Tiksi	49.86	16	P	P	04 24 43.8	-1.0
TIXI				IAmb	IAmb	04 24 45.4	
	comp=Z,9.7nm,0.6s						
MLR	Muntele Rosu	49.93	307	⇑P	P	04 24 47.3	+1.4
MLR	Muntele Rosu	49.93	307	P	P	04 24 45.8	0.0
MLR				pmax	pmax		
	comp=Z,55nm,0.9s						
MLR	Muntele Rosu	49.93	307	P	P	04 24 45.8	0.0
EZN	Ezine	49.94	300	P	P	04 24 46.9	+1.1
NACGM	Naroch	49.99	320	*i* P	P	04 24 46.5	+0.6
DOPR	Dopca	50.31	308	⇑P	P	04 24 49.5	+0.9
BURAR	Bucovina Array	50.43	310	⇓P	P	04 24 50.6	+1.1
BURAR	Bucovina Array	50.43	310	⇓P	P	04 24 50.6	+1.1
BURAR	Bucovina Array	50.43	310	P	P	04 24 49.5	0.0
BUR08	Bucovina Ar. S	50.44	310	P	P	04 24 49.2	-0.5
BUR08				IAmb	IAmb	04 24 51.0	
	comp=Z,11nm,0.8s						
ISAL	Salakas	50.45	321	*e*P	P	04 24 50.3	+0.8
APA	Apatity	50.48	337	⇑*i*P	P	04 24 40.6	-8.9
APA				pmax	pmax		
	comp=Z,13nm,0.8s						
VOIR		50.56	307	⇑P	P	04 24 50.9	+0.3
VOIR		50.56	307	⇑P	P	04 24 50.9	+0.3
VSU	Vasula	50.60	324	*e*P	P	04 24 50.8	+0.3
VSU	Vasula	50.60	324	*i* P	P	04 24 50.6	+0.1
VSU				pmax	pmax		
	comp=Z,26nm,0.4s						
ARR	Arges	50.86	307	⇑P	P	04 24 53.2	+0.4
SANT	Santorini	51.03	296	P	P	04 24 53.6	-0.5
LVV	L'vov	51.26	313	*e*P	P	04 24 55.4	-0.2
LOT	Lotru	51.46	307	⇑P	P	04 24 56.4	-0.9
FIA1	FINESS Array S	51.53	328	P	P	04 24 56.4	-1.0
FINES	FINESS Array B	51.53	328	P	P	04 24 57.7	+0.3
	comp=Z,16nm,0.6s,baz=107,slow=8.3,SNR=61						
FINES				LR	LR	04 48 37.9	
	comp=Z,155nm,19.4s,baz=96,slow=38						
FINES	FINESS Array B	51.53	328	P	P	04 24 56.8	-0.6
FINES	FINESS Array B	51.53	328	P	P	04 24 56.8	-0.6
BMR	Baia Mare	51.60	310	⇑P	P	04 24 59.8	+1.6
BMR	Baia Mare	51.60	310	⇑P	P	04 24 59.8	+1.6
PABE	Paberze	51.66	320	*e*P	P	04 24 59.1	+0.6
PABE	Paberze	51.66	320	P	P	04 24 57.4	-1.2
PAIG	Paliouri	51.95	300	P	P	04 25 01.6	+0.6
MESR	Meseseni	51.98	310	⇑P	P	04 25 02.1	+1.0
SUW	Suwalki	51.99	318	*e*P	P	04 25 01.1	+0.1
SUW	Suwalki	51.99	318	*e*P	P	04 25 00.8	-0.2
VTS	Vitosha	52.02	304	⇑P	P	04 25 02.6	+1.0
VTS	Vitosha	52.02	304	P	P	04 25 01.2	-0.4
VTS				pmax	pmax		
	comp=Z,24nm,1.0s						
VTS	Vitosha	52.02	304	P	P	04 25 01.2	-0.4
VTS				IAmb	IAmb	04 25 03.6	
	comp=Z,24nm,1.0s						
DEV	Deva	52.05	308	⇑P	P	04 25 02.8	+1.2
DEV	Deva	52.05	308	⇑P	P	04 25 02.8	+1.2
KWP	Kalwaria Pacla	52.11	313	*e*P	P	04 25 02.9	+0.9
KWP	Kalwaria Pacla	52.11	313	P	P	04 25 01.6	-0.4
KWP	Kalwaria Pacla	52.11	313	P	P	04 25 01.6	-0.4
MTSE	Matsula	52.15	324	*e*P	P	04 25 02.8	+0.7
DRGR		52.15	309	⇑P	P	04 25 03.3	+0.9
DRGR		52.15	309	⇑P	P	04 25 03.3	+0.9
GZR	Gura Zlata	52.16	307	⇑P	P	04 25 03.3	+0.7
GZR	Gura Zlata	52.16	307	P	P	04 25 03.9	+1.4
TRPA	Tarpa	52.23	311	⇑P	P	04 25 03.5	+0.6
TRPA	Tarpa	52.23	311	*e*P	P	04 25 03.1	+0.2
UZH	Uzhgorod	52.39	312	⇑*i*P	P	04 25 04.3	+0.2
UZH				*e*		04 25 07.0	
KOLS	Kolonicke sedl	52.40	312	*e*P	P	04 25 05.0	+0.8
KOLS	Kolonicke sedl	52.40	312	*e*P	P	04 25 05.0	+0.8
SOEI	Soe	52.80	129	P	P	04 25 06.4	-1.3
SOEI				IAmb	IAmb	04 25 31.1	
	comp=Z,25nm,0.8s						
MDVR	Moldovita	52.95	307	⇓P	P	04 25 09.2	+0.8
BZS	Buzias	52.97	308	P	P	04 25 09.1	+0.7
BOVS	Bovan	53.05	305	⇑P	P	04 25 08.5	-0.6
AGG	Agios Georgios	53.11	299	P	P	04 25 07.3	-2.3
AGG				pmax	pmax		
	comp=Z,17nm,0.8s						
AGG	Agios Georgios	53.11	299	P	P	04 25 07.3	-2.3
AGG				IAmb	IAmb	04 25 09.5	
	comp=Z,17nm,0.8s						
FNA	Florina	53.60	302	P	P	04 25 11.4	-1.8
FNA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
FNA	Florina	53.60	302	P	P	04 25 11.4	-1.8
NIE	Niedzica	53.68	313	*e*P	P	04 25 15.6	+2.0
NIE	Niedzica	53.68	313	P	P	04 25 15.5	+1.8
LODK	Lodwar	53.69	252	P	P	04 25 13.2	-1.0
ITM	Ithomi	53.70	297		P	04 25 12.5	-1.5
ITM				IAmb	IAmb	04 26 45.9	
	comp=Z,29nm,1.2s						

ARA0	ARCESS Array S	53.90	338	eP	P	04 25 15.3	+0.4
ARCES	ARCESS Array B	53.90	338	P	P	04 25 15.6	+0.7
	comp=Z,19nm,0.8s,baz=106,slow=7.8,SNR=44						
ARCES	ARCESS Array B	53.90	338	P	P	04 25 13.4	-1.5
ARCES				IAmb	IAmb	04 25 19.7	
	comp=Z,28nm,1.1s						
PSZ	Piszkesteto	54.01	311	eP	P	04 25 15.4	-0.7
PSZ	Piszkesteto	54.01	311	P	P	04 25 14.5	-1.6
PSZ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PSZ	Piszkesteto	54.01	311	P	P	04 25 14.5	-1.6
PSZ				IAmb	IAmb	04 25 17.5	
	comp=Z,7.2nm,0.8s						
KBN	Korca	54.06	302	P	P	04 25 15.0	-1.6
KBN				pmax	pmax		
	comp=Z,21nm,1.0s						
KBN	Korca	54.06	302	P	P	04 25 15.0	-1.6
KBN				IAmb	IAmb	04 25 17.5	
	comp=Z,21nm,1.0s						
DIVS	Divibare	54.24	306	⇑iP	P	04 25 17.5	-0.4
DIVS	Divibare	54.24	306	P	P	04 25 17.9	0.0
FRGS	Fruska Gora	54.27	307	⇑P	P	04 25 18.5	+0.5
FRGS	Fruska Gora	54.27	307	⇑iP	P	04 25 17.8	-0.2
KMBO	Kilima Mbogo	54.65	247	P	P	04 25 22.6	+1.3
	comp=Z,3.8nm,0.8s,baz=41,slow=8.9,SNR=8.4						
KMBO	Kilima Mbogo	54.65	247	P	P	04 25 20.0	-1.4
KMBO				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KMBO	Kilima Mbogo	54.65	247	P	P	04 25 19.9	-1.4
BBLS	Lazići	54.69	306	eP	P	04 25 21.7	+0.6
VYHS	Vyhne	54.69	311	eP	P	04 25 21.0	0.0
VYHS	Vyhne	54.69	311	eP	P	04 25 21.0	0.0
RUDO	Rudo	54.74	305	⇑iP	P	04 25 21.3	-0.1
HAMF	Hammerfest	54.83	339	eP	P	04 25 22.7	+1.1
PDG	Podgorica	54.97	304	⇑iP	P	04 25 22.5	-0.5
PDG	Podgorica	54.97	304	P	P	04 25 21.4	-1.7
PDG				IAmb	IAmb	04 25 23.5	
	comp=Z,20nm,0.8s						
KOLL	Kolacno	54.97	312	eP	P	04 25 23.1	+0.1
HAPS	Han Pijesak,BI	54.99	306	eP	P	04 25 23.5	+0.2
MORH	Mrgy, Hungar	54.99	309	⇑iP	P	04 25 23.1	0.0
SRO2	Moca	55.03	311	eP	P	04 25 23.5	+0.1
SRO2	Moca	55.03	311	eP	P	04 25 23.5	+0.1
DRME	Dracevica, Mon	55.05	304	⇑iP	P	04 25 23.1	-0.6
OKC	Ostrava-Krasne	55.07	313	eP	P	04 25 24.2	+0.5
OKC	Ostrava-Krasne	55.07	313	eP	P	04 25 24.2	+0.5
SRO	Srobarova	55.08	311	eP	P	04 25 24.8	+1.0
SRO	Srobarova	55.08	311	eP	P	04 25 24.8	+1.0
UPM	Unac-Piva	55.12	305	eP	P	04 25 17.5	-6.9
KOVH	Kovagotottos	55.38	309	eP	P	04 25 25.4	-0.6
UPP	Uppsala	55.42	325	eP	P	04 25 26.5	+0.5
BRY	Bratogost	55.43	305	eP	P	04 25 26.5	-0.1
JAVC	Velka Javorina	55.44	312	eP	P	04 25 28.0	+1.6
MORC	Moravsky Berou	55.46	313	P	P	04 25 26.0	-0.6
MORC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MORC	Moravsky Berou	55.46	313	eP	P	04 25 26.9	+0.3
MORC	Moravsky Berou	55.46	313	P	P	04 25 25.9	-0.6
MORC				IAmb	IAmb	04 25 27.9	
	comp=Z,7.8nm,0.8s						
HCY	Herceg Novi	55.52	304	eP	P	04 25 26.3	-0.8
TREB	Trebinje	55.59	304	eP	P	04 25 27.0	-0.6
JETT	Jettan, Norway	55.63	337	eP	P	04 25 29.0	+1.5
MPLH	Magyarpolny	55.66	310	eP	P	04 25 27.7	-0.3
MODS	Modra-Piesok	55.73	311	eP	P	04 25 31.0	+2.5
MODS	Modra-Piesok	55.73	311	eP	P	04 25 31.0	+2.5
KRLC	Kraliky	55.93	313	eP	P	04 25 30.2	+0.2
KRLC	Kraliky	55.93	313	eP	P	04 25 30.2	+0.2
STON	Ston	56.04	305	eP	P	04 25 30.1	-0.7
STON	Ston	56.04	305	i P	P	04 25 29.9	-0.9
VRAC	Vranov	56.11	313	eP	P	04 25 31.7	+0.5
TRO	Tromso	56.16	337	eP	P	04 25 30.3	-0.9
DPC	Dobruska-Polom	56.21	314	eP	P	04 25 32.1	+0.2
DPC	Dobruska-Polom	56.21	314	eP	P	04 25 32.1	+0.2
KRUC	Moravsky	56.26	312	eP	P	04 25 32.5	+0.2
OSTC	Ostas	56.26	314	eP	P	04 25 32.6	+0.3
SOP	Sopron	56.27	311	eP	P	04 25 32.3	-0.1
SOP	Sopron	56.27	311	P	P	04 25 32.8	+0.4
MRAK	Mrakovica	56.34	307	eP	P	04 25 32.1	-0.8
CHVC	Chvalec	56.36	314	eP	P	04 25 33.3	+0.3
RICI	Ricice	56.37	306	i P	P	04 25 31.4	-1.7
UPC	Upice	56.40	314	eP	P	04 25 34.2	+1.0
UPC	Upice	56.40	314	eP	P	04 25 34.2	+1.0
KALN	Kalnik	56.51	309	i P	P	04 25 34.4	+0.3
KOGS	Kog	56.62	309	i P	P	04 25 35.0	+0.2
LSTV	Lastovo	56.65	305	i P	P	04 25 34.3	-0.8
GUMO	Guam	56.66	92	LR	LR	04 51 06.3	
	comp=Z,52nm,18.7s,baz=102,slow=37						
CONA	Conrad Observa	56.72	311	i P	P	04 25 36.1	+0.4
	comp=Z,9.5nm,0.8s,SNR=6.6						
LOBO	Lobor	56.77	309	i P	P	04 25 36.1	+0.1
KIJV	Kijevo	56.82	306	i P	P	04 25 35.4	-1.0
PTJ	Puntijarka	56.88	309	P	P	04 25 37.2	+0.4
HVAR	Hvar	56.91	305	i P	P	04 25 36.2	-0.8
ARSA	Arzberg	57.02	310	eP	P	04 25 37.6	-0.1
	comp=Z,4.4nm,0.7s						
FAUS	Fauske	57.13	334	eP	P	04 25 38.6	+0.4
UDBI	Udbina	57.20	307	i P	P	04 25 38.7	-0.4
STEI	Steigen	57.21	335	eP	P	04 25 39.0	+0.3
CRES	Cresnjev	57.24	309	⇑iP	P	04 25 39.4	+0.1
PLIT	Plitvice	57.25	307	i P	P	04 25 39.1	-0.3
PVCC	Panska Ves	57.31	314	eP	P	04 25 40.1	+0.4
PVCC	Panska Ves	57.31	314	eP	P	04 25 40.1	+0.4
MOR8	Moi Rana	57.35	333	eP	P	04 25 39.1	-0.6
TIP	Timpagrande	57.36	301	P	P	04 25 38.8	-1.5
TIP				IAmb	IAmb	04 25 41.2	
	comp=Z,14nm,1.2s						
PERS	Pernice	57.37	310	i P	P	04 25 40.5	+0.2
PRU	Pruhonice	57.38	314	eP	P	04 25 40.5	+0.3
PRU	Pruhonice	57.38	314	eP	P	04 25 40.5	+0.3
ZIRJ	Zirje	57.41	306	i P	P	04 25 39.7	-0.8
SOKA	Soboth	57.42	310	i P	P	04 25 41.1	+0.5
	comp=Z,9.5nm,0.6s,SNR=13						
BOJS	Bojanci	57.42	308	i P	P	04 25 41.0	+0.4
RUE	Ruedersdorf	57.64	317	eP	P	04 25 42.6	+0.7
	comp=Z,30nm,0.6s,baz=83,slow=6.9						
CKRC	Cesky Krumlov	57.65	312	eP	P	04 25 41.9	-0.3
BRG	Berggiesshubel	57.68	315	eP	P	04 25 43.1	+0.8
	comp=Z,16nm,0.9s,baz=83,slow=6.9						
BRG				epP	sP	04 25 46.8	-0.6
BRG	Berggiesshubel	57.68	315	eP	P	04 25 42.8	+0.5
BRG				Amp		04 25 43.6	
	comp=Z,14nm,0.8s						
OBKA	Obir	57.77	309	i P	P	04 25 43.6	+0.4
	comp=Z,8.4nm,0.7s,SNR=5.9						
DUGI	Dugi Otok	57.78	306	i P	P	04 25 42.5	-0.7
MOA	Molln	57.79	311	eP	P	04 25 42.9	-0.3
	comp=Z,3.9nm,0.4s						
NVLJ	Novalja	57.83	307	i P	P	04 25 42.4	-1.0
LJU	Ljubljana	57.85	309	⇑iP	P	04 25 44.0	+0.4
RABC	Rab	57.86	307	i P	P	04 25 42.8	-0.8
LOF	Lofoten	57.87	335	eP	P	04 25 42.8	-0.5
KONS	Konsvik	57.90	333	eP	P	04 25 43.8	+0.2
STOK	Stokkvaagen	57.93	333	eP	P	04 25 44.0	+0.3
CEY	Cerknica	57.97	309	⇑iP	P	04 25 44.7	+0.3
RIY	Rijeka	57.99	308	eP	P	04 25 43.7	-0.8
FBE	Freiberg	58.04	315	eP	P	04 25 46.2	+1.4
	comp=Z,26nm,0.9s,baz=83,slow=6.9						
GEC2	GERESS Array S	58.05	312	eP	P	04 25 45.8	+0.7
	comp=Z,16µm,14.3s,baz=83,slow=6.9						
GEC2	GERESS Array S	58.05	312	P	P	04 25 43.1	-1.9
GEC2				IAmb	IAmb	04 25 46.0	
	comp=Z,12nm,1.1s						
GERES	GERESS Array B	58.05	312	P	P	04 25 45.2	+0.2
	comp=Z,4.4nm,0.8s,baz=101,slow=7.2,SNR=17						
GERES	GERESS Array B	58.05	312	P	P	04 25 44.0	-1.1
KHC	Kasperske Hory	58.09	313	eP	P	04 25 45.1	-0.2
KHC	Kasperske Hory	58.09	313	eP	P	04 25 45.1	-0.2
CLL	Collm	58.22	315	eP	P	04 25 46.0	-0.1
CLL	Collm	58.22	315	eP	P	04 25 46.0	-0.1
SMRN	Sveta Marina	58.26	308	i P	P	04 25 45.8	-0.6
NSS	Namsos	58.29	331	eP	P	04 25 46.7	+0.4
CADS	Cadrg	58.37	309	i P	P	04 25 47.0	-0.3
NC602	NORSAR Array S	58.47	326	eP	P	04 25 47.5	-0.2
NORES	NORESS Array B	58.47	326	P	P	04 25 48.9	+1.2
KBA	Koelnbreinsper	58.52	310	eP	P	04 25 48.1	-0.4
	comp=Z,3.3nm,0.5s						
WET	Wettzell	58.55	313	eP	P	04 25 49.4	+0.9
	comp=Z,9.0nm,0.8s,baz=83,slow=6.9						
WET				epP	sP	04 25 53.0	-0.5
BRJN	Brijuni	58.56	308	i P	P	04 25 48.1	-0.4
NB2	NORSAR Subarra	58.62	327	P	P	04 25 48.0	-0.8
	comp=Z,2.4nm,0.7s,baz=87,slow=6.9						
NOA	NORSAR Array B	58.62	327	P	P	04 25 48.4	-0.4
	comp=Z,3.7nm,0.8s,baz=88,slow=6.9,SNR=12						
NOA				LR	LR	04 52 19.2	
	comp=Z,174nm,19.4s,baz=80,slow=37						
GUNZ	Gunzen	58.75	314	eP	P	04 25 50.9	+1.1
	comp=Z,18nm,1.2s,baz=83,slow=6.9						
WERD	Werda	58.76	314	eP	P	04 25 50.8	+0.9
	comp=Z,11nm,0.8s,baz=83,slow=6.9						
SPA0	Spitsbergen Ar	58.77	347	eP	P	04 25 50.2	+0.7
ZOU	Zoufplan	58.84	310	P	P	04 25 47.8	-3.0
PLN	Plauen	58.85	314	eP	P	04 25 51.4	+0.9
	comp=Z,6.6nm,0.9s,baz=83,slow=6.9						
OSL	Oslo	58.90	325	eP	P	04 25 50.9	+0.2
ROTZ	Rotzenmuhle	58.90	313	eP	P	04 25 52.3	+1.4
	comp=Z,4.6nm,0.9s,baz=83,slow=6.9						
NEUB	Neuenburg	59.00	315	eP	P	04 25 52.3	+0.8
	comp=Z,28nm,1.1s,baz=83,slow=6.9						
STAL	STALIGIAL	59.07	309	P	P	04 25 51.0	-1.2
ABTA	Abfaltersbach	59.13	310	eP	P	04 25 52.0	-0.6
MOX	Moxa	59.17	315	eP	P	04 25 53.7	+1.0
	comp=Z,11nm,0.9s,baz=83,slow=6.9						
MOX				eL	L	05 25 53.6	
	comp=Z,107nm,19.4s						
FLTG	Flechtingen	59.20	317	eP	P	04 25 53.2	+0.4
	comp=Z,22nm,1.4s,baz=83,slow=6.9						
AQU	L'Aquila	59.26	305	P	P	04 25 51.8	-1.7
AQU				pmax	pmax		
	comp=Z,16nm,0.9s						
AQU	L'Aquila	59.26	305	P	P	04 25 51.8	-1.7
AQU				IAmb	IAmb	04 26 18.2	
	comp=Z,16nm,0.9s						
NRCA	Norcia	59.38	305	P	P	04 25 52.1	-2.3
KONO	Kongsberg	59.49	325	eP	P	04 25 55.2	+0.5
GRF	Grafenberg Arr	59.55	313	eL	L	05 26 05.6	
	comp=Z,161nm,20.5s						
BSEG	Bad Segeberg	59.58	318	eP	P	04 25 56.7	+1.3
	comp=Z,31nm,1.1s,baz=83,slow=6.9						
DOMB	Dombas	59.62	328	eP	P	04 25 55.6	-0.1
WTTA	Wattenberg	59.64	311	eP	P	04 25 55.6	-0.6
	comp=Z,12nm,0.8s						
WATA	Walderalm	59.67	311	eP	P	04 25 55.9	-0.5
	comp=Z,6.3nm,0.6s						
MURB	Monte Urbino	59.72	306	P	P	04 25 56.0	-0.7
MBAR	Mbarara	59.74	251	ceP	P	04 25 58.4	+1.0
CLZ	Clausthal	59.79	316	eP	P	04 25 58.1	+1.1
	comp=Z,27nm,0.8s,baz=83,slow=6.9						
FITZ	Fitzroy Crossi	59.82	135	LR	LR	04 57 21.9	
	comp=Z,37nm,18.4s,baz=318,slow=42						
CTI	Castel Tesino	59.83	309	P	P	04 25 56.2	-1.3
CTI				pmax	pmax		
	comp=Z,13nm,0.7s						
CTI	Castel Tesino	59.83	309	P	P	04 25 56.2	-1.3
CTI				IAmb	IAmb	04 25 57.9	
	comp=Z,13nm,0.7s						
NRDL	Niedersach Rie	59.87	317	eP	P	04 25 58.9	+1.5
	comp=Z,37nm,1.0s,baz=83,slow=6.9						
SQTA	Sankt Quirin	59.93	311	i P	P	04 25 57.4	-0.7
	comp=Z,8.0nm,0.4s,SNR=6.0						
TEOL	Teolo	59.94	308	P	P	04 25 57.1	-1.0
MOTA	Moosalm	59.98	311	i P	P	04 25 57.8	-0.8
	comp=Z,15nm,0.7s,SNR=7.1						
SKAR	Skarslia	60.06	326	eP	P	04 25 58.8	0.0
GTTG	Gottingen	60.08	316	eP	P	04 25 59.9	+1.0
	comp=Z,21nm,1.0s,baz=83,slow=6.9						
RETA	Reutte	60.19	311	i P	P	04 25 59.4	-0.5
	comp=Z,6.7nm,0.6s,SNR=5.1						
CORL	Corleone	60.27	300	P	P	04 25 59.8	-0.8
FETA	Feichten	60.29	310	i P	P	04 25 59.8	-0.9
	comp=Z,8.6nm,0.8s,SNR=5.4						
OSSC	Osservatorio P	60.58	306	P	P	04 26 01.3	-1.3
OSSC				IAmb	IAmb	04 26 03.1	
	comp=Z,9.7nm,0.7s						
ZCCA	Zocca	60.61	307	P	P	04 26 01.6	-1.2
ZCCA				IAmb	IAmb	04 26 05.1	
	comp=Z,13nm,0.8s						
SALO	Salr	60.68	309	P	P	04 26 01.8	-1.4
DAVA	Damuels	60.81	311	i P	P	04 26 03.8	-0.5
	comp=Z,22nm,0.8s,SNR=7.7						
STU	Stuttgart	61.01	313	eP	P	04 26 06.2	+0.9
	comp=Z,36nm,0.7s,baz=83,slow=6.9						
BILL	Bilibino	61.03	25	⇓eP	P	04 26 05.8	+0.6
BILL				e*PP	pP	04 26 09.1	+0.2
BILL						04 28 24.0	
BILL				S	S	04 34 41.0	+17
BILL				pmax	pmax		
	comp=Z,10.0nm,1.4s						
BILL				MLR	MLR		
	comp=Z,156nm,17.0s						
VLC	Villacollemand	61.06	307	P	P	04 26 04.3	-1.6
TNS	Taunus Mts	61.24	314	eP	P	04 26 07.9	+1.0
	comp=Z,15nm,0.8s,baz=83,slow=6.9						
BER	Bergen	61.55	326	eP	P	04 26 09.4	+0.6
MSSA	Maissana	61.64	308	P	P	04 26 08.3	-1.5
BUG	Bochum--Univer	61.77	316	eP	P	04 26 11.4	+1.0
	comp=Z,26nm,1.0s,baz=83,slow=6.9						
AHRW	Bad Neuenahr-A	62.05	315	eP	P	04 26 13.4	+1.1
	comp=Z,36nm,1.3s,baz=83,slow=6.9						
CDF	Champ du Feu	62.32	313	eP	P	04 26 13.6	-0.7
CDF				pmax	pmax		
	comp=Z,27nm,1.4s						
PGF	Pioggiola	62.40	306	eP	P	04 26 13.7	-1.3
PGF				pmax	pmax		
	comp=Z,5.0nm,0.5s						
BTNL	Ternell	62.63	315	dP	P	04 26 17.0	+0.7
MEM	Membach	62.70	315	dP	P	04 26 17.5	+0.8
MEM				dPcP	PcP	04 26 57.5	+2.1
HINF	Hinteralfeld	62.72	312	eP	P	04 26 16.2	-0.8
HINF				pmax	pmax		
	comp=Z,16nm,0.9s						
SENIN	Lac Senin/Sane	62.73	310	P	P	04 26 15.9	-1.4
BHOU	Houvegnez	62.75	315	dP	P	04 26 18.3	+1.2
WLF	Walferdange	62.80	314	dP	P	04 26 17.9	+0.6
	comp=Z,17nm,1.0s						
WLF	Walferdange	62.80	314	P	P	04 26 16.9	-0.4
WLF				pmax	pmax		
	comp=Z,21nm,0.9s						
WLF	Walferdange	62.80	314	eP	P	04 26 18.8	+1.4
	comp=Z,34nm,1.3s,baz=83,slow=6.9						
WLF	Walferdange	62.80	314	P	P	04 26 16.9	-0.4
BEBN	Eben Emael	62.87	315	dP	P	04 26 18.4	+0.6
BEBN				dPcP	PcP	04 26 56.2	+0.2
HAU	Haudompre	63.02	312	eP	P	04 26 18.1	-0.8
HAU				pmax	pmax		
	comp=Z,16nm,0.7s						
BCLA	Clavier	63.18	315	dP	P	04 26 20.0	+0.1
SBF	Sospel	63.21	308	eP	P	04 26 19.8	-0.5
SBF				pmax	pmax		
	comp=Z,34nm,0.9s						
RCHB	Rochefort	63.28	315	dP	P	04 26 21.2	+0.7
LPG	La Plagne	63.30	309	eP	P	04 26 20.8	-0.3
LPG				pmax	pmax		
	comp=Z,35nm,0.8s						
LPL	La Plagne	63.31	309	eP	P	04 26 20.8	-0.3
LPL				pmax	pmax		
	comp=Z,40nm,0.8s						
BGES	Gesves	63.32	315	dP	P	04 26 21.6	+0.8
BNI	Bardonecchia	63.45	309	P	P	04 26 21.7	-0.3
BNI				pmax	pmax		
	comp=Z,18nm,0.9s						
BNI	Bardonecchia	63.45	309	P	P	04 26 21.7	-0.3
MBDF	Montbardon	63.47	309	eP	P	04 26 20.9	-1.2
MBDF				pmax	pmax		
	comp=Z,14nm,0.8s						
CABF	La Chapelle	63.49	311	eP	P	04 26 21.6	-0.6
CABF				pmax	pmax		
	comp=Z,138nm,2.3s						
BMRD	Maredsous	63.54	315	dP	P	04 26 22.4	+0.2
GIVF	Givet	63.55	315	eP	P	04 26 22.1	-0.2
GIVF				pmax	pmax		
	comp=Z,29nm,1.2s						
DOU	Dourbes	63.69	315	dP	P	04 26 24.1	+0.8
FRF	La Foret Royal	63.84	307	eP	P	04 26 23.7	-0.7
FRF				pmax	pmax		
	comp=Z,19nm,0.7s						
KEST	Kesra	63.90	298	P	P	04 26 25.9	+0.8
	comp=Z,52nm,0.9s,baz=347,slow=0.6,SNR=58						
KEST	Kesra	63.90	298	P	P	04 26 25.9	+0.8
	SNR=6.6						
KEST	Kesra	63.90	298	P	P	04 26 24.4	-0.6
BAIF	Baives	63.94	315	eP	P	04 26 24.7	-0.2
BAIF				pmax	pmax		
	comp=Z,25nm,1.2s						
LMR	La Mourre	63.99	307	eP	P	04 26 24.8	-0.6
LMR				pmax	pmax		
	comp=Z,34nm,1.2s						
ORIF	Oris-en-Rattie	64.04	309	eP	P	04 26 25.0	-0.8
ORIF				pmax	pmax		
	comp=Z,6.0nm,0.6s						
NOR	Nord	64.47	351	eP	P	04 26 27.2	-0.7
NOR				IAmb	IAmb	04 26 28.7	
	comp=Z,4.2nm,0.8s						
LOR	Lormes	64.82	312	eP	P	04 26 29.7	-1.1
LOR				pmax	pmax		
	comp=Z,12nm,1.0s						
AVF	Avril sur Loir	65.28	311	eP	P	04 26 32.8	-0.9
AVF				pmax	pmax		
	comp=Z,25nm,1.0s						
TCF	Toulx Ste Croi	66.17	311	eP	P	04 26 39.3	-0.3
TCF				pmax	pmax		
	comp=Z,24nm,1.0s						
CAF	Calviac	66.65	310	eP	P	04 26 39.3	-3.3
CAF				pmax	pmax		
	comp=Z,17nm,1.0s						
WB0	Warramunga Arr	66.75	130	P	P	04 26 43.8	+0.2
WB0				IAmb	IAmb	04 26 46.4	
	comp=Z,10nm,0.9s						
WRA	Warramunga Arr	66.84	130	P	P	04 26 44.4	+0.3
	comp=Z,5.1nm,0.7s,baz=323,slow=6.5,SNR=70						
WRA				PKPPKP	P'P'df	04 55 13.7	+3.6
	comp=Z,1.0nm,0.8s,baz=128,slow=3.1,SNR=5.5						
WRA				LR	LR	04 59 30.2	
	comp=Z,31nm,19.9s,baz=65,slow=39						
WRA	Warramunga Arr	66.84	130	i P	P	04 26 44.7	+0.6
WRA				pmax	pmax		
	comp=Z,4.0nm,0.4s						
WRA	Warramunga Arr	66.84	130	P	P	04 26 43.8	-0.2
WRAB	Tennant Creek	66.84	130	ceP	P	04 26 44.9	+0.8
WRAB				pmax	pmax		
	comp=Z,18nm,1.3s						
WRAB	Tennant Creek	66.84	130	P	P	04 26 43.4	-0.6
WRAB				IAmb	IAmb	04 26 50.6	
	comp=Z,11nm,0.7s						
WB2	Warramunga Arr	66.85	130	P	P	04 26 44.0	-0.1
WB2				IAmb	IAmb	04 26 50.6	
	comp=Z,8.2nm,0.8s						
RJF	Les Rejaudoux	66.91	310	eP	P	04 26 44.2	-0.1
RJF				pmax	pmax		
	comp=Z,20nm,1.0s						
WR0	Warramunga Arr	66.99	130	P	P	04 26 44.4	-0.6
WR0				IAmb	IAmb	04 26 48.7	
	comp=Z,20nm,1.5s						
EKA	Eskdalemuir Ar	66.99	322	P	P	04 26 44.5	-0.1
MTLF	Montolieu	67.00	308	eP	P	04 26 44.5	-0.4
MTLF				pmax	pmax		
	comp=Z,15nm,1.0s						
LDF	La Druitiere	67.05	314	eP	P	04 26 45.1	0.0
LDF				pmax	pmax		
	comp=Z,17nm,0.8s						
GRR	Gorron	67.58	314	eP	P	04 26 47.6	-0.8
GRR				pmax	pmax		
	comp=Z,29nm,1.1s						
DBG	Daneborg	67.65	344	eP	P	04 26 47.6	-0.8
DBG				IAmb	IAmb	04 26 49.6	
	comp=Z,4.7nm,0.6s						
SGMF	Saint Gilles	68.70	314	eP	P	04 26 55.0	-0.5
SGMF				pmax	pmax		
	comp=Z,85nm,1.5s						
ETSF	Etsaut	69.07	308	eP	P	04 26 57.8	-0.2
ETSF				pmax	pmax		
	comp=Z,20nm,1.3s						
ROSF	Rostrenen	69.13	314	eP	P	04 26 57.6	-0.5
ROSF				pmax	pmax		
	comp=Z,107nm,1.6s						
AS31	Alice Springs	69.14	133	P	P	04 26 58.3	-0.2
ASAR	Alice Springs	69.14	133	P	P	04 26 58.8	+0.3
	comp=Z,3.9nm,0.8s,baz=316,slow=6.1,SNR=18						
ASAR	Alice Springs	69.14	133	P	P	04 26 58.0	-0.5
ASAR	Alice Springs	69.14	133	P	P	04 26 58.0	-0.5
SJPF	Ste Jean	69.46	309	eP	P	04 27 00.6	+0.3
SJPF				pmax	pmax		
	comp=Z,11nm,1.2s						
LSZ	Lusaka	70.25	240	P	P	04 27 04.8	-0.8
LSZ				pmax	pmax		
	comp=Z,8.0nm,0.6s						
LSZ	Lusaka	70.25	240	P	P	04 27 04.8	-0.8
LSZ				IAmb	IAmb	04 27 06.5	
	comp=Z,8.0nm,0.6s						
NEEM	North Greenlan	71.85	351	i P	P	04 27 13.6	-1.1
NEEM				IAmb	IAmb	04 27 21.1	
	comp=Z,30nm,0.8s						
A21K	Barrow	72.15	17	P	P	04 27 16.8	+0.7
	baz=305						
EUNU	Eureka	72.29	359	P	P	04 27 16.5	-0.4
EUNU				IAmb	IAmb	04 27 23.3	
	comp=Z,9.9nm,0.9s						
ESBB	Sonseca Array	72.59	306	P	P	04 27 18.4	-1.1
ESDC	Sonseca Array	72.59	306	P	P	04 27 19.4	0.0
	comp=Z,4.7nm,0.9s,baz=60,slow=5.0,SNR=44						
ESDC	Sonseca Array	72.59	306	P	P	04 27 17.7	-1.8
ESDC				IAmb	IAmb	04 27 20.6	
	comp=Z,26nm,1.9s						
PAB	San Pablo	72.92	306	P	P	04 27 20.3	-1.1
PAB				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PAB	San Pablo	72.92	306	P	P	04 27 20.3	-1.1
PAB				IAmb	IAmb	04 27 22.5	
	comp=Z,6.7nm,0.8s						
SUMG	Summit	72.99	345	P	P	04 27 21.6	-0.1
SUMG				pmax	pmax		
	comp=Z,23nm,0.9s						
SUMG	Summit	72.99	345	i P	P	04 27 21.0	-0.6
SUMG				IAmb	IAmb	04 27 23.5	
	comp=Z,20nm,0.8s						
SUMG	Summit	72.99	345	P	P	04 27 21.6	-0.1
MVO	Moncorvo	74.19	308	eP	P	04 27 29.4	+0.5
	comp=Z,21nm,1.6s						
MTE	Manteigas	74.85	308	eP	P	04 27 33.6	+0.9
	comp=Z,31nm,1.8s						
PMRV	Marv??o	75.13	307	eP	P	04 27 34.5	+0.2
ICESG	Greenland Ices	75.58	342	i P	P	04 27 35.5	-1.2
ICESG				IAmb	IAmb	04 27 38.1	
	comp=Z,34nm,0.7s						
TOLK	Toolik Lake Re	75.72	18	P	P	04 27 38.2	+1.0
	baz=311						
TOLK	Toolik Lake Re	75.72	18	P	P	04 27 37.7	+0.5
EVO	Evora	75.94	306	eP	P	04 27 39.8	+0.9
PVAQ	Vaqueiros	76.19	305	eP	P	04 27 40.9	+0.5
	comp=Z,37nm,1.4s						
PCVE	Castro Verde	76.33	305	eP	P	04 27 41.9	+0.8
MESJ	Messejana	76.38	306	eP	P	04 27 42.4	+1.0
PBDV	Barranco-do-Ve	76.41	305	eP	P	04 27 42.2	+0.5
PNCL	Nicolau / Gran	76.48	306	eP	P	04 27 42.7	+0.7
	comp=Z,21nm,1.5s						
H21K	Melozitna Rive	76.69	21	P	P	04 27 43.8	+1.1
	baz=309						
BBOO	Buckleboo	76.96	138	P	P	04 27 44.6	+0.1
BBOO				IAmb	IAmb	04 27 52.1	
	comp=Z,12nm,0.9s						
K20K	Telida	77.71	23	P	P	04 27 50.0	+1.5
	baz=309						
MLY	Manley	77.76	21	P	P	04 27 49.8	+1.1
	baz=311						
BMAR	Burnt Mountain	77.92	18	P	P	04 27 49.8	+0.2
I23K	Minto, Yukon-K	78.12	21	P	P	04 27 54.1	+3.5
	baz=312						
I23K	Minto, Yukon-K	78.12	21	P	P	04 27 50.3	-0.3
I23K				IAmb	IAmb	04 27 55.2	
	comp=Z,5.9nm,0.7s						
LBTB	Lobatse	78.13	233	P	P	04 27 51.4	0.0
LBTB				pmax	pmax		
	comp=Z,12nm,0.8s						
LBTB	Lobatse	78.13	233	P	P	04 27 51.4	0.0
LBTB				IAmb	IAmb	04 27 52.6	
	comp=Z,12nm,0.8s						
A36M	Sachs Harbour	78.20	9	P	P	04 27 51.7	+0.7
	baz=332						
CAST	Castle Rocks	78.36	23	P	P	04 27 53.4	+1.3
	baz=310						
NEA2	Nenana	78.58	21	P	P	04 27 54.4	+1.1
	baz=312						
MDM	Murphy Dome	78.60	21	P	P	04 27 53.0	-0.4
MDM				IAmb	IAmb	04 27 54.9	
	comp=Z,22nm,1.5s						
POKR	Poker Plat Res	78.73	20	P	P	04 27 54.9	+0.8
	baz=314						
TORD	Torodi Ar. Bea	78.75	279	P	P	04 27 54.3	-0.7
	comp=Z,4.4nm,0.7s,baz=50,slow=4.6,SNR=33						
TORD				PKKP	PKKPdf	04 46 39.8	+3.0
	comp=Z,0.8nm,1.1s,baz=238,slow=2.8,SNR=4.1						
TORD	Torodi Ar. Bea	78.75	279	P	P	04 27 53.9	-1.1

PRP	Porcupine Dome	79.03	19	P	P	04 27 57.5	+1.7
	baz=315						
PRP	Porcupine Dome	79.03	19	P	P	04 27 55.6	-0.2
PRP				IAmb	IAmb	04 28 04.1	
	comp=Z,15nm,1.6s						
IL31		79.14	20	P	P	04 27 56.1	-0.2
IL31				IAmb	IAmb	04 28 29.4	
	comp=Z,21nm,1.9s						
ILAR	Eielson Array	79.14	20	P	P	04 27 56.5	+0.1
	comp=Z,1.3nm,0.6s,baz=311,slow=4.5,SNR=20						
ILAR				PP	PP	04 30 53.6	-1.4
	comp=Z,0.9nm,0.9s,baz=311,slow=8.8,SNR=5.8						
ILAR	Eielson Array	79.14	20	P	P	04 27 56.0	-0.3
ILAR	Eielson Array	79.14	20	P	P	04 27 56.0	-0.3
DY2G	Dye2	79.22	342	*e*P	P	04 27 53.4	-3.5
DY2G				IAmb	IAmb	04 28 00.2	
	comp=Z,46nm,1.4s						
SKT	Skwentna	79.49	24	P	P	04 27 58.8	+0.5
	baz=311						
SKT	Skwentna	79.49	24	P	P	04 27 58.0	-0.3
SKT				IAmb	IAmb	04 28 02.3	
	comp=Z,34nm,1.6s						
STKA	Stephens Creek	79.71	134	P	P	04 27 59.6	-0.2
	comp=Z,4.3nm,1.0s,baz=97,slow=16,SNR=4.1						
STKA	Stephens Creek	79.71	134	P	P	04 27 56.5	-3.3
INK	Inuvik	79.90	14	P	P	04 28 01.1	+0.8
	baz=325						
J26L	Joseph Creek	80.34	19	P	P	04 28 03.3	+0.3
	baz=317						
RIDG	Independent Ri	80.51	20	P	P	04 28 04.1	+0.3
	baz=316						
SCRK	Sand Creek	80.60	20	P	P	04 28 04.8	+0.4
	baz=317						
SCRK	Sand Creek	80.60	20	P	P	04 28 03.6	-0.7
SCRK				IAmb	IAmb	04 28 06.8	
	comp=Z,20nm,1.7s						
BOSA	Boshof	80.60	231	P	P	04 28 04.8	0.0
	comp=Z,4.9nm,0.9s,baz=64,slow=4.2,SNR=7.7						
SML	Sawmill	80.73	23	P	P	04 28 06.1	+1.0
	baz=314						
SML	Sawmill	80.73	23	P	P	04 28 05.6	+0.5
SML				IAmb	IAmb	04 28 17.9	
	comp=Z,15nm,0.8s						
EPYK	Eagle Plains	80.75	16	P	P	04 28 04.9	-0.2
	baz=323						
KNK	Knik Glacier	80.96	23	P	P	04 28 07.5	+1.2
	baz=314						
SCM	Sheep Creek Mo	81.06	23	P	P	04 28 07.4	+0.5
	baz=314						
SEW	Seward	81.50	25	P	P	04 28 10.9	+1.8
	baz=313						
KDAK	Kodiak Island	81.83	27	P	P	04 28 12.0	+1.2
	baz=311						
DAWY	Dawson	81.86	18	P	P	04 28 11.6	+0.6
	baz=321						
N25K	Chitina, Valde	82.13	22	P	P	04 28 14.0	+1.5
	baz=317						
KOWA	Kowa	83.12	283	P	P	04 28 17.7	-0.6
KOWA				IAmb	IAmb	04 28 19.1	
	comp=Z,7.5nm,0.8s						
DBIC	Dimbokro	87.41	276	P	P	04 28 39.8	-0.1
	comp=Z,4.3nm,0.6s,baz=53,slow=5.1,SNR=9.0						
DBIC				LR	LR	05 11 30.9	
	comp=Z,95nm,19.4s,baz=216,slow=38						
KIC	Kosan Boka	87.45	276	*e*PKIKP	P	04 28 39.9	-0.2
	comp=Z,16nm,0.9s						
TIC	Toumodi	87.57	276	*e*PKIKP	P	04 28 39.7	-0.9
LIC	Lamto	87.77	276	*e*PKIKP	P	04 28 39.4	-2.2
	comp=Z,46nm,1.4s						
VNA2	Neumayer--Watz	116.98	202	PKPdf	PKPdf	04 34 35.5	-0.4
VNA3	Neumayer Olymp	117.75	201	PKPdf	PKPdf	04 34 36.7	-0.7
TXAR	Lajitas Array	122.49	10	PKP	PKPdf	04 34 48.0	0.0
	comp=Z,0.4nm,0.6s,baz=314,slow=0.3,SNR=10						
SPBC	San Pablo de B	141.43	326	*e*P	PKPdf	04 35 17.1	-6.8
ROSC	El Rosal	142.25	326	PKhKP	PKPpre	04 35 21.5	
	comp=Z,4.4nm,0.5s,baz=337,slow=14,SNR=2.1						
GUY2C	Guyana, Caldas	142.42	328	*e*P	PKPdf	04 35 22.0	-4.2
PLMC	San Jos del P	143.13	329	*e*P	PKPab	04 35 23.0	+0.7
PRAC	Prado	143.50	326	*e*P	PKPab	04 35 23.9	+0.1
ORTC	Ortega, Tolima	143.51	327	*e*P	PKPab	04 35 24.2	+0.4
YOTC	Yotoco, Valle	143.97	328	*e*P	PKPab	04 35 23.9	-1.7
AQDB	Aquidauana	144.13	273	PKPdf	PKPbc	04 35 27.0	+0.6
MACC	Macarena, Meta	144.31	323	*e*P	PKPab	04 35 26.9	+0.1
PLTB	Pedras Altas	144.59	253	PKPdf	PKPab	04 35 27.3	-0.1
MARP	Paez Belalcaza	144.78	327	*e*P	PKPbc	04 35 29.1	+0.1
PCON	Cinco Dias	145.44	327	*e*P	PKPab	04 35 32.0	+0.4
SOTA	Rioblanco	145.71	327	*e*P	PKPdf	04 35 31.9	-0.1
PTLC	Puerto Leguiza	146.47	323	*e*P	PKPdf	04 35 33.2	+0.6
GCUF	Volcan Galeras	146.86	328	*e*P	PKPab	04 35 37.3	+0.4
CPUP	Villa Florida	147.11	264	PKPbc	PKPdf	04 35 34.2	+0.9
	comp=Z,4.5nm,0.9s,baz=38,slow=2.4,SNR=6.2						
CPUP	Villa Florida	147.11	264		PKPdf	04 35 33.2	-0.1
OTAV	Otavalo	148.24	329	*e*P	PKiKP	04 35 40.9	-0.3
LPAZ	La Paz	153.23	290	PKPbc	PKPbc	04 35 50.7	-0.7
	comp=Z,1.4nm,0.7s,baz=185,slow=11,SNR=6.0						
LPAZ	La Paz	153.23	290	PKIKP	PKPbc	04 35 48.3	-3.1
LPAZ	La Paz	153.23	290		PKPbc	04 35 48.3	-3.1
PLCA	Paso Flores	156.59	230	PKP	PKPdf	04 35 47.5	+0.3
	comp=Z,1.8nm,1.0s,baz=135,slow=4.3,SNR=3.0						

MDD 19 04:18:17.0±0.2**, 37°.84N×1°.54W, h0^{km}, mbLg1.5**/9**, Error ellipse: s-maj=3.5km s-min=1.7km az=9.0, PRXIMO, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLOR	Lorca, Murcia	0.21	213	Lg	Lg	04 18 24.0	
	68nm,0.2s,SNR=7.9						
EMUR	La Murta	0.24	89	Pg	Pg	04 18 21.6	+0.1
	3.2nm,0.3s,SNR=12						
EMUR				Lg	Lg	04 18 24.6	
	23nm,0.3s,SNR=17						
CART	Cartagena	0.50	120	P	Pg	04 18 26.9	+0.5
CART				S	Sg	04 18 30.0	-2.9
CART	Cartagena	0.50	120	P	Pg	04 18 26.9	+0.5
CART				S	Sg	04 18 30.0	-2.9
ETOB	Tobarra	0.81	360	Pg	Pg	04 18 32.0	-0.4
	9.9nm,0.6s,SNR=22						
ETOB				Lg	Lg	04 18 46.5	
	12nm,0.3s,SNR=10						
SESP	Santiago Espad	0.84	290	Pg	Pg	04 18 33.2	+0.1
	1.8nm,0.5s,SNR=7.9						
SESP				Lg	Lg	04 18 46.6	
	5.9nm,0.2s,SNR=7.9						
ENIJ	Nijar	1.01	212	Pg	Pb	04 18 37.5	+0.1
	4.0nm,0.3s,SNR=7.9						
ENIJ				Lg	Lg	04 18 53.2	
	5.0nm,0.5s,SNR=7.9						
GORA	Gorafe	1.24	254	Lg	Lg	04 19 01.1	
	5.3nm,0.4s,SNR=7.9						
EBER	Berja	1.43	229	Pg	Pn	04 18 43.8	-0.5
	1.3nm,0.3s,SNR=7.5						
EBER				Lg	Lg	04 19 02.3	
	0.9nm,0.4s,SNR=7.9						
EQUE	Quentar	1.64	248	Pg	Pg	04 18 49.3	+0.9
	0.1nm,0.1s,SNR=7.9						
EQUE				Lg	Lg	04 19 10.1	
	2.7nm,0.4s,SNR=7.9						
ECHE	Chera	1.81	14	Pg	Pb	04 18 50.3	-0.7
	0.0nm,0.0s,SNR=7.9						
ECHE				Lg	Lg	04 19 15.2	
	0.6nm,0.3s,SNR=7.9						
EADA	Adamuz	2.42	279	Pg	Pb	04 19 00.1	-1.3
	0.0nm,0.1s,SNR=7.9						
EADA				Lg	Lg	04 19 35.7	
	1.3nm,0.3s,SNR=7.9						
ESDC	Sonseca Array	2.64	315	Pg	Pg	04 19 06.7	-0.8
	0.4nm,0.2s,baz=131,slow=16,SNR=5.9						
ESDC				Lg	Lg	04 19 41.8	
	0.2nm,0.4s,baz=134,slow=30,SNR=7.9						
PAB	San Pablo	2.78	309	Pn	Pn	04 19 01.0	-1.9
	0.2nm,0.3s,SNR=7.9						
PAB				Pg	Pg	04 19 10.2	-0.1
	0.4nm,0.4s,SNR=7.9						
PAB				Lg	Lg	04 19 44.2	
	0.4nm,0.3s,SNR=7.9						
ETOR	Torete	3.00	353	Pg	Pb	04 19 12.8	+1.3
	0.6nm,0.1s,SNR=4.0						
ETOR				Lg	Lg	04 19 53.1	
	2.2nm,0.3s,SNR=7.9						
ECAB	El Cabril	3.07	276	Pg	Pg	04 19 15.5	-0.4
	0.0nm,0.1s,SNR=4.0						
ECAB				Lg	Lg	04 19 56.6	
	0.3nm,0.3s,SNR=4.0						

LDG ***19*** *04:19:43.0±0.1, 43°.15N×1°.11W, h3^{km}, Md1.5/2, Ml1.5/2, Error ellipse: s-maj=2.6km s-min=1.7km az=167.0*

MDD 19 04:19:43.2±0.3**, 43°.14N×1°.09W, h0^{km}, mbLg1.3**/8**, 2C, Error ellipse: s-maj=3.6km s-min=2.2km az=6.0, PRXIMO, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SJPF	Ste Jean	0.10	255	*e*Pg	Pg	04 19 45.3	+0.1
SJPF				*e*Sg	Sg	04 19 47.2	+0.7
SJPF	Ste Jean	0.10	255	Pg	Pg	04 19 45.3	+0.1
SJPF				Lg	Lg	04 19 47.2	
ATE	Arette	0.29	101	Pg	Pg	04 19 48.4	-0.3
	1.7nm,0.1s,SNR=7.9						
ATE				Lg	Lg	04 19 52.9	
	8.2nm,0.1s,SNR=7.9						
EORO	Oroz-Betelu	0.30	213	⇑Pg	Pg	04 19 48.5	-0.4
	1.6nm,0.1s,SNR=18						
EORO				Lg	Lg	04 19 53.2	
	9.6nm,0.1s,SNR=11						
EALK	Alkurruntz	0.32	284	⇑Pg	Pg	04 19 48.9	-0.4
	2.2nm,0.1s,SNR=18						
EALK				Lg	Lg	04 19 53.1	
	22nm,0.2s,SNR=7.9						
ETSF	Etsaut	0.46	122	*e*Pg	Pg	04 19 51.5	-0.4
ETSF				*e*Sg	Sg	04 19 56.8	-1.0
	6.0nm,0.3s						
ETSF	Etsaut	0.46	122	Pg	Pg	04 19 51.5	-0.4
ETSF	Etsaut	0.46	122	Lg	Lg	04 19 56.8	
	3.0nm,0.3s						
EARA	Aranguren	0.52	225	Lg	Lg	04 20 01.1	
	4.9nm,0.2s,SNR=4.0						
EPF	Esparros	1.05	96	*e*Pg	Pg	04 20 03.4	+0.1
EPF				*e*Sg	Sg	04 20 17.1	+0.2
	0.8nm,0.2s						
EPF	Esparros	1.05	96	Pg	Pg	04 20 03.4	+0.1
EPF				Lg	Lg	04 20 17.1	
	0.4nm,0.2s						
ECHI	Chisagues Biel	1.05	116	Pg	Pb	04 20 04.6	+0.2
	0.1nm,0.0s,SNR=7.9						
ECHI				Lg	Lg	04 20 15.5	
	0.9nm,0.1s,SNR=7.9						
ELAN	Lanestosa	1.72	274	Pg	Pn	04 20 14.4	0.0
	SNR=7.9						
ELAN				Lg	Lg	04 20 37.0	
	SNR=7.9						
CSOR	Sort	1.81	114	Pg	Pb	04 20 17.1	-0.1
	0.1nm,0.2s,SNR=4.0						
CSOR				Lg	Lg	04 20 40.4	
	3.3nm,0.3s,SNR=7.9						
CLLI	Llivia	2.35	105	Lg	Lg	04 20 57.7	
	SNR=7.9						
EPOB	Poblet	2.40	137	Lg	Lg	04 20 57.2	
	0.1nm,0.1s,SNR=7.9						
ETOR	Torete	2.43	198	Lg	Lg	04 20 59.4	
	1.8nm,0.2s,SNR=7.9						
RJF	Les Rejaudoux	2.86	40	*e*P	Pn	04 20 30.7	+0.6
RJF	Les Rejaudoux	2.86	40	*e*Pg	Pg	04 20 36.6	-1.4
RJF				*e*Sg	Sg	04 21 13.2	-1.8
	0.5nm,0.2s						
RJF	Les Rejaudoux	2.86	40	P	Pn	04 20 30.7	+0.6
CAF	Calviac	2.89	51	*e*Pn	Pn	04 20 28.1	-2.4
CAF	Calviac	2.89	51	*e*Pg	Pb	04 20 36.1	+0.5
CAF	Calviac	2.89	51	Pg	Pb	04 20 36.1	+0.5
CAF	Calviac	2.89	51	Pn	Pn	04 20 28.1	-2.4

MDD ***19*** *04:50:57.3±0.5, 42°.18N×3°.24E, h8^{km}±3^{km}, mbLg2.6/21, Error ellipse: s-maj=4.4km s-min=2.8km az=122.0, PRXIMO*

MDD EMS: II-III INTENSIDAD MAXIMA.

MRB ***19*** *04:50:57.6±0.3, 42°.18N×3°.19E, ML2.6/26, Error ellipse: s-maj=2.4km s-min=0.9km az=279.0*

LDG ***19*** *04:50:57.2±0.1, 42°.18N×3°.22E, h2^{km}, Ml2.9/36, Error ellipse: s-maj=1.4km s-min=0.9km az=144.0*

STR ***19*** *04:50:58.8±0.6, 42°N±5°×°±°, h17^{km}±3^{km}, MLv2.8/18, preliminary*

ISC 19 04:50:56.1±1.0**, 42°.22N**±0°.02×**3°.27E**±0°.02**, h15**^{km}±2^{km}**, n164, σ1ˢ.91**/269**, 3C-4D, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPAL	Palau Saverder	0.12	322	P	Pg	04 51 00.5	+0.8
CPAL				S	Sg	04 51 02.5	+0.5
	4µm,0.1s						
EJON	La Jonquera	0.36	310	⇓Pg	Pg	04 51 04.3	+0.7
EJON	La Jonquera	0.36	310	⇓Pg	Pg	04 51 04.3	+0.7
	121nm,0.1s,SNR=18						
EJON				Lg	Lg	04 51 09.1	
	138nm,0.1s,SNR=23						
SJAF	Saint Jean de	0.39	314	Pg	Pg	04 51 04.9	+0.8
SJAF				Sg	Sg	04 51 10.3	+0.9
SJAF	Saint Jean de	0.39	314	⇓*i*P	Pg	04 51 04.8	+0.8
SJAF				S	Sg	04 51 10.3	+0.9
	143nm,0.1s						
SJAF	Saint Jean de	0.39	314	⇓Pg	Pg	04 51 04.9	+0.8
	167nm,0.1s,SNR=18						
SJAF				Lg	Lg	04 51 10.3	
	346nm,0.0s,SNR=7.9						
CCAS	Cassa de la Se	0.43	219	⇑*i*P	Pg	04 51 04.5	-0.2
CCAS				S	Sg	04 51 09.3	-1.1
	163nm,0.2s						
CBEU	Beuda	0.44	276	P	Pg	04 51 04.9	0.0
CBEU				S	Sg	04 51 10.7	-0.2
	691nm,0.3s						
FILF	Fillols	0.63	304	P	Pb	04 51 10.3	+1.5
FILF				S	Sb	04 51 20.2	+2.9
	136nm,0.1s						
CFON	Fontmartina	0.77	234	P	Pg	04 51 10.7	-0.3
CFON				S	Sg	04 51 20.9	-0.2
	571nm,0.1s						
CFON	Fontmartina	0.77	234	⇑Pg	Pg	04 51 10.7	-0.3
	165nm,0.1s,SNR=18						
CFON				Lg	Lg	04 51 20.5	
	564nm,0.1s,SNR=6.6						
CBRU	Bruguera	0.81	275	P	Pg	04 51 11.9	+0.1
CBRU				S	Sg	04 51 22.5	0.0
	98nm,0.2s						
CORI	Orista	0.94	255	⇑*i*P	Pg	04 51 13.9	-0.3
CORI				S	Sg	04 51 26.0	-0.5
	276nm,0.3s						
CLLI	Llivia	0.99	286	P	Pg	04 51 14.9	-0.4
CLLI				S	Sg	04 51 28.4	+0.1
	75nm,0.2s						
CLLI	Llivia	0.99	286	Pg	Pg	04 51 15.2	-0.1
	16nm,0.1s,SNR=325						
CLLI				Lg	Lg	04 51 28.2	
	60nm,0.1s,SNR=30						
VILA	Vilada	1.02	266	P	Pn	04 51 24.4	+8.5
VILA				S	Sn	04 51 44.3	+14
	204nm,0.3s						
FNEB	Nbias	1.10	309	Pg	Pg	04 51 17.4	+0.2
FNEB				Sn	Sg	04 51 32.6	+1.0
FNEB	Nbias	1.10	309	P	Pg	04 51 17.8	+0.6
FNEB				S	Sg	04 51 32.3	+0.6
FBR	Fabra	1.17	227	P	Pg	04 51 18.0	-0.6
FBR				S	Sg	04 51 33.0	-0.8
	187nm,0.1s						
ARBS	La Rabassa	1.29	281	P	Pn	04 51 20.8	+1.0
ARBS				S	Sg	04 51 37.9	0.0
	205nm,0.3s						
PAND	Andorre	1.31	284	Pg	Pn	04 51 21.0	+1.0
PAND				Sn	Sb	04 51 38.2	+1.0
EMIR	Miracle	1.33	258	Pg	Pn	04 51 21.2	+1.1
EMIR				Lg	Lg	04 51 38.1	
EMIR	Miracle	1.33	258	Pg	Pn	04 51 21.2	+1.1
	26nm,0.1s,SNR=28						
EMIR				Lg	Lg	04 51 38.1	
	116nm,0.1s,SNR=16						
MTLF	Montolieu	1.36	326	*e*Pn	Pn	04 51 20.8	+0.2
MTLF	Montolieu	1.36	326	*e*Pg	Pn	04 51 22.7	+2.1
MTLF				*e*Sn	Sb	04 51 38.2	-0.4
MTLF				*e*Sg	Sn	04 51 40.3	+1.9
	41nm,0.2s						
MTLF	Montolieu	1.36	326	Pn	Pn	04 51 21.3	+0.8
MTLF				Pg	Pn	04 51 22.7	+2.1
MTLF	Montolieu	1.36	326	Sn	Sb	04 51 38.0	-0.6
MTLF	Montolieu	1.36	326	Pg	Pn	04 51 22.7	+2.1
MTLF				Lg	Lg	04 51 40.3	
	21nm,0.2s						
CORG	Organya	1.45	271	P	Pn	04 51 22.7	+1.0
CORG				S	Sn	04 51 42.1	+1.6
	60nm,0.1s						
CEST	Esterri de Car	1.54	285	P	Pn	04 51 24.3	+1.2
CEST				S	Sn	04 51 44.9	+2.1
	87nm,0.2s						
CSOR	Sort	1.59	276	P	Pn	04 51 25.5	+1.8
CSOR				S	Sn	04 51 46.4	+2.3
	111nm,0.2s						
CSOR	Sort	1.59	276	Pg	Pb	04 51 26.4	+1.2
	7.3nm,0.1s,SNR=148						
CSOR				Lg	Lg	04 51 46.9	
	122nm,0.2s,SNR=5.0						
EPOB	Poblet	1.85	243	P	Pn	04 51 29.2	+2.0
EPOB				S	Sn	04 51 52.1	+1.6
	36nm,0.2s						
EPOB	Poblet	1.85	243	Pn	Pn	04 51 27.9	+0.6
	0.6nm,0.1s,SNR=60						
EPOB				Pg	Pn	04 51 29.3	+2.0
	1.7nm,0.1s,SNR=7.9						
EPOB				Lg	Lg	04 51 52.9	
	27nm,0.2s,SNR=6.5						
CTRE	Tremp	1.85	274	P	Pn	04 51 29.1	+1.7
CARA	Val d'Aran	1.88	286	*e*P	Pn	04 51 29.5	+1.8
LASF	Ste Croix	1.91	13	*e*Pn	Pn	04 51 29.1	+1.0
LASF	Ste Croix	1.91	13	*e*Pg	Pb	04 51 33.4	+2.8
LASF				*e*Sn	Sn	04 51 53.8	+1.9
LASF				*e*Sg	Sb	04 51 58.6	+4.3
	26nm,0.3s						
LASF	Ste Croix	1.91	13	Pg	Pb	04 51 33.4	+2.8
LASF				Lg	Lg	04 51 58.6	
	13nm,0.3s						
TRBF	Trabuc cave	1.96	15	Pn	Pn	04 51 29.6	+1.0
TRBF				Pg	Pb	04 51 32.0	+0.7
ASEAF	Site Antares,	2.22	74	Pn	Pn	04 51 32.1	+0.2
ASEAF				Sn	Sn	04 51 56.8	-2.2
EPF	Esparros	2.31	292	*e*P	Pn	04 51 36.7	+3.1
EPF	Esparros	2.31	292	*e*Pg	Pb	04 51 40.2	+2.8
EPF				*e*Sn	Sn	04 52 01.4	-0.3
EPF				*e*Sg	Sb	04 52 08.8	+3.1
	21nm,0.3s						
EPF	Esparros	2.31	292	Pg	Pb	04 51 40.2	+2.8
ARTF	Artigues	2.31	53	Pn	Pn	04 51 35.2	+1.6
ECHI	Chisagues Biel	2.32	282	Pn	Pn	04 51 35.8	+2.0
ECHI	Chisagues Biel	2.32	282	P	Pn	04 51 35.7	+1.9
ECHI	Chisagues Biel	2.32	282	Pn	Pn	04 51 35.5	+1.7
	0.2nm,0.1s,SNR=7.9						
ECHI				Pg	Pb	04 51 38.8	+1.2
	1.5nm,0.1s,SNR=7.9						
ECHI				Lg	Lg	04 52 08.2	
	9.2nm,0.1s,SNR=7.9						
RUSF	Rustrel	2.37	43	Pn	Pn	04 51 36.4	+2.0
BSTF	la Bastide-des	2.41	46	Pn	Pn	04 51 36.0	+1.1
SMRF	Simiane la Rot	2.44	43	*e*Pn	Pn	04 51 37.8	+2.4
SMRF				*e*Sg	Sb	04 52 14.1	+4.6
	14nm,0.3s						
SMRF	Simiane la Rot	2.44	43	Pn	Pn	04 51 37.8	+2.4
SMRF				Lg	Lg	04 52 14.1	
	14nm,0.3s						
ETOS	Mallorca	2.47	188	Pn	Pn	04 51 35.6	-0.2
	0.5nm,0.1s,SNR=9.1						
ETOS				Sn	Sn	04 52 02.2	-3.5
	2.4nm,0.2s,SNR=10						
ERTA	Horta de San J	2.53	241	Pn	Pn	04 51 36.9	+0.2
	0.3nm,0.1s,SNR=7.9						
ERTA				Pg	Pb	04 51 43.2	+1.9
	0.6nm,0.1s,SNR=7.9						
ERTA				Lg	Lg	04 52 15.5	
	8.8nm,0.1s,SNR=7.9						
MLYF	Mely	2.55	45	Pn	Pn	04 51 39.4	+2.6
MONQ	Montcuq	2.63	326	Pn	Pn	04 51 39.1	+1.2
MONQ				Pg	Pb	04 51 46.2	+3.3
LMR	La Mourre	2.64	64	*e*Pn	Pn	04 51 38.8	+0.8
LMR				*e*Sn	Sn	04 52 09.4	-0.3
	8.0nm,0.2s						
LMR	La Mourre	2.64	64	Pn	Pn	04 51 38.8	+0.8
LMR				Sn	Sn	04 52 09.4	-0.3
	4.0nm,0.2s						
BLAF	les Blancs	2.67	49	Pn	Pn	04 51 40.5	+1.9
FRF	La Foret Royal	2.83	60	*e*Pn	Pn	04 51 41.2	+0.6
FRF				*e*Sn	Sn	04 52 13.4	-1.0
	8.1nm,0.3s						
FRF	La Foret Royal	2.83	60	Pn	Pn	04 51 41.2	+0.6
FRF				Sn	Sn	04 52 13.4	-1.0
	4.1nm,0.3s						
VIVF	Saint-Julien-l	2.83	21	*e*Pn	Pn	04 51 41.9	+1.2
VIVF	Saint-Julien-l	2.83	21	*e*Pg	Pg	04 51 50.7	+0.4
VIVF				*e*Sn	Sn	04 52 15.9	+1.3
VIVF				*e*Sg	Sg	04 52 27.3	+0.3
	12nm,0.2s						
VIVF	Saint-Julien-l	2.83	21	Pn	Pn	04 51 41.9	+1.2
VIVF				Pg	Pg	04 51 50.7	+0.4
VIVF				Sn	Sn	04 52 15.9	+1.3
VIVF				Lg	Lg	04 52 27.3	
	5.8nm,0.2s						
CAF	Calviac	2.85	343	*e*Pn	Pn	04 51 42.5	+1.5
CAF	Calviac	2.85	343	*e*Pg	Pb	04 51 50.6	+4.0
CAF				*e*Sn	Sn	04 52 14.9	-0.1
CAF				*e*Sg	Sg	04 52 27.0	-0.5
	16nm,0.2s						
CAF	Calviac	2.85	343	Pn	Pn	04 51 42.5	+1.5
CAF				Pg	Pb	04 51 50.6	+4.0
CAF				Sn	Sn	04 52 14.9	-0.1
ETSF	Etsaut	2.91	285	*e*P	Pn	04 51 45.3	+3.5
ETSF	Etsaut	2.91	285	*e*Pg	Pb	04 51 50.8	+3.2
ETSF				*e*Sn	Sn	04 52 16.1	-0.4
ETSF				*e*Sg	Sb	04 52 27.6	+4.6
	31nm,0.4s						
ETSF	Etsaut	2.91	285	P	Pn	04 51 45.3	+3.5
ETSF				Pg	Pb	04 51 50.8	+3.2
ETSF				Sn	Sn	04 52 16.1	-0.4
OGDI	Digne	2.92	49	Pn	Pn	04 51 43.4	+1.4
LBL	Lubilhac	3.02	360	Pn	Pn	04 51 44.0	+0.7
ECOL	Islas Columbre	3.03	221	P	Pn	04 51 45.4	+2.0
ATE	Arette	3.05	288	Pn	Pn	04 51 46.6	+2.8
ATE				Pg	Pg	04 51 54.1	-0.4
ATE	Arette	3.05	288	P	Pn	04 51 45.9	+2.1
ATE	Arette	3.05	288	Pn	Pn	04 51 45.4	+1.6
	0.1nm,0.2s,SNR=7.9						
ATE				Pg	Pg	04 51 54.1	-0.4
	1.0nm,0.1s,SNR=7.9						
ATE				Lg	Lg	04 52 32.0	
	15nm,0.2s,SNR=7.9						
CALF	Calern	3.09	59	Pn	Pn	04 51 46.1	+1.7
LFF	La Frestale	3.28	327	*e*Pn	Pn	04 51 48.2	+1.3
LFF	La Frestale	3.28	327	*e*Pg	Pb	04 51 58.1	+4.1
LFF				*e*Sn	Sn	04 52 25.2	-0.5
LFF				*e*Sg	Sg	04 52 40.8	-0.7
	23nm,0.4s						
LFF	La Frestale	3.28	327	Pn	Pn	04 51 48.2	+1.3
LFF				Pg	Pb	04 51 58.1	+4.1
LFF				Sn	Sn	04 52 25.2	-0.5
LFF				Lg	Lg	04 52 40.8	
	12nm,0.4s						
ORIF	Oris-en-Rattie	3.30	34	*e*Pn	Pn	04 51 49.4	+2.1
ORIF				*e*Sn	Sn	04 52 24.2	-2.1
	1.5nm,0.3s						
ORIF	Oris-en-Rattie	3.30	34	Pn	Pn	04 51 50.4	+3.1
ORIF	Oris-en-Rattie	3.30	34	Pn	Pn	04 51 49.4	+2.1
RJF	Les Rejaudoux	3.34	338	*e*Pn	Pn	04 51 48.9	+1.2
RJF	Les Rejaudoux	3.34	338	*e*Pg	Pg	04 51 59.6	-0.4
RJF				*e*Sn	Sn	04 52 26.3	-0.8
RJF				*e*Sg	Sg	04 52 42.1	-1.1
	14nm,0.2s						
RJF	Les Rejaudoux	3.34	338	Pn	Pn	04 51 48.9	+1.2
RJF				Pg	Pg	04 51 59.6	-0.4
RJF				Sn	Sn	04 52 26.3	-0.8
EMOS	Mosqueruela	3.37	238	P	Pn	04 51 49.8	+1.5
EMOS				S	Sn	04 52 29.1	+1.0
	5.3nm,0.5s						
EMOS	Mosqueruela	3.37	238	Pn	Pn	04 51 49.4	+1.2
	0.3nm,0.1s,SNR=7.9						
EMOS				Pg	Pb	04 51 58.8	+3.2
	3.1nm,0.2s,SNR=15						
EMOS				Lg	Lg	04 52 42.3	
	2.1nm,0.2s,SNR=7.9						
ISO	Isola	3.39	53	Pn	Pn	04 51 50.8	+2.2
SJPF	Ste Jean	3.43	287	*e*Pn	Pn	04 51 52.2	+3.2
SJPF	Ste Jean	3.43	287	*e*Pg	Pb	04 52 00.2	+3.7
SJPF				*e*Sn	Sn	04 52 28.6	-0.8
SJPF				*e*Sg	Sg	04 52 44.0	-2.3
	22nm,0.6s						
SJPF	Ste Jean	3.43	287	Pg	Pb	04 52 00.2	+3.7
SJPF				Sn	Sn	04 52 28.6	-0.8
SURF	Saint Ours	3.44	48	Pn	Pn	04 51 51.5	+2.2
SPIF	crte de Spivo	3.44	56	Pn	Pn	04 51 50.9	+1.7
EORO	Oroz-Betelu	3.45	283	Pn	Pn	04 51 51.1	+1.9

	0.1nm,0.1s,SNR=6.1						
EORO				Pg	Pb	04 52 00.7	+3.8
	0.1nm,0.1s,SNR=10						
EORO				Lg	Lg	04 52 47.3	
	15nm,0.2s,SNR=5.0						
SBF	**Sospel**	3.47	60	*e*Pn	Pn	04 51 50.2	+0.6
SBF				*e*Sn	Sn	04 52 29.3	-1.1
	4.1nm,0.2s						
SBF				*e*Sg	Sb	04 52 44.4	+5.2
SBF	**Sospel**	3.47	60	Pn	Pn	04 51 50.2	+0.6
SBF				Sn	Sn	04 52 29.3	-1.1
	2.0nm,0.2s						
TURF	**col de Turini**	3.50	58	Pn	Pn	04 51 51.7	+1.7
EIBI	**Ibiza**	3.50	205	Pn	Pn	04 51 49.8	-0.2
	0.7nm,0.2s,SNR=9.3						
EIBI				Sn	Sn	04 52 26.4	-4.7
	9.5nm,0.2s,SNR=14						
PYM	**Petit Puy Mans**	3.54	357	Pg	Pg	04 52 04.9	+1.0
PYM	**Petit Puy Mans**	3.54	357	Pn	Pn	04 51 52.4	+1.9
MBDF	**Montbardon**	3.58	44	*e*Pn	Pn	04 51 53.8	+2.7
MBDF	**Montbardon**	3.58	44	Pn	Pn	04 51 53.8	+2.7
EALK	**Alkurruntz**	3.66	288	Pn	Pn	04 51 54.9	+2.8
EALK	**Alkurruntz**	3.66	288	Pn	Pn	04 51 54.6	+2.4
	0.5nm,0.1s,SNR=7.2						
EALK				Pg	Pg	04 52 05.2	-0.9
	0.4nm,0.1s,SNR=5.0						
EALK				Lg	Lg	04 52 53.0	
	39nm,0.3s,SNR=6.6						
OGSM	**Saint Maurice**	3.82	27	Pn	Pn	04 51 56.6	+2.3
OGMO	**Fort Saint-Gob**	3.88	38	Pn	Pn	04 51 59.4	+4.2
LPG	**La Plagne**	4.14	36	*e*Pn	Pn	04 51 59.9	+1.0
LPG	**La Plagne**	4.14	36	Pn	Pn	04 51 59.9	+1.0
TCF	**Toulx Ste Croi**	4.14	350	*e*Pn	Pn	04 52 00.2	+1.4
TCF	**Toulx Ste Croi**	4.14	350	*e*Pg	Pg	04 52 15.0	-0.4
TCF				*e*Sn	Sn	04 52 44.9	-2.0
TCF				*e*Sg	Sg	04 53 07.8	-1.2
	8.7nm,0.4s						
TCF	**Toulx Ste Croi**	4.14	350	Pn	Pn	04 52 00.2	+1.4
TCF				Pg	Pg	04 52 15.0	-0.4
TCF				Sn	Sn	04 52 44.9	-2.0
ECHE	**Chera**	4.14	232	Pn	Pn	04 51 59.8	+1.0
	1.6nm,0.3s,SNR=7.9						
ECHE				Pg	Pg	04 52 13.4	-2.1
	0.1nm,0.1s,SNR=7.9						
ECHE				Lg	Lg	04 53 06.2	
	0.3nm,0.2s,SNR=7.9						
LPL	**La Plagne**	4.14	36	*e*P	Pn	04 52 03.0	+4.0
ETOR	**Torete**	4.23	253	Pn	Pn	04 52 00.9	+0.8
	5.0nm,0.2s,SNR=5.5						
ETOR				Pg	Pb	04 52 13.5	+3.3
	0.9nm,0.1s,SNR=8.4						
ETOR				Sn	Sn	04 52 48.2	-1.1
	1.6nm,0.1s,SNR=7.9						
ETOR				Lg	Lg	04 53 09.4	
	12nm,0.3s,SNR=7.9						
PGF	**Pioggiola**	4.26	84	*e*Pn	Pn	04 51 59.0	-1.4
PGF				*e*Sn	Sn	04 52 43.3	-6.6
	11nm,0.3s						
PGF	**Pioggiola**	4.26	84	Pn	Pn	04 52 00.2	-0.2
BGF	**Bois d'Agland**	4.35	356	*e*Pn	Pn	04 52 06.1	+4.5
BGF	**Bois d'Agland**	4.35	356	*e*Pg	Pg	04 52 19.1	-0.3
BGF				*e*Sn	Sn	04 52 50.6	-1.4
BGF				*e*Sg	Sg	04 53 13.3	-2.4
	20nm,0.4s						
BGF	**Bois d'Agland**	4.35	356	Pg	Pg	04 52 19.1	-0.3
BGF				Sn	Sn	04 52 50.6	-1.4
CORF	**Corte**	4.37	87	Pn	Pn	04 52 02.2	+0.3
SMF	**Signal de Mont**	4.45	5	*e*Pn	Pn	04 52 04.2	+1.3
SMF	**Signal de Mont**	4.45	5	*e*Pg	Pg	04 52 21.0	-0.2
SMF				*e*Sn	Sn	04 52 53.3	-1.1
SMF				*e*Sg	Sg	04 53 17.3	-1.5
	4.0nm,0.3s						
SMF	**Signal de Mont**	4.45	5	Pn	Pn	04 52 04.2	+1.3
SMF				Pg	Pg	04 52 21.0	-0.2
SMF				Sn	Sn	04 52 53.3	-1.1
SMPL	**Sampolo**	4.48	90	Pn	Pn	04 52 03.5	+0.2
AVF	**Avril sur Loir**	4.58	1	*e*Pn	Pn	04 52 05.0	+0.3
AVF	**Avril sur Loir**	4.58	1	*e*Pg	Pg	04 52 23.1	-0.5
AVF				*e*Sn	Sn	04 52 56.7	-0.8
AVF				*e*Sg	Sg	04 53 20.1	-2.8
	4.6nm,0.3s						
AVF	**Avril sur Loir**	4.58	1	Pn	Pn	04 52 05.0	+0.3
AVF				Pg	Pg	04 52 23.1	-0.5
AVF				Sn	Sn	04 52 56.7	-0.8
CHIF	**Chize**	4.72	327	Pn	Pn	04 52 08.0	+1.3
GIMEL	**St. Georges /**	4.82	25	Pn	Pn	04 52 10.5	+2.3
CABF	**La Chapelle**	4.84	24	*e*Pn	Pn	04 52 10.3	+1.9
CABF				*e*Sg	Sg	04 53 30.1	-1.2
	1.0nm,0.3s						
CABF	**La Chapelle**	4.84	24	Pn	Pn	04 52 10.3	+1.9
CABF				Lg	Lg	04 53 30.1	
	0.0nm,0.3s						
SSF	**Saint Saulge**	4.85	2	*e*Pn	Pn	04 52 10.0	+1.6
SSF	**Saint Saulge**	4.85	2	*e*Pg	Pg	04 52 27.8	-1.1
SSF				*e*Sg	Sg	04 53 30.0	-1.6
	6.9nm,0.5s						
SSF	**Saint Saulge**	4.85	2	Pn	Pn	04 52 10.0	+1.6
SSF				Pg	Pg	04 52 27.8	-1.1
MFF	**Saint Martin d**	5.02	332	*e*Pn	Pn	04 52 11.3	+0.5
MFF	**Saint Martin d**	5.02	332	*e*Pg	Pg	04 52 30.3	-1.9
MFF				*e*Sn	Sn	04 53 06.3	-2.2
MFF				*e*Sg	Sg	04 53 35.0	-2.2
	1.4nm,0.2s						
MFF	**Saint Martin d**	5.02	332	Pn	Pn	04 52 12.0	+1.2
MFF	**Saint Martin d**	5.02	332	Pn	Pn	04 52 11.3	+0.5
MFF				Pg	Pg	04 52 30.3	-1.9
MFF				Sn	Sn	04 53 06.3	-2.2
ELAN	**Lanestosa**	5.04	284	Lg	Lg	04 53 34.8	
	0.3nm,0.2s,SNR=7.9						
LOR	**Lormes**	5.07	5	*e*Pn	Pn	04 52 11.8	+0.3
LOR	**Lormes**	5.07	5	*e*Pg	Pg	04 52 33.0	-0.1
	baz=182						
LOR				*e*Sg	Sg	04 53 36.8	-1.9
	3.7nm,0.3s,baz=193						
LOR	**Lormes**	5.07	5	Pn	Pn	04 52 11.8	+0.3
HYF	**Humbligny**	5.07	355	*e*Sg	Sg	04 53 37.4	-1.4
ETOB	**Tobarra**	5.12	227	Pn	Pn	04 52 12.4	+0.2
	0.8nm,0.4s,SNR=7.9						
BRANT	**Les Verrieres**	5.25	25	Pn	Pn	04 52 15.8	+1.7
ESDC	**Sonseca Array**	6.03	248	Pn	Pn	04 52 27.2	+2.5
	0.2nm,0.1s,baz=63,slow=14,SNR=3.7						
ESDC				Lg	Lg	04 54 03.8	
	0.4nm,0.2s,baz=61,slow=30,SNR=4.7						
SESP	**Santiago Espad**	6.04	229	Lg	Lg	04 54 08.2	
	1.2nm,0.2s,SNR=7.9						
HINF	**Hinteralfeld**	6.15	23	*e*Pn	Pn	04 52 27.0	+0.7
HINF	**Hinteralfeld**	6.15	23	Pn	Pn	04 52 27.0	+0.7
EARI	**Arriondas**	6.33	283	Pn	Pn	04 52 30.3	+1.5
	0.2nm,0.1s,SNR=7.9						
PAB	**San Pablo**	6.36	248	Pn	Pn	04 52 28.8	-0.4
	0.5nm,0.4s,SNR=7.9						
PAB				Lg	Lg	04 54 14.5	
	1.2nm,0.3s,SNR=7.9						
LDF	**La Druitiere**	6.81	341	*e*Pn	Pn	04 52 35.6	+0.3
LDF				*e*Sg	Sg	04 54 32.5	-1.9
	0.3nm,0.1s						
GRR	**Gorron**	6.82	336	*e*Pn	Pn	04 52 37.1	+1.6
GRR				*e*Sn	Sn	04 53 49.5	-3.3
	1.4nm,0.3s						
GRR				*e*Sg	Sg	04 54 32.3	-2.6
	0.7nm,0.2s						
GRR	**Gorron**	6.82	336	Pn	Pn	04 52 37.1	+1.6
GRR				Sn	Sn	04 53 49.5	-3.3
	0.7nm,0.3s						
FLN	**La Foliniere**	7.06	339	*e*Sg	Sg	04 54 39.0	-3.4
	0.8nm,0.3s						
QUIF	**Quistinic**	7.29	324	*e*Pn	Pn	04 52 42.5	+0.5
QUIF	**Quistinic**	7.29	324	*e*Pg	Pg	04 53 11.0	-4.6
QUIF				*e*Sn	Sn	04 54 01.9	-2.5
QUIF				*e*Sg	Sg	04 54 46.8	-3.2
	1.3nm,0.4s						
QUIF	**Quistinic**	7.29	324	Pn	Pn	04 52 42.5	+0.5
QUIF				Pg	Pg	04 53 11.0	-4.6
QUIF				Sn	Sn	04 54 01.9	-2.5
SGMF	**Saint Gilles**	7.30	328	*e*Pn	Pn	04 52 41.9	-0.2
SGMF				*e*Sn	Sn	04 54 01.9	-2.8
SGMF				*e*Sg	Sg	04 54 46.2	-4.0
	1.9nm,0.4s						
SGMF	**Saint Gilles**	7.30	328	Pn	Pn	04 52 41.9	-0.2
SGMF				Sn	Sn	04 54 01.9	-2.8
ECAL	**Calabor**	7.45	271	Lg	Lg	04 54 49.9	
	0.3nm,0.1s,SNR=7.9						
ROSF	**Rostrenen**	7.66	325	*e*Pn	Pn	04 52 47.5	+0.5
ROSF				*e*Sn	Sn	04 54 09.4	-4.1
	0.4nm,0.2s						
ROSF	**Rostrenen**	7.66	325	Pn	Pn	04 52 47.5	+0.5
ROSF				Sn	Sn	04 54 09.4	-4.1
	0.2nm,0.2s						

IDC ***19*** *04:52:31.2±0.9, 51°.56N×173°.30W, h0^{km}, mb4.0/16, mb1 4.1/17, mb1mx3.9/54, mbtmp3.9/17, ML4.2/1, Error ellipse: s-maj=25.9km s-min=16.6km az=1.0*

AEIC ***19*** *04:52:38±7.7, 51°.65N±0°.03×173°.77W±0°.07, h4^{km}±4^{km}, Error ellipse: s-maj=6.6km s-min=4.7km az=81.0*

NEIC ***19*** *04:52:38.1±1.2, 51°.71N±0°.08×173°.35W±0°.09, h41^{km}±10^{km}, mb3.7/8, ML3.0/14(AEIC), Error ellipse: s-maj=12.6km s-min=7.3km az=195.0*

ISC 19 04:52:36.8±0.7**, 51°.6N**±0°.1×**173°.27W**±0°.06**, h37**^{km}**, n46, σ0^{s}.91**/43**, mb4.0**/16**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATKA	**Atka Island**	0.83	317		Pn	04 52 51.8	-0.2
ATKA					Sn	04 53 01.7	-1.3
KOFP	**Korovin Flat P**	0.85	323		Pn	04 52 52.8	+0.6
KOSE	**Korovin Southe**	0.89	327		Pn	04 52 53.7	+0.9
KOKL	**Mount Kliuchef**	0.93	322		Pn	04 52 53.6	+0.3
GSMY	**Great Sitkin M**	1.79	285		Pn	04 53 05.4	+0.3
GSMY					Sn	04 53 25.1	-1.4
GSTR	**Great Sitkin T**	1.80	287		Pn	04 53 06.1	+0.8
GSTD	**Great Sitkin T**	1.84	285		Pn	04 53 06.4	+0.5
GSTD					Sn	04 53 28.5	+0.6
ADK	**Adak**	2.14	279		Pn	04 53 10.1	+0.1
ADK	**Adak**	2.14	279	Sn	Sn	04 53 33.4	-1.9
KIWB	**Kanaga Island**	2.43	277		Pn	04 53 14.2	+0.4
KIMD	**Kanaga Island**	2.48	275		Pn	04 53 14.8	+0.4
TAFP	**Tanaga Falls P**	2.95	278		Pn	04 53 21.7	+0.7
UNV	**Unalaska Valle**	4.69	59	Pn	Pn	04 53 46.4	+1.6
KDAK	**Kodiak Island**	13.44	55	Pn	Pn	04 55 42.2	-2.5
	0.2nm,0.3s,baz=322,slow=3.3,SNR=14						
BRLK	**Bradley Lake**	14.97	48	Pn	Pn	04 56 07.1	+1.6
SKT	**Skwentna**	15.72	40		P	04 56 17.8	-0.9
SKT				IAmb	IAmb	04 56 32.1	
	comp=Z,9.3nm,1.4s						
SUA	**Susitna One**	15.78	43	Pn	Pn	04 56 17.9	+1.8
PPLA	**Purkeypile**	15.97	37	Pn	Pn	04 56 18.9	+0.4
PPLA				IAmb	IAmb	04 56 32.4	
	comp=Z,8.1nm,1.1s						
GHO	**Glory Hole Cre**	16.70	43	Pn	Pn	04 56 28.1	+0.4
GHO				IAmb	IAmb	04 56 41.0	
	comp=Z,6.7nm,1.0s						
KTH	**Kantishna Hill**	16.82	36		P	04 56 30.9	-0.1
KTH				IAmb	IAmb	04 56 38.7	
	comp=Z,5.8nm,1.0s						
TRF	**Thorofare Moun**	16.99	37		P	04 56 33.1	0.0
ILAR	**Eielson Array**	18.97	36	P	P	04 56 54.1	-0.4
	comp=Z,0.8nm,0.3s,baz=223,slow=8.9,SNR=67						
INK	**Inuvik**	25.32	34	P	P	04 57 59.5	0.0
	comp=Z,1.4nm,0.3s,baz=238,slow=6.7,SNR=12						
INK	**Inuvik**	25.32	34	P	P	04 57 59.5	0.0
KLR	**Kul'dur**	34.42	288	P	P	04 59 20.2	-0.1
	comp=Z,0.7nm,0.4s,baz=72,slow=6.4,SNR=2.0						
H11N2	**WAKE ISLAND Hy**	35.41	213	T	T	05 37 35.8	
	baz=21,slow=76,SNR=5.3						
H11N3	**WAKE ISLAND Hy**	35.42	213	T	T	05 37 35.8	
	baz=21,slow=76,SNR=3.9						
H11N1	**WAKE ISLAND Hy**	35.43	213	T	T	05 37 34.4	
	baz=21,slow=76,SNR=3.7						
H11S1	**WAKE ISLAND Hy**	36.62	213	T	T	05 38 57.2	
	baz=19,slow=74,SNR=6.1						
H11S2	**WAKE ISLAND Hy**	36.63	213	T	T	05 38 58.5	
	baz=19,slow=74,SNR=4.3						
H11S3	**WAKE ISLAND Hy**	36.63	213	T	T	05 38 58.2	
	baz=19						
NVAR	**Mina Array Bea**	40.09	87	P	P	05 00 10.1	+1.3
	comp=Z,0.5nm,0.8s,baz=298,slow=8.1,SNR=4.2						
PDAR	**Pinedale Array**	42.92	76	P	P	05 00 31.6	-0.3
	comp=Z,0.6nm,0.7s,baz=339,slow=3.5,SNR=7.0						
SONM	**Songino Array**	49.60	299	P	P	05 01 25.2	+1.1
	comp=Z,0.7nm,0.5s,baz=52,slow=7.6,SNR=5.4						
SONM	**Songino Array**	49.60	299	P	P	05 01 24.5	+0.3
TXAR	**Lajitas Array**	55.19	85	P	P	05 02 05.7	-0.2
	comp=Z,0.3nm,0.5s,baz=309,slow=6.4,SNR=7.4						
ARCES	**ARCESS Array B**	58.40	352	P	P	05 02 27.6	-0.2
	comp=Z,2.4nm,0.8s,baz=12,slow=9.2,SNR=1.5						
KURBB	**Kurchatov Arra**	61.41	316	P	P	05 02 48.1	-0.7
	comp=Z,0.8nm,0.4s,baz=38,slow=6.7,SNR=4.6						
MKAR	**Makanchi Array**	62.54	311	P	P	05 02 56.3	-0.2
	comp=Z,0.3nm,0.3s,baz=42,slow=6.7,SNR=6.9						
BVAR	**Borovoye Array**	62.88	323	P	P	05 02 59.5	+0.9
	comp=Z,1.3nm,0.5s,baz=199,slow=4.1,SNR=9.8						
FINES	**FINESS Array B**	66.25	350	P	P	05 03 20.6	+0.2
	comp=Z,4.2nm,1.1s,baz=349,slow=6.8,SNR=5.4						
NOA	**NORSAR Array B**	67.65	358	P	P	05 03 29.3	-0.1
	comp=Z,1.5nm,1.0s,baz=3.8,slow=6.7,SNR=2.0						
AAK	**Ala-Archa**	69.31	313	P	P	05 03 40.9	+0.6
	comp=Z,2.4nm,0.7s,baz=152,slow=7.9,SNR=5.2						
AKASG	**Malin Array Be**	76.30	345	P	P	05 04 21.0	-0.3
	comp=Z,0.9nm,0.3s,baz=15,slow=5.6,SNR=6.6						
WRA	**Warramunga Arr**	84.66	228	P	P	05 05 05.0	-1.4
	comp=Z,0.6nm,1.0s,baz=26,slow=5.5,SNR=2.5						
ASAR	**Alice Springs**	88.08	227	P	P	05 05 23.3	+0.1
	comp=Z,1.0nm,0.9s,baz=38,slow=3.4,SNR=7.5						

SJA ***19*** *05:02:18.3±0.7, 30°.20S×72°.16W, h12^{km}, ML4.1, MW4.0*

GUC ***19*** *05:02:20.8±0.5, 30°.25S×71°.67W, h13^{km}±4^{km}, ML4.2*

NEIC ***19*** *05:02:24.8±1.4, 30°.24S±0°.04×71°.65W±0°.07, h28^{km}±6^{km}, mb4.1/8, ML4.2(GUC), Error ellipse: s-maj=9.4km s-min=4.9km az=107.0*

IDC ***19*** *05:02:25.8±3.8, 30°.31S×71°.40W, h38^{km}±31^{km}, mb3.6/4, mb1 3.8/8, mb1mx3.6/27, mbtmp3.8/8, ML3.5/4, MS3.1/6, Ms1 3.1/6, ms1mx3.0/23, Error ellipse: s-maj=37.7km s-min=21.7km az=94.0*

ISC 19 05:02:19.0±1.5**, 30°.21S**±0°.02×**71°.99W**±0°.04**, h0**^{km}±10^{km}**, n94, σ2^{s}.28**/132**, mb4.1**/5**, 2C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	**Fray Jorge**	0.55	146		Pn	05 02 33.5	-0.6
CO05	**La Serena**	0.71	66		Pg	05 02 34.7	+2.0
CO05					Sb	05 02 41.8	-2.9
CO05				Sg	Sg	05 02 42.0	+0.1
GO04	**Tololo Observa**	1.03	88		Pb	05 02 38.8	-1.1
LCO	**Las Campanas**	1.64	43	*e*P	Pn	05 02 49.3	-0.1
LCO				*i* S	Sn	05 03 10.2	-1.1
LCO	**Las Campanas**	1.64	43	Pn	Pb	05 02 49.6	-0.7
LCO	**Las Campanas**	1.64	43	*e*P	Pb	05 02 49.9	-0.4
AC04	**Llanos de Chal**	2.16	22	*e*P	Pb	05 02 57.8	-1.1
AC04				*i* S	Sb	05 03 26.4	+0.2
AC04	**Llanos de Chal**	2.16	22	Pn	Pb	05 02 57.9	-1.1
AC04	**Llanos de Chal**	2.16	22	*e*P	Pb	05 02 57.0	-1.9
AC04				*e*S	Sg	05 03 28.9	+0.6
AC04				IAML		05 03 34.6	
	comp=Z,894nm,1.2s						
AROD	**Rodeo**	2.18	89	*e*P	Pb	05 02 59.6	+0.1
AROD				*e*S	Sn	05 03 23.0	-1.7
VA06	**Catapilco**	2.41	166	*e*P	Pb	05 03 01.0	-2.3
VA06				*i* S	Sb	05 03 32.1	-1.5
VA06				IAML		05 03 40.9	
	comp=E,1µm,0.4s						
ACDV	**Cuesta del Vie**	2.48	90	*e*P	Pn	05 03 03.0	+2.1
ACDV				*e*S	Sn	05 03 26.9	-5.1
ACDV				IAML		05 03 31.9	
	comp=Z,764nm,0.7s						
ACDV				*e*S	Sb	05 03 33.1	-2.7
ACCO	**Cerro Coronel**	2.55	99	*e*P	Pn	05 03 04.2	+2.3
VA03	**San Esteban**	2.82	155	*e*P	Pn	05 03 06.8	+1.4
VA03				*i* S	Sn	05 03 42.1	+1.9
VA03				IAML		05 03 55.4	
	comp=N,1µm,0.2s						
VA03	**San Esteban**	2.82	155		Pb	05 03 07.8	-2.5
VA03	**San Esteban**	2.82	155	*e*P	Pb	05 03 07.4	-2.9
VA03				*e*S	Sn	05 03 39.4	-0.8
VA03				IAML		05 03 55.0	
	comp=Z,876nm,0.6s						
ROCH	**El Roble**	2.87	163	*e*P	Pn	05 03 07.7	+1.4
ROCH				*i* S	Sb	05 03 44.1	-3.0
ROCH				IAML		05 03 56.0	
	comp=N,694nm,0.5s						
ROC1	**El Roble**	2.88	163	*e*P	Pn	05 03 07.4	+1.1
ROC1				*e*P	Pb	05 03 07.7	-3.7
ROC1				*e*S	Sb	05 03 46.9	-0.3
AUSP	**Uspallata**	3.00	133	*e*P	Pn	05 03 04.9	-3.1
AUSP				*e*P	Pb	05 03 10.4	-3.0
AUSP				*e*S	Sb	05 03 49.9	-0.8
GO03	**Copiap**	3.03	31	*e*P	Pn	05 03 09.8	+1.5
GO03				*e*S	Sb	05 03 53.2	+1.7
GO03				IAML		05 03 58.1	
	comp=N,764nm,0.5s						
GO03	**Copiap**	3.03	31		Pn	05 03 08.9	+0.7
GO03	**Copiap**	3.03	31	*e*P	Pb	05 03 10.2	-3.7
GO03				*e*P	Pn	05 03 11.0	+2.7
GO03				*e*S	Sb	05 03 48.9	-2.5
MT02	**Curacav**	3.12	167		Pn	05 03 11.1	+1.6
MT02	**Curacav**	3.12	167	*e*P	Pn	05 03 10.8	+1.4
MT02				*e*P	Pn	05 03 11.0	+1.6
MT02				*e*S	Sn	05 03 49.4	+1.9
MT02				IAML		05 04 04.0	
	comp=Z,301nm,0.5s						
PEL	**Peldehue**	3.13	159	*e*P	Pn	05 03 11.1	+1.5
PEL				*i* S	Sn	05 03 50.1	+2.4
PEL	**Peldehue**	3.13	159		Pn	05 03 11.0	+1.5
PEL	**Peldehue**	3.13	159	*e*P	Pn	05 03 11.0	+1.4
PEL				*e*S	Sn	05 03 49.4	+1.8
PEL				*e*S	Sb	05 03 50.4	-3.7
ZON	**Zonda**	3.14	116	*e*P	Pn	05 03 12.4	+2.6
ZON				*e*S	Sn	05 03 49.4	+1.4
ZON				*e*S	Sb	05 03 50.4	-4.2
ZON				IAML		05 04 02.9	
	comp=Z,261nm,0.9s						
MT05	**Renca**	3.34	162	*e*P	Pn	05 03 14.0	+1.4
MT05	**Renca**	3.34	162		Pn	05 03 14.4	+1.8
MT05	**Renca**	3.34	162	*e*P	Pn	05 03 14.2	+1.6
MT05				*e*S	Sb	05 03 56.9	-3.5
MT05				IAML		05 04 08.1	
	comp=Z,669nm,0.6s						
FCH	**Farellones**	3.43	155	*e*P	Pn	05 03 15.7	+1.8
FCH				*i* S	Sn	05 03 57.9	+2.4
FCH				IAML		05 04 15.4	
	comp=N,262nm,0.2s						
VA05	**Santo Domingo**	3.45	175		Pn	05 03 15.2	+1.2
ASAL	**Salagasta**	3.59	132	*e*P	Pn	05 03 18.9	+2.9
ASAL				*e*S	Sb	05 04 06.9	-0.7
VCA	**Vinchina**	3.61	67	⇑*i*P	Pn	05 03 19.8	+3.4
VCA				*e*S	Sb	05 04 05.3	-3.0
VCA	**Vinchina**	3.61	67	*e*P	Pn	05 03 19.8	+3.4
VCA				*e*S	Sn	05 04 04.9	+5.1
VCA				*e*S	Sb	05 04 06.9	-1.4
VCA				*e*S	Sg	05 04 08.4	-6.7
VCA				IAML		05 04 13.6	
	comp=Z,654nm,0.8s						
MT09	**Talagante**	3.65	167	⇑*i*P	Pn	05 03 18.8	+1.9
MT09				*e*S	Sb	05 04 11.9	+2.5
MT09				IAML		05 04 18.3	
	comp=E,356nm,0.5s						
MT09	**Talagante**	3.65	167		Pn	05 03 18.8	+1.9
MT01	**Popeta**	3.69	170	*e*P	Pn	05 03 18.9	+1.6
MT01				*e*S	Sb	05 04 11.9	+1.5
MT01	**Popeta**	3.69	170		Pn	05 03 18.6	+1.3
MT01	**Popeta**	3.69	170	*e*P	Pn	05 03 18.9	+1.6
MT01				*e*S	Sb	05 04 08.4	-2.0
MT01				IAML		05 04 20.4	
	comp=Z,224nm,0.7s						
ARCO	**CERRO ARCO**	3.70	136	*e*P	Pn	05 03 21.2	+3.7
ARCO				*e*S	Sn	05 04 03.9	+2.0
ARCO				IAML		05 04 22.9	
	comp=Z,231nm,1.2s						
LMEL	**Las Melosas**	3.93	158	*e*P	Pn	05 03 22.5	+1.8
LMEL				*i* S	Sn	05 04 09.3	+1.7
AAGR	**Agrelo**	3.93	138	*e*P	Pn	05 03 24.3	+3.6
AAGR				*e*S	Sb	05 04 22.4	+5.0
AVFE	**Valle Fertil**	3.94	98	*e*P	Pn	05 03 22.0	+1.2
AVFE				*e*S	Sn	05 04 12.4	+4.6
AVFE				IAML		05 04 20.4	
	comp=Z,252nm,0.6s						
BO04	**La Punta**	3.94	163	*e*P	Pn	05 03 22.5	+1.7
BO04				*e*S	Sn	05 04 09.4	+1.6
AC02	**Maricunga**	4.20	37	Pn	Pn	05 03 26.6	+1.8
AC02	**Maricunga**	4.20	37	*e*P	Pn	05 03 26.4	+1.7
AC02				*e*P	Pn	05 03 26.7	+2.0
AC02				*e*S	Sb	05 04 22.4	-3.2
AC02				*e*S	Sg	05 04 34.9	+0.8
AC02				IAML		05 04 39.5	
	comp=Z,189nm,0.7s						
BO01	**Tunca**	4.24	170	Pn	Pn	05 03 25.9	+1.1
BO01	**Tunca**	4.24	170	*e*P	Pn	05 03 26.4	+1.6
BO01				*e*S	Sb	05 04 22.9	-3.1
BO01				*e*S	Sg	05 04 26.4	-8.7
BO01				IAML		05 04 39.0	
	comp=Z,130nm,0.7s						
ACLC	**CERRO LA CRUZ**	4.45	81	*e*P	Pn	05 03 29.8	+1.9
ACLC				*e*S	Sb	05 04 29.3	-3.1
ACLC				IAML		05 04 31.8	
	comp=Z,261nm,0.5s						
BO02	**Sierra Bellavi**	4.68	168		Pn	05 03 32.5	+1.6
BO02	**Sierra Bellavi**	4.68	168	*e*P	Pn	05 03 33.0	+2.0
BO02				*e*S	Sb	05 04 33.9	-5.0
BO02				IAML		05 04 47.9	
	comp=Z,188nm,0.9s						
ACHE	**Chepes**	4.68	103	*e*P	Pn	05 03 31.9	+0.8
APLL	**PUNTA DE LOS L**	4.73	94	*e*P	Pn	05 03 33.0	+1.4
APLL				*e*P	Pn	05 03 33.0	+1.4
GO05	**Huala**	4.78	179	Pn	Pn	05 03 32.7	+0.4
RFA	**San Rafael**	5.43	148	*e*P	Pn	05 03 43.8	+2.5
RFA				*e*S	Sn	05 04 49.9	+5.4
RFA				*e*S	Sb	05 05 03.9	+3.4
PB14	**IPOC Station P**	5.74	15	Pn	Pn	05 03 45.4	-0.4
H03N1	**Juan Fernandez**	6.71	240	T	T	05 11 09.3	
	baz=69,slow=72,SNR=3368						
H03N2	**Juan Fernandez**	6.73	240	T	T	05 11 07.5	
	baz=69,slow=72,SNR=3008						
H03N3	**Juan Fernandez**	6.73	240	T	T	05 11 10.1	
	baz=69,slow=72,SNR=2626						
PB04	**IPOC Station P**	8.02	12	Pn	Pn	05 04 16.2	-0.7
LVC	**Limon Verde**	8.06	21	Pn	Pn	05 04 19.4	+1.7
	comp=Z,0.4nm,0.3s,baz=160,slow=8.7,SNR=1.4						
LVC				LR	LR	05 07 20.3	
	comp=Z,142nm,18.5s,baz=209,slow=37						
LC01	**Cunco**	8.66	179	Pn	Pn	05 04 25.9	+0.3
PLCA	**Paso Flores**	10.56	174	Pn	Pn	05 04 52.2	+0.5
	comp=Z,0.1nm,0.3s,baz=331,slow=12,SNR=2.9						
PLCA				LR	LR	05 09 05.6	
	comp=Z,122nm,19.1s,baz=346,slow=38						
PLCA	**Paso Flores**	10.56	174		Pn	05 04 54.2	+2.5
TRQA	**Tornquist**	11.39	136	Pn	Pn	05 05 02.5	-0.5
PB12	**IPOC Station P**	11.65	8	Pn	Pn	05 05 07.6	+1.0
ITQB	**Itaqui**	13.34	92	Pn	Pn	05 05 26.4	-3.2
CPUP	**Villa Florida**	13.49	77	LR	LR	05 11 06.2	
	comp=Z,97nm,18.4s,baz=226,slow=40						
LPAZ	**La Paz**	14.31	15	Pn	P	05 05 46.8	-4.1
	comp=Z,0.2nm,0.3s,baz=339,slow=9.2,SNR=7.0						
LPAZ				LR	LR	05 11 47.4	
	comp=Z,62nm,20.8s,baz=322,slow=39						
SIV	**San Ignacio**	17.34	38	P	P	05 06 23.3	-0.7
	comp=Z,0.3nm,0.3s,baz=214,slow=11,SNR=27						
SIV				LR	LR	05 14 09.7	
	comp=Z,108nm,19.8s,baz=261,slow=41						
NNA	**Nana**	18.69	345	LR	LR	05 13 02.9	
	comp=Z,33nm,19.8s,baz=113,slow=34						
VILB	**Vilhena**	20.35	35	P	Pn	05 06 56.8	-2.3
VILB				IAmb	IAmb	05 07 04.4	
	comp=Z,6.9nm,0.9s						
CZSB	**Cruzeiro do Su**	22.38	358	P	P	05 07 21.8	+2.8
CZSB				IAmb	IAmb	05 07 29.9	
	comp=Z,7.7nm,1.0s						
SAML	**Samuel**	22.70	23	P	P	05 07 23.1	+0.7
BDFB	**Brasilia**	26.34	62	P	P	05 07 53.5	-3.4
	comp=Z,2.7nm,0.7s,baz=247,slow=6.2,SNR=6.8						
BDFB	**Brasilia**	26.34	62	P	P	05 07 53.9	-3.0
BDFB				IAmb	IAmb	05 08 03.0	
	comp=Z,5.2nm,1.1s						
ROSC	**El Rosal**	34.92	356	P	P	05 09 14.4	+1.4
PMSA	**Palmer Station**	34.94	174	P	P	05 09 13.4	+1.2
SVB	**Belmont**	44.45	15	P	P	05 10 32.3	+0.4
PCDR	**Punta Cana, DR**	48.57	5	P	P	05 11 05.2	+1.1
SNAA	**Sanae**	55.08	159	P	P	05 11 51.9	-0.4
	comp=Z,0.3nm,0.5s,baz=246,slow=16,SNR=8.5						
SNAA	**Sanae**	55.08	159	P	P	05 11 52.0	-0.4
SNAA				IAmb	IAmb	05 12 09.3	
	comp=Z,1.8nm,0.9s						
TX32	**Lajitas Array**	66.47	330	P	P	05 13 11.5	+1.1
TXAR	**Lajitas Array**	66.47	330	P	P	05 13 13.5	+3.0
	comp=Z,0.2nm,0.7s,baz=154,slow=6.8,SNR=3.8						
TXAR	**Lajitas Array**	66.47	330	P	P	05 13 12.2	+1.8
TORD	**Torodi Ar. Bea**	82.89	70	P	P	05 14 45.0	-0.9
	comp=Z,0.9nm,0.6s,baz=282,slow=6.3,SNR=8.5						
WRA	**Warramunga Arr**	124.06	210	PKP	PKiKP	05 21 19.7	-0.6

	comp=Z,0.3nm,0.9s,baz=148,slow=1.9,SNR=1.1						
H11S2	WAKE ISLAND Hy	125.78	272	T	T	07 40 13.1	
	baz=115,slow=74,SNR=35						
H11S1	WAKE ISLAND Hy	125.79	272	T	T	07 40 12.8	
	baz=115,slow=74,SNR=31						
H11S3	WAKE ISLAND Hy	125.80	272	T	T	07 40 07.3	
	baz=115,slow=74,SNR=28						
ZALV	Zalesovo Beam	150.95	29	PKPbc	PKiKP	05 22 13.8	-0.1
	comp=Z,2.9nm,0.6s,baz=296,slow=3.2,SNR=14						
ZALV	Zalesovo Beam	150.95	29		PKiKP	05 22 14.3	+0.5

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*IDC **19** 05:16:23.1±0.8, 58.°54S×148.°88E, h0^{km}, mb4.5/8, mb1 4.6/9, mb1mx4.3/18, mbtmp4.4/9, ML3.6/1, MS4.2/16, Ms1 4.2/16, ms1mx4.1/21, Error ellipse: s-maj=43.9km s-min=15.9km az=82.0*

*NEIC **19** 05:16:24.4±1.2, 58.°67S±0.°09×148.°8E±0.°2, h10^{km}±1^{km}, mb4.9/32, Error ellipse: s-maj=18.8km s-min=15.5km az=97.0*

*GCMT **19** 05:16:26.4±0.2, 58.°54S±0.°01×148.°73E±0.°03, h12^{km}, MW5.0/99, Moment Tensor Solution. s38,c44; s99,c153; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.06±.12; $M_{\theta\theta}$1.91±.09; $M_{\phi\phi}$-1.85±.12; $M_{r\theta}$-0.69±.28; $M_{\theta\phi}$-3.76±.08; $M_{\phi r}$-0.55±.32; Best double couple: $M_0$4.29500×10^{16} NP1:ϕ_s346.00000°, δ79.00000°, λ-5.00000°. NP2: ϕ_s77.00000°, δ85.00000°, λ-169.00000°. Principal axes: T 4.2550, Plg4.0000°, Azm211.0000°; N 0.0820, Plg78.0000°, Azm101.0000°; P -4.3360, Plg11.0000°, Azm302.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 05:16:24.7±0.4**, 58.°63S**±0.°06×**149.°01E**±0.°08**, h10^{km}, n124,** σ**1^{s}42**/113**, mb4.8**/33**, MS4.3**/18**, 3C, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MCQ	Macquarie Isla	6.88	57	P	Pn	05 18 08.2	+2.7
	baz=6.9						
MCQ				S	Sn	05 19 21.1	-2.7
	baz=6.9						
MCQ	Macquarie Isla	6.88	57	Pn	Pn	05 18 06.7	+1.2
TAU	Tasmania Unive	15.78	355	Pn	Pn	05 20 06.5	-0.3
TAU				IAmb	IAmb	05 20 13.2	
	comp=Z,136nm,1.1s						
TAU	Tasmania Unive	15.78	355	P	P	05 20 12.8	+2.1
	comp=Z,125nm,1.2s						
MOO	Moorlands	16.25	355	P	P	05 20 15.9	-0.1
	baz=16,SNR=3.8						
MOO	Moorlands	16.25	355	P	P	05 20 17.3	+1.4
	comp=Z,112nm,1.5s						
MLZ	Mavora Lakes	17.65	50	P	P	05 20 31.1	-0.4
MLZ				IAmb	IAmb	05 20 32.7	
	comp=Z,158nm,1.9s						
CASY	Casey	19.07	230	P	P	05 20 44.5	-2.4
VNDA	Vanda	19.47	172	P	P	05 20 50.6	-0.5
	comp=Z,0.2nm,0.3s,baz=337,slow=10,SNR=13						
VNDA				LR	LR	05 27 14.6	
	comp=Z,729nm,20.9s,baz=345,slow=33						
VNDA	Vanda	19.47	172	P	P	05 20 50.5	-0.7
TOO	Toolangi	21.20	352	P	P	05 21 10.2	0.0
	baz=21,SNR=9.8						
TOO	Toolangi	21.20	352	P	P	05 21 10.6	+0.3
TOO	Toolangi	21.20	352	P	P	05 21 11.6	+1.3
	comp=Z,61nm,1.9s						
BRAT	Ballarat	21.35	349	P	P	05 21 12.8	+1.0
	comp=Z,18nm,1.6s						
MILA	Mila	21.59	0	P	P	05 21 16.3	+1.8
	baz=22,SNR=4.4						
ARPS	Mount Arapiles	22.37	345	P	P	05 21 24.1	+1.3
	baz=22,SNR=12						
ARPS	Mount Arapiles	22.37	345	P	P	05 21 24.8	+2.0
	comp=Z,34nm,1.1s						
THZ	Tophouse	22.58	52	P	P	05 21 26.2	+1.1
THZ				IAmb	IAmb	05 21 36.9	
	comp=Z,112nm,1.5s						
CAN	Canberra	23.32	360	P	P	05 21 32.2	-0.6
CAN				IAmb	IAmb	05 21 35.7	
	comp=Z,38nm,1.0s						
CAN	Canberra	23.32	360	P	P	05 21 34.8	+2.0
	comp=Z,80nm,1.1s						
CNB	Canberra Magne	23.33	1	P	P	05 21 32.8	-0.1
	baz=23,SNR=6.0						
CNB	Canberra Magne	23.33	1	P	P	05 21 34.6	+1.7
	comp=Z,50nm,1.3s						
YNG	Young	24.34	359	P	P	05 21 42.4	-0.2
	baz=24,SNR=23						
YNG	Young	24.34	359	P	P	05 21 42.6	0.0
	comp=Z,71nm,1.7s						
MGCD	Mangrove Creek	25.47	4	P	P	05 21 54.4	+1.8
	baz=26						
HTT	Hallett	26.10	341	P	P	05 21 58.7	+0.2
	baz=26,SNR=4.1						
HTT	Hallett	26.10	341	P	P	05 22 01.7	+3.2
	comp=Z,16nm,1.4s						
CMSA	Cobar Meteorol	27.19	354	P	P	05 22 08.2	0.0
	baz=27,SNR=12						
CMSA	Cobar Meteorol	27.19	354	P	P	05 22 09.8	+1.6
	comp=Z,23nm,1.5s						
STKA	Stephens Creek	27.23	346	P	P	05 22 06.6	-2.0
	comp=Z,4.1nm,0.8s,baz=155,slow=11,SNR=8.0						
STKA				PcP	PcP	05 25 28.6	+0.2
	comp=Z,1.1nm,0.7s,baz=150,slow=4.5,SNR=3.1						
STKA				LR	LR	05 32 08.4	
	comp=Z,376nm,18.1s,baz=180,slow=35						
STKA	Stephens Creek	27.23	346	P	P	05 22 08.8	+0.3
	baz=27,SNR=5.5						
STKA	Stephens Creek	27.23	346	P	P	05 22 08.4	-0.2
STKA	Stephens Creek	27.23	346	P	P	05 22 10.6	+2.0
	comp=Z,2.2nm,1.2s						
BBOO	Buckleboo	27.26	336	P	P	05 22 10.0	+1.0
	baz=27						
BBOO	Buckleboo	27.26	336	P	P	05 22 07.5	-1.4
BBOO				IAmb	IAmb	05 22 36.2	
	comp=Z,20nm,1.1s						
URZ	Urewera	27.28	54	LR	LR	05 32 22.7	
	comp=Z,1μm,18.3s,baz=211,slow=35						
URZ	Urewera	27.28	54	P	P	05 22 08.6	-0.3
URZ				IAmb	IAmb	05 22 12.2	
	comp=Z,30nm,1.2s						
URZ	Urewera	27.28	54	P	P	05 22 53.9	+45
	comp=Z,82nm,2.4s						
FORT	Forrest	31.30	324	P	P	05 22 44.4	-0.4
	baz=31,SNR=11						
FORT	Forrest	31.30	324	P	P	05 22 44.3	-0.4
QSPA	South Pole Qui	31.47	180	P	P	05 22 46.1	0.0
	comp=Z,8.7nm,0.9s,baz=6.8,slow=2.9,SNR=17						
QSPA				PcP	PcP	05 25 39.6	+0.8
	comp=Z,3.0nm,0.8s,baz=274,slow=2.2,SNR=5.3						
QSPA	South Pole Qui	31.47	180	P	P	05 22 45.1	-1.0
QSPA				IAmb	IAmb	05 23 03.7	
	comp=Z,18nm,1.1s						
RMQ	Roma	32.13	360	P	P	05 22 52.3	+0.2
	baz=32,SNR=9.5						
RMQ	Roma	32.13	360	P	P	05 22 52.8	+0.7
	comp=Z,17nm,1.3s						
QLP	Quilpie	32.21	352	P	P	05 22 53.4	+0.6
	baz=32,SNR=5.4						
QLP	Quilpie	32.21	352	P	P	05 22 53.6	+0.8
	comp=Z,72nm,1.7s						
H01W1	Cape Leeuwin H	33.05	301	T	T	05 57 56.7	
	baz=146,slow=75,SNR=259						
H01W2	Cape Leeuwin H	33.05	300	T	T	05 57 55.7	
	baz=146,slow=75,SNR=303						
H01W3	Cape Leeuwin H	33.07	301	T	T	05 57 59.6	
	baz=146,slow=75,SNR=230						
EIDS	Eidsvold	33.27	3	P	P	05 23 02.7	+0.6
	baz=33,SNR=4.4						
EIDS	Eidsvold	33.27	3	P	P	05 23 01.9	-0.2
EIDS				IAmb	IAmb	05 23 04.4	
	comp=Z,20nm,1.0s						
EIDS	Eidsvold	33.27	3	P	P	05 23 03.6	+1.5
	comp=Z,27nm,1.7s						
ASAR	Alice Springs	36.56	336	P	P	05 23 28.4	-2.1
	comp=Z,3.3nm,0.8s,baz=164,slow=9.1,SNR=20						
ASAR				PcP	PcP	05 25 52.5	-1.2
	comp=Z,2.3nm,0.9s,baz=168,slow=3.6,SNR=5.8						
ASAR				LR	LR	05 36 18.1	
	comp=Z,260nm,20.2s,baz=170,slow=33						
ASAR	Alice Springs	36.56	336	P	P	05 23 29.3	-1.2
AS31	Alice Springs	36.56	336	P	P	05 23 29.6	-0.9
WRKA	Warakurna	36.63	327	P	P	05 23 29.9	-1.2
	baz=37,SNR=14						
MAW	Mawson	36.80	220	P	P	05 23 31.1	-0.9
	comp=Z,6.7nm,1.0s,baz=135,slow=12,SNR=2.8						
MAW				LR	LR	05 38 38.1	
	comp=Z,2μm,18.1s,baz=92,slow=36						
MEEK	Meekatharra	38.38	313	P	P	05 23 44.2	-1.7
	baz=38,SNR=3.7						
CTAO	Charters Tower	38.55	356	P	P	05 23 47.4	0.0
CTAO				IAmb	IAmb	05 23 49.8	
	comp=Z,38nm,1.2s						
CTAO	Charters Tower	38.55	356	P	P	05 23 49.6	+2.3
	comp=Z,28nm,1.6s						
DZM	Mont Dzumac	38.62	26	*e*S	S	05 29 38.8	-5.4
	comp=Z,154nm,25.9s						
DZM				*e*LR	LR	05 34 39.7	
	comp=Z,2μm,25.6s						
QIS	Mount Isa	38.64	346	P	P	05 23 47.6	-0.5
	baz=39,SNR=5.4						
WR0	Warramunga Arr	40.03	339	P	P	05 23 58.8	-1.0
WB2	Warramunga Arr	40.09	338	P	P	05 23 58.3	-1.9
WRA	Warramunga Arr	40.09	338	P	P	05 23 58.2	-2.0
	comp=Z,5.4nm,0.8s,baz=165,slow=7.4,SNR=31						
WRA				LR	LR	05 38 19.6	
	comp=Z,390nm,21.3s,baz=160,slow=33						
WRA	Warramunga Arr	40.09	338	P	P	05 23 59.1	-1.1
WRAB	Tennant Creek	40.10	338	P	P	05 23 59.3	-1.0
WRAB				IAmb	IAmb	05 24 01.6	
	comp=Z,48nm,1.6s						
WB0	Warramunga Arr	40.25	338	P	P	05 24 00.0	-1.5
MTSU	Mount Surprise	40.59	353	P	P	05 24 05.0	+0.7
	baz=41,SNR=4.6						
MTSU	Mount Surprise	40.59	353	P	P	05 24 07.1	+2.7
	comp=Z,15nm,1.4s						
PSA00	Pilbara Seismi	42.55	318	P	P	05 24 19.3	-1.0
PSA00				IAmb	IAmb	05 24 22.0	
	comp=Z,33nm,0.9s						
PSA00	Pilbara Seismi	42.55	318	P	P	05 24 19.2	-1.2
PSA00				IAmb	IAmb	05 24 21.9	
	comp=Z,15nm,0.9s						
SYO	Syowa Base	42.91	210	⇑*e*pP	P	05 24 23.0	+0.2
FITZ	Fitzroy Crossi	43.95	327	P	P	05 24 31.5	-0.2
	baz=44,SNR=3.9						
COEN	Coen	44.81	352	P	P	05 24 37.9	-0.7
COEN				IAmb	IAmb	05 24 40.8	
	comp=Z,23nm,1.3s						
SANVU	Saraoutou	45.19	25	P	P	05 24 42.3	+0.7
KNRA	Kununurra	45.44	332	P	P	05 24 43.3	-0.4
	baz=46,SNR=3.5						
KNRA	Kununurra	45.44	332	P	P	05 24 42.9	-0.8
KNRA				IAmb	IAmb	05 24 53.8	
	comp=Z,13nm,0.9s						
MTN	Manton Dam	47.64	336	P	P	05 24 60.0	-0.9
MTN				IAmb	IAmb	05 25 23.1	
	comp=Z,13nm,1.1s						
SNAA	Sanae	48.50	191	P	P	05 25 06.6	-0.5
SNAA	Sanae	48.50	191	LR	LR	05 45 01.6	
	comp=Z,155nm,20.9s,baz=186,slow=35						
SNAA	Sanae	48.50	191	P	P	05 25 06.7	-0.3
PMG	Port Moresby	49.14	358	P	P	05 25 11.9	-0.5
VNA3	Neumayer Olymp	49.55	189	P	P	05 25 14.4	-0.6
VNA2	Neumayer--Watz	49.66	190	P	P	05 25 15.3	-0.5
	baz=151,slow=6.4						
VNA1	Neumayer--Stat	50.01	190	P	P	05 25 18.6	+0.1
PPT2	Papeete2	60.35	75	*e*LR	LR	05 45 08.2	
	comp=Z,289nm,23.8s						
PPT	Papeete	60.37	75	LR	LR	05 46 31.6	
	comp=Z,130nm,21.8s,baz=220,slow=30						
USHA	Ushuaia	62.94	157	LR	LR	05 48 37.2	
	comp=Z,276nm,18.5s,baz=200,slow=31						
TOLI2	Tolitoli	63.62	328	P	P	05 26 55.1	-0.6
TOLI2				IAmb	IAmb	05 26 59.1	
	comp=Z,6.4nm,0.9s						
KSM	Kuching	67.27	317	P	P	05 27 17.9	-1.4
PLCA	Paso Flores	75.67	150	LR	LR	05 55 23.8	
	comp=Z,183nm,19.2s,baz=187,slow=31						
H08S2	Diego Garcia H	76.49	278	T	T	06 52 14.4	
	baz=148,slow=76,SNR=105						
H08S1	Diego Carcia H	76.50	278	T	T	06 52 16.0	
	baz=148,slow=76,SNR=58						
H08S3	Diego Garcia H	76.51	278	T	T	06 52 16.0	
	baz=148,slow=76,SNR=182						
H03S1	Juan Fernandez	79.59	141	T	T	06 56 48.6	
	baz=201,slow=74,SNR=34						
H03S2	Juan Fernandez	79.59	141	T	T	06 56 47.3	
	baz=201,slow=74,SNR=44						
H03S3	Juan Fernandez	79.61	141	T	T	06 56 48.1	
	baz=201,slow=74,SNR=38						
BOSA	Boshof	81.34	228	P	P	05 28 41.5	+0.1
	comp=Z,4.7nm,0.9s,baz=140,slow=7.7,SNR=5.8						
BOSA				LR	LR	06 00 19.3	
	comp=Z,236nm,19.5s,baz=181,slow=32						
CMAR	Chiang Mai Arr	87.10	313	P	P	05 29 11.0	+0.6
	comp=Z,0.9nm,0.3s,baz=185,slow=4.5,SNR=11						
CMAR				PP	PP	05 32 34.9	+0.6
	comp=Z,0.8nm,0.4s,baz=168,slow=5.5,SNR=5.0						
CMAR				LR	LR	06 06 21.3	
	comp=Z,175nm,19.9s,baz=192,slow=34						
CMAR	Chiang Mai Arr	87.10	313	P	P	05 29 09.6	-0.9
CHTO	Chiang Mai	87.43	313	P	P	05 29 10.4	-1.6
CHTO				IAmb	IAmb	05 29 14.9	
	comp=Z,8.0nm,0.9s						
KMI	Kunming	91.84	319	⇑P	P	05 29 34.8	+2.0
KMI				sP	pwP	05 29 43.9	+5.1
KMI				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KMI				LR	LR		
	comp=N,190nm,23.2s						
KMI				LR	LR		
	comp=E,170nm,24.0s						
KMI				LR	LR		
	comp=Z,220nm,28.5s						
CPUP	Villa Florida	92.56	157	P	P	05 29 36.6	+0.5
	comp=Z,2.2nm,0.8s,baz=226,slow=2.8,SNR=4.2						
CPUP				LR	LR	06 07 39.7	
	comp=Z,59nm,19.7s,baz=198,slow=33						
CPUP	Villa Florida	92.56	157	P	P	05 29 35.3	-0.8
NJ2	Nanjing	93.78	335	*e*P	P	05 29 43.3	+2.0
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
MJAR	Matsushiro Arr	95.25	351	LR	LR	06 10 26.3	
	comp=Z,42nm,21.8s,baz=295,slow=34						
KSRS	Korea Array	97.34	343	LR	LR	06 09 49.4	
	comp=Z,41nm,22.0s,baz=165,slow=33						
LPAZ	La Paz	99.38	144	LR	LR	06 07 56.7	
	comp=Z,68nm,18.5s,baz=146,slow=31						
TXAR	Lajitas Array	123.47	88	PKP	PKiKP	05 35 21.9	-0.1
	comp=Z,0.4nm,0.8s,baz=165,slow=5.2,SNR=3.6						
ILAR	Eielson Array	132.23	31	PKP	PKPdf	05 35 37.1	-0.1
	comp=Z,1.0nm,1.1s,baz=271,slow=4.7,SNR=3.9						
KEST	Kesra	145.08	247	PKPbc	PKPdf	05 36 01.9	+0.3
	comp=Z,21nm,1.1s,baz=240,slow=5.7,SNR=8.4						
AKASG	Malin Array Be	145.38	284	PKPbc	PKPbc	05 36 01.0	-0.6
	comp=Z,3.4nm,0.9s,baz=100,slow=2.3,SNR=12						
AKASG	Malin Array Be	145.38	284		PKPbc	05 36 00.9	-0.6
VYHS	Vyhne	149.41	273	*e*PKP	PKPbc	05 36 13.2	+0.4
DPC	Dobruska-Polom	151.84	274	⇑*e*PKP	PKiKP	05 36 21.5	+2.6
FINES	FINESS Array B	152.14	300	PKPbc	PKiKP	05 36 18.9	-0.1
	comp=Z,2.9nm,0.8s,baz=39,slow=10.0,SNR=6.2						
GERES	GERESS Array B	152.31	269	PKPbc	PKPbc	05 36 19.8	0.0
	comp=Z,1.0nm,0.7s,baz=116,slow=6.1,SNR=4.2						
GERES	GERESS Array B	152.31	269	PKPdf	PKPdf	05 36 14.4	+1.5
GERES					PKiKP	05 36 19.9	-0.1
KHC	Kasperske Hory	152.55	269	*e*PKPAB	PKPab	05 36 36.5	+5.7
ARCES	ARCESS Array B	154.07	318	PKPab	PKPab	05 36 37.8	+1.2
	comp=Z,3.2nm,0.8s,baz=111,slow=4.0,SNR=3.7						
ARCES	ARCESS Array B	154.07	318	PKPdf	PKPdf	05 36 15.7	+1.0
ESDC	Sonseca Array	154.36	234	PKPbc	PKiKP	05 36 25.2	+0.7
	comp=Z,0.9nm,0.7s,baz=192,slow=0.5,SNR=7.0						
ESDC				PKPab	PKPab	05 36 37.5	-1.2
	comp=Z,2.2nm,1.0s,baz=156,slow=3.6,SNR=8.7						
ESDC	Sonseca Array	154.36	234		PKPdf	05 36 15.7	-0.5
ESDC				PKPab	PKPab	05 36 38.4	-0.4

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*SOME **19** 05:20:00.3, 39.°15N×75.°90E, h0^{km}*

*KRNET **19** 05:20:03.1±0.1, 39.°15N×75.°71E, h7^{km}, mb4.3*

*BJI **19** 05:20:04.4±0.0, 39.°15N×75.°70E, h9^{km}, ML4.3/7*

*NNC **19** 05:20:04.7±1.6, 39.°29N×75.°75E, h0^{km}, mb4.5, mpv4.1, Error ellipse: s-maj=12.8km s-min=8.1km az=158.0*

*NEIC **19** 05:20:06.5±1.8, 39.°40N±0.°06×75.°63E±0.°05, h10^{km}±1^{km}, mb4.7/12, Error ellipse: s-maj=11.3km s-min=6.4km az=162.0*

*IDC **19** 05:20:10.3±6.0, 39.°71N×74.°55E, h0^{km}, mb3.8/3, mb1 3.8/4, mb1mx3.5/35, mbtmp3.8/4, ML2.7/1, MS3.0/2, Ms1 3.0/2, ms1mx2.6/35, Error ellipse: s-maj=133.2km s-min=45.3km az=121.0*

ISC 19 05:20:05.3±0.5**, 39.°32N**±0.°03×**75.°75E**±0.°03**, h10^{km}, n133,** σ**2^{s}33**/161**, mb4.2**/8**, 49C-11D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	Kashi	0.27	41	Pg	Pg	05 20 06.0	-4.8
KSH				Sg	Sg	05 20 08.8	-5.6
KSH				smax	smax		
	comp=N,197μm,0.5s						
KSH				smax	smax		
	comp=E,110μm,0.5s						
SFK	Sufi-Kurgan	1.87	293	⇑*e*P	Pb	05 20 39.5	-0.1
	baz=98						
SFK				⇑*e*S	Sg	05 21 05.0	-0.3
	baz=98						
OHH	Osh	2.58	299	⇑*e*P	Pb	05 20 49.7	-1.9
	baz=2.0						
OHH				⇑*i*S	Sb	05 21 22.8	-0.6
	baz=2.0						
TARG	Taragay, Kyrgy	2.88	32		Pn	05 20 52.4	+0.9
ULHL	Ulahol	2.95	7	P	Pb	05 20 58.8	+0.8
	SNR=67						
ULHL	Ulahol	2.95	7	⇑*i*P	Pb	05 20 56.3	-1.8
	baz=7.0						
ULHL				⇑*i*S	Sb	05 21 34.9	+0.6
	baz=7.0						
KDJ	Kajisay	3.02	21		Pn	05 20 55.1	+1.9
KDJ	Kajisay	3.02	21	⇑*e*P	Pb	05 20 56.7	-2.4
	baz=20						
KDJ				⇑*i*S	Sb	05 21 36.1	0.0
	baz=20						
UCH	Uchtor	3.06	343	P	Pn	05 20 53.0	-1.0
	SNR=21						
UCH	Uchtor	3.06	343	⇑*e*P	Pb	05 20 57.5	-2.5
	baz=44						
UCH				⇑*i*S	Sb	05 21 36.8	-0.7
	baz=44						
DRK	Karamyk	3.06	274		Pn	05 20 53.2	-0.8
DRK	Karamyk	3.06	274	⇑*i*P	Pn	05 20 54.9	+0.9
	baz=78						
DRK				⇑*i*S	Sn	05 21 33.3	+2.5
	baz=78						
BOOM	Boomskoye usch	3.17	3		Pn	05 20 55.0	-0.4
BOOM	Boomskoye usch	3.17	3	⇑*e*P	Pb	05 20 59.4	-2.5
	baz=3.0						
BOOM				⇑*i*S	Sb	05 21 40.1	-0.6
	baz=3.0						
AML	Almayashu	3.21	332	P	Pn	05 20 58.6	+2.4
	SNR=13						
AML	Almayashu	3.21	332	⇑*e*P	Pb	05 20 59.4	-3.3
	baz=33						
AML				⇑*i*S	Sb	05 21 40.2	-1.9
	baz=33						
KBK	Karagaybulak	3.39	350	P	Pb	05 21 02.4	-3.2
	SNR=8.0						
KBK	Karagaybulak	3.39	350	⇑*e*P	Pb	05 21 02.2	-3.4
	baz=51						
KBK				⇑*i*S	Sb	05 21 45.0	-1.9
	baz=51						
AAK	Ala-Archa	3.45	344	P	Pb	05 21 02.8	-3.8
	SNR=27						
AAK	Ala-Archa	3.45	344	⇓Pn	Pb	05 21 02.7	-3.8
	13nm,0.4s						
AAK				⇑Pg	Pb	05 21 07.3	+0.8
	64nm,0.6s						
AAK				⇑Lg	Lg	05 21 55.9	
	325nm,1.0s						
AAK	Ala-Archa	3.45	344		Pn	05 21 00.0	+0.8
AAK	Ala-Archa	3.45	344	⇑*e*P	Pb	05 21 03.0	-3.6
	baz=46						
AAK				⇑*i*S	Sb	05 21 46.1	-2.5
	baz=46						
FRU1	Bishkek	3.59	347		Pn	05 21 00.3	-0.8
FRU1	Bishkek	3.59	347	⇑*e*P	Pb	05 21 05.3	-3.6
	baz=48						
FRU1				⇑*i*S	Sb	05 21 50.3	-2.3
	baz=48						
TKM2	Tokmak 2	3.60	358	P	Pn	05 21 04.9	+3.5
	SNR=22						
TKM2	Tokmak 2	3.60	358	⇑Pn	Pn	05 21 04.6	+3.3
	5.5nm,0.4s						
TKM2				⇑Pg	Pb	05 21 10.2	+1.0
	57nm,0.7s						
TKM2				⇓Lg	Lg	05 22 00.4	
	155nm,0.8s						
TKM2	Tokmak 2	3.60	358	⇑*e*P	Pb	05 21 05.3	-3.9
	baz=59						
TKM2				⇑*i*S	Sb	05 21 50.2	-2.8
	baz=59						
EKS2	Erkin-Say	3.66	337	P	Pb	05 21 06.5	-3.6
	SNR=11						
EKS2	Erkin-Say	3.66	337	⇑*e*P	Pn	05 21 05.7	+3.6
	baz=38						
EKS2				⇑*i*S	Sb	05 21 51.0	-3.6
	baz=38						
KST	Kastek	3.73	2	*e*S	Sg	05 22 05.5	+0.5
	173nm,0.8s						
KST	Kastek	3.73	2	*e*P	Pb	05 21 13.8	+2.5
	63nm,0.7s						
PRZ	Przheval'sk	3.75	32		Pn	05 21 04.3	+1.0
PRZ	Przheval'sk	3.75	32	⇑*e*P	Pn	05 21 07.2	+3.9
	baz=30						
PRZ				⇑*i*S	Sb	05 21 53.9	-3.3
	baz=30						
CHMS	Chumysh	3.75	349	P	Pn	05 21 06.7	+3.4
	SNR=8.5						
CHMS	Chumysh	3.75	349	⇑*e*P	Pn	05 21 07.1	+3.8
	baz=50						
CHMS				⇑*i*S	Sb	05 21 53.8	-3.4
	baz=50						
ANVS	Anan'yevo	3.76	22	⇑*e*P	Pn	05 21 07.3	+3.9
	baz=22						
ANVS				⇑*i*S	Sb	05 21 54.0	-3.4
	baz=22						
TNSS	Tian-Shan	3.83	13	*e*S	Sg	05 22 08.2	0.0
	47nm,0.6s						
TNSS	Tian-Shan	3.83	13	Pg	Pb	05 21 14.9	+1.8
	42nm,0.6s						
TNSS				Lg	Lg	05 22 08.2	
	47nm,0.6s						
TNSS	Tian-Shan	3.83	13	*e*P	Pb	05 21 14.9	+1.8
	42nm,0.6s						
MTBS	Maitube	3.84	7	*e*S	Sg	05 22 09.3	+0.5
	75nm,0.8s						
MTBS	Maitube	3.84	7	Pg	Pb	05 21 15.5	+2.3
	42nm,0.6s						
MTBS				Lg	Lg	05 22 09.3	
	75nm,0.8s						
MTBS	Maitube	3.84	7	*e*P	Pb	05 21 15.5	+2.3
	42nm,0.6s						
BTK	Batken	3.87	283		Pn	05 21 06.2	+1.3
BTK	Batken	3.87	283	⇑*e*P	Pn	05 21 06.3	+1.3
	baz=85						
BTK				⇑*i*S	Sn	05 21 53.0	+2.4
	baz=85						
MRKS	Merke	3.92	332	*e*S	Sg	05 22 11.4	+0.3
	61nm,0.8s						
MRKS	Merke	3.92	332	Pg	Pb	05 21 17.0	+2.5
	45nm,0.6s						
MRKS				Lg	Lg	05 22 11.4	
	61nm,0.8s						
MRKS	Merke	3.92	332	*e*P	Pb	05 21 17.0	+2.5
	45nm,0.6s						
DGS	Degeres	3.92	0	*e*S	Sg	05 22 10.8	-0.4
	108nm,2.0s						
DGS	Degeres	3.92	0	Pg	Pb	05 21 16.5	+1.9
	60nm,0.4s						
DGS				Lg	Lg	05 22 10.8	
	108nm,2.0s						
DGS	Degeres	3.92	0	*e*P	Pb	05 21 16.5	+1.9
	60nm,0.4s						
MDOK	Medeo	3.97	14	*e*S	Sg	05 22 11.8	-0.8
	94nm,0.6s						
MDOK	Medeo	3.97	14	⇑Pg	Pb	05 21 16.4	+1.1
	35nm,0.6s						
MDOK				⇓Lg	Lg	05 22 11.5	
	111nm,0.7s						
MDOK	Medeo	3.97	14	Pg	Pb	05 21 17.1	+1.7
	30nm,0.5s						
MDOK				Lg	Lg	05 22 11.8	
	94nm,0.6s						
MDOK	Medeo	3.97	14	*e*P	Pb	05 21 17.1	+1.7
	30nm,0.5s						
KNDC	Almaty	4.00	13	⇓Pg	Pb	05 21 17.6	+1.7
	103nm,0.7s						
KNDC				⇓Lg	Lg	05 22 13.7	
	288nm,0.8s						
MNAS	Manas	4.01	323	⇑*e*P	Pn	05 21 10.2	+3.3

	baz=25						
MNAS				⇑eS	Sn	05 21 58.8	+4.8
	baz=25						
KOTS	Kotyrbulak	4.05	14	eS	Sg	05 22 15.9	+0.7
	156nm,0.9s						
KOTS	Kotyrbulak	4.05	14	Pg	Pb	05 21 19.2	+2.4
	30nm,0.7s						
KOTS				Lg	Lg	05 22 15.9	
	156nm,0.9s						
KOTS	Kotyrbulak	4.05	14	eP	Pb	05 21 19.1	+2.4
	30nm,0.7s						
USP	Ospenovka	4.06	347	P	Pn	05 21 10.5	+3.0
	SNR=16						
USP	Ospenovka	4.06	347	⇑eP	Pn	05 21 11.5	+4.1
	baz=48						
USP				⇑iS	Sb	05 22 00.9	-5.0
	baz=48						
TRKS	Terek-Say	4.15	304	⇑eP	Pn	05 21 10.6	+1.7
	baz=5.0						
TRKS				⇑iS	Sn	05 21 59.6	+2.0
	baz=5.0						
GAR	Garm	4.23	267		Pn	05 21 09.7	-0.3
GAR	Garm	4.23	267	⇓eP	Pn	05 21 10.9	+1.0
	baz=70						
GAR				⇓eS	Sn	05 22 00.6	+1.1
	baz=70						
SATY	Saty	4.24	27	eP	Pb	05 21 21.7	+1.6
	29nm,1.2s						
SATY				eS	Sg	05 22 20.1	-1.4
	116nm,0.7s						
SATY	Saty	4.24	27	Pg	Pb	05 21 21.7	+1.6
	29nm,1.2s						
SATY				Lg	Lg	05 22 20.1	
	116nm,0.7s						
KURS	Kuram	4.55	23	eS	Sg	05 22 30.2	-1.1
	81nm,0.7s						
KURS	Kuram	4.55	23	Pg	Pb	05 21 27.6	+2.3
	34nm,0.9s						
KURS				Lg	Lg	05 22 30.2	
	81nm,0.7s						
KURS	Kuram	4.55	23	eP	Pb	05 21 27.6	+2.3
	34nm,0.9s						
UZB	Uzynbulak	4.55	32	eS	Sg	05 22 29.3	-2.2
	39nm,0.4s						
UZB	Uzynbulak	4.55	32	Pg	Pb	05 21 26.9	+1.5
	17nm,0.5s						
UZB				Lg	Lg	05 22 29.3	
	39nm,0.4s						
UZB	Uzynbulak	4.55	32	eP	Pb	05 21 26.9	+1.5
	17nm,0.5s						
KUU	Kurty	4.59	5	eS	Sg	05 22 33.0	+0.2
	63nm,0.9s						
KUU	Kurty	4.59	5	Pg	Pb	05 21 29.1	+3.2
	22nm,0.3s						
KUU				Lg	Lg	05 22 33.0	
	63nm,0.9s						
KUU	Kurty	4.59	5	eP	Pb	05 21 29.1	+3.2
	22nm,0.3s						
KPKS	Kokpek	4.70	27	eP	Pb	05 21 29.6	+1.8
	28nm,0.6s						
KPKS				eS	Sg	05 22 33.6	-2.4
	164nm,0.6s						
PDGK	Podgornoye	4.90	34	Pg	Pb	05 21 33.3	+2.0
	7.0nm,0.7s						
PDGK				Lg	Lg	05 22 40.2	
	30nm,0.5s						
PDGK	Podgornoye	4.90	34	⇓Pn	Pn	05 21 21.5	+2.4
	8.8nm,0.8s						
PDGK				⇑Pg	Pb	05 21 33.9	+2.7
	19nm,0.5s						
PDGK				⇓Lg	Lg	05 22 40.6	
	156nm,0.8s						
ARXS	Arharly	5.13	17	eS	Sg	05 22 48.0	-2.1
	49nm,0.8s						
ARXS	Arharly	5.13	17	Pg	Pb	05 21 37.8	+2.6
	19nm,0.7s						
ARXS				Lg	Lg	05 22 48.0	
	49nm,0.8s						
ARXS	Arharly	5.13	17	eP	Pb	05 21 37.8	+2.6
	19nm,0.7s						
CHGR	Chuyangaron	5.17	265		Pn	05 21 22.2	-0.7
CHGR	Chuyangaron	5.17	265	⇑iP	Pn	05 21 23.8	+0.9
	baz=67						
CHGR				⇑eS	Sn	05 22 23.0	+0.3
	baz=67						
BLB	Baldybastay	5.20	22	Pg	Pb	05 21 39.1	+2.8
	31nm,0.5s						
BLB				Lg	Lg	05 22 49.9	
	73nm,0.6s						
KK07	Karatay Array	5.46	315	⇓Pn	Pn	05 21 27.5	+0.8
	3.0nm,0.4s,baz=129,slow=13						
KK07				⇑Sn	Sn	05 22 29.2	-0.5
	11nm,0.5s,baz=139,slow=22						
KKAR	Karatay Array	5.47	315		Pn	05 21 27.6	+0.8
BRLS	Borolday	5.80	312	eS	Sg	05 23 12.4	+1.0
	20nm,0.5s						
BRLS	Borolday	5.80	312	Pg	Pg	05 21 52.2	-4.1
	4.0nm,0.4s						
BRLS				Lg	Lg	05 23 12.4	
	20nm,0.5s						
BRLS	Borolday	5.80	312	eP	Pg	05 21 52.2	-4.1
	4.0nm,0.4s						
CHCP	Chirah Chowk	5.99	200	P	Pn	05 21 36.6	+2.6
NIL	Nilore	6.00	200		Pn	05 21 36.1	+2.0
CEP	Cherat	6.29	211	P	Pn	05 21 40.1	+1.9
KAPS	Kapalarasan	6.54	23	eS	Sg	05 23 30.1	-4.9
	15nm,1.2s						
KAPS	Kapalarasan	6.54	23	Pg	Pb	05 22 02.3	+3.2
	10nm,0.8s						
KAPS				Lg	Lg	05 23 30.1	
	15nm,1.2s						
KAPS	Kapalarasan	6.54	23	eP	Pb	05 22 02.3	+3.2
	10nm,0.8s						
DHRM	DHARAMSHALA	7.07	176	eP	Pn	05 21 49.7	+0.8
DHRM				eS	Sn	05 23 07.0	-2.4
DHRM				IAML		05 23 13.3	
	comp=N,443nm,0.7s						
KBL	Kabul	7.18	230	Pn	Pn	05 21 51.5	+1.0
SMLA	Simla	8.25	171	eP	Pn	05 22 05.7	+0.7
SMLA				eS	Sn	05 23 33.7	-4.6
SMLA				IAML		05 23 40.8	
	comp=E,64nm,0.8s						
MAKZ	Makanchi	8.76	29	Pn	Pn	05 22 13.7	+1.7
MK31	Makanchi Array	8.87	31	Pn	Pn	05 22 14.3	+0.8
MKAR	Makanchi Array	8.87	31	Pn	Pn	05 22 14.3	+0.8
WMQ	Urumqi	10.02	59	eP	Pn	05 22 31.8	+2.5
KUDL	Kundal	11.16	177	eP	Pn	05 22 42.4	-2.5
PYUN	Piuthan	12.70	150	eP	Pn	05 23 03.1	-3.1
	comp=E,33nm,0.3s						
DANN	Dangsing	12.80	146	eP	Pn	05 23 02.3	-5.3
KOLN	Koldanda	13.24	148	eP	Pn	05 23 08.7	-4.8
	comp=E,16nm,0.4s						
GEYT	Alibeck	13.86	270	LR	LR	05 28 56.1	
	comp=E,91nm,18.4s,baz=135,slow=41						
JIRN	Jiri	14.51	140	eP	Pn	05 23 27.2	-3.9
	comp=E,10nm,0.4s						
AB31	Akbulak array	15.03	317	P	Pn	05 23 36.0	-1.6
	comp=E,1.1nm,0.4s,baz=126,slow=13,SNR=40						
ABKAR	Akbulak array	15.03	317	Pn	Pn	05 23 36.7	-0.9
ODAN	Odare	15.78	138	eP	Pn	05 23 46.4	-1.4
	comp=E,10nm,0.5s						
ZAA0	Zalesovo Array	15.89	20	Pn	Pn	05 23 49.7	+0.9
ZALV	Zalesovo Beam	15.89	20	Pn	P	05 23 53.9	+1.4
	comp=E,0.1nm,0.3s,baz=205,slow=13,SNR=2.7						
ZALV				LR	LR	05 30 40.7	
	comp=E,44nm,20.0s,baz=216,slow=40						
ZALV	Zalesovo Beam	15.89	20		Pn	05 23 50.1	+1.3
AKTO	Aktyubinsk	16.73	317	⇓P	Pn	05 23 59.1	-0.5
	comp=E,2.0nm,0.6s						
FINES	FINESS Array B	37.38	323	P	P	05 27 15.8	-2.0
	comp=E,1.3nm,0.8s,baz=107,slow=9.5,SNR=1.5						
FINES	FINESS Array B	37.38	323	P	P	05 27 16.7	-1.1
ARCES	ARCESS Array B	40.07	335	P	P	05 27 41.6	+1.2
	comp=E,2.3nm,0.9s,baz=108,slow=8.6,SNR=6.0						
KULM	Kulim	40.67	140	P	P	05 27 46.3	+0.4
KULM				IAmb	IAmb	05 28 04.7	
	comp=Z,24nm,1.2s						
JNU	Nakatsue	44.33	80	P	P	05 28 15.5	-0.1
GERES	GERESS Array B	44.44	304	P	P	05 28 18.5	+2.1
	comp=Z,0.8nm,0.8s,baz=91,slow=6.2,SNR=3.5						
GERES	GERESS Array B	44.44	304	P	P	05 28 16.0	-0.3
NBO00	NORSAR Array S	44.68	321	P	P	05 28 17.9	-0.1
MSEY	Mahe Island	47.60	208	P	P	05 28 42.2	+0.7
JKA	Kamikawa-asahi	48.90	62	P	P	05 28 53.0	+1.8
KKM	Kota Kinabalu	49.24	122	P	P	05 28 55.7	+1.5
BILL	Bilibino	54.41	28	P	P	05 29 33.4	+1.4
BILL				IAmb	IAmb	05 29 43.1	
	comp=Z,9.6nm,1.5s						
PETK	Petropavlovsk-	55.32	47	P	P	05 29 38.6	-0.3
TORD	Torodi Ar. Bea	69.50	270	P	P	05 31 15.2	+1.0
	comp=Z,0.5nm,0.7s,baz=49,slow=5.7,SNR=4.6						
BWN	Browne	70.86	19	P	P	05 31 23.1	+1.2
KTH	Kantishna Hill	70.98	20	P	P	05 31 22.2	-0.5
GHO	Glory Hole Cre	72.97	20	P	P	05 31 35.0	+0.3
GHO				IAmb	IAmb	05 31 46.5	
	comp=Z,7.0nm,1.1s						
DAWY	Dawson	73.27	15	P	P	05 31 37.8	+1.4
DAWY				IAmb	IAmb	05 32 02.1	
	comp=Z,7.3nm,1.4s						

*HEL **19** 05:40:16.2±0.3, 67°.63N×33°.82E, h0^{km}, ML2.2, Explosion*
*NAO **19** 05:40:16.1±1.2, 67°.62N×33°.78E, ML2.8*
ISC 19 05:40:12.4±1.2**, 67°.57N**±0°.04×**34°.17E**±0°.06**, h0^{km}, n33, σ1ˢ.94**/63**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APZ9	Apatity	0.29	271	Pg	Pb	05 40 19.6	-1.0
APZ9				Lg	Lg	05 40 21.9	
APZ9	Apatity	0.29	271	Pg	Pb	05 40 19.6	-1.0
APZ9				Sg	Sg	05 40 21.9	+0.1
APA0	Apatity Array	0.45	275	Pg	Pg	05 40 22.1	+1.0
	baz=87,slow=16						
APA0				Lg	Lg	05 40 25.9	
	baz=79,slow=37						
APA0				Rg	Rg	05 40 27.2	
	baz=67,slow=37						
APA0	Apatity Array	0.45	275	Pg	Pg	05 40 22.1	+1.0
	baz=87,slow=16						
APA0				Sg	Sg	05 40 25.9	-1.1
	baz=79,slow=37						
VRF	Varrio	1.75	278	PG	Pn	05 40 44.8	+0.8
VRF				MSG		05 41 04.4	
	comp=Z,26nm,0.2s						
VRF				SG	Sn	05 41 05.0	-2.0
KU6	Riekki	2.30	230	PG	Pg	05 40 56.0	-0.4
	baz=47						
KU6				MSG		05 41 22.3	
	comp=Z,12nm,0.2s						
KU6				SG	Sb	05 41 25.1	+1.6
MSF	Maaselka	2.63	233	PG	Pb	05 41 01.1	+0.8
MSF				SG	Sb	05 41 34.5	+1.4
SGF	Sodankyl	2.94	271	PN	Pn	05 41 02.2	+1.9
	baz=78						
SGF				SN	Sn	05 41 35.7	-0.6
RNF	Rovaniemi	3.33	257	PN	Pn	05 41 07.9	+2.2
RNF				SN	Sn	05 41 46.3	+0.4
KEV	Kevo	3.42	313	Pn	Pn	05 41 08.8	+1.9
KEV				Sn	Sn	05 41 47.4	-0.6
KEV				Lg	Lg	05 41 54.1	
KEV	Kevo	3.42	313	eP	Pn	05 41 08.9	+2.1
KEV				eS	Sn	05 41 46.2	-1.8
KEV	Kevo	3.42	313	PN	Pn	05 41 08.7	+1.9
	baz=125						
KEV				SN	Sn	05 41 47.4	-0.6
ARA0	ARCESS Array S	3.75	306	Pn	Pn	05 41 12.7	+1.3
	baz=122,slow=16						
ARA0				Sn	Sn	05 41 52.4	-3.7
	baz=120,slow=28						
ARA0				Lg	Lg	05 42 05.0	
	baz=108,slow=37						
ARA0	ARCESS Array S	3.75	306	Pn	Pn	05 41 12.7	+1.3
	baz=122,slow=16						
ARA0				Sn	Sn	05 41 52.4	-3.7
	baz=120,slow=28						
ARA0				Sg	Sb	05 42 05.0	-0.2
	baz=108,slow=37						
ARA0				IAML		05 42 10.8	
	comp=Z,20nm,0.5s						
ARA0	ARCESS Array S	3.75	306	PN	Pn	05 41 12.7	+1.3
	baz=120						
ARA0				SN	Sn	05 41 54.0	-2.1
KLF	Kolari	3.96	270	PG	Pb	05 41 23.6	+0.7
	baz=82						
KLF				SN	Sn	05 42 00.3	-0.9
HEF	Hetta	4.05	287	Pn	Pn	05 41 17.0	+1.5
HEF				Sn	Sn	05 42 01.0	-2.5
HEF				Lg	Lg	05 42 14.6	
HEF	Hetta	4.05	287	eP	Pn	05 41 17.1	+1.5
HEF				eS	Sn	05 42 01.0	-2.5
HEF	Hetta	4.05	287	PN	Pn	05 41 16.8	+1.3
	baz=101						
HEF				SN	Sn	05 42 02.4	-1.1
OUL	Oulu	4.16	237	PB	Pb	05 41 26.0	-0.4
TOF	Tornio	4.17	254	PG	Pb	05 41 29.3	+2.8
TOF				SN	Sn	05 42 06.1	-0.4
PAJU	Pajala	4.32	268	PN	Pn	05 41 20.9	+1.6
PAJU				SN	Sn	05 42 08.7	-1.6
LANU	Lannavaara	4.65	282	PN	Pn	05 41 25.1	+1.4
LANU				SG	Sb	05 42 33.3	+2.3
HAMF	Hammerfest	4.86	314	eS	Sn	05 42 21.0	-2.4
HAMF				IAML		05 42 51.2	
	comp=Z,20nm,0.5s						
KIF	Kilpisjarvi	5.17	292	Pn	Pn	05 41 32.2	+1.3
KIF				Sn	Sn	05 42 27.0	-4.1
KIF				Lg	Lg	05 42 43.6	
KIF	Kilpisjarvi	5.17	292	eP	Pn	05 41 31.8	+0.9
JETT	Jettan, Norway	5.42	298	Pn	Pn	05 41 35.8	+1.3
JETT				Sn	Sn	05 42 34.7	-2.8
TRO	Tromso	5.95	297	eP	Pn	05 41 42.0	+0.5
TRO				eS	Sn	05 42 45.8	-4.5
TRO				IAML		05 43 21.4	
	comp=Z,9.2nm,0.6s						
FIA0	FINESS Array S	7.07	213	Sn	Sn	05 43 17.5	-0.3
	baz=37,slow=22						
FIA0				Lg	Lg	05 43 54.6	
	baz=32,slow=28						
FIA0	FINESS Array S	7.07	213	Sn	Sn	05 43 17.5	-0.3
	baz=37,slow=22						
FIA0				Sg	Sg	05 43 54.6	-4.4
	baz=32,slow=28						
KLMR	Klimovskoe	7.13	158	P	Pn	05 41 59.5	+1.7
KLMR				P	Pn	05 41 59.5	+1.7
KLMR				P	Pn	05 41 59.5	+1.7
KLMR				eS	Sn	05 43 16.4	-2.9
KLMR				eS	Sn	05 43 16.5	-2.9
KLMR				eS	Sn	05 43 16.6	-2.8
SPA0	Spitsbergen Ar	11.78	342	Pn	Pn	05 43 01.0	-0.5
	baz=139,slow=16						
SPA0	Spitsbergen Ar	11.78	342	Pn	Pn	05 43 01.0	-0.5
	baz=139,slow=16						

*TUL **19** 06:00:46.4±0.9, 36°.47N±0°.03×98°.75W±0°.02, h6^{km}±2^{km}, ML2.6, mb_Lg2.3/6(NEIC), Error ellipse: s-maj=4.3km s-min=2.0km az=152.0*
NEIC 19 06:00:46.4±0.7**, 36°.48N**±0°.03×**98°.75W**±0°.01**, h5^{km}**±2^{km}**, Error ellipse: s-maj=4.9km s-min=3.0km az=165.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
U32A	Winter Ranch,	0.23	244		Pg	06 00 51.2	+0.3
U32A				Sg	Sg	06 00 54.7	+0.8
OK032	Salt Plains WL	0.54	53		Pg	06 00 57.2	+0.5
OK032				Sg	Sg	06 01 04.7	+1.0
CROK	Carrier	0.61	88		Pg	06 00 58.4	+0.2
CROK				Sg	Sg	06 01 07.1	+0.9
KAN14	Manchester OK	0.79	53	Pg	Pg	06 01 02.0	+0.5
KAN14				Sg	Sb	06 01 12.7	-0.9
GC02	Grant County #	0.80	62		Pg	06 01 01.9	+0.2
KAN16	Harper SW Stat	0.92	36	Pg	Pg	06 01 04.2	+0.1
KAN05	Bluff City Nor	0.94	48		Pg	06 01 04.4	0.0
KAN05				Sg	Sb	06 01 17.4	-0.5
KAN08	Anthony NE Sta	0.97	40	Pg	Pg	06 01 05.0	0.0
KAN08				IAmb_Lg		06 01 16.5	
	comp=Z,38nm,0.7s						
KAN12	Harper NE Stat	1.01	36	Pg	Pg	06 01 05.8	0.0
KAN01	Argonia South	1.04	49	Pg	Pg	06 01 06.2	-0.1
KAN01				IAmb_Lg		06 01 20.0	
	comp=Z,17nm,1.0s						
KAN09	Caldwell North	1.12	54	Pg	Pg	06 01 07.7	-0.1
KAN13	South Haven SW	1.15	62	Pg	Pg	06 01 08.1	-0.3
BLOK	Blackwell	1.26	77	Pn	Pg	06 01 10.1	-0.5
OKCFA	Oklahoma City	1.50	135	Pn	Pn	06 01 13.7	-0.2
OK031	S. Brethren Rd	1.63	108		Pn	06 01 15.8	0.0
FNO	Franklin	1.64	138	Pn	Pn	06 01 16.2	+0.3
QUOK	Quay	1.68	100		Pn	06 01 16.2	-0.1
OK030	Cody Creek RV	1.68	109	Pn	Pn	06 01 16.0	-0.5
X34A	Smith Ranch, M	2.02	158	IAmb_Lg		06 01 55.4	
	comp=Z,20nm,0.9s						
AMTX	Amarillo	2.87	237	IAmb_Lg		06 02 17.5	
	comp=Z,8.4nm,0.7s						

*IDC **19** 06:17:03.9±3.6, 24°.02S×179°.92W, h503^{km}±28^{km}, mb3.3/6, mb1 3.7/7, mb1mx3.3/34, mbtmp4.2/7, Error ellipse: s-maj=81.1km s-min=17.1km az=156.0*
*NEIC **19** 06:17:04.3±1.0, 24°.0S±0°.2×179°.9W±0°.2, h504^{km}±13^{km}, mb4.1/14, Error ellipse: s-maj=23.1km s-min=22.3km az=149.0*
ISC 19 06:17:05.0±0.7**, 23°.90S**±0°.09×**180°.0W**±0°.1**, h518^{km}, n32, σ0ˢ.89**/34**, mb3.9**/12**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	6.41	343	P	P	06 18 46.1	-0.1
	4.8nm,0.3s,baz=202,slow=7.1,SNR=27						
LIFNC	LIFOU	12.22	282	P	P	06 19 44.8	-1.1
OUZ	Omahuta	12.58	205	P	P	06 19 51.6	+2.2
URZ	Urewera	14.52	189	S	S	06 22 41.3	-0.9
QRZ	Quartz Range	18.00	199	P	P	06 20 44.1	-0.2
NNZ	Nelson	18.14	196	P	P	06 20 44.7	-0.8
TUWZ	Tuamarina	18.20	195	P	P	06 20 44.8	-1.2
KHZ	Kahutara	19.23	195	P	P	06 20 54.8	-0.6
EIDS	Eidsvold	26.32	261	P	P	06 21 58.3	-0.8
EIDS				IAmb	IAmb	06 22 20.3	
	comp=Z,4.2nm,1.1s						
CTAO	Charters Tower	31.48	270	P	P	06 22 45.5	+1.2
BBOO	Buckleboo	39.45	247	P	P	06 23 50.0	-0.3
BBOO				IAmb	IAmb	06 24 15.3	
	comp=Z,7.4nm,1.3s						
AS31	Alice Springs	42.04	261	P	P	06 24 11.6	+0.4
ASAR	Alice Springs	42.04	261	P	P	06 24 11.6	+0.4
	comp=Z,1.8nm,0.5s,baz=98,slow=6.8,SNR=30						
ASAR				ScP	ScP	06 28 56.9	+1.6
	comp=Z,1.2nm,0.7s,baz=109,slow=4.2,SNR=10.0						
ASAR	Alice Springs	42.04	261	P	P	06 24 11.2	+0.1
WR0	Warramunga Arr	42.23	266	P	P	06 24 12.3	-0.4
WR0				IAmb	IAmb	06 24 26.2	
	comp=Z,3.5nm,1.0s						
WB2	Warramunga Arr	42.40	266	P	P	06 24 13.9	-0.1
WB0	Warramunga Arr	42.41	266	P	P	06 24 13.8	-0.2
WB0				IAmb	IAmb	06 24 14.4	
	comp=Z,7.7nm,0.7s						
WRA	Warramunga Arr	42.42	266	P	P	06 24 13.9	-0.3
	comp=Z,5.0nm,0.5s,baz=97,slow=8.4,SNR=116						
WRA				ScP	ScP	06 28 58.6	+1.8
	comp=Z,0.8nm,0.9s,baz=98,slow=4.0,SNR=4.0						
WRA	Warramunga Arr	42.42	266	P	P	06 24 13.8	-0.3
FORT	Forrest	46.32	250	P	P	06 24 44.0	-0.1
FORT				IAmb	IAmb	06 25 01.4	
	comp=Z,14nm,1.0s						
KNRA	Kununurra	48.70	270	P	P	06 25 01.5	-0.6
KNRA				IAmb	IAmb	06 25 03.1	
	comp=Z,6.5nm,0.8s						
FITZ	Fitzroy Crossi	50.84	266	P	P	06 25 18.4	+0.5
	comp=Z,2.8nm,0.6s,baz=103,slow=6.0,SNR=12						
QSPA	South Pole Qui	66.18	180	P	P	06 27 01.9	+1.1
SNAA	Sanae	84.66	179	P	P	06 28 42.6	-0.9
NVAR	Mina Array Bea	84.75	44	P	P	06 28 45.0	+0.3
	comp=Z,0.2nm,0.5s,baz=232,slow=8.2,SNR=4.0						
VNA3	Neumayer Olymp	84.87	177	P	P	06 28 43.2	-1.3
VNA2	Neumayer--Watz	85.29	178	P	P	06 28 45.9	-0.6
TXAR	Lajitas Array	90.42	58	P	P	06 29 12.2	+0.8
	comp=Z,0.9nm,0.7s,baz=218,slow=6.2,SNR=11						
TXAR	Lajitas Array	90.42	58	P	P	06 29 11.5	+0.2
PDAR	Pinedale Array	92.69	44	P	P	06 29 21.1	-0.5
	comp=Z,0.4nm,0.7s,baz=212,slow=3.2,SNR=3.6						
PDAR	Pinedale Array	92.69	44	P	P	06 29 21.6	0.0
ARCES	ARCESS Array B	131.89	348	PKP	PKPdf	06 35 17.7	-0.8
	comp=Z,2.2nm,0.9s,baz=20,slow=3.2,SNR=3.7						

IDC 19 06:28:56.5±2.4**, 54°.24N**×**86°.09E, h0^{km}, mb1 3.2**/2**, mb1mx2.6**/59**, mbtmp3.2**/2**, ML3.0**/2**, Error ellipse: s-maj=18.6km s-min=11.1km az=54.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	0.81	249	i		06 33 46.8	
	baz=68,slow=340,SNR=7.4						
ZALV	Zalesovo Beam	0.81	249	Pg	Pg	06 29 10.1	-1.8
	2.2nm,0.3s,baz=66,slow=17,SNR=26						
ZALV				Lg	Lg	06 29 24.0	
	7.5nm,0.3s,baz=71,slow=30,SNR=22						
KURBB	Kurchatov Arra	5.87	235	Pn	Pn	06 30 26.0	+1.3
	0.2nm,0.3s,baz=51,slow=13,SNR=10						
MKAR	Makanchi Array	7.84	200	Pn	Pn	06 30 52.6	+0.9
	0.4nm,0.3s,baz=17,slow=13,SNR=14						

*IDC **19** 06:31:40.5±5.1, 35°.82N×70°.59E, h79^{km}±35^{km}, mb3.8/4, mb1 3.8/10, mb1mx3.3/62, mbtmp4.1/10, Error ellipse: s-maj=55.8km s-min=21.2km az=154.0*
*NNC **19** 06:31:45.2±5.6, 36°.68N×70°.42E, h0^{km}, mb4.2, mpv3.7, Error ellipse: s-maj=50.6km s-min=40.8km az=154.0*
*NEIC **19** 06:31:47.0±1.9, 36°.30N±0°.05×70°.49E±0°.07, h121^{km}±8^{km}, mb4.4/5, Error ellipse: s-maj=9.0km s-min=5.0km az=53.0*
ISC 19 06:31:44.6±0.6**, 36°.24N**±0°.06×**70°.55E**±0°.06**, h100^{km}, n49, σ1ˢ.75**/55**, mb4.3**/3**, 3C-3D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	Kabul	2.09	216	Pn	Pn	06 32 23.0	+4.4
CHGR	Chuyangaron	2.66	336	Pn	Pn	06 32 27.5	+1.7
GAR	Garm	2.76	356		Pn	06 32 29.4	+2.1
DRK	Karamyk	3.38	17		Pn	06 32 38.2	+2.4
NIL	Nilore	3.40	139	Pn	Pn	06 32 39.7	+3.9
BTK	Batken	3.82	3	Pn	Pn	06 32 44.2	+2.8
DHRM	DHARAMSHALA	6.20	128	eP	Pn	06 33 15.0	+1.2
DHRM				eS	Sn	06 34 23.1	-0.4
DHRM				IAML		06 34 28.0	
	comp=E,72nm,0.0s						
DHRM				IAML		06 34 29.2	
	comp=N,59nm,0.4s						
DHRM	DHARAMSHALA	6.20	128	eP	Pn	06 33 15.1	+1.2
DHRM				eS	Sn	06 34 23.5	+0.1
DHRM				IAML		06 34 26.4	
	comp=E,89nm,0.4s						
DHRM				IAML		06 34 29.1	
	comp=N,54nm,0.1s						
KK07	Karatay Array	6.84	360	⇑P	Pn	06 33 22.1	-0.2
	comp=N,5.1nm,0.5s,baz=188,slow=13						
KK07				⇑S	Sn	06 34 36.9	-1.8
	comp=N,7.5nm,0.6s,baz=193,slow=23						
KKAR	Karatay Array	6.86	360	Pn	Pn	06 33 23.0	+0.5
AAK	Ala-Archa	7.08	24	P	Pn	06 33 26.6	+1.0
	comp=N,0.9nm,0.3s,baz=203,slow=5.3,SNR=12						
AAK				S	Sn	06 34 42.9	-1.7
	comp=N,1.3nm,0.3s,baz=337,slow=20,SNR=12						
AAK	Ala-Archa	7.08	24	⇑P	Pn	06 33 26.3	+0.6
	comp=N,2.7nm,0.5s						
SMLA	Simla	7.51	131	eP	Pn	06 33 31.8	+0.4
SMLA				eS	Sn	06 34 52.0	-2.8
SMLA				IAML		06 34 59.5	
	comp=E,44nm,0.6s						
SMLA	Simla	7.51	131	eP	Pn	06 33 31.5	+0.1
SMLA				eS	Sn	06 34 52.9	-1.9
SMLA				IAML		06 34 55.7	
	comp=E,30nm,0.5s						
SMLA				IAML		06 34 56.4	
	comp=N,36nm,0.1s						
BOOM	Boomskoye usch	7.51	32		Pn	06 33 32.6	+1.1
TKM2	Tokmak 2	7.73	29	⇓P	Pn	06 33 34.6	+0.1
	comp=N,1.6nm,0.6s						
TKM2				⇓S	Sn	06 34 58.6	-1.9
	comp=N,4.1nm,0.6s						
KDJ	Kajisay	7.82	39	Pn	Pn	06 33 37.9	+2.2
TARG	Taragay, Kyrgy	7.87	44	Pn	Pn	06 33 38.1	+1.5
PRZ	Przheval'sk	8.71	42	Pn	Pn	06 33 50.4	+2.6
GEYT	Alibeck	10.08	283	P	Pn	06 34 04.8	-1.5
	comp=N,1.5nm,0.3s,baz=83,slow=14,SNR=4.4						
GEYT				S	Sn	06 35 55.2	-2.2
	comp=N,0.6nm,0.3s,baz=197,slow=24,SNR=2.1						
GEYT	Alibeck	10.08	283	Pn	Pn	06 34 05.3	-1.0
GYA0B	ALIBECK ARRAY	10.08	283	Pn	Pn	06 34 05.1	-1.2
DANN	Dangsing	13.65	121	eP	Pn	06 34 51.6	-2.7
MKAR	Makanchi Array	13.71	36	P	Pn	06 34 56.2	+1.5
	baz=229,slow=18,SNR=2.7						
MKAR	Makanchi Array	13.71	36	Pn	Pn	06 34 55.2	+0.5
KOLN	Koldanda	13.91	124	eP	Pn	06 34 56.2	-1.4

GKN	Gorkha	14.47	121	eP	Pn	06 35 02.0	-2.8
	comp=N,18nm,0.6s						
AB31	Akbulak array	15.14	333	P	Pn	06 35 12.5	-0.4
	comp=N,1.5nm,0.3s,baz=148,slow=12,SNR=96						
ABKAR	Akbulak array	15.14	333	Pn	Pn	06 35 12.4	-0.5
ABKAR				IAmb	IAmb	06 35 14.1	
	comp=Z,5.7nm,0.7s						
ABKAR	Akbulak array	15.14	333	Pn	Pn	06 35 12.3	-0.7
GUN	Gumba	15.41	118	eP	Pn	06 35 14.0	-2.8
	comp=Z,14nm,0.5s						
KURBB	Kurchatov Arra	15.49	19	P	Pn	06 35 19.6	+2.4
	comp=Z,0.0nm,0.3s,baz=210,slow=10,SNR=8.9						
JIRN	Jiri	15.78	118	eP	Pn	06 35 18.7	-2.7
	comp=Z,7.9nm,0.4s						
RAMN	Ramite	16.50	120	eP	Pn	06 35 29.0	-1.2
	comp=Z,12nm,0.6s						
BVAR	Borovoye Array	16.79	360	P	P	06 35 36.0	+2.1
	comp=Z,0.3nm,0.3s,baz=198,slow=18,SNR=3.4						
AKTO	Aktyubinsk	16.83	331	P	P	06 35 36.5	+2.1
	comp=Z,0.6nm,0.3s,baz=120,slow=12,SNR=22						
AKTO	Aktyubinsk	16.83	331	⇓P	Pn	06 35 35.1	+1.2
	comp=Z,11nm,0.8s						
TAPN	Taplejung	17.05	116	eP	Pn	06 35 36.3	-0.8
	comp=Z,17nm,0.6s						
ODAN	Odare	17.11	118	eP	Pn	06 35 37.0	-0.7
	comp=Z,16nm,0.7s						
ZAA0	Zalesovo Array	20.30	25	P	P	06 36 12.5	+0.2
ZAA0				IAmb	IAmb	06 36 13.5	
	comp=Z,11nm,0.6s						
ZALV	Zalesovo Beam	20.30	25	P	P	06 36 12.4	+0.1
	comp=Z,12nm,0.5s,baz=220,slow=11,SNR=53						
ZALV	Zalesovo Beam	20.30	25	P	P	06 36 12.7	+0.4
SHL	Shillong	21.13	114	P	P	06 36 22.4	+0.8
FINES	FINESS Array B	37.50	326	P	P	06 38 49.8	+1.5
	comp=Z,3.3nm,0.9s,baz=134,slow=8.0,SNR=3.4						
FINES	FINESS Array B	37.50	326	P	P	06 38 49.6	+1.3
ARCES	ARCESS Array B	41.25	338	P	P	06 39 20.5	+1.1
	comp=Z,3.5nm,0.9s,baz=112,slow=6.9,SNR=5.5						
ARCES	ARCESS Array B	41.25	338	P	P	06 39 19.2	-0.2
ARCES				IAmb	IAmb	06 39 37.4	
	comp=Z,27nm,1.4s						
TORD	Torodi Ar. Bea	65.35	268	P	P	06 42 14.9	-1.6
	comp=Z,0.7nm,0.6s,baz=47,slow=6.3,SNR=6.1						
TORD	Torodi Ar. Bea	65.35	268	P	P	06 42 14.4	-2.1

IDC 19 06:49:58.0±1.4, 28°.31N×102°.41E, h0^{km}, mb3.7/3, mb1 3.9/4, mb1mx3.2/48, mbtmp3.7/4, ML3.6/1, MS3.2/5, Ms1 3.2/5, ms1mx2.7/48, Error ellipse: s-maj=82.6km s-min=23.6km az=66.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	19.74	8	P	P	06 54 28.2	-1.1
	0.2nm,0.3s,baz=186,slow=11,SNR=9.4						
KSRS	Korea Array	23.23	60	LR	LR	07 05 20.2	
	comp=Z,18nm,18.4s,baz=20,slow=40						
MKAR	Makanchi Array	24.27	325	P	P	06 55 17.7	+0.9
	1.4nm,0.8s,baz=120,slow=9.7,SNR=5.1						
USRK	Ussuriysk Ar.	28.45	48	LR	LR	07 08 25.1	
	comp=Z,45nm,18.9s,baz=196,slow=39						
JCJ	Chichijima	35.13	82	LR	LR	07 10 14.2	
	comp=Z,23nm,19.0s,baz=164,slow=35						
TIXI	Tiksi	45.77	11	LR	LR	07 17 35.2	
	comp=Z,84nm,21.0s,baz=308,slow=36						
WRA	Warramunga Arr	57.04	144	P	P	06 59 45.7	-0.2
	1.1nm,0.8s,baz=321,slow=6.1,SNR=10						
ASAR	Alice Springs	59.93	146	P	P	07 00 06.2	+0.1
	0.4nm,0.4s,baz=325,slow=7.0,SNR=9.4						
STKA	Stephens Creek	70.52	145	LR	LR	07 33 55.5	
	comp=Z,18nm,19.1s,baz=27,slow=37						

IDC 19 06:54:19.7±3.1, 54°.44N×86°.98E, h0^{km}, mb1 3.0/2, mb1mx3.0/49, mbtmp3.0/2, ML2.6/2, Error ellipse: s-maj=27.6km s-min=19.3km az=48.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.36	250	i		07 01 40.0	
	baz=71,slow=343,SNR=11						
ZALV	Zalesovo Beam	1.36	250	Pg	Pg	06 54 44.0	-1.8
	1.2nm,0.3s,baz=68,slow=16,SNR=12						
ZALV				Lg	Lg	06 55 02.9	
	1.6nm,0.3s,baz=65,slow=27,SNR=7.5						
KURBB	Kurchatov Arra	6.41	237	Pn	Pn	06 55 56.1	+0.8
	0.1nm,0.3s,baz=48,slow=15,SNR=6.4						
KURBB				Lg	Lg	06 57 45.7	
	0.1nm,0.3s,baz=60,slow=30,SNR=4.1						
MKAR	Makanchi Array	8.21	203	Pn	Pn	06 56 21.2	+1.2
	0.1nm,0.3s,baz=25,slow=13,SNR=5.1						

*SJA **19** 06:57:35.0, 31°.68S×72°.08W, h10^{km}, ML4.0*
*GUC **19** 06:57:37.8±0.6, 31°.66S×71°.64W, h38^{km}±2^{km}, ML3.4*

ISC 19 06:57:35.4±1.7, 31°.67S±0°.03×71°.83W±0°.08, h9^{km}±12^{km}, n43, σ1^{s}21/53, 4C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA06	Catapilco	1.00	153	⇓iP	Pg	06 57 54.9	+0.4
VA06				i S	Sg	06 58 07.6	+0.1
VA06				IAML		06 58 09.5	
	comp=N,4μm,0.2s						
CO06	Fray Jorge	1.01	10	eP	Pb	06 57 55.8	+0.7
CO06				i S	Sb	06 58 08.9	+0.5
CO06				IAML		06 58 11.9	
	comp=E,900nm,0.3s						
ROCH	El Roble	1.47	152	⇓eP	Pn	06 58 02.0	-0.4
ROCH				i S	Sn	06 58 21.3	-0.6
ROCH				IAML		06 58 23.5	
	comp=N,573nm,0.2s						
ROC1	El Roble	1.47	152	i P	Pn	06 58 02.0	-0.4
VA03	San Esteban	1.54	136	eP	Pn	06 58 03.3	+0.1
VA03				eS	Sn	06 58 22.1	-1.3
VA03				IAML		06 58 24.7	
	comp=E,2μm,0.2s						
VA03	San Esteban	1.54	136	i P	Pn	06 58 03.0	-0.2
MT02	Curacav	1.69	160	i P	Pn	06 58 05.0	-0.2
GO04	Tololo Observa	1.73	31	eP	Pn	06 58 05.9	-0.1
GO04				eS	Sn	06 58 27.5	-1.0
GO04				IAML		06 58 36.5	
	comp=E,2μm,0.5s						
GO04	Tololo Observa	1.73	31	i P	Pn	06 58 06.0	0.0
PEL	Peldehue	1.76	147	⇑eP	Pn	06 58 06.6	+0.4
PEL				eS	Sn	06 58 28.7	-0.1
PEL				IAML		06 58 31.9	
	comp=N,327nm,0.3s						
PEL	Peldehue	1.76	147	i P	Pn	06 58 06.0	-0.2
CO05	La Serena	1.82	16	eP	Pn	06 58 05.6	-1.4
CO05				eS	Sn	06 58 30.2	+0.1
CO05				IAML		06 58 37.8	
	comp=E,448nm,0.4s						
MT05	Renca	1.95	152	⇑eP	Pn	06 58 09.5	+0.7
MT05				eS	Sn	06 58 34.6	+1.2
MT05				IAML		06 58 37.4	
	comp=E,1μm,0.3s						
MT05	Renca	1.95	152	i P	Pn	06 58 09.0	+0.2
VA05	Santo Domingo	1.99	175	eP	Pn	06 58 09.4	+0.1
FCH	Farellones	2.10	142	⇑eP	Pn	06 58 11.8	+0.7
FCH				eS	Sn	06 58 36.7	-0.9
FCH				IAML		06 58 44.3	
	comp=E,274nm,0.3s						
MT09	Talagante	2.22	162	⇑eP	Pn	06 58 13.6	+1.0
MT09				eS	Sn	06 58 40.9	+0.7
MT09				IAML		06 58 53.7	
	comp=N,276nm,0.4s						
MT01	Popeta	2.24	168	eP	Pn	06 58 13.2	+0.4
MT01	Popeta	2.24	168	i P	Pn	06 58 13.0	+0.2
AROD	Rodeo	2.52	54	i P	Pb	06 58 20.0	-1.0
ACCO	Cerro Coronel	2.60	66	i P	Pn	06 58 19.0	+0.9
ZON	Zonda	2.69	88	i P	Pb	06 58 22.0	-1.8
ASAL	Salagasta	2.70	111	i P	Pb	06 58 23.0	-1.0
ARCO	CERRO ARCO	2.72	116	i P	Pb	06 58 23.0	-1.4
ACDV	Cuesta del Vie	2.77	58	i P	Pb	06 58 23.0	-2.2
BO01	Tunca	2.79	167	eP	Pn	06 58 20.9	+0.7
BO01	Tunca	2.79	167	i P	Pn	06 58 21.0	+0.7
LCO	Las Campanas	2.82	20	i P	Pn	06 58 21.0	0.0
AAGR	Agrelo	2.90	120	i P	Pn	06 58 25.0	+3.0
BO02	Sierra Bellavi	3.23	165	eP	Pn	06 58 27.3	+0.8
BO02	Sierra Bellavi	3.23	165	i P	Pn	06 58 27.0	+0.5
AC04	Llanos de Chal	3.52	11	i P	Pn	06 58 31.0	+0.7
AVFE	Valle Fertil	3.88	76	i P	Pn	06 58 36.0	+0.6
RFA	San Rafael	4.18	139	i P	Pn	06 58 41.0	+1.4
VCA	Vinchina	4.29	48	i P	Pn	06 58 44.0	+2.9
ACHE	Chepes	4.44	85	i P	Pn	06 58 45.0	+1.8
APLL	PUNTA DE LOS L	4.72	76	i P	Pn	06 58 48.0	+1.0
ACLC	CERRO LA CRUZ	4.76	63	i P	Pn	06 58 49.0	+1.4
AC02	Maricunga	5.36	27	i P	Pn	06 58 56.0	-0.2
CYA	Choya	6.13	60	i P	Pn	06 59 06.0	-0.3
LC01	Cunco	7.21	180	i P	Pn	06 59 21.0	-0.1
AHML	Horco Molle	7.47	51	i P	Pn	06 59 26.0	+1.2
FSA	Cafayete	7.55	44	i P	Pn	06 59 30.0	+4.1

IDC 19 06:59:01.1±2.8, 53°.95N×86°.60E, h0^{km}, mb1 2.7/2, mb1mx2.7/49, mbtmp2.7/2, ML2.4/2, Error ellipse: s-maj=23.2km s-min=13.6km az=64.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.05	271	i		07 04 40.0	
	baz=88,slow=346,SNR=4.7						
ZALV	Zalesovo Beam	1.05	271	Pg	Pg	06 59 20.4	-0.9
	0.7nm,0.3s,baz=90,slow=12,SNR=5.7						
ZALV				Lg	Lg	06 59 36.2	
	1.4nm,0.3s,baz=91,slow=30,SNR=8.6						
KURBB	Kurchatov Arra	5.97	239	Pn	Pn	07 00 31.9	+1.2
	0.1nm,0.3s,baz=58,slow=14,SNR=3.3						
MKAR	Makanchi Array	7.68	203	Pn	Pn	07 00 55.0	+0.9
	0.1nm,0.3s,baz=25,slow=14,SNR=4.9						

*IDC **19** 07:05:49.6±1.2, 11°.31N×139°.53E, h0^{km}, mb3.7/7, mb1 3.9/7, mb1mx3.7/39, mbtmp3.7/7, MS2.9/6, Ms1 2.9/6, ms1mx2.5/47, Error ellipse: s-maj=52.7km s-min=20.9km az=88.0*

ISC 19 07:05:53.0±1.2, 11°.3N±0°.1×139°.5E±0°.4, h22^{km}, n11, σ0^{s}95/7, mb3.7/7, MS2.8/5, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	13.77	175	LR	LR	07 13 25.1	
	comp=Z,74nm,21.0s,baz=341,slow=33						
MJAR	Matsushiro Arr	25.17	358	LR	LR	07 19 16.4	
	comp=Z,23nm,21.8s,baz=185,slow=32						
KSRS	Korea Array	28.06	340	LR	LR	07 22 27.1	
	comp=Z,18nm,19.0s,baz=135,slow=36						
WRA	Warramunga Arr	31.46	189	P	P	07 12 13.0	-0.1
	0.3nm,0.7s,baz=15,slow=9.7,SNR=1.8						
WRA				LR	LR	07 24 12.0	
	comp=Z,22nm,19.0s,baz=195,slow=35						
ASAR	Alice Springs	35.18	189	P	P	07 12 46.1	+0.5
	0.4nm,0.8s,baz=19,slow=12,SNR=5.3						
KLR	Kul'dur	38.37	352	P	P	07 13 13.6	+1.2
	4.0nm,0.7s,baz=162,slow=5.5,SNR=14						
PSI	Prapat	41.12	261	LR	LR	07 33 15.6	
	comp=Z,12nm,18.9s,baz=312,slow=40						
SONM	Songino Array	45.80	329	P	P	07 14 13.5	+0.2
	0.9nm,1.0s,baz=142,slow=7.3,SNR=4.1						
MKAR	Makanchi Array	59.59	318	P	P	07 15 54.8	-0.5
	1.5nm,0.8s,baz=103,slow=8.4,SNR=6.7						
ZALV	Zalesovo Beam	60.53	326	P	P	07 16 00.4	-1.1
	0.5nm,0.5s,baz=99,slow=9.1,SNR=2.1						
ZALV				LR	LR	07 41 40.7	
	comp=Z,13nm,20.8s,baz=73,slow=36						
ILAR	Eielson Array	72.87	25	P	P	07 17 19.4	-0.6
	0.4nm,0.5s,baz=247,slow=6.7,SNR=7.3						

NOU 19 07:10:31.6, 17°.99S×167°.08E, h0^{km}, MLv4.6/7, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	1.09	76	P	Pg	07 10 52.5	0.0
RTV	Rentapao	1.30	81	P	Pg	07 10 56.2	-0.3
SANVU	Saraoutou	2.53	3	P	Pn	07 11 13.9	-0.1

IDC 19 07:25:53.9±2.0, 0°.54N×127°.14E, h0^{km}, mb3.5/3, mb1 3.7/3, mb1mx3.0/33, mbtmp3.6/3, MS3.1/1, Ms1 3.1/1, ms1mx2.2/31, Error ellipse: s-maj=162.4km s-min=25.3km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	13.89	103	LR	LR	07 35 00.2	
	comp=Z,70nm,19.7s,slow=39						
WRA	Warramunga Arr	21.54	161	P	P	07 30 45.5	+0.5
	1.0nm,0.6s,baz=340,slow=11,SNR=8.7						
ASAR	Alice Springs	24.94	165	P	P	07 31 18.8	-0.4
	0.6nm,0.6s,baz=342,slow=8.8,SNR=7.9						
MKAR	Makanchi Array	60.41	326	P	P	07 36 05.2	0.0
	1.0nm,0.8s,baz=130,slow=8.5,SNR=3.8						

WEL 19 07:34:30.5±0.8, 32°S±16°×17°9E±4°0, h255^{km}±30^{km}, M4.0/11, mB4.3/6, ML4.4/8, MLv4.4/11, Mw(mB)3.5/6, Error ellipse: s-maj=0.1km s-min=0.0km az=111.5, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.63	44	S	S	07 36 15.2	-2.6
MXZ	Matakaoa Point	5.67	187	P	Pn	07 35 57.8	+3.2
MXZ				S	S	07 37 02.5	+0.7
WMGZ	Waiomatatini S	5.91	186	P	Pn	07 36 01.4	+3.8
HAZ	Te Kaha	5.93	191	P	Pn	07 35 58.5	+0.7
HAZ				S	S	07 37 09.5	+1.8
RUGZ	Raukumara Rang	6.15	191	P	Pn	07 36 02.6	+1.9
RUGZ				S	S	07 37 12.9	0.0
PUZ	Puketiti	6.18	187	P	Pn	07 36 03.7	+2.8
PUZ				S	S	07 37 14.7	+1.3
MWZ	Matawai	6.54	192	P	Pn	07 36 07.0	+1.6
MWZ				S	S	07 37 22.5	+1.0
URZ	Urewera	6.55	195	P	Pn	07 36 06.8	+1.4
URZ				S	S	07 37 22.3	+0.7
TKGZ	Te Karaka	6.59	189	P	Pn	07 36 07.2	+1.2
TKGZ				S	S	07 37 22.3	-0.4
CNGZ	Carnagh Statio	6.59	187	P	Pn	07 36 07.9	+1.9
RIGZ	Rimuhau	6.87	189	P	Pn	07 36 10.3	+0.8
RIGZ				S	S	07 37 28.4	-0.6
MTHZ	Maungataniwha	7.17	195	P	Pn	07 36 14.5	+1.1
MTHZ				S	S	07 37 36.2	+0.2
RAHZ	Arahi	7.18	193	P	Pn	07 36 13.5	0.0
RAHZ				S	S	07 37 35.0	-1.2
NMHZ	Naumai	7.42	195	P	Pn	07 36 17.0	+0.6
NMHZ				S	S	07 37 41.5	-0.1
KWHZ	Kaweka Forest	7.81	196	P	Pn	07 36 21.2	-0.2
KWHZ				S	S	07 37 49.2	-1.6
FWVZ	Far West T-bar	7.89	201	P	Pn	07 36 23.2	+0.6
WNVZ	Wahianoa	7.95	201	P	Pn	07 36 23.3	+0.1
BHHZ	Black Hill Sta	7.97	198	P	Pn	07 36 22.3	-1.1
KRHZ	Kereru	8.04	196	P	Pn	07 36 23.6	-0.6
KRHZ				S	S	07 37 53.3	-2.6
KAHZ	Kahuranaki	8.07	193	P	Pn	07 36 24.3	-0.4
KAHZ				S	S	07 37 53.1	-3.7
PXZ	Pawanui	8.31	193	P	Pn	07 36 26.6	-1.0
PNHZ	Pukenui	8.33	196	P	Pn	07 36 26.6	-1.4
PRHZ	Porangahau	8.58	193	P	Pn	07 36 30.0	-1.0
CAW	Cannon Point	9.75	199	P	Pn	07 36 42.7	-3.0
MSWZ	Moikau Station	9.99	197	P	Pn	07 36 46.2	-2.5

*SJA **19** 07:40:23±5.3, 22°.61S±0°.06×66°.7W±0°.1, h240^{km}±7^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=182.0*
*NEIC **19** 07:40:25.7±1.9, 22°.61S±0°.06×66°.6W±0°.1, h202^{km}±7^{km}, mb4.9/17, Md4.6(SJA), ML4.5(GUC), Error ellipse: s-maj=13.6km s-min=9.2km az=97.0*
*IDC **19** 07:40:25.3±0.9, 22°.58S×66°.55W, h198^{km}±11^{km}, mb4.2/8, mb1 4.2/14, mb1mx4.0/42, mbtmp4.7/14, MS2.3/1, Ms1 2.3/1, ms1mx2.1/27, Error ellipse: s-maj=16.8km s-min=10.5km az=109.0*
*GUC **19** 07:40:26.0±0.6, 22°.59S×67°.16W, h247^{km}±6^{km}, ML4.6*
*VAO **19** 07:40:27.1±0.3, 22°.49S×66°.59W, h225^{km}, mb4.5*

ISC 19 07:40:25.4±0.5, 22°.55S±0°.04×66°.67W±0°.05, h207^{km}±5^{km}, n197, σ1^{s}24/237, mb4.6/24, 25C-17D, Fault plane solution: NP1:ϕ_s7.61913°, δ56.57336°, λ-50.82321°. NP2:ϕ_s131.67746°, δ49.68602°, λ-133.74361°. Principal axes: T Plg3.8967°, Azm71.0213°; N Plg31.8181°, Azm163.4435°; P Plg57.8873°, Azm334.7906°; Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YJA	Yavi	1.14	71	eP	Pn	07 40 58.9	+1.5
HJA	Humahuaca	1.34	120	eP	Pn	07 41 00.0	+1.2
LVC	Limon Verde	2.07	268	P	Pn	07 41 06.8	+1.3
	74nm,0.3s,baz=85,slow=6.9,SNR=716						
LVC				S	S	07 41 37.3	+1.0
	22nm,0.3s,baz=38,slow=5.6,SNR=4.7						
LVC				LR	LR	07 42 04.3	
	comp=Z,64nm,19.1s,baz=88,slow=45						
LVC	Limon Verde	2.07	268	⇑iP	Pn	07 41 06.8	+1.3
LVC				i S	S	07 41 37.6	+1.2
SLA	San Lorenzo	2.41	154	⇑iP	Pn	07 41 10.3	+1.4
SLA	San Lorenzo	2.41	154	eP	Pn	07 41 10.3	+1.4
SLA				eP	Pn	07 41 10.5	+1.5
SLA				eS	S	07 41 27.7	-15
ASTB	Santa Barbara	2.47	125	eP	Pn	07 41 10.5	+0.9
PB09	IPOC Station P	2.50	287	⇑iP	Pn	07 41 11.7	+1.8
PB09				eS	S	07 41 45.5	+1.4
PB09	IPOC Station P	2.50	287		Pn	07 41 11.9	+2.0
PB09	IPOC Station P	2.50	287	eP	Pn	07 41 10.5	+0.6
PB09				eS	S	07 41 46.4	+2.3
PB09				IAML		07 41 47.7	
	comp=Z,961nm,0.6s						
PB15	IPOC Station P	2.66	255	⇑iP	Pn	07 41 12.3	+0.5
PB15				i S	S	07 41 48.1	+0.6
PB15	IPOC Station P	2.66	255		Pn	07 41 12.0	+0.2
PB15	IPOC Station P	2.66	255	eP	Pn	07 41 12.5	+0.7
PB15				eS	S	07 41 49.3	+1.8
PB15				IAML		07 41 55.1	
	comp=Z,1μm,0.2s						
PB06	IPOC Station P	2.68	266	⇑iP	Pn	07 41 12.5	+0.5
PB06				eS	S	07 41 47.7	-0.1
PB06				IAML		07 41 52.1	
	comp=E,613nm,0.5s						
PB06	IPOC Station P	2.68	266		Pn	07 41 12.5	+0.5
PB06	IPOC Station P	2.68	266	eP	Pn	07 41 12.5	+0.5
PB06				eP	Pn	07 41 12.7	+0.7
PB06				eS	S	07 41 48.6	+0.8
ALOL	LOMAS DE OLMED	2.78	117	eP	Pn	07 41 13.4	+0.5
PB03	IPOC Station P	2.90	279	⇑iP	Pn	07 41 14.9	+0.5
PB03				i S	S	07 41 51.9	-0.3
PB03				IAML		07 41 53.3	
	comp=N,2μm,0.4s						
PB03	IPOC Station P	2.90	279	eP	Pn	07 41 15.1	+0.7
PB03				eS	S	07 41 52.4	+0.2
PB03				IAML		07 41 56.0	
	comp=Z,1μm,0.6s						
PB01	IPOC Station P	3.02	299	⇑iP	Pn	07 41 16.9	+1.1
PB01				i S	S	07 41 55.2	+0.6
PB01				IAML		07 41 57.0	
	comp=E,1μm,0.4s						
PB01	IPOC Station P	3.02	299		Pn	07 41 16.5	+0.8
PB07	IPOC Station P	3.09	285	⇑iP	Pn	07 41 17.4	+0.7
PB07				i S	S	07 41 55.6	-0.7
PB07				IAML		07 41 57.1	
	comp=N,2μm,0.6s						
PB07	IPOC Station P	3.09	285		Pn	07 41 17.1	+0.4
PB07	IPOC Station P	3.09	285	eP	Pn	07 41 17.4	+0.7
PB07				eS	S	07 41 56.5	+0.3
PB07				IAML		07 41 59.1	
	comp=Z,735nm,0.5s						
PB04	IPOC Station P	3.22	273	⇑iP	Pn	07 41 18.6	+0.3
PB04				i S	S	07 41 57.8	-1.3
PB04				IAML		07 42 00.8	
	comp=N,1μm,0.4s						
PB04	IPOC Station P	3.22	273		Pn	07 41 18.1	-0.1
PB04	IPOC Station P	3.22	273	eP	Pn	07 41 18.8	+0.6
PB04				eP	Pn	07 41 19.0	+0.8
PB04				eS	S	07 41 59.2	+0.1
PB04				IAML		07 42 05.8	
	comp=Z,765nm,0.7s						
PB02	IPOC Station P	3.23	292	⇑iP	Pn	07 41 19.0	+0.7
PB02				eS	S	07 41 58.0	-1.2
PB02	IPOC Station P	3.23	292	eP	Pn	07 41 19.0	+0.7
PB02				eP	Pn	07 41 19.2	+0.9
PB02				eS	S	07 41 59.5	+0.3
PB02				IAML		07 42 02.5	
	comp=Z,937nm,0.3s						
PB05	IPOC Station P	3.27	264	⇑iP	Pn	07 41 18.8	0.0
PB05				i S	S	07 41 58.3	-1.7
PB05	IPOC Station P	3.27	264	eP	Pn	07 41 18.8	0.0
PB05				eP	Pn	07 41 19.0	+0.2
PB05				eP	Pn	07 41 19.2	+0.5
PB05				eS	S	07 41 59.9	-0.2
PB08	IPOC Station P	3.33	316	⇑iP	Pn	07 41 22.3	+2.5
PB08				eS	S	07 42 03.4	+1.7
PB08	IPOC Station P	3.33	316		Pn	07 41 22.1	+2.3
PATCX	Punta Patache	3.67	297	⇑iP	Pn	07 41 23.8	+0.4
PATCX				i S	S	07 42 07.2	-1.4
PATCX	Punta Patache	3.67	297		Pn	07 41 24.1	+0.6
PATCX	Punta Patache	3.67	297	eP	Pn	07 41 24.0	+0.6
PATCX				eP	Pn	07 41 24.2	+0.6
PATCX				eP	Pn	07 41 24.3	+0.8
PATCX				IAML		07 42 11.3	
	comp=Z,1μm,0.7s						
PB10	IPOC Station P	3.70	254	⇑iP	Pn	07 41 23.8	0.0
PB10				eS	S	07 42 06.7	-2.5
PB10	IPOC Station P	3.70	254		Pn	07 41 23.6	-0.2
HMBC	Humberstone	3.75	306	⇑iP	Pn	07 41 24.9	+0.3
HMBC				i S	S	07 42 09.2	-1.4
TA01	Diego Aracena	3.82	301	⇑iP	Pn	07 41 25.2	+0.1
TA01				i S	S	07 42 09.7	-2.0
TA01	Diego Aracena	3.82	301		Pn	07 41 25.3	+0.1
PB11	IPOC Station P	3.93	314	eP	Pn	07 41 27.6	+0.8
PB11				eS	S	07 42 14.4	-0.2
PB11	IPOC Station P	3.93	314		Pn	07 41 27.6	+0.8
TA02	Huaiquique	3.94	305		Pn	07 41 27.6	+0.8
PB14	IPOC Station P	4.00	238	⇑iP	Pn	07 41 27.3	-0.4
PB14				i S	S	07 42 13.1	-3.2
PB14	IPOC Station P	4.00	238		Pn	07 41 27.4	-0.4
AC02	Maricunga	4.81	207	⇑iP	Pn	07 41 37.9	-0.2
AC02				eS	S	07 42 37.6	+2.6
AC02	Maricunga	4.81	207		Pn	07 41 37.3	-0.8
PB16	IPOC Station P	4.96	327	⇓iP	Pn	07 41 42.2	+2.1
PB16				eS	S	07 42 39.5	+0.8
PB16	IPOC Station P	4.96	327		Pn	07 41 42.4	+2.2
PB12	IPOC Station P	5.20	318	eP	Pn	07 41 41.9	-0.8
PB12				eS	S	07 42 37.8	-5.7
PB12	IPOC Station P	5.20	318		Pn	07 41 45.3	+2.6
GO03	Copiap	5.97	212		Pn	07 41 51.7	-0.8
LPAZ	La Paz	6.38	347	P	Pn	07 42 00.7	+2.4
	comp=Z,7.3nm,0.3s,baz=303,slow=12,SNR=100						
LPAZ				S	S	07 43 11.9	+0.2
	comp=Z,1.4nm,0.3s,baz=180,slow=24,SNR=3.6						
LPAZ	La Paz	6.38	347	eP	Pn	07 42 00.7	+2.4
AC04	Llanos de Chal	6.89	214		Pn	07 42 01.5	-2.8
LCO	Las Campanas	7.39	209	Pn	Pn	07 42 08.1	-2.8
SIV	San Ignacio	8.40	40	P	Pn	07 42 23.2	-0.7
	comp=Z,9.3nm,0.3s,baz=217,slow=11,SNR=124						
SIV				S	S	07 43 45.2	-13
	comp=Z,0.5nm,0.3s,baz=233,slow=14,SNR=7.2						
GO04	Tololo Observa	8.44	205		Pn	07 42 23.6	-1.0
ZON	Zonda	9.14	191	Pn	Pn	07 42 31.6	-1.8
CPUP	Villa Florida	9.31	116	P	Pn	07 42 33.8	-1.8
	comp=Z,0.1nm,0.3s,baz=295,slow=13,SNR=4.5						
CPUP	Villa Florida	9.31	116	eP	Pn	07 42 35.4	-0.2
PTLB	Pontes e Lacer	10.03	47	eP	Pn	07 42 44.1	-0.9
PTLB	Pontes e Lacer	10.03	47	Pn	Pn	07 42 45.2	+0.2
AQDB	Aquidauana	10.42	81	eP	Pn	07 42 49.6	-0.4
VA03	San Esteban	10.74	198		Pn	07 42 54.2	+0.1
VILB	Vilhena	11.36	34	eP	Pn	07 43 02.1	0.0
VILB	Vilhena	11.36	34	Pn	Pn	07 43 02.7	+0.6
ITQB	Itaqui	11.48	130	eP	Pn	07 43 04.2	+0.8
MT09	Talagante	11.81	198	Pn	Pn	07 43 06.5	-1.2
MT01	Popeta	11.97	199		Pn	07 43 08.6	-1.0
PP1B	Ponte de Pedra	12.12	68	eP	Pn	07 43 11.1	-0.6
SALV	Santo Antonio	12.29	59	eP	Pn	07 43 13.2	-0.7
BO01	Tunca	12.42	197	Pn	Pn	07 43 14.0	-1.3
ETMB	Extrema	12.67	2	eP	Pn	07 43 18.1	-0.6
ETMB	Extrema	12.67	2	Pn	Pn	07 43 18.5	-0.1
BO02	Sierra Bellavi	12.72	196	P	Pn	07 43 18.8	-0.4
ML02	Panimavida	13.80	196	Pn	Pn	07 43 31.8	-0.7
SAML	Samuel	13.93	14		P	07 43 35.6	-0.5
CPSB	Cacapava Do Su	14.19	126	eP	P	07 43 38.4	-0.4
PCMB	Pacaembu	14.32	89	eP	Pn	07 43 39.4	+0.3
PDRB	Porto dos Gac	14.44	43	eP	Pn	07 43 39.4	-1.2
PLTB	Pedras Altas	14.80	131	eP	P	07 43 46.2	+0.6
ITRB	Iturama	15.48	82	eP	Pn	07 43 53.4	+0.1
CLDB	Colider	15.59	44	eP	P	07 43 54.5	+0.1
ARAG	Araguaiana, MT	15.60	67	eP	Pn	07 43 55.0	+0.3

CNLB	Canela	15.74	119	*e*P	P	07 43 55.6	-0.4
FRTB	Fartura	15.78	96	*e*P	P	07 43 56.5	-0.1
CZSB	Cruzeiro do Su	15.84	338	*e*P	Pn	07 43 57.8	+0.2
TIJ01	Guaruva-PR	16.39	103	*e*P	P	07 44 03.1	-0.2
LC01	Cunco	16.89	194	P	P	07 44 08.4	-0.2
LC01				IAmb	IAmb	07 44 10.5	
	comp=Z,14nm,0.7s						
TER01	Tubaro-SC	16.91	114	*e*P	P	07 44 07.8	-1.1
BB19B	Bebedouro	16.92	88	*e*P	Pn	07 44 10.0	-0.5
PET01	Itanhaem-SP	17.89	99	*e*P	P	07 44 19.9	+0.3
IPMB	Ipameri, GO	17.90	79	*e*P	P	07 44 20.4	+0.5
SNDB	Serra Nova Dou	18.05	57	*e*P	P	07 44 21.8	+0.4
VAO	Valinhos	18.18	95	*e*P	P	07 44 22.9	+0.1
PLCA	Paso Flores	18.42	189	P	P	07 44 25.8	+0.5
	comp=Z,1.8nm,0.3s,baz=9.2,slow=12,SNR=81						
PLCA	Paso Flores	18.42	189	*e*P	P	07 44 25.5	+0.2
PLCA	Paso Flores	18.42	189	P	P	07 44 25.5	+0.2
PLCA				IAmb	IAmb	07 44 26.3	
	comp=Z,26nm,0.7s						
NPGB	Novo Progresso	18.88	37	*e*P	P	07 44 29.4	-1.1
BDFB	Brasilia	18.91	72	P	P	07 44 32.0	+1.1
	comp=Z,8.5nm,0.3s,baz=250,slow=11,SNR=99						
BDFB	Brasilia	18.91	72	P	P	07 44 31.9	+1.1
LL04	Puerto Octay	18.93	193	P	P	07 44 30.7	0.0
LL04				IAmb	IAmb	07 44 31.3	
	comp=Z,86nm,0.8s						
PARB	Paraibuna	19.40	96	*e*P	P	07 44 35.0	-1.0
LL05	Los Muermos	19.65	195	P	P	07 44 38.0	-0.4
MACA	Manacapuru-AM	20.13	18	*e*P	P	07 44 42.7	-1.1
MACA	Manacapuru-AM	20.13	18	P	P	07 44 43.0	-0.8
PEXB	Peixe	20.36	62	*e*P	P	07 44 45.6	-0.7
BSCB	Bom Sucesso	20.40	90	*e*P	P	07 44 46.8	+0.1
ITTB	Itaituba	20.95	32	*e*P	P	07 44 51.4	-1.1
MAN01	Angra dos Reis	20.95	95	*e*P	P	07 44 52.4	-0.2
VAS01	Vassouras-RJ	21.48	94	*e*P	P	07 44 58.1	+0.1
DIAM	Diamantina, MG	21.96	83	*e*P	P	07 45 02.7	-0.2
MC01	Montes Claros	22.17	79	*e*P	P	07 45 03.8	-1.1
JANB	Januaria	22.42	74	*e*P	P	07 45 06.3	-0.8
DUB01	Friburgo-RJ	22.48	93	*e*P	P	07 45 07.5	-0.1
PTGA	Pitinga	22.65	18	P	P	07 45 08.1	-0.9
	comp=Z,9.9nm,0.3s,baz=210,slow=18,SNR=56						
PTGA	Pitinga	22.65	18	P	P	07 45 08.4	-0.7
PTGA				IAmb	IAmb	07 45 10.2	
	comp=Z,18nm,0.8s						
SMTB	Santa Maria do	22.82	56	*e*P	P	07 45 10.3	-0.4
PRPB	Parauapebas	23.02	48	*e*P	P	07 45 11.4	-1.0
SDBA	SAO DESIDERIO	23.05	68	*e*P	P	07 45 12.2	-0.7
CAM01	Campos-RJ	23.17	93	*e*P	P	07 45 13.3	-0.4
COYC	Coyhaique	23.39	190	P	P	07 45 15.5	+0.1
COYC				IAmb	IAmb	07 45 17.8	
	comp=Z,20nm,1.0s						
MALB	Monte Alegre	23.85	32	*e*P	P	07 45 19.0	-0.9
SJMB	Sao Joao De Ma	24.15	86	*e*P	P	07 45 22.1	-0.6
ALF01	Guarapari-ES	24.20	90	*e*P	P	07 45 22.9	-0.2
BSFB	Barra de Sao F	24.43	86	*e*P	P	07 45 24.6	-0.6
RIB01	Linhares ES	24.74	87	*e*P	P	07 45 27.4	-0.7
NAN01	Guarapari, ES	25.33	84	*e*P	P	07 45 32.2	-1.2
BOAV	Boa Vista	25.51	14	*e*P	P	07 45 35.3	+0.3
BOAV	Boa Vista	25.51	14	P	P	07 45 35.5	+0.5
BOAV				IAmb	IAmb	07 45 36.1	
	comp=Z,19nm,1.1s						
GUA01	Guaratinga, BA	25.98	82	*e*P	P	07 45 38.9	-0.3
MCPB	Macapa, AP	26.25	35	*e*P	P	07 45 41.1	-0.5
CMC01	Camacan, BA	26.63	79	*e*P	P	07 45 44.0	-1.1
NBIT	Itapeh - BA	26.85	78	*e*P	P	07 45 46.7	-0.3
TMAB	Tom-Au,PA,Br	26.98	45	*e*P	P	07 45 48.6	+0.5
GDU01	Guandu, BA	27.17	76	*e*P	P	07 45 48.6	-1.3
NBPN	Ponto Novo - B	27.85	70	*e*P	P	07 45 55.0	-1.0
ROSB	Rosrio	29.33	51	*e*P	P	07 46 08.6	-0.3
NBLA	Lagarto - SE	29.89	72	*e*P	P	07 46 12.6	-1.3
NBPS	Pedro II - PI	30.36	57	*e*P	P	07 46 17.0	-1.2
NBMA	Muriti-CE	30.81	65	*e*P	P	07 46 21.3	-0.9
ZARC	Zaragoza, Cauc	30.91	344	P	P	07 46 22.3	-0.6
NBPB	Pedra_Branca-C	31.15	61	*e*P	P	07 46 24.4	-0.6
SDV	Santo Domingo	31.48	352	*e*P	P	07 46 27.3	-0.7
NBAN	Anadia - AL	31.81	71	*e*P	P	07 46 29.6	-1.2
NBMO	Morrinhos-CE	32.12	57	*e*P	P	07 46 32.5	-1.1
USHA	Ushuaia	32.26	182	P	P	07 46 34.0	-0.3
	comp=Z,2.3nm,0.6s,baz=348,slow=10,SNR=5.2						
NBLV	Livramento - P	32.37	67	*e*P	P	07 46 35.8	0.0
PLCV	Puerto La Cruz	32.58	4	P	P	07 46 39.1	+1.7
PCRV	Puerto La Cruz	32.59	4	P	P	07 46 39.1	+1.5
	comp=Z,9.5nm,0.6s,baz=175,slow=6.1,SNR=8.5						
NBPA	Parau_RN	33.06	64	*e*P	P	07 46 41.0	-0.7
TOSP	Speyside	34.17	11	P	P	07 46 51.9	+0.7
TOSP				IAmb	IAmb	07 47 16.7	
	comp=Z,67nm,1.2s						
NBPV	Pedro Velho	34.24	67	*e*P	P	07 46 51.7	-0.2
MPOM	Morne Pois Mar	37.21	9	P	P	07 47 16.5	-0.4
BIM	Bigot	37.24	9	P	P	07 47 17.5	+0.2
FDF	Fort de France	37.45	9	P	P	07 47 18.5	-0.5
FDF				IAmb	IAmb	07 47 21.9	
	comp=Z,53nm,0.8s						
PMSA	Palmer Station	42.25	178	P	P	07 47 58.8	+1.0
	comp=Z,6.0nm,0.7s,baz=35,slow=5.1,SNR=4.6						
PMSA	Palmer Station	42.25	178	*e*P	P	07 47 58.6	+0.7
PMSA	Palmer Station	42.25	178	IAmb	IAmb	07 48 00.1	
	comp=Z,6.0nm,0.7s						
VNA3	Neumayer Olymp	58.42	161	P	P	07 49 59.8	+0.8
VNA1	Neumayer--Stat	58.61	161	P	P	07 50 01.7	+1.5
VNA2	Neumayer--Watz	58.98	161	P	P	07 50 03.8	+1.0
	baz=285,slow=7.9						
SNAA	Sanae	60.61	161	P	P	07 50 14.8	+0.9
SNAA	Sanae	60.61	161	P	P	07 50 14.8	+0.9
LIC	Lamto	66.71	72	*e*PKP1	P	07 50 54.9	+0.3
	comp=Z,32nm,1.2s						
TIC	Toumodi	66.91	72	*e*PKP1	P	07 50 56.2	+0.3
KIC	Kosan Boka	67.02	72	*e*PKP1	P	07 50 55.3	-1.3
	comp=Z,9.5nm,0.5s						
DBIC	Dimbokro	67.06	72	P	P	07 50 56.2	-0.6
	comp=Z,3.6nm,0.6s,baz=239,slow=6.2,SNR=6.9						
QSPA	South Pole Qui	67.65	180	P	P	07 51 01.0	+1.2
QSPA				IAmb	IAmb	07 51 01.8	
	comp=Z,9.7nm,0.5s						
SYO	Syowa Base	74.79	159⇑	*e*P	P	07 51 42.0	-0.3
SYO	Syowa Base	74.79	159⇓	*e*PcP	PcP	07 51 53.0	-2.4
TORD	Torodi Ar. Bea	75.77	69	P	P	07 51 48.2	-0.6
	comp=Z,5.2nm,0.5s,baz=256,slow=5.5,SNR=94						
TORD	Torodi Ar. Bea	75.77	69	P	P	07 51 48.6	-0.3
PNCL	Nicolau / Gran	81.34	43	*e*P	P	07 52 20.4	+1.6
	comp=Z,19nm,1.3s						
PNCL				*e*pP	pP	07 53 14.8	+4.5
PCVE	Castro Verde	81.36	43	*e*P	P	07 52 20.6	+1.7
	comp=Z,19nm,1.7s						
PCVE				*e*pP	pP	07 53 18.7	+8.3
MESJ	Messejana	81.37	43	*e*P	P	07 52 21.0	+2.1
PVAQ	Vaqueiros	81.43	44	*e*P	P	07 52 20.1	+0.8
PMTG	Montargil	82.11	42	*e*P	P	07 52 23.6	+0.8
	comp=Z,14nm,1.6s						
PMTG				*e*pP	pP	07 53 13.2	-1.2
PBAR	Barrancos	82.32	43	*e*P	P	07 52 25.1	+1.2
	comp=Z,12nm,2.0s						
PBAR				*e*pP	pP	07 53 21.0	+5.5
PESTR	Estremoz	82.39	43	*e*P	P	07 52 25.7	+1.5
	comp=Z,13nm,1.5s						
PESTR				*e*pP	pP	07 53 16.5	+0.6
MAW	Mawson	82.72	163	P	P	07 52 26.7	+1.2
	comp=Z,4.8nm,1.0s,baz=180,slow=6.1,SNR=3.3						
MAW	Mawson	82.72	163	IAmb	IAmb	07 52 28.8	
	comp=Z,1.7nm,1.1s						
PMRV	Marv??o	82.84	42	*e*P	P	07 52 27.4	+0.8
	comp=Z,12nm,2.1s						
PMRV				*e*sP	sP	07 53 35.2	-5.4
PCBR	Castelo Branco	83.04	42	*e*P	P	07 52 28.4	+0.9
PCAB	Cabril	83.83	40	*e*P	P	07 52 32.6	+1.0
	comp=Z,14nm,1.8s						
MVO	Moncorvo	84.11	41	*e*P	P	07 52 34.4	+1.4
	comp=Z,20nm,1.6s						
PBRG	Braganca	84.66	41	*e*P	P	07 52 36.9	+1.1
	comp=Z,21nm,1.5s						
ESDC	Sonseca Array	85.14	44	P	P	07 52 39.7	+1.5
	comp=Z,3.1nm,0.9s,baz=239,slow=5.2,SNR=11						
ASAR	Alice Springs	129.89	205	PKP	PKiKP	07 59 11.5	-0.2
	comp=Z,0.9nm,0.4s,baz=126,slow=1.7,SNR=16						
WRA	Warramunga Arr	133.04	207	PKP	PKiKP	07 59 17.9	-0.2
	comp=Z,0.8nm,0.3s,baz=153,slow=1.9,SNR=5.0						
ZALV	Zalesovo Beam	141.97	27	PKP	PKPdf	07 59 32.5	+0.3
	comp=Z,0.8nm,0.5s,baz=308,slow=5.2,SNR=2.8						
KSH	Kashi	144.10	53	PKP	PKPbc	07 59 35.3	0.0
MKAR	Makanchi Array	145.21	38	PKPbc	PKPab	07 59 38.5	-0.1
	comp=Z,2.6nm,0.5s,baz=348,slow=2.5,SNR=20						
SONM	Songino Array	154.17	11	PKPab	PKPab	08 00 16.5	+1.3
	comp=Z,1.0nm,0.6s,baz=327,slow=4.3,SNR=2.7						
CD2	Chengdu	168.07	44	PKP	PKPdf	08 00 06.5	-0.9

NOU 19 07:41:50.8, 17°.78S×167°.34E, h0^{km}, MLv3.6/7, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	0.81	86	P	Pg	07 42 07.0	+0.7
RTV	Rentapao	1.03	91	P	Pg	07 42 10.7	+0.1
SANVU	Saraoutou	2.32	357	P	Pn	07 42 30.4	+0.1

ANF ***19*** *07:42:10.9±0.3, 36°.74N×98°.31W, h0^{km}, ML6.3/17, Error ellipse: s-maj=3.9km s-min=3.2km az=17.0*

IDC ***19*** *07:42:11.0±0.5, 36°.68N×98°.35W, h0^{km}, mb4.4/19, mb1 4.6/28, mb1mx4.4/55, mbtmp4.4/28, ML3.8/8, MS4.0/41, Ms1 4.0/41, ms1mx4.0/53, Error ellipse: s-maj=10.7km s-min=8.5km az=140.0*

TUL ***19*** *07:42:12±1.3, 36°.66N±0°.03×98°.46W±0°.04, h6^{km}±4^{km}, ML5.3, mb_Lg5.1/30(NEIC), Mwr4.7/59(NEIC), Error ellipse: s-maj=5.0km s-min=2.8km az=124.0*

NEIC ***19*** *07:42:13.3, 36°.66N×98°.39W, h8^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.04; $M_{\theta\theta}$1.09; $M_{\phi\phi}$-1.13; $M_{r\theta}$-0.32; $M_{\theta\phi}$0.42; $M_{\phi r}$0.41; Fault plane solution: $M_0$1.29000×10^{16} NP1:ϕ_s215.79000°, δ67.99000°, λ-175.57000°. NP2:ϕ_s124.13000°, δ85.90000°, λ-22.07000°. Principal axes: T 1.2163, Plg12.0000°, Azm172.0000°; N 0.1448, Plg68.0000°, Azm294.0000°; P -1.3611, Plg18.0000°, Azm78.0000°;*

NEIC ***19*** *07:42:13.5±1.9, 36°.68N±0°.02×98°.36W±0°.04, h5^{km}±4^{km} Error ellipse: s-maj=4.6km s-min=3.0km az=113.0*

GCMT ***19*** *07:42:14.0±0.3, 36°.76N±0°.02×98°.34W±0°.02, h20^{km}±1^{km}, MW4.8/83, Moment Tensor Solution. s14,c15; s83,c115; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.44±.11; $M_{\theta\theta}$2.07±.11; $M_{\phi\phi}$-1.63±.08; $M_{r\theta}$-0.49±.17; $M_{\theta\phi}$1.11±.08; $M_{\phi r}$0.08±.16; Best double couple: $M_0$2.20600×10^{16} NP1:ϕ_s209.00000°, δ78.00000°, λ179.00000°. NP2: ϕ_s299.00000°, δ89.00000°, λ12.00000°. Principal axes: T 2.4470, Plg9.0000°, Azm165.0000°; N -0.4780, Plg78.0000°, Azm303.0000°; P -1.9650, Plg8.0000°, Azm74.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 07:42:12.4±0.8, 36°.68N±0°.02×98°.32W±0°.02, h11^{km}±5^{km}, n561, σ1^{s}.53/625, mb4.5/25, MS4.1/33, 1D, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK032	Salt Plains WL	0.15	35		Pg	07 42 17.4	+1.4
OK032				Sg	Sg	07 42 21.0	+2.6
CROK	Carrier	0.32	123		Pb	07 42 20.4	+0.1
CROK				Sg	Sb	07 42 26.1	+0.7
KAN14	Manchester OK	0.40	46		Pb	07 42 21.8	+0.3
KAN14				Sg	Sb	07 42 28.7	+1.0
GC02	Grant County #	0.41	65	Pg	Pb	07 42 22.3	+0.6
GC02				Sg	Sb	07 42 29.3	+1.4
KAN10	Anthony SW Sta	0.48	22		Pb	07 42 22.8	-0.1
KAN10				Sg	Sb	07 42 30.4	+0.4
KAN05	Bluff City Nor	0.56	40		Pb	07 42 24.6	+0.3
KAN05				Sg	Sb	07 42 33.6	+1.3
KAN17	Caldwell West	0.57	51	Pg	Pb	07 42 25.1	+0.5
KAN17				Sg	Sb	07 42 34.2	+1.5
KAN16	Harper SW Stat	0.58	20	Pg	Pb	07 42 24.7	0.0
KAN16				Sg	Sb	07 42 33.3	+0.2
KAN08	Anthony NE Sta	0.61	27		Pb	07 42 25.5	+0.2
KAN08				Sg	Sb	07 42 34.7	+0.8
U32A	Winter Ranch,	0.62	242		Pg	07 42 22.0	-2.6
U32A				Sg	Sg	07 42 29.3	-3.5
U32A	Winter Ranch,	0.62	242	P	Pg	07 42 22.1	-2.4
	baz=57						
U32A				S	Sg	07 42 29.3	-3.5
	baz=57						
KAN01	Argonia South	0.65	43	Pg	Pb	07 42 26.4	+0.6
KAN01				Sg	Sb	07 42 36.4	+1.4
KAN12	Harper NE Stat	0.67	23		Pb	07 42 26.3	+0.2
KAN12				Sg	Sb	07 42 36.2	+0.7
KAN06	Argonia West S	0.68	33		Pb	07 42 26.6	+0.3
KAN06				Sg	Sb	07 42 36.8	+1.1
KAN09	Caldwell North	0.72	51		Pb	07 42 27.6	+0.5
KAN09				Sg	Sb	07 42 38.7	+1.6
KAN13	South Haven SW	0.75	63	Pg	Pb	07 42 28.3	+0.7
KAN13				Sg	Sb	07 42 39.9	+2.0
KS21	Milan North St	0.80	41	Pg	Pb	07 42 29.1	+0.6
KS21				Sg	Sb	07 42 41.0	+1.7
BLOK	Blackwell	0.89	84		Pn	07 42 30.9	0.0
OK029	Liberty Lake	1.12	141	Pg	Pg	07 42 34.0	-0.1
BCOK	Bluff Creek, N	1.17	150		Pg	07 42 34.5	-0.4
OK009	Oakdale Elemen	1.31	146		Pn	07 42 37.3	+0.5
OK005	Luther M Schoo	1.37	138		Pg	07 42 38.5	-0.3
OK001	Jones High Sch	1.39	143		Pb	07 42 38.8	+0.3
QUOK	Quay	1.40	111		Pg	07 42 39.8	+0.5
OK031	S. Brethren Rd	1.40	121		Pg	07 42 39.3	0.0
OKCFA	Oklahoma City	1.44	151		Pn	07 42 39.2	+0.7
OKCFA				IAmb_Lg		07 43 02.8	
	comp=Z,13µm,0.9s						
OKCFA	Oklahoma City	1.44	151	P	Pn	07 42 38.9	+0.3
	baz=327						
OKCFA				S	Sg	07 42 59.2	+0.3
	baz=327						
OK030	Cody Creek RV	1.45	121		Pg	07 42 40.2	-0.1
OKCSW	OKLAHOMA CITY	1.46	150		Pb	07 42 39.5	-0.1
T35A	Sooner Cattle	1.47	80		Pg	07 42 41.0	+0.3
T35B	Sooner Cattle	1.47	80	P	Pg	07 42 41.0	+0.3
	baz=261						
T35B				S	Sg	07 43 02.1	+2.3
	baz=261						
FNO	Franklin	1.60	152		Pb	07 42 41.8	-0.3
FNO				IAmb_Lg		07 43 04.6	
	comp=Z,6µm,0.7s						
R32A	Long Quarter,	1.77	350		Pb	07 42 44.2	-0.7
R32A				IAmb_Lg		07 43 08.2	
	comp=Z,9µm,0.8s						
R32A	Long Quarter,	1.77	350	P	Pb	07 42 44.1	-0.7
	baz=174						
R32A				S	Sg	07 43 08.1	-1.2
	baz=174						
OK011	Prague	1.78	132		Pb	07 42 45.5	+0.4
WMOK	Wichita Mounta	1.97	191	P	Pn	07 42 45.3	-0.5
	baz=7.6						
WMOK				S	Sn	07 43 11.7	+1.1
	baz=7.6						
WMOK	Wichita Mounta	1.97	191	Pn	Pn	07 42 46.1	+0.2
WMOK	Wichita Mounta	1.97	191	P	Pn	07 42 45.4	-0.4
	baz=7.6						
WMOK				S	Sn	07 43 11.6	+1.0
	baz=7.6						
X34A	Smith Ranch, M	2.11	169	Pn	Pn	07 42 49.0	+1.3
X34A				IAmb_Lg		07 43 20.0	
	comp=Z,19µm,0.7s						
TUL1	Leonard	2.18	110	P	Pn	07 42 50.2	+1.5
	baz=290,SNR=1000						
TUL1				Sn	Sb	07 43 19.4	+0.5
	baz=290						
TUL1				Sb	Sg	07 43 22.6	0.0
	baz=290						
TUL1	Leonard	2.18	110	Pn	Pn	07 42 50.5	+1.9
TUL1	Leonard	2.18	110	P	Pn	07 42 50.2	+1.5
	baz=290						
TUL1				S	Sb	07 43 19.3	+0.3
	baz=290						
CBKS	Cedar Bluff	2.41	333	P	Pn	07 42 52.2	+0.3
	baz=154,SNR=948						
CBKS				S	Sn	07 43 22.5	+1.1
	baz=154						
CBKS	Cedar Bluff	2.41	333	Pn	Pn	07 42 52.4	+0.5
CBKS				IAmb_Lg		07 43 31.7	
	comp=Z,13µm,0.9s						
CBKS	Cedar Bluff	2.41	333	P	Pn	07 42 52.2	+0.3
	baz=154						
CBKS				S	Sn	07 43 22.3	+0.8
	baz=154						
KSU1	Kansas State U	2.77	29	P	Pn	07 42 58.7	+1.9
	baz=212,SNR=369						
KSU1				S	Sb	07 43 33.9	-2.1
	baz=212						
KSU1	Kansas State U	2.77	29	Pn	Pn	07 42 58.8	+2.0
KSU1	Kansas State U	2.77	29	IAmb_Lg		07 43 47.6	
	comp=Z,5µm,0.8s						
KSU1	Kansas State U	2.77	29	P	Pn	07 42 58.7	+1.9
	baz=212						
KSU1				S	Sn	07 43 33.6	+3.3
	baz=212						
LOOK	Love County	2.84	160	Pn	Pn	07 42 58.7	+0.9
LOOK					Pb	07 43 03.7	+0.6
LOOK				IAmb_Lg		07 43 50.2	
	comp=Z,7µm,0.8s						
U38A	Gravette	3.18	93	Pn	Pn	07 43 04.5	+2.1
U38A					Pg	07 43 11.7	-1.6
U38A				IAmb_Lg		07 43 56.9	
	comp=Z,5µm,0.7s						
U38A	Gravette	3.18	93	P	Pn	07 43 04.1	+1.7
	baz=275						
X37A	Clayton	3.18	130	Pn	Pn	07 43 04.0	+1.6
X37A	Clayton	3.18	130	P	Pn	07 43 03.7	+1.3
	baz=310						
X37A				Sb	Sg	07 43 54.0	-0.6
	baz=310						
AMTX	Amarillo	3.27	238	Pn	Pn	07 43 03.6	-0.1
	baz=55						
AMTX				Pb	Pb	07 43 09.8	-0.7
	baz=55						
AMTX				Sb	Sb	07 43 50.3	-0.1
	baz=55						
AMTX	Amarillo	3.27	238	Pn	Pn	07 43 03.8	+0.1
AMTX					Pb	07 43 09.6	-0.9
AMTX	Amarillo	3.27	238	P	Pn	07 43 03.6	-0.1
	baz=55						
AMTX				Sb	Sb	07 43 51.1	+0.7
	baz=55						
Z35A	Perchaven, San	3.45	165		Pn	07 43 06.8	+0.6
Z35A					Pb	07 43 12.7	-1.0
Z35A				IAmb_Lg		07 44 02.8	
	comp=Z,5µm,1.0s						
Z35A	Perchaven, San	3.45	165	P	Pn	07 43 06.5	+0.4
	baz=344						
Z35A				Sb	Sb	07 43 59.1	+3.5
	baz=344						
W39A	Magazine	3.97	111	Pn	Pn	07 43 14.2	+1.0
	baz=292,SNR=153						
W39A				Pb	Pb	07 43 25.0	+2.6
	baz=292						
W39A				Sn	Sn	07 44 02.0	+2.3
	baz=292						
W39A				Sb	Sg	07 44 19.2	-0.7
	baz=292						
W39A	Magazine	3.97	111		Pn	07 43 14.6	+1.4
W39A	Magazine	3.97	111	P	Pn	07 43 14.4	+1.1
	baz=292						
W39A				S	Sn	07 44 01.7	+1.9
	baz=292						
S39A	Bolivar	4.12	74	Pn	Pn	07 43 16.9	+1.6
S39A					Pb	07 43 27.8	+2.8
S39A	Bolivar	4.12	74	P	Pn	07 43 16.7	+1.4
	baz=257						
KSCO	Kaye Shedlock'	4.13	306	Pn	Pn	07 43 15.2	-0.4
	baz=124,SNR=75						
KSCO				Pb	Pb	07 43 25.7	+0.5
	baz=124						
KSCO				Sb	Sb	07 44 18.5	+3.4
	baz=124						
KSCO	Kaye Shedlock'	4.13	306	P	Pn	07 43 15.0	-0.6
	baz=124						
ABTX	Abilene, Hawle	4.19	195	Pn	Pn	07 43 15.3	-1.1
	baz=13						
ABTX				Pb	Pb	07 43 24.0	-2.2
	baz=13						
ABTX	Abilene, Hawle	4.19	195	Pn	Pn	07 43 15.0	-1.4
ABTX				IAmb_Lg		07 44 24.7	
	comp=Z,5µm,0.8s						
ABTX	Abilene, Hawle	4.19	195	P	Pn	07 43 15.2	-1.1
	baz=13						
Z38A	Mt. Pleasant	4.37	140	Pn	Pn	07 43 19.4	+0.6
Z38A				IAmb_Lg		07 44 41.3	
	comp=Z,9µm,0.8s						
Z38A	Mt. Pleasant	4.37	140	P	Pn	07 43 19.4	+0.6
	baz=321						
MIAR	Mount Ida	4.41	117	P	Pn	07 43 20.6	+1.3
	baz=299,SNR=90						
MIAR				Sn	Sn	07 44 12.1	+1.4
	baz=299						
MIAR				Sb	Sg	07 44 31.9	-2.2
	baz=299						
MIAR	Mount Ida	4.41	117	IAmb_Lg		07 44 43.9	
	comp=Z,5µm,0.7s						
MIAR	Mount Ida	4.41	117	P	Pn	07 43 20.6	+1.3
	baz=299						
MIAR				S	Sn	07 44 11.9	+1.1
	baz=299						
U40A	Yellville	4.42	93	P	Pn	07 43 20.4	+1.0
	baz=276,SNR=212						
U40A				S	Sn	07 44 11.9	+1.1
	baz=276						
U40A	Yellville	4.42	93	Pn	Pn	07 43 20.7	+1.3
U40A	Yellville	4.42	93	P	Pn	07 43 20.6	+1.2
	baz=276						
U40A				P	Pn	07 43 20.6	+1.2
	baz=276						
MSTX	Muleshoe	4.53	235	Pn	Pn	07 43 20.4	-0.8
	baz=51,SNR=67						
MSTX				Pb	Pb	07 43 30.9	-1.2
	baz=51						
MSTX				Sb	Sb	07 44 30.3	+3.5
	baz=51						
MSTX	Muleshoe	4.53	235	IAmb_Lg		07 44 41.7	
	comp=Z,4µm,0.8s						
N35A	Tabor	4.67	26	P	Pn	07 43 23.9	+0.9
	baz=208						
BGNE	Belgrade	4.72	2	P	Pn	07 43 24.1	+0.4
	baz=183,SNR=178						
BGNE				Sb	Sg	07 44 40.3	-3.8
	baz=183						
BGNE	Belgrade	4.72	2		Pn	07 43 24.3	+0.6
BGNE	Belgrade	4.72	2	P	Pn	07 43 24.1	+0.4
	baz=183						
WHTX	Lake Whitney,	4.73	171	P	Pn	07 43 23.5	-0.2
	baz=350,SNR=466						
WHTX				Sb	Sb	07 44 37.5	+5.1
	baz=350						
WHTX	Lake Whitney,	4.73	171	Pn	Pn	07 43 23.7	-0.1
WHTX	Lake Whitney,	4.73	171	P	Pn	07 43 23.6	-0.2
	baz=350						
P38A	Dawn	4.78	51	Pn	Pn	07 43 26.8	+2.3
P38A				Pg	Pg	07 43 42.6	-1.5
P38A				IAmb_Lg		07 44 47.9	
	comp=Z,4µm,0.8s						
P38A	Dawn	4.78	51	P	Pn	07 43 25.8	+1.3
	baz=234						
MGMO	Mountain Grove	4.87	83		Pn	07 43 28.0	+2.3
T25A	Trinidad	4.90	277	P	Pn	07 43 25.1	-1.3
	baz=94,SNR=131						
T25A				Sb	Sb	07 44 40.6	+3.0
	baz=94						
T25A	Trinidad	4.90	277		Pn	07 43 25.2	-1.1
T25A				Pg	Pb	07 43 41.4	+3.0
X40A	Basin Creek Fa	4.98	114	P	Pn	07 43 28.7	+1.6
	baz=297,SNR=132						
X40A				S	Sn	07 44 28.2	+3.5
	baz=297						
X40A	Basin Creek Fa	4.98	114		Pn	07 43 29.2	+2.1
X40A	Basin Creek Fa	4.98	114	P	Pn	07 43 28.7	+1.6
	baz=297						
X40A				P	Pn	07 43 28.7	+1.6
	baz=297						
FCAR	Ozark Folk Cen	5.07	97		Pn	07 43 28.6	+0.2
R40A	Maddies Statio	5.07	70		Pn	07 43 29.9	+1.5
R40A					Pg	07 43 47.2	-2.4
R40A	Maddies Statio	5.07	70	P	Pn	07 43 29.7	+1.2
	baz=254						
237A	Washetta, Mont	5.11	155		Pn	07 43 28.4	-0.5
237A	Washetta, Mont	5.11	155	P	Pn	07 43 28.5	-0.4
	baz=336						
W41B	Gary Mavity, V	5.15	105	P	Pn	07 43 29.7	+0.2
	baz=288,SNR=43						
W41B				S	Sn	07 44 29.4	+0.5
	baz=288						
W41B	Gary Mavity, V	5.15	105	P	Pn	07 43 30.3	+0.8
	baz=288						
OGNE	Ogallala	5.15	327	P	Pn	07 43 29.2	-0.5
	baz=146,SNR=165						
OGNE				Sn	Sn	07 44 30.2	+1.0
	baz=146						
OGNE				Sb	Sb	07 44 49.9	+5.3
	baz=146						
OGNE	Ogallala	5.15	327	Pn	Pn	07 43 30.6	+1.0
OGNE				Pg	Pg	07 43 47.5	-3.6
OGNE	Ogallala	5.15	327	P	Pn	07 43 29.4	-0.2

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       baz=146
WLAR  White Oak Lake       5.21 123  Pn    Pn    07 43 31.3 +1.1
L34A  Svendsen Farm,       5.49  15  Pn    Pn    07 43 32.9 -1.3
L34A  Svendsen Farm,       5.49  15  P     Pn    07 43 33.2 -1.0
       baz=198
Z41A  Richland Creek       5.67 125  P     Pn    07 43 37.3 +0.6
       baz=308,SNR=48
Z41A                                 S     Sn    07 44 41.0 -0.8
       baz=308
Z41A  Richland Creek       5.67 125  P     Pn    07 43 37.5 +0.9
       baz=308
Z41A                                 P     Pn    07 43 37.5 +0.9
       baz=308
P40A  Paris                5.71  58        Pn    07 43 39.4 +2.2
P40A  Paris                5.71  58  P     Pn    07 43 37.7 +0.6
       baz=242
N38A  Joes South For       5.72  43        Pn    07 43 38.4 +1.1
N38A  Joes South For       5.72  43  P     Pn    07 43 38.2 +1.0
       baz=226
NATX  Nacogdoches          5.77 147  P     Pn    07 43 37.7 -0.3
       baz=328,SNR=31
NATX                                 S     Sn    07 44 42.8 -1.4
       baz=328
NATX  Nacogdoches          5.77 147  Pn    Pn    07 43 37.7 -0.3
NATX  Nacogdoches          5.77 147  P     Pn    07 43 37.7 -0.3
       baz=328
CCM   Cathedral Cave       5.80  74  P     Pn    07 43 39.2 +0.7
       baz=258
CCM   Cathedral Cave       5.80  74  Pn    Pn    07 43 38.9 +0.5
CCM                                        Pb    07 43 58.6 +5.0
CCM   Cathedral Cave       5.80  74  P     Pn    07 43 39.1 +0.7
       baz=258
T42A  Van Buren            5.81  84        Pn    07 43 39.6 +1.1
T42A                                 Pg    Pb    07 43 58.4 +4.7
T42A  Van Buren            5.81  84  P     Pn    07 43 39.5 +1.0
       baz=269
LCAR  Lake Charles         5.81  94        Pn    07 43 40.3 +1.7
LCAR  Lake Charles         5.81  94  P     Pn    07 43 39.3 +0.7
       baz=278
SDCO  Great Sand Dun       5.83 283  P     Pn    07 43 38.7 -0.4
       baz=99,SNR=192
SDCO                                 Sb    Sb    07 45 09.6 +5.3
       baz=99
Q24A  Divide               5.87 295  P     Pn    07 43 39.0 -0.7
       baz=112,SNR=42
Q24A                                 Sb    Sb    07 45 09.9 +4.5
       baz=112
435B  Jarrell              5.91 174  P     Pn    07 43 38.8 -1.2
       baz=353
435B  Jarrell              5.91 174        Pn    07 43 38.6 -1.4
435B  Jarrell              5.91 174  P     Pn    07 43 39.1 -0.9
       baz=353
K31A  O'Neill              5.95 357  Pn    Pn    07 43 41.3 +0.8
K31A  O'Neill              5.95 357  P     Pn    07 43 40.9 +0.4
       baz=178
CCAR  Cane Creek           6.02 115        Pn    07 43 42.8 +1.3
HBAR  Harrisburg           6.30  98        Pn    07 43 47.0 +1.7
JCT   Junction City        6.31 192  Pn    Pn    07 43 43.2 -2.2
       baz=9.9
JCT                                  Pb    Pb    07 44 02.8 +0.6
       baz=9.9
JCT                                  Sb    Sg    07 45 27.4 -7.4
       baz=9.9
JCT   Junction City        6.31 192  Pn    Pn    07 43 44.1 -1.3
JCT   Junction City        6.31 192  P     Pn    07 43 43.4 -2.0
       baz=9.9
PBMO  Poplar Bluff         6.34  87        Pn    07 43 47.6 +1.8
FVM   French Village       6.42  76  Pn    Pn    07 43 48.2 +1.2
ISCO  Idaho Springs        6.53 301  P     Pn    07 43 47.9 -0.8
       baz=117,SNR=42
ISCO                                 Sb    Sb    07 45 30.8 +6.4
       baz=117
ISCO  Idaho Springs        6.53 301  Pn    Pn    07 43 48.0 -0.8
ISCO  Idaho Springs        6.53 301  P     Pn    07 43 48.0 -0.8
       baz=117
SCIA  State Center         6.55  36  P     Pn    07 43 49.7 +1.0
       baz=219,SNR=26
SCIA                                 S     Sn    07 45 02.8 -0.6
       baz=219
SCIA  State Center         6.55  36  Pn    Pn    07 43 50.1 +1.4
LPAR  Lepanto              6.58  97        Pn    07 43 50.0 +0.9
SLM   Saint Louis          6.70  71        Pn    07 43 50.9 +0.1
GNAR  Gosnell              6.74  94        Pn    07 43 53.3 +2.0
ANMO  Albuquerque          6.83 258  Pn    Pn    07 43 52.1 -0.7
       comp=Z,3.6nm,0.3s,baz=84,slow=14,SNR=92
ANMO                                 Pg    Pb    07 44 13.3 +2.0
       comp=Z,38nm,0.3s,baz=76,slow=16,SNR=16
ANMO                                 Lg    Lg    07 45 40.5
       comp=Z,103nm,0.3s,baz=342,slow=14,SNR=3.3
ANMO                                 LR    LR    07 46 39.2
       comp=Z,2µm,20.8s,baz=72,slow=39
ANMO  Albuquerque          6.83 258  P     Pn    07 43 52.0 -0.8
       baz=73
ANMO                                 Sb    Sb    07 45 40.4 +7.3
       baz=73
ANMO  Albuquerque          6.83 258  Pn    Pn    07 43 51.4 -1.4
PEBM  Pemiscott Bayo       6.84  92        Pn    07 43 54.7 +1.9
S22A  4UR Ranch, Cre       6.87 281  P     Pn    07 43 53.1 -0.4
       baz=97,SNR=37
S22A                                 Sb    Sb    07 45 42.1 +7.8
       baz=97
143A  Socs Landing,        6.94 123        Pn    07 43 55.3 +1.2
PVMO  Portageville         6.94  90        Pn    07 43 55.5 +1.4
PENMO Penman               7.00  89        Pn    07 43 56.3 +1.4
HKT   Hockley              7.03 162  Pn    Pn    07 43 55.3 +0.1
N41A  Harden Midland       7.09  53        Pn    07 43 56.6 +0.5
HENM  Henderson Moun       7.11  87        Pn    07 43 57.9 +1.5
LNXT  Lenox                7.14  92        Pn    07 43 58.2 +1.4
ECSD  EROS Data Cent       7.17  10  P     Pn    07 43 56.2 -1.0
       baz=192,SNR=113
ECSD                                 S     Sn    07 45 16.7 -1.9
       baz=192
ECSD  EROS Data Cent       7.17  10  Pn    Pn    07 43 56.4 -0.8
BNM   Barren Site          7.24 252        Pn    07 43 57.8 -0.6
342A  Flagon Creek P       7.26 135  Pn    Pn    07 43 59.6 +1.1
GLAT  Glass                7.29  91        Pn    07 44 00.4 +1.5
N23A  Red Feather La       7.29 308  P     Pn    07 43 58.7 -0.4
       baz=124,SNR=56
441A  DeRidder             7.29 143        Pn    07 43 59.8 +0.8
S44A  Carbondale           7.31  79        Pn    07 44 00.2 +1.1
S44A                                 Pg    Pg    07 44 26.8 -5.5
HICK  Hickman              7.31  88        Pn    07 44 00.7 +1.5
SIUC  Southern Illin       7.34  79        Pn    07 44 00.5 +1.0
P43A  Skaggs, Pawnee       7.54  64        Pn    07 44 03.3 +1.1
UTMT  University of        7.62  90        Pn    07 44 04.7 +1.2
MNTX  Cornudas Mount       7.67 232  P     Pn    07 44 03.2 -1.0
       baz=47,SNR=104
MNTX  Cornudas Mount       7.67 232  Pn    Pn    07 44 03.8 -0.4
L40A  Anamosa              7.69  43  Pn    Pn    07 44 04.9 +0.6
L40A                                 Pg    Pg    07 44 37.3 -2.3
Q44A  Meyer Farm, Va       7.69  70  Pn    Pn    07 44 05.5 +1.1
Y45A  Yeager Farm, C       7.71 109  Pn    Pn    07 44 05.5 +0.9
T45A  Paducah              7.76  85        Pn    07 44 07.3 +1.9
SUSD  Miller               7.77 357  P     Pn    07 44 05.5  0.0
       baz=177,SNR=13
SUSD  Miller               7.77 357        Pn    07 44 05.5  0.0
SUSD                                 Pg    Pg    07 44 39.3 -1.9
735A  Kenedy               7.81 177        Pn    07 44 06.0 -0.1
VBMS  Vicksburg            7.83 122  P     Pn    07 44 07.8 +1.5
       baz=306,SNR=11
VBMS                                 S     Sn    07 45 33.0 -1.9
       baz=306
VBMS  Vicksburg            7.83 122        Pn    07 44 06.5 +0.2
HDIL  Hopedale             8.05  59  P     Pn    07 44 10.3 +0.9
       baz=244,SNR=199
HDIL                                 S     Sn    07 45 38.2 -2.3
       baz=244
HDIL  Hopedale             8.05  59        Pn    07 44 10.9 +1.5
MVCO  Mesa Verde           8.17 277  P     Pn    07 44 12.3 +1.1
       baz=91,SNR=21
MVCO                                 Sb    Sg    07 46 23.1  -11
       baz=91
344A  Westbrook Farm       8.17 127        Pn    07 44 11.7 +0.8
I37A  Lemond, Waseca       8.23  26  Pn    Pn    07 44 10.8 -1.0
OLIL  Olney                8.36  73        Pn    07 44 14.4 +0.9
833A  Chaparral WMA,       8.38 187  P     Pn    07 44 11.9 -2.0
       baz=5.1
WVT   Waverly              8.48  91  P     Pn    07 44 15.6 +0.4
       baz=277
WVT                                  S     Sn    07 45 49.5 -1.4
       baz=277
O20A  White River Ci       8.52 297  P     Pn    07 44 17.0 +1.0
       baz=111,SNR=10
O20A  White River Ci       8.52 297        Pn    07 44 16.5 +0.5
RWWY  Rawlins              8.52 309        Pn    07 44 16.0  0.0
L42A  Oliver, Polo         8.55  49        Pn    07 44 17.2 +1.0
TX31  Lajitas Ar. Si       8.59 213        Pn    07 44 15.9 -1.0
TX32  Lajitas Array        8.59 213        Pn    07 44 15.8 -1.0
TXAR  Lajitas Array        8.59 213  Pn    Pn    07 44 15.0 -1.8
       comp=Z,7.2nm,0.3s,baz=31,slow=11,SNR=404
TXAR                                 Pg    Pg    07 44 42.8  -14
       comp=Z,18nm,0.3s,baz=52,slow=15,SNR=7.3
TXAR                                 Lg    Lg    07 46 35.7
       comp=Z,47nm,0.3s,baz=18,slow=25,SNR=8.4
TXAR  Lajitas Array        8.59 213  Pn    Pn    07 44 15.7 -1.2
RSSD  Black Hills          8.62 331  P     Pn    07 44 17.7 +0.4
       baz=148
RSSD  Black Hills          8.62 331  Pn    Pn    07 44 17.7 +0.4
146A  Union                8.63 115        Pn    07 44 17.9 +0.6
K22A  Casper               8.69 316  P     Pn    07 44 17.0 -1.2
       baz=131,SNR=43
K22A  Casper               8.69 316        Pn    07 44 17.2 -1.0
JFWS  Jewell Farm          8.79  42  P     Pn    07 44 19.0 -0.5
       baz=228,SNR=84
JFWS                                 S     Sn    07 45 53.0 -5.6
       baz=228
T47A  Sharon Grove         9.00  85  Pn    Pn    07 44 23.5 +1.2
346A  Big Creek Wild       9.04 123        Pn    07 44 24.0 +1.0
Z47A  Carrollton           9.10 109        Pn    07 44 24.7 +0.9
M44A  Midewin, Midew       9.27  56        Pn    07 44 26.6 +0.6
F33A  5 Mile Ranch,        9.28   9        Pn    07 44 25.1 -1.1
I40A  Norwalk              9.30  37  Pn    Pn    07 44 27.4 +0.9
V48A  Smith Brothers       9.34  92        Pn    07 44 27.6 +0.6
W18A  Petrified Fore       9.39 264  P     Pn    07 44 28.4 +0.4
       baz=77
X48A  Hartselle            9.45 100  Pn    Pn    07 44 29.0 +0.4
SPMN  Marine on St.        9.50  24  P     Pn    07 44 27.4 -1.7
       baz=208,SNR=55
SPMN                                 S     Sn    07 46 12.6 -3.3
       baz=208
SFIN  Lafayette            9.54  64  P     Pn    07 44 30.8 +1.1
       baz=251,SNR=39
HQIL  Hanson Quary C       9.59  55  Pn    Pn    07 44 30.5  0.0
WCI   Wyandotte Cave       9.69  77  P     Pn    07 44 33.0 +1.2
       baz=264
WCI   Wyandotte Cave       9.69  77  Pn    Pn    07 44 32.6 +0.8
L44A  Lake County Fo       9.74  53  P     Pn    07 44 32.6 +0.1
       baz=239,SNR=15
L44A                                 S     Sn    07 46 17.2 -4.7
       baz=239
L44A  Lake County Fo       9.74  53        Pn    07 44 32.9 +0.4
K43A  Burlington           9.77  49        Pn    07 44 33.2 +0.4
E28A  Huff                10.04 351        Pn    07 44 35.4 -1.2
U49A  Red Boiling Sp      10.09  87        Pn    07 44 38.1 +0.8
Y49A  Blount Mountai      10.13 103        Pn    07 44 38.1 +0.2
SWET  Sewanee             10.15  95        Pn    07 44 39.4 +1.3
P48A  Milroy              10.54  71  Pn    Pn    07 44 42.4 -1.0
G40A  Rib Lake            10.54  33  Pn    Pn    07 44 41.9 -1.6
FPAL  Fort Paine          10.56  98        Pn    07 44 44.7 +0.9
PD31  Pinedale Array      10.57 309        Pn    07 44 42.7 -1.4
PDAR  Pinedale Array      10.57 309  Pn    Pn    07 44 42.0 -2.1
       comp=Z,3.9nm,0.3s,baz=114,slow=13,SNR=117
PDAR                                 Pg          07 45 26.7
       comp=Z,12nm,0.3s,baz=105,slow=18,SNR=9.4
PDAR                                 Lg    Lg    07 47 39.4
       comp=Z,36nm,0.3s,baz=116,slow=33,SNR=10
PDAR                                 LR    LR    07 48 48.7
       comp=Z,1µm,18.8s,baz=126,slow=38
PDAR  Pinedale Array      10.57 309  Pn    Pn    07 44 42.5 -1.6
BW06  Boulder Array       10.57 309  P     Pn    07 44 42.9 -1.2
       baz=122,SNR=40
BW06  Boulder Array       10.57 309        Pn    07 44 42.3 -1.8
R49A  Shelbyville         10.57  77        Pn    07 44 44.7 +0.8
WUAZ  Wupatki             10.63 268  P     Pn    07 44 44.8  0.0
       baz=80
WUAZ  Wupatki             10.63 268  Pn    Pn    07 44 45.5 +0.6
W50A  Signal Mountai      10.65  94  Pn    Pn    07 44 45.7 +0.7
L46A  Eue Claire          10.72  57        Pn    07 44 45.8 -0.2
T50A  Nancy               10.81  84        Pn    07 44 48.1 +0.9
BRAL  Brewton             10.85 117  P     Pn    07 44 48.3 +0.5
       baz=303,SNR=8.6
BRAL  Brewton             10.85 117        Pn    07 44 47.3 -0.5
X16A  Lo Mia Camp, P      10.93 262        Pn    07 44 49.5 +0.6
MPU   Maple Canyon        10.97 292        Pn    07 44 50.7 +1.1
P49A  Miami Univ. Ec      11.09  71  P     Pn    07 44 49.9 -1.1
       baz=259,SNR=30
X51A  Calhoun             11.16  97        Pn    07 44 52.4 +0.5
TUC   Tucson              11.17 251  P     Pn    07 44 52.1 -0.1
       baz=63
H43A  Windswept, Lux      11.17  43  Pn    Pn    07 44 50.8 -1.2
R50A  Paris               11.23  78        Pn    07 44 53.3 +0.3
CPCT  Cooper Cave         11.24  92        Pn    07 44 53.8 +0.8
U15A  North Rim           11.24 273        Pn    07 44 54.5 +1.1
Z51A  Franklin            11.29 103  Pn    Pn    07 44 53.7 -0.1
V51A  Loudon              11.32  90        Pn    07 44 55.0 +0.9
O49A  Covington           11.51  68        Pn    07 44 55.4 -1.3
HPIG                      11.54 215        Pn    07 44 55.6 -1.8
LAO   LASA Array          11.61 332  P     Pn    07 44 57.1 -1.0
       baz=147,SNR=43
LAO   LASA Array          11.61 332  Pn    Pn    07 44 56.5 -1.6
KNB   Kanab               11.63 276  Pn    Pn    07 44 58.8 +0.3
LOHW  Long Hollow         11.67 310        Pn    07 44 57.8 -1.3
SNOW  Snow King Moun      11.68 309        Pn    07 44 58.6 -0.8
REDW  Red Top Meadow      11.69 309        Pn    07 44 57.9 -1.5
AGMN  Agassiz Nation      11.75   8  P     Pn    07 44 58.1 -1.9
       baz=190,SNR=12
AGMN                                 S     Sn    07 47 02.2 -8.9
       baz=190
W52A  Murphy              11.78  93        Pn    07 45 00.9 +0.4
S51A  Beattyville         11.79  81        Pn    07 45 01.1 +0.5
TKL   Tuckaleechee C      11.80  91  Pn    Pn    07 45 00.9 +0.1
       comp=Z,18nm,0.3s,baz=236,slow=8.2,SNR=247
TKL                                  Lg    Lg    07 48 18.2
       comp=Z,26nm,0.3s,baz=180,slow=21,SNR=6.6
TKL                                  LR    LR    07 49 53.6
       comp=Z,689nm,18.5s,baz=278,slow=39
TKL   Tuckaleechee C      11.80  91        Pn    07 45 01.2 +0.5
RLMT  Red Lodge           11.81 319  P     Pn    07 44 59.7 -1.3
       baz=132,SNR=25
RLMT  Red Lodge           11.81 319        Pn    07 44 58.8 -2.2
TPAW  Teton Pass          11.82 309        Pn    07 45 00.1 -1.1
MOOW  Moose Ponds         11.83 310  Pn    Pn    07 44 59.2 -2.0
TZTN  Tazewell            11.87  86  P     Pn    07 45 02.6 +0.9
       baz=275,SNR=15
TZTN  Tazewell            11.87  86        Pn    07 45 02.5 +0.9
152A  Waverly Hall        11.89 106        Pn    07 45 02.0 +0.1
V52A  Sevierville         11.92  90        Pn    07 45 03.0 +0.7
LCMT  Little Creek M      11.96 276        Pn    07 45 02.9 -0.2
L48A  N Adams             11.97  60        Pn    07 45 02.1 -0.9
FLWY  Flagg Ranch         11.98 312        Pn    07 45 03.4  0.0
Y52A  Lilburn             11.99  99        Pn    07 45 03.1 -0.1
Q51A  Peebles             12.07  74        Pn    07 45 03.7 -0.6
451A  Vernon              12.09 116  Pn    Pn    07 45 04.7 +0.1
B35A  Bob, Littlefor      12.15  15        Pn    07 45 03.4 -2.1
J47A  Sunmer              12.25  54        Pn    07 45 05.8 -1.0
352A  Blakely             12.25 111        Pn    07 45 06.0 -0.9
EYMN  Ely                 12.33  22  P     Pn    07 45 04.7 -3.3
       baz=207,SNR=16
EYMN                                 S     Sn    07 47 17.4 -7.9
       baz=207
EYMN  Ely                 12.33  22  Pn    Pn    07 45 04.8 -3.2
P51A  Williamsport        12.35  72        Pn    07 45 07.6 -0.6
GCMT  Greycliff           12.47 320        Pn    07 45 07.6 -2.4
YHH   Holmes Hill         12.48 314        Pn    07 45 08.2 -2.0
ACSO  Alum Creek Sta      12.54  69  P     Pn    07 45 09.5 -1.3
       baz=258,SNR=48
ACSO  Alum Creek Sta      12.54  69  Pn    Pn    07 45 09.4 -1.3
DGMT  Dagmar              12.55 342  P     Pn    07 45 09.0 -1.9
       baz=158,SNR=34
DGMT                                 S     Sn    07 47 24.1 -6.6
       baz=158
DGMT  Dagmar              12.55 342  Pn    Pn    07 45 08.7 -2.2
V53A  Saluda              12.57  90        Pn    07 45 11.6 +0.3
GOGA  Godfrey             12.60 101  P     Pn    07 45 11.6  0.0
       baz=289,SNR=5.6
GOGA  Godfrey             12.60 101        Pn    07 45 11.8 +0.1
BG3   Lake Jocassee       12.60  93        Pn    07 45 11.3 -0.4
AAM   Ann Arbor           12.64  59  P     Pn    07 45 11.8 -0.3
       baz=249,SNR=26
AAM                                  S     Sn    07 47 30.1 -2.7
       baz=249
D41A  Chassel             12.65  32        Pn    07 45 09.3 -3.0
M50A  Fremont             12.78  64        Pn    07 45 12.4 -1.6
QLMT  Earthquake Lak      12.84 313        Pn    07 45 14.0 -1.1
SPR3  Spring Creek 3      12.87 285  Pn    Pn    07 45 16.8 +1.2
214A  Organ Pipe Nat      12.87 253  P     Pn    07 45 15.7 +0.3
       baz=64
214A  Organ Pipe Nat      12.87 253  Pn    Pn    07 45 15.1 -0.2
Q52A  Bidwell             12.90  75        Pn    07 45 14.8 -0.9
P52A  Corning             13.08  72  P     Pn    07 45 17.6 -0.6
       baz=262,SNR=25
R53A  Hurricane           13.10  78        Pn    07 45 17.5 -1.0
154A  Montrose            13.16 103        Pn    07 45 19.2 -0.2
GLMI  Grayling            13.18  48  P     Pn    07 45 17.1 -2.5
       baz=237,SNR=35
U54A  Nelsons Funny       13.26  86        Pn    07 45 19.8 -1.0
PRN   Pahroc Range        13.39 278        Pn    07 45 24.5 +2.0
BOZ   Bozeman (W)         13.40 316  P     Pn    07 45 24.5 +1.9
       baz=128
PAULI Pauline             13.54  93        Pn    07 45 23.5 -0.9
ULM   Lac du Bonnet       13.68   7  Pn    Pn    07 45 21.4 -4.9
       comp=Z,7.1nm,0.3s,baz=182,slow=12,SNR=38
ULM                                  Sn    Sn    07 47 45.5  -13
       comp=Z,12nm,0.3s,baz=276,slow=23,SNR=3.1
ULM                                  Lg    Lg    07 49 15.1
       comp=Z,15nm,0.3s,baz=107,slow=19,SNR=2.2
ULM                                  LR    LR    07 50 56.8
       comp=Z,539nm,20.6s,baz=211,slow=38
MCMT  McKenzie Canyo      13.68 311        Pn    07 45 26.1 -0.4
R11A  Troy Canyon, C      13.81 282  P     Pn    07 45 31.7 +3.4
       baz=92,SNR=7.8
R11A  Troy Canyon, C      13.81 282        Pn    07 45 28.5 +0.2
ELK   Elko                13.82 292  Pn    Pn    07 45 29.3 +0.8
       comp=Z,0.1nm,0.3s,baz=126,slow=17,SNR=3.3
ELK                                  Lg    Lg    07 49 24.4
       comp=Z,0.3nm,0.3s,baz=320,slow=12,SNR=3.7
V55A  Taylorsville        13.83  88        Pn    07 45 27.7 -0.8
KMSC  Kings Mountain      13.86  91        Pn    07 45 27.6 -1.2
O53A  New Philadelph      13.87  70  P     Pn    07 45 26.3 -2.7
       baz=261,SNR=12
255A  Hazlehurst          13.93 105        Pn    07 45 28.3 -1.4
IRM   Iron Mountain       13.95 265  P     Pn    07 45 30.3 +0.2
       baz=75,SNR=8.5
LRM   Limekiln Ridge      14.00 315        Pn    07 45 30.0 -0.9
Q54A  Coxs Mills          14.01  75        Pn    07 45 29.6 -1.3
JSC   Jenkinsville        14.11  95        Pn    07 45 30.8 -1.4
EGMT  Eagleton            14.12 327  P     Pn    07 45 29.8 -2.7
       baz=140,SNR=37
EGMT  Eagleton            14.12 327        Pn    07 45 29.9 -2.5
HRY   Holter Researc      14.21 319        Pn    07 45 31.1 -2.6
GMRC  Granite Mounta      14.21 267  P     Pn    07 45 34.6 +0.8
       baz=77,SNR=28
BLA   Blacksburg          14.33  83  P     Pn    07 45 33.9 -1.4
       baz=273,SNR=18
BLA   Blacksburg          14.33  83        Pn    07 45 34.6 -0.7
U56A  King                14.43  86        Pn    07 45 36.3 -0.4
M53A  WI Miller and       14.51  65  P     Pn    07 45 34.9 -2.7
       baz=257,SNR=15
HEC   Hector,Ludlow       14.75 268  P     Pn    07 45 41.7 +0.7
       baz=78,SNR=7.1
MCWV  Mont Chateau        14.83  73  P     Pn    07 45 40.2 -1.9
       baz=264,SNR=5.9
FURC  Furnace Creek,      14.91 275  P     Pn    07 45 45.4 +2.3
       baz=84,SNR=14
N54A  Moraine State       14.91  68  P     Pn    07 45 39.8 -3.4
       baz=259,SNR=22
GSC   Goldstone, Bar      15.03 270  P     Pn    07 45 46.0 +1.1
       baz=79,SNR=11
PFO   Pinyon Flats O      15.15 264  Pn    Pn    07 45 47.5 +1.0
       comp=Z,0.0nm,0.3s,baz=81,slow=13,SNR=3.3
PFO                                  Lg    Lg    07 50 10.6
       comp=Z,0.2nm,0.3s,baz=78,slow=13,SNR=7.2
ERPA  Erie                15.17  63  P     Pn    07 45 42.8 -3.8
       baz=255
M54A  Oil Creek Stat      15.26  66  P     Pn    07 45 45.7 -2.2
       baz=258,SNR=12
MONP2 Monument Peak       15.35 261  P     Pn    07 45 50.4 +1.2
       baz=71
BBRC  Big Bear Solar      15.35 266  P     Pn    07 45 49.9 +0.6
       baz=76,SNR=5.3
MPMC  Manual Prospec      15.46 273  P     Pn    07 45 51.6 +0.9
       baz=82,SNR=13
LRMC  Laurel Mtn Rad      15.70 271  P     Pn    07 45 54.9 +1.1
       baz=80,SNR=5.7
MURC  Murrieta            15.74 264  P     P     07 45 59.6 +1.4
       baz=73,SNR=6.5
O56A  Blue Knob Stat      15.88  71  P     Pn    07 45 53.6 -2.3
       baz=263,SNR=15
BFSC  Mount Baldy Ra      15.95 267  P     Pn    07 45 57.6 +0.6
       baz=76,SNR=8.1
NVAR  Mina Array Bea      15.95 282  Pn    Pn    07 45 58.4 +1.4
       comp=Z,0.5nm,0.3s,baz=95,slow=11,SNR=37
EDW2  Edwards Air Fo      16.07 269  P     Pn    07 45 59.9 +1.4
       baz=78
LPIG  La Paz              16.23 223  LR    LR    07 52 00.0
       comp=Z,270nm,20.4s,baz=41,slow=36
SSPA  Standing Stone      16.44  70  P     Pn    07 45 59.9 -3.1
       baz=263
SADO  Sadowa              16.61  55  Pn    Pn    07 46 00.3 -4.8
       comp=Z,1.5nm,0.3s,baz=268,slow=13,SNR=8.3
SADO                                 Lg    Lg    07 50 49.9
       comp=Z,11nm,0.3s,baz=301,slow=7.7,SNR=6.8
SADO                                 LR    LR    07 52 09.3
       comp=Z,395nm,19.8s,baz=252,slow=36
WVOR  Wild Horse Val      16.68 296  P     P     07 46 07.7 -0.8
YERR  Yerington           16.69 284  P     Pn    07 46 07.3 +0.9
ARVC  Arvin               16.69 271  P     P     07 46 09.8 +1.1
       baz=79,SNR=13
CBN   Corbin Frederi      16.71  78  P     Pn    07 46 05.5 -0.9
       baz=271
J08A  Circle Bar Ran      16.80 300  P     Pn    07 46 08.3 +0.6
WALA  Waterton Lakes      16.80 322        Pn    07 46 08.1 +0.4
PAHR  Pah Rah Range       16.83 287  P     Pn    07 46 08.3 +0.1
F10A  Beach Ranch, E      16.93 309  P     P     07 46 10.8 -0.6
PNTR  Pine Nut            16.97 285        Pn    07 46 10.7 +0.7
VCNR  Virginia City       17.02 285  P     Pn    07 46 11.2 +0.7
MOIG  Morelia             17.12 189  P     P     07 46 13.9 +0.2
MPK   Martis Peak         17.31 285  P     P     07 46 15.7 -0.1
EMB   Emerald Bay         17.36 284  P     Pn    07 46 15.3 +0.4
CMB   Columbia Colle      17.59 281  P     P     07 46 18.3 -0.4
E09A  Wood Farm, Sta      17.75 310  P     Pn    07 46 19.2 -0.2
K57A  Scipio Center       17.81  63        Pn    07 46 17.9 -2.4
NEW   Newport             18.01 316  P     P     07 46 23.3  0.0
       baz=124,SNR=20
NEW   Newport             18.01 316  P     P     07 46 23.6 +0.4
N59A  State Game Lan      18.07  70  P     P     07 46 24.3 +0.5
       baz=264,SNR=13
P60A  Greenville          18.08  73  P     Pn    07 46 22.5 -1.1
       baz=267,SNR=5.8
P60A  Greenville          18.08  73  P     Pn    07 46 22.6 -0.9
BINY  Binghamton          18.09  65  P     Pn    07 46 21.8 -2.0
       baz=260,SNR=12
BINY  Binghamton          18.09  65  P     Pn    07 46 21.9 -1.9
WUPA  West Chester U      18.11  73        Pn    07 46 21.7 -2.2
FFC   Flin Flon           18.22 353        Pn    07 46 24.6 -0.6
E08A  Dider Farm, El      18.30 309  P     Pn    07 46 24.8 -1.5
LUPA  Lehigh Univers      18.34  71  P     Pn    07 46 24.7 -2.0
C09A  Chrisman Ranch      18.43 313  P     Pn    07 46 27.6 -0.2
D08A  Wollman Farm,       18.46 311  P     P     07 46 26.0 -2.1
HAWA  Hanford             18.56 308  P     P     07 46 28.4 -0.8
PINE  Pine Mountain       18.64 299        P     07 46 29.4 -0.9
O03E  Paynes Creek        18.72 288  P     Pn    07 46 33.4 +1.9
       baz=94,SNR=13
L59A  Walton              18.78  66  P     P     07 46 31.1 -0.6
M04C  Macdoel             18.90 293  P     Pn    07 46 34.5 +0.9
       baz=98,SNR=8.5
BRNJ  Basking Ridge       18.95  71        P     07 46 32.5 -1.0
ODNJ  Ogdensburg          18.96  69  P     P     07 46 32.3 -1.3
TLIG  Tlapa               19.04 181  P     P     07 46 33.6 -1.2
VLDQ  Val d'Or            19.12  47  P     P     07 46 32.4 -2.9
TRNY  Table Rock, Ra      19.25  69  P     P     07 46 35.9 -1.0
WDC   Whiskeytown Da      19.30 289  P     P     07 46 35.9 -1.5
J59A  Piesco              19.41  62  P     P     07 46 38.2 -0.4
CPNY  Central Park        19.42  70  P     P     07 46 39.3 +0.6
N02D  Trinity Center      19.46 290  P     P     07 46 39.0 -0.1
       baz=95
O02D  Mt. Diablo Mer      19.47 288  P     Pn    07 46 41.2 +0.7
       baz=93,SNR=5.3
PAL   Palisades           19.48  70  P     P     07 46 39.0 -0.3
       baz=265,SNR=10.0
PAL   Palisades           19.48  70  P     P     07 46 37.6 -1.7
YBH   Yreka Blue Hor      19.54 292  P     P     07 46 40.2 +0.1
       comp=Z,0.7nm,0.3s,baz=65,slow=5.2,SNR=21
YBH                                  LR    LR    07 54 53.6
       comp=Z,335nm,21.6s,baz=98,slow=39
YBH   Yreka Blue Hor      19.54 292  P     P     07 46 40.6 +0.5
EDM   Edmonton            19.60 332  P     P     07 46 39.9 -0.7
M02C  Callahan            19.61 291  P     Pn    07 46 43.1 +0.9
       baz=96,SNR=8.3
LTY   Liberty             19.63 310  P     P     07 46 40.1 -0.9
LONY  Lake Ozonia         19.63  59  P     P     07 46 40.7 -0.3
       baz=254
LONY  Lake Ozonia         19.63  59  P     P     07 46 41.5 +0.5
HOPS  Hopland Field       19.67 284  P     P     07 46 40.9 -0.6
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I04A	Tendick Farm,	19.68	299	P	Pn	07 46 43.8	+0.9
	baz=103						
NCB	Newcomb	19.72	61	P	P	07 46 41.4	-0.6
CMIG	Matias Romero	19.75	170	P	P	07 46 41.8	-0.6
	comp=Z,0.7nm,0.3s,baz=346,slow=8.3,SNR=21						
CMIG				LR	LR	07 57 05.3	
	comp=Z,160nm,18.4s,baz=352,slow=45						
KSCT	Kent School, K	19.87	68	P	P	07 46 44.1	+0.6
TRY	Troy	19.87	65		P	07 46 43.7	+0.1
ACCN	Adirondack Com	19.99	63	P	P	07 46 44.1	-0.8
TRQ	Mont Tremblant	20.14	54	P	P	07 46 46.4	-0.2
YLE	Yale	20.24	69	P	P	07 46 48.7	+1.1
FRNY	Flat Rock	20.37	59	P	P	07 46 49.2	+0.1
MNTQ	Montreal, Queb	20.53	57	P	P	07 46 51.1	+0.4
L61B	Northampton	20.55	66	P	P	07 46 52.2	+1.3
	baz=262,SNR=16						
QUA2	Belchertown	20.77	66	P	P	07 46 53.9	+0.6
J61A	Chester	20.78	63	P	P	07 46 54.0	+0.5
UCCT	U. Connecticut	20.81	68		P	07 46 54.9	+1.1
VT1	Waterbury	20.83	61	P	P	07 46 54.7	+0.6
K62A	Royalston	20.91	65	P	P	07 46 55.9	+1.1
M63A	Gales Ferry	20.91	69		P	07 46 55.6	+0.7
PETF	Flores	21.06	157	P	P	07 46 56.5	-0.2
BRYW	Bryant College	21.33	68	P	P	07 47 00.3	+0.8
HRV	Adam Dziewonsk	21.38	66	P	P	07 47 01.5	+1.5
	baz=263						
HRV	Adam Dziewonsk	21.38	66	P	P	07 47 00.9	+1.0
LBNH	Lisbon	21.39	61	P	P	07 47 00.9	+0.8
	baz=258,SNR=7.3						
LBNH	Lisbon	21.39	61	P	P	07 47 00.3	+0.3
MOQ	Mont Orford	21.41	58	P	P	07 47 01.2	+0.9
FFD	Franklin Falls	21.45	63	P	P	07 47 00.8	+0.2
WES	Weston	21.54	66	P	P	07 47 01.9	+0.3
BCX	Boston College	21.65	67	P	P	07 47 03.5	+0.7
I62A	Tamworth	21.74	62	P	P	07 47 04.7	+0.8
L64A	Middleborough	21.86	68	P	P	07 47 05.6	+0.6
LLLB	Lillooet	21.89	317	P	P	07 47 05.2	-0.1
H62A	Milan	22.00	61	P	P	07 47 07.4	+0.8
I63A	Otisfield	22.31	62	P	P	07 47 11.1	+1.2
G62A	West of Eustis	22.57	59	P	P	07 47 13.4	+0.8
WVL	Waterville	23.05	61	P	P	07 47 18.2	+0.5
LMQ	La Malbaie	23.31	53	P	P	07 47 20.1	-0.2
PKME	Peaks-Kenny Pk	23.44	59	P	P	07 47 22.7	+1.1
	baz=259,SNR=8.2						
PKME	Peaks-Kenny Pk	23.44	59	P	P	07 47 22.1	+0.5
E62A	Clayton Lake	23.58	56	P	P	07 47 23.7	+0.7
MTO3	Montecristo	23.59	158	P	P	07 47 24.0	+0.5
CBB	Campbell River	23.61	313	P	P	07 47 22.7	-0.6
F63A	Nahmakanta, Br	23.66	58	P	P	07 47 24.4	+0.6
D62A	Allapoint, All	24.01	55	P	P	07 47 27.5	+0.3
F64A	Sherman	24.20	58	P	P	07 47 30.0	+1.0
TGUH	Tegucigalpa,Un	24.60	153	P	P	07 47 33.9	+0.9
PQI	Presque Isle	24.60	57	P	P	07 47 33.6	+1.0
G65A	Princeton	24.63	60	P	P	07 47 33.8	+1.0
BATG	Bathurst New B	26.04	56	P	P	07 47 46.4	+0.7
BBB	Bella Bella	26.08	316	LR	LR	07 58 56.1	
	comp=Z,572nm,18.7s,baz=120,slow=39						
LMN	Caledonia Moun	26.64	59	P	P	07 47 52.8	+1.7
YKA	Yellowknife Ar	27.74	344	P	P	07 48 00.1	-0.7
	comp=Z,9.7nm,0.9s,baz=140,slow=10.0,SNR=22						
YKA				LR	LR	07 59 19.8	
	comp=Z,756nm,19.1s,baz=0.0,slow=37						
YKA	Yellowknife Ar	27.74	344	P	P	07 48 00.3	-0.5
SCHQ	Schefferville	28.15	40	P	P	07 48 04.3	-0.2
	comp=Z,8.1nm,0.8s,baz=234,slow=9.3,SNR=11						
SCHQ				LR	LR	07 58 12.1	
	comp=Z,270nm,20.1s,baz=260,slow=34						
GBN	Guysborough	28.89	61	P	P	07 48 12.0	+0.9
JTS	Las Juntas de	28.92	152	LR	LR	08 01 57.0	
	comp=Z,190nm,21.6s,baz=50,slow=41						
DLBC	Dease Lake	30.05	326	P	P	07 48 23.7	+2.2
DRLN	Deer Lake	32.01	54	P	P	07 48 40.4	+1.7
FRB	Frobisher Bay	32.54	24	P	P	07 48 41.9	-1.2
	comp=Z,16nm,1.0s,baz=227,slow=16,SNR=2.8						
FRB				LR	LR	08 01 56.2	
	comp=Z,471nm,21.7s,baz=226,slow=36						
WHY	Whitehorse	33.32	328	P	P	07 48 51.3	+1.1
MOTC	Monteria, Cord	34.56	138	*e*P	P	07 49 02.0	+0.7
MOTC	Monteria, Cord	34.56	138	P	P	07 49 02.0	+0.7
M30M	Minto, Yukon	35.06	330	P	P	07 49 06.1	+1.0
	baz=120						
ZARC	Zaragoza, Cauc	36.07	138	*e*P	P	07 49 14.2	-0.1
ZARC	Zaragoza, Cauc	36.07	138	P	P	07 49 14.0	-0.3
M27K	Edge Creek, AK	37.08	328	P	P	07 49 25.7	+3.2
	baz=114						
INK	Inuvik	37.22	339	P	P	07 49 23.5	0.0
	comp=Z,5.7nm,0.8s,baz=109,slow=10,SNR=10						
INK	Inuvik	37.22	339	P	P	07 49 23.6	+0.2
	baz=130,SNR=6.5						
INK	Inuvik	37.22	339	P	P	07 49 23.8	+0.3
BCAR	Beaver Creek A	37.33	329	P	P	07 49 25.7	+1.1
L27K	Beaver Creek,	37.34	329	P	P	07 49 25.8	+1.1
	baz=114						
L27K	Beaver Creek,	37.34	329	P	P	07 49 25.4	+0.7
NORC	Norcasia	37.69	140	*e*P	P	07 49 28.0	-0.1
GUY2C	Guyana, Caldas	37.72	141	*e*P	P	07 49 29.2	+0.4
EGAK	Eagle	37.82	332	P	P	07 49 28.9	+0.3
A36M	Sachs Harbour	37.98	347	P	P	07 49 30.0	+0.2
RES	Resolute Bay	38.13	1	P	P	07 49 32.1	+1.0
	comp=Z,1.9nm,0.7s,baz=182,slow=14,SNR=3.8						
J26L	Joseph Creek	38.63	331	P	P	07 49 36.2	+0.6
	baz=114						
ORTC	Ortega, Tolima	38.91	141	*e*P	P	07 49 38.0	-0.3
SOTA	Rioblanco	39.79	145	*e*P	P	07 49 46.7	+0.5
PRP	Porcupine Dome	39.80	331	P	P	07 49 45.9	+0.4
	baz=113						
PRP	Porcupine Dome	39.80	331	P	P	07 49 45.7	+0.3
SEW	Seward	39.87	323	P	P	07 49 46.6	+0.7
	baz=103						
IL31		40.06	330	P	P	07 49 48.0	+0.6
ILAR	Eielson Array	40.06	330	P	P	07 49 48.0	+0.6
	comp=Z,12nm,0.9s,baz=107,slow=7.1,SNR=50						
ILAR				LR	LR	08 07 02.9	
	comp=Z,375nm,18.3s,baz=128,slow=37						
ILAR	Eielson Array	40.06	330	P	P	07 49 48.2	+0.8
BMAR	Burnt Mountain	40.25	334	P	P	07 49 50.0	+1.0
CCB	Clear Creek Bu	40.39	330	P	P	07 49 50.7	+0.6
H24K	Noodor Dome	40.83	331	P	P	07 49 54.4	+0.6
	baz=111						
H24K	Noodor Dome	40.83	331	P	P	07 49 54.5	+0.6
MACC	Macarena, Meta	41.12	141	*e*P	P	07 49 56.0	-0.8
PPLA	Purkeypile	41.77	326	P	P	07 50 02.6	+0.9
	baz=103						
PPLA	Purkeypile	41.77	326	P	P	07 50 02.9	+1.2
I21K	Tanana	42.25	330	P	P	07 50 06.3	+1.0
	baz=106						
I21K	Tanana	42.25	330	P	P	07 50 06.4	+1.0
L20K	Farewell, AK	42.45	325	P	P	07 50 07.9	+0.8
	baz=101						
TOLK	Toolik Lake Re	42.46	335	P	P	07 50 07.9	+0.8
H21K	Melozitna Rive	42.71	330	P	P	07 50 09.5	+0.4
	baz=105						
H21K	Melozitna Rive	42.71	330	P	P	07 50 09.6	+0.4
J20K	Nowinta River	42.91	328	P	P	07 50 12.0	+1.3
	baz=102						
J20K	Nowinta River	42.91	328	P	P	07 50 11.2	+0.4
IMAR	Indian Mountai	43.17	330	P	P	07 50 14.4	+1.6
ICESG	Greenland Ices	45.16	26	*e*P	P	07 50 29.3	+0.2
NEEM	North Greenlan	45.60	13	*i* P	P	07 50 32.4	-0.1
NEEM				IAmb	IAmb	07 50 36.2	
	comp=Z,14nm,0.9s						
A21K	Barrow	45.64	337	P	P	07 50 32.9	+0.4
SUMG	Summit	46.47	21	*i* P	P	07 50 40.0	+0.5
SUMG				IAmb	IAmb	07 50 43.2	
	comp=Z,5.2nm,0.9s						
SUMG	Summit	46.47	21	P	P	07 50 39.9	+0.3
BOAV	Boa Vista	48.75	125	P	P	07 50 57.6	+0.2
CZSB	Cruzeiro do Su	50.29	146	P	P	07 51 09.3	+0.2
SCO	Scoresbysund	51.40	25	*i* P	P	07 51 17.0	+0.1
SCO				IAmb	IAmb	07 51 18.6	
	comp=Z,0.8nm,0.4s						
SCO	Scoresbysund	51.40	25	P	P	07 51 17.5	+0.6
PTGA	Pitinga	51.48	128	P	P	07 51 18.6	+0.5
	comp=Z,3.3nm,0.7s,baz=320,slow=12,SNR=4.9						
DAG	Danmarks Havn	52.27	17	*i* P	P	07 51 22.6	-0.6
DAG				IAmb	IAmb	07 51 23.9	
	comp=Z,3.3nm,0.5s						
NOR	Nord	52.74	11	*i* P	P	07 51 27.0	+0.3
NOR				IAmb	IAmb	07 51 29.7	
	comp=Z,4.2nm,0.8s						
ARCES	ARCESS Array B	66.46	19	P	P	07 53 01.4	-0.1
	comp=Z,2.4nm,0.6s,baz=300,slow=5.5,SNR=13						
ARCES				LR	LR	08 21 06.6	
	comp=Z,136nm,18.9s,baz=340,slow=35						
ARCES	ARCESS Array B	66.46	19	P	P	07 53 01.6	+0.1
KEV	Kevo	66.69	18	P	P	07 53 03.4	+0.5
TIXI	Tiksi	66.98	345	LR	LR	08 24 48.9	
	comp=Z,140nm,19.4s,baz=357,slow=38						
NOA	NORSAR Array B	67.12	30	P	P	07 53 06.0	+0.2
	comp=Z,0.5nm,0.6s,baz=306,slow=6.6,SNR=2.1						
NOA				LR	LR	08 21 24.9	
	comp=Z,187nm,18.4s,baz=305,slow=35						
PFVI	Vila Bisbo	68.70	59	P	P	07 53 17.6	+1.4
PETK	Petropavlovsk-	69.06	321	LR	LR	08 25 04.1	
	comp=Z,112nm,19.1s,baz=56,slow=37						
PVAQ	Vaqueiros	69.33	58	P	P	07 53 21.2	+1.1
BDFB	Brasilia	70.41	128	LR	LR	08 26 33.3	
	comp=Z,164nm,19.2s,baz=314,slow=38						
MEM	Membach	70.63	41	*d*P	P	07 53 28.3	+0.5
	comp=Z,13nm,0.8s						
ESDC	Sonseca Array	70.67	55	P	P	07 53 28.5	+0.2
	comp=Z,1.5nm,0.9s,baz=309,slow=7.2,SNR=5.3						
ESDC				LR	LR	08 22 22.2	
	comp=Z,136nm,19.4s,baz=280,slow=34						
FIA1	FINESS Array S	72.34	25	P	P	07 53 38.4	+0.5
FINES	FINESS Array B	72.34	25	P	P	07 53 38.2	+0.3
	comp=Z,4.4nm,0.7s,baz=306,slow=4.5,SNR=9.1						
FINES				LR	LR	08 22 41.6	
	comp=Z,255nm,18.5s,baz=318,slow=34						
FINES	FINESS Array B	72.34	25	P	P	07 53 38.1	+0.2
PPT	Papeete	72.45	231	LR	LR	08 19 53.6	
	comp=Z,34nm,21.2s,baz=48,slow=31						
CPUP	Villa Florida	73.61	142	LR	LR	08 30 40.2	
	comp=Z,42nm,18.8s,baz=334,slow=40						
MDT	Midelt	73.92	61	LR	LR	08 23 58.2	
	comp=Z,103nm,18.9s,baz=339,slow=34						
NRIK	Noril'sk	74.20	358	P	P	07 53 50.8	+2.0
	comp=Z,1.0nm,0.3s,baz=26,slow=7.2,SNR=3.6						
NRIK				LR	LR	08 27 10.5	
	comp=Z,88nm,19.9s,baz=8.0,slow=36						
DAVOX	Davos/Dischmat	74.96	43	LR	LR	08 26 28.2	
	comp=Z,144nm,19.3s,baz=304,slow=35						
GERES	GERESS Array B	75.68	39	P	P	07 53 58.2	+0.4
	comp=Z,1.0nm,0.5s,baz=311,slow=8.9,SNR=2.4						
GERES				LR	LR	08 24 33.1	
	comp=Z,154nm,21.2s,baz=268,slow=34						
VRAC	Vranov	76.82	38	LR	LR	08 27 16.1	
	comp=Z,165nm,18.4s,baz=319,slow=35						
KLMR	Klimovskoe	76.89	20	*e*P	P	07 54 04.0	-0.3
KLMR				AMP		07 54 05.6	
	comp=Z,16nm,1.4s						
OBN	Obninsk	80.75	24	LR	LR	08 28 53.5	
	comp=Z,47nm,21.7s,baz=323,slow=35						
PLCA	Paso Flores	81.14	159	LR	LR	08 28 15.0	
	comp=Z,18nm,20.6s,baz=346,slow=34						
AKASG	Malin Array Be	81.52	31	P	P	07 54 29.9	+0.1
	comp=Z,1.5nm,0.7s,baz=309,slow=4.3,SNR=6.7						
KEST	Kesra	81.53	52	P	P	07 54 31.2	+0.9
	comp=Z,3.2nm,0.8s,baz=199,slow=9.9,SNR=4.4						
KLR	Kul'dur	83.63	330	LR	LR	08 34 42.4	
	comp=Z,81nm,18.1s,baz=44,slow=38						
MLR	Muntele Rosu	84.01	36	LR	LR	08 32 00.3	
	comp=Z,185nm,18.4s,baz=322,slow=36						
KOWA	Kowa	84.86	76	LR	LR	08 30 56.7	
	comp=Z,82nm,18.6s,baz=300,slow=34						
ZAA0	Zalesovo Array	89.70	358	P	P	07 55 10.8	+0.4
ZALV	Zalesovo Beam	89.70	358	P	P	07 55 10.6	+0.2
	comp=Z,4.9nm,0.8s,baz=19,slow=5.0,SNR=13						
ZALV				LR	LR	08 40 38.7	
	comp=Z,46nm,18.4s,baz=350,slow=39						
ZALV	Zalesovo Beam	89.70	358	P	P	07 55 10.8	+0.4
TLY	Talaya	89.93	347	LR	LR	08 38 04.0	
	comp=Z,106nm,19.9s,baz=5.0,slow=37						
TORD	Torodi Ar. Bea	90.10	74	P	P	07 55 12.3	-0.6
	comp=Z,1.0nm,1.0s,baz=323,slow=2.2,SNR=3.3						
BRTR	Keskin Array B	92.06	35	LR	LR	08 36 28.5	
	comp=Z,57nm,20.8s,baz=349,slow=35						
ABKAR	Akbulak array	92.29	14	P	P	07 55 22.9	+0.4
SONM	Songino Array	93.01	344	P	P	07 55 27.7	+1.6
	comp=Z,0.6nm,0.6s,baz=15,slow=6.3,SNR=2.6						
SONM				LR	LR	08 42 45.9	
	comp=Z,127nm,18.1s,baz=5.0,slow=39						
KSRS	Korea Array	94.72	325	LR	LR	08 41 14.9	
	comp=Z,61nm,18.2s,baz=42,slow=37						
JCJ	Chichijima	94.78	309	LR	LR	08 30 49.0	
	comp=Z,79nm,21.6s,baz=354,slow=31						
GNI	Garni	96.35	28	LR	LR	08 38 35.4	
	comp=Z,84nm,21.5s,baz=336,slow=35						
MKAR	Makanchi Array	96.90	360	P	P	07 55 43.3	-0.5
	comp=Z,1.6nm,0.9s,baz=353,slow=6.1,SNR=5.0						
MKAR				LR	LR	08 42 03.2	
	comp=Z,62nm,21.0s,baz=344,slow=37						
WMQ	Urumqi	99.69	356	*e*P	Pdif	07 55 59.1	+2.7
WRA	Warramunga Arr	131.33	275	PKP	PKiKP	08 01 26.9	+0.8
	comp=Z,0.4nm,0.8s,baz=56,slow=2.2,SNR=2.1						
ASAR	Alice Springs	133.54	271	PKP	PKPdf	08 01 30.0	+0.7
	comp=Z,0.2nm,0.8s,baz=83,slow=1.3,SNR=1.4						
MAW	Mawson	147.24	167	PKPbc	PKPbc	08 01 54.5	-0.3
	comp=Z,3.8nm,0.8s,baz=153,slow=2.3,SNR=2.5						

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*SJA **19** 07:47:23.0±0.7, 30°.30S×72°.65W, h*24^{km}±6^{km}*, ML4.5, MW4.6*

*NEIC **19** 07:47:27.4±1.4, 30°.35S±0°.05×72°.12W±0°.05, h*8^{km}±6^{km}*, mb4.5/5, ML4.4(GUC), Error ellipse: s-maj=7.0km s-min=5.8km az=213.0*

*IDC **19** 07:47:27.1±1.4, 30°.37S×71°.86W, h*0^{km}*, mb4.3/2, mb1 4.1/6, mb1mx3.9/30, mbtmp4.0/6, ML3.9/4, MS3.2/6, Ms1 3.2/6, ms1mx3.1/20, Error ellipse: s-maj=52.0km s-min=30.2km az=114.0*

*GUC **19** 07:47:30.4±0.7, 30°.46S×71°.79W, h*32^{km}±2^{km}*, ML4.4*

ISC 19 07:47:24.9±0.6**, 30°.35S**±0°.02×**72°.16W**±0°.04**, h**10^{km}**, n93,** σ**2**^{s}**30**/127**, mb4.3**/3**, 3C-4D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.55	126	⇓*i*P	Pn	07 47 37.8	-1.1
CO06				*i* S	Sb	07 47 43.3	-1.4
CO06	Fray Jorge	0.55	126		Pn	07 47 37.6	-1.2
CO06				Sg	Sb	07 47 43.7	-1.0
CO05	La Serena	0.90	62	⇓*i*P	Pn	07 47 44.5	+0.9
CO05				*e*S	Sn	07 47 56.1	-0.7
CO05				IAML		07 47 58.2	
	comp=E,28µm,0.3s						
CO05	La Serena	0.90	62		Pn	07 47 44.3	+0.7
GO04	Tololo Observa	1.19	82	⇓*i*P	Pn	07 47 48.6	+0.8
GO04				*e*S	Sg	07 48 01.8	-1.4
GO04				IAML		07 48 06.9	
	comp=N,61µm,0.5s						
GO04	Tololo Observa	1.19	82		Pn	07 47 48.6	+0.8
GO04	Tololo Observa	1.19	82	*e*P	Sb	07 48 03.4	+0.2
GO04				*e*S	Sn	07 48 07.7	+3.5
LCO	Las Campanas	1.84	44	⇑*i*P	Pg	07 47 59.6	-0.6
LCO				*i* S	Sg	07 48 22.6	-1.5
LCO	Las Campanas	1.84	44	Pn	Pg	07 47 59.4	-0.9
LCO	Las Campanas	1.84	44	*e*P	Pg	07 47 59.0	-1.2
VA06	Catapilco	2.32	162	⇑*e*P	Pb	07 48 05.1	-1.8
VA06				*e*S	Sb	07 48 34.1	-1.6
VA06				IAML		07 48 43.4	
	comp=N,4µm,0.5s						
AROD	Rodeo	2.33	86	*e*P	Pg	07 48 08.1	-1.5
AROD				*e*S	Sg	07 48 38.0	-1.8
AC04	Llanos de Chal	2.34	24	⇓*e*P	Pb	07 48 05.8	-1.3
AC04				*e*S	Sb	07 48 35.8	-0.3
AC04				IAML		07 48 51.8	
	comp=E,1µm,0.6s						
AC04	Llanos de Chal	2.34	24	Pn	Pb	07 48 05.6	-1.6
AC04	Llanos de Chal	2.34	24	*e*P	Pb	07 48 05.9	-1.3
AC04				*e*S	Sg	07 48 40.2	+0.1
AC04				IAML		07 48 52.7	
	comp=Z,1µm,0.9s						
ACDV	Cuesta del Vie	2.63	87	*e*P	Pg	07 48 13.7	-1.7
ACDV				*e*P	Pb	07 48 13.9	+1.7
ACDV				*e*S	Sb	07 48 42.2	-2.6
ACDV				*e*S	Sn	07 48 43.2	+3.4
ACDV				IAML		07 48 52.2	
	comp=Z,1µm,0.7s						
ACCO	Cerro Coronel	2.68	96	*e*P	Pb	07 48 13.7	+0.5
ACCO				*e*P	Pg	07 48 13.9	-2.3
ACCO				*e*S	Sg	07 48 51.5	+0.5
VA03	San Esteban	2.77	151	*e*P	Pb	07 48 12.3	-2.2
VA03				*e*S	Sn	07 48 45.1	+2.1
VA03				IAML		07 48 55.9	
	comp=N,3µm,0.6s						
VA03	San Esteban	2.77	151		Pb	07 48 12.0	-2.6
VA03	San Esteban	2.77	151	*e*P	Pb	07 48 12.4	-2.2
VA03				IAML		07 49 06.0	
	comp=Z,992nm,0.7s						
ROCH	El Roble	2.79	160	*e*P	Pb	07 48 11.9	-3.1
ROCH				*e*S	Sb	07 48 47.2	-2.1
ROCH				IAML		07 49 02.4	
	comp=E,2µm,0.5s						
ROC1	El Roble	2.79	160	*e*P	Pb	07 48 12.0	-3.0
ROC1				*e*S	Sg	07 48 52.7	-2.0
AUSP	Uspallata	3.02	129	*e*P	Pn	07 48 12.7	-0.4
AUSP				*e*P	Pb	07 48 18.0	-0.9
AUSP				*e*S	Sg	07 48 59.0	-2.9
MT02	Curacav	3.03	164	*e*P	Pn	07 48 14.7	+1.8
MT02				*e*S	Sn	07 48 51.9	+2.7
MT02				IAML		07 49 04.4	
	comp=E,571nm,0.5s						
MT02	Curacav	3.03	164		Pn	07 48 15.3	+2.4
MT02	Curacav	3.03	164	*e*P	Pn	07 48 15.0	+2.1
MT02				*e*S	Sb	07 48 52.7	-3.3
PEL	Peldehue	3.05	156	*e*P	Pb	07 48 16.1	-3.3
PEL				*e*S	Sn	07 48 50.6	+0.6
PEL	Peldehue	3.05	156		Pb	07 48 16.5	-2.9
PEL	Peldehue	3.05	156	*e*P	Pb	07 48 16.5	-2.9
PEL				*e*S	Sb	07 48 55.7	-1.1
ZON	Zonda	3.22	113		Pb	07 48 20.6	-1.6
ZON	Zonda	3.22	113	*e*P	Pb	07 48 20.9	-1.3
ZON				*e*S	Sb	07 49 00.3	-1.1
ZON				IAML		07 49 15.2	
	comp=Z,679nm,1.0s						
GO03	Copiap	3.22	32	Pn	Pb	07 48 18.8	-3.5
GO03	Copiap	3.22	32	*e*P	Pb	07 48 18.8	-3.5
GO03				*e*S	Sb	07 48 59.2	-2.4
MT05	Renca	3.26	159	*e*P	Pb	07 48 19.1	-3.9
MT05				*e*S	Sb	07 49 01.9	-0.9
MT05				IAML		07 49 15.6	
	comp=E,2µm,0.4s						
MT05	Renca	3.26	159		Pn	07 48 18.8	+2.6
MT05	Renca	3.26	159	*e*P	Pb	07 48 20.2	-2.8
MT05				*e*S	Sb	07 48 59.9	-2.9
MT05				IAML		07 49 15.1	
	comp=Z,861nm,0.8s						
VA05	Santo Domingo	3.33	172		Pn	07 48 18.9	+1.8
FCH	Farellones	3.37	152	*i* P	Pn	07 48 20.8	+2.9
FCH				*e*S	Sb	07 49 08.2	+2.2
RTCV	Cerro Valdivia	3.45	117	*e*P	Pb	07 48 24.0	-2.1
MT09	Talagante	3.56	164	*e*P	Pn	07 48 23.2	+2.9
MT09				*e*S	Sn	07 49 03.4	+0.9
MT09	Talagante	3.56	164	Pn	Pn	07 48 23.5	+3.2
MT01	Popeta	3.59	168		Pn	07 48 22.9	+2.3
MT01	Popeta	3.59	168	*e*P	Pn	07 48 22.6	+2.0
MT01				*e*S	Sb	07 49 12.7	+0.6
MT01				IAML		07 49 23.2	
	comp=Z,358nm,0.7s						
ASAL	Salagasta	3.61	129	*e*P	Pb	07 48 26.7	-2.3
ASAL				*e*S	Sb	07 49 13.7	+0.8
ARCO	CERRO ARCO	3.71	133	*e*P	Pb	07 48 30.0	-0.6
ARCO				*e*S	Sb	07 49 16.7	+1.0
ARCO				IAML		07 49 35.3	
	comp=Z,792nm,1.4s						
VCA	Vinchina	3.80	66	⇑*i*P	Pb	07 48 29.8	-2.3
VCA	Vinchina	3.80	66	*e*P	Pb	07 48 30.0	-2.2
VCA				IAML		07 49 39.0	
	comp=Z,1µm,0.6s						
AAGR	Agrelo	3.93	135	*e*P	Pb	07 48 31.0	-3.4
AAGR				*e*S	Sg	07 49 34.8	+3.6
AVFE	Valle Fertil	4.07	96	*e*P	Pn	07 48 31.0	+3.7
AVFE				*e*P	Pb	07 48 31.4	-5.3
AVFE				*e*S	Sb	07 49 26.7	+0.7
AVFE				IAML		07 49 38.0	
	comp=Z,506nm,0.6s						
BO01	Tunca	4.13	168	Pn	Pn	07 48 30.5	+2.4
BO01	Tunca	4.13	168	*e*P	Pn	07 48 30.0	+1.9
BO01				*e*P	Pn	07 48 30.2	+2.1
BO01				*e*S	Sg	07 49 35.2	-2.4
AC02	Maricunga	4.40	38	Pn	Pn	07 48 35.8	+3.5
AC02	Maricunga	4.40	38	*e*P	Pn	07 48 35.7	+3.5
AC02				*e*S	Sb	07 49 36.7	+0.8
AC02				IAML		07 49 49.8	
	comp=Z,552nm,1.3s						
BO02	Sierra Bellavi	4.58	166		Pn	07 48 38.0	+3.7
BO02	Sierra Bellavi	4.58	166	*e*P	Pn	07 48 36.9	+2.6
BO02				*e*S	Sb	07 49 42.2	+1.5
BO02				IAML		07 50 00.3	
	comp=Z,295nm,0.6s						
ACLC	CERRO LA CRUZ	4.61	80	*e*P	Pn	07 48 39.4	+4.6
ACLC				*e*S	Sb	07 49 34.7	-7.1
ACLC				IAML		07 49 55.4	
	comp=Z,473nm,0.5s						
GO05	Huala	4.65	178		Pn	07 48 36.1	+0.8
GO05	Huala	4.65	178	*e*P	Pn	07 48 36.5	+1.2
GO05				*e*S	Sb	07 49 47.7	+5.0
ACHE	Chepes	4.80	101	*e*P	Pn	07 48 42.0	+4.6
APLL	PUNTA DE LOS L	4.86	92	*e*P	Pn	07 48 42.3	+4.1
RFA	San Rafael	5.40	146	*e*P	Pn	07 48 49.9	+4.4
RFA				*e*S	Sg	07 50 12.7	-5.5
RFA				IAML		07 50 24.5	
	comp=Z,206nm,1.1s						
ML02	Panimavida	5.43	174	Pn	Pn	07 48 48.0	+2.0
CYA	Choya	5.86	73	*e*P	Pn	07 48 56.2	+4.3
CYA				*e*P	Pn	07 48 56.2	+4.3
CYA				IAML		07 50 36.6	
	comp=Z,123nm,0.8s						
PB14	IPOC Station P	5.91	16	Pn	Pn	07 48 54.0	+1.2
PB14	IPOC Station P	5.91	16	*e*S	Sn	07 50 00.5	-0.3
PB14				IAML		07 50 39.8	
	comp=Z,160nm,1.1s						
VA04	Juan Fernndez	6.55	238	Pn	Pn	07 49 03.1	+1.8
FSA	Cafayete	6.89	54	*e*P	Pn	07 49 10.5	+4.3
LVC	Limon Verde	8.24	21	Pn	Pn	07 49 25.7	+0.8
	comp=Z,0.7nm,0.3s,baz=133,slow=5.9,SNR=7.6						
LVC				Sn	Sn	07 50 57.4	-0.8
	comp=Z,2.7nm,0.3s,baz=192,slow=19,SNR=1.5						
LVC				LR	LR	07 53 08.8	
	comp=Z,48nm,20.4s,baz=210,slow=42						
LVC	Limon Verde	8.24	21	Pn	Pn	07 49 26.5	+1.6
LC01	Cunco	8.53	179	Pn	Pn	07 49 29.5	+1.0
PLCA	Paso Flores	10.44	173	Pn	Pn	07 49 56.9	+2.1
	comp=Z,0.3nm,0.3s,baz=344,slow=15,SNR=8.0						
PLCA				LR	LR	07 54 36.1	
	comp=Z,149nm,19.4s,baz=352,slow=41						
ITQB	Itaqui	13.48	91		Pn	07 50 36.1	-0.1
CPUP	Villa Florida	13.66	77	Pn	Pn	07 50 38.4	-0.3
	comp=Z,0.1nm,0.3s,baz=222,slow=15,SNR=1.6						
CPUP				LR	LR	07 56 14.1	
	comp=Z,283nm,18.4s,baz=256,slow=39						
LPAZ	La Paz	14.47	16	Pn	P	07 50 58.0	+0.7
	comp=Z,0.2nm,0.3s,baz=312,slow=5.1,SNR=8.2						
LPAZ	La Paz	14.47	16	*e*P	P	07 50 56.2	-1.1
SIV	San Ignacio	17.53	38	P	P	07 51 32.2	+1.5
	comp=Z,1.3nm,0.3s,baz=220,slow=10,SNR=21						
SIV				LR	LR	07 59 23.1	
	comp=Z,175nm,19.8s,baz=244,slow=41						
NNA	Nana	18.78	346	LR	LR	07 57 33.4	
	comp=Z,58nm,20.1s,baz=181,slow=32						
PTLB	Pontes e Lacer	19.05	42	P	Pn	07 51 49.2	+1.1
VILB	Vilhena	20.54	35	P	Pn	07 52 05.8	-0.1
VILB				IAmb	IAmb	07 52 11.3	
	comp=Z,33nm,1.2s						
BDFB	Brasilia	26.53	62	P	P	07 53 04.8	+1.7
	comp=Z,4.0nm,0.6s,baz=242,slow=9.5,SNR=5.7						
BDFB				LR	LR	08 05 41.1	
	comp=Z,43nm,21.4s,baz=98,slow=42						
BDFB	Brasilia	26.53	62	IAmb	IAmb	07 53 15.2	
	comp=Z,7.2nm,0.9s						
VNA3	Neumayer Olymp	52.78	159	P	P	07 56 42.4	+2.6
VNA1	Neumayer--Stat	53.07	158	P	P	07 56 44.9	+3.0
VNA2	Neumayer--Watz	53.42	158	P	P	07 56 47.3	+2.8
	baz=286,slow=8.6						
SNAA	Sanae	55.00	159	P	P	07 56 58.8	+2.7
SNAA	Sanae	55.00	159	P	P	07 56 58.9	+2.8
SNAA				IAmb	IAmb	07 57 11.8	
	comp=Z,3.0nm,0.7s						
TORD	Torodi Ar. Bea	83.07	70	P	P	07 59 53.7	+2.5
	comp=Z,0.8nm,0.5s,baz=220,slow=5.6,SNR=5.5						
TORD	Torodi Ar. Bea	83.07	70	P	P	07 59 53.1	+2.0
BVAR	Borovoye Array	144.60	39	PKP	PKPdf	08 07 02.0	+0.7
	comp=Z,0.9nm,0.8s,baz=259,slow=2.9,SNR=2.8						
KURBB	Kurchatov Arra	150.19	39	PKPbc	PKPab	08 07 19.4	-2.5
	comp=Z,1.9nm,0.8s,baz=300,slow=3.2,SNR=9.5						
AAK	Ala-Archa	150.71	56	PKPbc	PKPab	08 07 21.1	-3.4
	comp=Z,5.6nm,0.9s,baz=212,slow=3.2,SNR=12						
ZALV	Zalesovo Beam	151.14	29	PKPbc	PKPab	08 07 21.5	-4.1
	comp=Z,6.9nm,0.8s,baz=298,slow=3.2,SNR=21						
KSH	Kashi	152.43	62	PKPbc	PKPdf	08 07 14.1	-0.5
KSH				pPKP	sPKPbc	08 07 25.0	+0.5
KSH				sPKP		08 07 28.1	

*TUL **19** 07:56:18.5±0.7, 36°.66N±0°.01×98°.47W±0°.03, h8^{km}±1^{km}, ML2.6, ML2.4/33(NEIC), Error ellipse: s-maj=3.5km s-min=1.8km az=79.0*

NEIC 19 07:56:18.9±0.6**, 36°.65N**±0°.01×**98°.48W**±0°.02**, h5**^{km}±1^{km}**, Error ellipse: s-maj=3.1km s-min=2.5km az=317.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK032	Salt Plains WL	0.26	55		Pg	07 56 23.8	-0.2
OK032				Sg	Sg	07 56 27.6	+0.2
OK032				IAML		07 56 28.5	
	734nm,0.2s						
CROK	Carrier	0.42	110		Pg	07 56 26.8	-0.3
CROK				Sg	Sg	07 56 32.6	0.0
CROK				IAML		07 56 37.7	
	comp=E,391nm,0.2s						
U32A	Winter Ranch,	0.50	237	Pg	Pg	07 56 28.4	-0.2
KAN14	Manchester OK	0.51	54		Pg	07 56 28.3	-0.5
KAN14				IAML		07 56 35.7	
	comp=E,331nm,0.2s						
GC02	Grant County #	0.53	68		Pg	07 56 28.7	-0.5
KAN10	Anthony SW Sta	0.56	33	Pg	Pg	07 56 28.8	-0.9
KAN10				Sg	Sg	07 56 37.0	0.0
KAN16	Harper SW Stat	0.66	30	Pg	Pg	07 56 31.5	-0.1
KAN05	Bluff City Nor	0.66	47	Pg	Pg	07 56 31.2	-0.4
KAN05				IAML		07 56 40.7	
	comp=E,229nm,0.2s						
KAN05				IAML		07 56 41.1	
	comp=N,189nm,0.2s						
KAN12	Harper NE Stat	0.75	31	Pg	Pg	07 56 33.0	-0.2
KAN12				IAML		07 56 45.7	
	comp=N,218nm,0.4s						
KAN12				IAML		07 56 47.4	
	comp=E,240nm,0.3s						
KAN01	Argonia South	0.76	49	Pg	Pg	07 56 33.0	-0.6
KAN01				Sg	Sg	07 56 42.9	-0.5
KAN01				IAML		07 56 43.3	
	comp=N,170nm,0.3s						
KAN01				IAML		07 56 43.7	
	comp=E,109nm,0.2s						
KAN06	Argonia West S	0.77	40	Pg	Pg	07 56 33.2	-0.5
KAN06				IAML		07 56 43.6	
	comp=E,144nm,0.2s						
KAN06				IAML		07 56 44.7	
	comp=N,201nm,0.1s						
KAN09	Caldwell North	0.84	55	Pg	Pg	07 56 34.2	-0.9
KAN13	South Haven SW	0.88	66	Pg	Pg	07 56 34.9	-0.8
KAN13				IAML		07 56 54.7	
	comp=N,169nm,0.6s						
KAN13				IAML		07 56 55.3	
	comp=E,185nm,0.3s						
BLOK	Blackwell	1.02	84	Pg	Pg	07 56 37.2	-1.2
BLOK				Sg	Sg	07 56 51.3	-0.4
OK029	Liberty Lake	1.19	136	Pg	Pg	07 56 40.3	-1.4
OK029				Sg	Sg	07 56 56.5	-0.7
OK029				IAML		07 56 59.2	
	comp=E,97nm,0.4s						
BCOK	Bluff Creek, N	1.22	145	Pg	Pg	07 56 40.9	-1.3
BCOK				IAML		07 56 59.1	
	comp=E,80nm,0.3s						
OKCFA	Oklahoma City	1.49	146	Pg	Pn	07 56 45.3	-1.1
QUOK	Quay	1.51	108		Pn	07 56 46.1	-0.5
T35A	Sooner Cattle	1.60	80	Pn	Pn	07 56 47.5	-0.4
FNO	Franklin	1.65	148	Pn	Pn	07 56 48.0	-0.5
R32A	Long Quarter,	1.77	354	Pn	Pn	07 56 50.1	-0.1
X34A	Smith Ranch, M	2.12	165	Pn	Pn	07 56 55.9	+1.0
S39A	Bolivar	4.25	74	Pn	Pn	07 57 23.5	-0.7

SOME 19 07:59:30.0, 42°.10N×81°.13E, h0^{km}, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SATY	Saty	2.23	296	*e*P	Pg	08 00 12.6	-0.1
	1.0nm,0.2s						
SATY				*e*S	Sg	08 00 43.6	+1.9
	1.6nm,0.1s						
KPKS	Kokpek	2.26	308	*e*P	Pg	08 00 13.1	-0.3
	0.4nm,0.1s						
KPKS				*e*S	Sg	08 00 44.0	+1.3
	3.5nm,0.2s						

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*NEIC **19** 08:02:30±0.9, 46°.25N±0°.02×122°.47W±0°.03, h20^{km}±2^{km}, Error ellipse: s-maj=3.6km s-min=3.2km az=165.0*

*PGC **19** 08:02:30.6, 46°.25N×122°.45W, h19^{km}, ML2.7, ML2.1/6, 150km south of Seattle, Wa Washington*

*ANF **19** 08:02:30.3±0.4, 46°.25N×122°.46W, h18^{km}, ML2.9/10, Error ellipse: s-maj=4.9km s-min=2.8km az=84.0*

*SEA **19** 08:02:30.6±1.3, 46°.25N±0°.02×122°.45W±0°.03, h19^{km}±3^{km}, ML2.7/108, ML2.6/14(NEIC), Error ellipse: s-maj=3.4km s-min=2.6km az=138.0*

*PNSN **19** 08:02:30.6, 46°.25N×122°.45W, h17^{km}, MD2.7, Fault plane solution: NP1:ϕ_s80.00000°, δ50.00000°, λ30.00000°.*

ISC 19 08:02:30.0±0.8**, 46°.26N**±0°.01×**122°.46W**±0°.02**, h18**^{km}±3^{km}**, n120, σ0^{s}91**/147**, Washington**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERK	Elk Rock	0.10	60		Pg	08 02 34.1	+0.3
FL2	Flat Top 2	0.10	129		Pg	08 02 34.2	+0.4
B203	Quarry, Mount	0.12	135		Pg	08 02 34.2	+0.3
B203					Sg	08 02 37.1	+0.4
B201	Coldwater, Mou	0.14	71		Pg	08 02 34.4	+0.2
B201					Sg	08 02 37.3	+0.3
STD	Studebaker Rid	0.17	97		Pg	08 02 34.7	+0.2
STD					Sg	08 02 38.0	+0.3
SHW	Mount Saint He	0.17	113		Pg	08 02 35.0	+0.4
SWF2	Southwest Flan	0.19	115		Pg	08 02 35.2	+0.3
LVP	Lakeview Peak	0.19	169		Pg	08 02 35.2	+0.3
VALT	Mount Saint He	0.19	103		Pg	08 02 35.2	+0.3
SEPW	September Lobe	0.20	107		Pg	08 02 35.4	+0.3
BOLM	Sugar Bowl	0.20	102		Pg	08 02 35.5	+0.3
SOSW	Source of Smit	0.22	93		Pg	08 02 35.5	+0.1
B202	Windy Ridge, M	0.23	93		Pb	08 02 35.4	0.0
B202					Sb	08 02 39.2	+0.1
RVW	Rose Valley	0.23	241		Pg	08 02 35.6	+0.3
JLK	June Lake	0.24	117		Pg	08 02 35.8	+0.2
E04D	Cinebar	0.31	346	P	Pb	08 02 37.1	+0.1
	baz=164,SNR=534						
E04D				S	Sb	08 02 42.1	+0.4
	baz=164						
E04D	Cinebar	0.31	346		Pb	08 02 37.1	+0.1
F04A	Amboy	0.33	175		Pg	08 02 37.0	0.0
F04A	Amboy	0.33	175		Sb	08 02 42.2	0.0
F04A	Amboy	0.33	175	IAML		08 02 42.1	
	comp=N,2µm,0.3s						
F04D	Rainier, OR	0.42	246	P	Pb	08 02 38.9	0.0
	baz=67,SNR=17						
F04D				S	Sb	08 02 45.5	+0.5
	baz=67						
F04D	Rainier, OR	0.42	246		Pb	08 02 38.9	0.0
B023	Clatskanie	0.45	251		Pb	08 02 39.3	-0.2
GLK	Glacier Lake	0.66	62		Pb	08 02 42.8	-0.3
LON	Longmire	0.67	42		Pb	08 02 42.8	-0.3
LON	Longmire	0.67	42		Pb	08 02 42.6	-0.6
LON	Longmire	0.67	42		Sb	08 02 51.9	-0.2
LON	Longmire	0.67	42	P	Pb	08 02 42.5	-0.6
LON				S	Sb	08 02 51.8	-0.2
WPO	West Portland	0.72	199		Pb	08 02 43.7	-0.3
PCFR	Pierce County	0.73	1		Pb	08 02 43.7	-0.4
B941	Kapowsin	0.75	13		Pb	08 02 43.7	-0.8
OBSR	Observation Ro	0.78	34		Pb	08 02 44.8	-0.4
F05D	White Salmon	0.79	118	P	Pb	08 02 44.6	-0.6
	baz=298,SNR=18						
F05D				S	Sb	08 02 55.3	-0.3
	baz=298						
F05D	White Salmon	0.79	118		Pb	08 02 44.8	-0.4
RCS	Mount Rainier-	0.79	39		Pb	08 02 44.8	-0.7
GHW	Garrison Hill	0.80	9		Pb	08 02 44.7	-0.6
E03A	Lebam	0.82	291		Pb	08 02 45.5	-0.1
E03A				IAML		08 03 02.8	
	comp=E,212nm,0.4s						
E03A				IAML		08 03 04.0	
	comp=N,289nm,0.4s						
E03A	Lebam	0.82	291	P	Pb	08 02 45.2	-0.4
E03A				S	Sb	08 02 56.1	-0.2
PANH	Panhandle Gap,	0.82	43		Pb	08 02 45.1	-0.8
CPW	Capitol Peak	0.85	327	S	Sg	08 02 57.9	-0.1
FMW	Mount Fremont	0.87	39	P	Pb	08 02 46.1	-0.5
SR41	SR410 Landslid	0.90	45		Pb	08 02 46.2	-0.8
B019	Raymond	0.91	296		Pb	08 02 47.4	+0.1
HIYU	Hiyu Mountain	0.94	151		Pb	08 02 47.3	-0.6
RADR	Rader Ridge	0.94	281		Pb	08 02 47.5	-0.3
RADR	Rader Ridge	0.94	281	IAML		08 03 08.6	
	comp=E,141nm,2.1s						
D04E	Lakebay	0.95	347	P	Pb	08 02 47.9	0.0
	baz=166,SNR=32						
D04E				S	Sn	08 03 02.5	+1.1
	baz=166						
D04E	Lakebay	0.95	347		Pn	08 02 48.1	-0.2
D05A	Enumclaw	0.98	19		Pb	08 02 48.5	-0.1
D05A	Enumclaw	0.98	19	P	Pb	08 02 48.2	-0.3
D05A				S	Sb	08 03 01.4	+0.2
SHRK	Shell Rock	1.03	140		Pb	08 02 49.2	-0.1
GSM	Grass Mountain	1.05	26		Pb	08 02 49.5	-0.2
G04A	Mulino	1.05	181		Pb	08 02 48.7	-1.0
B017	Montesano	1.06	315		Pn	08 02 49.7	-0.1
TDH	Tom, Dick, Har	1.08	154		Pb	08 02 49.2	-1.0
HOOD	Mount Hood Mea	1.09	149		Pb	08 02 49.9	-0.5
HOOD				IAML		08 03 10.0	
	comp=E,100nm,0.9s						
G03D	McMinnville, O	1.19	209	P	Pn	08 02 50.9	-0.8
	baz=29,SNR=58						
G03D				S	Sn	08 03 07.6	+0.2
	baz=29						
G03D	McMinnville, O	1.19	209		Pn	08 02 51.1	-0.5
SMW	South Mountain	1.22	331	P	Pn	08 02 52.3	+0.1
NAC	Naches	1.23	67		Pb	08 02 53.2	+0.6
WISH	Wishkah	1.25	314	P	Pb	08 02 53.0	+0.1
RATT	Rattlesnake La	1.25	21		Pn	08 02 52.4	-0.2
G05D	Wamic, OR	1.29	141	P	Pb	08 02 53.6	-0.1
	baz=322,SNR=27						
G05D				S	Sg	08 03 11.9	0.0
	baz=322						
SP2	Seward Park 2	1.31	6		Pb	08 02 53.8	-0.2
GMW	Gold Mountain	1.31	350		Pn	08 02 53.1	-0.3
TRW	Toppenish Ridg	1.33	88		Pg	08 02 55.1	-0.5
GNW	Green Mountain	1.33	349		Pn	08 02 53.5	-0.2
GNW	Green Mountain	1.33	349	P	Pn	08 02 53.3	-0.4
GNW				S	Sn	08 03 10.6	-0.4
VBEM	Beaver Butte	1.34	153		Pb	08 02 54.4	-0.4
D03D	Eldon	1.35	342	P	Pn	08 02 53.8	-0.1
	baz=161,SNR=28						
D03D				S	Sb	08 03 12.1	+0.5
	baz=161						
D03D	Eldon	1.35	342		Pn	08 02 53.9	0.0
HDW	Hoodsport	1.45	344		Pn	08 02 55.4	0.0
HDW	Hoodsport	1.45	344	P	Pn	08 02 55.4	0.0
HDW				S	Sb	08 03 14.3	-0.4
EBG	Ellensburg	1.46	63		Pb	08 02 56.7	+0.1
NLWA	Neilton Lookou	1.49	320		Pb	08 02 56.7	-0.5
NLWA				IAML		08 03 20.9	
	comp=E,74nm,0.7s						
NLWA				IAML		08 03 29.4	
	comp=E,60nm,2.0s						
C05A	Tolt Reservoir	1.53	20		Pn	08 02 57.0	+0.5
C05A	Tolt Reservoir	1.53	20	P	Pn	08 02 56.9	+0.4
C05A				S	Sn	08 03 16.1	+0.2
TBM	Table Mountain	1.57	54		Pb	08 02 58.9	+0.3
B013	Quilcene	1.59	349		Pn	08 02 57.4	+0.3
B013	Quilcene	1.59	349		Pn	08 02 57.4	+0.3
LTY	Liberty	1.59	50		Pb	08 02 58.1	-0.7
LTY				IAML		08 03 19.8	
	comp=N,99nm,0.6s						
LTY				IAML		08 03 20.0	
	comp=E,52nm,0.3s						
LTY	Liberty	1.59	50	P	Pb	08 02 58.2	-0.5
LTY				S	Sb	08 03 18.6	+0.1
HTW	Haystack Looko	1.62	17		Pn	08 02 58.2	+0.6
H04D	Lebanon	1.75	187	P	Pn	08 02 59.9	+0.6
	baz=6.7,SNR=9.1						
H04D				S	Sb	08 03 22.4	-0.6
	baz=6.7						
H04D	Lebanon	1.75	187		Pb	08 03 00.3	-1.2
OSD	Olympics--Snow	1.78	332	P	Pb	08 03 01.4	-0.8
F07A	Phinny Hill Vi	1.80	101		Pn	08 03 00.2	+0.1
BVW	Beverly	1.86	72		Pb	08 03 03.9	+0.4
BENWA	Benson Ranch	1.92	81		Pb	08 03 04.2	-0.2
WRW	Wenatchee Ridg	1.93	33		Pb	08 03 04.3	-0.4
JCW	Jim Creek	1.97	10	S	Sb	08 03 29.4	-0.2
ETW	Entiat	1.99	47		Pb	08 03 05.1	-0.6
BROR	Big Rock Looko	1.99	180		Pb	08 03 04.0	-1.6
B05A	Bryant	2.02	7	P	Pb	08 03 04.7	-1.5
	baz=187,SNR=9.2						
B05A				S	Sb	08 03 30.7	-0.3
	baz=187						
B05A	Bryant	2.02	7		Pb	08 03 04.8	-1.4
GPW	Glacier Peak	2.07	25		Pb	08 03 06.4	-0.7
GPW	Glacier Peak	2.07	25	P	Pb	08 03 06.4	-0.7
I05D	Terrebonne, OR	2.08	157	Pb	Pb	08 03 06.3	-0.8
	baz=338,SNR=9.0						
I05D				Sb	Sg	08 03 35.0	-1.8
	baz=338						
CMW	Cultus Mountai	2.18	6	P	Pb	08 03 07.5	-1.5
CMW				S	Sb	08 03 34.6	-1.1
VGZ	Gonzales	2.24	345	P	Pb	08 03 08.4	-1.4
VGZ				S	Sb	08 03 35.5	-1.6
RPW	Rockport	2.28	16		Pb	08 03 09.2	-1.6
RPW	Rockport	2.28	16	P	Pb	08 03 09.1	-1.6
RPW				S	Sb	08 03 38.0	-0.6
NLW	Nelson Butte	2.33	38		Pb	08 03 11.4	0.0
I02E	Swisshome, OR	2.36	205	Pb	Pb	08 03 10.4	-1.6
	baz=24,SNR=29						
MCW	Mount Constitu	2.44	354		Pb	08 03 11.7	-1.6
MCW	Mount Constitu	2.44	354	P	Pb	08 03 11.2	-2.0
MCW				S	Sb	08 03 41.5	-1.5
I04A	Tendick Farm,	2.46	179	P	Pn	08 03 11.2	+1.9
	baz=360,SNR=15						
I04A				S	Sb	08 03 42.8	-1.0
	baz=360						
PA12	PA12 Sannich	2.48	345	P	Pn	08 03 11.2	+1.7
B009	North Saanich	2.48	345	P	Pn	08 03 11.3	+1.8
B011	North Saanich	2.48	345	P	Pn	08 03 11.5	+2.0
B010	North Saanich	2.49	345	P	Pn	08 03 11.4	+1.9
PGC	Sidney	2.49	345	P	Pn	08 03 11.2	+1.7
PGC				S	Sn	08 03 41.1	+1.7
MBW	Mount Baker	2.56	8		Pb	08 03 13.9	-1.5
MBW	Mount Baker	2.56	8	P	Pb	08 03 13.6	-1.8
MBW				S	Sb	08 03 45.1	-1.5
SNB	Saturna Island	2.56	349	P	Pb	08 03 14.0	-1.5
I03D	Drain, OR	2.64	194	P	Pn	08 03 13.6	+2.0
	baz=14,SNR=18						
I03D				Sb	Sb	08 03 48.4	-0.2
	baz=14						
A05A	Maple Falls	2.75	5	P	Pb	08 03 16.8	-1.9
GOBB	Galiano Island	2.79	346	P	Pb	08 03 16.6	-2.6
B08A	Colville Reser	2.99	44	P	Pb	08 03 19.7	-3.0
HNBB	Haney	3.03	359	S	Sn	08 03 55.5	+2.6

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*NEIC **19** 08:04:19.9±1.4, 6°.50N±0°.09×123°.9E±0°.1, h569^{km}±3^{km}, mb4.4/29, Error ellipse: s-maj=17.5km s-min=13.3km az=81.0*

*IDC **19** 08:04:20.4±0.6, 6°.46N×123°.97E, h589^{km}±7^{km}, mb3.5/29, mb1 3.6/31, mb1mx3.4/51, mbtmp4.5/31, Error ellipse: s-maj=13.8km s-min=7.3km az=73.0*

*DJA **19** 08:04:20.0±0.9, 7°N±10°×12°4E±°, h526^{km}±9^{km}, M4.4/13, mB4.8/13, mb4.6/12, MLv5.1/10, Mw(mB)4.0/13*

*KLM **19** 08:04:21, 6°.55N×123°.94E, h563^{km}, mb5.0*

*MAN **19** 08:04:23.7, 6°.12N×123°.41E, h501^{km}, mb4.9, ML3.9, MS3.9*

ISC 19 08:04:18.1±0.4**, 6°.51N**±0°.05×**123°.86E**±0°.07**, h550**^{km}**, n128, σ2^{s}04**/134**, mb4.3**/59**, 2C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	General Santos	1.17	111	⇑*i*P	P	08 05 28.8	+3.8
KCP	Kidapawan	1.32	68	⇓*i*P	P	08 05 29.1	+3.7
DMPH	Davao City--Mi	1.74	71	⇑*e*P	P	08 05 30.8	+4.0
DAV	Davao City (W)	1.80	72	P	P	08 05 32.6	+5.6
	58nm,0.3s,baz=270,slow=20,SNR=1.9						
DAV				S	S	08 06 31.6	+8.6
	63nm,0.3s,baz=112,slow=11,SNR=1.9						
DAV	Davao City (W)	1.80	72	P	P	08 05 29.9	+2.9
BUKP	Musuan	1.81	41	⇓*i*P	P	08 05 31.2	+4.2
MSLP	Maasin	3.73	15	⇓*e*P	P	08 05 45.0	+7.0
LLP	Lapu-Lapu	3.78	2	*e*P	P	08 05 40.1	+1.7
LLP				*e*S	S	08 06 43.1	-0.8
GTOI	Gorontalo	5.90	188	P	P	08 05 57.5	+1.6
	0.1nm222nm15nm,0.5s						
TOLI2	Tolitoli	6.18	210	P	P	08 06 00.9	+2.5
TOLI2					S	08 07 23.4	+3.0
TOLI2	Tolitoli	6.18	210	P	P	08 06 01.3	+2.9
MRSI	Marisa	6.29	198	P	P	08 06 02.8	+3.3
TNTI	Ternate	6.69	148	P	P	08 06 07.6	+4.4
TNTI	Ternate	6.69	148	P	P	08 06 04.4	+1.1
MPSI	Mapaga	7.29	213	P	P	08 06 11.8	+2.8
	0.4nm4µm64nm,0.6s						
SPMM	Sapulut	7.57	257	P	P	08 06 15.0	+3.3
LUWI	Luwuk	7.58	188	P	P	08 06 12.6	+0.8
	0.7nm5µm87nm,0.9s						
LUWI	Luwuk	7.58	188	P	P	08 06 12.4	+0.7
LUWI					S	08 07 45.7	+0.8
KKM	Kota Kinabalu	7.61	267	P	P	08 06 13.5	+1.3
APSI	Ampana	7.69	197	P	P	08 06 14.6	+1.7
	0.2nm925nm68nm,1.2s						
SANI	Sanana	8.77	166	P	P	08 06 23.2	-0.4
SPSI	Sidrap Palu	11.18	202	P	P	08 06 51.0	+2.8
	846nm115nm,0.7s						
BNSI	Bone	11.47	199	P	P	08 06 56.8	+5.6
	68nm,1.0s						
KAPI	Kappang	12.16	200	P	P	08 07 01.1	+2.7
	0.9nm,0.3s,baz=61,slow=4.4,SNR=3.6						
SBUM	Sibu	12.28	251	P	P	08 07 03.0	+3.4
SBUM	Sibu	12.28	251	P	P	08 07 01.9	+2.2
FAKI	Fak Fak	12.57	138	P	P	08 07 04.3	+1.6
KSM	Kuching	14.41	250	P	P	08 07 22.9	+1.2
KSM	Kuching	14.41	250	P	P	08 07 23.9	+2.3
BAKI	Biak	14.43	122	P	P	08 07 25.6	+3.8
EDFI	Ende, Flores	15.31	188	P	P	08 07 34.3	+3.3
SAUI	Saumlaki	16.20	153	P	P	08 07 43.7	+4.0
SAUI	Saumlaki	16.20	153	P	P	08 07 42.7	+3.0
BATI	Baumata	16.61	181	P	P	08 07 43.0	-0.4
	3.9nm,0.3s,baz=63,slow=2.3,SNR=2.7						
SLVN	Son La	24.28	309	P	P	08 08 53.8	+1.0
FITZ	Fitzroy Crossi	24.52	176	P	P	08 08 54.6	0.0
	0.9nm,0.4s,baz=357,slow=6.1,SNR=18						
PSI	Prapat	25.12	263	P	P	08 09 00.5	+0.2
	4.2nm,0.7s,baz=224,slow=0.7,SNR=4.7						
RPSI	Rantau Prapat	25.13	262	P	P	08 09 00.5	+0.2
GSI	Gunungsitoli	26.71	260	P	P	08 09 13.4	-0.8
JCJ	Chichijima	26.89	38	P	P	08 09 14.8	-0.8
	72nm,1.0s,baz=300,slow=20,SNR=1.7						
CM31	Chiang Mai Arr	27.02	298	P	P	08 09 18.6	+1.7
CM31				IAmb	IAmb	08 09 20.0	
	comp=Z,8.8nm,0.7s						
CMAR	Chiang Mai Arr	27.02	298	P	P	08 09 19.2	+2.4
	comp=Z,6.3nm,0.7s,baz=113,slow=7.0,SNR=25						
CMAR				ScP	ScP	08 15 05.4	-3.2
	comp=Z,0.9nm,0.3s,baz=96,slow=2.0,SNR=7.4						
CMAR	Chiang Mai Arr	27.02	298	P	P	08 09 17.6	+0.8
CHTO	Chiang Mai	27.16	299	P	P	08 09 19.1	+1.1
WB0	Warramunga Arr	28.10	159	P	P	08 09 25.7	-0.5
WB0				IAmb	IAmb	08 10 08.5	
	comp=Z,11nm,1.4s						
WRAB	Tennant Creek	28.23	159	P	P	08 09 27.1	-0.3
WRA	Warramunga Arr	28.24	159	P	P	08 09 27.0	-0.5
	comp=Z,0.6nm,0.3s,baz=339,slow=10.0,SNR=38						
WRA				PcP	PcP	08 12 21.9	-1.1
	comp=Z,1.4nm,0.5s,baz=329,slow=2.8,SNR=6.9						
WRA				S	S	08 13 30.2	-5.0
	comp=Z,0.9nm,0.6s,baz=340,slow=16,SNR=7.6						
WRA				ScP	ScP	08 15 08.0	-4.4
	comp=Z,1.8nm,0.6s,baz=342,slow=3.2,SNR=14						
WRA	Warramunga Arr	28.24	159	IAmb	IAmb	08 09 27.7	
	comp=Z,0.7nm,1.8s						
WB2	Warramunga Arr	28.24	159	P	P	08 09 26.5	-0.9
WB2				IAmb	IAmb	08 09 35.7	
	comp=Z,12nm,1.6s						
JMN	Monobe	28.63	18	P	P	08 09 31.5	+0.7
XAN	Xi'an	30.68	335	P	P	08 09 49.3	+0.8
XAN				pmax	pmax		
	comp=Z,18nm,0.6s						
XAN				pmax	pmax		
	comp=Z,76nm,4.3s						
KSRS	Korea Array	31.02	6	P	P	08 09 51.4	+0.1
	comp=Z,1.6nm,0.9s,baz=186,slow=7.3,SNR=3.1						
QIS	Mount Isa	31.04	150	P	P	08 09 51.4	-0.2
	comp=Z,4.1nm,1.1s						
AS31	Alice Springs	31.56	162	P	P	08 09 56.6	+0.6
ASAR	Alice Springs	31.56	162	P	P	08 09 56.0	-0.1
	comp=Z,1.2nm,0.6s,baz=338,slow=6.8,SNR=31						
ASAR				PcP	sP	08 12 30.5	0.0
	comp=Z,1.4nm,0.5s,baz=349,slow=2.7,SNR=13						
ASAR				S	S	08 14 22.6	-3.7
	comp=Z,2.9nm,0.9s,baz=339,slow=13,SNR=22						
ASAR				ScP	ScP	08 15 18.8	-4.4
	comp=Z,1.5nm,0.5s,baz=342,slow=3.4,SNR=13						
ASAR	Alice Springs	31.56	162	P	P	08 09 56.8	+0.8
WRKA	Warakurna	31.65	172	P	P	08 09 56.8	-0.1
	comp=Z,9.9nm,1.6s						
MAT	Matsushiro	32.65	22	P	P	08 10 04.5	-0.6
MJAR	Matsushiro Arr	32.65	22	P	P	08 10 04.5	-0.6
	comp=Z,5.1nm,0.6s,baz=190,slow=9.7,SNR=9.9						
MJAR	Matsushiro Arr	32.65	22	IAmb	IAmb	08 10 43.4	
	comp=Z,21nm,1.9s						
LZH	Lanzhou	34.68	331	*e*P	P	08 10 24.9	+2.5
LZH				pmax	pmax		
	comp=Z,32nm,1.5s						
OOD	Oodnadatta	35.97	162	P	P	08 10 33.8	+0.8
	comp=Z,6.8nm,2.2s						
MORW	Morawa	36.16	192	P	P	08 10 34.2	-0.4
FORT	Forrest	37.30	174	P	P	08 10 44.2	+0.4
FORT	Forrest	37.30	174	P	P	08 10 43.5	-0.3
	comp=Z,26nm,0.9s						
KLBR	Kellerberrin	38.33	188	P	P	08 10 51.7	-0.6
	comp=Z,30nm,0.6s						
GTA	Gaotai	39.27	330	*e*P	P	08 11 01.3	+1.4
GTA				pmax	pmax		
	comp=Z,12nm,0.8s						
TAPN	Taplejung	40.08	305	*e*P	P	08 11 08.3	+1.5
	comp=Z,19nm,0.4s						
ODAN	Odare	40.14	305	*e*P	P	08 11 08.4	+1.1
	comp=Z,28nm,0.6s						
BBOO	Buckleboo	40.79	164	P	P	08 11 11.8	-0.2
BBOO				IAmb	IAmb	08 11 47.4	
	comp=Z,34nm,1.7s						
RAMN	Ramite	40.82	304	*e*P	P	08 11 14.4	+1.7
	comp=Z,18nm,0.5s						
ASAJ	Asahikawa	40.90	21	P	P	08 11 13.0	+0.3
	comp=Z,5.6nm,0.6s,baz=230,slow=12,SNR=6.6						
JKA	Kamikawa-asahi	40.90	21	P	P	08 11 13.0	+0.3
JIRN	Jiri	41.44	305	*e*P	P	08 11 18.9	+1.2
	comp=Z,17nm,0.6s						
GUN	Gumba	41.79	305	*e*P	P	08 11 21.7	+1.2
	comp=Z,28nm,0.4s						
PKI	Pulchoki	42.04	304	*e*P	P	08 11 23.1	+0.7
PKIN	Phulchoki	42.05	304	*e*P	P	08 11 23.1	+0.6
	comp=Z,8.3nm,0.3s						
KKN	Kakani	42.23	305	*e*P	P	08 11 24.4	+0.6
	comp=Z,14nm,0.4s						
DMN	Daman	42.30	304	*e*P	P	08 11 25.2	+0.8
KOLN	Koldanda	43.60	304	*e*P	P	08 11 35.9	+1.4
	comp=Z,49nm,0.4s						
DANN	Dangsing	43.68	305	*e*P	P	08 11 36.2	+1.0
SONM	Songino Array	43.79	343	P	P	08 11 36.4	+0.9
	comp=Z,2.4nm,0.8s,baz=168,slow=8.9,SNR=9.0						
SONM	Songino Array	43.79	343	IAmb	IAmb	08 13 12.0	
	comp=Z,7.3nm,0.5s						
PYUN	Piuthan	44.22	304	*e*P	P	08 11 40.6	+1.3
	comp=Z,58nm,0.7s						
WMQ	Urumqi	48.82	325	*e*P	P	08 12 16.4	+2.8
MK31	Makanchi Array	53.66	326	P	P	08 12 49.6	+1.1
MKAR	Makanchi Array	53.66	326	P	P	08 12 49.4	+0.9
	comp=Z,14nm,0.5s,baz=121,slow=7.9,SNR=242						
MKAR				PcP	PcP	08 13 45.1	-0.9
	comp=Z,2.2nm,0.5s,baz=120,slow=3.7,SNR=6.1						
MKAR				ScP	ScP	08 16 47.2	-4.2
	comp=Z,1.6nm,0.8s,baz=105,slow=6.0,SNR=2.1						
MKAR	Makanchi Array	53.66	326	P	P	08 12 49.7	+1.2
TARG	Taragay, Kyrgy	53.78	318	P	P	08 12 52.2	+2.3
MAKZ	Makanchi	53.84	325	P	P	08 12 50.8	+1.0
MAKZ				IAmb	IAmb	08 12 51.1	
	comp=Z,13nm,0.5s						
PETK	Petropavlovsk-	54.03	25	P	P	08 12 50.9	0.0
	comp=Z,3.6nm,0.8s,baz=188,slow=4.9,SNR=6.1						
KSH	Kashi	54.07	315	P	P	08 12 53.8	+2.1
KSH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KDJ	Kajisay	54.38	318	P	P	08 12 55.5	+1.6
KDJ				IAmb	IAmb	08 12 56.0	
	comp=Z,14nm,0.7s						
BOOM	Boomskoye usch	55.36	318	P	P	08 13 01.3	+0.6
TKM2	Tokmak 2	55.78	318	P	P	08 13 04.8	+1.1
	SNR=11						
UCH	Uchtor	56.20	317	P	P	08 13 08.4	+1.5
	SNR=14						

AAK	Ala-Archa	56.39	318	P	P	08 13 08.2	+0.4
	comp=Z,1.9nm,0.5s,baz=124,slow=8.3,SNR=5.8						
USP	Ospenovka	56.65	318	P	P	08 13 10.4	+1.0
	SNR=9.1						
AML	Almayashu	56.72	317	P	P	08 13 11.8	+1.5
	SNR=11						
ZALV	Zalesovo Beam	56.83	334	P	P	08 13 09.6	-0.8
	comp=Z,5.3nm,0.5s,baz=140,slow=7.2,SNR=1.2						
EKS2	Erkin-Say	56.88	318	P	P	08 13 12.4	+1.3
	SNR=7.6						
DRK	Karamyk	57.03	313	P	P	08 13 12.9	+0.5
DRK				IAmb	IAmb	08 13 14.5	
	comp=Z,13nm,0.8s						
KURBB	Kurchatov Arra	57.87	328	P	P	08 13 17.8	+0.3
	comp=Z,14nm,0.6s,baz=130,slow=6.4,SNR=65						
KURK	Kurchatov	57.88	328	P	P	08 13 17.8	+0.2
KURK				IAmb	IAmb	08 15 02.6	
	comp=Z,32nm,1.0s						
BTK	Batken	57.94	314	P	P	08 13 18.7	+0.3
GAR	Garm	57.95	312	P	P	08 13 18.2	-0.2
GAR				IAmb	IAmb	08 13 19.9	
	comp=Z,30nm,0.9s						
KKAR	Karatay Array	59.26	317	P	P	08 13 27.3	+0.3
BVAR	Borovoye Array	63.45	327	P	P	08 13 54.1	-0.1
	comp=Z,2.5nm,0.4s,baz=185,slow=15,SNR=18						
TIXI	Tiksi	65.14	2	P	P	08 14 03.3	-1.3
	comp=Z,2.8nm,0.3s,baz=155,slow=3.2,SNR=2.8						
GEYT	Alibeck	66.93	308	P	P	08 14 15.9	-0.6
	comp=Z,1.6nm,0.4s,baz=98,slow=10,SNR=2.6						
NRIK	Noril'sk	67.08	347	P	P	08 14 16.2	-0.4
	comp=Z,5.1nm,0.6s,baz=126,slow=6.9,SNR=12						
ABKAR	Akbulak array	68.20	321	P	P	08 14 24.0	+0.1
ABKAR				IAmb	IAmb	08 14 24.6	
	comp=Z,6.5nm,0.6s						
ABKAR	Akbulak array	68.20	321	P	P	08 14 23.9	0.0
AKTO	Aktyubinsk	69.72	322	P	P	08 14 32.7	-0.3
	comp=Z,8.8nm,0.7s,baz=103,slow=8.8,SNR=21						
ARU	Arti	71.07	328	P	P	08 14 40.0	-0.9
	comp=Z,2.9nm,0.3s,baz=77,slow=3.6,SNR=12						
KIRV	Kirov	76.38	329	P	P	08 15 09.8	-1.1
	comp=Z,14nm,0.7s,baz=108,slow=3.1,SNR=4.5						
BELG	Belogornoye	76.47	322	P	P	08 15 10.6	-1.0
	comp=Z,15nm,0.9s,baz=36,slow=4.1,SNR=8.0						
RAYN	Ar Rayn	76.77	293	P	P	08 15 12.7	-1.2
RAYN				IAmb	IAmb	08 15 14.3	
	comp=Z,12nm,0.7s						
GURO	Guroymak-BITLI	79.59	308	P	P	08 15 29.2	+0.4
GURO				IAmb	IAmb	08 15 30.5	
	comp=Z,8.5nm,0.8s						
KLMR	Klimovskoe	81.59	330	eP	P	08 15 37.2	-1.3
KLMR				AMP		08 15 38.4	
	comp=Z,12nm,0.7s						
ILAR	Eielson Array	83.84	26	P	P	08 15 48.8	-1.0
	comp=Z,0.3nm,0.6s,baz=245,slow=5.4,SNR=5.8						
BRTR	Keskin Array B	86.05	309	P	P	08 15 59.4	-1.9
	comp=Z,2.3nm,0.8s,baz=95,slow=6.2,SNR=6.9						
ARCES	ARCESS Array B	86.86	340	P	P	08 16 02.2	-2.1
	comp=Z,3.9nm,1.0s,baz=65,slow=6.4,SNR=6.0						
AKASG	Malin Array Be	87.94	321	P	P	08 16 07.7	-2.0
	comp=Z,0.2nm,0.3s,baz=67,slow=4.1,SNR=4.5						
FINES	FINESS Array B	88.04	332	P	P	08 16 08.0	-1.9
	comp=Z,2.7nm,0.6s,baz=78,slow=4.6,SNR=17						
NOA	NORSAR Array B	95.03	333	P	P	08 16 39.3	-2.8
	comp=Z,0.9nm,0.8s,baz=91,slow=4.4,SNR=2.3						
TORD	Torodi Ar. Bea	119.33	289	PKP	PKPdf	08 22 04.5	-1.7
	comp=Z,0.9nm,0.4s,baz=64,slow=1.7,SNR=12						
PLCA	Paso Flores	143.57	161	PKP	PKPab	08 22 48.9	-0.7
	comp=Z,4.0nm,1.0s,baz=283,slow=3.1,SNR=6.3						

IDC 19 08:07:17.0±2.9**, 54°.20N**×**86°.48E, h0**^{km}**, mb1 2.8**/2**, mb1mx2.8**/42**, mbtmp2.8**/2**, ML2.4**/2**, Error ellipse: s-maj=22.3km s-min=13.8km az=56.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.01	256	i		08 12 58.6	
	baz=77,slow=342,SNR=11						
ZALV	Zalesovo Beam	1.01	256	Pg	Pg	08 07 35.0	-1.3
	1.2nm,0.3s,baz=72,slow=16,SNR=14						
ZALV				Lg	Lg	08 07 51.0	
	1.9nm,0.3s,baz=76,slow=31,SNR=9.9						
KURBB	Kurchatov Arra	6.04	237	Pn	Pn	08 08 47.8	+0.3
	0.1nm,0.3s,baz=53,slow=13,SNR=3.3						
KURBB				Lg	Lg	08 10 29.9	
	0.0nm,0.3s,baz=55,slow=31,SNR=1.5						
MKAR	Makanchi Array	7.87	201	Pn	Pn	08 09 14.2	+1.5
	0.1nm,0.3s,baz=24,slow=13,SNR=5.3						

IDC 19 08:10:13.9±3.3**, 54°.15N**×**87°.28E, h0**^{km}**, mb1 2.9**/2**, mb1mx2.9**/44**, mbtmp2.9**/2**, ML2.4**/2**, Error ellipse: s-maj=29.7km s-min=18.5km az=58.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.47	263	i		08 18 10.8	
	baz=81,slow=343,SNR=7.4						
ZALV	Zalesovo Beam	1.47	263	Pg	Pn	08 10 40.2	-1.3
	2.9nm,0.3s,baz=83,slow=18,SNR=18						
ZALV				Lg	Lg	08 11 00.9	
	2.0nm,0.3s,baz=81,slow=28,SNR=8.9						
KURBB	Kurchatov Arra	6.42	240	Pn	Pn	08 11 50.0	+0.4
	0.1nm,0.3s,baz=56,slow=14,SNR=4.4						
MKAR	Makanchi Array	8.02	205	Pn	Pn	08 12 13.1	+1.4
	0.0nm,0.3s,baz=27,slow=14,SNR=1.8						

IDC ***19*** *08:27:05.5±1.5, 25°.60N×127°.31E, h0*^{km}*, mb3.7/6, mb1 3.7/6, mb1mx3.4/48, mbtmp3.7/6, Error ellipse: s-maj=30.5km s-min=15.7km az=132.0*

JMA ***19*** *08:27:08.0±0.3, 25°.51N×127°.62E, h44*^{km}*±4*^{km}*, M3.7*

NIED ***19*** *08:27:08.1, 25°.51N×127°.62E, h44*^{km}*, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10*^{14}*Nm;* M_{rr}*3.30;* $M_{\theta\theta}$*-2.42;* $M_{\phi\phi}$*-0.88;* $M_{r\theta}$*3.16;* $M_{\theta\phi}$*-3.18;* $M_{\phi r}$*3.52; Fault plane solution:* M_0*6.30000×10*^{14} *NP1:*ϕ_s*42.00000°, δ70.00000°, λ81.00000°. NP2:*ϕ_s*248.00000°, δ22.00000°, λ114.00000°.*

ISC 19 08:27:05.2±2.1**, 25°.53N**±0°.07×**127°.73E**±0°.05**, h8**^{km}±12^{km}**, n17,** σ**1**^{s}**.10**/26**, mb3.7**/6**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJT3	Tamagusuku3	0.61	5	P	Pn	08 27 20.9	+0.7
JJT3				eS	Sn	08 27 30.0	-0.2
JNTH	Nagotoyohara	1.02	15	P	Pn	08 27 26.7	+1.0
JNTH				S	Sn	08 27 41.0	+0.8
JAGN	Aguni-jima	1.14	338	P	Pn	08 27 28.1	+0.7
JAGN				eS	Sn	08 27 42.9	-0.3
JKE	Kume jima 2	1.16	313	P	Pn	08 27 27.8	+0.1
JKE				eS	Sn	08 27 42.6	-1.1
JOW	Kunigami	1.39	21	Pg	Pg	08 27 32.2	+0.4
	95nm,0.3s,baz=90,slow=28,SNR=73						
JOW				Lg	Lg	08 27 54.0	
	137nm,0.3s,baz=143,slow=20,SNR=7.5						
JOW	Kunigami	1.39	21	P	Pg	08 27 32.1	+0.3
JOW				eS	Sn	08 27 50.2	+0.9
JIH	Iheya	1.51	8	P	Pg	08 27 33.8	-0.4
JIH				eS	Sg	08 27 53.6	-0.3
JYRO	Yoronjima	1.62	23	P	Pb	08 27 35.0	-0.4
JYRO				eS	Sn	08 27 55.2	+0.1
JOKE	Okinoerabujima	1.97	22	P	Pb	08 27 41.0	-0.4
JMZ	Minamidaito 2	3.16	84	P	Pn	08 27 55.8	+0.6
JMZ				eS	Sn	08 28 31.0	-2.2
JKDJ	Kitadaitoujima	3.25	82	P	Pn	08 27 57.0	+0.6
JKDJ				S	Sn	08 28 33.0	-2.2
SONM	Songino Array	27.90	328	P	P	08 32 54.1	-1.6
	0.4nm,0.3s,baz=134,slow=14,SNR=1.9						
MKAR	Makanchi Array	41.67	313	P	P	08 34 53.3	-0.9
	0.4nm,0.4s,baz=102,slow=9.4,SNR=9.1						
ZALV	Zalesovo Beam	42.53	323	P	P	08 35 00.8	-0.2
	0.8nm,0.5s,baz=98,slow=6.0,SNR=2.5						
KURBB	Kurchatov Arra	45.05	317	P	P	08 35 20.2	-1.1
	0.3nm,0.3s,baz=102,slow=8.6,SNR=1.8						
ASAR	Alice Springs	49.27	173	P	P	08 35 57.0	+2.5
	0.4nm,0.8s,baz=351,slow=7.9,SNR=2.6						
FINES	FINESS Array B	73.25	331	P	P	08 38 36.8	+0.2
	1.0nm,0.6s,baz=60,slow=6.6,SNR=8.6						

IDC 19 09:17:18.4±2.5**, 54°.08N**×**86°.51E, h0**^{km}**, mb1 3.7**/2**, mb1mx3.3**/45**, mbtmp3.7**/2**, ML3.4**/2**, Error ellipse: s-maj=21.4km s-min=12.0km az=60.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.01	263	i		09 23 07.1	
	baz=83,slow=342,SNR=17						
ZALV	Zalesovo Beam	1.01	263	Pg	Pg	09 17 36.3	-1.4
	4.5nm,0.3s,baz=83,slow=17,SNR=31						
ZALV				Lg	Lg	09 17 52.2	
	5.5nm,0.3s,baz=80,slow=34,SNR=9.1						
ZALV				Rg	Rg	09 17 57.9	
	5.1nm,0.4s,baz=80,slow=34,SNR=6.5						
KURBB	Kurchatov Arra	5.99	238	Pn	Pn	09 18 49.6	+1.3
	0.6nm,0.3s,baz=54,slow=14,SNR=7.0						
MKAR	Makanchi Array	7.78	202	Pn	Pn	09 19 13.6	+0.9
	0.8nm,0.3s,baz=26,slow=14,SNR=54						
MKAR				Sn	Sn	09 20 40.6	-0.8
	0.2nm,0.3s,baz=18,slow=25,SNR=6.7						
MKAR				Lg	Lg	09 21 28.5	
	0.2nm,0.3s,baz=19,slow=31,SNR=4.0						

BJI ***19*** *09:32:58.0±0.0, 37°.42N×141°.67E, h51*^{km}*, mB5.0/46, mb5.0/70, Ms4.4/56, Ms7 4.2/55*

NIED ***19*** *09:33:01.9, 37°.53N×141°.41E, h51*^{km}*, MW4.9, Moment Tensor Solution. s3 Moment tensor: Scale 10*^{16}*Nm;* M_{rr}*1.87;* $M_{\theta\theta}$*-0.41;* $M_{\phi\phi}$*-1.46;* $M_{r\theta}$*0.94;* $M_{\theta\phi}$*-0.64;* $M_{\phi r}$*1.69; Fault plane solution:* M_0*2.65000×10*^{16} *NP1:*ϕ_s*28.00000°, δ68.00000°, λ92.00000°. NP2:*ϕ_s*203.00000°, δ22.00000°, λ85.00000°.*

MOS ***19*** *09:33:01.0±1.1, 37°.59N×141°.37E, h56*^{km}*, mb5.2/48, MS4.1/5 Error ellipse: s-maj=5.9km s-min=4.0km az=103.9*

JMA ***19*** *09:33:01.9, 37°.53N×141°.41E, h51*^{km}*±1*^{km}*, M4.9 Broadband fault plane solution: P waves. NP1:*ϕ_s*209.00000°, δ23.00000°, λ83.00000°. NP2:*ϕ_s*36.00000°, δ67.00000°, λ93.00000°. Principal axes: T Plg68.0000°, Azm312.0000°; N Plg3.0000°, Azm215.0000°; P Plg22.0000°, Azm124.0000°;*

JMA Felt IV J1.

NEIC ***19*** *09:33:03.3±2.7, 37°.53N±0°.05×141°.43E±0°.09, h56*^{km}*±5*^{km}*, mb4.9/176 Error ellipse: s-maj=10.8km s-min=7.5km az=112.0*

IDC ***19*** *09:33:05.6±1.6, 37°.57N×141°.31E, h81*^{km}*±14*^{km}*, mb4.4/33, mb1 4.4/39, mb1mx4.3/58, mbtmp4.7/39, MS3.9/37, Ms1 3.9/37, ms1mx3.9/46, Error ellipse: s-maj=12.4km s-min=8.7km az=115.0*

GCMT ***19*** *09:33:05.3±0.3, 37°.60N±0°.02×141°.41E±0°.03, h51*^{km}*±1*^{km}*, MW5.0/92, Moment Tensor Solution. s39,c54; s92,c139; Duration: 0 Moment tensor: Scale 10*^{16}*Nm;* M_{rr}*2.69±.15;* $M_{\theta\theta}$*-0.43±.10;* $M_{\phi\phi}$*-2.26±.10;* $M_{r\theta}$*1.10±.07;* $M_{\theta\phi}$*-0.69±.07;* $M_{\phi r}$*1.74±.08; Best double couple:* M_0*3.30700×10*^{16} *NP1:*ϕ_s*192.00000°, δ26.00000°, λ77.00000°. NP2:*ϕ_s*27.00000°, δ64.00000°, λ97.00000°. Principal axes: T 3.4310, Plg70.0000°, Azm310.0000°; N -0.2490, Plg6.0000°, Azm204.0000°; P -3.1840, Plg19.0000°, Azm112.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 09:33:02.6±0.4**, 37°.52N**±0°.03×**141°.42E**±0°.04**, h60**^{km}±2^{km}**, h60**^{km}**:pP-P, n550,** σ**1**^{s}**.53**/542**, mb4.9**/172**, 59C-43D, Fault plane solution: NP1:**ϕ_s21.87223°, δ75.67043°, λ59.12000°. **NP2:**ϕ_s269.38910°**,** δ33.74249°**,** λ153.53992°. **Principal axes:** T Plg49.7292°**,** Azm257.7167°**;** N Plg29.8198°**,** Azm30.2913°**;** P Plg24.3922°**,** Azm135.3558°**; Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	Kawauchi	0.46	251	⇓P	Pn	09 33 12.7	-1.5
JFK				i S	Sn	09 33 20.1	-2.5
JMST	Minamisoumatoc	0.47	296	⇓P	Pn	09 33 12.6	-1.6
JMST				S	Sn	09 33 20.1	-2.6
JMM	Marumori	0.60	305	⇓P	Pn	09 33 14.4	-1.3
JMM				S	Sn	09 33 23.2	-2.1
JMM	Marumori	0.60	305		Pn	09 33 14.5	-1.3
ONAJ	Iwakimizuishiy	0.64	230	⇓P	Pn	09 33 14.9	-1.4
ONAJ				S	Sn	09 33 24.0	-2.2
JIKH	Ishinomakikobu	0.79	3	⇓P	Pn	09 33 16.7	-1.3
JIKH				S	Sn	09 33 27.0	-2.3
JFT	Otama	0.86	270	⇓P	Pn	09 33 18.3	-0.5
JFT				S	Sn	09 33 29.7	-1.1
JIO	Ouri	0.94	357	⇓P	Pn	09 33 18.6	-1.2
JIO				S	Sn	09 33 30.3	-2.2
JOU	Okura	1.03	325	⇓P	Pn	09 33 19.9	-1.2
JOU				S	Sn	09 33 33.2	-1.6
JYS	Shirataka	1.28	304	⇓P	Pn	09 33 23.5	-0.8
JYS				eS	Sn	09 33 39.4	-1.2
JFY	Yanaizu	1.37	266	⇓P	Pn	09 33 24.9	-0.6
JMK	Ichinoseki	1.44	354	⇓P	Pn	09 33 25.5	-1.0
JMK				S	Sn	09 33 43.2	-1.2
JYT	Yasato	1.62	218		Pn	09 33 28.0	-0.9
JYK	Kaneyama	1.63	330	⇓P	Pn	09 33 28.4	-0.6
JSD	Sado	2.55	283	Pn	Pn	09 33 40.5	-1.0
MJAR	Matsushiro Arr	2.75	250	P	Pn	09 33 44.8	+0.6
	9.2nm,0.3s,baz=36,slow=11,SNR=196						
MJAR				S	Sn	09 34 19.6	+3.3
	21nm,0.3s,baz=89,slow=8.4,SNR=5.9						
MJAR				LR	LR	09 35 04.9	
	comp=Z,4μm,18.7s,baz=60,slow=45						
MJAR	Matsushiro Arr	2.75	250	Pn	Pn	09 33 43.9	-0.3
MAJO	Matsushiro	2.75	250	d iP	Pn	09 33 44.9	+0.7
MAJO	Matsushiro	2.75	250	Pn	Pn	09 33 44.8	+0.5
MAT	Matsushiro	2.75	250	P	Pn	09 33 44.8	+0.6
MAT				eS	Sn	09 34 14.2	-2.1
JTM	Tenmabayashi	3.28	355	Pn	Pn	09 33 51.9	+0.5
JGF	Kuroka	3.79	241		Pn	09 33 59.7	+1.2
JSG	Sagara	3.86	224		Pn	09 34 02.0	+2.6
INU	Inuyama	4.16	240	Pn	Pn	09 34 04.9	+1.4
JHJ2	Mitsune	4.59	197	Pn	Pn	09 34 09.0	-0.4
JHJ	Hachijo jima 2	4.59	197	P	Pn	09 34 09.2	-0.3
	207nm,0.3s,baz=323,slow=22,SNR=12						
JHJ				S	Sn	09 34 60.0	-1.5
	276nm,0.3s,baz=88,slow=23,SNR=10.0						
JHJ				LR	LR	09 35 55.1	
	comp=Z,874nm,20.4s,baz=56,slow=37						
ERM	Erimo	4.69	16	deP	Pn	09 34 09.5	-1.2
ERM	Erimo	4.69	16	Pn	Pn	09 34 09.9	-0.9
JEW	Eniwo	5.32	0	Pn	Pn	09 34 19.5	+0.2
JWT	Wachi	5.34	247	Pn	Pn	09 34 21.4	+1.7
ASAJ	Asahikawa	6.65	7	P	Pn	09 34 36.5	-1.2
	7.8nm,0.3s,baz=218,slow=9.3,SNR=49						
ASAJ				S	Sn	09 35 51.2	-0.8
	5.1nm,0.3s,baz=246,slow=18,SNR=3.6						
ASAJ	Asahikawa	6.65	7	P	Pn	09 34 36.1	-1.6
JKA	Kamikawa-asahi	6.65	7	Pn	Pn	09 34 36.1	-1.5
NMR	Nemuro--Hokkai	6.71	28	⇑iP	Pn	09 34 36.3	-2.1
NMR				i S	Sn	09 35 46.6	-6.7
GLVR	Golovnino	6.95	25	eP	Pn	09 34 39.9	-1.8
GLVR				eS	Sn	09 35 52.0	-7.3
GLVR				pmax	pmax		
	comp=Z,196nm,0.5s						
JHS	Saijyo	7.16	252	Pn	Pn	09 34 46.3	+1.6
RUSJ	Misakicho	7.19	23	eP	Pn	09 34 44.4	-0.6
RUSJ				eS	Sn	09 36 02.9	-2.3
JMN	Monobe	7.21	241	Pn	Pn	09 34 46.9	+1.6
GRPR	Tuman	7.26	26	eP	Pn	09 34 44.7	-1.3
GRPR				eS	Sn	09 35 59.3	-7.7
GRPR				pmax	pmax		
	comp=Z,134nm,0.2s						
YUK	Yuzh-Kuril'sk	7.33	26	eP	Pn	09 34 47.4	+0.5
YUK				eS	Sn	09 36 04.7	-3.9
YUK				pmax	pmax		
	comp=Z,244nm,0.3s						
YUK				pmax	pmax		
	comp=N,183nm,0.5s						
TEY	Ternei	8.34	336	⇑eP	Pn	09 35 02.3	+1.6
TEY				pmax	pmax		
	comp=N,10.0nm,0.6s						
TEY				pmax	pmax		
	comp=Z,20nm,0.6s						
TEY				pmax	pmax		
	comp=N,70nm,0.8s						
TEY				pmax	pmax		
	comp=E,40nm,0.8s						
TEY				pmax	pmax		
	comp=Z,60nm,0.8s						
KUR	Kuril'sk	9.10	30	P	Pn	09 35 13.2	+2.1
KUR				i S	Sn	09 36 46.1	-5.9
KUR				pmax	pmax		
	comp=Z,82nm,0.7s						
KUR				pmax	pmax		
	comp=E,36nm,0.6s						
KUR				smax	smax		
	comp=E,136nm,0.4s						
KUR				smax	smax		
	comp=N,110nm,0.6s						
VLA	Vladivostok	9.18	311	⇓eP	Pn	09 35 14.6	+2.4
VLA				pmax	pmax		
	comp=Z,130nm,0.8s						
MSHR	Mys Shultsa	9.35	306	deP	Pn	09 35 16.5	+2.0
MSHR				pmax	pmax		
	comp=Z,26nm,0.6s						
YSS	Yuzh-Sakhalins	9.48	6	eP	Pn	09 35 15.4	-0.9
YSS				eS	Sn	09 36 59.1	-2.2
YSS				pmax	pmax		
	comp=Z,40nm,1.2s						
YSS				MLR	MLR		
	comp=Z,500nm,16.0s						
YSS	Yuzh-Sakhalins	9.48	6	Pn	Pn	09 35 15.8	-0.6
JNU	Nakatsue	9.66	246	P	Pn	09 35 21.3	+2.4
	comp=Z,62nm,0.3s,baz=98,slow=0.1,SNR=13						
USA0B	Ussuriysk Arra	9.77	316	P	Pn	09 35 20.8	+0.5
USA0B	Ussuriysk Arra	9.77	316	Pn	Pn	09 35 20.8	+0.5
USRK	Ussuriysk Ar.	9.77	316	P	Pn	09 35 20.6	+0.3
	baz=129,slow=13,SNR=52						
USRK				LR	LR	09 38 53.7	
	comp=Z,2μm,19.0s,baz=133,slow=36						
USRK	Ussuriysk Ar.	9.77	316	P	Pn	09 35 20.7	+0.4
USRK	Ussuriysk Ar.	9.77	316	Pn	Pn	09 35 20.7	+0.4
JCJ	Chichijima	10.41	176	P	Pn	09 35 26.6	-2.5
	comp=Z,32nm,0.3s,baz=79,slow=12,SNR=28						
JCJ				S	Sn	09 37 15.3	-9.0
	comp=Z,39nm,0.3s,baz=287,slow=19,SNR=6.0						
JCJ				LR	LR	09 39 44.9	
	comp=Z,411nm,21.0s,baz=356,slow=38						
JCJ	Chichijima	10.41	176	Pn	Pn	09 35 26.4	-2.7
KSRS	Korea Array	10.72	274	P	Pn	09 35 36.0	+2.6
	comp=Z,2.0nm,0.3s,baz=85,slow=14,SNR=46						
KSRS				LR	LR	09 39 24.8	
	comp=Z,882nm,20.8s,baz=78,slow=36						
KSRS	Korea Array	10.72	274	P	Pn	09 35 36.0	+2.6
KSAR	Wonju Array Be	10.76	274	P	Pn	09 35 35.5	+1.7
KSAR	Wonju Array Be	10.76	274		Pn	09 35 35.5	+1.7
KS19	Wonju Array Si	10.77	274	Pn	Pn	09 35 36.2	+2.2
TJN	Taejon	11.30	268	⇑eP	Pn	09 35 43.1	+1.8
MDJ	Mudanjiang	11.39	312	P	Pn	09 35 46.6	+4.2
MDJ				S	Sn	09 37 55.4	+7.4
MDJ				pmax	pmax		
	comp=Z,23nm,0.5s						
MDJ				pmax	pmax		
	comp=Z,290nm,5.3s						
MDJ				LR	LR		
	comp=Z,610nm,13.5s						
MDJ				LR	LR		
	comp=Z,870nm,15.7s						
MDJ				LR	LR		
	comp=Z,1μm,18.9s						
TYV	Tymovskoe	13.37	3	eP	P	09 36 19.0	+2.1
TYV				pmax	pmax		
	comp=Z,22nm,0.8s						
TYV				pmax	pmax		
	comp=Z,200nm,2.5s						
KLR	Kul'dur	13.64	332	P	Pn	09 36 13.4	+0.4
	comp=Z,0.6nm,0.3s,baz=149,slow=12,SNR=8.6						
KLR				LR	LR	09 41 08.1	
	comp=Z,756nm,21.8s,baz=152,slow=36						
KLR	Kul'dur	13.64	332	⇑eP	Pn	09 36 13.3	+0.3
KLR				pmax	pmax		
	comp=Z,17nm,0.7s						
CN2	Changchun	13.64	302	eP	Pn	09 36 13.3	+0.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,400nm,7.0s						
CN2				LR	LR		
	comp=Z,400nm,17.0s						
CN2				LR	LR		
	comp=Z,600nm,17.0s						
CN2				LR	LR		
	comp=Z,700nm,21.0s						
JOW	Kunigami	15.39	230	P	Pn	09 36 38.5	+2.5
	comp=Z,4.2nm,0.3s,baz=71,slow=12,SNR=8.4						
JOW				LR	LR	09 42 20.7	
	comp=Z,294nm,21.7s,baz=92,slow=36						
JOW	Kunigami	15.39	230	Pn	Pn	09 36 38.1	+2.1
DL2	Dalian	15.62	281	eP	Pn	09 36 40.3	+1.4
DL2				pmax	pmax		
	comp=Z,68nm,0.7s						
DL2				LR	LR		
	comp=Z,650nm,10.4s						
DL2				LR	LR		
	comp=Z,730nm,14.9s						
DL2				LR	LR		
	comp=Z,740nm,15.6s						
SSE	Sheshan	17.88	255	P	P	09 37 06.3	-0.8
SSE				S	Sn	09 40 25.4	-0.4
SSE				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SSE				pmax	pmax		
	comp=Z,170nm,4.6s						
SSE				LR	LR		
	comp=Z,400nm,24.7s						
SSE				LR	LR		
	comp=Z,190nm,26.1s						
ZEA	Zeya	18.95	333	eP	P	09 37 17.7	-0.9
ZEA				pmax	pmax		
	comp=N,10.0nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,20nm,0.7s						
ZEA				MLR	MLR		
	comp=N,300nm,14.0s						
ZEA				MLR	MLR		
	comp=Z,400nm,15.0s						
PEA0B	Petropavlovsk-	19.27	31	P	Pn	09 37 25.3	+1.7
PEA0B				pmax	pmax		
	comp=Z,83nm,1.3s						
PEA0B	Petropavlovsk-	19.27	31	Pn	Pn	09 37 25.3	+1.7
PEA0B				IAmb	IAmb	09 37 50.7	
	comp=Z,83nm,1.3s						
PETK	Petropavlovsk-	19.27	31	P	P	09 37 22.7	+0.6
	comp=Z,0.3nm,0.3s,baz=217,slow=4.7,SNR=6.9						
PETK				LR	LR	09 44 44.4	
	comp=Z,106nm,20.5s,baz=221,slow=36						
NJ2	Nanjing	19.30	260	eP	P	09 37 22.8	+0.2
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
NJ2				LR	LR		
	comp=Z,610nm,15.0s						
NJ2				LR	LR		
	comp=Z,480nm,18.3s						
NJ2				LR	LR		
	comp=Z,550nm,16.4s						
TIA	Tai'an	19.47	274	⇓P	P	09 37 23.3	-1.2
TIA				pmax	pmax		
	comp=Z,13nm,0.8s						
TIA				pmax	pmax		
	comp=Z,120nm,3.8s						
TIA				LR	LR		
	comp=Z,470nm,16.5s						
TIA				LR	LR		
	comp=Z,330nm,13.9s						
TIA				LR	LR		
	comp=Z,390nm,16.4s						
HIA	Hailar	19.57	314	⇓eP	P	09 37 25.9	+0.5
HIA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
BJI	Beijing	19.82	285	P	P	09 37 27.0	-1.2
BJI				sP	pP	09 37 42.9	+1.6
BJI				S	S	09 41 02.8	-5.4
BJI				pmax	pmax		
	comp=Z,25nm,0.7s						
BJI				LR	LR		
	comp=Z,350nm,14.1s						
BJI				LR	LR		
	comp=Z,250nm,15.3s						
BJT	Baijiatuau	19.83	285	P	P	09 37 27.3	-1.0
BJT				pmax	pmax		
	comp=Z,16nm,0.7s						
BJT	Baijiatuau	19.83	285	P	P	09 37 27.3	-1.0
YHNB	Yeheng	21.36	239	P	P	09 37 43.5	-1.5
YHNB				IAmb	IAmb	09 37 50.9	
	comp=Z,82nm,1.5s						
NACB	Ninganchiao	21.54	238	P	P	09 37 43.6	-3.3

SSLB	**Suanglung**	**22.23**	**238**	P	**P**	**09 37 51.1**	**-3.2**
YULB	**Yu-li**	**22.27**	**236**	P	**P**	**09 37 51.8**	**-3.0**
YULB				IAmb	IAmb	09 38 02.2	
	comp=Z,26nm,0.4s						
TPUB	**Ta-pu**	**22.78**	**237**	P	**P**	**09 37 57.2**	**-3.0**
TPUB				IAmb	IAmb	09 37 58.1	
	comp=Z,32nm,0.6s						
TWG	**Pinlang**	**22.82**	**236**	IAmb	IAmb	09 38 07.7	
	comp=Z,30nm,0.7s						
MA2	**Magadan**	**22.88**	**12**	P	**P**	**09 38 00.7**	**-0.2**
	comp=Z,22nm,0.8s,baz=185,slow=7.9,SNR=6.3						
MA2	**Magadan**	**22.88**	**12**	deP	**P**	**09 38 01.9**	**+1.0**
MA2				pmax	pmax		
	comp=Z,34nm,1.1s						
MA2	**Magadan**	**22.88**	**12**	IAmb	IAmb	09 38 26.7	
	comp=Z,39nm,1.0s						
HHC	**Hu-ho-hao-te**	**23.32**	**288**	eP	**P**	**09 38 05.0**	**-0.5**
HHC				pmax	pmax		
	comp=Z,30nm,0.6s						
HHC				pmax	pmax		
	comp=Z,100nm,5.7s						
HHC				LR	LR		
	comp=Z,400nm,15.2s						
HHC				LR	LR		
	comp=Z,360nm,16.5s						
HHC				LR	LR		
	comp=Z,470nm,20.8s						
WHN	**Wuhan**	**23.44**	**261**	⇓P	**P**	**09 38 06.1**	**-0.4**
WHN				S	**S**	**09 42 09.8**	**-5.5**
WHN				LR	LR		
	comp=Z,690nm,15.3s						
WHN				LR	LR		
	comp=Z,1µm,15.4s						
WHN				LR	LR		
	comp=Z,2µm,37.4s						
GUMO	**Guam**	**24.03**	**172**	LR	LR	09 45 55.5	
	comp=Z,98nm,21.2s,baz=26,slow=32						
YAK	**Yakutsk**	**25.60**	**347**	P	**P**	**09 38 25.5**	**-0.3**
	comp=Z,26nm,0.6s,baz=140,slow=3.5,SNR=10						
YAK	**Yakutsk**	**25.60**	**347**	eP	**P**	**09 38 25.6**	**-0.3**
YAK				e*PP	**pP**	**09 38 42.8**	**+2.3**
YAK				e		09 39 04.8	
YAK				e		09 41 56.5	
YAK				eS	**S**	**09 42 47.4**	**-1.9**
YAK				e*SS	**sS**	**09 43 11.9**	**-2.4**
YAK				e		09 49 17.4	
YAK				pmax	pmax		
	comp=Z,50nm,0.9s						
YAK				pmax	pmax		
	comp=N,17nm,1.1s						
YAK				pmax	pmax		
	comp=E,8.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,401nm,5.2s						
YAK				pmax	pmax		
	comp=N,243nm,3.0s						
YAK				pmax	pmax		
	comp=E,452nm,5.2s						
YAK				smax	smax		
	comp=E,339nm,5.4s						
YAK				smax	smax		
	comp=N,407nm,4.5s						
YAK	**Yakutsk**	**25.60**	**347**	P	**P**	**09 38 25.0**	**-0.8**
SEY	**Seymchan**	**26.32**	**11**	P	**P**	**09 38 33.8**	**+1.5**
	comp=N,22nm,0.9s,baz=193,slow=8.4,SNR=14						
XAN	**Xi'an**	**26.52**	**272**	P	**P**	**09 38 33.4**	**-1.2**
XAN				pP	pP	09 38 47.8	-1.5
XAN				sP	sP	09 38 53.5	-2.9
XAN				S	**S**	**09 43 03.0**	**-1.5**
XAN				pmax	pmax		
	comp=N,20nm,0.7s						
XAN				pmax	pmax		
	comp=N,190nm,4.5s						
XAN				LR	LR		
	comp=N,430nm,14.1s						
XAN				LR	LR		
	comp=N,280nm,16.8s						
XAN				LR	LR		
	comp=N,400nm,16.0s						
ULN	**Ulaanbaatar**	**27.09**	**303**	deP	**P**	**09 38 39.6**	**-0.1**
ULN				pmax	pmax		
	comp=Z,11nm,0.6s						
ULN	**Ulaanbaatar**	**27.09**	**303**	P	**P**	**09 38 39.6**	**-0.1**
ULN				IAmb	IAmb	09 38 40.7	
	comp=Z,14nm,0.6s						
BOD	**Bodaibo**	**27.12**	**327**	eP	**P**	**09 38 38.6**	**-1.1**
BOD				pmax	pmax		
	comp=Z,17nm,0.6s						
ENH	**Enshi**	**27.38**	**264**	P	**P**	**09 38 41.7**	**-0.6**
SONM	**Songino Array**	**27.52**	**303**	P	**P**	**09 38 43.1**	**-0.4**
	comp=Z,19nm,0.7s,baz=100,slow=9.0,SNR=75						
SONM				PcP	**PcP**	**09 42 00.9**	**+0.7**
	comp=Z,1.0nm,0.5s,baz=127,slow=1.8,SNR=4.4						
SONM				LR	LR	09 50 04.4	
	comp=Z,260nm,18.4s,baz=123,slow=37						
SONM	**Songino Array**	**27.52**	**303**	P	**P**	**09 38 42.9**	**-0.7**
SONM				IAmb	IAmb	09 38 44.7	
	comp=Z,16nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**28.39**	**122**	T	T	10 08 28.7	
	baz=314,slow=75						
H11N1	**WAKE ISLAND Hy**	**28.40**	**122**	T	T	10 08 32.3	
	baz=314,slow=75						
H11N3	**WAKE ISLAND Hy**	**28.41**	**122**	T	T	10 08 32.8	
	baz=314,slow=75						
H11S1	**WAKE ISLAND Hy**	**29.12**	**124**	T	T	10 09 26.6	
	baz=318,slow=76						
H11S3	**WAKE ISLAND Hy**	**29.12**	**124**	T	T	10 09 28.0	
	baz=318,slow=76						
H11S2	**WAKE ISLAND Hy**	**29.14**	**124**	T	T	10 09 26.8	
	baz=318,slow=76						
ZAK	**Zakamensk**	**29.97**	**308**	eP	**P**	**09 39 04.6**	**-0.6**
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.4s						
LZH	**Lanzhou**	**29.99**	**279**	eP	**P**	**09 39 06.3**	**+0.7**
LZH				pP	pP	09 39 16.3	-4.2
LZH				sP	sP	09 39 22.9	-4.7
LZH				sS	sS	09 44 24.8	+0.2
LZH				pmax	pmax		
	comp=Z,40nm,1.2s						
LZH				pmax	pmax		
	comp=Z,130nm,4.9s						
LZH				LR	LR		
	comp=Z,780nm,14.1s						
LZH				LR	LR		
	comp=Z,510nm,15.8s						
LZH				LR	LR		
	comp=Z,840nm,16.4s						
TLY	**Talaya**	**30.02**	**310**	P	**P**	**09 39 05.9**	**+0.4**
	comp=Z,6.8nm,0.6s,baz=37,slow=1.2,SNR=5.6						
TLY				LR	LR	09 51 37.2	
	comp=Z,368nm,20.7s,baz=123,slow=37						
TLY	**Talaya**	**30.02**	**310**	ceP	**P**	**09 39 06.3**	**+0.8**
TLY				pmax	pmax		
	comp=Z,8.0nm,0.7s						
TLY	**Talaya**	**30.02**	**310**	IAmb	IAmb	09 39 07.2	
	comp=Z,7.7nm,0.7s						
GYA	**Guiyang**	**31.31**	**260**	⇑P	**P**	**09 39 16.4**	**-0.9**
GYA				sP	pP	09 39 35.5	+3.3
GYA				S	**S**	**09 44 19.0**	**-1.0**
GYA				pmax	pmax		
	comp=Z,30nm,0.8s						
GYA				LR	LR		
	comp=Z,480nm,27.7s						
CD2	**Chengdu**	**31.68**	**269**	P	**P**	**09 39 19.8**	**-0.6**
CD2				S	**S**	**09 44 25.1**	**-0.5**
CD2				pmax	pmax		
	comp=Z,40nm,0.6s						
CD2				LR	LR		
	comp=Z,370nm,6.5s						
CD2				LR	LR		
	comp=Z,460nm,21.6s						
CD2				LR	LR		
	comp=Z,560nm,12.9s						
GTA	**Gaotai**	**32.43**	**286**	eP	**P**	**09 39 25.3**	**-1.7**
GTA				pP	pP	09 39 39.5	-2.4
GTA				sP	sP	09 39 44.8	-4.2
GTA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,83nm,8.0s						
GTA				LR	LR		
	comp=Z,270nm,17.9s						
GTA				LR	LR		
	comp=Z,320nm,19.9s						
GTA				LR	LR		
	comp=Z,430nm,23.1s						
QIZ	**Qiongzhong**	**33.13**	**245**	P	**P**	**09 39 33.3**	**+0.1**
QIZ				S	**S**	**09 44 49.4**	**+1.1**
QIZ				pmax	pmax		
	comp=Z,87nm,4.1s						
QIZ				LR	LR		
	comp=Z,220nm,28.8s						
QIZ				LR	LR		
	comp=Z,250nm,22.8s						
QIZ				LR	LR		
	comp=Z,230nm,16.7s						
BILL	**Bilibino**	**33.56**	**17**	⇑eP	**P**	**09 39 39.1**	**+2.7**
BILL				e*PP	**pP**	**09 39 51.1**	**-0.2**
BILL				e*SP	**sP**	**09 39 56.4**	**-1.9**
BILL				pmax	pmax		
	comp=Z,25nm,2.6s						
BILL				MLR	MLR		
	comp=Z,107nm,19.0s						
TIXI	**Tiksi**	**34.81**	**353**	P	**P**	**09 39 46.7**	**-0.4**
	comp=Z,5.7nm,0.5s,baz=130,slow=5.2,SNR=12						
TIXI	**Tiksi**	**34.81**	**353**	ceP	**P**	**09 39 46.4**	**-0.7**
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.7s						
TIXI	**Tiksi**	**34.81**	**353**	P	**P**	**09 39 46.7**	**-0.4**
KMI	**Kunming**	**35.04**	**261**	⇑P	**P**	**09 39 49.3**	**-0.6**
KMI				pP	pP	09 40 03.9	-1.1
KMI				sP	sP	09 40 08.6	-3.4
KMI				S	**S**	**09 45 15.6**	**-2.5**
KMI				sS	sS	09 45 45.3	+1.8
KMI				pmax	pmax		
	comp=Z,32nm,1.0s						
KMI				pmax	pmax		
	comp=Z,100nm,4.3s						
KMI				LR	LR		
	comp=Z,230nm,23.3s						
KMI				LR	LR		
	comp=Z,360nm,15.8s						
KMI				LR	LR		
	comp=Z,490nm,22.6s						
SIJI	**Sorong**	**39.33**	**196**	LR	LR	09 54 36.2	
	comp=Z,193nm,21.7s,baz=41,slow=33						
DGZ	**Jazzator, Alta**	**40.11**	**305**	c iP	**P**	**09 40 33.4**	**+1.0**
DGZ				pmax	pmax		
	comp=Z,51nm,0.9s						
GTOI	**Gorontalo**	**40.44**	**209**	P	**P**	**09 40 37.0**	**+1.8**
	comp=Z,11nm,0.8s						
WMQ	**Urumqi**	**40.63**	**296**	eP	**P**	**09 40 37.8**	**+1.2**
WMQ				pP	pP	09 40 45.9	-6.0
WMQ				sP	sP	09 40 55.4	-3.5
WMQ				pmax	pmax		
	comp=Z,34nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,270nm,4.5s						
WMQ				LR	LR		
	comp=Z,480nm,15.1s						
WMQ				LR	LR		
	comp=Z,330nm,21.1s						
TOLI2	**Tolitoli**	**40.92**	**213**	P	**P**	**09 40 39.5**	**+0.4**
MRSI	**Marisa**	**41.01**	**211**	P	**P**	**09 40 42.4**	**+2.5**
	comp=Z,36nm,1.2s						
FAKI	**Fak Fak**	**41.12**	**194**	P	**P**	**09 40 41.9**	**+1.1**
FAKI				IAmb	IAmb	09 40 57.5	
	comp=Z,16nm,0.9s						
CHTO	**Chiang Mai**	**41.41**	**255**	P	**P**	**09 40 42.9**	**-0.4**
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.7s						
CHTO	**Chiang Mai**	**41.41**	**255**	P	**P**	**09 40 42.9**	**-0.4**
ZAA0	**Zalesovo Array**	**41.59**	**312**	P	**P**	**09 40 44.3**	**0.0**
ZAA0				IAmb	IAmb	09 40 45.2	
	comp=Z,16nm,0.8s						
ZALV	**Zalesovo Beam**	**41.59**	**312**	P	**P**	**09 40 44.5**	**+0.1**
	comp=Z,11nm,0.5s,baz=84,slow=8.0,SNR=51						
ZALV				PcP	**PcP**	**09 42 40.4**	**0.0**
	comp=Z,3.2nm,0.6s,baz=103,slow=3.6,SNR=4.8						
ZALV				LR	LR	09 58 43.7	
	comp=Z,378nm,18.1s,baz=102,slow=37						
ZALV	**Zalesovo Beam**	**41.59**	**312**	P	**P**	**09 40 44.0**	**-0.3**
CMAR	**Chiang Mai Arr**	**41.62**	**255**	P	**P**	**09 40 45.0**	**0.0**
	comp=Z,1.8nm,0.4s,baz=40,slow=9.0,SNR=7.4						
CMAR				LR	LR	09 59 14.7	
	comp=Z,136nm,18.8s,baz=91,slow=38						
CMAR	**Chiang Mai Arr**	**41.62**	**255**	P	**P**	**09 40 44.6**	**-0.4**
SANI	**Sanana**	**41.89**	**203**	P	**P**	**09 40 47.2**	**+0.1**
LSA	**Lhasa**	**42.17**	**275**	P	**P**	**09 40 50.0**	**+0.1**
LSA				pmax	pmax		
	comp=Z,36nm,1.4s						
LSA	**Lhasa**	**42.17**	**275**	P	**P**	**09 40 50.0**	**+0.1**
LSA				IAmb	IAmb	09 41 11.2	
	comp=Z,36nm,1.4s						
APSI	**Ampana**	**42.39**	**210**	P	**P**	**09 40 52.2**	**+1.0**
	comp=Z,596nmcomp=Z,30nm,1.2s						
NRIK	**Noril'sk**	**42.83**	**335**	P	**P**	**09 40 54.2**	**0.0**
	comp=Z,2.5nm,0.4s,baz=110,slow=4.2,SNR=4.6						
NRIK				LR	LR	09 59 52.7	
	comp=Z,189nm,18.9s,baz=118,slow=38						
NRIK	**Noril'sk**	**42.83**	**335**	⇓eP	**P**	**09 40 54.2**	**0.0**
NRIK				pmax	pmax		
	comp=Z,10.0nm,1.5s						
RDOG	**Red Dog Mine**	**43.07**	**27**	P	P	09 41 03.9	+7.7
	baz=254						
SHL	**Shillong**	**43.42**	**269**	P	**P**	**09 40 58.9**	**-0.8**
SHL				pmax	pmax		
	comp=Z,29nm,0.5s						
SHL	**Shillong**	**43.42**	**269**	P	**P**	**09 40 58.9**	**-0.8**
MK31	**Makanchi Array**	**43.87**	**302**	c iP	**P**	**09 41 02.8**	**-0.1**
MK31	**Makanchi Array**	**43.87**	**302**	P	**P**	**09 41 03.0**	**+0.1**
MK31				IAmb	IAmb	09 41 04.0	
	comp=Z,16nm,0.8s						
MKAR	**Makanchi Array**	**43.87**	**302**	P	**P**	**09 41 02.9**	**0.0**
	comp=Z,18nm,0.8s,baz=87,slow=10,SNR=72						
MKAR				PcP	**PcP**	**09 42 48.5**	**+0.3**
	comp=Z,0.7nm,0.3s,baz=130,slow=2.3,SNR=1.4						
MKAR				LR	LR	09 59 44.4	
	comp=Z,184nm,20.5s,baz=80,slow=36						
MKAR	**Makanchi Array**	**43.87**	**302**	P	**P**	**09 41 02.4**	**-0.5**
MAKZ	**Makanchi**	**44.08**	**302**	P	**P**	**09 41 04.2**	**-0.4**
MAKZ	**Makanchi**	**44.08**	**302**	P	**P**	**09 41 04.0**	**-0.6**
MAKZ				IAmb	IAmb	09 41 05.8	
	comp=Z,17nm,0.6s						
KURK	**Kurchatov**	**45.64**	**308**	c iP	**P**	**09 41 16.5**	**-0.3**
KURK				pmax	pmax		
	comp=Z,39nm,0.7s						
KURK	**Kurchatov**	**45.64**	**308**	P	**P**	**09 41 16.9**	**+0.1**
KURK	**Kurchatov**	**45.64**	**308**	P	**P**	**09 41 16.3**	**-0.6**
KURBB	**Kurchatov Arra**	**45.71**	**308**	P	**P**	**09 41 17.2**	**-0.2**
	comp=Z,24nm,0.5s,baz=84,slow=8.1,SNR=70						
KSM	**Kuching**	**45.89**	**226**	P	**P**	**09 41 19.3**	**+0.1**
KSM				IAmb	IAmb	09 41 24.6	
	comp=Z,8.9nm,0.5s						
TAPN	**Taplejung**	**45.91**	**274**	eP	**P**	**09 41 20.0**	**+0.3**
	comp=Z,40nm,0.4s						
K20K	**Telida**	**45.93**	**35**	P	**P**	**09 41 21.0**	**+2.0**
	baz=268						
J20K	**Nowinta River**	**45.94**	**33**	P	**P**	**09 41 21.1**	**+2.1**
	baz=267						
J20K	**Nowinta River**	**45.94**	**33**	P	**P**	**09 41 20.9**	**+1.8**
A21K	**Barrow**	**46.01**	**23**	P	**P**	**09 41 21.0**	**+1.5**
	baz=257,SNR=5.9						
A21K	**Barrow**	**46.01**	**23**	P	**P**	**09 41 20.6**	**+1.1**
Q19K	**Cape Douglas,**	**46.12**	**41**	P	**P**	**09 41 20.3**	**-0.3**
BNSI	**Bone**	**46.18**	**210**	P	**P**	**09 41 21.9**	**+0.4**
	comp=Z,29nm,1.1s						
IMAR	**Indian Mountai**	**46.23**	**31**	P	**P**	**09 41 23.2**	**+1.8**
ODAN	**Odare**	**46.39**	**273**	eP	**P**	**09 41 23.6**	**+0.2**
	comp=Z,31nm,0.4s						
PDGK	**Podgornoye**	**46.55**	**298**	P	**P**	**09 41 23.9**	**-0.4**
H21K	**Melozitna Rive**	**46.60**	**31**	P	**P**	**09 41 26.2**	**+2.0**
	baz=267						
H21K	**Melozitna Rive**	**46.60**	**31**	P	**P**	**09 41 25.0**	**+0.7**
H21K				IAmb	IAmb	09 41 27.2	
	comp=Z,15nm,1.5s						
CHUM	**Lake Minchumin**	**46.73**	**34**	P	**P**	**09 41 27.8**	**+2.6**
	baz=269						
KDAK	**Kodiak Island**	**46.74**	**42**	P	**P**	**09 41 26.4**	**+1.0**
	comp=Z,4.0nm,0.5s,baz=308,slow=4.4,SNR=14						
KDAK	**Kodiak Island**	**46.74**	**42**	IAmb	IAmb	09 41 41.7	
	comp=Z,22nm,0.8s						
PPLA	**Purkeypile**	**46.77**	**35**	P	**P**	**09 41 28.0**	**+2.2**
PPLA				IAmb	IAmb	09 41 47.2	
	comp=Z,18nm,1.1s						
SPCR	**Spurr Chakacha**	**46.77**	**38**	P	**P**	**09 41 28.1**	**+2.3**
	baz=271						
KAPI	**Kappang**	**46.88**	**210**	P	**P**	**09 41 28.3**	**+1.4**
	comp=Z,12nm,0.8s,baz=15,slow=3.4,SNR=5.3						
KAPI	**Kappang**	**46.88**	**210**	P	**P**	**09 41 29.6**	**+2.7**
KAPI				pmax	pmax		
	comp=Z,28nm,1.1s						
KAPI	**Kappang**	**46.88**	**210**	P	**P**	**09 41 29.6**	**+2.7**
KAPI				IAmb	IAmb	09 41 31.4	
	comp=Z,28nm,1.1s						
I21K	**Tanana**	**46.92**	**32**	P	**P**	**09 41 28.5**	**+1.8**
	baz=268						
I21K	**Tanana**	**46.92**	**32**	P	**P**	**09 41 27.2**	**+0.5**
RAMN	**Ramite**	**46.97**	**274**	eP	**P**	**09 41 28.0**	**0.0**
	comp=Z,38nm,0.5s						
JIRN	**Jiri**	**46.98**	**275**	eP	**P**	**09 41 28.5**	**+0.4**
	comp=Z,32nm,0.6s						
GUN	**Gumba**	**47.11**	**275**	eP	**P**	**09 41 29.5**	**+0.3**
	comp=Z,76nm,0.4s						
CNPM	**China Poot**	**47.33**	**40**	P	**P**	**09 41 32.3**	**+2.3**
CNPM				IAmb	IAmb	09 41 46.2	
	comp=Z,23nm,1.0s						
KTH	**Kantishna Hill**	**47.35**	**34**	P	**P**	**09 41 30.9**	**+0.8**
KTH				IAmb	IAmb	09 41 49.1	
	comp=Z,12nm,1.0s						
MLY	**Manley**	**47.44**	**32**	P	**P**	**09 41 33.0**	**+2.2**
	baz=269						
TRF	**Thorofare Moun**	**47.63**	**34**	P	**P**	**09 41 34.6**	**+2.1**
	baz=271						
TRF	**Thorofare Moun**	**47.63**	**34**	P	**P**	**09 41 34.0**	**+1.5**
TRF				IAmb	IAmb	09 41 36.1	
	comp=Z,16nm,1.2s						
PKI	**Pulchoki**	**47.64**	**275**	eP	**P**	**09 41 33.0**	**-0.2**
	comp=Z,21nm,0.4s						
KKN	**Kakani**	**47.64**	**275**	eP	**P**	**09 41 33.3**	**+0.2**
	comp=Z,82nm,0.7s						
PKIN	**Phulchoki**	**47.64**	**275**	eP	**P**	**09 41 33.3**	**+0.1**
	comp=Z,23nm,0.4s						
COLD	**Coldfoot**	**47.73**	**29**	P	**P**	**09 41 34.9**	**+1.9**
	baz=268						
COLD	**Coldfoot**	**47.73**	**29**	P	**P**	**09 41 32.9**	**-0.1**
DMN	**Daman**	**47.86**	**275**	eP	**P**	**09 41 34.8**	**-0.1**
RC01	**Rabbit Creek A**	**47.98**	**38**	P	**P**	**09 41 36.1**	**+1.2**
	baz=274						
I23K	**Minto, Yukon-K**	**48.02**	**32**	P	**P**	**09 41 37.8**	**+2.5**
	baz=270						
TOLK	**Toolik Lake Re**	**48.04**	**27**	P	**P**	**09 41 37.4**	**+2.0**
	baz=267,SNR=5.2						
GKN	**Gorkha**	**48.05**	**276**	eP	**P**	**09 41 36.4**	**+0.2**
	comp=Z,51nm,0.4s						
SEW	**Seward**	**48.18**	**39**	P	**P**	**09 41 37.3**	**+0.8**
SEW				IAmb	IAmb	09 41 55.7	
	comp=Z,15nm,1.0s						
MCK	**McKinley**	**48.23**	**34**	P	**P**	**09 41 38.5**	**+1.5**
MCK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MCK	**McKinley**	**48.23**	**34**	P	**P**	**09 41 38.1**	**+1.1**
	baz=272						
MCK	**McKinley**	**48.23**	**34**	P	**P**	**09 41 38.5**	**+1.5**
MCK				IAmb	IAmb	09 41 59.7	
	comp=Z,9.6nm,1.0s						
PMR	**Palmer**	**48.24**	**37**	P	**P**	**09 41 38.0**	**+1.1**
PMR				pmax	pmax		
	comp=Z,14nm,1.0s						
PMR	**Palmer**	**48.24**	**37**	P	**P**	**09 41 38.1**	**+1.1**
	baz=274						
PMR	**Palmer**	**48.24**	**37**	P	**P**	**09 41 38.0**	**+1.1**
PMR				IAmb	IAmb	09 41 54.4	
	comp=Z,14nm,1.0s						
RND	**Reindeer**	**48.28**	**34**	IAmb	IAmb	09 41 57.2	
	comp=Z,8.9nm,0.8s						
GHO	**Glory Hole Cre**	**48.33**	**37**	P	**P**	**09 41 39.1**	**+1.3**
GHO				IAmb	IAmb	09 42 03.4	
	comp=Z,14nm,0.8s						
AAA	**Alma-Ata**	**48.40**	**298**	eP	P	09 41 31.1	-7.5
MDM	**Murphy Dome**	**48.51**	**32**	P	**P**	**09 41 40.9**	**+1.8**
MDM				IAmb	IAmb	09 41 42.1	
	comp=Z,28nm,1.4s						
KDJ	**Kajisay**	**48.52**	**297**	P	**P**	**09 41 40.0**	**+0.3**
KDJ				pmax	pmax		
	comp=Z,12nm,0.6s						
KDJ	**Kajisay**	**48.52**	**297**	P	**P**	**09 41 40.0**	**+0.3**
KDJ				IAmb	IAmb	09 41 42.2	
	comp=Z,12nm,0.6s						
KNK	**Knik Glacier**	**48.57**	**37**	P	**P**	**09 41 40.8**	**+1.2**
	baz=274						
DANN	**Dangsing**	**48.59**	**277**	eP	**P**	**09 41 41.0**	**+0.5**
	comp=Z,264nm,0.7s						
SML	**Sawmill**	**48.60**	**37**	P	**P**	**09 41 41.3**	**+1.4**
	baz=274						
SML	**Sawmill**	**48.60**	**37**	P	**P**	**09 41 41.1**	**+1.2**
SML				IAmb	IAmb	09 42 01.6	
	comp=Z,15nm,1.0s						
H24K	**Noodor Dome**	**48.64**	**31**	P	**P**	**09 41 42.4**	**+2.3**
	baz=271						
H24K	**Noodor Dome**	**48.64**	**31**	P	**P**	**09 41 42.1**	**+2.1**
H24K				IAmb	IAmb	09 42 03.4	
	comp=Z,9.3nm,1.0s						
COLA	**College**	**48.67**	**32**	⇑eP	**P**	**09 41 41.8**	**+1.6**
COLA				pmax	pmax		
	comp=Z,22nm,2.0s						
WAT6	**Susitna Watana**	**48.83**	**36**	P	**P**	**09 41 42.7**	**+1.0**
	baz=274						
POKR	**Poker Plat Res**	**48.84**	**32**	P	**P**	**09 41 43.9**	**+2.3**
	baz=272,SNR=5.3						
POKR	**Poker Plat Res**	**48.84**	**32**	P	**P**	**09 41 44.2**	**+2.7**
DHY	**Denali Highway**	**48.96**	**35**	P	**P**	**09 41 43.9**	**+1.2**
	baz=274						
DHY	**Denali Highway**	**48.96**	**35**	P	**P**	**09 41 44.6**	**+1.9**
DHY				IAmb	IAmb	09 42 08.6	
	comp=Z,17nm,1.4s						
KOLN	**Koldanda**	**48.98**	**276**	eP	**P**	**09 41 43.4**	**0.0**
	comp=Z,58nm,0.7s						
HDA	**Harding Lake**	**49.08**	**33**	P	**P**	**09 41 44.5**	**+1.1**
	baz=273,SNR=5.7						
SCM	**Sheep Creek Mo**	**49.08**	**36**	P	**P**	**09 41 45.0**	**+1.5**
SCM				pmax	pmax		
	comp=Z,21nm,1.0s						
SCM	**Sheep Creek Mo**	**49.08**	**36**	P	**P**	**09 41 44.8**	**+1.3**
	baz=275						
SCM	**Sheep Creek Mo**	**49.08**	**36**	P	**P**	**09 41 45.0**	**+1.5**
SCM				IAmb	IAmb	09 42 00.6	
	comp=Z,21nm,1.0s						
IL31		**49.09**	**33**	P	**P**	**09 41 44.3**	**+1.0**
IL31				IAmb	IAmb	09 42 07.6	
	comp=Z,10nm,0.9s						
ILAR	**Eielson Array**	**49.09**	**33**	P	**P**	**09 41 44.2**	**+0.8**
	comp=Z,4.9nm,0.7s,baz=267,slow=5.4,SNR=61						
ILAR	**Eielson Array**	**49.09**	**33**	P	**P**	**09 41 43.8**	**+0.3**
BOOM	**Boomskoye usch**	**49.29**	**297**	P	**P**	**09 41 45.8**	**+0.3**
BOOM				pmax	pmax		
	comp=Z,13nm,0.6s						
BOOM	**Boomskoye usch**	**49.29**	**297**	P	**P**	**09 41 45.8**	**+0.3**
BOOM				IAmb	IAmb	09 41 49.0	
	comp=Z,13nm,0.6s						
PYUN	**Piuthan**	**49.31**	**277**	eP	**P**	**09 41 46.3**	**+0.3**
	comp=Z,76nm,0.4s						
IPM	**Ipoh**	**49.40**	**238**	P	**P**	**09 41 45.9**	**-0.6**
IPM				IAmb	IAmb	09 41 49.9	
	comp=Z,12nm,0.7s						
TKM2	**Tokmak 2**	**49.40**	**298**	P	**P**	**09 41 47.3**	**+0.8**
	SNR=70						
TKM2	**Tokmak 2**	**49.40**	**298**	P	**P**	**09 41 46.9**	**+0.4**
BRZS	**Berezniki**	**49.51**	**308**	eP	**P**	**09 41 46.0**	**-0.9**
BRZS				pmax	pmax		
	comp=Z,2.0nm,0.3s						
EDFI	**Ende, Flores**	**49.59**	**206**	P	P	09 41 43.2	-4.7
M24K	**Tolsona, Glenn**	**49.59**	**36**	P	**P**	**09 41 48.5**	**+1.1**
HIN	**Hinchinbrook I**	**49.62**	**38**	P	**P**	**09 41 48.6**	**+1.0**
PRP	**Porcupine Dome**	**49.62**	**32**	P	**P**	**09 41 49.3**	**+1.6**
	baz=273,SNR=5.1						
PRP	**Porcupine Dome**	**49.62**	**32**	IAmb	IAmb	09 42 10.5	
	comp=Z,9.0nm,1.0s						
KLU	**Klutina**	**49.78**	**37**	P	**P**	**09 41 50.6**	**+1.8**
	baz=276						
KLU	**Klutina**	**49.78**	**37**	IAmb	IAmb	09 42 07.1	
	comp=Z,10.0nm,0.8s						
PAX	**Paxson**	**49.84**	**35**	P	**P**	**09 41 50.7**	**+1.4**
	baz=276						
BTLS	**Baital**	**49.87**	**301**	eP	**P**	**09 41 48.9**	**-0.8**
BTLS				pmax	pmax		
	comp=Z,8.0nm,0.5s						
BMAR	**Burnt Mountain**	**49.91**	**29**	P	**P**	**09 41 51.8**	**+2.1**
KBK	**Karagaybulak**	**49.94**	**298**	P	**P**	**09 41 51.0**	**+0.5**
	SNR=37						
USP	**Ospenovka**	**50.07**	**299**	P	**P**	**09 41 51.5**	**+0.2**
	SNR=17						
OTUK	**Ortayu**	**50.15**	**306**	P	**P**	**09 41 51.5**	**-0.3**
KSH	**Kashi**	**50.21**	**294**	P	**P**	**09 41 55.5**	**+2.9**
KSH				sP	sP	09 42 18.3	+3.2
KSH				pmax	pmax		
	comp=Z,13nm,0.8s						
KSH				LR	LR		

	comp=Z,370nm,17.0s						
KSH				LR	LR		
	comp=Z,300nm,18.7s						
KSH				LR	LR		
	comp=Z,520nm,14.4s						
AAK	**Ala-Archa**	50.26	298	LR	LR	10 04 36.7	
	comp=Z,485nm,19.0s,baz=119,slow=38						
AAK	**Ala-Archa**	50.26	298	P	**P**	**09 41 53.2**	**+0.3**
	SNR=17						
AAK	**Ala-Archa**	50.26	298	*i* P	**P**	**09 41 53.2**	**+0.3**
	SNR=18						
AAK	**Ala-Archa**	50.26	298*c*	*i*P	**P**	**09 41 53.0**	**+0.1**
AAK				pmax	pmax		
	comp=Z,38nm,0.7s						
AAK	**Ala-Archa**	50.26	298	P	**P**	**09 41 52.8**	**-0.1**
BRVK	**Borovoye**	50.30	312*d*	*e*P	**P**	**09 41 52.4**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BRVK	**Borovoye**	50.30	312	P	**P**	**09 41 53.2**	**+0.3**
BRVK	**Borovoye**	50.30	312	P	**P**	**09 41 52.2**	**-0.7**
BRVK				IAmb	IAmb	09 42 14.6	
	comp=Z,11nm,0.8s						
UCH	**Uchtor**	50.38	298	P	**P**	**09 41 54.2**	**0.0**
	SNR=10						
SCRK	**Sand Creek**	50.40	33	P	**P**	**09 41 54.5**	**+0.9**
	baz=276,SNR=7.6						
SCRK	**Sand Creek**	50.40	33	P	**P**	**09 41 54.5**	**+0.9**
SCRK				IAmb	IAmb	09 41 55.8	
	comp=Z,15nm,1.2s						
J26L	**Joseph Creek**	50.53	33	P	**P**	**09 41 55.6**	**+1.0**
	baz=276						
MENT	**Mentasta**	50.64	35	P	**P**	**09 41 57.0**	**+1.7**
MENT					**pP**	**09 42 12.2**	**+1.3**
MENT				IAmb	IAmb	09 42 18.1	
	comp=Z,23nm,1.4s						
EKS2	**Erkin-Say**	50.76	298	P	**P**	**09 41 56.9**	**+0.2**
	SNR=18						
L26K	**Log Cabin Wild**	50.79	35	P	**P**	**09 41 58.6**	**+2.2**
	baz=277						
L26K	**Log Cabin Wild**	50.79	35	P	**P**	**09 41 58.1**	**+1.7**
L26K					**pP**	**09 42 13.2**	**+1.0**
L26K				IAmb	IAmb	09 42 18.0	
	comp=Z,11nm,0.9s						
AML	**Almayashu**	50.98	298	P	**P**	**09 41 59.5**	**+0.8**
	SNR=23						
AML	**Almayashu**	50.98	298	*i* P	**P**	**09 41 59.5**	**+0.8**
	SNR=23						
VRDI	**Verde Repeater**	50.99	37	P	**P**	**09 41 59.8**	**+1.6**
VRDI				IAmb	IAmb	09 42 15.6	
	comp=Z,9.4nm,1.0s						
BERG	**Berg Lake**	51.00	38	P	**P**	**09 42 00.1**	**+2.1**
CRQM	**Cirque**	51.21	38	P	**P**	**09 42 01.6**	**+1.8**
WAX	**Waxell Ridge**	51.40	38	P	**P**	**09 42 03.4**	**+2.3**
L27K	**Beaver Creek,**	51.48	35	P	**P**	**09 42 03.6**	**+2.0**
	baz=278,SNR=6.1						
L27K	**Beaver Creek,**	51.48	35	IAmb	IAmb	09 42 20.9	
	comp=Z,9.6nm,1.0s						
EGAK	**Eagle**	51.53	32	P	**P**	**09 42 02.8**	**+0.9**
	baz=278						
EGAK	**Eagle**	51.53	32	IAmb	IAmb	09 42 30.5	
	comp=Z,9.5nm,1.1s						
M27K	**Edge Creek, AK**	51.56	35	P	**P**	**09 42 03.6**	**+1.3**
	baz=279						
M27K	**Edge Creek, AK**	51.56	35	IAmb	IAmb	09 42 21.5	
	comp=Z,16nm,1.1s						
ISLE	**Juniper Island**	51.63	38	P	**P**	**09 42 04.0**	**+1.1**
ISLE				IAmb	IAmb	09 42 24.8	
	comp=Z,23nm,1.2s						
BARN	**Barnard Glacie**	51.88	37	P	**P**	**09 42 06.1**	**+1.3**
BARN				IAmb	IAmb	09 42 10.7	
	comp=Z,15nm,1.2s						
GRNC	**Granite Creek**	51.89	37	P	**P**	**09 42 05.0**	**0.0**
GRNC				IAmb	IAmb	09 42 28.0	
	comp=Z,14nm,1.0s						
BVCY	**Beaver Creek**	52.02	35	P	**P**	**09 42 07.8**	**+2.2**
	baz=280						
PSI	**Prapat**	52.04	239	P	**P**	**09 42 07.0**	**+0.5**
	comp=Z,4.2nm,0.6s,baz=32,slow=9.8,SNR=4.6						
CTGM	**Chitina Glacie**	52.05	37	P	**P**	**09 42 07.7**	**+1.6**
YUK3	**Moose Creek**	52.32	36	P	**P**	**09 42 09.7**	**+1.6**
	baz=281						
DAWY	**Dawson**	52.40	33	P	**P**	**09 42 09.9**	**+1.5**
	baz=280						
I29M	**Ogilvie Camp,**	52.64	31	P	**P**	**09 42 12.1**	**+1.9**
	baz=280,SNR=11						
EPYK	**Eagle Plains**	53.11	30	P	**P**	**09 42 15.8**	**+2.2**
	baz=280,SNR=17						
EPYK	**Eagle Plains**	53.11	30	P	**P**	**09 42 15.6**	**+2.0**
YUK4	**Talbot Arm**	53.25	36	P	**P**	**09 42 16.7**	**+1.7**
	baz=282						
BRLS	**Borolday**	53.38	300	*e*P	P	09 42 26.3	+10
BRLS				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BTK	**Batken**	53.74	296	IAmb	IAmb	09 42 42.6	
	comp=Z,8.3nm,0.7s						
M30M	**Minto, Yukon**	53.84	35	P	**P**	**09 42 21.4**	**+2.4**
	baz=283						
HYT	**Haines Junctio**	53.91	37	P	**P**	**09 42 23.1**	**+3.4**
	baz=284						
HYT	**Haines Junctio**	53.91	37	P	**P**	**09 42 23.4**	**+3.7**
HYT				IAmb	IAmb	09 42 39.4	
	comp=Z,16nm,1.0s						
INK	**Inuvik**	53.95	27	P	**P**	**09 42 21.2**	**+1.5**
	comp=Z,6.7nm,0.5s,baz=294,slow=5.9,SNR=41						
INK	**Inuvik**	53.95	27	P	**P**	**09 42 21.0**	**+1.4**
	baz=282,SNR=11						
INK	**Inuvik**	53.95	27	IAmb	IAmb	09 42 42.2	
	comp=Z,11nm,0.9s						
GSI	**Gunungsitoli**	54.05	239	P	**P**	**09 42 22.0**	**+0.9**
KNRA	**Kununurra**	54.23	195	P	**P**	**09 42 23.4**	**+1.2**
NIL	**Nilore**	54.47	288	P	**P**	**09 42 23.9**	**-0.1**
NIL				pmax	pmax		
	comp=Z,22nm,0.7s						
NIL	**Nilore**	54.47	288	P	**P**	**09 42 23.9**	**-0.1**
SVE	**Sverdlovsk**	54.79	318	*e*P	**P**	**09 42 26.3**	**+0.4**
SVE				pmax	pmax		
	comp=Z,23nm,0.8s						
CHGR	**Chuyangaron**	55.46	295	P	**P**	**09 42 31.2**	**-0.1**
FARO	**Faro, Yukon**	55.48	35	P	**P**	**09 42 32.7**	**+1.8**
	baz=286						
ARU	**Arti**	56.00	318*c*	*i*P	**P**	**09 42 34.7**	**0.0**
ARU				*PP	**pP**	**09 42 51.2**	**+0.6**
ARU						09 44 36.4	
ARU				S	**S**	**09 50 18.0**	**-0.2**
ARU				SS	**SS**	**09 54 01.3**	**-3.1**
ARU				pmax	pmax		
	comp=Z,20nm,0.6s						
ARU				MLR	MLR		
	comp=Z,295nm,18.0s						
ARU	**Arti**	56.00	318	P	**P**	**09 42 34.5**	**-0.1**
P33M	**Teslin, Yukon**	56.31	37	P	**P**	**09 42 38.5**	**+1.5**
	baz=288						
KBL	**Kabul**	57.25	291	P	**P**	**09 42 43.5**	**-0.6**
KBL				pmax	pmax		
	comp=Z,18nm,1.1s						
KBL	**Kabul**	57.25	291	P	**P**	**09 42 46.1**	**+2.0**
	SNR=7.6						
KBL	**Kabul**	57.25	291	P	**P**	**09 42 43.5**	**-0.6**
KBL				IAmb	IAmb	09 42 44.7	
	comp=Z,18nm,1.1s						
FITZ	**Fitzroy Crossi**	57.28	198	P	**P**	**09 42 44.8**	**+0.7**
	comp=Z,2.0nm,0.5s,baz=349,slow=9.5,SNR=4.2						
WRAB	**Tennant Creek**	57.53	188⇓	*i*P	**P**	**09 42 46.3**	**+0.5**
WRAB				pmax	pmax		
	comp=Z,10.0nm,1.4s						
WRAB	**Tennant Creek**	57.53	188	P	**P**	**09 42 45.8**	**0.0**
WR0	**Warramunga Arr**	57.53	188	P	**P**	**09 42 46.1**	**+0.2**
WB2	**Warramunga Arr**	57.54	188	P	**P**	**09 42 45.9**	**0.0**
WRA	**Warramunga Arr**	57.54	188	P	**P**	**09 42 46.4**	**+0.4**
	comp=Z,6.6nm,0.4s,baz=4.9,slow=7.3,SNR=113						
WRA				LR	LR	10 07 00.6	
	comp=Z,31nm,20.7s,baz=320,slow=35						
WRA	**Warramunga Arr**	57.54	188	P	**P**	**09 42 45.0**	**-0.9**
AB31	**Akbulak array**	57.63	310	*i* P	**P**	**09 42 45.8**	**-0.5**
TGTN	**Hyland Airport**	57.98	34	P	**P**	**09 42 50.8**	**+2.2**
	baz=290,SNR=5.7						
AKTO	**Aktyubinsk**	58.35	312	LR	LR	10 09 11.1	
	comp=Z,192nm,20.1s,baz=68,slow=37						
KIRV	**Kirov**	59.87	323*c*	*i*P	**P**	**09 43 01.8**	**+0.2**
SPA0	**Spitsbergen Ar**	60.05	349	*e*P	**P**	**09 43 03.5**	**+0.8**
NOR	**Nord**	60.57	356	*i* P	**P**	**09 43 06.1**	**0.0**
NOR				IAmb	IAmb	09 43 07.3	
	comp=Z,4.0nm,0.7s						
AS31	**Alice Springs**	61.27	188	P	**P**	**09 43 11.9**	**+0.4**
ASAR	**Alice Springs**	61.27	188	P	**P**	**09 43 12.1**	**+0.4**
	comp=Z,1.7nm,0.6s,baz=9.0,slow=8.5,SNR=25						
ASAR				LR	LR	10 09 15.4	
	comp=Z,54nm,20.1s,baz=3.5,slow=35						
ASAR	**Alice Springs**	61.27	188	P	**P**	**09 43 12.0**	**+0.4**
LVZ	**Lovozero**	61.67	336	P	**P**	**09 43 14.1**	**+0.2**
LVZ				pmax	pmax		
	comp=Z,75nm,1.5s						
LVZ	**Lovozero**	61.67	336	P	**P**	**09 43 14.1**	**+0.2**
HRA	**Herat**	62.33	293	P	**P**	**09 43 19.1**	**+0.1**
HRA				IAmb	IAmb	09 43 20.0	
	comp=Z,8.6nm,0.7s						
KLMR	**Klimovskoe**	63.35	328	*e*P	**P**	**09 43 23.8**	**-1.3**
KLMR				*e*		09 45 42.5	
KLMR				pmax	pmax		
	comp=Z,20nm,0.8s						
KLMR	**Klimovskoe**	63.35	328	*e*P	**P**	**09 43 23.9**	**-1.2**
KLMR				AMP		09 43 26.4	
	comp=Z,20nm,0.8s						
KLMR				*e*PP	**PP**	**09 45 42.6**	**-1.9**
HAMF	**Hammerfest**	63.36	341	*e*P	**P**	**09 43 25.0**	**0.0**
YKA	**Yellowknife Ar**	63.39	30	P	**P**	**09 43 25.8**	**+0.5**
	comp=Z,0.9nm,0.5s,baz=38,slow=6.8,SNR=12						
YKA				LR	LR	10 12 02.1	
	comp=Z,38nm,20.4s,baz=0.0,slow=37						
BELG	**Belogornoye**	63.45	317	LR	LR	10 11 43.9	
	comp=Z,70nm,20.8s,baz=111,slow=37						
BELG	**Belogornoye**	63.45	317*c*	*i*P	**P**	**09 43 25.8**	**0.0**
BELG				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ARA0	**ARCESS Array S**	63.55	339	*e*P	**P**	**09 43 26.1**	**-0.2**
ARCES	**ARCESS Array B**	63.55	339	P	**P**	**09 43 26.6**	**+0.4**
	comp=Z,4.3nm,0.6s,baz=51,slow=7.0,SNR=29						
ARCES				LR	LR	10 14 53.1	
	comp=Z,82nm,18.4s,baz=50,slow=40						
GEYT	**Alibeck**	63.60	299	P	**P**	**09 43 27.6**	**+0.4**
	comp=Z,10nm,0.6s,baz=46,slow=11,SNR=9.3						
GEYT				LR	LR	10 14 46.2	
	comp=Z,44nm,18.3s,baz=220,slow=39						
GEYT	**Alibeck**	63.60	299	IAmb	IAmb	09 43 28.1	
	comp=Z,12nm,0.7s						
GYA0B	**ALIBECK ARRAY**	63.60	299	IAmb	IAmb	09 43 28.1	
	comp=Z,15nm,0.7s						
DZM	**Mont Dzumac**	63.78	154	*e*LR	LR	10 02 37.3	
	comp=Z,231nm,21.1s						
JETT	**Jettan, Norway**	64.92	341	*e*P	**P**	**09 43 36.9**	**+1.6**
NEEM	**North Greenlan**	65.05	3	*i* P	**P**	**09 43 36.6**	**+0.3**
TRO	**Tromso**	65.26	341	*e*P	**P**	**09 43 37.4**	**0.0**
DAG	**Danmarks Havn**	65.29	355	P	**P**	**09 43 37.8**	**+0.3**
DAG	**Danmarks Havn**	65.29	355	*i* P	**P**	**09 43 37.6**	**+0.1**
DAG				IAmb	IAmb	09 43 38.4	
	comp=Z,7.8nm,0.6s						
MOS	**Moscow**	66.86	323	*e*P	**P**	**09 43 46.2**	**-1.7**
MOS				pmax	pmax		
	comp=Z,52nm,1.5s						
VRH	**Novokhopyorsk**	67.22	318	*e*P	**P**	**09 43 49.7**	**-0.6**
VRH				pmax	pmax		
	comp=Z,30nm,0.5s						
STEI	**Steigen**	67.41	341	*e*P	**P**	**09 43 51.3**	**+0.1**
OBN	**Obninsk**	67.71	323	LR	LR	10 14 36.7	
	comp=Z,26nm,20.1s,baz=29,slow=37						
OBN	**Obninsk**	67.71	323*c*	*e*P	**P**	**09 43 53.0**	**-0.3**
OBN				*SP	**pP**	**09 44 09.0**	**-0.6**
OBN						09 44 14.0	
OBN				SS	SS	09 57 12.0	+4.9
OBN				pmax	pmax		
	comp=Z,48nm,1.7s						
OBN				MLR	MLR		
	comp=Z,101nm,16.0s						
FAUS	**Fauske**	67.80	340	*e*P	**P**	**09 43 53.7**	**+0.1**
LPSR	**Galich'ya Gora**	67.93	320	*e*P	**P**	**09 43 54.1**	**-0.6**
LPSR				pmax	pmax		
	comp=Z,20nm,0.7s						
FIA1	**FINESS Array S**	68.39	332	P	**P**	**09 43 57.4**	**0.0**
FIA1				IAmb	IAmb	09 43 58.1	
	comp=Z,17nm,0.8s						
FINES	**FINESS Array B**	68.39	332	P	**P**	**09 43 57.5**	**+0.1**
	comp=Z,9.4nm,0.4s,baz=34,slow=9.0,SNR=101						
FINES				LR	LR	10 16 13.1	
	comp=Z,193nm,19.3s,baz=48,slow=38						
VSR	**Storozhevoye**	68.57	319	*e*P	**P**	**09 43 58.3**	**-0.5**
VSR				pmax	pmax		
	comp=Z,20nm,0.8s						
VORD	**Divnogorie**	68.64	318	*e*P	**P**	**09 43 58.4**	**-0.8**
VORD				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MOR8	**Moi Rana**	68.91	340	*e*P	**P**	**09 43 59.9**	**-0.8**
EDM	**Edmonton**	68.97	38	P	**P**	**09 44 02.5**	**+1.2**
EDM				pmax	pmax		
	comp=Z,16nm,1.2s						
EDM	**Edmonton**	68.97	38	P	**P**	**09 44 02.5**	**+1.2**
EDM				IAmb	IAmb	09 44 18.2	
	comp=Z,16nm,1.2s						
KONS	**Konsvik**	69.03	340	*e*P	**P**	**09 44 02.0**	**+0.7**
STKA	**Stephens Creek**	69.04	180	P	**P**	**09 44 01.8**	**0.0**
	comp=Z,1.6nm,0.6s,baz=339,slow=8.8,SNR=4.4						
STKA				LR	LR	10 13 28.3	
	comp=Z,68nm,21.2s,baz=24,slow=35						
FORT	**Forrest**	69.08	192	P	**P**	**09 44 01.7**	**-0.3**
FORT					**pP**	**09 44 16.7**	**-1.6**
GOF	**Gofitskoye**	69.77	312⇑	*e*P	**P**	**09 44 06.8**	**+0.5**
NEW	**Newport**	69.78	44	P	**P**	**09 44 08.1**	**+1.7**
	baz=304						
PINE	**Pine Mountain**	70.02	50	P	**P**	**09 44 10.0**	**+1.8**
PINE				pP	**pP**	**09 44 24.8**	**+0.3**
L04D	**Klamath Falls**	70.04	52	P	**P**	**09 44 10.0**	**+1.8**
	baz=303						
VSU	**Vasula**	70.04	329⇓	*e*P	**P**	**09 44 06.8**	**-0.9**
VSU				pmax	pmax		
	comp=Z,236nm,3.9s						
SUMG	**Summit**	70.20	360	P	**P**	**09 44 08.6**	**-0.4**
SUMG				pmax	pmax		
	comp=Z,28nm,1.5s						
SUMG	**Summit**	70.20	360	*i* P	**P**	**09 44 09.5**	**+0.5**
SUMG				IAmb	IAmb	09 44 11.1	
	comp=Z,5.8nm,0.8s						
SUMG	**Summit**	70.20	360	P	**P**	**09 44 08.6**	**-0.4**
SUMG				IAmb	IAmb	09 44 26.3	
	comp=Z,28nm,1.5s						
ZEI	**Tsey**	70.50	309	*e*P	**P**	**09 44 09.8**	**-1.3**
ZEI				pmax	pmax		
	comp=Z,4.0nm,1.3s						
M04C	**Macdoel**	70.57	52	P	**P**	**09 44 13.8**	**+2.4**
	baz=303						
KBZ	**Khabaz**	70.59	311	P	**P**	**09 44 11.7**	**+0.4**
	comp=Z,9.3nm,0.9s,baz=62,slow=2.4,SNR=17						
KBZ				LR	LR	10 19 50.6	
	comp=Z,109nm,18.4s,baz=64,slow=40						
KBZ	**Khabaz**	70.59	311*c*	*i*P	**P**	**09 44 11.3**	**0.0**
KBZ				pmax	pmax		
	comp=Z,15nm,0.9s						
KIV	**Kislovodsk**	70.59	311	*i* P	**P**	**09 44 13.2**	**+1.7**
	SNR=6.0						
KIV	**Kislovodsk**	70.59	311	*e*P	**P**	**09 44 11.9**	**+0.4**
KIV				pmax	pmax		
	comp=Z,32nm,1.0s						
KIV				MLR	MLR		
	comp=Z,71nm,17.0s						
KIV	**Kislovodsk**	70.59	311	P	**P**	**09 44 11.9**	**+0.4**
K05A	**Summer Lake**	70.64	51	P	**P**	**09 44 14.4**	**+2.5**
WSAR	**Wadi Sarin**	70.75	285	P	**P**	**09 44 12.5**	**-0.1**
WBK	**Wadi Bani Khal**	70.83	284	P	**P**	**09 44 12.7**	**-0.4**
NSS	**Namsos**	70.83	339	*e*P	**P**	**09 44 12.8**	**+0.4**
NEY	**Neytrino**	70.96	310⇓	*e*P	**P**	**09 44 15.2**	**+1.3**
NEY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BANOM	**Banah**	71.06	288	*i* P	**P**	**09 44 15.0**	**+0.5**
	SNR=11						
BANOM	**Banah**	71.06	288	P	**P**	**09 44 15.1**	**+0.6**
	SNR=11						
SHME	**Shamm**	71.11	289	*i* P	**P**	**09 44 15.2**	**+0.5**
	SNR=17						
SHME	**Shamm**	71.11	289	P	**P**	**09 44 15.1**	**+0.3**
	SNR=5.2						
SMDO	**Samad**	71.29	285	P	**P**	**09 44 15.9**	**-0.1**
MDH	**Madha**	71.40	288	P	**P**	**09 44 16.7**	**+0.1**
O03E	**Paynes Creek**	71.41	53	P	**P**	**09 44 17.9**	**+1.4**
	baz=304						
GNI	**Garni**	71.42	307	P	**P**	**09 44 17.3**	**+0.6**
GNI	**Garni**	71.42	307⇓	*e*P	**P**	**09 44 18.5**	**+1.8**
GNI				pmax	pmax		
	comp=Z,22nm,1.7s						
MASF	**Masafi**	71.46	288	P	**P**	**09 44 17.7**	**+0.7**
	SNR=8.8						
MSFE	**Esma-Masafi**	71.47	288	*i* P	**P**	**09 44 17.7**	**+0.6**
	SNR=8.8						
HOQ	**Hoqain**	71.57	286	P	**P**	**09 44 17.0**	**-0.7**
	SNR=5.4						
JMDO	**Jabal Madar**	71.63	284	P	**P**	**09 44 18.1**	**+0.1**
UOSS	**Minazif**	71.66	288	*i* P	**P**	**09 44 18.1**	**0.0**
	SNR=9.2						
UOSS	**Minazif**	71.66	288	P	**P**	**09 44 18.2**	**+0.1**
UOSS	**Minazif**	71.66	288	P	**P**	**09 44 17.9**	**-0.3**
UOSS				IAmb	IAmb	09 44 20.3	
	comp=Z,17nm,0.7s						
J08A	**Circle Bar Ran**	71.76	49	IAmb	IAmb	09 44 39.0	
	comp=Z,17nm,1.3s						
HATD	**Hatta, Dubai**	71.78	288	*i* P	**P**	**09 44 19.3**	**+0.4**
	SNR=16						
HATD	**Hatta, Dubai**	71.78	288	P	**P**	**09 44 18.6**	**-0.3**
	SNR=16						
SOHO	**SOHO**	71.86	287	*i* P	**P**	**09 44 19.3**	**0.0**
	SNR=9.2						
SOHO	**SOHO**	71.86	287	P	**P**	**09 44 19.6**	**+0.2**
ASHO	**Ashiyiah**	71.92	287	*i* P	**P**	**09 44 19.8**	**+0.1**
	SNR=9.0						
ASHO	**Ashiyiah**	71.92	287	P	**P**	**09 44 20.0**	**+0.3**
	SNR=9.0						
MNK	**Minsk**	72.10	326	*i* P	**P**	**09 44 18.2**	**-2.0**
MNK				*i*		09 44 36.3	
MNK				*i*		09 46 58.4	
MNK				*i* PPP	PPP	09 48 42.4	
MNK				*i* S	**S**	**09 53 35.5**	**-1.9**
MNK				*i*		09 54 18.7	
MNK				*i* SS	**SS**	**09 58 12.6**	**-1.9**
MNK				*i* SSS	SSS	10 01 31.3	
MNK				pmax	pmax		
	comp=N,38nm,1.4s						
MNK				pmax	pmax		
	comp=E,3.0nm,1.1s						
MNK				pmax	pmax		
	comp=Z,31nm,1.4s						
MNK				MLR	MLR		
	comp=E,23nm,14.0s						
MNK				MLR	MLR		
	comp=N,201nm,15.0s						
MNK				MLR	MLR		
	comp=Z,156nm,18.0s						
MNK	**Minsk**	72.10	326	*i* P	**P**	**09 44 18.2**	**-2.0**
	comp=E,3.0nm,1.1s						
MNK				*i* P	**P**	**09 44 18.2**	**-2.0**
	comp=N,38nm,1.4s						
MNK				*i* P	**P**	**09 44 18.2**	**-2.0**
	comp=Z,31nm,1.4s,baz=50						
MNK				*i* PcP	**pP**	**09 44 36.3**	**-0.4**
MNK				*i* PP	**PP**	**09 46 58.5**	**-1.9**
MNK				*i* PPP	PPP	09 48 42.5	
MNK				*i* S	**S**	**09 53 35.6**	**-1.8**
MNK				*i* SS	**SS**	**09 58 12.7**	**-1.9**
MNK				*i* SSS	SSS	10 01 31.3	
MNK				*i* LR	LR	10 16 09.2	
MNK				*i* LRM	MLR	10 17 58.4	
	comp=E,23nm,14.1s						
MNK				*i* LRM	MLR	10 18 03.5	
	comp=N,201nm,14.7s						
MNK				*i* LRM	MLR	10 18 25.2	
	comp=Z,156nm,17.9s						
BSY	**Bisya**	72.12	285	P	**P**	**09 44 21.2**	**+0.3**
WVOR	**Wild Horse Val**	72.18	50	IAmb	IAmb	09 44 39.1	
	comp=Z,21nm,1.5s						
PLID	**Pearl Lake**	72.22	47	P	**P**	**09 44 22.5**	**+1.0**
PLID					**pP**	**09 44 38.1**	**+0.2**
FAQ	**Al Faqa, Dubai**	72.24	288	*i* P	**P**	**09 44 21.5**	**-0.1**
	SNR=5.9						
NACGM	**Naroch**	72.32	327	*i* P	**P**	**09 44 21.9**	**+0.4**
ALNE	**Al Ain**	72.50	287	P	**P**	**09 44 23.3**	**+0.1**
ALNE	**Al Ain**	72.50	287	P	**P**	**09 44 23.4**	**+0.3**
	SNR=6.1						
ASUD	**Al Ashush, Dub**	72.50	288	*i* P	**P**	**09 44 23.5**	**+0.4**
	SNR=9.2						
ASUD	**Al Ashush, Dub**	72.50	288	P	**P**	**09 44 23.6**	**+0.4**
MPK	**Martis Peak**	73.10	53	P	**P**	**09 44 28.2**	**+1.4**
MPK				IAmb	IAmb	09 44 45.3	
	comp=Z,26nm,1.3s						
PABE	**Paberze**	73.13	328	P	**P**	**09 44 26.6**	**+0.3**
ANN	**Anapa**	73.20	314	*e*P	**P**	**09 44 25.1**	**-1.8**
ANN				*e**PP	**PcP**	**09 44 41.4**	**-1.8**
ANN				*e*		09 47 09.2	
ANN				*e*S	**S**	**09 53 49.4**	**-0.8**
ANN				pmax	pmax		
	comp=Z,87nm,1.0s						
MFID	**Camas Ranch**	73.30	48	P	**P**	**09 44 29.5**	**+1.8**
MFID					**PcP**	**09 44 44.7**	**+0.8**
PNTR	**Pine Nut**	73.49	53	P	**P**	**09 44 31.5**	**+2.4**
PNTR					**pP**	**09 44 46.8**	**+1.3**
CMB	**Columbia Colle**	73.59	55		**pP**	**09 44 46.2**	**+0.3**
CMB				IAmb	IAmb	09 44 47.0	
	comp=Z,23nm,1.5s						
DOMB	**Dombas**	73.60	339	*e*P	**P**	**09 44 29.5**	**+0.4**
NB2	**NORSAR Subarra**	73.74	337	P	**P**	**09 44 29.2**	**-0.7**
	comp=Z,3.9nm,0.6s,baz=39,slow=6.2						
NOA	**NORSAR Array B**	73.74	337	P	**P**	**09 44 30.1**	**+0.2**
	comp=Z,4.2nm,0.6s,baz=38,slow=5.9,SNR=30						
NOA				LR	LR	10 20 17.9	
	comp=Z,184nm,19.6s,baz=40,slow=38						
NC602	**NORSAR Array S**	73.88	337	*e*P	**P**	**09 44 30.6**	**0.0**
NORES	**NORESS Array B**	73.88	337	P	**P**	**09 44 30.5**	**-0.1**
EGMT	**Eagleton**	73.91	41	P	**P**	**09 44 32.6**	**+1.4**
	baz=309						
AKASG	**Malin Array Be**	73.92	322	P	**P**	**09 44 30.9**	**-0.2**
	comp=Z,13nm,0.5s,baz=46,slow=6.3,SNR=55						
AKASG				LR	LR	10 20 13.8	
	comp=Z,139nm,18.7s,baz=60,slow=38						
AKASG	**Malin Array Be**	73.92	322*c*	*e*P	**P**	**09 44 30.8**	**-0.2**
AKASG				pmax	pmax		
	comp=Z,16nm,0.5s						
AKBB	**Malin Array Si**	73.92	322*c*	*e*P	**P**	**09 44 31.2**	**+0.2**
AKBB				pmax	pmax		
	comp=Z,16nm,0.6s						
AKBB	**Malin Array Si**	73.92	322	IAmb	IAmb	09 44 31.4	
	comp=Z,17nm,0.7s						
HLID	**Hailey**	74.04	47	P	**P**	**09 44 34.0**	**+1.9**
	baz=307						
HLID	**Hailey**	74.04	47		**PcP**	**09 44 48.4**	**+1.2**
JRN	**Qarnain Island**	74.19	289	P	**P**	**09 44 32.2**	**-0.9**
BOZ	**Bozeman (W)**	74.39	44	P	**P**	**09 44 35.6**	**+1.5**
	baz=308						
KVN	**Kaiserville**	74.46	53	P	**P**	**09 44 36.5**	**+1.8**
KVN				pmax	pmax		
	comp=Z,20nm,1.4s						
KVN	**Kaiserville**	74.46	53	P	**P**	**09 44 36.5**	**+1.8**
KVN				IAmb	IAmb	09 44 54.5	
	comp=Z,20nm,1.4s						
LHV	**Little Huntoon**	74.67	53	IAmb	IAmb	09 44 54.9	
	comp=Z,18nm,1.0s						
NVAR	**Mina Array Bea**	74.70	53	P	**P**	**09 44 37.9**	**+1.8**
	comp=Z,2.3nm,0.7s,baz=298,slow=6.0,SNR=20						
NVAR				LR	LR	10 09 07.3	
	comp=Z,53nm,21.7s,baz=282,slow=29						
SKAR	**Skarslia**	74.90	338	*e*P	**P**	**09 44 37.9**	**+1.2**
SHMA	**Al-Shehemyia**	75.08	291	P	**P**	**09 44 37.7**	**-0.5**
ELK	**Elko**	75.24	50	pP	pP	09 44 55.3	-0.4
KONO	**Kongsberg**	75.33	337	*e*P	**P**	**09 44 39.2**	**+0.1**
MIB	**Mutribah**	75.48	296	*e*P	**P**	**09 44 40.0**	**-0.4**
KBD	**Kabd**	75.58	296	*e*P	**P**	**09 44 40.0**	**-1.1**
QRN	**Al-Qurain**	75.67	295	*e*P	**P**	**09 44 41.3**	**-0.2**
VES	**Vestal, Richgr**	75.71	56	P	**P**	**09 44 42.9**	**+1.2**
	baz=306						
H17A	**Grant Village**	75.72	45	P	**P**	**09 44 45.4**	**+3.4**
	baz=309						
H17A	**Grant Village**	75.72	45	IAmb	IAmb	09 44 46.5	
	comp=Z,17nm,1.2s						
FLWY	**Flagg Ranch**	75.85	45	IAmb	IAmb	09 44 45.7	
	comp=Z,21nm,1.5s						
RLMT	**Red Lodge**	75.99	44	P	**P**	**09 44 45.3**	**+1.9**
	baz=310						
CWC	**Cottonwood Cre**	76.01	55	P	**P**	**09 44 44.3**	**+0.7**
	baz=306						
ISA	**Isabella, Lake**	76.21	56	pP	pP	09 45 00.6	-0.6
R11A	**Troy Canyon, C**	76.46	52	P	**P**	**09 44 47.8**	**+1.6**
	baz=307						
R11A	**Troy Canyon, C**	76.46	52	IAmb	IAmb	09 45 04.2	
	comp=Z,12nm,1.3s						
MPMC	**Manual Prospec**	76.62	55	P	**P**	**09 44 48.7**	**+1.5**
	baz=307						
FURC	**Furnace Creek,**	76.78	54	P	**P**	**09 44 49.8**	**+2.1**
	baz=307						
DOK	**Doka**	76.81	283	P	**P**	**09 44 47.3**	**-0.9**
SPR3	**Spring Creek 3**	76.85	51	pP	pP	09 45 06.0	+0.9
HWUT	**Hardware Ranch**	76.90	47	IAmb	IAmb	09 45 07.4	
	comp=Z,9.9nm,1.1s						
EDW2	**Edwards Air Fo**	76.99	56	P	**P**	**09 44 50.5**	**+1.4**

	baz=307						
DUG	Dugway, Tooele	77.04	49	P	P	09 44 51.4	+2.1
	baz=308						
DUG	Dugway, Tooele	77.04	49	IAmb	IAmb	09 45 08.1	
	comp=Z,6.3nm,0.8s						
GWY	Greenwater Val	77.08	54	IAmb	IAmb	09 45 07.9	
	comp=Z,7.5nm,0.8s						
QSM	Queen of Sheba	77.08	55	IAmb	IAmb	09 45 07.8	
	comp=Z,14nm,1.0s						
TCUT	Toone Canyon	77.30	48	IAmb	IAmb	09 45 10.5	
	comp=Z,6.6nm,0.7s						
BW06	Boulder Array	77.33	46	P	P	09 44 52.0	+1.0
	baz=310						
PDAR	Pinedale Array	77.33	46	P	P	09 44 52.1	+1.1
	comp=Z,1.5nm,0.5s,baz=341,slow=0.3,SNR=27						
WHFO	Wadi Hawf	77.49	283	P	P	09 44 50.8	-1.3
SHPR	Sheep Range	77.85	53	pP	pP	09 45 11.3	+0.7
TUQ	Turquoise Moun	78.01	55	P	P	09 44 56.7	+1.9
	baz=308						
ABTO	Aybut	78.19	283	P	P	09 44 55.0	-0.9
KOLS	Kolonicke sedl	78.43	324	*e*P	P	09 44 57.9	+1.1
KOLS	Kolonicke sedl	78.43	324	*e*P	P	09 44 57.9	+1.1
BRTR	Keskin Array B	78.53	311	P	P	09 44 57.9	+0.2
	comp=Z,1.6nm,0.7s,baz=72,slow=4.0,SNR=7.8						
BRTR				LR	LR	10 24 21.6	
	comp=Z,78nm,18.8s,baz=58,slow=39						
RDMU	Red Mountain	78.72	47	IAmb	IAmb	09 45 17.4	
	comp=Z,13nm,0.9s						
P17A	Butcher Ranch,	78.73	49	IAmb	IAmb	09 45 17.5	
	comp=Z,8.9nm,0.8s						
LCMT	Little Creek M	78.75	52	IAmb	IAmb	09 45 17.1	
	comp=Z,16nm,1.4s						
PFO	Pinyon Flats O	78.77	56	P	P	09 45 01.5	+2.5
	baz=308						
PFO	Pinyon Flats O	78.77	56		pP	09 45 16.2	+0.6
P18A	Preston Nutter	78.93	48	IAmb	IAmb	09 45 17.6	
	comp=Z,13nm,1.4s						
KNB	Kanab	79.01	52	pP	pP	09 45 18.0	+1.0
IRM	Iron Mountain	79.30	55	P	P	09 45 03.6	+1.8
	baz=308						
RSSD	Black Hills	79.47	42	P	P	09 45 03.8	+1.0
	baz=313						
LANS	Liptovska Anna	79.56	325	*e*P	P	09 45 04.3	+1.3
LANS	Liptovska Anna	79.56	325	*e*P	P	09 45 04.3	+1.3
U15A	North Rim	79.71	52	IAmb	IAmb	09 45 22.8	
	comp=Z,18nm,1.4s						
MORC	Moravsky Berou	79.95	327	P	P	09 45 07.0	+1.9
DPC	Dobruska-Polom	80.05	328	*e*P	P	09 45 06.5	+0.9
DPC	Dobruska-Polom	80.05	328	*e*P	P	09 45 06.5	+0.9
PSZ	Piszkesteto	80.27	324	P	P	09 45 09.4	+2.6
VYHS	Vyhne	80.33	325	*e*P	P	09 45 09.1	+2.0
VYHS	Vyhne	80.33	325	*e*P	P	09 45 09.1	+2.0
RAYN	Ar Rayn	80.47	292	P	P	09 45 08.1	-0.3
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
RAYN	Ar Rayn	80.47	292	P	P	09 45 08.1	-0.3
CLL	Collm	80.68	330	*i* P	P	09 45 09.0	+0.1
CLL				*e**PP	pP	09 45 25.0	-0.6
CLL				pmax	pmax		
	comp=Z,45nm,1.8s						
CLL	Collm	80.68	330	*i* P	P	09 45 09.0	+0.1
	comp=Z,45nm,1.8s						
CLL				*e*pP	pP	09 45 25.0	-0.6
CLL				LmV		10 23 00.0	
	comp=Z,100nm,18.2s						
WUAZ	Wupatki	80.86	52	P	P	09 45 12.5	+2.1
	baz=310						
WUAZ	Wupatki	80.86	52	IAmb	IAmb	09 45 31.1	
	comp=Z,12nm,1.1s						
PRU	Pruhonice	81.07	328	*e*P	P	09 45 11.6	+0.6
PRU	Pruhonice	81.07	328	*e*P	P	09 45 11.6	+0.6
MVCO	Mesa Verde	81.54	49	P	P	09 45 15.8	+1.8
	baz=311						
MVCO	Mesa Verde	81.54	49	IAmb	IAmb	09 45 33.8	
	comp=Z,11nm,1.1s						
CKRC	Cesky Krumlov	82.07	328	*e*P	P	09 45 16.5	+0.2
KHC	Kasperske Hory	82.13	328	*e*P	P	09 45 17.1	+0.4
KHC				*e*		09 45 32.0	
KHC	Kasperske Hory	82.13	328	*e*P	P	09 45 17.1	+0.4
KHC				*e*pP	pP	09 45 32.0	-1.4
S22A	4UR Ranch, Cre	82.18	48	P	P	09 45 19.7	+2.3
	baz=312						
GERES	GERESS Array B	82.30	328	P	P	09 45 17.8	+0.1
	comp=Z,3.2nm,0.6s,baz=59,slow=5.1,SNR=6.3						
GERES				LR	LR	10 25 22.4	
	comp=Z,153nm,18.3s,baz=24,slow=38						
VTS	Vitosha	82.42	319	IAmb	IAmb	09 45 19.9	
	comp=Z,6.9nm,0.7s						
EKA	Eskdalemuir Ar	82.68	340	P	P	09 45 19.6	+0.3
SDCO	Great Sand Dun	82.96	47	P	P	09 45 22.8	+1.3
	baz=313						
ECSD	EROS Data Cent	83.54	38	P	P	09 45 24.7	+0.7
	baz=317						
T25A	Trinidad	84.01	47	P	P	09 45 28.5	+1.7
	baz=313						
ANMO	Albuquerque	84.27	50	P	P	09 45 29.4	+1.2
ANMO				*PP	pP	09 45 45.5	+0.5
ANMO				pmax	pmax		
	comp=Z,14nm,1.3s						
ANMO	Albuquerque	84.27	50	P	P	09 45 30.1	+1.9
	baz=312						
ANMO	Albuquerque	84.27	50	P	P	09 45 29.4	+1.2
ANMO				pP	pP	09 45 45.5	+0.5
ANMO				IAmb	IAmb	09 45 46.5	
	comp=Z,14nm,1.3s						
BCLA	Clavier	84.29	334	*d*P	P	09 45 27.9	+0.2
PMOR	Pomariorio Ree	84.37	114	*e*T	T	11 18 38.1	
	comp=Z,23nm,0.2s						
BMRD	Maredsous	84.58	334	*d*P	P	09 45 30.1	+1.0
LTZ	Lake Taylor	84.71	158	P	P	09 45 28.0	-1.6
STAL	STALIGIAL	84.74	327	IAmb	IAmb	09 45 52.1	
	comp=Z,12nm,1.0s						
PPT	Papeete	84.85	117	LR	LR	10 19 30.2	
	comp=Z,117nm,21.2s,baz=306,slow=33						
PPT2	Papeete2	84.86	117	*e*LR	LR	10 11 59.4	
	comp=Z,390nm,32.5s						
PPT2	Papeete2	84.86	117	*e*T	T	11 19 15.8	
	comp=Z,6.9nm,0.3s						
319A	Douglas	84.87	54	IAmb	IAmb	09 45 49.0	
	comp=Z,15nm,1.3s						
SCHQ	Schefferville	84.87	16	P	P	09 45 31.1	+0.5
	comp=Z,3.5nm,0.9s,baz=280,slow=8.3,SNR=3.7						
SCHQ	Schefferville	84.87	16	IAmb	IAmb	09 45 35.5	
	comp=Z,13nm,1.3s						
MEH	Mehetia	86.13	116	*e*T	T	11 20 50.0	
	comp=Z,34nm,0.3s						
MNTX	Cornudas Mount	87.13	52	pP	pP	09 45 59.3	+0.3
TBI	Tubuai	88.77	121	*e*LR	LR	10 14 12.0	
	comp=Z,220nm,27.2s						
TBI	Tubuai	88.77	121	*e*T	T	11 24 07.7	
	comp=Z,77nm,0.3s						
TX32	Lajitas Array	89.82	52	IAmb	IAmb	09 46 12.6	
	comp=Z,4.7nm,0.9s						
TXAR	Lajitas Array	89.82	52	P	P	09 45 56.1	+1.0
	comp=Z,1.9nm,0.5s,baz=291,slow=3.1,SNR=81						
TXAR				LR	LR	10 20 21.1	
	comp=Z,30nm,21.8s,baz=0.0,slow=32						
U40A	Yellville	90.97	41	P	P	09 46 00.7	+0.5
	baz=320						
JCT	Junction City	91.40	49	P	P	09 46 03.1	+0.8
	baz=316						
WHTX	Lake Whitney,	91.69	47	P	P	09 46 05.5	+1.9
	baz=317						
WHTX	Lake Whitney,	91.69	47	pP	pP	09 46 20.7	+0.2
KEST	Kesra	94.64	323	LR	LR	10 32 59.2	
	comp=Z,71nm,19.8s,baz=276,slow=38						
ESDC	Sonseca Array	96.86	334	LR	LR	10 34 45.9	
	comp=Z,142nm,20.3s,baz=340,slow=38						
TORD	Torodi Ar. Bea	116.99	315	PKP	PKPdf	09 51 40.2	-0.9
	comp=Z,0.7nm,0.5s,baz=14,slow=1.7,SNR=8.5						
DBIC	Dimbokro	125.94	317	PKP	PKPdf	09 51 58.1	-0.2
	comp=Z,2.1nm,0.6s,baz=12,slow=4.0,SNR=5.2						
SNAA	Sanae	141.21	197	PKPdf	PKPdf	09 52 22.7	-2.5
VNA2	Neumayer--Watz	142.78	196	PKPdf	PKPdf	09 52 24.9	-3.0
VNA3	Neumayer Olymp	143.03	195	PKPdf	PKPab	09 52 25.4	+1.6
VNA1	Neumayer--Stat	143.18	196	PKPdf	PKPbc	09 52 26.3	+0.6
LPAZ	La Paz	146.44	59	PKPbc	PKPbc	09 52 38.7	+0.6
	comp=Z,4.5nm,0.5s,baz=359,slow=25,SNR=32						

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*IDC **19** 09:36:27.2±1.2, 6°.03S×128°.62E, h302^{km}±19^{km}, mb3.2/1, mb1 2.8/5, mb1mx2.5/37, mbtmp3.5/5 Error ellipse: s-maj=27.0km s-min=12.9km az=114.0*

ISC 19 09:36:27.6±0.9, **6°.04S**±0°.08×**128°.6E**±0°.1, **h322**^{km}**, n6,** σ**1^{s}.75**/9**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.78	27	P	Pn	09 37 55.8	+0.7
	0.8nm,0.3s,baz=177,slow=23,SNR=1.4						
SIJI				S	S	09 39 03.0	-2.7
	3.1nm,0.3s,baz=84,slow=23,SNR=9.8						
BATI	Baumata	6.41	229	P	Pn	09 38 03.1	+0.6
	29nm,0.3s,baz=52,slow=3.1,SNR=8.0						
BATI				S	S	09 39 16.9	-2.3
	4.4nm,0.3s,baz=264,slow=11,SNR=1.6						
FITZ	Fitzroy Crossi	12.33	193	P	Pn	09 39 12.5	-1.4
	0.2nm,0.3s,baz=18,slow=11,SNR=7.0						
FITZ				S	S	09 41 31.2	+0.4
	0.2nm,0.3s,baz=33,slow=13,SNR=2.3						
WRA	Warramunga Arr	14.90	159	P	P	09 39 43.0	+0.4
	0.1nm,0.3s,baz=340,slow=11,SNR=9.8						
ASAR	Alice Springs	18.25	164	P	P	09 40 19.9	+1.1
	0.1nm,0.3s,baz=346,slow=12,SNR=10						
MKAR	Makanchi Array	66.67	327	P	P	09 46 45.8	+1.3
	0.9nm,0.8s,baz=111,slow=6.9,SNR=3.0						

IDC 19 09:41:28.1±56.0**, 17°.36S**×**179°.74E, h0**^{km}**, mb4.0**/3**, mb1 4.2**/3**, mb1mx3.6**/39**, mbtmp4.0**/3**, Error ellipse: s-maj=1007.0km s-min=147.5km az=77.0, Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	37.36	240	P	P	09 48 43.6	+0.9
	0.9nm,0.5s,baz=69,slow=8.6,SNR=5.0						
WRA	Warramunga Arr	43.00	259	P	P	09 49 29.2	-0.4
	0.5nm,0.3s,baz=95,slow=7.9,SNR=19						
ASAR	Alice Springs	43.25	254	P	P	09 49 31.1	-0.6
	3.0nm,0.5s,baz=92,slow=8.1,SNR=53						

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*NEIC **19** 09:46:22.6±1.7, 36°.65N±0°.02×98°.44W±0°.03, h13^{km}±5^{km}, Error ellipse: s-maj=3.7km s-min=2.3km az=135.0*

*TUL **19** 09:46:22±1.1, 36°.66N±0°.02×98°.46W±0°.04, h10^{km}±6^{km}, ML3.2, mb_Lg3.1/63(NEIC), Error ellipse: s-maj=4.8km s-min=2.7km az=57.0*

*ANF **19** 09:46:24.6±0.7, 36°.69N×98°.49W, h24^{km}±10^{km}, ML4.0/11, Error ellipse: s-maj=5.3km s-min=4.4km az=125.0*

ISC 19 09:46:21.9±1.0**, 36°.64N**±0°.02×**98°.41W**±0°.02**, h10**^{km}±9^{km}**, n90,** σ**1^{s}.15**/80**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK032	Salt Plains WL	0.23	45		Pg	09 46 27.3	+0.6
OK032				Sg	Sg	09 46 30.8	+0.9
CROK	Carrier	0.37	111	Pg	Pb	09 46 30.1	-0.5
CROK				Sg	Sb	09 46 35.8	-0.6
KAN14	Manchester OK	0.48	49		Pb	09 46 31.8	-0.6
KAN14				Sg	Sb	09 46 38.8	-0.9
GC02	Grant County #	0.49	64	Pg	Pb	09 46 32.0	-0.6
GC02				Sg	Sb	09 46 39.4	-0.6
U32A	Winter Ranch,	0.54	242	Pg	Pg	09 46 32.3	-0.1
U32A	Winter Ranch,	0.54	242	P	Pg	09 46 32.0	-0.4
	baz=61,SNR=55						
U32A				S	Sg	09 46 39.3	-0.2
	baz=61						
KAN10	Anthony SW Sta	0.55	28		Pg	09 46 32.6	+0.1
KAN05	Bluff City Nor	0.64	43		Pg	09 46 34.5	+0.2
KAN16	Harper SW Stat	0.65	25	Pg	Pg	09 46 34.4	-0.1
KAN17	Caldwell West	0.66	52	Pg	Pb	09 46 35.1	-0.4
KAN17				Sg	Sb	09 46 44.4	-0.4
KAN08	Anthony NE Sta	0.69	31		Pg	09 46 35.3	+0.1
KAN01	Argonia South	0.73	45	Pg	Pb	09 46 36.3	-0.5
KAN12	Harper NE Stat	0.74	27		Pg	09 46 36.1	-0.1
KAN12				Sg	Sg	09 46 46.1	+0.3
KAN09	Caldwell North	0.81	52		Pb	09 46 37.8	-0.3
KAN13	South Haven SW	0.84	63		Pb	09 46 38.6	0.0
KS20	Mayfield South	0.91	49		Pb	09 46 39.3	-0.4
BLOK	Blackwell	0.97	82		Pb	09 46 40.9	0.0
OK029	Liberty Lake	1.14	137		Pn	09 46 43.9	-0.1
OK029				Sn	Sn	09 46 59.8	+0.1
BCOK	Bluff Creek, N	1.18	146		Pn	09 46 44.4	-0.1
OK031	S. Brethren Rd	1.44	118		Pg	09 46 49.0	-0.6
OKCFA	Oklahoma City	1.45	147		Pb	09 46 48.7	-0.2
OKCFA	Oklahoma City	1.45	147	P	Pb	09 46 48.7	-0.2
	baz=327,SNR=9.8						
OKCFA				S	Sg	09 47 08.8	+0.3
	baz=327						
QUOK	Quay	1.45	108	Pn	Pg	09 46 49.4	-0.4
OKCSW	OKLAHOMA CITY	1.46	147	Pn	Pb	09 46 49.1	-0.1
OK030	Cody Creek RV	1.50	118		Pg	09 46 50.3	-0.3
T35A	Sooner Cattle	1.55	79		Pg	09 46 51.0	-0.6
T35B	Sooner Cattle	1.55	79	P	Pg	09 46 50.9	-0.8
	baz=260						
T35B				S	Sg	09 47 12.1	+0.3
	baz=260						
FNO	Franklin	1.60	149	Pn	Pb	09 46 51.4	-0.2
R32A	Long Quarter,	1.80	353		Pn	09 46 54.2	+1.2
R32A	Long Quarter,	1.80	353	P	Pb	09 46 54.4	-0.5
	baz=173						
R32A				S	Sb	09 47 18.1	+0.5
	baz=173						
WMOK	Wichita Mounta	1.92	189	P	Pn	09 46 55.6	+0.9
	baz=8.5						
WMOK	Wichita Mounta	1.92	189	Pn	Pn	09 46 55.6	+0.9
WMOK	Wichita Mounta	1.92	189	P	Pn	09 46 55.8	+1.2
	baz=8.5						
X34A	Smith Ranch, M	2.09	167	Pn	Pn	09 46 58.4	+1.5
TUL1	Leonard	2.24	108	P	Pb	09 47 01.8	-0.6
	baz=290						
TUL1				S	Sb	09 47 29.8	-0.4
	baz=290						
TUL1	Leonard	2.24	108		Pb	09 47 01.6	-0.9
TUL1				IAmb_Lg		09 47 34.6	
	comp=Z,112nm,0.9s						
CBKS	Cedar Bluff	2.41	335	P	Pb	09 47 04.1	-1.4
	baz=154						
CBKS				Sb	Sb	09 47 35.1	-0.1
	baz=154						
CBKS	Cedar Bluff	2.41	335	Pn	Pb	09 47 04.0	-1.4
CBKS	Cedar Bluff	2.41	335	P	Pn	09 47 02.2	+0.8
	baz=154,SNR=23						
CBKS				S	Sn	09 47 32.5	+1.3
	baz=154						
LOOK	Love County	2.83	159	Pn	Pn	09 47 08.6	+1.5
LOOK				IAmb_Lg		09 47 55.5	
	comp=Z,53nm,0.8s						
KSU1	Kansas State U	2.84	30	Pb	Pg	09 47 14.8	-1.5
	baz=211						
KSU1				Sb	Sg	09 47 50.9	-2.3
	baz=211						
KSU1	Kansas State U	2.84	30		Pn	09 47 06.7	-0.6
KSU1	Kansas State U	2.84	30	P	Pn	09 47 08.5	+1.2
	baz=211,SNR=5.8						
AMTX	Amarillo	3.18	238	Pb	Pb	09 47 19.3	+0.7
	baz=56						
AMTX				Sb	Sb	09 47 59.7	+2.2
	baz=56						
AMTX	Amarillo	3.18	238	IAmb_Lg		09 48 09.6	
	comp=Z,86nm,0.8s						
X37A	Clayton	3.21	129		Pn	09 47 14.2	+1.7
X37A				IAmb_Lg		09 48 13.9	
	comp=Z,60nm,0.9s						
X37A	Clayton	3.21	129	P	Pn	09 47 13.5	+1.1
	baz=310,SNR=24						
U38A	Gravette	3.25	92		Pn	09 47 15.3	+2.3
U38A				IAmb_Lg		09 48 07.3	
	comp=Z,49nm,0.7s						
Z35A	Perchaven, San	3.43	164	Pn	Pn	09 47 16.8	+1.3
Z35A	Perchaven, San	3.43	164	P	Pn	09 47 16.5	+1.1
	baz=344						
W39A	Magazine	4.02	110	Sb	Sg	09 48 29.4	-1.7
	baz=292						
W39A	Magazine	4.02	110		Pn	09 47 27.0	+3.4
W39A				IAmb_Lg		09 48 36.7	
	comp=Z,59nm,0.8s						
KSCO	Kaye Shedlock'	4.09	307	Pb	Pb	09 47 35.6	+1.5
	baz=124						
KSCO	Kaye Shedlock'	4.09	307		Pn	09 47 24.6	-0.1
KSCO				IAmb_Lg		09 48 36.6	
	comp=Z,38nm,0.7s						
ABTX	Abilene, Hawle	4.13	195	Pn	Pn	09 47 24.7	-0.4
S39A	Bolivar	4.20	74	Pn	Pn	09 47 28.3	+2.3
Z38A	Mt. Pleasant	4.39	139	IAmb_Lg		09 48 44.2	
	comp=Z,37nm,0.8s						
MSTX	Muleshoe	4.45	235	Sb	Sg	09 48 40.1	-4.6
	baz=52						
MSTX	Muleshoe	4.45	235	IAmb_Lg		09 48 50.4	
	comp=Z,27nm,1.0s						
MIAR	Mount Ida	4.46	116		Pn	09 47 30.3	+0.7
MIAR				IAmb_Lg		09 48 56.6	
	comp=Z,34nm,1.2s						
U40A	Yellville	4.49	92	IAmb_Lg		09 48 43.1	
	comp=Z,29nm,0.8s						
WHTX	Lake Whitney,	4.70	170	P	Pn	09 47 33.7	+0.8
	baz=350						
WHTX	Lake Whitney,	4.70	170	Pn	Pn	09 47 33.4	+0.4
WHTX	Lake Whitney,	4.70	170	P	Pn	09 47 33.7	+0.8
	baz=350						
BGNE	Belgrade	4.77	2	IAmb_Lg		09 48 53.9	
	comp=Z,33nm,0.8s						
T25A	Trinidad	4.83	278	P	Pn	09 47 35.6	+0.7
	baz=94						
T25A	Trinidad	4.83	278	IAmb_Lg		09 48 57.3	
	comp=Z,51nm,1.0s						
P38A	Dawn	4.87	51	IAmb_Lg		09 49 04.0	
	comp=Z,27nm,0.8s						
MGMO	Mountain Grove	4.95	82	IAmb_Lg		09 48 58.7	
	comp=Z,32nm,1.0s						
237A	Washetta, Mont	5.10	154	IAmb_Lg		09 49 14.2	
	comp=Z,27nm,1.0s						
237A	Washetta, Mont	5.10	154	P	Pn	09 47 38.9	+0.5
	baz=336						
OGNE	Ogallala	5.15	328	P	Pn	09 47 40.7	+1.7
	baz=146						
WHAR	Wooly Hollow	5.15	103	IAmb_Lg		09 49 19.4	
	comp=Z,30nm,0.7s						
L34A	Svendsen Farm,	5.55	16	IAmb_Lg		09 49 22.8	
	comp=Z,41nm,0.8s						
P40A	Paris	5.79	58	IAmb_Lg		09 49 27.8	
	comp=Z,41nm,0.8s						
435B	Jarrell	5.88	173	IAmb_Lg		09 49 43.1	
	comp=Z,27nm,0.9s						
CCM	Cathedral Cave	5.88	74	IAmb_Lg		09 49 32.7	
	comp=Z,33nm,0.8s						
T42A	Van Buren	5.88	84	IAmb_Lg		09 49 32.9	
	comp=Z,24nm,1.0s						
K31A	O'Neill	5.98	358	IAmb_Lg		09 49 46.7	
	comp=Z,29nm,0.9s						
PBMO	Poplar Bluff	6.42	86	IAmb_Lg		09 49 45.2	
	comp=Z,21nm,0.8s						
SCIA	State Center	6.63	36	IAmb_Lg		09 50 02.7	
	comp=Z,26nm,0.7s						
LPAR	Lepanto	6.65	97	IAmb_Lg		09 50 12.4	
	comp=Z,32nm,0.9s						
SLM	Saint Louis	6.79	70	IAmb_Lg		09 49 59.3	
	comp=Z,19nm,0.7s						
GNAR	Gosnell	6.81	93	IAmb_Lg		09 50 12.5	
	comp=Z,32nm,0.8s						
143A	Socs Landing,	6.98	122	IAmb_Lg		09 50 16.7	
	comp=Z,15nm,0.8s						
N41A	Harden Midland	7.17	53	IAmb_Lg		09 50 18.7	
	comp=Z,28nm,0.8s						
ECSD	EROS Data Cent	7.22	10	P	Pn	09 48 07.1	-0.4
	baz=192						
W45A	Hickory Valley	7.63	98	IAmb_Lg		09 50 23.4	
	comp=Z,25nm,0.8s						
RSSD	Black Hills	8.62	332	IAmb_Lg		09 51 04.2	
	comp=Z,11nm,0.9s						
K22A	Casper	8.67	316	IAmb_Lg		09 51 11.7	
	comp=Z,20nm,1.1s						

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*JMA **19** 09:48:57.7±0.4, 31°.33N×128°.62E, h4^{km}±4^{km}, M4.0*

*NIED **19** 09:48:57.8, 31°.33N×128°.62E, h4^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.67; $M_{\theta\theta}$3.09; $M_{\phi\phi}$-1.42; $M_{r\theta}$1.15; $M_{\theta\phi}$3.17; $M_{\phi r}$-2.35; Fault plane solution: $M_0$4.90000×10^{14} NP1:ϕ_s24.00000°, δ65.00000°, λ-151.00000°. NP2:ϕ_s281.00000°, δ64.00000°, λ-28.00000°.*

*IDC **19** 09:49:02.8±1.1, 31°.49N×128°.57E, h0^{km}, mb3.4/4, mb1 3.6/6, mb1mx3.5/46, mbtmp3.5/6, ML3.9/3 Error ellipse: s-maj=31.1km s-min=16.1km az=93.0*

ISC 19 09:49:00.8±1.4**, 31°.37N**±0°.07×**128°.81E**±0°.07**, h10**^{km}**, n15,** σ**1^{s}.35**/16**, mb3.5**/4**, 2D, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.83	68	⇓P	Pg	09 49 16.4	-0.5
JSJ				*e*S	Sb	09 49 30.2	+1.6
JFU	Fukue jima 2	1.28	358	P	Pg	09 49 23.1	-2.3
JFU				S	Sg	09 49 41.3	-0.7
JSU	Suzuyama	1.41	84	⇓P	Pb	09 49 26.7	-0.6
JYAK	Yakushimahirau	1.85	127	P	Pn	09 49 31.4	-1.2
JTN	Tanegashima 3	2.00	110	P	Pn	09 49 34.2	-0.4
JTZ	Takazaki	2.01	74	P	Pn	09 49 35.0	+0.1
JMTN	Minamitane	2.04	118	P	Pn	09 49 35.1	-0.2
JIU3	Izumi3	2.07	55	P	Pn	09 49 35.8	+0.2
JNU	Nakatsue	2.47	45	Pn	Pg	09 49 46.8	-1.4
	118nm,0.3s,baz=195,slow=0.0,SNR=18						
JNU				Sn	Sg	09 50 19.6	-0.7
	120nm,0.3s,baz=73,slow=0.3,SNR=1.5						
KSRS	Korea Array	6.11	353	Pn	Pn	09 50 31.8	+0.7
	0.8nm,0.3s,baz=172,slow=14,SNR=10						
KSRS				Sn	Sn	09 51 40.1	-0.9
	1.0nm,0.3s,baz=172,slow=25,SNR=4.5						
KSRS				Lg	Lg	09 52 12.8	
	1.9nm,0.3s,baz=170,slow=30,SNR=5.9						
KLR	Kul'dur	17.98	6	P	P	09 53 13.7	+2.5
	0.1nm,0.3s,baz=201,slow=7.0,SNR=4.5						
SONM	Songino Array	23.71	320	P	P	09 54 14.8	+1.8
	0.3nm,0.3s,baz=122,slow=11,SNR=2.3						
WRA	Warramunga Arr	51.30	173	P	P	09 58 08.8	+3.6
	0.3nm,0.7s,baz=352,slow=8.3,SNR=1.9						
ASAR	Alice Springs	54.95	174	P	P	09 58 37.1	+5.1
	0.6nm,0.6s,baz=3.8,slow=14,SNR=14						
ILAR	Eielson Array	59.70	30	P	P	09 59 07.8	+2.6
	0.3nm,0.5s,baz=270,slow=5.4,SNR=4.9						

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*KOLA **19** 10:03:03.7, 64°.67N×30°.39E, h0^{km}, ML2.4, Kostomuksha, Karelia*

*UPP **19** 10:03:04.6±2.9, 64°.63N×30°.53E, h0^{km}, ML1.7, Suspected explosion*

*NAO **19** 10:03:04.6±1.5, 64°.71N×30°.46E, ML2.4*

*BER **19** 10:03:04.8±1.4, 64°.67N×30°.98E, h0^{km}, ML1.7, ML2.4(NAO), Suspected explosion*

*IDC **19** 10:03:05.4±2.8, 64°.66N×30°.71E, h0^{km}, mb1 2.8/2, mb1mx2.7/44, mbtmp2.7/2, ML2.0/2, Error ellipse: s-maj=47.8km s-min=8.7km az=101.0*

ISC 19 10:03:04.2±1.2**, 64°.75N**±0°.05×**30°.64E**±0°.06**, h0**^{km}**, n32,** σ**0^{s}.94**/45**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OUL	Oulu	2.05	282	Pn	Pn	10 03 40.4	+0.6
OUL				Sn	Sn	10 04 07.1	+1.0
OUL	Oulu	2.05	282	Pn	Pn	10 03 40.4	+0.6
OUL				Sn	Sn	10 04 07.1	+1.0
APA0	Apatity Array	3.03	17	Pn	Pn	10 03 53.5	+0.2
	baz=195,slow=14						
APA0				Sn	Sn	10 04 31.2	+1.1
	baz=194,slow=37						
APA0				Lg	Lg	10 04 41.3	
	baz=194,slow=37						
APA0	Apatity Array	3.03	17	Pn	Pn	10 03 53.5	+0.2
	baz=195,slow=14						
APA0	Apatity Array	3.03	17	P	Pn	10 03 53.6	+0.4
APA0				S	Sn	10 04 31.2	+1.1
APA	Apatity	3.05	20	P	Pn	10 03 54.1	+0.6
APA				S	Sn	10 04 31.7	+1.0
KALU	Kalix	3.26	293	P	Pn	10 03 57.0	+0.6
PAJU	Pajala	3.84	310	P	Pn	10 04 04.8	+0.3
PAJU				S	Sn	10 04 51.0	+0.7
SJUU	Sjulsmark	3.89	285	P	Pn	10 04 05.4	+0.3
FIA0	FINESS Array S	3.91	214	Pn	Pn	10 04 04.8	-0.6
	baz=36,slow=14						
FIA0				Lg	Lg	10 05 03.8	
	baz=34,slow=28						
FIA0	FINESS Array S	3.91	214	Pn	Pn	10 04 04.8	-0.6
	baz=36,slow=14						
FINES	FINESS Array B	3.91	214	Pn	Pn	10 04 05.2	-0.2
	0.2nm,0.3s,baz=37,slow=13,SNR=6.7						
FINES				Pg	Pb	10 04 14.1	+0.3
	0.6nm,0.3s,baz=32,slow=15,SNR=10.0						
FINES				Lg	Lg	10 05 04.2	
	1.8nm,0.3s,baz=40,slow=27,SNR=12						
BURU	Burvik	3.99	272	P	Pn	10 04 05.4	-1.0
ODEU	Stanfors	4.29	270	P	Pn	10 04 09.3	-1.4
LILU	Lilltraesk	4.61	282	P	Pn	10 04 14.6	-0.4
HEF	Hetta	4.61	326	Pn	Pn	10 04 16.2	+1.2
HEF				Sn	Sn	10 05 09.1	-0.2
HEF				Lg	Lg	10 05 25.4	
HEF	Hetta	4.61	326	*e*P	Pn	10 04 16.4	+1.4

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HEF				*e*S	**Sn**	**10 05 09.0**	**-0.2**
DUNU	**Dundret**	**4.76**	**305**	P	**Pn**	**10 04 17.3**	**+0.2**
SVAU	**Svanoeiden**	**4.77**	**272**	P	**Pn**	**10 04 16.4**	**-0.7**
LANU	**Lannavaara**	**4.80**	**318**	P	**Pn**	**10 04 17.7**	**0.0**
ARA0	**ARCESS Array S**	**5.21**	**340**	Pn	**Pn**	**10 04 22.9**	**-0.3**
	baz=154,slow=14						
ARA0				Sn	**Sn**	**10 05 22.2**	**-1.7**
	baz=156,slow=28						
ARA0				Lg	Lg	10 05 44.8	
	baz=160,slow=28						
ARA0	**ARCESS Array S**	**5.21**	**340**	Pn	**Pn**	**10 04 22.9**	**-0.3**
	baz=154,slow=14						
ARA0				Sn	**Sn**	**10 05 22.2**	**-1.7**
	baz=156,slow=28						
ARA0				IAML		10 05 47.1	
	comp=Z,2.0nm,0.5s						
ARCES	**ARCESS Array B**	**5.21**	**340**	Pn	**Pn**	**10 04 23.0**	**-0.2**
	baz=151,slow=13,SNR=30						
ARCES				Sn	**Sn**	**10 05 23.6**	**-0.2**
	baz=156,slow=24,SNR=5.0						
ARCES				Lg	Lg	10 05 42.1	
	baz=152,slow=26,SNR=2.8						
HUSU	**Husum**	**5.21**	**260**	P	**Pn**	**10 04 22.4**	**-0.8**
KEV	**Kevo**	**5.22**	**346**	Pn	**Pn**	**10 04 23.0**	**-0.4**
KEV				Sn	**Sn**	**10 05 21.8**	**-2.4**
KEV	**Kevo**	**5.22**	**346**	Pn	**Pn**	**10 04 23.0**	**-0.4**
KEV				Sn	**Sn**	**10 05 21.8**	**-2.4**
BREU	**Bredtraesk**	**5.32**	**266**	P	**Pn**	**10 04 23.7**	**-0.9**
RATU	**Laukkuluspa**	**5.42**	**310**	P	**Pn**	**10 04 26.6**	**+0.4**
JETT	**Jettan, Norway**	**6.25**	**325**	*e*P	**Pn**	**10 04 37.4**	**-0.2**
I43RU	**DUBNA INFRASON**	**8.67**	**155**	*i*		10 56 50.0	
	baz=349,slow=329,SNR=1.8						
NB2	**NORSAR Subarra**	**9.60**	**256**	Pn	**Pn**	**10 05 24.4**	**+1.0**
	baz=60,slow=18						
NB2	**NORSAR Subarra**	**9.60**	**256**	Pn	**Pn**	**10 05 24.4**	**+1.0**
	baz=60,slow=18						

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*ROM **19** 10:17:31.6±0.7, 42°.38N±0°.04×15°.26E±0°.03, h5^{km}, ML2.7/6, Error ellipse: s-maj=5.5km s-min=1.5km az=26.0*

ISC 19 10:17:31.5±1.5**, 42°.38N**±0°.03×**15°.24E**±0°.03**, h4**^{km}±13^{km}**, n35, σ0^{s}.70**/40**, 1C, Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TREM	**Isole Tremiti**	**0.33**	**142**	P	**Pg**	**10 17 38.6**	**+0.7**
TREM				S	**Sb**	**10 17 43.7**	**-1.8**
FRES	**Fresagrandinar**	**0.59**	**226**	P	**Pg**	**10 17 42.3**	**-0.5**
CAFR	**Castel Frentan**	**0.68**	**257**	P	**Pb**	**10 17 46.9**	**+1.0**
MELA	**Melanico ??? S**	**0.68**	**187**	P	**Pg**	**10 17 44.7**	**+0.1**
SGRT	**San Giovanni R**	**0.73**	**149**	P	**Pb**	**10 17 46.2**	**-0.7**
SGRT				S	**Sb**	**10 17 58.2**	**+1.0**
SGRT				AML	AML		
	comp=E,1020μm,0.2s						
SGRT				AML	AML		
	comp=N,973μm,0.2s						
CIGN	**Sant'Elia a Pi**	**0.77**	**199**	P	**Pb**	**10 17 47.4**	**0.0**
TRIV	**Trivento**	**0.80**	**220**	P	**Pg**	**10 17 46.7**	**-0.2**
MSAG	**Monte S. Angel**	**0.84**	**143**	P	**Pb**	**10 17 48.7**	**+0.1**
MSAG				AML	AML		
	comp=E,1011μm,0.7s						
MSAG				AML	AML		
	comp=N,1805μm,0.3s						
MSAG				AML	AML		
	comp=N,1800μm,0.3s						
MSAG				AML	AML		
	comp=E,1125μm,0.7s						
MSAG				AML	AML		
	comp=E,1008μm,0.7s						
MSAG				AML	AML		
	comp=N,1760μm,0.2s						
LPEL	**Lama dei Pelig**	**0.85**	**247**	AML	AML		
	comp=N,270μm,0.4s						
LPEL				AML	AML		
	comp=E,263μm,0.2s						
GATE	**Gambatesa**	**0.90**	**196**	P	**Pn**	**10 17 50.6**	**-0.4**
BSSO	**Busso**	**0.97**	**210**	P	**Pb**	**10 17 51.2**	**+0.3**
VCEL	**Villa Celiera**	**1.04**	**271**	P	**Pg**	**10 17 51.0**	**-0.4**
RNI2	**Rionero Sannit**	**1.06**	**230**	P	**Pn**	**10 17 53.4**	**+0.2**
T0110	**Collepietro**	**1.09**	**262**	P	**Pg**	**10 17 53.1**	**+0.6**
T0110				S	**Sn**	**10 18 09.3**	**+0.1**
T0110				AML	AML		
	comp=N,313μm,0.6s						
T0110				AML	AML		
	comp=E,392μm,0.5s						
HVAR	**Hvar**	**1.19**	**48**	*e*Pg	**Pn**	**10 17 55.2**	**+0.3**
HVAR				Sg	**Sn**	**10 18 12.2**	**+0.6**
VAGA	**Valle Agricola**	**1.22**	**218**	P	**Pg**	**10 17 55.1**	**+0.1**
LSTV	**Lastovo**	**1.28**	**72**	*e*Pg	**Pn**	**10 17 56.6**	**+0.5**
LSTV				Sg	**Sn**	**10 18 15.3**	**+1.6**
ZIRJ	**Zirje**	**1.30**	**13**	*e*Pn	**Pn**	**10 17 56.0**	**-0.4**
POFI	**Posta Fibreno**	**1.32**	**240**	P	**Pn**	**10 17 55.5**	**-1.3**
CAMP	**Campotosto**	**1.36**	**277**	P	**Pn**	**10 17 57.4**	**0.0**
CAMP				AML	AML		
	comp=E,112μm,0.8s						
CAMP				AML	AML		
	comp=N,117μm,0.7s						
SNAL	**S. Angelo Dei**	**1.46**	**181**	P	**Pn**	**10 17 58.3**	**-0.3**
MORI	**Morici**	**1.52**	**13**	*e*Pn	**Pn**	**10 17 58.4**	**-1.1**
MAKA	**Makarska**	**1.59**	**55**	*e*Pn	**Pn**	**10 18 00.7**	**+0.3**
MAKA				Sn	**Sn**	**10 18 21.1**	**-0.3**
MCRV	**Calabrutti - M**	**1.60**	**182**	P	**Pn**	**10 18 00.7**	**+0.1**
DUGI	**Dugi Otok**	**1.61**	**355**	*e*Pn	**Pn**	**10 18 00.2**	**-0.5**
LNSS	**Leonessa**	**1.64**	**278**	⇑P	**Pb**	**10 18 02.7**	**+0.3**
LNSS				AML	AML		
	comp=E,178μm,1.1s						
LNSS				AML	AML		
	comp=N,106μm,1.0s						
RICI	**Ricice**	**1.78**	**51**	*e*Pn	**Pn**	**10 18 03.3**	**+0.3**
AMUR	**Altamura**	**1.80**	**145**	P	**Pn**	**10 18 02.8**	**-0.4**
KIJV	**Kijevo**	**1.83**	**27**	*e*Pn	**Pb**	**10 18 04.6**	**-1.0**
STON	**Ston**	**1.88**	**74**	*e*Pn	**Pn**	**10 18 04.6**	**+0.3**
DBRK	**Dubrovnik**	**2.17**	**81**	*e*Pn	**Pn**	**10 18 07.3**	**-1.1**
NVLJ	**Novalja**	**2.19**	**353**	*e*Pn	**Pn**	**10 18 09.5**	**+0.8**
RABC	**Rab**	**2.39**	**352**	*e*Pn	**Pn**	**10 18 10.8**	**-0.6**
PLIT	**Plitvice**	**2.51**	**6**	*e*Pn	**Pn**	**10 18 13.2**	**+0.1**
SMRN	**Sveta Marina**	**2.77**	**344**	*e*Pn	**Pn**	**10 18 16.4**	**-0.1**

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*ATH **19** 10:19:00.7, 38°.74N×20°.62E, h6^{km}±3^{km}, ML2.6/3, Error ellipse: s-maj=4.2km s-min=0.9km az=80.0*

*THE **19** 10:19:00.6, 38°.73N×20°.61E, h6^{km}±1^{km}, ML2.6/6, Error ellipse: s-maj=1.2km s-min=0.3km az=73.0*

ISC 19 10:19:01.0±1.5**, 38°.73N**±0°.03×**20°.61E**±0°.04**, h4**^{km}±11^{km}**, n20, σ0^{s}.48**/35**, 1D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRAG	**Dragano-Lefkad**	**0.06**	**210**	P	**Pg**	**10 19 02.0**	**-0.2**
DRAG				S	**Sg**	**10 19 03.2**	**+0.2**
LKD2	**Lefkada island**	**0.07**	**33**	P	**Pg**	**10 19 02.1**	**-0.4**
LKD2				S	**Sg**	**10 19 03.8**	**+0.3**
	10μm,0.3s						
LKD2	**Lefkada island**	**0.07**	**33**	P	**Pg**	**10 19 02.1**	**-0.4**
LKD2				S	**Sg**	**10 19 03.7**	**+0.2**
LKD2				AML	AML	10 19 04.0	
	comp=E,20818μm,0.2s						
LKD2				AML	AML	10 19 04.1	
	comp=N,19384μm,0.4s						
NYDR	**Nydri-Lefkada**	**0.07**	**104**	P	**Pg**	**10 19 02.2**	**-0.3**
NYDR				S	**Sg**	**10 19 03.8**	**+0.3**
	comp=N,11μm,0.1s						
NYDR	**Nydri-Lefkada**	**0.07**	**104**	P	**Pg**	**10 19 02.2**	**-0.3**
NYDR				S	**Sg**	**10 19 03.5**	**0.0**
TSLK	**Tsoukalades, L**	**0.10**	**21**	P	**Pg**	**10 19 03.0**	**0.0**
TSLK				S	**Sg**	**10 19 04.7**	**+0.3**
	comp=N,5μm,0.5s						
TSLK	**Tsoukalades, L**	**0.10**	**21**	P	**Pg**	**10 19 02.9**	**-0.1**
TSLK				S	**Sg**	**10 19 04.8**	**+0.3**
TSLK				AML	AML	10 19 05.5	
	comp=E,10068μm,0.3s						
TSLK				AML	AML	10 19 09.2	
	comp=N,9796μm,0.5s						
EVGI	**Lefkada island**	**0.12**	**162**	P	**Pg**	**10 19 03.2**	**-0.1**
EVGI				S	**Sg**	**10 19 04.9**	**+0.1**
EVGI	**Lefkada island**	**0.12**	**162**	P	**Pg**	**10 19 03.2**	**-0.1**
EVGI				S	**Sg**	**10 19 05.2**	**+0.4**
FSK	**Fiskardo**	**0.27**	**188**	P	**Pg**	**10 19 06.2**	**0.0**
FSK				S	**Sg**	**10 19 10.4**	**+0.6**
	comp=N,2μm,0.3s						
FSK	**Fiskardo**	**0.27**	**188**	P	**Pg**	**10 19 06.0**	**-0.2**
FSK				S	**Sg**	**10 19 10.8**	**+1.0**
FSK				AML	AML	10 19 12.0	
	comp=N,2302μm,0.4s						
FSK				AML	AML	10 19 12.2	
	comp=E,4736μm,0.3s						
KEF4	**Livadi, Kephal**	**0.49**	**197**	P	**Pg**	**10 19 10.0**	**-0.4**
DMLN	**Damoulianata-K**	**0.53**	**201**	P	**Pg**	**10 19 10.9**	**-0.2**
VLS	**Valsamata**	**0.55**	**182**	P	**Pg**	**10 19 10.7**	**-0.9**
VLS				S	**Sg**	**10 19 19.6**	**+0.8**
	comp=E,330nm,0.3s						
VLS	**Valsamata**	**0.55**	**182**	P	**Pg**	**10 19 10.9**	**-0.7**
VLS	**Valsamata**	**0.55**	**182**	⇓P	**Pg**	**10 19 11.1**	**-0.5**
KEF3	**Kipouria, Keph**	**0.57**	**201**	P	**Pg**	**10 19 11.1**	**-0.7**
KEF3				S	**Sg**	**10 19 19.5**	**+0.3**
	comp=E,830nm,0.3s						
PSDA	**Pessada-Kefalo**	**0.62**	**182**	P	**Pg**	**10 19 12.1**	**-0.7**
PSDA				S	**Sg**	**10 19 21.3**	**+0.5**
PSDA	**Pessada-Kefalo**	**0.62**	**182**	P	**Pg**	**10 19 12.0**	**-0.8**
PSDA				S	**Sg**	**10 19 21.2**	**+0.4**
PVO	**Paravola**	**0.73**	**99**	P	**Pg**	**10 19 14.7**	**-0.1**

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*TUL **19** 10:19:23.3±1.0, 36°.12N±0°.01×97°.52W±0°.02, h6^{km}±7^{km}, ML2.6, mb_Lg2.1/13(NEIC), Error ellipse: s-maj=2.2km s-min=1.1km az=134.0*

NEIC 19 10:19:23.3±0.6**, 36°.13N**±0°.01×**97°.54W**±0°.02**, h3**^{km}±7^{km}**, Error ellipse: s-maj=2.2km s-min=1.1km az=133.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK029	**Liberty Lake**	**0.34**	**169**	Pg	Pg	10 19 29.6	-0.3
BCOK	**Bluff Creek, N**	**0.48**	**187**	Pg	Pg	10 19 32.5	+0.1
CROK	**Carrier**	**0.52**	**316**	Pg	Pg	10 19 33.7	+0.4
OK031	**S. Brethren Rd**	**0.59**	**107**		Pg	10 19 34.5	-0.1
OK030	**Cody Creek RV**	**0.64**	**108**		Pg	10 19 35.4	-0.2
QUOK	**Quay**	**0.67**	**86**	Pg	Pg	10 19 36.2	+0.1
BLOK	**Blackwell**	**0.68**	**22**		Pg	10 19 36.3	0.0
OKCFA	**Oklahoma City**	**0.72**	**175**	IAmb_Lg		10 19 46.4	
	comp=Z,21nm,0.7s						
GC02	**Grant County #**	**0.76**	**340**	Pg	Pg	10 19 38.0	0.0
OK032	**Salt Plains WL**	**0.86**	**321**		Pg	10 19 39.8	-0.1
FNO	**Franklin**	**0.88**	**173**	Pg	Pg	10 19 39.9	-0.2
KAN13	**South Haven SW**	**0.88**	**3**	Pg	Pg	10 19 40.2	0.0
KAN14	**Manchester OK**	**0.89**	**337**		Pg	10 19 40.4	0.0
KAN17	**Caldwell West**	**0.93**	**349**		Pg	10 19 41.2	+0.1
KAN09	**Caldwell North**	**1.00**	**356**	Pg	Pg	10 19 42.5	0.0
KAN05	**Bluff City Nor**	**1.01**	**345**	Pg	Pg	10 19 41.7	-1.0
KAN01	**Argonia South**	**1.03**	**350**	Pg	Pg	10 19 42.9	-0.3
T35A	**Sooner Cattle**	**1.14**	**46**		Pg	10 19 44.8	-0.3
KAN08	**Anthony NE Sta**	**1.15**	**342**	Pg	Pg	10 19 44.7	-0.6
U32A	**Winter Ranch,**	**1.21**	**282**	Pn	Pg	10 19 46.4	-0.1
U32A				IAmb_Lg		10 20 01.3	
	comp=Z,15nm,1.3s						
TUL1	**Leonard**	**1.43**	**98**	Pn	Pn	10 19 48.8	-1.4
X34A	**Smith Ranch, M**	**1.55**	**189**	Pn	Pn	10 19 52.1	+0.3
WMOK	**Wichita Mounta**	**1.72**	**217**	Pn	Pn	10 19 54.1	-0.1
WMOK				IAmb_Lg		10 20 17.1	
	comp=Z,13nm,1.0s						
LOOK	**Love County**	**2.15**	**172**	Pn	Pn	10 20 00.1	0.0
X37A	**Clayton**	**2.34**	**130**	Pn	Pn	10 20 03.5	+0.8
R32A	**Long Quarter,**	**2.47**	**338**	Pn	Pn	10 20 04.8	+0.3
U38A	**Gravette**	**2.56**	**82**	Pn	Pn	10 20 06.8	+1.1
CBKS	**Cedar Bluff**	**3.20**	**327**	IAmb_Lg		10 21 02.7	
	comp=Z,4.4nm,0.8s						
S39A	**Bolivar**	**3.72**	**64**	IAmb_Lg		10 21 19.0	
	comp=Z,11nm,1.2s						
U40A	**Yellville**	**3.79**	**85**	IAmb_Lg		10 21 32.4	
	comp=Z,4.4nm,0.8s						
FCAR	**Ozark Folk Cen**	**4.39**	**92**	IAmb_Lg		10 21 45.4	
	comp=Z,4.4nm,0.8s						

SOME 19 10:21:33.3, 42°.47N×80°.95E, h0^{km}, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KPKS	**Kokpek**	**1.94**	**302**	*e*P	Pg	10 22 10.8	+0.3
	2.4nm,0.3s						
KPKS				*e*S	Sg	10 22 37.7	+2.0
	10.0nm,0.4s						
SATY	**Saty**	**1.96**	**288**	*e*P	Pg	10 22 11.6	+0.6
	1.3nm,0.4s						
SATY				*e*S	Sg	10 22 38.6	+2.2
	3.1nm,0.1s						

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*TUL **19** 10:23:55.6±1.3, 36°.39N±0°.02×98°.72W±0°.05, h6^{km}±7^{km}, ML2.8, mb_Lg2.6/39(NEIC), Error ellipse: s-maj=5.5km s-min=2.3km az=100.0*

NEIC 19 10:23:56.6±1.3**, 36°.43N**±0°.04×**98°.65W**±0°.05**, h14**^{km}±6^{km}**, Error ellipse: s-maj=6.0km s-min=4.6km az=132.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
U32A	**Winter Ranch,**	**0.28**	**261**	Pg	Pg	10 24 00.5	-2.2
OK032	**Salt Plains WL**	**0.52**	**43**		Pg	10 24 07.0	+0.2
CROK	**Carrier**	**0.55**	**82**	Pg	Pg	10 24 07.1	-0.3
GC02	**Grant County #**	**0.77**	**56**		Pg	10 24 11.5	0.0
KAN14	**Manchester OK**	**0.77**	**46**		Pg	10 24 11.4	-0.1
KAN10	**Anthony SW Sta**	**0.83**	**33**		Pg	10 24 12.2	-0.4
KAN05	**Bluff City Nor**	**0.93**	**42**	Pg	Pb	10 24 14.4	0.0
KAN16	**Harper SW Stat**	**0.93**	**30**	Pg	Pb	10 24 14.2	-0.2
KAN17	**Caldwell West**	**0.94**	**49**		Pb	10 24 14.7	+0.1
KAN08	**Anthony NE Sta**	**0.97**	**34**	Pg	Pb	10 24 14.9	-0.2
KAN12	**Harper NE Stat**	**1.01**	**31**		Pb	10 24 14.8	-1.1
KAN01	**Argonia South**	**1.02**	**44**		Pb	10 24 15.8	-0.1
KAN01					Sb	10 24 29.0	-0.3
KAN09	**Caldwell North**	**1.09**	**49**		Pb	10 24 17.2	0.0
KAN13	**South Haven SW**	**1.11**	**58**		Pb	10 24 17.6	+0.1
BCOK	**Bluff Creek, N**	**1.14**	**132**		Pb	10 24 17.4	-0.7
OK029	**Liberty Lake**	**1.16**	**123**	Pn	Pn	10 24 17.1	-1.1
KS20	**Mayfield South**	**1.19**	**47**	Pn	Pn	10 24 18.8	0.0
BLOK	**Blackwell**	**1.20**	**74**		Pb	10 24 19.2	0.0
OK031	**S. Brethren Rd**	**1.54**	**107**		Pb	10 24 24.6	-0.3
FNO	**Franklin**	**1.55**	**139**		Pn	10 24 23.9	+0.2
OK030	**Cody Creek RV**	**1.59**	**108**		Pb	10 24 25.5	-0.3
QUOK	**Quay**	**1.59**	**99**		Pb	10 24 25.5	-0.2
WMOK	**Wichita Mounta**	**1.69**	**184**	Pn	Pn	10 24 24.6	-1.1
T35A	**Sooner Cattle**	**1.79**	**74**		Pb	10 24 28.9	-0.2
T35A				IAmb_Lg		10 24 56.4	
	comp=Z,33nm,0.8s						
X34A	**Smith Ranch, M**	**1.94**	**160**		Pn	10 24 30.0	+0.9
X34A				IAmb_Lg		10 24 58.3	
	comp=Z,34nm,0.8s						
R32A	**Long Quarter,**	**1.99**	**359**		Pn	10 24 31.0	+1.2
TUL1	**Leonard**	**2.37**	**102**		Pn	10 24 35.8	+0.8
TUL1				IAmb_Lg		10 25 12.0	
	comp=Z,16nm,0.7s						
LOOK	**Love County**	**2.71**	**153**	Pn	Pn	10 24 39.4	-0.3
AMTX	**Amarillo**	**2.91**	**239**		Pn	10 24 44.3	+1.8
AMTX				IAmb_Lg		10 25 23.8	
	comp=Z,12nm,0.8s						
KSU1	**Kansas State U**	**3.12**	**31**		Pn	10 24 47.2	+1.9
KSU1				IAmb_Lg		10 25 39.4	
	comp=Z,15nm,0.8s						
X37A	**Clayton**	**3.25**	**123**	Pn	Pn	10 24 48.7	+1.7
U38A	**Gravette**	**3.44**	**89**	Pn	Pn	10 24 51.7	+2.0
U38A				IAmb_Lg		10 25 52.4	
	comp=Z,11nm,0.8s						
KSCO	**Kaye Shedlock'**	**4.07**	**310**	IAmb_Lg		10 26 12.8	
	comp=Z,15nm,0.7s						
MSTX	**Muleshoe**	**4.17**	**235**	IAmb_Lg		10 26 11.5	
	comp=Z,18nm,0.8s						
T25A	**Trinidad**	**4.68**	**280**	Pn	Pn	10 25 06.7	-0.2
U40A	**Yellville**	**4.68**	**89**	IAmb_Lg		10 26 38.7	
	comp=Z,13nm,1.1s						
BGNE	**Belgrade**	**4.99**	**4**	IAmb_Lg		10 26 43.5	
	comp=Z,14nm,0.8s						
X40A	**Basin Creek Fa**	**5.13**	**110**	IAmb_Lg		10 26 43.9	
	comp=Z,13nm,0.8s						
P38A	**Dawn**	**5.15**	**50**	IAmb_Lg		10 26 43.7	
	comp=Z,10nm,0.7s						
FCAR	**Ozark Folk Cen**	**5.31**	**94**	IAmb_Lg		10 26 43.7	
	comp=Z,6.9nm,0.7s						
R40A	**Maddies Statio**	**5.42**	**68**	IAmb_Lg		10 26 52.0	
	comp=Z,11nm,0.9s						
JCT	**Junction City**	**6.01**	**190**	IAmb_Lg		10 27 13.7	
	comp=Z,11nm,0.9s						
T42A	**Van Buren**	**6.10**	**82**	IAmb_Lg		10 27 12.5	
	comp=Z,8.7nm,0.9s						
ISCO	**Idaho Springs**	**6.44**	**304**	IAmb_Lg		10 27 32.4	
	comp=Z,6.2nm,0.8s						
Y22D	**IRIS PASSCAL I**	**7.16**	**253**	IAmb_Lg		10 27 58.9	
	comp=Z,9.5nm,0.8s						
MNTX	**Cornudas Mount**	**7.31**	**232**	IAmb_Lg		10 28 02.1	
	comp=Z,4.9nm,0.8s						
SIUC	**Southern Illin**	**7.65**	**78**	IAmb_Lg		10 28 06.8	
	comp=Z,9.4nm,0.8s						

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*NEIC **19** 10:27:45.4±1.3, 59°.31N±0°.03×136°.55W±0°.04, h8^{km}±6^{km}, Error ellipse: s-maj=5.2km s-min=2.5km az=205.0*

*PGC **19** 10:27:45.2±0.0, 59°.33N×136°.67W, h1^{km}, ML2.9/4, 85km west of Haines, Ak Southeastern Alaska*

*AEIC **19** 10:27:45±1.3, 59°.33N±0°.04×136°.52W±0°.04, h12^{km}±4^{km}, Error ellipse: s-maj=5.4km s-min=2.9km az=198.0*

ISC 19 10:27:44.7±0.8**, 59°.29N**±0°.03×**136°.59W**±0°.02**, h10**^{km}**, n74, σ1^{s}.68**/94**, Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKAG	**Skagway**	**0.67**	**75**		**Pg**	**10 27 57.5**	**-0.1**
SKAG					**Sg**	**10 28 05.8**	**-0.5**
SKAG	**Skagway**	**0.67**	**75**	IAML		10 28 06.1	
	comp=E,896nm,0.2s						
SKAG				IAML		10 28 06.7	
	comp=N,558nm,0.2s						
BESE	**Bessie Mountai**	**1.15**	**128**		**Pb**	**10 28 06.7**	**0.0**
BESE					**Sn**	**10 28 22.8**	**+0.1**
BESE	**Bessie Mountai**	**1.15**	**128**	P	**Pb**	**10 28 06.6**	**0.0**
BESE				S	**Sn**	**10 28 22.8**	**+0.1**
YUK7	**Dusty Glacier**	**1.47**	**329**		**Pn**	**10 28 11.0**	**-0.5**
YUK7	**Dusty Glacier**	**1.47**	**329**	Pn	**Pn**	**10 28 10.9**	**-0.5**
YUK7				Sg	**Sn**	**10 28 29.6**	**-1.2**
PNL	**Peninsula**	**1.48**	**286**		**Pn**	**10 28 11.8**	**+0.4**
PNL	**Peninsula**	**1.48**	**286**	Pn	**Pn**	**10 28 11.8**	**+0.4**
PNL				Sg	**Sn**	**10 28 30.7**	**-0.1**
JIS	**Juneau Island**	**1.54**	**131**		**Pn**	**10 28 12.7**	**+0.7**
JIS	**Juneau Island**	**1.54**	**131**	IAML		10 28 37.8	
	comp=N,183nm,0.2s						
HYT	**Haines Junctio**	**1.61**	**344**		**Pn**	**10 28 12.6**	**-0.6**
HYT	**Haines Junctio**	**1.61**	**344**	Pn	**Pn**	**10 28 12.6**	**-0.6**
HYT				Sg	**Sn**	**10 28 33.9**	**-0.2**
WHY	**Whitehorse**	**1.62**	**31**		**Pn**	**10 28 13.8**	**+0.4**
WHY					**Sn**	**10 28 34.4**	**0.0**
WHY	**Whitehorse**	**1.62**	**31**	IAML		10 28 35.2	
	comp=E,157nm,0.3s						
WHY				IAML		10 28 35.5	
	comp=N,137nm,0.1s						
WHY	**Whitehorse**	**1.62**	**31**	Pn	**Pn**	**10 28 13.9**	**+0.4**
WHY				Sg	**Sn**	**10 28 34.7**	**+0.3**
BCPM	**Bancas Point**	**1.68**	**295**		**Pn**	**10 28 15.4**	**+1.2**
BCPM					**Sn**	**10 28 36.6**	**+0.8**
BCPM	**Bancas Point**	**1.68**	**295**	IAML		10 28 40.8	
	comp=E,194nm,0.3s						
YUK6	**Outpost Mounta**	**1.88**	**333**		**Pn**	**10 28 18.0**	**+0.9**
YUK6	**Outpost Mounta**	**1.88**	**333**	Pn	**Pn**	**10 28 18.0**	**+0.9**
YUK6				Sg	**Sn**	**10 28 42.1**	**+1.2**
YUK5	**Granite Creek**	**1.95**	**342**		**Pn**	**10 28 19.0**	**+1.0**
YUK5	**Granite Creek**	**1.95**	**342**	Pn	**Pn**	**10 28 19.1**	**+1.0**
YUK5				Sg	**Sb**	**10 28 45.4**	**+0.5**
PCA	**Pinnacle**	**2.03**	**295**		**Pn**	**10 28 20.4**	**+1.5**
PCA					**Sb**	**10 28 47.6**	**+0.7**
PCA	**Pinnacle**	**2.03**	**295**	Pn	**Pn**	**10 28 19.8**	**+0.8**
PCA				Sg	**Sb**	**10 28 47.1**	**+0.2**
P33M	**Teslin, Yukon**	**2.12**	**63**		**Pn**	**10 28 20.5**	**+0.3**
N31M	**Braeburn, Yuko**	**2.24**	**10**		**Sn**	**10 28 51.4**	**+1.8**
SAMH	**Samovar Hills**	**2.29**	**293**		**Pn**	**10 28 24.5**	**+2.0**
SAMH					**Sb**	**10 28 55.2**	**+0.9**
SAMH	**Samovar Hills**	**2.29**	**293**	Pn	**Pn**	**10 28 23.4**	**+0.9**
SAMH				Sg	**Sb**	**10 28 55.1**	**+0.8**
YUK4	**Talbot Arm**	**2.30**	**334**	Pg	**Pb**	**10 28 27.0**	**+0.6**
SIT	**Sitka**	**2.34**	**163**		**Pn**	**10 28 24.3**	**+1.2**
SIT	**Sitka**	**2.34**	**163**	IAML		10 28 40.1	
	comp=N,61nm,4.2s						
SIT				IAML		10 29 04.9	
	comp=E,62nm,3.6s						
CHX	**Chaix Hills**	**2.42**	**291**		**Pn**	**10 28 25.9**	**+1.5**
YUK8	**Steele Glacier**	**2.55**	**323**		**Pn**	**10 28 28.0**	**+1.7**
YUK8	**Steele Glacier**	**2.55**	**323**	Pg	**Pb**	**10 28 30.5**	**-0.2**
YUK8				Sg	**Sb**	**10 29 03.6**	**+1.5**
TABL	**Table Mountain**	**2.57**	**299**		**Pn**	**10 28 27.7**	**+1.2**
TABL	**Table Mountain**	**2.57**	**299**	Pn	**Pn**	**10 28 27.4**	**+0.8**
TABL				Sg	**Sb**	**10 29 03.0**	**+0.3**
RKAV	**Rock Avalanche**	**2.61**	**295**	Pn	**Pn**	**10 28 27.8**	**+0.8**
LOGN	**Logan Glacier**	**2.69**	**307**	Pn	**Pb**	**10 28 31.8**	**-1.3**
LOGN	**Logan Glacier**	**2.69**	**307**	Pg	**Pb**	**10 28 32.7**	**-0.4**
LOGN				Sg	**Sb**	**10 29 06.6**	**+0.4**
YAH	**Yahtse**	**2.82**	**295**		**Pn**	**10 28 31.9**	**+2.0**
YAH	**Yahtse**	**2.82**	**295**	IAML		10 29 21.9	
	comp=N,48nm,5.0s						
YAH				IAML		10 29 42.6	
	comp=E,34nm,4.1s						
MESA	**MESA**	**2.86**	**290**	Pn	**Pb**	**10 28 34.2**	**-1.7**
MESA	**MESA**	**2.86**	**290**	Pn	**Pn**	**10 28 30.1**	**-0.4**
CTGM	**Chitina Glacie**	**2.91**	**307**		**Pn**	**10 28 32.4**	**+1.3**
CTGM	**Chitina Glacie**	**2.91**	**307**	Pg	**Pb**	**10 28 36.2**	**-0.4**
CTGM				Sg	**Sb**	**10 29 14.0**	**+1.7**
GRNC	**Granite Creek**	**2.97**	**301**		**Pn**	**10 28 33.3**	**+1.3**
GRNC	**Granite Creek**	**2.97**	**301**	IAML		10 29 42.3	
	comp=N,23nm,4.9s						
GRNC	**Granite Creek**	**2.97**	**301**	Pn	**Pn**	**10 28 33.0**	**+1.0**
BAGL	**Bagley Icefiel**	**3.02**	**296**		**Pn**	**10 28 34.3**	**+1.8**
BARN	**Barnard Glacie**	**3.09**	**307**		**Pn**	**10 28 35.0**	**+1.3**
YUK3	**Moose Creek**	**3.14**	**324**	Pg	**Pb**	**10 28 40.9**	**+0.2**
YUK3				Sg	**Sb**	**10 29 21.4**	**+2.3**
ISLE	**Juniper Island**	**3.18**	**297**		**Pn**	**10 28 36.3**	**+1.5**
ISLE	**Juniper Island**	**3.18**	**297**	IAML		10 29 03.4	
	comp=E,26nm,4.2s						
ISLE				IAML		10 29 29.2	
	comp=N,34nm,1.2s						
YUK2	**White River**	**3.27**	**322**	Pg	**Pb**	**10 28 43.3**	**+0.5**
YUK2				Sg	**Sb**	**10 29 24.1**	**+1.5**
M30M	**Minto, Yukon**	**3.30**	**358**		**Pn**	**10 28 36.7**	**+0.3**
FARO	**Faro, Yukon**	**3.35**	**27**	Pg	**Pb**	**10 28 46.0**	**+1.8**
FARO				Sg	**Sb**	**10 29 27.1**	**+2.2**
BALM	**Baldy**	**3.37**	**304**	Pn	**Pn**	**10 28 39.5**	**+2.1**
BALM				Sg	**Sb**	**10 29 28.0**	**+2.5**
YUK1	**Sand Pete Hill**	**3.46**	**328**	Pg	**Pb**	**10 28 46.7**	**+0.6**
PTPK	**Patty Peak**	**3.49**	**306**	Sg	**Sb**	**10 29 32.9**	**+3.8**
DLBC	**Dease Lake**	**3.51**	**101**		**Pn**	**10 28 40.0**	**+0.6**
DLBC	**Dease Lake**	**3.51**	**101**	IAML		10 30 16.9	
	comp=N,26nm,4.6s						
DLBC				IAML		10 30 20.9	
	comp=E,25nm,4.3s						
DLBC	**Dease Lake**	**3.51**	**101**	Pn	**Pn**	**10 28 40.0**	**+0.6**
DLBC				Sg	**Sg**	**10 29 34.6**	**-2.9**
KHIT	**Khitrov Hills**	**3.55**	**292**		**Pn**	**10 28 41.7**	**+1.8**
CRQM	**Cirque**	**3.60**	**297**	Pn	**Pn**	**10 28 41.4**	**+0.7**
CRQM				IAML		10 29 54.5	
	comp=E,20nm,4.0s						
CRQM				IAML		10 30 03.5	
	comp=N,28nm,4.0s						
WRAK	**Wrangell Islan**	**3.66**	**140**	Pn	**Pn**	**10 28 42.5**	**+1.2**
BERG	**Berg Lake**	**3.75**	**290**	Pn	**Pn**	**10 28 43.5**	**+0.9**
BVCY	**Beaver Creek**	**3.77**	**328**	Pg	**Pb**	**10 28 52.1**	**+0.9**
BVCY				Sg	**Sb**	**10 29 40.6**	**+3.7**
MCARA	**McCarthy VSAT**	**3.83**	**306**	Pn	**Pn**	**10 28 46.2**	**+2.6**
MCARA				IAML		10 29 55.0	
	comp=N,27nm,4.5s						
MCARA				IAML		10 30 08.5	
	comp=E,22nm,4.6s						
VRDI	**Verde Repeater**	**3.93**	**303**	Pn	**Pn**	**10 28 45.5**	**+0.3**
VRDI				IAML		10 30 03.3	
	comp=N,23nm,4.8s						
VRDI				IAML		10 31 19.5	
	comp=E,14nm,4.4s						
WTLY	**Watson Lake, Y**	**4.03**	**75**	Sg	**Sg**	**10 29 49.5**	**-4.6**
GLB	**Gilahina Butte**	**4.18**	**304**	Pn	**Pn**	**10 28 49.5**	**+0.9**
GLB				IAML		10 29 41.3	
	comp=E,13nm,4.4s						
GLB				IAML		10 30 57.0	
	comp=N,19nm,4.7s						
MMPY	**Sheldon Lake,**	**4.23**	**36**	Pn	**Pn**	**10 28 50.3**	**+1.1**
MMPY				Pg	**Pb**	**10 29 01.5**	**+2.4**
MMPY				Sg	**Sg**	**10 29 55.4**	**-5.0**
TGTN	**Hyland Airport**	**4.69**	**58**	Pn	**Pn**	**10 28 56.3**	**+0.8**
TGTN				Sg	**Sg**	**10 30 09.9**	**-5.3**
DAWY	**Dawson**	**4.97**	**346**	Pn	**Pn**	**10 29 01.9**	**+2.5**
DAWY	**Dawson**	**4.97**	**346**	Pn	**Pn**	**10 29 00.5**	**+1.1**
DAWY				Sg	**Sg**	**10 30 18.7**	**-5.5**

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*MOS **19** 10:29:19.6±1.3, 44°.60N×147°.83E, h112^{km}, mb4.1/9, Error*

ellipse: s-maj=10.5km s-min=9.0km az=66.3

*SKHL **19** 10:29:20.6±0.7, 44°.40N×147°.90E, h112^{km}±5^{km}, mb4.9/7, msha5.7/5*

*NEIC **19** 10:29:21.5±1.9, 44°.60N±0°.08×147°.9E±0°.1, h114^{km}±7^{km}, mb4.2/7, Error ellipse: s-maj=13.6km s-min=10.3km az=136.0*

*JMA **19** 10:29:22.0±0.5, 44°.12N×147°.85E, h96^{km}, M4.1*

*IDC **19** 10:29:23.2±2.2, 44°.64N×147°.83E, h133^{km}±20^{km}, mb3.7/15, mb1 3.8/17, mb1mx3.6/43, mbtmp4.1/17, Error ellipse: s-maj=17.7km s-min=12.7km az=101.0*

ISC 19 10:29:19.5±0.8, **44°.39N**±0°.05×**147°.97E**±0°.06, **h102**^{km}±7^{km}, **n96**, σ**1^{s}.80**/103, **mb4.0**/20, **4C-5D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.84**	**355**	d *i*PN	**Pn**	**10 29 38.5**	**+0.1**
KUR				*i* S	**Sn**	**10 29 52.7**	**+0.1**
KUR				pmax	pmax		
	comp=N,979nm,0.3s						
KUR				pmax	pmax		
	comp=E,967nm,0.3s						
KUR				pmax	pmax		
	comp=Z,5µm,0.3s						
KUR				smax	smax		
	comp=E,6µm,0.3s						
KUR				smax	smax		
	comp=N,6µm,0.4s						
KUR	**Kuril'sk**	**0.84**	**355**	*i* P	**Pn**	**10 29 38.6**	**+0.1**
KUR				AMB	AMB	10 29 39.0	
	comp=N,5µm,0.4s						
KUR				*i* S	**Sn**	**10 29 52.8**	**+0.1**
KUR				A	A	10 29 53.0	
	comp=N,4µm,0.4s						
KUR				A	A	10 29 53.0	
	comp=N,7µm,0.4s						
YUK	**Yuzh-Kuril'sk**	**1.56**	**257**	*e*PN	**Pn**	**10 29 47.4**	**+0.9**
YUK				*e*S	**Sn**	**10 30 06.6**	**-0.5**
YUK				pmax	pmax		
	comp=N,169nm,0.1s						
YUK				pmax	pmax		
	comp=Z,685nm,0.1s						
YUK				smax	smax		
	comp=N,3µm,0.3s						
YUK				smax	smax		
	comp=E,2µm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.56**	**257**	*e*P	**Pn**	**10 29 47.4**	**+0.9**
YUK				AMB	AMB	10 29 48.0	
	comp=E,169nm,0.5s						
YUK				AMB	AMB	10 29 48.0	
	comp=E,685nm,0.5s						
YUK				*e*S	**Sn**	**10 30 06.9**	**-0.2**
YUK				A	A	10 30 10.0	
	comp=E,2µm,0.4s						
YUK				A	A	10 30 10.0	
	comp=E,4µm,0.4s						
GRPR	**Tuman**	**1.63**	**257**	*e*PN	**Pn**	**10 29 47.7**	**+0.2**
GRPR				*e*S	**Sn**	**10 30 07.3**	**-1.4**
GRPR				pmax	pmax		
	comp=Z,326nm,0.2s						
GRPR				pmax	pmax		
	comp=N,87nm,0.1s						
GRPR				pmax	pmax		
	comp=E,153nm,0.2s						
GRPR				smax	smax		
	comp=E,358nm,0.1s						
GRPR				smax	smax		
	comp=N,2µm,0.2s						
GRPR	**Tuman**	**1.63**	**257**	*e*P	**Pn**	**10 29 47.0**	**-0.5**
GRPR				AMB	AMB	10 29 51.0	
	comp=N,326nm,0.4s						
GRPR				*e*S	**Sn**	**10 30 07.0**	**-1.7**
GRPR				A	A	10 30 10.0	
	comp=N,2µm,0.5s						
GRPR				A	A	10 30 10.0	
	comp=N,358nm,0.5s						
GLVR	**Golovnino**	**1.89**	**251**	*e*PN	**Pn**	**10 29 51.2**	**+0.6**
GLVR				*e*S	**Sn**	**10 30 14.6**	**+0.2**
GLVR				pmax	pmax		
	comp=Z,255nm,0.1s						
GLVR				smax	smax		
	comp=N,3µm,0.4s						
GLVR				smax	smax		
	comp=E,1µm,0.2s						
GLVR	**Golovnino**	**1.89**	**251**	*e*P	**Pn**	**10 29 51.0**	**+0.4**
GLVR				AMB	AMB	10 29 52.0	
	comp=E,255nm,0.5s						
GLVR				*e*S	**Sn**	**10 30 14.0**	**-0.4**
GLVR				A	A	10 30 16.0	
	comp=E,3µm,0.3s						
GLVR				A	A	10 30 16.0	
	comp=E,1µm,0.3s						
NEM2	**Nemuro 2**	**1.91**	**238**	P	**Pn**	**10 29 50.9**	**-0.1**
NEM2				*e*S	**Sn**	**10 30 13.2**	**-1.8**
NMR	**Nemuro--Hokkai**	**1.92**	**239**	⇑*i*PN	**Pn**	**10 29 50.9**	**-0.2**
NMR				*i* S	**Sn**	**10 30 13.3**	**-1.8**
NMR	**Nemuro--Hokkai**	**1.92**	**239**	*i* P	**Pn**	**10 29 50.0**	**-1.1**
NMR				*i* S	**Sn**	**10 30 13.0**	**-2.1**
RUSJ	**Misakicho**	**1.98**	**263**	*e*PN	**Pn**	**10 29 54.0**	**+2.2**
RUSJ				*e*S	**Sn**	**10 30 19.5**	**+3.0**
JRA	**Rausu**	**2.10**	**259**	P	**Pn**	**10 29 54.3**	**+0.9**
JNSB	**Nemuroshibetsu**	**2.23**	**255**	P	**Pn**	**10 29 56.2**	**+1.2**
JKHN	**Kushirohamanak**	**2.42**	**238**	P	**Pn**	**10 29 57.7**	**+0.1**
JKHN				*e*S	**Sn**	**10 30 25.0**	**-1.8**
JNK	**Nakash**	**2.48**	**252**	P	**Pn**	**10 29 59.0**	**+0.6**
AKK	**Akkeshi**	**2.65**	**240**	*e*P	**Pn**	**10 30 00.4**	**-0.3**
AKK				*e*S	**Sn**	**10 30 30.0**	**-2.3**
JAK	**Akkeshi**	**2.75**	**241**	P	**Pn**	**10 30 01.9**	**-0.1**
JAK				*e*S	**Sn**	**10 30 32.8**	**-1.9**
JTKR	**Abashiri--Toko**	**2.95**	**263**	P	**Pn**	**10 30 05.6**	**+1.0**
JAR	**Ashorobuto**	**3.23**	**252**	P	**Pn**	**10 30 09.7**	**+1.3**
JCH	**Churui**	**3.79**	**244**	P	**Pn**	**10 30 15.9**	**0.0**
JCH				*e*S	**Sn**	**10 30 57.6**	**-2.0**
JKK2	**Kamakawa 2**	**3.80**	**264**	P	**Pn**	**10 30 17.5**	**+1.6**
JKA	**Kamikawa-asahi**	**3.87**	**268**	*e*P	**Pn**	**10 30 18.3**	**+1.4**
JKA	**Kamikawa-asahi**	**3.87**	**268**		**Pn**	**10 30 18.1**	**+1.2**
JKA	**Kamikawa-asahi**	**3.87**	**268**		**Sn**	**10 31 07.3**	**+5.9**
ASAJ	**Asahikawa**	**3.87**	**268**	P	**Pn**	**10 30 18.3**	**+1.4**
	comp=E,1.9nm,0.3s,baz=63,slow=16,SNR=19						
ASAJ				S	**Sn**	**10 31 07.3**	**+5.8**
	comp=E,1.8nm,0.3s,baz=197,slow=32,SNR=2.0						
JFR	**Furan**	**4.08**	**254**	P	**Pn**	**10 30 21.2**	**+1.4**
JEM	**Erimo**	**4.25**	**238**	Pn	**Pn**	**10 30 21.1**	**-0.9**
ERM	**Erimo**	**4.25**	**238**	*ce*PN	**Pn**	**10 30 24.1**	**+2.1**
ERM	**Erimo**	**4.25**	**238**	Pn	**Pn**	**10 30 24.2**	**+2.2**
JNBK	**Urakawa-nobuka**	**4.35**	**243**	P	**Pn**	**10 30 23.0**	**-0.4**
YSS	**Yuzh-Sakhalins**	**4.46**	**307**	*e*PN	**Pn**	**10 30 26.7**	**+1.8**
YSS				*e*S	**Sn**	**10 31 14.6**	**-1.1**
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
YSS				smax	smax		
	comp=N,40nm,1.3s						
YSS	**Yuzh-Sakhalins**	**4.46**	**307**	*e*P	**Pn**	**10 30 26.0**	**+1.1**
YSS				AMB	AMB	10 30 28.0	
	comp=N,10.0nm,0.7s						
YSS				*e*S	**Sn**	**10 31 14.0**	**-1.7**
YSS				A	A	10 31 16.3	
	comp=N,10.0nm,0.7s						
YSS				A	A	10 31 16.3	
	comp=N,20nm,0.7s						
YSS	**Yuzh-Sakhalins**	**4.46**	**307**		**Pn**	**10 30 26.2**	**+1.3**
JEW	**Eniwo**	**4.98**	**254**	Pn	**Pn**	**10 30 34.1**	**+2.2**
JKB	**Kayabe**	**5.66**	**246**	P	**Pn**	**10 30 41.1**	**0.0**
JKB				*e*S	**Sn**	**10 31 41.0**	**-3.8**
JOT	**Ohata**	**5.91**	**242**	P	**Pn**	**10 30 43.6**	**-0.9**
JTM	**Tenmabayashi**	**6.24**	**237**	Pn	**Pn**	**10 30 49.6**	**+0.6**
JANG	**Nango**	**6.24**	**232**	*e*S	Sn	10 31 53.1	-5.9
JOSM	**Okushiri--Mats**	**6.62**	**253**	P	**Pn**	**10 30 54.6**	**+0.4**
TYV	**Tymovskoe**	**7.40**	**333**	*e*P	**Pn**	**10 31 04.8**	**+0.1**
SKR	**Severo-Kuril's**	**8.36**	**38**	⇓*e*PN	**Pn**	**10 31 19.2**	**+1.5**
SKR	**Severo-Kuril's**	**8.36**	**38**	*e*P	**Pn**	**10 31 18.4**	**+0.7**
SKR				AMB	AMB	10 31 27.7	
	comp=N,40nm,0.9s						
PAU	**Pauzhetka**	**9.23**	**37**	*e*P	**Pn**	**10 31 31.1**	**+1.6**
PAU				AMB	AMB	10 31 33.6	
	comp=N,20nm,0.4s						
USRK	**Ussuriysk Ar.**	**11.46**	**275**	P	**Pn**	**10 31 59.6**	**-0.2**
	baz=88,slow=14,SNR=7.6						
JHJ2	**Mitsune**	**12.93**	**212**	Pn	**Pn**	**10 32 23.5**	**+4.2**
JHJ	**Hachijo jima 2**	**12.93**	**212**	P	**Pn**	**10 32 22.9**	**+3.5**
	comp=N,40nm,0.3s,baz=91,slow=20,SNR=4.5						
SEY	**Seymchan**	**18.75**	**6**	P	**P**	**10 33 28.2**	**-1.8**
	comp=N,0.4nm,0.3s,baz=185,slow=10,SNR=7.5						
YAK	**Yakutsk**	**20.65**	**335**	P	**P**	**10 33 47.2**	**-3.5**
	comp=N,7.3nm,0.3s,baz=120,slow=2.8,SNR=6.4						
YAK	**Yakutsk**	**20.65**	**335**	*de*P	**P**	**10 33 47.0**	**-3.7**
YAK				pmax	pmax		
	comp=Z,19nm,0.7s						
YAK	**Yakutsk**	**20.65**	**335**	P	**P**	**10 33 47.0**	**-3.7**
SONM	**Songino Array**	**28.78**	**292**	P	**P**	**10 35 06.7**	**-0.9**
	comp=Z,0.4nm,0.3s,baz=88,slow=8.5,SNR=4.2						
SONM	**Songino Array**	**28.78**	**292**	IAmb	IAmb	10 35 28.8	
	comp=Z,3.2nm,1.5s						
H11N2	**WAKE ISLAND Hy**	**29.21**	**141**	T	T	11 06 12.7	
	baz=332,slow=76,SNR=83						
H11N1	**WAKE ISLAND Hy**	**29.23**	**141**	T	T	11 06 13.7	
	baz=332,slow=76,SNR=68						
H11N3	**WAKE ISLAND Hy**	**29.23**	**141**	T	T	11 06 14.1	
	baz=332,slow=76,SNR=61						
H11S1	**WAKE ISLAND Hy**	**30.20**	**143**	T	T	11 07 27.2	
	baz=333,slow=76,SNR=218						
H11S3	**WAKE ISLAND Hy**	**30.21**	**143**	T	T	11 07 20.9	
	baz=333,slow=76,SNR=104						
H11S2	**WAKE ISLAND Hy**	**30.22**	**143**	T	T	11 07 28.6	
	baz=333,slow=76,SNR=92						
ILAR	**Eielson Array**	**40.62**	**37**	P	**P**	**10 36 48.9**	**-0.1**
	comp=Z,0.9nm,0.5s,baz=271,slow=8.4,SNR=15						
MK31	**Makanchi Array**	**44.81**	**297**	d *i*P	**P**	**10 37 22.5**	**-0.6**
MKAR	**Makanchi Array**	**44.81**	**297**	P	**P**	**10 37 22.6**	**-0.5**
	comp=Z,1.9nm,0.7s,baz=75,slow=7.2,SNR=8.3						
INK	**Inuvik**	**45.55**	**31**	P	**P**	**10 37 28.3**	**-0.2**
	comp=Z,1.8nm,0.5s,baz=313,slow=4.2,SNR=6.6						
INK	**Inuvik**	**45.55**	**31**	IAmb	IAmb	10 37 34.0	
	comp=Z,5.0nm,1.4s						
KURK	**Kurchatov**	**45.66**	**304**	⇓*e*P	**P**	**10 37 28.9**	**-0.7**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KURK	**Kurchatov**	**45.66**	**304**	*e*P	**P**	**10 37 28.9**	**-0.7**
BOOM	**Boomskoye usch**	**50.75**	**295**	P	**P**	**10 38 08.8**	**-0.3**
BOOM				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BOOM	**Boomskoye usch**	**50.75**	**295**	P	**P**	**10 38 08.8**	**-0.3**
BOOM				IAmb	IAmb	10 38 10.1	
	comp=Z,4.5nm,0.8s						
AAK	**Ala-Archa**	**51.61**	**296**	⇑*e*P	**P**	**10 38 15.3**	**-0.2**
AAK				pmax	pmax		
	comp=Z,14nm,1.3s						
AAK	**Ala-Archa**	**51.61**	**296**	*e*P	**P**	**10 38 15.3**	**-0.2**
KSH	**Kashi**	**52.18**	**291**	P	**P**	**10 38 21.3**	**+1.6**
KSH				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KKAR	**Karatay Array**	**53.94**	**298**	P	**P**	**10 38 31.5**	**-0.9**
KKAR	**Karatay Array**	**53.94**	**298**	P	**P**	**10 38 31.5**	**-0.9**
YKA	**Yellowknife Ar**	**54.94**	**34**	*ce*P	**P**	**10 38 42.2**	**+2.9**
ABKAR	**Akbulak array**	**57.12**	**309**	P	**P**	**10 38 53.8**	**-1.3**
ABKAR				IAmb	IAmb	10 39 03.0	
	comp=Z,1.9nm,1.1s						
ARCES	**ARCESS Array B**	**58.85**	**340**	P	**P**	**10 39 04.3**	**-2.6**
	comp=Z,0.8nm,0.5s,baz=44,slow=7.6,SNR=9.2						
ARCES	**ARCESS Array B**	**58.85**	**340**	*e*P	**P**	**10 39 05.0**	**-1.9**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ARCES	**ARCESS Array B**	**58.85**	**340**	IAmb	IAmb	10 39 17.1	
	comp=Z,5.5nm,1.1s						
FINES	**FINESS Array B**	**64.57**	**333**	P	**P**	**10 39 43.0**	**-2.3**
	comp=Z,2.3nm,0.5s,baz=39,slow=7.2,SNR=14						
WRA	**Warramunga Arr**	**65.22**	**194**	P	**P**	**10 39 50.8**	**+0.7**
	comp=Z,1.1nm,0.9s,baz=8.5,slow=6.8,SNR=8.3						
ASAR	**Alice Springs**	**68.94**	**194**	P	**P**	**10 40 14.9**	**+1.5**
	comp=Z,0.6nm,0.6s,baz=15,slow=6.0,SNR=12						
ASAR	**Alice Springs**	**68.94**	**194**	P	**P**	**10 40 15.0**	**+1.5**
NB2	**NORSAR Subarra**	**69.22**	**339**	P	**P**	**10 40 13.2**	**-1.6**
	comp=Z,2.1nm,0.8s,baz=30,slow=6.2						
NOA	**NORSAR Array B**	**69.22**	**339**	P	**P**	**10 40 13.1**	**-1.8**
	comp=Z,0.7nm,0.6s,baz=31,slow=6.6,SNR=8.8						
KIV	**Kislovodsk**	**69.78**	**312**	*e*P	**P**	**10 40 20.2**	**+1.6**
KIV				pmax	pmax		
	comp=Z,11nm,1.0s						
KIV	**Kislovodsk**	**69.78**	**312**	*e*P	**P**	**10 40 20.2**	**+1.6**
KBZ	**Khabaz**	**69.81**	**312**	P	**P**	**10 40 19.3**	**+0.6**
	comp=Z,6.2nm,0.9s,baz=31,slow=3.8,SNR=9.7						
AKASG	**Malin Array Be**	**71.41**	**324**	P	**P**	**10 40 26.7**	**-1.6**
	comp=Z,1.5nm,0.5s,baz=38,slow=6.0,SNR=8.5						
STKA	**Stephens Creek**	**76.13**	**186**	P	**P**	**10 40 57.5**	**+1.7**
	comp=Z,1.8nm,0.9s,baz=333,slow=9.0,SNR=2.8						
STKA	**Stephens Creek**	**76.13**	**186**	*e*P	**P**	**10 40 59.7**	**+3.8**
STKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
GERES	**GERESS Array B**	**78.88**	**331**	P	**P**	**10 41 10.4**	**-0.9**
	comp=Z,0.6nm,0.4s,baz=40,slow=6.4,SNR=2.5						
TXAR	**Lajitas Array**	**81.80**	**57**	P	**P**	**10 41 28.4**	**+1.0**
	comp=Z,0.3nm,0.5s,baz=292,slow=4.5,SNR=10						
H03N2	**Juan Fernandez**	**142.37**	**90**	T	T	13 28 01.5	
	baz=304,slow=77,SNR=5.3						
H03N3	**Juan Fernandez**	**142.38**	**90**	T	T	13 28 02.3	
	baz=304,slow=77,SNR=7.1						
H03N1	**Juan Fernandez**	**142.38**	**90**	T	T	13 28 02.9	
	baz=304,slow=77,SNR=6.4						
PLCA	**Paso Flores**	**151.57**	**96**	PKPbc	**PKPbc**	**10 49 01.9**	**+0.5**
	comp=Z,2.0nm,1.1s,baz=281,slow=5.0,SNR=3.1						

IDC 19 10:34:24.3±1.2, **9°.16S**×**158°.65E**, **h0**^{km}, **mb3.8**/4, **mb1 3.9**/4, **mb1mx3.6**/28, **mbtmp3.8**/4, **Error ellipse: s-maj=33.8km s-min=19.2km az=7.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.31**	**102**	Pn	Pn	10 34 50.1	+0.2
	100nm,0.3s,baz=242,slow=8.8,SNR=23						
HNR				Sn	Sn	10 35 08.4	+0.2
	111nm,0.3s,baz=238,slow=18,SNR=5.2						
WRA	**Warramunga Arr**	**25.82**	**243**	P	P	10 39 56.9	-0.6
	0.5nm,0.6s,baz=71,slow=9.3,SNR=2.4						
STKA	**Stephens Creek**	**27.60**	**213**	P	P	10 40 13.8	+0.4
	1.1nm,0.5s,baz=36,slow=16,SNR=6.0						
SONM	**Songino Array**	**73.11**	**326**	P	P	10 45 57.0	+0.3
	0.4nm,0.6s,baz=136,slow=5.1,SNR=5.2						
MKAR	**Makanchi Array**	**87.41**	**318**	P	P	10 47 13.3	-0.3
	0.4nm,0.6s,baz=95,slow=3.6,SNR=2.1						

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*IDC **19** 10:39:09.1±2.7, 8°.49S×158°.60E, h148^{km}±38^{km}, mb3.5/6, mb1 3.7/6, mb1mx3.4/36, mbtmp3.9/6, Error ellipse: s-maj=55.0km s-min=20.2km az=127.0*

ISC 19 10:39:09.3±0.9, **8°.5S**±0°.2×**158°.6E**±0°.1, **h150**^{km}, **n13**, σ**0^{s}.56**/8, **mb3.7**/6, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.61**	**125**	P	**Pn**	**10 39 40.2**	**+0.1**
	127nm,0.3s,baz=255,slow=3.7,SNR=37						
HNR				S	**Sn**	**10 40 03.4**	**-0.3**
	163nm,0.3s,baz=188,slow=20,SNR=12						
WRA	**Warramunga Arr**	**26.09**	**242**	P	**P**	**10 44 29.2**	**-0.1**
	1.2nm,0.4s,baz=67,slow=9.3,SNR=26						
H11S3	**WAKE ISLAND Hy**	**27.98**	**17**	T	T	11 13 24.9	
	baz=199,slow=76						
H11S2	**WAKE ISLAND Hy**	**27.98**	**17**	T	T	11 13 19.9	
	baz=199,slow=76						
H11S1	**WAKE ISLAND Hy**	**27.99**	**17**	T	T	11 13 33.0	
	baz=199,slow=76						
ASAR	**Alice Springs**	**28.05**	**235**	P	**P**	**10 44 46.5**	**-0.2**
	0.8nm,0.5s,baz=64,slow=9.4,SNR=17						
STKA	**Stephens Creek**	**28.14**	**212**	P	**P**	**10 44 47.7**	**+0.4**
	1.1nm,0.4s,baz=31,slow=14,SNR=8.9						
H11N1	**WAKE ISLAND Hy**	**29.19**	**16**	T	T	11 14 59.6	
	baz=196,slow=76						
H11N3	**WAKE ISLAND Hy**	**29.20**	**16**	T	T	11 14 59.9	
	baz=196,slow=76						
H11N2	**WAKE ISLAND Hy**	**29.21**	**16**	T	T	11 15 02.2	
	baz=196,slow=76						
SONM	**Songino Array**	**72.55**	**326**	P	**P**	**10 50 20.6**	**+0.6**
	1.0nm,0.6s,baz=137,slow=5.6,SNR=6.6						
ILAR	**Eielson Array**	**83.48**	**21**	P	**P**	**10 51 20.0**	**+0.2**
	0.2nm,0.5s,baz=224,slow=6.3,SNR=1.6						
MKAR	**Makanchi Array**	**86.90**	**318**	P	**P**	**10 51 36.3**	**-0.9**
	0.4nm,0.5s,baz=96,slow=6.8,SNR=4.4						

IDC 19 10:46:10.4±2.9, **18°.12S**×**177°.54W**, **h0**^{km}, **mb3.8**/3, **mb1 4.1**/3, **mb1mx3.7**/34, **mbtmp3.8**/3, **Error ellipse: s-maj=313.8km s-min=35.4km az=159.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**45.41**	**260**	P	P	10 54 30.8	-0.4
	0.4nm,0.3s,baz=97,slow=7.1,SNR=8.6						
ASAR	**Alice Springs**	**45.53**	**254**	P	P	10 54 32.3	+0.1
	2.7nm,0.5s,baz=87,slow=8.8,SNR=47						
TXAR	**Lajitas Array**	**85.41**	**57**	P	P	10 58 50.2	0.0
	0.2nm,0.7s,baz=235,slow=6.4,SNR=2.1						

IDC 19 10:48:33.1±1.8, **1°.90N**×**127°.74E**, **h0**^{km}, **mb3.9**/4, **mb1 4.0**/5, **mb1mx3.6**/37, **mbtmp3.9**/5, **ML3.6**/1, **Error ellipse: s-maj=99.3km s-min=24.3km az=68.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.98**	**186**	P	P	10 53 07.5	+0.3
	0.1nm,0.3s,baz=24,slow=9.8,SNR=6.3						
WRA	**Warramunga Arr**	**22.66**	**164**	P	P	10 53 37.0	+0.9
	2.6nm,0.4s,baz=343,slow=11,SNR=53						
ASAR	**Alice Springs**	**26.11**	**167**	P	P	10 54 08.7	-0.3
	0.9nm,0.4s,baz=344,slow=7.5,SNR=33						
STKA	**Stephens Creek**	**36.08**	**160**	P	P	10 55 35.8	-0.9
	1.7nm,0.5s,baz=338,slow=11,SNR=5.4						
MKAR	**Makanchi Array**	**59.62**	**325**	P	P	10 58 39.2	+0.2
	0.3nm,0.3s,baz=119,slow=7.0,SNR=4.6						

IDC 19 10:54:36.9±1.4, **9°.30S**×**158°.53E**, **h0**^{km}, **mb3.4**/3, **mb1 3.6**/3, **mb1mx3.4**/23, **mbtmp3.4**/3, **Error ellipse: s-maj=48.3km s-min=19.2km az=178.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.40**	**96**	Pn	Pb	10 55 04.3	+0.3
	88nm,0.3s,baz=248,slow=11,SNR=23						
HNR				Sn	Sb	10 55 22.5	+0.1
	86nm,0.3s,baz=217,slow=15,SNR=7.9						
WRA	**Warramunga Arr**	**25.65**	**243**	P	P	11 00 08.3	-0.3
	0.3nm,0.6s,baz=71,slow=9.7,SNR=1.8						
ASAR	**Alice Springs**	**27.53**	**236**	P	P	11 00 25.8	+0.2
	0.3nm,0.8s,baz=62,slow=9.9,SNR=2.4						
SONM	**Songino Array**	**73.17**	**326**	P	P	11 06 09.6	0.0
	0.6nm,0.7s,baz=135,slow=4.3,SNR=2.8						

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*THE **19** 11:02:06.0, 38°.75N×20°.57E, h6^{km}±1^{km}, ML2.9/8, Error ellipse: s-maj=1.4km s-min=0.8km az=291.0*

*ATH **19** 11:02:06.4, 38°.74N×20°.61E, h6^{km}±2^{km}, ML2.9/3, Error ellipse: s-maj=2.9km s-min=0.9km az=24.0*

ISC 19 11:02:06.5±1.1, **38°.74N**±0°.03×**20°.63E**±0°.04, **h6**^{km}±6^{km}, **n22**, σ**0^{s}.51**/39, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKD2	**Lefkada island**	**0.06**	**23**	P	**Pg**	**11 02 07.8**	**-0.3**
LKD2				S	**Sg**	**11 02 09.2**	**+0.1**
LKD2	**Lefkada island**	**0.06**	**23**	P	**Pg**	**11 02 07.8**	**-0.3**
LKD2				S	**Sg**	**11 02 09.3**	**+0.1**
LKD2				AML	AML	11 02 09.4	
	comp=N,45889µm,0.2s						
LKD2				AML	AML	11 02 09.6	
	comp=E,41419µm,0.2s						
NYDR	**Nydri-Lefkada**	**0.06**	**113**	P	**Pg**	**11 02 07.8**	**-0.2**
NYDR				S	**Sg**	**11 02 09.3**	**+0.3**
	comp=E,20µm,0.2s						
NYDR	**Nydri-Lefkada**	**0.06**	**113**	P	**Pg**	**11 02 07.9**	**-0.2**
NYDR				S	**Sg**	**11 02 09.3**	**+0.3**
DRAG	**Dragano-Lefkad**	**0.07**	**219**	P	**Pg**	**11 02 07.8**	**-0.4**
DRAG				S	**Sg**	**11 02 09.1**	**-0.3**
	comp=E,80µm,0.2s						
DRAG	**Dragano-Lefkad**	**0.07**	**219**	P	**Pg**	**11 02 07.8**	**-0.4**
DRAG				S	**Sg**	**11 02 09.0**	**-0.3**
TSLK	**Tsoukalades, L**	**0.09**	**13**	P	**Pg**	**11 02 08.6**	**0.0**
TSLK				S	**Sg**	**11 02 10.5**	**+0.6**
	comp=E,14µm,0.4s						
TSLK	**Tsoukalades, L**	**0.09**	**13**	P	**Pg**	**11 02 08.4**	**-0.1**
TSLK				S	**Sg**	**11 02 10.3**	**+0.3**
TSLK				AML	AML	11 02 10.9	
	comp=E,29145µm,0.5s						
TSLK				AML	AML	11 02 13.0	
	comp=N,27089µm,0.4s						
EVGI	**Lefkada island**	**0.12**	**170**	P	**Pg**	**11 02 08.9**	**-0.1**
EVGI				S	**Sg**	**11 02 11.1**	**+0.5**
	comp=N,8µm,0.1s						
EVGI	**Lefkada island**	**0.12**	**170**	P	**Pg**	**11 02 08.9**	**-0.1**
EVGI				S	**Sg**	**11 02 11.3**	**+0.7**
FSK	**Fiskardo**	**0.28**	**191**	P	**Pg**	**11 02 11.9**	**-0.1**
FSK				S	**Sg**	**11 02 16.2**	**+0.5**
FSK	**Fiskardo**	**0.28**	**191**	P	**Pg**	**11 02 11.8**	**-0.3**
FSK				S	**Sg**	**11 02 16.3**	**+0.5**
FSK				AML	AML	11 02 17.3	
	comp=E,5058µm,0.4s						
FSK				AML	AML	11 02 17.7	
	comp=N,2239µm,0.3s						
PVO	**Paravola**	**0.71**	**99**	P	**Pg**	**11 02 20.3**	**0.0**
PVO				S	**Sb**	**11 02 32.1**	**+0.6**
	comp=N,722nm,0.3s						
PVO	**Paravola**	**0.71**	**99**	P	**Pg**	**11 02 20.2**	**0.0**
EVR	**Evrytania**	**0.94**	**79**	P	**Pg**	**11 02 24.0**	**-0.6**
EVR	**Evrytania**	**0.94**	**79**	P	**Pg**	**11 02 23.9**	**-0.7**
ANX	**Ano Chora**	**1.02**	**98**	P	**Pg**	**11 02 25.8**	**-0.3**
ANX				S	**Sn**	**11 02 42.4**	**+0.1**
	comp=N,542nm,0.4s						
EFP	**Efpalio**	**1.05**	**107**	P	**Pg**	**11 02 26.1**	**-0.5**
EFP				S	**Sn**	**11 02 42.2**	**-0.6**
	comp=N,385nm,0.4s						
DRO	**Drossia**	**1.16**	**132**	P	**Pg**	**11 02 27.7**	**-1.0**
DRO				S	**Sn**	**11 02 46.8**	**+1.3**
LAKA	**Lakka**	**1.17**	**115**	P	**Pg**	**11 02 27.7**	**-1.3**
LAKA				S	**Sn**	**11 02 46.1**	**+0.3**
	comp=N,500nm,0.6s						
MAKR	**Makrakomi, Fth**	**1.21**	**76**	P	**Pg**	**11 02 29.2**	**-0.5**
AGG	**Agios Georgios**	**1.36**	**77**	P	**Pn**	**11 02 31.8**	**-0.3**

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*CNRM **19** 11:11:00.7, 36°.59N×9°.42W, h87^{km}, ml3.4*

*MDD **19** 11:11:01.1±1.3, 36°.73N×9°.71W, h25^{km}±17^{km}, mbLg3.2/23, Error ellipse: s-maj=18.1km s-min=8.0km az=44.0, PRXIMO*

*INMG **19** 11:11:01.8±1.1, 36°.73N×9°.67W, h19^{km}±3^{km}, MD2.8, ML2.8, Error ellipse: s-maj=4.1km s-min=2.1km az=49.0*

*IGIL **19** 11:11:01.4, 36°.72N×9°.67W, h16^{km}, ML2.9*

ISC 19 11:10:59.6±1.4, **36°.69N**±0°.04×**9°.69W**±0°.06, **h35**^{km}, **n77**, σ**1^{s}.66**/138, **7C-1D, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**0.82**	**57**	⇑*i*P	**Pn**	**11 11 16.1**	**+1.4**
PFVI				*e*S	**Sn**	**11 11 26.8**	**+1.1**
PFVI				A	A	11 11 27.6	
	176nm,0.2s						
PFVI	**Vila Bisbo**	**0.82**	**57**	⇑P	**Pn**	**11 11 16.1**	**+1.4**
	42nm,0.1s,SNR=18						
PFVI				S	**Sn**	**11 11 26.3**	**+0.7**
	289nm,0.1s,SNR=14						
MORF	**Marmelete**	**1.04**	**53**	*e*P	**Pn**	**11 11 19.1**	**+1.4**
MORF				*e*S	**Sn**	**11 11 32.1**	**+1.1**
MORF				IAML		11 11 32.8	
	comp=N,303nm,0.1s						
MORF	**Marmelete**	**1.04**	**53**	⇑*i*P	**Pn**	**11 11 19.1**	**+1.4**
MORF				*e*S	**Sn**	**11 11 32.2**	**+1.2**
MORF				A	A	11 11 32.4	
	comp=N,177nm,0.1s						
MORF	**Marmelete**	**1.04**	**53**	P	**Pn**	**11 11 19.1**	**+1.4**
MORF				S	**Sn**	**11 11 32.1**	**+1.1**
PTEO	**Sao Teotonio**	**1.15**	**42**	*e*P	**Pn**	**11 11 20.6**	**+1.3**
PTEO				*e*S	**Sn**	**11 11 35.1**	**+1.3**
PTEO				A	A	11 11 36.4	
	comp=N,84nm,0.3s						
PBDV	**Barranco-do-Ve**	**1.51**	**68**	*e*P	**Pn**	**11 11 26.1**	**+1.8**
PBDV				*e*S	**Sn**	**11 11 43.7**	**+0.9**
PBDV				A	A	11 11 45.3	
	comp=N,55nm,0.4s						
PCVE	**Castro Verde**	**1.62**	**54**	⇑*e*P	**Pn**	**11 11 27.4**	**+1.7**
PCVE				*e*S	**Sn**	**11 11 46.8**	**+1.4**
PCVE				A	A	11 11 48.0	
	comp=N,78nm,0.3s						
MESJ	**Messejana**	**1.64**	**45**	*e*P	**Pn**	**11 11 27.3**	**+1.3**
MESJ				*e*S	**Sn**	**11 11 46.7**	**+0.8**
MESJ				IAML		11 11 47.4	
	comp=N,30nm,0.1s						
MESJ	**Messejana**	**1.64**	**45**	*e*P	**Pn**	**11 11 27.3**	**+1.3**
MESJ				*e*S	**Sn**	**11 11 46.6**	**+0.8**
MESJ				A	A	11 11 49.1	
	comp=N,35nm,0.3s						
MESJ	**Messejana**	**1.64**	**45**	P	**Pn**	**11 11 27.3**	**+1.3**
MESJ				S	**Sn**	**11 11 46.7**	**+0.8**

PNCL	**Nicolau / Gran**	**1.69**	**33**	⇑*i*Pn	**Pn**	**11 11 27.9**	**+1.2**
PNCL				*e*Sn	**Sn**	**11 11 47.8**	**+0.6**
PNCL				A	A	11 11 49.8	
	comp=N,55nm,0.1s						
PVAQ	**Vaqueiros**	**1.73**	**65**	⇑*e*Pn	**Pn**	**11 11 28.8**	**+1.5**
PVAQ				*e*Sn	**Sn**	**11 11 48.9**	**+0.8**
PVAQ				A	A	11 11 50.5	
	comp=N,58nm,0.2s						
PVAQ	**Vaqueiros**	**1.73**	**65**	P	**Pn**	**11 11 29.3**	**+2.0**
PVAQ				S	**Sn**	**11 11 48.5**	**+0.4**
EGRO	**El Granado**	**1.96**	**64**	P	**Pn**	**11 11 31.8**	**+1.4**
	comp=N,0.3nm,0.1s,SNR=32						
EGRO				S	**Sn**	**11 11 54.4**	**+0.7**
	comp=N,50nm,0.1s,SNR=9.8						
PBEJ	**Beja**	**1.97**	**47**	*e*Pn	**Pn**	**11 11 31.7**	**+1.1**
PBEJ				*e*Sn	**Sn**	**11 11 54.6**	**+0.5**
PBEJ				A	A	11 12 09.5	
	comp=N,15nm,0.1s						
LIS	**Lisbon**	**2.07**	**12**	*e*S	**Sn**	**11 11 56.6**	**+0.3**
LIS				IAML		11 12 00.1	
	comp=N,176nm,0.3s						
LIS	**Lisbon**	**2.07**	**12**	*e*Sn	**Sn**	**11 11 57.1**	**+0.7**
LIS	**Lisbon**	**2.07**	**12**	S	**Sn**	**11 11 56.6**	**+0.3**
PMST	**Lisbon--Monsan**	**2.08**	**11**	*e*Pn	**Pn**	**11 11 33.0**	**+0.9**
PMST				*e*Sn	**Sn**	**11 11 57.1**	**+0.4**
PMST				A	A	11 11 58.4	
	comp=N,85nm,0.2s						
EVO	**Evora**	**2.27**	**35**	P	**Pn**	**11 11 35.7**	**+1.1**
EVO				S	**Sn**	**11 12 00.9**	**-0.5**
EVO	**Evora**	**2.27**	**35**	*e*Pn	**Pn**	**11 11 35.7**	**+1.1**
EVO				*e*Sn	**Sn**	**11 12 01.5**	**+0.1**
EVO				A	A	11 12 02.2	
	comp=N,50nm,0.1s						
EVO	**Evora**	**2.27**	**35**	P	**Pn**	**11 11 35.7**	**+1.1**
EVO				S	**Sn**	**11 12 00.9**	**-0.5**
PMAFR	**Mafra**	**2.28**	**8**	*e*Pn	**Pn**	**11 11 35.8**	**+0.9**
PMAFR				*e*Sn	**Sn**	**11 12 02.3**	**+0.5**
PMAFR				A	A	11 12 04.3	
	comp=N,182nm,0.2s						
PMAFR	**Mafra**	**2.28**	**8**	P	**Pn**	**11 11 35.7**	**+0.9**
	comp=N,9.7nm,0.1s,SNR=23						
PMAFR				S	**Sn**	**11 12 01.8**	**0.0**
	comp=N,262nm,0.2s,SNR=43						
ARNO	**Arenosillo**	**2.41**	**79**	S	**Sn**	**11 12 05.3**	**+0.5**
PBAR	**Barrancos**	**2.58**	**54**	*e*Pn	**Pn**	**11 11 40.4**	**+1.5**
PBAR				A	A	11 12 11.3	
	comp=N,18nm,0.4s						
EMIN	**Mina Concepcio**	**2.64**	**65**	P	**Pn**	**11 11 40.8**	**+1.1**
	comp=N,0.8nm,0.1s,SNR=10.0						
EMIN				S	**Sn**	**11 12 10.3**	**-0.2**
	comp=N,15nm,0.1s,SNR=7.9						
PMTG	**Montargil**	**2.64**	**26**	*e*Pn	**Pn**	**11 11 41.0**	**+1.2**
PMTG				*e*Sn	**Sn**	**11 12 10.4**	**-0.2**
PMTG				A	A	11 12 11.9	
	comp=N,31nm,0.4s						
PESTR	**Estremoz**	**2.74**	**37**	*e*Pn	**Pn**	**11 11 41.8**	**+0.7**
PESTR				*e*Sn	**Sn**	**11 12 12.7**	**-0.3**
PESTR				A	A	11 12 28.9	
	comp=N,11nm,0.3s						
PESTR	**Estremoz**	**2.74**	**37**	P	**Pn**	**11 11 41.3**	**+0.2**
PESTR				S	**Sn**	**11 12 12.4**	**-0.5**
PSBE	**So Bento**	**2.91**	**14**	*e*Pn	**Pn**	**11 11 44.5**	**+1.1**
PSBE				*e*Sn	**Sn**	**11 12 16.6**	**-0.5**
PSBE				A	A	11 12 19.8	
	comp=N,21nm,0.4s						
EBAD	**Badajoz**	**2.96**	**45**	⇑P	**Pn**	**11 11 44.9**	**+0.7**
	comp=N,4.8nm,0.1s,SNR=18						
EBAD				S	**Sn**	**11 12 18.1**	**-0.3**
	comp=N,14nm,0.1s,SNR=7.9						
ESPR	**Espera**	**3.08**	**86**	⇓P	**Pn**	**11 11 47.2**	**+1.3**
	comp=N,21nm,0.1s,SNR=18						
ESPR				S	**Sn**	**11 12 21.4**	**-0.1**
	comp=N,95nm,0.3s,SNR=7.9						
PMRV	**Marv??o**	**3.28**	**33**	*e*Pn	**Pn**	**11 11 49.6**	**+1.0**
PMRV				*e*Sn	**Sn**	**11 12 25.3**	**-1.1**
PMRV				A	A	11 12 28.6	
	comp=N,13nm,0.2s						
EJIF	**Jimena Fronter**	**3.41**	**93**	P	**Pn**	**11 11 52.0**	**+1.7**
	SNR=7.9						
PCAS	**Casmilo, Conde**	**3.48**	**15**	*e*Pn	**Pn**	**11 11 52.6**	**+1.2**
PCAS				*e*Sn	**Sn**	**11 12 29.6**	**-1.8**
PCAS				A	A	11 12 33.6	
	comp=N,9.3nm,0.2s						
CEU	**Ceuta**	**3.58**	**101**	P	**Pn**	**11 11 55.4**	**+2.8**
CEU				S	**Sn**	**11 12 34.1**	**+0.5**
PCBR	**Castelo Branco**	**3.59**	**28**	*e*Pn	**Pn**	**11 11 54.2**	**+1.4**
PCBR				*e*Sn	**Sn**	**11 12 33.8**	**-0.3**
PCBR				A	A	11 12 36.0	
	comp=N,5.9nm,0.5s						
COI	**Coimbra**	**3.65**	**16**	*e*Sn	**Sn**	**11 12 36.3**	**+0.8**
ECAB	**El Cabril**	**3.67**	**67**	P	**Pn**	**11 11 55.3**	**+1.3**
	comp=N,0.1nm,0.1s,SNR=26						
ECAB				S	**Sn**	**11 12 34.9**	**-1.1**
	comp=N,6.2nm,0.1s,SNR=9.0						
EMIJ	**Mijas**	**3.96**	**90**	P	**Pn**	**11 11 59.6**	**+1.7**
	comp=N,0.8nm,0.2s,SNR=7.9						
EMIJ				S	**Sn**	**11 12 42.4**	**-0.8**
	comp=N,3.6nm,0.2s,SNR=7.9						
MTE	**Manteigas**	**4.07**	**24**	*e*Pn	**Pn**	**11 12 00.8**	**+1.4**
MTE				*e*Sn	**Sn**	**11 12 44.7**	**-1.1**
MTE				A	A	11 12 47.4	
	comp=N,9.6nm,0.3s						
ZHG	**ZHG**	**4.09**	**141**	P	**Pn**	**11 11 59.5**	**-0.3**
ZHG				S	**Sn**	**11 12 42.3**	**-4.1**
PVIS	**Viseu**	**4.26**	**19**	*e*Pn	**Pn**	**11 12 03.5**	**+1.5**
PVIS				*e*Sn	**Sn**	**11 12 50.1**	**-0.4**
PVIS				A	A	11 12 52.5	
	comp=N,19nm,0.3s						
EADA	**Adamuz**	**4.33**	**69**	P	**Pn**	**11 12 04.5**	**+1.5**
	comp=N,1.2nm,0.1s,SNR=26						
EADA				S	**Sn**	**11 12 51.0**	**-1.3**
	comp=N,8.0nm,0.1s,SNR=7.9						
EPLA	**Plasencia**	**4.40**	**39**	S	**Sn**	**11 12 52.9**	**-1.2**
	comp=N,16nm,0.1s,SNR=7.9						
EGOR	**Sierra Gorda,**	**4.49**	**83**	P	**Pn**	**11 12 08.0**	**+2.7**
	comp=N,1.0nm,0.3s,SNR=7.9						
EGOR				S	**Sn**	**11 12 55.5**	**-0.9**
	comp=N,5.8nm,0.3s,SNR=7.9						
PVRL	**Vila Real**	**4.83**	**18**	*e*Pn	**Pn**	**11 12 11.2**	**+1.3**
PVRL				*e*Sn	**Sn**	**11 13 02.6**	**-2.0**
PVRL				A	A	11 13 05.6	
	comp=N,23nm,0.2s						
ELGU	**Los Guajares,**	**4.87**	**86**	P	**Pn**	**11 12 12.3**	**+1.8**
	comp=N,1.4nm,0.2s,SNR=7.9						
ELGU				S	**Sn**	**11 13 04.0**	**-1.7**
	comp=N,6.8nm,0.3s,SNR=7.9						
POLO	**Lamas de Olo**	**4.90**	**17**	*e*Pn	**Pn**	**11 12 11.8**	**+0.9**
POLO				*e*Sn	**Sn**	**11 13 04.7**	**-1.8**
POLO				A	A	11 13 07.5	
	comp=N,4.6nm,0.1s						
MVO	**Moncorvo**	**4.93**	**24**	*e*Pn	**Pn**	**11 12 12.2**	**+0.9**
MVO				*e*Sn	**Sn**	**11 13 04.9**	**-2.1**
MVO				A	A	11 13 07.5	
	comp=N,20nm,0.5s						
MVO	**Moncorvo**	**4.93**	**24**	P	**Pn**	**11 12 12.1**	**+0.9**
	comp=N,0.4nm,0.2s,SNR=7.9						
MVO				S	**Sn**	**11 13 04.7**	**-2.3**
	comp=N,8.6nm,0.1s,SNR=7.2						
PAB	**San Pablo**	**5.09**	**54**	P	**Pn**	**11 12 14.8**	**+1.4**
	comp=N,1.2nm,0.1s,SNR=7.9						
PAB				S	**Sn**	**11 13 08.7**	**-2.3**
	comp=N,4.1nm,0.2s,SNR=7.9						
PCAB	**Cabril**	**5.18**	**14**	*e*Pn	**Pn**	**11 12 15.4**	**+0.8**
PCAB				*e*Sn	**Sn**	**11 13 11.1**	**-2.0**
PCAB				A	A	11 13 14.6	
	comp=N,11nm,0.3s						
CZD	**Col de Zad**	**5.29**	**132**	P	**Pn**	**11 12 16.7**	**+0.3**
CZD				S	**Sn**	**11 13 13.7**	**-2.5**
ELOB	**Lobios**	**5.32**	**13**	P	**Pn**	**11 12 17.5**	**+0.8**
	comp=N,0.1nm,0.2s,SNR=7.9						
ELOB				S	**Sn**	**11 13 14.2**	**-2.6**
	comp=N,10nm,0.1s,SNR=11						
PGAV	**Gavieira, Arco**	**5.38**	**11**	*e*Pn	**Pn**	**11 12 18.2**	**+0.7**
PGAV				*e*Sn	**Sn**	**11 13 15.8**	**-2.4**
PGAV				A	A	11 13 18.9	
	comp=N,11nm,0.4s						
ESDC	**Sonseca Array**	**5.41**	**55**	P	**Pn**	**11 12 19.0**	**+1.1**
	comp=N,1.4nm,0.3s,baz=240,slow=13,SNR=13						
ESDC				S	**Sn**	**11 13 17.7**	**-1.1**
	comp=N,0.4nm,0.3s,baz=240,slow=24,SNR=3.7						
MD31	**MD31**	**5.57**	**132**	P	**Pn**	**11 12 19.6**	**-0.5**
MD31				S	**Sn**	**11 13 19.8**	**-3.2**
PBRG	**Braganca**	**5.60**	**23**	*e*Pn	**Pn**	**11 12 21.7**	**+1.3**
PBRG				*e*Sn	**Sn**	**11 13 20.8**	**-2.7**
PBRG				A	A	11 13 24.5	
	comp=N,7.0nm,0.2s						
OUK	**Oukaimeden**	**5.68**	**164**	P	**Pn**	**11 12 21.1**	**-0.8**
OUK				S	**Sn**	**11 13 23.5**	**-2.4**
MDT	**Midelt**	**5.70**	**131**	S	**Sn**	**11 13 20.6**	**-5.5**
ECAL	**Calabor**	**5.72**	**23**	P	**Pn**	**11 12 23.4**	**+1.3**
	comp=N,7.4nm,0.3s,SNR=7.9						
ECAL				S	**Sn**	**11 13 24.2**	**-2.4**
	comp=N,11nm,0.2s,SNR=5.5						
SESP	**Santiago Espad**	**5.87**	**74**	P	**Pn**	**11 12 25.4**	**+1.2**
	comp=N,5.8nm,0.6s,SNR=7.9						
SESP				S	**Sn**	**11 13 28.3**	**-2.0**
	comp=N,8.3nm,0.2s,SNR=7.9						
TTIG	**Tnine Tigouga,**	**6.22**	**170**	P	Pn	11 12 25.4	-3.7
TTIG				S	**Sn**	**11 13 38.2**	**-0.8**
OUZM	**OUZ**	**6.26**	**156**	P	**Pn**	**11 12 29.4**	**-0.3**
OUZM				S	**Sn**	**11 13 37.6**	**-2.5**
JBK	**JBK**	**6.27**	**110**	P	**Pn**	**11 12 28.8**	**-1.0**
JBK				S	Sn	11 13 31.8	-8.5
EMAZ	**Mazaricos**	**6.27**	**5**	P	**Pn**	**11 12 29.6**	**-0.1**
	comp=N,0.7nm,0.1s,SNR=7.9						
EMAZ				S	**Sn**	**11 13 35.5**	**-4.6**
	comp=N,8.7nm,0.2s,SNR=7.9						
PMPST	**Porto Santo, M**	**6.54**	**238**	*e*Pn	**Pn**	**11 12 31.2**	**-2.1**
PMPST				*e*Sn	Sn	11 13 36.6	-10
EPON	**Pontenova**	**6.91**	**16**	P	**Pn**	**11 12 39.3**	**+0.9**
	comp=N,0.5nm,0.3s,SNR=7.9						
EPON				S	**Sn**	**11 13 52.1**	**-3.6**
	comp=N,1.6nm,0.3s,SNR=7.9						
ETOR	**Torete**	**7.25**	**53**	P	**Pn**	**11 12 44.5**	**+1.3**
	comp=N,3.4nm,0.2s,SNR=7.9						
ETOR				S	**Sn**	**11 14 01.2**	**-3.1**
	comp=N,13nm,0.3s						
PMOZ	**Porto Moniz, M**	**7.28**	**240**	*e*Sn	Sn	11 13 57.8	-7.3
EARI	**Arriondas**	**7.44**	**26**	P	**Pn**	**11 12 47.3**	**+1.5**
	comp=N,0.4nm,0.3s,SNR=7.9						
EARI				S	**Sn**	**11 14 06.1**	**-2.8**
	comp=N,0.4nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**8.10**	**60**	P	**Pn**	**11 12 56.5**	**+1.5**
	comp=N,0.1nm,0.3s,SNR=7.9						
EMOS				S	**Sn**	**11 14 21.8**	**-3.5**
	comp=N,2.1nm,0.2s,SNR=7.9						
EFAM	**Famara**	**8.20**	**204**	S	Sn	11 14 18.4	-9.2
	comp=N,1.5nm,0.3s,SNR=7.9						
EORO	**Oroz-Betelu**	**8.94**	**44**	P	**Pn**	**11 13 07.4**	**+1.1**
	comp=N,3.9nm,1.0s,SNR=5.5						
EORO				S	**Sn**	**11 14 40.4**	**-5.3**
	comp=N,2.3nm,0.4s,SNR=7.9						

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*TUL **19** 11:17:33.9±0.5, 36°.660N±0°.010×98°.46W±0°.03, h8km±5km, ML2.5, mb_Lg2.2/9(NEIC), Error ellipse: s-maj=3.2km s-min=1.0km az=69.0*

NEIC 19 11:17:34.2±0.6, 36°.65N±0°.02×98°.44W±0°.03, h8km±6km, Error ellipse: s-maj=3.2km s-min=2.1km az=109.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK032	**Salt Plains WL**	**0.24**	**50**		Pg	11 17 39.0	0.0
OK032				Sg	Sg	11 17 42.8	+0.6
CROK	**Carrier**	**0.39**	**112**	Pg	Pg	11 17 41.9	0.0
CROK				Sg	Sg	11 17 47.6	+0.5
KAN14	**Manchester OK**	**0.49**	**51**	Pg	Pg	11 17 43.6	-0.1
KAN14				Sg	Sg	11 17 49.9	-0.2
GC02	**Grant County #**	**0.50**	**67**	Pg	Pg	11 17 43.8	-0.2
GC02				Sg	Sg	11 17 50.5	-0.1
U32A	**Winter Ranch,**	**0.53**	**239**	Pg	Pg	11 17 43.8	-0.7
KAN10	**Anthony SW Sta**	**0.54**	**30**	Pg	Pg	11 17 44.4	-0.4
KAN10				Sg	Sg	11 17 51.7	-0.2
KAN05	**Bluff City Nor**	**0.64**	**45**	Sg	Sg	11 17 55.1	+0.1
KAN17	**Caldwell West**	**0.67**	**54**	Pg	Pg	11 17 46.1	-1.0
KAN08	**Anthony NE Sta**	**0.68**	**33**		Pg	11 17 47.0	-0.5
KAN08					Sg	11 17 56.3	-0.1
KAN08				Sg	Sb	11 17 56.5	-1.6
KAN01	**Argonia South**	**0.74**	**47**	Sg	Sg	11 17 58.2	+0.1
KAN13	**South Haven SW**	**0.85**	**65**	Pg	Pg	11 17 49.9	-0.7
BLOK	**Blackwell**	**0.99**	**83**		Pg	11 17 52.8	-0.5
BCOK	**Bluff Creek, N**	**1.20**	**146**	Pn	Pn	11 17 57.3	0.0
OK031	**S. Brethren Rd**	**1.47**	**118**		Pn	11 18 01.3	+0.3
QUOK	**Quay**	**1.48**	**108**		Pn	11 18 01.2	+0.1
QUOK					Sg	11 18 21.8	+0.2
OK030	**Cody Creek RV**	**1.52**	**118**	Pn	Pn	11 18 02.0	+0.3
T35A	**Sooner Cattle**	**1.57**	**80**	Pn	Pn	11 18 02.3	-0.1
R32A	**Long Quarter,**	**1.78**	**353**		Pn	11 18 05.8	+0.4
R32A				IAmb_Lg		11 18 34.3	
	comp=Z,8.6nm,0.7s						
TUL1	**Leonard**	**2.26**	**108**	IAmb_Lg		11 18 48.3	
	comp=Z,7.8nm,0.8s						
CBKS	**Cedar Bluff**	**2.39**	**335**	IAmb_Lg		11 18 52.1	
	comp=Z,7.5nm,0.7s						
AMTX	**Amarillo**	**3.17**	**237**	IAmb_Lg		11 19 15.4	
	comp=Z,13nm,0.8s						
KSCO	**Kaye Shedlock'**	**4.07**	**307**	IAmb_Lg		11 19 48.6	
	comp=Z,8.8nm,0.8s						

IDC 19 11:20:37.8±2.2, 0°.77N×127°.15E, h0km, mb3.7/3, mb1 4.0/3, mb1mx3.4/33, mbtmp3.8/3, MS2.9/1, Ms1 2.9/1, ms1mx2.2/51, 1C, Error ellipse: s-maj=163.9km s-min=27.9km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.43**	**112**	LR	LR	11 23 38.7	
	comp=Z,135nm,18.2s,baz=240,slow=41						
BBP	**Basco**	**20.20**	**346**	⇑*i*P	Pn	11 25 15.3	-0.8
WRA	**Warramunga Arr**	**21.75**	**161**	P	P	11 25 31.0	-0.1
	4.0nm,0.6s,baz=340,slow=11,SNR=30						
ASAR	**Alice Springs**	**25.16**	**165**	P	P	11 26 05.1	+0.1
	4.0nm,0.8s,baz=340,slow=8.2,SNR=28						
MKAR	**Makanchi Array**	**60.22**	**326**	P	P	11 30 47.8	-0.1
	0.4nm,0.5s,baz=118,slow=6.6,SNR=2.3						

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*EST **19** 11:28:46.2±0.1, 59°.23N×27°.77E, h0km, ML1.4(HEL), Explosion*

*LVSN **19** 11:28:47.8±1.2, 57°.68N×27°.47E, h0km±21km, ML1.7*

HEL 19 11:28:47.1±0.3, 59°.24N×27°.69E, h0km, ML1.7, Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EE04	**Vaivara Sinima**	**0.16**	**36**	*e*P	Pg	11 28 48.7	-1.5
EE04				*e*S	Sg	11 28 50.9	-1.5
EE05	**Udria, Vaivara**	**0.19**	**39**	*e*P	Pg	11 28 49.3	-1.5
EE05				*e*S	Sg	11 28 51.9	-1.4
EE03	**Tooma soojaam,**	**0.82**	**244**	*e*P	Pg	11 29 01.4	-1.4
EE03				*e*SB	Sg	11 29 13.2	-0.2
ARBE	**Arbavere**	**0.89**	**283**	*e*P	Pg	11 29 03.5	-0.7
ARBE				*e*S	Sg	11 29 14.7	-1.0
VSU	**Vasula**	**0.93**	**213**	*e*S	Sg	11 29 15.0	-1.7
VSU				AML	AML	11 29 22.0	
	comp=E,36nm,0.4s						
VSU				AML	AML	11 29 25.9	
	comp=N,29nm,0.4s						
VSU				AML	AML	11 29 26.3	
	comp=Z,20nm,0.6s						
VSU	**Vasula**	**0.93**	**213**	*e*P	Pg	11 29 03.3	-1.5
VJF	**Virojoki**	**1.30**	**357**	*e*P	Pg	11 29 09.5	-2.5
VJF				*e*SB	Sg	11 29 27.5	-1.4
EE02	**Kiisa, Saku**	**1.54**	**269**	*e*PG	Pn	11 29 14.8	-1.0
EE02				*e*S	Sn	11 29 34.7	-1.7
PVF	**Pernaja**	**1.60**	**326**	*e*PG	Pn	11 29 15.7	-0.8
PVF				MSG		11 29 35.0	
	comp=Z,2.5nm,0.2s						
PVF				*e*SG	Sn	11 29 36.6	-1.3
MEF	**Metsahovi**	**1.93**	**302**	*e*PG	Pn	11 29 21.7	+0.5
MEF				*e*SG	Sb	11 29 47.0	-0.8
MEF				MSG		11 29 49.0	
	comp=Z,2.0nm,0.1s						
NUR	**Nurmijrvi**	**1.99**	**311**	*e*PG	Pn	11 29 22.7	+0.7
NUR				*e*SB	Sn	11 29 48.0	+0.4
NUR				MSG		11 29 48.6	
	comp=Z,2.1nm,0.1s						
MTSE	**Matsula**	**2.07**	**257**	*e*P	Pn	11 29 23.6	+0.6
MTSE				*e*S	Sn	11 29 50.6	+1.0
MTSE	**Matsula**	**2.07**	**257**	*e*PG	Pn	11 29 23.9	+0.8
MTSE				*e*SG	Sb	11 29 51.3	-0.5
EE01	**Perakula, Nova**	**2.09**	**271**	*e*PG	Pn	11 29 24.0	+0.7
EE01				*e*SG	Sb	11 29 51.4	-0.9
RUFX	**Ruokolahti**	**2.28**	**15**	*e*P	Pn	11 29 25.4	-0.5
RUFX				*e*SB	Sn	11 29 55.8	+1.0
FIA1	**FINESS Array S**	**2.35**	**341**	*e*SG	Sb	11 29 59.4	-0.4
FIA1				MSG		11 30 01.4	
	comp=Z,1.1nm,0.1s						
EE06	**Soera, Palade,**	**2.51**	**266**	*e*SG	Sb	11 30 04.6	+0.2
KAF	**Kangasniemi**	**2.96**	**347**	*e*PB	Pb	11 29 38.5	-2.2
SLIT	**Slitere, Latvi**	**3.27**	**243**	*e*S	Sn	11 30 03.7	-15
JOF	**Joensuu**	**4.09**	**24**	*e*P	Pn	11 29 50.4	-0.4

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*UPP **19** 11:38:00.8±2.8, 62°.89N×27°.84E, h0km, ML1.8, Suspected explosion*

*HEL **19** 11:38:01.7±0.1, 63°.14N×27°.73E, h0km, ML1.9, Explosion*

*IDC **19** 11:38:02.3±1.6, 63°.09N×27°.89E, h0km, mb1 3.1/2, mb1mx2.9/59, mbtmp3.1/2, ML2.2/2, Error ellipse: s-maj=23.4km s-min=6.3km az=104.0*

ISC 19 11:38:01.0±0.9, 63°.05N±0°.04×27°.80E±0°.04, h0km, n35, σ1.s20/47, Finland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUF	**Sumiainen**	**0.82**	**247**	PG	**Pg**	**11 38 17.0**	**+0.2**
SUF				SB	**Sg**	**11 38 27.9**	**+0.5**
KAF	**Kangasniemi**	**1.17**	**217**	PG	**Pg**	**11 38 23.8**	**+0.4**
KAF				SB	**Sb**	**11 38 40.1**	**+0.4**
JOF	**Joensuu**	**1.61**	**93**	PG	**Pn**	**11 38 31.5**	**+0.9**
	baz=279						
JOF				SN	**Sn**	**11 38 52.8**	**+0.7**
KEF	**Keuruu**	**1.62**	**238**	PG	**Pn**	**11 38 31.6**	**+0.8**
KEF				MSG		11 38 51.0	
	comp=Z,4.1nm,0.2s						
KEF				SN	**Sg**	**11 38 53.1**	**+0.2**
FIA0	**FINESS Array S**	**1.80**	**207**	PG	**Pg**	**11 38 35.5**	**0.0**
FINES	**FINESS Array B**	**1.80**	**207**	Pg	**Pg**	**11 38 35.6**	**0.0**
	comp=Z,0.2nm,0.3s,baz=24,slow=17,SNR=9.6						
FINES				Lg	Lg	11 39 00.5	
	comp=Z,0.9nm,0.3s,baz=23,slow=28,SNR=12						
FINES				Rg	Rg	11 39 09.5	
	comp=Z,3.7nm,0.8s,baz=25,slow=32,SNR=6.2						
OUF	**Merijarvi**	**1.90**	**315**	PG	**Pn**	**11 38 34.6**	**0.0**
OUF				MSG		11 38 55.6	
	comp=Z,6.8nm,0.2s						
OUF				SG	**Sn**	**11 38 59.5**	**+0.3**
OUL	**Oulu**	**2.21**	**339**	PG	**Pn**	**11 38 39.6**	**+0.7**
	baz=154						
OUL				SG	**Sn**	**11 39 08.3**	**+1.5**
VAF	**Ylistaro**	**2.33**	**272**	PG	**Pn**	**11 38 42.7**	**+2.1**
VAF				MSG		11 39 09.8	
	comp=Z,11nm,0.2s						
VAF				SG	**Sb**	**11 39 12.9**	**-0.3**
VJF	**Virojoki**	**2.52**	**183**	MSG		11 39 18.7	
	comp=Z,3.8nm,0.2s						
VJF				SG	**Sg**	**11 39 21.5**	**-0.5**
MSF	**Maaselka**	**2.92**	**10**	PB	**Pn**	**11 38 49.7**	**+1.1**
	baz=193						
MSF				SB	**Sn**	**11 39 26.2**	**+1.8**
NUR	**Nurmijrvi**	**2.96**	**212**	SG	**Sg**	**11 39 35.6**	**-0.3**
KU6	**Riekki**	**3.12**	**16**	PB	**Pn**	**11 38 52.3**	**+0.9**
	baz=202						
KU6				MSG		11 39 31.1	
	comp=Z,3.7nm,0.2s						
KU6				SG	**Sb**	**11 39 34.8**	**-1.0**
BURU	**Burvik**	**3.23**	**301**	P	**Pn**	**11 38 54.6**	**+1.7**
BURU	**Burvik**	**3.23**	**301**	PG	**Pb**	**11 38 57.9**	**-1.4**
	baz=112						
TOF	**Tornio**	**3.39**	**335**	PB	**Pn**	**11 38 56.4**	**+1.4**
KALU	**Kalix**	**3.41**	**328**	P	**Pn**	**11 38 56.8**	**+1.4**
KALU	**Kalix**	**3.41**	**328**	PB	**Pn**	**11 38 57.6**	**+2.2**
ODEU	**Stanfors**	**3.43**	**297**	P	**Pn**	**11 38 55.8**	**+0.2**
RNF	**Rovaniemi**	**3.65**	**349**	PB	**Pn**	**11 39 00.4**	**+1.7**
	baz=172						
SJUU	**Sjulsmark**	**3.66**	**315**	P	**Pn**	**11 39 00.2**	**+1.4**
SJUU				S	**Sn**	**11 39 45.0**	**+2.6**
SVAU	**Svanoeiden**	**3.93**	**295**	P	**Pn**	**11 39 03.2**	**+0.8**
SVAU				S	**Sn**	**11 39 49.4**	**+0.3**
LILU	**Lilltraesk**	**4.14**	**306**	P	**Pn**	**11 39 06.5**	**+1.1**
HARU	**Harads**	**4.29**	**320**	P	**Pn**	**11 39 08.3**	**+0.9**
SGF	**Sodankyl**	**4.44**	**354**	PN	**Pn**	**11 39 10.6**	**+1.1**
PAJU	**Pajala**	**4.46**	**336**	P	**Pn**	**11 39 10.6**	**+0.9**
PAJU	**Pajala**	**4.46**	**336**	PN	**Pn**	**11 39 10.6**	**+0.9**
KLF	**Kolari**	**4.50**	**341**	PN	**Pn**	**11 39 11.2**	**+0.8**
VRF	**Varrio**	**4.78**	**8**	PN	**Pn**	**11 39 14.9**	**+0.7**
LANU	**Lannavaara**	**5.57**	**337**	P	**Pn**	**11 39 26.1**	**+1.1**
SALU	**Saltoluokta**	**5.84**	**322**	P	**Pn**	**11 39 29.4**	**+0.7**
NIKU	**Nikkaluokta**	**6.05**	**327**	P	**Pn**	**11 39 31.9**	**+0.3**
ARCES	**ARCESS Array B**	**6.58**	**353**	Pn	**Pn**	**11 39 38.5**	**-0.3**
	baz=166,slow=14,SNR=5.7						
ARCES				Sn	**Sn**	**11 40 51.0**	**-3.4**
	baz=168,slow=22,SNR=1.7						
HFS	**Hagfors**	**7.33**	**253**	Pn	**Pn**	**11 39 48.4**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=51,slow=12,SNR=1.2						
HFS				Sn	**Sn**	**11 41 11.9**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=188,slow=37,SNR=2.7						
I43RU	**DUBNA INFRASON**	**7.91**	**139**	*i*		12 27 10.0	
	baz=334,slow=328,SNR=1.3						

IDC 19 11:52:20.5±3.3, 6°.01S×151°.89E, h0km, mb3.5/2, mb1 3.9/3, mb1mx3.4/44, mbtmp3.8/3, ML2.2/1, MS3.2/1, Ms1 3.2/1, ms1mx2.5/33, Error ellipse: s-maj=115.2km s-min=47.2km az=125.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.78**	**234**	Pn	Pn	11 53 49.8	+2.2
	4.1nm,0.3s,baz=49,slow=10,SNR=6.4						
PMG				Sn	Sn	11 54 47.0	-7.7
	1.1nm,0.3s,baz=41,slow=15,SNR=1.5						
WRA	**Warramunga Arr**	**21.98**	**229**	P	P	11 57 15.4	-0.9
	0.9nm,0.6s,baz=55,slow=10,SNR=9.4						
ASAR	**Alice Springs**	**24.66**	**223**	P	P	11 57 43.1	-0.1
	1.7nm,0.7s,baz=56,slow=9.3,SNR=21						
KLR	**Kul'dur**	**57.75**	**345**	LR	LR	12 26 19.6	
	comp=Z,22nm,21.1s,baz=226,slow=35						
TORD	**Torodi Ar. Bea**	**149.79**	**286**	PKPbc	PKPbc	12 12 13.3	-0.4
	0.5nm,0.8s,baz=71,slow=2.4,SNR=3.7						

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*BJI **19** 11:56:10.0±0.0, 52°.06N×158°.83E, h57km, mB5.0/26, mb4.6/40, Ms4.4/11, Ms7 4.2/11*

*KRSC **19** 11:56:10.1±2.0, 51°.61N×158°.97E, h60km±18km, ML5.5*

*MOS **19** 11:56:12.4±1.0, 51°.69N×158°.69E, h65km, mb5.3/64, Error ellipse: s-maj=6.9km s-min=2.8km az=86.0*

MOS Felt (III) at Petropavlovsk-Kamchatskiy; (II) at Severo-Kuril'sk.

*NEIC **19** 11:56:14.4±1.5, 51°.79N±0°.08×158°.6E±0°.1, h66km±5km, mb4.9/235, Error ellipse: s-maj=12.3km s-min=10.6km az=121.0*

*IDC **19** 11:56:16.5±1.2, 51°.83N×158°.58E, h86km±9km, mb4.5/42, mb1 4.6/48, mb1mx4.5/72, mbtmp4.8/48, MS3.6/27, Ms1 3.6/27, ms1mx3.5/46, Error ellipse: s-maj=10.8km s-min=8.5km az=128.0*

*BGR **19** 11:56:18.6±0.0, 53°.00N×157°.74E, h33km, mb5.3, Ms4.2*

ISC 19 11:56:13.7±0.5, 51°.71N±0°.04×158°.79E±0°.04, h67km±3km, h67km:pP-P, n803, σ1.s31/750, mb5.0/273, 40C-49D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDTR	**Khodutka, Kamc**	**0.46**	**284**	PN	**Pn**	**11 56 24.6**	**-1.2**
KDTR				S	**Sn**	**11 56 32.7**	**-2.0**
KDTR	**Khodutka, Kamc**	**0.46**	**284**	*i* P	**Pn**	**11 56 24.6**	**-1.2**
KDTR				*e*S	**Sn**	**11 56 32.7**	**-2.0**
RUS	**Russkaya**	**0.75**	**347**	PN	**Pn**	**11 56 28.1**	**-0.8**
RUS				S	**Sn**	**11 56 38.9**	**-1.3**
RUS	**Russkaya**	**0.75**	**347**	*i* P	**Pn**	**11 56 28.1**	**-0.8**
RUS				*e*S	**Sn**	**11 56 38.9**	**-1.3**
MTVR	**Mutnovka**	**0.87**	**334**	PN	**Pn**	**11 56 30.0**	**-0.5**
MTVR	**Mutnovka**	**0.87**	**334**	*i* P	**Pn**	**11 56 30.0**	**-0.5**
ASAK	**Asacha**	**0.88**	**321**	PN	**Pn**	**11 56 30.5**	**-0.1**
ASAK	**Asacha**	**0.88**	**321**	*e*P	**Pn**	**11 56 30.5**	**-0.1**
GRL	**Gorelyy**	**0.96**	**333**	PN	**Pn**	**11 56 31.6**	**0.0**
GRL	**Gorelyy**	**0.96**	**333**	*i* P	**Pn**	**11 56 31.6**	**0.0**
KRMR	**Karymshinskiy**	**1.20**	**340**	PN	**Pn**	**11 56 34.7**	**+0.1**
KRMR				S	**Sn**	**11 56 50.4**	**+0.2**
KRMR	**Karymshinskiy**	**1.20**	**340**	*i* P	**Pn**	**11 56 34.7**	**+0.1**
KRMR				*e*S	**Sn**	**11 56 50.4**	**+0.2**
PAU	**Pauzhetka**	**1.26**	**260**	PN	**Pn**	**11 56 35.2**	**-0.1**
PAU				S	**Sn**	**11 56 51.2**	**-0.3**
PAU	**Pauzhetka**	**1.26**	**260**	*i* P	**Pn**	**11 56 35.2**	**-0.1**
PAU				*e*S	**Sn**	**11 56 51.2**	**-0.3**
PET	**Petropavlovsk**	**1.32**	**356**	⇓*i*PN	**Pn**	**11 56 35.8**	**-0.4**
PET				*i* S	**Sn**	**11 56 52.2**	**-0.9**

PET				pmax	pmax		
	comp=Z,5µm,0.7s						
PET				smax	smax		
	comp=N,52µm,0.5s						
PET				smax	smax		
	comp=E,17µm,0.6s						
PET	Petropavlovsk	1.32	356	*i* P	Pn	11 56 35.6	-0.6
PET	Petropavlovsk	1.32	356		Pn	11 56 35.7	-0.4
DALK	Dalny	1.33	359	PN	Pn	11 56 35.8	-0.4
DALK				S	Sn	11 56 52.0	-1.2
DALK	Dalny	1.33	359	*i* P	Pn	11 56 35.8	-0.4
DALK				*e*S	Sn	11 56 52.0	-1.2
UGLR	Uglovaya	1.51	1	PN	Pn	11 56 38.6	-0.1
UGLR	Uglovaya	1.51	1	*i* P	Pn	11 56 38.6	-0.1
NLC	Nalytchevo	1.51	13	PN	Pn	11 56 37.1	-1.5
NLC				S	Sn	11 56 54.8	-2.6
NLC	Nalytchevo	1.51	13	*i* P	Pn	11 56 37.1	-1.5
NLC				*e*S	Sn	11 56 54.8	-2.6
PEA0B	Petropavlovsk-	1.56	335	*d* *i*PN	Pn	11 56 39.5	+0.2
PEA0B	Petropavlovsk-	1.56	335	Pn	Pn	11 56 39.7	+0.4
PETK	Petropavlovsk-	1.56	335	P	Pn	11 56 38.7	-0.6
	comp=E,391nm,0.3s,baz=128,slow=18,SNR=4869						
PETK				S	Sn	11 57 00.3	+1.6
	comp=E,541nm,0.3s,baz=116,slow=13,SNR=3.1						
PETK				LR	LR	11 57 33.1	
	comp=E,3µm,21.3s,baz=134,slow=55						
SMAR	Somma	1.56	0	PN	Pn	11 56 39.0	-0.6
SMAR	Somma	1.56	0	*e*P	Pn	11 56 39.0	-0.6
AVH	Avacha	1.56	359	PN	Pn	11 56 39.5	0.0
AVH	Avacha	1.56	359	*i* P	Pn	11 56 39.5	0.0
SDLR	Sedlovina	1.58	2	PN	Pn	11 56 39.0	-0.7
SDLR	Sedlovina	1.58	2	*i* P	Pn	11 56 39.0	-0.7
APC	Apacha	1.58	321	PN	Pn	11 56 40.0	+0.4
APC				S	Sn	11 57 00.6	+1.4
APC	Apacha	1.58	321	*i* P	Pn	11 56 40.0	+0.4
APC				*e*S	Sn	11 57 00.6	+1.4
SPN	Mys Shipunski	1.59	28	PN	Pn	11 56 39.4	-0.3
SPN				S	Sn	11 56 58.0	-1.3
SPN	Mys Shipunski	1.59	28	*e*P	Pn	11 56 39.4	-0.3
SPN				*e*S	Sn	11 56 58.0	-1.3
KOK	Koryaka	1.59	357	PN	Pn	11 56 40.2	+0.3
KOK	Koryaka	1.59	357	*e*P	Pn	11 56 40.2	+0.3
KRER	Koryakskii	1.60	359	PN	Pn	11 56 40.0	-0.1
KRER	Koryakskii	1.60	359	*e*P	Pn	11 56 40.0	-0.1
SKR	Severo-Kuril's	1.97	240	⇓*i*PN	Pn	11 56 44.8	0.0
SKR				*e*S	Sn	11 57 08.4	-0.1
SKR				pmax	pmax		
	comp=Z,791nm,0.4s						
SKR				smax	smax		
	comp=N,15µm,0.6s						
SKR				smax	smax		
	comp=E,15µm,0.6s						
SKR	Severo-Kuril's	1.97	240	*e*P	Pn	11 56 44.5	-0.3
SKR				*e*S	Sn	11 57 07.2	-1.3
GNL	Ganaly	2.06	346	*i* P	Pn	11 56 46.7	+0.6
KII	Karymskiy	2.37	9	PN	Pn	11 56 51.2	+0.9
KII				S	Sn	11 57 19.7	+1.4
KII	Karymskiy	2.37	9	*e*P	Pn	11 56 51.2	+0.9
KII				*e*S	Sn	11 57 19.7	+1.4
MKZ	Mys Kozlova	3.36	31	PN	Pn	11 57 02.6	-1.1
MKZ				S	Sn	11 57 39.3	-3.0
MKZ	Mys Kozlova	3.36	31	*e*P	Pn	11 57 02.6	-1.1
MKZ				*e*S	Sn	11 57 39.3	-3.0
TUMR	Tumrok	3.67	12	PN	Pn	11 57 09.7	+1.6
TUMR	Tumrok	3.67	12	*e*P	Pn	11 57 09.7	+1.6
KMNR	Kamenistaya	4.15	11	PN	Pn	11 57 16.1	+1.6
KMNR	Kamenistaya	4.15	11	*e*P	Pn	11 57 16.1	+1.6
ESO	Esso	4.23	359	PN	Pn	11 57 22.1	+6.5
ESO	Esso	4.23	359	*e*P	Pn	11 57 22.1	+6.5
KPT	Kopyto	4.35	11	PN	Pn	11 57 18.9	+1.6
KPT	Kopyto	4.35	11	*e*P	Pn	11 57 18.9	+1.6
KIRR	Kirishev	4.36	12	PN	Pn	11 57 18.9	+1.5
KIRR	Kirishev	4.36	12	*e*P	Pn	11 57 18.9	+1.5
BZWR	Bezymyannyi-We	4.39	13	PN	Pn	11 57 19.5	+1.7
BZWR	Bezymyannyi-We	4.39	13	*e*P	Pn	11 57 19.5	+1.7
BZGR	Bezymyannyi-Gr	4.39	14	PN	Pn	11 57 19.0	+1.1
BZGR	Bezymyannyi-Gr	4.39	14	*e*P	Pn	11 57 19.0	+1.1
KOZ	Kozyrevsk	4.41	8	PN	Pn	11 57 19.4	+1.4
KOZ	Kozyrevsk	4.41	8	*e*P	Pn	11 57 19.4	+1.4
ZLN	Zelenaya	4.48	15	PN	Pn	11 57 20.9	+1.8
ZLN	Zelenaya	4.48	15	*e*P	Pn	11 57 20.9	+1.8
LGNR	Loginova	4.53	14	PN	Pn	11 57 21.6	+1.7
LGNR	Loginova	4.53	14	*e*P	Pn	11 57 21.6	+1.7
CIRR	Tsirk	4.57	14	PN	Pn	11 57 22.0	+1.7
CIRR	Tsirk	4.57	14	*e*P	Pn	11 57 22.0	+1.7
KRSR	Krestovskiy	4.64	12	PN	Pn	11 57 22.4	+1.1
KRSR	Krestovskiy	4.64	12	*e*P	Pn	11 57 22.4	+1.1
KLY	Klyuchi	4.75	13	PN	Pn	11 57 24.5	+1.9
KLY	Klyuchi	4.75	13	*e*P	Pn	11 57 24.5	+1.9
BDR	Baidarnaya	5.08	15	PN	Pn	11 57 29.2	+2.0
BDR	Baidarnaya	5.08	15	*e*P	Pn	11 57 29.2	+2.0
KBTR	Krutoberegovo	5.10	26	PN	Pn	11 57 27.9	+0.5
KBTR	Krutoberegovo	5.10	26	*e*P	Pn	11 57 27.9	+0.5
KBG	Krutoberegovo	5.11	25	PN	Pn	11 57 28.0	+0.5
KBG				S	Sn	11 58 25.9	+0.8
KBG	Krutoberegovo	5.11	25	*e*P	Pn	11 57 28.0	+0.5
KBG				*e*S	Sn	11 58 25.9	+0.8
SMKR	Semkarok	5.13	17	PN	Pn	11 57 28.7	+0.7
SMKR	Semkarok	5.13	17	*e*P	Pn	11 57 28.7	+0.7
SRKR	Sorokina	5.15	15	PN	Pn	11 57 29.0	+0.8
SRKR	Sorokina	5.15	15	*e*P	Pn	11 57 29.0	+0.8
BKI	Bering	5.54	48	PN	Pn	11 57 32.0	-1.4
BKI	Bering	5.54	48	*e*P	Pn	11 57 32.0	-1.4
BKI				*e*S	Sn	11 58 28.2	-7.4
OSSR	Ossora	7.94	16	PN	Pn	11 58 06.5	+0.3
OSSR	Ossora	7.94	16	P	Pn	11 58 06.5	+0.3
MA2	Magadan	9.09	333	P	Pn	11 58 22.5	+0.5
	comp=E,1.1nm,0.3s,baz=144,slow=13,SNR=6.9						
MA2				LR	LR	12 02 21.4	
	comp=E,463nm,19.1s,baz=121,slow=41						
MA2	Magadan	9.09	333	*ce*PN	Pn	11 58 22.6	+0.6
MA2				pmax	pmax		
	comp=Z,52nm,1.3s						
MA2	Magadan	9.09	333	Pn	Pn	11 58 20.9	-1.1
SMY	Shemya	9.46	78	PN	Pn	11 58 26.9	0.0
SMY	Shemya	9.46	78	Pn	Pn	11 58 26.9	0.0
TYV	Tymovskoe	10.15	272	*e*PN	Pn	11 58 38.8	+2.4
TYV				pmax	pmax		
	comp=Z,16nm,1.4s						
TYV				pmax	pmax		
	comp=Z,500nm,3.4s						
UGL	Uglegorsk	11.00	263	*e*PN	Pn	11 58 52.4	+4.4
UGL				pmax	pmax		
	comp=Z,110nm,0.7s						
YSS	Yuzh-Sakhalins	11.49	252	*e*PN	Pn	11 58 55.1	+0.4
YSS				pmax	pmax		
	comp=Z,20nm,1.3s						
YSS	Yuzh-Sakhalins	11.49	252	Pn	Pn	11 58 54.3	-0.4
KMSK	Kamenskaya	11.51	17	PN	Pn	11 58 57.1	+2.3
KMSK	Kamenskaya	11.51	17	*e*P	Pn	11 58 57.1	+2.3
YUK	Yuzh-Kuril'sk	11.58	234	⇑*e*PN	Pn	11 58 54.6	-1.3
SEY	Seymchan	11.77	346	P	Pn	11 58 59.1	+0.6
	comp=Z,0.7nm,0.3s,baz=159,slow=12,SNR=15						
SEY				LR	LR	12 03 50.0	
	comp=Z,531nm,22.0s,baz=159,slow=39						
JKA	Kamikawa-asahi	13.23	241		Pn	11 59 19.2	+0.8
ASAJ	Asahikawa	13.23	241	P	Pn	11 59 19.2	+0.8
	comp=Z,1.1nm,0.3s,baz=182,slow=17,SNR=3.4						
GRNR	Gornyy	14.04	275	*e*P	Pn	11 59 31.1	+2.0
GRNR				MLR	MLR		
	comp=Z,220nm,16.0s						
ERM	Erimo	14.40	234	*ce*P	Pn	11 59 31.2	-2.7
ERM	Erimo	14.40	234	Pn	Pn	11 59 30.1	-3.8
BILL	Bilibino	16.79	10	*ce*P	P	12 00 05.7	+0.5
BILL				pmax	pmax		
	comp=Z,33nm,0.6s						
BILL				MLR	MLR		
	comp=Z,112nm,9.0s						
BILL	Bilibino	16.79	10		Pn	12 00 03.0	-1.0
BILL				IAmb	IAmb	12 00 08.8	
	comp=Z,39nm,0.7s						
KLR	Kul'dur	17.36	272	P	P	12 00 12.5	+0.9
	comp=Z,0.8nm,0.3s,baz=69,slow=12,SNR=21						
KLR	Kul'dur	17.36	272	⇑*e*P	P	12 00 12.1	+0.5
KLR				pmax	pmax		
	comp=Z,11nm,0.7s						
KLR				MLR	MLR		
	comp=Z,198nm,15.0s						
JMM	Marumori	18.76	230	P	P	12 00 27.0	-0.1
YAK	Yakutsk	18.80	315	P	P	12 00 25.4	-1.9
	comp=Z,0.3nm,0.3s,baz=280,slow=5.0,SNR=13						
YAK	Yakutsk	18.80	315	*e*P	P	12 00 25.4	-1.9
YAK				*e*S	S	12 03 52.9	-4.3
YAK				pmax	pmax		
	comp=Z,104nm,1.2s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,15nm,1.3s						
YAK				smax	smax		
	comp=E,122nm,2.8s						
YAK				smax	smax		
	comp=N,53nm,2.1s						
YAK	Yakutsk	18.80	315		P	12 00 25.3	-2.0
YAK				IAmb	IAmb	12 00 26.9	
	comp=Z,123nm,1.2s						
ZEA	Zeya	19.14	289	*e*P	P	12 00 30.4	-0.7
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=E,10.0nm,0.6s						
USRK	Ussuriysk Ar.	19.38	258	P	P	12 00 32.9	-0.9
	baz=52,slow=12,SNR=7.6						
USRK				LR	LR	12 07 57.5	
	comp=E,176nm,19.5s,baz=43,slow=36						
USRK	Ussuriysk Ar.	19.38	258	P	P	12 00 32.7	-1.2
JSD	Sado	19.87	235	P	P	12 00 40.0	+0.9
JSD				IAmb	IAmb	12 00 42.4	
	comp=Z,78nm,1.4s						
JYT	Yasato	20.37	228	P	P	12 00 45.1	+0.5
JYT				IAmb	IAmb	12 00 46.0	
	comp=Z,50nm,0.6s						
MAJO	Matsushiro	21.06	232	*ce*P	P	12 00 53.0	+0.9
MAJO				pmax	pmax		
	comp=Z,51nm,0.7s						
MAJO	Matsushiro	21.06	232	P	P	12 00 52.0	0.0
MAJO				IAmb	IAmb	12 00 56.8	
	comp=Z,56nm,0.7s						
MJAR	Matsushiro Arr	21.06	232	P	P	12 00 53.4	+1.3
	comp=Z,16nm,0.8s,baz=41,slow=8.9,SNR=38						
MJAR				LR	LR	12 09 09.0	
	comp=Z,71nm,19.8s,baz=25,slow=37						
MJAR	Matsushiro Arr	21.06	232	P	P	12 00 52.6	+0.5
MJAR				pmax	pmax		
	comp=Z,18nm,0.8s						
MJAR	Matsushiro Arr	21.06	232	P	P	12 00 52.6	+0.5
TNA	Tin City	21.84	38	P	P	12 01 02.1	+2.0
TNA				IAmb	IAmb	12 01 29.2	
	comp=Z,119nm,1.4s						
JGF	Kuroka	22.22	232	P	P	12 01 04.4	-0.1
INU	Inuyama	22.59	232	P	P	12 01 08.4	-0.1
INU				IAmb	IAmb	12 01 13.2	
	comp=Z,36nm,0.8s						
JWT	Wachi	23.45	235	P	P	12 01 16.1	-0.9
JWT				IAmb	IAmb	12 01 38.4	
	comp=Z,44nm,1.3s						
TIXI	Tiksi	24.03	337	P	P	12 01 21.0	-0.9
	comp=Z,174nm,0.6s,baz=125,slow=10,SNR=276						
TIXI	Tiksi	24.03	337	*i* P	P	12 01 21.1	-0.7
TIXI				pmax	pmax		
	comp=Z,166nm,0.7s						
TIXI	Tiksi	24.03	337	P	P	12 01 20.7	-1.1
RDOG	Red Dog Mine	24.64	34	P	P	12 01 35.0	+7.6
	baz=248,SNR=11						
HIA	Hailar	24.77	280	P	P	12 01 27.3	-1.5
HIA				pmax	pmax		
	comp=Z,14nm,0.8s						
HIA	Hailar	24.77	280	P	P	12 01 27.3	-1.5
JHS	Saijyo	24.85	238	P	P	12 01 30.0	+0.3
JHS				IAmb	IAmb	12 01 40.2	
	comp=Z,81nm,1.5s						
JMN	Monobe	25.45	235	P	P	12 01 37.1	+2.0
JMN				IAmb	IAmb	12 01 39.0	
	comp=Z,62nm,1.3s						
KSRS	Korea Array	25.96	249	P	P	12 01 40.2	+0.5
	comp=Z,4.5nm,0.8s,baz=47,slow=9.1,SNR=14						
KSRS				LR	LR	12 11 00.3	
	comp=Z,65nm,20.3s,baz=66,slow=34						
BOD	Bodaibo	26.15	301	*e*P	P	12 01 40.1	-1.1
BOD				pmax	pmax		
	comp=Z,15nm,1.8s						
TTA	Tatalina	26.27	47	P	P	12 01 43.9	+1.5
	baz=266						
SVW2	Sparrevohn	26.41	51	P	P	12 01 44.8	+1.3
SVW2				IAmb	IAmb	12 02 07.2	
	comp=Z,38nm,1.4s						
L19K	White Mountain	26.77	49	P	P	12 01 48.2	+1.4
N19K	Bonanza Creek	26.95	52	P	P	12 01 49.4	+0.9
M19K	Big River Lodg	26.98	50	P	P	12 01 50.5	+1.8
TJN	Taejon	27.03	248	⇓*e*P	P	12 01 50.3	+1.0
K20K	Telida	27.18	46	P	P	12 01 52.0	+1.5
	baz=267						
J20K	Nowinta River	27.20	45	P	P	12 01 52.5	+1.9
	baz=265						
J20K	Nowinta River	27.20	45	P	P	12 01 51.9	+1.2
IMAR	Indian Mountai	27.57	41	P	P	12 01 54.9	+1.0
JCJ	Chichijima	27.59	213	LR	LR	12 14 36.5	
	comp=Z,21nm,19.1s,baz=352,slow=40						
A21K	Barrow	27.89	29	P	P	12 01 57.2	+0.6
	baz=249						
H21K	Melozitna Rive	27.92	41	P	P	12 01 57.8	+0.7
	baz=264						
H21K	Melozitna Rive	27.92	41	P	P	12 01 58.9	+1.9
PPLA	Purkeypile	28.02	47	P	P	12 01 59.3	+1.2
PPLA				IAmb	IAmb	12 02 21.3	
	comp=Z,32nm,1.3s						
KDAK	Kodiak Island	28.20	58	P	P	12 02 00.0	+0.5
	comp=Z,4.4nm,0.5s,baz=358,slow=6.2,SNR=2.0						
KDAK	Kodiak Island	28.20	58	P	P	12 02 00.5	+1.0
KDAK				IAmb	IAmb	12 02 21.7	
	comp=Z,66nm,1.4s						
SKT	Skwentna	28.34	49	P	P	12 02 02.3	+1.6
BPAW	Bear Paw Mtn.	28.58	45	P	P	12 02 04.6	+1.6
KTH	Kantishna Hill	28.60	46	P	P	12 02 03.6	+0.5
CNPM	China Poot	28.66	54	P	P	12 02 04.3	+0.7
CNPM				IAmb	IAmb	12 02 25.4	
	comp=Z,39nm,1.3s						
SUA	Susitna One	28.73	50	P	P	12 02 04.9	+0.5
	baz=274						
SUA	Susitna One	28.73	50	P	P	12 02 04.4	-0.1
SUA				IAmb	IAmb	12 02 09.0	
	comp=Z,24nm,1.2s						
BRLK	Bradley Lake	28.81	54	P	P	12 02 05.5	+0.4
BRLK				IAmb	IAmb	12 02 06.5	
	comp=Z,42nm,1.4s						
TRF	Thorofare Moun	28.88	46	P	P	12 02 06.9	+1.1
	baz=270						
TRF	Thorofare Moun	28.88	46	P	P	12 02 06.6	+0.8
CUT	Chulitna	28.91	48	P	P	12 02 06.5	+0.7
	baz=272						
COLD	Coldfoot	29.14	38	P	P	12 02 08.9	+1.1
	baz=264						
COLD	Coldfoot	29.14	38	P	P	12 02 08.9	+1.1
I23K	Minto, Yukon-K	29.32	43	P	P	12 02 10.8	+1.4
	baz=268						
MCK	McKinley	29.49	46	P	P	12 02 11.6	+0.7
MCK				pmax	pmax		
	comp=Z,14nm,1.1s						
MCK	McKinley	29.49	46	P	P	12 02 11.9	+0.9
	baz=271						
MCK	McKinley	29.49	46	P	P	12 02 11.6	+0.7
PMR	Palmer	29.50	50	P	P	12 02 11.7	+0.7
	baz=275						
RND	Reindeer	29.53	46	P	P	12 02 11.3	-0.1
RND				pmax	pmax		
	comp=Z,11nm,0.9s						
RND	Reindeer	29.53	46	P	P	12 02 11.3	-0.1
TOLK	Toolik Lake Re	29.56	36	P	P	12 02 12.5	+1.0
	baz=262						
TOLK	Toolik Lake Re	29.56	36	P	P	12 02 12.3	+0.8
GHO	Glory Hole Cre	29.58	50	P	P	12 02 12.8	+0.9
KNK	Knik Glacier	29.83	50	P	P	12 02 14.5	+0.5
	baz=276,SNR=9.4						
KNK	Knik Glacier	29.83	50	P	P	12 02 14.4	+0.3
KNK				IAmb	IAmb	12 02 15.4	
	comp=Z,24nm,0.7s						
SML	Sawmill	29.86	50	P	P	12 02 15.2	+0.9
	baz=275,SNR=15						
SML	Sawmill	29.86	50	P	P	12 02 15.3	+1.0
TCOL	CIGO, UAF Yank	29.95	43	P	P	12 02 16.2	+1.3
	baz=270						
PWL	Port Wells	29.95	51	P	P	12 02 15.0	-0.1
	baz=277						
PWL	Port Wells	29.95	51	P	P	12 02 15.2	+0.1
PWL				IAmb	IAmb	12 02 15.7	
	comp=Z,15nm,0.6s						
COLA	College	29.95	43	⇓*i*P	P	12 02 16.2	+1.2
COLA				pmax	pmax		
	comp=Z,31nm,2.8s						
H24K	Noodor Dome	29.96	41	P	P	12 02 16.7	+1.6
CCB	Clear Creek Bu	29.97	44	P	P	12 02 16.5	+1.3
WAT6	Susitna Watana	30.08	48	P	P	12 02 17.1	+0.7
	baz=274						
DHY	Denali Highway	30.21	47	P	P	12 02 17.7	+0.2
	baz=274						
DHY	Denali Highway	30.21	47	P	P	12 02 16.8	-0.7
SCM	Sheep Creek Mo	30.33	49	P	P	12 02 19.4	+0.9
SCM				pmax	pmax		
	comp=Z,18nm,0.7s						
SCM	Sheep Creek Mo	30.33	49	P	P	12 02 19.3	+0.8
	baz=276						
SCM	Sheep Creek Mo	30.33	49	P	P	12 02 19.4	+0.9
SCM				IAmb	IAmb	12 02 36.3	
	comp=Z,18nm,0.7s						
HDA	Harding Lake	30.35	44	P	P	12 02 19.0	+0.5
	baz=272						
IL31		30.37	44	P	P	12 02 19.3	+0.6
ILAR	Eielson Array	30.37	44	P	P	12 02 19.1	+0.5
	comp=Z,1.4nm,0.6s,baz=271,slow=5.6,SNR=18						
ILAR				PcP	PcP	12 05 16.3	-0.5
	comp=Z,0.9nm,0.5s,baz=278,slow=3.2,SNR=6.8						
ILAR				LR	LR	12 14 43.3	
	comp=Z,62nm,20.5s,baz=280,slow=36						
HIN	Hinchinbrook I	30.91	52	P	P	12 02 24.6	+1.0
HIN				IAmb	IAmb	12 02 24.8	
	comp=Z,28nm,0.9s						
PRP	Porcupine Dome	30.93	42	P	P	12 02 24.8	+1.0
	baz=271,SNR=11						
PRP	Porcupine Dome	30.93	42	P	P	12 02 24.7	+1.0
KLU	Klutina	31.04	50	P	P	12 02 25.9	+1.1
	baz=277						
EYAK	Cordova Ski Ar	31.25	52	P	P	12 02 27.2	+0.7
BMAR	Burnt Mountain	31.32	38	P	P	12 02 28.7	+1.5
N25K	Chitina, Valde	31.65	50	P	P	12 02 31.5	+1.4
	baz=278						
N25K	Chitina, Valde	31.65	50	P	P	12 02 30.6	+0.5
N25K				IAmb	IAmb	12 02 47.8	
	comp=Z,12nm,0.8s						
SCRK	Sand Creek	31.66	45	P	P	12 02 30.2	-0.1
	baz=275						
BMRM	Bremner River	31.74	51	P	P	12 02 31.0	+0.1
	baz=279						
BMRM	Bremner River	31.74	51	IAmb	IAmb	12 02 35.9	
	comp=Z,22nm,1.1s						
HMT	Hamilton	32.02	52	P	P	12 02 34.3	+1.0
VRDI	Verde Repeater	32.25	50	P	P	12 02 36.6	+1.1
M26K	Nabesna, AK	32.29	48	P	P	12 02 37.4	+1.8
	baz=278						
CRQM	Cirque	32.48	51	P	P	12 02 38.7	+1.2
CRQM					pP	12 02 54.6	+1.7
CRQM				IAmb	IAmb	12 02 56.2	
	comp=Z,36nm,1.2s						
CRQE	Cirque	32.51	51	P	P	12 02 38.4	+0.7
	baz=281						
H11N2	WAKE ISLAND Hy	32.54	166	T	T	12 37 07.8	
	baz=351,slow=76,SNR=154						
H11N3	WAKE ISLAND Hy	32.55	166	T	T	12 37 12.3	
	baz=351,slow=76,SNR=208						
H11N1	WAKE ISLAND Hy	32.55	166	T	T	12 37 09.1	
	baz=351,slow=76,SNR=198						
TGL	Tana Glacier	32.63	51	P	P	12 02 38.7	0.0
TGL				IAmb	IAmb	12 02 47.0	
	comp=Z,21nm,1.2s						
L27K	Beaver Creek,	32.73	46	P	P	12 02 41.0	+1.6
	baz=278,SNR=8.1						
M27K	Edge Creek, AK	32.81	48	P	P	12 02 41.9	+1.7
	baz=279						
M27K	Edge Creek, AK	32.81	48	P	P	12 02 42.0	+1.7
M27K				IAmb	IAmb	12 02 59.3	
	comp=Z,11nm,0.8s						
EGAK	Eagle	32.82	43	P	P	12 02 40.4	+0.2
	baz=276						
EGAK	Eagle	32.82	43	P	P	12 02 40.0	-0.2
EGAK				IAmb	IAmb	12 02 56.6	
	comp=Z,9.2nm,0.7s						
ISLE	Juniper Island	32.90	51	P	P	12 02 42.3	+1.2
ISLE				IAmb	IAmb	12 03 01.7	
	comp=Z,23nm,1.0s						
BARN	Barnard Glacie	33.14	50	IAmb	IAmb	12 03 01.5	
	comp=Z,14nm,0.7s						
BVCY	Beaver Creek	33.27	48	P	P	12 02 45.3	+1.1
	baz=280,SNR=5.3						
CTG	Chitna Glacier	33.31	50	P	P	12 02 45.9	+1.3
	baz=282						
CTGM	Chitina Glacie	33.31	50	IAmb	IAmb	12 02 47.5	
	comp=Z,30nm,1.2s						
SONM	Songino Array	33.46	284	P	P	12 02 45.5	-0.7
	comp=Z,0.6nm,0.4s,baz=46,slow=8.2,SNR=2.5						
SONM				ScP	ScP	12 09 05.5	+1.5
	comp=Z,1.2nm,0.8s,baz=82,slow=2.2,SNR=4.4						
SONM				LR	LR	12 17 58.1	
	comp=Z,246nm,18.5s,baz=26,slow=39						
TLY	Talaya	33.49	292	LR	LR	12 19 13.8	
	comp=Z,66nm,18.6s,baz=8.5,slow=41						
TLY	Talaya	33.49	292	⇑*e*P	P	12 02 45.2	-1.0
TLY				pmax	pmax		
	comp=Z,10.0nm,1.1s						
TLY				MLR	MLR		
	comp=Z,67nm,16.0s						
LOGN	Logan Glacier	33.50	50	P	P	12 02 47.6	+1.3
LOGN				IAmb	IAmb	12 02 48.5	
	comp=Z,15nm,0.8s						
YUK3	Moose Creek	33.57	49	P	P	12 02 48.1	+1.1
	baz=281						
DAWY	Dawson	33.66	44	P	P	12 02 48.5	+0.8
	baz=278						
H11S1	WAKE ISLAND Hy	33.71	166	T	T	12 38 36.4	
	baz=351,slow=76,SNR=104						
H11S3	WAKE ISLAND Hy	33.72	166	T	T	12 38 39.4	
	baz=351,slow=76,SNR=164						
H11S2	WAKE ISLAND Hy	33.73	166	T	T	12 38 39.4	
	baz=351,slow=76,SNR=72						
HHC	Hu-ho-hao-te	33.84	270	*e*P	P	12 02 49.6	+0.1
HHC				pmax	pmax		
	comp=Z,24nm,0.7s						
HHC				pmax	pmax		
	comp=Z,170nm,6.6s						
I29M	Ogilvie Camp,	33.95	42	P	P	12 02 52.0	+1.9
	baz=278						
PINM	Pinnacle	34.02	52	P	P	12 02 52.2	+1.4
	baz=284						
YUK4	Talbot Arm	34.51	49	P	P	12 02 56.8	+1.6
	baz=283						
YUK6	Outpost Mounta	34.73	50	P	P	12 02 58.7	+1.6
	baz=284						
NJ2	Nanjing	35.06	252	*e*P	P	12 03 01.4	+1.5
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
HYT	Haines Junctio	35.17	50	P	P	12 03 02.7	+2.0
	baz=285						
HYT	Haines Junctio	35.17	50	IAmb	IAmb	12 03 20.4	
	comp=Z,10nm,0.9s						
INK	Inuvik	35.46	36	P	P	12 03 03.3	+0.4
	comp=Z,4.6nm,0.5s,baz=287,slow=8.9,SNR=16						
INK	Inuvik	35.46	36	P	P	12 03 04.4	+1.5
	baz=277,SNR=7.0						
INK	Inuvik	35.46	36	IAmb	IAmb	12 03 21.3	
	comp=Z,7.7nm,0.6s						
M31M	Drury Creek, Y	36.27	47	P	P	12 03 12.3	+2.3
	baz=285						
WHY	Whitehorse	36.45	49	P	P	12 03 13.6	+1.9
	baz=287						
SKAG	Skagway	36.59	51	P	P	12 03 15.3	+2.6
	baz=288						
SKAG	Skagway	36.59	51	IAmb	IAmb	12 03 35.6	
	comp=Z,18nm,1.0s						
NRIK	Noril'sk	36.59	326	P	P	12 03 10.8	-1.8
	comp=Z,1.6nm,0.3s,baz=354,slow=12,SNR=3.6						
NRIK				LR	LR	12 19 21.6	
	comp=Z,233nm,19.9s,baz=88,slow=38						
NRIK	Noril'sk	36.59	326	⇑*e*P	P	12 03 11.2	-1.5
NRIK				pmax	pmax		
	comp=Z,15nm,2.0s						
NRIK	Noril'sk	36.59	326	IAmb	IAmb	12 03 11.8	
	comp=Z,4.7nm,0.8s						
GUMO	Guam	39.64	202	LR	LR	12 16 41.9	
	comp=Z,105nm,21.6s,baz=96,slow=31						
LZH	Lanzhou	41.54	270	*e*P	P	12 04 05.4	+11
LZH				pP	pP	12 04 13.5	+2.3
LZH				pmax	pmax		
	comp=Z,23nm,1.4s						
ENH	Enshi	41.96	259	IAmb	IAmb	12 03 59.3	
	comp=Z,10nm,0.6s						
GTA	Gaotai	41.98	277	*e*P	P	12 03 57.6	-0.4
GTA				pP	pP	12 04 11.5	-3.2

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GTA                                 sP      sP      12 04 16.6 -5.8
GTA                                 pmax    pmax
      comp=Z,6.0nm,1.2s
GTA                                 pmax    pmax
      comp=Z,130nm,5.6s
GTA                                 LR      LR
      comp=Z,98nm,15.9s
GTA                                 LR      LR
      comp=Z,180nm,15.1s
GTA                                 LR      LR
      comp=Z,170nm,16.3s
ZALV  Zalesovo Beam      42.87 303  P       P       12 04 02.2 -2.6
      comp=Z,0.9nm,0.5s,baz=60,slow=8.5,SNR=3.9
ZALV                                PcP     PcP     12 05 53.9 -0.7
      comp=Z,1.8nm,0.5s,baz=118,slow=1.7,SNR=6.7
EUNU  Eureka             43.49  13  P       P       12 04 11.1 +1.4
DGZ   Jazzator, Alta     43.58 297c iP      P       12 04 10.1 -0.7
DGZ                                 pmax    pmax
      comp=Z,7.0nm,0.8s
YKA   Yellowknife Ar     44.73  41  P       P       12 04 19.2 -0.5
      comp=Z,0.7nm,0.6s,baz=120,slow=18,SNR=9.6
YKA   Yellowknife Ar     44.73  41ceP       P       12 04 20.3 +0.6
RES   Resolute Bay       44.91  21  P       P       12 04 21.9 +1.0
RES                                 pmax    pmax
      comp=Z,17nm,1.1s
RES   Resolute Bay       44.91  21  P       P       12 04 21.9 +1.0
RES                                 IAmb    IAmb    12 04 23.1
      comp=Z,17nm,1.1s
ZSN   Zaisan             46.23 295 eP       P       12 04 29.1 -2.6
      baz=295
ZSN   Zaisan             46.23 295 eP       P       12 04 29.1 -2.6
WMQ   Urumqi             46.68 290 eP       P       12 04 37.6 +2.2
WMQ                                 pP      pP      12 04 52.8 +0.4
WMQ                                 pmax    pmax
      comp=Z,16nm,0.9s
WMQ                                 pmax    pmax
      comp=Z,130nm,4.7s
NOR   Nord               46.92 359 eP       P       12 04 36.6 -0.1
NOR                                 IAmb    IAmb    12 04 37.3
      comp=Z,6.5nm,0.6s
SEM   Semipalatinsk      47.10 301 eP       P       12 04 35.5 -3.4
      baz=301
SEM   Semipalatinsk      47.10 301 eP       P       12 04 35.4 -3.4
LLLB  Lillooet           47.41  58  IAmb    IAmb    12 04 43.7
      comp=Z,11nm,1.0s
KURK  Kurchatov          47.80 302d iP      P       12 04 41.2 -2.7
KURK                                pmax    pmax
      comp=Z,11nm,0.7s
KURK  Kurchatov          47.80 302  P       P       12 04 41.8 -2.0
MK31  Makanchi Array     48.04 296c iP      P       12 04 43.9 -2.0
MKAR  Makanchi Array     48.04 296  P       P       12 04 43.9 -2.0
      comp=Z,3.0nm,0.5s,baz=60,slow=7.1,SNR=34
MKAR                                LR      LR      12 25 33.7
      comp=Z,117nm,21.8s,baz=46,slow=37
KBS   Kingsbay           48.14 352⇓eP       P       12 04 47.0 +0.8
KBS   Kingsbay           48.14 352  P       P       12 04 46.9 +0.8
MAKZ  Makanchi           48.21 296  P       P       12 04 45.6 -1.6
MAKZ                                pmax    pmax
      comp=Z,5.0nm,0.9s
MAKZ  Makanchi           48.21 296  P       P       12 04 45.5 -1.6
SPA0  Spitsbergen Ar     48.37 350 eP       P       12 04 48.2 +0.2
SPITS Spitsbergen Ar     48.37 350  P       P       12 04 47.8 -0.2
      comp=Z,9.3nm,0.3s,baz=47,slow=10,SNR=9.4
SPB2  Spitsbergen Ar     48.37 350  P       P       12 04 48.3 +0.3
D03D  Eldon              48.51  62  P       P       12 04 51.6 +2.2
      baz=306
B05A  Bryant             48.63  61  P       P       12 04 52.1 +1.8
      baz=306,SNR=6.8
E04D  Cinebar            49.37  63  P       P       12 04 58.0 +1.9
      baz=307
NEEM  North Greenlan     49.78   8 i P      P       12 04 59.6 +0.5
NEEM                                IAmb    IAmb    12 05 00.8
      comp=Z,29nm,0.4s
KMI   Kunming            49.80 260 ⇓P       P       12 05 00.8 +1.0
KMI                                 pmax    pmax
      comp=Z,8.0nm,0.7s
LTY   Liberty            50.00  61  IAmb    IAmb    12 05 02.5
      comp=Z,6.0nm,0.6s
B08A  Colville Reser     50.06  59  P       P       12 05 01.6 +0.3
B08A                                IAmb    IAmb    12 05 03.5
      comp=Z,18nm,1.0s
EDM   Edmonton           50.25  51  IAmb    IAmb    12 05 04.7
      comp=Z,17nm,0.9s
BRVK  Borovoye           50.66 309deP       P       12 05 03.2 -2.5
BRVK                                pmax    pmax
      comp=Z,26nm,3.1s
BRVK  Borovoye           50.66 309  P       P       12 05 03.1 -2.5
I03D  Drain, OR          50.67  66  P       P       12 05 08.1 +2.3
      baz=308
G05D  Wamic, OR          50.86  64  P       P       12 05 08.9 +1.6
      baz=308
C09A  Chrisman Ranch     50.97  59  IAmb    IAmb    12 05 10.1
      comp=Z,8.1nm,0.8s
I04A  Tendick Farm,      51.14  66  P       P       12 05 11.4 +1.9
      baz=309
HAWA  Hanford            51.15  62  IAmb    IAmb    12 05 11.8
      comp=Z,13nm,1.1s
BJO1  Bjornoya           51.23 347 eP       P       12 05 09.8 +0.1
NEW   Newport            51.30  58  P       P       12 05 11.7 +1.1
NEW                                 pmax    pmax
      comp=Z,7.0nm,0.9s
NEW   Newport            51.30  58  P       P       12 05 11.8 +1.2
      baz=308,SNR=5.6
BRZS  Berezniki          51.31 304 eP       P       12 05 07.5 -3.2
      baz=304
BRZS  Berezniki          51.31 304 eP       P       12 05 07.4 -3.2
I05D  Terrebonne, OR     51.41  65  P       P       12 05 13.3 +1.8
      baz=309
L02E  Cave Junction      51.48  68  P       P       12 05 14.4 +2.4
      baz=309
J04D  Umpqua Nationa     51.66  66  P       P       12 05 16.1 +2.5
      baz=309
DAG   Danmarks Havn      51.79 359  P       P       12 05 14.2 +0.4
DAG                                 pmax    pmax
      comp=Z,53nm,0.7s
DAG   Danmarks Havn      51.79 359 i P      P       12 05 13.9 +0.1
DAG                                 IAmb    IAmb    12 05 14.8
      comp=Z,23nm,0.5s
KPKS  Kokpek             52.09 295 eP       P       12 05 14.3 -2.4
      baz=294
KPKS  Kokpek             52.09 295 eP       P       12 05 14.2 -2.4
J05D  Fort Rock, OR      52.13  66  P       P       12 05 19.6 +2.6
      baz=309,SNR=5.5
G08A  Pilot Rock         52.14  62  P       P       12 05 18.3 +1.3
L04D  Klamath Falls      52.19  67  P       P       12 05 19.7 +2.2
      baz=310
DAV   Davao City (W)     52.23 223  LR      LR      12 27 35.0
      comp=Z,20nm,20.5s,baz=42,slow=36
M02C  Callahan           52.40  68  P       P       12 05 21.0 +2.0
      baz=310
WALA  Waterton Lakes     52.49  56  IAmb    IAmb    12 05 21.3
      comp=Z,10.0nm,0.7s
SATY  Saty               52.50 294 eP       P       12 05 16.9 -2.9
      baz=294
SATY  Saty               52.50 294 eP       P       12 05 16.8 -2.9
M04C  Macdoel            52.73  67  P       P       12 05 23.7 +2.2
      baz=310
N02D  Trinity Center     52.75  69  P       P       12 05 24.1 +2.6
      baz=310
JTMT  Jette              53.12  57  IAmb    IAmb    12 05 27.4
      comp=Z,9.8nm,0.8s
KUU   Kurty              53.14 296 eP       P       12 05 21.3 -3.0
      baz=296
KUU   Kurty              53.14 296 eP       P       12 05 21.3 -3.0
BMO   Blue Mountains     53.33  62  P       P       12 05 26.8 +1.0
BMO                                 pmax    pmax
      comp=Z,6.0nm,0.7s
BMO   Blue Mountains     53.33  62  P       P       12 05 26.8 +1.0
BMO                                 IAmb    IAmb    12 05 28.1
      comp=Z,6.1nm,0.7s
BTLS  Baital             53.67 299 eP       P       12 05 25.5 -2.6
      baz=299
BTLS  Baital             53.67 299 eP       P       12 05 25.5 -2.6
O03E  Paynes Creek       53.72  69  P       P       12 05 30.3 +1.7
      baz=311,SNR=6.0
ARU   Arti               53.88 317⇓eP       P       12 05 28.4 -1.1
ARU                                 pmax    pmax
      comp=Z,26nm,1.9s
ARU                                 MLR     MLR
      comp=Z,96nm,16.0s
MSO   Missoula           53.88  58  P       P       12 05 31.0 +1.2
      baz=310
MSO   Missoula           53.88  58  IAmb    IAmb    12 05 32.1
      comp=Z,13nm,1.3s
PLID  Pearl Lake         53.89  61  P       P       12 05 30.9 +0.8
PLID                                IAmb    IAmb    12 05 32.4
      comp=Z,10nm,0.7s
WVOR  Wild Horse Val     54.14  65  P       P       12 05 34.0 +2.2
WVOR                                pmax    pmax
      comp=Z,17nm,0.9s
WVOR  Wild Horse Val     54.14  65  IAmb    IAmb    12 05 34.8
      comp=Z,12nm,0.8s
DBG   Daneborg           54.27 360 i P      P       12 05 32.0 -0.1
DBG                                 IAmb    IAmb    12 05 33.0
      comp=Z,14nm,0.5s
ARA0  ARCESS Array S     54.36 342 eP       P       12 05 33.1 +0.3
ARCES ARCESS Array B     54.36 342  P       P       12 05 32.0 -0.8
      comp=Z,2.0nm,0.4s,baz=41,slow=7.3,SNR=29
ARCES                               PcP     PcP     12 06 36.7 +0.9
      comp=Z,1.5nm,0.6s,baz=47,slow=5.3,SNR=3.9
SGDS  Sogindy            54.37 297 eP       P       12 05 30.6 -2.7
      baz=297
ORV   Oroville           54.38  69  IAmb    IAmb    12 05 53.5
      comp=Z,7.1nm,0.8s
AAK   Ala-Archa          54.98 296⇓eP       P       12 05 36.3 -1.6
AAK                                 pmax    pmax
      comp=Z,8.0nm,0.8s
AAK   Ala-Archa          54.98 296  P       P       12 05 36.3 -1.6
EGMT  Eagleton           55.28  55  P       P       12 05 40.1 +0.3
      baz=311
EGMT  Eagleton           55.28  55  IAmb    IAmb    12 05 41.8
      comp=Z,13nm,1.1s
JETT  Jettan, Norway     55.29 344 eP       P       12 05 40.4 +0.9
MPK   Martis Peak        55.40  69  IAmb    IAmb    12 06 02.1
      comp=Z,10nm,0.9s
SUMG  Summit             55.43   6  P       P       12 05 41.9 +0.9
SUMG                                pmax    pmax
      comp=Z,26nm,0.6s
SUMG  Summit             55.43   6 i P      P       12 05 41.9 +0.9
SUMG                                IAmb    IAmb    12 05 43.6
      comp=Z,25nm,0.7s
SUMG  Summit             55.43   6  P       P       12 05 41.9 +0.9
TRO   Tromso             55.48 344 eP       P       12 05 41.2 +0.4
PAHR  Pah Rah Range      55.50  68  IAmb    IAmb    12 06 02.6
      comp=Z,14nm,1.2s
VCNR  Virginia City      55.62  68  IAmb    IAmb    12 06 03.7
      comp=Z,10nm,1.0s
HLID  Hailey             55.75  61  P       P       12 05 45.2 +1.9
      baz=312,SNR=7.8
PNTR  Pine Nut           55.79  69  P       P       12 05 46.2 +2.3
PNTR                                IAmb    IAmb    12 05 46.9
      comp=Z,13nm,0.7s
BOZ   Bozeman (W)        55.90  58  P       P       12 05 46.2 +1.8
      baz=312,SNR=13
BOZ   Bozeman (W)        55.90  58  IAmb    IAmb    12 05 47.0
      comp=Z,8.0nm,0.8s
KIRV  Kirov              56.03 323⇑eP       P       12 05 43.4 -1.5
YERR  Yerington          56.06  68  IAmb    IAmb    12 05 48.8
      comp=Z,8.0nm,0.7s
KSH   Kashi              56.20 293  P       P       12 05 49.3 +2.7
KSH                                 pmax    pmax
      comp=Z,4.0nm,0.8s
BMN   Battle Mountai     56.26  66  IAmb    IAmb    12 05 50.2
      comp=Z,10nm,0.8s
KVN   Kaiserville        56.68  68  IAmb    IAmb    12 05 53.1
      comp=Z,8.5nm,0.8s
RYN   Ryan               56.72  68  IAmb    IAmb    12 05 53.3
      comp=Z,6.5nm,0.7s
CHTO  Chiang Mai         56.84 258  P       P       12 05 51.7 +0.5
CHTO                                pmax    pmax
      comp=Z,12nm,0.7s
CHTO  Chiang Mai         56.84 258  P       P       12 05 51.7 +0.5
CHTO                                IAmb    IAmb    12 05 53.2
      comp=Z,12nm,0.7s
YHH   Holmes Hill        56.85  58  IAmb    IAmb    12 05 54.1
      comp=Z,7.3nm,0.7s
YMR   Madison River      56.87  58  IAmb    IAmb    12 05 54.4
      comp=Z,8.7nm,1.0s
NVAR  Mina Array Bea     56.98  68  P       P       12 05 54.3 +2.0
      comp=Z,5.4nm,0.6s,baz=298,slow=7.2,SNR=61
LHV   Little Huntoon     56.98  69  IAmb    IAmb    12 05 55.7
      comp=Z,9.2nm,0.9s
YNR   Norris Junctio     56.99  58  IAmb    IAmb    12 06 13.0
      comp=Z,13nm,1.2s
CMAR  Chiang Mai Arr     57.11 258  P       P       12 05 54.9 +1.7
      comp=Z,5.9nm,0.7s,baz=23,slow=7.1,SNR=34
CMAR                                LR      LR      12 32 16.8
      comp=Z,35nm,20.4s,baz=93,slow=38
ELK   Elko               57.17  64  pP      pP      12 06 10.6 +0.4
YMP   Mirror Lake Pl     57.25  58  IAmb    IAmb    12 05 57.4
      comp=Z,14nm,1.0s
H17A  Grant Village      57.26  58  P       P       12 05 57.6 +3.4
      baz=312,SNR=5.5
H17A  Grant Village      57.26  58  IAmb    IAmb    12 05 58.7
      comp=Z,18nm,1.1s
SIJI  Sorong             57.32 213  P       P       12 05 55.0 +0.4
      comp=Z,50nm,1.1s,baz=5.2,slow=8.9,SNR=9.1
RLMT  Red Lodge          57.46  57  P       P       12 05 57.9 +2.3
      baz=313,SNR=11
RLMT  Red Lodge          57.46  57          P       12 05 57.5 +2.0
TAPN  Taplejung          57.51 274 eP       P       12 05 56.2  0.0
      comp=Z,22nm,0.5s
LOF   Lofoten            57.71 345 eP       P       12 05 56.4 -0.2
KLMR  Klimovskoe         57.75 330 eP       P       12 05 54.4 -2.6
KLMR                                pmax    pmax
      comp=Z,13nm,0.7s
KLMR  Klimovskoe         57.75 330 eP       P       12 05 54.5 -2.6
KLMR                                AMP             12 05 57.0
      comp=Z,13nm,0.7s
LOHW  Long Hollow        57.77  59  IAmb    IAmb    12 06 01.2
      comp=Z,11nm,1.1s
SNOW  Snow King Moun     57.79  59  IAmb    IAmb    12 06 01.7
      comp=Z,10nm,0.9s
REDW  Red Top Meadow     57.81  60  IAmb    IAmb    12 06 20.8
      comp=Z,14nm,1.1s
LAO   LASA Array         57.96  54  P       P       12 06 00.9 +2.0
      baz=313
LAO   LASA Array         57.96  54  IAmb    IAmb    12 06 19.5
      comp=Z,12nm,0.8s
FAUS  Fauske             58.10 344 eP       P       12 05 59.2 -0.3
AKTO  Aktyubinsk         58.17 312  P       P       12 05 59.2 -1.0
      comp=Z,2.4nm,0.6s
AKTO                                PcP     PcP     12 06 51.6 +0.7
      comp=Z,3.6nm,0.5s,baz=67,slow=7.1,SNR=4.3
JIRN  Jiri               58.23 275 eP       P       12 06 00.8 -0.6
      comp=Z,5.6nm,0.4s
GUN   Gumba              58.24 276 eP       P       12 06 00.5 -0.9
      comp=Z,14nm,0.3s
SPUT  South Promonto     58.34  62  IAmb    IAmb    12 06 22.7
      comp=Z,13nm,1.2s
CWC   Cottonwood Cre     58.47  70  P       P       12 06 03.8 +1.1
      baz=314
RAMN  Ramite             58.48 274 eP       P       12 06 02.4 -0.6
      comp=Z,38nm,0.5s
R11A  Troy Canyon, C     58.60  67  P       P       12 06 05.1 +1.5
      baz=314,SNR=13
R11A  Troy Canyon, C     58.60  67  IAmb    IAmb    12 06 06.2
      comp=Z,5.4nm,0.7s
HWUT  Hardware Ranch     58.62  61  IAmb    IAmb    12 06 06.7
      comp=Z,16nm,1.3s
KKN   Kakani             58.70 276 eP       P       12 06 04.2 -0.3
      comp=Z,33nm,0.5s
NBB30 Finnes             58.73 345 eP       P       12 06 03.8  0.0
ICESG Greenland Ices     58.76   8 eP       P       12 06 04.9 +0.5
ICESG                               IAmb    IAmb    12 06 05.7
      comp=Z,11nm,0.6s
BTK   Batken             58.76 296  IAmb    IAmb    12 06 04.4
      comp=Z,6.9nm,0.9s
PKI   Pulchoki           58.78 276 eP       P       12 06 04.5 -0.6
      comp=Z,11nm,0.5s
PKIN  Phulchoki          58.78 276 eP       P       12 06 04.6 -0.5
      comp=Z,12nm,0.5s
NBB17 Glomfjord B¥r      58.84 345 eP       P       12 06 04.7 +0.1
SPR3  Spring Creek 3     58.87  65  IAmb    IAmb    12 06 09.1
      comp=Z,12nm,0.8s
DUG   Dugway, Tooele     58.90  63  P       P       12 06 07.9 +2.3
DUG                                 pmax    pmax
      comp=Z,14nm,0.7s
DUG   Dugway, Tooele     58.90  63  P       P       12 06 07.7 +2.1
      baz=314,SNR=10
DUG   Dugway, Tooele     58.90  63  IAmb    IAmb    12 06 08.7
      comp=Z,12nm,1.1s
BW06  Boulder Array      58.91  59  P       P       12 06 07.7 +2.0
      baz=314,SNR=10
PDAR  Pinedale Array     58.91  59  P       P       12 06 07.2 +1.5
      comp=Z,9.9nm,0.6s,baz=108,slow=14,SNR=34
DMN   Daman              58.94 276 eP       P       12 06 06.0 -0.2
      comp=Z,33nm,0.5s
GKN   Gorkha             58.95 277 eP       P       12 06 05.4 -0.7
      comp=Z,15nm,0.5s
MPMC  Manual Prospec     59.08  70  P       P       12 06 08.5 +1.6
      baz=314
CTU   Camp Tracy         59.14  62  IAmb    IAmb    12 06 09.6
      comp=Z,5.8nm,0.7s
FURC  Furnace Creek,     59.16  69  P       P       12 06 09.3 +2.1
      baz=314,SNR=14
DANN  Dangsing           59.24 278 eP       P       12 06 07.8 -0.5
      comp=Z,20nm,0.6s
KONS  Konsvik            59.27 345 eP       P       12 06 08.1 +0.5
NBB40 Tonnes             59.27 345 eP       P       12 06 07.5 -0.1
MOR8  Moi Rana           59.35 344 eP       P       12 06 06.6 -1.6
LRMC  Laurel Mtn Rad     59.36  70  P       P       12 06 10.2 +1.3
      baz=314
JLU   Jordanelle         59.37  62  IAmb    IAmb    12 06 37.3
      comp=Z,5.8nm,0.9s
GWY   Greenwater Val     59.47  69  IAmb    IAmb    12 06 12.1
      comp=Z,7.1nm,0.7s
NLU   North Lily Min     59.47  63  IAmb    IAmb    12 06 12.5
      comp=Z,9.4nm,1.0s
QSM   Queen of Sheba     59.50  70  IAmb    IAmb    12 06 11.8
      comp=Z,5.4nm,0.8s
PRN   Pahroc Range       59.55  67  IAmb    IAmb    12 06 13.1
      comp=Z,5.6nm,0.8s
EDW2  Edwards Air Fo     59.60  71  P       P       12 06 12.0 +1.6
      baz=314
MPU   Maple Canyon       59.67  63  IAmb    IAmb    12 06 14.0
      comp=Z,8.1nm,0.9s
KOLN  Koldanda           59.75 277 eP       P       12 06 11.0 -0.7
      comp=Z,19nm,0.6s
PYUN  Piuthan            59.89 278 eP       P       12 06 12.0 -0.7
      comp=Z,22nm,0.4s
GSC   Goldstone, Bar     60.00  70  P       P       12 06 14.7 +1.6
      baz=315,SNR=5.6
GSC   Goldstone, Bar     60.00  70  IAmb    IAmb    12 06 15.6
      comp=Z,4.9nm,0.7s
SHPR  Sheep Range        60.12  68  P       P       12 06 15.7 +1.6
BFSC  Mount Baldy Ra     60.24  71  P       P       12 06 16.6 +1.7
      baz=315
ULM   Lac du Bonnet      60.36  45  P       P       12 06 15.7 +0.4
      comp=Z,5.8nm,0.4s,baz=325,slow=8.0,SNR=9.5
ULM                                 LR      LR      12 33 42.8
      comp=Z,73nm,19.6s,baz=354,slow=37
ULM   Lac du Bonnet      60.36  45  IAmb    IAmb    12 06 34.1
      comp=Z,9.3nm,0.6s
TMUT  Trail Mountain     60.41  63  IAmb    IAmb    12 06 19.0
      comp=Z,9.8nm,0.8s
CCUT  Cedar City         60.42  66  IAmb    IAmb    12 06 19.1
      comp=Z,5.8nm,0.9s
TUQ   Turquoise Moun     60.42  69  P       P       12 06 17.7 +1.6
      baz=315,SNR=7.2
P17A  Butcher Ranch,     60.55  63  IAmb    IAmb    12 06 19.9
      comp=Z,9.3nm,0.7s
HEC   Hector,Ludlow      60.61  70  P       P       12 06 18.9 +1.6
      baz=315
CHGR  Chuyangaron        60.65 296  IAmb    IAmb    12 06 16.8
      comp=Z,9.8nm,0.7s
Q16A  Castle Valley      60.70  63  IAmb    IAmb    12 06 20.9
      comp=Z,7.6nm,0.9s
MTPU  Mount Pierson      60.74  65  IAmb    IAmb    12 06 39.8
      comp=Z,6.3nm,1.0s
RSSD  Black Hills        60.85  55  P       P       12 06 20.9 +1.9
RSSD                                pmax    pmax
      comp=Z,45nm,0.7s
RSSD  Black Hills        60.85  55  P       P       12 06 20.7 +1.7
      baz=315
LCMT  Little Creek M     60.86  66  IAmb    IAmb    12 06 22.2
      comp=Z,7.7nm,0.8s
MURC  Murrieta           60.96  72  P       P       12 06 21.2 +1.5
      baz=315
GMRC  Granite Mounta     61.03  70  P       P       12 06 22.0 +1.8
      baz=315,SNR=7.2
FINES FINESS Array B     61.08 336  P       P       12 06 18.9 -1.1
      comp=Z,5.1nm,0.6s,baz=34,slow=6.8,SNR=30
FINES                               LR      LR      12 36 44.1
      comp=Z,193nm,18.4s,baz=20,slow=40
FINES FINESS Array B     61.08 336 i P      P       12 06 19.2 -0.7
FINES                               pmax    pmax
      comp=Z,5.0nm,0.6s
PKCU  Pink Cliffs        61.09  65  IAmb    IAmb    12 06 41.6
      comp=Z,9.8nm,0.9s
KNB   Kanab              61.10  66  IAmb    IAmb    12 06 24.0
      comp=Z,5.7nm,0.9s
BELG  Belogornoye        61.26 319  P       P       12 06 20.5 -0.8
      comp=Z,9.1nm,0.7s,baz=46,slow=5.4,SNR=4.5
BELG  Belogornoye        61.26 319 eP       P       12 06 20.9 -0.4
BELG                                pmax    pmax
      comp=Z,3.0nm,1.3s
NSS   Namsos             61.27 344 eP       P       12 06 21.1 -0.1
BELC  Belle Mtn. Jos     61.39  71  P       P       12 06 23.5 +0.8
      baz=315
PMG   Port Moresby       61.69 193  P       P       12 06 25.8 +1.2
      comp=Z,12nm,0.7s,baz=349,slow=9.4,SNR=2.8
PMG                                 LR      LR      12 29 41.3
      comp=Z,48nm,21.3s,baz=72,slow=32
IRM   Iron Mountain      61.77  70  P       P       12 06 26.9 +1.7
      baz=316,SNR=9.0
U15A  North Rim          61.82  66  IAmb    IAmb    12 06 43.0
      comp=Z,12nm,1.5s
NIL   Nilore             61.83 289  P       P       12 06 24.7 -0.8
NIL                                 pmax    pmax
      comp=Z,17nm,1.0s
NIL   Nilore             61.83 289  P       P       12 06 24.7 -0.8
BC3   Big Chuckawall     61.95  70  P       P       12 06 27.7 +1.2
      baz=316
PDMCI Parker Dam,Lak     62.26  69  P       P       12 06 30.1 +1.8
      baz=316
GLA   Glamis             62.75  71  IAmb    IAmb    12 06 34.3
      comp=Z,11nm,0.8s
ISCO  Idaho Springs      63.10  59  P       P       12 06 35.7 +1.4
ISCO                                pmax    pmax
      comp=Z,127nm,0.7s
OBN   Obninsk            63.25 327⇓eP       P       12 06 32.5 -2.1
OBN                                 *PP     sP      12 06 57.0 -2.7
OBN                                                 12 07 11.0
OBN                                 S       S       12 14 51.0  -10
OBN                                 SSS     SSS     12 21 58.0
OBN                                 pmax    pmax
      comp=Z,6.0nm,0.3s
OBN                                 MLR     MLR
      comp=Z,123nm,4.0s
MOL   Molde              63.82 346 eP       P       12 06 38.5 +0.3
DOMB  Dombas             64.08 345 eP       P       12 06 39.5 -0.5
AKN   Aaknes             64.28 346 eP       P       12 06 41.8 +0.5
X18A  Snowflake          64.51  66  IAmb    IAmb    12 06 46.0
      comp=Z,7.0nm,0.7s
NB2   NORSAR Subarra     64.65 343  P       P       12 06 43.3 -0.4
      comp=Z,10nm,0.6s,baz=20,slow=6.9
NOA   NORSAR Array B     64.65 343  P       P       12 06 43.7  0.0
      comp=Z,19nm,0.8s,baz=20,slow=6.7,SNR=59
NOA                                 LR      LR      12 40 38.5
      comp=Z,32nm,18.1s,baz=35,slow=41
214A  Organ Pipe Nat     64.72  70  P       P       12 06 46.2 +1.6
      baz=317
NC602 NORSAR Array S     64.87 343 eP       P       12 06 44.4 -0.7
NORES NORESS Array B     64.87 343  P       P       12 06 44.8 -0.3
HFS   Hagfors            65.02 342  P       P       12 06 45.8 -0.4
      comp=Z,11nm,0.4s,baz=47,slow=5.0,SNR=92
FOO   Floro              65.12 347 eP       P       12 06 47.6 +0.9
HYA   Hoyanger           65.36 346 eP       P       12 06 48.6 +0.3
SKAR  Skarslia           65.49 345 eP       P       12 06 49.7 +0.5
TUC   Tucson             65.64  68  P       P       12 06 52.6 +1.9
TUC                                 pmax    pmax
      comp=Z,4.0nm,0.9s
TUC   Tucson             65.64  68  P       P       12 06 52.4 +1.8
      baz=317
TUC   Tucson             65.64  68  P       P       12 06 52.6 +1.9
SUE   Sulen              65.68 346 eP       P       12 06 50.6 +0.3
OSL   Oslo               65.77 343 eP       P       12 06 51.6 +0.7
ASK   Askoy              66.17 346 eP       P       12 06 53.9 +0.4
KONO  Kongsberg          66.24 343⇑eP       P       12 06 53.4 -0.5
KONO                                pmax    pmax
      comp=Z,169nm,3.2s
KONO  Kongsberg          66.24 343 eP       P       12 06 54.3 +0.4
BER   Bergen             66.24 346 eP       P       12 06 54.5 +0.6
ODD1  Odda               66.49 345 eP       P       12 06 55.8 +0.2
MNK   Minsk              66.54 331 i P      P       12 06 53.4 -2.5
MNK                                i *PP    pP      12 07 14.1 +0.4
MNK                                i                12 09 20.3
MNK                                i PPP    PPP     12 10 56.2
MNK                                i S      S       12 15 37.8 -3.4
MNK                                i *SS    sS      12 16 13.6 +1.7
MNK                                i SS     SS      12 19 56.8 -1.3
MNK                                 pmax    pmax
      comp=Z,38nm,0.9s
MNK                                 pmax    pmax
      comp=E,4.0nm,1.3s
MNK                                 pmax    pmax
      comp=N,20nm,1.3s
MNK                                 MLR     MLR
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      comp=E,16nm,12.0s
MNK                                MLR     MLR
      comp=Z,117nm,11.0s
MNK                                MLR     MLR
      comp=N,107nm,13.0s
MNK   Minsk           66.54 331  i P     P       12 06 53.5 -2.5
      comp=E,4.0nm,1.3s
MNK                              i P     P       12 06 53.5 -2.5
      comp=N,20nm,1.3s
MNK                              i P     P       12 06 53.5 -2.5
      comp=Z,38nm,0.9s,baz=31
MNK                              i pP    pP      12 07 14.2 +0.4
MNK                              i PP    PP      12 09 20.4 -2.1
MNK                              i PPP   PPP     12 10 56.3
MNK                              i S     S       12 15 37.8 -3.3
MNK                              i sS    sS      12 16 13.7 +1.7
MNK                              i SS    SS      12 19 56.8 -1.3
MNK                              i SSS   SSS     12 23 08.1
MNK                              i LR    LR      12 35 23.4
MNK                              i LRM   MLR     12 39 03.2
      comp=E,16nm,11.5s
MNK                              i LRM   MLR     12 39 09.6
      comp=Z,117nm,10.9s
MNK                              i LRM   MLR     12 39 12.1
      comp=N,107nm,12.8s
BLS5  Blasjo          66.98 345  eP      P       12 06 59.3 +0.6
GEYT  Alibeck         67.17 303   P      P       12 06 59.5 -0.8
      comp=N,2.8nm,0.6s,baz=212,slow=5.3,SNR=3.7
GEYT                              LR     LR      12 38 59.2
      comp=N,107nm,18.5s,baz=50,slow=38
319A  Douglas         67.19  68   IAmb   IAmb    12 07 03.4
      comp=Z,15nm,0.9s
KMY   Karmoy          67.38 346  eP      P       12 07 01.9 +0.7
TJOU  Tjoern          67.38 342  i P     P       12 07 01.4 +0.2
HOMB  Homborsund      67.73 344  eP      P       12 07 03.7 +0.3
SNART Snartemo        67.89 344  i P     P       12 07 05.2 +0.8
SNART                             IAmb   IAmb    12 07 05.5
      comp=Z,18nm,0.5s
SNART Snartemo        67.89 344  eP      P       12 07 05.0 +0.6
BLEU  Blekinge        68.10 339  i P     P       12 07 04.9 -0.8
BLEU                              IAmb   IAmb    12 07 05.4
      comp=Z,1.0nm,0.4s
FABU  Falkenberg      68.12 341  i P     P       12 07 05.7 -0.2
FABU                              IAmb   IAmb    12 07 06.3
      comp=Z,6.1nm,0.3s
DEL   Delary          68.37 340  i P     P       12 07 07.2 -0.3
DEL                               IAmb   IAmb    12 07 07.6
      comp=Z,6.0nm,0.4s
MTN   Manton Dam      68.61 209   IAmb   IAmb    12 07 11.4
      comp=Z,17nm,0.8s
AKASG Malin Array Be  69.39 328   P      P       12 07 12.5 -1.4
      comp=Z,9.2nm,0.3s,baz=30,slow=6.3,SNR=49
AKASG                             LR     LR      12 43 13.3
      comp=Z,49nm,19.3s,baz=20,slow=41
AKASG Malin Array Be  69.39 328   IAmb   IAmb    12 07 13.7
      comp=Z,18nm,0.8s
AKBB  Malin Array Si  69.39 328deP       P       12 07 12.8 -1.1
AKBB  Malin Array Si  69.39 328   IAmb   IAmb    12 07 13.6
      comp=Z,16nm,0.8s
BSD   Bornholm Skovb  69.40 339  i P     P       12 07 14.0 +0.2
BSD                               IAmb   IAmb    12 07 14.9
      comp=Z,6.0nm,0.4s
KIV   Kislovodsk      69.90 316  eP      P       12 07 15.6 -1.7
KIV                               pmax   pmax
      comp=Z,7.0nm,1.0s
KIV                               MLR    MLR
      comp=Z,47nm,17.0s
KBZ   Khabaz          69.99 316   P      P       12 07 17.6 -0.1
      comp=Z,2.4nm,0.6s,baz=106,slow=5.7,SNR=7.0
KBZ                               LR     LR      12 41 21.0
      comp=Z,39nm,18.6s,baz=24,slow=39
NEY   Neytrino        70.45 316⇓eP       P       12 07 22.1 +1.3
NEY                               pmax   pmax
      comp=Z,3.0nm,1.2s
SORM  Soroca          71.89 328 ⇑P       P       12 07 28.4 -0.7
TXAR  Lajitas Array   71.93  66   P      P       12 07 31.4 +1.6
      comp=Z,14nm,0.6s,baz=301,slow=5.0,SNR=16
RUE   Ruedersdorf     72.09 338  eP      P       12 07 31.2 +0.9
      comp=Z,44nm,1.0s,baz=20,slow=5.9
EKA   Eskdalemuir Ar  72.28 349   P      P       12 07 31.4 +0.1
      comp=Z,4.7nm,0.4s,baz=19,slow=5.1,SNR=22
KWP   Kalwaria Pacla  72.35 332  eP      P       12 07 32.5 +0.6
FLTG  Flechtingen     72.80 340  eP      P       12 07 35.0 +0.6
      comp=Z,22nm,0.8s,baz=20,slow=5.9
RETH  Rethem/Aller,   72.80 341  eP      P       12 07 35.8 +1.3
      comp=Z,28nm,0.9s,baz=20,slow=5.9
NRDL  Niedersach Rie  72.88 341  eP      P       12 07 36.0 +1.2
      comp=Z,29nm,0.9s,baz=20,slow=5.9
KSP   Ksiaz           73.00 336  eP      P       12 07 35.8 +0.1
KOLS  Kolonicke sedl  73.10 332  eP      P       12 07 36.7 +0.4
KOLS                              pmax   pmax
      comp=Z,19nm,0.7s
KOLS  Kolonicke sedl  73.10 332  eP      P       12 07 36.7 +0.4
ASSE  Asse, Remlinge  73.10 340  eP      P       12 07 37.4 +1.2
      comp=Z,19nm,1.0s,baz=20,slow=5.9
OSTC  Ostas           73.28 336  eP      P       12 07 37.7 +0.3
CHVC  Chvalec         73.29 336  eP      P       12 07 37.7 +0.2
CLL   Collm           73.36 338⇓iP       P       12 07 37.7 -0.1
CLL                              e               12 08 05.0
CLL                               pmax   pmax
      comp=Z,34nm,0.8s
CLL   Collm           73.36 338⇓iP       P       12 07 37.7 -0.1
      comp=Z,34nm,0.8s
CLL   Collm           73.36 338  eP      P       12 07 38.3 +0.5
      comp=Z,34nm,0.8s,baz=20,slow=5.9
CRVS  Cervenica-Dubn  73.36 332  eP      P       12 07 38.2 +0.3
CRVS                              pmax   pmax
      comp=Z,14nm,0.7s
CRVS  Cervenica-Dubn  73.36 332  eP      P       12 07 38.2 +0.3
BURAR Bucovina Array  73.37 329 ⇓P       P       12 07 37.9 -0.2
UPC   Upice           73.38 336  eP      P       12 07 38.5 +0.5
UPC   Upice           73.38 336  eP      P       12 07 38.5 +0.5
CLZ   Clausthal       73.44 340  eP      P       12 07 39.8 +1.5
      comp=Z,38nm,1.0s,baz=20,slow=5.9
DPC   Dobruska-Polom  73.45 336  eP      P       12 07 38.9 +0.5
DPC   Dobruska-Polom  73.45 336  eP      P       12 07 38.9 +0.5
FBE   Freiberg        73.64 338  eP      P       12 07 40.6 +1.1
      comp=Z,19nm,1.0s,baz=20,slow=5.9
MORC  Moravsky Berou  73.66 335 ⇑P       P       12 07 40.3 +0.6
MORC  Moravsky Berou  73.66 335   P      P       12 07 40.0 +0.4
MORC  Moravsky Berou  73.66 335  eP      P       12 07 40.1 +0.4
LANS  Liptovska Anna  73.71 334  eP      P       12 07 41.3 +1.4
LANS                              pmax   pmax
      comp=Z,22nm,0.8s
LANS  Liptovska Anna  73.71 334  eP      P       12 07 41.3 +1.4
TRPA  Tarpa           73.74 331 ⇓P       P       12 07 40.8 +0.8
TRPA  Tarpa           73.74 331  eP      P       12 07 40.1 +0.1
DZM   Mont Dzumac     73.76 173  eLR     LR      12 30 27.4
      comp=Z,121nm,24.1s
M53A  WI Miller and   73.83  42   P      P       12 07 41.6 +0.9
      baz=326
TESR  Tescani         73.87 328 ⇑P       P       12 07 40.4 -0.5
VLDR  Vladesti        73.97 327 ⇑P       P       12 07 41.7 +0.2
KECS  Kecovo          74.02 333  eP      P       12 07 42.3 +0.5
KECS                              pmax   pmax
      comp=Z,9.0nm,0.7s
KECS  Kecovo          74.02 333  eP      P       12 07 42.3 +0.5
M54A  Oil Creek Stat  74.20  42   P      P       12 07 43.3 +0.4
      baz=327
PRU   Pruhonice       74.22 337  eP      P       12 07 42.9  0.0
PRU   Pruhonice       74.22 337  eP      P       12 07 42.9  0.0
MOX   Moxa            74.29 339  eP      P       12 07 44.2 +0.9
      comp=Z,34nm,1.2s,baz=20,slow=5.9
MOX                              eL      L       12 42 28.8
      comp=Z,108nm,18.3s
WB0   Warramunga Arr  74.30 204   IAmb   IAmb    12 07 45.3
      comp=Z,18nm,0.8s
PLN   Plauen          74.32 339  eP      P       12 07 44.5 +1.1
      comp=Z,15nm,0.8s,baz=20,slow=5.9
WERD  Werda           74.32 338  eP      P       12 07 44.6 +1.1
      comp=Z,20nm,1.0s,baz=20,slow=5.9
VRAC  Vranov          74.33 335 ⇓P       P       12 07 44.5 +1.0
VRAC  Vranov          74.33 335   P      P       12 07 44.1 +0.5
      comp=Z,21nm,0.8s,baz=30,slow=4.9,SNR=19
VRAC  Vranov          74.33 335  eP      P       12 07 44.4 +0.8
GUNZ  Gunzen          74.40 338  eP      P       12 07 45.0 +1.1
      comp=Z,19nm,0.9s,baz=20,slow=5.9
VRI   Vrincioaia      74.41 327 ⇑P       P       12 07 44.4 +0.3
BUG   Bochum--Univer  74.44 342  eP      P       12 07 45.2 +1.1
      comp=Z,34nm,1.0s,baz=20,slow=5.9
WR0   Warramunga Arr  74.45 204   P      P       12 07 44.7 +0.3
WR0                               IAmb   IAmb    12 07 46.1
      comp=Z,15nm,1.0s
PLOR  Plostina        74.45 327 ⇑P       P       12 07 44.6 +0.2
WERN  Wernitzgruen    74.46 338  eP      P       12 07 45.5 +1.2
      comp=Z,22nm,0.8s,baz=20,slow=5.9
JAVC  Velka Javorina  74.46 335  eP      P       12 07 46.0 +1.6
VYHS  Vyhne           74.48 334  eP      P       12 07 45.0 +0.6
VYHS                              pmax   pmax
      comp=Z,25nm,0.9s
VYHS  Vyhne           74.48 334  eP      P       12 07 45.0 +0.6
WB2   Warramunga Arr  74.48 204   P      P       12 07 45.6 +1.0
WB2                               IAmb   IAmb    12 07 46.4
      comp=Z,16nm,0.8s
WRA   Warramunga Arr  74.48 204   P      P       12 07 45.5 +0.8
      comp=Z,12nm,0.6s,baz=18,slow=6.2,SNR=88
WRA                               LR     LR      12 38 14.0
      comp=Z,24nm,21.9s,baz=180,slow=34
NKC   Novy Kostel     74.49 338  eP      P       12 07 45.0 +0.5
NKC   Novy Kostel     74.49 338  eP      P       12 07 45.0 +0.5
N54A  Moraine State   74.52  42   P      P       12 07 45.6 +0.8
      baz=327
L56A  Greenwood       74.53  40   P      P       12 07 45.0 +0.2
CFR   Carcaliu        74.54 326 ⇓P       P       12 07 44.6 -0.1
O53A  New Philadelph  74.59  43   P      P       12 07 45.8 +0.6
      baz=326
COVR  Voineasa-Covas  74.61 328 ⇑P       P       12 07 45.8 +0.6
KRUC  Moravsky        74.61 335  eP      P       12 07 45.8 +0.6
CBBR  Cluj-Babes-Bol  74.64 330 ⇓P       P       12 07 46.2 +0.8
CJR   Cluj-Napoca     74.68 330 ⇓P       P       12 07 46.6 +0.9
PSZ   Piszkesteto     74.70 333 ⇑P       P       12 07 46.9 +1.1
PSZ   Piszkesteto     74.70 333  eP      P       12 07 46.1 +0.3
PSZ   Piszkesteto     74.70 333   P      P       12 07 46.9 +1.1
TPGR  Topolog         74.72 326 ⇓P       P       12 07 45.7 -0.1
MANZ  Manzenberg      74.80 338  eP      P       12 07 47.2 +1.0
      comp=Z,3.6nm,1.1s,baz=20,slow=5.9
SMOL  Smolenice       74.84 335  eP      P       12 07 47.8 +1.3
SMOL                              pmax   pmax
      comp=Z,9.0nm,0.8s
SMOL  Smolenice       74.84 335  eP      P       12 07 47.8 +1.3
H62A  Milan           74.85  35   P      P       12 07 47.8 +1.1
H62A                                     pP      12 08 05.4 +1.4
H62A                              IAmb   IAmb    12 08 05.6
      comp=Z,17nm,0.8s
DRGR                  74.88 330 ⇑P       P       12 07 47.1 +0.2
ROTZ  Rotzenmuhle     74.98 338  eP      P       12 07 48.6 +1.3
      comp=Z,3.9nm,0.9s,baz=20,slow=5.9
MLR   Muntele Rosu    75.01 328 ⇑P       P       12 07 48.5 +0.9
MLR   Muntele Rosu    75.01 328   P      P       12 07 48.0 +0.3
      comp=Z,18nm,0.6s,baz=351,slow=3.4,SNR=14
MLR   Muntele Rosu    75.01 328   P      P       12 07 48.0 +0.3
MLR   Muntele Rosu    75.01 328   IAmb   IAmb    12 07 49.2
      comp=Z,17nm,0.7s
MODS  Modra-Piesok    75.01 335  eP      P       12 07 47.7 +0.2
MODS                              pmax   pmax
      comp=Z,22nm,1.0s
MODS  Modra-Piesok    75.01 335  eP      P       12 07 47.7 +0.2
HARR  Harsova         75.03 326 ⇑P       P       12 07 47.6  0.0
TIRR  Tirgusor        75.07 326 ⇑P       P       12 07 47.9 +0.1
ISR   Istrita         75.13 327 ⇓P       P       12 07 48.9 +0.6
ZST   Bratislava      75.22 335  eP      P       12 07 50.1 +1.4
ZST   Bratislava      75.22 335  eP      P       12 07 50.1 +1.4
SRO   Srobarova       75.24 334  eP      P       12 07 49.8 +1.0
SRO   Srobarova       75.24 334  eP      P       12 07 49.8 +1.0
KHC   Kasperske Hory  75.25 337  eP      P       12 07 49.2 +0.3
KHC   Kasperske Hory  75.25 337  eP      P       12 07 49.2 +0.3
GRF   Grafenberg Arr  75.28 339  eP      P       12 07 50.5 +1.5
      comp=Z,35nm,0.7s,baz=20,slow=5.9
GRF                              eL      L       12 43 09.4
      comp=Z,113nm,18.4s
FITZ  Fitzroy Crossi  75.30 213   P      P       12 07 50.6 +1.3
      comp=Z,9.6nm,0.8s,baz=11,slow=2.7,SNR=12
VOIR                  75.35 328 ⇓P       P       12 07 50.2 +0.6
CKRC  Cesky Krumlov   75.36 337  eP      P       12 07 50.0 +0.5
TNS   Taunus Mts      75.37 341  eP      P       12 07 50.8 +1.3
      comp=Z,24nm,0.7s,baz=20,slow=5.9
M57A  Sunshine Farm,  75.38  40   P      P       12 07 50.3 +0.6
M57A                              IAmb   IAmb    12 07 50.5
      comp=Z,17nm,0.7s
WET   Wettzell        75.41 338  eP      P       12 07 51.2 +1.4
      comp=Z,35nm,0.9s,baz=20,slow=5.9
BTNL  Ternell         75.48 342  dP      P       12 07 50.7 +0.6
      comp=Z,30nm,0.9s
MEM   Membach         75.48 342  dP      P       12 07 51.0 +0.9
      comp=Z,55nm,0.8s
GEC2  GERESS Array S  75.49 337  eP      P       12 07 51.2 +0.9
      comp=Z,21nm,0.6s,baz=20,slow=5.9
GERES GERESS Array B  75.49 337   P      P       12 07 50.9 +0.5
      comp=Z,18nm,0.5s,baz=37,slow=5.9,SNR=55
GERES                             LR     LR      12 45 54.7
      comp=Z,98nm,18.4s,baz=322,slow=40
ARR   Arges           75.55 329 ⇑P       P       12 07 51.8 +1.1
ICOR  Ion Corvin      75.58 326 ⇑P       P       12 07 51.6 +0.8
SSPA  Standing Stone  75.66  41   P      P       12 07 51.8 +0.5
      baz=328
SSPA  Standing Stone  75.66  41   P      P       12 07 51.8 +0.5
SSPA                              IAmb   IAmb    12 07 52.5
      comp=Z,13nm,0.6s
CSKK  Cskako          75.67 334  eP      P       12 07 51.9 +0.6
SIRR  Siria           75.68 331 ⇑P       P       12 07 51.7 +0.4
O56A  Blue Knob Stat  75.69  42   P      P       12 07 51.9 +0.4
      baz=328
O56A  Blue Knob Stat  75.69  42   P      P       12 07 52.4 +0.8
O56A                              IAmb   IAmb    12 08 10.6
      comp=Z,13nm,0.9s
BHOU  Houvegnez       75.72 342  dP      P       12 07 52.6 +1.1
      comp=Z,22nm,0.8s
BCLA  Clavier         75.79 343  bP      P       12 07 52.7 +0.8
      comp=Z,19nm,0.8s
CONA  Conrad Observa  75.80 335  i P     P       12 07 53.1 +1.1
      SNR=8.9
SOP   Sopron          75.84 335  eP      P       12 07 53.1 +0.9
BGES  Gesves          75.86 343  dP      P       12 07 51.5 -0.9
SNF   Seneffe         75.89 344  dP      P       12 07 52.6 +0.2
      comp=Z,24nm,0.8s
SNF                              dPcP    PcP     12 08 04.0 -0.7
BMRD  Maredsous       76.00 343  dP      P       12 07 53.5 +0.5
      comp=Z,23nm,1.0s
MPLH  Magyarpolny     76.04 334  eP      P       12 07 54.7 +1.3
RCHB  Rochefort       76.06 343  dP      P       12 07 54.2 +0.8
      comp=Z,14nm,1.0s
GZR   Gura Zlata      76.12 330 ⇓P       P       12 07 54.0 +0.1
GIVF  Givet           76.18 343  eP      P       12 07 54.5 +0.4
GIVF                              pmax   pmax
      comp=Z,28nm,1.2s
DOU   Dourbes         76.23 343  dP      P       12 07 53.7 -0.7
      comp=Z,11nm,1.0s
N59A  State Game Lan  76.27  39   P      P       12 07 55.1 +0.2
      baz=329
BZS   Buzias          76.27 331 ⇑P       P       12 07 54.5 -0.2
BAIF  Baives          76.33 343  eP      P       12 07 55.5 +0.5
BAIF                              pmax   pmax
      comp=Z,20nm,1.0s
ARSA  Arzberg         76.51 335  i P     P       12 07 57.1 +1.0
      SNR=6.2
MORH  Mrgy, Hungar    76.61 333 ⇑P       P       12 07 56.6  0.0
MORH  Mrgy, Hungar    76.61 333  eP      P       12 07 56.1 -0.5
MORH  Mrgy, Hungar    76.61 333⇓iP       P       12 07 56.1 -0.5
HERR  Herculane       76.69 330 ⇑P       P       12 07 56.6 -0.5
FUR   Furstenfeldbru  76.70 338  eP      P       12 07 58.4 +1.3
      comp=Z,48nm,0.9s,baz=20,slow=5.9
RJOB  Jochberg        76.74 337  eP      P       12 07 59.0 +1.5
      comp=Z,26nm,0.9s,baz=20,slow=5.9
KOVH  Kovagotottos    76.88 333  eP      P       12 07 58.4 +0.2
PALK  Pallekele       76.95 265   P      P       12 07 59.3 +0.3
PALK                              pmax   pmax
      comp=Z,17nm,0.7s
PALK  Pallekele       76.95 265   P      P       12 07 59.3 +0.3
MDVR  Moldovita       77.00 330 ⇑P       P       12 07 58.5 -0.3
SOKA  Soboth          77.17 335  i P     P       12 08 00.6 +0.8
      SNR=15
BRTR  Keskin Array B  77.17 320   P      P       12 07 60.0 -0.1
      comp=Z,3.0nm,0.8s,baz=46,slow=3.5,SNR=10
BRTR                              LR     LR      12 47 44.2
      comp=Z,54nm,18.0s,baz=28,slow=40
BRTR  Keskin Array B  77.17 320   P      P       12 08 00.0 -0.1
PERS  Pernice         77.18 335  i P     P       12 08 00.5 +0.6
BFO   Black Forest    77.19 340   P      P       12 07 59.7 -0.2
BFO                               pmax   pmax
      comp=Z,13nm,0.7s
BFO   Black Forest    77.19 340  eP      P       12 08 00.9 +1.0
      comp=Z,13nm,0.7s,baz=20,slow=5.9
BFO   Black Forest    77.19 340   P      P       12 07 59.7 -0.2
BFO                               IAmb   IAmb    12 08 01.2
      comp=Z,13nm,0.7s
KBA   Koelnbreinsper  77.22 337  i P     P       12 08 01.6 +1.3
      SNR=43
FRGS  Fruska Gora     77.23 332 ⇓P       P       12 08 00.5 +0.3
FRGS  Fruska Gora     77.23 332⇓iP       P       12 07 59.9 -0.3
KALN  Kalnik          77.29 334  i P     P       12 08 00.6 +0.1
CDF   Champ du Feu    77.33 341  eP      P       12 08 01.0 +0.3
CDF                               pmax   pmax
      comp=Z,24nm,0.8s
LOBO  Lobor           77.38 334  i P     P       12 08 00.7 -0.2
WATA  Walderalm       77.41 338  i P     P       12 08 02.3 +1.0
      SNR=8.5
UBR   Ueberruh        77.42 339  eP      P       12 08 02.5 +1.2
      comp=Z,22nm,1.0s,baz=20,slow=5.9
OBKA  Obir            77.45 336  i P     P       12 08 02.2 +0.7
      SNR=11
RETA  Reutte          77.45 338  i P     P       12 08 02.5 +1.1
      SNR=5.9
WTTA  Wattenberg      77.46 338  i P     P       12 08 02.7 +1.1
      SNR=13
MOTA  Moosalm         77.51 338  i P     P       12 08 02.6 +0.8
      SNR=14
ECH   Echery          77.54 341   IAmb   IAmb    12 08 03.3
      comp=Z,17nm,0.8s
SQTA  Sankt Quirin    77.60 338  i P     P       12 08 03.4 +1.1
      SNR=9.6
PTJ   Puntijarka      77.63 334  i P     P       12 08 03.0 +0.6
ABTA  Abfaltersbach   77.74 337  i P     P       12 08 03.8 +0.8
      SNR=18
ZOU   Zoufplan        77.80 337   IAmb   IAmb    12 08 08.6
      comp=Z,7.7nm,0.7s
DAVA  Damuels         77.84 339  i P     P       12 08 04.8 +1.1
      SNR=6.8
CRES  Cresnjev        77.84 335⇓iP       P       12 08 03.6  0.0
LJU   Ljubljana       77.89 335⇓iP       P       12 08 03.5 -0.3
LJU   Ljubljana       77.89 335  i P     P       12 08 03.8  0.0
FETA  Feichten        77.90 338  i P     P       12 08 05.2 +1.1
      SNR=12
HAU   Haudompre       77.90 341  eP      P       12 08 04.1 +0.2
HAU                               pmax   pmax
      comp=Z,8.0nm,0.7s
BOVS  Bovan           78.03 330 ⇑P       P       12 08 03.9 -0.7
OZLJ  Ozalj           78.04 335  i P     P       12 08 04.8 +0.3
DIVS  Divibare        78.14 331⇓iP       P       12 08 04.6 -0.7
STAL  STALIGIAL       78.14 337   IAmb   IAmb    12 08 05.6
      comp=Z,15nm,0.8s
AS31  Alice Springs   78.16 203   P      P       12 08 06.9 +1.4
ASAR  Alice Springs   78.16 203   P      P       12 08 07.0 +1.6
      comp=Z,7.8nm,0.6s,baz=15,slow=5.4,SNR=87
CEY   Cerknica        78.19 335⇓iP       P       12 08 05.3 -0.2
BOJS  Bojanci         78.20 335  i P     P       12 08 05.7 +0.2
MRAK  Mrakovica       78.20 333⇓iP       P       12 08 05.2 -0.4
DAVOX Davos/Dischmat  78.32 339   P      P       12 08 07.1 +0.7
      comp=Z,23nm,0.6s,baz=8.9,slow=3.4,SNR=42
BLY   Banja Luka      78.36 333⇓iP       P       12 08 05.9 -0.5
VTS   Vitosha         78.45 328 ⇑P       P       12 08 06.9 -0.2
LDF   La Druitiere    78.47 346  eP      P       12 08 07.7 +0.8
LDF                               pmax   pmax
      comp=Z,47nm,1.6s
BBLS  Lazi&#263;i     78.53 331⇓iP       P       12 08 07.5 +0.1
RIY   Rijeka          78.56 335  eP      P       12 08 06.8 -0.7
MGRS  Mrkonjic Grad   78.70 333⇑iP       P       12 08 09.2 +0.9
RUDO  Rudo            78.76 331  eP      P       12 08 08.2 -0.5
SMRN  Sveta Marina    78.92 335  i P     P       12 08 08.7 -0.7
UDBI  Udbina          78.96 334  i P     P       12 08 09.7 -0.1
RABC  Rab             79.02 335  i P     P       12 08 09.5 -0.5
ALN   Alexandroupoli  79.03 325   IAmb   IAmb    12 08 10.7
      comp=Z,11nm,0.8s
LOR   Lormes          79.09 343  eP      P       12 08 10.8 +0.4
LOR                               pmax   pmax
      comp=Z,32nm,1.0s
BRJN  Brijuni         79.15 336  i P     P       12 08 09.9 -0.7
SGMF  Saint Gilles    79.15 347  eP      P       12 08 11.0 +0.3
SGMF                              pmax   pmax
      comp=Z,33nm,1.2s
ROSF  Rostrenen       79.16 348  eP      P       12 08 12.0 +1.3
ROSF                              pmax   pmax
      comp=Z,48nm,1.2s
NVLJ  Novalja         79.17 335  i P     P       12 08 10.2 -0.6
KIJV  Kijevo          79.27 333  i P     P       12 08 11.2 -0.2
SALO  Salr            79.27 338   P      P       12 08 11.3 -0.1
UPM   Unac-Piva       79.28 331⇓iP       P       12 08 11.7  0.0
CABF  La Chapelle     79.29 341  eP      P       12 08 12.3 +0.7
CABF                              pmax   pmax
      comp=Z,17nm,0.9s
NVR   Nevrokopi       79.38 327   P      P       12 08 12.1  0.0
RICI  Ricice          79.53 333  i P     P       12 08 12.3 -0.6
QUIF  Quistinic       79.56 348  eP      P       12 08 14.7 +1.8
QUIF                              pmax   pmax
      comp=Z,101nm,1.7s
MORI  Morici          79.59 334  i P     P       12 08 12.8 -0.4
STIP  Stip            79.62 328  i P     P       12 08 12.5 -0.9
AVF   Avril sur Loir  79.64 343  eP      P       12 08 14.0 +0.7
AVF                               pmax   pmax
      comp=Z,35nm,1.1s
DUGI  Dugi Otok       79.65 334  i P     P       12 08 12.8 -0.7
SMF   Signal de Mont  79.69 343  eP      P       12 08 14.3 +0.6
SMF                               pmax   pmax
      comp=Z,26nm,1.2s
MAKA  Makarska        79.75 333  i P     P       12 08 13.1 -1.0
ZIRJ  Zirje           79.80 334  i P     P       12 08 13.6 -0.6
VAY   Valandovo       79.83 328  i P     P       12 08 14.8 +0.3
PDG   Podgorica       79.88 331 ⇑P       P       12 08 14.7 -0.1
PDG   Podgorica       79.88 331  eP      P       12 08 14.4 -0.3
TREB  Trebinje        79.89 332  eP      P       12 08 13.9 -0.9
STON  Ston            79.94 332⇓iP       P       12 08 13.7 -1.3
STON  Ston            79.94 332  i P     P       12 08 13.9 -1.1
BGF   Bois d'Agland   79.95 343  eP      P       12 08 16.1 +1.0
BGF                               pmax   pmax
      comp=Z,12nm,0.7s
DBRK  Dubrovnik       80.00 332  i P     P       12 08 14.2 -1.1
HVAR  Hvar            80.02 333  i P     P       12 08 14.4 -1.0
HCY   Herceg Novi     80.09 331⇓iP       P       12 08 15.0 -0.9
DRME  Dracevica, Mon  80.12 331  eP      P       12 08 15.7 -0.4
LPL   La Plagne       80.21 340  eP      P       12 08 18.0 +1.3
LPL                               pmax   pmax
      comp=Z,27nm,0.9s
LIA   Limnos Island   80.22 326   P      P       12 08 16.4 -0.2
GRG   Griva           80.22 328   P      P       12 08 17.6 +1.0
LPG   La Plagne       80.22 340  eP      P       12 08 18.2 +1.3
LPG                               pmax   pmax
      comp=Z,25nm,0.9s
TCF   Toulx Ste Croi  80.33 344  eP      P       12 08 17.9 +0.8
TCF                               pmax   pmax
      comp=Z,16nm,0.9s
PLG   Polygyros       80.39 327   P      P       12 08 17.0 -0.6
BNI   Bardonecchia    80.66 340   P      P       12 08 21.2 +2.1
BNI   Bardonecchia    80.66 340   IAmb   IAmb    12 08 30.6
      comp=Z,10nm,0.8s
TIR   Tirane          80.68 330 ⇑P       P       12 08 19.4 +0.3
TIR   Tirane          80.68 330   P      P       12 08 19.4 +0.3
FNA   Florina         80.71 329   P      P       12 08 18.8 -0.5
FNA   Florina         80.71 329   IAmb   IAmb    12 08 19.6
      comp=Z,18nm,0.8s
PMOR  Pomariorio Ree  80.92 128  eT      T       13 37 45.9
      comp=Z,5.9nm,0.2s
MBDF  Montbardon      80.95 340  eP      P       12 08 21.3 +0.7
MBDF                              pmax   pmax
      comp=Z,9.0nm,0.7s
ORIF  Oris-en-Rattie  80.95 341  eP      P       12 08 21.8 +1.2
ORIF                              pmax   pmax
      comp=Z,9.0nm,0.8s
CHOS  Chios island    81.25 324   P      P       12 08 21.5 -0.7
VIVF  Saint-Julien-l  81.25 342  eP      P       12 08 23.3 +1.2
VIVF                              pmax   pmax
      comp=Z,21nm,1.1s
XOR   Xorichti        81.38 327   P      P       12 08 21.2 -1.7
RJF   Les Rejaudoux   81.40 344  eP      P       12 08 25.0 +2.2
RJF                               pmax   pmax
      comp=Z,22nm,1.3s
LSK   Leskovik        81.53 329   P      P       12 08 23.8 +0.1
AQU   L'Aquila        81.62 335   P      P       12 08 25.9 +1.8
AQU   L'Aquila        81.62 335  eP      P       12 08 25.5 +1.4
SBF   Sospel          81.63 339  eP      P       12 08 25.3 +1.1
SBF                               pmax   pmax
      comp=Z,17nm,0.9s
FETY  Fethiye         81.64 321   P      P       12 08 23.9 -0.4
CAF   Calviac         81.67 344  eP      P       12 08 26.5 +2.2
CAF                               pmax   pmax
      comp=Z,21nm,1.2s
AGG   Agios Georgios  81.98 327   IAmb   IAmb    12 08 25.1
      comp=Z,12nm,0.8s
FRF   La Foret Royal  82.09 340  eP      P       12 08 29.2 +2.7
FRF                               pmax   pmax
      comp=Z,9.0nm,0.9s
MMAI  Mount Meron Ar  82.14 315   P      P       12 08 27.3 +0.3
      comp=Z,9.1nm,0.5s,baz=53,slow=14,SNR=16
ASF   Jabal al Asfar  82.19 313   P      P       12 08 27.0 -0.3
      comp=Z,9.4nm,0.7s,baz=73,slow=2.5,SNR=13
KEK   Kerkira         82.19 329   P      P       12 08 26.6 -0.5
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MATE	Matera	82.28	332	⇑P	P	12 08 27.8	+0.4
DION	Dionisos Attik	82.28	326	P	P	12 08 26.3	-1.3
PPT	Papeete	82.32	131	LR	LR	12 36 09.2	
	comp=Z,56nm,22.0s,baz=326,slow=29						
LMR	La Mourre	82.34	340	*e*P	P	12 08 28.5	+0.7
LMR				pmax	pmax		
	comp=Z,34nm,1.3s						
PPT2	Papeete2	82.34	131	*e*LR	LR	12 34 25.8	
	comp=Z,128nm,23.2s						
VILL	Villia	82.42	326	P	P	12 08 26.8	-1.5
PGF	Pioggiola	82.53	338	*e*P	P	12 08 29.1	+0.2
PGF				pmax	pmax		
	comp=Z,11nm,0.6s						
PAOL	Paolisi	82.53	334	IAmb	IAmb	12 08 29.6	
	comp=Z,12nm,1.0s						
LTK	Loutraki	82.66	326	P	P	12 08 27.6	-2.0
LAKA	Lakka	82.81	327	P	P	12 08 29.6	-0.7
KLV	Kalavryta, Ach	82.92	327	P	P	12 08 29.7	-1.3
DRO	Drossia	83.16	327	P	P	12 08 31.7	-0.4
MTLF	Montolieu	83.18	343	*e*P	P	12 08 33.7	+1.6
MTLF				pmax	pmax		
	comp=Z,18nm,1.4s						
TIP	Timpagrande	83.61	331	⇑P	P	12 08 35.2	+0.7
EPF	Esparros	83.81	344	*e*P	P	12 08 37.3	+1.9
EPF				pmax	pmax		
	comp=Z,10.0nm,1.2s						
SJPF	Ste Jean	83.98	345	*e*P	P	12 08 38.8	+2.5
SJPF				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ETSF	Etsaut	84.09	345	*e*P	P	12 08 38.4	+1.5
ETSF				pmax	pmax		
	comp=Z,27nm,1.6s						
PYL	PYLOS	84.10	327	P	P	12 08 34.4	-2.6
KTHA	Kythira Island	84.22	325	P	P	12 08 35.5	-2.1
IDI	Anoyia	84.42	324	P	P	12 08 36.8	-1.9
	comp=Z,13nm,0.6s,baz=32,slow=11,SNR=23						
ANKY	Antikythira Is	84.48	325	P	P	12 08 38.2	-0.7
STKA	Stephens Creek	84.59	195	P	P	12 08 40.5	+1.4
	comp=Z,2.9nm,0.5s,baz=337,slow=4.8,SNR=6.8						
STKA				LR	LR	12 42 53.9	
	comp=Z,24nm,21.8s,baz=25,slow=33						
RAYN	Ar Rayn	85.13	302	P	P	12 08 42.2	-0.2
RAYN				pmax	pmax		
	comp=Z,17nm,0.7s						
RAYN	Ar Rayn	85.13	302	P	P	12 08 42.2	-0.2
EIL	Elat	85.19	313	P	P	12 08 42.8	+0.2
	comp=Z,18nm,0.8s,baz=360,slow=4.4,SNR=17						
PBRG	Braganca	86.02	349	*e*P	P	12 08 49.2	+2.6
PCAB	Cabril	86.26	350	*e*P	P	12 08 50.5	+2.8
	comp=Z,27nm,2.0s						
POLO	Lamas de Olo	86.57	350	*e*P	P	12 08 51.1	+1.8
PVRL	Vila Real	86.66	350	*e*P	P	12 08 51.8	+2.1
MVO	Moncorvo	86.69	349	*e*P	P	12 08 53.2	+3.3
	comp=Z,21nm,1.7s						
TBI	Tubuai	87.39	134	*e*T	T	13 45 50.0	
	comp=Z,4.5nm,0.3s						
ESDC	Sonseca Array	87.76	347	P	P	12 08 56.8	+1.7
	comp=Z,1.6nm,0.7s,baz=2.3,slow=4.6,SNR=7.1						
ESDC				LR	LR	12 55 12.7	
	comp=Z,30nm,19.2s,baz=335,slow=40						
PMTG	Montargil	88.89	350	*e*P	P	12 09 00.8	+0.5
	comp=Z,20nm,1.5s						
KEST	Kesra	88.90	336	P	P	12 09 01.8	+1.2
	comp=Z,4.4nm,0.5s,baz=262,slow=2.3,SNR=5.0						
TORD	Torodi Ar. Bea	112.42	336	PKiKP	PKiKP	12 14 42.4	+0.3
	comp=Z,0.3nm,0.6s,baz=358,slow=2.0,SNR=2.0						
DBIC	Dimbokro	120.19	341	PKP	PKiKP	12 14 57.8	+0.7
	comp=Z,3.2nm,1.0s,baz=98,slow=4.6,SNR=4.3						
H03N2	Juan Fernandez	135.01	89	T	T	14 45 50.6	
	baz=314,slow=77,SNR=505						
H03N1	Juan Fernandez	135.02	89	T	T	14 45 51.9	
	baz=314,slow=77,SNR=348						
H03N3	Juan Fernandez	135.02	89	T	T	14 45 51.3	
	baz=314,slow=77,SNR=592						
BOSA	Boshof	138.57	286	PKP	PKiKP	12 15 33.2	-0.5
	comp=Z,2.9nm,0.8s,baz=46,slow=2.5,SNR=3.8						
PLCA	Paso Flores	144.78	92	PKP	PKPdf	12 15 42.1	-0.1
	comp=Z,5.8nm,0.6s,baz=293,slow=3.8,SNR=24						
PMSA	Palmer Station	154.53	137	PKPbc	PKPbc	12 16 05.0	-0.1
	comp=Z,9.7nm,0.7s,baz=241,slow=1.3,SNR=6.2						
SNAA	Sanae	158.35	196	PKPdf	PKPdf	12 16 00.6	-0.9
VNA3	Neumayer Olymp	159.71	191	PKPdf	PKPdf	12 15 58.4	-4.6
VNA2	Neumayer--Watz	159.71	193	PKPdf	PKPdf	12 15 58.7	-4.4

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*IDC **19** 11:58:45.6±1.0, 0°.85N×127°.41E, h0^{km}, mb3.8/6, mb1 3.9/7, mb1mx3.7/59, mbtmp3.8/7, ML3.0/1, Error ellipse: s-maj=60.7km s-min=18.7km az=63.0*

*DJA **19** 11:58:48.3±0.6, 1°N±3°×12°8E±°, h10^{km}, M4.4/6, mb4.7/1, mB4.7/1, MLv4.3/6, Mw(mB)3.9/1*

ISC 19 11:58:47.0±1.0, **1°.03N**±0°.08×**127°.63E**±0°.08, **h10^{km}, n20,** σ**1^{s}78**/15, **mb3.9**/6, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	0.37	227	P	Pg	11 58 51.6	-2.7
TNTI				S	Sb	11 59 13.3	+12
LBMI	Labuha	1.66	185	P	Pn	11 59 15.9	-0.3
LBMI				S	Sb	11 59 39.3	+0.7
SANI	Sanana	3.47	208	P	Pn	11 59 42.9	+1.8
KMSI	Cibinong	3.68	263	P	Pn	11 59 42.8	-1.2
SWI	Sorong	4.08	117	P	Pg	12 00 13.3	+8.0
SIJI	Sorong	4.09	117	Pn	Pn	11 59 51.0	+1.4
	0.8nm,0.3s,baz=273,slow=21,SNR=1.9						
GTOI	Gorontalo	4.64	265	P	Pg	12 00 23.3	+7.4
MRSI	Marisa	5.72	265	P	Pb	12 00 30.4	+3.5
APSI	Ampana	6.29	252	P	Pn	12 00 22.1	+2.3
MPSI	Mapaga	7.77	265	P	Pb	12 01 00.4	-1.4
TTSI	Tana Toraja	8.80	243	P	Pn	12 01 08.2	+14
BNSI	Bone	9.25	234	P	Pn	12 01 19.5	+19
SPSI	Sidrap Palu	9.29	238	P	Pn	12 01 21.2	+20
BKSI	Bulukumba	9.80	230	P	Pn	12 01 26.9	+19
WRA	Warramunga Arr	21.85	163	P	P	12 03 39.1	-0.8
	2.9nm,0.6s,baz=340,slow=11,SNR=21						
ASAR	Alice Springs	25.29	166	P	P	12 04 12.8	-1.1
	1.5nm,0.7s,baz=352,slow=7.4,SNR=26						
SONM	Songino Array	50.13	341	P	P	12 07 42.2	-0.4
	0.2nm,0.3s,baz=152,slow=9.4,SNR=1.5						
MKAR	Makanchi Array	60.28	326	P	P	12 08 56.8	+1.0
	1.0nm,0.7s,baz=119,slow=8.4,SNR=3.8						
KURBB	Kurchatov Arra	64.49	328	P	P	12 09 23.8	-0.1
	1.2nm,0.5s,baz=132,slow=5.5,SNR=2.5						
BVAR	Borovoye Array	70.06	327	P	P	12 10 00.4	+1.2
	0.7nm,0.8s,baz=148,slow=8.5,SNR=2.2						

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*IDC **19** 11:59:02.8±0.8, 1°.05N×127°.55E, h0^{km}, mb4.1/10, mb1 4.2/11, mb1mx4.0/59, mbtmp4.1/11, ML3.3/1, Error ellipse: s-maj=38.3km s-min=16.3km az=69.0*

ISC 19 11:59:07.7±1.1, **1°.0N**±0°.2×**127°.6E**±0°.2, **h35^{km}, n11,** σ**0^{s}67**/11, **mb4.1**/10, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	4.16	117	Pn	Pn	12 00 09.0	+0.3
	1.6nm,0.3s,baz=319,slow=8.0,SNR=5.2						
WRA	Warramunga Arr	21.89	163	P	P	12 03 57.0	-0.8
	3.3nm,0.4s,baz=340,slow=11,SNR=27						
ASAR	Alice Springs	25.32	166	P	P	12 04 31.6	+0.3
	3.5nm,0.6s,baz=343,slow=8.7,SNR=21						
KSRS	Korea Array	36.24	0	P	P	12 06 07.7	+0.3
	1.5nm,0.7s,baz=176,slow=9.5,SNR=6.2						
MJAR	Matsushiro Arr	36.68	14	P	P	12 06 11.0	-0.3
	3.1nm,0.8s,baz=189,slow=9.0,SNR=5.8						
SONM	Songino Array	50.10	342	P	P	12 07 58.6	-0.9
	1.6nm,0.8s,baz=141,slow=9.6,SNR=5.6						
PETK	Petropavlovsk-	57.61	21	P	P	12 08 54.1	0.0
	2.6nm,0.8s,baz=210,slow=8.3,SNR=2.2						
MKAR	Makanchi Array	60.23	326	P	P	12 09 13.2	+0.8
	2.1nm,0.6s,baz=119,slow=7.9,SNR=13						
ZALV	Zalesovo Beam	63.35	333	P	P	12 09 33.5	+0.3
	0.5nm,0.3s,baz=138,slow=8.9,SNR=4.9						
KURBB	Kurchatov Arra	64.44	328	P	P	12 09 40.6	+0.1
	6.5nm,0.8s,baz=128,slow=6.1,SNR=16						
BVAR	Borovoye Array	70.02	327	P	P	12 10 17.0	+1.1
	1.0nm,0.7s,baz=157,slow=8.0,SNR=4.3						

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*TUL **19** 12:03:10±1.2, 36°.66N±0°.04×98°.47W±0°.04, h7^{km}±7^{km}, ML3.9, mb_Lg3.7/92(NEIC), Mwr3.3/11(SLM), Error ellipse: s-maj=6.2km s-min=4.7km az=158.0*

*NEIC **19** 12:03:10.4±1.2, 36°.64N±0°.04×98°.44W±0°.04, h5^{km}±2^{km}, Error ellipse: s-maj=7.7km s-min=4.7km az=324.0*

*NEIC **19** 12:03:10, 36°.63N×98°.45W, h7^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M$_{rr}$-0.05; M$_{\theta\theta}$1.03; M$_{\phi\phi}$-0.98; M$_{r\theta}$0.09; M$_{\theta\phi}$-0.39; M$_{\phi r}$-0.29; Fault plane solution: M$_0$1.12000×10^{14} NP1:φ$_s$56.00000°, δ75.00000°, λ-175.00000°. NP2:φ$_s$325.00000°, δ85.00000°, λ-15.00000°. Principal axes: T 1.1213, Plg7.0000°, Azm12.0000°; N 0.0004, Plg74.0000°, Azm127.0000°; P -1.1217, Plg14.0000°, Azm280.0000°;*

*ANF **19** 12:03:11.2±0.3, 36°.62N×98°.39W, h5^{km}, ML4.5/17 Error ellipse: s-maj=3.5km s-min=2.9km az=34.0*

ISC 19 12:03:09.5±1.0, **36°.64N**±0°.02×**98°.50W**±0°.02, **h7^{km}**±8^{km}, **n152,** σ**1^{s}59**/149, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK032	Salt Plains WL	0.29	54		Pg	12 03 15.5	+0.2
OK032				Sg	Sg	12 03 19.2	+0.1
CROK	Carrier	0.44	107	Pg	Pg	12 03 18.4	+0.4
CROK				Sg	Sg	12 03 24.2	+0.4
U32A	Winter Ranch,	0.48	238		Pg	12 03 20.4	+1.6
U32A	Winter Ranch,	0.48	238	P	Pg	12 03 20.2	+1.4
	baz=60,SNR=254						
U32A				S	Sg	12 03 27.5	+2.5
	baz=60						
KAN14	Manchester OK	0.54	53		Pg	12 03 20.0	0.0
KAN14				Sg	Sg	12 03 27.0	-0.1
GC02	Grant County #	0.56	67	Pg	Pg	12 03 20.4	0.0
GC02				Sg	Sg	12 03 27.5	-0.2
KAN10	Anthony SW Sta	0.59	34		Pg	12 03 20.9	0.0
KAN16	Harper SW Stat	0.69	31	Pg	Pg	12 03 22.7	0.0
KAN05	Bluff City Nor	0.69	47		Pg	12 03 22.8	-0.1
KAN17	Caldwell West	0.72	55	Pg	Pg	12 03 23.3	-0.1
KAN08	Anthony NE Sta	0.73	36		Pg	12 03 23.5	0.0
KAN12	Harper NE Stat	0.77	31		Pg	12 03 24.4	0.0
KAN01	Argonia South	0.79	49	Pg	Pg	12 03 24.5	-0.2
KAN06	Argonia West S	0.80	40		Pg	12 03 24.6	-0.3
KAN09	Caldwell North	0.87	55		Pg	12 03 25.9	-0.4
KAN13	South Haven SW	0.91	65		Pg	12 03 26.5	-0.5
BLOK	Blackwell	1.04	83		Pb	12 03 29.1	-0.8
OK029	Liberty Lake	1.19	134	Pg	Pb	12 03 32.1	-0.4
BCOK	Bluff Creek, N	1.22	143		Pn	12 03 32.5	-0.4
OKCFA	Oklahoma City	1.49	145		Pn	12 03 37.1	+0.4
OKCFA	Oklahoma City	1.49	145	P	Pn	12 03 37.1	+0.4
	baz=327,SNR=24						
OKCFA				S	Sg	12 03 57.2	-0.1
	baz=327						
OKCSW	OKLAHOMA CITY	1.50	145		Pn	12 03 37.2	+0.4
OK031	S. Brethren Rd	1.51	116		Pn	12 03 37.2	+0.3
QUOK	Quay	1.52	107	Pn	Pn	12 03 37.5	+0.3
OK030	Cody Creek RV	1.56	116		Pn	12 03 38.0	+0.3
T35A	Sooner Cattle	1.62	79	Pn	Pn	12 03 39.0	+0.5
T35B	Sooner Cattle	1.62	79	P	Pb	12 03 39.1	-0.7
	baz=260,SNR=739						
T35B				S	Sb	12 04 00.4	-0.1
	baz=260						
FNO	Franklin	1.64	147		Pb	12 03 39.7	-0.4
R32A	Long Quarter,	1.79	355		Pb	12 03 42.3	-0.4
R32A	Long Quarter,	1.79	355	P	Pb	12 03 42.3	-0.4
	baz=173,SNR=500						
R32A				S	Sb	12 04 06.0	+0.7
	baz=173						
WMOK	Wichita Mounta	1.91	187	P	Pn	12 03 43.6	+1.2
	baz=8.0,SNR=12						
WMOK				S	Sb	12 04 10.0	+1.4
	baz=8.0						
WMOK	Wichita Mounta	1.91	187		Pn	12 03 43.7	+1.2
WMOK	Wichita Mounta	1.91	187	P	Pn	12 03 43.7	+1.2
	baz=8.0,SNR=72						
X34A	Smith Ranch, M	2.10	165	Pn	Pb	12 03 46.9	-1.1
TUL1	Leonard	2.31	107	P	Pn	12 03 48.4	+0.4
	baz=290,SNR=114						
TUL1				Sb	Sb	12 04 20.6	+0.4
	baz=290						
TUL1	Leonard	2.31	107	Pn	Pn	12 03 48.7	+0.7
TUL1				IAmb_Lg		12 04 22.8	
	comp=Z,366nm,0.9s						
TUL1	Leonard	2.31	107	P	Pn	12 03 48.4	+0.4
	baz=290,SNR=222						
TUL1				S	Sb	12 04 20.5	+0.4
	baz=290						
CBKS	Cedar Bluff	2.38	336	P	Pn	12 03 50.3	+1.3
	baz=155,SNR=21						
CBKS				S	Sb	12 04 23.4	+0.9
	baz=155						
CBKS	Cedar Bluff	2.38	336	IAmb_Lg		12 04 28.5	
	comp=Z,339nm,0.8s						
CBKS	Cedar Bluff	2.38	336	P	Pn	12 03 50.3	+1.3
	baz=155,SNR=125						
CBKS				S	Sb	12 04 20.8	-1.7
	baz=155						
LOOK	Love County	2.85	157	Pn	Pn	12 03 56.7	+1.3
LOOK				IAmb_Lg		12 04 45.5	
	comp=Z,174nm,0.9s						
KSU1	Kansas State U	2.88	31	Pn	Pn	12 03 56.8	+1.0
	baz=211,SNR=22						
KSU1				Pb	Pg	12 04 03.3	-1.4
	baz=211						
KSU1	Kansas State U	2.88	31	Pn	Pn	12 03 56.6	+0.7
KSU1	Kansas State U	2.88	31	P	Pn	12 03 56.8	+1.0
	baz=211,SNR=45						
AMTX	Amarillo	3.12	237	Pn	Pb	12 04 03.1	-2.3
	baz=55						
AMTX				Pb	Pg	12 04 07.4	-1.9
	baz=55						
AMTX	Amarillo	3.12	237	Pn	Pn	12 04 02.3	+3.1
AMTX				IAmb_Lg		12 04 56.6	
	comp=Z,405nm,0.8s						
AMTX	Amarillo	3.12	237	Sb	Sg	12 04 48.0	-1.7
	baz=55						
X37A	Clayton	3.27	128		Pn	12 04 02.0	+0.9
X37A				IAmb_Lg		12 04 56.8	
	comp=Z,174nm,0.7s						
X37A	Clayton	3.27	128	P	Pn	12 04 02.1	+0.9
	baz=310,SNR=51						
U38A	Gravette	3.32	92	Pn	Pn	12 04 02.8	+0.8
U38A				IAmb_Lg		12 05 01.3	
	comp=Z,122nm,0.7s						
U38A	Gravette	3.32	92	P	Pn	12 04 02.7	+0.8
	baz=275,SNR=50						
Z35A	Perchaven, San	3.45	162	S	Sn	12 04 47.1	+2.2
	baz=344						
KSCO	Kaye Shedlock’	4.04	307	Pb	Pb	12 04 23.9	+2.8
	baz=124,SNR=35						
KSCO				Sb	Sg	12 05 18.4	-0.7
	baz=124						
KSCO	Kaye Shedlock’	4.04	307	IAmb_Lg		12 05 24.8	
	comp=Z,185nm,0.7s						
KSCO	Kaye Shedlock’	4.04	307	P	Pn	12 04 13.5	+1.6
	baz=124						
W39A	Magazine	4.09	109	P	Pn	12 04 13.7	+1.2
	baz=292,SNR=13						
W39A				Sb	Sg	12 05 17.2	-3.7
	baz=292						
W39A	Magazine	4.09	109		Pn	12 04 13.8	+1.2
W39A				IAmb_Lg		12 05 25.8	
	comp=Z,216nm,0.8s						
W39A	Magazine	4.09	109	P	Pn	12 04 13.6	+1.2
	baz=292,SNR=19						
ABTX	Abilene, Hawle	4.11	194	P	Pn	12 04 13.7	+0.9
	baz=13						
ABTX	Abilene, Hawle	4.11	194	Pn	Pn	12 04 13.8	+0.9
ABTX	Abilene, Hawle	4.11	194	P	Pn	12 04 13.7	+0.9
	baz=13,SNR=18						
S39A	Bolivar	4.27	74		Pn	12 04 15.5	+0.5
S39A	Bolivar	4.27	74	P	Pn	12 04 15.0	+0.1
	baz=257,SNR=34						
MSTX	Muleshoe	4.39	234	Sb	Sg	12 05 28.2	-2.3
	baz=52						
Z38A	Mt. Pleasant	4.44	138		Pn	12 04 17.6	+0.4
Z38A				IAmb_Lg		12 05 31.9	
	comp=Z,148nm,0.8s						
MIAR	Mount Ida	4.52	116	P	Pn	12 04 19.7	+1.2
	baz=299						
MIAR				S	Sn	12 05 10.9	-0.4
	baz=299						
MIAR	Mount Ida	4.52	116		Pn	12 04 19.5	+1.1
U40A	Yellville	4.56	92	P	Pn	12 04 19.2	+0.3
	baz=275,SNR=12						
U40A	Yellville	4.56	92		Pn	12 04 19.3	+0.4
U40A				IAmb_Lg		12 05 31.8	
	comp=Z,163nm,1.0s						
U40A	Yellville	4.56	92	P	Pn	12 04 19.2	+0.3
	baz=275,SNR=49						
U40A				P	Pn	12 04 19.2	+0.3
	baz=275,SNR=49						
WHTX	Lake Whitney,	4.71	169	P	Pn	12 04 21.8	+0.8
	baz=350,SNR=5.6						
WHTX				Sb	Sb	12 05 35.1	+5.7
	baz=350						
WHTX	Lake Whitney,	4.71	169		Pn	12 04 21.8	+0.8
WHTX	Lake Whitney,	4.71	169	P	Pn	12 04 22.1	+1.0
	baz=350						
T25A	Trinidad	4.76	278	Pn	Pn	12 04 23.4	+1.4
	baz=94,SNR=6.6						
T25A				Pb	Pg	12 04 38.4	-2.4
	baz=94						
T25A				Sb	Sg	12 05 39.4	-3.1
	baz=94						
T25A	Trinidad	4.76	278		Pn	12 04 23.2	+1.4
T25A				IAmb_Lg		12 05 45.4	
	comp=Z,177nm,1.0s						
BGNE	Belgrade	4.77	3	P	Pn	12 04 22.5	+0.6
	baz=183,SNR=6.9						
BGNE	Belgrade	4.77	3		Pn	12 04 22.3	+0.4
BGNE				IAmb_Lg		12 05 43.2	
	comp=Z,157nm,0.7s						
BGNE	Belgrade	4.77	3	P	Pn	12 04 22.5	+0.6
	baz=183,SNR=22						
N35A	Tabor	4.78	27	Pn	Pn	12 04 22.1	+0.3
N35A	Tabor	4.78	27	P	Pn	12 04 22.2	+0.3
	baz=208						
P38A	Dawn	4.93	51		Pn	12 04 24.9	+1.0
P38A				IAmb_Lg		12 05 52.3	
	comp=Z,126nm,0.8s						
P38A	Dawn	4.93	51	P	Pn	12 04 24.3	+0.3
	baz=234,SNR=16						
MGMO	Mountain Grove	5.02	82		Pn	12 04 25.2	-0.1
MGMO				IAmb_Lg		12 05 47.0	
	comp=Z,124nm,0.8s						
X40A	Basin Creek Fa	5.09	113	P	Pn	12 04 27.4	+1.2
	baz=297,SNR=9.3						
X40A	Basin Creek Fa	5.09	113		Pn	12 04 27.1	+0.9
X40A	Basin Creek Fa	5.09	113	P	Pn	12 04 27.4	+1.2
	baz=297,SNR=35						
X40A				P	Pn	12 04 27.4	+1.2
	baz=297,SNR=35						
OGNE	Ogallala	5.11	328	P	Pn	12 04 29.0	+2.4
	baz=146,SNR=5.4						
OGNE				Sb	Sg	12 05 49.3	-4.3
	baz=146						
OGNE	Ogallala	5.11	328	Pn	Pn	12 04 28.9	+2.3
OGNE	Ogallala	5.11	328	P	Pn	12 04 29.0	+2.4
	baz=146,SNR=10						
237A	Washetta, Mont	5.13	153		Pn	12 04 27.2	+0.4
237A				IAmb_Lg		12 06 04.7	
	comp=Z,134nm,0.9s						
237A	Washetta, Mont	5.13	153	P	Pn	12 04 27.4	+0.6
	baz=336,SNR=6.3						
FCAR	Ozark Folk Cen	5.21	96	Pn	Pn	12 04 28.9	+1.1
WHAR	Wooly Hollow	5.22	103	Pn	Pn	12 04 29.0	+1.1
WHAR				IAmb_Lg		12 06 02.3	
	comp=Z,100nm,0.9s						
R40A	Maddies Statio	5.23	70		Pn	12 04 29.9	+1.8
R40A				IAmb_Lg		12 05 54.9	
	comp=Z,136nm,0.9s						
R40A	Maddies Statio	5.23	70	P	Pn	12 04 28.6	+0.5
	baz=253,SNR=24						
W41B	Gary Mavity, V	5.28	104	P	Pn	12 04 30.8	+1.9
	baz=288						
W41B	Gary Mavity, V	5.28	104	P	Pn	12 04 29.0	+0.2
	baz=288,SNR=18						
WLAR	White Oak Lake	5.31	122	IAmb_Lg		12 06 03.4	
	comp=Z,85nm,0.7s						
SDCO	Great Sand Dun	5.70	283	Pn	Pn	12 04 37.3	+2.5
	baz=99,SNR=7.6						
SDCO				Pb	Pb	12 04 54.5	+5.2
	baz=99						
SDCO	Great Sand Dun	5.70	283	Pn	Pn	12 04 37.2	+2.3
SDCO	Great Sand Dun	5.70	283	P	Pn	12 04 37.1	+2.3
	baz=99,SNR=12						
Q24A	Divide	5.75	296	Pb	Pb	12 04 55.5	+5.1
	baz=112						
Z41A	Richland Creek	5.77	124	S	Sn	12 05 39.4	-2.5
	baz=308						
NATX	Nacogdoches	5.81	146	IAmb_Lg		12 06 30.3	
	comp=Z,95nm,0.8s						
N38A	Joes South For	5.85	43	Pn	Pn	12 04 36.5	-0.1
N38A				IAmb_Lg		12 06 24.3	
	comp=Z,198nm,0.8s						
435B	Jarrell	5.89	172	Sb	Sg	12 06 13.1	-5.5
	baz=353						
435B	Jarrell	5.89	172	IAmb_Lg		12 06 28.3	
	comp=Z,127nm,0.9s						
CCM	Cathedral Cave	5.95	74	Pn	Pn	12 04 39.5	+1.4
CCM				IAmb_Lg		12 06 21.4	
	comp=Z,195nm,0.9s						
T42A	Van Buren	5.96	84	Pn	Pn	12 04 39.4	+1.3
T42A				IAmb_Lg		12 06 28.9	
	comp=Z,81nm,0.8s						
T42A	Van Buren	5.96	84	P	Pn	12 04 39.0	+0.9
	baz=268						
LCAR	Lake Charles	5.96	93		Pn	12 04 38.9	+0.8
K31A	O'Neill	5.98	358	Pn	Pn	12 04 40.2	+1.7
K31A				IAmb_Lg		12 06 34.3	
	comp=Z,131nm,1.0s						
CCAR	Cane Creek	6.14	114	Pn	Pn	12 04 41.3	+0.7
CCAR				IAmb_Lg		12 06 36.0	
	comp=Z,58nm,0.7s						
JCT	Junction City	6.24	190	P	Pn	12 04 42.1	+0.2
	baz=10.0						
JCT	Junction City	6.24	190	IAmb_Lg		12 06 34.5	
	comp=Z,96nm,0.9s						
ISCO	Idaho Springs	6.43	302	P	Pn	12 04 46.4	+1.5
	baz=117						
ISCO	Idaho Springs	6.43	302		Pn	12 04 45.9	+1.1
ISCO				IAmb_Lg		12 06 45.1	
	comp=Z,60nm,0.8s						
ISCO	Idaho Springs	6.43	302	P	Pn	12 04 46.0	+1.1
	baz=117,SNR=10						
PBMO	Poplar Bluff	6.49	86	IAmb_Lg		12 06 36.5	
	comp=Z,109nm,0.8s						
SCIA	State Center	6.67	36	IAmb_Lg		12 06 49.2	
	comp=Z,121nm,0.9s						
ANMO	Albuquerque	6.68	258	Sb	Sg	12 06 38.1	-6.0
	baz=73						
S22A	4UR Ranch, Cre	6.74	282	Pb	Pg	12 05 14.5	-4.1
	baz=97						
SLM	Saint Louis	6.86	71	IAmb_Lg		12 06 52.1	
	comp=Z,97nm,0.8s						
GNAR	Gosnell	6.88	93	IAmb_Lg		12 06 57.6	
	comp=Z,141nm,0.8s						
N41A	Harden Midland	7.23	53	IAmb_Lg		12 07 11.5	
	comp=Z,106nm,0.7s						
ECSD	EROS Data Cent	7.24	11	P	Pn	12 04 54.7	-0.9
	baz=192						
ECSD				S	Sn	12 06 15.3	-2.8
	baz=192						
ECSD	EROS Data Cent	7.24	11	Pn	Pn	12 04 54.6	-1.1
GLAT	Glass	7.44	90	IAmb_Lg		12 07 23.3	
	comp=Z,125nm,0.7s						
HALT	Halls	7.44	93	IAmb_Lg		12 07 05.7	
	comp=Z,115nm,1.0s						
K38A	Parkersburg	7.46	35	IAmb_Lg		12 07 12.2	
	comp=Z,107nm,0.8s						
MNTX	Cornudas Mount	7.53	231	P	Pn	12 05 02.0	+2.2
	baz=47						
MNTX	Cornudas Mount	7.53	231	Pn	Pn	12 05 01.6	+1.8
P43A	Skaggs, Pawnee	7.69	64	Pn	Pn	12 05 02.5	+0.6
W45A	Hickory Valley	7.70	98	IAmb_Lg		12 07 14.4	
	comp=Z,86nm,0.7s						
735A	Kenedy	7.78	175	IAmb_Lg		12 07 31.6	
	comp=Z,50nm,0.8s						
SUSD	Miller	7.81	358	IAmb_Lg		12 07 24.9	
	comp=Z,65nm,0.7s						
L40A	Anamosa	7.82	44	IAmb_Lg		12 07 28.3	
	comp=Z,99nm,0.8s						
MVCO	Mesa Verde	8.03	277	Sb	Sg	12 07 22.3	-4.9
	baz=91						
HDIL	Hopedale	8.20	59	IAmb_Lg		12 07 43.6	
	comp=Z,200nm,0.8s						
I37A	Lemond, Waseca	8.34	26	IAmb_Lg		12 07 48.7	
	comp=Z,63nm,1.0s						
RWWY	Rawlins	8.44	309	IAmb_Lg		12 07 44.9	
	comp=Z,80nm,1.1s						
TX31	Lajitas Ar. Si	8.47	212		Pn	12 05 13.3	+0.5
TX31	Lajitas Ar. Si	8.47	212	P	Pn	12 05 13.6	+0.8
	baz=30,SNR=5.8						
TX32	Lajitas Array	8.47	212		Pn	12 05 13.3	+0.5
RSSD	Black Hills	8.58	332	P	Pn	12 05 16.0	+1.6
	baz=148						
RSSD	Black Hills	8.58	332	IAmb_Lg		12 07 52.0	
	comp=Z,50nm,0.9s						
K22A	Casper	8.62	317	P	Pn	12 05 17.2	+2.3

	baz=131						
K22A	Casper	8.62	317	IAmb_Lg		12 08 05.8	
	comp=Z,61nm,0.8s						
L42A	Oliver, Polo	8.69	49	IAmb_Lg		12 07 48.8	
	comp=Z,105nm,0.9s						
JFWS	Jewell Farm	8.92	43	P	Pn	12 05 19.3	+0.4
	baz=228						
JFWS	Jewell Farm	8.92	43	IAmb_Lg		12 07 54.7	
	comp=Z,60nm,0.9s						
SPMN	Marine on St.	9.60	25	IAmb_Lg		12 08 11.2	
	comp=Z,33nm,1.0s						

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*MAN **19** 12:06:04.0, 17°.87N×120°.62E, h3^{km}, mb4.5, ML3.4, MS3.2*

*IDC **19** 12:06:18.1±6.3, 17°.85N×121°.37E, h152^{km}±65^{km}, mb3.2/9, mb1 3.4/9, mb1mx3.1/72, mbtmp3.7/9, Error ellipse: s-maj=27.6km s-min=13.6km az=66.0*

ISC 19 12:06:03.6±0.7, 17°.80N±0°.08×120°.68E±0°.06, h10^{km}, n15, σ2^s.48/16, mb3.7/8, 3C-2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIPP	Brgy, Tapao	0.24	300	⇓eP	Pg	12 06 11.1	+2.5
SIPP				eS	Sg	12 06 23.1	+11
APYP	Conner	0.54	84	⇑iP	Pb	12 06 16.7	+1.5
APYP				iS	Sb	12 06 25.8	+2.8
CVP	Callao Caves	1.09	95	⇑iP	Pb	12 06 25.1	+0.4
CVP				iS	Sn	12 06 42.0	+1.8
SGCP	Mt. Cagua	1.37	71	⇓eP	Pn	12 06 30.0	+1.1
LQP	Lukban	3.76	167	⇑eP	Pn	12 07 05.9	+4.0
KSRS	Korea Array	20.59	17	P	P	12 10 42.2	-0.6
	1.4nm,0.7s,baz=196,slow=11,SNR=6.0						
CMAR	Chiang Mai Arr	20.67	275	P	Pn	12 10 54.3	+8.1
	0.7nm,0.4s,baz=98,slow=9.2,SNR=6.0						
SONM	Songino Array	32.16	342	P	P	12 12 32.5	+0.9
	0.3nm,0.6s,baz=168,slow=9.6,SNR=2.4						
PMG	Port Moresby	37.62	134	P	P	12 13 15.3	-3.6
	15nm,0.9s,baz=311,slow=1.7,SNR=3.6						
WRA	Warramunga Arr	39.83	160	P	P	12 13 35.0	-2.4
	0.3nm,0.4s,baz=340,slow=9.1,SNR=7.2						
MKAR	Makanchi Array	42.79	321	P	P	12 14 02.9	+1.4
	1.0nm,0.8s,baz=140,slow=7.9,SNR=3.8						
ASAR	Alice Springs	43.19	162	P	P	12 14 02.5	-2.5
	0.8nm,0.5s,baz=339,slow=6.7,SNR=35						
KURBB	Kurchatov Arra	46.83	324	P	P	12 14 34.6	+1.0
	0.8nm,0.6s,baz=122,slow=7.8,SNR=4.3						
ILAR	Eielson Array	75.09	26	P	P	12 17 42.1	-3.5
	0.2nm,0.5s,baz=277,slow=4.8,SNR=2.9						
NOA	NORSAR Array B	83.63	333	P	P	12 18 30.9	-1.3
	0.6nm,0.6s,baz=47,slow=7.9,SNR=3.6						

THE 19 12:06:21.4, 38°.72N×20°.61E, h6^{km}±2^{km}, ML1.7/1, Error ellipse: s-maj=2.2km s-min=0.6km az=248.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRAG	Dragano-Lefkad	0.05	212	P	Pg	12 06 22.6	-0.2
DRAG				S	Sg	12 06 23.8	-0.1
NYDR	Nydri-Lefkada	0.07	98	P	Pg	12 06 22.9	-0.2
NYDR				S	Sg	12 06 24.3	-0.1
LKD2	Lefkada island	0.08	31	P	Pg	12 06 22.9	-0.4
LKD2				S	Sg	12 06 24.7	+0.1
TSLK	Tsoukalades, L	0.11	21	P	Pg	12 06 23.7	-0.1
TSLK				S	Sg	12 06 26.0	+0.6
EVGI	Lefkada island	0.11	159	P	Pg	12 06 23.8	0.0
EVGI				S	Sg	12 06 26.1	+0.7
	705nm,0.2s						

ZUR 19 12:17:07.6, 46°.07N×7°.97E, h8^{km}±1^{km}, MLh0.7/8, 6C-2D, Error ellipse: s-maj=2.5km s-min=1.1km az=158.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMK	Mattmark	0.02	190	⇓Pg	Pg	12 17 09.5	+0.3
	0.2nm,SNR=97						
MMK				⇓Pg	Pg	12 17 09.5	+0.3
MMK				Sg	Sg	12 17 10.7	+0.2
SGRA	Graechen Ausbl	0.16	324	Pg	Pg	12 17 11.4	+0.4
	0.4nm,SNR=2.4						
SGRA				Pg	Pg	12 17 11.4	+0.4
SGRA				Sg	Sg	12 17 13.7	+0.5
SGRA	Graechen Ausbl	0.16	324	Pg	Pg	12 17 11.4	+0.4
SGRA				Pg	Pg	12 17 11.4	+0.4
	0.1nm,SNR=6.6						
SGRA				Sg	Sg	12 17 13.7	+0.5
EMBD	Embd, Matterta	0.18	328	⇑Pg	Pg	12 17 11.6	+0.3
	0.1nm,SNR=0.8						
EMBD				⇑Pg	Pg	12 17 11.6	+0.3
EMBD				Sg	Sg	12 17 13.9	+0.1
SIMPL	Simplonpass	0.18	12	⇑Pg	Pg	12 17 11.6	+0.3
	0.1nm,SNR=17						
SIMPL				⇑Pg	Pg	12 17 11.6	+0.3
SIMPL				Sg	Sg	12 17 14.0	+0.1
SATI	Passo dei Sala	0.20	200	⇑Pg	Pg	12 17 11.9	+0.1
	0.1nm,SNR=39						
SATI				⇑Pg	Pg	12 17 11.9	+0.1
VANNI	Vissoie, Val d	0.29	299	Pg	Pg	12 17 13.7	+0.2
	0.6nm,SNR=6.3						
DIX	Grande Dixence	0.39	272	Sg	Sg	12 17 20.1	-0.3

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*ZUR **19** 12:17:33.6, 46°.34N×7°.51E, h3^{km}, MLh1.4/8, Error ellipse: s-maj=1.4km s-min=0.3km az=109.0*

STR 19 12:17:34.0±0.3, 46°N±3°×°±°, h13^{km}±5^{km}, MLv1.3/7, 10C-6D, preliminary, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIEB	Ecole de Borzu	0.03	249	⇑Pg	Pg	12 17 34.9	-1.5
	2.9nm,SNR=17						
SIEB				⇑Pg	Pg	12 17 34.9	-1.5
SIEB				Sg	Sg	12 17 35.7	-2.2
LKBD2	Leukerbad 2	0.09	36	⇑Pg	Pg	12 17 35.9	-1.2
	0.6nm,SNR=6.3						
LKBD2				⇑Pg	Pg	12 17 35.9	-1.2
LKBD2				Sg	Sg	12 17 37.4	-1.9
LKBD	Leukerbad	0.09	26	⇑Pg	Pg	12 17 35.7	-1.3
	0.9nm,SNR=8.6						
LKBD				⇑Pg	Pg	12 17 35.7	-1.3
LKBD				Sg	Sg	12 17 37.2	-2.0
VANNI	Vissoie, Val d	0.10	169	Pg	Pg	12 17 36.8	-0.3
VANNI				Pg	Pg	12 17 36.8	-0.3
	0.5nm,SNR=4.2						
VANNI				Sg	Sg	12 17 38.8	-0.5
LAUCH	Lauchernalp	0.18	51	⇑Pg	Pg	12 17 37.7	-0.6
LAUCH				⇑Pg	Pg	12 17 37.7	-0.6
	0.4nm,SNR=3.6						
LAUCH				Sg	Sg	12 17 40.5	-0.8
SENIN	Lac Senin/Sane	0.20	288	⇓Pg	Pg	12 17 36.8	-1.8
	0.4nm,SNR=2.5						
SENIN				⇓Pg	Pg	12 17 36.8	-1.8
SENIN				Sg	Sg	12 17 39.1	-2.6
EMBD	Embd, Matterta	0.20	116	⇓Pg	Pg	12 17 38.7	+0.1
	0.2nm,SNR=1.3						
EMBD				⇓Pg	Pg	12 17 38.7	+0.1
EMBD				Sg	Sg	12 17 42.0	+0.3
EMBD	Embd, Matterta	0.20	116	Pg	Pg	12 17 38.7	+0.1
SGRA	Graechen Ausbl	0.21	121	Sg	Sg	12 17 42.8	+0.7
DIX	Grande Dixence	0.25	207	⇑Pg	Pg	12 17 39.0	-0.5
DIX				Sg	Sg	12 17 42.5	-0.7
DIX	Grande Dixence	0.25	207	Pg	Pg	12 17 39.0	-0.5
SIMPL	Simplonpass	0.32	102	Pg	Pg	12 17 40.9	+0.3
SIMPL				Pg	Pg	12 17 40.9	+0.3
	0.1nm,SNR=0.8						
SIMPL				Sg	Sg	12 17 45.5	+0.4
GRYON	Gryon	0.32	261	⇓Pg	Pg	12 17 39.5	-1.2
	0.2nm,SNR=2.2						
GRYON				⇓Pg	Pg	12 17 39.5	-1.2
GRYON				Sg	Sg	12 17 43.6	-1.5
WIMIS	Wimmis	0.36	6	Pg	Pg	12 17 40.4	-1.0
	0.2nm,SNR=2.2						
WIMIS				Pg	Pg	12 17 40.4	-1.0
MMK	Mattmark	0.37	133	Pg	Pg	12 17 42.0	+0.4
	0.1nm,SNR=1.1						
FIESA	Fiescheralp	0.40	71	Pg	Pg	12 17 41.9	-0.2
	0.1nm,SNR=1.0						
AIGLE	Aigle	0.43	275	Sg	Sg	12 17 47.0	-1.3
SALAN	Lac Salanfe	0.44	249	⇑Pg	Pg	12 17 42.0	-0.9
	0.2nm,SNR=1.8						
BRANT	Les Verrieres	0.99	310	Pn	Pn	12 17 54.4	+0.6
BALST	Balsthal	1.03	5	Pn	Pg	12 17 54.0	0.0
CHMF	Charmoille	1.14	327	Pn	Pb	12 17 55.5	-0.1
CHMF				Sg	Sg	12 18 10.7	0.0
OG35	Corcelles	1.41	260	Pg	Pg	12 18 01.3	+0.1
OG35				Sg	Sg	12 18 19.9	+0.4

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*IDC **19** 12:18:58.5±2.1, 0°.52N×126°.85E, h0^{km}, mb3.8/3, mb1 4.1/3, mb1mx3.6/38, mbtmp3.9/3, Error ellipse: s-maj=161.1km s-min=28.0km az=66.0*

*DJA **19** 12:18:58.6±0.4, 1°N±3°×12°7E±°, h10^{km}, M3.6/5, MLv3.6/5*

ISC 19 12:18:59.2±1.5, 0°.93N±0°.08×127°.5E±0°.1, h10^{km}, n7, σ1^s.09/10, mb3.9/3, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	0.20	222	P	Pg	12 19 03.2	-0.3
TNTI				S	Sg	12 19 06.8	+0.4
LBMI	Labuha	1.55	180	P	Pn	12 19 27.2	+0.3
LBMI				S	Sg	12 19 51.2	+2.0
SANI	Sanana	3.32	207	P	Pn	12 19 50.8	-0.4
SANI				S	Sb	12 20 38.1	-0.6
KMSI	Cibinong	3.54	264	P	Pn	12 19 54.7	+0.5
WRA	Warramunga Arr	21.80	162	P	P	12 23 50.7	-0.9
	3.6nm,0.6s,baz=340,slow=11,SNR=30						
ASAR	Alice Springs	25.23	166	P	P	12 24 24.0	-1.4
	3.4nm,0.7s,baz=336,slow=8.9,SNR=31						
MKAR	Makanchi Array	60.29	326	P	P	12 29 08.7	+0.7
	0.3nm,0.5s,baz=125,slow=9.0,SNR=1.4						

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*FUNV **19** 12:23:07.4, 8°.28N×71°.12W, h5^{km}, MW3.2*

ISC 19 12:23:06.3±1.0, 8°.30N±0°.04×71°.12W±0°.03, h12^{km}±8^{km}, n19, σ1^s.29/34, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	Socops	0.26	93	eP	Pg	12 23 11.6	-0.2
SOCV				eS	Sg	12 23 16.2	+0.7
SOCV	Socops	0.26	93	eP	Pg	12 23 11.7	-0.1
SOCV				eS	Sg	12 23 16.1	+0.7
SDV	Santo Domingo	0.76	39	eP	Pg	12 23 21.0	0.0
SDV				iS	Sg	12 23 31.2	+0.2
SDV				i		12 23 32.4	
	comp=Z,1μm,0.3s						
CAPV	Capacho	1.26	250	eS	Sg	12 23 46.7	-0.2
PAMC	Pamplona, Colo	1.83	239	eP	Pn	12 23 38.1	+0.1
PAMC				eS	Sb	12 24 02.7	-0.4
PAMC				i		12 24 06.8	
	comp=Z,104nm,0.3s						
TAMC	Tame, Arauca	1.96	200	eP	Pn	12 23 40.6	+1.1
TAMC				eS	Sb	12 24 05.6	-0.9
ELOV	Elorza	2.07	128	eP	Pb	12 23 42.6	-1.2
ELOV				eS	Sn	12 24 08.2	+1.6
OCAC	Ocana	2.18	269	eP	Pn	12 23 43.4	+0.9
OCAC				eS	Sn	12 24 09.7	+0.3
MCQV	Machiques	2.23	321	eP	Pn	12 23 44.8	+1.7
MCQV				eS	Sb	12 24 12.6	-1.6
BARC	Barichara	2.66	230	eP	Pb	12 23 52.5	-1.5
BARC				eS	Sb	12 24 25.5	-1.0
SIQV	Siquisique	2.67	29	eP	Pn	12 23 50.6	+1.4
SIQV				eS	Sn	12 24 23.0	+1.5
BRRC	Barranca, Sant	2.83	245	eP	Pb	12 23 56.5	-0.2
BRRC				eS	Sb	12 24 30.4	-1.0
BAUV	El Baul	3.11	78	eP	Pn	12 23 55.5	+0.4
BAUV				eS	Sn	12 24 32.9	+0.6
URIC	Uribia, Colomb	3.49	346	eP	Pn	12 23 59.7	-0.7
ZARC	Zaragoza, Cauc	3.79	258	eP	Pn	12 24 05.5	+1.0
MONV	Montecano	3.81	17	eP	Pn	12 24 06.2	+1.4
MONV				eS	Sn	12 24 49.3	-0.2
BENV	Beln	3.85	64	eP	Pn	12 24 06.6	+1.2
BENV				eS	Sn	12 24 50.5	-0.2
MERV	Las Mercedes	4.86	78	eP	Pn	12 24 20.0	+0.8
MERV				eS	Sn	12 25 13.7	-1.9
ANIL	Santa Ana	5.69	229	eP	Pn	12 24 35.3	+4.3

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*EAF **19** 12:27:23.5±0.9, 25°.26S×29°.16E, h10^{km}, MD3.7*

BUL 19 12:27:23.6±0.9, 25°.26S×29°.15E, h10^{km}, MD4.0, South Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOPA	Mopani	2.68	50	eP	Pn	12 28 05.7	-1.2
MOPA				eS	Sn	12 28 38.3	-1.1
MOPA	Mopani	2.68	50	eP	Pn	12 28 05.7	-1.2
MOPA				eS	Sn	12 28 38.3	-1.1
MSNA	Messina	3.00	16	eP	Pn	12 28 11.3	-0.1
MSNA				eS	Sn	12 28 45.4	-2.1
MSNA	Messina	3.00	16	eP	Pn	12 28 11.3	-0.1
MSNA				eS	Sn	12 28 45.4	-2.1
BOSA	Boshof	4.83	225	eP	Pn	12 28 35.3	-1.1
BOSA				eS	Sn	12 29 29.1	-3.4
BOSA	Boshof	4.83	225	eP	Pn	12 28 35.3	-1.1
BOSA				eS	Sn	12 29 29.1	-3.4
MATP	Matopo	4.84	353	eP	Pn	12 28 36.0	-0.7
MATP				eS	Sn	12 29 29.5	-3.5
MATP	Matopo	4.84	353	eP	Pn	12 28 36.0	-0.7
MATP				eS	Sn	12 29 29.5	-3.5
KRI	Karoi	8.39	3	eP	Pn	12 29 16.4	-9.1
KRI				eS	Sn	12 30 39.0	-22
KRI	Karoi	8.39	3	eP	Pn	12 29 16.4	-9.1
KRI				eS	Sn	12 30 39.0	-22

NOU 19 12:28:56.5, 17°.46S×167°.58E, h4^{km}, MLv4.4/12, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	0.64	115	P	Pb	12 29 09.5	-0.7
RTV	Rentapao	0.87	112	P	Pg	12 29 13.2	0.0
SANVU	Saraoutou	2.03	350	P	Pn	12 29 29.9	-1.7
MARNC	Mare, Loyalty	4.02	174	P	Pn	12 29 59.2	+0.3
KOUNC	Koumac, New Ca	4.38	225	P	Pn	12 30 03.3	-0.5
DZM	Mont Dzumac	4.71	193	P	Pn	12 30 09.0	+0.5

IDC 19 12:29:51.5±3.4, 9°.84S×109°.51E, h0^{km}, mb3.5/3, mb1 3.7/3, mb1mx3.2/36, mbtmp3.5/3, Error ellipse: s-maj=161.9km s-min=30.2km az=47.0, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	25.97	116	P	P	12 35 25.1	-1.0
	0.7nm,0.8s,baz=286,slow=11,SNR=6.3						
ASAR	Alice Springs	27.04	124	P	P	12 35 36.6	+0.9
	0.3nm,0.6s,baz=295,slow=8.3,SNR=10						
MKAR	Makanchi Array	61.40	339	P	P	12 40 09.5	0.0
	0.4nm,0.7s,baz=162,slow=7.3,SNR=2.1						

WEL 19 12:36:15.6±0.4, 40°S±2°×17°5E±°, h22^{km}±4^{km}, M3.7/16, ML3.9/16, MLv3.7/16, Error ellipse: s-maj=0.0km s-min=0.0km az=78.7, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHWZ	Ohakea	0.33	94	P	Pn	12 36 24.9	-0.1
OHWZ				S	Sn	12 36 31.2	+0.1
WAZ	Wanganui	0.43	10	P	Pn	12 36 25.9	-0.5
WAZ				S	Sn	12 36 33.4	-0.3
OGWZ	Otaki Gorge	0.67	161	P	Pn	12 36 29.5	-0.3
OGWZ				S	Sn	12 36 39.0	-0.6
KIW	Kapiti Island	0.68	179	P	Pn	12 36 29.5	-0.4
KIW				S	Sn	12 36 38.8	-1.0
POWZ	Post Office Ro	0.70	108	P	Pn	12 36 30.1	-0.1
POWZ				S	Sn	12 36 39.9	-0.5
MRZ	Mangatainoka R	0.71	132	P	Pn	12 36 30.3	0.0
MRZ				S	Sn	12 36 40.0	-0.6
LREZ	Lake Rotokare	0.81	332	P	Pn	12 36 31.8	+0.1
LREZ				S	Sn	12 36 44.1	+1.2
TSZ	Takapari Road	0.83	82	P	Pb	12 36 31.6	+0.2
TSZ				S	Sb	12 36 42.5	+0.4
HOWZ	Holdsworth Sta	0.86	146	P	Pn	12 36 32.6	+0.2
HOWZ				S	Sn	12 36 44.5	+0.2
PRWZ	Pori Road	0.91	115	P	Pn	12 36 33.9	+0.9
PRWZ				S	Sn	12 36 46.2	+0.8
MTVZ	Mangateitei	0.91	30	P	Pb	12 36 32.3	-0.5
MTVZ				S	Sn	12 36 45.6	0.0
CAW	Cannon Point	0.94	172	P	Pn	12 36 33.4	0.0
PKVZ	Pokaka	0.96	22	P	Pb	12 36 32.6	-0.9
DUWZ	D’Urville Isla	0.96	230	P	Pb	12 36 33.2	-0.4
TIWZ	Tintock	0.96	128	P	Pn	12 36 34.5	+0.6
TIWZ				S	Sn	12 36 48.1	+1.2
DVHZ	Dannevirke	0.99	97	P	Pn	12 36 34.7	+0.6
PREZ	Palmer Road	1.01	326	P	Pn	12 36 35.1	+0.7
WNVZ	Wahianoa	1.01	33	P	Pb	12 36 33.7	-0.8
TRVZ	Turoa	1.02	30	P	Pb	12 36 33.7	-0.9
MOVZ	Moawhango	1.02	41	P	Pb	12 36 33.5	-1.1
PNHZ	Pukenui	1.04	76	P	Pn	12 36 34.6	-0.2
DRZ	Dome Shelter	1.04	30	P	Pb	12 36 34.2	-1.0
WHVZ	Whangaehu Hut	1.05	31	P	Pn	12 36 34.1	-1.0
FWVZ	Far West T-bar	1.06	29	P	Pn	12 36 34.2	-1.1
MTW	Mount Morrison	1.08	155	P	Pb	12 36 36.2	+0.6
TUVZ	Tukino	1.09	33	P	Pn	12 36 35.0	-0.6
NMEZ	Namu Road	1.09	314	P	Pb	12 36 36.4	+0.6
NEZ	North Egmont	1.10	326	P	Pb	12 36 36.1	+0.2
WEL	Wellington	1.10	185	P	Pb	12 36 35.9	-0.1
KHEZ	Kahui Hut	1.11	322	P	Pb	12 36 36.6	+0.5
DREZ	Durham Road	1.12	332	P	Pb	12 36 36.6	+0.3
TCW	Tory Channel	1.13	204	P	Pn	12 36 35.9	-0.2
BHHZ	Black Hill Sta	1.14	53	P	Pn	12 36 35.1	-1.1
NGZ	Ngauruhoe	1.15	29	P	Pn	12 36 35.7	-0.7
BFZ	Birch Farm	1.15	116	P	Pb	12 36 36.8	+0.1
SNVZ	South Ngauruho	1.15	31	P	Pn	12 36 35.8	-0.7
OTVZ	Oturere	1.18	31	P	Pn	12 36 36.2	-0.7
MHEZ	Mangahewa	1.19	338	P	Pb	12 36 37.6	+0.2
TWVZ	Taurewa	1.19	21	P	Pn	12 36 35.8	-1.1
NNVZ	North Ngauruho	1.19	28	P	Pn	12 36 36.1	-0.9
WTVZ	West Tongariro	1.19	27	P	Pn	12 36 36.0	-1.1
WPHZ	Waipukurau	1.20	85	P	Pb	12 36 37.9	+0.3
TMWZ	Te Maipa	1.20	141	P	Pb	12 36 37.7	+0.1
PKE	Pukeiti	1.21	325	P	Pb	12 36 38.1	+0.4
ETVZ	East Tongariro	1.22	32	P	Pn	12 36 36.7	-0.7
BHW	Baring Head	1.23	181	P	Pb	12 36 37.9	-0.1
KRVZ	Karewarewa	1.23	28	P	Pn	12 36 36.5	-1.0
TMVZ	Te Maari	1.24	31	P	Pn	12 36 36.9	-0.7
CPWZ	Castlepoint	1.24	126	P	Pb	12 36 39.4	+1.2
NTVZ	North Tongarir	1.24	30	P	Pn	12 36 37.0	-0.7
ANWZ	Angora Road	1.25	103	P	Pb	12 36 38.0	-0.4
KRHZ	Kereru	1.26	65	P	Pn	12 36 37.9	+0.1
MSWZ	Moikau Station	1.26	168	P	Pb	12 36 38.9	+0.2
PAWZ	Paruwai Farm	1.27	161	P	Pb	12 36 39.0	+0.2
PRHZ	Porangahau	1.34	94	P	Pb	12 36 39.6	-0.4
KATZ	Kakaramea	1.36	28	P	Pn	12 36 38.6	-0.6
TRWZ	Traveller	1.36	154	P	Pb	12 36 40.6	+0.2
KWHZ	Kaweka Forest	1.40	58	P	Pn	12 36 39.9	+0.1
PLWZ	Palliser	1.41	169	P	Pn	12 36 40.6	+0.6
RITZ	Rihia Road	1.42	32	P	Pn	12 36 40.5	+0.5
TUWZ	Tuamarina	1.44	210	P	Pn	12 36 40.1	-0.2
RATZ	Rangitukua	1.48	28	P	Pn	12 36 40.7	-0.2
PXZ	Pawanui	1.52	85	P	Pn	12 36 41.8	+0.4
NNZ	Nelson	1.54	227	P	Pn	12 36 41.8	+0.1
KAHZ	Kahuranaki	1.58	76	P	Pn	12 36 42.9	+0.7
MCHZ	McNeill Hill	1.58	63	P	Pb	12 36 43.5	-0.5
HATZ	Hinemaiaia	1.59	36	P	Pn	12 36 42.4	+0.1
WATZ	Wairara	1.61	24	P	Pn	12 36 42.5	-0.1
CMWZ	Cape Campbell	1.65	198	P	Pb	12 36 44.9	-0.4
BSWZ	Blackbirch Sta	1.71	206	P	Pn	12 36 45.1	+1.1
CKHZ	Cape Kidnapper	1.76	73	P	Pn	12 36 45.7	+1.0
MRHZ	Matea Rd	1.79	42	P	Pn	12 36 45.3	+0.1
NMHZ	Naumai	1.83	54	P	Pn	12 36 47.1	+1.3
KUTZ	Kaahu Road	1.84	24	P	Pn	12 36 46.2	+0.4
ARHZ	Aropaoanui	1.87	61	P	Pn	12 36 47.3	+1.1
QRZ	Quartz Range	1.91	250	P	Pn	12 36 47.0	+0.2
WPRZ	Whakapapatarin	1.93	31	P	Pn	12 36 47.5	+0.4
ALRZ	Allen Road	1.97	35	P	Pn	12 36 47.6	0.0
MTHZ	Maungataniwha	2.01	49	P	Pn	12 36 48.8	+0.6
PRRZ	Plateau Road	2.04	35	P	Pn	12 36 48.8	+0.1
GRRZ	Galatos Road	2.06	28	P	Pb	12 36 51.7	-0.6
HRRZ	Handcock Road	2.09	32	P	Pn	12 36 50.2	+0.9
RAHZ	Arahi	2.12	54	P	Pn	12 36 50.4	+0.8
WHHZ	Waihua	2.12	59	P	Pb	12 36 53.5	+0.2
HSRZ	Hossack Road	2.14	30	P	Pn	12 36 50.9	+0.9
THZ	Tophouse	2.18	223	P	Pn	12 36 51.5	+0.9
RRRZ	Republican Roa	2.23	35	P	Pn	12 36 52.4	+1.2
HLRZ	Highlands Stat	2.24	31	P	Pb	12 36 54.4	-0.9
MUGZ	Murupara	2.24	41	P	Pn	12 36 51.8	+0.5
UTU	Utuhina	2.24	27	P	Pb	12 36 55.9	+0.5
NGRZ	Ngongotaha	2.31	26	P	Pb	12 36 56.8	+0.2
TARZ	Mount Tarawera	2.31	33	P	Pb	12 36 54.9	-1.7
SNGZ	Shannon Statio	2.36	54	P	Pb	12 36 55.4	-1.9
KARZ	Kaharoa	2.40	26	P	Pb	12 36 57.4	-0.7
KMRZ	Kaimai	2.47	20	P	Pb	12 36 59.2	-0.2
TOZ	Tahuroa Road	2.49	11	P	Pn	12 36 54.1	-0.7
MHGZ	Mahia Peninsul	2.55	67	P	Pn	12 36 55.5	-0.1
URZ	Urewera	2.58	43	P	Pn	12 36 55.7	-0.3
PRGZ	Paritu Road	2.63	62	P	Pn	12 36 56.3	-0.4
RIGZ	Rimuhau	2.67	57	P	Pn	12 36 56.9	-0.3
OPRZ	Ohinepanea	2.67	30	P	Pn	12 36 58.5	+1.2
TGRZ	Tauranga	2.67	24	P	Pn	12 36 59.6	+2.3
MWZ	Matawai	2.76	49	P	Pn	12 36 58.4	-0.1
DSZ	Denniston Nort	2.81	235	P	Pn	12 37 00.0	+0.9
TKGZ	Te Karaka	2.88	54	P	Pn	12 36 59.8	-0.3
RUGZ	Raukumara Rang	3.10	45	P	Pn	12 37 02.7	-0.6
GVZ	Greta Valley S	3.11	206	P	Pn	12 37 03.0	-0.3
AWAZ	Awhitu Peninsu	3.12	356	P	Pn	12 37 03.6	+0.3
TWGZ	Tauwhareparae	3.13	51	P	Pn	12 37 03.7	+0.1
ETAZ	East Tamaki Re	3.22	1	P	Pn	12 37 05.6	+0.8
WTAZ	Waiatarua	3.25	356	P	Pn	12 37 06.1	+0.9
LTZ	Lake Taylor	3.26	216	P	Pn	12 37 05.3	0.0
PUZ	Puketiti	3.36	52	P	Pn	12 37 05.9	-0.8
PKGZ	Pakihiroa	3.38	48	P	Pn	12 37 06.5	-0.5
WIAZ	Waiheke Island	3.39	3	P	Pn	12 37 06.9	-0.1
MBAZ	Motutapu North	3.41	0	P	Pn	12 37 08.2	+0.9
RVAZ	Riverhead Bore	3.42	356	P	Pn	12 37 07.2	-0.2
AMCZ	Amberley	3.43	209	P	Pn	12 37 06.9	-0.7
KUZ	Kuaotunu	3.49	11	P	Pn	12 37 08.6	+0.1
WMGZ	Waiomatatini S	3.62	50	P	Pn	12 37 09.3	-1.0
INZ	Inchbonnie	3.63	224	P	Pn	12 37 10.5	+0.1
MXZ	Matakaoa Point	3.74	47	P	Pn	12 37 11.7	-0.2
OKCZ	Okains Bay	3.79	200	P	Pn	12 37 11.3	-1.3
OXZ	Oxford	3.80	213	P	Pn	12 37 11.4	-1.3
AKCZ	Akaroa Harbour	3.97	201	P	Pn	12 37 13.4	-1.7
RACZ	Rakaia	4.09	209	P	Pn	12 37 14.7	-2.0
MHCZ	Mount Hutt	4.17	215	P	Pn	12 37 16.4	-1.5
WVZ	Waitaha Valley	4.25	226	P	Pn	12 37 19.7	+0.8
WACZ	Wakanui South	4.39	210	P	Pn	12 37 19.0	-1.8
GCSZ	Gaunt Creek Bo	4.63	226	P	Pn	12 37 25.3	+1.1
ARCZ	Arundel	4.67	215	P	Pn	12 37 24.3	-0.4
FOZ	Fox Glacier	5.05	227	P	Pn	12 37 29.3	-0.7
OUZ	Omahuta	5.06	348	P	Pn	12 37 30.3	+0.3
TMZ	Timaru	5.09	213	P	Pn	12 37 29.0	-1.5
ODZ	Otahua Downs	5.78	211	P	Pn	12 37 37.7	-2.2
EAZ	Earnscleugh	6.51	217	P	Pn	12 37 49.5	-0.5

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*ATH **19** 12:52:15.6, 38°.75N×20°.58E, h10^{km}±1^{km}, ML3.2/25, Error ellipse: s-maj=1.3km s-min=0.8km az=108.0*

*THE **19** 12:52:15.5, 38°.77N×20°.58E, h9^{km}±1^{km}, ML3.5/5, Error ellipse: s-maj=1.5km s-min=0.4km az=95.0*

ISC 19 12:52:15.0±0.8, 38°.77N±0°.02×20°.57E±0°.03, h13^{km}±4^{km}, n65, σ0^s.63/87, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LKD2	Lefkada island	0.07	70	P	Pg	12 52 17.5	-0.1
LKD2				S	Sg	12 52 18.9	-0.6
	124μm,0.2s						
LKD2	Lefkada island	0.07	70	P	Pg	12 52 17.5	-0.1
LKD2				S	Sg	12 52 19.0	-0.6
LKD2				AML	AML	12 52 19.5	
LKD2				AML	AML	12 52 20.0	
TSLK	Tsoukalades, L	0.09	47	P	Pg	12 52 18.0	+0.2
TSLK				S	Sg	12 52 19.5	-0.3
TSLK	Tsoukalades, L	0.09	47	P	Pg	12 52 18.0	+0.2
TSLK				S	Sg	12 52 20.5	+0.7
TSLK				AML	AML	12 52 21.4	
TSLK				AML	AML	12 52 21.8	
NYDR	Nydri-Lefkada	0.11	117	P	Pg	12 52 17.9	-0.1
NYDR				S	Sg	12 52 19.7	-0.5
NYDR	Nydri-Lefkada	0.11	117	P	Pg	12 52 17.9	-0.1
NYDR				S	Sg	12 52 19.9	-0.3
EVGI	Lefkada island	0.16	156	P	Pg	12 52 18.9	+0.2
EVGI				S	Sg	12 52 21.7	+0.4
	44μm,0.3s						
EVGI	Lefkada island	0.16	156	P	Pg	12 52 18.9	+0.2
EVGI				S	Sg	12 52 21.7	+0.4
FSK	Fiskardo	0.30	182	P	Pg	12 52 21.7	+0.5
FSK				S	Sg	12 52 26.6	+1.2
	10μm,0.4s						
FSK	Fiskardo	0.30	182	P	Pg	12 52 21.7	+0.5
FSK				S	Sg	12 52 26.4	+1.0

FSK				AML	AML	12 52 27.5	
	comp=E,26297μm,0.3s						
FSK				AML	AML	12 52 30.1	
	comp=N,15622μm,0.5s						
KEF4	**Livadi, Kephal**	**0.52**	**193**	P	**Pg**	**12 52 25.1**	**0.0**
KEF4				S	**Sb**	**12 52 33.6**	**+0.2**
KEF4	**Livadi, Kephal**	**0.52**	**193**	P	**Pg**	**12 52 25.3**	**+0.2**
KEF4				S	**Sg**	**12 52 33.0**	**+1.0**
DMLN	**Damoulianata-K**	**0.55**	**197**	P	**Pg**	**12 52 25.6**	**-0.1**
DMLN				S	**Sb**	**12 52 34.4**	**+0.1**
	comp=N,7μm,0.7s						
DMLN	**Damoulianata-K**	**0.55**	**197**	P	**Pg**	**12 52 25.6**	**-0.1**
DMLN				S	**Sg**	**12 52 33.8**	**+0.8**
VLS	**Valsamata**	**0.59**	**179**	P	**Pg**	**12 52 26.3**	**-0.1**
VLS				S	**Sb**	**12 52 35.7**	**+0.3**
	comp=N,3μm,0.5s						
VLS	**Valsamata**	**0.59**	**179**	P	**Pg**	**12 52 26.3**	**-0.1**
VLS				S	**Sg**	**12 52 35.1**	**+0.9**
VLS				AML	AML	12 52 35.6	
	comp=E,5480μm,0.5s						
VLS				AML	AML	12 52 39.4	
	comp=N,5321μm,0.4s						
KEF3	**Kipouria, Keph**	**0.59**	**198**	P	**Pg**	**12 52 25.9**	**-0.5**
KEF3				S	**Sg**	**12 52 34.9**	**+0.7**
KEF3	**Kipouria, Keph**	**0.59**	**198**	P	**Pg**	**12 52 25.6**	**-0.8**
KEF3				S	**Sg**	**12 52 33.6**	**-0.6**
PSDA	**Pessada-Kefalo**	**0.65**	**179**	P	**Pg**	**12 52 27.4**	**-0.2**
PSDA				S	**Sb**	**12 52 37.5**	**+0.4**
PSDA	**Pessada-Kefalo**	**0.65**	**179**	P	**Pg**	**12 52 27.4**	**-0.2**
PVO	**Paravola**	**0.76**	**101**	P	**Pg**	**12 52 30.2**	**+0.5**
PVO	**Paravola**	**0.76**	**101**	P	**Pg**	**12 52 30.2**	**+0.5**
PVO				S	**Sg**	**12 52 39.6**	**0.0**
PVO				AML	AML	12 52 46.5	
	comp=N,6360μm,0.5s						
PVO				AML	AML	12 52 46.5	
	comp=E,4855μm,0.3s						
IGT	**Igoumenitsa**	**0.79**	**346**	P	**Pg**	**12 52 30.7**	**+0.4**
IGT	**Igoumenitsa**	**0.79**	**346**	P	**Pg**	**12 52 30.5**	**+0.2**
IGT				AML	AML	12 52 48.4	
	comp=N,3627μm,0.4s						
IGT				AML	AML	12 52 49.0	
	comp=E,3278μm,0.3s						
JAN	**Janina**	**0.92**	**14**	P	**Pg**	**12 52 33.5**	**+0.8**
JAN				AML	AML	12 52 50.7	
	comp=E,5836μm,0.7s						
JAN				AML	AML	12 52 52.7	
	comp=N,2510μm,0.6s						
VTN	**Vitineika**	**0.97**	**150**	P	**Pg**	**12 52 34.1**	**+0.4**
EVR	**Evrytania**	**0.98**	**81**	P	**Pg**	**12 52 33.9**	**+0.1**
EVR	**Evrytania**	**0.98**	**81**	P	**Pg**	**12 52 34.0**	**+0.1**
EVR				AML	AML	12 52 57.5	
	comp=N,1958μm,0.7s						
EVR				AML	AML	12 53 06.0	
	comp=E,1393μm,1.0s						
RLS	**Riolos of Patr**	**1.00**	**135**	P	**Pg**	**12 52 34.2**	**0.0**
RLS	**Riolos of Patr**	**1.00**	**135**	P	**Pg**	**12 52 33.6**	**-0.6**
RLS				AML	AML	12 52 54.2	
	comp=E,1640μm,0.6s						
RLS				AML	AML	12 52 57.2	
	comp=N,1815μm,0.6s						
ANX	**Ano Chora**	**1.07**	**99**	P	**Pg**	**12 52 35.5**	**-0.1**
ANX	**Ano Chora**	**1.07**	**99**	P	**Pg**	**12 52 35.4**	**-0.2**
ANX				AML	AML	12 53 00.7	
	comp=E,2934μm,0.6s						
ANX				AML	AML	12 53 06.8	
	comp=N,2461μm,0.7s						
LTHK	**Lithakia**	**1.07**	**169**	P	**Pg**	**12 52 34.2**	**-1.4**
LTHK				AML	AML	12 53 02.2	
	comp=N,2307μm,0.6s						
LTHK				AML	AML	12 53 13.6	
	comp=E,1932μm,0.8s						
EFP	**Efpalio**	**1.10**	**107**	P	**Pg**	**12 52 35.4**	**-0.7**
EFP	**Efpalio**	**1.10**	**107**	P	**Pg**	**12 52 35.4**	**-0.7**
EFP				AML	AML	12 52 58.4	
	comp=E,1560μm,0.4s						
EFP				AML	AML	12 53 04.6	
	comp=N,1695μm,0.4s						
KASA	**Kassiopi**	**1.10**	**333**	P	**Pb**	**12 52 36.3**	**+0.4**
KEK	**Kerkira**	**1.12**	**328**	P	**Pb**	**12 52 36.6**	**+0.3**
KEK				AML	AML	12 52 59.6	
	comp=N,1087μm,0.6s						
KEK				AML	AML	12 53 02.6	
	comp=E,1104μm,0.4s						
DRO	**Drossia**	**1.21**	**132**	P	**Pb**	**12 52 37.4**	**-0.3**
DRO	**Drossia**	**1.21**	**132**	P	**Pb**	**12 52 37.5**	**-0.3**
DRO				AML	AML	12 53 06.7	
	comp=N,3127μm,0.5s						
DRO				AML	AML	12 53 08.3	
	comp=E,2946μm,0.5s						
LAKA	**Lakka**	**1.22**	**115**	P	**Pn**	**12 52 37.1**	**-0.8**
LAKA				AML	AML	12 53 02.5	
	comp=N,3044μm,0.4s						
LAKA				AML	AML	12 53 07.3	
	comp=E,4307μm,0.9s						
MAKR	**Makrakomi, Fth**	**1.24**	**78**	P	**Pn**	**12 52 38.8**	**+0.7**
MAKR				AML	AML	12 53 08.2	
	comp=E,1240μm,0.7s						
MAKR				AML	AML	12 53 08.2	
	comp=N,1758μm,1.5s						
TRIZ	**Trizonia**	**1.24**	**108**	P	**Pn**	**12 52 38.0**	**-0.1**
TRIZ	**Trizonia**	**1.24**	**108**	P	**Pn**	**12 52 38.0**	**-0.1**
KPRO	**Kipourio**	**1.34**	**27**	P	**Pb**	**12 52 40.7**	**+0.7**
KPRO				AML	AML	12 53 05.4	
	comp=N,1862μm,0.7s						
KPRO				AML	AML	12 53 07.1	
	comp=E,1958μm,0.4s						
THL	**Klokotos Trika**	**1.38**	**54**	P	**Pn**	**12 52 41.1**	**+1.2**
THL				AML	AML	12 53 06.7	
	comp=N,1042μm,0.8s						
THL				AML	AML	12 53 06.7	
	comp=E,1226μm,0.5s						
AGG	**Agios Georgios**	**1.40**	**79**	P	**Pn**	**12 52 41.3**	**+1.0**
AGG				AML	AML	12 53 08.6	
	comp=E,1356μm,0.9s						
AGG				AML	AML	12 53 11.0	
	comp=N,1596μm,0.6s						
KLV	**Kalavryta, Ach**	**1.43**	**120**	P	**Pn**	**12 52 40.7**	**-0.1**
KLV				AML	AML	12 53 16.8	
	comp=E,634μm,0.9s						
KLV				AML	AML	12 53 25.8	
	comp=N,685μm,1.0s						
GUR	**Goura**	**1.62**	**120**	P	**Pn**	**12 52 43.9**	**+0.5**
GUR				AML	AML	12 53 18.0	
	comp=E,1501μm,0.5s						
GUR				AML	AML	12 53 18.1	
	comp=N,1678μm,0.4s						
ITM	**Ithomi**	**1.91**	**146**	P	**Pb**	**12 52 50.3**	**+0.6**
ITM				AML	AML	12 53 26.6	
	comp=E,548μm,0.5s						
ITM				AML	AML	12 53 28.9	
	comp=N,654μm,0.6s						
LTK	**Loutraki**	**2.02**	**111**	P	**Pb**	**12 52 52.3**	**+0.7**
LTK				AML	AML	12 53 38.3	
	comp=E,478μm,1.1s						
LTK				AML	AML	12 53 40.6	
	comp=N,488μm,1.4s						
FNA	**Florina**	**2.11**	**17**	P	**Pb**	**12 52 53.2**	**+0.1**
XOR	**Xorichti**	**2.13**	**73**	P	**Pb**	**12 52 54.2**	**+0.8**
XOR				AML	AML	12 53 39.2	
	comp=N,450μm,0.8s						
XOR				AML	AML	12 53 42.0	
	comp=E,367μm,1.0s						
NEO	**Neokhori**	**2.13**	**74**	P	**Pb**	**12 52 54.2**	**+0.7**
NEO				AML	AML	12 53 36.3	
	comp=N,504μm,0.4s						
NEO				AML	AML	12 53 40.1	
	comp=E,393μm,0.9s						
STIP	**Stip**	**3.18**	**22**	*i* Pn	**Pb**	**12 53 10.1**	**-1.2**
DBRK	**Dubrovnik**	**4.31**	**335**	*e*Pn	**Pn**	**12 53 20.4**	**0.0**
STON	**Ston**	**4.65**	**333**	*e*Pn	**Pn**	**12 53 24.7**	**-0.1**
STON				Sn	**Sn**	**12 54 16.0**	**-2.6**
LSTV	**Lastovo**	**4.88**	**326**	*e*Pn	**Pn**	**12 53 28.0**	**0.0**
MAKA	**Makarska**	**5.26**	**330**	*e*Pn	**Pn**	**12 53 33.9**	**+0.6**
RICI	**Ricice**	**5.39**	**332**	*e*Pn	**Pn**	**12 53 35.3**	**+0.2**
HVAR	**Hvar**	**5.40**	**326**	*e*Pn	**Pn**	**12 53 35.7**	**+0.5**
KIJV	**Kijevo**	**6.10**	**330**	*e*Pn	**Pn**	**12 53 45.6**	**+0.7**
KIJV				Sn	**Sn**	**12 54 53.7**	**-0.9**
ZIRJ	**Zirje**	**6.14**	**324**	*e*Pn	**Pn**	**12 53 45.6**	**+0.3**
MORI	**Morici**	**6.28**	**326**	*e*Pn	**Pn**	**12 53 47.1**	**-0.1**
DUGI	**Dugi Otok**	**6.67**	**323**	*e*Pn	**Pn**	**12 53 53.3**	**+0.6**
NVLJ	**Novalja**	**7.20**	**325**	*e*Pn	**Pn**	**12 53 59.2**	**-0.7**

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*EAF **19** 12:54:42.5±1.6,25°.92S×29°.47E,h10km,MD3.8*

BUL 19 12:54:43.3±0.9,25°.89S×29°.40E,h10km,MD4.1,South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOPA	**Mopani**	**2.98**	**38**	*e*P	Pn	12 55 29.2	-1.4
MOPA				*e*S	Sn	12 56 01.8	-4.7
MOPA	**Mopani**	**2.98**	**38**	*e*P	Pn	12 55 29.2	-1.4
MOPA				*e*S	Sn	12 56 01.8	-4.7
LBTB	**Lobatse**	**3.55**	**283**	*e*P	Pn	12 55 37.7	-0.8
LBTB				*e*S	Sn	12 56 18.1	-2.4
LBTB	**Lobatse**	**3.55**	**283**	*e*P	Pn	12 55 37.7	-0.8
LBTB				*e*S	Sn	12 56 18.1	-2.4
MSNA	**Messina**	**3.57**	**9**	*e*P	Pn	12 55 39.4	+0.5
MSNA				*e*S	Sn	12 56 18.4	-2.9
MSNA	**Messina**	**3.57**	**9**	*e*P	Pn	12 55 39.4	+0.5
MSNA				*e*S	Sn	12 56 18.4	-2.9
BOSA	**Boshof**	**4.58**	**233**	*e*P	Pn	12 55 52.2	-0.6
BOSA				*e*S	Sn	12 56 42.5	-3.6
BOSA	**Boshof**	**4.58**	**233**	*e*P	Pn	12 55 52.2	-0.6
BOSA				*e*S	Sn	12 56 42.5	-3.6
MATP	**Matopo**	**5.50**	**351**	*e*P	Pn	12 56 05.2	-0.2
MATP				*e*S	Sn	12 57 04.7	-4.2
MATP	**Matopo**	**5.50**	**351**	*e*P	Pn	12 56 05.2	-0.2
MATP				*e*S	Sn	12 57 04.7	-4.2
KRI	**Karoi**	**9.02**	**1**	*e*P	Pn	12 56 45.0	-8.7
KRI				*e*S	Sn	12 58 12.5	-23
KRI	**Karoi**	**9.02**	**1**	*e*P	Pn	12 56 45.0	-8.7
KRI				*e*S	Sn	12 58 12.5	-23

KMA 19 13:00:14.4±1.4,38°.22N×129°.40E,h0km,Error ellipse: s-maj=12.7km s-min=3.1km az=52.0,Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSJMJ	**Jumunjin**	**0.61**	**236**	P	Pg	13 00 26.3	+0.1
	SNR=34						
OKEB	**Okgye-meyeon**	**0.69**	**209**	P	Pg	13 00 27.8	+0.2
KSSKC	**Sokcho**	**0.70**	**276**	P	Pg	13 00 28.0	+0.2
	SNR=8.9						
KSDGY	**Daegwallycong**	**0.79**	**228**	P	Pg	13 00 29.4	0.0
	SNR=35						
SEHB	**SEOHWA**	**0.91**	**273**	P	Pg	13 00 31.5	-0.3
	SNR=31						
IMWB	**Imwonan-gil**	**0.98**	**183**	P	Pg	13 00 33.3	0.0
	SNR=24						
KSTBA	**Taebaek**	**1.16**	**198**	P	Pg	13 00 36.6	+0.1
	SNR=12						
KSCHC	**Chuncheon**	**1.33**	**251**	P	Pg	13 00 39.0	-1.0
	SNR=20						
CHYB	**Chungyang**	**1.33**	**197**	P	Pg	13 00 39.6	-0.4
	SNR=25						
KSWJU	**Wonju**	**1.35**	**233**	P	Pg	13 00 40.0	-0.3
	SNR=10						
KSULJ	**Uljin**	**1.52**	**180**	P	Pn	13 00 43.0	+0.1
	SNR=11						

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*IDC **19** 13:04:01.1±0.6,41°.11S×44°.06E,h0km,mb4.1/12, mb1 4.3/12,mb1mx3.9/43,mbtmp4.1/12,MS3.8/17, Ms1 3.8/17,ms1mx3.6/45,Error ellipse: s-maj=20.4km s-min=19.4km az=85.0*

*GCMT **19** 13:04:05.0±0.3,40°.99S±0°.02×43°.83E±0°.05,h20km, MW4.9/94,Moment Tensor Solution. s25,c29; s94,c122; Duration: 0 Moment tensor: Scale 10^{16}Nm; Mrr-3.24±.19; Mθθ2.53±.11; Mφφ0.70±.11; Mrθ-0.65±.17; Mθφ0.19±.07; Mφr1.59±.27; Best double couple: M0 3.23800×10^{16} NP1:φs249.00000°,δ42.00000°,λ-119.00000°. NP2: φs106.00000°,δ54.00000°,λ-66.00000°. Principal axes: T 2.6030, Plg6.0000°, Azm180.0000°; N 1.2660, Plg19.0000°, Azm272.0000°; P -3.8730, Plg70.0000°, Azm72.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 19 13:04:02.8±0.6,41°.1S±0°.1×44°.0E±0°.2,h10km,n31, σ0s.52/17,mb4.2/12,MS3.8/16,Crozet Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOSA	**Boshof**	**19.76**	**303**	LR	LR	13 14 48.5	
	comp=Z,214nm,21.9s,baz=151,slow=33						
LBTB	**Lobatse**	**22.20**	**311**	P	**P**	**13 08 59.2**	**-0.2**
	2.6nm,0.8s,baz=135,slow=16,SNR=3.0						
LBTB				LR	LR	13 16 14.4	
	comp=Z,249nm,21.9s,baz=124,slow=33						
OPO	**Ambohidratompo**	**22.61**	**8**	P	**P**	**13 09 03.2**	**-0.7**
	2.9nm,0.9s,baz=296,slow=19,SNR=1.9						
MAW	**Mawson**	**28.49**	**165**	LR	LR	13 18 24.3	
	comp=Z,223nm,21.8s,baz=346,slow=30						
LSZ	**Lusaka**	**29.17**	**327**	LR	LR	13 20 46.0	
	comp=Z,415nm,19.4s,baz=155,slow=34						
SNAA	**Sanae**	**38.31**	**202**	P	**P**	**13 11 23.3**	**+0.1**
SNAA	**Sanae**	**38.31**	**202**	P	**P**	**13 11 23.3**	**+0.1**
	1.7nm,0.7s,baz=95,slow=11,SNR=19						
VNA2	**Neumayer--Watz**	**39.35**	**204**	P	**P**	**13 11 32.3**	**+0.5**
	baz=60,slow=6.7						
VNA3	**Neumayer Olymp**	**40.15**	**204**	P	**P**	**13 11 38.4**	**-0.1**
KMBO	**Kilima Mbogo**	**40.25**	**349**	LR	LR	13 26 08.8	
	comp=Z,98nm,20.7s,baz=94,slow=33						
QSPA	**South Pole Qui**	**49.11**	**180**	P	**P**	**13 12 49.6**	**-0.6**
	2.8nm,0.7s,baz=239,slow=1.5,SNR=24						
QSPA				LR	LR	13 32 11.7	
	comp=Z,256nm,18.4s,baz=252,slow=34						
H01W2	**Cape Leeuwin H**	**54.24**	**108**	T	T	14 11 43.6	
	baz=241,slow=75,SNR=38						
H01W3	**Cape Leeuwin H**	**54.25**	**108**	T	T	14 11 44.2	
	baz=241,slow=75,SNR=41						
H01W1	**Cape Leeuwin H**	**54.26**	**108**	T	T	14 11 45.9	
	baz=241,slow=75,SNR=39						
VNDA	**Vanda**	**55.78**	**167**	LR	LR	13 35 12.0	
	comp=Z,103nm,20.9s,baz=232,slow=34						
PALK	**Pallekele**	**58.73**	**44**	LR	LR	13 32 50.1	
	comp=Z,164nm,21.4s,baz=315,slow=29						
PSI	**Prapat**	**66.27**	**63**	LR	LR	13 36 25.2	
	comp=Z,21nm,19.2s,baz=135,slow=29						
TORD	**Torodi Ar. Bea**	**66.66**	**314**	P	**P**	**13 14 53.5**	**-0.3**
	0.5nm,0.7s,baz=143,slow=4.9,SNR=3.8						
EIL	**Elat**	**70.91**	**352**	LR	LR	13 43 08.0	
	comp=Z,42nm,21.1s,baz=286,slow=33						
ASAR	**Alice Springs**	**74.76**	**108**	P	**P**	**13 15 42.7**	**-0.5**
	2.7nm,1.0s,baz=226,slow=6.4,SNR=11						
ASAR				LR	LR	13 43 43.4	
	comp=Z,45nm,19.2s,baz=248,slow=32						
STKA	**Stephens Creek**	**74.96**	**119**	P	**P**	**13 15 44.2**	**0.0**
	6.0nm,0.7s,baz=198,slow=3.0,SNR=19						
STKA				LR	LR	13 42 21.8	
	comp=Z,64nm,18.8s,baz=207,slow=31						
WRA	**Warramunga Arr**	**77.40**	**105**	P	**P**	**13 15 58.0**	**-0.2**
	1.9nm,0.9s,baz=222,slow=4.8,SNR=12						
WRA				LR	LR	13 45 43.6	
	comp=Z,28nm,18.6s,baz=225,slow=32						
CMAR	**Chiang Mai Arr**	**78.09**	**53**	P	**P**	**13 16 02.8**	**+0.8**
	0.6nm,0.2s,baz=232,slow=7.3,SNR=9.9						
CMAR				LR	LR	13 44 09.5	
	comp=Z,45nm,19.6s,baz=208,slow=31						
PLCA	**Paso Flores**	**79.24**	**225**	P	**P**	**13 16 08.3**	**0.0**
	1.7nm,0.7s,baz=130,slow=8.5,SNR=5.5						
GEYT	**Alibeck**	**79.69**	**11**	LR	LR	13 48 49.9	
	comp=Z,80nm,21.4s,baz=215,slow=34						
CPUP	**Villa Florida**	**81.07**	**243**	P	**P**	**13 16 18.9**	**+0.6**
	2.4nm,0.8s,baz=148,slow=5.0,SNR=4.2						
KBZ	**Khabaz**	**84.44**	**359**	LR	LR	13 55 29.2	
	comp=Z,62nm,18.8s,baz=172,slow=37						
KVAR	**Kislovodsk Arr**	**84.67**	**359**	LR	LR	13 55 53.6	
	comp=Z,36nm,18.1s,baz=122,slow=37						
MKAR	**Makanchi Array**	**93.90**	**25**	P	**P**	**13 17 20.7**	**+0.6**
	0.4nm,0.7s,baz=218,slow=5.6,SNR=2.0						
ULM	**Lac du Bonnet**	**150.84**	**302**	PKPbc	**PKPbc**	**13 23 54.0**	**-0.8**
	8.1nm,0.7s,baz=136,slow=1.9,SNR=7.3						
TXAR	**Lajitas Array**	**151.28**	**256**	PKPbc	**PKPbc**	**13 23 57.0**	**+0.3**
	4.4nm,0.7s,baz=133,slow=4.7,SNR=42						

IDC 19 13:10:46.2±1.6,3°.48N×128°.83E,h0km,mb3.6/4, mb1 3.7/5,mb1mx3.4/44,mbtmp3.6/5,ML2.7/1,Error ellipse: s-maj=118.3km s-min=19.6km az=67.0,North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**4.96**	**151**	Pn	Pn	13 12 02.5	+0.5
	0.3nm,0.3s,baz=319,slow=23,SNR=1.6						
WRA	**Warramunga Arr**	**23.90**	**167**	P	P	13 16 01.6	-0.3
	1.7nm,0.8s,baz=347,slow=10,SNR=6.3						
ASAR	**Alice Springs**	**27.43**	**170**	P	P	13 16 33.8	-0.2
	0.3nm,0.8s,baz=2.2,slow=8.0,SNR=6.5						
MKAR	**Makanchi Array**	**58.97**	**324**	P	P	13 20 47.8	+0.2
	0.3nm,0.3s,baz=111,slow=8.2,SNR=8.7						
KURBB	**Kurchatov Arra**	**63.09**	**327**	P	P	13 21 15.3	-0.1
	0.6nm,0.5s,baz=120,slow=5.9,SNR=8.2						

IDC 19 13:18:40.2±2.0,0°.91N×127°.40E,h0km,mb3.6/3, mb1 3.8/4,mb1mx3.3/55,mbtmp3.6/4,ML3.2/1,MS2.8/2, Ms1 2.8/2,ms1mx2.3/37,Error ellipse: s-maj=111.6km s-min=25.5km az=69.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**4.25**	**115**	LR	LR	13 20 58.3	
	comp=Z,29nm,21.2s,baz=207,slow=32						
FITZ	**Fitzroy Crossi**	**18.97**	**185**	P	Pn	13 23 04.0	+0.1
	0.1nm,0.3s,baz=350,slow=6.1,SNR=1.8						
WRA	**Warramunga Arr**	**21.81**	**162**	P	P	13 23 34.4	+0.2
	1.3nm,0.5s,baz=340,slow=11,SNR=21						
ASAR	**Alice Springs**	**25.23**	**166**	P	P	13 24 07.7	-0.4
	1.6nm,0.8s,baz=348,slow=10,SNR=18						
MKAR	**Makanchi Array**	**60.24**	**326**	P	P	13 28 50.4	0.0
	0.5nm,0.7s,baz=128,slow=7.0,SNR=4.3						
MKAR				LR	LR	13 56 25.0	
	comp=Z,32nm,18.0s,baz=198,slow=38						

IDC 19 13:24:49.5±56.0,29°.13S×59°.80E,h0km,mb3.9/3, mb1 4.1/3,mb1mx3.3/64,mbtmp3.9/3,Error ellipse: s-maj=1429.0km s-min=59.5km az=77.0,Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**60.55**	**43**	P	P	13 35 01.9	0.0
	0.4nm,0.3s,baz=238,slow=6.9,SNR=5.1						
ASAR	**Alice Springs**	**65.61**	**104**	P	P	13 35 35.9	+0.2
	0.6nm,0.7s,baz=245,slow=5.9,SNR=11						
WRA	**Warramunga Arr**	**67.44**	**101**	P	P	13 35 47.3	-0.2
	1.4nm,0.9s,baz=248,slow=5.4,SNR=6.0						

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*NEIC **19** 13:25:10.6±0.6,36°.09N±0°.01×97°.59W±0°.02,h4km±7km, Error ellipse: s-maj=3.1km s-min=1.0km az=66.0*

*TUL **19** 13:25:10.6±1.3,36°.07N±0°.01×97°.58W±0°.02,h5km±7km, ML3.2,mb_Lg3.4/93(NEIC),Error ellipse: s-maj=3.0km s-min=1.6km az=63.0*

*ANF **19** 13:25:11.5±0.9,36°.03N×97°.54W,h7km±7km,ML4.0/10, Error ellipse: s-maj=5.2km s-min=2.3km az=167.0*

ISC 19 13:25:10.9±1.1,36°.08N±0°.02×97°.57W±0°.02,h7km±10km, n98,σ0s.66/77,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK029	**Liberty Lake**	**0.30**	**162**	Pg	**Pg**	**13 25 16.7**	**0.0**
OK029				Sg	**Sg**	**13 25 20.9**	**+0.2**
BCOK	**Bluff Creek, N**	**0.43**	**185**	Pg	**Pg**	**13 25 19.0**	**-0.1**
BCOK				Sg	**Sg**	**13 25 25.0**	**+0.2**
OK009	**Oakdale Elemen**	**0.51**	**167**	Pg	**Pg**	**13 25 20.8**	**0.0**
CROK	**Carrier**	**0.54**	**321**	Pg	**Pg**	**13 25 21.3**	**0.0**
CROK				Sg	**Sg**	**13 25 28.8**	**+0.4**
OK031	**S. Brethren Rd**	**0.60**	**102**		**Pg**	**13 25 22.5**	**0.0**
OK030	**Cody Creek RV**	**0.65**	**103**		**Pg**	**13 25 23.5**	**+0.1**
OKCFA	**Oklahoma City**	**0.67**	**172**		**Pg**	**13 25 23.5**	**-0.3**
OKCFA				IAmb_Lg		13 25 31.5	
	comp=Z,602nm,1.2s						
OKCFA	**Oklahoma City**	**0.67**	**172**	P	**Pg**	**13 25 23.6**	**-0.3**
	baz=350,SNR=32						
OKCFA				S	**Sg**	**13 25 32.8**	**+0.2**
	baz=350						
OKCSW	**OKLAHOMA CITY**	**0.68**	**171**	Pg	**Pg**	**13 25 23.7**	**-0.3**
QUOK	**Quay**	**0.70**	**82**	Pg	**Pg**	**13 25 24.3**	**0.0**
BLOK	**Blackwell**	**0.73**	**23**		**Pg**	**13 25 24.9**	**-0.1**
GC02	**Grant County #**	**0.80**	**343**	Pg	**Pg**	**13 25 25.9**	**-0.5**
FNO	**Franklin**	**0.83**	**171**	Pg	**Pg**	**13 25 26.5**	**-0.4**
FNO				IAmb_Lg		13 25 37.0	
	comp=Z,336nm,1.0s						
OK032	**Salt Plains WL**	**0.89**	**324**		**Pg**	**13 25 27.5**	**-0.4**
KAN14	**Manchester OK**	**0.93**	**340**		**Pg**	**13 25 28.3**	**-0.4**
KAN13	**South Haven SW**	**0.93**	**4**		**Pg**	**13 25 28.3**	**-0.5**
KAN17	**Caldwell West**	**0.97**	**351**	Pg	**Pg**	**13 25 29.2**	**-0.4**
KAN09	**Caldwell North**	**1.05**	**358**		**Pg**	**13 25 30.6**	**-0.5**
KAN05	**Bluff City Nor**	**1.05**	**347**		**Pg**	**13 25 30.6**	**-0.5**
KAN01	**Argonia South**	**1.08**	**352**	Pg	**Pg**	**13 25 31.1**	**-0.5**
KAN10	**Anthony SW Sta**	**1.12**	**338**		**Pg**	**13 25 31.9**	**-0.6**
KS20	**Mayfield South**	**1.15**	**0**		**Pg**	**13 25 32.3**	**-0.6**
KAN06	**Argonia West S**	**1.19**	**349**		**Pg**	**13 25 33.1**	**-0.6**
KAN08	**Anthony NE Sta**	**1.19**	**344**		**Pg**	**13 25 33.0**	**-0.7**
T35A	**Sooner Cattle**	**1.19**	**45**	Pg	**Pg**	**13 25 33.3**	**-0.4**
T35B	**Sooner Cattle**	**1.19**	**45**	P	**Pg**	**13 25 33.1**	**-0.6**
	baz=226						
T35B				S	**Sg**	**13 25 48.8**	**-0.4**
	baz=226						
U32A	**Winter Ranch,**	**1.20**	**285**	Pg	**Pg**	**13 25 32.8**	**-1.1**
U32A	**Winter Ranch,**	**1.20**	**285**	P	**Pg**	**13 25 32.8**	**-1.1**
	baz=105,SNR=134						
KAN16	**Harper SW Stat**	**1.21**	**341**	Pg	**Pg**	**13 25 32.9**	**-1.2**
KAN12	**Harper NE Stat**	**1.26**	**344**		**Pg**	**13 25 34.3**	**-0.8**
TUL1	**Leonard**	**1.45**	**96**	P	**Pn**	**13 25 36.9**	**-0.6**
	baz=277						
TUL1				S	**Sg**	**13 25 57.5**	**+0.1**
	baz=277						
TUL1	**Leonard**	**1.45**	**96**	Pn	**Pn**	**13 25 37.0**	**-0.6**
TUL1				IAmb_Lg		13 25 59.1	
	comp=Z,175nm,0.8s						
TUL1	**Leonard**	**1.45**	**96**	P	**Pn**	**13 25 36.9**	**-0.6**
	baz=277						
TUL1				S	**Sg**	**13 25 57.4**	**-0.1**
	baz=277						
X34A	**Smith Ranch, M**	**1.49**	**188**		**Pb**	**13 25 38.4**	**-0.6**
WMOK	**Wichita Mounta**	**1.67**	**217**	P	**Pn**	**13 25 40.5**	**-0.1**
	baz=36						
WMOK				S	**Sb**	**13 26 03.0**	**-0.2**
	baz=36						
WMOK	**Wichita Mounta**	**1.67**	**217**		**Pn**	**13 25 40.4**	**-0.1**
WMOK	**Wichita Mounta**	**1.67**	**217**	P	**Pn**	**13 25 40.5**	**-0.1**
	baz=36,SNR=92						
WMOK				S	**Sb**	**13 26 02.6**	**-0.6**
	baz=36						
LOOK	**Love County**	**2.11**	**171**	Pn	**Pn**	**13 25 47.4**	**+0.8**
X37A	**Clayton**	**2.33**	**129**	Pn	**Pn**	**13 25 51.0**	**+1.3**
X37A				IAmb_Lg		13 26 27.6	
	comp=Z,248nm,0.8s						
X37A	**Clayton**	**2.33**	**129**	P	**Pn**	**13 25 50.6**	**+1.0**
	baz=310						
X37A				S	**Sb**	**13 26 20.6**	**-1.6**
	baz=310						
U38A	**Gravette**	**2.59**	**81**	P	**Pn**	**13 25 53.9**	**+0.6**
	baz=263,SNR=27						
Z35A	**Perchaven, San**	**2.76**	**175**		**Pn**	**13 25 56.1**	**+0.6**
KSU1	**Kansas State U**	**3.11**	**14**	P	**Pn**	**13 26 00.9**	**+0.6**
	baz=195						
W39A	**Magazine**	**3.21**	**105**	P	**Pn**	**13 26 02.5**	**+0.8**
	baz=287						
W39A	**Magazine**	**3.21**	**105**		**Pn**	**13 26 02.2**	**+0.5**
W39A				IAmb_Lg		13 26 57.0	
	comp=Z,100nm,0.8s						
W39A	**Magazine**	**3.21**	**105**	P	**Pn**	**13 26 02.1**	**+0.4**
	baz=287						
CBKS	**Cedar Bluff**	**3.23**	**328**	Pb	**Pb**	**13 26 10.2**	**+1.6**
	baz=148						
AMTX	**Amarillo**	**3.56**	**252**	P	**Pn**	**13 26 07.7**	**+0.9**
	baz=69						
AMTX	**Amarillo**	**3.56**	**252**		**Pn**	**13 26 07.4**	**+0.7**
AMTX				IAmb_Lg		13 27 06.4	
	comp=Z,69nm,0.8s						
MIAR	**Mount Ida**	**3.60**	**114**	S	**Sn**	**13 26 51.3**	**+1.3**
	baz=296						
MIAR	**Mount Ida**	**3.60**	**114**	Pn	**Pn**	**13 26 07.7**	**+0.5**
MIAR				IAmb_Lg		13 27 09.3	
	comp=Z,81nm,1.1s						
MIAR	**Mount Ida**	**3.60**	**114**	P	**Pn**	**13 26 08.0**	**+0.9**
	baz=296,SNR=14						
S39A	**Bolivar**	**3.76**	**63**		**Pn**	**13 26 10.4**	**+1.1**
S39A				IAmb_Lg		13 27 12.2	
	comp=Z,166nm,0.9s						
S39A	**Bolivar**	**3.76**	**63**	P	**Pn**	**13 26 10.0**	**+0.6**
	baz=246,SNR=14						
U40A	**Yellville**	**3.82**	**85**	P	**Pn**	**13 26 10.5**	**+0.3**
	baz=267						
U40A	**Yellville**	**3.82**	**85**		**Pn**	**13 26 10.5**	**+0.3**
U40A				IAmb_Lg		13 27 15.2	
	comp=Z,97nm,0.9s						

ABTX	**Abilene, Hawle**	**3.85**	**207**	IAmb_Lg		13 27 13.0	
	comp=Z,70nm,0.8s						
WHTX	**Lake Whitney,**	**4.08**	**179**	P	**Pn**	**13 26 14.4**	**+0.6**
	baz=358						
WHTX	**Lake Whitney,**	**4.08**	**179**		**Pn**	**13 26 14.1**	**+0.4**
237A	**Washetta, Mont**	**4.32**	**160**	IAmb_Lg		13 27 39.5	
	comp=Z,46nm,0.7s						
WHAR	**Wooly Hollow**	**4.37**	**99**	Pn	**Pn**	**13 26 17.7**	**0.0**
WHAR				IAmb_Lg		13 27 29.8	
	comp=Z,66nm,1.0s						
WLAR	**White Oak Lake**	**4.37**	**122**	IAmb_Lg		13 27 31.4	
	comp=Z,63nm,0.8s						
MGMO	**Mountain Grove**	**4.39**	**74**	IAmb_Lg		13 27 31.3	
	comp=Z,97nm,0.9s						
FCAR	**Ozark Folk Cen**	**4.42**	**91**	IAmb_Lg		13 27 29.2	
	comp=Z,69nm,1.0s						
W41B	**Gary Mavity, V**	**4.43**	**100**	Pb	**Pb**	**13 26 28.6**	**-0.4**
	baz=283						
P38A	**Dawn**	**4.76**	**41**	IAmb_Lg		13 27 50.7	
	comp=Z,49nm,0.7s						
R40A	**Maddies Statio**	**4.77**	**61**		**Pn**	**13 26 23.1**	**-0.1**
R40A				IAmb_Lg		13 27 41.6	
	comp=Z,107nm,0.9s						
Z41A	**Richland Creek**	**4.83**	**124**	S	**Sn**	**13 27 19.8**	**-0.4**
	baz=307						
KSCO	**Kaye Shedlock'**	**4.97**	**308**	IAmb_Lg		13 28 02.7	
	comp=Z,40nm,0.7s						
CCAR	**Cane Creek**	**5.22**	**113**	IAmb_Lg		13 28 05.9	
	comp=Z,100nm,0.9s						
435B	**Jarrell**	**5.29**	**180**	IAmb_Lg		13 28 12.5	
	comp=Z,51nm,0.9s						
T42A	**Van Buren**	**5.30**	**78**		**Pn**	**13 26 29.9**	**-0.5**
T42A				IAmb_Lg		13 28 10.6	
	comp=Z,44nm,0.7s						
CCM	**Cathedral Cave**	**5.42**	**67**		**Pn**	**13 26 31.9**	**-0.3**
CCM				IAmb_Lg		13 28 11.7	
	comp=Z,68nm,0.9s						
T25A	**Trinidad**	**5.61**	**283**	IAmb_Lg		13 28 21.2	
	comp=Z,74nm,1.1s						
HBAR	**Harrisburg**	**5.64**	**93**	IAmb_Lg		13 28 08.8	
	comp=Z,93nm,0.8s						
PBMO	**Poplar Bluff**	**5.80**	**81**	IAmb_Lg		13 28 16.5	
	comp=Z,68nm,0.7s						
JCT	**Junction City**	**5.89**	**199**		**Pn**	**13 26 37.8**	**-0.8**
JCT				IAmb_Lg		13 28 28.5	
	comp=Z,88nm,0.9s						
LPAR	**Lepanto**	**5.92**	**93**	IAmb_Lg		13 28 23.3	
	comp=Z,73nm,0.9s						
FVM	**French Village**	**6.02**	**70**	IAmb_Lg		13 28 24.9	
	comp=Z,67nm,0.9s						
143A	**Socs Landing,**	**6.11**	**122**	IAmb_Lg		13 28 37.7	
	comp=Z,43nm,0.9s						
GNAR	**Gosnell**	**6.12**	**89**	IAmb_Lg		13 28 35.0	
	comp=Z,72nm,0.7s						
PEBM	**Pemiscott Bayo**	**6.24**	**87**	IAmb_Lg		13 28 28.7	
	comp=Z,82nm,0.8s						
PARMO	**Parma**	**6.33**	**82**	IAmb_Lg		13 28 33.3	
	comp=Z,84nm,0.7s						
SLM	**Saint Louis**	**6.37**	**64**	IAmb_Lg		13 28 37.7	
	comp=Z,69nm,0.8s						
SDCO	**Great Sand Dun**	**6.57**	**287**	P	**Pn**	**13 26 49.4**	**+1.2**
	baz=102						
SDCO	**Great Sand Dun**	**6.57**	**287**		**Pn**	**13 26 47.4**	**-0.8**
HALT	**Halls**	**6.67**	**89**	IAmb_Lg		13 28 57.8	
	comp=Z,72nm,0.7s						
SCIA	**State Center**	**6.73**	**29**	IAmb_Lg		13 28 48.4	
	comp=Z,71nm,0.8s						
S44A	**Carbondale**	**6.85**	**74**	IAmb_Lg		13 28 54.7	
	comp=Z,63nm,0.8s						
SIUC	**Southern Illin**	**6.88**	**74**	IAmb_Lg		13 28 46.2	
	comp=Z,54nm,0.8s						
Y45A	**Yeager Farm, C**	**6.95**	**106**	IAmb_Lg		13 29 06.8	
	comp=Z,26nm,0.8s						
ISCO	**Idaho Springs**	**7.36**	**303**	IAmb_Lg		13 29 21.8	
	comp=Z,29nm,1.1s						
L40A	**Anamosa**	**7.75**	**38**	IAmb_Lg		13 29 19.2	
	comp=Z,47nm,0.9s						
Y22D	**IRIS PASSCAL I**	**7.93**	**258**	IAmb_Lg		13 29 33.4	
	comp=Z,44nm,0.8s						
O44A	**Mansfield**	**8.24**	**58**	IAmb_Lg		13 29 33.3	
	comp=Z,57nm,0.8s						
JFWS	**Jewell Farm**	**8.86**	**37**	IAmb_Lg		13 30 01.0	
	comp=Z,39nm,0.8s						
RWWY	**Rawlins**	**9.37**	**310**	IAmb_Lg		13 30 23.1	
	comp=Z,25nm,0.8s						
RSSD	**Black Hills**	**9.43**	**330**	IAmb_Lg		13 30 24.4	
	comp=Z,21nm,1.0s						

IDC 19 13:26:27.7±2.5, 7°.34S×124°.84E, h488^{km}±32^{km}, mb2.7/1, mb1 3.0/5, mb1mx2.5/49, mbtmp3.8/5, Error ellipse: s-maj=84.7km s-min=22.5km az=58.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
BATI	**Baumata**	**3.08**	**202**	P	P	13 27 38.8	+0.5
	31nm,0.3s,baz=96,slow=2.8,SNR=22						
BATI				S	S	13 28 36.0	+0.3
	4.2nm,0.3s,baz=52,slow=3.3,SNR=1.8						
FITZ	**Fitzroy Crossi**	**10.72**	**176**	P	P	13 28 52.9	+0.3
	0.2nm,0.3s,baz=1.1,slow=11,SNR=15						
FITZ				S	S	13 30 49.4	-2.5
	0.2nm,0.3s,baz=351,slow=13,SNR=3.3						
WRA	**Warramunga Arr**	**15.55**	**145**	P	P	13 29 43.0	-0.9
	0.7nm,0.3s,baz=305,slow=12,SNR=46						
WRA				S	S	13 32 25.5	-0.4
	baz=307,slow=17,SNR=1.1						
ASAR	**Alice Springs**	**18.42**	**153**	P	P	13 30 13.5	+0.9
	0.6nm,0.3s,baz=334,slow=11,SNR=48						
MKAR	**Makanchi Array**	**65.81**	**329**	P	P	13 36 23.7	-0.2
	0.6nm,0.9s,baz=152,slow=9.4,SNR=1.6						

MAN 19 13:26:32.5, 17°.45N×120°.31E, h26^{km}, mb4.4, ML3.2, MS3.0, 2C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SIPP	**Brgy, Tapao**	**0.49**	**17**	⇑*i*P	Pb	13 26 42.5	-0.2
SIPP				*e*S	Sn	13 26 50.9	-0.7
APYP	**Conner**	**0.98**	**65**	⇑*i*P	Pn	13 26 49.8	-0.9
APYP				*i* S	Sn	13 27 03.8	0.0

IDC ***19*** *13:37:54.3±0.9, 32°.55N×76°.29E, h0^{km}, mb3.7/10, mb1 3.8/13, mb1mx3.7/49, mbtmp3.7/13, ML3.5/3, Error ellipse: s-maj=24.8km s-min=15.8km az=60.0*

NDI ***19*** *13:37:56.3±2.1, 32°.68N×76°.36E, h10^{km}±9^{km}, ML3.7*

ISC 19 13:37:56.7±0.6, 32°.63N±0°.04×76°.35E±0°.06, h14^{km}, n34, σ1^{s}.81/50, mb3.6/9, Kashmir-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
DHRM	**DHARAMSHALA**	**0.38**	**186**	*e*P	**Pg**	**13 38 04.8**	**+0.3**
DHRM				*e*S	**Sb**	**13 38 10.6**	**-0.6**
DHRM				IAML		13 38 13.9	
	comp=E,7μm,0.3s						
DHRM				IAML		13 38 15.3	
	comp=N,9μm,0.4s						
BHK	**Bhakra**	**1.21**	**177**	*e*P	**Pn**	**13 38 17.8**	**-1.4**
BHK				*e*S	**Sb**	**13 38 35.2**	**+0.3**
SMLA	**Simla**	**1.65**	**155**	*e*P	**Pg**	**13 38 28.2**	**-0.2**
SMLA				*e*S	**Sg**	**13 38 51.3**	**+1.5**
SMLA				IAML		13 38 55.2	
	comp=N,2μm,0.2s						
SMLA				IAML		13 38 56.0	
	comp=E,2μm,0.2s						
NDI	**New Delhi**	**4.00**	**169**	*e*P	**Pg**	**13 39 11.0**	**-2.4**
NDI				*e*S	**Sb**	**13 39 57.7**	**+2.4**
AYAN	**Aya Nagar**	**4.19**	**171**	*e*P	**Pn**	**13 39 02.2**	**+2.1**
KUDL	**Kundal**	**4.47**	**178**	*e*P	**Pn**	**13 39 06.4**	**+2.4**
AJM	**Ajmer**	**6.31**	**194**	*e*P	**Pn**	**13 39 29.5**	**+0.2**
AJM				*e*S	**Sn**	**13 40 41.8**	**+0.5**
PYUN	**Piuthan**	**7.30**	**126**	*e*Pn	**Pn**	**13 39 45.3**	**+2.2**
PYUN				*e*Sn	**Sn**	**13 41 06.3**	**+0.4**
	comp=E,108nm,0.3s						
DANN	**Dangsing**	**7.69**	**122**	*e*Pn	**Pn**	**13 39 50.9**	**+2.4**
DANN				*e*Sn	**Sn**	**13 41 16.3**	**+0.8**
	comp=E,69nm,0.4s						
KOLN	**Koldanda**	**7.92**	**126**	*e*Pn	**Pn**	**13 39 54.0**	**+2.3**
KOLN				*e*Sn	**Sn**	**13 41 22.7**	**+1.4**
GKN	**Gorkha**	**8.52**	**121**	*e*Pn	**Pn**	**13 40 01.7**	**+1.9**
DMN	**Daman**	**9.08**	**121**	*e*Pn	**Pn**	**13 40 08.8**	**+1.2**
KKN	**Kakani**	**9.11**	**120**	*e*Pn	**Pn**	**13 40 09.3**	**+1.4**
PKIN	**Phulchoki**	**9.31**	**120**	*e*Pn	**Pn**	**13 40 12.2**	**+1.4**
PKIN				*e*Sn	**Sn**	**13 41 54.1**	**-1.4**
	comp=E,62nm,0.4s						
PKI	**Pulchoki**	**9.32**	**120**	*e*Pn	**Pn**	**13 40 12.0**	**+1.0**
PKI				*e*Sn	**Sn**	**13 41 54.3**	**-1.6**
	comp=E,43nm,0.4s						
BHPL	**Bhopal**	**9.40**	**174**	*e*P	**Pn**	**13 40 09.3**	**-2.5**
BHPL				*e*S	**Sn**	**13 41 51.7**	**-5.7**
BHPL				IAML		13 41 56.1	
	comp=N,7.3nm,0.0s						
BHPL				IAML		13 41 56.5	
	comp=E,13nm,0.1s						
GUN	**Gumba**	**9.49**	**117**	*e*Pn	**Pn**	**13 40 14.8**	**+1.6**
GUN				*e*Sn	**Sn**	**13 41 58.4**	**-1.4**
	comp=E,22nm,0.3s						
JIRN	**Jiri**	**9.85**	**118**	*e*Pn	**Pn**	**13 40 19.7**	**+1.5**
JIRN				*e*Sn	**Sn**	**13 42 06.6**	**-2.3**
	comp=E,28nm,0.3s						
AAK	**Ala-Archa**	**10.10**	**352**	Pn	**Pn**	**13 40 23.1**	**+1.8**
	comp=E,0.4nm,0.3s,baz=146,slow=9.7,SNR=9.3						
AAK				Sn	**Sn**	**13 42 15.1**	**+0.7**
	comp=E,0.4nm,0.3s,baz=324,slow=20,SNR=8.2						
RAMN	**Ramite**	**10.55**	**120**	*e*Pn	**Pn**	**13 40 28.4**	**+0.7**
RAMN				*e*Sn	**Sn**	**13 42 24.3**	**-1.5**
	comp=E,52nm,0.3s						
TAPN	**Taplejung**	**11.16**	**115**	*e*Pn	**Pn**	**13 40 36.2**	**+0.1**
ODAN	**Odare**	**11.18**	**118**	*e*Pn	**Pn**	**13 40 37.2**	**+0.9**
MKAR	**Makanchi Array**	**14.86**	**16**	Pn	**Pn**	**13 41 25.3**	**-1.0**
	comp=E,0.3nm,0.3s,baz=195,slow=12,SNR=11						
MKAR				Sn	**Sn**	**13 44 05.7**	**-5.0**
	comp=E,0.2nm,0.3s,baz=196,slow=25,SNR=5.3						
KURBB	**Kurchatov Arra**	**18.05**	**4**	P	**Pn**	**13 42 05.9**	**-1.0**
	comp=E,0.1nm,0.3s,baz=195,slow=11,SNR=7.2						
BVAR	**Borovoye Array**	**20.83**	**350**	P	**P**	**13 42 38.6**	**+0.8**
	comp=E,3.4nm,0.6s,baz=185,slow=16,SNR=16						
ZALV	**Zalesovo Beam**	**22.15**	**13**	P	**P**	**13 42 52.0**	**+0.2**
	comp=E,2.1nm,0.7s,baz=217,slow=8.6,SNR=9.2						
AKTO	**Aktyubinsk**	**22.36**	**328**	P	**P**	**13 42 55.0**	**+0.8**
	comp=E,5.9nm,0.6s,baz=124,slow=9.3,SNR=21						
CMAR	**Chiang Mai Arr**	**24.72**	**119**	P	**P**	**13 43 18.9**	**+1.3**
	comp=E,1.4nm,0.8s,baz=308,slow=9.8,SNR=12						
SONM	**Songino Array**	**27.29**	**47**	P	**P**	**13 43 41.6**	**+0.8**
	comp=E,1.0nm,0.8s,baz=252,slow=11,SNR=4.7						
BRTR	**Keskin Array B**	**34.94**	**294**	P	**P**	**13 44 48.9**	**+0.6**
	comp=E,0.7nm,0.8s,baz=93,slow=8.7,SNR=2.4						
ARCES	**ARCESS Array B**	**46.39**	**338**	P	**P**	**13 46 23.3**	**+1.1**
	comp=E,1.2nm,0.5s,baz=110,slow=8.3,SNR=14						
TORD	**Torodi Ar. Bea**	**70.19**	**273**	P	**P**	**13 49 07.7**	**-1.8**
	comp=E,0.6nm,0.7s,baz=82,slow=2.3,SNR=3.7						
WRA	**Warramunga Arr**	**76.18**	**125**	P	**P**	**13 49 44.5**	**-0.2**
	comp=E,0.3nm,0.7s,baz=330,slow=5.3,SNR=1.9						
ASAR	**Alice Springs**	**78.41**	**128**	P	**P**	**13 49 56.0**	**-1.1**
	comp=E,0.2nm,0.7s,baz=313,slow=5.1,SNR=5.3						

BJI ***19*** *13:49:42.2±0.0, 7°.50S×13°.50W, h10^{km}, mB5.5/1, mb5.1/1, Ms5.3/1, Ms7 5.2/2*

IDC ***19*** *13:49:43.9±0.6, 7°.41S×13°.41W, h0^{km}, mb4.5/22, mb1 4.6/23, mb1mx4.4/34, mbtmp4.5/23, ML3.5/1, MS4.2/37, Ms1 4.2/37, ms1mx4.2/41, Error ellipse: s-maj=16.7km s-min=13.6km az=135.0*

NEIC ***19*** *13:49:44.7±2.2, 7°.64S±0°.09×13°.56W±0°.05, h10^{km}±1^{km}, mb5.2/91, Error ellipse: s-maj=15.6km s-min=6.7km az=158.0*

GCMT ***19*** *13:49:47.7±0.2, 7°.34S±0°.01×13°.44W±0°.01, h12^{km}, MW5.1/131, Moment Tensor Solution. s70,c90; s131,c223; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-5.95±.10; $M_{\theta\theta}$0.37±.10; $M_{\phi\phi}$5.58±.09; $M_{r\theta}$0.40±.36; $M_{\theta\phi}$-1.14±.09; $M_{\phi r}$-1.42±.28; Best double couple: $M_0$6.06600×10^{16} NP1:ϕ_s169.00000°, δ38.00000°, λ-89.00000°. NP2:ϕ_s347.00000°, δ52.00000°, λ-91.00000°. Principal axes: T 6.0000, Plg7.0000°, Azm78.0000°; N 0.1350, Plg1.0000°, Azm348.0000°; P -6.1330, Plg83.0000°, Azm251.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 13:49:44.5±0.3, 7°.54S±0°.06×13°.49W±0°.04, h10^{km}, n281, σ1^{s}.84/260, mb5.1/78, MS4.3/42, Ascension Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ASCN	**Ascension**	**0.95**	**246**		**Pg**	**13 50 01.1**	**-1.7**
ASCN				Sg	**Sg**	**13 50 11.3**	**-3.8**
H10N1	**ASCENSION HYDR**	**1.03**	**253**	Pn	**Pb**	**13 50 02.5**	**-1.7**
H10N1				Sn	**Sb**	**13 50 13.4**	**-4.3**
H10N1				T	T	13 51 12.9	
	baz=75,slow=74						
H10N2	**ASCENSION HYDR**	**1.03**	**254**	Pn	**Pb**	**13 50 02.6**	**-1.7**
H10N2				Sn	**Sb**	**13 50 13.3**	**-4.5**
H10N2				T	T	13 51 15.3	
	baz=75,slow=74						
H10N3	**ASCENSION HYDR**	**1.05**	**253**	Pn	**Pb**	**13 50 02.9**	**-1.7**
H10N3				Sn	**Sb**	**13 50 13.6**	**-4.7**
H10N3				T	T	13 51 14.3	
	baz=75,slow=74						
H10S2	**ASCENSION HYDR**	**1.81**	**219**	Pn	**Pn**	**13 50 13.8**	**-1.8**
H10S2				T	T	13 52 18.3	
	baz=176,slow=74,SNR=6727						
H10S3	**ASCENSION HYDR**	**1.82**	**220**	Pn	**Pn**	**13 50 13.8**	**-1.9**
H10S3				T	T	13 52 21.6	
	baz=44,slow=74						
SHEL	**Horse Pasture**	**11.29**	**139**	Pn	**Pn**	**13 52 25.2**	**-0.7**
LIC	**Lamto**	**16.07**	**32**	*e*PKP1	**P**	**13 53 32.5**	**-1.6**
	69nm,1.1s						
KIC	**Kosan Boka**	**16.34**	**33**	*e*PKP1	**Pn**	**13 53 31.9**	**-2.2**
	39nm,1.0s						
TIC	**Toumodi**	**16.43**	**31**	*e*PKP1	**Pn**	**13 53 32.5**	**-2.9**
DBIC	**Dimbokro**	**16.54**	**32**	Pn	**Pn**	**13 53 35.2**	**-1.5**
	0.2nm,0.3s,baz=222,slow=9.8,SNR=6.2						
DBIC				LR	LR	13 58 34.7	
	comp=Z,1μm,19.9s,baz=223,slow=32						
DBIC	**Dimbokro**	**16.54**	**32**		**Pn**	**13 53 35.5**	**-1.2**
NBRF	**Rio Formoso -**	**21.45**	**265**	*e*P	**P**	**13 54 34.6**	**+1.4**
NBPV	**Pedro Velho**	**21.67**	**272**	*e*P	**P**	**13 54 38.0**	**+2.4**
NBAN	**Anadia - AL**	**22.63**	**263**	*e*P	**P**	**13 54 49.4**	**+3.6**
NBLV	**Livramento - P**	**23.23**	**269**	*e*P	**P**	**13 54 54.9**	**+2.7**
NBPA	**Parau_RN**	**23.53**	**273**	*e*P	**P**	**13 54 57.5**	**+2.3**
KOWA	**Kowa**	**23.83**	**23**	P	**P**	**13 54 57.1**	**-0.8**
	8.2nm,0.9s,baz=201,slow=8.1,SNR=10						
KOWA				LR	LR	14 03 09.1	
	comp=Z,1μm,19.4s,baz=201,slow=34						
KOWA	**Kowa**	**23.83**	**23**	P	**P**	**13 54 57.2**	**-0.7**
NBLA	**Lagarto - SE**	**24.22**	**260**	*e*P	**P**	**13 55 03.4**	**+1.7**
NBCL	**Cascavel-CE**	**24.89**	**276**	*e*P	**P**	**13 55 09.7**	**+1.9**
NBMA	**Muriti-CE**	**25.06**	**269**	*e*P	**P**	**13 55 11.5**	**+2.1**
TORD	**Torodi Ar. Bea**	**25.49**	**36**	P	**P**	**13 55 11.8**	**-1.5**
	36nm,1.1s,baz=228,slow=9.8,SNR=48						
TORD				LR	LR	14 03 45.7	
	comp=Z,966nm,21.1s,baz=190,slow=33						
TORD	**Torodi Ar. Bea**	**25.49**	**36**	P	**P**	**13 55 12.1**	**-1.2**
TORD				IAmb	IAmb	13 55 15.7	
	comp=Z,64nm,1.3s						
NBPB	**Pedra_Branca-C**	**26.00**	**273**	*e*P	**P**	**13 55 20.4**	**+2.5**
GDU01	**Guandu, BA**	**26.35**	**254**	*e*P	**P**	**13 55 25.1**	**+4.0**
NBIT	**Itapeh - BA**	**26.47**	**252**	*e*P	**P**	**13 55 25.5**	**+3.4**
NBPN	**Ponto Novo - B**	**26.57**	**261**	*e*P	**P**	**13 55 25.5**	**+2.4**
CMC01	**Camacan, BA**	**26.65**	**251**	*e*P	**P**	**13 55 24.6**	**+0.9**
NBMO	**Morrinhos-CE**	**26.76**	**278**	*e*P	**P**	**13 55 27.6**	**+2.8**
GUA01	**Guaratinga, BA**	**27.23**	**248**	*e*P	**P**	**13 55 31.2**	**+2.3**
NBPS	**Pedro II - PI**	**27.98**	**275**	*e*P	**P**	**13 55 37.8**	**+2.0**
RIB01	**Linhares ES**	**28.62**	**243**	*e*P	**P**	**13 55 44.8**	**+3.4**
BSFB	**Barra de Sao F**	**28.86**	**244**	*e*P	**P**	**13 55 45.8**	**+2.4**
SJMB	**Sao Joao De Ma**	**29.12**	**245**	*e*P	**P**	**13 55 49.5**	**+3.7**
ALF01	**Guarapari-ES**	**29.38**	**241**	*e*P	**P**	**13 55 51.4**	**+3.3**
H09N1	**TRISTAN DA CUN**	**29.41**	**178**	T	T	14 28 11.8	
	SNR=3.4						
ROSB	**Rosrio**	**30.85**	**277**	*e*P	**P**	**13 56 03.0**	**+1.8**
MC01	**Montes Claros**	**31.10**	**250**	*e*P	**P**	**13 56 07.3**	**+3.8**
JANB	**Januaria**	**31.11**	**253**	*e*P	**P**	**13 56 04.3**	**+0.8**
SDBA	**SAO DESIDERIO**	**31.30**	**259**	*e*P	**P**	**13 56 09.0**	**+3.7**
TSUM	**Tsumeb**	**32.31**	**114**	P	**P**	**13 56 12.2**	**-1.9**
WIN	**Windhoek**	**33.00**	**120**	P	**P**	**13 56 17.8**	**-2.5**
MAN01	**Angra dos Reis**	**33.02**	**239**	*e*P	**P**	**13 56 24.2**	**+4.0**
BSCB	**Bom Sucesso**	**33.05**	**243**	*e*P	**P**	**13 56 24.2**	**+3.6**
SMTB	**Santa Maria do**	**33.77**	**265**	*e*P	**P**	**13 56 28.9**	**+2.0**
PEXB	**Peixe**	**34.58**	**260**	*e*P	**P**	**13 56 36.7**	**+2.8**
BDFB	**Brasilia**	**34.72**	**253**	LR	LR	14 07 57.1	
	comp=Z,1μm,22.0s,baz=101,slow=31						
TMAB	**Tom-Au,PA,Br**	**34.84**	**277**	*e*P	**P**	**13 56 38.5**	**+2.4**
IPMB	**Ipameri, GO**	**35.35**	**250**	*e*P	**P**	**13 56 43.0**	**+2.4**
PRPB	**Parauapebas**	**36.09**	**270**	*e*P	**P**	**13 56 47.5**	**+0.6**
PET01	**Itanhaem-SP**	**36.37**	**239**	*e*P	**P**	**13 56 52.5**	**+3.4**
BB19B	**Bebedouro**	**36.41**	**245**	*e*P	**P**	**13 56 51.9**	**+2.3**
SNDB	**Serra Nova Dou**	**37.50**	**260**	*e*P	**P**	**13 57 00.2**	**+1.3**
TIJ01	**Guaruva-PR**	**38.20**	**238**	*e*P	**P**	**13 57 08.9**	**+4.0**
ARAG	**Araguaiana, MT**	**38.35**	**254**	*e*P	**P**	**13 57 07.8**	**+1.7**
PCMB	**Pacaembu**	**39.01**	**245**	*e*P	**P**	**13 57 12.9**	**+1.3**
MCPB	**Macapa, AP**	**39.11**	**279**	*e*P	**P**	**13 57 14.2**	**+1.7**
PTGB	**Pitanga**	**40.61**	**241**	*e*P	**P**	**13 57 27.7**	**+2.8**
MALB	**Monte Alegre**	**41.01**	**276**	*e*P	**P**	**13 57 29.9**	**+1.6**
LBTB	**Lobatse**	**41.14**	**120**	P	**P**	**13 57 29.6**	**+0.3**
	comp=Z,3.6nm,0.9s,baz=218,slow=13,SNR=3.6						
LBTB	**Lobatse**	**41.14**	**120**	P	**P**	**13 57 29.3**	**0.0**
LSZ	**Lusaka**	**41.51**	**104**	P	**P**	**13 57 33.5**	**+1.0**
	comp=Z,1.8nm,0.4s,baz=252,slow=11,SNR=3.2						
LSZ	**Lusaka**	**41.51**	**104**	P	**P**	**13 57 29.4**	**-3.1**
NPGB	**Novo Progresso**	**41.52**	**268**	*e*P	**P**	**13 57 34.7**	**+2.2**
CLDB	**Colider**	**41.87**	**262**	*e*P	**P**	**13 57 36.2**	**+0.9**
SALV	**Santo Antonio**	**42.08**	**255**	*e*P	**P**	**13 57 39.8**	**+2.8**
BOSA	**Boshof**	**42.10**	**125**	P	**P**	**13 57 37.6**	**+0.5**
	comp=Z,10nm,1.1s,baz=303,slow=7.7,SNR=5.4						
BOSA				LR	LR	14 12 20.3	
	comp=Z,528nm,20.0s,baz=292,slow=32						
ITTB	**Itaituba**	**42.12**	**272**	*e*P	**P**	**13 57 38.4**	**+0.9**
PDRB	**Porto dos Gac**	**42.80**	**261**	*e*P	**P**	**13 57 45.1**	**+2.2**
CPSB	**Cacapava Do Su**	**43.76**	**233**	*e*P	**P**	**13 57 54.2**	**+3.8**
PLTB	**Pedras Altas**	**44.43**	**232**	*e*P	**P**	**13 57 60.0**	**+4.2**
MBAR	**Mbarara**	**44.62**	**83**	P	**P**	**13 57 57.0**	**-0.7**
MBAR				IAmb	IAmb	13 58 02.7	
	comp=Z,48nm,1.4s						
PTLB	**Pontes e Lacer**	**45.34**	**256**	*e*P	**P**	**13 58 06.1**	**+2.9**
PTLB	**Pontes e Lacer**	**45.34**	**256**	P	**P**	**13 58 02.5**	**-0.8**
PTLB				IAmb	IAmb	13 58 08.5	
	comp=Z,38nm,1.8s						
CPUP	**Villa Florida**	**45.63**	**240**	P	**P**	**13 58 08.1**	**+2.7**
	comp=Z,2.8nm,0.6s,baz=119,slow=3.9,SNR=4.0						
CPUP				LR	LR	14 15 43.4	
	comp=Z,693nm,18.3s,baz=73,slow=34						
CPUP	**Villa Florida**	**45.63**	**240**	P	**P**	**13 58 03.8**	**-1.7**
ITQB	**Itaqui**	**46.06**	**236**	*e*P	**P**	**13 58 12.9**	**+4.1**
VILB	**Vilhena**	**46.23**	**259**	*e*P	**P**	**13 58 13.4**	**+3.1**
PTGA	**Pitinga**	**46.82**	**276**	P	**P**	**13 58 16.6**	**+1.6**
	comp=Z,9.8nm,1.1s,baz=83,slow=9.2,SNR=12						
PTGA	**Pitinga**	**46.82**	**276**	P	**P**	**13 58 14.3**	**-0.7**
PTGA				IAmb	IAmb	13 58 20.1	
	comp=Z,32nm,1.3s						
MACA	**Manacapuru-AM**	**47.17**	**273**	*e*P	**P**	**13 58 20.2**	**+2.5**
SIV	**San Ignacio**	**47.24**	**255**	P	**P**	**13 58 20.6**	**+2.3**
	comp=Z,0.8nm,0.4s,baz=89,slow=13,SNR=6.3						
ESDC	**Sonseca Array**	**47.80**	**10**	P	**P**	**13 58 21.9**	**-0.3**
	comp=Z,2.5nm,0.8s,baz=191,slow=6.4,SNR=15						
ESDC				LR	LR	14 19 12.8	
	comp=Z,121nm,18.2s,baz=225,slow=37						
ESDC	**Sonseca Array**	**47.80**	**10**	P	**P**	**13 58 22.2**	**0.0**
BOAV	**Boa Vista**	**47.95**	**280**	*e*P	**P**	**13 58 26.0**	**+2.1**
BOAV	**Boa Vista**	**47.95**	**280**	P	**P**	**13 58 24.0**	**+0.1**
KEST	**Kesra**	**48.11**	**25**	P	**P**	**13 58 25.9**	**+1.1**
	comp=Z,25nm,1.2s,baz=174,slow=6.2,SNR=6.3						
KEST				LR	LR	14 18 32.7	
	comp=Z,444nm,19.3s,baz=190,slow=36						
KEST	**Kesra**	**48.11**	**25**	P	**P**	**13 58 25.2**	**+0.5**
KEST				IAmb	IAmb	13 58 28.3	
	comp=Z,46nm,1.4s						
SAML	**Samuel**	**49.17**	**265**	P	**P**	**13 58 32.4**	**-0.9**
LODK	**Lodwar**	**49.94**	**79**	P	**P**	**13 58 39.8**	**+0.6**
KMBO	**Kilima Mbogo**	**50.96**	**85**	P	**P**	**13 58 49.0**	**+1.9**
	comp=Z,1.1nm,0.3s,baz=287,slow=6.7,SNR=4.5						
KMBO				LR	LR	14 18 34.4	
	comp=Z,680nm,20.3s,baz=269,slow=34						
KMBO	**Kilima Mbogo**	**50.96**	**85**	P	**P**	**13 58 47.1**	**0.0**
KIBK	**Kibwezi**	**51.57**	**87**	P	**P**	**13 58 49.0**	**-2.5**
H05S1	**Guadeloupe/Mar**	**51.79**	**295**	T	T	14 54 39.0	
	SNR=25						
ETMB	**Extrema**	**52.13**	**263**	*e*P	**P**	**13 58 56.9**	**+1.4**
ETMB	**Extrema**	**52.13**	**263**	P	**P**	**13 58 53.7**	**-1.8**
ETMB				IAmb	IAmb	13 59 00.6	
	comp=Z,51nm,1.4s						
H05N1	**Guadeloupe/Mar**	**52.70**	**297**	T	T	14 55 42.7	
	SNR=6.4						
LPAZ	**La Paz**	**54.03**	**255**	P	**P**	**13 59 09.3**	**-1.0**
TIP	**Timpagrande**	**54.29**	**29**	P	**P**	**13 59 10.9**	**-0.2**
CASP	**Castiglione de**	**54.79**	**22**	P	**P**	**13 59 14.6**	**0.0**
CASP				IAmb	IAmb	13 59 16.7	
	comp=Z,36nm,1.3s						
LATE	**Laterza**	**54.99**	**23**	P	**P**	**13 59 15.4**	**-0.7**
LATE				IAmb	IAmb	13 59 19.4	
	comp=Z,22nm,1.3s						
LVC	**Limon Verde**	**55.26**	**248**	*e*P	**P**	**13 59 21.4**	**+2.5**
AQU	**L'Aquila**	**55.39**	**24**	P	**P**	**13 59 19.7**	**+0.7**
BNI	**Bardonecchia**	**55.41**	**17**	P	**P**	**13 59 18.9**	**-0.2**
BNI				IAmb	IAmb	13 59 22.4	
	comp=Z,30nm,1.4s						
OSSC	**Osservatorio P**	**55.56**	**22**	P	**P**	**13 59 21.3**	**+1.1**
PB01	**IPOC Station P**	**55.64**	**250**	P	**P**	**13 59 19.4**	**-1.9**
PB01				IAmb	IAmb	13 59 25.1	
	comp=Z,80nm,2.0s						
NRCA	**Norcia**	**55.68**	**24**	P	**P**	**13 59 19.6**	**-1.5**
MURB	**Monte Urbino**	**55.81**	**23**	P	**P**	**13 59 21.2**	**-0.8**
MURB				IAmb	IAmb	13 59 24.8	
	comp=Z,19nm,1.0s						
IDI	**Anoyia**	**55.88**	**38**	LR	LR	14 25 10.2	
	comp=Z,209nm,19.1s,baz=226,slow=38						
ZCCA	**Zocca**	**56.18**	**21**	P	**P**	**13 59 23.7**	**-0.9**
ZCCA				IAmb	IAmb	13 59 36.3	
	comp=Z,63nm,1.5s						
PB12	**IPOC Station P**	**56.24**	**253**	P	**P**	**13 59 23.8**	**-1.9**
PB12				IAmb	IAmb	13 59 29.3	
	comp=Z,52nm,1.2s						
BAUV	**El Baul**	**56.77**	**286**	P	**P**	**13 59 27.8**	**-1.6**
TUE	**Stuetta**	**57.50**	**19**	P	**P**	**13 59 32.6**	**-1.5**
DAVOX	**Davos/Dischmat**	**57.94**	**19**	LR	LR	14 24 59.4	
	comp=Z,372nm,18.0s,baz=220,slow=37						
PDG	**Podgorica**	**58.01**	**28**	P	**P**	**13 59 37.2**	**-0.3**
PDG				IAmb	IAmb	13 59 41.0	
	comp=Z,22nm,1.5s						
DAVA	**Damuels**	**58.39**	**18**	*i* P	**P**	**13 59 39.8**	**-0.5**
	comp=Z,22nm,1.0s,SNR=6.6						
FETA	**Feichten**	**58.43**	**19**	*i* P	**P**	**13 59 40.9**	**+0.3**
	comp=Z,25nm,1.2s,SNR=8.0						
STAL	**STALIGIAL**	**58.45**	**21**	P	**P**	**13 59 41.0**	**+0.5**
SQTA	**Sankt Quirin**	**58.76**	**19**	*i* P	**P**	**13 59 42.4**	**-0.5**
	comp=Z,31nm,1.0s,SNR=6.4						
ZOU	**Zoufplan**	**58.79**	**21**	P	**P**	**13 59 42.4**	**-0.8**
ZOU				IAmb	IAmb	13 59 45.7	
	comp=Z,22nm,1.1s						
ABTA	**Abfaltersbach**	**58.79**	**21**	*e*P	**P**	**13 59 43.6**	**+0.5**
	comp=Z,23nm,1.6s						
MOTA	**Moosalm**	**58.84**	**19**	*i* P	**P**	**13 59 43.5**	**0.0**
	comp=Z,26nm,1.3s,SNR=7.1						
RETA	**Reutte**	**58.85**	**19**	*e*P	**P**	**13 59 42.6**	**-0.8**
	comp=Z,19nm,1.4s						
BFO	**Black Forest**	**58.86**	**17**	P	**P**	**13 59 43.7**	**+0.3**
BFO				IAmb	IAmb	13 59 45.1	
	comp=Z,21nm,1.2s						
WTTA	**Wattenberg**	**58.94**	**20**	*e*P	**P**	**13 59 44.2**	**+0.1**
	comp=Z,47nm,1.3s						
WATA	**Walderalm**	**58.98**	**20**	*e*P	**P**	**13 59 45.1**	**+0.6**
	comp=Z,22nm,1.2s						
MYKA	**Terra Mystica**	**59.10**	**21**	*e*P	**P**	**13 59 47.5**	**+2.4**
	comp=Z,4.7nm,0.8s						
OBKA	**Obir**	**59.33**	**22**	*e*P	**P**	**13 59 47.8**	**+1.0**
	comp=Z,11nm,1.4s						
KBA	**Koelnbreinsper**	**59.37**	**21**	*e*P	**P**	**13 59 46.5**	**-0.7**
	comp=Z,3.6nm,1.0s						
DIVS	**Divibare**	**59.64**	**27**	P	**P**	**13 59 48.9**	**-0.1**
SOKA	**Soboth**	**59.65**	**22**	*i* P	**P**	**13 59 49.6**	**+0.6**
	comp=Z,20nm,1.3s,SNR=7.8						
VTS	**Vitosha**	**60.09**	**31**	P	**P**	**13 59 51.9**	**-0.2**
ARSA	**Arzberg**	**60.31**	**22**	*e*P	**P**	**13 59 54.4**	**+0.9**
	comp=Z,9.6nm,1.4s						
ALN	**Alexandroupoli**	**60.35**	**34**	P	**P**	**13 59 54.2**	**+0.4**
ALN				IAmb	IAmb	13 59 58.1	
	comp=Z,18nm,1.3s						
MOA	**Molln**	**60.36**	**21**	*e*P	**P**	**13 59 53.0**	**-0.7**
	comp=Z,16nm,1.2s						
PLCA	**Paso Flores**	**60.37**	**227**	LR	LR	14 23 17.4	
	comp=Z,229nm,19.1s,baz=104,slow=33						
PLCA	**Paso Flores**	**60.37**	**227**	*e*P	**P**	**13 59 57.9**	**+3.8**
LC01	**Cunco**	**60.85**	**230**	P	**P**	**13 59 55.4**	**-2.0**
LC01				IAmb	IAmb	14 00 02.1	
	comp=Z,42nm,1.5s						
CONA	**Conrad Observa**	**61.01**	**22**	*i* P	**P**	**13 59 58.7**	**+0.5**
	comp=Z,18nm,1.3s,SNR=6.0						
GEC2	**GERESS Array S**	**61.01**	**20**	P	**P**	**13 59 57.9**	**-0.3**
GEC2				IAmb	IAmb	14 00 00.1	
	comp=Z,33nm,1.4s						
GERES	**GERESS Array B**	**61.01**	**20**	P	**P**	**13 59 58.0**	**-0.2**
	comp=Z,5.9nm,0.9s,baz=197,slow=4.2,SNR=10						
GERES				LR	LR	14 26 53.9	

	comp=Z,190nm,20.1s,baz=256,slow=37						
GERES	GERESS Array B	61.01	20	P	P	13 59 57.2	-1.0
CKRC	Cesky Krumlov	61.20	21	*e*P	P	13 59 59.5	+0.1
KHC	Kasperske Hory	61.21	20	*e*P	P	13 59 59.2	-0.3
MMAI	Mount Meron Ar	61.51	46	LR	LR	14 26 57.6	
	comp=Z,94nm,20.2s,baz=240,slow=36						
NKC	Novy Kostel	61.79	19	*e*P	P	14 00 05.1	+1.7
ROSC	El Rosal	61.93	280	P	P	14 00 07.0	+1.5
	comp=Z,7.1nm,0.4s,baz=110,slow=2.5,SNR=13						
ROSC				LR	LR	14 25 28.2	
	comp=Z,829nm,19.0s,baz=90,slow=35						
ROSC	El Rosal	61.93	280	P	P	14 00 07.4	+1.9
VRAC	Vranov	62.42	22	LR	LR	14 27 56.7	
	comp=Z,222nm,19.1s,baz=212,slow=37						
PSZ	Piszkesteto	62.59	25	P	P	14 00 09.7	+0.8
PSZ				IAmb	IAmb	14 00 11.5	
	comp=Z,23nm,1.3s						
VYHS	Vyhne	62.62	24	*e*P	P	14 00 09.7	+0.7
BRG	Berggiesshubel	62.83	19	*e*P	P	14 00 11.8	+1.5
BRG				Amp		14 00 13.5	
	comp=Z,5.7nm,0.8s						
BRG				Amp		14 28 08.0	
	comp=Z,0.4nm,16.1s						
CLL	Collm	62.90	18	*i* P	P	14 00 12.3	+1.5
	comp=Z,6.0nm,0.7s						
CLL				Lm	MLR	14 27 00.0	
	comp=Z,200nm,19.2s						
ZARC	Zaragoza, Cauc	62.99	282	P	P	14 00 12.0	-0.2
ZARC				IAmb	IAmb	14 00 15.3	
	comp=Z,30nm,1.3s						
MORC	Moravsky Berou	63.16	22	P	P	14 00 12.7	0.0
MORC				IAmb	IAmb	14 00 14.2	
	comp=Z,19nm,1.3s						
VNA2	Neumayer--Watz	63.43	178	P	P	14 00 15.5	+1.4
	baz=359,slow=5.8						
MLR	Muntele Rosu	63.51	30	LR	LR	14 28 55.1	
	comp=Z,210nm,19.7s,baz=310,slow=37						
MLR	Muntele Rosu	63.51	30	P	P	14 00 14.8	-0.4
MLR				IAmb	IAmb	14 00 17.2	
	comp=Z,24nm,1.3s						
VNA3	Neumayer Olymp	63.68	179	P	P	14 00 16.4	+0.7
SJCC	San Jacinto, C	63.83	285	P	P	14 00 18.3	+0.5
SJCC				IAmb	IAmb	14 00 20.8	
	comp=Z,34nm,1.3s						
CRVS	Cervenica-Dubn	64.01	25	*e*P	P	14 00 19.3	+1.1
MOTC	Monteria, Cord	64.05	284	P	P	14 00 17.9	-1.2
MOTC				IAmb	IAmb	14 00 21.7	
	comp=Z,38nm,1.6s						
BR131	Keskin Array S	64.07	39	P	P	14 00 19.6	+0.6
BR131				IAmb	IAmb	14 00 22.1	
	comp=Z,38nm,1.4s						
BRTR	Keskin Array B	64.07	39	P	P	14 00 20.9	+2.0
	comp=Z,9.7nm,1.1s,baz=208,slow=7.0,SNR=19						
BRTR				LR	LR	14 31 22.3	
	comp=Z,79nm,18.4s,baz=236,slow=39						
BRTR	Keskin Array B	64.07	39	P	P	14 00 20.1	+1.1
SNAA	Sanae	64.41	176	P	P	14 00 21.0	+0.4
SNAA	Sanae	64.41	176	P	P	14 00 21.8	+1.2
	comp=Z,1.6nm,0.8s,baz=336,slow=7.8,SNR=6.9						
SNAA	Sanae	64.41	176	P	P	14 00 20.0	-0.6
SNAA				IAmb	IAmb	14 01 00.8	
	comp=Z,25nm,2.0s						
BNN	Bunyan	64.97	41	P	P	14 00 25.9	+1.0
OTAV	Otavalo	65.22	274	*e*P	P	14 00 29.6	+2.2
OTAV	Otavalo	65.22	274	P	P	14 00 25.8	-1.7
OTAV				IAmb	IAmb	14 00 31.9	
	comp=Z,30nm,1.4s						
RAYN	Ar Rayn	65.35	60	P	P	14 00 28.9	+1.4
GBN	Guysborough	68.00	326	P	P	14 00 43.8	-0.1
SUW	Suwalki	68.65	22	P	P	14 00 48.7	+0.9
HAL	Halifax	68.73	324	P	P	14 00 50.2	+1.6
AKASG	Malin Array Be	68.74	28	P	P	14 00 47.3	-1.2
	comp=Z,4.6nm,0.8s,baz=227,slow=6.6,SNR=25						
AKASG				LR	LR	14 32 21.7	
	comp=Z,97nm,20.2s,baz=215,slow=37						
AKASG	Malin Array Be	68.74	28	IAmb	IAmb	14 00 49.4	
	comp=Z,28nm,1.6s						
AKBB	Malin Array Si	68.74	28	IAmb	IAmb	14 00 50.5	
	comp=Z,22nm,1.1s						
LMN	Caledonia Moun	70.13	325	P	P	14 00 57.7	+0.5
LMN				IAmb	IAmb	14 00 59.1	
	comp=Z,28nm,0.9s						
MNK	Minsk	70.85	24	*i* P	P	14 01 00.7	-0.7
	comp=E,3.0nm,1.2s						
MNK				*i* P	P	14 01 00.7	-0.7
	comp=N,18nm,0.8s						
MNK				*i* P	P	14 01 00.7	-0.7
	comp=Z,13nm,1.2s,baz=224						
MNK				*i* PP	PP	14 03 37.9	-0.7
MNK				*i* PPP	PPP	14 05 21.5	
MNK				*i* S	S	14 10 16.3	-0.1
MNK				*i* SS	SS	14 14 49.2	0.0
MNK				*i* SSS	SSS	14 18 08.3	
MNK				*i* LQ	LQ	14 27 13.3	
MNK				*i* LR	LR	14 31 30.6	
MNK				*i* LRM	MLR	14 33 38.5	
	comp=Z,200nm,15.9s						
MNK				*i* LRM	MLR	14 33 44.8	
	comp=N,330nm,17.2s						
MNK				*i* LRM	MLR	14 34 30.6	
	comp=E,36nm,18.4s						
NOA	NORSAR Array B	71.07	12	P	P	14 01 02.4	-0.3
	comp=E,3.7nm,1.1s,baz=204,slow=6.8,SNR=3.8						
NOA				LR	LR	14 34 15.0	
	comp=E,112nm,18.3s,baz=205,slow=38						
GNI	Garni	71.56	43	LR	LR	14 35 12.3	
	comp=E,82nm,18.3s,baz=266,slow=38						
KVAR	Kislovodsk Arr	72.04	39	LR	LR	14 35 15.8	
	comp=E,37nm,19.8s,baz=93,slow=38						
KBZ	Khabaz	72.06	39	P	P	14 01 09.2	+0.4
	comp=E,3.3nm,0.9s,baz=230,slow=1.9,SNR=4.6						
KBZ				LR	LR	14 35 35.1	
	comp=E,39nm,19.1s,baz=244,slow=38						
F64A	Sherman	72.21	323	P	P	14 01 11.0	+1.3
BORG	Borgarnes	72.33	356	LR	LR	14 27 25.1	
	comp=E,52nm,21.9s,baz=162,slow=31						
HRV	Adam Dziewonsk	72.54	319	P	P	14 01 14.5	+2.7
	baz=118						
ESPN	Las Esperanzas	73.07	285	P	P	14 01 15.9	+0.4
ESPN				IAmb	IAmb	14 01 17.9	
	comp=Z,48nm,1.2s						
LBNH	Lisbon	73.60	320	P	P	14 01 19.7	+1.6
	baz=118						
TRNY	Table Rock, Ra	73.71	317	P	P	14 01 17.6	-1.1
P60A	Greenville	74.12	315	P	P	14 01 22.7	+1.5
	baz=114						
N59A	State Game Lan	74.67	316	P	P	14 01 27.2	+2.7
	baz=115						
UOSS	Minazif	75.07	62	P	P	14 01 27.6	+0.5
UOSS				IAmb	IAmb	14 01 38.5	
	comp=Z,16nm,0.8s						
BINY	Binghamton	75.35	317	P	P	14 01 30.7	+2.4
	baz=115						
FINES	FINESS Array B	75.35	18	P	P	14 01 27.6	-0.3
	comp=Z,5.0nm,0.6s,baz=222,slow=5.5,SNR=16						
FINES				LR	LR	14 36 40.3	
	comp=Z,175nm,19.2s,baz=218,slow=38						
FINES	FINESS Array B	75.35	18	P	P	14 01 28.2	+0.3
LONY	Lake Ozonia	75.47	320	P	P	14 01 30.8	+1.9
	baz=116						
SSPA	Standing Stone	76.03	315	P	P	14 01 34.3	+2.0
	baz=113						
TRQ	Mont Tremblant	76.16	321	P	P	14 01 34.0	+1.0
SCHQ	Schefferville	76.34	331	LR	LR	14 32 05.2	
	comp=Z,133nm,18.2s,baz=91,slow=33						
KMSC	Kings Mountain	76.60	309	P	P	14 01 38.1	+2.5
	baz=109						
BLA	Blacksburg	76.61	311	P	P	14 01 38.0	+2.4
	baz=110						
WVNY	West Valley, N	77.21	316	P	P	14 01 39.1	+0.2
M54A	Oil Creek Stat	77.60	315	P	P	14 01 43.1	+1.9
	baz=112						
N54A	Moraine State	77.63	315	P	P	14 01 42.8	+1.5
	baz=112						
BG3	Lake Jocassee	77.80	308	P	P	14 01 42.4	+0.1
BG3				IAmb	IAmb	14 01 46.2	
	comp=Z,40nm,1.1s						
MAW	Mawson	77.88	158	P	P	14 01 43.4	+1.3
	comp=Z,3.7nm,0.9s,baz=284,slow=4.2,SNR=3.2						
MAW				LR	LR	14 29 42.6	
	comp=Z,92nm,18.7s,baz=246,slow=31						
O53A	New Philadelph	78.25	314	P	P	14 01 47.2	+2.5
	baz=110						
O53A	New Philadelph	78.25	314	P	P	14 01 46.6	+1.9
M53A	WI Miller and	78.28	315	P	P	14 01 46.9	+2.0
	baz=111						
SADO	Sadowa	78.48	319	LR	LR	14 29 15.4	
	comp=Z,303nm,21.5s,baz=166,slow=30						
TKL	Tuckaleechee C	78.66	309	LR	LR	14 29 26.2	
	comp=Z,322nm,19.9s,baz=126,slow=30						
P52A	Corning	78.70	313	P	P	14 01 49.1	+1.9
	baz=110						
VLDQ	Val d'Or	78.76	322	P	P	14 01 49.5	+2.1
VLDQ				IAmb	IAmb	14 01 50.4	
	comp=Z,21nm,1.1s						
SFJD	Kangerlussuaq	79.00	346	LR	LR	14 30 14.8	
	comp=Z,71nm,21.9s,baz=169,slow=31						
ACSO	Alum Creek Sta	79.51	313	P	P	14 01 53.7	+2.0
	baz=109						
ACSO	Alum Creek Sta	79.51	313	P	P	14 01 51.4	-0.3
KLMR	Klimovskoe	79.73	23	*e*P	P	14 01 50.4	-1.9
KLMR				AMP		14 02 00.8	
	comp=Z,29nm,1.4s						
KLMR				*e*PP	PP	14 04 50.8	-2.7
GEYT	Alibeck	80.35	50	LR	LR	14 37 32.1	
	comp=Z,108nm,21.5s,baz=350,slow=36						
P49A	Miami Univ. Ec	80.56	312	P	P	14 01 59.4	+2.0
	baz=108						
CLTN	Cedars of Leba	80.77	308	P	P	14 01 58.5	0.0
CLTN				IAmb	IAmb	14 02 01.1	
	comp=Z,26nm,1.1s						
V48A	Smith Brothers	81.05	308	IAmb	IAmb	14 02 02.7	
	comp=Z,32nm,1.1s						
WCI	Wyandotte Cave	81.34	310	P	P	14 02 03.1	+1.5
	baz=107						
WCI	Wyandotte Cave	81.34	310	P	P	14 02 00.5	-1.0
WCI				IAmb	IAmb	14 02 03.3	
	comp=Z,58nm,1.4s						
ARCES	ARCESS Array B	81.43	13	P	P	14 02 01.2	-0.1
	comp=Z,2.6nm,0.7s,baz=209,slow=4.7,SNR=13						
ARCES				LR	LR	14 39 34.1	
	comp=Z,138nm,19.1s,baz=210,slow=37						
T47A	Sharon Grove	81.62	309	P	P	14 02 02.2	-0.8
T47A				IAmb	IAmb	14 02 04.8	
	comp=Z,26nm,1.1s						
WVT	Waverly	81.95	308	P	P	14 02 06.0	+1.2
	baz=106						
WVT	Waverly	81.95	308	P	P	14 02 05.0	+0.2
WVT				IAmb	IAmb	14 02 07.0	
	comp=Z,36nm,1.1s						
SFIN	Lafayette	82.55	312	P	P	14 02 08.5	+0.6
	baz=106						
QSPA	South Pole Qui	82.58	180	P	P	14 02 08.6	+0.9
W45A	Hickory Valley	82.76	307	P	P	14 02 09.4	+0.3
OLIL	Olney	82.85	311	P	P	14 02 08.9	-0.5
CMIG	Matias Romero	84.04	288	LR	LR	14 38 36.2	
	comp=Z,60nm,21.1s,baz=110,slow=35						
LCAR	Lake Charles	84.54	307	P	P	14 02 17.8	-0.4
ABKAR	Akbulak array	85.02	39	P	P	14 02 20.3	0.0
ABKAR	Akbulak array	85.02	39	P	P	14 02 19.8	-0.5
ABKAR				IAmb	IAmb	14 02 36.3	
	comp=Z,11nm,1.4s						
CCM	Cathedral Cave	85.07	309	P	P	14 02 21.4	+0.6
	baz=104						
CCM	Cathedral Cave	85.07	309	P	P	14 02 20.9	+0.1
W41B	Gary Mavity, V	85.21	306	P	P	14 02 22.5	+1.0
	baz=103						
JFWS	Jewell Farm	85.51	314	P	P	14 02 23.8	+0.9
	baz=105						
X40A	Basin Creek Fa	85.53	305	P	P	14 02 24.1	+0.9
	baz=102						
X40A	Basin Creek Fa	85.53	305	P	P	14 02 23.6	+0.4
X40A				IAmb	IAmb	14 02 27.0	
	comp=Z,31nm,1.3s						
U40A	Yellville	85.94	307	P	P	14 02 26.2	+1.0
	baz=102						
MIAR	Mount Ida	86.14	305	P	P	14 02 27.7	+1.5
	baz=102						
W39A	Magazine	86.44	306	P	P	14 02 28.9	+1.2
	baz=102						
HHAR	Hobbs	86.79	307	P	P	14 02 27.6	-1.8
HHAR				IAmb	IAmb	14 02 31.0	
	comp=Z,33nm,1.3s						
WHTX	Lake Whitney,	88.87	302	P	P	14 02 41.2	+1.8
	baz=100						
QUOK	Quay	88.96	307	P	P	14 02 40.4	+0.6
833A	Chaparral WMA,	89.95	298	P	P	14 02 46.8	+2.2
	baz=99						
ECSD	EROS Data Cent	90.22	314	P	P	14 02 46.8	+1.3
	baz=100						
BTK	Batken	90.46	50	P	P	14 02 46.4	-0.4
BTK				IAmb	IAmb	14 02 49.8	
	comp=Z,24nm,1.8s						
JCT	Junction City	90.62	301	P	P	14 02 49.6	+1.9
	baz=98						
KKAR	Karatay Array	90.74	47	P	P	14 02 47.4	-0.5
ABTX	Abilene, Hawle	90.79	303	P	P	14 02 50.7	+2.3
	baz=98						
ULM	Lac du Bonnet	90.90	320	LR	LR	14 39 12.7	
	comp=Z,200nm,18.7s,baz=83,slow=33						
AMTX	Amarillo	92.78	305	P	P	14 02 59.5	+1.8
	baz=97						
AAK	Ala-Archa	93.57	48	P	P	14 03 00.8	-0.5
MSTX	Muleshoe	93.57	304	P	P	14 03 03.3	+1.9
	baz=97						
OGNE	Ogallala	93.79	311	P	P	14 03 03.7	+1.5
	baz=97						
TX32	Lajitas Array	93.80	299	P	P	14 03 03.4	+0.8
TX32				IAmb	IAmb	14 03 05.6	
	comp=Z,23nm,1.6s						
TXAR	Lajitas Array	93.80	299	P	P	14 03 03.0	+0.4
	comp=Z,2.8nm,0.9s,baz=101,slow=6.5,SNR=21						
TXAR				LR	LR	14 46 24.2	
	comp=Z,13nm,18.7s,baz=0.0,slow=36						
TXAR	Lajitas Array	93.80	299	P	P	14 03 03.8	+1.2
KSH	Kashi	94.33	51	P	P	14 03 02.6	-2.2
KSH				pmax	pmax		
	comp=Z,4.0nm,0.5s						
VNDA	Vanda	95.03	179	LR	LR	14 40 03.6	
	comp=Z,94nm,20.8s,baz=178,slow=32						
MNTX	Cornudas Mount	95.52	301	P	P	14 03 10.8	+0.6
	baz=96						
Q24A	Divide	95.97	308	P	P	14 03 14.1	+1.5
	baz=95						
SDCO	Great Sand Dun	96.15	307	P	P	14 03 15.4	+2.0
	baz=95						
SDCO	Great Sand Dun	96.15	307	P	P	14 03 14.6	+1.2
SDCO				IAmb	IAmb	14 03 16.7	
	comp=Z,10nm,1.1s						
ANMO	Albuquerque	96.69	304	P	P	14 03 18.0	+2.2
	baz=95						
N23A	Red Feather La	96.73	310	P	P	14 03 18.7	+2.8
	baz=94						
S22A	4UR Ranch, Cre	97.20	307	P	Pdif	14 03 18.7	+0.5
	baz=94						
PDAR	Pinedale Array	99.52	312	LR	LR	14 41 55.6	
	comp=Z,194nm,21.1s,baz=106,slow=32						
CD2	Chengdu	117.18	59	PKP	PKPdf	14 08 28.3	-2.4
HHC	Hu-ho-hao-te	121.12	47	*e*PKP	PKPdf	14 08 32.8	-5.3
TAOE	Nuku Hiva Isla	124.41	254	*e*LR	LR	14 47 29.7	
	comp=Z,473nm,26.3s						
TBI	Tubuai	127.14	233	*e*LR	LR	14 48 39.1	
	comp=Z,264nm,35.2s						
NJ2	Nanjing	129.49	54	*e*PKP	PKPdf	14 08 52.3	-1.9
PPT2	Papeete2	129.95	240	*e*SS	SS	14 28 31.2	-1.3
	comp=Z,159nm,25.0s						
PPT2	Papeete2	129.95	240	*e*LR	LR	14 49 53.0	
	comp=Z,156nm,22.5s						
DZM	Mont Dzumac	150.57	180	*e*LR	LR	14 59 40.5	
	comp=Z,157nm,26.4s						

PDG ***19*** *13:52:24.9±1.0, 38.°71N×20.°52E, h17^{km}±1^{km}, ML3.4/9, Error ellipse: s-maj=1.5km s-min=1.9km az=0.0*

THE ***19*** *13:52:24.9, 38.°72N×20.°61E, h6^{km}±1^{km}, ML3.6/8, Error ellipse: s-maj=1.0km s-min=0.3km az=23.0*

ATH ***19*** *13:52:25.0, 38.°72N×20.°63E, h5^{km}±2^{km}, ML3.5/13, Error ellipse: s-maj=2.5km s-min=0.8km az=316.0*

BEO ***19*** *13:52:28.3±0.8, 38.°85N×20.°14E, h0^{km}, ML3.5/6*

ISC 19 13:52:24.0±0.8**, 38.°72N**±0.°02×**20.°59E**±0.°03**, h10**^{km}±4^{km}**,**
n77, σ1^{s}26/116**, 5C-3D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRAG	Dragano-Lefkad	0.03	206	P	Pg	13 52 26.1	+0.3
DRAG				S	Sg	13 52 27.2	0.0
	445μm,0.3s						
DRAG	Dragano-Lefkad	0.03	206	P	Pg	13 52 26.2	+0.3
DRAG				S	Sg	13 52 27.1	0.0
NYDR	Nydri-Lefkada	0.08	91	P	Pg	13 52 26.3	0.0
NYDR				S	Sg	13 52 27.8	-0.1
	134μm,0.5s						
NYDR	Nydri-Lefkada	0.08	91	P	Pg	13 52 26.3	0.0
NYDR				S	Sg	13 52 27.7	-0.3
LKD2	Lefkada island	0.09	34	P	Pg	13 52 26.8	+0.3
LKD2				S	Sg	13 52 28.3	+0.1
	140μm,0.4s						
LKD2	Lefkada island	0.09	34	P	Pg	13 52 26.5	0.0
LKD2				S	Sg	13 52 28.1	-0.1
LKD2				AML	AML	13 52 28.5	
LKD2				AML	AML	13 52 28.7	
EVGI	Lefkada island	0.11	152	P	Pg	13 52 27.2	+0.6
EVGI				S	Sg	13 52 29.0	+0.5
	51μm,0.3s						
EVGI	Lefkada island	0.11	152	P	Pg	13 52 27.2	+0.6
EVGI				S	Sg	13 52 29.5	+1.0
TSLK	Tsoukalades, L	0.12	24	P	Pg	13 52 27.3	+0.4
TSLK				S	Sg	13 52 29.3	+0.4
	85μm,0.4s						
TSLK	Tsoukalades, L	0.12	24	P	Pg	13 52 27.3	+0.4
TSLK				S	Sg	13 52 29.4	+0.4
TSLK				AML	AML	13 52 30.1	
TSLK				AML	AML	13 52 30.7	
FSK	Fiskardo	0.26	186	P	Pb	13 52 30.3	-0.4
FSK				S	Sb	13 52 33.9	-1.3
	8μm,0.2s						
FSK	Fiskardo	0.26	186	P	Pb	13 52 30.3	-0.4
FSK				S	Sb	13 52 34.1	-1.1
FSK				AML	AML	13 52 36.7	
	comp=N,14419μm,0.5s						
FSK				AML	AML	13 52 38.1	
	comp=E,24686μm,0.4s						
KEF4	Livadi, Kephal	0.47	196	P	Pb	13 52 34.1	-0.3
KEF4				S	Sb	13 52 40.8	-0.7
KEF4	Livadi, Kephal	0.47	196	P	Pb	13 52 34.3	-0.2
KEF4				S	Sb	13 52 41.6	+0.1
DMLN	Damoulianata-K	0.51	200	P	Pg	13 52 34.5	+0.7
DMLN				S	Sb	13 52 42.6	+0.2
	comp=E,6μm,0.4s						
DMLN	Damoulianata-K	0.51	200	P	Pb	13 52 34.7	-0.3
DMLN				S	Sb	13 52 42.4	0.0
LXRA	Lixouri, Kepha	0.53	194	P	Pb	13 52 34.9	-0.4
VLS	Valsamata	0.54	180	P	Pb	13 52 34.8	-0.7
VLS				S	Sb	13 52 43.5	+0.2
	comp=E,3μm,0.4s						
VLS	Valsamata	0.54	180	P	Pb	13 52 34.8	-0.7
VLS				S	Sb	13 52 43.5	+0.2
VLS				AML	AML	13 52 46.8	
	comp=N,6038μm,0.4s						
VLS				AML	AML	13 52 47.0	
	comp=E,7378μm,0.3s						
ARGA	Argostoli. Kep	0.54	190	P	Pb	13 52 36.4	+0.8
KEF3	Kipouria, Keph	0.55	201	P	Pg	13 52 34.9	+0.3
KEF3				S	Sb	13 52 43.5	0.0
KEF3	Kipouria, Keph	0.55	201	P	Pg	13 52 34.9	+0.3
KEF3				S	Sb	13 52 43.8	+0.3
PSDA	Pessada-Kefalo	0.60	181	P	Pb	13 52 35.9	-0.7
PSDA				S	Sb	13 52 45.6	+0.5
PSDA	Pessada-Kefalo	0.60	181	P	Pb	13 52 36.1	-0.5
PSDA				S	Sb	13 52 45.9	+0.8
PVO	Paravola	0.74	97	P	Pn	13 52 39.0	-1.4
PVO	Paravola	0.74	97	P	Pn	13 52 39.1	-1.4
PVO				AML	AML	13 52 53.4	
	comp=E,10229μm,0.5s						
PVO				AML	AML	13 52 53.5	
	comp=N,7605μm,0.8s						
IGT	Igoumenitsa	0.84	346	P	Pg	13 52 40.6	+0.4
IGT	Igoumenitsa	0.84	346	P	Pg	13 52 40.5	+0.3
IGT				AML	AML	13 52 58.5	
	comp=N,12490μm,0.3s						
IGT				AML	AML	13 52 58.7	
	comp=E,8584μm,0.4s						
VTN	Vitineika	0.92	150	P	Pn	13 52 42.8	-0.2
RLS	Riolos of Patr	0.95	133	P	Pn	13 52 42.4	-1.0
RLS	Riolos of Patr	0.95	133	P	Pn	13 52 42.3	-1.1
RLS				AML	AML	13 53 05.7	
	comp=E,3597μm,0.5s						
RLS				AML	AML	13 53 06.4	
	comp=N,4419μm,0.9s						
JAN	Janina	0.96	12	P	Pn	13 52 43.7	+0.1
JAN				AML	AML	13 53 02.7	
	comp=E,5088μm,0.7s						
JAN				AML	AML	13 53 03.4	
	comp=N,3298μm,0.4s						
EVR	Evrytania	0.97	78	P	Pn	13 52 43.0	-0.8
EVR	Evrytania	0.97	78	P	Pn	13 52 43.0	-0.8
EVR				AML	AML	13 53 08.2	
	comp=N,2733μm,0.8s						
EVR				AML	AML	13 53 08.3	
	comp=E,1770μm,0.7s						
LTHK	Lithakia	1.02	169	P	Pb	13 52 43.1	-0.7
LTHK	Lithakia	1.02	169	P	Pb	13 52 43.1	-0.7
LTHK				AML	AML	13 53 11.2	
	comp=E,4016μm,0.9s						
LTHK				AML	AML	13 53 11.4	
	comp=N,4047μm,0.6s						
ANX	Ano Chora	1.05	96	P	Pn	13 52 44.0	-0.8
ANX	Ano Chora	1.05	96	P	Pn	13 52 44.6	-0.2
ANX				AML	AML	13 53 03.1	
	comp=N,7031μm,0.4s						
ANX				AML	AML	13 53 06.3	
	comp=E,5311μm,0.5s						
EFP	Efpalio	1.07	105	P	Pn	13 52 44.1	-0.9
EFP	Efpalio	1.07	105	P	Pn	13 52 44.1	-0.9
EFP				AML	AML	13 53 07.8	
	comp=N,6782μm,0.4s						
EFP				AML	AML	13 53 09.1	
	comp=E,6031μm,0.5s						
DRO	Drossia	1.16	131	P	Pn	13 52 46.1	-0.3
DRO	Drossia	1.16	131	P	Pn	13 52 46.0	-0.3
LAKA	Lakka	1.19	113	P	Pn	13 52 46.2	-0.5
TRIZ	Trizonia	1.21	106	P	Pn	13 52 46.9	-0.1
MAKR	Makrakomi, Fth	1.24	76	P	Pn	13 52 48.1	+0.7
ALIK	Aliki, Aigiali	1.27	110	P	Pn	13 52 48.4	+0.5
AGG	Agios Georgios	1.39	77	P	Pg	13 52 50.7	0.0
AGG	Agios Georgios	1.39	77	P	Pg	13 52 50.7	0.0
AGG				AML	AML	13 53 19.3	
	comp=N,2609μm,0.8s						
AGG				AML	AML	13 53 19.9	
	comp=E,2548μm,0.8s						
TIR	Tirane	2.69	348	*e*Pn	Pb	13 53 11.1	-1.1
TIR				*e*Sn	Sn	13 53 41.7	+1.7
VAY	Valandovo	3.01	30	*e*Pn	Pb	13 53 18.9	+1.2
STIP	Stip	3.22	22	*i* Pn	Pb	13 53 19.1	-2.1
ULC	Ulcinj	3.41	343	⇑ *i*Pn	Pn	13 53 17.8	+0.6
ULC				*i* Sn	Sn	13 53 57.6	-0.1
DRME	Dracevica, Mon	3.63	343	⇓ *i*Pn	Pn	13 53 21.3	+1.0
DRME				*i* Sn	Sn	13 54 03.9	+0.7
BUM	Brajici-Budva	3.81	341	⇓ *i*Pn	Pn	13 53 23.8	+1.0
BUM				*i* Sn	Sn	13 54 07.0	-0.7
PDG	Podgorica	3.85	345	*e*Pn	Pn	13 53 25.7	+2.4
PDG				*e*Sn	Sn	13 54 09.1	+0.6
TTG	Podgorica	3.85	345	⇑ *i*Pn	Pn	13 53 24.5	+1.2
TTG				*i* Sn	Sn	13 54 09.2	+0.7
PRVS	Prvonek	3.95	16	*e*Pn	Pb	13 53 29.7	-4.1
PRVS				*e*Sn	Sn	13 54 14.6	+3.4
BOSS	Bosilegrad	4.04	20	*e*Pn	Pb	13 53 32.1	-3.2
HCY	Herceg Novi	4.06	337	⇑ *i*Pn	Pn	13 53 26.5	+0.4
HCY				*i* Sn	Sn	13 54 13.4	-0.3
IVA	Berane	4.19	353	*e*Pn	Pn	13 53 28.6	+0.6
IVA				*i* Sn	Sn	13 54 17.4	+0.4
BARS	Barje	4.20	12	*e*Pn	Pn	13 53 32.4	+4.3
KOME	Kolasin	4.21	349	⇓ *i*Pn	Pn	13 53 29.4	+1.0
KOME				*i* Sn	Sn	13 54 18.0	+0.3
TREB	Trebinje	4.35	338	*e*Pn	Pn	13 53 30.8	+0.7
TREB				*e*Sn	Sn	13 54 20.1	-0.7
DBRK	Dubrovnik	4.37	336	*e*Pn	Pn	13 53 30.6	+0.2
VTS	Vitosha	4.39	26	*e*Pn	Pb	13 53 35.9	-5.3
VTS				*e*Sn	Sn	13 54 27.3	+5.3
BRY	Bratogost	4.46	340	⇑ *i*Pn	Pn	13 53 32.9	+1.0
BRY				*i* Sn	Sn	13 54 22.1	-1.8
SJES	Sjenica	4.57	354	*e*Pn	Pn	13 53 36.5	+3.3
SJES				*e*Sn	Sn	13 54 27.7	+1.3
UPM	Unac-Piva	4.66	345	⇑ *i*Pn	Pn	13 53 35.8	+1.2
UPM				*i* Sn	Sn	13 54 28.1	-0.8
STON	Ston	4.70	333	*e*Pn	Pn	13 53 35.6	+0.7
STON				*e*Sn	Sn	13 54 27.7	-1.7
STON	Ston	4.70	333	*e*Pn	Pn	13 53 34.9	0.0
LSTV	Lastovo	4.93	326	*e*Pn	Pn	13 53 38.0	-0.1
DIVS	Divibare	5.40	355	*e*Pn	Pn	13 53 47.0	+2.4
DIVS				*e*Sn	Sn	13 54 46.0	-0.9
RICI	Ricice	5.44	332	*e*Pn	Pn	13 53 45.7	+0.5
RICI				Sn	Sn	13 54 43.9	-4.0
HVAR	Hvar	5.45	326	*e*Pn	Pn	13 53 45.4	+0.1

ZIRJ	**Zirje**	6.19	324	*e*Pn	Pn	13 53 55.1	-0.3
MORI	**Morici**	6.33	326	*e*Pn	Pn	13 53 57.6	+0.4
DUGI	**Dugi Otok**	6.72	323	*e*Pn	Pn	13 54 03.4	+0.7

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*IDC **19** 13:55:20.0±2.3, 0°.92N×127°.26E, h0^{km}, mb3.4/3, mb1 3.7/3, mb1mx3.2/41, mbtmp3.5/3, Error ellipse: s-maj=168.2km s-min=28.4km az=66.0*

*DJA **19** 13:55:20.8±0.4, 1°N±3°×12°7E±°, h10^{km}, M3.1/6, MLv3.1/6*

ISC 19 13:55:20.9±4.2, **1°.0N**±0°.2×**127°.5E**±0°.2, **h8**^{km}±22^{km}, **n7**, σ**0^s.26**/9, **mb3.5**/3, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	0.23	206	P	Pg	13 55 25.7	+0.1
TNTI				S	Sg	13 55 28.6	-0.2
LBMI	**Labuha**	1.61	179	P	Pn	13 55 49.6	-0.1
LBMI				S	Sg	13 56 13.1	+0.3
SANI	**Sanana**	3.36	206	P	Pn	13 56 13.6	-0.1
KMSI	**Cibinong**	3.51	263	P	Pn	13 56 16.0	+0.1
WRA	**Warramunga Arr**	21.86	162	P	P	14 00 14.2	-0.1
	0.8nm,0.7s,baz=341,slow=11,SNR=7.4						
ASAR	**Alice Springs**	25.29	166	P	P	14 00 48.4	+0.3
	0.7nm,0.7s,baz=346,slow=10,SNR=9.5						
MKAR	**Makanchi Array**	60.22	326	P	P	14 05 29.6	-0.1
	0.6nm,0.8s,baz=115,slow=9.7,SNR=2.8						

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*WEL **19** 14:02:00, 41°.71S×174°.10E, h15^{km}, ML4.0, Mw4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14} Nm; M$_{rr}$1.31; M$_{\theta\theta}$1.67; M$_{\phi\phi}$-2.97; M$_{r\theta}$-2.65; M$_{\theta\phi}$-9.09; M$_{\phi r}$1.48; Fault plane solution: M$_0$9.93000×10^{14} NP1: φ$_s$355.00000°, δ75.00000°, λ12.00000°. NP2: φ$_s$261.00000°, δ78.00000°, λ164.00000°. Principal axes: T -100.5600, Plg19.0000°, Azm218.0000°; N 97.9400, Plg71.0000°, Azm44.0000°; P 2.6200, Plg2.0000°, Azm308.0000°;*

*IDC **19** 14:02:34.0±1.9, 41°.61S×174°.16E, h0^{km}, mb3.6/2, mb1 3.8/3, mb1mx3.2/33, mbtmp3.5/3, ML3.0/1 Error ellipse: s-maj=47.3km s-min=18.2km az=140.0*

*WEL **19** 14:02:35.9, 42°S±3°×17°4E±°, h14^{km}±3^{km}, M4.3/98, ML4.3/12, MLv4.3/98, Error ellipse: s-maj=0.0km s-min=0.0km az=152.6*

ISC 19 14:02:35.7±0.9, **41°.81S**±0°.03×**174°.19E**±0°.03, **h16**^{km}±5^{km}, **n117**, σ**1^s.47**/129, **Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	0.06	17	P	Pg	14 02 39.1	+0.3
CMWZ				S	Sg	14 02 41.6	+0.8
BSWZ	**Blackbirch Sta**	0.25	292	P	Pb	14 02 40.8	-1.1
BSWZ				S	Sg	14 02 44.2	-0.9
TUWZ	**Tuamarina**	0.42	334	P	Pg	14 02 43.4	-0.8
TUWZ				S	Sg	14 02 48.3	-1.7
TCW	**Tory Channel**	0.60	6	P	Pg	14 02 46.8	-0.8
TCW				S	Sg	14 02 54.3	-1.3
BHW	**Baring Head**	0.65	52	P	Pb	14 02 49.4	+0.7
WEL	**Wellington**	0.68	40	P	Pb	14 02 49.4	+0.2
WEL				S	Sb	14 02 59.2	+0.9
PLWZ	**Palliser**	0.83	74	P	Pn	14 02 53.7	+0.9
PLWZ				S	Sn	14 03 06.4	+1.6
NNZ	**Nelson**	0.85	314	P	Pg	14 02 50.9	-1.2
NNZ				S	Sg	14 03 02.2	-1.2
MSWZ	**Moikau Station**	0.89	64	P	Pn	14 02 54.3	+0.8
MSWZ				S	Sn	14 03 08.2	+2.2
THZ	**Tophouse**	0.96	272	P	Pb	14 02 54.0	-0.1
THZ				S	Sb	14 03 07.0	+0.5
CAW	**Cannon Point**	0.96	44	P	Pb	14 02 54.3	+0.3
CAW				S	Sn	14 03 09.0	+1.1
PAWZ	**Paruwai Farm**	1.02	66	P	Pn	14 02 56.2	+0.8
DUWZ	**D'Urville Isla**	1.03	349	P	Pg	14 02 53.9	-1.7
KIW	**Kapiti Island**	1.09	30	P	Pb	14 02 56.0	-0.2
MTW	**Mount Morrison**	1.18	57	P	Pn	14 02 58.1	+0.6
TRWZ	**Traveller**	1.20	70	P	Pn	14 02 58.3	+0.5
HOWZ	**Holdsworth Sta**	1.35	48	P	Pg	14 03 00.4	-1.3
GVZ	**Greta Valley S**	1.44	216	P	Pg	14 03 02.5	-0.9
TMWZ	**Te Maipa**	1.46	62	P	Pn	14 03 01.8	+0.4
MRZ	**Mangatainoka R**	1.55	43	P	Pn	14 03 03.3	+0.7
QRZ	**Quartz Range**	1.59	308	P	Pn	14 03 03.9	+0.7
TIWZ	**Tintock**	1.64	52	P	Pn	14 03 04.0	+0.1
LTZ	**Lake Taylor**	1.72	235	P	Pb	14 03 06.5	-0.5
DSZ	**Denniston Nort**	1.79	271	P	Pb	14 03 07.8	-0.2
OHWZ	**Ohakea**	1.81	28	P	Pb	14 03 08.5	0.0
PRWZ	**Pori Road**	1.84	48	P	Pn	14 03 06.9	+0.3
POWZ	**Post Office Ro**	1.85	41	P	Pn	14 03 07.2	+0.4
BFZ	**Birch Farm**	1.92	55	P	Pn	14 03 07.4	-0.3
OKCZ	**Okains Bay**	2.09	203	P	Pn	14 03 10.7	+0.6
DVHZ	**Dannevirke**	2.12	45	P	Pn	14 03 10.3	-0.3
WAZ	**Wanganui**	2.14	17	P	Pb	14 03 13.7	-0.4
ANWZ	**Angora Road**	2.19	53	P	Pn	14 03 10.9	-0.5
OXZ	**Oxford**	2.20	226	P	Pn	14 03 12.0	+0.4
TSZ	**Takapari Road**	2.20	38	P	Pn	14 03 11.9	+0.2
INZ	**Inchbonnie**	2.23	245	P	Pn	14 03 13.5	+1.5
AKCZ	**Akaroa Harbour**	2.27	204	P	Pn	14 03 13.0	+0.5
LREZ	**Lake Rotokare**	2.35	4	P	Pb	14 03 16.7	-0.9
NMEZ	**Namu Road**	2.41	354	P	Pb	14 03 18.0	-0.5
PRHZ	**Porangahau**	2.41	51	P	Pn	14 03 13.8	-0.6
PNHZ	**Pukenui**	2.43	40	P	Pn	14 03 14.7	-0.1
WPHZ	**Waipukurau**	2.44	45	P	Pn	14 03 14.6	-0.3
RACZ	**Rakaia**	2.44	218	P	Pn	14 03 14.8	0.0
KHEZ	**Kahui Hut**	2.52	357	P	Pb	14 03 19.2	-1.4
NEZ	**North Egmont**	2.54	358	P	Pb	14 03 20.3	-0.6
MHCZ	**Mount Hutt**	2.59	227	P	Pn	14 03 17.7	+0.8
MTVZ	**Mangateitei**	2.61	22	P	Pb	14 03 23.0	+0.9
DREZ	**Durham Road**	2.62	0	P	Pb	14 03 21.6	-0.6
PKE	**Pukeiti**	2.62	357	P	Pb	14 03 20.5	-1.7
PKVZ	**Pokaka**	2.67	20	P	Pb	14 03 23.0	-0.1
MOVZ	**Moawhango**	2.68	27	P	Pn	14 03 19.3	+1.0
PXZ	**Pawanui**	2.69	50	P	Pn	14 03 17.3	-1.0
WNVZ	**Wahianoa**	2.70	24	P	Pn	14 03 21.1	+2.5
TRVZ	**Turoa**	2.71	23	P	Pn	14 03 21.3	+2.5
VRZ	**Vera Road**	2.72	9	P	Pn	14 03 21.2	+2.5
BHHZ	**Black Hill Sta**	2.72	32	P	Pn	14 03 19.4	+0.6
KRHZ	**Kereru**	2.73	38	P	Pn	14 03 18.5	-0.4
MHEZ	**Mangahewa**	2.73	2	P	Pb	14 03 22.8	-1.3
DRZ	**Dome Shelter**	2.74	23	P	Pb	14 03 23.5	-1.0
WHVZ	**Whangaehu Hut**	2.74	23	P	Pn	14 03 21.3	+2.1
WACZ	**Wakanui South**	2.74	218	P	Pn	14 03 19.3	+0.3
FWVZ	**Far West T-bar**	2.75	23	P	Pn	14 03 21.4	+2.0
TUVZ	**Tukino**	2.77	24	P	Pn	14 03 21.4	+1.8
NGZ	**Ngauruhoe**	2.84	23	P	Pn	14 03 23.1	+2.6
SNVZ	**South Ngauruho**	2.84	23	P	Pn	14 03 22.7	+2.1
WVZ	**Waitaha Valley**	2.85	243	P	Pn	14 03 22.0	+1.5
KAHZ	**Kahuranaki**	2.87	46	P	Pn	14 03 19.9	-0.9
OTVZ	**Oturere**	2.87	24	P	Pn	14 03 22.8	+1.8
NNVZ	**North Ngauruho**	2.89	23	P	Pn	14 03 24.0	+2.8
WTVZ	**West Tongariro**	2.90	22	P	Pn	14 03 23.4	+2.1
TWVZ	**Taurewa**	2.90	20	P	Pb	14 03 27.4	+0.3
ETVZ	**East Tongariro**	2.91	24	P	Pb	14 03 25.7	-1.6
KWHZ	**Kaweka Forest**	2.93	36	P	Pn	14 03 21.4	-0.2
TMVZ	**Te Maari**	2.93	24	P	Pn	14 03 23.4	+1.7
KRVZ	**Karewarewa**	2.93	23	P	Pn	14 03 24.7	+3.0
NTVZ	**North Tongarir**	2.94	23	P	Pn	14 03 23.7	+1.9
RPZ	**Rata Peaks**	2.99	229	P	Pn	14 03 23.3	+0.8
MCHZ	**McNeill Hill**	3.04	40	P	Pn	14 03 22.7	-0.4
KATZ	**Kakaramea**	3.06	23	P	Pb	14 03 29.4	-0.4
ARCZ	**Arundel**	3.08	225	P	Pn	14 03 24.0	+0.4
RITZ	**Rihia Road**	3.10	25	P	Pb	14 03 31.0	+0.5
RATZ	**Rangitukua**	3.18	23	P	Pb	14 03 31.2	-0.6
GCSZ	**Gaunt Creek Bo**	3.23	241	P	Pn	14 03 27.4	+1.8
HATZ	**Hinemaiaia**	3.26	27	P	Pb	14 03 33.6	+0.4
WATZ	**Wairara**	3.31	21	P	Pb	14 03 33.7	-0.4
MRHZ	**Matea Rd**	3.42	31	P	Pn	14 03 27.9	-0.5
TMZ	**Timaru**	3.47	221	P	Pn	14 03 29.3	+0.3
KUTZ	**Kaahu Road**	3.54	21	P	Pb	14 03 37.9	-0.1
RAHZ	**Arahi**	3.64	38	P	Pn	14 03 31.1	-0.3
FOZ	**Fox Glacier**	3.66	240	P	Pn	14 03 32.9	+1.3
LBZ	**Lake Benmore**	3.90	227	P	Pn	14 03 36.0	+1.0
ODZ	**Otahua Downs**	4.14	217	P	Pn	14 03 38.0	-0.2
KMRZ	**Kaimai**	4.18	19	P	Pb	14 03 45.5	-3.4
URZ	**Urewera**	4.20	33	Pn	Pn	14 03 37.3	-1.7
	0.9nm,0.3s,baz=127,slow=20,SNR=13						
URZ				Pg	Pb	14 03 47.1	-1.9
	6.9nm,0.3s,baz=128,slow=20,SNR=23						
URZ				Sn	Sn	14 04 26.6	-1.0
	2.5nm,0.3s,baz=123,slow=22,SNR=2.0						
URZ				Lg	Lg	14 04 42.8	
	6.9nm,0.3s,baz=287,slow=19,SNR=4.6						
TOZ	**Tahuroa Road**	4.20	14	P	Pn	14 03 41.2	+2.2
TGRZ	**Tauranga**	4.38	22	P	Pn	14 03 45.3	+3.8
JCZ	**Jackson Bay**	4.57	238	P	Pn	14 03 47.4	+3.3
TWGZ	**Tauwhareparae**	4.65	40	P	Pn	14 03 45.6	+0.3
RUGZ	**Raukumara Rang**	4.68	36	P	Pn	14 03 44.8	-1.0
AWAZ	**Awhitu Peninsu**	4.75	4	P	Pn	14 03 49.3	+2.7
WKZ	**Wanaka**	4.83	230	P	Pn	14 03 47.9	+0.2
HHSZ	**Highcliff Hill**	4.83	211	P	Pn	14 03 48.3	+0.5
WTAZ	**Waiatarua**	4.88	4	P	Pn	14 03 48.0	-0.4
ETAZ	**East Tamaki Re**	4.88	7	P	Pn	14 03 51.2	+2.8
PKGZ	**Pakihiroa**	4.93	39	P	Pn	14 03 47.8	-1.3
EAZ	**Earnscleugh**	4.93	224	P	Pn	14 03 49.5	+0.4
RVAZ	**Riverhead Bore**	5.04	4	P	Pn	14 03 53.9	+3.3
WIAZ	**Waiheke Island**	5.06	9	P	Pn	14 03 53.3	+2.4
MBAZ	**Motutapu North**	5.06	6	P	Pn	14 03 55.6	+4.7
KUZ	**Kuaotunu**	5.19	14	P	Pn	14 03 55.0	+2.3
TUZ	**Tuapeka**	5.29	217	P	Pn	14 03 54.8	+0.7
MSZ	**Milford Sound**	5.40	236	P	Pn	14 03 58.3	+2.8
SYZ	**Scrubby Hill**	5.96	216	P	Pn	14 04 04.9	+1.7
OUZ	**Omahuta**	6.59	356	P	Pn	14 04 15.6	+3.6
CTZ	**Chatham Island**	7.03	109	P	Pn	14 04 18.0	0.0
ASAR	**Alice Springs**	38.00	286	P	P	14 09 53.5	+0.4
	0.4nm,0.4s,baz=126,slow=7.3,SNR=17						
WRA	**Warramunga Arr**	40.08	291	P	P	14 10 09.9	-0.5
	0.4nm,0.5s,baz=128,slow=8.5,SNR=8.8						
TORD	**Torodi Ar. Bea**	150.71	195	PKPbc	PKiKP	14 22 28.6	+0.5
	0.5nm,0.5s,baz=148,slow=2.2,SNR=5.4						

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*IDC **19** 14:10:20.5±0.7, 9°.11S×158°.53E, h0^{km}, mb4.2/11, mb1 4.4/11, mb1mx4.1/38, mbtmp4.2/11, MS3.3/5, Ms1 3.2/5, ms1mx2.9/36, Error ellipse: s-maj=20.7km s-min=15.8km az=163.0*

ISC 19 14:10:24.7±0.7, **9°.2S**±0°.1×**158°.56E**±0°.08, **h29**^{km}, **n16**, σ**0^s.81**/16, **mb4.0**/11, **MS2.9**/4, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	1.40	101	Pn	Pn	14 10 47.3	-0.9
	74nm,0.3s,baz=240,slow=5.5,SNR=31						
HNR				Sn	Sb	14 11 07.6	+0.1
	243nm,0.3s,baz=177,slow=18,SNR=5.8						
HNR				LR	LR	14 11 23.1	
	comp=Z,304nm,20.5s,baz=314,slow=44						
PMG	**Port Moresby**	11.25	268	LR	LR	14 17 06.7	
	comp=Z,209nm,18.3s,baz=98,slow=36						
WRA	**Warramunga Arr**	25.74	243	P	P	14 15 53.0	0.0
	3.5nm,0.8s,baz=70,slow=9.5,SNR=17						
WRA				PcP	PcP	14 19 23.1	+0.4
	0.5nm,0.9s,baz=60,slow=3.2,SNR=2.0						
WRA				LR	LR	14 26 29.6	
	comp=Z,35nm,18.5s,baz=80,slow=38						
STKA	**Stephens Creek**	27.55	212	P	P	14 16 10.2	+1.1
	1.8nm,0.4s,baz=58,slow=13,SNR=10						
STKA				LR	LR	14 25 47.3	
	comp=Z,28nm,18.4s,baz=22,slow=34						
ASAR	**Alice Springs**	27.63	236	P	P	14 16 09.2	-0.8
	2.0nm,0.9s,baz=65,slow=10.0,SNR=19						
ASAR				PcP	PcP	14 19 27.9	+0.8
	0.3nm,0.5s,baz=78,slow=2.8,SNR=5.2						
AFI	**Afiamalu**	29.43	102	LR	LR	14 24 54.6	
	comp=Z,13nm,20.8s,baz=56,slow=30						
FITZ	**Fitzroy Crossi**	33.15	251	P	P	14 16 58.2	-0.6
	1.9nm,0.5s,baz=59,slow=8.0,SNR=20						
KSRS	**Korea Array**	54.53	330	P	P	14 19 49.1	-1.0
	0.8nm,0.6s,baz=147,slow=7.0,SNR=2.9						
PSI	**Prapat**	60.60	278	LR	LR	14 52 29.8	
	comp=Z,162nm,18.1s,baz=253,slow=42						
CMAR	**Chiang Mai Arr**	64.90	295	P	P	14 21 01.9	0.0
	0.5nm,0.4s,baz=115,slow=4.7,SNR=8.0						
MA2	**Magadan**	68.80	356	P	P	14 21 26.4	+0.6
	9.1nm,0.5s,baz=159,slow=17,SNR=4.5						
SONM	**Songino Array**	73.07	326	P	P	14 21 52.6	+0.3
	4.9nm,0.9s,baz=141,slow=5.4,SNR=23						
ILAR	**Eielson Array**	84.12	21	P	P	14 22 52.0	-0.6
	0.9nm,0.8s,baz=244,slow=5.1,SNR=10						
MKAR	**Makanchi Array**	87.36	318	P	P	14 23 08.9	-0.2
	0.6nm,0.5s,baz=96,slow=5.4,SNR=14						
NVAR	**Mina Array Bea**	90.30	51	P	P	14 23 25.2	+1.8
	0.2nm,0.6s,baz=249,slow=6.7,SNR=2.1						
ESDC	**Sonseca Array**	145.84	336	PKPbc	PKPab	14 30 01.9	-0.2
	0.4nm,0.4s,baz=20,slow=4.1,SNR=4.4						

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*IDC **19** 14:18:34.2±1.5, 56°.93N×7°.42E, h0^{km}, mb3.5/1, mb1 3.9/6, mb1mx3.4/59, mbtmp3.8/6, ML2.8/4, Error ellipse: s-maj=24.0km s-min=12.6km az=111.0*

*LDG **19** 14:18:35.2±0.1, 56°.88N×7°.40E, h10^{km}, Ml3.7/12, Error ellipse: s-maj=7.4km s-min=2.7km az=121.0*

*BGR **19** 14:18:36.8±1.3, 56°.79N×7°.99E, h10^{km}, ML3.7/2, Error ellipse: s-maj=17.8km s-min=14.5km az=106.0*

*DNK **19** 14:18:36.8±1.7, 56°.89N×7°.67E, h48^{km}±10^{km}, ML3.4, MW2.6, Probable volcanic*

*BGS **19** 14:18:36.1±0.6, 56°.86N×7°.46E, h10^{km}, ML3.7*

*NAO **19** 14:18:36.5±2.9, 57°.04N×7°.35E, h14^{km}±16^{km}, ML2.7*

*BER **19** 14:18:37.3±2.5, 56°.89N×7°.62E, h22^{km}±9^{km}, ML2.8, MW2.6, ML3.7(BGS), Confirmed Earthquake*

*UPP **19** 14:18:39.5±1.6, 57°.05N×8°.22E, h14^{km}, ML2.6, Suspected explosion*

ISC 19 14:18:33.8±0.7, **56°.90N**±0°.03×**7°.59E**±0°.03, **h10**^{km}, **n174**, σ**1^s.96**/253, **North Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GOET	**G??ttrup**	0.91	81	*i* P	Pg	14 18 53.3	+2.0
GOET				*i* P	Pg	14 18 53.3	+2.0
GOET				*i* S	Sg	14 19 03.5	+0.4
GOET				*i* S	Sg	14 19 05.3	+2.3
GOET				IAML		14 19 07.5	
	comp=Z,944nm,0.4s						
GOET				IAML		14 19 07.5	
	comp=Z,944nm,0.4s						
GOET	**G??ttrup**	0.91	81	*i* P	Pg	14 18 53.3	+2.0
GOET				*i* S	Sg	14 19 05.3	+2.3
GOET				IAML		14 19 07.5	
	comp=Z,944nm,0.4s						
MUD	**Monsted U'grnd**	0.98	116	*i* P	Pg	14 18 53.5	+0.8
MUD				*i* P	Pg	14 18 53.5	+0.8
MUD				*i* Pg	Pb	14 18 54.6	+1.7
MUD				*i* Pg	Pb	14 18 54.6	+1.7
MUD				*i* S	Sg	14 19 05.7	+0.2
MUD				*i* S	Sg	14 19 06.2	+0.7
MUD				IAML		14 19 10.5	
	comp=Z,695nm,0.3s						
MUD				IAML		14 19 10.5	
	comp=Z,695nm,0.3s						
MUD	**Monsted U'grnd**	0.98	116	*i* P	Pg	14 18 53.5	+0.8
MUD				*i* Pg	Pb	14 18 54.6	+1.7
MUD				*i* S	Sg	14 19 06.2	+0.7
MUD				IAML		14 19 10.5	
	comp=Z,695nm,0.3s						
SNART	**Snartemo**	1.46	352	*e*P	Pn	14 19 01.3	+1.2
SNART				*e*P	Pb	14 19 01.4	+0.5
SNART				*e*S	Sn	14 19 18.8	-0.5
SNART				IAML		14 19 24.5	
	comp=Z,207nm,0.1s						
SNART	**Snartemo**	1.46	352	*e*P	Pn	14 19 01.3	+1.2
SNART				*e*S	Sn	14 19 18.8	-0.5
SNART				IAML		14 19 24.5	
	comp=Z,207nm,0.1s						
HOMB	**Homborsund**	1.46	19	Pg	Pn	14 19 01.3	+1.1
HOMB				Lg	Lg	14 19 19.5	
HOMB	**Homborsund**	1.46	19	*i* P	Pn	14 19 01.3	+1.1
HOMB				*i* S	Sn	14 19 18.8	-0.5
HOMB				IAML		14 19 23.4	
	comp=Z,304nm,0.1s						
HOMB				IAML		14 19 23.5	
	comp=Z,254nm,0.1s						
HOMB				IAML		14 19 23.6	
	comp=Z,265nm,0.1s						
HOMB	**Homborsund**	1.46	19	*e*P	Pn	14 19 01.3	+1.1
HOMB				*e*S	Sn	14 19 19.5	+0.2
HOMB				IAML		14 19 23.5	
	comp=Z,254nm,0.1s						
OVD	**Ostervraa, Den**	1.49	73	*i* P	Pn	14 19 02.8	+2.2
OVD				*i* P	Pn	14 19 03.0	+2.4
OVD				*i* S	Sn	14 19 18.9	-1.2
OVD				IAML		14 19 37.6	
	comp=Z,357nm,0.3s						
OVD				IAML		14 19 37.6	
	comp=Z,357nm,0.3s						
OVD	**Ostervraa, Den**	1.49	73	*i* P	Pn	14 19 03.0	+2.4
OVD				IAML		14 19 37.6	
	comp=Z,357nm,0.3s						
ONAU	**Onsala**	2.41	76	*i* P	Pn	14 19 13.0	-0.3
ONAU				*i* P	Pn	14 19 13.0	-0.3
ONAU				S	Sn	14 19 38.8	-4.0
ONAU				*i* S	Sn	14 19 39.2	-3.6
ONAU	**Onsala**	2.41	76	P	Pn	14 19 12.7	-0.5
ONAU				S	Sn	14 19 38.8	-4.0
ONAU	**Onsala**	2.41	76	*i* P	Pn	14 19 13.0	-0.3
ONAU				*e*S	Sn	14 19 40.1	-2.7
BLS5	**Blasjo**	2.60	347	*e*P	Pn	14 19 16.6	+0.8
BLS5				*e*S	Sn	14 19 44.9	-2.6
BLS5				IAML		14 20 06.7	
	comp=Z,52nm,0.5s						
BLS5				IAML		14 20 07.3	
	comp=Z,52nm,0.6s						
BLS5	**Blasjo**	2.60	347	*e*P	Pn	14 19 16.6	+0.8
BLS5				*e*S	Sn	14 19 44.9	-2.6
BLS5				IAML		14 20 06.7	
	comp=Z,52nm,0.5s						
KMY	**Karmoy**	2.63	333	*e*P	Pn	14 19 17.0	+0.7
KMY				*i* S	Sn	14 19 46.4	-1.8
KMY				IAML		14 20 11.4	
	comp=Z,50nm,0.3s						
KMY	**Karmoy**	2.63	333	*e*P	Pn	14 19 17.0	+0.7
KMY				*i* S	Sn	14 19 46.4	-1.8
KMY				IAML		14 20 11.4	
	comp=Z,50nm,0.3s						
HLG	**Helgoland**	2.73	176	*e*Sn	Sn	14 19 46.9	-3.7
FABU	**Falkenberg**	2.81	86	*e*P	Pn	14 19 19.5	+0.8
FABU				*e*P	Pn	14 19 19.5	+0.8
FABU				P	Pn	14 19 19.5	+0.8
FABU	**Falkenberg**	2.81	86	P	Pn	14 19 19.5	+0.8
FABU	**Falkenberg**	2.81	86	*e*P	Pn	14 19 19.5	+0.8
STRU	**Stroemstad**	2.87	40	P	Pn	14 19 19.9	+0.4
STRU				*e*P	Pn	14 19 20.0	+0.4
STRU				*e*P	Pn	14 19 20.0	+0.4
STRU				S	Sn	14 19 50.5	-3.6
STRU				*e*S	Sn	14 19 50.7	-3.4
STRU				*e*S	Sn	14 19 51.3	-2.8
STRU	**Stroemstad**	2.87	40	P	Pn	14 19 19.9	+0.4
STRU				S	Sn	14 19 50.5	-3.6
STRU	**Stroemstad**	2.87	40	*e*P	Pn	14 19 20.0	+0.4
STRU				*e*S	Sn	14 19 50.7	-3.4
VANU	**Vaenersborg**	2.89	55	P	Pn	14 19 20.4	+0.6
VANU				S	Sn	14 19 50.8	-3.8
VANU	**Vaenersborg**	2.89	55	P	Pn	14 19 20.4	+0.6
VANU				S	Sn	14 19 50.8	-3.8
BORU	**Boraas**	2.91	73	P	Pn	14 19 21.0	+0.9
BORU				*e*P	Pn	14 19 21.1	+1.0
BORU				*e*P	Pn	14 19 21.1	+1.0
BORU				S	Sn	14 19 51.0	-4.1
BORU	**Boraas**	2.91	73	P	Pn	14 19 21.0	+0.9
BORU				S	Sn	14 19 51.0	-4.1
BORU	**Boraas**	2.91	73	*e*P	Pn	14 19 21.1	+1.0
KON	**Kongsberg**	2.95	20	Pn	Pn	14 19 21.3	+0.6
KON				Pg	Pb	14 19 28.1	+1.6
KON				Sn	Sn	14 19 53.7	-2.4
KON				Lg	Lg	14 20 04.8	
KONO	**Kongsberg**	2.95	20	*e*P	Pn	14 19 21.4	+0.6
KONO				*e*S	Sn	14 19 53.8	-2.4
KONO				IAML		14 20 16.4	
	comp=Z,39nm,0.6s						
KONO	**Kongsberg**	2.95	20	*e*P	Pn	14 19 21.4	+0.6
KONO				*e*S	Sn	14 19 53.8	-2.4
KONO				IAML		14 20 16.4	
	comp=Z,39nm,0.6s						
ODD1	**Odda**	3.06	351	*e*P	Pn	14 19 23.6	+1.3
ODD1				*e*S	Sn	14 19 56.4	-2.5
ODD1				*i* S	Sn	14 19 56.4	-2.5
ODD1				IAML		14 20 19.1	
	comp=Z,48nm,0.3s						
ODD1	**Odda**	3.06	351	*e*P	Pn	14 19 23.6	+1.3
ODD1				*e*S	Sn	14 19 56.4	-2.5
ODD1				IAML		14 20 19.1	
	comp=Z,48nm,0.3s						
BJUU	**Bjuv**	3.13	103	*e*P	Pn	14 19 24.3	+1.2
BJUU				*e*P	Pn	14 19 24.3	+1.2
BJUU	**Bjuv**	3.13	103	*e*P	Pn	14 19 24.3	+1.2
BSEG	**Bad Segeberg**	3.36	151	*e*Pn	Pn	14 19 25.6	-0.6
GNOU	**Gnosjoe**	3.39	81	P	Pn	14 19 27.4	+0.7
GNOU				S	Sn	14 20 02.8	-4.1
GNOU	**Gnosjoe**	3.39	81	P	Pn	14 19 27.4	+0.7
GNOU				S	Sn	14 20 02.8	-4.1
OSL	**Oslo**	3.46	27	*e*P	Pn	14 19 28.9	+1.3
OSL				*e*S	Sn	14 20 05.1	-3.6
OSL				IAML		14 20 08.8	
	comp=Z,35nm,0.2s						
OSL	**Oslo**	3.46	27	*e*P	Pn	14 19 28.9	+1.3
OSL				*e*S	Sn	14 20 05.1	-3.6
OSL				IAML		14 20 08.8	
	comp=Z,35nm,0.2s						
DEL	**Delary**	3.49	94	P	Pn	14 19 28.6	+0.5
DEL				*e*P	Pn	14 19 29.4	+1.3
DEL				*e*P	Pn	14 19 29.4	+1.3
DEL				S	Sn	14 20 05.7	-3.8
DEL				*e*S	Sn	14 20 06.3	-3.2
DEL				*e*S	Sn	14 20 06.3	-3.2
DEL	**Delary**	3.49	94	P	Pn	14 19 28.6	+0.5
DEL				S	Sn	14 20 05.7	-3.8
DEL	**Delary**	3.49	94	*e*P	Pn	14 19 29.4	+1.3
DEL				*e*S	Sn	14 20 06.3	-3.2
LUNU	**Lund**	3.51	109	*e*P	Pn	14 19 28.6	+0.3
LUNU				*e*P	Pn	14 19 28.6	+0.3
LUNU	**Lund**	3.51	109	*e*P	Pn	14 19 28.6	+0.3
FINU	**Finntorp**	3.61	44	P	Pn	14 19 30.3	+0.6
FINU	**Finntorp**	3.61	44	P	Pn	14 19 30.3	+0.6
NASU	**Vaermlandsnaes**	3.61	53	P	Pn	14 19 30.5	+0.8
NASU	**Vaermlandsnaes**	3.61	53	P	Pn	14 19 30.5	+0.8
SKAR	**Skarslia**	3.81	5	*e*P	Pn	14 19 34.0	+1.5
SKAR				*e*S	Sn	14 20 15.6	-1.7
SKAR				IAML		14 20 45.8	
	comp=Z,30nm,0.3s						
SKAR	**Skarslia**	3.81	5	*e*P	Pn	14 19 34.0	+1.5
SKAR				*e*S	Sn	14 20 15.6	-1.7
SKAR				IAML		14 20 45.8	
	comp=Z,30nm,0.3s						
VXJU	**Vaexsjoe**	4.03	87	P	Pn	14 19 36.0	+0.5
VXJU	**Vaexsjoe**	4.03	87	P	Pn	14 19 36.0	+0.5
HYA	**Hoyanger**	4.34	351	*e*P	Pn	14 19 40.8	+1.2
HYA				*e*S	Sn	14 20 27.5	-2.7
HYA				IAML		14 21 02.7	
	comp=Z,14nm,0.4s						
HYA	**Hoyanger**	4.34	351	*e*P	Pn	14 19 40.8	+1.2
HYA				*e*S	Sn	14 20 27.5	-2.7
HYA				IAML		14 21 02.7	
	comp=Z,14nm,0.4s						
NC602	**NORSAR Array S**	4.36	26	*e*P	Pn	14 19 39.8	-0.3
NC602				*e*S	Sn	14 20 25.6	-5.3
NC602				IAML		14 20 30.1	
	comp=Z,30nm,0.5s						
NC602				IAML		14 20 30.3	
	comp=Z,30nm,0.4s						
NC602	**NORSAR Array S**	4.36	26	*e*P	Pn	14 19 39.8	-0.3
NC602				*e*S	Sn	14 20 25.6	-5.3
NC602				IAML		14 20 30.1	
	comp=Z,30nm,0.5s						
NRA0	**NORESS Array S**	4.36	26	Pn	Pn	14 19 39.7	-0.4
	baz=210,slow=14						
NRA0				Sn	Sn	14 20 25.5	-5.4
	baz=208,slow=22						
NRA0	**NORESS Array S**	4.36	26	Pn	Pn	14 19 39.7	-0.4
	baz=210,slow=14						
NRA0				Sn	Sn	14 20 25.5	-5.4
	baz=208,slow=22						
NRA0	**NORESS Array S**	4.36	26	Pn	Pn	14 19 39.7	-0.4
	baz=210,slow=14						
NRA0				Sn	Sn	14 20 25.5	-5.4
	baz=208,slow=22						
BSD	**Bornholm Skovb**	4.49	110	*e*P	Pn	14 19 41.0	-0.8
BSD				*e*P	Pn	14 19 41.0	-0.8
BSD				IAML		14 21 08.1	
	comp=Z,9.7nm,0.4s						
BSD				IAML		14 21 08.1	
	comp=Z,9.7nm,0.4s						
BSD	**Bornholm Skovb**	4.49	110	*e*P	Pn	14 19 41.0	-0.8
BSD				IAML		14 21 08.1	
	comp=Z,9.7nm,0.4s						
NB2	**NORSAR Subarra**	4.55	23	Pn	Pn	14 19 43.0	+0.2
	baz=203,slow=14						
NB2				Sn	Sn	14 20 33.7	-2.0
NB2	**NORSAR Subarra**	4.55	23	Pn	Pn	14 19 43.0	+0.2

	baz=203,slow=14						
NB2				Sn	**Sn**	**14 20 33.7**	**-2.0**
NB2	**NORSAR Subarra**	**4.55**	**23**	Pn	**Pn**	**14 19 43.0**	**+0.2**
	baz=203,slow=14						
NB2				Sn	**Sn**	**14 20 33.7**	**-2.0**
NOA	**NORSAR Array B**	**4.55**	**23**	Pn	**Pn**	**14 19 42.7**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=205,slow=13,SNR=1.8						
NOA				Sn	**Sn**	**14 20 31.1**	**-4.6**
	comp=Z,0.2nm,0.3s,baz=206,slow=21,SNR=5.3						
NOA				Lg	Lg	14 20 56.7	
	comp=Z,0.5nm,0.3s,baz=188,slow=19,SNR=2.6						
HFS	**Hagfors**	**4.56**	**42**	Pn	**Pn**	**14 19 42.9**	**+0.2**
	comp=Z,1.2nm,0.3s,baz=222,slow=13,SNR=36						
HFS				Sn	Sn	14 20 29.8	-5.8
	comp=Z,7.1nm,0.3s,baz=216,slow=25,SNR=13						
HFS				Lg	Lg	14 20 57.9	
	comp=Z,3.5nm,0.3s,baz=225,slow=24,SNR=2.3						
HFS	**Hagfors**	**4.56**	**42**	Pn	**Pn**	**14 19 43.0**	**+0.2**
	baz=225,slow=14						
HFS				Sn	**Sn**	**14 20 30.1**	**-5.5**
	baz=221,slow=28						
HFS	**Hagfors**	**4.56**	**42**	Pn	**Pn**	**14 19 43.0**	**+0.2**
	baz=225,slow=14						
HFS				Sn	**Sn**	**14 20 30.1**	**-5.5**
	baz=221,slow=28						
HFS	**Hagfors**	**4.56**	**42**	Pn	**Pn**	**14 19 43.0**	**+0.2**
	baz=225,slow=14						
HFS				Sn	**Sn**	**14 20 30.1**	**-5.5**
	baz=221,slow=28						
BLEU	**Blekinge**	**4.59**	**94**	*e*P	**Pn**	**14 19 43.7**	**+0.6**
BLEU				*e*P	**Pn**	**14 19 43.7**	**+0.6**
BLEU	**Blekinge**	**4.59**	**94**	*e*P	**Pn**	**14 19 43.7**	**+0.6**
NRDL	**Niedersach Rie**	**4.65**	**161**	*e*Pn	**Pn**	**14 19 43.2**	**-0.8**
NRDL				*e*Pg	**Pb**	**14 19 58.6**	**+3.2**
NRDL				*e*Sn	Sn	14 20 29.7	-8.3
NC204	**NORSAR Array S**	**4.68**	**19**	*e*P	**Pn**	**14 19 44.9**	**+0.3**
NC204				*e*S	**Sn**	**14 20 35.3**	**-3.6**
NC204				IAML		14 21 10.7	
	comp=Z,24nm,0.5s						
NC204	**NORSAR Array S**	**4.68**	**19**	*e*P	**Pn**	**14 19 44.9**	**+0.3**
NC204				*e*S	**Sn**	**14 20 35.3**	**-3.6**
NC204				IAML		14 21 10.7	
	comp=Z,24nm,0.5s						
FOO	**Floro**	**4.89**	**346**	*e*P	**Pn**	**14 19 47.6**	**+0.4**
FOO				IAML		14 21 21.8	
	comp=Z,12nm,0.5s						
FOO	**Floro**	**4.89**	**346**	*e*P	**Pn**	**14 19 47.6**	**+0.4**
FOO				IAML		14 21 21.8	
	comp=Z,12nm,0.5s						
FLTG	**Flechtingen**	**5.05**	**154**	*e*Sn	Sn	14 20 40.2	-7.6
ASSE	**Asse, Remlinge**	**5.11**	**158**	*e*Sn	Sn	14 20 41.8	-7.4
DOMB	**Dombas**	**5.21**	**8**	*e*P	**Pn**	**14 19 53.7**	**+1.9**
DOMB				*e*S	**Sn**	**14 20 48.4**	**-3.5**
DOMB				IAML		14 21 27.8	
	comp=Z,28nm,0.5s						
DOMB	**Dombas**	**5.21**	**8**	*e*P	**Pn**	**14 19 53.7**	**+1.9**
DOMB				*e*S	**Sn**	**14 20 48.4**	**-3.5**
DOMB				IAML		14 21 27.8	
	comp=Z,28nm,0.5s						
AKN	**Aaknes**	**5.30**	**357**	Pn	**Pn**	**14 19 53.7**	**+0.8**
AKN				Sn	**Sn**	**14 20 51.3**	**-2.7**
AKN	**Aaknes**	**5.30**	**357**	Pn	**Pn**	**14 19 53.7**	**+0.8**
AKN				Sn	**Sn**	**14 20 51.3**	**-2.7**
AKN	**Aaknes**	**5.30**	**357**	Pn	**Pn**	**14 19 53.7**	**+0.8**
AKN				Sn	**Sn**	**14 20 51.3**	**-2.7**
CLZ	**Clausthal**	**5.33**	**161**	*e*Pn	**Pn**	**14 19 52.2**	**-1.2**
CLZ				*e*Sn	Sn	14 20 47.3	-7.5
GDLE	**Glaisdale, N Y**	**5.37**	**246**	*e*P	**Pn**	**14 19 53.6**	**-0.2**
GDLE				*e*S	Sn	14 20 50.3	-5.3
GDLE				IAML		14 20 54.0	
	comp=E,54nm,0.3s						
GDLE				IAML		14 20 54.0	
	comp=N,107nm,0.3s						
GDLE	**Glaisdale, N Y**	**5.37**	**246**	*e*P	**Pn**	**14 19 53.6**	**-0.2**
GDLE				*e*S	**Sn**	**14 20 50.9**	**-4.7**
GDLE				IAML		14 20 54.0	
	comp=E,54nm,0.3s						
GDLE				IAML		14 20 54.0	
	comp=N,107nm,0.3s						
GDLE	**Glaisdale, N Y**	**5.37**	**246**	*e*P	**Pn**	**14 19 53.6**	**-0.2**
GDLE				*e*S	**Sn**	**14 20 50.9**	**-4.7**
GDLE				IAML		14 20 54.0	
	comp=E,54nm,0.3s						
BUG	**Bochum--Univer**	**5.48**	**182**	*e*Sn	Sn	14 20 51.6	-6.8
DRUM	**Mains of Drumt**	**5.52**	**274**	*e*P	**Pn**	**14 19 56.2**	**+0.3**
DRUM				*e*S	Sn	14 20 53.7	-5.7
DRUM				IAML		14 20 56.8	
	comp=E,55nm,0.6s						
DRUM				IAML		14 20 57.4	
	comp=N,48nm,0.4s						
DRUM	**Mains of Drumt**	**5.52**	**274**	*e*P	**Pn**	**14 19 56.3**	**+0.3**
DRUM				*e*S	Sn	14 20 53.3	-6.1
DRUM				IAML		14 20 56.8	
	comp=E,55nm,0.6s						
DRUM				IAML		14 20 57.4	
	comp=N,48nm,0.4s						
DRUM	**Mains of Drumt**	**5.52**	**274**	*e*P	**Pn**	**14 19 56.3**	**+0.3**
DRUM				*e*S	Sn	14 20 53.3	-6.1
DRUM				IAML		14 20 56.8	
	comp=E,55nm,0.6s						
GTTG	**Gottingen**	**5.55**	**164**	*e*Sn	Sn	14 20 53.4	-6.7
LRW	**Lerwick**	**5.62**	**309**	*e*P	**Pn**	**14 19 58.0**	**+0.8**
LRW				*e*S	**Sn**	**14 20 58.5**	**-3.3**
LRW				IAML		14 21 09.2	
	comp=Z,6.8nm,0.6s						
LRW	**Lerwick**	**5.62**	**309**	*e*P	**Pn**	**14 19 58.0**	**+0.8**
LRW				*e*S	**Sn**	**14 20 58.5**	**-3.3**
LRW				IAML		14 21 09.2	
	comp=Z,6.8nm,0.6s						
MOL	**Molde**	**5.69**	**360**	*e*P	**Pn**	**14 19 58.6**	**+0.5**
MOL				*e*S	**Sn**	**14 21 00.7**	**-2.7**
MOL				IAML		14 21 46.6	
	comp=Z,16nm,0.8s						
MOL	**Molde**	**5.69**	**360**	*e*P	**Pn**	**14 19 58.6**	**+0.5**
MOL				*e*S	**Sn**	**14 21 00.7**	**-2.7**
MOL				IAML		14 21 46.6	
	comp=Z,16nm,0.8s						
KASTN	**Kahler Asten**	**5.73**	**175**	*e*Sn	Sn	14 20 56.9	-7.8
ESY	**Stoneypath**	**5.75**	**264**	*e*P	**Pn**	**14 19 58.9**	**-0.2**
ESY	**Stoneypath**	**5.75**	**264**	*e*P	**Pn**	**14 19 58.9**	**-0.2**
ESY	**Stoneypath**	**5.75**	**264**	*e*P	**Pn**	**14 19 58.9**	**-0.2**
EDMD	**Edmundbyers**	**5.76**	**253**	*e*P	**Pn**	**14 19 58.8**	**-0.5**
EDMD				*e*S	Sn	14 20 59.6	-5.8
EDMD				IAML		14 21 02.0	
	comp=N,109nm,0.3s						
EDMD				IAML		14 21 02.4	
	comp=E,73nm,0.2s						
EDMD	**Edmundbyers**	**5.76**	**253**	*e*P	**Pn**	**14 19 58.8**	**-0.5**
EDMD				*e*S	Sn	14 20 58.5	-6.9
EDMD				IAML		14 21 02.0	
	comp=N,109nm,0.3s						
EDMD				IAML		14 21 02.4	
	comp=E,73nm,0.2s						
EDMD	**Edmundbyers**	**5.76**	**253**	*e*P	**Pn**	**14 19 58.8**	**-0.5**
EDMD				*e*S	Sn	14 20 58.5	-6.9
EDMD				IAML		14 21 02.0	
	comp=N,109nm,0.3s						
EDU	**Dundee**	**5.85**	**271**	*e*P	**Pn**	**14 20 00.7**	**+0.3**
EDU	**Dundee**	**5.85**	**271**	*e*P	**Pn**	**14 20 00.7**	**+0.3**
MCD	**Coleburn Disti**	**5.93**	**281**	*e*P	**Pn**	**14 20 01.6**	**+0.1**
MCD	**Coleburn Disti**	**5.93**	**281**	*e*P	**Pn**	**14 20 01.6**	**+0.1**
MCD	**Coleburn Disti**	**5.93**	**281**	*e*P	**Pn**	**14 20 01.6**	**+0.1**
HPK	**Haverah Park**	**6.01**	**244**	*e*P	**Pn**	**14 20 02.5**	**-0.2**
HPK				*e*S	Sn	14 21 05.8	-5.8
HPK				IAML		14 21 09.8	
	comp=N,46nm,0.2s						
HPK				IAML		14 21 11.1	
	comp=E,56nm,0.2s						
HPK	**Haverah Park**	**6.01**	**244**	*e*P	**Pn**	**14 20 02.5**	**-0.2**
HPK				*e*S	Sn	14 21 05.8	-5.8
HPK				IAML		14 21 09.8	
	comp=N,46nm,0.2s						
HPK				IAML		14 21 11.1	
	comp=E,56nm,0.2s						
HPK	**Haverah Park**	**6.01**	**244**	*e*P	**Pn**	**14 20 02.5**	**-0.2**
HPK				*e*S	Sn	14 21 05.8	-5.8
HPK				IAML		14 21 09.8	
	comp=N,46nm,0.2s						
EBL	**Broad Law**	**6.02**	**264**	*e*P	**Pn**	**14 20 02.5**	**-0.4**
EBL	**Broad Law**	**6.02**	**264**	*e*P	**Pn**	**14 20 02.5**	**-0.4**
EDI	**Edinburgh**	**6.06**	**265**	*e*P	**Pn**	**14 20 03.5**	**+0.1**
EDI	**Edinburgh**	**6.06**	**265**	*e*P	**Pn**	**14 20 02.5**	**-0.9**
EDI	**Edinburgh**	**6.06**	**265**	*e*P	**Pn**	**14 20 02.5**	**-0.9**
EKA	**Eskdalemuir Ar**	**6.21**	**260**	Pn	**Pn**	**14 20 04.7**	**-0.8**
	baz=75,slow=13,SNR=55						
EKA				Sn	Sn	14 21 08.8	-7.7
	baz=79,slow=24,SNR=11						
EKA	**Eskdalemuir Ar**	**6.21**	**260**	Pn	**Pn**	**14 20 04.8**	**-0.6**
EKA				Sn	**Sn**	**14 21 17.3**	**+0.8**
EKA	**Eskdalemuir Ar**	**6.21**	**260**	Pn	**Pn**	**14 20 04.8**	**-0.6**
EKA				Sn	**Sn**	**14 21 17.3**	**+0.8**
EKA	**Eskdalemuir Ar**	**6.21**	**260**	Pn	**Pn**	**14 20 04.8**	**-0.6**
EKA				Sn	**Sn**	**14 21 17.3**	**+0.8**
UBBA	**Unterbreizbach**	**6.26**	**166**	*e*Sn	Sn	14 21 09.2	-8.3
BIGH	**Upper Bighouse**	**6.37**	**289**	*e*P	**Pn**	**14 20 07.7**	**+0.2**
BIGH				*e*S	Sn	14 21 12.9	-7.3
BIGH	**Upper Bighouse**	**6.37**	**289**	*e*P	**Pn**	**14 20 07.7**	**+0.2**
BIGH				*e*S	Sn	14 21 12.9	-7.3
AHRW	**Bad Neuenahr-A**	**6.38**	**183**	*e*Sn	Sn	14 21 14.0	-6.6
LBWR	**Ladybower, Pea**	**6.38**	**241**	*e*P	**Pn**	**14 20 07.7**	**-0.1**
LBWR				*e*S	Sn	14 21 14.1	-6.7
LBWR				IAML		14 21 17.2	
	comp=E,48nm,0.3s						
LBWR				IAML		14 21 17.9	
	comp=N,45nm,0.2s						
LBWR	**Ladybower, Pea**	**6.38**	**241**	*e*P	**Pn**	**14 20 07.7**	**-0.1**
LBWR				*e*S	Sn	14 21 14.1	-6.7
LBWR				IAML		14 21 17.2	
	comp=E,48nm,0.3s						
LBWR				IAML		14 21 17.9	
	comp=N,45nm,0.2s						
LBWR	**Ladybower, Pea**	**6.38**	**241**	*e*P	**Pn**	**14 20 07.7**	**-0.1**
LBWR				*e*S	Sn	14 21 14.1	-6.7
LBWR				IAML		14 21 17.9	
	comp=N,45nm,0.2s						
INVG	**Invergeldie, C**	**6.43**	**271**	*e*P	**Pn**	**14 20 08.5**	**0.0**
INVG				IAML		14 21 20.6	
	comp=E,9.4nm,0.7s						
INVG				IAML		14 21 21.6	
	comp=N,8.1nm,0.3s						
INVG	**Invergeldie, C**	**6.43**	**271**	*e*P	**Pn**	**14 20 08.5**	**0.0**
INVG				IAML		14 21 20.6	
	comp=E,9.4nm,0.7s						
INVG				IAML		14 21 21.6	
	comp=N,8.1nm,0.3s						
INVG	**Invergeldie, C**	**6.43**	**271**	*e*P	**Pn**	**14 20 08.5**	**0.0**
INVG				IAML		14 21 20.6	
	comp=E,9.4nm,0.7s						
CLL	**Collm**	**6.45**	**148**	*i* Pn	**Pn**	**14 20 08.2**	**-0.5**
CLL				*i* Pg	Pb	14 20 32.4	+6.5
CLL				*i* Sn	Sn	14 21 13.6	-8.6
KESW	**Keswick, Cumbr**	**6.47**	**253**	*e*P	**Pn**	**14 20 08.1**	**-0.8**
KESW				IAML		14 21 18.6	
	comp=N,12nm,0.5s						
KESW				IAML		14 21 18.7	
	comp=E,23nm,0.9s						
KESW	**Keswick, Cumbr**	**6.47**	**253**	*e*P	**Pn**	**14 20 08.1**	**-0.8**
KESW				IAML		14 21 18.7	
	comp=E,23nm,0.9s						
TNS	**Taunus Mts**	**6.71**	**175**	*e*Pn	**Pn**	**14 20 11.9**	**-0.5**
TNS				*e*Sn	Sn	14 21 20.8	-8.1
PGBU	**Glenifferbraes**	**6.80**	**266**	*e*P	**Pn**	**14 20 13.5**	**+0.1**
PGBU	**Glenifferbraes**	**6.80**	**266**	*e*P	**Pn**	**14 20 13.5**	**+0.1**
PGBU	**Glenifferbraes**	**6.80**	**266**	*e*P	**Pn**	**14 20 13.5**	**+0.1**
NEWG	**New Galloway**	**6.86**	**260**	*e*P	**Pn**	**14 20 14.3**	**-0.1**
NEWG				IAML		14 21 28.7	
	comp=N,5.5nm,0.4s						
NEWG				IAML		14 21 29.3	
	comp=E,7.3nm,0.5s						
NEWG	**New Galloway**	**6.86**	**260**	*e*P	**Pn**	**14 20 14.3**	**-0.1**
NEWG				IAML		14 21 29.3	
	comp=E,7.3nm,0.5s						
GIVF	**Givet**	**7.01**	**195**	*e*P	**Pn**	**14 20 19.8**	**+3.4**
GIVF				*e*Sn	Sn	14 21 29.4	-6.7
	comp=E,16nm,0.3s						
BAIF	**Baives**	**7.14**	**198**	*e*Pn	**Pn**	**14 20 17.3**	**-1.0**
BAIF				*e*Sn	Sn	14 21 32.6	-6.8
	comp=E,6.0nm,0.3s						
LAWE	**Loch Awe, Argy**	**7.20**	**270**	*e*P	**Pn**	**14 20 19.0**	**0.0**
LAWE	**Loch Awe, Argy**	**7.20**	**270**	*e*P	**Pn**	**14 20 19.0**	**0.0**
LAWE	**Loch Awe, Argy**	**7.20**	**270**	*e*P	**Pn**	**14 20 19.0**	**0.0**
GAL1	**Galloway**	**7.21**	**259**	*e*P	**Pn**	**14 20 18.5**	**-0.7**
GAL1	**Galloway**	**7.21**	**259**	*e*P	**Pn**	**14 20 18.5**	**-0.7**
GAL1	**Galloway**	**7.21**	**259**	*e*P	**Pn**	**14 20 18.5**	**-0.7**
KPL	**Plockton**	**7.22**	**279**	*e*P	**Pn**	**14 20 19.1**	**-0.2**
KPL				*e*S	Sn	14 21 34.4	-6.9
KPL	**Plockton**	**7.22**	**279**	*e*P	**Pn**	**14 20 19.1**	**-0.2**
KPL				*e*S	Sn	14 21 34.4	-6.9
HLM1	**Long Mynd**	**7.48**	**238**	*e*P	**Pn**	**14 20 22.6**	**-0.3**
HLM1				IAML		14 21 43.9	
	comp=E,13nm,0.2s						
HLM1				IAML		14 21 44.1	
	comp=N,13nm,0.4s						
HLM1	**Long Mynd**	**7.48**	**238**	*e*P	**Pn**	**14 20 22.6**	**-0.3**
HLM1				IAML		14 21 43.9	
	comp=E,13nm,0.2s						
LLW	**Llanuwychllyn**	**7.65**	**243**	*e*P	**Pn**	**14 20 24.9**	**-0.3**
LLW	**Llanuwychllyn**	**7.65**	**243**	*e*P	**Pn**	**14 20 24.9**	**-0.3**
PAGF	**Fort de Pagny**	**8.44**	**188**	*e*Pn	Pn	14 20 34.2	-1.8
CDF	**Champ du Feu**	**8.51**	**181**	*e*Pn	**Pn**	**14 20 36.7**	**-0.3**
CDF				*e*Sn	Sn	14 22 06.3	-6.8
	comp=E,1.4nm,0.3s						
GERES	**GERESS Array B**	**8.87**	**153**	Pn	**Pn**	**14 20 43.6**	**+1.5**
	comp=E,1.2nm,0.3s,baz=339,slow=14,SNR=3.7						
FLN	**La Foliniere**	**9.50**	**214**	*e*Pn	Pn	14 20 48.4	-2.1
FLN				*e*Sn	Sn	14 22 28.3	-8.9
	comp=E,5.5nm,0.3s						
LDF	**La Druitiere**	**9.54**	**213**	*e*Pn	Pn	14 20 49.4	-1.7
LDF				*e*Sn	Sn	14 22 29.9	-8.3
	comp=E,4.3nm,0.3s						
LOR	**Lormes**	**9.92**	**195**	*e*Pn	Pn	14 20 54.4	-1.9
	baz=21						
LOR				*e*Sn	Sn	14 22 38.4	-9.1
	comp=E,1.9nm,0.2s						
GRR	**Gorron**	**9.94**	**215**	*e*Pn	Pn	14 20 54.4	-2.2
GRR				*e*Sn	Sn	14 22 40.3	-7.9
	comp=E,6.3nm,0.3s						
SSF	**Saint Saulge**	**10.17**	**196**	*e*Pn	Pn	14 20 57.9	-1.8
SSF				*e*Sn	Sn	14 22 44.3	-9.4
	comp=E,2.1nm,0.2s						
FIA0	**FINESS Array S**	**10.51**	**57**	Pn	**Pn**	**14 21 04.2**	**-0.1**
	baz=249,slow=12						
FIA0				Sn	Sn	14 22 52.7	-9.2
	baz=262,slow=22						
FIA0	**FINESS Array S**	**10.51**	**57**	Pn	**Pn**	**14 21 04.2**	**-0.1**
	baz=249,slow=12						
FIA0				Sn	Sn	14 22 52.7	-9.2
	baz=262,slow=22						
FIA0	**FINESS Array S**	**10.51**	**57**	Pn	**Pn**	**14 21 04.2**	**-0.1**
	baz=249,slow=12						
FIA0				Sn	Sn	14 22 52.7	-9.2
	baz=262,slow=22						
FINES	**FINESS Array B**	**10.51**	**57**	Pn	**Pn**	**14 21 04.1**	**-0.2**
	comp=E,1.0nm,0.3s,baz=251,slow=12,SNR=34						
FINES				Sn	Sn	14 22 53.1	-8.8
	comp=E,1.3nm,0.3s,baz=263,slow=22,SNR=13						
FINES				Lg	Lg	14 24 05.2	
	comp=E,0.4nm,0.3s,baz=249,slow=30,SNR=2.3						
SGMF	**Saint Gilles**	**10.62**	**220**	*e*Pn	Pn	14 21 03.7	-2.2
SGMF				*e*Sn	Sn	14 22 56.6	-8.2
	comp=E,2.3nm,0.2s						
ROSF	**Rostrenen**	**10.81**	**222**	*e*Pn	Pn	14 21 05.3	-3.2
ROSF				*e*Sn	Sn	14 22 58.7	-11
	comp=E,3.0nm,0.2s						
QUIF	**Quistinic**	**11.12**	**221**	*e*Pn	Pn	14 21 09.7	-3.1
QUIF				*e*Sn	Sn	14 23 05.9	-11
	comp=E,2.9nm,0.4s						
MFF	**Saint Martin d**	**11.36**	**208**	*e*Pn	Pn	14 21 14.1	-1.9
MFF				*e*Sn	Sn	14 23 13.7	-9.3
	comp=E,2.2nm,0.3s						
ARCES	**ARCESS Array B**	**14.93**	**25**	Pn	Pn	14 22 01.9	-2.7
	baz=216,slow=14,SNR=2.2						
ARCES				Sn	Sn	14 24 34.7	-15
	baz=216,slow=22,SNR=1.3						
MKAR	**Makanchi Array**	**45.02**	**70**	P	**P**	**14 26 49.7**	**+0.6**
	comp=E,0.3nm,0.5s,baz=309,slow=6.8,SNR=2.5						

NOU 19 14:23:27.0, 21°.17S×169°.70E, h0^{km}, MLv3.7/12, Southeast of Loyalty Islands, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**1.59**	**258**	P	Pn	14 23 56.0	-0.4
LIFNC	**LIFOU**	**2.33**	**279**	P	Pn	14 24 05.2	-1.4
PINNC	**Pines Island,**	**2.54**	**235**	P	Pn	14 24 09.0	-0.5
YATNC	**Mamie plateau,**	**2.76**	**251**	P	Pn	14 24 11.7	-0.8
OUENC	**Ouen Island, N**	**2.93**	**244**	P	Pn	14 24 15.2	+0.3
DZM	**Mont Dzumac**	**3.16**	**253**	P	Pn	14 24 18.4	+0.3
ONTNC	**Ouen Toro**	**3.22**	**249**	P	Pn	14 24 19.1	+0.2
NOUC	**Port Laguerre**	**3.29**	**253**	P	Pn	14 24 20.1	+0.2
KOUNC	**Koumac, New Ca**	**5.10**	**276**	P	Pn	14 24 45.5	+0.8

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*NEIC **19** 14:24:58.9±1.2, 36°.10N±0°.01×97°.55W±0°.04, h3^{km}±8^{km}, Error ellipse: s-maj=4.9km s-min=1.5km az=83.0*

*TUL **19** 14:24:58.8±1.2, 36°.08N±0°.02×97°.57W±0°.05, h4^{km}±7^{km}, ML4.0, mb_Lg4.0/117(NEIC), Mwr3.7/29(NEIC), Error ellipse: s-maj=6.6km s-min=2.4km az=65.0*

*NEIC **19** 14:24:58.8, 36°.08N×97°.57W, h5^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M$_{rr}$0.07; M$_{\theta\theta}$3.54; M$_{\phi\phi}$-3.61; M$_{r\theta}$-1.15; M$_{\theta\phi}$-0.27; M$_{\phi r}$0.65; Fault plane solution: M$_0$3.82000×10^{14} NP1:φ$_s$226.11000°, δ71.02000°, λ174.42000°. NP2:φ$_s$317.93000°, δ84.72000°, λ19.06000°. Principal axes: T 3.9066, Plg17.0000°, Azm184.0000°; N -0.1869, Plg70.0000°, Azm333.0000°; P -3.7197, Plg9.0000°, Azm91.0000°;*

*ANF **19** 14:24:59.4±0.3, 36°.02N×97°.57W, h3^{km}, ML5.0/16 Error ellipse: s-maj=3.6km s-min=2.6km az=178.0*

*IDC **19** 14:24:59.0±1.0, 36°.11N×97°.68W, h0^{km}, mb3.3/1, mb1 3.8/7, mb1mx3.5/50, mbtmp3.5/7, ML3.5/6, Error ellipse: s-maj=13.5km s-min=11.3km az=125.0*

ISC 19 14:24:58.1±0.6, 36°.12N±0°.02×97°.62W±0°.02, h10^{km}, n174, σ1^s.84/181, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK029	**Liberty Lake**	**0.35**	**158**	Pg	**Pg**	**14 25 04.9**	**-0.1**
OK029				Sg	**Sg**	**14 25 09.3**	**-0.4**
BCOK	**Bluff Creek, N**	**0.47**	**179**	Pg	**Pb**	**14 25 07.2**	**-1.1**
BCOK				Sg	**Sg**	**14 25 13.3**	**0.0**
CROK	**Carrier**	**0.48**	**322**	Pg	**Pn**	**14 25 09.5**	**-1.6**
OK009	**Oakdale Elemen**	**0.56**	**164**		**Pb**	**14 25 09.0**	**-1.0**
OK005	**Luther M Schoo**	**0.58**	**143**		**Pb**	**14 25 09.4**	**-0.9**
OK031	**S. Brethren Rd**	**0.65**	**105**		**Pb**	**14 25 10.8**	**-0.8**
OK030	**Cody Creek RV**	**0.70**	**106**		**Pb**	**14 25 11.7**	**-0.7**
BLOK	**Blackwell**	**0.71**	**27**		**Pn**	**14 25 13.1**	**-1.1**
OKCFA	**Oklahoma City**	**0.72**	**169**		**Pg**	**14 25 11.7**	**-0.2**
OKCFA				IAmb_Lg		14 25 21.6	
	comp=Z,2µm,0.9s						
OKCFA	**Oklahoma City**	**0.72**	**169**	P	**Pg**	**14 25 11.8**	**-0.2**
	baz=351,SNR=51						
OKCFA				S	**Sg**	**14 25 21.1**	**-0.3**
	baz=351						
OKCSW	**OKLAHOMA CITY**	**0.73**	**168**	Pg	**Pb**	**14 25 12.0**	**-0.9**
QUOK	**Quay**	**0.74**	**86**	Pg	**Pb**	**14 25 12.6**	**-0.4**
GC02	**Grant County #**	**0.75**	**345**	Pg	**Pn**	**14 25 14.2**	**-0.6**
OK032	**Salt Plains WL**	**0.83**	**325**		**Pn**	**14 25 15.7**	**-0.1**
KAN14	**Manchester OK**	**0.88**	**342**		**Pn**	**14 25 16.5**	**0.0**
FNO	**Franklin**	**0.88**	**168**	Pg	**Pg**	**14 25 14.6**	**-0.4**
KAN13	**South Haven SW**	**0.90**	**7**		**Pn**	**14 25 16.6**	**-0.1**
KAN17	**Caldwell West**	**0.93**	**353**	Pg	**Pn**	**14 25 17.1**	**0.0**
OK011	**Prague**	**0.99**	**130**		**Pb**	**14 25 16.7**	**-0.6**
KAN05	**Bluff City Nor**	**1.00**	**348**		**Pn**	**14 25 18.8**	**+0.5**
KAN09	**Caldwell North**	**1.01**	**360**		**Pn**	**14 25 18.8**	**+0.4**
KAN01	**Argonia South**	**1.03**	**354**	Pg	**Pn**	**14 25 19.3**	**+0.6**
KAN10	**Anthony SW Sta**	**1.07**	**339**		**Pn**	**14 25 19.8**	**+0.6**
KAN08	**Anthony NE Sta**	**1.14**	**346**		**Pn**	**14 25 21.2**	**+1.2**
KAN06	**Argonia West S**	**1.14**	**350**		**Pn**	**14 25 21.2**	**+1.1**
U32A	**Winter Ranch,**	**1.15**	**283**		**Pn**	**14 25 21.0**	**+0.8**
U32A	**Winter Ranch,**	**1.15**	**283**	S	**Sn**	**14 25 37.5**	**+1.5**
	baz=104						
KAN16	**Harper SW Stat**	**1.16**	**342**	Pg	**Pn**	**14 25 21.4**	**+1.1**
T35A	**Sooner Cattle**	**1.19**	**48**	Pg	**Pg**	**14 25 21.4**	**+0.4**
T35B	**Sooner Cattle**	**1.19**	**48**	P	**Pg**	**14 25 21.5**	**+0.5**
	baz=226,SNR=396						
T35B				S	**Sn**	**14 25 37.0**	**-0.1**
	baz=226						
KAN12	**Harper NE Stat**	**1.21**	**345**		**Pg**	**14 25 22.5**	**+1.1**
TUL1	**Leonard**	**1.50**	**98**	P	**Pb**	**14 25 25.2**	**-0.8**
	baz=278,SNR=307						
TUL1				S	**Sg**	**14 25 45.9**	**-0.3**
	baz=278						
TUL1	**Leonard**	**1.50**	**98**		**Pb**	**14 25 25.1**	**-0.8**
TUL1				IAmb_Lg		14 25 47.4	
	comp=Z,708nm,0.8s						
TUL1	**Leonard**	**1.50**	**98**	P	**Pb**	**14 25 25.3**	**-0.6**
	baz=278,SNR=149						
TUL1				S	**Sg**	**14 25 45.7**	**-0.5**
	baz=278						
X34A	**Smith Ranch, M**	**1.53**	**187**		**Pg**	**14 25 26.6**	**-0.8**
WMOK	**Wichita Mounta**	**1.68**	**215**	P	**Pb**	**14 25 28.7**	**-0.3**
	baz=36,SNR=58						
WMOK				S	**Sg**	**14 25 51.2**	**-0.8**
	baz=36						
WMOK	**Wichita Mounta**	**1.68**	**215**	Pn	**Pb**	**14 25 28.7**	**-0.3**
WMOK	**Wichita Mounta**	**1.68**	**215**	P	**Pb**	**14 25 28.8**	**-0.3**
	baz=36,SNR=100						
WMOK				S	**Sg**	**14 25 51.0**	**-1.1**
	baz=36						
LOOK	**Love County**	**2.16**	**170**		**Pb**	**14 25 35.7**	**-1.5**
LOOK				IAmb_Lg		14 26 06.3	
	comp=Z,385nm,0.8s						
X37A	**Clayton**	**2.39**	**129**	Pn	**Pb**	**14 25 38.8**	**-2.5**
X37A	**Clayton**	**2.39**	**129**	P	**Pb**	**14 25 38.7**	**-2.5**
	baz=310,SNR=104						
X37A				S	**Sb**	**14 26 09.1**	**-1.6**
	baz=310						
R32A	**Long Quarter,**	**2.46**	**340**	P	**Pb**	**14 25 42.4**	**+0.1**
	baz=159,SNR=87						
U38A	**Gravette**	**2.63**	**82**		**Pn**	**14 25 42.0**	**+1.5**
U38A				IAmb_Lg		14 26 27.5	
	comp=Z,402nm,1.0s						
U38A	**Gravette**	**2.63**	**82**	P	**Pb**	**14 25 42.3**	**-3.0**
	baz=263,SNR=143						
Z35A	**Perchaven, San**	**2.80**	**174**		**Pn**	**14 25 44.8**	**+1.8**
Z35A	**Perchaven, San**	**2.80**	**174**	P	**Pn**	**14 25 44.5**	**+1.6**
	baz=354,SNR=96						
HHAR	**Hobbs**	**2.98**	**86**		**Pn**	**14 25 46.7**	**+1.3**
KSU1	**Kansas State U**	**3.08**	**15**	Pn	**Pb**	**14 25 49.8**	**-3.1**
	baz=195,SNR=22						
KSU1				Pb	**Pg**	**14 25 56.5**	**-0.5**
	baz=195						
KSU1	**Kansas State U**	**3.08**	**15**	Pn	**Pn**	**14 25 49.0**	**+2.3**
KSU1	**Kansas State U**	**3.08**	**15**	P	**Pb**	**14 25 49.9**	**-3.1**
	baz=195,SNR=17						
CBKS	**Cedar Bluff**	**3.17**	**329**	Pn	**Pb**	**14 25 51.9**	**-2.7**
	baz=147,SNR=17						
CBKS				Pb	**Pg**	**14 25 58.3**	**-0.5**
	baz=147						
CBKS				Sb	**Sg**	**14 26 41.4**	**+1.5**
	baz=147						
W39A	**Magazine**	**3.26**	**105**	Pn	**Pn**	**14 25 50.4**	**+1.2**
	baz=287,SNR=22						
W39A				Pb	**Pg**	**14 25 57.4**	**-3.0**
	baz=287						
W39A	**Magazine**	**3.26**	**105**		**Pn**	**14 25 50.6**	**+1.4**
W39A				IAmb_Lg		14 26 45.3	
	comp=Z,468nm,0.9s						
W39A	**Magazine**	**3.26**	**105**	P	**Pn**	**14 25 50.5**	**+1.2**
	baz=287,SNR=26						
W39A				S	**Sn**	**14 26 29.6**	**+1.6**
	baz=287						
AMTX	**Amarillo**	**3.54**	**251**	P	**Pn**	**14 25 55.7**	**+2.5**
	baz=69						
AMTX				Sb	**Sg**	**14 26 49.0**	**-2.7**
	baz=69						
AMTX	**Amarillo**	**3.54**	**251**	Pn	**Pn**	**14 25 55.9**	**+2.7**
AMTX				IAmb_Lg		14 26 52.4	
	comp=Z,359nm,0.8s						
AMTX	**Amarillo**	**3.54**	**251**	P	**Pn**	**14 25 55.8**	**+2.6**
	baz=69,SNR=28						
Z38A	**Mt. Pleasant**	**3.59**	**142**	Pn	**Pn**	**14 25 54.6**	**+0.9**
Z38A				IAmb_Lg		14 26 59.9	
	comp=Z,474nm,0.8s						
MIAR	**Mount Ida**	**3.66**	**114**	P	**Pn**	**14 25 56.0**	**+1.2**
	baz=296,SNR=28						
MIAR				S	**Sn**	**14 26 39.6**	**+1.7**
	baz=296						
MIAR	**Mount Ida**	**3.66**	**114**	Pn	**Pn**	**14 25 56.4**	**+1.7**
MIAR				IAmb_Lg		14 27 02.8	
	comp=Z,204nm,0.7s						
MIAR	**Mount Ida**	**3.66**	**114**	P	**Pn**	**14 25 56.1**	**+1.4**
	baz=296,SNR=94						
S39A	**Bolivar**	**3.78**	**64**	Pn	**Pn**	**14 25 58.2**	**+1.8**
S39A				IAmb_Lg		14 26 58.0	
	comp=Z,616nm,0.9s						
S39A	**Bolivar**	**3.78**	**64**	P	**Pn**	**14 25 58.1**	**+1.7**
	baz=246,SNR=47						
U40A	**Yellville**	**3.86**	**85**	P	**Pn**	**14 25 58.1**	**+0.7**
	baz=267,SNR=62						

U40A	Yellville	3.86	85	Pn	Pn	14 25 58.1	+0.7
U40A				IAmb_Lg		14 27 02.2	
	comp=Z,442nm,1.1s						
U40A	Yellville	3.86	85	P	Pn	14 25 58.2	+0.7
	baz=267,SNR=96						
U40A				P	Pn	14 25 58.2	+0.7
	baz=267,SNR=96						
ABTX	Abilene, Hawle	3.87	206	P	Pn	14 25 59.4	+1.7
	baz=26,SNR=23						
ABTX	Abilene, Hawle	3.87	206		Pn	14 25 58.8	+1.1
WHTX	Lake Whitney,	4.12	178	Pn	Pn	14 26 02.2	+1.0
	baz=359,SNR=6.4						
WHTX				Pb	Pb	14 26 11.8	+1.1
	baz=359						
WHTX				Sb	Sb	14 27 03.8	+3.1
	baz=359						
WHTX	Lake Whitney,	4.12	178		Pn	14 26 02.1	+1.0
WHTX	Lake Whitney,	4.12	178	P	Pn	14 26 02.2	+1.0
	baz=359,SNR=21						
X40A	Basin Creek Fa	4.24	111	Pn	Pn	14 26 04.2	+1.5
	baz=294,SNR=9.7						
X40A				Pb	Pb	14 26 14.0	+1.3
	baz=294						
X40A				Sb	Sg	14 27 08.5	-5.7
	baz=294						
X40A	Basin Creek Fa	4.24	111		Pn	14 26 03.8	+1.1
X40A				IAmb_Lg		14 27 18.6	
	comp=Z,256nm,0.7s						
X40A	Basin Creek Fa	4.24	111	P	Pn	14 26 03.8	+1.1
	baz=294,SNR=18						
X40A				P	Pn	14 26 03.8	+1.1
	baz=294,SNR=18						
237A	Washetta, Mont	4.38	159		Pn	14 26 04.9	+0.3
237A				IAmb_Lg		14 27 13.5	
	comp=Z,412nm,1.3s						
237A	Washetta, Mont	4.38	159	P	Pn	14 26 05.1	+0.5
	baz=341,SNR=10						
WHAR	Wooly Hollow	4.42	99	Pn	Pn	14 26 05.9	+0.8
WHAR				IAmb_Lg		14 27 18.0	
	comp=Z,210nm,0.7s						
MGMO	Mountain Grove	4.42	75		Pn	14 26 06.8	+1.5
MGMO				IAmb_Lg		14 27 25.3	
	comp=Z,379nm,0.9s						
WLAR	White Oak Lake	4.43	122		Pn	14 26 06.5	+1.2
WLAR				IAmb_Lg		14 27 29.7	
	comp=Z,458nm,1.1s						
FCAR	Ozark Folk Cen	4.46	91		Pn	14 26 06.4	+0.6
FCAR				IAmb_Lg		14 27 21.3	
	comp=Z,202nm,0.9s						
W41B	Gary Mavity, V	4.47	101	Pn	Pn	14 26 06.9	+1.0
	baz=283,SNR=12						
W41B				Pb	Pb	14 26 16.9	+0.2
	baz=283						
W41B				Sn	Sn	14 26 58.7	+0.7
	baz=283						
W41B				Sb	Sg	14 27 17.0	-4.7
	baz=283						
W41B	Gary Mavity, V	4.47	101	P	Pn	14 26 06.6	+0.7
	baz=283,SNR=41						
MSTX	Muleshoe	4.74	245	Pn	Pn	14 26 11.8	+1.9
	baz=62						
MSTX				Pb	Pb	14 26 22.0	+0.6
	baz=62,SNR=13						
MSTX				Sb	Sg	14 27 26.3	-4.1
	baz=62						
MSTX	Muleshoe	4.74	245	Pn	Pn	14 26 11.7	+1.9
MSTX				IAmb_Lg		14 27 28.2	
	comp=Z,158nm,0.9s						
MSTX	Muleshoe	4.74	245	P	Pn	14 26 11.7	+1.9
	baz=62,SNR=9.1						
P38A	Dawn	4.76	42		Pn	14 26 12.6	+2.8
P38A				IAmb_Lg		14 27 37.1	
	comp=Z,252nm,0.8s						
R40A	Maddies Statio	4.79	62		Pn	14 26 11.6	+1.4
R40A	Maddies Statio	4.79	62	P	Pn	14 26 11.8	+1.6
	baz=244,SNR=43						
Z41A	Richland Creek	4.89	124	P	Pn	14 26 12.9	+1.3
	baz=307						
Z41A				S	Sn	14 27 07.9	-0.4
	baz=307						
KSCO	Kaye Shedlock’	4.91	307	P	Pn	14 26 16.8	+4.7
	baz=125						
KSCO				Sb	Sg	14 27 34.3	-1.5
	baz=125						
KSCO	Kaye Shedlock’	4.91	307	IAmb_Lg		14 27 49.9	
	comp=Z,183nm,0.8s						
LCAR	Lake Charles	5.23	89	Pn	Pn	14 26 16.5	+0.2
CCAR	Cane Creek	5.28	113	IAmb_Lg		14 27 56.8	
	comp=Z,268nm,0.8s						
BGNE	Belgrade	5.29	356	P	Pn	14 26 18.9	+1.8
	baz=175,SNR=9.4						
BGNE	Belgrade	5.29	356	Pn	Pn	14 26 18.2	+0.9
BGNE				IAmb_Lg		14 27 57.9	
	comp=Z,272nm,0.8s						
BGNE	Belgrade	5.29	356	P	Pn	14 26 19.0	+1.8
	baz=175,SNR=19						
435B	Jarrell	5.33	180	P	Pn	14 26 18.6	+1.0
	baz=0.0						
435B	Jarrell	5.33	180	Pn	Pn	14 26 18.5	+0.8
435B				IAmb_Lg		14 27 54.1	
	comp=Z,192nm,0.8s						
T42A	Van Buren	5.33	78		Pn	14 26 18.4	+0.8
T42A				IAmb_Lg		14 27 53.6	
	comp=Z,179nm,0.8s						
CCM	Cathedral Cave	5.45	67	P	Pn	14 26 21.2	+1.9
	baz=251						
CCM				Sb	Sg	14 27 48.0	-4.9
	baz=251						
CCM	Cathedral Cave	5.45	67	Pn	Pn	14 26 20.7	+1.4
CCM				IAmb_Lg		14 27 53.2	
	comp=Z,363nm,1.0s						
T25A	Trinidad	5.56	283	Pn	Pn	14 26 22.8	+1.8
	baz=99,SNR=9.0						
T25A				Pb	Pg	14 26 40.5	-4.0
	baz=99						
T25A	Trinidad	5.56	283		Pn	14 26 22.1	+1.1
T25A				IAmb_Lg		14 28 10.8	
	comp=Z,239nm,1.0s						
P40A	Paris	5.57	51		Pn	14 26 22.9	+2.0
N38A	Joes South For	5.79	35	Pn	Pn	14 26 25.9	+1.8
N38A	Joes South For	5.79	35	P	Pn	14 26 25.7	+1.6
	baz=217,SNR=9.0						
PBMO	Poplar Bluff	5.83	81	IAmb_Lg		14 28 04.7	
	comp=Z,312nm,0.8s						
JCT	Junction City	5.92	199	P	Pn	14 26 26.1	+0.2
	baz=18						
JCT				Sb	Sg	14 28 02.1	-6.0
	baz=18						
JCT	Junction City	5.92	199	Pn	Pn	14 26 25.9	0.0
JCT				IAmb_Lg		14 28 16.4	
	comp=Z,325nm,0.9s						
OGNE	Ogallala	5.93	326	P	Pn	14 26 29.4	+3.4
	baz=143,SNR=5.4						
OGNE				Sb	Sg	14 28 05.8	-2.5
	baz=143						
OGNE	Ogallala	5.93	326	Pn	Pn	14 26 28.8	+2.8
OGNE	Ogallala	5.93	326	P	Pn	14 26 29.1	+3.1
	baz=143,SNR=7.4						
LPAR	Lepanto	5.96	93	IAmb_Lg		14 28 22.5	
	comp=Z,328nm,1.0s						
FVM	French Village	6.04	70	Pn	Pn	14 26 28.6	+1.1
FVM				IAmb_Lg		14 28 11.3	
	comp=Z,303nm,0.8s						
FVM	French Village	6.04	70	P	Pn	14 26 28.4	+0.9
	baz=254,SNR=10						
143A	Socs Landing,	6.17	122	IAmb_Lg		14 28 26.6	
	comp=Z,200nm,0.9s						
PARMO	Parma	6.37	83	IAmb_Lg		14 28 32.4	
	comp=Z,285nm,0.7s						
SLM	Saint Louis	6.39	65	IAmb_Lg		14 28 26.2	
	comp=Z,295nm,0.8s						
PVMO	Portageville	6.40	85	IAmb_Lg		14 28 27.3	
	comp=Z,301nm,0.8s						
PENMO	Penman	6.46	85	IAmb_Lg		14 28 22.9	
	comp=Z,239nm,0.9s						
SDCO	Great Sand Dun	6.52	287	P	Pn	14 26 37.2	+2.8
	baz=102,SNR=12						
SDCO				Sb	Sg	14 28 21.7	-5.6
	baz=102						
SDCO	Great Sand Dun	6.52	287	Pn	Pn	14 26 36.7	+2.4
SDCO				IAmb_Lg		14 28 26.6	
	comp=Z,110nm,1.1s						
SDCO	Great Sand Dun	6.52	287	P	Pn	14 26 36.3	+2.0
	baz=102,SNR=15						
LNXT	Lenox	6.58	88	IAmb_Lg		14 28 39.1	
	comp=Z,258nm,0.8s						
HENM	Henderson Moun	6.59	82	IAmb_Lg		14 28 31.5	
	comp=Z,310nm,0.8s						
HALT	Halls	6.71	89	IAmb_Lg		14 28 40.4	
	comp=Z,265nm,1.0s						
SCIA	State Center	6.71	29	P	Pn	14 26 39.0	+2.3
	baz=212						
SCIA	State Center	6.71	29	Pn	Pn	14 26 38.8	+2.1
SCIA				IAmb_Lg		14 28 47.0	
	comp=Z,272nm,0.8s						
S44A	Carbondale	6.88	74	Pn	Pn	14 26 39.6	+0.6
S44A				IAmb_Lg		14 28 47.3	
	comp=Z,260nm,0.7s						
SIUC	Southern Illin	6.91	74	IAmb_Lg		14 28 48.0	
	comp=Z,234nm,0.8s						
W45A	Hickory Valley	6.93	96	IAmb_Lg		14 28 51.9	
	comp=Z,187nm,0.7s						
Y45A	Yeager Farm, C	7.00	106		Pn	14 26 39.3	-1.3
Y45A				IAmb_Lg		14 28 56.7	
	comp=Z,98nm,0.8s						
735A	Kenedy	7.25	181	IAmb_Lg		14 28 51.9	
	comp=Z,89nm,1.1s						
ANMO	Albuquerque	7.30	263	Pn	Pn	14 26 46.2	+1.2
	comp=Z,0.2nm,0.3s,baz=77,slow=14,SNR=2.0						
ANMO				Lg	Lg	14 28 46.1	
	comp=Z,5.2nm,0.3s,baz=28,slow=9.0,SNR=3.8						
ANMO	Albuquerque	7.30	263	Sb	Sg	14 28 47.2	-5.3
	baz=78						
ANMO	Albuquerque	7.30	263		Pn	14 26 46.1	+1.1
ISCO	Idaho Springs	7.30	303	P	Pn	14 26 47.1	+2.0
	baz=118						
ISCO				Sb	Sg	14 28 47.4	-5.1
	baz=118						
ISCO	Idaho Springs	7.30	303	Pn	Pn	14 26 47.0	+2.0
BNM	Barren Site	7.64	258	Pn	Pn	14 26 51.5	+1.8
ECSD	EROS Data Cent	7.64	5	P	Pn	14 26 50.3	+0.9
	baz=186,SNR=11						
ECSD	EROS Data Cent	7.64	5	Pn	Pn	14 26 50.2	+0.8
L40A	Anamosa	7.74	38	IAmb_Lg		14 29 09.1	
	comp=Z,158nm,0.8s						
MNTX	Cornudas Mount	7.82	238	P	Pn	14 26 53.8	+1.9
	baz=54						
MNTX	Cornudas Mount	7.82	238		Pn	14 26 53.7	+1.8
MNTX				IAmb_Lg		14 29 25.8	
	comp=Z,106nm,1.0s						
PLAL	Pickwick Lake	7.86	96	Pn	Pn	14 26 52.5	+0.1
Y22D	IRIS PASSCAL I	7.89	258	IAmb_Lg		14 29 22.2	
	comp=Z,207nm,0.9s						
WVT	Waverly	7.92	87	Pn	Pn	14 26 53.2	0.0
PHWY	Pilot Hill	8.02	313	IAmb_Lg		14 29 25.4	
	comp=Z,96nm,0.8s						
SUSD	Miller	8.37	353	IAmb_Lg		14 29 31.5	
	comp=Z,122nm,0.8s						
TX31	Lajitas Ar. Si	8.47	219		Pn	14 27 02.2	+1.2
TX32	Lajitas Array	8.47	219		Pn	14 27 01.4	+0.4
TXAR	Lajitas Array	8.47	219	Pn	Pn	14 27 01.0	0.0
	comp=Z,0.4nm,0.3s,baz=42,slow=11,SNR=14						
TXAR				Lg	Lg	14 29 21.4	
	comp=Z,5.7nm,0.3s,baz=37,slow=30,SNR=6.1						
TXAR	Lajitas Array	8.47	219		Pn	14 27 02.8	+1.8
T47A	Sharon Grove	8.50	81	Pn	Pn	14 27 01.5	+0.2
I37A	Lemond, Waseca	8.52	21	IAmb_Lg		14 29 38.3	
	comp=Z,144nm,0.9s						
L42A	Oliver, Polo	8.52	44	IAmb_Lg		14 29 33.6	
	comp=Z,204nm,0.9s						
JFWS	Jewell Farm	8.85	38		Pn	14 27 07.3	+1.2
JFWS				IAmb_Lg		14 29 49.2	
	comp=Z,163nm,0.8s						
RWWY	Rawlins	9.31	310	IAmb_Lg		14 30 17.1	
	comp=Z,72nm,1.0s						
RSSD	Black Hills	9.38	330	IAmb_Lg		14 30 12.1	
	comp=Z,68nm,0.8s						
I40A	Norwalk	9.43	33	Pn	Pn	14 27 14.9	+0.9
I40A				IAmb_Lg		14 30 04.0	
	comp=Z,96nm,0.9s						
HQIL	Hanson Quary C	9.48	50	IAmb_Lg		14 30 18.1	
	comp=Z,144nm,0.9s						
SPMN	Marine on St.	9.80	20	IAmb_Lg		14 30 16.1	
	comp=Z,57nm,0.8s						
F36A	Milaca	10.21	16		Pn	14 27 24.1	-0.5
CPCT	Cooper Cave	10.66	90	Pn	Pn	14 27 30.8	0.0
TKL	Tuckaleechee C	11.24	88	Pn	Pn	14 27 40.1	+1.3
	comp=Z,0.5nm,0.3s,baz=247,slow=9.6,SNR=1.7						
TKL				Lg	Lg	14 30 47.5	
	comp=Z,1.6nm,0.3s,baz=4.6,slow=21,SNR=4.8						
PDAR	Pinedale Array	11.36	309	Pn	Pn	14 27 41.6	+1.0
	comp=Z,0.3nm,0.3s,baz=119,slow=16,SNR=7.4						
PDAR				Lg	Lg	14 30 51.6	
	comp=Z,1.4nm,0.3s,baz=121,slow=30,SNR=1.7						
B35A	Bob, Littlefor	12.56	12	Pn	Pn	14 27 55.4	-1.4
D41A	Chassel	12.85	29	Pn	Pn	14 27 59.7	-0.9
E43A	Lone Tree Farm	12.98	35	Pn	Pn	14 28 01.9	-0.6
ULM	Lac du Bonnet	14.18	5	Pn	Pn	14 28 17.5	-1.3
	comp=Z,0.7nm,0.3s,baz=182,slow=12,SNR=5.1						
ULM				Sn	Sn	14 30 46.2	-10
	comp=Z,0.8nm,0.3s,baz=267,slow=18,SNR=2.0						
ULM				Lg	Lg	14 32 18.5	
	baz=97,slow=19,SNR=1.8						
SADO	Sadowa	16.48	53	Lg	Lg	14 33 28.5	
	comp=Z,0.4nm,0.3s,baz=270,slow=20,SNR=2.5						
NVAR	Mina Array Bea	16.62	284	Pn	P	14 28 53.9	0.0
	comp=Z,0.0nm,0.3s,baz=88,slow=13,SNR=1.8						
YBH	Yreka Blue Hor	20.28	294	P	Pn	14 29 38.3	+2.4
	comp=Z,1.1nm,0.5s,baz=88,slow=6.1,SNR=5.4						
ILAR	Eielson Array	40.82	330	P	P	14 32 43.5	+4.0
	comp=Z,0.4nm,0.7s,baz=111,slow=6.9,SNR=4.1						

NEIC ***19*** *14:31:08.8±1.8, 31°.31S±0°.05×72°.58W±0°.09, h10^{km}±1^{km}, mb4.4/7, ML4.2(GUC), Error ellipse: s-maj=13.3km s-min=7.1km az=292.0*

IDC ***19*** *14:31:10.5±0.8, 31°.41S×71°.95W, h0^{km}, mb3.9/7, mb1 4.1/9, mb1mx4.0/26, mbtmp3.9/9, ML4.5/2, MS3.3/5, Ms1 3.3/5, ms1mx3.1/21, Error ellipse: s-maj=33.7km s-min=20.8km az=93.0*

SJA ***19*** *14:31:11.1±0.7, 31°.44S×72°.44W, h48^{km}±13^{km}, ML4.4, MW4.2*

GUC ***19*** *14:31:14.7±0.6, 31°.39S×71°.75W, h46^{km}±4^{km}, ML4.2*

ISC 19 14:31:08.5±1.8**, 31°.37S**±0°.03×**72°.50W**±0°.07**, h6**^{km}±11^{km}**, n117,** σ2^{s}01/125**, mb4.3**/9**, 6C-3D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	Fray Jorge	1.02	47	⇑*i*P	Pb	14 31 28.7	+0.2
CO06				*i* S	Sg	14 31 39.1	-2.1
CO06				IAML		14 31 40.8	
	comp=E,15µm,0.2s						
CO06	Fray Jorge	1.02	47		Pg	14 31 28.6	+0.6
VA06	Catapilco	1.56	140	*e*P	Pn	14 31 36.6	-0.2
VA06				*i* S	Sn	14 31 52.3	-5.0
VA06				IAML		14 31 55.5	
	comp=N,13µm,0.5s						
VA01	Torpederas	1.79	157	*e*P	Pn	14 31 40.6	+0.6
VA01				*i* S	Sn	14 31 59.7	-3.4
VA01	Torpederas	1.79	157	Pn	Pn	14 31 40.4	+0.4
VA01	Torpederas	1.79	157	*i* P	Pn	14 31 40.1	+0.1
CO05	La Serena	1.81	37	*e*P	Pn	14 31 40.5	+0.3
CO05				*i* S	Sn	14 32 00.1	-3.4
CO05				IAML		14 32 03.1	
	comp=N,4µm,0.3s						
CO05	La Serena	1.81	37		Pn	14 31 40.6	+0.4
GO04	Tololo Observa	1.89	51	⇑*i*P	Pn	14 31 41.1	-0.5
GO04				*i* S	Sn	14 32 01.2	-4.6
GO04	Tololo Observa	1.89	51		Pn	14 31 41.1	-0.5
GO04	Tololo Observa	1.89	51	*i* P	Pn	14 31 41.0	-0.5
GO04				*e*S	Sn	14 32 06.6	+0.8
ROCH	El Roble	2.03	142	⇓*i*P	Pn	14 31 43.5	0.0
ROCH				*i* S	Sn	14 32 04.9	-4.4
ROCH				IAML		14 32 09.3	
	comp=N,4µm,0.5s						
ROC1	El Roble	2.03	142	*i* P	Pn	14 31 43.8	+0.3
ROC1				*e*S	Sn	14 32 07.6	-1.7
VA03	San Esteban	2.15	131	⇓*i*P	Pn	14 31 45.2	+0.1
VA03				*i* S	Sn	14 32 07.5	-4.7
VA03	San Esteban	2.15	131		Pn	14 31 45.2	+0.1
VA03	San Esteban	2.15	131	*i* P	Pn	14 31 45.0	-0.1
VA03				*e*S	Sn	14 32 10.7	-1.5
PEL	Peldehue	2.34	139	*e*P	Pn	14 31 47.4	-0.2
PEL				*i* S	Sn	14 32 11.7	-4.9
PEL				IAML		14 32 14.5	
	comp=E,2µm,0.3s						
PEL	Peldehue	2.34	139		Pn	14 31 47.9	+0.4
PEL	Peldehue	2.34	139	*i* P	Pn	14 31 48.0	+0.4
VA05	Santo Domingo	2.40	162	*e*P	Pn	14 31 49.1	+0.8
VA05				*i* S	Sn	14 32 14.5	-3.4
VA05	Santo Domingo	2.40	162		Pn	14 31 49.1	+0.8
MT05	Renca	2.50	144	IAML		14 32 25.9	
	comp=E,4µm,0.4s						
MT05	Renca	2.50	144		Pn	14 31 50.3	+0.5
MT05	Renca	2.50	144	*i* P	Pn	14 31 50.0	+0.2
MT01	Popeta	2.70	157	⇑*i*P	Pn	14 31 53.3	+0.8
MT01				*i* S	Sn	14 32 20.8	-4.6
MT01				IAML		14 32 23.4	
	comp=N,1µm,0.2s						
MT01	Popeta	2.70	157		Pn	14 31 53.4	+0.9
MT01	Popeta	2.70	157	*i* P	Pn	14 31 53.0	+0.6
FCH	Farellones	2.70	137	⇓*i*P	Pn	14 31 53.1	+0.3
FCH				*e*S	Sn	14 32 22.5	-3.4
FCH				IAML		14 32 24.2	
	comp=N,1µm,0.1s						
MT09	Talagante	2.71	152	*e*P	Pn	14 31 54.0	+1.2
MT09				*i* S	Sn	14 32 23.7	-2.3
MT09				IAML		14 32 27.2	
	comp=N,2µm,0.6s						
AUSP	Uspallata	2.78	109	*i* P	Pn	14 31 55.4	+1.5
LCO	Las Campanas	2.82	34	⇑*i*P	Pn	14 31 54.9	+0.4
LCO				*i* S	Sn	14 32 25.6	-3.3
LCO	Las Campanas	2.82	34	Pn	Pn	14 31 55.0	+0.6
AROD	Rodeo	2.87	66	*i* P	Pn	14 31 57.2	+2.1
ACCO	Cerro Coronel	3.05	76	*i* P	Pn	14 31 59.6	+2.0
ACCO				IAML		14 32 42.0	
	comp=Z,1µm,0.6s						
BO04	La Punta	3.05	149	*e*P	Pn	14 31 58.3	+0.9
BO04				*i* S	Sn	14 32 30.5	-3.8
LMEL	Las Melosas	3.13	143	*e*P	Pn	14 31 59.7	+1.1
LMEL				*i* S	Sn	14 32 32.3	-4.1
LMEL				IAML		14 32 36.0	
	comp=N,2µm,0.3s						
BO01	Tunca	3.23	159	⇑*i*P	Pn	14 32 00.9	+1.0
BO01				*i* S	Sn	14 32 35.2	-3.5
BO01				IAML		14 32 38.5	
	comp=N,406nm,0.6s						
BO01	Tunca	3.23	159	Pn	Pn	14 32 00.9	+1.0
BO01	Tunca	3.23	159	*i* P	Pn	14 32 00.7	+0.8
ZON	Zonda	3.27	94	Pn	Pn	14 32 01.7	+1.4
ZON	Zonda	3.27	94	*i* P	Pn	14 32 01.2	+0.9
ZON				IAML		14 32 49.0	
	comp=Z,584nm,1.3s						
ASAL	Salagasta	3.34	112	*i* P	Pn	14 32 04.0	+2.6
ARCO	CERRO ARCO	3.36	117	*i* P	Pn	14 32 05.0	+3.3
ARCO				IAML		14 33 00.7	
	comp=Z,495nm,1.4s						
RTCV	Cerro Valdivia	3.41	99	*i* P	Pn	14 32 04.0	+1.7
AAGR	Agrelo	3.54	120	*i* P	Pn	14 32 07.0	+2.8
AAGR				IAML		14 33 03.4	
	comp=Z,734nm,1.3s						
GO05	Huala	3.66	173	*e*P	Pn	14 32 06.8	+1.1
GO05				*e*S	Sn	14 32 45.0	-4.1
GO05	Huala	3.66	173		Pn	14 32 06.6	+0.9
BO02	Sierra Bellavi	3.70	158	*e*P	Pn	14 32 07.6	+1.3
BO02				*i* S	Sn	14 32 47.2	-3.1
BO02	Sierra Bellavi	3.70	158		Pn	14 32 07.1	+0.8
BO02	Sierra Bellavi	3.70	158	*i* P	Pn	14 32 07.3	+1.0
GO03	Copiap	4.25	28	*e*P	Pn	14 32 14.3	+0.5
GO03				*e*S	Sn	14 33 01.4	-2.5
GO03	Copiap	4.25	28	Pn	Pn	14 32 14.3	+0.5
GO03	Copiap	4.25	28	*i* P	Pn	14 32 14.0	+0.1
AVFE	Valle Fertil	4.38	82	*i* P	Pn	14 32 16.0	+0.3
ML02	Panimavida	4.47	169		Pn	14 32 17.6	+0.8
VCA	Vinchina	4.55	56	⇑*i*P	Pn	14 32 21.6	+3.5
VCA	Vinchina	4.55	56	*i* P	Pn	14 32 21.0	+2.9
VCA				IAML		14 33 35.1	
	comp=Z,557nm,0.6s						
RFA	San Rafael	4.79	136	*i* P	Pn	14 32 23.0	+1.8
RFA				IAML		14 33 36.1	
	comp=Z,172nm,0.8s						
ACLC	CERRO LA CRUZ	5.17	69	*i* P	Pn	14 32 28.0	+1.4
AC02	Maricunga	5.40	34	*i* P	Pn	14 32 30.9	+0.9
AC02	Maricunga	5.40	34	Pn	Pn	14 32 30.7	+0.7
AC02	Maricunga	5.40	34	*i* P	Pn	14 32 30.0	0.0
H03N1	Juan Fernandez	5.80	248	T	T	14 39 35.7	
	baz=77,slow=72,SNR=301						
H03N3	Juan Fernandez	5.82	247	T	T	14 39 26.1	
	baz=77,slow=72,SNR=368						
H03N2	Juan Fernandez	5.82	248	T	T	14 39 34.8	
	baz=77,slow=72,SNR=199						
CYA	Choya	6.50	65	*i* P	Pn	14 32 45.0	+0.2
CYA				IAML		14 34 27.9	
	comp=Z,144nm,0.9s						
PB14	IPOC Station P	6.97	16		Pn	14 32 50.0	-1.5
PB14	IPOC Station P	6.97	16	*i* P	Pn	14 32 50.0	-1.5
PB14				IAML		14 34 54.4	
	comp=Z,68nm,0.6s						
LC01	Cunco	7.52	176		Pn	14 32 60.0	+1.2
LC01	Cunco	7.52	176	*i* P	Pn	14 33 00.0	+1.2
FSA	Cafayete	7.76	49	*i* P	Pn	14 33 03.0	+0.8
PB15	IPOC Station P	8.57	19		Pn	14 33 12.5	-0.8
PB15	IPOC Station P	8.57	19	*i* P	Pn	14 33 13.0	-0.3
PB06	IPOC Station P	9.02	17	Pn	Pn	14 33 18.1	-1.3
PB06	IPOC Station P	9.02	17	*i* P	Pn	14 33 18.0	-1.5
PB06				IAML		14 35 42.5	
	comp=Z,23nm,0.9s						
PB04	IPOC Station P	9.24	14	Pn	Pn	14 33 20.1	-2.5
LVC	Limon Verde	9.29	21	Pn	Pn	14 33 21.5	-1.9
	comp=Z,1.9nm,0.3s,baz=176,slow=7.3,SNR=19						
LVC				LR	LR	14 37 11.2	
	comp=Z,145nm,18.7s,baz=214,slow=39						
LVC	Limon Verde	9.29	21	Pn	Pn	14 33 22.1	-1.4
LVC	Limon Verde	9.29	21	*i* P	Pn	14 33 22.0	-1.4
LVC				IAML		14 35 20.8	
	comp=Z,9.4nm,4.8s						
PLCA	Paso Flores	9.47	171	Pn	Pn	14 33 27.6	+2.0
	comp=Z,1.1nm,0.3s,baz=335,slow=12,SNR=36						
PLCA				LR	LR	14 37 16.8	
	comp=Z,121nm,18.1s,baz=353,slow=39						
PLCA	Paso Flores	9.47	171	Pn	Pn	14 33 26.6	+1.0
PLCA	Paso Flores	9.47	171	*i* P	Pn	14 33 28.0	+2.5
LL04	Puerto Octay	9.52	180	Pn	Pn	14 33 27.1	+1.0
PB09	IPOC Station P	9.97	18	Pn	Pn	14 33 30.6	-1.9
PB09	IPOC Station P	9.97	18	*i* P	Pn	14 33 31.0	-1.6
PB01	IPOC Station P	10.64	15	Pn	Pn	14 33 38.9	-2.7
PB01	IPOC Station P	10.64	15	*i* P	Pn	14 33 39.0	-2.6
SIV	San Ignacio	18.52	37	P	Pn	14 35 25.9	0.0
	comp=Z,1.7nm,0.3s,baz=207,slow=9.3,SNR=25						
SIV				LR	LR	14 43 02.4	
	comp=Z,180nm,20.6s,baz=60,slow=39						
NNA	Nana	19.71	347	LR	LR	14 41 48.5	
	comp=Z,109nm,19.1s,baz=144,slow=32						
PTLB	Pontes e Lacer	20.01	41	P	P	14 35 41.4	-0.6
VILB	Vilhena	21.55	34	P	P	14 35 58.4	-0.3
ETMB	Extrema	22.23	17	P	P	14 36 06.2	+0.2
ETMB				IAmb	IAmb	14 36 11.7	
	comp=Z,12nm,0.8s						
ATAH	Atahualpa	24.74	346	LR	LR	14 45 32.6	
	comp=Z,74nm,18.0s,baz=173,slow=35						
BDFB	Brasilia	27.28	61	P	P	14 36 53.1	-0.9
	comp=Z,3.2nm,0.6s,baz=228,slow=8.9,SNR=4.5						
BDFB	Brasilia	27.28	61	P	P	14 36 53.1	-0.9
BDFB				IAmb	IAmb	14 37 04.2	
	comp=Z,5.8nm,0.8s						
URIC	Uribia, Colomb	42.83	1	P	P	14 39 03.8	-3.6
PDPR	Patillas Dam,	49.50	8	P	P	14 39 58.2	-1.7
VNA3	Neumayer Olymp	51.93	159	P	P	14 40 20.2	+2.4
SNAA	Sanae	54.16	159	P	P	14 40 36.1	+1.8
SNAA	Sanae	54.16	159	P	P	14 40 35.7	+1.5
	comp=Z,0.9nm,0.7s,baz=271,slow=8.3,SNR=11						
SNAA	Sanae	54.16	159	P	P	14 40 35.2	+1.0
SNAA				IAmb	IAmb	14 40 49.2	
	comp=Z,4.5nm,1.0s						
QSPA	South Pole Qui	58.85	180	P	P	14 41 06.5	-1.4
QSPA				IAmb	IAmb	14 41 11.7	
	comp=Z,2.4nm,0.8s						
VNDA	Vanda	66.59	191	P	P	14 42 02.8	+3.7
	comp=Z,0.4nm,0.7s,baz=127,slow=5.1,SNR=1.5						
TXAR	Lajitas Array	67.26	331	P	P	14 42 08.5	+4.5
	comp=Z,0.3nm,0.6s,baz=141,slow=8.4,SNR=4.2						
MAW	Mawson	75.80	164	P	P	14 42 57.1	+2.2
	comp=Z,1.7nm,0.7s,baz=277,slow=5.0,SNR=1.6						
NVAR	Mina Array Bea	81.51	325	P	P	14 43 32.4	+5.5
	comp=Z,0.3nm,0.6s,baz=147,slow=5.1,SNR=2.7						
TORD	Torodi Ar. Bea	83.69	71	P	P	14 43 39.6	+1.1
	comp=Z,0.9nm,0.7s,baz=267,slow=4.3,SNR=6.5						
TORD	Torodi Ar. Bea	83.69	71	P	P	14 43 39.0	+0.5
TORD				IAmb	IAmb	14 43 54.5	
	comp=Z,2.9nm,0.8s						
WRA	Warramunga Arr	122.84	210	PKP	PKiKP	14 50 07.5	+1.1
	comp=Z,0.5nm,1.0s,baz=159,slow=1.6,SNR=2.0						
H11S2	WAKE ISLAND Hy	125.38	271	T	T	17 09 03.9	
	baz=116,slow=74,SNR=23						

H11S1	WAKE ISLAND Hy	25.39	271	T	T	17 09 12.2	
	baz=116,slow=74,SNR=22						
H11S3	WAKE ISLAND Hy	25.39	271	T	T	17 09 03.7	
	baz=116,slow=74,SNR=29						
H11N3	WAKE ISLAND Hy	25.72	273	T	T	17 09 34.2	
	baz=114,slow=74						
H11N1	WAKE ISLAND Hy	25.74	273	T	T	17 09 26.0	
	baz=114						
H11N2	WAKE ISLAND Hy	25.74	273	T	T	17 09 34.5	
	baz=114,slow=74						
ZALV	Zalesovo Beam	152.17	29	PKPbc	PKiKP	14 51 06.9	+2.1
	comp=Z,1.8nm,0.7s,baz=300,slow=3.0,SNR=6.4						
KSH	Kashi	153.16	64	PKPbc	PKPdf	14 51 00.6	+0.6

IDC 19 14:35:23.2±1.5**, 1°.01N×127°.55E, h0^{km}, mb3.6**/6**,**
mb1 3.8/6**, mb1mx3.4**/48**, mbtmp3.6**/6**, Error ellipse:**
s-maj=152.9km s-min=19.0km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	21.86	163	P	P	14 40 18.1	+0.3
	1.3nm,0.6s,baz=341,slow=11,SNR=12						
ASAR	Alice Springs	25.29	166	P	P	14 40 51.4	-0.2
	1.3nm,0.7s,baz=346,slow=9.0,SNR=15						
STKA	Stephens Creek	35.31	159	P	P	14 42 20.1	-0.1
	1.1nm,0.6s,baz=333,slow=9.0,SNR=2.5						
MKAR	Makanchi Array	60.25	326	P	P	14 45 34.3	+0.8
	0.2nm,0.5s,baz=122,slow=7.7,SNR=5.1						
ZALV	Zalesovo Beam	63.37	333	P	P	14 45 52.8	-1.5
	0.4nm,0.4s,baz=131,slow=5.9,SNR=2.0						
KURBB	Kurchatov Arra	64.46	328	P	P	14 46 01.9	+0.4
	0.2nm,0.3s,baz=132,slow=6.2,SNR=1.8						

IDC 19 14:37:44.9±2.4**, 0°.95N×127°.28E, h0^{km}, mb3.6**/3**,**
mb1 3.9/3**, mb1mx3.3**/47**, mbtmp3.7**/3**, Error ellipse:**
s-maj=187.8km s-min=28.4km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	21.88	162	P	P	14 42 39.9	+0.2
	1.2nm,0.7s,baz=341,slow=11,SNR=6.0						
ASAR	Alice Springs	25.30	166	P	P	14 43 13.2	-0.1
	1.1nm,0.7s,baz=345,slow=8.8,SNR=10						
MKAR	Makanchi Array	60.15	326	P	P	14 47 54.4	0.0
	1.0nm,1.0s,baz=133,slow=8.1,SNR=1.9						

*NIED **19** 14:41:45.8, 31°.26N×128°.70E, h12^{km}, MW4.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.45; $M_{\theta\theta}$0.26; $M_{\phi\phi}$0.19; $M_{r\theta}$-0.11; $M_{\theta\phi}$0.92; $M_{\phi r}$0.40; Fault plane solution: $M_0$1.07000×10^{16} NP1: ϕ_s188.00000°, δ71.00000°, λ-147.00000°. NP2: ϕ_s86.00000°, δ59.00000°, λ-22.00000°.*

*JMA **19** 14:41:45.7±0.3, 31°.26N×128°.70E, h12^{km}±3^{km}, M4.6*

JMA Felt I J1.

*IDC **19** 14:41:46.5±0.6, 31°.24N×128°.76E, h0^{km}, mb4.1/22, mb1 4.2/27, mb1mx4.1/54, mbtmp4.1/27, ML3.7/5, MS4.0/32, Ms1 4.0/32, ms1mx3.8/61, Error ellipse: s-maj=16.5km s-min=12.1km az=86.0*

*MOS **19** 14:41:46.4±1.1, 31°.18N×128°.84E, h16^{km}, mb4.6/18, MS4.3/6, Error ellipse: s-maj=11.2km s-min=6.5km az=97.1*

*NEIC **19** 14:41:48.2±1.3, 31°.22N±0°.06×128°.85E±0°.06, h17^{km}±4^{km}, mb4.7/18, Error ellipse: s-maj=9.9km s-min=6.3km az=150.0*

*GCMT **19** 14:41:50.2±0.3, 31°.33N±0°.02×128°.76E±0°.02, h12^{km}, MW4.7/73, Moment Tensor Solution. s5,c7; s73,c100; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.49±.06; $M_{\theta\theta}$0.36±.06; $M_{\phi\phi}$0.13±.07; $M_{r\theta}$0.19±.17; $M_{\theta\phi}$1.36±.04; $M_{\phi r}$0.25±.17; Best double couple: $M_0$1.39000×10^{16} NP1:ϕ_s93.00000°, δ80.00000°, λ2.00000°. NP2: ϕ_s2.00000°, δ88.00000°, λ170.00000°. Principal axes: T 1.6550, Plg8.0000°, Azm317.0000°; N -0.5310, Plg80.0000°, Azm170.0000°; P -1.1240, Plg5.0000°, Azm48.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*KMA **19** 14:41:54.9, 31°.60N×128°.47E, h35^{km}*

ISC 19 14:41:47.5±0.4**, 31°.26N**±0°.04×**128°.86E**±0°.03**, h10^{km}, n165,**
σ**1^{s}68**/164**, mb4.4**/49**, MS4.3**/39**, 6C-11D, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	Shimokoshiki	0.84	60	⇓P	Pg	14 42 03.5	-0.2
JSJ				S	Sb	14 42 16.3	+0.8
JSU	Suzuyama	1.38	79	P	Pb	14 42 13.4	0.0
JSU	Suzuyama	1.38	79		Pb	14 42 12.9	-0.5
JFU	Fukue jima 2	1.39	356	⇑P	Pn	14 42 11.2	-1.8
JKC	Kuchinoerabu	1.40	124	⇑P	Pn	14 42 12.1	-0.9
JNN	Nakanoshima	1.66	148	P	Pn	14 42 15.8	-0.9
JYAK	Yakushimahirau	1.75	125	⇑P	Pn	14 42 17.1	-0.7
JTN	Tanegashima 3	1.92	108	P	Pn	14 42 20.2	0.0
JMTN	Minamitane	1.95	116	P	Pn	14 42 20.6	-0.1
JTZ	Takazaki	2.00	71	P	Pn	14 42 21.8	+0.4
JNU	Nakatsue	2.52	42	Pn	Pn	14 42 29.5	+0.9
	80nm,0.3s,baz=194,slow=0.1,SNR=2.1						
JNU				Sn	Sb	14 43 04.7	+0.7
	baz=55,slow=20,SNR=1.4						
JNU	Nakatsue	2.52	42		Pn	14 42 29.1	+0.5
KSSGP	Seogwipo	2.82	315	P	Pn	14 42 30.8	-1.9
	SNR=33						
KSJJU	Jeju	2.92	318	P	Pn	14 42 32.4	-1.6
	SNR=21						
GOS1	Gosan-ri	3.03	313	P	Pn	14 42 34.2	-1.2
	SNR=22						
GOS2	Gosang-Q330s	3.03	313	P	Pn	14 42 34.0	-1.5
	SNR=24						
HALB	Hallimjungang-	3.06	315	P	Pn	14 42 34.2	-1.7
	SNR=35						
GMDB	Geomundo	3.07	335	P	Pn	14 42 35.0	-1.1
	SNR=16						
JTU	Tsushima	3.29	8		Pn	14 42 38.7	-0.3
YNDB	Yeoundo	3.29	345	P	Pn	14 42 39.0	0.0
	SNR=9.6						
YKDB	Yokjido	3.39	352	P	Pn	14 42 40.0	-0.3
	SNR=18						
CJD	Chujado	3.46	322	P	Pn	14 42 39.6	-1.7
	SNR=39						
KOHB	KOHEUNG	3.60	339	P	Pn	14 42 42.1	-1.3
	SNR=27						
BOSB	Boseong-gun	3.76	339	P	Pn	14 42 44.4	-1.0
	SNR=25						
HANB	Haenam	3.81	330	P	Pn	14 42 45.0	-1.2
	SNR=23						
KSJDO	Jindo	3.85	327	P	Pn	14 42 45.6	-1.2
	SNR=12						
GGDB	Gageodo	4.20	312	P	Pn	14 42 50.0	-1.6
	SNR=32						
JOW	Kunigami	4.44	187	Pn	Pn	14 42 56.9	+1.9
	4.3nm,0.3s,baz=70,slow=8.7,SNR=5.6						
JOW	Kunigami	4.44	187		Pn	14 42 54.6	-0.3
HUK2	Heuksan-myeon	4.46	321	P	Pn	14 42 53.8	-1.3
	SNR=32						
KSJEU	Jeongeup	4.52	340	P	Pn	14 42 56.1	+0.2
	SNR=11						
KSJEO	Jeonju	4.84	345	P	Pn	14 42 60.0	-0.4
	SNR=11						
JMN	Monobe	4.90	59		Pn	14 43 03.7	+2.5
KSCPR	CHUPUNGNYEONG	5.00	352	P	Pn	14 43 03.8	+1.2
	SNR=11						
OKCB	Cheongsan-myeo	5.15	350	P	Pn	14 43 06.0	+1.4
	SNR=9.8						
JHS	Saijyo	5.16	43		Pn	14 43 07.0	+2.2
TJN	Taejon	5.25	347	⇓eP	Pn	14 43 07.1	+1.1
KSBON	Boeun	5.30	351	P	Pn	14 43 08.0	+1.3
	SNR=9.2						
KSCEA	Cheonan	5.71	347	P	Pn	14 43 12.9	+0.7
	SNR=12						
KSAR	Wonju Array Be	6.22	353	P	Pn	14 43 19.9	+0.6
KSAR	Wonju Array Be	6.22	353	Pn	Pn	14 43 19.9	+0.6
KSRS	Korea Array	6.23	353	Pn	Pn	14 43 19.7	+0.3
	2.9nm,0.3s,baz=175,slow=14,SNR=73						
KSRS				Sn	Sn	14 44 28.6	-1.9
	8.0nm,0.3s,baz=174,slow=24,SNR=10						
KSRS				Lg	Lg	14 44 59.2	
	7.4nm,0.3s,baz=176,slow=30,SNR=5.8						
KSRS				LR	LR	14 46 03.0	
	comp=Z,664nm,19.4s,baz=174,slow=41						
KS19	Wonju Array Si	6.28	353	Pn	Pn	14 43 20.0	-0.1
KSDEI	Deokjeokdo	6.40	340	P	Pn	14 43 22.4	+0.6
	SNR=7.4						
KSCHC	Chuncheon	6.56	353	P	Pn	14 43 25.0	+1.0
	SNR=9.1						
SSE	Sheshan	6.58	271	Pn	Pn	14 43 30.6	+6.4
SSE				Sn	Sn	14 44 46.0	+6.7
SSE				smax	smax		
	comp=N,380nm,0.8s						
SSE				LR	LR		
	comp=N,3μm,15.1s						
SSE				LR	LR		
	comp=E,900nm,17.9s						
SSE				LR	LR		
	comp=Z,680nm,14.6s						
KSGAH	Ganghwa	6.73	343	P	Pn	14 43 26.8	+0.5
	SNR=6.5						
JWT	Wachi	6.79	52	Pn	Pn	14 43 29.4	+2.3
KSMUS	Musan	6.83	346	P	Pn	14 43 29.2	+1.5
	SNR=8.0						
INU	Inuyama	7.95	57	Pn	Pn	14 43 42.7	-0.3
NJ2	Nanjing	8.57	278	eP	Pn	14 43 53.4	+1.9
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2				smax	smax		
	comp=N,190nm,0.5s						
NJ2				smax	smax		
	comp=E,280nm,0.9s						
NJ2				LR	LR		
	comp=N,2μm,11.3s						
NJ2				LR	LR		
	comp=E,2μm,10.8s						
NJ2				LR	LR		
	comp=Z,2μm,12.3s						
MJAR	Matsushiro Arr	9.38	53	Pn	Pn	14 44 06.0	+3.3
	0.1nm,0.3s,baz=235,slow=15,SNR=6.2						
MJAR				LR	LR	14 47 56.7	
	comp=Z,628nm,18.5s,baz=240,slow=39						
MJA0	Matsu Arr-Jizo	9.41	53	eP	Pn	14 44 06.9	+3.8
JCJ	Chichijima	12.36	106	LR	LR	14 49 07.3	
	comp=Z,218nm,19.4s,baz=288,slow=35						
BJI	Beijing	13.52	314	P	Pn	14 45 01.4	+2.1
BJI				S	Sn	14 47 24.3	-5.3
BJI				pmax	pmax		
	comp=Z,14nm,1.7s						
BJI				LR	LR		
	comp=N,2μm,14.5s						
BJI				LR	LR		
	comp=E,1μm,12.6s						
BJI				LR	LR		
	comp=Z,2μm,14.8s						
ASAJ	Asahikawa	16.79	36	Pn	P	14 45 43.5	-1.3
	0.5nm,0.3s,baz=227,slow=12,SNR=16						
ASAJ				LR	LR	14 51 49.2	
	comp=Z,428nm,18.9s,baz=229,slow=36						
ASAJ	Asahikawa	16.79	36	P	Pn	14 45 43.2	+0.6
ASAJ				pmax	pmax		
	comp=Z,19nm,0.8s						
JKA	Kamikawa-asahi	16.79	36		Pn	14 45 43.2	+0.6
HHC	Hu-ho-hao-te	16.92	309	eP	P	14 45 45.1	-1.3
HHC				S	Sn	14 48 55.4	+2.9
HHC				pmax	pmax		
	comp=Z,13nm,0.9s						
HHC				pmax	pmax		
	comp=Z,200nm,5.5s						
HHC				LR	LR		
	comp=Z,1μm,14.5s						
HHC				LR	LR		
	comp=Z,1μm,14.9s						
HHC				LR	LR		
	comp=Z,2μm,15.3s						
XAN	Xi'an	17.02	285	P	Pn	14 45 45.3	-0.4
XAN				pP	sP	14 45 52.3	+0.9
XAN				sP	pP	14 45 55.4	+5.3
XAN				S	Sn	14 48 53.9	-1.0
XAN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
XAN				LR	LR		
	comp=Z,3μm,13.2s						
XAN				LR	LR		
	comp=Z,2μm,12.5s						
XAN				LR	LR		
	comp=Z,1μm,14.9s						
KLR	Kul'dur	18.08	6	P	P	14 46 02.0	+2.9
	comp=Z,0.2nm,0.3s,baz=207,slow=8.6,SNR=15						
KLR	Kul'dur	18.08	6	⇑eP	P	14 46 02.9	+3.9
KLR				pmax	pmax		
	comp=Z,24nm,0.9s						
YUK	Yuzh-Kuril'sk	18.50	42	eP	P	14 46 03.2	-0.4
YUK				eS	Sn	14 49 27.0	-3.4
YUK				MLR	MLR		
	comp=Z,525nm,18.0s						
YSS	Yuzh-Sakhalins	18.97	30	eP	Pn	14 46 10.6	+1.1
YSS				pmax	pmax		
	comp=Z,20nm,1.1s						
YSS				MLR	MLR		
	comp=Z,700nm,15.0s						
GYA	Guiyang	20.01	262	⇑P	Pn	14 46 21.4	-0.9
GYA				pP	sP	14 46 29.8	+5.4
GYA				sP	pP	14 46 36.8	+14
GYA				S	Sn	14 50 06.0	-1.5
GYA				pmax	pmax		
	comp=Z,15nm,0.7s						
GYA				LR	LR		
	comp=Z,680nm,10.8s						
GYA				LR	LR		
	comp=Z,610nm,10.2s						
GYA				LR	LR		
	comp=Z,600nm,11.6s						
QIZ	Qiongzhong	21.05	239	P	P	14 46 33.4	+1.7
QIZ				S	S	14 50 27.6	+1.5
QIZ				LR	LR		
	comp=Z,700nm,11.6s						
QIZ				LR	LR		
	comp=Z,670nm,13.4s						
QIZ				LR	LR		
	comp=Z,490nm,10.2s						
LZH	Lanzhou	21.35	290	eP	P	14 46 40.8	+5.8
LZH				pP	sP	14 46 44.4	+5.5
LZH				sP	pP	14 46 46.9	+9.3
LZH				pmax	pmax		
	comp=Z,28nm,1.0s						
LZH				pmax	pmax		
	comp=Z,62nm,4.9s						
LZH				LR	LR		
	comp=Z,2μm,16.8s						
LZH				LR	LR		
	comp=Z,1μm,16.3s						
LZH				LR	LR		
	comp=Z,2μm,17.7s						
ZEA	Zeya	22.49	357	eP	P	14 46 49.1	+2.2
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ZEA				MLR	MLR		
	comp=N,600nm,10.0s						
ZEA				MLR	MLR		
	comp=Z,500nm,13.0s						
GUMO	Guam	22.93	137	LR	LR	14 54 45.3	
	comp=Z,235nm,19.1s,baz=334,slow=34						
ULN	Ulaanbaatar	23.49	321	⇓eP	P	14 46 58.3	+0.8
ULN				pmax	pmax		
	comp=Z,12nm,1.7s						
ULN	Ulaanbaatar	23.49	321	P	P	14 46 56.3	-1.2
ULN				IAmb	IAmb	14 47 17.0	
	comp=Z,19nm,1.5s						
KMI	Kunming	23.79	262	⇓P	P	14 47 02.3	+1.6
KMI				sP	sP	14 47 13.5	+8.8
KMI				S	S	14 51 16.0	-0.5
KMI				pmax	pmax		
	comp=Z,13nm,0.6s						
KMI				LR	LR		
	comp=Z,1μm,17.1s						
KMI				LR	LR		
	comp=Z,590nm,17.4s						
KMI				LR	LR		
	comp=Z,550nm,9.1s						
SONM	Songino Array	23.83	320	P	P	14 47 00.7	0.0
	comp=Z,3.9nm,0.7s,baz=136,slow=9.8,SNR=15						
SONM				LR	LR	14 57 22.5	
	comp=Z,990nm,18.1s,baz=144,slow=39						
SONM	Songino Array	23.83	320	eP	P	14 47 01.0	+0.3
SONM				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GTA	Gaotai	24.97	297	eP	P	14 47 10.9	-0.5
GTA				pmax	pmax		
	comp=Z,150nm,5.6s						
GTA				LR	LR		
	comp=Z,980nm,15.1s						
GTA				LR	LR		
	comp=Z,750nm,13.1s						
GTA				LR	LR		
	comp=Z,870nm,13.9s						
ZAK	Zakamensk	26.98	322	eP	P	14 47 26.4	-2.9
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
TLY	Talaya	27.57	325	LR	LR	14 59 40.5	
	comp=Z,747nm,18.0s,baz=133,slow=39						
CMAR	Chiang Mai Arr	29.89	252	P	P	14 47 56.8	+1.3
	comp=Z,0.5nm,0.5s,baz=51,slow=6.2,SNR=2.9						
CMAR				LR	LR	15 01 15.0	
	comp=Z,195nm,19.0s,baz=60,slow=39						
CMAR	Chiang Mai Arr	29.89	252	eP	P	14 48 01.5	+6.1
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
PETK	Petropavlovsk-	30.20	35	LR	LR	14 59 43.1	
	comp=Z,258nm,19.8s,baz=219,slow=36						
MA2	Magadan	31.91	21	⇓eP	P	14 48 17.4	+4.5
MA2				pmax	pmax		
	comp=Z,71nm,2.5s						
WMQ	Urumqi	34.62	303	eP	P	14 48 39.6	+2.8
WMQ				sP	sP	14 48 49.0	+8.1
WMQ				pmax	pmax		
	comp=Z,27nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,260nm,5.3s						
WMQ				LR	LR		
	comp=Z,690nm,15.3s						
WMQ				LR	LR		
	comp=Z,670nm,17.7s						
WMQ				LR	LR		
	comp=Z,440nm,18.9s						
SEY	Seymchan	35.08	19	P	P	14 48 42.3	+1.9
	comp=Z,4.2nm,0.8s,baz=230,slow=12,SNR=4.9						
ZALV	Zalesovo Beam	38.70	319	P	P	14 49 10.8	-0.6
	comp=Z,0.4nm,0.4s,baz=107,slow=7.7,SNR=2.2						
ZALV				LR	LR	15 06 25.4	
	comp=Z,430nm,19.0s,baz=121,slow=38						
MK31	Makanchi Array	38.77	307	P	P	14 49 11.5	-0.6
MK31				pmax	pmax		
	comp=Z,6.0nm,1.4s						
MK31	Makanchi Array	38.77	307	P	P	14 49 11.5	-0.6
MKAR	Makanchi Array	38.77	307	P	P	14 49 11.6	-0.5
	comp=Z,2.0nm,0.9s,baz=97,slow=9.9,SNR=6.8						
MKAR				LR	LR	15 05 11.0	
	comp=Z,150nm,19.4s,baz=90,slow=36						
MKAR	Makanchi Array	38.77	307	eP	P	14 49 16.4	+4.3
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
PSI	Prapat	39.98	231	LR	LR	15 06 40.1	
	comp=Z,150nm,18.3s,baz=29,slow=37						
TIXI	Tiksi	40.44	0	P	P	14 49 27.2	+1.6
	comp=Z,2.1nm,0.8s,baz=207,slow=5.8,SNR=4.8						
TIXI	Tiksi	40.44	0	⇓iP	P	14 49 27.7	+2.1
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KURK	Kurchatov	41.69	313	⇓eP	P	14 49 37.8	+1.7
KURK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KURBB	Kurchatov Arra	41.73	313	P	P	14 49 35.8	-0.7
	comp=Z,0.7nm,0.3s,baz=99,slow=8.9,SNR=2.2						
GSI	Gunungsitoli	41.99	231	P	P	14 49 38.9	-0.1
GSI				IAmb	IAmb	14 49 41.3	
	comp=Z,13nm,1.3s						
AAK	Ala-Archa	44.22	301	P	P	14 49 56.8	-0.2
	comp=Z,0.9nm,0.6s,baz=122,slow=9.5,SNR=4.4						
AAK	Ala-Archa	44.22	301	⇓eP	P	14 49 56.9	-0.2
AAK				pmax	pmax		
	comp=Z,20nm,1.9s						
NRIK	Noril'sk	44.68	341	P	P	14 50 00.6	+0.6
	comp=Z,9.5nm,1.1s,baz=117,slow=11,SNR=4.6						
NRIK				LR	LR	15 07 56.0	
	comp=Z,132nm,19.9s,baz=126,slow=35						
NRIK	Noril'sk	44.68	341	eP	P	14 50 02.2	+2.1
NRIK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KNRA	Kununurra	46.67	180	P	P	14 50 14.1	-2.2
KNRA				IAmb	IAmb	14 50 25.8	
	comp=Z,16nm,1.1s						
BVAR	Borovoye Array	47.00	315	P	P	14 50 18.5	-0.2
	comp=Z,2.9nm,0.6s,baz=156,slow=8.1,SNR=18						
BRVK	Borovoye	47.06	315	ceP	P	14 50 19.0	-0.1
BRVK	Borovoye	47.06	315	P	P	14 50 18.4	-0.7
BRVK				IAmb	IAmb	14 50 20.0	
	comp=Z,5.8nm,0.6s						
KKAR	Karatay Array	47.10	302	P	P	14 50 19.0	-0.6
KKAR	Karatay Array	47.10	302	P	P	14 50 19.0	-0.6
FITZ	Fitzroy Crossi	49.17	184	P	P	14 50 36.0	+0.3
	comp=Z,3.8nm,0.8s,baz=11,slow=8.2,SNR=5.5						
WB0	Warramunga Arr	51.01	173	P	P	14 50 48.5	-1.2
WB0				IAmb	IAmb	14 50 57.8	
	comp=Z,10nm,1.3s						
WRAB	Tennant Creek	51.17	173	deP	P	14 50 58.1	+7.2
WRAB				pmax	pmax		
	comp=Z,5.0nm,1.0s						
WRA	Warramunga Arr	51.18	173	P	P	14 50 50.6	-0.4
	comp=Z,3.1nm,0.8s,baz=353,slow=8.3,SNR=15						
SVE	Sverdlovsk	52.70	320	eP	P	14 51 03.2	+1.3
ABKAR	Akbulak array	53.71	311	P	P	14 51 08.8	-0.7
ABKAR	Akbulak array	53.71	311	P	P	14 51 08.4	-1.0
ABKAR				IAmb	IAmb	14 51 24.0	
	comp=Z,3.1nm,0.8s						
CTAO	Charters Tower	53.72	160	P	P	14 51 06.2	-3.6
CTAO				pmax	pmax		
	comp=Z,26nm,1.5s						
CTAO	Charters Tower	53.72	160	P	P	14 51 06.2	-3.6
ARU	Arti	53.86	320	d iP	P	14 51 10.7	+0.2
ARU						14 53 14.8	
ARU				S	S	14 58 43.0	-2.3
ARU				SS	SKiKP	15 02 21.8	-2.3
ARU				pmax	pmax		
	comp=Z,30nm,3.0s						
ARU				MLR	MLR		
	comp=Z,597nm,16.0s						
AS31	Alice Springs	54.83	174	P	P	14 51 16.6	-1.3
ASAR	Alice Springs	54.83	174	P	P	14 51 18.3	+0.4
	comp=Z,2.8nm,0.6s,baz=5.1,slow=12,SNR=55						
ASAR	Alice Springs	54.83	174	P	P	14 51 17.3	-0.6
ASAR	Alice Springs	54.83	174	P	P	14 51 17.3	-0.6
J20K	Nowinta River	56.73	31	P	P	14 51 30.4	-0.7
J20K				IAmb	IAmb	14 51 33.2	
	comp=Z,8.9nm,1.1s						
K20K	Telida	56.82	32	P	P	14 51 31.4	-0.3
K20K				IAmb	IAmb	14 51 34.4	
	comp=Z,7.8nm,0.9s						
GEYT	Alibeck	57.36	298	LR	LR	15 19 48.4	
	comp=Z,231nm,18.4s,baz=120,slow=40						
PPLA	Purkeypile	57.71	32	P	P	14 51 37.9	-0.3
PPLA				IAmb	IAmb	14 51 52.2	
	comp=Z,14nm,1.1s						
MDM	Murphy Dome	59.18	29	P	P	14 51 48.3	0.0
PMR	Palmer	59.30	33	P	P	14 51 49.2	+0.1
PMR				pmax	pmax		
	comp=Z,17nm,1.2s						
PMR	Palmer	59.30	33	P	P	14 51 49.2	+0.1
COLA	College	59.36	30	d iP	P	14 51 49.9	+0.5
COLA				pmax	pmax		
	comp=Z,20nm,2.3s						
GHO	Glory Hole Cre	59.37	33	P	P	14 51 48.3	-1.4
ILAR	Eielson Array	59.78	30	P	P	14 51 52.6	+0.3
	comp=Z,1.8nm,0.7s,baz=275,slow=6.2,SNR=20						
ILAR				LR	LR	15 19 14.4	
	comp=Z,40nm,18.1s,baz=294,slow=38						
ILAR	Eielson Array	59.78	30	P	P	14 51 50.0	-2.4
BMAR	Burnt Mountain	60.25	26	P	P	14 51 55.1	-0.5
M26K	Nabesna, AK	61.97	32	P	P	14 52 06.1	-1.3
M26K				IAmb	IAmb	14 52 09.4	
	comp=Z,8.5nm,0.8s						
KLMR	Klimovskoe	62.93	327	eP	P	14 52 12.9	-0.8
KLMR				pmax	pmax		
	comp=Z,19nm,1.5s						
KLMR	Klimovskoe	62.93	327	eP	P	14 52 12.9	-0.8
KLMR				AMP		14 52 27.9	
	comp=Z,19nm,1.5s						
STKA	Stephens Creek	63.94	168	P	P	14 52 21.1	+0.4
	comp=Z,2.1nm,0.8s,baz=338,slow=5.4,SNR=4.5						
STKA				LR	LR	15 20 59.1	
	comp=Z,56nm,20.5s,baz=21,slow=37						
STKA	Stephens Creek	63.94	168	P	P	14 52 17.1	-3.6
ARCES	ARCESS Array B	65.55	338	LR	LR	15 25 14.6	
	comp=Z,165nm,18.3s,baz=90,slow=40						
KBZ	Khabaz	66.46	308	P	P	14 52 38.9	+1.8
	comp=Z,1.8nm,0.8s,baz=128,slow=4.8,SNR=3.9						
KBZ				LR	LR	15 23 00.0	

	comp=Z,83nm,19.4s,baz=43,slow=37						
KBZ	**Khabaz**	**66.46**	**308**	*e*P	**P**	**14 52 40.3**	**+3.3**
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KIV	**Kislovodsk**	**66.52**	**308**	*e*P	**P**	**14 52 37.2**	**-0.4**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,136nm,17.0s						
FINES	**FINESS Array B**	**68.79**	**330**	P	**P**	**14 52 51.0**	**-0.4**
	comp=Z,1.2nm,0.6s,baz=62,slow=6.5,SNR=1.9						
FINES				LR	LR	15 25 00.4	
	comp=Z,159nm,19.1s,baz=54,slow=38						
MNK	**Minsk**	**71.07**	**323**	*i* P	**P**	**14 53 05.4**	**-0.2**
MNK				*i*		14 53 24.7	
MNK				*i*		14 55 40.1	
MNK				*i* PPP	PPP	14 57 25.1	
MNK				*i* S	**S**	**15 02 18.7**	**-3.2**
MNK				*i* SS	**SS**	**15 06 54.6**	**+0.3**
MNK				*i* SSS	SSS	15 10 08.1	
MNK				pmax	pmax		
	comp=Z,16nm,0.9s						
MNK				pmax	pmax		
	comp=E,3.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,16nm,1.2s						
MNK				MLR	MLR		
	comp=Z,388nm,15.0s						
MNK				MLR	MLR		
	comp=N,199nm,14.0s						
MNK				MLR	MLR		
	comp=E,79nm,20.0s						
MNK	**Minsk**	**71.07**	**323**	*i* P	**P**	**14 53 05.4**	**-0.2**
	comp=E,3.0nm,0.9s						
MNK				*i* P	**P**	**14 53 05.4**	**-0.2**
	comp=N,16nm,1.2s						
MNK				*i* P	**P**	**14 53 05.4**	**-0.2**
	comp=Z,16nm,0.9s,baz=62						
MNK				*i* PcP	**PcP**	**14 53 24.7**	**-1.1**
MNK				*i* PP	**PP**	**14 55 40.2**	**-2.5**
MNK				*i* PPP	PPP	14 57 25.1	
MNK				*i* S	**S**	**15 02 18.7**	**-3.1**
MNK				*i* SS	**SS**	**15 06 54.6**	**+0.2**
MNK				*i* SSS	SSS	15 10 08.2	
MNK				*i* LQ	LQ	15 19 22.4	
MNK				*i* LR	LR	15 24 12.1	
MNK				*i* LRM	MLR	15 26 44.2	
	comp=Z,388nm,15.3s						
MNK				*i* LRM	MLR	15 26 55.0	
	comp=N,199nm,14.1s						
MNK				*i* LRM	MLR	15 27 00.1	
	comp=E,79nm,19.8s						
AKASG	**Malin Array Be**	**72.10**	**319**	P	**P**	**14 53 13.3**	**+1.4**
	comp=E,0.4nm,0.4s,baz=51,slow=6.5,SNR=5.0						
AKASG				LR	LR	15 27 32.8	
	comp=E,208nm,18.8s,baz=50,slow=38						
BRTR	**Keskin Array B**	**74.42**	**307**	P	**P**	**14 53 26.6**	**+0.7**
	comp=E,0.9nm,0.9s,baz=79,slow=6.4,SNR=3.7						
BRTR	**Keskin Array B**	**74.42**	**307**	*e*P	**P**	**14 53 29.9**	**+3.9**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
HFS	**Hagfors**	**74.64**	**332**	LR	LR	15 31 21.6	
	comp=Z,212nm,18.0s,baz=38,slow=40						
NOA	**NORSAR Array B**	**75.07**	**334**	P	**P**	**14 53 29.0**	**-0.2**
	comp=Z,1.2nm,0.9s,baz=52,slow=5.9,SNR=1.5						
NOA				LR	LR	15 29 24.9	
	comp=Z,104nm,18.2s,baz=45,slow=38						
KOLS	**Kolonicke sedl**	**76.88**	**320**	*e*P	**P**	**14 53 39.3**	**-0.5**
KOLS	**Kolonicke sedl**	**76.88**	**320**	*e*P	**P**	**14 53 39.3**	**-0.5**
EIL	**Elat**	**78.26**	**298**	LR	LR	15 31 12.2	
	comp=Z,85nm,20.9s,baz=74,slow=38						
VRAC	**Vranov**	**79.75**	**322**	LR	LR	15 33 17.8	
	comp=Z,206nm,19.0s,baz=71,slow=39						
MODS	**Modra-Piesok**	**79.93**	**321**	*e*P	**P**	**14 53 56.0**	**-0.6**
MODS	**Modra-Piesok**	**79.93**	**321**	*e*P	**P**	**14 53 56.0**	**-0.6**
CLL	**Collm**	**80.36**	**325**	*e*P	**P**	**14 53 59.0**	**+0.2**
CLL				*e**PP	**PcP**	**14 54 06.0**	**+0.1**
CLL	**Collm**	**80.36**	**325**	*e*P	**P**	**14 53 59.0**	**+0.2**
CLL				*e*(sP)	**PcP**	**14 54 06.0**	**+0.1**
CLL				*e*PP	**PP**	**14 56 59.0**	**-2.0**
CLL				LmH		15 27 00.0	
	comp=N,400nm,20.5s						
CLL				LmH		15 27 00.0	
	comp=E,400nm,21.7s						
CLL				LmV		15 33 00.0	
	comp=N,300nm,19.1s						
CLL				LmV		15 33 00.0	
	comp=E,300nm,18.7s						
ATD	**Arta Tunnel**	**80.74**	**278**	LR	LR	15 30 47.3	
	comp=E,29nm,19.9s,baz=60,slow=36						
GERES	**GERESS Array B**	**81.54**	**323**	LR	LR	15 32 49.5	
	comp=E,120nm,19.6s,baz=40,slow=38						
EKA	**Eskdalemuir Ar**	**84.48**	**335**	LR	LR	15 37 30.0	
	comp=E,91nm,18.0s,baz=35,slow=40						
DAVOX	**Davos/Dischmat**	**84.84**	**323**	LR	LR	15 37 06.1	
	comp=E,220nm,18.1s,baz=68,slow=39						
NVAR	**Mina Array Bea**	**86.64**	**46**	P	**P**	**14 54 33.0**	**+1.3**
	comp=E,0.7nm,0.7s,baz=304,slow=4.3,SNR=5.8						
PDAR	**Pinedale Array**	**88.90**	**39**	P	**P**	**14 54 43.4**	**+0.9**
	comp=E,0.9nm,0.7s,baz=357,slow=1.0,SNR=8.3						
ULM	**Lac du Bonnet**	**89.69**	**27**	LR	LR	15 36 18.0	
	comp=E,44nm,21.0s,baz=110,slow=36						
PPT	**Papeete**	**92.01**	**109**	LR	LR	15 30 27.4	
	comp=E,16nm,19.6s,baz=300,slow=32						
SCHQ	**Schefferville**	**93.20**	**9**	LR	LR	15 38 37.1	
	comp=E,66nm,21.4s,baz=90,slow=37						
ESDC	**Sonseca Array**	**96.94**	**325**	LR	LR	15 43 60.0	
	comp=E,162nm,18.4s,baz=350,slow=38						

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*BEO **19** 14:52:13.9±2.9, 38°.56N×20°.34E, h74^{km}, ML3.5/8*
*IDC **19** 14:52:16.5±1.6, 39°.41N×20°.70E, h0^{km}, mb3.7/4, mb1 3.7/4, mb1mx3.4/38, mbtmp3.7/4, Error ellipse: s-maj=67.6km s-min=28.2km az=128.0*
*THE **19** 14:52:19.4, 39°.38N×20°.62E, h8^{km}±3^{km}, ML3.1/7, Error ellipse: s-maj=3.0km s-min=0.5km az=337.0*
*ATH **19** 14:52:19.4, 39°.38N×20°.59E, h9^{km}±2^{km}, ML3.0/10, Error ellipse: s-maj=2.7km s-min=0.8km az=288.0*
ISC 19 14:52:18.8±0.9**, 39°.38N**±0°.02×**20°.55E**±0°.02**, h16**^{km}±6^{km}**, n76,** σ**1^{s}.23**/96**, mb3.5**/4**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGT	**Igoumenitsa**	**0.23**	**313**	P	**Pb**	**14 52 24.3**	**-0.3**
IGT				S	**Sg**	**14 52 29.0**	**+1.4**
	6µm,0.2s						
IGT	**Igoumenitsa**	**0.23**	**313**	P	**Pb**	**14 52 24.3**	**-0.3**
IGT				S	**Sg**	**14 52 28.0**	**+0.3**
IGT				AML	AML	14 52 29.5	
	comp=N,11255µm,0.2s						
IGT				AML	AML	14 52 31.3	
	comp=E,13631µm,0.3s						
JAN	**Janina**	**0.36**	**39**	P	**Pg**	**14 52 25.7**	**-0.6**
JAN				S	**Sg**	**14 52 30.3**	**-1.1**
	comp=E,4µm,0.3s						
JAN	**Janina**	**0.36**	**39**	P	**Pg**	**14 52 25.6**	**-0.6**
JAN				S	**Sg**	**14 52 30.5**	**-0.9**
LKD2	**Lefkada island**	**0.59**	**172**	P	**Pg**	**14 52 30.1**	**-0.3**
LKD2				S	**Sb**	**14 52 39.2**	**+0.4**
LKD2				AML	AML	14 52 46.8	
	comp=E,2424µm,0.4s						
LKD2				AML	AML	14 52 50.4	
	comp=N,2534µm,0.7s						
KASA	**Kassiopi**	**0.60**	**308**	P	**Pb**	**14 52 30.8**	**-0.1**
KASA				S	**Sb**	**14 52 40.2**	**+0.9**
SRN	**Sarande**	**0.66**	**320**	P	**Pb**	**14 52 32.0**	**+0.1**
NYDR	**Nydri-Lefkada**	**0.67**	**170**	P	**Pg**	**14 52 31.5**	**-0.4**
NYDR	**Nydri-Lefkada**	**0.67**	**170**	P	**Pg**	**14 52 31.4**	**-0.6**
KEK	**Kerkira**	**0.67**	**300**	P	**Pb**	**14 52 32.3**	**+0.1**
KEK				S	**Sn**	**14 52 43.9**	**0.0**
	comp=N,1µm,0.3s						
KEK	**Kerkira**	**0.67**	**300**	P	**Pb**	**14 52 32.0**	**-0.1**
KEK				AML	AML	14 52 49.4	
	comp=N,2270µm,0.3s						
KEK				AML	AML	14 52 54.5	
	comp=E,2752µm,0.7s						
DRAG	**Dragano-Lefkad**	**0.69**	**179**	P	**Pg**	**14 52 31.6**	**-0.7**
EVGI	**Lefkada island**	**0.76**	**174**	P	**Pb**	**14 52 33.8**	**+0.2**
EVGI	**Lefkada island**	**0.76**	**174**	P	**Pg**	**14 52 32.8**	**-0.8**
LSK	**Leskovik**	**0.78**	**3**	P	**Pb**	**14 52 34.2**	**+0.2**
LSK				S	**Sb**	**14 52 44.9**	**+0.6**
	comp=E,2µm,0.7s						
KPRO	**Kipourio**	**0.85**	**47**	P	**Pg**	**14 52 34.5**	**-0.9**
KPRO	**Kipourio**	**0.85**	**47**	P	**Pg**	**14 52 34.4**	**-0.9**
KPRO				S	**Sb**	**14 52 46.9**	**+0.4**
KPRO				AML	AML	14 52 52.8	
	comp=E,2232µm,0.6s						
KPRO				AML	AML	14 52 56.6	
	comp=N,2128µm,0.5s						
FSK	**Fiskardo**	**0.91**	**180**	P	**Pn**	**14 52 37.2**	**+0.3**
FSK	**Fiskardo**	**0.91**	**180**	P	**Pg**	**14 52 35.8**	**-0.7**
PENT	**Pentalofos**	**0.94**	**29**	P	**Pg**	**14 52 36.4**	**-0.6**
PENT	**Pentalofos**	**0.94**	**29**	P	**Pg**	**14 52 36.2**	**-0.8**
PENT				S	**Sg**	**14 52 48.6**	**-0.7**
PENT				AML	AML	14 52 55.0	
	comp=N,1245µm,0.5s						
PENT				AML	AML	14 53 00.8	
	comp=E,1133µm,0.6s						
PVO	**Paravola**	**1.07**	**135**	P	**Pn**	**14 52 39.4**	**+0.3**
PVO				S	**Sn**	**14 52 54.6**	**+1.0**
	comp=E,1µm,0.7s						
PVO	**Paravola**	**1.07**	**135**	P	**Pn**	**14 52 39.5**	**+0.3**
PVO				AML	AML	14 53 01.1	
	comp=N,2585µm,0.9s						
PVO				AML	AML	14 53 02.4	
	comp=E,2602µm,0.8s						
EVR	**Evrytania**	**1.08**	**115**	P	**Pg**	**14 52 38.5**	**-1.1**
EVR	**Evrytania**	**1.08**	**115**	P	**Pg**	**14 52 38.7**	**-0.9**
NEST	**Nestorio**	**1.11**	**20**	P	**Pn**	**14 52 39.8**	**0.0**
DMLN	**Damoulianata-K**	**1.14**	**187**	P	**Pg**	**14 52 41.1**	**+0.2**
DMLN	**Damoulianata-K**	**1.14**	**187**	P	**Pn**	**14 52 40.6**	**+0.5**
THL	**Klokotos Trika**	**1.15**	**80**	P	**Pb**	**14 52 39.7**	**-0.5**
THL				S	**Sg**	**14 52 55.5**	**-0.4**
	comp=E,375nm,0.8s						
THL	**Klokotos Trika**	**1.15**	**80**	P	**Pb**	**14 52 39.5**	**-0.7**
THL				S	**Sb**	**14 52 55.2**	**+0.3**
THL				AML	AML	14 53 01.1	
	comp=N,687µm,0.6s						
THL				AML	AML	14 53 02.4	
	comp=E,776µm,0.7s						
KEF3	**Kipouria, Keph**	**1.18**	**188**	P	**Pg**	**14 52 41.4**	**-0.2**
KEF3	**Kipouria, Keph**	**1.18**	**188**	P	**Pn**	**14 52 41.2**	**+0.6**
VLS	**Valsamata**	**1.20**	**179**	P	**Pg**	**14 52 41.6**	**-0.3**
VLS	**Valsamata**	**1.20**	**179**	P	**Pg**	**14 52 41.6**	**-0.3**
VLS				AML	AML	14 53 05.4	
	comp=N,1586µm,0.4s						
VLS				AML	AML	14 53 05.7	
	comp=E,1811µm,0.3s						
MAKR	**Makrakomi, Fth**	**1.28**	**106**	P	**Pn**	**14 52 42.4**	**+0.4**
MAKR				S	**Sn**	**14 52 59.4**	**+0.6**
	comp=E,1µm,0.5s						
MAKR	**Makrakomi, Fth**	**1.28**	**106**	P	**Pb**	**14 52 42.5**	**0.0**
ANX	**Ano Chora**	**1.32**	**126**	P	**Pn**	**14 52 42.8**	**+0.2**
ANX	**Ano Chora**	**1.32**	**126**	P	**Pb**	**14 52 43.5**	**+0.2**
KZN	**Kozani**	**1.32**	**45**	P	**Pg**	**14 52 43.7**	**-0.6**
EFP	**Efpalio**	**1.42**	**131**	P	**Pg**	**14 52 45.9**	**-0.2**
AGG	**Agios Georgios**	**1.43**	**104**	P	**Pb**	**14 52 44.9**	**-0.1**
AGG				AML	AML	14 53 11.0	
	comp=N,781µm,0.4s						
AGG				AML	AML	14 53 11.3	
	comp=E,1206µm,0.9s						
RLS	**Riolos of Patr**	**1.50**	**151**	P	**Pb**	**14 52 46.5**	**+0.3**
RLS				AML	AML	14 53 14.8	
	comp=N,833µm,0.5s						
RLS				AML	AML	14 53 15.9	
	comp=E,1373µm,0.6s						
FNA	**Florina**	**1.54**	**24**	P	**Pb**	**14 52 47.3**	**+0.3**
LAKA	**Lakka**	**1.59**	**135**	P	**Pb**	**14 52 48.4**	**+0.6**
DRO	**Drossia**	**1.69**	**147**	P	**Pb**	**14 52 50.0**	**+0.6**
OHR	**Ohrid**	**1.75**	**6**	*e*Pn	**Pg**	**14 52 53.4**	**+1.1**
OHR				*e*Sn	**Sg**	**14 53 16.4**	**+1.4**
OHR	**Ohrid**	**1.75**	**6**	*i* Pn	**Pg**	**14 52 52.7**	**+0.4**
KLV	**Kalavryta, Ach**	**1.82**	**136**	P	**Pb**	**14 52 52.2**	**+0.4**
TIR	**Tirane**	**2.04**	**345**	*e*Pn	**Pb**	**14 52 56.0**	**+0.6**
TIR				*e*Sn	**Sg**	**14 53 24.7**	**+0.3**
NEO	**Neokhori**	**2.07**	**91**	P	**Pb**	**14 52 55.1**	**-0.9**
VAY	**Valandovo**	**2.48**	**38**	*e*Pn	**Pb**	**14 53 01.7**	**-1.3**
VAY				*e*Sn	**Sb**	**14 53 33.1**	**-0.2**
STIP	**Stip**	**2.63**	**28**	*i* Pn	**Pb**	**14 53 05.1**	**-0.4**
PRVS	**Prvonek**	**3.34**	**20**	*e*Pn	**Pn**	**14 53 13.1**	**+2.8**
BARS	**Barje**	**3.57**	**15**	*e*Pn	**Pn**	**14 53 16.2**	**+2.7**
TREB	**Trebinje**	**3.73**	**334**	*e*Pn	**Pn**	**14 53 16.6**	**+0.9**
DBRK	**Dubrovnik**	**3.76**	**332**	*e*Pn	**Pn**	**14 53 15.1**	**-1.0**
VTS	**Vitosha**	**3.82**	**31**	*e*Pn	**Pn**	**14 53 20.8**	**+3.7**
SJES	**Sjenica**	**3.91**	**354**	*e*Pn	**Pn**	**14 53 21.3**	**+3.1**
STON	**Ston**	**4.11**	**329**	*e*Pn	**Pn**	**14 53 21.4**	**+0.6**
STON	**Ston**	**4.11**	**329**	*e*Pn	**Pn**	**14 53 20.9**	**+0.1**
ZAPS	**Zavoj**	**4.20**	**21**	*e*Pn	**Pn**	**14 53 25.3**	**+3.1**
LSTV	**Lastovo**	**4.38**	**322**	*e*Pn	**Pn**	**14 53 24.2**	**-0.3**
LSTV				Sn	**Sn**	**14 54 12.3**	**-2.9**
GRUS	**Gruza**	**4.51**	**1**	*e*Pn	**Pn**	**14 53 28.0**	**+1.6**
ZAGS	**Zajecar**	**4.61**	**15**	*e*Pn	**Pn**	**14 53 32.3**	**+4.5**
MAKA	**Makarska**	**4.73**	**327**	*e*Pn	**Pn**	**14 53 30.1**	**+0.8**
DIVS	**Divibare**	**4.74**	**355**	*e*Pn	**Pn**	**14 53 31.9**	**+2.3**
RICI	**Ricice**	**4.85**	**329**	*e*Pn	**Pn**	**14 53 31.2**	**+0.1**
HVAR	**Hvar**	**4.90**	**322**	*e*Pn	**Pn**	**14 53 31.6**	**-0.2**
HVAR				Sn	**Sn**	**14 54 24.9**	**-3.2**
ZIRJ	**Zirje**	**5.64**	**321**	*e*Pn	**Pn**	**14 53 42.1**	**+0.1**
ZIRJ				Sn	**Sn**	**14 54 43.0**	**-3.4**
MORI	**Morici**	**5.77**	**323**	*e*Pn	**Pn**	**14 53 44.7**	**+1.0**
DUGI	**Dugi Otok**	**6.18**	**320**	*e*Pn	**Pn**	**14 53 49.8**	**+0.5**
NVLJ	**Novalja**	**6.69**	**323**	*e*Pn	**Pn**	**14 53 57.3**	**+1.0**
FINES	**FINESS Array B**	**22.36**	**7**	P	**P**	**14 57 15.3**	**-0.5**
	comp=E,1.1nm,0.6s,baz=183,slow=11,SNR=1.3						
TORD	**Torodi Ar. Bea**	**30.98**	**218**	P	**P**	**14 58 36.5**	**+1.0**
	comp=E,0.4nm,0.6s,baz=22,slow=8.7,SNR=2.7						
MKAR	**Makanchi Array**	**44.66**	**59**	P	**P**	**15 00 29.9**	**-0.8**
	comp=E,0.5nm,0.6s,baz=277,slow=8.4,SNR=7.9						
ZALV	**Zalesovo Beam**	**44.88**	**49**	P	**P**	**15 00 31.5**	**-0.7**
	comp=E,1.7nm,0.5s,baz=271,slow=8.7,SNR=4.7						

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*IDC **19** 14:58:02.1±0.8, 0°.94N×127°.48E, h0^{km}, mb4.0/10, mb1 4.1/13, mb1mx3.9/36, mbtmp4.0/13, ML3.6/2, MS3.5/9, Ms1 3.5/9, ms1mx3.1/52, Error ellipse: s-maj=27.7km s-min=13.7km az=71.0*
*NEIC **19** 14:58:03.6±2.4, 0°.99N±0°.04×127°.53E±0°.05, h11^{km}±6^{km}, mb4.2/13, Error ellipse: s-maj=8.2km s-min=4.0km az=61.0*
*DJA **19** 14:58:04.7±0.2, 1°N±2°×12°7E±°, h10^{km}, M4.2/14, mb4.4/13, mB4.8/4, MLv4.1/14, Mw(mB)4.1/4*
ISC 19 14:58:03.4±0.6**, 0°.97N**±0°.05×**127°.51E**±0°.06**, h10**^{km}**, n52,** σ**1^{s}.24**/50**, mb4.1**/15**, MS3.3**/7**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.24**	**216**	P	**Pg**	**14 58 07.6**	**-0.6**
TNTI				S	**Sg**	**14 58 12.1**	**+0.6**
TNTI	**Ternate**	**0.24**	**216**		**Pg**	**14 58 09.0**	**+0.7**
LBMI	**Labuha**	**1.59**	**180**	P	**Pn**	**14 58 32.7**	**+1.1**
LBMI				S	**Sb**	**14 58 54.3**	**+1.2**
SANI	**Sanana**	**3.36**	**207**	P	**Pn**	**14 58 55.6**	**-0.3**
KMSI	**Cibinong**	**3.55**	**264**	P	**Pn**	**14 58 59.9**	**+1.4**
SWI	**Sorong**	**4.17**	**116**	P	**Pn**	**14 59 09.2**	**+2.1**
SIJI	**Sorong**	**4.18**	**116**	Pn	**Pn**	**14 59 08.7**	**+1.5**
	1.9nm,0.3s,baz=323,slow=15,SNR=6.3						
SIJI				Sn	**Sn**	**14 59 57.8**	**+1.6**
	1.9nm,0.3s,baz=240,slow=20,SNR=1.6						
GTOI	**Gorontalo**	**4.51**	**266**	P	**Pn**	**14 59 15.1**	**+3.4**
LUWI	**Luwuk**	**5.14**	**247**		**Pn**	**14 59 18.5**	**-1.9**
MRSI	**Marisa**	**5.59**	**265**	P	**Pn**	**14 59 27.5**	**+0.9**
	0.2nm554nm45nm,0.7s						
APSI	**Ampana**	**6.15**	**252**	P	**Pn**	**14 59 36.4**	**+2.1**
	0.2nm402nm24nm,0.5s						
TOLI2	**Tolitoli**	**6.72**	**271**	Pn	**Pn**	**14 59 42.4**	**+0.2**
MPSI	**Mapaga**	**7.63**	**265**	P	**Pn**	**14 59 56.6**	**+1.9**
	0.1nm723nm16nm,0.8s						
TTSI	**Tana Toraja**	**8.65**	**243**	P	**Pn**	**15 00 08.7**	**-0.1**
	2µm24nm,0.6s						
BNSI	**Bone**	**9.11**	**234**	P	**Pn**	**15 00 16.2**	**+1.1**
	27nm,1.5s						
SPSI	**Sidrap Palu**	**9.15**	**238**	P	**Pn**	**15 00 17.0**	**+1.4**
	26nm,0.6s						
BKSI	**Bulukumba**	**9.66**	**230**	P	**Pn**	**15 00 23.2**	**+0.6**
	24nm,0.9s						
KAPI	**Kappang**	**9.76**	**232**	Pn	**Pn**	**15 00 25.1**	**+1.2**
	0.9nm,0.3s,baz=45,slow=5.8,SNR=5.7						
KAPI	**Kappang**	**9.76**	**232**	Pn	**Pn**	**15 00 25.6**	**+1.7**
SOEI	**Soe**	**11.13**	**197**	Pn	**Pn**	**15 00 42.9**	**+0.1**
EDFI	**Ende, Flores**	**11.26**	**211**	P	**Pn**	**15 00 45.8**	**+1.3**
	10nm,0.9s						
BATI	**Baumata**	**11.74**	**199**	LR	LR	15 06 34.1	
	comp=Z,208nm,18.4s,baz=326,slow=44						
JAY	**Jayapura**	**13.64**	**105**	LR	LR	15 06 59.2	
	comp=Z,276nm,20.3s,slow=39						
SBUM	**Sibu**	**15.35**	**276**	Pn	**Pn**	**15 01 38.7**	**-1.6**
SBUM				IAmb	IAmb	15 01 47.2	
	comp=Z,11nm,1.2s						
KNRA	**Kununurra**	**16.58**	**176**	Pn	**Pn**	**15 01 54.2**	**-1.9**
KNRA				IAmb	IAmb	15 02 00.9	
	comp=Z,16nm,1.0s						
KSM	**Kuching**	**17.20**	**272**		**Pn**	**15 02 03.3**	**-0.7**
FITZ	**Fitzroy Crossi**	**19.03**	**185**	P	**P**	**15 02 26.1**	**+0.4**
	baz=0.1,slow=8.2						
GUMO	**Guam**	**21.28**	**53**	LR	LR	15 09 52.8	
	comp=Z,143nm,22.0s,baz=60,slow=33						
LEM	**Lembang**	**21.30**	**248**	LR	LR	15 12 17.4	
	comp=Z,101nm,18.3s,baz=10.0,slow=40						
WB0	**Warramunga Arr**	**21.68**	**162**	P	**P**	**15 02 54.3**	**-0.2**
WB0				IAmb	IAmb	15 03 03.1	
	comp=Z,20nm,1.0s						
WRAB	**Tennant Creek**	**21.83**	**162**	P	**P**	**15 02 56.3**	**+0.3**
WRAB				IAmb	IAmb	15 03 04.7	
	comp=Z,14nm,0.9s						
WRA	**Warramunga Arr**	**21.83**	**162**	P	**P**	**15 02 56.3**	**+0.2**
	comp=Z,9.4nm,0.6s,baz=341,slow=11,SNR=50						
WRA	**Warramunga Arr**	**21.83**	**162**	P	**P**	**15 02 56.0**	**-0.1**
WB2	**Warramunga Arr**	**21.84**	**162**	P	**P**	**15 02 56.4**	**+0.3**
WR0	**Warramunga Arr**	**21.91**	**162**	P	**P**	**15 02 57.2**	**+0.3**
WR0				IAmb	IAmb	15 03 03.7	
	comp=Z,15nm,1.1s						
AS31	**Alice Springs**	**25.26**	**166**	P	**P**	**15 03 29.5**	**-0.5**
AS31				IAmb	IAmb	15 03 36.8	
	comp=Z,3.3nm,0.8s						
ASAR	**Alice Springs**	**25.26**	**166**	P	**P**	**15 03 29.9**	**0.0**
	comp=Z,6.9nm,0.7s,baz=343,slow=9.2,SNR=46						
ASAR	**Alice Springs**	**25.26**	**166**	P	**P**	**15 03 30.6**	**+0.6**
CTAO	**Charters Tower**	**27.85**	**140**	P	**P**	**15 03 50.7**	**-2.7**
CMAR	**Chiang Mai Arr**	**32.98**	**304**	P	**P**	**15 04 38.8**	**0.0**
	comp=Z,0.2nm,0.3s,baz=113,slow=6.4,SNR=1.0						
CMAR				LR	LR	15 17 32.1	
	comp=Z,27nm,20.7s,baz=194,slow=36						
CHTO	**Chiang Mai**	**33.16**	**304**	P	**P**	**15 04 39.4**	**-0.9**
CHTO				IAmb	IAmb	15 04 48.6	
	comp=Z,2.6nm,1.1s						
BBOO	**Buckleboo**	**34.55**	**167**	P	**P**	**15 04 49.9**	**-2.3**
STKA	**Stephens Creek**	**35.29**	**159**	P	**P**	**15 04 58.4**	**-0.2**
	comp=Z,3.9nm,0.8s,baz=318,slow=6.4,SNR=6.9						
STKA	**Stephens Creek**	**35.29**	**159**	P	**P**	**15 04 59.0**	**+0.4**
KSRS	**Korea Array**	**36.31**	**1**	P	**P**	**15 05 08.0**	**+0.7**
	comp=Z,1.2nm,0.6s,baz=173,slow=9.3,SNR=7.2						
MJAR	**Matsushiro Arr**	**36.76**	**14**	P	**P**	**15 05 11.8**	**+0.6**
	comp=Z,2.2nm,0.9s,baz=178,slow=10,SNR=4.0						
MJAR				LR	LR	15 18 20.1	
	comp=Z,117nm,21.8s,baz=310,slow=33						
PALK	**Pallekele**	**47.07**	**279**	LR	LR	15 27 12.4	
	comp=Z,35nm,20.5s,baz=206,slow=37						
SONM	**Songino Array**	**50.15**	**342**	P	**P**	**15 07 00.3**	**+1.2**
	comp=Z,0.6nm,0.6s,baz=161,slow=8.2,SNR=2.8						
SONM				LR	LR	15 31 31.3	
	comp=Z,49nm,20.0s,baz=186,slow=40						
MKAR	**Makanchi Array**	**60.26**	**326**	P	**P**	**15 08 12.2**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=118,slow=7.9,SNR=11						
MKAR	**Makanchi Array**	**60.26**	**326**	P	**P**	**15 08 11.3**	**-0.7**
ZALV	**Zalesovo Beam**	**63.39**	**333**	P	**P**	**15 08 32.6**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=123,slow=5.3,SNR=1.7						
VNDA	**Vanda**	**80.60**	**173**	P	**P**	**15 10 15.0**	**-0.8**
	comp=Z,0.5nm,0.7s,baz=310,slow=6.5,SNR=1.7						
VNDA				LR	LR	15 45 19.1	
	comp=Z,36nm,20.9s,baz=324,slow=35						

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*IDC **19** 14:58:51.9±1.8, 30°.61S×71°.97W, h0^{km}, mb3.7/1, mb1 3.6/3, mb1mx3.5/22, mbtmp3.6/3, ML3.6/2, MS3.2/4, Ms1 3.2/4, ms1mx2.9/25, Error ellipse: s-maj=90.2km s-min=37.7km az=108.0*
*GUC **19** 14:58:56.9±0.6, 30°.64S×71°.70W, h38^{km}±1^{km}, ML4.1*
ISC 19 14:58:56.3±1.5**, 30°.60S**±0°.05×**71°.9W**±0°.1**, h26**^{km}±8^{km}**, n33,** σ**1^{s}.45**/30**, 1C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	**0.22**	**110**	⇑*i*P	**Pb**	**14 59 02.5**	**+0.3**
CO06				*i* S	**Sb**	**14 59 06.3**	**0.0**
CO06				IAML		14 59 07.5	
	comp=E,18µm,0.4s						
CO05	**La Serena**	**0.87**	**39**	*e*P	**Pb**	**14 59 12.2**	**-0.6**
CO05				*i* S	**Sb**	**14 59 23.8**	**-0.3**
GO04	**Tololo Observa**	**1.02**	**66**	*e*P	**Pb**	**14 59 13.8**	**-1.6**
GO04				*i* S	**Sb**	**14 59 26.2**	**-2.4**
LCO	**Las Campanas**	**1.88**	**33**	*e*P	**Pn**	**14 59 27.8**	**+0.8**
LCO				*i* S	**Sn**	**14 59 52.5**	**+2.4**
VA06	**Catapilco**	**2.02**	**166**	*e*P	**Pn**	**14 59 28.7**	**+0.1**
VA06				IAML		15 00 06.0	
	comp=N,3µm,0.5s						
VA01	**Torpederas**	**2.42**	**175**	IAML		15 00 18.8	
	comp=N,397nm,0.3s						
VA03	**San Esteban**	**2.44**	**153**	*e*P	**Pn**	**14 59 35.0**	**+0.5**
VA03				*i* S	**Sn**	**15 00 04.8**	**+1.3**
VA03				IAML		15 00 13.3	
	comp=E,2µm,0.2s						
ROCH	**El Roble**	**2.48**	**163**	*e*P	**Pn**	**14 59 35.7**	**+0.6**
ROCH				IAML		15 00 19.4	
	comp=N,1µm,0.5s						
PEL	**Peldehue**	**2.73**	**159**	*e*P	**Pn**	**14 59 38.9**	**+0.4**
PEL				IAML		15 00 21.3	
	comp=N,960nm,0.4s						
MT05	**Renca**	**2.95**	**161**	*e*P	**Pn**	**14 59 41.9**	**+0.4**
MT05				IAML		15 00 30.5	
	comp=E,1µm,0.4s						
VA05	**Santo Domingo**	**3.06**	**176**	IAML		15 00 46.4	
	comp=E,768nm,0.4s						
MT09	**Talagante**	**3.25**	**167**	*e*P	**Pn**	**14 59 46.1**	**+0.3**
MT09				IAML		15 00 42.2	
	comp=E,648nm,0.4s						
MT01	**Popeta**	**3.30**	**171**	*e*P	**Pn**	**14 59 46.9**	**+0.7**
MT01				IAML		15 00 41.4	
	comp=E,372nm,0.3s						
GO03	**Copiap**	**3.32**	**26**	*e*P	**Pn**	**14 59 47.5**	**+0.8**
GO03				IAML		15 00 41.6	
	comp=N,183nm,0.5s						
LMEL	**Las Melosas**	**3.53**	**157**	*e*P	**Pn**	**14 59 52.5**	**+2.8**
LMEL				IAML		15 00 49.5	
	comp=N,584nm,0.4s						
BO04	**La Punta**	**3.54**	**163**	*e*P	**Pn**	**14 59 50.4**	**+0.7**
BO04				*i* S	**Sn**	**15 00 30.7**	**-0.1**
VCA	**Vinchina**	**3.69**	**61**	*e*P	**Pn**	**14 59 56.0**	**+4.2**
VCA				*e*S	**Sb**	**15 00 42.8**	**-2.5**
BO01	**Tunca**	**3.84**	**170**	*e*P	**Pn**	**14 59 54.7**	**+1.0**
CYA	**Choya**	**5.71**	**69**	*e*P	**Pn**	**15 00 20.3**	**+0.8**
CYA				*e*S	**Sn**	**15 01 24.9**	**+0.6**
H03N1	**Juan Fernandez**	**6.61**	**243**	T	T	15 07 30.2	
	baz=70,slow=72						
H03N2	**Juan Fernandez**	**6.63**	**243**	T	T	15 07 29.9	
	baz=70,slow=72						
H03N3	**Juan Fernandez**	**6.63**	**243**	T	T	15 07 28.4	
	baz=70,slow=72						
LVC	**Limon Verde**	**8.39**	**19**	LR	LR	15 04 20.1	
	comp=N,74nm,18.3s,baz=246,slow=39						
PLCA	**Paso Flores**	**10.17**	**174**	Pn	**Pn**	**15 01 19.9**	**-0.7**
	comp=N,0.1nm,0.3s,baz=356,slow=13,SNR=1.0						
CPUP	**Villa Florida**	**13.48**	**75**	LR	LR	15 07 51.5	
	comp=N,57nm,19.6s,baz=226,slow=40						
SIV	**San Ignacio**	**17.59**	**37**	P	**Pn**	**15 03 00.3**	**+0.6**
	comp=N,0.3nm,0.3s,baz=242,slow=15,SNR=3.9						
SIV				LR	LR	15 11 12.3	
	comp=N,67nm,19.2s,baz=88,slow=42						
MAW	**Mawson**	**76.39**	**164**	LR	LR	15 45 43.9	
	comp=N,40nm,18.2s,baz=60,slow=37						
TORD	**Torodi Ar. Bea**	**82.93**	**70**	P	**P**	**15 11 18.7**	**-0.5**
	comp=N,0.4nm,0.6s,baz=246,slow=5.9,SNR=2.6						
WRA	**Warramunga Arr**	**123.78**	**210**	PKP	**PKPdf**	**15 17 51.8**	**-0.6**
	comp=N,0.5nm,1.0s,baz=156,slow=1.4,SNR=1.9						
H11S2	**WAKE ISLAND Hy**	**125.89**	**272**	T	T	17 36 42.8	
	baz=115,slow=75,SNR=5.1						
H11S1	**WAKE ISLAND Hy**	**125.90**	**272**	T	T	17 36 40.9	
	baz=115,slow=75,SNR=6.4						
H11S3	**WAKE ISLAND Hy**	**125.91**	**271**	T	T	17 36 41.7	
	baz=115,slow=75,SNR=6.0						
ZALV	**Zalesovo Beam**	**151.24**	**29**	PKPbc	**PKPbc**	**15 18 46.9**	**0.0**
	comp=N,3.4nm,0.9s,baz=326,slow=1.5,SNR=9.0						

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*TUL **19** 15:06:17.2±1.0, 36°.65N±0°.02×98°.47W±0°.02, h8^{km}±5^{km}, ML2.9, mb_Lg2.8/28(NEIC), Error ellipse: s-maj=3.1km s-min=2.3km az=131.0*
NEIC 19 15:06:17.4±1.1**, 36°.65N**±0°.02×**98°.45W**±0°.01**, h9**^{km}±4^{km}**, Error ellipse: s-maj=3.3km s-min=0.5km az=155.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK032	Salt Plains WL	0.25	51		Pg	15 06 22.6	+0.1
OK032				Sg	Sg	15 06 26.5	+0.6
CROK	Carrier	0.40	111	Pg	Pg	15 06 25.5	+0.2
CROK				Sg	Sg	15 06 31.3	+0.6
KAN14	Manchester OK	0.50	52		Pg	15 06 27.1	0.0
KAN14				Sg	Sg	15 06 34.1	+0.4
U32A	Winter Ranch,	0.52	239	Pg	Pg	15 06 27.0	-0.5
U32A				Sg	Sg	15 06 34.3	0.0
GC02	Grant County #	0.52	67	Pg	Pg	15 06 27.4	-0.1
GC02				Sg	Sg	15 06 34.6	+0.3
KAN10	Anthony SW Sta	0.56	31		Pg	15 06 28.1	-0.2
KAN10				Sg	Sg	15 06 35.8	+0.3
KAN05	Bluff City Nor	0.65	45		Pg	15 06 29.9	-0.2
KAN16	Harper SW Stat	0.66	28	Pg	Pg	15 06 29.8	-0.3
KAN16				Sg	Sg	15 06 38.7	0.0
KAN17	Caldwell West	0.68	54	Pg	Pg	15 06 30.3	-0.3
KAN17				Sg	Sg	15 06 39.6	+0.2
KAN08	Anthony NE Sta	0.69	34		Pg	15 06 30.6	-0.3
KAN08				Sg	Sg	15 06 40.2	+0.2
KAN12	Harper NE Stat	0.74	29		Pg	15 06 31.4	-0.4
KAN12				Sg	Sg	15 06 41.6	+0.1
KAN01	Argonia South	0.75	48	Pg	Pg	15 06 31.7	-0.2
KAN06	Argonia West S	0.77	38		Pg	15 06 31.9	-0.3
KAN09	Caldwell North	0.83	54	Pg	Pg	15 06 33.0	-0.4
KAN09				Sg	Sg	15 06 43.9	-0.3
KAN13	South Haven SW	0.86	65		Pg	15 06 33.8	-0.3
KS20	Mayfield South	0.93	51	Pg	Pg	15 06 34.7	-0.6
KS20				Sg	Sg	15 06 47.1	-0.2
BLOK	Blackwell	1.00	83		Pg	15 06 36.2	-0.5
BLOK				Sg	Sg	15 06 49.7	+0.1
OK029	Liberty Lake	1.17	136	Pg	Pb	15 06 39.2	-0.6
OK029				Sg	Sg	15 06 54.8	-0.3
BCOK	Bluff Creek, N	1.20	145		Pb	15 06 39.5	-0.8
BCOK				Sg	Sb	15 06 56.0	0.0
OKCFA	Oklahoma City	1.47	146	Pn	Pn	15 06 44.3	+0.2
OKCFA				Sn	Sb	15 07 04.1	+0.3
OK031	S. Brethren Rd	1.48	118		Pn	15 06 44.6	+0.4
OK031				Sn	Sb	15 07 04.3	+0.4
QUOK	Quay	1.48	108	Pn	Pb	15 06 44.8	-0.4
QUOK				Sn	Sb	15 07 04.4	+0.2
OK030	Cody Creek RV	1.53	118		Pb	15 06 45.6	-0.3
OK030				Sn	Sb	15 07 05.9	+0.5
T35A	Sooner Cattle	1.58	80	Pn	Pn	15 06 46.2	+0.6
FNO	Franklin	1.63	148	Pn	Pn	15 06 45.9	-0.4
R32A	Long Quarter,	1.78	353		Pn	15 06 48.7	+0.2
WMOK	Wichita Mounta	1.92	188	Pn	Pn	15 06 50.5	+0.1
X34A	Smith Ranch, M	2.10	166	Pn	Pn	15 06 52.6	-0.2
X34A				IAmb_Lg		15 07 27.6	
	comp=Z,42nm,0.7s						
TUL1	Leonard	2.27	108		Pn	15 06 55.9	+0.7
TUL1				IAmb_Lg		15 07 33.8	
	comp=Z,31nm,0.8s						
CBKS	Cedar Bluff	2.39	335		Pn	15 06 57.4	+0.5
LOOK	Love County	2.85	158	Pn	Pn	15 07 03.5	+0.5
LOOK				IAmb_Lg		15 07 50.7	
	comp=Z,20nm,0.8s						
KSU1	Kansas State U	2.85	30		Pn	15 07 03.5	+0.4
AMTX	Amarillo	3.16	237		Pn	15 07 06.2	-1.3
X37A	Clayton	3.24	128	Pn	Pn	15 07 08.1	-0.5
X37A				IAmb_Lg		15 08 07.0	
	comp=Z,19nm,1.0s						
U38A	Gravette	3.28	92		Pn	15 07 08.5	-0.6
Z35A	Perchaven, San	3.45	163	Pn	Pn	15 07 11.9	+0.5
HHAR	Hobbs	3.66	94		Pn	15 07 14.2	0.0
W39A	Magazine	4.06	110		Pn	15 07 20.5	+0.8
W39A				IAmb_Lg		15 08 32.8	
	comp=Z,18nm,0.7s						
KSCO	Kaye Shedlock'	4.06	307	IAmb_Lg		15 08 26.1	
	comp=Z,17nm,0.7s						
ABTX	Abilene, Hawle	4.13	194	Pn	Pn	15 07 20.3	-0.5
S39A	Bolivar	4.23	74		Pn	15 07 24.0	+2.0
MIAR	Mount Ida	4.49	116	Pn	Pn	15 07 25.3	-0.4
U40A	Yellville	4.52	92	Pn	Pn	15 07 26.2	+0.1
WHTX	Lake Whitney,	4.72	170	Pn	Pn	15 07 28.2	-0.5
BGNE	Belgrade	4.76	3	Pn	Pn	15 07 29.2	-0.2
T25A	Trinidad	4.80	278		Pn	15 07 25.1	-5.0
T25A				IAmb_Lg		15 08 52.4	
	comp=Z,22nm,1.1s						
P38A	Dawn	4.89	51	Pn	Pn	15 07 27.3	-3.8
MGMO	Mountain Grove	4.98	82	Pn	Pn	15 07 30.1	-2.4
X40A	Basin Creek Fa	5.06	114	Pn	Pn	15 07 32.2	-1.3
OGNE	Ogallala	5.12	328	Pn	Pn	15 07 34.2	-0.2
FCAR	Ozark Folk Cen	5.17	97	Pn	Pn	15 07 35.1	+0.1
WHAR	Wooly Hollow	5.18	103		Pn	15 07 35.2	+0.1
R40A	Maddies Statio	5.18	70	Pn	Pn	15 07 33.5	-1.7
R40A				IAmb_Lg		15 09 07.4	
	comp=Z,10nm,1.0s						
SDCO	Great Sand Dun	5.73	283	Pn	Pn	15 07 44.2	+1.2
P40A	Paris	5.81	58	Pn	Pn	15 07 41.7	-2.1
CCM	Cathedral Cave	5.91	74	Pn	Pn	15 07 43.3	-1.9
CCM				IAmb_Lg		15 09 26.8	
	comp=Z,17nm,1.1s						
LCAR	Lake Charles	5.92	93	Pn	Pn	15 07 42.6	-2.6
PBMO	Poplar Bluff	6.45	86	Pn	Pn	15 07 51.2	-1.3
PBMO				IAmb_Lg		15 09 44.9	
	comp=Z,11nm,0.8s						
ISCO	Idaho Springs	6.46	301	Pn	Pn	15 07 53.5	+0.5
FVM	French Village	6.53	76	Pn	Pn	15 07 51.9	-1.9
FVM				IAmb_Lg		15 09 44.9	
	comp=Z,16nm,0.8s						
ANMO	Albuquerque	6.72	258	Pn	Pn	15 07 56.4	-0.1
S44A	Carbondale	7.42	79	IAmb_Lg		15 10 14.0	
	comp=Z,12nm,0.8s						
K38A	Parkersburg	7.42	34	IAmb_Lg		15 10 21.4	
	comp=Z,14nm,0.8s						

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*IDC **19** 15:06:55.8±3.6, 9°.34N×125°.93E, h0^{km}, mb3.4/3, mb1 3.6/3, mb1mx3.3/41, mbtmp3.4/3, Error ellipse: s-maj=297.3km s-min=30.3km az=65.0*

*MAN **19** 15:07:02.2, 9°.39N×126°.26E, h19^{km}, mb4.4, ML3.2, MS3.0*

ISC 19 15:07:02.4±1.4**, 9°.42N**±0°.08×**126°.3E**±0°.1**, h50^{km}, n16,** σ**2^s.51**/14**, mb3.4**/3**, 4C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	Bislig	1.22	178	⇓*i*P	Pn	15 07 22.6	-0.6
BIPH				*i* S	Sn	15 07 37.3	-1.4
MSLP	Maasin	1.61	296	⇑*i*P	Pn	15 07 29.4	+0.9
MSLP				*i* S	Sn	15 07 51.0	+2.9
BUKP	Musuan	1.97	219	⇓*i*P	Pn	15 07 33.4	-0.1
BUKP				*i* S	Sn	15 08 15.4	+18
TBP	Tagbilaran	2.44	277	*e*P	Pn	15 07 40.2	+0.4
TBP				*i* S	Sn	15 08 07.9	-0.7
DMPH	Davao City--Mi	2.45	199	⇑*e*P	Pn	15 07 47.1	+7.0
DMPH				*e*S	Sn	15 08 14.4	+5.6
CNOP	Candoni, Negro	3.66	277	⇑*e*P	Pn	15 07 56.6	+0.1
CNOP				*i* S	Sn	15 08 33.8	-4.6
RCP	Roxas	4.12	302	⇑*e*P	Pn	15 08 04.6	+1.8
WRA	Warramunga Arr	30.22	165	P	P	15 13 09.1	+0.6
	0.8nm,1.1s,baz=346,slow=9.5,SNR=2.8						
ASAR	Alice Springs	33.70	167	P	P	15 13 38.6	-0.5
	0.1nm,0.3s,baz=345,slow=7.3,SNR=6.0						
H11S3	WAKE ISLAND Hy	40.12	73	T	T	15 57 36.1	
	baz=262,slow=75,SNR=19						
H11S1	WAKE ISLAND Hy	40.13	72	T	T	15 57 37.6	
	baz=262,slow=75,SNR=13						
H11S2	WAKE ISLAND Hy	40.13	73	T	T	15 57 37.0	
	baz=262,slow=75,SNR=12						
H11N1	WAKE ISLAND Hy	40.48	71	T	T	15 58 11.1	
	baz=265,slow=74,SNR=4.5						
H11N2	WAKE ISLAND Hy	40.49	71	T	T	15 58 15.6	
	baz=265,slow=74,SNR=5.4						
H11N3	WAKE ISLAND Hy	40.50	71	T	T	15 58 14.8	
	baz=265,slow=74,SNR=4.7						
MKAR	Makanchi Array	52.74	323	P	P	15 16 11.1	-1.2
	0.3nm,0.7s,baz=122,slow=6.5,SNR=1.6						

SJA 19 15:13:26.0, 23°.74S×68°.62W, h223^{km}, ML4.3, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	2.02	343	*i* P	Pn	15 14 07.0	+0.3
PB07	IPOC Station P	2.32	329	*i* P	Pn	15 14 09.0	-0.7
PB11	IPOC Station P	4.08	346	*i* P	Pn	15 14 29.0	-0.8
AUSP	Uspallata	8.48	184	*i* P	Pn	15 15 26.0	+0.4
ASAL	Salagasta	8.82	181	*i* P	Pn	15 15 29.0	-0.8
ARCO	CERRO ARCO	9.07	182	*i* P	Pn	15 15 32.0	-1.1
AAGR	Agrelo	9.31	181	*i* P	Pn	15 15 35.0	-1.2

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*DJA **19** 15:14:19.7±0.2, 1°N±2°×12°8E±°, h10^{km}, M4.0/13, mb4.2/8, mB5.2/1, MLv3.8/13, Mw(mB)4.6/1*

*IDC **19** 15:14:19.5±1.5, 0°.74N×127°.09E, h0^{km}, mb4.0/6, mb1 4.2/6, mb1mx3.8/50, mbtmp4.0/6, MS3.2/1, Ms1 3.2/1, ms1mx2.4/45, Error ellipse: s-maj=210.1km s-min=19.7km az=68.0*

*NEIC **19** 15:14:22.5±1.5, 0°.8N±0°.1×127°.29E±0°.04, h22^{km}±7^{km}, mb4.1/15, Error ellipse: s-maj=17.4km s-min=2.8km az=196.0*

ISC 19 15:14:21.8±1.3**, 0°.91N**±0°.07×**127°.44E**±0°.10**, h16^{km}**±7^{km}**, n41,** σ**1^s.33**/41**, mb4.1**/12**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.15	210	P	Pg	15 14 25.3	-0.6
TNTI				S	Sg	15 14 29.0	+0.5
TNTI	Ternate	0.15	210		Pg	15 14 25.5	-0.4
TNTI				Sg	Sg	15 14 29.1	+0.5
LBMI	Labuha	1.53	178	P	Pn	15 14 49.1	+0.6
LBMI				S	Sg	15 15 11.7	+0.4
SANI	Sanana	3.27	206	P	Pn	15 15 12.4	-0.1
KMSI	Cibinong	3.48	265	P	Pn	15 15 16.6	+1.4
SWI	Sorong	4.20	115	P	Pn	15 15 14.3	-11
AAI	Ambon	4.62	171	P	Pn	15 15 32.8	+1.8
LUWI	Luwuk	5.05	248	Pn	Pn	15 15 34.1	-2.8
MRSI	Marisa	5.52	266	P	Pn	15 15 44.6	+1.3
	0.1nm20nm,0.6s						
APSI	Ampana	6.07	253	P	Pn	15 15 52.8	+1.9
	0.1nm14nm,0.9s						
FAKI	Fak Fak	6.12	128		Pn	15 15 51.6	0.0
TOLI2	Tolitoli	6.66	272		Pn	15 15 55.5	-3.6
MPSI	Mapaga	7.56	266	P	Pn	15 16 12.9	+1.4
	0.0nm8.1nm,0.7s						
TTSI	Tana Toraja	8.57	243	P	Pn	15 16 25.9	+0.6
	1µm15nm,0.7s						
BNSI	Bone	9.03	234	P	Pn	15 16 32.9	+1.4
	16nm,1.1s						
SPSI	Sidrap Palu	9.07	238	P	Pn	15 16 33.8	+1.7
	24nm,0.6s						
KNRA	Kununurra	16.53	176		Pn	15 18 12.5	-0.6
KNRA				IAmb	IAmb	15 18 19.1	
	comp=Z,20nm,1.4s						
WB0	Warramunga Arr	21.64	162	P	P	15 19 10.4	-1.3
WB0				IAmb	IAmb	15 19 17.2	
	comp=Z,5.9nm,0.9s						
WRAB	Tennant Creek	21.79	162	P	P	15 19 13.1	-0.1
WRAB				IAmb	IAmb	15 19 14.4	
	comp=Z,6.5nm,0.8s						
WRA	Warramunga Arr	21.79	162	P	P	15 19 13.1	-0.2
	comp=Z,4.6nm,0.6s,baz=341,slow=11,SNR=39						
WRA	Warramunga Arr	21.79	162	P	P	15 19 12.1	-1.2
WB2	Warramunga Arr	21.80	162	P	P	15 19 12.4	-0.9
WB2				IAmb	IAmb	15 19 14.4	
	comp=Z,6.8nm,0.7s						
WR0	Warramunga Arr	21.87	162	P	P	15 19 12.6	-1.5
AS31	Alice Springs	25.22	166	P	P	15 19 44.9	-2.1
AS31				IAmb	IAmb	15 19 53.6	
	comp=Z,2.1nm,0.7s						
ASAR	Alice Springs	25.22	166	P	P	15 19 46.1	-0.9
	comp=Z,5.8nm,0.7s,baz=347,slow=9.5,SNR=41						
ASAR	Alice Springs	25.22	166	P	P	15 19 45.3	-1.7
BBOO	Buckleboo	34.51	167	P	P	15 21 08.6	-0.7
STKA	Stephens Creek	35.25	159	P	P	15 21 15.1	-0.7
	comp=Z,2.3nm,0.6s,baz=333,slow=11,SNR=7.0						
STKA	Stephens Creek	35.25	159	P	P	15 21 15.5	-0.3
MJAR	Matsushiro Arr	36.84	15	P	P	15 21 30.9	+1.7
MJAR				IAmb	IAmb	15 21 44.0	
	comp=Z,4.1nm,1.4s						
MAJO	Matsushiro	36.84	15	P	P	15 21 29.2	-0.1
USRK	Ussuriysk Ar.	43.30	5	LR	LR	15 41 45.9	
	comp=Z,30nm,20.4s,baz=168,slow=38						
SONM	Songino Array	50.19	342	P	P	15 23 17.9	+1.1
	comp=Z,0.4nm,0.5s,baz=147,slow=7.0,SNR=3.0						
SONM	Songino Array	50.19	342	IAmb	IAmb	15 23 26.9	
	comp=Z,3.5nm,1.6s						
MKAR	Makanchi Array	60.27	326	P	P	15 24 28.8	-0.8
	comp=Z,1.7nm,0.9s,baz=121,slow=8.6,SNR=6.7						
MKAR	Makanchi Array	60.27	326	P	P	15 24 28.6	-1.0
KURK	Kurchatov	64.49	328	P	P	15 24 57.7	0.0
KURK				IAmb	IAmb	15 25 03.5	
	comp=Z,2.2nm,0.7s						
SMY	Shemya	64.54	29	P	P	15 24 58.4	+0.5
CHGR	Chuyangaron	65.08	313	P	P	15 25 01.5	-0.4
KKAR	Karatay Array	65.78	318	P	P	15 25 04.9	-1.3
VNDA	Vanda	80.55	173	P	P	15 26 34.1	+1.3
	comp=Z,0.7nm,0.9s,baz=306,slow=3.5,SNR=2.2						

IDC 19 15:20:03.5±58.0**, 15°.81S×175°.78W, h0^{km}, mb3.8**/3**, mb1 4.0**/3**, mb1mx3.6**/34**, mbtmp3.8**/3**, Error ellipse: s-maj=1086.0km s-min=177.9km az=78.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	41.85	240	P	P	15 27 55.6	0.0
	0.4nm,0.3s,baz=96,slow=9.2,SNR=3.6						
WRA	Warramunga Arr	47.52	257	P	P	15 28 40.7	-0.3
	0.2nm,0.3s,baz=92,slow=8.1,SNR=7.9						
ASAR	Alice Springs	47.80	252	P	P	15 28 43.1	-0.1
	1.6nm,0.4s,baz=89,slow=7.9,SNR=34						

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*MOS **19** 15:21:35.7±1.6, 34°.49N×26°.53E, h10^{km}, mb4.4/17, Error ellipse: s-maj=10.2km s-min=5.4km az=64.6*

*NIC **19** 15:21:36.9±0.0, 34°.37N×26°.46E, h48^{km}±7^{km}, Ml4.3/4*

*THE **19** 15:21:38.4, 34°.62N×26°.72E, h0^{km}±4^{km}, ML3.1/3, Error ellipse: s-maj=8.2km s-min=0.7km az=120.0*

*ISK **19** 15:21:38.5, 34°.64N×26°.72E, h2^{km}, ML3.6/20*

*ATH **19** 15:21:39.4, 34°.75N×26°.84E, h32^{km}±11^{km}, ML3.5/2, Error ellipse: s-maj=13.6km s-min=4.8km az=1.0*

*IDC **19** 15:21:40.0±2.4, 34°.62N×26°.62E, h26^{km}±16^{km}, mb4.0/20, mb1 4.0/28, mb1mx3.9/50, mbtmp4.1/28, ML3.8/8, MS3.1/5, Ms1 3.1/5, ms1mx2.8/54, Error ellipse: s-maj=15.8km s-min=11.6km az=173.0*

*DDA **19** 15:21:40.0, 34°.51N×26°.61E, h44^{km}±734^{km}, MW4.0*

*HLW **19** 15:21:41.8, 34°.41N×26°.92E, h31^{km}±30^{km}, Md4.2, Ml4.0*

ISC 19 15:21:37.3±1.0**, 34°.51N**±0°.03×**26°.75E**±0°.02**, h14^{km}**±6^{km}**, n153,** σ**2^s.16**/187**, mb4.2**/27**, MS3.0**/5**, 8C-3D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZKR	Zakros	0.74	324	P	Pg	15 21 51.6	-0.1
ZKR				S	Sb	15 22 01.6	-0.5
	2µm,0.6s						
ZKR	Zakros	0.74	324	P	Pg	15 21 51.7	-0.1
ZKR				S	Sg	15 22 00.6	-0.9
ZKR				AML	AML	15 22 14.1	
	comp=E,10893µm,0.6s						
ZKR				AML	AML	15 22 14.3	
	comp=N,5628µm,0.6s						
ZKR	Zakros	0.74	324	PG	Pg	15 21 51.9	+0.2
ZKR	Zakros	0.74	324	P	Pg	15 21 51.6	-0.1
ZKR				S	Sn	15 22 02.9	-1.6
ZKR				AML	AML	15 22 12.6	
	comp=N,5.4nm,0.5s						
ZKR				AML	AML	15 22 12.6	
	comp=N,5.4nm,0.5s						
ZKR				AML	AML	15 22 12.9	
	comp=N,11nm,0.6s						
ZKR				AML	AML	15 22 12.9	
	comp=N,11nm,0.6s						
STIA	Sitia Lasithi	0.87	322	P	Pb	15 21 54.1	-0.2
STIA				S	Sg	15 22 06.1	+0.4
FRMA	Ierapetra Chan	0.97	301	P	Pb	15 21 54.3	-1.7
FRMA				S	Sb	15 22 07.6	-1.1
	comp=N,1µm,0.4s						
NPS	Neapolis	1.20	309	P	Pn	15 21 59.8	+0.1
NPS				S	Sg	15 22 15.9	0.0
	comp=N,1µm,0.6s						
NPS	Neapolis	1.20	309	P	Pb	15 22 00.1	+0.3
NPS				S	Sb	15 22 15.0	-0.1
NPS				AML	AML	15 22 27.8	
	comp=E,6804µm,0.7s						
NPS				AML	AML	15 22 30.5	
	comp=N,3622µm,0.5s						
NPS	Neapolis	1.20	309	P	Pn	15 21 59.8	+0.1
NPS				S	Sg	15 22 15.9	0.0
HRKL	Herakleio	1.57	301	PN	Pg	15 22 07.1	-0.4
HRKL				SN	Sg	15 22 28.3	+0.4
IDI	Anoyia	1.71	297	Pg	Pb	15 22 09.3	+0.7
	comp=N,23nm,0.3s,baz=123,slow=16,SNR=46						
IDI				Lg	Lg	15 22 30.9	
	comp=N,27nm,0.3s,baz=179,slow=22,SNR=10						
IDI	Anoyia	1.71	297	P	Pb	15 22 09.1	+0.5
ARG	Arkhangelos	2.04	33	P	Pb	15 22 14.6	+0.5
ARG				S	Sb	15 22 39.3	-0.1
SANT	Santorini	2.13	331	P	Pn	15 22 13.9	+1.4
SANT	Santorini	2.13	331	PN	Pb	15 22 14.1	-1.6
GVD	Gavdhos	2.22	279	PN	Pb	15 22 17.2	0.0
GVD				SN	Sb	15 22 45.6	+1.1
KOSK	Kos Island	2.24	5	PN	Pb	15 22 16.1	-1.5
DAT	Datca	2.31	17	PN	Pb	15 22 17.5	-1.4
IMMV	Iera Moni Meta	2.46	293	PN	Pb	15 22 19.9	-1.4
MRSB	Marmaris-Mugla	2.49	28	PN	Pb	15 22 20.4	-1.5
TURN	Turunc	2.56	28	*i* P	Pb	15 22 21.5	-1.6
TURN	Turunc	2.56	28	PN	Pb	15 22 21.3	-1.8
BODT	Bodrum	2.58	10	PN	Pb	15 22 21.4	-2.0
BDRM	Kayabasi	2.61	12	*i* P	Pn	15 22 20.3	+1.2
KNDR	Palaiochora Ch	2.62	287	PN	Pb	15 22 22.7	-1.3
APE	Apeiranthos	2.73	339	*i* P	Pn	15 22 22.1	+1.2
APE	Apeiranthos	2.73	339	*i* P	Pn	15 22 22.1	+1.2
APE	Apeiranthos	2.73	339	PN	Pn	15 22 22.5	+1.6
DALY	Dalyan (Mula)	2.77	33	PN	Pb	15 22 24.6	-2.0
KSL	Kastellorizon	2.83	54	P	Pn	15 22 24.4	+2.2
KSL				S	Sb	15 23 00.9	-1.4
FETY	Fethiye	2.85	41	PN	Pb	15 22 25.3	-2.6
AKAS	Kas	2.90	53	*i* P	Pn	15 22 25.9	+2.8
AKAS				*i* S	Sn	15 22 59.2	+1.3
AKAS	Kas	2.90	53	PN	Pb	15 22 26.2	-2.6
YER	Yerkesik	2.90	25	P	Pb	15 22 26.1	-2.7
YER	Yerkesik	2.90	25	PN	Pb	15 22 26.2	-2.6
MLSB	Milas	2.90	16	PN	Pb	15 22 25.8	-3.0
DDIM	Aydin, Didim	2.96	8	*i* P	Pn	15 22 26.4	+2.4
MULA	Mugla, Merkez-	3.02	25	*i* P	Pn	15 22 27.4	+2.5
CAME	Cameli-Denizli	3.19	40	PN	Pn	15 22 30.4	+3.1
GCAM	G?zelcaml?	3.20	7	PN	Pn	15 22 30.1	+2.9
AYDN	Tasoluk	3.27	16	*i* P	Pn	15 22 31.1	+2.8
SLUM	Salum	3.28	204	P	Pn	15 22 28.9	+0.6
	baz=207						
SLUM				AMP		15 23 00.0	
	baz=207						
SLUM				S	Sn	15 23 05.9	-1.2
	baz=207						
CAEL	Denizli, Camel	3.34	38	*i* P	Pn	15 22 32.6	+3.4
CAEL				*i* S	Sn	15 23 11.6	+2.8
ELL	Elmali	3.41	48	P	Pb	15 22 34.1	-3.4
ELL	Elmali	3.41	48	PN	Pn	15 22 33.7	+3.5
TAVA	DENIZLI_Tavas	3.43	30	*i* P	Pn	15 22 33.4	+2.9
AKUM	Antalya-Kumluc	3.44	57	*i* P	Pn	15 22 32.3	+1.7
AKUM				*i* S	Sb	15 23 15.9	-4.0
AYDB	Zeytinkoy-Aydi	3.55	15	PN	Pn	15 22 34.8	+2.7
ZEYE	Izmir, Urla-Ze	3.72	357	*i* P	Pn	15 22 35.8	+1.4
KORT	Korkueli	3.84	49	*i* P	Pn	15 22 40.1	+3.9
URLA	Izmir	3.84	358	*i* P	Pn	15 22 36.9	+0.8
URLA	Izmir	3.84	358	PN	Pn	15 22 37.9	+1.8
OSC1	CSNet OBS 1	3.90	104	P	Pn	15 22 37.7	+0.9
OSC1				S	Sn	15 23 25.6	+3.3
CHOS	Chios island	3.91	352	PN	Pn	15 22 38.8	+1.8
BUCA	Burdur, Bucak-	4.18	47	*i* P	Pn	15 22 44.8	+4.1
PASA	Karahalli, USA	4.42	29	*i* P	Pn	15 22 46.2	+2.2
AKMS	Akamas	4.63	82	P	Pn	15 22 48.3	+1.4
AKMS				AML	AML	15 23 42.0	
	comp=N,0.4nm,0.4s						
AKMS				AML	AML	15 23 43.0	
	comp=N,0.8nm,0.4s						
BAGO	Egridir - ISPA	4.76	42	*i* P	Pn	15 22 49.7	+0.9
NATA	Nata	4.81	85	P	Pn	15 22 51.5	+2.1
OSC2	CSNet OBS 4	4.81	106	P	Pn	15 22 50.9	+1.5
ALFC	Alefka	4.85	81	P	Pn	15 22 51.4	+1.4
ALFC				AML	AML	15 23 50.3	
	comp=N,0.6nm,0.6s						
ALFC				AML	AML	15 23 50.5	
	comp=N,0.8nm,0.6s						
GAZI	Gazipasa	4.86	68	*i* P	Pn	15 22 51.5	+1.4
GAZI				*i* S	Sn	15 23 46.1	-0.1
BUHA	Balikesir, Bur	4.98	3	*i* P	Pn	15 22 46.8	-4.9
SEDI	Konya, Seydise	5.01	53	*i* P	Pn	15 22 56.8	+4.7
SEDI				*i* S	Sn	15 23 52.9	+3.0
YVAC	Isparta, Yalva	5.21	43	*i* P	Pn	15 22 59.0	+4.0
DURS	Dursunbey	5.26	15	*i* P	Pn	15 22 57.5	+1.9
DOGA	KONYA_Doganhis	5.35	47	*i* P	Pn	15 23 02.0	+5.1
ASGA	Asgata	5.36	85	P	Pn	15 22 58.9	+1.9
ASGA				AML	AML	15 24 02.9	
	comp=N,0.5nm,0.4s						
ASGA				AML	AML	15 24 03.8	
	comp=N,0.5nm,0.6s						
SWA2		5.37	192	P	Pn	15 22 57.7	+0.7
	baz=194						
CSS	Mathiatis	5.44	83	*i* P	Pn	15 22 58.8	+0.8
CSS				*i* S	Sn	15 24 00.8	+0.4
CSS	Mathiatis	5.44	83	P	Pn	15 23 00.3	+2.3
ERMK	Ermenek	5.45	65	*i* P	Pn	15 23 02.6	+4.2
KMER	Konya-Meram	5.59	53	*i* P	Pn	15 23 04.8	+4.6
MVOU	Mavrovouni	5.69	83	P	Pn	15 23 03.8	+2.4
KKBE	Karaman, Kazim	5.71	60	*i* P	Pn	15 23 04.8	+3.0
GULN	MERSIN_Gulnar	5.80	71	*i* P	Pn	15 23 04.4	+1.5
GULN				*i* S	Sn	15 24 08.2	-1.0
RYAN	Fayoum	6.19	150	P	Pn	15 23 09.7	+1.4
	baz=150						
RYAN				AMP		15 24 00.0	
	baz=150						
RYAN				S	Sn	15 24 14.7	-4.3
	baz=150						
HSAF	As Saff	6.36	139	P	Pn	15 23 12.5	+1.8
	baz=139						
ALN	Alexandroupoli	6.40	355	*i* P	Pn	15 23 04.1	-7.1
GLL	Jalalah	6.48	138	P	Pn	15 23 12.7	+0.4
	baz=138						
SUZ	Suez	6.95	130	P	Pn	15 23 19.2	+0.4
	baz=130						
MMAI	Mount Meron Ar	7.36	99	Pn	Pn	15 23 25.2	+0.8
	comp=N,2.7nm,0.3s,baz=280,slow=10,SNR=9.1						
MMAI				Sn	Sn	15 24 48.7	+0.8
	comp=N,6.9nm,0.3s,baz=290,slow=27,SNR=7.9						
HFRF	Wahat Farafira	7.46	169	P	Pn	15 23 26.5	+0.6
	baz=170						
HFRF				S	Sn	15 24 44.2	-6.1
	baz=170						
BRTR	Keskin Array B	7.57	45	Pn	Pn	15 23 30.4	+3.0
	comp=N,0.2nm,0.3s,baz=219,slow=12,SNR=14						
BRTR				Sn	Sn	15 24 54.0	+0.9
	comp=N,0.1nm,0.3s,baz=213,slow=22,SNR=2.4						
GRB	Gharib	8.08	139	P	Pn	15 23 35.1	+0.7
	baz=139						
EIL	Elat	8.47	123	Pn	Pn	15 23 41.1	+1.5
	comp=N,0.9nm,0.3s,baz=319,slow=5.2,SNR=15						
EIL				Sn	Sn	15 25 10.7	-4.4
	comp=N,2.7nm,0.3s,baz=60,slow=20,SNR=6.7						
HKAT	Jabal Katrina	8.59	132	P	Pn	15 23 42.7	+1.1
	baz=132						
HKAT				S	Sn	15 25 10.9	-7.6
	baz=132						
ASF	Jabal al Asfar	8.81	103	Pn	Pn	15 23 45.3	+1.0
	comp=N,0.6nm,0.3s,baz=285,slow=9.8,SNR=4.7						
ASF				Sn	Sn	15 25 23.0	-0.4
	comp=N,0.7nm,0.3s,baz=357,slow=16,SNR=2.3						
VAE	Valguarnera	10.42	290	Pn	Pn	15 24 06.8	+0.4
	comp=N,1.7nm,0.3s,baz=151,slow=17,SNR=1.7						
VAE				Sn	Sn	15 25 56.2	-6.9
	comp=N,2.2nm,0.3s,baz=228,slow=21,SNR=2.0						
ANN	Anapa	13.15	35	*e*P	Pn	15 24 42.1	-1.5
ANN				*e*S	Sn	15 27 09.0	-0.6
ANN				pmax	pmax		
	comp=Z,107nm,1.5s						
SOC	Sochi	13.53	44	*e*P	Pn	15 24 50.0	+1.1
SOC				*e*		15 27 23.4	
SOC				MLR	MLR		
	comp=Z,111nm,16.0s						
NEY	Neytrino	15.17	50	⇓*e*P	P	15 25 16.2	-0.2
NEY				pmax	pmax		
	comp=Z,11nm,1.2s						
KIV	Kislovodsk	15.51	48	*e*P	P	15 25 20.1	0.0
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KBZ	Khabaz	15.53	49	Pn	P	15 25 20.4	+0.3
	comp=Z,0.1nm,0.3s,baz=282,slow=7.9,SNR=8.1						
ZEI	Tsey	15.72	53	*e*P	P	15 25 23.0	+0.5
ZEI				pmax	pmax		
	comp=Z,6.0nm,1.2s						
NCK	Nalchik	15.85	51	⇑*e*P	P	15 25 25.3	+1.6
NCK				pmax	pmax		
	comp=Z,11nm,0.3s						

AKASG	**Malin Array Be**	**16.28**	**6**	Pn	**Pn**	**15 25 25.5**	**+0.1**
	comp=Z,2.2nm,0.3s,baz=191,slow=11,SNR=11						
AKASG	**Malin Array Be**	**16.28**	**6**	*e*P	**Pn**	**15 25 26.2**	**+0.8**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.3s						
AKBB	**Malin Array Si**	**16.28**	**6**	⇑*e*P	**Pn**	**15 25 26.4**	**+1.0**
AKBB				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GERES	**GERESS Array B**	**17.28**	**330**	Pn	**P**	**15 25 39.4**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=143,slow=9.9,SNR=4.0						
KHC	**Kasperske Hory**	**17.56**	**330**	*e*P	**P**	**15 25 48.0**	**+5.4**
KHC	**Kasperske Hory**	**17.56**	**330**	*e*P	**P**	**15 25 48.0**	**+5.4**
MAK	**Makhachkala**	**18.22**	**56**	*e*P	**Pn**	**15 25 48.0**	**-1.8**
MAK				*e*S	**Sn**	**15 29 13.6**	**+0.6**
MAK				pmax	pmax		
	comp=Z,144nm,1.4s						
MAK				MLR	MLR		
	comp=Z,101nm,17.0s						
VSR	**Storozhevoye**	**18.97**	**25**	*e*P	**P**	**15 25 57.9**	**-0.2**
VSR				pmax	pmax		
	comp=Z,7.0nm,0.5s						
VRH	**Novokhopyorsk**	**19.90**	**29**	*e*P	**Pn**	**15 26 09.4**	**-0.5**
VRH				pmax	pmax		
	comp=Z,20nm,0.6s						
MNK	**Minsk**	**20.00**	**2**	*i* P	**P**	**15 26 06.7**	**-2.6**
MNK				*i* PPP	PPP	15 26 31.6	
MNK				*i* S	**S**	**15 29 50.6**	**-3.2**
MNK				*i* SSS	SSS	15 30 20.0	
MNK				pmax	pmax		
	comp=Z,13nm,0.9s						
MNK				pmax	pmax		
	comp=N,20nm,0.9s						
MNK				pmax	pmax		
	comp=E,2.0nm,0.9s						
MNK				MLR	MLR		
	comp=N,705nm,4.0s						
MNK				MLR	MLR		
	comp=Z,1µm,5.0s						
MNK				MLR	MLR		
	comp=E,230nm,5.0s						
MNK	**Minsk**	**20.00**	**2**	*i* P	**P**	**15 26 06.7**	**-2.6**
	comp=E,2.0nm,0.9s						
MNK				*i* P	**P**	**15 26 06.7**	**-2.6**
	comp=N,20nm,0.9s						
MNK				*i* P	**P**	**15 26 06.7**	**-2.6**
	comp=Z,13nm,0.9s,baz=184						
MNK				*i* PP	**PnPn**	**15 26 22.4**	**-2.9**
MNK				*i* PPP	PPP	15 26 31.6	
MNK				*i* S	**S**	**15 29 50.6**	**-3.1**
MNK				*i* SS	**SnSn**	**15 30 07.2**	**-3.0**
MNK				*i* SSS	SSS	15 30 20.0	
MNK				*i* LQ	LQ	15 32 05.1	
MNK				*i* LR	LR	15 33 36.2	
MNK				*i* LRM	MLR	15 35 24.7	
	comp=N,705nm,4.3s						
MNK				*i* LRM	MLR	15 35 25.0	
	comp=Z,1µm,4.9s						
MNK				*i* LRM	MLR	15 35 25.3	
	comp=E,230nm,5.2s						
LPSR	**Galich'ya Gora**	**20.07**	**22**	*e*P	**Pn**	**15 26 11.0**	**-0.9**
LPSR				pmax	pmax		
	comp=Z,20nm,0.9s						
OBN	**Obninsk**	**21.70**	**15**	LR	LR	15 36 50.7	
	comp=Z,25nm,20.1s,baz=274,slow=42						
OBN	**Obninsk**	**21.70**	**15**	⇑*e*P	**P**	**15 26 27.5**	**-0.2**
OBN				*PP	**pP**	**15 26 30.0**	**-0.8**
OBN				pmax	pmax		
	comp=Z,12nm,0.7s						
BELG	**Belogornoye**	**23.29**	**34**	P	**P**	**15 26 45.0**	**+0.5**
	comp=Z,16nm,0.8s,baz=229,slow=19,SNR=5.3						
BELG				LR	LR	15 38 17.8	
	comp=Z,52nm,18.7s,baz=8.9,slow=43						
BELG	**Belogornoye**	**23.29**	**34**	⇓*i*P	**P**	**15 26 45.0**	**+0.5**
BELG				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GEYT	**Alibeck**	**25.47**	**73**	P	**P**	**15 27 07.0**	**+2.0**
	comp=Z,2.7nm,0.5s,baz=256,slow=12,SNR=4.7						
FINES	**FINESS Array B**	**26.95**	**359**	P	**P**	**15 27 17.1**	**-1.0**
	comp=Z,2.0nm,0.7s,baz=170,slow=12,SNR=7.1						
FINES	**FINESS Array B**	**26.95**	**359**	*e*P	**P**	**15 27 17.2**	**-0.9**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
HFS	**Hagfors**	**27.01**	**346**	P	**P**	**15 27 17.0**	**-1.7**
	comp=Z,2.6nm,0.6s,baz=116,slow=10,SNR=5.5						
HFS	**Hagfors**	**27.01**	**346**	P	**P**	**15 27 17.0**	**-1.7**
KLMR	**Klimovskoe**	**27.62**	**13**	*e*P	**P**	**15 27 21.9**	**-2.1**
KLMR				pmax	pmax		
	comp=Z,15nm,1.2s						
KLMR	**Klimovskoe**	**27.62**	**13**	*e*P	**P**	**15 27 22.0**	**-2.1**
KLMR				AMP		15 27 34.4	
	comp=Z,15nm,1.2s						
AKTO	**Aktyubinsk**	**27.75**	**45**	P	**P**	**15 27 26.7**	**+1.3**
	comp=Z,1.5nm,0.4s,baz=231,slow=14,SNR=5.2						
AKTO				LR	LR	15 43 07.1	
	comp=Z,50nm,21.2s,baz=163,slow=46						
NB2	**NORSAR Subarra**	**28.37**	**344**	P	**P**	**15 27 28.2**	**-2.6**
	comp=Z,1.5nm,0.7s,baz=158,slow=10						
NOA	**NORSAR Array B**	**28.37**	**344**	P	**P**	**15 27 29.0**	**-1.8**
	comp=Z,0.8nm,0.7s,baz=143,slow=6.7,SNR=3.8						
NOA				LR	LR	15 41 11.0	
	comp=Z,29nm,18.3s,baz=160,slow=42						
NOA	**NORSAR Array B**	**28.37**	**344**	*e*P	**P**	**15 27 29.6**	**-1.2**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
EKA	**Eskdalemuir Ar**	**29.32**	**324**	P	**P**	**15 27 39.0**	**-0.4**
	comp=Z,0.5nm,0.4s,baz=118,slow=9.0,SNR=1.5						
EKA	**Eskdalemuir Ar**	**29.32**	**324**	P	**P**	**15 27 39.0**	**-0.4**
TORD	**Torodi Ar. Bea**	**31.11**	**233**	P	**P**	**15 27 55.8**	**+0.3**
	comp=Z,1.0nm,0.6s,baz=39,slow=8.7,SNR=6.9						
KOWA	**Kowa**	**34.15**	**242**	P	**P**	**15 28 23.5**	**+1.3**
	comp=Z,1.5nm,0.5s,baz=344,slow=5.1,SNR=4.3						
ARCES	**ARCESS Array B**	**35.08**	**359**	P	**P**	**15 28 28.1**	**-1.6**
	comp=Z,1.5nm,0.5s,baz=175,slow=9.9,SNR=25						
ARCES	**ARCESS Array B**	**35.08**	**359**	*e*P	**P**	**15 28 27.7**	**-1.9**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BRVK	**Borovoye**	**35.80**	**45**	⇑*e*P	**P**	**15 28 38.6**	**+2.6**
BRVK				pmax	pmax		
	comp=Z,10.0nm,2.0s						
KMBO	**Kilima Mbogo**	**36.80**	**162**	LR	LR	15 45 53.6	
	comp=Z,60nm,18.3s,baz=92,slow=39						
AAK	**Ala-Archa**	**37.78**	**63**	⇑*e*P	**P**	**15 28 55.2**	**+2.0**
AAK				pmax	pmax		
	comp=Z,15nm,2.5s						
DBIC	**Dimbokro**	**40.21**	**234**	P	**P**	**15 29 13.7**	**+0.1**
	comp=Z,1.7nm,0.7s,baz=42,slow=12,SNR=1.3						
KURK	**Kurchatov**	**40.58**	**50**	⇑*e*P	**P**	**15 29 18.0**	**+1.7**
KURK				pmax	pmax		
	comp=Z,7.0nm,1.7s						
MK31	**Makanchi Array**	**43.04**	**56**	⇓*e*P	**P**	**15 29 38.6**	**+2.0**
MKAR	**Makanchi Array**	**43.04**	**56**	P	**P**	**15 29 38.4**	**+1.8**
	comp=Z,2.7nm,0.9s,baz=282,slow=5.7,SNR=7.2						
MKAR				PcP	**PcP**	**15 31 26.5**	**0.0**
	comp=Z,0.7nm,0.8s,baz=272,slow=3.5,SNR=1.6						
ZALV	**Zalesovo Beam**	**44.51**	**46**	P	**P**	**15 29 49.3**	**+1.1**
	comp=Z,1.9nm,0.4s,baz=270,slow=8.9,SNR=9.0						
ZALV	**Zalesovo Beam**	**44.51**	**46**	*e*P	**P**	**15 29 49.5**	**+1.3**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.4s						
DGZ	**Jazzator, Alta**	**46.25**	**52**	*ce*P	**P**	**15 30 04.2**	**+1.9**
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.5s						
SONM	**Songino Array**	**58.88**	**51**	P	**P**	**15 31 38.0**	**+2.1**
	comp=Z,2.4nm,0.6s,baz=284,slow=7.0,SNR=11						
ULN	**Ulaanbaatar**	**59.29**	**51**	⇑*e*P	**P**	**15 31 40.6**	**+1.9**
ULN				pmax	pmax		
	comp=Z,8.0nm,2.5s						
SCHQ	**Schefferville**	**64.52**	**320**	P	**P**	**15 32 13.2**	**-0.4**
	comp=Z,3.8nm,0.7s,baz=76,slow=8.3,SNR=5.1						
CMAR	**Chiang Mai Arr**	**65.34**	**84**	P	**P**	**15 32 20.8**	**+1.3**
	comp=Z,0.5nm,0.6s,baz=296,slow=7.2,SNR=5.3						
CMAR	**Chiang Mai Arr**	**65.34**	**84**	*e*P	**P**	**15 32 23.7**	**+4.2**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
USRK	**Ussuriysk Ar.**	**76.36**	**46**	P	**P**	**15 33 27.1**	**+1.0**
	comp=Z,2.9nm,0.5s,baz=305,slow=4.9,SNR=10.0						
USRK	**Ussuriysk Ar.**	**76.36**	**46**	*e*P	**P**	**15 33 27.0**	**+1.0**
USRK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KSRS	**Korea Array**	**77.63**	**53**	P	**P**	**15 33 34.3**	**+1.0**
	comp=Z,1.0nm,0.6s,baz=306,slow=4.9,SNR=5.5						
KSRS	**Korea Array**	**77.63**	**53**	*e*P	**P**	**15 33 34.8**	**+1.5**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ILAR	**Eielson Array**	**80.92**	**357**	P	**P**	**15 33 51.0**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=342,slow=3.8,SNR=4.1						
ILAR	**Eielson Array**	**80.92**	**357**	*e*P	**P**	**15 33 52.0**	**+1.2**
MJAR	**Matsushiro Arr**	**84.78**	**49**	P	**P**	**15 34 12.5**	**+1.1**
	comp=Z,3.9nm,1.0s,baz=318,slow=3.4,SNR=6.6						
MJAR	**Matsushiro Arr**	**84.78**	**49**	*e*P	**P**	**15 34 13.1**	**+1.7**
MJAR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MJA0	**Matsu Arr-Jizo**	**84.80**	**49**	*e*P	**P**	**15 34 13.1**	**+1.6**
MJA0				pmax	pmax		
	comp=Z,5.0nm,1.0s						

*IDC **19** 15:21:41.1±1.6, 0°.93N×127°.34E, h0^{km}, mb4.0/4, mb1 4.1/6, mb1mx3.7/48, mbtmp3.9/6, ML3.3/2, Error ellipse: s-maj=45.0km s-min=24.9km az=56.0*

*DJA **19** 15:21:43.2±0.3, 1°N±2°×12°7E±°, h10^{km}, M3.7/10, mb4.1/2, MLv3.6/10*

*NEIC **19** 15:21:43.3±1.6, 0°.99N±0°.05×127°.47E±0°.08, h14^{km}±4^{km}, mb4.0/10, Error ellipse: s-maj=12.3km s-min=6.4km az=110.0*

ISC 19 15:21:42.6±1.0**, 0°.98N**±0°.07×**127°.47E**±0°.06**, h10^{km}, n28, σ1^{s}.58**/31**, mb4.0**/7**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.23**	**206**	P	**Pg**	**15 21 48.1**	**+0.7**
TNTI	**Ternate**	**0.23**	**206**		**Pg**	**15 21 48.0**	**+0.7**
TNTI				Sg	**Sg**	**15 21 52.1**	**+1.5**
LBMI	**Labuha**	**1.61**	**179**	P	**Pn**	**15 22 11.8**	**+0.7**
LBMI				S	**Sb**	**15 22 33.8**	**+1.0**
SANI	**Sanana**	**3.35**	**206**	P	**Pn**	**15 22 34.9**	**-0.2**
KMSI	**Cibinong**	**3.51**	**263**	P	**Pn**	**15 22 38.6**	**+1.3**
SWI	**Sorong**	**4.21**	**116**	P	**Pn**	**15 22 48.3**	**+1.3**
SIJI	**Sorong**	**4.22**	**116**	Pn	**Pn**	**15 22 47.7**	**+0.6**
	1.5nm,0.3s,baz=343,slow=19,SNR=6.5						
SIJI				Sn	**Sn**	**15 23 41.0**	**+4.5**
	0.2nm,0.3s,baz=15,slow=23,SNR=1.0						
GTOI	**Gorontalo**	**4.47**	**266**	P	**Pn**	**15 22 53.6**	**+3.1**
LUWI	**Luwuk**	**5.11**	**247**	Pn	**Pn**	**15 22 58.4**	**-0.9**
LUWI					**Pn**	**15 22 59.7**	**+0.5**
APSI	**Ampana**	**6.11**	**252**	P	**Pn**	**15 23 14.5**	**+1.4**
FAKI	**Fak Fak**	**6.15**	**129**	Pn	**Pn**	**15 23 14.6**	**+0.9**
TOLI2	**Tolitoli**	**6.69**	**271**	Pn	**Pn**	**15 23 21.8**	**+0.8**
KNRA	**Kununurra**	**16.60**	**176**	Pn	**Pn**	**15 25 33.3**	**-2.3**
KNRA				IAmb	IAmb	15 25 47.0	
	comp=Z,13nm,1.1s						
FITZ	**Fitzroy Crossi**	**19.04**	**185**	P	**P**	**15 26 04.6**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=21,slow=8.6,SNR=1.9						
COEN	**Coen**	**21.50**	**134**	P	**P**	**15 26 29.4**	**-2.6**
WB0	**Warramunga Arr**	**21.71**	**162**	P	**P**	**15 26 33.6**	**-0.5**
WB0				IAmb	IAmb	15 26 35.2	
	comp=Z,4.1nm,0.8s						
WRAB	**Tennant Creek**	**21.85**	**162**	P	**P**	**15 26 35.5**	**-0.1**
WRA	**Warramunga Arr**	**21.86**	**162**	P	**P**	**15 26 35.7**	**0.0**
	comp=Z,5.3nm,0.6s,baz=341,slow=11,SNR=59						
WRA	**Warramunga Arr**	**21.86**	**162**	P	**P**	**15 26 34.5**	**-1.2**
WB2	**Warramunga Arr**	**21.86**	**162**	P	**P**	**15 26 35.1**	**-0.6**
WB2				IAmb	IAmb	15 26 36.9	
	comp=Z,5.4nm,0.7s						
WR0	**Warramunga Arr**	**21.94**	**162**	P	**P**	**15 26 35.9**	**-0.6**
WR0				IAmb	IAmb	15 26 37.7	
	comp=Z,3.6nm,0.5s						
AS31	**Alice Springs**	**25.29**	**166**	P	**P**	**15 27 07.2**	**-2.3**
ASAR	**Alice Springs**	**25.29**	**166**	P	**P**	**15 27 09.1**	**-0.4**
	comp=Z,3.0nm,0.6s,baz=345,slow=9.1,SNR=40						
ASAR	**Alice Springs**	**25.29**	**166**	P	**P**	**15 27 06.8**	**-2.7**
BBOO	**Buckleboo**	**34.58**	**167**	P	**P**	**15 28 31.2**	**-0.6**
STKA	**Stephens Creek**	**35.31**	**159**	P	**P**	**15 28 37.9**	**-0.3**
	comp=Z,1.4nm,0.6s,baz=344,slow=6.9,SNR=4.9						
STKA	**Stephens Creek**	**35.31**	**159**	IAmb	IAmb	15 28 47.0	
	comp=Z,2.6nm,1.6s						
MKAR	**Makanchi Array**	**60.22**	**326**	P	**P**	**15 31 51.0**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=118,slow=7.9,SNR=2.1						

*EAF **19** 15:26:46.8±1.5, 25°.46S×29°.29E, h10^{km}, MD3.9*

BUL 19 15:26:47.1±1.3**, 25°.45S**×**29°.27E, h10^{km}, MD4.2, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOPA	**Mopani**	**2.74**	**46**	*e*P	Pn	15 27 29.9	-1.2
MOPA				*e*S	Sn	15 28 01.4	-2.9
MOPA	**Mopani**	**2.74**	**46**	*e*P	Pn	15 27 29.9	-1.2
MOPA				*e*S	Sn	15 28 01.4	-2.9
MSNA	**Messina**	**3.17**	**13**	*e*P	Pn	15 27 36.8	-0.4
MSNA				*e*S	Sn	15 28 13.5	-1.6
MSNA	**Messina**	**3.17**	**13**	*e*P	Pn	15 27 36.8	-0.4
MSNA				*e*S	Sn	15 28 13.5	-1.6
LBTB	**Lobatse**	**3.35**	**277**	*e*P	Pn	15 27 37.5	-2.2
LBTB				*e*S	Sn	15 28 17.2	-2.3
LBTB	**Lobatse**	**3.35**	**277**	*e*P	Pn	15 27 37.5	-2.2
LBTB				*e*S	Sn	15 28 17.2	-2.3
BOSA	**Boshof**	**4.76**	**228**	*e*P	Pn	15 27 59.5	+0.4
BOSA				*e*S	Sn	15 28 51.1	-3.3
BOSA	**Boshof**	**4.76**	**228**	*e*P	Pn	15 27 59.5	+0.4
BOSA				*e*S	Sn	15 28 51.1	-3.3
MATP	**Matopo**	**5.05**	**352**	*e*P	Pn	15 28 02.4	-0.7
MATP				*e*S	Sn	15 28 57.9	-3.7
MATP	**Matopo**	**5.05**	**352**	*e*P	Pn	15 28 02.4	-0.7
MATP				*e*S	Sn	15 28 57.9	-3.7
BLWY	**Bulawayo**	**5.32**	**353**	*e*P	Pn	15 28 06.7	-0.2
BLWY				*e*S	Sn	15 29 04.0	-4.3
BLWY	**Bulawayo**	**5.32**	**353**	*e*P	Pn	15 28 06.7	-0.2
BLWY				*e*S	Sn	15 29 04.0	-4.3
KRI	**Karoi**	**8.59**	**2**	*e*P	Pn	15 28 42.5	-9.2
KRI				*e*S	Sn	15 30 07.0	-22
KRI	**Karoi**	**8.59**	**2**	*e*P	Pn	15 28 42.5	-9.2
KRI				*e*S	Sn	15 30 07.0	-22

NOU 19 16:01:26.3, 19°.66S×**168°.81E, h14^{km}, MLv3.8**/14**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LIFNC	**LIFOU**	**1.85**	**233**	P	Pn	16 01 56.8	-0.8
RTV	**Rentapao**	**1.89**	**349**	P	Pn	16 01 58.4	+0.2
MARNC	**Mare, Loyalty**	**1.95**	**202**	P	Pn	16 01 58.1	-0.9
DVP	**Devils Point**	**2.01**	**343**	P	Pn	16 02 00.8	+0.9
YATNC	**Mamie plateau,**	**2.99**	**217**	P	Pn	16 02 12.2	-1.1
PINNC	**Pines Island,**	**3.20**	**203**	P	Pn	16 02 16.8	+0.6
DZM	**Mont Dzumac**	**3.26**	**222**	P	Pn	16 02 17.0	-0.2
OUENC	**Ouen Island, N**	**3.30**	**213**	P	Pn	16 02 19.0	+1.4
NOUC	**Port Laguerre**	**3.38**	**224**	P	Pn	16 02 19.6	+1.0
ONTNC	**Ouen Toro**	**3.43**	**219**	P	Pn	16 02 20.0	+0.6

*SOME **19** 16:27:02.1, 45°.75N×85°.15E, h20^{km}*

*NNC **19** 16:27:05.6±2.8, 45°.69N×85°.00E, h0^{km}, mb3.2, mpv2.9, Error ellipse: s-maj=23.0km s-min=8.9km az=114.0*

ISC 19 16:27:05.8±1.7**, 45°.71N**±0°.06×**84°.99E**±0°.10**, h10^{km}, n24, σ1^{s}.57**/26**, 6C-1D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZSN	**Zaisan**	**1.74**	**357**	*e*S	**Sb**	**16 28 00.4**	**+0.5**
	21nm,0.4s						
ZSN	**Zaisan**	**1.74**	**357**	*e*P	**Pn**	**16 27 35.4**	**-0.8**
	1.7nm,0.2s						
ZSN				*e*S	**Sb**	**16 28 00.4**	**+0.5**
	21nm,0.4s						
ZSN	**Zaisan**	**1.74**	**357**	P	**Pg**	**16 27 38.9**	**-0.3**
	5.4nm,0.2s						
ZSN				S	**Sb**	**16 28 00.4**	**+0.5**
	21nm,0.4s						
ZSN	**Zaisan**	**1.74**	**357**	*e*P	**Pg**	**16 27 38.9**	**-0.3**
	5.4nm,0.2s						
MK31	**Makanchi Array**	**2.17**	**301**	⇑Pg	**Pb**	**16 27 44.9**	**-0.2**
	0.2nm,0.2s,baz=120,slow=17,SNR=7.7						
MK31				⇓Lg	Lg	16 28 18.4	
	2.7nm,0.3s,baz=120,slow=28,SNR=6.5						
MAKZ	**Makanchi**	**2.36**	**299**	⇑Pg	**Pb**	**16 27 49.4**	**+1.0**
	0.9nm,0.2s						
MAKZ				⇑Lg	Lg	16 28 22.5	
	3.8nm,0.3s						
DJR	**Jarkent**	**3.94**	**251**	*e*S	**Sg**	**16 29 11.4**	**-0.8**
	2.6nm,0.2s						
DJR	**Jarkent**	**3.94**	**251**	*e*P	**Pb**	**16 28 17.9**	**+2.6**
	1.1nm,0.4s						
DJR				*e*S	**Sg**	**16 29 11.4**	**-0.8**
	2.6nm,0.2s						
DJR	**Jarkent**	**3.94**	**251**	Pg	**Pg**	**16 28 20.6**	**-0.6**
	1.1nm,0.4s						
DJR				Lg	Lg	16 29 11.4	
	2.6nm,0.2s						
DJR	**Jarkent**	**3.94**	**251**	*e*P	**Pg**	**16 28 20.6**	**-0.6**
	1.1nm,0.4s						
KAPS	**Kapalarasan**	**3.99**	**266**	*e*S	**Sg**	**16 29 13.8**	**0.0**
	8.9nm,0.8s						
KAPS	**Kapalarasan**	**3.99**	**266**	*e*P	**Pb**	**16 28 17.4**	**+1.2**
	0.9nm,0.7s						
KAPS				*e*S	**Sg**	**16 29 12.9**	**-0.8**
	8.9nm,0.8s						
KAPS	**Kapalarasan**	**3.99**	**266**	Pg	**Pg**	**16 28 21.8**	**-0.3**
	0.9nm,0.4s						
KAPS				Lg	Lg	16 29 13.8	
	8.9nm,0.8s						
KAPS	**Kapalarasan**	**3.99**	**266**	*e*P	**Pg**	**16 28 21.8**	**-0.3**
	0.9nm,0.4s						
KTMS	**Ketmen**	**4.01**	**237**	*e*S	**Sb**	**16 29 07.6**	**+2.3**
	13nm,0.5s						
KTMS	**Ketmen**	**4.01**	**237**	*e*P	**Pb**	**16 28 16.3**	**-0.4**
	0.9nm,0.3s						
KTMS				*e*S	**Sb**	**16 29 07.3**	**+2.0**
	13nm,0.5s						
KTMS	**Ketmen**	**4.01**	**237**	Pg	**Pb**	**16 28 18.4**	**+1.7**
	1.0nm,0.4s						
KTMS				Lg	Lg	16 29 07.6	
	13nm,0.5s						
KTMS	**Ketmen**	**4.01**	**237**	*e*P	**Pb**	**16 28 18.4**	**+1.7**
	1.0nm,0.4s						
PDGK	**Podgornoye**	**4.60**	**241**	Pg	**Pb**	**16 28 29.0**	**+2.3**
	0.3nm,0.4s						
PDGK				Lg	Lg	16 29 25.5	
	2.7nm,0.4s						
PDGK	**Podgornoye**	**4.60**	**241**	⇑Lg	Lg	16 29 27.1	
	4.6nm,0.6s						
BLB	**Baldybastay**	**4.90**	**253**	Pg	**Pg**	**16 28 37.0**	**-2.7**
	1.4nm,0.2s						
BLB				Lg	Lg	16 29 39.5	
	3.2nm,0.3s						
UZB	**Uzynbulak**	**4.99**	**241**	Pg	**Pg**	**16 28 37.4**	**-3.9**
	0.9nm,0.2s						
UZB				Lg	Lg	16 29 40.4	
	3.2nm,0.3s						
KURBB	**Kurchatov Arra**	**6.54**	**321**	⇑Lg	Lg	16 30 39.3	
	3.6nm,0.6s						
KURK	**Kurchatov**	**6.57**	**322**	⇑Lg	Lg	16 30 37.4	
	2.2nm,0.6s						

IDC 19 16:27:14.6±2.3**, 0°.93N**×**127°.33E, h0^{km}, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.4**/39**, mbtmp3.4**/3**, Error ellipse: s-maj=167.8km s-min=28.2km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.85**	**162**	P	P	16 32 08.8	-0.2
	0.9nm,0.6s,baz=341,slow=11,SNR=9.5						
ASAR	**Alice Springs**	**25.27**	**166**	P	P	16 32 43.0	+0.2
	0.7nm,0.7s,baz=340,slow=8.8,SNR=12						
MKAR	**Makanchi Array**	**60.19**	**326**	P	P	16 37 24.4	-0.1
	0.4nm,0.8s,baz=142,slow=7.3,SNR=1.9						

*DJA **19** 16:28:53.2±0.4, 2°S±3°×10°2E±°, h151^{km}±4^{km}, M4.3/15, mb5.1/1, mB5.4/1, MLv3.8/15, Mw(mB)4.9/1*

*IDC **19** 16:29:05.8±12.0, 1°.77S×102°.80E, h268^{km}±102^{km}, mb3.0/5, mb1 3.2/5, mb1mx2.9/46, mbtmp3.6/5, Error ellipse: s-maj=184.9km s-min=15.5km az=56.0*

ISC 19 16:28:53.0±0.9**, 2°.31S**±0°.06×**102°.02E**±0°.07**, h150^{km}, n23, σ1^{s}.08**/21**, mb3.4**/4**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASI	**Maura Aman, Be**	**0.85**	**165**	P	**Pn**	**16 29 18.1**	**+1.4**
MASI				S	**Sn**	**16 29 37.0**	**+2.2**
KSI	**Kapahiang**	**1.45**	**157**	P	**Pn**	**16 29 23.1**	**+1.0**
RGRI	**Rengat**	**1.97**	**9**	P	Pn	16 29 12.8	-15
PPSI	**Pulau Pagai**	**2.06**	**257**	P	**Pn**	**16 29 29.6**	**+0.8**
PDSI	**Padang**	**2.09**	**312**	P	**Pn**	**16 29 30.0**	**+0.8**
LHSI	**Lahat**	**2.13**	**135**	P	**Pn**	**16 29 30.7**	**+1.1**
MNAI	**Manna**	**2.24**	**155**	P	**Pn**	**16 29 30.9**	**-0.1**
PPI	**Padang Panjang**	**2.45**	**319**	P	**Pn**	**16 29 34.1**	**+0.6**
BKNI	**Bangkinang**	**2.79**	**339**	P	**Pn**	**16 29 38.9**	**+1.1**
MDSI	**Maura Dua**	**3.05**	**135**	P	**Pn**	**16 29 41.8**	**+0.8**
SISI	**Saibi**	**3.09**	**288**	P	**Pn**	**16 29 41.8**	**+0.3**
DSRI	**Dabo**	**3.14**	**55**	P	**Pn**	**16 29 43.0**	**+0.9**
LWLI	**Liwa**	**3.37**	**143**	P	**Pn**	**16 29 44.4**	**-0.8**
KLSI		**3.59**	**131**	P	**Pn**	**16 29 48.2**	**+0.2**
MNSI	**Mandailing Nat**	**3.93**	**322**	P	Pn	16 29 45.1	-7.3
KASI	**Kota Agung**	**4.04**	**142**	P	**Pn**	**16 29 52.6**	**-1.1**
GSI	**Gunungsitoli**	**5.71**	**309**	P	**Pn**	**16 30 15.2**	**-0.7**
CMAR	**Chiang Mai Arr**	**20.86**	**352**	P	**P**	**16 33 23.8**	**+0.5**
	0.5nm,0.5s,baz=182,slow=8.0,SNR=5.9						
FITZ	**Fitzroy Crossi**	**27.98**	**126**	P	**P**	**16 34 29.1**	**-0.8**
	3.4nm,1.0s,baz=301,slow=11,SNR=3.5						
WRA	**Warramunga Arr**	**36.10**	**121**	P	**P**	**16 35 39.2**	**-1.6**
	0.2nm,0.4s,baz=299,slow=8.5,SNR=1.3						
ASAR	**Alice Springs**	**37.45**	**127**	P	**P**	**16 35 51.9**	**-0.3**
	0.4nm,0.5s,baz=302,slow=7.8,SNR=7.5						
MKAR	**Makanchi Array**	**51.89**	**343**	P	**P**	**16 37 44.9**	**-1.2**
	0.3nm,0.4s,baz=160,slow=9.1,SNR=5.7						
TXAR	**Lajitas Array**	**143.69**	**40**	PKP	PKPab	16 48 08.2	+0.2
	0.1nm,0.5s,baz=15,slow=3.7,SNR=1.7						

*DJA **19** 16:29:21.1±0.3, 1°N±2°×12°8E±°, h10^{km}, M3.9/10, mb4.2/5, MLv3.7/10*

*IDC **19** 16:29:21.7±1.3, 0°.56N×127°.42E, h0^{km}, mb3.8/4, mb1 3.9/5, mb1mx3.6/40, mbtmp3.7/5, ML2.8/1, MS2.9/5, Ms1 2.9/5, ms1mx2.6/36, Error ellipse: s-maj=46.7km s-min=20.8km az=59.0*

*NEIC **19** 16:29:23.9±1.6, 0°.62N±0°.08×127°.49E±0°.10, h10^{km}±1^{km}, mb4.2/16, Error ellipse: s-maj=19.7km s-min=7.6km az=231.0*

ISC 19 16:29:23.2±0.7**, 0°.81N**±0°.07×**127°.49E**±0°.08**, h10^{km}, n40, σ1^{s}.68**/33**, mb3.9**/11**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBMI	**Labuha**	**1.44**	**179**	P	**Pn**	**16 29 48.9**	**-0.4**
LBMI				S	**Sb**	**16 30 11.4**	**+2.9**
SANI	**Sanana**	**3.21**	**208**	P	**Pn**	**16 30 15.1**	**+1.4**
SGSI	**Sangihe**	**3.46**	**326**	P	**Pn**	**16 30 14.5**	**-2.8**
KMSI	**Cibinong**	**3.51**	**266**	P	**Pn**	**16 30 16.4**	**-1.5**
SIJI	**Sorong**	**4.13**	**114**	Pn	**Pn**	**16 30 24.6**	**-1.8**
	0.5nm,0.3s,baz=151,slow=23,SNR=2.0						
SIJI				Sn	**Sn**	**16 31 16.0**	**+1.1**
	baz=173,slow=21,SNR=1.1						
SIJI				LR	LR	16 32 24.7	
	comp=Z,272nm,18.6s,baz=11,slow=45						
GTOI	**Gorontalo**	**4.48**	**268**	P	**Pn**	**16 30 32.1**	**+0.9**
APSI	**Ampana**	**6.08**	**254**	P	**Pn**	**16 30 53.3**	**0.0**
	0.1nm13nm,0.7s						
TOLI2	**Tolitoli**	**6.71**	**273**	Pn	**Pn**	**16 31 01.5**	**-0.4**
TTSI	**Tana Toraja**	**8.56**	**243**	P	**Pn**	**16 31 25.4**	**-2.0**
	10nm,0.9s						
BNSI	**Bone**	**9.01**	**235**	P	**Pn**	**16 31 32.7**	**-0.7**
	12nm,1.1s						
SPSI	**Sidrap Palu**	**9.05**	**238**	P	**Pn**	**16 31 33.9**	**-0.2**
KAPI	**Kappang**	**9.65**	**233**	LR	LR	16 35 56.5	
	comp=Z,28nm,20.9s,baz=57,slow=42						
JAY	**Jayapura**	**13.62**	**104**	LR	LR	16 38 19.8	
	comp=Z,111nm,18.7s,baz=301,slow=40						
MTN	**Manton Dam**	**14.04**	**165**	Pn	Pn	16 32 36.7	-5.6
KNRA	**Kununurra**	**16.43**	**176**	Pn	**Pn**	**16 33 12.6**	**-1.5**
KNRA				IAmb	IAmb	16 33 27.7	
	comp=Z,24nm,1.5s						
WB0	**Warramunga Arr**	**21.54**	**162**	P	**P**	**16 34 11.3**	**-1.6**
WB0				IAmb	IAmb	16 34 17.0	
	comp=Z,5.5nm,1.1s						
WRAB	**Tennant Creek**	**21.68**	**162**	P	**P**	**16 34 12.9**	**-1.4**
WRA	**Warramunga Arr**	**21.69**	**162**	P	**P**	**16 34 12.7**	**-1.8**
	comp=Z,3.9nm,0.8s,baz=341,slow=11,SNR=22						
WRA	**Warramunga Arr**	**21.69**	**162**	IAmb	IAmb	16 34 16.0	
	comp=Z,0.5nm,1.6s						
WB2	**Warramunga Arr**	**21.69**	**162**	P	**P**	**16 34 12.8**	**-1.7**
WB2				IAmb	IAmb	16 34 20.3	
	comp=Z,3.6nm,0.7s						
WR0	**Warramunga Arr**	**21.77**	**162**	P	**P**	**16 34 13.0**	**-2.3**
WR0				IAmb	IAmb	16 34 51.8	
	comp=Z,6.1nm,1.1s						
PMG	**Port Moresby**	**22.06**	**118**	LR	LR	16 45 25.7	
	comp=Z,42nm,19.3s,baz=294,slow=44						
AS31	**Alice Springs**	**25.11**	**166**	P	**P**	**16 34 45.3**	**-3.2**
ASAR	**Alice Springs**	**25.11**	**166**	P	**P**	**16 34 46.4**	**-2.1**

	comp=Z,1.8nm,0.8s,baz=345,slow=9.1,SNR=16						
ASAR	Alice Springs	25.11	166	P	P	16 34 45.5	-3.0
PPI	Padang Panjang	27.12	267	P	P	16 35 06.0	-0.7
CTAO	Charters Tower	27.74	139	P	P	16 35 10.6	-1.7
CMAR	Chiang Mai Arr	33.05	304	LR	LR	16 48 16.7	
	comp=Z,8.3nm,21.3s,baz=95,slow=34						
SONM	Songino Array	50.29	342	P	P	16 38 22.9	+2.8
	comp=Z,1.3nm,1.0s,baz=141,slow=7.3,SNR=4.0						
SONM	Songino Array	50.29	342	IAmb	IAmb	16 38 29.8	
	comp=Z,3.1nm,1.3s						
MKAR	Makanchi Array	60.38	326	P	P	16 39 32.7	-0.1
	comp=Z,0.7nm,0.8s,baz=134,slow=6.2,SNR=3.3						
MKAR	Makanchi Array	60.38	326	P	P	16 39 34.4	+1.6
KURK	Kurchatov	64.60	328	P	P	16 40 01.4	+0.6
KURK				IAmb	IAmb	16 40 07.1	
	comp=Z,4.5nm,0.9s						
CHGR	Chuyangaron	65.18	313	P	P	16 40 05.7	+0.7
KKAR	Karatay Array	65.88	318	P	P	16 40 10.1	+0.7
ADK	Adak	68.96	33	P	P	16 40 29.5	+0.9
BRVK	Borovoye	70.24	327	P	P	16 40 37.7	+1.2
BRVK				IAmb	IAmb	16 41 08.7	
	comp=Z,4.0nm,1.4s						
TIXI	Tiksi	70.74	0	P	P	16 40 39.8	+0.6
TIXI				IAmb	IAmb	16 40 48.9	
	comp=Z,7.0nm,1.5s						
NRIK	Noril'sk	73.43	346	P	P	16 40 57.0	+1.7
NRIK				IAmb	IAmb	16 41 23.3	
	comp=Z,6.4nm,1.5s						
ABKAR	Akbulak array	74.88	321	P	P	16 41 05.7	+1.5

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*IDC **19** 16:30:52.1±0.7, 40°.12S×45°.50E, h0^{km}, mb4.2/12, mb1 4.4/12, mb1mx4.1/33, mbtmp4.3/12, MS3.8/18, Ms1 3.8/18, ms1mx3.6/38, Error ellipse: s-maj=28.8km s-min=14.8km az=37.0*

*NEIC **19** 16:30:54.2±2.1, 40°.16S±0°.09×45°.5E±0°.1, h15^{km}±4^{km}, mb4.6/24, Error ellipse: s-maj=17.1km s-min=7.9km az=45.0*

ISC 19 16:30:52.9±0.5**, 40°.12S**±0°.10×**45°.49E**±0°.09**, h10**^{km}**, n50,** σ**1**^{s}**.00**/38**, mb4.6**/17**, MS3.8**/18**, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOSA	Boshof	20.21	298	P	P	16 35 28.9	+0.9
	4.4nm,0.8s,baz=134,slow=8.9,SNR=4.2						
BOSA				LR	LR	16 42 00.4	
	comp=Z,343nm,19.9s,baz=152,slow=33						
BOSA	Boshof	20.21	298	P	P	16 35 27.8	-0.3
BOSA				IAmb	IAmb	16 35 31.8	
	comp=Z,43nm,1.6s						
RER	Riviere de l'E	20.83	28	P	P	16 35 34.6	-0.1
SUR	Sutherland	21.30	283	P	P	16 35 42.1	+2.2
	comp=Z,26nm,0.8s,baz=112,slow=11,SNR=11						
SUR				LR	LR	16 42 10.0	
	comp=Z,217nm,20.9s,baz=133,slow=32						
SUR	Sutherland	21.30	283	P	P	16 35 39.9	0.0
SUR				IAmb	IAmb	16 35 46.5	
	comp=Z,30nm,0.8s						
OPO	Ambohidratompo	21.52	4	P	P	16 35 44.5	+2.2
	comp=Z,2.8nm,0.8s,baz=175,slow=13,SNR=3.3						
OPO				LR	LR	16 42 45.0	
	comp=Z,206nm,18.8s,baz=360,slow=33						
LBTB	Lobatse	22.46	306	P	P	16 35 52.4	+0.1
	comp=Z,15nm,1.1s,baz=130,slow=10,SNR=8.9						
LBTB				LR	LR	16 43 19.7	
	comp=Z,343nm,20.2s,baz=140,slow=33						
LBTB	Lobatse	22.46	306	P	P	16 35 51.7	-0.5
LBTB				IAmb	IAmb	16 35 55.8	
	comp=Z,50nm,1.6s						
MATP	Matopo	24.42	318	P	P	16 36 11.9	+0.1
	comp=Z,1.6nm,0.3s,baz=159,slow=11,SNR=5.7						
AIS	Amsterdam Isla	24.99	95	P	P	16 36 14.8	-1.8
LSZ	Lusaka	28.99	324	P	P	16 36 52.4	-0.5
	comp=Z,1.8nm,0.2s,baz=152,slow=9.0,SNR=5.0						
LSZ				LR	LR	16 47 39.7	
	comp=Z,395nm,18.4s,baz=126,slow=35						
LSZ	Lusaka	28.99	324	P	P	16 36 52.2	-0.8
LSZ				IAmb	IAmb	16 36 55.0	
	comp=Z,5.7nm,0.9s						
MAW	Mawson	29.16	166	LR	LR	16 45 45.4	
	comp=Z,208nm,20.8s,baz=6.0,slow=31						
MAW	Mawson	29.16	166	P	P	16 36 53.2	-0.6
TSUM	Tsumeb	31.76	303	P	P	16 37 16.5	-0.9
TSUM				IAmb	IAmb	16 37 19.7	
	comp=Z,26nm,1.9s						
KMBO	Kilima Mbogo	39.52	347	LR	LR	16 52 31.3	
	comp=Z,78nm,20.4s,baz=88,slow=33						
QSPA	South Pole Qui	50.09	180	P	P	16 39 47.5	-0.2
	comp=Z,6.8nm,1.0s,baz=278,slow=3.1,SNR=12						
QSPA	South Pole Qui	50.09	180	P	P	16 39 47.2	-0.6
SHEL	Horse Pasture	50.41	283	P	P	16 39 50.8	+0.1
COCO	West Island	52.92	73	P	P	16 40 08.5	-0.8
H01W2	Cape Leeuwin H	53.48	108	T	T	17 37 46.9	
	baz=243,slow=75,SNR=51						
H01W3	Cape Leeuwin H	53.49	108	T	T	17 37 50.5	
	baz=243,slow=75,SNR=49						
H01W1	Cape Leeuwin H	53.50	108	T	T	17 37 51.2	
	baz=243,slow=75,SNR=46						
HOPE	Hope Point	54.36	226	P	P	16 40 20.0	+0.5
VNDA	Vanda	56.47	166	LR	LR	17 03 36.3	
	comp=Z,122nm,18.7s,baz=235,slow=35						
VNDA	Vanda	56.47	166	P	P	16 40 35.0	+0.7
VNDA				IAmb	IAmb	16 40 44.0	
	comp=Z,12nm,2.0s						
PALK	Pallekele	57.26	43	LR	LR	16 58 58.7	
	comp=Z,46nm,18.6s,baz=294,slow=30						
PMSA	Palmer Station	61.97	207	P	P	16 41 10.4	-2.0
DBIC	Dimbokro	65.67	303	LR	LR	17 07 31.0	
	comp=Z,195nm,20.1s,baz=152,slow=34						
TORD	Torodi Ar. Bea	66.78	313	P	P	16 41 45.2	+0.5
	comp=Z,2.1nm,0.7s,baz=131,slow=5.4,SNR=12						
TORD				LR	LR	17 10 33.8	
	comp=Z,44nm,19.3s,baz=255,slow=36						
TORD	Torodi Ar. Bea	66.78	313	P	P	16 41 43.5	-1.2
TORD				IAmb	IAmb	16 42 05.7	
	comp=Z,2.5nm,1.1s						
GO10	Punta Arenas	72.18	214	P	P	16 42 17.3	-0.3
ASAR	Alice Springs	74.00	108	P	P	16 42 29.8	+0.9
	comp=Z,2.3nm,0.7s,baz=228,slow=5.5,SNR=35						
ASAR				LR	LR	17 10 40.0	
	comp=Z,89nm,18.1s,baz=236,slow=32						
ASAR	Alice Springs	74.00	108	P	P	16 42 29.0	+0.1
AS31	Alice Springs	74.00	108	P	P	16 42 29.0	+0.1
STKA	Stephens Creek	74.46	119	P	P	16 42 32.4	+0.9
	comp=Z,2.5nm,0.7s,baz=226,slow=4.1,SNR=6.2						
STKA				LR	LR	17 07 38.1	
	comp=Z,54nm,19.7s,baz=205,slow=30						
STKA	Stephens Creek	74.46	119	P	P	16 42 32.4	+0.9
PLTB	Pedras Altas	76.53	240	P	P	16 42 42.3	-1.0
WRA	Warramunga Arr	76.58	105	P	P	16 42 44.8	+1.0
	comp=Z,2.2nm,0.8s,baz=227,slow=4.7,SNR=19						
WRA				LR	LR	17 12 10.0	
	comp=Z,84nm,18.0s,baz=220,slow=32						
WRA	Warramunga Arr	76.58	105	P	P	16 42 44.0	+0.2
WB2	Warramunga Arr	76.59	105	P	P	16 42 44.6	+0.8
WB2				IAmb	IAmb	16 42 54.4	
	comp=Z,11nm,1.4s						
WRAB	Tennant Creek	76.59	105	P	P	16 42 44.9	+1.0
WRAB				IAmb	IAmb	16 43 10.3	
	comp=Z,6.3nm,1.1s						
CMAR	Chiang Mai Arr	76.62	52	P	P	16 42 44.2	+0.4
	comp=Z,0.2nm,0.3s,baz=226,slow=6.1,SNR=1.6						
CMAR				LR	LR	17 13 03.0	
	comp=Z,26nm,18.2s,baz=198,slow=33						
WR0	Warramunga Arr	76.72	105	P	P	16 42 45.8	+1.2
WR0				IAmb	IAmb	16 42 53.6	
	comp=Z,18nm,1.8s						
WB0	Warramunga Arr	76.73	105	P	P	16 42 45.5	+0.8
WB0				IAmb	IAmb	16 42 46.5	
	comp=Z,5.0nm,0.9s						
BRTR	Keskin Array B	80.20	351	LR	LR	17 17 11.2	
	comp=Z,21nm,20.5s,baz=168,slow=35						
KEST	Kesra	82.49	331	LR	LR	17 21 16.9	
	comp=Z,86nm,19.0s,baz=224,slow=37						
ESDC	Sonseca Array	91.34	324	LR	LR	17 25 43.8	
	comp=Z,36nm,19.8s,baz=130,slow=36						
TXAR	Lajitas Array	152.59	257	PKPbc	PKPbc	16 50 52.3	+2.6
	comp=Z,0.8nm,0.8s,baz=104,slow=4.9,SNR=9.0						
TXAR	Lajitas Array	152.59	257		PKPbc	16 50 49.2	-0.6

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*IDC **19** 16:58:00.3±4.1, 52°.05N×178°.36E, h110^{km}±37^{km}, mb3.7/17, mb1 3.9/19, mb1mx3.7/50, mbtmp4.1/19, Error ellipse: s-maj=20.7km s-min=11.7km az=166.0*

*NEIC **19** 16:58:01.7±1.6, 52°.1N±0°.1×178°.31E±0°.10, h122^{km}±4^{km}, mb4.3/90, ML3.5/23(AEIC), Error ellipse: s-maj=18.1km s-min=8.5km az=181.0*

*AEIC **19** 16:58:01±2.0, 51°.9N±0°.1×178°.20E±0°.10, h129^{km}±4^{km}, Error ellipse: s-maj=19.8km s-min=8.6km az=182.0*

ISC 19 16:58:01.4±0.6**, 52°.06N**±0°.09×**178°.27E**±0°.04**, h122**^{km}±5^{km}**, n151,** σ**1**^{s}**.04**/155**, mb4.2**/58**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSNW	Little Sitkin	0.18	119		Pn	16 58 18.4	+0.3
LSSA	Little Sitkin	0.19	125		Pn	16 58 18.6	+0.4
LSSA					Sn	16 58 30.8	-0.1
LSPA	Little Sitkin	0.21	118		Pn	16 58 18.7	+0.5
LSPA					Sn	16 58 32.8	+1.8
CEAP	Semis' Anvil P	0.81	93		Pn	16 58 22.4	+0.6
CESW	Semis' Southwe	0.82	100		Pn	16 58 21.9	+0.1
CEPE	Semis' Perret	0.86	96		Pn	16 58 22.7	+0.5
CERAA	Semis' Rag'd T	0.89	99		Pn	16 58 22.7	+0.2
AMKA	Amchitka	0.94	136		Pn	16 58 22.5	-0.3
AMKA					Sn	16 58 37.9	-1.2
GANO	Gareloi North	1.83	96		Pn	16 58 32.9	+0.2
GALAA	Gareloi Lava P	1.86	98		Pn	16 58 33.5	+0.4
GAEA	Gareloi East	1.87	97		Pn	16 58 33.6	+0.3
TASE	Tanaga Southea	2.30	94		Pn	16 58 38.7	+0.1
TAFP	Tanaga Falls P	2.32	92		Pn	16 58 38.8	-0.1
TAFP					Sn	16 59 07.0	-0.8
SMY	Shemya	2.64	286		Pn	16 58 42.8	-0.2
SMY					Sn	16 59 14.4	-0.5
KIMD	Kanaga Island	2.80	94		Pn	16 58 44.8	-0.2
KIWB	Kanaga Island	2.84	92	Pn	Pn	16 58 45.3	-0.3
ADK	Adak	3.13	91		Pn	16 58 48.8	-0.5
ADK					Sn	16 59 25.1	-1.2
GSTD	Great Sitkin T	3.45	88		Pn	16 58 53.2	-0.5
GSTR	Great Sitkin T	3.50	87	Pn	Pn	16 58 55.0	+0.8
UNV	Unalaska Valle	9.37	73	Pn	Pn	17 00 13.1	0.0
AKUT	Akutan	9.82	71	Pn	Pn	17 00 21.1	+1.9
PET	Petropavlovsk	11.98	282	Pn	Pn	17 00 47.2	-0.8
PEA0B	Petropavlovsk-	12.55	283	Pn	Pn	17 00 56.9	+1.4
PETK	Petropavlovsk-	12.55	283	P	Pn	17 00 56.9	+1.4
	0.4nm,0.3s,baz=97,slow=18,SNR=21						
PETK				S	Sn	17 03 08.1	-5.5
	0.3nm,0.3s,baz=280,slow=13,SNR=1.2						
OHAK	Old Harbor	17.18	61	P	P	17 01 51.2	-2.2
Q19K	Cape Douglas,	17.24	55	P	Pn	17 01 54.1	-0.3
N19K	Bonanza Creek	17.31	49	P	Pn	17 01 56.5	+1.1
N19K				IAmb	IAmb	17 02 01.6	
	comp=Z,19nm,0.8s						
P19K	Oil Pt	17.60	53	P	Pn	17 01 59.6	+0.9
KDAK	Kodiak Island	17.62	60	P	P	17 01 56.5	-1.6
	comp=Z,3.2nm,0.3s,baz=246,slow=4.0,SNR=44						
KDAK	Kodiak Island	17.62	60	IAmb	IAmb	17 02 05.5	
	comp=Z,75nm,1.6s						
L19K	White Mountain	17.63	44	P	Pn	17 02 00.0	+1.0
L19K				IAmb	IAmb	17 02 12.0	
	comp=Z,33nm,1.4s						
M19K	Big River Lodg	17.72	46	P	Pn	17 02 01.8	+1.6
M19K				IAmb	IAmb	17 02 10.2	
	comp=Z,30nm,1.4s						
RSO	Redoubt South	18.03	51	P	P	17 02 02.4	-0.5
K20K	Telida	18.43	41	P	Pn	17 02 07.5	-1.1
K20K				IAmb	IAmb	17 02 24.0	
	comp=Z,16nm,1.6s						
SPU	Mount Spurr	18.55	49	P	Pn	17 02 09.3	-0.7
CNPM	China Poot	18.57	54	P	P	17 02 08.5	0.0
J20K	Nowinta River	18.77	39	P	Pn	17 02 12.2	-0.3
J20K				IAmb	IAmb	17 02 15.7	
	comp=Z,11nm,1.0s						
BRLK	Bradley Lake	18.79	54	P	P	17 02 10.1	-0.9
SKT	Skwentna	19.02	47	P	Pn	17 02 14.0	-1.5
SKT				IAmb	IAmb	17 02 21.5	
	comp=Z,12nm,0.9s						
PPLA	Purkeypile	19.04	44	P	Pn	17 02 15.1	-0.8
PPLA				IAmb	IAmb	17 02 21.4	
	comp=Z,28nm,1.4s						
SUA	Susitna One	19.24	49	P	Pn	17 02 17.3	-0.9
SUA				IAmb	IAmb	17 02 21.5	
	comp=Z,15nm,1.0s						
O22K	Cooper Landing	19.50	52	P	Pn	17 02 19.8	-1.2
IMAR	Indian Mountai	19.80	35	P	Pn	17 02 22.9	-1.7
KTH	Kantishna Hill	19.81	43	P	Pn	17 02 23.7	-1.1
KTH				IAmb	IAmb	17 02 24.8	
	comp=Z,12nm,1.0s						
H21K	Melozitna Rive	19.97	36	P	Pn	17 02 25.1	-1.5
BPAW	Bear Paw Mtn.	19.99	41	P	P	17 02 22.3	-1.6
TRF	Thorofare Moun	20.04	43	P	P	17 02 24.2	-0.5
GHO	Glory Hole Cre	20.16	48	P	P	17 02 25.9	+0.1
PWL	Port Wells	20.24	51	P	P	17 02 26.7	0.0
PWL				IAmb	IAmb	17 02 29.8	
	comp=Z,22nm,1.1s						
KNK	Knik Glacier	20.29	50	P	P	17 02 26.2	-1.0
KNK				IAmb	IAmb	17 02 30.1	
	comp=Z,8.5nm,0.7s						
SML	Sawmill	20.44	48	P	P	17 02 29.1	+0.3
SML				IAmb	IAmb	17 02 31.5	
	comp=Z,11nm,0.8s						
RND	Reindeer	20.64	44	P	P	17 02 30.6	-0.4
RND				IAmb	IAmb	17 02 39.5	
	comp=Z,17nm,1.5s						
MCK	McKinley	20.71	43	P	P	17 02 32.7	+1.1
MCK				IAmb	IAmb	17 03 00.4	
	comp=Z,20nm,1.5s						
GLI	Glacier Island	20.84	51	P	P	17 02 32.4	-0.7
SCM	Sheep Creek Mo	20.91	49	P	P	17 02 33.8	-0.1
SCM				IAmb	IAmb	17 02 38.8	
	comp=Z,26nm,1.3s						
NEA2	Nenana	20.95	41	P	P	17 02 34.9	+0.7
NEA2				IAmb	IAmb	17 02 35.6	
	comp=Z,8.0nm,0.5s						
I23K	Minto, Yukon-K	21.05	39	P	P	17 02 36.2	+1.1
I23K				IAmb	IAmb	17 03 00.9	
	comp=Z,16nm,1.6s						
FID	Port Fidalgo	21.12	52	P	P	17 02 35.7	-0.4
DHY	Denali Highway	21.18	45	P	P	17 02 36.8	-0.1
DHY				IAmb	IAmb	17 02 39.7	
	comp=Z,8.0nm,0.6s						
MDM	Murphy Dome	21.42	40	P	P	17 02 39.9	+0.6
EYAK	Cordova Ski Ar	21.45	53	P	P	17 02 37.0	-2.5
EYAK				IAmb	IAmb	17 02 42.9	
	comp=Z,26nm,1.3s						
CCB	Clear Creek Bu	21.48	41	P	P	17 02 40.3	+0.5
M24K	Tolsona, Glenn	21.50	48	P	P	17 02 40.1	-0.1
KLU	Klutina	21.50	50	P	P	17 02 39.0	-1.3
KLU				IAmb	IAmb	17 02 47.1	
	comp=Z,10nm,1.0s						
DIV	Divide	21.52	51	P	P	17 02 39.9	-0.5
DIV				IAmb	IAmb	17 02 40.9	
	comp=Z,32nm,1.5s						
HDA	Harding Lake	21.75	42	P	P	17 02 42.9	+0.1
H24K	Noodor Dome	21.88	38	P	P	17 02 45.2	+1.0
IL31		21.89	41	P	P	17 02 43.7	-0.5
ILAR	Eielson Array	21.89	41	P	P	17 02 42.1	-2.1
	comp=Z,0.7nm,0.4s,baz=245,slow=8.2,SNR=26						
PAX	Paxson	22.00	46	P	P	17 02 44.9	-0.6
KAIM	Kayak Island	22.05	54	P	P	17 02 44.4	-1.4
BMRM	Bremner River	22.06	52	P	P	17 02 45.0	-1.1
BMRM				IAmb	IAmb	17 02 49.4	
	comp=Z,20nm,1.2s						
N25K	Chitina, Valde	22.15	50	P	P	17 02 45.4	-1.6
BERG	Berg Lake	22.44	53	P	P	17 02 50.0	+0.2
RIDG	Independent Ri	22.45	44	P	P	17 02 50.6	+0.6
RIDG				IAmb	IAmb	17 03 07.7	
	comp=Z,12nm,1.0s						
GLB	Gilahina Butte	22.50	51	P	P	17 02 50.5	0.0
TOLK	Toolik Lake Re	22.57	31	P	P	17 02 52.1	+0.9
VRDI	Verde Repeater	22.64	51	P	P	17 02 51.3	-0.8
VRDI				IAmb	IAmb	17 03 09.7	
	comp=Z,14nm,1.4s						
PRP	Porcupine Dome	22.68	40	P	P	17 02 51.9	-0.4
CRQM	Cirque	22.75	52	P	P	17 02 52.7	-0.4
CRQM				IAmb	IAmb	17 02 55.7	
	comp=Z,19nm,1.0s						
DOT	Dot Lake	22.77	45	P	P	17 02 52.5	-0.7
DOT				IAmb	IAmb	17 02 55.4	
	comp=Z,20nm,1.5s						
WAX	Waxell Ridge	22.86	53	P	P	17 02 53.0	-1.1
WAX				IAmb	IAmb	17 02 59.9	
	comp=Z,27nm,1.3s						
MCARA	McCarthy VSAT	22.87	51	P	P	17 02 53.9	-0.1
MCARA				IAmb	IAmb	17 03 04.7	
	comp=Z,8.5nm,0.7s						
SCRK	Sand Creek	22.88	44	P	P	17 02 53.5	-0.8
TGL	Tana Glacier	22.90	52	P	P	17 02 54.5	+0.1
TGL				IAmb	IAmb	17 02 59.5	
	comp=Z,31nm,1.5s						
L26K	Log Cabin Wild	22.96	47	P	P	17 02 54.8	-0.1
L26K				IAmb	IAmb	17 02 57.0	
	comp=Z,13nm,1.2s						
M26K	Nabesna, AK	23.02	48	P	P	17 02 54.9	-0.6
M26K				IAmb	IAmb	17 03 08.5	
	comp=Z,13nm,1.5s						
ISLE	Juniper Island	23.13	53	P	P	17 02 55.8	-0.9
ISLE				IAmb	IAmb	17 03 24.7	
	comp=Z,15nm,1.1s						
FYU	Fort Yukon	23.15	37	P	P	17 02 54.7	-1.9
MESA	MESA	23.30	54	P	P	17 02 56.9	-1.4
YAH	Yahtse	23.41	54	P	P	17 02 58.8	-0.5
GRNC	Granite Creek	23.42	53	P	P	17 02 59.6	+0.1
GRNC				IAmb	IAmb	17 03 02.2	
	comp=Z,9.3nm,0.8s						
BARN	Barnard Glacie	23.49	52	P	P	17 03 00.1	0.0
BARN				IAmb	IAmb	17 03 16.2	
	comp=Z,30nm,1.5s						
M27K	Edge Creek, AK	23.52	48	P	P	17 02 59.4	-0.9
CTGM	Chitina Glacie	23.64	52	P	P	17 02 58.9	-2.4
L27K	Beaver Creek,	23.65	47	P	P	17 02 59.8	-1.5
L27K				IAmb	IAmb	17 03 04.3	
	comp=Z,10nm,0.8s						
BCAR	Beaver Creek A	23.67	47	P	P	17 03 02.0	+0.5
BMAR	Burnt Mountain	23.71	35	P	P	17 03 02.6	+0.8
TABL	Table Mountain	23.71	53	P	P	17 03 00.7	-1.4
EGAK	Eagle	24.26	43	P	P	17 03 06.0	-0.7
EGAK				IAmb	IAmb	17 03 08.2	
	comp=Z,11nm,0.8s						
BCPM	Bancas Point	24.45	55	P	P	17 03 08.4	0.0
DAWY	Dawson	24.88	45	P	P	17 03 12.5	0.0
DAWY				IAmb	IAmb	17 03 16.0	
	comp=Z,6.3nm,0.8s						
HYT	Haines Junctio	25.51	53	P	P	17 03 19.1	+0.9
HYT				IAmb	IAmb	17 03 22.6	
	comp=Z,8.0nm,0.6s						
INK	Inuvik	27.97	36	P	P	17 03 41.0	+1.1
	comp=Z,1.0nm,0.5s,baz=274,slow=10,SNR=4.0						
INK	Inuvik	27.97	36	IAmb	IAmb	17 04 02.8	
	comp=Z,10.0nm,1.5s						
KLR	Kul'dur	29.24	283	P	P	17 03 52.2	+0.7
	comp=Z,1.6nm,0.4s,baz=62,slow=8.2,SNR=8.2						
USRK	Ussuriysk Ar.	31.41	274	P	P	17 04 11.2	+0.6
	comp=Z,2.8nm,0.6s,baz=56,slow=12,SNR=3.3						
EDM	Edmonton	40.07	60	P	P	17 05 24.2	-0.2
K05A	Summer Lake	41.11	78	P	P	17 05 33.7	+0.4
K05A				IAmb	IAmb	17 05 36.7	
	comp=Z,4.5nm,0.9s						
PNTR	Pine Nut	44.06	82	P	P	17 05 58.0	+0.8
PNTR				IAmb	IAmb	17 06 05.0	
	comp=Z,4.9nm,0.9s						
BCYI	Bear Canyon	44.66	72	P	P	17 06 01.2	-0.7
SONM	Songino Array	44.71	294	P	P	17 06 03.2	+1.0
	comp=Z,0.9nm,0.5s,baz=59,slow=8.3,SNR=3.6						
RYN	Ryan	45.01	81	P	P	17 06 02.7	-2.0
RYN				IAmb	IAmb	17 06 05.9	
	comp=Z,4.7nm,1.3s						
NVAR	Mina Array Bea	45.27	81	P	P	17 06 06.9	+0.1
	comp=Z,0.7nm,0.5s,baz=294,slow=7.9,SNR=8.2						
R11A	Troy Canyon, C	46.97	80	P	P	17 06 18.8	-1.3
DUG	Dugway, Tooele	47.48	76	P	P	17 06 22.7	-1.3
DUG				IAmb	IAmb	17 06 25.1	
	comp=Z,5.2nm,1.2s						
BW06	Boulder Array	47.83	71	P	P	17 06 26.2	-0.5
PDAR	Pinedale Array	47.83	71	P	P	17 06 26.1	-0.6
	comp=Z,0.6nm,0.5s,baz=310,slow=3.2,SNR=7.0						
PSUT	Pine Spring	47.90	78	P	P	17 06 27.3	0.0
SRU	San Rafael Swe	49.54	75	P	P	17 06 39.3	-0.5
SRU				IAmb	IAmb	17 07 06.3	
	comp=Z,3.4nm,1.2s						
U15A	North Rim	50.21	79	P	P	17 06 44.0	-1.0
U15A				IAmb	IAmb	17 06 46.5	
	comp=Z,1.6nm,0.5s						
ZALV	Zalesovo Beam	52.23	312	PcP	PcP	17 08 10.0	+0.8
	comp=Z,0.3nm,0.3s,baz=20,slow=4.6,SNR=2.5						
ARCES	ARCESS Array B	57.09	349	P	P	17 07 34.6	+0.3
	comp=Z,3.0nm,1.0s,baz=30,slow=7.3,SNR=1.5						
MK31	Makanchi Array	58.17	306	P	P	17 07 42.2	0.0
MK31				IAmb	IAmb	17 07 49.8	
	comp=Z,4.3nm,1.2s						
MKAR	Makanchi Array	58.17	306	P	P	17 07 42.3	+0.1
	comp=Z,0.5nm,0.3s,baz=48,slow=5.8,SNR=13						
TXAR	Lajitas Array	60.34	79	P	P	17 07 57.5	+0.1
	comp=Z,0.5nm,0.4s,baz=306,slow=5.6,SNR=13						
FINES	FINESS Array B	64.70	346	P	P	17 08 25.7	-0.1
	comp=Z,1.5nm,0.8s,baz=351,slow=9.7,SNR=4.4						
SIJI	Sorong	65.85	233	P	P	17 08 33.5	-0.3
	comp=Z,8.4nm,0.8s,baz=28,slow=9.0,SNR=7.4						
CMAR	Chiang Mai Arr	69.14	273	P	P	17 08 55.4	+0.9
	comp=Z,0.4nm,0.3s,baz=28,slow=6.9,SNR=5.0						
TAPN	Taplejung	69.26	288	*e*P	P	17 08 56.8	+1.3
	comp=Z,4.4nm,0.5s						
ODAN	Odare	69.81	288	*e*P	P	17 08 59.8	+0.9
GAR	Garm	69.83	308	P	P	17 08 59.1	+0.4
GUN	Gumba	69.91	290	*e*P	P	17 09 01.0	+1.4
	comp=Z,18nm,0.4s						
JIRN	Jiri	69.92	289	*e*P	P	17 09 01.2	+1.5
	comp=Z,7.7nm,0.6s						
RAMN	Ramite	70.21	289	*e*P	P	17 09 02.6	+1.3
	comp=Z,9.4nm,0.5s						
KKN	Kakani	70.35	290	*e*P	P	17 09 03.3	+1.2
	comp=Z,8.3nm,0.5s						
PKI	Pulchoki	70.44	290	*e*P	P	17 09 03.2	+0.4
	comp=Z,6.4nm,0.5s						
PKIN	Phulchoki	70.44	290	*e*P	P	17 09 03.6	+0.9
	comp=Z,9.0nm,0.5s						
GKN	Gorkha	70.56	291	*e*P	P	17 09 04.3	+1.0
	comp=Z,7.2nm,0.4s						
DMN	Daman	70.59	290	*e*P	P	17 09 04.7	+1.1
	comp=Z,6.8nm,0.8s						
DANN	Dangsing	70.80	292	*e*P	P	17 09 05.9	+0.9
	comp=Z,13nm,0.8s						
KOLN	Koldanda	71.33	291	*e*P	P	17 09 08.7	+0.6
	comp=Z,6.8nm,0.8s						
PYUN	Piuthan	71.43	292	*e*P	P	17 09 09.5	+0.8
	comp=Z,11nm,0.8s						
AKASG	Malin Array Be	74.31	340	P	P	17 09 25.4	+0.4
	comp=Z,1.4nm,0.5s,baz=21,slow=6.1,SNR=4.9						
WRA	Warramunga Arr	81.28	221	P	P	17 10 03.8	0.0
	comp=Z,1.2nm,0.6s,baz=32,slow=6.2,SNR=14						
WRA	Warramunga Arr	81.28	221	IAmb	IAmb	17 10 04.2	
	comp=Z,0.5nm,1.6s						
FITZ	Fitzroy Crossi	83.48	230	P	P	17 10 16.3	+1.0
	comp=Z,1.5nm,0.7s,baz=36,slow=6.3,SNR=1.8						
ASAR	Alice Springs	84.79	220	P	P	17 10 22.3	+0.4
	comp=Z,0.7nm,0.7s,baz=24,slow=5.0,SNR=15						
TORD	Torodi Ar. Bea	115.00	356	PKP	PKiKP	17 16 27.1	-0.9
	comp=Z,0.2nm,0.3s,baz=352,slow=3.2,SNR=1.7						
MAW	Mawson	145.90	218	PKPbc	PKPab	17 17 25.1	-0.6
	comp=Z,1.5nm,0.6s,baz=341,slow=1.5,SNR=1.6						
BOSA	Boshof	149.15	309	PKPbc	PKiKP	17 17 35.5	-0.9
	comp=Z,1.6nm,0.7s,baz=39,slow=3.5,SNR=7.9						

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*TUL **19** 17:13:45.1±1.3, 36°.66N±0°.02×98°.47W±0°.03, h8^{km}±4^{km}, ML2.6, mb_Lg2.6/13(NEIC), Error ellipse: s-maj=3.8km s-min=2.3km az=83.0*

NEIC 19 17:13:45.0±1.1**, 36°.65N**±0°.02×**98°.47W**±0°.03**, h5**^{km}±2^{km}**, Error ellipse: s-maj=4.7km s-min=3.0km az=252.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK032	Salt Plains WL	0.26	54		Pg	17 13 50.4	+0.3
OK032				Sg	Sg	17 13 54.5	+1.0
CROK	Carrier	0.42	110	Pg	Pg	17 13 53.1	+0.1
CROK				Sg	Sg	17 13 59.4	+0.9
U32A	Winter Ranch,	0.51	238	Pg	Pg	17 13 55.4	+0.6
KAN14	Manchester OK	0.51	53	Pg	Pg	17 13 54.4	-0.5
KAN14				Sg	Sg	17 14 02.1	+0.6
GC02	Grant County #	0.53	67	Pg	Pg	17 13 55.3	+0.1
GC02				Sg	Sg	17 14 02.8	+0.7
KAN10	Anthony SW Sta	0.56	32		Pg	17 13 55.8	0.0
KAN10				Sg	Sg	17 14 03.2	+0.1
KAN16	Harper SW Stat	0.66	29	Pg	Pg	17 13 57.6	-0.1
KAN05	Bluff City Nor	0.66	46	Pg	Pg	17 13 57.8	0.0
KAN05				Sg	Sg	17 14 06.7	+0.3
KAN17	Caldwell West	0.69	55	Pg	Pg	17 13 57.7	-0.6
KAN17					Sg	17 14 07.6	+0.4
KAN08	Anthony NE Sta	0.70	35		Pg	17 13 58.3	-0.2
KAN08				Sg	Sg	17 14 07.9	+0.3
KAN12	Harper NE Stat	0.75	30		Pg	17 13 59.2	-0.2
KAN01	Argonia South	0.76	48	Pg	Pg	17 13 59.2	-0.4

KAN06	Argonia West S	0.77	39		Pg	17 13 59.2	-0.7
KAN09	Caldwell North	0.84	54	Pg	Pg	17 14 00.1	-1.0
KAN13	South Haven SW	0.88	65		Pg	17 14 01.4	-0.4
BLOK	Blackwell	1.01	83		Pg	17 14 03.7	-0.8
OK031	S. Brethren Rd	1.49	117		Pn	17 14 12.2	-0.3
QUOK	Quay	1.50	108		Pn	17 14 12.2	-0.4
QUOK				Sg	Sb	17 14 32.7	+0.1
OK030	Cody Creek RV	1.54	117		Pn	17 14 13.3	+0.2
T35A	Sooner Cattle	1.59	80	Pn	Pn	17 14 14.1	+0.2
FNO	Franklin	1.64	148	Pn	Pn	17 14 12.9	-1.6
R32A	Long Quarter,	1.78	354		Pn	17 14 16.8	+0.3
WMOK	Wichita Mounta	1.92	188	Pn	Pn	17 14 18.3	-0.2
X34A	Smith Ranch, M	2.11	166	Pn	Pn	17 14 21.3	+0.3
X34A				IAmb_Lg		17 14 52.7	
	comp=Z,26nm,0.9s						
TUL1	Leonard	2.29	108	Pn	Pn	17 14 22.7	-0.7
TUL1				IAmb_Lg		17 15 01.4	
	comp=Z,26nm,1.1s						
CBKS	Cedar Bluff	2.38	335	Pn	Pn	17 14 24.3	-0.5
AMTX	Amarillo	3.15	237	IAmb_Lg		17 15 25.9	
	comp=Z,18nm,0.8s						
HHAR	Hobbs	3.67	94	IAmb_Lg		17 15 39.9	
	comp=Z,12nm,1.2s						
KSCO	Kaye Shedlock'	4.05	307	IAmb_Lg		17 15 59.2	
	comp=Z,11nm,0.8s						
U40A	Yellville	4.53	92	IAmb_Lg		17 16 06.9	
	comp=Z,9.0nm,1.0s						

IDC 19 17:36:30.0±1.7**,7°.59S**×**156°.03E,h0km,mb3.5**/3**,**
mb1 3.6/4**,mb1mx3.4**/36**,mbtmp3.6**/4**,ML3.9**/1**,Error**
ellipse: s-maj=43.5km s-min=28.8km az=11.0,
Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	4.28	116	Pn	Pn	17 37 36.0	-0.5
	7.3nm,0.3s,baz=200,slow=8.2,SNR=3.0						
HNR				Sn	Sn	17 38 26.7	-0.5
	5.9nm,0.3s,baz=157,slow=22,SNR=1.0						
WRA	Warramunga Arr	24.34	238	P	P	17 41 51.7	+1.9
	0.3nm,0.6s,baz=62,slow=9.7,SNR=1.6						
ASAR	Alice Springs	26.57	231	P	P	17 42 08.6	-1.4
	0.7nm,1.1s,baz=58,slow=9.5,SNR=1.8						
MKAR	Makanchi Array	84.53	319	P	P	17 49 05.1	0.0
	1.0nm,0.7s,baz=113,slow=5.5,SNR=6.6						

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*IDC **19** 17:39:00.0±2.9, 11°.16S×163°.21E, h46km±26km, mb3.6/8,*
mb1 3.9/10, mb1mx3.6/40, mbtmp3.9/10, ML4.2/2, MS3.4/7,
Ms1 3.4/7, ms1mx3.0/31, Error ellipse: s-maj=25.5km
s-min=18.2km az=71.0
ISC 19 17:38:59.0±0.8**,11°.19S**±0°.09×**163°.22E**±0°.09**,h34km,n23,**
σ1s44/22**,mb3.8**/11**,MS3.4**/4**,Bougainville-Solomon**
Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	3.67	298	P	Pn	17 39 53.8	+0.5
	106nm,0.3s,baz=144,slow=8.0,SNR=21						
HNR				S	Sn	17 40 36.4	+0.9
	56nm,0.3s,baz=345,slow=9.4,SNR=2.4						
HNR				LR	LR	17 41 20.4	
	comp=Z,508nm,19.9s,baz=120,slow=39						
HNR	Honiara	3.67	298	P	Pn	17 39 53.9	+0.5
SANVU	Saraoutou	5.74	138	P	Pn	17 40 22.6	+0.8
DVP	Devils Point	8.08	144	P	Pn	17 40 56.3	+2.3
	101µm,0.6s						
RTV	Rentapao	8.27	143	P	Pn	17 40 59.9	+3.3
	302µm,1.4s						
DZM	Mont Dzumac	11.25	165	P	Pn	17 41 37.9	+0.4
	0.4nm,0.3s,baz=322,slow=18,SNR=12						
DZM				S	Sn	17 43 39.0	-3.2
	0.2nm,0.3s,baz=180,slow=22,SNR=1.2						
DZM				LR	LR	17 45 04.2	
	comp=Z,116nm,18.2s,baz=22,slow=32						
DZM	Mont Dzumac	11.25	165	eLR	LR	17 43 40.7	
	comp=Z,128nm,23.6s						
DZM	Mont Dzumac	11.25	165	P	Pn	17 41 39.0	+1.5
MSVF	Nonsavu	15.76	116	LR	LR	17 47 12.9	
	comp=Z,102nm,19.8s,baz=178,slow=31						
MTSU	Mount Surprise	19.54	247	P	Pn	17 43 26.3	+0.9
	14nm,0.7s						
STKA	Stephens Creek	28.68	221	P	P	17 44 53.6	+0.7
	1.1nm,0.5s,baz=75,slow=15,SNR=3.2						
STKA				LR	LR	17 54 56.0	
	comp=Z,91nm,21.4s,baz=26,slow=33						
WRAB	Tennant Creek	29.10	249	P	P	17 44 56.5	-0.3
WRA	Warramunga Arr	29.11	249	P	P	17 44 56.4	-0.6
	1.2nm,0.7s,baz=80,slow=8.9,SNR=10						
WRA				LR	LR	17 56 54.6	
	comp=Z,90nm,19.0s,baz=70,slow=37						
LCRK	Leigh Creek	30.10	227	P	P	17 45 06.7	+1.2
	10nm,1.1s						
ASAR	Alice Springs	30.53	242	P	P	17 45 08.8	-0.6
	1.1nm,0.7s,baz=63,slow=10,SNR=26						
ASAR				LR	LR	17 56 59.0	
	comp=Z,60nm,18.9s,baz=61,slow=35						
SIJI	Sorong	33.35	286	LR	LR	18 01 18.6	
	comp=Z,66nm,18.3s,baz=84,slow=40						
KNRA	Kununurra	33.79	259	P	P	17 45 36.7	-1.4
	10nm,0.5s						
WRKA	Warakurna	35.81	243	P	P	17 45 55.0	-0.6
	12nm,3.0s						
ASAJ	Asahikawa	58.15	343	P	P	17 48 48.7	-0.7
	5.3nm,0.9s,baz=162,slow=9.6,SNR=2.9						
VNDA	Vanda	66.32	180	P	P	17 49 43.9	+0.2
	0.9nm,1.0s,baz=54,slow=7.7,SNR=2.1						
SONM	Songino Array	77.34	325	P	P	17 50 49.5	-0.9
	0.3nm,0.5s,baz=132,slow=9.1,SNR=2.1						
ILAR	Eielson Array	84.45	19	P	P	17 51 26.5	-1.4
	0.5nm,0.8s,baz=243,slow=8.0,SNR=4.4						
NVAR	Mina Array Bea	88.01	50	P	P	17 51 46.8	+0.5
	0.3nm,0.5s,baz=231,slow=8.0,SNR=2.5						

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*IDC **19** 17:43:45.7±1.9, 29°.92N×140°.49E, h125km±19km, mb3.0/5,*
mb1 3.2/7, mb1mx3.0/51, mbtmp3.4/7, Error ellipse:
s-maj=32.7km s-min=15.4km az=79.0
ISC 19 17:43:46.5±0.9**,29°.9N**±0°.1×**140°.5E**±0°.2**,h139km,n7,**
σ1s53/8**,mb3.2**/5**,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	Chichijima	3.14	152	P	Pn	17 44 33.4	-1.9
	3.9nm,0.3s,baz=248,slow=23,SNR=9.3						
JCJ				S	Sn	17 45 13.3	+0.5
	9.4nm,0.3s,baz=286,slow=23,SNR=2.0						
MJAR	Matsushiro Arr	6.91	344	P	Pn	17 45 24.2	-1.1
	0.0nm,0.3s,baz=173,slow=11,SNR=1.5						
MKAR	Makanchi Array	47.61	308	P	P	17 52 08.5	+0.3
	0.3nm,0.6s,baz=80,slow=7.0,SNR=4.7						
WRA	Warramunga Arr	49.91	188	P	P	17 52 26.8	+0.8
	0.4nm,0.4s,baz=3.5,slow=7.4,SNR=12						
ASAR	Alice Springs	53.63	188	P	P	17 52 54.1	+0.5
	0.1nm,0.4s,baz=0.1,slow=5.0,SNR=9.1						
ILAR	Eielson Array	55.98	30	P	P	17 53 09.2	-0.8
	0.2nm,0.6s,baz=265,slow=5.2,SNR=2.2						
NVAR	Mina Array Bea	79.92	52	P	P	17 55 42.7	+2.3
	0.3nm,0.6s,baz=300,slow=7.2,SNR=2.6						

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*NEIC **19** 17:44:52.8±2.2, 38°.91S±0°.07×68°.96W±0°.05, h15km±7km,*
mb4.2/2, Md4.0(SJA), Error ellipse: s-maj=9.8km
s-min=5.0km az=194.0
*SJA **19** 17:44:57±3.1, 38°.80S±0°.05×69°.5W±0°.1, h10km±7km,*
Error ellipse: s-maj=0.0km s-min=0.0km az=177.0
ISC 19 17:44:54.6±0.9**,38°.76S**±0°.04×**69°.30W**±0°.07**,h10km,n35,**
σ1s69/35**,1D,Southern Argentina**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CANA	Caviahue	1.64	302	iP	Pb	17 45 25.6	+0.6
CANA				eS	Sg	17 45 47.0	-0.3
CANA				IAML		17 45 57.2	
	comp=Z,1µm,0.7s						
LC01	Cunco	2.02	265	Pn	Pn	17 45 29.5	+0.8
LC01	Cunco	2.02	265	iP	Pg	17 45 32.5	-0.8
PLCA	Paso Flores	2.19	206		Pn	17 45 32.5	+1.3
PLCA	Paso Flores	2.19	206	iP	Pn	17 45 33.8	+2.6
PLCA				eS	Sg	17 46 07.2	+2.1
PLCA				IAML		17 46 17.9	
	comp=Z,769nm,0.5s						
LR03	Panguipulli	2.52	249		Pn	17 45 36.8	+1.2
LL04	Puerto Octay	3.22	227	Pn	Pn	17 45 47.8	+2.6
LL04					Pb	17 45 53.6	+1.8
PUMA	Malargue	3.26	358	⇓iP	Pn	17 45 51.6	+5.9
LL03	Petrohue	3.37	224	Pg	Pg	17 45 57.4	-1.7
ML02	Panimavida	3.44	330		Pn	17 45 48.4	+0.2
BO02	Sierra Bellavi	4.13	343	Pn	Pn	17 45 58.3	+0.5
BO02	Sierra Bellavi	4.13	343	iP	Pb	17 46 11.8	+4.4
LL05	Los Muermos	4.15	229	Pn	Pn	17 45 56.6	-1.4
GO05	Huala	4.30	330		Pb	17 46 11.3	+1.1
GO05	Huala	4.30	330	iP	Pb	17 46 13.6	+3.3
LL01	San Ignacio de	4.32	212	Pn	Pn	17 45 58.4	-1.9
BO01	Tunca	4.59	341	Pn	Pn	17 46 05.7	+1.7
LL02	Futaleuf	4.83	203	Pn	Pn	17 46 06.1	-1.2
MT01	Popeta	5.13	342	Pn	Pn	17 46 12.6	+1.0
MT09	Talagante	5.16	344	Pn	Pn	17 46 12.9	+0.9
VA05	Santo Domingo	5.43	339	Pn	Pn	17 46 16.2	+0.7
GO07	Milladeo Hill,	5.46	216	Pn	Pn	17 46 15.4	-0.6
MT05	Renca	5.48	347	Pn	Pn	17 46 15.9	-0.5
MT02	Curacav	5.69	344	Pn	Pn	17 46 19.9	+0.8
PEL	Peldehue	5.72	348	Pn	Pn	17 46 19.6	0.0
TRQA	Tornquist	5.79	85	Pn	Pn	17 46 15.3	-5.2
VA03	San Esteban	6.07	350	Pn	Pn	17 46 23.7	-0.8
COYC	Coyhaique	7.11	196	Pn	Pn	17 46 33.2	-5.4
ZON	Zonda	7.21	4	Pn	Pn	17 46 39.4	-0.7
AQDB	Aquidauana	21.67	37	P	P	17 49 42.2	-3.2
AQDB				IAmb	IAmb	17 49 46.5	
	comp=Z,13nm,1.3s						
PTLB	Pontes e Lacer	24.88	24	P	P	17 50 15.4	-2.1
PTLB				IAmb	IAmb	17 50 17.1	
	comp=Z,8.0nm,1.5s						
VNA3	Neumayer Olymp	44.12	156	P	P	17 53 02.3	-0.4
VNA1	Neumayer--Stat	44.44	155	P	P	17 53 05.3	+0.2
VNA2	Neumayer--Watz	44.77	156	P	P	17 53 07.5	-0.4
	baz=284,slow=8.2						
SNAA	Sanae	46.35	156	P	P	17 53 20.0	-0.4

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*BEO **19** 17:45:42.8±3.6, 37°.21N×20°.22E, h116km±5km, ML4.0/12*
*IDC **19** 17:45:52.3±1.0, 38°.58N×20°.42E, h0km, mb3.8/9,*
mb1 3.8/18, mb1mx3.6/56, mbtmp3.7/18, ML3.6/8, MS2.9/12,
Ms1 2.9/12, ms1mx2.7/53, Error ellipse: s-maj=17.1km
s-min=15.1km az=150.0
*PDG **19** 17:45:53.9±0.5, 38°.49N×20°.38E, h19km, ML3.7/13, Error*
ellipse: s-maj=0.7km s-min=0.9km az=0.0
*THE **19** 17:45:54.8, 38°.47N×20°.45E, h12km, ML4.0/8, Error*
ellipse: s-maj=1.0km s-min=0.3km az=102.0
*ATH **19** 17:45:55.2, 38°.46N×20°.50E, h12km±1km, ML4.0/12, Error*
ellipse: s-maj=1.7km s-min=0.7km az=278.0
*NEIC **19** 17:45:56.7±2.6, 38°.52N±0°.04×20°.47E±0°.06, h31km±8km,*
Error ellipse: s-maj=8.3km s-min=3.3km az=49.0
ISC 19 17:45:54.2±0.7**,38°.49N**±0°.02×**20°.42E**±0°.03**,h16km**±4km**,**
n221,σ1s46/261**,mb3.9**/11**,MS3.0**/6**,16C-10D,Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FSK	Fiskardo	0.12	103	P	Pg	17 45 57.3	-0.5
FSK				S	Sg	17 45 58.9	-1.2
	283µm,0.3s						
FSK	Fiskardo	0.12	103	P	Pg	17 45 57.4	-0.4
FSK				S	Sg	17 45 59.1	-1.0
FSK				AML	AML	17 45 59.2	
FSK				AML	AML	17 45 59.3	
EVGI	Lefkada island	0.23	54	P	Pb	17 45 59.5	-0.6
EVGI				S	Sg	17 46 03.2	+0.2
	58µm,0.4s						
EVGI	Lefkada island	0.23	54	P	Pb	17 45 59.5	-0.6
EVGI				S	Sg	17 46 03.1	+0.1
DRAG	Dragano-Lefkad	0.23	32	P	Pb	17 45 59.5	-0.6
DRAG				S	Sg	17 46 03.5	+0.5
	136µm,0.3s						
DRAG	Dragano-Lefkad	0.23	32	P	Pb	17 45 59.6	-0.6
DRAG				S	Sg	17 46 03.6	+0.5
DMLN	Damoulianata-K	0.25	188	P	Pb	17 46 00.0	-0.4
DMLN				S	Sb	17 46 04.2	-0.3
	105µm,0.4s						
DMLN	Damoulianata-K	0.25	188	P	Pb	17 45 60.0	-0.4
DMLN				S	Sb	17 46 04.1	-0.3
LXRA	Lixouri, Kepha	0.28	177	P	Pg	17 46 00.5	+0.2
LXRA				S	Sg	17 46 05.3	+0.9
KEF3	Kipouria, Keph	0.29	191	P	Pg	17 46 00.2	-0.2
KEF3				S	Sg	17 46 04.5	0.0
KEF3	Kipouria, Keph	0.29	191	P	Pg	17 46 00.1	-0.2
KEF3				S	Sg	17 46 04.4	-0.1
ARGA	Argostoli. Kep	0.31	171	P	Pb	17 46 01.7	+0.3
ARGA				S	Sg	17 46 06.1	+0.9
NYDR	Nydri-Lefkada	0.32	44	P	Pg	17 46 01.0	+0.2
NYDR				S	Sb	17 46 06.0	-0.4
	25µm,0.5s						
NYDR	Nydri-Lefkada	0.32	44	P	Pg	17 46 01.1	+0.2
NYDR				S	Sg	17 46 05.7	+0.3
VLS	Valsamata	0.34	156	P	Pg	17 46 00.9	-0.3
VLS				S	Sg	17 46 06.0	0.0
	42µm,0.1s						
VLS	Valsamata	0.34	156	P	Pg	17 46 00.9	-0.3
VLS				S	Sg	17 46 05.8	-0.2
VLS				AML	AML	17 46 06.9	
	comp=N,71314µm,0.2s						
VLS				AML	AML	17 46 07.2	
	comp=E,96757µm,0.1s						
LKD2	Lefkada island	0.36	32	P	Pg	17 46 01.7	+0.1
LKD2				S	Sb	17 46 07.5	-0.1
	comp=E,18µm,0.8s						
LKD2	Lefkada island	0.36	32	P	Pg	17 46 01.8	+0.2
LKD2				S	Sb	17 46 07.4	-0.3
LKD2				AML	AML	17 46 08.4	
	comp=E,36173µm,0.4s						
LKD2				AML	AML	17 46 10.4	
	comp=N,28853µm,0.5s						
TSLK	Tsoukalades, L	0.39	29	P	Pg	17 46 02.3	+0.2
TSLK				S	Sb	17 46 08.9	+0.4
	comp=N,23µm,0.5s						
TSLK	Tsoukalades, L	0.39	29	P	Pg	17 46 02.6	+0.4
TSLK				S	Sb	17 46 08.9	+0.4
PSDA	Pessada-Kefalo	0.39	161	P	Pg	17 46 02.0	-0.2
PSDA				S	Sg	17 46 07.9	+0.3
PSDA	Pessada-Kefalo	0.39	161	P	Pg	17 46 02.0	-0.2
PSDA				S	Sg	17 46 08.0	+0.3
ZAK2	Zakynthos	0.79	151	P	Pb	17 46 09.6	0.0
VTN	Vitineika	0.83	133	P	Pb	17 46 10.2	0.0
VTN	Vitineika	0.83	133	P	Pb	17 46 10.1	-0.2
LTHK	Lithakia	0.84	157	P	Pb	17 46 09.4	-1.1
LTHK	Lithakia	0.84	157	P	Pb	17 46 09.5	-0.9
LTHK				AML	AML	17 46 24.2	
	comp=E,30074µm,0.2s						
LTHK				AML	AML	17 46 24.9	
	comp=N,24974µm,0.2s						
PVO	Paravola	0.88	81	P	Pb	17 46 11.0	-0.1
PVO	Paravola	0.88	81	P	Pb	17 46 11.0	-0.1
PVO				AML	AML	17 46 30.6	
	comp=N,15293µm,0.7s						
PVO				AML	AML	17 46 32.8	
	comp=E,20893µm,0.7s						
RLS	Riolos of Patr	0.93	117	P	Pb	17 46 11.6	-0.3
IGT	Igoumenitsa	1.05	356	P	Pb	17 46 14.1	+0.1
IGT	Igoumenitsa	1.05	356	P	Pb	17 46 14.2	+0.1
IGT				AML	AML	17 46 34.4	
	comp=E,5651µm,0.5s						
IGT				AML	AML	17 46 35.4	
	comp=N,3709µm,0.4s						
UPR	University Cam	1.09	100	P	Pn	17 46 14.8	-0.1
DRO	Drossia	1.15	117	P	Pn	17 46 15.3	-0.3
DRO	Drossia	1.15	117	P	Pn	17 46 15.4	-0.3
DRO				AML	AML	17 46 38.3	
	comp=E,18864µm,0.4s						
DRO				AML	AML	17 46 41.3	
	comp=N,18165µm,0.5s						
EFP	Efpalio	1.17	92	P	Pn	17 46 15.1	-0.8
EFP	Efpalio	1.17	92	P	Pn	17 46 15.1	-0.8
EFP				AML	AML	17 46 38.5	
	comp=E,27940µm,0.7s						
EFP				AML	AML	17 46 39.4	
	comp=N,8887µm,0.4s						
EVR	Evrytania	1.17	68	P	Pn	17 46 15.8	-0.2
ANX	Ano Chora	1.18	84	P	Pn	17 46 15.7	-0.5
ANX	Ano Chora	1.18	84	P	Pn	17 46 15.9	-0.4
ANX				AML	AML	17 46 40.4	
	comp=E,10225µm,0.7s						
ANX				AML	AML	17 46 40.6	
	comp=N,16322µm,0.5s						
JAN	Janina	1.22	16	P	Pg	17 46 18.2	+0.5
JAN				AML	AML	17 46 38.4	
	comp=E,6325µm,0.7s						
JAN				AML	AML	17 46 43.2	
	comp=N,3350µm,0.4s						
LAKA	Lakka	1.25	101	P	Pn	17 46 16.7	-0.4
LAKA	Lakka	1.25	101	P	Pn	17 46 16.7	-0.4
LAKA				AML	AML	17 46 39.9	
	comp=N,33538µm,0.6s						
LAKA				AML	AML	17 46 41.1	
	comp=E,35615µm,0.8s						
TRIZ	Trizonia	1.30	95	P	Pn	17 46 17.6	-0.1
KASA	Kassiopi	1.31	344	P	Pg	17 46 20.5	+0.9
ALIK	Aliki, Aigiali	1.35	99	P	Pn	17 46 18.3	-0.1
KLV	Kalavryta, Ach	1.43	107	P	Pn	17 46 19.8	+0.2
MAKR	Makrakomi, Fth	1.44	68	P	Pb	17 46 20.7	+0.1
AGG	Agios Georgios	1.59	70	P	Pb	17 46 23.2	-0.1
AGG	Agios Georgios	1.59	70	Pn	Pb	17 46 23.1	-0.1
GUR	Goura	1.61	109	P	Pb	17 46 22.8	-0.9
GUR	Goura	1.61	109	P	Pb	17 46 22.8	-0.9
GUR				AML	AML	17 46 51.0	
	comp=E,6923µm,0.5s						
GUR				AML	AML	17 46 53.2	
	comp=N,10619µm,0.4s						
KPRO	Kipourio	1.64	26	P	Pg	17 46 25.3	-0.4
THL	Klokotos Trika	1.65	49	P	Pb	17 46 24.7	+0.6
ITM	Ithomi	1.77	137	P	Pb	17 46 26.2	-0.1
ITM	Ithomi	1.77	137	Pn	Pb	17 46 26.0	-0.3
THAL	Thalero	1.82	104	P	Pb	17 46 27.1	-0.1
KZN	Kozani	2.10	30	P	Pb	17 46 32.3	+0.4
VLO	Vlora	2.10	340		Pn	17 46 28.8	0.0
KBN	Korca	2.15	8	Pn	Pn	17 46 29.9	+0.3
SCTE	Santa Cesarea	2.19	317		Pn	17 46 31.4	+1.4
VIL2	Platees	2.26	96	P	Pb	17 46 33.8	-0.9
FNA	Florina	2.41	18	Pn	Pb	17 46 35.7	-1.6
OHR	Ohrid	2.64	6	ePn	Pb	17 46 40.3	-0.8
OHR				eSn	Sb	17 47 12.8	-0.5
OHR	Ohrid	2.64	6	iPn	Pb	17 46 39.6	-1.6
TIR	Tirane	2.89	352	⇓P	Pn	17 46 42.2	+2.7
TIR	Tirane	2.89	352	ePn	Pn	17 46 42.5	+2.9
TIR				eSn	Sb	17 47 17.9	-2.6
TIR	Tirane	2.89	352	Pn	Pn	17 46 41.9	+2.3
TIP	Timpagrande	2.94	285	⇑P	Pn	17 46 42.3	+1.9
TIP	Timpagrande	2.94	285		Pn	17 46 42.2	+1.8
VAY	Valandovo	3.28	30	ePn	Pn	17 46 46.7	+1.8
VAY	Valandovo	3.28	30	ePn	Pn	17 46 46.7	+1.8
STIP	Stip	3.48	22	iPn	Pn	17 46 51.7	+4.0
CEL	Celeste	3.56	268	Pn	Pn	17 46 49.4	+0.5
ULC	Ulcinj	3.59	346	⇓iPn	Pn	17 46 50.1	+0.9
ULC				iSn	Sn	17 47 31.6	+0.3
MATE	Matera	3.59	308	⇓P	Pn	17 46 51.2	+2.0
DRME	Dracevica, Mon	3.81	346	ePn	Pn	17 46 53.4	+1.1
DRME	Dracevica, Mon	3.81	346	⇑iPn	Pn	17 46 53.2	+0.9
DRME				iSn	Sn	17 47 37.1	+0.3
BUM	Brajici-Budva	3.98	344	⇓iPn	Pn	17 46 55.4	+0.7
BUM				iSn	Sn	17 47 41.1	0.0
PDG	Podgorica	4.04	348	⇓P	Pn	17 46 56.8	+1.4
PDG	Podgorica	4.04	348	ePn	Pn	17 46 57.0	+1.6
PDG	Podgorica	4.04	348	ePn	Pn	17 46 56.3	+0.9
PDG	Podgorica	4.04	348	Pn	Pn	17 46 55.4	0.0
TTG	Podgorica	4.04	348	⇑iPn	Pn	17 46 56.4	+1.0
TTG				iSn	Sn	17 47 42.5	+0.2
PVY	Plav	4.12	355	ePn	Pn	17 46 57.0	+0.4
PVY				iSn	Sn	17 47 44.5	0.0
PRVS	Prvonek	4.21	17	ePn	Pn	17 47 00.6	+2.8
CEME	Cevo	4.21	345	⇑iPn	Pn	17 46 58.4	+0.5
CEME				iSn	Sn	17 47 46.6	-0.2
HCY	Herceg Novi	4.22	340	ePn	Pn	17 46 58.0	+0.1
HCY	Herceg Novi	4.22	340	⇑iPn	Pn	17 46 57.9	+0.1
HCY				eSn	Sn	17 47 47.2	+0.4
APE	Apeiranthos	4.29	108	⇑P	Pn	17 46 59.9	+1.0
BOSS	Bosilegrad	4.30	21	ePn	Pn	17 47 00.1	+1.1
IVA	Berane	4.40	355	ePn	Pn	17 47 00.1	-0.3
IVA				iSn	Sn	17 47 51.2	-0.2
KOME	Kolasin	4.41	351	⇑iPn	Pn	17 47 02.3	+1.7
KOME				iSn	Sn	17 47 51.5	-0.2
NKME	Niksic	4.42	346	⇑iPn	Pn	17 47 01.8	+1.1
NKME				iSn	Sn	17 47 51.7	-0.1
BARS	Barje	4.46	13	ePn	Pn	17 47 03.1	+2.0
BARS	Barje	4.46	13	ePn	Pg	17 47 18.5	-1.0
NKY	Niksic	4.46	346	⇑iPn	Pn	17 47 02.3	+1.1
NKY				iSn	Sn	17 47 53.2	+0.4
TREB	Trebinje	4.51	340	ePn	Pn	17 47 02.1	+0.2
TREB	Trebinje	4.51	340	ePn	Pn	17 47 01.8	-0.1
DBRK	Dubrovnik	4.52	338	ePn	Pn	17 47 02.2	+0.1
DBRK				Sn	Sn	17 47 52.9	-1.4
BRY	Bratogost	4.64	343	ePn	Pn	17 47 04.1	+0.3
BRY	Bratogost	4.64	343	⇓iPn	Pn	17 47 04.0	+0.3
BRY				iSn	Sn	17 47 56.7	-0.6
VTS	Vitosha	4.65	27	⇑P	Pn	17 47 06.8	+2.9
VTS	Vitosha	4.65	27	ePn	Pn	17 47 05.7	+1.7
VTS				eSn	Sn	17 47 57.3	-0.4
VTS	Vitosha	4.65	27	Pn	Pn	17 47 06.0	+2.0
SELS	Selova	4.76	6	ePn	Pn	17 47 06.2	+0.9
SJES	Sjenica	4.78	356	ePn	Pn	17 47 07.5	+1.8
IDI	Anoyia	4.80	130	Pn	Pn	17 47 06.7	+0.8
	comp=N,0.3nm,0.3s,baz=352,slow=16,SNR=1.8						
IDI				Sn	Sn	17 47 58.8	-2.4
	comp=N,4.1nm,0.3s,baz=331,slow=20,SNR=6.6						
IDI				LR	LR	17 48 55.4	
	comp=N,62nm,20.4s,baz=298,slow=38						
STON	Ston	4.84	336	ePn	Pn	17 47 06.8	+0.4
STON	Ston	4.84	336	ePn	Pn	17 47 06.4	0.0
STON	Ston	4.84	336	ePn	Pn	17 47 06.3	0.0
SGRT	San Giovanni R	4.85	314	Pn	Pn	17 47 07.6	+1.1
UPM	Unac-Piva	4.85	347	ePn	Pn	17 47 07.9	+1.2
UPM	Unac-Piva	4.85	347	⇓iPn	Pn	17 47 07.8	+1.1
UPM				iSn	Sn	17 48 01.7	-0.9
VAE	Valguarnera	4.85	260	Pn	Pn	17 47 05.8	-0.8
	comp=N,1.0nm,0.3s,baz=237,slow=20,SNR=1.8						
VAE				Sn	Sn	17 48 03.1	+0.7
	comp=N,0.7nm,0.3s,baz=209,slow=12,SNR=1.5						
RAFF	Raffo Rosso	4.96	257		Pn	17 47 08.7	+0.7
ALN	Alexandroupoli	4.96	59	Pn	Pn	17 47 07.7	-0.4
LSTV	Lastovo	5.05	329	ePn	Pn	17 47 09.3	0.0
PAOL	Paolisi	5.18	301	Pn	Pn	17 47 09.4	-1.6
RUDO	Rudo	5.19	352	ePn	Pn	17 47 11.4	+0.2
BOVS	Bovan	5.24	10	ePn	Pn	17 47 13.0	+1.2
GRUS	Gruza	5.40	2	ePn	Pn	17 47 16.2	+2.1
BLKB	Belogradchik	5.41	18	⇓P	Pn	17 47 18.2	+3.9
BBLS	Lazići	5.43	352	ePn	Pn	17 47 15.8	+1.2
BBLS	Lazići	5.43	352	ePn	Pn	17 47 15.2	+0.6
MAKA	Makarska	5.44	333	ePn	Pn	17 47 15.3	+0.7
HVAR	Hvar	5.57	329	ePn	Pn	17 47 16.5	+0.1
RICI	Ricice	5.59	335	ePn	Pn	17 47 17.0	+0.3
DIVS	Divibare	5.62	357	ePn	Pn	17 47 18.0	+0.9
DIVS	Divibare	5.62	357	ePn	Pn	17 47 17.6	+0.5
DIVS	Divibare	5.62	357	Pn	Pn	17 47 16.0	-1.1
CORL	Corleone	5.63	266		Pn	17 47 21.4	+4.1
CLTB	Caltabellotta	5.76	263		Pn	17 47 23.2	+4.1
KIJV	Kijevo	6.29	333	ePn	Pn	17 47 27.1	+0.8
ZIRJ	Zirje	6.30	327	ePn	Pn	17 47 26.6	+0.3
ZIRJ				Sn	Sn	17 48 35.3	-2.7
MDVR	Moldovita	6.37	8	⇑P	Pn	17 47 31.2	+3.8
MGRS	Mrkonjic Grad	6.43	338	ePn	Pn	17 47 29.5	+1.2
MORI	Morici	6.44	328	ePn	Pn	17 47 29.5	+1.1
HERR	Herculane	6.56	13	⇑P	Pn	17 47 33.3	+3.3
AQU	L'Aquila	6.60	308	Pn	Pn	17 47 30.3	-0.4
FRGS	Fruska Gora	6.68	356	ePn	Pn	17 47 32.2	+0.5
FRGS	Fruska Gora	6.68	356	ePn	Pn	17 47 30.7	-1.0
BLY	Banja Luka	6.71	340	ePn	Pn	17 47 31.9	-0.2
BLY	Banja Luka	6.71	340	ePn	Pn	17 47 30.2	-1.9
DUGI	Dugi Otok	6.82	325	ePn	Pn	17 47 34.3	+0.7
UDBI	Udbina	6.97	331	ePn	Pn	17 47 37.2	+1.5
MRAK	Mrakovica	7.03	339	ePn	Pn	17 47 36.7	+0.2
NRCA	Norcia	7.05	310		Pn	17 47 37.8	+1.0
GZR	Gura Zlata	7.12	14	⇓P	Pn	17 47 41.6	+3.8
NVLJ	Novalja	7.36	327	ePn	Pn	17 47 41.5	+0.5
RABC	Rab	7.55	328	ePn	Pn	17 47 43.9	+0.3
MURB	Monte Urbino	7.65	311	Pn	Pn	17 47 45.7	+0.7
VOIR		7.75	25	⇑P	Pn	17 47 49.5	+3.1
MORH	Mrgy, Hungar	7.83	351	ePN	Pn	17 47 46.7	-0.7
MORH				eSN	Sn	17 49 10.2	-5.6
MORH	Mrgy, Hungar	7.83	351	ePn	Pn	17 47 46.8	-0.7
MLR	Muntele Rosu	8.12	29	⇓P	Pn	17 47 55.8	+4.3
MLR	Muntele Rosu	8.12	29	Pn	Pn	17 47 51.9	+0.4
	comp=N,0.2nm,0.3s,baz=292,slow=11,SNR=4.1						
MLR				LR	LR	17 52 01.6	
	comp=N,71nm,20.1s,baz=170,slow=46						
MLR	Muntele Rosu	8.12	29	Pn	Pn	17 47 56.1	+4.6
RIY	Rijeka	8.14	329	ePn	Pn	17 47 52.6	+0.9
RIY	Rijeka	8.14	329	ePn	Pn	17 47 52.3	+0.6
CRES	Cresnjev	8.21	335	ePn	Pn	17 47 52.9	+0.3

BISRR	Bisoca	8.47	32	⇑P	Pn	17 48 00.3	+4.1
CEY	Cerknica	8.50	330	*e*Pn	Pn	17 47 57.4	+0.7
PLOR	Plostina	8.69	30	⇑P	Pn	17 48 03.1	+3.8
LJU	Ljubljana	8.72	332	*e*Pn	Pn	17 48 00.3	+0.6
VRI	Vrincioaia	8.73	30	⇑P	Pn	17 48 03.9	+4.0
MPLH	Magyarpolny	8.93	347	*e*PN	Pn	17 48 03.0	+0.5
MPLH	Magyarpolny	8.93	347	*e*P	Pn	17 48 05.4	+2.9
SOKA	Soboth	9.10	336	Pn	Pn	17 48 05.0	+0.1
	comp=N,7.6nm,0.4s,SNR=16						
SOKA				*e*Sn	Sn	17 49 43.6	-3.4
	comp=N,4.6nm,0.6s						
OBKA	Obir	9.11	334	*e*Pn	Pn	17 48 06.4	+1.3
	comp=N,3.8nm,0.3s						
OBKA				*e*Sn	Sn	17 49 44.3	-3.0
	comp=N,11nm,0.8s						
KEST	Kesra	9.26	256	Pn	Pn	17 48 05.5	-1.6
	comp=N,0.3nm,0.3s,baz=315,slow=12,SNR=2.4						
KEST				Sn	Sn	17 49 48.5	-2.6
	comp=N,0.1nm,0.3s,baz=282,slow=17,SNR=2.2						
ARSA	Arzberg	9.47	339	*e*Pn	Pn	17 48 09.3	-0.6
	comp=N,2.3nm,0.3s						
TEOL	Teolo	9.47	319	Pn	Pn	17 48 09.3	-0.6
MYKA	Terra Mystica	9.55	331	*e*Pn	Pn	17 48 12.0	+1.0
	comp=N,2.2nm,0.5s						
STAL	STALIGIAL	9.63	326	Pn	Pn	17 48 10.1	-2.0
ZOU	Zoufplan	9.76	328	Pn	Pn	17 48 13.6	-0.4
CTI	Castel Tesino	9.96	322	Pn	Pn	17 48 16.7	-0.1
CONA	Conrad Observa	10.01	342	*e*Pn	Pn	17 48 20.1	+2.8
	comp=N,1.4nm,0.6s						
ABTA	Abfaltersbach	10.10	327	*e*Pn	Pn	17 48 19.1	+0.4
	comp=N,3.2nm,0.5s						
BRTR	Keskin Array B	10.35	79	Pn	Pn	17 48 23.7	+1.6
	comp=N,0.1nm,0.3s,baz=324,slow=35,SNR=3.4						
BRTR				LR	LR	17 53 28.4	
	comp=N,62nm,19.4s,baz=270,slow=44						
MOA	Molln	10.38	336	Pn	Pn	17 48 22.9	+0.6
	comp=N,4.1nm,0.3s,SNR=8.3						
WTTA	Wattenberg	10.88	327	*e*Pn	Pn	17 48 30.7	+1.4
	comp=N,2.5nm,0.3s						
WATA	Walderalm	10.96	327	*e*Pn	Pn	17 48 31.7	+1.3
	comp=N,7.7nm,0.5s						
SQTA	Sankt Quirin	11.03	325	*e*Pn	Pn	17 48 33.4	+2.0
	comp=N,4.2nm,0.5s						
FETA	Feichten	11.11	323	*e*Pn	Pn	17 48 35.4	+3.0
	comp=N,1.9nm,0.5s						
FETA				*e*Sn	Sn	17 50 37.7	+1.4
	comp=N,1.7nm,0.5s						
VRAC	Vranov	11.16	347	LR	LR	17 53 14.6	
	comp=N,45nm,19.6s,baz=177,slow=40						
MOTA	Moosalm	11.17	325	*e*Pn	Pn	17 48 35.5	+2.1
	comp=N,4.1nm,0.4s						
DAVOX	Davos/Dischmat	11.35	320	Pn	Pn	17 48 36.1	+0.3
	comp=N,0.5nm,0.3s,baz=325,slow=19,SNR=3.6						
DAVOX				Sn	Sn	17 50 38.7	-3.6
	comp=N,0.2nm,0.3s,baz=130,slow=17,SNR=2.5						
GERES	GERESS Array B	11.44	337	Pn	Pn	17 48 36.4	-0.5
	comp=N,0.5nm,0.3s,baz=155,slow=14,SNR=11						
GERES				LR	LR	17 53 35.6	
	comp=N,36nm,20.7s,baz=232,slow=41						
GERES	GERESS Array B	11.44	337	Pn	Pn	17 48 36.5	-0.4
KHC	Kasperske Hory	11.73	337	*e*PN	Pn	17 48 40.9	+0.1
SENIN	Lac Senin/Sane	12.47	313	Pn	Pn	17 48 53.5	+2.3
MMAI	Mount Meron Ar	13.33	110	Sn	Sn	17 51 25.9	-4.9
	comp=N,0.8nm,0.3s,baz=146,slow=33,SNR=2.2						
AKASG	Malin Array Be	13.72	24	Pn	Pn	17 49 06.7	-1.2
	comp=N,0.3nm,0.3s,baz=213,slow=11,SNR=2.0						
CLL	Collm	13.85	340	*e*(PP)		17 49 17.0	
EIL	Elat	14.90	122	Sn	Sn	17 51 56.3	-13
	comp=N,0.6nm,0.3s,baz=151,slow=2.5,SNR=7.2						
ESDC	Sonseca Array	18.96	281	P	P	17 50 15.1	+0.4
	comp=N,0.1nm,0.3s,baz=77,slow=12,SNR=3.7						
OBN	Obninsk	19.89	28	LR	LR	17 58 00.8	
	comp=N,19nm,18.0s,baz=180,slow=37						
MDT	Midelt	21.08	262	LR	LR	17 58 21.2	
	comp=N,15nm,21.6s,baz=18,slow=36						
HFS	Hagfors	22.08	351	P	P	17 50 48.5	+0.1
	comp=N,3.7nm,0.8s,baz=167,slow=9.1,SNR=7.5						
HFS				LR	LR	17 59 59.1	
	comp=N,41nm,18.7s,baz=196,slow=38						
EKA	Eskdalemuir Ar	23.13	324	P	P	17 50 59.1	-0.3
	comp=N,1.2nm,0.6s,baz=126,slow=7.3,SNR=5.7						
FINES	FINESS Array B	23.25	7	P	P	17 50 59.9	-0.7
	comp=N,6.3nm,0.9s,baz=175,slow=10,SNR=4.8						
FINES	FINESS Array B	23.25	7	P	P	17 51 01.4	+0.8
NC405	NORSAR Array S	23.30	349	P	P	17 51 01.7	+0.7
NB2	NORSAR Subarra	23.30	349	P	P	17 51 03.1	+1.9
	comp=Z,0.9nm,0.7s,baz=162,slow=11						
NOA	NORSAR Array B	23.30	349	P	P	17 50 59.9	-1.3
	comp=Z,1.0nm,0.7s,baz=164,slow=11,SNR=3.5						
NOA				LR	LR	18 01 46.3	
	comp=Z,32nm,18.8s,baz=5.0,slow=41						
BELG	Belogornoye	23.44	45	P	P	17 51 01.2	-1.3
	comp=Z,2.4nm,0.5s,baz=346,slow=3.5,SNR=1.6						
KIRV	Kirov	27.44	33	LR	LR	18 02 24.6	
	comp=Z,50nm,19.0s,baz=336,slow=36						
TORD	Torodi Ar. Bea	30.22	218	P	P	17 52 06.3	+2.1
	comp=Z,0.9nm,0.7s,baz=28,slow=9.0,SNR=6.0						
TORD	Torodi Ar. Bea	30.22	218	IAmb	IAmb	17 52 26.3	
	comp=Z,0.8nm,1.1s						
ARCES	ARCESS Array B	31.23	3	P	P	17 52 13.0	+0.4
	comp=Z,1.5nm,0.9s,baz=165,slow=5.0,SNR=3.5						
ARCES				LR	LR	18 07 37.1	
	comp=Z,33nm,18.4s,baz=295,slow=42						
KKAR	Karatay Array	37.75	67	P	P	17 53 08.8	-0.5
KMBO	Kilima Mbogo	42.36	155	LR	LR	18 15 11.0	
	comp=Z,24nm,18.3s,baz=94,slow=41						
MK31	Makanchi Array	45.21	59	P	P	17 54 09.4	-1.0
MK31				IAmb	IAmb	17 54 35.5	
	comp=Z,4.6nm,1.2s						
MKAR	Makanchi Array	45.21	59	P	P	17 54 10.5	0.0
	comp=Z,0.5nm,0.4s,baz=278,slow=7.6,SNR=20						
MKAR	Makanchi Array	45.21	59	P	P	17 54 09.8	-0.6
ZAA0	Zalesovo Array	45.55	48	P	P	17 54 12.9	0.0
ZALV	Zalesovo Beam	45.55	48	P	P	17 54 13.2	+0.2
	comp=Z,2.1nm,0.5s,baz=279,slow=8.5,SNR=7.5						
ZALV	Zalesovo Beam	45.55	48	P	P	17 54 12.6	-0.3
HHC	Hu-ho-hao-te	66.93	56	*e*P	P	17 56 47.3	+1.3
HHC				pmax	pmax		
	comp=Z,12nm,0.8s						
HHC				pmax	pmax		
	comp=Z,160nm,7.6s						
ASAR	Alice Springs	122.29	96	PKP	PKiKP	18 04 49.3	+0.4
	comp=Z,0.3nm,0.8s,baz=295,slow=1.5,SNR=4.8						

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*MAN **19** 17:47:27.7, 13°.80N×120°.63E, h202^{km}, mb4.7, ML3.6, MS3.5*
*IDC **19** 17:47:32.8±15.0, 13°.71N×120°.65E, h284^{km}±183^{km}, mb3.3/8, mb1 3.4/8, mb1mx3.1/50, mbtmp3.9/8, Error ellipse: s-maj=34.5km s-min=11.8km az=66.0*
ISC 19 17:47:28.0±0.8, **13°.7N**±0°.1×**120°.8E**±0°.2, **h250**^{km}, **n11**, σ**3^{s}.60**/11, **mb3.6**/8, **1C-1D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PGP	Puerto Galera	0.21	148	⇑*e*P	Pn	17 47 55.9	-4.5
PGP				*i* S	S	17 48 18.1	-7.7
LUBP	Lubang	0.58	275	⇓*e*P	Pn	17 48 09.8	+8.7
CMAR	Chiang Mai Arr	21.56	286	P	P	17 51 58.5	+0.4
	1.1nm,0.5s,baz=94,slow=7.7,SNR=9.9						
BATI	Baumata	23.90	173	P	P	17 52 21.9	+2.5
	12nm,0.8s,baz=177,slow=4.4,SNR=4.1						
WRA	Warramunga Arr	35.96	158	P	P	17 54 07.3	+2.0
	0.9nm,0.4s,baz=341,slow=8.8,SNR=34						
SONM	Songino Array	36.11	343	P	P	17 54 07.2	+0.8
	0.6nm,0.5s,baz=164,slow=9.2,SNR=4.6						
KLR	Kul'dur	36.57	12	P	P	17 54 12.1	+2.0
	1.4nm,0.6s,baz=235,slow=9.0,SNR=5.8						
ASAR	Alice Springs	39.26	161	P	P	17 54 35.6	+2.8
	1.4nm,0.4s,baz=336,slow=7.1,SNR=64						
WMQ	Urumqi	41.30	323	*e*P	P	17 54 48.9	-0.4
MKAR	Makanchi Array	46.12	324	P	P	17 55 28.3	+0.8
	0.2nm,0.5s,baz=112,slow=9.8,SNR=2.2						
ZALV	Zalesovo Beam	49.13	333	P	P	17 55 50.6	+0.2
	0.4nm,0.3s,baz=108,slow=7.2,SNR=2.8						

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*KRNET **19** 17:50:00.3±0.1, 40°.38N×73°.22E, h17^{km}, mb2.8*
*SOME **19** 17:50:01.6, 40°.57N×73°.18E, h0^{km}*
*NNC **19** 17:50:05.7±3.8, 40°.45N×73°.46E, h0^{km}, mb3.2, mpv2.8, Error ellipse: s-maj=29.5km s-min=16.5km az=169.0*
ISC 19 17:50:00.4±0.8, **40°.41N**±0°.03×**73°.20E**±0°.03, **h10**^{km}, **n31**, σ**1^{s}.87**/54, **21C-8D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	Osh	0.34	291	⇑*i*P	Pg	17 50 07.3	+0.1
	baz=93						
OHH				⇑*i*S	Sg	17 50 12.5	+0.7
	baz=93						
SFK	Sufi-Kurgan	0.46	149	⇓*e*P	Pg	17 50 08.4	-1.0
	baz=49						
SFK				⇓*e*S	Sg	17 50 14.5	-0.9
	baz=49						
SALK	Salom-Alik	0.67	45	⇑*e*P	Pg	17 50 13.5	+0.1
	baz=43						
SALK				⇑*e*S	Sg	17 50 22.9	+0.7
	baz=43						
DRK	Karamyk	1.42	230	⇑*i*P	Pb	17 50 26.7	-0.5
	baz=31						
DRK				⇑*i*S	Sg	17 50 45.8	-0.3
	baz=31						
AML	Almayashu	1.76	12	⇑*i*P	Pb	17 50 33.3	+0.2
	baz=12						
AML				⇑*i*S	Sb	17 50 56.6	+1.1
	baz=12						
BTK	Batken	1.86	260	⇑*i*P	Pb	17 50 34.2	-0.3
	baz=61						
BTK				⇑*i*S	Sb	17 50 58.7	+0.9
	baz=61						
TRKS	Terek-Say	1.92	306	⇑*i*P	Pn	17 50 34.6	+1.2
	baz=6.0						
TRKS				⇑*i*S	Sb	17 51 00.1	+0.3
	baz=6.0						
UCH	Uchtor	2.07	28	⇓*i*P	Pb	17 50 37.5	-0.9
	baz=28						
UCH				⇓*i*S	Sb	17 51 04.6	+0.2
	baz=28						
MNAS	Manas	2.15	346	⇓*e*P	Pb	17 50 38.4	-1.1
	baz=46						
MNAS				⇓*i*S	Sb	17 51 05.9	-0.3
	baz=46						
EKS2	Erkin-Say	2.29	11	⇑*e*P	Pb	17 50 41.0	-1.0
	baz=10.0						
EKS2				⇑*i*S	Sb	17 51 09.8	-0.7
	baz=10.0						
MRKS	Merke	2.34	0	*e*P	Pb	17 50 43.8	+1.1
	3.7nm,0.3s						
MRKS				*e*S	Sg	17 51 15.2	-0.4
	14nm,0.3s						
MRKS	Merke	2.34	0	Pg	Pb	17 50 43.8	+1.1
	3.7nm,0.3s						
MRKS				Lg	Lg	17 51 15.2	
	14nm,0.3s						
AAK	Ala-Archa	2.43	23	Pn	Pb	17 50 45.3	+0.9
	3.1nm,0.5s						
AAK				⇑Sn	Sg	17 51 17.2	-1.4
	2.6nm,0.3s						
AAK	Ala-Archa	2.43	23	⇑*e*P	Pb	17 50 42.9	-1.5
	baz=23						
AAK				⇑*i*S	Sb	17 51 13.5	-1.0
	baz=23						
GAR	Garm	2.63	239	⇑*i*P	Pn	17 50 45.0	+1.9
	baz=39						
GAR				⇑*i*S	Sb	17 51 17.6	-2.5
	baz=39						
TKM2	Tokmak 2	3.09	35	⇑Pn	Pb	17 50 56.7	+1.1
	0.7nm,0.4s						
TKM2				⇓Sn	Sb	17 51 35.3	+1.9
	3.4nm,0.6s						
KST	Kastek	3.35	37	*e*P	Pg	17 51 02.8	-1.8
	1.5nm,0.4s						
KST				*e*S	Sg	17 51 47.8	-0.2
	4.8nm,0.5s						
KST	Kastek	3.35	37	Pg	Pg	17 51 02.8	-1.8
	1.5nm,0.4s						
KST				Lg	Lg	17 51 47.8	
	4.8nm,0.5s						
KK07	Karatay Array	3.36	324	⇑Pn	Pb	17 51 02.0	+2.0
	1.1nm,0.6s,baz=139,slow=16						
KK07				⇓Sn	Sg	17 51 45.3	-2.9
	3.0nm,0.6s,baz=141,slow=30						
DGS	Degeres	3.42	33	*e*P	Pb	17 51 03.6	+2.4
	0.7nm,0.3s						
DGS				*e*S	Sg	17 51 48.9	-1.5
	4.2nm,0.5s						
DGS	Degeres	3.42	33	Pg	Pb	17 51 03.6	+2.4
	0.7nm,0.3s						
DGS				Lg	Lg	17 51 48.9	
	4.2nm,0.5s						
TNSS	Tian-Shan	3.84	46	*e*P	Pb	17 51 11.2	+2.6
	0.6nm,0.2s						
TNSS				*e*S	Sg	17 52 01.8	-2.1
	3.1nm,0.5s						
TNSS	Tian-Shan	3.84	46	Pg	Pb	17 51 11.2	+2.6
	0.6nm,0.2s						
TNSS				Lg	Lg	17 52 01.8	
	3.1nm,0.5s						
MDOK	Medeo	3.98	45	*e*P	Pb	17 51 13.7	+2.9
	1.0nm,0.3s						
MDOK				*e*S	Sg	17 52 05.9	-2.5
	4.2nm,0.8s						
MDOK	Medeo	3.98	45	Pg	Pb	17 51 13.7	+2.9
	1.0nm,0.3s						
MDOK				Lg	Lg	17 52 05.9	
	4.2nm,0.8s						
KOTS	Kotyrbulak	4.07	45	*e*P	Pg	17 51 15.8	-2.5
	1.2nm,0.2s						
KOTS				*e*S	Sg	17 52 09.6	-1.4
	6.5nm,1.1s						
KOTS	Kotyrbulak	4.07	45	Pg	Pg	17 51 15.8	-2.5
	1.2nm,0.2s						
KOTS				Lg	Lg	17 52 09.6	
	6.5nm,1.1s						
KUU	Kurty	4.19	33	*e*P	Pb	17 51 16.8	+2.5
	0.5nm,0.1s						
KUU				*e*S	Sg	17 52 11.8	-3.3
	3.3nm,0.7s						
KUU	Kurty	4.19	33	Pg	Pb	17 51 16.8	+2.5
	0.5nm,0.1s						
KUU				Lg	Lg	17 52 11.7	
	3.3nm,0.7s						
BTLS	Baital	4.67	7	*e*P	Pb	17 51 25.9	+3.4
	0.7nm,0.4s						
BTLS				*e*S	Sg	17 52 27.3	-3.2
	2.4nm,1.0s						
BTLS	Baital	4.67	7	Pg	Pb	17 51 25.9	+3.4
	0.7nm,0.4s						
BTLS				Lg	Lg	17 52 27.3	
	2.4nm,1.0s						

IDC 19 17:51:27.9±1.7, **0°.94N**×**127°.44E, h0**^{km}**, mb3.6**/3, **mb1 3.8**/4, **mb1mx3.4**/36, **mbtmp3.5**/4, **ML2.6**/1, **Error ellipse: s-maj=65.2km s-min=27.3km az=59.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.23	115	Pn	Pn	17 52 33.1	-0.6
	0.3nm,0.3s,baz=164,slow=23,SNR=2.4						
WRA	Warramunga Arr	21.82	162	P	P	17 56 22.4	+0.4
	1.8nm,0.6s,baz=340,slow=11,SNR=7.7						
ASAR	Alice Springs	25.25	166	P	P	17 56 55.8	-0.1
	0.7nm,0.5s,baz=350,slow=8.4,SNR=9.2						
MKAR	Makanchi Array	60.24	326	P	P	18 01 38.1	0.0
	0.4nm,0.8s,baz=126,slow=7.5,SNR=1.7						

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*IDC **19** 18:14:18.2±1.0, 9°.07S×158°.40E, h0^{km}, mb3.8/6, mb1 4.0/6, mb1mx3.7/42, mbtmp3.8/6, MS3.0/1, Ms1 3.0/1, ms1mx2.5/38, Error ellipse: s-maj=29.4km s-min=19.0km az=174.0*
ISC 19 18:14:22.5±0.9, **9°.1S**±0°.2×**158°.43E**±0°.09, **h29**^{km}, **n8**, σ**0^{s}.45**/8, **mb3.7**/6, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.52	102	Pn	Pn	18 14 47.5	-0.3
	397nm,0.3s,baz=254,slow=6.5,SNR=72						
HNR				Sn	Sb	18 15 09.5	+0.4
	227nm,0.3s,baz=343,slow=18,SNR=6.7						
PMG	Port Moresby	11.13	268	LR	LR	18 20 40.5	
	comp=Z,81nm,21.2s,baz=72,slow=34						
WRA	Warramunga Arr	25.65	243	P	P	18 19 49.9	-0.1
	1.8nm,0.9s,baz=69,slow=9.1,SNR=9.2						
STKA	Stephens Creek	27.52	212	P	P	18 20 07.1	+0.4
	1.9nm,0.4s,baz=37,slow=14,SNR=4.1						
ASAR	Alice Springs	27.55	235	P	P	18 20 06.7	-0.6
	0.8nm,0.8s,baz=69,slow=9.8,SNR=7.4						
SONM	Songino Array	72.97	326	P	P	18 25 49.8	+0.3
	0.5nm,0.7s,baz=137,slow=7.3,SNR=2.6						
ILAR	Eielson Array	84.12	21	P	P	18 26 50.1	-0.4
	0.8nm,0.9s,baz=243,slow=5.9,SNR=3.4						
MKAR	Makanchi Array	87.25	318	P	P	18 27 06.7	+0.3
	0.5nm,0.9s,baz=109,slow=5.2,SNR=1.8						

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*BJI **19** 18:15:31.3±0.0, 24°.41S×175°.54W, h10^{km}, mB5.6/20, mb5.2/38, Ms4.8/5, Ms7 4.6/4*
*IDC **19** 18:15:31.6±0.4, 24°.56S×176°.01W, h0^{km}, mb4.8/22, mb1 4.9/23, mb1mx4.8/42, mbtmp4.7/23, ML3.9/1, MS4.2/18, Ms1 4.2/18, ms1mx4.0/33, Error ellipse: s-maj=17.1km s-min=14.3km az=121.0*
*NEIC **19** 18:15:34.2±1.5, 24°.57S±0°.09×175°.9W±0°.1, h10^{km}±1^{km}, mb5.1/124, Error ellipse: s-maj=22.8km s-min=12.9km az=109.0*
*GCMT **19** 18:15:36.2±0.3, 24°.66S±0°.03×175°.42W±0°.02, h22^{km}, MW5.0/92, Moment Tensor Solution. s46,c53; s92,c119; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.44±.16; M$_{\theta\theta}$-0.70±.12; M$_{\phi\phi}$-2.73±.11; M$_{r\theta}$0.62±.22; M$_{\theta\phi}$-0.79±.07; M$_{\phi r}$1.26±.16; Best double couple: M$_0$3.51200×10^{16} NP1:ϕ_s197.00000°,δ33.00000°,λ86.00000°. NP2: ϕ_s22.00000°,δ57.00000°,λ93.00000°. Principal axes: T 3.7350, Plg78.0000°, Azm300.0000°; N -0.4400, Plg2.0000°, Azm200.0000°; P -3.2900, Plg12.0000°, Azm110.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 19 18:15:33.3±0.3, **24°.69S**±0°.06×**175°.93W**±0°.08, **h10**^{km}, **n328**, σ**1^{s}.17**/335, **mb5.1**/89, **MS4.2**/19, **7C-5D, South of Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	4.88	201	Sn	Sn	18 17 47.1	+3.8
	46nm,0.3s,baz=95,slow=22,SNR=2.1						
RAO	Raoul Island	4.88	201	Pn	Pn	18 16 45.4	-1.4
RAO				Sn	Sn	18 17 45.3	+2.0
NIUE	Niue	7.89	46		Pn	18 17 19.9	-8.3
NIUE					Sn	18 18 34.0	-24
MSVF	Nonsavu	8.91	320	Pn	Pn	18 17 43.8	+1.6
	4.2nm,0.3s,baz=146,slow=12,SNR=28						
MSVF				LR	LR	18 20 51.3	
	comp=Z,4μm,18.7s,baz=117,slow=36						
MSVF	Nonsavu	8.91	320		Pn	18 17 45.3	+3.1
AFI	Afiamalu	11.41	21	Pn	Pn	18 18 09.8	-6.7
	8.9nm,0.3s,baz=296,slow=4.4,SNR=8.5						
AFI				Sn	Sn	18 20 05.2	-19
	4.3nm,0.3s,baz=44,slow=22,SNR=1.4						
URZ	Urewera	14.77	202	Pn	Pn	18 19 03.3	+1.1
	0.5nm,0.3s,baz=300,slow=23,SNR=1.8						
URZ				Sn	Sn	18 21 36.4	-9.5
	0.7nm,0.3s,baz=117,slow=23,SNR=2.0						
URZ	Urewera	14.77	202	Pn	Pn	18 19 01.9	-0.4
RAR	Rarotonga	15.28	80	Pn	Pn	18 19 01.1	-8.1
	11nm,0.3s,baz=240,slow=7.2,SNR=33						
RAR				Sn	Sn	18 21 33.6	-25
	2.3nm,0.3s,baz=64,slow=22,SNR=1.8						
RAR				LR	LR	18 24 32.6	
	comp=Z,526nm,18.1s,baz=265,slow=35						
RAR	Rarotonga	15.28	80	Pn	Pn	18 19 00.5	-8.7
RAR				IAmb	IAmb	18 19 05.9	
	comp=Z,112nm,0.8s						
ONTNC	Ouen Toro	16.33	275	P	P	18 19 25.9	+0.2
DZM	Mont Dzumac	16.39	276	Pn	P	18 19 28.3	+1.8
	comp=Z,0.2nm,0.3s,baz=114,slow=15,SNR=6.7						
DZM				LR	LR	18 24 34.7	
	comp=Z,880nm,20.8s,baz=96,slow=33						
DZM	Mont Dzumac	16.39	276	*e*Pn	P	18 19 31.0	+4.5
	comp=Z,183nm,1.4s						
DZM				*e*LQ	LQ	18 22 37.9	
	comp=Z,1μm,27.6s						
DZM				*e*LR	LR	18 23 24.7	
	comp=Z,1μm,23.6s						
DZM	Mont Dzumac	16.39	276	P	Pn	18 19 19.1	-4.6
SANVU	Saraoutou	18.30	297	P	Pn	18 19 46.9	-0.5
SANVU				IAmb	IAmb	18 20 06.6	
	comp=Z,217nm,1.4s						
BHW	Baring Head	18.35	202	P	P	18 19 45.7	-2.2
TUWZ	Tuamarina	18.70	204	P	P	18 19 46.3	-5.6
THZ	Tophouse	19.39	206	P	P	18 19 55.6	-3.9
TBI	Tubuai	24.21	92	*e*S	S	18 24 55.7	-13
	comp=Z,156nm,23.8s						
TBI				*e*LQ	LQ	18 25 33.3	
	comp=Z,732nm,26.0s						
TBI				*e*LR	LR	18 26 32.0	
	comp=Z,659nm,30.8s						
TBI	Tubuai	24.21	92	*e*T	T	18 45 23.8	
	comp=Z,7.9nm,0.4s						
PAE	Paea	25.52	79	*e*T	T	18 46 52.0	
	comp=Z,2.5nm,0.3s						
PPT2	Papeete2	25.55	79	*e*S	S	18 25 16.9	-14
	comp=Z,186nm,28.5s						
PPT2				*e*LQ	LQ	18 26 03.3	
	comp=Z,1μm,23.0s						
PPT2				*e*LR	LR	18 27 09.2	
	comp=Z,711nm,25.5s,baz=249						
PPT	Papeete	25.56	79	LR	LR	18 29 45.5	
	comp=Z,341nm,18.5s,baz=253,slow=33						
EIDS	Eidsvold	29.86	262	P	P	18 21 41.9	+0.9
CTAO	Charters Tower	35.19	270	P	P	18 22 27.9	+0.1
TOO	Toolangi	35.19	239	P	P	18 22 28.3	+0.6
STKA	Stephens Creek	37.90	249	P	P	18 22 50.6	-0.2
	comp=Z,1.5nm,0.5s,baz=87,slow=14,SNR=4.9						
STKA				LR	LR	18 37 39.4	
	comp=Z,1μm,18.0s,baz=76,slow=35						
PMG	Port Moresby	38.27	287	P	P	18 22 51.4	-2.7
	comp=Z,16nm,1.0s,baz=142,slow=8.6,SNR=2.9						
AS31	Alice Springs	45.57	260	P	P	18 23 53.1	-0.7
ASAR	Alice Springs	45.57	260	P	P	18 23 52.7	-1.1
	comp=Z,4.8nm,0.9s,baz=96,slow=8.0,SNR=29						
ASAR				PcP	PcP	18 25 32.5	+0.1
	comp=Z,1.2nm,0.8s,baz=112,slow=4.1,SNR=4.6						
ASAR				LR	LR	18 42 56.3	
	comp=Z,766nm,18.2s,baz=117,slow=36						
WR0	Warramunga Arr	45.87	266	P	P	18 23 54.1	-2.0
WB2	Warramunga Arr	46.04	266	P	P	18 23 56.3	-1.2
WRAB	Tennant Creek	46.04	266	P	P	18 23 56.1	-1.4
WB0	Warramunga Arr	46.05	266	P	P	18 23 56.0	-1.6
WRA	Warramunga Arr	46.05	266	P	P	18 23 56.3	-1.3
	comp=Z,6.6nm,0.9s,baz=104,slow=7.7,SNR=22						
WRA				PcP	PcP	18 25 33.5	-0.5
	comp=Z,6.2nm,1.1s,baz=100,slow=4.3,SNR=5.0						
WRA				LR	LR	18 42 30.0	
	comp=Z,744nm,19.1s,baz=105,slow=35						
WRA	Warramunga Arr	46.05	266	P	P	18 23 56.0	-1.7
KNRA	Kununurra	52.39	269		P	18 24 46.0	-0.1
VNDA	Vanda	53.94	186	P	P	18 24 56.7	0.0
	comp=Z,7.8nm,1.1s,baz=9.5,slow=7.9,SNR=21						
VNDA				LR	LR	18 43 48.8	
	comp=Z,128nm,21.6s,baz=18,slow=31						
VNDA	Vanda	53.94	186	P	P	18 24 59.0	+2.3
FITZ	Fitzroy Crossi	54.46	265	P	P	18 25 00.7	-0.7
	comp=Z,7.7nm,1.0s						
SIJI	Sorong	56.21	287	P	P	18 25 11.5	-2.5
	comp=Z,11nm,0.6s,baz=151,slow=2.5,SNR=13						
SWI	Sorong	56.22	287	P	P	18 25 11.9	-2.1
	comp=Z,19nm,1.0s						
QSPA	South Pole Qui	65.40	180	P	P	18 26 16.8	+0.8
	comp=Z,21nm,1.0s,baz=33,slow=2.1,SNR=29						
QSPA	South Pole Qui	65.40	180	P	P	18 26 17.5	+1.5
MJAR	Matsushiro Arr	74.69	323	LR	LR	18 55 01.1	
	comp=Z,99nm,21.9s,baz=145,slow=32						
MAW	Mawson	78.28	200	P	P	18 27 34.9	+1.8
	comp=Z,6.0nm,0.7s,baz=125,slow=3.4,SNR=15						
MAW				LR	LR	19 03 14.4	
	comp=Z,192nm,18.0s,baz=71,slow=36						
MAW	Mawson	78.28	200	P	P	18 27 34.9	+1.8
MWC	Mount Wilson	80.31	45	P	P	18 27 44.9	-0.1
YSS	Yuzh-Sakhalins	80.48	333	P	P	18 27 46.0	+0.8
MONP2	Monument Peak	80.57	47	P	P	18 27 47.3	+1.0
	baz=232,SNR=6.0						
RMX	La Rumorosa	80.63	48	P	P	18 27 46.8	+0.2
IKP	In-Ko-Pah, Jac	80.63	48	P	P	18 27 47.1	+0.6
	baz=233,SNR=5.8						
EDW2	Edwards Air Fo	80.76	45	P	P	18 27 47.6	+0.4
	baz=231,SNR=9.9						
PETK	Petropavlovsk-	80.80	344	P	P	18 27 46.6	-0.2
	comp=Z,22nm,1.0s,baz=152,slow=6.7,SNR=12						
PETK	Petropavlovsk-	80.80	344	P	P	18 27 48.0	+1.2
KMRM	Mail Ridge	80.82	38	P	P	18 27 49.0	+1.6
KMRM				IAmb	IAmb	18 27 49.8	
	comp=Z,29nm,0.9s						
ISA	Isabella, Lake	80.94	44	P	P	18 27 48.8	+0.6
	baz=231						
ISA	Isabella, Lake	80.94	44	P	P	18 27 48.3	+0.2

ISA				IAmb	IAmb	18 27 50.2	
	comp=Z,23nm,1.1s						
PFO	Pinyon Flats O	80.98	47	P	P	18 27 48.5	0.0
	baz=232,SNR=5.8						
PFO	Pinyon Flats O	80.98	47	P	P	18 27 48.0	-0.5
KSRS	Korea Array	81.27	318	P	P	18 27 50.3	+0.6
	comp=Z,14nm,1.1s,baz=140,slow=5.1,SNR=26						
KSRS				LR	LR	19 02 56.3	
	comp=Z,93nm,18.1s,baz=124,slow=35						
CMB	Columbia Colle	81.28	41	P	P	18 27 49.9	0.0
CMB				IAmb	IAmb	18 27 51.6	
	comp=Z,15nm,1.0s						
KSAR	Wonju Array Be	81.29	318	P	P	18 27 50.8	+1.0
KSAR	Wonju Array Be	81.29	318	P	P	18 27 50.8	+1.0
O02D	Mt. Diablo Mer	81.31	38	P	P	18 27 51.0	+1.0
	baz=227						
LRMC	Laurel Mtn Rad	81.33	45	P	P	18 27 50.7	+0.4
	baz=231						
BELC	Belle Mtn. Jos	81.52	47	P	P	18 27 51.8	+0.4
	baz=233,SNR=5.6						
ORV	Oroville	81.63	39	P	P	18 27 51.4	-0.2
CWC	Cottonwood Cre	81.68	44	P	P	18 27 52.8	+0.6
	baz=231						
WDC	Whiskeytown Da	81.72	38	P	P	18 27 52.3	+0.3
GSC	Goldstone, Bar	81.79	45	P	P	18 27 52.9	+0.3
	baz=232,SNR=7.2						
GSC	Goldstone, Bar	81.79	45	P	P	18 27 52.1	-0.6
GSC				IAmb	IAmb	18 27 54.0	
	comp=Z,13nm,1.0s						
HEC	Hector,Ludlow	81.80	46	P	P	18 27 53.4	+0.7
	baz=232						
MDPB	Devils Postpil	81.82	42	P	P	18 27 53.2	+0.2
MDPB				IAmb	IAmb	18 27 54.9	
	comp=Z,18nm,1.0s						
MPMC	Manual Prospec	81.82	44	P	P	18 27 53.3	+0.4
	baz=231,SNR=10						
N02D	Trinity Center	81.89	38	P	P	18 27 54.5	+1.4
	baz=227						
O03E	Paynes Creek	81.94	39	P	P	18 27 54.5	+1.1
	baz=228						
TIN	Tinemaha, Big	81.97	43	P	P	18 27 54.6	+1.0
	baz=231						
M02C	Callahan	82.09	37	P	P	18 27 55.0	+0.9
	baz=227						
QSM	Queen of Sheba	82.15	45	P	P	18 27 54.4	0.0
QSM				IAmb	IAmb	18 27 55.7	
	comp=Z,15nm,1.1s						
IRM	Iron Mountain	82.18	47	P	P	18 27 55.2	+0.5
	baz=233,SNR=11						
GMRC	Granite Mounta	82.22	46	P	P	18 27 55.7	+0.7
	baz=233,SNR=6.4						
MPK	Martis Peak	82.31	40	P	P	18 27 55.2	-0.3
MPK				IAmb	IAmb	18 27 57.0	
	comp=Z,29nm,1.1s						
YBH	Yreka Blue Hor	82.40	37	P	P	18 27 55.8	+0.1
	comp=Z,5.7nm,0.9s,baz=172,slow=2.1,SNR=4.9						
GWY	Greenwater Val	82.42	45	P	P	18 27 56.1	+0.1
GWY				IAmb	IAmb	18 27 57.7	
	comp=Z,18nm,1.3s						
PNTR	Pine Nut	82.44	41	P	P	18 27 56.6	+0.5
TUQ	Turquoise Moun	82.44	46	P	P	18 27 56.7	+0.6
	baz=232,SNR=7.5						
LCH	Last Change Ra	82.45	43	P	P	18 27 55.8	-0.3
LCH				IAmb	IAmb	18 27 57.4	
	comp=Z,12nm,1.0s						
VCNR	Virginia City	82.54	41	P	P	18 27 57.1	+0.5
VCNR				IAmb	IAmb	18 27 58.6	
	comp=Z,11nm,0.9s						
LHV	Little Huntoon	82.56	42	P	P	18 27 56.7	+0.2
LHV				IAmb	IAmb	18 27 58.8	
	comp=Z,16nm,1.0s						
RYN	Ryan	82.79	42	P	P	18 27 57.6	-0.3
RYN				IAmb	IAmb	18 27 59.3	
	comp=Z,13nm,1.2s						
NVAR	Mina Array Bea	82.80	42	P	P	18 27 57.8	-0.3
	comp=Z,9.0nm,0.8s,baz=222,slow=8.6,SNR=19						
NVAR				LR	LR	19 04 19.9	
	comp=Z,98nm,18.0s,baz=256,slow=35						
NV11	Mina Array Sit	82.89	42	P	P	18 27 58.5	+0.1
NV11				IAmb	IAmb	18 27 59.8	
	comp=Z,16nm,1.1s						
M04C	Macdoel	82.92	38	P	P	18 27 59.3	+0.8
	baz=228						
PDMCI	Parker Dam,Lak	82.94	47	P	P	18 27 59.6	+1.0
	baz=234						
PAHR	Pah Rah Range	82.96	40	P	P	18 27 58.8	0.0
PAHR				IAmb	IAmb	18 28 00.1	
	comp=Z,11nm,1.0s						
SYO	Syowa Base	83.07	192	⇑eP	P	18 27 59.2	+0.5
SYO	Syowa Base	83.07	192	⇑epP	pP	18 28 02.4	+1.2
TPH	Tonopah	83.24	43	P	P	18 27 59.8	-0.5
KVN	Kaiserville	83.31	42	P	P	18 28 00.4	-0.2
KVN				IAmb	IAmb	18 28 01.8	
	comp=Z,10nm,1.0s						
USRK	Ussuriysk Ar.	83.48	325	P	P	18 28 00.8	-0.2
	comp=Z,39nm,1.0s,baz=126,slow=2.4,SNR=26						
USRK	Ussuriysk Ar.	83.48	325	P	P	18 28 01.6	+0.5
USA0B	Ussuriysk Arra	83.48	325	P	P	18 28 01.7	+0.6
Y14A	Wickenburg	83.49	48	P	P	18 28 01.5	0.0
W13A	Hualapai Mount	83.58	47	P	P	18 28 02.3	+0.2
SHPR	Sheep Range	83.58	45	P	P	18 28 02.8	+0.7
SHPR				IAmb	IAmb	18 28 03.8	
	comp=Z,13nm,1.1s						
J04D	Umpqua Nationa	83.75	36	P	P	18 28 04.5	+1.7
	baz=228						
SNAA	Sanae	83.78	178	P	P	18 28 03.2	+0.7
SNAA	Sanae	83.78	178	P	P	18 28 02.7	+0.2
SNAA				IAmb	IAmb	18 28 04.8	
	comp=Z,20nm,1.1s						
VNA3	Neumayer Olymp	83.85	176	P	P	18 28 03.2	+0.4
MOD	Modoc Plateau	83.86	38	P	P	18 28 02.7	-0.6
MOD				IAmb	IAmb	18 28 05.0	
	comp=Z,17nm,1.0s						
NJ2	Nanjing	84.00	309	⇓P	P	18 28 05.3	+1.2
NJ2				sP	pwP	18 28 14.5	+4.3
NJ2				pmax	pmax		
	comp=Z,13nm,0.8s						
K05A	Summer Lake	84.07	37	P	P	18 28 05.0	+0.6
TUC	Tucson	84.10	51	P	P	18 28 05.8	+1.1
	baz=236						
TUC	Tucson	84.10	51	P	P	18 28 05.1	+0.4
PRN	Pahroc Range	84.19	44	P	P	18 28 05.7	+0.6
J05D	Fort Rock, OR	84.25	37	P	P	18 28 06.5	+1.2
	baz=228						
VNA2	Neumayer--Watz	84.31	176	P	P	18 28 05.8	+0.7
R11A	Troy Canyon, C	84.42	43	P	P	18 28 06.7	+0.4
	baz=232,SNR=7.1						
R11A	Troy Canyon, C	84.42	43	P	P	18 28 06.4	0.0
VNA1	Neumayer--Stat	84.53	176	P	P	18 28 07.0	+0.9
BMN	Battle Mountai	84.70	41	P	P	18 28 07.5	-0.1
BMN				IAmb	IAmb	18 28 08.8	
	comp=Z,12nm,1.0s						
PINE	Pine Mountain	84.75	37	P	P	18 28 08.0	+0.2
X16A	Lo Mia Camp, P	84.83	49	P	P	18 28 09.2	+0.7
X16A				IAmb	IAmb	18 28 10.4	
	comp=Z,10nm,1.1s						
MDJ	Mudanjiang	85.02	324	P	P	18 28 08.3	-0.6
MDJ				pmax	pmax		
	comp=Z,10.0nm,1.6s						
MDJ				pmax	pmax		
	comp=Z,190nm,5.5s						
PLCA	Paso Flores	85.03	133	P	P	18 28 08.6	-0.9
	comp=Z,3.0nm,1.1s,baz=20,slow=3.4,SNR=3.7						
PLCA				LR	LR	19 00 21.3	
	comp=Z,44nm,19.6s,baz=206,slow=32						
LCMT	Little Creek M	85.12	46	P	P	18 28 10.3	+0.5
LCMT				IAmb	IAmb	18 28 11.5	
	comp=Z,17nm,1.1s						
CCUT	Cedar City	85.36	45	P	P	18 28 11.5	+0.4
CCUT				IAmb	IAmb	18 28 13.1	
	comp=Z,17nm,1.1s						
KNB	Kanab	85.39	46	P	P	18 28 11.9	+0.7
KNB				IAmb	IAmb	18 28 13.2	
	comp=Z,16nm,1.1s						
U15A	North Rim	85.40	46	P	P	18 28 12.1	+0.7
U15A				IAmb	IAmb	18 28 14.0	
	comp=Z,19nm,1.1s						
WUAZ	Wupatki	85.49	48	P	P	18 28 13.2	+1.4
	baz=235						
WUAZ	Wupatki	85.49	48	P	P	18 28 12.2	+0.4
WUAZ				IAmb	IAmb	18 28 13.6	
	comp=Z,10nm,1.1s						
SZCU	Shurtz Canyon	85.56	45	P	P	18 28 12.1	0.0
SZCU				IAmb	IAmb	18 28 14.0	
	comp=Z,14nm,1.0s						
SPR3	Spring Creek 3	85.59	43	P	P	18 28 11.2	-1.2
PSUT	Pine Spring	85.62	44	P	P	18 28 12.2	-0.1
I07A	Izee	85.72	37	P	P	18 28 13.4	+0.8
I07A				IAmb	IAmb	18 28 14.6	
	comp=Z,16nm,1.2s						
J08A	Circle Bar Ran	85.83	38	P	P	18 28 13.8	+0.7
J08A				IAmb	IAmb	18 28 14.4	
	comp=Z,20nm,1.3s						
PKCU	Pink Cliffs	85.97	46	P	P	18 28 14.7	+0.4
ELK	Elko	86.09	42	P	P	18 28 14.3	-0.4
MTPU	Mount Pierson	86.40	45	P	P	18 28 17.4	+1.0
MTPU				IAmb	IAmb	18 28 18.8	
	comp=Z,18nm,1.2s						
WHN	Wuhan	86.44	306	⇓P	P	18 28 17.8	+1.5
WHN				pmax	pmax		
	comp=Z,62nm,1.2s						
MVU	Marysvale	86.65	45	P	P	18 28 18.2	+0.8
MSU	Marysvale	86.67	45	P	P	18 28 18.7	+1.1
CN2	Changchun	86.76	322	eP	P	18 28 18.3	+0.7
CN2				pmax	pmax		
	comp=Z,40nm,1.2s						
G08A	Pilot Rock	86.80	36	P	P	18 28 17.5	-0.5
G08A				IAmb	IAmb	18 28 20.7	
	comp=Z,21nm,1.5s						
KLR	Kul'dur	87.08	329	P	P	18 28 16.9	-2.1
	comp=Z,4.1nm,0.9s,baz=124,slow=8.8,SNR=7.0						
KLR				LR	LR	19 04 14.6	
	comp=Z,127nm,18.6s,baz=139,slow=34						
TIA	Tai'an	87.49	312	⇓P	P	18 28 22.5	+1.2
TIA				pmax	pmax		
	comp=Z,41nm,1.2s						
MNTX	Cornudas Mount	87.65	54	P	P	18 28 22.6	+0.4
	baz=239						
MNTX	Cornudas Mount	87.65	54	P	P	18 28 22.2	-0.1
MNTX				IAmb	IAmb	18 28 23.9	
	comp=Z,8.6nm,1.0s						
TX31	Lajitas Ar. Si	87.73	56	P	P	18 28 22.3	-0.5
TX32	Lajitas Array	87.73	56	P	P	18 28 22.4	-0.4
TXAR	Lajitas Array	87.74	56	P	P	18 28 21.6	-1.1
	comp=Z,4.7nm,1.0s,baz=210,slow=7.2,SNR=22						
TXAR				LR	LR	18 59 39.4	
	comp=Z,64nm,21.6s,baz=0.0,slow=30						
TXAR	Lajitas Array	87.74	56	P	P	18 28 23.0	+0.2
TMUT	Trail Mountain	87.74	45	P	P	18 28 22.4	-0.5
TMUT				IAmb	IAmb	18 28 25.0	
	comp=Z,11nm,0.9s						
D08A	Wollman Farm,	87.96	35	P	P	18 28 23.6	+0.3
SPUT	South Promonto	88.12	42	P	P	18 28 23.8	-0.7
SPUT				IAmb	IAmb	18 28 25.4	
	comp=Z,8.8nm,1.1s						
P17A	Butcher Ranch,	88.14	45	P	P	18 28 24.4	-0.2
P17A				IAmb	IAmb	18 28 28.4	
	comp=Z,7.2nm,1.0s						
L19K	White Mountain	88.20	10	P	P	18 28 25.5	+1.4
	baz=199						
HLID	Hailey	88.27	40	P	P	18 28 25.8	+0.6
	baz=233						
HLID	Hailey	88.27	40	P	P	18 28 25.1	-0.1
ANMO	Albuquerque	88.56	50	P	P	18 28 27.5	+0.8
	baz=238						
ANMO	Albuquerque	88.56	50	P	P	18 28 26.6	-0.1
ANMO				IAmb	IAmb	18 28 28.7	
	comp=Z,11nm,1.1s						
TTA	Tatalina	88.74	9	P	P	18 28 27.1	+0.3
	baz=198						
TTA	Tatalina	88.74	9	P	P	18 28 26.7	0.0
C09A	Chrisman Ranch	88.78	35	P	P	18 28 26.8	-0.4
C09A				IAmb	IAmb	18 28 28.2	
	comp=Z,18nm,1.1s						
GHO	Glory Hole Cre	88.86	12	P	P	18 28 27.2	-0.1
DIV	Divide	88.94	14	P	P	18 28 28.0	+0.4
MESA	MESA	89.01	16	P	P	18 28 29.0	+0.8
	baz=210						
BMRM	Bremner River	89.06	15	P	P	18 28 28.3	+0.1
	baz=208						
BMRM	Bremner River	89.06	15	P	P	18 28 28.9	+0.6
CRQM	Cirque	89.22	15	P	P	18 28 29.9	+0.8
CRQE	Cirque	89.23	15	P	P	18 28 29.7	+0.6
	baz=210						
SCM	Sheep Creek Mo	89.24	13	P	P	18 28 29.5	+0.4
	baz=206						
TGL	Tana Glacier	89.29	16	P	P	18 28 29.7	+0.3
K20K	Telida	89.44	10	P	P	18 28 29.9	0.0
	baz=200						
VRDI	Verde Repeater	89.56	15	P	P	18 28 31.3	+0.6
N25K	Chitina, Valde	89.62	14	P	P	18 28 31.8	+0.9
	baz=208,SNR=5.8						
N25K	Chitina, Valde	89.62	14	P	P	18 28 31.8	+0.9
GLB	Gilahina Butte	89.66	15	P	P	18 28 31.1	+0.1
GLB				IAmb	IAmb	18 28 32.4	
	comp=Z,23nm,1.1s						
S22A	4UR Ranch, Cre	89.77	48	P	P	18 28 33.0	+0.5
	baz=238						
MCARA	McCarthy VSAT	89.79	15	P	P	18 28 32.7	+1.1
	baz=210,SNR=8.2						
MCARA	McCarthy VSAT	89.79	15	P	P	18 28 32.7	+1.1
WAT6	Susitna Watana	89.83	13	P	P	18 28 31.8	-0.2
	baz=205,SNR=7.6						
CTG	Chitna Glacier	89.84	16	P	P	18 28 32.3	+0.3
	baz=211						
BARN	Barnard Glacie	89.84	16	P	P	18 28 31.8	-0.3
CTGM	Chitina Glacie	89.84	16	P	P	18 28 31.8	-0.3
CTGM				IAmb	IAmb	18 28 33.4	
	comp=Z,20nm,1.2s						
WAT1	Susitna Watana	89.90	12	P	P	18 28 32.6	+0.5
	baz=205						
MCMT	McKenzie Canyo	89.93	39	P	P	18 28 32.6	-0.3
ENH	Enshi	89.95	303	P	P	18 28 33.4	+0.3
TRF	Thorofare Moun	90.14	11	P	P	18 28 33.1	-0.3
	baz=203						
TRF	Thorofare Moun	90.14	11	P	P	18 28 33.5	+0.1
BJI	Beijing	90.19	315	P	P	18 28 35.0	+1.1
BJI				pmax	pmax		
	comp=Z,11nm,1.3s						
J20K	Nowinta River	90.20	9	P	P	18 28 34.5	+1.1
	baz=200						
J20K	Nowinta River	90.20	9	P	P	18 28 33.7	+0.3
J20K				IAmb	IAmb	18 28 34.9	
	comp=Z,15nm,1.1s						
SKAG	Skagway	90.25	19	P	P	18 28 35.7	+1.9
	baz=216						
SLVN	Son La	90.31	293	P	P	18 28 35.5	+0.4
SLVN				IAmb	IAmb	18 28 38.7	
	comp=Z,19nm,1.4s						
GYA	Guiyang	90.36	299	⇓P	P	18 28 36.3	+1.1
GYA				pmax	pmax		
	comp=Z,12nm,1.6s						
RND	Reindeer	90.37	12	P	P	18 28 35.0	+0.7
PAX	Paxson	90.64	13	P	P	18 28 36.0	+0.4
	baz=207,SNR=5.6						
PAX	Paxson	90.64	13	P	P	18 28 35.8	+0.1
PAX				IAmb	IAmb	18 28 36.9	
	comp=Z,20nm,1.3s						
MCK	McKinley	90.65	12	P	P	18 28 35.9	+0.3
	baz=204,SNR=5.1						
MCK	McKinley	90.65	12	P	P	18 28 35.5	0.0
SDCO	Great Sand Dun	90.67	48	P	P	18 28 37.0	+0.4
	baz=239						
SDCO	Great Sand Dun	90.67	48	P	P	18 28 36.5	-0.2
M26K	Nabesna, AK	90.69	15	P	P	18 28 36.9	+1.1
	baz=210						
BW06	Boulder Array	90.72	42	P	P	18 28 36.7	0.0
	baz=236						
PDAR	Pinedale Array	90.72	42	P	P	18 28 35.6	-1.0
	comp=Z,2.5nm,0.9s,baz=204,slow=3.3,SNR=7.1						
PDAR				LR	LR	19 10 50.2	
	comp=Z,103nm,18.2s,baz=266,slow=37						
PDAR	Pinedale Array	90.72	42	P	P	18 28 36.3	-0.4
HYT	Haines Junctio	90.74	18	P	P	18 28 37.4	+1.2
	baz=214						
QLMT	Earthquake Lak	90.76	40	P	P	18 28 37.2	+0.4
YUK3	Moose Creek	90.76	16	P	P	18 28 37.3	+1.0
	baz=212,SNR=8.4						
FLWY	Flagg Ranch	90.76	41	P	P	18 28 36.4	-0.5
FLWY				IAmb	IAmb	18 28 38.4	
	comp=Z,9.5nm,1.1s						
SEY	Seymchan	90.87	346	P	P	18 28 35.6	-0.9
	comp=Z,11nm,1.0s,baz=149,slow=6.9,SNR=7.7						
M27K	Edge Creek, AK	90.91	15	P	P	18 28 38.2	+1.3
	baz=211,SNR=11						
M27K	Edge Creek, AK	90.91	15	P	P	18 28 37.2	+0.2
YMR	Madison River	90.94	40	P	P	18 28 37.2	-0.4
YMR				IAmb	IAmb	18 28 39.4	
	comp=Z,8.0nm,1.1s						
MENT	Mentasta	90.99	14	P	P	18 28 38.0	+0.8
MENT				IAmb	IAmb	18 28 39.2	
	comp=Z,20nm,1.2s						
YHH	Holmes Hill	91.07	40	P	P	18 28 38.8	+0.4
YHH				IAmb	IAmb	18 28 40.9	
	comp=Z,11nm,1.4s						
BOZ	Bozeman (W)	91.08	39	P	P	18 28 39.0	+0.8
	baz=235,SNR=5.4						
BOZ	Bozeman (W)	91.08	39	P	P	18 28 37.7	-0.5
BOZ				IAmb	IAmb	18 28 39.5	
	comp=Z,14nm,0.9s						
L26K	Log Cabin Wild	91.15	14	P	P	18 28 38.9	+1.0
	baz=209						
L26K	Log Cabin Wild	91.15	14	P	P	18 28 37.7	-0.2
L26K				IAmb	IAmb	18 28 40.5	
	comp=Z,10nm,1.0s						
DLBC	Dease Lake	91.16	22	P	P	18 28 37.7	-0.4
	comp=Z,4.6nm,0.9s,baz=232,slow=6.4,SNR=7.6						
DLBC	Dease Lake	91.16	22	P	P	18 28 37.2	-0.9
DLBC				IAmb	IAmb	18 28 40.5	
	comp=Z,11nm,1.1s						
BVCY	Beaver Creek	91.20	16	P	P	18 28 39.8	+1.6
	baz=212						
WRH	Wood River Hil	91.48	12	P	P	18 28 38.8	-0.5
L27K	Beaver Creek,	91.53	15	P	P	18 28 40.5	+0.8
	baz=211						
L27K	Beaver Creek,	91.53	15	P	P	18 28 39.9	+0.2
L27K				IAmb	IAmb	18 28 41.7	
	comp=Z,10nm,1.1s						
HDA	Harding Lake	91.64	12	P	P	18 28 40.3	+0.2
	baz=206						
CCB	Clear Creek Bu	91.69	12	P	P	18 28 39.4	-0.9
CCB				IAmb	IAmb	18 28 41.3	
	comp=Z,17nm,1.2s						
N31M	Braeburn, Yuko	91.76	18	P	P	18 28 41.9	+1.1
	baz=216						
SCRK	Sand Creek	91.85	14	P	P	18 28 42.0	+0.7
	baz=209						
MDM	Murphy Dome	91.90	11	P	P	18 28 40.1	-1.2
MDM				IAmb	IAmb	18 28 42.3	
	comp=Z,17nm,1.2s						
IL31		91.97	12	P	P	18 28 41.5	0.0
IL31				IAmb	IAmb	18 28 42.7	
	comp=Z,18nm,1.4s						
ILAR	Eielson Array	91.97	12	P	P	18 28 41.0	-0.7
	comp=Z,5.5nm,1.1s,baz=220,slow=4.9,SNR=17						
ILAR	Eielson Array	91.97	12	P	P	18 28 41.4	-0.3
XAN	Xi'an	92.17	307	P	P	18 28 44.6	+1.2
XAN				sP	pwP	18 28 51.8	+2.3
XAN				pmax	pmax		
	comp=Z,17nm,1.3s						
XAN				pmax	pmax		
	comp=Z,150nm,4.1s						
ABTX	Abilene, Hawle	92.34	55	P	P	18 28 43.8	-0.4
	baz=242						
ABTX	Abilene, Hawle	92.34	55	P	P	18 28 43.6	-0.6
ABTX				IAmb	IAmb	18 28 45.2	
	comp=Z,16nm,1.1s						
M30M	Minto, Yukon	92.38	17	P	P	18 28 43.6	-0.1
	baz=215						
J26L	Joseph Creek	92.40	13	P	P	18 28 44.5	+0.8
	baz=209,SNR=14						
PRP	Porcupine Dome	92.90	12	P	P	18 28 46.9	+0.8
	baz=207						
PRP	Porcupine Dome	92.90	12	P	P	18 28 46.5	+0.4
PRP				IAmb	IAmb	18 28 47.3	
	comp=Z,16nm,1.3s						
KMI	Kunming	92.93	296	⇓P	P	18 28 49.5	+2.2
KMI				sP	pwP	18 29 01.0	+7.5
KMI				pmax	pmax		
	comp=Z,22nm,1.3s						
KMI				LR	LR		
	comp=Z,110nm,20.5s						
KMI				LR	LR		
	comp=Z,160nm,18.5s						
KMI				LR	LR		
	comp=Z,160nm,19.3s						
DAWY	Dawson	92.96	15	P	P	18 28 47.3	+1.0
	baz=213,SNR=5.8						
DAWY	Dawson	92.96	15	P	P	18 28 46.9	+0.6
DAWY				IAmb	IAmb	18 28 47.7	
	comp=Z,14nm,1.3s						
EGAK	Eagle	93.16	14	P	P	18 28 47.3	+0.2
EGAK				IAmb	IAmb	18 28 48.9	
	comp=Z,15nm,1.2s						
CM31	Chiang Mai Arr	93.29	289	P	P	18 28 49.7	+0.8
CMAR	Chiang Mai Arr	93.29	289	P	P	18 28 50.0	+1.2
	comp=Z,15nm,1.1s,baz=122,slow=2.9,SNR=40						
CMAR				LR	LR	19 10 57.7	
	comp=Z,36nm,18.2s,baz=180,slow=36						
CHTO	Chiang Mai	93.44	289	P	P	18 28 50.5	+1.0
HHC	Hu-ho-hao-te	93.62	314	eP	P	18 28 51.3	+1.3
HHC				pmax	pmax		
	comp=Z,19nm,1.0s						
HHC				pmax	pmax		
	comp=Z,140nm,7.6s						
RSSD	Black Hills	94.85	43	P	P	18 28 55.1	-0.6
RSSD				IAmb	IAmb	18 28 56.7	
	comp=Z,8.9nm,0.9s						
SONM	Songino Array	100.14	318	LR	LR	19 15 29.2	
	comp=Z,42nm,18.0s,baz=103,slow=36						
WMQ	Urumqi	111.08	310	ePKP	PKiKP	18 34 07.8	+0.6
KURK	Kurchatov	118.34	316		PKPdf	18 34 19.1	-1.6
KURBB	Kurchatov Arra	118.39	316	PKP	PKPdf	18 34 19.1	-1.7
	comp=Z,0.4nm,0.2s,baz=80,slow=2.1,SNR=4.5						
GAR	Garm	123.08	302		PKPdf	18 34 30.4	0.0
BRVK	Borovoye	123.55	318	PKPdf	PKPdf	18 34 30.8	+0.1
ARU	Arti	129.71	324	PKP	PKPdf	18 34 42.5	+0.1
	comp=Z,2.2nm,0.7s,baz=325,slow=0.7,SNR=10						
ARU	Arti	129.71	324	PKPdf	PKPdf	18 34 41.9	-0.5
AKTO	Aktyubinsk	131.43	316	PKP	PKPdf	18 34 45.5	-0.3
	comp=Z,0.6nm,0.5s,baz=18,slow=4.9,SNR=4.0						
LODK	Lodwar	143.19	240	PKPdf	PKPab	18 35 05.3	+1.0
HFS	Hagfors	143.95	352	PKhKP	PKPpre	18 35 04.6	
	comp=Z,4.4nm,0.9s,baz=72,slow=4.7,SNR=3.2						
MBAR	Mbarara	143.95	230		PKPab	18 35 07.8	+0.5
SIRT	Sirnak	144.98	301	PKPdf	PKPab	18 35 10.4	-0.1
MNK	Minsk	145.36	336	i PKP	PKPbc	18 35 10.8	-0.2
	comp=E,3.0nm,0.8s						
MNK				i PKP	PKPbc	18 35 10.8	-0.2
	comp=Z,65nm,1.1s,baz=40						
MNK				i PKP	PKPbc	18 35 10.8	-0.2
	comp=N,17nm,0.8s						
MNK				i PP	PP	18 38 31.3	+0.8
MNK				i SKP		18 38 42.3	
MNK				i PKS	PKSdf	18 38 44.8	-1.5
MNK				i PPP	PPP	18 41 44.1	
MNK				i SKS	SKSdf	18 42 17.4	-2.8
MNK				i SKKS	SKKSdf	18 51 23.7	-6.7
MNK				i SSS	SSS	19 02 49.1	
MNK				i LR	LR	19 37 42.4	
MNK				i LRM	MLR	19 40 01.5	
	comp=Z,132nm,21.1s						
MNK				i LRM	MLR	19 40 10.3	
	comp=E,8.0nm,10.9s						
MNK				i LRM	MLR	19 40 11.0	
	comp=N,61nm,15.6s						
NACGM	Naroch	145.46	337	i PKP	PKPbc	18 35 11.8	+0.6
PABE	Paberze	145.91	340	PKPdf	PKPdf	18 35 12.6	+0.6
AKASG	Malin Array Be	147.58	330	PKPbc	PKPdf	18 35 15.7	+0.8
	comp=N,11nm,1.0s,baz=40,slow=4.0,SNR=20						
AKASG	Malin Array Be	147.58	330	PKPdf	PKPdf	18 35 13.7	-1.2
AKBB	Malin Array Si	147.58	330		PKPdf	18 35 16.6	+1.6
GAZ	Gaziantep	149.12	302	PKPdf	PKPdf	18 35 17.9	-0.2
BNN	Bunyan	149.69	305	PKPdf	PKPdf	18 35 18.4	-0.6
ASF	Jabal al Asfar	150.27	292	PKPbc	PKPbc	18 35 25.1	-0.1
	comp=N,11nm,1.1s,baz=73,slow=0.5,SNR=10						
BR131	Keskin Array S	150.99	308	PKPdf	PKPdf	18 35 19.8	-1.3
BRTR	Keskin Array B	150.99	308	PKPbc	PKPbc	18 35 25.9	-0.8
	comp=N,6.9nm,1.1s,baz=139,slow=2.7,SNR=14						
BRTR	Keskin Array B	150.99	308		PKPbc	18 35 26.5	-0.3
KWP	Kalwaria Pacla	151.17	334		PKPbc	18 35 26.6	-0.1
MMAI	Mount Meron Ar	151.41	294	PKPbc	PKPbc	18 35 26.6	-1.2
	comp=N,11nm,0.9s,baz=79,slow=5.2,SNR=20						
OJC	Ojcow	151.74	338	ePKP	PKiKP	18 35 29.2	+0.8
OJC	Ojcow	151.74	338		PKPbc	18 35 27.5	-0.5
KOLS	Kolonicke sedl	151.90	334	ePKP	PKPbc	18 35 27.5	-0.9
KOLS				e	PKPab	18 35 38.1	+0.6
EIL	Elat	152.13	287	PKPbc	PKPbc	18 35 29.2	-0.3
	comp=N,8.1nm,1.0s,baz=178,slow=0.7,SNR=5.7						
OSTC	Ostas	152.51	343	⇑ePKP	PKPbc	18 35 29.1	-0.6
CHVC	Chvalec	152.53	343	⇑ePKP	PKPbc	18 35 27.0	-2.8
CLL	Collm	152.55	348		PKPbc	18 35 29.2	-0.5
UPC	Upice	152.61	343	⇑ePKP	PKPbc	18 35 30.7	+0.8
DPC	Dobruska-Polom	152.67	343	⇑ePKP	PKiKP	18 35 31.3	+0.9
DPC				ePKPAB	PKPab	18 35 41.5	+0.8
CSS	Mathiatis	152.71	299	PKPdf	PKPdf	18 35 23.4	-0.2

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MLR    Muntele Rosu       152.75 325  PKPbc    PKPbc   18 35 28.1  -2.4
       comp=N,5.0nm,1.1s,baz=54,slow=5.2,SNR=4.8
MLR    Muntele Rosu       152.75 325           PKPbc   18 35 28.6  -2.0
BRG    Berggiesshubel     152.77 346  ePKP     PKiKP   18 35 31.3  +0.8
BRG                                   Amp              18 35 32.3
       comp=Z,12nm,1.1s
BRG    Berggiesshubel     152.77 346  P        PKPab   18 35 36.7  -4.3
BRG                                   Amp              18 35 38.9
       comp=Z,9.1nm,1.1s
MORC   Moravsky Berou     152.84 341  ePKP     PKiKP   18 35 31.7  +1.0
VRAC   Vranov             153.54 341  PKPab    PKPab   18 35 44.6  +0.3
       comp=Z,4.0nm,0.6s,baz=56,slow=2.2,SNR=7.7
VRAC   Vranov             153.54 341  ePKP     PKiKP   18 35 33.1  +1.0
VRAC                                  e        PKPab   18 35 45.2  +0.8
VYHS   Vyhne              153.54 338  ePKP     PKPbc   18 35 31.0  -1.1
VYHS                                  e        PKPab   18 35 45.4  +1.0
JAVC   Velka Javorina     153.61 340  ePKP     PKiKP   18 35 34.4  +2.0
JAVC                                  e        PKPab   18 35 46.8  +2.1
PSZ    Piszkesteto        153.64 336  PKPab    PKPab   18 35 44.7  -0.3
KRUC   Moravsky           153.82 341  ePKP     PKiKP   18 35 33.5  +0.8
KRUC                                  e        PKPab   18 35 46.3  +0.8
MODS   Modra-Piesok       154.16 340  ePKP     PKPbc   18 35 33.7  +0.3
MODS                                  e        PKPab   18 35 47.5  +0.5
CKRC   Cesky Krumlov      154.60 344⇑ePKP     PKPdf   18 35 25.5  -0.4
CKRC                                  ePKPAB   PKPab   18 35 49.9  +1.0
GERES  GERESS Array B     154.72 345  PKP      PKPdf   18 35 25.2  -0.9
       comp=Z,0.3nm,0.4s,baz=48,slow=1.5,SNR=2.7
GERES                                 PKPab    PKPab   18 35 47.7  -1.8
       comp=Z,1.0nm,0.8s,baz=108,slow=4.3,SNR=4.6
ARSA   Arzberg            155.70 341  eP       PKPab   18 35 54.8  +1.2
       comp=Z,6.5nm,0.9s
SOKA   Soboth             156.37 341  eP       PKPab   18 35 56.8  +0.2
       comp=Z,16nm,1.2s
OBKA   Obir               156.66 342  eP       PKPab   18 35 58.1  +0.2
       comp=Z,2.5nm,0.6s
MYKA   Terra Mystica      156.80 343  eP       PKPab   18 35 58.4   0.0
       comp=Z,10nm,1.0s
DAVOX  Davos/Dischmat     157.47 350  PKPab    PKPab   18 36 01.2  -0.2
       comp=Z,3.0nm,0.9s,baz=251,slow=8.3,SNR=3.2
PCAB   Cabril             160.27  28  ePKPdf   PKPdf   18 35 35.3  +2.1
NRCA   Norcia             160.42 340  PKPdf    PKPdf   18 35 30.8  -2.6
NRCA                                           PKPab   18 36 14.7  +0.4
MVO    Moncorvo           161.14  27  ePKPdf   PKPdf   18 35 35.9  +1.7
PVIS   Viseu              161.14  29  ePKPdf   PKPdf   18 35 34.2   0.0
MTE    Manteigas          161.55  29  ePKPdf   PKPdf   18 35 35.1  +0.4
MTE    Manteigas          161.55  29           PKPdf   18 35 34.5  -0.1
PSBE   So Bento           161.66  33  ePKPdf   PKPdf   18 35 34.1  -0.7
PCBR   Castelo Branco     162.04  30  ePKPdf   PKPdf   18 35 35.7  +0.6
PMRV   Marv??o            162.41  31  ePKPdf   PKPdf   18 35 36.5  +1.0
EVO    Evora              162.81  34  ePKPdf   PKPdf   18 35 37.9  +2.0
MESJ   Messejana          163.22  36  ePKPdf   PKPdf   18 35 38.4  +2.1
MORF   Marmelete          163.38  38  ePKPdf   PKPdf   18 35 38.6  +2.0
PFVI   Vila Bisbo         163.40  39  ePKPdf   PKPdf   18 35 38.8  +2.3
PBAR   Barrancos          163.57  32  ePKPdf   PKPdf   18 35 38.9  +2.3
ESDC   Sonseca Array      163.60  22  PKP      PKPdf   18 35 36.8  +0.1
       comp=Z,2.7nm,1.0s,baz=331,slow=2.2,SNR=13
ESDC                                  PKPab    PKPab   18 36 27.8  -0.3
       comp=Z,1.2nm,0.9s,baz=316,slow=4.3,SNR=5.1
ESDC   Sonseca Array      163.60  22           PKPdf   18 35 36.4  -0.3
PBDV   Barranco-do-Ve     163.82  37  ePKPdf   PKPdf   18 35 39.0  +2.1
KEST   Kesra              168.09 339  PKPab    PKPab   18 36 47.7  -0.4
       comp=Z,8.3nm,1.1s,baz=358,slow=5.0,SNR=3.7
TORD   Torodi Ar. Bea     168.30 169  PKP      PKPdf   18 35 40.2  -0.9
       comp=Z,4.3nm,1.2s,baz=305,slow=2.0,SNR=9.9
TORD                                  PKPab    PKPab   18 36 50.3  +1.0
       comp=Z,1.9nm,0.9s,baz=190,slow=3.6,SNR=6.1
TORD   Torodi Ar. Bea     168.30 169           PKPdf   18 35 40.1  -1.0
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IDC ***19*** *18:24:31.5±2.2, 5°.98S×151°.84E, h0^{km}, mb3.6/4, mb1 3.9/5, mb1mx3.5/48, mbtmp3.7/5, ML1.6/1, Error ellipse: s-maj=129.7km s-min=26.5km az=130.0*

ISC 19 18:24:39.3±2.2, **5°.7S**±0°.7×**151°.4E**±0°.8, **h50**^{km}, **n6,** σ**0^{s}.70**/7, **mb3.5**/4, **New Britain region**

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Code   Station Name        Δ°   AZ°   Phase ID             Time      Res
                                      Op       ISC         h  m  s   ISC
PMG    Port Moresby         5.55 228  Pn       Pn      18 26 00.2  +0.8
       1.1nm,0.3s,baz=9.4,slow=9.4,SNR=4.2
PMG                                   Sn       Sn      18 27 01.3  -0.7
       0.6nm,0.3s,baz=289,slow=23,SNR=2.3
WRA    Warramunga Arr      21.78 228  P        P       18 29 26.2  -0.8
       0.2nm,0.3s,baz=55,slow=10,SNR=9.2
ASAR   Alice Springs       24.52 221  P        P       18 29 54.2  -0.1
       1.3nm,0.8s,baz=53,slow=10,SNR=12
FITZ   Fitzroy Crossi      27.97 242  P        P       18 30 25.8  +0.4
       3.0nm,1.1s,baz=63,slow=6.8,SNR=1.8
ILAR   Eielson Array       83.53  22  P        P       18 37 01.4  -0.2
       0.3nm,0.7s,baz=246,slow=5.6,SNR=4.6
TORD   Torodi Ar. Bea     149.20 286  PKPbc    PKiKP   18 44 24.5  -0.1
       0.9nm,0.6s,baz=42,slow=2.5,SNR=5.0
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MOS ***19*** *18:25:08.7±1.0, 38°.28N×142°.62E, h28^{km}, mb4.7/16, Error ellipse: s-maj=8.9km s-min=5.4km az=93.4*

NEIC ***19*** *18:25:10.6±1.7, 38°.24N±0°.06×142°.6E±0°.1, h30^{km}±5^{km}, mb4.5/19, Error ellipse: s-maj=13.4km s-min=8.0km az=117.0*

JMA ***19*** *18:25:11.0±0.1, 38°.31N×142°.44E, h38^{km}±2^{km}, M4.4*

JMA Felt I J1.

NIED ***19*** *18:25:11.1, 38°.31N×142°.44E, h38^{km}, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}3.37; $M_{\theta\theta}$-0.26; $M_{\phi\phi}$-3.11; $M_{r\theta}$0.27; $M_{\theta\phi}$0.45; $M_{\phi r}$-0.57; Fault plane solution: $M_0$3.34000×10^{15} NP1: ϕ_s168.00000°, δ50.00000°, λ86.00000°. NP2: ϕ_s354.00000°, δ40.00000°, λ94.00000°.*

IDC ***19*** *18:25:12.1±2.8, 38°.26N×142°.42E, h38^{km}±24^{km}, mb4.0/23, mb1 4.2/27, mb1mx3.9/70, mbtmp4.2/27, ML3.8/4, MS3.5/14, Ms1 3.5/14, ms1mx3.2/48 Error ellipse: s-maj=16.3km s-min=13.6km az=89.0*

ISC 19 18:25:09.3±0.9, **38°.27N**±0°.04×**142°.62E**±0°.04, **h24**^{km}±5^{km}, **n166,** σ**1^{s}.73**/174, **mb4.5**/52, **MS3.7**/9, **8C-20D, Near east coast of eastern Honshu**

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Code   Station Name        Δ°   AZ°   Phase ID             Time      Res
                                      Op       ISC         h  m  s   ISC
JIKH   Ishinomakikobu       0.91 273 ⇓P        Pb      18 25 25.4  -1.1
JIKH                                  S        Sb      18 25 35.4  -2.8
JIO    Ouri                 1.02 281 ⇓P        Pn      18 25 27.0  -1.1
JIO                                   S        Sb      18 25 38.4  -2.8
JKMT   Kesennumamotoy       1.05 302 ⇓P        Pn      18 25 27.6  -1.0
JKMT                                  S        Sb      18 25 39.4  -2.8
OFUJ   Ofunato              1.10 318 ⇑P        Pn      18 25 28.6  -0.7
OFUJ                                  S        Sn      18 25 41.1  -2.7
JMK    Ichinoseki           1.29 302 ⇓P        Pn      18 25 31.2  -0.7
JMK                                   S        Sn      18 25 45.9  -2.6
JMM    Marumori             1.50 255 ⇓P        Pn      18 25 33.9  -0.8
JMM                                   eS       Sn      18 25 50.4  -3.1
JMM    Marumori             1.50 255           Pn      18 25 33.8  -0.9
JOU    Okura                1.54 274 ⇓P        Pn      18 25 35.1  -0.3
JOU                                   eS       Sn      18 25 53.0  -1.7
JOM    Ohasama              1.59 320  P        Pn      18 25 36.1  +0.1
JOM                                   S        Sn      18 25 54.2  -1.6
JFK    Kawauchi             1.65 238 ⇓P        Pn      18 25 36.1  -0.7
JFK                                   S        Sn      18 25 54.5  -2.8
JYK    Kaneyama             1.89 291 ⇓P        Pn      18 25 40.0  -0.1
JYK                                   S        Sn      18 26 02.3  -0.9
JRG    Rokugo               1.92 307  P        Pn      18 25 41.0  +0.5
JRG                                   eS       Sn      18 26 03.7  -0.3
JFT    Otama                1.96 248 ⇓P        Pn      18 25 41.4  +0.4
JFT                                   S        Sn      18 26 04.1  -0.7
JYS    Shirataka            2.01 270  P        Pn      18 25 42.0  +0.2
JYS                                   S        Sn      18 26 06.4  +0.1
JTM    Tenmabayashi         2.79 335  Pn       Pn      18 25 54.3  +1.8
JYT    Yasato               2.81 224           Pn      18 25 52.4  -0.3
JSD    Sado                 3.45 268  Pn       Pn      18 26 01.2  -0.3
ERM    Erimo                3.77   6ceP        Pn      18 26 07.6  +1.7
ERM    Erimo                3.77   6  Pn       Pn      18 26 06.5  +0.6
MJAR   Matsushiro Arr       3.91 245  Pn       Pn      18 26 08.8  +0.8
       1.5nm,0.3s,baz=60,slow=8.0,SNR=82
MJAR                                  LR       LR      18 27 54.3
       comp=Z,862nm,18.4s,baz=45,slow=43
MJAR   Matsushiro Arr       3.91 245  P        Pn      18 26 09.4  +1.5
MJAR   Matsushiro Arr       3.91 245  Pn       Pn      18 26 09.4  +1.5
MAJO   Matsushiro           3.91 245d iP       Pn      18 26 10.9  +2.9
MAJO   Matsushiro           3.91 245  Pn       Pn      18 26 09.7  +1.8
MAT    Matsushiro           3.91 245  P        Pn      18 26 08.4  +0.4
MAT                                   eS       Sn      18 26 55.0  +1.8
MJB9   Matsu-Tunnel         3.91 245           Pn      18 26 08.0   0.0
JEW    Eniwo                4.66 349  Pn       Pn      18 26 19.2  +1.0
JGF    Kuroka               4.99 239           Pn      18 26 25.0  +2.3
JSG    Sagara               5.06 226  Pn       Pn      18 26 26.1  +2.4
INU    Inuyama              5.36 239  Pn       Pn      18 26 29.4  +1.6
NMR    Nemuro--Hokkai       5.62  24⇑iP        Pn      18 26 30.9  -0.4
NMR                                  i S       Sn      18 27 30.6  -4.5
JHJ2   Mitsune              5.62 205  Pn       Pn      18 26 31.8  +0.3
JHJ    Hachijo jima 2       5.63 205  Pn       Pn      18 26 32.0  +0.5
       20nm,0.3s,baz=89,slow=19,SNR=1.3
JHJ                                   Sn       Sn      18 27 30.5  -4.9
       56nm,0.3s,baz=257,slow=24,SNR=6.1
JHJ                                   LR       LR      18 28 49.1
       comp=Z,293nm,20.3s,baz=80,slow=39
JKA    Kamikawa-asahi       5.85 360  Pn       Pn      18 26 35.2  +0.7
ASAJ   Asahikawa            5.85 360  Pn       Pn      18 26 35.3  +0.8
       1.8nm,0.3s,baz=212,slow=10,SNR=21
ASAJ                                  Sn       Sn      18 27 39.0  -1.7
       0.9nm,0.3s,baz=235,slow=25,SNR=2.2
GLVR   Golovnino            5.89  21  eP       Pn      18 26 36.7  +1.6
GLVR                                  eS       Sn      18 27 38.1  -3.7
GLVR                                  pmax     pmax
       comp=Z,159nm,0.6s
GLVR                                  pmax     pmax
       comp=E,101nm,0.7s
GLVR                                  smax     smax
       comp=N,322nm,0.3s
GLVR                                  smax     smax
       comp=E,131nm,0.3s
RUSJ   Misakicho            6.16  18  eP       Pn      18 26 39.4  +0.6
RUSJ                                  eS       Sn      18 27 48.3  -0.1
GRPR   Tuman                6.20  22  eP       Pn      18 26 38.4  -0.9
GRPR                                  S        Sn      18 27 43.9  -5.4
GRPR                                  pmax     pmax
       comp=Z,50nm,0.2s
GRPR                                  smax     smax
       comp=E,192nm,0.3s
GRPR                                  smax     smax
       comp=N,285nm,0.4s
YUK    Yuzh-Kuril'sk        6.26  22  eP       Pn      18 26 40.6  +0.4
YUK                                   eS       Sn      18 27 48.0  -2.9
YUK                                   pmax     pmax
       comp=Z,66nm,0.8s
YUK                                   pmax     pmax
       comp=N,36nm,0.4s
YUK                                   pmax     pmax
       comp=E,24nm,0.5s
YUK                                   smax     smax
       comp=N,222nm,0.5s
YUK                                   smax     smax
       comp=E,128nm,0.5s
JWT    Wachi                6.51 245  Pn       Pn      18 26 45.7  +2.0
KUR    Kuril'sk             7.99  28⇓eP        Pn      18 27 07.1  +3.2
JHS    Saijyo               8.31 250  Pn       Pn      18 27 07.6  -0.7
YSS    Yuzh-Sakhalins       8.69   1  eP       Pn      18 27 15.3  +1.9
YSS                                   pmax     pmax
       comp=Z,30nm,0.8s
YSS    Yuzh-Sakhalins       8.69   1           Pn      18 27 15.1  +1.7
USRK   Ussuriysk Ar.        9.96 310  Pn       Pn      18 27 34.9  +4.0
       baz=128,slow=13,SNR=15
USRK                                  LR       LR      18 31 02.8
       comp=Z,199nm,20.2s,baz=129,slow=36
USRK   Ussuriysk Ar.        9.96 310  P        Pn      18 27 33.8  +2.9
USRK   Ussuriysk Ar.        9.96 310  Pn       Pn      18 27 33.8  +2.9
USA0B  Ussuriysk Arra       9.96 310  P        Pn      18 27 34.2  +3.3
USA0B  Ussuriysk Arra       9.96 310  Pn       Pn      18 27 34.2  +3.3
JCJ    Chichijima          11.14 182  Pn       Pn      18 27 46.8  -0.4
       comp=Z,2.8nm,0.3s,baz=325,slow=14,SNR=1.2
JCJ                                   Sn       Sn      18 29 39.5   -12
       comp=Z,3.5nm,0.3s,baz=281,slow=16,SNR=2.0
KSRS   Korea Array         11.65 271  Pn       Pn      18 27 58.0  +3.9
       comp=Z,0.2nm,0.3s,baz=80,slow=14,SNR=7.5
KSRS                                  LR       LR      18 32 03.3
       comp=Z,156nm,20.6s,baz=71,slow=36
KSRS   Korea Array         11.65 271  P        Pn      18 27 58.0  +3.9
TYV    Tymovskoe           12.60   0  eP       Pn      18 28 03.0  -3.9
TYV                                   pmax     pmax
       comp=Z,16nm,1.2s
TYV                                   pmax     pmax
       comp=Z,900nm,4.8s
GRNR   Gornyy              13.25 343⇓iP        Pn      18 28 13.4  -2.5
GRNR                                  pmax     pmax
       comp=Z,7.0nm,0.9s
GRNR                                  MLR      MLR
       comp=E,120nm,14.0s
KLR    Kul'dur             13.47 328  LR       LR      18 33 27.2
       comp=E,161nm,19.0s,baz=140,slow=37
KLR    Kul'dur             13.47 328⇓eP        Pn      18 28 19.2  +0.3
KLR                                   pmax     pmax
       comp=Z,17nm,1.4s
OKH    Okha                15.29   1deP        Pn      18 28 39.9  -3.5
OKH                                   MLR      MLR
       comp=E,300nm,6.0s
OKH                                   MLR      MLR
       comp=Z,200nm,6.0s
PETK   Petropavlovsk-      18.14  30  LR       LR      18 37 25.8
       comp=Z,32nm,19.2s,baz=247,slow=40
ZEA    Zeya                18.74 331  eP       P       18 29 26.1  -0.1
ZEA                                   pmax     pmax
       comp=E,10.0nm,1.1s
ZEA                                   pmax     pmax
       comp=N,10.0nm,1.0s
ZEA                                   pmax     pmax
       comp=Z,20nm,0.9s
NJ2    Nanjing             20.37 259  eP       P       18 29 44.1  -0.1
NJ2                                   pmax     pmax
       comp=Z,5.0nm,0.5s
BJI    Beijing             20.56 283  P        Pn      18 29 47.3  -1.3
BJI                                   S        S       18 33 36.1  +1.0
BJI                                   pmax     pmax
       comp=Z,12nm,0.6s
HHC    Hu-ho-hao-te        24.02 286  eP       P       18 30 20.6  -1.9
HHC                                   pmax     pmax
       comp=Z,18nm,0.7s
HHC                                   pmax     pmax
       comp=Z,150nm,6.6s
HHC                                   LR       LR
       comp=N,150nm,10.4s
HHC                                   LR       LR
       comp=E,270nm,10.9s
HHC                                   LR       LR
       comp=Z,220nm,10.6s
YAK    Yakutsk             25.10 346  eP       P       18 30 32.5  +0.6
YAK                                   pmax     pmax
       comp=Z,17nm,1.1s
YAK                                   pmax     pmax
       comp=N,10.0nm,1.5s
YAK                                   pmax     pmax
       comp=E,8.0nm,2.0s
SEY    Seymchan            25.40  10  P        P       18 30 37.0  +2.4
       comp=E,6.4nm,1.0s,baz=179,slow=9.1,SNR=5.1
XAN    Xi'an               27.45 272  P        P       18 30 56.6  +3.1
XAN                                   pmax     pmax
       comp=Z,8.0nm,0.8s
XAN                                   pmax     pmax
       comp=Z,88nm,3.8s
ULN    Ulaanbaatar         27.49 302⇑eP        P       18 30 54.4  +0.6
ULN                                   pmax     pmax
       comp=Z,4.0nm,1.1s
ULN    Ulaanbaatar         27.49 302  P        P       18 30 54.0  +0.2
ULN                                   IAmb     IAmb    18 31 17.8
       comp=Z,7.6nm,1.4s
SONM   Songino Array       27.92 302  P        P       18 30 57.7   0.0
       comp=Z,0.8nm,0.9s,baz=90,slow=4.4,SNR=3.9
SONM                                  LR       LR      18 42 55.5
       comp=Z,48nm,18.9s,baz=2.5,slow=38
SONM   Songino Array       27.92 302  P        P       18 30 57.9  +0.2
SONM                                  pmax     pmax
       comp=Z,2.0nm,1.2s
SONM   Songino Array       27.92 302  P        P       18 30 57.9  +0.2
H11N2  WAKE ISLAND Hy      28.00 124  T        T       19 01 24.6
       baz=318
H11N1  WAKE ISLAND Hy      28.01 124  T        T       19 01 28.0
       baz=318,slow=74
H11N3  WAKE ISLAND Hy      28.02 124  T        T       19 01 24.7
       baz=318,slow=74
ENH    Enshi               28.41 264  P        P       18 31 02.9  +0.9
H11S1  WAKE ISLAND Hy      28.77 126  T        T       19 02 23.8
       baz=318,slow=76,SNR=90
H11S3  WAKE ISLAND Hy      28.77 126  T        T       19 02 23.8
       baz=318,slow=76,SNR=113
H11S2  WAKE ISLAND Hy      28.79 126  T        T       19 02 24.9
       baz=318,slow=76,SNR=95
TLY    Talaya              30.28 309  LR       LR      18 43 57.7
       comp=Z,69nm,19.1s,baz=78,slow=37
BILL   Bilibino            32.58  16⇑eP        P       18 31 41.4  +3.0
BILL                                  e*PP     sP      18 31 49.1  +1.2
BILL                                   *SP     pP      18 31 54.0  +8.8
BILL                                  e                18 32 49.1
BILL                                  PPP      PPP     18 33 00.0
BILL                                  SS       SS      18 38 47.0   -26
BILL                                  pmax     pmax
       comp=Z,30nm,2.6s
GTA    Gaotai              33.14 286  eP       P       18 31 43.9  +0.1
GTA                                   pP       sP      18 31 52.9  -0.5
GTA                                   sP       pP      18 31 58.1  +7.5
GTA                                   pmax     pmax
       comp=Z,1.0nm,1.0s
DGZ    Jazzator, Alta      40.46 305⇑iP        P       18 32 46.7  +0.6
DGZ                                   pmax     pmax
       comp=Z,10.0nm,0.8s
WMQ    Urumqi              41.15 296  eP       P       18 32 54.1  +2.4
WMQ                                   pP       sP      18 33 02.5  +1.1
WMQ                                   sP       pP      18 33 08.5   +10
WMQ                                   pmax     pmax
       comp=Z,11nm,1.1s
WMQ                                   pmax     pmax
       comp=Z,140nm,4.5s
ZAA0   Zalesovo Array      41.81 311  P        P       18 32 55.8  -1.0
ZALV   Zalesovo Beam       41.81 311  P        P       18 32 56.9   0.0
       comp=Z,8.8nm,1.1s,baz=87,slow=7.6,SNR=12
ZALV   Zalesovo Beam       41.81 311 i P       P       18 32 56.9   0.0
ZALV                                  pmax     pmax
       comp=Z,3.0nm,0.7s
ZALV   Zalesovo Beam       41.81 311  P        P       18 32 55.7  -1.2
NRIK   Noril'sk            42.56 335  LR       LR      18 51 41.9
       comp=Z,100nm,18.9s,baz=134,slow=37
CMAR   Chiang Mai Arr      42.74 255  P        P       18 33 05.0  +0.2
       comp=Z,0.3nm,0.4s,baz=48,slow=7.2,SNR=3.0
CMAR                                  PcP      PcP     18 34 57.2  +1.0
       comp=Z,0.4nm,0.5s,baz=10,slow=5.5,SNR=2.8
CMAR   Chiang Mai Arr      42.74 255  P        P       18 33 04.5  -0.3
MK31   Makanchi Array      44.29 301  P        P       18 33 17.2  +0.1
MK31                                  pmax     pmax
       comp=Z,5.0nm,1.0s
MK31   Makanchi Array      44.29 301  P        P       18 33 17.1  +0.1
MK31                                  IAmb     IAmb    18 33 28.9
       comp=Z,5.2nm,1.0s
MKAR   Makanchi Array      44.29 301  P        P       18 33 17.0  -0.1
       comp=Z,1.7nm,0.7s,baz=82,slow=9.9,SNR=9.9
MKAR                                  LR       LR      18 52 34.4
       comp=Z,52nm,18.2s,baz=51,slow=37
MKAR   Makanchi Array      44.29 301 i P       P       18 33 19.0  +1.9
MKAR                                  pmax     pmax
       comp=Z,2.0nm,0.7s
KURK   Kurchatov           45.94 307ceP        P       18 33 29.4  -0.7
KURK                                  pmax     pmax
       comp=Z,10.0nm,1.3s
KURK   Kurchatov           45.94 307  P        P       18 33 29.1  -1.0
KURK                                  IAmb     IAmb    18 33 30.5
       comp=Z,11nm,0.9s
KURBB  Kurchatov Arra      46.01 307  P        P       18 33 30.5  -0.1
       comp=Z,6.8nm,0.6s,baz=82,slow=8.1,SNR=39
TAPN   Taplejung           46.82 273  eP       P       18 33 39.2  +1.6
       comp=Z,8.1nm,0.7s
ODAN   Odare               47.30 273  eP       P       18 33 41.6  +0.3
       comp=Z,11nm,0.8s
JIRN   Jiri                47.87 275  eP       P       18 33 46.5  +0.6
       comp=Z,7.5nm,0.6s
RAMN   Ramite              47.88 274  eP       P       18 33 45.9  +0.1
       comp=Z,9.5nm,0.6s
ILAR   Eielson Array       47.94  33  P        P       18 33 47.2  +1.7
       comp=Z,1.7nm,0.8s,baz=270,slow=6.5,SNR=11
GUN    Gumba               47.99 275  eP       P       18 33 47.0  +0.1
       comp=Z,22nm,0.5s
KKN    Kakani              48.52 275  eP       P       18 33 50.9  +0.1
       comp=Z,23nm,0.8s
PKI    Pulchoki            48.52 275  eP       P       18 33 50.5  -0.4
       comp=Z,5.7nm,0.6s
PKIN   Phulchoki           48.53 275  eP       P       18 33 51.3  +0.4
GKN    Gorkha              48.92 276  eP       P       18 33 53.6  -0.2
DANN   Dangsing            49.45 277  eP       P       18 33 58.2  +0.2
       comp=Z,36nm,0.6s
KOLN   Koldanda            49.84 276  eP       P       18 34 00.6  -0.3
       comp=Z,12nm,0.7s
PYUN   Piuthan             50.17 277  eP       P       18 34 03.6  +0.3
       comp=Z,40nm,0.8s
BCAR   Beaver Creek A      50.34  35  P        P       18 34 07.0  +3.0
BVAR   Borovoye Array      50.46 312  P        P       18 34 05.0   0.0
       comp=Z,1.1nm,0.5s,baz=156,slow=7.8,SNR=7.7
BVAR   Borovoye Array      50.46 312  P        P       18 34 05.0   0.0
BRVK   Borovoye            50.52 312⇓iP        P       18 34 05.4   0.0
BRVK                                  pmax     pmax
       comp=Z,5.0nm,1.5s
BRVK   Borovoye            50.52 312  P        P       18 34 04.8  -0.6
BRVK                                  IAmb     IAmb    18 34 31.8
       comp=Z,8.0nm,1.2s
AAK    Ala-Archa           50.76 298  P        P       18 34 07.1  -0.4
       comp=Z,0.4nm,0.4s,baz=24,slow=2.3,SNR=2.0
AAK    Ala-Archa           50.76 298⇓eP        P       18 34 07.1  -0.4
AAK                                   pmax     pmax
       comp=Z,33nm,3.8s
KKAR   Karatay Array       53.34 300  P        P       18 34 25.9  -0.7
KKAR   Karatay Array       53.34 300  P        P       18 34 25.9  -0.7
SVE    Sverdlovsk          54.86 318  eP       P       18 34 38.1  +0.7
SVE                                   pmax     pmax
       comp=Z,14nm,0.9s
ARU    Arti                56.08 318d iP       P       18 34 46.3  +0.1
ARU                                                    18 36 50.5
ARU                                   S        S       18 42 32.1  -1.2
ARU                                   SS       SS      18 46 14.9  -4.2
ARU                                   pmax     pmax
       comp=Z,6.0nm,0.7s
ABKAR  Akbulak array       57.88 310  P        P       18 34 57.8  -1.3
WB0    Warramunga Arr      58.24 189  P        P       18 35 01.3  -0.5
WB0                                   IAmb     IAmb    18 35 02.8
       comp=Z,7.5nm,0.8s
WRAB   Tennant Creek       58.41 189⇓iP        P       18 35 03.2  +0.2
WRAB                                  pmax     pmax
       comp=Z,12nm,2.5s
WRAB   Tennant Creek       58.41 189  P        P       18 35 02.6  -0.4
WRAB                                  IAmb     IAmb    18 35 04.1
       comp=Z,8.2nm,0.9s
WB2    Warramunga Arr      58.42 189  P        P       18 35 02.7  -0.4
WRA    Warramunga Arr      58.42 189  P        P       18 35 03.4  +0.3
       comp=Z,6.3nm,0.8s,baz=7.0,slow=7.2,SNR=42
AKTO   Aktyubinsk          58.57 312  P        P       18 35 03.8  -0.1
       comp=Z,3.7nm,0.8s,baz=79,slow=12,SNR=12
KIRV   Kirov               59.85 323  P        P       18 35 12.2  -0.4
       comp=Z,9.0nm,0.7s,baz=59,slow=2.3,SNR=4.5
KIRV   Kirov               59.85 323⇓eP        P       18 35 12.9  +0.4
AS31   Alice Springs       62.14 189  P        P       18 35 28.0  -0.5
ASAR   Alice Springs       62.15 189  P        P       18 35 28.9  +0.4
       comp=Z,2.7nm,0.7s,baz=10,slow=5.8,SNR=30
ASAR   Alice Springs       62.15 189  P        P       18 35 28.7  +0.2
ARCES  ARCESS Array B      63.18 339  P        P       18 35 34.8  -0.1
       comp=Z,2.5nm,0.9s,baz=56,slow=6.8,SNR=1.7
FINES  FINESS Array B      68.17 332  P        P       18 36 07.4  +0.2
       comp=Z,9.3nm,0.9s,baz=58,slow=5.2,SNR=9.4
KIV    Kislovodsk          70.82 311  eP       P       18 36 23.4  -0.6
KIV                                   pmax     pmax
       comp=Z,7.0nm,1.1s
KBZ    Khabaz              70.83 311  P        P       18 36 24.1  +0.2
       comp=Z,3.3nm,0.9s,baz=161,slow=5.2,SNR=4.8
KBZ    Khabaz              70.83 311⇓eP        P       18 36 24.5  +0.6
KBZ                                   pmax     pmax
       comp=Z,5.0nm,1.1s
KVN    Kaiserville         73.25  53  P        P       18 36 39.7  +0.9
KVN                                   pmax     pmax
       comp=Z,4.0nm,1.2s
KVN    Kaiserville         73.25  53  P        P       18 36 39.7  +0.9
KVN                                   IAmb     IAmb    18 36 42.2
       comp=Z,3.7nm,1.2s
HFS    Hagfors             73.36 336  P        P       18 36 39.5  +0.7
       comp=Z,3.3nm,0.8s,baz=28,slow=6.5,SNR=3.3
NB2    NORSAR Subarra      73.42 338  P        P       18 36 36.3  -2.9
       comp=Z,0.2nm,0.9s,baz=37,slow=6.2
NOA    NORSAR Array B      73.42 338  P        P       18 36 38.2  -1.1
       comp=Z,2.5nm,0.8s,baz=43,slow=5.4,SNR=8.0
NOA                                   LR       LR      19 11 24.3
       comp=Z,29nm,21.4s,baz=40,slow=38
NVAR   Mina Array Bea      73.49  54  P        P       18 36 42.4  +2.1
       comp=Z,0.9nm,0.8s,baz=291,slow=5.0,SNR=6.8
NVAR   Mina Array Bea      73.49  54  P        P       18 36 42.0  +1.8
AKASG  Malin Array Be      73.91 323  P        P       18 36 41.7  -0.5
       comp=Z,0.7nm,0.4s,baz=44,slow=6.7,SNR=3.2
AKASG  Malin Array Be      73.91 323  IAmb     IAmb    18 37 03.8
       comp=Z,4.1nm,1.4s
DUG    Dugway, Tooele      75.83  50  P        P       18 36 55.1  +1.4
DUG                                   pmax     pmax
       comp=Z,8.0nm,1.4s
DUG    Dugway, Tooele      75.83  50  P        P       18 36 55.1  +1.4
DUG                                   IAmb     IAmb    18 37 10.3
       comp=Z,7.9nm,1.4s
PD31   Pinedale Array      76.12  46  P        P       18 36 56.3  +0.9
```

PD31				IAmb	IAmb	18 36 56.9	
	comp=Z,3.6nm,1.3s						
PDAR	Pinedale Array	76.12	46	P	P	18 36 57.1	+1.7
	comp=Z,1.3nm,0.6s,baz=282,slow=1.3,SNR=16						
PDAR	Pinedale Array	76.12	46	P	P	18 36 55.2	-0.2
RDMU	Red Mountain	77.52	48	P	P	18 37 04.6	+1.3
RDMU				IAmb	IAmb	18 37 19.1	
	comp=Z,11nm,1.2s						
ULM	Lac du Bonnet	77.95	34	LR	LR	19 15 01.2	
	comp=Z,118nm,18.1s,baz=332,slow=38						
RAR	Rarotonga	80.12	127	LR	LR	19 09 13.9	
	comp=Z,62nm,20.8s,baz=153,slow=33						
NRS	Narsarsuaq	80.71	4	i	P	18 37 20.6	+0.5
KHC	Kasperske Hory	81.99	329	eP	P	18 37 27.2	0.0
MMAI	Mount Meron Ar	82.03	306	P	P	18 37 28.3	+0.5
	comp=Z,0.7nm,0.5s,baz=51,slow=9.6,SNR=1.6						
URZ	Urewera	82.50	153	LR	LR	19 07 27.0	
	comp=Z,93nm,21.9s,baz=31,slow=31						
ANMO	Albuquerque	83.06	51	⇑eP	P	18 37 36.3	+3.0
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.7s						
TXAR	Lajitas Array	88.61	53	P	P	18 38 01.8	+1.1
	comp=Z,0.5nm,0.6s,baz=302,slow=3.0,SNR=7.1						
SWET	Sewanee	94.16	38	P	P	18 38 23.9	-2.3
KMBO	Kilima Mbogo	102.75	279	i P	Pdif	18 39 06.6	+1.2
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SNAA	Sanae	142.20	197	PKPdf	PKPdf	18 44 34.2	-4.3
VNA2	Neumayer--Watz	143.76	196	PKPdf	PKPbc	18 44 39.1	+0.3
VNA3	Neumayer Olymp	144.00	195	PKPdf	PKPbc	18 44 39.6	0.0
VNA1	Neumayer--Stat	144.16	196	PKPdf	PKPbc	18 44 40.6	+0.6

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*IDC **19** 18:58:32.1±0.9, 9°.18N×138°.29E, h0^{km}, mb3.9/10, mb1 4.1/10, mb1mx3.9/43, mbtmp3.9/10, MS3.2/4, Ms1 3.2/4, ms1mx2.7/48, Error ellipse: s-maj=32.2km s-min=17.5km az=91.0*

*NEIC **19** 18:58:34.2±1.4, 9°.2N±0°.1×138°.4E±0°.2, h10^{km}±1^{km}, mb4.6/12, Error ellipse: s-maj=27.4km s-min=18.5km az=99.0*

ISC 19 18:58:33.8±0.8, **9°.18N**±0°.09×**138°.3E**±0°.2, **h10**^{km}**, n27, σ0ˢ.77**/22, **mb4.1**/15, **MS3.1**/3, **Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	13.45	207	Pn	Pn	19 01 44.8	0.0
JOW	Kunigami	19.96	333	LR	LR	19 08 56.8	
	comp=Z,76nm,19.5s,baz=237,slow=31						
PMG	Port Moresby	20.46	154	LR	LR	19 10 45.0	
	comp=Z,83nm,19.4s,baz=32,slow=36						
BATI	Baumata	24.15	217	P	P	19 03 49.2	-1.1
	6.3nm,0.7s,baz=271,slow=13,SNR=3.6						
WRA	Warramunga Arr	29.20	188	P	P	19 04 35.1	-0.7
	1.3nm,1.0s,baz=3.8,slow=9.5,SNR=6.7						
WRA	Warramunga Arr	29.20	188	IAmb	IAmb	19 04 37.9	
	comp=Z,0.3nm,1.1s						
KSRS	Korea Array	29.68	343	LR	LR	19 15 58.5	
	comp=Z,22nm,19.6s,baz=125,slow=35						
AS31	Alice Springs	32.92	187	P	P	19 05 08.9	+0.3
ASAR	Alice Springs	32.92	187	P	P	19 05 08.7	+0.1
	comp=Z,0.9nm,0.6s,baz=22,slow=11,SNR=14						
ENH	Enshi	34.12	312	P	P	19 05 20.1	+1.1
ENH				IAmb	IAmb	19 05 21.0	
	comp=Z,3.8nm,0.7s						
CMAR	Chiang Mai Arr	39.24	288	P	P	19 06 02.3	-0.5
	comp=Z,1.2nm,0.7s,baz=103,slow=6.9,SNR=12						
KLR	Kul'dur	40.30	353	P	P	19 06 10.6	-0.6
	comp=Z,4.6nm,0.8s,baz=167,slow=5.9,SNR=8.8						
SONM	Songino Array	47.02	331	P	P	19 07 05.6	+0.1
	comp=Z,1.5nm,1.1s,baz=113,slow=3.4,SNR=4.5						
SONM				PcP	PcP	19 08 37.6	-0.1
	comp=Z,0.5nm,0.8s,baz=122,slow=1.9,SNR=2.4						
SONM	Songino Array	47.02	331	IAmb	IAmb	19 07 08.2	
	comp=Z,3.8nm,1.4s						
MSVF	Nonsavu	47.50	124	LR	LR	19 25 42.0	
	comp=Z,29nm,18.5s,baz=215,slow=34						
MKAR	Makanchi Array	60.37	319	P	P	19 08 44.0	+0.8
	comp=Z,1.1nm,0.8s,baz=103,slow=8.0,SNR=5.1						
KURK	Kurchatov	63.95	322	P	P	19 09 07.0	-0.2
KURK				IAmb	IAmb	19 09 08.3	
	comp=Z,3.6nm,0.8s						
NIL	Nilore	64.23	303	P	P	19 09 10.0	+0.6
NIL				IAmb	IAmb	19 09 10.9	
	comp=Z,9.5nm,0.9s						
GAR	Garm	67.19	308	P	P	19 09 28.7	+0.2
KKAR	Karatay Array	67.59	313	P	P	19 09 29.9	-1.0
HRA	Herat	73.39	303	P	P	19 10 06.3	-0.4
HRA				IAmb	IAmb	19 10 27.9	
	comp=Z,2.2nm,0.5s						
DHY	Denali Highway	74.78	27	P	P	19 10 12.5	-1.6
DHY				IAmb	IAmb	19 10 14.6	
	comp=Z,12nm,1.0s						
ILAR	Eielson Array	75.28	25	P	P	19 10 15.8	-1.0
	comp=Z,0.6nm,0.7s,baz=240,slow=5.5,SNR=7.2						
ABKAR	Akbulak array	75.51	318	P	P	19 10 18.6	+0.1
BMAR	Burnt Mountain	76.64	23	P	P	19 10 24.5	-0.1
VNDA	Vanda	87.58	175	P	P	19 11 22.6	+0.9
	comp=Z,0.7nm,1.0s,baz=330,slow=6.4,SNR=2.6						
NVAR	Mina Array Bea	94.68	50	P	P	19 11 57.0	+1.1
	comp=Z,0.7nm,0.9s,baz=281,slow=4.2,SNR=3.8						

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*NNC **19** 19:18:10.3±4.8, 36°.74N×69°.83E, h0^{km}, mb3.8, mpv3.6, Error ellipse: s-maj=40.3km s-min=32.3km az=156.0*

ISC 19 19:18:12.3±4.7, **36°.6N**±0°.3×**69°.8E**±0°.2, **h200**^{km}**, n9, σ0ˢ.62**/10, **2C-4D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	6.30	27	P	Pn	19 19 43.4	-0.4
	SNR=21						
KK07	Karatay Array	6.51	5	⇓P	Pn	19 19 46.6	+0.5
	1.5nm,0.5s,baz=180,slow=12						
KK07				⇓S	Sn	19 20 59.9	-0.7
	2.8nm,0.4s,baz=188,slow=22						
UCH	Uchtor	6.71	32	P	Pn	19 19 48.9	-0.2
	SNR=12						
EKS2	Erkin-Say	6.79	26	P	Pn	19 19 51.1	+1.2
	SNR=12						
AAK	Ala-Archa	7.04	30	⇑P	Pn	19 19 53.3	+0.1
	1.4nm,0.3s						
AAK				⇓S	Sn	19 21 13.1	-0.1
	3.6nm,0.6s						
CHMS	Chumysh	7.45	29	P	Pn	19 19 58.5	+0.2
	SNR=6.4						
TKM2	Tokmak 2	7.74	33	P	Pn	19 20 02.7	+0.4
	SNR=5.5						
TKM2	Tokmak 2	7.74	33	⇓P	Pn	19 20 01.4	-0.9
	3.3nm,0.7s						
TKM2				⇑S	Sn	19 21 30.5	+0.8
	1.2nm,0.6s						
AB31	Akbulak array	14.55	333	P	P	19 21 33.9	+3.8
	0.3nm,0.5s,baz=161,slow=12,SNR=6.7						

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*NEIC **19** 19:23:03.6±1.8, 18°.2N±0°.2×68°.64W±0°.07, h145^{km}±11^{km}, Error ellipse: s-maj=33.5km s-min=8.6km az=189.0*

*RSPR **19** 19:23:04.6, 18°.04N×68°.64W, h137^{km}±2^{km}, MD3.4/15*

*OSPL **19** 19:23:05.1±0.3, 18°.37N×68°.61W, h140^{km}, ML2.8*

ISC 19 19:23:02.7±1.3, **18°.2N**±0°.1×**68°.66W**±0°.04, **h150**^{km}**, n65, σ0ˢ.89**/66, **12C-4D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCDR	Punta Cana, DR	0.45	36	⇓eP	Pn	19 23 24.1	+0.2
PCDR	Punta Cana, DR	0.45	36	eS	Sn	19 23 39.3	-0.6
PCDR	Punta Cana, DR	0.45	36	Pn	Pn	19 23 23.5	-0.3
PCDR	Punta Cana, DR	0.45	36		Sn	19 23 39.3	-0.6
DR12	Loma Pena Alta	0.93	313		Pn	19 23 25.9	-1.2
IDE	Isla Desecheo	1.15	78	⇑eP	Pn	19 23 29.4	+0.5
IDE	Isla Desecheo	1.15	78	eS	Sn	19 23 48.9	+0.1
SDD	Santo Domingo	1.23	285	Pn	Pn	19 23 29.0	-0.6
SDD				IAML		19 23 52.9	
	comp=N,297nm,0.4s						
SDD	Santo Domingo	1.23	285	i P	Pn	19 23 29.9	+0.4
SDD				eS	Sn	19 23 48.4	-1.7
SDD				IAML		19 23 54.4	
	comp=Z,67nm,0.5s						
PRSN	Puerto Rico Se	1.44	87	⇑eP	Pn	19 23 33.2	+1.5
PRSN	Puerto Rico Se	1.44	87	eS	Sn	19 23 54.9	+1.0
PRSN	Puerto Rico Se	1.44	87		Pn	19 23 32.5	+0.8
PRSN	Puerto Rico Se	1.44	87		Sn	19 23 54.9	+1.0
CRPR	Cabo Rojo, PR	1.48	95	⇑eP	Pn	19 23 32.5	+0.4
CRPR	Cabo Rojo, PR	1.48	95	eS	Sn	19 23 52.4	-2.2
CRPR	Cabo Rojo, PR	1.48	95	Pn	Pn	19 23 32.5	+0.4
CRPR	Cabo Rojo, PR	1.48	95		Sn	19 23 52.4	-2.2
CRPR	Cabo Rojo, PR	1.48	95	i P	Pn	19 23 32.4	+0.3
CRPR				IAML		19 24 02.0	
	comp=N,100nm,0.5s						
LSP	Las Mesas	1.50	89	⇑eP	Pn	19 23 32.9	+0.6
LSP	Las Mesas	1.50	89	eS	Sn	19 23 54.3	-0.7
AGPR	Aguadilla, PR	1.50	78	⇓eP	Pn	19 23 33.7	+1.4
AGPR	Aguadilla, PR	1.50	78	eS	Sn	19 23 55.6	+0.6
AGPR	Aguadilla, PR	1.50	78	Pn	Pn	19 23 32.6	+0.3
AGPR	Aguadilla, PR	1.50	78		Sn	19 23 55.6	+0.6
MLPR	Magueyes Islan	1.55	96	⇓eP	Pn	19 23 33.4	+0.6
MLPR	Magueyes Islan	1.55	96	eS	Sn	19 23 54.6	-1.1
MLPR	Magueyes Islan	1.55	96	Pn	Pn	19 23 32.7	-0.1
MLPR	Magueyes Islan	1.55	96		Sn	19 23 54.6	-1.1
GBPR	Guanica, Bosqu	1.70	96	⇑eP	Pn	19 23 35.2	+0.7
GBPR	Guanica, Bosqu	1.70	96	eS	Sn	19 23 58.7	-0.1
AOPR	Arecibo Observ	1.82	84	⇑eP	Pn	19 23 36.6	+0.7
AOPR	Arecibo Observ	1.82	84	eS	Sn	19 24 01.9	+0.7
AOPR	Arecibo Observ	1.82	84		Pn	19 23 36.5	+0.6
AOPR	Arecibo Observ	1.82	84		Sn	19 24 01.9	+0.7
OBIP	Obispado Ponce	1.96	93	⇓eP	Pn	19 23 38.0	+0.7
OBIP	Obispado Ponce	1.96	93	eS	Sn	19 24 04.2	+0.2
OBIP	Obispado Ponce	1.96	93		Pn	19 23 37.6	+0.3
OBIP	Obispado Ponce	1.96	93		Sn	19 24 04.2	+0.2
EMPR	Esperanza - Ma	2.05	81	⇑eP	Pn	19 23 39.0	+0.5
EMPR	Esperanza - Ma	2.05	81	eS	Sn	19 24 06.0	+0.2
EMPR	Esperanza - Ma	2.05	81	Pn	Pn	19 23 38.3	-0.1
EMPR	Esperanza - Ma	2.05	81		Sn	19 24 06.0	+0.2
LOBA2	Hotel Casa Bon	2.31	269	i P	Pn	19 23 42.6	+1.0
SC01	Santiago de lo	2.33	303	Pn	Pn	19 23 43.0	+1.1
SC01				IAML		19 24 19.4	
	comp=E,186nm,0.4s						
SC01				IAML		19 24 20.9	
	comp=N,166nm,0.3s						
SJG	San Juan	2.39	91		Pn	19 23 44.2	+1.8
SJG				IAML		19 24 14.0	
	comp=N,166nm,0.5s						
SJG				IAML		19 24 17.7	
	comp=N,122nm,0.4s						
IGPR	InterUniversit	2.44	94	⇑eP	Pn	19 23 44.1	+1.1
IGPR	InterUniversit	2.44	94	eS	Sn	19 24 15.1	+1.0
GCPR	Guaynabo City	2.45	86	⇑eP	Pn	19 23 43.2	-0.1
GCPR	Guaynabo City	2.45	86	eS	Sn	19 24 13.2	-1.4
GCPR	Guaynabo City	2.45	86	Pn	Pn	19 23 42.8	-0.5
PDPR	Patillas Dam,	2.51	93		Pn	19 23 44.3	+0.3
SDDR	Presa de Saban	2.63	289		Pn	19 23 47.2	+1.7
SDDR				IAML		19 24 25.1	
	comp=N,57nm,0.9s						
CBYP	Canovanas	2.67	87	⇑eP	Pn	19 23 45.8	-0.2
CBYP	Canovanas	2.67	87	eS	Sn	19 24 19.1	-0.3
CBYP	Canovanas	2.67	87		Pn	19 23 45.8	-0.2
CBYP				IAML		19 24 26.9	
	comp=N,407nm,0.2s						
CBYP	Canovanas	2.67	87		Sn	19 24 19.1	-0.3
CUPR	Culebra, Puert	3.21	87	⇑eP	Pn	19 23 52.1	-0.7
CUPR	Culebra, Puert	3.21	87	eS	Sn	19 24 30.2	-1.4
CUPR	Culebra, Puert	3.21	87	Pn	Pn	19 23 51.8	-1.0
CUPR	Culebra, Puert	3.21	87		Sn	19 24 30.2	-1.4
STVI	Saint Thomas	3.53	86	⇑eP	Pn	19 23 57.5	+0.7
STVI	Saint Thomas	3.53	86	Pn	Pn	19 23 56.3	-0.6
STVI				IAML		19 24 41.6	
	comp=N,51nm,0.3s						
JAKH	Jacmel	3.67	272	Pn	Pn	19 23 59.2	+0.5
CDVI	St. Croix	3.73	96	Pn	Pn	19 23 59.4	-0.1
CDVI				IAML		19 24 52.9	
	comp=N,169nm,0.5s						
CDVI				IAML		19 25 59.9	
	comp=E,125nm,0.4s						
SMRT	St. Maarten	5.31	90	Pn	Pn	19 24 20.7	+0.4

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*IDC **19** 19:22:48.7±6.8, 23°.44S×178°.14W, h0^{km}, mb3.6/2, mb1 3.8/2, mb1mx3.2/28, mbtmp3.6/2, Error ellipse: s-maj=317.4km s-min=100.1km az=158.0*

*WEL **19** 19:23:33.5±1.1, 32°S±14°×17°9E±4°3, h433^{km}±27^{km}, M4.0/11, mB4.3/6, MLv4.4/11, Mw(mB)3.4/6, Error ellipse: s-maj=0.1km s-min=0.0km az=105.1*

ISC 19 19:23:31.0±2.2, **32°.1S**±0°.2×**179°.2E**±0°.4, **h450**^{km}**, n19, σ1ˢ.65**/29, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	5.75	186	P	P	19 25 05.2	+2.6
WMGZ				S	S	19 26 18.4	+0.9
PKGZ	Pakihiroa	5.85	188	P	P	19 25 04.8	+1.1
PKGZ				S	S	19 26 17.6	-1.9
RUGZ	Raukumara Rang	5.99	191	P	P	19 25 04.7	-0.5
RUGZ				S	S	19 26 18.7	-3.4
PUZ	Puketiti	6.01	187	P	P	19 25 04.7	-0.6
PUZ				S	S	19 26 22.4	-0.1
TWGZ	Tauwhareparae	6.15	189	P	P	19 25 08.3	+1.6
TWGZ				S	S	19 26 25.1	0.0
URZ	Urewera	6.38	195	P	P	19 25 04.4	-4.6
URZ				S	S	19 26 27.0	-2.3
KARZ	Kaharoa	6.38	201	P	P	19 25 11.7	+2.6
CNGZ	Carnagh Statio	6.43	187	P	P	19 25 09.4	-0.1
RIGZ	Rimuhau	6.70	189	P	P	19 25 14.1	+1.7
RIGZ				S	S	19 26 35.3	-0.2
RAHZ	Arahi	7.02	193	P	P	19 25 16.8	+1.1
RAHZ				S	S	19 26 42.3	+0.6
ARHZ	Aropaoanui	7.37	193	P	P	19 25 21.3	+1.9
ARHZ				S	S	19 26 50.7	+2.3
KWHZ	Kaweka Forest	7.65	196	P	P	19 25 23.3	+0.8
KWHZ				S	S	19 26 52.7	-1.3
BHHZ	Black Hill Sta	7.80	198	P	P	19 25 24.3	+0.2
KAHZ	Kahuranaki	7.91	193	P	P	19 25 25.6	+0.3
KAHZ				S	S	19 27 00.8	+1.7
PXZ	Pawanui	8.14	193	P	P	19 25 27.9	+0.2
PXZ				S	S	19 27 01.5	-2.0
PRHZ	Porangahau	8.41	193	P	P	19 25 31.8	+1.2
PRHZ				S	S	19 27 06.6	-2.3
ASAR	Alice Springs	40.64	270	P	P	19 30 56.6	+26
	0.3nm,0.4s,baz=94,slow=7.4,SNR=5.2						
WRA	Warramunga Arr	41.78	276	P	P	19 30 59.2	+19
	0.5nm,0.3s,baz=104,slow=8.3,SNR=28						
FINES	FINESS Array B	145.83	337	PKP	PKPdf	19 42 15.4	-1.2
	1.1nm,0.8s,baz=90,slow=2.5,SNR=4.2						

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*TUL **19** 19:37:58.3±0.8, 36°.659N±0°.010×98°.46W±0°.02, h10^{km}±5^{km}, ML2.5, mb_Lg2.4/6(NEIC), Error ellipse: s-maj=2.4km s-min=1.4km az=103.0*

NEIC 19 19:37:58.2±0.7, **36°.671N**±0°.010×**98°.48W**±0°.02, **h5**^{km}±2^{km}**, Error ellipse: s-maj=3.0km s-min=2.9km az=111.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK032	Salt Plains WL	0.25	58		Pg	19 38 03.4	+0.3
OK032				Sg	Sg	19 38 06.4	-0.1
CROK	Carrier	0.43	113	Pg	Pg	19 38 06.3	-0.2
CROK				Sg	Sg	19 38 12.5	+0.3
KAN14	Manchester OK	0.50	55	Pg	Pg	19 38 07.9	0.0
KAN14				Sg	Sg	19 38 14.1	-0.3
U32A	Winter Ranch,	0.51	236	Pg	Pg	19 38 08.3	+0.2
GC02	Grant County #	0.53	70	Pg	Pg	19 38 08.3	0.0
GC02					Sg	19 38 15.5	+0.2
KAN10	Anthony SW Sta	0.55	34		Pg	19 38 09.0	+0.2
KAN16	Harper SW Stat	0.64	31		Pg	19 38 10.7	+0.1
KAN05	Bluff City Nor	0.65	48	Pg	Pg	19 38 10.8	0.0
KAN08	Anthony NE Sta	0.69	36	Pg	Pg	19 38 11.5	+0.1
KAN12	Harper NE Stat	0.73	31		Pg	19 38 12.2	-0.2
KAN01	Argonia South	0.75	50	Pg	Pg	19 38 12.5	-0.1
KAN01				Sg	Sg	19 38 22.8	+0.4
KAN06	Argonia West S	0.76	40		Pg	19 38 12.7	-0.1
KAN09	Caldwell North	0.83	56	Pg	Pg	19 38 13.7	-0.4
KAN13	South Haven SW	0.87	67	Pg	Pg	19 38 14.0	-1.0
BLOK	Blackwell	1.02	85		Pg	19 38 16.9	-0.8
OK031	S. Brethren Rd	1.50	118		Pn	19 38 25.2	-0.6
QUOK	Quay	1.51	109		Pn	19 38 25.3	-0.6
OK030	Cody Creek RV	1.55	118		Pn	19 38 25.6	-0.9
T35A	Sooner Cattle	1.59	81		Pn	19 38 27.2	0.0
WMOK	Wichita Mounta	1.94	187	Pn	Pn	19 38 31.9	-0.1
X34A	Smith Ranch, M	2.13	166	Pn	Pn	19 38 35.2	+0.8
X34A				IAmb_Lg		19 39 06.6	
	comp=Z,24nm,0.8s						
TUL1	Leonard	2.30	108	IAmb_Lg		19 39 10.0	
	comp=Z,13nm,0.8s						
CBKS	Cedar Bluff	2.36	335	IAmb_Lg		19 39 13.5	
	comp=Z,13nm,0.7s						
OGNE	Ogallala	5.09	328	IAmb_Lg		19 40 42.8	
	comp=Z,6.2nm,0.7s						

IDC 19 19:44:38.7±2.1, **0°.99N**×**127°.25E, h0**^{km}**, mb3.4**/3, **mb1 3.6**/3, **mb1mx3.2**/36, **mbtmp3.4**/3, **Error ellipse: s-maj=167.2km s-min=25.6km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.93	162	P	P	19 49 33.7	-0.3
	0.9nm,0.7s,baz=341,slow=11,SNR=8.8						
ASAR	Alice Springs	25.35	166	P	P	19 50 07.9	+0.3
	0.7nm,0.9s,baz=348,slow=11,SNR=6.6						
MKAR	Makanchi Array	60.10	326	P	P	19 54 47.8	-0.1
	0.3nm,0.5s,baz=122,slow=8.3,SNR=6.9						

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*GUC **19** 20:17:43.7±0.7, 21°.93S×68°.64W, h118^{km}±3^{km}, ML3.7*

ISC 19 20:17:42.9±1.1, **21°.90S**±0°.04×**68°.72W**±0°.09, **h128**^{km}±8^{km}**, n22, σ0ˢ.82**/39, **14C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.50	281	⇑iP	Pn	20 18 02.0	+0.1
PB09				i S	Sn	20 18 16.4	+0.1
LVC	Limon Verde	0.73	194	eP	Pn	20 18 02.9	-0.8
LVC				i S	Sn	20 18 18.1	-1.4
PB03	IPOC Station P	0.97	261	⇑iP	Pn	20 18 05.6	+0.1
PB03				i S	Sn	20 18 22.2	-0.5
PB03				IAML		20 18 23.2	
	comp=N,2µm,0.1s						
PB07	IPOC Station P	1.10	279	⇑iP	Pn	20 18 07.0	+0.3
PB07				i S	Sn	20 18 24.8	-0.1
PB07				IAML		20 18 26.9	
	comp=E,2µm,0.4s						
PB01	IPOC Station P	1.11	320	⇑iP	Pn	20 18 06.8	0.0
PB01				i S	Sn	20 18 24.8	-0.2
PB01				IAML		20 18 26.6	
	comp=N,2µm,0.2s						
PB06	IPOC Station P	1.13	224	⇑iP	Pn	20 18 07.2	+0.2
PB06				i S	Sn	20 18 25.2	-0.2
PB06				IAML		20 18 26.8	
	comp=E,1µm,0.2s						
PB02	IPOC Station P	1.24	297	⇑iP	Pn	20 18 08.2	+0.1
PB02				i S	Sn	20 18 27.1	-0.1
PB04	IPOC Station P	1.40	252	⇑iP	Pn	20 18 10.1	+0.2
PB04				i S	Sn	20 18 29.8	-0.7
PB04				IAML		20 18 32.8	
	comp=E,668nm,0.3s						
PB15	IPOC Station P	1.48	208	⇑iP	Pn	20 18 11.1	+0.2
PB15				eS	Sn	20 18 32.3	+0.1
PB05	IPOC Station P	1.67	235	⇑iP	Pn	20 18 13.1	+0.2
PB05				i S	Sn	20 18 35.5	-0.3
PATCX	Punta Patache	1.71	308	⇑iP	Pn	20 18 13.4	0.0
PATCX				i S	Sn	20 18 36.7	0.0
PATCX				IAML		20 18 38.2	
	comp=N,1µm,0.3s						
PB08	IPOC Station P	1.79	347	⇑iP	Pn	20 18 15.4	+0.7
PB08				i S	Sn	20 18 39.6	+0.7
PB08				IAML		20 18 41.7	
	comp=E,703nm,0.4s						
TA01	Diego Aracena	1.90	314	eP	Pn	20 18 15.5	-0.1
TA01				i S	Sn	20 18 40.5	0.0
TA01				IAML		20 18 42.7	
	comp=E,920nm,0.7s						
HMBC	Humberstone	1.95	326	⇑iP	Pn	20 18 15.8	-0.4
HMBC				i S	Sn	20 18 41.1	-0.6
HMBC				IAML		20 18 43.5	
	comp=E,1µm,0.4s						
PB11	IPOC Station P	2.30	337	⇑iP	Pn	20 18 20.3	-0.3
PB11				i S	Sn	20 18 49.0	-0.6
PB10	IPOC Station P	2.34	226	⇑iP	Pn	20 18 20.8	-0.1
PB10				i S	Sn	20 18 48.5	-1.7
PB12	IPOC Station P	3.60	335	eP	Pn	20 18 36.0	-1.4
PB12				eS	Sn	20 19 17.3	-2.3
AC02	Maricunga	4.93	184	eP	Pn	20 18 54.9	-0.6
VNA3	Neumayer Olymp	59.64	161	P	P	20 27 32.3	-0.8
VNA1	Neumayer--Stat	59.85	160	P	P	20 27 36.7	+2.1
VNA2	Neumayer--Watz	60.22	161	P	P	20 27 38.3	+1.2
	baz=294,slow=6.6						
SNAA	Sanae	61.85	161	P	P	20 27 48.9	+0.8

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*IDC **19** 20:19:32.7±1.2, 6°.75N×72°.90W, h167^{km}±13^{km}, mb3.1/2, mb1 3.6/4, mb1mx3.2/29, mbtmp3.7/4, Error ellipse: s-maj=33.6km s-min=14.7km az=131.0*

*RSNC **19** 20:19:33.2±1.0, 6°.82N×73°.14W, h150^{km}±4^{km}, ML3.8, Mw3.8, Fault plane solution: NP1:ϕ_s38.00000°, δ18.00000°, λ-162.00000°.*

ISC 19 20:19:32.0±0.8, **6°.84N**±0°.03×**73°.12W**±0°.03, **h157**^{km}±6^{km}**, n42, σ1ˢ.39**/77, **3C-5D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.25	195	i P	Pn	20 19 53.5	-0.1
BARC				eS	Sn	20 20 08.5	-1.6
BARC				i		20 20 10.6	
	comp=Z,1µm,0.3s						
BRRC	Barranca, Sant	0.65	294	⇓iP	Pn	20 19 55.3	+0.4
BRRC				eS	Sn	20 20 12.4	0.0
BRRC				i		20 20 16.4	
	comp=Z,832nm,0.3s						
PAMC	Pamplona, Colo	0.65	40	⇓eP	Pn	20 19 56.3	+0.8
PAMC				eS	Sn	20 20 13.3	-0.2
PAMC				i		20 20 15.7	
	comp=Z,2µm,0.5s						
RUSC	La Rusia	0.94	178	eP	Pn	20 19 57.4	-0.2
RUSC				eS	Sn	20 20 15.9	-1.2
RUSC				i		20 20 17.4	
	comp=Z,868nm,0.3s						
TAMC	Tame, Arauca	1.38	107	⇓iP	Pn	20 20 01.9	+1.0
TAMC				eS	Sn	20 20 23.9	+0.8
OCAC	Ocana	1.41	352	eP	Pn	20 20 01.5	+0.2
OCAC				eS	Sn	20 20 23.4	-0.4
OCAC				i		20 20 27.5	
	comp=Z,1µm,0.2s						
SPBC	San Pablo de B	1.51	219	eP	Pn	20 20 02.2	-0.1
SPBC				eS	Sn	20 20 24.6	-1.1
SPBC				i		20 20 27.1	
	comp=Z,1µm,0.4s						
ZARC	Zaragoza, Cauc	1.84	291	eP	Pn	20 20 06.0	+0.2
ZARC				eS	Sn	20 20 31.4	-0.4
ZARC				i		20 20 37.1	
	comp=Z,502nm,0.4s						
NORC	Norcasia	2.15	234	eP	Pn	20 20 09.6	+0.2
NORC				eS	Sn	20 20 37.8	-0.4
NORC				i		20 20 45.4	
	comp=Z,348nm,0.1s						
SMLC	San Martn de	2.17	334	eP	Pn	20 20 09.8	+0.3
SMLC				eS	Sn	20 20 38.1	-0.4
SMLC				i		20 20 41.9	
	comp=Z,982nm,0.1s						
ROSC	El Rosal	2.32	211	P	Pn	20 20 13.4	+1.8
	comp=Z,163nm,0.3s,baz=260,slow=18,SNR=65						
ROSC				S	Sn	20 20 39.8	-2.5
	comp=Z,59nm,0.3s,baz=293,slow=19,SNR=9.8						
ROSC	El Rosal	2.32	211	⇑eP	Pn	20 20 12.8	+1.1
ROSC				eS	Sn	20 20 42.3	0.0
ROSC				i		20 20 47.0	
	comp=Z,571nm,0.3s						
HELC	Santa Helena	2.48	255	eP	Pn	20 20 14.6	+1.0
HELC				eS	Sn	20 20 45.0	-0.6
HELC				i		20 20 51.6	
	comp=Z,198nm,0.3s						
UREC	San Jos de Ur	2.56	291	eP	Pn	20 20 13.4	-0.8
UREC				eS	Sn	20 20 44.0	-2.8
UREC				i		20 20 56.5	
	comp=Z,339nm,0.3s						
SOCV	Socops	2.66	57	⇓iP	Pn	20 20 15.3	-0.1
SOCV				eS	Sn	20 20 47.6	-1.5
LL1C	La Loma 1 Cana	2.72	351	eP	Pn	20 20 18.3	+2.2
LL1C				eS	Sn	20 20 51.3	+0.9
LL1C				i		20 20 59.3	
	comp=Z,876nm,0.2s						
GUY2C	Guyana, Caldas	2.75	234	eP	Pn	20 20 17.6	+0.6
GUY2C				eS	Sn	20 20 51.9	+0.1
GUY2C				i		20 21 03.7	
	comp=Z,254nm,0.5s						
VILC	Villavicencio,	2.77	192	eP	Pn	20 20 16.8	-0.1
VILC				eS	Sn	20 20 50.9	-0.9
PTGC	Puerto Gaitan,	2.80	159	⇑eP	Pn	20 20 16.6	-0.5
PTGC				eS	Sn	20 20 50.1	-2.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PTGC				i		20 20 55.0	
	comp=Z,457nm,0.3s						
CBOC	Ciudad Bolivar	3.04	252	eP	Pn	20 20 21.5	+1.2
CBOC				eS	Sn	20 20 57.0	-0.6
CBOC				i		20 21 08.8	
	comp=Z,72nm,0.5s						
DBBC	Dabeiba	3.08	273	eP	Pn	20 20 21.0	+0.3
DBBC				i		20 21 03.1	
	comp=Z,600nm,0.2s						
MOTC	Monteria, Cord	3.17	308	eP	Pn	20 20 20.6	-1.3
MOTC				eS	Sn	20 20 58.9	-1.7
MOTC				i		20 21 13.2	
	comp=Z,116nm,0.5s						
SDV	Santo Domingo	3.19	50	P	Pn	20 20 23.0	+0.7
	comp=Z,10nm,0.3s,baz=227,slow=10,SNR=7.9						
SDV				S	Sn	20 21 00.6	-0.6
	comp=Z,55nm,0.3s,baz=49,slow=21,SNR=42						
SDV	Santo Domingo	3.19	50	eP	Pn	20 20 23.0	+0.7
SDV				eS	Sn	20 20 59.8	-1.4
SDV				i		20 21 03.7	
	comp=Z,107nm,0.3s						
ANIL	Santa Ana	3.26	224	eP	Pn	20 20 24.7	+1.5
ANIL				eS	Sn	20 21 03.1	+0.2
ANIL				i		20 21 10.4	
	comp=Z,637nm,0.3s						
PRAC	Prado	3.57	210	eP	Pn	20 20 26.9	-0.1
PRAC				eS	Sn	20 21 09.0	-0.6
PRAC				i		20 21 15.4	
	comp=Z,156nm,0.2s						
ORTC	Ortega, Tolima	3.60	216	eP	Pn	20 20 27.8	+0.5
ORTC				eS	Sn	20 21 10.8	+0.5
ORTC				i		20 21 14.9	
	comp=Z,142nm,0.3s						
ELOV	Elorza	3.61	87	i P	Pn	20 20 27.8	+0.4
ELOV				eS	Sn	20 21 09.5	-1.0
SJCC	San Jacinto, C	3.66	326	eP	Pn	20 20 27.2	-0.9
SJCC				eS	Sn	20 21 08.5	-3.2
SJCC				i		20 21 12.3	
	comp=Z,78nm,0.4s						
PLMC	San Jos del P	3.69	239	i P	Pn	20 20 29.1	+0.6
PLMC				eS	Sn	20 21 11.5	-0.9
PLMC				i		20 21 17.4	
	comp=Z,80nm,0.3s						
YOTC	Yotoco, Valle	4.29	229	eP	Pn	20 20 35.8	-0.5
YOTC				eS	Sn	20 21 26.3	-0.1
YOTC				i		20 21 38.1	
	comp=Z,41nm,0.9s						
GUVC	San Jose del G	4.29	173	eP	Pn	20 20 36.0	-0.4
GUVC				eS	Sn	20 21 24.5	-1.9
GUVC				i		20 21 30.8	
	comp=Z,221nm,0.3s						
SMRC	Santa Marta, M	4.43	346	eP	Pn	20 20 38.8	+0.7
SMRC				eS	Sn	20 21 26.5	-3.2
SMRC				i		20 21 30.0	
	comp=Z,78nm,0.3s						
MACC	Macarena, Meta	4.72	189	⇑eP	Pn	20 20 40.4	-1.5
MACC				eS	Sn	20 21 31.2	-5.3
MARP	Paez Belalcaza	4.87	216	eP	Pn	20 20 44.5	+0.3
MARP				eS	Sn	20 21 38.3	-2.2
URIC	Uribia, Colomb	4.96	13	⇓iP	Pn	20 20 44.0	-1.0
URIC				eS	Sn	20 21 38.8	-3.3
PCON	Cinco Dias	5.55	216	eP	Pn	20 20 54.4	+1.1
SOTA	Rioblanco	5.83	217	eP	Pn	20 20 58.3	+1.3
TXAR	Lajitas Array	36.45	312	P	P	20 26 23.4	+1.4
	comp=Z,0.5nm,0.6s,baz=128,slow=9.5,SNR=6.3						
NVAR	Mina Array Bea	51.47	315	P	P	20 28 23.4	+1.7
	comp=Z,0.2nm,0.4s,baz=133,slow=5.3,SNR=3.7						
ASAR	Alice Springs	149.12	234	PKPbc	PKPbc	20 39 02.0	-0.7
	comp=Z,0.8nm,0.6s,baz=122,slow=3.3,SNR=8.8						
WRA	Warramunga Arr	150.35	241	PKPbc	PKiKP	20 39 05.2	-1.2
	comp=Z,0.5nm,0.4s,baz=110,slow=2.7,SNR=16						

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*NEIC **19** 20:20:27.1±0.8, 56°.97N±0°.04×154°.56W±0°.07, h60^{km}±9^{km}, Error ellipse: s-maj=6.0km s-min=5.1km az=153.0*

AEIC 19 20:20:28±1.0**, 56°.98N**±0°.04×**154°.58W**±0°.06**, h50**^{km}±8^{km}**, ML3.2, ML3.6**/40(NEIC)**, Error ellipse: s-maj=6.0km s-min=5.0km az=198.0, Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SII	Sitkinak Islan	0.47	152		Pn	20 20 38.5	-0.4
SII					Sn	20 20 47.2	+0.5
OHAK	Old Harbor	0.75	70		Pn	20 20 41.7	-0.6
OHAK					Sn	20 20 52.7	-0.1
CAHL	Cahill	1.15	340		Pn	20 20 46.7	-1.0
PLK3	Peulik 3	1.16	309		Pn	20 20 47.2	-0.7
PLK3					Sn	20 21 02.4	-0.3
KABR	Katmai Barrier	1.18	350		Pn	20 20 47.2	-1.0
MGLS	Mageik Landsli	1.20	345		Pn	20 20 47.9	-0.6
MGLS					Sn	20 21 03.7	0.0
KJL	Kejulik	1.21	334		Pn	20 20 47.8	-0.7
PLK2	Peulik 2	1.23	311		Pn	20 20 48.4	-0.5
CHIR	Chirikof Islan	1.29	207		Pn	20 20 47.8	-1.8
KDAK	Kodiak Island	1.35	52		Pn	20 20 49.8	-0.6
KDAK					Sn	20 21 06.8	-0.4
KABU	Katmai Buttres	1.35	344		Pn	20 20 50.6	+0.1
PLK1	Peulik 1	1.38	308		Pn	20 20 50.6	-0.2
KAPH	Katmai Pasha	1.63	4		Sn	20 21 14.3	+0.1
KAHC	Katmai Hardscr	1.69	352		Pn	20 20 54.6	-0.6
Q19K	Cape Douglas,	2.02	14		Pn	20 20 59.4	-0.2
Q19K	Cape Douglas,	2.02	14	IAML		20 21 28.9	
	comp=N,354nm,1.1s						
Q19K				IAML		20 21 48.9	
	comp=E,487nm,1.1s						
CHGN	Chignik	2.22	254		Pn	20 21 01.8	-0.5
CHGN				IAML		20 21 34.2	
	comp=N,316nm,0.8s						
CHGN				IAML		20 21 34.4	
	comp=E,272nm,0.3s						
P18K	Big Mountain,	2.45	352		Pn	20 21 05.3	-0.2
VNHG	Veniaminof 1	2.65	255		Pn	20 21 08.6	+0.4
P19K	Oil Pt	2.78	14		Pn	20 21 09.6	-0.4
P19K	Oil Pt	2.78	14	IAML		20 22 04.9	
	comp=N,188nm,3.5s						
P19K				IAML		20 22 30.2	
	comp=E,138nm,4.7s						
O18K	Koktuh Hills	2.91	354		Pn	20 21 10.8	-0.9
ILS	Iliamna Low So	3.10	14		Pn	20 21 13.4	-1.0
CNPM	China Poot	3.11	33		Pn	20 21 14.1	-0.4
CNPM	China Poot	3.11	33	IAML		20 22 05.1	
	comp=N,175nm,3.0s						
CNPM				IAML		20 22 15.5	
	comp=E,113nm,2.5s						
ILSW	Iliamna Southw	3.11	13		Pn	20 21 13.4	-1.2
IVE	Iliamna Volcan	3.16	14		Pn	20 21 14.9	-0.3
O20K	Slope Mountain	3.28	17		Pn	20 21 16.3	-0.6
BRLK	Bradley Lake	3.41	33		Pn	20 21 17.6	-1.0
BRLK	Bradley Lake	3.41	33	IAML		20 21 47.3	
	comp=N,100nm,3.3s						
BRLK				IAML		20 22 18.7	
	comp=E,123nm,3.3s						
BRSE	Bradley Lake S	3.43	34		Pn	20 21 18.0	-0.9
RED	Redoubt Volcan	3.58	15		Pn	20 21 20.7	-0.3
RSO	Redoubt South	3.62	14	Pn	Pn	20 21 21.7	0.0
SDPT	Sand Point	3.68	246	Pn	Pn	20 21 23.1	+0.9
DFR	Drift River	3.76	14		Pn	20 21 23.3	-0.2
RDT	Redoubt	3.78	17		Pn	20 21 23.5	-0.3
N19K	Bonanza Creek	3.85	1		Pn	20 21 24.2	-0.5
N19K	Bonanza Creek	3.85	1	IAML		20 22 30.8	
	comp=N,59nm,3.0s						
N19K				IAML		20 22 43.4	
	comp=E,72nm,4.5s						
SVW2	Sparrevohn	4.17	353	Pn	Pn	20 21 28.4	-0.6
SVW2				IAML		20 22 42.0	
	comp=E,58nm,5.0s						
SVW2				IAML		20 23 15.6	
	comp=N,50nm,5.0s						
SLKM	Skilak Lake	4.21	31		Pn	20 21 28.5	-1.1
SPU	Mount Spurr	4.42	16		Pn	20 21 32.1	-0.3
SPNN	North Nagishla	4.51	12		Pn	20 21 34.0	+0.2
STLK	Strandline Lak	4.75	16		Pn	20 21 36.9	-0.1
RC01	Rabbit Creek A	4.83	29	Pn	Pn	20 21 37.1	-0.9
RC01				IAML		20 23 29.1	
	comp=N,45nm,3.6s						
RC01				IAML		20 24 19.8	
	comp=E,58nm,2.9s						
SUA	Susitna One	4.91	22		Pn	20 21 38.6	-0.7
M19K	Big River Lodg	4.95	1		Pn	20 21 38.9	-0.8
M19K	Big River Lodg	4.95	1	IAML		20 22 47.2	
	comp=N,57nm,4.9s						
M19K				IAML		20 23 54.6	
	comp=E,43nm,4.0s						
PWL	Port Wells	5.06	37		Pn	20 21 39.8	-1.4
PWL	Port Wells	5.06	37	IAML		20 24 43.0	
	comp=N,55nm,3.9s						
L19K	White Mountain	5.22	359		Pn	20 21 42.8	-0.7
SKT	Skwentna	5.25	16		Pn	20 21 42.9	-1.0
SKT	Skwentna	5.25	16	IAML		20 23 15.3	
	comp=E,46nm,4.9s						
KNK	Knik Glacier	5.45	33		Pn	20 21 45.0	-1.6
GLI	Glacier Island	5.51	42		Pn	20 21 45.6	-1.8
GHO	Glory Hole Cre	5.61	29		Pn	20 21 47.3	-1.6
FID	Port Fidalgo	5.66	45		Pn	20 21 47.0	-2.4
SML	Sawmill	5.80	31	Pn	Pn	20 21 50.5	-1.0
SCM	Sheep Creek Mo	6.12	34	Pn	Pn	20 21 54.5	-1.3
KLU	Klutina	6.34	41	Pn	Pn	20 21 57.5	-1.4
K20K	Telida	6.41	2		Pn	20 21 59.8	+0.1
M24K	Tolsona, Glenn	6.69	36	Pn	Pn	20 22 02.8	-0.8
TRF	Thorofare Moun	6.84	16	Pn	Pn	20 22 04.6	-1.1
KTH	Kantishna Hill	6.84	14	Pn	Pn	20 22 04.7	-1.0
DHY	Denali Highway	7.10	28	Pn	Pn	20 22 07.8	-1.4
GLB	Gilahina Butte	7.11	47	Pn	Pn	20 22 08.2	-1.1
VRDI	Verde Repeater	7.14	49	Pn	Pn	20 22 09.4	-0.5
ISLE	Juniper Island	7.32	55	Pn	Pn	20 22 11.5	-0.8
MCK	McKinley	7.33	20	Pn	Pn	20 22 11.8	-0.5
GRNC	Granite Creek	7.64	55	Pn	Pn	20 22 15.6	-1.2
TABL	Table Mountain	7.81	58	Pn	Pn	20 22 18.1	-0.9
H21K	Melozitna Rive	8.75	5	Pn	Pn	20 22 30.4	-1.3
IMAR	Indian Mountai	9.05	2	Pn	Pn	20 22 34.6	-1.2

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*SJA **19** 20:29:26.3±0.5, 31°.12S×71°.95W, h6^{km}±2^{km}, ML4.2, MW3.9*

*IDC **19** 20:29:27.5±0.8, 31°.12S×71°.68W, h0^{km}, mb4.2/5, mb1 4.2/9, mb1mx4.0/26, mbtmp4.1/9, ML4.1/4, MS3.1/3, Ms1 3.1/3, ms1mx2.9/19, Error ellipse: s-maj=32.0km s-min=19.4km az=98.0*

*NEIC **19** 20:29:29.9, 31°.08S×72°.03W, h40^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$0.58; M$_{\theta\theta}$-0.15; M$_{\phi\phi}$-0.43; M$_{r\theta}$0.09; M$_{\theta\phi}$-0.00; M$_{\phi r}$1.40; Fault plane solution: M$_0$1.50000×10^{15} NP1:φ$_s$180.61000°, δ9.85000°, λ87.33000°. NP2:φ$_s$3.33000°, δ80.16000°, λ90.46000°. Principal axes: T 1.5643, Plg55.0000°, Azm274.0000°; N -0.1473, Plg0.0000°, Azm183.0000°; P -1.4170, Plg35.0000°, Azm93.0000°;*

*NEIC **19** 20:29:29.9±1.0, 31°.08S±0°.05×72°.0W±0°.1, h24^{km}±6^{km}, mb4.7/2, Mwr4.1/24, ML4.2(GUC) Error ellipse: s-maj=15.6km s-min=6.7km az=95.0*

*GUC **19** 20:29:31.5±0.7, 31°.13S×71°.73W, h40^{km}±3^{km}, ML4.3*

ISC 19 20:29:27.1±1.5**, 31°.07S**±0°.02×**71°.91W**±0°.05**, h4**^{km}±9^{km}**, n98, σ1^{s}60**/117**, mb4.5**/5**, 8C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.46	31	⇑iP	Pn	20 29 41.7	+1.3
CO06				i S	Sb	20 29 48.6	+3.6
CO06				IAML		20 29 49.8	
	comp=E,33μm,0.3s						
CO06	Fray Jorge	0.46	31	Pn	Pn	20 29 41.1	+0.6
CO05	La Serena	1.29	27	eP	Pg	20 29 54.1	+2.4
CO05				i S	Sn	20 30 10.4	+0.9
CO05	La Serena	1.29	27		Pg	20 29 54.2	+2.4
GO04	Tololo Observa	1.31	47	⇓iP	Pg	20 29 53.8	+1.5
GO04				i S	Sn	20 30 10.2	-0.3
GO04	Tololo Observa	1.31	47	Pn	Pg	20 29 53.9	+1.6
GO04	Tololo Observa	1.31	47	eP	Pb	20 29 52.6	+0.2
VA06	Catapilco	1.57	161	⇑iP	Pb	20 29 56.6	-0.2
VA06				i S	Sn	20 30 15.2	-1.4
VA06				IAML		20 30 22.1	
	comp=N,6μm,0.4s						
VA01	Torpederas	1.96	173	Pn	Pn	20 30 01.6	+0.5
ROCH	El Roble	2.04	158	⇑iP	Pn	20 30 03.5	+1.0
ROCH				⇑iP	Pn	20 30 03.4	+1.0
ROCH				i S	Sn	20 30 28.6	+0.1
ROCH				i S	Sn	20 30 28.7	+0.1
ROCH				IAML		20 30 34.3	
	comp=E,4μm,0.4s						
ROCH				IAML		20 30 35.2	
	comp=N,5μm,0.6s						
ROC1	El Roble	2.05	158	eP	Pn	20 29 52.6	-10
ROC1				eP	Pb	20 30 03.4	-1.6
ROC1				eS	Sb	20 30 31.3	+0.5
VA03	San Esteban	2.05	146	⇑iP	Pb	20 30 03.6	-1.3
VA03				i S	Sn	20 30 27.8	-0.7
VA03				IAML		20 30 32.7	
	comp=E,4μm,0.4s						
VA03	San Esteban	2.05	146		Pn	20 30 03.5	+1.1
VA03	San Esteban	2.05	146	eP	Pn	20 30 03.2	+0.8
VA03				eS	Sb	20 30 30.1	-0.6
VA03				IAML		20 30 38.6	
	comp=Z,2μm,0.5s						
MT02	Curacav	2.28	163	eP	Pn	20 30 06.2	+0.7
MT02	Curacav	2.28	163	Pn	Pn	20 30 06.1	+0.6
AROD	Rodeo	2.29	67	eP	Pb	20 30 08.4	-0.7
AROD				eS	Sb	20 30 38.3	+0.5
LCO	Las Campanas	2.31	27	⇑iP	Pb	20 30 08.5	-0.9
LCO				i S	Sb	20 30 37.1	-1.2
LCO	Las Campanas	2.31	27		Pn	20 30 07.4	+1.3
LCO	Las Campanas	2.31	27	eP	Pb	20 30 08.4	-1.0
PEL	Peldehue	2.31	154	eP	Pn	20 30 07.4	+1.4
PEL				i S	Sn	20 30 34.7	-0.3
PEL	Peldehue	2.31	154	Pn	Pn	20 30 07.3	+1.3
PEL	Peldehue	2.31	154	eP	Pn	20 30 07.0	+1.0
PEL				eS	Sn	20 30 31.6	-3.3
AUSP	Uspallata	2.44	119	eP	Pb	20 30 09.8	-1.9
AUSP				eS	Sb	20 30 42.2	-0.1
MT05	Renca	2.52	157	eP	Pn	20 30 10.4	+1.5
MT05				eS	Sn	20 30 41.4	+1.3
MT05	Renca	2.52	157		Pn	20 30 10.0	+1.1
MT05	Renca	2.52	157	eP	Pn	20 30 10.0	+1.2
MT05				eS	Sn	20 30 26.1	-14
MT05				IAML		20 30 57.3	
	comp=Z,1μm,1.1s						
VA05	Santo Domingo	2.59	174	eP	Pn	20 30 10.5	+0.7
VA05				eS	Sb	20 30 47.0	+0.7
VA05				IAML		20 30 54.2	
	comp=N,3μm,0.4s						
VA05	Santo Domingo	2.59	174		Pn	20 30 10.4	+0.7
MT09	Talagante	2.81	164	eP	Pn	20 30 14.7	+1.8
MT09				eS	Sn	20 30 48.4	+1.1
MT09				IAML		20 30 58.4	
	comp=E,1μm,0.5s						
MT09	Talagante	2.81	164	Pn	Pn	20 30 14.0	+1.1
ZON	Zonda	2.81	101		Pn	20 30 14.9	+2.1
MT01	Popeta	2.84	169	⇑iP	Pn	20 30 14.2	+1.0
MT01	Popeta	2.84	169		Pn	20 30 13.7	+0.5
MT01	Popeta	2.84	169	eP	Pn	20 30 14.0	+0.8
MT01				eS	Sn	20 30 50.1	+2.3
MT01				IAML		20 30 57.6	
	comp=Z,756nm,0.7s						
AC04	Llanos de Chal	2.95	15		Pn	20 30 15.5	+0.8
AC04	Llanos de Chal	2.95	15	eP	Pn	20 30 17.1	+2.4
AC04				eS	Sb	20 30 54.6	-2.0
AC04				IAML		20 31 06.9	
	comp=Z,573nm,0.5s						
RTCV	Cerro Valdivia	2.99	106	eP	Pn	20 30 17.2	+1.9
RTCV				eS	Sb	20 30 58.6	+0.9
RTCV				IAML		20 31 06.9	
	comp=Z,424nm,0.9s						
BO04	La Punta	3.11	160	eP	Pn	20 30 18.7	+1.8
BO04				eS	Sb	20 30 58.0	-3.3
BO04				IAML		20 31 09.0	
	comp=E,869nm,0.5s						
BO01	Tunca	3.38	168	eP	Pn	20 30 21.6	+0.9
BO01	Tunca	3.38	168	Pn	Pn	20 30 21.2	+0.6
BO01	Tunca	3.38	168	eP	Pn	20 30 22.0	+1.3
BO01				eS	Sn	20 31 02.6	+1.4
BO01				IAML		20 31 16.4	
	comp=Z,296nm,0.7s						
GO03	Copiap	3.76	23	eP	Pn	20 30 28.8	+2.8
GO03				eS	Sb	20 31 16.6	-3.4
GO03	Copiap	3.76	23		Pn	20 30 27.4	+1.4
GO03	Copiap	3.76	23	eP	Pn	20 30 28.9	+3.0
GO03				eS	Sg	20 31 25.4	-2.5
BO02	Sierra Bellavi	3.83	166		Pn	20 30 28.1	+1.2
BO02	Sierra Bellavi	3.83	166	eP	Pn	20 30 28.2	+1.3
BO02				eS	Sn	20 31 13.1	+0.7
BO02				IAML		20 31 26.3	
	comp=Z,406nm,0.8s						
GO05	Huala	3.93	180		Pn	20 30 28.3	+0.1
VCA	Vinchina	3.97	55	⇑iP	Pb	20 30 34.0	-3.7
VCA				eS	Sb	20 31 27.4	+1.2
VCA	Vinchina	3.97	55	eP	Pn	20 30 32.0	+3.1
VCA				eS	Sb	20 31 20.6	-5.6
VCA				IAML		20 31 34.0	
	comp=Z,1μm,0.4s						
ACLC	CERRO LA CRUZ	4.59	70	eP	Pn	20 30 40.6	+3.1
ACLC				eS	Sn	20 31 34.6	+3.2
RFA	San Rafael	4.69	143	eP	Pn	20 30 41.0	+2.3
RFA				IAML		20 31 58.5	
	comp=Z,129nm,1.4s						
ML02	Panimavida	4.70	175	Pn	Pn	20 30 38.3	-0.4
AC02	Maricunga	4.87	31		Pn	20 30 42.9	+1.2
H03N1	Juan Fernandez	6.38	246	T	T	20 37 48.4	
	baz=76,slow=72,SNR=418						
H03N3	Juan Fernandez	6.40	246	T	T	20 37 44.7	
	baz=76,slow=72,SNR=416						
H03N2	Juan Fernandez	6.40	247	T	T	20 37 51.6	
	baz=76,slow=72,SNR=446						
PB14	IPOC Station P	6.56	12		Pn	20 31 04.9	+0.3
LC01	Cunco	7.81	180	Pn	Pn	20 31 21.3	-0.2
PB15	IPOC Station P	8.13	16	Pn	Pn	20 31 26.7	+0.6
PB06	IPOC Station P	8.59	15	Pn	Pn	20 31 32.1	-0.2
LVC	Limon Verde	8.84	18	Pn	Pn	20 31 38.2	+2.2
	comp=Z,0.2nm,0.3s,baz=201,slow=14,SNR=1.4						
LVC				LR	LR	20 35 11.8	
	comp=Z,110nm,21.5s,baz=213,slow=39						
LVC	Limon Verde	8.84	18	Pn	Pn	20 31 33.2	-2.8
PB09	IPOC Station P	9.54	15	Pn	Pn	20 31 43.3	-2.1
PLCA	Paso Flores	9.70	174	Pn	Pn	20 31 48.6	+1.1
	comp=Z,0.7nm,0.3s,baz=340,slow=11,SNR=16						
PLCA				LR	LR	20 35 42.9	
	comp=Z,86nm,18.6s,baz=350,slow=39						
PLCA	Paso Flores	9.70	174	Pn	Pn	20 31 48.4	+0.9
LL04	Puerto Octay	9.83	182	Pn	Pn	20 31 48.4	-0.7
TRQA	Tornquist	10.75	133	Pn	Pn	20 32 02.3	+0.5
ITQB	Itaqui	13.28	88	Pn	Pn	20 32 34.5	-1.9
CPUP	Villa Florida	13.64	73	Pn	Pn	20 32 40.9	-0.5
	comp=Z,0.5nm,0.3s,baz=258,slow=7.1,SNR=1.9						
CPUP				Sn	Sn	20 35 11.3	-2.0
	comp=Z,0.3nm,0.3s,baz=341,slow=18,SNR=1.6						
SIV	San Ignacio	17.98	36	P	P	20 33 38.7	+0.1
	comp=Z,0.3nm,0.3s,baz=243,slow=12,SNR=4.0						
USHA	Ushuaia	23.88	175	P	P	20 34 42.6	+1.2
	comp=Z,8.4nm,0.6s,baz=354,slow=8.6,SNR=6.3						
VNA3	Neumayer Olymp	52.03	159	P	P	20 38 37.3	0.0
VNA1	Neumayer--Stat	52.33	158	P	P	20 38 39.9	+0.4
VNA2	Neumayer--Watz	52.67	158	P	P	20 38 42.0	-0.1
	baz=289,slow=7.9						
SNAA	Sanae	54.26	159	P	P	20 38 53.8	0.0
SNAA	Sanae	54.26	159	P	P	20 38 54.1	+0.3
	comp=Z,2.5nm,0.6s,baz=270,slow=7.1,SNR=33						
SNAA	Sanae	54.26	159	P	P	20 38 53.4	-0.4
SNAA				IAmb	IAmb	20 39 12.2	
	comp=Z,7.2nm,1.2s						
TXAR	Lajitas Array	67.25	330	P	P	20 40 25.4	+2.6
	comp=Z,0.3nm,0.6s,baz=157,slow=8.9,SNR=4.3						
DBIC	Dimbokro	74.16	72	P	P	20 41 04.8	-0.4
	comp=Z,3.3nm,0.5s,baz=239,slow=5.2,SNR=7.0						
DBIC	Dimbokro	74.16	72	IAmb	IAmb	20 41 22.5	
	comp=Z,16nm,1.4s						
SUR	Sutherland	76.16	119	LR	LR	21 08 08.8	
	comp=Z,22nm,21.9s,baz=192,slow=31						
TORD	Torodi Ar. Bea	83.12	70	P	P	20 41 54.5	0.0
	comp=Z,2.1nm,0.7s,baz=265,slow=4.5,SNR=13						
WRA	Warramunga Arr	123.36	210	PKP	PKPdf	20 48 25.8	-0.2
	comp=Z,0.4nm,0.5s,baz=161,slow=1.7,SNR=10						
WRA	Warramunga Arr	123.36	210		PKPdf	20 48 25.6	-0.4
H11S2	WAKE ISLAND Hy	125.87	271	T	T	23 07 15.6	
	baz=116,slow=75,SNR=37						
H11S1	WAKE ISLAND Hy	125.88	271	T	T	23 07 16.1	
	baz=116,slow=75,SNR=42						
H11S3	WAKE ISLAND Hy	125.89	271	T	T	23 07 16.9	
	baz=116,slow=75,SNR=37						
H11N3	WAKE ISLAND Hy	126.21	273	T	T	23 07 41.3	
	baz=116,slow=74						
H11N1	WAKE ISLAND Hy	126.22	273	T	T	23 07 45.3	
	baz=116						
H11N2	WAKE ISLAND Hy	126.22	273	T	T	23 07 41.5	
	baz=116,slow=74						
BVAR	Borovoye Array	145.02	40	PKP	PKPdf	20 49 05.6	+0.4
	comp=Z,0.7nm,0.5s,baz=260,slow=8.7,SNR=5.3						
KURBB	Kurchatov Arra	150.61	40	PKPbc	PKiKP	20 49 20.4	-0.2
	comp=Z,0.7nm,0.7s,baz=304,slow=2.9,SNR=6.0						
KURK	Kurchatov	150.62	40		PKPbc	20 49 19.5	-0.4
AAK	Ala-Archa	150.93	57	PKPbc	PKiKP	20 49 22.1	+0.4
	comp=Z,0.7nm,0.4s,baz=331,slow=4.6,SNR=5.9						
AAK	Ala-Archa	150.93	57		PKPbc	20 49 21.5	+0.3
ZALV	Zalesovo Beam	151.66	29	PKPbc	PKiKP	20 49 22.8	+0.2
	comp=Z,2.6nm,0.7s,baz=290,slow=3.4,SNR=11						
ZALV	Zalesovo Beam	151.66	29		PKPbc	20 49 22.3	+0.1

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*KRNET **19** 20:35:23.5±0.1, 40°.36N×73°.22E, h14^{km}, mb2.9*

*ISU **19** 20:35:24, 40°.30N×73°.20E, h5^{km}*

*SOME **19** 20:35:25.8, 40°.48N×73°.43E, h0^{km}*

*NNC **19** 20:35:28.7±2.6, 40°.57N×73°.37E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=19.4km s-min=11.7km az=173.0*

ISC 19 20:35:23.9±1.1**, 40°.30N**±0°.03×**73°.15E**±0°.02**, h3**^{km}±10^{km}**, n37, σ1^{s}10**/65**, 26C-8D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	Osh	0.35	309	eP	Pg	20 35 31.0	+0.3
OHH				eS	Sg	20 35 36.0	+0.6
OHH	Osh	0.35	309	⇑iP	Pg	20 35 30.4	-0.3
	baz=96						
OHH				⇑iS	Sg	20 35 35.9	+0.6
	baz=96						
SFK	Sufi-Kurgan	0.40	137	eP	Pg	20 35 31.0	-0.5
SFK				eS	Sg	20 35 36.0	-0.7
SFK	Sufi-Kurgan	0.40	137	⇓eP	Pg	20 35 31.3	-0.2
	baz=48						
SFK				⇓eS	Sg	20 35 37.5	+0.8
	baz=48						
ANR	Andizhan	0.75	307	eP	Pb	20 35 39.0	-0.6
ANR				eS	Sn	20 35 51.0	-2.4
SALK	Salom-Alik	0.77	41	⇑eP	Pg	20 35 36.7	-2.0
	baz=41						
SALK				⇑eS	Sg	20 35 46.2	-2.5
	baz=41						
DRK	Karamyk	1.32	232	⇓iP	Pn	20 35 49.7	+0.1
	baz=32						
DRK				⇓iS	Sn	20 36 08.7	+0.8
	baz=32						
BTK	Batken	1.80	263	eP	Pb	20 35 57.0	-0.6
BTK				eS	Sg	20 36 24.0	+2.3
BTK	Batken	1.80	263	⇑iP	Pb	20 35 58.0	+0.4
	baz=61						
BTK				⇑iS	Sg	20 36 22.9	+1.2
	baz=61						
AML	Almayashu	1.87	13	⇑iP	Pn	20 35 56.7	-0.5
	baz=11						
AML				⇑iS	Sn	20 36 21.0	-0.6
	baz=11						
TRKS	Terek-Say	1.95	310	⇑iP	Pn	20 35 58.5	+0.4
	baz=6.0						
TRKS				⇑iS	Sb	20 36 24.2	-0.9
	baz=6.0						
UCH	Uchtor	2.18	28	⇓iP	Pn	20 36 01.3	-0.2
	baz=27						
UCH				⇓iS	Sn	20 36 29.1	-0.2
	baz=27						
MNAS	Manas	2.23	348	⇓iP	Pn	20 36 02.5	+0.5
	baz=46						
MNAS				⇓iS	Sb	20 36 31.0	-2.2
	baz=46						
EKS2	Erkin-Say	2.40	11	⇑iP	Pn	20 36 04.5	+0.2
	baz=10.0						
EKS2				⇑iS	Sn	20 36 34.5	+0.2
	baz=10.0						
MRKS	Merke	2.44	1	eP	Pb	20 36 07.8	-0.7
	8.8nm,0.2s						
MRKS				eS	Sb	20 36 39.1	+0.1
	32nm,0.3s						
MRKS	Merke	2.44	1	Pg	Pb	20 36 07.8	-0.7
	8.8nm,0.2s						
MRKS				Lg	Lg	20 36 39.1	
	32nm,0.3s						
AAK	Ala-Archa	2.54	23	Pg	Pg	20 36 12.0	-0.6
	3.9nm,0.3s						
AAK				Lg	Lg	20 36 40.0	
	6.3nm,0.4s						
AAK	Ala-Archa	2.54	23	⇑iP	Pn	20 36 06.3	+0.1
	baz=22						
AAK				⇑iS	Sn	20 36 37.5	-0.3

	baz=22						
GAR	Garm	2.54	240	⇑eP	Pb	20 36 08.4	-1.8
	baz=40						
GAR				⇑iS	Sb	20 36 41.1	-0.9
	baz=40						
BOOM	Boomskoye usch	3.03	43	⇑iP	Pn	20 36 13.1	+0.2
	baz=43						
BOOM				⇑iS	Sn	20 36 48.9	-0.9
	baz=43						
ULHL	Ulahol	3.03	49	⇑iP	Pn	20 36 13.1	+0.1
	baz=49						
ULHL				⇑iS	Sn	20 36 49.5	-0.5
	baz=49						
USP	Ospenovka	3.13	18	⇑iP	Pn	20 36 14.5	+0.3
	baz=18						
USP				⇑iS	Sn	20 36 51.8	-0.3
	baz=18						
KK07	Karatay Array	3.42	325	⇑Pg	Pg	20 36 30.0	+0.7
	1.6nm,0.5s,baz=143,slow=15						
KK07				⇑Lg	Lg	20 37 09.0	
	11nm,0.6s,baz=136,slow=30						
KST	Kastek	3.46	37	eP	Pb	20 36 26.0	+0.2
	2.8nm,0.4s						
KST				eS	Sb	20 37 09.9	+1.6
	6.3nm,0.4s						
DGS	Degeres	3.53	33	eP	Pb	20 36 27.0	-0.1
	3.5nm,0.5s						
DGS				eS	Sb	20 37 12.0	+1.6
	14nm,0.6s						
DGS	Degeres	3.53	33	Pg	Pb	20 36 27.0	-0.1
	3.5nm,0.5s						
DGS				Lg	Lg	20 37 12.0	
	14nm,0.6s						
KDJ	Kajisay	3.55	58	⇑eP	Pn	20 36 20.4	+0.4
	baz=58						
KDJ				⇑iS	Sn	20 37 01.3	-1.3
	baz=58						
MTBS	Maitube	3.74	40	eP	Pb	20 36 30.7	0.0
	2.8nm,0.3s						
MTBS				eS	Sb	20 37 17.9	+1.5
	6.2nm,0.3s						
MTBS	Maitube	3.74	40	Pg	Pb	20 36 30.7	0.0
	2.8nm,0.3s						
MTBS				Lg	Lg	20 37 17.9	
	6.2nm,0.3s						
TNSS	Tian-Shan	3.94	45	eP	Pb	20 36 34.6	+0.3
	2.6nm,0.3s						
TNSS				eS	Sb	20 37 25.1	+2.5
	7.6nm,0.6s						
TNSS	Tian-Shan	3.94	45	Pg	Pb	20 36 34.6	+0.3
	2.6nm,0.3s						
TNSS				Lg	Lg	20 37 25.1	
	7.6nm,0.6s						
MDOK	Medeo	4.08	44	eP	Pb	20 36 36.9	+0.4
	2.2nm,0.3s						
MDOK				eS	Sb	20 37 29.2	+2.9
	9.3nm,0.6s						
MDOK	Medeo	4.08	44	Pg	Pb	20 36 36.9	+0.4
	2.2nm,0.3s						
MDOK				Lg	Lg	20 37 29.2	
	9.3nm,0.6s						
KUU	Kurty	4.30	32	eP	Pb	20 36 40.5	+0.3
	1.7nm,0.3s						
KUU				eS	Sb	20 37 35.3	+2.8
	9.1nm,0.4s						
KUU	Kurty	4.30	32	Pg	Pb	20 36 40.5	+0.3
	1.7nm,0.3s						
KUU				Lg	Lg	20 37 35.3	
	9.1nm,0.4s						
KTBS	Karatobe	4.30	37	eP	Pb	20 36 39.9	-0.3
	1.6nm,0.5s						
KTBS				eS	Sb	20 37 34.0	+1.4
	8.7nm,0.6s						
KTBS	Karatobe	4.30	37	Pg	Pb	20 36 39.9	-0.3
	1.6nm,0.5s						
KTBS				Lg	Lg	20 37 34.0	
	8.7nm,0.6s						

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*IDC **19** 20:41:54.7±1.8, 54°.14N×162°.01E, h0^{km}, mb3.6/4, mb1 3.9/6, mb1mx3.4/52, mbtmp3.7/6, ML3.4/2, MS2.8/1, Ms1 2.8/1, ms1mx2.3/38, Error ellipse: s-maj=83.2km s-min=23.8km az=156.0*

*KRSC **19** 20:41:54.5±0.9, 54°.42N×161°.82E, h26^{km}±8^{km}, ML4.3*

*MOS **19** 20:41:56.1±0.9, 54°.47N×161°.75E, h24^{km}, mb4.0/2, Error ellipse: s-maj=8.7km s-min=4.2km az=79.8*

ISC 19 20:41:56.4±1.1**, 54°.47N**±0°.03×**161°.73E**±0°.04**, h16**^{km}±7^{km}**, n92, σ1^{s}07**/109**, mb3.6**/4**, 1D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKZ	Mys Kozlova	0.09	359	PN	Pg	20 41 59.4	-0.2
MKZ	Mys Kozlova	0.09	359	eP	Pg	20 41 59.4	-0.2
TUMR	Tumrok	1.23	312	PN	Pn	20 42 17.3	-1.7
TUMR				S	Sb	20 42 34.0	-0.9
TUMR	Tumrok	1.23	312	eP	Pn	20 42 17.3	-1.7
TUMR				eS	Sb	20 42 34.0	-0.9
KII	Karymskiy	1.41	253	PN	Pn	20 42 20.3	-1.2
KII				S	Sn	20 42 38.3	-1.5
KII	Karymskiy	1.41	253	eP	Pn	20 42 20.3	-1.2
KII				eS	Sn	20 42 38.3	-1.5
KMNR	Kamenistaya	1.55	327	PN	Pn	20 42 22.6	-0.9
KMNR	Kamenistaya	1.55	327	eP	Pn	20 42 22.6	-0.9
ZLN	Zelenaya	1.64	341	PN	Pn	20 42 24.2	-0.5
ZLN				S	Sn	20 42 45.5	0.0
ZLN	Zelenaya	1.64	341	eP	Pn	20 42 24.2	-0.5
ZLN				eS	Sn	20 42 45.5	0.0
BZWR	Bezymyannyi-We	1.66	335	PN	Pn	20 42 25.0	0.0
BZWR	Bezymyannyi-We	1.66	335	eP	Pn	20 42 25.0	0.0
KIRR	Kirishev	1.69	332	PN	Pn	20 42 24.6	-0.8
KIRR	Kirishev	1.69	332	eP	Pn	20 42 24.6	-0.8
SPN	Mys Shipunski	1.71	217	PN	Pn	20 42 23.4	-2.1
SPN				S	Sn	20 42 43.9	-3.1
SPN	Mys Shipunski	1.71	217	eP	Pn	20 42 23.4	-2.1
SPN				eS	Sn	20 42 43.9	-3.1
LGNR	Loginova	1.72	340	PN	Pn	20 42 25.9	-0.1
LGNR	Loginova	1.72	340	eP	Pn	20 42 25.9	-0.1
KPT	Kopyto	1.73	331	PN	Pn	20 42 25.5	-0.4
KPT	Kopyto	1.73	331	eP	Pn	20 42 25.5	-0.4
CIRR	Tsirk	1.74	342	PN	Pn	20 42 26.4	+0.2
CIRR	Tsirk	1.74	342	eP	Pn	20 42 26.4	+0.2
KBTR	Krutoberegovo	1.85	19	PN	Pn	20 42 26.7	-0.8
KBTR	Krutoberegovo	1.85	19	eP	Pn	20 42 26.7	-0.8
KBG	Krutoberegovo	1.87	17	PN	Pn	20 42 28.0	+0.2
KBG	Krutoberegovo	1.87	17	eP	Pn	20 42 28.0	+0.2
KRSR	Krestovskiy	1.87	340	PN	Pn	20 42 27.7	-0.2
KRSR	Krestovskiy	1.87	340	eP	Pn	20 42 27.7	-0.2
KOZ	Kozyrevsk	1.91	327	PN	Pn	20 42 26.7	-1.7
KOZ	Kozyrevsk	1.91	327	eP	Pn	20 42 26.7	-1.7
NLC	Nalytchevo	1.92	228	PN	Pn	20 42 27.6	-0.9
NLC				S	Sn	20 42 50.7	-1.6
NLC	Nalytchevo	1.92	228	eP	Pn	20 42 27.6	-0.9
NLC				eS	Sn	20 42 50.7	-1.6
KLY	Klyuchi	1.95	342	PN	Pn	20 42 27.5	-1.3
KLY	Klyuchi	1.95	342	eP	Pn	20 42 27.5	-1.3
SMAR	Somma	2.12	236	PN	Pn	20 42 31.0	-0.3
SMAR	Somma	2.12	236	eP	Pn	20 42 31.0	-0.3
KRER	Koryakskii	2.12	238	PN	Pn	20 42 31.3	-0.1
KRER	Koryakskii	2.12	238	eP	Pn	20 42 31.3	-0.1
SMKR	Semkarok	2.12	356	PN	Pn	20 42 31.2	-0.1
SMKR	Semkarok	2.12	356	eP	Pn	20 42 31.2	-0.1
BDR	Baidarnaya	2.12	352	PN	Pn	20 42 30.0	-1.3
BDR	Baidarnaya	2.12	352	eP	Pn	20 42 30.0	-1.3
UGLR	Uglovaya	2.14	235	PN	Pn	20 42 31.3	-0.2
UGLR	Uglovaya	2.14	235	i P	Pn	20 42 31.3	-0.2
AVH	Avacha	2.15	237	PN	Pn	20 42 31.7	+0.1
AVH	Avacha	2.15	237	eP	Pn	20 42 31.7	+0.1
KOK	Koryaka	2.18	238	PN	Pn	20 42 32.0	-0.1
KOK	Koryaka	2.18	238	eP	Pn	20 42 32.0	-0.1
SRKR	Sorokina	2.21	352	PN	Pn	20 42 31.8	-0.7
SRKR	Sorokina	2.21	352	eP	Pn	20 42 31.8	-0.7
ESO	Esso	2.27	311	PN	Pn	20 42 34.6	+1.3
ESO	Esso	2.27	311	eP	Pb	20 42 37.3	+0.3
DALK	Dalny	2.28	232	PN	Pn	20 42 32.9	-0.5
DALK				S	Sn	20 43 00.1	-1.1
DALK	Dalny	2.28	232	eP	Pn	20 42 32.9	-0.5
DALK				eS	Sn	20 43 00.1	-1.1
PET	Petropavlovsk	2.33	233	ePN	Pn	20 42 34.0	-0.2
PET				eS	Sn	20 43 00.8	-1.6
PET				pmax	pmax		
	comp=Z,184nm,0.5s						
PET				smax	smax		
	comp=E,690nm,0.5s						
PET				smax	smax		
	comp=N,657nm,0.5s						
PET				MLR	MLR		
	comp=Z,400nm,13.0s						
PET	Petropavlovsk	2.33	233	eP	Pn	20 42 33.9	-0.2
PET				eS	Sn	20 43 01.6	-0.8
GNL	Ganaly	2.36	252	eP	Pn	20 42 34.6	-0.1
BKI	Bering	2.56	72	PN	Pn	20 42 36.9	-0.3
BKI				S	Sn	20 43 07.1	-0.9
BKI	Bering	2.56	72	eP	Pn	20 42 36.9	-0.3
BKI				eS	Sn	20 43 07.1	-0.9
PEA0B	Petropavlovsk-	2.75	242	i PN	Pn	20 42 39.8	-0.1
PETK	Petropavlovsk-	2.75	242	Pn	Pn	20 42 40.0	+0.1
	comp=Z,8.2nm,0.3s,baz=71,slow=15,SNR=123						
PETK				Sn	Sn	20 43 15.4	+2.5
	comp=Z,13nm,0.3s,baz=88,slow=18,SNR=2.7						
PETK	Petropavlovsk-	2.75	242	ePN	Pn	20 42 38.9	-1.0
PETK				pmax	pmax		
	comp=Z,8.0nm,0.3s						
RUS	Russkaya	2.81	225	PN	Pn	20 42 39.8	-0.8
RUS				S	Sn	20 43 12.4	-1.7
RUS	Russkaya	2.81	225	eP	Pn	20 42 39.8	-0.8
RUS				eS	Sn	20 43 12.4	-1.7
MTVR	Mutnovka	2.91	228	PN	Pn	20 42 42.5	+0.3
MTVR				S	Sn	20 43 16.8	-0.1
MTVR	Mutnovka	2.91	228	eP	Pn	20 42 42.5	+0.3
MTVR				eS	Sn	20 43 16.8	-0.1
GRL	Gorelyy	2.91	230	PN	Pn	20 42 42.5	+0.3
GRL	Gorelyy	2.91	230	eP	Pn	20 42 42.5	+0.3
ASAK	Asacha	3.10	229	PN	Pn	20 42 45.6	+0.8
ASAK	Asacha	3.10	229	eP	Pn	20 42 45.6	+0.8
APC	Apacha	3.13	242	PN	Pn	20 42 45.3	+0.3
APC				S	Sn	20 43 21.8	-0.3
APC	Apacha	3.13	242	eP	Pn	20 42 45.3	+0.3
APC				eS	Sn	20 43 21.8	-0.3
KDTR	Khodutka, Kamc	3.46	221	PN	Pn	20 42 49.5	0.0
KDTR				S	Sn	20 43 30.0	-0.1
KDTR	Khodutka, Kamc	3.46	221	eP	Pn	20 42 49.5	0.0
KDTR				eS	Sn	20 43 30.0	-0.1
PAU	Pauzhetka	4.23	227	PN	Pn	20 43 02.2	+2.0
PAU	Pauzhetka	4.23	227	eP	Pn	20 43 02.2	+2.0
SKR	Severo-Kuril's	5.11	224	ePN	Pn	20 43 14.8	+2.6
SKR				MLR	MLR		
	comp=Z,1μm,13.0s						
ASAJ	Asahikawa	16.17	238	Pn	Pn	20 45 43.5	+0.8
	comp=Z,0.4nm,0.3s,baz=36,slow=19,SNR=6.5						
KLR	Kul'dur	19.16	266	⇓eP	P	20 46 19.8	+0.9
KLR				pmax	pmax		
	comp=Z,6.0nm,1.4s						
MJA0	Matsu Arr-Jizo	24.15	232	eP	P	20 47 13.5	+1.9
MJA0				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MJAR	Matsushiro Arr	24.16	232	P	P	20 47 11.5	-0.3
	comp=Z,2.9nm,0.8s,baz=22,slow=11,SNR=5.1						
MJAR	Matsushiro Arr	24.16	232	eP	P	20 47 13.5	+1.7
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KSRS	Korea Array	28.64	247	LR	LR	20 58 25.0	
	comp=Z,19nm,19.9s,baz=25,slow=34						
H11N2	WAKE ISLAND Hy	34.90	171	T	T	21 25 49.4	
	baz=355,slow=76,SNR=1307						
H11N3	WAKE ISLAND Hy	34.92	171	T	T	21 25 50.5	
	baz=355,slow=76,SNR=1545						
H11N1	WAKE ISLAND Hy	34.92	171	T	T	21 25 50.7	
	baz=355,slow=76,SNR=1156						
H11S1	WAKE ISLAND Hy	36.10	172	T	T	21 27 17.4	
	baz=352,slow=76,SNR=33						
H11S3	WAKE ISLAND Hy	36.11	172	T	T	21 27 21.2	
	baz=352,slow=76,SNR=27						
H11S2	WAKE ISLAND Hy	36.12	172	T	T	21 27 38.8	
	baz=352,slow=76,SNR=28						
TXAR	Lajitas Array	69.22	69	P	P	20 53 03.0	+0.6
	comp=Z,0.2nm,0.6s,baz=305,slow=4.4,SNR=3.6						
WRA	Warramunga Arr	77.75	206	P	P	20 53 51.7	-0.7
	comp=Z,0.8nm,1.1s,baz=20,slow=6.2,SNR=3.0						
ASAR	Alice Springs	81.42	206	P	P	20 54 12.7	+0.4
	comp=Z,0.3nm,0.5s,baz=2.2,slow=4.7,SNR=1.9						

IDC 19 20:44:11.2±15.0**, 1°.42N**×**127°.50E, h0**^{km}**, mb3.9**/3**, mb1 4.2**/3**, mb1mx3.6**/35**, mbtmp4.0**/3**, Error ellipse: s-maj=235.3km s-min=162.8km az=158.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.27	163	P	P	20 49 09.9	-0.2
	2.3nm,0.6s,baz=342,slow=11,SNR=18						
ASAR	Alice Springs	25.71	166	P	P	20 49 43.6	+0.2
	2.0nm,0.7s,baz=346,slow=10,SNR=17						
STKA	Stephens Creek	35.72	159	P	P	20 51 11.5	-0.2
	1.3nm,0.4s,baz=327,slow=11,SNR=4.9						

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*IDC **19** 20:48:21.1±4.5, 35°.57N×82°.42E, h0^{km}, mb3.6/1, mb1 3.5/5, mb1mx3.1/48, mbtmp3.5/5, ML3.0/4, Error ellipse: s-maj=95.9km s-min=36.8km az=111.0*

*NNC **19** 20:48:48.6±8.6, 37°.65N×80°.54E, h0^{km}, mb4.0, mpv3.7, Error ellipse: s-maj=59.7km s-min=44.8km az=176.0*

ISC 19 20:48:35.8±2.2**, 37°.0N**±0°.1×**80°.1E**±0°.2**, h10**^{km}**, n9, σ2^{s}03**/11**, 5C-1D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDGK	Podgornoye	6.36	356	⇑Pg	Pg	20 50 34.8	-2.7
	4.2nm,0.6s						
PDGK				⇑Lg	Lg	20 51 47.8	
	15nm,0.7s						
MDOK	Medeo	6.60	340	Pg	Pg	20 50 41.6	-0.5
	5.5nm,0.7s						
MDOK				Lg	Lg	20 52 04.8	
	13nm,0.7s						
AAK	Ala-Archa	7.10	324	Pn	Pb	20 50 39.7	+0.5
	0.1nm,0.3s,baz=162,slow=13,SNR=2.0						
AAK	Ala-Archa	7.10	324	⇑Pg	Pg	20 50 51.3	-0.4
	3.1nm,0.7s						
AAK				⇑Lg	Lg	20 52 19.2	
	15nm,0.9s						
MK31	Makanchi Array	9.94	9	⇓Pn	Pn	20 51 02.2	+3.5
	1.5nm,0.6s,baz=189,slow=14,SNR=7.0						
MK31				⇑Sn	Sn	20 52 49.4	-0.9
	2.0nm,0.6s,baz=185,slow=24						
MKAR	Makanchi Array	9.94	9	Pn	Pn	20 51 01.8	+3.1
	0.4nm,0.3s,baz=186,slow=13,SNR=18						
MKAR				Sn	Sn	20 52 50.0	-0.4
	0.4nm,0.3s,baz=186,slow=24,SNR=3.3						
KURBB	Kurchatov Arra	13.68	356	Pn	P	20 51 57.7	-0.9
	0.0nm,0.3s,baz=178,slow=9.2,SNR=2.8						
ZALV	Zalesovo Beam	17.28	9	P	P	20 52 38.4	-0.1
	0.2nm,0.3s,baz=193,slow=12,SNR=3.2						
TORD	Torodi Ar. Bea	73.00	274	P	P	21 00 04.8	-1.3
	0.4nm,0.6s,baz=48,slow=5.1,SNR=4.4						

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*IDC **19** 20:52:14.7±1.6, 10°.09S×118°.86E, h0^{km}, mb3.6/3, mb1 3.7/7, mb1mx3.4/36, mbtmp3.6/7, ML3.4/3, MS2.1/1, Ms1 2.1/1, ms1mx2.0/30, Error ellipse: s-maj=55.8km s-min=19.9km az=43.0*

*DJA **19** 20:52:18.8±0.4, 10°S±6°×11°9E±°, h10^{km}, M3.7/15, mb4.0/5, MLv3.6/15*

ISC 19 20:52:20.1±0.9**, 10°.07S**±0°.08×**118°.95E**±0°.05**, h33**^{km}**, n23, σ0^{s}92**/23**, mb3.8**/3**, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSI	Waingapu	1.39	73	P	Pn	20 52 37.5	-5.6
WSI				S	Sb	20 53 03.0	+0.2
BASI	Baing, Sumba	1.61	95	P	Pn	20 52 47.1	+0.9
PLAI	Plampang	1.69	317	P	Pn	20 52 47.2	-0.2
TWSI	Taliwang, Sumb	2.43	303	P	Pn	20 52 58.8	+1.2
EDFI	Ende, Flores	3.00	64	P	Pn	20 53 06.0	+0.5
MMRI	Maumere	3.54	67	P	Pn	20 53 13.2	+0.4
IGBI	Denpasar	3.96	288	P	Pn	20 53 19.3	+0.8
SRBI	Singaraja	4.18	298	P	Pn	20 53 22.6	+0.9
BSSI	Bau Bau, Buton	4.19	21	P	Pn	20 53 21.7	0.0
BATI	Baumata	4.64	92	Pn	Pn	20 53 28.7	+0.7
	5.3nm,0.3s,baz=274,slow=3.6,SNR=4.5						
BATI				Sn	Sn	20 54 22.6	+1.8
	1.8nm,0.3s,baz=51,slow=23,SNR=5.6						
BATI	Baumata	4.64	92	P	Pn	20 53 28.5	+0.5
BKSI	Bulukumba	4.86	14	P	Pn	20 53 30.8	-0.1
JAGI	Jajag, Banyuwa	5.00	288	P	Pn	20 53 33.6	+0.8
	0.1nm14nm,1.0s						
KAPI	Kappang	5.08	9	LR	LR	20 55 25.1	
	comp=Z,20nm,19.4s,baz=172,slow=37						
GMJI	Gumukmas	5.72	288	P	Pn	20 53 43.9	+1.1
	0.1nm13nm,1.0s						
BNSI	Bone	5.75	12	P	Pn	20 53 43.8	+0.6
	0.1nm12nm,0.7s						
KMMI	Kalianget	5.77	301	P	Pn	20 53 45.1	+1.6
	0.3nm55nm,2.0s						
FITZ	Fitzroy Crossi	10.28	142	Pn	Pn	20 54 43.9	-1.5
	baz=322,slow=12						
WRA	Warramunga Arr	17.80	125	P	Pn	20 56 24.9	-0.6
	0.1nm,0.3s,baz=301,slow=13,SNR=5.2						
ASAR	Alice Springs	19.66	135	P	P	20 56 45.9	-0.5
	0.1nm,0.3s,baz=325,slow=14,SNR=6.4						
SONM	Songino Array	58.72	350	P	P	21 02 14.7	0.0
	0.2nm,0.4s,baz=178,slow=9.0,SNR=1.8						
MKAR	Makanchi Array	65.38	333	P	P	21 02 59.0	-0.4
	0.7nm,0.6s,baz=148,slow=7.5,SNR=7.4						
ZALV	Zalesovo Beam	70.02	339	P	P	21 03 27.5	-0.9
	0.5nm,0.6s,baz=119,slow=5.1,SNR=2.7						

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*IDC **19** 20:59:59.7±0.6, 41°.19S×85°.62E, h0^{km}, mb4.3/15, mb1 4.4/15, mb1mx4.1/30, mbtmp4.2/15, MS4.0/23, Ms1 4.0/23, ms1mx3.9/28, Error ellipse: s-maj=20.0km s-min=17.3km az=141.0*

*NEIC **19** 21:00:01.2±1.4, 41°.2S±0°.1×85°.4E±0°.1, h10^{km}±1^{km}, mb4.8/39, Error ellipse: s-maj=17.6km s-min=16.2km az=194.0*

*GCMT **19** 21:00:03.2±0.3, 41°.18S±0°.02×85°.82E±0°.02, h17^{km}±1^{km}, MW4.9/92, Moment Tensor Solution. s33,c37; s92,c123; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.14±.09; $M_{\theta\theta}$2.91±.10; $M_{\phi\phi}$-2.76±.10; $M_{r\theta}$-0.41±.25; $M_{\theta\phi}$-0.09±.08; $M_{\phi r}$0.82±.27; Best double couple: $M_0$2.98300×10^{16} NP1:ϕ_s227.00000°, δ73.00000°, λ-174.00000°. NP2: ϕ_s135.00000°, δ84.00000°, λ-17.00000°. Principal axes: T 2.9700, Plg8.0000°, Azm182.0000°; N 0.0330, Plg72.0000°, Azm297.0000°; P -2.9960, Plg16.0000°, Azm90.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 21:00:00.8±0.4**, 41°.17S**±0°.08×**85°.52E**±0°.07**, h10**^{km}**, n91, σ0^{s}80**/72**, mb4.7**/38**, MS4.1**/25**, 1D, Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AIS	Amsterdam Isla	7.01	296	Pn	Pn	21 01 42.3	-1.1
H01W2	Cape Leeuwin H	23.33	84	T	T	21 28 56.0	
	baz=246,slow=74,SNR=100						
H01W3	Cape Leeuwin H	23.34	84	T	T	21 28 56.6	
	baz=246,slow=74,SNR=109						
H01W1	Cape Leeuwin H	23.35	84	T	T	21 28 57.3	
	baz=246,slow=74,SNR=70						
MAW	Mawson	29.23	198	LR	LR	21 15 08.9	
	comp=Z,292nm,20.5s,baz=50,slow=31						
MAW	Mawson	29.23	198	P	P	21 06 00.3	-2.0
PSA00	Pilbara Seismi	34.91	67	P	P	21 06 52.3	-0.4
H08S2	Diego Garcia H	35.33	337	T	T	21 44 15.3	
	baz=162,slow=76,SNR=194						
H08S1	Diego Carcia H	35.34	337	T	T	21 44 17.6	
	baz=162,slow=76,SNR=96						
H08S3	Diego Garcia H	35.35	337	T	T	21 44 15.6	
	baz=162,slow=76,SNR=692						
FORT	Forrest	35.64	87	P	P	21 06 58.3	-0.6
JAGI	Jajag, Banyuwa	41.28	46	P	P	21 07 45.5	-0.9
JAGI				IAmb	IAmb	21 07 47.9	
	comp=Z,23nm,1.1s						
ASAR	Alice Springs	43.82	82	P	P	21 08 07.1	0.0
	comp=Z,1.5nm,0.7s,baz=232,slow=8.0,SNR=12						
ASAR				PcP	PcP	21 09 53.6	0.0
	comp=Z,1.5nm,0.8s,baz=226,slow=2.7,SNR=4.7						
ASAR				LR	LR	21 24 30.5	
	comp=Z,714nm,19.4s,baz=242,slow=34						
ASAR	Alice Springs	43.82	82	P	P	21 08 07.7	+0.6
AS31	Alice Springs	43.83	82	P	P	21 08 06.6	-0.6
KNRA	Kununurra	45.10	69	P	P	21 08 17.4	+0.1
KNRA				IAmb	IAmb	21 08 20.4	
	comp=Z,13nm,0.9s						
STKA	Stephens Creek	45.33	97	P	P	21 08 18.6	-0.3
	comp=Z,7.3nm,0.8s,baz=253,slow=10.0,SNR=14						
STKA				LR	LR	21 23 37.2	
	comp=Z,202nm,21.1s,baz=213,slow=31						
STKA	Stephens Creek	45.33	97	P	P	21 08 19.4	+0.4
RPSI	Rantau Prapat	45.33	19	P	P	21 08 20.5	+1.4
PSI	Prapat	45.43	19	P	P	21 08 20.5	+0.5
	comp=Z,5.1nm,0.9s,baz=174,slow=11,SNR=4.6						
SOEI	Soe	46.30	59	P	P	21 08 27.5	+0.5
SOEI				IAmb	IAmb	21 08 28.8	
	comp=Z,12nm,0.9s						
WRA	Warramunga Arr	46.37	78	P	P	21 08 27.1	-0.3
	comp=Z,4.1nm,1.1s,baz=232,slow=7.3,SNR=10						
WRA				PcP	PcP	21 10 02.1	-0.3
	comp=Z,0.7nm,0.9s,baz=234,slow=3.2,SNR=2.0						
WRA				LR	LR	21 25 35.1	
	comp=Z,103nm,21.1s,baz=240,slow=33						
WRA	Warramunga Arr	46.37	78	P	P	21 08 27.3	0.0
WB2	Warramunga Arr	46.38	78	P	P	21 08 26.4	-1.0
WB2				IAmb	IAmb	21 08 38.0	
	comp=Z,6.5nm,1.1s						
WRAB	Tennant Creek	46.38	78	P	P	21 08 27.2	-0.3
WRAB				IAmb	IAmb	21 08 37.0	
	comp=Z,7.4nm,1.1s						
WR0	Warramunga Arr	46.51	78	P	P	21 08 28.0	-0.5
WR0				IAmb	IAmb	21 08 31.8	
	comp=Z,19nm,1.5s						
WB0	Warramunga Arr	46.52	78	P	P	21 08 28.7	+0.2
WB0				IAmb	IAmb	21 08 31.1	
	comp=Z,12nm,1.1s						
VNDA	Vanda	47.25	163	P	P	21 08 33.2	-0.3
	comp=Z,0.4nm,0.6s,baz=294,slow=5.9,SNR=3.6						
VNDA				LR	LR	21 26 11.5	
	comp=Z,284nm,21.0s,baz=272,slow=33						
VNDA	Vanda	47.25	163	P	P	21 08 34.0	+0.5
KAPI	Kappang	47.25	50	P	P	21 08 33.2	-1.1
LHMI	Lhok Sumawe	47.34	16	P	P	21 08 33.5	-1.4
KSM	Kuching	48.05	34	P	P	21 08 40.1	-0.3
KSM				IAmb	IAmb	21 08 42.7	
	comp=Z,9.8nm,1.0s						
MTN	Manton Dam	48.71	68	P	P	21 08 45.7	+0.1
QSPA	South Pole Qui	48.99	180	P	P	21 08 47.7	+0.4
	comp=Z,18nm,1.1s,baz=305,slow=4.6,SNR=21						
QSPA	South Pole Qui	48.99	180	P	P	21 08 47.0	-0.3
SBUM	Sibu	49.76	36	P	P	21 08 54.3	+0.8
SBUM				IAmb	IAmb	21 08 55.9	
	comp=Z,11nm,1.0s						
BOSA	Boshof	50.08	264	P	P	21 08 57.1	+1.0
	comp=Z,6.4nm,1.1s,baz=122,slow=8.8,SNR=3.8						
BOSA				LR	LR	21 26 30.6	
	comp=Z,402nm,18.3s,baz=166,slow=32						
SNAA	Sanae	51.03	204	P	P	21 09 05.2	+2.5
SNAA	Sanae	51.03	204	P	P	21 09 03.6	+1.0
	comp=Z,1.9nm,1.0s,baz=132,slow=8.1,SNR=4.2						
SNAA	Sanae	51.03	204	IAmb	IAmb	21 09 10.2	
	comp=Z,10nm,1.4s						
LBTB	Lobatse	51.75	269	P	P	21 09 09.3	+0.6
	comp=Z,9.3nm,1.2s,baz=146,slow=6.1,SNR=4.2						
LBTB	Lobatse	51.75	269	P	P	21 09 08.4	-0.3
LBTB				IAmb	IAmb	21 09 09.8	
	comp=Z,10nm,1.1s						
VNA2	Neumayer--Watz	52.65	204	P	P	21 09 15.2	+0.5
	baz=106,slow=6.7						
TOLI2	Tolitoli	52.86	46	P	P	21 09 15.9	-1.0
VNA1	Neumayer--Stat	53.01	205	P	P	21 09 18.7	+1.5
VNA3	Neumayer Olymp	53.25	204	P	P	21 09 19.8	+0.7
ARMA	Armidale	53.52	101	P	P	21 09 22.1	+0.3
ARMA				IAmb	IAmb	21 09 30.7	
	comp=Z,10nm,0.9s						
KKM	Kota Kinabalu	54.76	38	P	P	21 09 31.1	+0.3
CTA	Charters Tower	55.19	87	LR	LR	21 31 36.2	
	comp=Z,3μm,21.6s,baz=249,slow=34						
CTAO	Charters Tower	55.19	87	P	P	21 09 34.5	+0.6
CTAO				IAmb	IAmb	21 09 36.2	
	comp=Z,13nm,1.1s						
LSZ	Lusaka	55.60	280	P	P	21 09 36.3	-0.7
FAKI	Fak Fak	56.63	61	P	P	21 09 44.5	+0.3
HYB	Hyderabad	58.64	352	i P	P	21 09 59.0	+0.8
KMBO	Kilima Mbogo	58.98	299	LR	LR	21 32 22.7	
	comp=Z,59nm,18.4s,baz=100,slow=33						
UBPT	Khong Chiam	59.12	23	P	P	21 10 01.7	+0.1
UBPT				IAmb	IAmb	21 10 17.4	
	comp=Z,8.6nm,1.3s						
CM31	Chiang Mai Arr	60.61	15	P	P	21 10 12.1	+0.3
CM31				IAmb	IAmb	21 10 13.4	

	comp=Z,10nm,1.0s						
CMAR	**Chiang Mai Arr**	**60.61**	**15**	P	**P**	**21 10 12.3**	**+0.6**
	comp=Z,1.4nm,0.3s,baz=202,slow=6.8,SNR=27						
CMAR				LR	LR	21 34 14.8	
	comp=Z,41nm,18.0s,baz=233,slow=34						
CMAR	**Chiang Mai Arr**	**60.61**	**15**	P	**P**	**21 10 12.0**	**+0.2**
CHTO	**Chiang Mai**	**60.96**	**15**	P	**P**	**21 10 13.9**	**-0.2**
CHTO				IAmb	IAmb	21 10 15.5	
	comp=Z,6.7nm,1.2s						
TSUM	**Tsumeb**	**61.16**	**269**	P	**P**	**21 10 16.0**	**+0.2**
TSUM				IAmb	IAmb	21 10 33.4	
	comp=Z,10nm,1.2s						
SHL	**Shillong**	**66.65**	**6**	P	**P**	**21 10 51.6**	**-0.2**
KMI	**Kunming**	**67.86**	**17**	⇓P	**P**	**21 11 01.3**	**+1.8**
KMI				pP	pwP	21 11 07.5	+1.2
KMI				sP	sP	21 11 11.1	+8.7
KMI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KMI				LR	LR		
	comp=N,150nm,16.5s						
KMI				LR	LR		
	comp=E,150nm,15.5s						
KMI				LR	LR		
	comp=Z,190nm,27.7s						
LSA	**Lhasa**	**70.70**	**5**	P	**P**	**21 11 18.0**	**+0.7**
LSA				pmax	pmax		
	comp=Z,26nm,0.8s						
LSA	**Lhasa**	**70.70**	**5**	P	**P**	**21 11 17.4**	**+0.1**
LSA				IAmb	IAmb	21 11 18.5	
	comp=Z,8.3nm,1.2s						
KBL	**Kabul**	**76.85**	**346**	P	**P**	**21 11 53.1**	**+0.2**
KBL				IAmb	IAmb	21 11 54.8	
	comp=Z,10nm,1.1s						
XAN	**Xi'an**	**77.88**	**20**	P	**P**	**21 11 58.5**	**0.0**
XAN				pP	PcP	21 12 08.8	+0.5
XAN				pmax	pmax		
	comp=Z,12nm,1.3s						
XAN				pmax	pmax		
	comp=Z,65nm,4.3s						
LZH	**Lanzhou**	**78.70**	**15**	*e*P	P	21 11 56.0	-7.1
LZH				pP	pP	21 11 59.3	-6.0
LZH				pmax	pmax		
	comp=Z,21nm,1.5s						
KSH	**Kashi**	**80.77**	**353**	P	**P**	**21 12 12.3**	**-2.0**
KSH				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GTA	**Gaotai**	**81.25**	**11**	*e*P	**P**	**21 12 17.8**	**+1.0**
GTA				pP	PcP	21 12 23.4	+0.4
GTA				sP	pwP	21 12 26.4	+2.8
GTA				pmax	pmax		
	comp=Z,9.0nm,1.2s						
BTK	**Batken**	**81.94**	**349**	P	**P**	**21 12 20.1**	**-0.3**
BTK				IAmb	IAmb	21 12 22.5	
	comp=Z,13nm,1.4s						
GEYT	**Alibeck**	**82.61**	**338**	LR	LR	21 44 20.3	
	comp=Z,79nm,19.7s,baz=80,slow=32						
KKAR	**Karatay Array**	**84.97**	**349**	P	**P**	**21 12 35.7**	**-0.2**
MMAI	**Mount Meron Ar**	**87.07**	**320**	LR	LR	21 48 22.5	
	comp=Z,25nm,19.3s,baz=100,slow=33						
KSRS	**Korea Array**	**87.33**	**32**	LR	LR	21 52 37.9	
	comp=Z,17nm,18.0s,baz=220,slow=36						
MKAR	**Makanchi Array**	**87.62**	**358**	LR	LR	21 49 00.7	
	comp=Z,174nm,20.4s,baz=183,slow=34						
GNI	**Garni**	**89.02**	**330**	LR	LR	21 47 46.8	
	comp=Z,72nm,21.9s,baz=150,slow=32						
SONM	**Songino Array**	**90.53**	**14**	P	**P**	**21 13 02.3**	**-0.3**
	comp=Z,1.7nm,1.0s,baz=197,slow=4.5,SNR=7.6						
SONM				LR	LR	21 52 40.8	
	comp=Z,69nm,19.5s,baz=174,slow=35						
MJAR	**Matsushiro Arr**	**91.16**	**40**	P	**P**	**21 13 05.2**	**-0.4**
	comp=Z,2.1nm,1.0s,baz=203,slow=6.4,SNR=3.6						
MJAR				LR	LR	21 53 29.0	
	comp=Z,20nm,18.9s,baz=325,slow=35						
KBZ	**Khabaz**	**92.80**	**331**	LR	LR	21 49 59.1	
	comp=Z,32nm,19.1s,baz=164,slow=32						
BRTR	**Keskin Array B**	**93.32**	**323**	P	**P**	**21 13 17.3**	**+1.5**
	comp=Z,0.6nm,0.9s,baz=132,slow=6.4,SNR=4.3						
BRTR				LR	LR	21 51 30.4	
	comp=Z,56nm,18.3s,baz=141,slow=33						
BRTR	**Keskin Array B**	**93.32**	**323**	P	**P**	**21 13 16.3**	**+0.5**
TORD	**Torodi Ar. Bea**	**93.96**	**284**	P	**P**	**21 13 19.6**	**+0.5**
	comp=Z,0.6nm,0.8s,baz=134,slow=6.2,SNR=3.8						
TORD				LR	LR	21 54 38.6	
	comp=Z,89nm,18.1s,baz=115,slow=35						
TORD	**Torodi Ar. Bea**	**93.96**	**284**	P	**P**	**21 13 19.1**	**-0.1**
IDI	**Anoyia**	**94.25**	**314**	LR	LR	21 51 19.0	
	comp=Z,12nm,21.0s,baz=144,slow=33						
DBIC	**Dimbokro**	**94.62**	**275**	LR	LR	21 52 11.6	
	comp=Z,179nm,18.2s,baz=154,slow=33						
USRK	**Ussuriysk Ar.**	**94.68**	**32**	LR	LR	21 54 10.8	
	comp=Z,45nm,20.1s,baz=217,slow=34						
ZALV	**Zalesovo Beam**	**94.74**	**360**	P	**P**	**21 13 20.7**	**-1.0**
	comp=Z,0.4nm,0.5s,baz=176,slow=2.3,SNR=2.2						
ZALV				LR	LR	21 53 35.9	
	comp=Z,128nm,20.9s,baz=168,slow=34						
PLCA	**Paso Flores**	**95.64**	**198**	LR	LR	21 56 19.1	
	comp=Z,155nm,19.7s,baz=174,slow=35						
INK	**Inuvik**	**145.76**	**25**	PKPbc	**PKPab**	**21 19 39.6**	**+0.3**
	comp=Z,11nm,0.9s,baz=286,slow=2.5,SNR=16						
RES	**Resolute Bay**	**146.38**	**0**	PKPbc	**PKPbc**	**21 19 40.9**	**+0.3**
	comp=Z,3.6nm,0.8s,baz=4.9,slow=10,SNR=5.3						
PDAR	**Pinedale Array**	**168.66**	**77**	PKPab	**PKPab**	**21 21 17.6**	**-0.4**
	comp=Z,0.9nm,0.9s,baz=253,slow=1.5,SNR=4.1						

WEL ***19*** *21:35:58.4±0.7, 33°S±8°×17°9W±2°1, h146^{km}±24^{km}, M4.3/15, mB4.8/11, ML5.2/14, MLv4.9/15, Mw(mB)4.0/11, Error ellipse: s-maj=0.0km s-min=0.0km az=111.1*
NEIC ***19*** *21:36:00.7±0.9, 33°.1S±0°.1×179°.7W±0°.2, h105^{km}±8^{km}, mb4.3/13, Error ellipse: s-maj=21.7km s-min=14.5km az=91.0*
IDC ***19*** *21:36:01.2±22.0, 32°.93S×179°.54W, h130^{km}±182^{km}, mb3.7/4, mb1 3.8/4, mb1mx3.5/20, mbtmp4.0/4, Error ellipse: s-maj=94.6km s-min=27.1km az=59.0*
ISC 19 21:35:59.0±0.7**, 33°.04S**±0°.06×**179°.7W**±0°.1**, h100^{km}, n61,** σ**1.^{s}13**/73**, mb4.4**/10**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**4.06**	**22**	P	**Pn**	**21 36 59.2**	**+0.3**
GLKZ				S	**Sn**	**21 37 45.6**	**+0.2**
MXZ	**Matakaoa Point**	**4.80**	**199**	P	**Pn**	**21 37 10.1**	**+1.2**
MXZ				S	**Sn**	**21 38 06.4**	**+3.0**
MXZ	**Matakaoa Point**	**4.80**	**199**	Pn	**Pn**	**21 37 09.9**	**+1.0**
MXZ				Sn	**Sn**	**21 38 03.5**	**+0.1**
WMGZ	**Waiomatatini S**	**5.01**	**197**	P	**Pn**	**21 37 13.6**	**+1.7**
WMGZ				S	**Sn**	**21 38 09.6**	**+1.1**
GRZ	**Great Barrier**	**5.13**	**230**	P	Pn	21 37 19.0	+5.6
PKGZ	**Pakihiroa**	**5.17**	**200**	P	**Pn**	**21 37 15.3**	**+1.3**
PKGZ				S	**Sn**	**21 38 12.7**	**+0.3**
PUZ	**Puketiti**	**5.29**	**198**	P	**Pn**	**21 37 16.3**	**+0.7**
PUZ				S	**Sn**	**21 38 15.8**	**+0.5**
RUGZ	**Raukumara Rang**	**5.36**	**203**	P	**Pn**	**21 37 14.6**	**-2.1**
RUGZ				S	**Sn**	**21 38 18.2**	**+1.0**
TWGZ	**Tauwhareparae**	**5.47**	**200**	P	**Pn**	**21 37 18.8**	**+0.8**
TWGZ				S	**Sn**	**21 38 22.0**	**+2.4**
CNGZ	**Carnagh Statio**	**5.70**	**197**	P	**Pn**	**21 37 21.9**	**+0.8**
MWZ	**Matawai**	**5.75**	**202**	P	**Pn**	**21 37 22.5**	**+0.6**
MWZ				S	**Sn**	**21 38 26.5**	**+0.1**
URZ	**Urewera**	**5.82**	**206**	P	**Pn**	**21 37 21.2**	**-1.6**
URZ	**Urewera**	**5.82**	**206**	Pn	**Pn**	**21 37 23.6**	**+0.8**
OUZ	**Omahuta**	**5.98**	**247**	Pn	**Pn**	**21 37 25.5**	**+0.6**
RIGZ	**Rimuhau**	**6.02**	**199**	P	**Pn**	**21 37 25.3**	**-0.2**
RIGZ				S	**Sn**	**21 38 32.7**	**-0.4**
PRGZ	**Paritu Road**	**6.19**	**198**	P	**Pn**	**21 37 27.9**	**0.0**
PRGZ				S	**Sn**	**21 38 35.9**	**-1.4**
SNGZ	**Shannon Statio**	**6.22**	**202**	P	**Pn**	**21 37 28.8**	**+0.6**
SNGZ				S	**Sn**	**21 38 38.1**	**+0.3**
MHGZ	**Mahia Peninsul**	**6.40**	**197**	P	**Pn**	**21 37 30.3**	**-0.4**
MHGZ				S	**Sn**	**21 38 39.5**	**-2.9**
RAHZ	**Arahi**	**6.42**	**203**	P	**Pn**	**21 37 31.1**	**+0.2**
RAHZ				S	**Sn**	**21 38 42.6**	**-0.2**
MTHZ	**Maungataniwha**	**6.45**	**205**	P	**Pn**	**21 37 31.9**	**+0.6**
MTHZ				S	**Sn**	**21 38 43.1**	**-0.3**
MCHZ	**McNeill Hill**	**7.03**	**204**	P	**Pn**	**21 37 39.0**	**-0.2**
MCHZ				S	**Sn**	**21 38 56.6**	**-0.8**
KWHZ	**Kaweka Forest**	**7.10**	**205**	P	**Pn**	**21 37 39.4**	**-0.8**
KWHZ				S	**Sn**	**21 38 57.3**	**-2.1**
KAHZ	**Kahuranaki**	**7.29**	**201**	P	**Pn**	**21 37 40.9**	**-1.9**
FWVZ	**Far West T-bar**	**7.30**	**210**	P	**Pn**	**21 37 43.1**	**+0.1**
KRHZ	**Kereru**	**7.32**	**205**	P	**Pn**	**21 37 41.5**	**-1.6**
KRHZ				S	**Sn**	**21 39 01.7**	**-2.9**
FOZ	**Fox Glacier**	**13.32**	**215**	P	**Pn**	**21 39 04.7**	**+0.8**
FOZ				S	Sn	21 41 15.1	-15
FOZ	**Fox Glacier**	**13.32**	**215**	Pn	**Pn**	**21 39 05.2**	**+1.3**
MLZ	**Mavora Lakes**	**15.50**	**214**	Pn	**Pn**	**21 39 32.7**	**+0.9**
MLZ				IAmb	IAmb	21 39 40.0	
	comp=Z,17nm,1.0s						
COEN	**Coen**	**38.73**	**290**	P	**P**	**21 43 14.7**	**+1.2**
COEN				IAmb	IAmb	21 43 20.8	
	comp=Z,7.4nm,1.0s						
AS31	**Alice Springs**	**41.61**	**271**	P	**P**	**21 43 37.1**	**-0.3**
AS31				IAmb	IAmb	21 43 39.0	
	comp=Z,1.9nm,0.5s						
ASAR	**Alice Springs**	**41.62**	**271**	P	**P**	**21 43 37.7**	**+0.3**
	comp=Z,4.3nm,0.7s,baz=110,slow=7.7,SNR=40						
ASAR	**Alice Springs**	**41.62**	**271**	P	**P**	**21 43 36.7**	**-0.7**
WR0	**Warramunga Arr**	**42.67**	**276**	P	**P**	**21 43 45.9**	**-0.1**
WR0				IAmb	IAmb	21 43 46.7	
	comp=Z,4.5nm,0.8s						
WB2	**Warramunga Arr**	**42.84**	**276**	P	**P**	**21 43 47.3**	**0.0**
WRAB	**Tennant Creek**	**42.84**	**276**	P	**P**	**21 43 47.3**	**-0.1**
WRAB				IAmb	IAmb	21 43 48.6	
	comp=Z,5.5nm,0.8s						
WRA	**Warramunga Arr**	**42.85**	**276**	P	**P**	**21 43 47.3**	**-0.1**
	comp=Z,4.7nm,0.5s,baz=113,slow=8.0,SNR=73						
WRA				PcP	**PcP**	**21 45 35.2**	**-1.6**
	comp=Z,0.3nm,0.5s,baz=122,slow=2.9,SNR=1.9						
WRA	**Warramunga Arr**	**42.85**	**276**	P	**P**	**21 43 47.4**	**0.0**
WB0	**Warramunga Arr**	**42.88**	**276**	P	**P**	**21 43 47.7**	**0.0**
VNDA	**Vanda**	**45.34**	**186**	P	**P**	**21 44 06.2**	**-0.2**
	comp=Z,0.2nm,0.6s,baz=355,slow=8.1,SNR=1.2						
VNDA	**Vanda**	**45.34**	**186**	P	**P**	**21 44 08.1**	**+1.6**
KNRA	**Kununurra**	**49.55**	**278**	P	**P**	**21 44 40.6**	**+0.7**
KNRA				IAmb	IAmb	21 44 54.7	
	comp=Z,4.7nm,0.9s						
QSPA	**South Pole Qui**	**57.08**	**180**	P	**P**	**21 45 35.8**	**+1.3**
MAW	**Mawson**	**69.34**	**201**	P	**P**	**21 46 55.8**	**+0.6**
	comp=Z,0.6nm,0.3s,baz=150,slow=4.8,SNR=1.6						
MAW	**Mawson**	**69.34**	**201**	P	**P**	**21 46 55.6**	**+0.4**
SNAA	**Sanae**	**75.56**	**179**	P	**P**	**21 47 31.5**	**-0.8**
SNAA	**Sanae**	**75.56**	**179**	P	**P**	**21 47 31.7**	**-0.5**
SNAA				IAmb	IAmb	21 47 34.9	
	comp=Z,4.4nm,0.9s						
VNA3	**Neumayer Olymp**	**75.77**	**177**	P	**P**	**21 47 33.1**	**-0.3**
VNA2	**Neumayer--Watz**	**76.18**	**177**	P	**P**	**21 47 35.8**	**+0.1**
	baz=175,slow=5.0						
VNA1	**Neumayer--Stat**	**76.42**	**177**	P	**P**	**21 47 37.2**	**+0.2**
H03S2	**Juan Fernandez**	**80.20**	**124**	T	T	23 16 41.2	
	baz=235,slow=74,SNR=6.5						
H03S1	**Juan Fernandez**	**80.21**	**124**	T	T	23 16 45.2	
	baz=235,slow=74,SNR=6.2						
H03S3	**Juan Fernandez**	**80.22**	**124**	T	T	23 16 43.3	
	baz=235,slow=74,SNR=7.7						
H03N3	**Juan Fernandez**	**80.41**	**124**	T	T	23 16 55.5	
	baz=239,slow=72,SNR=11						
H03N2	**Juan Fernandez**	**80.41**	**124**	T	T	23 16 51.7	
	baz=239,slow=72,SNR=9.8						
H03N1	**Juan Fernandez**	**80.43**	**124**	T	T	23 16 46.6	
	baz=239,slow=72,SNR=9.6						
FINES	**FINESS Array B**	**147.07**	**337**	PKPbc	**PKPdf**	**21 55 26.9**	**-0.2**
	comp=Z,1.6nm,0.4s,baz=46,slow=4.4,SNR=27						
FINES	**FINESS Array B**	**147.07**	**337**		**PKPdf**	**21 55 27.5**	**+0.3**
MMAI	**Mount Meron Ar**	**150.66**	**280**	PKPbc	**PKPbc**	**21 55 38.0**	**-1.6**
	comp=Z,0.2nm,0.3s,baz=97,slow=6.1,SNR=2.4						
NOA	**NORSAR Array B**	**151.10**	**349**	PKPbc	**PKPbc**	**21 55 38.6**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=15,slow=4.1,SNR=1.8						
BRTR	**Keskin Array B**	**152.46**	**294**	PKPbc	**PKPbc**	**21 55 42.1**	**-1.5**
	comp=Z,0.2nm,0.3s,baz=86,slow=2.0,SNR=2.0						
TORD	**Torodi Ar. Bea**	**160.16**	**184**	PKPab	**PKPab**	**21 56 26.0**	**-1.4**
	comp=Z,0.6nm,0.5s,baz=178,slow=3.8,SNR=9.5						

IDC 19 21:43:01.1±2.4**, 17°.16N**×**40°.41E, h0^{km}, mb3.7**/5**, mb1 3.7**/5**, mb1mx3.5**/33**, mbtmp3.7**/5**, MS2.8**/2**, Ms1 2.8**/2**, ms1mx2.5**/47**, Error ellipse: s-maj=68.4km s-min=27.9km az=157.0, Red Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WSAR	**Wadi Sarin**	**18.13**	**68**	LR	LR	21 55 51.2	
	comp=Z,39nm,18.8s,baz=252,slow=42						
MBAR	**Mbarara**	**20.06**	**209**	LR	LR	21 56 12.4	
	comp=Z,21nm,20.7s,baz=282,slow=40						
BRTR	**Keskin Array B**	**23.24**	**347**	P	P	21 48 10.4	+0.2
	1.6nm,1.0s,baz=160,slow=10,SNR=4.6						
TORD	**Torodi Ar. Bea**	**37.54**	**269**	P	P	21 50 17.2	-0.1
	1.0nm,0.8s,baz=78,slow=8.5,SNR=7.4						
MKAR	**Makanchi Array**	**45.41**	**40**	P	P	21 51 21.5	-0.1
	0.9nm,0.9s,baz=238,slow=8.3,SNR=2.5						
ZALV	**Zalesovo Beam**	**50.19**	**33**	P	P	21 51 58.0	-0.6
	2.3nm,0.9s,baz=248,slow=7.6,SNR=8.6						
SONM	**Songino Array**	**61.39**	**45**	P	P	21 53 19.7	+0.5
	0.5nm,0.9s,baz=258,slow=7.2,SNR=2.7						

CNRM ***19*** *21:57:02.0, 36°.66N×8°.83W, h30^{km}, ml3.1*
MDD ***19*** *21:57:03.5±1.1, 36°.91N×8°.90W, h35^{km}±6^{km}, mbLg3.1/28, Error ellipse: s-maj=11.2km s-min=6.3km az=45.0, PRXIMO*
INMG ***19*** *21:57:03.7±1.5, 36°.88N×8°.89W, h30^{km}±2^{km}, MD2.7, ML2.9, Error ellipse: s-maj=3.9km s-min=2.1km az=68.0*
IGIL ***19*** *21:57:04.0, 36°.89N×8°.87W, h29^{km}, ML3.0*
LDG ***19*** *21:57:04.0, 36°.94N×8°.88W, h34^{km}*
ISC 19 21:57:00.8±1.2**, 36°.87N**±0°.03×**8°.87W**±0°.04**, h35^{km}, n111,** σ**2.^{s}21**/205**, 9C-7D, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSVI	**Cabo S. Vicent**	**0.19**	**326**	⇓*e*Pg	**Pn**	**21 57 08.8**	**+1.4**
PSVI				*e*Sg	**Sn**	**21 57 12.9**	**+0.9**
PSVI				A	A	21 57 14.4	
	814nm,0.5s						
PFVI	**Vila Bisbo**	**0.27**	**7**	⇓*i*Pg	**Pn**	**21 57 10.1**	**+1.8**
PFVI				*e*Sg	**Sn**	**21 57 15.2**	**+1.8**
PFVI				A	A	21 57 15.5	
	529nm,0.1s						
PFVI	**Vila Bisbo**	**0.27**	**7**	⇓P	**Pn**	**21 57 10.1**	**+1.8**
	660nm,0.1s,SNR=18						
PFVI				S	**Sn**	**21 57 14.7**	**+1.2**
	1µm,0.1s,SNR=7.3						
PFVI	**Vila Bisbo**	**0.27**	**7**	P	**Pn**	**21 57 09.3**	**+1.1**
PFVI				S	**Sn**	**21 57 16.0**	**+2.5**
PLAGO	**Lagos**	**0.27**	**32**	⇓*e*Pg	**Pn**	**21 57 10.3**	**+2.0**
PLAGO				*e*Sg	**Sn**	**21 57 15.6**	**+2.1**
PPOR	**Portimao**	**0.38**	**45**	*e*Pg	**Pn**	**21 57 11.7**	**+2.1**
PPOR				*e*Sg	**Sn**	**21 57 17.9**	**+2.1**
PPOR				A	A	21 57 19.4	
	1µm,0.2s						
PALJ	**Aljezur**	**0.45**	**7**	*e*Pg	**Pn**	**21 57 12.6**	**+1.9**
PALJ				*e*Sg	**Sn**	**21 57 19.5**	**+1.9**
PALJ				A	A	21 57 20.1	
	2µm,0.6s						
MORF	**Marmelete**	**0.47**	**22**	*e*P	**Pn**	**21 57 12.9**	**+1.8**
MORF				*e*S	**Sn**	**21 57 19.4**	**+1.2**
MORF				IAML		21 57 20.2	
	comp=N,2µm,0.2s						
MORF	**Marmelete**	**0.47**	**22**	⇓*e*Pg	**Pn**	**21 57 12.9**	**+1.8**
MORF				*e*Sg	**Sn**	**21 57 20.1**	**+1.9**
MORF				A	A	21 57 20.8	
	comp=N,2µm,0.1s						
PTEO	**Sao Teotonio**	**0.69**	**10**	*e*P	**Pn**	**21 57 15.8**	**+1.8**
PTEO				*e*S	**Sn**	**21 57 25.1**	**+1.7**
PTEO				A	A	21 57 26.6	
	comp=N,297nm,0.4s						
PFARO	**Faro**	**0.77**	**78**	*e*P	**Pn**	**21 57 17.5**	**+2.4**
PFARO				*e*S	**Sn**	**21 57 28.2**	**+2.7**
PBDV	**Barranco-do-Ve**	**0.84**	**63**	⇑*i*P	**Pn**	**21 57 18.4**	**+2.3**
PBDV				*e*S	**Sn**	**21 57 29.1**	**+1.9**
PBDV				A	A	21 57 30.1	
	comp=N,56nm,0.2s						
PTAV	**Tavira**	**1.00**	**75**	*e*S	**Sn**	**21 57 32.8**	**+1.6**
PCVE	**Castro Verde**	**1.01**	**41**	⇑*i*P	**Pn**	**21 57 20.5**	**+2.1**
PCVE				*e*S	**Sn**	**21 57 33.2**	**+1.8**
PCVE				A	A	21 57 34.2	
	comp=N,66nm,0.4s						
PVAQ	**Vaqueiros**	**1.06**	**60**	⇑*i*P	**Pn**	**21 57 21.3**	**+2.1**
PVAQ				*e*S	**Sn**	**21 57 34.5**	**+1.8**
PVAQ				A	A	21 57 39.9	
	comp=N,65nm,0.3s						
PVAQ	**Vaqueiros**	**1.06**	**60**	P	**Pn**	**21 57 20.6**	**+1.5**
PVAQ				S	**Sn**	**21 57 38.0**	**+5.3**
MESJ	**Messejana**	**1.10**	**28**	*e*P	**Pn**	**21 57 21.7**	**+2.1**
MESJ				*e*S	**Sn**	**21 57 34.9**	**+1.3**
MESJ				IAML		21 57 36.4	
	comp=N,182nm,0.4s						
MESJ	**Messejana**	**1.10**	**28**	⇑*e*P	**Pn**	**21 57 21.7**	**+2.1**
MESJ				*e*S	**Sn**	**21 57 35.5**	**+1.9**
MESJ				A	A	21 57 36.5	
	comp=N,120nm,0.7s						
PNCL	**Nicolau / Gran**	**1.27**	**12**	⇓*e*P	**Pn**	**21 57 23.5**	**+1.5**
PNCL				*e*S	**Sn**	**21 57 38.5**	**+0.7**
PNCL				A	A	21 57 45.3	
	comp=N,60nm,0.2s						
EGRO	**El Granado**	**1.29**	**59**	⇑P	**Pn**	**21 57 24.2**	**+1.9**
	comp=N,8.8nm,0.0s,SNR=18						
EGRO				S	**Sn**	**21 57 40.1**	**+1.8**
	comp=N,42nm,0.1s,SNR=7.4						
PBEJ	**Beja**	**1.40**	**34**	⇓*e*P	**Pn**	**21 57 25.5**	**+1.6**
PBEJ				*e*S	**Sn**	**21 57 42.8**	**+1.7**
PBEJ				A	A	21 57 56.1	
	comp=N,42nm,0.6s						
ARNO	**Arenosillo**	**1.73**	**82**	P	**Pn**	**21 57 31.0**	**+2.8**
ARNO				S	**Sn**	**21 57 51.0**	**+2.0**
EVO	**Evora**	**1.79**	**22**	P	**Pn**	**21 57 30.7**	**+1.6**
EVO				S	**Sn**	**21 57 50.9**	**+0.1**
EVO	**Evora**	**1.79**	**22**	*e*Pn	**Pn**	**21 57 30.8**	**+1.6**
EVO				*e*Sn	**Sn**	**21 57 51.2**	**+0.4**
EVO				A	A	21 57 52.3	
	comp=N,133nm,0.1s						
LIS	**Lisbon**	**1.86**	**353**	*e*S	**Sn**	**21 57 52.9**	**+0.5**
LIS				IAML		21 57 55.8	
	comp=N,108nm,0.2s						
LIS	**Lisbon**	**1.86**	**353**	*e*Sn	**Sn**	**21 57 53.2**	**+0.9**
LIS				A	A	21 57 56.1	
	comp=N,81nm,0.3s						
PBAR	**Barrancos**	**1.95**	**48**	*e*Pn	**Pn**	**21 57 33.0**	**+1.6**
PBAR				A	A	21 58 08.0	
	comp=N,16nm,0.2s						
EMIN	**Mina Concepcio**	**1.97**	**62**	⇑P	**Pn**	**21 57 33.1**	**+1.6**
	comp=N,5.6nm,0.1s,SNR=18						
EMIN				S	**Sn**	**21 57 56.2**	**+1.2**
	comp=N,12nm,0.1s,SNR=9.3						
PMAFR	**Mafra**	**2.11**	**351**	*e*Pn	**Pn**	**21 57 35.5**	**+1.9**
PMAFR				*e*Sn	**Sn**	**21 58 00.1**	**+1.5**
PMAFR				A	A	21 58 02.5	
	comp=N,94nm,0.2s						
PMAFR	**Mafra**	**2.11**	**351**	⇑P	**Pn**	**21 57 35.5**	**+1.9**
	comp=N,24nm,0.1s,SNR=18						
PMAFR				S	**Sn**	**21 57 58.7**	**+0.1**
	comp=N,132nm,0.2s,SNR=7.9						
PESTR	**Estremoz**	**2.24**	**26**	*e*Pn	**Pn**	**21 57 36.7**	**+1.4**
PESTR				*e*Sn	**Sn**	**21 58 02.7**	**+1.0**
PESTR				A	A	21 58 13.2	
	comp=N,16nm,0.5s						
PESTR	**Estremoz**	**2.24**	**26**	P	**Pn**	**21 57 36.8**	**+1.4**
PMTG	**Montargil**	**2.25**	**13**	*e*Pn	**Pn**	**21 57 37.0**	**+1.5**
PMTG				*e*Sn	**Sn**	**21 58 01.7**	**-0.4**
PMTG				A	A	21 58 05.1	
	comp=N,45nm,0.1s						
EBAD	**Badajoz**	**2.39**	**37**	P	**Pn**	**21 57 38.8**	**+1.4**
	comp=N,14nm,0.1s,SNR=7.9						
EBAD				S	**Sn**	**21 58 05.7**	**+0.2**
	comp=N,26nm,0.1s,SNR=7.9						
ESPR	**Espera**	**2.42**	**89**	P	**Pn**	**21 57 40.2**	**+2.4**
	comp=N,13nm,0.2s,SNR=30						
ESPR				S	**Sn**	**21 58 07.0**	**+0.9**
	comp=N,68nm,0.2s,SNR=20						
PSBE	**So Bento**	**2.64**	**1**	*e*Pn	**Pn**	**21 57 42.7**	**+1.8**
PSBE				*e*Sn	**Sn**	**21 58 13.2**	**+1.5**
PSBE				A	A	21 58 15.8	
	comp=N,23nm,0.3s						
EJIF	**Jimena Fronter**	**2.76**	**98**	P	**Pn**	**21 57 45.4**	**+2.9**
	SNR=7.9						
EJIF				S	**Sn**	**21 58 15.5**	**+0.8**
	SNR=7.9						
LIJA	**Lijar**	**2.78**	**88**	S	**Sn**	**21 58 17.3**	**+2.1**
LIJA	**Lijar**	**2.78**	**88**	S	**Sn**	**21 58 17.3**	**+2.1**
PMRV	**Marv??o**	**2.81**	**24**	*e*Pn	**Pn**	**21 57 44.8**	**+1.6**
PMRV				*e*Sn	**Sn**	**21 58 15.6**	**-0.2**
PMRV				A	A	21 58 18.2	
	comp=N,44nm,0.2s						
CEU	**Ceuta**	**2.98**	**108**	P	**Pn**	**21 57 48.9**	**+3.4**
CEU				S	**Sn**	**21 58 23.5**	**+3.5**
ECAB	**El Cabril**	**3.00**	**65**	P	**Pn**	**21 57 47.7**	**+1.9**
	comp=N,33nm,0.2s,SNR=356						
ECAB				S	**Sn**	**21 58 20.8**	**+0.3**
	comp=N,8.6nm,0.1s,SNR=7.5						
PCBR	**Castelo Branco**	**3.16**	**20**	*e*Pn	**Pn**	**21 57 49.9**	**+1.9**
PCBR				*e*Sn	**Sn**	**21 58 24.4**	**-0.1**
PCBR				A	A	21 58 26.2	
	comp=N,25nm,0.2s						
PCAS	**Casmilo, Conde**	**3.19**	**5**	*e*Pn	**Pn**	**21 57 50.2**	**+1.8**
PCAS				*e*Sn	**Sn**	**21 58 25.2**	**-0.1**
PCAS				A	A	21 58 27.0	
	comp=N,24nm,0.5s						
EMIJ	**Mijas**	**3.30**	**94**	P	**Pn**	**21 57 52.8**	**+2.8**
	comp=N,1.1nm,0.1s,SNR=9.1						
EMIJ				S	**Sn**	**21 58 28.3**	**+0.2**
	comp=N,5.5nm,0.2s						
COI	**Coimbra**	**3.35**	**6**	*e*Sn	**Sn**	**21 58 29.0**	**-0.2**
COI				A	A	21 58 30.0	
	comp=N,25nm,0.4s						
CHEFC	**Chefchaouen**	**3.36**	**121**	P	**Pn**	**21 57 53.0**	**+2.2**
CHEFC				S	**Sn**	**21 58 28.0**	**-1.5**
EMAL	**Malaga-Limoner**	**3.56**	**90**	P	**Pn**	**21 57 56.6**	**+3.1**
EMAL				S	**Sn**	**21 58 35.7**	**+1.3**
EADA	**Adamuz**	**3.65**	**68**	P	**Pn**	**21 57 56.6**	**+1.9**
	comp=N,7.2nm,0.1s,SNR=102						
EADA				S	**Sn**	**21 58 35.8**	**-0.8**
	comp=N,12nm,0.1s						
MTE	**Manteigas**	**3.67**	**16**	*e*Pn	**Pn**	**21 57 56.7**	**+1.6**
MTE				*e*Sn	**Sn**	**21 58 36.7**	**-0.6**
MTE				A	A	21 58 38.5	
	comp=N,48nm,0.2s						
AVE	**Averroes**	**3.76**	**161**	P	**Pn**	**21 57 58.5**	**+2.3**
AVE				S	**Sn**	**21 58 39.9**	**+0.7**
AVE	**Averroes**	**3.76**	**161**	P	**Pn**	**21 57 58.5**	**+2.3**
AVE				S	**Sn**	**21 58 37.2**	**-2.0**
EGOR	**Sierra Gorda,**	**3.82**	**85**	P	**Pn**	**21 58 00.4**	**+3.3**
	comp=N,0.8nm,0.1s,SNR=7.9						
EGOR				S	**Sn**	**21 58 42.0**	**+1.2**
	comp=N,12nm,0.3s,SNR=7.9						
EPLA	**Plasencia**	**3.87**	**34**	P	**Pn**	**21 57 59.3**	**+1.6**
	comp=N,1.6nm,0.1s,SNR=17						
EPLA				S	**Sn**	**21 58 41.8**	**-0.2**
	comp=N,12nm,0.1s,SNR=14						
ZHG	**ZHG**	**3.87**	**151**	P	**Pn**	**21 57 59.5**	**+1.6**
ZHG				S	**Sn**	**21 58 41.1**	**-1.1**
PVIS	**Viseu**	**3.92**	**11**	*e*Pn	**Pn**	**21 58 00.0**	**+1.6**
PVIS				*e*Sn	**Sn**	**21 58 43.0**	**-0.2**
PVIS				A	A	21 58 44.6	
	comp=N,21nm,0.1s						
ELGU	**Los Guajares,**	**4.20**	**88**	P	**Pn**	**21 58 05.3**	**+2.9**
	comp=N,2.1nm,0.1s,SNR=7.9						
ELGU				S	**Sn**	**21 58 51.3**	**+1.0**
	comp=N,12nm,0.2s,SNR=7.9						
PALE	**Palemas**	**4.32**	**111**	P	**Pn**	**21 58 05.3**	**+1.4**
PALE				S	**Sn**	**21 58 53.5**	**+0.4**
PAB	**San Pablo**	**4.45**	**52**	⇑P	**Pn**	**21 58 07.6**	**+1.7**
	comp=N,3.6nm,0.1s,SNR=18						
PAB				S	**Sn**	**21 58 54.8**	**-1.6**
	comp=N,3.9nm,0.1s,SNR=7.9						
SRHM	**Skhour des Reh**	**4.46**	**169**	P	**Pn**	**21 58 06.6**	**+0.7**
PVRL	**Vila Real**	**4.49**	**11**	*e*Sn	**Sn**	**21 58 55.7**	**-1.6**
PVRL				A	A	21 58 58.7	
	comp=N,30nm,0.1s						
MVO	**Moncorvo**	**4.52**	**18**	*e*Pn	**Pn**	**21 58 08.3**	**+1.5**
MVO				*e*Sn	**Sn**	**21 58 56.6**	**-1.6**
MVO				A	A	21 58 58.4	
	comp=N,12nm,0.1s						
MVO	**Moncorvo**	**4.52**	**18**	P	**Pn**	**21 58 08.3**	**+1.5**
	comp=N,3.0nm,0.1s,SNR=23						
MVO				S	**Sn**	**21 58 56.0**	**-2.1**
	comp=N,19nm,0.1s,SNR=15						
IFR	**Ifrane**	**4.54**	**136**	P	**Pn**	**21 58 08.1**	**+1.0**
IFR				S	**Sn**	**21 58 58.4**	**-0.2**
LCRM	**LCR**	**4.56**	**133**	P	**Pn**	**21 58 07.9**	**+0.5**
LCRM				S	**Sn**	**21 58 59.4**	**0.0**
POLO	**Lamas de Olo**	**4.58**	**10**	*e*Pn	**Pn**	**21 58 09.1**	**+1.6**
POLO				*e*Sn	**Sn**	**21 58 57.7**	**-1.8**
POLO				A	A	21 59 00.4	
	comp=N,5.5nm,0.5s						
GORA	**Gorafe**	**4.69**	**81**	P	**Pn**	**21 58 10.5**	**+1.4**
	comp=N,2.3nm,0.1s,SNR=7.9						
GORA				S	**Sn**	**21 59 02.8**	**+0.4**
	comp=N,19nm,0.2s,SNR=7.9						
ESDC	**Sonseca Array**	**4.77**	**53**	P	**Pn**	**21 58 11.7**	**+1.6**
	comp=N,2.6nm,0.2s,baz=236,slow=13,SNR=72						
ESDC				S	**Sn**	**21 59 03.9**	**-0.3**
	comp=N,4.6nm,0.2s,baz=240,slow=24,SNR=19						
EBER	**Berja**	**4.79**	**88**	P	**Pn**	**21 58 14.2**	**+3.6**

	comp=N,0.9nm,0.1s,SNR=16						
EBER				S	Sn	21 59 05.9	+0.9
	comp=N,6.7nm,0.4s						
PCAB	Cabril	4.88	7	*e*Pn	Pn	21 58 13.3	+1.7
PCAB				*e*Sn	Sn	21 59 04.8	-2.1
PCAB				A	A	21 59 10.0	
	comp=N,7.9nm,0.1s						
CZD	Col de Zad	4.95	139	P	Pn	21 58 13.2	+0.2
CZD				S	Sn	21 59 05.9	-3.2
ELOB	Lobios	5.03	7	P	Pn	21 58 15.0	+1.2
	comp=N,1.4nm,0.1s,SNR=21						
ELOB				S	Sn	21 59 08.2	-2.5
	comp=N,7.7nm,0.1s,SNR=14						
PGAV	Gavieira, Arco	5.11	5	*e*Pn	Pn	21 58 16.4	+1.5
PGAV				*e*Sn	Sn	21 59 10.7	-2.0
PGAV				A	A	21 59 13.7	
	comp=N,6.6nm,0.4s						
SESP	Santiago Espad	5.18	74	P	Pn	21 58 17.8	+1.8
	comp=N,5.7nm,0.2s,SNR=7.9						
SESP				S	Sn	21 59 13.9	-0.7
	comp=N,7.7nm,0.1s,SNR=7.9						
PBRG	Braganca	5.20	18	*e*Pn	Pn	21 58 17.6	+1.6
PBRG				*e*Sn	Sn	21 59 12.7	-2.1
PBRG				A	A	21 59 15.7	
	comp=N,8.0nm,0.1s						
MD31	MD31	5.23	139	P	Pn	21 58 17.4	+0.9
MD31				S	Sn	21 59 13.7	-1.9
EAH	EAH	5.24	187	P	Pn	21 58 17.1	+0.4
EAH				S	Sn	21 59 11.8	-4.0
EZAM	Zamans	5.28	1	P	Pn	21 58 18.9	+1.8
	comp=N,0.4nm,0.0s,SNR=7.9						
EZAM				S	Sn	21 59 13.9	-2.7
	comp=N,5.7nm,0.3s,SNR=7.9						
ECAL	Calabor	5.33	17	P	Pn	21 58 19.8	+2.0
	comp=N,1.2nm,0.1s,SNR=11						
ECAL				S	Sn	21 59 15.8	-2.2
	comp=N,7.7nm,0.1s,SNR=13						
MDT	Midelt	5.35	138	P	Pn	21 58 19.2	+1.0
MDT				S	Sn	21 59 15.7	-3.0
CHAS	Isla Isabel II	5.48	106	P	Pn	21 58 24.4	+4.5
CHAS				S	Sn	21 59 18.5	-3.2
UCM	Universidad Co	5.58	50	P	Pn	21 58 23.5	+2.1
UCM				S	Sn	21 59 22.5	-1.8
UCM	Universidad Co	5.58	50	S	Sn	21 59 22.5	-1.8
TAF	Taforalt	5.63	109	P	Pn	21 58 22.9	+0.9
TAF				S	Sn	21 59 24.8	-0.6
OUK	Oukaimeden	5.71	171	P	Pn	21 58 24.7	+1.3
OUK				S	Sn	21 59 24.2	-3.7
JBK	JBK	5.72	114	P	Pn	21 58 25.4	+2.0
JBK				S	Sn	21 59 25.5	-2.5
ETOB	Tobarra	6.07	71	⇑P	Pn	21 58 29.4	+1.4
	comp=N,1.4nm,0.1s,SNR=18						
ETOB				S	Sn	21 59 34.2	-1.9
	comp=N,1.7nm,0.1s						
EMAZ	Mazaricos	6.07	359	P	Pn	21 58 29.3	+1.3
	comp=N,2.5nm,0.1s,SNR=7.9						
EMAZ				S	Sn	21 59 32.5	-3.8
	comp=N,5.7nm,0.2s,SNR=7.9						
EMUR	La Murta	6.15	79	P	Pn	21 58 30.9	+1.7
	comp=N,2.3nm,0.2s,SNR=7.2						
EMUR				S	Sn	21 59 35.0	-3.3
	comp=N,7.2nm,0.5s						
OUZM	OUZ	6.20	163	P	Pn	21 58 31.2	+1.3
OUZM				S	Sn	21 59 37.7	-1.8
TTIG	Tnine Tigouga,	6.32	177	P	Pn	21 58 28.8	-2.7
EPON	Pontenova	6.58	11	P	Pn	21 58 36.8	+1.7
	comp=N,0.2nm,0.1s,SNR=5.9						
EPON				S	Sn	21 59 45.8	-3.1
	comp=N,1.2nm,0.2s,SNR=7.9						
ETOR	Torete	6.62	51	P	Pn	21 58 37.4	+1.8
	comp=N,4.0nm,0.2s,SNR=23						
ETOR				S	Sn	21 59 47.3	-2.5
	comp=N,6.4nm,0.3s						
TZRR	Tazzarine	6.66	155	P	Pn	21 58 37.9	+1.7
TZRR				S	Sn	21 59 48.9	-2.0
ECHE	Chera	6.79	64	P	Pn	21 58 40.1	+2.3
	comp=N,0.8nm,0.1s,SNR=7.9						
ECHE				S	Sn	21 59 52.1	-1.8
	comp=N,0.8nm,0.3s,SNR=7.9						
TDRA	Tendrara	6.79	122	P	Pn	21 58 37.3	-0.8
TDRA				S	Sn	21 59 51.8	-2.4
ZGR	Zagora	7.26	157	P	Pn	21 58 45.1	+0.7
ZGR				S	Sn	22 00 01.4	-4.2
EMOS	Mosqueruela	7.44	59	P	Pn	21 58 49.8	+2.9
	comp=N,2.8nm,0.2s,SNR=26						
EMOS				S	Sn	22 00 06.8	-3.4
	comp=N,1.6nm,0.3s,SNR=7.9						
ELAN	Lanestosa	7.60	32	P	Pn	21 58 51.8	+2.8
	comp=N,0.2nm,0.1s,SNR=7.9						
ELAN				S	Sn	22 00 09.9	-4.0
	comp=N,0.6nm,0.2s,SNR=7.9						
ERTA	Horta de San J	8.25	58	P	Pn	21 59 00.9	+2.9
	comp=N,0.6nm,0.1s,SNR=7.9						
EIBI	Ibiza	8.35	72	P	Pn	21 59 00.3	+1.1
	comp=N,0.3nm,0.1s,SNR=7.9						
EIBI				S	Sn	22 00 27.6	-4.7
	comp=N,0.5nm,0.2s,SNR=7.9						
EORO	Oroz-Betelu	8.36	42	P	Pn	21 59 01.3	+1.8
	comp=N,0.5nm,0.2s,SNR=7.9						
EORO				S	Sn	22 00 30.0	-2.6
	comp=N,1.2nm,0.3s,SNR=7.9						
EALK	Alkurruntz	8.49	39	P	Pn	21 59 02.6	+1.4
	comp=N,1.9nm,0.2s,SNR=5.8						
EALK				S	Sn	22 00 31.8	-4.0
	comp=N,5.8nm,0.3s,SNR=7.9						
SJPF	Ste Jean	8.56	41	*e*Pn	Pn	21 59 04.0	+1.9
SJPF				*e*Sn	Sn	22 00 32.1	-5.3
	comp=N,1.9nm,0.4s						
SJPF	Ste Jean	8.56	41	P	Pn	21 59 04.0	+1.9
SJPF				Sn	Sn	22 00 32.1	-5.3
	comp=N,0.9nm,0.4s						
ETSF	Etsaut	8.78	44	*e*Pn	Pn	21 59 06.8	+1.7
ETSF				*e*Sn	Sn	22 00 37.7	-5.1
	comp=N,0.5nm,0.3s						
EPF	Esparros	9.37	46	*e*Pn	Pn	21 59 14.4	+1.1
EPF				*e*Sn	Sn	22 00 52.3	-5.1
	comp=N,1.2nm,0.3s						
MTLF	Montolieu	10.66	49	*e*P	Pn	21 59 35.6	+4.6
MTLF				*e*Sn	Sn	22 01 22.8	-6.3
	comp=N,0.8nm,0.2s						
RJF	Les Rejaudoux	11.50	40	*e*Pn	Pn	21 59 43.5	+1.1
RJF				*e*Sn	Sn	22 01 41.6	-7.9
	comp=N,0.4nm,0.2s						
CAF	Calviac	11.53	42	*e*Pn	Pn	21 59 43.9	+1.0
CAF				*e*Sn	Sn	22 01 44.4	-6.0
	comp=N,0.7nm,0.3s						
TCF	Toulx Ste Croi	12.53	38	*e*P	Pn	22 00 03.2	+6.7

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*SJA **19** 22:02:04.0, 30°.86S×71°.62W, h10^{km}, ML4.1*
*GUC **19** 22:02:05.8±0.8, 30°.84S×71°.41W, h54^{km}±4^{km}, ML3.5*
ISC 19 22:02:06.6±1.5**, 30°.83S**±0°.03×**71°.5W**±0°.1**, h47**^{km}±13^{km}**,**
n22, σ0^{s}.**81**/31**, 1C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	Fray Jorge	0.18	328	⇑*i*P	Pn	22 02 14.6	0.0
CO06				*i* S	Sn	22 02 20.8	+0.6
CO06				IAML		22 02 22.5	
	comp=E,5μm,0.2s						
GO04	Tololo Observa	0.91	44	*e*P	Pn	22 02 22.1	-1.1
GO04				*i* S	Sn	22 02 33.9	-1.5
GO04	Tololo Observa	0.91	44	*i* P	Pn	22 02 22.0	-1.3
CO05	La Serena	0.94	15	*e*P	Pn	22 02 23.3	-0.2
CO05				*i* S	Sn	22 02 35.5	-0.3
CO05				IAML		22 02 38.7	
	comp=E,2μm,0.2s						
VA06	Catapilco	1.73	174	*e*P	Pn	22 02 33.8	-0.5
VA06				IAML		22 03 07.4	
	comp=E,930nm,0.3s						
LCO	Las Campanas	1.95	22	*e*P	Pn	22 02 37.5	-0.1
LCO				*i* S	Sn	22 03 00.8	-0.1
LCO	Las Campanas	1.95	22	*i* P	Pn	22 02 37.0	-0.5
VA03	San Esteban	2.10	157	*e*P	Pn	22 02 39.2	-0.2
VA03				*i* S	Sn	22 03 04.3	0.0
VA03	San Esteban	2.10	157	*i* P	Pn	22 02 39.0	-0.4
ROCH	El Roble	2.18	169	*e*P	Pn	22 02 40.0	-0.6
ROCH				*e*P	Pn	22 02 40.3	-0.4
ROCH				IAML		22 03 17.2	
	comp=N,512nm,0.6s						
ROCH				IAML		22 03 18.6	
	comp=N,394nm,0.6s						
ROC1	El Roble	2.18	169	*i* P	Pn	22 02 40.0	-0.7
PEL	Peldehue	2.41	163	*e*P	Pn	22 02 44.0	+0.3
PEL	Peldehue	2.41	163	*i* P	Pn	22 02 44.0	+0.3
MT02	Curacav	2.44	172	*e*P	Pn	22 02 43.6	-0.4
ZON	Zonda	2.54	107	*i* P	Pn	22 02 46.0	+0.6
MT09	Talagante	2.97	171	*e*P	Pn	22 02 51.3	-0.1
MT01	Popeta	3.03	176	*i* P	Pn	22 02 52.0	-0.1
LMEL	Las Melosas	3.21	160	*e*P	Pn	22 02 55.7	+1.0
LMEL				*i* S	Sn	22 03 33.0	+1.2
BO04	La Punta	3.24	166	*e*P	Pn	22 02 55.0	-0.1
BO04				*e*S	Sn	22 03 32.8	+0.4
BO04				IAML		22 03 52.3	
	comp=E,151nm,0.6s						
GO03	Copiap	3.42	20	*e*P	Pn	22 02 58.4	+0.9
GO03				*i* S	Sn	22 03 37.5	+0.7
GO03	Copiap	3.42	20	*i* P	Pn	22 02 59.0	+1.5
GO05	Huala	4.18	185	*i* P	Pn	22 03 06.0	-1.9

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*JMA **19** 22:17:31.7±0.2, 24°.91N×122°.61E, h0^{km}, M2.9*
*IDC **19** 22:17:33.5±1.7, 24°.67N×121°.50E, h0^{km}, mb3.6/5,*
mb1 3.7/6, mb1mx3.4/54, mbtmp3.6/6, ML3.5/1, MS3.2/3,
Ms1 3.2/3, ms1mx2.7/41, Error ellipse: s-maj=67.2km
s-min=27.6km az=67.0
ISC 19 22:17:33.5±1.0**, 24°.9N**±0°.1×**122°.6E**±0°.2**, h16**^{km}**, n13,**
σ**1**^{s}.**57**/14**, mb3.4**/5**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	Yonagunijimaku	0.53	142	P	Pg	22 17 42.9	-1.2
JYNG				*e*S	Sg	22 17 50.4	-0.8
YOJ	Yonaguni jima	0.56	137	P	Pg	22 17 43.1	-1.5
YOJ				*e*S	Sg	22 17 51.9	-0.3
IRIF	Iriomote-Funau	1.17	117	P	Pn	22 17 54.6	-0.6
HATJ	Hateruma jima	1.38	126	*e*S	Sn	22 18 16.3	+0.4
JKRS	Kuro-shima	1.44	116	P	Pn	22 17 59.5	+0.6
JIJ	Ishigaki jima	1.51	109	P	Pn	22 18 00.5	+0.7
KSRS	Korea Array	13.34	19	Pn	P	22 20 52.5	+0.8
	0.2nm,0.3s,baz=187,slow=13,SNR=4.4						
KSRS				LR	LR	22 26 35.1	
	comp=Z,97nm,18.8s,baz=176,slow=39						
KLR	Kul'dur	25.35	14	LR	LR	22 32 42.6	
	comp=Z,56nm,20.6s,baz=192,slow=35						
SONM	Songino Array	26.26	335	P	P	22 23 08.5	+0.5
	0.7nm,1.1s,baz=144,slow=10.0,SNR=2.2						
SONM				LR	LR	22 34 35.5	
	comp=Z,58nm,19.1s,baz=133,slow=39						
MKAR	Makanchi Array	38.74	315	P	P	22 24 56.5	-0.5
	2.5nm,1.1s,baz=105,slow=9.0,SNR=4.2						
ZALV	Zalesovo Beam	40.37	326	P	P	22 25 08.2	-2.2
	0.2nm,0.3s,baz=127,slow=9.3,SNR=1.7						
KURBB	Kurchatov Arra	42.42	319	P	P	22 25 24.8	-2.4
	0.4nm,0.4s,baz=124,slow=7.6,SNR=1.9						
WRA	Warramunga Arr	45.99	165	P	P	22 25 59.3	+3.1
	0.5nm,1.1s,baz=348,slow=8.6,SNR=2.6						

TAP 19 22:18:35.0, 23°.84N×121°.48E, h9^{km}**, ML2.5, 1D, B,**
Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESL	Shilin	0.06	238	⇓*i*P	Pg	22 18 37.0	-0.1
	baz=231						
ESL				*i* S	Sg	22 18 38.2	-0.2
	baz=231						
TEYL	Yanliau Villag	0.11	77	P	Pg	22 18 38.0	+0.3
	baz=60						
TEYL				S	Sg	22 18 40.5	+1.0
	baz=60						
ETM	Tongmen	0.12	4	P	Pg	22 18 37.7	-0.2
	baz=3.0						
ETM				S	Sg	22 18 39.5	-0.4
	baz=3.0						
EGFH	Guangfu	0.18	197	*e*P	Pg	22 18 38.9	0.0
	baz=196						
EGFH				*e*S	Sg	22 18 41.9	+0.4
	baz=196						
TWD	Chiawan	0.26	23	P	Pg	22 18 40.0	-0.3
	baz=25						
TWD				S	Sg	22 18 44.8	+1.0
	baz=25						
OWD	Renai	0.30	292	*e*P	Pg	22 18 40.4	-0.8
	baz=291						
OWD				*e*S	Sg	22 18 45.9	+0.7
	baz=291						
VWDT	VWDT	0.33	254	P	Pg	22 18 41.4	-0.1
	baz=254						
ETL	Fush Village	0.34	22	S	Sg	22 18 47.0	+0.6
	baz=22						
NACB	Ninganchiao	0.34	17	*e*S	Sg	22 18 47.2	+0.7
	baz=17						
CHGB	Renai	0.36	307	*e*P	Pg	22 18 41.8	-0.4
	baz=307						
WHF	Hehuan Shan	0.36	326	*e*P	Pg	22 18 42.1	-0.2
	baz=327						
WHF				S	Sg	22 18 47.5	+0.3
	baz=327						
FUSS	Fushou	0.46	331	*e*P	Pg	22 18 44.1	+0.1
	baz=331						
FUSS				*e*S	Sg	22 18 51.0	+0.9
	baz=331						
SSLB	Suanglung	0.49	264	*e*P	Pg	22 18 44.1	-0.5
	baz=263						
TWT	Tachien	0.50	325	*e*P	Pg	22 18 44.0	-0.7
	baz=323						
TWT				*e*S	Sg	22 18 51.6	+0.2
	baz=323						
TDCB	Techi	0.51	324	*e*P	Pg	22 18 44.4	-0.5
	baz=323						
EYUL	Yuli	0.52	197	*e*P	Pg	22 18 44.8	-0.2
	baz=196						
SMLT	Sun Moon Lake	0.54	274	*e*P	Pg	22 18 45.5	0.0
	baz=274						
WCS	Beigang Elemen	0.56	292	*e*P	Pg	22 18 45.3	-0.7
	baz=292						
WCS				*e*S	Sb	22 18 54.6	-0.7
	baz=292						
TYC	Yuchr	0.58	276	*e*P	Pg	22 18 45.4	-0.8
	baz=276						
TYC				*e*S	Sg	22 18 54.4	+0.6
	baz=276						
NNS	Nan Shan	0.60	350	P	Pg	22 18 45.9	-0.8
	baz=351						
ENA	Nanau	0.63	22	*e*S	Sg	22 18 55.6	+0.1
	baz=22						
WHP	Taichung City	0.66	311	*e*P	Pg	22 18 46.9	-0.8
	baz=311						
WHP				*e*S	Sg	22 18 56.3	0.0
	baz=311						
EWUT	Wuta	0.66	24	*e*S	Sg	22 18 56.1	-0.3
	baz=24						

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*IDC **19** 22:20:54.7±1.1, 42°.23N×29°.36W, h0^{km}, mb3.9/14,*
mb1 4.0/15, mb1mx3.8/69, mbtmp3.9/15, ML4.1/1, MS3.4/20,
Ms1 3.4/20, ms1mx3.2/55, Error ellipse: s-maj=29.7km
s-min=18.1km az=19.0
*NEIC **19** 22:20:56.8±1.0, 42°.2N±0°.1×29°.3W±0°.1, h10^{km}±1^{km},*
mb4.3/31, Error ellipse: s-maj=19.0km s-min=16.5km
az=172.0
ISC 19 22:20:56.6±0.6**, 42°.22N**±0°.10×**29°.27W**±0°.08**, h10**^{km}**, n76,**
σ**0**^{s}.**85**/63**, mb4.2**/27**, MS3.4**/19**, Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROSA	Rosais	3.58	167	Pn	Pn	22 21 52.2	-0.1
PMOZ	Porto Moniz, M	13.39	131	*e*P	Pn	22 24 07.7	+0.9
PMOZ	Porto Moniz, M	13.39	131	*e*T	T	22 37 27.1	
PMOZ	Porto Moniz, M	13.39	131	Pn	Pn	22 24 05.1	-1.7
PMAR	Madeira	13.63	130	*e*P	Pn	22 24 10.9	+0.8
PCAS	Casmilo, Conde	15.79	91	*e*P	P	22 24 43.7	+0.8
	42nm,1.7s						
COI	Coimbra	15.82	90	*e*P	P	22 24 44.3	+1.1
	49nm,1.0s						
COI	Coimbra	15.82	90		Pn	22 24 39.1	-0.2
COI				IAmb	IAmb	22 24 45.4	
	comp=Z,34nm,0.8s						
PMTG	Montargil	16.27	94	*e*P	P	22 24 49.1	+0.9
	comp=Z,33nm,1.4s						
MTE	Manteigas	16.42	89	Pn	Pn	22 24 46.9	-0.2
MTE				IAmb	IAmb	22 24 52.2	
	comp=Z,17nm,1.2s						
PTEO	Sao Teotonio	16.43	100	*e*P	Pn	22 24 46.3	-0.9
PFVI	Vila Bisbo	16.52	101	*e*P	Pn	22 24 47.7	-0.7
PFVI	Vila Bisbo	16.52	101	Pn	Pn	22 24 47.1	-1.3
PFVI				IAmb	IAmb	22 24 48.1	
	comp=Z,20nm,0.9s						
MORF	Marmelete	16.58	100	*e*P	Pn	22 24 48.1	-1.1
	comp=Z,50nm,1.7s						
EVO	Evora	16.60	96	*e*P	Pn	22 24 47.4	-2.0
	comp=Z,33nm,1.4s						
PCBR	Castelo Branco	16.61	91	*e*P	P	22 24 53.2	+1.3
MESJ	Messejana	16.69	98	*e*P	Pn	22 24 49.5	-1.0
	comp=Z,31nm,1.9s						
PMRV	Marv??o	16.79	92	*e*P	P	22 24 54.8	+0.9
	comp=Z,22nm,1.2s						
PESTR	Estremoz	16.81	94	Pn	Pn	22 24 52.0	0.0
PCVE	Castro Verde	16.90	99	*e*P	Pn	22 24 52.8	-0.4
	comp=Z,32nm,1.8s						
PBDV	Barranco-do-Ve	17.13	100	*e*P	Pn	22 24 57.1	+1.0
PVAQ	Vaqueiros	17.23	99	*e*P	Pn	22 24 57.8	+0.5
	comp=Z,27nm,1.5s						
PVAQ	Vaqueiros	17.23	99	Pn	Pn	22 24 57.0	-0.3
PBAR	Barrancos	17.44	96	*e*P	Pn	22 25 00.1	+0.2
	comp=Z,20nm,2.1s						
DSB	Dublin	18.85	46	P	P	22 25 16.7	+0.2
DSB				IAmb	IAmb	22 25 20.0	
	comp=Z,20nm,1.2s						
PAB	San Pablo	19.01	90	P	P	22 25 18.3	-0.3
ESDC	Sonseca Array	19.26	89	P	P	22 25 20.8	-0.4
	comp=Z,0.1nm,0.3s,baz=286,slow=12,SNR=16						
ESDC				LR	LR	22 31 01.0	
	comp=Z,99nm,21.8s,baz=295,slow=31						
ESBB	Sonseca Array	19.26	89	P	P	22 25 21.4	+0.1
EKA	Eskdalemuir Ar	21.47	43	P	P	22 25 46.2	+1.2
	comp=Z,3.5nm,0.9s,baz=268,slow=11,SNR=2.8						
MDT	Midelt	21.63	108	P	P	22 25 49.0	+1.9
	comp=Z,2.4nm,0.9s,baz=244,slow=7.3,SNR=4.6						
MDT				LR	LR	22 32 33.9	
	comp=Z,48nm,21.7s,baz=309,slow=32						
BORG	Borgarnes	23.02	9	LR	LR	22 32 27.4	
	comp=Z,67nm,21.7s,baz=220,slow=30						
LMN	Caledonia Moun	25.67	290	P	P	22 26 25.8	-0.8
ECH	Echery	26.17	64	P	P	22 26 30.7	-0.3
ECH				IAmb	IAmb	22 26 38.1	
	comp=Z,8.9nm,1.1s						
SENIN	Lac Senin/Sane	26.34	68	P	P	22 26 32.2	-0.7
SENIN				IAmb	IAmb	22 26 46.1	
	comp=Z,7.5nm,1.1s						
BATG	Bathurst New B	26.45	294	P	P	22 26 34.0	+0.5
SCHQ	Schefferville	27.54	310	LR	LR	22 35 37.8	
	comp=Z,166nm,18.7s,baz=98,slow=32						
DAVOX	Davos/Dischmat	28.08	67	P	P	22 26 48.5	0.0
	comp=Z,2.6nm,0.8s,baz=311,slow=9.3,SNR=5.3						
DAVOX				LR	LR	22 36 06.0	
	comp=Z,100nm,18.8s,baz=274,slow=32						
PKME	Peaks-Kenny Pk	28.87	290	P	P	22 26 56.1	+0.9
ZCCA	Zocca	29.17	72	P	P	22 26 59.0	+1.1
CTI	Castel Tesino	29.38	68	P	P	22 26 59.2	-0.6
CTI				IAmb	IAmb	22 27 02.2	
	comp=Z,3.9nm,0.6s						
STAL	STALIGIAL	30.08	68	P	P	22 27 06.7	+0.7
STAL				IAmb	IAmb	22 27 16.1	
	comp=Z,3.5nm,0.9s						
ZOU	Zoufplan	30.23	67	P	P	22 27 07.0	-0.5
ZOU				IAmb	IAmb	22 27 08.1	
	comp=Z,5.8nm,0.8s						
KBA	Koelnbreinsper	30.41	66	*e*X	P	22 27 10.0	+0.9
	comp=Z,3.5nm,0.6s						
GERES	GERESS Array B	30.49	63	LR	LR	22 37 49.7	
	comp=Z,96nm,20.1s,baz=261,slow=33						
KEST	Kesra	30.52	89	P	P	22 27 09.7	-0.3
	comp=Z,3.4nm,0.7s,baz=301,slow=5.5,SNR=2.5						
KEST	Kesra	30.52	89	IAmb	IAmb	22 27 11.1	
	comp=Z,16nm,1.4s						
NOA	NORSAR Array B	30.70	38	LR	LR	22 37 47.7	
	comp=Z,28nm,19.4s,baz=250,slow=33						
MOQ	Mont Orford	30.93	291	P	P	22 27 14.8	+1.3
NRCA	Norcia	31.00	74	P	P	22 27 12.1	-2.1
NRCA				IAmb	IAmb	22 27 13.2	
	comp=Z,4.4nm,1.2s						
OBKA	Obir	31.31	67	*e*X	P	22 27 16.4	-0.5
	comp=Z,10nm,0.7s						
AQU	L'Aquila	31.32	75	P	P	22 27 16.1	-0.9
AQU				IAmb	IAmb	22 27 23.4	
	comp=Z,7.7nm,1.0s						
PSZ	Piszkesteto	34.70	63	P	P	22 27 46.0	-0.4
PSZ				IAmb	IAmb	22 27 50.8	
	comp=Z,4.8nm,0.9s						
TIP	Timpagrande	34.70	79	P	P	22 27 46.8	+0.2
TIP				IAmb	IAmb	22 27 58.1	
	comp=Z,3.6nm,1.0s						
FINES	FINESS Array B	37.80	40	P	P	22 28 12.6	-0.2
	comp=Z,1.8nm,0.8s,baz=260,slow=8.3,SNR=1.7						
FINES				LR	LR	22 41 56.2	
	comp=Z,54nm,20.0s,baz=208,slow=33						
BUR08	Bucovina Ar. S	38.26	63	P	P	22 28 16.7	-0.2
BUR08				IAmb	IAmb	22 28 18.1	
	comp=Z,3.7nm,0.9s						
BURAR	Bucovina Array	38.28	63	P	P	22 28 16.4	-0.6
ARCES	ARCESS Array B	38.97	27	LR	LR	22 41 09.4	
	comp=Z,54nm,21.8s,baz=35,slow=31						
TORD	Torodi Ar. Bea	39.48	128	P	P	22 28 27.6	+0.2
	comp=Z,2.7nm,0.8s,baz=321,slow=8.4,SNR=14						
TORD				LR	LR	22 43 17.0	
	comp=Z,47nm,19.5s,baz=315,slow=34						
AKASG	Malin Array Be	40.22	57	P	P	22 28 31.6	-1.4
	comp=Z,1.3nm,0.7s,baz=277,slow=8.0,SNR=4.8						
AKASG				LR	LR	22 44 50.5	
	comp=Z,78nm,19.0s,baz=265,slow=36						
ULM	Lac du Bonnet	45.36	304	LR	LR	22 46 34.4	
	comp=Z,93nm,18.9s,baz=66,slow=34						
BRTR	Keskin Array B	46.60	71	P	P	22 29 24.9	0.0
	comp=Z,0.5nm,0.8s,baz=318,slow=4.1,SNR=2.4						
BRTR				LR	LR	22 47 58.4	
	comp=Z,21nm,20.8s,baz=300,slow=35						
KBZ	Khabaz	51.23	62	LR	LR	22 51 49.9	
	comp=Z,33nm,19.9s,baz=4.5,slow=36						
ZARC	Zaragoza, Cauc	52.98	243	P	P	22 30 13.2	-0.3
ROSC	El Rosal	54.62	240	LR	LR	22 50 01.5	
	comp=Z,34nm,20.1s,baz=50,slow=32						
INK	Inuvik	56.39	334	P	P	22 30 37.4	-0.2
	comp=Z,2.4nm,0.9s,baz=58,slow=5.7,SNR=3.1						
INK	Inuvik	56.39	334	IAmb	IAmb	22 30 38.8	
	comp=Z,9.0nm,1.4s						
AKTO	Aktyubinsk	57.50	49	LR	LR	22 56 03.0	
	comp=Z,40nm,18.3s,baz=315,slow=37						
TX31	Lajitas Ar. Si	59.95	284	P	P	22 31 02.5	-0.7
TX32	Lajitas Array	59.95	284	P	P	22 31 03.1	-0.2
TX32				IAmb	IAmb	22 31 19.4	
	comp=Z,2.6nm,1.1s						
TXAR	Lajitas Array	59.95	284	P	P	22 31 01.9	-1.3
	comp=Z,0.7nm,0.7s,baz=66,slow=6.8,SNR=8.8						
TXAR				LR	LR	22 56 02.5	
	comp=Z,35nm,18.6s,baz=0.0,slow=35						
ILAR	Eielson Array	62.78	335	P	P	22 31 21.7	-0.1
	comp=Z,0.9nm,1.0s,baz=72,slow=4.0,SNR=3.1						
ZALV	Zalesovo Beam	68.85	35	P	P	22 32 01.1	+0.1
	comp=Z,0.3nm,0.4s,baz=289,slow=8.8,SNR=2.0						
ZALV				LR	LR	23 02 15.3	
	comp=Z,33nm,18.2s,baz=340,slow=36						
MKAR	Makanchi Array	72.60	42	P	P	22 32 23.7	-0.3
	comp=Z,0.4nm,0.6s,baz=322,slow=6.1,SNR=2.7						
MKAR				LR	LR	23 02 42.4	
	comp=Z,34nm,21.3s,baz=335,slow=34						
SONM	Songino Array	82.14	28	P	P	22 33 18.1	+0.6
	comp=Z,1.1nm,1.0s,baz=347,slow=6.1,SNR=4.0						
SONM	Songino Array	82.14	28	P	P	22 33 17.9	+0.4
SONM				IAmb	IAmb	22 33 18.9	
	comp=Z,1.9nm,1.2s						
BOSA	Boshof	86.56	134	LR	LR	23 08 44.7	
	comp=Z,27nm,21.7s,baz=1.0,slow=33						

IDC 19 22:24:23.4±1.6**, 41°.70N×29°.33W, h0**^{km}**, mb3.4**/3**,**
mb1 3.6/4**, mb1mx3.3**/65**, mbtmp3.4**/4**, ML3.3**/1**, Error**
ellipse: s-maj=97.8km s-min=27.1km az=15.0, Azores
Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESDC	Sonseca Array	19.33	88	P	P	22 28 50.1	0.0
	0.0nm,0.3s,baz=292,slow=13,SNR=4.8						
MDT	Midelt	21.53	106	P	P	22 29 14.8	+0.6
	0.9nm,0.8s,baz=336,slow=10.0,SNR=2.0						
TORD	Torodi Ar. Bea	39.21	127	P	P	22 31 52.9	-0.4
	0.7nm,0.8s,baz=313,slow=5.4,SNR=4.1						
TXAR	Lajitas Array	60.03	284	P	P	22 34 32.1	0.0
	0.3nm,0.6s,baz=64,slow=5.8,SNR=3.9						

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*IDC **19** 22:28:53.3±42.0, 37°.50N×19°.25E, h0^{km}, mb3.6/3,*
mb1 3.7/3, mb1mx3.3/38, mbtmp3.6/3, MS3.5/1, Ms1 3.5/1,

ms1mx2.4/47, Error ellipse: s-maj=796.3km s-min=72.9km az=42.0

*BEO **19** 22:29:05.3±3.3, 38°08N×20°22E, h57^{km}±3^{km}, ML3.2/8*

*THE **19** 22:29:07.8, 38°53N×20°52E, h10^{km}, ML3.1/14, Error ellipse: s-maj=0.7km s-min=0.4km az=231.0*

*ATH **19** 22:29:07.8, 38°53N×20°57E, h11^{km}±1^{km}, ML2.9/20, Error ellipse: s-maj=1.6km s-min=0.6km az=280.0*

ISC 19 22:29:07.2±0.7**, 38°53N**±0°01×**20°52E**±0°02**, h14**^{km}±4^{km}**, n83,** σ**1^{s}02**/118**, mb3.9**/3**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FSK	Fiskardo	0.08	151	P	Pg	22 29 10.2	+0.1
FSK				S	Sg	22 29 11.9	-0.1
	33µm,0.3s						
FSK	Fiskardo	0.08	151	P	Pg	22 29 10.0	0.0
FSK				S	Sg	22 29 11.4	-0.6
FSK				AML	AML	22 29 12.2	
	comp=N,46892µm,0.4s						
FSK				AML	AML	22 29 12.3	
	comp=E,82697µm,0.2s						
EVGI	Lefkada island	0.15	50	P	Pg	22 29 10.8	-0.2
EVGI				S	Sg	22 29 13.3	-0.2
	comp=E,8µm,0.2s						
EVGI	Lefkada island	0.15	50	P	Pg	22 29 10.7	-0.2
EVGI				S	Sg	22 29 13.3	-0.2
DRAG	Dragano-Lefkad	0.16	17	P	Pg	22 29 11.3	+0.1
DRAG				S	Sg	22 29 14.1	+0.1
	comp=E,55µm,0.2s						
DRAG	Dragano-Lefkad	0.16	17	P	Pg	22 29 11.1	-0.2
DRAG				S	Sg	22 29 14.1	+0.1
NYDR	Nydri-Lefkada	0.24	38	P	Pg	22 29 12.3	0.0
NYDR				S	Sg	22 29 15.9	+0.1
	comp=E,10µm,0.3s						
NYDR	Nydri-Lefkada	0.24	38	P	Pg	22 29 12.2	-0.2
NYDR				S	Sg	22 29 15.2	-0.6
KEF4	Livadi, Kephal	0.28	195	P	Pg	22 29 13.4	+0.4
KEF4				S	Sg	22 29 18.2	+1.2
	comp=E,40µm,0.3s						
KEF4	Livadi, Kephal	0.28	195	P	Pg	22 29 13.3	+0.3
KEF4				S	Sb	22 29 18.5	-0.1
LKD2	Lefkada island	0.28	23	P	Pg	22 29 13.1	-0.1
LKD2				S	Sg	22 29 17.2	-0.1
LKD2				AML	AML	22 29 18.5	
	comp=E,5106µm,0.2s						
LKD2				AML	AML	22 29 18.7	
	comp=N,5507µm,0.5s						
DMLN	Damoulianata-K	0.31	201	P	Pg	22 29 13.9	+0.3
DMLN				S	Sb	22 29 19.4	-0.1
	comp=N,8µm,0.4s						
DMLN	Damoulianata-K	0.31	201	P	Pg	22 29 13.9	+0.3
DMLN				S	Sg	22 29 19.1	+1.2
TSLK	Tsoukalades, L	0.32	20	P	Pg	22 29 14.0	+0.2
TSLK	Tsoukalades, L	0.32	20	P	Pg	22 29 13.9	+0.2
TSLK				S	Sg	22 29 18.1	-0.1
TSLK				AML	AML	22 29 25.0	
	comp=E,8342µm,0.6s						
TSLK				AML	AML	22 29 25.4	
	comp=N,6406µm,0.5s						
LXRA	Lixouri, Kepha	0.33	191	P	Pg	22 29 14.5	+0.5
LXRA				S	Sg	22 29 19.6	+1.0
KEF3	Kipouria, Keph	0.35	202	P	Pg	22 29 14.1	-0.2
KEF3				S	Sg	22 29 19.4	+0.3
	comp=N,7µm,0.3s						
KEF3	Kipouria, Keph	0.35	202	P	Pg	22 29 14.1	-0.2
KEF3				S	Sg	22 29 19.6	+0.5
ARGA	Argostoli. Kep	0.35	185	P	Pb	22 29 15.5	+0.2
ARGA				S	Sg	22 29 19.7	+0.6
VLS	Valsamata	0.35	170	P	Pg	22 29 14.5	+0.1
VLS				S	Sg	22 29 20.3	+1.0
	comp=N,5µm,0.2s						
VLS	Valsamata	0.35	170	P	Pg	22 29 14.4	-0.1
VLS				S	Sg	22 29 20.3	+1.0
VLS				AML	AML	22 29 21.1	
	comp=E,15775µm,0.3s						
VLS				AML	AML	22 29 22.4	
	comp=N,7839µm,0.4s						
PSDA	Pessada-Kefalo	0.41	172	P	Pg	22 29 15.7	+0.2
PSDA				S	Sb	22 29 22.7	+0.2
PSDA	Pessada-Kefalo	0.41	172	P	Pg	22 29 15.6	0.0
PSDA				S	Sg	22 29 22.0	+0.9
PVO	Paravola	0.80	83	P	Pg	22 29 22.8	+0.1
PVO				S	Sb	22 29 34.5	+1.0
	comp=N,1µm,0.6s						
PVO	Paravola	0.80	83	P	Pg	22 29 22.5	-0.2
PVO				AML	AML	22 29 41.3	
	comp=N,2237µm,0.5s						
PVO				AML	AML	22 29 42.0	
	comp=E,2100µm,0.6s						
VTN	Vitineika	0.81	139	P	Pg	22 29 23.1	+0.3
LTHK	Lithakia	0.85	163	P	Pg	22 29 23.1	-0.7
LTHK				S	Sb	22 29 36.6	+1.5
	comp=E,878nm,0.2s						
LTHK	Lithakia	0.85	163	P	Pg	22 29 23.1	-0.7
RLS	Riolos of Patr	0.88	122	P	Pg	22 29 23.9	-0.4
RLS				S	Sb	22 29 36.9	+0.9
	comp=E,810nm,0.4s						
RLS	Riolos of Patr	0.88	122	P	Pg	22 29 23.8	-0.6
RLS				AML	AML	22 29 39.8	
	comp=N,941µm,0.3s						
RLS				AML	AML	22 29 43.0	
	comp=E,725µm,0.4s						
IGT	Igoumenitsa	1.01	352	P	Pg	22 29 26.9	0.0
IGT				S	Sb	22 29 41.4	+1.6
	comp=E,805nm,0.6s						
IGT	Igoumenitsa	1.01	352	P	Pg	22 29 26.9	0.0
IGT				AML	AML	22 29 44.6	
	comp=E,1837µm,0.6s						
IGT				AML	AML	22 29 45.3	
	comp=N,1376µm,0.6s						
UPR	University Cam	1.03	103	P	Pb	22 29 27.6	+0.8
EVR	Evrytania	1.08	69	P	Pb	22 29 27.5	-0.3
EVR	Evrytania	1.08	69	P	Pb	22 29 27.3	-0.5
EVR				AML	AML	22 29 50.4	
	comp=E,762µm,0.6s						
EVR				AML	AML	22 29 50.5	
	comp=N,749µm,0.5s						
EFP	Efpalio	1.10	95	P	Pb	22 29 27.0	-0.9
EFP				AML	AML	22 29 49.8	
	comp=E,1498µm,0.5s						
EFP				AML	AML	22 29 49.9	
	comp=N,1391µm,0.4s						
DRO	Drossia	1.10	121	P	Pb	22 29 27.9	-0.2
DRO				S	Sn	22 29 44.9	+1.6
	comp=N,1µm,0.4s						
DRO	Drossia	1.10	121	P	Pb	22 29 27.9	-0.2
DRO				AML	AML	22 29 46.1	
	comp=N,2764µm,0.5s						
DRO				AML	AML	22 29 47.2	
	comp=E,2846µm,0.3s						
ANX	Ano Chora	1.10	86	P	Pb	22 29 27.8	-0.4
ANX	Ano Chora	1.10	86	P	Pb	22 29 27.4	-0.7
ANX				AML	AML	22 29 51.9	
	comp=N,1686µm,0.5s						
ANX				AML	AML	22 29 54.0	
	comp=E,1247µm,0.5s						
JAN	Janina	1.16	13	P	Pb	22 29 29.0	-0.1
JAN	Janina	1.16	13	P	Pb	22 29 29.6	+0.5
JAN				AML	AML	22 29 49.0	
	comp=E,874µm,0.4s						
JAN				AML	AML	22 29 49.7	
	comp=N,760µm,0.4s						
LAKA	Lakka	1.19	104	P	Pb	22 29 28.6	-0.9
LAKA				AML	AML	22 29 51.2	
	comp=E,2726µm,0.6s						
LAKA				AML	AML	22 29 52.4	
	comp=N,1708µm,0.5s						
SERG	Sergoula	1.22	95	P	Pn	22 29 29.1	-0.8
SERG				AML	AML	22 29 53.3	
	comp=E,979µm,0.8s						
SERG				AML	AML	22 29 55.1	
	comp=N,699µm,0.5s						
TRIZ	Trizonia	1.23	97	P	Pn	22 29 29.3	-0.8
KASA	Kassiopi	1.30	340	P	Pn	22 29 31.6	+0.6
KEK	Kerkira	1.31	335	P	Pn	22 29 31.2	+0.1
KEK				S	Sg	22 29 50.0	+0.5
	comp=N,260nm,0.6s						
KEK	Kerkira	1.31	335	P	Pb	22 29 32.7	+1.1
KEK				AML	AML	22 29 55.9	
	comp=N,454µm,0.7s						
KEK				AML	AML	22 29 57.9	
	comp=E,561µm,0.5s						
MAKR	Makrakomi, Fth	1.35	68	P	Pn	22 29 32.6	+0.8
MAKR				AML	AML	22 29 58.8	
	comp=E,728µm,0.7s						
MAKR				AML	AML	22 30 02.1	
	comp=N,643µm,0.5s						
KLV	Kalavryta, Ach	1.38	110	P	Pn	22 29 31.8	-0.3
KLV	Kalavryta, Ach	1.38	110	P	Pn	22 29 31.7	-0.3
KLV				AML	AML	22 30 01.2	
	comp=N,260µm,0.6s						
KLV				AML	AML	22 30 03.2	
	comp=E,301µm,0.6s						
AGG	Agios Georgios	1.50	70	P	Pn	22 29 34.4	+0.5
AGG				AML	AML	22 30 03.5	
	comp=E,992µm,0.4s						
AGG				AML	AML	22 30 06.3	
	comp=N,867µm,0.7s						
GUR	Goura	1.56	112	P	Pn	22 29 34.9	+0.3
GUR	Goura	1.56	112	P	Pn	22 29 34.8	+0.3
GUR				AML	AML	22 30 05.7	
	comp=N,1021µm,0.4s						
GUR				AML	AML	22 30 11.4	
	comp=E,652µm,0.5s						
THL	Klokotos Trika	1.56	48	P	Pn	22 29 35.9	+1.3
THL				AML	AML	22 30 04.9	
	comp=E,671µm,0.5s						
THL				AML	AML	22 30 05.2	
	comp=N,316µm,0.7s						
KPRO	Kipourio	1.57	25	P	Pb	22 29 36.6	+0.5
OHR	Ohrid	2.59	5	*e*Pn	Pn	22 29 50.8	+2.0
OHR				*e*Sn	Sn	22 30 22.9	+2.8
TIR	Tirane	2.86	350	*e*Pn	Pn	22 29 54.1	+1.6
TIR				*e*Sn	Sn	22 30 29.4	+2.7
STIP	Stip	3.41	22	*i* Pn	Pn	22 30 03.2	+3.2
PDG	Podgorica	4.02	347	*e*Pn	Pn	22 30 09.7	+1.4
PDG				*e*Sn	Sn	22 30 54.7	-0.4
PRVS	Prvonek	4.15	16	*e*Pn	Pn	22 30 12.1	+1.9
BARS	Barje	4.40	13	*e*Pn	Pn	22 30 15.0	+1.4
TREB	Trebinje	4.50	339	*e*Pn	Pn	22 30 14.6	-0.4
TREB				*e*Sn	Sn	22 31 05.9	-1.2
DBRK	Dubrovnik	4.51	337	*e*Pn	Pn	22 30 13.7	-1.4
DBRK				Sn	Sn	22 31 04.5	-2.9
VTS	Vitosha	4.58	26	*e*Pn	Pn	22 30 18.0	+1.8
SJES	Sjenica	4.75	355	*e*Pn	Pn	22 30 19.7	+1.2
SJES				*e*Sn	Sn	22 31 12.6	-0.8
STON	Ston	4.84	335	*e*Pn	Pn	22 30 19.2	-0.4
STON				*e*Sn	Sn	22 31 12.3	-3.1
STON	Ston	4.84	335	*e*Pn	Pn	22 30 18.9	-0.7
LSTV	Lastovo	5.05	328	*e*Pn	Pn	22 30 21.9	-0.7
LSTV				Sn	Sn	22 31 16.5	-4.3
BBLS	Lazići	5.40	351	*e*Pn	Pn	22 30 27.1	-0.3
MAKA	Makarska	5.44	332	*e*Pn	Pn	22 30 28.3	+0.4
HVAR	Hvar	5.58	328	*e*Pn	Pn	22 30 29.4	-0.3
DIVS	Divibare	5.58	356	*e*Pn	Pn	22 30 29.9	0.0
RICI	Ricice	5.58	334	*e*Pn	Pn	22 30 29.5	-0.4
KIJV	Kijevo	6.29	332	*e*Pn	Pn	22 30 39.5	-0.1
ZIRJ	Zirje	6.31	326	*e*Pn	Pn	22 30 39.5	-0.3
MORI	Morici	6.45	327	*e*Pn	Pn	22 30 42.0	+0.2
DUGI	Dugi Otok	6.83	325	*e*Pn	Pn	22 30 46.9	-0.1
UDBI	Udbina	6.97	331	*e*Pn	Pn	22 30 49.7	+0.7
FINES	FINESS Array B	23.20	7	P	P	22 34 12.6	-0.8
	comp=N,8.9nm,1.2s,baz=171,slow=9.4,SNR=5.5						
MKAR	Makanchi Array	45.12	59	P	P	22 37 22.0	-1.1
	comp=N,0.2nm,0.6s,baz=281,slow=6.9,SNR=1.5						
ZALV	Zalesovo Beam	45.46	48	P	P	22 37 25.3	-0.3
	comp=N,0.7nm,0.5s,baz=256,slow=5.8,SNR=2.6						
SFJD	Kangerlussuaq	47.93	330	LR	LR	23 00 24.3	
	comp=N,54nm,19.8s,baz=270,slow=39						

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*IDC **19** 22:30:46.0±2.9, 32°60S×178°10W, h0^{km}, mb4.0/2, mb1 4.1/3, mb1mx3.8/23, mbtmp3.9/3, ML3.3/1, Error ellipse: s-maj=70.4km s-min=36.5km az=120.0*

*NEIC **19** 22:30:49.5±1.7, 32°32S±0°04×178°3W±0°1, h10^{km}±2^{km}, mb4.1/8, Error ellipse: s-maj=19.0km s-min=6.3km az=80.0*

ISC 19 22:30:50.6±1.8**, 32°32S**±0°10×**178°3W**±0°2**, h35**^{km}**, n16,** σ**2^{s}01**/17**, mb4.1**/4**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	3.08	6	Pn	Pn	22 31 38.1	+1.4
MXZ	Matakaoa Point	5.93	207	Pn	Pn	22 32 15.7	-0.2
URZ	Urewera	7.02	211	Pn	Pn	22 32 26.9	-3.8
	0.5nm,0.3s,baz=302,slow=24,SNR=1.3						
URZ				Sn	Sn	22 33 49.1	-0.2
	1.7nm,0.3s,baz=306,slow=24,SNR=1.5						
URZ	Urewera	7.02	211		Pn	22 32 32.3	+1.5
URZ				Sn	Sn	22 33 50.5	+1.2
BKZ	Black Stump Fm	8.04	210	Pn	Pn	22 32 45.8	+0.9
WKZ	Wanaka	15.93	215	Pn	Pn	22 34 29.1	-2.9
OUENC	Ouen Island, N	16.47	303	Pn	Pn	22 34 38.5	-0.5
OUENC				IAmb	IAmb	22 34 44.6	
	comp=Z,17nm,1.0s						
DZM	Mont Dzumac	16.97	303	Pn	P	22 34 45.0	-2.1
DZM				IAmb	IAmb	22 34 48.2	
	comp=Z,6.3nm,0.9s						
AS31	Alice Springs	42.80	269	P	P	22 38 47.1	+1.9
ASAR	Alice Springs	42.80	269	P	P	22 38 47.3	+2.2
	comp=Z,1.5nm,0.9s,baz=109,slow=7.7,SNR=8.5						
WR0	Warramunga Arr	43.78	274	P	P	22 38 54.5	+1.5
WR0				IAmb	IAmb	22 38 55.9	
	comp=Z,4.5nm,1.1s						
WB2	Warramunga Arr	43.95	274	P	P	22 38 56.4	+2.0
WRA	Warramunga Arr	43.96	274	P	P	22 38 56.0	+1.5
	comp=Z,1.7nm,0.6s,baz=112,slow=8.0,SNR=17						
WRA	Warramunga Arr	43.96	274	IAmb	IAmb	22 39 05.2	
	comp=Z,0.1nm,0.8s						
WB0	Warramunga Arr	43.99	275	P	P	22 38 56.7	+1.9
WB0				IAmb	IAmb	22 39 14.7	
	comp=Z,4.2nm,1.1s						
FINES	FINESS Array B	146.85	339	PKPbc	PKiKP	22 50 29.6	-1.3
	comp=Z,1.5nm,0.5s,baz=44,slow=3.8,SNR=10						

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*IDC **19** 22:49:52.8±4.2, 36°23N×71°16E, h0^{km}, mb4.0/2, mb1 4.0/8, mb1mx3.4/62, mbtmp3.9/8, ML3.6/5, MS3.4/1, Ms1 3.4/1, ms1mx2.4/58, Error ellipse: s-maj=64.3km s-min=27.3km az=147.0*

*NNC **19** 22:50:07.5±5.0, 37°32N×70°55E, h0^{km}, mb4.1, mpv3.9, Error ellipse: s-maj=45.0km s-min=32.3km az=149.0*

ISC 19 22:50:04.7±2.5**, 36°8N**±0°2×**70°7E**±0°1**, h100**^{km}**, n20,** σ**1^{s}89**/21**, 3C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.79	23	P	Pn	22 51 29.1	+0.8
	SNR=33						
UCH	Uchtor	6.16	28	P	Pn	22 51 34.9	+1.4
	SNR=11						
KK05	Karatay Array	6.27	359	⇑P	Pn	22 51 36.0	+1.4
	3.9nm,0.3s,baz=182,slow=13						
KK05				⇓S	Sn	22 52 43.4	-1.4
	5.5nm,0.6s,baz=192,slow=26						
EKS2	Erkin-Say	6.29	22	P	Pn	22 51 36.3	+1.3
	SNR=9.7						
AAK	Ala-Archa	6.50	26	Pn	Pn	22 51 38.9	+1.0
	2.9nm,0.3s,baz=194,slow=6.3,SNR=46						
AAK				Sn	Sn	22 52 50.9	+0.2
	1.3nm,0.3s,baz=339,slow=23,SNR=7.3						
AAK				Lg	Lg	22 53 31.2	
	0.2nm,0.3s,baz=94,slow=22,SNR=1.5						
AAK	Ala-Archa	6.50	26	P	Pn	22 51 38.9	+1.0
	SNR=19						
AAK	Ala-Archa	6.50	26	⇑P	Pn	22 51 39.0	+1.0
	5.9nm,0.4s						
AAK				⇓S	Sn	22 52 50.5	-0.2
	9.3nm,0.6s						
KBK	Karagaybulak	6.69	28	P	Pn	22 51 42.8	+2.4
	SNR=5.7						
CHMS	Chumysh	6.91	26	P	Pn	22 51 44.9	+1.5
	SNR=16						
USP	Ospenovka	7.07	24	P	Pn	22 51 45.9	+0.4
	SNR=8.0						
GEYT	Alibeck	10.03	280	Pn	Pn	22 52 25.4	-0.4
	0.4nm,0.3s,baz=93,slow=18,SNR=1.4						
GEYT				Sn	Sn	22 54 16.5	+0.1
	1.3nm,0.3s,baz=300,slow=42,SNR=3.3						
MKAR	Makanchi Array	13.19	37	Pn	Pn	22 53 06.3	-1.6
	0.1nm,0.3s,baz=227,slow=16,SNR=9.3						
MKAR				Sn	Sn	22 55 17.1	-16
	0.1nm,0.3s,baz=198,slow=27,SNR=1.9						
MKAR				Lg	Lg	22 57 02.7	
	baz=213,slow=29,SNR=2.5						
AB31	Akbulak array	14.65	331	P	P	22 53 27.6	-2.8
	0.3nm,0.3s,baz=165,slow=9.0,SNR=26						
KURBB	Kurchatov Arra	14.90	20	Pn	Pn	22 53 29.1	-0.8
	0.0nm,0.3s,baz=209,slow=10,SNR=1.7						
BVAR	Borovoye Array	16.19	359	Pn	P	22 53 46.5	-0.9
	0.1nm,0.3s,baz=182,slow=17,SNR=2.6						
AKTO	Aktyubinsk	16.34	330	P	P	22 53 53.0	+3.8
	0.3nm,0.3s,baz=137,slow=7.1,SNR=11						
AKTO	Aktyubinsk	16.34	330	⇑P	P	22 53 53.1	+4.0
	6.3nm,0.8s						
ZALV	Zalesovo Beam	19.73	25	P	Pn	22 54 26.6	-1.9
	1.8nm,0.3s,baz=223,slow=11,SNR=9.2						
VRAC	Vranov	40.57	305	LR	LR	23 16 50.7	
	comp=Z,44nm,18.5s,baz=325,slow=39						
ARCES	ARCESS Array B	40.72	338	P	P	22 57 39.8	+4.7
	3.2nm,1.0s,baz=106,slow=9.5,SNR=1.9						

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*NEIC **19** 22:52:40.7, 29°67S×72°36W, h8^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-1.62; $M_{\theta\theta}$-4.61; $M_{\phi\phi}$6.23; $M_{r\theta}$6.35; $M_{\theta\phi}$-1.18; $M_{\phi r}$-4.15; Fault plane solution: $M_0$9.50000×10^{14} NP1:ϕ_s311.39000°, δ83.83000°, λ-126.26000°. NP2:ϕ_s213.06000°, δ36.71000°, λ-10.35000°. Principal axes: T 9.1440, Plg29.0000°, Azm70.0000°; N 0.6802, Plg36.0000°, Azm316.0000°; P -9.8242, Plg40.0000°, Azm188.0000°;*

*VAO **19** 22:52:40.5±0.5, 29°96S×72°65W, h27^{km}, mb4.4*

*NEIC **19** 22:52:42.0±2.6, 29°69S±0°04×72°33W±0°05, h10^{km}±1^{km}, mb4.3/11, Mwr3.9/26, ML4.1(GUC), Error ellipse: s-maj=7.0km s-min=5.9km az=295.0*

*IDC **19** 22:52:42.4±0.9, 29°81S×72°05W, h0^{km}, mb4.1/7, mb1 4.3/9, mb1mx4.1/26, mbtmp4.2/9, ML4.3/2, MS3.2/4, Ms1 3.1/4, ms1mx2.8/27, Error ellipse: s-maj=29.2km s-min=21.4km az=86.0*

*GUC **19** 22:52:45.2±0.5, 29°80S×72°19W, h32^{km}±4^{km}, ML4.2*

ISC 19 22:52:41.9±0.5**, 29°71S**±0°04×**72°36W**±0°04**, h10**^{km}**, n105,** σ**1^{s}87**/115**, mb4.3**/10**, 4C-6D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	La Serena	1.00	102	⇑*i*P	Pg	22 53 00.5	-0.6
CO05				*i* S	Sg	22 53 11.7	-2.5
CO05	La Serena	1.00	102		Pg	22 53 00.6	-0.6
CO05					Sg	22 53 12.4	-1.8
CO06	Fray Jorge	1.15	147	⇓*i*P	Pb	22 53 03.1	-0.9
CO06				*i* S	Sb	22 53 16.2	-2.7
CO06	Fray Jorge	1.15	147		Pb	22 53 03.2	-0.8
CO06					Sb	22 53 17.2	-1.8
GO04	Tololo Observa	1.43	109	*e*P	Pn	22 53 07.4	-0.9
GO04				*i* S	Sb	22 53 24.2	-3.2
GO04	Tololo Observa	1.43	109		Pn	22 53 07.5	-0.8
GO04				Sn	Sb	22 53 24.7	-2.6
LCO	Las Campanas	1.61	65	*e*P	Pn	22 53 09.3	-1.4
LCO	Las Campanas	1.61	65	Pn	Pn	22 53 09.7	-1.0
AC04	Llanos de Chal	1.88	37	⇑*i*P	Pn	22 53 12.5	-1.6
AC04				*i* S	Sn	22 53 34.6	-3.3
AC04	Llanos de Chal	1.88	37	Pn	Pn	22 53 12.7	-1.5
AC04				Sn	Sn	22 53 35.0	-2.9
GO03	Copiap	2.82	42	Pn	Pn	22 53 26.1	-1.0
VA06	Catapilco	2.99	162	⇓*i*P	Pn	22 53 29.5	+0.2
VA06				*e*S	Sn	22 54 03.4	-1.8
VA06				IAML		22 54 25.1	
	comp=E,807nm,0.4s						
VA01	Torpederas	3.36	170	Pn	Pn	22 53 34.0	-0.5
VA03	San Esteban	3.42	153	*e*P	Pn	22 53 36.4	+1.0
VA03				*i* S	Sn	22 54 15.3	-0.7
VA03				IAML		22 54 27.8	
	comp=N,572nm,0.3s						
VA03	San Esteban	3.42	153		Pn	22 53 36.2	+0.8
ROCH	El Roble	3.45	161	⇓*i*P	Pn	22 53 36.4	+0.4
ROCH				⇓*i*P	Pn	22 53 36.2	+0.3
ROCH				IAML		22 54 41.9	
	comp=N,559nm,0.8s						
ROCH				IAML		22 54 42.0	
	comp=N,468nm,0.5s						
ZON	Zonda	3.67	121	Pn	Pn	22 53 42.1	+3.4
MT02	Curacav	3.69	164		Pn	22 53 39.2	+0.1
PEL	Peldehue	3.71	158	*e*P	Pn	22 53 39.7	+0.3
PEL				IAML		22 54 50.1	
	comp=E,206nm,0.5s						
PEL	Peldehue	3.71	158		Pn	22 53 40.2	+0.8
MT05	Renca	3.92	160	*e*P	Pn	22 53 43.0	+0.6
MT05	Renca	3.92	160		Pn	22 53 42.7	+0.4
VA05	Santo Domingo	3.99	171		Pn	22 53 42.5	-0.6
AC02	Maricunga	4.04	46	Pn	Pn	22 53 43.7	-0.6
MT09	Talagante	4.22	164	⇓*i*P	Pn	22 53 47.1	+0.6
MT09	Talagante	4.22	164	Pn	Pn	22 53 47.0	+0.6
MT01	Popeta	4.25	167	⇓*i*P	Pn	22 53 46.6	-0.1
MT01	Popeta	4.25	167		Pn	22 53 46.6	-0.1
LMEL	Las Melosas	4.52	157	⇑*i*P	Pn	22 53 52.2	+1.6
LMEL				⇑*e*S	Sn	22 54 43.1	-0.2
BO04	La Punta	4.52	161	*e*P	Pn	22 53 51.3	+0.8
BO04				*e*S	Sn	22 54 42.5	-0.6
BO01	Tunca	4.79	167	Pn	Pn	22 53 54.3	0.0
BO02	Sierra Bellavi	5.24	166		Pn	22 54 00.4	0.0
GO05	Huala	5.30	176		Pn	22 53 59.5	-1.6
PB14	IPOC Station P	5.36	19	Pn	Pn	22 53 58.5	-3.7
ML02	Panimavida	6.09	173	Pn	Pn	22 54 11.1	-0.9
H03N1	Juan Fernandez	6.71	235	Pn	Pn	22 54 20.4	+0.1
	baz=112,slow=18,SNR=92						
H03N1				Sn	Sn	22 55 29.1	-7.6
	baz=105,slow=21,SNR=25						
H03N1				T	T	23 01 27.7	
	baz=53,slow=74,SNR=45						
H03N2	Juan Fernandez	6.73	235	Pn	Pn	22 54 20.6	+0.1
	baz=112,slow=18,SNR=87						
H03N2				Sn	Sn	22 55 30.3	-6.8
	baz=105,slow=21,SNR=16						
H03N2				T	T	23 01 51.9	
	baz=53,slow=74,SNR=51						
H03N3	Juan Fernandez	6.73	235	Pn	Pn	22 54 20.4	-0.1
	baz=112,slow=18,SNR=73						
H03N3				Sn	Sn	22 55 30.8	-6.4
	baz=105,slow=21,SNR=13						
H03N3				T	T	23 02 21.4	
	baz=53,SNR=54						
VA04	Juan Fernndez	6.76	233	Pn	Pn	22 54 20.7	-0.6
H03S3	Juan Fernandez	6.92	232	Pn	Pn	22 54 22.3	-0.9
H03S3				Sn	Sn	22 55 32.3	-10
	baz=59,slow=79,SNR=45						
H03S1	Juan Fernandez	6.93	232	Pn	Pn	22 54 22.1	-1.2
H03S1				Sn	Sn	22 55 32.8	-9.3
	baz=59,slow=79,SNR=34						
H03S2	Juan Fernandez	6.94	232	Pn	Pn	22 54 22.3	-1.1
H03S2				Sn	Sn	22 55 32.3	-10
	baz=59,slow=79,SNR=38						
PB15	IPOC Station P	6.97	22		Pn	22 54 22.1	-2.3
LVC	Limon Verde	7.72	24	*e*P	Pn	22 54 35.4	+0.6
LC01	Cunco	9.17	178	Pn	Pn	22 54 53.8	-0.6
PLCA	Paso Flores	11.10	173	Pn	Pn	22 55 21.1	+0.2
	comp=E,0.7nm,0.3s,baz=335,slow=12,SNR=23						
PLCA				LR	LR	22 59 35.0	
	comp=E,52nm,19.8s,baz=342,slow=38						
PLCA	Paso Flores	11.10	173	Pn	Pn	22 55 21.0	+0.2
TRQA	Tornquist	11.98	137	Pn	Pn	22 55 33.0	+0.2
LL02	Futaleuf	13.46	178	Pn	Pn	22 55 55.6	+2.6
CPUP	Villa Florida	13.70	79	LR	LR	23 00 56.8	
	comp=E,55nm,20.6s,baz=263,slow=37						
PLTB	Pedras Altas	16.26	102		Pn	22 56 31.2	+0.7
SIV	San Ignacio	17.15	40	P	P	22 56 43.5	0.0
	comp=E,0.7nm,0.3s,baz=219,slow=11,SNR=47						
NNA	Nana	18.12	346	LR	LR	23 02 14.7	
	comp=E,53nm,19.5s,baz=0.5,slow=31						
PTLB	Pontes e Lacer	18.70	43	*e*P	Pn	22 57 01.2	+0.3
PTLB	Pontes e Lacer	18.70	43	P	Pn	22 57 01.2	+0.3
PTLB				IAmb	IAmb	22 57 11.5	
	comp=Z,9.4nm,1.0s						
PP1B	Ponte de Pedra	20.01	57	*e*P	P	22 57 14.7	-0.2
VILB	Vilhena	20.13	37	*e*P	P	22 57 16.7	+0.4
VILB	Vilhena	20.13	37	P	P	22 57 14.3	-1.9
VILB				IAmb	IAmb	22 57 26.9	
	comp=Z,14nm,0.8s						
TER01	Tubaro-SC	20.33	92	*e*P	P	22 57 17.7	-0.7
SALV	Santo Antonio	20.58	52	*e*P	P	22 57 20.8	-0.3
ETMB	Extrema	20.61	17	*e*P	Pn	22 57 22.7	-1.0
ETMB	Extrema	20.61	17	P	Pn	22 57 22.9	-0.8
PCMB	Pacaembu	20.64	72	*e*P	P	22 57 21.8	0.0
GO09	Cerro Castillo	21.54	180		P	22 57 33.4	+2.1
GO09				IAmb	IAmb	22 57 34.9	
	comp=Z,9.0nm,0.9s						
CZSB	Cruzeiro do Su	21.87	359	*e*P	P	22 57 33.5	-1.5
ITRB	Iturama	22.30	68	*e*P	P	22 57 39.0	-0.7
SAML	Samuel	22.37	24	P	P	22 57 41.9	+1.4
PDRB	Porto dos Gac	23.15	42	*e*P	P	22 57 47.4	-1.2

BB19B	Bebedouro	23.16	74	*e*P	P	22 57 46.4	-2.3
ATAH	Atahualpa	23.16	345	P	P	22 57 53.0	+3.9
	comp=Z,2.4nm,0.5s,baz=125,slow=9.9,SNR=5.8						
ARAG	Araguaiana, MT	23.48	58	*e*P	P	22 57 50.0	-1.9
VAO	Valinhos	23.69	80	*e*P	P	22 57 53.3	-0.8
CLDB	Colider	24.29	43	*e*P	P	22 57 59.3	-0.4
PARB	Paraibuna	24.72	81	*e*P	P	22 58 02.8	-0.8
IPMB	Ipameri, GO	24.93	68	*e*P	P	22 58 03.6	-1.9
USHA	Ushuaia	25.27	175	P	P	22 58 09.6	+1.5
	comp=Z,11nm,0.8s,baz=349,slow=9.1,SNR=6.5						
TBTG	Tabatinga, AM	25.49	6	*e*P	P	22 58 09.1	-1.4
MAN01	Angra dos Reis	26.32	82	*e*P	P	22 58 15.2	-2.9
SNDB	Serra Nova Dou	26.36	52	*e*P	P	22 58 16.9	-1.5
BDFB	Brasilia	26.40	63	P	P	22 58 18.4	-0.4
	comp=Z,6.0nm,0.7s,baz=246,slow=9.2,SNR=11						
BDFB	Brasilia	26.40	63	P	P	22 58 18.5	-0.4
BDFB				IAmb	IAmb	22 58 30.4	
	comp=Z,10nm,0.9s						
NPGB	Novo Progresso	27.65	39	*e*P	P	22 58 28.5	-1.6
DUB01	Friburgo-RJ	27.97	81	*e*P	P	22 58 31.8	-1.2
PEXB	Peixe	28.39	57	*e*P	P	22 58 37.0	+0.2
JANB	Januaria	29.65	67	*e*P	P	22 58 47.8	-0.1
BSFB	Barra de Sao F	30.61	76	*e*P	P	22 58 56.1	-0.3
PRPB	Parauapebas	31.62	47	*e*P	P	22 59 02.8	-2.4
BOAV	Boa Vista	33.87	22	P	P	22 59 24.0	-1.0
BOAV				IAmb	IAmb	22 59 42.3	
	comp=Z,1.4nm,0.9s						
NBPN	Ponto Novo - B	35.35	65	*e*P	P	22 59 37.0	-0.8
NBPV	Pedro Velho	41.88	64	*e*P	P	23 00 31.9	-0.7
VNA3	Neumayer Olymp	53.44	159	P	P	23 02 03.3	+1.5
VNA1	Neumayer--Stat	53.73	158	P	P	23 02 05.6	+1.8
VNA2	Neumayer--Watz	54.08	158	P	P	23 02 07.6	+1.2
	baz=290,slow=8.1						
SNAA	Sanae	55.66	159	P	P	23 02 19.0	+1.1
SNAA	Sanae	55.66	159	P	P	23 02 17.8	-0.1
SNAA				IAmb	IAmb	23 02 20.1	
	comp=Z,3.8nm,0.8s						
QSPA	South Pole Qui	60.51	180	P	P	23 02 54.6	+2.5
LPIG	La Paz	64.74	322	LR	LR	23 25 05.1	
	comp=Z,72nm,18.8s,baz=32,slow=30						
TXAR	Lajitas Array	65.88	330	P	P	23 03 31.5	+3.6
	comp=Z,0.2nm,0.6s,baz=171,slow=6.4,SNR=2.5						
DBIC	Dimbokro	74.11	73	P	P	23 04 19.4	+0.5
	comp=Z,2.7nm,0.7s,baz=161,slow=5.0,SNR=5.6						
DBIC	Dimbokro	74.11	73	IAmb	IAmb	23 04 25.9	
	comp=Z,5.2nm,0.9s						
PDAR	Pinedale Array	79.82	333	P	P	23 04 53.9	+3.2
	comp=Z,0.3nm,0.5s,baz=150,slow=5.8,SNR=2.5						
TORD	Torodi Ar. Bea	83.03	71	P	P	23 05 09.4	+1.4
	comp=Z,2.4nm,0.6s,baz=283,slow=5.7,SNR=18						
WRA	Warramunga Arr	124.33	211	PKP	PKiKP	23 11 42.3	+0.2
	comp=Z,0.6nm,0.9s,baz=150,slow=1.7,SNR=5.2						
ZALV	Zalesovo Beam	150.66	28	PKPbc	PKiKP	23 12 36.2	+1.7
	comp=Z,8.6nm,0.6s,baz=299,slow=3.3,SNR=44						
MKAR	Makanchi Array	153.96	42	PKPbc	PKiKP	23 12 43.7	+2.1
	comp=Z,0.6nm,0.9s,baz=319,slow=2.4,SNR=2.5						

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*TUL **19** 22:57:21.9±1.4, 36°.47N±0°.02×98°.76W±0°.02, h3^{km}±1^{km}, ML2.7, mb_Lg2.2/11(NEIC), Error ellipse: s-maj=3.5km s-min=2.1km az=161.0*

NEIC 19 22:57:22.1±1.0**, 36°.52N**±0°.03×**98°.77W**±0°.01**, h11**^{km}±6^{km}**, Error ellipse: s-maj=4.7km s-min=1.3km az=167.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	Winter Ranch,	0.23	233	Pg	Pg	22 57 26.4	-0.5
U32A				Sg	Sg	22 57 29.8	-0.3
OK032	Salt Plains WL	0.53	58		Pg	22 57 32.9	+0.4
OK032				Sg	Sg	22 57 39.7	+0.1
CROK	Carrier	0.64	91	Pg	Pg	22 57 34.2	-0.2
CROK				Sg	Sg	22 57 43.1	+0.3
GC02	Grant County #	0.81	65		Pg	22 57 37.6	0.0
KAN10	Anthony SW Sta	0.81	42	Pg	Pg	22 57 38.0	+0.2
KAN16	Harper SW Stat	0.91	39	Pg	Pg	22 57 38.4	-1.2
KAN05	Bluff City Nor	0.93	50	Pg	Pg	22 57 39.5	-0.6
KAN08	Anthony NE Sta	0.95	42	Pg	Pg	22 57 39.8	-0.7
KAN01	Argonia South	1.03	52		Pg	22 57 41.9	0.0
KAN06	Argonia West S	1.03	45	Pg	Pb	22 57 42.2	+0.2
KAN09	Caldwell North	1.11	56		Pb	22 57 43.3	-0.1
KAN13	South Haven SW	1.15	64		Pb	22 57 43.8	-0.2
BCOK	Bluff Creek, N	1.27	132	Pn	Pn	22 57 45.0	-0.9
BLOK	Blackwell	1.27	79		Pn	22 57 45.7	-0.2
OK029	Liberty Lake	1.29	124	Pn	Pn	22 57 45.3	-0.8
OKCSW	OKLAHOMA CITY	1.55	135	Pn	Pn	22 57 49.3	-0.4
OK031	S. Brethren Rd	1.66	109		Pn	22 57 51.5	+0.2
FNO	Franklin	1.68	138	Pn	Pn	22 57 51.9	+0.4
QUOK	Quay	1.70	101		Pn	22 57 51.9	+0.1
OK030	Cody Creek RV	1.71	110		Pn	22 57 51.8	-0.1
WMOK	Wichita Mounta	1.78	180	Pn	Pn	22 57 52.2	-0.6
T35A	Sooner Cattle	1.86	77		Pn	22 57 54.0	+0.1
T35A				IAmb_Lg		22 58 19.7	
	comp=Z,5.2nm,1.2s						
R32A	Long Quarter,	1.90	1		Pb	22 57 57.1	+0.2
R32A				Sg	Sg	22 58 23.4	+0.1
X34A	Smith Ranch, M	2.06	158	Pn	Pn	22 57 57.6	+0.9
X34A				IAmb_Lg		22 58 28.1	
	comp=Z,20nm,0.7s						
CBKS	Cedar Bluff	2.42	342	Pn	Pn	22 58 01.1	-0.5
CBKS				IAmb_Lg		22 58 45.2	
	comp=Z,5.5nm,0.8s						
TUL1	Leonard	2.48	103	Pn	Pn	22 58 02.5	0.0
AMTX	Amarillo	2.88	236		Pn	22 58 08.7	+0.7
HHAR	Hobbs	3.91	92	IAmb_Lg		22 59 32.6	
	comp=Z,5.8nm,0.8s						
KSCO	Kaye Shedlock'	3.94	310	IAmb_Lg		22 59 30.2	
	comp=Z,8.5nm,0.7s						
T25A	Trinidad	4.57	279	IAmb_Lg		22 59 46.1	
	comp=Z,8.8nm,0.8s						
CCM	Cathedral Cave	6.19	73	IAmb_Lg		23 00 38.4	
	comp=Z,3.3nm,0.8s						

IDC 19 22:58:56.4±2.3**, 0°.64N**×**127°.36E, h0**^{km}**, mb3.4**/3**, mb1 3.7**/3**, mb1mx3.2**/31**, mbtmp3.5**/3**, Error ellipse: s-maj=163.6km s-min=29.8km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.57	162	P	P	23 03 47.5	-0.2
	1.0nm,0.6s,baz=341,slow=11,SNR=2.0						
ASAR	Alice Springs	24.98	166	P	P	23 04 22.1	+0.1
	1.4nm,1.0s,baz=342,slow=11,SNR=4.2						
MKAR	Makanchi Array	60.45	326	P	P	23 09 07.9	0.0
	0.2nm,0.5s,baz=108,slow=8.0,SNR=2.0						

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*IDC **19** 23:01:04.9±1.5, 0°.77N×126°.96E, h0^{km}, mb3.7/4, mb1 4.0/4, mb1mx3.4/36, mbtmp3.8/4, Error ellipse: s-maj=138.7km s-min=22.0km az=69.0*

*NEIC **19** 23:01:13.4±1.2, 0°.4N±0°.1×126°.2E±0°.2, h72^{km}±12^{km}, mb4.1/9, Error ellipse: s-maj=23.8km s-min=13.0km az=69.0*

ISC 19 23:01:10.7±0.8**, 0°.4N**±0°.1×**126°.3E**±0°.2**, h47**^{km}**, n17,** σ**1**^{s}**.11**/17**, mb3.9**/9**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TOLI2	Tolitoli	5.60	277	Pn	Pn	23 02 31.8	+0.4
WB0	Warramunga Arr	21.55	159	P	P	23 05 56.8	+0.5
WB0				IAmb	IAmb	23 06 03.4	
	comp=Z,4.5nm,1.1s						
WRA	Warramunga Arr	21.70	159	P	P	23 05 57.7	-0.1
	comp=Z,2.6nm,0.6s,baz=341,slow=11,SNR=23						
WRA	Warramunga Arr	21.70	159	P	P	23 05 58.9	+1.1
WB2	Warramunga Arr	21.70	159	P	P	23 05 58.7	+0.8
WB2				IAmb	IAmb	23 05 59.5	
	comp=Z,4.1nm,0.8s						
WR0	Warramunga Arr	21.79	159	P	P	23 05 58.9	+0.1
AS31	Alice Springs	25.04	163	P	P	23 06 30.1	-0.5
ASAR	Alice Springs	25.04	163	P	P	23 06 33.5	+2.8
	comp=Z,2.6nm,0.7s,baz=345,slow=11,SNR=17						
ASAR	Alice Springs	25.04	163	P	P	23 06 30.7	0.0
MORW	Morawa	30.93	198	P	P	23 07 22.8	-0.4
MORW				IAmb	IAmb	23 07 27.7	
	comp=Z,3.1nm,0.9s						
FORT	Forrest	31.07	177	P	P	23 07 23.0	-1.4
BBOO	Buckleboo	34.30	165	P	P	23 07 52.9	+0.3
BBOO				IAmb	IAmb	23 08 07.8	
	comp=Z,9.4nm,1.1s						
JHJ2	Mitsune	34.91	20	P	P	23 07 57.8	-0.1
SONM	Songino Array	50.31	343	P	P	23 10 03.4	+0.7
	comp=Z,0.7nm,1.1s,baz=152,slow=6.5,SNR=2.6						
MKAR	Makanchi Array	60.06	327	P	P	23 11 13.2	+0.3
	comp=Z,0.7nm,0.8s,baz=121,slow=8.1,SNR=4.7						
MKAR	Makanchi Array	60.06	327	P	P	23 11 13.0	0.0
MAKZ	Makanchi	60.24	326	P	P	23 11 12.2	-2.0
MAKZ				IAmb	IAmb	23 11 15.7	
	comp=Z,2.2nm,0.9s						

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*IDC **19** 23:14:16.0±5.7, 20°.70S×178°.61W, h550^{km}±38^{km}, mb2.9/3, mb1 3.4/4, mb1mx2.8/52, mbtmp3.8/4, Error ellipse: s-maj=144.4km s-min=46.6km az=161.0*

ISC 19 23:14:14.8±1.5**, 21°.0S**±0°.4×**178°.7W**±0°.2**, h550**^{km}**, n9,** σ**0**^{s}**.95**/9**, mb3.2**/3**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.45	316	P	P	23 15 40.4	+0.1
	6.5nm,0.3s,baz=146,slow=5.1,SNR=26						
ASAR	Alice Springs	43.79	257	PcP	PcP	23 23 06.9	-0.1
	0.3nm,0.5s,baz=108,slow=4.1,SNR=2.5						
NVAR	Mina Array Bea	81.80	44	P	P	23 25 37.5	+0.6
	0.4nm,0.6s,baz=224,slow=8.8,SNR=4.3						
TXAR	Lajitas Array	87.84	58	P	P	23 26 06.2	-0.1
	0.3nm,0.8s,baz=259,slow=4.4,SNR=2.9						
ILAR	Eielson Array	88.90	13	P	P	23 26 09.8	-0.5
	0.4nm,0.5s,baz=222,slow=5.0,SNR=6.2						
ARCES	ARCESS Array B	129.25	349	PKP	PKPdf	23 32 20.9	+0.8
	0.7nm,0.5s,baz=76,slow=1.5,SNR=9.6						
FINES	FINESS Array B	136.03	343	PKP	PKPdf	23 32 32.5	-0.6
	4.9nm,1.0s,baz=7.6,slow=4.2,SNR=4.0						
AKASG	Malin Array Be	143.10	330	PKP	PKPdf	23 32 44.7	-1.5
	1.0nm,0.4s,baz=44,slow=4.3,SNR=8.0						
MMAI	Mount Meron Ar	147.48	299	PKPbc	PKPbc	23 32 59.1	+1.3
	0.6nm,0.5s,baz=71,slow=6.3,SNR=5.0						

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*IDC **19** 23:15:49.8±0.5, 36°.69N×140°.64E, h0^{km}, mb4.3/21, mb1 4.3/27, mb1mx4.1/81, mbtmp4.2/27, ML3.6/4, Error ellipse: s-maj=12.6km s-min=11.5km az=58.0*

*NEIC **19** 23:15:52.3, 36°.68N×140°.70E, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M$_{rr}$-4.74; M$_{\theta\theta}$-3.78; M$_{\phi\phi}$8.52; M$_{r\theta}$-4.35; M$_{\theta\phi}$-1.89; M$_{\phi r}$-2.22; Fault plane solution: M$_{0}$9.06000×10^{14} NP1:φ$_{s}$25.77000°, δ64.50000°, λ-42.49000°. NP2:φ$_{s}$137.30000°, δ52.43000°, λ-147.10000°. Principal axes: T 9.0024, Plg7.0000°, Azm84.0000°; N 0.1154, Plg42.0000°, Azm181.0000°; P -9.1177, Plg47.0000°, Azm346.0000°;*

*NEIC **19** 23:15:52.2±1.5, 36°.69N±0°.04×140°.70E±0°.06, h10^{km}±4^{km}, mb4.6/20, Mwr3.9/19 Error ellipse: s-maj=7.7km s-min=3.2km az=125.0*

*JMA **19** 23:15:53.1, 36°.67N×140°.65E, h10^{km}±1^{km}, M4.3 Broadband fault plane solution: P waves. NP1: φ$_{s}$193.00000°, δ41.00000°, λ-50.00000°. NP2: φ$_{s}$325.00000°, δ59.00000°, λ-119.00000°. Principal axes: T Plg10.0000°, Azm76.0000°; N Plg25.0000°, Azm341.0000°; P Plg63.0000°, Azm186.0000°;*

JMA Felt III J1.

*NIED **19** 23:15:53.1, 36°.67N×140°.65E, h10^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.93; M$_{\theta\theta}$-0.26; M$_{\phi\phi}$1.19; M$_{r\theta}$0.44; M$_{\theta\phi}$-0.13; M$_{\phi r}$0.11; Fault plane solution: M$_{0}$1.18000×10^{15} NP1: φ$_{s}$199.00000°, δ53.00000°, λ-55.00000°. NP2: φ$_{s}$330.00000°, δ49.00000°, λ-127.00000°.*

ISC 19 23:15:52.2±0.9**, 36°.66N**±0°.03×**140°.67E**±0°.05**, h13**^{km}±5^{km}**, n101,** σ**1**^{s}**.25**/107**, mb4.5**/33**, 5C-1D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHO	Hitachi	0.10	238	⇑P	Pg	23 15 55.5	+0.4
JHO				S	Sg	23 15 57.2	0.0
JHYU	Hitachinakayam	0.33	192	P	Pb	23 15 59.8	-0.1
JHYU				S	Sb	23 16 04.9	-0.2
JFFD	Fukushimafurud	0.43	348	P	Pb	23 16 01.5	-0.2
JFFD				S	Sb	23 16 07.4	-0.8
ONAJ	Iwakimizuishiy	0.45	13	⇑P	Pb	23 16 01.6	-0.4
ONAJ				S	Sb	23 16 08.1	-0.5
JYT	Yasato	0.58	222	⇑P	Pg	23 16 04.0	+0.5
JYT				S	Sg	23 16 11.6	+0.3
JYT	Yasato	0.58	222		Pg	23 16 04.0	+0.5
JYT				Sg	Sg	23 16 11.7	+0.5
JSB	Shiboa	0.68	297	⇑P	Pb	23 16 06.3	+0.4
JSB				S	Sb	23 16 15.1	-0.1
JFK	Kawauchi	0.72	13	⇑P	Pb	23 16 06.2	-0.4
JFK				S	Sb	23 16 16.1	-0.3
JFT	Otama	0.89	343	⇓P	Pb	23 16 09.7	+0.1
JFT				S	Sb	23 16 21.3	-0.1
JMM	Marumori	1.20	5		Pb	23 16 14.4	-0.4
JMM				Sg	Sb	23 16 29.7	-0.6
MJAR	Matsushiro Arr	1.99	267	Pg	Pn	23 16 26.4	+0.9
	17nm,0.3s,baz=90,slow=16,SNR=229						
MJAR				Lg	Lg	23 16 51.1	
	66nm,0.3s,baz=130,slow=29,SNR=12						
MJAR	Matsushiro Arr	1.99	267	Pn	Pn	23 16 26.2	+0.7
MAJO	Matsushiro	1.99	267	Pn	Pn	23 16 26.7	+1.2
MAT	Matsushiro	1.99	267	P	Pb	23 16 27.0	-1.2
MAT				S	Sb	23 16 52.1	-0.8
MJB9	Matsu-Tunnel	1.99	267		Pn	23 16 26.8	+1.2
JSD	Sado	2.36	306		Pn	23 16 31.1	+0.5
JSG	Sagara	2.84	226		Pn	23 16 38.7	+1.6
JGF	Kuroka	2.89	249		Pn	23 16 39.7	+1.8
INU	Inuyama	3.24	247		Pn	23 16 45.0	+2.2
JHJ	Hachijo jima 2	3.61	192	Pn	Pn	23 16 47.0	-0.8
	13nm,0.3s,baz=240,slow=20,SNR=1.3						
JHJ				Sn	Sn	23 17 31.4	+1.1
	35nm,0.3s,baz=277,slow=18,SNR=3.5						
JHJ2	Mitsune	3.61	191	Pn	Pn	23 16 49.1	+1.3
JTM	Tenmabayashi	4.13	4	Pn	Pn	23 16 57.0	+2.0
JWT	Wachi	4.49	254	Pn	Pn	23 17 02.2	+2.2
ERM	Erimo	5.68	19	Pn	Pn	23 17 16.2	0.0
JMN	Monobe	6.29	244	Pn	Pn	23 17 25.2	+0.6
JHS	Saijyo	6.36	257	Pn	Pn	23 17 27.3	+1.7
ASAJ	Asahikawa	7.59	11	Pn	Pn	23 17 43.1	+0.7
	1.7nm,0.3s,baz=230,slow=19,SNR=1.9						
ASAJ				Sn	Sn	23 19 10.8	+2.6
	0.7nm,0.3s,baz=111,slow=32,SNR=1.6						
JCJ	Chichijima	9.63	172	Pn	Pn	23 18 08.4	-2.0
	9.7nm,0.3s,baz=48,slow=8.3,SNR=5.3						
USA0B	Ussuriysk Arra	10.02	321	Pn	Pn	23 18 18.8	+3.1
USRK	Ussuriysk Ar.	10.02	321	Pn	Pn	23 18 12.5	-3.2
	baz=132,slow=13,SNR=2.4						
USRK	Ussuriysk Ar.	10.02	321		Pn	23 18 18.6	+2.8
KSRS	Korea Array	10.22	278	Pn	Pn	23 18 18.1	-0.4
	0.4nm,0.3s,baz=88,slow=14,SNR=1.9						
KLR	Kul'dur	14.14	335	Pn	Pn	23 19 09.6	-2.5
	0.1nm,0.3s,baz=136,slow=18,SNR=2.4						
SONM	Songino Array	27.50	305	P	P	23 21 37.4	-1.0
	3.4nm,0.8s,baz=107,slow=9.1,SNR=19						
SONM	Songino Array	27.50	305	P	P	23 21 37.8	-0.5
H11N2	WAKE ISLAND Hy	28.48	119	T	T	23 51 31.8	
	baz=312,slow=75,SNR=1018						
H11N1	WAKE ISLAND Hy	28.48	119	T	T	23 51 32.4	
	baz=312,slow=75,SNR=734						
H11N3	WAKE ISLAND Hy	28.50	119	T	T	23 51 33.1	
	baz=312,slow=75,SNR=594						
H11S1	WAKE ISLAND Hy	29.17	121	T	T	23 52 21.2	
	baz=314,slow=75,SNR=2622						
H11S3	WAKE ISLAND Hy	29.17	121	T	T	23 52 21.1	
	baz=314,slow=75,SNR=1260						
H11S2	WAKE ISLAND Hy	29.18	121	T	T	23 52 23.7	
	baz=314,slow=75,SNR=1037						
ZAA0	Zalesovo Array	41.73	313	P	P	23 23 40.7	0.0
ZAA0				IAmb	IAmb	23 23 44.6	
	comp=Z,7.1nm,0.6s						
ZALV	Zalesovo Beam	41.73	313	P	P	23 23 40.2	-0.5
	comp=Z,8.4nm,0.5s,baz=96,slow=6.9,SNR=26						
ZALV				PcP	PcP	23 25 35.6	-1.3
	comp=Z,1.3nm,0.6s,baz=96,slow=1.5,SNR=4.0						
ZALV	Zalesovo Beam	41.73	313	P	P	23 23 40.7	0.0
MK31	Makanchi Array	43.81	302	P	P	23 23 57.6	-0.1
MKAR	Makanchi Array	43.81	302	P	P	23 23 56.9	-0.8
	comp=Z,1.5nm,0.8s,baz=94,slow=7.4,SNR=6.9						
MKAR	Makanchi Array	43.81	302	P	P	23 23 57.9	+0.2
MAKZ	Makanchi	44.02	302	P	P	23 23 59.5	+0.1
KURK	Kurchatov	45.69	308	P	P	23 24 12.6	0.0
KSH	Kashi	50.02	294	P	P	23 24 49.6	+3.2
KSH				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ILAR	Eielson Array	50.12	32	P	P	23 24 46.3	-0.4
	comp=Z,0.6nm,0.6s,baz=268,slow=5.5,SNR=10.0						
ILAR	Eielson Array	50.12	32	P	P	23 24 47.0	+0.2
COEN	Coen	50.40	177	P	P	23 24 49.8	+0.5
KKAR	Karatay Array	52.80	300	P	P	23 25 06.6	-0.5
KNRA	Kununurra	53.26	194	P	P	23 25 11.6	+1.0
KNRA				IAmb	IAmb	23 25 11.8	
	comp=Z,9.3nm,1.0s						
CHGR	Chuyangaron	55.29	295	P	P	23 25 25.4	0.0
CHGR				IAmb	IAmb	23 25 26.4	
	comp=Z,6.9nm,0.7s						
ARU	Arti	56.24	319	P	P	23 25 31.5	-0.4
	comp=Z,1.8nm,0.5s,baz=172,slow=1.2,SNR=11						
ARU	Arti	56.24	319	P	P	23 25 32.1	+0.2
WB0	Warramunga Arr	56.44	187	P	P	23 25 33.6	0.0
WR0	Warramunga Arr	56.61	187	P	P	23 25 32.8	-2.0
WB2	Warramunga Arr	56.62	187	P	P	23 25 33.1	-1.7
WB2				IAmb	IAmb	23 25 35.8	
	comp=Z,6.4nm,0.8s						
WRA	Warramunga Arr	56.62	187	P	P	23 25 34.9	+0.1
	comp=Z,5.5nm,0.6s,baz=3.2,slow=7.4,SNR=28						
WRA				PcP	PcP	23 26 32.8	+1.6
	comp=Z,0.8nm,0.6s,baz=1.3,slow=4.3,SNR=2.2						
WRA	Warramunga Arr	56.62	187	P	P	23 25 33.4	-1.5
ABKAR	Akbulak array	57.72	310	P	P	23 25 41.0	-1.5
AKTO	Aktyubinsk	58.48	312	P	P	23 25 46.5	-1.3
	comp=Z,0.6nm,0.6s,baz=61,slow=13,SNR=4.9						
KIRV	Kirov	60.18	323	P	P	23 25 58.1	-1.3
	comp=Z,8.1nm,0.5s,baz=108,slow=3.2,SNR=3.8						
AS31	Alice Springs	60.34	187	P	P	23 26 01.6	+0.7
ASAR	Alice Springs	60.34	187	P	P	23 26 00.0	-0.9
	comp=Z,3.6nm,0.8s,baz=13,slow=6.4,SNR=18						
ASAR	Alice Springs	60.34	187	P	P	23 26 01.1	+0.3
EUNU	Eureka	60.64	8	P	P	23 26 01.9	-0.4
EUNU				IAmb	IAmb	23 26 18.5	
	comp=Z,1.8nm,0.9s						
EIDS	Eidsvold	62.48	169	P	P	23 26 16.5	+1.3
EIDS				IAmb	IAmb	23 26 17.6	
	comp=Z,5.2nm,1.1s						
RES	Resolute Bay	63.10	14	P	P	23 26 18.3	-0.5
RES				IAmb	IAmb	23 26 19.9	
	comp=Z,3.0nm,0.8s						
DZM	Mont Dzumac	63.28	153	P	P	23 26 20.5	-0.3
	comp=Z,8.6nm,0.9s,baz=184,slow=7.6,SNR=3.0						
ARCES	ARCESS Array B	64.13	339	P	P	23 26 25.3	-0.5
	comp=Z,2.3nm,0.7s,baz=62,slow=8.4,SNR=11						
ARCES	ARCESS Array B	64.13	339	P	P	23 26 26.1	+0.3
STKA	Stephens Creek	68.19	179	P	P	23 26 52.1	0.0
	comp=Z,1.9nm,0.7s,baz=354,slow=10,SNR=3.5						
FINES	FINESS Array B	68.86	332	P	P	23 26 55.5	-0.5
	comp=Z,4.1nm,0.7s,baz=46,slow=8.2,SNR=8.6						
FINES	FINESS Array B	68.86	332	P	P	23 26 56.1	0.0
KBZ	Khabaz	70.69	310	P	P	23 27 08.2	+0.6
	comp=Z,1.4nm,0.8s,baz=328,slow=20,SNR=2.2						
BMO	Blue Mountains	72.61	47	P	P	23 27 20.6	+1.2
BMO				IAmb	IAmb	23 27 21.9	
	comp=Z,1.7nm,0.6s						
NC405	NORSAR Array S	74.08	337	P	P	23 27 26.4	-1.2
NC405				IAmb	IAmb	23 27 40.3	
	comp=Z,9.2nm,0.9s						
AKASG	Malin Array Be	74.22	322	P	P	23 27 26.7	-1.9
	comp=Z,2.8nm,0.6s,baz=46,slow=6.2,SNR=8.5						
AKBB	Malin Array Si	74.22	322	P	P	23 27 27.9	-0.6
AKBB				IAmb	IAmb	23 27 32.3	
	comp=Z,6.5nm,1.1s						
NB2	NORSAR Subarra	74.30	337	P	P	23 27 29.0	+0.1
	comp=Z,1.6nm,0.6s,baz=41,slow=6.2						
NOA	NORSAR Array B	74.30	337	P	P	23 27 28.8	-0.1
	comp=Z,1.3nm,0.6s,baz=40,slow=5.8,SNR=6.9						
NVAR	Mina Array Bea	75.68	53	P	P	23 27 38.4	+0.8
	comp=Z,0.8nm,0.6s,baz=295,slow=5.2,SNR=8.8						
CHVC	Chvalec	80.39	328	*e*P	P	23 28 03.4	+0.2
DPC	Dobruska-Polom	80.45	328	*e*P	P	23 28 07.5	+3.9
KRLC	Kraliky	80.46	327	*e*P	P	23 28 03.8	+0.2
CLL	Collm	81.12	330	*e*P	P	23 28 08.0	+1.0
	comp=Z,6.0nm,1.0s						
PRU	Pruhonice	81.48	328	*e*P	P	23 28 12.7	+3.7
MMAI	Mount Meron Ar	81.69	305	P	P	23 28 10.4	-0.1
	comp=Z,0.5nm,0.6s,baz=46,slow=8.3,SNR=2.6						
KHC	Kasperske Hory	82.55	328	*e*P	P	23 28 14.8	+0.1
GERES	GERESS Array B	82.71	328	P	P	23 28 15.8	+0.2
	comp=Z,1.0nm,0.5s,baz=50,slow=6.5,SNR=4.7						
IDI	Anoyia	86.80	312	P	P	23 28 36.2	-0.3
	comp=Z,3.4nm,0.9s,baz=60,slow=6.4,SNR=2.9						
TXAR	Lajitas Array	90.82	52	P	P	23 28 53.8	-1.8
	comp=Z,0.5nm,0.6s,baz=312,slow=2.9,SNR=7.9						
TORD	Torodi Ar. Bea	117.17	314	PKP	PKPdf	23 34 37.6	0.0
	comp=Z,0.6nm,1.0s,baz=6.2,slow=3.1,SNR=2.9						
QSPA	South Pole Qui	126.41	180	PKP	PKPdf	23 34 54.1	+0.3
	comp=Z,2.3nm,1.1s,baz=14,slow=2.7,SNR=3.3						
H03N2	Juan Fernandez	147.57	96	T	T	02 20 29.2	
	baz=291,slow=76,SNR=82						
H03N3	Juan Fernandez	147.59	96	T	T	02 20 30.2	
	baz=291,slow=76,SNR=83						
H03N1	Juan Fernandez	147.59	96	T	T	02 20 27.5	
	baz=291,slow=76,SNR=95						

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*NEIC **19** 23:16:18.2±1.6, 9°.32S±0°.06×118°.76E±0°.06, h93^{km}±6^{km}, mb4.0/13, Error ellipse: s-maj=9.3km s-min=7.8km az=202.0*

*DJA **19** 23:16:18.5±1.9, 9°S±3°×11°9E±°, h25^{km}±19^{km}, M4.3/15, mb4.3/3, MLv4.3/15*

*IDC **19** 23:16:22.7±4.3, 9°.03S×119°.20E, h135^{km}±38^{km}, mb3.7/8, mb1 3.7/11, mb1mx3.3/61, mbtmp4.1/11, Error ellipse: s-maj=58.9km s-min=11.3km az=59.0*

ISC 19 23:16:18.3±0.5**, 9°.36S**±0°.05×**118°.82E**±0°.04**, h100**^{km}**, n65,** σ**1**^{s}**.87**/64**, mb4.0**/10**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSI	Waingapu	1.49	102	P	Pn	23 16 44.8	+0.3
WSI				S	Sn	23 17 04.5	+0.1
BASI	Baing, Sumba	1.94	116	P	Pn	23 16 50.7	+0.6
TWSI	Taliwang, Sumb	2.01	288	P	Pn	23 16 51.3	+0.3
EDFI	Ende, Flores	2.90	78	P	Pn	23 17 03.4	+0.5
MMRI	Maumere	3.46	78	P	Pn	23 17 11.4	+1.2
MMRI	Maumere	3.46	78		Pn	23 17 10.7	+0.5
MMRI				Sn	Sn	23 17 53.5	+3.2
MMRI	Maumere	3.46	78	P	Pn	23 17 12.1	+1.9
BSSI	Bau Bau, Buton	3.60	28	P	Pn	23 17 12.4	+0.2
DNP	Denpasar	3.62	281	P	Pn	23 17 17.5	+5.1
IGBI	Denpasar	3.66	278	P	Pn	23 17 13.4	+0.4
SRBI	Singaraja	3.78	289	P	Pn	23 17 15.2	+0.7
BKSI	Bulukumba	4.22	18	P	Pn	23 17 21.2	+0.7
KAPI	Kappang	4.42	12	P	Pn	23 17 23.6	+0.5
	5.1nm,0.3s,baz=168,slow=17,SNR=3.1						
KAPI				S	Sn	23 18 10.1	-3.4
	35nm,0.3s,baz=126,slow=23,SNR=37						
KAPI	Kappang	4.42	12		Pn	23 17 23.3	+0.1
KAPI					Sn	23 18 11.6	-1.9
JAGI	Jajag, Banyuwa	4.69	281		Pn	23 17 25.2	-1.7
JAGI				Sn	Sn	23 18 18.2	-2.0
BATI	Baumata	4.85	100	P	Pn	23 17 29.1	+0.1
	22nm,0.3s,baz=294,slow=3.5,SNR=12						
BATI				S	Sn	23 18 22.7	-1.4
	6.1nm,0.3s,baz=272,slow=18,SNR=1.6						
BATI	Baumata	4.85	100	P	Pn	23 17 29.7	+0.6
BNSI	Bone	5.09	15	P	Pn	23 17 33.9	+1.6
	0.3nm13nm,0.5s						
SOEI	Soe	5.39	95		Pn	23 17 35.0	-1.5
GMJI	Gumukmas	5.42	281	P	Pn	23 17 36.6	-0.1
	0.3nm38nm,1.0s						
PBKI	Pangkalan Bun	9.70	313	P	Pn	23 18 47.8	+13
TOLI2	Tolitoli	10.59	11		Pn	23 18 46.5	-0.6
FITZ	Fitzroy Crossi	10.92	143	S	Sn	23 20 45.5	-6.4
	1.0nm,0.3s,baz=181,slow=19,SNR=9.8						
KNRA	Kununurra	11.56	124		Pn	23 18 59.5	-0.7
KNRA	Kununurra	11.56	124	P	Pn	23 18 59.9	-0.3
	9.6nm,0.5s						
MBWA	Marble Bar	11.76	176	P	Pn	23 19 04.2	+1.3
PSA00	Pilbara Seismi	12.18	175	Pn	Pn	23 19 08.7	+0.2
PSA00	Pilbara Seismi	12.18	175	Pn	Pn	23 19 08.8	+0.3
PSA00	Pilbara Seismi	12.18	175	P	Pn	23 19 11.2	+2.7
	17nm,2.0s						
SAUI	Saumlaki	12.42	85	Pn	Pn	23 19 07.2	-4.4
MTN	Manton Dam	12.57	107		Pn	23 19 12.8	-0.9
MTN	Manton Dam	12.57	107	P	Pn	23 19 13.2	-0.5
SBUM	Sibu	13.45	330	Pn	Pn	23 19 24.3	-0.8
KDU	Kakadu	13.81	105	P	Pn	23 19 29.3	-0.5
	12nm,1.3s						
GIRL	Giralia	13.92	198	P	P	23 19 36.9	+0.8
	260nm,1.7s						
PPBI	Pangkal Pinang	14.49	299	P	P	23 19 46.2	+3.7
MEEK	Meekatharra	17.19	181	P	P	23 20 17.7	+5.4
	22nm,2.3s						

WB0	Warramunga Arr	18.27	126	Pn	Pn	23 20 26.1	+0.7
WRA	Warramunga Arr	18.32	127	P	P	23 20 25.3	+0.4
	0.5nm,0.3s,baz=300,slow=13,SNR=29						
WRA				S	S	23 23 41.7	-7.5
	0.2nm,0.3s,baz=305,slow=22,SNR=5.9						
WRA	Warramunga Arr	18.32	127	P	Pn	23 20 26.6	+0.6
WRAB	Tennant Creek	18.32	127	P	Pn	23 20 27.6	+1.5
WRAB				IAmb	IAmb	23 20 28.5	
	comp=Z,4.5nm,0.7s						
WRAB	Tennant Creek	18.32	127	P	Pn	23 20 27.8	+1.8
WB2	Warramunga Arr	18.33	127	P	Pn	23 20 26.7	+0.6
WB2				IAmb	IAmb	23 20 35.6	
	comp=Z,4.2nm,0.8s						
WR0	Warramunga Arr	18.49	126		Pn	23 20 28.6	+0.6
WR0				IAmb	IAmb	23 20 30.5	
	comp=Z,3.9nm,0.8s						
AS31	Alice Springs	20.26	136	P	Pn	23 20 48.5	-0.3
ASAR	Alice Springs	20.26	136	P	Pn	23 20 48.4	-0.4
	comp=Z,3.2nm,0.6s,baz=315,slow=10,SNR=57						
ASAR				S	S	23 24 25.8	-2.1
	comp=Z,0.4nm,0.8s,baz=317,slow=24,SNR=2.2						
ASAR	Alice Springs	20.26	136	P	P	23 20 45.0	-1.0
H08S2	Diego Garcia H	45.82	268	T	T	00 14 01.8	
	baz=95						
H08S3	Diego Garcia H	45.83	268	T	T	00 13 59.1	
	baz=95						
H08S1	Diego Carcia H	45.84	268	T	T	00 13 51.9	
	baz=95						
USA0B	Ussuriysk Arra	54.63	12	P	P	23 25 36.4	-0.1
USRK	Ussuriysk Ar.	54.63	12	P	P	23 25 36.7	+0.1
SONM	Songino Array	58.00	350	P	P	23 26 00.5	-0.1
	comp=Z,2.4nm,0.7s,baz=168,slow=8.4,SNR=15						
SONM	Songino Array	58.00	350	IAmb	IAmb	23 26 01.9	
	comp=Z,2.2nm,0.8s						
MK31	Makanchi Array	64.69	333	P	P	23 26 45.5	-0.2
MK31				IAmb	IAmb	23 26 46.4	
	comp=Z,2.6nm,1.1s						
MKAR	Makanchi Array	64.69	333	P	P	23 26 44.9	-0.8
	comp=Z,1.3nm,0.7s,baz=144,slow=5.2,SNR=8.6						
BOOM	Boomskoye usch	64.78	326	P	P	23 26 46.2	-0.3
MAKZ	Makanchi	64.84	333	P	P	23 26 46.8	+0.2
MAKZ				IAmb	IAmb	23 26 54.0	
	comp=Z,3.7nm,1.1s						
AAK	Ala-Archa	65.67	326	P	P	23 26 51.8	-0.5
	comp=Z,1.5nm,0.7s,baz=124,slow=7.5,SNR=5.5						
AAK	Ala-Archa	65.67	326	P	P	23 26 51.7	-0.6
AAK				IAmb	IAmb	23 26 53.7	
	comp=Z,2.5nm,0.9s						
KURBB	Kurchatov Arra	69.21	334	P	P	23 27 13.8	-0.4
	comp=Z,0.6nm,0.3s,baz=130,slow=5.0,SNR=1.5						
KURK	Kurchatov	69.24	334	P	P	23 27 14.4	+0.1
KURK				IAmb	IAmb	23 27 30.3	
	comp=Z,1.4nm,0.7s						
ZALV	Zalesovo Beam	69.31	339	P	P	23 27 13.8	-1.0
	comp=Z,1.0nm,0.5s,baz=136,slow=5.9,SNR=4.0						
AKTO	Aktyubinsk	79.42	325	P	P	23 28 13.6	+0.1
	comp=Z,1.5nm,0.7s,baz=90,slow=6.7,SNR=5.4						
MMAI	Mount Meron Ar	89.57	303	P	P	23 29 06.0	+0.9
	comp=Z,0.4nm,0.5s,baz=92,slow=7.5,SNR=2.2						

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*DNK **19** 23:16:51.6±1.4, 51°.48N×16°.44E, h0^{km}±59^{km}, ML2.3*
*IPEC **19** 23:16:53.0±0.3, 51°.49N×16°.42E, h1^{km}, ML2.9/3, Error ellipse: s-maj=2.6km s-min=1.4km az=61.0*
*PRU **19** 23:16:54.4±0.0, 51°.42N×16°.19E, h0^{km}*
*IDC **19** 23:16:54.0±0.6, 51°.47N×16°.09E, h0^{km}, mb3.4/1, mb1 3.5/9, mb1mx3.3/67, mbtmp3.4/9, ML3.1/8, Error ellipse: s-maj=13.2km s-min=6.1km az=104.0*
*BGR **19** 23:16:55.0±0.3, 51°.40N×16°.18E, h1^{km}, ML3.2/14, Error ellipse: s-maj=4.4km s-min=2.2km az=19.0*
ISC 19 23:16:51.8±0.6**, 51°.47N**±0°.02×**16°.20E**±0°.02**, h0^{km}, n82,** σ**1^s.91**/164**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.63	175	ePg	Pb	23 17 05.9	+0.3
KSP				eSg	Sg	23 17 13.3	+1.2
KSP	Ksiaz	0.63	175	ePg	Pb	23 17 06.0	+0.3
KSP				eSg	Sg	23 17 13.5	+1.4
CHVC	Chvalec	0.89	186	ePG	Pb	23 17 10.7	+0.6
CHVC				eSG	Sg	23 17 21.8	+1.4
	comp=Z,114nm,0.4s						
OSTC	Ostas	0.92	179	ePG	Pb	23 17 11.1	+0.5
OSTC				eSG	Sg	23 17 22.2	+1.0
	comp=Z,208nm,0.9s						
UPC	Upice	0.97	187	ePG	Pb	23 17 12.1	+0.6
UPC				eSG	Sg	23 17 24.5	+1.4
	comp=Z,356nm,0.4s						
DPC	Dobruska-Polom	1.13	176	ePG	Pb	23 17 14.8	+0.6
DPC				eSG	Sg	23 17 29.0	+1.0
	comp=Z,142nm,0.5s						
DPC	Dobruska-Polom	1.13	176	ePg	Pb	23 17 14.8	+0.6
DPC				eSg	Sg	23 17 29.1	+1.2
PVCC	Panska Ves	1.40	228	ePG	Pb	23 17 20.2	+1.4
PVCC				eSG	Sn	23 17 38.6	+0.9
	comp=Z,529nm,0.4s						
KRLC	Kraliky	1.45	165	ePG	Pb	23 17 20.5	+0.9
KRLC				eSG	Sn	23 17 39.4	+0.4
	comp=Z,83nm,0.5s						
BRG	Berggiesshubel	1.54	248	ePn	Pb	23 17 21.6	+0.3
BRG				ePg	Pg	23 17 23.3	+2.0
BRG				eSg	Sg	23 17 42.9	+1.6
BRG	Berggiesshubel	1.54	248	Pn	Pb	23 17 21.6	+0.3
BRG				Pg	Pg	23 17 23.6	+2.3
BRG				Sg	Sg	23 17 43.8	+2.5
BRG				Amp		23 17 45.7	
	comp=Z,104nm,0.4s						
PRA	Prague	1.80	219	ePG	Pb	23 17 25.6	0.0
PRA				eSG	Sg	23 17 50.2	+0.7
	comp=Z,89nm,0.9s						
RUE	Ruedersdorf	1.81	305	eP	Pb	23 17 25.5	-0.2
RUE				eS	Sg	23 17 54.0	+4.3
RUE				IAML		23 17 56.8	
	comp=Z,101nm,0.4s						
PRU	Pruhonice	1.82	216	ePG	Pg	23 17 27.3	+0.6
PRU				eSG	Sg	23 17 50.8	+0.5
	comp=Z,104nm,0.6s						
FBE	Freiberg	1.88	254	ePn	Pb	23 17 26.5	-0.4
FBE				ePg	Pg	23 17 29.6	+1.9
FBE				eSg	Sg	23 17 53.9	+1.9
RAC	Raciborz	1.88	137	ePG	Pg	23 17 29.2	+1.4
RAC				eSG	Sg	23 17 53.4	+1.3
MORC	Moravsky Berou	1.90	153	ePn	Pn	23 17 26.4	+0.9
	baz=338						
MORC				eSg	Sn	23 17 51.0	+0.8
	comp=Z,82nm,0.7s,baz=338						
MORC	Moravsky Berou	1.90	153	ePn	Pb	23 17 26.8	-0.5
MORC				eSg	Sg	23 17 52.7	-0.1
GKP	Gorka Klasztor	1.91	19	eP	Pg	23 17 32.3	+4.0
CLL	Collm	2.01	267	ePn	Pn	23 17 28.0	+1.0
CLL				ePg	Pg	23 17 31.0	+0.7
CLL				i		23 17 34.3	
CLL				i		23 17 46.5	
CLL				eSg	Sg	23 17 57.0	+0.6
	comp=Z,67nm,0.6s						
CLL	Collm	2.01	267	ePn	Pn	23 17 28.2	+1.3
CLL				ePg	Pg	23 17 31.3	+0.9
CLL				eSg	Sg	23 17 58.3	+1.9
OKC	Ostrava-Krasne	2.05	142	ePG	Pg	23 17 31.6	+0.5
OKC				eSG	Sg	23 17 57.8	+0.2
	comp=Z,97nm,0.6s						
OKC	Ostrava-Krasne	2.05	142	ePn	Pb	23 17 29.0	-0.9
OKC				ePg	Pg	23 17 32.3	+1.2
OKC				eSg	Sg	23 17 57.9	+0.2
VRAC	Vranov	2.18	173	Pn	Pb	23 17 31.2	-0.9
	comp=Z,5.6nm,0.3s,baz=347,slow=12,SNR=41						
VRAC				Sn	Sn	23 17 58.2	+1.2
	comp=Z,10nm,0.3s,baz=108,slow=22,SNR=13						
VRAC	Vranov	2.18	173	ePn	Pn	23 17 30.8	+1.5
	baz=357						
VRAC				eSg	Sg	23 18 01.8	0.0
	comp=Z,68nm,0.8s,baz=357						
TREC	Trest	2.23	192	ePG	Pb	23 17 33.2	+0.3
TREC				eSG	Sg	23 18 03.1	-0.2
	comp=Z,56nm,0.7s						
KRUC	Moravsky	2.42	177	ePn	Pn	23 17 34.2	+1.6
	baz=0.3						
KRUC				eSg	Sg	23 18 09.4	0.0
	comp=Z,66nm,0.8s,baz=0.3						
TANN	Tannenbergstha	2.59	247	ePn	Pn	23 17 36.8	+1.8
TANN				ePg	Pg	23 17 43.3	+1.9
TANN				eSg	Sg	23 18 15.6	+0.6
OJC	Ojcow	2.60	117	ePn	Pn	23 17 35.0	-0.1
OJC				ePg	Pg	23 17 43.5	+1.9
OJC				eSg	Sg	23 18 17.2	+1.9
WERD	Werda	2.67	249	ePn	Pn	23 17 37.9	+1.9
WERD				ePg	Pg	23 17 44.6	+1.7
WERD				eSn	Sn	23 18 08.4	-0.7
WERD				eSg	Sg	23 18 19.3	+1.8
NKC	Novy Kostel	2.68	244	ePN	Pn	23 17 38.3	+2.1
NKC				ePG	Pg	23 17 43.4	+0.2
NKC				eSG	Sg	23 18 19.6	+1.6
	comp=Z,89nm,0.3s						
JAVC	Velka Javorina	2.78	160	ePn	Pn	23 17 37.9	+0.3
	baz=344						
JAVC	Velka Javorina	2.78	160	ePN	Pn	23 17 38.0	+0.3
KHC	Kasperske Hory	2.89	217	ePN	Pn	23 17 40.8	+1.8
KHC				ePG	Pg	23 17 46.5	-0.6
KHC				eSG	Sg	23 18 24.5	0.0
	comp=Z,89nm,1.3s						
CKRC	Cesky Krumlov	2.92	205	ePN	Pn	23 17 42.0	+2.5
CKRC				ePG	Pg	23 17 46.8	-1.0
CKRC				eSG	Sg	23 18 25.5	-0.1
MOX	Moxa	3.01	256	ePn	Pn	23 17 42.3	+1.6
MOX				ePg	Pg	23 17 51.2	+1.7
MOX				eSg	Sg	23 18 29.2	+0.8
SMOL	Smolenice	3.07	165	ePG	Pg	23 17 52.5	+2.0
SMOL				eSG	Sg	23 18 33.0	+2.8
GEC2	GERESS Array S	3.08	212	ePn	Pn	23 17 44.1	+2.3
GEC2				eSg	Sg	23 18 30.4	-0.4
GERES	GERESS Array B	3.08	212	Pn	Pn	23 17 44.3	+2.5
	comp=Z,2.0nm,0.3s,baz=37,slow=13,SNR=33						
GERES				Pg	Pg	23 17 49.9	-0.9
	comp=Z,20nm,0.3s,baz=33,slow=19,SNR=72						
GERES				Sn	Sn	23 18 14.0	-5.4
	comp=Z,5.2nm,0.3s,baz=30,slow=25,SNR=5.7						
GERES				Lg	Lg	23 18 29.0	
	comp=Z,13nm,0.3s,baz=28,slow=26,SNR=8.0						
LANS	Liptovska Anna	3.13	137	ePN	Pn	23 17 44.2	+1.8
LANS				ePG	Pg	23 17 53.2	+1.5
LANS				eSG	Sg	23 18 34.2	+2.0
WET	Wettzell	3.16	224	ePn	Pn	23 17 44.8	+2.1
WET				eSg	Sg	23 18 32.5	-0.7
MODS	Modra-Piesok	3.18	167	ePG	Pg	23 17 53.1	+0.4
MODS				eSG	Sg	23 18 35.0	+1.1
ZST	Bratislava	3.33	170	eSG	Sg	23 18 40.5	+1.7
VYHS	Vyhne	3.43	149	ePN	Pn	23 17 48.2	+1.7
VYHS				ePG	Pg	23 17 59.5	+2.0
VYHS				eSG	Sg	23 18 44.2	+2.2
CONA	Conrad Observa	3.56	184	i Pn	Pn	23 17 50.8	+2.6
	comp=Z,3.0nm,0.4s,SNR=8.7						
CONA				eSn	Sg	23 18 47.9	+2.0
	comp=Z,39nm,0.5s						
GRF	Grafenberg Arr	3.64	243	ePn	Pn	23 17 51.3	+1.9
GRF				eSg	Sg	23 18 50.3	+1.6
CLZ	Clausthal	3.65	278	ePn	Pn	23 17 52.3	+2.7
CLZ				eSg	Sg	23 18 49.8	+0.8
BSD	Bornholm Skovb	3.73	349	i P	Pn	23 17 51.0	+0.5
BSD				IAML		23 19 03.7	
	comp=Z,6.6nm,0.4s						
MOA	Molln	3.84	200	i Pn	Pn	23 17 54.0	+1.9
	comp=Z,5.4nm,0.3s,SNR=19						
MOA				eSn	Sg	23 18 58.0	+2.9
	comp=Z,26nm,0.4s						
CRVS	Cervenica-Dubn	4.25	125	ePG	Pg	23 18 14.4	+1.3
CRVS				eSG	Sg	23 19 13.1	+4.9
ARSA	Arzberg	4.25	186	ePn	Pn	23 18 01.9	+4.1
	comp=Z,2.3nm,0.3s						
ARSA				eSn	Sg	23 19 10.7	+2.4
	comp=Z,20nm,0.6s						
LUNU	Lund	4.48	340	i P	Pn	23 18 01.2	+0.4
LUNU				i S	Sn	23 18 53.2	-0.4
KOLS	Kolonicke sedl	4.65	121	ePN	Pn	23 18 05.6	+2.3
KOLS				ePG	Pg	23 18 26.1	+5.2
KBA	Koelnbreinsper	4.78	204	i Pn	Pn	23 18 07.3	+2.1
	comp=Z,3.2nm,0.4s,SNR=8.3						
KBA				eSg	Sg	23 19 27.5	+2.2
	comp=Z,12nm,0.5s						
BLEU	Blekinge	4.85	357	e	Pn	23 18 06.2	+0.3
	baz=178,slow=14						
BLEU				i P	Pn	23 18 07.2	+1.3
BLEU				eS	Sn	23 19 00.1	-2.6
BLEU				IAML		23 19 01.3	
	comp=Z,0.8nm,0.3s						
SOKA	Soboth	4.86	190	i Pn	Pn	23 18 09.4	+3.2
	comp=Z,0.8nm,0.4s						
BJUU	Bjuv	4.98	339	i P	Pn	23 18 08.4	+0.7
BJUU				eS	Sn	23 19 05.0	-0.9
OBKA	Obir	5.09	193	ePn	Pn	23 18 11.8	+2.5
	comp=Z,1.7nm,0.4s						
OBKA				eSg	Sg	23 19 36.6	+1.5
	comp=Z,27nm,0.8s						
WATA	Walderalm	5.12	218	i Pn	Pn	23 18 12.9	+3.0
	comp=Z,5.3nm,0.5s,SNR=6.2						
WATA				eSn	Sn	23 19 09.7	-0.1
	comp=Z,3.3nm,0.4s						
WATA				eSg	Sg	23 19 37.6	+1.3
	comp=Z,8.7nm,0.4s						
MYKA	Terra Mystica	5.13	200	eSg	Sg	23 19 39.4	+2.8
	comp=Z,7.9nm,0.4s						
WTTA	Wattenberg	5.16	217	i Pn	Pn	23 18 13.4	+3.0
	comp=Z,2.5nm,0.3s						
DEL	Delary	5.19	346	i P	Pn	23 18 10.8	+0.1
MOTA	Moosalm	5.30	221	i Pn	Pn	23 18 14.4	+2.0
	comp=Z,2.1nm,0.4s,SNR=4.2						
MOTA				eSn	Sn	23 19 16.5	+2.2
	comp=Z,6.1nm,0.5s						
ABTA	Abfaltersbach	5.31	209	i Pn	Pn	23 18 14.2	+1.8
	comp=Z,2.4nm,0.4s						
ABTA				eSg	Sg	23 19 43.6	+1.2
	comp=Z,22nm,0.8s						
RETA	Reutte	5.34	224	i Pn	Pn	23 18 14.3	+1.6
	comp=Z,3.0nm,0.3s,SNR=6.2						
RETA				eSn	Sn	23 19 16.0	+1.0
	comp=Z,4.5nm,0.4s						
RETA				eSg	Sg	23 19 44.0	+0.9
	comp=Z,7.4nm,0.4s						
SQTA	Sankt Quirin	5.36	219	i Pn	Pn	23 18 16.1	+3.0
	comp=Z,3.0nm,0.2s,SNR=9.6						
SQTA				eSn	Sn	23 19 18.1	+2.5
	comp=Z,3.6nm,0.3s						
FETA	Feichten	5.72	221	i Pn	Pn	23 18 20.4	+2.4
	comp=Z,1.1nm,0.4s						
DAVA	Damuels	5.88	227	ePn	Pn	23 18 21.6	+1.3
	comp=Z,2.1nm,0.3s						
DAVA				eSn	Sn	23 19 28.8	+0.3
	comp=Z,3.4nm,0.3s						
FABU	Falkenberg	5.90	341	eP	Pn	23 18 21.5	+1.1
FABU				i S	Sn	23 19 26.6	-2.1
PABE	Paberze	6.15	46	eP	Pn	23 18 25.6	+1.9
DAVOX	Davos/Dischmat	6.27	224	Pn	Pn	23 18 27.1	+1.5
	comp=Z,0.7nm,0.3s,baz=103,slow=15,SNR=8.7						
DAVOX				Sn	Sn	23 19 37.5	-0.5
	comp=Z,0.4nm,0.3s,baz=147,slow=20,SNR=1.3						
DAVOX				Lg	Lg	23 20 09.6	
	baz=195,slow=20						
SLIT	Slitere, Latvi	7.11	27	eP	Pn	23 18 38.5	+1.5
AKASG	Malin Array Be	8.24	90	Pn	Pn	23 18 51.8	-0.7
	comp=Z,1.2nm,0.3s,baz=280,slow=12,SNR=6.6						
AKASG				Sn	Sn	23 20 19.1	-7.0
	comp=Z,0.6nm,0.3s,baz=111,slow=33,SNR=2.0						
AKASG				Lg	Lg	23 21 14.8	
	comp=Z,0.1nm,0.3s,baz=273,slow=27,SNR=1.4						
MTSE	Matsula	8.46	28	eP	Pn	23 18 57.1	+1.6
HFS	Hagfors	8.79	352	Pn	Pn	23 18 59.0	-1.0
	comp=Z,0.3nm,0.3s,baz=173,slow=13,SNR=6.5						
HFS				Sn	Sn	23 20 36.5	-3.3
	comp=Z,0.3nm,0.3s,baz=168,slow=28,SNR=1.2						
AAL	Aland	8.98	12	eP	Pn	23 19 03.1	+0.5
VSU	Vasula	9.25	37	eP	Pn	23 19 08.4	+2.1
NOA	NORSAR Array B	9.98	346	Pn	Pn	23 19 14.1	-2.2
	comp=Z,0.0nm,0.3s,baz=180,slow=11,SNR=5.8						
FINES	FINESS Array B	11.37	25	Pn	Pn	23 19 34.5	-0.8
	comp=Z,0.4nm,0.3s,baz=202,slow=14,SNR=14						
FINES				Sn	Sn	23 21 35.9	-7.0
	comp=Z,0.2nm,0.3s,baz=206,slow=22,SNR=2.2						
EKA	Eskdalemuir Ar	12.17	296	Pn	Pn	23 19 42.5	-3.7
	baz=100,slow=14,SNR=2.0						
ARCES	ARCESS Array B	18.65	10	Pn	P	23 21 08.8	-2.0
	baz=195,slow=12,SNR=13						
TORD	Torodi Ar. Bea	39.99	202	P	P	23 24 30.0	+1.9
	comp=Z,0.7nm,1.0s,baz=4.3,slow=9.8,SNR=2.9						

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*IDC **19** 23:22:05.0±1.8, 23°.13S×66°.19W, h188^{km}±18^{km}, mb3.2/4, mb1 3.4/7, mb1mx3.3/32, mbtmp3.7/7, Error ellipse: s-maj=26.4km s-min=18.7km az=112.0*
ISC 19 23:22:05.8±0.7**, 23°.1S**±0°.1×**66°.4W**±0°.1**, h200^{km}, n13,** σ**0^s.96**/13**, mb3.4**/4**, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	Limon Verde	2.38	281	P	Pn	23 22 48.8	+0.1
	8.8nm,0.3s,baz=96,slow=5.9,SNR=41						
LVC				S	Sn	23 23 20.2	-1.8
	24nm,0.3s,baz=302,slow=19,SNR=10						
SIV	San Ignacio	8.65	36	P	Pn	23 24 07.1	-0.6
	2.1nm,0.3s,baz=214,slow=13,SNR=24						
PLCA	Paso Flores	17.94	190	P	P	23 26 00.4	-0.5
	0.1nm,0.3s,baz=17,slow=12,SNR=2.2						
VNA3	Neumayer Olymp	57.83	161	P	P	23 31 36.1	+0.1
VNA1	Neumayer--Stat	58.02	161	P	P	23 31 36.9	-0.3
VNA2	Neumayer--Watz	58.39	161	P	P	23 31 40.4	+0.6
	baz=289,slow=6.9						
SNAA	Sanae	60.02	161	P	P	23 31 51.0	-0.1
TXAR	Lajitas Array	63.27	324	P	P	23 32 15.2	+1.8
	0.1nm,0.4s,baz=147,slow=5.2,SNR=1.5						
QSPA	South Pole Qui	67.11	180	P	P	23 32 38.1	+0.5
	1.9nm,0.6s,baz=194,slow=1.2,SNR=12						
TORD	Torodi Ar. Bea	75.72	69	P	P	23 33 28.6	-1.1
	0.6nm,0.5s,baz=258,slow=5.6,SNR=14						
PDAR	Pinedale Array	76.66	329	P	P	23 33 35.2	+0.4
	0.4nm,0.7s,baz=135,slow=9.0,SNR=3.0						
ZALV	Zalesovo Beam	142.33	28	PKhKP	PKPpre	23 41 10.6	
	0.4nm,0.3s,baz=306,slow=5.2,SNR=2.7						
MKAR	Makanchi Array	145.46	39	PKPbc	PKPab	23 41 20.7	-0.1
	2.4nm,0.6s,baz=324,slow=2.9,SNR=27						

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*BJI **19** 23:28:16.7±0.0, 37°.45N×71°.56E, h113^{km}, mB4.7/17, mb4.7/29*
*MOS **19** 23:28:18.2±0.9, 37°.26N×71°.73E, h124^{km}, mb4.2/15, Error ellipse: s-maj=7.5km s-min=4.5km az=81.7*
*IDC **19** 23:28:18.0±2.6, 37°.07N×71°.79E, h121^{km}±24^{km}, mb3.7/22, mb1 3.8/28, mb1mx3.7/45, mbtmp4.2/28, Error ellipse: s-maj=15.1km s-min=10.7km az=176.0*
*NEIC **19** 23:28:19.2±2.0, 37°.26N±0°.05×71°.62E±0°.07, h115^{km}±1^{km}, mb4.3/31, Error ellipse: s-maj=8.4km s-min=7.9km az=113.0*
*NNC **19** 23:28:23.5±3.5, 37°.65N×71°.59E, h167^{km}±55^{km}, mb3.9, mpv4.9, Error ellipse: s-maj=36.4km s-min=16.5km az=17.0*
ISC 19 23:28:17.2±0.3**, 37°.17N**±0°.04×**71°.70E**±0°.04**, h106^{km}, n210,** σ**1^s.92**/227**, mb4.2**/44**, 14C-14D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAR	Garm	2.13	330		Pn	23 28 52.6	+0.8
GAR				Sn	Sn	23 29 17.5	-0.8
DRK	Karamyk	2.31	2		Pn	23 28 56.3	+2.0
CHGR	Chuyangaron	2.50	307	Pn	Pn	23 28 56.6	0.0
BTK	Batken	2.97	347	PN	Pn	23 29 04.8	+2.0
BTK	Batken	2.97	347		Pn	23 29 04.8	+2.0
CEP	Cherat	3.34	177	P	Pn	23 29 10.9	+3.1
CEP				S	Sn	23 29 51.0	+4.2
KBL	Kabul	3.39	220	PN	Pn	23 29 11.3	+2.8
KBL	Kabul	3.39	220	Pn	Pn	23 29 11.3	+2.8
CHCP	Chirah Chowk	3.73	159	⇓P	Pn	23 29 16.6	+3.8
NIL	Nilore	3.73	160	PN	Pn	23 29 16.8	+3.9
NIL	Nilore	3.73	160		Pn	23 29 16.8	+3.9
KSH	Kashi	4.10	54	P	Pn	23 29 15.3	-2.6
KSH				S	Sn	23 29 57.8	-7.2
KSH				smax	smax		
	comp=N,5µm,0.6s						
KSH				smax	smax		
	comp=E,2µm,0.8s						
THW	Thamme Wali	4.36	179	P	Pn	23 29 23.6	+2.2
TAS	Tashkent	4.55	337	PN	Pn	23 29 24.6	+0.7
TAS	Tashkent	4.55	337	Pn	Pn	23 29 24.6	+0.7
AML	Almayashu	5.19	17	P	Pn	23 29 34.1	+1.2
	SNR=503						
AML	Almayashu	5.19	17	i P	Pn	23 29 34.5	+1.6
	SNR=9.4						
SARP	Sargodha	5.29	171	P	Pn	23 29 35.3	+1.4
UCH	Uchtor	5.50	22	P	Pn	23 29 38.5	+1.4
	SNR=102						
EKS2	Erkin-Say	5.72	16	P	Pn	23 29 41.0	+1.2
	SNR=125						
AAK	Ala-Archa	5.87	21	P	Pn	23 29 43.7	+1.8
	33nm,0.3s,baz=186,slow=6.3,SNR=498						
AAK				S	Sn	23 30 45.9	-2.0
	19nm,0.3s,baz=356,slow=22,SNR=22						
AAK	Ala-Archa	5.87	21	P	Pn	23 29 43.7	+1.8
	SNR=160						
AAK	Ala-Archa	5.87	21	i P	Pn	23 29 43.7	+1.8
	SNR=115						
AAK	Ala-Archa	5.87	21	d iPN	Pn	23 29 43.6	+1.7
AAK				pmax	pmax		
	comp=Z,108nm,0.4s						
AAK	Ala-Archa	5.87	21	⇓P	Pn	23 29 43.7	+1.8
	comp=Z,42nm,0.3s						
AAK				⇑S	Sn	23 30 46.2	-1.7
	comp=Z,215nm,0.6s						
KK02	Karatay Array	6.00	352	⇓P	Pn	23 29 44.0	+0.5
	comp=Z,114nm,0.3s,baz=175,slow=13						
KK02				⇑S	Sn	23 30 47.1	-3.7
	comp=Z,89nm,0.6s,baz=171,slow=22						
KKAR	Karatay Array	6.00	352	PN	Pn	23 29 43.9	+0.4
KKAR	Karatay Array	6.00	352	Pn	Pn	23 29 43.9	+0.4
KBK	Karagaybulak	6.03	23	P	Pn	23 29 45.8	+1.8
	SNR=35						
FRU1	Bishkek	6.07	21	PN	Pn	23 29 46.6	+2.1
FRU1	Bishkek	6.07	21		Pn	23 29 46.6	+2.1
ULHL	Ulahol	6.17	33	P	Pn	23 29 47.9	+2.0
	SNR=9.7						
DHRM	DHARAMSHALA	6.20	141	eP	Pn	23 29 49.1	+2.7
DHRM				eS	Sn	23 30 54.1	-1.9
DHRM				IAML		23 31 00.2	
	comp=E,1µm,0.6s						
DHRM				IAML		23 31 00.4	
	comp=N,894nm,0.5s						
BOOM	Boomskoye usch	6.24	30	PN	Pn	23 29 48.2	+1.3
BOOM	Boomskoye usch	6.24	30		Pn	23 29 48.2	+1.3
CHMS	Chumysh	6.28	21	P	Pn	23 29 48.8	+1.5
	SNR=82						
USP	Ospenovka	6.46	19	P	Pn	23 29 50.6	+0.8
	SNR=75						
KDJ	Kajisay	6.52	39	PN	Pn	23 29 51.8	+1.1
KDJ	Kajisay	6.52	39		Pn	23 29 51.8	+1.1
TARG	Taragay, Kyrgy	6.56	44	Pn	Pn	23 29 53.5	+2.0
AAA	Alma-Ata	7.24	32	ePN	Pn	23 29 51.0	-9.3
MDOK	Medeo	7.26	33	PN	Pn	23 30 02.4	+1.8
MDOK	Medeo	7.26	33	⇑P	Pn	23 30 02.4	+1.8
	comp=N,32nm,0.6s						
KNDC	Almaty	7.26	32	PN	Pn	23 30 03.2	+2.5
KNDC	Almaty	7.26	32	⇓P	Pn	23 30 03.2	+2.5
	comp=N,74nm,0.5s						
PRZ	Przheval'sk	7.40	42	PN	Pn	23 30 04.5	+1.8
PRZ	Przheval'sk	7.40	42		Pn	23 30 04.5	+1.8
SMLA	Simla	7.54	141	eP	Pn	23 30 05.8	+1.5
SMLA				eS	Sn	23 31 25.0	-3.2
SMLA				IAML		23 31 32.1	
	comp=E,250nm,0.6s						
SMLA				IAML		23 31 32.7	
	comp=N,312nm,0.3s						
BTLS	Baital	8.06	12	ePN	Pn	23 30 11.1	-0.4
BTLS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
HRA	Herat	8.17	253		Pn	23 30 13.5	+0.3
UZB	Uzynbulak	8.19	41	ePN	Pn	23 30 12.8	-0.5
UZB				pmax	pmax		
	comp=Z,3.0nm,0.3s						
PDGK	Podgornoye	8.56	42	i PN	Pn	23 30 18.5	+0.1
PDGK				pmax	pmax		
	comp=Z,15nm,0.6s						
PDGK	Podgornoye	8.56	42	⇑P	Pn	23 30 18.5	+0.1
	comp=Z,15nm,0.6s						
NDI	New Delhi	9.64	150	eP	Pn	23 30 33.1	+0.1
NDI				eP	Pn	23 30 34.0	+1.0
AYAN	Aya Nagar	9.79	151	eP	Pn	23 30 35.1	+0.2
KUDL	Kundal	9.86	154	eP	Pn	23 30 35.4	-0.5
KUDL				eS	Sn	23 32 18.3	-6.3
SONA	Sohna	9.98	151	eP	Pn	23 30 37.3	-0.2
GEYT	Alibeck	10.81	278	P	Pn	23 30 45.3	-3.5
	comp=Z,3.4nm,0.3s,baz=123,slow=10,SNR=24						
GEYT				S	Sn	23 32 39.1	-8.7
	comp=Z,13nm,0.3s,baz=119,slow=14,SNR=17						
GEYT	Alibeck	10.81	278		Pn	23 30 45.8	-3.1
GYA0B	ALIBECK ARRAY	10.81	278		Pn	23 30 45.3	-3.5
AJM	Ajmer	10.94	166	eP	Pn	23 30 50.7	0.0

OTUK	Ortayu	11.08	2	iP	Pn	23 30 50.4	-2.0
OTUK				pmax	pmax		
	comp=Z,7.0nm,0.5s						
OTUK	Ortayu	11.08	2	⇑P	Pn	23 30 50.4	-2.0
	comp=Z,7.1nm,0.5s						
MAKZ	Makanchi	12.29	35	P	Pn	23 31 08.0	-0.5
MAKZ	Makanchi	12.29	35	Pn	Pn	23 31 08.0	-0.5
MK31	Makanchi Array	12.43	36	d iP	Pn	23 31 10.4	+0.2
MKAR	Makanchi Array	12.43	36	P	Pn	23 31 09.7	-0.6
	comp=Z,0.5nm,0.3s,baz=224,slow=13,SNR=34						
MKAR	Makanchi Array	12.43	36	iP	Pn	23 31 10.5	+0.3
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MKAR	Makanchi Array	12.43	36	Pn	Pn	23 31 09.4	-0.8
BRZS	Berezniki	12.83	3	eP	Pn	23 31 11.6	-3.9
PYUN	Piuthan	13.12	130	eP	Pn	23 31 17.3	-2.3
	comp=Z,40nm,0.3s						
DANN	Dangsing	13.42	127	eP	Pn	23 31 21.3	-2.3
	comp=Z,21nm,0.2s						
KOLN	Koldanda	13.73	130	eP	Pn	23 31 25.4	-2.2
	comp=Z,26nm,0.3s						
WMQ	Urumqi	13.86	56	eP	Pn	23 31 28.4	-0.6
WMQ				S	Sn	23 34 00.5	-1.1
WMQ				pmax	pmax		
	comp=Z,15nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,260nm,8.1s						
GKN	Gorkha	14.22	126	eP	Pn	23 31 31.2	-2.6
	comp=Z,55nm,0.4s						
KURBB	Kurchatov Arra	14.32	18	P	Pn	23 31 35.3	+0.6
	comp=Z,0.5nm,0.3s,baz=205,slow=10,SNR=28						
KURBB				S	Sn	23 34 14.9	+2.4
	comp=Z,0.1nm,0.3s,baz=216,slow=18,SNR=1.3						
KURK	Kurchatov	14.42	18	d iP	P	23 31 39.6	-0.3
KURK	Kurchatov	14.42	18	P	P	23 31 39.6	-0.3
BHPL	Bhopal	14.73	159	eP	Pn	23 31 41.5	+1.2
BHPL				i x	P	23 31 45.8	+2.2
BHPL				eS	Sn	23 34 12.6	-10
KKN	Kakani	14.78	125	eP	Pn	23 31 37.8	-3.2
	comp=Z,32nm,0.5s						
DMN	Daman	14.79	126	eP	Pn	23 31 38.7	-2.5
	comp=Z,57nm,0.6s						
AB31	Akbulak array	14.79	328	iP	Pn	23 31 38.3	-2.5
AB31	Akbulak array	14.79	328	⇑P	Pn	23 31 38.3	-2.5
	comp=Z,3.3nm,0.3s,baz=134,slow=13,SNR=184						
ABKAR	Akbulak array	14.79	328	Pn	Pn	23 31 38.1	-2.7
ABKAR	Akbulak array	14.79	328	Pn	Pn	23 31 38.4	-2.4
PKIN	Phulchoki	15.00	126	eP	Pn	23 31 40.8	-3.1
	comp=Z,51nm,0.5s						
PKI	Pulchoki	15.01	126	eP	Pn	23 31 41.1	-3.0
	comp=Z,17nm,0.2s						
GUN	Gumba	15.09	124	eP	Pn	23 31 41.9	-3.2
	comp=Z,277nm,1.1s						
JIRN	Jiri	15.46	124	eP	Pn	23 31 47.0	-2.8
	comp=Z,54nm,0.4s						
BRVK	Borovoye	15.92	357	⇓iP	Pn	23 31 54.4	-0.6
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BRVK	Borovoye	15.92	357	P	Pn	23 31 54.3	-0.7
RAMN	Ramite	16.21	125	eP	Pn	23 31 56.2	-2.8
	comp=Z,51nm,0.4s						
AKTO	Aktyubinsk	16.50	328	P	Pn	23 32 01.6	-0.5
	comp=Z,1.2nm,0.3s,baz=138,slow=13,SNR=28						
AKTO				S	Sn	23 34 51.0	-14
	comp=Z,0.4nm,0.3s,baz=195,slow=18,SNR=3.0						
AKTO	Aktyubinsk	16.50	328	iP	Pn	23 32 01.1	-1.0
AKTO				pmax	pmax		
	comp=Z,9.0nm,0.6s						
AKTO	Aktyubinsk	16.50	328	⇓P	Pn	23 32 01.1	-1.0
	comp=Z,8.9nm,0.6s						
TAPN	Taplejung	16.69	121	eP	Pn	23 32 02.1	-2.9
	comp=Z,49nm,0.6s						
ODAN	Odare	16.79	123	eP	Pn	23 32 04.0	-2.1
	comp=Z,56nm,0.6s						
DGZ	Jazzator, Alta	16.91	37	deP	Pn	23 32 06.0	-1.4
DGZ				pmax	pmax		
	comp=Z,12nm,0.5s						
AKL	Akola	17.05	163	eP	P	23 32 09.5	+0.4
BANOM	Banah	17.23	234	iP	Pn	23 32 11.6	+0.3
	SNR=8.8						
SHME	Shamm	17.25	234	P	Pn	23 32 11.7	+0.2
MDH	Madha	17.67	232	P	Pn	23 32 16.5	-0.1
MSFE	Esma-Masafi	17.72	233	P	Pn	23 32 18.7	+1.5
LSA	Lhasa	17.84	109	P	Pn	23 32 20.6	+1.5
LSA				pmax	pmax		
	comp=Z,32nm,1.2s						
LSA	Lhasa	17.84	109	P	Pn	23 32 19.5	+0.3
LSA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
LSA	Lhasa	17.84	109	P	Pn	23 32 19.5	+0.3
LSA				IAmb	IAmb	23 32 23.6	
	comp=Z,7.7nm,0.8s						
WSAR	Wadi Sarin	17.87	223	P	P	23 32 18.0	-0.2
	comp=Z,0.4nm,0.3s,baz=71,slow=11,SNR=7.4						
UOSS	Minazif	17.99	232	iP	P	23 32 19.2	-0.3
	SNR=6.6						
UOSS	Minazif	17.99	232	P	Pn	23 32 19.9	-0.5
UOSS				IAmb	IAmb	23 32 21.5	
	comp=Z,16nm,0.9s						
HATD	Hatta, Dubai	18.12	232	P	Pn	23 32 22.3	+0.3
ASHO	Ashiyiah	18.27	231	iP	Pn	23 32 24.0	+0.3
	SNR=23						
NAZ	Nazwa, Dubai	18.30	233	P	Pn	23 32 24.0	-0.1
SOHO	SOHO	18.38	229	P	P	23 32 24.2	+0.4
FAQ	Al Faqa, Dubai	18.52	233	P	Pn	23 32 26.0	-0.7
ASUD	Al Ashush, Dub	18.77	233	P	Pn	23 32 29.1	-0.6
ALNE	Al Ain	18.91	231	iP	P	23 32 30.2	+0.5
	SNR=12						
ZAA0	Zalesovo Array	19.08	24	P	P	23 32 30.6	-0.5
ZAA0				IAmb	IAmb	23 32 31.8	
	comp=Z,11nm,0.6s						
ZALV	Zalesovo Beam	19.08	24	P	P	23 32 31.3	+0.1
	comp=Z,3.2nm,0.3s,baz=224,slow=10.0,SNR=52						
ZALV	Zalesovo Beam	19.08	24	iP	P	23 32 31.2	+0.1
ZALV				pmax	pmax		
	comp=Z,11nm,0.4s						
MAK	Makhachkala	19.37	295	eP	P	23 32 32.0	-2.4
MAK				eS	S	23 36 05.0	-2.7
MAK				pmax	pmax		
	comp=Z,133nm,1.0s						
MAK				MLR	MLR		
	comp=Z,61nm,16.0s						
SHL	Shillong	20.71	118	P	P	23 32 50.3	+1.1
SHL				pmax	pmax		
	comp=Z,15nm,0.7s						
SHL	Shillong	20.71	118	P	P	23 32 50.3	+1.1
SHL				IAmb	IAmb	23 32 52.4	
	comp=Z,15nm,0.7s						
ARU	Arti	21.20	340	P	P	23 32 55.0	+1.0
	comp=Z,0.7nm,0.3s,baz=151,slow=13,SNR=5.2						
ARU	Arti	21.20	340	c iP	P	23 32 57.7	+3.7
ARU						23 33 23.8	
ARU				S	S	23 36 49.5	+6.1
ARU				pmax	pmax		
	comp=Z,3.0nm,0.6s						
GNI	Garni	21.23	286	P	P	23 32 56.7	+2.0
	comp=Z,9.8nm,0.6s,baz=155,slow=1.0,SNR=14						
GNI	Garni	21.23	286	deP	P	23 32 57.5	+2.8
GNI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GNI	Garni	21.23	286	P	P	23 32 55.2	+0.5
GNI				IAmb	IAmb	23 32 58.5	
	comp=Z,11nm,0.7s						
GTA	Gaotai	22.15	76	⇑P	P	23 33 06.8	+2.4
GTA				pmax	pmax		
	comp=Z,44nm,0.7s						
ONI	Oni	22.29	293	P	P	23 33 08.4	+2.7
ONI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ONI	Oni	22.29	293	P	P	23 33 08.4	+2.7
BELG	Belogornoye	22.73	320	P	P	23 33 10.2	+0.2
	comp=Z,7.9nm,0.8s,baz=132,slow=10,SNR=2.6						
KBZ	Khabaz	22.80	296	P	P	23 33 10.9	+0.1
	comp=Z,1.9nm,0.8s,baz=216,slow=22,SNR=2.6						
KVAR	Kislovodsk Arr	22.98	296	P	P	23 33 13.4	+0.7
	comp=Z,5.3nm,1.2s,baz=90,slow=20,SNR=2.1						
KIV	Kislovodsk	22.98	296	eP	P	23 33 14.1	+1.3
KIV				eS	S	23 37 16.1	+1.2
KIV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
LZH	Lanzhou	25.76	83	eP	P	23 33 40.6	+2.4
LZH				pmax	pmax		
	comp=Z,28nm,1.4s						
RAYN	Ar Rayn	26.28	246	P	P	23 33 43.0	+0.2
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.6s						
RAYN	Ar Rayn	26.28	246	P	P	23 33 43.0	+0.2
RAYN				IAmb	IAmb	23 33 49.1	
	comp=Z,5.0nm,0.6s						
SONM	Songino Array	27.50	56	P	P	23 33 53.1	-0.5
	comp=Z,1.5nm,0.7s,baz=256,slow=9.4,SNR=13						
SONM	Songino Array	27.50	56	P	P	23 33 54.6	+1.0
SONM				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SONM	Songino Array	27.50	56	P	P	23 33 54.6	+1.0
ULN	Ulaanbaatar	27.94	56	⇓eP	P	23 33 57.9	+0.3
ULN				pmax	pmax		
	comp=Z,7.0nm,1.6s						
SOCY	Socotra	29.51	217	P	P	23 34 09.8	-1.9
BR131	Keskin Array S	29.77	287	P	P	23 34 14.5	+0.6
BR131				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BR131	Keskin Array S	29.77	287	P	P	23 34 14.5	+0.6
BR131				IAmb	IAmb	23 34 17.7	
	comp=Z,4.1nm,0.7s						
BRTR	Keskin Array B	29.77	287	P	P	23 34 13.9	0.0
	comp=Z,1.7nm,0.6s,baz=103,slow=8.5,SNR=13						
BRTR	Keskin Array B	29.77	287	ceP	P	23 34 15.1	+1.2
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
OBN	Obninsk	29.80	318	⇓eP	P	23 34 14.3	+0.5
OBN				*PP	pP	23 34 38.0	-0.4
OBN						23 35 13.0	
OBN				pmax	pmax		
	comp=Z,46nm,2.8s						
CMAR	Chiang Mai Arr	30.30	121	P	P	23 34 17.0	-1.5
	comp=Z,0.8nm,0.3s,baz=312,slow=9.8,SNR=6.5						
CMAR	Chiang Mai Arr	30.30	121	ceP	P	23 34 21.0	+2.5
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
XAN	Xi'an	30.30	85	P	P	23 34 19.4	+0.9
XAN				pmax	pmax		
	comp=Z,12nm,0.9s						
HHC	Hu-ho-hao-te	31.01	71	eP	P	23 34 28.1	+3.3
HHC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,200nm,6.6s						
AKASG	Malin Array Be	32.97	308	P	P	23 34 42.1	+0.4
	comp=Z,1.9nm,0.5s,baz=80,slow=6.9,SNR=7.6						
AKASG	Malin Array Be	32.97	308	iP	P	23 34 43.7	+2.1
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKBB	Malin Array Si	32.97	308	⇑eP	P	23 34 42.2	+0.6
AKBB				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ELL	Elmali	33.20	282	P	P	23 34 45.5	+1.5
ELL				pmax	pmax		
	comp=Z,27nm,0.6s						
ELL	Elmali	33.20	282	P	P	23 34 45.5	+1.5
NRIK	Noril'sk	33.37	10	P	P	23 34 45.6	+0.7
	comp=Z,3.4nm,0.5s,baz=170,slow=5.8,SNR=7.6						
NRIK	Noril'sk	33.37	10	⇓eP	P	23 34 45.4	+0.5
NRIK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NRIK	Noril'sk	33.37	10	P	P	23 34 46.2	+1.3
NRIK				IAmb	IAmb	23 34 47.9	
	comp=Z,3.8nm,0.8s						
MLR	Muntele Rosu	34.95	298	P	P	23 34 59.8	+0.8
MLR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BURAR	Bucovina Array	35.40	302	P	P	23 35 03.8	+1.0
BURAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BURAR	Bucovina Array	35.40	302	P	P	23 35 03.8	+1.0
SANT	Santorini	36.76	283	P	P	23 35 14.1	-0.4
SANT				IAmb	IAmb	23 35 32.4	
	comp=Z,7.8nm,1.1s						
LVZ	Lovozero	37.05	338	P	P	23 35 16.7	+0.2
LVZ	Lovozero	37.05	338	P	P	23 35 16.7	+0.2
FINES	FINESS Array B	37.25	325	P	P	23 35 18.1	0.0
	comp=Z,3.5nm,1.0s,baz=122,slow=9.3,SNR=10						
FINES	FINESS Array B	37.25	325	iP	P	23 35 19.6	+1.4
FINES				pmax	pmax		
	comp=Z,4.0nm,1.0s						
FINES	FINESS Array B	37.25	325	P	P	23 35 18.7	+0.5
KEV	Kevo	40.39	338	P	P	23 35 45.9	+1.6
KEV				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KEV	Kevo	40.39	338	P	P	23 35 45.9	+1.6
KEV				IAmb	IAmb	23 35 56.8	
	comp=Z,5.5nm,0.9s						
ARCES	ARCESS Array B	40.75	337	P	P	23 35 47.9	+0.7
	comp=Z,0.8nm,0.4s,baz=114,slow=7.3,SNR=15						
ARCES	ARCESS Array B	40.75	337	P	P	23 35 46.5	-0.7
NC405	NORSAR Array S	43.95	323	P	P	23 36 12.8	-0.5
NC602	NORSAR Array S	44.01	322	P	P	23 36 13.8	0.0
NORES	NORESS Array B	44.01	322	P	P	23 36 14.0	+0.3
TPUB	Ta-pu	44.02	94	P	P	23 36 15.8	+1.4
NC303	NORSAR Array S	44.13	323	P	P	23 36 15.1	+0.4
KSRS	Korea Array	44.14	72	P	P	23 36 14.3	-0.8
	comp=Z,1.2nm,0.6s,baz=286,slow=10,SNR=4.1						
NB201	NORSAR Array S	44.15	323	P	P	23 36 15.2	+0.3
NB2	NORSAR Subarra	44.19	323	P	P	23 36 15.3	0.0
	comp=Z,0.8nm,0.5s,baz=94,slow=7.9						
NOA	NORSAR Array B	44.19	323	P	P	23 36 15.1	-0.2
	comp=Z,0.5nm,0.6s,baz=107,slow=7.2,SNR=9.0						
KLR	Kul'dur	44.30	54	⇑eP	P	23 36 16.8	+0.5
KLR				pmax	pmax		
	comp=Z,11nm,2.0s						
NBO00	NORSAR Array S	44.40	323	P	P	23 36 15.7	-1.2
NBO00				IAmb	IAmb	23 36 25.0	
	comp=Z,12nm,1.1s						
NC204	NORSAR Array S	44.42	323	P	P	23 36 17.4	+0.2
NC204				IAmb	IAmb	23 36 31.4	
	comp=Z,7.3nm,1.0s						
KONO	Kongsberg	44.92	321	P	P	23 36 21.5	+0.4
KONO	Kongsberg	44.92	321	P	P	23 36 21.5	+0.4
TIXI	Tiksi	44.95	22	⇑eP	P	23 36 21.1	+0.1
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.5s						
LODK	Lodwar	47.31	234	P	P	23 36 41.5	+1.1
LODK				IAmb	IAmb	23 36 42.8	
	comp=Z,2.7nm,0.8s						
VSL	Villasalto	48.07	293	P	P	23 36 45.1	-0.8
KEST	Kesra	49.36	288	P	P	23 36 56.1	+0.2
	comp=Z,2.2nm,0.6s,baz=215,slow=16,SNR=2.2						
KEST	Kesra	49.36	288	P	P	23 36 56.6	+0.7
KEST				IAmb	IAmb	23 36 58.6	
	comp=Z,7.5nm,1.1s						
KMBO	Kilima Mbogo	49.69	228	P	P	23 36 58.6	-0.2
	comp=Z,2.5nm,0.6s,baz=33,slow=12,SNR=9.3						
KMBO	Kilima Mbogo	49.69	228	iP	P	23 37 00.1	+1.3
KMBO				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KMBO	Kilima Mbogo	49.69	228	P	P	23 36 59.4	+0.6
KMBO				IAmb	IAmb	23 37 00.5	
	comp=Z,2.8nm,0.7s						
KIBK	Kibwezi	50.21	226	P	P	23 37 03.5	+1.0
MJAR	Matsushiro Arr	52.19	69	P	P	23 37 17.3	+0.2
	comp=Z,1.3nm,0.5s,baz=299,slow=6.9,SNR=2.2						
EKA	Eskdalemuir Ar	52.20	316	P	P	23 37 16.6	-0.2
MBAR	Mbarara	53.35	235	ceP	P	23 37 26.7	+0.7
ESBB	Sonseca Array	57.64	298	P	P	23 37 56.8	+0.5
ESBB				IAmb	IAmb	23 37 57.0	
	comp=Z,2.4nm,1.1s						
ESDC	Sonseca Array	57.64	298	P	P	23 37 56.4	+0.1
	comp=Z,0.7nm,0.8s,baz=52,slow=7.4,SNR=14						
ESDC	Sonseca Array	57.64	298	P	P	23 37 57.0	+0.6
EUNU	Eureka	62.39	356	P	P	23 38 29.5	+1.4
VOI	Vohitsoka	63.27	206	P	P	23 38 35.3	+0.5
VOI				IAmb	IAmb	23 38 45.4	
	comp=Z,6.4nm,1.1s						
TORD	Torodi Ar. Bea	66.29	269	P	P	23 38 53.1	-1.3
	comp=Z,0.9nm,0.5s,baz=50,slow=6.2,SNR=22						
ILAR	Eielson Array	73.99	16	P	P	23 39 39.9	-0.8
	comp=Z,0.6nm,0.8s,baz=326,slow=5.4,SNR=6.6						
YKA	Yellowknife Ar	80.55	3	P	P	23 40 17.0	-0.3
	comp=Z,6.6nm,1.1s,baz=346,slow=5.7,SNR=7.4						
YKA	Yellowknife Ar	80.55	3	iP	P	23 40 17.5	+0.2
YKA				pmax	pmax		
	comp=Z,1.0nm,0.3s						
WRA	Warramunga Arr	81.87	122	P	P	23 40 21.8	-3.2
	comp=Z,0.4nm,0.8s,baz=324,slow=4.4,SNR=1.7						
WRA	Warramunga Arr	81.87	122	iP	P	23 40 26.1	+1.2
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ASAR	Alice Springs	84.18	125	P	P	23 40 32.2	-4.6
	comp=Z,0.2nm,0.6s,baz=330,slow=5.4,SNR=1.9						

NEIC ***19*** *23:38:25.6±1.3, 36°.17S±0°.05×71°.10W±0°.10, h118^{km}±8^{km}, mb4.0/13, ML4.1(GUC), Error ellipse: s-maj=11.4km s-min=7.3km az=81.0*
GUC ***19*** *23:38:26.4±0.7, 36°.11S×71°.22W, h126^{km}±4^{km}, ML4.2*
IDC ***19*** *23:38:27.1±2.5, 36°.22S×70°.12W, h134^{km}±25^{km}, mb3.4/4, mb1 3.8/6, mb1mx3.5/25, mbtmp4.0/6, Error ellipse: s-maj=42.0km s-min=22.8km az=101.0*
ISC 19 23:38:25.8±0.7, **36°.15S**±0°.04×**71°.11W**±0°.07, **h119**^{km}±6^{km}, **n77,** σ1^{s}**09**/96, **mb3.7**/6, **3C-9D, Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ML02	Panimavida	0.46	328	eP	Pn	23 38 44.0	+0.5
ML02				eS	Sn	23 38 57.2	+0.5
ML02	Panimavida	0.46	328	Pn	Pn	23 38 43.7	+0.2
ML02				Sn	Sn	23 38 57.1	+0.3
GO05	Huala	1.32	330	⇓iP	Pn	23 38 51.6	+0.4
GO05				iS	Sn	23 39 10.2	-0.2
GO05	Huala	1.32	330		Pn	23 38 51.3	+0.1
GO05				Sn	Sn	23 39 10.8	+0.4
BO02	Sierra Bellavi	1.38	11	⇑iP	Pn	23 38 51.9	-0.1
BO02				iS	Sn	23 39 12.8	+1.0
BO02				IAML		23 39 17.5	
	comp=N,2μm,0.2s						
BO02	Sierra Bellavi	1.38	11		Pn	23 38 52.6	+0.6
BO02				Sn	Sn	23 39 12.6	+0.8
BO01	Tunca	1.76	1	⇓iP	Pn	23 38 56.7	+0.4
BO01				iS	Sn	23 39 19.4	0.0
BO01				IAML		23 39 20.9	
	comp=E,1μm,0.3s						
BO01	Tunca	1.76	1	Pn	Pn	23 38 56.6	+0.4
BO01				Sn	Sn	23 39 19.5	0.0
BI05	Punta Hualpn	1.78	250	⇑iP	Pn	23 38 56.9	+0.5
BI05				iS	Sn	23 39 19.1	-0.8
BI05				IAML		23 39 28.0	
	comp=E,2μm,0.5s						
BO04	La Punta	2.20	11	⇓iP	Pn	23 39 02.4	+0.6
BO04				iS	Sn	23 39 30.1	+0.7
MT01	Popeta	2.29	357	⇓iP	Pn	23 39 02.9	0.0
MT01				iS	Sn	23 39 30.5	-0.8
MT01				IAML		23 39 33.2	
	comp=E,2μm,0.2s						
MT01	Popeta	2.29	357	Pn	Pn	23 39 02.9	0.0
MT09	Talagante	2.37	3	⇓iP	Pn	23 39 04.2	+0.1
MT09				iS	Sn	23 39 32.9	-0.5
MT09				IAML		23 39 35.8	
	comp=N,1μm,0.2s						
MT09	Talagante	2.37	3	Pn	Pn	23 39 04.1	0.0
LMEL	Las Melosas	2.42	18	iP	Pn	23 39 05.8	+1.1
LMEL				IAML		23 39 43.5	
	comp=N,598nm,0.4s						
VA05	Santo Domingo	2.52	350	⇓iP	Pn	23 39 05.8	-0.1
VA05				iS	Sn	23 39 36.0	-0.6
VA05				IAML		23 39 41.0	
	comp=E,3μm,0.3s						
VA05	Santo Domingo	2.52	350		Pn	23 39 05.7	-0.2
MT05	Renca	2.77	7	eP	Pn	23 39 09.3	+0.1
MT05				iS	Sn	23 39 42.4	-0.2
MT05				IAML		23 39 46.8	
	comp=N,1μm,0.5s						
MT05	Renca	2.77	7		Pn	23 39 09.2	+0.1
LC01	Cunco	2.81	192	iP	Pn	23 39 09.5	0.0
LC01	Cunco	2.81	192	Pn	Pn	23 39 09.3	-0.2
MT02	Curacav	2.89	360	⇓iP	Pn	23 39 10.6	-0.1
MT02				IAML		23 39 46.1	
	comp=N,910nm,0.2s						
MT02	Curacav	2.89	360		Pn	23 39 10.6	-0.1
PEL	Peldehue	3.02	7	eP	Pn	23 39 12.4	0.0
PEL				iS	Sn	23 39 48.3	-0.1
PEL				IAML		23 39 51.8	
	comp=N,831nm,0.5s						
PEL	Peldehue	3.02	7		Pn	23 39 12.3	-0.2
VA01	Torpederas	3.15	352	Pn	Pn	23 39 13.8	-0.3
ROCH	El Roble	3.17	2	⇓iP	Pn	23 39 14.4	-0.2
ROCH				⇑iP	Pn	23 39 14.3	-0.3
ROCH				iS	Sn	23 39 51.9	-0.2
ROCH				iS	Sn	23 39 52.0	-0.2
VA03	San Esteban	3.41	8	⇓iP	Pn	23 39 17.3	-0.3
VA03				iS	Sn	23 39 57.1	-0.5
VA03	San Esteban	3.41	8		Pn	23 39 17.2	-0.5
VA06	Catapilco	3.59	358	eP	Pn	23 39 19.4	-0.5
LR03	Panguipulli	3.61	195		Pn	23 39 20.2	+0.1
PLCA	Paso Flores	4.59	175	P	Pn	23 39 34.1	+0.8
	comp=N,12nm,0.3s,baz=349,slow=12,SNR=303						
PLCA	Paso Flores	4.59	175	Pn	Pn	23 39 34.0	+0.6
LL04	Puerto Octay	4.86	192		Pn	23 39 35.7	-1.1
ZON	Zonda	5.02	24	Pn	Pn	23 39 38.4	-0.8
LL03	Petrohue	5.08	191		Pn	23 39 38.7	-1.0
CO06	Fray Jorge	5.48	355		Pn	23 39 44.3	-0.9
LL05	Los Muermos	5.56	199	Pn	Pn	23 39 43.6	-2.6
GO04	Tololo Observa	5.97	3		Pn	23 39 51.4	-0.7
CO05	La Serena	6.22	359	Pn	Pn	23 39 54.1	-1.1
LL01	San Ignacio de	6.30	189		Pn	23 39 55.6	-0.6
LL02	Futaleuf	7.05	184		Pn	23 40 05.8	-0.6
LCO	Las Campanas	7.13	3	Pn	Pn	23 40 07.0	-0.8
GO07	Milladeo Hill,	7.22	195		Pn	23 40 06.8	-1.9
TRQA	Tornquist	7.54	107		Pn	23 40 12.3	-0.8
AC02	Maricunga	9.44	11	Pn	Pn	23 40 37.4	-1.9
PB14	IPOC Station P	11.51	3	Pn	Pn	23 41 05.3	-1.5
PB15	IPOC Station P	12.98	7	Pn	Pn	23 41 26.1	0.0
LVC	Limon Verde	13.63	9	P	Pn	23 41 33.6	-1.0
	comp=N,1.1nm,0.3s,baz=188,slow=9.8,SNR=8.4						
LVC	Limon Verde	13.63	9	Pn	Pn	23 41 34.0	-0.7
ITQB	Itaqui	13.78	66	Pn	Pn	23 41 35.9	-0.1
PB09	IPOC Station P	14.40	7	Pn	Pn	23 41 44.1	-0.2
PB07	IPOC Station P	14.41	5	Pn	Pn	23 41 42.3	-2.1
PB01	IPOC Station P	15.12	6		Pn	23 41 52.2	-1.1
PLTB	Pedras Altas	15.17	78	Pn	Pn	23 41 53.1	-0.7
PLTB				IAmb	IAmb	23 42 07.2	
	comp=Z,7.3nm,1.0s						
CPUP	Villa Florida	15.31	54	Pn	Pn	23 41 55.1	-0.4
PB08	IPOC Station P	16.05	7	Pn	Pn	23 42 04.2	-0.9
PB11	IPOC Station P	16.38	5		Pn	23 42 08.0	-1.0
PB11				IAmb	IAmb	23 42 12.4	
	comp=Z,13nm,0.9s						
PB16	IPOC Station P	17.81	5	P	P	23 42 26.0	+0.2
PB16				IAmb	IAmb	23 42 31.8	
	comp=Z,3.6nm,0.7s						
EFI	East Falkland	18.10	153	P	P	23 42 27.2	-0.9
EFI				IAmb	IAmb	23 42 41.3	
	comp=Z,24nm,1.0s						
ITAB	Concordia	18.41	66	P	P	23 42 31.7	-0.1
ITAB				IAmb	IAmb	23 42 51.1	
	comp=Z,12nm,1.2s						
AQDB	Aquidauana	20.65	45	P	P	23 42 55.5	-0.5
TRCB	Terra Rica	20.83	55	P	P	23 42 58.3	+0.3
SIV	San Ignacio	21.98	27	P	P	23 43 07.8	-2.5
	comp=Z,3.3nm,0.4s,baz=192,slow=8.3,SNR=16						
PTLB	Pontes e Lacer	23.23	30	P	P	23 43 22.5	+0.1
ETMB	Extrema	26.59	11	P	P	23 43 56.4	+3.4
ETMB				IAmb	IAmb	23 43 60.0	
	comp=Z,3.0nm,1.1s						
SAML	Samuel	28.03	17	P	P	23 44 06.1	+0.4
BOAV	Boa Vista	39.60	17	P	P	23 45 45.3	-0.4
BOAV				IAmb	IAmb	23 45 59.5	
	comp=Z,2.2nm,0.9s						
VNA3	Neumayer Olymp	47.08	157	P	P	23 46 47.4	+2.3
VNA2	Neumayer--Watz	47.74	157	P	P	23 46 52.2	+2.1
	baz=286,slow=7.4						
SNAA	Sanae	49.31	157	P	P	23 47 04.4	+2.1
TXAR	Lajitas Array	71.98	330	P	P	23 49 39.1	+2.7
	comp=Z,0.7nm,0.6s,baz=153,slow=8.6,SNR=12						
TXAR	Lajitas Array	71.98	330	P	P	23 49 38.3	+1.9
TORD	Torodi Ar. Bea	84.25	69	P	P	23 50 40.2	-4.2
	comp=Z,0.3nm,0.7s,baz=231,slow=4.6,SNR=2.3						
NVAR	Mina Array Bea	86.08	325	P	P	23 50 55.2	+1.9
	comp=Z,0.3nm,0.6s,baz=124,slow=5.6,SNR=3.6						
WRA	Warramunga Arr	119.23	208	PKP	PKPdf	23 57 00.5	-0.8
	comp=Z,0.3nm,0.6s,baz=178,slow=1.6,SNR=6.5						
ARCES	ARCESS Array B	125.64	25	PKP	PKPdf	23 57 11.3	-0.6
	comp=Z,2.0nm,0.8s,baz=242,slow=3.8,SNR=1.4						

IDC 19 23:38:46.2±1.5, **31°.93N**×**71°.32E, h0**^{km}**, mb3.8**/4, **mb1 3.9**/4, **mb1mx3.3**/45, **mbtmp3.8**/4, **Error ellipse: s-maj=56.9km s-min=34.8km az=48.0, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FINES	FINESS Array B	41.48	329	P	P	23 46 35.5	+0.9
	1.0nm,0.8s,baz=112,slow=9.2,SNR=0.7						

ARCES	ARCESS Array B	45.48	339	P	P	23 47 06.2	-0.7
	3.6nm,1.0s,baz=108,slow=8.6,SNR=7.1						
TORD	Torodi Ar. Bea	65.96	271	P	P	23 49 34.3	-0.3
	0.6nm,0.8s,baz=54,slow=5.6,SNR=4.5						
WRA	Warramunga Arr	79.37	121	P	P	23 50 54.6	+0.2
	0.5nm,0.8s,baz=325,slow=5.8,SNR=1.9						

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*NEIC **19** 23:41:08.5±1.8, 24°.83S±0°.06×175°.6W±0°.1, h10^{km}±1^{km}, mb4.6/11, Error ellipse: s-maj=18.2km s-min=6.9km az=117.0*

*IDC **19** 23:41:10.8±1.7, 25°.09S×175°.83W, h0^{km}, mb4.1/5, mb1 4.3/6, mb1mx3.8/38, mbtmp4.1/6, ML5.0/1, MS3.2/4, Ms1 3.2/4, ms1mx2.8/42, Error ellipse: s-maj=59.3km s-min=32.8km az=156.0*

ISC 19 23:41:08.4±0.7, **24°.94S**±0°.07×**175°.61W**±0°.09, **h10**^{km}, **n35**, σ**2^{s}11**/23, **mb4.2**/6, **South of Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	4.76	205	Pn	Pn	23 42 21.3	+1.0
RAO				Sn	Sn	23 43 11.4	-4.2
NIUE	Niue	7.86	43	Pn	Pn	23 43 01.7	-1.2
MSVF	Nonsavu	9.29	319	Pn	Pn	23 43 25.8	+3.3
	0.5nm,0.3s,baz=113,slow=9.6,SNR=7.3						
MSVF				LR	LR	23 46 35.4	
	comp=Z,131nm,21.3s,baz=150,slow=35						
MSVF	Nonsavu	9.29	319		Pn	23 43 20.6	-1.9
AFI	Afiamalu	11.55	19	LR	LR	23 47 55.8	
	comp=Z,45nm,21.8s,baz=51,slow=34						
URZ	Urewera	14.65	203	Pn	Pn	23 44 36.9	+1.2
RAR	Rarotonga	15.04	79	Pn	Pn	23 44 42.3	+1.2
	2.0nm,0.3s,baz=242,slow=9.4,SNR=4.7						
RAR	Rarotonga	15.04	79		Pn	23 44 41.3	+0.2
RAR				IAmb	IAmb	23 45 00.9	
	comp=Z,11nm,0.7s						
MARNC	Mare, Loyalty	15.43	280	Pn	Pn	23 44 43.9	-2.4
BKZ	Black Stump Fm	15.68	203	Pn	Pn	23 44 50.8	+1.4
BKZ				IAmb	IAmb	23 45 00.8	
	comp=Z,18nm,0.9s						
HIZ	Hauiti	15.76	209	Pn	Pn	23 44 51.6	+1.0
HIZ				IAmb	IAmb	23 44 53.9	
	comp=Z,54nm,1.1s						
OUENC	Ouen Island, N	16.27	275	Pn	Pn	23 44 56.3	-0.8
LIFNC	LIFOU	16.34	281	Pn	Pn	23 44 58.3	+0.3
DZM	Mont Dzumac	16.71	276	Pn	Pn	23 45 02.5	-0.3
FUNA	Funafuti	17.06	342		Pn	23 45 06.8	-0.3
FUNA				IAmb	IAmb	23 45 11.6	
	comp=Z,68nm,1.1s						
LTZ	Lake Taylor	20.41	206	P	Pn	23 45 47.7	0.0
LTZ				IAmb	IAmb	23 45 56.4	
	comp=Z,50nm,1.1s						
OXZ	Oxford	20.96	206	P	P	23 45 51.6	+0.1
OXZ				IAmb	IAmb	23 45 52.2	
	comp=Z,11nm,0.8s						
ODZ	Otahua Downs	22.94	206	P	P	23 46 12.1	-0.6
ODZ				IAmb	IAmb	23 46 12.3	
	comp=Z,38nm,1.2s						
PPT	Papeete	25.32	78	LR	LR	23 54 44.3	
	comp=Z,29nm,19.9s,baz=1.0,slow=32						
ASAR	Alice Springs	45.81	261	P	P	23 49 33.1	+2.3
	comp=Z,0.7nm,0.7s,baz=98,slow=8.3,SNR=6.4						
WRA	Warramunga Arr	46.32	266	P	P	23 49 36.8	+1.9
	comp=Z,0.6nm,0.6s,baz=337,slow=11,SNR=2.3						
JSU	Suzuyama	76.20	315	P	P	23 52 54.3	-2.8
PETK	Petropavlovsk-	81.11	344	P	P	23 53 28.5	+4.9
	comp=Z,3.9nm,1.0s,baz=124,slow=7.3,SNR=2.5						
H03S2	Juan Fernandez	81.69	123	T	T	01 24 45.5	
	baz=243						
H03S1	Juan Fernandez	81.71	123	T	T	01 24 50.8	
	baz=243						
H03S3	Juan Fernandez	81.71	123	T	T	01 24 48.8	
	baz=243						
NVAR	Mina Array Bea	82.79	42	P	P	23 53 38.1	+5.1
	comp=Z,0.9nm,0.8s,baz=232,slow=11,SNR=5.2						
SNAA	Sanae	83.52	178	P	P	23 53 44.1	+7.8
VNA3	Neumayer Olymp	83.58	175	P	P	23 53 44.9	+8.4
VNA2	Neumayer--Watz	84.04	176	P	P	23 53 48.8	+10
VNA1	Neumayer--Stat	84.26	176	P	P	23 53 49.2	+9.3
CMAR	Chiang Mai Arr	93.64	289	P	P	23 54 28.4	+2.8
	comp=Z,0.9nm,0.3s,baz=150,slow=3.8,SNR=2.0						
INK	Inuvik	97.98	15	LR	LR	00 32 49.7	
	comp=Z,70nm,19.7s,baz=314,slow=32						
AKASG	Malin Array Be	147.94	330	PKPbc	PKPab	00 00 57.4	+1.1
	comp=Z,0.5nm,0.5s,baz=44,slow=4.5,SNR=4.2						
BRTR	Keskin Array B	151.38	308	PKPbc	PKPab	00 01 07.0	-4.0
	comp=Z,0.5nm,0.7s,baz=131,slow=5.1,SNR=4.0						

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*DJA **19** 23:44:16.0±0.3, 1°N±2°×12°8E±°, h10^{km}, M4.0/9, mb4.3/7, mB5.3/2, MLv3.9/9, Mw(mB)4.7/2*

*IDC **19** 23:44:18.6±2.9, 1°.01N×127°.52E, h49^{km}±31^{km}, mb3.8/4, mb1 3.9/7, mb1mx3.4/40, mbtmp4.0/7, ML3.7/2, MS3.0/4, Ms1 3.0/4, ms1mx2.7/36, Error ellipse: s-maj=27.2km s-min=20.7km az=46.0*

*NEIC **19** 23:44:20.0±1.6, 0°.9N±0°.1×127°.51E±0°.03, h28^{km}±7^{km}, mb4.3/15, Error ellipse: s-maj=15.3km s-min=3.9km az=188.0*

ISC 19 23:44:16.8±0.7, **0°.90N**±0°.06×**127°.56E**±0°.07, **h10**^{km}, **n39**, σ**1^{s}43**/39, **mb4.2**/13, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBMI	Labuha	1.53	182	P	Pn	23 44 42.6	-1.6
LBMI				S	Sb	23 45 05.9	+1.2
SANI	Sanana	3.33	208	P	Pn	23 45 08.5	-0.4
KMSI	Cibinong	3.59	265	P	Pn	23 45 11.5	-1.1
SIJI	Sorong	4.10	115	P	Pn	23 45 21.1	+1.5
	3.1nm,0.3s,baz=304,slow=11,SNR=7.2						
SIJI				S	Sn	23 46 08.1	+0.4
	baz=232,slow=22,SNR=0.9						
SIJI				LR	LR	23 47 15.0	
	comp=Z,608nm,19.0s,baz=14,slow=42						
GTOI	Gorontalo	4.56	267	P	Pn	23 45 25.4	-0.4
MRSI	Marisa	5.63	266	P	Pb	23 45 54.7	-0.6
TOLI2	Tolitoli	6.78	272	Pn	Pn	23 45 56.4	-0.1
MPSI	Mapaga	7.68	266	P	Pn	23 46 08.1	-0.7
	0.0nm11nm,1.6s						
TTSI	Tana Toraja	8.68	243	P	Pn	23 46 21.0	-1.4
	2µm22nm,0.7s						
BNSI	Bone	9.12	235	P	Pn	23 46 29.2	+0.6
	18nm,1.0s						
SPSI	Sidrap Palu	9.16	238	P	Pn	23 46 29.2	0.0
	1µm29nm,0.5s						
BKSI	Bulukumba	9.66	230	P	Pn	23 46 36.2	+0.2
	14nm,0.9s						
KAPI	Kappang	9.77	233	P	Pn	23 46 37.3	-0.1
	0.8nm,0.3s,baz=57,slow=12,SNR=2.7						
KAPI				LR	LR	23 51 36.8	
	comp=Z,34nm,20.1s,baz=82,slow=45						
FITZ	Fitzroy Crossi	18.97	186	P	P	23 48 37.1	-1.3
	baz=5.4,slow=12						
LEM	Lembang	21.33	249	LR	LR	23 58 20.5	
	comp=Z,39nm,19.8s,baz=126,slow=40						
WB0	Warramunga Arr	21.61	162	P	P	23 49 07.0	-0.1
WB0				IAmb	IAmb	23 49 13.1	
	comp=Z,8.3nm,0.8s						
WRAB	Tennant Creek	21.75	163	P	P	23 49 09.4	+0.8
WRAB				IAmb	IAmb	23 49 14.7	
	comp=Z,6.0nm,0.7s						
WRA	Warramunga Arr	21.75	163	P	P	23 49 05.8	-2.9
	comp=Z,4.3nm,0.6s,baz=342,slow=11,SNR=44						
WRA	Warramunga Arr	21.75	163	P	P	23 49 07.0	-1.6
WB2	Warramunga Arr	21.76	163	P	P	23 49 06.7	-2.0
WB2				IAmb	IAmb	23 49 14.8	
	comp=Z,8.7nm,0.7s						
WR0	Warramunga Arr	21.83	162	P	P	23 49 07.4	-2.1
WR0				IAmb	IAmb	23 49 15.5	
	comp=Z,7.7nm,0.7s						
PSA00	Pilbara Seismi	23.57	198	P	P	23 49 27.2	-0.6
AS31	Alice Springs	25.19	166	P	P	23 49 42.7	+0.1
AS31				IAmb	IAmb	23 49 50.3	
	comp=Z,2.1nm,0.7s						
ASAR	Alice Springs	25.19	166	P	P	23 49 40.5	-2.2
	comp=Z,1.6nm,0.5s,baz=343,slow=8.9,SNR=5.7						
ASAR	Alice Springs	25.19	166	P	P	23 49 42.9	+0.2
BSI	Banda Aceh	32.53	279	P	P	23 50 51.6	+3.3
CMAR	Chiang Mai Arr	33.06	304	LR	LR	00 03 40.6	
	comp=Z,17nm,21.7s,baz=184,slow=35						
BBOO	Buckleboo	34.48	167	P	P	23 51 05.2	+0.2
STKA	Stephens Creek	35.21	159	P	P	23 51 11.0	-0.3
	comp=Z,1.8nm,0.6s,baz=316,slow=6.7,SNR=4.4						
STKA	Stephens Creek	35.21	159	P	P	23 51 11.8	+0.5
INU	Inuyama	35.39	13	P	P	23 51 14.0	+1.2
INU				IAmb	IAmb	23 51 20.5	
	comp=Z,8.5nm,1.0s						
KSAR	Wonju Array Be	36.36	0	P	P	23 51 21.7	+0.6
KS19	Wonju Array Si	36.42	0	P	P	23 51 21.7	0.0
KS19				IAmb	IAmb	23 51 28.7	
	comp=Z,3.1nm,0.8s						
PEA0B	Petropavlovsk-	57.74	21	P	P	23 54 07.2	-0.6
MK31	Makanchi Array	60.34	326	P	P	23 54 26.5	+0.5
MK31				IAmb	IAmb	23 54 40.6	
	comp=Z,3.4nm,1.1s						
MKAR	Makanchi Array	60.34	326	P	P	23 54 21.6	-4.4
	comp=Z,1.1nm,0.6s,baz=120,slow=8.6,SNR=19						
MKAR	Makanchi Array	60.34	326	P	P	23 54 26.4	+0.4
MAKZ	Makanchi	60.53	326	P	P	23 54 27.5	+0.2
KDJ	Kajisay	61.01	319	P	P	23 54 29.3	-1.5
KDJ				IAmb	IAmb	23 54 31.4	
	comp=Z,4.6nm,0.8s						

IDC 19 23:47:37.2±2.4, **0°.92N**×**127°.32E**, **h0**^{km}, **mb3.5**/3, **mb1 3.7**/3, **mb1mx3.2**/33, **mbtmp3.5**/3, **Error ellipse: s-maj=192.6km s-min=28.6km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	21.84	162	P	P	23 52 31.9	+0.4
	0.9nm,0.6s,baz=341,slow=11,SNR=4.6						
ASAR	Alice Springs	25.26	166	P	P	23 53 05.0	-0.3
	0.6nm,0.8s,baz=343,slow=11,SNR=4.2						
MKAR	Makanchi Array	60.19	326	P	P	23 57 47.0	0.0
	0.8nm,0.8s,baz=109,slow=8.1,SNR=3.5						

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*IDC **20** 00:02:23.5±5.9, 36°.09N×70°.55E, h176^{km}±59^{km}, mb3.3/5, mb1 3.2/9, mb1mx2.9/67, mbtmp3.7/9, MS3.1/1, Ms1 3.1/1, ms1mx2.3/29, Error ellipse: s-maj=71.2km s-min=43.4km az=131.0*

*NNC **20** 00:02:27.1±17.0, 37°.17N×69°.70E, h0^{km}, mb3.9, mpv4.0, Error ellipse: s-maj=160.9km s-min=77.1km az=172.0*

*NEIC **20** 00:02:28.1±1.5, 36°.50N±0°.06×70°.31E±0°.08, h201^{km}±4^{km}, mb4.0/11, Error ellipse: s-maj=9.5km s-min=8.4km az=83.0*

ISC 20 00:02:27.2±0.6, **36°.49N**±0°.06×**70°.44E**±0°.06, **h204**^{km}, **n54**, σ**1^{s}93**/60, **mb3.8**/10, **4C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	Kabul	2.25	211	Pn	Pn	00 03 09.4	+0.4
CHGR	Chuyangaron	2.39	335	Pn	Pn	00 03 10.2	0.0
GAR	Garm	2.50	358		Pn	00 03 11.9	+0.4
DRK	Karamyk	3.17	19		Pn	00 03 20.1	+0.8
BTK	Batken	3.57	5	Pn	Pn	00 03 25.2	+1.3
NIL	Nilore	3.66	140	Pn	Pn	00 03 26.7	+1.7
TAS	Tashkent	4.91	350	Pn	Pn	00 03 41.4	+0.9
AML	Almayashu	6.17	23	P	Pn	00 03 57.3	+0.3
	SNR=134						
DHRM	DHARAMSHALA	6.43	129	*e*P	Pn	00 04 00.7	+0.3
DHRM				*e*S	S	00 05 11.5	-2.4
DHRM				IAML		00 05 13.1	
	comp=E,181nm,0.4s						
DHRM				IAML		00 05 13.5	
	comp=N,108nm,0.0s						
UCH	Uchtor	6.54	28	P	Pn	00 04 02.3	+0.4
	SNR=33						
KKAR	Karatay Array	6.60	0	Pn	Pn	00 04 02.3	+0.1
EKS2	Erkin-Say	6.68	22	P	Pn	00 04 04.0	+0.7
	SNR=36						
AAK	Ala-Archa	6.89	26	P	Pn	00 04 06.6	+0.6
	comp=N,4.2nm,0.3s,baz=181,slow=6.1,SNR=53						
AAK				S	S	00 05 21.9	-2.6
	comp=N,0.6nm,0.3s,baz=358,slow=19,SNR=3.8						
AAK	Ala-Archa	6.89	26	P	Pn	00 04 06.7	+0.6
	SNR=16						
AAK	Ala-Archa	6.89	26	⇑P	Pn	00 04 05.9	-0.2
	comp=N,4.0nm,0.3s						
AAK				⇑S	S	00 05 21.0	-3.5
	comp=N,16nm,0.6s						
AAK	Ala-Archa	6.89	26	Pn	Pn	00 04 06.8	+0.6
KBK	Karagaybulak	7.07	28	P	Pn	00 04 09.3	+0.8
	SNR=10						
FRU1	Bishkek	7.09	26	Pn	Pn	00 04 09.3	+0.7
CHMS	Chumysh	7.30	26	P	Pn	00 04 11.8	+0.5
	SNR=5.8						
BOOM	Boomskoye usch	7.34	34	Pn	Pn	00 04 12.6	+0.6
USP	Ospenovka	7.45	24	P	Pn	00 04 13.3	0.0
	SNR=6.7						
KDJ	Kajisay	7.68	41	Pn	Pn	00 04 17.3	+0.9
SMLA	Simla	7.74	132	*e*P	Pn	00 04 17.6	+0.5
SMLA				*e*S	S	00 05 39.9	-4.7
SMLA				IAML		00 05 43.1	
	comp=N,37nm,0.4s						
SMLA				IAML		00 05 43.2	
	comp=E,34nm,0.6s						
SMLA	Simla	7.74	132	*e*P	Pn	00 04 17.3	+0.2
SMLA				*e*S	S	00 05 40.0	-4.5
SMLA				IAML		00 05 44.7	
	comp=E,40nm,0.3s						
SMLA				IAML		00 05 45.3	
	comp=N,35nm,0.5s						
TARG	Taragay, Kyrgy	7.75	45	Pn	Pn	00 04 18.2	+0.6
PRZ	Przheval'sk	8.58	43	Pn	Pn	00 04 29.5	+1.4
GEYT	Alibeck	9.93	282	Pn	Pn	00 04 44.5	-1.0
MAKZ	Makanchi	13.43	36	Pn	Pn	00 05 30.6	+0.8
MK31	Makanchi Array	13.56	37	Pn	Pn	00 05 32.8	+1.3
MKAR	Makanchi Array	13.56	37	P	Pn	00 05 32.6	+1.1
	comp=N,0.1nm,0.3s,baz=211,slow=11,SNR=8.7						
AB31	Akbulak array	14.88	332	⇓P	Pn	00 05 47.9	+0.3
	comp=N,0.6nm,0.5s,baz=151,slow=12,SNR=25						
AB31				⇓S	S	00 08 24.4	-8.0
	comp=N,0.5nm,0.6s,baz=156,slow=23						
ABKAR	Akbulak array	14.88	332		P	00 05 49.9	+1.6
ABKAR	Akbulak array	14.88	332		P	00 05 49.4	+1.1
KURBB	Kurchatov Arra	15.28	20	P	Pn	00 05 52.3	-0.1
	comp=N,0.0nm,0.3s,baz=206,slow=10,SNR=3.4						
KURK	Kurchatov	15.39	20		P	00 05 55.0	+1.1
BVAR	Borovoye Array	16.53	360	P	Pn	00 06 10.2	+2.7
	comp=N,0.3nm,0.3s,baz=213,slow=19,SNR=4.7						
AKTO	Aktyubinsk	16.57	331	⇑P	Pn	00 06 10.1	+2.2
	comp=N,0.9nm,0.6s						
AKTO				⇑S	S	00 09 05.6	-4.0
	comp=N,2.1nm,1.4s						
BRVK	Borovoye	16.57	360	P	Pn	00 06 08.8	+0.9
ZALV	Zalesovo Beam	20.11	25	P	P	00 06 47.0	+1.8
	comp=N,0.9nm,0.4s,baz=223,slow=11,SNR=5.6						
ZALV	Zalesovo Beam	20.11	25	P	P	00 06 46.7	+1.5
RAYN	Ar Rayn	25.08	246	P	P	00 07 32.6	-0.6
RAYN				IAmb	IAmb	00 07 39.5	
	comp=Z,2.4nm,1.1s						
GAZ	Gaziantep	26.53	282	P	P	00 07 44.6	-1.5
GAZ				IAmb	IAmb	00 07 47.7	
	comp=Z,2.8nm,0.6s						
SNOP	Sinop	27.70	292	P	P	00 07 56.3	-0.1
ULN	Ulaanbaatar	29.15	56	P	P	00 08 10.8	+1.4
ULN				IAmb	IAmb	00 08 30.3	
	comp=Z,6.0nm,1.5s						
FINES	FINESS Array B	37.24	326	P	P	00 09 21.0	+2.2
	comp=Z,1.4nm,0.8s,baz=119,slow=11,SNR=5.1						
FINES	FINESS Array B	37.24	326	P	P	00 09 20.6	+1.8
DIVS	Divibare	38.71	297	P	P	00 09 32.0	+0.6
DIVS				IAmb	IAmb	00 10 00.4	
	comp=Z,1.9nm,1.1s						
ARCES	ARCESS Array B	40.98	338	P	P	00 09 51.9	+2.2
	comp=Z,8.2nm,1.2s,baz=86,slow=7.4,SNR=4.1						
KULM	Kulim	41.61	131	P	P	00 09 56.1	+0.7
NC303	NORSAR Array S	44.06	323	P	P	00 10 16.4	+1.8
NC303				IAmb	IAmb	00 10 50.3	
	comp=Z,4.4nm,1.1s						
NB201	NORSAR Array S	44.08	323	P	P	00 10 16.0	+1.2
NB201				IAmb	IAmb	00 10 30.8	
	comp=Z,17nm,1.2s						
NOA	NORSAR Array B	44.11	323	P	P	00 10 16.4	+1.3
	comp=Z,0.7nm,0.8s,baz=96,slow=7.9,SNR=3.2						
KMBO	Kilima Mbogo	48.49	227	LR	LR	00 32 34.2	
	comp=Z,23nm,21.2s,baz=280,slow=38						
TORD	Torodi Ar. Bea	65.27	268	P	P	00 12 47.2	-0.2
	comp=Z,0.2nm,0.4s,baz=56,slow=6.2,SNR=2.3						

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*BEO **20** 00:37:20.8±4.1, 38°.09N×20°.02E, h59^{km}±8^{km}, ML3.0/3*

*THE **20** 00:37:21.3, 38°.46N×20°.45E, h15^{km}, ML3.1/9, Error ellipse: s-maj=1.0km s-min=0.3km az=287.0*

ATH 20 00:37:21.5, 38°.46N×20°.47E, h14^{km}±1^{km}, **ML2.7**/18, **Error ellipse: s-maj=1.4km s-min=0.6km az=282.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FSK	Fiskardo	0.07	93	P	Pg	00 37 24.3	0.0
FSK				S	Sg	00 37 26.2	0.0
	17µm,0.2s						
FSK	Fiskardo	0.07	93	P	Pg	00 37 24.2	-0.1
FSK				S	Sg	00 37 26.0	-0.2
FSK				AML	AML	00 37 26.3	
	comp=N,32403µm,0.2s						
FSK				AML	AML	00 37 26.8	
	comp=E,34485µm,0.2s						
KEF4	Livadi, Kephal	0.21	190	P	Pg	00 37 26.0	-0.1
KEF4				S	Sg	00 37 30.0	+0.7
KEF4	Livadi, Kephal	0.21	190	P	Pg	00 37 26.0	-0.2
KEF4				S	Sg	00 37 29.8	+0.6
EVGI	Lefkada island	0.21	43	P	Pg	00 37 26.4	+0.1
EVGI				S	Sb	00 37 30.3	-0.7
	comp=E,9µm,0.3s						
EVGI	Lefkada island	0.21	43	P	Pg	00 37 26.3	+0.1
EVGI				S	Sg	00 37 29.9	+0.4
DRAG	Dragano-Lefkad	0.23	20	P	Pg	00 37 26.4	-0.2
DRAG				S	Sb	00 37 31.1	-0.5
	comp=E,29µm,0.2s						
DRAG	Dragano-Lefkad	0.23	20	P	Pg	00 37 26.3	-0.3
DRAG				S	Sg	00 37 30.6	+0.5
DMLN	Damoulianata-K	0.24	199	P	Pg	00 37 26.4	-0.2
DMLN				S	Sg	00 37 30.7	+0.6
	comp=E,3µm,0.5s						
DMLN	Damoulianata-K	0.24	199	P	Pg	00 37 26.4	-0.2
DMLN				S	Sg	00 37 30.7	+0.5
LXRA	Lixouri, Kepha	0.26	186	P	Pg	00 37 27.1	0.0
KEF3	Kipouria, Keph	0.28	200	P	Pg	00 37 26.6	-0.7
KEF3				S	Sg	00 37 31.0	-0.2
	comp=E,5µm,0.3s						
KEF3	Kipouria, Keph	0.28	200	P	Pg	00 37 26.6	-0.7
KEF3				S	Sg	00 37 30.7	-0.5
ARGA	Argostoli. Kep	0.29	179	P	Pg	00 37 27.6	+0.1
VLS	Valsamata	0.30	162	P	Pg	00 37 27.5	-0.2
VLS				S	Sg	00 37 32.6	+0.6
	comp=E,3µm,0.2s						
VLS	Valsamata	0.30	162	P	Pg	00 37 27.5	-0.2
VLS				S	Sg	00 37 32.3	+0.3
VLS				AML	AML	00 37 33.0	
	comp=E,5799µm,0.2s						
VLS				AML	AML	00 37 33.0	
	comp=N,6936µm,0.3s						
NYDR	Nydri-Lefkada	0.31	36	P	Pg	00 37 28.1	+0.3
NYDR				S	Sg	00 37 32.9	+0.7
	comp=N,6µm,0.4s						
NYDR	Nydri-Lefkada	0.31	36	P	Pg	00 37 27.7	-0.1
NYDR				S	Sg	00 37 32.5	+0.4
LKD2	Lefkada island	0.36	24	P	Pg	00 37 28.2	-0.6
LKD2				S	Sg	00 37 34.1	+0.4
	comp=N,2µm,0.3s						
LKD2	Lefkada island	0.36	24	P	Pg	00 37 28.1	-0.7
LKD2				S	Sg	00 37 33.9	+0.2
LKD2				AML	AML	00 37 35.2	
	comp=N,4176µm,0.2s						
LKD2				AML	AML	00 37 40.1	
	comp=E,4817µm,0.4s						
PSDA	Pessada-Kefalo	0.36	166	P	Pg	00 37 28.7	-0.1
PSDA				S	Sg	00 37 34.2	+0.5
	comp=E,405nm,0.3s						
PSDA	Pessada-Kefalo	0.36	166	P	Pg	00 37 28.5	-0.3
PSDA				S	Sg	00 37 34.2	+0.5
LTHK	Lithakia	0.81	159	P	Pg	00 37 36.2	-0.9
LTHK	Lithakia	0.81	159	P	Pg	00 37 36.2	-0.9
PVO	Paravola	0.84	79	P	Pg	00 37 37.8	0.0
PVO	Paravola	0.84	79	P	Pg	00 37 37.6	-0.2
PVO				AML	AML	00 37 57.7	
	comp=N,1346µm,0.4s						
PVO				AML	AML	00 37 58.3	
	comp=E,1701µm,0.3s						
RLS	Riolos of Patr	0.88	117	P	Pg	00 37 37.6	-1.0
RLS	Riolos of Patr	0.88	117	P	Pg	00 37 37.8	-0.8
RLS				AML	AML	00 37 58.8	
	comp=E,454µm,0.5s						
RLS				AML	AML	00 38 03.4	
	comp=N,491µm,0.5s						
IGT	Igoumenitsa	1.07	354	P	Pb	00 37 40.8	-1.0
IGT	Igoumenitsa	1.07	354	P	Pb	00 37 41.1	-0.7
IGT				AML	AML	00 38 01.4	
	comp=E,386µm,0.3s						
IGT				AML	AML	00 38 05.6	
	comp=N,470µm,0.4s						
DRO	Drossia	1.10	117	P	Pb	00 37 42.0	-0.3
DRO	Drossia	1.10	117	P	Pb	00 37 42.0	-0.4
DRO				AML	AML	00 38 05.0	
	comp=E,982µm,0.4s						
DRO				AML	AML	00 38 09.6	
	comp=N,1038µm,0.5s						
EFP	Efpalio	1.13	91	P	Pb	00 37 41.8	-1.0
EFP	Efpalio	1.13	91	P	Pb	00 37 41.8	-1.0
EFP				AML	AML	00 38 05.4	
	comp=N,1015µm,0.6s						
EFP				AML	AML	00 38 05.7	
	comp=E,2166µm,0.6s						
EVR	Evrytania	1.14	66	P	Pb	00 37 42.7	-0.4
EVR	Evrytania	1.14	66	P	Pb	00 37 42.3	-0.8
EVR				AML	AML	00 38 10.2	
	comp=E,414µm,0.7s						
EVR				AML	AML	00 38 11.1	
	comp=N,351µm,0.5s						
ANX	Ano Chora	1.15	83	P	Pb	00 37 42.9	-0.2
ANX	Ano Chora	1.15	83	P	Pb	00 37 42.9	-0.3
ANX				AML	AML	00 38 07.2	
	comp=N,986µm,0.4s						
ANX				AML	AML	00 38 09.5	
	comp=E,965µm,0.5s						
LAKA	Lakka	1.21	100	P	Pn	00 37 43.5	-0.5
LAKA	Lakka	1.21	100	P	Pn	00 37 43.3	-0.7
LAKA				AML	AML	00 38 07.6	
	comp=E,557µm,0.7s						
LAKA				AML	AML	00 38 10.4	
	comp=N,287µm,0.6s						
JAN	Janina	1.23	14	P	Pn	00 37 43.0	-1.3
JAN	Janina	1.23	14	P	Pb	00 37 44.8	+0.3
JAN				AML	AML	00 38 08.5	
	comp=E,420µm,0.3s						
JAN				AML	AML	00 38 13.9	
	comp=N,349µm,0.4s						
SERG	Sergoula	1.25	92	P	Pn	00 37 44.1	-0.5
SERG				AML	AML	00 38 09.2	
	comp=E,1014µm,0.8s						
SERG				AML	AML	00 38 11.1	
	comp=N,549µm,0.6s						
TRIZ	Trizonia	1.26	94	P	Pn	00 37 44.0	-0.7
ALIK	Aliki, Aigiali	1.31	98	P	Pn	00 37 45.0	-0.3
KEK	Kerkira	1.35	337	P	Pn	00 37 46.0	0.0
KEK				AML	AML	00 38 10.1	
	comp=N,466µm,0.4s						
KEK				AML	AML	00 38 16.5	
	comp=E,426µm,0.6s						
KLV	Kalavryta, Ach	1.39	107	P	Pn	00 37 45.5	-1.0
KLV	Kalavryta, Ach	1.39	107	P	Pn	00 37 46.4	-0.1
KLV				AML	AML	00 38 16.4	
	comp=E,211µm,0.5s						
KLV				AML	AML	00 38 29.2	
	comp=N,134µm,0.6s						
MAKR	Makrakomi, Fth	1.41	67	P	Pn	00 37 47.1	+0.3
MAKR				AML	AML	00 38 12.5	
	comp=N,609µm,0.8s						
MAKR				AML	AML	00 38 16.2	
	comp=E,1472µm,0.4s						
GUR	Goura	1.57	109	P	Pn	00 37 49.5	+0.5
GUR				AML	AML	00 38 22.6	
	comp=E,332µm,0.4s						
GUR				AML	AML	00 38 24.7	
	comp=N,542µm,0.4s						
THL	Klokotos Trika	1.63	47	P	Pb	00 37 51.0	-0.3
THL				AML	AML	00 38 18.9	
	comp=N,378µm,0.6s						
THL				AML	AML	00 38 19.6	
	comp=E,369µm,0.7s						
KPRO	Kipourio	1.64	25	P	Pn	00 37 49.4	-0.6
OHR	Ohrid	2.66	5	*e*Pn	Pb	00 38 06.7	-2.2
TIR	Tirane	2.92	351	*e*Pn	Pn	00 38 09.5	+2.0
VAY	Valandovo	3.28	29	*e*Pn	Pn	00 38 15.8	+3.4
PDG	Podgorica	4.07	347	*e*Pn	Pn	00 38 23.4	+0.1
PDG				*e*Sn	Sn	00 39 09.1	-1.6
PRVS	Prvonek	4.22	16	*e*Pn	Pn	00 38 28.1	+2.7
BOSS	Bosilegrad	4.31	20	*e*Pn	Pn	00 38 29.7	+3.1
BARS	Barje	4.47	13	*e*Pn	Pn	00 38 30.3	+1.5
TREB	Trebinje	4.54	340	*e*Pn	Pn	00 38 29.1	-0.7

DBRK	Dubrovnik	4.56	338	ePn	Pn	00 38 28.4	-1.7
DBRK				Sn	Sn	00 39 19.2	-3.6
STON	Ston	4.88	335	ePn	Pn	00 38 33.7	-0.7
STON				eSn	Sn	00 39 26.4	-4.3
STON	Ston	4.88	335	ePn	Pn	00 38 33.1	-1.3
STON				Sn	Sn	00 39 25.7	-5.0
LSTV	Lastovo	5.09	329	ePn	Pn	00 38 36.0	-1.3
MAKA	Makarska	5.48	333	ePn	Pn	00 38 41.6	-1.1
HVAR	Hvar	5.61	328	ePn	Pn	00 38 43.6	-0.9
HVAR				Sn	Sn	00 39 43.2	-5.5
RICI	Ricice	5.62	334	ePn	Pn	00 38 43.7	-0.9
RICI				Sn	Sn	00 39 44.9	-4.2
KIJV	Kijevo	6.33	332	ePn	Pn	00 38 53.9	-0.4
ZIRJ	Zirje	6.34	326	ePn	Pn	00 38 53.3	-1.1
MORI	Morici	6.48	328	ePn	Pn	00 38 56.2	-0.2
DUGI	Dugi Otok	6.86	325	ePn	Pn	00 39 00.9	-0.8
UDBI	Udbina	7.01	331	ePn	Pn	00 39 03.9	+0.2
NVLJ	Novalja	7.40	327	ePn	Pn	00 39 07.3	-1.7
RABC	Rab	7.59	328	ePn	Pn	00 39 11.5	-0.1

IDC ***20*** *00:47:46.7±0.8, 0°.96N×127°.41E, h0^{km}, mb4.2/11, mb1 4.3/12, mb1mx4.1/35, mbtmp4.2/12, ML3.6/1, MS3.5/6, Ms1 3.5/6, ms1mx3.0/38, Error ellipse: s-maj=35.5km s-min=13.7km az=73.0*

NEIC ***20*** *00:47:49.3±1.5, 1°.01N±0°.05×127°.52E±0°.08, h10^{km}±1^{km}, mb4.4/20, Error ellipse: s-maj=13.1km s-min=8.5km az=74.0*

DJA ***20*** *00:47:50.1±1.2, 1°N±4°×12°8E±°, h19^{km}±13^{km}, M4.3/13, mb4.5/9, mB4.9/4, MLv4.2/13, Mw(mB)4.2/4*

ISC 20 00:47:48.6±0.6**, 1°.06N**±0°.06×**127°.55E**±0°.07**, h10**^{km}**, n62, σ1^{s}.11**/52**, mb4.3**/17**, MS3.2**/5**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBMI	Labuha	1.69	182	P	Pn	00 48 18.6	+0.4
LBMI				S	Sn	00 48 42.6	+2.7
SANI	Sanana	3.46	207	P	Pn	00 48 44.3	+1.7
KMSI	Cibinong	3.60	262	P	Pn	00 48 45.0	+0.5
SWI	Sorong	4.17	117	P	Pn	00 48 59.0	+6.7
SIJI	Sorong	4.18	117	Pn	Pn	00 48 53.5	+1.1
	3.4nm,0.3s,baz=302,slow=11,SNR=8.3						
SIJI				Sn	Sn	00 49 43.0	+1.5
	3.1nm,0.3s,baz=224,slow=23,SNR=1.9						
GTOI	Gorontalo	4.56	265	P	Pn	00 48 59.5	+1.9
AAI	Ambon	4.76	172	P	Pn	00 49 02.6	+2.2
MRSI	Marisa	5.64	264	P	Pb	00 49 22.1	-5.0
FAKI	Fak Fak	6.14	130	Pn	Pn	00 49 20.1	+0.7
APSI	Ampana	6.22	252	P	Pn	00 49 21.4	+0.9
	0.2nm575nm42nm,0.6s						
TOLI2	Tolitoli	6.77	270		Pn	00 49 28.5	+0.5
MPSI	Mapaga	7.69	265	P	Pn	00 49 41.4	+0.8
	0.1nm465nm16nm,0.8s						
TTSI	Tana Toraja	8.74	242	P	Pn	00 49 56.2	+1.1
	36nm,0.5s						
BNSI	Bone	9.21	234	P	Pn	00 50 02.8	+1.3
	31nm,0.7s						
SPSI	Sidrap Palu	9.24	237	P	Pn	00 50 03.2	+1.2
	3µm42nm,0.6s						
SAUI	Saumlaki	9.73	157	Pn	Pn	00 50 08.4	-0.3
BKSI	Bulukumba	9.76	229	P	Pn	00 50 10.0	+0.9
	26nm,0.7s						
KAPI	Kappang	9.86	232	Pn	Pn	00 50 11.0	+0.6
	2.8nm,0.3s,baz=97,slow=6.6,SNR=7.1						
KAPI	Kappang	9.86	232		Pn	00 50 10.0	-0.4
EDFI	Ende, Flores	11.36	211	P	Pn	00 50 32.7	+1.5
	6.3nm,0.8s						
JAY	Jayapura	13.62	105	LR	LR	00 55 57.4	
	comp=Z,473nm,19.2s,baz=304,slow=36						
SBUM	Sibu	15.38	275	Pn	Pn	00 51 26.3	+0.3
SBUM				IAmb	IAmb	00 51 35.9	
	comp=Z,19nm,1.2s						
KSM	Kuching	17.24	272		Pn	00 51 49.7	0.0
KSM				IAmb	IAmb	00 52 03.7	
	comp=Z,16nm,1.1s						
SMRI	Semarang	18.88	244	P	P	00 52 08.6	-0.7
SMRI				IAmb	IAmb	00 52 23.1	
	comp=Z,49nm,1.2s						
GUMO	Guam	21.18	53	LR	LR	01 01 13.4	
	comp=Z,62nm,18.4s,baz=220,slow=38						
WB0	Warramunga Arr	21.76	162	P	P	00 52 40.7	+0.1
WB0				IAmb	IAmb	00 52 43.9	
	comp=Z,12nm,0.8s						
WRAB	Tennant Creek	21.91	163	P	P	00 52 41.8	-0.3
WRAB				IAmb	IAmb	00 52 45.3	
	comp=Z,14nm,0.8s						
WRA	Warramunga Arr	21.91	163	P	P	00 52 41.7	-0.4
	comp=Z,7.3nm,0.6s,baz=341,slow=11,SNR=39						
WRA	Warramunga Arr	21.91	163	P	P	00 52 41.8	-0.3
WB2	Warramunga Arr	21.91	163	P	P	00 52 41.8	-0.4
WB2				IAmb	IAmb	00 52 45.4	
	comp=Z,16nm,0.8s						
WR0	Warramunga Arr	21.99	162	P	P	00 52 42.6	-0.4
WR0				IAmb	IAmb	00 52 44.8	
	comp=Z,22nm,1.4s						
MBWA	Marble Bar	23.37	199	P	P	00 52 55.7	-1.8
SSLB	Suanglung	23.48	345	P	P	00 53 00.1	+1.5
SSLB				IAmb	IAmb	00 53 07.9	
	comp=Z,14nm,0.8s						
KASI	Kota Agung	23.93	254	P	P	00 53 12.1	+9.0
AS31	Alice Springs	25.34	166		P	00 53 15.5	-0.4
ASAR	Alice Springs	25.34	166	P	P	00 53 15.7	-0.3
	comp=Z,8.6nm,0.8s,baz=347,slow=10,SNR=45						
ASAR	Alice Springs	25.34	166		P	00 53 14.8	-1.1
JOW	Kunigami	25.63	1	P	P	00 53 20.8	+2.4
	comp=Z,11nm,0.8s,baz=165,slow=6.9,SNR=4.2						
JOW	Kunigami	25.63	1	P	P	00 53 19.9	+1.4
CMAR	Chiang Mai Arr	32.97	303	LR	LR	01 09 02.1	
	comp=Z,28nm,19.4s,baz=179,slow=39						
HNR	Honiara	33.91	109	LR	LR	01 10 05.3	
	comp=Z,110nm,18.4s,baz=272,slow=39						
STKA	Stephens Creek	35.36	159	P	P	00 54 43.7	-0.7
	comp=Z,1.9nm,0.8s,baz=338,slow=15,SNR=3.9						
STKA	Stephens Creek	35.36	159	IAmb	IAmb	00 54 46.6	
	comp=Z,1.1nm,1.1s						
KSAR	Wonju Array Be	36.20	0	P	P	00 54 51.2	-0.3
KSRS	Korea Array	36.22	1	P	P	00 54 52.4	+0.7
	comp=Z,1.3nm,0.6s,baz=172,slow=8.7,SNR=2.6						
MJAR	Matsushiro Arr	36.66	14	P	P	00 54 55.2	-0.3
	comp=Z,6.0nm,0.8s,baz=189,slow=9.3,SNR=12						
MJAR	Matsushiro Arr	36.66	14	IAmb	IAmb	00 55 02.2	
	comp=Z,2.9nm,1.0s						
USRK	Ussuriysk Ar.	43.13	5	P	P	00 55 49.5	+0.3
	comp=Z,4.5nm,0.9s,baz=190,slow=9.7,SNR=4.3						
USRK	Ussuriysk Ar.	43.13	5	P	P	00 55 48.3	-0.9
PALK	Pallekele	47.10	279	LR	LR	01 19 54.4	
	comp=Z,24nm,18.8s,baz=230,slow=41						
SONM	Songino Array	50.07	342	P	P	00 56 43.9	+0.2
	comp=Z,1.4nm,0.9s,baz=159,slow=6.5,SNR=7.3						
SONM	Songino Array	50.07	342	IAmb	IAmb	00 56 51.7	
	comp=Z,6.7nm,1.5s						
MSVF	Nonsavu	53.09	113	LR	LR	01 17 35.7	
	comp=Z,87nm,20.4s,baz=71,slow=34						
MKAR	Makanchi Array	60.20	326	P	P	00 57 56.6	-0.3
	comp=Z,0.8nm,0.4s,baz=117,slow=8.1,SNR=15						
ZALV	Zalesovo Beam	63.32	333	P	P	00 58 17.2	-0.5
	comp=Z,0.4nm,0.3s,baz=135,slow=5.6,SNR=2.5						
ZALV	Zalesovo Beam	63.32	333	P	P	00 58 16.1	-1.6
KBL	Kabul	63.80	308	P	P	00 58 20.9	-0.6
GAR	Garm	64.33	313	P	P	00 58 24.5	-0.3
BTK	Batken	64.36	315	P	P	00 58 25.0	0.0
BTK				IAmb	IAmb	00 58 34.6	
	comp=Z,6.5nm,1.3s						
KURK	Kurchatov	64.42	328	P	P	00 58 24.7	-0.2
VNDA	Vanda	80.69	173	P	P	00 59 59.4	-2.0
	comp=Z,1.1nm,0.9s,baz=0.7,slow=1.3,SNR=3.5						
VNDA	Vanda	80.69	173	P	P	00 59 59.6	-1.8

SKHL ***20*** *00:50:01.2±0.5, 43°.90N×147°.70E, h38^{km}±1^{km}, mb4.4/3*

JMA ***20*** *00:50:01.8±0.3, 43°.87N×147°.65E, h66^{km}, M3.7*

ISC 20 00:50:00.6±2.3**, 43°.9N**±0°.1×**147°.8E**±0°.1**, h35**^{km}**, n15, σ0^{s}.70**/26**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.31	3	eP	Pn	00 50 22.5	0.0
KUR				AMB	AMB	00 50 29.0	
	60nm,0.3s						
KUR				iS	Sn	00 50 38.6	-0.1
KUR				A	A	00 50 40.0	
	600nm,0.4s						
KUR				A	A	00 50 40.0	
	900nm,0.4s						
YUK	Yuzh-Kuril'sk	1.39	275	eP	Pn	00 50 23.8	+0.3
YUK				AMB	AMB	00 50 25.0	
	447nm,0.4s						
YUK				eS	Sn	00 50 40.2	-0.5
YUK				A	A	00 50 44.2	
	720nm,0.3s						
YUK				A	A	00 50 44.2	
	730nm,0.3s						
GRPR	Tuman	1.46	274	eP	Pn	00 50 24.0	-0.4
GRPR				AMB	AMB	00 50 25.0	
	149nm,0.5s						
GRPR				eS	Sn	00 50 41.0	-1.2
GRPR				A	A	00 50 43.0	
	931nm,0.3s						
GRPR				A	A	00 50 43.0	
	782nm,0.3s						
NEM2	Nemuro 2	1.58	250	P	Pn	00 50 26.8	+0.6
NEM2				eS	Sn	00 50 45.3	-0.1
NMR	Nemuro--Hokkai	1.59	250	eP	Pn	00 50 26.0	-0.3
NMR				eS	Sn	00 50 45.0	-0.6
GLVR	Golovnino	1.65	264	eS	Sn	00 50 47.0	0.0
JRA	Rausu	1.92	271	P	Pn	00 50 31.6	+0.8
JNSB	Nemuroshibetsu	2.02	267	P	Pn	00 50 33.1	+1.0
JNSB				eS	Sn	00 50 56.7	+0.6
JKHN	Kushirohamanak	2.08	247	P	Pn	00 50 33.9	+0.8
JKHN				eS	Sn	00 50 57.6	-0.2
JNK	Nakash	2.25	262	P	Pn	00 50 36.0	+0.7
JNK				eS	Sn	00 51 02.0	+0.2
JAK	Akkeshi	2.43	249	P	Pn	00 50 37.9	+0.1
JAK				eS	Sn	00 51 05.0	-1.3
JAR	Ashorobuto	2.98	259	P	Pn	00 50 46.4	+1.0
JAR				eS	Sn	00 51 19.6	-0.3
JOB	Onbets	3.05	252	P	Pn	00 50 47.1	+0.7
JOB				eS	Sn	00 51 20.3	-1.3
JCH	Churui	3.48	249	P	Pn	00 50 52.7	+0.4
JNBK	Urakawa-nobuka	4.03	248	P	Pn	00 50 59.8	-0.1

IDC 20 00:54:01.4±2.2**, 0°.77N**×**127°.09E, h0**^{km}**, mb3.6**/3**, mb1 3.9**/3**, mb1mx3.5**/35**, mbtmp3.7**/3**, MS3.6**/1**, Ms1 3.6**/1**, ms1mx2.7**/31**, Error ellipse: s-maj=164.0km s-min=28.1km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.78	161	P	P	00 58 55.0	0.0
	1.9nm,0.7s,baz=340,slow=11,SNR=13						
ASAR	Alice Springs	25.18	165	P	P	00 59 28.8	0.0
	1.5nm,0.8s,baz=342,slow=9.1,SNR=11						
PETK	Petropavlovsk-	58.03	21	LR	LR	01 28 01.2	
	comp=Z,58nm,20.3s,baz=185,slow=35						
MKAR	Makanchi Array	60.18	326	P	P	01 04 11.1	0.0
	0.6nm,0.8s,baz=123,slow=7.6,SNR=1.7						

SOME ***20*** *00:57:35.9, 44°.97N×86°.85E, h0^{km}*

NNC ***20*** *00:57:41.7±2.5, 44°.73N×86°.65E, h15^{km}±12^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=17.7km s-min=13.1km az=98.0*

ISC 20 00:57:44.9±2.8**, 45°.01N**±0°.08×**86°.5E**±0°.1**, h10**^{km}**, n18, σ1^{s}.57**/27**, 3C-5D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZSN	Zaisan	2.70	336	eP	Pb	00 58 32.3	-1.0
	5.9nm,0.0s						
ZSN				eS	Sg	00 59 12.6	+1.1
	35nm,0.2s						
ZSN	Zaisan	2.70	336	Pg	Pb	00 58 32.2	-1.0
	9.4nm,0.6s						
ZSN				Lg	Lg	00 59 12.6	
	43nm,0.7s						
MK31	Makanchi Array	3.44	303	⇓Pn	Pn	00 58 38.4	-0.3
	0.6nm,0.5s,baz=328,slow=16,SNR=33						
MK31				⇓Pg	Pb	00 58 47.7	+1.7
	1.5nm,0.3s,baz=118,slow=15,SNR=31						
MK31				Lg	Lg	00 59 41.5	
	25nm,0.6s,baz=115,slow=27,SNR=13						
MAKZ	Makanchi	3.64	301	⇑Pn	Pn	00 58 42.0	+0.7
	1.3nm,0.6s						
MAKZ				⇓Pg	Pg	00 58 53.3	-1.3
	2.1nm,0.5s						
MAKZ				⇓Lg	Lg	00 59 46.0	
	12nm,0.7s						
KTMS	Ketmen	4.69	253	eP	Pb	00 59 08.6	+1.3
	2.3nm,0.1s						
KTMS				eS	Sg	01 00 15.1	-0.4
	12nm,0.1s						
KTMS	Ketmen	4.69	253	Pg	Pb	00 59 08.2	+0.9
	3.8nm,0.5s						
KTMS				Lg	Lg	01 00 14.0	
	11nm,0.5s						
DJR	Jarkent	4.84	264	eP	Pb	00 59 10.4	+0.6
	2.0nm,0.1s						
DJR				eS	Sg	01 00 18.2	-1.9
	7.8nm,0.1s						
DJR	Jarkent	4.84	264	Pg	Pb	00 59 10.4	+0.6
	1.8nm,0.2s						
DJR				Lg	Lg	01 00 18.3	
KAPS	Kapalarasan	5.07	276	eP	Pb	00 59 15.6	+1.9
	1.9nm,0.5s						
KAPS				eS	Sg	01 00 27.3	-0.2
	7.6nm,0.6s						
KAPS	Kapalarasan	5.07	276	Pg	Pb	00 59 15.6	+1.9
	1.9nm,0.5s						
KAPS				Lg	Lg	01 00 27.3	
	7.6nm,0.6s						
KNOS	Konyrlen	5.26	266	Pg	Pb	00 59 19.5	+2.4
	2.3nm,0.3s						
KNOS				Lg	Lg	01 00 33.6	
	11nm,0.7s						
PDGK	Podgornoye	5.32	254	Pg	Pb	00 59 16.8	-1.2
	1.0nm,0.6s						
PDGK				Lg	Lg	01 00 28.7	
	4.0nm,0.5s						
UZB	Uzynbulak	5.70	254	eP	Pb	00 59 26.3	+1.7
	3.2nm,0.1s						
UZB				eS	Sg	01 00 45.3	-2.6
	4.7nm,0.2s						
UZB	Uzynbulak	5.70	254	Pg	Pb	00 59 25.0	+0.4
	2.9nm,0.4s						
UZB				Lg	Lg	01 00 42.6	
	4.6nm,0.5s						
BLB	Baldybastay	5.81	264	Pg	Pb	00 59 27.6	+1.3
BLB				Lg	Lg	01 00 47.7	
KPKS	Kokpek	5.83	257	eP	Pb	00 59 28.5	+1.9
	1.0nm,0.0s						
KPKS				eS	Sg	01 00 49.3	-2.6
	16nm,0.2s						
SATY	Saty	6.16	254	Pg	Pb	00 59 34.7	+2.4
	1.2nm,0.3s						
SATY				Lg	Lg	01 00 59.4	
	7.9nm,0.5s						
KURBB	Kurchatov Arra	7.77	319	⇓Pn	Pn	00 59 38.8	+0.8
	2.6nm,0.9s						
KURBB				⇑Sn	Sn	01 01 06.8	+0.9
	4.2nm,0.6s						
KURBB				⇑Lg	Lg	01 01 58.0	
	13nm,0.7s						

NOU 20 01:00:36.3, 22°.13S×**171°.99E, h0**^{km}**, ML4.4**/6**, Southeast of Loyalty Islands, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	3.74	279	P	Pn	01 01 35.1	-0.1
YATNC	Mamie plateau,	4.73	270	P	Pn	01 01 48.2	-0.7
OUENC	Ouen Island, N	4.78	266	P	Pn	01 01 49.4	-0.2
ONTNC	Ouen Toro	5.13	267	P	Pn	01 01 54.4	-0.1
DZM	Mont Dzumac	5.14	270	P	Pn	01 01 54.8	+0.1
NOUC	Port Laguerre	5.27	269	P	Pn	01 01 56.6	+0.2

IDC 20 01:03:48.8±2.3**, 0°.91N**×**127°.13E, h0**^{km}**, mb3.6**/3**, mb1 3.8**/3**, mb1mx3.3**/44**, mbtmp3.6**/3**, MS4.0**/1**, Ms1 4.0**/1**, ms1mx2.7**/25**, Error ellipse: s-maj=171.8km s-min=28.3km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	21.61	54	LR	LR	01 15 33.2	
	comp=Z,478nm,21.8s,baz=340,slow=33						
WRA	Warramunga Arr	21.89	162	P	P	01 08 42.6	-1.1
	1.0nm,0.6s,baz=340,slow=11,SNR=6.7						
ASAR	Alice Springs	25.30	165	P	P	01 09 18.0	+0.7
	1.6nm,0.8s,baz=343,slow=9.9,SNR=10						
MKAR	Makanchi Array	60.09	326	P	P	01 13 57.8	-0.1
	0.5nm,0.7s,baz=132,slow=8.0,SNR=2.3						

BJI ***20*** *01:08:39.8±0.0, 26°.10N×143°.08E, h20^{km}, mB4.9/35, mb4.6/50, Ms4.5/46, Ms7 4.3/43*

IDC ***20*** *01:08:42.6±0.5, 26°.23N×142°.54E, h0^{km}, mb4.4/27, mb1 4.6/30, mb1mx4.5/46, mbtmp4.4/30, ML3.5/3, MS4.0/23, Ms1 4.0/23, ms1mx3.8/48, Error ellipse: s-maj=15.6km s-min=11.9km az=79.0*

NIED ***20*** *01:08:42.6, 26°.40N×143°.05E, h7^{km}, MW4.7, Moment Tensor Solution. s2 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.02; $M_{\theta\theta}$0.07; $M_{\phi\phi}$-0.05; $M_{r\theta}$-0.00; $M_{\theta\phi}$-0.47; $M_{\phi r}$1.18; Fault plane solution: $M_0$1.27000×10^{16} NP1: ϕ_s178.00000°, δ90.00000°, λ-68.00000°. NP2: ϕ_s269.00000°, δ22.00000°, λ-180.00000°.*

JMA ***20*** *01:08:42.5±0.2, 26°.40N×143°.05E, h7^{km}±3^{km}, M5.2*

JMA Felt I J1.

NEIC ***20*** *01:08:45.0±1.4, 26°.40N±0°.06×142°.6E±0°.1, h8^{km}±4^{km}, mb4.7/96, Error ellipse: s-maj=15.0km s-min=7.3km az=68.0*

MOS ***20*** *01:08:45.7±1.2, 26°.22N×142°.53E, h33^{km}, mb5.1/41, MS4.6/6, Error ellipse: s-maj=11.8km s-min=5.4km az=119.0*

ISC 20 01:08:47.4±0.4**, 26°.30N**±0°.05×**142°.64E**±0°.06**, h31**^{km}**, n248, σ1^{s}.57**/220**, mb4.7**/117**, MS4.2**/44**, 14C-8D, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHH2	Haha-jima-NKT2	0.53	308	P	Pn	01 08 58.3	-0.6
JCJ	Chichijima	0.89	333	Pn	Pn	01 09 02.4	-1.5
	702nm,0.3s,baz=287,slow=23,SNR=138						
JCJ				Sn	Sb	01 09 21.4	+5.4
	6µm,0.3s,baz=266,slow=23,SNR=21						
JCJ	Chichijima	0.89	333	Pn	Pn	01 09 02.1	-1.7
CBIJ	Chichi jima	0.89	333	P	Pn	01 09 02.3	-1.6
CBIJ				eS	Sb	01 09 16.0	0.0
JHJ	Hachijo jima 2	7.24	341	LR	LR	01 13 12.2	
	comp=Z,861nm,19.8s,baz=198,slow=37						
JYT	Yasato	10.12	349		Pn	01 11 08.2	-2.3
JHO	Hitachi	10.43	351	P	Pn	01 11 13.4	-1.4
MJAR	Matsushiro Arr	10.89	341	Pn	Pn	01 11 21.0	-0.1
	0.4nm,0.3s,baz=155,slow=12,SNR=14						
MJAR				Sn	Sn	01 13 20.0	-1.9
	0.3nm,0.3s,baz=182,slow=16,SNR=4.5						
MJAR				LR	LR	01 15 36.6	
	comp=Z,656nm,18.1s,baz=205,slow=38						
MJAR	Matsushiro Arr	10.89	341	P	Pn	01 11 21.0	-0.1
MJAR	Matsushiro Arr	10.89	341	Pn	Pn	01 11 19.4	-1.8
MAJO	Matsushiro	10.89	341	⇑eP	Pn	01 11 24.5	+3.4
MAJO	Matsushiro	10.89	341	Pn	Pn	01 11 19.2	-2.0
MAT	Matsushiro	10.89	341	P	Pn	01 11 20.7	-0.4
MAT				eS	Sn	01 13 18.4	-3.5
JMM	Marumori	11.64	353		Pn	01 11 29.0	-2.4
JSU	Suzuyama	11.87	299	Pn	Pn	01 11 33.6	-1.0
JOW	Kunigami	12.87	276	LR	LR	01 16 09.4	
	comp=Z,656nm,20.6s,baz=120,slow=35						
TJN	Taejon	16.45	311	⇓eP	P	01 12 37.9	-0.5
KSRS	Korea Array	16.71	315	Pn	P	01 12 39.4	-1.8
	0.4nm,0.3s,baz=125,slow=11,SNR=10						
KSRS				LR	LR	01 18 55.3	
	comp=Z,1µm,18.6s,baz=111,slow=37						
ASAJ	Asahikawa	17.78	360	LR	LR	01 20 34.1	
	comp=Z,249nm,21.4s,baz=192,slow=40						
YULB	Yu-li	19.58	266	P	P	01 13 12.3	-0.8
YULB				IAmb	IAmb	01 13 35.7	
	comp=Z,78nm,1.2s						
SSLB	Suanglung	19.81	267	P	Pn	01 13 15.7	-1.5
SSLB				IAmb	IAmb	01 13 35.2	
	comp=Z,34nm,0.9s						
USRK	Ussuriysk Ar.	19.83	337	P	P	01 13 15.2	-0.3
	baz=144,slow=9.9,SNR=6.7						
USRK				LR	LR	01 20 40.4	
	comp=Z,270nm,19.2s,baz=145,slow=36						
USRK	Ussuriysk Ar.	19.83	337	P	P	01 13 13.8	-1.8
USA0B	Ussuriysk Arra	19.83	337	P	P	01 13 12.8	-2.8
USA0B				pmax	pmax		
	comp=Z,10.0nm,0.9s						
USA0B	Ussuriysk Arra	19.83	337	P	P	01 13 12.8	-2.8
YSS	Yuzh-Sakhalins	20.61	0	eP	Pn	01 13 27.9	+1.5
MDJ	Mudanjiang	21.09	333	P	P	01 13 29.6	+0.4
MDJ				pP	pP	01 13 34.0	-3.0
MDJ				S	S	01 17 22.5	+0.2
MDJ				pmax	pmax		
	comp=Z,7.0nm,0.5s						
MDJ				pmax	pmax		
	comp=Z,180nm,4.2s						
MDJ				LR	LR		
	comp=Z,570nm,12.9s						
MDJ				LR	LR		
	comp=Z,440nm,12.2s						
MDJ				LR	LR		
	comp=Z,840nm,15.1s						
NJ2	Nanjing	21.53	291	eP	P	01 13 34.1	+0.1
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
NJ2				LR	LR		
	comp=Z,300nm,12.4s						
NJ2				LR	LR		
	comp=Z,360nm,13.1s						
NJ2				LR	LR		
	comp=Z,780nm,19.1s						
H11N2	WAKE ISLAND Hy	23.24	101	T	T	01 37 32.0	
	baz=291,slow=74,SNR=22						
H11N1	WAKE ISLAND Hy	23.24	101	T	T	01 37 34.4	
	baz=291,slow=74,SNR=20						
H11N3	WAKE ISLAND Hy	23.26	101	T	T	01 37 34.1	
	baz=291,slow=74,SNR=22						
H11S3	WAKE ISLAND Hy	23.52	104	T	T	01 37 56.2	
	baz=294,slow=74,SNR=14						
H11S1	WAKE ISLAND Hy	23.53	104	T	T	01 37 56.0	
	baz=294,slow=74,SNR=16						
H11S2	WAKE ISLAND Hy	23.54	104	T	T	01 37 55.5	
	baz=294,slow=74,SNR=12						
TIA	Tai'an	23.89	301	P	P	01 13 55.9	-2.5
TIA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
TIA				pmax	pmax		
	comp=Z,64nm,4.2s						
TIA				LR	LR		
	comp=Z,190nm,11.3s						
TIA				LR	LR		
	comp=Z,720nm,16.2s						
TIA				LR	LR		
	comp=Z,820nm,17.6s						
KLR	Kul'dur	24.41	343	P	P	01 14 04.0	+1.0
	comp=Z,14nm,1.0s,baz=146,slow=8.6,SNR=20						
KLR				LR	LR	01 23 09.6	
	comp=Z,285nm,21.7s,baz=157,slow=36						
KLR	Kul'dur	24.41	343	⇑eP	P	01 14 03.4	+0.4
KLR				pmax	pmax		
	comp=Z,25nm,0.9s						
GRNR	Gornyy	24.89	351	⇓iP	P	01 14 12.4	+5.0
GRNR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GRNR				MLR	MLR		
	comp=E,410nm,16.0s						
GRNR				MLR	MLR		
	comp=Z,150nm,12.0s						
WHN	Wuhan	25.21	286	⇓P	P	01 14 10.0	-0.4
WHN				LR	LR		
	comp=Z,650nm,13.2s						
WHN				LR	LR		
	comp=Z,2µm,19.6s						
BJT	Baijiatuau	25.93	308	P	P	01 14 16.1	-0.8
BJT				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BJT	Baijiatuau	25.93	308	P	P	01 14 16.1	-0.8
ENH	Enshi	29.40	285	P	P	01 14 47.4	-0.7
ENH				IAmb	IAmb	01 14 53.0	
	comp=Z,20nm,1.3s						
HHC	Hu-ho-hao-te	29.50	307	eP	P	01 14 50.5	+1.5
HHC				S	S	01 19 50.4	+8.7
HHC				pmax	pmax		
	comp=Z,11nm,0.6s						
HHC				pmax	pmax		
	comp=Z,320nm,7.6s						
HHC				LR	LR		
	comp=Z,220nm,14.2s						
HHC				LR	LR		
	comp=Z,400nm,18.9s						

HHC				LR	LR		
	comp=Z,500nm,21.8s						
ZEA	**Zeya**	**29.70**	**341**	*e*P	**P**	**01 14 51.3**	**+0.9**
ZEA				pmax	pmax		
	comp=N,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,20nm,0.6s						
ZEA				MLR	MLR		
	comp=N,200nm,11.0s						
ZEA				MLR	MLR		
	comp=Z,300nm,16.0s						
XAN	**Xi'an**	**30.06**	**293**	P	**P**	**01 14 52.5**	**-1.4**
XAN				pP	pP	01 14 58.3	-4.2
XAN				sP	pwP	01 15 01.8	-0.7
XAN				S	**S**	**01 19 48.8**	**-1.6**
XAN				pmax	pmax		
	comp=Z,25nm,0.8s						
XAN				pmax	pmax		
	comp=Z,140nm,3.6s						
XAN				LR	LR		
	comp=Z,520nm,16.0s						
XAN				LR	LR		
	comp=Z,320nm,14.6s						
XAN				LR	LR		
	comp=Z,540nm,15.6s						
QIZ	**Qiongzhong**	**31.06**	**263**	P	**P**	**01 15 03.9**	**+1.0**
QIZ				S	**S**	**01 20 07.8**	**+1.5**
QIZ				LR	LR		
	comp=Z,270nm,18.6s						
QIZ				LR	LR		
	comp=Z,280nm,20.6s						
GYA	**Guiyang**	**32.17**	**278**	⇑P	**P**	**01 15 16.1**	**+3.4**
GYA				pmax	pmax		
	comp=Z,11nm,1.2s						
GYA				LR	LR		
	comp=Z,480nm,19.2s						
TOLI2	**Tolitoli**	**32.71**	**224**	P	**P**	**01 15 18.2**	**+0.9**
TOLI2				IAmb	IAmb	01 15 28.0	
	comp=Z,10nm,1.0s						
LZH	**Lanzhou**	**34.40**	**296**	*e*P	**P**	**01 15 31.8**	**-0.3**
LZH				pP	pP	01 15 38.3	-2.5
LZH				pmax	pmax		
	comp=Z,27nm,1.2s						
LZH				pmax	pmax		
	comp=Z,98nm,6.0s						
LZH				LR	LR		
	comp=Z,360nm,14.6s						
LZH				LR	LR		
	comp=Z,610nm,15.7s						
LZH				LR	LR		
	comp=Z,780nm,16.3s						
ULN	**Ulaanbaatar**	**35.18**	**317**	P	**P**	**01 15 36.9**	**-1.8**
ULN				pmax	pmax		
	comp=Z,12nm,1.5s						
ULN	**Ulaanbaatar**	**35.18**	**317**	P	**P**	**01 15 36.9**	**-1.8**
SONM	**Songino Array**	**35.57**	**317**	P	**P**	**01 15 41.0**	**-1.0**
	comp=Z,0.6nm,0.5s,baz=132,slow=8.9,SNR=9.1						
SONM				PcP	**PcP**	**01 18 12.8**	**+2.2**
	comp=Z,1.3nm,0.7s,baz=150,slow=4.0,SNR=3.1						
SONM				ScP	**ScP**	**01 21 56.2**	**+1.9**
	comp=Z,1.5nm,1.0s,baz=136,slow=4.3,SNR=5.2						
SONM				LR	LR	01 30 28.2	
	comp=Z,355nm,20.9s,baz=126,slow=37						
SLVN	**Son La**	**35.69**	**270**	P	**P**	**01 15 42.7**	**-0.6**
KMI	**Kunming**	**35.87**	**277**	⇓P	**P**	**01 15 45.5**	**+0.5**
KMI				sP	sP	01 15 56.8	-0.2
KMI				PP	**PP**	**01 17 11.8**	**+5.0**
KMI				S	**S**	**01 21 25.8**	**+4.5**
KMI				pmax	pmax		
	comp=Z,16nm,0.9s						
KMI				LR	LR		
	comp=Z,110nm,21.8s						
KMI				LR	LR		
	comp=Z,350nm,22.7s						
KMI				LR	LR		
	comp=Z,390nm,18.8s						
YAK	**Yakutsk**	**36.77**	**350**	*e*P	**P**	**01 15 53.2**	**+1.3**
YAK				*e**PP	**pP**	**01 15 59.0**	**-1.3**
YAK				*e*		01 17 18.7	
YAK				*e*		01 18 15.7	
YAK				*e*S	**S**	**01 21 39.9**	**+6.3**
YAK				*e*		01 26 06.1	
YAK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,3.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,203nm,3.0s						
YAK				pmax	pmax		
	comp=N,155nm,2.8s						
YAK				pmax	pmax		
	comp=E,112nm,3.0s						
YAK				smax	smax		
	comp=E,143nm,2.6s						
YAK				smax	smax		
	comp=N,74nm,2.4s						
YAK				MLR	MLR		
	comp=Z,269nm,22.0s						
YAK				MLR	MLR		
	comp=E,189nm,27.0s						
SEY	**Seymchan**	**37.19**	**7**	P	**P**	**01 15 56.0**	**+0.5**
	comp=E,3.2nm,0.9s,baz=197,slow=19,SNR=2.0						
GTA	**Gaotai**	**37.94**	**301**	*e*P	**P**	**01 16 03.6**	**+1.3**
GTA				pP	pwP	01 16 11.3	-2.5
GTA				sP	sP	01 16 14.4	+0.2
GTA				pmax	pmax		
	comp=E,5.0nm,1.2s						
GTA				pmax	pmax		
	comp=E,150nm,7.2s						
GTA				LR	LR		
	comp=E,350nm,19.1s						
GTA				LR	LR		
	comp=E,380nm,18.7s						
GTA				LR	LR		
	comp=E,420nm,17.9s						
KAPI	**Kappang**	**38.23**	**219**	LR	LR	01 31 40.5	
	comp=E,44nm,21.0s,baz=66,slow=36						
HNR	**Honiara**	**39.30**	**152**	LR	LR	01 31 33.6	
	comp=E,248nm,20.8s,baz=344,slow=35						
MTN	**Manton Dam**	**40.49**	**197**	P	**P**	**01 16 25.0**	**+1.4**
MTN				IAmb	IAmb	01 16 35.6	
	comp=Z,14nm,0.8s						
CHTO	**Chiang Mai**	**40.89**	**269**	P	**P**	**01 16 26.0**	**-1.0**
CHTO				pmax	pmax		
	comp=Z,12nm,0.8s						
CHTO	**Chiang Mai**	**40.89**	**269**	P	**P**	**01 16 26.0**	**-1.0**
CHTO				IAmb	IAmb	01 16 27.7	
	comp=Z,12nm,0.8s						
CMAR	**Chiang Mai Arr**	**41.00**	**268**	P	**P**	**01 16 25.7**	**-2.2**
	comp=Z,4.6nm,0.6s,baz=58,slow=8.6,SNR=19						
CMAR				LR	LR	01 34 25.9	
	comp=Z,195nm,18.6s,baz=126,slow=38						
CMAR	**Chiang Mai Arr**	**41.00**	**268**	*i* P	**P**	**01 16 28.2**	**+0.3**
CMAR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**41.00**	**268**	P	**P**	**01 16 27.7**	**-0.2**
BILL	**Bilibino**	**44.14**	**13**	*i* P	**P**	**01 16 52.9**	**+0.2**
BILL				*i*		01 17 07.5	
BILL				pmax	pmax		
	comp=Z,26nm,1.7s						
BILL	**Bilibino**	**44.14**	**13**	P	**P**	**01 16 53.1**	**+0.4**
BILL				IAmb	IAmb	01 17 10.5	
	comp=Z,25nm,1.4s						
SHL	**Shillong**	**45.41**	**281**	P	**P**	**01 17 02.3**	**-1.4**
SHL				pmax	pmax		
	comp=Z,15nm,1.0s						
SHL	**Shillong**	**45.41**	**281**	P	**P**	**01 17 02.3**	**-1.4**
SHL				IAmb	IAmb	01 17 03.7	
	comp=Z,15nm,1.0s						
TIXI	**Tiksi**	**46.04**	**354**	P	P	01 17 12.0	+4.2
TIXI				pmax	pmax		
	comp=Z,26nm,1.0s						
WB0	**Warramunga Arr**	**46.49**	**191**	P	**P**	**01 17 12.8**	**+0.9**
WRAB	**Tennant Creek**	**46.66**	**191**	*d i*P	**P**	**01 17 12.3**	**-0.9**
WRAB				pmax	pmax		
	comp=Z,24nm,1.3s						
WRAB	**Tennant Creek**	**46.66**	**191**	P	**P**	**01 17 13.1**	**-0.1**
WB2	**Warramunga Arr**	**46.67**	**191**	P	**P**	**01 17 12.8**	**-0.5**
WRA	**Warramunga Arr**	**46.67**	**191**	P	**P**	**01 17 12.8**	**-0.5**
	comp=Z,7.4nm,0.4s,baz=11,slow=8.5,SNR=80						
WRA	**Warramunga Arr**	**46.67**	**191**	*i* P	**P**	**01 17 12.8**	**-0.5**
WRA				pmax	pmax		
	comp=Z,8.0nm,0.4s						
WMQ	**Urumqi**	**47.37**	**306**	*e*P	**P**	**01 17 17.9**	**-0.8**
WMQ				pP	pP	01 17 27.8	+0.4
WMQ				sP	sP	01 17 34.0	+3.1
WMQ				pmax	pmax		
	comp=Z,10.0nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,84nm,4.3s						
WMQ				LR	LR		
	comp=Z,580nm,21.3s						
WMQ				LR	LR		
	comp=Z,200nm,18.5s						
WMQ				LR	LR		
	comp=Z,390nm,20.3s						
PSI	**Prapat**	**47.98**	**248**	P	**P**	**01 17 23.6**	**-0.2**
	comp=Z,6.4nm,0.2s,baz=302,slow=15,SNR=8.2						
DGZ	**Jazzator, Alta**	**48.11**	**314**	⇑*e*P	**P**	**01 17 24.2**	**-0.3**
DGZ				pmax	pmax		
	comp=Z,6.0nm,1.1s						
TAPN	**Taplejung**	**48.69**	**284**	*e*P	**P**	**01 17 29.7**	**+0.3**
	comp=Z,10nm,0.5s						
ODAN	**Odare**	**49.07**	**284**	*e*P	**P**	**01 17 31.8**	**-0.5**
	comp=Z,9.7nm,0.5s						
RAMN	**Ramite**	**49.74**	**284**	*e*P	**P**	**01 17 37.1**	**-0.3**
	comp=Z,8.8nm,0.3s						
JIRN	**Jiri**	**49.95**	**285**	*e*P	**P**	**01 17 39.1**	**0.0**
	comp=Z,18nm,0.4s						
GUN	**Gumba**	**50.16**	**285**	*e*P	**P**	**01 17 40.6**	**-0.1**
	comp=Z,17nm,0.4s						
ZAA0	**Zalesovo Array**	**50.35**	**319**	P	**P**	**01 17 40.0**	**-1.4**
ZALV	**Zalesovo Beam**	**50.35**	**319**	P	**P**	**01 17 40.1**	**-1.2**
	comp=Z,1.5nm,0.5s,baz=102,slow=7.0,SNR=8.2						
ZALV				PcP	**PcP**	**01 18 59.3**	**-0.3**
	comp=Z,1.7nm,0.5s,baz=153,slow=2.7,SNR=3.9						
ZALV				ScP	**ScP**	**01 22 55.4**	**+2.0**
	comp=Z,0.6nm,0.6s,baz=64,slow=3.4,SNR=3.9						
ZALV				LR	LR	01 39 36.4	
	comp=Z,239nm,18.7s,baz=122,slow=37						
ZALV	**Zalesovo Beam**	**50.35**	**319**	*i* P	**P**	**01 17 41.2**	**-0.2**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.4s						
AS31	**Alice Springs**	**50.39**	**190**	P	**P**	**01 17 41.4**	**-0.5**
ASAR	**Alice Springs**	**50.39**	**190**	P	**P**	**01 17 40.6**	**-1.3**
	comp=Z,1.6nm,0.6s,baz=9.2,slow=5.9,SNR=14						
ASAR	**Alice Springs**	**50.39**	**190**	P	**P**	**01 17 42.7**	**+0.8**
ASAR	**Alice Springs**	**50.39**	**190**	P	**P**	**01 17 42.7**	**+0.8**
PKI	**Pulchoki**	**50.64**	**285**	*e*P	**P**	**01 17 43.4**	**-0.9**
PKIN	**Phulchoki**	**50.65**	**285**	*e*P	**P**	**01 17 43.9**	**-0.4**
DMN	**Daman**	**50.90**	**285**	*e*P	**P**	**01 17 45.8**	**-0.4**
GKN	**Gorkha**	**51.22**	**286**	*e*P	**P**	**01 17 48.0**	**-0.5**
MK31	**Makanchi Array**	**51.30**	**310**	*ce*P	**P**	**01 17 47.3**	**-1.3**
MKAR	**Makanchi Array**	**51.30**	**310**	P	**P**	**01 17 47.2**	**-1.4**
	comp=Z,1.5nm,0.5s,baz=89,slow=8.8,SNR=37						
MKAR				PcP	**PcP**	**01 19 02.8**	**-0.5**
	comp=Z,0.5nm,0.4s,baz=75,slow=6.1,SNR=6.0						
MKAR				ScP	**ScP**	**01 22 59.8**	**+2.1**
	comp=Z,0.8nm,0.6s,baz=83,slow=4.4,SNR=6.2						
DANN	**Dangsing**	**51.90**	**286**	*e*P	**P**	**01 17 53.6**	**-0.1**
KOLN	**Koldanda**	**52.16**	**286**	*e*P	**P**	**01 17 54.8**	**-0.8**
PYUN	**Piuthan**	**52.62**	**286**	*e*P	**P**	**01 17 58.9**	**-0.1**
DZM	**Mont Dzumac**	**53.33**	**152**	*e*LR	LR	01 33 34.8	
	comp=Z,285nm,22.6s						
NRIK	**Noril'sk**	**53.53**	**339**	P	**P**	**01 18 04.8**	**0.0**
	comp=Z,6.6nm,0.9s,baz=111,slow=6.6,SNR=7.2						
NRIK				LR	LR	01 41 58.5	
	comp=Z,338nm,18.5s,baz=120,slow=37						
NRIK	**Noril'sk**	**53.53**	**339**	*de*P	**P**	**01 18 05.6**	**+0.8**
NRIK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
NRIK	**Noril'sk**	**53.53**	**339**	P	**P**	**01 18 04.5**	**-0.2**
NRIK				IAmb	IAmb	01 18 30.7	
	comp=Z,9.9nm,1.0s						
KURK	**Kurchatov**	**53.83**	**315**	*c i*P	**P**	**01 18 06.4**	**-0.9**
KURK				pmax	pmax		
	comp=Z,15nm,1.3s						
KURK	**Kurchatov**	**53.83**	**315**	P	**P**	**01 18 05.9**	**-1.4**
KURK				IAmb	IAmb	01 18 12.8	
	comp=Z,15nm,1.1s						
TARG	**Taragay, Kyrgy**	**54.70**	**304**	IAmb	IAmb	01 18 23.9	
	comp=Z,10nm,0.9s						
J20K	**Nowinta River**	**55.01**	**29**	P	**P**	**01 18 16.7**	**+1.0**
J20K				IAmb	IAmb	01 18 31.1	
	comp=Z,7.8nm,0.8s						
IMAR	**Indian Mountai**	**55.57**	**26**	P	**P**	**01 18 20.8**	**+1.2**
MSVF	**Nonsavu**	**55.67**	**138**	P	**P**	**01 18 21.8**	**+0.8**
	comp=Z,13nm,1.0s,baz=309,slow=11,SNR=4.2						
MSVF	**Nonsavu**	**55.67**	**138**	P	**P**	**01 18 21.7**	**+0.6**
BOOM	**Boomskoye usch**	**56.00**	**305**	P	**P**	**01 18 22.6**	**-0.8**
BOOM				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BOOM	**Boomskoye usch**	**56.00**	**305**	P	**P**	**01 18 22.6**	**-0.8**
BOOM				IAmb	IAmb	01 18 32.1	
	comp=Z,9.0nm,0.7s						
A21K	**Barrow**	**56.04**	**20**	P	**P**	**01 18 22.1**	**-0.9**
KSH	**Kashi**	**56.34**	**301**	P	**P**	**01 18 28.0**	**+2.3**
KSH				pP	sP	01 18 35.3	-2.7
KSH				sP	pP	01 18 37.3	+2.8
KSH				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KSH				LR	LR		
	comp=Z,150nm,13.1s						
KSH				LR	LR		
	comp=Z,360nm,17.2s						
KSH				LR	LR		
	comp=Z,460nm,22.3s						
FRU1	**Bishkek**	**56.93**	**305**	P	**P**	**01 18 30.0**	**+0.2**
FRU1				pmax	pmax		
	comp=Z,16nm,0.9s						
FRU1	**Bishkek**	**56.93**	**305**	P	**P**	**01 18 30.0**	**+0.2**
AAK	**Ala-Archa**	**57.05**	**305**	⇑*e*P	**P**	**01 18 30.4**	**-0.4**
AAK				pmax	pmax		
	comp=Z,21nm,2.5s						
AAK	**Ala-Archa**	**57.05**	**305**	P	**P**	**01 18 30.3**	**-0.5**
AAK				IAmb	IAmb	01 18 39.7	
	comp=Z,6.2nm,1.0s						
STKA	**Stephens Creek**	**57.86**	**181**	P	**P**	**01 18 33.9**	**-2.3**
	comp=Z,2.7nm,0.8s,baz=320,slow=8.7,SNR=3.6						
STKA				LR	LR	01 43 08.9	
	comp=Z,71nm,21.6s,baz=25,slow=36						
ILAR	**Eielson Array**	**58.21**	**28**	P	**P**	**01 18 37.8**	**-0.6**
	comp=Z,2.4nm,0.8s,baz=258,slow=5.7,SNR=17						
ILAR	**Eielson Array**	**58.21**	**28**	P	**P**	**01 18 38.0**	**-0.4**
ILAR	**Eielson Array**	**58.21**	**28**	P	**P**	**01 18 38.0**	**-0.4**
BRVK	**Borovoye**	**58.97**	**318**	*c i*P	**P**	**01 18 43.5**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,16nm,1.0s						
BRVK	**Borovoye**	**58.97**	**318**	P	**P**	**01 18 43.5**	**-0.3**
SCRK	**Sand Creek**	**59.41**	**29**	P	**P**	**01 18 47.3**	**+0.4**
SCRK				IAmb	IAmb	01 18 47.8	
	comp=Z,4.9nm,0.8s						
NIL	**Nilore**	**59.56**	**295**	P	**P**	**01 18 47.3**	**-1.0**
NIL				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NIL	**Nilore**	**59.56**	**295**	P	**P**	**01 18 47.3**	**-1.0**
KKAR	**Karatay Array**	**59.88**	**306**	P	**P**	**01 18 49.5**	**-0.8**
KKAR	**Karatay Array**	**59.88**	**306**	P	**P**	**01 18 49.5**	**-0.8**
BTK	**Batken**	**60.17**	**303**	P	**P**	**01 18 52.1**	**-0.4**
BTK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BTK	**Batken**	**60.17**	**303**	P	**P**	**01 18 52.1**	**-0.4**
BTK				IAmb	IAmb	01 19 19.3	
	comp=Z,4.3nm,0.8s						
KBL	**Kabul**	**62.74**	**297**	P	**P**	**01 19 09.8**	**-0.3**
KBL				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KBL	**Kabul**	**62.74**	**297**	P	**P**	**01 19 09.8**	**-0.3**
INK	**Inuvik**	**63.58**	**24**	P	**P**	**01 19 14.9**	**+0.1**
	comp=Z,1.9nm,0.5s,baz=318,slow=4.8,SNR=6.9						
INK	**Inuvik**	**63.58**	**24**	P	**P**	**01 19 15.4**	**+0.7**
INK				pmax	pmax		
	comp=Z,15nm,1.4s						
INK	**Inuvik**	**63.58**	**24**	P	**P**	**01 19 15.4**	**+0.7**
SVE	**Sverdlovsk**	**64.10**	**323**	*e*P	**P**	**01 19 18.8**	**+0.4**
SVE				pmax	pmax		
	comp=Z,21nm,1.1s						
ARU	**Arti**	**65.30**	**323**	*c i*P	**P**	**01 19 26.2**	**0.0**
ARU				S	**S**	**01 28 09.5**	**+1.7**
ARU				pmax	pmax		
	comp=Z,56nm,1.5s						
ARU	**Arti**	**65.30**	**323**	P	**P**	**01 19 25.5**	**-0.7**
ABKAR	**Akbulak array**	**65.94**	**315**	P	**P**	**01 19 29.7**	**-0.8**
DLBC	**Dease Lake**	**66.62**	**35**	P	**P**	**01 19 36.0**	**+1.2**
	comp=Z,4.5nm,1.0s,baz=276,slow=3.1,SNR=4.5						
DLBC	**Dease Lake**	**66.62**	**35**	IAmb	IAmb	01 19 46.9	
	comp=Z,7.0nm,1.1s						
HRA	**Herat**	**68.19**	**299**	IAmb	IAmb	01 19 58.2	
	comp=Z,4.1nm,0.7s						
KIRV	**Kirov**	**69.58**	**326**	⇓*e*P	**P**	**01 19 54.0**	**+0.8**
GEYT	**Alibeck**	**70.28**	**303**	P	**P**	**01 19 58.8**	**+0.8**
	comp=Z,1.6nm,0.6s,baz=209,slow=24,SNR=3.6						
GEYT	**Alibeck**	**70.28**	**303**	IAmb	IAmb	01 19 59.3	
	comp=Z,11nm,1.4s						
GYA0B	**ALIBECK ARRAY**	**70.28**	**303**	P	**P**	**01 19 57.7**	**-0.3**
GYA0B				IAmb	IAmb	01 20 15.8	
	comp=Z,5.4nm,0.8s						
BELG	**Belogornoye**	**72.53**	**320**	*c i*P	**P**	**01 20 11.2**	**0.0**
BELG				pmax	pmax		
	comp=Z,6.0nm,1.0s						
YKA	**Yellowknife Ar**	**72.64**	**28**	P	**P**	**01 20 11.5**	**-0.2**
	comp=Z,4.1nm,0.9s,baz=297,slow=4.6,SNR=5.6						
KLMR	**Klimovskoe**	**73.47**	**330**	*e*P	**P**	**01 20 14.6**	**-2.0**
KLMR				pmax	pmax		
	comp=Z,12nm,0.8s						
KLMR	**Klimovskoe**	**73.47**	**330**	*e*P	**P**	**01 20 14.6**	**-2.0**
KLMR				AMP		01 20 33.5	
	comp=Z,12nm,0.8s						
ARCES	**ARCESS Array B**	**74.42**	**341**	P	**P**	**01 20 23.7**	**+1.6**
	comp=Z,6.1nm,0.7s,baz=52,slow=7.9,SNR=14						
ARCES				LR	LR	01 57 31.0	
	comp=Z,215nm,18.5s,baz=75,slow=39						
MSF	**Maaselka**	**75.27**	**337**	P	**P**	**01 20 26.1**	**-0.9**
MSF				pmax	pmax		
	comp=Z,36nm,1.8s						
SGF	**Sodankyl**	**75.28**	**339**	P	**P**	**01 20 24.6**	**-2.4**
B08A	**Colville Reser**	**75.83**	**43**	IAmb	IAmb	01 20 43.2	
	comp=Z,5.4nm,0.9s						
MAK	**Makhachkala**	**76.10**	**311**	*e*P	**P**	**01 20 29.5**	**-2.7**
MAK				*e*S	**S**	**01 30 11.9**	**-1.9**
MAK				pmax	pmax		
	comp=Z,171nm,1.1s						
MAK				MLR	MLR		
	comp=Z,442nm,14.0s						
VRH	**Novokhopyorsk**	**76.38**	**321**	*e*P	**P**	**01 20 31.3**	**-2.3**
VRH				pmax	pmax		
	comp=Z,10.0nm,1.3s						
MOS	**Moscow**	**76.59**	**326**	*e*P	**P**	**01 20 32.6**	**-2.1**
MOS				*e*S	**S**	**01 30 15.5**	**-3.2**
MOS				pmax	pmax		
	comp=Z,42nm,1.5s						
MOS				MLR	MLR		
	comp=Z,400nm,18.0s						
E09A	**Wood Farm, Sta**	**77.32**	**44**	IAmb	IAmb	01 20 40.5	
	comp=Z,6.4nm,0.9s						
LPSR	**Galich'ya Gora**	**77.33**	**323**	*e*P	**P**	**01 20 36.3**	**-2.6**
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.3s						
OBN	**Obninsk**	**77.41**	**326**	*i* P	**P**	**01 20 40.6**	**+1.2**
OBN				*i*		01 20 48.4	
OBN				pmax	pmax		
	comp=Z,35nm,1.6s						
OBN				MLR	MLR		
	comp=Z,421nm,18.0s						
VSR	**Storozhevoye**	**77.82**	**321**	*e*P	**P**	**01 20 40.6**	**-1.1**
VSR				pmax	pmax		
	comp=Z,20nm,1.4s						
J08A	**Circle Bar Ran**	**78.44**	**47**	IAmb	IAmb	01 20 46.9	
	comp=Z,8.5nm,1.1s						
NCK	**Nalchik**	**78.49**	**313**	⇑*e*P	**P**	**01 20 45.5**	**-0.2**
NCK				pmax	pmax		
	comp=Z,15nm,1.3s						
BMO	**Blue Mountains**	**78.56**	**46**	IAmb	IAmb	01 20 47.0	
	comp=Z,4.8nm,0.8s						
ZEI	**Tsey**	**78.59**	**312**	*e*P	**P**	**01 20 45.3**	**-1.1**
ZEI				pmax	pmax		
	comp=Z,5.0nm,1.4s						
FIA1	**FINESS Array S**	**78.84**	**334**	P	**P**	**01 20 48.0**	**+0.8**
FINES	**FINESS Array B**	**78.84**	**334**	P	**P**	**01 20 47.5**	**+0.4**
	comp=Z,8.4nm,0.5s,baz=74,slow=4.8,SNR=51						
FINES				LR	LR	01 58 15.8	
	comp=Z,100nm,18.3s,baz=28,slow=38						
KBZ	**Khabaz**	**78.85**	**313**	P	**P**	**01 20 47.9**	**+0.3**
	comp=Z,9.3nm,0.9s,baz=105,slow=4.9,SNR=14						
KBZ	**Khabaz**	**78.85**	**313**	*ce*P	**P**	**01 20 47.9**	**+0.3**
KBZ				pmax	pmax		
	comp=Z,14nm,1.1s						
KIV	**Kislovodsk**	**78.89**	**314**	*e*P	**P**	**01 20 49.1**	**+1.2**
KIV				pmax	pmax		
	comp=Z,15nm,1.1s						
KIV				MLR	MLR		
	comp=Z,208nm,19.0s						
KIV	**Kislovodsk**	**78.89**	**314**	P	**P**	**01 20 48.5**	**+0.6**
KIV				IAmb	IAmb	01 20 59.7	
	comp=Z,12nm,0.9s						
PPT2	**Papeete2**	**78.97**	**116**	*e*LR	LR	01 45 27.2	
	comp=Z,94nm,20.8s						
PMOR	**Pomariorio Ree**	**78.99**	**113**	*e*T	T	02 47 00.7	
	comp=Z,11nm,0.3s						
GNI	**Garni**	**79.14**	**309**	P	**P**	**01 20 48.9**	**-0.6**
GNI				pmax	pmax		
	comp=Z,26nm,1.3s						
GNI	**Garni**	**79.14**	**309**	P	**P**	**01 20 48.9**	**-0.6**
JTMT	**Jette**	**79.16**	**42**	IAmb	IAmb	01 20 50.9	
	comp=Z,7.5nm,0.9s						
CMB	**Columbia Colle**	**79.38**	**53**	IAmb	IAmb	01 20 51.8	
	comp=Z,7.5nm,0.8s						
PAHR	**Pah Rah Range**	**79.38**	**51**	P	**P**	**01 20 50.6**	**-0.2**
PNTR	**Pine Nut**	**79.49**	**52**	P	**P**	**01 20 52.2**	**+0.8**
PNTR				IAmb	IAmb	01 20 52.8	
	comp=Z,7.9nm,0.9s						
VSU	**Vasula**	**80.28**	**331**	⇑*e*P	**P**	**01 20 53.9**	**-1.2**
VSU				pmax	pmax		
	comp=Z,106nm,1.5s						
KVN	**Kaiserville**	**80.56**	**51**	IAmb	IAmb	01 20 58.3	
	comp=Z,6.7nm,1.0s						
NVAR	**Mina Array Bea**	**80.69**	**52**	P	**P**	**01 20 58.5**	**+0.5**
	comp=Z,3.0nm,0.8s,baz=286,slow=5.8,SNR=22						
NVAR				LR	LR	01 49 07.1	
	comp=Z,80nm,20.5s,baz=292,slow=30						
SOC	**Sochi**	**80.98**	**314**	*e*P	**P**	**01 20 58.6**	**-0.5**
SOC				*e*		01 24 01.1	
SOC				*e*PPP	PPP	01 25 49.2	
SOC				*e*S	**S**	**01 31 08.2**	**+2.1**
SOC				*e*SS	**SS**	**01 36 19.1**	**-0.8**
SOC				*e*SSS	SSS	01 39 47.2	
SOC				MLR	MLR		
	comp=Z,315nm,20.0s						
HLID	**Hailey**	**81.00**	**46**	P	**P**	**01 20 59.9**	**+0.4**
GURO	**Guroymak-BITLI**	**81.72**	**309**	IAmb	IAmb	01 21 12.7	
	comp=Z,6.4nm,1.1s						
SIRT	**Sirnak**	**81.91**	**308**	P	**P**	**01 21 04.3**	**0.0**
MNK	**Minsk**	**82.03**	**328**	*i* P	P	01 20 55.9	-8.5
MNK				*i* S	S	01 31 06.9	-10
MNK				*i* SSS	SSS	01 39 56.7	
MNK				pmax	pmax		
	comp=E,4.0nm,1.1s						
MNK				pmax	pmax		
	comp=N,20nm,1.1s						
MNK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MNK				MLR	MLR		
	comp=Z,197nm,22.0s						
MNK				MLR	MLR		
	comp=E,26nm,27.0s						
MNK				MLR	MLR		
	comp=N,155nm,20.0s						
MNK	**Minsk**	**82.03**	**328**	*i* P	P	01 20 55.9	-8.5
	comp=E,4.0nm,1.1s						
MNK				*i* P	P	01 20 55.9	-8.5
	comp=N,20nm,1.1s						
MNK				*i* P	P	01 20 55.9	-8.5
	comp=Z,9.0nm,1.0s,baz=55						
MNK				*i* PP	PP	01 24 03.6	-8.3
MNK				*i* PPP	PPP	01 25 54.4	
MNK				*i* S	S	01 31 07.0	-10
MNK				*i* SS	**SS**	**01 36 28.6**	**-6.3**
MNK				*i* SSS	SSS	01 39 56.8	
MNK				*i* LQ	LQ	01 51 03.5	
MNK				*i* LR	LR	01 57 01.7	
MNK				*i* LRM	MLR	01 59 08.3	
	comp=Z,197nm,22.4s						
MNK				*i* LRM	MLR	01 59 11.2	
	comp=E,26nm,26.8s						
MNK				*i* LRM	MLR	01 59 18.5	
	comp=N,155nm,20.3s						
TBI	**Tubuai**	**82.14**	**121**	*e*LR	LR	01 46 54.0	
	comp=N,169nm,22.5s						
NACGM	**Naroch**	**82.32**	**328**	*i* P	**P**	**01 21 06.2**	**+0.2**
YHL	**Hebgen Lake**	**82.42**	**44**	IAmb	IAmb	01 21 20.6	
	comp=Z,7.6nm,1.2s						
TAOE	**Nuku Hiva Isla**	**82.59**	**104**	*e*LR	LR	01 47 02.7	
	comp=Z,358nm,23.9s						
YMR	**Madison River**	**82.65**	**44**	IAmb	IAmb	01 21 10.2	
	comp=Z,4.8nm,0.9s						

QSM	**Queen of Sheba**	**82.81**	**54**	IAmb	IAmb	01 21 20.9	
	comp=Z,7.5nm,1.0s						
GWY	**Greenwater Val**	**82.86**	**53**	IAmb	IAmb	01 21 10.3	
	comp=Z,7.3nm,0.8s						
GSC	**Goldstone, Bar**	**83.16**	**54**	IAmb	IAmb	01 21 13.6	
	comp=Z,6.0nm,1.2s						
RLMT	**Red Lodge**	**83.46**	**43**	IAmb	IAmb	01 21 39.9	
	comp=Z,8.1nm,1.2s						
AKASG	**Malin Array Be**	**83.50**	**324**	P	**P**	**01 21 11.6**	**-0.6**
	comp=Z,1.0nm,0.4s,baz=50,slow=5.5,SNR=7.4						
AKASG	**Malin Array Be**	**83.50**	**324**	IAmb	IAmb	01 21 25.0	
	comp=Z,6.1nm,1.2s						
AKBB	**Malin Array Si**	**83.50**	**324**	⇑*e*P	**P**	**01 21 11.7**	**-0.4**
AKBB				pmax	pmax		
	comp=Z,7.0nm,0.9s						
AKBB	**Malin Array Si**	**83.50**	**324**	P	**P**	**01 21 12.0**	**-0.1**
DUG	**Dugway, Tooele**	**83.65**	**48**	P	**P**	**01 21 13.3**	**-0.1**
DUG				pmax	pmax		
	comp=Z,7.0nm,2.7s						
DUG	**Dugway, Tooele**	**83.65**	**48**	IAmb	IAmb	01 21 25.0	
	comp=Z,4.8nm,1.1s						
JLU	**Jordanelle**	**84.36**	**47**	IAmb	IAmb	01 21 29.8	
	comp=Z,5.2nm,1.1s						
PDAR	**Pinedale Array**	**84.49**	**45**	P	**P**	**01 21 17.7**	**0.0**
	comp=Z,0.9nm,0.8s,baz=276,slow=2.8,SNR=6.7						
PDAR	**Pinedale Array**	**84.49**	**45**	P	**P**	**01 21 17.4**	**-0.3**
NB2	**NORSAR Subarra**	**84.50**	**338**	P	**P**	**01 21 16.5**	**-0.6**
	comp=Z,8.8nm,1.1s,baz=46,slow=4.8						
NOA	**NORSAR Array B**	**84.50**	**338**	P	**P**	**01 21 17.4**	**+0.2**
	comp=Z,2.3nm,0.7s,baz=56,slow=6.1,SNR=7.4						
NOA				LR	LR	02 03 04.9	
	comp=Z,91nm,18.6s,baz=30,slow=39						
NORES	**NORESS Array B**	**84.61**	**338**	P	**P**	**01 21 20.0**	**+2.4**
LCMT	**Little Creek M**	**84.90**	**51**	IAmb	IAmb	01 21 21.1	
	comp=Z,3.5nm,0.8s						
Q16A	**Castle Valley**	**85.38**	**49**	IAmb	IAmb	01 21 23.6	
	comp=Z,3.6nm,0.8s						
RDMU	**Red Mountain**	**85.61**	**47**	IAmb	IAmb	01 21 24.5	
	comp=Z,6.3nm,1.0s						
P18A	**Preston Nutter**	**85.64**	**48**	IAmb	IAmb	01 21 28.3	
	comp=Z,6.4nm,1.3s						
SRU	**San Rafael Swe**	**85.72**	**48**	IAmb	IAmb	01 21 24.7	
	comp=Z,4.4nm,0.8s						
RAYN	**Ar Rayn**	**85.84**	**294**	P	**P**	**01 21 24.6**	**0.0**
RAYN				pmax	pmax		
	comp=Z,28nm,1.0s						
RAYN	**Ar Rayn**	**85.84**	**294**	P	**P**	**01 21 24.6**	**0.0**
U15A	**North Rim**	**85.85**	**51**	IAmb	IAmb	01 21 26.4	
	comp=Z,4.0nm,0.8s						
BR131	**Keskin Array S**	**86.84**	**313**	P	**P**	**01 21 29.3**	**0.0**
BR131				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BR131	**Keskin Array S**	**86.84**	**313**	P	**P**	**01 21 29.3**	**0.0**
BR131				IAmb	IAmb	01 21 40.7	
	comp=Z,5.8nm,0.9s						
BRTR	**Keskin Array B**	**86.84**	**313**	P	**P**	**01 21 29.1**	**-0.2**
	comp=Z,1.2nm,0.8s,baz=115,slow=5.6,SNR=8.9						
BRTR				LR	LR	02 03 59.6	
	comp=Z,145nm,19.8s,baz=76,slow=38						
CRVS	**Cervenica-Dubn**	**88.60**	**326**	*e*P	**P**	**01 21 35.3**	**-2.1**
CRVS	**Cervenica-Dubn**	**88.60**	**326**	*e*P	**P**	**01 21 35.3**	**-2.1**
MMAI	**Mount Meron Ar**	**89.11**	**307**	LR	LR	02 06 15.6	
	comp=Z,50nm,18.2s,baz=0.0,slow=39						
DPC	**Dobruska-Polom**	**90.13**	**329**	*e*P	**P**	**01 21 44.6**	**0.0**
DPC				*e*		01 21 53.8	
DPC	**Dobruska-Polom**	**90.13**	**329**	*e*P	**P**	**01 21 44.6**	**0.0**
DPC				*e*x	x	01 21 53.8	
ANMO	**Albuquerque**	**90.67**	**50**	⇓*e*P	**P**	**01 21 48.2**	**+0.6**
ANMO				pmax	pmax		
	comp=Z,8.0nm,2.7s						
BRG	**Berggiesshubel**	**90.84**	**330**	*e*P	P	01 21 58.0	+10
BRG				Amp		01 22 03.4	
	comp=Z,2.9nm,0.8s						
CONA	**Conrad Observa**	**92.03**	**327**	*e*P	**P**	**01 21 53.9**	**+0.4**
	comp=Z,4.9nm,1.2s						
CKRC	**Cesky Krumlov**	**92.14**	**329**	*e*P	**P**	**01 21 53.2**	**-0.7**
CKRC				*e*x	x	01 22 03.0	
KHC	**Kasperske Hory**	**92.25**	**329**	*e*P	**P**	**01 21 53.9**	**-0.5**
KHC				*e*		01 22 02.7	
KHC	**Kasperske Hory**	**92.25**	**329**	*e*P	**P**	**01 21 53.9**	**-0.5**
KHC				*e*x	x	01 22 02.7	
GERES	**GERESS Array B**	**92.40**	**329**	P	**P**	**01 21 56.4**	**+1.2**
	comp=Z,0.9nm,0.7s,baz=32,slow=3.9,SNR=1.5						
GERES				LR	LR	02 07 52.4	
	comp=Z,143nm,18.5s,baz=272,slow=38						
ARSA	**Arzberg**	**92.66**	**327**	*e*P	**P**	**01 21 56.4**	**0.0**
	comp=Z,4.5nm,1.1s						
MOA	**Molln**	**92.84**	**328**	*e*P	**P**	**01 21 57.2**	**0.0**
	comp=Z,2.4nm,0.7s						
MNTX	**Cornudas Mount**	**93.20**	**52**	IAmb	IAmb	01 22 00.7	
	comp=Z,3.4nm,0.8s						
OBKA	**Obir**	**93.66**	**327**	*e*P	**P**	**01 21 59.2**	**-1.9**
	comp=Z,2.3nm,1.3s						
KBA	**Koelnbreinsper**	**93.83**	**328**	P	**P**	**01 21 58.0**	**-3.9**
KBA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
IDI	**Anoyia**	**95.08**	**313**	LR	LR	02 10 37.5	
	comp=Z,53nm,18.1s,baz=42,slow=39						
SCHQ	**Schefferville**	**95.32**	**17**	LR	LR	02 14 33.4	
	comp=Z,33nm,18.0s,baz=80,slow=41						
TXAR	**Lajitas Array**	**95.75**	**53**	P	**P**	**01 22 11.7**	**+0.7**
	comp=Z,0.9nm,0.8s,baz=309,slow=2.6,SNR=12						
ESDC	**Sonseca Array**	**107.35**	**334**	PP	**PP**	**01 27 34.0**	**+5.1**
	comp=Z,1.0nm,1.1s,baz=46,slow=8.5,SNR=4.5						
TORD	**Torodi Ar. Bea**	**125.41**	**311**	PKP	**PKiKP**	**01 27 48.4**	**+1.9**
	comp=Z,0.5nm,0.6s,baz=24,slow=3.8,SNR=4.0						
TORD				PP	**PP**	**01 29 34.2**	**-1.9**
	comp=Z,1.3nm,1.1s,baz=5.4,slow=5.0,SNR=3.7						
PTGA	**Pitinga**	**146.53**	**44**	PKPbc	**PKPab**	**01 28 26.4**	**-1.1**
	comp=Z,8.9nm,0.8s,baz=327,slow=3.9,SNR=20						
PTGA	**Pitinga**	**146.53**	**44**		**PKPab**	**01 28 26.8**	**-0.7**
ETMB	**Extrema**	**148.16**	**64**	PKPbc	**PKPbc**	**01 28 29.7**	**-1.3**
PLCA	**Paso Flores**	**149.01**	**126**	PKPbc	**PKiKP**	**01 28 33.0**	**-0.8**
	comp=Z,2.9nm,0.6s,baz=260,slow=3.4,SNR=13						

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*IDC **20** 01:17:22.3±2.3, 5°.84S×130°.17E, h161^{km}±36^{km}, mb3.2/1, mb1 3.7/5, mb1mx3.3/32, mbtmp4.1/5, MS3.4/1, Ms1 3.4/1, ms1mx2.5/18, Error ellipse: s-maj=70.3km s-min=16.7km az=89.0*

ISC 20 01:17:21.1±1.0**, 5°.97S**±0°.06×**130°.0E**±0°.2**, h146**^{km}**, n9,** σ**3**^{s}**.14**/10**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.22**	**14**	P	**Pn**	**01 18 38.6**	**+1.1**
	8.8nm,0.3s,baz=34,slow=23,SNR=41						
SIJI				S	**Sn**	**01 19 34.4**	**-2.7**
	11nm,0.3s,baz=242,slow=23,SNR=14						
MTN	**Manton Dam**	**6.92**	**171**	P	Pn	01 19 04.0	+3.8
	35nm,0.5s						
KDU	**Kakadu**	**7.11**	**160**	P	**Pn**	**01 19 05.7**	**+3.1**
	73nm,0.6s						
KNRA	**Kununurra**	**9.72**	**187**	P	**Pn**	**01 19 40.4**	**+2.9**
	28nm,0.5s						
FITZ	**Fitzroy Crossi**	**12.78**	**199**	P	**Pn**	**01 20 19.3**	**+1.6**
	baz=35,slow=12						
FITZ				S	**Sn**	**01 22 34.3**	**-4.7**
	0.9nm,0.3s,baz=96,slow=20,SNR=2.9						
WRA	**Warramunga Arr**	**14.52**	**163**	P	**Pn**	**01 20 39.5**	**-0.3**
	0.6nm,0.3s,baz=350,slow=12,SNR=16						
WRA				S	**Sn**	**01 23 16.9**	**-4.0**
	0.4nm,0.3s,baz=330,slow=23,SNR=2.3						
PMG	**Port Moresby**	**17.35**	**102**	LR	LR	01 27 55.1	
	comp=Z,136nm,21.5s,baz=10,slow=37						
ASAR	**Alice Springs**	**17.99**	**168**	P	**Pn**	**01 21 23.3**	**+1.1**
	1.3nm,0.3s,baz=346,slow=9.4,SNR=49						
MKAR	**Makanchi Array**	**67.36**	**327**	P	**P**	**01 27 59.8**	**-0.7**
	0.6nm,0.8s,baz=109,slow=8.1,SNR=1.4						

IDC 20 01:24:02.3±2.2**, 0°.94N×127°.31E, h0**^{km}**, mb3.8**/3**, mb1 4.1**/3**, mb1mx3.4**/30**, mbtmp3.9**/3**, MS3.1**/1**, Ms1 3.1**/1**, ms1mx2.5**/35**, Error ellipse: s-maj=163.7km s-min=27.9km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**11.65**	**198**	LR	LR	01 31 42.1	
	comp=Z,102nm,20.4s,baz=74,slow=40						
WRA	**Warramunga Arr**	**21.87**	**162**	P	P	01 28 55.9	-1.1
	2.2nm,0.6s,baz=341,slow=11,SNR=20						
ASAR	**Alice Springs**	**25.28**	**166**	P	P	01 29 31.4	+0.7
	1.8nm,0.7s,baz=344,slow=11,SNR=17						
MKAR	**Makanchi Array**	**60.17**	**326**	P	P	01 34 11.9	-0.1
	0.5nm,0.5s,baz=122,slow=8.7,SNR=2.5						

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*IDC **20** 01:49:12.9±1.4, 16°.66N×86°.64W, h0^{km}, mb3.7/7, mb1 4.1/9, mb1mx3.8/47, mbtmp3.7/9, ML3.3/2, MS3.4/2, Ms1 3.4/2, ms1mx2.8/23, Error ellipse: s-maj=35.5km s-min=23.9km az=25.0*

*NEIC **20** 01:49:19.2±2.3, 16°.56N±0°.08×87°.15W±0°.10, h25^{km}±4^{km}, mb4.2/34, Error ellipse: s-maj=14.5km s-min=10.7km az=57.0*

ISC 20 01:49:16.9±0.8**, 16°.59N**±0°.08×**86°.90W**±0°.07**, h22**^{km}**, n58,** σ**1**^{s}**.49**/57**, mb4.1**/12**, North of Honduras**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGUH	**Tegucigalpa,Un**	**2.54**	**188**	Pn	**Pn**	**01 49 55.7**	**-1.3**
PETF	**Flores**	**2.86**	**277**	Pn	**Pn**	**01 49 58.6**	**-2.7**
ESQI	**Esquipulas**	**3.10**	**230**	Pn	**Pn**	**01 50 03.0**	**-1.6**
MTO3	**Montecristo**	**3.22**	**228**	Pn	**Pn**	**01 50 05.3**	**-1.1**
CNGN	**Cerro Negro**	**4.07**	**177**	Pn	**Pn**	**01 50 19.6**	**+1.7**
BOAB	**BOACO BROADBAN**	**4.28**	**164**	Pn	**Pn**	**01 50 22.9**	**+2.1**
ACON	**Acoyapa**	**4.89**	**160**	Pn	**Pn**	**01 50 31.8**	**+2.6**
CCIG	**Comitan**	**5.04**	**267**	Pn	**Pn**	**01 50 28.2**	**-3.2**
JTS	**Las Juntas de**	**6.54**	**163**	Pn	**Pn**	**01 50 51.6**	**-0.2**
	0.4nm,0.3s,baz=190,slow=23,SNR=1.8						
JTS				Lg	Lg	01 52 26.7	
	0.9nm,0.3s,baz=259,slow=17,SNR=4.2						
SOR	**Soroa**	**7.18**	**30**	Pn	**Pn**	**01 51 00.4**	**-0.2**
CMIG	**Matias Romero**	**7.66**	**275**	Pn	**Pn**	**01 51 07.5**	**+0.2**
	0.5nm,0.3s,baz=108,slow=7.5,SNR=7.3						
CMIG				Sn	**Sn**	**01 52 35.8**	**+2.3**
	0.6nm,0.3s,baz=137,slow=23,SNR=1.9						
CMIG				LR	LR	01 54 10.7	
	comp=Z,112nm,20.4s,baz=88,slow=38						
250A	**Grady**	**15.34**	**2**	Pn	**Pn**	**01 52 51.8**	**-0.2**
HKT	**Hockley**	**15.62**	**330**	Pn	**P**	**01 52 58.0**	**-1.7**
HKT				IAmb	IAmb	01 52 59.0	
	comp=Z,19nm,1.1s						
NATX	**Nacogdoches**	**16.67**	**336**		**Pn**	**01 53 09.2**	**-0.1**
NATX				IAmb	IAmb	01 53 12.6	
	comp=Z,18nm,0.9s						
435B	**Jarrell**	**17.17**	**327**		**P**	**01 53 17.1**	**+0.1**
435B				IAmb	IAmb	01 53 20.1	
	comp=Z,20nm,0.6s						
237A	**Washetta, Mont**	**17.35**	**334**		**P**	**01 53 20.6**	**+1.7**
237A				IAmb	IAmb	01 53 22.0	
	comp=Z,19nm,1.1s						
Y52A	**Lilburn**	**17.39**	**8**		**P**	**01 53 20.8**	**+1.3**
Y52A				IAmb	IAmb	01 53 23.1	
	comp=Z,24nm,1.4s						
CCAR	**Cane Creek**	**17.81**	**347**	Pn	**P**	**01 53 27.1**	**+3.1**
WHTX	**Lake Whitney,**	**18.09**	**330**	P	**P**	**01 53 28.5**	**+1.4**
MIAR	**Mount Ida**	**18.86**	**343**	P	**Pn**	**01 53 37.3**	**+1.1**
MIAR				IAmb	IAmb	01 53 49.2	
	comp=Z,18nm,1.4s						
CPCT	**Cooper Cave**	**18.91**	**6**	P	**Pn**	**01 53 40.9**	**+4.1**
TKL	**Tuckaleechee C**	**19.20**	**8**	P	**Pn**	**01 53 42.8**	**+2.5**
	comp=Z,0.5nm,0.3s,baz=172,slow=13,SNR=5.2						
V51A	**Loudon**	**19.27**	**6**	P	**Pn**	**01 53 42.5**	**+1.3**
V53A	**Saluda**	**19.35**	**10**	P	**Pn**	**01 53 42.3**	**+0.1**
V53A				IAmb	IAmb	01 54 05.7	
	comp=Z,12nm,1.1s						
CLTN	**Cedars of Leba**	**19.43**	**1**	P	**Pn**	**01 53 43.7**	**+0.6**
ABTX	**Abilene, Hawle**	**19.70**	**326**	P	**Pn**	**01 53 46.9**	**+0.5**
ABTX				IAmb	IAmb	01 53 47.3	
	comp=Z,11nm,0.8s						
LCAR	**Lake Charles**	**19.77**	**350**	P	**Pn**	**01 53 47.2**	**+0.1**
TXAR	**Lajitas Array**	**19.95**	**312**	P	**Pn**	**01 53 49.1**	**-0.4**
	comp=Z,2.4nm,0.8s,baz=128,slow=11,SNR=29						
TXAR	**Lajitas Array**	**19.95**	**312**	P	**P**	**01 53 48.1**	**+0.3**
TX31	**Lajitas Ar. Si**	**19.95**	**312**	P	**P**	**01 53 47.5**	**-0.2**
TX31				IAmb	IAmb	01 54 03.0	
	comp=Z,15nm,1.1s						
TX32	**Lajitas Array**	**19.95**	**312**	P	**Pn**	**01 53 49.4**	**-0.1**
PBMO	**Poplar Bluff**	**20.36**	**352**	P	**P**	**01 53 52.1**	**+0.2**
PBMO				IAmb	IAmb	01 53 54.1	
	comp=Z,6.6nm,0.8s						
HHAR	**Hobbs**	**20.59**	**344**	P	Pn	01 53 56.1	-0.7
HHAR				IAmb	IAmb	01 53 56.7	
	comp=Z,12nm,1.1s						
U38A	**Gravette**	**20.86**	**343**	P	**P**	**01 53 57.9**	**+0.4**
U38A				IAmb	IAmb	01 54 01.4	
	comp=Z,24nm,1.5s						
WMOK	**Wichita Mounta**	**20.98**	**332**	P	**P**	**01 53 59.3**	**+0.6**
MGMO	**Mountain Grove**	**21.03**	**348**	P	**P**	**01 53 59.3**	**0.0**
T57A	**Hurt**	**21.43**	**17**	P	**P**	**01 54 03.7**	**+0.2**
T57A				IAmb	IAmb	01 54 04.9	
	comp=Z,9.5nm,0.8s						
S39A	**Bolivar**	**21.77**	**346**	P	**P**	**01 54 08.4**	**+1.2**
S39A				IAmb	IAmb	01 54 10.0	
	comp=Z,5.5nm,0.7s						
R40A	**Maddies Statio**	**22.13**	**349**	P	**P**	**01 54 11.8**	**+0.8**
R40A				IAmb	IAmb	01 54 12.3	
	comp=Z,6.9nm,0.7s						
AMTX	**Amarillo**	**22.52**	**327**	P	**P**	**01 54 14.4**	**-0.9**
AMTX				IAmb	IAmb	01 54 17.8	
	comp=Z,8.8nm,0.8s						
P40A	**Paris**	**23.30**	**350**	P	**P**	**01 54 24.5**	**+1.2**
N49A	**Columbus Grove**	**24.36**	**5**	P	**P**	**01 54 33.8**	**+0.4**
LENM	**Lemitar**	**25.13**	**318**	P	**P**	**01 54 43.5**	**+2.9**
ANMO	**Albuquerque**	**25.30**	**320**	P	**P**	**01 54 43.0**	**+0.8**
	comp=Z,0.9nm,0.7s,baz=141,slow=9.9,SNR=5.0						
SDCO	**Great Sand Dun**	**26.70**	**326**	P	**P**	**01 54 55.5**	**+0.6**
SADO	**Sadowa**	**28.85**	**11**	P	**P**	**01 55 12.8**	**-0.9**
	comp=Z,17nm,1.0s,baz=166,slow=1.1,SNR=3.2						
PDAR	**Pinedale Array**	**32.48**	**328**	P	**P**	**01 55 45.5**	**-0.6**
	comp=Z,0.8nm,0.8s,baz=126,slow=11,SNR=5.1						
REDW	**Red Top Meadow**	**33.57**	**328**	P	**P**	**01 55 56.3**	**+0.7**
SNOW	**Snow King Moun**	**33.59**	**328**	P	**P**	**01 55 55.5**	**-0.3**
NVAR	**Mina Array Bea**	**35.08**	**315**	P	**P**	**01 56 09.9**	**+1.2**
	comp=Z,1.2nm,1.0s,baz=126,slow=7.7,SNR=6.2						
BMN	**Battle Mountai**	**35.40**	**318**	P	**P**	**01 56 13.2**	**+1.7**
BMN				IAmb	IAmb	01 56 13.5	
	comp=Z,2.2nm,0.8s						
MCMT	**McKenzie Canyo**	**35.62**	**328**	P	**P**	**01 56 13.8**	**+0.4**
HOOD	**Mount Hood Mea**	**40.81**	**322**	P	**P**	**01 56 58.0**	**+1.0**
ILAR	**Eielson Array**	**62.49**	**335**	P	**P**	**01 59 37.2**	**-1.3**
	comp=Z,1.1nm,0.8s,baz=117,slow=5.9,SNR=10						
BMAR	**Burnt Mountain**	**62.64**	**338**	P	**P**	**01 59 39.3**	**-0.2**
ESDC	**Sonseca Array**	**74.25**	**53**	P	**P**	**02 00 50.6**	**-2.0**
	comp=Z,0.9nm,0.9s,baz=301,slow=6.4,SNR=6.1						
DBIC	**Dimbokro**	**80.53**	**86**	LR	LR	02 35 34.0	
	comp=Z,48nm,19.6s,baz=74,slow=35						
GERES	**GERESS Array B**	**84.46**	**41**	P	**P**	**02 01 46.2**	**-2.0**
	comp=Z,0.4nm,0.3s,baz=266,slow=6.5,SNR=1.0						

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*SKHL **20** 02:00:14.3±0.3, 44°.20N×148°.00E, h46^{km}±3^{km}, mb4.1/2*

*JMA **20** 02:00:15.4±0.3, 43°.74N×147°.80E, h13^{km}, M3.5*

ISC 20 02:00:14.3±3.9**, 44°.3N**±0°.1×**147°.7E**±0°.2**, h24**^{km}±21^{km}**, n6,** σ**0**^{s}**.75**/11**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**0.93**	**5**	*e*P	**Pn**	**02 00 32.1**	**+0.2**
KUR				AMB	AMB	02 00 33.0	
	50nm,0.3s						
KUR				*e*S	**Sn**	**02 00 44.3**	**-0.2**
KUR				A	A	02 00 46.3	
	180nm,0.4s						
KUR				A	A	02 00 46.3	
	150nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**1.38**	**259**	*e*P	**Pn**	**02 00 38.0**	**0.0**
YUK				AMB	AMB	02 00 40.8	
	100nm,0.5s						
YUK				*e*S	**Sb**	**02 00 57.2**	**+0.6**
YUK				A	A	02 01 02.3	
	310nm,0.5s						
YUK				A	A	02 01 02.3	
	340nm,0.5s						
NEM2	**Nemuro 2**	**1.72**	**238**	P	**Pn**	**02 00 42.9**	**+0.2**
NEM2				*e*S	**Sn**	**02 01 02.5**	**-1.5**
JNSB	**Nemuroshibetsu**	**2.04**	**256**	P	**Pb**	**02 00 50.2**	**-0.5**
AKK	**Akkeshi**	**2.47**	**240**	*e*P	**Pn**	**02 00 53.2**	**+0.2**
AKK				*e*S	**Sn**	**02 01 22.8**	**+0.5**
JAK	**Akkeshi**	**2.57**	**240**	P	**Pn**	**02 00 55.2**	**+0.9**
JAK				*e*S	**Sn**	**02 01 24.9**	**+0.1**

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*NEIC **20** 02:07:19.4±1.9, 3°.80N±0°.07×125°.77E±0°.09, h47^{km}±6^{km}, mb4.8/51, Error ellipse: s-maj=13.3km s-min=8.5km az=61.0*

*IDC **20** 02:07:20.7±2.1, 3°.77N×125°.79E, h67^{km}±17^{km}, mb4.3/21, mb1 4.5/23, mb1mx4.3/36, mbtmp4.6/23, MS3.3/14, Ms1 3.3/14, ms1mx3.0/43, Error ellipse: s-maj=23.1km s-min=8.1km az=73.0*

*GCMT **20** 02:07:22.4±0.4, 3°.96N±0°.02×126°.54E±0°.03, h80^{km}±4^{km}, MW4.8/68, Moment Tensor Solution. s13,c14; s68,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.10±.12; $M_{\theta\theta}$1.39±.11; $M_{\phi\phi}$-2.49±.11; $M_{r\theta}$0.66±.06; $M_{\theta\phi}$-0.60±.09; $M_{\phi r}$0.46±.08; Best double couple: $M_0$2.29700×10^{16} NP1:ϕ_s149.00000°,δ58.00000°,λ23.00000°. NP2: ϕ_s46.00000°,δ71.00000°,λ146.00000°. Principal axes: T 1.9310, Plg37.0000°, Azm3.0000°; N 0.7330, Plg51.0000°, Azm201.0000°; P -2.6640, Plg9.0000°, Azm100.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **20** 02:07:23.1±0.3, 4°N±3°×12°6E±°, h65^{km}±3^{km}, M4.8/30, mB5.2/16, mb4.8/30, MLv5.1/17, Mw(mB)4.6/16*

*KLM **20** 02:07:23, 4°.08N×126°.37E, h79^{km}, mb5.0*

ISC 20 02:07:20.6±0.3**, 3°.92N**±0°.03×**126°.22E**±0°.05**, h50**^{km}**, n138,** σ**1**^{s}**.94**/108**, mb4.8**/48**, MS3.4**/14**, 1C-2D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**0.72**	**252**	P	**Pn**	**02 07 37.0**	**+2.3**
SGSI				S	**Sn**	**02 07 47.8**	**+2.9**
GSPH	**General Santos**	**2.50**	**330**	⇓*i*P	**Pn**	**02 08 01.9**	**+3.0**
GSPH				*e*S	**Sn**	**02 08 31.9**	**+3.5**
DAV	**Davao City (W)**	**3.20**	**349**		**Pn**	**02 08 08.2**	**-0.2**
DAV	**Davao City (W)**	**3.20**	**349**	P	Pn	02 08 16.4	+7.9
DMPH	**Davao City--Mi**	**3.22**	**347**	⇑*e*P	Pn	02 08 15.6	+6.7
DMPH				*e*S	Sn	02 09 02.4	+16
TNTI	**Ternate**	**3.33**	**160**		**Pn**	**02 08 12.0**	**+1.8**
KMSI	**Cibinong**	**4.00**	**214**	P	**Pn**	**02 08 20.6**	**+1.1**
BUKP	**Musuan**	**4.10**	**344**	*e*P	Pn	02 08 27.7	+6.8
BIPH	**Bislig**	**4.24**	**2**	*e*P	Pn	02 08 28.6	+5.8
BIPH				*e*S	Sn	02 09 31.6	+20
GTOI	**Gorontalo**	**4.57**	**225**	P	**Pn**	**02 08 27.8**	**+0.5**
LBMI	**Labuha**	**4.70**	**164**	P	**Pn**	**02 08 30.2**	**+1.1**
MRSI	**Marisa**	**5.47**	**231**	P	**Pn**	**02 08 40.4**	**+0.8**
	7.4nm22μm2μm,0.5s						
SANI	**Sanana**	**5.93**	**182**	P	**Pn**	**02 08 44.1**	**-1.9**
APSI	**Ampana**	**6.62**	**224**	P	**Pn**	**02 08 56.1**	**+0.7**
	1.3nm3μm249nm,0.6s						
SWI	**Sorong**	**6.92**	**133**	P	**Pn**	**02 09 01.4**	**+1.8**
	0.5nm132nm,1.0s						
SIJI	**Sorong**	**6.93**	**133**	P	**Pn**	**02 09 01.7**	**+1.9**
	11nm,0.3s,baz=322,slow=7.7,SNR=30						
MPSI	**Mapaga**	**7.25**	**241**	P	**Pn**	**02 09 04.1**	**+0.1**
	0.4nm1μm113nm,0.8s						
MSAI	**Masohi**	**7.71**	**159**	P	**Pn**	**02 09 13.0**	**+2.7**
	0.2nm882nm21nm,0.6s						
AAI	**Ambon**	**7.81**	**165**	P	**Pn**	**02 09 11.9**	**+0.2**
	0.7nm2μm132nm,0.5s						
RCP	**Roxas**	**8.34**	**336**	⇓*e*P	Pn	02 09 25.9	+6.9
FAKI	**Fak Fak**	**9.08**	**138**		**Pn**	**02 09 31.8**	**+2.6**
TTSI	**Tana Toraja**	**9.42**	**223**	P	**Pn**	**02 09 35.9**	**+2.1**
	82nm,0.8s						
SPSI	**Sidrap Palu**	**10.14**	**220**	P	**Pn**	**02 09 44.2**	**+0.5**
	2μm27nm,0.6s						
KKM	**Kota Kinabalu**	**10.19**	**282**	Pn	Pn	02 09 39.1	-5.3
BNSI	**Bone**	**10.27**	**217**	P	**Pn**	**02 09 47.4**	**+1.9**
	39nm,0.6s						
BAKI	**Biak**	**11.11**	**117**	P	**Pn**	**02 10 00.5**	**+3.5**
	3μm231nm,1.4s						
MTKI	**Muara Teweh, K**	**12.30**	**247**	P	**Pn**	**02 10 15.1**	**+1.9**
MMRI	**Maumere**	**13.09**	**198**	Pn	Pn	02 10 17.4	-6.6
EDFI	**Ende, Flores**	**13.37**	**200**	P	**Pn**	**02 10 28.5**	**+0.6**
	272nm20nm,0.6s						
SBUM	**Sibu**	**14.05**	**264**	Pn	**Pn**	**02 10 37.4**	**+0.3**
BATI	**Baumata**	**14.26**	**190**	P	**Pn**	**02 10 41.1**	**+1.2**
	44nm,0.6s						
TWSI	**Taliwang, Sumb**	**15.64**	**216**	P	**Pn**	**02 10 58.2**	**+0.3**
	347nm31nm,0.7s						
JAY	**Jayapura**	**15.83**	**114**	P	**P**	**02 11 04.7**	**+1.3**
	1.0nm,0.3s,baz=351,slow=5.9,SNR=6.5						
JAY				LR	LR	02 17 11.8	
	comp=Z,166nm,19.2s,baz=10.0,slow=37						
JAY	**Jayapura**	**15.83**	**114**	P	**Pn**	**02 11 03.7**	**+3.3**
	1μm20nm,1.7s						
MTN	**Manton Dam**	**17.35**	**164**	Pn	**Pn**	**02 11 16.1**	**-3.3**
MTN				IAmb	IAmb	02 11 17.8	
	comp=Z,68nm,0.5s						
GMJI	**Gumukmas**	**17.57**	**226**	P	**Pn**	**02 11 23.3**	**+1.1**
	comp=Z,31nm,1.3s						
TWG	**Pinlang**	**19.44**	**346**	P	**P**	**02 11 40.4**	**-2.8**
TWG				IAmb	IAmb	02 11 42.0	
	comp=Z,52nm,1.2s						
KNRA	**Kununurra**	**19.63**	**173**	P	**P**	**02 11 43.7**	**-1.5**
KNRA				IAmb	IAmb	02 11 46.1	
	comp=Z,37nm,0.7s						
YULB	**Yu-li**	**19.94**	**347**	P	**P**	**02 11 45.7**	**-2.9**
YULB				IAmb	IAmb	02 11 52.0	
	comp=Z,41nm,1.2s						
TPUB	**Ta-pu**	**20.01**	**345**		**P**	**02 11 46.9**	**-2.5**
TPUB				IAmb	IAmb	02 11 50.0	
	comp=Z,26nm,0.7s						
SSLB	**Suanglung**	**20.40**	**346**		**P**	**02 11 51.4**	**-2.1**
SSLB				IAmb	IAmb	02 11 55.4	
	comp=Z,26nm,0.8s						
LEM	**Lembang**	**21.41**	**240**	LR	LR	02 21 02.4	
	comp=Z,43nm,18.5s,baz=284,slow=39						
FITZ	**Fitzroy Crossi**	**21.88**	**181**	P	**P**	**02 12 06.0**	**-3.5**
	comp=Z,18nm,0.5s,baz=34,slow=10.0,SNR=53						
JMZ	**Minamidaito 2**	**22.30**	**12**	P	**P**	**02 12 14.9**	**+0.9**
JOW	**Kunigami**	**22.87**	**5**	P	**P**	**02 12 21.5**	**+1.5**
	comp=Z,28nm,0.6s,baz=231,slow=10,SNR=11						
JOW				LR	LR	02 21 11.8	
	comp=Z,29nm,20.7s,baz=171,slow=36						
JOW	**Kunigami**	**22.87**	**5**	P	**P**	**02 12 20.2**	**+0.2**
JOW				IAmb	IAmb	02 12 22.9	
	comp=Z,35nm,0.7s						
MDSI	**Maura Dua**	**23.55**	**249**	P	**P**	**02 12 27.3**	**+0.5**
	comp=Z,16nm,1.2s						
JRMM	**Jerantut**	**23.68**	**271**	P	**P**	**02 12 29.0**	**+0.9**
RGRI	**Rengat**	**24.24**	**260**	P	P	02 12 50.9	+18
COEN	**Coen**	**24.46**	**137**	P	**P**	**02 12 35.0**	**-0.2**
COEN				IAmb	IAmb	02 12 35.6	
	comp=Z,49nm,0.8s						
PMG	**Port Moresby**	**24.71**	**122**	P	**P**	**02 12 38.4**	**+1.0**
	comp=Z,9.8nm,0.5s,baz=315,slow=10,SNR=6.3						
PMG				LR	LR	02 22 42.6	
	comp=Z,126nm,21.1s,baz=294,slow=37						
PMG	**Port Moresby**	**24.71**	**122**	P	**P**	**02 12 38.2**	**+0.7**
PMG				IAmb	IAmb	02 12 39.7	
	comp=Z,59nm,1.4s						
WB0	**Warramunga Arr**	**24.87**	**161**	P	**P**	**02 12 36.8**	**-2.1**
WRAB	**Tennant Creek**	**25.01**	**162**	P	**P**	**02 12 38.2**	**-1.9**
WRA	**Warramunga Arr**	**25.02**	**162**	P	**P**	**02 12 38.3**	**-1.9**
	comp=Z,46nm,0.6s,baz=342,slow=10,SNR=131						
WRA				S	**S**	**02 17 00.7**	**-0.2**
	comp=Z,4.3nm,0.9s,baz=346,slow=18,SNR=5.8						
WB2	**Warramunga Arr**	**25.02**	**162**	P	**P**	**02 12 38.4**	**-1.8**
WR0	**Warramunga Arr**	**25.10**	**161**	P	**P**	**02 12 39.0**	**-1.8**
IPM	**Ipoh**	**25.13**	**272**	P	**P**	**02 12 42.0**	**+0.7**
PSI	**Prapat**	**27.27**	**269**	LR	LR	02 25 39.0	
	comp=Z,38nm,20.5s,baz=79,slow=41						
JCJ	**Chichijima**	**27.64**	**32**	P	**P**	**02 13 03.9**	**+0.1**
	comp=Z,57nm,0.5s,baz=253,slow=9.0,SNR=5.9						
JCJ	**Chichijima**	**27.64**	**32**	P	**P**	**02 13 04.3**	**+0.5**
AS31	**Alice Springs**	**28.42**	**165**	P	**P**	**02 13 07.6**	**-3.2**
ASAR	**Alice Springs**	**28.42**	**165**	P	**P**	**02 13 09.0**	**-1.8**
	comp=Z,6.6nm,0.5s,baz=347,slow=7.7,SNR=99						
ASAR				S	**S**	**02 17 50.1**	**-4.6**
	comp=Z,1.0nm,0.8s,baz=344,slow=18,SNR=4.4						
ASAR				ScP	**SS**	**02 19 54.3**	**-2.2**
	comp=Z,1.2nm,0.8s,baz=354,slow=2.7,SNR=4.2						
ASAR	**Alice Springs**	**28.42**	**165**	P	**P**	**02 13 08.4**	**-2.4**
NJ2	**Nanjing**	**28.83**	**347**	*e*P	**P**	**02 13 15.6**	**+1.3**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
CMAR	**Chiang Mai Arr**	**30.34**	**301**	LR	LR	02 25 44.4	
	comp=Z,24nm,20.4s,baz=174,slow=37						
CHTO	**Chiang Mai**	**30.49**	**301**	P	P	02 13 24.4	-4.8
ENH	**Enshi**	**30.61**	**331**	P	P	02 13 25.9	-4.2
ENH				IAmb	IAmb	02 13 49.2	
	comp=Z,7.7nm,0.5s						
CTAO	**Charters Tower**	**30.93**	**141**	P	**P**	**02 13 33.3**	**+0.3**
JWT	**Wachi**	**32.35**	**14**	P	**P**	**02 13 46.0**	**+0.6**
JWT				IAmb	IAmb	02 13 47.4	
	comp=Z,19nm,0.9s						
JGF	**Kuroka**	**33.17**	**17**	IAmb	IAmb	02 13 54.7	
	comp=Z,8.5nm,0.8s						
KSRS	**Korea Array**	**33.41**	**2**	P	**P**	**02 13 55.2**	**+0.6**
	comp=Z,5.6nm,0.6s,baz=179,slow=9.9,SNR=23						
XAN	**Xi'an**	**34.02**	**334**	P	**P**	**02 13 59.9**	**-0.1**

XAN				pmax	pmax		
	comp=Z,8.0nm,0.7s						
XAN				pmax	pmax		
	comp=Z,270nm,4.5s						
MJAR	**Matsushiro Arr**	**34.29**	**17**	P	**P**	**02 14 02.0**	**-0.3**
	comp=Z,11nm,0.8s,baz=189,slow=9.2,SNR=17						
MAJO	**Matsushiro**	**34.30**	**17**	P	**P**	**02 14 01.9**	**-0.4**
MAJO				IAmb	IAmb	02 14 02.9	
	comp=Z,14nm,0.9s						
MAT	**Matsushiro**	**34.30**	**17**	P	**P**	**02 14 02.1**	**-0.2**
HNR	**Honiara**	**36.14**	**112**	LR	LR	02 29 05.2	
	comp=Z,68nm,19.7s,baz=298,slow=36						
JMM	**Marumori**	**36.33**	**20**	P	**P**	**02 14 20.8**	**+1.1**
BJT	**Baijiatuau**	**37.07**	**347**	P	**P**	**02 14 25.5**	**-0.5**
BJT				IAmb	IAmb	02 14 29.0	
	comp=Z,22nm,0.9s						
BJI	**Beijing**	**37.09**	**347**	P	**P**	**02 14 28.1**	**+1.9**
BJI				pmax	pmax		
	comp=Z,33nm,0.9s						
BBOO	**Buckleboo**	**37.70**	**166**	P	**P**	**02 14 29.1**	**-2.3**
EIDS	**Eidsvold**	**37.81**	**142**	P	**P**	**02 14 31.0**	**-1.5**
EIDS				IAmb	IAmb	02 14 32.6	
	comp=Z,18nm,0.9s						
STKA	**Stephens Creek**	**38.49**	**159**	P	**P**	**02 14 37.3**	**-0.8**
	comp=Z,25nm,0.7s,baz=330,slow=8.4,SNR=43						
STKA				LR	LR	02 30 58.1	
	comp=Z,49nm,18.7s,baz=26,slow=37						
STKA	**Stephens Creek**	**38.49**	**159**	P	**P**	**02 14 37.0**	**-1.0**
HHC	**Hu-ho-hao-te**	**39.06**	**342**	*e*P	**P**	**02 14 44.8**	**+1.9**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,110nm,7.6s						
SHL	**Shillong**	**39.35**	**307**	P	P	02 14 41.9	-3.8
SHL				IAmb	IAmb	02 15 04.5	
	comp=Z,12nm,0.6s						
USA0B	**Ussuriysk Arra**	**40.44**	**6**	P	**P**	**02 14 54.6**	**+0.4**
USA0B				IAmb	IAmb	02 14 56.1	
	comp=Z,19nm,0.9s						
USRK	**Ussuriysk Ar.**	**40.44**	**6**	P	**P**	**02 14 54.9**	**+0.7**
	comp=Z,14nm,0.7s,baz=193,slow=7.3,SNR=33						
USRK	**Ussuriysk Ar.**	**40.44**	**6**	P	**P**	**02 14 54.6**	**+0.4**
MDJ	**Mudanjiang**	**40.64**	**4**	P	**P**	**02 14 57.3**	**+1.4**
MDJ				pmax	pmax		
	comp=Z,36nm,0.6s						
MDJ				pmax	pmax		
	comp=Z,180nm,5.6s						
GTA	**Gaotai**	**42.68**	**329**	*e*P	**P**	**02 15 11.4**	**-1.4**
GTA				pP	pP	02 15 27.5	+2.3
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
TOO	**Toolangi**	**45.00**	**158**	P	**P**	**02 15 30.9**	**-0.3**
TOO				IAmb	IAmb	02 15 32.7	
	comp=Z,24nm,1.4s						
PALK	**Pallekele**	**45.40**	**276**	LR	LR	02 34 20.6	
	comp=Z,38nm,22.0s,baz=214,slow=36						
ULN	**Ulaanbaatar**	**46.79**	**342**	P	P	02 15 42.5	-2.9
SONM	**Songino Array**	**46.96**	**342**	P	P	02 15 44.8	-1.9
	comp=Z,0.9nm,0.5s,baz=157,slow=8.6,SNR=6.0						
SONM				PcP	**PcP**	**02 17 17.1**	**-1.5**
	comp=Z,2.3nm,0.7s,baz=156,slow=3.3,SNR=7.4						
SONM				LR	LR	02 39 50.1	
	comp=Z,36nm,18.1s,baz=134,slow=42						
SONM	**Songino Array**	**46.96**	**342**	P	**P**	**02 15 45.3**	**-1.4**
DZM	**Mont Dzumac**	**47.06**	**125**	P	**P**	**02 15 49.1**	**+1.2**
WMQ	**Urumqi**	**52.28**	**325**	*e*P	**P**	**02 16 26.6**	**-0.6**
PEA0B	**Petropavlovsk-**	**55.45**	**22**	P	**P**	**02 16 51.5**	**+1.3**
PETK	**Petropavlovsk-**	**55.45**	**22**	P	**P**	**02 16 51.8**	**+1.7**
	comp=Z,4.5nm,0.7s,baz=199,slow=3.1,SNR=5.3						
PETK	**Petropavlovsk-**	**55.45**	**22**	P	**P**	**02 16 51.2**	**+1.0**
MK31	**Makanchi Array**	**57.11**	**325**	P	P	02 16 59.9	-2.2
MK31				IAmb	IAmb	02 17 05.4	
	comp=Z,20nm,1.5s						
MKAR	**Makanchi Array**	**57.11**	**325**	P	P	02 16 59.7	-2.4
	comp=Z,1.4nm,0.3s,baz=120,slow=7.7,SNR=53						
MKAR				PcP	**PcP**	**02 17 54.7**	**-1.8**
	comp=Z,4.8nm,0.6s,baz=120,slow=4.3,SNR=8.7						
MKAR				LR	LR	02 41 45.5	
	comp=Z,34nm,21.9s,baz=85,slow=36						
MKAR	**Makanchi Array**	**57.11**	**325**	P	P	02 16 59.5	-2.6
NIL	**Nilore**	**57.41**	**308**	P	P	02 16 59.7	-4.8
NIL				IAmb	IAmb	02 17 25.6	
	comp=Z,7.0nm,1.1s						
ZALV	**Zalesovo Beam**	**60.19**	**333**	P	P	02 17 20.0	-3.3
	comp=Z,0.7nm,0.3s,baz=103,slow=6.7,SNR=7.2						
ZALV				PcP	**PcP**	**02 18 05.0**	**-3.4**
	comp=Z,0.8nm,0.4s,baz=184,slow=4.5,SNR=4.0						
ZALV				LR	LR	02 44 09.1	
	comp=Z,32nm,18.3s,baz=140,slow=37						
ZALV	**Zalesovo Beam**	**60.19**	**333**	P	P	02 17 20.5	-2.8
KURK	**Kurchatov**	**61.31**	**328**	P	P	02 17 27.7	-3.3
KURK				IAmb	IAmb	02 17 57.9	
	comp=Z,5.5nm,0.8s						
KKAR	**Karatay Array**	**62.75**	**317**	P	P	02 17 38.1	-2.8
BRVK	**Borovoye**	**66.96**	**327**	P	P	02 18 05.0	-3.0
TIXI	**Tiksi**	**67.67**	**1**	P	**P**	**02 18 11.5**	**-0.6**
TIXI				IAmb	IAmb	02 18 12.2	
	comp=Z,5.4nm,0.6s						
NRIK	**Noril'sk**	**70.13**	**346**	P	**P**	**02 18 26.3**	**-1.2**
	comp=Z,4.9nm,0.5s,baz=127,slow=7.5,SNR=9.9						
NRIK				LR	LR	02 50 56.9	
	comp=Z,45nm,18.1s,baz=156,slow=37						
NRIK	**Noril'sk**	**70.13**	**346**	P	**P**	**02 18 26.5**	**-1.0**
NRIK				IAmb	IAmb	02 18 27.3	
	comp=Z,6.7nm,0.7s						
GEYT	**Alibeck**	**70.38**	**309**	LR	LR	02 50 47.1	
	comp=Z,10nm,21.5s,baz=265,slow=37						
ABKAR	**Akbulak array**	**71.68**	**321**	P	P	02 18 34.0	-3.3
AKTO	**Aktyubinsk**	**73.20**	**322**	P	P	02 18 43.1	-3.2
	comp=Z,0.9nm,0.4s,baz=95,slow=10.0,SNR=6.3						
RAYN	**Ar Rayn**	**79.94**	**293**	P	P	02 19 21.1	-4.0
SVW2	**Sparrevohn**	**80.89**	**29**	P	**P**	**02 19 30.1**	**+0.7**
SVW2				IAmb	IAmb	02 19 34.2	
	comp=Z,24nm,1.3s						
VOI	**Vohitsoka**	**81.67**	**247**	P	P	02 19 30.1	-4.3
VOI				IAmb	IAmb	02 19 49.0	
	comp=Z,26nm,1.4s						
J20K	**Nowinta River**	**81.98**	**26**	P	**P**	**02 19 36.4**	**+1.4**
VNDA	**Vanda**	**83.67**	**173**	P	**P**	**02 19 41.9**	**-1.6**
	comp=Z,0.8nm,0.6s,baz=325,slow=6.6,SNR=8.7						
VNDA	**Vanda**	**83.67**	**173**	P	**P**	**02 19 42.0**	**-1.6**
COLD	**Coldfoot**	**83.92**	**23**	P	**P**	**02 19 45.6**	**+0.6**
COLD				IAmb	IAmb	02 19 47.5	
	comp=Z,12nm,0.9s						
TOLK	**Toolik Lake Re**	**84.26**	**21**	P	**P**	**02 19 47.0**	**+0.2**
TOLK				IAmb	IAmb	02 19 49.2	
	comp=Z,9.4nm,0.8s						
KLMR	**Klimovskoe**	**84.99**	**331**	*e*P	P	02 19 46.3	-4.2
KLMR				AMP		02 19 49.1	
	comp=Z,10.0nm,0.9s						
ILAR	**Eielson Array**	**85.16**	**25**	P	P	02 19 49.5	-1.8
	comp=Z,0.8nm,0.6s,baz=240,slow=5.1,SNR=15						
BMAR	**Burnt Mountain**	**86.11**	**23**	P	**P**	**02 19 57.0**	**+1.0**
ARCES	**ARCESS Array B**	**90.10**	**340**	P	P	02 20 12.7	-2.3
	comp=Z,8.9nm,0.7s,baz=80,slow=7.0,SNR=29						
AKASG	**Malin Array Be**	**91.42**	**321**	P	P	02 20 18.0	-3.5
	comp=Z,0.2nm,0.2s,baz=71,slow=4.1,SNR=2.8						
AKASG	**Malin Array Be**	**91.42**	**321**	IAmb	IAmb	02 20 21.5	
	comp=Z,2.3nm,1.4s						
FINES	**FINESS Array B**	**91.43**	**332**	P	P	02 20 18.7	-2.6
	comp=Z,1.4nm,0.3s,baz=54,slow=4.9,SNR=18						
MNK	**Minsk**	**91.67**	**325**	*i* P	P	02 20 20.2	-2.3
	comp=E,2.0nm,1.1s						
MNK				*i* P	P	02 20 20.2	-2.3
	comp=N,9.0nm,0.8s						
MNK				*i* P	P	02 20 20.2	-2.3
	comp=Z,9.0nm,1.1s,baz=82						
MNK				*i* PP	**PP**	**02 23 58.8**	**-2.5**
MNK				*i* PPP	PPP	02 26 04.7	
MNK				*i* S	**SKSac**	**02 30 47.0**	**-4.1**
MNK				*i* PS	**PS**	**02 32 35.1**	**+0.3**
MNK				*i* SS	**SS**	**02 37 34.3**	**+7.7**
MNK				*i* SSS	SSS	02 41 02.7	
MNK				*i* LR	LR	03 01 44.9	
MNK				*i* LRM	MLR	03 02 38.5	
	comp=N,116nm,18.1s						
MNK				*i* LRM	MLR	03 02 45.7	
	comp=E,8.0nm,15.2s						
MNK				*i* LRM	MLR	03 02 58.7	
	comp=Z,66nm,17.4s						
NB2	**NORSAR Subarra**	**98.39**	**334**	P	P	02 20 50.2	-3.0
	comp=Z,1.7nm,0.7s,baz=66,slow=4.6						
NOA	**NORSAR Array B**	**98.39**	**334**	P	P	02 20 50.2	-3.0
	comp=Z,3.2nm,0.8s,baz=66,slow=4.6,SNR=8.6						
TXAR	**Lajitas Array**	**121.89**	**52**	PKP	**PKPdf**	**02 26 09.9**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=336,slow=1.4,SNR=4.2						
TXAR	**Lajitas Array**	**121.89**	**52**		**PKPdf**	**02 26 08.6**	**-1.6**
TORD	**Torodi Ar. Bea**	**122.37**	**288**	PKP	**PKPdf**	**02 26 08.9**	**-2.5**
	comp=Z,0.6nm,0.3s,baz=59,slow=1.5,SNR=25						
TORD	**Torodi Ar. Bea**	**122.37**	**288**		**PKPdf**	**02 26 08.2**	**-3.2**

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*TAP **20** 02:24:05.2, 24°.74N×122°.30E, h14^{km}, ML3.4, C*
*JMA **20** 02:24:06.0±0.1, 24°.67N×122°.32E, h30^{km}, M2.6*
ISC 20 02:24:04.7±1.0**, 24°.74N**±0°.02×**122°.34E**±0°.02**, h13**^{km}±8^{km}**,**
n72, σ0^s.84/121**, 5C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.41**	**310**	⇑*i*P	**Pb**	**02 24 13.5**	**-0.4**
	baz=313						
TWB1				*i* S	**Sg**	**02 24 18.8**	**+0.3**
	baz=313						
TWC	**Suao**	**0.46**	**253**	*i* P	**Pg**	**02 24 13.8**	**-0.1**
	baz=258						
TWC				S	**Sg**	**02 24 19.4**	**-0.7**
	baz=258						
NTC	**Toucheng**	**0.47**	**284**	P	**Pg**	**02 24 14.5**	**+0.4**
	baz=284						
NTC				S	**Sb**	**02 24 21.9**	**0.0**
	baz=284						
TIPB	**Shuangxi**	**0.52**	**296**	*i* P	**Pb**	**02 24 15.6**	**-0.1**
	baz=298						
TIPB				S	**Sb**	**02 24 22.5**	**-0.7**
	baz=298						
ILA	**Ilan**	**0.54**	**272**	*e*S	**Sb**	**02 24 23.1**	**-0.6**
	baz=272						
NDS	**Dongshan**	**0.58**	**259**	*i* P	**Pg**	**02 24 16.1**	**+0.1**
	baz=258						
NDS				S	**Sg**	**02 24 23.2**	**-0.4**
	baz=258						
EWUT	**Wuta**	**0.59**	**240**	*i* P	**Pg**	**02 24 16.3**	**+0.1**
	baz=246						
EWUT				S	**Sg**	**02 24 23.2**	**-0.9**
	baz=246						
NWF	**Wu-fen Shan**	**0.60**	**303**	⇑*i*P	**Pb**	**02 24 18.1**	**+0.9**
	baz=305						
NWF				S	**Sb**	**02 24 26.4**	**+0.8**
	baz=305						
TWE	**Neicheng**	**0.61**	**268**	P	**Pg**	**02 24 16.6**	**-0.1**
	baz=262						
TWE				S	**Sb**	**02 24 26.4**	**+0.6**
	baz=262						
JYNG	**Yonagunijimaku**	**0.62**	**118**	P	**Pb**	**02 24 17.7**	**+0.2**
JYNG				S	**Sb**	**02 24 26.9**	**+0.7**
ENA	**Nanau**	**0.63**	**240**	*i* P	**Pg**	**02 24 17.0**	**+0.1**
	baz=245						
ENA				S	**Sg**	**02 24 24.3**	**-1.0**
	baz=245						
YOJ	**Yonaguni jima**	**0.67**	**114**	⇑*i*P	**Pb**	**02 24 18.5**	**+0.1**
	baz=113						
YOJ				S	**Sb**	**02 24 27.8**	**+0.2**
	baz=113						
YOJ	**Yonaguni jima**	**0.67**	**114**	P	**Pb**	**02 24 18.5**	**+0.1**
YOJ				S	**Sb**	**02 24 28.4**	**+0.8**
ENTT	**Nioudou**	**0.71**	**262**	*i* P	**Pg**	**02 24 18.5**	**0.0**
	baz=261						
ENTT				S	**Sg**	**02 24 27.5**	**-0.3**
	baz=261						
TWA	**Mucha**	**0.72**	**289**	P	**Pn**	**02 24 20.1**	**-0.7**
	baz=290						
TWA				S	**Sb**	**02 24 29.9**	**+0.8**
	baz=290						
NWLT	**Wulai**	**0.76**	**273**	*i* P	**Pg**	**02 24 19.7**	**+0.3**
	baz=272						
NWLT				S	**Sg**	**02 24 28.4**	**-1.0**
	baz=272						
NDT	**Datong Townshi**	**0.76**	**260**	P	**Pg**	**02 24 19.7**	**+0.2**
	baz=252						
NDT				S	**Sg**	**02 24 29.4**	**-0.1**
	baz=252						
NHDH	**Xindian Distri**	**0.77**	**287**	*e*P	**Pn**	**02 24 20.9**	**-0.4**
	baz=279						
NHDH				*e*S	**Sb**	**02 24 30.1**	**-0.3**
	baz=279						
YM01	**YM01**	**0.80**	**300**	⇑*i*P	**Pn**	**02 24 21.3**	**-0.6**
	baz=301						
YM01				S	**Sb**	**02 24 32.1**	**+0.7**
	baz=301						
TAP	**Taipei**	**0.81**	**291**	*e*S	**Sb**	**02 24 32.3**	**+0.7**
	baz=293						
TWY	**Chenhua**	**0.85**	**309**	P	**Pb**	**02 24 21.7**	**+0.3**
	baz=310						
TWY				S	**Sn**	**02 24 34.0**	**-0.9**
	baz=310						
ETL	**Fush Village**	**0.87**	**228**	P	**Pg**	**02 24 21.6**	**0.0**
	baz=237						
ETL				*e*S	**Sg**	**02 24 32.4**	**-0.7**
	baz=237						
YHNB	**Yeheng**	**0.88**	**265**	P	**Pb**	**02 24 22.0**	**+0.1**
	baz=277						
YHNB				*e*S	**Sg**	**02 24 32.2**	**-1.0**
	baz=277						
NACB	**Ninganchiao**	**0.88**	**230**	P	**Pg**	**02 24 21.3**	**-0.5**
	baz=239						
NACB				S	**Sg**	**02 24 32.5**	**-0.9**
	baz=239						
NSK	**Sanguang**	**0.89**	**266**	P	**Pg**	**02 24 22.0**	**0.0**
	baz=277						
NSK				S	**Sg**	**02 24 33.4**	**-0.3**
	baz=277						
NTST	**Danshui**	**0.91**	**298**	*e*S	**Sn**	**02 24 35.5**	**-0.7**
	baz=309						
PCYT	**Pengchaiyu**	**0.91**	**345**	*e*P	**Pg**	**02 24 22.3**	**-0.1**
	baz=347						
NNSB	**Datong**	**0.92**	**250**	*e*P	**Pg**	**02 24 22.9**	**+0.3**
	baz=249						
NNSB				*e*S	**Sg**	**02 24 34.4**	**-0.3**
	baz=249						
NNS	**Nan Shan**	**0.93**	**251**	*e*P	**Pb**	**02 24 22.7**	**-0.1**
	baz=250						
NNS				*e*S	**Sg**	**02 24 34.2**	**-0.6**
	baz=250						
ETLH	**Xiulin Townshi**	**0.94**	**236**	*e*P	**Pb**	**02 24 22.7**	**-0.4**
	baz=234						
ETLH				*e*S	**Sb**	**02 24 34.2**	**-1.3**
	baz=234						
TWD	**Chiawan**	**0.94**	**226**	P	**Pb**	**02 24 23.0**	**0.0**
	baz=232						
TWD				*e*S	**Sb**	**02 24 34.2**	**-1.2**
	baz=232						
FUSS	**Fushou**	**1.11**	**244**	⇑*i*P	**Pn**	**02 24 26.4**	**+0.1**
	baz=242						
FUSS				S	**Sb**	**02 24 40.4**	**-0.1**
	baz=242						
WHF	**Hehuan Shan**	**1.14**	**239**	P	**Pb**	**02 24 26.6**	**-0.1**
	baz=248						
WHF				S	**Sb**	**02 24 40.7**	**-0.9**
	baz=248						
TWT	**Tachien**	**1.17**	**245**	*e*P	**Pg**	**02 24 27.8**	**+0.6**
	baz=244						
TWT				*e*S	**Sn**	**02 24 43.2**	**+0.4**
	baz=244						
TDCB	**Techi**	**1.18**	**246**	*e*P	**Pg**	**02 24 27.6**	**+0.2**
	baz=243						
LIOB	**Emei**	**1.21**	**266**	*e*P	**Pg**	**02 24 29.1**	**+1.2**
	baz=264						
NSTT	**Nanjuang**	**1.22**	**265**	*e*P	**Pg**	**02 24 29.1**	**+0.9**
	baz=255						
NSTT				*e*S	**Sg**	**02 24 44.8**	**+0.7**
	baz=255						
ESL	**Shilin**	**1.24**	**222**	*e*P	**Pb**	**02 24 28.4**	**+0.4**
	baz=202						
HSN	**Hsinchu**	**1.24**	**273**	*e*S	**Sn**	**02 24 44.4**	**-0.1**
	baz=275						
CHGB	**Renai**	**1.26**	**238**	P	**Pb**	**02 24 28.8**	**+0.3**
	baz=246						
CHGB				S	**Sb**	**02 24 43.9**	**-0.9**
	baz=246						
IRIF	**Iriomote-Funau**	**1.33**	**107**	P	**Pb**	**02 24 29.9**	**+0.3**
IRIF				*e*S	**Sn**	**02 24 45.7**	**-1.0**
WHP	**Taichung City**	**1.35**	**250**	*e*P	**Pg**	**02 24 30.9**	**+0.2**
	baz=249						
WHP				*e*S	**Sb**	**02 24 47.6**	**+0.4**
	baz=249						
EGFH	**Guangfu**	**1.35**	**218**	*e*P	**Pg**	**02 24 31.1**	**+0.3**
	baz=199						
NMLH	**Miaoli**	**1.42**	**262**	*e*P	**Pg**	**02 24 33.1**	**+1.1**
	baz=262						
NMLH				S	**Sg**	**02 24 51.9**	**+1.3**
	baz=262						
WCS	**Beigang Elemen**	**1.47**	**243**	*e*P	**Pg**	**02 24 33.1**	**+0.2**
	baz=240						
NSY	**Sanyi**	**1.47**	**258**	*e*P	**Pg**	**02 24 34.6**	**+1.6**
	baz=257						
NSY				*e*S	**Sg**	**02 24 54.2**	**+2.1**
	baz=257						
TWQ1	**Liyutan**	**1.48**	**255**	*e*P	**Pg**	**02 24 34.9**	**+1.8**
	baz=254						
TWQ1				*e*S	**Sg**	**02 24 53.9**	**+1.6**
	baz=254						
HGSD	**Ruisui**	**1.50**	**214**	*e*P	**Pn**	**02 24 32.1**	**+0.7**
	baz=199						
SMLT	**Sun Moon Lake**	**1.57**	**237**	*e*P	**Pg**	**02 24 35.1**	**+0.2**
	baz=243						
SMLT				*e*S	**Sg**	**02 24 55.4**	**+0.2**
	baz=243						
SSLB	**Suanglung**	**1.58**	**233**	*e*P	**Pb**	**02 24 34.3**	**+0.4**
	baz=237						
SSLB				*e*S	**Sb**	**02 24 54.1**	**+0.3**
	baz=237						
TYC	**Yuchr**	**1.59**	**239**	P	**Pg**	**02 24 35.0**	**-0.2**
	baz=244						
TYC				*e*S	**Sb**	**02 24 54.9**	**+0.9**
	baz=244						
JKRS	**Kuro-shima**	**1.60**	**108**	P	**Pn**	**02 24 32.3**	**-0.5**
JKRS				*e*S	**Sn**	**02 24 52.4**	**-1.0**
YULB	**Yu-li**	**1.65**	**215**	*e*P	**Pn**	**02 24 33.0**	**-0.5**
	baz=213						
JIJ	**Ishigaki jima**	**1.69**	**103**	P	**Pn**	**02 24 34.4**	**+0.4**
JIJ				*e*S	**Sn**	**02 24 54.2**	**-1.3**
JISG	**Ishigakijimahi**	**1.80**	**95**	*e*S	**Sn**	**02 24 57.9**	**-0.4**
FULB	**Fuli**	**1.81**	**212**	*e*P	**Pb**	**02 24 37.1**	**-0.6**
	baz=195						
ALS	**Alishan**	**1.86**	**229**	*e*P	**Pb**	**02 24 38.7**	**-0.1**
	baz=210						
ALS				*e*S	**Sg**	**02 25 05.7**	**+1.0**
	baz=210						
WDLH	**Douliu**	**1.95**	**238**	*e*S	**Sg**	**02 25 08.7**	**+1.3**
	baz=255						
WRL	**Guolierlin Hig**	**1.98**	**245**	*e*S	**Sg**	**02 25 08.0**	**-0.2**
	baz=263						
EDH	**Donghe**	**2.00**	**208**	*e*P	**Pn**	**02 24 38.1**	**-0.2**
	baz=192						
EDH				*e*S	**Sn**	**02 25 01.1**	**-2.1**
	baz=192						
STYH	**Taoyuan**	**2.12**	**223**	*e*S	**Sb**	**02 25 08.2**	**-1.1**
	baz=204						
TPUB	**Ta-pu**	**2.12**	**228**	*e*P	**Pn**	**02 24 41.2**	**+1.2**
	baz=209						
TPUB				*e*S	**Sb**	**02 25 11.3**	**+1.9**
	baz=209						
LONT	**Longtian**	**2.14**	**211**	*e*S	**Sb**	**02 25 09.4**	**-0.4**
	baz=209						
WTP	**Ta-pu**	**2.17**	**227**	*e*P	**Pb**	**02 24 42.6**	**-1.3**
	baz=209						
WTP				*e*S	**Sb**	**02 25 12.5**	**+1.7**
	baz=209						
TWG	**Pinlang**	**2.24**	**211**	*e*P	**Pn**	**02 24 42.0**	**+0.4**
	baz=209						
TWK	**Hsinying**	**2.24**	**229**	*e*P	**Pn**	**02 24 43.2**	**+1.6**
	baz=211						
TWK				*e*S	**Sb**	**02 25 13.0**	**+0.2**
	baz=211						
CHN1	**Nanshi**	**2.27**	**227**	*e*P	**Pb**	**02 24 45.4**	**-0.2**
	baz=210						
CHN1				*e*S	**Sb**	**02 25 14.5**	**+0.9**
	baz=210						
SLGT	**Liugui**	**2.33**	**222**	*e*P	**Pb**	**02 24 45.5**	**-1.2**
	baz=203						
SLGT				*e*S	**Sb**	**02 25 14.9**	**-0.4**
	baz=203						
MASBT	**Mashibuluo**	**2.63**	**217**	*e*P	**Pb**	**02 24 50.8**	**-1.0**
	baz=203						
SLIU	**Shizi**	**2.88**	**210**	*e*P	**Pn**	**02 24 52.2**	**+1.7**
	baz=198						
LYJJ	**Jianjiangzhen**	**2.94**	**308**	*e*S	**Sn**	**02 25 23.7**	**-2.7**
	baz=311						
TSEB	**Hengchuen, Pin**	**3.12**	**205**	*e*S	**Sn**	**02 25 32.4**	**+1.4**
	baz=203						

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*TAP **20** 02:25:36.3, 24°.74N×122°.31E, h14^{km}, ML3.4, D*
*JMA **20** 02:25:37.1±0.1, 24°.68N×122°.33E, h37^{km}±4^{km}, M2.8*
ISC 20 02:25:35.7±1.1**, 24°.72N**±0°.02×**122°.36E**±0°.02**, h8**^{km}±9^{km}**,**
n67, σ0^s.84/116**, 2C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.45**	**310**	⇑*i*P	**Pg**	**02 25 44.6**	**+0.3**
	baz=313						
TWB1				S	**Sg**	**02 25 49.8**	**-0.5**
	baz=313						
TWC	**Suao**	**0.48**	**257**	*i* P	**Pg**	**02 25 45.0**	**0.0**
	baz=258						
TWC				S	**Sg**	**02 25 50.7**	**-0.6**
	baz=258						
NTC	**Toucheng**	**0.50**	**285**	P	**Pg**	**02 25 45.6**	**+0.2**
	baz=284						
NTC				*e*S	**Sb**	**02 25 54.4**	**+0.1**
	baz=284						
TIPB	**Shuangxi**	**0.55**	**297**	P	**Pg**	**02 25 46.8**	**+0.5**
	baz=298						
TIPB				*e*S	**Sb**	**02 25 55.1**	**-0.6**
	baz=298						
ILA	**Ilan**	**0.56**	**275**	*e*P	**Pb**	**02 25 48.9**	**+1.1**
	baz=273						
ILA				*e*S	**Sb**	**02 25 56.7**	**+0.7**
	baz=273						
JYNG	**Yonagunijimaku**	**0.59**	**117**	P	**Pb**	**02 25 48.8**	**+0.5**
JYNG				*e*S	**Sb**	**02 25 58.1**	**+1.2**
NDS	**Dongshan**	**0.60**	**262**	*i* P	**Pg**	**02 25 47.4**	**+0.2**
	baz=258						
NDS				S	**Sg**	**02 25 54.6**	**-0.4**
	baz=258						
EWUT	**Wuta**	**0.60**	**243**	*i* P	**Pg**	**02 25 47.4**	**+0.1**
	baz=246						
EWUT				S	**Sg**	**02 25 54.4**	**-0.7**
	baz=246						
NWF	**Wu-fen Shan**	**0.63**	**304**	⇑*i*P	**Pb**	**02 25 49.3**	**+0.2**
	baz=305						
NWF				*e*S	**Sb**	**02 25 58.3**	**+0.2**
	baz=305						
TWE	**Neicheng**	**0.63**	**270**	*i* P	**Pg**	**02 25 47.9**	**-0.1**
	baz=262						
TWE				S	**Sg**	**02 25 55.9**	**-0.3**
	baz=262						
ENA	**Nanau**	**0.64**	**243**	P	**Pg**	**02 25 47.9**	**-0.1**
	baz=246						
ENA				S	**Sg**	**02 25 55.9**	**-0.5**
	baz=246						
YOJ	**Yonaguni jima**	**0.64**	**114**	P	**Pb**	**02 25 49.7**	**+0.5**
	baz=113						
YOJ				S	**Sb**	**02 25 59.5**	**+1.1**
	baz=113						
YOJ	**Yonaguni jima**	**0.64**	**114**	P	**Pb**	**02 25 49.7**	**+0.5**
YOJ				S	**Sb**	**02 25 59.4**	**+1.1**
ENTT	**Nioudou**	**0.73**	**264**	P	**Pb**	**02 25 50.7**	**0.0**
	baz=261						
ENTT				S	**Sg**	**02 25 58.4**	**-0.9**
	baz=261						
TWA	**Mucha**	**0.75**	**290**	P	**Pb**	**02 25 51.4**	**+0.3**
	baz=290						
TWA				S	**Sb**	**02 26 01.2**	**-0.4**
	baz=290						
NDT	**Datong Townshi**	**0.78**	**262**	*i* P	**Pg**	**02 25 51.0**	**+0.3**
	baz=253						
NDT				S	**Sg**	**02 26 00.3**	**-0.6**
	baz=253						
NWLT	**Wulai**	**0.79**	**274**	*e*P	**Pg**	**02 25 51.5**	**+0.7**
	baz=273						
NWLT				*e*S	**Sg**	**02 25 59.7**	**-1.4**
	baz=273						
NHDH	**Xindian Distri**	**0.80**	**288**	*e*P	**Pb**	**02 25 52.5**	**+0.7**
	baz=279						
NHDH				*e*S	**Sg**	**02 26 02.1**	**+0.6**
	baz=279						
YM01	**YM01**	**0.84**	**301**	*e*P	**Pb**	**02 25 52.6**	**+0.1**
	baz=301						
YM01				*e*S	**Sg**	**02 26 03.4**	**+0.7**
	baz=301						
TAP	**Taipei**	**0.84**	**292**	*e*S	**Sb**	**02 26 04.0**	**0.0**
	baz=293						
ETL	**Fush Village**	**0.88**	**231**	*e*P	**Pg**	**02 25 52.4**	**-0.2**
	baz=237						
ETL				*e*S	**Sg**	**02 26 03.8**	**-0.1**
	baz=237						
TWY	**Chenhua**	**0.89**	**309**	*e*P	**Pb**	**02 25 53.8**	**+0.4**
	baz=310						
TWY				*e*S	**Sb**	**02 26 05.2**	**-0.1**
	baz=310						
NACB	**Ninganchiao**	**0.89**	**232**	*e*P	**Pg**	**02 25 52.5**	**-0.3**

	baz=239						
NACB				eS	Sg	02 26 03.9	-0.5
	baz=239						
ANP	Anpu	0.90	301	eP	Pb	02 25 54.0	+0.4
	baz=301						
YHNB	Yeheng	0.90	267	P	Pg	02 25 53.4	+0.4
	baz=265						
YHNB				eS	Sg	02 26 04.5	-0.2
	baz=265						
NSK	Sanguang	0.92	267	eP	Pg	02 25 53.4	+0.1
	baz=265						
NSK				eS	Sg	02 26 04.2	-1.0
	baz=265						
NNSB	Datong	0.94	252	P	Pg	02 25 53.7	0.0
	baz=249						
NNSB				S	Sg	02 26 05.7	-0.3
	baz=249						
PCYT	Pengchaiyu	0.94	344	eP	Pg	02 25 53.5	-0.4
	baz=347						
NNS	Nan Shan	0.94	253	P	Pg	02 25 53.7	-0.2
	baz=250						
NNS				S	Sg	02 26 04.9	-1.3
	baz=250						
TWD	Chiawan	0.95	228	eP	Pg	02 25 54.1	+0.2
	baz=230						
TWD				eS	Sg	02 26 05.7	-0.5
	baz=230						
ETLH	Xiulin Townshi	0.95	238	P	Pg	02 25 53.8	-0.2
	baz=234						
ETLH				eS	Sg	02 26 05.2	-1.3
	baz=234						
FUSS	Fushou	1.12	245	P	Pb	02 25 57.6	+0.1
	baz=242						
FUSS				S	Sg	02 26 12.3	+0.4
	baz=242						
WHF	Hehuan Shan	1.15	240	P	Pb	02 25 57.8	-0.4
	baz=248						
WHF				S	Sg	02 26 12.2	-0.7
	baz=248						
TWT	Tachien	1.18	247	eP	Pg	02 25 59.9	+1.6
	baz=244						
TWT				S	Sb	02 26 14.0	+0.1
	baz=244						
TDCB	Techi	1.19	247	eP	Pg	02 25 59.1	+0.5
	baz=245						
TDCB				eS	Sb	02 26 14.0	-0.3
	baz=245						
LIOB	Emei	1.23	267	eP	Pg	02 26 00.2	+0.9
	baz=256						
LIOB				eS	Sn	02 26 16.5	+0.5
	baz=256						
ESL	Shilin	1.24	223	eP	Pg	02 26 00.4	+0.9
	baz=201						
ESL				eS	Sn	02 26 17.6	+1.4
	baz=201						
NSTT	Nanjuang	1.24	266	eP	Pg	02 26 00.4	+0.9
	baz=265						
NSTT				eS	Sn	02 26 16.7	+0.3
	baz=265						
CHGB	Renai	1.27	239	eP	Pn	02 26 00.2	+0.2
	baz=246						
CHGB				eS	Sb	02 26 16.0	-0.6
	baz=246						
IRIF	Iriomote-Funau	1.30	107	P	Pn	02 26 00.2	0.0
IRIF				eS	Sb	02 26 16.9	-0.4
EGFH	Guangfu	1.35	219	eP	Pg	02 26 02.0	+0.3
	baz=200						
WHP	Taichung City	1.36	251	P	Pg	02 26 02.2	+0.3
	baz=249						
WHP				eS	Sb	02 26 19.0	-0.2
	baz=249						
NMLH	Miaoli	1.44	263	eS	Sg	02 26 23.3	+1.2
	baz=262						
HATJ	Hateruma jima	1.47	116	S	Sn	02 26 20.9	-1.0
WCS	Beigang Elemen	1.48	244	eP	Pg	02 26 04.5	+0.4
	baz=240						
NSY	Sanyi	1.49	259	eP	Pg	02 26 06.3	+2.0
	baz=257						
NSY				eS	Sg	02 26 25.8	+2.1
	baz=257						
HGSD	Ruisui	1.50	215	eP	Pb	02 26 04.3	+0.6
	baz=199						
TWQ1	Liyutan	1.50	256	eP	Pg	02 26 04.6	+0.2
	baz=253						
JKRS	Kuro-shima	1.57	107	P	Pn	02 26 03.5	-0.4
JKRS				S	Sn	02 26 23.7	-0.8
SMLT	Sun Moon Lake	1.57	238	eP	Pg	02 26 06.2	+0.3
	baz=243						
SMLT				eS	Sg	02 26 26.8	+0.4
	baz=243						
SSLB	Suanglung	1.59	234	eP	Pb	02 26 05.6	+0.3
	baz=238						
SSLB				eS	Sn	02 26 24.4	-0.5
	baz=238						
TYC	Yuchr	1.60	240	eP	Pg	02 26 06.3	0.0
	baz=224						
YULB	Yu-li	1.64	217	eP	Pn	02 26 05.5	+0.6
	baz=214						
JIJ	Ishigaki jima	1.66	102	P	Pn	02 26 04.9	-0.2
WJS	Zhushan	1.74	239	eS	Sg	02 26 33.6	+2.0
	baz=238						
CHKT	Chengkung	1.85	210	eP	Pn	02 26 06.8	-0.9
	baz=192						
CHKT				eS	Sn	02 26 29.5	-1.9
	baz=192						
ALS	Alishan	1.87	230	eP	Pb	02 26 10.2	0.0
	baz=210						
ALS				eS	Sb	02 26 34.4	+0.6
	baz=210						
WDLH	Douliu	1.96	239	eS	Sg	02 26 39.7	+1.0
	baz=256						
EDH	Donghe	1.99	209	eP	Pn	02 26 10.3	+0.6
	baz=194						
TPUB	Ta-pu	2.12	229	eP	Pb	02 26 15.0	+0.6
	baz=210						
TPUB				eS	Sb	02 26 42.2	+1.1
	baz=210						
WTP	Ta-pu	2.17	228	eP	Pb	02 26 15.1	-0.2
	baz=209						
WTP				eS	Sb	02 26 42.9	+0.5
	baz=209						
TWK	Hsinying	2.25	230	eP	Pb	02 26 15.8	-0.7
	baz=211						
TWK				eS	Sb	02 26 44.5	-0.1
	baz=211						
CHN1	Nanshi	2.27	228	eP	Pn	02 26 15.4	+1.8
	baz=211						
CHN1				eS	Sb	02 26 46.1	+0.9
	baz=211						
SLGT	Liugui	2.33	223	eP	Pb	02 26 17.5	-0.5
	baz=204						
SLGT				eS	Sb	02 26 46.5	-0.4
	baz=204						
MATB	Ma-tsu	2.61	304	eS	Sn	02 26 46.7	-3.4
	baz=306						
MASBT	Mashibuluo	2.63	217	eP	Pb	02 26 21.5	-1.6
	baz=204						
SLIU	Shizi	2.88	210	eP	Pb	02 26 24.9	-2.5
	baz=208						

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*NNC **20** 02:30:05.0±5.9, 36°.67N×70°.32E, h217^{km}±103^{km}, mb3.1, mpv3.9, Error ellipse: s-maj=88.3km s-min=49.2km az=94.0*

*IDC **20** 02:30:07.7±8.4, 36°.83N×70°.33E, h218^{km}±55^{km}, mb3.3/2, mb1 3.2/6, mb1mx2.9/42, mbtmp3.8/6, Error ellipse: s-maj=76.9km s-min=32.2km az=9.0*

ISC 20 02:30:04.2±2.1**, 36°.6N**±0°.2×**70°.3E**±0°.1**, h204**^{km}**, n15, σ0^{s}.90**/19**, 1C-3D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	6.12	25	P	Pn	02 31 33.5	+0.2
	SNR=93						
UCH	Uchtor	6.50	29	P	Pn	02 31 38.4	+0.1
	SNR=25						
EKS2	Erkin-Say	6.62	23	P	Pn	02 31 40.0	+0.5
	SNR=8.5						
AAK	Ala-Archa	6.84	27	P	Pn	02 31 43.2	+0.7
	2.0nm,0.3s,baz=198,slow=12,SNR=22						
AAK				S	S	02 33 00.1	-0.3
	2.5nm,0.3s,baz=147,slow=24,SNR=22						
AAK	Ala-Archa	6.84	27	P	Pn	02 31 43.0	+0.6
	SNR=9.2						
AAK	Ala-Archa	6.84	27	P	Pn	02 31 42.9	+0.4
	3.8nm,0.4s						
AAK				S	S	02 33 00.3	-0.1
	17nm,0.5s						
KBK	Karagaybulak	7.03	29	P	Pn	02 31 45.8	+0.9
	SNR=6.5						
USP	Ospenovka	7.40	25	P	Pn	02 31 50.4	+0.8
	SNR=14						
MKAR	Makanchi Array	13.55	38	P	P	02 33 09.0	-1.7
	0.2nm,0.3s,baz=221,slow=17,SNR=11						
AB31	Akbulak array	14.71	332	⇓P	Pn	02 33 21.0	-1.4
	1.7nm,0.5s,baz=150,slow=12,SNR=35						
AB31				⇑S	S	02 36 07.1	+1.6
	0.3nm,0.5s,baz=153,slow=24,SNR=2.8						
AKTO	Aktyubinsk	16.39	331	P	Pn	02 33 42.9	+0.1
	0.4nm,0.3s,baz=144,slow=13,SNR=15						
AKTO	Aktyubinsk	16.39	331	⇓P	Pn	02 33 42.2	-0.7
	8.7nm,1.1s						
AKTO				⇓S	S	02 36 42.0	-1.1
	2.3nm,1.2s						
ZALV	Zalesovo Beam	20.06	26	P	P	02 34 21.8	+0.1
	0.4nm,0.3s,baz=217,slow=10,SNR=7.0						
SONM	Songino Array	28.76	56	P	P	02 35 43.7	+0.9
	0.2nm,0.4s,baz=257,slow=9.9,SNR=2.2						
ARCES	ARCESS Array B	40.82	338	P	P	02 37 25.9	+0.5
	6.3nm,1.2s,baz=104,slow=7.6,SNR=6.0						

KMA 20 02:46:34.7±3.7**, 38°.23N**×**129°.15E, h0**^{km}**, Error ellipse: s-maj=31.8km s-min=5.2km az=66.0, Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSJMJ	Jumunjin	0.47	222	P	Pg	02 46 43.3	-0.4
	SNR=15						
KSSKC	Sokcho	0.50	277	P	Pg	02 46 44.4	+0.2
	SNR=11						
KSDGY	Daegwallycong	0.66	215	P	Pg	02 46 47.7	+0.4
	SNR=7.4						
SEHB	SEOHWA	0.71	273	P	Pg	02 46 48.0	-0.3
	SNR=33						
KSCHC	Chuncheon	1.15	247	P	Pg	02 46 56.9	+0.2
	SNR=9.7						

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*NNC **20** 02:50:28.0±12.0, 36°.69N×70°.00E, h149^{km}±278^{km}, mb3.4, mpv4.1, Error ellipse: s-maj=138.4km s-min=74.6km az=67.0*

ISC 20 02:50:26.4±1.4**, 36°.5N**±0°.1×**70°.3E**±0°.1**, h200**^{km}**, n18, σ1^{s}.33**/21**, 2C-4D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	6.17	24	P	Pn	02 51 57.4	+1.2
	SNR=104						
UCH	Uchtor	6.55	28	P	Pn	02 52 02.4	+1.3
	SNR=29						
EKS2	Erkin-Say	6.68	22	P	Pn	02 52 03.6	+1.1
	SNR=6.8						
AAK	Ala-Archa	6.90	27	P	Pn	02 52 06.9	+1.6
	SNR=13						
AAK	Ala-Archa	6.90	27	⇓P	Pn	02 52 06.3	+1.0
	8.2nm,0.6s						
AAK				⇓S	Sn	02 53 22.1	-1.7
	16nm,0.7s						
KBK	Karagaybulak	7.08	29	P	Pn	02 52 09.3	+1.5
	SNR=8.2						
USP	Ospenovka	7.45	24	P	Pn	02 52 13.1	+0.7
	SNR=9.2						
PYUN	Piuthan	13.60	125	eP	Pn	02 53 29.8	-1.8
	16nm,0.3s						
KOLN	Koldanda	14.22	124	eP	Pn	02 53 37.3	-2.0
	7.8nm,0.3s						
GKN	Gorkha	14.78	121	eP	Pn	02 53 46.1	+0.1
	23nm,0.3s						
AB31	Akbulak array	14.80	332	⇑P	Pn	02 53 46.5	+0.5
	1.1nm,0.5s,baz=148,slow=11,SNR=26						
AB31				⇓S	S	02 56 27.5	-2.7
	0.4nm,0.5s,baz=152,slow=25,SNR=2.9						
DMN	Daman	15.35	121	eP	Pn	02 53 53.0	-0.1
KKN	Kakani	15.36	120	eP	Pn	02 53 52.7	-0.4
PKI	Pulchoki	15.58	121	eP	P	02 53 56.1	+0.1
	16nm,0.4s						
GUN	Gumba	15.70	119	eP	P	02 53 58.2	+0.8
	12nm,0.4s						
JIRN	Jiri	16.07	119	eP	Pn	02 54 01.9	-0.1
	17nm,0.4s						
AKTO	Aktyubinsk	16.49	331	⇑P	Pn	02 54 07.5	+1.1
	6.9nm,0.8s						
AKTO				⇓S	Sn	02 57 12.8	+1.1
	1.1nm,0.9s						
RAMN	Ramite	16.79	120	eP	P	02 54 09.9	+0.6
	17nm,0.5s						

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*NEIC **20** 02:59:18.5±1.5, 0°.90N±0°.09×127°.51E±0°.08, h23^{km}±6^{km}, mb4.6/22, Error ellipse: s-maj=13.4km s-min=10.7km az=211.0*

*IDC **20** 02:59:21.4±3.2, 0°.93N×127°.58E, h52^{km}±32^{km}, mb3.9/7, mb1 4.0/10, mb1mx3.6/53, mbtmp4.1/10, ML3.8/3, MS3.4/3, Ms1 3.4/3, ms1mx3.0/25, Error ellipse: s-maj=31.3km s-min=15.7km az=77.0*

*DJA **20** 02:59:26.9±0.4, 0°N±6°×12°7E±°, h10^{km}, M4.5/9, mb4.5/5, mB5.2/2, MLv4.4/9, Mw(mB)4.5/2*

ISC 20 02:59:16.3±0.6**, 0°.97N**±0°.06×**127°.53E**±0°.05**, h10**^{km}**, n49, σ1^{s}.56**/43**, mb4.4**/15**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.26	220		Pg	02 59 23.2	+1.6
LBMI	Labuha	1.60	181	P	Pn	02 59 46.7	+2.1
SANI	Sanana	3.37	207	P	Pn	03 00 12.9	+3.8
KMSI	Cibinong	3.57	264	P	Pn	03 00 13.7	+1.9
SWI	Sorong	4.15	116	P	Pg	03 00 37.7	+1.9
SIJI	Sorong	4.16	116	P	Pn	03 00 21.4	+1.5
	3.8nm,0.3s,baz=304,slow=18,SNR=4.3						
SIJI				LR	LR	03 01 30.1	
	comp=Z,488nm,19.9s,baz=151,slow=31						
MRSI	Marisa	5.61	265	P	Pb	03 00 53.3	-1.1
FAKI	Fak Fak	6.09	129	Pn	Pn	03 00 45.1	-1.4
APSI	Ampana	6.17	252	P	Pb	03 00 59.4	-4.6
TOLI2	Tolitoli	6.75	271		Pn	03 00 55.5	-0.1
MPSI	Mapaga	7.66	265	P	Pn	03 01 12.5	+4.5
	0.2nm2µm24nm,2.2s						
TTSI	Tana Toraja	8.68	243	P	Pn	03 01 23.3	+1.2
	0.3nm39nm,0.5s						
BNSI	Bone	9.14	234	P	Pn	03 01 31.5	+3.2
	0.2nm900nm39nm,1.3s						
SPSI	Sidrap Palu	9.18	238	P	Pn	03 01 37.8	+8.9
BKSI	Bulukumba	9.69	230	P	Pn	03 01 52.4	+17
KAPI	Kappang	9.79	233	P	Pn	03 01 40.1	+2.9
	1.5nm,0.3s,baz=63,slow=14,SNR=5.8						
KAPI	Kappang	9.79	233		Pn	03 01 39.0	+1.8
SOEI	Soe	11.14	197	Pn	Pn	03 01 55.1	-0.8
EDFI	Ende, Flores	11.27	211	P	Pn	03 02 04.8	+7.1
BATI	Baumata	11.75	199	LR	LR	03 07 26.4	
	comp=Z,159nm,18.2s,baz=86,slow=41						
JAGI	Jajag, Banyuwa	16.30	235	Pn	Pn	03 03 04.4	-1.2
JAGI				IAmb	IAmb	03 03 29.3	
	comp=Z,50nm,1.1s						
KNRA	Kununurra	16.58	176	Pn	Pn	03 03 07.0	-2.1
KNRA				IAmb	IAmb	03 03 33.3	
	comp=Z,28nm,1.1s						
KSM	Kuching	17.23	272	Pn	Pn	03 03 16.3	-1.0
KSM				IAmb	IAmb	03 03 36.8	
	comp=Z,18nm,0.8s						
FITZ	Fitzroy Crossi	19.04	186	P	P	03 03 37.9	-0.9
	comp=Z,0.2nm,0.3s,baz=15,slow=9.6,SNR=7.9						
WB0	Warramunga Arr	21.68	162	P	P	03 04 05.8	-1.6
WB0				IAmb	IAmb	03 04 25.5	
	comp=Z,31nm,0.9s						
WRAB	Tennant Creek	21.82	163	P	P	03 04 08.4	-0.5
WRAB				IAmb	IAmb	03 04 27.0	
	comp=Z,28nm,0.9s						
WRA	Warramunga Arr	21.83	163	P	P	03 04 09.4	+0.4
	comp=Z,10.0nm,0.8s,baz=340,slow=11,SNR=64						
WRA	Warramunga Arr	21.83	163	P	P	03 04 08.0	-1.1
WB2	Warramunga Arr	21.83	163	P	P	03 04 08.8	-0.3
WR0	Warramunga Arr	21.91	162	P	P	03 04 09.8	0.0
WR0				IAmb	IAmb	03 04 34.1	
	comp=Z,29nm,1.1s						
AS31	Alice Springs	25.26	166	P	P	03 04 41.9	-1.0
AS31				IAmb	IAmb	03 04 59.7	
	comp=Z,6.0nm,0.8s						
ASAR	Alice Springs	25.26	166	P	P	03 04 42.7	-0.2
	comp=Z,4.4nm,0.6s,baz=344,slow=10,SNR=34						
JOW	Kunigami	25.73	2	LR	LR	03 14 46.7	
	comp=Z,73nm,21.7s,baz=244,slow=36						
STKA	Stephens Creek	35.28	159	P	P	03 06 11.8	+0.3
	comp=Z,2.4nm,0.7s,baz=316,slow=7.8,SNR=4.3						
INCN	Inchon	36.34	359	P	P	03 06 22.0	+1.5
MJAR	Matsushiro Arr	36.75	14	P	P	03 06 23.9	-0.1
	comp=Z,2.8nm,0.8s,baz=189,slow=9.4,SNR=7.1						
ARMA	Armidale	38.74	146	P	P	03 06 40.2	-0.9
ARMA				IAmb	IAmb	03 07 01.0	
	comp=Z,12nm,1.1s						
USRK	Ussuriysk Ar.	43.23	5	P	P	03 07 17.6	-0.1
SONM	Songino Array	50.15	342	P	P	03 08 12.0	-0.2
	comp=Z,0.8nm,0.7s,baz=160,slow=10,SNR=5.1						
MK31	Makanchi Array	60.27	326	P	P	03 09 24.5	-0.6
MKAR	Makanchi Array	60.27	326	P	P	03 09 25.1	+0.1
	comp=Z,1.5nm,0.5s,baz=117,slow=7.7,SNR=21						
TARG	Taragay, Kyrgy	60.34	319	P	P	03 09 25.5	-0.6
AAK	Ala-Archa	62.94	319	P	P	03 09 43.6	+0.2
AAK				IAmb	IAmb	03 10 01.4	
	comp=Z,8.1nm,1.4s						
ZAA0	Zalesovo Array	63.40	333	P	P	03 09 45.7	-0.2
ZAA0				IAmb	IAmb	03 10 15.1	
	comp=Z,3.7nm,0.8s						
ZALV	Zalesovo Beam	63.40	333	P	P	03 09 45.4	-0.5
KBL	Kabul	63.84	308	P	P	03 09 49.9	+0.3
KBL				IAmb	IAmb	03 10 06.9	
	comp=Z,7.2nm,1.2s						
KKAR	Karatay Array	65.79	318	P	P	03 10 02.0	+0.1
CASY	Casey	68.19	187	P	P	03 10 16.9	+0.4
VNDA	Vanda	80.61	173	P	P	03 11 27.3	-1.4
	comp=Z,0.7nm,0.7s,baz=319,slow=6.3,SNR=7.0						

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*IDC **20** 02:59:34.4±5.1, 1°.05N×127°.61E, h49^{km}±52^{km}, mb4.1/9, mb1 4.3/10, mb1mx3.8/51, mbtmp4.3/10, ML3.9/1, MS3.4/1, Ms1 3.4/1, ms1mx2.7/25, Error ellipse: s-maj=54.1km s-min=15.0km az=83.0*

ISC 20 02:59:32.8±0.9**, 1°.0N**±0°.1×**127°.5E**±0°.2**, h35**^{km}**, n11, σ0^{s}.85**/10**, mb4.3**/9**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.19	117	P	Pn	03 00 34.4	+0.1
	6.7nm,0.3s,baz=318,slow=16,SNR=5.8						
WRA	Warramunga Arr	21.89	163	P	P	03 04 23.0	+0.1
	19nm,0.9s,baz=338,slow=11,SNR=14						
ASAR	Alice Springs	25.32	166	P	P	03 04 57.9	+1.4
	19nm,0.8s,baz=342,slow=12,SNR=23						
PSI	Prapat	28.64	274	LR	LR	03 18 44.5	
	comp=Z,81nm,20.6s,baz=98,slow=40						
STKA	Stephens Creek	35.34	159	P	P	03 06 24.9	-0.1
	6.2nm,0.8s,baz=337,slow=6.1,SNR=7.9						
MJAR	Matsushiro Arr	36.69	14	P	P	03 06 35.6	-0.9
	4.0nm,0.9s,baz=190,slow=9.4,SNR=6.2						
USRK	Ussuriysk Ar.	43.16	5	P	P	03 07 30.0	-0.1
	3.8nm,0.9s,baz=177,slow=7.9,SNR=4.4						
SONM	Songino Array	50.09	342	P	P	03 08 24.6	+0.1
	1.6nm,0.8s,baz=153,slow=6.8,SNR=3.6						
PETK	Petropavlovsk-	57.63	21	P	P	03 09 20.2	+0.9
	1.1nm,0.5s,baz=202,slow=2.3,SNR=4.3						
MKAR	Makanchi Array	60.22	326	P	P	03 09 37.9	+0.4
	1.7nm,0.4s,baz=121,slow=8.5,SNR=19						
VNDA	Vanda	80.67	173	P	P	03 11 40.6	-1.1
	0.4nm,0.6s,baz=305,slow=5.3,SNR=5.4						

ATH 20 03:00:53.9, 35°.44N×**23°.43E, h14**^{km}±4^{km}**, ML1.2**/1**, Error ellipse: s-maj=6.0km s-min=1.3km az=47.0, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANKY	Antikythira Is	0.44	346	P	Pg	03 01 02.4	-0.3
ANKY				S	Sg	03 01 08.9	+0.3
IMMV	Iera Moni Meta	0.45	87	P	Pg	03 01 02.9	0.0
IMMV				S	Sg	03 01 09.3	+0.4
IMMV				AML	AML	03 01 10.4	
	comp=E,81µm,0.2s						
IMMV				AML	AML	03 01 11.1	
	comp=N,91µm,0.2s						
VAM	Vamos	0.63	93	P	Pg	03 01 05.5	-0.7
GVD	Gavdhos	0.81	138	P	Pg	03 01 09.5	-0.1
KTHA	Kythira Island	0.87	340	P	Pg	03 01 10.3	-0.4

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*BEO **20** 03:01:51.6±2.9, 38°.23N×20°.47E, h76^{km}, ML4.3/14*

*IDC **20** 03:01:53.0±1.1, 38°.95N×20°.63E, h0^{km}, mb3.9/9, mb1 3.9/16, mb1mx3.8/60, mbtmp3.8/16, ML3.6/6, MS3.5/20, Ms1 3.5/20, ms1mx3.3/59, Error ellipse: s-maj=20.5km s-min=14.6km az=39.0*

*MOS **20** 03:01:52.8±1.3, 38°.71N×20°.34E, h15^{km}, mb4.6/13, Error ellipse: s-maj=6.1km s-min=3.1km az=74.7*

*THE **20** 03:01:53.9, 38°.79N×20°.58E, h10^{km}, ML4.0/6, Error ellipse: s-maj=0.9km s-min=0.6km az=110.0*

*PDG **20** 03:01:53.7±0.7, 38°.81N×20°.47E, h9^{km}±1^{km}, ML3.9/14, Error ellipse: s-maj=1.0km s-min=1.2km az=0.0*

*ATH **20** 03:01:54.4, 38°.78N×20°.62E, h10^{km}, ML3.9/21, Error ellipse: s-maj=1.5km s-min=0.8km az=286.0*

*NEIC **20** 03:01:54.7±2.3, 38°.83N±0°.05×20°.54E±0°.07, h10^{km}±1^{km}, Error ellipse: s-maj=10.2km s-min=7.5km az=217.0*

*TIR **20** 03:01:55.7, 38°.88N×20°.56E, h26^{km}±2^{km}, Md4.3, Ml4.3*

ISC 20 03:01:53.9±0.6**, 38°.80N**±0°.01×**20°.56E**±0°.02**, h11**^{km}±3^{km}**, n423, σ1^{s}.68**/468**, mb4.3**/21**, MS3.5**/16**, 35C-38D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKD2	Lefkada island	0.08	97	P	Pg	03 01 55.8	-0.6
LKD2				S	Sg	03 01 57.3	-0.9
	556µm,0.3s						
LKD2	Lefkada island	0.08	97	P	Pg	03 01 55.7	-0.6
LKD2				S	Sg	03 01 57.1	-1.0
LKD2				AML	AML	03 01 57.8	
LKD2				AML	AML	03 01 58.2	
TSLK	Tsoukalades, L	0.08	72	P	Pg	03 01 56.0	-0.3
TSLK				S	Sg	03 01 57.7	-0.5
TSLK	Tsoukalades, L	0.08	72	P	Pg	03 01 56.0	-0.3
TSLK				S	Sg	03 01 57.9	-0.2
TSLK				AML	AML	03 01 58.1	
TSLK				AML	AML	03 01 58.7	
DRAG	Dragano-Lefkad	0.12	173	P	Pg	03 01 56.9	+0.1
DRAG				S	Sg	03 01 58.8	-0.1
	428µm,0.5s						
DRAG	Dragano-Lefkad	0.12	173	P	Pg	03 01 57.0	+0.1
DRAG				S	Sg	03 01 59.2	+0.3
NYDR	Nydri-Lefkada	0.14	128	P	Pg	03 01 56.8	-0.4
NYDR				S	Sg	03 01 58.6	-0.8
	55µm,0.3s						
NYDR	Nydri-Lefkada	0.14	128	P	Pg	03 01 56.8	-0.4
NYDR				S	Sg	03 01 59.1	-0.4
EVGI	Lefkada island	0.19	156	P	Pg	03 01 58.0	-0.1
EVGI				S	Sg	03 02 01.2	+0.3
EVGI	Lefkada island	0.19	156	P	Pg	03 01 57.9	-0.1
EVGI				S	Sg	03 02 01.0	+0.1
FSK	Fiskardo	0.34	179	P	Pg	03 02 01.0	+0.3
FSK				S	Sg	03 02 05.8	+0.6
	30µm,0.4s						
FSK	Fiskardo	0.34	179	P	Pg	03 02 00.9	+0.2
FSK				S	Sg	03 02 05.9	+0.6
FSK				AML	AML	03 02 06.9	
	comp=N,36634µm,0.5s						
FSK				AML	AML	03 02 07.1	
	comp=E,85164µm,0.3s						
KEF4	Livadi, Kephal	0.55	191	P	Pg	03 02 04.3	-0.3
KEF4	Livadi, Kephal	0.55	191	P	Pg	03 02 04.4	-0.3
KEF4				S	Sb	03 02 13.2	-0.3
DMLN	Damoulianata-K	0.58	194	P	Pg	03 02 04.8	-0.3
DMLN	Damoulianata-K	0.58	194	P	Pg	03 02 04.9	-0.2
DMLN				S	Sb	03 02 14.0	-0.3
LXRA	Lixouri, Kepha	0.61	189	P	Pg	03 02 05.4	-0.3
LXRA				S	Sb	03 02 14.7	-0.3
KEF3	Kipouria, Keph	0.62	195	P	Pg	03 02 05.1	-0.8
KEF3	Kipouria, Keph	0.62	195	P	Pg	03 02 05.0	-0.8
KEF3				S	Sg	03 02 13.9	-0.1
VLS	Valsamata	0.62	178	P	Pg	03 02 05.3	-0.7
VLS				S	Sg	03 02 14.7	+0.5
	comp=E,7µm,0.4s						
VLS	Valsamata	0.62	178	P	Pg	03 02 05.2	-0.7
VLS				S	Sg	03 02 14.6	+0.5
VLS				AML	AML	03 02 17.6	
	comp=E,15094µm,0.3s						
VLS				AML	AML	03 02 19.8	
	comp=N,14215µm,0.4s						
VLS	Valsamata	0.62	178	P	Pg	03 02 05.3	-0.7
VLS				S	Sg	03 02 14.7	+0.5
ARGA	Argostoli. Kep	0.62	186	P	Pg	03 02 06.5	+0.5

ARGA				S	Sb	03 02 15.3	-0.3
PSDA	Pessada-Kefalo	0.69	178	P	Pg	03 02 06.3	-0.8
PSDA				S	Sg	03 02 16.7	+0.6
PSDA	Pessada-Kefalo	0.69	178	P	Pg	03 02 06.4	-0.8
PSDA				S	Sg	03 02 16.7	+0.6
IGT	Igoumenitsa	0.75	347	P	Pg	03 02 07.8	-0.7
IGT	Igoumenitsa	0.75	347	P	Pb	03 02 08.8	-0.2
IGT				AML	AML	03 02 23.0	
	comp=E,14082µm,0.8s						
IGT				AML	AML	03 02 26.8	
	comp=N,13837µm,0.2s						
IGT	Igoumenitsa	0.75	347	P	Pg	03 02 07.8	-0.7
IGT	Igoumenitsa	0.75	347	P	Pb	03 02 08.8	-0.2
	baz=345						
IGT				S	Sg	03 02 17.9	-0.4
	baz=345						
PVO	Paravola	0.78	103	P	Pg	03 02 08.6	-0.4
PVO				S	Sb	03 02 19.9	-0.2
	comp=N,11µm,0.4s						
PVO	Paravola	0.78	103	P	Pg	03 02 08.6	-0.4
PVO				AML	AML	03 02 25.3	
	comp=N,20379µm,0.5s						
PVO				AML	AML	03 02 25.7	
	comp=E,22353µm,0.3s						
JAN	Janina	0.89	15	P	Pb	03 02 11.5	+0.2
JAN	Janina	0.89	15	P	Pb	03 02 11.6	+0.3
JAN				AML	AML	03 02 27.9	
	comp=E,73479µm,0.9s						
JAN				AML	AML	03 02 28.8	
	comp=N,22734µm,1.0s						
JAN	Janina	0.89	15	P	Pb	03 02 11.5	+0.2
EVR	Evrytania	0.98	83	P	Pg	03 02 11.3	-1.6
EVR	Evrytania	0.98	83	P	Pg	03 02 12.0	-0.9
EVR				AML	AML	03 02 32.5	
	comp=N,9504µm,0.8s						
EVR				AML	AML	03 02 35.0	
	comp=E,8084µm,0.8s						
VTN	Vitineika	1.01	151	P	Pg	03 02 13.0	-0.3
VTN	Vitineika	1.01	151	P	Pg	03 02 13.2	-0.2
RLS	Riolos of Patr	1.03	136	P	Pg	03 02 12.4	-1.3
RLS	Riolos of Patr	1.03	136	P	Pg	03 02 12.7	-1.0
RLS				S	Sg	03 02 26.8	-0.2
RLS				AML	AML	03 02 34.5	
	comp=N,14829µm,0.6s						
RLS				AML	AML	03 02 35.1	
	comp=E,6495µm,0.4s						
KASA	Kassiopi	1.06	333	P	Pn	03 02 15.3	+0.6
KEK	Kerkira	1.09	327	P	Pb	03 02 14.0	-0.7
KEK	Kerkira	1.09	327	P	Pn	03 02 15.6	+0.5
KEK				AML	AML	03 02 48.1	
	comp=N,8237µm,0.8s						
KEK				AML	AML	03 02 48.4	
	comp=E,7902µm,1.1s						
ANX	Ano Chora	1.09	100	P	Pb	03 02 13.5	-1.3
ANX	Ano Chora	1.09	100	P	Pb	03 02 13.7	-1.1
ANX				AML	AML	03 02 38.1	
	comp=E,10257µm,0.5s						
ANX				AML	AML	03 02 44.6	
	comp=N,13493µm,0.6s						
UPR	University Cam	1.09	118	P	Pb	03 02 14.2	-0.6
LTHK	Lithakia	1.11	168	P	Pb	03 02 13.4	-1.7
LTHK	Lithakia	1.11	168	P	Pb	03 02 13.8	-1.3
EFP	Efpalio	1.12	109	P	Pb	03 02 14.1	-1.2
EFP	Efpalio	1.12	109	P	Pb	03 02 14.1	-1.2
EFP				AML	AML	03 02 37.4	
	comp=N,11987µm,0.4s						
EFP				AML	AML	03 02 44.4	
	comp=E,9310µm,0.9s						
SRN	Sarande	1.16	338	P	Pb	03 02 15.8	-0.2
SRN	Sarande	1.16	338	P	Pg	03 02 16.9	+0.6
SRN				AML	AML		
	comp=N,3225µm,1.2s						
SRN				AML	AML		
	comp=E,3710µm,1.0s						
SRN	Sarande	1.16	338	P	Pg	03 02 16.8	+0.5
	baz=337						
SRN				S	Sn	03 02 33.1	+1.1
	baz=337						
SRN				AMP			
	comp=N,10.0nm,1.2s,baz=337						
DRO	Drossia	1.24	133	P	Pn	03 02 15.6	-1.6
DRO	Drossia	1.24	133	P	Pn	03 02 16.2	-1.0
DRO				AML	AML	03 02 41.6	
	comp=N,13466µm,0.6s						
DRO				AML	AML	03 02 46.9	
	comp=E,17986µm,0.6s						
LAKA	Lakka	1.25	116	P	Pn	03 02 16.0	-1.3
LAKA	Lakka	1.25	116	P	Pn	03 02 16.0	-1.3
LAKA				AML	AML	03 02 51.7	
	comp=N,22911µm,1.2s						
LAKA				AML	AML	03 02 52.2	
	comp=E,24220µm,1.3s						
MAKR	Makrakomi, Fth	1.25	80	P	Pn	03 02 16.5	-0.8
MAKR	Makrakomi, Fth	1.25	80	P	Pn	03 02 17.4	+0.1
MAKR				AML	AML	03 02 46.5	
	comp=N,6010µm,1.2s						
MAKR				AML	AML	03 02 58.4	
	comp=E,6865µm,1.3s						
TRIZ	Trizonia	1.27	110	P	Pn	03 02 16.6	-0.9
TRIZ	Trizonia	1.27	110	P	Pn	03 02 16.9	-0.7
LSK	Leskovik	1.35	1	P	Pg	03 02 20.2	+0.3
	baz=1.0						
LSK				S	Sg	03 02 37.4	+0.1
	baz=1.0						
LSK				AMP			
	comp=N,53nm,1.0s,baz=1.0						
THL	Klokotos Trika	1.37	56	P	Pn	03 02 18.7	-0.2
THL	Klokotos Trika	1.37	56	P	Pn	03 02 19.0	+0.1
THL				AML	AML	03 02 49.7	
	comp=E,3876µm,0.9s						
THL				AML	AML	03 02 52.9	
	comp=N,5119µm,0.7s						
AGG	Agios Georgios	1.40	80	P	Pn	03 02 19.0	-0.5
AGG	Agios Georgios	1.40	80	P	Pb	03 02 19.9	-0.2
AGG				AML	AML	03 02 46.4	
	comp=E,11033µm,1.3s						
AGG				AML	AML	03 02 50.0	
	comp=N,10505µm,1.0s						
AGG	Agios Georgios	1.40	80	P	Pb	03 02 20.3	+0.2
AGG	Agios Georgios	1.40	80	Pn	Pb	03 02 20.3	+0.2
KLV	Kalavryta, Ach	1.46	121	P	Pn	03 02 19.5	-0.8
KLV				AML	AML	03 02 52.3	
	comp=E,5358µm,1.1s						
KLV				AML	AML	03 02 55.8	
	comp=N,4089µm,1.2s						
GUR	Goura	1.65	121	P	Pn	03 02 22.4	-0.5
GUR				AML	AML	03 02 58.1	
	comp=N,8702µm,1.1s						
GUR				AML	AML	03 02 59.2	
	comp=E,5799µm,0.5s						
KZN	Kozani	1.77	32	P	Pb	03 02 27.0	+0.5
KZN				AML	AML	03 03 00.5	
	comp=E,4800µm,0.6s						
KZN				AML	AML	03 03 03.7	
	comp=N,4345µm,1.0s						
KBN	Korca	1.83	6	P	Pg	03 02 28.4	-0.6
KBN	Korca	1.83	6		Pg	03 02 28.4	-0.6
KBN	Korca	1.83	6	P	Pg	03 02 28.9	-0.2
	baz=5.0						
KBN				S	Sg	03 02 52.1	-0.6
	baz=5.0						
VLO	Vlora	1.86	334	P	Pb	03 02 27.2	-0.7
VLO	Vlora	1.86	334		Pb	03 02 27.2	-0.7
VLO	Vlora	1.86	334	P	Pb	03 02 28.3	+0.4
	baz=334						
VLO				S	Sb	03 02 52.4	+1.3
	baz=334						
LKR	Lokris	1.92	94	P	Pb	03 02 28.7	-0.1
LKR				AML	AML	03 03 04.0	
	comp=N,2223µm,0.6s						
LKR				AML	AML	03 03 11.7	
	comp=E,2063µm,0.8s						
ITM	Ithomi	1.95	146		Pb	03 02 29.4	0.0
SCTE	Santa Cesarea	2.06	309	P	Pn	03 02 29.7	+1.3
SCTE				AML	AML		
	comp=N,2355µm,1.3s						
SCTE				AML	AML		
	comp=E,2110µm,0.7s						
SCTE	Santa Cesarea	2.06	309	Pn	Pn	03 02 29.3	+0.9
FNA	Florina	2.08	17	P	Pb	03 02 31.1	-0.6
FNA	Florina	2.08	17	Pn	Pb	03 02 31.1	-0.6
OHR	Ohrid	2.32	5	*e*Pn	Pb	03 02 34.8	-0.9
OHR				*e*Sn	Sn	03 03 02.4	+1.8
OHR	Ohrid	2.32	5	*e*P	Pb	03 02 34.8	-0.9
OHR				*e*S	Sn	03 03 02.4	+1.8
OHR	Ohrid	2.32	5	*i* Pn	Pb	03 02 35.0	-0.7
GRG	Griva	2.58	33	P	Pb	03 02 38.5	-1.7
TIR	Tirane	2.60	348	⇑P	Pn	03 02 38.3	+2.3
TIR	Tirane	2.60	348	*e*Pn	Pn	03 02 38.2	+2.3
TIR				*e*Sn	Sn	03 03 09.1	+1.6
TIR	Tirane	2.60	348	P	Pn	03 02 37.8	+1.9
TIR	Tirane	2.60	348	P	Pn	03 02 38.2	+2.3
TIR				AML	AML		
	comp=E,2955µm,1.0s						
TIR				AML	AML		
	comp=N,3040µm,1.0s						
TIR	Tirane	2.60	348	Pn	Pn	03 02 37.8	+1.9
TIR	Tirane	2.60	348	P	Pb	03 02 38.6	-2.0
	baz=349						
TIR				S	Sb	03 03 14.0	+1.5
	baz=349						
THE	Thessaloniki	2.61	45	P	Pb	03 02 39.4	-1.2
PAIG	Paliouri	2.67	64	P	Pb	03 02 40.4	-1.3
PHP	Peshkopia	2.88	358	P	Pn	03 02 42.2	+2.3
	baz=359						
PHP				S	Sb	03 03 18.5	-2.2
	baz=359						
SOH	Sokhos	2.95	46	P	Pn	03 02 42.8	+2.0
VAY	Valandovo	2.96	31	*e*Pn	Pn	03 02 42.6	+1.8
VAY	Valandovo	2.96	31	P	Pb	03 02 44.5	-2.1
VAY	Valandovo	2.96	31	*i* Pn	Pn	03 02 42.2	+1.4
KNT	Kendrikon	2.97	37	P	Pn	03 02 43.0	+2.0
TIP	Timpagrande	2.98	278	⇑P	Pn	03 02 42.2	+1.0
TIP	Timpagrande	2.98	278	P	Pn	03 02 42.2	+1.0
TIP				AML	AML		
	comp=N,318µm,1.6s						
TIP				AML	AML		
	comp=N,364µm,1.6s						
TIP				AML	AML		
	comp=E,214µm,1.6s						
TIP				AML	AML		
	comp=E,250µm,1.6s						
TIP	Timpagrande	2.98	278		Pn	03 02 41.9	+0.7
SERS	Sersale	3.03	276	P	Pn	03 02 43.1	+1.2
SERS				S	Sn	03 03 20.5	+2.3
SERS				AML	AML		
	comp=N,222µm,1.6s						
SERS				AML	AML		
	comp=E,218µm,1.0s						
OUR	Ouranopolis	3.06	59	P	Pn	03 02 45.2	+3.0
STIP	Stip	3.15	23	*i* Pn	Pn	03 02 46.6	+3.1
CELI	Celico	3.21	282	P	Pn	03 02 45.5	+1.1
CELI				S	Sn	03 03 25.3	+2.7
CELI				AML	AML		
	comp=N,885µm,1.6s						
CELI				AML	AML		
	comp=E,773µm,1.5s						
GRI	Girifalco	3.23	272	P	Pn	03 02 46.8	+2.1
GRI	Girifalco	3.23	272	AML	AML		
	comp=E,264µm,0.5s						
GRI	Girifalco	3.23	272	AML	AML		
	comp=N,206µm,0.5s						
GRI	Girifalco	3.23	272	AML	AML		
	comp=E,264µm,0.5s						
GRI	Girifalco	3.23	272	AML	AML		
	comp=N,206µm,0.5s						
SKO	Skopje	3.24	12	P	Pn	03 02 46.5	+1.8
SKO				S	Sn	03 03 26.4	+3.1
SKO	Skopje	3.24	12	*i* Pn	Pn	03 02 48.0	+3.3
PLAC	Placanica	3.25	265	P	Pn	03 02 46.0	+1.2
PLAC				S	Sn	03 03 25.0	+1.5
PLAC				AML	AML		
	comp=E,194µm,1.0s						
PLAC				AML	AML		
	comp=N,196µm,0.5s						
SRS	Serrai	3.29	44	P	Pn	03 02 47.1	+1.7
ULC	Ulcinj	3.32	343	⇓*i*Pn	Pn	03 02 46.4	+0.6
ULC				*i* Sn	Sn	03 03 26.1	+0.9
SPS2	Spezzano della	3.32	280	P	Pn	03 02 48.1	+2.2
SPS2				AML	AML		
	comp=N,119µm,0.4s						
SPS2				AML	AML		
	comp=E,162µm,0.5s						
NOCI	Noci	3.34	308	P	Pn	03 02 47.4	+1.3
NOCI				AML	AML		
	comp=N,1100µm,1.2s						
NOCI				AML	AML		
	comp=E,962µm,1.1s						
CAR1	CAROLEI	3.42	279	P	Pn	03 02 49.6	+2.5
CAR1				AML	AML		
	comp=N,428µm,1.3s						
CAR1				AML	AML		
	comp=E,613µm,1.0s						
SALB	San Lorenzo Be	3.44	290	P	Pn	03 02 49.1	+1.6
SALB				AML	AML		
	comp=E,372µm,0.9s						
SALB				AML	AML		
	comp=N,340µm,1.2s						
DRME	Dracevica, Mon	3.54	343	*e*Pn	Pn	03 02 50.1	+1.2
DRME	Dracevica, Mon	3.54	343	⇑*i*Pn	Pn	03 02 49.7	+0.8
DRME				*i* Sn	Sn	03 03 31.6	+0.9
KKB	Krupnik	3.62	31	P	Pn	03 02 52.2	+2.2
CET2	Cetraro	3.65	283	P	Pn	03 02 52.8	+2.4
CET2				S	Sn	03 03 35.9	+2.4
CET2				AML	AML		
	comp=E,652µm,0.7s						
CET2				AML	AML		
	comp=N,669µm,1.1s						
MIGL	Miglionico	3.65	301	P	Pn	03 02 52.2	+1.8
MIGL				AML	AML		
	comp=E,3570µm,1.2s						
MIGL				AML	AML		
	comp=N,3745µm,1.3s						
JOPP	Joppolo	3.66	268	P	Pn	03 02 52.1	+1.6
JOPP	Joppolo	3.66	268	AML	AML		
	comp=E,300µm,1.2s						
JOPP	Joppolo	3.66	268	AML	AML		
	comp=N,252µm,1.4s						
JOPP	Joppolo	3.66	268	AML	AML		
	comp=N,252µm,1.4s						
JOPP	Joppolo	3.66	268	AML	AML		
	comp=E,300µm,1.2s						
CEL	Celeste	3.70	263	Pn	Pn	03 02 51.4	+0.3
MMB	Musomiste	3.70	40	P	Pn	03 02 52.2	+1.2
MMB				S	Sn	03 03 39.0	+4.4
AMUR	Altamura	3.70	306	P	Pn	03 02 52.0	+1.0
AMUR				AML	AML		
	comp=N,624µm,1.3s						
AMUR				AML	AML		
	comp=E,562µm,1.1s						
BUM	Brajici-Budva	3.72	341	⇓*i*Pn	Pn	03 02 51.8	+0.4
BUM				*i* Sn	Sn	03 03 35.8	+0.6
PDG	Podgorica	3.76	345	⇓P	Pn	03 02 53.5	+1.7
PDG				⇑S	Sn	03 03 36.9	+0.8
PDG	Podgorica	3.76	345	*e*Pn	Pn	03 02 53.7	+1.9
PDG	Podgorica	3.76	345	*e*Pn	Pn	03 02 52.9	+1.1
PDG	Podgorica	3.76	345	⇑P	Pn	03 02 53.6	+1.7
PDG				S	Sn	03 03 37.0	+0.9
PDG				AML	AML		
	comp=N,764µm,1.0s						
PDG				AML	AML		
	comp=E,530µm,1.4s						
PDG				AML	AML		
	comp=N,582µm,1.0s						
PDG				AML	AML		
	comp=E,702µm,1.4s						
PDG	Podgorica	3.76	345	Pn	Pn	03 02 52.8	+1.0
TTG	Podgorica	3.76	345	⇑*i*Pn	Pn	03 02 52.9	+1.1
TTG				*i* Sn	Sn	03 03 36.6	+0.5
PVY	Plav	3.82	353	⇑*i*Pn	Pn	03 02 53.8	+1.0
PVY				*i* Sn	Sn	03 03 38.2	+0.5
CUC	Castrocucco	3.86	289	P	Pn	03 02 55.6	+2.3
CUC				AML	AML		
	comp=E,417µm,1.0s						
CUC				AML	AML		
	comp=N,102µm,1.6s						
CUC				AML	AML		
	comp=N,354µm,0.8s						
CUC				AML	AML		
	comp=E,142µm,1.0s						
PRVS	Prvonek	3.88	17	*e*Pn	Pn	03 02 55.1	+1.6
CEME	Cevo	3.94	342	⇑*i*Pn	Pn	03 02 54.9	+0.4
CEME				*i* Sn	Sn	03 03 41.1	+0.3
HCY	Herceg Novi	3.97	337	P	Pn	03 02 54.9	+0.2
HCY	Herceg Novi	3.97	337	*e*Pn	Pn	03 02 54.6	-0.1
HCY	Herceg Novi	3.97	337	⇑*i*Pn	Pn	03 02 54.7	0.0
HCY				*i* Sn	Sn	03 03 39.9	-1.3
BOSS	Bosilegrad	3.97	21	*e*Pn	Pn	03 02 56.7	+1.9
MCEL	Monticello	3.98	294	P	Pn	03 02 57.6	+2.7
MCEL				AML	AML		
	comp=E,367µm,0.9s						
MCEL				AML	AML		
	comp=E,362µm,0.9s						
MCEL				AML	AML		
	comp=N,597µm,1.0s						
MCEL				AML	AML		
	comp=N,598µm,1.0s						
MRVN	Minervino Murg	4.04	305	⇓P	Pn	03 02 57.7	+1.9
MRVN				AML	AML		
	comp=N,450µm,0.9s						
MRVN				AML	AML		
	comp=E,382µm,1.0s						
ACER	Acerenza	4.07	301	P	Pn	03 02 58.2	+2.1
ACER				AML	AML		
	comp=E,1175µm,1.5s						
ACER				AML	AML		
	comp=N,1175µm,1.0s						
ACER				AML	AML		
	comp=N,1261µm,0.9s						
ACER				AML	AML		
	comp=E,1204µm,1.4s						
MGR	Morigerati	4.10	291	⇓P	Pn	03 02 59.6	+3.2
MGR				AML	AML		
	comp=N,358µm,1.0s						
MGR				AML	AML		
	comp=E,386µm,1.1s						
IVA	Berane	4.10	353	⇑*i*Pn	Pn	03 02 57.8	+1.2
IVA				*i* Sn	Sn	03 03 45.1	+0.5
KOME	Kolasin	4.12	349	⇓*i*Pn	Pn	03 02 58.0	+1.1
KOME				*i* Sn	Sn	03 03 45.7	+0.5
BARS	Barje	4.12	13	*e*Pn	Pn	03 02 58.2	+1.3
BARS	Barje	4.12	13	*e*Pn	Pg	03 03 14.3	+1.4
PALZ	Palazzo San Ge	4.13	303	P	Pn	03 02 58.5	+1.5
PALZ				AML	AML		
	comp=E,3030µm,1.3s						
PALZ				AML	AML		
	comp=N,1820µm,1.1s						
MPNC	Port Mandanici	4.14	263	P	Pn	03 03 00.9	+3.9
MPNC				AML	AML		
	comp=N,371µm,1.0s						
MPNC				AML	AML		
	comp=E,359µm,1.2s						
NKME	Niksic	4.15	343	⇓*i*Pn	Pn	03 02 58.0	+0.8
NKME				*i* Sn	Sn	03 03 45.9	+0.2
NKY	Niksic	4.18	344	P	Pn	03 03 00.7	+3.0
NKY	Niksic	4.18	344	⇓*i*Pn	Pn	03 02 58.8	+1.1
NKY				*i* Sn	Sn	03 03 46.9	+0.2
BULG	Bulgheria - Ca	4.21	289	⇑P	Pn	03 03 01.0	+2.9
BULG				AML	AML		
	comp=E,281µm,1.3s						
BULG				AML	AML		
	comp=N,430µm,1.4s						
BULG				AML	AML		
	comp=E,277µm,0.8s						
BULG				AML	AML		
	comp=N,428µm,1.4s						
TREB	Trebinje	4.26	338	*e*Pn	Pn	03 02 59.1	+0.4
TREB	Trebinje	4.26	338	*e*Pn	Pn	03 02 58.5	-0.2
DBRK	Dubrovnik	4.28	335	*e*Pn	Pn	03 02 58.7	-0.3
APE	Apeiranthos	4.29	112	⇑P	Pn	03 03 03.4	+4.2
APE	Apeiranthos	4.29	112	P	Pn	03 03 03.4	+4.2
RZN	Rozhen	4.30	46	P	Pn	03 03 01.2	+1.8
VTS	Vitosha	4.32	27	⇓P	Pn	03 03 01.6	+1.9
VTS				⇓S	Sn	03 03 54.9	+4.7
VTS	Vitosha	4.32	27	*e*Pn	Pn	03 03 01.7	+2.0
VTS				*e*Sn	Sn	03 03 47.8	-2.4
VTS	Vitosha	4.32	27	P	Pn	03 03 01.3	+1.5
VTS	Vitosha	4.32	27	Pn	Pn	03 03 01.3	+1.5
CMPR	Campora	4.33	292	⇓P	Pn	03 03 03.0	+3.2
BRY	Bratogost	4.37	340	P	Pn	03 03 01.3	+0.9
BRY	Bratogost	4.37	340	*e*Pn	Pn	03 03 00.8	+0.4
BRY	Bratogost	4.37	340	⇓*i*Pn	Pn	03 03 00.8	+0.4
BRY				*i* Sn	Sn	03 03 51.4	-0.1
VPL	Vulcano Piano	4.39	266	P	Pn	03 03 03.0	+2.6
VPL	Vulcano Piano	4.39	266	AML	AML		
	comp=N,866µm,0.4s						
VPL	Vulcano Piano	4.39	266	AML	AML		
	comp=E,742µm,0.7s						
VPL	Vulcano Piano	4.39	266	AML	AML		
	comp=N,866µm,0.4s						
VPL	Vulcano Piano	4.39	266	AML	AML		
	comp=E,742µm,0.7s						
CDRU	Civita di Ruta	4.39	294	⇑P	Pn	03 03 05.5	+4.9
CDRU				AML	AML		
	comp=E,217µm,1.5s						
CDRU				AML	AML		
	comp=N,188µm,1.3s						
SELS	Selova	4.44	5	*e*Pn	Pn	03 03 02.0	+0.8
SJES	Sjenica	4.48	355	*e*Pn	Pn	03 03 04.0	+2.2
PLD	Plovdiv	4.57	42	P	Pn	03 03 06.9	+3.9
UPM	Unac-Piva	4.57	345	*e*Pn	Pn	03 03 04.6	+1.4
UPM	Unac-Piva	4.57	345	⇓*i*Pn	Pn	03 03 04.4	+1.2
UPM				*i* Sn	Sn	03 03 56.1	-0.3
SANT	Santorini	4.59	120		Pn	03 03 05.8	+2.5
EZN	Ezine	4.59	75	P	Pb	03 03 08.9	-5.5
MSAG	Monte S. Angel	4.59	311	⇑P	Pn	03 03 04.3	+0.9
MSAG				AML	AML		
	comp=E,486µm,1.1s						
MSAG				AML	AML		
	comp=N,728µm,1.6s						
MSAG				AML	AML		
	comp=N,721µm,1.6s						
MSAG				AML	AML		
	comp=E,494µm,1.1s						
STON	Ston	4.61	333	*e*Pn	Pn	03 03 03.6	+0.1
STON	Ston	4.61	333	*e*Pn	Pn	03 03 03.2	-0.3
STON	Ston	4.61	333	*e*Pn	Pn	03 03 03.1	-0.3
STON				Sn	Sn	03 03 54.1	-2.9
STON	Ston	4.61	333	⇑P	Pn	03 03 03.3	-0.3
STON				S	Sn	03 03 56.0	-1.0
STON				AML	AML		
	comp=N,262µm,1.1s						
STON				AML	AML		
	comp=E,197µm,0.4s						
PLE	Pljevlja	4.61	349	P	Pn	03 03 05.8	+2.1
PLE	Pljevlja	4.61	349	⇓*i*Pn	Pn	03 03 04.9	+1.2
PLE				*i* Sn	Sn	03 03 57.3	0.0
HAVL	Avola	4.67	249	S	Sn	03 03 55.0	-3.7
KDZ	Kurdzhali	4.68	51	P	Pn	03 03 06.3	+1.7
IFIL	Filicudi I Eol	4.69	269	⇓P	Pn	03 03 07.0	+2.3
IFIL	Filicudi I Eol	4.69	269	AML	AML		
	comp=E,715µm,1.1s						
IFIL	Filicudi I Eol	4.69	269	AML	AML		
	comp=N,262µm,0.3s						
IFIL	Filicudi I Eol	4.69	269	AML	AML		
	comp=E,715µm,1.1s						
IFIL	Filicudi I Eol	4.69	269	AML	AML		
	comp=N,262µm,0.3s						
ALN	Alexandroupoli	4.71	62	P	Pn	03 03 07.2	+2.2
ALN	Alexandroupoli	4.71	62	Pn	Pn	03 03 07.2	+2.2
SGRT	San Giovanni R	4.72	310	Pn	Pn	03 03 05.8	+0.7
MEU	Monte Lauro	4.76	251	S	Sn	03 04 01.0	+0.1
LSTV	Lastovo	4.84	326	*e*Pn	Pn	03 03 06.1	-0.6
LSTV				Sn	Sn	03 03 59.3	-3.5
IACL	Alicudi	4.86	269	⇓P	Pn	03 03 07.9	+1.0
IACL				AML	AML		
	comp=N,148µm,1.4s						
IACL				AML	AML		
	comp=E,181µm,0.6s						
RUDO	Rudo	4.90	350	*e*Pn	Pn	03 03 07.6	+0.1
BOVS	Bovan	4.91	10	⇑P	Pn	03 03 09.1	+1.5
BOVS	Bovan	4.91	10	*e*Pn	Pn	03 03 08.5	+0.9
IDI	Anoyia	4.93	134	Pn	Pn	03 03 09.0	+1.1
	comp=E,0.6nm,0.3s,baz=258,slow=4.2,SNR=10						
IDI				Sn	Sn	03 04 06.5	+1.5
	comp=E,4.0nm,0.3s,baz=265,slow=7.7,SNR=8.3						
DIM	Dimitrovgrad	5.00	48	P	Pn	03 03 12.9	+4.1
MELA	Melanico ??? S	5.07	307	⇑P	Pn	03 03 11.2	+1.5
MELA				AML	AML		
	comp=E,1226µm,1.1s						
MELA				AML	AML		
	comp=N,1500µm,1.0s						
MELA				AML	AML		
	comp=E,1116µm,1.6s						
MELA				AML	AML		
	comp=N,1395µm,1.0s						
TREM	Isole Tremiti	5.08	312	P	Pn	03 03 10.7	+0.7
TREM				AML	AML		
	comp=E,777µm,1.5s						
TREM				AML	AML		
	comp=N,507µm,0.7s						
GRUS	Gruza	5.09	1	*e*Pn	Pn	03 03 10.5	+0.4
GATE	Gambatesa	5.11	304	⇑P	Pn	03 03 14.1	+3.8

GATE				AML	AML		
	comp=E,444µm,1.6s						
GATE				AML	AML		
	comp=E,260µm,1.3s						
GATE				AML	AML		
	comp=N,499µm,1.6s						
GATE				AML	AML		
	comp=N,593µm,1.1s						
PAOL	**Paolisi**	**5.12**	**298**		**Pn**	**03 03 11.9**	**+1.4**
BBLS	**Lazići**	**5.14**	**351**	*e*Pn	**Pn**	**03 03 12.1**	**+1.3**
BBLS	**Lazići**	**5.14**	**351**	*e*Pn	**Pn**	**03 03 11.3**	**+0.5**
RAFF	**Raffo Rosso**	**5.14**	**254**	Pn	**Pn**	**03 03 12.2**	**+1.4**
ZAGS	**Zajecar**	**5.17**	**14**	*e*Pn	**Pn**	**03 03 13.7**	**+2.6**
MAKA	**Makarska**	**5.22**	**330**	*e*Pn	**Pn**	**03 03 11.6**	**-0.3**
MAKA				Sn	**Sn**	**03 04 09.6**	**-2.4**
DIVS	**Divibare**	**5.31**	**356**	*e*Pn	**Pn**	**03 03 14.1**	**+0.9**
DIVS	**Divibare**	**5.31**	**356**	*e*Pn	**Pn**	**03 03 13.4**	**+0.2**
DIVS	**Divibare**	**5.31**	**356**	⇓P	**Pn**	**03 03 13.1**	**-0.1**
DIVS				AML	AML		
	comp=N,120µm,0.9s						
DIVS				AML	AML		
	comp=E,134µm,1.4s						
DIVS	**Divibare**	**5.31**	**356**	Pn	**Pn**	**03 03 13.5**	**+0.3**
RICI	**Ricice**	**5.36**	**332**	*e*Pn	**Pn**	**03 03 13.6**	**-0.2**
HVAR	**Hvar**	**5.37**	**326**	*e*Pn	**Pn**	**03 03 13.6**	**-0.3**
TRUS	**Trudelj**	**5.42**	**359**	*e*Pn	**Pn**	**03 03 15.9**	**+1.2**
TRIV	**Trivento**	**5.47**	**305**	⇑P	**Pn**	**03 03 17.4**	**+2.1**
TRIV				AML	AML		
	comp=N,320µm,1.3s						
TRIV				AML	AML		
	comp=E,405µm,1.4s						
BALB	**Balikesir**	**5.75**	**79**		**Pn**	**03 03 22.0**	**+2.9**
TEKS	**Tekeris**	**5.80**	**353**	*e*Pn	**Pn**	**03 03 21.3**	**+1.5**
VENT	**Ventotene**	**5.84**	**292**	⇓P	**Pn**	**03 03 21.6**	**+1.1**
MDVR	**Moldovita**	**6.04**	**8**	⇑P	**Pn**	**03 03 24.1**	**+0.9**
KIJV	**Kijevo**	**6.07**	**330**	*e*Pn	**Pn**	**03 03 23.5**	**0.0**
ZIRJ	**Zirje**	**6.10**	**324**	*e*Pn	**Pn**	**03 03 23.7**	**-0.2**
ZIRJ				Sn	**Sn**	**03 04 30.4**	**-3.4**
MGRS	**Mrkonjic Grad**	**6.19**	**336**	*e*Pn	**Pn**	**03 03 26.2**	**+1.0**
T0110	**Collepietro**	**6.20**	**306**	P	**Pn**	**03 03 27.8**	**+2.5**
HERR	**Herculane**	**6.23**	**12**	⇑P	**Pn**	**03 03 28.0**	**+2.2**
MORI	**Morici**	**6.24**	**326**	*e*Pn	**Pn**	**03 03 26.2**	**+0.3**
FRGS	**Fruska Gora**	**6.38**	**355**	⇓P	**Pn**	**03 03 30.3**	**+2.5**
FRGS	**Fruska Gora**	**6.38**	**355**	*e*Pn	**Pn**	**03 03 29.1**	**+1.3**
FRGS	**Fruska Gora**	**6.38**	**355**	*e*Pn	**Pn**	**03 03 27.0**	**-0.8**
BLY	**Banja Luka**	**6.46**	**338**	*e*Pn	**Pn**	**03 03 29.4**	**+0.5**
BLY	**Banja Luka**	**6.46**	**338**	*e*Pn	**Pn**	**03 03 29.6**	**+0.7**
BLY	**Banja Luka**	**6.46**	**338**	⇓P	**Pn**	**03 03 29.7**	**+0.8**
AQU	**L'Aquila**	**6.50**	**305**	P	**Pn**	**03 03 30.6**	**+1.1**
AQU	**L'Aquila**	**6.50**	**305**	*e*Pn	**Pn**	**03 03 29.1**	**-0.4**
AQU	**L'Aquila**	**6.50**	**305**		**Pn**	**03 03 30.6**	**+1.1**
TERO	**Teramo**	**6.52**	**308**	⇑P	**Pn**	**03 03 31.8**	**+2.0**
HUMR	**Humele**	**6.61**	**29**	⇑P	**Pn**	**03 03 34.1**	**+3.1**
DUGI	**Dugi Otok**	**6.63**	**323**	*e*Pn	**Pn**	**03 03 31.8**	**+0.5**
OFFI	**Offida**	**6.65**	**311**	⇓P	**Pn**	**03 03 33.9**	**+2.4**
UDBI	**Udbina**	**6.75**	**329**	*e*Pn	**Pn**	**03 03 33.9**	**+0.9**
MRAK	**Mrakovica**	**6.78**	**337**	*e*Pn	**Pn**	**03 03 33.4**	**0.0**
GZR	**Gura Zlata**	**6.79**	**13**	⇑P	**Pn**	**03 03 36.7**	**+3.1**
BZS	**Buzias**	**6.86**	**6**	⇑P	**Pn**	**03 03 36.5**	**+2.2**
BZS	**Buzias**	**6.86**	**6**	*e*Pn	**Pn**	**03 03 35.6**	**+1.2**
BZS	**Buzias**	**6.86**	**6**	P	**Pn**	**03 03 37.0**	**+2.6**
BZS				pmax	pmax		
	comp=Z,6.0nm,1.1s						
NRCA	**Norcia**	**6.94**	**308**		**Pn**	**03 03 36.4**	**+0.8**
FDMO	**Fiordimonte**	**7.06**	**309**	⇓P	**Pn**	**03 03 39.2**	**+2.0**
PLIT	**Plitvice**	**7.10**	**330**	*e*Pn	**Pn**	**03 03 38.0**	**+0.2**
NVLJ	**Novalja**	**7.16**	**325**	*e*Pn	**Pn**	**03 03 38.6**	**+0.1**
ARR	**Arges**	**7.23**	**23**	⇓P	**Pn**	**03 03 41.2**	**+1.7**
RABC	**Rab**	**7.34**	**326**	*e*Pn	**Pn**	**03 03 40.9**	**-0.1**
FOSV	**Fossato di Vic**	**7.41**	**310**	P	**Pn**	**03 03 40.4**	**-1.6**
FOSV				P	**Pb**	**03 04 02.2**	**-0.2**
ARVD	**Arcevia**	**7.42**	**312**	P	**Pn**	**03 03 43.4**	**+1.3**
VOIR		**7.42**	**25**	⇓P	**Pn**	**03 03 44.7**	**+2.5**
VOIR		**7.42**	**25**	P	**Pn**	**03 03 45.1**	**+2.9**
VOIR				pmax	pmax		
	comp=Z,12nm,1.0s						
KOVH	**Kovagotottos**	**7.51**	**347**	*e*PN	**Pn**	**03 03 42.6**	**-0.7**
KOVH	**Kovagotottos**	**7.51**	**347**	*e*P	**Pn**	**03 03 45.4**	**+2.1**
KOVH	**Kovagotottos**	**7.51**	**347**	*e*SN	**Sn**	**03 05 02.8**	**-5.6**
MURB	**Monte Urbino**	**7.53**	**309**		**Pn**	**03 03 43.8**	**+0.1**
MORH	**Mrgy, Hungar**	**7.54**	**350**	*e*Pn	**Pn**	**03 03 42.5**	**-1.3**
PIEI	**Pieia**	**7.68**	**311**	⇑P	**Pn**	**03 03 47.8**	**+2.0**
ELL	**Elmali**	**7.68**	**103**	P	**Pn**	**03 03 44.5**	**-1.4**
ELL	**Elmali**	**7.68**	**103**		**Pn**	**03 03 44.5**	**-1.4**
ATPI	**Pietralunga -**	**7.71**	**310**	⇓P	**Pn**	**03 03 46.8**	**+0.7**
ISR	**Istrita**	**7.73**	**33**	⇑P	**Pn**	**03 03 48.9**	**+2.6**
ISR	**Istrita**	**7.73**	**33**	P	**Pn**	**03 03 50.6**	**+4.2**
ISR				pmax	pmax		
	comp=Z,81nm,1.2s						
BOJS	**Bojanci**	**7.77**	**331**	⇓P	**Pn**	**03 03 47.4**	**+0.5**
BOJS	**Bojanci**	**7.77**	**331**	*e*Pn	**Pn**	**03 03 47.1**	**+0.2**
BOJS				*e*Sn	**Sn**	**03 05 10.2**	**-4.7**
BOJS				IAML		03 05 21.5	
	comp=Z,50nm,1.0s						
OZLJ	**Ozalj**	**7.79**	**333**	*e*Pn	**Pn**	**03 03 46.8**	**-0.3**
MLR	**Muntele Rosu**	**7.79**	**29**	⇓P	**Pn**	**03 03 51.0**	**+3.7**
MLR	**Muntele Rosu**	**7.79**	**29**	LR	LR	03 07 13.6	
	comp=Z,277nm,19.2s,baz=205,slow=42						
MLR	**Muntele Rosu**	**7.79**	**29**	P	**Pn**	**03 03 47.6**	**+0.3**
MLR	**Muntele Rosu**	**7.79**	**29**		**Pn**	**03 03 47.6**	**+0.3**
SMRN	**Sveta Marina**	**7.85**	**325**	*e*Pn	**Pn**	**03 03 47.7**	**-0.2**
PTJ	**Puntijarka**	**7.87**	**336**	P	**Pn**	**03 03 50.2**	**+1.8**
NEHR	**Nehoiu**	**7.88**	**31**	⇓P	**Pn**	**03 03 51.8**	**+3.4**
RIY	**Rijeka**	**7.93**	**327**	*e*Pn	**Pn**	**03 03 49.0**	**-0.1**
RIY	**Rijeka**	**7.93**	**327**	*e*Pn	**Pn**	**03 03 49.0**	**-0.1**
GBRS	**Gornja Briga**	**7.96**	**329**	*i* Pn	**Pn**	**03 03 50.4**	**+0.8**
GBRS				*e*Sn	**Sn**	**03 05 15.6**	**-4.1**
CRES	**Cresnjev**	**7.97**	**333**	*e*Pn	**Pn**	**03 03 49.2**	**-0.4**
CRES	**Cresnjev**	**7.97**	**333**	*e*Pn	**Pn**	**03 03 49.3**	**-0.4**
DOPR	**Dopca**	**8.00**	**25**	⇑P	**Pn**	**03 03 53.0**	**+2.9**
LOBO	**Lobor**	**8.06**	**337**	*e*Pn	**Pn**	**03 03 50.1**	**-0.8**
VISS	**Visnje**	**8.18**	**331**	*i* Pn	**Pn**	**03 03 52.9**	**+0.4**
OZUR		**8.25**	**26**	⇑P	**Pn**	**03 03 56.7**	**+3.2**
KOGS	**Kog**	**8.28**	**339**	⇓P	**Pn**	**03 03 53.6**	**-0.2**
CEY	**Cerknica**	**8.29**	**329**	*e*Pn	**Pn**	**03 03 54.6**	**+0.6**
PLOR	**Plostina**	**8.37**	**31**	⇑P	**Pn**	**03 03 58.5**	**+3.3**
PLOR	**Plostina**	**8.37**	**31**	P	**Pn**	**03 03 58.4**	**+3.3**
MDUB	**Mudurnu**	**8.38**	**75**	Pn	**Pn**	**03 03 55.5**	**+0.1**
VRI	**Vrincioaia**	**8.41**	**31**	⇓P	**Pn**	**03 03 58.9**	**+3.2**
VRI	**Vrincioaia**	**8.41**	**31**	P	**Pn**	**03 03 58.7**	**+3.0**
VRI				pmax	pmax		
	comp=Z,37nm,1.0s						
OSSC	**Osservatorio P**	**8.46**	**307**	Pn	**Pn**	**03 03 56.8**	**+0.4**
LJU	**Ljubljana**	**8.50**	**330**	*e*Pn	**Pn**	**03 03 57.2**	**+0.3**
MPLH	**Magyarpolny**	**8.65**	**346**	*e*PN	**Pn**	**03 03 59.0**	**0.0**
MPLH	**Magyarpolny**	**8.65**	**346**	*e*P	**Pn**	**03 04 01.2**	**+2.2**
MPLH	**Magyarpolny**	**8.65**	**346**	*e*SN	**Sn**	**03 05 33.3**	**-3.2**
SABO	**M.te Sabotino**	**8.83**	**327**	⇓P	**Pn**	**03 04 01.3**	**-0.2**
SOKA	**Soboth**	**8.86**	**335**	*e*Pn	**Pn**	**03 04 02.0**	**+0.1**
	comp=Z,2.1nm,0.2s						
OBKA	**Obir**	**8.88**	**332**	*i* Pn	**Pn**	**03 04 02.6**	**+0.3**
	comp=Z,6.2nm,0.4s,SNR=9.1						
OBKA				*e*Sn	**Sn**	**03 05 40.5**	**-1.8**
	comp=Z,12nm,0.4s						
PSZ	**Piszkesteto**	**9.13**	**357**	*e*PN	**Pn**	**03 04 06.8**	**+1.2**
PSZ	**Piszkesteto**	**9.13**	**357**	Pn	**Pn**	**03 04 05.8**	**+0.2**
ARSA	**Arzberg**	**9.21**	**338**	*i* Pn	**Pn**	**03 04 06.5**	**-0.2**
	comp=Z,4.6nm,0.5s,SNR=6.2						
TEOL	**Teolo**	**9.30**	**318**	Pn	**Pn**	**03 04 08.1**	**+0.2**
STAL	**STALIGIAL**	**9.44**	**325**		**Pn**	**03 04 08.8**	**-1.0**
BURAR	**Bucovina Array**	**9.44**	**20**	Pn	**Pn**	**03 04 10.0**	**+0.1**
ZOU	**Zoufplan**	**9.55**	**327**	Pn	**Pn**	**03 04 10.9**	**-0.6**
PRMA	**PARMA**	**9.69**	**311**	Pn	**Pn**	**03 04 13.4**	**+0.2**
CONA	**Conrad Observa**	**9.74**	**341**	*e*Pn	**Pn**	**03 04 16.5**	**+2.5**
	comp=Z,4.6nm,0.7s						
VYHS	**Vyhne**	**9.77**	**353**	*e*SN	**Sn**	**03 06 00.0**	**-4.0**
CTI	**Castel Tesino**	**9.78**	**321**	P	**Pn**	**03 04 14.3**	**-0.3**
CTI	**Castel Tesino**	**9.78**	**321**	Pn	**Pn**	**03 04 14.3**	**-0.3**
KBA	**Koelnbreinsper**	**9.81**	**330**	P	**Pn**	**03 04 15.8**	**+0.7**
KBA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ABTA	**Abfaltersbach**	**9.90**	**326**	*i* Pn	**Pn**	**03 04 16.2**	**0.0**
	comp=Z,1.5nm,0.3s,SNR=6.7						
ABTA				*e*Sn	**Sn**	**03 06 07.6**	**+0.3**
	comp=Z,14nm,0.8s						
MOA	**Molln**	**10.14**	**335**	*i* Pn	**Pn**	**03 04 20.0**	**+0.7**
	comp=Z,3.0nm,0.3s,SNR=6.5						
MOA				*e*Sn	**Sn**	**03 06 11.8**	**-1.2**
	comp=Z,3.1nm,0.4s						
BR131	**Keskin Array S**	**10.19**	**81**	P	**Pn**	**03 04 19.0**	**-1.2**
BR131	**Keskin Array S**	**10.19**	**81**		**Pn**	**03 04 19.0**	**-1.2**
BRTR	**Keskin Array B**	**10.19**	**81**	Pn	**Pn**	**03 04 24.9**	**+4.6**
	comp=Z,0.3nm,0.3s,baz=259,slow=13,SNR=10						
BRTR	**Keskin Array B**	**10.19**	**81**	*i* P	**Pn**	**03 04 24.8**	**+4.6**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BRTR	**Keskin Array B**	**10.19**	**81**		**Pn**	**03 04 18.8**	**-1.4**
NIE	**Niedzica**	**10.62**	**359**	P	Pn	03 04 31.5	+5.5
WTTA	**Wattenberg**	**10.68**	**325**	*i* Pn	**Pn**	**03 04 28.9**	**+1.9**
	comp=Z,1.7nm,0.3s						
WTTA				*e*Sn	**Sn**	**03 06 25.7**	**-0.8**
	comp=Z,8.7nm,0.4s						
WTTA	**Wattenberg**	**10.68**	**325**	P	**Pn**	**03 04 27.0**	**+0.1**
WTTA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
WATA	**Walderalm**	**10.76**	**325**	*e*Pn	**Pn**	**03 04 29.5**	**+1.5**
	comp=Z,1.8nm,0.2s,SNR=8.0						
SQTA	**Sankt Quirin**	**10.84**	**324**	*i* Pn	**Pn**	**03 04 30.4**	**+1.4**
	comp=Z,2.6nm,0.4s						
FETA	**Feichten**	**10.92**	**322**	*i* Pn	**Pn**	**03 04 33.0**	**+2.8**
	comp=Z,1.3nm,0.6s						
CSS	**Mathiatis**	**10.92**	**107**	Pn	**Pn**	**03 04 28.4**	**-1.7**
MOTA	**Moosalm**	**10.98**	**324**	*i* Pn	**Pn**	**03 04 32.4**	**+1.4**
	comp=Z,4.8nm,0.5s,SNR=6.7						
MOTA				*e*Sn	**Sn**	**03 06 31.7**	**-2.2**
	comp=Z,6.2nm,0.6s						
CKRC	**Cesky Krumlov**	**10.98**	**338**	*e*P	**Pn**	**03 04 31.1**	**+0.2**
DAVOX	**Davos/Dischmat**	**11.18**	**319**	Pn	**Pn**	**03 04 34.9**	**+1.1**
	baz=146,slow=18						
DAVOX				LR	LR	03 09 24.2	
	comp=Z,175nm,18.7s,baz=130,slow=41						
MORC	**Moravsky Berou**	**11.18**	**350**	P	**Pn**	**03 04 34.3**	**+0.6**
MORC	**Moravsky Berou**	**11.18**	**350**		**Pn**	**03 04 34.2**	**+0.6**
GEC2	**GERESS Array S**	**11.19**	**336**	Pn	**Pn**	**03 04 33.0**	**-0.8**
GERES	**GERESS Array B**	**11.19**	**336**	Pn	**Pn**	**03 04 33.0**	**-0.8**
	comp=Z,0.6nm,0.3s,baz=157,slow=14,SNR=9.7						
GERES	**GERESS Array B**	**11.19**	**336**	P	**Pn**	**03 04 33.0**	**-0.8**
TUE	**Stuetta**	**11.26**	**317**	Pn	**Pn**	**03 04 35.4**	**+0.5**
KHC	**Kasperske Hory**	**11.48**	**336**	*e*P	**Pn**	**03 04 37.0**	**-0.8**
KHC	**Kasperske Hory**	**11.48**	**336**	*e*P	**Pn**	**03 04 37.0**	**-0.8**
KHC				*e*x	x	03 05 06.5	
KHC				*e*x	x	03 06 38.6	
SENIN	**Lac Senin/Sane**	**12.34**	**312**		**Pn**	**03 04 49.9**	**+0.2**
CLL	**Collm**	**13.59**	**339**	*e*P	**Pn**	**03 05 11.0**	**+4.5**
EIL	**Elat**	**14.97**	**123**	Pn	**Pn**	**03 05 27.8**	**+2.3**
	comp=Z,0.3nm,0.3s,baz=214,slow=6.6,SNR=4.1						
SOC	**Sochi**	**15.19**	**66**	*e*P	**Pn**	**03 05 29.0**	**+0.7**
SOC				*e*		03 08 18.3	
SOC				MLR	MLR		
	comp=Z,74nm,15.0s						
KLNR	**Kaliningrad**	**15.81**	**359**	⇓*e*P	**P**	**03 05 39.6**	**-0.6**
KLNR				pmax	pmax		
	comp=Z,304nm,1.0s						
MNK	**Minsk**	**16.48**	**15**	*i* P	**Pn**	**03 05 41.5**	**-3.4**
MNK				*i* S	**Sn**	**03 08 45.7**	**-1.9**
MNK				pmax	pmax		
	comp=N,15nm,1.2s						
MNK				pmax	pmax		
	comp=E,3.0nm,1.1s						
MNK				pmax	pmax		
	comp=Z,13nm,0.9s						
MNK				MLR	MLR		
	comp=N,155nm,17.0s						
MNK				MLR	MLR		
	comp=Z,79nm,14.0s						
MNK				MLR	MLR		
	comp=E,23nm,16.0s						
MNK	**Minsk**	**16.48**	**15**	*i* P	**Pn**	**03 05 41.5**	**-3.3**
	comp=E,3.0nm,1.1s						
MNK				*i* P	**Pn**	**03 05 41.5**	**-3.3**
	comp=N,15nm,1.2s						
MNK				*i* P	**Pn**	**03 05 41.5**	**-3.3**
	comp=Z,13nm,0.8s,baz=200						
MNK				*i* PP	**sP**	**03 05 52.3**	**+0.4**
MNK				*i* PPP	PPP	03 05 58.6	
MNK				*i* S	**Sn**	**03 08 45.7**	**-1.9**
MNK				*i* SS	**SnSn**	**03 09 00.5**	**-0.2**
MNK				*i* SSS	SSS	03 09 13.2	
MNK				*i* LQ	LQ	03 10 34.7	
MNK				*i* LR	LR	03 11 31.8	
MNK				*i* LRM	MLR	03 12 45.3	
	comp=N,155nm,17.2s						
MNK				*i* LRM	MLR	03 12 58.3	
	comp=Z,79nm,14.5s						
MNK				*i* LRM	MLR	03 13 03.8	
	comp=E,23nm,16.3s						
SIRT	**Sirnak**	**17.26**	**87**	Pn	**Pn**	**03 05 53.8**	**-1.1**
KIV	**Kislovodsk**	**17.37**	**66**	*e*P	**P**	**03 05 58.4**	**+0.7**
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,22nm,14.0s						
KBZ	**Khabaz**	**17.49**	**67**	P	**Pn**	**03 05 58.1**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=274,slow=12,SNR=3.5						
KBZ				LR	LR	03 13 08.7	
	comp=Z,55nm,21.4s,baz=237,slow=39						
KBZ	**Khabaz**	**17.49**	**67**	⇓*e*P	**Pn**	**03 05 57.6**	**0.0**
KBZ				pmax	pmax		
	comp=Z,9.0nm,1.3s						
GOF	**Gofitskoye**	**17.84**	**62**	⇑*e*P	**P**	**03 06 06.7**	**+4.0**
GNI	**Garni**	**18.71**	**78**	LR	LR	03 14 40.7	
	comp=Z,61nm,21.7s,baz=280,slow=41						
LPSR	**Galich'ya Gora**	**18.77**	**37**	*e*P	**Pn**	**03 06 17.3**	**+4.0**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ESDC	**Sonseca Array**	**19.00**	**280**	P	**Pn**	**03 06 17.1**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=72,slow=11,SNR=4.9						
VRH	**Novokhopyorsk**	**19.35**	**43**	*e*P	**Pn**	**03 06 24.9**	**+4.6**
VRH				pmax	pmax		
	comp=Z,30nm,1.6s						
OBN	**Obninsk**	**19.56**	**28**	*i* P	**Pn**	**03 06 23.2**	**+0.4**
OBN				*i* S	**S**	**03 09 55.4**	**-6.7**
OBN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,43nm,10.0s						
VSU	**Vasula**	**20.08**	**9**	⇓*e*P	Pn	03 06 29.5	+0.6
VSU				pmax	pmax		
	comp=Z,88nm,1.6s						
MOS	**Moscow**	**20.43**	**28**	*e*P	Pn	03 06 36.2	+3.1
MDT	**Midelt**	**21.23**	**261**	LR	LR	03 16 43.2	
	comp=Z,36nm,18.4s,baz=70,slow=42						
HFS	**Hagfors**	**21.79**	**351**	P	**P**	**03 06 45.1**	**-0.5**
	comp=Z,3.1nm,0.7s,baz=162,slow=10.0,SNR=1.9						
HFS				LR	LR	03 15 29.7	
	comp=Z,179nm,19.4s,baz=178,slow=38						
FINES	**FINESS Array B**	**22.93**	**7**	P	**P**	**03 06 57.2**	**-0.5**
	comp=Z,4.5nm,0.7s,baz=172,slow=9.3,SNR=13						
FINES				LR	LR	03 17 48.4	
	comp=Z,100nm,18.8s,baz=196,slow=42						
FINES	**FINESS Array B**	**22.93**	**7**	*i* P	**P**	**03 06 58.7**	**+1.0**
FINES				pmax	pmax		
	comp=Z,5.0nm,0.7s						
EKA	**Eskdalemuir Ar**	**22.94**	**324**	P	**P**	**03 06 58.4**	**+0.5**
	comp=Z,4.4nm,0.6s,baz=123,slow=10,SNR=13						
NB2	**NORSAR Subarra**	**23.02**	**348**	P	**P**	**03 06 58.6**	**-0.1**
	comp=Z,20nm,1.7s,baz=162,slow=11						
NOA	**NORSAR Array B**	**23.02**	**348**	P	**P**	**03 06 57.9**	**-0.7**
	comp=Z,2.9nm,0.8s,baz=158,slow=9.3,SNR=6.6						
NOA				LR	LR	03 17 54.9	
	comp=Z,142nm,18.9s,baz=170,slow=42						
BELG	**Belogornoye**	**23.14**	**45**	LR	LR	03 17 05.7	
	comp=Z,194nm,19.0s,baz=343,slow=40						
BELG	**Belogornoye**	**23.14**	**45**	⇓*e*P	**P**	**03 07 02.8**	**+2.8**
BELG				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KLMR	**Klimovskoe**	**25.05**	**22**	*e*P	**P**	**03 07 18.9**	**+1.0**
KLMR				*e*		03 10 50.7	
KLMR				pmax	pmax		
	comp=Z,18nm,1.3s						
KLMR	**Klimovskoe**	**25.05**	**22**	*e*P	**P**	**03 07 18.9**	**+1.0**
KLMR				AMP		03 07 21.0	
	comp=Z,18nm,1.3s						
KLMR				*e*PcP	**PcP**	**03 10 50.8**	**-1.4**
KLMR				LQ	LQ	03 15 12.2	
KLMR				LQ	LQ	03 15 12.2	
KLMR				LR	LR	03 16 50.1	
KIRV	**Kirov**	**27.12**	**34**	LR	LR	03 19 00.8	
	comp=Z,138nm,21.6s,baz=238,slow=38						
KIRV	**Kirov**	**27.12**	**34**	⇑*e*P	**P**	**03 07 36.8**	**+0.2**
PRGR	**Permogore**	**27.59**	**26**	*e*P	**P**	**03 07 38.5**	**-2.3**
PRGR				pmax	pmax		
	comp=Z,9.0nm,1.4s						
AKTO	**Aktyubinsk**	**28.79**	**54**	P	**P**	**03 07 50.9**	**-0.8**
	comp=Z,1.7nm,0.6s,baz=270,slow=10,SNR=4.0						
GEYT	**Alibeck**	**29.33**	**80**	LR	LR	03 22 07.7	
	comp=Z,44nm,20.7s,baz=255,slow=42						
GYA0B	**ALIBECK ARRAY**	**29.33**	**80**	P	**P**	**03 07 56.1**	**-0.5**
GYA0B				IAmb	IAmb	03 08 22.1	
	comp=Z,5.5nm,0.8s						
ABKAR	**Akbulak array**	**29.87**	**57**	P	**P**	**03 08 00.2**	**-1.1**
TORD	**Torodi Ar. Bea**	**30.53**	**218**	P	**P**	**03 08 09.3**	**+1.9**
	comp=Z,1.0nm,1.0s,baz=25,slow=9.5,SNR=4.8						
ARU	**Arti**	**30.58**	**42**	⇑*e*P	**P**	**03 08 10.6**	**+3.2**
ARU				pmax	pmax		
	comp=Z,10.0nm,1.7s						
ARCES	**ARCESS Array B**	**30.91**	**3**	P	**P**	**03 08 09.7**	**-0.5**
	comp=Z,1.9nm,0.9s,baz=187,slow=12,SNR=1.3						
ARCES				LR	LR	03 22 46.9	
	comp=Z,78nm,20.3s,baz=210,slow=41						
BRVK	**Borovoye**	**36.64**	**51**	⇓*i*P	**P**	**03 09 00.8**	**+0.6**
BRVK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
BRVK	**Borovoye**	**36.64**	**51**	P	**P**	**03 08 59.7**	**-0.5**
BRVK				IAmb	IAmb	03 09 05.1	
	comp=Z,6.3nm,0.9s						
KKAR	**Karatay Array**	**37.52**	**67**	P	**P**	**03 09 08.5**	**+0.6**
KKAR	**Karatay Array**	**37.52**	**67**	P	**P**	**03 09 08.5**	**+0.6**
GAR	**Garm**	**38.33**	**74**	P	**P**	**03 09 13.2**	**-1.7**
BTK	**Batken**	**38.42**	**72**	P	**P**	**03 09 14.8**	**-0.8**
BTK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BTK	**Batken**	**38.42**	**72**	P	**P**	**03 09 14.8**	**-0.8**
DBIC	**Dimbokro**	**39.37**	**222**	LR	LR	03 26 50.1	
	comp=Z,84nm,19.2s,baz=46,slow=38						
MBAR	**Mbarara**	**40.31**	**164**	LR	LR	03 28 44.1	
	comp=Z,43nm,18.8s,baz=334,slow=40						
AAK	**Ala-Archa**	**40.48**	**67**	⇓*e*P	**P**	**03 09 34.2**	**+1.4**
AAK				pmax	pmax		
	comp=Z,22nm,2.8s						
KURK	**Kurchatov**	**41.89**	**54**	⇑*e*P	**P**	**03 09 46.1**	**+2.1**
KURK				pmax	pmax		
	comp=Z,12nm,2.5s						
KURK	**Kurchatov**	**41.89**	**54**	P	**P**	**03 09 44.0**	**-0.1**
KURK				IAmb	IAmb	03 10 07.7	
	comp=Z,7.3nm,0.8s						
NIL	**Nilore**	**42.34**	**80**	P	**P**	**03 09 47.8**	**-0.2**
NIL				pmax	pmax		
	comp=Z,9.0nm,0.9s						
NIL	**Nilore**	**42.34**	**80**	P	**P**	**03 09 47.8**	**-0.2**
NIL				IAmb	IAmb	03 10 12.5	
	comp=Z,8.9nm,0.8s						
MKAR	**Makanchi Array**	**44.95**	**59**	P	**P**	**03 10 07.9**	**-1.0**
	comp=Z,0.6nm,0.5s,baz=283,slow=8.3,SNR=4.6						
ZAA0	**Zalesovo Array**	**45.26**	**49**	P	**P**	**03 10 11.8**	**+0.6**
ZALV	**Zalesovo Beam**	**45.26**	**49**	P	**P**	**03 10 10.2**	**-0.9**
	comp=Z,7.2nm,0.8s,baz=271,slow=8.5,SNR=16						
ZALV	**Zalesovo Beam**	**45.26**	**49**	*i* P	**P**	**03 10 12.8**	**+1.7**
ZALV				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ZALV	**Zalesovo Beam**	**45.26**	**49**	P	**P**	**03 10 11.3**	**+0.2**
NRIK	**Noril'sk**	**46.23**	**27**	⇑*e*P	**P**	**03 10 22.3**	**+3.7**
NRIK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
DGZ	**Jazzator, Alta**	**47.63**	**54**	⇓*e*P	**P**	**03 10 33.1**	**+3.0**
DGZ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
YAK	**Yakutsk**	**64.56**	**30**	LR	LR	03 41 41.7	
	comp=Z,80nm,19.3s,baz=269,slow=37						
SEY	**Seymchan**	**71.55**	**21**	LR	LR	03 51 35.0	
	comp=Z,56nm,20.6s,baz=285,slow=42						
YKA	**Yellowknife Ar**	**72.82**	**340**	LR	LR	03 46 50.6	
	comp=Z,45nm,18.4s,baz=0.0,slow=37						
ILAR	**Eielson Array**	**76.29**	**354**	LR	LR	03 49 43.6	
	comp=Z,29nm,19.7s,baz=340,slow=38						
USRK	**Ussuriysk Ar.**	**76.81**	**43**	LR	LR	03 50 10.7	
	comp=Z,59nm,18.1s,baz=169,slow=38						
CPUP	**Villa Florida**	**97.36**	**242**	LR	LR	04 01 38.3	
	comp=Z,32nm,18.2s,baz=42,slow=37						

KMA 20 03:04:59.7±0.3**, 37°.54N×128°.95E, h0^{km}, Error ellipse: s-maj=5.1km s-min=2.5km az=63.0, South Korea**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
OKEB	**Okgye-meyeon**	**0.08**	**15**	P	Pg	03 05 01.3	0.0
	SNR=14						
KSDGY	**Daegwallycong**	**0.27**	**304**	P	Pg	03 05 04.9	+0.1
	SNR=10						
KSJMJ	**Jumunjin**	**0.37**	**335**	P	Pg	03 05 07.0	+0.1
	SNR=18						
KSULJ	**Uljin**	**0.91**	**156**	P	Pg	03 05 17.2	0.0
	SNR=6.6						
SEHB	**SEOHWA**	**0.91**	**323**	P	Pg	03 05 17.1	-0.1
	SNR=5.2						

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*BEO **20** 03:05:26.3±1.2, 38°.38N×20°.20E, h0^{km}, ML3.8/14*
*IDC **20** 03:05:26.6±1.1, 38°.57N×20°.53E, h0^{km}, mb3.8/7, mb1 3.8/12, mb1mx3.6/61, mbtmp3.7/12, ML3.6/5, Error ellipse: s-maj=21.8km s-min=16.7km az=46.0*
*PDG **20** 03:05:27.8±0.5, 38°.52N×20°.43E, h17^{km}, ML3.7/13, Error ellipse: s-maj=0.8km s-min=1.1km az=0.0*
*THE **20** 03:05:28.6, 38°.50N×20°.50E, h9^{km}, ML4.1/10, Error ellipse: s-maj=1.0km s-min=0.4km az=284.0*
*ATH **20** 03:05:28.7, 38°.50N×20°.51E, h11^{km}±1^{km}, ML3.8/15, Error ellipse: s-maj=1.5km s-min=0.6km az=282.0*
*NEIC **20** 03:05:30.9±1.9, 38°.54N±0°.04×20°.50E±0°.07, h28^{km}±8^{km}, Error ellipse: s-maj=7.5km s-min=6.4km az=80.0*
ISC 20 03:05:27.8±0.7**, 38°.50N**±0°.02×**20°.46E**±0°.03**, h13^{km}**±4^{km}**, n185, σ1^{s}.16**/231**, mb4.0**/8**, 1C-5D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
FSK	**Fiskardo**	**0.09**	**117**	P	**Pg**	**03 05 30.7**	**+0.1**
FSK				S	**Sg**	**03 05 32.1**	**-0.5**
	193µm,0.4s						
FSK	**Fiskardo**	**0.09**	**117**	P	**Pg**	**03 05 30.8**	**+0.1**
FSK				S	**Sg**	**03 05 32.0**	**-0.6**
FSK				AML	AML	03 05 32.4	
FSK				AML	AML	03 05 34.2	
EVGI	**Lefkada island**	**0.20**	**52**	P	**Pg**	**03 05 32.3**	**+0.2**
EVGI				S	**Sg**	**03 05 35.4**	**+0.3**
	122µm,0.2s						
EVGI	**Lefkada island**	**0.20**	**52**	P	**Pg**	**03 05 32.3**	**+0.2**
EVGI				S	**Sg**	**03 05 35.2**	**0.0**
DRAG	**Dragano-Lefkad**	**0.20**	**26**	P	**Pg**	**03 05 32.3**	**0.0**
DRAG				S	**Sg**	**03 05 35.7**	**+0.3**
	246µm,0.4s						
DRAG	**Dragano-Lefkad**	**0.20**	**26**	P	**Pg**	**03 05 32.5**	**+0.2**
DRAG				S	**Sg**	**03 05 35.7**	**+0.3**
KEF4	**Livadi, Kephal**	**0.24**	**187**	P	**Pg**	**03 05 33.5**	**+0.6**
KEF4				S	**Sb**	**03 05 37.5**	**-0.7**
	186µm,0.3s						
KEF4	**Livadi, Kephal**	**0.24**	**187**	P	**Pg**	**03 05 33.5**	**+0.6**
KEF4				S	**Sb**	**03 05 38.0**	**-0.2**
DMLN	**Damoulianata-K**	**0.27**	**195**	P	**Pg**	**03 05 34.1**	**+0.6**
DMLN				S	**Sb**	**03 05 39.0**	**0.0**
	67µm,0.5s						
DMLN	**Damoulianata-K**	**0.27**	**195**	P	**Pg**	**03 05 34.0**	**+0.6**
DMLN				S	**Sb**	**03 05 38.7**	**-0.3**
NYDR	**Nydri-Lefkada**	**0.28**	**41**	P	**Pg**	**03 05 33.7**	**0.0**
NYDR				S	**Sg**	**03 05 38.1**	**+0.5**
	27µm,0.4s						
NYDR	**Nydri-Lefkada**	**0.28**	**41**	P	**Pg**	**03 05 33.7**	**0.0**
NYDR				S	**Sg**	**03 05 37.8**	**+0.2**
LXRA	**Lixouri, Kepha**	**0.30**	**183**	P	**Pg**	**03 05 34.6**	**+0.7**
LXRA				S	**Sb**	**03 05 40.0**	**+0.1**
KEF3	**Kipouria, Keph**	**0.31**	**197**	P	**Pg**	**03 05 34.2**	**+0.1**
KEF3				S	**Sb**	**03 05 39.4**	**-0.7**
	91µm,0.5s						
KEF3	**Kipouria, Keph**	**0.31**	**197**	P	**Pg**	**03 05 34.3**	**+0.2**
KEF3				S	**Sg**	**03 05 38.8**	**+0.4**
ARGA	**Argostoli. Kep**	**0.32**	**177**	P	**Pb**	**03 05 35.7**	**+0.3**
LKD2	**Lefkada island**	**0.33**	**28**	P	**Pg**	**03 05 34.5**	**0.0**
LKD2				S	**Sg**	**03 05 39.9**	**+0.9**
	14µm,0.5s						
LKD2	**Lefkada island**	**0.33**	**28**	P	**Pg**	**03 05 34.8**	**+0.3**
LKD2				S	**Sg**	**03 05 38.8**	**-0.1**
LKD2				AML	AML	03 05 40.6	
	comp=N,38823µm,0.5s						
LKD2				AML	AML	03 05 40.9	
	comp=E,36566µm,0.6s						
VLS	**Valsamata**	**0.34**	**163**	P	**Pg**	**03 05 35.0**	**+0.3**
VLS				S	**Sg**	**03 05 40.1**	**+0.8**
	comp=E,32µm,0.3s						
VLS	**Valsamata**	**0.34**	**163**	P	**Pg**	**03 05 35.0**	**+0.3**
VLS				S	**Sb**	**03 05 40.5**	**-0.4**
VLS				AML	AML	03 05 41.4	
	comp=N,63270µm,0.2s						
VLS				AML	AML	03 05 42.4	

	comp=E,63296µm,0.4s						
TSLK	Tsoukalades, L	0.36	25	P	Pg	03 05 35.3	+0.3
TSLK				S	Sg	03 05 40.9	+1.0
	comp=E,25µm,0.6s						
TSLK	Tsoukalades, L	0.36	25	P	Pg	03 05 35.3	+0.3
TSLK				S	Sg	03 05 40.3	+0.5
TSLK				AML	AML	03 05 43.1	
	comp=E,61754µm,0.6s						
TSLK				AML	AML	03 05 43.6	
	comp=N,35687µm,0.6s						
PSDA	Pessada-Kefalo	0.40	166	P	Pg	03 05 36.0	+0.3
PSDA				S	Sb	03 05 42.0	-0.6
PSDA	Pessada-Kefalo	0.40	166	P	Pg	03 05 36.0	+0.3
PSDA				S	Sb	03 05 42.6	0.0
ZAK2	Zakynthos	0.79	154	P	Pg	03 05 43.6	+0.5
VTN	Vitineika	0.82	135	P	Pg	03 05 44.0	+0.4
VTN	Vitineika	0.82	135	P	Pg	03 05 44.1	+0.6
PVO	Paravola	0.84	82	P	Pb	03 05 44.1	-0.2
PVO	Paravola	0.84	82	P	Pb	03 05 44.3	0.0
PVO				AML	AML	03 06 01.7	
	comp=N,9276µm,0.5s						
PVO				AML	AML	03 06 05.5	
	comp=E,9688µm,0.3s						
LTHK	Lithakia	0.84	159	P	Pb	03 05 43.5	-0.8
LTHK	Lithakia	0.84	159	P	Pb	03 05 43.6	-0.6
LTHK				AML	AML	03 06 00.8	
	comp=N,19730µm,0.3s						
LTHK				AML	AML	03 06 04.5	
	comp=E,20503µm,0.4s						
RLS	Riolos of Patr	0.91	119	P	Pb	03 05 45.3	0.0
RLS	Riolos of Patr	0.91	119	P	Pb	03 05 45.4	0.0
RLS				AML	AML	03 06 07.0	
	comp=N,7522µm,0.6s						
RLS				AML	AML	03 06 07.4	
	comp=E,8158µm,0.7s						
IGT	Igoumenitsa	1.03	355	P	Pb	03 05 47.3	-0.3
IGT	Igoumenitsa	1.03	355	P	Pb	03 05 47.2	-0.3
IGT				AML	AML	03 06 11.3	
	comp=E,8919µm,0.4s						
IGT				AML	AML	03 06 11.5	
	comp=N,5747µm,0.4s						
DRO	Drossia	1.13	119	P	Pn	03 05 48.7	-0.6
DRO	Drossia	1.13	119	P	Pn	03 05 48.9	-0.3
DRO				AML	AML	03 06 13.6	
	comp=E,13685µm,0.7s						
DRO				AML	AML	03 06 16.4	
	comp=N,15642µm,0.6s						
EVR	Evrytania	1.13	68	P	Pn	03 05 49.0	-0.4
EVR	Evrytania	1.13	68	P	Pn	03 05 48.9	-0.6
EFP	Efpalio	1.14	93	P	Pn	03 05 48.5	-0.9
EFP	Efpalio	1.14	93	P	Pn	03 05 48.4	-0.9
EFP				AML	AML	03 06 12.0	
	comp=E,8775µm,0.6s						
EFP				AML	AML	03 06 12.2	
	comp=N,6026µm,0.4s						
ANX	Ano Chora	1.15	85	P	Pn	03 05 49.1	-0.5
ANX	Ano Chora	1.15	85	P	Pn	03 05 49.4	-0.2
ANX				AML	AML	03 06 15.5	
	comp=N,11279µm,0.5s						
ANX				AML	AML	03 06 17.1	
	comp=E,8032µm,0.5s						
JAN	Janina	1.19	15	P	Pn	03 05 50.9	+0.7
JAN	Janina	1.19	15	P	Pb	03 05 51.3	+1.1
LAKA	Lakka	1.22	102	P	Pn	03 05 50.0	-0.5
LAKA	Lakka	1.22	102	P	Pn	03 05 50.1	-0.5
LAKA				AML	AML	03 06 16.7	
	comp=N,16999µm,0.6s						
LAKA				AML	AML	03 06 17.8	
	comp=E,19575µm,0.8s						
TRIZ	Trizonia	1.27	96	P	Pn	03 05 50.9	-0.3
TRIZ	Trizonia	1.27	96	P	Pn	03 05 51.0	-0.2
KASA	Kassiopi	1.31	342	P	Pb	03 05 53.3	+1.1
KEK	Kerkira	1.31	337	P	Pb	03 05 53.0	+0.7
KEK	Kerkira	1.31	337	P	Pg	03 05 54.1	+1.0
ALIK	Aliki, Aigiali	1.32	100	P	Pn	03 05 51.8	-0.1
MAKR	Makrakomi, Fth	1.40	68	P	Pb	03 05 54.1	+0.3
MAKR	Makrakomi, Fth	1.40	68	P	Pn	03 05 53.9	+0.8
KLV	Kalavryta, Ach	1.41	108	P	Pn	03 05 53.2	+0.1
AGG	Agios Georgios	1.55	70	P	Pn	03 05 55.5	+0.4
AGG	Agios Georgios	1.55	70	P	Pn	03 05 56.0	+0.8
AGG				AML	AML	03 06 27.9	
	comp=N,2718µm,0.4s						
AGG				AML	AML	03 06 30.2	
	comp=E,2888µm,0.7s						
AGG	Agios Georgios	1.55	70	Pn	Pb	03 05 56.4	0.0
GUR	Goura	1.59	110	P	Pn	03 05 56.1	+0.5
THL	Klokotos Trika	1.61	48	P	Pn	03 05 56.7	+0.8
THL	Klokotos Trika	1.61	48	P	Pb	03 05 57.7	+0.3
THL				AML	AML	03 06 24.9	
	comp=E,4192µm,0.6s						
THL				AML	AML	03 06 25.2	
	comp=N,4857µm,0.7s						
ITM	Ithomi	1.76	138	P	Pb	03 06 00.1	+0.3
ITM	Ithomi	1.76	138	Pn	Pb	03 05 59.7	-0.1
THAL	Thalero	1.79	104	P	Pb	03 06 00.6	+0.1
THAL				AML	AML	03 06 36.0	
	comp=E,5350µm,0.6s						
THAL				AML	AML	03 06 46.2	
	comp=N,5224µm,0.8s						
LTK	Loutraki	2.03	103	P	Pb	03 06 04.0	-0.5
VLO	Vlora	2.10	339	Pn	Pn	03 06 03.7	+1.0
KBN	Korca	2.13	7	Pn	Pn	03 06 04.7	+1.5
SCTE	Santa Cesarea	2.20	316	Pn	Pn	03 06 05.5	+1.4
VIL2	Platees	2.23	97	P	Pb	03 06 07.6	-0.3
FNA	Florina	2.39	17	Pn	Pn	03 06 08.1	+1.5
OHR	Ohrid	2.62	6	ePn	Pb	03 06 13.1	-1.5
OHR				eSn	Sb	03 06 46.5	-0.2
OHR	Ohrid	2.62	6	iPn	Pb	03 06 13.1	-1.5
TIR	Tirane	2.88	351	ePn	Pn	03 06 15.7	+2.4
TIR	Tirane	2.88	351	Pn	Pn	03 06 14.5	+1.2
TIP	Timpagrande	2.97	284	Pn	Pn	03 06 15.6	+0.9
VAY	Valandovo	3.25	29	ePn	Pn	03 06 21.5	+3.1
VAY	Valandovo	3.25	29	ePn	Pn	03 06 20.2	+1.8
STIP	Stip	3.45	22	iPn	Pn	03 06 25.0	+3.8
ULC	Ulcinj	3.58	345	⇓iPn	Pn	03 06 23.5	+0.5
ULC				iSn	Sn	03 07 05.4	+0.2
CEL	Celeste	3.60	268		Pn	03 06 23.8	+0.5
DRME	Dracevica, Mon	3.81	346	ePn	Pn	03 06 27.2	+1.1
DRME	Dracevica, Mon	3.81	346	⇓iPn	Pn	03 06 27.0	+0.9
DRME				iSn	Sn	03 07 10.8	0.0
BUM	Brajici-Budva	3.98	343	⇓iPn	Pn	03 06 28.9	+0.4
BUM				eSn	Sn	03 07 14.9	-0.2
PDG	Podgorica	4.03	347	ePn	Pn	03 06 30.1	+1.0
PDG	Podgorica	4.03	347	ePn	Pn	03 06 29.3	+0.2
PDG	Podgorica	4.03	347	Pn	Pn	03 06 29.3	+0.2
TTG	Podgorica	4.03	347	⇓iPn	Pn	03 06 30.2	+1.1
TTG				eSn	Sn	03 07 16.1	-0.1
PVY	Plav	4.11	355	ePn	Pn	03 06 32.0	+1.7
PVY				iSn	Sn	03 07 17.0	-1.3
PRVS	Prvonek	4.19	17	ePn	Pn	03 06 33.6	+2.2
CEME	Cevo	4.21	344	⇓iPn	Pn	03 06 32.1	+0.4
CEME				iSn	Sn	03 07 20.3	-0.4
HCY	Herceg Novi	4.22	340	ePn	Pn	03 06 31.1	-0.6
HCY	Herceg Novi	4.22	340	⇑iPn	Pn	03 06 31.4	-0.3
HCY				iSn	Sn	03 07 20.5	-0.3
BOSS	Bosilegrad	4.28	20	ePn	Pn	03 06 35.6	+3.0
IVA	Berane	4.39	355	ePn	Pn	03 06 35.2	+1.0
IVA				iSn	Sn	03 07 24.7	-0.5
KOME	Kolasin	4.40	351	ePn	Pn	03 06 34.6	+0.2
KOME				iSn	Sn	03 07 24.2	-1.4
NKME	Niksic	4.41	345	ePn	Pn	03 06 34.8	+0.3
NKME				iSn	Sn	03 07 25.2	-0.5
BARS	Barje	4.43	13	ePn	Pn	03 06 36.2	+1.5
NKY	Niksic	4.45	346	ePn	Pn	03 06 35.6	+0.6
NKY				iSn	Sn	03 07 26.0	-0.7
TREB	Trebinje	4.51	340	ePn	Pn	03 06 36.1	+0.4
TREB	Trebinje	4.51	340	ePn	Pn	03 06 35.5	-0.2
SANT	Santorini	4.51	117	Pn	Pn	03 06 37.8	+2.0
DBRK	Dubrovnik	4.52	338	ePn	Pn	03 06 35.1	-0.7
VTS	Vitosha	4.62	26	ePn	Pn	03 06 39.7	+2.2
VTS				eSn	Sn	03 07 33.8	+2.7
VTS	Vitosha	4.62	26	Pn	Pn	03 06 39.3	+1.9
BRY	Bratogost	4.63	342	ePn	Pn	03 06 37.5	-0.1
BRY	Bratogost	4.63	342	ePn	Pn	03 06 37.2	-0.4
BRY				eSn	Sn	03 07 30.8	-0.5
SELS	Selova	4.74	6	ePn	Pn	03 06 40.1	+1.2
IDI	Anoyia	4.78	131	Pn	Pn	03 06 40.4	+0.8
	comp=N,1.1nm,0.3s,baz=295,slow=14,SNR=1.5						
IDI				Sn	Sn	03 07 35.5	+0.6
	comp=N,4.2nm,0.3s,baz=300,slow=16,SNR=3.3						
UPM	Unac-Piva	4.84	346	ePn	Pn	03 06 40.4	-0.1
UPM				eSn	Sn	03 07 36.3	-0.2
STON	Ston	4.84	335	ePn	Pn	03 06 40.5	+0.2
STON	Ston	4.84	335	ePn	Pn	03 06 39.8	-0.5
STON	Ston	4.84	335	ePn	Pn	03 06 40.0	-0.3
STON				Sn	Sn	03 07 34.0	-2.3
SGRT	San Giovanni R	4.86	313	Pn	Pn	03 06 42.3	+1.6
PLE	Pljevlja	4.89	351	ePn	Pn	03 06 41.8	+0.7
PLE				eSn	Sn	03 07 38.3	+0.7
ALN	Alexandroupoli	4.93	59	Pn	Pn	03 06 42.0	+0.5
RAFF	Raffo Rosso	4.99	257		Pn	03 06 43.3	+0.9
LSTV	Lastovo	5.05	329	ePn	Pn	03 06 42.9	-0.3
LSTV				Sn	Sn	03 07 37.1	-4.3
RUDO	Rudo	5.18	351	ePn	Pn	03 06 44.1	-0.8
PAOL	Paolisi	5.20	301	Pn	Pn	03 06 46.9	+1.7
BOVS	Bovan	5.21	10	ePn	Pn	03 06 45.9	+0.5
GRUS	Gruza	5.39	2	ePn	Pn	03 06 49.2	+1.4
BBLS	Lazići	5.42	352	ePn	Pn	03 06 49.1	+0.8
BBLS	Lazići	5.42	352	ePn	Pn	03 06 53.5	+5.2
MAKA	Makarska	5.45	332	ePn	Pn	03 06 48.8	+0.3
MAKA				Sn	Sn	03 07 48.6	-2.5
HVAR	Hvar	5.58	328	ePn	Pn	03 06 49.4	-1.0
RICI	Ricice	5.59	334	ePn	Pn	03 06 50.3	-0.2
RICI				Sn	Sn	03 07 51.7	-2.9
DIVS	Divibare	5.60	357	ePn	Pn	03 06 51.2	+0.3
DIVS	Divibare	5.60	357	ePn	Pn	03 06 50.9	0.0
DIVS	Divibare	5.60	357	Pn	Pn	03 06 50.6	-0.2
CORL	Corleone	5.67	266	Pn	Pn	03 06 54.0	+2.2
TRUS	Trudelj	5.72	360	ePn	Pn	03 06 52.8	+0.5
CLTB	Caltabellotta	5.79	263		Pn	03 06 55.9	+2.5
KIJV	Kijevo	6.29	332	ePn	Pn	03 07 00.7	+0.5
ZIRJ	Zirje	6.30	326	ePn	Pn	03 07 00.0	-0.4
MGRS	Mrkonjic Grad	6.43	338	ePn	Pn	03 07 02.5	+0.3
MORI	Morici	6.45	328	ePn	Pn	03 07 02.6	+0.3
FRGS	Fruska Gora	6.67	356	ePn	Pn	03 07 05.1	-0.3
FRGS	Fruska Gora	6.67	356	ePn	Pn	03 07 05.1	-0.3
BLY	Banja Luka	6.71	340	ePn	Pn	03 07 06.9	+1.0
BLY	Banja Luka	6.71	340	ePn	Pn	03 07 05.7	-0.2
DUGI	Dugi Otok	6.83	325	ePn	Pn	03 07 08.3	+0.7
UDBI	Udbina	6.98	331	ePn	Pn	03 07 10.9	+1.2
MRAK	Mrakovica	7.03	339	ePn	Pn	03 07 09.6	-0.8
NRCA	Norcia	7.06	310	Pn	Pn	03 07 12.8	+1.9
PLIT	Plitvice	7.33	332	ePn	Pn	03 07 14.7	+0.3
PLIT				Sn	Sn	03 08 34.3	-3.1
NVLJ	Novalja	7.37	327	ePn	Pn	03 07 15.3	+0.4
RABC	Rab	7.55	328	ePn	Pn	03 07 17.7	+0.2
MORH	Mrgy, Hungar	7.83	351	ePn	Pn	03 07 20.6	-0.6
SMRN	Sveta Marina	8.05	326	ePn	Pn	03 07 25.2	+0.9
SMRN				Sn	Sn	03 08 50.3	-4.9
BRJN	Brijuni	8.13	324	ePn	Pn	03 07 25.0	-0.5
RIY	Rijeka	8.14	329	ePn	Pn	03 07 26.1	+0.5
RIY	Rijeka	8.14	329	ePn	Pn	03 07 25.8	+0.2
CRES	Cresnjev	8.21	335	ePn	Pn	03 07 26.2	-0.3
CEY	Cerknica	8.51	330	ePn	Pn	03 07 30.7	+0.1
LJU	Ljubljana	8.72	332	ePn	Pn	03 07 33.5	-0.1
OBKA	Obir	9.11	333	Pn	Pn	03 07 40.6	+1.6
	comp=N,4.7nm,0.3s						
OBKA				eSn	Sn	03 09 17.6	-3.9
	comp=N,16nm,0.7s						
ARSA	Arzberg	9.46	339	ePn	Pn	03 07 43.5	-0.2
	comp=N,2.2nm,0.4s						
ABTA	Abfaltersbach	10.11	327	ePn	Pn	03 07 51.8	-0.8
	comp=N,4.0nm,0.5s						
ABTA				eSn	Sn	03 09 42.7	-3.1
	comp=N,7.3nm,0.9s						
BR131	Keskin Array S	10.32	79	Pn	Pn	03 07 55.0	-0.5
BRTR	Keskin Array B	10.32	79	Pn	Pn	03 08 00.9	+5.3
	comp=N,0.1nm,0.3s,baz=266,slow=12,SNR=3.6						
BRTR	Keskin Array B	10.32	79		Pn	03 07 55.0	-0.5
MOA	Molln	10.38	336	ePn	Pn	03 07 56.9	+0.6
	comp=N,7.4nm,0.8s						
MOA				eSn	Sn	03 09 48.3	-4.0
	comp=N,4.5nm,0.6s						
WTTA	Wattenberg	10.88	326	eSn	Sn	03 10 02.3	-2.7
	comp=N,5.0nm,0.5s						
WATA	Walderalm	10.96	326	ePn	Pn	03 08 05.9	+1.5
	comp=N,5.4nm,0.5s						
SQTA	Sankt Quirin	11.04	325	ePn	Pn	03 08 07.3	+1.9
	comp=N,2.6nm,0.5s						
FETA	Feichten	11.11	323	Pn	Pn	03 08 12.7	+6.2
	comp=N,3.9nm,0.8s						
FETA				eSn	Sn	03 10 09.3	-1.3
	comp=N,2.1nm,0.6s						
MOTA	Moosalm	11.18	325	iPn	Pn	03 08 08.8	+1.4
	comp=N,8.5nm,0.9s						
MOTA				eSn	Sn	03 10 10.8	-1.5
	comp=N,4.2nm,0.5s						
GERES	GERESS Array B	11.43	337	Pn	Pn	03 08 11.0	+0.3
	comp=N,0.3nm,0.3s,baz=155,slow=14,SNR=5.5						
KHC	Kasperske Hory	11.72	337	eP	Pn	03 08 13.5	-1.2
KHC				ex	x	03 09 21.5	
MMAI	Mount Meron Ar	13.31	110	Pn	Pn	03 08 34.7	-1.7
	comp=N,0.2nm,0.3s,baz=297,slow=13,SNR=1.5						
NACGM	Naroch	16.96	13	iP	Pn	03 09 25.1	+0.6
ESBB	Sonseca Array	18.98	281	P	P	03 09 47.3	-1.7
ESBB				IAmb	IAmb	03 09 53.1	
	comp=Z,7.7nm,1.2s						
ESDC	Sonseca Array	18.99	281	P	Pn	03 09 50.4	+0.7
	comp=Z,0.1nm,0.3s,baz=74,slow=11,SNR=7.2						
ESDC	Sonseca Array	18.99	281	IAmb	IAmb	03 09 50.7	
	comp=Z,2.8nm,1.6s						
HFS	Hagfors	22.07	351	P	P	03 10 22.1	-0.1
	comp=Z,4.7nm,0.7s,baz=160,slow=11,SNR=9.4						
EKA	Eskdalemuir Ar	23.14	324	P	P	03 10 34.8	+1.4
	comp=Z,2.1nm,0.7s,baz=126,slow=8.5,SNR=5.7						
FINES	FINESS Array B	23.23	7	P	P	03 10 33.7	-0.6
	comp=Z,2.3nm,0.5s,baz=174,slow=10,SNR=15						
NOA	NORSAR Array B	23.29	349	P	P	03 10 36.4	+1.3
	comp=Z,1.2nm,0.6s,baz=165,slow=10,SNR=5.2						
ABKAR	Akbulak array	30.10	56	P	P	03 11 36.6	-0.2
ABKAR				IAmb	IAmb	03 11 41.1	
	comp=Z,5.0nm,1.5s						
TORD	Torodi Ar. Bea	30.25	218	P	P	03 11 39.9	+1.5
	comp=Z,0.9nm,0.7s,baz=27,slow=9.3,SNR=5.9						
TORD	Torodi Ar. Bea	30.25	218	IAmb	IAmb	03 12 12.8	
	comp=Z,5.4nm,1.5s						
MKAR	Makanchi Array	45.17	59	P	P	03 13 44.2	0.0
	comp=Z,0.5nm,0.5s,baz=275,slow=6.2,SNR=4.2						
ZAA0	Zalesovo Array	45.51	48	P	P	03 13 46.9	+0.2
ZALV	Zalesovo Beam	45.51	48	P	P	03 13 46.8	+0.1
	comp=Z,1.2nm,0.4s,baz=280,slow=7.8,SNR=4.5						

IDC 20 03:10:17.6±2.2, 0°.77N×127°.17E, h0^{km}, mb3.7/3,
mb1 4.0/3, mb1mx3.4/45, mbtmp3.8/3, Error ellipse:
s-maj=163.4km s-min=28.0km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAGZ	Pagadian	7.99	332	eP	Pb	03 12 28.7	-8.3
WRA	Warramunga Arr	21.75	162	P	P	03 15 10.3	-0.6
	2.3nm,0.6s,baz=340,slow=11,SNR=19						
ASAR	Alice Springs	25.15	165	P	P	03 15 45.2	+0.4
	2.0nm,0.7s,baz=346,slow=11,SNR=17						
MKAR	Makanchi Array	60.23	326	P	P	03 20 27.7	-0.1
	0.4nm,0.5s,baz=125,slow=8.1,SNR=2.4						

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*IDC **20** 03:10:18.7±1.4, 38°.70N×20°.57E, h0^{km}, mb3.6/5,*
mb1 3.5/8, mb1mx3.4/55, mbtmp3.5/8, ML3.2/3, Error
ellipse: s-maj=27.6km s-min=21.6km az=63.0
*THE **20** 03:10:19.1, 38°.47N×20°.45E, h14^{km}, ML3.7/8, Error*
ellipse: s-maj=0.9km s-min=0.3km az=284.0
*ATH **20** 03:10:19.4, 38°.46N×20°.48E, h13^{km}±1^{km}, ML3.6/4, Error*
ellipse: s-maj=1.5km s-min=0.6km az=283.0
*BEO **20** 03:10:20.0±1.2, 38°.56N×20°.13E, h0^{km}, ML3.3/10*
ISC 20 03:10:18.8±0.8, 38°.50N±0°.02×20°.42E±0°.03, h13^{km}±5^{km},
n115, σ1^{s}.27/147, mb3.7/5, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FSK	Fiskardo	0.12	111	P	Pg	03 10 21.7	-0.3
FSK				S	Sg	03 10 23.6	-0.7
FSK	Fiskardo	0.12	111	P	Pg	03 10 21.7	-0.3
FSK				S	Sg	03 10 23.3	-1.0
FSK				AML	AML	03 10 23.6	
FSK				AML	AML	03 10 24.0	
DRAG	Dragano-Lefkad	0.22	34	P	Pb	03 10 24.0	-0.7
DRAG				S	Sb	03 10 28.1	-0.6
	71µm,0.3s						
DRAG	Dragano-Lefkad	0.22	34	P	Pb	03 10 23.9	-0.8
DRAG				S	Sb	03 10 27.9	-0.7
EVGI	Lefkada island	0.22	57	P	Pb	03 10 23.9	-0.8
EVGI				S	Sb	03 10 27.8	-0.9
EVGI	Lefkada island	0.22	57	P	Pb	03 10 23.9	-0.8
EVGI				S	Sb	03 10 27.3	-1.4
KEF4	Livadi, Kephal	0.24	179	P	Pg	03 10 23.7	-0.3
KEF4				S	Sg	03 10 27.7	+0.3
KEF4	Livadi, Kephal	0.24	179	P	Pg	03 10 23.7	-0.3
KEF4				S	Sg	03 10 27.6	+0.2
DMLN	Damoulianata-K	0.27	188	P	Pg	03 10 24.2	-0.2
DMLN				S	Sg	03 10 28.4	+0.3
	30µm,0.4s						
DMLN	Damoulianata-K	0.27	188	P	Pg	03 10 24.1	-0.3
DMLN				S	Sg	03 10 28.4	+0.3
LXRA	Lixouri, Kepha	0.30	177	P	Pg	03 10 24.8	-0.2
LXRA				S	Sg	03 10 29.0	-0.2
NYDR	Nydri-Lefkada	0.30	46	P	Pb	03 10 25.3	-0.9
NYDR				S	Sb	03 10 30.5	-0.6
	17µm,0.4s						
NYDR	Nydri-Lefkada	0.30	46	P	Pb	03 10 25.3	-0.9
NYDR				S	Sb	03 10 30.4	-0.7
KEF3	Kipouria, Keph	0.30	191	P	Pg	03 10 24.4	-0.6
KEF3				S	Sg	03 10 28.9	-0.3
	55µm,0.5s						
KEF3	Kipouria, Keph	0.30	191	P	Pg	03 10 24.4	-0.6
KEF3				S	Sg	03 10 28.8	-0.3
ARGA	Argostoli. Kep	0.33	172	P	Pg	03 10 26.0	+0.5
LKD2	Lefkada island	0.34	33	P	Pb	03 10 26.1	-0.7
LKD2				S	Sb	03 10 32.2	0.0
	10µm,0.5s						
LKD2	Lefkada island	0.34	33	P	Pb	03 10 26.2	-0.7
LKD2				S	Sb	03 10 31.1	-1.2
LKD2				AML	AML	03 10 32.9	
	comp=E,21482µm,0.4s						
LKD2				AML	AML	03 10 34.9	
	comp=N,16620µm,0.6s						
VLS	Valsamata	0.35	158	P	Pg	03 10 25.2	-0.7
VLS				S	Sg	03 10 30.3	-0.3
VLS	Valsamata	0.35	158	P	Pg	03 10 25.2	-0.7
VLS				S	Sg	03 10 30.2	-0.5
VLS				AML	AML	03 10 32.2	
	comp=E,17289µm,0.2s						
VLS				AML	AML	03 10 33.4	
	comp=N,22672µm,0.4s						
TSLK	Tsoukalades, L	0.37	30	P	Pb	03 10 26.9	-0.5
TSLK				S	Sb	03 10 32.3	-0.7
	comp=N,15µm,0.3s						
TSLK	Tsoukalades, L	0.37	30	P	Pb	03 10 26.8	-0.5
TSLK				S	Sb	03 10 33.2	+0.2
TSLK				AML	AML	03 10 34.2	
	comp=N,25365µm,0.3s						
TSLK				AML	AML	03 10 34.2	
	comp=E,35492µm,0.3s						
PSDA	Pessada-Kefalo	0.41	162	P	Pg	03 10 26.3	-0.6
PSDA				S	Sg	03 10 32.2	-0.2
PSDA	Pessada-Kefalo	0.41	162	P	Pg	03 10 26.3	-0.6
ZAK2	Zakynthos	0.81	152	P	Pg	03 10 34.0	-0.4
VTN	Vitineika	0.84	134	P	Pg	03 10 34.3	-0.8
VTN	Vitineika	0.84	134	P	Pg	03 10 34.1	-1.0
LTHK	Lithakia	0.86	157	P	Pg	03 10 34.0	-1.4
LTHK	Lithakia	0.86	157	P	Pg	03 10 33.8	-1.6
PVO	Paravola	0.87	82	P	Pg	03 10 35.4	-0.4
PVO				S	Sb	03 10 47.6	+0.1
	comp=E,3µm,0.4s						
PVO	Paravola	0.87	82	P	Pg	03 10 35.3	-0.4
RLS	Riolos of Patr	0.94	118	P	Pg	03 10 35.7	-1.1
RLS	Riolos of Patr	0.94	118	P	Pg	03 10 35.8	-1.1
IGT	Igoumenitsa	1.03	356	P	Pn	03 10 38.7	-0.3
IGT	Igoumenitsa	1.03	356	P	Pg	03 10 38.5	-0.3
DRO	Drossia	1.16	118	P	Pb	03 10 39.7	-1.0
EVR	Evrytania	1.16	69	P	Pb	03 10 40.1	-0.7
EFP	Efpalio	1.17	93	P	Pb	03 10 39.6	-1.3
EFP	Efpalio	1.17	93	P	Pb	03 10 39.7	-1.2
ANX	Ano Chora	1.18	85	P	Pb	03 10 40.3	-0.8
JAN	Janina	1.20	16	P	Pg	03 10 42.6	+0.7
LAKA	Lakka	1.25	102	P	Pn	03 10 41.1	-1.0
LAKA				S	Sb	03 10 58.2	-0.2
	comp=E,2µm,0.6s						
LAKA	Lakka	1.25	102	P	Pn	03 10 41.1	-1.0
KEK	Kerkira	1.30	338	P	Pg	03 10 44.2	+0.3
TRIZ	Trizonia	1.30	95	P	Pn	03 10 42.0	-0.8
MAKR	Makrakomi, Fth	1.43	69	P	Pb	03 10 45.2	-0.2
AGG	Agios Georgios	1.58	70	P	Pb	03 10 47.4	-0.6
GUR	Goura	1.62	110	P	Pn	03 10 46.8	-0.3
THL	Klokotos Trika	1.63	49	P	Pg	03 10 49.5	-0.7
ITM	Ithomi	1.78	137	P	Pb	03 10 51.1	-0.2
THAL	Thalero	1.82	104	P	Pn	03 10 50.8	+0.8
LTK	Loutraki	2.06	103	P	Pb	03 10 55.7	-0.5
VIL2	Platees	2.26	96	P	Pb	03 10 58.3	-1.2
OHR	Ohrid	2.62	6	ePn	Pb	03 11 04.7	-1.0
OHR				eSn	Sb	03 11 35.4	-2.5
OHR	Ohrid	2.62	6	iPn	Pb	03 11 04.1	-1.6
TIR	Tirane	2.87	352	ePn	Pn	03 11 06.4	+2.0
VAY	Valandovo	3.27	30	ePn	Pb	03 11 13.0	-3.6
VAY	Valandovo	3.27	30	iPn	Pn	03 11 12.4	+2.7
STIP	Stip	3.46	22	iPn	Pb	03 11 16.4	-3.6
DRME	Dracevica, Mon	3.80	346	ePn	Pn	03 11 17.9	+0.8
PDG	Podgorica	4.02	348	ePn	Pn	03 11 21.8	+1.7
PDG	Podgorica	4.02	348	ePn	Pn	03 11 20.3	+0.2
HCY	Herceg Novi	4.21	340	ePn	Pn	03 11 22.5	-0.2
BOSS	Bosilegrad	4.29	21	ePn	Pn	03 11 26.5	+2.7
BARS	Barje	4.44	13	ePn	Pn	03 11 27.6	+1.7
BARS	Barje	4.44	13	ePn	Pg	03 11 45.0	+1.2
TREB	Trebinje	4.50	340	ePn	Pn	03 11 27.0	+0.3
TREB	Trebinje	4.50	340	ePn	Pn	03 11 26.4	-0.3
DBRK	Dubrovnik	4.51	338	ePn	Pn	03 11 26.4	-0.4
BRY	Bratogost	4.62	343	ePn	Pn	03 11 27.9	-0.6
VTS	Vitosha	4.64	27	ePn	Pn	03 11 31.4	+2.7
VTS				eSn	Sn	03 12 25.2	+2.7
SELS	Selova	4.74	6	ePn	Pn	03 11 31.1	+1.0
IDI	Anoyia	4.81	130	Pn	Pn	03 11 34.0	+2.9
	comp=E,0.2nm,0.3s,baz=309,slow=15,SNR=1.2						
IDI				Sn	Sn	03 12 24.1	-2.6
	comp=E,1.7nm,0.3s,baz=336,slow=13,SNR=7.5						
STON	Ston	4.83	336	ePn	Pn	03 11 31.6	+0.4
STON	Ston	4.83	336	ePn	Pn	03 11 30.5	-0.7
STON	Ston	4.83	336	ePn	Pn	03 11 30.8	-0.4
STON				Sn	Sn	03 12 24.9	-2.1
LSTV	Lastovo	5.04	329	ePn	Pn	03 11 33.6	-0.5
RUDO	Rudo	5.17	352	ePn	Pn	03 11 33.8	-2.2
BBLS	Lazići	5.41	352	ePn	Pn	03 11 41.7	+2.4
BBLS	Lazići	5.41	352	ePn	Pn	03 11 41.3	+2.0
MAKA	Makarska	5.43	333	ePn	Pn	03 11 39.8	+0.3
MAKA				Sn	Sn	03 12 39.6	-2.2
HVAR	Hvar	5.56	328	ePn	Pn	03 11 41.1	-0.1
RICI	Ricice	5.57	335	ePn	Pn	03 11 41.2	-0.3
DIVS	Divibare	5.60	357	ePn	Pn	03 11 42.4	+0.5
DIVS	Divibare	5.60	357	ePn	Pn	03 11 41.6	-0.3
KIJV	Kijevo	6.27	332	ePn	Pn	03 11 51.2	+0.1
KIJV				Sn	Sn	03 13 01.4	-1.2
ZIRJ	Zirje	6.29	326	ePn	Pn	03 11 50.8	-0.4
MGRS	Mrkonjic Grad	6.42	338	ePn	Pn	03 11 54.1	+1.0
MORI	Morici	6.43	328	ePn	Pn	03 11 53.8	+0.6
FRGS	Fruska Gora	6.67	356	ePn	Pn	03 11 55.8	-0.7
FRGS	Fruska Gora	6.67	356	ePn	Pn	03 11 55.2	-1.3
BLY	Banja Luka	6.70	340	ePn	Pn	03 11 57.5	+0.7
BLY	Banja Luka	6.70	340	ePn	Pn	03 11 55.4	-1.4
DUGI	Dugi Otok	6.81	325	ePn	Pn	03 11 58.5	+0.1
UDBI	Udbina	6.96	331	ePn	Pn	03 12 01.6	+1.1
MRAK	Mrakovica	7.02	339	ePn	Pn	03 12 00.8	-0.5
NVLJ	Novalja	7.35	327	ePn	Pn	03 12 06.3	+0.6
RABC	Rab	7.54	328	ePn	Pn	03 12 09.0	+0.7
MORH	Mrgy, Hungar	7.82	351	ePn	Pn	03 12 11.4	-0.8
RIY	Rijeka	8.13	329	ePn	Pn	03 12 15.6	-0.9
RIY	Rijeka	8.13	329	ePn	Pn	03 12 16.6	+0.1
CRES	Cresnjev	8.19	335	ePn	Pn	03 12 16.9	-0.5
CEY	Cerknica	8.49	330	ePn	Pn	03 12 21.6	+0.1
LJU	Ljubljana	8.71	332	ePn	Pn	03 12 21.6	-2.9
OBKA	Obir	9.10	333	ePn	Pn	03 12 30.7	+0.8
	comp=E,1.0nm,0.2s						
OBKA				eSn	Sn	03 14 09.4	-2.9
	comp=E,3.5nm,0.4s						
ABTA	Abfaltersbach	10.09	327	ePn	Pn	03 12 44.2	+0.8
	comp=E,1.6nm,0.5s						
ABTA				eSn	Sn	03 14 33.3	-3.2
	comp=E,1.5nm,0.3s						
BRTR	Keskin Array B	10.35	79	Pn	Pn	03 12 51.2	+4.2
	comp=E,0.1nm,0.3s,baz=276,slow=13,SNR=2.4						
MOA	Molln	10.36	336	iPn	Pn	03 12 47.9	+0.7
	comp=E,2.3nm,0.5s						
FETA	Feichten	11.09	323	eSn	Sn	03 15 02.1	+0.8
	comp=E,0.9nm,0.6s						
GERES	GERESS Array B	11.42	337	Pn	Pn	03 13 02.4	+0.7
	comp=E,0.2nm,0.3s,baz=161,slow=14,SNR=4.3						
HFS	Hagfors	22.07	351	P	P	03 15 14.6	+1.3
	comp=E,1.8nm,0.6s,baz=178,slow=11,SNR=1.9						

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FINES	FINESS Array B	23.23	7	P	P	03 15 24.9	-0.6
	comp=E,1.0nm,0.4s,baz=186,slow=8.5,SNR=12						
TORD	Torodi Ar. Bea	30.23	218	P	P	03 16 33.1	+3.7
	comp=E,0.3nm,0.8s,baz=30,slow=9.0,SNR=1.8						
MKAR	Makanchi Array	45.20	59	P	P	03 18 35.2	-0.2
	comp=E,0.8nm,0.9s,baz=291,slow=6.8,SNR=4.4						
ZALV	Zalesovo Beam	45.53	48	P	P	03 18 36.9	-1.0
	comp=E,0.7nm,0.4s,baz=272,slow=9.6,SNR=3.9						

IDC 20 03:11:37.7±2.4, 1°.00N×127°.19E, h0^{km}, mb3.6/3, mb1 3.8/3, mb1mx3.3/42, mbtmp3.6/3, Error ellipse: s-maj=190.8km s-min=29.8km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	21.96	162	P	P	03 16 33.7	+0.4
	0.6nm,0.4s,baz=340,slow=11,SNR=2.5						
ASAR	Alice Springs	25.37	166	P	P	03 17 06.5	-0.3
	1.1nm,0.8s,baz=350,slow=10,SNR=2.7						
MKAR	Makanchi Array	60.06	326	P	P	03 21 46.6	0.0
	0.5nm,0.6s,baz=119,slow=8.8,SNR=3.1						

TUL 20 03:15:38.8±1.0, 35°.96N±0°.02×96°.76W±0°.01, h4^{km}±3^{km}, ML2.7, mb_Lg2.3/8(NEIC), Error ellipse: s-maj=2.2km s-min=1.3km az=156.0

NEIC 20 03:15:39.0±0.9, 35°.98N±0°.02×96°.76W±0°.01, h4^{km}±2^{km}, Error ellipse: s-maj=2.4km s-min=1.3km az=149.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK030	Cody Creek RV	0.06	203		Pg	03 15 40.3	0.0
OK030				Sg	Sg	03 15 41.2	+0.1
OK031	S. Brethren Rd	0.07	248	Pg	Pg	03 15 40.6	+0.1
OK031				Sg	Sg	03 15 41.9	+0.3
QUOK	Quay	0.20	12	Pg	Pg	03 15 43.4	+0.6
QUOK				Sg	Sg	03 15 46.5	+1.1
OK029	Liberty Lake	0.60	252		Pg	03 15 50.4	0.0
OK029				Sg	Sg	03 15 58.8	+0.7
BCOK	Bluff Creek, N	0.76	245	Pg	Pg	03 15 53.5	-0.1
BCOK				Sg	Sg	03 16 04.0	+0.5
TUL1	Leonard	0.79	95		Pg	03 15 53.8	-0.2
TUL1				Sg	Sg	03 16 04.2	0.0
OKCFA	Oklahoma City	0.80	225	Pg	Pg	03 15 54.0	-0.2
OKCFA				Sg	Sg	03 16 04.6	0.0
BLOK	Blackwell	0.86	335		Pg	03 15 55.4	-0.1
BLOK				Sg	Sg	03 16 07.5	+0.8
FNO	Franklin	0.89	216	Pg	Pg	03 15 55.6	-0.4
FNO				Sg	Sg	03 16 07.6	0.0
T35A	Sooner Cattle	0.95	12		Pg	03 15 57.1	-0.1
T35A				Sg	Sg	03 16 09.8	+0.2
CROK	Carrier	1.12	298	Pg	Pg	03 16 00.3	-0.1
CROK				Sg	Sg	03 16 15.2	+0.2
KAN13	South Haven SW	1.18	331		Pg	03 16 01.3	-0.4
KAN13				Sg	Sg	03 16 17.2	+0.2
GC02	Grant County #	1.24	315	Pg	Pg	03 16 02.1	-0.7
GC02				Sg	Sg	03 16 19.0	+0.1
KAN17	Caldwell West	1.34	323		Pn	03 16 03.8	-0.7
KAN09	Caldwell North	1.35	329	Pn	Pn	03 16 04.1	-0.4
KAN14	Manchester OK	1.38	315	Pn	Pn	03 16 04.5	-0.4
KAN01	Argonia South	1.42	326	Pn	Pn	03 16 05.2	-0.4
OK032	Salt Plains WL	1.43	305	Pn	Pn	03 16 04.9	-0.8
KAN06	Argonia West S	1.54	325	Pn	Pn	03 16 07.6	+0.3
KAN10	Anthony SW Sta	1.57	317	Pn	Pn	03 16 07.6	0.0
KAN08	Anthony NE Sta	1.58	322	Pn	Pn	03 16 07.9	+0.1
KAN16	Harper SW Stat	1.63	320	Pn	Pn	03 16 08.8	+0.3
X34A	Smith Ranch, M	1.63	213	Pn	Pn	03 16 08.4	-0.1
X37A	Clayton	1.79	140	Pn	Pn	03 16 11.1	+0.4
X37A				IAmb_Lg		03 16 38.3	
	comp=Z,21nm,0.8s						
U38A	Gravette	1.97	76	Pn	Pn	03 16 13.7	+0.5
LOOK	Love County	2.01	190	Pn	Pn	03 16 14.4	+0.7
LOOK				IAmb_Lg		03 16 46.6	
	comp=Z,15nm,0.9s						
WMOK	Wichita Mounta	2.07	234	Pn	Pn	03 16 14.9	+0.5
HHAR	Hobbs	2.30	82	Pn	Pn	03 16 18.1	+0.4
U40A	Yellville	3.18	82	Pn	Pn	03 16 30.1	+0.4
S39A	Bolivar	3.24	57	IAmb_Lg		03 17 25.2	
	comp=Z,7.6nm,1.1s						
X40A	Basin Creek Fa	3.54	114	Pn	Pn	03 16 35.8	+1.1
X40A				IAmb_Lg		03 17 36.6	
	comp=Z,7.3nm,0.9s						
WHAR	Wooly Hollow	3.70	99	Pn	Pn	03 16 37.4	+0.4
FCAR	Ozark Folk Cen	3.76	90	Pn	Pn	03 16 37.4	-0.3
R40A	Maddies Statio	4.26	56	Pn	Pn	03 16 44.5	-0.1
P38A	Dawn	4.45	34	Pn	Pn	03 16 46.7	-0.4

IDC 20 03:16:26.2±1.1, 18°.35S×65°.85E, h0^{km}, mb4.0/5, mb1 4.2/6, mb1mx3.6/54, mbtmp4.0/6, ML3.8/1, MS3.2/2, Ms1 3.3/2, ms1mx2.8/45, Error ellipse: s-maj=42.2km s-min=25.4km az=173.0

ISC 20 03:16:27.8±1.1, 18°.4S±0°.3×65°.8E±0°.2, h10^{km}, n10, σ1.^{s}40/6, mb4.1/5, Mauritius-Reunion region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S1	Diego Carcia H	12.47	32	T	T	03 32 40.0	
	baz=211,slow=76,SNR=15						
H08S2	Diego Garcia H	12.48	32	T	T	03 32 40.0	
	baz=211,slow=76,SNR=19						
H08S3	Diego Garcia H	12.49	32	T	T	03 32 39.6	
	baz=211,slow=76,SNR=78						
OPO	Ambohidratompo	17.67	266	P	Pn	03 20 33.7	-0.7
	0.3nm,0.3s,baz=89,slow=18,SNR=2.2						
LBTB	Lobatse	37.84	253	P	P	03 23 46.1	+1.0
	3.8nm,0.9s,baz=108,slow=5.8,SNR=3.5						
PSI	Prapat	38.80	61	LR	LR	03 36 46.0	
	comp=Z,59nm,19.9s,baz=214,slow=32						
CMAR	Chiang Mai Arr	48.98	43	P	P	03 25 16.3	+1.4
	1.6nm,0.3s,baz=220,slow=8.3,SNR=1.6						
CMAR				LR	LR	03 42 57.1	
	comp=Z,19nm,20.8s,baz=238,slow=32						
ASAR	Alice Springs	63.27	108	P	P	03 26 56.3	-0.9
	0.9nm,1.0s,baz=261,slow=5.9,SNR=4.8						
WRA	Warramunga Arr	64.33	104	P	P	03 27 04.2	-0.1
	0.8nm,0.9s,baz=260,slow=5.2,SNR=5.6						
ZALV	Zalesovo Beam	73.84	12	P	P	03 28 01.1	-1.3
	1.0nm,0.6s,baz=185,slow=5.2,SNR=4.7						

DDA 20 03:25:48.1, 35°.22N×27°.76E, h16^{km}±1^{km}, ML2.8

ISK 20 03:25:50.4, 35°.18N×27°.76E, h21^{km}, ML3.0/9

THE 20 03:25:52.9, 35°.44N×27°.90E, h0^{km}±1^{km}, ML2.6/3, Error ellipse: s-maj=2.2km s-min=1.0km az=147.0

NIC 20 03:25:53.6±0.0, 35°.44N×27°.95E, h24^{km}±1^{km}, Ml3.3/3

ISC 20 03:25:51.7±1.3, 35°.35N±0°.04×27°.92E±0°.03, h8^{km}±11^{km}, n46, σ0.^{s}94/64, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARG	Arkhangelos	0.88	11	P	Pb	03 26 09.0	-0.3
ARG				S	Sb	03 26 20.8	-0.5
	452nm,0.3s						
ARG	Arkhangelos	0.88	11	P	Pb	03 26 08.7	-0.6
ARG				S	Sb	03 26 20.9	-0.3
MRSB	Marmaris-Mugla	1.38	9	PN	Pb	03 26 17.9	0.0
MRSB				SN	Sg	03 26 37.8	+1.6
DAT	Datca	1.41	349	P	Pb	03 26 18.0	-0.3
DAT				S	Sb	03 26 36.0	-0.4
DAT	Datca	1.41	349	*i* P	Pb	03 26 17.8	-0.6
DAT	Datca	1.41	349	PN	Pb	03 26 17.7	-0.6
DAT				SN	Sb	03 26 37.3	+0.9
ZKR	Zakros	1.41	261	P	Pb	03 26 18.1	-0.2
ZKR				S	Sg	03 26 38.6	+1.5
	240nm,0.6s						
ZKR	Zakros	1.41	261	P	Pg	03 26 18.3	-0.6
ZKR				S	Sg	03 26 37.4	+0.2
ZKR				AML	AML	03 26 46.0	
	0.3nm,0.5s						
ZKR				AML	AML	03 26 46.0	
	0.3nm,0.5s						
ZKR				AML	AML	03 26 46.1	
	0.6nm,0.7s						
ZKR				AML	AML	03 26 46.1	
	0.6nm,0.7s						
TURN	Turunc	1.45	10	*i* P	Pb	03 26 18.5	-0.4
TURN				IAML		03 26 43.0	
	comp=E,161nm,0.4s						
TURN				IAML		03 26 49.0	
	comp=N,119nm,0.7s						
TURN	Turunc	1.45	10	PN	Pb	03 26 18.9	0.0
STIA	Sitia Lasithi	1.50	265	P	Pb	03 26 18.9	-1.0
KSL	Kastellorizon	1.57	59	P	Pn	03 26 19.7	-0.2
KSL				S	Sg	03 26 42.1	-0.2
KSL	Kastellorizon	1.57	59	P	Pb	03 26 20.0	-1.0
KSL				S	Sn	03 26 38.3	-2.2
DALY	Dalyan (Mula)	1.58	22	*i* P	Pb	03 26 20.3	-0.9
DALY				*i* S	Sg	03 26 44.2	+1.6
DALY	Dalyan (Mula)	1.58	22	PN	Pb	03 26 21.0	-0.2
FETY	Fethiye	1.59	36	P	Pn	03 26 20.1	-0.2
FETY				S	Sn	03 26 40.4	-0.7
FETY	Fethiye	1.59	36	*i* P	Pb	03 26 20.8	-0.7
FETY	Fethiye	1.59	36	PN	Pb	03 26 21.3	-0.2
KOSK	Kos Island	1.59	332	PN	Pn	03 26 19.7	-0.5
AKAS	Kas	1.63	57	*i* P	Pb	03 26 21.2	-0.9
AKAS				IAML		03 27 18.0	
	comp=N,102nm,0.7s						
AKAS	Kas	1.63	57	PN	Pb	03 26 21.5	-0.6
BDRM	Kayabasi	1.76	348	*i* P	Pn	03 26 22.1	-0.4
BDRM				IAML		03 26 51.0	
	comp=N,95nm,0.4s						
BODT	Bodrum	1.78	344	P	Pn	03 26 22.2	-0.6
BODT	Bodrum	1.78	344	PN	Pn	03 26 22.8	0.0
YER	Yerkesik	1.81	9	P	Pn	03 26 23.3	+0.1
YER				S	Sb	03 26 46.7	-1.3
YER	Yerkesik	1.81	9	PN	Pb	03 26 24.3	-0.8
MULA	Mugla, Merkez-	1.93	10	*i* P	Pb	03 26 25.8	-1.5
MULA				*i* S	Sb	03 26 52.9	+1.3
CAME	Cameli-Denizli	1.95	35	PN	Pb	03 26 26.3	-1.2
MLSB	Milas	1.95	357	PN	Pn	03 26 25.4	+0.3
CAEL	Denizli, Camel	2.10	32	*i* P	Pb	03 26 28.5	-1.7
CAEL				*i* S	Sb	03 26 58.2	+1.7
CAEL				IAML		03 27 18.0	
	comp=N,86nm,0.8s						
CAEL				IAML		03 27 27.0	
	comp=E,84nm,0.6s						
ELL	Elmali	2.13	49	PN	Pb	03 26 28.9	-1.8
AKUM	Antalya-Kumluc	2.20	63	*i* P	Pn	03 26 29.0	+0.5
SANT	Santorini	2.24	298	P	Pn	03 26 29.4	+0.2
SANT				S	Sn	03 26 56.9	-0.2
	comp=E,105nm,0.5s						
THR8	Santorini-Mono	2.25	299	P	Pn	03 26 28.1	-1.1
TAVA	DENIZLI_Tavas	2.26	20	*i* P	Pb	03 26 31.9	-1.0
AYDN	Tasoluk	2.31	359	*i* P	Pn	03 26 30.1	-0.1
GCAM	G?zelcaml?	2.41	347	PN	Pn	03 26 32.1	+0.6
AYDB	Zeytinkoy-Aydi	2.59	360	PN	Pn	03 26 34.9	+0.8
ZEYE	Izmir, Urla-Ze	3.10	339	*i* P	Pn	03 26 40.3	-0.7
ZEYE				*i* S	Sn	03 27 20.2	+2.0
URLA	Izmir	3.19	341	*i* P	Pn	03 26 41.4	-0.8
URLA				*i* S	Sn	03 27 21.8	+1.4
OSC1	CSNet OBS 1	3.33	123	P	Pn	03 26 45.0	+0.9
OSC1				S	Sn	03 27 24.9	+1.0
KEPZ	Antalya-Kepez	3.36	61	*i* P	Pn	03 26 46.2	+1.6
USAK	Uak-Merkez	3.47	14	*i* P	Pn	03 26 46.0	-0.2
USAK				IAML		03 27 29.0	
	comp=N,28nm,1.4s						
USAK				IAML		03 28 58.0	
	comp=E,31nm,5.0s						
AKMS	Akamas	3.63	94	P	Pn	03 26 48.5	+0.2
AKMS				AML	AML	03 27 35.9	
	comp=E,0.2nm,0.3s						
AKMS				AML	AML	03 27 37.9	
	comp=E,0.1nm,0.5s						
ALFC	Alefka	3.83	92	P	Pn	03 26 51.4	+0.3
ALFC				AML	AML	03 27 40.1	
	comp=E,0.1nm,0.4s						
ALFC				AML	AML	03 27 40.9	
	comp=E,0.1nm,0.4s						
ASGA	Asgata	4.41	96	P	Pn	03 26 59.3	+0.4

IDC 20 03:37:33.7±3.5, 35°.76N×141°.09E, h0^{km}, mb3.5/3, mb1 3.7/4, mb1mx3.4/43, mbtmp3.5/4, ML2.6/1, MS2.7/1, Ms1 2.7/1, ms1mx2.2/50, Error ellipse: s-maj=104.3km s-min=27.4km az=56.0

JMA 20 03:37:41.3±0.1, 35°.74N×140°.64E, h51^{km}±2^{km}, M3.1

JMA Felt I J1.

ISC 20 03:37:41.5±1.1, 35°.75N±0°.06×140°.73E±0°.08, h52^{km}±7^{km}, n21, σ0.^{s}75/21, mb3.6/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	Chosi	0.11	114	P	Pn	03 37 49.4	-0.1
CHOJ				*e*S	Sn	03 37 55.8	+0.5
JSMT	Sammumatsuo	0.26	245	P	Pn	03 37 50.0	-0.4
JSMT				S	Sn	03 37 56.9	+0.2
JIHU	Itakohorinouch	0.27	322	P	Pn	03 37 50.6	+0.1
JIHU				S	Sn	03 37 57.6	+0.6
JCN	Nagara	0.54	233	P	Pn	03 37 53.1	-0.2
JCN				S	Sn	03 38 02.2	+0.3
JYT	Yasato	0.65	318	P	Pn	03 37 53.9	-0.7
JYT				S	Sn	03 38 02.9	-1.2
BSO4	Boso 4	0.82	203	P	Pn	03 37 56.3	-0.5
BSO3	Boso 3	0.96	191	P	Pn	03 37 58.2	-0.3
BSO1	Boso 1	1.11	170	P	Pn	03 38 00.4	+0.2
JAG	Ashikaga	1.24	303	P	Pn	03 38 01.6	-0.8
JOD2	Odawara 2	1.43	251	P	Pn	03 38 04.2	-0.8
MJAR	Matsushiro Arr	2.19	292	Pn	Pn	03 38 15.8	+0.4
	1.5nm,0.3s,baz=99,slow=8.6,SNR=56						
MJAR				LR	LR	03 39 15.4	
	comp=Z,137nm,18.3s,baz=140,slow=42						
MAT	Matsushiro	2.19	292	P	Pn	03 38 16.1	+0.6
MAT				*e*S	Sn	03 38 43.4	+2.0
H11N2	WAKE ISLAND Hy	28.00	118	T	T	04 12 45.1	
	baz=310,slow=75,SNR=5.4						
H11N1	WAKE ISLAND Hy	28.01	118	T	T	04 12 36.7	
	baz=310,slow=75,SNR=5.3						
H11N3	WAKE ISLAND Hy	28.02	118	T	T	04 12 31.6	
	baz=310,slow=75,SNR=4.5						
H11S3	WAKE ISLAND Hy	28.66	120	T	T	04 13 21.3	
	baz=312,slow=75,SNR=8.5						
H11S1	WAKE ISLAND Hy	28.66	120	T	T	04 13 29.6	
	baz=312,slow=75,SNR=10						
H11S2	WAKE ISLAND Hy	28.68	120	T	T	04 13 30.8	
	baz=312,slow=75,SNR=5.9						
KURBB	Kurchatov Arra	46.37	309	P	P	03 46 02.6	+0.3
	0.4nm,0.4s,baz=86,slow=7.8,SNR=5.3						
WRA	Warramunga Arr	55.72	187	P	P	03 47 12.2	-0.6
	0.3nm,0.4s,baz=0.5,slow=7.5,SNR=7.9						
ASAR	Alice Springs	59.45	187	P	P	03 47 38.8	-0.1
	0.2nm,0.5s,baz=12,slow=9.7,SNR=1.6						

NIED 20 03:42:36.2, 31°.83N×128°.93E, h18^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.39; $M_{\theta\theta}$3.12; $M_{\phi\phi}$-1.73; $M_{r\theta}$-1.66; $M_{\theta\phi}$3.25; $M_{\phi r}$1.00; Fault plane solution: $M_0$4.62000×10^{14} NP1: ϕ_s104.00000°, δ76.00000°, λ-29.00000°. NP2: ϕ_s202.00000°, δ61.00000°, λ-164.00000°.

JMA 20 03:42:36.2±0.1, 31°.83N×128°.93E, h18^{km}±3^{km}, M3.6

IDC 20 03:42:37.3±1.9, 32°.12N×129°.75E, h0^{km}, mb3.6/3, mb1 3.8/4, mb1mx3.4/40, mbtmp3.6/4, ML3.2/1, MS2.6/1, Ms1 2.6/1, ms1mx2.2/53, Error ellipse: s-maj=85.8km s-min=22.4km az=74.0

ISC 20 03:42:39.1±1.1, 31°.99N±0°.08×129°.16E±0°.09, h10^{km}, n11, σ1.^{s}25/13, mb3.4/3, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	Shimokoshiki	0.57	123	P	Pg	03 42 48.9	-1.3
JSJ				*e*S	Sg	03 42 57.7	0.0
JFU	Fukue jima 2	0.74	333	P	Pg	03 42 51.8	-1.7
JFU				*e*S	Sg	03 43 03.1	-0.1
NGSJ	Nagasakinomoza	0.84	40	P	Pb	03 42 56.1	+0.4
JHD	Hondo	0.95	60	P	Pb	03 42 57.9	+0.2
JIU3	Izumi3	1.51	68	P	Pn	03 43 06.5	+0.3
JTZ	Takazaki	1.64	93	P	Pn	03 43 07.1	-0.9
JII	Iki	1.86	15	P	Pn	03 43 10.4	-0.6
KSRS	Korea Array	5.54	350	Pn	Pn	03 44 00.5	-1.1
	0.7nm,0.3s,baz=168,slow=14,SNR=6.5						
KSRS				Lg	Lg	03 45 29.9	
	1.0nm,0.3s,baz=165,slow=29,SNR=4.8						
KSRS				LR	LR	03 46 04.6	
	comp=Z,59nm,21.9s,baz=160,slow=38						
SONM	Songino Array	23.43	319	P	P	03 47 50.8	+2.3
	1.0nm,0.8s,baz=129,slow=9.0,SNR=6.0						
WRA	Warramunga Arr	51.88	174	P	P	03 51 47.1	-0.7
	0.5nm,0.9s,baz=354,slow=7.6,SNR=2.1						
FINES	FINESS Array B	68.28	330	P	P	03 53 41.5	+1.6
	3.9nm,1.1s,baz=72,slow=4.8,SNR=6.0						

NEIC 20 03:55:09.9±0.9, 0°.98N±0°.06×127°.5E±0°.1, h10^{km}±2^{km}, mb4.2/7, Error ellipse: s-maj=20.3km s-min=5.1km az=117.0

DJA 20 03:55:10.6±0.5, 1°N±4°×12°8E±°, h10^{km}, M4.0/8, mb4.4/3, MLv3.9/8

IDC 20 03:55:18.6±13.0, 0°.79N×127°.22E, h92^{km}±121^{km}, mb3.7/4, mb1 3.9/5, mb1mx3.3/45, mbtmp4.0/5, ML3.6/1, MS3.0/6, Ms1 3.0/6, ms1mx2.7/48, Error ellipse: s-maj=129.3km s-min=21.4km az=57.0

ISC 20 03:55:09.5±1.2, 0°.97N±0°.08×127°.55E±0°.08, h10^{km}, n29, σ1.^{s}06/25, mb4.2/9, MS3.0/5, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	0.27	224	P	Pg	03 55 14.4	-0.6
TNTI				S	Sg	03 55 18.6	0.0
TNTI	Ternate	0.27	224		Pg	03 55 14.6	-0.4
TNTI					Sg	03 55 17.7	-0.9
LBMI	Labuha	1.59	182	P	Pn	03 55 39.1	+1.3
SANI	Sanana	3.38	208	P	Pn	03 56 01.5	-0.9
KMSI	Cibinong	3.59	264	P	Pn	03 56 06.6	+1.3
GTOI	Gorontalo	4.55	266	P	Pn	03 56 20.9	+2.3
TOLI2	Tolitoli	6.77	271		Pn	03 56 48.3	-0.7
MPSI	Mapaga	7.68	265	P	Pn	03 57 03.2	+1.7
	0.1nm8.1nm,0.8s						
TTSI	Tana Toraja	8.70	243	P	Pn	03 57 17.1	+1.6
SPSI	Sidrap Palu	9.19	238	P	Pn	03 57 22.2	-0.1
KAPI	Kappang	9.80	233	P	Pn	03 57 31.8	+1.2
	0.6nm,0.3s,baz=78,slow=14,SNR=4.2						
KAPI				LR	LR	04 02 19.8	
	comp=Z,20nm,19.6s,baz=82,slow=45						
MTN	Manton Dam	14.17	166	Pn	Pn	03 58 31.6	+1.1
WB0	Warramunga Arr	21.67	162	P	P	04 00 00.7	+0.1
WB0				IAmb	IAmb	04 00 05.2	
	comp=Z,11nm,1.0s						
WRA	Warramunga Arr	21.82	163	P	P	04 00 02.6	+0.5
	comp=Z,5.7nm,0.6s,baz=340,slow=11,SNR=48						
WB2	Warramunga Arr	21.82	163	P	P	04 00 02.0	-0.1
WB2				IAmb	IAmb	04 00 11.0	
	comp=Z,8.9nm,0.9s						
WR0	Warramunga Arr	21.89	162	P	P	04 00 02.8	-0.1
WR0				IAmb	IAmb	04 00 04.2	
	comp=Z,7.1nm,1.1s						
PMG	Port Moresby	22.08	118	LR	LR	04 10 51.6	
	comp=Z,112nm,18.1s,baz=266,slow=42						
AS31	Alice Springs	25.25	166	P	P	04 00 36.2	+0.2
AS31				IAmb	IAmb	04 00 39.6	
	comp=Z,2.5nm,0.8s						
ASAR	Alice Springs	25.25	166	P	P	04 00 35.8	-0.2
	comp=Z,7.1nm,0.8s,baz=345,slow=11,SNR=46						
ASAR	Alice Springs	25.25	166	P	P	04 00 35.6	-0.4
PSI	Prapat	28.67	274	LR	LR	04 12 42.3	
	comp=Z,41nm,18.9s,baz=78,slow=37						
CMAR	Chiang Mai Arr	33.02	303	LR	LR	04 15 08.2	
	comp=Z,16nm,21.5s,baz=192,slow=36						
MJAR	Matsushiro Arr	36.75	14	LR	LR	04 18 45.9	
	comp=Z,22nm,18.6s,baz=65,slow=38						
PALK	Pallekele	47.12	279	LR	LR	04 25 12.6	
	comp=Z,16nm,18.7s,baz=169,slow=38						
MKAR	Makanchi Array	60.29	326	P	P	04 05 17.1	-1.3
	comp=Z,0.6nm,0.7s,baz=131,slow=7.9,SNR=4.1						
AAK	Ala-Archa	62.95	319	P	P	04 05 36.0	-0.7
AAK				IAmb	IAmb	04 07 49.8	
	comp=Z,6.8nm,1.6s						
KURBB	Kurchatov Arra	64.50	328	P	P	04 05 45.4	-1.1
	comp=Z,1.2nm,0.8s,baz=127,slow=6.0,SNR=6.1						
KURK	Kurchatov	64.50	328	P	P	04 05 45.4	-1.1
KURK	Kurchatov	64.50	328	IAmb	IAmb	04 05 51.2	
	comp=Z,6.6nm,1.3s						

TUL 20 03:58:30.1±0.8, 36°.66N±0°.02×98°.45W±0°.05, h7^{km}±7^{km}, ML2.6, mb_Lg2.2/9(NEIC), Error ellipse: s-maj=6.0km s-min=3.2km az=92.0

NEIC 20 03:58:29.9±1.3, 36°.73N±0°.04×98°.51W±0°.05, h14^{km}±7^{km}, Error ellipse: s-maj=7.4km s-min=5.3km az=137.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK032	Salt Plains WL	0.25	74	Pg	Pg	03 58 35.2	-0.1
CROK	Carrier	0.48	118	Pg	Pg	03 58 38.0	-1.4
KAN14	Manchester OK	0.49	63	Pg	Pg	03 58 39.1	-0.5
KAN10	Anthony SW Sta	0.51	40	Pg	Pb	03 58 40.6	-0.1
GC02	Grant County #	0.53	77	Pg	Pg	03 58 39.7	-0.8
KAN16	Harper SW Stat	0.60	36	Pg	Pb	03 58 42.5	+0.1
KAN08	Anthony NE Sta	0.65	41	Pg	Pg	03 58 42.8	+0.1
KAN17	Caldwell West	0.67	62	Pg	Pg	03 58 42.7	-0.3
KAN12	Harper NE Stat	0.69	36	Pg	Pb	03 58 44.6	+0.7
KAN06	Argonia West S	0.73	45	Pg	Pg	03 58 44.3	+0.2
KAN01	Argonia South	0.73	55	Pg	Pb	03 58 44.4	-0.1
KAN09	Caldwell North	0.82	60	Pg	Pg	03 58 45.0	-0.8
KAN13	South Haven SW	0.87	71		Pg	03 58 46.2	-0.6
BLOK	Blackwell	1.04	88	Pg	Pb	03 58 48.5	-1.2
OK029	Liberty Lake	1.27	137	Pg	Pn	03 58 51.9	-1.4
QUOK	Quay	1.56	111	Pn	Pn	03 58 57.4	+0.1
OK031	S. Brethren Rd	1.56	120	Pn	Pn	03 58 57.5	+0.3
OKCFA	Oklahoma City	1.57	147	IAmb_Lg		03 59 18.1	
	comp=Z,13nm,0.7s						
OK030	Cody Creek RV	1.61	120		Pn	03 58 57.9	-0.1
T35A	Sooner Cattle	1.61	83	Pn	Pn	03 58 58.3	+0.3
T35A				IAmb_Lg		03 59 22.5	
	comp=Z,11nm,0.8s						
R32A	Long Quarter,	1.69	355		Pb	03 59 00.1	-0.8
FNO	Franklin	1.73	148	Pn	Pn	03 58 59.5	-0.1
WMOK	Wichita Mounta	2.00	186	Pn	Pn	03 59 03.3	-0.1
X34A	Smith Ranch, M	2.20	165	Pn	Pn	03 59 06.5	+0.5
TUL1	Leonard	2.34	110	Pn	Pn	03 59 08.2	+0.1
AMTX	Amarillo	3.17	235	Pn	Pn	03 59 19.4	-0.1
U38A	Gravette	3.33	94	Pn	Pn	03 59 21.5	-0.2
X37A	Clayton	3.33	129	Pn	Pn	03 59 21.9	+0.2
X37A				IAmb_Lg		04 00 19.2	
	comp=Z,11nm,1.0s						
HHAR	Hobbs	3.71	96	Pn	Pn	03 59 26.9	0.0
W39A	Magazine	4.13	110	Pn	Pn	03 59 32.2	-0.4
ABTX	Abilene, Hawle	4.21	193	Pn	Pn	03 59 32.6	-1.1
S39A	Bolivar	4.25	75	Pn	Pn	03 59 35.0	+0.7
U40A	Yellville	4.57	93	Pn	Pn	03 59 38.0	-0.7
U40A				IAmb_Lg		04 00 51.3	
	comp=Z,7.4nm,0.8s						
MIAR	Mount Ida	4.57	117	Pn	Pn	03 59 37.1	-1.6
WHTX	Lake Whitney,	4.81	169	IAmb_Lg		04 01 09.6	
	comp=Z,3.7nm,0.7s						
X40A	Basin Creek Fa	5.14	114	Pn	Pn	03 59 46.0	-0.4
R40A	Maddies Statio	5.20	71	Pn	Pn	03 59 47.8	+0.5

IDC 20 04:01:34.4±2.2, 26°.28N×128°.52E, h0^{km}, mb3.9/4, mb1 4.1/4, mb1mx3.6/44, mbtmp3.9/4, Error ellipse: s-maj=213.0km s-min=12.4km az=72.0

JMA 20 04:01:36.7±0.2, 26°.45N×128°.94E, h39^{km}±3^{km}, M3.9

ISC 20 04:01:36.7±1.0, 26°.44N±0°.05×128°.97E±0°.03, h28^{km}±9^{km}, n20, σ1.^{s}45/30, mb3.9/7, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOW	Kunigami	0.74	302	Pn	Pn	04 01 50.3	-0.9
	786nm,0.3s,baz=110,slow=25,SNR=1665						
JOW				Sn	Sn	04 01 59.8	-1.8
JOW	Kunigami	0.74	302	P	Pb	04 01 50.2	-0.7
JOW				S	Sn	04 01 59.9	-1.6
JYRO	Yoronjima	0.75	322	P	Pn	04 01 50.4	-1.0
JYRO				S	Sn	04 02 00.0	-1.8
JNTH	Nagotoyohara	0.85	276	P	Pb	04 01 51.7	-1.2
JNTH				S	Sn	04 02 03.2	-1.2
JOKE	Okinoerabujima	0.99	339	P	Pb	04 01 54.3	-0.9
JOKE				S	Sn	04 02 06.4	-1.3
JIH	Iheya	1.08	304	P	Pb	04 01 55.5	-1.1
JIH				S	Sn	04 02 08.9	-1.0
JJT3	Tamagusuku3	1.10	255	P	Pn	04 01 55.9	-0.4
JJT3				*e*S	Sb	04 02 10.5	-0.6
JTK	Tokunoshima	1.34	359	P	Pn	04 01 59.2	-0.4
JTK				*e*S	Sn	04 02 15.0	-1.5
JAGN	Aguni-jima	1.56	276	P	Pn	04 02 02.5	0.0
JAMN	Amaminishikomi	1.81	6	P	Pn	04 02 05.7	-0.2
JAMN				*e*S	Sn	04 02 27.0	-0.9
JKE	Kume jima 2	1.96	267	P	Pn	04 02 07.2	-0.9
JKE				*e*S	Sn	04 02 30.1	-1.7
JMZ	Minamidaito 2	2.12	106	P	Pn	04 02 09.6	-0.6
JMZ				S	Sn	04 02 32.7	-2.8
JKDJ	Kitadaitoujima	2.15	103	P	Pn	04 02 10.3	-0.3

JKDJ				*e*S	Sn	04 02 33.6	-2.7
SONM	Songino Array	27.74	326	P	P	04 07 25.4	+2.4
	0.8nm,0.8s,baz=143,slow=12,SNR=4.5						
SONM				sP	pwP	04 07 36.0	+1.9
	0.7nm,0.7s,baz=139,slow=10,SNR=4.7						
ZALV	Zalesovo Beam	42.48	322	pP	pP	04 09 39.2	+2.5
	1.2nm,0.6s,baz=99,slow=8.9,SNR=4.2						
KURBB	Kurchatov Arra	45.16	316	pP	pP	04 10 01.2	+2.9
	0.7nm,0.6s,baz=102,slow=8.9,SNR=4.9						
WRA	Warramunga Arr	46.40	173	P	P	04 10 01.5	+0.7
	0.7nm,0.4s,baz=352,slow=8.5,SNR=14						
ASAR	Alice Springs	50.04	174	P	P	04 10 30.2	+1.3
	0.7nm,0.5s,baz=5.4,slow=13,SNR=12						
STKA	Stephens Creek	59.23	168	P	P	04 11 36.4	+1.0
	2.2nm,0.7s,baz=352,slow=7.1,SNR=3.6						
FINES	FINESS Array B	73.01	331	pP	pP	04 13 15.6	+4.3
	1.3nm,0.6s,baz=55,slow=7.2,SNR=4.3						

IDC 20 04:09:02.0±1.7, 11°.15S×165°.09E, h0^{km}, mb3.7/3, mb1 4.1/4, mb1mx3.7/45, mbtmp3.8/4, ML4.0/1, MS3.3/1, Ms1 3.3/1, ms1mx2.6/43, Error ellipse: s-maj=51.2km s-min=31.7km az=127.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.93	173	Pn	Pn	04 11 39.6	-0.3
	1.1nm,0.3s,baz=320,slow=17,SNR=16						
PMG	Port Moresby	17.73	274	LR	LR	04 19 30.4	
	comp=Z,90nm,19.0s,baz=77,slow=35						
H11S2	WAKE ISLAND Hy	29.50	3	T	T	04 46 20.7	
	baz=184,slow=76,SNR=4.4						
H11S3	WAKE ISLAND Hy	29.50	3	T	T	04 46 20.9	
	baz=184,slow=76,SNR=6.3						
H11S1	WAKE ISLAND Hy	29.52	3	T	T	04 46 21.7	
	baz=184,slow=76,SNR=5.9						
H11N1	WAKE ISLAND Hy	30.72	3	T	T	04 47 49.9	
	baz=185,slow=74,SNR=2.4						
H11N3	WAKE ISLAND Hy	30.73	3	T	T	04 47 51.9	
	baz=185						
H11N2	WAKE ISLAND Hy	30.74	3	T	T	04 47 51.1	
	baz=185,slow=74,SNR=2.8						
WRA	Warramunga Arr	30.84	250	P	P	04 15 19.6	-0.5
	0.9nm,0.7s,baz=80,slow=8.9,SNR=5.6						
ASAR	Alice Springs	32.17	243	P	P	04 15 32.2	+0.4
	1.0nm,0.9s,baz=68,slow=9.4,SNR=7.9						
ILAR	Eielson Array	83.82	19	P	P	04 21 33.0	+0.1
	0.4nm,0.7s,baz=226,slow=4.8,SNR=6.5						

*IDC **20** 04:14:49.3±1.0, 1°.07N×127°.64E, h0^{km}, mb4.0/6, mb1 4.2/6, mb1mx3.8/39, mbtmp4.1/6, Error ellipse: s-maj=68.9km s-min=17.4km az=75.0*

*NEIC **20** 04:14:51.4±1.4, 1°.01N±0°.07×127°.48E±0°.08, h10^{km}±2^{km}, mb4.2/11, Error ellipse: s-maj=15.2km s-min=9.3km az=127.0*

*DJA **20** 04:14:53.5±0.3, 1°N±3°×12°7E±°, h10^{km}, M3.9/7, mb4.0/3, MLv3.9/7*

ISC 20 04:14:50.7±0.8, 1°.18N±0°.09×127°.70E±0°.08, h10^{km}, n25, σ1^{s}.14/21, mb4.2/11, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBMI	Labuha	1.82	186	P	Pn	04 15 21.9	-0.1
SANI	Sanana	3.63	208	P	Pn	04 15 48.8	+1.7
KMSI	Cibinong	3.77	261	P	Pn	04 15 49.0	+0.1
GTOI	Gorontalo	4.72	263	P	Pn	04 16 03.1	+1.1
GTOI				S	Sn	04 16 57.4	+0.6
FAKI	Fak Fak	6.11	132	Pn	Pn	04 16 22.2	+1.2
TOLI2	Tolitoli	6.92	270	Pn	Pn	04 16 29.2	-2.9
MPSI	Mapaga	7.84	264	P	Pn	04 16 44.3	-0.6
	0.1nm7.3nm,0.8s						
PPBI	Pangkal Pinang	21.81	261	P	P	04 19 53.1	+10
WB0	Warramunga Arr	21.83	163	P	P	04 19 43.9	+0.5
WB0				IAmb	IAmb	04 19 47.0	
	comp=Z,8.9nm,1.0s						
WRA	Warramunga Arr	21.98	163	P	P	04 19 44.2	-0.8
	comp=Z,3.7nm,0.8s,baz=340,slow=11,SNR=23						
WB2	Warramunga Arr	21.98	163	P	P	04 19 44.0	-1.1
WB2				IAmb	IAmb	04 19 52.4	
	comp=Z,17nm,1.3s						
WR0	Warramunga Arr	22.05	163	P	P	04 19 45.5	-0.3
WR0				IAmb	IAmb	04 19 51.0	
	comp=Z,7.3nm,1.1s						
AS31	Alice Springs	25.42	167	P	P	04 20 17.2	-1.5
ASAR	Alice Springs	25.42	167	P	P	04 20 17.6	-1.1
	comp=Z,5.4nm,0.9s,baz=347,slow=11,SNR=16						
ASAR	Alice Springs	25.42	167	P	P	04 20 16.2	-2.6
STKA	Stephens Creek	35.42	159	P	P	04 21 46.9	-0.1
	comp=Z,2.4nm,0.7s,baz=328,slow=2.4,SNR=4.7						
STKA	Stephens Creek	35.42	159	IAmb	IAmb	04 21 56.5	
	comp=Z,2.3nm,1.4s						
MJAR	Matsushiro Arr	36.51	14	P	P	04 21 57.3	+1.0
	comp=Z,4.0nm,0.9s,baz=184,slow=8.8,SNR=7.0						
MJAR	Matsushiro Arr	36.51	14	IAmb	IAmb	04 22 06.5	
	comp=Z,0.4nm,0.6s						
SONM	Songino Array	50.01	341	P	P	04 23 46.0	+0.7
	comp=Z,1.4nm,1.0s,baz=153,slow=7.8,SNR=6.5						
SONM	Songino Array	50.01	341	IAmb	IAmb	04 23 49.1	
	comp=Z,1.3nm,0.8s						
MK31	Makanchi Array	60.19	326	P	P	04 24 59.2	+0.3
MK31				IAmb	IAmb	04 25 05.9	
	comp=Z,6.2nm,1.2s						
MKAR	Makanchi Array	60.19	326	P	P	04 24 59.6	+0.6
	comp=Z,1.2nm,0.5s,baz=119,slow=8.4,SNR=9.4						
NIL	Nilore	60.25	309	P	P	04 24 58.0	-1.6
NIL				IAmb	IAmb	04 25 11.1	
	comp=Z,3.8nm,0.8s						
KURK	Kurchatov	64.40	328	P	P	04 25 26.6	-0.3

*DJA **20** 04:18:54.6±0.3, 1°N±3°×12°7E±°, h10^{km}, M4.4/12, mb4.5/12, mB4.8/3, MLv4.4/10, Mw(mB)4.1/3*

*NEIC **20** 04:18:56.0±1.1, 0°.9N±0°.1×127°.44E±0°.09, h28^{km}±7^{km}, mb4.5/23, Error ellipse: s-maj=17.8km s-min=10.7km az=207.0*

*IDC **20** 04:18:57.8±3.5, 0°.88N×127°.48E, h52^{km}±36^{km}, mb4.1/5, mb1 4.2/8, mb1mx3.7/41, mbtmp4.3/8, ML3.7/3, MS3.3/10, Ms1 3.3/10, ms1mx3.0/53, Error ellipse: s-maj=35.7km s-min=18.9km az=67.0*

ISC 20 04:18:56.3±0.7, 0°.92N±0°.08×127°.46E±0°.09, h35^{km}, n57, σ1^{s}.19/48, mb4.5/17, MS3.3/8, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBMI	Labuha	1.55	178	P	Pn	04 19 22.4	+0.9
SANI	Sanana	3.30	206	P	Pn	04 19 45.3	-0.2
KMSI	Cibinong	3.49	264	P	Pn	04 19 49.1	+1.0
SIJI	Sorong	4.21	115	P	Pn	04 19 58.6	+0.6
	2.8nm,0.3s,baz=305,slow=16,SNR=5.0						
GTOI	Gorontalo	4.45	266	P	Pn	04 20 04.1	+2.7
AAI	Ambon	4.64	171	P	Pn	04 20 07.7	+3.8
MRSI	Marisa	5.53	265	P	Pn	04 20 17.7	+1.5
	0.2nm709nm59nm,0.6s						
APSI	Ampana	6.09	253	P	Pn	04 20 25.9	+2.1
	0.2nm552nm46nm,0.9s						
FAKI	Fak Fak	6.13	129	Pn	Pn	04 20 24.1	-0.3
TOLI2	Tolitoli	6.68	272		Pn	04 20 31.6	-0.4
MPSI	Mapaga	7.58	266	P	Pn	04 20 46.6	+2.2
	3.1nm14nm,0.7s						
TTSI	Tana Toraja	8.59	243	P	Pn	04 20 57.6	-0.7
	50nm,0.8s						
BNSI	Bone	9.05	234	P	Pn	04 21 05.0	+0.5
	40nm,0.8s						
SPSI	Sidrap Palu	9.09	238	P	Pn	04 21 04.8	-0.3
	676nm52nm,0.5s						
BKSI	Bulukumba	9.60	230	P	Pn	04 21 13.8	+1.7
	24nm,1.6s						
KAPI	Kappang	9.70	232	P	Pn	04 21 15.0	+1.6
	1.2nm,0.3s,baz=78,slow=9.6,SNR=1.5						
EDFI	Ende, Flores	11.20	211	P	Pn	04 21 36.5	+2.4
	6.8nm,0.8s						
BATI	Baumata	11.68	199	LR	LR	04 26 35.7	
	comp=Z,123nm,20.2s,baz=27,slow=39						
JAY	Jayapura	13.68	104	LR	LR	04 27 03.0	
	comp=Z,293nm,19.8s,baz=304,slow=36						
JAGI	Jajag, Banyuwa	16.21	235	Pn	Pn	04 22 42.2	+0.5
JAGI				IAmb	IAmb	04 22 57.7	
	comp=Z,40nm,1.1s						
KNRA	Kununurra	16.55	176	Pn	Pn	04 22 44.2	-1.6
KSM	Kuching	17.15	272	Pn	Pn	04 22 52.6	-0.8
FITZ	Fitzroy Crossi	18.99	185	P	P	04 23 14.0	-0.9
	comp=Z,0.1nm,0.3s,baz=9.8,slow=12,SNR=6.6						
GUMO	Guam	21.34	53	LR	LR	04 31 31.2	
	comp=Z,156nm,18.6s,baz=168,slow=35						
WB0	Warramunga Arr	21.66	162		P	04 23 43.4	-0.5
WB0				IAmb	IAmb	04 23 49.2	
	comp=Z,26nm,1.1s						
WRAB	Tennant Creek	21.80	162		P	04 23 45.6	+0.1
WRAB				IAmb	IAmb	04 23 46.8	
	comp=Z,14nm,0.7s						
WRA	Warramunga Arr	21.81	162	P	P	04 23 45.5	0.0
	comp=Z,12nm,0.6s,baz=340,slow=11,SNR=102						
WRA	Warramunga Arr	21.81	162		P	04 23 44.4	-1.1
WB2	Warramunga Arr	21.81	162		P	04 23 45.2	-0.4
WB2				IAmb	IAmb	04 23 47.0	
	comp=Z,16nm,0.7s						
WR0	Warramunga Arr	21.89	162		P	04 23 45.7	-0.7
WR0				IAmb	IAmb	04 23 51.7	
	comp=Z,12nm,0.8s						
PMG	Port Moresby	22.14	118	LR	LR	04 34 46.3	
	comp=Z,245nm,18.2s,baz=234,slow=43						
AS31	Alice Springs	25.23	166		P	04 24 18.4	-0.8
ASAR	Alice Springs	25.23	166	P	P	04 24 18.9	-0.3
	comp=Z,16nm,0.8s,baz=342,slow=9.7,SNR=42						
ASAR	Alice Springs	25.23	166		P	04 24 18.7	-0.5
PSI	Prapat	28.58	274	LR	LR	04 38 17.7	
	comp=Z,60nm,18.8s,baz=86,slow=41						
CMAR	Chiang Mai Arr	32.97	304	LR	LR	04 38 56.8	
	comp=Z,15nm,19.8s,baz=182,slow=36						
BBOO	Buckleboo	34.52	167	P	P	04 25 41.1	-0.2
EIDS	Eidsvold	34.72	140	P	P	04 25 44.4	+1.1
EIDS				IAmb	IAmb	04 25 47.7	
	comp=Z,14nm,1.4s						
STKA	Stephens Creek	35.27	159	P	P	04 25 47.0	-0.8
	comp=Z,4.9nm,0.8s,baz=322,slow=10,SNR=6.9						
STKA				LR	LR	04 40 41.9	
	comp=Z,85nm,19.5s,baz=22,slow=37						
STKA	Stephens Creek	35.27	159	P	P	04 25 47.4	-0.4
KSRS	Korea Array	36.35	1	LR	LR	04 41 11.0	
	comp=Z,8.5nm,21.3s,baz=165,slow=37						
MJAR	Matsushiro Arr	36.81	15	LR	LR	04 40 15.4	
	comp=Z,44nm,20.2s,baz=220,slow=35						
SHL	Shillong	42.15	308	P	P	04 26 44.6	-1.2
SHL				IAmb	IAmb	04 26 52.5	
	comp=Z,8.9nm,1.2s						
SONM	Songino Array	50.17	342	P	P	04 27 48.8	+0.2
	comp=Z,0.9nm,0.7s,baz=140,slow=7.5,SNR=5.2						
NIL	Nilore	60.22	309	P	P	04 29 01.5	+0.3
MK31	Makanchi Array	60.26	326	P	P	04 29 00.4	-0.9
MK31				IAmb	IAmb	04 29 21.9	
	comp=Z,5.6nm,1.2s						
MKAR	Makanchi Array	60.26	326	P	P	04 29 01.1	-0.2
	comp=Z,2.6nm,0.8s,baz=117,slow=8.7,SNR=7.6						
AAK	Ala-Archa	62.92	319	P	P	04 29 20.4	+0.9
AAK				IAmb	IAmb	04 29 23.6	
	comp=Z,5.0nm,1.3s						
KBL	Kabul	63.81	308	P	P	04 29 26.0	+0.4
KBL				IAmb	IAmb	04 29 31.5	
	comp=Z,4.9nm,0.8s						
GAR	Garm	64.36	313	P	P	04 29 29.3	+0.3
BTK	Batken	64.39	315	P	P	04 29 29.5	+0.4
BTK				IAmb	IAmb	04 29 39.0	
	comp=Z,5.9nm,1.1s						
KURK	Kurchatov	64.48	328	P	P	04 29 29.4	0.0
KKAR	Karatay Array	65.77	318	P	P	04 29 37.8	-0.2
BRVK	Borovoye	70.13	327	P	P	04 30 05.9	+0.8
BRVK				IAmb	IAmb	04 30 32.3	
	comp=Z,3.9nm,1.2s						
ABKAR	Akbulak array	74.77	321	P	P	04 30 34.1	+1.3
VNDA	Vanda	80.57	173	LR	LR	05 08 44.7	
	comp=Z,22nm,18.2s,baz=338,slow=37						
RAYN	Ar Rayn	82.25	293	P	P	04 31 14.7	-0.1
RAYN				IAmb	IAmb	04 31 29.9	
	comp=Z,2.6nm,0.9s						

*KRNET **20** 04:23:59.6±0.1, 41°.08N×75°.21E, h18^{km}, mb3.0*

*KNET **20** 04:24:01.2±0.5, 41°.15N×75°.03E, h0^{km}, ml2.3, Error ellipse: s-maj=3.1km s-min=2.6km az=163.0*

*SOME **20** 04:24:02.2, 41°.18N×75°.15E, h0^{km}*

*NNC **20** 04:24:04.9±1.6, 41°.19N×75°.17E, h19^{km}±11^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=11.1km s-min=7.2km az=6.0*

ISC 20 04:24:01.6±1.4, 41°.13N±0°.04×75°.14E±0°.02, h11^{km}±11^{km}, n62, σ1^{s}.22/99, 27C-22D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UCH	Uchtor	1.20	337	⇑P	Pb	04 24 23.5	-1.1
	10nm,0.2s,SNR=14						
UCH				⇓S	Sn	04 24 41.2	+0.1
	34nm,0.2s						
UCH	Uchtor	1.20	337	⇓*i*P	Pb	04 24 23.6	-0.9
	baz=36						
UCH				⇓*i*S	Sn	04 24 41.2	+0.1
	baz=36						
ULHL	Ulahol	1.39	36	⇓P	Pn	04 24 27.4	+0.3
	9.7nm,0.2s,SNR=12						
ULHL	Ulahol	1.39	36	⇓*e*P	Pn	04 24 25.9	-1.2
	baz=33						
ULHL				⇓*i*S	Sb	04 24 45.2	-0.3
	baz=33						
AML	Almayashu	1.48	313	⇑P	Pn	04 24 28.2	-0.3
	9.3nm,0.2s,SNR=19						
AML				⇑S	Sg	04 24 49.1	-0.1
	19nm,0.2s						
AML	Almayashu	1.48	313	⇓*i*P	Pn	04 24 28.4	-0.1
	baz=13						
AML				⇓*i*S	Sg	04 24 49.5	+0.3
	baz=13						
BOOM	Boomskoye usch	1.48	23	⇓*i*P	Pn	04 24 28.2	-0.2
	baz=21						
BOOM				⇓*i*S	Sg	04 24 48.8	-0.6
	baz=21						
KBK	Karagaybulak	1.53	355	⇓P	Pb	04 24 30.5	+0.3
	15nm,0.1s,SNR=42						
KBK				⇓S	Sg	04 24 53.3	+2.4
	68nm,0.2s						
KBK	Karagaybulak	1.53	355	⇑*e*P	Pn	04 24 29.2	+0.1
	baz=53						
KBK				⇑*e*S	Sg	04 24 51.1	+0.2
	baz=53						
AAK	Ala-Archa	1.58	342	⇓P	Pb	04 24 30.8	-0.1
	14nm,0.3s,SNR=15						
AAK				⇑S	Sg	04 24 53.3	+0.8
	39nm,0.2s						
AAK	Ala-Archa	1.58	342	Pn	Pb	04 24 31.3	+0.3
	3.6nm,0.3s						
AAK				Lg	Lg	04 24 56.6	
	32nm,0.5s						
AAK	Ala-Archa	1.58	342	⇑*i*P	Pn	04 24 30.5	+0.8
	baz=41						
AAK				⇑*i*S	Sg	04 24 52.9	+0.4
	baz=41						
SFK	Sufi-Kurgan	1.67	229	⇑*e*P	Pn	04 24 30.8	-0.2
	baz=31						
SFK				⇑*e*S	Sb	04 24 54.4	+0.7
	baz=31						
TKM2	Tokmak 2	1.82	11	Pg	Pb	04 24 34.9	-0.2
	4.3nm,0.4s						
TKM2				Lg	Lg	04 25 00.3	
	13nm,0.3s						
TKM2	Tokmak 2	1.82	11	⇑*i*P	Pb	04 24 34.4	-0.7
	baz=9.0						
TKM2				⇑*i*S	Sg	04 24 59.3	-0.9
	baz=9.0						
KDJ	Kajisay	1.83	56	⇓*i*P	Pn	04 24 33.7	+0.6
	baz=54						
KDJ				⇓*i*S	Sb	04 24 58.3	+0.3
	baz=54						
EKS2	Erkin-Say	1.84	327	⇓P	Pb	04 24 35.2	-0.2
	3.0nm,0.2s,SNR=8.2						
EKS2				⇑S	Sg	04 25 00.8	0.0
	4.8nm,0.2s						
EKS2	Erkin-Say	1.84	327	⇑*e*P	Pb	04 24 35.0	-0.3
	baz=26						
EKS2				⇑*e*S	Sg	04 25 00.6	-0.1
	baz=26						
CHMS	Chumysh	1.89	351	⇓P	Pb	04 24 36.7	+0.6
	5.2nm,0.1s,SNR=9.8						
CHMS				⇓S	Sg	04 25 03.8	+1.4
	22nm,0.2s						
CHMS	Chumysh	1.89	351	⇑*i*P	Pb	04 24 35.7	-0.4
	baz=50						
CHMS				⇑*i*S	Sg	04 25 02.0	-0.4
	baz=50						
KST	Kastek	2.01	17	*e*P	Pg	04 24 40.3	+0.3
	7.8nm,0.1s						
KST				*e*S	Sg	04 25 07.4	+1.2
	32nm,0.4s						
KST	Kastek	2.01	17	Pg	Pg	04 24 41.5	+1.4
	8.6nm,0.2s						
KST				Lg	Lg	04 25 07.8	
	32nm,0.4s						
TARG	Taragay, Kyrgy	2.09	72	⇑*e*P	Pn	04 24 37.6	+0.7
	baz=71						
TARG				⇑*i*S	Sb	04 25 05.1	-0.8
	baz=71						
MRKS	Merke	2.16	319	*e*P	Pg	04 24 42.3	-0.6
	13nm,0.4s						
MRKS				*e*S	Sg	04 25 10.7	-0.3
	45nm,0.3s						
MRKS	Merke	2.16	319	Pg	Pg	04 24 43.2	+0.3
	13nm,0.4s						
MRKS				Lg	Lg	04 25 10.6	
	45nm,0.3s						
DGS	Degeres	2.16	12	*e*P	Pg	04 24 43.5	+0.5
	10nm,0.1s						
DGS				*e*S	Sg	04 25 12.7	+1.6
	36nm,0.5s						
DGS	Degeres	2.16	12	Pg	Pg	04 24 44.6	+1.5
	31nm,0.5s						
DGS				Lg	Lg	04 25 12.7	
	36nm,0.5s						
USP	Ospenovka	2.19	348	⇓P	Pb	04 24 41.9	+0.7
	16nm,0.2s,SNR=44						
USP				⇑S	Sg	04 25 12.3	+0.4
	19nm,0.2s						
USP	Ospenovka	2.19	348	⇑*i*P	Pn	04 24 39.7	+1.7
	baz=47						
USP				⇑*i*S	Sb	04 25 09.0	+0.6
	baz=47						
IZV	Izvestkoviy	2.20	29	*e*P	Pg	04 24 44.0	+0.3
	4.3nm,0.1s						
IZV				*e*S	Sg	04 25 13.4	+1.2
	16nm,0.1s						
IZV	Izvestkoviy	2.20	29	Pg	Pg	04 24 45.1	+1.4
	9.7nm,0.3s						
IZV				Lg	Lg	04 25 13.4	
	16nm,0.2s						
MTBS	Maitube	2.22	25	*e*P	Pg	04 24 44.0	-0.1
	3.7nm,0.1s						
MTBS				*e*S	Sg	04 25 13.5	+0.7
	28nm,0.3s						
MTBS	Maitube	2.22	25	Pg	Pg	04 24 45.0	+1.0
	8.8nm,0.4s						
MTBS				Lg	Lg	04 25 13.5	
	28nm,0.3s						
TNSS	Tian-Shan	2.33	35	*e*P	Pg	04 24 46.1	-0.2
	3.2nm,0.1s						
TNSS				*e*S	Sg	04 25 16.9	+0.4
	9.2nm,0.2s						
TNSS	Tian-Shan	2.33	35	Pg	Pg	04 24 47.2	+0.9
	7.4nm,0.4s						
TNSS				Lg	Lg	04 25 16.9	
	9.2nm,0.4s						
MNAS	Manas	2.40	305	⇑*i*P	Pn	04 24 42.9	+2.0
	baz=6.0						
MNAS				⇑*i*S	Sb	04 25 14.6	+0.2
	baz=6.0						
MDOK	Medeo	2.48	34	*e*P	Pg	04 24 48.9	-0.2
	3.0nm,0.1s						
MDOK				*e*S	Sg	04 25 22.2	+1.0
	16nm,0.2s						
MDOK	Medeo	2.48	34	Pg	Pb	04 24 47.4	+1.2
	2.5nm,0.5s						
MDOK				Lg	Lg	04 25 22.4	
	12nm,0.5s						
MDOK	Medeo	2.48	34	Pg	Pg	04 24 50.3	+1.2
	6.2nm,0.6s						
MDOK				Lg	Lg	04 25 22.2	
	12nm,0.5s						
KNDC	Almaty	2.49	32	⇓Pg	Pg	04 24 49.0	-0.3
	26nm,0.3s						
KNDC				⇓Lg	Lg	04 25 23.1	
	26nm,0.3s						
ANVS	Anan'yevo	2.50	48	⇑*i*P	Pn	04 24 43.3	+0.9
	baz=46						
ANVS				⇑*i*S	Sb	04 25 15.8	-1.8
	baz=46						
KOTS	Kotyrbulak	2.56	34	*e*P	Pg	04 24 51.1	+0.5
	4.4nm,0.1s						
KOTS				*e*S	Sg	04 25 26.0	+2.1
	48nm,0.2s						
KOTS	Kotyrbulak	2.56	34	Pg	Pg	04 24 52.5	+1.8
	7.7nm,0.3s						
KOTS				Lg	Lg	04 25 26.0	
	48nm,0.6s						
KTBS	Karatobe	2.82	23	*e*P	Pg	04 24 54.8	-0.9
	2.9nm,0.1s						
KTBS				*e*S	Sg	04 25 32.4	+0.2
	40nm,0.1s						
KTBS	Karatobe	2.82	23	Pg	Pg	04 24 56.3	+0.6
	3.6nm,0.3s						
KTBS				Lg	Lg	04 25 32.4	
	40nm,0.4s						
KUU	Kurty	2.90	17	*e*P	Pg	04 24 55.6	-1.5
	1.7nm,0.0s						
KUU				*e*S	Sg	04 25 33.7	-1.0
	46nm,0.6s						
KUU	Kurty	2.90	17	Pg	Pg	04 24 57.0	-0.1
	2.7nm,0.2s						
KUU				Lg	Lg	04 25 33.7	
	46nm,0.6s						
CHKK	Chushkaly	3.05	26	*e*P	Pg	04 24 58.9	-1.0
	1.6nm,0.1s						
CHKK				*e*S	Sg	04 25 39.1	-0.3
	27nm,0.3s						
CHKK	Chushkaly	3.05	26	Pg	Pg	04 25 00.1	+0.1
	3.6nm,0.2s						
CHKK				Lg	Lg	04 25 39.1	
	27nm,0.3s						
KPKS	Kokpek	3.52	47	*e*P	Pb	04 25 06.2	+2.3
	1.9nm,0.1s						
KPKS				*e*S	Sg	04 25 51.8	-2.6
	9.6nm,0.2s						
UZB	Uzynbulak	3.52	54	*e*P	Pb	04 25 05.9	+1.9
	1.9nm,0.1s						
UZB				*e*S	Sg	04 25 51.3	-3.3
	6.3nm,0.6s						
UZB	Uzynbulak	3.52	54	Pg	Pg	04 25 07.3	-1.7
	6.2nm,0.6s						
UZB				Lg	Lg	04 25 51.3	
	6.3nm,0.6s						
ARXS	Arharly	3.66	32	*e*P	Pg	04 25 09.2	-2.5
	1.9nm,0.1s						
ARXS				*e*S	Sg	04 25 56.7	-2.5
	9.9nm,0.6s						
ARXS	Arharly	3.66	32	Pg	Pg	04 25 10.3	-1.5
	2.5nm,0.6s						
ARXS				Lg	Lg	04 25 56.7	
	9.9nm,0.6s						
BLB	Baldybastay	3.85	39	Pg	Pg	04 25 13.9	-1.5
	7.4nm,0.6s						
BLB				Lg	Lg	04 26 02.8	
	9.1nm,0.3s						
PDGK	Podgornoye	3.91	54	Pg	Pg	04 25 14.3	-2.0
	0.7nm,0.6s						
PDGK				Lg	Lg	04 26 03.4	
	2.0nm,0.7s						
PDGK	Podgornoye	3.91	54	⇑Pg	Pg	04 25 18.5	+2.1
	1.8nm,0.6s						
PDGK				⇓Lg	Lg	04 26 12.6	
	4.9nm,0.6s						
BTLS	Baital	3.99	349	*e*P	Pg	04 25 15.3	-2.8
	1.1nm,0.1s						
BTLS				*e*S	Sg	04 26 07.1	-2.6
	6.4nm,0.2s						
BTLS	Baital	3.99	349	Pg	Pg	04 25 16.1	-2.0
	1.8nm,0.6s						
BTLS				Lg	Lg	04 26 07.1	
	5.7nm,0.5s						
KNOS	Konyrlen	4.39	41	Pg	Pg	04 25 24.6	-1.1
	1.4nm,0.4s						
KNOS				Lg	Lg	04 26 21.0	
	3.0nm,0.7s						
DJR	Jarkent	4.69	45	Pg	Pg	04 25 29.4	-2.0
	1.5nm,0.6s						
DJR				Lg	Lg	04 26 29.3	
	3.1nm,0.6s						
KAPS	Kapalarasan	5.17	35	Pg	Pg	04 25 39.4	-1.2
	1.2nm,0.5s						
KAPS				Lg	Lg	04 26 46.5	
	3.5nm,0.5s						

IDC 20 04:25:05.8±1.6, 0°.68N×127°.31E, h0^{km}, mb3.8/3, mb1 4.0/3, mb1mx3.6/43, mbtmp3.8/3, Error ellipse:

s-maj=162.2km s-min=25.0km az=73.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.62	162	P	P	04 29 58.3	+0.6
	1.7nm,0.6s,baz=341,slow=11,SNR=16						
ASAR	Alice Springs	25.03	166	P	P	04 30 31.4	-0.4
	1.3nm,0.5s,baz=344,slow=9.5,SNR=14						
SONM	Songino Array	50.36	342	P	P	04 34 04.7	-0.1
	1.0nm,0.6s,baz=167,slow=7.6,SNR=6.8						

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*IDC **20** 04:25:04.8±1.3, 1°20S×120°05E, h0^{km}, mb3.9/4, mb1 4.0/5, mb1mx3.7/47, mbtmp3.9/5, ML3.6/1, Error ellipse: s-maj=77.5km s-min=23.3km az=66.0*

*DJA **20** 04:25:05.9±0.5, 1°S±3°×11°9E±°, h10^{km}, M4.2/6, MLv4.2/6*

*NEIC **20** 04:25:10.3±2.3, 1°24S±0°08×119°9E±0°2, h40^{km}±10^{km}, mb4.3/6, Error ellipse: s-maj=21.8km s-min=11.0km az=89.0*

ISC 20 04:25:08.0±0.7**, 1°18S**±0°05×**119°9E**±0°1**, h28**^{km}**, n22, σ1^{s}67**/24**, mb4.1**/8**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MPSI	Mapaga	1.50	0	P	Pn	04 25 33.4	+0.2
MPSI				S	Sb	04 25 55.3	+1.3
APSI	Ampana	1.78	81	P	Pb	04 25 42.0	+2.0
TTSI	Tana Toraja	1.86	182	P	Pn	04 25 38.2	+0.2
TTSI				S	Sb	04 26 04.5	+0.3
TOLI2	Tolitoli	2.44	21		Pb	04 25 49.4	-1.9
MRSI	Marisa	2.63	51	P	Pb	04 25 53.3	-1.2
SPSI	Sidrap Palu	2.77	182	P	Pn	04 25 50.4	-0.2
BNSI	Bone	3.21	176	P	Pn	04 25 58.7	+2.1
GTOI	Gorontalo	3.60	60	P	Pb	04 26 07.4	-3.7
KAPI	Kappang	3.81	182	Pn	Pn	04 26 05.7	+0.7
	4.6nm,0.3s,baz=332,slow=7.1,SNR=17						
KAPI	Kappang	3.81	182		Pn	04 26 05.8	+0.8
BKSI	Bulukumba	4.12	177	P	Pn	04 26 10.7	+1.5
KKM	Kota Kinabalu	8.06	333	Pn	Pn	04 27 04.7	+1.3
WSI	Waingapu	8.45	177	P	Pn	04 27 05.8	-2.8
WB0	Warramunga Arr	23.30	143	P	P	04 30 13.0	-0.9
WB0				IAmb	IAmb	04 30 21.9	
	comp=Z,16nm,1.4s						
WRA	Warramunga Arr	23.40	144	P	P	04 30 14.3	-0.6
	comp=Z,2.7nm,0.7s,baz=321,slow=10,SNR=12						
WB2	Warramunga Arr	23.41	144	P	P	04 30 14.7	-0.3
WB2				IAmb	IAmb	04 30 21.7	
	comp=Z,5.5nm,0.9s						
WR0	Warramunga Arr	23.54	143	P	P	04 30 16.1	-0.1
WR0				IAmb	IAmb	04 30 23.0	
	comp=Z,9.6nm,0.9s						
USA0B	Ussuriysk Arra	46.45	12	P	P	04 33 31.9	-0.6
USA0B				IAmb	IAmb	04 33 53.5	
	comp=Z,15nm,1.3s						
MKAR	Makanchi Array	58.03	330	P	P	04 34 59.9	+1.4
	comp=Z,0.8nm,0.8s,baz=142,slow=6.8,SNR=2.8						
ZALV	Zalesovo Beam	62.15	337	P	P	04 35 29.4	+2.9
	comp=Z,0.7nm,0.5s,baz=132,slow=6.6,SNR=3.6						
CSS	Mathiatis	87.84	305	P	P	04 37 53.3	-2.0
BRTR	Keskin Array B	87.85	310	P	P	04 37 56.3	+0.9
	comp=Z,0.8nm,0.9s,baz=94,slow=4.3,SNR=4.5						

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*TIR **20** 04:27:55.1, 38°52N×20°85E, h2^{km}±1^{km}, Md3.6, Ml3.5*

*BEO **20** 04:27:55.3±3.4, 38°07N×20°07E, h47^{km}±5^{km}, ML3.5/8*

*ATH **20** 04:27:57.5, 38°50N×20°52E, h12^{km}±1^{km}, ML3.3/17, Error ellipse: s-maj=1.7km s-min=0.7km az=277.0*

*THE **20** 04:27:57.1, 38°50N×20°44E, h9^{km}±1^{km}, ML3.2/16, Error ellipse: s-maj=1.0km s-min=0.3km az=256.0*

ISC 20 04:27:57.1±0.8**, 38°50N**±0°01×**20°50E**±0°02**, h11**^{km}±4^{km}**, n147, σ1^{s}25**/202**, 10C-8D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FSK	Fiskardo	0.06	127	P	Pg	04 27 59.4	+0.1
FSK				S	Sg	04 28 00.9	-0.1
FSK	Fiskardo	0.06	127	P	Pg	04 27 59.4	+0.1
FSK				S	Sg	04 28 00.9	-0.1
FSK				AML	AML	04 28 01.1	
FSK				AML	AML	04 28 01.8	
EVGI	Lefkada island	0.17	45	P	Pg	04 28 01.0	+0.1
EVGI				S	Sg	04 28 04.6	+1.0
EVGI	Lefkada island	0.17	45	P	Pg	04 28 01.1	+0.1
EVGI				S	Sg	04 28 04.4	+0.8
DRAG	Dragano-Lefkad	0.20	18	P	Pg	04 28 01.1	-0.2
DRAG				S	Sg	04 28 04.9	+0.7
DRAG	Dragano-Lefkad	0.20	18	P	Pg	04 28 01.4	+0.1
DRAG				S	Sg	04 28 05.2	+1.0
KEF4	Livadi, Kephal	0.25	194	P	Pg	04 28 02.1	0.0
KEF4				S	Sg	04 28 06.4	+0.9
KEF4	Livadi, Kephal	0.25	194	P	Pg	04 28 02.3	+0.1
KEF4				S	Sg	04 28 06.7	+1.2
NYDR	Nydri-Lefkada	0.27	36	P	Pg	04 28 02.4	-0.1
NYDR				S	Sb	04 28 07.1	-1.4
NYDR	Nydri-Lefkada	0.27	36	P	Pg	04 28 02.5	-0.1
NYDR				S	Sb	04 28 07.1	-1.4
DMLN	Damoulianata-K	0.28	201	P	Pg	04 28 02.7	0.0
DMLN				S	Sg	04 28 06.5	0.0
DMLN	Damoulianata-K	0.28	201	P	Pg	04 28 02.8	0.0
DMLN				S	Sg	04 28 07.6	+1.2
LXRA	Lixouri, Kepha	0.30	189	P	Pg	04 28 03.3	+0.2
LXRA				S	Sb	04 28 09.0	-0.4
KEF3	Kipouria, Keph	0.32	202	P	Pg	04 28 02.9	-0.5
KEF3				S	Sg	04 28 07.8	+0.1
KEF3	Kipouria, Keph	0.32	202	P	Pg	04 28 03.1	-0.3
KEF3				S	Sg	04 28 08.2	+0.5
LKD2	Lefkada island	0.32	23	P	Pg	04 28 03.3	-0.2
LKD2				S	Sb	04 28 08.8	-1.2
LKD2				AML	AML	04 28 09.5	
	comp=N,11997µm,0.5s						
LKD2				AML	AML	04 28 10.3	
	comp=E,15714µm,0.5s						
ARGA	Argostoli. Kep	0.32	183	P	Pb	04 28 04.6	-0.2
VLS	Valsamata	0.33	167	P	Pg	04 28 03.7	0.0
VLS				S	Sb	04 28 09.4	-0.8
VLS	Valsamata	0.33	167	P	Pg	04 28 03.7	0.0
VLS				S	Sb	04 28 09.5	-0.8
VLS				AML	AML	04 28 10.0	
	comp=N,27549µm,0.2s						
VLS				AML	AML	04 28 11.2	
	comp=E,33594µm,0.3s						
VLS	Valsamata	0.33	167	⇑P	Pg	04 28 03.7	0.0
VLS				S	Sb	04 28 09.4	-0.8
VLS				AML	AML		
	comp=E,6310µm,0.5s						
VLS				AML	AML		
	comp=N,5425µm,0.6s						
TSLK	Tsoukalades, L	0.35	21	P	Pg	04 28 04.0	0.0
TSLK				S	Sb	04 28 09.6	-1.3
TSLK	Tsoukalades, L	0.35	21	P	Pg	04 28 04.1	0.0
TSLK				S	Sb	04 28 09.7	-1.2
TSLK				AML	AML	04 28 11.4	
	comp=N,12583µm,0.4s						
TSLK				AML	AML	04 28 12.0	
	comp=E,18376µm,0.5s						
PSDA	Pessada-Kefalo	0.39	170	P	Pg	04 28 04.6	-0.2
PSDA				S	Sb	04 28 11.1	-0.8
PSDA	Pessada-Kefalo	0.39	170	P	Pg	04 28 04.8	0.0
PSDA				S	Sb	04 28 11.1	-0.8
VTN	Vitineika	0.79	137	P	Pb	04 28 12.8	-0.1
PVO	Paravola	0.81	81	P	Pb	04 28 13.0	-0.2
PVO				S	Sn	04 28 26.7	+0.1
	comp=E,2µm,0.7s						
PVO	Paravola	0.81	81	P	Pb	04 28 13.0	-0.2
PVO				AML	AML	04 28 32.2	
	comp=E,3684µm,0.4s						
PVO				AML	AML	04 28 33.6	
	comp=N,3598µm,0.4s						
LTHK	Lithakia	0.83	161	P	Pg	04 28 12.1	-1.0
LTHK				S	Sb	04 28 25.2	+0.5
	comp=N,4µm,0.3s						
LTHK	Lithakia	0.83	161	P	Pg	04 28 12.4	-0.7
LTHK				AML	AML	04 28 30.9	
	comp=N,6807µm,0.5s						
LTHK				AML	AML	04 28 33.3	
	comp=E,9434µm,0.3s						
RLS	Riolos of Patr	0.88	120	P	Pg	04 28 14.0	0.0
RLS				S	Sn	04 28 27.5	-0.6
	comp=E,1µm,0.6s						
RLS	Riolos of Patr	0.88	120	P	Pg	04 28 14.0	0.0
RLS				AML	AML	04 28 38.3	
	comp=E,2276µm,0.5s						
RLS				AML	AML	04 28 38.3	
	comp=N,2886µm,0.7s						
UPR	University Cam	1.03	102	P	Pn	04 28 17.1	-0.4
UPR				S	Sn	04 28 33.9	+1.9
IGT	Igoumenitsa	1.04	353	P	Pb	04 28 16.3	-0.9
IGT				S	Sn	04 28 32.3	+0.1
	comp=N,970nm,0.6s						
IGT	Igoumenitsa	1.04	353	P	Pb	04 28 16.2	-0.9
IGT				AML	AML	04 28 39.2	
	comp=N,1828µm,0.7s						
IGT				AML	AML	04 28 40.9	
	comp=E,2094µm,0.9s						
IGT	Igoumenitsa	1.04	353	P	Pn	04 28 17.6	-0.1
	baz=339						
IGT				S	Sn	04 28 32.2	-0.1
	baz=339						
DRO	Drossia	1.10	119	P	Pb	04 28 17.6	-0.5
DRO				S	Sn	04 28 35.8	+2.2
	comp=E,2µm,0.4s						
DRO	Drossia	1.10	119	P	Pb	04 28 17.6	-0.5
DRO				AML	AML	04 28 40.0	
	comp=E,4567µm,0.3s						
DRO				AML	AML	04 28 41.5	
	comp=N,4910µm,0.5s						
EFP	Efpalio	1.11	93	P	Pb	04 28 17.2	-1.0
EFP				S	Sn	04 28 35.0	+1.2
	comp=N,1µm,0.7s						
EFP	Efpalio	1.11	93	P	Pb	04 28 17.2	-1.0
EFP				AML	AML	04 28 40.1	
	comp=N,2540µm,0.4s						
EFP				AML	AML	04 28 41.2	
	comp=E,2769µm,0.6s						
EVR	Evrytania	1.11	67	P	Pb	04 28 17.6	-0.7
EVR				S	Sn	04 28 36.4	+2.4
	comp=E,560nm,0.6s						
EVR	Evrytania	1.11	67	P	Pb	04 28 17.8	-0.5
EVR				AML	AML	04 28 43.3	
	comp=E,1060µm,0.5s						
EVR				AML	AML	04 28 45.2	
	comp=N,1228µm,0.7s						
ANX	Ano Chora	1.12	85	P	Pb	04 28 17.8	-0.7
ANX				S	Sn	04 28 34.7	+0.5
	comp=N,2µm,0.6s						
ANX	Ano Chora	1.12	85	P	Pb	04 28 17.9	-0.7
ANX				AML	AML	04 28 44.1	
	comp=N,3440µm,0.8s						
ANX				AML	AML	04 28 47.2	
	comp=E,3529µm,0.5s						
JAN	Janina	1.19	13	P	Pg	04 28 20.1	+0.2
JAN				S	Sn	04 28 36.1	+0.2
	comp=E,1µm,0.4s						
JAN	Janina	1.19	13	P	Pg	04 28 20.2	+0.3
JAN				AML	AML	04 28 41.1	
	comp=E,2763µm,0.4s						
JAN				AML	AML	04 28 44.6	
	comp=N,1940µm,0.6s						
LAKA	Lakka	1.19	102	P	Pb	04 28 18.8	-0.9
LAKA				S	Sn	04 28 38.2	+2.3
	comp=N,3µm,0.6s						
LAKA	Lakka	1.19	102	P	Pb	04 28 18.9	-0.8
LAKA				AML	AML	04 28 45.6	
	comp=N,5159µm,0.6s						
LAKA				AML	AML	04 28 47.3	
	comp=E,5379µm,0.6s						
TRIZ	Trizonia	1.24	96	P	Pn	04 28 19.7	-0.7
TRIZ				S	Sg	04 28 37.1	0.0
	comp=E,378nm,0.6s						
TRIZ	Trizonia	1.24	96	P	Pn	04 28 19.9	-0.5
ALIK	Aliki, Aigiali	1.29	100	P	Pn	04 28 20.8	-0.2
ALIK				S	Sg	04 28 40.7	+2.1
KASA	Kassiopi	1.32	341	P	Pg	04 28 22.7	+0.3
KEK	Kerkira	1.33	336	P	Pb	04 28 21.9	-0.1
KEK				S	Sg	04 28 40.7	+0.8
	comp=E,665nm,0.6s						
KEK	Kerkira	1.33	336	P	Pb	04 28 21.9	-0.1
KEK				AML	AML	04 28 48.4	
	comp=N,1369µm,0.5s						
KEK				AML	AML	04 28 53.3	
	comp=E,1198µm,0.4s						
KLV	Kalavryta, Ach	1.38	109	P	Pn	04 28 21.9	-0.4
KLV				S	Sg	04 28 43.1	+1.7
	comp=E,408nm,0.7s						
KLV	Kalavryta, Ach	1.38	109	P	Pn	04 28 22.1	-0.2
MAKR	Makrakomi, Fth	1.38	68	P	Pb	04 28 22.4	-0.5
MAKR	Makrakomi, Fth	1.38	68	P	Pb	04 28 22.6	-0.2
SRN	Sarande	1.43	344	P	Pb	04 28 23.5	-0.3
SRN	Sarande	1.43	344	P	Pb	04 28 24.1	+0.2
	baz=335						
SRN				S	Sg	04 28 48.0	+4.8
	baz=335						
SRN				AMP			
	comp=N,0.8nm,0.4s,baz=335						
AGG	Agios Georgios	1.52	69	P	Pb	04 28 25.1	-0.3
AGG				S	Sg	04 28 45.4	-0.7
	comp=N,535nm,0.5s						
AGG	Agios Georgios	1.52	69	P	Pb	04 28 25.3	-0.1
GUR	Goura	1.56	111	P	Pn	04 28 24.9	+0.1
GUR				S	Sb	04 28 45.8	+0.1
	comp=N,2µm,0.4s						
GUR	Goura	1.56	111	P	Pn	04 28 24.8	+0.1
GUR				AML	AML	04 28 56.8	
	comp=E,2290µm,0.5s						
GUR				AML	AML	04 28 57.8	
	comp=N,3630µm,0.4s						
THL	Klokotos Trika	1.59	47	P	Pb	04 28 26.1	-0.4
THL				S	Sb	04 28 46.5	-0.1
	comp=N,690nm,0.6s						
THL	Klokotos Trika	1.59	47	P	Pb	04 28 26.8	+0.3
THL				AML	AML	04 28 53.9	
	comp=E,1414µm,0.6s						
THL				AML	AML	04 28 54.2	
	comp=N,1390µm,0.6s						
LSK	Leskovik	1.65	3	P	Pb	04 28 27.5	-0.1
LSK	Leskovik	1.65	3	P	Pb	04 28 27.8	+0.2
	baz=354						
LSK				S	Sg	04 28 51.0	+0.8
	baz=354						
LSK				AMP			
	comp=N,3.0nm,0.5s,baz=354						
ITM	Ithomi	1.73	139	P	Pg	04 28 29.7	-0.6
KBN	Korca	2.13	6	P	Pb	04 28 35.7	-0.1
	baz=359						
KBN				S	Sg	04 29 09.2	+3.5
	baz=359						
KBN				AMP			
	comp=N,1.0nm,0.7s,baz=359						
SCTE	Santa Cesarea	2.23	316	⇑P	Pn	04 28 34.4	+0.4
SCTE				S	Sn	04 29 01.5	+0.1
SCTE				AML	AML		
	comp=E,572µm,0.8s						
SCTE				AML	AML		
	comp=N,668µm,0.4s						
OHR	Ohrid	2.62	5	*e*Pn	Pb	04 28 42.2	-1.9
OHR				*e*Sn	Sb	04 29 16.2	-0.1
OHR	Ohrid	2.62	5	*i* Pn	Pn	04 28 41.5	+2.1
TIR	Tirane	2.89	350	*e*Pn	Pn	04 28 44.9	+1.9
TIR				*e*Sn	Sn	04 29 19.6	+1.8
TIP	Timpagrande	3.00	284	⇓P	Pn	04 28 45.7	+1.0
TIP				S	Sn	04 29 19.2	-1.4
TIP				AML	AML		
	comp=N,78µm,0.7s						
TIP				AML	AML		
	comp=E,66µm,1.2s						
SERS	Sersale	3.03	281	⇑P	Pn	04 28 46.1	+1.0
SERS				S	Sn	04 29 20.7	-0.6
SERS				AML	AML		
	comp=E,135µm,0.4s						
SERS				AML	AML		
	comp=N,134µm,0.5s						
PHP	Peshkopia	3.18	359	P	Pn	04 28 48.7	+1.5
	baz=355						
PLAC	Placanica	3.19	270	⇓P	Pn	04 28 47.5	+0.3
PLAC				AML	AML		
	comp=N,111µm,0.4s						
PLAC				AML	AML		
	comp=E,110µm,0.4s						
GRI	Girifalco	3.21	277	⇑P	Pn	04 28 47.9	+0.4
GRI				S	Sn	04 29 25.0	-0.7
GRI				AML	AML		
	comp=E,144µm,1.5s						
GRI				AML	AML		
	comp=N,172µm,0.5s						
VAY	Valandovo	3.24	29	*e*Pn	Pn	04 28 50.0	+2.2
VAY	Valandovo	3.24	29	*i* Pn	Pn	04 28 44.6	-3.3
CAR1	CAROLEI	3.43	284	⇓P	Pn	04 28 52.2	+1.7
CAR1				S	Sn	04 29 31.9	+0.7
CAR1				AML	AML		
	comp=E,310µm,0.5s						
CAR1				AML	AML		
	comp=N,240µm,0.5s						
STIP	Stip	3.44	22	*i* Pn	Pb	04 28 54.3	-3.8
NOCI	Noci	3.50	312	P	Pn	04 28 53.1	+1.6
NOCI				AML	AML		
	comp=N,412µm,0.5s						
NOCI				AML	AML		
	comp=E,281µm,0.5s						
SALB	San Lorenzo Be	3.51	294	⇓P	Pn	04 28 53.2	+1.6
SALB				AML	AML		
	comp=E,103µm,0.4s						
SALB				AML	AML		
	comp=N,96µm,0.6s						
MPAZ	Palizzi	3.58	263	P	Pn	04 28 53.0	+0.4
MPAZ				AML	AML		
	comp=E,83µm,1.3s						
MPAZ				AML	AML		
	comp=N,95µm,0.6s						
JOPP	Joppolo	3.62	273	P	Pn	04 28 53.5	+0.4
JOPP				AML	AML		
	comp=E,128µm,0.6s						
JOPP				AML	AML		
	comp=N,124µm,1.3s						
GMB	Gambarie	3.69	266	P	Pn	04 28 53.0	-1.1
GMB				AML	AML		
	comp=E,451µm,0.6s						
GMB				AML	AML		
	comp=N,399µm,0.8s						
DRME	Dracevica, Mon	3.82	345	*e*Pn	Pn	04 28 55.3	-0.5
AMUR	Altamura	3.85	310	⇓P	Pn	04 28 57.4	+1.1
AMUR				AML	AML		
	comp=E,156µm,0.8s						
AMUR				AML	AML		
	comp=N,175µm,0.6s						
CUC	Castrocucco	3.93	294	⇑P	Pn	04 29 00.2	+2.8
CUC				AML	AML		
	comp=E,128µm,0.9s						
CUC				AML	AML		
	comp=N,68µm,0.8s						
CUC				AML	AML		
	comp=E,123µm,1.0s						
CUC				AML	AML		
	comp=N,82µm,0.9s						
PDG	Podgorica	4.04	347	*e*Pn	Pn	04 28 59.1	+0.2
PDG				*e*Sn	Sn	04 29 44.8	-1.4
PDG	Podgorica	4.04	347	*e*Pn	Pn	04 28 58.9	0.0
AIO	Antillo	4.18	264	S	Sn	04 29 51.0	+1.3
PRVS	Prvonek	4.18	16	*e*Pn	Pn	04 29 03.1	+2.2
ACER	Acerenza	4.20	304	⇑P	Pn	04 29 02.1	+1.1
ACER				AML	AML		
	comp=E,286µm,0.6s						
ACER				AML	AML		
	comp=N,314µm,0.6s						
ACER				AML	AML		
	comp=N,364µm,0.5s						
ACER				AML	AML		
	comp=E,266µm,0.6s						
HCY	Herceg Novi	4.23	339	*e*Pn	Pn	04 29 00.3	-1.2
PALZ	Palazzo San Ge	4.27	306	P	Pn	04 29 03.5	+1.5
PALZ				AML	AML		
	comp=N,322µm,0.8s						
PALZ				AML	AML		
	comp=E,368µm,1.2s						
BOSS	Bosilegrad	4.27	20	*e*Pn	Pn	04 29 04.3	+2.3
VPL	Vulcano Piano	4.33	270	⇓P	Pn	04 29 05.4	+2.5
VPL				AML	AML		
	comp=N,393µm,0.6s						
VPL				AML	AML		
	comp=E,384µm,0.5s						
BARS	Barje	4.43	13	*e*Pn	Pn	04 29 04.8	+0.6
BARS	Barje	4.43	13	*e*Pn	Pn	04 29 06.0	+1.8
CAPA	Cerignola FG	4.48	308	P	Pn	04 29 06.3	+1.4
CAPA				AML	AML		
	comp=N,413µm,0.9s						
CAPA				AML	AML		
	comp=E,318µm,0.9s						
TREB	Trebinje	4.52	339	*e*Pn	Pn	04 29 04.1	-1.4
TREB	Trebinje	4.52	339	*e*Pn	Pn	04 29 04.2	-1.3
HAVL	Avola	4.53	252	⇑P	Pn	04 29 03.9	-1.7
HAVL				AML	AML		
	comp=E,222µm,0.3s						
HAVL				AML	AML		
	comp=N,203µm,0.3s						
DBRK	Dubrovnik	4.54	337	*i* Pn	Pn	04 29 04.1	-1.6
DBRK				Sn	Sn	04 29 55.3	-3.0
HLNI	Lentini	4.59	257	⇑P	Pn	04 29 04.9	-1.6
HLNI				AML	AML		
	comp=E,95µm,0.7s						
HLNI				AML	AML		
	comp=N,81µm,0.8s						
VTS	Vitosha	4.61	26	*e*Pn	Pn	04 29 09.2	+2.3
MEU	Monte Lauro	4.62	254	P	Pn	04 29 06.1	-0.9
MEU				AML	AML		
	comp=N,402µm,0.3s						
MEU				AML	AML		
	comp=E,255µm,0.3s						
BRY	Bratogost	4.64	342	*e*Pn	Pn	04 29 06.4	-0.9
IFIL	Filicudi I Eol	4.65	273	⇓P	Pn	04 29 08.9	+1.6
IFIL				AML	AML		
	comp=E,391µm,0.4s						
IFIL				AML	AML		
	comp=N,154µm,0.3s						
SELS	Selova	4.74	5	*e*Pn	Pn	04 29 08.7	+0.2
SJES	Sjenica	4.78	355	*e*Pn	Pn	04 29 09.8	+0.7
STON	Ston	4.86	335	*e*Pn	Pn	04 29 09.2	-0.9
STON	Ston	4.86	335	*e*Pn	Pn	04 29 08.6	-1.5
STON	Ston	4.86	335	*e*Pn	Pn	04 29 08.7	-1.4
STON	Ston	4.86	335	⇑P	Pn	04 29 08.7	-1.4
ZAPS	Zavoj	5.04	18	*e*Pn	Pn	04 29 13.4	+0.8
LSTV	Lastovo	5.07	328	*e*Pn	Pn	04 29 11.8	-1.3
RUDO	Rudo	5.19	351	*e*Pn	Pn	04 29 13.1	-1.5
BOVS	Bovan	5.21	10	*e*Pn	Pn	04 29 17.4	+2.4
MELA	Melanico ??? S	5.22	310	⇑P	Pn	04 29 16.6	+1.5
TREM	Isole Tremiti	5.26	315	P	Pn	04 29 17.7	+2.1
GRUS	Gruza	5.39	2	*e*Pn	Pn	04 29 18.1	+0.7
BBLS	Lazići	5.43	352	*e*Pn	Pn	04 29 17.2	-0.8
BBLS	Lazići	5.43	352	*e*Pn	Pn	04 29 22.9	+4.9
HVAR	Hvar	5.59	328	*e*Pn	Pn	04 29 18.5	-1.7
RICI	Ricice	5.60	334	*e*Pn	Pn	04 29 19.4	-1.0
DIVS	Divibare	5.61	356	*e*Pn	Pn	04 29 20.5	0.0
DIVS	Divibare	5.61	356	*e*Pn	Pn	04 29 19.0	-1.5
KIJV	Kijevo	6.31	332	*e*Pn	Pn	04 29 29.3	-0.7
ZIRJ	Zirje	6.32	326	*e*Pn	Pn	04 29 28.8	-1.4
GIUL	Giuliano Di Ro	6.34	301	⇓P	Pn	04 29 34.2	+3.7
MGRS	Mrkonjic Grad	6.45	338	*e*Pn	Pn	04 29 29.7	-2.2
MORI	Morici	6.47	328	*e*Pn	Pn	04 29 31.7	-0.5
FRGS	Fruska Gora	6.67	356	*e*Pn	Pn	04 29 33.4	-1.7
BLY	Banja Luka	6.72	339	*e*Pn	Pn	04 29 35.7	0.0
BLY	Banja Luka	6.72	339	*e*Pn	Pn	04 29 34.4	-1.3
DUGI	Dugi Otok	6.85	325	*e*Pn	Pn	04 29 37.3	-0.2
UDBI	Udbina	6.99	331	*e*Pn	Pn	04 29 39.8	+0.3
MRAK	Mrakovica	7.04	339	*e*Pn	Pn	04 29 39.0	-1.2
NVLJ	Novalja	7.38	327	*e*Pn	Pn	04 29 44.2	-0.6
CRES	Cresnjev	8.22	335	*e*Pn	Pn	04 29 55.0	-1.3
CEY	Cerknica	8.53	330	*e*Pn	Pn	04 29 59.8	-0.6
OBKA	Obir	9.13	333	*e*Pn	Pn	04 30 09.6	+0.8
	comp=N,4.5nm,0.6s						
OBKA				*i* Sn	Sn	04 31 51.3	-0.3
	comp=N,2.9nm,0.4s						
ABTA	Abfaltersbach	10.12	327	*i* Pn	Pn	04 30 20.3	-2.1
	comp=N,1.0nm,0.4s						
ABTA				*e*Sn	Sn	04 32 12.0	-4.0
	comp=N,1.6nm,0.5s						
MOA	Molln	10.39	336	*i* Pn	Pn	04 30 25.8	-0.3
	comp=N,2.2nm,0.5s						

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*KRNET **20** 04:45:48.0±0.1, 40°36N×73°20E, h14^{km}, mb5.2*

*ISU **20** 04:45:48, 40°25N×73°20E, h25^{km}*

*BJI **20** 04:45:48.9±0.0, 40°48N×73°20E, h30^{km}, mB4.8/28, mb4.8/41, ML4.8/7, Ms4.5/37, Ms7 4.2/31*

*MOS **20** 04:45:48.9±2.0, 40°28N×73°43E, h16^{km}, mb5.1/59, MS4.0/20, Error ellipse: s-maj=4.1km s-min=3.1km az=84.4*

MOS Felt (V-VI) at Alga-Bas, Bek-Dzhar, Langar, Kablan-Kol', Kara-Seget, Kyzyl-Tuu, Chaichi; (V) at Osh; (IV) at Laglan, Uzgen; (III-IV) at Dzhalal-Abad.

*NEIC **20** 04:45:49.9, 40°40N×73°22E, h18^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}6.37; $M_{\theta\theta}$-1.20; $M_{\phi\phi}$-5.17; $M_{r\theta}$3.95; $M_{\theta\phi}$-4.05; $M_{\phi r}$1.55; Fault* *plane solution: M$_0$8.29000×10^{15} NP1:φ$_s$191.66000°, δ35.63000°,λ56.24000°. NP2:φ$_s$51.09000°,δ61.03000°, λ111.71000°. Principal axes: T 8.0590, Plg67.0000°, Azm2.0000°; N 0.4521, Plg19.0000°, Azm220.0000°; P -8.5111, Plg13.0000°, Azm125.0000°;*

*NEIC **20** 04:45:49.9±2.6,40°.40N±0°.05×73°.22E±0°.06,h16^{km}±4^{km}, mb4.9/86,Mwr4.5/31 Error ellipse: s-maj=7.9km s-min=6.2km az=140.0*

*IDC **20** 04:45:51.1±2.5,40°.32N×73°.30E,h32^{km}±19^{km},mb4.3/33, mb1 4.4/41,mb1mx4.3/72,mbtmp4.5/41,ML3.6/8,MS3.9/20, Ms1 3.9/20,ms1mx3.7/68,Error ellipse: s-maj=11.5km s-min=8.4km az=7.0*

*SOME **20** 04:45:53.4,40°.68N×73°.28E,h0^{km},MS4.1*

*NNC **20** 04:45:54.2±1.3,40°.65N×73°.21E,h17^{km}±7^{km},mb5.2, mpv5.0,Error ellipse: s-maj=9.9km s-min=5.5km az=1.0*

ISC 20 04:45:48.0±0.5**,40°.34N**±0°.02×**73°.37E**±0°.01**,h8**^{km}±2^{km}**, h8**^{km}**:pP-P,n583,**σ**2**^{s}**00**/641**,mb4.9**/144**,MS4.0**/34**, 73C-65D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	0.34	163	*i* PG	Pb	04 45 56.6	0.0
SFK				*i* S	Sb	04 46 03.0	+0.7
SFK	**Sufi-Kurgan**	0.34	163	*e*P	Pb	04 45 56.0	-0.6
SFK				*e*S	Sb	04 46 02.0	-0.3
SFK	**Sufi-Kurgan**	0.34	163	⇑*e*P	Pb	04 45 56.4	-0.2
	baz=46						
SFK				⇑*e*S	Sb	04 46 02.5	+0.2
	baz=46						
OHH	**Osh**	0.48	292	*e*P	Pg	04 45 56.0	-1.4
OHH				*e*S	Sg	04 46 02.0	-1.7
SALK	**Salom-Alik**	0.64	32	*i* PG	Pb	04 46 02.1	+0.5
SALK				*i* S	Sb	04 46 12.1	+1.3
SALK	**Salom-Alik**	0.64	32	⇓*e*P	Pb	04 46 01.4	-0.2
	baz=42						
SALK				⇓*e*S	Sb	04 46 10.9	+0.1
	baz=42						
ANR	**Andizhan**	0.87	299	*e*P	Pg	04 46 05.0	+0.2
ANR				*e*S	Sg	04 46 16.0	-0.2
FRG	**Fergana**	1.21	272	*e*P	Pb	04 46 10.0	-1.3
FRG				*e*S	Sg	04 46 26.0	-1.0
NAM	**Namangan**	1.45	297	*e*P	Pg	04 46 16.0	+0.1
NAM				*e*S	Sg	04 46 36.0	+1.2
DRK	**Karamyk**	1.48	235		Pn	04 46 15.1	-0.2
DRK	**Karamyk**	1.48	235	⇑*i*P	Pn	04 46 14.9	-0.4
	baz=31						
DRK				⇑*i*S	Sn	04 46 33.9	-1.2
	baz=31						
AML	**Almayashu**	1.80	8	P	Pb	04 46 22.0	+0.4
	SNR=4980						
AML	**Almayashu**	1.80	8	*e*P	Pb	04 46 22.0	+0.4
	SNR=4366						
AML	**Almayashu**	1.80	8	⇓*i*PN	Pb	04 46 22.1	+0.4
AML				*i* S	Sg	04 46 46.7	+0.6
AML	**Almayashu**	1.80	8	⇓*i*P	Pb	04 46 22.1	+0.4
	baz=12						
AML				⇓*i*S	Sg	04 46 46.7	+0.6
	baz=12						
MINT	**Mingtut**	1.83	275	*e*P	Pn	04 46 21.0	+1.1
MINT				*e*S	Sb	04 46 45.0	0.0
BTK	**Batken**	1.97	263	PN	Pn	04 46 23.0	+1.1
BTK	**Batken**	1.97	263	*e*P	Pn	04 46 23.0	+1.1
BTK				*e*S	Sb	04 46 49.0	-0.1
BTK	**Batken**	1.97	263		Pn	04 46 22.9	+1.1
BTK	**Batken**	1.97	263	⇑*e*P	Pn	04 46 22.5	+0.6
	baz=61						
BTK				⇑*i*S	Sn	04 46 47.4	+0.5
	baz=61						
TRKS	**Terek-Say**	2.06	306	⇓*i*P	Pn	04 46 22.9	-0.3
	baz=6.0						
TRKS				⇓*i*S	Sn	04 46 48.3	-1.0
	baz=6.0						
UCH	**Uchtor**	2.07	24	P	Pb	04 46 26.7	+0.6
	SNR=253						
UCH	**Uchtor**	2.07	24	⇓*e*PN	Pb	04 46 26.8	+0.6
UCH				*i* S	Sg	04 46 55.0	+0.3
UCH	**Uchtor**	2.07	24	⇓*e*P	Pb	04 46 26.8	+0.6
	baz=28						
UCH				⇓*i*S	Sg	04 46 55.0	+0.3
	baz=28						
KSH	**Kashi**	2.17	112	Pn	Pb	04 46 27.9	+0.3
KSH				Sn	Sg	04 46 57.3	-0.3
KSH				smax	smax		
	comp=N,54μm,0.8s						
KSH				smax	smax		
	comp=E,35μm,0.5s						
MNAS	**Manas**	2.24	343	⇓*i*PN	Pb	04 46 27.7	-1.2
MNAS				*i* S	Sb	04 46 56.5	-0.3
MNAS	**Manas**	2.24	343	⇓*i*P	Pb	04 46 27.7	-1.2
	baz=47						
MNAS				⇓*i*S	Sb	04 46 56.5	-0.3
	baz=47						
EKS2	**Erkin-Say**	2.34	7	P	Pb	04 46 30.1	-0.5
	SNR=262						
EKS2	**Erkin-Say**	2.34	7	*e*PN	Pb	04 46 30.0	-0.5
EKS2				*i* S	Sb	04 47 00.2	+0.6
EKS2	**Erkin-Say**	2.34	7	⇑*e*P	Pb	04 46 30.0	-0.5
	baz=11						
EKS2				⇑*i*S	Sb	04 47 00.2	+0.6
	baz=11						
MRKS	**Merke**	2.40	357	*e*P	Pb	04 46 32.9	+1.3
	537nm,0.1s						
MRKS				*e*S	Sb	04 47 02.3	+0.8
	4μm,0.2s						
MRKS	**Merke**	2.40	357	Pg	Pb	04 46 32.9	+1.3
	1μm,0.7s						
MRKS				Lg	Lg	04 47 02.3	
	4μm,0.8s						
AAK	**Ala-Archa**	2.44	20	Pn	Pb	04 46 32.1	-0.2
	68nm,0.3s,baz=202,slow=8.5,SNR=274						
AAK				Lg	Lg	04 47 05.4	
	308nm,0.3s,baz=306,slow=22,SNR=21						
AAK	**Ala-Archa**	2.44	20	P	Pb	04 46 32.2	-0.2
	SNR=880						
AAK	**Ala-Archa**	2.44	20	P	Pb	04 46 32.4	0.0
AAK	**Ala-Archa**	2.44	20	*d i*PN	Pb	04 46 31.9	-0.4
AAK	**Ala-Archa**	2.44	20	⇑Pg	Pb	04 46 33.5	+1.1
	702nm,0.6s						
AAK				⇑Lg	Lg	04 47 05.1	
	2μm,0.7s						
AAK	**Ala-Archa**	2.44	20		Pb	04 46 30.9	-1.5
AAK	**Ala-Archa**	2.44	20	⇑*e*P	Pb	04 46 32.0	-0.4
	baz=23						
AAK				⇑*i*S	Sb	04 47 03.3	+0.6
	baz=23						
KBK	**Karagaybulak**	2.60	27	P	Pb	04 46 35.0	-0.1
	SNR=110						
KBK	**Karagaybulak**	2.60	27	⇓*e*PN	Pb	04 46 34.4	-0.6
KBK				*i* S	Sb	04 47 07.7	+0.5
KBK	**Karagaybulak**	2.60	27	⇓*e*P	Pb	04 46 34.4	-0.6
	baz=29						
KBK				⇓*i*S	Sb	04 47 07.7	+0.5
	baz=29						
FRU1	**Bishkek**	2.64	21	PN	Pb	04 46 34.5	-1.2
FRU1	**Bishkek**	2.64	21		Pb	04 46 34.5	-1.2
FRU1	**Bishkek**	2.64	21	⇑*i*P	Pb	04 46 35.0	-0.7
	baz=23						
FRU1				⇑*i*S	Sb	04 47 08.3	0.0
	baz=23						
GAR	**Garm**	2.71	241		Pn	04 46 34.1	+2.0
CHMG	**Chimgan**	2.82	296	*e*P	Pb	04 46 39.0	+0.3
CHMG				*e*S	Sn	04 47 11.0	+3.2
CHMS	**Chumysh**	2.85	21	P	Pb	04 46 37.8	-1.5
	SNR=51						
CHMS	**Chumysh**	2.85	21	*e*PN	Pb	04 46 37.6	-1.6
CHMS				*i* S	Sb	04 47 13.1	-1.2
CHMS	**Chumysh**	2.85	21	⇑*e*P	Pb	04 46 37.6	-1.6
	baz=23						
CHMS				⇑*i*S	Sb	04 47 13.1	-1.2
	baz=23						
ULHL	**Ulahol**	2.88	48	P	Pb	04 46 38.2	-1.7
	SNR=70						
ULHL	**Ulahol**	2.88	48	*e*PN	Pb	04 46 38.5	-1.4
ULHL				*i* S	Sb	04 47 15.7	+0.3
ULHL	**Ulahol**	2.88	48	⇑*e*P	Pb	04 46 38.5	-1.4
	baz=50						
ULHL				⇑*i*S	Sb	04 47 15.7	+0.3
	baz=50						
BOOM	**Boomskoye usch**	2.89	41	PN	Pb	04 46 38.3	-1.7
BOOM	**Boomskoye usch**	2.89	41		Pb	04 46 38.3	-1.7
BOOM	**Boomskoye usch**	2.89	41	⇑*e*P	Pb	04 46 38.8	-1.2
	baz=43						
BOOM				⇑*i*S	Sb	04 47 15.5	0.0
	baz=43						
CHRV	**Charvak**	2.89	298	*e*P	Pn	04 46 36.0	+1.5
CHRV				*e*S	Sn	04 47 11.0	+1.4
DZA	**Taraz**	2.97	330	*e*P	Pb	04 46 42.7	+1.4
	520nm,0.1s						
DZA				*e*S	Sb	04 47 17.9	+0.2
	4μm,0.2s						
DZA	**Taraz**	2.97	330	*e*Pn	Pn	04 46 35.8	+0.2
	baz=329						
DZA				*i* Pg	Pb	04 46 42.6	+1.4
	baz=329						
DZA				*e*Lg	Lg	04 47 22.6	
	baz=329						
DZA	**Taraz**	2.97	330	*e*PN	Pn	04 46 35.7	+0.2
DZA	**Taraz**	2.97	330	Pg	Pb	04 46 42.7	+1.4
	955nm,0.4s						
DZA				Lg	Lg	04 47 17.9	
	4μm,0.4s						
USP	**Ospenovka**	3.04	16	P	Pb	04 46 39.8	-2.7
	SNR=61						
USP	**Ospenovka**	3.04	16	*e*PN	Pb	04 46 40.1	-2.4
USP	**Ospenovka**	3.04	16	⇑*e*P	Pb	04 46 40.1	-2.4
	baz=18						
USP				⇑*i*S	Sb	04 47 17.5	-2.3
	baz=18						
TKM2	**Tokmak 2**	3.07	32	P	Pb	04 46 41.0	-2.1
	SNR=140						
TKM2	**Tokmak 2**	3.07	32	*i* PN	Pb	04 46 40.7	-2.4
TKM2				pmax	pmax		
	comp=Z,391nm,0.8s						
TKM2	**Tokmak 2**	3.07	32	⇑Pn	Pb	04 46 40.7	-2.4
	comp=Z,391nm,0.8s						
TKM2				⇑Lg	Lg	04 47 26.6	
	comp=Z,854nm,0.6s						
TKM2	**Tokmak 2**	3.07	32	⇓*e*P	Pb	04 46 40.9	-2.1
	baz=34						
TKM2				⇓*i*S	Sb	04 47 19.5	-1.3
	baz=34						
TGS	**TashGRES**	3.11	292	*e*P	Pg	04 46 46.0	-1.6
TGS				*e*S	Sg	04 47 28.0	0.0
TAS	**Tashkent**	3.24	289	PN	Pn	04 46 39.3	0.0
TAS	**Tashkent**	3.24	289		Pn	04 46 39.3	0.0
TAS	**Tashkent**	3.24	289	⇑*i*P	Pn	04 46 40.0	+0.7
	baz=89						
TAS				⇑*i*S	Sn	04 47 18.1	0.0
	baz=89						
SGDS	**Sogindy**	3.25	16	*e*Pg	Pg	04 46 48.4	-1.9
	baz=19						
SGDS				*i* Lg	Lg	04 47 31.1	
	baz=19						
KST	**Kastek**	3.33	35	*e*P	Pg	04 46 51.5	-0.3
	comp=Z,343nm,0.3s						
KST				*e*S	Sg	04 47 32.9	-1.9
	comp=Z,712nm,0.2s						
KST	**Kastek**	3.33	35	Pg	Pg	04 46 51.5	-0.3
	comp=Z,598nm,0.6s						
KST				Lg	Lg	04 47 32.9	
	comp=Z,1μm,0.8s						
KDJ	**Kajisay**	3.38	57	PN	Pb	04 46 45.0	-3.4
KDJ	**Kajisay**	3.38	57		Pb	04 46 45.0	-3.4
KDJ	**Kajisay**	3.38	57	⇑*e*P	Pb	04 46 46.3	-2.1
	baz=58						
KDJ				⇑*i*S	Sb	04 47 28.5	-1.3
	baz=58						
DGS	**Degeres**	3.41	31	*e*P	Pg	04 46 53.6	+0.3
	comp=Z,675nm,0.4s						
DGS				*e*S	Sg	04 47 36.7	-0.8
	comp=Z,1μm,0.4s						
DGS	**Degeres**	3.41	31	Pg	Pg	04 46 53.6	+0.3
	comp=Z,722nm,0.7s						
DGS				Lg	Lg	04 47 36.7	
	comp=Z,1μm,0.9s						
CHM	**Chimkent**	3.46	306	*e*P	Pg	04 46 53.2	-1.1
	comp=Z,5.9nm,0.1s						
CHM				*e*S	Sg	04 47 35.9	-3.1
	comp=Z,7μm,0.2s						
KKAR	**Karatay Array**	3.49	323	PN	Pn	04 46 42.6	-0.1
KKAR	**Karatay Array**	3.49	323	Pn	Pn	04 46 42.6	-0.1
MTBS	**Maitube**	3.61	38	*e*P	Pg	04 46 57.1	0.0
	comp=Z,218nm,0.3s						
MTBS				*e*S	Sg	04 47 44.0	+0.1
	comp=Z,726nm,0.8s						
MTBS	**Maitube**	3.61	38	Pg	Pg	04 46 57.1	0.0
	comp=Z,267nm,0.7s						
MTBS				Lg	Lg	04 47 44.0	
	comp=Z,726nm,0.8s						
IZV	**Izvestkoviy**	3.63	41	*e*P	Pg	04 46 58.0	+0.4
	comp=Z,214nm,0.2s						
IZV				*e*S	Sg	04 47 44.8	+0.3
	comp=Z,1μm,0.2s						
IZV	**Izvestkoviy**	3.63	41	Pg	Pg	04 46 58.0	+0.4
IZV				Lg	Lg	04 47 44.8	
	comp=Z,1μm,0.9s						
TARG	**Taragay, Kyrgy**	3.63	66		Pn	04 46 47.2	+2.2
CHGR	**Chuyangaron**	3.67	244	Pn	Pn	04 46 46.6	+1.4
BRLS	**Borolday**	3.77	317	*e*P	Pg	04 46 58.1	-2.2
	comp=Z,22nm,0.1s						
BRLS				*e*S	Sb	04 47 44.0	+3.3
	comp=Z,335nm,0.1s						
BRLS	**Borolday**	3.77	317	*e*PN	Pb	04 46 56.2	+1.3
TNSS	**Tian-Shan**	3.80	44	*e*P	Pg	04 47 01.5	+0.7
	comp=Z,319nm,0.3s						
TNSS				*e*S	Sg	04 47 50.8	+0.7
	comp=Z,418nm,0.1s						
TNSS	**Tian-Shan**	3.80	44	*i* Pn	Pn	04 46 51.1	+3.8
	baz=47						
TNSS				*e*Pg	Pb	04 46 57.5	+1.9
	baz=47						
TNSS				*e*Lg	Lg	04 47 49.7	
	baz=47						
TNSS	**Tian-Shan**	3.80	44	Pg	Pg	04 47 01.5	+0.7
	comp=Z,317nm,0.6s						
TNSS				Lg	Lg	04 47 50.8	
	comp=Z,771nm,0.7s						
AAA	**Alma-Ata**	3.90	42	*e*P	Pg	04 47 03.6	+0.8
	comp=Z,309nm,0.3s						
AAA				*e*S	Sg	04 47 54.1	+0.7
	comp=Z,2μm,0.9s						
AAA	**Alma-Ata**	3.90	42	*e*Pn	Pn	04 46 50.1	+1.7
	baz=45						
AAA				*e*Pg	Pg	04 47 01.3	-1.5
	baz=45						
AAA				*e*Lg	Lg	04 47 53.3	
	baz=45						
AAA	**Alma-Ata**	3.90	42	*e*PN	Pn	04 46 50.1	+1.7
AAA				*e*		04 47 01.3	
AAA	**Alma-Ata**	3.90	42	Pg	Pg	04 47 03.4	+0.6
	comp=Z,309nm,0.3s						
AAA				Lg	Lg	04 47 54.0	
	comp=Z,2μm,0.9s						
KNDC	**Almaty**	3.94	42	PN	Pg	04 47 03.2	-0.2
KNDC	**Almaty**	3.94	42	⇑Pg	Pg	04 47 03.3	-0.2
	comp=Z,752nm,0.7s						
KNDC				⇓Lg	Lg	04 47 54.9	
	comp=Z,1μm,0.7s						
MDOK	**Medeo**	3.94	43	*e*P	Pg	04 47 02.6	-0.9
	comp=Z,154nm,0.3s						
MDOK				*e*S	Sg	04 47 53.9	-0.7
	comp=Z,676nm,0.3s						
MDOK	**Medeo**	3.94	43	*e*Pn	Pn	04 46 51.3	+2.3
	baz=46						
MDOK				*e*Pg	Pg	04 47 01.4	-2.1
	baz=46						
MDOK				*e*Lg	Lg	04 47 54.2	
	baz=46						
MDOK	**Medeo**	3.94	43	PN	Pn	04 46 52.7	+3.7
MDOK						04 47 08.8	
MDOK						04 47 53.8	
MDOK	**Medeo**	3.94	43	⇑Pn	Pn	04 46 52.8	+3.7
	comp=Z,169nm,0.6s						
MDOK				⇑Pg	Pg	04 47 08.8	+5.3
	comp=Z,245nm,0.6s						
MDOK				⇑Lg	Lg	04 47 53.9	
	comp=Z,829nm,0.8s						
MDOK	**Medeo**	3.94	43	Pg	Pg	04 47 02.6	-0.9
	comp=Z,178nm,0.7s						
MDOK				Lg	Lg	04 47 53.9	
	comp=Z,766nm,1.0s						
KOTS	**Kotyrbulak**	4.02	43	*e*P	Pg	04 47 05.7	+0.6
	comp=Z,278nm,0.2s						
KOTS				*e*S	Sg	04 47 57.3	+0.1
	comp=Z,2μm,0.7s						
KOTS	**Kotyrbulak**	4.02	43	Pg	Pg	04 47 05.7	+0.6
	comp=Z,401nm,0.6s						
KOTS				Lg	Lg	04 47 57.3	
	comp=Z,2μm,0.7s						
ANVS	**Anan'yevo**	4.04	51	*e*PN	Pn	04 46 54.3	+3.8
ANVS				*i* S	Sb	04 47 43.8	-5.0
ANVS	**Anan'yevo**	4.04	51	⇑*e*P	Pn	04 46 54.3	+3.8
	baz=53						
ANVS				⇑*i*S	Sb	04 47 43.8	-5.0
	baz=53						
KTBS	**Karatobe**	4.17	35	*e*P	Pg	04 47 07.6	-0.4
	comp=Z,98nm,0.2s						
KTBS				*e*S	Sg	04 48 00.5	-1.6
	comp=Z,635nm,0.4s						
KTBS	**Karatobe**	4.17	35	Pg	Pg	04 47 07.6	-0.4
	comp=Z,208nm,1.1s						
KTBS				Lg	Lg	04 48 00.5	
	comp=Z,635nm,0.4s						
KUU	**Kurty**	4.18	31	*e*P	Pg	04 47 07.3	-0.8
	comp=Z,152nm,0.3s						
KUU				*e*S	Sg	04 47 59.9	-2.3
	comp=Z,698nm,0.2s						
KUU	**Kurty**	4.18	31	*e*Pn	Pn	04 46 54.6	+2.4
	baz=33						
KUU				*e*Pg	Pg	04 47 05.4	-2.7
	baz=33						
KUU				*e*Lg	Lg	04 48 00.0	
	baz=33						
KUU	**Kurty**	4.18	31	*e*PN	Pn	04 46 54.5	+2.4
KUU				*e*		04 47 05.3	
KUU	**Kurty**	4.18	31	Pg	Pg	04 47 07.3	-0.8
	comp=Z,144nm,0.9s						
KUU				Lg	Lg	04 47 59.9	
	comp=Z,695nm,0.6s						
DZI	**Dzhizak**	4.25	269	*e*P	Pn	04 46 54.0	+0.8
DZI				*e*S	Sn	04 47 42.0	-1.0
PRZ	**Przheval'sk**	4.35	59	PN	Pn	04 46 57.8	+3.2
PRZ	**Przheval'sk**	4.35	59		Pn	04 46 57.8	+3.2
PRZ	**Przheval'sk**	4.35	59	⇑*e*P	Pn	04 46 58.9	+4.3
	baz=60						
PRZ				⇑*i*S	Sb	04 47 51.7	-5.8
	baz=60						
CHKK	**Chushkaly**	4.42	36	*e*P	Pg	04 47 11.9	-0.9
	comp=Z,62nm,0.3s						
CHKK				*e*S	Sg	04 48 08.9	-1.2
	comp=Z,435nm,0.2s						
CHKK	**Chushkaly**	4.42	36	*e*Pn	Pn	04 46 57.9	+2.4
	baz=39						
CHKK				*e*Pg	Pg	04 47 10.0	-2.8
	baz=39						
CHKK				*e*Lg	Lg	04 48 08.7	
	baz=39						
CHKK	**Chushkaly**	4.42	36	Pg	Pg	04 47 11.9	-0.9
	comp=Z,97nm,0.6s						
CHKK				Lg	Lg	04 48 08.9	
	comp=Z,593nm,0.6s						
SATY	**Saty**	4.65	53	⇑*i*Pn	Pn	04 47 01.7	+3.0
	baz=55						
SATY				*e*Pg	Pg	04 47 14.2	-2.8
	baz=55						
SATY				*e*Lg	Lg	04 48 16.5	
	baz=55						
SATY	**Saty**	4.65	53	*c i*PN	Pn	04 47 01.7	+3.0
SATY				*e*		04 47 14.1	
BTLS	**Baital**	4.72	6	*e*P	Pg	04 47 15.8	-2.7
	comp=Z,90nm,0.4s						
BTLS				*e*S	Sg	04 48 14.9	-4.8
	comp=Z,514nm,0.2s						
BTLS	**Baital**	4.72	6	*e*Pn	Pn	04 47 01.2	+1.6
	baz=7.1						
BTLS				*e*Pg	Pg	04 47 15.1	-3.4
	baz=7.1						
BTLS				*e*Lg	Lg	04 48 15.8	
	baz=7.1						
BTLS	**Baital**	4.72	6	*e*PN	Pn	04 47 01.2	+1.6
BTLS				*e*		04 47 15.0	
BTLS	**Baital**	4.72	6	Pg	Pg	04 47 15.8	-2.7
	comp=Z,97nm,1.0s						
BTLS				Lg	Lg	04 48 14.9	
	comp=Z,512nm,0.8s						
KURS	**Kuram**	4.77	47	*e*P	Pg	04 47 20.8	+1.4
	comp=Z,190nm,0.2s						
KURS				*e*S	Sg	04 48 22.9	+1.8
	comp=Z,441nm,0.3s						
KURS	**Kuram**	4.77	47	Pg	Pg	04 47 20.7	+1.4
	comp=Z,190nm,0.6s						
KURS				Lg	Lg	04 48 22.9	
	comp=Z,518nm,1.1s						
SAM	**Samarkand**	4.94	264	*e*P	Pn	04 47 06.0	+3.3
SAM				*e*S	Sn	04 47 59.0	-1.1
KPKS	**Kokpek**	5.05	50	*e*P	Pg	04 47 24.2	-0.5
	comp=Z,122nm,0.2s						
KPKS				*e*S	Sg	04 48 29.1	-0.9
	comp=Z,1μm,0.5s						
KPKS	**Kokpek**	5.05	50	⇑*i*P	Pn	04 47 07.7	+3.5
	baz=53						
KPKS				*e*Lg	Lg	04 48 29.0	
	baz=53						
KPKS	**Kokpek**	5.05	50	*c i*PN	Pn	04 47 07.6	+3.5
UZB	**Uzynbulak**	5.07	55	*e*P	Pg	04 47 24.1	-1.1
	comp=Z,132nm,0.7s						
UZB				*e*S	Sg	04 48 29.5	-1.4
	comp=Z,633nm,0.6s						
UZB	**Uzynbulak**	5.07	55	⇑*i*Pn	Pn	04 47 07.6	+3.0
	baz=57						
UZB				*e*Pg	Pb	04 47 20.3	+3.1
	baz=57						
UZB				*e*Lg	Lg	04 48 29.2	
	baz=57						
UZB	**Uzynbulak**	5.07	55	*c i*PN	Pn	04 47 07.6	+3.0
UZB				*e*		04 47 20.2	
UZB	**Uzynbulak**	5.07	55	Pg	Pg	04 47 24.1	-1.1
	comp=Z,132nm,0.7s						
UZB				Lg	Lg	04 48 29.5	
	comp=Z,633nm,0.6s						
ARXS	**Arharly**	5.09	39	*e*P	Pg	04 47 24.9	-0.6
	comp=Z,191nm,0.3s						
ARXS				*e*S	Sg	04 48 29.0	-2.4
	comp=Z,327nm,0.2s						
ARXS	**Arharly**	5.09	39	*e*PG	Pg	04 47 40.1	+15
ARXS	**Arharly**	5.09	39	Pg	Pg	04 47 24.9	-0.6
	comp=Z,190nm,0.7s						
ARXS				Lg	Lg	04 48 29.0	
	comp=Z,580nm,0.9s						
KTAB	**Kitab**	5.14	259	*e*P	Pn	04 47 08.0	+2.6
KTAB				*e*S	Sn	04 48 08.0	+3.0
BLB	**Baldybastay**	5.33	44	Pg	Pg	04 47 28.6	-1.6
	comp=Z,282nm,0.8s						
BLB				Lg	Lg	04 48 36.7	
	comp=Z,546nm,0.7s						
SHLS	**Shalkode**	5.36	56	*e*P	Pg	04 47 34.2	+3.6
	comp=Z,99nm,0.2s						
SHLS				*e*S	Sg	04 48 47.1	+7.2
	comp=Z,803nm,0.5s						
SHLS	**Shalkode**	5.36	56	*e*Pn	Pb	04 47 15.0	-7.0
	baz=60						
SHLS				*e*Pg	Pg	04 47 30.7	+0.1
	baz=60						
SHLS				*e*Lg	Lg	04 48 47.1	
	baz=60						
SHLS	**Shalkode**	5.36	56	*e*PN	Pn	04 47 14.9	+6.5
SHLS				*e*		04 47 30.6	
SHLS	**Shalkode**	5.36	56	Pg	Pg	04 47 34.2	+3.6
	comp=Z,220nm,0.6s						
SHLS				Lg	Lg	04 48 47.1	
	comp=Z,1μm,0.8s						
PDGK	**Podgornoye**	5.46	55	*i* PN	Pn	04 47 12.9	+3.0
PDGK				pmax	pmax		
	comp=Z,100nm,0.7s						
PDGK	**Podgornoye**	5.46	55	Pg	Pg	04 47 30.6	-2.0
PDGK				Lg	Lg	04 48 41.2	
PDGK	**Podgornoye**	5.46	55	⇑Pn	Pn	04 47 12.9	+3.0
	comp=Z,100nm,0.8s						
PDGK				⇑Pg	Pg	04 47 32.8	+0.2
	comp=Z,117nm,0.7s						
PDGK				⇓Lg	Lg	04 48 48.9	
	comp=Z,552nm,0.8s						
NUT	**Nurota**	5.87	275	*e*P	Pn	04 47 15.0	-0.4
NUT				*e*S	Sn	04 48 22.0	-0.9
KNOS	**Konyrlen**	5.88	45	Pg	Pg	04 47 40.6	-0.1
	comp=Z,104nm,0.7s						
KNOS				Lg	Lg	04 48 57.3	
	comp=Z,339nm,1.4s						
TDK	**Taldyqorghan**	5.96	37	*e*P	Pg	04 47 41.0	-1.1
	comp=Z,186nm,0.2s						
TDK				*e*S	Sg	04 48 58.5	-0.6
	comp=Z,981nm,1.0s						
TDK	**Taldyqorghan**	5.96	37	*e*Pn	Pn	04 47 17.1	+0.6
	baz=39						
TDK				*e*Lg	Lg	04 48 58.2	
	baz=39						
TDK	**Taldyqorghan**	5.96	37	*e*PN	Pn	04 47 17.1	+0.6

TDK	Taldyqorghan	5.96	37	Pg	Pg	04 47 41.0	-1.1
	comp=Z,305nm,0.8s						
TDK				Lg	Lg	04 48 58.5	
	comp=Z,981nm,1.0s						
KTMS	Ketmen	6.06	57	eP	Pg	04 47 43.2	-0.9
	comp=Z,110nm,0.4s						
KTMS				eS	Sg	04 49 01.6	-1.0
	comp=Z,203nm,0.3s						
KTMS	Ketmen	6.06	57	Pg	Pg	04 47 43.2	-0.9
	comp=Z,172nm,0.9s						
KTMS				Lg	Lg	04 49 01.6	
	comp=Z,204nm,0.8s						
DJR	Jarkent	6.21	48	eP	Pg	04 47 44.7	-2.2
	comp=Z,46nm,0.3s						
DJR				eS	Sg	04 49 04.2	-3.1
	comp=Z,232nm,0.4s						
DJR	Jarkent	6.21	48	Pg	Pg	04 47 44.7	-2.2
	comp=Z,54nm,0.8s						
DJR				Lg	Lg	04 49 04.2	
	comp=Z,238nm,0.9s						
CEP	Cherat	6.61	191	P	Pn	04 47 29.3	+3.6
CEP				S	Sn	04 48 46.0	+4.7
KAPS	Kapalarasan	6.62	40	eP	Pg	04 47 50.3	-4.4
	comp=Z,16nm,0.2s						
KAPS				eS	Sg	04 49 13.8	-6.5
	comp=Z,254nm,0.3s						
KAPS	Kapalarasan	6.62	40	Pg	Pg	04 47 50.3	-4.4
	comp=Z,38nm,0.8s						
KAPS				Lg	Lg	04 49 13.9	
	comp=Z,254nm,0.8s						
CHCP	Chirah Chowk	6.67	181	P	Pn	04 47 30.6	+4.2
NIL	Nilore	6.68	181	PN	Pn	04 47 30.4	+3.9
NIL	Nilore	6.68	181	Pn	Pn	04 47 30.4	+3.9
KBL	Kabul	6.74	212	PN	Pn	04 47 30.0	+2.5
KBL	Kabul	6.74	212		Pn	04 47 30.0	+2.5
TMD	Tamdy-Bulak	6.75	285	eP	Pn	04 47 26.0	-1.4
TMD				eS	Sn	04 48 39.0	-5.5
BUXR	Bukhara	6.95	268	eP	Pn	04 47 28.0	-2.2
BUXR				eS	Sn	04 48 46.0	-3.4
GZLY	Gazly	7.59	272	eP	Pn	04 47 40.0	+1.0
GZLY				eS	Sn	04 48 42.0	-23
THW	Thamme Wali	7.64	190	P	Pn	04 47 42.0	+2.2
OTUK	Ortayu	7.94	355	i P	Pn	04 47 44.3	+0.6
OTUK				pmax	pmax		
	comp=Z,12nm,0.5s						
OTUK	Ortayu	7.94	355	⇓Pn	Pn	04 47 44.3	+0.6
	comp=Z,12nm,0.5s						
OTUK				⇓Lg	Lg	04 49 56.4	
	comp=Z,196nm,0.8s						
SARP	Sargodha	8.42	184	P	Pn	04 47 51.5	+1.1
MAKZ	Makanchi	8.98	41	P	Pn	04 48 01.5	+3.4
MAKZ	Makanchi	8.98	41	⇑Pn	Pn	04 48 04.6	+6.4
	comp=Z,17nm,0.9s						
MAKZ				⇓Lg	Lg	04 50 36.2	
	comp=Z,118nm,1.2s						
MAKZ	Makanchi	8.98	41		Pn	04 48 01.5	+3.4
MK31	Makanchi Array	9.13	42	d iP	Pn	04 48 02.6	+2.4
MK31	Makanchi Array	9.13	42	⇑Pn	Pn	04 48 02.0	+1.8
	comp=Z,8.8nm,0.7s,baz=212,slow=12,SNR=28						
MK31				⇓Lg	Lg	04 50 40.2	
	comp=Z,35nm,0.7s,baz=220,slow=29,SNR=4.0						
MKAR	Makanchi Array	9.13	42	Pn	Pn	04 48 02.7	+2.5
	comp=Z,0.5nm,0.3s,baz=223,slow=14,SNR=18						
MKAR				Lg	Lg	04 50 41.0	
	comp=Z,1.5nm,0.3s,baz=237,slow=32,SNR=5.5						
MKAR				LR	LR	04 51 54.0	
	comp=Z,842nm,18.1s,baz=221,slow=40						
MKAR	Makanchi Array	9.13	42	i P	Pn	04 48 03.0	+2.8
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MKAR	Makanchi Array	9.13	42	Pn	Pn	04 48 03.4	+3.3
BRZS	Berezniki	9.65	357	eP	Pn	04 48 46.1	+39
BRZS				eS	Sn	04 50 49.7	+54
BRZS	Berezniki	9.65	357	ePn	Pn	04 48 07.7	+0.4
	baz=358						
BRZS				eLg	Lg	04 50 52.0	
	baz=358						
BRZS	Berezniki	9.65	357	eP	Pn	04 48 07.6	+0.4
BRZS	Berezniki	9.65	357	Pg	Pn	04 48 46.1	+39
BRZS				Lg	Lg	04 50 49.7	
HRA	Herat	10.66	240		Pn	04 48 19.1	-2.2
KURBB	Kurchatov Arra	10.90	18	Pn	Pn	04 48 24.5	+0.3
	comp=Z,0.4nm,0.3s,baz=206,slow=12,SNR=11						
KURBB				Lg	Lg	04 51 28.1	
	comp=Z,0.5nm,0.3s,baz=203,slow=28,SNR=14						
KURBB	Kurchatov Arra	10.90	18	P	Pn	04 48 24.2	0.0
KURBB	Kurchatov Arra	10.90	18	⇓Pn	Pn	04 48 24.2	0.0
	comp=Z,9.7nm,0.6s						
KURBB				⇓Lg	Lg	04 51 32.1	
	comp=Z,297nm,0.8s						
ZSN	Zaisan	10.91	46	eP	Pn	04 48 26.4	+1.8
	baz=47						
ZSN	Zaisan	10.91	46	eP	Pn	04 48 26.3	+1.8
ZSN	Zaisan	10.91	46	Pg	Pn	04 49 09.8	+45
ZSN				Lg	Lg	04 51 30.7	
KURK	Kurchatov	11.01	18	⇓iP	Pn	04 48 27.1	+1.4
KURK	Kurchatov	11.01	18	⇓Pn	Pn	04 48 24.7	-1.0
	comp=Z,8.3nm,1.0s						
KURK				⇓Lg	Lg	04 51 33.7	
	comp=Z,469nm,1.2s						
KURK	Kurchatov	11.01	18	Pn	Pn	04 48 26.0	+0.3
SEM	Semipalatinsk	11.16	23	eP	Pn	04 48 28.3	+0.1
	baz=24						
SEM	Semipalatinsk	11.16	23	eP	Pn	04 48 28.2	+0.1
SEM	Semipalatinsk	11.16	23	Pg	Pn	04 49 16.1	+48
SEM				Lg	Lg	04 51 41.8	
WMQ	Urumqi	11.20	67	eP	Pn	04 48 30.0	+1.5
WMQ				pP		04 48 34.3	
WMQ				sP		04 48 38.9	
WMQ				S	Sn	04 50 39.9	+6.0
WMQ				pmax	pmax		
	comp=Z,22nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,180nm,4.7s						
WMQ				LR	LR		
	comp=Z,1μm,9.1s						
WMQ				LR	LR		
	comp=Z,770nm,8.5s						
WMQ				LR	LR		
	comp=Z,380nm,18.9s						
NDI	New Delhi	12.05	164	eP	Pn	04 48 41.0	+0.8
NDI				eS	Sn	04 50 45.5	-9.3
GEYT	Alibeck	12.09	263	Pn	Pn	04 48 38.2	-2.4
	comp=Z,0.9nm,0.3s,baz=32,slow=47,SNR=3.2						
GEYT				LR	LR	04 53 59.6	
	comp=Z,399nm,20.4s,baz=65,slow=41						
GEYT	Alibeck	12.09	263		Pn	04 48 38.4	-2.3
GYA0B	ALIBECK ARRAY	12.09	263		Pn	04 48 39.7	-1.0
BVAR	Borovoye Array	12.85	352	Pn	Pn	04 48 49.5	-1.4
	comp=Z,0.6nm,0.3s,baz=191,slow=21,SNR=31						
BVAR				Lg	Lg	04 52 30.5	
	comp=Z,1.1nm,0.3s,baz=191,slow=29,SNR=2.9						
BRVK	Borovoye	12.89	352	d iP	Pn	04 48 50.1	-1.4
BRVK	Borovoye	12.89	352	⇑Pn	Pn	04 48 49.1	-2.5
	comp=Z,28nm,0.8s						
BRVK				⇑Lg	Lg	04 52 34.8	
	comp=Z,187nm,1.3s						
BRVK	Borovoye	12.89	352	Pn	Pn	04 48 50.5	-1.0
AB31	Akbulak array	13.03	318	i P	Pn	04 48 50.8	-2.6
AB31	Akbulak array	13.03	318	P	Pn	04 48 50.8	-2.6
	comp=Z,19nm,0.6s,baz=127,slow=12,SNR=311						
ABKAR	Akbulak array	13.03	318	Pn	Pn	04 48 50.5	-3.0
DGZ	Jazzator, Alta	13.63	42	ceP	Pn	04 49 05.3	+3.5
DANN	Dangsing	14.71	141	eP	Pn	04 49 13.4	-3.3
	comp=Z,108nm,0.5s						
AKTO	Aktyubinsk	14.74	318	Pn	Pn	04 49 14.2	-2.7
	comp=Z,1.1nm,0.3s,baz=133,slow=14,SNR=35						
AKTO				LR	LR	04 55 22.6	
	comp=Z,892nm,20.9s,baz=135,slow=39						
AKTO	Aktyubinsk	14.74	318	⇓P	Pn	04 49 14.1	-2.7
	comp=Z,42nm,0.8s						
AKTO				⇑S	Sn	04 52 04.2	+4.0
	comp=Z,29nm,0.8s						
GKN	Gorkha	15.42	139	eP	Pn	04 49 22.7	-3.5
	comp=Z,113nm,0.5s						
ZAA0	Zalesovo Array	15.65	26	Pn	Pn	04 49 30.2	+1.4
ZALV	Zalesovo Beam	15.65	26	Pn	Pn	04 49 28.9	+0.1
	comp=Z,1.1nm,0.3s,baz=223,slow=12,SNR=35						
ZALV	Zalesovo Beam	15.65	26	i P	Pn	04 49 30.3	+1.5
ZALV				pmax	pmax		
	comp=Z,13nm,0.7s						
ZALV	Zalesovo Beam	15.65	26	Pn	Pn	04 49 29.9	+1.1
KKN	Kakani	15.92	138	eP	Pn	04 49 29.4	-3.3
	comp=Z,84nm,0.5s						
DMN	Daman	15.98	139	eP	Pn	04 49 30.1	-3.4
	comp=Z,84nm,0.7s						
GUN	Gumba	16.14	136	eP	Pn	04 49 32.0	-3.5
	comp=Z,143nm,0.6s						
GUN	Gumba	16.14	136	eP	Pn	04 49 32.1	-3.5
	comp=Z,220nm,0.6s						
PKIN	Phulchoki	16.16	138	eP	Pn	04 49 31.7	-4.1
	comp=Z,107nm,0.6s						
PKI	Pulchoki	16.17	138	eP	Pn	04 49 32.2	-3.8
	comp=Z,114nm,0.6s						
TAPN	Taplejung	17.57	133	eP	Pn	04 49 50.9	-2.8
ODAN	Odare	17.78	135	eP	Pn	04 49 52.6	-3.6
	comp=Z,116nm,0.5s						
LSA	Lhasa	17.99	121	P	P	04 50 02.3	+2.7
LSA				S	S	04 53 27.3	+0.8
LSA				LR	LR		
	comp=Z,2μm,15.1s						
LSA				LR	LR		
	comp=Z,1μm,14.5s						
LSA	Lhasa	17.99	121	P	P	04 50 00.4	+0.8
LSA				pmax	pmax		
	comp=Z,26nm,1.0s						
LSA	Lhasa	17.99	121	P	P	04 50 00.3	+0.8
SVE	Sverdlovsk	18.47	338	eP	P	04 50 02.1	-2.0
SVE				eS	S	04 53 38.9	+3.9
SVE				pmax	pmax		
	comp=Z,20nm,0.9s						
SVE				MLR	MLR		
	comp=Z,946nm,12.0s						
ARU	Arti	18.80	334	P	P	04 50 05.8	-1.9
	comp=Z,0.0nm,0.3s,baz=161,slow=2.1,SNR=24						
ARU				LR	LR	04 57 58.4	
	comp=Z,481nm,19.6s,baz=134,slow=39						
ARU	Arti	18.80	334	c iP	Pn	04 50 08.8	+0.6
ARU				S	S	04 53 40.9	-0.7
ARU				pmax	pmax		
	comp=Z,25nm,0.8s						
ARU				MLR	MLR		
	comp=Z,511nm,11.0s						
ARU	Arti	18.80	334	P	P	04 50 07.2	-0.5
MAK	Makhachkala	19.48	286	eP	P	04 50 12.3	-3.0
MAK				eS	Sn	04 53 47.8	-7.4
MAK				pmax	pmax		
	comp=Z,427nm,1.1s						
MAK				MLR	MLR		
	comp=Z,1μm,14.0s						
SHME	Shamm	20.22	230	P	P	04 50 23.1	-0.4
SHME	Shamm	20.22	230	P	P	04 50 23.4	-0.2
BANOM	Banah	20.22	230	i P	P	04 50 22.9	-0.6
	SNR=9.7						
BANOM	Banah	20.22	230	P	P	04 50 23.0	-0.6
	SNR=9.7						
GTA	Gaotai	20.30	84	⇑P	Pn	04 50 26.4	0.0
GTA				pP	sP	04 50 35.4	+7.0
GTA				sP	pP	04 50 42.0	+15
GTA				pmax	pmax		
	comp=Z,24nm,0.9s						
GTA				pmax	pmax		
	comp=Z,99nm,7.2s						
GTA				LR	LR		
	comp=Z,320nm,12.7s						
GTA				LR	LR		
	comp=Z,500nm,13.9s						
GTA				LR	LR		
	comp=Z,530nm,12.4s						
LGD	Lagodekhi	20.47	283	P	P	04 50 27.3	+1.1
DDFL	Dedoflistskaro	20.60	282	P	Pn	04 50 31.0	+1.1
MASF	Masafi	20.73	229	P	P	04 50 29.1	0.0
	SNR=5.0						
MSFE	Esma-Masafi	20.73	229	P	P	04 50 28.7	-0.4
UOSS	Minazif	21.03	228	i P	P	04 50 31.7	-0.6
	SNR=9.4						
UOSS	Minazif	21.03	228	P	P	04 50 31.4	-0.9
UOSS	Minazif	21.03	228	P	P	04 50 30.6	-1.7
WSAR	Wadi Sarin	21.11	221	P	P	04 50 33.3	+0.1
	comp=Z,11nm,1.0s,baz=68,slow=7.1,SNR=7.7						
WSAR	Wadi Sarin	21.11	221	P	P	04 50 33.3	+0.1
HATD	Hatta, Dubai	21.16	228	i P	P	04 50 32.4	-1.3
	SNR=7.4						
HATD	Hatta, Dubai	21.16	228	P	P	04 50 33.2	-0.5
NAZ	Nazwa, Dubai	21.31	229	P	P	04 50 34.6	-0.7
NAZ	Nazwa, Dubai	21.31	229	P	P	04 50 34.9	-0.4
	SNR=7.1						
ASHO	Ashiyiah	21.31	228	i P	P	04 50 35.1	-0.3
	SNR=33						
ASHO	Ashiyiah	21.31	228	P	P	04 50 35.2	-0.3
	SNR=33						
BELG	Belogornoye	21.34	313	P	P	04 50 33.6	-1.8
	comp=Z,234nm,0.9s,baz=125,slow=3.5,SNR=23						
BELG				LR	LR	04 59 57.9	
	comp=Z,477nm,20.8s,baz=33,slow=40						
BELG	Belogornoye	21.34	313	deP	P	04 50 33.8	-1.6
BELG				pmax	pmax		
	comp=Z,50nm,0.9s						
BELG				MLR	MLR		
	comp=Z,92nm,18.0s						
SHL	Shillong	21.35	128	P	P	04 50 36.2	+0.2
SHL				pmax	pmax		
	comp=Z,54nm,0.6s						
SHL	Shillong	21.35	128	P	P	04 50 36.1	+0.2
	SNR=27						
SHL	Shillong	21.35	128	P	P	04 50 36.1	+0.2
SHL				IAmb	IAmb	04 50 39.8	
	comp=Z,54nm,0.6s						
SOHO	SOHO	21.48	226	P	P	04 50 35.1	-2.1
SOHO	SOHO	21.48	226	P	P	04 50 34.6	-2.5
HOQ	Hoqain	21.50	224	P	P	04 50 35.8	-1.6
FAQ	Al Faqa, Dubai	21.53	229	P	P	04 50 36.0	-1.7
FAQ	Al Faqa, Dubai	21.53	229	P	P	04 50 37.2	-0.5
GUDG	Gudauri	21.73	285	P	P	04 50 44.7	+4.7
POO	Poona	21.74	179	eP	P	04 50 37.0	-3.0
ASUD	Al Ashush, Dub	21.78	229	P	P	04 50 40.1	-0.3
ASUD	Al Ashush, Dub	21.78	229	P	P	04 50 41.0	+0.6
	SNR=6.5						
GNI	Garni	21.82	279	P	P	04 50 42.3	+1.4
	comp=Z,68nm,1.1s,baz=312,slow=3.2,SNR=7.7						
GNI				LR	LR	05 00 47.2	
	comp=Z,190nm,20.3s,baz=96,slow=41						
GNI	Garni	21.82	279	P	P	04 50 42.0	+1.1
GNI	Garni	21.82	279	deP	P	04 50 42.5	+1.6
GNI				pmax	pmax		
	comp=Z,195nm,1.3s						
GNI				MLR	MLR		
	comp=Z,149nm,17.0s						
GNI	Garni	21.82	279	P	P	04 50 42.7	+1.8
GNI	Garni	21.82	279	P	P	04 50 40.6	-0.3
KZRT	Kazreti	21.89	282	P	P	04 50 46.0	+4.4
ALNE	Al Ain	21.98	228	P	P	04 50 42.1	-0.4
ALNE	Al Ain	21.98	228	P	P	04 50 42.3	-0.2
	SNR=11						
AJN	Ajban	22.03	230	P	P	04 50 42.5	-0.5
AJN	Ajban	22.03	230	P	P	04 50 42.9	-0.1
JMDO	Jabal Madar	22.10	220	P	P	04 50 43.9	+0.1
ARQ	Araqi	22.12	225	P	P	04 50 44.2	+0.1
ZEI	Tsey	22.13	286	eP	P	04 50 45.8	+1.5
ZEI				pmax	pmax		
	comp=Z,18nm,1.1s						
MOY	Mondy	22.14	50	eP	P	04 50 48.6	+4.4
MOY				pmax	pmax		
	comp=Z,43nm,1.8s						
NCK	Nalchik	22.32	288	⇓iP	P	04 50 50.5	+4.4
NCK				pmax	pmax		
	comp=Z,72nm,0.6s						
NCK				MLR	MLR		
	comp=Z,724nm,16.0s						
BGD	Bogdanovka	22.51	282	P	P	04 50 55.0	+6.7
AKH	Akhalkalaki	22.57	283	P	P	04 50 50.7	+1.8
GOF	Gofitskoye	22.71	292	⇑eP	P	04 50 54.1	+3.9
GOF				eS	S	04 54 41.9	-17
GOF				pmax	pmax		
	comp=Z,92nm,1.3s						
KBZ	Khabaz	22.82	289	P	P	04 50 53.0	+1.7
	comp=Z,12nm,0.8s,baz=111,slow=9.9,SNR=15						
KBZ				LR	LR	05 01 23.2	
	comp=Z,304nm,19.9s,baz=98,slow=41						
KBZ	Khabaz	22.82	289	⇑eP	P	04 50 56.2	+4.9
KBZ				pmax	pmax		
	comp=Z,20nm,0.9s						
KBZ				MLR	MLR		
	comp=Z,501nm,16.0s						
KVAR	Kislovodsk Arr	22.96	289	LR	LR	05 02 06.5	
	comp=Z,351nm,18.5s,baz=242,slow=43						
KIV	Kislovodsk	22.97	289	i P	P	04 50 55.5	+2.6
	SNR=8.0						
KIV	Kislovodsk	22.97	289	eP	P	04 50 56.7	+3.7
KIV				eS	S	04 55 07.8	+4.3
KIV				pmax	pmax		
	comp=Z,46nm,1.1s						
KIV				MLR	MLR		
	comp=Z,197nm,14.0s						
KIV	Kislovodsk	22.97	289	P	P	04 50 55.6	+2.6
KIV	Kislovodsk	22.97	289	P	P	04 50 53.0	0.0
KIV				IAmb	IAmb	04 51 13.3	
	comp=Z,59nm,1.0s						
NEY	Neytrino	22.97	287	⇓iP	P	04 50 58.3	+5.2
NEY				pmax	pmax		
	comp=Z,9.0nm,0.8s						
NEY				MLR	MLR		
	comp=Z,180nm,16.0s						
KARS	Kars	22.99	281	P	P	04 50 59.8	+6.5
ZAK	Zakamensk	23.15	54	eP	P	04 50 54.8	0.0
ZAK				pmax	pmax		
	comp=Z,18nm,1.2s						
HYB	Hyderabad	23.28	167	i P	P	04 50 55.5	-0.8
HYB				eS	Sn	04 55 21.0	-5.8
KIRV	Kirov	23.77	328	P	P	04 51 00.9	+0.2
	comp=Z,13nm,0.7s,baz=111,slow=8.2,SNR=5.5						
KIRV				LR	LR	05 00 57.0	
	comp=Z,1μm,18.3s,baz=135,slow=38						
KIRV	Kirov	23.77	328	⇓iP	P	04 51 01.3	+0.5
SIRT	Sirnak	24.17	273	P	P	04 51 04.8	-0.2
LZH	Lanzhou	24.26	90	eP	P	04 51 07.3	+1.5
LZH				pP	sP	04 51 17.0	+7.1
LZH				pmax	pmax		
	comp=Z,17nm,1.2s						
LZH				pmax	pmax		
	comp=Z,160nm,6.5s						
LZH				LR	LR		
	comp=Z,590nm,14.6s						
LZH				LR	LR		
	comp=Z,860nm,16.8s						
LZH				LR	LR		
	comp=Z,930nm,17.3s						
VRH	Novokhopyorsk	24.41	307	eP	P	04 51 09.0	+2.1
VRH				pmax	pmax		
	comp=Z,60nm,0.7s						
SONM	Songino Array	24.73	61	P	P	04 51 10.7	+0.7
	comp=Z,13nm,0.9s,baz=267,slow=9.2,SNR=48						
SONM				LR	LR	05 01 59.5	
	comp=Z,440nm,19.1s,baz=248,slow=39						
SONM	Songino Array	24.73	61	P	P	04 51 10.7	+0.7
SONM				IAmb	IAmb	04 51 13.1	
	comp=Z,25nm,1.2s						
SOC	Sochi	25.13	289	eP	P	04 51 15.4	+1.9
SOC				eS	S	04 55 42.7	+4.3
SOC				eSS	SnSn	04 56 30.7	+3.0
SOC				MLR	MLR		
	comp=Z,278nm,16.0s						
ULN	Ulaanbaatar	25.18	61	c iP	P	04 51 14.5	+0.5
ULN				pmax	pmax		
	comp=Z,26nm,1.0s						
ULN				MLR	MLR		
	comp=Z,399nm,18.0s						
ULN	Ulaanbaatar	25.18	61	P	P	04 51 14.6	+0.5
ULN				IAmb	IAmb	04 51 17.4	
	comp=Z,20nm,0.9s						
VORD	Divnogorie	25.86	306	eP	P	04 51 18.4	-1.6
VORD				pmax	pmax		
	comp=Z,20nm,0.8s						
VSR	Storozhevoye	25.99	306	eP	P	04 51 20.2	-0.9
VSR				pmax	pmax		
	comp=Z,10.0nm,0.4s						
CD2	Chengdu	26.33	101	P	P	04 51 25.8	+1.3
CD2				pmax	pmax		
	comp=Z,50nm,1.0s						
LPSR	Galich'ya Gora	26.43	309	eP	P	04 51 24.9	-0.2
LPSR				pmax	pmax		
	comp=Z,40nm,0.8s						
MALT	Malatya	27.00	277	P	P	04 51 36.5	+5.9
PRGR	Permogore	27.18	331	eP	P	04 51 31.4	-0.3
PRGR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
DOK	Doka	27.26	223	P	P	04 51 32.5	-0.3
	SNR=7.4						
DMTO	DMTO	27.60	221	P	P	04 51 33.5	-2.3
WHFO	Wadi Hawf	28.02	223	P	P	04 51 39.1	-0.6
MOS	Moscow	28.04	315	eP	P	04 51 43.1	+3.6
MOS				e		04 52 32.1	
MOS				pmax	pmax		
	comp=Z,47nm,0.8s						
GAZ	Gaziantep	28.25	275	P	P	04 51 42.3	+0.6
GAZ				IAmb	IAmb	04 51 47.7	
	comp=Z,13nm,0.9s						
OBN	Obninsk	28.43	314	LR	LR	05 03 57.3	
	comp=Z,89nm,20.4s,baz=43,slow=38						
OBN	Obninsk	28.43	314	i P	P	04 51 46.4	+3.4
OBN				i		04 52 41.9	
OBN				i		04 54 54.7	
OBN				pmax	pmax		
	comp=Z,36nm,1.4s						
OBN				MLR	MLR		
	comp=Z,474nm,16.0s						
ABTO	Aybut	28.74	223	P	P	04 51 45.6	-0.6
RAYN	Ar Rayn	28.82	243	i P	P	04 51 46.3	-0.6
	SNR=11						
RAYN	Ar Rayn	28.82	243	P	P	04 51 46.7	-0.2
RAYN				pmax	pmax		
	comp=Z,24nm,1.2s						
RAYN	Ar Rayn	28.82	243	P	P	04 51 46.3	-0.6
RAYN	Ar Rayn	28.82	243	P	P	04 51 46.7	-0.2
RAYN				IAmb	IAmb	04 51 53.2	
	comp=Z,24nm,1.2s						
HHC	Hu-ho-hao-te	28.86	76	eP	P	04 51 48.9	+1.8
HHC				pmax	pmax		
	comp=Z,16nm,0.7s						
HHC				pmax	pmax		
	comp=Z,110nm,6.6s						
XAN	Xi'an	28.88	91	P	P	04 51 47.6	+0.3
XAN				pP	sP	04 52 00.4	+9.0
XAN				S	S	04 56 35.6	-2.2
XAN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,82nm,4.6s						
XAN				LR	LR		
	comp=Z,450nm,15.5s						
XAN				LR	LR		
	comp=Z,570nm,16.0s						
XAN				LR	LR		
	comp=Z,750nm,18.9s						
KLMR	Klimovskoe	29.19	326	eP	P	04 51 49.5	-0.1
KLMR				e		04 52 40.8	
KLMR				pmax	pmax		
	comp=Z,14nm,1.1s						
KLMR	Klimovskoe	29.19	326	eP	P	04 51 49.6	-0.1
KLMR				AMP		04 52 01.8	
	comp=Z,14nm,1.1s						
KLMR				ePP	PnPn	04 52 40.9	-1.2
KLMR				LQ	LQ	05 01 11.9	
KLMR				LQ	LQ	05 01 11.9	
KLMR				LR	LR	05 03 07.1	
NRIK	Noril'sk	30.02	10	LR	LR	05 05 41.3	
	comp=Z,205nm,21.0s,baz=184,slow=40						
NRIK	Noril'sk	30.02	10	⇓eP	P	04 51 57.4	+0.4
NRIK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
NRIK				MLR	MLR		
	comp=Z,390nm,16.0s						
NRIK	Noril'sk	30.02	10	P	P	04 51 59.6	+2.6
BR131	Keskin Array S	30.25	282	IAmb	IAmb	04 52 07.1	
	comp=Z,21nm,1.1s						
BRTR	Keskin Array B	30.25	282	P	P	04 51 59.7	+0.1
	comp=Z,6.5nm,0.8s,baz=93,slow=6.2,SNR=11						
BRTR	Keskin Array B	30.25	282	ceP	P	04 52 03.5	+3.9
BRTR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ASF	Jabal al Asfar	30.35	266	P	P	04 52 00.4	-0.1
	comp=Z,1.1nm,0.8s,baz=191,slow=21,SNR=3.4						
CHTO	Chiang Mai	30.71	127	P	P	04 52 03.8	+0.2
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CHTO	Chiang Mai	30.71	127	P	P	04 52 03.8	+0.2
GYA	Guiyang	30.86	106	⇓iP	P	04 52 06.1	+1.1
GYA				pmax	pmax		
	comp=Z,18nm,0.9s						
CM31	Chiang Mai Arr	30.98	127	P	P	04 52 06.7	+0.7
CMAR	Chiang Mai Arr	30.98	127	P	P	04 52 05.6	-0.4
	comp=Z,1.4nm,0.3s,baz=313,slow=8.5,SNR=13						
CMAR				LR	LR	05 06 58.0	
	comp=Z,82nm,20.7s,baz=342,slow=41						
CMAR	Chiang Mai Arr	30.98	127	P	P	04 52 06.2	+0.2

SLVN	Son La	32.12	117	P	P	04 52 16.8	+0.8
AKASG	Malin Array Be	32.17	304	P	P	04 52 15.1	-1.1
	comp=Z,0.5nm,0.4s,baz=78,slow=7.8,SNR=11						
AKASG				LR	LR	05 08 18.9	
	comp=Z,390nm,18.4s,baz=85,slow=42						
AKASG	Malin Array Be	32.17	304	i P	P	04 52 15.1	-1.1
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.6s						
AKBB	Malin Array Si	32.17	304	⇓eP	P	04 52 17.5	+1.3
AKBB				pmax	pmax		
	comp=Z,15nm,0.8s						
AKBB				MLR	MLR		
	comp=Z,335nm,14.0s						
AKBB	Malin Array Si	32.17	304	IAmb	IAmb	04 52 24.8	
	comp=Z,14nm,0.8s						
SORM	Soroca	32.79	299	⇑P	P	04 52 25.5	+4.0
SORM	Soroca	32.79	299	⇑P	P	04 52 25.5	+4.0
TPGR	Topolog	33.07	293	⇑P	P	04 52 24.3	+0.2
CFR	Carcaliu	33.22	294	P	P	04 52 24.7	-0.7
CFR				pmax	pmax		
	comp=Z,11nm,1.0s						
MNK	Minsk	33.25	311	i P	P	04 52 26.6	+1.1
MNK				i		04 53 37.1	
MNK				i		04 55 08.3	
MNK				i S	S	04 57 46.8	+1.2
MNK				i SS	SnSn	04 59 49.3	+4.2
MNK				i		05 02 52.9	
MNK				pmax	pmax		
	comp=N,6.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,15nm,0.8s						
MNK				pmax	pmax		
	comp=E,3.0nm,0.9s						
MNK				MLR	MLR		
	comp=N,414nm,20.0s						
MNK				MLR	MLR		
	comp=E,86nm,21.0s						
MNK				MLR	MLR		
	comp=Z,387nm,17.0s						
MNK	Minsk	33.25	311	i P	P	04 52 26.6	+1.1
	comp=E,3.0nm,0.9s						
MNK				i P	P	04 52 26.6	+1.1
	comp=N,6.0nm,0.8s						
MNK				i P	P	04 52 26.6	+1.1
	comp=Z,15nm,0.8s,baz=276						
MNK				i PP	PP	04 53 37.1	-3.3
MNK				i PPP	PPP	04 53 47.9	
MNK				i PcP	PcP	04 55 08.3	+0.6
MNK				i S	S	04 57 46.8	+1.2
MNK				i SS	SnSn	04 59 49.4	+4.3
MNK				i SSS	SSS	05 00 05.0	
MNK				i LQ	LQ	05 03 27.5	
MNK				i LR	LR	05 05 22.6	
MNK				i LRM	MLR	05 06 48.7	
	comp=N,414nm,20.2s						
MNK				i LRM	MLR	05 06 50.9	
	comp=E,86nm,21.0s						
MNK				i LRM	MLR	05 07 00.3	
	comp=Z,387nm,16.6s						
PALK	Pallekele	33.58	167	P	P	04 52 29.4	+0.7
	comp=Z,20nm,0.6s,baz=83,slow=9.6,SNR=21						
PALK				LR	LR	05 06 20.4	
	comp=Z,193nm,18.5s,baz=99,slow=37						
PALK	Pallekele	33.58	167	P	P	04 52 29.5	+0.7
PALK	Pallekele	33.58	167	P	P	04 52 29.2	+0.4
NACGM	Naroch	33.92	311	i P	P	04 52 29.6	-1.8
ELL	Elmali	33.93	278	P	P	04 52 31.9	+0.1
ELL				pmax	pmax		
	comp=Z,25nm,1.0s						
ELL	Elmali	33.93	278	P	P	04 52 31.9	+0.1
ELL				IAmb	IAmb	04 52 40.8	
	comp=Z,25nm,1.0s						
TESR	Tescani	34.08	296	⇓P	P	04 52 31.9	-1.0
VRI	Vrincioaia	34.11	295	⇓P	P	04 52 34.8	+1.6
VRI	Vrincioaia	34.11	295	⇓P	P	04 52 34.8	+1.6
PLOR	Plostina	34.17	295	⇓P	P	04 52 34.1	+0.4
PLOR	Plostina	34.17	295	⇓P	P	04 52 34.1	+0.4
NEHR	Nehoiu	34.47	294	⇑P	P	04 52 38.9	+2.6
COVR	Voineasa-Covas	34.48	295	⇓P	P	04 52 36.6	+0.2
RAZG	Razgrad	34.64	291	⇓P	P	04 52 36.9	-0.9
MLR	Muntele Rosu	34.71	295	⇑P	P	04 52 38.6	+0.2
MLR	Muntele Rosu	34.71	295	P	P	04 52 38.4	-0.1
	comp=Z,19nm,1.0s,baz=62,slow=6.6,SNR=9.9						
MLR	Muntele Rosu	34.71	295	P	P	04 52 37.9	-0.6
MLR				pmax	pmax		
	comp=Z,21nm,0.8s						
MLR	Muntele Rosu	34.71	295	P	P	04 52 37.9	-0.6
MLR				IAmb	IAmb	04 52 48.8	
	comp=Z,21nm,0.8s						
OZUR		34.73	296	⇓P	P	04 52 44.6	+6.1
BURAR	Bucovina Array	34.93	298	⇑P	P	04 52 43.1	+2.7
BURAR	Bucovina Array	34.93	298	⇑P	P	04 52 43.1	+2.7
BURAR	Bucovina Array	34.93	298	P	P	04 52 40.4	0.0
DOPR	Dopca	35.02	295	⇓P	P	04 52 41.1	0.0
VOIR		35.34	295	⇓P	P	04 52 45.5	+1.6
VOIR		35.34	295	⇓P	P	04 52 45.5	+1.6
FINES	FINESS Array B	35.45	323	P	P	04 52 43.9	-0.6
	comp=Z,2.0nm,0.4s,baz=113,slow=9.7,SNR=26						
FINES				LR	LR	05 07 50.2	
	comp=Z,396nm,19.3s,baz=104,slow=37						
FINES	FINESS Array B	35.45	323	i P	P	04 52 44.5	0.0
FINES				pmax	pmax		
	comp=Z,2.0nm,0.4s						
FINES	FINESS Array B	35.45	323	P	P	04 52 45.1	+0.6
LVV	L'vov	35.52	302	eP	P	04 52 50.0	+4.7
LVV				eS	S	04 58 25.5	+4.6
LVV				MLR	MLR		
	comp=Z,600nm,15.0s						
ARCR	ARCALIA	35.58	298	⇑P	P	04 52 51.8	+6.0
ARR	Arges	35.64	295	⇑P	P	04 52 46.2	-0.2
EZN	Ezine	35.66	285	P	P	04 52 52.3	+5.7
KWP	Kalwaria Pacla	36.40	302	P	P	04 52 54.0	+1.2
KWP				pmax	pmax		
	comp=Z,30nm,1.1s						
TRPA	Tarpa	36.66	300	⇑P	P	04 52 55.6	+0.6
TRPA	Tarpa	36.66	300	eP	P	04 52 55.6	+0.6
DRGR		36.73	297	⇓P	P	04 52 56.8	+1.0
DRGR		36.73	297	⇓P	P	04 52 56.8	+1.0
UZH	Uzhgorod	36.77	300	eP	P	04 52 59.3	+3.4
UZH				i		04 53 01.6	
UZH				e		04 53 03.9	
GZR	Gura Zlata	36.92	295	⇓P	P	04 52 59.1	+1.7
APE	Apeiranthos	37.12	281	⇓P	P	04 53 00.6	+1.4
APE	Apeiranthos	37.12	281	⇓P	P	04 53 00.6	+1.4
VTS	Vitosha	37.19	290	⇓P	P	04 53 00.0	+0.2
VTS	Vitosha	37.19	290	⇓P	P	04 53 00.0	+0.2
NJ2	Nanjing	37.29	88	eP	P	04 53 01.3	+0.7
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
SANT	Santorini	37.42	280	P	P	04 53 02.6	+0.9
SANT				IAmb	IAmb	04 53 06.4	
	comp=Z,41nm,1.5s						
BZS	Buzias	37.68	296	⇑P	P	04 53 09.9	+6.1
BZS	Buzias	37.68	296	⇑P	P	04 53 09.9	+6.1
KLNR	Kaliningrad	37.71	310	⇓eP	P	04 53 06.4	+2.5
MDVR	Moldovita	37.78	294	⇓P	P	04 53 04.7	0.0
NIE	Niedzica	37.98	302	P	P	04 53 08.4	+2.1
NIE				pmax	pmax		
	comp=Z,11nm,1.3s						
BOVS	Bovan	38.04	292	⇓P	P	04 53 06.3	-0.5
ZEA	Zeya	38.15	51	eP	P	04 53 11.8	+4.2
ZEA				e		05 03 16.4	
OJC	Ojcow	38.21	303	IAmb	IAmb	04 53 15.4	
	comp=Z,26nm,1.1s						
CN2	Changchun	38.29	67	eP	P	04 53 12.4	+3.5
CN2				eS	S	04 59 00.4	-2.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,500nm,18.0s						
CN2				LR	LR		
	comp=Z,400nm,18.0s						
CN2				LR	LR		
	comp=Z,700nm,18.0s						
ARCES	ARCESS Array B	38.37	335	P	P	04 53 09.1	-0.3
	comp=Z,4.1nm,0.5s,baz=99,slow=4.1,SNR=43						
ARCES				LR	LR	05 10 23.8	
	comp=Z,119nm,19.0s,baz=115,slow=38						
AGG	Agios Georgios	38.86	285	P	P	04 53 13.5	-0.3
AGG				pmax	pmax		
	comp=Z,11nm,1.0s						
AGG	Agios Georgios	38.86	285	P	P	04 53 13.5	-0.3
FNA	Florina	39.02	288	P	P	04 53 19.7	+4.6
FNA	Florina	39.02	288	IAmb	IAmb	04 53 21.0	
	comp=Z,26nm,1.4s						
VYHS	Vyhne	39.06	301	eP	P	04 53 20.8	+5.4
VYHS	Vyhne	39.06	301	eP	P	04 53 20.8	+5.4
DIVS	Divibare	39.13	294	IAmb	IAmb	04 53 23.7	
	comp=Z,27nm,1.0s						
MORC	Moravsky Berou	39.71	303	P	P	04 53 27.4	+6.6
YAK	Yakutsk	39.78	38	P	P	04 53 21.1	+0.1
	comp=Z,16nm,0.5s,baz=107,slow=1.5,SNR=8.0						
YAK	Yakutsk	39.78	38	d iP	P	04 53 21.3	+0.2
YAK				pmax	pmax		
	comp=Z,42nm,0.7s						
YAK				MLR	MLR		
	comp=Z,87nm,16.0s						
YAK	Yakutsk	39.78	38	P	P	04 53 21.3	+0.2
PDG	Podgorica	40.08	291	IAmb	IAmb	04 53 32.2	
	comp=Z,16nm,0.8s						
KSP	Ksiaz	40.35	305	P	P	04 53 31.6	+5.5
VRAC	Vranov	40.39	302	eP	P	04 53 27.2	+0.8
DPC	Dobruska-Polom	40.41	304	eP	P	04 53 27.2	+0.6
DPC				e		04 53 31.2	
DPC	Dobruska-Polom	40.41	304	eP	P	04 53 27.2	+0.6
DPC				epP	sP	04 53 31.2	+0.5
OSTC	Ostas	40.44	304	eP	P	04 53 27.7	+0.9
VLO	Vlora	40.48	288	P	P	04 53 26.4	-0.8
VLO				pmax	pmax		
	comp=Z,89nm,1.4s						
VLO	Vlora	40.48	288	P	P	04 53 26.4	-0.8
CHVC	Chvalec	40.54	304	eP	P	04 53 27.3	-0.4
CHVC				ex	x	04 53 32.7	
KRUC	Moravsky	40.56	302	eP	P	04 53 28.4	+0.6
CONA	Conrad Observa	41.12	300	eP	P	04 53 34.0	+1.4
	comp=Z,15nm,1.1s						
KLR	Kul'dur	41.44	58	P	P	04 53 35.0	0.0
	comp=Z,2.2nm,0.5s,baz=295,slow=7.3,SNR=10.0						
KLR				LR	LR	05 12 01.2	
	comp=Z,120nm,21.2s,baz=240,slow=38						
KLR	Kul'dur	41.44	58	⇓iP	P	04 53 35.5	+0.4
KLR				pmax	pmax		
	comp=Z,8.0nm,1.6s						
KLR				MLR	MLR		
	comp=Z,137nm,16.0s						
ARSA	Arzberg	41.48	299	eP	P	04 53 38.5	+3.0
	comp=Z,5.3nm,1.1s						
TIXI	Tiksi	41.52	23	P	P	04 53 35.8	+0.4
	comp=Z,15nm,0.9s,baz=262,slow=5.9,SNR=9.5						
TIXI	Tiksi	41.52	23	d iP	P	04 53 35.8	+0.4
TIXI				pmax	pmax		
	comp=Z,26nm,1.1s						
TIXI				MLR	MLR		
	comp=Z,183nm,15.0s						
TIXI	Tiksi	41.52	23	P	P	04 53 35.8	+0.4
TIXI				IAmb	IAmb	04 53 36.4	
	comp=Z,21nm,1.0s						
PRU	Pruhonice	41.59	304	eP	P	04 53 40.9	+4.6
PRU	Pruhonice	41.59	304	epP	P	04 53 40.9	+4.6
BRG	Berggiesshubel	41.82	305	eP	P	04 53 43.5	+5.3
BRG				Amp		04 53 45.3	
	comp=Z,9.0nm,0.9s						
KSRS	Korea Array	41.99	76	P	P	04 53 38.8	-0.9
	comp=Z,1.2nm,0.6s,baz=279,slow=9.7,SNR=5.5						
KSRS				LR	LR	05 12 58.6	
	comp=Z,153nm,18.1s,baz=292,slow=39						
MOA	Molln	42.19	301	eP	P	04 53 43.9	+2.7
	comp=Z,7.4nm,1.0s						
CLL	Collm	42.34	306	eP	P	04 53 45.0	+2.7
CLL				i		04 53 50.1	
CLL				pmax	pmax		
	comp=Z,54nm,2.0s						
CLL				MLR	MLR		
	comp=Z,500nm,18.5s						
CLL	Collm	42.34	306	eP	P	04 53 41.0	-1.3
CLL				ePmax		04 53 45.0	
	comp=Z,54nm,2.0s						
CLL				i sP	sP	04 53 50.1	+3.6
CLL				ePP	PP	04 55 24.0	+3.8
CLL				ePPPP		04 55 57.0	
CLL				LmV		05 12 00.0	
	comp=Z,500nm,18.5s						
GERES	GERESS Array B	42.35	302	P	P	04 53 42.3	-0.2
	comp=Z,1.3nm,0.5s,baz=79,slow=7.2,SNR=13						
NORES	NORESS Array B	42.36	320	P	P	04 53 43.2	+0.8
KHC	Kasperske Hory	42.37	303	eP	P	04 53 43.2	+0.5
KHC				e		04 53 47.8	
KHC	Kasperske Hory	42.37	303	eP	P	04 53 43.2	+0.5
KHC				epP	sP	04 53 47.8	+1.0
NB2	NORSAR Subarra	42.52	320	P	P	04 53 42.5	-1.2
	comp=Z,11nm,0.9s,baz=90,slow=8.6						
NOA	NORSAR Array B	42.52	320	P	P	04 53 42.6	-1.2
	comp=Z,2.1nm,0.6s,baz=90,slow=8.1,SNR=9.6						
KULM	Kulim	42.65	138	P	P	04 53 46.0	+0.8
KULM	Kulim	42.65	138	P	P	04 53 45.0	-0.2
KULM				IAmb	IAmb	04 53 46.7	
	comp=Z,41nm,1.3s						
NC204	NORSAR Array S	42.74	321	P	P	04 53 45.8	+0.3
NC204				IAmb	IAmb	04 54 05.6	
	comp=Z,13nm,1.0s						
USRK	Ussuriysk Ar.	42.76	65	LR	LR	05 12 54.6	
	comp=Z,172nm,20.6s,baz=273,slow=38						
SGRT	San Giovanni R	42.77	291	P	P	04 53 46.8	+0.6
SGRT				IAmb	IAmb	04 53 52.8	
	comp=Z,13nm,1.0s						
TIP	Timpagrande	42.89	288	P	P	04 53 46.4	-0.7
TIP				pP	sP	04 53 51.3	+0.1
TIP				IAmb	IAmb	04 53 53.0	
	comp=Z,19nm,1.2s						
IPM	Ipoh	43.53	138	P	P	04 53 53.0	+0.6
IPM	Ipoh	43.53	138	P	P	04 53 51.9	-0.5
IPM				IAmb	IAmb	04 53 53.1	
	comp=Z,26nm,1.0s						
GRF	Grafenberg Arr	43.76	304	eP	P	04 53 59.3	+5.4
	comp=Z,14nm,0.9s,baz=78,slow=6.9						
GRFO	Grafenberg	43.76	304	P	P	04 53 54.4	+0.5
GRFO				pmax	pmax		
	comp=Z,14nm,0.8s						
GRFO	Grafenberg	43.76	304	P	P	04 53 54.4	+0.5
GRFO				IAmb	IAmb	04 54 04.1	
	comp=Z,14nm,0.8s						
SPITS	Spitsbergen Ar	44.21	346	P	P	04 53 57.8	+0.7
	comp=Z,16nm,1.0s,baz=105,slow=15,SNR=2.8						
CTI	Castel Tesino	44.36	299	P	P	04 53 58.2	-0.7
CTI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
CTI	Castel Tesino	44.36	299	P	P	04 53 58.2	-0.7
GSI	Gunungsitoli	44.64	144	P	P	04 54 02.0	+0.7
RAFF	Raffo Rosso	45.37	286	P	P	04 54 07.1	+0.2
MNSI	Mandailing Nat	46.01	142	P	P	04 54 11.9	-0.2
	comp=Z,4µmcomp=Z,43nm,0.8s						
CDF	Champ du Feu	46.59	303	eP	P	04 54 23.3	+6.8
CDF				pmax	pmax		
	comp=Z,8.0nm,0.9s						
JOW	Kunigami	46.99	89	P	P	04 54 19.8	0.0
	comp=Z,10nm,0.5s,baz=337,slow=2.6,SNR=4.6						
JOW	Kunigami	46.99	89	IAmb	IAmb	04 54 20.1	
	comp=Z,13nm,0.6s						
PPI	Padang Panjang	47.49	142	P	P	04 54 23.8	+0.1
GIVF	Givet	47.67	306	eP	P	04 54 30.3	+5.5
GIVF				pmax	pmax		
	comp=Z,6.0nm,0.6s						
LPL	La Plagne	47.81	299	eP	P	04 54 29.7	+3.5
LPL				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SBF	Sospel	47.88	297	eP	P	04 54 30.9	+4.3
SBF				pmax	pmax		
	comp=Z,21nm,1.0s						
CABF	La Chapelle	47.89	301	eP	P	04 54 32.7	+6.1
CABF				pmax	pmax		
	comp=Z,31nm,1.6s						
PDSI	Padang	47.92	142	P	P	04 54 26.8	-0.3
BNI	Bardonecchia	47.99	299	P	P	04 54 27.3	-0.2
BNI				pmax	pmax		
	comp=Z,22nm,1.3s						
BNI	Bardonecchia	47.99	299	P	P	04 54 27.3	-0.2
BNI				IAmb	IAmb	04 54 33.8	
	comp=Z,22nm,1.3s						
MBDF	Montbardon	48.04	298	eP	P	04 54 30.4	+2.5
MBDF				pmax	pmax		
	comp=Z,7.0nm,0.7s						
RGRI	Rengat	48.33	140	P	P	04 54 26.7	-3.5
FRF	La Foret Royal	48.52	297	eP	P	04 54 37.8	+6.4
FRF				pmax	pmax		
	comp=Z,15nm,1.0s						
LOR	Lormes	49.13	302	eP	P	04 54 42.6	+6.5
LOR				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SMF	Signal de Mont	49.34	302	eP	P	04 54 41.6	+3.9
SMF				pmax	pmax		
	comp=Z,56nm,2.0s						
VIVF	Saint-Julien-l	49.40	299	eP	P	04 54 42.5	+4.3
VIVF				pmax	pmax		
	comp=Z,53nm,1.7s						
SSF	Saint Saulge	49.42	302	eP	P	04 54 43.6	+5.3
SSF				pmax	pmax		
	comp=Z,41nm,1.8s						
INU	Inuyama	49.55	74	P	P	04 54 39.1	-0.4
INU				IAmb	IAmb	04 54 39.8	
	comp=Z,15nm,1.0s						
MAJO	Matsushiro	49.91	72	⇑eP	P	04 54 41.0	-1.2
MAJO				MLR	MLR		
	comp=Z,98nm,16.0s						
MAT	Matsushiro	49.91	72	P	P	04 54 40.6	-1.6
MJAR	Matsushiro Arr	49.91	72	P	P	04 54 41.7	-0.5
	comp=Z,8.7nm,0.8s,baz=294,slow=7.9,SNR=14						
MJAR	Matsushiro Arr	49.91	72	P	P	04 54 42.4	+0.2
MJAR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MJAR	Matsushiro Arr	49.91	72	P	P	04 54 42.4	+0.2
LODK	Lodwar	50.25	233	P	P	04 54 44.8	-0.3
NOR	Nord	50.38	349	i P	P	04 54 45.2	+0.1
NOR				IAmb	IAmb	04 54 54.6	
	comp=Z,2.5nm,0.8s						
TCF	Toulx Ste Croi	50.52	302	eP	P	04 54 51.9	+5.2
TCF				pmax	pmax		
	comp=Z,13nm,1.2s						
MASI	Maura Aman, Be	50.71	141	P	P	04 54 46.5	-1.9
	comp=Z,103nm,0.9s						
EKA	Eskdalemuir Ar	50.88	314	P	P	04 54 47.9	-1.3
CAF	Calviac	51.11	300	eP	P	04 54 55.7	+4.5
CAF				pmax	pmax		
	comp=Z,9.0nm,1.0s						
LDF	La Druitiere	51.21	305	eP	P	04 54 58.0	+6.1
LDF				pmax	pmax		
	comp=Z,66nm,1.6s						
DAG	Danmarks Havn	51.59	343	P	P	04 54 54.3	0.0
DAG	Danmarks Havn	51.59	343	i P	P	04 54 53.9	-0.4
DAG				IAmb	IAmb	04 55 01.0	
	comp=Z,8.9nm,0.8s						
MTLF	Montolieu	51.60	298	eP	P	04 54 59.3	+4.5
MTLF				pmax	pmax		
	comp=Z,17nm,1.2s						
GRR	Gorron	51.74	305	eP	P	04 55 01.7	+5.9
GRR				pmax	pmax		
	comp=Z,36nm,1.3s						
LFF	La Frestale	51.97	301	eP	P	04 55 02.1	+4.5
LFF				pmax	pmax		
	comp=Z,20nm,1.1s						
DBG	Daneborg	52.59	340	i P	P	04 55 00.2	-1.5
DBG				IAmb	IAmb	04 55 09.6	
	comp=Z,2.9nm,0.7s						
KMBO	Kilima Mbogo	52.79	228	P	P	04 55 04.0	-0.2
	comp=Z,1.1nm,0.3s,baz=66,slow=11,SNR=4.3						
KMBO	Kilima Mbogo	52.79	228	i P	P	04 55 05.4	+1.2
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KMBO	Kilima Mbogo	52.79	228	P	P	04 55 04.0	-0.2
SGMF	Saint Gilles	52.85	306	eP	P	04 55 10.0	+6.0
SGMF				pmax	pmax		
	comp=Z,142nm,2.1s						
EPF	Esparros	52.98	299	eP	P	04 55 09.4	+4.2
EPF				pmax	pmax		
	comp=Z,11nm,1.4s						
ROSF	Rostrenen	53.27	306	eP	P	04 55 12.7	+5.6
ROSF				pmax	pmax		
	comp=Z,27nm,1.0s						
KIBK	Kibwezi	53.35	226	P	P	04 55 07.6	-0.6
ETSF	Etsaut	53.64	299	eP	P	04 55 13.4	+3.3
ETSF				pmax	pmax		
	comp=Z,44nm,2.0s						
BILL	Bilibino	54.34	28	ceP	P	04 55 16.3	+1.6
BILL				pmax	pmax		
	comp=Z,15nm,1.7s						
BILL	Bilibino	54.34	28	P	P	04 55 15.6	+0.8
BILL				IAmb	IAmb	04 55 16.2	
	comp=Z,14nm,0.9s						
ESDC	Sonseca Array	57.36	297	P	P	04 55 35.2	-1.6
	comp=Z,0.7nm,0.5s,baz=57,slow=6.9,SNR=9.5						
NEEM	North Greenlan	57.68	348	i P	P	04 55 38.3	-0.6
NEEM				IAmb	IAmb	04 55 46.0	
	comp=Z,10.0nm,0.8s						
MPSI	Mapaga	58.02	121	P	P	04 55 42.8	+1.2
SUMG	Summit	58.04	341	P	P	04 55 41.2	-0.4
SUMG				pmax	pmax		
	comp=Z,16nm,1.0s						
SUMG	Summit	58.04	341	i P	P	04 55 42.0	+0.4
SUMG				IAmb	IAmb	04 55 43.8	
	comp=Z,6.5nm,0.8s						
SUMG	Summit	58.04	341	P	P	04 55 41.2	-0.4
SUMG				IAmb	IAmb	04 55 49.4	
	comp=Z,16nm,1.0s						
MRSI	Marisa	59.27	119	P	P	04 55 51.2	+0.9
EUNU	Eureka	59.32	356	IAmb	IAmb	04 55 58.2	
	comp=Z,8.3nm,1.0s						
ICESG	Greenland Ices	60.36	338	i P	P	04 55 57.7	+0.1
ICESG				IAmb	IAmb	04 56 04.2	
	comp=Z,8.3nm,0.9s						
TTSI	Tana Toraja	60.54	124	P	P	04 56 00.0	+0.9
DY2G	Dye2	63.97	337	i P	P	04 56 20.6	-1.0
DY2G				IAmb	IAmb	04 56 27.3	
	comp=Z,6.2nm,0.9s						
VOI	Vohitsoka	66.69	207	P	P	04 56 39.1	-0.5
	SNR=7.2						
VOI	Vohitsoka	66.69	207	P	P	04 56 39.0	-0.7
TOLK	Toolik Lake Re	66.73	16	P	P	04 56 39.0	-0.3
TOLK				IAmb	IAmb	04 56 53.3	
	comp=Z,9.1nm,0.9s						
TORD	Torodi Ar. Bea	67.68	268	P	P	04 56 43.8	-2.2
	comp=Z,4.7nm,0.6s,baz=48,slow=5.4,SNR=44						
TORD	Torodi Ar. Bea	67.68	268	P	P	04 56 43.8	-2.2
TORD				IAmb	IAmb	04 56 50.8	
	comp=Z,12nm,1.1s						
COLD	Coldfoot	67.77	17	P	P	04 56 45.6	-0.3
COLD				IAmb	IAmb	04 56 46.3	
	comp=Z,7.5nm,0.9s						
IMAR	Indian Mountai	67.95	19	P	P	04 56 46.1	-0.9
BATI	Baumata	68.46	125	P	P	04 56 49.5	-1.4
	comp=Z,20nm,0.5s,baz=303,slow=2.6,SNR=3.6						
SOEI	Soe	68.49	125	P	P	04 56 50.6	-0.6
FAKI	Fak Fak	68.78	113	P	P	04 56 52.1	-0.8
LSZ	Lusaka	69.44	227	P	P	04 56 56.0	-1.1
LSZ				pmax	pmax		
	comp=Z,14nm,1.4s						
LSZ	Lusaka	69.44	227	P	P	04 56 56.0	-1.1
LSZ				IAmb	IAmb	04 57 04.9	
	comp=Z,14nm,1.4s						
INK	Inuvik	69.81	10	P	P	04 56 58.3	-0.2
	comp=Z,5.3nm,0.6s,baz=352,slow=7.3,SNR=25						
INK	Inuvik	69.81	10	P	P	04 56 58.4	-0.1
INK				IAmb	IAmb	04 57 07.2	
	comp=Z,8.0nm,0.9s						
MDM	Murphy Dome	70.11	17	IAmb	IAmb	04 57 22.4	
	comp=Z,7.3nm,1.0s						
COLA	College	70.27	17	⇑iP	P	04 57 01.0	-0.4
COLA				pmax	pmax		
	comp=Z,13nm,1.0s						
IL31		70.57	17	IAmb	IAmb	04 57 14.5	
	comp=Z,7.5nm,1.1s						
ILAR	Eielson Array	70.57	17	P	P	04 57 02.2	-1.1
	comp=Z,3.9nm,1.0s,baz=318,slow=4.6,SNR=26						
KOWA	Kowa	71.21	273	P	P	04 57 06.2	-1.7
KOWA				pP	sP	04 57 12.4	+0.2
KOWA				IAmb	IAmb	04 57 13.1	
	comp=Z,16nm,0.8s						
SCRK	Sand Creek	71.90	16	IAmb	IAmb	04 57 11.5	
	comp=Z,9.8nm,1.1s						
PAX	Paxson	72.45	17	IAmb	IAmb	04 57 15.1	
	comp=Z,17nm,1.2s						
BCAR	Beaver Creek A	73.17	16	P	P	04 57 19.3	+0.3
FITZ	Fitzroy Crossi	75.77	129	P	P	04 57 33.7	-0.9
	comp=Z,7.6nm,0.8s,baz=344,slow=4.7,SNR=14						
KNRA	Kununurra	75.82	125	P	P	04 57 34.3	-0.5
DBIC	Dimbokro	76.74	267	P	P	04 57 38.5	-1.8
	comp=Z,5.0nm,0.7s,baz=36,slow=5.6,SNR=8.8						
DBIC	Dimbokro	76.74	267	P	P	04 57 38.5	-1.8
KIC	Kosan Boka	76.85	267	ePKIKP	P	04 57 30.9	-10
	comp=Z,39nm,1.0s						
TIC	Toumodi	76.88	268	ePKIKP	P	04 57 31.4	-10
LIC	Lamto	77.16	267	ePKIKP	P	04 57 31.4	-11
	comp=Z,81nm,1.3s						
YKA	Yellowknife Ar	77.31	4	P	P	04 57 42.0	-0.7

	comp=Z,2.5nm,0.7s,baz=317,slow=7.2,SNR=9.1						
YKA	**Yellowknife Ar**	**77.31**	**4**	*ce*P	**P**	**04 57 42.0**	**-0.7**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
LBTB	**Lobatse**	**78.76**	**223**	P	**P**	**04 57 50.5**	**-0.8**
LBTB				pmax	pmax		
	comp=Z,34nm,1.2s						
LBTB	**Lobatse**	**78.76**	**223**	P	**P**	**04 57 50.5**	**-0.8**
BOSA	**Boshof**	**81.87**	**221**	P	**P**	**04 58 06.5**	**-1.5**
	comp=Z,4.8nm,0.9s,baz=21,slow=8.5,SNR=3.0						
WB0	**Warramunga Arr**	**82.42**	**124**	P	**P**	**04 58 10.1**	**-0.9**
WB0				IAmb	IAmb	04 58 10.7	
	comp=Z,11nm,0.8s						
WRA	**Warramunga Arr**	**82.51**	**124**	P	**P**	**04 58 10.1**	**-1.4**
	comp=Z,13nm,0.7s,baz=323,slow=5.0,SNR=80						
WRA	**Warramunga Arr**	**82.51**	**124**	*i* P	**P**	**04 58 10.3**	**-1.2**
WRA				pmax	pmax		
	comp=Z,13nm,0.7s						
WRAB	**Tennant Creek**	**82.51**	**124**	*c i*P	**P**	**04 58 10.1**	**-1.4**
WRAB				pmax	pmax		
	comp=Z,16nm,0.8s						
WRAB				MLR	MLR		
	comp=Z,69nm,18.0s						
WRAB	**Tennant Creek**	**82.51**	**124**	P	**P**	**04 58 10.9**	**-0.5**
WB2	**Warramunga Arr**	**82.52**	**124**	P	**P**	**04 58 10.7**	**-0.8**
WR0	**Warramunga Arr**	**82.65**	**124**	IAmb	IAmb	04 58 11.9	
	comp=Z,14nm,0.8s						
AS31	**Alice Springs**	**84.99**	**127**	P	**P**	**04 58 22.7**	**-1.4**
AS31				IAmb	IAmb	04 58 23.6	
	comp=Z,2.7nm,0.7s						
ASAR	**Alice Springs**	**84.99**	**127**	P	**P**	**04 58 22.8**	**-1.4**
	comp=Z,8.5nm,0.7s,baz=313,slow=4.9,SNR=80						
FORT	**Forrest**	**87.03**	**135**	P	**P**	**04 58 33.4**	**-0.5**
SUR	**Sutherland**	**87.16**	**222**	P	**P**	**04 58 34.3**	**-0.5**
B08A	**Colville Reser**	**90.97**	**8**	IAmb	IAmb	04 58 53.3	
	comp=Z,9.3nm,1.2s						
C09A	**Chrisman Ranch**	**91.63**	**8**	P	**P**	**04 58 55.5**	**-0.2**
C09A				IAmb	IAmb	04 59 04.7	
	comp=Z,5.2nm,0.9s						
JTMT	**Jette**	**92.03**	**5**	P	**P**	**04 58 57.1**	**-0.5**
JTMT				IAmb	IAmb	04 58 58.3	
	comp=Z,5.5nm,1.0s						
F10A	**Beach Ranch, E**	**93.55**	**7**	IAmb	IAmb	04 59 06.6	
	comp=Z,4.2nm,0.9s						
LRM	**Limekiln Ridge**	**94.06**	**4**	P	**P**	**04 59 06.5**	**-0.7**
MCMT	**McKenzie Canyo**	**95.03**	**4**	P	**P**	**04 59 11.4**	**-0.3**
BCYI	**Bear Canyon**	**95.51**	**5**	P	**P**	**04 59 13.3**	**-0.6**
PDAR	**Pinedale Array**	**97.23**	**2**	P	**P**	**04 59 21.1**	**-0.6**
	comp=Z,0.4nm,0.8s,baz=132,slow=2.2,SNR=4.0						
VNA2	**Neumayer--Watz**	**124.66**	**203**	PKPdf	**PKPdf**	**05 04 46.3**	**-0.7**
VNA3	**Neumayer Olymp**	**125.46**	**203**	PKPdf	**PKPdf**	**05 04 48.3**	**-0.3**
PLCA	**Paso Flores**	**152.69**	**257**	PKPbc	**PKPbc**	**05 05 44.3**	**-0.9**
	comp=Z,5.5nm,0.9s,baz=21,slow=1.2,SNR=9.7						

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*DJA **20** 04:46:43.9±0.5, 1°N±3°×12°8E±°, h10^{km}, M4.3/9, mb4.6/4, MLv4.2/9*

*NEIC **20** 04:46:47.7±0.9, 0°.8N±0°.1×127°.4E±0°.1, h8^{km}±8^{km}, mb4.1/7, Error ellipse: s-maj=18.4km s-min=13.1km az=209.0*

*IDC **20** 04:46:58.8±11.0, 0°.80S×127°.34E, h0^{km}, mb3.9/3, mb1 4.2/4, mb1mx3.7/56, mbtmp4.1/4, ML4.1/1, MS3.1/1, Ms1 3.1/1, ms1mx2.5/50, Error ellipse: s-maj=191.3km s-min=45.4km az=8.0*

ISC 20 04:46:47.4±0.9**, 0°.8N**±0°.1×**127°.34E**±0°.08**, h14**^{km}±6^{km}**, n24,** σ**1^{s}27**/25**, mb4.1**/6**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.03**	**99**	P	**Pg**	**04 46 49.1**	**-0.7**
TNTI				S	**Sb**	**04 46 53.2**	**+1.7**
TNTI	**Ternate**	**0.03**	**99**		**Pg**	**04 46 49.2**	**-0.6**
LBMI	**Labuha**	**1.41**	**173**	P	**Pn**	**04 47 12.8**	**0.0**
SANI	**Sanana**	**3.11**	**206**	P	**Pn**	**04 47 35.7**	**-0.5**
KMSI	**Cibinong**	**3.36**	**267**	P	**Pn**	**04 47 39.7**	**+0.1**
GTOI	**Gorontalo**	**4.33**	**268**	P	**Pn**	**04 47 54.7**	**+1.8**
MRSI	**Marisa**	**5.40**	**267**	P	**Pb**	**04 48 18.6**	**-3.1**
APSI	**Ampana**	**5.93**	**254**	P	**Pb**	**04 48 30.5**	**-0.1**
FAKI	**Fak Fak**	**6.13**	**127**	Pn	**Pn**	**04 48 17.5**	**-0.2**
TOLI2	**Tolitoli**	**6.56**	**273**	Pn	**Pn**	**04 48 25.3**	**+1.7**
TTSI	**Tana Toraja**	**8.42**	**243**	P	**Pn**	**04 48 50.1**	**+1.0**
	0.1nm26nm,0.6s						
BNSI	**Bone**	**8.87**	**234**	P	**Pn**	**04 48 56.2**	**+0.9**
	31nm,1.1s						
SPSI	**Sidrap Palu**	**8.91**	**238**	P	**Pn**	**04 48 57.7**	**+1.9**
KAPI	**Kappang**	**9.51**	**233**	Pn	**Pn**	**04 49 05.5**	**+1.4**
	2.0nm,0.3s,baz=76,slow=13,SNR=4.6						
KNRA	**Kununurra**	**16.41**	**175**	Pn	**Pn**	**04 50 37.2**	**-0.2**
KNRA				IAmb	IAmb	04 50 41.3	
	comp=Z,14nm,1.1s						
KSM	**Kuching**	**17.04**	**272**	Pn	**Pn**	**04 50 45.9**	**+0.4**
KSM				IAmb	IAmb	04 50 47.8	
	comp=Z,20nm,1.2s						
WB0	**Warramunga Arr**	**21.56**	**162**	P	**P**	**04 51 37.1**	**+0.5**
WRA	**Warramunga Arr**	**21.70**	**162**	P	**P**	**04 51 36.3**	**-1.9**
	comp=Z,3.4nm,0.7s,baz=340,slow=11,SNR=20						
WB2	**Warramunga Arr**	**21.71**	**162**	P	**P**	**04 51 38.7**	**+0.4**
WB2				IAmb	IAmb	04 51 45.0	
	comp=Z,8.8nm,0.9s						
WR0	**Warramunga Arr**	**21.78**	**161**	P	**P**	**04 51 39.3**	**+0.2**
WR0				IAmb	IAmb	04 51 46.3	
	comp=Z,8.1nm,1.0s						
AS31	**Alice Springs**	**25.12**	**166**	P	**P**	**04 52 12.3**	**+0.2**
AS31				IAmb	IAmb	04 52 33.7	
	comp=Z,8.9nm,2.0s						
ASAR	**Alice Springs**	**25.12**	**166**	P	**P**	**04 52 11.1**	**-1.1**
	comp=Z,2.9nm,0.8s,baz=343,slow=10,SNR=15						
STKA	**Stephens Creek**	**35.17**	**159**	P	**P**	**04 53 42.2**	**+1.1**
	comp=Z,1.9nm,0.6s,baz=355,slow=7.7,SNR=3.3						
STKA				LR	LR	05 09 28.7	
	comp=Z,32nm,18.1s,baz=22,slow=40						
USRK	**Ussuriysk Ar.**	**43.43**	**5**	P	**P**	**04 54 50.0**	**+0.1**

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*IDC **20** 04:49:50.6±1.9, 0°.70N×126°.96E, h0^{km}, mb4.0/4, mb1 4.2/4, mb1mx3.7/57, mbtmp4.0/4, MS3.3/1, Ms1 3.3/1, ms1mx2.5/50, Error ellipse: s-maj=155.5km s-min=25.2km az=65.0*

*DJA **20** 04:49:52.0±0.4, 1°N±3°×12°8E±°, h10^{km}, M3.8/6, mb3.9/1, MLv3.7/6*

ISC 20 04:49:51.6±1.2**, 1°.0N**±0°.1×**127°.55E**±0°.07**, h10**^{km}**, n9,** σ**0^{s}49**/10**, mb4.0**/4**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.26**	**226**	P	**Pg**	**04 49 56.7**	**-0.3**
TNTI				S	**Sg**	**04 50 00.9**	**+0.4**
LBMI	**Labuha**	**1.58**	**182**	P	**Pb**	**04 50 20.8**	**-0.2**
KMSI	**Cibinong**	**3.59**	**264**	P	**Pn**	**04 50 47.4**	**0.0**
SWI	**Sorong**	**4.12**	**116**	P	**Pn**	**04 50 55.3**	**+0.6**
GTOI	**Gorontalo**	**4.55**	**266**	P	**Pn**	**04 51 01.6**	**+0.9**
WRA	**Warramunga Arr**	**21.81**	**163**	P	**P**	**04 54 44.1**	**0.0**
	3.9nm,0.6s,baz=340,slow=11,SNR=20						
WRA				LR	LR	05 03 19.6	
	comp=Z,68nm,18.0s,baz=25,slow=37						
ASAR	**Alice Springs**	**25.24**	**166**	P	**P**	**04 55 17.7**	**-0.3**
	5.2nm,0.9s,baz=345,slow=11,SNR=23						
STKA	**Stephens Creek**	**35.26**	**159**	P	**P**	**04 56 46.7**	**0.0**
	1.6nm,0.7s,baz=325,slow=12,SNR=2.8						
MKAR	**Makanchi Array**	**60.29**	**326**	P	**P**	**05 00 00.2**	**-0.3**
	0.6nm,0.5s,baz=118,slow=7.9,SNR=4.6						

IDC 20 05:00:39.5±2.3**, 0°.81N**×**127°.42E, h0**^{km}**, mb3.5**/3**, mb1 3.7**/3**, mb1mx3.4**/54**, mbtmp3.5**/3**, Error ellipse: s-maj=165.6km s-min=28.2km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.71**	**162**	P	P	05 05 31.1	-1.3
	1.2nm,0.6s,baz=341,slow=11,SNR=12						
ASAR	**Alice Springs**	**25.13**	**166**	P	P	05 06 07.3	+0.9
	1.2nm,0.8s,baz=344,slow=9.3,SNR=11						
MKAR	**Makanchi Array**	**60.34**	**326**	P	P	05 10 50.2	-0.1
	0.3nm,0.6s,baz=112,slow=11,SNR=1.7						

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*IDC **20** 05:01:07.9±0.6, 37°.20N×137°.23E, h266^{km}±7^{km}, mb3.5/16, mb1 3.5/20, mb1mx3.3/69, mbtmp4.1/20, Error ellipse: s-maj=24.3km s-min=12.4km az=66.0*

*NIED **20** 05:01:07.6, 37°.08N×137°.16E, h265^{km}, MW4.1, Moment Tensor Solution.   s3   Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.38; M$_{\theta\theta}$1.28; M$_{\phi\phi}$-0.90; M$_{r\theta}$-0.44; M$_{\theta\phi}$-0.50; M$_{\phi r}$-0.51; Fault plane solution: M$_0$1.41000×10^{15} NP1: ϕ_s62.00000°, δ76.00000°, λ-149.00000°.   NP2: ϕ_s323.00000°, δ60.00000°, λ-16.00000°.*

*JMA **20** 05:01:07.6±0.1, 37°.08N×137°.16E, h265^{km}±1^{km}, M3.5*

ISC 20 05:01:07.7±0.7**, 37°.12N**±0°.07×**137°.13E**±0°.07**, h263**^{km}±6^{km}**, n40,** σ**0^{s}74**/50**, mb3.7**/16**, Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSZ	**Suzu**	**0.38**	**30**	P	**Pn**	**05 01 42.0**	**+0.3**
JSZ				S	**S**	**05 02 08.6**	**0.0**
JHG	**Hegura jima**	**0.75**	**347**	P	**Pn**	**05 01 43.5**	**+0.7**
MAT	**Matsushiro**	**1.04**	**123**	P	**Pn**	**05 01 44.4**	**0.0**
MAT				S	**S**	**05 02 14.3**	**+1.0**
MAT	**Matsushiro**	**1.04**	**123**	P	**Pn**	**05 01 44.4**	**0.0**
MJAR	**Matsushiro Arr**	**1.04**	**123**	P	**Pn**	**05 01 43.9**	**-0.6**
	5.4nm,0.3s,baz=300,slow=5.7,SNR=106						
MJAR				S	**S**	**05 02 15.0**	**+1.7**
	baz=309,slow=12,SNR=1.4						
JSD	**Sado**	**1.28**	**44**	P	**Pn**	**05 01 46.2**	**+0.5**
JSD				S	**S**	**05 02 15.3**	**-0.5**
JYTA	**Yamagatataniai**	**1.56**	**192**	P	**Pn**	**05 01 48.0**	**+0.3**
JYTA				S	**S**	**05 02 19.2**	**-0.1**
JRY	**Ryogami san**	**1.80**	**127**	P	**Pn**	**05 01 49.0**	**-0.7**
JNS	**Sasagawa**	**1.88**	**68**	P	**Pn**	**05 01 50.5**	**+0.3**
JYN	**Shimob**	**1.98**	**144**	P	**Pn**	**05 01 50.9**	**-0.4**
JAG	**Ashikaga**	**1.99**	**110**	P	**Pn**	**05 01 50.4**	**-0.8**
JAW	**Awa shima**	**2.15**	**51**	P	**Pn**	**05 01 53.1**	**+0.6**
JAW				*e*S	**S**	**05 02 28.3**	**+0.3**
JWT	**Wachi**	**2.30**	**218**	P	**Pn**	**05 01 53.7**	**-0.4**
JWT				S	**S**	**05 02 29.2**	**-1.6**
JOD2	**Odawara 2**	**2.44**	**139**	P	**Pn**	**05 01 55.2**	**-0.2**
JFT	**Otama**	**2.59**	**80**	P	**Pn**	**05 01 57.2**	**+0.4**
JFT				S	**S**	**05 02 36.0**	**+0.3**
JIE	**Ise**	**2.74**	**187**	P	**Pn**	**05 01 58.8**	**+0.4**
JIE				S	**S**	**05 02 38.2**	**-0.4**
JYK	**Kaneyama**	**3.12**	**54**	P	**Pn**	**05 02 02.6**	**+0.4**
JYK				*e*S	**S**	**05 02 44.9**	**-0.7**
JWY	**Kouya**	**3.15**	**204**	P	**Pn**	**05 02 02.9**	**+0.1**
JOI	**OKI**	**3.22**	**256**	P	**Pn**	**05 02 03.6**	**+0.2**
KSRS	**Korea Array**	**7.34**	**275**	P	**Pn**	**05 02 54.2**	**+1.5**
	0.8nm,0.3s,baz=93,slow=13,SNR=24						
USRK	**Ussuriysk Ar.**	**8.08**	**333**	P	**Pn**	**05 03 03.2**	**+1.3**
	baz=149,slow=13,SNR=5.2						
ASAJ	**Asahikawa**	**8.13**	**29**	P	**Pn**	**05 03 00.8**	**-1.8**
	9.3nm,0.3s,baz=235,slow=10,SNR=20						
KLR	**Kul'dur**	**12.72**	**344**	P	**Pn**	**05 03 58.6**	**-1.0**
	0.4nm,0.3s,baz=165,slow=7.5,SNR=8.1						
SONM	**Songino Array**	**24.91**	**305**	P	**P**	**05 06 05.9**	**-1.1**
	1.7nm,0.7s,baz=113,slow=8.3,SNR=7.4						
ZALV	**Zalesovo Beam**	**39.32**	**312**	P	**P**	**05 08 11.0**	**-0.4**
	0.8nm,0.4s,baz=74,slow=6.3,SNR=4.4						
MKAR	**Makanchi Array**	**41.16**	**301**	P	**P**	**05 08 26.3**	**-0.2**
	1.4nm,0.5s,baz=84,slow=10,SNR=14						
AAK	**Ala-Archa**	**47.41**	**297**	P	**P**	**05 09 16.5**	**+0.4**
	4.7nm,0.9s,baz=77,slow=5.9,SNR=11						
BVAR	**Borovoye Array**	**47.97**	**312**	P	**P**	**05 09 19.6**	**-0.4**
	1.3nm,0.5s,baz=169,slow=8.9,SNR=9.2						
ARU	**Arti**	**54.01**	**318**	P	**P**	**05 10 04.7**	**0.0**
	0.9nm,0.3s,baz=81,slow=3.2,SNR=4.7						
AKTO	**Aktyubinsk**	**56.05**	**311**	P	**P**	**05 10 19.8**	**+0.5**
	2.5nm,0.7s,baz=80,slow=18,SNR=7.3						
WRA	**Warramunga Arr**	**56.81**	**183**	P	**P**	**05 10 24.9**	**-0.1**
	0.7nm,0.5s,baz=357,slow=7.7,SNR=11						
ASAR	**Alice Springs**	**60.54**	**183**	P	**P**	**05 10 51.5**	**+0.9**
	0.4nm,0.8s,baz=15,slow=12,SNR=4.1						
FINES	**FINESS Array B**	**67.11**	**331**	P	**P**	**05 11 32.7**	**0.0**
	2.7nm,0.7s,baz=57,slow=7.0,SNR=6.2						
KBZ	**Khabaz**	**68.21**	**309**	P	**P**	**05 11 39.9**	**0.0**
	3.3nm,0.8s,baz=161,slow=3.8,SNR=5.3						
AKASG	**Malin Array Be**	**72.09**	**321**	P	**P**	**05 12 02.9**	**-0.3**
	2.6nm,0.5s,baz=47,slow=6.5,SNR=6.4						
NB2	**NORSAR Subarra**	**72.74**	**336**	P	**P**	**05 12 07.2**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=42,slow=5.9						
NOA	**NORSAR Array B**	**72.74**	**336**	P	**P**	**05 12 05.8**	**-1.1**
	comp=Z,1.0nm,0.7s,baz=40,slow=5.7,SNR=4.1						
BRTR	**Keskin Array B**	**76.19**	**309**	P	**P**	**05 12 27.7**	**+0.4**
	comp=Z,1.6nm,0.9s,baz=96,slow=4.2,SNR=7.3						
ASF	**Jabal al Asfar**	**78.58**	**302**	P	**P**	**05 12 41.7**	**+1.2**
	comp=Z,2.2nm,0.8s,baz=36,slow=5.9,SNR=4.2						
GERES	**GERESS Array B**	**80.78**	**326**	P	**P**	**05 12 52.5**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=71,slow=6.1,SNR=4.2						

IDC 20 05:03:05.9±6.1**, 31°.81S**×**178°.34W, h0**^{km}**, mb4.0**/2**, mb1 4.2**/2**, mb1mx3.7**/27**, mbtmp4.0**/2**, Error ellipse: s-maj=252.4km s-min=59.3km az=158.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**42.76**	**269**	P	P	05 11 05.0	-0.3
	0.9nm,0.5s,baz=108,slow=7.8,SNR=11						
WRA	**Warramunga Arr**	**43.88**	**274**	P	P	05 11 14.3	0.0
	1.3nm,0.4s,baz=115,slow=7.5,SNR=19						
FINES	**FINESS Array B**	**146.36**	**339**	PKPbc	PKPdf	05 22 47.1	+0.4
	0.9nm,0.4s,baz=45,slow=4.3,SNR=4.3						

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*PRU **20** 05:09:44.1±0.0, 51°.49N×16°.09E, h0^{km}*

ISC 20 05:09:43.0±2.9**, 51°.5N**±0°.1×**16°.08E**±0°.07**, h0**^{km}**, n10,** σ**0^{s}76**/16**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.69**	**169**	*e*Pg	**Pg**	**05 09 56.3**	**+0.1**
KSP				*e*Sg	**Sg**	**05 10 05.7**	**+0.5**
CHVC	**Chvalec**	**0.93**	**181**	*e*PG	**Pg**	**05 10 01.3**	**+0.5**
CHVC				*e*SG	**Sg**	**05 10 13.6**	**+0.7**
OSTC	**Ostas**	**0.97**	**175**	*e*PG	**Pg**	**05 10 01.5**	**0.0**
OSTC				*e*SG	**Sg**	**05 10 14.7**	**+0.7**
	comp=Z,4.5nm,0.2s						
UPC	**Upice**	**1.01**	**182**	*e*SG	**Sg**	**05 10 15.8**	**+0.3**
	comp=Z,4.5nm,0.2s						
DPC	**Dobruska-Polom**	**1.18**	**172**	*e*PG	**Pg**	**05 10 05.1**	**-0.5**
DPC				*e*SG	**Sg**	**05 10 19.5**	**-1.4**
PVCC	**Panska Ves**	**1.38**	**224**	*e*PG	**Pg**	**05 10 08.8**	**-0.6**
PVCC				*e*SG	**Sg**	**05 10 27.8**	**+0.6**
	comp=Z,13nm,0.2s						
BRG	**Berggiesshubel**	**1.49**	**245**	Pg	**Pn**	**05 10 11.0**	**0.0**
BRG				Sg	**Sg**	**05 10 30.8**	**-0.1**
BRG				Amp		05 10 31.4	
	comp=Z,3.4nm,0.4s						
BRG				Amp		05 14 01.0	
	comp=E,0.4nm,17.8s						
BRG				Amp		05 14 05.0	
	comp=Z,0.7nm,19.3s						
BRG				Amp		05 14 20.0	
	comp=N,0.2nm,18.1s						
PRU	**Pruhonice**	**1.82**	**213**	*e*SG	**Sb**	**05 10 40.5**	**+0.1**
NKC	**Novy Kostel**	**2.64**	**242**	*e*SG	**Sg**	**05 11 08.9**	**+1.3**
KHC	**Kasperske Hory**	**2.88**	**215**	*e*SG	**Sg**	**05 11 14.2**	**-1.2**

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*ATH **20** 05:11:48.2, 35°.37N×22°.58E, h12^{km}±3^{km}, ML2.8/3, Error ellipse: s-maj=6.0km s-min=2.1km az=71.0*

*THE **20** 05:11:51.0, 35°.50N×22°.70E, h12^{km}±9^{km}, ML2.8/3, Error ellipse: s-maj=9.4km s-min=1.8km az=60.0*

ISC 20 05:11:48.9±2.6**, 35°.44N**±0°.07×**22°.6E**±0°.1**, h11**^{km}±12^{km}**, n16,** σ**0^{s}44**/21**, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANKY	**Antikythira Is**	**0.69**	**51**	P	**Pb**	**05 12 02.9**	**0.0**
ANKY				S	**Sb**	**05 12 11.6**	**-0.8**
	860nm,0.4s						
ANKY	**Antikythira Is**	**0.69**	**51**	P	**Pb**	**05 12 02.8**	**0.0**
ANKY				S	**Sb**	**05 12 12.9**	**+0.5**
ANKY				AML	AML	05 12 14.2	
	comp=E,1444µm,0.5s						
ANKY				AML	AML	05 12 15.2	
	comp=N,2054µm,0.4s						
KTHR	**Kythira**	**0.87**	**20**	P	**Pg**	**05 12 05.5**	**-0.3**
KTHR				S	**Sb**	**05 12 18.6**	**+0.8**
	comp=N,840nm,0.4s						
KNDR	**Palaiochora Ch**	**0.88**	**103**	P	**Pg**	**05 12 06.2**	**+0.4**
KTHA	**Kythira Island**	**0.89**	**23**	P	**Pg**	**05 12 05.9**	**-0.1**
KTHA				S	**Sg**	**05 12 17.3**	**-0.3**
	comp=N,840nm,0.5s						
KTHA	**Kythira Island**	**0.89**	**23**	P	**Pg**	**05 12 05.9**	**-0.1**
KTHA				S	**Sn**	**05 12 19.9**	**-0.3**
KTHA				AML	AML	05 12 21.3	
	comp=E,2436µm,0.6s						
KTHA				AML	AML	05 12 25.2	
	comp=N,985µm,0.5s						
IMMV	**Iera Moni Meta**	**1.09**	**88**	P	**Pb**	**05 12 10.3**	**+0.5**
IMMV	**Iera Moni Meta**	**1.09**	**88**	P	**Pg**	**05 12 09.9**	**0.0**
IMMV				AML	AML	05 12 29.1	
	comp=E,791µm,0.5s						
IMMV				AML	AML	05 12 30.3	
	comp=N,810µm,0.5s						
VAM	**Vamos**	**1.27**	**91**	P	**Pn**	**05 12 12.7**	**+0.1**
VAM	**Vamos**	**1.27**	**91**	P	**Pn**	**05 12 12.3**	**-0.4**
MNVA	**Monemvasia**	**1.29**	**14**	P	**Pn**	**05 12 13.4**	**+0.6**
VLI	**Veliai**	**1.30**	**10**	P	**Pn**	**05 12 12.8**	**-0.2**
GVD	**Gavdhos**	**1.33**	**116**	P	**Pn**	**05 12 12.9**	**-0.5**
GVD	**Gavdhos**	**1.33**	**116**	P	**Pn**	**05 12 12.8**	**-0.6**
IDI	**Anoyia**	**1.84**	**94**	P	**Pn**	**05 12 20.6**	**+0.1**
IDI	**Anoyia**	**1.84**	**94**	P	**Pn**	**05 12 20.6**	**+0.1**

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*HLW **20** 05:12:14.5, 38°.64N×20°.14E, h9^{km}±18^{km}, Md5.3, Ml5.3*

*BGR **20** 05:12:18.7±1.5, 38°.35N×21°.51E, h10^{km}, Error ellipse: s-maj=84.5km s-min=20.0km az=46.0*

*BEO **20** 05:12:21.4±0.9, 38°.33N×20°.22E, h0^{km}, ML4.8/16*

*TIR **20** 05:12:22.4, 38°.73N×21°.30E, h9^{km}±2^{km}, Md4.9, Ml5.0*

*IDC **20** 05:12:22.7±0.4, 38°.60N×20°.47E, h0^{km}, mb4.6/35, mb1 4.6/49, mb1mx4.5/70, mbtmp4.5/49, ML4.3/13, MS4.2/21, Ms1 4.2/21, ms1mx4.0/76, Error ellipse: s-maj=10.2km s-min=8.5km az=103.0*

*MOS **20** 05:12:23.0±1.3, 38°.57N×20°.35E, h12^{km}, mb5.0/25, MS4.3/13, Error ellipse: s-maj=3.8km s-min=2.2km az=87.6*

*GCMT **20** 05:12:23.8±0.3, 38°.31N±0°.02×20°.50E±0°.02, h24^{km}±1^{km}, MW5.0/92, Moment Tensor Solution.   s33,c39;   s92,c139;   Duration: 0   Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.36±.16; M$_{\theta\theta}$3.76±.15; M$_{\phi\phi}$-3.40±.12; M$_{r\theta}$0.21±.18; M$_{\theta\phi}$1.32±.11; M$_{\phi r}$-0.02±.19;   Best double couple: M$_0$3.82100×10^{16} NP1:ϕ_s35.00000°, δ87.00000°, λ179.00000°.   NP2: ϕ_s125.00000°, δ89.00000°, λ3.00000°.   Principal axes: T 4.0050, Plg3.0000°, Azm350.0000°; N -0.3700, Plg87.0000°, Azm149.0000°; P -3.6370, Plg1.0000°, Azm260.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*PDG **20** 05:12:24.1±0.8, 38°.51N×20°.40E, h11^{km}±1^{km}, MD4.9/2, ML4.9/11 Error ellipse: s-maj=0.7km s-min=0.6km az=90.0*

*MED_RC **20** 05:12:24.0±0.2, 38°.51N×20°.37E, h23^{km}, MW5.0/37, Moment Tensor Solution.   Body waves: s5,c5;Mantle waves: s37,c67;   Duration: 1^{s}2   Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.52±.14; M$_{\theta\theta}$3.52±.12; M$_{\phi\phi}$-3.00±.10; M$_{r\theta}$0.24±.14; M$_{\theta\phi}$1.84±.08; M$_{\phi r}$-0.28±.14;   Best double couple: M$_0$3.76000×10^{16} NP1:ϕ_s30.00000°, δ84.00000°, λ-177.00000°.   NP2:ϕ_s300.00000°, δ87.00000°, λ-6.00000°.   Principal axes: T 4.0100, Plg2.0000°, Azm345.0000°; N -0.4900, Plg83.0000°, Azm92.0000°; P -3.5200, Plg6.0000°, Azm255.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=35s.*

*ATH **20** 05:12:24.9, 38°.47N×20°.49E, h12^{km}±1^{km}, ML4.8/13 Error ellipse: s-maj=1.6km s-min=0.6km az=280.0*

*THE **20** 05:12:24.3, 38°.47N×20°.44E, h14^{km}, ML4.9/7, Error ellipse: s-maj=1.1km s-min=0.3km az=285.0*

*UPSL **20** 05:12:24.9, 38°.47N×20°.49E, h12^{km}, Mw4.7, Moment Tensor Solution.   s6   Moment tensor: M$_{rr}$0.01; M$_{\theta\theta}$1.33; M$_{\phi\phi}$-1.34; M$_{r\theta}$0.48; M$_{\theta\phi}$0.64; M$_{\phi r}$-0.16; Fault plane solution: NP1:ϕ_s32.00000°, δ72.00000°, λ176.00000°. NP2:ϕ_s123.00000°, δ86.00000°, λ18.00000°.*

*NEIC **20** 05:12:25.4±2.3, 38°.54N±0°.05×20°.39E±0°.06, h14^{km}±2^{km} Error ellipse: s-maj=7.6km s-min=7.2km az=150.0*

ISC 20 05:12:24.6±0.7**, 38°.48N**±0°.01×**20°.44E**±0°.02**, h14**^{km}±4^{km}**, n846,** σ**1^{s}75**/912**, mb4.7**/102**, MS4.1**/11**, 112C-120D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FSK	**Fiskardo**	**0.10**	**103**	P	**Pg**	**05 12 27.1**	**-0.7**
FSK	**Fiskardo**	**0.10**	**103**	P	**Pg**	**05 12 27.1**	**-0.7**
FSK				S	**Sg**	**05 12 28.7**	**-1.2**
EVGI	**Lefkada island**	**0.22**	**50**	P	**Pg**	**05 12 29.1**	**-0.4**
EVGI				S	**Sg**	**05 12 32.4**	**-0.5**
	569µm,0.4s						
EVGI	**Lefkada island**	**0.22**	**50**	P	**Pg**	**05 12 29.2**	**-0.3**
EVGI				S	**Sg**	**05 12 32.6**	**-0.3**
KEF4	**Livadi, Kephal**	**0.22**	**183**	P	**Pg**	**05 12 29.1**	**-0.5**
KEF4	**Livadi, Kephal**	**0.22**	**183**	P	**Pg**	**05 12 29.3**	**-0.3**
KEF4				S	**Sg**	**05 12 33.3**	**+0.4**
DRAG	**Dragano-Lefkad**	**0.23**	**27**	P	**Pg**	**05 12 29.4**	**-0.3**
DRAG				S	**Sg**	**05 12 33.5**	**+0.3**
	2063µm,0.4s						
DRAG	**Dragano-Lefkad**	**0.23**	**27**	P	**Pg**	**05 12 29.7**	**0.0**
DRAG				S	**Sg**	**05 12 33.4**	**+0.3**
DMLN	**Damoulianata-K**	**0.25**	**192**	P	**Pg**	**05 12 29.5**	**-0.5**
DMLN				S	**Sg**	**05 12 33.7**	**0.0**
DMLN	**Damoulianata-K**	**0.25**	**192**	P	**Pg**	**05 12 30.2**	**+0.2**
DMLN				S	**Sg**	**05 12 33.6**	**-0.1**
LXRA	**Lixouri, Kepha**	**0.28**	**181**	P	**Pg**	**05 12 30.1**	**-0.4**
LXRA				S	**Sg**	**05 12 35.3**	**+0.7**
KEF3	**Kipouria, Keph**	**0.29**	**195**	P	**Pg**	**05 12 29.9**	**-0.8**
KEF3				S	**Sg**	**05 12 34.5**	**-0.3**
KEF3	**Kipouria, Keph**	**0.29**	**195**	P	**Pg**	**05 12 30.1**	**-0.6**
KEF3				S	**Sg**	**05 12 34.4**	**-0.4**
ARGA	**Argostoli. Kep**	**0.31**	**174**	P	**Pg**	**05 12 31.4**	**+0.4**
ARGA				S	**Sb**	**05 12 36.5**	**-0.2**
NYDR	**Nydri-Lefkada**	**0.31**	**41**	P	**Pg**	**05 12 30.6**	**-0.4**
NYDR				S	**Sg**	**05 12 35.4**	**0.0**
	446µm,0.6s						
NYDR	**Nydri-Lefkada**	**0.31**	**41**	P	**Pg**	**05 12 30.4**	**-0.6**
NYDR				S	**Sg**	**05 12 35.4**	**0.0**
VLS	**Valsamata**	**0.33**	**159**	P	**Pg**	**05 12 30.5**	**-0.9**
VLS				S	**Sg**	**05 12 35.6**	**-0.3**
	548µm,0.4s						
VLS	**Valsamata**	**0.33**	**159**	P	**Pg**	**05 12 30.9**	**-0.4**
VLS				S	**Sg**	**05 12 35.4**	**-0.5**
VLS				AML	AML	05 12 36.4	
VLS				AML	AML	05 12 37.3	
VLS	**Valsamata**	**0.33**	**159**	P	**Pg**	**05 12 30.9**	**-0.4**
VLS				S	**Sg**	**05 12 35.8**	**-0.1**
VLS	**Valsamata**	**0.33**	**159**	P	**Pg**	**05 12 30.7**	**-0.7**
VLS				S	**Sg**	**05 12 35.8**	**-0.1**
VLS				AML	AML		
VLS				AML	AML		
LKD2	**Lefkada island**	**0.35**	**29**	P	**Pg**	**05 12 31.2**	**-0.6**
LKD2				S	**Sg**	**05 12 37.1**	**+0.4**
	172µm,0.7s						
LKD2	**Lefkada island**	**0.35**	**29**	P	**Pg**	**05 12 31.5**	**-0.4**
LKD2				S	**Sg**	**05 12 36.8**	**0.0**
LKD2				AML	AML	05 12 37.5	
LKD2				AML	AML	05 12 39.9	
TSLK	**Tsoukalades, L**	**0.38**	**26**	P	**Pg**	**05 12 32.0**	**-0.3**
TSLK				S	**Sb**	**05 12 38.4**	**-0.5**
	204µm,0.8s						
TSLK	**Tsoukalades, L**	**0.38**	**26**	P	**Pg**	**05 12 32.1**	**-0.3**
TSLK				S	**Sg**	**05 12 38.1**	**+0.5**
PSDA	**Pessada-Kefalo**	**0.38**	**163**	P	**Pg**	**05 12 31.6**	**-0.8**
PSDA				S	**Sg**	**05 12 37.3**	**-0.3**
PSDA	**Pessada-Kefalo**	**0.38**	**163**	P	**Pg**	**05 12 31.8**	**-0.6**
PSDA				S	**Sg**	**05 12 37.3**	**-0.3**
ZAK2	**Zakynthos**	**0.78**	**152**	P	**Pg**	**05 12 39.3**	**-0.5**
LTHK	**Lithakia**	**0.83**	**158**	P	**Pg**	**05 12 39.0**	**-1.8**
LTHK	**Lithakia**	**0.83**	**158**	P	**Pg**	**05 12 39.3**	**-1.4**
LTHK				AML	AML	05 12 58.1	
LTHK				AML	AML	05 12 59.2	
PVO	**Paravola**	**0.86**	**81**	P	**Pb**	**05 12 40.4**	**-0.9**
PVO				S	**Sn**	**05 12 54.2**	**-0.4**
	85µm,0.4s						
PVO	**Paravola**	**0.86**	**81**	P	**Pb**	**05 12 40.6**	**-0.8**
PVO				AML	AML	05 13 01.0	
PVO				AML	AML	05 13 01.5	
RLS	**Riolos of Patr**	**0.91**	**117**	P	**Pb**	**05 12 40.9**	**-1.3**
RLS	**Riolos of Patr**	**0.91**	**117**	P	**Pb**	**05 12 41.5**	**-0.7**
RLS				AML	AML	05 12 59.1	
RLS				AML	AML	05 12 59.2	
	comp=E,93419µm,0.6s						
IGT	**Igoumenitsa**	**1.05**	**355**	P	**Pb**	**05 12 44.2**	**-0.4**
IGT	**Igoumenitsa**	**1.05**	**355**	P	**Pb**	**05 12 44.7**	**+0.1**

IGT				AML	AML	05 13 05.1	
	comp=E,50808µm,1.0s						
IGT				AML	AML	05 13 07.4	
	comp=N,27733µm,0.4s						
IGT	**Igoumenitsa**	**1.05**	**355**	P	**Pb**	**05 12 44.2**	**-0.4**
IGT	**Igoumenitsa**	**1.05**	**355**	P	**Pb**	**05 12 44.5**	**-0.1**
	baz=317						
IGT				S	**Sn**	**05 13 01.1**	**+1.7**
	baz=317						
DRO	**Drossia**	**1.13**	**117**	P	**Pb**	**05 12 44.8**	**-1.1**
DRO	**Drossia**	**1.13**	**117**	P	**Pb**	**05 12 45.0**	**-1.0**
DRO				AML	AML	05 13 09.1	
DRO				AML	AML	05 13 10.7	
EFP	**Efpalio**	**1.15**	**92**	P	**Pn**	**05 12 44.7**	**-1.6**
EFP	**Efpalio**	**1.15**	**92**	P	**Pn**	**05 12 45.0**	**-1.3**
EFP				AML	AML	05 13 07.8	
EFP				AML	AML	05 13 08.1	
EVR	**Evrytania**	**1.16**	**67**	P	**Pb**	**05 12 45.3**	**-1.1**
ANX	**Ano Chora**	**1.17**	**84**	P	**Pn**	**05 12 45.2**	**-1.4**
JAN	**Janina**	**1.22**	**15**	P	**Pn**	**05 12 46.9**	**-0.3**
JAN	**Janina**	**1.22**	**15**	P	**Pn**	**05 12 46.9**	**-0.3**
LAKA	**Lakka**	**1.23**	**101**	P	**Pn**	**05 12 46.1**	**-1.3**
TRIZ	**Trizonia**	**1.29**	**95**	P	**Pn**	**05 12 47.0**	**-1.1**
KEK	**Kerkira**	**1.33**	**338**	P	**Pb**	**05 12 49.0**	**-0.3**
KEK	**Kerkira**	**1.33**	**338**	P	**Pb**	**05 12 49.6**	**+0.3**
KEK				AML	AML	05 13 15.6	
	comp=E,49054µm,0.8s						
KEK				AML	AML	05 13 19.6	
	comp=N,20608µm,0.6s						
KEK	**Kerkira**	**1.33**	**338**	⇑P	**Pn**	**05 12 48.3**	**-0.4**
KEK				S	**Sg**	**05 13 07.2**	**-0.3**
KEK				AML	AML		
	comp=N,3070µm,1.6s						
KEK				AML	AML		
	comp=E,6245µm,0.8s						
KLV	**Kalavryta, Ach**	**1.42**	**107**	P	**Pn**	**05 12 49.1**	**-0.9**
KLV	**Kalavryta, Ach**	**1.42**	**107**	P	**Pb**	**05 12 50.9**	**+0.1**
KLV				AML	AML	05 13 21.1	
	comp=E,41079µm,0.8s						
KLV				AML	AML	05 13 21.9	
	comp=N,34241µm,0.7s						
KLV	**Kalavryta, Ach**	**1.42**	**107**	⇓P	**Pn**	**05 12 49.2**	**-0.7**
KLV				S	**Sn**	**05 13 07.7**	**-0.7**
KLV				AML	AML		
	comp=N,20450µm,1.0s						
KLV				AML	AML		
	comp=E,24700µm,0.8s						
MAKR	**Makrakomi, Fth**	**1.43**	**68**	P	**Pb**	**05 12 50.6**	**-0.4**
MAKR	**Makrakomi, Fth**	**1.43**	**68**	P	**Pb**	**05 12 51.2**	**+0.2**
SRN	**Sarande**	**1.44**	**346**	⇑P	**Pn**	**05 12 50.6**	**+0.5**
SRN				S	**Sb**	**05 13 09.2**	**-0.1**
SRN				AML	AML		
	comp=N,7905µm,0.8s						
SRN				AML	AML		
	comp=E,10950µm,0.8s						
SRN	**Sarande**	**1.44**	**346**	P	**Pn**	**05 12 50.5**	**+0.4**
	baz=319						
SRN				S	**Sg**	**05 13 12.8**	**+1.8**
	baz=319						
SRN				AMP			
	comp=N,25nm,0.8s,baz=319						
AGG	**Agios Georgios**	**1.57**	**69**	P	**Pb**	**05 12 52.8**	**-0.7**
AGG	**Agios Georgios**	**1.57**	**69**	P	**Pb**	**05 12 52.9**	**-0.7**
AGG				AML	AML	05 13 20.9	
	comp=N,64677µm,0.5s						
AGG				AML	AML	05 13 22.5	
	comp=E,42251µm,0.5s						
AGG	**Agios Georgios**	**1.57**	**69**	P	**Pb**	**05 12 52.9**	**-0.6**
AGG	**Agios Georgios**	**1.57**	**69**	Pn	**Pb**	**05 12 52.9**	**-0.6**
GUR	**Goura**	**1.59**	**109**	P	**Pn**	**05 12 52.8**	**+0.3**
THL	**Klokotos Trika**	**1.64**	**48**	P	**Pg**	**05 12 55.7**	**-0.4**
THL				AML	AML	05 13 21.4	
	comp=N,47773µm,0.6s						
THL				AML	AML	05 13 22.2	
	comp=E,51995µm,0.7s						
THL	**Klokotos Trika**	**1.64**	**48**	P	**Pb**	**05 12 55.1**	**+0.6**
THL				S	**Sg**	**05 13 17.8**	**+0.5**
THL				AML	AML		
	comp=E,6525µm,0.7s						
THL				AML	AML		
	comp=N,6275µm,1.6s						
KPRO	**Kipourio**	**1.64**	**26**	P	**Pb**	**05 12 55.2**	**+0.6**
LSK	**Leskovik**	**1.67**	**4**	P	**Pb**	**05 12 54.8**	**-0.4**
	baz=340						
LSK				S	**Sg**	**05 13 18.5**	**+0.1**
	baz=340						
LSK				AMP			
	comp=E,84nm,0.9s,baz=340						
ITM	**Ithomi**	**1.75**	**137**	P	**Pg**	**05 12 57.7**	**-0.6**
ITM	**Ithomi**	**1.75**	**137**	⇓P	**Pg**	**05 12 57.9**	**-0.4**
ITM				S	**Sg**	**05 13 22.9**	**+1.8**
ITM	**Ithomi**	**1.75**	**137**	Pn	**Pb**	**05 12 56.4**	**-0.1**
LKR	**Lokris**	**2.01**	**84**	P	**Pb**	**05 12 60.0**	**-1.0**
KZN	**Kozani**	**2.09**	**29**	P	**Pb**	**05 13 01.6**	**-0.8**
KZN	**Kozani**	**2.09**	**29**	P	**Pb**	**05 13 01.6**	**-0.8**
VLO	**Vlora**	**2.12**	**340**	P	**Pn**	**05 13 00.5**	**+1.0**
VLO	**Vlora**	**2.12**	**340**	P	**Pn**	**05 13 00.5**	**+1.0**
VLO				S	**Sg**	**05 13 33.7**	**+1.1**
VLO				AML	AML		
	comp=N,19100µm,0.6s						
VLO				AML	AML		
	comp=E,20800µm,1.0s						
VLO	**Vlora**	**2.12**	**340**		**Pn**	**05 13 00.5**	**+1.0**
VLO	**Vlora**	**2.12**	**340**	P	**Pb**	**05 13 03.3**	**+0.6**
	baz=322						
VLO				S	**Sg**	**05 13 34.5**	**+1.9**
	baz=322						
KBN	**Korca**	**2.16**	**7**	P	**Pb**	**05 13 01.9**	**-1.5**
KBN	**Korca**	**2.16**	**7**		**Pb**	**05 13 01.9**	**-1.5**
KBN	**Korca**	**2.16**	**7**	P	**Pn**	**05 12 59.7**	**-0.5**
	baz=349						
KBN				S	**Sn**	**05 13 25.8**	**-0.9**
	baz=349						
KBN				AMP			
	comp=N,32nm,0.9s,baz=349						
SCTE	**Santa Cesarea**	**2.21**	**317**	⇑P	**Pn**	**05 13 01.1**	**+0.3**
SCTE				S	**Sn**	**05 13 27.1**	**-0.7**
SCTE				AML	AML		
	comp=E,16900µm,0.6s						
SCTE				AML	AML		
	comp=N,14750µm,0.7s						
SCTE	**Santa Cesarea**	**2.21**	**317**		**Pn**	**05 13 01.3**	**+0.5**
NEO	**Neokhori**	**2.32**	**68**	P	**Pn**	**05 13 04.1**	**+1.7**
NEO				AML	AML	05 13 44.9	
	comp=E,11552µm,0.8s						
NEO				AML	AML	05 13 45.6	
	comp=N,19602µm,0.4s						
FNA	**Florina**	**2.41**	**17**	P	**Pn**	**05 13 04.9**	**+1.3**
FNA	**Florina**	**2.41**	**17**		**Pn**	**05 13 04.9**	**+1.3**
ATH	**Athens Observa**	**2.63**	**100**	P	**Pn**	**05 13 07.7**	**+1.1**
ATH	**Athens Observa**	**2.63**	**100**	P	**Pn**	**05 13 07.7**	**+1.1**
OHR	**Ohrid**	**2.64**	**6**	*e*Pn	**Pn**	**05 13 09.2**	**+2.4**
OHR				*e*Sn	**Sb**	**05 13 42.5**	**-1.5**
OHR	**Ohrid**	**2.64**	**6**	*e*P	**Pn**	**05 13 09.2**	**+2.4**
OHR				*e*S	**Sb**	**05 13 42.5**	**-1.5**
OHR	**Ohrid**	**2.64**	**6**	*i* Pn	**Pn**	**05 13 08.7**	**+1.9**
TIR	**Tirane**	**2.90**	**351**	⇓P	**Pn**	**05 13 11.3**	**+1.0**
TIR	**Tirane**	**2.90**	**351**	*e*Pn	**Pn**	**05 13 11.1**	**+0.8**
TIR				*e*Sn	**Sn**	**05 13 47.5**	**+2.6**
TIR	**Tirane**	**2.90**	**351**	P	**Pn**	**05 13 11.1**	**+0.8**
TIR	**Tirane**	**2.90**	**351**	⇓P	**Pn**	**05 13 11.8**	**+1.6**
TIR				AML	AML		
	comp=N,8085µm,1.0s						
TIR				AML	AML		
	comp=E,5980µm,0.7s						
TIR	**Tirane**	**2.90**	**351**		**Pn**	**05 13 11.1**	**+0.8**
TIR	**Tirane**	**2.90**	**351**	P	**Pn**	**05 13 11.5**	**+1.2**
	baz=338						
GRG	**Griva**	**2.90**	**31**	P	**Pn**	**05 13 11.2**	**+0.9**
PAIG	**Paliouri**	**2.90**	**59**	P	**Pn**	**05 13 12.0**	**+1.7**
THE	**Thessaloniki**	**2.90**	**41**	P	**Pn**	**05 13 11.6**	**+1.3**
TIP	**Timpagrande**	**2.96**	**285**	⇓P	**Pn**	**05 13 11.9**	**+0.7**
TIP	**Timpagrande**	**2.96**	**285**	⇓P	**Pn**	**05 13 11.5**	**+0.3**
TIP				S	**Sn**	**05 13 47.5**	**+1.0**
TIP				AML	AML		
	comp=E,2510µm,1.2s						
TIP				AML	AML		
	comp=E,2925µm,1.2s						
TIP				AML	AML		
	comp=N,3995µm,1.6s						
TIP				AML	AML		
	comp=N,3195µm,1.6s						
TIP	**Timpagrande**	**2.96**	**285**		**Pn**	**05 13 11.4**	**+0.2**
SERS	**Sersale**	**2.98**	**282**	⇓P	**Pn**	**05 13 11.8**	**+0.2**
SERS				S	**Sn**	**05 13 47.6**	**+0.4**
SERS				AML	AML		
	comp=E,3085µm,1.3s						
SERS				AML	AML		
	comp=N,3205µm,0.9s						
SERS				AML	AML		
	comp=E,3260µm,1.1s						
SERS				AML	AML		
	comp=N,3060µm,1.3s						
PIPA	**Pietrapaola**	**3.00**	**291**	⇑P	**Pn**	**05 13 12.6**	**+0.9**
PIPA				S	**Sn**	**05 13 48.9**	**+1.6**
PIPA				AML	AML		
	comp=E,7375µm,0.9s						
PIPA				AML	AML		
	comp=E,7245µm,0.9s						
PIPA				AML	AML		
	comp=N,9890µm,1.1s						
PIPA				AML	AML		
	comp=N,9875µm,1.1s						
PLAC	**Placanica**	**3.14**	**271**	⇓P	**Pn**	**05 13 14.2**	**+0.5**
PLAC				S	**Sn**	**05 13 51.0**	**0.0**
PLAC				AML	AML		
	comp=E,2420µm,0.8s						
PLAC				AML	AML		
	comp=N,2580µm,0.7s						
PLAC				AML	AML		
	comp=N,2500µm,0.8s						
PLAC				AML	AML		
	comp=E,2685µm,0.7s						
GRI	**Girifalco**	**3.17**	**277**	⇓P	**Pn**	**05 13 14.6**	**+0.6**
GRI				S	**Sn**	**05 13 52.5**	**+0.9**
GRI	**Girifalco**	**3.17**	**277**	⇓P	**Pn**	**05 13 14.6**	**+0.6**
GRI				S	**Sn**	**05 13 52.5**	**+0.9**
GRI				AML	AML		
	comp=N,2780µm,1.1s						
GRI				AML	AML		
	comp=E,2930µm,0.8s						
PHP	**Peshkopia**	**3.20**	**0**	P	**Pn**	**05 13 15.9**	**+1.4**
	baz=348						
PHP				S	**Sn**	**05 13 54.4**	**+2.0**
	baz=348						
CELI	**Celico**	**3.20**	**288**	⇓P	**Pn**	**05 13 14.9**	**+0.4**
CELI				AML	AML		
	comp=N,4775µm,1.6s						
CELI				AML	AML		
	comp=N,11800µm,1.6s						
CELI				AML	AML		
	comp=E,4095µm,1.5s						
CELI				AML	AML		
	comp=E,10120µm,1.5s						
SOH	**Sokhos**	**3.24**	**43**	P	**Pn**	**05 13 16.4**	**+1.3**
VAY	**Valandovo**	**3.27**	**29**	*e*Pn	**Pn**	**05 13 16.8**	**+1.3**
VAY	**Valandovo**	**3.27**	**29**	P	**Pn**	**05 13 16.2**	**+0.7**
VAY				S	**Sb**	**05 13 58.2**	**-4.0**
VAY	**Valandovo**	**3.27**	**29**	*i* Pn	**Pn**	**05 13 16.4**	**+1.0**
KNT	**Kendrikon**	**3.28**	**34**	P	**Pn**	**05 13 16.6**	**+1.1**
SPS2	**Spezzano della**	**3.30**	**285**	P	**Pn**	**05 13 17.4**	**+1.5**
SPS2				AML	AML		
	comp=E,1170µm,0.6s						
SPS2				AML	AML		
	comp=N,1565µm,1.1s						
OUR	**Ouranopolis**	**3.31**	**55**	P	**Pn**	**05 13 17.6**	**+1.7**
CAR1	**CAROLEI**	**3.39**	**284**	⇓P	**Pn**	**05 13 17.9**	**+0.8**
CAR1				AML	AML		
	comp=E,7240µm,0.8s						
CAR1				AML	AML		
	comp=E,7645µm,0.9s						
CAR1				AML	AML		
	comp=N,4900µm,1.6s						
CAR1				AML	AML		
	comp=N,5030µm,1.5s						
SALB	**San Lorenzo Be**	**3.47**	**295**	⇓P	**Pn**	**05 13 18.9**	**+0.6**
SALB				AML	AML		
	comp=N,4615µm,1.6s						
SALB				AML	AML		
	comp=E,4785µm,0.8s						
SALB				AML	AML		
	comp=N,4620µm,1.6s						
SALB				AML	AML		
	comp=E,4690µm,0.7s						
SOI	**Samo**	**3.48**	**265**	⇓P	**Pn**	**05 13 18.4**	**+0.2**
SOI	**Samo**	**3.48**	**265**	AML	AML		
	comp=E,1850µm,1.1s						
SOI	**Samo**	**3.48**	**265**	AML	AML		
	comp=N,1600µm,0.9s						
SOI	**Samo**	**3.48**	**265**	⇓P	**Pn**	**05 13 18.4**	**+0.2**
ORI	**Oriolo Calabro**	**3.48**	**298**	⇓P	**Pn**	**05 13 20.6**	**+2.4**
ORI	**Oriolo Calabro**	**3.48**	**298**	⇓P	**Pn**	**05 13 20.6**	**+2.4**
ORI				AML	AML		
	comp=E,13515µm,0.7s						
ORI				AML	AML		
	comp=N,13250µm,0.8s						
STIP	**Stip**	**3.48**	**22**	*i* Pn	**Pn**	**05 13 20.8**	**+2.5**
NOCI	**Noci**	**3.48**	**313**	⇑P	**Pn**	**05 13 18.6**	**+0.3**
NOCI				AML	AML		
	comp=N,11105µm,0.9s						
NOCI				AML	AML		
	comp=E,7215µm,1.0s						
MPAZ	**Palizzi**	**3.53**	**263**	⇓P	**Pn**	**05 13 19.0**	**0.0**
MPAZ				AML	AML		
	comp=N,2465µm,1.6s						
MPAZ				AML	AML		
	comp=E,3145µm,0.7s						
SKO	**Skopje**	**3.57**	**12**	P	**Pn**	**05 13 20.2**	**+0.7**
SKO	**Skopje**	**3.57**	**12**	*i* Pn	**Pn**	**05 13 20.7**	**+1.2**
JOPP	**Joppolo**	**3.57**	**273**	P	**Pn**	**05 13 20.1**	**+0.5**
JOPP				AML	AML		
	comp=N,2770µm,1.1s						
JOPP				AML	AML		
	comp=E,3680µm,1.0s						
CEL	**Celeste**	**3.58**	**268**	Pn	**Pn**	**05 13 20.1**	**+0.4**
CEL	**Celeste**	**3.58**	**268**	AML	AML		
	comp=N,3405µm,1.0s						
CEL	**Celeste**	**3.58**	**268**	AML	AML		
	comp=E,3935µm,0.9s						
CEL	**Celeste**	**3.58**	**268**	AML	AML		
	comp=N,4105µm,0.9s						
CEL	**Celeste**	**3.58**	**268**	AML	AML		
	comp=E,3325µm,0.9s						
CEL	**Celeste**	**3.58**	**268**	P	**Pn**	**05 13 20.2**	**+0.5**
SRS	**Serrai**	**3.58**	**42**	P	**Pn**	**05 13 20.7**	**+1.0**
ULC	**Ulcinj**	**3.60**	**346**	P	**Pn**	**05 13 19.7**	**-0.2**
ULC	**Ulcinj**	**3.60**	**346**	⇑*i*Pn	**Pn**	**05 13 19.4**	**-0.5**
ULC				*e*Sn	**Sn**	**05 14 01.1**	**-1.1**
MATE	**Matera**	**3.61**	**308**	⇑P	**Pn**	**05 13 21.5**	**+1.5**
MATE	**Matera**	**3.61**	**308**	⇓P	**Pn**	**05 13 21.6**	**+1.5**
MATE				AML	AML		
	comp=E,4695µm,1.1s						
MATE				AML	AML		
	comp=N,6885µm,1.1s						
CRAC	**Craco**	**3.63**	**302**	⇓P	**Pn**	**05 13 22.1**	**+1.8**
CRAC				AML	AML		
	comp=E,15950µm,1.6s						
CRAC				AML	AML		
	comp=N,23250µm,1.3s						
GMB	**Gambarie**	**3.64**	**266**	⇓P	**Pn**	**05 13 20.8**	**+0.2**
GMB	**Gambarie**	**3.64**	**266**	AML	AML		
	comp=E,12100µm,1.5s						
GMB	**Gambarie**	**3.64**	**266**	AML	AML		
	comp=N,14150µm,0.9s						
GMB	**Gambarie**	**3.64**	**266**	⇓P	**Pn**	**05 13 20.8**	**+0.2**
CET2	**Cetraro**	**3.65**	**288**	⇑P	**Pn**	**05 13 22.6**	**+2.0**
CET2				AML	AML		
	comp=E,7885µm,0.8s						
CET2				AML	AML		
	comp=N,10095µm,1.0s						
MIGL	**Miglionico**	**3.75**	**306**	⇓P	**Pn**	**05 13 23.1**	**+1.1**
MIGL				AML	AML		
	comp=N,30850µm,1.1s						
MIGL				AML	AML		
	comp=E,23500µm,1.1s						
MTTG	**Motta San Giov**	**3.77**	**264**	P	**Pn**	**05 13 22.2**	**-0.1**
MTTG				AML	AML		
	comp=N,6535µm,0.7s						
MTTG				AML	AML		
	comp=E,6530µm,1.4s						
SCHR	**S. Chirico Rap**	**3.79**	**298**	⇓P	**Pn**	**05 13 25.6**	**+2.9**
SCHR				AML	AML		
	comp=E,3695µm,0.8s						
SCHR				AML	AML		
	comp=N,3865µm,0.9s						
DRME	**Dracevica, Mon**	**3.82**	**346**	⇑*i*Pn	**Pn**	**05 13 22.8**	**-0.2**
DRME	**Dracevica, Mon**	**3.82**	**346**	⇑*i*Pn	**Pn**	**05 13 22.8**	**-0.2**
AMUR	**Altamura**	**3.82**	**311**	⇓P	**Pn**	**05 13 23.6**	**+0.5**
AMUR				AML	AML		
	comp=E,7180µm,0.8s						
AMUR				AML	AML		
	comp=N,7220µm,0.9s						
BCI	**Bajram Curri**	**3.89**	**356**	P	**Pn**	**05 13 24.7**	**+0.7**
	baz=346						
BCI				S	**Sn**	**05 14 12.3**	**+2.8**
	baz=346						
CUC	**Castrocucco**	**3.90**	**294**	⇓P	**Pn**	**05 13 25.4**	**+1.4**
CUC				AML	AML		
	comp=E,3500µm,0.9s						
CUC				AML	AML		
	comp=N,2890µm,0.9s						
CUC				AML	AML		
	comp=E,4300µm,0.9s						
CUC				AML	AML		
	comp=N,3510µm,0.9s						
SIRI	**Monte Sirino -**	**3.93**	**297**	⇑P	**Pn**	**05 13 26.3**	**+1.7**
SIRI				AML	AML		
	comp=E,4165µm,1.6s						
SIRI				AML	AML		
	comp=N,4095µm,1.2s						
SIRI				AML	AML		
	comp=E,4205µm,1.6s						
SIRI				AML	AML		
	comp=N,4165µm,1.2s						
AG11	**Viggiano (PZ)**	**3.94**	**299**	P	**Pn**	**05 13 24.7**	**0.0**
AG11				AML	AML		
	comp=E,6220µm,0.7s						
AG11				AML	AML		
	comp=N,8500µm,0.8s						
KKB	**Krupnik**	**3.94**	**30**	P	**Pn**	**05 13 24.6**	**0.0**
KKB				S	**Sn**	**05 14 11.6**	**+1.0**
BUM	**Brajici-Budva**	**3.99**	**343**	⇑*i*Pn	**Pn**	**05 13 24.7**	**-0.7**
BUM				*e*Sn	**Sn**	**05 14 10.2**	**-1.8**
MMB	**Musomiste**	**4.00**	**38**	P	**Pn**	**05 13 25.6**	**+0.1**
MPNC	**Port Mandanici**	**4.02**	**267**	AML	AML		
	comp=E,7670µm,0.7s						
MPNC	**Port Mandanici**	**4.02**	**267**	AML	AML		
	comp=N,9520µm,0.8s						
MPNC	**Port Mandanici**	**4.02**	**267**	⇓P	**Pn**	**05 13 25.5**	**-0.1**
MCEL	**Monticello**	**4.04**	**299**	⇑P	**Pn**	**05 13 27.7**	**+1.6**
MCEL				AML	AML		
	comp=E,4455µm,1.1s						
MCEL				AML	AML		
	comp=E,4485µm,1.1s						
MCEL				AML	AML		
	comp=N,5375µm,1.4s						
MCEL				AML	AML		
	comp=N,5460µm,1.4s						
PDG	**Podgorica**	**4.05**	**347**	⇓P	**Pn**	**05 13 26.2**	**+0.1**
PDG	**Podgorica**	**4.05**	**347**	*e*Pn	**Pn**	**05 13 26.8**	**+0.8**
PDG	**Podgorica**	**4.05**	**347**	⇑*i*Pn	**Pn**	**05 13 25.7**	**-0.3**
PDG	**Podgorica**	**4.05**	**347**	⇑P	**Pn**	**05 13 25.8**	**-0.2**
PDG				AML	AML		
	comp=E,2335µm,1.3s						
PDG				AML	AML		
	comp=E,1825µm,1.3s						
PDG				AML	AML		
	comp=N,1725µm,1.0s						
PDG				AML	AML		
	comp=N,2205µm,1.0s						
PDG	**Podgorica**	**4.05**	**347**	Pn	**Pn**	**05 13 25.7**	**-0.3**
TTG	**Podgorica**	**4.05**	**347**	⇑*i*Pn	**Pn**	**05 13 25.7**	**-0.3**
TTG				*e*Sn	**Sn**	**05 14 12.0**	**-1.2**
MTSN	**Montesano sull**	**4.05**	**298**	⇑P	**Pn**	**05 13 27.9**	**+1.8**
MTSN				AML	AML		
	comp=N,3040µm,1.1s						
MTSN				AML	AML		
	comp=E,4130µm,0.9s						
IST3	**Stromboli F**	**4.09**	**276**	⇓P	**Pn**	**05 13 28.2**	**+1.5**
IST3				AML	AML		
	comp=E,3515µm,0.8s						
IST3				AML	AML		
	comp=N,2750µm,0.4s						
MILZ	**Milazzo**	**4.10**	**269**	AML	AML		
	comp=N,2415µm,1.1s						
MILZ	**Milazzo**	**4.10**	**269**	AML	AML		
	comp=E,3870µm,0.8s						
MILZ	**Milazzo**	**4.10**	**269**	⇑P	**Pn**	**05 13 27.2**	**+0.4**
MCSR	**Castroreale**	**4.11**	**266**	AML	AML		
	comp=E,5275µm,1.3s						
MCSR	**Castroreale**	**4.11**	**266**	AML	AML		
	comp=N,4030µm,0.9s						
MCSR	**Castroreale**	**4.11**	**266**	⇓P	**Pn**	**05 13 27.1**	**+0.1**
PVY	**Plav**	**4.12**	**355**	*e*Pn	**Pn**	**05 13 26.5**	**-0.8**
PVY				*e*Sn	**Sn**	**05 14 14.5**	**-0.8**
AIO	**Antillo**	**4.13**	**265**	⇓P	**Pn**	**05 13 27.4**	**+0.1**
AIO				AML	AML		
	comp=N,2165µm,0.8s						
AIO				AML	AML		
	comp=E,1735µm,0.9s						
MGR	**Morigerati**	**4.14**	**295**	⇑P	**Pn**	**05 13 28.9**	**+1.6**
MGR				AML	AML		
	comp=E,2810µm,1.6s						
MGR				AML	AML		
	comp=N,2570µm,1.6s						
MGR				AML	AML		
	comp=E,2685µm,1.2s						
MGR				AML	AML		
	comp=N,2885µm,1.6s						
MRVN	**Minervino Murg**	**4.16**	**310**	P	**Pn**	**05 13 28.1**	**+0.4**
MRVN				AML	AML		
	comp=N,4935µm,1.4s						
MRVN				AML	AML		
	comp=E,5620µm,1.6s						
ACER	**Acerenza**	**4.17**	**305**	⇓P	**Pn**	**05 13 28.9**	**+1.1**
ACER				AML	AML		
	comp=E,10115µm,0.9s						
ACER				AML	AML		
	comp=N,12900µm,0.9s						
ACER				AML	AML		
	comp=N,12450µm,0.9s						
ACER				AML	AML		
	comp=E,9725µm,0.9s						
NOV	**Novara**	**4.20**	**265**	⇓P	**Pn**	**05 13 28.4**	**+0.2**
NOV				AML	AML		
	comp=E,4085µm,0.5s						
NOV				AML	AML		
	comp=N,2985µm,0.4s						
PRVS	**Prvonek**	**4.21**	**17**	*e*Pn	**Pn**	**05 13 29.4**	**+1.0**
HCY	**Herceg Novi**	**4.23**	**340**	P	**Pn**	**05 13 28.0**	**-0.6**
HCY	**Herceg Novi**	**4.23**	**340**	⇑*i*Pn	**Pn**	**05 13 27.4**	**-1.2**
HCY	**Herceg Novi**	**4.23**	**340**	⇑*i*Pn	**Pn**	**05 13 27.4**	**-1.2**
HCY				*e*Sn	**Sn**	**05 14 15.9**	**-1.9**
BULG	**Bulgheria - Ca**	**4.24**	**294**	⇑P	**Pn**	**05 13 30.4**	**+1.6**
BULG				AML	AML		
	comp=E,2360µm,1.6s						
BULG				AML	AML		
	comp=E,2380µm,1.6s						
BULG				AML	AML		
	comp=N,6665µm,1.4s						
BULG				AML	AML		
	comp=N,6475µm,1.4s						
PALZ	**Palazzo San Ge**	**4.24**	**307**	⇑P	**Pn**	**05 13 29.7**	**+0.9**
PALZ				AML	AML		
	comp=E,21600µm,1.2s						
PALZ				AML	AML		
	comp=N,18500µm,1.6s						
APE	**Apeiranthos**	**4.27**	**108**	⇑P	Pb	05 13 34.4	-5.1
APE	**Apeiranthos**	**4.27**	**108**	P	Pb	05 13 34.4	-5.1
VPL	**Vulcano Piano**	**4.29**	**270**	P	**Pn**	**05 13 28.7**	**-0.7**
VPL				AML	AML		
	comp=E,8240µm,0.7s						
VPL				AML	AML		
	comp=N,9330µm,0.6s						
BOSS	**Bosilegrad**	**4.30**	**21**	*e*Pn	**Pn**	**05 13 30.4**	**+0.8**
AGST	**Augusta-Monte**	**4.30**	**255**	⇓P	**Pn**	**05 13 27.6**	**-2.0**
AGST				AML	AML		
	comp=N,3435µm,0.8s						
AGST				AML	AML		
	comp=E,2625µm,0.8s						
LLI	**Lipari**	**4.31**	**271**	AML	AML		
	comp=N,30050µm,0.7s						
LLI	**Lipari**	**4.31**	**271**	AML	AML		
	comp=E,19150µm,0.9s						
LLI	**Lipari**	**4.31**	**271**	⇓P	**Pn**	**05 13 31.7**	**+2.0**
HAGA	**Augusta**	**4.35**	**256**	⇑P	**Pn**	**05 13 28.9**	**-1.3**
HAGA				AML	AML		
	comp=N,2515µm,0.6s						
HAGA				AML	AML		
	comp=E,2705µm,0.9s						
EMSG	**Monte Spagnolo**	**4.38**	**263**	P	**Pn**	**05 13 30.9**	**+0.1**
EMSG				AML	AML		
	comp=N,4275µm,1.2s						
EMSG				AML	AML		
	comp=E,4230µm,1.6s						
CMPR	**Campora**	**4.38**	**296**	⇑P	**Pn**	**05 13 31.7**	**+0.9**

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CMPR                              AML     AML
      comp=E,2595µm,1.3s
CMPR                              AML     AML
      comp=N,2885µm,1.2s
MUCR  Ucria             4.40 266 ⇓P       Pn      05 13 31.3 +0.2
MUCR                              AML     AML
      comp=E,1655µm,0.5s
MUCR                              AML     AML
      comp=N,3690µm,0.5s
IVA   Berane            4.41 355 ⇑iPn     Pn      05 13 31.3 +0.2
IVA                               eSn     Sn      05 14 20.2 -2.0
KOME  Kolasin           4.42 351  ePn     Pn      05 13 31.6 +0.3
KOME                              eSn     Sn      05 14 21.7 -0.9
NKME  Niksic            4.43 346 ⇑iPn     Pn      05 13 30.6 -0.8
NKME                              eSn     Sn      05 14 21.3 -1.4
MRLC  Muro Lucano       4.45 302 ⇑P       Pn      05 13 33.5 +1.9
MRLC                              AML     AML
      comp=N,3265µm,1.5s
MRLC                              AML     AML
      comp=N,3480µm,1.6s
MRLC                              AML     AML
      comp=E,3680µm,1.2s
MRLC                              AML     AML
      comp=E,3380µm,1.2s
EPZF  Pizzo Felice      4.45 263  P       Pn      05 13 31.7 -0.1
EPZF                              AML     AML
      comp=E,3255µm,0.5s
EPZF                              AML     AML
      comp=N,3450µm,0.5s
CDRU  Civita di Ruta    4.45 298 ⇑P       Pn      05 13 34.0 +2.2
CDRU                              AML     AML
      comp=E,1760µm,1.3s
CDRU                              AML     AML
      comp=N,1995µm,1.0s
CAPA  Cerignola FG      4.45 308  P       Pn      05 13 32.8 +1.2
CAPA                              AML     AML
      comp=N,16000µm,1.5s
CAPA                              AML     AML
      comp=E,19750µm,1.3s
SSY   Sortino           4.45 254 ⇓P       Pn      05 13 29.6 -2.1
SSY                               AML     AML
      comp=N,4140µm,1.6s
SSY                               AML     AML
      comp=E,2400µm,0.3s
BARS  Barje             4.46  13  ePn     Pn      05 13 32.7 +1.0
BARS  Barje             4.46  13  ePn     Pg      05 13 48.6 -1.3
NKY   Niksic            4.46 346  P       Pn      05 13 32.3 +0.4
NKY   Niksic            4.46 346 ⇑iPn     Pn      05 13 31.5 -0.4
NKY                               eSn     Sn      05 14 22.4 -1.3
VULT  Monte Vulture     4.46 305  P       Pn      05 13 31.5 -0.5
VULT                              AML     AML
      comp=E,7045µm,1.6s
VULT                              AML     AML
      comp=E,7115µm,1.6s
VULT                              AML     AML
      comp=N,6530µm,1.3s
VULT                              AML     AML
      comp=N,6430µm,0.9s
ESML  S. M. di Licod    4.47 261 ⇓P       Pn      05 13 32.3 +0.3
HAVL  Avola             4.48 252 ⇓P       Pn      05 13 30.1 -2.0
HAVL                              AML     AML
      comp=N,5735µm,0.3s
HAVL                              AML     AML
      comp=E,7345µm,1.2s
SANT  Santorini         4.52 116 ⇑P       Pb      05 13 38.7 -5.0
SANT  Santorini         4.52 116  Pn      Pn      05 13 36.5 +3.9
TREB  Trebinje          4.52 340  ePn     Pn      05 13 32.0 -0.6
TREB  Trebinje          4.52 340 ⇑iPn     Pn      05 13 31.3 -1.3
DBRK  Dubrovnik         4.53 338  ePn     Pn      05 13 31.9 -0.9
DBRK                              Sn      Sn      05 14 23.1 -2.1
HLNI  Lentini           4.55 257 ⇓P       Pn      05 13 30.9 -2.0
HLNI                              S       Sn      05 14 22.0 -3.5
HLNI                              AML     AML
      comp=E,2265µm,1.0s
HLNI                              AML     AML
      comp=N,2615µm,0.8s
MNO   Monte Soro        4.56 265 ⇓P       Pn      05 13 33.7 +0.4
MNO   Monte Soro        4.56 265 ⇓P       Pn      05 13 33.7 +0.4
MNO                               AML     AML
      comp=E,3655µm,1.6s
MNO                               AML     AML
      comp=N,3645µm,0.9s
MEU   Monte Lauro       4.58 254 ⇑P       Pn      05 13 31.9 -1.6
MEU                               S       Sn      05 14 24.0 -2.5
MEU                               AML     AML
      comp=E,6690µm,1.2s
MEU                               AML     AML
      comp=N,8845µm,1.2s
RZN   Rozhen            4.58  44  P       Pn      05 13 34.2 +0.6
HPAC  Pachino           4.59 249 ⇓P       Pn      05 13 32.9 -0.7
HPAC                              S       Sn      05 14 26.0 -0.7
HPAC                              AML     AML
      comp=E,4485µm,0.5s
HPAC                              AML     AML
      comp=N,16675µm,0.3s
ECNV  Catenanuova       4.61 261 ⇓P       Pn      05 13 33.6 -0.2
ECNV                              AML     AML
      comp=N,5025µm,1.3s
ECNV                              AML     AML
      comp=E,3040µm,0.6s
IFIL  Filicudi I Eol    4.61 273 ⇑P       Pn      05 13 33.5 -0.2
IFIL                              AML     AML
      comp=E,10950µm,0.7s
IFIL                              AML     AML
      comp=N,3080µm,1.5s
MSFR  San Fratello      4.63 266  P       Pn      05 13 34.6 +0.5
MSFR                              AML     AML
      comp=E,1135µm,0.9s
MSFR                              AML     AML
      comp=N,920µm,1.0s
BRY   Bratogost         4.65 342  P       Pn      05 13 33.7 -0.7
BRY   Bratogost         4.65 342 ⇑iPn     Pn      05 13 33.2 -1.2
BRY   Bratogost         4.65 342  ePn     Pn      05 13 33.3 -1.2
BRY                               i Sn    Sn      05 14 26.7 -1.5
VTS   Vitosha           4.65  26 ⇑P       Pn      05 13 35.8 +1.3
VTS   Vitosha           4.65  26  ePn     Pn      05 13 35.7 +1.3
VTS                               eSn     Sn      05 14 29.8 +1.5
VTS   Vitosha           4.65  26  P       Pn      05 13 34.9 +0.4
VTS   Vitosha           4.65  26  Pn      Pn      05 13 34.9 +0.4
VTS   Vitosha           4.65  26  AML     AML
      comp=N,426µm,0.8s
VTS   Vitosha           4.65  26  AML     AML
      comp=E,510µm,1.0s
VTS   Vitosha           4.65  26 ⇓P       Pn      05 13 35.2 +0.7
GALF  Gagliano Caste    4.70 262 ⇓P       Pn      05 13 35.0 -0.1
GALF                              AML     AML
      comp=N,1535µm,0.9s
GALF                              AML     AML
      comp=E,1920µm,0.6s
SNAL  S. Angelo Dei     4.71 303 ⇑P       Pn      05 13 38.3 +3.0
SNAL                              AML     AML
      comp=N,8140µm,1.5s
SNAL                              AML     AML
      comp=E,6200µm,1.2s
SNAL                              AML     AML
      comp=E,6135µm,1.2s
SNAL                              AML     AML
      comp=N,8625µm,1.5s
HMDC  Modica            4.74 253 ⇑P       Pn      05 13 33.4 -2.2
HMDC                              S       Sn      05 14 29.0 -1.3
HMDC                              AML     AML
      comp=E,4970µm,0.4s
HMDC                              AML     AML
      comp=N,3960µm,1.6s
MSAG  Monte S. Angel    4.74 314 ⇑P       Pn      05 13 35.8 +0.1
MSAG                              AML     AML
      comp=E,4170µm,1.5s
MSAG                              AML     AML
      comp=N,6395µm,1.1s
MSAG                              AML     AML
      comp=E,4025µm,1.1s
MSAG                              AML     AML
      comp=N,6405µm,1.1s
RDO   Rodhopi           4.74  54  AML     AML
      comp=N,166µm,0.9s
RDO   Rodhopi           4.74  54  AML     AML
      comp=E,128µm,1.1s
RDO   Rodhopi           4.74  54 ⇑P       Pn      05 13 36.9 +1.3
CAFE  Carife            4.75 304  P       Pn      05 13 37.4 +1.6
CAFE                              AML     AML
      comp=E,4090µm,1.6s
CAFE                              AML     AML
      comp=N,4090µm,1.6s
CAFE                              AML     AML
      comp=E,4125µm,1.6s
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CAFE                              AML     AML
      comp=N,4245µm,1.6s
SELS  Selova            4.76   6  ePn     Pn      05 13 35.7 -0.2
CAGR  Agira             4.77 261 ⇓P       Pn      05 13 36.5 +0.5
EZN   Ezine             4.77  72  P       Pn      05 13 37.7 +1.7
IACL  Alicudi           4.77 273  AML     AML
      comp=E,1850µm,0.4s
IACL  Alicudi           4.77 273  AML     AML
      comp=N,1855µm,0.6s
IACL  Alicudi           4.77 273 ⇓P       Pn      05 13 37.9 +1.8
IDI   Anoyia            4.78 130  Pn      Pn      05 13 38.4 +2.2
      comp=N,5.7nm,0.3s,baz=244,slow=8.5,SNR=6.8
IDI                               Sn      Sn      05 14 28.9 -2.6
      comp=N,30nm,0.3s,baz=272,slow=17,SNR=6.8
IDI                               LR      LR      05 15 25.3
      comp=N,2µm,20.5s,baz=311,slow=38
SJES  Sjenica           4.79 356  ePn     Pn      05 13 37.2 +0.8
STON  Ston              4.86 335  ePn     Pn      05 13 36.4 -0.7
STON  Ston              4.86 335 ⇑iPn     Pn      05 13 35.9 -1.2
STON  Ston              4.86 335  ePn     Pn      05 13 35.9 -1.2
STON                              Sn      Sn      05 14 29.1 -4.0
STON  Ston              4.86 335 ⇑P       Pn      05 13 35.9 -1.2
STON                              AML     AML
      comp=N,1845µm,0.8s
STON                              AML     AML
      comp=E,1350µm,1.2s
UPM   Unac-Piva         4.86 347 ⇑iPn     Pn      05 13 37.7 +0.3
UPM   Unac-Piva         4.86 347 ⇓iPn     Pn      05 13 37.3 -0.1
UPM                               eSn     Sn      05 14 32.1 -1.4
SGRT  San Giovanni R    4.86 314 ⇑P       Pn      05 13 37.5 +0.1
SGRT                              AML     AML
      comp=E,4610µm,0.8s
SGRT                              AML     AML
      comp=N,3185µm,1.1s
SGRT  San Giovanni R    4.86 314  Pn      Pn      05 13 37.5 +0.1
VAE   Valguarnera       4.87 260  Pn      Pn      05 13 38.2 +0.8
      baz=45,slow=2.9,SNR=7.1
PLD   Plovdiv           4.87  41  P       Pn      05 13 39.7 +2.3
PLD                               S       Sn      05 14 36.6 +3.1
PLE   Pljevlja          4.91 351  P       Pn      05 13 38.9 +0.9
PLE   Pljevlja          4.91 351 ⇑iPn     Pn      05 13 38.6 +0.6
PLE                               i Sn    Sn      05 14 33.6 -1.0
ALN   Alexandroupoli    4.95  59  P       Pn      05 13 40.1 +1.6
ALN   Alexandroupoli    4.95  59  Pn      Pn      05 13 40.1 +1.6
KDZ   Kurdzhali         4.96  49  P       Pn      05 13 38.8 +0.2
KDZ                               S       Sn      05 14 36.3 +0.6
RAFF  Raffo Rosso       4.97 257 ⇓P       Pn      05 13 37.6 -1.2
RAFF                              AML     AML
      comp=N,2110µm,0.7s
RAFF                              AML     AML
      comp=E,2030µm,0.6s
RAFF  Raffo Rosso       4.97 257          Pn      05 13 37.6 -1.2
PETRA Petralia Sopra    5.03 265 ⇓P       Pn      05 13 40.2 +0.5
PETRA                             AML     AML
      comp=E,1392µm,1.3s
PETRA                             AML     AML
      comp=N,1475µm,1.1s
CSLB  Castelbuono       5.06 266 ⇑P       Pn      05 13 41.7 +1.7
CSLB                              AML     AML
      comp=N,418µm,0.9s
CSLB                              AML     AML
      comp=E,490µm,1.0s
LSTV  Lastovo           5.06 329  ePn     Pn      05 13 39.1 -0.9
LSTV                              Sn      Sn      05 14 33.4 -4.8
ZAPS  Zavoj             5.07  18  ePn     Pn      05 13 42.0 +1.9
MELA  Melanico ??? S    5.19 310 ⇑P       Pn      05 13 42.8 +1.0
MELA                              AML     AML
      comp=E,12750µm,1.6s
MELA                              AML     AML
      comp=N,14800µm,0.9s
MELA                              AML     AML
      comp=E,13150µm,1.6s
MELA                              AML     AML
      comp=N,14350µm,0.9s
RUDO  Rudo              5.20 351 ⇑iPn     Pn      05 13 41.1 -0.8
GATE  Gambatesa         5.21 307 ⇑P       Pn      05 13 45.2 +3.1
GATE                              AML     AML
      comp=E,3745µm,1.6s
GATE                              AML     AML
      comp=E,2670µm,1.6s
GATE                              AML     AML
      comp=N,3860µm,1.6s
GATE                              AML     AML
      comp=N,3835µm,1.6s
VITU  Vitulano (BN)     5.22 303  P       Pn      05 13 45.0 +2.7
VITU                              AML     AML
      comp=E,910µm,1.6s
VITU                              AML     AML
      comp=N,1905µm,0.7s
VITU                              AML     AML
      comp=E,2045µm,1.1s
VITU                              AML     AML
      comp=N,1945µm,0.7s
BOVS  Bovan             5.24  10 ⇑P       Pn      05 13 41.7 -0.7
BOVS  Bovan             5.24  10  ePn     Pn      05 13 42.8 +0.4
TREM  Isole Tremiti     5.24 316  P       Pn      05 13 42.5 +0.1
TREM                              AML     AML
      comp=N,5565µm,1.0s
TREM                              AML     AML
      comp=E,4835µm,1.4s
SACR  S. Croce Del S    5.28 305 ⇓P       Pn      05 13 45.6 +2.5
CLTA  Licata            5.30 258  P       Pn      05 13 43.2 -0.1
CLTA                              AML     AML
      comp=E,5390µm,0.5s
CLTA                              AML     AML
      comp=N,9390µm,1.4s
CIGN  Sant'Elia a Pi    5.30 308 ⇑P       Pn      05 13 45.1 +1.8
GRUS  Gruza             5.41   2  ePn     Pn      05 13 44.4 -0.3
WDD   Wied Dalam        5.41 243 ⇓P       Pn      05 13 44.7 -0.1
WDD                               S       Sn      05 14 45.0 -1.9
BSSO  Busso             5.43 306 ⇑P       Pn      05 13 47.5 +2.3
BBLS  Lazi&#263;i       5.44 352  ePn     Pn      05 13 44.1 -1.1
BBLS  Lazi&#263;i       5.44 352 ⇑iPn     Pn      05 13 44.6 -0.6
MCT   Mte Cammarata     5.44 263 ⇓P       Pn      05 13 50.5 +5.1
MAKA  Makarska          5.46 333  i Pn    Pn      05 13 45.3 -0.1
MAKA                              Sn      Sn      05 14 43.8 -4.1
SGG   Gregorio Mates    5.49 304 ⇓P       Pn      05 13 48.8 +2.8
ZAGS  Zajecar           5.50  14  ePn     Pn      05 13 46.4 +0.4
TRIV  Trivento          5.58 308 ⇑P       Pn      05 13 48.8 +1.6
HVAR  Hvar              5.58 328  i Pn    Pn      05 13 46.3 -0.9
HVAR                              Sn      Sn      05 14 45.1 -5.9
RICI  Ricice            5.60 335  ePn     Pn      05 13 46.5 -0.9
RICI                              Sn      Sn      05 14 47.1 -4.3
DIVS  Divibare          5.62 357  ePn     Pn      05 13 47.2 -0.6
DIVS  Divibare          5.62 357 ⇑iPn     Pn      05 13 46.8 -1.0
DIVS  Divibare          5.62 357 ⇑P       Pn      05 13 46.9 -0.9
DIVS  Divibare          5.62 357  Pn      Pn      05 13 47.0 -0.7
FRES  Fresagrandinar    5.63 310  P       Pn      05 13 49.0 +1.2
CORL  Corleone          5.65 266  Pn      Pn      05 13 49.8 +1.6
USI   Ustica            5.69 275 ⇑P       Pn      05 13 49.7 +1.0
MIDA  Miranda           5.70 306 ⇓P       Pn      05 13 51.4 +2.5
MODR  Mondragone        5.71 300 ⇑P       Pn      05 13 49.9 +1.0
TRUS  Trudelj           5.74 360  ePn     Pn      05 13 48.9 -0.4
CLTB  Caltabellotta     5.78 263 ⇓P       Pn      05 13 51.3 +1.3
CLTB  Caltabellotta     5.78 263          Pn      05 13 51.8 +1.9
RNI2  Rionero Sannit    5.80 306 ⇓P       Pn      05 13 52.9 +2.7
CERA  Filignano         5.83 304 ⇑P       Pn      05 13 52.3 +1.7
BALB  Balikesir         5.90  76  Pn      Pn      05 13 53.7 +2.2
MMGO  Monte Magaggia    5.95 264 ⇑P       Pn      05 13 55.2 +3.0
LPEL  Lama dei Pelig    5.96 309 ⇓P       Pn      05 13 54.3 +1.8
KUBS  Kucevo            6.00   8  ePn     Pn      05 13 51.6 -1.3
LIK   San Giovanni I    6.09 302  P       Pn      05 13 55.4 +1.3
POFI  Posta Fibreno     6.09 304 ⇓P       Pn      05 13 56.3 +2.2
TEKS  Tekeris           6.10 354  ePn     Pn      05 13 52.5 -1.8
TEKS  Tekeris           6.10 354 ⇑iPn     Pn      05 13 51.0 -3.3
VVLD  Villa Vallelon    6.22 305 ⇓P       Pn      05 13 58.8 +2.7
KIJV  Kijevo            6.30 332  ePn     Pn      05 13 56.5 -0.6
KIJV                              Sn      Sn      05 15 05.5 -3.2
ZIRJ  Zirje             6.31 326  i Pn    Pn      05 13 56.3 -0.8
T0110 Collepietro       6.31 308  P       Pn      05 13 59.4 +2.1
BEO   Beograd           6.32   0  P       Pn      05 13 55.6 -1.7
VCEL  Villa Celiera     6.37 310  P       Pn      05 13 60.0 +1.8
MGRS  Mrkonjic Grad     6.44 338  ePn     Pn      05 13 59.1 +0.1
MORI  Morici            6.46 328  i Pn    Pn      05 13 58.8 -0.3
MORI                              Sn      Sn      05 15 09.2 -3.4
FAGN  Fagnano           6.46 308 ⇓P       Pn      05 14 02.5 +3.2
ARG   Arkhangelos       6.53 108  P       Pn      05 14 04.8 +4.7
HERR  Herculane         6.56  12 ⇑P       Pn      05 14 00.9 +0.3
AQU   L'Aquila          6.62 308  P       Pn      05 14 02.8 +1.4
AQU   L'Aquila          6.62 308 ⇑iPn     Pn      05 14 03.9 +2.5
AQU   L'Aquila          6.62 308  Pn      Pn      05 14 02.8 +1.4
TERO  Teramo            6.65 311 ⇓P       Pn      05 14 03.5 +1.6
FRGS  Fruska Gora       6.69 356 ⇓P       Pn      05 14 01.4 -1.0
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FRGS  Fruska Gora       6.69 356  ePn     Pn      05 14 00.9 -1.5
FRGS  Fruska Gora       6.69 356 ⇑iPn     Pn      05 14 00.9 -1.5
COPA  Copaceanca        6.69  31 ⇓P       Pn      05 14 04.0 +1.6
CAMP  Campotosto        6.71 309 ⇓P       Pn      05 14 04.8 +2.0
BLY   Banja Luka        6.72 340  ePn     Pn      05 14 02.7 -0.1
BLY   Banja Luka        6.72 340 ⇑iPn     Pn      05 14 02.0 -0.7
BLY   Banja Luka        6.72 340 ⇑P       Pn      05 14 02.1 -0.7
FIAM  Fiamignano        6.75 306 ⇓P       Pn      05 14 06.6 +3.3
DUGI  Dugi Otok         6.84 325  Sn      Sn      05 15 16.9 -5.1
DUGI  Dugi Otok         6.84 325  ePn     Pn      05 14 04.0 -0.4
BANR  Banloc            6.92   4 ⇑P       Pn      05 14 05.4  0.0
UDBI  Udbina            6.99 331  ePn     Pn      05 14 06.7 +0.2
MRAK  Mrakovica         7.04 339 ⇑iPn     Pn      05 14 06.3 -1.0
PRIJ  Prijedor          7.06 338 ⇑iPn     Pn      05 14 07.0 -0.5
NRCA  Norcia            7.06 310          Pn      05 14 08.7 +1.1
PRD   Provadia          7.07  46  P       Pn      05 14 12.4 +4.8
PP3   Marolino          7.12 316 ⇓P       Pn      05 14 09.4 +1.2
GZR   Gura Zlata        7.12  13 ⇓P       Pn      05 14 08.4 +0.1
BZS   Buzias            7.18   7 ⇑P       Pn      05 14 10.0 +0.9
BZS   Buzias            7.18   7  ePn     Pn      05 14 08.0 -1.1
BZS   Buzias            7.18   7  P       Pn      05 14 08.3 -0.8
BZS                               pmax    pmax
      comp=Z,26nm,0.9s
FDMO  Fiordimonte       7.20 312 ⇓P       Pn      05 14 11.1 +1.7
STFAR Stefanesti-Arg    7.22  26 ⇑P       Pn      05 14 12.8 +3.2
CESI  CESI - Serrava    7.29 311  P       Pn      05 14 12.4 +1.7
PLIT  Plitvice          7.34 332  ePn     Pn      05 14 11.2 -0.1
CING  Cingoli           7.35 314 ⇓P       Pn      05 14 12.2 +0.7
EL6   Elcito            7.37 313 ⇓P       Pn      05 14 12.6 +0.8
NVLJ  Novalja           7.37 327  ePn     Pn      05 14 10.8 -0.9
MOMA  Monte Martano     7.38 308 ⇓P       Pn      05 14 14.3 +2.4
LOT   Lotru             7.39  19 ⇓P       Pn      05 14 13.6 +1.5
FOSV  Fossato di Vic    7.54 312 ⇓P       Pn      05 14 15.2 +1.1
ATCC  AVT- Casa Cast    7.55 311 ⇓P       Pn      05 14 16.2 +2.0
ARR   Arges             7.56  23 ⇓P       Pn      05 14 15.8 +1.4
RABC  Rab               7.56 328  ePn     Pn      05 14 13.3 -1.0
ARVD  Arcevia           7.57 314 ⇑P       Pn      05 14 14.9 +0.5
MTUR  Matau             7.57  26 ⇓P       Pn      05 14 17.1 +2.6
SULR                    7.57  33 ⇑P       Pn      05 14 17.1 +2.7
DEV   Deva              7.62  13  P       Pn      05 14 17.3 +2.2
DEV                               pmax    pmax
      comp=Z,37nm,0.7s
MURB  Monte Urbino      7.67 311          Pn      05 14 17.6 +1.8
ATFO  Monte Foce - G    7.70 312  P       Pn      05 14 17.9 +1.6
ELL   Elmali            7.71 100  P       Pn      05 14 22.2 +5.7
MGAB  Montegabbione     7.72 308 ⇓P       Pn      05 14 19.0 +2.5
VOIR                    7.75  25 ⇓P       Pn      05 14 18.4 +1.4
VOIR                    7.75  25  P       Pn      05 14 18.2 +1.2
VOIR                              pmax    pmax
      comp=Z,79nm,0.9s
SECR                    7.78  31 ⇓P       Pn      05 14 20.5 +3.2
FSSB  Fossombrone       7.78 314 ⇓P       Pn      05 14 18.1 +0.7
KOVH  Kovagotottos      7.80 348  eP      Pn      05 14 15.5 -2.0
KOVH  Kovagotottos      7.80 348  ePN     Pn      05 14 15.9 -1.6
ATVO  AVT- Monte Val    7.80 311 ⇓P       Pn      05 14 19.9 +2.1
PIEI  Pieia             7.82 313  P       Pn      05 14 18.8 +0.9
MORH  Mrgy, Hungar      7.84 351 ⇑iPn     Pn      05 14 15.8 -2.3
NARO  Abbazia di Nar    7.84 313 ⇓P       Pn      05 14 19.1 +1.0
ATPI  Pietralunga -     7.85 312 ⇑P       Pn      05 14 20.8 +2.5
ATMI  Monte Miggiano    7.86 311 ⇓P       Pn      05 14 24.3 +5.8
APEC  Apecchio          7.90 312  P       Pn      05 14 18.6 -0.4
ISP   Isparta           7.97  92  P       Pn      05 14 21.8 +1.7
ISP   Isparta           7.97  92          Pn      05 14 21.8 +1.7
SLUM  Salum             8.00 149  P       Pn      05 14 20.2 -0.1
      baz=148
SLUM                              AMP             05 15 00.0
      baz=148
SLUM                              S       Sn      05 15 42.7 -7.8
      baz=148
BOJS  Bojanci           8.01 333 ⇑P       Pn      05 14 19.9 -0.5
BOJS  Bojanci           8.01 333 ⇑iPn     Pn      05 14 19.8 -0.7
ISR   Istrita           8.04  33 ⇑P       Pn      05 14 24.2 +3.2
ISR   Istrita           8.04  33  P       Pn      05 14 23.6 +2.6
ISR                               pmax    pmax
      comp=Z,149nm,1.1s
ZAG   Zagreb            8.05 337  P       Pn      05 14 24.3 +3.3
ZAG   Zagreb            8.05 337  ePn     Pn      05 14 19.2 -1.8
SMRN  Sveta Marina      8.06 326  ePn     Pn      05 14 20.6 -0.5
MLR   Muntele Rosu      8.11  29 ⇑P       Pn      05 14 24.6 +2.5
MLR   Muntele Rosu      8.11  29  Pn      Pn      05 14 23.6 +1.5
      comp=Z,2.3nm,0.3s,baz=254,slow=12,SNR=28
MLR                               LR      LR      05 17 32.6
      comp=Z,2µm,20.5s,baz=203,slow=39
PTJ   Puntijarka        8.13 337  P       Pn      05 14 20.4 -1.8
MANR  Mangalia          8.13  46 ⇑P       Pn      05 14 25.0 +2.8
RIY   Rijeka            8.15 329 ⇑iPn     Pn      05 14 21.6 -0.8
RIY   Rijeka            8.15 329  ePn     Pn      05 14 21.7 -0.7
GBRS  Gornja Briga      8.19 331 ⇑iPn     Pn      05 14 22.7 -0.3
NEHR  Nehoiu            8.20  30 ⇓P       Pn      05 14 25.4 +2.3
CRES  Cresnjev          8.22 335 ⇑iPn     Pn      05 14 22.2 -1.1
MFTR  Murfatlar         8.27  44 ⇓P       Pn      05 14 28.5 +4.4
TLBR  Topalu            8.32  41 ⇓P       Pn      05 14 26.6 +1.9
DOPR  Dopca             8.33  25 ⇓P       Pn      05 14 26.1 +1.2
HARR  Harsova           8.36  40 ⇑P       Pn      05 14 26.9 +1.6
ASQU  Asqua             8.41 312  P       Pn      05 14 28.7 +2.6
SFI   Santa Sofia       8.44 313 ⇓P       Pn      05 14 28.4 +1.9
SFI   Santa Sofia       8.44 313 ⇓P       Pn      05 14 28.4 +1.9
TIRR  Tirgusor          8.45  43  P       Pn      05 14 26.3 -0.2
TIRR  Tirgusor          8.45  43          Pn      05 14 26.3 -0.2
BISRR Bisoca            8.46  31 ⇓P       Pn      05 14 29.5 +2.8
DRGR                    8.47  11 ⇑P       Pn      05 14 28.1 +1.2
DRGR                    8.47  11  P       Pn      05 14 27.8 +0.9
DRGR                              pmax    pmax
      comp=Z,16nm,1.0s
COVR  Voineasa-Covas    8.51  28 ⇓P       Pn      05 14 29.7 +2.3
CEY   Cerknica          8.52 330 ⇑iPn     Pn      05 14 26.8 -0.6
SKDS  Skadanscina       8.52 328 ⇑ePn     Pn      05 14 26.2 -1.4
KOGS  Kog               8.54 340 ⇑P       Pn      05 14 26.2 -1.6
MDUB  Mudurnu           8.55  73  Pn      Pn      05 14 30.4 +2.4
OZUR                    8.58  26 ⇑P       Pn      05 14 30.3 +2.0
OSSC  Osservatorio P    8.58 309          Pn      05 14 29.8 +1.4
VSL   Villasalto        8.68 280          Pn      05 14 29.3 -0.3
PLOR  Plostina          8.69  30 ⇑P       Pn      05 14 32.4 +2.6
PLOR  Plostina          8.69  30  P       Pn      05 14 32.4 +2.6
TPGR  Topolog           8.73  41 ⇓P       Pn      05 14 31.5 +1.2
VRI   Vrincioaia        8.73  30 ⇑P       Pn      05 14 31.6 +1.2
VRI   Vrincioaia        8.73  30  P       Pn      05 14 32.5 +2.1
VRI                               pmax    pmax
      comp=Z,99nm,1.2s
LJU   Ljubljana         8.73 332 ⇑iPn     Pn      05 14 29.3 -1.1
LJU   Ljubljana         8.73 332 ⇑P       Pn      05 14 29.4 -1.0
ODBI  Odobesti          8.78  32 ⇓P       Pn      05 14 32.9 +1.9
CFR   Carcaliu          8.81  38 ⇑P       Pn      05 14 32.7 +1.2
CFR   Carcaliu          8.81  38  P       Pn      05 14 32.5 +1.0
CFR                               pmax    pmax
      comp=Z,16nm,0.8s
SEI   Scarperia         8.82 312 ⇓P       Pn      05 14 34.0 +2.4
MPLH  Magyarpolny       8.94 347  ePN     Pn      05 14 31.6 -1.6
MPLH  Magyarpolny       8.94 347  eP      Pn      05 14 32.0 -1.2
VOJS  Vojsko            8.97 329 ⇑iPn     Pn      05 14 32.3 -1.4
CSKK  Cskako            9.02 351  ePN     Pn      05 14 34.5 +0.2
CSKK  Cskako            9.02 351  eP      Pn      05 14 35.8 +1.5
MATC  Matruh            9.04 140  P       Pn      05 14 34.8 +0.2
      baz=139
SABO  M.te Sabotino     9.04 328 ⇑P       Pn      05 14 33.4 -1.3
BUD   Budapest          9.06 354  ePN     Pn      05 14 31.5 -3.3
BUD   Budapest          9.06 354  eP      Pn      05 14 37.3 +2.5
ARCR  ARCALIA           9.07  17 ⇑P       Pn      05 14 36.3 +1.3
SOKA  Soboth            9.11 336  ePn     Pn      05 14 34.1 -1.5
      comp=Z,70nm,0.5s,SNR=143
SOKA                              eSn     Sn      05 16 10.9 -7.0
      comp=Z,89nm,0.7s
OBKA  Obir              9.12 333  ePn     Pn      05 14 35.3 -0.5
      comp=Z,18nm,0.4s,SNR=24
OBKA                              eSn     Sn      05 16 14.3 -4.0
      comp=Z,236nm,0.8s
PII   Pisa              9.13 308  P       Pn      05 14 40.8 +5.0
EGYH  Egyhazaskeszo     9.22 347  eP      Pn      05 14 40.2 +3.2
TESR  Tescani           9.24  28 ⇑P       Pn      05 14 38.8 +1.4
KEST  Kesra             9.28 256  Pn      Pn      05 14 38.5 +0.5
      comp=Z,3.8nm,0.3s,baz=20,slow=2.0,SNR=35
KEST  Kesra             9.28 256  Pn      Pn      05 14 38.8 +0.8
VLDR  Vladesti          9.29  35 ⇑P       Pn      05 14 40.3 +2.3
PSZ   Piszkesteto       9.44 358 ⇓P       Pn      05 14 40.0 -0.1
PSZ   Piszkesteto       9.44 358  ePN     Pn      05 14 38.8 -1.3
PSZ   Piszkesteto       9.44 358  eP      Pn      05 14 39.7 -0.5
PSZ   Piszkesteto       9.44 358  P       Pn      05 14 39.2 -1.0
PSZ   Piszkesteto       9.44 358  Pn      Pn      05 14 39.2 -1.0
ARSA  Arzberg           9.48 339  i Pn    Pn      05 14 39.4 -1.2
      comp=Z,18nm,0.6s,SNR=20
TEOL  Teolo             9.48 319  Pn      Pn      05 14 39.8 -0.9
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MYKA  Terra Mystica      9.56 331 i Pn   Pn     05 14 41.2  -0.5
      comp=Z,12nm,0.4s,SNR=7.8
POLC  Polcenigo          9.56 325 ⇓P     Pn     05 14 41.9  +0.1
PGF   Pioggiola          9.61 299  P     Pn     05 14 46.6  +4.1
PGF                                pmax  pmax
      comp=Z,27nm,1.0s
SOP   Sopron             9.62 344 eP     Pn     05 14 47.7  +5.1
SOP   Sopron             9.62 344  P     Pn     05 14 42.2  -0.4
SOP                                pmax  pmax
      comp=Z,20nm,0.6s
STAL  STALIGIAL          9.65 326        Pn     05 14 41.5  -1.4
TRPA  Tarpa              9.76   8 ⇓P     Pn     05 14 44.2  -0.3
ZOU   Zoufplan           9.77 328  Pn    Pn     05 14 43.1  -1.7
BURAR Bucovina Array     9.77  19 ⇑P     Pn     05 14 46.5  +1.8
BURAR Bucovina Array     9.77  19  P     Pn     05 14 46.5  +1.8
BURAR Bucovina Array     9.77  19  Pn    Pn     05 14 45.2  +0.5
BUR08 Bucovina Ar. S     9.79  19  Pn    Pn     05 14 44.8  -0.2
CTI   Castel Tesino      9.97 322  P     Pn     05 14 46.0  -1.5
CTI   Castel Tesino      9.97 322  Pn    Pn     05 14 46.0  -1.5
ZST   Bratislava        10.01 347  P     Pn     05 14 47.7  -0.2
ZST                                pmax  pmax
      comp=Z,183nm,0.9s
ZST   Bratislava        10.01 347 ePN    Pn     05 14 47.4  -0.5
ZST                               ePG           05 15 35.1
ZST                               eSN    Sn     05 16 31.7  -8.2
CONA  Conrad Observa    10.01 342 i Pn   Pn     05 14 46.9  -1.1
      comp=Z,4.4nm,0.7s,SNR=5.7
KBA   Koelnbreinsper    10.05 331 i Pn   Pn     05 14 48.0  -0.6
      comp=Z,13nm,0.6s,SNR=8.4
KBA                               eSn    Sn     05 16 37.0  -4.1
      comp=Z,71nm,0.8s
KBA   Koelnbreinsper    10.05 331  P     Pn     05 14 48.0  -0.6
KBA                                pmax  pmax
      comp=Z,79nm,1.1s
VYHS  Vyhne             10.08 354 eP     Pn     05 14 48.1  -0.7
VYHS                              e             05 16 35.7
VYHS  Vyhne             10.08 354 ePN    Pn     05 14 48.1  -0.7
VYHS                              eSN    Sn     05 16 35.7  -5.8
SWA2                    10.11 154  P     Pn     05 14 33.7   -16
      baz=153
SWA2                               S     Sn     05 16 33.3  -9.2
      baz=153
ABTA  Abfaltersbach     10.11 327 i Pn   Pn     05 14 48.1  -1.3
      comp=Z,34nm,0.9s,SNR=19
ABTA                              eSn    Sn     05 16 39.4  -3.2
      comp=Z,378nm,1.1s
MODS  Modra-Piesok      10.15 348 eP     Pn     05 14 48.0  -1.8
MODS                              e             05 16 35.9
MODS                               MLR   MLR
      comp=Z,4µm,17.8s
MODS  Modra-Piesok      10.15 348 ePN    Pn     05 14 48.0  -1.8
MODS                              ePG           05 15 42.0
MODS                              eSN    Sn     05 16 35.9  -7.5
MODS                              eL     L      05 19 48.2
KOLL  Kolacno           10.20 352 ePN    Pn     05 14 49.8  -0.7
UZH   Uzhgorod          10.23   7⇑iP     Pn     05 14 51.2  +0.3
UZH                               eS     Sn     05 16 46.4  +1.0
UZH                                MLR   MLR
      comp=Z,350nm,13.0s
SALO  Salr              10.25 317  Pn    Pn     05 14 50.7  -0.5
BR131 Keskin Array S    10.34  79  P     Pn     05 14 55.7  +3.2
BR131 Keskin Array S    10.34  79  Pn    Pn     05 14 55.6  +3.2
BRTR  Keskin Array B    10.34  79  Pn    Pn     05 14 55.0  +2.5
      comp=Z,0.7nm,0.3s,baz=261,slow=12,SNR=20
BRTR                               LR    LR     05 19 35.4
      comp=Z,532nm,21.2s,baz=268,slow=42
BRTR  Keskin Array B    10.34  79 i P    Pn     05 14 56.0  +3.5
BRTR                               pmax  pmax
      comp=Z,8.0nm,0.6s
BRTR  Keskin Array B    10.34  79  Pn    Pn     05 14 56.5  +4.0
BOB   Bobbio (Coli)     10.35 311  P     Pn     05 14 56.0  +3.4
BOB                                pmax  pmax
      comp=Z,95nm,0.7s
MOA   Molln             10.39 336 i Pn   Pn     05 14 52.0  -1.1
      comp=Z,20nm,0.4s,SNR=22
MOA                               eSn    Sn     05 16 46.5  -2.7
      comp=Z,19nm,0.3s
CRVS  Cervenica-Dubn    10.44   4 eP     Pn     05 14 54.5  +0.6
CRVS                               MLR   MLR
      comp=Z,2µm,18.3s
CRVS  Cervenica-Dubn    10.44   4 ePN    Pn     05 14 54.4  +0.6
CRVS                              eL     L      05 19 27.5
JAVC  Velka Javorina    10.56 350 ePN    Pn     05 14 55.2  -0.3
LANS  Liptovska Anna    10.69 357 eP     Pn     05 15 03.7  +6.5
LANS  Liptovska Anna    10.69 357 ePN    Pn     05 15 03.7  +6.5
WTTA  Wattenberg        10.89 327 i Pn   Pn     05 15 00.0  -0.1
      comp=Z,26nm,0.4s,SNR=22
WTTA                              eSn    Sn     05 16 56.4  -5.4
      comp=Z,146nm,0.7s
WTTA  Wattenberg        10.89 327  P     Pn     05 14 59.9  -0.2
WTTA                               pmax  pmax
      comp=Z,70nm,0.8s
NIE   Niedzica          10.93 360  P     Pn     05 15 02.4  +1.8
NIE                                pmax  pmax
      comp=Z,19nm,1.0s
KRUC  Moravsky          10.97 346  P     Pn     05 14 59.9  -1.1
KRUC                               pmax  pmax
      comp=Z,13nm,1.7s
KRUC  Moravsky          10.97 346 ePN    Pn     05 14 59.9  -1.1
WATA  Walderalm         10.97 327 i Pn   Pn     05 15 01.3  +0.1
      comp=Z,55nm,0.6s,SNR=28
WATA                              eSn    Sn     05 17 01.3  -2.4
      comp=Z,180nm,0.9s
SQTA  Sankt Quirin      11.05 325 i Pn   Pn     05 15 03.1  +1.0
      comp=Z,17nm,0.5s,SNR=14
SQTA                              eSn    Sn     05 17 02.1  -3.4
      comp=Z,81nm,0.6s
FETA  Feichten          11.12 323 ePn    Pn     05 15 03.3  +0.1
      comp=Z,6.2nm,0.5s
FETA                              eSn    Sn     05 17 03.9  -3.4
      comp=Z,26nm,0.6s
SAOF  Saorge            11.15 304  P     Pn     05 15 06.3  +2.8
SAOF                               pmax  pmax
      comp=Z,33nm,0.9s
VRAC  Vranov            11.17 347 ⇓P     Pn     05 15 03.3  -0.5
VRAC  Vranov            11.17 347  Pn    Pn     05 15 03.2  -0.6
      comp=Z,0.7nm,0.3s,baz=167,slow=9.6,SNR=8.6
VRAC                               LR    LR     05 20 36.3
      comp=Z,2µm,18.9s,baz=172,slow=45
VRAC  Vranov            11.17 347 ePN    Pn     05 15 02.5  -1.3
MOTA  Moosalm           11.19 325 i Pn   Pn     05 15 04.9  +0.7
      comp=Z,39nm,0.5s,SNR=32
MOTA                              eSn    Sn     05 17 05.5  -3.5
      comp=Z,86nm,0.7s
CKRC  Cesky Krumlov     11.24 339 eP     Pn     05 15 03.4  -1.4
CKRC                               AMS   AMS    05 20 00.0
      comp=Z,3µm,10.2s
KWP   Kalwaria Pacla    11.27   8  P     Pn     05 15 06.7  +1.6
KWP                                pmax  pmax
      comp=Z,25nm,0.9s
ZUGS  Zugspitze, Sch    11.30 325 ePn    Pn     05 15 06.1  +0.3
ZUGS                              eSn    Sn     05 17 05.8  -6.1
PART  Garmisch-Parte    11.30 326 ePn    Pn     05 15 05.6  +0.1
PART                              eSn    Sn     05 17 06.3  -5.3
DAVOX Davos/Dischmat    11.36 320  Pn    Pn     05 15 07.1  +0.5
      comp=Z,3.4nm,0.3s,baz=129,slow=16,SNR=30
DAVOX                              Sn    Sn     05 17 05.8  -7.5
      comp=Z,1.7nm,0.3s,baz=121,slow=12,SNR=6.0
DAVOX                              LR    LR     05 19 56.7
      comp=Z,2µm,18.9s,baz=104,slow=40
TUE   Stuetta           11.43 318  Pn    Pn     05 15 08.3  +0.7
GEC2  GERESS Array S    11.45 337 ePn    Pn     05 15 05.5  -2.2
GEC2  GERESS Array S    11.45 337        Pn     05 15 05.6  -2.0
GERES GERESS Array B    11.45 337  Pn    Pn     05 15 05.4  -2.2
      comp=Z,1.9nm,0.3s,baz=156,slow=14,SNR=58
GERES                              Sn    Sn     05 17 08.7  -6.5
      comp=Z,2.7nm,0.3s,baz=153,slow=24,SNR=4.7
GERES                              LR    LR     05 20 07.3
      comp=Z,1µm,19.5s,baz=160,slow=41
GERES GERESS Array B    11.45 337  P     Pn     05 15 05.6  -2.0
GERES GERESS Array B    11.45 337  Pn    Pn     05 15 05.6  -2.0
RETA  Reutte            11.45 325 i Pn   Pn     05 15 07.9  +0.3
      comp=Z,7.2nm,0.4s,SNR=6.5
RETA                              eSn    Sn     05 17 13.8  -1.4
      comp=Z,32nm,0.6s
OKC   Ostrava-Krasne    11.47 353 eP     Pn     05 15 07.8  -0.1
OKC                                MLR   MLR
      comp=Z,2µm,14.2s
OKC   Ostrava-Krasne    11.47 353 eP     Pn     05 15 07.8  -0.1
OKC                                AMS   AMS    05 20 20.0
      comp=Z,2µm,14.2s
MORC  Moravsky Berou    11.48 351 ⇓P     Pn     05 15 07.8  -0.3
MORC  Moravsky Berou    11.48 351  P     Pn     05 15 06.9  -1.2
MORC  Moravsky Berou    11.48 351 ePN    Pn     05 15 06.9  -1.2
MORC  Moravsky Berou    11.48 351  Pn    Pn     05 15 06.9  -1.2
LVV   L'vov             11.62  12 eP     Pn     05 15 12.4  +2.5
LVV                               eS     Sn     05 17 19.3  -0.1
LVV                                pmax  pmax
      comp=Z,20nm,1.3s
DAVA  Damuels           11.71 322 ePn    Pn     05 15 12.2  +0.9
      comp=Z,8.2nm,0.5s
DAVA                              eSn    Sn     05 17 18.9  -3.0
      comp=Z,87nm,0.8s
KHC   Kasperske Hory    11.74 337 eP     Pn     05 15 09.8  -1.7
KHC                               e             05 17 15.5
KHC                                MLR   MLR
      comp=Z,2µm,10.7s
KHC   Kasperske Hory    11.74 337 eP     Pn     05 15 09.8  -1.7
KHC                               ex     x      05 16 06.5
KHC                               ex     x      05 17 15.5
KHC                                AMS   AMS    05 20 20.0
      comp=Z,2µm,10.7s
OJC   Ojcow             11.74 358  P     Pn     05 15 10.5  -1.1
OJC   Ojcow             11.74 358        Pn     05 15 10.5  -1.1
FUR   Furstenfeldbru    11.75 328 ePn    Pn     05 15 09.4  -2.3
KRLC  Kraliky           11.88 348 eP     Pn     05 15 13.5   0.0
KRLC                               MLR   MLR
      comp=Z,2µm,13.8s
KRLC  Kraliky           11.88 348 eP     Pn     05 15 13.5   0.0
KRLC                               AMS   AMS    05 20 50.0
      comp=Z,2µm,13.8s
MMK   Mattmark          11.93 313  P     Pn     05 15 15.8  +1.4
WET   Wettzell          11.97 335  P     Pn     05 15 12.7  -2.0
WET                                pmax  pmax
      comp=Z,32nm,1.0s
WET   Wettzell          11.97 335 ePn    Pn     05 15 12.2  -2.5
MBDF  Montbardon        11.98 306 eP     Pn     05 15 17.1  +2.1
MBDF                               pmax  pmax
      comp=Z,26nm,1.0s
BNN   Bunyan            12.05  83  Pn    Pn     05 15 19.3  +3.3
HNAT  Natroun           12.20 133  P     Pn     05 15 15.9  -2.1
      baz=133
DPC   Dobruska-Polom    12.22 347 eP     Pn     05 15 17.4  -0.8
DPC                                MLR   MLR
      comp=Z,3µm,13.7s
DPC   Dobruska-Polom    12.22 347 eP     Pn     05 15 17.4  -0.8
DPC                                AMS   AMS    05 20 50.0
      comp=Z,3µm,13.7s
PRU   Pruhonice         12.25 342 eP     Pn     05 15 17.3  -1.2
PRU                                MLR   MLR
      comp=Z,2µm,10.8s
PRU   Pruhonice         12.25 342 eP     Pn     05 15 17.3  -1.2
PRU                                AMS   AMS    05 21 10.0
      comp=Z,2µm,10.8s
LPG   La Plagne         12.35 309 eP     Pn     05 15 20.0  -0.2
LPG                                pmax  pmax
      comp=Z,12nm,0.8s
PRA   Prague            12.35 342 eP     Pn     05 15 19.5  -0.4
PRA   Prague            12.35 342 eP     Pn     05 15 19.5  -0.4
LPL   La Plagne         12.38 309 eP     Pn     05 15 24.6  +4.1
LPL                                pmax  pmax
      comp=Z,10.0nm,0.6s
NORI  Noerdlinger Ri    12.45 328 ePn    Pn     05 15 18.6  -2.7
SENIN Lac Senin/Sane    12.49 313  Pn    Pn     05 15 22.5  +0.4
CHVC  Chvalec           12.50 347 eP     Pn     05 15 22.1  +0.2
CHVC                               AMS   AMS    05 21 00.0
      comp=Z,2µm,14.4s
ORIF  Oris-en-Rattie    12.63 305 eP     Pn     05 15 26.8  +3.0
ORIF                               pmax  pmax
      comp=Z,20nm,1.1s
KSP   Ksiaz             12.70 348  P     Pn     05 15 24.4  -0.3
KSP                                pmax  pmax
      comp=Z,8.0nm,0.9s
SLE   Schleitheim       12.72 321  P     Pn     05 15 24.8  -0.2
SLE                                pmax  pmax
      comp=Z,17nm,0.8s
HHAG  Hagoal            12.85 128  S     Sn     05 17 46.3  -3.4
      baz=127
GLL   Jalalah           12.88 130  P     Pn     05 15 24.3  -3.0
      baz=130
NKC   Novy Kostel       13.05 337 eP     Pn     05 15 29.0  -0.5
NKC                                MLR   MLR
      comp=Z,2µm,13.3s
NKC   Novy Kostel       13.05 337 eP     Pn     05 15 29.0  -0.5
NKC                                AMS   AMS    05 21 20.0
      comp=Z,2µm,13.3s
HFRF  Wahat Farafira    13.09 147  P     Pn     05 15 27.6  -2.5
      baz=146
HFRF                               S     Sn     05 17 44.2   -11
      baz=146
STU   Stuttgart         13.11 325  P     Pn     05 15 28.2  -2.0
STU   Stuttgart         13.11 325 ePn    Pn     05 15 28.5  -1.7
STU   Stuttgart         13.11 325  Pn    Pn     05 15 28.1  -2.0
BFO   Black Forest      13.19 322  P     Pn     05 15 28.8  -2.6
BFO                                pmax  pmax
      comp=Z,19nm,0.9s
BRG   Berggiesshubel    13.22 342  P     Pn     05 15 30.3  -1.4
BRG                                pmax  pmax
      comp=Z,14nm,1.1s
BRG   Berggiesshubel    13.22 342 eP     Pn     05 15 30.2  -1.4
BRG                                Amp          05 15 33.3
      comp=Z,12nm,0.9s
BRG                                Amp          05 20 31.0
      comp=N,1.4nm,11.8s
BRG                                Amp          05 20 38.0
      comp=E,3.1nm,10.6s
BRG                                Amp          05 20 43.0
      comp=Z,0.9nm,12.4s
MMAI  Mount Meron Ar    13.32 110  Pn    Pn     05 15 32.3  -1.0
      comp=Z,2.9nm,0.3s,baz=290,slow=14,SNR=4.8
MMAI                               Sn    Sn     05 17 51.8  -9.3
      comp=Z,5.0nm,0.3s,baz=308,slow=22,SNR=3.4
CABF  La Chapelle       13.33 312 eP     Pn     05 15 32.2  -1.1
CABF                               pmax  pmax
      comp=Z,9.0nm,0.6s
NBNS  Bani Suef         13.35 134  P     Pn     05 15 30.7  -3.0
      baz=134
VIVF  Saint-Julien-l    13.39 303 eP     Pn     05 15 36.5  +2.4
VIVF                               pmax  pmax
      comp=Z,8.0nm,1.0s
SUZ   Suez              13.39 126  P     Pn     05 15 31.3  -2.9
      baz=126
HINF  Hinteralfeld      13.60 318 eP     Pn     05 15 35.1  -1.9
HINF                               pmax  pmax
      comp=Z,7.0nm,0.4s
MOX   Moxa              13.68 336  P     Pn     05 15 36.6  -1.4
MOX                                pmax  pmax
      comp=Z,30nm,1.1s
MOX   Moxa              13.68 336 ePn    Pn     05 15 35.4  -2.6
ECH   Echery            13.69 320  P     Pn     05 15 38.3   0.0
ECH   Echery            13.69 320        Pn     05 15 38.2   0.0
AKASG Malin Array Be    13.71  24  Pn    Pn     05 15 37.0  -1.5
      comp=Z,1.5nm,0.3s,baz=211,slow=11,SNR=13
AKASG                              LR    LR     05 22 03.1
      comp=Z,2µm,18.8s,baz=215,slow=43
AKASG Malin Array Be    13.71  24 i P    Pn     05 15 38.0  -0.4
AKASG                              pmax  pmax
      comp=Z,4.0nm,0.6s
AKBB  Malin Array Si    13.71  24⇓eP     Pn     05 15 37.5  -0.9
AKBB                               pmax  pmax
      comp=Z,15nm,1.4s
AKBB  Malin Array Si    13.71  24  Pn    Pn     05 15 37.8  -0.7
CDF   Champ du Feu      13.76 320 eP     Pn     05 15 38.2  -1.1
CDF                                pmax  pmax
      comp=Z,67nm,1.6s
CLL   Collm             13.86 340 eP     Pn     05 15 34.0  -6.4
CLL   Collm             13.86 340 eP     Pn     05 15 42.0  +1.6
CLL                               ePP    P      05 15 49.0  +0.3
      comp=Z,29nm,1.3s
CLL                               e             05 16 15.0
CLL                               e             05 17 58.0
CLL                                Lmax         05 22 00.0
TAMRE El Minia          13.88 138  P     Pn     05 15 38.5  -2.4
      baz=137
TAMRE                              AMP          05 17 24.4
      baz=137
HAU   Haudompre         13.98 317 eP     Pn     05 15 40.9  -1.3
HAU                                pmax  pmax
      comp=Z,9.0nm,0.4s
GRB   Gharib            14.48 131  P     Pn     05 15 45.6  -3.5
      baz=131
RUE   Ruedersdorf       14.75 344 eP     P      05 15 59.4  +0.8
ASF   Jabal al Asfar    14.83 110  Pn    Pn     05 15 54.2  +0.3
      comp=Z,0.5nm,0.3s,baz=284,slow=4.2,SNR=3.7
EIL   Elat              14.88 122  Pn    Pn     05 15 51.1  -3.4
      comp=Z,0.7nm,0.3s,baz=320,slow=5.7,SNR=4.2
EIL                                Sn    Sn     05 18 26.4   -13
      comp=Z,6.8nm,0.3s,baz=188,slow=4.6,SNR=10
GKP   Gorka Klasztor    14.96 353 eP     P      05 16 02.2  +1.4
GKP   Gorka Klasztor    14.96 353  P     P      05 16 00.2  -0.7
GKP                                pmax  pmax
      comp=Z,123nm,1.2s
HDK1  Dakhla            14.96 147  P     Pn     05 15 52.4  -3.3
      baz=146
HKAT  Jabal Katrina     15.03 127  P     Pn     05 15 53.4  -3.4
      baz=127
AVF   Avril sur Loir    15.05 309 eP     P      05 16 00.9  -1.1
AVF                                pmax  pmax
      comp=Z,9.0nm,1.1s
CAF   Calviac           15.15 301 eP     P      05 16 05.0  +1.9
CAF                                pmax  pmax
      comp=Z,12nm,1.0s
WLF   Walferdange       15.15 322 dP     P      05 16 05.5  +2.4
SOC   Sochi             15.40  65 eP     Pn     05 16 00.7  -0.7
SOC                               e             05 18 53.4
SOC                                MLR   MLR
      comp=Z,275nm,15.0s
AKRG  Al Kharijah       15.48 144  P     Pn     05 15 59.7  -2.9
      baz=143
SUW   Suwalki           15.65   6 eP     Pn     05 16 04.7  +0.2
HHRG  Al Ghardaqah      15.72 132  P     Pn     05 16 05.2  -0.5
      baz=132
BTNL  Ternell           15.79 325 dP     P      05 16 12.0  +1.8
MEM   Membach           15.87 324 dP     P      05 16 13.1  +2.0
      comp=Z,32nm,0.9s
RCHB  Rochefort         15.92 322 dP     P      05 16 13.9  +2.2
BCLA  Clavier           16.06 323 dP     P      05 16 13.5  +0.3
BCLA                              dx     x      05 16 20.7
DOU   Dourbes           16.19 321 dP     P      05 16 16.4  +1.8
      comp=Z,32nm,1.1s
BMRD  Maredsous         16.24 322 dP     P      05 16 17.3  +2.1
MNK   Minsk             16.81  15 i P    Pn     05 16 15.3  -4.0
MNK                               i S    Sn     05 19 20.2  -5.5
MNK                                pmax  pmax
      comp=E,7.0nm,0.9s
MNK                                pmax  pmax
      comp=Z,163nm,0.9s
MNK                                pmax  pmax
      comp=N,109nm,1.0s
MNK                                MLR   MLR
      comp=E,253nm,16.0s
MNK                                MLR   MLR
      comp=Z,1µm,18.0s
MNK                                MLR   MLR
      comp=N,778nm,15.0s
MNK   Minsk             16.81  15 i LRM  MLR    05 23 33.1
      comp=N,778nm,14.9s
MNK   Minsk             16.81  15 i P    Pn     05 16 15.4  -3.9
      comp=N,109nm,1.0s
MNK   Minsk             16.81  15 i P    Pn     05 16 15.4  -3.9
      comp=Z,163nm,0.9s,baz=22
MNK   Minsk             16.81  15 i P    Pn     05 16 15.4  -3.9
      comp=E,7.0nm,0.9s
MNK   Minsk             16.81  15 i PP   P      05 16 24.6  +3.1
MNK   Minsk             16.81  15 i PPP  PPP    05 16 32.3
MNK   Minsk             16.81  15 i S    Sn     05 19 20.3  -5.4
MNK   Minsk             16.81  15 i SS   S      05 19 34.7  -1.6
MNK   Minsk             16.81  15 i SSS  SSS    05 19 47.4
MNK   Minsk             16.81  15 i LR   LR     05 21 57.4
MNK   Minsk             16.81  15 i LRM  MLR    05 23 23.6
      comp=E,253nm,15.6s
MNK   Minsk             16.81  15 i LRM  MLR    05 23 31.0
      comp=Z,1µm,17.6s
GURO  Guroymak-BITLI    16.90  83  P     P      05 16 24.3  +1.5
NACGM Naroch            16.98  13 i P    Pn     05 16 19.2  -2.3
SJPF  Ste Jean          17.03 293 eP     P      05 16 29.6  +5.6
SJPF                               pmax  pmax
      comp=Z,26nm,1.3s
PABE  Paberze           17.20   7 eP     Pn     05 16 22.3  -1.8
SIRT  Sirnak            17.37  86  P     P      05 16 28.5  +0.6
NEY   Neytrino          17.50  67⇑eP     P      05 16 32.4  +3.0
NEY                                pmax  pmax
      comp=Z,12nm,1.3s
ISAL  Salakas           17.52  11 eP     Pn     05 16 26.8  -1.4
PBUR  Paburge           17.58   3  IAmb  IAmb   05 17 17.6
      comp=Z,247nm,1.4s
KIV   Kislovodsk        17.59  65 eP     P      05 16 33.5  +3.2
KIV                               eS     S      05 19 51.5  -1.0
KIV                                pmax  pmax
      comp=Z,17nm,1.0s
KIV                                MLR   MLR
      comp=Z,269nm,14.0s
KIV   Kislovodsk        17.59  65  P     P      05 16 30.6  +0.3
KBZ   Khabaz            17.70  66  Pn    P      05 16 32.1  +0.7
      comp=Z,0.3nm,0.3s,baz=260,slow=7.7,SNR=8.9
KBZ   Khabaz            17.70  66⇑eP     P      05 16 32.2  +0.9
KBZ                                pmax  pmax
      comp=Z,19nm,1.1s
LUNU  Lund              17.79 347 i P    Pn     05 16 30.3  -1.3
AKH   Akhalkalaki       17.91  73  P     P      05 16 39.8  +5.9
NCK   Nalchik           18.16  67⇓eP     P      05 16 40.7  +4.2
NCK                                pmax  pmax
      comp=Z,24nm,0.4s
VORD  Divnogorie        18.24  41 eP     Pn     05 16 36.5  -0.7
VORD                               pmax  pmax
      comp=Z,10.0nm,0.6s
ZEI   Tsey              18.30  69 i P    P      05 16 39.4  +1.1
ZEI                                pmax  pmax
      comp=Z,8.0nm,0.8s
VSR   Storozhevoye      18.33  40 eP     Pn     05 16 37.6  -0.6
VSR                                pmax  pmax
      comp=Z,10.0nm,0.6s
VSR                                MLR   MLR
      comp=Z,970nm,10.0s
DEL   Delary            18.52 348 i P    P      05 16 40.1  -0.2
FIGM  Figuig            18.79 257  P     Pn     05 16 44.0  -0.1
GNI   Garni             18.87  77  P     Pn     05 16 46.3  +1.3
      comp=Z,1.2nm,0.3s,baz=155,slow=2.1,SNR=6.7
GNI                                LR    LR     05 25 18.2
      comp=Z,187nm,21.5s,baz=284,slow=41
GNI   Garni             18.87  77ceP     Pn     05 16 47.5  +2.5
GNI                                pmax  pmax
      comp=Z,56nm,1.7s
GNI   Garni             18.87  77        Pn     05 16 45.5  +0.5
GNI                                IAmb  IAmb   05 17 31.0
      comp=Z,38nm,1.0s
JBK   JBK               18.96 264  P     Pn     05 16 46.2   0.0
ESBB  Sonseca Array     18.97 281  P     P      05 16 45.5   0.0
ESDC  Sonseca Array     18.97 281  P     P      05 16 45.4  -0.1
      comp=Z,0.3nm,0.3s,baz=76,slow=11,SNR=38
ESDC                               LR    LR     05 23 52.0
      comp=Z,513nm,20.4s,baz=60,slow=36
ESDC  Sonseca Array     18.97 281  P     P      05 16 45.5   0.0
TDRA  Tendrara          19.01 260  P     Pn     05 16 48.0  +1.1
LPSR  Galich'ya Gora    19.08  36 eP     P      05 16 45.3  -1.2
LPSR                               pmax  pmax
      comp=Z,90nm,1.2s
LPSR                               MLR   MLR
      comp=Z,800nm,15.0s
SLIT  Slitere, Latvi    19.20   3  IAmb  IAmb   05 16 35.1
      comp=Z,612nm,1.4s
FABU  Falkenberg        19.22 347 i P    P      05 16 47.5  -0.5
PAB   San Pablo         19.28 281  P     P      05 16 48.7  -0.2
PAB                                pmax  pmax
      comp=Z,15nm,0.9s
PAB   San Pablo         19.28 281  P     P      05 16 48.6  -0.2
MUD   Monsted U'grnd    19.48 341 i P    P      05 16 51.4  +0.6
MUD                                IAmb  IAmb   05 16 59.3
      comp=Z,13nm,0.8s
VRH   Novokhopyorsk     19.65  43 eP     P      05 16 52.1  -0.6
VRH                                pmax  pmax
      comp=Z,70nm,1.5s
DDFL  Dedoflistskaro    19.88  73  P     Pn     05 16 59.9  +2.8
OBN   Obninsk           19.88  28  P     P      05 16 54.3  -0.9
      comp=Z,1.2nm,0.3s,baz=208,slow=8.1,SNR=6.5
OBN                                LR    LR     05 25 08.3
      comp=Z,222nm,21.1s,baz=214,slow=39
OBN   Obninsk           19.88  28 i P    P      05 16 54.1  -1.1
OBN                                pmax  pmax
      comp=Z,35nm,0.9s
OBN                                MLR   MLR
      comp=Z,843nm,16.0s
AKLM  AKL               19.92 266  P     Pn     05 16 57.0  -0.6
MTSE  Matsula           20.37   5 eP     P      05 16 59.8  -0.6
VSU   Vasula            20.41  10 eP     P      05 17 01.2  +0.3
VSU   Vasula            20.41  10deP     P      05 16 59.6  -1.3
VSU                                pmax  pmax
      comp=Z,948nm,1.6s
MOS   Moscow            20.75  28 eP     P      05 17 02.1  -2.5
MOS                               e             05 17 39.2
MOS                               eS     S      05 20 55.1  -0.6
MOS                                pmax  pmax
      comp=Z,90nm,1.0s
MOS                                MLR   MLR
      comp=Z,1µm,9.0s
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PBRG  Braganca          21.01 288  eP      P        05 17 08.6 +0.9
      comp=Z,37nm,1.4s
MDT   Midelt            21.10 262   P      P        05 17 09.8 +1.1
      comp=Z,7.5nm,0.8s,baz=81,slow=12,SNR=18
MDT                                 LR     LR       05 26 15.8
      comp=Z,267nm,22.0s,baz=63,slow=39
MDT   Midelt            21.10 262   P      P        05 17 09.6 +0.8
MVO   Moncorvo          21.23 286  eP      P        05 17 10.3 +0.2
      comp=Z,46nm,1.4s
MVO                                eLR     LR       05 24 35.0
      comp=Z,475nm,16.0s
STRU  Stroemstad        21.41 347  eP      P        05 17 11.1  -0.7
UPP   Uppsala           21.47 356  eP      P        05 17 11.6  -0.7
PBAR  Barrancos         21.53 278  eP      P        05 17 13.4 +0.1
      comp=Z,43nm,1.3s
PMRV  Marv??o           21.64 281  eP      P        05 17 13.8  -0.6
      comp=Z,49nm,1.2s
PMRV                               eLR     LR       05 24 39.2
      comp=Z,406nm,18.0s
PCBR  Castelo Branco    21.66 282  eP      P        05 17 14.5  -0.1
      comp=Z,45nm,1.3s
MTE   Manteigas         21.66 284  eP      P        05 17 16.8 +2.1
      comp=Z,55nm,1.7s
MTE                                eLR     LR       05 24 34.3
      comp=Z,625nm,18.0s
MTE   Manteigas         21.66 284   P      P        05 17 14.5  -0.2
MTE                                 IAmb   IAmb     05 17 29.9
      comp=Z,30nm,1.0s
AAL   Aland             21.72 359  eP      P        05 17 14.1  -0.9
POLO  Lamas de Olo      21.81 287  eP      P        05 17 20.4 +4.1
      comp=Z,17nm,1.8s
GOLM  Goulmima          21.81 260   P      P        05 17 18.0 +1.6
PESTR Estremoz          21.86 280  eP      P        05 17 15.6  -1.2
      comp=Z,52nm,1.4s
PESTR Estremoz          21.86 280   P      P        05 17 15.1  -1.7
PESTR Estremoz          21.86 280   P      P        05 17 15.7  -1.0
PVIS  Viseu             21.91 285  eP      P        05 17 16.9  -0.5
      comp=Z,54nm,1.3s
PCAB  Cabril            21.97 287  eP      P        05 17 22.6 +4.6
      comp=Z,44nm,1.4s
HFS   Hagfors           22.09 351   P      P        05 17 17.4  -1.7
      comp=Z,26nm,0.6s,baz=153,slow=10.0,SNR=67
HFS                                 LR     LR       05 28 19.6
      comp=Z,720nm,19.2s,baz=171,slow=44
PGAV  Gavieira, Arco    22.15 288  eLR     LR       05 24 25.7
      comp=Z,499nm,20.0s
PVAQ  Vaqueiros         22.20 276  eP      P        05 17 20.0  -0.5
      comp=Z,35nm,1.7s
PVAQ                               eLR     LR       05 25 20.4
      comp=Z,259nm,18.0s
PBEJ  Beja              22.20 278  eP      P        05 17 21.5 +1.0
      comp=Z,33nm,1.7s
PUL   Pulkovo           22.22  13⇓iP      P        05 17 19.1  -1.3
PUL                                 pmax   pmax
      comp=Z,162nm,0.7s
EVO   Evora             22.23 279  eP      P        05 17 22.1 +1.3
      comp=Z,36nm,1.6s
PMTG  Montargil         22.32 281  eP      P        05 17 20.3  -1.4
      comp=Z,48nm,1.5s
PBDV  Barranco-do-Ve    22.40 276  eP      P        05 17 23.1 +0.5
      comp=Z,48nm,1.2s
PCVE  Castro Verde      22.41 277  eP      P        05 17 23.1 +0.4
      comp=Z,46nm,1.4s
PCAS  Casmilo, Conde    22.42 283  eP      P        05 17 24.7 +1.9
MESJ  Messejana         22.51 277  eP      P        05 17 24.8 +1.1
MESJ                                IAmb   IAmb     05 17 28.4
      comp=Z,13nm,1.1s
MESJ  Messejana         22.51 277  eP      P        05 17 24.8 +1.1
MESJ  Messejana         22.51 277  eP      P        05 17 24.2 +0.5
      comp=Z,31nm,1.3s
TZRR  Tazzarine         22.69 258   P      P        05 17 27.1 +1.3
PNCL  Nicolau / Gran    22.70 278  eP      P        05 17 27.7 +1.9
      comp=Z,66nm,1.3s
NC602 NORSAR Array S    22.97 349   P      P        05 17 27.8  -0.6
NC602                               IAmb   IAmb     05 17 32.7
      comp=Z,58nm,0.8s
NORES NORESS Array B    22.97 349   P      P        05 17 27.1  -1.2
NORES                               pmax   pmax
      comp=Z,3.0nm,0.6s
ZGR   Zagora            23.03 257   P      P        05 17 31.0 +1.5
PFVI  Vila Bisbo        23.12 276  eP      P        05 17 33.6 +3.4
      comp=Z,53nm,2.0s
EKA   Eskdalemuir Ar    23.14 324   P      P        05 17 29.6  -0.6
      comp=Z,13nm,0.6s,baz=124,slow=8.3,SNR=22
ESK   Eskdalemuir       23.16 324   P      P        05 17 34.1 +3.8
FINES FINESS Array B    23.25   7   P      P        05 17 28.9  -2.3
      comp=Z,65nm,0.8s,baz=167,slow=9.4,SNR=62
FINES                               PcP    PcP      05 21 18.4   0.0
      comp=Z,1.4nm,0.6s,baz=150,slow=5.6,SNR=3.5
FINES                               LR     LR       05 27 25.9
      comp=Z,1µm,19.7s,baz=192,slow=39
FINES FINESS Array B    23.25   7  i P     P        05 17 29.3  -1.9
FINES                               pmax   pmax
      comp=Z,64nm,0.8s
FINES FINESS Array B    23.25   7   P      P        05 17 29.4  -1.8
FIA1  FINESS Array S    23.25   7   P      P        05 17 30.0  -1.2
NB2   NORSAR Subarra    23.31 349   P      P        05 17 30.0  -1.9
      comp=Z,22nm,1.0s,baz=162,slow=11
NOA   NORSAR Array B    23.31 349   P      P        05 17 30.2  -1.6
      comp=Z,21nm,0.8s,baz=160,slow=9.8,SNR=54
NOA                                 LR     LR       05 28 08.3
      comp=Z,638nm,20.3s,baz=165,slow=41
BELG  Belogornoye       23.43  45   P      P        05 17 32.7  -0.3
      comp=Z,75nm,0.7s,baz=298,slow=1.3,SNR=23
BELG                                LR     LR       05 26 42.7
      comp=Z,430nm,20.5s,baz=234,slow=37
BELG  Belogornoye       23.43  45d iP      P        05 17 33.0  -0.1
BELG                                pmax   pmax
      comp=Z,34nm,1.4s
TTIG  Tnine Tigouga,    25.01 260   P      P        05 17 52.0 +3.8
KLMR  Klimovskoe        25.38  22  eP      P        05 17 49.7  -1.4
KLMR                               e                05 18 23.5
KLMR                               eS      S        05 22 17.6 +0.7
KLMR                                pmax   pmax
      comp=Z,78nm,0.8s
KLMR  Klimovskoe        25.38  22  eP      P        05 17 49.7  -1.4
KLMR                                AMP             05 17 51.8
      comp=Z,78nm,0.8s
KLMR                               ePP     PnPn     05 18 23.6  -2.4
KLMR                               eS      S        05 22 17.6 +0.7
KLMR                               eS      S        05 22 17.6 +0.7
KLMR                                LQ     LQ       05 25 42.4
KLMR                                LQ     LQ       05 25 42.4
KLMR                                LR     LR       05 27 46.8
RAYN  Ar Rayn           26.04 118   P      P        05 17 58.0 +0.5
RAYN                                pmax   pmax
      comp=Z,10.0nm,1.0s
RAYN  Ar Rayn           26.04 118   P      P        05 17 58.0 +0.5
KIRV  Kirov             27.44  33   P      P        05 18 08.4  -1.2
      comp=Z,22nm,0.6s,baz=260,slow=5.7,SNR=6.9
KIRV                                LR     LR       05 29 07.5
      comp=Z,995nm,20.7s,baz=235,slow=37
PRGR  Permogore         27.92  26  eP      P        05 18 12.6  -1.3
PRGR                                pmax   pmax
      comp=Z,32nm,0.8s
AKTO  Aktyubinsk        29.05  53   P      P        05 18 23.1  -1.1
      comp=Z,3.2nm,0.5s,baz=235,slow=4.9,SNR=9.2
AKTO                                LR     LR       05 31 10.8
      comp=Z,492nm,21.4s,baz=276,slow=39
GEYT  Alibeck           29.48  79   P      P        05 18 28.0  -0.1
      comp=Z,5.6nm,0.5s,baz=249,slow=12,SNR=5.7
GEYT                                LR     LR       05 32 40.2
      comp=Z,137nm,19.1s,baz=240,slow=41
ABKAR Akbulak array     30.12  56   P      P        05 18 32.6  -1.1
ABKAR Akbulak array     30.12  56   P      P        05 18 32.3  -1.4
TORD  Torodi Ar. Bea    30.23 218   P      P        05 18 34.9   0.0
      comp=Z,10nm,0.7s,baz=27,slow=9.3,SNR=52
TORD  Torodi Ar. Bea    30.23 218   P      P        05 18 34.6  -0.3
TORD                                IAmb   IAmb     05 18 39.2
      comp=Z,12nm,1.4s
ARU   Arti              30.88  42c iP      P        05 18 38.1  -2.1
ARU                                 S      S        05 23 42.2  -1.3
ARU                                 pmax   pmax
      comp=Z,14nm,1.3s
ARCES ARCESS Array B    31.23   3   P      P        05 18 42.2  -1.1
      comp=Z,2.4nm,0.5s,baz=186,slow=9.7,SNR=21
ARCES                               LR     LR       05 32 31.2
      comp=Z,667nm,18.2s,baz=160,slow=39
SVE   Sverdlovsk        32.09  42  eP      P        05 18 50.3  -0.6
SVE                                 pmax   pmax
      comp=Z,26nm,1.2s
UOSS  Minazif           33.07 103   P      P        05 18 59.1  -0.8
UOSS                                IAmb   IAmb     05 19 06.8
      comp=Z,11nm,0.8s
BRVK  Borovoye          36.91  50d iP      P        05 19 32.4  -0.2
BRVK                                pmax   pmax
      comp=Z,11nm,0.8s
BRVK  Borovoye          36.91  50   P      P        05 19 32.5  -0.1
BRVK                                IAmb   IAmb     05 19 38.5
      comp=Z,24nm,1.3s
CHGR  Chuyangaron       37.73  74   P      P        05 19 40.0 +0.1
CHGR                                IAmb   IAmb     05 19 54.4
      comp=Z,29nm,0.7s
KKAR  Karatay Array     37.73  67   P      P        05 19 39.2  -0.6
KKAR  Karatay Array     37.73  67   P      P        05 19 39.2  -0.6
BTK   Batken            38.61  71   P      P        05 19 47.8 +0.5
BTK                                 pmax   pmax
      comp=Z,9.0nm,0.7s
BTK   Batken            38.61  71   P      P        05 19 47.8 +0.5
BTK                                 IAmb   IAmb     05 20 04.3
      comp=Z,8.7nm,0.7s
DBIC  Dimbokro          39.07 222   P      P        05 19 51.2   0.0
      comp=Z,6.2nm,0.5s,baz=30,slow=9.5,SNR=13
DBIC                                LR     LR       05 36 55.5
      comp=Z,382nm,20.3s,baz=42,slow=38
DBIC  Dimbokro          39.07 222   P      P        05 19 51.1  -0.2
DBIC                                pmax   pmax
      comp=Z,17nm,1.0s
DBIC  Dimbokro          39.07 222   P      P        05 19 51.1  -0.2
DBIC                                IAmb   IAmb     05 19 55.5
      comp=Z,17nm,1.0s
TIC   Toumodi           39.18 223  ePKP1   P        05 19 52.2   0.0
KIC   Kosan Boka        39.27 222  ePKP1   P        05 19 53.0 +0.1
      comp=Z,28nm,0.8s
LIC   Lamto             39.54 222  ePKP1   P        05 19 52.4  -2.7
      comp=Z,69nm,0.9s
SPITS Spitsbergen Ar    39.84 359   P      P        05 19 56.9  -0.1
      comp=Z,4.7nm,0.7s,baz=140,slow=11,SNR=1.1
MBAR  Mbarara           40.03 164   P      P        05 20 00.6 +1.2
MBAR                                pmax   pmax
      comp=Z,18nm,1.2s
MBAR  Mbarara           40.03 164   P      P        05 20 00.6 +1.2
MBAR                                IAmb   IAmb     05 20 05.2
      comp=Z,18nm,1.2s
AAK   Ala-Archa         40.69  66⇑eP      P        05 20 06.9 +2.2
AAK                                 pmax   pmax
      comp=Z,16nm,0.7s
AAK   Ala-Archa         40.69  66   P      P        05 20 05.2 +0.5
DAG   Danmarks Havn     41.98 347   P      P        05 20 15.0 +0.3
DAG   Danmarks Havn     41.98 347  i P     P        05 20 14.4  -0.3
DAG                                 IAmb   IAmb     05 20 15.4
      comp=Z,5.8nm,0.9s
KURK  Kurchatov         42.15  54⇑eP      P        05 20 15.9  -0.4
KURK                                pmax   pmax
      comp=Z,11nm,1.3s
KMBO  Kilima Mbogo      42.35 155   P      P        05 20 20.2 +1.7
      comp=Z,0.7nm,0.3s,baz=350,slow=7.9,SNR=6.9
NIL   Nilore            42.48  80   P      P        05 20 20.1 +0.8
NIL                                 pmax   pmax
      comp=Z,12nm,0.7s
NIL   Nilore            42.48  80   P      P        05 20 20.1 +0.8
NIL                                 IAmb   IAmb     05 20 32.0
      comp=Z,12nm,0.7s
KSH   Kashi             42.58  70   P      P        05 20 18.3  -1.9
ICESG Greenland Ices    44.04 333  i P     P        05 20 32.7 +0.9
ICESG                               IAmb   IAmb     05 20 33.9
      comp=Z,27nm,1.1s
SUMG  Summit            44.52 338  i P     P        05 20 36.5 +0.8
SUMG                                IAmb   IAmb     05 20 37.0
      comp=Z,31nm,0.8s
NOR   Nord              45.17 353  i P     P        05 20 40.1  -0.2
NOR                                 IAmb   IAmb     05 20 40.8
      comp=Z,9.4nm,0.8s
MK31  Makanchi Array    45.20  59d iP      P        05 20 39.7  -1.3
MK31  Makanchi Array    45.20  59   P      P        05 20 39.4  -1.5
MK31                                IAmb   IAmb     05 20 53.2
      comp=Z,6.2nm,0.8s
MKAR  Makanchi Array    45.20  59   P      P        05 20 39.6  -1.4
      comp=Z,3.2nm,0.5s,baz=281,slow=7.1,SNR=24
ZAA0  Zalesovo Array    45.54  48   P      P        05 20 42.2  -1.3
ZALV  Zalesovo Beam     45.54  48   P      P        05 20 42.4  -1.1
      comp=Z,17nm,0.4s,baz=277,slow=8.8,SNR=74
ZALV  Zalesovo Beam     45.54  48   P      P        05 20 42.3  -1.2
DY2G  Dye2              46.20 329  eP      P        05 20 48.4  -0.5
NRIK  Noril'sk          46.55  27   P      P        05 20 52.0 +0.7
      comp=Z,4.0nm,0.6s,baz=238,slow=5.4,SNR=6.6
NRIK  Noril'sk          46.55  27ceP      P        05 20 51.7 +0.4
NRIK                                pmax   pmax
      comp=Z,16nm,1.3s
DGZ   Jazzator, Alta    47.90  54⇑eP      P        05 21 01.2  -1.1
DGZ                                 pmax   pmax
      comp=Z,4.0nm,0.6s
WMQ   Urumqi            49.67  61  eP      P        05 21 16.1 +0.3
WMQ                                 pP     pwP      05 21 23.3 +1.3
WMQ                                 sP     sP       05 21 31.6  +10
WMQ                                 pmax   pmax
      comp=Z,28nm,0.9s
WMQ                                 pmax   pmax
      comp=Z,110nm,4.5s
PYUN  Piuthan           52.41  82  eP      P        05 21 35.4  -1.5
DANN  Dangsing          52.89  81  eP      P        05 21 39.1  -1.4
      comp=Z,37nm,0.8s
KOLN  Koldanda          53.04  82  eP      P        05 21 40.0  -1.5
      comp=Z,4.9nm,0.3s
GKN   Gorkha            53.73  81  eP      P        05 21 44.6  -2.0
      comp=Z,7.8nm,0.3s
LSZ   Lusaka            53.97 171   P      P        05 21 50.7 +2.6
      comp=Z,2.4nm,0.4s,baz=14,slow=7.6,SNR=6.6
LSZ   Lusaka            53.97 171   IAmb   IAmb     05 23 14.7
      comp=Z,17nm,1.6s
DMN   Daman             54.29  81  eP      P        05 21 49.0  -1.7
      comp=Z,11nm,0.6s
PKIN  Phulchoki         54.53  81  eP      P        05 21 50.6  -1.9
      comp=Z,6.5nm,0.5s
PKI   Pulchoki          54.54  81  eP      P        05 21 50.5  -2.2
GUN   Gumba             54.74  80  eP      P        05 21 52.4  -1.7
      comp=Z,8.7nm,0.5s
JIRN  Jiri              55.10  80  eP      P        05 21 55.4  -1.4
      comp=Z,4.1nm,0.4s
RAMN  Ramite            55.77  81  eP      P        05 21 59.4  -2.0
TAPN  Taplejung         56.43  80  eP      P        05 22 04.3  -1.9
ZAK   Zakamensk         57.41  49  eP      P        05 22 11.8  -0.8
ZAK                                 pmax   pmax
      comp=Z,8.0nm,1.3s
SCHQ  Schefferville     58.19 317   P      P        05 22 18.1 +0.2
      comp=Z,5.1nm,0.5s,baz=63,slow=5.4,SNR=20
TIXI  Tiksi             59.39  20   P      P        05 22 26.1 +0.2
      comp=Z,1.7nm,0.3s,baz=305,slow=3.7,SNR=4.1
TIXI  Tiksi             59.39  20⇓eP      P        05 22 26.2 +0.3
TIXI  Tiksi             59.39  20   IAmb   IAmb     05 22 26.9
      comp=Z,12nm,1.2s
GTA   Gaotai            59.74  62  eP      P        05 22 31.0 +2.0
GTA                                 pP     sP       05 22 34.3  -0.5
GTA                                 sP     pP       05 22 37.3 +4.1
GTA                                 pmax   pmax
      comp=Z,4.0nm,1.0s
SONM  Songino Array     60.31  51   P      P        05 22 31.9  -0.9
      comp=Z,2.7nm,0.9s,baz=279,slow=7.9,SNR=9.9
ULN   Ulaanbaatar       60.70  50⇑eP      P        05 22 34.6  -0.9
ULN                                 pmax   pmax
      comp=Z,11nm,2.1s
OPO   Ambohidratompo    62.05 151   P      P        05 22 47.5 +2.7
      comp=Z,7.1nm,0.8s,baz=340,slow=6.7,SNR=9.2
LBTB  Lobatse           63.35 175   P      P        05 22 55.1 +1.8
      comp=Z,7.4nm,0.8s,baz=341,slow=7.7,SNR=7.3
LBTB                                LR     LR       05 52 50.4
      comp=Z,241nm,18.1s,baz=354,slow=38
YAK   Yakutsk           64.88  29deP      P        05 23 02.1  -0.7
YAK                                 pmax   pmax
      comp=Z,12nm,0.6s
BOSA  Boshof            66.90 175   P      P        05 23 16.0  -0.3
      comp=Z,3.7nm,0.8s,baz=10,slow=7.0,SNR=6.3
HHC   Hu-ho-hao-te      66.92  56  eP      P        05 23 17.3 +0.8
HHC                                 pmax   pmax
      comp=Z,9.0nm,0.7s
HHC                                 pmax   pmax
      comp=Z,150nm,6.6s
XAN   Xi'an             68.74  63   P      P        05 23 31.6 +3.5
XAN                                 pP     sP       05 23 40.0 +5.8
XAN                                 pmax   pmax
      comp=Z,8.0nm,0.9s
CMAR  Chiang Mai Arr    69.91  82   P      P        05 23 33.9  -1.6
      comp=Z,0.7nm,0.3s,baz=309,slow=7.6,SNR=6.5
CMAR  Chiang Mai Arr    69.91  82  i P     P        05 23 35.7 +0.3
CMAR                                pmax   pmax
      comp=Z,1.0nm,0.3s
BILL  Bilibino          70.73  13  i P     P        05 23 38.4  -1.3
BILL                               i                05 23 57.9
BILL                                pmax   pmax
      comp=Z,17nm,1.3s
SEY   Seymchan          71.88  21   P      P        05 23 47.4 +0.8
      comp=Z,1.6nm,0.4s,baz=309,slow=9.7,SNR=3.9
TOLK  Toolik Lake Re    72.94 356   P      P        05 23 54.8 +1.8
TOLK                                IAmb   IAmb     05 23 56.5
      comp=Z,11nm,1.1s
YKA   Yellowknife Ar    73.08 340   P      P        05 23 54.4 +0.6
      comp=Z,1.4nm,0.7s,baz=32,slow=5.1,SNR=3.3
KLR   Kul'dur           73.68  40   P      P        05 23 57.2  -0.4
      comp=Z,5.9nm,0.7s,baz=317,slow=6.9,SNR=19
KLR   Kul'dur           73.68  40ceP      P        05 23 57.1  -0.5
KLR                                 pmax   pmax
      comp=Z,11nm,0.9s
CN2   Changchun         73.72  47  eP      P        05 23 57.8  -0.2
CN2                                 pmax   pmax
      comp=Z,20nm,0.8s
BMAR  Burnt Mountain    73.80 354   P      P        05 23 59.6 +1.5
WHN   Wuhan             74.50  63 ⇓P      P        05 24 07.4 +4.7
IMAR  Indian Mountai    75.77 358   P      P        05 24 10.6 +1.2
H21K  Melozitna Rive    76.06 357   P      P        05 24 12.7 +1.6
H21K                                IAmb   IAmb     05 24 13.8
      comp=Z,16nm,0.9s
MDM   Murphy Dome       76.51 355   P      P        05 24 14.3 +0.6
ILAR  Eielson Array     76.60 354   P      P        05 24 14.9 +0.8
      comp=Z,1.4nm,0.7s,baz=1.0,slow=4.4,SNR=16
ILAR  Eielson Array     76.60 354   P      P        05 24 15.0 +0.8
NJ2   Nanjing           76.72  60  eP      P        05 24 16.9 +1.5
NJ2                                 pmax   pmax
      comp=Z,16nm,0.5s
USRK  Ussuriysk Ar.     77.10  43   P      P        05 24 16.8  -0.6
      comp=Z,5.8nm,0.7s,baz=313,slow=4.4,SNR=9.9
USRK  Ussuriysk Ar.     77.10  43   P      P        05 24 16.9  -0.5
DHY   Denali Highway    78.31 354   P      P        05 24 24.6 +0.6
K20K  Telida            78.41 357   P      P        05 24 25.5 +1.1
KSAR  Wonju Array Be    79.17  51   P      P        05 24 28.9  -0.1
KSAR  Wonju Array Be    79.17  51   P      P        05 24 28.9  -0.1
KSRS  Korea Array       79.19  51   P      P        05 24 28.4  -0.6
      comp=Z,2.0nm,0.6s,baz=315,slow=5.2,SNR=7.2
L19K  White Mountain    79.61 358   P      P        05 24 31.9 +1.0
YSS   Yuzh-Sakhalins    80.56  36⇓eP      P        05 24 34.9  -1.4
YSS                                 pmax   pmax
      comp=Z,72nm,1.5s
X48A  Hartselle         81.14 307   P      P        05 24 40.4 +0.8
X48A                                IAmb   IAmb     05 24 42.6
      comp=Z,8.6nm,0.8s
BDFB  Brasilia          83.59 244   P      P        05 24 54.9 +2.2
      comp=Z,3.6nm,0.8s,baz=49,slow=9.2,SNR=5.2
T35A  Sooner Cattle     85.09 314   P      P        05 25 01.7 +1.6
JTMT  Jette             85.15 331   P      P        05 25 01.2 +0.9
JTMT                                IAmb   IAmb     05 25 25.7
      comp=Z,11nm,1.0s
MAT   Matsushiro        85.82  46   P      P        05 25 03.2  -0.5
MJAR  Matsushiro Arr    85.82  46   P      P        05 25 03.4  -0.3
      comp=Z,3.9nm,0.7s,baz=313,slow=3.8,SNR=9.9
MJAR  Matsushiro Arr    85.82  46   P      P        05 25 03.8 +0.1
MJAR                                IAmb   IAmb     05 25 04.4
      comp=Z,5.1nm,0.8s
C09A  Chrisman Ranch    86.56 334   P      P        05 25 08.1 +1.0
C09A                                IAmb   IAmb     05 25 14.5
      comp=Z,13nm,1.2s
PDAR  Pinedale Array    87.26 326   P      P        05 25 10.4  -0.5
      comp=Z,0.4nm,0.7s,baz=91,slow=3.9,SNR=3.0
HWUT  Hardware Ranch    89.08 326   P      P        05 25 20.6 +1.1
SRU   San Rafael Swe    90.63 324   P      P        05 25 27.2 +0.3
SRU                                 pmax   pmax
      comp=Z,6.0nm,1.0s
SRU   San Rafael Swe    90.63 324   P      P        05 25 27.2 +0.3
SRU                                 IAmb   IAmb     05 25 43.7
      comp=Z,5.6nm,1.0s
TXAR  Lajitas Array     94.72 313   P      P        05 25 47.4 +1.6
      comp=Z,0.7nm,0.9s,baz=69,slow=4.3,SNR=4.3
WRA   Warramunga Arr   120.61  92   PKP    PKPdf    05 31 15.2  -1.0
      comp=Z,0.8nm,0.7s,baz=313,slow=1.4,SNR=9.9
ASAR  Alice Springs    122.27  96   PKP    PKPdf    05 31 18.6  -0.7
      comp=Z,1.1nm,0.7s,baz=342,slow=2.0,SNR=13
```

LJU ***20*** *05:14:47.8, 45.°69N×15.°61E, h10km, ML2.7*

ISC 20 05:14:47.9±0.9**, 45.°70N**±0.°02×**15.°62E**±0.°02**, h10**km±6km**,**

n37, σ0.s32/55**, 2C-1D, Northwestern Balkan Peninsula**

```
Code  Station Name        Δ°   AZ°   Phase ID         Time      Res
                                     Op     ISC      h  m  s    ISC
OZLJ  Ozalj              0.13 232  ePg     Pg       05 14 51.1 +0.2
OZLJ                                Sg     Sg       05 14 53.3 +0.2
CRES  Cresnjev           0.17 320⇑iPg     Pg       05 14 51.5  -0.1
CRES                               i Sg    Sg       05 14 54.0  -0.3
CRES                                IAML            05 14 54.7
      comp=Z,1µm,0.1s
GCIS  Gornji Cirnik      0.17   3⇓iPg     Pg       05 14 51.5  -0.1
GCIS                               i Sg    Sg       05 14 54.0  -0.3
GCIS                                IAML            05 14 55.3
      comp=Z,718nm,0.2s
ZAG   Zagreb             0.29  63  ePg     Pg       05 14 54.0 +0.2
ZAG                                 Sg     Sg       05 14 58.5 +0.9
CESS  Cesta pri Krsk     0.30 339  i Pg    Pg       05 14 54.0 +0.1
CESS                               i Sg    Sg       05 14 58.3 +0.4
CESS                                IAML            05 14 59.1
      comp=Z,1µm,0.2s
GOLS  Golise             0.32   1  ePg     Pg       05 14 54.2   0.0
GOLS                               i Sg    Sg       05 14 58.8 +0.3
GOLS                                IAML            05 15 01.1
      comp=Z,465nm,0.2s
BOJS  Bojanci            0.32 233  i Pg    Pg       05 14 54.5 +0.3
BOJS                               i Sg    Sg       05 14 59.0 +0.5
BOJS                                IAML            05 14 59.9
      comp=Z,456nm,0.1s
PTJ   Puntijarka         0.33  49  ePg     Pg       05 14 54.4  -0.1
PTJ                                 Sg     Sg       05 14 59.1 +0.3
LEGS  Legarje            0.33 321  i Pg    Pg       05 14 54.3  -0.1
LEGS                               eSg     Sg       05 14 59.1 +0.3
DOBS  Dobrina            0.47 347  i Pg    Pg       05 14 57.2 +0.2
DOBS                               i Sg    Sg       05 15 03.0  -0.2
DOBS                                IAML            05 15 04.4
      comp=Z,270nm,0.1s
VISS  Visnje             0.55 282⇑iPg     Pg       05 14 59.0 +0.3
VISS                               i Sg    Sg       05 15 05.6  -0.4
VISS                                IAML            05 15 10.0
      comp=Z,207nm,0.2s
PDKS  Podkum             0.57 311  i Pg    Pg       05 14 59.1 +0.2
PDKS                               i Sg    Sg       05 15 06.1  -0.3
PDKS                                IAML            05 15 08.7
      comp=Z,223nm,0.2s
GBRS  Gornja Briga       0.59 254  i Pg    Pb       05 14 59.8  -0.5
GBRS                                IAML            05 15 12.0
      comp=Z,82nm,0.1s
KALN  Kalnik             0.73  53  ePg     Pg       05 15 02.1 +0.1
KALN                                Sg     Sg       05 15 11.9 +0.3
VNDS  Vrh nad Dolski     0.76 303  i Pg    Pg       05 15 02.7 +0.2
VNDS                                IAML            05 15 15.1
      comp=Z,119nm,0.2s
GROS  Grobnik            0.77 354  i Pg    Pg       05 15 02.8   0.0
GROS                               i                05 15 04.5
GROS                                IAML            05 15 15.9
      comp=Z,476nm,0.3s
MOSL  Moslavina          0.80  95  ePg     Pg       05 15 03.2  -0.2
PLIT  Plitvice           0.82 180  ePg     Pg       05 15 03.1  -0.5
CEY   Cerknica           0.83 273  i Pg    Pb       05 15 04.2  -0.3
CEY                                 IAML            05 15 20.0
      comp=Z,137nm,0.2s
LJU   Ljubljana          0.84 295  i Pg    Pb       05 15 04.3  -0.2
LJU                                 IAML            05 15 18.7
      comp=Z,151nm,0.3s
GBAS  Gorenja Brezov     0.85 287  i Pg    Pg       05 15 04.4 +0.1
GBAS                                IAML            05 15 18.6
      comp=Z,80nm,0.2s
KOGS  Kog                0.87  30  i Pg    Pg       05 15 04.7   0.0
KOGS                               e                05 15 06.0
KOGS                               i Sg    Sb       05 15 17.2 +0.3
KOGS                                IAML            05 15 19.9
      comp=Z,231nm,0.3s
RIY   Rijeka             0.88 245  ePg     Pg       05 15 04.8   0.0
RIY                                 Sg     Sg       05 15 15.9  -0.3
KNDS  Knezji Dol         0.88 260  i Sg    Sb       05 15 17.1  -0.1
KNDS                                IAML            05 15 20.7
      comp=Z,148nm,0.3s
MOZS  Mozjanca           1.01 307  i Pg    Pb       05 15 07.4  -0.1
MOZS                                IAML            05 15 25.4
      comp=Z,76nm,0.2s
CRNS  Crni Vrh           1.02 293  i Pg    Pb       05 15 07.5  -0.1
CRNS                               eSg     Sn       05 15 22.3  -0.4
CRNS                                IAML            05 15 23.9
      comp=Z,92nm,0.1s
OBKA  Obir               1.10 318   Pg     Pn       05 15 09.5   0.0
      comp=Z,134nm,0.4s
OBKA                               i Sg    Sn       05 15 25.2 +0.4
      comp=Z,174nm,0.3s
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JAVS	Javornik	1.10	281	i Pg	Pb	05 15 09.1	0.0
JAVS				IAML		05 15 25.9	
	comp=Z,75nm,0.3s						
SKDS	Skadanscina	1.13	263	eSg	Sn	05 15 25.6	+0.2
SKDS				IAML		05 15 28.7	
	comp=Z,68nm,0.2s						
UDBI	Udbina	1.17	175	ePb	Pb	05 15 10.2	-0.1
SMRN	Sveta Marina	1.22	238	ePg	Pg	05 15 12.3	+1.0
NVLJ	Novalja	1.25	205	ePg	Pn	05 15 11.2	-0.1
VOJS	Vojsko	1.26	286	i Pg	Pg	05 15 12.4	+0.4
GORS	Gorjuse	1.29	299	i Pg	Pg	05 15 12.4	-0.2
GORS				IAML		05 15 34.3	
	comp=Z,85nm,0.2s						
MYKA	Terra Mystica	1.66	305	i Pg	Pg	05 15 19.7	0.0
	comp=Z,51nm,0.3s						
MYKA				i Sg	Sg	05 15 41.6	+0.4
	comp=Z,26nm,0.3s						
KRUC	Moravsky	3.41	9	ePN	Pn	05 15 40.9	-0.2
VRAC	Vranov	3.67	10	ePN	Pn	05 15 44.4	-0.3

IDC 20 05:20:37.5±1.8**, 0°.95N×127°.26E, h0^{km}, mb3.8**/4**, mb1 4.0**/4**, mb1mx3.5**/54**, mbtmp3.8**/4**, MS3.1**/1**, Ms1 3.1**/1**, ms1mx2.6**/41**, Error ellipse: s-maj=165.4km s-min=21.9km az=67.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	13.87	104	LR	LR	05 29 46.0	
	comp=Z,76nm,18.5s,baz=353,slow=40						
WRA	Warramunga Arr	21.89	162	P	P	05 25 31.4	-0.9
	1.5nm,0.6s,baz=340,slow=11,SNR=14						
ASAR	Alice Springs	25.30	166	P	P	05 26 06.6	+0.6
	1.5nm,0.8s,baz=348,slow=12,SNR=12						
MKAR	Makanchi Array	60.14	326	P	P	05 30 46.6	-0.3
	0.7nm,0.7s,baz=118,slow=6.9,SNR=5.2						
KURBB	Kurchatov Arra	64.36	328	P	P	05 31 15.3	+0.2
	0.6nm,0.3s,baz=131,slow=5.5,SNR=4.1						

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*JMA **20** 05:31:47.6±0.1, 26°.38N×143°.11E, h0^{km}, M6.3*

JMA Felt II J1.

*NIED **20** 05:31:47.6, 26°.39N×143°.11E, h0^{km}, MW5.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{17}Nm; M$_{rr}$2.64; M$_{\theta\theta}$-0.14; M$_{\phi\phi}$-2.50; M$_{r\theta}$1.37; M$_{\theta\phi}$-1.37; M$_{\phi r}$5.53; Fault plane solution: M$_0$6.39000×10^{17} NP1:ϕ_s15.00000°, δ77.00000°, λ85.00000°. NP2:ϕ_s218.00000°, δ14.00000°, λ112.00000°.*

*BJI **20** 05:31:48.2±0.0, 26°.39N×142°.63E, h7^{km}, mB5.8/66, mb5.6/73, Ms6.0/97, Ms7 5.9/90*

*IDC **20** 05:31:49.1±0.4, 26°.28N×142°.54E, h0^{km}, mb5.2/39, mb1 5.3/43, mb1mx5.2/48, mbtmp5.2/43, ML4.2/4, MS5.4/24, Ms1 5.4/24, ms1mx5.2/38, Error ellipse: s-maj=12.9km s-min=9.3km az=82.0*

*NEIC **20** 05:31:52, 26°.37N×142°.70E, h11^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$3.79; M$_{\theta\theta}$-0.34; M$_{\phi\phi}$-3.44; M$_{r\theta}$2.46; M$_{\theta\phi}$-1.23; M$_{\phi r}$4.35; Fault plane solution: M$_0$6.30000×10^{17} NP1:ϕ_s191.01000°, δ19.31000°, λ74.57000°. NP2:ϕ_s27.31000°, δ71.41000°, λ95.33000°. Principal axes: T 6.2934, Plg63.0000°, Azm306.0000°; N 0.0067, Plg5.0000°, Azm206.0000°; P -6.3001, Plg26.0000°, Azm113.0000°;*

*NEIC **20** 05:31:52.5±1.8, 26°.36N±0°.04×142°.64E±0°.08, h14^{km}±1^{km}, mb5.6/116, Ms_20 5.7/322, Mwb5.8/99, Mww5.8, Mwc5.8(GCMT) Error ellipse: s-maj=13.9km s-min=2.7km az=60.0*

*MOS **20** 05:31:52.4±1.1, 26°.33N×142°.45E, h27^{km}, mb5.7/92, MS5.9/40, Error ellipse: s-maj=7.2km s-min=3.3km az=113.2*

*GCMT **20** 05:31:54.5±0.1, 26°.30N±0°.01×142°.80E±0°.01, h18^{km}, MW5.8/153, Moment Tensor Solution. s134,c273; s153,c470; Duration: 2^{s}0 Moment tensor: Scale 10^{17} Nm; M$_{rr}$5.25±.05; M$_{\theta\theta}$-0.16±.04; M$_{\phi\phi}$-5.08±.04; M$_{r\theta}$1.77±.10; M$_{\theta\phi}$-1.66±.03; M$_{\phi r}$4.09±.12; Best double couple: M$_0$7.01700×10^{17} NP1:ϕ_s192.00000°, δ26.00000°, λ82.00000°. NP2:ϕ_s21.00000°, δ65.00000°, λ94.00000°. Principal axes: T 6.8630, Plg70.0000°, Azm299.0000°; N 0.3160, Plg3.0000°, Azm200.0000°; P -7.1710, Plg20.0000°, Azm108.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*BGR **20** 05:31:54.2±0.0, 26°.03N×142°.45E, h33^{km}, mb5.7, Ms6.2*

*NEIC **20** 05:31:55, 26°.28N×142°.82E, h15^{km}, Moment Tensor Solution. Duration: 4^{s}0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$4.83; M$_{\theta\theta}$0.05; M$_{\phi\phi}$-4.87; M$_{r\theta}$1.79; M$_{\theta\phi}$-1.59; M$_{\phi r}$4.28; Fault plane solution: M$_0$6.90000×10^{17} NP1: ϕ_s191.00000°, δ24.00000°, λ81.00000°. NP2:ϕ_s21.00000°, δ66.00000°, λ94.00000°. Principal axes: T 6.6440, Plg69.0000°, Azm299.0000°; N 0.4816, Plg4.0000°, Azm199.0000°; P -7.1256, Plg21.0000°, Azm108.0000°;*

*NEIC **20** 05:31:56, 26°.15N×142°.86E, h14^{km}, Moment Tensor Solution. Duration: 8^{s}0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$4.36; M$_{\theta\theta}$-0.13; M$_{\phi\phi}$-4.23; M$_{r\theta}$1.59; M$_{\theta\phi}$-2.08; M$_{\phi r}$2.58; Fault plane solution: M$_0$5.66000×10^{17} NP1: ϕ_s196.00000°, δ29.00000°, λ79.00000°. NP2:ϕ_s28.00000°, δ61.00000°, λ96.00000°. Principal axes: T 5.2751, Plg73.0000°, Azm312.0000°; N 0.6980, Plg5.0000°, Azm205.0000°; P -5.9731, Plg16.0000°, Azm114.0000°;*

ISC 20 05:31:52.2±0.5**, 26°.35N**±0°.03×**142°.68E**±0°.03**, h16^{km}**±2^{km}**, h16^{km}:pP-P, n1298, σ1^{s}82**/1414**, mb5.5**/235**, MS5.7**/260**, 157C-68D, Fault plane solution: NP1:**ϕ_s57.71578°, δ83.33986°**,** λ111.44538°. **NP2:**ϕ_s164.16538°**,** δ22.40913°, λ17.71215°. **Principal axes:** T Plg47.3681°, Azm350.1555°**;** N Plg21.2936°**,** Azm235.1073°**;** P Plg34.8688°**,** Azm129.3489°**; Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHH2	Haha-jima-NKT2	0.53	302	P	Pn	05 32 04.7	-0.4
JHH2				eS	Sn	05 32 16.8	+3.0
CBIJ	Chichi jima	0.86	330	P	Pb	05 32 08.7	-0.1
JCJ	Chichijima	0.86	330	Pn	Pg	05 32 08.9	-0.1
	2µm,0.3s,baz=96,slow=22,SNR=284						
JCJ				Sn	Sn	05 32 24.4	+2.3
	5µm,0.3s,baz=294,slow=23,SNR=9.0						
JCJ				LR	LR	05 32 35.9	
	comp=Z,179µm,21.4s,baz=92,slow=54						
JCJ	Chichijima	0.86	330	P	Pn	05 32 11.0	+1.3
JHJ	Hachijo jima 2	7.20	340	LR	LR	05 36 19.5	
	comp=Z,43µm,20.0s,baz=166,slow=38						
BSO3	Boso 3	8.63	348	P	Pn	05 33 55.1	-1.1
BSO4	Boso 4	8.85	347	P	Pn	05 33 59.2	-0.1
JHTM	Izuhatsuma	9.14	341	P	Pn	05 34 05.1	+1.6
JOD2	Odawara 2	9.41	342	P	Pn	05 34 07.0	-0.1
JSGW	Sagamiharawaka	9.69	343	P	Pn	05 34 10.7	-0.3
JYN	Shimob	9.79	340	P	Pn	05 34 13.8	+1.5
JNY	Yasuok	9.89	336	P	Pn	05 34 14.3	+0.6
JHU	Hanno	9.91	344	P	Pn	05 34 12.6	-1.4
JHU				eS	Sn	05 36 01.0	-3.9
JYT	Yasato	10.07	348	P	Pn	05 34 16.0	-0.2
JYT				eS	Sn	05 36 05.9	-3.0
JYT	Yasato	10.07	348		Pn	05 34 15.0	-1.2
JRY	Ryogami san	10.16	342	P	Pn	05 34 16.9	-0.6
INU	Inuyama	10.20	333		Pn	05 34 18.2	+0.3
INU	Inuyama	10.20	333	P	Pn	05 34 18.8	+0.8
JGF	Kuroka	10.29	335		Pn	05 34 20.0	+0.8
JMZ	Minamidaito 2	10.31	270		Pn	05 34 21.2	+1.6
JHO	Hitachi	10.39	351	P	Pn	05 34 18.8	-1.7
JAG	Ashikaga	10.42	345	P	Pn	05 34 18.9	-2.0
JMN	Monobe	10.59	316		Pn	05 34 25.8	+2.5
JNG	Nsakai	10.76	340	P	Pn	05 34 26.5	+0.8
MJAR	Matsushiro Arr	10.85	341	Pn	Pn	05 34 26.2	-0.7
	1.3nm,0.3s,baz=161,slow=12,SNR=69						
MJAR				LR	LR	05 38 43.8	
	comp=Z,22µm,18.3s,baz=145,slow=38						
MJAR	Matsushiro Arr	10.85	341	P	Pn	05 34 27.4	+0.5
MJAR	Matsushiro Arr	10.85	341		Pn	05 34 27.4	+0.5
MAJO	Matsushiro	10.85	341	d iP	Pn	05 34 27.1	+0.2
MAJO	Matsushiro	10.85	341		Pn	05 34 27.2	+0.2
MAJO	Matsushiro	10.85	341	P	Pn	05 34 27.4	+0.5
MAT	Matsushiro	10.85	341	P	Pn	05 34 26.7	-0.2
MAT				S	Sn	05 36 29.5	+1.4
MAT	Matsushiro	10.85	341	P	Pn	05 34 27.2	+0.3
MAT				S	Sn	05 36 27.3	-0.8
MJB9	Matsu-Tunnel	10.86	341		Pn	05 34 27.1	+0.2
JWT	Wachi	10.88	327		Pn	05 34 28.2	+1.0
JJN	Nakama	11.39	341	P	Pn	05 34 34.2	0.0
JMM	Marumori	11.60	353		Pn	05 34 35.9	-1.1
JSD	Sado	12.24	343	P	Pn	05 34 43.8	-2.0
JSD	Sado	12.24	343		Pn	05 34 43.8	-2.0
GUMO	Guam	12.86	170	Pn	Pn	05 34 55.6	+1.2
	6.3nm,0.3s,baz=175,slow=7.4,SNR=2.3						
GUMO				LR	LR	05 38 05.9	
	comp=Z,5µm,20.9s,baz=350,slow=29						
GUMO	Guam	12.86	170	P	Pn	05 34 56.6	+2.2
GUMO	Guam	12.86	170	Pn	Pn	05 34 56.6	+2.2
JOW	Kunigami	12.90	275	Pn	Pn	05 34 57.2	+2.3
	1.1nm,0.3s,baz=100,slow=20,SNR=3.8						
JOW				LR	LR	05 39 16.5	
	comp=Z,27µm,20.6s,baz=88,slow=35						
JOW	Kunigami	12.90	275	P	P	05 35 00.5	-5.1
JTM	Tenmabayashi	14.46	355	Pn	Pn	05 35 14.4	-1.9
YNDB	Yeoundo	15.14	306	P	P	05 35 33.2	+2.6
	SNR=12						
KSADO	Andong	15.41	314	P	P	05 35 36.0	+2.5
	SNR=6.7						
GWYB	Gwangyang	15.47	307	P	P	05 35 37.0	+2.8
	SNR=5.9						
KOHB	KOHEUNG	15.61	306	P	P	05 35 35.4	-0.3
	SNR=32						
KOHB	KOHEUNG	15.61	306	P	P	05 35 40.1	+4.4
	SNR=9.5						
ERM	Erimo	15.63	1	ceP	Pn	05 35 32.7	+0.9
ERM				pmax	pmax		
	comp=Z,251nm,1.3s						
ERM	Erimo	15.63	1		Pn	05 35 30.7	-1.1
ERM				IAmb	IAmb	05 35 44.8	
	comp=Z,270nm,1.1s						
ERM	Erimo	15.63	1	P	P	05 35 34.3	-1.6
KSKCH	Geochang	15.65	310	P	P	05 35 38.1	+1.8
	SNR=11						
HAMB	Hamyang	15.72	309	P	P	05 35 38.0	+1.1
	SNR=22						
BOSB	Boseong-gun	15.73	306	P	P	05 35 41.0	+4.0
	SNR=11						
KSTBA	Taebaek	15.85	316	P	P	05 35 43.1	+4.7
	SNR=6.1						
NAWB	Namwon	15.92	308	P	P	05 35 40.0	+0.9
	SNR=20						
KSSAJ	Sangju	15.93	313	P	P	05 35 41.1	+1.9
	SNR=7.2						
KSCPR	CHUPUNGNYEONG	15.95	312	P	P	05 35 41.6	+2.1
	SNR=6.3						
KSCPR	CHUPUNGNYEONG	15.95	312	P	P	05 35 39.8	+0.3
	SNR=11						
SUCA	Sunchang	16.07	308	P	P	05 35 43.0	+2.1
	SNR=11						
SUCA	Sunchang	16.07	308	P	P	05 35 44.0	+3.1
	SNR=8.2						
KSKWJ	Gwangju	16.08	307	P	P	05 35 42.7	+1.8
	SNR=23						
KSKWJ	Gwangju	16.08	307	P	P	05 35 43.0	+2.1
	SNR=23						
HANB	Haenam	16.11	304	P	P	05 35 43.0	+1.8
	SNR=16						
KSMGY	Mungyeong	16.14	313	P	P	05 35 44.4	+2.9
	SNR=5.9						
OKCB	Cheongsan-myeo	16.14	312	P	P	05 35 44.0	+2.5
	SNR=11						
KSBON	Boeun	16.22	312	P	P	05 35 43.5	+1.0
	SNR=16						
KSJEO	Jeonju	16.25	310	P	P	05 35 45.0	+2.1
	SNR=12						
KSJDO	Jindo	16.26	304	P	P	05 35 44.9	+1.9
	SNR=12						
KSJEU	Jeongeup	16.28	308	P	P	05 35 44.7	+1.5
	SNR=13						
KSJEU	Jeongeup	16.28	308	P	P	05 35 46.6	+3.4
	SNR=11						
KSCHJ	Chungju	16.32	314	P	P	05 35 48.0	+4.4
	SNR=5.8						
TJN	Taejon	16.44	311	ceP	Pn	05 35 42.1	-0.1
TJN	Taejon	16.44	311	P	P	05 35 46.4	+1.5
GOCB	Gochang-gun	16.45	307	P	P	05 35 47.1	+2.1
	SNR=14						
JEW	Eniwo	16.48	357		Pn	05 35 41.2	-1.5
JEW				IAmb	IAmb	05 36 08.2	
	comp=Z,481nm,1.0s						
KOJ2	Gongju-si	16.64	311	P	P	05 35 50.0	+2.8
	SNR=21						
SMKB	Mukjeong-gil	16.64	308	P	P	05 35 51.0	+3.9
	SNR=5.9						
BUYB	Buyeo	16.69	310	P	P	05 35 51.0	+3.3
	SNR=14						
KSRS	Korea Array	16.70	315	Pn	Pn	05 35 46.1	+0.6
	comp=Z,0.8nm,0.3s,baz=126,slow=11,SNR=51						
KSRS				LR	LR	05 42 03.0	
	comp=Z,58µm,18.6s,baz=120,slow=37						
KSAR	Wonju Array Be	16.71	315	P	Pn	05 35 46.4	+0.7
KSAR	Wonju Array Be	16.71	315		Pn	05 35 46.4	+0.7
KSCEA	Cheonan	16.76	312	P	P	05 35 50.0	+1.5
	SNR=19						
KS19	Wonju Array Si	16.76	315		Pn	05 35 47.2	+0.9
MNYD	Munyeodo	16.79	308	P	P	05 35 53.0	+4.1
	SNR=9.2						
KSSKC	Sokcho	16.85	318	P	P	05 35 50.0	+0.5
	SNR=8.9						
ANMD	Anmado	16.86	306	P	P	05 35 52.0	+2.5
	SNR=7.9						
PYTK	Pyeongtaek	16.95	313	P	P	05 35 54.8	+4.3
	SNR=7.3						
PYTK	Pyeongtaek	16.95	313	P	P	05 35 53.6	+3.0
	SNR=8.2						
KSCHC	Chuncheon	16.96	316	P	P	05 35 52.0	+1.3
	SNR=6.0						
PORA	Boryeong	16.97	310	P	P	05 35 54.0	+3.2
	SNR=6.3						
GAPB	Gapyeong	17.20	315	P	P	05 35 54.0	+0.6
	SNR=5.7						
KSSWO	Suwon	17.20	313	P	P	05 35 55.9	+2.6
	SNR=7.5						
HAWB	Hwaseong-si	17.23	312	P	P	05 35 57.0	+3.4
	SNR=5.9						
OYDB	Oeyeondo	17.25	309	P	P	05 35 59.0	+5.1
	SNR=6.7						
KSSES	Seosan	17.28	311	P	P	05 35 57.0	+2.8
	SNR=9.4						
HWCB	Hwacheon	17.33	317	P	P	05 35 55.2	+0.4
	SNR=7.8						
KSCWO	Cheorwon	17.34	316	P	P	05 35 55.9	+1.0
	SNR=8.9						
INCN	Inchon	17.54	313	P	P	05 35 57.9	+0.7
INCN				pmax	pmax		
	comp=Z,79nm,1.1s						
INCN	Inchon	17.54	313	P	P	05 35 57.9	+0.7
INCN	Inchon	17.54	313	P	P	05 36 00.2	+3.0
YNCB	YEONCHEON	17.68	315	P	P	05 36 00.0	+1.4
	SNR=7.9						
ASAJ	Asahikawa	17.73	360	P	P	05 35 59.7	+0.6
	comp=Z,3.4nm,0.3s,baz=206,slow=12,SNR=15						
ASAJ				LR	LR	05 43 53.4	
	comp=Z,8µm,21.1s,baz=204,slow=41						
JKA	Kamikawa-asahi	17.73	360		Pn	05 35 55.6	-2.7
YUK	Yuzh-Kuril'sk	17.84	8	eP	P	05 36 00.0	-0.3
YUK				eS	Sn	05 39 18.4	+0.3
YUK				pmax	pmax		
	comp=E,200nm,0.5s						
YUK				pmax	pmax		
	comp=Z,398nm,0.5s						
YUK				pmax	pmax		
	comp=N,221nm,0.4s						
YUK				MLR	MLR		
	comp=Z,8µm,13.0s						
YUK				MLR	MLR		
	comp=N,6µm,12.0s						
YUK				MLR	MLR		
	comp=E,8µm,12.0s						
YOJ	Yonaguni jima	17.87	268	P	P	05 36 07.3	+6.5
MSHR	Mys Shultsa	18.74	333	ceP	P	05 36 10.2	-0.1
MSHR				pmax	pmax		
	comp=Z,36nm,0.9s						
MSHR				MLR	MLR		
	comp=Z,13µm,15.0s						
VLA	Vladivostok	18.91	335	d iP	Pn	05 36 14.0	+1.3
VLA				pmax	pmax		
	comp=Z,121nm,1.1s						
VLA				MLR	MLR		
	comp=Z,27µm,16.0s						
NACB	Ninganchiao	19.19	268	P	Pn	05 36 17.2	+0.9
NACB				IAmb	IAmb	05 36 37.8	
	comp=Z,377nm,1.3s						
TEY	Ternei	19.28	347	ceP	P	05 36 15.3	-0.8
TEY				e		05 39 42.1	
TEY				pmax	pmax		
	comp=E,10.0nm,1.0s						
TEY				pmax	pmax		
	comp=N,20nm,1.1s						
TEY				pmax	pmax		
	comp=Z,30nm,1.1s						
YHNB	Yeheng	19.30	270	P	Pn	05 36 17.5	-0.2
YHNB				IAmb	IAmb	05 36 34.4	
	comp=Z,211nm,1.0s						
YHNB	Yeheng	19.30	270	P	Pn	05 36 22.4	+4.7
KUR	Kuril'sk	19.30	11	c iP	Pn	05 36 17.7	+0.3
KUR				i S	S	05 39 58.7	+4.4
KUR				pmax	pmax		
	comp=Z,10µm,8.9s						
KUR				pmax	pmax		
	comp=N,6µm,6.2s						
KUR				pmax	pmax		
	comp=E,4µm,6.2s						
KUR				pmax	pmax		
	comp=E,452nm,2.1s						
KUR				pmax	pmax		
	comp=Z,688nm,2.1s						
KUR				pmax	pmax		
	comp=N,536nm,2.4s						
KUR				MLR	MLR		
	comp=Z,5µm,10.0s						
KUR				MLR	MLR		
	comp=N,3µm,11.0s						
KUR				MLR	MLR		
	comp=E,2µm,12.0s						
SSE	Sheshan	19.42	289	P	Pn	05 36 18.4	-0.6
SSE				S	Sn	05 39 55.8	-0.9
SSE				pmax	pmax		
	comp=E,44nm,1.0s						
SSE				pmax	pmax		
	comp=E,3µm,11.3s						
SSE				LR	LR		
	comp=E,4µm,16.3s						
SSE				LR	LR		
	comp=E,9µm,16.2s						
USA0B	Ussuriysk Arra	19.80	337	P	P	05 36 22.5	+0.6
USA0B				pmax	pmax		
	comp=Z,83nm,0.9s						
USA0B	Ussuriysk Arra	19.80	337		P	05 36 22.5	+0.6
USRK	Ussuriysk Ar.	19.80	337	P	P	05 36 21.8	-0.1
	baz=156,slow=12,SNR=33						
USRK				LR	LR	05 43 56.5	
	comp=Z,15µm,18.1s,baz=147,slow=37						
USRK	Ussuriysk Ar.	19.80	337	P	P	05 36 21.2	-0.7
SSLB	Suanglung	19.84	267	P	Pn	05 36 24.4	+0.3
SSLB				IAmb	IAmb	05 36 41.2	
	comp=Z,174nm,0.8s						
SSLB	Suanglung	19.84	267	P	Pn	05 36 28.0	+3.9
TWG	Pinlang	19.95	265	P	P	05 36 24.1	+0.4
TWG				IAmb	IAmb	05 36 46.9	
	comp=Z,341nm,1.3s						
TPUB	Ta-pu	20.24	266	P	Pn	05 36 27.8	-1.0
TPUB				IAmb	IAmb	05 36 54.1	
	comp=Z,345nm,1.1s						
TPUB	Ta-pu	20.24	266	P	Pn	05 36 32.9	+4.1
YSS	Yuzh-Sakhalins	20.57	0	c iP	Pn	05 36 31.4	-1.0
YSS				e		05 36 42.9	
YSS				eS	S	05 40 17.7	-1.9
YSS				pmax	pmax		
	comp=Z,120nm,1.4s						
YSS				pmax	pmax		
	comp=Z,11µm,8.0s						
YSS				pmax	pmax		
	comp=N,7µm,9.6s						
YSS				pmax	pmax		
	comp=E,1µm,9.4s						
YSS				smax	smax		
	comp=N,7µm,12.3s						
YSS				smax	smax		
	comp=E,12µm,13.0s						
YSS				MLR	MLR		
	comp=Z,7µm,12.0s						
YSS				MLR	MLR		
	comp=N,7µm,16.0s						
YSS				MLR	MLR		
	comp=E,10µm,15.0s						
YSS	Yuzh-Sakhalins	20.57	0		P	05 36 30.3	+0.1
YSS				IAmb	IAmb	05 36 38.9	
	comp=Z,601nm,1.8s						
YSS	Yuzh-Sakhalins	20.57	0	P	Pn	05 36 33.2	+0.8
MDJ	Mudanjiang	21.06	333	P	P	05 36 36.9	+1.3
MDJ				pP	pP	05 36 38.5	-0.9
MDJ				sP	sP	05 36 40.4	-0.9
MDJ				PP	PnPn	05 36 54.4	-0.3
MDJ				S	S	05 40 29.4	-0.1
MDJ				SS	SnSn	05 40 52.1	+1.0
MDJ				pmax	pmax		
	comp=Z,59nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,6µm,10.6s						
MDJ				LR	LR		
	comp=Z,20µm,11.3s						
MDJ				LR	LR		
	comp=Z,15µm,15.7s						
MDJ				LR	LR		
	comp=Z,35µm,16.1s						
NJ2	Nanjing	21.54	291	eP	P	05 36 40.0	-0.8
NJ2				pP	pP	05 36 43.3	-1.4
NJ2				sP	sP	05 36 46.1	-0.2
NJ2				PP	PnPn	05 37 04.3	+3.1
NJ2				S	S	05 40 40.8	+1.7
NJ2				pmax	pmax		
	comp=Z,55nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,4µm,10.9s						
NJ2				LR	LR		
	comp=Z,12µm,15.9s						
NJ2				LR	LR		
	comp=Z,19µm,15.3s						
NJ2				LR	LR		
	comp=Z,28µm,16.2s						
DL2	Dalian	21.64	311	P	P	05 36 39.3	-2.5
DL2				S	S	05 40 38.1	-2.9
DL2				pmax	pmax		
	comp=Z,60nm,1.0s						
DL2				pmax	pmax		
	comp=Z,2µm,10.6s						
DL2				LR	LR		
	comp=Z,22µm,15.3s						
DL2				LR	LR		
	comp=Z,19µm,17.5s						
DL2				LR	LR		
	comp=Z,29µm,17.8s						
QZH	Quanzhou	21.75	272	⇑iP	P	05 36 41.4	-1.7
QZH				S	S	05 40 45.3	+1.9
QZH				pmax	pmax		
	comp=Z,72nm,1.3s						
QZH				pmax	pmax		
	comp=Z,4µm,9.4s						
QZH				LR	LR		
	comp=Z,9µm,15.5s						
QZH				LR	LR		
	comp=Z,10µm,21.2s						
QZH				LR	LR		
	comp=Z,20µm,22.0s						
KNMB	Chin-men Tao	22.01	270	IAMs_20	IAMs_20	05 44 48.8	
	comp=Z,35µm,20.0s						
SNY	Shenyang	22.03	319	⇓P	P	05 36 44.9	-1.0
SNY				sP	pwP	05 36 55.3	+2.5
SNY				pmax	pmax		
	comp=Z,110nm,1.0s						
SNY				LR	LR		
	comp=Z,14µm,14.5s						
SNY				LR	LR		
	comp=Z,14µm,16.3s						
SNY				LR	LR		
	comp=Z,28µm,17.3s						
CN2	Changchun	22.33	326	eP	P	05 36 48.0	-1.2
CN2				eS	S	05 40 50.4	-3.7
CN2				pmax	pmax		
	comp=Z,5µm,10.0s						
CN2				LR	LR		
	comp=Z,11µm,16.0s						
CN2				LR	LR		
	comp=Z,31µm,16.0s						
CN2				LR	LR		
	comp=Z,32µm,17.0s						
UGL	Uglegorsk	22.70	359	eP	P	05 36 55.9	+2.9
UGL				eS	S	05 41 03.0	+2.3
UGL				pmax	pmax		

	comp=N,6µm,5.5s						
UGL				pmax	pmax		
	comp=E,2µm,5.5s						
UGL				pmax	pmax		
	comp=Z,8µm,5.0s						
UGL				pmax	pmax		
	comp=Z,300nm,1.7s						
UGL				smax	smax		
	comp=E,21µm,14.0s						
UGL				smax	smax		
	comp=N,26µm,12.0s						
UGL				MLR	MLR		
	comp=N,11µm,13.0s						
UGL				MLR	MLR		
	comp=E,10µm,13.0s						
UGL				MLR	MLR		
	comp=Z,8µm,15.0s						
WAKE	**Wake Island**	**23.17**	**103**	IAMs_20	IAMs_20	05 43 51.3	
	comp=Z,27µm,21.0s						
H11N2	**WAKE ISLAND Hy**	**23.22**	**101**	T	T	06 00 42.3	
	baz=291,slow=74,SNR=79						
H11N1	**WAKE ISLAND Hy**	**23.22**	**101**	T	T	06 00 38.7	
	baz=291,slow=74,SNR=95						
LQP	**Lukban**	**23.23**	**243**	⇑*e*P	**P**	**05 36 59.9**	**+0.8**
H11N3	**WAKE ISLAND Hy**	**23.24**	**101**	T	T	06 00 43.8	
	baz=291,slow=74,SNR=67						
MSLP	**Maasin**	**23.32**	**230**	⇑*e*P	**P**	**05 37 02.3**	**+2.5**
H11S3	**WAKE ISLAND Hy**	**23.50**	**104**	T	T	06 00 59.2	
	baz=294,slow=75,SNR=17						
H11S1	**WAKE ISLAND Hy**	**23.51**	**104**	T	T	06 01 06.2	
	baz=294,slow=75,SNR=16						
H11S2	**WAKE ISLAND Hy**	**23.52**	**104**	T	T	06 01 01.3	
	baz=294,slow=75,SNR=18						
TGY	**Tagaytay City**	**23.71**	**243**	P	**P**	**05 37 05.0**	**+1.3**
	comp=Z,256nm,0.4s,baz=323,slow=5.0,SNR=12						
TGY				LR	LR	05 45 06.9	
	comp=Z,20µm,20.5s,baz=53,slow=34						
LLP	**Lapu-Lapu**	**23.81**	**231**	*e*P	**P**	**05 37 05.2**	**+0.7**
TIA	**Tai'an**	**23.89**	**301**	P	**P**	**05 37 01.8**	**-3.4**
TIA				pmax	pmax		
	comp=Z,3µm,7.1s						
TIA				LR	LR		
	comp=Z,15µm,14.8s						
TIA				LR	LR		
	comp=Z,25µm,19.1s						
TIA				LR	LR		
	comp=Z,33µm,16.9s						
PGP	**Puerto Galera**	**24.04**	**242**	⇑*e*P	**P**	**05 37 05.7**	**-1.1**
TBP	**Tagbilaran**	**24.33**	**231**	⇑*i*P	**P**	**05 37 04.3**	**-5.1**
TBP				*i* S	**S**	**05 41 28.7**	**+0.6**
KLR	**Kul'dur**	**24.37**	**342**	P	**P**	**05 37 09.9**	**+0.4**
	comp=Z,71nm,0.8s,baz=151,slow=8.2,SNR=136						
KLR				LR	LR	05 46 46.6	
	comp=Z,12µm,18.6s,baz=160,slow=37						
KLR	**Kul'dur**	**24.37**	**342**	*c i*P	**P**	**05 37 09.7**	**+0.2**
KLR				pmax	pmax		
	comp=Z,290nm,1.8s						
KLR				MLR	MLR		
	comp=Z,16µm,16.0s						
LUBP	**Lubang**	**24.48**	**244**	*i* P	**P**	**05 37 11.2**	**+0.5**
TYV	**Tymovskoe**	**24.48**	**360**	*e*P	**P**	**05 37 12.8**	**+2.4**
TYV				pmax	pmax		
	comp=Z,4µm,6.2s						
TYV				pmax	pmax		
	comp=Z,36nm,1.9s						
TYV				MLR	MLR		
	comp=Z,8µm,14.0s						
GRNR	**Gornyy**	**24.85**	**351**	⇓*i*P	**P**	**05 37 15.5**	**+1.7**
GRNR				pmax	pmax		
	comp=N,10.0nm,1.1s						
GRNR				pmax	pmax		
	comp=Z,20nm,1.1s						
GRNR				MLR	MLR		
	comp=E,5µm,15.0s						
BUKP	**Musuan**	**24.86**	**225**	⇑*i*P	**P**	**05 37 14.5**	**+0.3**
CNOP	**Candoni, Negro**	**25.09**	**233**	⇑*e*P	**P**	**05 37 15.1**	**-1.2**
DAV	**Davao City (W)**	**25.15**	**223**	LR	LR	05 45 34.3	
	comp=E,6µm,21.2s,baz=46,slow=33						
DAV	**Davao City (W)**	**25.15**	**223**	P	**P**	**05 37 18.3**	**+1.4**
WHN	**Wuhan**	**25.22**	**286**	⇑*i*P	**P**	**05 37 17.3**	**-0.1**
WHN				pP	**sP**	**05 37 22.4**	**-0.7**
WHN				S	**S**	**05 41 39.0**	**-3.3**
WHN				pmax	pmax		
	comp=E,220nm,0.9s						
WHN				pmax	pmax		
	comp=E,5µm,10.0s						
WHN				LR	LR		
	comp=E,15µm,12.8s						
WHN				LR	LR		
	comp=E,59µm,16.4s						
WHN				LR	LR		
	comp=E,63µm,16.1s						
BJT	**Baijiatuau**	**25.92**	**308**	IAMs_20	IAMs_20	05 48 03.1	
	comp=Z,17µm,19.0s						
BJI	**Beijing**	**25.93**	**308**	P	**P**	**05 37 22.3**	**-1.4**
BJI				pP	**pP**	**05 37 26.3**	**-1.4**
BJI				PcP	**PcP**	**05 40 53.8**	**+1.6**
BJI				S	**S**	**05 41 57.0**	**+3.7**
BJI				sS	**sS**	**05 42 03.3**	**+3.1**
BJI				pmax	pmax		
	comp=Z,3µm,11.8s						
BJI				LR	LR		
	comp=Z,15µm,15.3s						
BJI				LR	LR		
	comp=Z,17µm,17.7s						
BJI				LR	LR		
	comp=Z,23µm,17.7s						
HKC	**Hong Kong Obse**	**26.26**	**267**	⇑P	**P**	**05 37 27.0**	**+0.2**
SKR	**Severo-Kuril's**	**26.39**	**19**	*e*P	**P**	**05 37 28.6**	**+0.9**
SKR				*e*S	**S**	**05 42 00.2**	**-0.2**
SKR				pmax	pmax		
	comp=Z,700nm,5.6s						
SKR				pmax	pmax		
	comp=Z,800nm,13.1s						
SKR				MLR	MLR		
	comp=Z,4µm,14.0s						
SKR				MLR	MLR		
	comp=Z,4µm,13.0s						
NKL	**Nikolayevsk**	**26.81**	**357**	*e*P	**P**	**05 37 32.5**	**+1.0**
NKL				*e*S	**S**	**05 42 01.8**	**-5.1**
NKL				pmax	pmax		
	comp=E,7.0nm,1.1s						
NKL				pmax	pmax		
	comp=N,1µm,0.8s						
NKL				pmax	pmax		
	comp=Z,127nm,1.2s						
NKL				smax	smax		
	comp=E,4.0nm,1.5s						
NKL				smax	smax		
	comp=N,844nm,2.1s						
NKL				MLR	MLR		
	comp=N,17µm,16.0s						
NKL				MLR	MLR		
	comp=E,160nm,16.0s						
NKL				MLR	MLR		
	comp=Z,7µm,15.0s						
SGSI	**Sangihe**	**27.89**	**219**	P	**P**	**05 37 37.5**	**-4.0**
	comp=Z,801nm,0.4s						
TIY	**Taiyuan**	**27.91**	**301**	⇑P	**P**	**05 37 39.4**	**-2.3**
TIY				pmax	pmax		
	comp=Z,2µm,8.3s						
TIY				LR	LR		
	comp=Z,10µm,14.3s						
TIY				LR	LR		
	comp=Z,23µm,17.0s						
TIY				LR	LR		
	comp=Z,30µm,17.2s						
SMPI	**Sarmi**	**28.43**	**188**	P	P	05 38 02.7	+16
MANU	**Manus Island**	**28.59**	**170**	P	**P**	**05 37 47.0**	**-0.7**
MANU				IAmb	IAmb	05 38 00.1	
	comp=Z,114nm,1.8s						
HIA	**Hailar**	**28.97**	**328**	*c i*P	**P**	**05 37 49.7**	**-1.2**
HIA				pmax	pmax		
	comp=Z,54nm,1.1s						
HIA				MLR	MLR		
	comp=Z,12µm,16.0s						
HIA	**Hailar**	**28.97**	**328**	P	**P**	**05 37 50.5**	**-0.4**
HIA	**Hailar**	**28.97**	**328**	IAMs_20	IAMs_20	05 49 18.9	
	comp=Z,13µm,18.0s						
PEA0B	**Petropavlovsk-**	**29.00**	**19**	⇓*e*P	**P**	**05 37 52.2**	**+1.1**
PEA0B	**Petropavlovsk-**	**29.00**	**19**	P	**P**	**05 37 50.9**	**-0.2**
PETK	**Petropavlovsk-**	**29.00**	**19**	P	**P**	**05 37 51.5**	**+0.5**
	comp=Z,5.7nm,0.7s,baz=196,slow=10,SNR=8.4						
PETK				LR	LR	05 51 28.7	
	comp=Z,3µm,19.9s,baz=190,slow=40						
PETK	**Petropavlovsk-**	**29.00**	**19**	P	**P**	**05 37 50.3**	**-0.7**
PET	**Petropavlovsk**	**29.21**	**20**	*ce*P	**P**	**05 37 54.0**	**+1.1**
PET				*e*S	**S**	**05 42 42.8**	**-1.8**
PET						05 44 15.4	
PET				pmax	pmax		
	comp=Z,91nm,1.4s						
PET				pmax	pmax		
	comp=Z,2µm,16.6s						
PET				pmax	pmax		
	comp=Z,2µm,16.6s						
SWI	**Sorong**	**29.21**	**204**	P	**P**	**05 37 52.7**	**-0.6**
SWI				pmax	pmax		
	comp=Z,58nm,0.9s						
SWI	**Sorong**	**29.21**	**204**	P	**P**	**05 37 54.1**	**+0.8**
	comp=Z,3µmcomp=Z,1µmcomp=Z,59nm,0.9s						
SIJI	**Sorong**	**29.21**	**204**	P	**P**	**05 37 52.5**	**-0.8**
	comp=Z,25nm,0.8s,baz=360,slow=8.7,SNR=10						
ENH	**Enshi**	**29.42**	**285**	P	**P**	**05 37 53.7**	**-1.4**
ENH				IAmb	IAmb	05 37 55.9	
	comp=Z,233nm,1.5s						
HHC	**Hu-ho-hao-te**	**29.50**	**307**	*e*P	P	05 37 50.3	-5.5
HHC				SS	**SnSn**	**05 44 14.8**	**-2.6**
HHC				pmax	pmax		
	comp=Z,35nm,0.9s						
HHC				pmax	pmax		
	comp=Z,2µm,8.5s						
HHC				LR	LR		
	comp=Z,10µm,15.6s						
HHC				LR	LR		
	comp=Z,8µm,14.6s						
HHC				LR	LR		
	comp=Z,18µm,15.6s						
ZEA	**Zeya**	**29.66**	**341**	*ce*P	**P**	**05 37 57.5**	**+0.5**
ZEA				*e*S	**S**	**05 42 48.9**	**-3.0**
ZEA				pmax	pmax		
	comp=N,70nm,0.8s						
ZEA				pmax	pmax		
	comp=E,20nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,100nm,0.8s						
ZEA				pmax	pmax		
	comp=E,300nm,3.3s						
ZEA				pmax	pmax		
	comp=N,300nm,4.2s						
ZEA				pmax	pmax		
	comp=Z,700nm,5.1s						
ZEA				smax	smax		
	comp=N,2µm,14.4s						
ZEA				MLR	MLR		
	comp=E,5µm,14.0s						
ZEA				MLR	MLR		
	comp=N,9µm,16.0s						
XAN	**Xi'an**	**30.07**	**293**	P	**P**	**05 37 59.0**	**-1.8**
XAN				pP	pP	05 38 04.6	-0.3
XAN				sP	pwP	05 38 07.3	-0.9
XAN				S	**S**	**05 42 56.8**	**-2.0**
XAN				sS	sS	05 43 07.9	+1.9
XAN				SS	**SnSn**	**05 44 35.3**	**+4.0**
XAN				ScS	**ScS**	**05 48 36.8**	**-3.0**
XAN				pmax	pmax		
	comp=N,150nm,0.9s						
XAN				pmax	pmax		
	comp=N,2µm,7.9s						
XAN				LR	LR		
	comp=N,13µm,14.8s						
XAN				LR	LR		
	comp=N,9µm,15.8s						
XAN				LR	LR		
	comp=N,17µm,16.1s						
LBMI	**Labuha**	**30.56**	**211**	P	**P**	**05 38 08.3**	**+3.0**
	comp=N,2µmcomp=N,3µmcomp=N,114nm,0.7s						
FAKI	**Fak Fak**	**30.79**	**201**	P	**P**	**05 38 05.9**	**-1.4**
QIZ	**Qiongzhong**	**31.09**	**263**	P	**P**	**05 38 10.1**	**+0.1**
QIZ				S	**S**	**05 43 16.1**	**+1.1**
QIZ				pmax	pmax		
	comp=N,2µm,12.3s						
QIZ				LR	LR		
	comp=N,4µm,18.0s						
QIZ				LR	LR		
	comp=N,7µm,19.8s						
QIZ				LR	LR		
	comp=N,10µm,21.0s						
GTOI	**Gorontalo**	**31.81**	**220**	P	**P**	**05 38 16.0**	**-0.3**
	comp=N,514nmcomp=N,20nm,0.9s						
GYA	**Guiyang**	**32.19**	**278**	⇑P	**P**	**05 38 18.9**	**-0.8**
GYA				sP	pwP	05 38 28.4	+1.3
GYA				S	**S**	**05 43 29.6**	**-2.7**
GYA				pmax	pmax		
	comp=N,95nm,1.0s						
GYA				pmax	pmax		
	comp=N,2µm,12.8s						
GYA				LR	LR		
	comp=N,6µm,18.0s						
GYA				LR	LR		
	comp=N,11µm,20.3s						
GYA				LR	LR		
	comp=N,16µm,19.2s						
KKM	**Kota Kinabalu**	**32.32**	**236**	P	**P**	**05 38 21.2**	**+0.3**
KKM				IAmb	IAmb	05 38 23.3	
	comp=Z,121nm,1.0s						
KKM				IAMs_20	IAMs_20	05 50 58.4	
	comp=Z,13µm,20.0s						
MSAI	**Masohi**	**32.38**	**206**	P	P	05 38 38.5	+17
SANI	**Sanana**	**32.51**	**212**	P	**P**	**05 38 20.5**	**-1.9**
	comp=Z,895nmcomp=Z,46nm,1.0s						
MRSI	**Marisa**	**32.56**	**221**	P	**P**	**05 38 23.4**	**+0.5**
	comp=Z,2µmcomp=Z,114nm,0.9s						
TOLI2	**Tolitoli**	**32.76**	**224**	P	**P**	**05 38 23.8**	**-0.9**
TOLI2				IAmb	IAmb	05 38 29.5	
	comp=Z,48nm,1.0s						
AAI	**Ambon**	**32.98**	**207**	P	**P**	**05 38 27.0**	**+0.4**
AAI				pmax	pmax		
	comp=Z,187nm,0.9s						
AAI	**Ambon**	**32.98**	**207**	P	**P**	**05 38 28.2**	**+1.6**
	comp=Z,5µmcomp=Z,2µmcomp=Z,188nm,1.0s						
SPMM	**Sapulut**	**33.03**	**234**	P	**P**	**05 38 27.0**	**-0.1**
MA2	**Magadan**	**33.69**	**7**	P	**P**	**05 38 33.0**	**+0.7**
	comp=Z,15nm,0.7s,baz=177,slow=12,SNR=4.7						
MA2	**Magadan**	**33.69**	**7**	*i* P	**P**	**05 38 33.4**	**+1.2**
MA2				pmax	pmax		
	comp=Z,79nm,1.4s						
MA2				MLR	MLR		
	comp=Z,5µm,17.0s						
MA2	**Magadan**	**33.69**	**7**	IAmb	IAmb	05 38 40.0	
	comp=Z,110nm,1.4s						
MA2				IAMs_20	IAMs_20	05 51 25.8	
	comp=Z,6µm,20.0s						
CIT	**Chita**	**33.75**	**327**	*e*P	**P**	**05 38 33.1**	**+0.1**
CIT				*e*		05 38 41.4	
CIT				*e*		05 39 40.5	
CIT				*e*		05 41 05.8	
CIT				pmax	pmax		
	comp=Z,382nm,2.5s						
APSI	**Ampana**	**33.85**	**220**	P	**P**	**05 38 33.9**	**-0.2**
	comp=Z,2µmcomp=Z,837nmcomp=Z,66nm,1.1s						
MPSI	**Mapaga**	**33.91**	**224**	P	**P**	**05 38 34.2**	**-0.5**
	comp=Z,4µmcomp=Z,997nmcomp=Z,40nm,1.0s						
CD2	**Chengdu**	**34.34**	**287**	P	**P**	**05 38 38.0**	**-0.4**
CD2				S	**S**	**05 44 05.0**	**-0.5**
CD2				sS	pS	05 44 10.8	+0.4
CD2				pmax	pmax		
	comp=Z,480nm,1.1s						
CD2				pmax	pmax		
	comp=Z,3µm,12.9s						
CD2				LR	LR		
	comp=Z,25µm,17.2s						
CD2				LR	LR		
	comp=Z,33µm,17.2s						
CD2				LR	LR		
	comp=Z,34µm,18.7s						
LZH	**Lanzhou**	**34.41**	**296**	⇑P	**P**	**05 38 38.0**	**-1.0**
LZH				pP	pP	05 38 43.5	+0.4
LZH				sP	pwP	05 38 48.6	+2.2
LZH				S	**S**	**05 44 07.5**	**+0.9**
LZH				sS	sS	05 44 19.3	+5.4
LZH				pmax	pmax		
	comp=Z,160nm,1.3s						
LZH				pmax	pmax		
	comp=Z,1µm,6.0s						
LZH				LR	LR		
	comp=Z,13µm,18.0s						
LZH				LR	LR		
	comp=Z,16µm,19.5s						
LZH				LR	LR		
	comp=Z,18µm,19.3s						
ULN	**Ulaanbaatar**	**35.17**	**317**	*c i*P	**P**	**05 38 44.5**	**-0.9**
ULN				pmax	pmax		
	comp=Z,43nm,1.3s						
ULN				MLR	MLR		
	comp=Z,14µm,16.0s						
ULN	**Ulaanbaatar**	**35.17**	**317**	P	**P**	**05 38 45.0**	**-0.5**
ULN	**Ulaanbaatar**	**35.17**	**317**	IAMs_20	IAMs_20	05 52 48.7	
	comp=Z,14µm,22.0s						
SONM	**Songino Array**	**35.56**	**317**	P	**P**	**05 38 47.1**	**-1.7**
	comp=Z,11nm,0.9s,baz=134,slow=6.2,SNR=35						
SONM				ScP	**ScP**	**05 45 03.1**	**0.0**
	comp=Z,4.3nm,1.1s,baz=123,slow=5.5,SNR=4.5						
SONM				LR	LR	05 53 35.8	
	comp=Z,16µm,21.7s,baz=116,slow=37						
SONM	**Songino Array**	**35.56**	**317**	P	**P**	**05 38 47.8**	**-1.0**
SONM				pmax	pmax		
	comp=Z,33nm,1.3s						
SONM	**Songino Array**	**35.56**	**317**	P	**P**	**05 38 47.8**	**-1.0**
SLVN	**Son La**	**35.72**	**270**	P	**P**	**05 38 49.8**	**-0.5**
SLVN				IAMs_20	IAMs_20	05 52 37.9	
	comp=Z,10µm,21.0s						
PMG	**Port Moresby**	**35.80**	**172**	LR	LR	05 53 11.9	
	comp=Z,3µm,18.6s,baz=356,slow=36						
KMI	**Kunming**	**35.90**	**277**	⇑P	**P**	**05 38 51.5**	**-0.6**
KMI				pP	sP	05 38 57.4	-0.4
KMI				sP	pwP	05 38 59.9	+0.4
KMI				S	**S**	**05 44 28.9**	**-1.0**
KMI				sS	sS	05 44 39.5	+2.4
KMI				pmax	pmax		
	comp=Z,120nm,1.0s						
KMI				pmax	pmax		
	comp=Z,2µm,8.2s						
KMI				LR	LR		
	comp=Z,2µm,13.1s						
KMI				LR	LR		
	comp=Z,12µm,20.5s						
KMI				LR	LR		
	comp=Z,14µm,23.0s						
TTSI	**Tana Toraja**	**36.64**	**221**	P	**P**	**05 38 58.0**	**-0.2**
	comp=Z,3µmcomp=Z,46nm,1.1s						
YAK	**Yakutsk**	**36.73**	**350**	P	**P**	**05 38 58.0**	**-0.4**
	comp=Z,11nm,0.5s,baz=40,slow=2.2,SNR=9.3						
YAK	**Yakutsk**	**36.73**	**350**	*c i*P	**P**	**05 38 57.8**	**-0.6**
YAK				pmax	pmax		
	comp=Z,103nm,1.3s						
YAK				MLR	MLR		
	comp=Z,8µm,17.0s						
YAK	**Yakutsk**	**36.73**	**350**	P	**P**	**05 38 57.8**	**-0.6**
YAK				IAmb	IAmb	05 39 02.4	
	comp=Z,252nm,1.7s						
YAK				IAMs_20	IAMs_20	05 54 31.0	
	comp=Z,10µm,18.0s						
SEY	**Seymchan**	**37.14**	**7**	P	**P**	**05 39 02.8**	**+0.9**
	comp=Z,19nm,0.8s,baz=192,slow=8.0,SNR=21						
SPSI	**Sidrap Palu**	**37.41**	**220**	P	**P**	**05 39 04.1**	**-0.6**
	comp=Z,1µmcomp=Z,131nm,0.9s						
BOD	**Bodaibo**	**37.42**	**335**	*e*P	**P**	**05 39 04.3**	**0.0**
BOD				pmax	pmax		
	comp=Z,80nm,1.3s						
BNSI	**Bone**	**37.58**	**219**	P	**P**	**05 39 07.1**	**+1.0**
	comp=Z,2µmcomp=Z,91nm,1.4s						
SBUM	**Sibu**	**37.67**	**236**	P	**P**	**05 39 07.0**	**+0.1**
SBUM	**Sibu**	**37.67**	**236**	P	**P**	**05 39 06.2**	**-0.7**
SBUM				IAmb	IAmb	05 39 17.3	
	comp=Z,96nm,1.2s						
GTA	**Gaotai**	**37.94**	**301**	⇑P	**P**	**05 39 07.1**	**-2.1**
GTA				pP	pP	05 39 10.5	-2.8
GTA				sP	sP	05 39 14.8	-0.1
GTA				PP	**PP**	**05 40 37.8**	**+2.0**
GTA				PcP	**PcP**	**05 41 25.6**	**+0.6**
GTA				S	**S**	**05 44 56.8**	**-3.7**
GTA				sS	pS	05 45 06.0	+0.5
GTA				PcS	**PcS**	**05 45 09.9**	**-4.0**
GTA				pmax	pmax		
	comp=Z,2µm,11.9s						
GTA				LR	LR		
	comp=Z,13µm,17.9s						
GTA				LR	LR		
	comp=Z,15µm,17.1s						
GTA				LR	LR		
	comp=Z,17µm,21.1s						
MTKI	**Muara Teweh, K**	**38.13**	**229**	P	**P**	**05 39 10.8**	**-0.1**
KAPI	**Kappang**	**38.28**	**219**	LR	LR	05 53 18.8	
	comp=Z,2µm,21.4s,baz=52,slow=34						
KAPI	**Kappang**	**38.28**	**219**	P	**P**	**05 39 11.5**	**-0.6**
KAPI				pmax	pmax		
	comp=Z,56nm,1.1s						
KAPI	**Kappang**	**38.28**	**219**	P	**P**	**05 39 11.4**	**-0.6**
BKSI	**Bulukumba**	**38.33**	**218**	P	**P**	**05 39 11.4**	**-1.0**
	comp=Z,878nmcomp=Z,66nm,0.9s						
ZAK	**Zakamensk**	**38.46**	**319**	*e*P	**P**	**05 39 11.8**	**-1.6**
ZAK				pmax	pmax		
	comp=Z,57nm,1.3s						
ZAK				pmax	pmax		
	comp=Z,16nm,1.4s						
IRK	**Irkutsk**	**38.70**	**322**	*e*P	**P**	**05 39 14.4**	**-0.8**
IRK				pmax	pmax		
	comp=Z,74nm,2.0s						
BSSI	**Bau Bau, Buton**	**38.81**	**217**	P	**P**	**05 39 16.9**	**+0.4**
	comp=Z,906nmcomp=Z,60nm,1.4s						
KBKI	**Kotabaru**	**39.07**	**225**	P	**P**	**05 39 16.2**	**-2.5**
	comp=Z,59nm,1.0s						
HNR	**Honiara**	**39.33**	**152**	LR	LR	05 54 41.2	
	comp=Z,13µm,20.6s,baz=314,slow=35						
HNR	**Honiara**	**39.33**	**152**	IAMs_20	IAMs_20	05 54 30.4	
	comp=Z,13µm,21.0s						
KSM	**Kuching**	**39.74**	**237**	P	**P**	**05 39 25.0**	**+0.6**
KSM	**Kuching**	**39.74**	**237**	P	**P**	**05 39 23.7**	**-0.6**
KSM				IAmb	IAmb	05 39 34.0	
	comp=Z,139nm,1.7s						
STKI	**Sintang**	**39.82**	**234**	P	**P**	**05 39 24.2**	**-0.8**
BBKI	**Banjar Baru**	**40.04**	**226**	P	**P**	**05 39 26.6**	**-0.2**
	comp=Z,34nm,0.9s						
MMRI	**Maumere**	**40.04**	**212**	P	**P**	**05 39 26.0**	**-0.8**
	comp=Z,4µmcomp=Z,151nm,1.2s						
MMRI	**Maumere**	**40.04**	**212**	P	**P**	**05 39 26.4**	**-0.4**
MMRI				IAmb	IAmb	05 40 14.6	
	comp=Z,199nm,1.1s						
COEN	**Coen**	**40.06**	**179**	P	**P**	**05 39 26.4**	**-0.5**
SOEI	**Soe**	**40.10**	**209**	P	**P**	**05 39 27.9**	**+0.5**
SOEI				IAmb	IAmb	05 39 46.4	
	comp=Z,126nm,0.9s						
MOY	**Mondy**	**40.30**	**320**	*e*P	**P**	**05 39 28.3**	**-0.4**
MOY				pmax	pmax		
	comp=Z,47nm,2.0s						
EDFI	**Ende, Flores**	**40.41**	**213**	P	**P**	**05 39 28.1**	**-1.8**
	comp=Z,2µmcomp=Z,978nmcomp=Z,37nm,0.8s						
MTN	**Manton Dam**	**40.54**	**197**	P	**P**	**05 39 29.7**	**-1.1**
MTN				IAmb	IAmb	05 39 41.2	
	comp=Z,103nm,0.9s						
CHTO	**Chiang Mai**	**40.92**	**269**	P	**P**	**05 39 33.3**	**-0.8**
CHTO				pmax	pmax		
	comp=Z,110nm,1.0s						
CHTO				MLR	MLR		
	comp=Z,8µm,19.0s						
CHTO	**Chiang Mai**	**40.92**	**269**	P	**P**	**05 39 33.3**	**-0.8**
CHTO				IAmb	IAmb	05 39 35.6	
	comp=Z,110nm,1.0s						
CHTO	**Chiang Mai**	**40.92**	**269**	IAMs_20	IAMs_20	05 56 50.6	
	comp=Z,9µm,19.0s						
CM31	**Chiang Mai Arr**	**41.03**	**268**	P	**P**	**05 39 34.8**	**-0.3**
	SNR=20						
CM31				P	**P**	**05 39 34.8**	**-0.3**
	SNR=20						
CM31	**Chiang Mai Arr**	**41.03**	**268**	P	**P**	**05 39 34.6**	**-0.5**
CMAR	**Chiang Mai Arr**	**41.03**	**268**	P	**P**	**05 39 34.1**	**-0.9**
	comp=Z,44nm,0.9s,baz=58,slow=8.3,SNR=134						
CMAR				LR	LR	05 57 04.8	
	comp=Z,8µm,19.3s,baz=114,slow=37						
CMAR	**Chiang Mai Arr**	**41.03**	**268**	*i* P	**P**	**05 39 35.0**	**-0.1**
CMAR				pmax	pmax		
	comp=Z,44nm,0.9s						
CMAR	**Chiang Mai Arr**	**41.03**	**268**	P	**P**	**05 39 34.5**	**-0.6**
LKP	**Lekhapani**	**41.60**	**282**	*e*P	**P**	**05 39 37.4**	**-2.3**
PBKI	**Pangkalan Bun**	**41.62**	**231**	P	**P**	**05 39 39.7**	**-0.2**
	comp=Z,4µmcomp=Z,214nm,1.3s						
TWSI	**Taliwang, Sumb**	**42.94**	**219**	P	**P**	**05 39 48.8**	**-1.8**
	comp=Z,2µmcomp=Z,526nmcomp=Z,38nm,0.9s						
MOKO	**MOKOCHONG**	**42.96**	**281**	*e*P	**P**	**05 39 49.5**	**-1.4**
ITAN	**ITANAGAR**	**43.50**	**282**	*e*P	**P**	**05 39 54.6**	**-0.4**
ITAN				IAmb	IAmb	05 39 55.9	
	comp=Z,64nm,0.5s						
ABJI	**Asem Bagus**	**43.75**	**223**	P	**P**	**05 39 57.3**	**+0.2**
	comp=Z,7µmcomp=Z,4µmcomp=Z,177nm,0.9s						
IMP	**Imphal**	**43.77**	**279**	*e*P	**P**	**05 39 54.5**	**-2.8**
IMP				IAmb	IAmb	05 40 01.9	
	comp=Z,27nm,0.5s						
KNRA	**Kununurra**	**43.91**	**200**	P	**P**	**05 39 58.4**	**+0.1**

BILL	**Bilibino**	44.09	12	*i* P	P	05 39 59.5	+0.3
BILL				*i*		05 40 05.0	
BILL				*i*		05 41 50.0	
BILL				*i* S	S	05 46 28.4	-2.5
BILL				*i* SS	SS	05 49 38.5	-10
BILL				pmax	pmax		
	comp=Z,27nm,0.9s						
BILL				MLR	MLR		
	comp=Z,2µm,14.0s						
BILL	**Bilibino**	44.09	12	P	P	05 39 59.5	+0.3
BILL				IAmb	IAmb	05 40 14.6	
	comp=Z,227nm,1.8s						
SRIT	**Nakonsritamara**	44.46	255	P	P	05 40 02.8	-0.1
SRIT				IAmb	IAmb	05 40 05.5	
	comp=Z,63nm,0.8s						
JRMM	**Jerantut**	44.48	247	P	P	05 40 04.0	+1.0
MYKOM	**Kota Tinggi**	44.57	243	P	P	05 40 05.0	+1.3
MYKOM	**Kota Tinggi**	44.57	243	P	P	05 40 03.6	-0.1
MYKOM				IAMs_20	IAMs_20	05 57 10.9	
	comp=Z,7µm,20.0s						
NIKH	**Nikolski High**	44.66	40	S	S	05 46 43.3	+3.8
	baz=253						
KULM	**Kulim**	45.24	250	P	P	05 40 10.0	+0.9
KULM	**Kulim**	45.24	250	P	P	05 40 08.9	-0.2
KULM				IAmb	IAmb	05 40 11.4	
	comp=Z,116nm,1.0s						
KULM				IAMs_20	IAMs_20	05 57 28.5	
	comp=Z,9µm,20.0s						
LSA	**Lhasa**	45.31	287	P	P	05 40 09.2	-0.8
LSA	**Lhasa**	45.31	287	P	P	05 40 09.9	-0.2
LSA				pmax	pmax		
	comp=Z,30nm,0.9s						
LSA				MLR	MLR		
	comp=Z,10µm,19.0s						
LSA	**Lhasa**	45.31	287	P	P	05 40 09.9	-0.2
LSA				IAMs_20	IAMs_20	06 00 29.0	
	comp=Z,10µm,19.0s						
SPIA	**Saint Paul Isl**	45.33	34	P	P	05 40 09.2	-0.1
	baz=248						
IPM	**Ipoh**	45.36	249	P	P	05 40 10.0	-0.1
IPM	**Ipoh**	45.36	249	P	P	05 40 09.6	-0.4
IPM				IAMs_20	IAMs_20	05 57 50.6	
	comp=Z,7µm,20.0s						
SHL	**Shillong**	45.43	281	P	P	05 40 09.5	-1.3
SHL				pmax	pmax		
	comp=Z,101nm,1.0s						
SHL	**Shillong**	45.43	281	*e*P	P	05 40 10.2	-0.5
SHL	**Shillong**	45.43	281	P	P	05 40 10.0	-0.7
	SNR=39						
SHL	**Shillong**	45.43	281	P	P	05 40 09.4	-1.3
SHL				IAmb	IAmb	05 40 20.8	
	comp=Z,101nm,1.0s						
TIXI	**Tiksi**	46.00	354	P	P	05 40 14.4	+0.1
	comp=Z,11nm,0.9s,baz=138,slow=9.9,SNR=8.4						
TIXI				LR	LR	06 01 43.3	
	comp=Z,3µm,19.1s,baz=206,slow=39						
TIXI	**Tiksi**	46.00	354	*ce*P	P	05 40 14.2	-0.1
TIXI				pmax	pmax		
	comp=Z,56nm,1.4s						
TIXI	**Tiksi**	46.00	354	P	P	05 40 13.2	-1.2
TIXI				IAmb	IAmb	05 40 31.1	
	comp=Z,145nm,1.8s						
UGM	**Wanagama**	46.20	227	P	P	05 40 16.2	-0.4
UNV	**Unalaska Valle**	46.25	39	P	P	05 40 16.6	0.0
	baz=254						
UNV				S	S	05 47 01.3	-1.2
	baz=254						
CTAO	**Charters Tower**	46.29	175	P	P	05 40 17.4	+0.2
CTAO				pmax	pmax		
	comp=Z,59nm,1.3s						
CTAO	**Charters Tower**	46.29	175	P	P	05 40 17.4	+0.2
CTAO				IAmb	IAmb	05 40 25.5	
	comp=Z,59nm,1.2s						
WR0	**Warramunga Arr**	46.70	191	P	P	05 40 18.9	-1.5
WRAB	**Tennant Creek**	46.71	191	*ce*P	P	05 40 19.6	-0.9
WRAB				pmax	pmax		
	comp=Z,115nm,1.0s						
WRAB				MLR	MLR		
	comp=Z,4µm,19.0s						
WRAB	**Tennant Creek**	46.71	191	P	P	05 40 19.8	-0.7
WB2	**Warramunga Arr**	46.72	191	P	P	05 40 19.7	-0.9
WRA	**Warramunga Arr**	46.72	191	P	P	05 40 18.9	-1.6
	comp=Z,84nm,0.7s,baz=10,slow=8.5,SNR=136						
WRA				S	S	05 47 05.7	-4.2
	comp=Z,14nm,1.1s,baz=5.3,slow=13,SNR=9.6						
WRA				LR	LR	05 59 18.9	
	comp=Z,3µm,21.9s,baz=0.0,slow=35						
WRA	**Warramunga Arr**	46.72	191	*i* P	P	05 40 19.0	-1.6
WRA				pmax	pmax		
	comp=Z,85nm,0.7s						
WRA	**Warramunga Arr**	46.72	191	P	P	05 40 19.3	-1.3
DHUB	**DHUBRI**	46.99	282	*e*P	P	05 40 19.1	-3.7
WMQ	**Urumqi**	47.37	306	*e*P	P	05 40 25.8	+0.2
WMQ				pP	pP	05 40 30.3	+0.5
WMQ				sP	pwP	05 40 35.1	+2.0
WMQ				PcP	PcP	05 41 55.6	-0.6
WMQ				PP	PP	05 42 16.8	0.0
WMQ				ScS	ScS	05 50 14.8	-4.4
WMQ				pmax	pmax		
	comp=Z,67nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,550nm,5.7s						
WMQ				LR	LR		
	comp=Z,6µm,18.7s						
WMQ				LR	LR		
	comp=Z,12µm,19.5s						
WMQ				LR	LR		
	comp=Z,14µm,21.1s						
WMQ	**Urumqi**	47.37	306	P	P	05 40 25.9	+0.3
WMQ	**Urumqi**	47.37	306	P	P	05 40 25.9	+0.3
LEM	**Lembang**	47.37	231	LR	LR	06 02 03.2	
	comp=Z,2µm,18.9s,baz=28,slow=38						
GAMB	**Gambell**	47.60	25	P	P	05 40 27.0	+0.1
	baz=240						
BKNI	**Bangkinang**	47.69	244	P	P	05 40 28.5	+0.1
SANVU	**Saraoutou**	47.90	147	IAMs_20	IAMs_20	05 58 28.6	
	comp=Z,6µm,21.0s						
GTK	**Tadong**	47.94	284	*e*P	P	05 40 29.4	-1.0
GTK				IAmb	IAmb	05 40 33.3	
	comp=Z,34nm,1.1s						
PSI	**Prapat**	48.02	248	P	P	05 40 30.1	-0.9
	comp=Z,105nm,1.0s,baz=35,slow=2.3,SNR=43						
RPSI	**Rantau Prapat**	48.08	248	P	P	05 40 30.1	-1.2
DGZ	**Jazzator, Alta**	48.10	314	*c i*P	P	05 40 30.6	-0.7
DGZ				pmax	pmax		
	comp=Z,69nm,1.1s						
DGZ				MLR	MLR		
	comp=Z,32µm,17.0s						
FALS	**False Pass**	48.26	39	P	P	05 40 32.0	-0.2
	baz=256						
DGPR	**DIGLIPUR**	48.34	264	*e*P	P	05 40 32.8	-0.6
TAPN	**Taplejung**	48.71	284	*e*P	P	05 40 35.9	-0.6
	comp=Z,29nm,0.4s						
ODAN	**Odare**	49.09	284	*e*P	P	05 40 38.7	-0.7
	comp=Z,257nm,1.0s						
ZSN	**Zaisan**	49.56	311	*e*P	P	05 40 40.0	-2.4
	baz=311						
ZSN	**Zaisan**	49.56	311	*e*P	P	05 40 40.0	-2.4
RAMN	**Ramite**	49.76	284	*e*P	P	05 40 43.7	-0.8
	comp=Z,36nm,0.4s						
TNA	**Tin City**	49.88	24	P	P	05 40 44.5	0.0
	baz=243						
JIRN	**Jiri**	49.96	285	*e*P	P	05 40 45.3	-0.9
	comp=Z,67nm,0.5s						
GSI	**Gunungsitoli**	49.97	248	P	P	05 40 45.3	-0.6
GSI				IAMs_20	IAMs_20	06 00 31.9	
	comp=Z,6µm,19.0s						
SDPT	**Sand Point**	50.01	39	P	P	05 40 45.9	+0.2
	baz=259						
GUN	**Gumba**	50.18	285	*e*P	P	05 40 47.0	-0.8
	comp=Z,88nm,0.5s						
ZAA0	**Zalesovo Array**	50.34	319	P	P	05 40 47.3	-0.8
ZALV	**Zalesovo Beam**	50.34	319	P	P	05 40 46.5	-1.7
	comp=Z,11nm,0.6s,baz=101,slow=7.7,SNR=48						
ZALV				PcP	PcP	05 42 06.5	-0.2
	comp=Z,25nm,0.8s,baz=112,slow=4.3,SNR=7.6						
ZALV				LR	LR	06 02 44.3	
	comp=Z,12µm,18.5s,baz=98,slow=37						
ZALV	**Zalesovo Beam**	50.34	319	*i* P	P	05 40 47.2	-0.9
ZALV				pmax	pmax		
	comp=Z,11nm,0.6s						
ZALV	**Zalesovo Beam**	50.34	319	P	P	05 40 47.0	-1.1
CHNA	**Chernabura Isl**	50.42	39	P	P	05 40 48.6	-0.1
	baz=260						
CHNA				S	S	05 47 59.2	-2.1
	baz=260						
AS31	**Alice Springs**	50.44	190	P	P	05 40 49.0	-0.2
ASAR	**Alice Springs**	50.44	190	P	P	05 40 47.4	-1.8
	comp=Z,4.1nm,0.8s,baz=12,slow=5.2,SNR=30						
ASAR				PcP	PcP	05 42 07.3	-0.1
	comp=Z,10nm,0.8s,baz=359,slow=3.7,SNR=5.9						
ASAR				S	S	05 47 59.3	-3.1
	comp=Z,5.5nm,1.1s,baz=13,slow=16,SNR=7.8						
ASAR	**Alice Springs**	50.44	190	P	P	05 40 48.0	-1.2
ASAR	**Alice Springs**	50.44	190	P	P	05 40 48.0	-1.2
PKI	**Pulchoki**	50.66	285	*e*P	P	05 40 50.5	-0.9
	comp=Z,116nm,1.2s						
PKIN	**Phulchoki**	50.67	285	*e*P	P	05 40 50.4	-1.0
	comp=Z,24nm,0.4s						
KKN	**Kakani**	50.72	285	*e*P	P	05 40 51.0	-0.7
	comp=Z,114nm,1.0s						
DMN	**Daman**	50.91	285	*e*P	P	05 40 52.6	-0.6
	comp=Z,83nm,0.9s						
GKN	**Gorkha**	51.23	286	*e*P	P	05 40 54.9	-0.6
	comp=Z,242nm,1.2s						
MK31	**Makanchi Array**	51.29	310	*c i*P	P	05 40 53.8	-1.7
MK31	**Makanchi Array**	51.29	310	P	P	05 40 55.3	-0.2
MKAR	**Makanchi Array**	51.29	310	P	P	05 40 54.0	-1.5
	comp=Z,22nm,0.8s,baz=90,slow=8.7,SNR=78						
MKAR				PcP	PcP	05 42 10.3	-0.1
	comp=Z,7.3nm,0.6s,baz=79,slow=10,SNR=7.9						
MKAR	**Makanchi Array**	51.29	310	*i* P	P	05 40 54.0	-1.5
MKAR				pmax	pmax		
	comp=Z,22nm,0.8s						
MKAR	**Makanchi Array**	51.29	310	P	P	05 40 54.5	-1.0
MAKZ	**Makanchi**	51.51	310	P	P	05 40 56.6	-0.5
MAKZ				pmax	pmax		
	comp=Z,70nm,1.4s						
MAKZ				MLR	MLR		
	comp=Z,16µm,18.0s						
MAKZ	**Makanchi**	51.51	310	P	P	05 40 56.6	-0.5
MAKZ				IAmb	IAmb	05 40 58.8	
	comp=Z,70nm,1.4s						
DANN	**Dangsing**	51.91	286	*e*P	P	05 40 59.9	-0.9
	comp=Z,366nm,1.0s						
KOLN	**Koldanda**	52.18	286	*e*P	P	05 41 01.6	-1.0
	comp=Z,211nm,1.0s						
PSA00	**Pilbara Seismi**	52.53	207	P	P	05 41 04.0	-0.8
PSA00				IAmb	IAmb	05 41 06.4	
	comp=Z,79nm,0.9s						
LIFNC	**LIFOU**	52.56	151	IAMs_20	IAMs_20	06 01 00.8	
	comp=Z,6µm,20.0s						
PYUN	**Piuthan**	52.63	286	*e*P	P	05 41 05.1	-0.9
	comp=Z,434nm,1.2s						
KNTN	**Kanton**	52.71	116	IAMs_20	IAMs_20	06 05 10.2	
	comp=Z,8µm,19.0s						
RDOG	**Red Dog Mine**	52.75	23	P	P	05 41 06.5	+0.5
	baz=246,SNR=6.5						
RDOG				S	S	05 48 40.8	+7.6
	baz=246						
SEM	**Semipalatinsk**	52.77	315	*e*P	P	05 41 04.4	-2.3
	comp=Z,77nm,1.4s,baz=314						
SEM				*e*LR	LR	06 03 21.6	
	comp=Z,5µm,16.8s,baz=314						
SEM	**Semipalatinsk**	52.77	315	*e*P	P	05 41 04.4	-2.3
SEM				pmax	pmax		
	comp=Z,77nm,1.4s						
SEM				MLR	MLR		
	comp=Z,5µm,17.0s						
DZM	**Mont Dzumac**	53.36	152	*e*P	P	05 41 18.8	+7.7
	comp=Z,84nm,1.1s						
DZM				*e*S	S	05 48 47.7	+5.1
	comp=Z,9µm,25.8s						
DZM				*e*LR	LR	05 56 43.3	
	comp=Z,12µm,23.3s						
SHLS	**Shalkode**	53.36	306	*e*P	P	05 41 06.0	-5.1
	comp=Z,58nm,1.4s,baz=305						
SHLS	**Shalkode**	53.36	306	*e*P	P	05 41 06.0	-5.1
SHLS				pmax	pmax		
	comp=Z,58nm,1.4s						
NRIK	**Noril'sk**	53.50	339	P	P	05 41 11.3	-0.2
	comp=Z,141nm,1.2s,baz=112,slow=8.3,SNR=43						
NRIK				LR	LR	06 05 23.9	
	comp=Z,16µm,18.0s,baz=116,slow=38						
NRIK	**Noril'sk**	53.50	339	*ce*P	P	05 41 12.0	+0.5
NRIK				pmax	pmax		
	comp=Z,141nm,1.1s						
NRIK				MLR	MLR		
	comp=Z,15µm,18.0s						
NRIK	**Noril'sk**	53.50	339	P	P	05 41 11.9	+0.5
P18K	**Big Mountain,**	53.55	34	S	S	05 48 45.7	+1.3
	baz=260						
UZB	**Uzynbulak**	53.68	306	*e*P	P	05 41 10.2	-3.2
	comp=Z,49nm,1.7s,baz=305						
UZB				*e*S	S	05 48 51.2	+4.2
	comp=Z,69nm,3.4s,baz=305						
UZB	**Uzynbulak**	53.68	306	*e*P	P	05 41 13.2	-0.3
UZB				pmax	pmax		
	comp=Z,18nm,0.8s						
SII	**Sitkinak Islan**	53.70	38	P	P	05 41 12.8	-0.3
	baz=263						
KURK	**Kurchatov**	53.82	315	*ce*P	P	05 41 12.3	-1.8
KURK				pmax	pmax		
	comp=Z,147nm,1.3s						
KURK				MLR	MLR		
	comp=Z,18µm,17.0s						
KURK	**Kurchatov**	53.82	315	P	P	05 41 13.6	-0.5
TTA	**Tatalina**	53.87	30	P	P	05 41 14.6	+0.2
	baz=257						
TTA				S	S	05 48 51.7	+2.9
	baz=257						
KURBB	**Kurchatov Arra**	53.88	315	P	P	05 41 13.2	-1.3
	comp=Z,48nm,0.8s,baz=91,slow=7.3,SNR=211						
KURBB				PKPPKP	P'P'df	06 11 33.6	-4.6
	comp=Z,0.2nm,0.4s,baz=259,slow=3.4,SNR=1.9						
KPKS	**Kokpek**	53.91	306	*e*P	P	05 41 13.1	-1.9
	comp=Z,53nm,1.6s,baz=306						
KPKS				*e*S	S	05 48 47.9	-2.1
	comp=Z,93nm,5.1s,baz=306						
KPKS	**Kokpek**	53.91	306	*e*P	P	05 41 13.1	-1.9
KPKS				*e*S	S	05 48 47.8	-2.1
KPKS				pmax	pmax		
	comp=Z,53nm,1.6s						
KPKS				smax	smax		
	comp=E,93nm,5.1s						
GCSA	**Galena City Sc**	53.94	27	P	P	05 41 15.1	+0.3
	baz=255						
TDK	**Taldyqorghan**	54.02	308	*e*P	P	05 41 13.1	-2.6
	baz=308						
TDK				*e*LR	LR	06 04 18.3	
	comp=E,9µm,20.9s,baz=308						
TDK	**Taldyqorghan**	54.02	308	*e*P	P	05 41 13.1	-2.6
TDK				MLR	MLR		
	comp=Z,9µm,21.0s						
O19K	**Port Alsworth**	54.13	33	P	P	05 41 17.2	+0.9
	baz=261						
O19K				S	S	05 48 54.5	+2.3
	baz=261						
O19K	**Port Alsworth**	54.13	33	P	P	05 41 16.9	+0.7
O19K				IAmb	IAmb	05 41 25.5	
	comp=Z,90nm,1.2s						
SATY	**Saty**	54.14	305	*e*P	P	05 41 14.6	-2.2
	comp=Z,53nm,1.7s,baz=305						
SATY	**Saty**	54.14	305	*e*P	P	05 41 14.5	-2.2
SATY				pmax	pmax		
	comp=Z,53nm,1.7s						
N19K	**Bonanza Creek**	54.16	33	P	P	05 41 17.0	+0.4
	baz=260						
N19K				S	S	05 48 55.1	+2.4
	baz=260						
L19K	**White Mountain**	54.24	31	P	P	05 41 16.8	-0.3
	baz=259						
L19K	**White Mountain**	54.24	31	P	P	05 41 17.9	+0.9
L19K				IAmb	IAmb	05 41 38.7	
	comp=Z,76nm,1.5s						
OHAK	**Old Harbor**	54.26	37	P	P	05 41 17.2	0.0
	baz=264						
M19K	**Big River Lodg**	54.40	31	P	P	05 41 18.5	+0.3
	baz=259						
M19K				S	S	05 48 58.7	+2.9
	baz=259						
ARXS	**Arharly**	54.48	307	*e*P	P	05 41 19.0	-0.2
P19K	**Oil Pt**	54.59	34	P	P	05 41 20.3	+0.6
	baz=262						
TARG	**Taragay, Kyrgy**	54.70	304	P	P	05 41 21.5	+0.3
TARG				IAmb	IAmb	05 41 23.5	
	comp=Z,81nm,1.0s						
L20K	**Farewell, AK**	54.74	31	P	P	05 41 21.7	+1.0
	baz=259						
L20K				S	S	05 49 00.7	+0.3
	baz=259						
K20K	**Telida**	54.83	30	P	P	05 41 22.4	+1.1
	baz=259,SNR=12						
K20K				S	S	05 49 04.4	+2.9
	baz=259						
O20K	**Slope Mountain**	54.96	34	P	P	05 41 22.7	+0.3
	baz=262						
J20K	**Nowinta River**	54.96	29	P	P	05 41 22.9	+0.7
	baz=258,SNR=17						
J20K				S	S	05 49 05.8	+2.6
	baz=258						
J20K	**Nowinta River**	54.96	29	P	P	05 41 22.6	+0.4
J20K				IAmb	IAmb	05 41 45.7	
	comp=Z,90nm,1.1s						
CHKK	**Chushkaly**	55.11	307	*e*P	P	05 41 22.7	-1.0
	baz=306						
KDJ	**Kajisay**	55.12	304	P	P	05 41 24.5	+0.5
KDJ				pmax	pmax		
	comp=Z,41nm,0.9s						
KDJ	**Kajisay**	55.12	304	P	P	05 41 24.5	+0.5
KDJ				IAmb	IAmb	05 41 26.9	
	comp=Z,41nm,0.8s						
MDOK	**Medeo**	55.12	306	*e*P	P	05 41 21.4	-2.5
	baz=306						
MDOK				*e*S	S	05 49 14.6	+8.3
	baz=306						
MDOK				*e*SS	SS	05 53 12.2	+22
	baz=306						
MDOK				*e*LR	LR	06 05 28.3	
	comp=Z,4µm,16.7s,baz=306						
MDOK	**Medeo**	55.12	306	P	P	05 41 23.2	-0.7
KNDC	**Almaty**	55.18	306	P	P	05 41 24.1	-0.1
TNSS	**Tian-Shan**	55.21	306	*e*P	P	05 41 24.2	-0.6
	baz=305						
AAA	**Alma-Ata**	55.22	306	*e*P	P	05 41 24.3	-0.3
	baz=306						
AAA				*e*S	S	05 49 16.3	+8.8
	baz=306						
AAA				*e*LR	LR	06 06 06.2	
	comp=Z,12µm,21.4s,baz=306						
AAA	**Alma-Ata**	55.22	306	*e*P	P	05 41 24.2	-0.3
AAA				*e*S	S	05 49 16.2	+8.8
AAA				MLR	MLR		
	comp=Z,12µm,21.0s						
SPCR	**Spurr Chakacha**	55.31	32	P	P	05 41 25.7	+0.8
	baz=262						
SPCR				S	S	05 49 10.6	+2.4
	baz=262						
HOM	**Homer**	55.40	34	P	P	05 41 26.0	+0.6
	baz=263						
KUU	**Kurty**	55.57	307	*e*P	P	05 41 24.6	-2.4
	comp=Z,133nm,0.7s,baz=306						
KUU	**Kurty**	55.57	307	*e*P	P	05 41 24.6	-2.4
KUU				pmax	pmax		
	comp=Z,133nm,0.7s						
CNPM	**China Poot**	55.59	34	IAMs_20	IAMs_20	06 06 41.5	
	comp=Z,5µm,19.0s						
MSVF	**Nonsavu**	55.69	138	P	P	05 41 29.3	+1.2
MSVF				pmax	pmax		
	comp=Z,35nm,0.9s						
MSVF	**Nonsavu**	55.69	138	P	P	05 41 29.2	+1.2
MSVF				IAmb	IAmb	05 41 47.8	
	comp=Z,35nm,0.9s						
MSVF	**Nonsavu**	55.69	138	IAMs_20	IAMs_20	05 59 53.4	
	comp=Z,5µm,19.0s						
CHUM	**Lake Minchumin**	55.69	29	P	P	05 41 28.2	+0.7
	baz=260						
CHUM				S	S	05 49 16.5	+3.5
	baz=260						
CAST	**Castle Rocks**	55.72	30	P	P	05 41 28.1	+0.4
	baz=260						
CAPN	**Captain Cook N**	55.77	33	P	P	05 41 28.6	+0.6
	baz=263						
BRLK	**Bradley Lake**	55.79	34	IAMs_20	IAMs_20	06 06 57.6	
	comp=Z,5µm,20.0s						
ULHL	**Ulahol**	55.80	305	P	P	05 41 29.4	+0.5
	SNR=9.8						
H21K	**Melozitna Rive**	55.83	27	P	P	05 41 29.4	+0.9
	baz=258						
H21K				S	S	05 49 17.4	+2.6
	baz=258						
BRSE	**Bradley Lake S**	55.86	34	P	P	05 41 28.8	0.0
	baz=264						
A21K	**Barrow**	55.99	20	P	P	05 41 30.5	+1.0
	baz=251						
A21K				S	S	05 49 18.2	+1.5
	baz=251						
BOOM	**Boomskoye usch**	56.00	305	P	P	05 41 30.0	-0.3
BOOM				pmax	pmax		
	comp=Z,50nm,0.7s						
BOOM	**Boomskoye usch**	56.00	305	P	P	05 41 30.0	-0.3
BOOM				IAmb	IAmb	05 41 31.8	
	comp=Z,50nm,0.7s						
I21K	**Tanana**	56.07	28	P	P	05 41 30.9	+0.7
	baz=259						
I21K				S	S	05 49 21.8	+3.9
	baz=259						
TKM2	**Tokmak 2**	56.20	305	P	P	05 41 32.3	+0.6
	SNR=48						
BPAW	**Bear Paw Mtn.**	56.31	29	P	P	05 41 32.3	+0.4
	baz=261						
BPAW				S	S	05 49 23.5	+2.3
	baz=261						
BPAW	**Bear Paw Mtn.**	56.31	29	P	P	05 41 32.2	+0.3
BPAW				IAmb	IAmb	05 41 40.6	
	comp=Z,148nm,1.8s						
KSH	**Kashi**	56.34	301	P	P	05 41 34.6	+1.9
KSH				pP	sP	05 41 38.3	-0.3
KSH				sP	pwP	05 41 40.5	+0.3
KSH				PP	PP	05 43 41.6	+3.6
KSH				ScP	ScP	05 46 28.4	-0.3
KSH				S	S	05 49 20.5	-2.2
KSH				ScS	ScS	05 51 16.1	-5.6
KSH				SS	SS	05 53 08.6	-0.8
KSH				pmax	pmax		
	comp=Z,45nm,0.9s						
KSH				pmax	pmax		
	comp=Z,2µm,12.7s						
KSH				LR	LR		
	comp=Z,5µm,16.5s						
KSH				LR	LR		
	comp=Z,14µm,18.9s						
KSH				LR	LR		
	comp=Z,15µm,22.0s						
M22K	**Willow**	56.38	32	P	P	05 41 33.0	+0.6
	baz=263						
CUT	**Chulitna**	56.39	31	P	P	05 41 33.1	+0.6
	baz=263						
RC01	**Rabbit Creek A**	56.49	33	P	P	05 41 33.5	+0.3
	baz=264						
TRF	**Thorofare Moun**	56.52	30	P	P	05 41 33.5	-0.1
	baz=262						
TRF				S	S	05 49 26.4	+2.0
	baz=262						
TRF	**Thorofare Moun**	56.52	30	P	P	05 41 33.8	+0.1
TRF				IAmb	IAmb	05 41 55.3	
	comp=Z,101nm,1.4s						
SEW	**Seward**	56.54	34	P	P	05 41 33.3	-0.3
	baz=265						
SEW				S	S	05 49 23.4	-0.9
	baz=265						
MLY	**Manley**	56.56	28	P	P	05 41 33.6	-0.2
	baz=261						
MLY				S	S	05 49 26.2	+1.6
	baz=261						
KBK	**Karagaybulak**	56.71	305	P	P	05 41 35.6	+0.3
	SNR=65						
POHA	**Pohakuloa**	56.78	83	IAMs_20	IAMs_20	06 07 36.3	
	comp=Z,7µm,19.0s						
CHMS	**Chumysh**	56.81	306	P	P	05 41 36.1	+0.2
	SNR=18						
PMR	**Palmer**	56.83	32	P	P	05 41 35.2	-0.5
	baz=264,SNR=6.1						
PMR				S	S	05 49 26.8	-1.4
	baz=264						
SGDS	**Sogindy**	56.85	306	*e*P	P	05 41 34.5	-1.7
	comp=Z,74nm,2.5s,baz=306						
SMLA	**Simla**	56.90	291	*e*P	P	05 41 34.9	-1.8
USP	**Ospenovka**	56.97	306	P	P	05 41 37.1	+0.1
	SNR=23						
AAK	**Ala-Archa**	57.04	305	P	P	05 41 36.3	-1.4
	comp=Z,24nm,0.7s,baz=128,slow=4.7,SNR=63						
AAK	**Ala-Archa**	57.04	305	P	P	05 41 36.7	-1.0
	SNR=39						
AAK	**Ala-Archa**	57.04	305	*i* P	P	05 41 36.7	-1.0
	SNR=36						
AAK	**Ala-Archa**	57.04	305	*i* P	P	05 41 37.1	-0.6
AAK				pmax	pmax		
	comp=Z,98nm,0.8s						
AAK	**Ala-Archa**	57.04	305	IAMs_20	IAMs_20	06 07 12.3	

	comp=Z,5µm,18.0s						
UCH	Uchtor	57.08	305	P	P	05 41 38.5	+0.1
	SNR=50						
BTLS	Baital	57.10	308	*e*P	P	05 41 35.6	-2.3
	comp=Z,52nm,0.8s,baz=308						
BTLS	Baital	57.10	308	*e*P	P	05 41 35.6	-2.3
BTLS				pmax	pmax		
	comp=Z,52nm,0.8s						
KNK	Knik Glacier	57.14	32	P	P	05 41 38.6	+0.7
	baz=265,SNR=5.9						
KNK				S	S	05 49 31.6	-0.7
	baz=265						
COLD	Coldfoot	57.15	25	P	P	05 41 37.9	0.0
	baz=260						
COLD				S	S	05 49 34.4	+2.1
	baz=260						
PWL	Port Wells	57.15	33	P	P	05 41 38.6	+0.6
	baz=266						
PWL				S	S	05 49 32.2	-0.3
	baz=266						
RND	Reindeer	57.15	30	P	P	05 41 38.4	+0.4
RND				pmax	pmax		
	comp=Z,34nm,1.0s						
RND	Reindeer	57.15	30	P	P	05 41 38.4	+0.4
MCK	McKinley	57.16	29	P	P	05 41 38.0	0.0
	baz=263						
MCK				S	S	05 49 34.0	+1.5
	baz=263						
I23K	Minto, Yukon-K	57.16	28	P	P	05 41 38.3	+0.4
	baz=262						
I23K				S	S	05 49 34.0	+1.7
	baz=262						
NEA2	Nenana	57.20	28	P	P	05 41 38.7	+0.4
	baz=263,SNR=8.1						
NEA2				S	S	05 49 33.5	+0.4
	baz=263						
WAT1	Susitna Watana	57.23	31	P	P	05 41 38.4	-0.1
	baz=264						
SML	Sawmill	57.23	32	P	P	05 41 38.1	-0.5
	baz=265						
SML				S	S	05 49 33.6	0.0
	baz=265						
DHRM	DHARAMSHALA	57.38	293	*e*P	P	05 41 37.9	-2.4
DHRM				IAmb	IAmb	05 41 43.3	
	comp=Z,42nm,0.9s						
NDI	New Delhi	57.44	288	*e*P	P	05 41 38.9	-1.6
EKS2	Erkin-Say	57.56	305	P	P	05 41 41.4	0.0
	SNR=22						
WAT6	Susitna Watana	57.58	31	P	P	05 41 41.7	+0.5
	baz=265,SNR=8.2						
WAT6				S	S	05 49 37.0	-1.4
	baz=265						
WRH	Wood River Hil	57.61	29	P	P	05 41 42.0	+0.9
BRZS	Berezniki	57.64	314	*e*P	P	05 41 39.2	-2.4
	comp=Z,78nm,1.5s,baz=314						
BRZS	Berezniki	57.64	314	*e*P	P	05 41 39.2	-2.4
BRZS				pmax	pmax		
	comp=Z,78nm,1.5s						
TOLK	Toolik Lake Re	57.64	24	P	P	05 41 42.1	+0.8
	baz=260,SNR=9.2						
TOLK				S	S	05 49 41.0	+2.2
	baz=260						
AML	Almayashu	57.70	305	P	P	05 41 42.6	+0.1
	SNR=57						
AML	Almayashu	57.70	305	*i* P	P	05 41 42.0	-0.6
	SNR=56						
SCM	Sheep Creek Mo	57.71	32	P	P	05 41 42.9	+1.0
	baz=266,SNR=6.9						
SCM				S	S	05 49 40.6	+0.6
	baz=266						
TCOL	CIGO, UAF Yank	57.75	28	P	P	05 41 42.1	0.0
	baz=264						
TCOL				S	S	05 49 41.8	+1.6
	baz=264						
COLA	College	57.76	28	*i* P	P	05 41 43.8	+1.7
COLA				pmax	pmax		
	comp=Z,26nm,1.2s						
COLA				MLR	MLR		
	comp=Z,2µm,17.0s						
COLA	College	57.76	28	P	P	05 41 42.6	+0.5
	baz=264						
GLI	Glacier Island	57.76	33	P	P	05 41 42.5	+0.2
	baz=267						
DHY	Denali Highway	57.79	30	P	P	05 41 42.8	+0.2
	baz=265						
DHY				S	S	05 49 40.2	-0.8
	baz=265						
DHY	Denali Highway	57.79	30	P	P	05 41 42.4	-0.1
DHY				IAmb	IAmb	05 42 55.8	
	comp=Z,52nm,1.3s						
H24K	Noodor Dome	57.86	27	P	P	05 41 43.3	+0.4
	baz=263,SNR=8.1						
H24K				S	S	05 49 44.8	+3.0
	baz=263						
STKA	Stephens Creek	57.91	181	P	P	05 41 41.8	-1.7
	comp=Z,14nm,0.8s,baz=344,slow=8.2,SNR=23						
STKA	Stephens Creek	57.91	181	P	P	05 41 43.6	+0.1
STKA				pmax	pmax		
	comp=Z,15nm,1.4s						
STKA	Stephens Creek	57.91	181	P	P	05 41 43.6	+0.1
POKR	Poker Plat Res	57.96	28	P	P	05 41 44.4	+0.8
	baz=264						
POKR				S	S	05 49 44.6	+1.6
	baz=264						
HIN	Hinchinbrook I	58.03	34	IAMs_20	IAMs_20	06 08 40.9	
	comp=Z,4µm,19.0s						
Q23K	Middleton Isla	58.07	35	P	P	05 41 44.7	+0.3
	baz=268						
HDA	Harding Lake	58.10	29	P	P	05 41 44.6	+0.1
	baz=265,SNR=6.2						
HDA				S	S	05 49 48.2	+3.4
	baz=265						
HDA				S	S	05 49 48.2	+3.4
	baz=265						
HDA	Harding Lake	58.10	29	P	P	05 41 44.2	-0.3
HDA				IAmb	IAmb	05 42 06.2	
	comp=Z,43nm,1.1s						
ILAR	Eielson Array	58.16	28	P	P	05 41 44.1	-0.9
	comp=Z,9.4nm,0.7s,baz=260,slow=5.7,SNR=107						
ILAR	Eielson Array	58.16	28	P	P	05 41 45.0	+0.1
ILAR	Eielson Array	58.16	28	P	P	05 41 45.0	+0.1
KUDL	Kundal	58.19	288	*e*P	P	05 41 44.3	-1.5
M24K	Tolsona, Glenn	58.27	32	P	P	05 41 46.3	+0.4
	baz=267						
KLU	Klutina	58.36	32	P	P	05 41 47.5	+0.9
	baz=267,SNR=7.2						
KLU				S	S	05 49 49.1	+0.7
	baz=267						
EYAK	Cordova Ski Ar	58.41	33	P	P	05 41 47.2	+0.5
	baz=268						
PAX	Paxson	58.65	31	P	P	05 41 48.7	+0.2
	baz=267,SNR=7.8						
PAX				S	S	05 49 51.6	-0.6
	baz=267						
BHPL	Bhopal	58.75	282	*e*P	P	05 41 47.7	-2.1
BHPL				IAmb	IAmb	05 41 52.0	
	comp=Z,16nm,0.7s						
HARP	HAARP	58.76	31	P	P	05 41 49.5	+0.2
	baz=268						
J25K	Salcha River,	58.79	29	P	P	05 41 49.1	-0.4
	baz=266						
J25K				S	S	05 49 52.6	-1.4
	baz=266						
PRP	Porcupine Dome	58.80	28	P	P	05 41 49.5	-0.1
	baz=265						
PRP				S	S	05 49 55.8	+1.6
	baz=265						
BVAR	Borovoye Array	58.89	318	P	P	05 41 49.2	-1.0
	comp=Z,45nm,0.5s,baz=179,slow=5.9,SNR=146						
BRVK	Borovoye	58.95	318	*i* P	P	05 41 49.6	-1.1
BRVK				pmax	pmax		
	comp=Z,120nm,0.9s						
BRVK				MLR	MLR		
	comp=Z,10µm,19.0s						
BRVK	Borovoye	58.95	318	P	P	05 41 50.0	-0.7
RIDG	Independent Ri	58.97	30	P	P	05 41 50.2	-0.5
	baz=267						
BMRM	Bremner River	58.98	33	P	P	05 41 50.9	+0.1
	baz=269						
BMRM				S	S	05 49 58.8	+2.3
	baz=269						
BMRM	Bremner River	58.98	33	P	P	05 41 51.7	+0.9
N25K	Chitina, Valde	59.00	32	P	P	05 41 51.1	+0.1
	baz=268						
N25K				S	S	05 49 57.1	+0.4
	baz=268						
N25K	Chitina, Valde	59.00	32	P	P	05 41 52.2	+1.2
N25K				IAmb	IAmb	05 42 40.0	
	comp=Z,89nm,1.6s						
FYU	Fort Yukon	59.01	26	P	P	05 41 51.6	+0.8
KAIM	Kayak Island	59.06	34	P	P	05 41 51.4	+0.1
	baz=270						
HMT	Hamilton	59.14	34	IAMs_20	IAMs_20	06 06 58.4	
	comp=Z,5µm,21.0s						
BBOO	Buckleboo	59.17	186	P	P	05 41 51.5	-0.7
DZA	Taraz	59.32	306	*i* P	P	05 41 51.4	-2.0
	baz=306						
DZA	Taraz	59.32	306	*i* P	P	05 41 51.4	-2.0
BMAR	Burnt Mountain	59.34	25	P	P	05 41 54.4	+1.2
SCRK	Sand Creek	59.36	29	P	P	05 41 53.1	-0.3
	baz=268,SNR=18						
SCRK				S	S	05 50 01.9	+0.4
	baz=268						
J26L	Joseph Creek	59.57	29	P	P	05 41 54.6	-0.3
	baz=268,SNR=22						
J26L				S	S	05 50 04.2	+0.2
	baz=268						
L26K	Log Cabin Wild	59.62	31	P	P	05 41 55.8	+0.7
	baz=269						
L26K				S	S	05 50 05.9	+1.3
	baz=269						
HYB	Hyderabad	59.66	276	*i* P	P	05 41 47.0	-9.1
HYB				*e*PP	PP	05 44 08.0	+0.2
HYB				*e*		05 46 40.0	
HYB				*e*S	S	05 50 08.0	+1.6
CRQM	Cirque	59.69	33	IAMs_20	IAMs_20	06 08 30.7	
	comp=Z,4µm,19.0s						
CRQE	Cirque	59.72	33	P	P	05 41 56.0	0.0
	baz=270						
MCARA	McCarthy VSAT	59.75	32	P	P	05 41 56.5	+0.5
	baz=270						
M26K	Nabesna, AK	59.77	31	P	P	05 41 56.4	+0.2
	baz=269						
M26K				S	S	05 50 06.9	+0.3
	baz=269						
WAX	Waxell Ridge	59.84	34	P	P	05 41 58.5	+1.7
WAX				IAMs_20	IAMs_20	06 05 28.9	
	comp=Z,4µm,18.0s						
KKAR	Karatay Array	59.88	306	P	P	05 41 56.6	-0.7
KKAR	Karatay Array	59.88	306	P	P	05 41 56.6	-0.7
ISLE	Juniper Island	60.09	33	IAMs_20	IAMs_20	06 04 08.5	
	comp=Z,4µm,20.0s						
BTK	Batken	60.17	303	P	P	05 41 58.7	-0.7
BTK				pmax	pmax		
	comp=Z,116nm,1.7s						
BTK	Batken	60.17	303	P	P	05 41 58.7	-0.7
BTK				IAmb	IAmb	05 42 00.9	
	comp=Z,116nm,1.6s						
AJM	Ajmer	60.22	287	*e*P	P	05 41 57.6	-2.4
M27K	Edge Creek, AK	60.29	31	P	P	05 41 60.0	+0.1
	baz=270						
M27K				S	S	05 50 14.5	+1.0
	baz=270						
M27K	Edge Creek, AK	60.29	31	P	P	05 41 59.5	-0.5
M27K				IAmb	IAmb	05 43 01.1	
	comp=Z,129nm,1.8s						
MESA	MESA	60.29	34	P	P	05 41 59.8	-0.3
	baz=272						
MESA	MESA	60.29	34	IAMs_20	IAMs_20	06 06 07.9	
	comp=Z,4µm,18.0s						
L27K	Beaver Creek,	60.31	31	P	P	05 42 00.5	+0.5
	baz=270,SNR=7.0						
L27K				S	S	05 50 13.7	+0.2
	baz=270						
BCAR	Beaver Creek A	60.33	30	P	P	05 42 01.3	+1.2
BRLS	Boroldav	60.38	306	*e*P	P	05 42 12.7	+12
BRLS				pmax	pmax		
	comp=Z,12nm,0.9s						
YAH	Yahtse	60.39	34	IAMs_20	IAMs_20	06 06 04.4	
	comp=Z,5µm,18.0s						
CTG	Chitna Glacier	60.57	33	P	P	05 42 02.2	+0.4
	baz=272						
CTG				S	S	05 50 17.3	+0.2
	baz=272						
TABL	Table Mountain	60.69	34	IAMs_20	IAMs_20	06 06 04.2	
	comp=Z,4µm,20.0s						
LOGN	Logan Glacier	60.74	33	IAMs_20	IAMs_20	06 09 11.6	
	comp=Z,4µm,19.0s						
GAR	Garm	60.75	302	P	P	05 42 03.0	-0.4
BVCY	Beaver Creek	60.76	31	S	S	05 50 20.4	+1.1
	baz=271						
YUK3	Moose Creek	60.97	32	P	P	05 42 04.8	+0.2
	baz=272						
YUK3				S	S	05 50 21.8	-0.6
	baz=272						
PINM	Pinnacle	61.14	34	P	P	05 42 05.8	+0.1
	baz=273						
PINM				S	S	05 50 25.2	+0.9
	baz=273						
DAWY	Dawson	61.38	29	P	P	05 42 07.9	+0.6
	baz=272,SNR=7.7						
DAWY				S	S	05 50 30.4	+3.2
	baz=272						
CHGR	Chuyangaron	61.71	302	P	P	05 42 09.5	-0.4
PALK	Pallekele	61.72	264	P	P	05 42 10.1	-0.2
PALK				pmax	pmax		
	comp=Z,66nm,1.1s						
I29M	Ogilvie Camp,	61.81	28	P	P	05 42 10.6	+0.6
	baz=272,SNR=7.9						
I29M				S	S	05 50 36.0	+3.4
	baz=272						
YUK4	Talbot Arm	61.86	32	P	P	05 42 11.3	+0.7
	baz=274,SNR=11						
J29M	Klondike Camp	61.88	29	P	P	05 42 11.1	+0.5
	baz=273						
J29M				S	S	05 50 37.8	+4.2
	baz=273						
YUK6	Outpost Mounta	62.02	33	P	P	05 42 12.4	+0.6
	baz=274						
YUK6				S	S	05 50 37.8	+2.0
	baz=274						
HYT	Haines Junctio	62.45	33	P	P	05 42 15.4	+0.8
	baz=275,SNR=7.4						
HYT				S	S	05 50 43.4	+2.4
	baz=275						
HYT	Haines Junctio	62.45	33	P	P	05 42 16.3	+1.8
M30M	Minto, Yukon	62.64	31	P	P	05 42 16.2	+0.5
	baz=275,SNR=6.5						
M30M				S	S	05 50 46.4	+3.3
	baz=275						
KBL	Kabul	62.75	297	P	P	05 42 15.0	-2.1
KBL				pmax	pmax		
	comp=Z,62nm,1.0s						
KBL	Kabul	62.75	297	P	P	05 42 15.4	-1.7
	SNR=20						
KBL				P	P	05 42 15.4	-1.7
	SNR=20						
N31M	Braeburn, Yuko	63.22	32	P	P	05 42 20.3	+0.7
	baz=276,SNR=5.3						
N31M				S	S	05 50 51.6	+1.2
	baz=276						
POO	Poona	63.45	278	*e*P	P	05 42 20.9	-0.9
POO	Poona	63.45	278⇑	*i*P	P	05 42 19.0	-2.8
	comp=Z,60nm,1.0s						
INK	Inuvik	63.52	24	P	P	05 42 22.4	+1.0
	comp=Z,17nm,0.7s,baz=283,slow=6.0,SNR=56						
INK	Inuvik	63.52	24	P	P	05 42 21.3	-0.1
	baz=275,SNR=18						
INK				S	S	05 50 55.0	+1.1
	baz=275						
INK	Inuvik	63.52	24	P	P	05 42 21.6	+0.2
INK				IAmb	IAmb	05 42 47.0	
	comp=Z,50nm,1.1s						
TOO	Toolangi	63.64	178	P	P	05 42 22.8	+0.3
TOO				pmax	pmax		
	comp=Z,47nm,1.1s						
SKAG	Skagway	63.68	34	P	P	05 42 22.8	+0.2
	baz=278						
SKAG				S	S	05 50 59.6	+3.5
	baz=278						
WHY	Whitehorse	63.75	33	P	P	05 42 24.0	+0.8
	baz=277,SNR=7.0						
WHY				S	S	05 50 56.9	-0.3
	baz=277						
M31M	Drury Creek, Y	63.79	31	P	P	05 42 23.7	+0.4
	baz=277,SNR=7.2						
M31M				S	S	05 50 58.5	+1.0
	baz=277						
SIT	Sitka	64.03	37	P	P	05 42 25.1	+0.3
	baz=279						
SIT				S	S	05 51 01.0	+0.6
	baz=279						
SVE	Sverdlovsk	64.08	323*d*	*e*P	P	05 42 25.1	-0.2
SVE				*e*S	S	05 51 02.8	+1.6
SVE				*e*		05 52 15.1	
SVE				pmax	pmax		
	comp=Z,145nm,1.1s						
SVE				MLR	MLR		
	comp=Z,5µm,18.0s						
BOM	Bombay	64.24	279	*e*P	P	05 42 21.8	-5.1
FARO	Faro, Yukon	64.27	31	P	P	05 42 26.3	-0.2
	baz=278						
FARO				S	S	05 51 04.8	+1.3
	baz=278						
TRD	Trivandrum	64.54	267	*e*P	P	05 42 29.0	0.0
GOA	Goa	64.58	275	*e*P	P	05 42 26.1	-3.0
P33M	Teslin, Yukon	64.83	33	P	P	05 42 30.3	+0.1
	baz=279						
P33M				S	S	05 51 12.9	+2.4
	baz=279						
MMPY	Sheldon Lake,	65.17	31	P	P	05 42 32.7	+0.3
	baz=280						
MMPY				S	S	05 51 17.4	+2.8
	baz=280						
ARU	Arti	65.28	323	P	P	05 42 32.5	-0.5
	comp=Z,30nm,0.6s,baz=82,slow=4.7,SNR=113						
ARU	Arti	65.28	323*c*	*i*P	P	05 42 32.4	-0.7
ARU						05 43 02.2	
ARU						05 44 58.4	
ARU				S	S	05 51 18.7	+2.7
ARU						05 52 24.7	
ARU				pmax	pmax		
	comp=Z,232nm,1.0s						
ARU				MLR	MLR		
	comp=Z,7µm,17.0s						
ARU	Arti	65.28	323	P	P	05 42 32.8	-0.3
CRAG	Craig	65.51	38	S	S	05 51 22.7	+3.9
	baz=281						
WRAK	Wrangell Islan	65.75	37	P	P	05 42 36.0	-0.1
	baz=281						
WRAK				S	S	05 51 24.7	+3.0
	baz=281						
A36M	Sachs Harbour	65.83	20	S	S	05 51 23.8	+1.6
	baz=281						
AB31	Akbulak array	65.93	315	*i* P	P	05 42 36.4	-1.0
ABKAR	Akbulak array	65.93	315	P	P	05 42 36.9	-0.5
H02N1	VAN INLET T-PH	66.30	41	T	T	06 55 08.7	
	SNR=8.6						
H02S1	DAWSON INLET T	66.35	41	P	P	05 42 40.7	+0.7
	SNR=4.5						
H02S1				T	T	06 55 13.9	
	SNR=14						
TGTN	Hyland Airport	66.76	31	P	P	05 42 42.6	0.0
	baz=282						
TGTN				S	S	05 51 34.7	+0.7
	baz=282						
AKTO	Aktyubinsk	66.87	316	*i* P	P	05 42 41.9	-1.5
AKTO				pmax	pmax		
	comp=Z,7.0nm,0.9s						
RAO	Raoul Island	66.97	143	LR	LR	06 09 38.2	
	comp=Z,3µm,19.1s,baz=350,slow=34						
HRA	Herat	68.19	299	P	P	05 42 51.8	-0.5
HRA				IAmb	IAmb	05 42 54.3	
	comp=Z,48nm,1.0s						
WRGLY	Wrigley	68.52	29	P	P	05 42 54.3	+0.8
	baz=286,SNR=5.4						
TAU	Tasmania Unive	69.05	176	IAMs_20	IAMs_20	06 10 51.0	
	comp=Z,4µm,21.0s						
KIRV	Kirov	69.56	326	P	P	05 42 59.8	-0.3
	comp=Z,122nm,0.8s,baz=92,slow=5.8,SNR=38						
KIRV	Kirov	69.56	326*c*	*e*P	P	05 43 00.3	+0.2
GEYT	Alibeck	70.28	303	P	P	05 43 04.1	-0.9
	comp=Z,35nm,1.1s,baz=127,slow=2.2,SNR=22						
GYA0B	ALIBECK ARRAY	70.28	303	P	P	05 43 04.9	-0.1
GYA0B				IAmb	IAmb	05 43 07.0	
	comp=Z,76nm,1.2s						
PRGR	Permogore	70.41	330	*e*P	P	05 43 05.1	-0.2
PRGR				pmax	pmax		
	comp=Z,27nm,0.7s						
HOPEN	Hopen	70.65	347	*e*P	P	05 43 08.8	+2.3
HOPEN				*e*S	S	05 52 24.0	+4.4
HOPEN				IVMs_BB	IVMs_BB	06 21 46.8	
	comp=Z,8µm,4.1s						
SPA0	Spitsbergen Ar	71.19	350	*e*P	P	05 43 15.1	+5.3
NOR	Nord	71.75	357	*i* P	P	05 43 13.8	+0.6
NOR				IAmb	IAmb	05 43 22.9	
	comp=Z,7.4nm,0.9s						
URZ	Urewera	71.92	152	IAMs_20	IAMs_20	06 12 02.5	
	comp=Z,4µm,20.0s						
HSPB	Hornsund (broa	72.10	349	*e*P	P	05 43 16.1	+0.8
HSPB				*e*S	S	05 52 36.8	+0.5
LVZ	Lovozero	72.33	338*c*	*e*P	P	05 43 17.2	+0.3
LVZ				pmax	pmax		
	comp=Z,143nm,1.3s						
LVZ				MLR	MLR		
	comp=Z,6µm,17.0s						
QRZ	Quartz Range	72.36	157	IAMs_20	IAMs_20	06 11 41.0	
	comp=Z,4µm,21.0s						
BELG	Belogornoye	72.52	320*c*	*i*P	P	05 43 17.3	-0.8
BELG				pmax	pmax		
	comp=Z,50nm,0.9s						
BELG				MLR	MLR		
	comp=Z,1µm,18.0s						
YKA	Yellowknife Ar	72.59	28	P	P	05 43 17.7	-0.7
	comp=Z,12nm,0.7s,baz=295,slow=5.0,SNR=37						
YKA				LR	LR	06 14 07.6	
	comp=Z,1µm,21.4s,baz=0.0,slow=35						
YKA	Yellowknife Ar	72.59	28	*i* P	P	05 43 18.8	+0.4
YKA				pmax	pmax		
	comp=Z,13nm,0.7s						
APA	Apatity	72.90	338⇓	*i*P	P	05 43 20.0	-0.2
APA				*i*		05 43 40.7	
APA				*i* PPP	PPP	05 47 43.0	
APA				pmax	pmax		
	comp=Z,124nm,0.8s						
NNZ	Nelson	73.00	156	IAMs_20	IAMs_20	06 10 54.2	
	comp=Z,4µm,21.0s						
BJO1	Bjornoya	73.06	346	*e*P	P	05 43 22.7	+1.7
BJO1				*e*S	S	05 52 47.8	+0.5
BJO1				IVMs_BB	IVMs_BB	06 17 46.1	
	comp=Z,4µm,3.8s						
NLWA	Neilton Lookou	73.31	45	IAMs_20	IAMs_20	06 13 06.9	
	comp=Z,4µm,18.0s						
THZ	Tophouse	73.32	157	IAMs_20	IAMs_20	06 13 25.4	
	comp=Z,5µm,21.0s						
KLMR	Klimovskoe	73.44	330	*e*P	P	05 43 22.7	-0.8
KLMR				*e*		05 43 37.7	
KLMR				*e*		05 46 02.9	
KLMR				*e*S	SKiKP	05 52 54.4	+0.7
KLMR				*e*SS	SS	05 57 38.7	+5.0
KLMR				pmax	pmax		
	comp=Z,47nm,0.9s						
KLMR				MLR	MLR		
	comp=Z,4µm,16.0s						
KLMR	Klimovskoe	73.44	330	*e*P	P	05 43 22.8	-0.8
KLMR				AMP		05 43 24.9	
	comp=Z,47nm,0.9s						
KLMR				*e*PcP	PcP	05 43 37.7	-1.9
KLMR				*e*PP	PP	05 46 03.0	-3.8
KLMR				*e*S	SKiKP	05 52 54.4	+0.7
KLMR				*e*S	SKiKP	05 52 54.4	+0.7
KLMR				*e*SS	SS	05 57 38.8	+5.0
KLMR				*e*SS	SS	05 57 38.8	+5.0
KLMR				LQ	LQ	06 10 01.4	
KLMR				LQ	LQ	06 10 01.4	
KLMR				LR	LR	06 13 51.7	
KLMR				AMP		06 20 01.9	
	comp=Z,4µm,15.5s						
A04D	Lummi Island	73.57	43	S	SKiKP	05 52 54.9	+0.6
	baz=291						
BFZ	Birch Farm	73.62	154	IAMs_20	IAMs_20	06 16 53.6	
	comp=Z,3µm,19.0s						
D03D	Eldon	73.75	45	P	P	05 43 26.3	+0.7
	baz=291,SNR=9.7						
D03D				S	S	05 52 58.7	+2.6
	baz=291						
KEV	Kevo	73.83	341	P	P	05 43 26.3	+0.7
KEV				pmax	pmax		
	comp=Z,90nm,1.1s						
D04E	Lakebay	74.09	45	P	P	05 43 28.3	+0.8
	baz=292						
B05A	Bryant	74.11	44	P	P	05 43 27.3	-0.3
	baz=292						
B05A				S	S	05 53 00.7	+0.7
	baz=292						
HAMF	Hammerfest	74.27	342	*e*P	P	05 43 28.7	+0.5
HAMF				*e*S	S	05 53 05.0	+4.0
F04D	Rainier, OR	74.34	46	S	S	05 53 04.3	+1.6
	baz=292						
ARCES	ARCESS Array B	74.39	341	P	P	05 43 29.8	+0.9

Sta	Name	Dist	Az	Phase	ISC	Time	Res
	comp=Z,50nm,0.9s,baz=70,slow=4.3,SNR=30						
RPZ	Rata Peaks	74.43	159	P	P	05 43 28.4	-1.0
RPZ				IAmb	IAmb	05 43 45.9	
	comp=Z,53nm,0.9s						
E04D	Cinebar	74.45	46	P	P	05 43 30.1	+0.4
	baz=292						
E04D				S	S	05 53 05.8	+2.0
	baz=292						
COR	Corvallis	74.70	48	IAMs_20	IAMs_20	06 15 23.8	
	comp=Z,4µm,19.0s						
JLN	Jalan Bani Buh	74.75	287	P	P	05 43 30.7	-1.2
	SNR=6.0						
JLN				P	P	05 43 30.7	-1.2
	SNR=6.0						
J01E	Myrtle Point	74.81	49	P	P	05 43 32.4	+0.5
	baz=292						
WBK	Wadi Bani Khal	74.95	288	P	P	05 43 32.6	-0.4
	SNR=10						
WBK				P	P	05 43 32.6	-0.4
	SNR=10						
C06D	Leavenworth	74.98	44	S	S	05 53 09.8	-0.1
	baz=293						
WSAR	Wadi Sarin	75.00	289	P	P	05 43 32.3	-1.0
	comp=Z,9.9nm,1.0s,baz=52,slow=5.8,SNR=8.1						
WSAR	Wadi Sarin	75.00	289	P	P	05 43 32.8	-0.5
	SNR=6.1						
I03D	Drain, OR	75.00	49	P	P	05 43 33.2	+0.3
	baz=292						
H04D	Lebanon	75.10	48	P	P	05 43 33.8	+0.3
	baz=292						
K02D	Willamette Mer	75.17	50	P	P	05 43 34.2	+0.2
	baz=292						
BIDO	Bidbid	75.32	289	P	P	05 43 35.1	0.0
	SNR=14						
BIDO				P	P	05 43 35.1	0.0
	SNR=14						
L02E	Cave Junction	75.41	50	P	P	05 43 36.0	+0.6
	baz=292						
L02E				S	S	05 53 14.6	-0.3
	baz=292						
F05D	White Salmon	75.41	46	P	P	05 43 35.7	+0.4
	baz=293						
F05D				S	S	05 53 14.6	-0.2
	baz=293						
TULEG	Thule	75.53	7	eP	P	05 43 35.5	+0.1
TULEG				IAmb	IAmb	05 43 37.0	
	comp=Z,26nm,0.9s						
SMDO	Samad	75.56	289	P	P	05 43 36.5	-0.1
	SNR=10						
SMDO				P	P	05 43 36.5	-0.1
	SNR=10						
I04A	Tendick Farm,	75.59	48	P	P	05 43 36.5	+0.1
	baz=293						
I04A				S	S	05 53 17.4	+0.5
	baz=293						
HUMO	Hull Mountain	75.68	49	IAMs_20	IAMs_20	06 14 48.0	
	comp=Z,3µm,19.0s						
G05D	Wamic, OR	75.75	46	P	P	05 43 37.9	+0.6
	baz=293						
G05D				S	S	05 53 21.0	+2.4
	baz=293						
JMDO	Jabal Madar	75.78	288	P	P	05 43 37.2	-0.6
	SNR=7.0						
JMDO				P	P	05 43 37.2	-0.6
	SNR=7.0						
JETT	Jettan, Norway	75.82	342	eP	P	05 43 39.3	+2.1
BANOM	Banah	75.94	292	i P	P	05 43 37.9	-0.8
	SNR=16						
BANOM	Banah	75.94	292	P	P	05 43 38.8	+0.1
	SNR=11						
BANOM				P	P	05 43 38.8	+0.1
	SNR=11						
HOQ	Hoqain	75.99	290	P	P	05 43 38.2	-0.8
	SNR=22						
HOQ				P	P	05 43 38.2	-0.8
	SNR=22						
J04D	Umpqua Nationa	76.01	49	P	P	05 43 39.0	0.0
	baz=293						
SHME	Shamm	76.02	292	i P	P	05 43 38.4	-0.7
	SNR=35						
SHME	Shamm	76.02	292	P	P	05 43 39.5	+0.4
	SNR=21						
SHME				P	P	05 43 39.5	+0.4
	SNR=21						
MAK	Makhachkala	76.09	311	c iP	P	05 43 32.2	-7.0
MAK				e		05 46 29.7	
MAK				ePPP	PPP	05 48 10.7	
MAK				eS	S	05 53 11.4	-11
MAK				eSS	SS	05 58 13.7	-1.1
MAK				eSSS	SSS	06 01 34.8	
MAK				pmax	pmax		
	comp=Z,894nm,1.6s						
MAK				MLR	MLR		
	comp=Z,18µm,16.0s						
I05D	Terrebonne, OR	76.09	47	P	P	05 43 38.5	-0.8
	baz=293						
I05D				S	S	05 53 22.9	+0.5
	baz=293						
NEEM	North Greenlan	76.11	3	i P	P	05 43 39.2	+0.1
TRO	Tromso	76.17	343	eP	P	05 43 39.6	+0.5
TRO				IVmB_BB		05 43 50.7	
	comp=Z,3µm,2.8s						
TRO				eS	S	05 53 24.6	+2.4
TRO				IVMs_BB	IVMs_BB	06 29 11.2	
	comp=Z,3µm,3.8s						
MDH	Madha	76.18	292	i P	P	05 43 38.0	-2.0
	SNR=6.0						
M02C	Callahan	76.22	51	P	P	05 43 40.5	+0.4
	baz=293						
M02C				S	S	05 53 25.5	+1.5
	baz=293						
MASF	Masafi	76.27	292	P	P	05 43 40.7	+0.1
	SNR=10						
MASF				P	P	05 43 40.7	+0.1
	SNR=10						
MSFE	Esma-Masafi	76.27	292	i P	P	05 43 39.4	-1.2
	SNR=17						
L04D	Klamath Falls	76.28	50	P	P	05 43 40.3	-0.1
	baz=293						
VRH	Novokhopyorsk	76.36	321	eP	P	05 43 39.8	-0.7
VRH				pmax	pmax		
	comp=Z,100nm,1.0s						
VRH				MLR	MLR		
	comp=Z,8µm,16.0s						
UOSS	Minazif	76.39	291	i P	P	05 43 39.4	-1.9
	SNR=11						
BSY	Bisya	76.41	289	P	P	05 43 40.9	-0.5
	SNR=11						
BSY				P	P	05 43 40.9	-0.5
	SNR=11						
SOHO	SOHO	76.43	290	i P	P	05 43 40.0	-1.5
	SNR=51						
HAWA	Hanford	76.44	45	IAMs_20	IAMs_20	06 14 30.7	
	comp=Z,4µm,20.0s						
DAG	Danmarks Havn	76.48	356	P	P	05 43 41.3	+0.5
DAG	Danmarks Havn	76.48	356	i P	P	05 43 40.1	-0.7
DAG				IAmb	IAmb	05 43 43.1	
	comp=Z,68nm,1.5s						
N02D	Trinity Center	76.49	51	P	P	05 43 41.9	+0.3
	baz=293,SNR=7.8						
N02D				S	S	05 53 27.5	+0.5
	baz=293						
K04D	Chiloquin, OR	76.49	49	P	P	05 43 41.9	+0.2
	baz=293						
K04D				S	S	05 53 26.6	-0.4
	baz=293						
HATD	Hatta, Dubai	76.50	291	i P	P	05 43 40.5	-1.3
	SNR=31						
HATD	Hatta, Dubai	76.50	291	P	P	05 43 41.9	0.0
	SNR=17						
HATD				P	P	05 43 41.9	0.0
	SNR=17						
MOS	Moscow	76.57	326	eP	P	05 43 40.5	-1.1
MOS				e		05 43 50.9	
MOS				eS	S	05 53 28.6	+1.6
MOS				eSS	SS	05 58 28.7	+7.3
MOS				pmax	pmax		
	comp=Z,170nm,1.8s						
MOS				pmax	pmax		
	comp=Z,2µm,6.0s						
MOS				MLR	MLR		
	comp=N,6µm,17.0s						
MOS				MLR	MLR		
	comp=E,13µm,17.0s						
MOS				MLR	MLR		
	comp=Z,15µm,17.0s						
J05D	Fort Rock, OR	76.58	48	P	P	05 43 42.4	+0.2
	baz=294,SNR=13						
J05D				S	S	05 53 28.4	+0.4
	baz=294						
ASHO	Ashiyiah	76.62	291	i P	P	05 43 41.0	-1.5
	SNR=25						
ASHO	Ashiyiah	76.62	291	P	P	05 43 42.1	-0.4
	SNR=16						
ASHO				P	P	05 43 42.1	-0.4
	SNR=16						
O02D	Mt. Diablo Mer	76.74	52	P	P	05 43 43.1	0.0
	baz=293,SNR=11						
O02D				S	S	05 53 30.7	+1.0
	baz=293						
ARQ	Araqi	76.75	290	P	P	05 43 43.0	-0.4
	SNR=16						
ARQ				P	P	05 43 43.0	-0.4
	SNR=16						
WDC	Whiskeytown Da	76.76	51	IAMs_20	IAMs_20	06 12 07.5	
	comp=Z,4µm,20.0s						
M04C	Macdoel	76.77	50	P	P	05 43 43.1	-0.1
	baz=294,SNR=11						
M04C				S	S	05 53 30.4	+0.3
	baz=294						
NAZ	Nazwa, Dubai	76.83	291	i P	P	05 43 42.6	-1.1
	SNR=7.7						
NAZ	Nazwa, Dubai	76.83	291	P	P	05 43 43.6	-0.1
	SNR=7.1						
NAZ				P	P	05 43 43.6	-0.1
	SNR=7.1						
FAQ	Al Faqa, Dubai	76.98	291	i P	P	05 43 44.0	-0.6
	SNR=10						
FAQ	Al Faqa, Dubai	76.98	291	P	P	05 43 44.1	-0.4
	SNR=5.9						
FAQ				P	P	05 43 44.1	-0.4
	SNR=5.9						
HOPS	Hopland Field	77.01	53	IAMs_20	IAMs_20	06 19 23.3	
	comp=Z,4µm,18.0s						
ALNE	Al Ain	77.12	291	i P	P	05 43 44.0	-1.3
	SNR=12						
ALNE	Al Ain	77.12	291	P	P	05 43 45.3	-0.1
	SNR=21						
ALNE				P	P	05 43 45.3	-0.1
	SNR=21						
ASUD	Al Ashush, Dub	77.25	291	P	P	05 43 45.1	-0.9
LPSR	Galich'ya Gora	77.31	323	eP	P	05 43 45.5	-0.3
LPSR				pmax	pmax		
	comp=Z,70nm,1.4s						
LPSR				MLR	MLR		
	comp=Z,8µm,16.0s						
O03E	Paynes Creek	77.39	51	P	P	05 43 46.5	-0.2
	baz=294,SNR=9.1						
O03E				S	S	05 53 35.7	-1.1
	baz=294						
OBN	Obninsk	77.39	326	c iP	P	05 43 45.7	-0.6
OBN				i		05 43 55.5	
OBN				i		05 46 41.9	
OBN				i S	S	05 53 29.4	-6.6
OBN				i SS	SS	05 58 32.0	-1.8
OBN				pmax	pmax		
	comp=Z,49nm,1.0s						
OBN				MLR	MLR		
	comp=Z,19µm,18.0s						
MCCM	Marconi Confer	77.48	54	IAMs_20	IAMs_20	06 13 12.9	
	comp=Z,3µm,20.0s						
VORR	Voronezh	77.57	322	P	P	05 43 45.0	-2.3
VORR				pmax	pmax		
	comp=Z,250nm,2.0s						
DDFL	Dedoflistskaro	77.64	310	P	P	05 43 50.8	+2.7
MOD	Modoc Plateau	77.77	49	IAMs_20	IAMs_20	06 16 05.2	
	comp=Z,3µm,19.0s						
VSR	Storozhevoye	77.80	321	eP	P	05 43 47.7	-0.9
VSR				pmax	pmax		
	comp=Z,90nm,1.2s						
VSR				MLR	MLR		
	comp=Z,6µm,16.0s						
VORD	Divnogorie	77.84	321	eP	P	05 43 47.8	-1.1
VORD				pmax	pmax		
	comp=Z,30nm,0.7s						
ORV	Oroville	77.90	52	IAMs_20	IAMs_20	06 18 15.8	
	comp=Z,3µm,18.0s						
PUL	Pulkovo	77.99	331	ceP	P	05 43 50.0	+0.5
PUL				pmax	pmax		
	comp=Z,103nm,0.7s						
PUL				MLR	MLR		
	comp=Z,4µm,18.0s						
GOF	Gofitskoye	78.17	314	⇓iP	P	05 43 51.1	+0.2
GOF				pmax	pmax		
	comp=Z,162nm,1.3s						
STEI	Steigen	78.31	342	eP	P	05 43 52.8	+1.7
STEI				eS	S	05 53 46.2	+0.7
STEI				IVMs_BB	IVMs_BB	06 23 24.2	
	comp=Z,4µm,17.5s						
GUDG	Gudauri	78.33	312	P	P	05 43 53.8	+1.7
ZEI	Tsey	78.58	312	eP	P	05 43 51.1	-2.3
ZEI				pmax	pmax		
	comp=Z,27nm,1.5s						
LOF	Lofoten	78.63	343	eP	P	05 43 52.2	-0.7
LOF				IVmBBB		05 43 52.6	
	comp=Z,2µm,3.3s						
LOF				eS	S	05 53 49.7	+0.8
LOF				IVMs_BB	IVMs_BB	06 23 49.9	
	comp=Z,3µm,4.0s						
WVOR	Wild Horse Val	78.67	48	IAMs_20	IAMs_20	06 17 33.9	
	comp=Z,3µm,19.0s						
FAUS	Fauske	78.68	342	eP	P	05 43 53.8	+0.6
FAUS				IVmB_BB		05 44 01.2	
	comp=Z,3µm,6.4s						
FAUS				eS	S	05 53 51.1	+1.7
FAUS				IVMs_BB	IVMs_BB	06 24 25.8	
	comp=Z,3µm,5.5s						
FINES	FINESS Array B	78.81	334	P	P	05 43 53.6	-0.5
	comp=Z,50nm,0.5s,baz=72,slow=5.1,SNR=199						
FINES	FINESS Array B	78.81	334	i P	P	05 43 53.5	-0.5
FINES				pmax	pmax		
	comp=Z,50nm,0.5s						
KBZ	Khabaz	78.84	313	P	P	05 43 54.4	-0.1
	comp=Z,82nm,0.9s,baz=96,slow=1.9,SNR=91						
KBZ	Khabaz	78.84	313	ceP	P	05 43 54.4	-0.1
KBZ				pmax	pmax		
	comp=Z,124nm,1.0s						
KBZ				MLR	MLR		
	comp=Z,12µm,20.0s						
KZRT	Kazreti	78.84	311	P	P	05 43 55.1	+0.4
KIV	Kislovodsk	78.88	314	i P	P	05 43 54.4	-0.5
	SNR=15						
KIV	Kislovodsk	78.88	314	eP	P	05 43 54.5	-0.4
KIV				e		05 46 53.1	
KIV				ePPP	PPP	05 48 41.4	
KIV				eS	S	05 53 53.7	+1.0
KIV				eSS	SS	05 58 59.6	+2.6
KIV				pmax	pmax		
	comp=Z,87nm,1.0s						
KIV				pmax	pmax		
	comp=Z,461nm,4.0s						
KIV				MLR	MLR		
	comp=Z,9µm,19.0s						
PPT2	Papeete2	78.96	116	eS	S	05 53 59.0	+4.9
	comp=Z,4µm,30.5s						
PPT2	Papeete2	78.96	116	eLR	LR	06 08 29.4	
	comp=Z,4µm,20.2s,baz=305						
ONI	Oni	78.96	312	P	P	05 43 56.4	+1.0
DBG	Daneborg	78.97	355	i P	P	05 43 54.9	+0.2
DBG				IAmb	IAmb	05 43 57.5	
	comp=Z,29nm,1.3s						
PMOR	Pomariorio Ree	78.98	113	eT	T	07 10 09.3	
	comp=Z,38nm,0.2s						
SHA1	Shidzhatmaz	78.99	313	c iP	P	05 43 55.3	-0.4
SAO	San Andreas Ge	79.09	54	IAMs_20	IAMs_20	06 14 07.5	
	comp=Z,4µm,19.0s						
GNI	Garni	79.13	309	P	P	05 43 56.3	-0.1
GNI	Garni	79.13	309	ceP	P	05 43 56.7	+0.2
GNI				pmax	pmax		
	comp=Z,108nm,1.3s						
GNI				MLR	MLR		
	comp=Z,4µm,17.0s						
NEY	Neytrino	79.16	313	i P	P	05 43 55.5	-1.1
NEY				pmax	pmax		
	comp=Z,18nm,1.2s						
NEY				MLR	MLR		
	comp=Z,5µm,17.0s						
PLID	Pearl Lake	79.24	45	P	P	05 43 57.3	+0.2
PLID				IAMs_20	IAMs_20	06 14 05.6	
	comp=Z,4µm,22.0s						
CMB	Columbia Colle	79.32	53	P	P	05 43 58.3	+0.9
CMB				pmax	pmax		
	comp=Z,38nm,1.0s						
CMB	Columbia Colle	79.32	53	P	P	05 43 58.3	+0.9
CMB				IAmb	IAmb	05 44 08.2	
	comp=Z,38nm,1.0s						
BGD	Bogdanovka	79.44	311	P	P	05 44 00.4	+2.2
AKH	Akhalkalaki	79.45	311	⇓P	P	05 43 59.0	+0.8
AKH	Akhalkalaki	79.45	311	P	P	05 43 59.1	+0.9
SHAO	Shalim	79.65	285	P	P	05 43 58.9	-0.5
MSO	Missoula	79.73	43	S	S	05 53 59.6	-2.1
	baz=298						
MSO	Missoula	79.73	43	IAMs_20	IAMs_20	06 16 24.5	
	comp=Z,2µm,19.0s						
YERR	Yerington	79.73	52	P	P	05 44 00.5	+0.7
YERR				IAmb	IAmb	05 44 20.0	
	comp=Z,85nm,1.6s						
MOR8	Moi Rana	79.76	341	eP	P	05 43 58.8	-0.4
MOR8				eS	S	05 54 03.2	+2.1
MOR8				eSS	SS	05 59 07.6	-1.3
MOR8				IVMs_BB	IVMs_BB	06 24 11.8	
	comp=Z,4µm,5.4s						
CHVG	Ch'k'valeri	79.81	313	⇓P	P	05 43 60.0	+0.1
CHVG	Ch'k'valeri	79.81	313	⇓P	P	05 44 00.0	+0.1
VSU	Vasula	80.26	331	eP	P	05 44 02.5	+0.6
VSU	Vasula	80.26	331	i P	P	05 44 00.9	-1.0
VSU				pmax	pmax		
	comp=Z,303nm,1.0s						
VSU				MLR	MLR		
	comp=Z,11µm,16.0s						
PAGB	Antelope Grade	80.40	55	P	P	05 44 04.4	+1.1
PAGB				IAmb	IAmb	05 44 05.4	
	comp=Z,35nm,0.8s						
MLAC	Mammoth, Mammo	80.61	53	P	P	05 44 03.8	-0.8
	baz=296						
MLAC				S	S	05 54 12.5	+1.0
	baz=296						
NVAR	Mina Array Bea	80.63	52	P	P	05 44 04.1	-0.6
	comp=Z,13nm,0.8s,baz=281,slow=5.3,SNR=82						
NVAR	Mina Array Bea	80.63	52	P	P	05 44 05.1	+0.4
BCA	Borcka	80.69	312	⇑P	P	05 44 05.3	+0.6
SMMC	Simmler	80.77	55	P	P	05 44 05.3	+0.1
	baz=296						
SMMC				S	S	05 54 12.1	-0.7
	baz=296						
VOG	Valley Oaks Go	80.78	54	P	P	05 44 05.0	-0.2
	baz=296						
VOG				S	S	05 54 17.5	+4.7
	baz=296						
HLID	Hailey	80.94	46	P	P	05 44 06.8	+0.6
	baz=298,SNR=15						
HLID				S	S	05 54 16.9	+2.2
	baz=298						
SOC	Sochi	80.97	314	c iP	P	05 44 05.0	-1.1
SOC				e		05 47 08.0	
SOC				ePPP	PPP	05 48 56.5	
SOC				eS	S	05 54 16.5	+2.0
SOC				pmax	pmax		
	comp=Z,56nm,0.9s						
SOC				MLR	MLR		
	comp=Z,10µm,17.0s						
HRY	Holter Researc	81.06	42	P	P	05 44 08.1	+1.4
PKM	Mcpherson Peak	81.09	56	P	P	05 44 06.7	-0.5
	baz=296						
PKM				S	S	05 54 16.9	+0.4
	baz=296						
VES	Vestal, Richgr	81.21	54	P	P	05 44 05.8	-1.7
	baz=296,SNR=9.5						
DLMT	Dillon	81.24	44	IAMs_20	IAMs_20	06 25 05.7	
	comp=Z,3µm,20.0s						
TIN	Tinemaha, Big	81.29	53	P	P	05 44 08.6	+0.5
	baz=296,SNR=7.9						
TIN				S	S	05 54 18.0	-0.4
	baz=296						
SUMG	Summit	81.34	0	i P	P	05 44 07.7	-0.3
SUMG				IAmb	IAmb	05 44 14.4	
	comp=Z,30nm,1.0s						
MTSE	Matsula	81.34	332	eP	P	05 44 08.7	+0.9
SBC	Santa Barbara	81.36	56	P	P	05 44 08.0	-0.3
	baz=296						
UMR	Umm Al-Rimmam	81.43	299	eP	P	05 44 07.3	-1.5
KBD	Kabd	81.61	298	eP	P	05 44 07.9	-1.8
SCZ2	Santa Cruz Isl	81.61	56	S	S	05 54 21.5	-0.1
	baz=296						
QRN	Al-Qurain	81.61	298	eP	P	05 44 08.4	-1.4
MIB	Mutribah	81.62	299	eP	P	05 44 08.1	-1.7
EGMT	Eagleton	81.64	40	P	P	05 44 09.6	-0.1
	baz=300						
EGMT				S	S	05 54 20.5	-1.1
	baz=300						
EGMT	Eagleton	81.64	40	IAMs_20	IAMs_20	06 15 53.9	
	comp=Z,3µm,21.0s						
NSS	Namsos	81.66	341	eP	P	05 44 09.1	-0.2
NSS				eS	S	05 54 24.4	+3.4
CWC	Cottonwood Cre	81.67	54	P	P	05 44 10.1	-0.1
	baz=297						
CWC				S	S	05 54 20.5	-2.0
	baz=297						
ELK	Elko	81.70	49	IAMs_20	IAMs_20	06 18 33.3	
	comp=Z,3µm,20.0s						
ARVC	Arvin	81.71	55	P	P	05 44 09.7	-0.5
	baz=296						
ARVC				S	S	05 54 22.5	-0.1
	baz=296						
BOZ	Bozeman (W)	81.72	43	P	P	05 44 10.7	+0.4
	baz=299,SNR=12						
BOZ				S	S	05 54 21.5	-1.2
	baz=299						
ISA	Isabella, Lake	81.73	54	P	P	05 44 09.4	-1.0
	baz=296						
ISA				S	S	05 54 21.2	-1.7
	baz=296						
RDF	Al-Radifah	81.83	298	eP	P	05 44 09.1	-1.8
ANN	Anapa	81.83	316	eP	P	05 44 07.5	-3.1
ANN				eS	S	05 54 22.6	-0.8
ANN				pmax	pmax		
	comp=Z,132nm,1.2s						
ANN				MLR	MLR		
	comp=Z,8µm,18.0s						
AAL	Aland	81.94	335	eP	P	05 44 10.7	-0.1
MNK	Minsk	82.00	328	i P	P	05 44 11.9	+0.6
MNK				i		05 44 17.2	
MNK				i		05 47 21.7	
MNK				i PPP	PPP	05 49 09.8	
MNK				i S	S	05 54 25.6	+0.8
MNK				i SS	SS	05 59 46.5	+3.7
MNK				i SSS	SSS	06 03 09.8	
MNK				pmax	pmax		
	comp=Z,107nm,0.9s						
MNK				pmax	pmax		
	comp=N,31nm,1.0s						
MNK				pmax	pmax		
	comp=E,9.0nm,1.0s						
MNK				MLR	MLR		
	comp=Z,4µm,22.0s						
MNK				MLR	MLR		
	comp=N,1µm,15.0s						
MNK				MLR	MLR		
	comp=E,455nm,22.0s						
MNK	Minsk	82.00	328	i P	P	05 44 11.9	+0.6
	comp=E,9.0nm,1.0s						
MNK				i P	P	05 44 11.9	+0.6
	comp=N,31nm,1.1s						
MNK				i P	P	05 44 11.9	+0.6
	comp=Z,107nm,0.9s,baz=236						
MNK				i PcP	sP	05 44 17.2	-0.2
MNK				i PP	PP	05 47 21.8	+3.3
MNK				i PPP	PPP	05 49 09.8	
MNK				i S	S	05 54 25.7	+0.8
MNK				i SS	SS	05 59 46.5	+3.7
MNK				i SSS	SSS	06 03 09.8	
MNK				i LR	LR	06 19 48.5	
MNK				i LRM	MLR	06 22 22.7	
	comp=N,1µm,15.2s						
MNK				i LRM	MLR	06 22 22.7	
	comp=Z,4µm,22.4s						
MNK				i LRM	MLR	06 22 29.9	
	comp=E,455nm,21.7s						
OSI	Osito Audit: C	82.01	55	P	P	05 44 11.6	-0.3
	baz=296						
OSI				S	S	05 54 25.0	-0.9
	baz=296						
SNCC	San Nicolas Is	82.02	57	P	P	05 44 10.4	-1.5
	baz=296						
SNCC				S	S	05 54 26.8	+1.0
	baz=296						
TBI	Tubuai	82.14	121	eS	S	05 54 32.2	+5.2
	comp=E,2µm,35.2s						
TBI	Tubuai	82.14	121	eLR	LR	06 09 58.5	

	comp=E,7µm,21.5s,baz=299						
TBI	**Tubuai**	**82.14**	**121**	*e*T	T	07 14 13.6	
	comp=E,6.8nm,0.3s						
ISAL	**Salakas**	**82.21**	**329**	*e*P	**P**	**05 44 13.6**	**+1.2**
MPMC	**Manual Prospec**	**82.27**	**54**	P	**P**	**05 44 13.4**	**0.0**
	baz=297,SNR=20						
MPMC				S	**S**	**05 54 26.7**	**-2.0**
	baz=297						
NACGM	**Naroch**	**82.30**	**328**	*i* P	**P**	**05 44 13.5**	**+0.6**
LRMC	**Laurel Mtn Rad**	**82.39**	**54**	P	**P**	**05 44 13.8**	**-0.2**
	baz=297,SNR=13						
LRMC				S	**S**	**05 54 29.2**	**-0.7**
	baz=297						
EDW2	**Edwards Air Fo**	**82.43**	**55**	P	**P**	**05 44 14.1**	**0.0**
	baz=297,SNR=15						
EDW2				S	**S**	**05 54 28.9**	**-1.2**
	baz=297						
DECC	**Green Verdugo**	**82.46**	**56**	P	**P**	**05 44 13.7**	**-0.5**
	baz=297						
DECC				S	**S**	**05 54 28.7**	**-1.7**
	baz=297						
FURC	**Furnace Creek,**	**82.54**	**53**	P	**P**	**05 44 14.9**	**+0.4**
	baz=297,SNR=15						
FURC				S	**S**	**05 54 29.4**	**-1.5**
	baz=297						
TAOE	**Nuku Hiva Isla**	**82.57**	**104**	*e*S	**S**	**05 54 36.0**	**+3.9**
	comp=E,1µm,26.7s						
TAOE	**Nuku Hiva Isla**	**82.57**	**104**	*e*LR	LR	06 10 09.7	
	comp=E,7µm,22.2s,baz=306						
R11A	**Troy Canyon, C**	**82.58**	**51**	P	**P**	**05 44 15.4**	**+0.4**
	baz=298,SNR=15						
R11A				S	**S**	**05 54 30.1**	**-1.7**
	baz=298						
YHH	**Holmes Hill**	**82.60**	**44**	P	**P**	**05 44 16.9**	**+1.8**
PASC	**Pasadena Art C**	**82.61**	**56**	IAMs_20	IAMs_20	06 25 35.8	
	comp=Z,4µm,18.0s						
FMP	**Fort Macarthur**	**82.73**	**56**	P	**P**	**05 44 14.7**	**-0.9**
	baz=297						
FMP				S	**S**	**05 54 33.2**	**+0.1**
	baz=297						
CIS	**Catalina Islan**	**82.78**	**56**	P	**P**	**05 44 15.9**	**0.0**
	baz=297						
CIS				S	**S**	**05 54 32.6**	**-1.1**
	baz=297						
GWY	**Greenwater Val**	**82.80**	**53**	P	**P**	**05 44 16.8**	**+0.6**
GWY				IAmb	IAmb	05 44 26.8	
	comp=Z,43nm,1.0s						
SCO	**Scoresbysund**	**82.82**	**355**	*i* P	**P**	**05 44 16.7**	**+1.4**
GCMT	**Greycliff**	**82.82**	**42**	P	**P**	**05 44 17.5**	**+1.5**
SCI2	**San Clemente I**	**82.87**	**57**	P	**P**	**05 44 15.8**	**-0.6**
	baz=297						
SCI2				S	**S**	**05 54 33.5**	**-1.0**
	baz=297						
BFSC	**Mount Baldy Ra**	**82.97**	**55**	P	**P**	**05 44 16.8**	**-0.2**
	baz=297						
BFSC				S	**S**	**05 54 34.0**	**-1.8**
	baz=297						
H17A	**Grant Village**	**82.97**	**44**	P	**P**	**05 44 16.8**	**-0.1**
	baz=300						
H17A				S	**S**	**05 54 39.1**	**+3.4**
	baz=300						
UPP	**Uppsala**	**83.05**	**335**	*e*P	**P**	**05 44 16.9**	**+0.3**
FXWY	**Fox Creek**	**83.06**	**45**	IAMs_20	IAMs_20	06 19 47.9	
	comp=Z,3µm,19.0s						
GSC	**Goldstone, Bar**	**83.11**	**54**	P	**P**	**05 44 17.5**	**-0.1**
	baz=297,SNR=11						
GSC				S	**S**	**05 54 36.0**	**-1.1**
	baz=297						
RRX	**Edison Barstow**	**83.17**	**55**	P	**P**	**05 44 17.7**	**-0.2**
	baz=297						
RRX				S	**S**	**05 54 36.3**	**-1.2**
	baz=297						
TPAW	**Teton Pass**	**83.19**	**45**	IAMs_20	IAMs_20	06 16 14.1	
	comp=Z,3µm,20.0s						
MOOW	**Moose Ponds**	**83.19**	**44**	IAMs_20	IAMs_20	06 19 25.1	
	comp=Z,3µm,19.0s						
SHOC	**Shoshone, Teco**	**83.22**	**53**	P	**P**	**05 44 17.7**	**-0.4**
	baz=298,SNR=6.6						
SHOC				S	**S**	**05 54 37.5**	**-0.6**
	baz=298						
PABE	**Paberze**	**83.23**	**330**	*e*P	**P**	**05 44 18.2**	**+0.5**
REDW	**Red Top Meadow**	**83.31**	**45**	IAMs_20	IAMs_20	06 20 06.5	
	comp=Z,3µm,19.0s						
SNOW	**Snow King Moun**	**83.32**	**45**	IAMs_20	IAMs_20	06 20 06.7	
	comp=Z,3µm,19.0s						
LOHW	**Long Hollow**	**83.34**	**44**	IAMs_20	IAMs_20	06 19 39.3	
	comp=Z,3µm,19.0s						
RLMT	**Red Lodge**	**83.41**	**43**	P	**P**	**05 44 19.3**	**+0.1**
	baz=301,SNR=11						
RLMT				S	**S**	**05 54 38.7**	**-1.3**
	baz=301						
AHID	**Auburn Hatcher**	**83.45**	**45**	IAMs_20	IAMs_20	06 16 41.2	
	comp=Z,2µm,20.0s						
AKASG	**Malin Array Be**	**83.48**	**324**	P	**P**	**05 44 17.9**	**-1.2**
	comp=Z,18nm,0.6s,baz=51,slow=5.2,SNR=95						
AKASG	**Malin Array Be**	**83.48**	**324**	P	**P**	**05 44 18.0**	**-1.0**
AKASG				IAmb	IAmb	05 44 19.7	
	comp=Z,39nm,0.9s						
AKBB	**Malin Array Si**	**83.48**	**324**	*ce*P	**P**	**05 44 17.7**	**-1.4**
BBRC	**Big Bear Solar**	**83.50**	**55**	P	**P**	**05 44 19.7**	**-0.2**
	baz=298						
BBRC				S	**S**	**05 54 39.0**	**-2.4**
	baz=298						
DUG	**Dugway, Tooele**	**83.59**	**48**	P	**P**	**05 44 19.7**	**-0.5**
	baz=299,SNR=13						
DUG				S	**S**	**05 54 41.1**	**-0.9**
	baz=299						
DUG	**Dugway, Tooele**	**83.59**	**48**	IAMs_20	IAMs_20	06 20 48.2	
	comp=Z,3µm,18.0s						
MURC	**Murrieta**	**83.60**	**56**	P	**P**	**05 44 18.8**	**-1.3**
	baz=297						
MURC				S	**S**	**05 54 39.9**	**-2.1**
	baz=297						
HEC	**Hector,Ludlow**	**83.67**	**54**	P	**P**	**05 44 20.1**	**-0.5**
	baz=298,SNR=18						
HEC				S	**S**	**05 54 41.1**	**-1.6**
	baz=298						
TUQ	**Turquoise Moun**	**83.69**	**54**	P	**P**	**05 44 20.5**	**-0.2**
	baz=298,SNR=19						
TUQ				S	**S**	**05 54 41.7**	**-1.4**
	baz=298						
HWUT	**Hardware Ranch**	**83.73**	**47**	IAMs_20	IAMs_20	06 21 23.6	
	comp=Z,2µm,18.0s						
SIM	**Simferopol'**	**83.80**	**317**	P	**P**	**05 44 20.0**	**-0.9**
SIM				pmax	pmax		
	comp=Z,77nm,0.5s						
PBUR	**Paburge**	**83.81**	**331**	*e*P	**P**	**05 44 21.0**	**+0.3**
109C	**Camp Elliot, M**	**83.99**	**56**	P	**P**	**05 44 22.4**	**+0.3**
	baz=298						
109C				S	**S**	**05 54 44.6**	**-1.3**
	baz=298						
109C	**Camp Elliot, M**	**83.99**	**56**	IAMs_20	IAMs_20	06 24 53.5	
	comp=Z,2µm,18.0s						
PFO	**Pinyon Flats O**	**84.14**	**55**	P	**P**	**05 44 23.7**	**+0.7**
PFO				pmax	pmax		
	comp=Z,128nm,2.0s						
PFO				MLR	MLR		
	comp=Z,3µm,20.0s						
PFO	**Pinyon Flats O**	**84.14**	**55**	P	**P**	**05 44 22.6**	**-0.4**
	baz=298,SNR=9.4						
PFO				S	**S**	**05 54 46.3**	**-1.4**
	baz=298						
PFO	**Pinyon Flats O**	**84.14**	**55**	P	**P**	**05 44 23.7**	**+0.7**
PFO	**Pinyon Flats O**	**84.14**	**55**	IAMs_20	IAMs_20	06 25 11.4	
	comp=Z,3µm,20.0s						
TPFO	**Pinon Flats**	**84.15**	**55**	P	**P**	**05 44 22.4**	**-0.6**
	baz=298,SNR=10						
TPFO				S	**S**	**05 54 46.7**	**-1.0**
	baz=298						
GMRC	**Granite Mounta**	**84.18**	**54**	P	**P**	**05 44 22.9**	**-0.3**
	baz=298,SNR=13						
GMRC				S	**S**	**05 54 46.0**	**-2.0**
	baz=298						
NC303	**NORSAR Array S**	**84.28**	**339**	P	**P**	**05 44 23.4**	**+0.4**
HFS	**Hagfors**	**84.28**	**337**	P	**P**	**05 44 21.5**	**-1.5**
	comp=Z,43nm,0.8s,baz=76,slow=6.3,SNR=41						
BELC	**Belle Mtn. Jos**	**84.30**	**55**	P	**P**	**05 44 23.5**	**-0.3**
	baz=298,SNR=7.2						
BELC				S	**S**	**05 54 47.0**	**-2.2**
	baz=298						
MALT	**Malatya**	**84.33**	**310**	P	**P**	**05 44 24.4**	**+0.5**
LAO	**LASA Array**	**84.39**	**40**	P	**P**	**05 44 24.0**	**+0.1**
	baz=303						
LAO	**LASA Array**	**84.39**	**40**	IAMs_20	IAMs_20	06 19 45.5	
	comp=Z,2µm,20.0s						
DOMB	**Dombas**	**84.40**	**340**	*e*P	**P**	**05 44 23.9**	**+0.3**
DOMB				IVmB_BB		05 44 24.7	
	comp=Z,3µm,4.1s						
DOMB				*e*S	**S**	**05 54 49.5**	**+0.5**
DOMB				IVMs_BB	IVMs_BB	06 31 59.7	
	comp=Z,4µm,4.8s						
NB201	**NORSAR Array S**	**84.43**	**338**	*e*P	**P**	**05 44 23.4**	**-0.4**
BW06	**Boulder Array**	**84.43**	**45**	P	**P**	**05 44 24.2**	**-0.2**
	baz=301,SNR=8.6						
BW06				S	**S**	**05 54 48.4**	**-2.0**
	baz=301						
BW06	**Boulder Array**	**84.43**	**45**	IAMs_20	IAMs_20	06 20 16.1	
	comp=Z,4µm,19.0s						
PDAR	**Pinedale Array**	**84.43**	**45**	P	**P**	**05 44 23.7**	**-0.8**
	comp=Z,4.6nm,0.8s,baz=281,slow=3.2,SNR=27						
NB2	**NORSAR Subarra**	**84.46**	**339**	P	**P**	**05 44 23.7**	**-0.3**
	comp=Z,378nm,2.5s,baz=45,slow=5.1						
NB2	**NORSAR Subarra**	**84.46**	**339**	P	**P**	**05 44 20.6**	**-3.4**
NB2				pmax	pmax		
	comp=Z,517nm,2.4s						
NOA	**NORSAR Array B**	**84.46**	**339**	P	**P**	**05 44 22.6**	**-1.4**
	comp=Z,23nm,0.9s,baz=47,slow=4.6,SNR=41						
MONP2	**Monument Peak**	**84.50**	**56**	P	**P**	**05 44 24.9**	**-0.1**
	baz=298,SNR=5.9						
MONP2				S	**S**	**05 54 51.2**	**-0.2**
	baz=298						
SUW	**Suwalki**	**84.51**	**329**	*e*P	**P**	**05 44 23.8**	**-0.5**
SUW				*e*L	L	06 22 54.1	
	comp=Z,4µm,23.2s						
SUW	**Suwalki**	**84.51**	**329**	*e*P	**P**	**05 44 24.3**	**0.0**
SUW	**Suwalki**	**84.51**	**329**	P	**P**	**05 44 23.8**	**-0.5**
SUW				pmax	pmax		
	comp=Z,280nm,1.0s						
SUW				MLR	MLR		
	comp=Z,4µm,19.0s						
SUW	**Suwalki**	**84.51**	**329**	P	**P**	**05 44 23.8**	**-0.5**
SUW				IAMs_20	IAMs_20	06 25 05.3	
	comp=Z,4µm,19.0s						
DGMT	**Dagmar**	**84.55**	**38**	P	**P**	**05 44 23.3**	**-1.4**
	baz=304						
KVT	**Kavak**	**84.56**	**313**	P	**P**	**05 44 26.8**	**+1.9**
NORES	**NORESS Array B**	**84.58**	**338**	P	**P**	**05 44 26.2**	**+1.7**
ICESG	**Greenland Ices**	**84.83**	**1**	*i* P	**P**	**05 44 26.0**	**0.0**
ICESG				IAmb	IAmb	05 44 32.9	
	comp=Z,73nm,1.1s						
MVU	**Marysvale**	**84.83**	**50**	P	**P**	**05 44 27.9**	**+1.4**
LCMT	**Little Creek M**	**84.84**	**51**	P	**P**	**05 44 27.7**	**+1.2**
IKP	**In-Ko-Pah, Jac**	**84.85**	**56**	P	**P**	**05 44 26.4**	**-0.1**
	baz=298						
IKP				S	**S**	**05 54 52.5**	**-2.1**
	baz=298						
IRM	**Iron Mountain**	**84.85**	**54**	P	**P**	**05 44 26.1**	**-0.4**
	baz=298,SNR=10						
IRM				S	**S**	**05 54 53.0**	**-1.6**
	baz=298						
BC3	**Big Chuckawall**	**84.86**	**55**	P	**P**	**05 44 26.2**	**-0.4**
	baz=298,SNR=12						
BC3				S	**S**	**05 54 53.5**	**-1.3**
	baz=298						
AKN	**Aaknes**	**84.92**	**341**	*e*P	**P**	**05 44 26.6**	**+0.3**
SWSC	**Sam W. Stewart**	**84.94**	**56**	P	**P**	**05 44 26.6**	**-0.2**
	baz=298						
SWSC				S	**S**	**05 54 54.8**	**-0.6**
	baz=298						
NEE2	**Needles Airpor**	**84.94**	**54**	S	**S**	**05 54 54.3**	**-1.1**
	baz=299						
KNB	**Kanab**	**85.14**	**51**	P	**P**	**05 44 29.2**	**+1.2**
KNB				pmax	pmax		
	comp=Z,31nm,0.8s						
KNB	**Kanab**	**85.14**	**51**	P	**P**	**05 44 29.2**	**+1.2**
KNB				IAmb	IAmb	05 44 30.3	
	comp=Z,31nm,0.8s						
SORM	**Soroca**	**85.40**	**322**	⇓P	**P**	**05 44 27.3**	**-1.6**
OSL	**Oslo**	**85.45**	**338**	*e*P	**P**	**05 44 29.3**	**+0.4**
OSL				*e*S	**S**	**05 54 58.0**	**-1.3**
PDMCI	**Parker Dam,Lak**	**85.51**	**54**	P	**P**	**05 44 30.2**	**+0.4**
	baz=299,SNR=8.6						
PDMCI				S	**S**	**05 54 58.5**	**-2.5**
	baz=299						
GLA	**Glamis**	**85.61**	**55**	P	**P**	**05 44 29.8**	**-0.5**
	baz=299						
GLA				S	**S**	**05 54 59.9**	**-2.2**
	baz=299						
SRU	**San Rafael Swe**	**85.67**	**48**	P	**P**	**05 44 31.3**	**+0.6**
SRU				pmax	pmax		
	comp=Z,19nm,0.9s						
SRU	**San Rafael Swe**	**85.67**	**48**	P	**P**	**05 44 31.3**	**+0.6**
SKAR	**Skarslia**	**85.67**	**339**	*e*P	**P**	**05 44 30.7**	**+0.6**
SKAR				IVmBBB		05 44 32.7	
	comp=Z,2µm,3.8s						
SKAR				*e*S	**S**	**05 54 56.6**	**-5.1**
SKAR				IVMs_BB	IVMs_BB	06 25 02.3	
	comp=Z,3µm,4.4s						
KIS	**Kishinev**	**85.79**	**321**	*e*P	P	05 44 26.0	-4.8
	comp=Z,400nm,5.2s						
KIS				*e*S	**SKSac**	**05 54 55.0**	**-1.0**
	comp=Z,1µm,14.0s						
KIS				*e*LQ	LQ	06 18 40.0	
	comp=Z,1µm,15.5s						
KIS				LRM	MLR	06 28 51.0	
	comp=Z,2µm,17.0s						
KIS	**Kishinev**	**85.79**	**321**	*e*P	P	05 44 26.0	-4.8
KIS				*e*		05 44 41.0	
KIS				*e*S	**SKSac**	**05 54 55.0**	**-1.0**
KIS				pmax	pmax		
	comp=Z,400nm,5.2s						
KIS				smax	smax		
	comp=E,1µm,14.0s						
MILM	**Milestii Mici**	**85.84**	**321**	*e*P	**P**	**05 44 27.0**	**-4.1**
MILM				*e*		05 44 40.0	
MILM				*e*		05 47 46.0	
MILM				*e*S	**SKSac**	**05 54 53.0**	**-3.2**
MILM				*e*PS	**PnS**	**05 56 05.0**	**+4.2**
MILM				pmax	pmax		
	comp=Z,1µm,3.7s						
MILM				smax	smax		
	comp=E,2µm,14.2s						
RAYN	**Ar Rayn**	**85.85**	**294**	*i* P	**P**	**05 44 30.8**	**-0.8**
	SNR=106						
RAYN	**Ar Rayn**	**85.85**	**294**	P	**P**	**05 44 30.9**	**-0.8**
RAYN				pmax	pmax		
	comp=Z,194nm,1.2s						
RAYN	**Ar Rayn**	**85.85**	**294**	P	**P**	**05 44 30.9**	**-0.8**
RAYN	**Ar Rayn**	**85.85**	**294**	IAMs_20	IAMs_20	06 28 24.0	
	comp=Z,3µm,20.0s						
HYA	**Hoyanger**	**85.95**	**340**	*e*P	**P**	**05 44 31.5**	**+0.2**
KONO	**Kongsberg**	**86.04**	**338**	*ce*P	**P**	**05 44 31.3**	**-0.5**
KONO				pmax	pmax		
	comp=Z,67nm,1.3s						
KONO	**Kongsberg**	**86.04**	**338**	*e*P	**P**	**05 44 31.6**	**-0.2**
KONO	**Kongsberg**	**86.04**	**338**	P	**P**	**05 44 31.6**	**-0.2**
K22A	**Casper**	**86.39**	**44**	P	**P**	**05 44 32.9**	**-1.3**
	baz=303						
K22A				S	**S**	**05 55 08.0**	**-1.7**
	baz=303						
K22A	**Casper**	**86.39**	**44**	P	**P**	**05 44 34.4**	**+0.3**
K22A				IAmb	IAmb	05 44 45.2	
	comp=Z,108nm,2.0s						
SFJD	**Kangerlussuaq**	**86.41**	**5**	P	**P**	**05 44 34.1**	**+0.7**
SFJD				pmax	pmax		
	comp=Z,65nm,1.0s						
SFJD	**Kangerlussuaq**	**86.41**	**5**	*i* P	**P**	**05 44 33.6**	**+0.2**
SFJD				IAmb	IAmb	05 44 35.5	
	comp=Z,42nm,1.0s						
SFJD	**Kangerlussuaq**	**86.41**	**5**	P	**P**	**05 44 34.1**	**+0.7**
SFJD				IAmb	IAmb	05 44 43.9	
	comp=Z,65nm,1.0s						
RWWY	**Rawlins**	**86.48**	**45**	IAMs_20	IAMs_20	06 19 02.3	
	comp=Z,3µm,20.0s						
O20A	**White River Ci**	**86.64**	**47**	P	**P**	**05 44 34.9**	**-0.6**
	baz=302,SNR=6.7						
O20A				S	**S**	**05 55 09.7**	**-2.6**
	baz=302						
LVV	**L'vov**	**86.69**	**325**	*e*P	**P**	**05 44 35.2**	**-0.1**
LVV				*e*		05 48 02.8	
LVV				*e*S	**S**	**05 55 06.5**	**-5.4**
LVV				pmax	pmax		
	comp=Z,40nm,1.3s						
LVV				MLR	MLR		
	comp=N,6µm,20.0s						
LVV				MLR	MLR		
	comp=E,10µm,20.0s						
LVV				MLR	MLR		
	comp=Z,12µm,19.0s						
ODD1	**Odda**	**86.80**	**339**	*e*P	**P**	**05 44 35.0**	**-0.6**
BR131	**Keskin Array S**	**86.83**	**313**	P	**P**	**05 44 34.8**	**-1.5**
	SNR=12						
BR131				P	**P**	**05 44 34.8**	**-1.5**
	SNR=12						
BRTR	**Keskin Array B**	**86.83**	**313**	P	**P**	**05 44 34.4**	**-1.9**
	comp=Z,13nm,0.9s,baz=94,slow=3.4,SNR=20						
BRTR				PKPPKP	**P'P'df**	**06 10 41.4**	**-0.3**
	comp=Z,0.7nm,0.8s,baz=308,slow=6.1,SNR=3.9						
BRTR	**Keskin Array B**	**86.83**	**313**	*i* P	**P**	**05 44 38.2**	**+1.9**
BRTR				pmax	pmax		
	comp=Z,13nm,0.9s						
BRTR	**Keskin Array B**	**86.83**	**313**	P	**P**	**05 44 36.0**	**-0.3**
WUAZ	**Wupatki**	**86.90**	**52**	P	**P**	**05 44 36.8**	**+0.1**
	baz=300,SNR=14						
WUAZ				S	**S**	**05 55 14.2**	**-0.6**
	baz=300						
WUAZ	**Wupatki**	**86.90**	**52**	IAMs_20	IAMs_20	06 27 34.9	
	comp=Z,3µm,18.0s						
RSSD	**Black Hills**	**87.09**	**41**	P	**P**	**05 44 37.6**	**0.0**
RSSD				pmax	pmax		
	comp=Z,62nm,1.7s						
RSSD				MLR	MLR		
	comp=Z,2µm,18.0s						
RSSD	**Black Hills**	**87.09**	**41**	P	**P**	**05 44 37.4**	**-0.2**
	baz=304						
RSSD				S	**S**	**05 55 15.0**	**-1.5**
	baz=304						
RSSD	**Black Hills**	**87.09**	**41**	P	**P**	**05 44 37.6**	**0.0**
RSSD				IAmb	IAmb	05 44 49.2	
	comp=Z,62nm,1.7s						
DY2G	**Dye2**	**87.22**	**4**	*i* P	**P**	**05 44 38.4**	**+0.6**
DY2G				IAmb	IAmb	05 44 40.2	
	comp=Z,22nm,0.8s						
CFR	**Carcaliu**	**87.22**	**320**	⇑P	**P**	**05 44 37.4**	**-0.5**
BLS5	**Blasjo**	**87.24**	**339**	*e*P	**P**	**05 44 35.9**	**-1.9**
TPGR	**Topolog**	**87.24**	**320**	⇓P	**P**	**05 44 38.0**	**0.0**
TESR	**Tescani**	**87.29**	**322**	⇓P	**P**	**05 44 37.4**	**-0.9**
BURAR	**Bucovina Array**	**87.41**	**323**	⇓P	**P**	**05 44 38.3**	**-0.7**
BURAR	**Bucovina Array**	**87.41**	**323**	⇓P	**P**	**05 44 38.3**	**-0.7**
BURAR	**Bucovina Array**	**87.41**	**323**	P	**P**	**05 44 37.6**	**-1.4**
MDND	**Maddock**	**87.41**	**37**	P	**P**	**05 44 38.3**	**-0.5**
	baz=307						
HOMB	**Homborsund**	**87.46**	**338**	*e*P	**P**	**05 44 36.4**	**-2.4**
KWP	**Kalwaria Pacla**	**87.48**	**326**	*e*P	**P**	**05 44 39.8**	**+0.6**
KWP				*e*L	L	06 26 41.2	
	comp=Z,21µm,19.0s						
KWP	**Kalwaria Pacla**	**87.48**	**326**	P	**P**	**05 44 38.7**	**-0.4**
KWP	**Kalwaria Pacla**	**87.48**	**326**	P	**P**	**05 44 38.7**	**-0.4**
HARR	**Harsova**	**87.62**	**320**	⇑P	**P**	**05 44 40.2**	**+0.4**
HARR	**Harsova**	**87.62**	**320**	⇑P	**P**	**05 44 40.2**	**+0.4**
VRI	**Vrincioaia**	**87.62**	**321**	⇓P	**P**	**05 44 41.2**	**+1.3**
VRI	**Vrincioaia**	**87.62**	**321**	⇓P	**P**	**05 44 41.2**	**+1.3**
214A	**Organ Pipe Nat**	**87.63**	**55**	P	**P**	**05 44 40.5**	**+0.2**
	baz=300,SNR=9.1						
214A				S	**S**	**05 55 21.8**	**+0.1**
	baz=300						
214A	**Organ Pipe Nat**	**87.63**	**55**	P	**P**	**05 44 40.6**	**+0.4**
214A				IAmb	IAmb	05 44 51.4	
	comp=Z,48nm,1.4s						
PLOR	**Plostina**	**87.68**	**321**	⇑P	**P**	**05 44 39.1**	**-1.0**
PLOR	**Plostina**	**87.68**	**321**	⇑P	**P**	**05 44 39.2**	**-1.0**
N23A	**Red Feather La**	**87.71**	**45**	P	**P**	**05 44 40.3**	**-0.4**
	baz=303						
N23A				S	**S**	**05 55 22.5**	**-0.2**
	baz=303						
BISRR	**Bisoca**	**87.82**	**321**	⇑P	**P**	**05 44 41.9**	**+1.0**
COVR	**Voineasa-Covas**	**87.93**	**321**	⇓P	**P**	**05 44 40.4**	**-0.9**
SMCO	**Snowmass**	**87.98**	**47**	IAMs_20	IAMs_20	06 23 18.2	
	comp=Z,3µm,19.0s						
MVCO	**Mesa Verde**	**88.02**	**49**	P	**P**	**05 44 41.1**	**-1.1**
	baz=302						
MVCO				S	**S**	**05 55 21.8**	**-3.9**
	baz=302						
MVCO	**Mesa Verde**	**88.02**	**49**	IAMs_20	IAMs_20	06 22 37.3	
	comp=Z,2µm,19.0s						
OZUR		**88.02**	**322**	⇑P	**P**	**05 44 42.2**	**+0.4**
KOLS	**Kolonicke sedl**	**88.14**	**325**	*e*P	**P**	**05 44 42.7**	**+0.4**
KOLS				pmax	pmax		
	comp=Z,22nm,1.2s						
KOLS	**Kolonicke sedl**	**88.14**	**325**	*e*P	**P**	**05 44 42.6**	**+0.3**
W18A	**Petrified Fore**	**88.25**	**51**	P	**P**	**05 44 42.9**	**-0.4**
	baz=301						
W18A				S	**S**	**05 55 27.4**	**-0.5**
	baz=301						
MLR	**Muntele Rosu**	**88.29**	**321**	⇑P	**P**	**05 44 42.8**	**-0.4**
DOPR	**Dopca**	**88.31**	**322**	⇓P	**P**	**05 44 43.3**	**+0.1**
UZH	**Uzhgorod**	**88.33**	**325**	*e*P	**P**	**05 44 45.4**	**+2.3**
UZH				*e*		05 44 55.2	
UZH				*i*		05 48 05.7	
UZH				*i*		05 55 05.2	
UZH				*e*S	**S**	**05 55 29.4**	**+1.8**
SECR		**88.49**	**321**	⇓P	**P**	**05 44 44.5**	**+0.5**
TRPA	**Tarpa**	**88.51**	**325**	⇑P	**P**	**05 44 43.9**	**-0.1**
TRPA	**Tarpa**	**88.51**	**325**	*e*P	**P**	**05 44 42.1**	**-1.9**
ISCO	**Idaho Springs**	**88.53**	**46**	P	**P**	**05 44 43.5**	**-1.2**
	baz=304						
ISCO				S	**S**	**05 55 29.5**	**-1.1**
	baz=304						
ISCO	**Idaho Springs**	**88.53**	**46**	IAMs_20	IAMs_20	06 22 42.5	
	comp=Z,2µm,20.0s						
OJC	**Ojcow**	**88.54**	**327**	*e*P	**P**	**05 44 44.5**	**+0.4**
OJC				*e*L	L	06 25 53.4	
	comp=Z,4µm,21.1s						
CRVS	**Cervenica-Dubn**	**88.58**	**326**	*e*P	**P**	**05 44 44.8**	**+0.5**
CRVS				pmax	pmax		
	comp=Z,86nm,1.3s						
CRVS	**Cervenica-Dubn**	**88.58**	**326**	*e*P	**P**	**05 44 44.8**	**+0.5**
NIE	**Niedzica**	**88.82**	**327**	*e*P	**P**	**05 44 46.9**	**+1.4**
NIE				*e*L	L	06 27 32.4	
	comp=Z,6µm,19.6s						
VOIR		**88.83**	**321**	⇑P	**P**	**05 44 45.5**	**-0.2**
VOIR		**88.83**	**321**	⇑P	**P**	**05 44 45.5**	**-0.2**
S22A	**4UR Ranch, Cre**	**88.85**	**48**	P	**P**	**05 44 45.9**	**-0.4**
	baz=303						
S22A				S	**S**	**05 55 30.6**	**-3.1**
	baz=303						
TUC	**Tucson**	**88.94**	**54**	P	**P**	**05 44 46.4**	**-0.1**
TUC				pmax	pmax		
	comp=Z,36nm,1.5s						
TUC	**Tucson**	**88.94**	**54**	P	**P**	**05 44 46.1**	**-0.4**
	baz=301						
TUC				S	**S**	**05 55 32.5**	**-1.8**
	baz=301						
TUC	**Tucson**	**88.94**	**54**	IAMs_20	IAMs_20	06 19 27.3	
	comp=Z,2µm,20.0s						
AGMN	**Agassiz Nation**	**89.09**	**35**	P	**P**	**05 44 46.3**	**-0.4**
	baz=310						
AGMN				S	**S**	**05 55 31.5**	**-3.4**
	baz=310						
AGMN	**Agassiz Nation**	**89.09**	**35**	IAMs_20	IAMs_20	06 24 10.6	
	comp=Z,2µm,20.0s						
ARR	**Arges**	**89.10**	**322**	⇑P	**P**	**05 44 47.4**	**+0.5**
DRGR		**89.27**	**323**	⇑P	**P**	**05 44 46.8**	**-0.9**
DRGR		**89.27**	**323**	⇑P	**P**	**05 44 46.8**	**-0.9**
Q24A	**Divide**	**89.29**	**46**	P	**P**	**05 44 48.1**	**-0.2**
	baz=304						
Q24A				S	**S**	**05 55 35.7**	**-2.0**
	baz=304						
KECS	**Kecovo**	**89.34**	**326**	*e*P	**P**	**05 44 48.0**	**0.0**
KECS	**Kecovo**	**89.34**	**326**	*e*P	**P**	**05 44 47.9**	**0.0**
LANS	**Liptovska Anna**	**89.41**	**327**	*e*P	**P**	**05 44 48.8**	**+0.5**
LANS				pmax	pmax		
	comp=Z,18nm,1.4s						
LANS	**Liptovska Anna**	**89.41**	**327**	*e*P	**P**	**05 44 48.8**	**+0.5**
MSEY	**Mahe Island**	**89.54**	**265**	P	**P**	**05 44 48.8**	**-0.7**
MSEY	**Mahe Island**	**89.54**	**265**	P	**P**	**05 44 49.3**	**-0.2**
MSEY				pmax	pmax		
	comp=Z,31nm,1.1s						
MSEY	**Mahe Island**	**89.54**	**265**	P	**P**	**05 44 49.3**	**-0.2**
MSEY				IAmb	IAmb	05 44 49.9	
	comp=Z,31nm,1.1s						
OKC	**Ostrava-Krasne**	**89.59**	**328**	*e*P	**P**	**05 44 49.2**	**+0.1**
OKC				MLR	MLR		
	comp=Z,5µm,17.0s						
OKC	**Ostrava-Krasne**	**89.59**	**328**	*e*P	**P**	**05 44 49.2**	**+0.1**
OKC				AMS	AMS	06 30 40.0	
	comp=Z,5µm,17.0s						
SDCO	**Great Sand Dun**	**89.73**	**47**	P	**P**	**05 44 50.2**	**-0.1**
	baz=304						
SDCO				S	**S**	**05 55 40.1**	**-1.8**
	baz=304						
KSP	**Ksiaz**	**89.78**	**329**	*e*P	**P**	**05 44 50.3**	**+0.4**
KSP				*e*L	L	06 29 17.8	
	comp=Z,12µm,17.5s						
SUSD	**Miller**	**89.85**	**39**	P	**P**	**05 44 50.4**	**0.0**
	baz=308						
SUSD				S	**S**	**05 55 39.6**	**-2.6**
	baz=308						
GHAJ	**Ghor Haditha**	**89.87**	**305**	IAMs_20	IAMs_20	06 30 44.7	

	comp=Z,3µm,18.0s						
ISP	Isparta	89.91	313	IAMs_20	IAMs_20	06 29 01.0	
	comp=Z,3µm,21.0s						
MORC	Moravsky Berou	89.92	328	⇓P	P	05 44 48.2	-2.5
MORC	Moravsky Berou	89.92	328	P	P	05 44 50.3	-0.4
MORC				pmax	pmax		
	comp=Z,16nm,1.0s						
MORC	Moravsky Berou	89.92	328	eP	P	05 44 50.2	-0.4
MORC	Moravsky Berou	89.92	328	P	P	05 44 50.3	-0.4
OSTC	Ostas	90.01	329	eP	P	05 44 51.1	+0.1
OSTC				ePP	PP	05 48 24.9	+1.5
OSTC				AMS	AMS	06 29 20.0	
	comp=Z,12µm,16.2s						
PSZ	Piszkesteto	90.01	326	⇑P	P	05 44 50.2	-1.0
PSZ	Piszkesteto	90.01	326	eP	P	05 44 49.7	-1.4
PSZ	Piszkesteto	90.01	326	⇑P	P	05 44 50.2	-1.0
CHVC	Chvalec	90.06	329	eP	P	05 44 51.3	0.0
CHVC				AMS	AMS	06 29 20.0	
	comp=Z,13µm,16.1s						
KRLC	Kraliky	90.08	329	eP	P	05 44 50.8	-0.6
KRLC				MLR	MLR		
	comp=Z,5µm,16.4s						
KRLC	Kraliky	90.08	329	eP	P	05 44 50.8	-0.6
KRLC				AMS	AMS	06 28 50.0	
	comp=Z,5µm,16.4s						
DPC	Dobruska-Polom	90.10	329	eP	P	05 44 51.3	-0.2
DPC				e		05 55 22.9	
DPC				MLR	MLR		
	comp=Z,8µm,15.8s						
DPC	Dobruska-Polom	90.10	329	eP	P	05 44 51.3	-0.2
DPC				eSKS	SKSac	05 55 22.9	+0.9
DPC				AMS	AMS	06 29 20.0	
	comp=Z,8µm,15.8s						
GZR	Gura Zlata	90.11	322	⇑P	P	05 44 50.6	-1.1
GZR	Gura Zlata	90.11	322	⇑P	P	05 44 50.6	-1.1
OGNE	Ogallala	90.13	43	P	P	05 44 52.0	+0.1
	baz=306						
OGNE				S	S	05 55 43.2	-1.9
	baz=306						
UPC	Upice	90.14	329	eP	P	05 44 51.9	+0.3
UPC				e		05 55 23.3	
UPC				MLR	MLR		
	comp=Z,14µm,16.3s						
UPC	Upice	90.14	329	eP	P	05 44 51.9	+0.3
UPC				eSKS	SKSac	05 55 23.3	+1.2
UPC				AMS	AMS	06 29 30.0	
	comp=Z,14µm,16.3s						
VYHS	Vyhne	90.16	326	eP	P	05 44 51.9	+0.1
VYHS				pmax	pmax		
	comp=Z,56nm,1.1s						
VYHS	Vyhne	90.16	326	eP	P	05 44 51.9	+0.1
KOLL	Kolacno	90.32	327	eP	P	05 44 52.7	+0.2
JAVC	Velka Javorina	90.48	327	eP	P	05 44 54.0	+0.7
BZS	Buzias	90.60	323	⇓P	P	05 44 53.1	-0.8
BZS	Buzias	90.60	323	⇓P	P	05 44 53.1	-0.8
ANMO	Albuquerque	90.62	50	ceP	P	05 44 55.1	+0.7
ANMO				pmax	pmax		
	comp=Z,20nm,1.2s						
ANMO				MLR	MLR		
	comp=Z,1µm,18.0s						
ANMO	Albuquerque	90.62	50	P	P	05 44 54.5	+0.1
	baz=303						
ANMO				S	S	05 55 47.9	-2.2
	baz=303						
ANMO	Albuquerque	90.62	50	P	P	05 44 54.9	+0.4
HERR	Herculane	90.63	322	⇓P	P	05 44 53.3	-0.7
VRAC	Vranov	90.69	328	⇓P	P	05 44 53.2	-1.0
VRAC	Vranov	90.69	328	P	P	05 44 53.5	-0.8
	comp=Z,32nm,1.1s,baz=50,slow=3.5,SNR=16						
VRAC	Vranov	90.69	328	eP	P	05 44 54.0	-0.2
BUD	Budapest	90.74	326	eP	P	05 44 52.1	-2.4
BUD	Budapest	90.74	326	P	P	05 44 55.5	+1.1
Y22D	IRIS PASSCAL I	90.77	51	P	P	05 44 55.9	+0.8
	baz=303						
PVCC	Panska Ves	90.78	330	eP	P	05 44 54.7	+0.1
PVCC				e		05 48 32.0	
PVCC				e		05 55 28.4	
PVCC				MLR	MLR		
	comp=Z,6µm,18.1s						
PVCC	Panska Ves	90.78	330	eP	P	05 44 54.7	+0.1
PVCC				ePP	PP	05 48 32.0	+2.6
PVCC				eSKS	SKSac	05 55 28.4	+2.6
PVCC				AMS	AMS	06 29 40.0	
	comp=Z,6µm,18.1s						
T25A	Trinidad	90.79	47	P	P	05 44 55.7	+0.5
	baz=304						
T25A				S	S	05 55 50.4	-1.2
	baz=304						
T25A	Trinidad	90.79	47	IAMs_20	IAMs_20	06 26 08.6	
	comp=Z,3µm,19.0s						
BRG	Berggiesshubel	90.81	330	i P	P	05 44 54.6	-0.1
BRG				Amp		05 44 56.8	
	comp=Z,25nm,1.2s						
BRG				PP	PP	05 48 31.3	+1.6
BRG				Amp		05 48 34.3	
	comp=Z,21nm,1.2s						
SMOL	Smolenice	90.84	327	eP	P	05 44 55.6	+0.7
SMOL				pmax	pmax		
	comp=Z,24nm,1.0s						
SMOL	Smolenice	90.84	327	eP	P	05 44 55.6	+0.7
KSCO	Kaye Shedlock’	90.88	45	S	S	05 55 49.4	-2.7
	baz=306						
CLL	Collm	90.91	331	i P	P	05 44 53.8	-1.4
CLL				i		05 45 03.1	
CLL				e		05 55 26.0	
CLL				eS	ScS	05 55 56.0	+1.1
CLL				pmax	pmax		
	comp=Z,34nm,1.0s						
CLL	Collm	90.91	331	i P	P	05 44 54.1	-1.1
	comp=Z,34nm,1.0s						
CLL				i		05 45 03.1	
CLL				ePP	PP	05 48 31.0	+0.6
CLL				e		05 48 41.0	
CLL				e		05 48 50.0	
CLL				eSKSac	SKSac	05 55 26.0	-0.5
CLL				eS	ScS	05 55 56.0	+1.1
CLL				ePS	PS	05 57 01.0	+0.4
CLL				eSS	SS	06 01 47.0	-6.2
CLL				ePKKPdf	PKKPdf	06 02 12.0	-3.5
CLL				e		06 02 56.0	
CLL				eSSS	SSS	06 05 24.0	
CLL				eSSSS		06 08 30.0	
KRUC	Moravsky	90.96	328	eP	P	05 44 55.0	-0.5
MODS	Modra-Piesok	91.01	327	eP	P	05 44 55.2	-0.5
MODS				pmax	pmax		
	comp=Z,46nm,1.2s						
MODS	Modra-Piesok	91.01	327	eP	P	05 44 55.1	-0.6
MDVR	Moldovita	91.08	322	⇓P	P	05 44 55.8	-0.4
PRU	Pruhonice	91.17	329	eP	P	05 44 56.1	-0.3
PRU				e		05 48 29.9	
PRU				MLR	MLR		
	comp=Z,12µm,15.9s						
PRU	Pruhonice	91.17	329	eP	P	05 44 56.1	-0.3
PRU				ePP	PP	05 48 29.9	-2.7
PRU				AMS	AMS	06 30 00.0	
	comp=Z,12µm,15.9s						
ZST	Bratislava	91.21	327	eP	P	05 44 57.6	+1.0
ZST	Bratislava	91.21	327	eP	P	05 44 57.6	+1.0
EZN	Ezine	91.44	316	P	P	05 44 57.4	-0.4
EYMN	Ely	91.51	33	S	S	05 55 55.2	-2.0
	baz=313						
VTS	Vitosha	91.59	320	⇑P	P	05 44 58.6	-0.1
VTS	Vitosha	91.59	320	⇑P	P	05 44 58.6	-0.1
ECSD	EROS Data Cent	91.61	39	P	P	05 44 58.5	-0.1
	baz=310						
ECSD				S	S	05 55 54.4	-3.9
	baz=310						
ECSD	EROS Data Cent	91.61	39	IAMs_20	IAMs_20	06 24 52.5	
	comp=Z,3µm,20.0s						
MPLH	Magyarpolny	91.70	326	eP	P	05 44 58.1	-0.8
MORH	Mrgy, Hungar	91.78	325	⇑iP	P	05 44 57.8	-1.5
BOVS	Bovan	91.82	321	⇓P	P	05 44 56.9	-2.7
SOP	Sopron	91.83	327	eP	P	05 44 57.3	-2.2
SOP	Sopron	91.83	327	P	P	05 45 00.3	+0.8
FRGS	Fruska Gora	91.87	324	⇑P	P	05 44 59.3	-0.5
FRGS	Fruska Gora	91.87	324	⇑iP	P	05 44 58.5	-1.3
NKC	Novy Kostel	91.94	331	eP	P	05 44 59.0	-1.0
NKC				MLR	MLR		
	comp=Z,7µm,18.2s						
NKC	Novy Kostel	91.94	331	eP	P	05 44 59.0	-1.0
NKC				AMS	AMS	06 30 00.0	
	comp=Z,7µm,18.2s						
CONA	Conrad Observa	92.00	327	i P	P	05 45 00.7	+0.2
	comp=Z,18nm,0.9s,SNR=17						
CKRC	Cesky Krumlov	92.11	329	eP	P	05 45 00.6	-0.2
CKRC				ePP	PP	05 48 38.7	-1.3
CKRC				eSKS	SKSac	05 55 34.1	+0.6
CKRC				AMS	AMS	06 31 50.0	
	comp=Z,7µm,16.2s						
KOVH	Kovagotottos	92.14	325	eP	P	05 44 58.5	-2.5
BGNE	Belgrade	92.19	41	P	P	05 45 01.1	-0.2
	baz=308						
BGNE				S	S	05 55 59.4	-4.3
	baz=308						
KHC	Kasperske Hory	92.23	329	eP	P	05 45 00.9	-0.5
KHC				e		05 45 08.4	
KHC				e		05 48 43.0	
KHC				MLR	MLR		
	comp=Z,12µm,15.3s						
KHC	Kasperske Hory	92.23	329	eP	P	05 45 00.9	-0.5
KHC				ex	x	05 45 08.4	
KHC				ex	x	05 48 43.0	
KHC				AMS	AMS	06 30 50.0	
	comp=Z,12µm,15.3s						
EPT	El Paso	92.31	53	IAMs_20	IAMs_20	06 27 15.4	
	comp=Z,3µm,19.0s						
GERES	GERESS Array B	92.37	329	P	P	05 45 00.7	-1.4
	comp=Z,9.1nm,0.8s,baz=46,slow=5.8,SNR=50						
GERES	GERESS Array B	92.37	329	P	P	05 45 00.9	-1.2
GERES	GERESS Array B	92.37	329	P	P	05 45 00.9	-1.2
DIVS	Divibare	92.46	323	⇑iP	P	05 45 00.9	-1.7
DIVS	Divibare	92.46	323	IAMs_20	IAMs_20	06 29 17.0	
	comp=Z,3µm,20.0s						
ARSA	Arzberg	92.64	327	i P	P	05 45 03.3	0.0
	comp=Z,5.5nm,0.7s,SNR=7.7						
SPMN	Marine on St.	92.70	36	P	P	05 45 03.7	+0.2
	baz=312						
SPMN				S	S	05 56 06.6	-1.4
	baz=312						
CBKS	Cedar Bluff	92.81	44	P	P	05 45 03.5	-0.8
	baz=307						
CBKS				S	S	05 56 07.7	-1.7
	baz=307						
CBKS	Cedar Bluff	92.81	44	IAMs_20	IAMs_20	06 25 33.8	
	comp=Z,2µm,18.0s						
MOA	Molln	92.82	328	i P	P	05 45 04.2	0.0
	comp=Z,8.5nm,0.8s,SNR=8.1						
GRF	Grafenberg Arr	92.87	331	eP	P	05 45 03.6	-0.7
	comp=Z,38nm,1.2s,baz=51,slow=4.3						
GRF				eL	L	06 30 59.7	
	comp=Z,7µm,18.1s						
GRFO	Grafenberg	92.87	331	P	P	05 45 04.1	-0.2
GRFO				pmax	pmax		
	comp=Z,103nm,1.5s						
GRFO	Grafenberg	92.87	331	P	P	05 45 04.0	-0.2
BBLS	Lazići	92.94	323	⇑iP	P	05 45 03.9	-0.9
RUDO	Rudo	93.12	323	eP	P	05 45 03.6	-2.0
MNTX	Cornudas Mount	93.15	52	P	P	05 45 05.3	-0.6
	baz=304						
MNTX				S	S	05 56 10.3	-2.3
	baz=304						
MNTX	Cornudas Mount	93.15	52	IAMs_20	IAMs_20	06 28 01.6	
	comp=Z,3µm,18.0s						
SOKA	Soboth	93.28	327	i P	P	05 45 05.8	-0.5
	comp=Z,8.0nm,0.6s,SNR=14						
MRAK	Mrakovica	93.49	325	⇑iP	P	05 45 04.7	-2.6
BLY	Banja Luka	93.53	324	⇑iP	P	05 45 06.0	-1.4
OBKA	Obir	93.64	327	i P	P	05 45 07.2	-0.8
	comp=Z,4.7nm,0.6s,SNR=5.3						
CRES	Cresnjev	93.67	326	⇑iP	P	05 45 06.3	-1.8
CRES	Cresnjev	93.67	326	eP	P	05 45 07.6	-0.5
MSTX	Muleshoe	93.69	49	P	P	05 45 07.6	-0.9
	baz=305						
MSTX				S	S	05 56 14.9	-2.5
	baz=305						
PDKS	Podkum	93.73	326	eP	P	05 45 07.1	-1.3
MGRS	Mrkonjic Grad	93.81	324	eP	P	05 45 08.9	+0.2
AMTX	Amarillo	93.89	48	P	P	05 45 08.9	-0.6
	baz=306						
AMTX				S	S	05 56 16.3	-2.9
	baz=306						
AMTX	Amarillo	93.89	48	IAMs_20	IAMs_20	06 27 19.9	
	comp=Z,3µm,19.0s						
PDG	Podgorica	93.97	322	⇑P	P	05 45 08.2	-1.3
PDG	Podgorica	93.97	322	eP	P	05 45 08.9	-0.6
LJU	Ljubljana	93.97	327	eP	P	05 45 08.2	-1.3
SLBS	Sierra La Lagu	93.98	61	IAMs_20	IAMs_20	06 21 47.4	
	comp=Z,3µm,20.0s						
MYKA	Terra Mystica	93.99	328	eP	P	05 45 08.6	-1.0
	comp=Z,6.0nm,0.6s						
BOJS	Bojanci	93.99	326	eP	P	05 45 09.3	-0.3
SANT	Santorini	94.05	314	IAMs_20	IAMs_20	06 33 35.6	
	comp=Z,3µm,20.0s						
DRME	Dracevica, Mon	94.17	322	eP	P	05 45 12.2	+1.8
CEY	Cerknica	94.24	327	⇑iP	P	05 45 09.9	-0.8
STU	Stuttgart	94.44	331	P	P	05 45 13.4	+1.9
ABTA	Abfaltersbach	94.44	328	i P	P	05 45 10.2	-1.5
	comp=Z,10nm,0.7s,SNR=10						
WTTA	Wattenberg	94.48	329	i P	P	05 45 10.1	-1.8
	comp=Z,4.1nm,0.5s						
KSU1	Kansas State U	94.55	42	P	P	05 45 12.1	-0.1
	baz=309						
KSU1				S	S	05 56 21.9	-2.7
	baz=309						
KSU1	Kansas State U	94.55	42	IAMs_20	IAMs_20	06 33 25.6	
	comp=Z,2µm,20.0s						
MOTA	Moosalm	94.66	329	eP	P	05 45 12.2	-0.6
	comp=Z,1.9nm,0.5s						
SCIA	State Center	94.69	38	P	P	05 45 12.6	-0.2
	baz=312						
SCIA				S	S	05 56 23.3	-2.3
	baz=312						
SCIA	State Center	94.69	38	IAMs_20	IAMs_20	06 22 28.1	
	comp=Z,2µm,21.0s						
RETA	Reutte	94.71	330	i P	P	05 45 12.5	-0.4
	comp=Z,20nm,1.3s						
U32A	Winter Ranch,	94.75	45	IAMs_20	IAMs_20	06 26 33.3	
	comp=Z,2µm,20.0s						
OK032	Salt Plains WL	95.00	45	IAMs_20	IAMs_20	06 27 06.7	
	comp=Z,3µm,19.0s						
FETA	Feichten	95.07	329	i P	P	05 45 13.4	-1.3
	comp=Z,5.8nm,1.0s,SNR=6.1						
BFO	Black Forest	95.15	331	P	P	05 45 13.5	-1.3
BFO				pmax	pmax		
	comp=Z,24nm,1.0s						
BFO	Black Forest	95.15	331	P	P	05 45 13.5	-1.3
BFO				IAmb	IAmb	05 45 15.2	
	comp=Z,24nm,1.0s						
DAVA	Damuels	95.26	330	i P	P	05 45 15.3	-0.3
	comp=Z,30nm,1.2s,SNR=6.8						
SCHQ	Schefferville	95.26	17	LR	LR	06 28 27.8	
	comp=Z,1µm,21.7s,baz=348,slow=36						
H06N1	SOCORRO T-PHAS	95.58	66	T	T	07 31 27.2	
	SNR=10						
JFWS	Jewell Farm	95.62	36	P	P	05 45 16.7	-0.4
	baz=314						
JFWS				S	S	05 56 32.0	-1.7
	baz=314						
JFWS	Jewell Farm	95.62	36	IAMs_20	IAMs_20	06 33 12.4	
	comp=Z,2µm,19.0s						
DAVOX	Davos/Dischmat	95.64	330	P	P	05 45 16.3	-1.0
	comp=Z,4.8nm,0.6s,baz=24,slow=6.2,SNR=9.7						
H06S1	SOCORRO T	95.66	66	T	T	07 31 28.0	
	SNR=2.8						
H06E1	SOCORRO T-PHAS	95.67	66	T	T	07 31 26.3	
	SNR=8.0						
TXAR	Lajitas Array	95.69	53	P	P	05 45 18.1	+0.4
	comp=Z,3.2nm,0.8s,baz=305,slow=2.5,SNR=30						
TXAR	Lajitas Array	95.69	53	P	P	05 45 18.9	+1.1
TXAR	Lajitas Array	95.69	53	P	P	05 45 18.9	+1.1
WMOK	Wichita Mounta	95.89	47	P	P	05 45 18.4	-0.1
	baz=308						
WMOK				S	S	05 56 35.2	-1.2
	baz=308						
WMOK	Wichita Mounta	95.89	47	IAMs_20	IAMs_20	06 25 10.7	
	comp=Z,2µm,19.0s						
DSB	Dublin	96.30	342	IAMs_20	IAMs_20	06 30 06.0	
	comp=Z,3µm,22.0s						
OK031	S. Brethren Rd	96.39	45	IAMs_20	IAMs_20	06 27 48.6	
	comp=Z,3µm,19.0s						
OK030	Cody Creek RV	96.44	45	IAMs_20	IAMs_20	06 27 51.0	
	comp=Z,3µm,19.0s						
ABTX	Abilene, Hawle	96.60	49	P	P	05 45 22.2	+0.5
	baz=307						
ABTX				S	S	05 56 39.3	-3.3
	baz=307						
TUL1	Leonard	97.08	44	P	Pdif	05 45 24.2	+0.3
	baz=310						
TUL1	Leonard	97.08	44	IAMs_20	IAMs_20	06 31 55.7	
	comp=Z,2µm,20.0s						
AQU	L'Aquila	97.17	325	⇑iP	P	05 45 23.9	-0.2
L44A	Lake County Fo	97.36	35	IAMs_20	IAMs_20	06 32 19.4	
	comp=Z,2µm,19.0s						
TIP	Timpagrande	97.55	321	⇑P	P	05 45 25.5	-0.5
JCT	Junction City	97.77	51	P	P	05 45 27.1	0.0
	baz=307						
JCT				S	S	05 56 50.9	-1.9
	baz=307						
JCT	Junction City	97.77	51	IAMs_20	IAMs_20	06 26 06.7	
	comp=Z,2µm,20.0s						
HDIL	Hopedale	97.78	37	S	S	05 56 51.1	-1.2
	baz=315						
HDIL	Hopedale	97.78	37	IAMs_20	IAMs_20	06 24 13.5	
	comp=Z,2µm,21.0s						
X37A	Clayton	98.18	45	IAMs_20	IAMs_20	06 24 24.1	
	comp=Z,3µm,22.0s						
CCM	Cathedral Cave	98.41	40	P	P	05 45 29.0	-0.7
	baz=313						
CCM				S	S	05 56 53.5	-4.2
	baz=313						
CCM	Cathedral Cave	98.41	40	IAMs_20	IAMs_20	06 29 42.5	
	comp=Z,2µm,20.0s						
WHTX	Lake Whitney,	98.45	48	S	S	05 56 56.1	-2.3
	baz=308						
U40A	Yellville	98.59	42	IAMs_20	IAMs_20	06 28 42.7	
	comp=Z,3µm,19.0s						
SFIN	Lafayette	99.08	36	S	S	05 57 00.4	-2.9
	baz=316						
435B	Jarrell	99.11	49	S	S	05 57 02.1	-1.8
	baz=308						
435B	Jarrell	99.11	49	IAMs_20	IAMs_20	06 30 44.0	
	comp=Z,3µm,20.0s						
SSB	Saint Sauveur	99.16	331	IAMs_20	IAMs_20	06 31 01.6	
	comp=Z,2µm,18.0s						
833A	Chaparral WMA,	99.33	52	S	S	05 57 05.0	-0.9
	baz=307						
MIAR	Mount Ida	99.34	44	S	S	05 57 04.4	-1.4
	baz=311						
AAM	Ann Arbor	99.42	33	IAMs_20	IAMs_20	06 30 43.6	
	comp=Z,2µm,21.0s						
X40A	Basin Creek Fa	99.84	44	IAMs_20	IAMs_20	06 28 25.8	
	comp=Z,3µm,20.0s						
P49A	Miami Univ. Ec	100.95	35	P	Pdif	05 45 40.4	-0.6
	baz=318						
P49A	Miami Univ. Ec	100.95	35	IAMs_20	IAMs_20	06 35 36.3	
	comp=Z,2µm,18.0s						
WCI	Wyandotte Cave	101.06	37	IAMs_20	IAMs_20	06 30 20.5	
	comp=Z,3µm,19.0s						
ERPA	Erie	101.30	31	IAMs_20	IAMs_20	06 36 11.2	
	comp=Z,2µm,19.0s						
ACSO	Alum Creek Sta	101.31	34	IAMs_20	IAMs_20	06 36 54.8	
	comp=Z,2µm,19.0s						
M53A	WI Miller and	101.51	32	IAMs_20	IAMs_20	06 32 02.8	
	comp=Z,2µm,19.0s						
LONY	Lake Ozonia	101.60	26	IAMs_20	IAMs_20	06 38 18.6	
	comp=Z,2µm,20.0s						
WVT	Waverly	101.70	40	IAMs_20	IAMs_20	06 33 04.8	
	comp=Z,2µm,19.0s						
M54A	Oil Creek Stat	101.93	31	IAMs_20	IAMs_20	06 36 19.9	
	comp=Z,2µm,19.0s						
P52A	Corning	102.19	34	IAMs_20	IAMs_20	06 27 34.0	
	comp=Z,2µm,19.0s						
PQI	Presque Isle	102.20	21	IAMs_20	IAMs_20	06 34 19.1	
	comp=Z,2µm,20.0s						
PLAL	Pickwick Lake	102.37	41	IAMs_20	IAMs_20	06 32 23.5	
	comp=Z,2µm,20.0s						
VT1	Waterbury	102.55	25	IAMs_20	IAMs_20	06 34 13.1	
	comp=Z,2µm,22.0s						
VBMS	Vicksburg	102.80	44	IAMs_20	IAMs_20	06 32 31.1	
	comp=Z,2µm,20.0s						
PKME	Peaks-Kenny Pk	103.01	23	IAMs_20	IAMs_20	06 32 55.7	
	comp=Z,2µm,22.0s						
HNH	Hanover	103.26	25	IAMs_20	IAMs_20	06 39 37.6	
	comp=Z,2µm,19.0s						
SSPA	Standing Stone	103.44	31	IAMs_20	IAMs_20	06 30 38.8	
	comp=Z,2µm,19.0s						
WVL	Waterville	103.49	23	IAMs_20	IAMs_20	06 28 20.4	
	comp=Z,2µm,18.0s						
TRY	Troy	103.54	27	IAMs_20	IAMs_20	06 30 36.1	
	comp=Z,2µm,20.0s						
MAHO	Mahon	103.55	328	PP	PP	05 50 03.6	-4.2
MAHO				SKS	SKSac	05 56 31.4	-0.8
FFD	Franklin Falls	103.70	25	IAMs_20	IAMs_20	06 37 01.2	
	comp=Z,2µm,20.0s						
TZTN	Tazewell	103.78	37	IAMs_20	IAMs_20	06 28 45.4	
	comp=Z,2µm,21.0s						
EMMW	East Machias	104.12	22	IAMs_20	IAMs_20	06 39 03.9	
	comp=Z,2µm,19.0s						
N59A	State Game Lan	104.16	29	IAMs_20	IAMs_20	06 41 22.6	
	comp=Z,2µm,20.0s						
VOI	Vohitsoka	104.43	253	IAMs_20	IAMs_20	06 29 02.2	
	comp=Z,2µm,20.0s						
QUA2	Belchertown	104.44	26	IAMs_20	IAMs_20	06 36 33.9	
	comp=Z,2µm,21.0s						
PAL	Palisades	104.88	28	IAMs_20	IAMs_20	06 39 54.6	
	comp=Z,2µm,19.0s						
BLA	Blacksburg	104.91	34	IAMs_20	IAMs_20	06 37 38.1	
	comp=Z,2µm,18.0s						
YLE	Yale	105.02	27	IAMs_20	IAMs_20	06 37 01.3	
	comp=Z,2µm,20.0s						
BRYW	Bryant College	105.07	26	IAMs_20	IAMs_20	06 39 31.5	
	comp=Z,2µm,18.0s						
P60A	Greenville	105.12	30	IAMs_20	IAMs_20	06 41 54.1	
	comp=Z,2µm,20.0s						
CBN	Corbin Frederi	105.62	32	IAMs_20	IAMs_20	06 34 27.6	
	comp=Z,2µm,18.0s						
GOGA	Godfrey	106.15	39	IAMs_20	IAMs_20	06 39 48.3	
	comp=Z,2µm,20.0s						
UCM	Universidad Co	106.49	333	PP	PP	05 50 29.3	-0.2
UCM				SKS	SKSac	05 56 51.1	+5.5
PBRG	Braganca	106.52	337	ePP	PP	05 50 38.0	+8.3
PGAV	Gavieira, Arco	106.91	338	ePP	PP	05 50 37.8	+5.2
PGAV				eSKSac	SKSac	05 56 49.3	+1.8
PGAV	Gavieira, Arco	106.91	338	eLQ	LQ	06 21 19.7	
PGAV				eLR	LR	06 27 20.3	
	comp=Z,3µm,20.0s						
MVO	Moncorvo	107.19	337	ePP	PP	05 50 39.3	+4.7
MVO				eSKSac	SKSac	05 56 52.1	+3.4
MVO	Moncorvo	107.19	337	eLQ	LQ	06 23 11.6	
MVO				eLR	LR	06 28 34.2	
	comp=Z,4µm,20.0s						
POLO	Lamas de Olo	107.27	337	ePP	PP	05 50 40.0	+4.7
ESDC	Sonseca Array	107.32	334	PKiKP	PKiKP	05 50 19.7	+1.5
	comp=Z,2.0nm,1.1s,baz=44,slow=7.9,SNR=4.6						
ESDC				PP	PP	05 50 32.7	-2.9
	comp=Z,2.1nm,0.8s,baz=26,slow=6.7,SNR=4.3						
CNNC	Cliffs of the	107.72	34	IAMs_20	IAMs_20	06 33 25.5	
	comp=Z,3µm,20.0s						
PVIS	Viseu	107.89	337	ePP	PP	05 50 49.3	+10
MTE	Manteigas	108.05	336	ePP	PP	05 50 47.3	+6.4
MTE				eSKSac	SKSac	05 56 53.6	+1.2
MTE	Manteigas	108.05	336	eLQ	LQ	06 20 15.4	
MTE				eLR	LR	06 27 29.6	
	comp=Z,3µm,20.0s						
NHSC	New Hope	108.19	37	IAMs_20	IAMs_20	06 34 51.1	
	comp=Z,2µm,20.0s						
PCBR	Castelo Branco	108.52	336	ePP	PP	05 50 53.8	+10
COI	Coimbra	108.52	337	ePP	PP	05 50 51.0	+6.7
PCAS	Casmilo, Conde	108.69	337	ePP	PP	05 50 50.5	+5.0
PMRV	Marv??o	108.85	336	ePP	PP	05 50 50.9	+4.2
PMRV				eSKSac	SKSac	05 57 00.9	+5.1
PMRV	Marv??o	108.85	336	eLQ	LQ	06 21 51.0	
PMRV				eLR	LR	06 31 21.3	
	comp=Z,6µm,18.0s						
PSBE	So Bento	109.27	337	ePP	PP	05 50 56.6	+6.8
PESTR	Estremoz	109.41	336	ePP	PP	05 50 57.0	+6.2
PMTG	Montargil	109.47	336	ePP	PP	05 50 59.4	+8.2
PBAR	Barrancos	109.81	335	ePP	PP	05 51 01.9	+8.2
EVO	Evora	109.86	336	PP	PP	05 50 54.4	+0.3
EVO				SKS	SKSac	05 57 06.4	+6.3
EVO	Evora	109.86	336	ePP	PP	05 50 58.9	+4.8
MBAR	Mbarara	109.87	280	IAMs_20	IAMs_20	06 44 47.4	
	comp=Z,2µm,20.0s						
PMAFR	Mafra	109.94	337	ePP	PP	05 51 00.2	+5.6
EMAL	Malaga-Limoner	110.00	332	PP	PP	05 50 55.6	+0.5
LIS	Lisbon	110.11	337	ePP	PP	05 50 57.0	+1.2
LIS				IAMs_20	IAMs_20	06 42 35.4	
	comp=E,5µm,16.3s						
PBEJ	Beja	110.26	336	ePP	PP	05 51 06.2	+9.3
PNCL	Nicolau / Gran	110.42	336	ePP	PP	05 51 04.6	+6.5
MESJ	Messejana	110.55	336	ePP	PP	05 51 00.1	+1.1
MESJ				IAMs_20	IAMs_20	06 43 56.7	
	comp=Z,4µm,16.1s						
MESJ	Messejana	110.55	336	ePP	PP	05 51 05.6	+6.6
ARNO	Arenosillo	110.64	334	PP	PP	05 51 00.7	+1.0
PCVE	Castro Verde	110.67	335	ePP	PP	05 51 06.8	+6.9

PVAQ	Vaqueiros	110.75	335	ePP	PP	05 51 07.1	+6.6
PVAQ				eSKSac	SKSac	05 57 05.5	+1.8
PVAQ	Vaqueiros	110.75	335	eLQ	LQ	06 21 50.0	
PVAQ				eLR	LR	06 28 36.8	
	comp=Z,4µm,18.0s						
PBDV	Barranco-do-Ve	110.97	335	ePP	PP	05 51 08.3	+6.2
SFS	San Fernando	110.98	334	PP	PP	05 51 03.4	+1.3
SFS				SKS	SKSac	05 57 12.1	+7.4
CEU	Ceuta	111.13	333	PP	PP	05 51 02.1	-1.1
CEU				SKS	SKSac	05 57 08.8	+3.6
MORF	Marmelete	111.18	336	ePP	PP	05 51 04.7	+1.1
MORF				IAMs_20	IAMs_20	06 43 38.2	
	comp=Z,4µm,15.1s						
MORF	Marmelete	111.18	336	ePP	PP	05 51 11.2	+7.6
PFVI	Vila Bisbo	111.40	336	ePP	PP	05 51 12.4	+7.3
IFR	Ifrane	113.06	331	PP	PP	05 51 15.9	-1.5
MDT	Midelt	113.43	330	PP	PP	05 51 17.7	-2.2
	comp=Z,0.6nm,0.5s,baz=83,slow=4.4,SNR=4.3						
AVE	Averroes	114.22	333	PP	PP	05 51 24.9	-0.4
SNET	Serv Nac Est T	115.74	58	IAMs_20	IAMs_20	06 36 53.6	
	comp=Z,1µm,20.0s						
QSPA	South Pole Qui	116.12	180		PKPdf	05 50 32.5	-1.4
PMPST	Porto Santo, M	117.62	340	ePP	PP	05 51 53.6	+4.6
PMOZ	Porto Moniz, M	118.11	341	ePP	PP	05 51 59.2	+6.6
PMOZ	Porto Moniz, M	118.11	341	eLR	LR	06 36 03.7	
	comp=Z,1µm,18.0s						
PMAR	Madeira	118.12	341	ePP	PP	05 51 58.5	+5.8
LSZ	Lusaka	118.33	266	IAMs_20	IAMs_20	06 41 30.3	
	comp=Z,2µm,20.0s						
SYO	Syowa Base	119.01	204	⇑eX	Pdif	05 47 14.2	+14
SYO	Syowa Base	119.01	204	⇓eX	PKPdf	05 50 37.6	-1.7
BOAB	BOACO BROADBAN	119.21	57	IAMs_20	IAMs_20	06 36 08.4	
	comp=Z,2µm,20.0s						
JTS	Las Juntas de	121.12	58	IAMs_20	IAMs_20	06 40 09.1	
	comp=Z,1µm,20.0s						
HDC	Heredia	121.94	58	IAMs_20	IAMs_20	06 40 37.8	
	comp=Z,1µm,20.0s						
GRTK	Grand Turk	122.23	38	IAMs_20	IAMs_20	06 51 33.2	
	comp=Z,2µm,21.0s						
LBTB	Lobatse	123.80	256	PKP	PKiKP	05 50 50.4	+0.1
	comp=Z,5.7nm,0.9s,baz=355,slow=1.6,SNR=4.9						
TORD	Torodi Ar. Bea	125.40	311	PKP	PKPdf	05 50 51.8	-1.5
	comp=Z,4.2nm,0.9s,baz=6.4,slow=2.5,SNR=20						
TORD				PP	PP	05 52 35.8	-7.2
	comp=Z,4.9nm,0.8s,baz=40,slow=7.3,SNR=5.3						
BCIP	Isla Barro Col	125.68	55	IAMs_20	IAMs_20	06 38 12.6	
	comp=Z,2µm,19.0s						
KOWA	Kowa	128.06	318	PKP	PKPdf	05 50 58.4	0.0
	comp=Z,2.7nm,0.4s,baz=38,slow=3.3,SNR=17						
KOWA				PP	PP	05 52 56.3	-4.2
	comp=Z,9.6nm,0.9s,baz=33,slow=6.5,SNR=3.5						
KOWA	Kowa	128.06	318	IAMs_20	IAMs_20	06 54 31.2	
	comp=Z,2µm,19.0s						
TSUM	Tsumeb	129.19	266	IAMs_20	IAMs_20	06 42 50.9	
	comp=Z,1µm,22.0s						
URIC	Uribia, Colomb	129.34	46	eP	PKiKP	05 51 02.8	+1.3
SABA	Saba	129.56	33	IAMs_20	IAMs_20	06 53 30.7	
	comp=Z,2µm,19.0s						
UREC	San Jos de Ur	129.76	53	eP	PKiKP	05 51 02.8	+0.3
SMLC	San Martn de	130.06	51	eP	PKPdf	05 51 01.8	-0.4
ANWB	Willy Bob	130.21	31	IAMs_20	IAMs_20	06 49 17.7	
	comp=Z,2µm,20.0s						
ZARC	Zaragoza, Cauc	130.42	53	eP	PKPdf	05 50 58.9	-4.0
SNAA	Sanae	130.75	194	PKPdf	PKiKP	05 51 02.3	-0.4
SNAA	Sanae	130.75	194	PKP	PKPdf	05 51 00.8	-1.1
	comp=Z,1.3nm,0.8s,baz=8.5,slow=8.0,SNR=7.1						
SNAA	Sanae	130.75	194	IAMs_20	IAMs_20	06 47 30.9	
	comp=Z,1µm,21.0s						
YOTC	Yotoco, Valle	131.68	57	eP	PKPdf	05 51 05.6	+0.2
SPBC	San Pablo de B	132.25	54	eP	PKPdf	05 51 04.7	-1.8
VNA2	Neumayer--Watz	132.26	193	PKPdf	PKPdf	05 51 04.7	+0.1
SDV	Santo Domingo	132.32	47	PKP	PKPdf	05 51 06.3	-0.4
	comp=Z,5.9nm,0.4s,baz=290,slow=2.0,SNR=7.5						
SDV				SKPbc	SKPbc	05 54 33.2	+0.4
	comp=Z,5.0nm,0.4s,baz=305,slow=2.5,SNR=4.1						
SDV	Santo Domingo	132.32	47	eP	PKPdf	05 51 07.0	+0.3
SDV	Santo Domingo	132.32	47	IAMs_20	IAMs_20	06 58 20.7	
	comp=Z,1µm,20.0s						
OTAV	Otavalo	132.38	63	eP	PKPdf	05 51 06.3	-0.9
OTAV	Otavalo	132.38	63	IAMs_20	IAMs_20	06 47 16.2	
	comp=Z,1µm,19.0s						
VNA3	Neumayer Olymp	132.44	192	PKPdf	PKiKP	05 51 05.7	-0.3
ROSC	El Rosal	132.62	55	PKP	PKPdf	05 51 06.9	-0.6
	comp=Z,4.7nm,0.5s,baz=139,slow=13,SNR=4.5						
TULM	Tulcn-Chalpat	132.62	62	eP	PKiKP	05 51 09.5	+0.7
VNA1	Neumayer--Stat	132.66	193	PKPdf	PKPdf	05 51 05.7	+0.4
SOTA	Rioblanco	132.66	59	eP	PKPdf	05 51 05.6	-2.1
SVN	Savane Anatole	132.95	32	IAMs_20	IAMs_20	06 54 50.4	
	comp=Z,1µm,20.0s						
FDF	Fort de France	133.05	32	IAMs_20	IAMs_20	06 56 56.2	
	comp=Z,1µm,20.0s						
DBIC	Dimbokro	134.51	312	PKP	PKiKP	05 51 11.3	-0.6
	comp=Z,4.1nm,0.8s,baz=34,slow=9.6,SNR=4.2						
DBIC				PP	PP	05 53 41.5	-0.8
	comp=Z,7.6nm,1.0s,baz=45,slow=4.3,SNR=2.7						
GRGR	Grenville	135.02	35	IAMs_20	IAMs_20	06 52 03.8	
	comp=Z,1µm,20.0s						
SACV	Santiago Islan	136.82	340	IAMs_20	IAMs_20	06 49 55.0	
	comp=Z,1µm,20.0s						
PMSA	Palmer Station	137.93	163	eP	PKPdf	05 51 14.9	-0.4
TBTG	Tabatinga, AM	141.82	60	eP	PKPpre	05 51 11.4	
H03N2	Juan Fernandez	143.43	111	T	T	08 31 03.1	
	baz=279,slow=76,SNR=3.5						
H03N3	Juan Fernandez	143.44	111	T	T	08 31 22.2	
	baz=279,slow=76,SNR=3.5						
H03N1	Juan Fernandez	143.44	111	T	T	08 31 04.8	
	baz=279,slow=76,SNR=4.0						
PTGA	Pitinga	146.48	44	PKPbc	PKPdf	05 51 32.7	+0.5
	comp=Z,35nm,0.8s,baz=323,slow=2.8,SNR=80						
PTGA	Pitinga	146.48	44	IAMs_20	IAMs_20	06 58 34.5	
	comp=Z,1µm,22.0s						
MACA	Manacapuru-AM	147.85	48	eP	PKPdf	05 51 34.1	-0.3
ETMB	Extrema	148.11	64	eP	PKPdf	05 51 34.2	-0.6
PLCA	Paso Flores	149.02	126	PKPbc	PKPbc	05 51 39.9	+0.1
	comp=Z,17nm,0.8s,baz=236,slow=2.9,SNR=37						
PLCA	Paso Flores	149.02	126	eP	PKPdf	05 51 35.1	-0.5
LPAZ	La Paz	149.68	77	eP	PKPdf	05 51 37.1	-0.9
PEL	Peldehue	150.34	111	IAMs_20	IAMs_20	06 59 57.7	
	comp=Z,1µm,19.0s						
MCPB	Macapa, AP	150.52	31	eP	PKPdf	05 51 38.5	-0.3
MALB	Monte Alegre	150.70	37	eP	PKPdf	05 51 38.6	-0.4
LVC	Limon Verde	151.05	89	PKPbc	PKiKP	05 51 46.4	+0.3
	comp=Z,25nm,1.0s,baz=265,slow=0.2,SNR=8.2						
LVC	Limon Verde	151.05	89	eP	PKPdf	05 51 39.1	-0.6
ITTB	Itaituba	151.92	42	eP	PKPdf	05 51 40.7	-0.2
TMAB	Tom-Au,PA,Br	154.01	25	eP	PKPdf	05 51 44.1	+0.2
NPGB	Novo Progresso	154.24	45	eP	PKPdf	05 51 44.3	+0.1
VILB	Vilhena	154.73	63	eP	PKPdf	05 51 45.4	+0.6
SIV	San Ignacio	155.62	70	PKP	PKPdf	05 51 46.3	+0.3
	comp=Z,2.5nm,0.9s,baz=22,slow=1.3,SNR=9.8						
ROSB	Rosrio	155.79	17	eP	PKPdf	05 51 46.8	+0.5
PDRB	Porto dos Gac	156.56	55	eP	PKPdf	05 51 46.2	-1.1
PRPB	Parauapebas	156.66	33	eP	PKPdf	05 51 48.1	+0.6
CLDB	Colider	156.74	52	eP	PKPdf	05 51 48.1	+0.5
PTLB	Pontes e Lacer	156.95	66	eP	PKPdf	05 51 48.7	+1.0
NBPS	Pedro II - PI	157.82	11	eP	PKPdf	05 51 49.4	+0.4
NBPB	Pedra_Branca-C	159.20	6	eP	PKPdf	05 51 51.6	+1.0
SALV	Santo Antonio	159.98	62	eP	PKPdf	05 51 51.5	+0.2
SMTB	Santa Maria do	160.07	31	eP	PKPdf	05 51 52.1	+0.5
SNDB	Serra Nova Dou	160.57	45	eP	PKPdf	05 51 53.1	+1.1
NBMA	Muriti-CE	161.07	4	eP	PKPdf	05 51 53.4	+0.7
NBLV	Livramento - P	161.11	359	eP	PKPdf	05 51 53.3	+0.5
PP1B	Ponte de Pedra	161.55	65	eP	PKPdf	05 51 54.5	+1.4
CPUP	Villa Florida	162.07	94	PKPab	PKPab	05 52 40.4	+0.5
	comp=Z,4.1nm,0.9s,baz=302,slow=4.3,SNR=4.6						
CPUP	Villa Florida	162.07	94	eP	PKPdf	05 51 54.5	+1.1
AQDB	Aquidauana	162.16	75	eP	PKPdf	05 51 53.9	+0.3
ITQB	Itaqui	162.64	105	eP	PKPdf	05 51 54.0	+0.2
NBAN	Anadia - AL	163.38	356	eP	PKPdf	05 51 55.2	+0.2
NBPN	Ponto Novo - B	164.34	11	eP	PKPdf	05 51 55.0	-0.9
BDFB	Brasilia	165.41	45	PKPab	PKPab	05 52 55.7	+1.0
	comp=Z,4.3nm,0.9s,baz=189,slow=6.1,SNR=3.9						
ITRB	Iturama	166.30	64	eP	PKPdf	05 51 58.0	+0.6
PCMB	Pacaembu	166.42	73	eP	PKPdf	05 51 58.1	+0.7
PTGB	Pitanga	166.59	86	eP	PKPdf	05 51 58.4	+0.9
IPMB	Ipameri, GO	166.93	53	eP	PKPdf	05 51 58.6	+0.6
JANB	Januaria	167.01	32	eP	PKPdf	05 51 58.6	+0.5
FRTB	Fartura	168.49	78	eP	PKPdf	05 51 59.8	+0.9
MC01	Montes Claros	168.60	34	eP	PKPdf	05 51 59.7	+0.5
CMC01	Camacan, BA	168.88	11	eP	PKPdf	05 52 00.2	+1.0
TER01	Tubaro-SC	169.29	104	eP	PKPdf	05 52 00.1	+0.9
DIAM	Diamantina, MG	170.07	38	eP	PKPdf	05 52 01.0	+0.9
VAO	Valinhos	170.62	71	eP	PKPdf	05 52 01.1	+0.8
NAN01	Guarapari, ES	171.15	18	eP	PKPdf	05 52 01.6	+1.1
BSCB	Bom Sucesso	171.34	54	eP	PKPdf	05 52 01.7	+1.1
DUB01	Friburgo-RJ	173.73	48	eP	PKPdf	05 52 02.7	+1.1

IDC **20** *05:33:56.2±0.8, 26°.24N×142°.63E, h0^{km}, mb4.8/14, mb1 5.0/14, mb1mx4.7/40, mbtmp4.8/14, MS5.4/2, Ms1 5.4/2, ms1mx4.6/33 Error ellipse: s-maj=25.7km s-min=18.7km az=63.0*

JMA **20** *05:33:56.1±0.4, 26°.32N×143°.04E, h0^{km}, M5.2*

JMA Felt I J1.

NEIC **20** *05:33:58.2±1.2, 26°.29N±0°.08×142°.7E±0°.2, h10^{km}±1^{km}, mb5.1/13, Error ellipse: s-maj=26.2km s-min=7.3km az=241.0*

ISC 20 05:33:57.9±0.6**, 26°.24N**±0°.07×**142°.6E**±0°.1**, h10^{km}, n87, σ0^{s}.76**/86**, mb4.8**/19**, 1C, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHH2	Haha-jima-NKT2	0.54	316	P	Pn	05 34 12.6	+0.9
CBIJ	Chichi jima	0.93	337	P	Pn	05 34 17.2	+0.2
CBIJ				eS	Sn	05 34 32.5	+2.1
JCJ	Chichijima	0.93	337	Pn	Pn	05 34 17.0	0.0
	964nm,0.3s,baz=246,slow=16,SNR=1.0						
JCJ				Sn	Sn	05 34 32.5	+2.1
	5µm,0.3s,baz=285,slow=23,SNR=5.8						
JCJ	Chichijima	0.93	337		Pg	05 34 15.4	-0.3
JCJ					Sg	05 34 27.8	-0.1
JHU	Hanno	9.99	344	eS	Sn	05 38 10.3	-3.5
MA2	Magadan	33.80	7	LR	LR	05 56 17.5	
	comp=Z,3µm,18.7s,baz=218,slow=40						
CHTO	Chiang Mai	40.84	269	P	P	05 41 40.4	+0.3
CHTO				IAmb	IAmb	05 41 42.0	
	comp=Z,20nm,0.9s						
CMAR	Chiang Mai Arr	40.96	268	P	P	05 41 41.3	+0.2
	comp=Z,7.1nm,0.8s,baz=57,slow=6.4,SNR=3.1						
WRAB	Tennant Creek	46.59	191	P	P	05 42 25.9	-0.3
WB2	Warramunga Arr	46.60	191	P	P	05 42 25.7	-0.6
WRA	Warramunga Arr	46.60	191	P	P	05 42 26.1	-0.2
	comp=Z,21nm,0.6s,baz=10,slow=8.4,SNR=5.5						
WRA	Warramunga Arr	46.60	191	P	P	05 42 25.4	-0.9
ZALV	Zalesovo Beam	50.37	320	PcP	PcP	05 44 12.9	-0.6
	comp=Z,3.5nm,0.6s,baz=99,slow=3.6,SNR=2.5						
MK31	Makanchi Array	51.30	310	P	P	05 43 01.4	-0.8
KURK	Kurchatov	53.85	315	P	P	05 43 21.4	+0.4
KURK	Kurchatov	53.85	315	IAmb	IAmb	05 43 45.5	
	comp=Z,30nm,0.9s						
KURBB	Kurchatov Arra	53.90	315	P	P	05 43 21.4	0.0
	comp=Z,1.9nm,0.3s,baz=93,slow=7.8,SNR=5.5						
H21K	Melozitna Rive	55.95	27	P	P	05 43 37.9	+1.9
	baz=258						
BRSE	Bradley Lake S	55.99	34	P	P	05 43 37.0	+0.6
	baz=264						
A21K	Barrow	56.12	20	P	P	05 43 38.6	+1.6
	baz=251						
MCK	McKinley	57.29	29	P	P	05 43 46.0	+0.5
	baz=263						
WAT6	Susitna Watana	57.71	31	P	P	05 43 48.4	-0.2
	baz=265						
ILAR	Eielson Array	58.29	28	P	P	05 43 51.6	-0.9
	comp=Z,5.3nm,0.9s,baz=257,slow=5.5,SNR=4.9						
KLU	Klutina	58.49	32	P	P	05 43 54.2	+0.2
	baz=267						
BVAR	Borovoye Array	58.92	318	P	P	05 43 57.5	+0.3
	comp=Z,12nm,0.5s,baz=184,slow=5.9,SNR=7.8						
J26L	Joseph Creek	59.70	29	P	P	05 44 02.4	0.0
	baz=268						
MCARA	McCarthy VSAT	59.88	32	P	P	05 44 03.6	0.0
	baz=270						
DAWY	Dawson	61.51	29	P	P	05 44 15.3	+0.5
	baz=272						
YUK4	Talbot Arm	61.99	32	P	P	05 44 19.7	+1.5
	baz=274						
YUK6	Outpost Mounta	62.15	33	P	P	05 44 19.7	+0.3
	baz=274						
SKAG	Skagway	63.81	34	P	P	05 44 30.2	+0.1
	baz=278						
YKA	Yellowknife Ar	72.72	28	P	P	05 45 25.5	-0.4
	comp=Z,3.1nm,1.0s,baz=304,slow=4.8,SNR=4.3						
D03D	Eldon	73.88	45	P	P	05 45 34.3	+1.3
	baz=291						
ARCES	ARCESS Array B	74.47	341	P	P	05 45 37.1	+1.1
	comp=Z,8.1nm,0.7s,baz=84,slow=9.2,SNR=3.6						
M02C	Callahan	76.35	51	P	P	05 45 48.2	+0.7
	baz=293						
L04D	Klamath Falls	76.41	50	P	P	05 45 48.1	+0.2
	baz=293						
N02D	Trinity Center	76.61	51	P	P	05 45 49.2	+0.2
	baz=293						
O02D	Mt. Diablo Mer	76.87	52	P	P	05 45 51.0	+0.6
	baz=293						
M04C	Macdoel	76.89	50	P	P	05 45 51.0	+0.4
	baz=294						
FIA1	FINESS Array S	78.87	334	P	P	05 46 01.3	+0.3
FINES	FINESS Array B	78.87	334	P	P	05 46 01.1	+0.1
	comp=Z,17nm,0.5s,baz=74,slow=4.9,SNR=8.3						
FINES	FINESS Array B	78.87	334	P	P	05 46 01.6	+0.6
KIV	Kislovodsk	78.90	314	P	P	05 46 02.2	+0.5
KIV				IAmb	IAmb	05 46 04.7	
	comp=Z,47nm,1.3s						
NVAR	Mina Array Bea	80.76	52	P	P	05 46 12.0	0.0
	comp=Z,7.8nm,0.9s,baz=277,slow=5.4,SNR=4.1						
NVAR	Mina Array Bea	80.76	52	P	P	05 46 10.9	-1.2
HLID	Hailey	81.07	46	P	P	05 46 13.4	-0.2
	baz=298						
HRY	Holter Researc	81.19	42	P	P	05 46 13.8	-0.2
LRM	Limekiln Ridge	81.24	43	P	P	05 46 14.3	-0.2
VES	Vestal, Richgr	81.33	54	P	P	05 46 14.4	-0.4
	baz=296						
TIN	Tinemaha, Big	81.42	53	P	P	05 46 15.7	+0.2
	baz=296						
ELK	Elko	81.83	49	LR	LR	06 18 43.9	
	comp=Z,3µm,18.7s,baz=306,slow=33						
ELK	Elko	81.83	49	P	P	05 46 17.6	-0.1
ISA	Isabella, Lake	81.86	54	P	P	05 46 17.1	-0.6
	baz=296						
MPMC	Manual Prospec	82.39	54	P	P	05 46 20.6	-0.1
	baz=297						
LRMC	Laurel Mtn Rad	82.51	54	P	P	05 46 21.2	-0.1
	baz=297						
EDW2	Edwards Air Fo	82.56	55	P	P	05 46 21.8	+0.4
	baz=297						
R11A	Troy Canyon, C	82.70	51	P	P	05 46 22.0	-0.3
	baz=298						
SHOC	Shoshone, Teco	83.34	53	P	P	05 46 25.2	-0.2
	baz=298						
AKASG	Malin Array Be	83.52	324	P	P	05 46 25.3	-0.7
	comp=Z,5.9nm,0.6s,baz=52,slow=5.3,SNR=4.6						
AKASG	Malin Array Be	83.52	324	P	P	05 46 25.8	-0.2
AKASG				IAmb	IAmb	05 46 33.6	
	comp=Z,8.5nm,0.8s						
AKBB	Malin Array Si	83.52	324	P	P	05 46 25.6	-0.4
AKBB				IAmb	IAmb	05 46 34.2	
	comp=Z,13nm,0.8s						
RLMT	Red Lodge	83.53	43	P	P	05 46 27.3	+0.8
	baz=301						
DUG	Dugway, Tooele	83.72	48	P	P	05 46 27.7	+0.2
	baz=299						
MURC	Murrieta	83.72	56	P	P	05 46 26.9	-0.6
	baz=297						
HEC	Hector,Ludlow	83.79	54	P	P	05 46 27.5	-0.4
	baz=298						
TUQ	Turquoise Moun	83.81	54	P	P	05 46 27.9	-0.1
	baz=298						
PFO	Pinyon Flats O	84.26	55	P	P	05 46 29.8	-0.5
	baz=298						
TPFO	Pinon Flats	84.27	55	P	P	05 46 30.1	-0.2
	baz=298						
GMRC	Granite Mounta	84.31	54	P	P	05 46 30.7	+0.2
	baz=298						
HFS	Hagfors	84.35	337	P	P	05 46 30.0	-0.1
	baz=66,slow=3.6						
BELC	Belle Mtn. Jos	84.42	55	P	P	05 46 31.1	0.0
	baz=298						
NOA	NORSAR Array B	84.54	338	P	P	05 46 30.9	-0.1
	comp=Z,6.0nm,0.8s,baz=47,slow=4.9,SNR=3.8						
BC3	Big Chuckawall	84.98	55	P	P	05 46 34.4	+0.5
	baz=298						
GLA	Glamis	85.73	55	P	P	05 46 38.0	+0.4
	baz=299						
BRTR	Keskin Array B	86.85	313	P	P	05 46 42.5	-0.6
	comp=Z,2.7nm,0.8s,baz=101,slow=3.3,SNR=2.3						
WUAZ	Wupatki	87.02	52	P	P	05 46 43.9	-0.2
	baz=300						
214A	Organ Pipe Nat	87.75	55	P	P	05 46 47.5	0.0
	baz=300						
AGMN	Agassiz Nation	89.22	35	P	P	05 46 54.5	+0.5
	baz=310						
CLL	Collm	90.97	331	eP	P	05 47 01.0	-1.1
	comp=Z,23nm,1.4s						
GERES	GERESS Array B	92.43	329	P	P	05 47 08.0	-1.1
	comp=Z,2.0nm,0.7s,baz=32,slow=5.8,SNR=5.0						
MNTX	Cornudas Mount	93.28	52	P	P	05 47 13.4	+0.2
	baz=304						
AMTX	Amarillo	94.02	48	P	P	05 47 16.8	+0.1
	baz=306						
KSU1	Kansas State U	94.68	42	P	P	05 47 19.1	-0.4
	baz=309						
TXAR	Lajitas Array	95.82	53	P	P	05 47 25.2	+0.1
	comp=Z,1.6nm,0.9s,baz=339,slow=2.2,SNR=2.8						
SYO	Syowa Base	118.88	204	⇑epPdiff	pPdif	05 49 11.2	+2.1
PTGA	Pitinga	146.61	44	PKPbc	PKPbc	05 53 40.3	-0.2
	comp=Z,18nm,0.8s,baz=332,slow=2.7,SNR=4.0						
PLCA	Paso Flores	149.01	126	PKPbc	PKPbc	05 53 46.6	+0.2
	comp=Z,7.3nm,0.8s,baz=244,slow=4.7,SNR=2.8						

CNRM **20** *05:37:32.3, 35°.53N×4°.85W, h123^{km}, ml2.6*

MDD **20** *05:37:34.2±1.1, 35°.76N×4°.63W, h98^{km}±8^{km}, mb2.5/12, Error ellipse: s-maj=10.3km s-min=6.0km az=163.0, PRXIMO*

IGIL **20** *05:37:34.0, 35°.77N×4°.61W, h32^{km}, ML2.4*

INMG **20** *05:37:34.5±1.8, 35°.78N×4°.67W, h103^{km}±9^{km}, ML2.3, Error ellipse: s-maj=5.6km s-min=3.9km az=159.0*

SFS **20** *05:37:34.0, 35°.70N×4°.60W, h99^{km}, ML2.4, ALBORAN W.*

ISC 20 05:37:31.1±1.2**, 35°.70N**±0°.02×**4°.65W**±0°.03**, h115**^{km}±7^{km}**, n68, σ1^{s}.84**/126**, 7C, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEU	Ceuta	0.62	289	P	Pn	05 37 49.3	0.0
CEU				S	Sn	05 38 00.8	-2.3
ECEU	Ceuta	0.62	289	P	Pn	05 37 50.3	+0.9
	11nm,0.1s,SNR=8.0						
ECEU				S	Sn	05 38 03.3	+0.1
	11nm,0.1s,SNR=4.7						
CHEFC	Chefchaouen	0.82	224	P	Pn	05 37 53.0	+1.9
CHEFC				S	Sn	05 38 07.3	+1.2
EMIJ	Mijas	0.87	353	⇑P	Pn	05 37 51.0	-0.5
	9.8nm,0.2s,SNR=18						
EMIJ				S	Sn	05 38 04.7	-2.2
	29nm,0.2s,SNR=16						
EJIF	Jimena Fronter	1.00	319	⇑P	Pn	05 37 54.9	+2.1
	SNR=18						
EMAL	Malaga-Limoner	1.08	9	P	Pn	05 37 53.4	-0.1
EMAL				S	Sn	05 38 08.1	-2.4
EMAL	Malaga-Limoner	1.08	9	P	Pn	05 37 53.4	-0.1
EMAL				S	Sn	05 38 08.1	-2.4
AKLM	AKL	1.35	151	P	Pn	05 37 56.9	+0.3
AKLM				S	Sn	05 38 15.3	-0.6
LIJA	Lijar	1.35	333	P	Pn	05 38 00.3	+3.7
LIJA				S	Sn	05 38 16.2	+0.3
ELGU	Los Guajares,	1.43	35	P	Pn	05 37 57.2	-0.3
	3.8nm,0.1s,SNR=7.9						
ELGU				S	Sn	05 38 15.2	-2.4
	12nm,0.1s,SNR=7.9						
EGOR	Sierra Gorda,	1.48	17	P	Pn	05 37 59.3	+1.2
	0.7nm,0.2s,SNR=7.9						
EGOR				S	Sn	05 38 19.3	+0.7
	4.3nm,0.2s,SNR=7.9						
ESPR	Espera	1.52	320	⇑P	Pn	05 38 00.1	+1.6
	3.1nm,0.1s,SNR=18						
ESPR				S	Sn	05 38 20.1	+0.9
	3.0nm,0.1s,SNR=7.9						
EQUE	Quentar	1.79	33	P	Pn	05 38 04.6	+2.8
	0.3nm,0.1s,SNR=5.8						
EQUE				S	Sn	05 38 25.4	+0.1
	10nm,0.7s,SNR=7.9						
EBER	Berja	1.86	49	P	Pn	05 38 03.9	+1.2
	0.6nm,0.1s,SNR=7.9						
EBER				S	Sn	05 38 25.7	-1.2
	8.0nm,0.6s,SNR=8.9						
LCRM	LCR	2.01	185	P	Pn	05 38 07.7	+3.0
LCRM				S	Sn	05 38 30.1	-0.2
JBK	JBK	2.18	128	P	Pn	05 38 11.2	+4.3
JBK				S	Sn	05 38 31.4	-2.8
GORA	Gorafe	2.20	36	S	Sn	05 38 36.7	+2.4
	7.0nm,0.5s,SNR=7.9						
IFR	Ifrane	2.21	190	P	Pn	05 38 07.2	0.0
IFR				S	Sn	05 38 31.4	-3.4
ECAB	El Cabril	2.45	346	⇑P	Pn	05 38 11.0	+0.9
	2.2nm,0.1s,SNR=18						
ECAB				S	Sn	05 38 38.4	-1.6
	13nm,0.1s,SNR=26						
EADA	Adamuz	2.47	1	⇑P	Pn	05 38 11.7	+1.4
	6.2nm,0.1s,SNR=18						
EADA				S	Sn	05 38 39.4	-1.0
	13nm,0.1s,SNR=27						
EMIN	Mina Concepcio	2.63	322	⇑P	Pn	05 38 13.5	+1.1
	5.2nm,0.0s,SNR=18						
EMIN				S	Sn	05 38 42.6	-1.5
	4.9nm,0.1s,SNR=7.5						
CZD	Col de Zad	2.68	187	P	Pn	05 38 13.8	+0.4
CZD				S	Sn	05 38 44.4	-1.3
ZHG	ZHG	2.78	217	P	Pn	05 38 15.1	+0.6
ZHG				S	Sn	05 38 45.1	-2.8
MD31	MD31	2.83	182	P	Pn	05 38 15.7	+0.6
MD31				S	Sn	05 38 47.0	-1.8
MDT	Midelt	2.88	179	P	Pn	05 38 16.3	+0.5
MDT				S	Sn	05 38 47.9	-2.2
EGRO	El Granado	2.93	310	⇑P	Pn	05 38 17.4	+1.1
	5.1nm,0.1s,SNR=18						
EGRO				S	Sn	05 38 49.7	-1.3
	8.8nm,0.1s						
PVAQ	Vaqueiros	3.00	305	eP	Pn	05 38 18.2	+1.0
PVAQ				eS	Sn	05 38 51.5	-1.3
PVAQ				A	A	05 38 53.1	
	8.4nm,0.2s						
PVAQ	Vaqueiros	3.00	305	P	Pn	05 38 18.1	+0.9
PVAQ				S	Sn	05 38 51.7	-1.1
PBDV	Barranco-do-Ve	3.06	301	eP	Pn	05 38 19.4	+1.3
PBDV				eS	Sn	05 38 53.6	-0.7
PBDV				A	A	05 38 55.0	
	7.0nm,0.3s						
PBAR	Barrancos	3.13	323	eP	Pn	05 38 20.2	+1.3
PBAR				A	A	05 38 56.8	
	5.7nm,0.1s						
PCVE	Castro Verde	3.34	306	eP	Pn	05 38 22.9	+1.2
PCVE				eS	Sn	05 38 59.8	-1.0
PCVE				A	A	05 39 00.8	
	4.2nm,0.2s						
PBEJ	Beja	3.47	313	eP	Pn	05 38 24.8	+1.3
PBEJ				eS	Sn	05 39 02.8	-1.2
PBEJ				A	A	05 39 04.4	
	3.7nm,0.2s						
MESJ	Messejana	3.58	308	eP	Pn	05 38 26.1	+1.2
MESJ				eS	Sn	05 39 03.8	-2.6
MESJ				IAML		05 39 07.6	
	comp=N,6.8nm,0.2s						
MESJ	Messejana	3.58	308	eP	Pn	05 38 26.2	+1.3
MESJ				eS	Sn	05 39 05.0	-1.5
MESJ				A	A	05 39 07.2	
	comp=N,4.4nm,0.2s						
EBAD	Badajoz	3.59	329	P	Pn	05 38 26.5	+1.4
	comp=N,4.4nm,0.1s,SNR=33						
EBAD				S	Sn	05 39 05.6	-1.1
	comp=N,6.1nm,0.1s,SNR=12						
MORF	Marmelete	3.60	298	eP	Pn	05 38 26.2	+0.9
MORF				eS	Sn	05 39 04.4	-2.7
MORF				IAML		05 39 07.7	
	comp=N,17nm,0.2s						
MORF	Marmelete	3.60	298	eP	Pn	05 38 26.2	+0.9
MORF				eS	Sn	05 39 05.9	-1.3
MORF				A	A	05 39 07.8	
	comp=N,10nm,0.1s						
PFVI	Vila Bisbo	3.66	294	eP	Pn	05 38 27.3	+1.3
PFVI				eS	Sn	05 39 07.3	-1.2
PFVI				A	A	05 39 08.6	
	comp=N,5.4nm,0.8s						
PFVI	Vila Bisbo	3.66	294	P	Pn	05 38 27.0	+1.0
	comp=N,1.7nm,0.1s,SNR=13						
PFVI				S	Sn	05 39 07.0	-1.5
	comp=N,6.6nm,0.1s,SNR=7.5						
PFVI	Vila Bisbo	3.66	294	P	Pn	05 38 26.8	+0.8
PFVI				S	Sn	05 39 09.0	+0.5
PTEO	Sao Teotonio	3.76	301	eP	Pn	05 38 28.8	+1.5
PTEO				eS	Sn	05 39 09.7	-1.2
PTEO				A	A	05 39 12.5	
	comp=N,5.9nm,0.4s						
ETOB	Tobarra	3.84	39	P	Pn	05 38 30.1	+1.6

	comp=N,0.4nm,0.1s,SNR=6.2						
ETOB				S	Sn	05 39 12.2	-0.8
	comp=N,1.1nm,0.3s,SNR=7.9						
PAB	San Pablo	3.85	3	P	Pn	05 38 30.6	+2.0
	comp=N,0.1nm,0.1s,SNR=7.9						
PAB				S	Sn	05 39 10.5	-2.6
	comp=N,2.8nm,0.2s,SNR=7.9						
EVO	Evora	3.90	317	P	Pn	05 38 30.6	+1.3
EVO				S	Sn	05 39 12.0	-2.2
EVO	Evora	3.90	317	*e*P	Pn	05 38 30.7	+1.5
EVO				*e*S	Sn	05 39 12.9	-1.4
EVO				A	A	05 39 15.4	
	comp=N,9.0nm,0.1s						
PNCL	Nicolau / Gran	3.93	309	*e*P	Pn	05 38 30.9	+1.3
PNCL				*e*S	Sn	05 39 13.0	-2.0
PNCL				A	A	05 39 15.7	
	comp=N,3.3nm,0.4s						
PESTR	Estremoz	3.94	324	*e*P	Pn	05 38 31.5	+1.8
PESTR				*e*S	Sn	05 39 13.8	-1.3
PESTR				A	A	05 39 15.4	
	comp=N,3.8nm,0.3s						
PESTR	Estremoz	3.94	324	P	Pn	05 38 31.8	+2.1
PESTR				S	Sn	05 39 15.6	+0.5
ESDC	Sonseca Array	4.01	8	S	Sn	05 39 14.4	-2.5
	comp=N,1.5nm,0.2s,baz=189,slow=22,SNR=7.9						
PMRV	Marv??o	4.32	330	*e*P	Pn	05 38 36.5	+1.7
PMRV				*e*S	Sn	05 39 22.8	-1.4
PMRV				A	A	05 39 36.2	
	comp=N,3.1nm,0.3s						
PMTG	Montargil	4.41	321	*e*P	Pn	05 38 37.5	+1.5
PMTG				*e*S	Sn	05 39 24.5	-1.9
PMTG				A	A	05 39 28.2	
	comp=N,2.9nm,0.6s						
EPLA	Plasencia	4.50	346	P	Pn	05 38 39.0	+1.7
	comp=N,0.6nm,0.1s,SNR=6.1						
EPLA				S	Sn	05 39 26.4	-2.3
	comp=N,1.3nm,0.1s,SNR=11						
PCBR	Castelo Branco	4.70	332	*e*P	Pn	05 38 41.9	+1.9
PCBR				*e*S	Sn	05 39 30.1	-3.4
PCBR				A	A	05 39 44.0	
	comp=N,2.2nm,0.3s						
UCM	Universidad Co	4.73	13	S	Sn	05 39 31.5	-2.8
UCM	Universidad Co	4.73	13	S	Sn	05 39 31.5	-2.8
PMAFR	Mafra	4.92	313	*e*S	Sn	05 39 38.3	-0.4
PSBE	So Bento	5.04	320	*e*P	Pn	05 38 47.2	+2.7
PSBE				*e*S	Sn	05 39 40.4	-1.1
MTE	Manteigas	5.22	335	*e*P	Pn	05 38 48.8	+1.8
MTE				*e*S	Sn	05 39 45.7	-0.4
MTE				A	A	05 39 51.3	
	comp=N,2.5nm,0.7s						
PCAS	Casmilo, Conde	5.31	326	*e*P	Pn	05 38 50.9	+2.8
PCAS				*e*S	Sn	05 39 46.5	-1.6
ETOR	Torete	5.50	21	P	Pn	05 38 52.2	+1.3
	comp=N,2.2nm,0.1s,SNR=8.8						
ETOR				S	Sn	05 39 48.5	-4.5
	comp=N,3.8nm,0.2s,SNR=5.7						
PVIS	Viseu	5.62	334	*e*P	Pn	05 38 54.7	+2.3
PVIS				*e*S	Sn	05 39 55.5	-0.3
PVIS				A	A	05 39 56.9	
	comp=N,2.0nm,0.2s						
MVO	Moncorvo	5.77	342	*e*P	Pn	05 38 56.6	+2.2
MVO				*e*S	Sn	05 39 56.2	-3.1
MVO	Moncorvo	5.77	342	P	Pn	05 38 56.7	+2.2
	comp=N,0.4nm,0.1s,SNR=5.6						
MVO				S	Sn	05 39 56.6	-2.7
	comp=N,0.2nm,0.1s,SNR=7.9						
POLO	Lamas de Olo	6.18	337	*e*P	Pn	05 39 02.3	+2.3
POLO				*e*S	Sn	05 40 07.5	-1.8
PBRG	Braganca	6.31	346	*e*S	Sn	05 40 10.1	-2.4
PCAB	Cabril	6.56	337	*e*P	Pn	05 39 08.1	+3.1
PCAB				*e*S	Sn	05 40 15.9	-2.5
ELOB	Lobios	6.71	338	S	Sn	05 40 19.8	-2.4
	comp=N,0.5nm,0.2s,SNR=7.9						
PGAV	Gavieira, Arco	6.87	337	*e*S	Sn	05 40 24.5	-1.4

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*ISK **20** 05:42:38.8, 36°.92N×27°.66E, h7^{km}, ML1.6/4*

DDA 20 05:42:38.1, 36°.96N×27°.66E, h7^{km}±3^{km}, ML1.7, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BDRM	Kayabasi	0.20	303	*i* P	Pg	05 42 42.6	+0.5
BDRM				*i* S	Sg	05 42 46.1	+1.2
DAT	Datca	0.23	196	*i* P	Pg	05 42 42.8	+0.1
DAT				*i* S	Sg	05 42 47.4	+1.4
DAT	Datca	0.23	196	PG	Pg	05 42 42.9	+0.1
DAT				SG	Sg	05 42 46.9	+1.0
TURN	Turunc	0.50	111	*i* P	Pb	05 42 49.2	-0.1
TURN				*i* S	Sg	05 42 55.2	+0.8
TURN	Turunc	0.50	111	PG	Pb	05 42 48.8	-0.5
TURN				SG	Sb	05 42 56.1	-0.7
YER	Yerkesik	0.53	70	PG	Pb	05 42 49.8	0.0
YER				SG	Sb	05 42 57.9	+0.2
DDIM	Aydin, Didim	0.60	327	*i* P	Pn	05 42 52.9	-0.1
DDIM				*i* S	Sb	05 42 58.7	-0.9
DDIM				IAML		05 43 05.0	
	comp=N,45nm,0.5s						
DDIM				IAML		05 43 12.0	
	comp=E,40nm,0.8s						
AYDN	Tasoluk	0.73	14	*i* P	Pg	05 42 51.9	-0.2
AYDN				*i* S	Sg	05 43 02.0	+0.5
AYDN				IAML		05 43 20.0	
	comp=E,21nm,0.3s						
GCAM	G?zelcaml?	0.82	336	*i* P	Pn	05 42 56.6	+0.5
GCAM				*i* S	Sb	05 43 05.6	-0.3
GCAM				IAML		05 43 11.0	
	comp=E,34nm,0.4s						
GCAM				IAML		05 43 12.0	
	comp=N,28nm,0.2s						
GCAM	G?zelcaml?	0.82	336	PG	Pn	05 42 55.9	-0.1
CAME	Cameli-Denizli	1.32	90	PN	Pg	05 43 04.2	+0.8

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*IDC **20** 05:55:46.2±1.8, 26°.17N×142°.27E, h0^{km}, mb4.1/7, mb1 4.2/7, mb1mx3.7/49, mbtmp4.1/7, Error ellipse: s-maj=68.5km s-min=17.6km az=90.0*

*NEIC **20** 05:55:47.0±0.9, 26°.3N±0°.2×142°.8E±0°.3, h10^{km}±2^{km}, mb4.4/9, Error ellipse: s-maj=54.0km s-min=7.1km az=55.0*

ISC 20 05:55:46.6±1.2**, 26°.2N**±0°.2×**142°.7E**±0°.4**, h10**^{km}**, n18, σ0^s.65**/18**, mb4.3**/12**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	1.00	333	Pn	Pn	05 56 06.4	-0.3
	155nm,0.3s,baz=108,slow=22,SNR=24						
JCJ				Sn	Sn	05 56 21.7	+0.8
	204nm,0.3s,baz=307,slow=22,SNR=16						
KLR	Kul'dur	24.51	343	P	P	06 01 07.2	+1.1
	2.0nm,0.8s,baz=165,slow=7.9,SNR=4.6						
WB0	Warramunga Arr	46.40	191	P	P	06 04 14.3	+0.9
WB0				IAmb	IAmb	06 04 34.6	
	comp=Z,7.5nm,1.4s						
WB2	Warramunga Arr	46.58	191	P	P	06 04 15.0	+0.2
WB2				IAmb	IAmb	06 04 20.9	
	comp=Z,3.9nm,0.7s						
WRA	Warramunga Arr	46.58	191	P	P	06 04 15.4	+0.5
	comp=Z,2.0nm,0.7s,baz=9.9,slow=8.5,SNR=15						
WRA	Warramunga Arr	46.58	191	P	P	06 04 15.8	+1.0
MK31	Makanchi Array	51.40	310	P	P	06 04 51.5	-0.1
MK31				IAmb	IAmb	06 05 03.5	
	comp=Z,5.8nm,1.4s						
MKAR	Makanchi Array	51.40	310	P	P	06 04 50.7	-0.9
	comp=Z,0.5nm,0.5s,baz=88,slow=9.2,SNR=8.2						
KURK	Kurchatov	53.94	315	P	P	06 05 10.3	0.0
KURK	Kurchatov	53.94	315	IAmb	IAmb	06 05 11.0	
	comp=Z,5.1nm,1.4s						
KURBB	Kurchatov Arra	53.99	315	P	P	06 05 10.3	-0.4
	comp=Z,0.8nm,0.4s,baz=93,slow=7.3,SNR=5.1						
PINNC	Pines Island,	54.13	151	P	P	06 05 11.6	-0.3
BVAR	Borovoye Array	59.01	318	P	P	06 05 46.2	-0.2
	comp=Z,1.7nm,0.5s,baz=180,slow=5.3,SNR=12						
ABKAR	Akbulak array	66.04	315	P	P	06 06 33.1	-0.3
ABKAR	Akbulak array	66.04	315	P	P	06 06 33.0	-0.5
ABKAR				IAmb	IAmb	06 06 33.6	
	comp=Z,1.4nm,0.6s						
FIA1	FINESS Array S	78.94	334	P	P	06 07 50.4	+0.2
FINES	FINESS Array B	78.95	334	P	P	06 07 50.4	+0.3
	comp=Z,2.3nm,0.5s,baz=74,slow=5.1,SNR=23						
AKASG	Malin Array Be	83.60	324	P	P	06 08 14.4	-0.7
	comp=Z,0.7nm,0.6s,baz=56,slow=5.0,SNR=4.7						

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*TUL **20** 05:59:07±0.8, 36°.674N±0°.010×97°.74W±0°.02, h7^{km}±4^{km}, ML2.9, mb_Lg2.6/23(NEIC), Error ellipse: s-maj=2.3km s-min=1.2km az=112.0*

NEIC 20 05:59:07.1±0.5**, 36°.66N**±0°.01×**97°.72W**±0°.02**, h4**^{km}±7^{km}**, Error ellipse: s-maj=2.3km s-min=1.6km az=125.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.22	330	Pg	Pg	05 59 11.6	+0.1
GC02				Sg	Sg	05 59 14.7	+0.3
CROK	Carrier	0.26	234	Pg	Pg	05 59 12.4	+0.2
CROK				Sg	Sg	05 59 16.2	+0.6
KAN14	Manchester OK	0.36	327	Pg	Pg	05 59 14.0	0.0
KAN14				Sg	Sg	05 59 19.0	+0.3
KAN17	Caldwell West	0.39	355	Pg	Pg	05 59 14.7	+0.1
KAN13	South Haven SW	0.41	29		Pg	05 59 15.1	+0.2
KAN13				Sg	Sg	05 59 20.8	+0.6
BLOK	Blackwell	0.42	76	Pg	Pg	05 59 15.5	+0.4
OK032	Salt Plains WL	0.42	291	Pg	Pg	05 59 15.1	-0.1
OK032				Sg	Sg	05 59 20.9	+0.2
KAN05	Bluff City Nor	0.47	345		Pg	05 59 16.1	0.0
KAN09	Caldwell North	0.48	10		Pg	05 59 16.5	0.0
KAN01	Argonia South	0.50	356	Pg	Pg	05 59 16.6	0.0
KAN10	Anthony SW Sta	0.55	327		Pg	05 59 17.7	-0.1
KAN10				Sg	Sg	05 59 25.2	+0.2
KAN06	Argonia West S	0.60	349		Pg	05 59 18.6	0.0
KAN08	Anthony NE Sta	0.60	341		Pg	05 59 18.7	0.0
KAN16	Harper SW Stat	0.63	334		Pg	05 59 19.0	-0.2
KAN16				Sg	Sg	05 59 27.6	+0.2
KAN12	Harper NE Stat	0.68	341		Pg	05 59 20.0	-0.1
OK029	Liberty Lake	0.89	166	Pg	Pg	05 59 24.0	0.0
QUOK	Quay	0.95	120		Pg	05 59 25.4	+0.1
OK031	S. Brethren Rd	1.00	134		Pg	05 59 26.5	+0.2
BCOK	Bluff Creek, N	1.00	175	Pg	Pg	05 59 26.2	-0.1
T35A	Sooner Cattle	1.00	75		Pg	05 59 26.2	-0.1
OKCFA	Oklahoma City	1.26	170		Pg	05 59 30.7	-0.5
OKCSW	OKLAHOMA CITY	1.27	170		Pg	05 59 31.0	-0.4
FNO	Franklin	1.42	169	Pn	Pn	05 59 33.5	-0.2
TUL1	Leonard	1.73	115	IAmb_Lg		06 00 03.3	
	comp=Z,28nm,0.8s						
WMOK	Wichita Mounta	2.10	205	Pn	Pn	05 59 43.4	+0.3
X37A	Clayton	2.81	136	IAmb_Lg		06 00 42.5	
	comp=Z,30nm,0.8s						
S39A	Bolivar	3.66	72	IAmb_Lg		06 01 06.8	
	comp=Z,13nm,0.7s						
AMTX	Amarillo	3.67	242	IAmb_Lg		06 01 12.1	
	comp=Z,15nm,0.8s						
U40A	Yellville	3.93	93	IAmb_Lg		06 01 12.4	
	comp=Z,21nm,0.8s						
MIAR	Mount Ida	3.98	121	IAmb_Lg		06 01 21.9	
	comp=Z,12nm,0.8s						
P38A	Dawn	4.43	47	IAmb_Lg		06 01 33.2	
	comp=Z,18nm,0.7s						
KSCO	Kaye Shedlock'	4.54	303	IAmb_Lg		06 01 35.5	
	comp=Z,11nm,0.9s						
FCAR	Ozark Folk Cen	4.58	98	IAmb_Lg		06 01 39.0	
	comp=Z,19nm,1.3s						
T25A	Trinidad	5.38	277	IAmb_Lg		06 02 01.7	
	comp=Z,9.5nm,0.9s						
PBMO	Poplar Bluff	5.86	87	IAmb_Lg		06 02 14.4	
	comp=Z,12nm,1.0s						
FVM	French Village	5.96	75	IAmb_Lg		06 02 18.3	
	comp=Z,7.3nm,0.9s						
JCT	Junction City	6.40	196	IAmb_Lg		06 02 47.8	
	comp=Z,5.8nm,0.8s						

NNC 20 06:03:15.5±35.0**, 36°.05N×69°.15E, h0**^{km}**, mb3.8, mpv3.9, 2C-4D, Error ellipse: s-maj=308.0km s-min=164.8km az=175.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	7.77	31	⇓P	Pn	06 05 10.4	+0.4
	3.0nm,0.4s						
AAK				⇑S	Sn	06 06 36.8	-2.0
	2.2nm,0.5s						
AB31	Akbulak array	14.81	336	⇑P	Pn	06 06 47.5	+1.3
	0.2nm,0.3s,baz=161,slow=11,SNR=12						
AB31				⇓S	Sn	06 09 33.8	+2.8
	0.5nm,0.5s,baz=169,slow=24						
AKTO	Aktyubinsk	16.48	334	⇓P	P	06 07 11.1	+0.3
	1.6nm,0.8s						
AKTO				⇓S	Sn	06 10 12.9	+1.5
	1.6nm,0.8s						

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*IDC **20** 06:03:57.5±1.0, 26°.27N×142°.73E, h0^{km}, mb4.0/12, mb1 4.2/12, mb1mx3.9/61, mbtmp4.0/12, Error ellipse: s-maj=33.0km s-min=15.9km az=76.0*

ISC 20 06:03:58.8±1.0**, 26°.2N**±0°.1×**142°.8E**±0°.2**, h10**^{km}**, n13, σ0^s.92**/14**, mb4.0**/12**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	1.04	327	Pn	Pg	06 04 17.9	-0.8
	343nm,0.3s,baz=254,slow=13,SNR=21						
JCJ				Sn	Sb	06 04 34.3	+1.8
	498nm,0.3s,baz=278,slow=22,SNR=8.8						
KLR	Kul'dur	24.53	342	P	P	06 09 19.5	+1.1
	2.9nm,0.7s,baz=187,slow=4.0,SNR=5.6						
SONM	Songino Array	35.73	317	P	P	06 10 57.0	-0.8
	0.3nm,0.3s,baz=120,slow=5.2,SNR=2.6						
CMAR	Chiang Mai Arr	41.16	268	P	P	06 11 43.6	+0.1
	0.9nm,0.3s,baz=60,slow=7.7,SNR=5.3						
WRA	Warramunga Arr	46.62	191	P	P	06 12 27.8	+0.4
	2.8nm,0.6s,baz=11,slow=8.5,SNR=15						
ASAR	Alice Springs	50.34	191	P	P	06 12 56.9	+0.9
	0.3nm,0.7s,baz=20,slow=11,SNR=1.9						
ZALV	Zalesovo Beam	50.52	319	P	P	06 12 56.2	-0.8
	0.5nm,0.3s,baz=118,slow=6.9,SNR=4.3						
MKAR	Makanchi Array	51.47	310	P	P	06 13 03.2	-1.1
	0.7nm,0.4s,baz=87,slow=10.0,SNR=12						
KURBB	Kurchatov Arra	54.05	315	P	P	06 13 22.8	-0.5
	1.5nm,0.3s,baz=92,slow=7.6,SNR=10						
ILAR	Eielson Array	58.21	28	P	P	06 13 52.8	0.0
	0.6nm,1.0s,baz=249,slow=5.3,SNR=4.8						
BVAR	Borovoye Array	59.07	318	P	P	06 13 58.6	-0.4
	2.0nm,0.4s,baz=188,slow=6.8,SNR=24						
ARCES	ARCESS Array B	74.55	341	P	P	06 15 37.5	+0.1
	2.1nm,0.9s,baz=72,slow=8.6,SNR=5.5						
FINES	FINESS Array B	78.98	334	P	P	06 16 02.6	+0.1
	4.6nm,0.4s,baz=70,slow=5.0,SNR=59						

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*IDC **20** 06:04:12.1±1.2, 8°.80S×111°.37E, h0^{km}, mb4.1/9, mb1 4.2/9, mb1mx3.8/47, mbtmp4.1/9, Error ellipse: s-maj=46.9km s-min=19.2km az=50.0*

*DJA **20** 06:04:20.3±1.1, 9°S±6°×11°1E±°, h26^{km}±11^{km}, M4.5/11, MLv4.5/11*

*NEIC **20** 06:04:22.1±1.0, 8°.8S±0°.1×111°.45E±0°.08, h74^{km}±8^{km}, mb4.7/15, Error ellipse: s-maj=17.2km s-min=9.2km az=212.0*

ISC 20 06:04:20.1±0.6**, 8°.94S**±0°.08×**111°.30E**±0°.05**, h58**^{km}**, n44, σ1^s.27**/40**, mb4.5**/15**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCJI	Pacitan	0.75	351	P	Pn	06 04 34.6	-0.2
UGM	Wanagama	1.28	323	P	Pn	06 04 42.5	+0.7
UGM	Wanagama	1.28	323		Pn	06 04 42.6	+0.7
YOGI	Yogyakarta	1.49	318	P	Pn	06 04 44.5	-0.2
YOGI				S	Sn	06 05 04.3	+1.1
NGJI	Ngawi	1.57	6	P	Pn	06 04 50.2	+4.5
SMRI	Semarang	2.06	336		Pn	06 04 55.5	+3.0
GMJI	Gumukmas	2.22	73	P	Pn	06 04 53.7	-0.8
UWJI	Ujung Watu	2.53	352	P	Pn	06 05 01.5	+2.7
BLJI	Banyuglugur	2.56	63	P	Pn	06 05 00.1	+0.9
JAGI	Jajag, Banyuwa	2.86	81		Pn	06 05 02.9	-0.4
CMJI	Cimerak	3.05	292	P	Pn	06 05 05.2	-0.6
ABJI	Asem Bagus	3.12	69	P	Pn	06 05 09.2	+2.4
IGBI	Denpasar	3.80	89	P	Pn	06 05 17.3	+1.1
TOLI2	Tolitoli	13.74	44	Pn	Pn	06 07 32.0	-0.3
PSA00	Pilbara Seismi	15.02	148	Pn	Pn	06 07 48.0	-1.0
MTN	Manton Dam	19.86	103	P	P	06 08 46.2	-0.4
MTN				IAmb	IAmb	06 09 20.8	
	comp=Z,32nm,1.5s						
WRA	Warramunga Arr	24.81	119	P	P	06 09 36.0	-1.0
	comp=Z,0.7nm,0.6s,baz=289,slow=12,SNR=6.3						
WRA	Warramunga Arr	24.81	119	IAmb	IAmb	06 09 43.7	
	comp=Z,1.4nm,2.0s						
ASAR	Alice Springs	26.11	127	P	P	06 09 48.4	-0.5
	comp=Z,1.5nm,0.9s,baz=300,slow=9.1,SNR=8.1						
ASAR				PcP	PcP	06 13 15.8	+0.5
	comp=Z,0.5nm,0.4s,baz=304,slow=2.0,SNR=5.0						
COEN	Coen	31.62	102	P	P	06 10 38.8	+0.9
COEN				IAmb	IAmb	06 11 21.4	
	comp=Z,24nm,1.4s						
H08S2	Diego Garcia H	38.41	269	T	T	06 52 22.7	
	baz=95,slow=74,SNR=6.0						
H08S3	Diego Garcia H	38.42	269	T	T	06 52 23.1	
	baz=95,slow=74,SNR=6.3						
H08S1	Diego Carcia H	38.43	269	T	T	06 52 26.0	
	baz=95						
MJAR	Matsushiro Arr	51.83	28	P	P	06 13 20.4	-2.0
	comp=Z,3.6nm,0.8s,baz=190,slow=8.0,SNR=5.9						
MJAR	Matsushiro Arr	51.83	28	IAmb	IAmb	06 13 57.7	
	comp=Z,12nm,1.9s						
USRK	Ussuriysk Ar.	56.11	18	P	P	06 13 52.0	-1.5
	comp=Z,4.2nm,1.0s,baz=197,slow=6.0,SNR=5.6						
USRK	Ussuriysk Ar.	56.11	18	P	P	06 13 52.6	-0.9
SONM	Songino Array	56.69	356	P	P	06 13 57.1	-0.6
	comp=Z,1.7nm,0.6s,baz=180,slow=8.0,SNR=15						
SONM				PcP	PcP	06 14 53.4	+0.1
	comp=Z,0.8nm,0.5s,baz=144,slow=2.6,SNR=3.8						
SONM	Songino Array	56.69	356	IAmb	IAmb	06 13 58.1	
	comp=Z,10nm,1.8s						
MK31	Makanchi Array	61.22	338	P	P	06 14 28.2	-0.8
MK31				IAmb	IAmb	06 14 38.2	
	comp=Z,11nm,1.6s						
MKAR	Makanchi Array	61.22	338	P	P	06 14 28.2	-0.8
	comp=Z,2.6nm,0.7s,baz=140,slow=7.1,SNR=14						
MKAR	Makanchi Array	61.22	338	P	P	06 14 27.9	-1.1
KURBB	Kurchatov Arra	65.78	338	P	P	06 14 58.3	-0.7
	comp=Z,1.1nm,0.4s,baz=154,slow=5.4,SNR=9.9						
ZAA0	Zalesovo Array	66.53	343	P	P	06 15 03.1	-0.6
ZALV	Zalesovo Beam	66.53	343	P	P	06 15 02.6	-1.1
GEYT	Alibeck	68.06	317	P	P	06 15 13.0	-0.8
GEYT				IAmb	IAmb	06 15 14.5	
	comp=Z,8.7nm,1.3s						
GYA0B	ALIBECK ARRAY	68.06	317	P	P	06 15 12.9	-0.9
GYA0B				IAmb	IAmb	06 15 41.6	
	comp=Z,7.2nm,0.6s						
BVAR	Borovoye Array	70.85	335	P	P	06 15 29.7	-0.9
	comp=Z,2.7nm,0.7s,baz=186,slow=13,SNR=8.1						
ABKAR	Akbulak array	73.28	328	P	P	06 15 45.0	-0.3
ABKAR	Akbulak array	73.28	328	P	P	06 15 45.0	-0.3
ABKAR				IAmb	IAmb	06 15 45.6	
	comp=Z,11nm,0.8s						
VNDA	Vanda	73.31	170	P	P	06 15 48.3	+3.2
QSPA	South Pole Qui	81.06	180	P	P	06 16 30.1	+1.3
QSPA				IAmb	IAmb	06 19 22.9	
	comp=Z,23nm,2.0s						
BRTR	Keskin Array B	86.30	311	P	P	06 16 55.9	-0.3
	comp=Z,1.7nm,0.8s,baz=129,slow=5.9,SNR=8.1						
SNAA	Sanae	88.94	197	P	P	06 17 09.2	+1.1

IDC 20 06:06:36.4±7.6**, 31°.07S×178°.69W, h0**^{km}**, mb3.6**/2**, mb1 3.9**/2**, mb1mx3.3**/40**, mbtmp3.6**/2**, Error ellipse: s-maj=314.9km s-min=64.5km az=157.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	42.49	268	P	P	06 14 33.0	-0.6
	0.4nm,0.6s,baz=105,slow=6.7,SNR=4.7						
WRA	Warramunga Arr	43.54	273	P	P	06 14 42.4	+0.2
	0.4nm,0.3s,baz=111,slow=8.0,SNR=5.8						
FINES	FINESS Array B	145.57	339	PKPbc	PKPdf	06 26 15.3	-0.6
	6.1nm,1.1s,baz=318,slow=1.9,SNR=2.0						

IDC 20 06:10:55.0±2.6**, 26°.28N×142°.45E, h0**^{km}**, mb3.9**/3**, mb1 4.1**/3**, mb1mx3.4**/55**, mbtmp3.9**/3**, Error ellipse: s-maj=128.2km s-min=18.0km az=82.0, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	0.85	344	Pn	Pn	06 11 14.3	+0.1
	95nm,0.3s,baz=274,slow=21,SNR=27						
JCJ				Sn	Sn	06 11 27.4	+0.1
	158nm,0.3s,baz=282,slow=24,SNR=8.1						
H11N2	WAKE ISLAND Hy	23.41	101	T	T	06 39 43.3	
	baz=291,slow=75,SNR=5.0						
H11N1	WAKE ISLAND Hy	23.41	101	T	T	06 39 53.2	
	baz=291,slow=75,SNR=4.4						
H11N3	WAKE ISLAND Hy	23.42	101	T	T	06 39 45.7	
	baz=291,slow=75,SNR=5.1						
H11S3	WAKE ISLAND Hy	23.68	104	T	T	06 40 14.1	
	baz=295,slow=76,SNR=5.7						
H11S1	WAKE ISLAND Hy	23.69	104	T	T	06 40 13.0	
	baz=295,slow=76,SNR=6.3						
H11S2	WAKE ISLAND Hy	23.70	104	T	T	06 40 15.5	
	baz=295,slow=76,SNR=7.2						
WRA	Warramunga Arr	46.62	191	P	P	06 19 24.8	-0.4
	1.0nm,0.5s,baz=10,slow=8.4,SNR=11						
MKAR	Makanchi Array	51.18	310	P	P	06 20 00.5	+0.5
	0.2nm,0.4s,baz=89,slow=7.0,SNR=1.7						
FINES	FINESS Array B	78.78	334	P	P	06 22 59.4	0.0
	1.3nm,0.5s,baz=59,slow=5.6,SNR=8.9						

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*TUL **20** 06:12:49.9±0.3, 36°.65N±0°.02×98°.47W±0°.02, h7^{km}±7^{km}, ML3.7, mb_Lg3.5/76(NEIC), Error ellipse: s-maj=3.0km s-min=1.8km az=132.0*

*ANF **20** 06:12:50.7±1.4, 36°.61N×98°.40W, h6^{km}±10^{km}, ML4.4/14, Error ellipse: s-maj=4.5km s-min=4.0km az=48.0*

*NEIC **20** 06:12:50.7±0.5, 36°.64N±0°.02×98°.46W±0°.02, h9^{km}±7^{km}, Error ellipse: s-maj=3.5km s-min=2.0km az=140.0*

*IDC **20** 06:12:51.1±1.7, 36°.73N×98°.75W, h0^{km}, mb1 3.7/4, mb1mx3.4/54, mbtmp3.4/4, ML3.3/4, Error ellipse: s-maj=24.7km s-min=11.9km az=102.0*

ISC 20 06:12:50.1±1.0**, 36°.63N**±0°.02×**98°.44W**±0°.02**, h9**^{km}±8^{km}**, n110, σ1^s.15**/94**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK032	Salt Plains WL	0.26	47		Pg	06 12 55.4	+0.1
OK032				Sg	Sg	06 12 58.9	+0.1
CROK	Carrier	0.39	108	Pg	Pg	06 12 58.4	+0.6
CROK				Sg	Sg	06 13 03.8	+0.8
KAN14	Manchester OK	0.51	50	Pg	Pg	06 12 59.9	0.0
KAN14				Sg	Sg	06 13 06.5	-0.1
U32A	Winter Ranch,	0.51	241		Pg	06 12 59.9	-0.2
U32A				Sg	Sg	06 13 07.0	+0.2
U32A	Winter Ranch,	0.51	241	P	Pg	06 12 59.9	-0.2
	baz=59,SNR=209						
U32A				S	Sg	06 13 07.3	+0.5
	baz=59						
GC02	Grant County #	0.52	64	Pg	Pg	06 13 00.3	+0.1
KAN10	Anthony SW Sta	0.57	29		Pg	06 13 00.9	-0.3
KAN10				Sg	Sg	06 13 08.6	0.0
KAN05	Bluff City Nor	0.66	44		Pg	06 13 02.8	-0.2
KAN05				Sg	Sg	06 13 11.5	-0.1
KAN16	Harper SW Stat	0.67	27	Pg	Pg	06 13 02.6	-0.4
KAN17	Caldwell West	0.69	53	Pg	Pg	06 13 03.2	-0.1
KAN08	Anthony NE Sta	0.71	32		Pg	06 13 03.4	-0.4
KAN12	Harper NE Stat	0.76	28		Pg	06 13 04.4	-0.4
KAN01	Argonia South	0.76	46	Pg	Pg	06 13 04.5	-0.3
KAN06	Argonia West S	0.78	37		Pg	06 13 04.8	-0.3
KAN09	Caldwell North	0.83	52		Pg	06 13 05.8	-0.4
KAN13	South Haven SW	0.86	63		Pg	06 13 06.3	-0.5
BLOK	Blackwell	1.00	82		Pg	06 13 08.9	-0.4
OK029	Liberty Lake	1.15	136		Pg	06 13 11.7	-0.6
BCOK	Bluff Creek, N	1.18	145	Pg	Pg	06 13 12.2	-0.6
OKCFA	Oklahoma City	1.45	146		Pn	06 13 16.7	+0.1
OKCFA	Oklahoma City	1.45	146	P	Pn	06 13 16.8	+0.3
	baz=327,SNR=27						
OKCFA				S	Sn	06 13 37.2	+1.4
	baz=327						
OK031	S. Brethren Rd	1.46	117		Pn	06 13 16.9	+0.2
OKCSW	OKLAHOMA CITY	1.47	146		Pn	06 13 17.2	+0.5
QUOK	Quay	1.47	108		Pn	06 13 17.3	+0.5
OK030	Cody Creek RV	1.51	117		Pn	06 13 18.0	+0.6
T35A	Sooner Cattle	1.58	79		Pn	06 13 18.7	+0.4
T35B	Sooner Cattle	1.58	79	P	Pn	06 13 19.0	+0.7
	baz=261,SNR=488						
T35B				S	Sb	06 13 40.4	+0.8
	baz=261						
FNO	Franklin	1.61	148		Pn	06 13 19.1	+0.4
R32A	Long Quarter,	1.80	353		Pn	06 13 21.9	+0.5
R32A	Long Quarter,	1.80	353	P	Pn	06 13 22.2	+0.8
	baz=174,SNR=309						
R32A				S	Sb	06 13 46.2	+0.2
	baz=174						

WMOK	Wichita Mounta	1.91	188	P	Pn	06 13 23.6	+0.8
	baz=7.8						
WMOK				S	Sb	06 13 49.6	+0.6
	baz=7.8						
WMOK	Wichita Mounta	1.91	188		Pn	06 13 23.4	+0.6
WMOK	Wichita Mounta	1.91	188	P	Pn	06 13 23.6	+0.8
	baz=7.8,SNR=268						
WMOK				S	Sb	06 13 49.6	+0.6
	baz=7.8						
X34A	Smith Ranch, M	2.08	166		Pn	06 13 25.4	+0.2
X34A				IAmb_Lg		06 13 58.0	
	comp=Z,207nm,0.8s						
TUL1	Leonard	2.26	108	P	Pn	06 13 28.3	+0.7
	baz=290						
TUL1				S	Sn	06 13 57.4	+1.7
	baz=290						
TUL1	Leonard	2.26	108	IAmb_Lg		06 14 02.2	
	comp=Z,160nm,0.8s						
TUL1	Leonard	2.26	108	P	Pn	06 13 28.2	+0.5
	baz=290,SNR=141						
TUL1				S	Sn	06 13 57.4	+1.7
	baz=290						
CBKS	Cedar Bluff	2.41	335	P	Pn	06 13 30.2	+0.4
	baz=155						
CBKS				S	Sb	06 14 03.5	-0.1
	baz=155						
CBKS	Cedar Bluff	2.41	335	P	Pn	06 13 30.2	+0.4
	baz=155,SNR=81						
CBKS				S	Sn	06 14 00.4	+1.0
	baz=155						
KSU1	Kansas State U	2.86	30	P	Pn	06 13 36.9	+0.9
	baz=211						
KSU1				S	Sn	06 14 11.9	+1.4
	baz=211						
KSU1	Kansas State U	2.86	30	P	Pn	06 13 36.8	+0.9
	baz=211,SNR=17						
KSU1				S	Sn	06 14 12.0	+1.4
	baz=211						
AMTX	Amarillo	3.16	237	Pb	Pb	06 13 47.4	+1.0
	baz=55						
X37A	Clayton	3.23	128	IAmb_Lg		06 14 38.3	
	comp=Z,168nm,0.8s						
X37A	Clayton	3.23	128	P	Pn	06 13 41.8	+0.9
	baz=310,SNR=50						
X37A				S	Sn	06 14 21.6	+2.1
	baz=310						
U38A	Gravette	3.27	92	P	Pn	06 13 42.6	+1.0
	baz=275,SNR=45						
Z35A	Perchaven, San	3.43	163	P	Pn	06 13 44.5	+0.8
	baz=344,SNR=16						
W39A	Magazine	4.04	109	P	Pn	06 13 53.7	+1.5
	baz=292						
W39A	Magazine	4.04	109	IAmb_Lg		06 15 07.0	
	comp=Z,74nm,0.8s						
KSCO	Kaye Shedlock'	4.08	307	IAmb_Lg		06 15 07.9	
	comp=Z,120nm,0.9s						
ABTX	Abilene, Hawle	4.12	194	P	Pn	06 13 53.3	+0.1
	baz=13						
ABTX	Abilene, Hawle	4.12	194	P	Pn	06 13 53.3	+0.1
	baz=13,SNR=9.8						
S39A	Bolivar	4.23	74	P	Pn	06 13 54.7	0.0
	baz=257,SNR=28						
Z38A	Mt. Pleasant	4.40	139	IAmb_Lg		06 15 12.6	
	comp=Z,90nm,0.8s						
MSTX	Muleshoe	4.42	234	Sb	Sg	06 15 08.0	-4.2
	baz=52						
MIAR	Mount Ida	4.48	116	P	Pn	06 13 59.5	+1.3
	baz=299						
MIAR	Mount Ida	4.48	116	P	Pn	06 13 59.1	+0.9
	baz=299,SNR=22						
U40A	Yellville	4.51	92	P	Pn	06 13 59.1	+0.4
	baz=275						
U40A	Yellville	4.51	92	IAmb_Lg		06 15 11.6	
	comp=Z,103nm,0.7s						
U40A	Yellville	4.51	92	P	Pn	06 13 59.0	+0.4
	baz=275,SNR=30						
U40A				P	Pn	06 13 59.0	+0.4
	baz=275,SNR=30						
WHTX	Lake Whitney,	4.70	170	P	Pn	06 14 01.6	+0.4
	baz=350						
WHTX	Lake Whitney,	4.70	170	P	Pn	06 14 01.6	+0.4
	baz=350,SNR=21						
N35A	Tabor	4.76	27	P	Pn	06 14 02.0	0.0
	baz=208						
BGNE	Belgrade	4.78	3	IAmb_Lg		06 15 30.8	
	comp=Z,115nm,0.7s						
BGNE	Belgrade	4.78	3	P	Pn	06 14 02.1	-0.2
	baz=183						
T25A	Trinidad	4.81	278	Sb	Sb	06 15 18.3	+5.5
	baz=94						
P38A	Dawn	4.89	51	IAmb_Lg		06 15 25.9	
	comp=Z,70nm,0.7s						
P38A	Dawn	4.89	51	P	Pn	06 14 04.2	+0.4
	baz=234,SNR=23						
X40A	Basin Creek Fa	5.05	113	IAmb_Lg		06 15 34.4	
	comp=Z,95nm,0.7s						
237A	Washetta, Mont	5.11	154	IAmb_Lg		06 15 43.2	
	comp=Z,58nm,1.0s						
237A	Washetta, Mont	5.11	154	P	Pn	06 14 06.9	+0.1
	baz=336,SNR=7.1						
OGNE	Ogallala	5.14	328	P	Pn	06 14 08.8	+1.4
	baz=146						
OGNE	Ogallala	5.14	328	IAmb_Lg		06 15 34.7	
	comp=Z,95nm,0.7s						
OGNE	Ogallala	5.14	328	P	Pn	06 14 08.7	+1.4
	baz=146,SNR=8.6						
WHAR	Wooly Hollow	5.17	103	IAmb_Lg		06 15 35.8	
	comp=Z,68nm,0.8s						
R40A	Maddies Statio	5.18	69	IAmb_Lg		06 15 34.6	
	comp=Z,52nm,0.9s						
R40A	Maddies Statio	5.18	69	P	Pn	06 14 08.0	+0.1
	baz=253,SNR=37						
W41B	Gary Mavity, V	5.24	104	S	Sn	06 15 07.4	-1.6
	baz=288						
W41B	Gary Mavity, V	5.24	104	P	Pn	06 14 08.9	+0.4
	baz=288						
WLAR	White Oak Lake	5.26	122	IAmb_Lg		06 15 53.1	
	comp=Z,102nm,1.3s						
Z41A	Richland Creek	5.72	124	S	Sn	06 15 18.9	-2.2
	baz=308						
NATX	Nacogdoches	5.78	146	IAmb_Lg		06 16 10.6	
	comp=Z,45nm,0.9s						
P40A	Paris	5.82	58	IAmb_Lg		06 15 54.1	
	comp=Z,79nm,0.7s						
435B	Jarrell	5.88	173	IAmb_Lg		06 16 04.2	
	comp=Z,52nm,0.7s						
CCM	Cathedral Cave	5.91	74	IAmb_Lg		06 15 59.1	
	comp=Z,71nm,0.9s						
LCAR	Lake Charles	5.91	93	IAmb_Lg		06 15 59.2	
	comp=Z,40nm,0.8s						
CCAR	Cane Creek	6.09	114	IAmb_Lg		06 16 20.0	
	comp=Z,80nm,1.1s						
JCT	Junction City	6.24	191	IAmb_Lg		06 16 15.2	
	comp=Z,45nm,0.7s						
PBMO	Poplar Bluff	6.44	86	IAmb_Lg		06 16 30.4	
	comp=Z,42nm,0.8s						
ISCO	Idaho Springs	6.47	301	IAmb_Lg		06 16 18.3	
	comp=Z,44nm,0.8s						
FVM	French Village	6.53	76	IAmb_Lg		06 16 18.7	
	comp=Z,50nm,0.8s						
LPAR	Lepanto	6.67	96	IAmb_Lg		06 16 26.5	
	comp=Z,60nm,0.7s						
ANMO	Albuquerque	6.73	258	Pn	Pn	06 14 30.1	+0.9
	comp=Z,0.2nm,0.3s,baz=67,slow=7.7,SNR=2.1						
ANMO				Lg	Lg	06 16 17.5	
	comp=Z,1.7nm,0.3s,baz=357,slow=16,SNR=3.7						
N41A	Harden Midland	7.20	53	IAmb_Lg		06 16 41.6	
	comp=Z,55nm,0.8s						
ECSD	EROS Data Cent	7.23	11	Pn	Pn	06 14 34.8	-1.2
ECSD				IAmb_Lg		06 16 40.3	
	comp=Z,40nm,1.1s						
LNXT	Lenox	7.24	92	IAmb_Lg		06 16 55.2	
	comp=Z,71nm,0.8s						
S44A	Carbondale	7.41	79	Pn	Pn	06 14 38.9	+0.4
MNTX	Cornudas Mount	7.56	231	Pn	Pn	06 14 41.2	+0.7
UTMT	University of	7.72	89	IAmb_Lg		06 17 16.5	
	comp=Z,63nm,0.8s						
Y45A	Yeager Farm, C	7.79	108	IAmb_Lg		06 17 11.4	
	comp=Z,56nm,1.0s						
L40A	Anamosa	7.79	44	IAmb_Lg		06 16 57.8	
	comp=Z,62nm,0.9s						
Q44A	Meyer Farm, Va	7.80	70	IAmb_Lg		06 17 07.5	
	comp=Z,40nm,0.9s						
SUSD	Miller	7.82	357	IAmb_Lg		06 17 18.1	
	comp=Z,28nm,0.8s						
T45A	Paducah	7.87	84	IAmb_Lg		06 17 06.6	
	comp=Z,53nm,0.7s						
HDIL	Hopedale	8.17	59	Pn	Pn	06 14 48.9	+0.1
TXAR	Lajitas Array	8.49	213	Pn	Pn	06 14 53.3	-0.1
	comp=Z,0.2nm,0.3s,baz=42,slow=11,SNR=14						
TXAR				Lg	Lg	06 17 13.0	
	comp=Z,1.2nm,0.3s,baz=27,slow=28,SNR=3.9						
L42A	Oliver, Polo	8.66	49	IAmb_Lg		06 17 39.7	
	comp=Z,48nm,0.8s						
JFWS	Jewell Farm	8.90	43	IAmb_Lg		06 17 42.7	
	comp=Z,37nm,0.7s						
SPMN	Marine on St.	9.59	25	IAmb_Lg		06 18 02.2	
	comp=Z,26nm,1.0s						
PDAR	Pinedale Array	10.53	309	Pn	Pn	06 15 20.7	-0.7
	comp=Z,0.2nm,0.3s,baz=122,slow=16,SNR=2.9						
PDAR				Lg	Lg	06 18 12.7	
	comp=Z,0.3nm,0.3s,baz=114,slow=33,SNR=2.8						
ULM	Lac du Bonnet	13.74	7	Pn	Pn	06 16 00.9	-4.1
	comp=Z,0.3nm,0.3s,baz=184,slow=12,SNR=1.6						
ULM				Sn	Sn	06 18 26.7	-11
	comp=Z,0.3nm,0.3s,baz=240,slow=18,SNR=1.3						

GCG ***20*** *06:17:22.7±0.5, 15°.17N×91°.48W, h169km±10km, MD3.8*
IDC ***20*** *06:17:24.5±2.1, 15°.12N×91°.21W, h148km±33km, mb3.4/3, mb1 3.6/6, mb1mx3.2/46, mbtmp3.9/6, Error ellipse: s-maj=71.1km s-min=22.3km az=30.0*
NEIC ***20*** *06:17:25.3±1.4, 14°.91N±0°.06×91°.40W±0°.08, h158km±6km, mb4.4/7, Error ellipse: s-maj=13.5km s-min=6.0km az=54.0*
ISC 20 06:17:24.5±1.0**, 14°.90N**±0°.09×**91°.54W**±0°.07**, h169**km±8km**, n34,** σ1s.**10**/36**, mb4.3**/7**, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STG3	Santiaguito 3,	0.19	188	eP	Pn	06 17 47.0	-0.4
RTAL	Retalhuleu	0.40	201		Pn	06 17 46.8	-0.8
HUEH	Huehuetenango	0.41	6		Pn	06 17 47.5	-0.5
FUG	Fuego 3	0.82	124	eP	Pn	06 17 49.4	-0.6
PCG	Pacaya	1.04	119	eP	Pn	06 17 51.7	0.0
NBG	Las Nubes	1.20	105	eP	Pn	06 17 52.8	-0.2
NBG				eS	Sn	06 18 15.9	+1.0
CCIG	Comitan	1.48	337		Pn	06 17 56.0	+0.5
CCIG					Sn	06 18 19.5	-0.2
MRL	Marmol	1.81	84	eP	Pn	06 17 58.6	-0.3
MRL				eS	Sn	06 18 24.4	-1.1
ESQI	Esquipulas	2.16	99		Pn	06 18 01.4	-1.3
MTO3	Montecristo	2.17	103		Pn	06 18 01.3	-1.6
PETF	Flores	2.57	39		Pn	06 18 05.9	-1.5
CMIG	Matias Romero	3.88	305	P	Pn	06 18 24.0	+0.3
	11nm,0.3s,baz=134,slow=10,SNR=387						
CMIG				S	Sn	06 19 06.7	-3.3
	29nm,0.3s,baz=140,slow=14,SNR=21						
CMIG	Matias Romero	3.88	305		Pn	06 18 24.3	+0.6
TGUH	Tegucigalpa,Un	4.22	101		Pn	06 18 26.9	-1.4
CNGN	Cerro Negro	5.28	116		Pn	06 18 41.6	-0.4
BOAB	BOACO BROADBAN	6.21	112	Pn	Pn	06 18 54.7	+0.5
HZTE	Horizontes, Gu	7.14	125	Pn	Pn	06 19 06.4	-0.1
TLIG	Tlapa	7.25	292		Pn	06 19 09.7	+1.7
ORTG	Ortega, Santa	7.46	127		Pn	06 19 10.3	-0.5
JTS	Las Juntas de	7.90	125	P	Pn	06 19 15.5	-1.0
	3.3nm,0.3s,baz=31,slow=9.9,SNR=16						
RIMA	Rio Macho	9.07	123		Pn	06 19 31.5	-0.8
PEZE	Perez Zeledon,	9.45	125		Pn	06 19 36.3	-0.8
SRBA	San Rafael, Bu	9.79	124		Pn	06 19 40.4	-1.2
553A	Crawfordville	16.56	22	P	Pn	06 21 08.9	+1.9
TXAR	Lajitas Array	18.21	324	P	Pn	06 21 28.5	+1.8
	0.1nm,0.3s,baz=145,slow=13,SNR=3.8						
ABTX	Abilene, Hawle	19.12	339	P	Pn	06 21 36.8	-0.5
FCAR	Ozark Folk Cen	20.91	359	P	Pn	06 21 53.7	-5.1
FCAR				IAmb	IAmb	06 21 54.3	
	comp=Z,7.1nm,0.8s						
U40A	Yellville	21.40	357	P	P	06 21 59.4	+0.5
U40A				IAmb	IAmb	06 22 00.1	
	comp=Z,8.1nm,0.6s						
T42A	Van Buren	22.04	1	P	P	06 22 04.9	-0.6
T42A				IAmb	IAmb	06 22 05.5	
	comp=Z,6.9nm,0.7s						
CCM	Cathedral Cave	23.06	1	P	P	06 22 14.8	-0.2
CCM				IAmb	IAmb	06 22 16.3	
	comp=Z,17nm,0.7s						
R40A	Maddies Statio	23.30	359	P	P	06 22 17.5	+0.3
R40A				IAmb	IAmb	06 22 18.6	
	comp=Z,16nm,1.1s						
NVAR	Mina Array Bea	33.26	320	P	P	06 23 49.8	+3.8
	comp=Z,0.8nm,0.6s,baz=130,slow=8.4,SNR=8.1						
SCHQ	Schefferville	44.23	20	P	P	06 25 16.1	-0.6
	comp=Z,5.7nm,0.9s,baz=224,slow=16,SNR=5.2						
ILAR	Eielson Array	62.19	337	P	P	06 27 27.8	+0.2
	comp=Z,0.4nm,0.8s,baz=108,slow=4.4,SNR=4.1						

IDC ***20*** *06:24:39.6±1.7, 20°.42S×178°.65W, h580km±18km, mb3.5/6, mb1 3.7/7, mb1mx3.2/49, mbtmp4.4/7, Error ellipse: s-maj=22.0km s-min=17.2km az=144.0*
ISC 20 06:24:39.4±0.9**, 20°.5S**±0°.2×**178°.6W**±0°.2**, h587**km**, n15,** σ0s.**82**/16**, mb4.0**/6**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.21	310	P	P	06 26 05.0	-0.7
	3.3nm,0.3s,baz=128,slow=8.3,SNR=14						
ASAR	Alice Springs	44.01	257	P	P	06 31 56.5	+0.1
	11nm,0.8s,baz=89,slow=8.4,SNR=36						
ASAR				PcP	PcP	06 33 29.2	+0.4
	1.0nm,0.7s,baz=100,slow=4.2,SNR=4.5						
ASAR				S	S	06 37 47.4	+0.4
	1.0nm,0.9s,baz=85,slow=14,SNR=6.2						
WRA	Warramunga Arr	44.08	262	P	P	06 31 56.6	-0.3
	5.5nm,0.7s,baz=96,slow=7.6,SNR=21						
SIJI	Sorong	52.73	285	P	P	06 33 00.5	-0.5
	29nm,0.7s,baz=84,slow=6.4,SNR=14						
VNDA	Vanda	57.89	185	P	P	06 33 36.6	+1.0
	0.9nm,0.6s,baz=355,slow=6.4,SNR=9.5						
PETK	Petropavlovsk-	76.11	346	P	P	06 35 28.5	+0.9
	3.3nm,0.9s,baz=90,slow=6.7,SNR=5.2						
VNA3	Neumayer Olymp	88.20	176	P	P	06 36 27.3	-1.1
ILAR	Eielson Array	88.41	13	P	P	06 36 28.8	-0.5
	0.7nm,0.7s,baz=220,slow=5.6,SNR=7.6						
VNA2	Neumayer--Watz	88.63	177	P	P	06 36 29.6	-0.8
	baz=175,slow=3.5						
VNA1	Neumayer--Stat	88.86	177	P	P	06 36 30.0	-1.4
ARCES	ARCESS Array B	128.80	349	PKP	PKPdf	06 42 40.6	+0.4
	1.7nm,0.8s,baz=0.0,slow=2.4,SNR=4.7						
AKASG	Malin Array Be	142.74	331	PKhKP	PKPpre	06 43 03.5	
	3.4nm,0.5s,baz=43,slow=4.5,SNR=20						
BRTR	Keskin Array B	146.43	312	PKPbc	PKPbc	06 43 15.9	0.0
	1.0nm,0.6s,baz=157,slow=3.1,SNR=4.8						
MMAI	Mount Meron Ar	147.35	300	PKPbc	PKPbc	06 43 19.6	+1.2
	1.4nm,0.4s,baz=56,slow=6.4,SNR=4.1						
GERES	GERESS Array B	150.03	344	PKPbc	PKPbc	06 43 24.8	+0.3
	0.6nm,0.5s,baz=36,slow=3.7,SNR=4.5						

IDC ***20*** *06:25:34.2±0.8, 0°.90N×127°.41E, h0km, mb4.2/9, mb1 4.3/10, mb1mx3.9/60, mbtmp4.2/10, ML3.8/1, MS3.7/1, Ms1 3.7/1, ms1mx3.2/42, Error ellipse: s-maj=49.0km s-min=14.8km az=61.0*
NEIC ***20*** *06:25:36.4±1.9, 0°.93N±0°.07×127°.54E±0°.06, h8km±6km, mb4.2/9, Error ellipse: s-maj=11.5km s-min=5.2km az=141.0*
DJA ***20*** *06:25:36.3±0.4, 1°N±4°×12°8E±°, h10km, M4.0/9, mb3.8/1, MLv4.1/9*
ISC 20 06:25:36.4±0.7**, 0°.88N**±0°.08×**127°.50E**±0°.07**, h10**km**, n37,** σ1s.**19**/32**, mb4.2**/12**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.17	231	P	Pg	06 25 40.8	+0.6
TNTI	Ternate	0.17	231		Pg	06 25 41.0	+0.9
LBMI	Labuha	1.51	180	P	Pn	06 26 04.6	+1.1
SANI	Sanana	3.28	207	P	Pn	06 26 28.5	+0.6
KMSI	Cibinong	3.54	265	P	Pn	06 26 32.6	+1.2
SIJI	Sorong	4.15	115	Pn	Pn	06 26 40.5	+0.7
	5.2nm,0.3s,baz=162,slow=21,SNR=6.2						
SIJI				Sn	Sn	06 27 31.6	+3.2
	baz=343,slow=23,SNR=1.4						
GTOI	Gorontalo	4.50	267	P	Pn	06 26 46.8	+2.2
LUWI	Luwuk	5.10	248	Pn	Pn	06 26 53.1	+0.1
MRSI	Marisa	5.58	266	P	Pb	06 27 12.9	-1.0
APSI	Ampana	6.12	253	P	Pb	06 27 23.5	+0.4
TOLI2	Tolitoli	6.72	272	Pn	Pn	06 27 17.0	+1.8
MPSI	Mapaga	7.62	266	P	Pn	06 27 29.4	+1.8
TTSI	Tana Toraja	8.62	243	P	Pn	06 27 46.6	+5.4
BNSI	Bone	9.06	235	P	Pn	06 27 55.1	+7.7
SPSI	Sidrap Palu	9.11	238	P	Pn	06 27 54.5	+6.5
KNRA	Kununurra	16.50	176		Pn	06 29 25.8	-2.3
KNRA				IAmb	IAmb	06 29 41.9	
	comp=Z,19nm,1.2s						
WB0	Warramunga Arr	21.61	162	P	P	06 30 26.6	-0.1
WB0				IAmb	IAmb	06 30 38.0	
	comp=Z,10.0nm,0.8s						
WRAB	Tennant Creek	21.75	162	P	P	06 30 28.3	+0.1
WRAB				IAmb	IAmb	06 30 31.9	
	comp=Z,20nm,1.1s						
WRA	Warramunga Arr	21.75	162	P	P	06 30 28.4	+0.1
	comp=Z,8.9nm,0.6s,baz=340,slow=11,SNR=57						
WRA	Warramunga Arr	21.75	162	P	P	06 30 28.1	-0.3
PMG	Port Moresby	22.08	118	LR	LR	06 41 30.3	
	comp=Z,230nm,22.0s,baz=79,slow=43						
AS31	Alice Springs	25.18	166	P	P	06 31 02.2	-0.1
AS31				IAmb	IAmb	06 31 07.5	
	comp=Z,3.3nm,0.7s						
ASAR	Alice Springs	25.18	166	P	P	06 31 01.9	-0.4
	comp=Z,9.9nm,0.8s,baz=344,slow=10.0,SNR=54						
ASAR	Alice Springs	25.18	166	P	P	06 31 02.8	+0.5
STKA	Stephens Creek	35.21	159	P	P	06 32 30.9	-0.1
	comp=Z,3.4nm,0.8s,baz=330,slow=11,SNR=5.0						
SONM	Songino Array	50.23	342	P	P	06 34 30.5	-2.2
	comp=Z,0.9nm,0.7s,baz=158,slow=4.7,SNR=2.6						
SONM	Songino Array	50.23	342	IAmb	IAmb	06 34 50.8	
	comp=Z,3.8nm,1.4s						
MKAR	Makanchi Array	60.32	326	P	P	06 35 44.6	-1.0
	comp=Z,1.2nm,0.6s,baz=123,slow=9.2,SNR=7.2						
KURBB	Kurchatov Arra	64.54	328	P	P	06 36 12.3	-1.3
	comp=Z,3.4nm,0.6s,baz=126,slow=6.1,SNR=14						
KURK	Kurchatov	64.54	328	P	P	06 36 12.2	-1.4
KKAR	Karatay Array	65.83	318	P	P	06 36 21.9	-0.4
TAS	Tashkent	66.00	316	P	P	06 36 23.6	+0.3
BVAR	Borovoye Array	70.11	327	P	P	06 36 48.1	-0.8
	comp=Z,0.5nm,0.6s,baz=193,slow=12,SNR=3.7						
ABKAR	Akbulak array	74.83	321	P	P	06 37 17.6	+0.5
ABKAR	Akbulak array	74.83	321	P	P	06 37 17.5	+0.4
ABKAR				IAmb	IAmb	06 37 26.3	
	comp=Z,1.9nm,1.1s						
AKTO	Aktyubinsk	76.36	322	P	P	06 37 26.8	+0.9
	comp=Z,1.4nm,0.7s,baz=88,slow=9.9,SNR=4.0						
VNDA	Vanda	80.52	173	P	P	06 37 47.0	-1.3
	comp=Z,0.9nm,0.9s,baz=322,slow=4.1,SNR=4.2						

ANF ***20*** *06:26:16.5±0.3, 47°.87N×122°.46W, h20km±5km, ML2.5/7, Error ellipse: s-maj=3.1km s-min=1.7km az=128.0*
PGC ***20*** *06:26:17.9±16.0, 47°.86N×122°.47W, h10km, ML2.8, ML2.4/26, 30km Nnw of Seattle, Wa Washington*
NEIC ***20*** *06:26:17±1.8, 47°.90N±0°.02×122°.505W±0°.009, h25km±8km, Error ellipse: s-maj=3.3km s-min=0.9km az=185.0*
PNSN ***20*** *06:26:17.2, 47°.86N×122°.48W, h27km, MD2.8, Fault plane solution: NP1:ϕ_s90.00000°, δ35.00000°, λ100.00000°.*
SEA ***20*** *06:26:17.2±1.8, 47°.86N±0°.02×122°.48W±0°.02, h27km±6km, ML2.8/142, ML2.4/14(NEIC), Error ellipse: s-maj=3.5km s-min=1.6km az=157.0*
ISC 20 06:26:17.5±0.8**, 47°.87N**±0°.02×**122°.48W**±0°.02**, h30**km±4km**, n181,** σ1s.**23**/233**, Washington**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LYNC	Lynnwood City	0.14	111		Pb	06 26 21.7	-1.3
LYNC					Sb	06 26 24.0	-2.8
SCCW	Shoreline CC	0.15	146		Pb	06 26 22.0	-1.1
SCCW					Sb	06 26 26.2	-0.8
BEVT	Boeing Everett	0.15	72		Pb	06 26 22.0	-1.1
BEVT					Sb	06 26 26.1	-1.0
KINR	Kitsap County	0.16	221		Pb	06 26 22.5	-0.7
KINR					Sb	06 26 26.7	-0.5
BRKS	Brookside Elem	0.18	132		Pb	06 26 22.3	-1.1
BRKS					Sb	06 26 26.7	-0.7
NIHS	Ingelmoor High	0.22	127		Sb	06 26 28.2	0.0
KITP	Kitsap County	0.22	206		Sb	06 26 28.5	+0.2
LAWT	Lawton Element	0.23	164		Pb	06 26 23.4	-0.6
LAWT					Sb	06 26 29.2	+0.9
EVCC	Everett Colleg	0.23	54		Pb	06 26 23.1	-0.9
EVCC					Sb	06 26 28.2	-0.2
FINN	Finn Hill Juni	0.23	132		Pb	06 26 23.3	-0.7
NOWS	NOAA--Sand Poi	0.24	141		Pb	06 26 23.6	-0.5
NOWS					Sb	06 26 29.2	+0.6
LEOT	Leota Junior H	0.27	113		Pb	06 26 23.6	-0.8
MEAN	Meany Midle Sc	0.28	155		Pb	06 26 24.3	-0.3
B013	Quilcene	0.29	258		Pb	06 26 23.6	-1.1
B013					Sb	06 26 28.4	-1.3
B013	Quilcene	0.29	258		Pb	06 26 23.6	-1.1
KDKW	Coast Env Seat	0.30	160		Pb	06 26 24.6	-0.3
KDKW					Sb	06 26 31.2	+1.4
ALKI	Alki Wastewate	0.30	172		Pb	06 26 24.4	-0.4
HART	Harbor Island	0.30	163		Pb	06 26 24.7	-0.2
BLH	Bald Hill	0.31	97		Pb	06 26 23.6	-1.4
MARYW	Marymoor Park	0.32	131		Pb	06 26 24.7	-0.5
EARN	East Ridge Ele	0.33	114		Pb	06 26 24.4	-0.9
WISC	Wilburton Inst	0.34	142		Pb	06 26 25.0	-0.4
BLN	Blyn Mountain	0.35	292	P	Pb	06 26 24.7	-1.0
SP2	Seward Park 2	0.35	153		Pb	06 26 25.1	-0.5
C04A	Brinnon	0.36	245		Pb	06 26 24.6	-1.1
C04A					Sb	06 26 30.2	-1.2
GMW	Gold Mountain	0.39	212		Pb	06 26 24.8	-1.4
GMW					Sb	06 26 30.5	-1.5
GNW	Green Mountain	0.39	217		Pb	06 26 24.8	-1.3
GNW					Sb	06 26 30.6	-1.4
GNW	Green Mountain	0.39	217	P	Pb	06 26 24.8	-1.3
GNW				S	Sb	06 26 30.3	-1.7
MBPA	Monroe Substat	0.40	86		Sb	06 26 30.9	-1.4
SVOH	Skagit Valley	0.43	346		Pb	06 26 25.9	-0.8
SQM	Sequim	0.43	298		Pb	06 26 26.3	-0.4
HDW	Hoodsport	0.45	240		Pb	06 26 25.9	-1.2
HDW	Hoodsport	0.45	240	P	Pb	06 26 25.9	-1.2
VVHS	Vashon High Sc	0.45	178		Pb	06 26 26.2	-0.9
B05A	Bryant	0.47	34	P	Pb	06 26 26.3	-1.1
	baz=213,SNR=180						
B05A				S	Sb	06 26 32.8	-1.3
	baz=213						
B05A	Bryant	0.47	34		Pb	06 26 26.3	-1.1
B05A					Sb	06 26 33.0	-1.2
HTW	Haystack Looko	0.49	98		Pb	06 26 26.4	-1.3
JCW	Jim Creek	0.49	49		Pb	06 26 26.6	-1.1
JCW	Jim Creek	0.49	49	P	Pb	06 26 26.6	-1.1
D03D	Eldon	0.53	231	P	Pb	06 26 27.1	-1.3
	baz=51,SNR=88						
D03D				S	Sb	06 26 34.5	-1.3
	baz=51						
D03D	Eldon	0.53	231		Pb	06 26 27.1	-1.3
ELW	Echo Lake	0.56	132		Pb	06 26 27.5	-1.4
C05A	Tolt Reservoir	0.56	108		Pb	06 26 27.4	-1.6
C05A	Tolt Reservoir	0.56	108	P	Pb	06 26 27.3	-1.6
C05A				S	Sb	06 26 34.6	-2.1
CMW	Cultus Mountai	0.60	24		Pb	06 26 28.8	-0.8
CMW	Cultus Mountai	0.60	24	P	Pb	06 26 28.8	-0.8
RATT	Rattlesnake La	0.64	134		Pb	06 26 28.7	-1.5
B04A	Port Angeles	0.71	285		Pb	06 26 30.3	-1.1
B04A	Port Angeles	0.71	285		Pb	06 26 30.2	-1.1
B04A	Port Angeles	0.71	285	IAML		06 26 48.0	
	comp=E,129nm,0.6s						
D04E	Lakebay	0.72	196	P	Pn	06 26 30.7	-0.8
	baz=16,SNR=51						
D04E				Sn	Sn	06 26 42.3	+0.6
	baz=16						
D04E	Lakebay	0.72	196		Pn	06 26 30.8	-0.8
D05A	Enumclaw	0.76	154		Pn	06 26 31.1	-1.0
D05A					Sb	06 26 41.8	-0.5
D05A	Enumclaw	0.76	154	IAML		06 26 42.0	
	comp=E,174nm,0.5s						
D05A				IAML		06 26 42.0	
	comp=N,188nm,0.4s						
D05A	Enumclaw	0.76	154	P	Pn	06 26 31.1	-1.0
D05A				S	Sb	06 26 40.0	-2.3
VGZ	Gonzales	0.78	314		Pn	06 26 30.9	-1.5
VGZ	Gonzales	0.78	314	P	Pn	06 26 30.9	-1.5
VGZ				S	Sb	06 26 41.3	-1.4
SMW	South Mountain	0.80	227	P	Pn	06 26 31.5	-1.3
OSD	Olympics--Snow	0.82	267	P	Pn	06 26 32.9	-0.3
MCW	Mount Constitu	0.84	344		Pn	06 26 32.8	-0.5
MCW	Mount Constitu	0.84	344	P	Pn	06 26 32.8	-0.5
STW	Striped Peak	0.84	290	P	Pn	06 26 32.3	-1.0
GHW	Garrison Hill	0.84	170		Pn	06 26 31.9	-1.4
A04D	Lummi Island	0.86	350	P	Pn	06 26 33.0	-0.6
	baz=170,SNR=53						
A04D				S	Sn	06 26 44.6	-0.4
	baz=170						

A04D	Lummi Island	0.86	350		Pn	06 26 32.9	-0.6
RPW	Rockport	0.87	48		Pn	06 26 33.1	-0.6
RPW	Rockport	0.87	48	P	Pn	06 26 33.0	-0.6
B941	Kapowsin	0.91	168		Pn	06 26 32.6	-1.5
B06A	Marblemount	0.93	46		Pn	06 26 34.3	-0.1
B06A	Marblemount	0.93	46	P	Pn	06 26 34.0	-0.5
B06A				S	Sn	06 26 45.9	-0.8
GPW	Glacier Peak	0.94	74		Pn	06 26 34.4	-0.5
GPW	Glacier Peak	0.94	74	P	Pn	06 26 34.2	-0.6
OLQ	Olympics--Lake	0.96	249		Pn	06 26 35.2	+0.3
MBW	Mount Baker	0.99	23		Pn	06 26 35.4	-0.1
MBW	Mount Baker	0.99	23	P	Pn	06 26 35.4	-0.1
RVC	Mount Rainier-	0.99	159		Pn	06 26 34.4	-1.1
CPW	Capitol Peak	1.00	206	P	Pn	06 26 34.6	-0.9
PA12	PA12 Sannich	1.01	321	P	Pn	06 26 34.8	-0.7
PA12				S	Sn	06 26 47.6	-1.1
B009	North Saanich	1.01	321	P	Pn	06 26 34.7	-0.9
B009				S	Sn	06 26 47.6	-1.1
B011	North Saanich	1.01	321		Pn	06 26 34.8	-0.8
B011	North Saanich	1.01	321	P	Pn	06 26 34.8	-0.8
B011				S	Sn	06 26 47.1	-1.6
PGC	Sidney	1.01	321	P	Pn	06 26 34.9	-0.7
PGC				S	Sn	06 26 47.7	-1.0
B010	North Saanich	1.01	321	P	Pn	06 26 34.8	-0.8
B010				S	Sn	06 26 48.1	-0.7
PA01	PA01 North	1.01	321	P	Pn	06 26 34.9	-0.6
PA01				S	Sn	06 26 47.9	-0.9
SNB	Saturna Island	1.01	333		Pn	06 26 35.7	+0.1
SNB	Saturna Island	1.01	333	P	Pn	06 26 35.4	-0.2
SNB				S	Sn	06 26 49.1	+0.3
NLWA	Neilton Lookou	1.05	243		Pn	06 26 35.8	-0.5
NLWA				IAML		06 26 55.8	
	comp=N,82nm,0.8s						
NLWA				IAML		06 26 56.0	
	comp=N,68nm,0.4s						
C06D	Leavenworth	1.07	87	P	Pn	06 26 36.1	-0.3
	baz=267						
C06D				S	Sn	06 26 49.7	-0.6
	baz=267						
C06D	Leavenworth	1.07	87		Pn	06 26 36.2	-0.2
OBSR	Observation Ro	1.07	155		Pn	06 26 35.8	-0.9
OBC	Olympics--Boni	1.08	279	P	Pn	06 26 37.2	+0.6
FMW	Mount Fremont	1.09	149		Pn	06 26 35.8	-1.1
FMW	Mount Fremont	1.09	149	P	Pn	06 26 35.8	-1.1
SHUK	Shuksan-Mt. Ba	1.12	28		Pn	06 26 37.4	+0.2
RCS	Mount Rainier-	1.13	153		Pn	06 26 36.7	-0.8
P403	Sandy Floe Qua	1.13	280		Pb	06 26 39.6	+1.3
B017	Montesano	1.14	220		Pn	06 26 37.6	+0.3
REMR	Mount Rainier-	1.14	157		Pn	06 26 36.6	-0.9
WISH	Wishkah	1.16	230		Pn	06 26 37.5	0.0
WISH				IAML		06 26 58.5	
	comp=E,58nm,2.1s						
WISH				IAML		06 27 06.5	
	comp=N,65nm,1.9s						
WISH	Wishkah	1.16	230	P	Pn	06 26 38.1	+0.5
A05A	Maple Falls	1.16	13	P	Pn	06 26 38.1	+0.5
A05A				S	Sn	06 26 52.6	+0.2
PANH	Panhandle Gap,	1.17	150		Pn	06 26 37.1	-0.8
SR41	SR410 Landslid	1.18	147		Pn	06 26 37.3	-0.7
VDB	Vedder Mountai	1.18	12		Pn	06 26 38.3	+0.3
VDB	Vedder Mountai	1.18	12	P	Pn	06 26 38.3	+0.3
LON	Longmire	1.21	158		Pn	06 26 38.1	-0.4
LON	Longmire	1.21	158		Pn	06 26 37.6	-0.8
LON	Longmire	1.21	158	P	Pn	06 26 37.5	-1.0
LON				S	Sn	06 26 53.1	-0.8
GOBB	Galiano Island	1.27	328	P	Pn	06 26 39.3	+0.1
E04D	Cinebar	1.32	183	P	Pn	06 26 39.6	-0.2
	baz=2.6,SNR=7.5						
E04D				S	Sn	06 26 57.2	+0.8
	baz=2.6						
E04D	Cinebar	1.32	183		Pn	06 26 40.1	+0.2
TWW	Teanaway	1.32	123		Pn	06 26 41.4	+1.5
WPW	White Pass	1.34	151		Pn	06 26 40.2	0.0
LTY	Liberty	1.37	116		Pn	06 26 41.3	+0.6
LTY				IAML		06 27 00.3	
	comp=E,172nm,0.3s						
LTY	Liberty	1.37	116	P	Pn	06 26 41.1	+0.5
LTY				S	Sn	06 26 58.3	+0.4
HNBB	Haney	1.42	358	P	Pn	06 26 41.6	+0.4
HNBB				S	Sn	06 26 59.8	+1.0
GLK	Glacier Lake	1.44	155		Pn	06 26 42.1	+0.5
B926	Mesachie Lake	1.45	311	P	Pn	06 26 41.5	-0.1
B926				S	Sn	06 26 59.8	+0.1
CLRS	Cowichan Lake	1.45	311	P	Pn	06 26 41.4	-0.2
CLRS				S	Sn	06 26 59.8	+0.1
NLW	Nelson Butte	1.46	81		Pn	06 26 42.9	+1.0
TBM	Table Mountain	1.46	118		Pn	06 26 43.0	+1.1
ETW	Entiat	1.48	100		Pn	06 26 42.9	+0.8
PFB	Port Renfrew	1.48	299	P	Pn	06 26 42.1	-0.1
PFB				S	Sn	06 27 00.7	+0.2
OCP	Olym-Cheeka Pk	1.50	287	P	Pn	06 26 42.8	+0.5
E03A	Lebam	1.52	209	P	Pn	06 26 43.0	+0.4
E03A				S	Sn	06 27 03.0	+1.7
ERK	Elk Rock	1.57	176		Pn	06 26 43.6	+0.1
B201	Coldwater, Mou	1.58	174		Pn	06 26 43.8	+0.3
NAC	Naches	1.60	135		Pn	06 26 44.9	+1.1
EBG	Ellensburg	1.62	126		Pn	06 26 46.0	+2.0
BIB	Bowen Island	1.63	341	P	Pn	06 26 45.0	+1.0
B202	Windy Ridge, M	1.65	172		Pn	06 26 44.8	+0.3
STD	Studebaker Rid	1.65	174		Pn	06 26 45.1	+0.6
SOSW	Source of Smit	1.65	172		Pn	06 26 45.2	+0.7
HOPB	Hope	1.67	25	P	Pn	06 26 46.3	+1.7
HOPB				S	Sb	06 27 07.7	-0.5
BOLM	Sugar Bowl	1.67	173		Pn	06 26 45.8	+0.9
VALT	Mount Saint He	1.67	173		Pn	06 26 46.0	+1.2
FL2	Flat Top 2	1.68	177		Pn	06 26 45.4	+0.5
NLLB	Nanaimo Lost L	1.68	324		Pn	06 26 45.9	+1.1
NLLB	Nanaimo Lost L	1.68	324	P	Pn	06 26 45.2	+0.4
NLLB				S	Sn	06 27 06.7	+1.3
SEPW	September Lobe	1.69	173		Pn	06 26 46.2	+1.1
SHW	Mount Saint He	1.69	174		Pn	06 26 45.9	+0.9
B203	Quarry, Mount	1.71	177		Pn	06 26 45.8	+0.5
RVW	Rose Valley	1.73	186		Pn	06 26 46.5	+1.0
JLK	June Lake	1.74	172		Pn	06 26 46.7	+0.9
LVP	Lakeview Peak	1.81	178		Pn	06 26 47.6	+1.0
B023	Clatskanie	1.81	193		Pn	06 26 48.0	+1.5
F04D	Rainier, OR	1.83	192	Pb	Pb	06 26 49.3	-0.9
	baz=11						
GHNB	Nanoose	1.85	322	P	Pn	06 26 47.9	+0.9
GHNB				S	Sn	06 27 11.5	+2.2
WPB	Watts Point	1.85	345	P	Pn	06 26 48.0	+0.9
MGB	Mount Grey	1.85	308		Pn	06 26 48.3	+1.0
MGB	Mount Grey	1.85	308	P	Pn	06 26 47.9	+0.6
MGB				S	Sn	06 27 11.8	+2.0
YA2	Yakima	1.90	135		Pn	06 26 45.1	-2.7
SHB	Sechelt	1.96	332		Pn	06 26 50.2	+1.5
SHB	Sechelt	1.96	332	P	Pn	06 26 49.6	+0.9
SHB				S	Sn	06 27 14.6	+2.4
B928	Bamfield	2.01	299	P	Pn	06 26 50.9	+1.6
B928				S	Sb	06 27 16.5	-1.4
BFSB	Bamfield	2.01	299	P	Pn	06 26 50.7	+1.3
BFSB				S	Sb	06 27 16.7	-1.3
EPH	Ephrata	2.02	104		Pb	06 26 52.3	-1.2
B927	Port Alberni	2.05	312	P	Pn	06 26 51.5	+1.7
B927				S	Sb	06 27 17.3	-1.7
BVW	Beverly	2.06	120		Pn	06 26 51.9	+1.8
TRW	Toppenish Ridg	2.06	139		Pn	06 26 52.9	+2.7
B08A	Colville Reser	2.17	76	P	Pn	06 26 52.8	+1.3
B08A				S	Sb	06 27 20.9	-1.5
APM	Augspurger Mou	2.21	165		Pn	06 26 52.8	+0.7
APM					Pb	06 26 58.5	+1.8
TXB	Texada	2.23	325	P	Pn	06 26 54.0	+1.6
MDW	Midway	2.24	123		Pn	06 26 54.4	+1.8
OZB	Mount Ozzard	2.28	300	P	Pn	06 26 54.9	+1.8
OZB				S	Sb	06 27 23.7	-2.0
B012	Ucluelet	2.29	298	P	Pn	06 26 55.0	+1.8
BENWA	Benson Ranch	2.32	125		Pn	06 26 55.9	+2.2
PNT	Penticton	2.39	52		Pb	06 26 59.7	0.0
PNT	Penticton	2.39	52	P	Pn	06 26 55.4	+0.8
HIYU	Hiyu Mountain	2.48	169		Pb	06 26 59.6	-1.8
BTB	Buttle Lake	2.57	310	P	Pn	06 26 58.4	+1.2
BTB				S	Sb	06 27 31.6	-2.5
TOFB	Tofino	2.61	301	S	Sn	06 27 32.1	+3.8
TDH	Tom, Dick, Har	2.63	169		Pn	06 27 01.6	+3.6
G05D	Wamic, OR	2.75	163	Pb	Pb	06 27 04.0	-2.0
	baz=343						
LLLB	Lillooet	2.77	8	P	Pn	06 27 01.1	+1.4
CBB	Campbell River	2.88	320	P	Pn	06 27 03.0	+1.7
CBB				S	Sb	06 27 39.9	-2.9
SPLB	Strathcona Par	2.91	315	P	Pn	06 27 04.1	+2.4
WOSB	Woss	3.53	312	P	Pn	06 27 11.8	+1.5
BPBC	Brooks Peninsu	4.16	305	P	Pn	06 27 22.1	+3.1
SLEB	Sale Mountain	4.35	39	S	Sn	06 28 14.2	+2.9
UBRB	Upper Baezaeko	5.13	349	P	Pn	06 27 34.9	+2.6
ASAR	Alice Springs	138.00	221	PKP	PKPdf	06 54 28.9	-0.1
	comp=Z,0.7nm,0.6s,baz=116,slow=2.1,SNR=8.0						

IDC 20 06:28:33.5±2.5, 54°.14N×86°.42E, h0^{km}, mb1 3.4/2, mb1mx3.1/64, mbtmp3.4/2, ML3.2/2, Error ellipse: s-maj=21.0km s-min=12.5km az=56.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	0.96	260	i		06 34 10.0	
	baz=80,slow=340,SNR=13						
ZALV	Zalesovo Beam	0.96	259	Pg	Pg	06 28 50.2	-1.8
	2.6nm,0.3s,baz=78,slow=17,SNR=32						
ZALV				Lg	Lg	06 29 06.2	
	3.5nm,0.3s,baz=77,slow=31,SNR=10						
ZALV				Rg	Rg	06 29 10.4	
	4.9nm,0.4s,baz=74,slow=30,SNR=7.3						
KURBB	Kurchatov Arra	5.98	237	Pn	Pn	06 30 04.4	+1.3
	0.4nm,0.3s,baz=54,slow=13,SNR=10						
MKAR	Makanchi Array	7.81	201	Pn	Pn	06 30 29.2	+0.9
	0.6nm,0.3s,baz=26,slow=14,SNR=16						

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*INET **20** 06:32:10.9, 9°.59N×83°.22W, h32^{km}, MW2.7*

UPA 20 06:32:10.8±1.1, 9°.43N×82°.92W, h2^{km}±2^{km}, MW4.1, 6C-2D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK0	Durika	0.36	242	⇓iP	Pb	06 32 18.9	-1.1
DRK0				⇑iS	Sb	06 32 25.1	-1.1
CNI2	El Empalme, Bo	0.45	91	⇑iP	Pg	06 32 19.7	+0.3
CNI2				⇓iS	Sg	06 32 26.5	+1.3
MLIR3	Monte Lirio, C	0.64	171	eP	Pb	06 32 24.7	-0.1
MLIR3				eS	Sb	06 32 34.6	+0.3
BRU2	Volcan	0.67	160	eP	Pb	06 32 24.9	-0.5
BRU2				eS	Sb	06 32 35.2	0.0
BC3P	Paso Ancho	0.69	153	eP	Pg	06 32 24.8	+0.8
BC3P				eS	Sb	06 32 36.7	+1.1
LNBQ3	Los Naranjos,	0.80	143	eP	Pg	06 32 26.3	+0.2
LNBQ3				eS	Sb	06 32 38.1	-0.6
BATAN	Batan	0.80	326	⇑eP	Pg	06 32 24.5	-1.7
BATAN				eS	Sg	06 32 36.8	+0.3
BCO2	Palmira	0.81	151	eP	Pb	06 32 27.5	-0.2
BCO2				eS	Sb	06 32 40.4	+1.3
PTJ1	Puerto Jimnez	0.96	203	eP	Pb	06 32 30.1	-0.1
PTJ1				eS	Sn	06 32 44.6	-1.0
BAGA3	Bagala, Chiriq	1.03	158	⇑eP	Pb	06 32 31.3	-0.1
GUAL3	Gualaca, Chiri	1.09	145	eP	Pg	06 32 31.5	-0.2
DVD	David	1.09	155	⇑iP	Pb	06 32 32.2	-0.3
DVD				i S	Sn	06 32 48.1	-0.7
PIRO	Carate, Puerto	1.10	202	eP	Pg	06 32 32.0	+0.2
LOMA3	Las Lomas, Chi	1.12	152	⇑eP	Pg	06 32 32.4	0.0
LOMA3				eS	Sb	06 32 48.6	+0.5
LOCO3	Loma Colorada,	1.13	154	eP	Pg	06 32 32.6	+0.1
LOCO3				eS	Sb	06 32 48.7	+0.4
PTPM	Petroterminale	1.22	178	eP	Pg	06 32 34.1	-0.1
PTPM				eS	Sn	06 32 53.0	+1.0
REME3	Remedios, Chir	1.61	138	eP	Pb	06 32 41.3	0.0
REME3				eS	Sg	06 33 03.1	+0.4
JTS	Las Juntas de	2.17	293	eP	Pn	06 32 47.3	-0.7
JTS				eS	Sn	06 33 15.3	-0.3

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*ARE **20** 06:35:17±0.0, 7°.88S×74°.46W, h161^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=90.0*

*IDC **20** 06:35:20.2±2.0, 7°.93S×74°.43W, h142^{km}±22^{km}, mb3.5/7, mb1 3.8/11, mb1mx3.6/29, mbtmp4.0/11, MS4.5/1, Ms1 4.5/1, ms1mx3.7/20, Error ellipse: s-maj=27.4km s-min=14.9km az=38.0*

*NEIC **20** 06:35:21.5±1.7, 8°.06S±0°.09×74°.49W±0°.06, h148^{km}±4^{km}, mb4.4/8, ML4.5(ARE), Error ellipse: s-maj=12.3km s-min=9.0km az=176.0*

*VAO **20** 06:35:34.4±0.4, 7°.85S×73°.23W, h151^{km}±4^{km}, mbR3.9*

ISC 20 06:35:21.2±0.5, 8°.05S±0°.06×74°.50W±0°.06, h151^{km}, n56, $\sigma 1^{s}55$/52, mb3.7/9, Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CZSB	Cruzeiro do Su	1.81	80	eP	Pn	06 35 55.9	+1.6
CZSB	Cruzeiro do Su	1.81	80		Pn	06 35 55.6	+1.4
ATAH	Atahualpa	3.96	283	P	Pn	06 36 21.0	-0.4
	15nm,0.3s,baz=86,slow=2.9,SNR=114						
ATAH				S	Sn	06 37 07.5	-0.5
	12nm,0.3s,baz=101,slow=6.1,SNR=5.5						
NNA	Nana	4.54	210	P	Pn	06 36 29.4	+0.7
	8.3nm,0.3s,baz=331,slow=5.0,SNR=22						
NNA				S	Sn	06 37 19.1	-2.1
	30nm,0.3s,baz=63,slow=22,SNR=9.1						
NNA	Nana	4.54	210		Pn	06 36 29.6	+1.0
TBTG	Tabatinga, AM	5.96	50	eP	Pn	06 36 46.7	-0.8
TBTG	Tabatinga, AM	5.96	50		Pn	06 36 47.2	-0.3
ETMB	Extrema	8.38	103	eP	Pn	06 37 17.7	-2.0
ETMB	Extrema	8.38	103	Pn	Pn	06 37 17.6	-2.0
OTAV	Otavalo	9.12	334	eP	Pn	06 37 49.5	+19
OTAV	Otavalo	9.12	334	Pn	Pn	06 37 31.2	+1.1
LPAZ	La Paz	10.29	143	eP	P	06 37 51.5	-3.9
SAML	Samuel	11.23	95	Pn	Pn	06 37 54.8	-2.7
MACA	Manacapuru-AM	14.58	71	eP	Pn	06 38 37.5	-2.9
MACA	Manacapuru-AM	14.58	71		Pn	06 38 39.5	-1.0
VILB	Vilhena	14.88	110	eP	Pn	06 38 44.0	-0.2
VILB	Vilhena	14.88	110	Pn	Pn	06 38 43.4	-0.8
SIV	San Ignacio	15.32	122	P	P	06 38 50.8	-0.3
	0.5nm,0.3s,baz=295,slow=11,SNR=20						
LVC	Limon Verde	15.45	160	eP	P	06 39 02.5	+10
PTGA	Pitinga	16.21	64	P	Pn	06 39 00.1	-0.4
	2.0nm,0.3s,baz=250,slow=16,SNR=17						
PTGA	Pitinga	16.21	64	P	Pn	06 38 59.3	-1.3
PTLB	Pontes e Lacer	16.74	117	eP	Pn	06 39 07.3	+0.4
PTLB	Pontes e Lacer	16.74	117		P	06 39 06.5	-0.1
SDV	Santo Domingo	17.26	13	eP	Pn	06 39 21.2	+7.8
BOAV	Boa Vista	17.38	54	eP	Pn	06 39 14.7	0.0
BOAV	Boa Vista	17.38	54		P	06 39 13.2	-0.6
BOAV				IAmb	IAmb	06 39 17.1	
	comp=Z,15nm,1.4s						
PDRB	Porto dos Gac	17.87	103	eP	Pn	06 39 20.0	-0.6
CLDB	Colider	18.66	100	eP	P	06 39 28.1	+0.3
NPGB	Novo Progresso	19.01	88	eP	P	06 39 31.8	+0.2
ITTB	Itaituba	19.01	80	eP	P	06 39 32.3	+0.8
SALV	Santo Antonio	19.98	115	eP	Pn	06 39 44.2	-1.1
MALB	Monte Alegre	21.07	74	eP	P	06 39 53.3	-0.4
ARAG	Araguaiana, MT	23.46	111	eP	P	06 40 19.4	+2.1
MCPB	Macapa, AP	23.64	72	eP	P	06 40 18.6	-0.3
CPUP	Villa Florida	24.43	140	LR	LR	06 51 53.9	
	comp=Z,1μm,21.7s,baz=280,slow=41						
CPUP	Villa Florida	24.43	140	eP	P	06 40 32.5	+6.5
PRPB	Parauapebas	24.57	87	eP	P	06 40 26.9	-0.5
TIJ01	Guaruva-PR	29.76	128	eP	P	06 41 19.3	+5.4
PLCA	Paso Flores	32.74	174	P	P	06 41 40.9	+1.2
	comp=Z,1.4nm,0.7s,baz=313,slow=9.6,SNR=4.2						
PLCA	Paso Flores	32.74	174	IAmb	IAmb	06 42 09.2	
	comp=Z,30nm,1.9s						
T57A	Hurt	45.03	355	P	P	06 43 21.7	-0.1
TXAR	Lajitas Array	46.58	324	P	P	06 43 34.2	0.0
	comp=Z,0.5nm,0.6s,baz=152,slow=10.0,SNR=3.4						
PDAR	Pinedale Array	59.81	331	P	P	06 45 10.3	-0.6
	comp=Z,0.2nm,0.3s,baz=120,slow=8.4,SNR=2.8						
HWUT	Hardware Ranch	59.96	329	P	P	06 45 11.8	0.0
HWUT				IAmb	IAmb	06 46 13.2	
	comp=Z,4.8nm,0.8s						
NVAR	Mina Array Bea	61.62	322	P	P	06 45 23.8	+0.6
	comp=Z,0.8nm,0.8s,baz=160,slow=5.6,SNR=5.5						
YHL	Hebgen Lake	62.15	331	P	P	06 45 28.0	+1.3
GCMT	Greycliff	62.16	333	P	P	06 45 26.9	+0.4
BOZ	Bozeman (W)	62.91	332	P	P	06 45 32.0	+0.4
BOZ				IAmb	IAmb	06 45 32.4	
	comp=Z,2.0nm,0.7s						
DBIC	Dimbokro	70.97	80	P	P	06 46 22.1	-0.9
	comp=Z,3.2nm,0.4s,baz=282,slow=3.2,SNR=7.5						
VNA3	Neumayer Olymp	74.47	162	P	P	06 46 43.3	+0.8
VNA1	Neumayer--Stat	74.69	162	P	P	06 46 45.3	+1.5
VNA2	Neumayer--Watz	75.05	162	P	P	06 46 46.9	+1.0
	baz=304,slow=6.2						
SNAA	Sanae	76.67	162	P	P	06 46 55.9	+0.7
TORD	Torodi Ar. Bea	78.54	75	P	P	06 47 05.3	-1.2
	comp=Z,1.1nm,0.7s,baz=295,slow=6.4,SNR=7.4						
ILAR	Eielson Array	89.84	336	P	P	06 48 02.0	-0.5
	comp=Z,0.4nm,0.7s,baz=120,slow=3.4,SNR=6.0						

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*IDC **20** 06:36:27.1±1.5, 29°.33N×51°.41E, h0^{km}, mb3.8/9, mb1 3.9/11, mb1mx3.7/55, mbtmp3.8/11, ML3.3/2, Error ellipse: s-maj=32.7km s-min=23.8km az=4.0*

*TEH **20** 06:36:28.4, 29°.31N×51°.35E, h5^{km}, ML3.5*

*DSN **20** 06:36:29.1±2.7, 28°.60N×50°.79E, h10^{km}, ML3.3/7, Error ellipse: s-maj=77.1km s-min=21.8km az=45.0*

*THR **20** 06:36:29.0±0.3, 29°.28N×51°.35E, h7^{km}±9^{km}, ML3.4*

ISC 20 06:36:30.4±0.7, 29°.28N±0°.05×51°.33E±0°.04, h20^{km}, n84, $\sigma 1^{s}79$/86, mb3.9/9, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAZ1	Kazerun	0.44	38	ePg	Pb	06 36 37.3	-2.1
KAZ1				e		06 36 48.2	
	comp=Z,62μm,0.4s						
SHI	Shiraz	1.09	70	ePg	Pn	06 36 49.9	-0.8
SHI				eSg	Sb	06 37 06.8	+2.2
SHI				e		06 37 17.3	
	comp=Z,10μm,0.8s						
ABEH	Behbahan	1.61	325	ePg	Pb	06 37 00.4	+0.9
QIR1	Qir	1.70	118	ePg	Pb	06 37 03.4	+2.4
KLNJ	Kolanjah	1.74	7	ePn	Pn	06 37 01.8	+2.1
KLNJ				e		06 37 30.0	
	comp=Z,9μm,0.4s						
JHRM	Jahrom	2.12	111	ePn	Pb	06 37 07.9	-0.2
IBRJ	Brojen	2.62	359	ePn	Pn	06 37 13.8	+2.0
IRAM	Ramesheh	2.68	20	ePn	Pn	06 37 15.1	+2.5
IRAM				e		06 38 00.7	
	comp=Z,2μm,0.4s						
AMIS	Naft Sefid	2.96	324	ePn	Pn	06 37 18.0	+1.7
QRN	Al-Qurain	3.04	261	eP	Pn	06 37 18.8	+1.6
SHK1	Shahrekord	3.06	353	ePn	Pn	06 37 19.9	+2.0
UMR	Umm Al-Rimmam	3.17	276	eP	Pn	06 37 20.4	+1.4
IGAR	Gharneh	3.17	11	ePn	Pn	06 37 21.6	+2.2
KBD	Kabd	3.18	269	eP	Pn	06 37 20.6	+1.4
IPIR	Pirpir	3.41	354	ePn	Pn	06 37 25.0	+2.3
MIB	Mutribah	3.52	279	eP	Pn	06 37 24.8	+1.0
IMEH	Mehriz	3.53	53	ePn	Pn	06 37 27.6	+3.3
IZEF	Zefreh	3.70	13	ePn	Pn	06 37 28.8	+2.1
NASN	Na'in	3.73	20	ePn	Pn	06 37 29.3	+2.2
NASN	Na'in	3.73	20	ePn	Pn	06 37 29.3	+2.2
ICHK	Chekchek	3.97	41	ePn	Pn	06 37 32.3	+2.0
IKLH	Kolahrood	4.03	3	ePn	Pn	06 37 33.2	+2.0
YZKH	Yazd	4.18	41	ePn	Pn	06 37 35.5	+2.4
YZKH				IAML		06 38 26.8	
	comp=N,30nm,0.3s						
YZKH	Yazd	4.18	41	ePn	Pn	06 37 35.5	+2.4
ANAR	Anarak	4.41	27	ePn	Pn	06 37 38.3	+2.1
QAMS	Qamsar	4.44	1	ePn	Pn	06 37 39.4	+2.6
KHMZ	Khomeyn	4.60	346	ePn	Pn	06 37 41.2	+2.3
KHMZ	Khomeyn	4.60	346	ePn	Pn	06 37 41.2	+2.3
KHGB	Koh Gabri	4.60	75	ePn	Pn	06 37 41.4	+2.4
KHGB				e		06 38 43.8	
	comp=Z,377nm,0.6s						
NGRK	Negar Kerman	4.72	84	ePn	Pn	06 37 43.4	+2.6
NGRK				e		06 38 49.2	
	comp=Z,445nm,0.6s						
KRSH	Karshahi	4.72	8	ePn	Pn	06 37 42.5	+1.8
KRBR	Kerman	4.78	80	ePn	Pn	06 37 43.5	+2.0
KRBR				IAML		06 38 47.5	
	comp=N,22nm,0.5s						
KRBR				IAML		06 39 15.1	
	comp=E,20nm,0.7s						
KRBR	Kerman	4.78	80	ePn	Pn	06 37 43.5	+2.0
BMDN	Meydan	4.87	335	ePn	Pn	06 37 44.0	+1.3
ISFB	Sefidab	5.12	8	ePn	Pn	06 37 47.6	+1.7
IKFM	Kafar-mosalman	5.17	326	ePn	Pn	06 37 48.4	+1.8
GHVR	GHOM	5.18	360	ePn	Pn	06 37 49.2	+2.3
GHVR				IAML		06 38 51.7	
	comp=N,16nm,0.6s						
GHVR				IAML		06 39 05.4	
	comp=E,16nm,0.4s						
GHVR	GHOM	5.18	360	ePn	Pn	06 37 49.2	+2.3
IDOB	Doab	5.24	330	ePn	Pn	06 37 48.7	+1.0
SHME	Shamm	5.34	126	P	Pn	06 37 49.8	+0.8
ASAO	Ashtian	5.37	348	ePn	Pn	06 37 51.9	+2.3
ASAO				IAML		06 38 59.0	
	comp=E,16nm,0.6s						
ASAO				IAML		06 38 59.2	
	comp=N,12nm,0.4s						
ASAO	Ashtian	5.37	348	ePn	Pn	06 37 51.9	+2.3
HSAM	Samen	5.44	335	ePn	Pn	06 37 52.2	+1.7
BANOM	Banah	5.53	126	P	Pn	06 37 51.4	-0.2
IQOM	Qom	5.55	358	ePn	Pn	06 37 53.2	+1.1
IVRN	Varamin	5.71	3	ePn	Pn	06 37 55.6	+1.5
KHNJ	Kahnooj	5.76	102	ePn	Pn	06 37 56.7	+1.9
MSFE	Esma-Masafi	5.80	131	P	Pn	06 37 56.2	+0.9
HAGD	Aghdareh	5.83	342	ePn	Pn	06 37 57.8	+1.9
TPRV	Parvadeh(Tabas	5.92	50	ePn	Pn	06 37 58.6	+1.6
MDH	Madha	5.94	131	P	Pn	06 37 55.7	-1.5
IBZA	Bozab	5.96	331	ePn	Pn	06 37 58.3	+0.7
HATD	Hatta, Dubai	6.17	135	P	Pn	06 38 00.1	-0.3
IALM	Almabolaq	6.18	335	ePn	Pn	06 38 01.7	+1.0
IRAZ	Razeghan	6.22	349	ePn	Pn	06 38 03.3	+2.1
ASHO	Ashiyiah	6.22	136	P	Pn	06 38 00.6	-0.5
ASHO				S	Sn	06 39 10.7	-1.0
KBAM	BAM	6.23	90	e		06 38 06.7	
	comp=Z,354nm,0.3s						
KBAM				ePn	Pn	06 38 03.4	+2.2
IDMV	Damavand	6.31	5	ePn	Pn	06 38 03.4	+0.9
IFIR	Firoozkooh	6.46	10	ePn	Pn	06 38 06.1	+1.6
IGHG	Ghaleghazi	6.46	322	ePn	Pn	06 38 04.9	+0.3
TNSJ	Nastanj	6.49	43	ePn	Pn	06 38 06.6	+1.8
IANJ	Anjilo	6.54	19	ePn	Pn	06 38 07.0	+1.3
TKDS	Koohdasht(Taba	6.57	47	ePn	Pn	06 38 07.5	+1.6
QABG	Abgarm-Qazvin	6.58	347	ePn	Pn	06 38 06.8	+0.6
ILIN	Lien	6.73	328	ePn	Pn	06 38 09.1	+0.8
IDHR	Dehrash	6.84	323	ePn	Pn	06 38 09.9	+0.1
SOHO	SOHO	6.92	137	P	Pn	06 38 07.0	-3.6
IPRN	Peran	6.99	7	ePn	Pn	06 38 14.3	+2.5
QALM	Alamut, Qazvin	7.16	356	ePn	Pn	06 38 15.6	+1.5
QSDN	Sirdan	7.43	346	ePn	Pn	06 38 18.9	+1.1
IGLO	Ghaloghah	7.50	16	ePn	Pn	06 38 20.9	+2.1
WSAR	Wadi Sarin	8.89	131	Pn	Pn	06 38 36.5	-1.3
	comp=Z,0.3nm,0.3s,baz=19,slow=13,SNR=1.8						
SRVN	Saravan	9.93	98	ePn	Pn	06 38 53.9	+1.8
BRTR	Keskin Array B	17.89	310	Pn	P	06 40 40.2	+1.5
	comp=Z,0.1nm,0.3s,baz=138,slow=12,SNR=4.7						
IDI	Anoyia	23.11	292	P	P	06 41 36.6	+1.5
	comp=Z,4.1nm,0.5s,baz=53,slow=9.0,SNR=6.1						
AKASG	Malin Array Be	27.10	328	P	P	06 42 11.2	-0.5
	comp=Z,0.5nm,0.3s,baz=137,slow=8.6,SNR=5.1						
MKAR	Makanchi Array	29.74	45	P	P	06 42 35.6	+0.2
	comp=Z,0.4nm,0.5s,baz=244,slow=6.3,SNR=2.3						
ZALV	Zalesovo Beam	34.60	35	P	P	06 43 17.1	-0.7
	comp=Z,0.6nm,0.3s,baz=246,slow=11,SNR=2.3						
FINES	FINESS Array B	36.25	340	P	P	06 43 31.6	-0.2
	comp=Z,0.9nm,0.4s,baz=148,slow=11,SNR=7.3						
NB2	NORSAR Subarra	41.39	332	P	P	06 44 12.8	-2.2
	comp=Z,1.6nm,0.6s,baz=122,slow=8.6						
NOA	NORSAR Array B	41.39	332	P	P	06 44 13.6	-1.4
	comp=Z,1.4nm,0.8s,baz=122,slow=8.3,SNR=4.5						
ARCES	ARCESS Array B	42.94	347	P	P	06 44 26.9	-0.5
	comp=Z,1.0nm,0.5s,baz=161,slow=6.9,SNR=14						
TORD	Torodi Ar. Bea	48.61	262	P	P	06 45 13.3	+0.3
	comp=Z,0.6nm,0.5s,baz=52,slow=6.5,SNR=3.8						
ILAR	Eielson Array	85.18	8	P	P	06 49 03.8	-1.1
	comp=Z,0.3nm,0.6s,baz=316,slow=4.6,SNR=5.0						

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*JMA **20** 06:44:32.5±0.1, 37°.02N×141°.13E, h51^{km}±1^{km}, M4.1 Broadband fault plane solution: P waves. NP1: ϕ_s208.00000°, δ17.00000°, λ102.00000°. NP2: ϕ_s15.00000°, δ73.00000°, λ86.00000°. Principal axes: T Plg62.0000°, Azm279.0000°; N Plg4.0000°, Azm16.0000°; P Plg28.0000°, Azm108.0000°;*

JMA Felt II J1.

*IDC **20** 06:44:33.0±2.2, 37°.00N×141°.03E, h51^{km}±20^{km}, mb3.8/19, mb1 4.0/22, mb1mx3.9/44, mbtmp4.1/22, ML3.8/3 Error ellipse: s-maj=20.8km s-min=12.7km az=82.0*

*NIED **20** 06:44:32.5, 37°.02N×141°.13E, h51^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.78; $M_{\theta\theta}$-0.20; $M_{\phi\phi}$-0.58; $M_{r\theta}$0.20; $M_{\theta\phi}$-0.37; $M_{\phi r}$1.18; Fault plane solution: $M_0$1.44000×10^{15} NP1: ϕ_s14.00000°, δ74.00000°, λ80.00000°. NP2: ϕ_s227.00000°, δ19.00000°, λ121.00000°.*

NEIC ***20*** *06:44:33.3±2.5, 36.°99N±0.°04×141.°1E±0.°1, h50^{km}±7^{km}, mb4.2/6 Error ellipse: s-maj=12.6km s-min=2.8km az=110.0*

ISC 20 06:44:32.1±1.1**, 36.°99N**±0.°04×**141.°21E**±0.°07**, h45**^{km}±9^{km}**, n65,** σ**0^{s}95**/67**, mb4.1**/21**, 10D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.35	289	⇓P	Pn	06 44 41.4	+0.1
ONAJ				S	Sn	06 44 47.6	-0.2
JFK	Kawauchi	0.46	325	⇓P	Pn	06 44 42.6	-0.1
JFK				S	Sn	06 44 49.6	-0.5
JFFD	Fukushimafurud	0.53	281	⇓P	Pn	06 44 43.3	-0.2
JFFD				S	Sn	06 44 51.1	-0.4
JHO	Hitachi	0.64	234	⇓P	Pn	06 44 44.8	-0.1
JHO				S	Sn	06 44 53.3	-0.7
JFT	Otama	0.87	307	⇓P	Pn	06 44 48.5	+0.5
JFT				S	Sn	06 44 59.9	+0.3
JMM	Marumori	0.94	339	⇓P	Pn	06 44 48.6	-0.3
JMM				S	Sn	06 45 00.2	-0.9
JMM	Marumori	0.94	339		Pn	06 44 49.0	+0.2
JMM				Sn	Sn	06 45 00.8	-0.3
JYT	Yasato	1.11	227		Pn	06 44 51.2	-0.1
JFY	Yanaizu	1.27	290	⇓P	Pn	06 44 53.4	-0.1
JOU	Okura	1.44	343	⇓P	Pn	06 44 55.8	0.0
JOU				*e*S	Sn	06 45 14.2	+0.7
JIO	Ouri	1.47	4	P	Pn	06 44 56.0	-0.1
JIO				*e*S	Sn	06 45 12.9	-1.2
JAG	Ashikaga	1.52	249	⇓P	Pn	06 44 56.8	0.0
JAG				S	Sn	06 45 15.0	-0.4
JYS	Shirataka	1.53	324	⇓P	Pn	06 44 57.4	+0.4
JYS				*e*S	Sn	06 45 16.7	+1.0
JKT	Katashina	1.59	263	P	Pn	06 44 58.4	+0.6
MJAR	Matsushiro Arr	2.45	260	P	Pn	06 45 09.4	-0.3
	5.2nm,0.3s,baz=89,slow=8.9,SNR=94						
MJAR	Matsushiro Arr	2.45	260		Pn	06 45 09.9	+0.3
MAJO	Matsushiro	2.45	260		Pn	06 45 10.6	+0.9
MJB9	Matsu-Tunnel	2.45	260		Pn	06 45 10.7	+1.0
JSD	Sado	2.57	295	Pn	Pn	06 45 10.3	-0.9
JGF	Kuroka	3.41	247		Pn	06 45 24.4	+1.6
INU	Inuyama	3.77	245		Pn	06 45 29.0	+1.4
JTM	Tenmabayashi	3.79	358		Pn	06 45 29.8	+1.7
JHJ	Hachijo jima 2	4.03	197	P	Pn	06 45 32.9	+1.5
	52nm,0.3s,baz=59,slow=22,SNR=5.4						
JHJ				S	Sn	06 46 17.4	0.0
	57nm,0.3s,baz=60,slow=24,SNR=7.4						
JWT	Wachi	5.00	252		Pn	06 45 46.0	+1.4
JHS	Saijyo	6.85	256		Pn	06 46 12.3	+2.2
ASAJ	Asahikawa	7.20	8	P	Pn	06 46 14.4	-0.4
	1.9nm,0.3s,baz=194,slow=15,SNR=5.0						
JKA	Kamikawa-asahi	7.20	8		Pn	06 46 14.4	-0.4
USRK	Ussuriysk Ar.	10.04	319	P	Pn	06 46 56.2	+2.5
	baz=128,slow=13,SNR=9.7						
KSRS	Korea Array	10.61	277	P	Pn	06 47 04.8	+3.4
	0.3nm,0.3s,baz=84,slow=17,SNR=12						
SONM	Songino Array	27.67	304	P	P	06 50 14.8	-1.1
	1.5nm,0.6s,baz=97,slow=8.5,SNR=9.5						
SONM	Songino Array	27.67	304	IAmb	IAmb	06 50 17.7	
	comp=Z,2.8nm,1.0s						
H11N2	WAKE ISLAND Hy	28.27	120	T	T	07 20 16.9	
	baz=313,slow=75,SNR=242						
H11N1	WAKE ISLAND Hy	28.27	120	T	T	07 20 16.3	
	baz=313,slow=75,SNR=137						
H11N3	WAKE ISLAND Hy	28.29	120	T	T	07 20 17.1	
	baz=313,slow=75,SNR=120						
H11S1	WAKE ISLAND Hy	28.97	123	T	T	07 21 15.1	
	baz=314,slow=75,SNR=122						
H11S3	WAKE ISLAND Hy	28.98	123	T	T	07 21 16.9	
	baz=314,slow=75,SNR=86						
H11S2	WAKE ISLAND Hy	28.99	123	T	T	07 21 18.0	
	baz=314,slow=75,SNR=79						
ZAA0	Zalesovo Array	41.82	312	P	P	06 52 17.2	-0.1
ZAA0				IAmb	IAmb	06 52 17.6	
	comp=Z,6.5nm,0.8s						
ZALV	Zalesovo Beam	41.82	312	P	P	06 52 16.8	-0.5
	comp=Z,4.3nm,0.5s,baz=91,slow=7.2,SNR=17						
ZALV	Zalesovo Beam	41.82	312	P	P	06 52 17.0	-0.2
MKAR	Makanchi Array	44.00	302	P	P	06 52 34.3	-0.7
	comp=Z,2.0nm,0.8s,baz=84,slow=10,SNR=10						
KURK	Kurchatov	45.83	308	P	P	06 52 48.7	-0.8
KURK				IAmb	IAmb	06 52 50.4	
	comp=Z,5.5nm,0.8s						
KURBB	Kurchatov Arra	45.90	308	P	P	06 52 49.0	-1.0
	comp=Z,3.6nm,0.7s,baz=84,slow=8.0,SNR=24						
ILAR	Eielson Array	49.62	32	P	P	06 53 19.4	+0.8
	comp=Z,0.5nm,0.7s,baz=271,slow=5.6,SNR=5.5						
BVAR	Borovoye Array	50.48	312	P	P	06 53 24.7	-0.6
	comp=Z,1.5nm,0.5s,baz=259,slow=1.5,SNR=8.1						
BVAR				PcP	PcP	06 54 42.7	-0.2
	comp=Z,1.6nm,0.6s,baz=218,slow=9.4,SNR=5.6						
ARU	Arti	56.28	319	P	P	06 54 07.1	-0.8
	comp=Z,3.0nm,0.2s,baz=79,slow=2.0,SNR=12						
WRA	Warramunga Arr	56.99	188	P	P	06 54 12.9	-0.4
	comp=Z,1.1nm,0.8s,baz=5.0,slow=7.3,SNR=9.6						
ABKAR	Akbulak array	57.84	310	P	P	06 54 18.1	-0.9
ABKAR	Akbulak array	57.84	310	P	P	06 54 18.3	-0.7
AKTO	Aktyubinsk	58.58	312	P	P	06 54 22.8	-1.3
	comp=Z,1.1nm,0.5s,baz=74,slow=14,SNR=4.4						
ASAR	Alice Springs	60.72	188	P	P	06 54 39.2	+0.1
	comp=Z,0.4nm,0.8s,baz=13,slow=9.6,SNR=3.2						
ARCES	ARCESS Array B	63.98	339	P	P	06 55 00.1	-0.2
	comp=Z,2.5nm,0.8s,baz=52,slow=6.7,SNR=7.7						
FINES	FINESS Array B	68.78	332	P	P	06 55 30.6	-0.5
	comp=Z,4.0nm,0.7s,baz=46,slow=11,SNR=10						
KBZ	Khabaz	70.81	311	P	P	06 55 44.2	+0.3
	comp=Z,2.5nm,0.7s,baz=313,slow=2.0,SNR=4.8						
NB2	NORSAR Subarra	74.16	337	P	P	06 56 03.2	-0.5
	comp=Z,1.2nm,0.6s,baz=39,slow=6.2						
NOA	NORSAR Array B	74.16	337	P	P	06 56 02.7	-0.9
	comp=Z,1.8nm,0.7s,baz=39,slow=5.9,SNR=8.7						
AKASG	Malin Array Be	74.23	322	P	P	06 56 03.4	-0.8
	comp=Z,2.0nm,0.5s,baz=47,slow=5.7,SNR=6.6						
AKASG	Malin Array Be	74.23	322	IAmb	IAmb	06 56 14.7	
	comp=Z,2.3nm,1.4s						
PDAR	Pinedale Array	77.81	45	P	P	06 56 26.3	+1.3
	comp=Z,0.3nm,0.6s,baz=262,slow=3.0,SNR=3.8						
BRTR	Keskin Array B	78.76	311	P	P	06 56 30.5	+0.3
	comp=Z,0.5nm,0.6s,baz=116,slow=2.9,SNR=3.6						
GERES	GERESS Array B	82.66	328	P	P	06 56 50.5	-0.3
	comp=Z,0.7nm,0.4s,baz=42,slow=6.1,SNR=6.6						
TXAR	Lajitas Array	90.28	52	P	P	06 57 29.6	+1.1
	comp=Z,0.3nm,0.6s,baz=313,slow=2.6,SNR=4.1						
H03N2	Juan Fernandez	147.18	96	T	T	09 49 08.4	
	baz=291,slow=76,SNR=23						
H03N3	Juan Fernandez	147.19	96	T	T	09 49 09.5	
	baz=291,slow=76,SNR=21						
H03N1	Juan Fernandez	147.20	96	T	T	09 49 10.0	
	baz=291,slow=76,SNR=27						

SOME ***20*** *06:48:54.3, 39.°12N×74.°20E, h15^{km}*
KRNET ***20*** *06:48:55.2±0.1, 38.°50N×73.°83E, mb3.7*
NNC ***20*** *06:49:02.8±4.0, 39.°08N×73.°72E, h260^{km}±53^{km}, mb2.1, mpv3.3, Error ellipse: s-maj=65.1km s-min=40.6km az=65.0*

ISC 20 06:48:46.9±1.0**, 38.°59N**±0.°06×**74.°12E**±0.°04**, h10**^{km}**, n40,** σ**1^{s}65**/60**, 21C-5D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	2.01	297	⇑*i*P	Pg	06 49 27.7	+2.2
	baz=3.0						
DRK				⇑*i*S	Sg	06 49 51.2	-0.4
	baz=3.0						
BTK	Batken	2.95	301	⇑*i*P	Pb	06 49 40.5	+0.9
	baz=5.0						
BTK				⇑*i*S	Sb	06 50 13.8	-1.9
	baz=5.0						
AML	Almayashu	3.55	355	P	Pg	06 49 54.4	-0.6
	SNR=10						
AML	Almayashu	3.55	355	⇑*i*P	Pb	06 49 52.2	+2.2
	baz=58						
AML				⇑*i*S	Sb	06 50 33.7	+0.3
	baz=58						
UCH	Uchtor	3.65	5	P	Pg	06 49 56.3	-0.4
	SNR=14						
UCH	Uchtor	3.65	5	⇑*i*P	Pb	06 49 54.0	+2.3
	baz=8.0						
UCH				⇑*i*S	Sb	06 50 37.0	+0.8
	baz=8.0						
TRKS	Terek-Say	3.72	323	⇑*i*P	Pb	06 49 51.3	-1.5
	baz=26						
TRKS				⇑*i*S	Sn	06 50 32.4	+3.9
	baz=26						
ULHL	Ulahol	4.00	23	P	Pg	06 50 01.6	-1.8
	SNR=13						
ULHL	Ulahol	4.00	23	⇓*i*P	Pb	06 49 59.5	+2.0
	baz=25						
ULHL				⇓*i*S	Sb	06 50 46.5	+0.5
	baz=25						
AAK	Ala-Archa	4.05	4	⇓P	Pg	06 50 02.6	-1.9
	2.4nm,0.5s						
AAK				⇑S	Sb	06 50 50.1	+2.5
	10nm,0.6s						
EKS2	Erkin-Say	4.08	356	P	Pg	06 50 02.3	-2.7
	SNR=12						
EKS2	Erkin-Say	4.08	356	⇑*i*P	Pb	06 49 59.4	+0.6
	baz=59						
EKS2				⇑*i*S	Sb	06 50 46.2	-2.0
	baz=59						
MNAS	Manas	4.08	343	⇑*i*P	Pb	06 49 58.9	0.0
	baz=46						
MNAS				⇑*i*S	Sb	06 50 45.1	-3.3
	baz=46						
BOOM	Boomskoye usch	4.14	19	⇑*e*P	Pb	06 50 01.3	+1.4
	baz=21						
BOOM				⇑*i*S	Sb	06 50 49.4	-0.6
	baz=21						
MRKS	Merke	4.21	351	*e*P	Pb	06 50 02.4	+1.4
	17nm,0.0s						
MRKS				*e*S	Sb	06 50 51.2	-0.7
	190nm,0.5s						
TKM2	Tokmak 2	4.47	14	P	Pb	06 50 07.7	+2.2
	SNR=11						
TKM2	Tokmak 2	4.47	14	⇑P	Pb	06 50 07.3	+1.7
	6.2nm,0.5s						
TKM2				⇑S	Sb	06 51 01.6	+2.0
	10nm,0.6s						
KST	Kastek	4.67	17	⇓*e*P	Pb	06 50 10.8	+1.9
	20nm,0.1s						
KST				*e*S	Sb	06 51 05.5	+0.4
	29nm,0.2s						
DGS	Degeres	4.81	15	*e*P	Pb	06 50 12.3	+0.9
	9.2nm,0.2s						
DGS				*e*S	Sb	06 51 08.2	-1.2
	13nm,0.8s						
MTBS	Maitube	4.86	20	*e*P	Pb	06 50 13.2	+1.0
	6.9nm,0.2s						
MTBS				*e*S	Sb	06 51 09.5	-1.3
	9.0nm,0.7s						
TNSS	Tian-Shan	4.94	25	*e*P	Pb	06 50 14.4	+0.8
	7.9nm,0.0s						
TNSS				*e*S	Sb	06 51 12.0	-1.1
	2.3nm,0.3s						
MDOK	Medeo	5.08	25	*e*P	Pb	06 50 16.1	+0.1
	5.1nm,0.5s						
MDOK				*e*S	Sb	06 51 14.5	-2.6
	3.9nm,0.6s						
KOTS	Kotyrbulak	5.17	25	*e*P	Pb	06 50 18.3	+1.0
	7.6nm,0.2s						
KOTS				*e*S	Sb	06 51 18.4	-1.1
	9.9nm,0.5s						
KTBS	Karatobe	5.47	20	*e*P	Pb	06 50 25.6	+3.1
	1.1nm,0.5s						
KTBS				*e*S	Sb	06 51 31.5	+3.3
	11nm,0.7s						
BRLS	Borolday	5.50	325	*e*P	Pb	06 50 23.6	+0.6
	7.7nm,0.0s						
BRLS				*e*S	Sb	06 51 27.6	-1.4
	15nm,0.1s						
PYUN	Piuthan	12.81	142	*e*P	Pn	06 51 49.2	-0.1
	75nm,0.4s						
DANN	Dangsing	12.99	139	*e*P	Pn	06 51 51.6	-0.2
	37nm,0.3s						
KOLN	Koldanda	13.39	141	*e*P	Pn	06 51 57.2	+0.1
	26nm,0.4s						
GKN	Gorkha	13.73	137	*e*P	Pn	06 52 01.8	+0.1
	16nm,0.3s						
KKN	Kakani	14.24	136	*e*P	Pn	06 52 08.6	-0.3
	32nm,0.5s						
DMN	Daman	14.29	137	*e*P	Pn	06 52 09.6	0.0
	12nm,0.4s						
PKIN	Phulchoki	14.48	136	*e*P	Pn	06 52 12.2	+0.1
	12nm,0.3s						
GUN	Gumba	14.48	134	*e*P	Pn	06 52 11.6	-0.7
	15nm,0.4s						
PKI	Pulchoki	14.49	136	*e*P	Pn	06 52 11.5	-0.8
	15nm,0.3s						
AB31	Akbulak array	14.74	321	P	Pn	06 52 15.7	+0.4
	0.3nm,0.3s,baz=130,slow=13,SNR=27						
AB31				⇑S	Sn	06 54 47.1	-11
	0.6nm,0.5s,baz=129,slow=25						
JIRN	Jiri	14.85	134	*e*P	Pn	06 52 16.6	-0.7
	22nm,0.5s						
RAMN	Ramite	15.63	134	*e*P	Pn	06 52 25.8	-1.7
	14nm,0.4s						
TAPN	Taplejung	15.97	131	*e*P	Pn	06 52 31.1	-0.8
	6.4nm,0.4s						
ODAN	Odare	16.15	132	*e*P	Pn	06 52 32.9	-1.3
	9.8nm,0.5s						
AKTO	Aktyubinsk	16.45	321	⇓P	Pn	06 52 34.3	-3.4
	0.6nm,0.5s						
AKTO				⇑S	Sn	06 55 27.8	-12
	1.2nm,1.0s						

BYKL ***20*** *06:49:16.3±0.2, 51.°83N×99.°61E*

ISC 20 06:49:15.4±1.3**, 51.°86N**±0.°04×**99.°78E**±0.°03**, h4**^{km}±10^{km}**, n26,** σ**2^{s}43**/57**, 1C-1D, Tuva-Buryatia-Mongolia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ORL	Orlik	0.68	2	⇓*i*Pg	Pg	06 49 30.1	+1.7
ORL				*e*Sg	Sg	06 49 39.8	+2.6
ORL				Pmax			
	98nm,0.2s						
ORL				Smax			
	485nm,0.2s						
MOY	Mondy	0.78	104	⇑*i*Pg	Pb	06 49 32.2	+0.6
MOY				*e*Sg	Sb	06 49 43.9	+1.3
MOY				Pmax			
	270nm,0.4s						
MOY				Smax			
	375nm,0.5s						
KNGR	Kungurtug, Tuv	1.90	229	*e*Pg	Pn	06 49 48.5	-0.2
KNGR				*e*Sg	Sn	06 50 12.7	-0.4
TLY	Talaya	2.41	93	*e*Pg	Pb	06 50 00.7	+1.4
TLY				*e*Sn	Sn	06 50 27.5	+1.9
TLY				*e*Sg	Sg	06 50 34.2	+1.4
TLY				Pmax			
	62nm,0.5s						
TLY				Smax			
	140nm,0.3s						
ZAK	Zakamensk	2.66	123	Pg	Pb	06 50 04.1	+0.5
ZAK				Sg	Sg	06 50 43.5	+2.7
ZAK	Zakamensk	2.66	123	*e*Pn	Pn	06 49 59.7	+0.6
ZAK				*e*Pg	Pb	06 50 04.7	+1.1
ZAK				*e*Sn	Sb	06 50 34.3	-2.4
ZAK				*e*Sg	Sg	06 50 41.9	+1.1
ZAK				Pmax			
	58nm,0.4s						
ZAK				Smax			
	172nm,0.3s						
IRK	Irkutsk	2.80	80	Pg	Pg	06 50 19.9	+11
IRK				Sg	Sg	06 50 46.6	+1.3
IRK	Irkutsk	2.80	80	*e*Sg	Sg	06 50 45.9	+0.6
IRK				Smax			
	863nm,0.5s						
IVK	Ivanovka	2.88	89	*e*Pn	Pn	06 50 04.7	+2.7
IVK				*e*Pg	Pb	06 50 09.0	+1.7
IVK				*e*PgPg	PbPb	06 50 11.7	+1.3
IVK				*e*Sn	Sn	06 50 38.5	+1.4
IVK				*e*Sg	Sg	06 50 48.3	+0.5
IVK				Pmax			
	27nm,0.4s						
IVK				Smax			
	110nm,0.4s						
LSTR	Listvyanka	3.13	88	*e*Pn	Pn	06 50 07.1	+1.6
LSTR				*e*Pg	Pb	06 50 13.3	+1.7
LSTR				*e*Sg	Sg	06 50 55.8	-0.2
LSTR				Pmax			
	32nm,0.8s						
LSTR				Smax			
	127nm,0.9s						
KZLR	Kyzyl	3.31	269	*e*Pn	Pn	06 50 06.9	-1.0
KZLR				*e*Pg	Pb	06 50 13.6	-1.0
KZLR				*e*Sn	Sn	06 50 43.8	-3.9
KZLR				*e*Sg	Sb	06 50 54.7	-0.5
TRG	Tyrgan	4.13	75	Pg	Pb	06 50 27.6	-1.1
TRG				Sg	Sb	06 51 16.7	-2.2
TRG	Tyrgan	4.13	75	*e*	Pn	06 50 24.7	+5.4
TRG				*e*Pg	Pb	06 50 32.4	+3.7
TRG				*e*		06 50 38.6	
TRG				*e*		06 51 16.2	
TRG				*e*Sg	Sg	06 51 27.4	-0.6
TRG				max			
	38nm,0.7s						
TRG				Smax			
	110nm,0.6s						
FFNB	Fofonovo	4.33	85	*e*Pn	Pn	06 50 24.2	+2.3
FFNB				*e*Pg	Pg	06 50 35.8	-2.4
FFNB				*e*		06 51 23.6	
FFNB				*e*Sg	Sg	06 51 33.3	-1.0
HRMR	Khuramsha	4.47	90	*e*Pg	Pg	06 50 38.8	-2.1
HRMR				*e*		06 51 29.3	
HRMR				*e*Sg	Sg	06 51 38.0	-0.8
HRMR				Pmax			
	31nm,0.3s						
HRMR				Smax			
	180nm,0.6s						
UUDB	Ulan-Yde	4.89	87	*e*Pg	Pg	06 50 46.0	-3.0
UUDB				*e*		06 51 38.8	
UUDB				*e*Sg	Sg	06 51 50.7	-1.6
UUDB				Pmax			
	13nm,0.4s						
UUDB				Smax			
	87nm,1.4s						
OGRR	Ongureny	5.07	66	*e*Pg	Pg	06 50 49.9	-2.6
OGRR				*e*Sn	Sn	06 51 32.6	+1.4
OGRR				*e*		06 51 38.3	
OGRR				*e*Sg	Sg	06 51 56.9	-1.3
OGRR				Pmax			
	28nm,0.5s						
OGRR				Smax			
	101nm,0.6s						
KELR	Kotokel	5.17	77	*e*Pg	Pb	06 50 51.1	+4.7
KELR				*e*Sg	Sg	06 51 59.0	-2.4
CERR	Cheremushki	5.22	284	Pg	Pb	06 50 48.8	+1.7
CERR				Sg	Sb	06 51 55.3	+5.1
SYVR	Suvo	6.46	70	*e*Pg	Pb	06 51 14.7	+6.4
SYVR				*e*Sn	Sn	06 52 04.7	-0.6
SYVR				*e*Sg	Sg	06 52 38.7	-4.0
SYVR				Pmax			
	4.0nm,0.5s						
SYVR				Smax			
	61nm,1.2s						
NIZ	Nizh Angarsk	6.98	52	*e*Pg	Pb	06 51 24.0	+6.9
NIZ				*e*Sn	Sn	06 52 18.2	+0.1
NIZ				*e*Sg	Sg	06 52 55.5	-3.9
NIZ				Pmax			
	18nm,0.7s						
NIZ				Smax			
	277nm,1.3s						
YLYR	Ulyunkhan	7.45	62	*e*Pn	Pn	06 51 09.5	+4.7
YLYR				*e*Pg	Pb	06 51 31.6	+6.5
YLYR				*e*Sn	Sn	06 52 29.6	-0.1
YLYR				*e*		06 52 37.6	
YLYR				*e*Sg	Sg	06 53 08.7	-5.7
YLYR				Pmax			
	4.0nm,0.5s						
YLYR				Smax			
	43nm,1.2s						
KMO	Kumora	7.86	55	*e*Sn	Sn	06 52 40.5	+0.7
KMO				*e*Sg	Sg	06 53 22.8	-4.7
KMO				Smax			
	85nm,1.3s						
UKT	Uakit	8.99	61	*e*Pg	Pg	06 52 00.4	-6.9
UKT				*e*Sn	Sn	06 53 04.0	-3.5
UKT				*e*		06 53 29.2	
UKT				*e*Sg	Sg	06 53 56.8	-6.8
UKT				Pmax			
	2.0nm,0.7s						
UKT				Smax			
	17nm,1.5s						
BOD	Bodaibo	10.13	48	*e*Sg	Sn	06 54 33.5	+58
BOD				Smax			
	30nm,1.8s						
CRS	Chara	11.89	58	*e*Sg		06 55 26.9	
CRS				Smax			
	8.0nm,0.6s						

JMA ***20*** *07:06:16.5±0.1, 26.°37N×143.°13E, h0^{km}, M5.0*
JMA Felt I J1.
BJI ***20*** *07:06:18.0±0.0, 26.°05N×142.°88E, h30^{km}, mB5.0/16, mb4.5/38, Ms4.6/6, Ms7 4.5/6*
IDC ***20*** *07:06:18.7±0.7, 26.°30N×142.°55E, h0^{km}, mb4.3/22, mb1 4.5/25, mb1mx4.3/48, mbtmp4.3/25, ML3.7/3, MS3.8/6, Ms1 3.9/6, ms1mx3.4/59, Error ellipse: s-maj=21.1km s-min=14.3km az=73.0*
MOS ***20*** *07:06:20.0±1.0, 26.°37N×142.°44E, h17^{km}, mb4.9/29, Error ellipse: s-maj=13.8km s-min=5.7km az=114.3*
NEIC ***20*** *07:06:21.6±1.3, 26.°45N±0.°05×142.°5E±0.°1, h10^{km}±1^{km}, mb4.9/35, Error ellipse: s-maj=20.8km s-min=2.9km az=64.0*

ISC 20 07:06:24.0±0.5**, 26.°43N**±0.°05×**142.°60E**±0.°07**, h31**^{km}**, n156,** σ**1^{s}31**/161**, mb4.8**/59**, MS4.1**/4**, 11C-2D, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHH2	Haha-jima-NKT2	0.43	299	P	Pn	07 06 34.0	-0.1
JHH2				*e*S	Sn	07 06 46.4	+5.5
CBIJ	Chichi jima	0.76	331	P	Pn	07 06 38.1	-0.5
CBIJ				*e*S	Sn	07 06 53.5	+4.4
JCJ	Chichijima	0.76	331	Pn	Pn	07 06 38.0	-0.6
	719nm,0.3s,baz=111,slow=20,SNR=151						
JCJ				Sn	Sn	07 06 53.4	+4.3
	3µm,0.3s,baz=282,slow=23,SNR=16						
JCJ	Chichijima	0.76	331		Pn	07 06 37.7	-1.0
JCJ					Sb	07 06 44.6	-4.3
BSO4	Boso 4	8.75	348	P	Pn	07 08 27.4	-1.0
BSO4				*e*S	Sn	07 10 07.2	+1.3
JHU	Hanno	9.81	344	P	Pn	07 08 42.7	-0.3
JHU				*e*S	Sn	07 10 29.7	-2.4
JYT	Yasato	9.98	349		Pn	07 08 44.6	-0.6
JRY	Ryogami san	10.07	343	P	Pn	07 08 46.1	-0.4
JRY				*e*S	Sn	07 10 38.2	-0.2
INU	Inuyama	10.10	333	Pn	Pn	07 08 46.4	-0.5
JHO	Hitachi	10.30	351	P	Pn	07 08 48.4	-1.2
JAG	Ashikaga	10.32	346	P	Pn	07 08 47.7	-2.2
JAG				S	Sn	07 10 41.2	-3.4
MJAR	Matsushiro Arr	10.75	341	Pn	Pn	07 08 53.7	-2.2
	0.3nm,0.3s,baz=161,slow=13,SNR=13						
MJAR				Sn	Sn	07 10 58.9	+3.7
	0.2nm,0.3s,baz=322,slow=18,SNR=5.1						
MJAR	Matsushiro Arr	10.75	341	P	Pn	07 08 55.2	-0.7
MJAR	Matsushiro Arr	10.75	341		Pn	07 08 55.2	-0.7
MAJO	Matsushiro	10.76	341	*i* P	Pn	07 08 55.5	-0.4
MAJO	Matsushiro	10.76	341		Pn	07 08 55.3	-0.6
MAT	Matsushiro	10.76	341	P	Pn	07 08 54.7	-1.2
MAT				*e*S	Sn	07 10 53.6	-1.6
MJB9	Matsu-Tunnel	10.76	341	Pn	Pn	07 08 55.4	-0.6
JMM	Marumori	11.51	353		Pn	07 09 05.2	-1.0
JSD	Sado	12.14	344	Pn	Pn	07 09 12.6	-2.3
JOW	Kunigami	12.82	275	LR	LR	07 14 03.2	
	comp=Z,269nm,19.3s,baz=111,slow=36						
JTM	Tenmabayashi	14.38	355	Pn	Pn	07 09 43.9	-1.5
ERM	Erimo	15.56	2	*i* P	Pn	07 10 01.7	+0.7
TJN	Taejon	16.34	311	*i* P	Pn	07 10 09.8	-1.3
KSRS	Korea Array	16.59	315	Pn	P	07 10 16.6	+0.1
	0.3nm,0.3s,baz=127,slow=12,SNR=11						
KSRS				LR	LR	07 16 20.7	
	comp=Z,476nm,19.6s,baz=115,slow=36						
JKA	Kamikawa-asahi	17.65	0	P	P	07 10 28.5	+0.3
ASAJ	Asahikawa	17.65	0	P	P	07 10 28.5	+0.3
	1.5nm,0.3s,baz=217,slow=16,SNR=4.5						
MSHR	Mys Shultsa	18.64	333	*i* P	Pn	07 10 39.8	+0.2
MSHR				pmax	pmax		
	comp=Z,25nm,1.2s						
USRK	Ussuriysk Ar.	19.70	337	P	Pn	07 10 51.5	-0.8
	baz=149,slow=9.0,SNR=5.4						
USRK				LR	LR	07 17 06.6	
	comp=Z,179nm,21.3s,baz=36,slow=33						
USRK	Ussuriysk Ar.	19.70	337	P	P	07 10 49.9	-0.8
YSS	Yuzh-Sakhalins	20.49	0	*e*P	Pn	07 11 03.5	+2.0
YSS				pmax	pmax		
	comp=Z,20nm,1.1s						
MDJ	Mudanjiang	20.96	333	P	Pn	07 11 06.3	-0.8
MDJ				pmax	pmax		
	comp=Z,8.0nm,0.6s						

MDJ				pmax	pmax		
	comp=Z,650nm,11.4s						
NJ2	**Nanjing**	**21.44**	**291**	*e*P	**P**	**07 11 09.4**	**-0.3**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**23.31**	**102**	T	T	07 35 06.1	
	baz=291,slow=74,SNR=7.7						
H11N1	**WAKE ISLAND Hy**	**23.31**	**102**	T	T	07 35 08.8	
	baz=291,slow=74,SNR=6.8						
H11N3	**WAKE ISLAND Hy**	**23.32**	**102**	T	T	07 35 14.5	
	baz=291,slow=74,SNR=6.7						
H11S3	**WAKE ISLAND Hy**	**23.59**	**105**	T	T	07 35 26.8	
	baz=294,slow=75,SNR=13						
H11S1	**WAKE ISLAND Hy**	**23.60**	**105**	T	T	07 35 25.6	
	baz=294,slow=75,SNR=8.9						
H11S2	**WAKE ISLAND Hy**	**23.61**	**105**	T	T	07 35 33.8	
	baz=294,slow=75,SNR=10						
KLR	**Kul'dur**	**24.27**	**343**	P	**P**	**07 11 39.4**	**+1.1**
	comp=Z,9.2nm,0.7s,baz=146,slow=7.9,SNR=27						
KLR	**Kul'dur**	**24.27**	**343**	*ce*P	**P**	**07 11 39.4**	**+1.1**
KLR				pmax	pmax		
	comp=Z,33nm,1.9s						
WHN	**Wuhan**	**25.13**	**286**	⇓P	**P**	**07 11 47.3**	**+1.0**
HIA	**Hailar**	**28.87**	**328**	*i* P	**P**	**07 12 18.4**	**-1.4**
HIA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC	**Hu-ho-hao-te**	**29.39**	**307**	*e*P	**P**	**07 12 24.6**	**0.0**
HHC				pmax	pmax		
	comp=Z,21nm,0.7s						
HHC				pmax	pmax		
	comp=Z,180nm,5.7s						
ZEA	**Zeya**	**29.57**	**341**	*e*P	**P**	**07 12 27.0**	**+1.1**
ZEA				pmax	pmax		
	comp=E,10.0nm,0.4s						
ZEA				pmax	pmax		
	comp=N,10.0nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.0s						
XAN	**Xi'an**	**29.97**	**293**	P	**P**	**07 12 28.9**	**-0.8**
XAN				pmax	pmax		
	comp=Z,21nm,0.8s						
MA2	**Magadan**	**33.62**	**8**	*i* P	**P**	**07 13 02.8**	**+1.4**
MA2				pmax	pmax		
	comp=Z,41nm,1.4s						
LZH	**Lanzhou**	**34.31**	**296**	*e*P	**P**	**07 13 07.0**	**-0.9**
LZH				pmax	pmax		
	comp=Z,23nm,1.2s						
ULN	**Ulaanbaatar**	**35.06**	**317**	*ce*P	**P**	**07 13 12.7**	**-1.6**
ULN				pmax	pmax		
	comp=Z,8.0nm,2.5s						
SONM	**Songino Array**	**35.45**	**317**	P	**P**	**07 13 17.3**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=122,slow=8.1,SNR=4.7						
SONM				PcP	**PcP**	**07 15 47.1**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=209,slow=4.7,SNR=3.9						
SONM	**Songino Array**	**35.45**	**317**	IAmb	IAmb	07 13 25.8	
	comp=Z,1.6nm,1.0s						
KMI	**Kunming**	**35.82**	**277**	⇓P	**P**	**07 13 21.6**	**+0.5**
KMI				pmax	pmax		
	comp=Z,21nm,0.9s						
YAK	**Yakutsk**	**36.64**	**350**	*i* P	**P**	**07 13 28.2**	**+0.9**
YAK				pmax	pmax		
	comp=Z,23nm,1.3s						
GTA	**Gaotai**	**37.84**	**301**	*e*P	**P**	**07 13 36.5**	**-1.5**
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ZAK	**Zakamensk**	**38.35**	**319**	*e*P	**P**	**07 13 39.6**	**-2.6**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
MTN	**Manton Dam**	**40.59**	**197**	P	**P**	**07 14 01.0**	**-0.1**
MTN				IAmb	IAmb	07 14 15.2	
	comp=Z,9.1nm,0.7s						
CHTO	**Chiang Mai**	**40.85**	**269**	P	**P**	**07 14 02.7**	**-0.5**
CHTO				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CHTO	**Chiang Mai**	**40.85**	**269**	P	**P**	**07 14 02.7**	**-0.5**
CM31	**Chiang Mai Arr**	**40.96**	**268**	P	**P**	**07 14 04.5**	**+0.3**
CM31				IAmb	IAmb	07 14 07.8	
	comp=Z,7.8nm,0.4s						
CMAR	**Chiang Mai Arr**	**40.96**	**268**	P	**P**	**07 14 03.7**	**-0.5**
	comp=Z,2.7nm,0.6s,baz=59,slow=8.8,SNR=18						
CMAR				LR	LR	07 31 13.2	
	comp=Z,102nm,19.1s,baz=80,slow=36						
CMAR	**Chiang Mai Arr**	**40.96**	**268**	*i* P	**P**	**07 14 04.1**	**-0.1**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
BILL	**Bilibino**	**44.02**	**13**	*i* P	**P**	**07 14 30.0**	**+1.6**
BILL				pmax	pmax		
	comp=Z,6.0nm,1.4s						
SHL	**Shillong**	**45.35**	**281**	P	**P**	**07 14 38.8**	**-1.0**
SHL				pmax	pmax		
	comp=Z,11nm,0.9s						
SHL	**Shillong**	**45.35**	**281**	P	**P**	**07 14 38.8**	**-1.0**
SHL				IAmb	IAmb	07 14 39.6	
	comp=Z,11nm,0.9s						
WB0	**Warramunga Arr**	**46.60**	**191**	P	**P**	**07 14 49.6**	**+0.2**
WB0				IAmb	IAmb	07 15 15.2	
	comp=Z,10nm,0.7s						
WRAB	**Tennant Creek**	**46.77**	**191**	*ce*P	**P**	**07 14 49.6**	**-1.1**
WRAB				pmax	pmax		
	comp=Z,14nm,1.0s						
WRA	**Warramunga Arr**	**46.78**	**191**	P	**P**	**07 14 48.8**	**-2.0**
	comp=Z,9.6nm,0.7s,baz=11,slow=8.5,SNR=34						
WRA	**Warramunga Arr**	**46.78**	**191**	*i* P	**P**	**07 14 49.2**	**-1.6**
WRA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WRA	**Warramunga Arr**	**46.78**	**191**	P	**P**	**07 14 49.6**	**-1.2**
WMQ	**Urumqi**	**47.26**	**306**	*e*P	**P**	**07 14 56.3**	**+1.8**
DGZ	**Jazzator, Alta**	**47.99**	**314**	*i* P	**P**	**07 14 59.1**	**-1.0**
DGZ				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ZALV	**Zalesovo Beam**	**50.23**	**319**	P	**P**	**07 15 16.4**	**-0.6**
	comp=Z,1.6nm,0.7s,baz=111,slow=8.1,SNR=7.1						
ZALV				PcP	**PcP**	**07 16 35.4**	**-0.3**
	comp=Z,3.5nm,0.9s,baz=105,slow=3.4,SNR=5.4						
ZALV				LR	LR	07 37 23.1	
	comp=Z,117nm,19.3s,baz=348,slow=37						
ZALV	**Zalesovo Beam**	**50.23**	**319**	*i* P	**P**	**07 15 17.2**	**+0.2**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ZALV	**Zalesovo Beam**	**50.23**	**319**	P	**P**	**07 15 16.2**	**-0.8**
MK31	**Makanchi Array**	**51.18**	**310**	*i* P	**P**	**07 15 22.9**	**-1.5**
MKAR	**Makanchi Array**	**51.18**	**310**	P	**P**	**07 15 23.1**	**-1.3**
	comp=Z,3.1nm,0.8s,baz=89,slow=9.6,SNR=15						
MKAR				PcP	**PcP**	**07 16 39.4**	**-0.1**
	comp=Z,1.4nm,0.7s,baz=86,slow=6.2,SNR=4.9						
MKAR	**Makanchi Array**	**51.18**	**310**	*i* P	**P**	**07 15 23.6**	**-0.7**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MKAR	**Makanchi Array**	**51.18**	**310**	P	**P**	**07 15 23.6**	**-0.7**
NRIK	**Noril'sk**	**53.40**	**339**	P	**P**	**07 15 41.4**	**+0.9**
	comp=Z,11nm,1.0s,baz=112,slow=8.7,SNR=8.2						
NRIK	**Noril'sk**	**53.40**	**339**	*ce*P	**P**	**07 15 41.2**	**+0.8**
NRIK				pmax	pmax		
	comp=Z,16nm,1.2s						
NRIK	**Noril'sk**	**53.40**	**339**	P	**P**	**07 15 40.6**	**+0.2**
NRIK				IAmb	IAmb	07 15 43.2	
	comp=Z,18nm,1.2s						
KURK	**Kurchatov**	**53.72**	**315**	*ce*P	**P**	**07 15 42.4**	**-0.6**
KURK				pmax	pmax		
	comp=Z,17nm,1.3s						
KURK	**Kurchatov**	**53.72**	**315**	P	**P**	**07 15 42.0**	**-1.0**
KURK				IAmb	IAmb	07 15 43.6	
	comp=Z,14nm,1.1s						
KURBB	**Kurchatov Arra**	**53.77**	**315**	P	**P**	**07 15 42.2**	**-1.2**
	comp=Z,7.1nm,0.9s,baz=92,slow=7.2,SNR=41						
TARG	**Taragay, Kyrgy**	**54.59**	**304**	P	**P**	**07 15 48.8**	**-1.3**
TARG				IAmb	IAmb	07 15 52.1	
	comp=Z,9.3nm,1.0s						
K20K	**Telida**	**54.79**	**30**	P	**P**	**07 15 51.3**	**+0.6**
K20K				IAmb	IAmb	07 16 05.2	
	comp=Z,9.5nm,1.1s						
J20K	**Nowinta River**	**54.92**	**29**	P	**P**	**07 15 52.4**	**+0.8**
IMAR	**Indian Mountai**	**55.48**	**26**	P	**P**	**07 15 56.0**	**+0.5**
BOOM	**Boomskoye usch**	**55.90**	**305**	P	**P**	**07 15 59.3**	**+0.1**
BOOM				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BOOM	**Boomskoye usch**	**55.90**	**305**	P	**P**	**07 15 59.3**	**+0.1**
BOOM				IAmb	IAmb	07 16 00.4	
	comp=Z,6.7nm,0.7s						
I21K	**Tanana**	**56.03**	**28**	P	**P**	**07 15 59.8**	**+0.2**
KSH	**Kashi**	**56.24**	**301**	P	**P**	**07 16 03.9**	**+2.3**
KSH				pmax	pmax		
	comp=Z,6.0nm,1.1s						
AAK	**Ala-Archa**	**56.94**	**305**	P	**P**	**07 16 06.9**	**+0.3**
	comp=Z,3.3nm,0.7s,baz=123,slow=4.0,SNR=4.3						
AAK	**Ala-Archa**	**56.94**	**305**	*ce*P	**P**	**07 16 06.2**	**-0.4**
AAK				pmax	pmax		
	comp=Z,28nm,2.5s						
AAK	**Ala-Archa**	**56.94**	**305**	P	**P**	**07 16 06.3**	**-0.3**
ILAR	**Eielson Array**	**58.12**	**28**	P	**P**	**07 16 13.8**	**-0.5**
	comp=Z,1.1nm,0.8s,baz=268,slow=5.8,SNR=6.6						
FORT	**Forrest**	**58.56**	**195**	P	**P**	**07 16 19.1**	**+1.5**
BVAR	**Borovoye Array**	**58.78**	**318**	P	**P**	**07 16 18.9**	**-0.2**
	comp=Z,5.5nm,0.5s,baz=165,slow=6.2,SNR=26						
BRVK	**Borovoye**	**58.84**	**318**	*ce*P	**P**	**07 16 19.0**	**-0.6**
BRVK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BRVK	**Borovoye**	**58.84**	**318**	P	**P**	**07 16 19.3**	**-0.3**
BRVK				IAmb	IAmb	07 16 20.6	
	comp=Z,26nm,1.5s						
BMAR	**Burnt Mountain**	**59.30**	**25**	P	**P**	**07 16 22.3**	**-0.3**
KKAR	**Karatay Array**	**59.77**	**306**	P	**P**	**07 16 25.6**	**-0.6**
KKAR	**Karatay Array**	**59.77**	**306**	P	**P**	**07 16 25.6**	**-0.6**
GAR	**Garm**	**60.65**	**302**	P	**P**	**07 16 31.5**	**-0.9**
GAR				IAmb	IAmb	07 16 33.1	
	comp=Z,25nm,1.3s						
CHGR	**Chuyangaron**	**61.61**	**301**	P	**P**	**07 16 38.3**	**-0.5**
EPYK	**Eagle Plains**	**62.38**	**27**	P	**P**	**07 16 44.2**	**+0.7**
EPYK				IAmb	IAmb	07 16 54.0	
	comp=Z,12nm,1.0s						
INK	**Inuvik**	**63.48**	**24**	P	**P**	**07 16 50.8**	**+0.2**
	comp=Z,2.4nm,1.1s,baz=297,slow=5.2,SNR=4.4						
INK	**Inuvik**	**63.48**	**24**	P	**P**	**07 16 50.0**	**-0.7**
INK				IAmb	IAmb	07 17 00.2	
	comp=Z,3.5nm,0.8s						
SVE	**Sverdlovsk**	**63.98**	**323**	*e*P	**P**	**07 16 54.5**	**+0.3**
ARU	**Arti**	**65.18**	**322**	*c i*P	**P**	**07 17 02.1**	**+0.1**
ARU						07 17 33.6	
ARU				S	**S**	**07 25 44.0**	**+1.2**
ARU						07 26 58.6	
ARU				SS	**SS**	**07 29 59.1**	**+4.0**
ARU				pmax	pmax		
	comp=Z,40nm,1.4s						
ARU	**Arti**	**65.18**	**322**	P	**P**	**07 17 02.0**	**0.0**
ABKAR	**Akbulak array**	**65.82**	**315**	P	**P**	**07 17 06.0**	**-0.4**
ABKAR	**Akbulak array**	**65.82**	**315**	P	**P**	**07 17 05.7**	**-0.6**
ABKAR				IAmb	IAmb	07 17 06.9	
	comp=Z,13nm,1.1s						
AKTO	**Aktyubinsk**	**66.77**	**316**	P	**P**	**07 17 12.0**	**-0.4**
	comp=Z,3.4nm,0.6s,baz=77,slow=14,SNR=13						
KIRV	**Kirov**	**69.45**	**326**	*ce*P	**P**	**07 17 30.1**	**+1.1**
PRGR	**Permogore**	**70.31**	**330**	*e*P	**P**	**07 17 34.3**	**+0.1**
PRGR				pmax	pmax		
	comp=Z,5.0nm,0.4s						
KLMR	**Klimovskoe**	**73.34**	**330**	*e*P	**P**	**07 17 50.6**	**-1.9**
KLMR				pmax	pmax		
	comp=Z,14nm,1.1s						
KLMR	**Klimovskoe**	**73.34**	**330**	*e*P	**P**	**07 17 50.7**	**-1.8**
KLMR				AMP		07 18 02.0	
	comp=Z,14nm,1.1s						
ARCES	**ARCESS Array B**	**74.29**	**341**	P	**P**	**07 17 58.5**	**+0.6**
	comp=Z,7.0nm,0.8s,baz=60,slow=5.3,SNR=8.2						
ARCES	**ARCESS Array B**	**74.29**	**341**	P	**P**	**07 17 58.9**	**+1.0**
ARCES				pmax	pmax		
	comp=Z,19nm,1.1s						
ARCES	**ARCESS Array B**	**74.29**	**341**	P	**P**	**07 17 58.9**	**+1.0**
ARCES				IAmb	IAmb	07 18 02.8	
	comp=Z,19nm,1.1s						
UOSS	**Minazif**	**76.30**	**291**	P	**P**	**07 18 09.9**	**-0.4**
UOSS				IAmb	IAmb	07 18 20.9	
	comp=Z,6.9nm,1.0s						
OBN	**Obninsk**	**77.29**	**326**	*i* P	**P**	**07 18 14.8**	**-0.4**
OBN				*i*		07 18 25.5	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
OBN				MLR	MLR		
	comp=Z,199nm,17.0s						
FIA1	**FINESS Array S**	**78.70**	**334**	P	**P**	**07 18 22.9**	**-0.1**
FIA1				IAmb	IAmb	07 18 46.7	
	comp=Z,19nm,1.1s						
FINES	**FINESS Array B**	**78.71**	**334**	P	**P**	**07 18 23.0**	**0.0**
	comp=Z,5.0nm,0.5s,baz=70,slow=5.0,SNR=25						
KBZ	**Khabaz**	**78.73**	**313**	P	**P**	**07 18 23.6**	**+0.1**
	comp=Z,11nm,0.9s,baz=102,slow=3.7,SNR=16						
KBZ				LR	LR	07 56 18.5	
	comp=Z,145nm,20.3s,baz=238,slow=38						
KBZ	**Khabaz**	**78.73**	**313**	*ce*P	**P**	**07 18 23.6**	**+0.1**
KBZ				pmax	pmax		
	comp=Z,15nm,0.9s						
KIV	**Kislovodsk**	**78.77**	**314**	*e*P	**P**	**07 18 23.9**	**0.0**
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
NVAR	**Mina Array Bea**	**80.64**	**52**	P	**P**	**07 18 34.8**	**+0.5**
	comp=Z,0.6nm,0.8s,baz=286,slow=6.9,SNR=4.2						
NVAR	**Mina Array Bea**	**80.64**	**52**	P	**P**	**07 18 34.5**	**+0.2**
LRM	**Limekiln Ridge**	**81.11**	**43**	P	**P**	**07 18 36.8**	**+0.1**
GWY	**Greenwater Val**	**82.81**	**53**	P	**P**	**07 18 47.4**	**+1.7**
AKASG	**Malin Array Be**	**83.37**	**324**	P	**P**	**07 18 47.3**	**-0.8**
	comp=Z,2.5nm,0.6s,baz=52,slow=5.3,SNR=8.4						
AKASG	**Malin Array Be**	**83.37**	**324**	P	**P**	**07 18 47.6**	**-0.5**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
AKASG	**Malin Array Be**	**83.37**	**324**	P	**P**	**07 18 47.5**	**-0.5**
AKBB	**Malin Array Si**	**83.37**	**324**	*ce*P	**P**	**07 18 48.1**	**0.0**
AKBB	**Malin Array Si**	**83.37**	**324**	P	**P**	**07 18 47.4**	**-0.7**
AKBB				IAmb	IAmb	07 18 48.3	
	comp=Z,9.6nm,1.0s						
NB2	**NORSAR Subarra**	**84.36**	**338**	P	**P**	**07 18 52.9**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=43,slow=5.3						
NOA	**NORSAR Array B**	**84.36**	**338**	P	**P**	**07 18 52.9**	**-0.1**
	comp=Z,2.4nm,0.9s,baz=49,slow=4.8,SNR=4.4						
UABX	**UABC, Campus M**	**85.37**	**56**	P	**P**	**07 18 59.7**	**+1.2**
RAYN	**Ar Rayn**	**85.75**	**294**	P	**P**	**07 19 00.3**	**-0.4**
RAYN				pmax	pmax		
	comp=Z,16nm,1.1s						
RAYN	**Ar Rayn**	**85.75**	**294**	P	**P**	**07 19 00.3**	**-0.4**
RAYN				IAmb	IAmb	07 19 01.8	
	comp=Z,16nm,1.1s						
BRTR	**Keskin Array B**	**86.72**	**313**	P	**P**	**07 19 04.8**	**-0.5**
	comp=Z,1.9nm,1.0s,baz=11,slow=1.5,SNR=3.6						
CRVS	**Cervenica-Dubn**	**88.47**	**326**	*e*P	**P**	**07 19 13.5**	**+0.1**
CRVS	**Cervenica-Dubn**	**88.47**	**326**	*e*P	**P**	**07 19 13.5**	**+0.1**
VYHS	**Vyhne**	**90.05**	**326**	*e*P	**P**	**07 19 21.0**	**+0.2**
VYHS	**Vyhne**	**90.05**	**326**	*e*P	**P**	**07 19 21.0**	**+0.2**
CLL	**Collm**	**90.81**	**331**	*i* P	**P**	**07 19 23.6**	**-0.6**
CLL	**Collm**	**90.81**	**331**	*i* P	**P**	**07 19 23.6**	**-0.6**
KHC	**Kasperske Hory**	**92.12**	**329**	*e*P	**P**	**07 19 33.0**	**+2.6**
KHC	**Kasperske Hory**	**92.12**	**329**	*e*P	**P**	**07 19 33.0**	**+2.6**
GERES	**GERESS Array B**	**92.27**	**329**	P	**P**	**07 19 30.0**	**-1.2**
	comp=Z,0.5nm,0.5s,baz=34,slow=5.0,SNR=6.6						
GERES	**GERESS Array B**	**92.27**	**329**	P	**P**	**07 19 30.0**	**-1.2**
TXAR	**Lajitas Array**	**95.71**	**53**	P	**P**	**07 19 47.3**	**-0.1**
	comp=Z,0.4nm,0.8s,baz=283,slow=8.2,SNR=2.0						
BOSA	**Boshof**	**124.96**	**252**	PKP	**PKiKP**	**07 25 22.0**	**+0.1**
	comp=Z,5.1nm,1.1s,baz=84,slow=2.5,SNR=3.3						
PLCA	**Paso Flores**	**149.12**	**126**	PKPbc	**PKPbc**	**07 26 09.5**	**+0.1**
	comp=Z,2.7nm,0.9s,baz=201,slow=3.2,SNR=4.1						

KRNET ***20*** *07:13:06.1±0.1, 40°.36N×73°.19E, h12^{km}, mb2.9*
ISU ***20*** *07:13:06, 40°.30N×73°.20E, h5^{km}*
NNC ***20*** *07:13:07.6±2.6, 40°.44N×73°.39E, h0^{km}, mb3.5, mpv3.1,*
Error ellipse: s-maj=18.0km s-min=16.6km az=156.0
SOME ***20*** *07:13:09.5, 40°.53N×73°.27E, h5^{km}*
ISC 20 07:13:05.6±1.1**, 40°.38N**±0°.02×**73°.21E**±0°.02**, h1**^{km}±12^{km}**,**
n35, σ1§73/64**, 31C-3D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	**Osh**	**0.35**	**295**	*e*P	**Pb**	**07 13 14.0**	**-0.7**
OHH				*e*S	**Sb**	**07 13 20.0**	**-0.9**
OHH	**Osh**	**0.35**	**295**	⇑*i*P	**Pg**	**07 13 12.8**	**+0.4**
	baz=97						
OHH				⇑*i*S	**Sg**	**07 13 17.9**	**+0.9**
	baz=97						
SFK	**Sufi-Kurgan**	**0.43**	**148**	*e*P	**Pg**	**07 13 14.0**	**+0.2**
SFK				*e*S	**Sg**	**07 13 20.0**	**+0.6**
SFK	**Sufi-Kurgan**	**0.43**	**148**	⇑*e*P	**Pg**	**07 13 14.1**	**+0.2**
	baz=46						
SFK				⇑*e*S	**Sg**	**07 13 20.3**	**+0.9**
	baz=46						
SALK	**Salom-Alik**	**0.69**	**43**	⇑*e*P	**Pg**	**07 13 19.7**	**+1.0**
	baz=42						
SALK				⇑*e*S	**Sg**	**07 13 29.0**	**+1.4**
	baz=42						
FRG	**Fergana**	**1.09**	**270**	*e*P	**Pn**	**07 13 29.0**	**+1.0**
FRG				*e*S	**Sn**	**07 13 44.0**	**+0.3**
DRK	**Karamyk**	**1.41**	**231**	⇑*i*P	**Pn**	**07 13 31.7**	**-0.9**
	baz=31						
DRK				⇑*i*S	**Sg**	**07 13 51.4**	**+0.7**
	baz=31						
AML	**Almayashu**	**1.79**	**12**	⇑*i*P	**Pb**	**07 13 39.8**	**+0.4**
	baz=12						
AML				⇑*i*S	**Sg**	**07 14 04.0**	**+0.9**
	baz=12						
BTK	**Batken**	**1.86**	**261**	*e*P	**Pg**	**07 13 42.0**	**+0.8**
BTK				*e*S	**Sg**	**07 14 07.0**	**+1.7**
BTK	**Batken**	**1.86**	**261**	⇑*i*P	**Pb**	**07 13 40.3**	**-0.1**
	baz=61						
BTK				⇑*i*S	**Sg**	**07 14 05.2**	**-0.1**
	baz=61						
TRKS	**Terek-Say**	**1.94**	**307**	⇑*i*P	**Pb**	**07 13 41.4**	**-0.5**
	baz=6.0						
TRKS				⇑*i*S	**Sb**	**07 14 06.6**	**-0.1**
	baz=6.0						
UCH	**Uchtor**	**2.09**	**28**	⇑*i*P	**Pb**	**07 13 44.5**	**-0.1**
	baz=28						
UCH				⇑*i*S	**Sg**	**07 14 12.5**	**-0.4**
	baz=28						
MNAS	**Manas**	**2.17**	**346**	⇑*e*P	**Pb**	**07 13 45.6**	**-0.2**
	baz=47						
MNAS				⇑*i*S	**Sb**	**07 14 14.1**	**+0.8**
	baz=47						
EKS2	**Erkin-Say**	**2.32**	**10**	⇑*e*P	**Pb**	**07 13 47.6**	**-0.7**
	baz=11						
EKS2				⇑*i*S	**Sb**	**07 14 17.6**	**+0.1**
	baz=11						
MRKS	**Merke**	**2.37**	**0**	*e*P	**Pg**	**07 13 51.0**	**0.0**
	5.7nm,0.1s						
MRKS				*e*S	**Sg**	**07 14 21.6**	**0.0**
	34nm,0.3s						
MRKS	**Merke**	**2.37**	**0**	Pg	**Pb**	**07 13 49.1**	**+0.1**
	10nm,0.4s						
MRKS				Lg	Lg	07 14 21.6	
	34nm,0.3s						
AAK	**Ala-Archa**	**2.46**	**23**	⇑Pg	**Pb**	**07 13 50.6**	**0.0**
	4.6nm,0.5s						
AAK				⇑Lg	Lg	07 14 22.7	
	6.6nm,0.7s						
AAK	**Ala-Archa**	**2.46**	**23**	⇑*i*P	**Pb**	**07 13 49.5**	**-1.1**
	baz=23						
AAK				⇑*i*S	**Sb**	**07 14 21.2**	**-0.2**
	baz=23						
GAR	**Garm**	**2.62**	**239**	⇑*i*P	**Pb**	**07 13 51.4**	**-2.0**
	baz=39						
GAR				⇑*i*S	**Sb**	**07 14 24.1**	**-2.0**
	baz=39						
KBK	**Karagaybulak**	**2.62**	**29**	⇑*i*P	**Pb**	**07 13 51.9**	**-1.6**
	baz=29						
KBK				⇑*i*S	**Sb**	**07 14 25.3**	**-1.0**
	baz=29						
CHMG	**Chimgan**	**2.69**	**297**	*e*P	**Pg**	**07 13 57.0**	**-0.1**
CHMG				*e*S	**Sg**	**07 14 32.0**	**0.0**
BOOM	**Boomskoye usch**	**2.94**	**43**	⇓*e*P	**Pb**	**07 13 56.5**	**-2.5**
	baz=43						
BOOM				⇓*i*S	**Sb**	**07 14 33.0**	**-2.5**
	baz=43						
ULHL	**Ulahol**	**2.95**	**50**	⇑*i*P	**Pb**	**07 13 56.6**	**-2.5**
	baz=50						
ULHL				⇑*i*S	**Sb**	**07 14 33.1**	**-2.6**
	baz=50						
TKM2	**Tokmak 2**	**3.11**	**34**	⇑Pg	**Pb**	**07 14 03.8**	**+2.0**
	2.4nm,0.6s						
TKM2				⇓Lg	Lg	07 14 41.0	
	2.1nm,0.4s						
KST	**Kastek**	**3.37**	**37**	*e*P	**Pg**	**07 14 08.6**	**-1.6**
	2.3nm,0.1s						
KST				*e*S	**Sb**	**07 14 50.7**	**+3.1**
	7.1nm,0.5s						
KST	**Kastek**	**3.37**	**37**	Pg	**Pb**	**07 14 06.2**	**0.0**
	2.7nm,0.3s						
KST				Lg	Lg	07 14 50.7	
	7.1nm,0.5s						
DGS	**Degeres**	**3.44**	**33**	*e*P	**Pg**	**07 14 10.2**	**-1.4**
	5.4nm,0.5s						
DGS				*e*S	**Sb**	**07 14 52.9**	**+3.1**
	3.5nm,0.3s						
DGS	**Degeres**	**3.44**	**33**	Pg	**Pb**	**07 14 07.2**	**-0.3**
	5.4nm,0.5s						
DGS				Lg	Lg	07 14 52.9	
	5.4nm,0.6s						
MTBS	**Maitube**	**3.66**	**40**	*e*P	**Pb**	**07 14 13.4**	**+2.4**
	1.3nm,0.0s						
MTBS				*e*S	**Sb**	**07 14 59.5**	**+3.7**
	4.4nm,0.5s						
MTBS	**Maitube**	**3.66**	**40**	Pg	**Pb**	**07 14 11.2**	**+0.2**
	3.1nm,0.4s						
MTBS				Lg	Lg	07 14 59.6	
	4.4nm,0.5s						
BRLS	**Borolday**	**3.66**	**317**	*e*P	**Pb**	**07 14 13.3**	**+2.3**
	0.9nm,0.1s						
BRLS				*e*S	**Sg**	**07 14 59.5**	**-3.7**
	4.2nm,0.1s						
TNSS	**Tian-Shan**	**3.86**	**45**	*e*P	**Pg**	**07 14 18.5**	**-1.1**
	1.7nm,0.1s						
TNSS				*e*S	**Sg**	**07 15 07.9**	**-1.7**
	5.0nm,0.2s						
MDOK	**Medeo**	**4.00**	**45**	*e*P	**Pb**	**07 14 19.6**	**+2.7**
	1.3nm,0.1s						
MDOK				*e*S	**Sb**	**07 15 09.8**	**+4.0**
	6.9nm,0.3s						
KUU	**Kurty**	**4.21**	**33**	*e*P	**Pg**	**07 14 25.1**	**-1.2**
	1.0nm,0.1s						
KUU				*e*S	**Sg**	**07 15 19.2**	**-1.7**
	5.9nm,0.6s						
BTLS	**Baital**	**4.70**	**7**	*e*P	**Pb**	**07 14 32.5**	**+3.7**
	0.8nm,0.1s						
BTLS				*e*S	**Sg**	**07 15 32.7**	**-3.9**
	2.4nm,0.2s						

NNC ***20*** *07:18:31.9±0.7, 50°.02N×78°.74E, h5^{km}±9^{km}, mb3.4,*
mpv3.1, Error ellipse: s-maj=6.7km s-min=5.2km az=48.0,
Suspected Mining explosion.
IDC ***20*** *07:18:33.2±1.2, 50°.06N×78°.80E, h0^{km}, mb1 3.1/2,*
mb1mx3.0/42, mbtmp3.1/2, ML2.7/2, Error ellipse:
s-maj=13.3km s-min=7.9km az=64.0
ISC 20 07:18:32.6±0.9**, 50°.02N**±0°.05×**78°.74E**±0°.05**, h0**^{km}**, n13,**
σ1§98/17**, 13C-2D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**0.62**	**348**	Pg	**Pg**	**07 18 44.2**	**-0.3**
	4.9nm,0.3s,baz=164,slow=18,SNR=242						
KURBB				Lg	Lg	07 18 53.2	
	5.2nm,0.3s,baz=160,slow=34,SNR=18						
KURBB	**Kurchatov Arra**	**0.62**	**348**	⇑P	**Pg**	**07 18 44.2**	**-0.3**
	35nm,0.3s						
KURBB				⇑S	**Sg**	**07 18 53.6**	**+1.0**
	64nm,0.5s						
KURK	**Kurchatov**	**0.70**	**354**	⇓P	**Pg**	**07 18 45.5**	**-0.7**
	16nm,0.4s						
KURK				⇑S	**Sg**	**07 18 55.7**	**+0.5**
	18nm,0.6s						
SEM	**Semipalatinsk**	**1.05**	**67**	P	**Pg**	**07 18 52.5**	**-0.1**
	6.9nm,0.2s						
SEM				S	**Sg**	**07 19 06.7**	**+0.5**
	86nm,0.3s						
MAKZ	**Makanchi**	**3.87**	**145**	⇑Pg	**Pb**	**07 19 41.4**	**-0.3**
	3.8nm,0.7s						
MAKZ				⇑Lg	Lg	07 20 30.5	
	6.3nm,0.5s						
BRZS	**Berezniki**	**3.91**	**272**	Lg	Lg	07 20 36.8	
	6.8nm,0.6s						
MK31	**Makanchi Array**	**4.00**	**142**	⇑Pn	**Pn**	**07 19 36.4**	**+1.3**
	0.8nm,0.5s,baz=324,slow=10,SNR=32						
MK31				⇑Pg	**Pb**	**07 19 44.8**	**+0.9**
	1.1nm,0.3s,baz=322,slow=14,SNR=19						
MK31				⇑Lg	Lg	07 20 37.3	
	8.8nm,0.5s,baz=328,slow=27,SNR=15						
MKAR	**Makanchi Array**	**4.00**	**142**	Pn	**Pn**	**07 19 36.4**	**+1.3**
	0.6nm,0.3s,baz=328,slow=11,SNR=28						
MKAR				Lg	Lg	07 20 36.6	
	3.4nm,0.3s,baz=330,slow=27,SNR=12						
OTUK	**Ortayu**	**4.56**	**250**	⇑Pn	**Pn**	**07 19 43.4**	**+0.5**
	1.0nm,0.2s						
OTUK				⇓Pg	**Pb**	**07 19 54.8**	**+1.3**
	1.3nm,0.5s						
OTUK				⇑Lg	Lg	07 20 56.9	
	3.4nm,0.5s						
KAPS	**Kapalarasan**	**4.75**	**175**	Pg	**Pg**	**07 19 59.3**	**-4.3**
	2.1nm,0.4s						
KAPS				Lg	Lg	07 21 01.0	
	9.3nm,0.4s						
I46RU	**ZALESOVO INFRA**	**5.44**	**41**	*i*		07 51 40.0	
	baz=222,slow=337,SNR=1.7						
ZALV	**Zalesovo Beam**	**5.44**	**41**	Pn	**Pn**	**07 19 56.8**	**+1.9**

	1.2nm,0.3s,baz=231,slow=14,SNR=14						
ZALV				Lg	Lg	07 21 23.6	
	0.5nm,0.3s,baz=224,slow=29,SNR=3.1						
BRVK	**Borovoye**	**6.09**	**303**	⇑Pg	**Pg**	**07 20 25.4**	**-3.9**
	0.6nm,0.5s						
BRVK				⇑Sn	**Sn**	**07 21 11.1**	**-3.1**
	1.6nm,0.6s						
BRVK				⇑Lg	Lg	07 21 43.1	
	1.7nm,0.5s						

KMA 20 07:26:33.6±0.2, 35°.95N×127°.06E, h31^{km}, Error ellipse: s-maj=4.1km s-min=2.6km az=4.0, South Korea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSJEO	**Jeonju**	**0.19**	**92**	P	Pb	07 26 39.2	-0.6
	SNR=21						
KSJEU	**Jeongeup**	**0.46**	**194**	P	Pb	07 26 43.5	0.0
	SNR=6.8						
SMKB	**Mukjeong-gil**	**0.48**	**238**	P	Pb	07 26 43.9	0.0
	SNR=171						
ANMD	**Anmado**	**1.03**	**235**	P	Pn	07 26 51.0	-1.0
	SNR=7.1						

IDC 20 07:32:33.2±3.0, 53°.79N×86°.93E, h0^{km}, mb1 2.8/2, mb1mx2.7/51, mbtmp2.8/2, ML2.5/2, Error ellipse: s-maj=28.5km s-min=16.2km az=63.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.26**	**278**	*i*		07 39 10.0	
	baz=98,slow=340,SNR=6.9						
ZALV	**Zalesovo Beam**	**1.26**	**278**	Pg	Pg	07 32 56.3	-1.0
	1.1nm,0.3s,baz=96,slow=15,SNR=14						
ZALV				Lg	Lg	07 33 14.1	
	0.9nm,0.3s,baz=95,slow=28,SNR=6.5						
ZALV				Rg	Rg	07 33 22.9	
	1.7nm,0.4s,baz=100,slow=30,SNR=9.3						
KURBB	**Kurchatov Arra**	**6.06**	**242**	Pn	Pn	07 34 05.2	+1.3
	0.1nm,0.3s,baz=58,slow=14,SNR=4.1						
MKAR	**Makanchi Array**	**7.60**	**205**	Pn	Pn	07 34 26.2	+1.0
	0.1nm,0.3s,baz=24,slow=13,SNR=5.3						

EST 20 07:46:07.7±0.1, 59°.23N×27°.75E, h0^{km}, ML1.5(HEL), Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EE04	**Vaivara Sinima**	**0.16**	**24**	*e*P	Pg	07 46 10.6	-0.2
EE04				*e*S	Sg	07 46 12.6	-0.4
EE05	**Udria, Vaivara**	**0.19**	**28**	*e*P	Pg	07 46 11.1	-0.3
EE05				*e*S	Sg	07 46 13.7	-0.1
EE03	**Tooma soojaam,**	**0.84**	**246**	*e*P	Pg	07 46 22.7	-1.0
EE03				*e*S	Sg	07 46 33.5	-1.1
ARBE	**Arbavere**	**0.93**	**284**	*e*P	Pg	07 46 24.3	-1.2
VSU	**Vasula**	**0.93**	**215**	*e*P	Pg	07 46 25.0	-0.4
VJF	**Virojoki**	**1.32**	**356**	*e*P	Pg	07 46 31.1	-1.9
VJF				*e*SB	Sg	07 46 48.9	-1.2
EE02	**Kiisa, Saku**	**1.57**	**270**	*e*P	Pn	07 46 35.9	-0.9
EE02				*e*S	Sn	07 46 55.7	-2.0
PVF	**Pernaja**	**1.63**	**325**	*e*PG	Pn	07 46 37.0	-0.6
PVF				*e*S	Sn	07 46 57.6	-1.6
PVF				MSG		07 47 01.9	
	comp=Z,2.8nm,0.1s						
MEF	**Metsahovi**	**1.97**	**302**	*e*PG	Pn	07 46 43.1	+0.8
MEF				*e*SG	Sn	07 47 08.0	+0.4
MEF				MSG		07 47 09.7	
	comp=Z,1.4nm,0.1s						
NUR	**Nurmijrvi**	**2.02**	**311**	*e*PG	Pn	07 46 44.1	+1.0
NUR				*e*SB	Sn	07 47 09.1	+0.1
NUR				MSG		07 47 11.5	
	comp=Z,1.9nm,0.1s						
MTSE	**Matsula**	**2.10**	**258**	*e*PG	Pn	07 46 45.1	+1.1
MTSE				*e*SG	Sb	07 47 12.3	-0.9
EE01	**Perakula, Nova**	**2.12**	**271**	*e*PG	Pn	07 46 45.4	+1.1
EE01				*e*SG	Sb	07 47 12.9	-0.8
RUFX	**Ruokolahti**	**2.29**	**15**	*e*P	Pn	07 46 46.5	-0.3
RUFX				*e*PB	Pb	07 46 47.4	-2.4
RUFX				*e*SG	Sb	07 47 17.8	-1.0
FIA0	**FINESS Array S**	**2.38**	**340**	*e*P	Pn	07 46 47.7	-0.2
FIA0				*e*PB	Pb	07 46 49.0	-2.2
FIA0				*e*S	Sn	07 47 16.9	-0.7
FIA0				*e*SB	Sb	07 47 19.9	-1.2
FIA0				MSG		07 47 21.9	
	comp=Z,1.7nm,0.1s						
FIA1	**FINESS Array S**	**2.38**	**340**	*e*P	Pn	07 46 47.6	-0.2
FIA1				*e*PB	Pb	07 46 49.1	-2.2
FIA1				*e*SG	Sb	07 47 20.5	-0.6
FIA1				MSG		07 47 22.0	
	comp=Z,1.7nm,0.1s						
EE06	**Soera, Palade,**	**2.54**	**266**	*e*SB	Sb	07 47 23.9	-2.0
KAF	**Kangasniemi**	**2.98**	**347**	*e*PB	Pb	07 46 59.0	-2.6
KAF				*e*SG	Sb	07 47 38.7	+0.1
KAF				MSG		07 47 39.9	
	comp=Z,1.3nm,0.1s						
KEF	**Keuruu**	**3.27**	**336**	*e*PB	Pb	07 47 04.2	-2.3
KEF				*e*PG	Pg	07 47 06.8	-3.6
RAF	**Rauma**	**3.49**	**304**	*e*P	Pn	07 47 04.1	+0.9
JOF	**Joensuu**	**4.09**	**24**	*e*P	Pn	07 47 11.9	+0.5

MOS ***20*** *07:48:09.8±1.1, 51°.53N×16°.18E, h12^{km}, mb4.3/6, Error ellipse: s-maj=7.8km s-min=4.3km az=85.7*
DNK ***20*** *07:48:09.4±1.0, 51°.48N×16°.40E, h13^{km}±40^{km}, ML2.4*
PRU ***20*** *07:48:10.6±0.0, 51°.47N×16°.17E, h0^{km}*
IPEC ***20*** *07:48:10.0±0.4, 51°.48N×16°.29E, h2^{km}±2^{km}, ML3.2/3, Error ellipse: s-maj=4.1km s-min=1.8km az=56.0*
IDC ***20*** *07:48:10.6±0.6, 51°.46N×16°.09E, h0^{km}, mb3.7/6, mb1 3.7/14, mb1mx3.6/48, mbtmp3.6/14, ML3.2/7, Error ellipse: s-maj=10.6km s-min=6.2km az=115.0*
BGR ***20*** *07:48:10.2±0.6, 51°.50N×16°.23E, h1^{km}, ML3.4/7, Error ellipse: s-maj=6.7km s-min=4.4km az=29.0*

ISC 20 07:48:09.3±0.5, 51°.54N±0°.02×16°.23E±0°.02, h0^{km}, n129, σ1^{s}50/198, mb3.8/10, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.70**	**177**	*e*Pg	**Pg**	**07 48 22.6**	**0.0**
KSP				*e*Sg	**Sg**	**07 48 30.8**	**-1.0**
KSP	**Ksiaz**	**0.70**	**177**	P	**Pg**	**07 48 22.7**	**0.0**
KSP	**Ksiaz**	**0.70**	**177**	*e*Pg	**Pg**	**07 48 22.7**	**0.0**
KSP				*e*Sg	**Sg**	**07 48 30.9**	**-0.9**
CHVC	**Chvalec**	**0.96**	**187**	*e*PG	**Pg**	**07 48 27.6**	**0.0**
CHVC				*e*SG	**Sg**	**07 48 39.2**	**-0.9**
OSTC	**Ostas**	**0.98**	**181**	*e*PG	**Pg**	**07 48 28.2**	**+0.1**
OSTC				*e*SG	**Sg**	**07 48 40.2**	**-0.7**
	comp=Z,350nm,0.6s						
UPC	**Upice**	**1.04**	**188**	*e*P	**Pg**	**07 48 28.9**	**-0.3**
UPC				*e*		07 48 41.5	
UPC	**Upice**	**1.04**	**188**	*e*PG	**Pg**	**07 48 28.9**	**-0.3**
UPC				*e*SG	**Sg**	**07 48 41.5**	**-1.3**
DPC	**Dobruska-Polom**	**1.19**	**177**	*e*P	**Pg**	**07 48 31.6**	**-0.5**
DPC				*e*		07 48 46.0	
DPC				smax	smax		
	comp=N,266nm,0.5s						
DPC	**Dobruska-Polom**	**1.19**	**177**	*e*PG	**Pg**	**07 48 31.6**	**-0.5**
DPC				*e*SG	**Sg**	**07 48 46.0**	**-1.6**
	comp=N,266nm,0.5s						
DPC	**Dobruska-Polom**	**1.19**	**177**	*e*Pg	**Pg**	**07 48 31.5**	**-0.5**
DPC				*e*Sg	**Sg**	**07 48 46.3**	**-1.2**
PVCC	**Panska Ves**	**1.46**	**227**	*e*P	**Pn**	**07 48 36.5**	**-0.4**
PVCC				*e*		07 48 55.9	
PVCC				smax	smax		
	comp=N,660nm,0.4s						
PVCC	**Panska Ves**	**1.46**	**227**	*e*PG	**Pn**	**07 48 36.5**	**-0.4**
PVCC				*e*SG	**Sg**	**07 48 55.9**	**-0.2**
	comp=N,660nm,0.4s						
KRLC	**Kraliky**	**1.51**	**166**	*e*P	**Pn**	**07 48 37.1**	**-0.5**
KRLC				*e*		07 48 56.2	
KRLC				smax	smax		
	comp=N,163nm,0.5s						
KRLC	**Kraliky**	**1.51**	**166**	*e*PG	**Pn**	**07 48 37.1**	**-0.5**
KRLC				*e*SG	**Sg**	**07 48 56.2**	**-1.5**
	comp=N,163nm,0.5s						
BRG	**Berggiesshubel**	**1.59**	**246**	P	**Pn**	**07 48 38.5**	**-0.1**
BRG	**Berggiesshubel**	**1.59**	**246**	*e*Pn	**Pn**	**07 48 37.5**	**-1.1**
BRG				*e*Sg	**Sn**	**07 48 59.6**	**-0.2**
BRG	**Berggiesshubel**	**1.59**	**246**	Pn	**Pn**	**07 48 37.7**	**-0.9**
BRG				Pg	**Pg**	**07 48 39.8**	**+0.2**
BRG				Sg	**Sb**	**07 48 59.9**	**-0.1**
BRG				Amp		07 49 03.1	
	comp=Z,241nm,0.5s						
RUE	**Ruedersdorf**	**1.78**	**303**	*e*P	**Pn**	**07 48 41.4**	**+0.1**
RUE				*e*S	**Sg**	**07 49 09.6**	**+3.1**
GKP	**Gorka Klasztor**	**1.84**	**19**	*e*P	Pg	07 48 51.4	+6.9
PRA	**Prague**	**1.86**	**218**	*e*P	**Pb**	**07 48 44.0**	**-0.1**
PRA				*e*		07 49 07.7	
PRA	**Prague**	**1.86**	**218**	*e*PG	**Pb**	**07 48 44.0**	**-0.1**
PRA				*e*SG	**Sb**	**07 49 07.7**	**-0.2**
PRU	**Pruhonice**	**1.89**	**215**	*e*P	**Pn**	**07 48 41.9**	**-0.9**
PRU				*e*		07 49 07.4	
PRU				smax	smax		
	comp=N,212nm,0.6s						
PRU	**Pruhonice**	**1.89**	**215**	*e*PN	**Pn**	**07 48 41.9**	**-0.9**
PRU				*e*PG	**Pb**	**07 48 43.8**	**-0.8**
PRU				*e*SG	**Sn**	**07 49 07.4**	**+0.2**
	comp=N,212nm,0.6s						
FBE	**Freiberg**	**1.91**	**252**	*e*Pn	**Pn**	**07 48 42.4**	**-0.7**
FBE				*e*Sg	**Sg**	**07 49 10.2**	**-0.4**
RAC	**Raciborz**	**1.92**	**139**	*e*PG	**Pg**	**07 48 46.0**	**0.0**
RAC				*e*SG	**Sg**	**07 49 10.7**	**-0.2**
RAC	**Raciborz**	**1.92**	**139**	*e*P	**Pg**	**07 48 46.0**	**0.0**
RAC				*e*		07 49 10.7	
MORC	**Moravsky Berou**	**1.95**	**154**	P	**Pn**	**07 48 43.3**	**-0.4**
MORC	**Moravsky Berou**	**1.95**	**154**	*e*Pn	**Pn**	**07 48 43.0**	**-0.7**
	baz=335						
MORC				*e*Sg	**Sn**	**07 49 08.8**	**-0.1**
	comp=N,166nm,0.9s,baz=335						
MORC	**Moravsky Berou**	**1.95**	**154**	*e*PN	**Pn**	**07 48 43.1**	**-0.7**
MORC				*e*SG	**Sn**	**07 49 08.9**	**0.0**
MORC	**Moravsky Berou**	**1.95**	**154**	*e*Pn	**Pn**	**07 48 43.2**	**-0.6**
CLL	**Collm**	**2.03**	**265**	*e*P	**Pn**	**07 48 44.0**	**-0.7**
CLL				*e*		07 49 15.0	
CLL	**Collm**	**2.03**	**265**	*e*Pn	**Pn**	**07 48 44.0**	**-0.7**
CLL				*e*Pg	**Pb**	**07 48 47.0**	**-0.1**
CLL				*e*Pgmax		07 48 48.0	
CLL				*e*		07 48 51.0	
CLL				*e*Sg	**Sg**	**07 49 15.0**	**+0.4**
	comp=Z,155nm,0.5s						
CLL	**Collm**	**2.03**	**265**	*e*Pn	**Pn**	**07 48 44.1**	**-0.7**
VRAC	**Vranov**	**2.25**	**174**	Pn	**Pn**	**07 48 47.9**	**+0.2**
	comp=Z,9.3nm,0.3s,baz=353,slow=15,SNR=16						
VRAC				Lg	Lg	07 49 19.0	
	comp=Z,14nm,0.3s,baz=238,slow=16,SNR=6.5						
VRAC	**Vranov**	**2.25**	**174**	*e*Pn	**Pn**	**07 48 47.2**	**-0.5**
	baz=355						
VRAC				*e*Sg	**Sb**	**07 49 18.0**	**-1.0**
	comp=Z,129nm,0.7s,baz=355						
VRAC	**Vranov**	**2.25**	**174**	*e*PN	**Pn**	**07 48 47.3**	**-0.5**
VRAC				*e*SG	**Sb**	**07 49 18.1**	**-1.0**
TREC	**Trest**	**2.30**	**192**	*e*P	**Pb**	**07 48 51.6**	**0.0**
TREC				*e*		07 49 20.5	
TREC				smax	smax		
	comp=N,83nm,0.3s						
TREC	**Trest**	**2.30**	**192**	*e*PG	**Pb**	**07 48 51.6**	**0.0**
TREC				*e*SG	**Sb**	**07 49 20.5**	**0.0**
	comp=N,83nm,0.3s						
KRUC	**Moravsky**	**2.48**	**177**	P	**Pn**	**07 48 51.8**	**+0.8**
KRUC	**Moravsky**	**2.48**	**177**	*e*Pn	**Pn**	**07 48 50.6**	**-0.4**
	baz=358						
KRUC				*e*Sg	**Sb**	**07 49 25.7**	**-0.2**
	comp=N,130nm,0.7s,baz=358						
OJC	**Ojcow**	**2.62**	**119**	*e*Pn	**Pn**	**07 48 51.6**	**-1.2**
OJC				*e*Pg	**Pg**	**07 48 58.9**	**-0.5**
OJC				*e*Sg	**Sg**	**07 49 34.0**	**+0.6**
OJC	**Ojcow**	**2.62**	**119**	*e*Pn	**Pn**	**07 48 51.4**	**-1.4**
TANN	**Tannenbergstha**	**2.63**	**246**	*e*Pn	**Pn**	**07 48 53.1**	**+0.1**
WERD	**Werda**	**2.71**	**248**	*e*Pn	**Pn**	**07 48 53.9**	**-0.2**
NKC	**Novy Kostel**	**2.73**	**243**	*e*P	**Pn**	**07 48 54.3**	**-0.1**
NKC				*e*		07 49 36.2	
NKC				smax	smax		
	comp=N,153nm,0.5s						
NKC	**Novy Kostel**	**2.73**	**243**	*e*PN	**Pn**	**07 48 54.3**	**-0.1**
NKC				*e*PG	**Pg**	**07 49 00.9**	**-0.7**
NKC				*e*SG	**Sg**	**07 49 36.2**	**-0.7**
	comp=N,153nm,0.5s						
JAVC	**Velka Javorina**	**2.84**	**160**	*e*PN	**Pn**	**07 48 55.6**	**-0.3**
KHC	**Kasperske Hory**	**2.95**	**216**	*e*P	**Pn**	**07 48 56.6**	**-0.8**
KHC				*e*		07 49 32.3	
KHC				smax	smax		
	comp=N,79nm,0.6s						
KHC	**Kasperske Hory**	**2.95**	**216**	*e*PN	**Pn**	**07 48 56.6**	**-0.8**
KHC				*e*PG	**Pb**	**07 49 02.7**	**0.0**
KHC				*e*SN	**Sn**	**07 49 32.3**	**-1.2**
KHC				*e*SG	**Sg**	**07 49 42.0**	**-2.0**
	comp=N,79nm,0.6s						
CKRC	**Cesky Krumlov**	**2.99**	**205**	*e*PN	**Pn**	**07 48 57.9**	**0.0**
CKRC				*e*PG	**Pb**	**07 49 04.1**	**+0.7**
CKRC				*e*SG	**Sb**	**07 49 41.5**	**+1.0**
	comp=N,89nm,0.6s						
MOX	**Moxa**	**3.04**	**255**	P	**Pn**	**07 48 59.5**	**+0.8**
SMOL	**Smolenice**	**3.13**	**165**	*e*P	**Pg**	**07 49 08.7**	**-0.5**
SMOL	**Smolenice**	**3.13**	**165**	*e*PG	**Pg**	**07 49 08.7**	**-0.5**
SMOL				*e*SG	**Sg**	**07 49 49.4**	**-0.3**
GEC2	**GERESS Array S**	**3.15**	**212**	*e*Pn	**Pn**	**07 49 00.1**	**-0.1**
GERES	**GERESS Array B**	**3.15**	**212**	Pn	**Pn**	**07 48 59.8**	**-0.4**
	comp=N,2.9nm,0.3s,baz=32,slow=13,SNR=53						
GERES				Pg	**Pb**	**07 49 06.2**	**0.0**
	comp=N,11nm,0.3s,baz=37,slow=16,SNR=40						
GERES				Lg	Lg	07 49 45.9	
	comp=N,19nm,0.3s,baz=29,slow=25,SNR=11						
LANS	**Liptovska Anna**	**3.17**	**138**	*e*P	**Pn**	**07 49 00.9**	**+0.5**
LANS				pmax	pmax		
	comp=N,34nm,0.4s						
LANS	**Liptovska Anna**	**3.17**	**138**	*e*PN	**Pn**	**07 49 00.9**	**+0.5**
LANS				*e*PG	**Pg**	**07 49 09.7**	**-0.2**
LANS				*e*SG	**Sg**	**07 49 50.5**	**-0.4**
LANS				*e*LG	Lg	07 49 58.3	
WET	**Wettzell**	**3.22**	**223**	P	**Pn**	**07 49 00.9**	**-0.2**
WET	**Wettzell**	**3.22**	**223**	*e*Pn	**Pn**	**07 49 00.8**	**-0.3**
MODS	**Modra-Piesok**	**3.24**	**168**	*e*P	**Pn**	**07 49 01.8**	**+0.4**
MODS				pmax	pmax		
	comp=N,138nm,1.0s						
MODS	**Modra-Piesok**	**3.24**	**168**	*e*PN	**Pn**	**07 49 01.8**	**+0.4**
MODS				*e*PG	**Pg**	**07 49 10.5**	**-0.9**
MODS				*e*SG	**Sg**	**07 49 52.9**	**-0.5**
MODS				*e*LG	Lg	07 50 02.7	
KOLL	**Kolacno**	**3.28**	**154**	*e*PN	**Pn**	**07 49 02.6**	**+0.7**
KOLL				*e*PG	**Pg**	**07 49 11.9**	**-0.2**
KOLL				*e*SG	**Sg**	**07 49 54.1**	**-0.5**
NIE	**Niedzica**	**3.36**	**128**	*e*P	**Pg**	**07 49 14.0**	**+0.4**
NIE				*e*S	**Sg**	**07 49 58.6**	**+1.5**
NIE	**Niedzica**	**3.36**	**128**	P	**Pb**	**07 49 07.6**	**-2.1**
ZST	**Bratislava**	**3.40**	**170**	*e*P	**Pg**	**07 49 13.1**	**-1.2**
ZST				pmax	pmax		
	comp=N,142nm,0.9s						
ZST	**Bratislava**	**3.40**	**170**	*e*PG	**Pg**	**07 49 13.1**	**-1.2**
ZST				*e*SG	**Sg**	**07 49 56.7**	**-1.6**
ZST				*e*LG	Lg	07 50 02.3	
VYHS	**Vyhne**	**3.48**	**150**	*e*P	**Pn**	**07 49 04.3**	**-0.4**
VYHS	**Vyhne**	**3.48**	**150**	*e*PN	**Pn**	**07 49 04.3**	**-0.4**
VYHS				*e*PG	**Pg**	**07 49 16.9**	**+0.9**
VYHS				*e*SG	**Sg**	**07 49 59.2**	**-1.9**
CONA	**Conrad Observa**	**3.62**	**184**	*e*Pn	**Pn**	**07 49 07.0**	**+0.3**
	comp=N,2.9nm,0.4s						
CONA				*e*Sg	**Sg**	**07 50 03.8**	**-1.8**
	comp=N,77nm,0.5s						
BSD	**Bornholm Skovb**	**3.67**	**348**	*e*P	**Pn**	**07 49 07.4**	**+0.2**
GRF	**Grafenberg Arr**	**3.69**	**242**	P	**Pn**	**07 49 07.5**	**0.0**
STHS	**Stebnicka Huta**	**3.84**	**122**	*e*P	**Pg**	**07 49 22.8**	**-0.1**
STHS	**Stebnicka Huta**	**3.84**	**122**	*e*PG	**Pg**	**07 49 22.8**	**-0.1**
STHS				*e*SG	**Sg**	**07 50 14.2**	**+1.5**
SOP	**Sopron**	**3.87**	**177**	*e*P	**Pg**	**07 49 24.7**	**+1.3**
SOP	**Sopron**	**3.87**	**177**	P	**Pn**	**07 49 10.5**	**+0.5**
MOA	**Molln**	**3.91**	**200**	*e*Pn	**Pn**	**07 49 10.8**	**+0.2**
	comp=N,19nm,0.6s						
MOA				*e*Sg	**Sg**	**07 50 11.9**	**-2.9**
	comp=N,90nm,0.8s						
CRVS	**Cervenica-Dubn**	**4.27**	**126**	*e*P	**Pg**	**07 49 31.5**	**+0.4**
CRVS	**Cervenica-Dubn**	**4.27**	**126**	*e*PG	**Pg**	**07 49 31.5**	**+0.4**
CRVS				*e*SG	**Sg**	**07 50 27.9**	**+1.4**
ARSA	**Arzberg**	**4.32**	**186**	*e*Pn	**Pn**	**07 49 18.4**	**+2.2**
	comp=N,2.3nm,0.3s						
ARSA				*e*Sg	**Sg**	**07 50 28.4**	**+0.5**
	comp=N,69nm,0.7s						
BSEG	**Bad Segeberg**	**4.32**	**306**	P	**Pn**	**07 49 16.7**	**+0.6**
PSZ	**Piszkesteto**	**4.33**	**145**	*e*P	**Pn**	**07 49 18.2**	**+1.8**
PSZ	**Piszkesteto**	**4.33**	**145**	P	**Pn**	**07 49 18.2**	**+1.8**
LUNU	**Lund**	**4.42**	**339**	*i* P	**Pn**	**07 49 17.1**	**-0.5**
LUNU				*i* S	**Sn**	**07 50 08.5**	**-1.2**
KOLS	**Kolonicke sedl**	**4.67**	**122**	*e*P	**Pn**	**07 49 21.5**	**+0.4**
KOLS	**Kolonicke sedl**	**4.67**	**122**	*e*PN	**Pn**	**07 49 21.5**	**+0.4**
KOLS				*e*PG	**Pg**	**07 49 40.3**	**+1.5**
KOLS				*e*SG	**Sg**	**07 50 37.9**	**-1.5**
BLEU	**Blekinge**	**4.78**	**357**	*e*	**Pn**	**07 49 22.5**	**+0.1**
	baz=176,slow=11						
BLEU				*i* P	**Pn**	**07 49 23.0**	**+0.6**
BLEU				*i* S	**Sn**	**07 50 15.6**	**-2.9**
BLEU				IAML		07 50 20.3	
	comp=Z,1.1nm,0.4s						
KBA	**Koelnbreinsper**	**4.85**	**204**	*e*Pn	**Pn**	**07 49 24.2**	**+0.6**
	comp=Z,7.1nm,0.4s						
KBA				*e*Sg	**Sg**	**07 50 45.3**	**+0.3**
	comp=Z,61nm,0.8s						
UZH	**Uzhgorod**	**4.87**	**124**	*e*P	**Pn**	**07 49 25.5**	**+1.8**
UZH				*e*S	**Sn**	**07 50 22.8**	**+2.1**
SOKA	**Soboth**	**4.93**	**190**	*e*Sg	**Sg**	**07 50 44.5**	**-3.1**
	comp=Z,11nm,0.5s						
TNS	**Taunus Mts**	**5.10**	**258**	P	**Pn**	**07 49 27.0**	**0.0**
DEL	**Delary**	**5.13**	**345**	*i* P	**Pn**	**07 49 27.5**	**+0.2**
DEL				*i* S	**Sn**	**07 50 24.4**	**-2.8**
DEL				IAML		07 50 27.5	
	comp=Z,4.1nm,0.4s						
OBKA	**Obir**	**5.16**	**193**	*e*Pn	**Pn**	**07 49 28.5**	**+0.8**
	comp=Z,3.1nm,0.4s						
OBKA				*e*Sg	**Sb**	**07 50 48.2**	**+5.4**
	comp=Z,36nm,0.8s						
WATA	**Walderalm**	**5.19**	**218**	Pn	**Pn**	**07 49 29.1**	**+0.9**
	comp=Z,8.9nm,0.6s,SNR=4.5						
WATA				*e*Sg	**Sg**	**07 50 54.8**	**-1.0**
	comp=Z,28nm,0.6s						
MYKA	**Terra Mystica**	**5.20**	**200**	*e*Sg	**Sg**	**07 50 53.1**	**-3.1**
	comp=Z,24nm,0.6s						
WTTA	**Wattenberg**	**5.23**	**217**	*e*Pn	**Pn**	**07 49 29.7**	**+0.9**
	comp=Z,6.5nm,0.5s						
WTTA				*e*Sg	**Sg**	**07 50 53.9**	**-3.1**
	comp=Z,59nm,0.8s						
WTTA	**Wattenberg**	**5.23**	**217**	P	**Pn**	**07 49 29.9**	**+1.1**
WTTA				pmax	pmax		
	comp=Z,13nm,0.6s						
MOTA	**Moosalm**	**5.37**	**221**	*e*Pn	**Pn**	**07 49 31.3**	**+0.6**
	comp=Z,4.2nm,0.5s						
MOTA				*e*Sg	**Sg**	**07 51 02.7**	**+1.1**
	comp=Z,28nm,0.6s						
ABTA	**Abfaltersbach**	**5.38**	**208**	*e*Pn	**Pn**	**07 49 31.7**	**+0.8**
	comp=Z,5.1nm,0.6s						
ABTA				*e*Sg	**Sb**	**07 50 54.5**	**+5.2**
	comp=Z,36nm,0.7s						
RETA	**Reutte**	**5.40**	**223**	*e*Pn	**Pn**	**07 49 30.8**	**-0.2**
	comp=Z,3.8nm,0.3s						
RETA				*e*Sg	**Sg**	**07 51 00.5**	**-2.1**
	comp=Z,25nm,0.7s						
FETA	**Feichten**	**5.78**	**221**	*e*Pn	**Pn**	**07 49 36.7**	**+0.3**
	comp=Z,2.2nm,0.6s						
FETA				*e*Sg	**Sg**	**07 51 09.1**	**-5.8**
	comp=Z,14nm,0.7s						
FABU	**Falkenberg**	**5.84**	**341**	*i* P	**Pn**	**07 49 37.2**	**+0.2**
FABU				*i* S	**Sn**	**07 50 40.9**	**-3.8**
FABU				IAML		07 50 46.6	
	comp=Z,3.3nm,0.3s						
PABE	**Paberze**	**6.09**	**46**	*e*P	**Pn**	**07 49 42.4**	**+2.0**
DAVOX	**Davos/Dischmat**	**6.33**	**224**	Pn	**Pn**	**07 49 42.6**	**-1.3**
	comp=Z,0.7nm,0.3s,baz=358,slow=14,SNR=5.2						
DAVOX				Lg	Lg	07 51 29.5	
	comp=Z,0.8nm,0.3s,baz=6.5,slow=24,SNR=5.8						
DRGR		**6.37**	**136**	P	**Pn**	**07 49 44.9**	**+0.4**
DRGR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
AKASG	**Malin Array Be**	**8.22**	**91**	Pn	**Pn**	**07 50 08.9**	**-0.8**
	comp=Z,3.2nm,0.3s,baz=279,slow=12,SNR=20						
AKASG				Sn	**Sn**	**07 51 38.8**	**-4.5**
	comp=Z,2.0nm,0.3s,baz=274,slow=23,SNR=4.5						
AKASG	**Malin Array Be**	**8.22**	**91**	*i* P	**Pn**	**07 50 10.8**	**+1.1**
AKASG				pmax	pmax		
	comp=Z,6.0nm,0.5s						
AKBB	**Malin Array Si**	**8.22**	**91**	*i* P	**Pn**	**07 50 10.5**	**+0.8**
HFS	**Hagfors**	**8.73**	**352**	Pn	**Pn**	**07 50 16.6**	**0.0**
	comp=Z,0.4nm,0.3s,baz=162,slow=15,SNR=7.2						
NOA	**NORSAR Array B**	**9.92**	**346**	Pn	**Pn**	**07 50 31.5**	**-1.5**
	comp=Z,0.0nm,0.3s,baz=163,slow=12,SNR=5.1						
FINES	**FINESS Array B**	**11.30**	**25**	Pn	**Pn**	**07 50 50.4**	**-1.5**
	comp=Z,0.4nm,0.3s,baz=211,slow=12,SNR=9.1						
FINES				Sn	**Sn**	**07 52 53.0**	**-5.7**
	comp=Z,0.4nm,0.3s,baz=204,slow=20,SNR=4.2						
EKA	**Eskdalemuir Ar**	**12.16**	**296**	Pn	**Pn**	**07 51 01.2**	**-2.4**
	baz=99,slow=14,SNR=4.6						
OBN	**Obninsk**	**12.66**	**66**	*i* P	**Pn**	**07 51 13.5**	**+3.1**
OBN				pmax	pmax		
	comp=Z,10.0nm,1.4s						
KLMR	**Klimovskoe**	**15.88**	**45**	*e*P	**Pn**	**07 51 49.2**	**-4.6**
KLMR				pmax	pmax		
	comp=Z,15nm,1.5s						
KLMR	**Klimovskoe**	**15.88**	**45**	*e*Pn	**Pn**	**07 51 49.3**	**-4.6**
KLMR				AMP		07 52 07.2	
	comp=Z,15nm,1.5s						
ARCES	**ARCESS Array B**	**18.58**	**10**	Pn	**P**	**07 52 25.1**	**-2.4**
	baz=191,slow=13,SNR=12						
BELG	**Belogornoye**	**19.29**	**75**	*i* P	**Pn**	**07 52 36.6**	**+0.3**
ARU	**Arti**	**25.06**	**62**	P	**P**	**07 53 36.5**	**+1.5**
	comp=Z,1.1nm,0.3s,baz=270,slow=18,SNR=4.4						
ARU	**Arti**	**25.06**	**62**	*i* P	**P**	**07 53 36.0**	**+1.1**
ARU				pmax	pmax		
	comp=Z,5.0nm,1.0s						
AKTO	**Aktyubinsk**	**26.07**	**76**	P	**P**	**07 53 45.2**	**+0.9**
	comp=Z,1.3nm,0.5s,baz=286,slow=14,SNR=5.5						
BRVK	**Borovoye**	**32.44**	**66**	*i* P	**P**	**07 54 42.2**	**+1.5**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AAK	**Ala-Archa**	**39.69**	**79**	*i* P	**P**	**07 55 45.1**	**+2.0**
AAK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
TORD	**Torodi Ar. Bea**	**40.06**	**202**	P	**P**	**07 55 46.0**	**-0.2**
	comp=Z,0.9nm,0.9s,baz=11,slow=8.9,SNR=4.1						
ZALV	**Zalesovo Beam**	**40.12**	**59**	P	**P**	**07 55 49.2**	**+2.9**
	comp=Z,0.4nm,0.4s,baz=270,slow=7.1,SNR=3.5						
ZALV	**Zalesovo Beam**	**40.12**	**59**	*i* P	**P**	**07 55 48.0**	**+1.7**
DGZ	**Jazzator, Alta**	**43.56**	**63**	*i* P	**P**	**07 56 16.0**	**+1.3**
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TIXI	**Tiksi**	**48.34**	**23**	*i* P	**P**	**07 56 54.4**	**+2.5**
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SONM	**Songino Array**	**54.84**	**56**	P	**P**	**07 57 43.3**	**+2.3**
	comp=Z,0.6nm,0.7s,baz=317,slow=8.1,SNR=4.1						
CMAR	**Chiang Mai Arr**	**71.28**	**84**	*i* P	**P**	**07 59 30.5**	**0.0**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
TXAR	**Lajitas Array**	**83.75**	**310**	P	**P**	**08 00 42.1**	**+1.9**
	comp=Z,0.2nm,0.6s,baz=90,slow=2.5,SNR=3.7						

TUL ***20*** *08:06:01.9±0.8, 36°.51N±0°.02×98°.61W±0°.02, h5^{km}±7^{km}, ML3.4, mb_Lg3.2/63(NEIC), Error ellipse: s-maj=2.8km s-min=1.6km az=132.0*
ANF ***20*** *08:06:03.0±2.6, 36°.49N×98°.57W, h12^{km}±17^{km}, ML4.0/10, Error ellipse: s-maj=7.2km s-min=5.8km az=97.0*
NEIC ***20*** *08:06:02.7±0.9, 36°.518N±0°.009×98°.60W±0°.02, h5^{km}±2^{km}, Error ellipse: s-maj=3.1km s-min=3.0km az=287.0*

ISC 20 08:06:02.2±1.0, 36°.52N±0°.02×98°.58W±0°.02, h9^{km}±8^{km}, n88, σ1^{s}08/74, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	**Winter Ranch,**	**0.36**	**248**	Pg	**Pg**	**08 06 09.0**	**-0.4**
U32A				Sg	**Sg**	**08 06 14.1**	**-0.1**
U32A	**Winter Ranch,**	**0.36**	**248**	P	**Pg**	**08 06 08.9**	**-0.4**
	baz=67						
U32A				S	**Sg**	**08 06 14.1**	**-0.1**
	baz=67						
OK032	**Salt Plains WL**	**0.41**	**46**		**Pg**	**08 06 10.6**	**+0.3**
OK032				Sg	**Sg**	**08 06 16.6**	**+0.8**
CROK	**Carrier**	**0.48**	**91**		**Pg**	**08 06 12.0**	**+0.4**
CROK				Sg	**Sg**	**08 06 19.3**	**+1.3**
KAN14	**Manchester OK**	**0.67**	**48**		**Pg**	**08 06 14.7**	**-0.3**
KAN14				Sg	**Sg**	**08 06 24.1**	**+0.3**
GC02	**Grant County #**	**0.67**	**60**	Pg	**Pg**	**08 06 15.0**	**-0.2**
GC02				Sg	**Sg**	**08 06 24.4**	**+0.5**
KAN10	**Anthony SW Sta**	**0.72**	**33**		**Pg**	**08 06 15.5**	**-0.6**
KAN10				Sg	**Sg**	**08 06 25.2**	**-0.4**
KAN16	**Harper SW Stat**	**0.82**	**30**	Pg	**Pg**	**08 06 17.4**	**-0.6**
KAN05	**Bluff City Nor**	**0.82**	**44**		**Pg**	**08 06 17.6**	**-0.5**
KAN17	**Caldwell West**	**0.84**	**51**	Pg	**Pg**	**08 06 18.0**	**-0.5**
KAN08	**Anthony NE Sta**	**0.86**	**35**		**Pg**	**08 06 18.4**	**-0.5**
KAN12	**Harper NE Stat**	**0.91**	**31**		**Pg**	**08 06 19.7**	**0.0**
KAN01	**Argonia South**	**0.92**	**46**		**Pg**	**08 06 19.9**	**0.0**
KAN06	**Argonia West S**	**0.93**	**38**		**Pg**	**08 06 20.2**	**0.0**
KAN09	**Caldwell North**	**0.99**	**51**		**Pg**	**08 06 21.1**	**-0.1**

KAN13	South Haven SW	1.02	60		Pg	08 06 21.5	-0.2
BLOK	Blackwell	1.13	77	Pg	Pg	08 06 23.0	-0.9
OK029	Liberty Lake	1.16	128		Pg	08 06 24.0	-0.5
BCOK	Bluff Creek, N	1.17	137		Pg	08 06 23.8	-0.7
OKCFA	Oklahoma City	1.43	140		Pn	08 06 28.5	+0.1
OKCFA	Oklahoma City	1.43	140	P	Pn	08 06 28.4	0.0
	baz=320,SNR=10						
OKCFA				S	Sb	08 06 48.0	+0.6
	baz=320						
OKCSW	OKLAHOMA CITY	1.45	140	Pg	Pn	08 06 28.2	-0.3
OK031	S. Brethren Rd	1.52	111		Pn	08 06 30.0	+0.5
QUOK	Quay	1.55	102		Pn	08 06 30.7	+0.7
OK030	Cody Creek RV	1.57	111		Pn	08 06 30.4	+0.1
FNO	Franklin	1.58	142		Pn	08 06 30.7	+0.3
T35A	Sooner Cattle	1.71	76	Pn	Pn	08 06 32.4	+0.2
T35B	Sooner Cattle	1.71	76	P	Pn	08 06 33.1	+0.9
	baz=257						
T35B				S	Sb	08 06 56.8	+1.3
	baz=257						
WMOK	Wichita Mounta	1.78	185	P	Pn	08 06 33.1	0.0
	baz=4.7						
WMOK				S	Sb	08 06 57.2	-0.3
	baz=4.7						
WMOK	Wichita Mounta	1.78	185	Pn	Pn	08 06 32.9	-0.2
WMOK	Wichita Mounta	1.78	185	P	Pn	08 06 33.2	+0.1
	baz=4.7,SNR=34						
WMOK				S	Sn	08 06 57.0	+1.1
	baz=4.7						
R32A	Long Quarter,	1.91	357	P	Pn	08 06 35.9	+1.0
	baz=177,SNR=62						
R32A				S	Sb	08 07 02.1	+1.1
	baz=177						
X34A	Smith Ranch, M	2.01	162	IAmb_Lg		08 07 09.5	
	comp=Z,119nm,0.8s						
TUL1	Leonard	2.34	104	P	Pn	08 06 41.6	+0.8
	baz=286						
TUL1				S	Sn	08 07 11.8	+2.2
	baz=286						
TUL1	Leonard	2.34	104	IAmb_Lg		08 07 15.7	
	comp=Z,59nm,0.8s						
CBKS	Cedar Bluff	2.47	339	P	Pb	08 06 45.2	-1.6
	baz=158						
CBKS				S	Sb	08 07 17.7	+0.4
	baz=158						
CBKS	Cedar Bluff	2.47	339	P	Pb	08 06 45.1	-1.6
	baz=158,SNR=21						
CBKS				S	Sb	08 07 17.9	+0.6
	baz=158						
AMTX	Amarillo	3.00	238	Sb	Sb	08 07 34.0	+1.3
	baz=56						
AMTX	Amarillo	3.00	238	IAmb_Lg		08 07 37.8	
	comp=Z,81nm,0.9s						
KSU1	Kansas State U	3.02	31	P	Pn	08 06 51.7	+1.6
	baz=212						
KSU1	Kansas State U	3.02	31	P	Pn	08 06 51.7	+1.6
	baz=212,SNR=7.5						
X37A	Clayton	3.25	125	IAmb_Lg		08 07 53.2	
	comp=Z,61nm,0.8s						
X37A	Clayton	3.25	125	P	Pn	08 06 54.1	+0.8
	baz=307,SNR=23						
Z35A	Perchaven, San	3.36	161	P	Pn	08 06 55.8	+0.9
	baz=341,SNR=7.5						
U38A	Gravette	3.38	90	IAmb_Lg		08 07 53.8	
	comp=Z,68nm,1.1s						
ABTX	Abilene, Hawle	3.98	193	P	Pn	08 07 03.6	+0.2
	baz=12						
ABTX				Sb	Sb	08 08 02.9	+2.1
	baz=12						
ABTX	Abilene, Hawle	3.98	193	P	Pn	08 07 03.6	+0.2
	baz=12,SNR=5.8						
KSCO	Kaye Shedlock’	4.06	309	IAmb_Lg		08 08 13.5	
	comp=Z,41nm,0.7s						
W39A	Magazine	4.12	107	IAmb_Lg		08 08 13.2	
	comp=Z,58nm,0.8s						
MSTX	Muleshoe	4.27	235	IAmb_Lg		08 08 18.7	
	comp=Z,34nm,0.9s						
S39A	Bolivar	4.37	73	IAmb_Lg		08 08 23.6	
	comp=Z,39nm,0.8s						
S39A	Bolivar	4.37	73	P	Pn	08 07 09.2	+0.5
	baz=256						
Z38A	Mt. Pleasant	4.39	137	IAmb_Lg		08 08 25.5	
	comp=Z,39nm,0.8s						
MIAR	Mount Ida	4.53	114	P	Pn	08 07 11.9	+1.0
	baz=297						
MIAR				S	Sn	08 08 03.8	+0.1
	baz=297						
MIAR	Mount Ida	4.53	114	P	Pn	08 07 11.8	+1.0
	baz=297,SNR=13						
WHTX	Lake Whitney,	4.61	168	P	Pn	08 07 12.3	+0.3
	baz=348						
WHTX	Lake Whitney,	4.61	168	P	Pn	08 07 12.3	+0.3
	baz=348,SNR=6.3						
U40A	Yellville	4.62	90	P	Pn	08 07 12.6	+0.4
	baz=274,SNR=18						
U40A				P	Pn	08 07 12.6	+0.4
	baz=274,SNR=18						
T25A	Trinidad	4.72	279	Sb	Sb	08 08 27.3	+5.2
	baz=96						
BGNE	Belgrade	4.90	4	IAmb_Lg		08 08 40.7	
	comp=Z,46nm,0.7s						
BGNE	Belgrade	4.90	4	P	Pn	08 07 16.4	+0.4
	baz=184						
P38A	Dawn	5.05	51	IAmb_Lg		08 08 44.0	
	comp=Z,29nm,0.8s						
P38A	Dawn	5.05	51	P	Pn	08 07 18.9	+0.8
	baz=234,SNR=8.3						
X40A	Basin Creek Fa	5.11	112	IAmb_Lg		08 08 49.4	
	comp=Z,49nm,1.0s						
OGNE	Ogallala	5.18	330	IAmb_Lg		08 08 57.1	
	comp=Z,50nm,0.8s						
WHAR	Wooly Hollow	5.25	102	IAmb_Lg		08 09 00.8	
	comp=Z,26nm,0.8s						
WLAR	White Oak Lake	5.30	121	IAmb_Lg		08 08 56.1	
	comp=Z,31nm,0.7s						
W41B	Gary Mavity, V	5.32	103	S	Sn	08 08 21.4	-1.7
	baz=286						
R40A	Maddies Statio	5.33	69	IAmb_Lg		08 08 51.5	
	comp=Z,28nm,0.7s						
R40A	Maddies Statio	5.33	69	P	Pn	08 07 22.8	+0.9
	baz=252,SNR=11						
435B	Jarrell	5.78	171	IAmb_Lg		08 09 12.7	
	comp=Z,25nm,0.7s						
CCM	Cathedral Cave	6.05	73	IAmb_Lg		08 09 17.8	
	comp=Z,26nm,0.7s						
K31A	O'Neill	6.10	359	IAmb_Lg		08 09 27.1	
	comp=Z,28nm,0.7s						
JCT	Junction City	6.11	190	IAmb_Lg		08 09 30.0	
	comp=Z,26nm,0.8s						
CCAR	Cane Creek	6.15	113	IAmb_Lg		08 09 34.6	
	comp=Z,34nm,0.8s						
ISCO	Idaho Springs	6.44	303	IAmb_Lg		08 09 33.9	
	comp=Z,28nm,1.0s						
PBMO	Poplar Bluff	6.56	85	IAmb_Lg		08 09 28.5	
	comp=Z,27nm,0.7s						
LPAR	Lepanto	6.77	95	IAmb_Lg		08 09 47.1	
	comp=Z,38nm,0.7s						
SCIA	State Center	6.81	36	IAmb_Lg		08 09 43.0	
	comp=Z,25nm,0.7s						
SLM	Saint Louis	6.96	70	IAmb_Lg		08 09 47.5	
	comp=Z,31nm,0.9s						
SMCO	Snowmass	7.15	294	IAmb_Lg		08 10 07.5	
	comp=Z,34nm,0.9s						
HENM	Henderson Moun	7.33	86	IAmb_Lg		08 09 56.6	
	comp=Z,33nm,0.7s						
ECSD	EROS Data Cent	7.37	11	P	Pn	08 07 48.8	-1.1
	baz=192						
ECSD				S	Sn	08 09 10.8	-2.7
	baz=192						
S44A	Carbondale	7.55	78	IAmb_Lg		08 10 02.5	
	comp=Z,25nm,1.0s						
SIUC	Southern Illin	7.58	78	IAmb_Lg		08 10 04.1	
	comp=Z,21nm,0.8s						
UTMT	University of	7.84	88	IAmb_Lg		08 10 33.9	
	comp=Z,31nm,0.7s						
T45A	Paducah	7.99	83	IAmb_Lg		08 10 38.7	
	comp=Z,30nm,0.8s						
HDIL	Hopedale	8.32	58	P	Pn	08 08 03.1	+0.2
	baz=244						

ISC 20 08:06:34.6±1.6**, 49°.17N**±0°.05×**18°.91E**±0°.04**, h8**^{km}±16^{km}**,**
n5, σ0^{s}.76/10**, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LANS	Liptovska Anna	0.37	93	*e*PG	Pg	08 06 42.2	+0.4
LANS				*e*SG	Sb	08 06 48.4	-0.9
VYHS	Vyhne	0.68	184	*e*PG	Pg	08 06 48.3	+0.6
VYHS				*e*SG	Sb	08 06 58.2	-0.1
KOLL	Kolacno	0.68	210	*e*PG	Pg	08 06 46.6	-1.2
KOLL				*e*SG	Sb	08 06 58.8	+0.5
JAVC	Velka Javorina	0.87	249	*e*PG	Pn	08 06 53.3	0.0
JAVC				*e*SG	Sb	08 07 04.7	+0.8
MORC	Moravsky Berou	1.08	305	*e*PG	Pg	08 06 55.2	-0.1
MORC				*e*SG	Sb	08 07 09.8	0.0

OMAN 20 08:10:03.6±0.4**, 24°.99N**×**63°.48E, h33**^{km}±17^{km}**, mb4.8**/14**,**
ml3.5/5**, Error ellipse: s-maj=24.0km s-min=3.0km**
az=258.0, Off coast of Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JLN	Jalan Bani Buh	4.69	234	P	Pn	08 11 12.7	+0.6
	SNR=19						
JLN				S	Sn	08 12 06.2	+0.9
WSAR	Wadi Sarin	4.76	249	P	Pn	08 11 14.8	+1.6
	SNR=9.7						
WSAR				S	Sn	08 12 06.5	-0.8
WBK	Wadi Bani Khal	4.76	241	P	Pn	08 11 14.5	+1.3
	SNR=129						
WBK				S	Sn	08 12 07.1	-0.2
BIDO	Bidbid	5.10	254	P	Pn	08 11 19.8	+2.0
	SNR=6.0						
BIDO				S	Sn	08 12 16.0	+0.4
SMDO	Samad	5.33	250	P	Pn	08 11 22.8	+1.8
	SNR=18						
SMDO				S	Sn	08 12 21.7	+0.4
JMDO	Jabal Madar	5.58	243	P	Pn	08 11 26.1	+1.7
	SNR=64						
JMDO				S	Sn	08 12 28.7	+1.3
HOQ	Hoqain	5.80	257	P	Pn	08 11 28.2	+0.8
BSY	Bisya	6.17	250	P	Pn	08 11 35.0	+2.5
	SNR=21						
BSY				S	Sn	08 12 44.2	+2.2
SOHO	SOHO	6.38	264	P	Pn	08 11 35.7	+0.3
SOHO				S	Sn	08 12 45.4	-1.8
MDH	Madha	6.52	274	P	Pn	08 11 36.7	-0.5
MDH				S	Sn	08 12 46.1	-4.4
BANOM	Banah	6.56	280	P	Pn	08 11 37.7	-0.1
ARQ	Araqi	6.56	257	P	Pn	08 11 42.0	+4.0
	SNR=95						
ARQ				S	Sn	08 12 54.9	+3.2
UOSS	Minazif	6.60	271	P	Pn	08 11 37.7	-0.7
MASF	Masafi	6.64	275	P	Pn	08 11 38.0	-1.0
HATD	Hatta, Dubai	6.67	270	P	Pn	08 11 38.6	-0.8
HATD				S	Sn	08 12 59.1	+4.7
SHME	Shamm	6.71	281	P	Pn	08 11 42.2	+2.2
	SNR=11						
SHME				S	Sn	08 12 55.7	+0.4
ASHO	Ashiyiah	6.75	269	P	Pn	08 11 44.0	+3.5
	SNR=22						
NAZ	Nazwa, Dubai	7.09	272	P	Pn	08 11 44.9	-0.2
NAZ				S	Sn	08 13 08.2	+3.5
FAQ	Al Faqa, Dubai	7.17	270	P	Pn	08 11 49.0	+2.8
	SNR=7.0						
ASUD	Al Ashush, Dub	7.42	269	P	Pn	08 11 53.0	+3.4
	SNR=6.9						
ASUD				S	Sn	08 13 14.2	+1.6

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*IDC **20** 08:14:15.9±1.7, 38°.82N×20°.47E, h0^{km}, mb3.4/3, mb1 3.5/4, mb1mx3.3/36, mbtmp3.4/4, ML2.8/1, Error ellipse: s-maj=43.4km s-min=28.9km az=112.0*

*IASPEI **20** 08:14:16.2±1.0, 38°.72N±0°.02×20°.64E±0°.03, h8^{km}±4^{km}, mb3.5/3, Error ellipse: s-maj=3.8km s-min=2.7km az=103.9, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*BEO **20** 08:14:16.9±1.2, 38°.69N×19°.99E, h0^{km}, ML3.4/6*

*THE **20** 08:14:16.6, 38°.72N×20°.62E, h7^{km}±1^{km}, ML3.6/10, Error ellipse: s-maj=1.1km s-min=0.4km az=352.0*

*ATH **20** 08:14:16.7, 38°.72N×20°.64E, h6^{km}±1^{km}, ML3.4/15, Error ellipse: s-maj=1.9km s-min=0.7km az=294.0*

ISC 20 08:14:16.5±0.8**, 38°.71N**±0°.02×**20°.63E**±0°.02**, h6**^{km}±4^{km}**,**
n76, σ1^{s}.08/98**, mb3.5**/3**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NYDR	Nydri-Lefkada	0.05	89	P	Pg	08 14 18.0	+0.1
NYDR				S	Sg	08 14 19.4	+0.4
	105μm,0.4s						
NYDR	Nydri-Lefkada	0.05	89	P	Pg	08 14 18.0	+0.1
NYDR				S	Sg	08 14 19.1	+0.1
DRAG	Dragano-Lefkad	0.06	239	P	Pg	08 14 17.9	-0.1
DRAG				S	Sg	08 14 19.2	0.0
	167μm,0.3s						
DRAG	Dragano-Lefkad	0.06	239	P	Pg	08 14 17.9	-0.1
DRAG				S	Sg	08 14 19.1	0.0
LKD2	Lefkada island	0.08	13	P	Pg	08 14 18.1	-0.3
LKD2				S	Sg	08 14 19.6	-0.2
	111μm,0.4s						
LKD2	Lefkada island	0.08	13	P	Pg	08 14 18.0	-0.4
LKD2				S	Sg	08 14 19.5	-0.2
LKD2				AML	AML	08 14 19.9	
LKD2				AML	AML	08 14 20.3	
EVGI	Lefkada island	0.09	169	P	Pg	08 14 19.0	+0.5
EVGI				S	Sg	08 14 21.0	+1.0
	20μm,0.3s						
EVGI	Lefkada island	0.09	169	P	Pg	08 14 19.0	+0.5
EVGI				S	Sg	08 14 21.0	+1.0
TSLK	Tsoukalades, L	0.11	8	P	Pg	08 14 18.9	0.0
TSLK				S	Sg	08 14 21.7	+1.1
	66μm,0.5s						
TSLK	Tsoukalades, L	0.11	8	P	Pg	08 14 19.1	+0.1
TSLK				S	Sg	08 14 21.0	+0.4
TSLK				AML	AML	08 14 24.6	
TSLK				AML	AML	08 14 24.7	
FSK	Fiskardo	0.26	193	P	Pg	08 14 22.1	+0.5
FSK				S	Sg	08 14 26.1	+1.1
	14μm,0.2s						
FSK	Fiskardo	0.26	193	P	Pg	08 14 22.0	+0.5
FSK				S	Sg	08 14 26.4	+1.4
FSK				AML	AML	08 14 27.6	
	comp=N,25320μm,0.3s						
FSK				AML	AML	08 14 28.7	
	comp=E,31015μm,0.2s						
KEF4	Livadi, Kephal	0.48	200	P	Pg	08 14 25.7	-0.1
KEF4				S	Sg	08 14 32.3	+0.2
	comp=E,17μm,0.4s						
KEF4	Livadi, Kephal	0.48	200	P	Pg	08 14 26.0	+0.2
KEF4				S	Sb	08 14 33.7	-0.9
DMLN	Damoulianata-K	0.52	203	P	Pg	08 14 26.2	-0.2
DMLN				S	Sg	08 14 34.5	+1.4
	comp=E,4μm,0.6s						
DMLN	Damoulianata-K	0.52	203	P	Pg	08 14 26.2	-0.2
VLS	Valsamata	0.54	184	P	Pg	08 14 26.5	-0.3
VLS				S	Sg	08 14 33.9	+0.1
	comp=E,2μm,0.2s						
VLS	Valsamata	0.54	184	P	Pg	08 14 26.5	-0.3
VLS				S	Sg	08 14 34.7	+0.9
VLS				AML	AML	08 14 36.9	
	comp=E,5481μm,0.2s						
VLS				AML	AML	08 14 39.3	
	comp=N,3818μm,0.3s						
ARGA	Argostoli. Kep	0.55	193	P	Pg	08 14 27.9	+0.8
KEF3	Kipouria, Keph	0.56	204	P	Pg	08 14 26.4	-0.8
KEF3				S	Sg	08 14 35.2	+0.8
	comp=N,7μm,0.3s						
KEF3	Kipouria, Keph	0.56	204	P	Pg	08 14 26.4	-0.8
KEF3				S	Sg	08 14 35.2	+0.8
PSDA	Pessada-Kefalo	0.60	184	P	Pg	08 14 27.6	-0.4
PSDA	Pessada-Kefalo	0.60	184	P	Pg	08 14 27.8	-0.2
PSDA				S	Sg	08 14 35.6	-0.2
PVO	Paravola	0.70	98	P	Pg	08 14 30.6	+0.6
PVO	Paravola	0.70	98	P	Pg	08 14 30.5	+0.5
PVO				AML	AML	08 14 44.6	
	comp=N,9510μm,0.4s						
PVO				AML	AML	08 14 44.6	
	comp=E,9260μm,0.6s						
IGT	Igoumenitsa	0.85	344	P	Pg	08 14 32.5	-0.3
IGT	Igoumenitsa	0.85	344	P	Pg	08 14 32.4	-0.5
IGT				AML	AML	08 14 50.4	
	comp=E,7336μm,0.7s						
IGT				AML	AML	08 14 50.5	
	comp=N,9598μm,0.4s						
VTN	Vitineika	0.91	151	P	Pg	08 14 34.4	+0.6
VTN	Vitineika	0.91	151	P	Pg	08 14 34.1	+0.3
RLS	Riolos of Patr	0.93	135	P	Pg	08 14 34.0	-0.2
RLS	Riolos of Patr	0.93	135	P	Pg	08 14 34.0	-0.2
EVR	Evrytania	0.94	77	P	Pg	08 14 34.4	-0.1
EVR	Evrytania	0.94	77	P	Pg	08 14 34.6	+0.1
EVR				AML	AML	08 14 54.0	
	comp=E,1930μm,0.3s						
EVR				AML	AML	08 14 59.3	
	comp=N,1894μm,0.7s						
JAN	Janina	0.96	10	P	Pg	08 14 35.0	+0.2
JAN	Janina	0.96	10	P	Pg	08 14 35.1	+0.2
ANX	Ano Chora	1.01	96	P	Pg	08 14 35.4	-0.5
ANX	Ano Chora	1.01	96	P	Pg	08 14 35.7	-0.3
ANX				AML	AML	08 14 59.2	
	comp=E,5833μm,0.6s						
ANX				AML	AML	08 15 01.0	
	comp=N,7444μm,0.5s						
LTHK	Lithakia	1.01	171	P	Pg	08 14 34.6	-1.3
LTHK				AML	AML	08 14 57.9	
	comp=N,3130μm,0.7s						
LTHK				AML	AML	08 15 08.7	
	comp=E,3882μm,0.5s						
EFP	Efpalio	1.04	106	P	Pg	08 14 35.9	-0.5
EFP	Efpalio	1.04	106	P	Pg	08 14 35.8	-0.5
EFP				AML	AML	08 14 59.0	
	comp=N,6107μm,0.3s						
EFP				AML	AML	08 14 59.5	
	comp=E,4680μm,0.6s						
DRO	Drossia	1.14	132	P	Pg	08 14 37.5	-0.7
DRO	Drossia	1.14	132	P	Pg	08 14 37.6	-0.7
LAKA	Lakka	1.16	114	P	Pg	08 14 37.9	-0.7
LAKA	Lakka	1.16	114	P	Pg	08 14 38.1	-0.6
LAKA				AML	AML	08 15 02.1	
	comp=N,7244μm,0.7s						
LAKA				AML	AML	08 15 04.7	
	comp=E,7861μm,0.7s						
KASA	Kassiopi	1.17	332	P	Pg	08 14 38.8	0.0
TRIZ	Trizonia	1.18	107	P	Pg	08 14 38.4	-0.7
TRIZ	Trizonia	1.18	107	P	Pg	08 14 38.4	-0.7
KEK	Kerkira	1.19	327	P	Pg	08 14 39.0	-0.3
KEK	Kerkira	1.19	327	P	Pg	08 14 39.3	0.0
KEK				AML	AML	08 15 00.9	
	comp=N,1640μm,0.7s						
KEK				AML	AML	08 15 06.0	
	comp=E,1870μm,0.6s						
MAKR	Makrakomi, Fth	1.21	75	P	Pg	08 14 39.1	-0.5
MAKR	Makrakomi, Fth	1.21	75	P	Pg	08 14 39.4	-0.2
MAKR				AML	AML	08 15 05.7	
	comp=N,1908μm,0.9s						
MAKR				AML	AML	08 15 06.2	
	comp=E,2080μm,0.7s						
ALIK	Aliki, Aigiali	1.24	111	P	Pn	08 14 39.9	-0.4
AGG	Agios Georgios	1.36	76	P	Pn	08 14 42.1	+0.2
AGG				AML	AML	08 15 10.1	
	comp=N,1831μm,0.5s						
AGG				AML	AML	08 15 11.2	
	comp=E,2656μm,0.6s						
KLV	Kalavryta, Ach	1.37	119	P	Pn	08 14 41.0	-1.1
KLV	Kalavryta, Ach	1.37	119	P	Pn	08 14 40.9	-1.1
KLV				AML	AML	08 15 10.2	
	comp=N,1148μm,0.6s						
KLV				AML	AML	08 15 10.8	
	comp=E,1251μm,0.6s						
THL	Klokotos Trika	1.37	51	P	Pn	08 14 41.6	-0.5
THL	Klokotos Trika	1.37	51	P	Pn	08 14 42.5	+0.4
GUR	Goura	1.55	119	P	Pn	08 14 44.4	-0.3
ITM	Ithomi	1.84	146	P	Pn	08 14 47.8	-0.7
VIL2	Platees	2.13	103	P	Pb	08 14 55.3	-0.1
OHR	Ohrid	2.40	3	*e*Pn	Pb	08 14 59.1	-1.0
OHR				*e*Sn	Sb	08 15 30.1	+0.2
OHR	Ohrid	2.40	3	*e*Pn	Pb	08 14 58.6	-1.4
VAY	Valandovo	3.00	29	*e*Pn	Pb	08 15 09.0	-1.2
VAY	Valandovo	3.00	29	*e*Pn	Pb	08 15 09.1	-1.2
STIP	Stip	3.21	21	*e*Pn	Pb	08 15 11.0	-2.8
PDG	Podgorica	3.86	345	*e*Pn	Pn	08 15 16.7	+0.4
PDG				*e*Sn	Sn	08 16 00.9	-1.0
PRVS	Prvonek	3.95	16	*e*Pn	Pn	08 15 21.2	+3.7
BOSS	Bosilegrad	4.03	20	*e*Pn	Pn	08 15 23.4	+4.7
VTS	Vitosha	4.37	26	*e*Pn	Pn	08 15 27.5	+4.0
STON	Ston	4.71	333	*e*Pn	Pn	08 15 26.5	-1.5
IDI	Anoyia	4.83	134	Pn	Pn	08 15 33.5	+3.8
	comp=E,0.4nm,0.3s,baz=311,slow=20,SNR=2.6						
BBLS	Lazići	5.23	350	*e*Pn	Pn	08 15 34.7	-0.5
DIVS	Divibare	5.40	355	*e*Pn	Pn	08 15 37.4	-0.2
FINES	FINESS Array B	23.01	7	P	P	08 19 22.1	+0.4
	comp=E,2.7nm,0.8s,baz=190,slow=7.1,SNR=3.7						
TORD	Torodi Ar. Bea	30.50	219	P	P	08 20 30.6	+0.3
	comp=E,0.1nm,0.4s,baz=18,slow=8.3,SNR=1.4						
MKAR	Makanchi Array	44.95	59	P	P	08 22 31.9	-0.1
	comp=E,0.3nm,0.5s,baz=274,slow=6.9,SNR=4.5						

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*TUL **20** 08:23:23.9±0.5, 36°.66N±0°.02×98°.46W±0°.02, h7^{km}±6^{km}, ML2.5, mb_Lg2.4/8(NEIC), Error ellipse: s-maj=2.7km s-min=1.5km az=149.0*

NEIC 20 08:23:24.1±0.4**, 36°.66N**±0°.02×**98°.47W**±0°.01**, h5**^{km}±2^{km}**,**
Error ellipse: s-maj=3.0km s-min=2.9km az=337.0,
Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK032	Salt Plains WL	0.25	56		Pg	08 23 29.1	+0.1
OK032				Sg	Sg	08 23 33.0	+0.7
CROK	Carrier	0.42	112	Pg	Pg	08 23 32.1	-0.1
CROK				Sg	Sg	08 23 38.2	+0.5
KAN14	Manchester OK	0.50	54		Pg	08 23 33.7	0.0
KAN14				Sg	Sg	08 23 40.6	+0.4
U32A	Winter Ranch,	0.52	237	Pg	Pg	08 23 34.0	0.0
U32A				Sg	Sg	08 23 41.2	+0.5
GC02	Grant County #	0.52	69	Pg	Pg	08 23 34.0	-0.1
KAN10	Anthony SW Sta	0.55	33		Pg	08 23 34.6	0.0
KAN16	Harper SW Stat	0.65	30	Pg	Pg	08 23 36.4	-0.2
KAN08	Anthony NE Sta	0.69	35	Pg	Pg	08 23 37.3	0.0
KAN12	Harper NE Stat	0.74	31	Pg	Pg	08 23 38.3	0.0
KAN13	South Haven SW	0.87	66	Pg	Pg	08 23 40.5	-0.3
BLOK	Blackwell	1.01	84		Pg	08 23 42.4	-1.1
OK031	S. Brethren Rd	1.49	118		Pn	08 23 51.4	-0.2
QUOK	Quay	1.50	109	Pn	Pn	08 23 51.4	-0.3
T35A	Sooner Cattle	1.59	80	Pn	Pn	08 23 52.8	-0.1
FNO	Franklin	1.65	148	Pn	Pn	08 23 53.5	-0.2
WMOK	Wichita Mounta	1.94	188	Pn	Pn	08 23 57.9	+0.2
X34A	Smith Ranch, M	2.12	166	IAmb_Lg		08 24 35.1	
	comp=Z,24nm,0.8s						
CBKS	Cedar Bluff	2.37	335	IAmb_Lg		08 24 42.8	
	comp=Z,15nm,0.8s						
AMTX	Amarillo	3.16	237	IAmb_Lg		08 25 12.5	
	comp=Z,11nm,0.8s						
KSCO	Kaye Shedlock’	4.04	307	IAmb_Lg		08 25 33.3	
	comp=Z,8.2nm,0.7s						

IDC 20 08:29:49.8±3.1**, 34°.71S**×**179°.97W, h0**^{km}**, mb3.8**/2**,**
mb1 4.0/3**, mb1mx3.7**/22**, mbtmp3.8**/3**, ML3.5**/1**, Error**
ellipse: s-maj=68.8km s-min=46.0km az=116.0, South
of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	4.25	213	Pn	Pn	08 30 55.8	0.0
	2.7nm,0.3s,baz=300,slow=23,SNR=25						
URZ				Sn	Sn	08 31 41.6	-4.5
	8.3nm,0.3s,baz=157,slow=16,SNR=7.4						
ASAR	Alice Springs	41.43	273	P	P	08 37 38.4	+0.1
	0.7nm,0.4s,baz=117,slow=7.4,SNR=22						
WRA	Warramunga Arr	42.81	278	P	P	08 37 49.2	-0.5
	0.8nm,0.6s,baz=118,slow=7.7,SNR=8.0						
H03N3	Juan Fernandez	79.69	123	T	T	10 10 19.3	
	baz=237,slow=72,SNR=8.4						
H03N2	Juan Fernandez	79.69	123	T	T	10 10 14.1	
	baz=237,slow=72,SNR=7.7						
H03N1	Juan Fernandez	79.70	123	T	T	10 10 10.5	
	baz=237,slow=72,SNR=9.3						
FINES	FINESS Array B	148.51	336	PKPbc	PKPbc	08 49 37.2	-0.5
	8.3nm,1.2s,baz=20,slow=4.4,SNR=4.3						

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*TUL **20** 08:31:10.6±0.7, 36°.47N±0°.05×98°.76W±0°.04, h4^{km}±7^{km}, ML2.6, mb_Lg2.5/19(NEIC), Error ellipse: s-maj=7.3km s-min=4.3km az=154.0*

NEIC 20 08:31:11.1±0.5**, 36°.49N**±0°.04×**98°.73W**±0°.05**, h5**^{km}±7^{km}**,**
Error ellipse: s-maj=8.0km s-min=0.8km az=138.0,
Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	**Winter Ranch,**	0.24	244	Pg	Pg	08 31 15.2	-0.7
U32A				Sg	Sg	08 31 18.4	-0.7
OK032	**Salt Plains WL**	0.53	53		Pg	08 31 21.5	+0.3
OK032				IAmb_Lg		08 31 28.9	
	comp=Z,40nm,0.9s						
CROK	**Carrier**	0.60	88	Pg	Pg	08 31 22.9	+0.2
KAN14	**Manchester OK**	0.78	53	Pg	Pg	08 31 26.1	+0.1
GC02	**Grant County #**	0.79	62	Pg	Pg	08 31 26.3	+0.1
KAN10	**Anthony SW Sta**	0.81	39		Pg	08 31 26.8	+0.1
KAN16	**Harper SW Stat**	0.91	36	Pg	Pg	08 31 28.7	+0.1
KAN05	**Bluff City Nor**	0.93	48	Pg	Pg	08 31 28.9	0.0
KAN17	**Caldwell West**	0.95	54		Pg	08 31 29.3	-0.1
KAN08	**Anthony NE Sta**	0.96	39		Pg	08 31 29.3	-0.1
KAN12	**Harper NE Stat**	1.00	36		Pg	08 31 30.3	0.0
KAN01	**Argonia South**	1.02	49		Pg	08 31 30.6	-0.2
KAN09	**Caldwell North**	1.10	54		Pg	08 31 32.1	-0.2
KAN13	**South Haven SW**	1.14	62		Pg	08 31 32.5	-0.4
BLOK	**Blackwell**	1.25	77		Pg	08 31 34.6	-0.5
OK031	**S. Brethren Rd**	1.62	109		Pn	08 31 40.1	-0.2
FNO	**Franklin**	1.64	138		Pn	08 31 40.4	-0.2
OK030	**Cody Creek RV**	1.67	109		Pn	08 31 41.1	+0.1
X34A	**Smith Ranch, M**	2.02	158	IAmb_Lg		08 32 15.0	
	comp=Z,31nm,0.8s						
AMTX	**Amarillo**	2.88	237	IAmb_Lg		08 32 49.1	
	comp=Z,24nm,1.0s						
HHAR	**Hobbs**	3.87	92	IAmb_Lg		08 33 17.7	
	comp=Z,9.3nm,0.7s						
ABTX	**Abilene, Hawle**	3.93	191	IAmb_Lg		08 33 22.3	
	comp=Z,7.6nm,0.8s						
MSTX	**Muleshoe**	4.15	234	IAmb_Lg		08 33 27.9	
	comp=Z,8.3nm,0.7s						
S39A	**Bolivar**	4.49	73	IAmb_Lg		08 33 33.5	
	comp=Z,12nm,0.8s						
FCAR	**Ozark Folk Cen**	5.38	94	IAmb_Lg		08 34 03.3	
	comp=Z,5.1nm,0.8s						
JCT	**Junction City**	6.06	189	IAmb_Lg		08 34 29.7	
	comp=Z,7.3nm,0.8s						
Y45A	**Yeager Farm, C**	7.96	106	IAmb_Lg		08 35 22.8	
	comp=Z,12nm,1.2s						

IDC 20 08:36:01.0±16.0**, 17°.12S**×**178°.84W, h470**^{km}±195^{km}**, mb2.9**/6**, mb1 3.3**/6**, mb1mx3.0**/32**, mbtmp3.8**/6**, 1D, Error ellipse: s-maj=107.3km s-min=49.8km az=166.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	38.66	240	P	P	08 42 42.7	-0.4
	2.6nm,1.0s,baz=100,slow=14,SNR=3.1						
WRA	**Warramunga Arr**	44.38	259	P	P	08 43 29.0	+0.1
	0.4nm,0.6s,baz=91,slow=6.8,SNR=6.9						
ASAR	**Alice Springs**	44.62	253	P	P	08 43 30.5	-0.2
	3.8nm,0.6s,baz=88,slow=8.4,SNR=30						
ILAR	**Eielson Array**	85.22	13	P	P	08 47 46.3	-0.2
	0.5nm,1.0s,baz=223,slow=5.4,SNR=6.7						
TXAR	**Lajitas Array**	85.92	58	P	P	08 47 51.1	+0.2
	0.3nm,0.6s,baz=224,slow=6.3,SNR=4.4						
PDAR	**Pinedale Array**	87.06	44	P	P	08 47 56.0	-0.2
	0.2nm,0.6s,baz=210,slow=5.2,SNR=2.2						
SYO	**Syowa Base**	89.83	193	⇓*e*P	P	08 48 07.4	-0.9
GERES	**GERESS Array B**	146.75	345	PKPbc	PKPbc	08 54 48.9	-0.8
	0.5nm,0.4s,baz=28,slow=4.4,SNR=3.3						

IDC 20 08:44:24.9±1.3**, 9°.70S**×**123°.53E, h112**^{km}±9^{km}**, mb3.1**/1**, mb1 3.3**/4**, mb1mx3.0**/46**, mbtmp3.5**/4**, Error ellipse: s-maj=77.9km s-min=22.0km az=66.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	0.52	166	P	Pn	08 44 43.1	+0.9
	71nm,0.3s,baz=0.2,slow=4.2,SNR=19						
BATI				S	Sn	08 44 56.7	+1.5
	64nm,0.3s,baz=94,slow=17,SNR=8.4						
FITZ	**Fitzroy Crossi**	8.60	166	P	Pn	08 46 28.0	+1.4
FITZ				S	Sn	08 48 01.4	-0.4
	5.5nm,0.3s,baz=71,slow=1.2,SNR=6.2						
WRA	**Warramunga Arr**	14.58	136	P	Pn	08 47 45.8	-0.2
	0.2nm,0.3s,baz=308,slow=13,SNR=9.4						
WRA				S	Sn	08 50 17.0	-10
	0.6nm,0.3s,baz=307,slow=22,SNR=8.6						
ASAR	**Alice Springs**	17.06	146	P	Pn	08 48 17.7	+0.9
	0.3nm,0.3s,baz=320,slow=12,SNR=17						
ASAR				S	Sn	08 51 18.9	-7.9
	0.3nm,0.3s,baz=317,slow=22,SNR=8.3						
MKAR	**Makanchi Array**	67.19	331	P	P	08 55 06.4	-0.6
	0.2nm,0.5s,baz=131,slow=6.8,SNR=2.1						

IDC 20 08:44:32.2±7.3**, 6°.97S**×**147°.64E, h77**^{km}±67^{km}**, mb3.1**/1**, mb1 3.3**/3**, mb1mx3.0**/45**, mbtmp3.4**/3**, ML3.6**/1**, Error ellipse: s-maj=94.6km s-min=54.4km az=119.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	2.47	191	P	Pn	08 45 10.6	+0.3
	4.7nm,0.3s,baz=24,slow=12,SNR=4.5						
PMG				S	Sn	08 45 40.2	+0.7
	6.8nm,0.3s,baz=11,slow=17,SNR=3.1						
WRA	**Warramunga Arr**	18.25	224	P	Pn	08 48 40.4	+0.1
	0.2nm,0.3s,baz=49,slow=11,SNR=3.4						
ASAR	**Alice Springs**	21.21	217	P	P	08 49 11.6	-0.1
	1.1nm,0.7s,baz=52,slow=9.5,SNR=12						
TORD	**Torodi Ar. Bea**	145.93	283	PKPbc	PKPdf	09 04 03.0	-0.3
	0.3nm,0.8s,baz=90,slow=1.4,SNR=1.6						

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*INET **20** 08:45:34.1, 10°.36N×84°.12W, h133^{km}, MW3.2*

UCR 20 08:45:39.3±1.1**, 10°.34N**×**84°.11W, h120**^{km}±2^{km}**, MW3.8, 9C-1D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HDC	**Heredia**	0.34	181	*e*P	Pn	08 45 56.8	+0.2
HDC				*e*S	Sn	08 46 09.8	+0.3
SRA1	**San Ramn**	0.44	235	*e*P	Pn	08 45 57.0	0.0
COVE	**Coope Vega, Sa**	0.47	323	*e*P	Pn	08 45 56.8	-0.3
RAFA	**San Farael, Vo**	0.48	142	*e*P	Pn	08 45 57.9	+0.4
FORC	**Fortuna**	0.56	283	⇑*i*P	Pn	08 45 58.0	+0.3
FORC				*i* S	Sn	08 46 12.3	+0.8
CEDE	**Laguna Cedeo**	0.60	284	*i* P	Pn	08 45 58.3	+0.3
LCR2	**La Lucha 2**	0.60	170	*e*P	Pn	08 45 58.2	0.0
ARE1	**Arenal 1**	0.61	282	*e*P	Pn	08 45 58.3	+0.3
RIMA	**Rio Macho**	0.62	157	*e*P	Pn	08 45 58.2	-0.1
CASO	**Castillo**	0.62	279	⇑*i*P	Pn	08 45 58.3	+0.2
JTS	**Las Juntas de**	0.83	267	*e*P	Pn	08 45 59.6	-0.1
PTEN	**Parque Tenorio**	0.94	294	⇑*i*P	Pn	08 46 00.8	0.0
LAFE	**Finca La Fe, P**	0.95	236	*e*P	Pn	08 46 01.5	+0.7
ACAL	**Aguas Claras**	0.95	288	⇑*i*P	Pn	08 46 00.9	-0.1
PEZE	**Perez Zeledon,**	1.04	156	*e*P	Pn	08 46 01.9	0.0
CUI	**Cuipilapa**	1.08	287	⇑*i*P	Pn	08 46 02.4	+0.2
EDDO	**Dominical**	1.10	167	⇓*e*P	Pn	08 46 03.0	+0.6
EDDO				*e*S	Sn	08 46 20.8	+0.9
HORNC	**Hornillas**	1.11	290	*i* P	Pn	08 46 02.7	+0.2
COLC	**Colonia**	1.12	287	⇑*i*P	Pn	08 46 02.7	+0.1
GUAB	**Guayabo de Bag**	1.16	289	*i* P	Pn	08 46 03.2	+0.2
LIM1	**Limonal**	1.18	288	⇑*i*P	Pn	08 46 03.4	+0.2
BUAI	**Buenos Aires**	1.31	294	*i* P	Pn	08 46 04.8	+0.2
LAPC	**Finca la Perla**	1.37	288	⇑*i*P	Pn	08 46 05.2	0.0
GUAI	**GUAI**	1.38	267	*i* P	Pn	08 46 05.5	+0.2
GBS3	**Finca Las Img**	1.39	289	⇑*i*P	Pn	08 46 05.6	0.0
EDBA	**Buenos Aires**	1.43	145	*e*P	Pn	08 46 06.2	+0.3
INDI	**Punta indio, G**	1.45	251	*e*P	Pn	08 46 05.3	-0.8
HZTE	**Horizontes, Gu**	1.51	284	*e*P	Pn	08 46 07.1	+0.3
EDPN	**Palmar Norte**	1.51	155	*e*P	Pn	08 46 07.5	+0.6
POTG	**Potrero Grande**	1.61	142	*e*P	Pn	08 46 08.0	-0.1

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*IDC **20** 08:50:40.6±14.0, 29°.79S×178°.25E, h0^{km}, mb3.9/3, mb1 4.2/4, mb1mx3.8/34, mbtmp4.1/4, ML4.8/1, Error ellipse: s-maj=267.1km s-min=44.1km az=65.0*

*WEL **20** 08:51:09.6±0.6, 32°S±7°×18°0E±1°8, h293^{km}±12^{km}, M4.3/22, mB4.8/19, ML5.0/24, MLv5.0/22, Mw(mB)4.1/19, Error ellipse: s-maj=0.0km s-min=0.0km az=110.2*

ISC 20 08:51:05.1±1.1**, 31°.75S**±0°.08×**179°.8E**±0°.1**, h350**^{km}**, n51,** σ**2^{s}22**/66**, mb3.3**/3**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	3.19	39	P	Pn	08 52 04.2	-2.0
GLKZ				S	S	08 52 53.8	-1.6
MXZ	**Matakaoa Point**	5.92	191	P	Pn	08 52 39.4	+4.6
MXZ				S	S	08 53 48.3	+0.7
WCZ	**Waipu Caves**	6.15	226	P	Pn	08 52 40.4	+3.0
WMGZ	**Waiomatatini S**	6.16	190	P	Pn	08 52 39.5	+1.9
HAZ	**Te Kaha**	6.21	195	P	Pn	08 52 40.5	+2.4
HAZ				S	S	08 53 54.0	+0.4
PKGZ	**Pakihiroa**	6.28	192	P	Pn	08 52 41.4	+2.4
PKGZ				S	S	08 53 51.7	-3.6
PUZ	**Puketiti**	6.43	191	P	Pn	08 52 42.6	+1.9
PUZ				S	S	08 53 57.3	-1.0
RUGZ	**Raukumara Rang**	6.43	195	P	Pn	08 52 44.3	+3.4
RUGZ				S	S	08 53 55.0	-3.6
TWGZ	**Tauwhareparae**	6.58	192	P	Pn	08 52 46.8	+4.4
TWGZ				S	S	08 54 03.1	+1.6
OPRZ	**Ohinepanea**	6.63	203	P	Pn	08 52 48.0	+5.0
MWZ	**Matawai**	6.82	195	P	Pn	08 52 47.3	+2.1
MWZ				S	S	08 54 07.3	+0.6
CNGZ	**Carnagh Statio**	6.84	190	P	Pn	08 52 47.8	+2.4
CNGZ				S	S	08 54 05.0	-2.0
URZ	**Urewera**	6.85	198	Pn	Pn	08 52 45.0	-0.6
	11nm,0.3s,baz=267,slow=3.3,SNR=83						
URZ				Sn	S	08 54 05.1	-2.2
	3.9nm,0.3s,baz=128,slow=22,SNR=1.8						
URZ	**Urewera**	6.85	198	P	Pn	08 52 46.4	+0.9
URZ				S	S	08 54 04.8	-2.5
RRRZ	**Republican Roa**	7.09	201	P	Pn	08 52 53.0	+4.5
MUGZ	**Murupara**	7.14	199	P	Pn	08 52 52.6	+3.6
MUGZ				S	S	08 54 13.9	+0.3
PRRZ	**Plateau Road**	7.28	201	P	Pn	08 52 54.5	+3.9
SNGZ	**Shannon Statio**	7.29	195	P	Pn	08 52 54.1	+3.3
SNGZ				S	S	08 54 18.4	+1.7
PRGZ	**Paritu Road**	7.32	192	P	Pn	08 52 55.3	+4.2
PRGZ				S	S	08 54 17.5	+0.1
ALRZ	**Allen Road**	7.35	201	P	Pn	08 52 55.2	+3.8
ALRZ				S	S	08 54 15.6	-2.4
KNZ	**Kokohu**	7.45	193	P	Pn	08 52 54.6	+2.0
KNZ				S	S	08 54 17.3	-2.8
MTHZ	**Maungataniwha**	7.48	198	P	Pn	08 52 56.0	+3.0
MHGZ	**Mahia Peninsul**	7.54	191	P	Pn	08 52 55.6	+2.0
MRHZ	**Matea Rd**	7.58	200	P	Pn	08 52 56.9	+2.7
WHHZ	**Waihua**	7.59	195	P	Pn	08 52 57.0	+2.7
NMHZ	**Naumai**	7.72	197	P	Pn	08 52 56.9	+1.1
ARHZ	**Aropaoanui**	7.83	196	P	Pn	08 52 58.8	+1.8
BKZ	**Black Stump Fm**	7.86	199	P	Pn	08 52 59.6	+2.1
TMVZ	**Te Maari**	8.06	203	P	P	08 53 02.7	-0.2
MCHZ	**McNeill Hill**	8.07	197	P	P	08 53 02.2	-0.7
KWHZ	**Kaweka Forest**	8.12	199	P	P	08 53 02.9	-0.7
CKHZ	**Cape Kidnapper**	8.19	195	P	P	08 53 04.1	-0.1
WNVZ	**Wahianoa**	8.29	203	P	P	08 53 05.0	-0.5
BHHZ	**Black Hill Sta**	8.29	200	P	Pn	08 53 03.4	+0.8
MOVZ	**Moawhango**	8.31	202	P	Pn	08 53 04.3	+1.5
KRHZ	**Kereru**	8.34	198	P	Pn	08 53 04.2	+1.0
KAHZ	**Kahuranaki**	8.36	195	P	Pn	08 53 04.9	+1.5
PXZ	**Pawanui**	8.59	195	P	Pn	08 53 07.8	+1.7
PNHZ	**Pukenui**	8.64	199	P	Pn	08 53 07.6	+0.8
WPHZ	**Waipukurau**	8.72	197	P	Pn	08 53 09.2	+1.5
TSZ	**Takapari Road**	8.84	199	P	Pn	08 53 10.2	+1.0
OGWZ	**Otaki Gorge**	9.78	201	P	Pn	08 53 20.2	0.0
KIW	**Kapiti Island**	9.90	202	P	Pn	08 53 22.3	+0.6
CAW	**Cannon Point**	10.07	201	P	Pn	08 53 23.6	-0.2
MSWZ	**Moikau Station**	10.30	199	P	Pn	08 53 26.1	-0.4
TCW	**Tory Channel**	10.42	204	P	Pn	08 53 27.5	-0.4
TUWZ	**Tuamarina**	10.73	204	P	Pn	08 53 31.1	-0.4
BSWZ	**Blackbirch Sta**	11.01	204	P	Pn	08 53 34.8	0.0
STKA	**Stephens Creek**	32.33	259	P	P	08 57 04.0	+1.2
	1.3nm,0.3s,baz=95,slow=12,SNR=5.7						
ASAR	**Alice Springs**	41.15	270	P	P	08 58 15.8	-0.9
	0.2nm,0.3s,baz=108,slow=7.9,SNR=6.1						
WRA	**Warramunga Arr**	42.27	275	P	P	08 58 24.4	-1.2
	0.7nm,0.3s,baz=112,slow=7.9,SNR=18						

IDC 20 09:04:22.3±31.0**, 25°.61N**×**142°.71E, h600**^{km}±358^{km}**, mb2.7**/4**, mb1 2.8**/4**, mb1mx2.5**/33**, mbtmp3.7**/4**, Error ellipse: s-maj=331.7km s-min=27.3km az=74.0, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	46.01	191	P	P	09 11 52.4	-1.1
	0.7nm,0.5s,baz=10,slow=8.3,SNR=15						
ASAR	**Alice Springs**	49.73	191	P	P	09 12 22.6	+1.5
	0.1nm,0.3s,baz=16,slow=6.2,SNR=4.7						
ZALV	**Zalesovo Beam**	50.92	320	P	P	09 12 29.7	+0.4
	0.4nm,0.4s,baz=99,slow=6.5,SNR=2.1						
FINES	**FINESS Array B**	79.48	334	P	P	09 15 27.0	-0.4
	0.8nm,0.4s,baz=57,slow=4.2,SNR=6.0						

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*IDC **20** 09:12:02.5±0.7, 65°.49N×134°.11W, h0^{km}, mb3.8/4, mb1 4.0/8, mb1mx3.7/36, mbtmp3.8/8, ML4.1/3, Error ellipse: s-maj=12.3km s-min=10.3km az=62.0*

*PGC **20** 09:12:03.6±0.0, 65°.45N×134°.03W, h5^{km}, ML3.5/13, 222km south of Fort McPherson, Nt Northern Yukon Territory, Canada*

*ANF **20** 09:12:04.5±0.5, 65°.45N×134°.06W, h22^{km}±4^{km}, ML4.2/18, Error ellipse: s-maj=2.1km s-min=1.6km az=71.0*

ISC 20 09:12:00.5±1.3**, 65°.49N**±0°.03×**133°.84W**±0°.03**, h5**^{km}±9^{km}**, n83,** σ**2^{s}62**/142**, mb4.0**/4**, Northern Yukon Territory**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EPYK	**Eagle Plains**	1.47	308	P	Pg	09 12 29.3	+0.5
	baz=129						
EPYK				Sb	Sg	09 12 49.7	+1.9
	baz=129						
EPYK	**Eagle Plains**	1.47	308	P	Pg	09 12 29.3	+0.5
EPYK				S	Sg	09 12 47.7	-0.1
I29M	**Ogilvie Camp,**	1.87	268	P	Pb	09 12 33.9	-1.2
	baz=85,SNR=119						
I29M				Sb	Sg	09 12 59.3	-1.3
	baz=85						
J29M	**Klondike Camp**	2.13	243	P	Pb	09 12 37.8	-1.7
	baz=59						
J29M				Sb	Sg	09 13 07.2	-1.7
	baz=59						
DAWY	**Dawson**	2.77	241	P	Pn	09 12 46.5	+0.9
	baz=56,SNR=83						
DAWY				S	Sn	09 13 19.8	+0.5
	baz=56						
DAWY	**Dawson**	2.77	241	Pn	Pn	09 12 46.9	+1.4
DAWY				Sn	Sn	09 13 19.3	0.0
INK	**Inuvik**	2.83	2	Pn	Pb	09 12 49.1	-2.3
	3.4nm,0.3s,baz=166,slow=18,SNR=66						
INK				Lg	Lg	09 13 32.2	
	60nm,0.3s,baz=272,slow=18,SNR=11						
INK	**Inuvik**	2.83	2	P	Pb	09 12 49.0	-2.4
	baz=184						
INK				Sb	Sg	09 13 31.5	+0.2
	baz=184						
INK	**Inuvik**	2.83	2	Pn	Pb	09 12 48.8	-2.6
INK				Sg	Sg	09 13 31.6	+0.2
MMPY	**Sheldon Lake,**	3.10	157	P	Pn	09 12 51.9	+1.9
	baz=338,SNR=33						
MMPY				S	Sn	09 13 28.3	+0.9
	baz=338						
MMPY	**Sheldon Lake,**	3.10	157	Pn	Pn	09 12 52.1	+2.1
MMPY				Sn	Sn	09 13 26.7	-0.7
M30M	**Minto, Yukon**	3.20	205	P	Pn	09 12 52.2	+0.8
	baz=22,SNR=17						
M30M				S	Sn	09 13 30.4	+0.5
	baz=22						
FARO	**Faro, Yukon**	3.28	176	P	Pn	09 12 54.0	+1.5
	baz=355,SNR=28						
FARO				S	Sn	09 13 32.0	+0.2
	baz=355						
FARO	**Faro, Yukon**	3.28	176	Pn	Pn	09 12 54.1	+1.6
FARO				Sn	Sn	09 13 31.2	-0.7
M31M	**Drury Creek, Y**	3.31	184	P	Pn	09 12 54.1	+1.2
	baz=2.6,SNR=28						
M31M				S	Sn	09 13 33.7	+1.1
	baz=2.6						
N31M	**Braeburn, Yuko**	4.11	193	P	Pn	09 13 04.9	+0.9
	baz=10						
N31M				S	Sn	09 13 52.5	+0.2
	baz=10						
J26L	**Joseph Creek**	4.25	261	P	Pn	09 13 05.6	-0.2
	baz=72						
J26L				S	Sn	09 13 55.0	-0.7
	baz=72						
L27K	**Beaver Creek,**	4.25	239	P	Pn	09 13 06.5	+0.7
	baz=51,SNR=6.3						
L27K				Sb	Sb	09 14 09.7	+2.5
	baz=51						
BVCY	**Beaver Creek**	4.37	228	P	Pn	09 13 08.3	+0.8
	baz=42,SNR=12						
BVCY				S	Sn	09 13 58.3	-0.3
	baz=42						
BVCY	**Beaver Creek**	4.37	228	Pn	Pn	09 13 09.1	+1.7
BVCY				Sn	Sn	09 13 56.9	-1.8
YUK1	**Sand Pete Hill**	4.47	225	Pn	Pn	09 13 10.3	+1.3
YUK1				Sn	Sn	09 13 58.9	-2.4
YUK1				Sg	Sg	09 14 22.4	-1.5
SCRK	**Sand Creek**	4.61	255	P	Pn	09 13 11.1	+0.4
	baz=66						
SCRK				Sb	Sb	09 14 20.2	+2.7
	baz=66						
YUK4	**Talbot Arm**	4.69	210	P	Pn	09 13 11.4	-0.6
	baz=25						
YUK4	**Talbot Arm**	4.69	210	Pn	Pn	09 13 12.0	+0.1
TGTN	**Hyland Airport**	4.70	145	P	Pn	09 13 14.2	+2.3
	baz=329						
TGTN	**Hyland Airport**	4.70	145	Pn	Pn	09 13 14.6	+2.6
YUK5	**Granite Creek**	4.74	204	Pn	Pn	09 13 13.8	+1.2
YUK5				Sn	Sn	09 14 05.6	-2.2
YUK5				Sg	Sb	09 14 25.5	+4.2
M27K	**Edge Creek, AK**	4.74	232	P	Pn	09 13 13.2	+0.6
	baz=45						
M27K				Sb	Sb	09 14 23.2	+1.9
	baz=45						
YUK3	**Moose Creek**	4.75	221	P	Pn	09 13 13.7	+0.8
	baz=35,SNR=10						
YUK3				S	Sn	09 14 08.0	-0.4
	baz=35						
YUK3	**Moose Creek**	4.75	221	Pn	Pn	09 13 14.0	+1.1
YUK3				Sn	Sn	09 14 06.9	-1.4
DOT	**Dot Lake**	4.78	252	Pn	Pn	09 13 13.1	0.0
L26K	**Log Cabin Wild**	4.83	244	P	Pn	09 13 14.7	+1.0
	baz=55						
L26K				Sb	Sb	09 14 27.3	+3.6
	baz=55						
YUK2	**White River**	4.85	223	Pn	Pn	09 13 15.5	+1.4
YUK2				Sn	Sn	09 14 07.7	-2.9
YUK2				Sg	Sb	09 14 29.1	+4.6
PRP	**Porcupine Dome**	4.86	276	P	Pn	09 13 14.4	+0.1
	baz=86						
PRP				S	Sn	09 14 08.2	-2.7
	baz=86						
WHY	**Whitehorse**	4.87	186	P	Pn	09 13 15.4	+1.0
	baz=4.2						
WHY				Sb	Sb	09 14 28.5	+3.3
	baz=4.2						
WHY	**Whitehorse**	4.87	186	Pn	Pn	09 13 15.6	+1.2
WHY				Sg	Sb	09 14 28.4	+3.3
J25K	**Salcha River,**	4.96	265	P	Pn	09 13 15.5	-0.1
	baz=75						
J25K				S	Sn	09 14 11.0	-2.3
	baz=75						
HYT	**Haines Junctio**	4.97	201	P	Pn	09 13 16.9	+1.2
	baz=17						
HYT				S	Sn	09 14 12.8	-0.8
	baz=17						
HYT	**Haines Junctio**	4.97	201	Pn	Pn	09 13 16.9	+1.2
HYT				Sn	Sn	09 14 12.6	-1.0
HYT				Sg	Sb	09 14 32.5	+4.6
YUK8	**Steele Glacier**	4.99	215	Pn	Pn	09 13 17.8	+1.7
YUK8				Sn	Sn	09 14 12.4	-1.9
YUK8				Sg	Sb	09 14 33.3	+4.6
YUK6	**Outpost Mounta**	5.00	206	P	Pn	09 13 17.2	+0.9
	baz=22						
YUK6				Sb	Sb	09 14 33.7	+4.7
	baz=22						
YUK6	**Outpost Mounta**	5.00	206	Pn	Pn	09 13 17.5	+1.2
YUK6				Sg	Sb	09 14 34.1	+5.1
WRGLY	**Wrigley**	5.05	112	P	Pn	09 13 19.9	+3.2
	baz=301						
WRGLY				S	Sn	09 14 17.1	+1.8
	baz=301						
M26K	**Nabesna, AK**	5.09	237	P	Pn	09 13 18.1	+0.8
	baz=48						
P33M	**Teslin, Yukon**	5.32	174	P	Pn	09 13 21.6	+1.1
	baz=354,SNR=12						
YUK7	**Dusty Glacier**	5.35	203	Pn	Pn	09 13 22.4	+1.4
YUK7				Sg	Sb	09 14 43.5	+4.5
ILAR	**Eielson Array**	5.55	268	Pn	Pn	09 13 23.3	-0.3
	0.3nm,0.3s,baz=85,slow=12,SNR=12						
ILAR				Lg	Lg	09 14 56.8	
	3.4nm,0.3s,baz=64,slow=29,SNR=8.2						
CTGM	**Chitina Glacie**	5.66	220	Sn	Sn	09 14 27.9	-2.8
PAX	**Paxson**	5.67	249	P	Pn	09 13 26.2	+0.9
	baz=58						
PAX				S	Sn	09 14 29.5	-1.2
	baz=58						
LOGN	**Logan Glacier**	5.70	218	Pn	Pn	09 13 27.6	+1.9
LOGN				Sn	Sn	09 14 28.3	-3.2
POKR	**Poker Plat Res**	5.71	272	P	Pn	09 13 27.2	+1.4
	baz=80						
PTPK	**Patty Peak**	5.80	226	Pn	Pn	09 13 29.2	+1.9
PTPK				Sn	Sn	09 14 28.7	-5.5
PTPK				Sg	Sg	09 15 01.4	-5.2
MCARA	**McCarthy VSAT**	5.82	229	S	Sn	09 14 34.2	-0.3
	baz=41						
WTLY	**Watson Lake, Y**	5.87	154	S	Sn	09 14 37.3	+1.7
	baz=338						
BALM	**Baldy**	5.89	225	Sn	Sn	09 14 33.2	-3.0
GRNC	**Granite Creek**	5.97	221	Pn	Pn	09 13 30.6	+1.0
GRNC				Sn	Sn	09 14 36.1	-2.2
GRNC				Sg	Sb	09 15 03.8	+6.9
KIAG	**Kiagna River**	5.98	224	Pn	Pn	09 13 31.4	+1.6
KIAG				Sn	Sn	09 14 36.1	-2.5
TABL	**Table Mountain**	6.06	217	Pn	Pn	09 13 32.0	+1.2
TABL				Sn	Sn	09 14 36.7	-3.9
SKAG	**Skagway**	6.09	187	P	Pn	09 13 32.7	+1.7
	baz=5.2,SNR=7.9						
PCA	**Pinnacle**	6.16	211	Pn	Pn	09 13 34.3	+2.3
PCA				Sg	Sg	09 15 12.4	-5.6
RKAV	**Rock Avalanche**	6.23	217	Pn	Pn	09 13 34.1	+1.0
RKAV				Sn	Sn	09 14 40.9	-3.9
SAMH	**Samovar Hills**	6.25	214	Pn	Pn	09 13 35.9	+2.6
CRQE	**Cirque**	6.34	226	S	Sn	09 14 45.8	-1.4
	baz=37						
DHY	**Denali Highway**	6.37	254	S	Sn	09 14 47.5	-0.5
	baz=62						
PNL	**Peninsula**	6.38	206	Pn	Pn	09 13 37.2	+2.1
PNL				Sg	Sg	09 15 18.0	-7.1
COLD	**Coldfoot**	6.80	292	Sn	Sn	09 14 54.0	-4.5
BESE	**Bessie Mountai**	6.95	184	Pn	Pn	09 13 44.0	+1.1
BESE				Sn	Sn	09 14 59.3	-3.0
BESE				Sg	Sg	09 15 34.5	-9.0
A36M	**Sachs Harbour**	7.23	22	Pn	Pn	09 13 48.4	+1.9
A36M				Sn	Sn	09 15 03.5	-5.3
DLBC	**Dease Lake**	7.30	164	Pn	Pn	09 13 49.8	+2.1
	4.8nm,0.3s,baz=17,slow=9.4,SNR=29						
DLBC				Lg	Lg	09 15 47.4	
	2.2nm,0.3s,baz=92,slow=11,SNR=6.7						
DLBC	**Dease Lake**	7.30	164	Pn	Pn	09 13 49.6	+1.9
DLBC				Sg	Sg	09 15 47.0	-7.7
NBC2	**NorthernBC 2**	7.75	132	Pn	Pn	09 13 56.2	+2.4
KUKN	**Kugluktuk,NWT**	7.80	64	Pn	Pn	09 13 57.1	+2.8
KUKN				Sn	Sn	09 15 20.0	-2.9
FNBB	**Fort Nelson**	8.32	138	Pn	Pn	09 14 03.5	+1.8
YKA	**Yellowknife Ar**	8.96	101	Pn	Pn	09 14 11.4	+1.1
	2.0nm,0.3s,baz=296,slow=13,SNR=48						
YKA				Sn	Sn	09 15 45.1	-6.3
	2.8nm,0.3s,baz=300,slow=22,SNR=7.3						
NBC6	**NorthernBC 6**	9.07	134	Pn	Pn	09 14 14.3	+2.5
NBC5	**NorthernBC 5**	9.59	141	Pn	Pn	09 14 19.9	+0.8
DIB	**Dawson Inlet,**	12.35	176	Pn	Pn	09 14 59.5	+2.9
RES	**Resolute Bay**	15.77	38	Pn	Pn	09 15 42.3	-0.5
	0.7nm,0.3s,baz=237,slow=11,SNR=21						
RES				Sn	Sn	09 18 29.0	-8.4
	0.3nm,0.3s,baz=331,slow=19,SNR=2.5						
RES	**Resolute Bay**	15.77	38	Pn	Pn	09 15 42.7	0.0
ARCES	**ARCESS Array B**	44.48	10	P	P	09 20 14.2	+2.3
	6.0nm,1.0s,baz=355,slow=8.4,SNR=4.2						
FINES	**FINESS Array B**	52.50	12	P	P	09 21 15.7	+2.0
	1.4nm,0.8s,baz=0.0,slow=8.3,SNR=5.3						
AKASG	**Malin Array Be**	63.41	12	P	P	09 22 34.8	+4.5
	0.4nm,0.4s,baz=355,slow=6.0,SNR=4.4						
MKAR	**Makanchi Array**	64.60	333	P	P	09 22 41.1	+2.8
	0.3nm,0.6s,baz=8.6,slow=3.9,SNR=2.2						

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*TAP **20** 09:12:13.3, 24°.78N×121°.92E, h7^{km}, ML3.2, B*

*JMA **20** 09:12:13.3, 24°.80N×121°.89E, h35^{km}±3^{km}, M3.1*

ISC 20 09:12:12.6±0.8**, 24°.82N**±0°.02×**121°.96E**±0°.02**, h14**^{km}±5^{km}**,**

n75, σ0ˢ.77/146, 5C-1D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGS	baz=20	0.03	315	⇓iP	Pg	09 12 15.2	+0.1
EGS	baz=20			iS	Sg	09 12 17.1	+0.2
NTC	**Toucheng** baz=319	0.12	285	⇑iP	Pg	09 12 16.4	+0.4
NTC	baz=319			iS	Sg	09 12 18.6	+0.3
TWB1	**Santiao Chiao** baz=12	0.19	9	eP	Pb	09 12 17.9	+0.1
TWB1	baz=12			eS	Sb	09 12 20.6	-0.7
TIPB	**Shuangxi** baz=342	0.19	321	⇑iP	Pb	09 12 17.9	-0.1
TIPB	baz=342			iS	Sb	09 12 21.0	-0.5
ILA	**Ilan** baz=262	0.20	253	iP	Pb	09 12 17.4	-0.6
ILA	baz=262			S	Sb	09 12 20.8	-0.8
TWC	**Suao** baz=191	0.23	205	P	Pg	09 12 17.6	-0.1
TWC	baz=191			eS	Sg	09 12 20.3	-0.9
TWE	**Neicheng** baz=253	0.28	249	⇑iP	Pg	09 12 18.8	+0.2
TWE	baz=253			iS	Sg	09 12 22.4	-0.1
NDS	**Dongshan** baz=230	0.29	229	eP	Pg	09 12 18.7	0.0
NDS	baz=230			eS	Sg	09 12 22.7	0.0
NWF	**Wu-fen Shan** baz=324	0.29	327	⇑iP	Pb	09 12 20.0	+0.3
NWF	baz=324			S	Sb	09 12 24.3	-0.2
TWA	**Mucha** baz=303	0.37	295	P	Pb	09 12 21.2	+0.1
TWA	baz=303			eS	Sb	09 12 26.2	-0.5
ENTT	**Nioudou** baz=245	0.40	243	eP	Pg	09 12 20.8	+0.2
ENTT	baz=245			eS	Sg	09 12 26.0	0.0
EWUT	**Wuta** baz=197	0.41	203	eP	Pg	09 12 20.6	-0.2
EWUT	baz=197			eS	Sg	09 12 25.5	-0.8
NWLT	**Wulai** baz=269	0.41	264	eP	Pb	09 12 21.3	-0.5
NWLT	baz=269			eS	Sg	09 12 26.2	-0.4
NHDH	**Xindian Distri** baz=297	0.42	290	eP	Pb	09 12 22.0	+0.3
NHDH	baz=297			eS	Sb	09 12 27.8	-0.2
ENA	**Nanau** baz=200	0.44	206	eP	Pg	09 12 21.0	-0.4
ENA	baz=200			eS	Sg	09 12 26.7	-0.6
NDT	**Datong Townshi** baz=244	0.46	242	P	Pg	09 12 22.0	+0.2
NDT	baz=244			eS	Sg	09 12 27.7	-0.3
TAP	**Taipei** baz=305	0.46	298	eP	Pb	09 12 22.4	-0.2
TAP	baz=305			eS	Sb	09 12 29.6	+0.3
YM01	**YM01** baz=319	0.48	313	⇑iP	Pn	09 12 23.6	-1.4
YM01	baz=319			eS	Sb	09 12 29.9	+0.2
ANP	**Anpu** baz=319	0.54	313	eP	Pb	09 12 24.3	+0.4
ANP	baz=319			eS	Sb	09 12 31.7	+0.2
YHNB	**Yeheng** baz=268	0.55	254	iP	Pg	09 12 23.5	0.0
YHNB	baz=268			eS	Sg	09 12 30.7	-0.1
TWY	**Chenhua** baz=323	0.56	324	eP	Pn	09 12 25.2	-0.9
TWY	baz=323			eS	Sn	09 12 32.7	-2.5
TWS1	**Kuangyinshan** baz=306	0.56	300	P	Pn	09 12 25.5	-0.7
TWS1	baz=306			eS	Sb	09 12 32.7	+0.5
NSK	**Sanguang** baz=268	0.56	255	P	Pg	09 12 23.8	0.0
NSK	baz=268			eS	Sg	09 12 30.6	-0.6
NTST	**Danshui** baz=320	0.57	307	P	Pn	09 12 25.7	-0.6
NTST	baz=320			eS	Sn	09 12 34.7	-0.9
NNSB	**Datong** baz=234	0.65	233	eP	Pg	09 12 25.2	-0.2
NNSB	baz=234			eS	Sg	09 12 34.0	-0.1
NNS	**Nan Shan** baz=235	0.65	234	eP	Pg	09 12 25.2	-0.2
NNS	baz=235			eS	Sg	09 12 33.7	-0.4
NCU	**National Centr** baz=286	0.71	282	eP	Pn	09 12 28.2	-0.1
NCU	baz=286			eS	Sn	09 12 37.9	-1.2
NCUH	**Zhongli** baz=286	0.71	282	eP	Pn	09 12 28.1	-0.3
NCUH	baz=286			eS	Sn	09 12 39.5	+0.3
NACB	**Ninganchiao** baz=206	0.73	207	P	Pg	09 12 26.5	-0.2
NACB	baz=206			S	Sg	09 12 35.8	-0.5
ETLH	**Xiulin Townshi** baz=226	0.75	215	eP	Pg	09 12 27.1	-0.1
ETLH	baz=226			eS	Sg	09 12 37.0	-0.2
TWD	**Chiawan** baz=202	0.81	204	eP	Pb	09 12 28.1	-0.4
TWD	baz=202			eS	Sg	09 12 38.0	-1.0
FUSS	**Fushou** baz=219	0.87	229	eP	Pg	09 12 29.3	-0.2
FUSS	baz=219			eS	Sg	09 12 40.1	-0.8
LIOB	**Emei** baz=253	0.87	259	eP	Pn	09 12 30.6	0.0
LIOB	baz=253			eS	Sn	09 12 43.8	+0.8
SBCB	**Hsinchu** baz=271	0.88	268	eP	Pn	09 12 31.3	+0.6
SBCB	baz=271			eS	Sn	09 12 44.0	+0.8
NSTT	**Nanjuang** baz=252	0.89	258	eP	Pn	09 12 30.8	+0.1
NSTT	baz=252			eS	Sn	09 12 43.5	0.0
HSN	**Hsinchu** baz=273	0.90	269	eP	Pn	09 12 30.6	-0.2
HSN	baz=273			eS	Sn	09 12 42.6	-0.9
TWT	**Tachien** baz=232	0.91	232	eP	Pn	09 12 31.2	+0.1
TWT	baz=232			eS	Sb	09 12 41.8	-0.5
TDCB	**Techi** baz=232	0.92	232	eP	Pb	09 12 30.4	-0.1
TDCB	baz=232			eS	Sb	09 12 40.8	-1.9
WHF	**Hehuan Shan** baz=222	0.92	223	eP	Pb	09 12 30.1	-0.5
WHF	baz=222			eS	Sg	09 12 41.6	-1.1
JYNG	**Yonagunijimaku**	0.97	112	P	Pb	09 12 31.7	+0.4
JYNG				eS	Sb	09 12 44.1	+0.1
YOJ	**Yonaguni jima** baz=106	1.02	110	eP	Pb	09 12 32.1	0.0
YOJ	baz=106			eS	Sb	09 12 46.0	+0.6
YOJ	**Yonaguni jima**	1.02	110	P	Pb	09 12 32.4	+0.3
YOJ				eS	Sb	09 12 45.9	+0.4
CHGB	**Renai** baz=216	1.04	223	eP	Pb	09 12 31.9	-0.7
CHGB	baz=216			eS	Sb	09 12 46.2	0.0
WHP	**Taichung City** baz=231	1.07	240	eP	Pg	09 12 33.6	+0.3
WHP	baz=231			eS	Sn	09 12 48.9	+1.0
NMLH	**Miaoli** baz=257	1.10	255	eP	Pg	09 12 35.0	+1.2
NMLH	baz=257			eS	Sn	09 12 50.4	+1.9
ESL	**Shilin** baz=204	1.11	206	eP	Pb	09 12 33.0	-0.6
ESL	baz=204			eS	Sb	09 12 47.2	-0.8
OWD	**Renai** baz=226	1.12	220	eP	Pb	09 12 33.8	0.0
NSY	**Sanyi** baz=267	1.16	250	eP	Pg	09 12 36.9	+1.9
NSY	baz=267			eS	Sg	09 12 53.6	+3.5
WCS	**Beigang Elemen** baz=239	1.22	232	eP	Pg	09 12 36.1	0.0
WCS	baz=239			eS	Sg	09 12 54.2	+2.2
EGFH	**Guangfu** baz=208	1.25	203	eP	Pb	09 12 36.2	+0.3
EGFH	baz=208			eS	Sb	09 12 51.5	-0.3
WDJ	**Dajia District** baz=239	1.29	249	eP	Pg	09 12 37.9	+0.5
WDJ	baz=239			eS	Sg	09 12 54.4	+0.2
SMLT	**Sun Moon Lake** baz=215	1.34	226	eP	Pg	09 12 38.5	0.0
SMLT	baz=215			eS	Sg	09 12 55.4	-0.6
TYC	**Yuchr** baz=217	1.36	228	eP	Pg	09 12 38.6	-0.1
TYC	baz=217			eS	Sg	09 12 57.7	+1.3
SSLB	**Suanglung** baz=222	1.38	222	eP	Pg	09 12 39.4	+0.3
SSLB	baz=222			eS	Sb	09 12 55.9	+0.2
HGSD	**Ruisui** baz=187	1.41	200	eP	Pg	09 12 39.5	-0.2
HGSD	baz=187			eS	Sg	09 12 59.5	+1.3
EHY	**Hungye** baz=203	1.43	204	eP	Pn	09 12 38.7	+0.5
YULB	**Yu-li** baz=207	1.55	203	eP	Pb	09 12 40.7	-0.3
YULB	baz=207			eS	Sg	09 13 02.3	-0.2
EYUL	**Yuli** baz=214	1.58	202	eP	Pn	09 12 40.2	0.0
EYUL	baz=214			eS	Sg	09 13 04.7	+1.2
ALS	**Alishan** baz=219	1.68	219	eP	Pg	09 12 44.8	-0.1
ALS	baz=219			eS	Sg	09 13 08.1	+1.4
IRIF	**Iriomote-Funau**	1.69	106	P	Pn	09 12 41.2	-0.5
IRIF				eS	Sn	09 13 02.8	-0.3
CHN5	**Tsauling** baz=224	1.69	224	eP	Pg	09 12 45.5	+0.5
CHN5	baz=224			eS	Sg	09 13 08.4	+1.4
FULB	**Fuli** baz=212	1.73	201	eP	Pb	09 12 43.9	-0.3
FULB	baz=212			eS	Sg	09 13 08.5	+0.3
ELDTW	**Lidau** baz=208	1.84	208	eP	Pb	09 12 46.0	-0.1
ELDTW	baz=208			eS	Sb	09 13 09.8	+0.7
HATJ	**Hateruma jima**	1.85	114	P	Pn	09 12 44.2	+0.3
HATJ				eS	Sn	09 13 06.5	-0.6
CHN4	**Tsaushan** baz=221	1.92	221	eP	Pb	09 12 47.8	+0.3
CHN4	baz=221			eS	Sg	09 13 14.4	-0.1
EDH	**Donghe** baz=198	1.94	198	eP	Pb	09 12 46.6	-1.1
EDH	baz=198			eS	Sn	09 13 10.4	+1.1
TPUB	**Ta-pu** baz=203	1.94	219	eP	Pb	09 12 48.3	+0.5
TPUB	baz=203			eS	Sg	09 13 14.4	-0.7
JKRS	**Kuro-shima**	1.96	107	P	Pn	09 12 45.5	+0.1
JKRS				eS	Sn	09 13 09.0	-0.8
STYH	**Taoyuan** baz=200	1.97	214	eP	Pb	09 12 48.4	+0.2
STYH	baz=200			eS	Sg	09 13 15.4	-0.5
JIJ	**Ishigaki jima**	2.04	102	P	Pn	09 12 46.8	+0.2
JIJ				eS	Sn	09 13 11.1	-0.8
TWK	**Hsinying** baz=221	2.05	221	eP	Pb	09 12 49.6	-0.1
TWK	baz=221			eS	Sg	09 13 17.2	-1.3
LONT	**Longtian** baz=201	2.05	202	eP	Pn	09 12 48.2	+1.5
CHN1	**Nanshi** baz=219	2.09	219	eP	Pb	09 12 51.5	+1.1
CHN1	baz=219			eS	Sg	09 13 19.3	-0.5
JISG	**Ishigakijimahi**	2.15	96	P	Pn	09 12 48.6	+0.5
JISG				eS	Sn	09 13 15.7	+1.1
MASBT	**Mashibuluo** baz=193	2.51	209	eP	Pb	09 12 55.5	-2.0

NOU 20 09:19:36.6, 17°.88S×167°.27E, h32km, MLv4.7/16, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	**Devils Point**	0.89	80	P	Pn	09 19 53.1	+0.3
RTV	**Rentapao**	1.10	86	P	Pn	09 19 56.2	+0.4
SANVU	**Saraoutou**	2.42	358	P	Pn	09 20 13.3	-0.7
LIFNC	**LIFOU**	2.88	181	P	Pn	09 20 18.2	-2.1
MARNC	**Mare, Loyalty**	3.65	169	P	Pn	09 20 31.7	+0.8
KOUNC	**Koumac, New Ca**	3.87	226	P	Pn	09 20 34.2	+0.2
YATNC	**Mamie plateau,**	4.17	185	P	Pn	09 20 36.9	-1.2
DZM	**Mont Dzumac**	4.24	190	P	Pn	09 20 39.0	-0.1
NOUC	**Port Laguerre**	4.30	192	P	Pn	09 20 40.2	+0.4
ONTNC	**Ouen Toro**	4.47	190	P	Pn	09 20 42.6	+0.4
OUENC	**Ouen Island, N**	4.53	185	P	Pn	09 20 43.7	+0.7

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*NEIC **20** 09:26:08.4±1.7, 34°.36N±0°.06×68°.92E±0°.07, h10km±7km, mb3.5/3, Error ellipse: s-maj=9.5km s-min=7.5km az=124.0*

ISC 20 09:26:08.0±1.9**, 34°.35N**±0°.09×**68°.9E**±0°.1**, h10km, n21, σ1ˢ.74**/24**, Southeastern Afghanistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	**Kabul**	0.22	31	Pg	Pg	09 26 12.8	+0.1
KBL				Sg	Sg	09 26 15.9	-0.1
NIL	**Nilore**	3.68	100	Pn	Pn	09 27 04.4	-0.6
CHGR	**Chuyangaron**	4.30	3	Pn	Pn	09 27 13.6	-0.1
GAR	**Garm**	4.78	13	Pn	Pn	09 27 20.6	+0.4
DRK	**Karamyk**	5.62	24	Pn	Pn	09 27 31.9	0.0
BTK	**Batken**	5.90	14	Pn	Pn	09 27 36.5	+1.0
DHRM	**DHARAMSHALA**	6.54	107	eP	Pb	09 28 06.5	+4.6
DHRM				eS	Sn	09 28 56.0	-3.2
SMLA	**Simla**	7.67	112	eP	Pn	09 27 59.3	-0.4
SMLA				eS	Sn	09 29 21.7	-4.9
AML	**Almayashu** SNR=46	8.63	24	P	Pn	09 28 13.4	+0.1
KKAR	**Karatay Array**	8.83	8		Pn	09 28 14.3	-1.4
UCH	**Uchtor** SNR=8.0	9.02	28	P	Pn	09 28 18.4	-0.2
AAK	**Ala-Archa** SNR=8.8	9.36	26	P	Pn	09 28 22.7	-0.4
AAK	**Ala-Archa**	9.36	26	Pn	Pn	09 28 22.7	-0.4
CHMS	**Chumysh** SNR=7.3	9.77	26	P	Pn	09 28 29.1	+0.5
BOOM	**Boomskoye usch**	9.82	32	Pn	Pn	09 28 29.6	+0.2
USP	**Ospenovka** SNR=8.4	9.91	24	P	Pn	09 28 30.6	0.0
MAKZ	**Makanchi**	15.89	35	Pn	Pn	09 29 51.2	-0.5
MAKZ	comp=Z,6.4nm,1.4s			IAmb	IAmb	09 30 13.9	
MKAR	**Makanchi Array**	16.03	35	Pn	Pn	09 29 54.0	+0.5
ABKAR	**Akbulak array**	16.31	339	Pn	Pn	09 29 55.4	-1.6
ABKAR	comp=Z,0.8nm,0.7s			IAmb	IAmb	09 30 07.1	
ZAA0	**Zalesovo Array**	22.58	25	P	P	09 31 08.1	-0.2
ZAA0	comp=Z,1.8nm,0.8s			IAmb	IAmb	09 31 23.9	
ZALV	**Zalesovo Beam**	22.58	25	P	P	09 31 09.2	+0.9

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*TIR **20** 09:33:12.6, 38°.57N×20°.60E, h16km±21km, Ml5.0*

*PDG **20** 09:33:13.8±0.7, 38°.66N×20°.46E, h13km±1km, MD4.8/2, ML4.8/13, Error ellipse: s-maj=0.7km s-min=1.0km az=0.0*

*MOS **20** 09:33:13.7±1.3, 38°.70N×20°.35E, h15km, mb5.0/29, MS4.1/8, Error ellipse: s-maj=4.3km s-min=2.3km az=85.2*

*IDC **20** 09:33:13.3±0.5, 38°.75N×20°.48E, h0km, mb4.4/31, mb1 4.5/44, mb1mx4.5/63, mbtmp4.4/44, ML4.2/12, MS3.8/41, Ms1 3.8/41, ms1mx3.7/67, Error ellipse: s-maj=10.7km s-min=9.6km az=162.0*

*UPSL **20** 09:33:14.8, 38°.64N×20°.58E, h10km, Mw4.5, Moment Tensor Solution. s8 Moment tensor: M_{rr}-0.99; $M_{\theta\theta}$4.97; $M_{\phi\phi}$-3.98; $M_{r\theta}$2.52; $M_{\theta\phi}$5.34; $M_{\phi r}$-1.10; Fault plane solution: NP1:ϕ_s289.00000°,δ85.00000°,λ-22.00000°. NP2:ϕ_s21.00000°,δ68.00000°,λ-175.00000°.*

*THE **20** 09:33:14.5, 38°.64N×20°.54E, h11km, ML4.8/12 Error ellipse: s-maj=0.9km s-min=0.3km az=8.0*

*BEO **20** 09:33:14.1±0.9, 38°.64N×20°.30E, h0km, ML4.5/18*

*GCMT **20** 09:33:14.8±0.4, 38°.55N±0°.02×20°.53E±0°.02, h20km±1km, MW4.7/71, Moment Tensor Solution. s6,c6; s71,c97; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.31±.10; $M_{\theta\theta}$1.36±.09; $M_{\phi\phi}$-1.05±.07; $M_{r\theta}$-0.12±.14; $M_{\theta\phi}$0.97±.06; $M_{\phi r}$-0.10±.14; Best double couple: $M_0$1.55300×10^{16} NP1:ϕ_s296.00000°,δ85.00000°,λ1.00000°. NP2: ϕ_s206.00000°,δ89.00000°,λ175.00000°. Principal axes: T 1.7120, Plg4.0000°, Azm161.0000°; N -0.3180, Plg85.0000°, Azm16.0000°; P -1.3940, Plg3.0000°, Azm251.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*ATH **20** 09:33:14.8, 38°.64N×20°.58E, h11km±1km, ML4.6/15 Error ellipse: s-maj=1.6km s-min=0.8km az=283.0*

*MED_RC **20** 09:33:15.0±0.2, 38°.62N×20°.50E, h19km±1km, MW4.7/30, Moment Tensor Solution.Mantle waves: s30,c49; Duration: 1ˢ.1 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.18±.11; $M_{\theta\theta}$1.20±.09; $M_{\phi\phi}$-1.03±.06; $M_{r\theta}$-0.08±.13; $M_{\theta\phi}$1.09±.05; $M_{\phi r}$-0.24±.11; Best double couple: $M_0$1.58000×10^{16} NP1:ϕ_s293.00000°,δ80.00000°, λ-2.00000°. NP2:ϕ_s23.00000°,δ88.00000°,λ-170.00000°. Principal axes: T 1.6600, Plg5.0000°, Azm157.0000°; N -0.1600, Plg80.0000°, Azm36.0000°; P -1.5000, Plg8.0000°, Azm248.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*NEIC **20** 09:33:15.2±3.0, 38°.65N±0°.06×20°.44E±0°.01, h10km±1km Error ellipse: s-maj=9.8km s-min=2.9km az=183.0*

*HLW **20** 09:33:15.6, 37°.87N×19°.43E, h11km±10km, Md5.0, Ml4.8*

ISC 20 09:33:14.7±0.7**, 38°.64N**±0°.01×**20°.52E**±0°.02**, h10**km±4km**, n726, σ1ˢ.58**/797**, mb4.6**/82**, MS3.9**/31**, 139C-117D, Fault plane solution: NP1:**ϕ_s307.26816°**,**δ89.70934°**,** λ4.26155°. **NP2:**ϕ_s217.24651°**,**δ85.73851°**,**λ179.70853°. **Principal axes:** T Plg3.2178°**,** Azm172.3363°**;** N Plg85.7286°**,** Azm311.1629°**;** P Plg2.8061°**,** Azm82.1784°**;**

Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRAG	**Dragano-Lefkad**	0.06	45	P	Pg	09 33 16.6	-0.3
DRAG	2106µm,0.5s			S	Sg	09 33 17.6	-0.9
EVGI	**Lefkada island**	0.11	100	P	Pg	09 33 17.0	-0.4
EVGI	1752µm,0.4s			S	Sg	09 33 18.6	-0.8
EVGI	**Lefkada island**	0.11	100	P	Pg	09 33 17.0	-0.4
EVGI				S	Sg	09 33 18.5	-0.9
NYDR	**Nydri-Lefkada**	0.16	63	P	Pg	09 33 17.8	-0.4
NYDR	573µm,0.6s			S	Sg	09 33 20.0	-0.6
FSK	**Fiskardo**	0.18	169	P	Pg	09 33 18.9	+0.3
FSK	137µm,0.9s			S	Sg	09 33 22.3	+1.0
FSK	**Fiskardo**	0.18	169	P	Pg	09 33 18.8	+0.3
FSK				S	Sg	09 33 21.5	+0.2
FSK				AML	AML	09 33 22.8	
FSK				AML	AML	09 33 27.8	
LKD2	**Lefkada island**	0.18	36	P	Pg	09 33 18.5	-0.2
LKD2	718µm,0.6s			S	Sg	09 33 21.6	+0.2
LKD2	**Lefkada island**	0.18	36	P	Pg	09 33 18.4	-0.2
LKD2				S	Sg	09 33 21.2	-0.2
LKD2				AML	AML	09 33 21.8	
LKD2				AML	AML	09 33 22.2	
LKD2	**Lefkada island** baz=11	0.18	36	P	Pg	09 33 18.5	-0.2
LKD2	baz=11			S	Sg	09 33 21.5	+0.2
TSLK	**Tsoukalades, L**	0.21	30	P	Pg	09 33 19.2	+0.1
TSLK	571µm,0.8s			S	Sg	09 33 22.8	+0.6
TSLK	**Tsoukalades, L**	0.21	30	P	Pg	09 33 19.3	+0.1
TSLK				S	Sg	09 33 21.7	-0.5
TSLK				AML	AML	09 33 23.7	
TSLK				AML	AML	09 33 24.8	
KEF4	**Livadi, Kephal**	0.39	191	P	Pg	09 33 22.4	+0.1
KEF4	349µm,0.6s			S	Sg	09 33 28.1	+0.6
KEF4	**Livadi, Kephal**	0.39	191	P	Pg	09 33 22.5	+0.1
KEF4				S	Sb	09 33 29.0	-0.7
DMLN	**Damoulianata-K**	0.42	196	P	Pg	09 33 22.9	0.0
DMLN	69µm,0.8s			S	Sb	09 33 29.5	-1.0
LXRA	**Lixouri, Kepha**	0.44	188	P	Pg	09 33 23.5	+0.1
LXRA				S	Sb	09 33 30.4	-0.8
KEF3	**Kipouria, Keph**	0.46	197	P	Pg	09 33 23.1	-0.4
KEF3	141µm,1.0s			S	Sg	09 33 30.2	+0.6
KEF3	**Kipouria, Keph**	0.46	197	P	Pg	09 33 23.2	-0.4
KEF3				S	Sg	09 33 29.1	-0.5
ARGA	**Argostoli. Kep**	0.46	184	P	Pb	09 33 24.6	-0.3
VLS	**Valsamata**	0.47	173	P	Pg	09 33 23.3	-0.5
VLS	38µm,0.3s			S	Sg	09 33 30.7	+0.8
VLS	**Valsamata**	0.47	173	P	Pg	09 33 23.2	-0.5
VLS				S	Sg	09 33 30.0	+0.1
VLS	comp=E,85928µm,0.6s			AML	AML	09 33 31.2	
VLS	comp=N,66734µm,0.4s			AML	AML	09 33 33.5	
VLS	**Valsamata**	0.47	173	P	Pg	09 33 23.3	-0.5
VLS				S	Sg	09 33 30.7	+0.8
VLS	**Valsamata**	0.47	173	⇑P	Pg	09 33 23.3	-0.5
VLS				S	Sg	09 33 30.6	+0.6
VLS	comp=N,11530µm,1.5s			AML	AML		
VLS	comp=E,17550µm,0.5s			AML	AML		
VLS	comp=N,11525µm,1.5s			AML	AML		
PSDA	**Pessada-Kefalo**	0.53	174	P	Pg	09 33 24.3	-0.6
PSDA	comp=N,5µm,0.6s			S	Sg	09 33 32.6	+0.7
PSDA	**Pessada-Kefalo**	0.53	174	P	Pg	09 33 24.5	-0.5
PVO	**Paravola**	0.79	91	P	Pg	09 33 29.4	-0.5
PVO	comp=N,70µm,0.5s			S	Sb	09 33 40.8	-0.4
PVO	**Paravola**	0.79	91	P	Pg	09 33 29.3	-0.5
PVO				AML	AML	09 33 42.9	
PVO	comp=E,95657µm,0.6s			AML	AML	09 33 46.0	
VTN	**Vitineika**	0.89	144	P	Pg	09 33 31.3	-0.6
IGT	**Igoumenitsa**	0.90	351	P	Pg	09 33 30.9	-1.2
IGT	**Igoumenitsa**	0.90	351	P	Pg	09 33 31.6	-0.5
IGT	comp=E,77686µm,0.6s			AML	AML	09 33 49.5	
IGT	comp=N,46785µm,0.6s			AML	AML	09 33 50.5	
IGT	**Igoumenitsa**	0.90	351	P	Pg	09 33 30.9	-1.2

IGT	Igoumenitsa	0.90	351	P	Pg	09 33 30.9	-1.2
	baz=348						
IGT				S	Sn	09 33 46.7	+0.2
	baz=348						
ZAK2	Zakynthos	0.90	160	P	Pg	09 33 31.7	-0.3
RLS	Riolos of Patr	0.95	128	P	Pg	09 33 31.6	-1.3
RLS	Riolos of Patr	0.95	128	P	Pg	09 33 32.3	-0.6
RLS				AML	AML	09 33 53.5	
	comp=E,31160μm,0.6s						
RLS				AML	AML	09 33 53.6	
	comp=N,47630μm,0.8s						
LTHK	Lithakia	0.96	165	P	Pg	09 33 31.4	-1.8
LTHK	Lithakia	0.96	165	P	Pg	09 33 31.6	-1.6
EVR	Evrytania	1.05	74	P	Pg	09 33 33.1	-1.7
EVR	Evrytania	1.05	74	P	Pg	09 33 32.9	-1.9
EVR				AML	AML	09 34 00.8	
	comp=N,48150μm,0.7s						
EVR				AML	AML	09 34 02.5	
	comp=E,30325μm,0.5s						
JAN	Janina	1.05	14	P	Pg	09 33 34.0	-0.8
JAN	Janina	1.05	14	P	Pg	09 33 33.8	-1.1
JAN				AML	AML	09 33 52.7	
	comp=N,52691μm,0.5s						
JAN				AML	AML	09 33 53.6	
	comp=E,75769μm,0.5s						
JAN	Janina	1.05	14	P	Pg	09 33 34.0	-0.8
UPR	University Cam	1.06	109	P	Pg	09 33 34.0	-1.0
ANX	Ano Chora	1.10	92	P	Pg	09 33 34.2	-1.6
ANX	Ano Chora	1.10	92	P	Pg	09 33 34.4	-1.5
ANX				AML	AML	09 33 57.9	
ANX				AML	AML	09 33 58.8	
EFP	Efpalio	1.11	101	P	Pb	09 33 34.4	-1.5
EFP	Efpalio	1.11	101	P	Pb	09 33 34.8	-1.1
DRO	Drossia	1.16	126	P	Pb	09 33 35.1	-1.8
KASA	Kassiopi	1.19	338	P	Pg	09 33 37.9	+0.3
KEK	Kerkira	1.21	333	P	Pn	09 33 35.9	-1.7
KEK	Kerkira	1.21	333	P	Pb	09 33 37.7	+0.1
KEK				AML	AML	09 34 02.3	
	comp=E,25351μm,0.8s						
KEK				AML	AML	09 34 04.6	
	comp=N,35727μm,0.7s						
KEK	Kerkira	1.21	333	P	Pn	09 33 37.0	-0.6
KEK				S	Sn	09 33 56.0	+2.0
KEK				AML	AML		
	comp=E,3570μm,0.5s						
KEK				AML	AML		
	comp=N,4555μm,0.7s						
LAKA	Lakka	1.22	109	P	Pn	09 33 36.1	-1.6
LAKA	Lakka	1.22	109	P	Pn	09 33 35.7	-2.0
LAKA				AML	AML	09 34 02.0	
LAKA				AML	AML	09 34 02.5	
TRIZ	Trizonia	1.25	102	P	Pn	09 33 36.8	-1.4
TRIZ	Trizonia	1.25	102	P	Pn	09 33 37.0	-1.2
SRN	Sarande	1.30	342	P	Pn	09 33 38.6	-0.3
SRN	Sarande	1.30	342	P	Pb	09 33 39.1	-0.1
SRN				S	Sg	09 33 58.8	+2.2
SRN				AML	AML		
	comp=N,8590μm,1.6s						
SRN				AML	AML		
	comp=E,10640μm,0.7s						
SRN	Sarande	1.30	342	P	Pn	09 33 38.5	-0.3
	baz=341						
SRN				AMP			
	comp=E,34nm,0.6s,baz=341						
ALIK	Aliki, Aigiali	1.31	106	P	Pn	09 33 37.8	-1.1
MAKR	Makrakomi, Fth	1.31	73	P	Pn	09 33 38.5	-0.6
MAKR	Makrakomi, Fth	1.31	73	P	Pn	09 33 39.1	0.0
MAKR				AML	AML	09 34 04.5	
	comp=E,49620μm,1.6s						
MAKR				AML	AML	09 34 08.6	
	comp=N,37247μm,0.9s						
KLV	Kalavryta, Ach	1.42	114	P	Pn	09 33 39.3	-1.2
KLV	Kalavryta, Ach	1.42	114	P	Pn	09 33 39.5	-1.0
KLV				AML	AML	09 34 09.6	
	comp=E,27677μm,1.2s						
KLV				AML	AML	09 34 13.2	
	comp=N,32250μm,0.9s						
KLV	Kalavryta, Ach	1.42	114	P	Pn	09 33 40.6	+0.1
KLV				S	Sg	09 34 01.9	+1.7
KLV				AML	AML		
	comp=E,16550μm,1.1s						
KLV				AML	AML		
	comp=N,19350μm,0.9s						
AGG	Agios Georgios	1.47	74	P	Pn	09 33 40.7	-0.5
AGG	Agios Georgios	1.47	74	P	Pb	09 33 42.0	0.0
AGG	Agios Georgios	1.47	74	Pn	Pb	09 33 42.0	0.0
KPRO	Kipourio	1.47	26	P	Pn	09 33 39.5	-1.8
THL	Klokotos Trika	1.49	51	P	Pn	09 33 39.2	-2.2
THL	Klokotos Trika	1.49	51	P	Pn	09 33 41.4	-0.1
THL				AML	AML	09 34 06.7	
	comp=N,60356μm,0.8s						
THL				AML	AML	09 34 09.4	
	comp=E,46730μm,0.5s						
THL	Klokotos Trika	1.49	51	P	Pn	09 33 41.3	-0.1
THL				S	Sg	09 34 03.6	+1.1
THL				AML	AML		
	comp=E,5855μm,0.5s						
THL				AML	AML		
	comp=N,7770μm,0.8s						
LSK	Leskovik	1.51	2	P	Pn	09 33 39.6	-2.2
LSK	Leskovik	1.51	2	P	Pb	09 33 43.0	+0.2
	baz=0.0						
LSK				S	Sg	09 34 03.5	+0.3
	baz=0.0						
LSK				AMP			
	comp=N,103nm,1.1s,baz=0.0						
GUR	Goura	1.60	116	P	Pn	09 33 42.4	-0.7
ITM	Ithomi	1.83	142	P	Pn	09 33 45.1	-1.1
ITM	Ithomi	1.83	142	P	Pb	09 33 48.6	+0.3
ITM	Ithomi	1.83	142	Pn	Pb	09 33 48.0	-0.4
KZN	Kozani	1.93	30	P	Pb	09 33 49.6	-0.3
KZN	Kozani	1.93	30	P	Pb	09 33 49.6	-0.3
LKR	Lokris	1.94	89	P	Pn	09 33 46.4	-1.3
VLO	Vlora	1.99	337	P	Pn	09 33 49.5	+1.2
VLO	Vlora	1.99	337	P	Pb	09 33 49.7	-1.2
VLO				AML	AML		
	comp=N,16750μm,1.1s						
VLO				AML	AML		
	comp=E,16900μm,1.2s						
VLO	Vlora	1.99	337		Pn	09 33 49.5	+1.2
VLO	Vlora	1.99	337	P	Pn	09 33 49.5	+1.2
	baz=336						
VLO				AMP			
	comp=E,47nm,0.6s,baz=336						
KBN	Korca	1.99	6	P	Pb	09 33 51.1	0.0
KBN	Korca	1.99	6		Pb	09 33 51.1	0.0
KBN	Korca	1.99	6	P	Pb	09 33 51.0	0.0
	baz=3.0						
KBN				S	Sg	09 34 17.9	-0.9
	baz=3.0						
KBN				AMP			
	comp=N,25nm,0.6s,baz=3.0						
PYL	PYLOS	1.99	151	P	Pn	09 33 46.3	-2.1
SCTE	Santa Cesarea	2.14	313	⇑P	Pn	09 33 50.9	+0.6
SCTE				AML	AML		
	comp=N,13250μm,0.8s						
SCTE				AML	AML		
	comp=E,15000μm,0.5s						
SCTE	Santa Cesarea	2.14	313	Pn	Pn	09 33 51.1	+0.7
SCTE	Santa Cesarea	2.14	313	P	Pn	09 33 51.0	+0.6
	baz=313						
FNA	Florina	2.24	17	P	Pn	09 33 49.9	-2.0
FNA	Florina	2.24	17	P	Pb	09 33 53.9	-1.4
FNA	Florina	2.24	17		Pb	09 33 53.9	-1.4
FNA	Florina	2.24	17	P	Pb	09 33 53.7	-1.6
	baz=15						
FNA				S	Sb	09 34 22.4	-0.7
	baz=15						
KRND	KRANIDI	2.43	120	P	Pn	09 33 53.8	-0.6
OHR	Ohrid	2.48	5	ePn	Pb	09 33 57.6	-1.7
OHR				eSn	Sn	09 34 26.9	+1.4
OHR	Ohrid	2.48	5	eP	Pb	09 33 57.6	-1.7
OHR				eS	Sn	09 34 26.9	+1.4
OHR	Ohrid	2.48	5	⇑iPn	Pb	09 33 57.4	-1.9
ATH	Athens Observa	2.60	104	P	Pn	09 33 55.7	-1.1
ATH	Athens Observa	2.60	104	P	Pn	09 33 55.7	-1.1
ATHU	Athens Univers	2.66	104	P	Pn	09 33 56.7	-0.8
VLY	Voula,Athens	2.70	106	P	Pn	09 33 57.7	-0.4
VLI	Veliai	2.71	134	P	Pn	09 33 57.9	-0.4
GRG	Griva	2.73	31	P	Pn	09 33 59.6	+1.0
TIR	Tirane	2.75	350	⇑P	Pn	09 34 00.0	+1.3
TIR	Tirane	2.75	350	ePn	Pn	09 34 00.1	+1.3
TIR	Tirane	2.75	350	P	Pn	09 34 00.1	+1.3
TIR	Tirane	2.75	350	⇓P	Pn	09 34 00.8	+2.0
TIR				AML	AML		
	comp=N,6720μm,1.1s						
TIR				AML	AML		
	comp=E,6440μm,1.2s						
TIR	Tirane	2.75	350	Pn	Pn	09 34 00.1	+1.3
TIR	Tirane	2.75	350	P	Pn	09 34 00.1	+1.3
	baz=349						
TIR				AMP			
	comp=E,8.3nm,1.2s,baz=349						
PAIG	Paliouri	2.77	61	P	Pn	09 34 00.8	+1.7
PLG	Polygyros	2.85	52	P	Pn	09 34 01.1	+0.9
PLG	Polygyros	2.85	52	P	Pn	09 34 01.1	+0.9
TIP	Timpagrande	2.98	282	⇓P	Pn	09 34 02.7	+0.6
TIP	Timpagrande	2.98	282	⇓P	Pn	09 34 02.7	+0.6
TIP				AML	AML		
	comp=E,1925μm,1.2s						
TIP				AML	AML		
	comp=E,1640μm,1.2s						
TIP				AML	AML		
	comp=N,2010μm,1.1s						
TIP				AML	AML		
	comp=N,1595μm,1.1s						
TIP	Timpagrande	2.98	282		Pn	09 34 02.8	+0.8
PIPA	Pietrapaola	3.00	287	⇑P	Pn	09 34 04.2	+1.9
PIPA				AML	AML		
	comp=E,5265μm,0.7s						
PIPA				AML	AML		
	comp=N,4150μm,0.8s						
PIPA				AML	AML		
	comp=E,5175μm,0.7s						
PIPA				AML	AML		
	comp=N,4080μm,0.8s						
SERS	Sersale	3.02	279	P	Pn	09 34 03.6	+1.0
SERS				AML	AML		
	comp=E,1870μm,1.1s						
SERS				AML	AML		
	comp=E,1700μm,0.8s						
SERS				AML	AML		
	comp=N,1815μm,1.2s						
SERS				AML	AML		
	comp=N,1535μm,0.7s						
PHP	Peshkopia	3.04	359	P	Pn	09 34 04.3	+1.4
PHP	Peshkopia	3.04	359	P	Pn	09 34 04.3	+1.4
	baz=358						
PHP				AMP			
	comp=N,8.9nm,0.9s,baz=358						
SOH	Sokhos	3.09	44	P	Pn	09 34 04.9	+1.4
KTHR	Kythira	3.09	139	P	Pn	09 34 03.5	0.0
VAY	Valandovo	3.11	30	iPn	Pn	09 34 04.7	+1.0
KNT	Kendrikon	3.11	35	P	Pn	09 34 03.0	-0.8
KNT	Kendrikon	3.11	35	P	Pn	09 34 03.0	-0.8
OUR	Ouranopolis	3.17	57	P	Pn	09 34 03.9	-0.7
OUR	Ouranopolis	3.17	57	P	Pn	09 34 03.9	-0.7
GRI	Girifalco	3.21	275	⇓P	Pn	09 34 06.9	+1.7
GRI				AML	AML		
	comp=N,1165μm,1.0s						
GRI				AML	AML		
	comp=E,1095μm,1.6s						
STIP	Stip	3.31	22	⇑iPn	Pn	09 34 09.2	+2.7
SPS2	Spezzano della	3.32	283	P	Pb	09 34 10.7	-3.0
SPS2				AML	AML		
	comp=E,201μm,1.1s						
SPS2				AML	AML		
	comp=N,217μm,0.8s						
SPS2				AML	AML		
	comp=E,1135μm,0.9s						
SPS2				AML	AML		
	comp=N,738μm,1.4s						
SKO	Skopje	3.40	12	P	Pn	09 34 08.7	+0.9
SKO	Skopje	3.40	12	iPn	Pn	09 34 09.2	+1.5
SKO				eSg	Sn	09 34 50.3	+2.2
TDS	Terranova Siba	3.41	289	⇑P	Pb	09 34 12.2	-2.9
TDS				AML	AML		
	comp=N,1585μm,1.0s						
TDS				AML	AML		
	comp=E,1710μm,0.9s						
CAR1	CAROLEI	3.41	282	⇑P	Pn	09 34 10.2	+2.2
CAR1				AML	AML		
	comp=E,892μm,0.6s						
CAR1				AML	AML		
	comp=N,560μm,0.5s						
CAR1				AML	AML		
	comp=E,2775μm,1.3s						
CAR1				AML	AML		
	comp=N,3225μm,0.9s						
CAR1				AML	AML		
	comp=E,2815μm,1.3s						
CAR1				AML	AML		
	comp=N,3020μm,1.0s						
NOCI	Noci	3.42	310	P	Pn	09 34 09.5	+1.4
NOCI				AML	AML		
	comp=N,8695μm,1.1s						
NOCI				AML	AML		
	comp=E,4800μm,1.3s						
NOCI	Noci	3.42	310	P	Pn	09 34 08.2	+0.1
	baz=311						
SRS	Serrai	3.42	43	P	Pn	09 34 07.0	-1.1
SRS	Serrai	3.42	43	P	Pn	09 34 07.0	-1.1
ULC	Ulcinj	3.46	344	⇑iPn	Pn	09 34 08.3	-0.3
ULC				iSn	Sn	09 34 48.4	-1.2
SALB	San Lorenzo Be	3.47	292	P	Pn	09 34 10.1	+1.3
SALB				AML	AML		
	comp=E,2215μm,1.3s						
SALB				AML	AML		
	comp=N,2350μm,0.8s						
SALB				AML	AML		
	comp=E,2265μm,1.3s						
SALB				AML	AML		
	comp=N,2245μm,0.8s						
SOI	Samo	3.55	262	⇓P	Pn	09 34 10.3	+0.5
SOI				AML	AML		
	comp=E,252μm,1.0s						
SOI				AML	AML		
	comp=N,271μm,0.8s						
SOI				AML	AML		
	comp=N,771μm,0.8s						
SOI				AML	AML		
	comp=E,688μm,0.8s						
CRAC	Craco	3.60	300	⇑P	Pn	09 34 10.9	+0.5
CRAC				AML	AML		
	comp=N,13750μm,1.3s						
CRAC				AML	AML		
	comp=E,9270μm,0.6s						
MPAZ	Palizzi	3.62	260	⇓P	Pn	09 34 11.0	+0.2
MPAZ				AML	AML		
	comp=N,882μm,1.1s						
MPAZ				AML	AML		
	comp=E,972μm,0.5s						
JOPP	Joppolo	3.63	271	⇓P	Pn	09 34 12.3	+1.4
JOPP				AML	AML		
	comp=N,1432μm,0.9s						
JOPP				AML	AML		
	comp=E,1645μm,1.1s						
CEL	Celeste	3.65	265	Pn	Pn	09 34 11.8	+0.6
CET2	Cetraro	3.66	285	P	Pn	09 34 13.8	+2.4
CET2				AML	AML		
	comp=E,4530μm,0.8s						
CET2				AML	AML		
	comp=N,5915μm,0.9s						
DRME	Dracevica, Mon	3.69	344	⇑iPn	Pn	09 34 11.6	-0.1
DRME	Dracevica, Mon	3.69	344	⇑iPn	Pn	09 34 11.6	-0.1
DRME				iSn	Sn	09 34 54.0	-1.2
MIGL	Miglionico	3.71	303	P	Pn	09 34 14.0	+2.0
MIGL				AML	AML		
	comp=N,22600μm,0.9s						
MIGL				AML	AML		
	comp=E,23400μm,1.2s						
GMB	Gambarie	3.71	264	P	Pn	09 34 09.4	-2.8
GMB				AML	AML		
	comp=E,1735μm,0.9s						
GMB				AML	AML		
	comp=N,1300μm,1.0s						
GMB				AML	AML		
	comp=E,5545μm,0.4s						
GMB				AML	AML		
	comp=N,4975μm,0.6s						
MMN	Mormanno	3.73	291	P	Pb	09 34 17.5	-3.1
BCI	Bajram Curri	3.74	355	P	Pn	09 34 13.9	+1.4
	baz=355						
BCI				AMP			
	comp=E,10.0nm,0.8s,baz=355						
AMUR	Altamura	3.77	308	⇑P	Pn	09 34 13.9	+1.0
AMUR				AML	AML		
	comp=N,4065μm,1.5s						
AMUR				AML	AML		
	comp=E,4350μm,0.7s						
MTTG	Motta San Giov	3.85	262	⇓P	Pn	09 34 14.1	+0.2
MTTG				AML	AML		
	comp=E,522μm,1.5s						
MTTG				AML	AML		
	comp=N,543μm,0.7s						
MTTG				AML	AML		
	comp=N,1820μm,0.6s						
MTTG				AML	AML		
	comp=E,1950μm,0.9s						
BUM	Brajici-Budva	3.86	342	⇑iPn	Pn	09 34 13.6	-0.5
BUM				iSn	Sn	09 34 58.4	-1.2
CUC	Castrocucco	3.89	292	⇓P	Pn	09 34 18.3	+3.8
CUC				AML	AML		
	comp=E,2630μm,0.8s						
CUC				AML	AML		
	comp=N,1565μm,0.8s						
CUC				AML	AML		
	comp=E,3240μm,0.8s						
CUC				AML	AML		
	comp=N,1905μm,0.9s						
PDG	Podgorica	3.91	346	ePn	Pn	09 34 15.2	+0.5
PDG				eSn	Sn	09 34 59.9	-0.7
PDG	Podgorica	3.91	346	⇑iPn	Pn	09 34 14.7	0.0
PDG	Podgorica	3.91	346	Pn	Pn	09 34 15.0	+0.3
TTG	Podgorica	3.91	346	⇑iPn	Pn	09 34 14.5	-0.2
TTG				iSn	Sn	09 34 59.6	-1.0
SIRI	Monte Sirino -	3.92	295	⇑P	Pn	09 34 18.7	+3.8
SIRI				AML	AML		
	comp=N,2455μm,1.3s						
SIRI				AML	AML		
	comp=E,2150μm,0.9s						
SIRI				AML	AML		
	comp=N,2515μm,1.3s						
SIRI				AML	AML		
	comp=E,2130μm,0.9s						
MSRU	Castanea	3.95	266	⇑P	Pn	09 34 15.9	+0.6
MSRU				AML	AML		
	comp=E,1970μm,1.0s						
MSRU				AML	AML		
	comp=N,1115μm,1.6s						
PVY	Plav	3.97	354	⇑iPn	Pn	09 34 15.1	-0.6
PVY				iSn	Sn	09 35 00.5	-1.9
MCEL	Monticello	4.02	296	⇑P	Pn	09 34 20.8	+4.5
MCEL				AML	AML		
	comp=N,3390μm,1.0s						
MCEL				AML	AML		
	comp=E,2485μm,1.0s						
MCEL				AML	AML		
	comp=N,3455μm,1.0s						
MCEL				AML	AML		
	comp=E,2470μm,1.0s						
MTSN	Montesano sull	4.03	295	⇑P	Pn	09 34 18.8	+2.3
MTSN				AML	AML		
	comp=E,2775μm,0.8s						
MTSN				AML	AML		
	comp=N,2470μm,0.8s						
PRVS	Prvonek	4.04	17	ePn	Pn	09 34 17.5	+0.9
CEME	Cevo	4.09	343	⇑iPn	Pn	09 34 16.7	-0.6
CEME				iSn	Sn	09 35 03.4	-1.8
HCY	Herceg Novi	4.10	339	P	Pn	09 34 16.9	-0.5
HCY	Herceg Novi	4.10	339	⇑iPn	Pn	09 34 16.3	-1.1
HCY	Herceg Novi	4.10	339	⇑iPn	Pn	09 34 16.4	-1.0
HCY				iSn	Sn	09 35 04.2	-1.3
MRVN	Minervino Murg	4.11	307	⇓P	Pn	09 34 18.7	+1.1
MRVN				AML	AML		
	comp=N,2200μm,0.9s						
MRVN				AML	AML		
	comp=E,2160μm,0.8s						
MRVN	Minervino Murg	4.11	307	P	Pn	09 34 17.9	+0.3
	baz=308						
MGR	Morigerati	4.13	293	P	Pn	09 34 20.2	+2.5
MGR				AML	AML		
	comp=E,1655μm,1.2s						
MGR				AML	AML		
	comp=N,2490μm,0.9s						
MGR				AML	AML		
	comp=E,1640μm,1.3s						
MGR				AML	AML		
	comp=N,2480μm,0.9s						
ACER	Acerenza	4.13	303	⇑P	Pn	09 34 20.6	+2.7
ACER				AML	AML		
	comp=E,8430μm,0.8s						
ACER				AML	AML		
	comp=E,8100μm,0.8s						
ACER				AML	AML		
	comp=N,9130μm,0.8s						
ACER				AML	AML		
	comp=N,9350μm,0.8s						
BOSS	Bosilegrad	4.13	21	ePn	Pn	09 34 18.9	+1.1
IST3	Stromboli F	4.14	274	⇓P	Pn	09 34 20.3	+2.4
IST3				AML	AML		
	comp=E,840μm,0.6s						
IST3				AML	AML		
	comp=N,995μm,0.5s						
MCSR	Castroreale	4.18	264	P	Pn	09 34 18.8	+0.3
MCSR				AML	AML		
	comp=E,1730μm,1.5s						
MCSR				AML	AML		
	comp=N,1345μm,1.3s						
PALZ	Palazzo San Ge	4.20	305	⇓P	Pn	09 34 19.9	+1.1
PALZ				AML	AML		
	comp=E,15850μm,1.1s						
PALZ				AML	AML		
	comp=N,12000μm,1.3s						
AIO	Antillo	4.21	263	⇓P	Pn	09 34 19.2	+0.3
AIO				AML	AML		
	comp=N,1070μm,1.6s						
AIO				AML	AML		
	comp=E,980μm,0.7s						
BULG	Bulgheria - Ca	4.24	291	⇓P	Pn	09 34 20.8	+1.5
BULG				AML	AML		
	comp=E,1460μm,1.2s						
BULG				AML	AML		
	comp=N,2980μm,1.2s						
IVA	Berane	4.25	354	⇓iPn	Pn	09 34 19.6	0.0
IVA				eSn	Sn	09 35 08.1	-1.2
APE	Apeiranthos	4.27	110	⇓P	Pn	09 34 24.0	+4.3
APE	Apeiranthos	4.27	110	P	Pn	09 34 23.8	+4.1
KOME	Kolasin	4.27	350	⇑iPn	Pn	09 34 19.8	-0.1
KOME				iSn	Sn	09 35 08.4	-1.4
BARS	Barje	4.29	13	ePn	Pn	09 34 20.3	+0.3
BARS	Barje	4.29	13	ePn	Pg	09 34 37.2	+0.4
NKME	Niksic	4.29	344	⇑iPn	Pn	09 34 19.5	-0.5
NKME				iSn	Sn	09 35 08.7	-1.5
NKY	Niksic	4.33	345	P	Pn	09 34 21.1	+0.5
NKY	Niksic	4.33	345	⇑iPn	Pn	09 34 20.4	-0.2
NKY				iSn	Sn	09 35 09.5	-1.6
VPL	Vulcano Piano	4.35	268	⇑P	Pn	09 34 22.8	+2.0
VPL				AML	AML		
	comp=E,3370μm,0.9s						
VPL				AML	AML		
	comp=N,4380μm,0.7s						
CMPR	Campora	4.37	294	⇑P	Pn	09 34 24.3	+3.1
CMPR				AML	AML		
	comp=E,2750μm,1.1s						
CMPR				AML	AML		
	comp=N,1470μm,1.1s						
TREB	Trebinje	4.39	339	ePn	Pn	09 34 20.6	-0.9
TREB	Trebinje	4.39	339	⇑iPn	Pn	09 34 20.5	-0.9
CAPA	Cerignola FG	4.40	306	P	Pn	09 34 23.0	+1.5
CAPA				AML	AML		
	comp=N,12600μm,1.1s						
CAPA				AML	AML		
	comp=E,10500μm,1.2s						
DBRK	Dubrovnik	4.41	337	ePn	Pn	09 34 22.4	+0.7
DBRK				Sn	Sn	09 35 10.1	-2.9
MRLC	Muro Lucano	4.42	300	⇑P	Pn	09 34 24.1	+2.4
CDRU	Civita di Ruta	4.43	296	⇑P	Pn	09 34 25.9	+3.9
CDRU				AML	AML		
	comp=E,1175μm,0.9s						
CDRU				AML	AML		
	comp=N,1092μm,1.0s						
HAGA	Augusta	4.45	254	P	Pn	09 34 20.1	-2.1
HAGA				S	Sn	09 35 07.8	-6.1
HAGA				AML	AML		
	comp=N,1028μm,0.6s						
HAGA				AML	AML		
	comp=E,1055μm,0.7s						
MUCR	Ucria	4.48	264	⇓P	Pn	09 34 23.0	+0.3
MUCR				AML	AML		
	comp=N,1009μm,1.5s						
MUCR				AML	AML		
	comp=E,741μm,0.9s						
VTS	Vitosha	4.48	27	⇑P	Pn	09 34 23.9	+1.2
VTS	Vitosha	4.48	27	ePn	Pn	09 34 23.9	+1.2

VTS				*e*Sn	Sn	09 35 16.2	+1.3
VTS	Vitosha	4.48	27	P	Pn	09 34 23.9	+1.2
VTS	Vitosha	4.48	27	Pn	Pn	09 34 23.9	+1.2
BRY	Bratogost	4.51	341	P	Pn	09 34 22.6	-0.6
BRY	Bratogost	4.51	341	⇑*i*Pn	Pn	09 34 22.3	-0.9
BRY	Bratogost	4.51	341	⇑*i*Pn	Pn	09 34 22.2	-0.9
BRY				*i* Sn	Sn	09 35 14.0	-1.8
EPZF	Pizzo Felice	4.53	261	P	Pn	09 34 23.6	+0.2
EPZF				AML	AML		
	comp=N,1700µm,0.9s						
EPZF				AML	AML		
	comp=E,1370µm,1.0s						
SANT	Santorini	4.54	118	⇓P	Pb	09 34 28.9	-5.5
SANT	Santorini	4.54	118	Pn	Pn	09 34 25.0	+1.6
HAVL	Avola	4.59	250	⇓P	Pn	09 34 22.3	-1.8
HAVL				AML	AML		
	comp=N,1485µm,0.5s						
HAVL				AML	AML		
	comp=E,1380µm,1.2s						
SELS	Selova	4.60	5	*e*Pn	Pn	09 34 24.2	0.0
SJES	Sjenica	4.63	355	*e*Pn	Pn	09 34 25.6	+0.8
MNO	Monte Soro	4.64	263	⇓P	Pn	09 34 25.6	+0.7
MNO				AML	AML		
	comp=N,1555µm,0.6s						
MNO				AML	AML		
	comp=E,1315µm,0.8s						
MCRV	Calabrutti - M	4.65	299	P	Pn	09 34 28.9	+4.0
MCRV				AML	AML		
	comp=N,1380µm,0.7s						
MCRV				AML	AML		
	comp=E,1035µm,1.5s						
EZN	Ezine	4.66	73	P	Pn	09 34 28.7	+3.6
MSAG	Monte S. Angel	4.68	312	⇑P	Pn	09 34 25.6	+0.2
MSAG				AML	AML		
	comp=E,3165µm,0.9s						
MSAG				AML	AML		
	comp=N,4300µm,0.8s						
MSAG				AML	AML		
	comp=E,2955µm,0.9s						
MSAG				AML	AML		
	comp=N,4290µm,0.8s						
MEU	Monte Lauro	4.68	253	⇓P	Pn	09 34 24.4	-1.0
MEU				AML	AML		
	comp=E,1885µm,0.4s						
MEU				AML	AML		
	comp=N,2405µm,0.4s						
ECNV	Catenanuova	4.70	259	⇓P	Pn	09 34 25.7	+0.1
ECNV				AML	AML		
	comp=E,1400µm,0.7s						
ECNV				AML	AML		
	comp=N,2195µm,1.4s						
MSFR	San Fratello	4.70	264	⇓P	Pn	09 34 26.6	+0.9
MSFR				AML	AML		
	comp=N,354µm,1.1s						
MSFR				AML	AML		
	comp=E,441µm,1.0s						
HPAC	Pachino	4.71	247	P	Pn	09 34 25.1	-0.6
HPAC				AML	AML		
	comp=N,1305µm,1.0s						
HPAC				AML	AML		
	comp=E,1620µm,0.5s						
PLD	Plovdiv	4.71	41	P	Pn	09 34 29.5	+3.8
UPM	Unac-Piva	4.72	346	⇑*i*Pn	Pn	09 34 27.7	+1.6
UPM	Unac-Piva	4.72	346	⇓*i*Pn	Pn	09 34 25.8	-0.3
UPM				*e*Sn	Sn	09 35 18.9	-2.0
STON	Ston	4.74	334	⇑*i*Pn	Pn	09 34 24.9	-1.2
STON	Ston	4.74	334	*i* Pn	Pn	09 34 25.6	-0.5
STON				Sn	Sn	09 35 18.1	-2.9
PLE	Pljevlja	4.76	350	P	Pn	09 34 28.9	+2.3
PLE	Pljevlja	4.76	350	*e*Pn	Pn	09 34 25.1	-1.5
GALF	Gagliano Caste	4.78	261	⇓P	Pn	09 34 27.0	+0.2
GALF				AML	AML		
	comp=E,846µm,0.7s						
GALF				AML	AML		
	comp=N,846µm,0.7s						
SGRT	San Giovanni R	4.80	312	P	Pn	09 34 27.2	+0.1
SGRT				AML	AML		
	comp=N,1935µm,0.9s						
SGRT				AML	AML		
	comp=E,2415µm,0.8s						
SGRT	San Giovanni R	4.80	312	Pn	Pn	09 34 27.4	+0.3
SGRT	San Giovanni R	4.80	312	P	Pn	09 34 27.1	+0.1
	baz=313						
ALN	Alexandroupoli	4.82	60	P	Pn	09 34 28.4	+1.2
ALN	Alexandroupoli	4.82	60	Pn	Pn	09 34 28.4	+1.2
IDI	Anoyia	4.84	132	Pn	Pn	09 34 29.3	+1.6
	comp=E,1.5nm,0.3s,baz=319,slow=16,SNR=17						
IDI				Sn	Sn	09 35 24.3	+0.5
	comp=E,8.4nm,0.3s,baz=358,slow=16,SNR=4.1						
IDI				LR	LR	09 37 06.3	
	comp=E,725nm,19.2s,baz=319,slow=47						
HMDC	Modica	4.84	251	⇓P	Pn	09 34 26.0	-1.6
HMDC				AML	AML		
	comp=E,1122µm,0.5s						
HMDC				AML	AML		
	comp=N,1085µm,0.8s						
CAGR	Agira	4.85	260	⇓P	Pn	09 34 28.5	+0.7
CAGR				AML	AML		
	comp=E,1975µm,0.9s						
CAGR				AML	AML		
	comp=N,1340µm,1.5s						
ZAPS	Zavoj	4.90	18	*e*Pn	Pn	09 34 29.4	+1.0
VAE	Valguarnera	4.96	258	Pn	Pn	09 34 30.4	+1.2
	comp=N,8.8nm,0.3s,baz=177,slow=0.8,SNR=4.8						
VAE				LR	LR	09 37 12.0	
	comp=N,737nm,19.1s,baz=53,slow=48						
LSTV	Lastovo	4.96	327	*e*Pn	Pn	09 34 28.5	-0.6
LSTV				Sn	Sn	09 35 24.4	-2.1
RUDO	Rudo	5.05	350	⇑*i*Pn	Pn	09 34 29.8	-0.6
RAFF	Raffo Rosso	5.07	256	P	Pn	09 34 29.1	-1.6
RAFF				S	Sn	09 35 28.0	-1.3
RAFF				AML	AML		
	comp=N,591µm,1.5s						
RAFF				AML	AML		
	comp=E,974µm,0.5s						
RAFF	Raffo Rosso	5.07	256		Pn	09 34 29.9	-0.8
BOVS	Bovan	5.07	10	⇑P	Pn	09 34 30.2	-0.5
BOVS	Bovan	5.07	10	*e*Pn	Pn	09 34 30.0	-0.7
MELA	Melanico ??? S	5.14	308	⇑P	Pn	09 34 32.9	+1.3
MELA				AML	AML		
	comp=N,6300µm,1.0s						
MELA				AML	AML		
	comp=E,5090µm,1.0s						
MELA				AML	AML		
	comp=N,6530µm,0.9s						
MELA				AML	AML		
	comp=E,4975µm,1.0s						
PAOL	Paolisi	5.17	299		Pn	09 34 33.3	+1.2
TREM	Isole Tremiti	5.17	314	P	Pn	09 34 32.3	+0.2
TREM				AML	AML		
	comp=E,3270µm,1.1s						
TREM				AML	AML		
	comp=N,3670µm,0.7s						
RESU	Resuttano	5.19	261	P	Pn	09 34 33.2	+0.8
RESU				AML	AML		
	comp=E,355µm,1.3s						
RESU				AML	AML		
	comp=N,422µm,1.4s						
GRUS	Gruza	5.25	2	*e*Pn	Pn	09 34 33.3	+0.2
CIGN	Sant'Elia a Pi	5.25	307	⇑P	Pn	09 34 34.8	+1.6
BBLS	Lazići	5.29	351	⇑*i*Pn	Pn	09 34 33.3	-0.5
ZAGS	Zajecar	5.33	13	*e*Pn	Pn	09 34 34.4	+0.2
MAKA	Makarska	5.34	331	*i* Pn	Pn	09 34 34.2	-0.2
MAKA				Sn	Sn	09 35 34.3	-1.7
CLTA	Licata	5.39	256	⇓P	Pn	09 34 35.3	+0.2
DIVS	Divibare	5.47	356	*e*Pn	Pn	09 34 36.0	-0.2
DIVS	Divibare	5.47	356	⇑*i*Pn	Pn	09 34 35.6	-0.6
DIVS	Divibare	5.47	356	⇑P	Pn	09 34 35.7	-0.5
DIVS	Divibare	5.47	356	Pn	Pn	09 34 35.2	-1.0
HVAR	Hvar	5.48	327	*e*Pn	Pn	09 34 35.4	-0.9
RICI	Ricice	5.48	333	*i* Pn	Pn	09 34 35.5	-0.9
RICI				Sn	Sn	09 35 37.6	-1.9
TRIV	Trivento	5.53	306	⇑P	Pn	09 34 38.7	+1.6
WDD	Wied Dalam	5.54	242	P	Pn	09 34 36.8	-0.3
HAPS	Han Pijesak,BI	5.57	348	⇑*i*Pn	Pn	09 34 37.2	-0.4
TRUS	Trudelj	5.58	359	*e*Pn	Pn	09 34 37.5	-0.2
CORL	Corleone	5.73	265	Pn	Pn	09 34 41.9	+2.2
BALB	Balikesir	5.81	78	Pn	Pn	09 34 42.4	+1.5
CLTB	Caltabellotta	5.86	262		Pn	09 34 41.9	+0.3
EDC	Edincik	5.93	71	P	Pn	09 34 48.2	+5.7
TEKS	Tekeris	5.95	353	*e*Pn	Pn	09 34 41.3	-1.5
TEKS	Tekeris	5.95	353	⇑*i*Pn	Pn	09 34 41.0	-1.8
POFI	Posta Fibreno	6.05	303	⇓P	Pn	09 34 47.7	+3.5
BEO	Beograd	6.16	360	P	Pn	09 34 44.1	-1.6
KIJV	Kijevo	6.19	331	*i* Pn	Pn	09 34 46.0	-0.1
MDVR	Moldovita	6.20	8	⇓P	Pn	09 34 45.8	-0.5
ZIRJ	Zirje	6.21	325	*e*Pn	Pn	09 34 45.3	-1.0
ERC	Erice	6.26	267	P	Pb	09 35 06.9	+3.1
T0110	Collepietro	6.26	307	P	Pn	09 34 48.8	+1.6
MGRS	Mrkonjic Grad	6.32	337	*e*Pn	Pn	09 34 48.0	+0.1
VCEL	Villa Celiera	6.32	309	P	Pn	09 34 49.5	+1.5
MORI	Morici	6.36	327	*i* Pn	Pn	09 34 48.1	-0.2
MORI				Sn	Sn	09 35 56.6	-4.3
HERR	Herculane	6.39	12	⇓P	Pn	09 34 49.0	+0.1
FRGS	Fruska Gora	6.53	356	⇑P	Pn	09 34 50.0	-0.8
FRGS	Fruska Gora	6.53	356	*e*Pn	Pn	09 34 49.8	-1.0
FRGS	Fruska Gora	6.53	356	⇑*i*Pn	Pn	09 34 49.6	-1.2
AQU	L'Aquila	6.57	307	P	Pn	09 34 53.4	+2.0
AQU	L'Aquila	6.57	307	⇑*i*Pn	Pn	09 34 52.7	+1.4
AQU	L'Aquila	6.57	307	Pn	Pn	09 34 53.4	+2.0
BLY	Banja Luka	6.59	339	*e*Pn	Pn	09 34 51.5	-0.1
BLY	Banja Luka	6.59	339	⇑*i*Pn	Pn	09 34 50.8	-0.8
TERO	Teramo	6.59	309	⇑P	Pn	09 34 52.7	+1.1
CAMP	Campotosto	6.66	308	⇑P	Pn	09 34 54.2	+1.5
DUGI	Dugi Otok	6.74	324	*e*Pn	Pn	09 34 53.2	-0.5
DUGI				Sn	Sn	09 36 06.3	-4.1
UDBI	Udbina	6.88	330	*e*Pn	Pn	09 34 56.3	+0.8
MRAK	Mrakovica	6.92	338	⇑*i*Pn	Pn	09 34 55.2	-0.9
GZR	Gura Zlata	6.95	13	⇑P	Pn	09 34 56.9	+0.2
GZR	Gura Zlata	6.95	13	P	Pn	09 34 56.8	+0.2
NRCA	Norcia	7.01	309	⇓P	Pn	09 34 59.4	+2.0
NRCA	Norcia	7.01	309		Pn	09 34 58.0	+0.6
BZS	Buzias	7.02	6	⇑P	Pn	09 34 57.1	-0.3
BZS	Buzias	7.02	6	*e*Pn	Pn	09 34 57.0	-0.4
BZS	Buzias	7.02	6	P	Pn	09 34 57.1	-0.3
BZS				pmax	pmax		
	comp=Z,36nm,0.8s						
FDMO	Fiordimonte	7.14	310	⇓P	Pn	09 35 00.8	+1.7
PLIT	Plitvice	7.23	331	*e*Pn	Pn	09 35 00.3	0.0
CESI	CESI - Serrava	7.23	309	⇑P	Pn	09 35 02.2	+1.7
NVLJ	Novalja	7.27	326	*e*Pn	Pn	09 35 00.2	-0.7
CING	Cingoli	7.28	313	⇓P	Pn	09 35 01.8	+0.7
EL6	Elcito	7.31	312	⇓P	Pn	09 35 02.2	+0.7
ARR	Arges	7.39	23	⇓P	Pn	09 35 03.5	+1.0
MTUR	Matau	7.40	26	⇑P	Pn	09 35 04.4	+1.6
RABC	Rab	7.46	327	*e*Pn	Pn	09 35 03.3	-0.2
ARVD	Arcevia	7.50	313	⇓P	Pn	09 35 04.8	+0.7
MOSL	Moslavina	7.51	339	*i* Pn	Pn	09 35 03.1	-1.0
VOIR		7.58	25	⇓P	Pn	09 35 06.9	+1.7
VOIR		7.58	25	P	Pn	09 35 07.1	+1.8
VOIR				pmax	pmax		
	comp=Z,46nm,1.0s						
MURB	Monte Urbino	7.61	310		Pn	09 35 07.1	+1.4
FRON	Frontone	7.64	312	⇓P	Pn	09 35 07.0	+1.0
KOVH	Kovagotottos	7.66	347	*e*PN	Pn	09 35 03.8	-2.4
KOVH	Kovagotottos	7.66	347	*e*P	Pn	09 35 04.6	-1.5
KOVH	Kovagotottos	7.66	347	*e*SN	Sn	09 36 27.6	-5.3
ELL	Elmali	7.68	101	P	Pn	09 35 13.4	+6.7
MPAG	Monte Paganucc	7.69	313	⇓P	Pn	09 35 07.4	+0.7
MORH	Mrgy, Hungar	7.70	350	*e*PN	Pn	09 35 04.4	-2.3
MORH	Mrgy, Hungar	7.70	350	*e*P	Pn	09 35 05.2	-1.5
MORH	Mrgy, Hungar	7.70	350	⇑*i*Pn	Pn	09 35 04.9	-1.8
ATVO	AVT- Monte Val	7.75	310	P	Pn	09 35 09.3	+1.8
PIEI	Pieia	7.76	312	P	Pn	09 35 08.4	+0.7
ATPI	Pietralunga -	7.79	311	⇓P	Pn	09 35 09.8	+1.7
ISR	Istrita	7.88	33	P	Pn	09 35 12.6	+3.3
ISR				pmax	pmax		
	comp=Z,145nm,0.8s						
BOJS	Bojanci	7.90	332	*i* Pn	Pn	09 35 08.9	-0.6
OZLJ	Ozalj	7.91	333	*i* Pn	Pn	09 35 09.1	-0.6
ISP	Isparta	7.92	93	P	Pn	09 35 13.3	+3.4
MLR	Muntele Rosu	7.95	29	⇓P	Pn	09 35 12.5	+2.2
MLR	Muntele Rosu	7.95	29	Pn	Pn	09 35 12.4	+2.2
	comp=Z,3.9nm,0.3s,baz=262,slow=3.1,SNR=26						
MLR				LR	LR	09 38 48.4	
	comp=Z,1µm,19.1s,baz=202,slow=43						
MLR	Muntele Rosu	7.95	29	P	Pn	09 35 12.0	+1.7
MLR	Muntele Rosu	7.95	29	Pn	Pn	09 35 12.0	+1.7
SMRN	Sveta Marina	7.96	325	*e*Pn	Pn	09 35 09.6	-0.7
PARC	Parchiule	8.00	311	⇓P	Pn	09 35 13.9	+3.0
PTJ	Puntijarka	8.01	337	P	Pn	09 35 09.3	-1.8
NEHR	Nehoiu	8.03	31	⇑P	Pn	09 35 13.5	+2.2
RIY	Rijeka	8.05	328	⇑*i*Pn	Pn	09 35 10.9	-0.7
RIY	Rijeka	8.05	328	*i* Pn	Pn	09 35 11.1	-0.4
CRES	Cresnjev	8.10	334	⇑*i*Pn	Pn	09 35 11.0	-1.3
CRES	Cresnjev	8.10	334	⇑*i*Pn	Pn	09 35 11.3	-1.0
SLUM	Salum	8.10	150	P	Pn	09 35 11.4	-0.9
	baz=141						
SLUM				AMP		09 36 00.0	
	baz=141						
SLUM				S	Sn	09 36 36.0	-8.0
	baz=141						
DOPR	Dopca	8.16	25	⇓P	Pn	09 35 14.6	+1.5
LOBO	Lobor	8.20	338	*e*Pn	Pn	09 35 12.3	-1.3
LEGS	Legarje	8.26	334	⇑*i*Pn	Pn	09 35 13.4	-1.1
DRGR		8.30	10	⇑P	Pn	09 35 16.1	+0.9
DRGR		8.30	10	P	Pn	09 35 16.3	+1.1
DRGR				pmax	pmax		
	comp=Z,12nm,0.9s						
ASQU	Asqua	8.35	311	⇓P	Pn	09 35 18.3	+2.5
DOBS	Dobrina	8.38	335	⇑*i*Pn	Pn	09 35 14.8	-1.3
CEY	Cerknica	8.41	329	⇑*i*Pn	Pn	09 35 15.7	-0.9
CASP	Castiglione de	8.42	303		Pn	09 35 16.2	-0.5
SKDS	Skadanscina	8.42	327	*i* Pn	Pn	09 35 15.4	-1.3
SKDS				*i* Sn	Sn	09 36 45.8	-6.1
MDUB	Mudurnu	8.45	74		Pn	09 35 20.0	+2.8
CSNT	Castellina Chi	8.48	308	⇓P	Pn	09 35 18.1	+0.6
TIH	Tihany	8.48	348	*e*PN	Pn	09 35 15.1	-2.3
TIH	Tihany	8.48	348	*e*P	Pn	09 35 19.4	+1.9
PLOR	Plostina	8.52	30	⇓P	Pn	09 35 20.2	+2.1
PLOR	Plostina	8.52	30	P	Pn	09 35 20.1	+2.1
OSSC	Osservatorio P	8.53	308		Pn	09 35 19.1	+0.8
RUFI	Rufina	8.54	310	⇑P	Pn	09 35 19.9	+1.5
VRI	Vrincioaia	8.56	31	⇑P	Pn	09 35 20.2	+1.6
VRI	Vrincioaia	8.56	31	P	Pn	09 35 21.0	+2.4
VRI				pmax	pmax		
	comp=Z,85nm,0.8s						
LJU	Ljubljana	8.62	331	⇑*i*Pn	Pn	09 35 18.3	-1.2
SEI	Scarperia	8.76	311	⇓P	Pn	09 35 23.6	+2.3
MPLH	Magyarpolny	8.80	347	*e*PN	Pn	09 35 20.0	-1.9
MPLH	Magyarpolny	8.80	347	*e*P	Pn	09 35 20.8	-1.0
VOJS	Vojsko	8.87	329	⇑*i*Pn	Pn	09 35 21.8	-1.1
CSKK	Cskako	8.87	350	*e*PN	Pn	09 35 21.8	-1.1
BUD	Budapest	8.91	353	*e*PN	Pn	09 35 21.6	-1.7
BUD	Budapest	8.91	353	*e*P	Pn	09 35 26.3	+3.0
BUD	Budapest	8.91	353	P	Pn	09 35 22.8	-0.5
BUD				pmax	pmax		
	comp=Z,33nm,1.1s						
MTCR	Monte La Croce	8.96	310	P	Pn	09 35 25.2	+1.1
SOKA	Soboth	8.99	335	*i* Pn	Pn	09 35 23.3	-1.2
	comp=Z,48nm,0.6s,SNR=47						
OBKA	Obir	9.01	333	*i* Pn	Pn	09 35 23.8	-1.0
	comp=Z,39nm,0.5s,SNR=14						
OBKA				*e*Sn	Sn	09 37 02.6	-3.7
	comp=Z,41nm,0.6s						
ZCCA	Zocca	9.15	312		Pn	09 35 27.2	+0.5
PSZ	Piszkesteto	9.29	357	⇑P	Pn	09 35 28.5	-0.1
PSZ	Piszkesteto	9.29	357	*e*P	Pn	09 35 28.3	-0.3
PSZ	Piszkesteto	9.29	357	P	Pn	09 35 28.3	-0.3
PSZ	Piszkesteto	9.29	357	Pn	Pn	09 35 28.3	-0.3
ARSA	Arzberg	9.35	339	*i* Pn	Pn	09 35 28.0	-1.4
	comp=Z,12nm,0.4s,SNR=10						
KEST	Kesra	9.38	255	Pn	Pn	09 35 30.4	+0.5
	comp=Z,1.2nm,0.3s,baz=12,slow=3.8,SNR=12						
KEST	Kesra	9.38	255	Pn	Pn	09 35 32.5	+2.6
VLC	Villacollemand	9.40	309		Pn	09 35 30.2	+0.2
TEOL	Teolo	9.40	318	Pn	Pn	09 35 27.7	-2.4
MYKA	Terra Mystica	9.45	330	*i* Pn	Pn	09 35 30.3	-0.6
	comp=Z,10nm,0.5s,SNR=6.9						
MYKA				*e*Sn	Sn	09 37 13.9	-3.3
	comp=Z,16nm,0.5s						
SOP	Sopron	9.49	344	*e*PN	Pn	09 35 28.2	-3.1
SOP	Sopron	9.49	344	*e*P	Pn	09 35 35.1	+3.8
SOP	Sopron	9.49	344	P	Pn	09 35 31.7	+0.4
SOP				pmax	pmax		
	comp=Z,23nm,1.2s						
STAL	STALIGIAL	9.55	325		Pn	09 35 29.9	-2.3
TRPA	Tarpa	9.60	8	*e*PN	Pn	09 35 31.0	-1.8
TRPA	Tarpa	9.60	8	*e*P	Pn	09 35 33.3	+0.5
BURAR	Bucovina Array	9.60	19	⇑P	Pn	09 35 33.2	+0.2
BURAR	Bucovina Array	9.60	19	P	Pn	09 35 33.2	+0.2
BURAR	Bucovina Array	9.60	19	Pn	Pn	09 35 33.4	+0.4
BUR08	Bucovina Ar. S	9.63	19	Pn	Pn	09 35 33.9	+0.6
ZOU	Zoufplan	9.67	327	Pn	Pn	09 35 32.0	-2.0
KECS	Kecovo	9.84	360	*e*P	Pn	09 35 36.7	+0.6
KECS	Kecovo	9.84	360	*e*PN	Pn	09 35 36.7	+0.6
ZST	Bratislava	9.87	347	*e*P	Pn	09 35 35.0	-1.5
ZST				*e*		09 37 21.7	
ZST	Bratislava	9.87	347	*e*PN	Pn	09 35 35.0	-1.5
ZST				*e*SN	Sn	09 37 21.7	-5.6
CONA	Conrad Observa	9.88	341	*i* Pn	Pn	09 35 35.7	-1.1
	comp=Z,5.0nm,0.6s,SNR=5.6						
CTI	Castel Tesino	9.89	321	P	Pn	09 35 35.4	-1.5
CTI	Castel Tesino	9.89	321	Pn	Pn	09 35 35.4	-1.5
VYHS	Vyhne	9.93	353	*e*P	Pn	09 35 37.0	-0.3
VYHS				*e*		09 37 26.4	
VYHS	Vyhne	9.93	353	*e*PN	Pn	09 35 37.0	-0.3
VYHS				*e*SG		09 36 08.0	
VYHS				*e*SN	Sn	09 37 26.4	-2.3
KBA	Koelnbreinsper	9.94	330	*i* Pn	Pn	09 35 37.3	-0.3
	comp=Z,9.9nm,0.4s,SNR=10.0						
KBA				*e*Sn	Sn	09 37 24.8	-4.4
	comp=Z,20nm,0.6s						
KBA	Koelnbreinsper	9.94	330	P	Pn	09 35 37.1	-0.5
KBA				pmax	pmax		
	comp=Z,40nm,0.9s						
MODS	Modra-Piesok	10.01	347	*e*P	Pn	09 35 36.7	-1.8
MODS				*e*		09 37 24.5	
MODS	Modra-Piesok	10.01	347	*e*PN	Pn	09 35 36.7	-1.8
MODS				*e*SN	Sn	09 37 24.5	-6.3
ABTA	Abfaltersbach	10.01	327	*i* Pn	Pn	09 35 37.6	-0.9
	comp=Z,26nm,0.6s,SNR=15						
ABTA				*e*Sn	Sn	09 37 28.7	-2.3
	comp=Z,55nm,0.8s						
KOLL	Kolacno	10.05	352	*e*PN	Pn	09 35 38.8	-0.2
KOLL				*e*SN	Sn	09 37 26.1	-5.7
UZH	Uzhgorod	10.07	7	⇑*i*P	Pn	09 35 39.5	+0.3
UZH				*e*S	Sn	09 37 32.4	+0.2
UZH				MLR	MLR		
	comp=Z,150nm,11.0s						
SMOL	Smolenice	10.12	348	*e*P	Pn	09 35 40.2	+0.2
SMOL	Smolenice	10.12	348	*e*PN	Pn	09 35 40.2	+0.2
SALO	Salr	10.18	316	Pn	Pn	09 35 39.4	-1.4
SWA2		10.23	155	P	Pn	09 35 40.0	-1.5
	baz=148						
SWA2				S	Sn	09 37 24.6	-12
	baz=148						
SWA2				AMP		09 38 00.0	
	baz=148						
BR131	Keskin Array S	10.25	80	P	Pn	09 35 44.7	+2.8
BR131	Keskin Array S	10.25	80	Pn	Pn	09 35 44.6	+2.8
BRTR	Keskin Array B	10.25	80	Pn	Pn	09 35 45.6	+3.7
	comp=Z,0.6nm,0.3s,baz=262,slow=12,SNR=18						
BRTR				LR	LR	09 39 43.1	
	comp=Z,696nm,21.1s,baz=270,slow=38						
BRTR	Keskin Array B	10.25	80	Pn	Pn	09 35 44.4	+2.6
MOA	Molln	10.27	336	*i* Pn	Pn	09 35 41.3	-0.7
	comp=Z,30nm,0.6s,SNR=23						
MOA				*e*Sn	Sn	09 37 35.5	-1.6
	comp=Z,12nm,0.5s						
CRVS	Cervenica-Dubn	10.28	3	*e*P	Pn	09 35 42.5	+0.3
CRVS	Cervenica-Dubn	10.28	3	*e*PN	Pn	09 35 42.5	+0.3
KOLS	Kolonicke sedl	10.37	6	*e*P	Pn	09 35 44.6	+1.2
KOLS	Kolonicke sedl	10.37	6	*e*PN	Pn	09 35 44.6	+1.2
JAVC	Velka Javorina	10.42	350	*e*PN	Pn	09 35 43.8	-0.3
NIE	Niedzica	10.78	359	*e*P	Pn	09 35 51.0	+2.0
NIE	Niedzica	10.78	359	P	Pn	09 35 50.7	+1.7
NIE				pmax	pmax		
	comp=Z,27nm,1.2s						
WTTA	Wattenberg	10.79	326	*i* Pn	Pn	09 35 49.2	-0.1
	comp=Z,15nm,0.4s,SNR=19						
WTTA				*e*Sn	Sn	09 37 45.4	-4.8
	comp=Z,25nm,0.5s						
WTTA	Wattenberg	10.79	326	P	Pn	09 35 49.0	-0.3
WTTA				pmax	pmax		
	comp=Z,57nm,0.8s						
KRUC	Moravsky	10.83	345	P	Pn	09 35 48.6	-1.1
KRUC				pmax	pmax		
	comp=Z,7.0nm,1.4s						
KRUC	Moravsky	10.83	345	*e*PN	Pn	09 35 48.3	-1.4
WATA	Walderalm	10.87	326	*i* Pn	Pn	09 35 51.0	+0.5
	comp=Z,30nm,0.7s,SNR=23						
WATA				*e*Sn	Sn	09 37 47.5	-4.7
	comp=Z,43nm,0.8s						
CSS	Mathiatis	10.91	106	Pn	Pn	09 35 52.4	+1.6
SQTA	Sankt Quirin	10.95	325	*i* Pn	Pn	09 35 52.6	+1.1
	comp=Z,12nm,0.4s,SNR=6.2						
FETA	Feichten	11.03	323	*i* Pn	Pn	09 35 52.4	-0.1
	comp=Z,7.9nm,0.9s						
FETA				*e*Sn	Sn	09 37 59.4	+3.4
	comp=Z,22nm,0.7s						
VRAC	Vranov	11.03	346	Pn	Pn	09 35 51.5	-0.9
	comp=Z,0.8nm,0.3s,baz=168,slow=12,SNR=7.6						
VRAC				LR	LR	09 40 28.9	
	comp=Z,844nm,18.8s,baz=168,slow=40						
VRAC	Vranov	11.03	346	*e*PN	Pn	09 35 51.3	-1.1
MOTA	Moosalm	11.09	325	*i* Pn	Pn	09 35 53.7	+0.3
	comp=Z,46nm,0.7s,SNR=23						
KWP	Kalwaria Pacla	11.10	7	P	Pn	09 35 53.6	+0.2
KWP	Kalwaria Pacla	11.10	7		Pn	09 35 53.6	+0.2
SAOF	Saorge	11.11	303	P	Pn	09 35 55.7	+2.1
SAOF				pmax	pmax		
	comp=Z,19nm,1.1s						
CKRC	Cesky Krumlov	11.12	338	*e*P	Pn	09 35 52.5	-1.1
CKRC				AMS	AMS	09 40 40.0	
	comp=Z,1µm,10.8s						
DAVOX	Davos/Dischmat	11.28	320	Pn	Pn	09 35 56.4	+0.4
	comp=Z,1.6nm,0.3s,baz=142,slow=14,SNR=14						
DAVOX				Sn	Sn	09 37 59.3	-2.8
	comp=Z,1.6nm,0.3s,baz=301,slow=23,SNR=2.9						
DAVOX				LR	LR	09 40 55.0	
	comp=Z,593nm,19.9s,baz=127,slow=41						
OKC	Ostrava-Krasne	11.32	352	*e*P	Pn	09 35 56.6	+0.2
OKC				MLR	MLR		
	comp=Z,1µm,12.8s						
OKC	Ostrava-Krasne	11.32	352	*e*P	Pn	09 35 56.6	+0.2
OKC				AMS	AMS	09 41 00.0	
	comp=Z,1µm,12.8s						
GEC2	GERESS Array S	11.32	336		Pn	09 35 55.0	-1.5
GERES	GERESS Array B	11.32	336	Pn	Pn	09 35 54.4	-2.1
	comp=Z,1.3nm,0.3s,baz=156,slow=14,SNR=58						
GERES				Sn	Sn	09 37 57.1	-6.0
	comp=Z,1.2nm,0.3s,baz=147,slow=24,SNR=5.2						
GERES				LR	LR	09 40 55.5	
	comp=Z,586nm,19.1s,baz=156,slow=41						
GERES	GERESS Array B	11.32	336	P	Pn	09 35 54.8	-1.7
GERES	GERESS Array B	11.32	336	Pn	Pn	09 35 54.8	-1.7
MORC	Moravsky Berou	11.34	350	⇓P	Pn	09 35 56.4	-0.3
MORC	Moravsky Berou	11.34	350	P	Pn	09 35 56.1	-0.5
MORC	Moravsky Berou	11.34	350	*e*PN	Pn	09 35 55.5	-1.1
MORC	Moravsky Berou	11.34	350	Pn	Pn	09 35 56.1	-0.5
TUE	Stuetta	11.35	317	Pn	Pn	09 35 57.0	0.0
LVV	L'vov	11.46	12	*e*P	Pn	09 36 01.1	+2.9
LVV				*e*S	Sn	09 38 09.8	+3.6
OJC	Ojcow	11.59	358	P	Pn	09 35 58.6	-1.5
OJC	Ojcow	11.59	358	Pn	Pn	09 35 58.6	-1.5
KHC	Kasperske Hory	11.61	337	*e*P	Pn	09 35 58.5	-1.9
KHC				MLR	MLR		
	comp=Z,1µm,8.9s						
KHC	Kasperske Hory	11.61	337	*e*P	Pn	09 35 58.5	-1.9
KHC				*e*x	x	09 37 09.5	
KHC				AMS	AMS	09 41 10.0	
	comp=Z,1µm,8.9s						
DAVA	Damuels	11.63	321	*e*Pn	Pn	09 36 01.6	+0.9
	comp=Z,8.1nm,0.6s						
DAVA				*e*Sn	Sn	09 38 09.2	-1.4
	comp=Z,26nm,0.6s						
KRLC	Kraliky	11.74	348	*e*P	Pn	09 36 01.6	-0.5
KRLC	Kraliky	11.74	348	*e*P	Pn	09 36 01.6	-0.5
WET	Wettzell	11.85	335	P	Pn	09 36 01.7	-2.0
WET				pmax	pmax		
	comp=Z,21nm,0.9s						
DPC	Dobruska-Polom	12.08	347	*e*P	Pn	09 36 05.7	-1.1
DPC				MLR	MLR		
	comp=Z,2µm,14.6s						
DPC	Dobruska-Polom	12.08	347	*e*P	Pn	09 36 05.7	-1.1
DPC				AMS	AMS	09 41 30.0	
	comp=Z,2µm,14.6s						
PRU	Pruhonice	12.12	341	*e*P	Pn	09 36 06.6	-0.7
PRU				MLR	MLR		
	comp=Z,2µm,10.6s						
PRU	Pruhonice	12.12	341	*e*P	Pn	09 36 06.6	-0.7
PRU				AMS	AMS	09 41 30.0	
	comp=Z,2µm,10.6s						
UPC	Upice	12.29	346	*e*P	Pn	09 36 09.4	-0.2
UPC				MLR	MLR		
	comp=Z,2µm,12.5s						
UPC	Upice	12.29	346	*e*P	Pn	09 36 09.4	-0.2
UPC				AMS	AMS	09 41 50.0	

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              comp=Z,2µm,12.5s
OSTC   Ostas              12.30 347  eP     Pn      09 36 08.6  -1.2
OSTC                                  AMS   AMS     09 41 40.0
              comp=Z,1µm,14.6s
SENIN  Lac Senin/Sane     12.43 313   Pn    Pn      09 36 11.8  +0.1
KSP    Ksiaz              12.56 348   P     Pn      09 36 12.9  -0.4
KSP                                   pmax  pmax
              comp=Z,10.0nm,2.1s
SLE    Schleitheim        12.64 320   P     Pn      09 36 16.2  +1.7
SLE                                   pmax  pmax
              comp=Z,15nm,1.1s
GLL    Jalalah            12.94 131   P     Pn      09 36 16.3  -2.3
              baz=125
STU    Stuttgart          13.01 325   P     Pn      09 36 17.8  -1.6
STU    Stuttgart          13.01 325   Pn    Pn      09 36 17.8  -1.6
BRG    Berggiesshubel     13.09 341   P     Pn      09 36 18.8  -1.7
BRG                                   pmax  pmax
              comp=Z,11nm,1.1s
BRG    Berggiesshubel     13.09 341  eP     Pn      09 36 19.3  -1.2
BRG                                   Amp           09 36 21.4
              comp=Z,7.3nm,0.9s
BRG                                   Amp           09 42 16.0
              comp=E,0.6nm,10.2s
BRG                                   Amp           09 42 20.0
              comp=Z,1.3nm,10.5s
BRG                                   Amp           09 42 23.0
              comp=N,1.0nm,7.8s
BFO    Black Forest       13.10 322   P     Pn      09 36 20.9  +0.1
BFO    Black Forest       13.10 322   Pn    Pn      09 36 20.9  +0.1
HFRF   Wahat Farafira     13.19 148   P     Pn      09 36 19.1  -2.9
              baz=142
GAZ    Gaziantep          13.27  91   Pn    Pn      09 36 25.5  +2.4
MMAI   Mount Meron Ar     13.31 110   Pn    Pn      09 36 21.5  -2.2
              comp=N,1.5nm,0.3s,baz=307,slow=14,SNR=2.4
SUZ    Suez               13.44 127   P     Pn      09 36 22.8  -2.6
              baz=122
AKASG  Malin Array Be     13.54  24   Pn    Pn      09 36 26.0  -0.7
              comp=N,1.0nm,0.3s,baz=210,slow=12,SNR=11
AKASG                                 LR    LR      09 42 26.7
              comp=N,573nm,20.5s,baz=205,slow=41
AKASG  Malin Array Be     13.54  24   P     Pn      09 36 26.0  -0.7
AKBB   Malin Array Si     13.54  24  i P    Pn      09 36 25.8  -0.9
AKBB   Malin Array Si     13.54  24   Pn    Pn      09 36 27.3  +0.6
MOX    Moxa               13.56 335   P     Pn      09 36 25.6  -1.4
MOX                                   pmax  pmax
              comp=Z,26nm,0.8s
ECH    Echery             13.61 319   P     Pn      09 36 27.5  -0.2
ECH    Echery             13.61 319         Pn      09 36 27.5  -0.2
CLL    Collm              13.73 340  eP     Pn      09 36 33.0  +3.8
CLL    Collm              13.73 340  epP    Pn      09 36 33.0  +3.8
CLL                                  i PP   P       09 36 38.5  +0.6
              comp=Z,48nm,1.4s
CLL                                   Lmax          09 42 00.0
GHAJ   Ghor Haditha       14.34 116         Pn      09 36 37.9  +0.2
RUE    Ruedersdorf        14.61 343  eP     P       09 36 48.5  +0.7
EIL    Elat               14.91 123   Pn    Pn      09 36 44.0  -1.5
              comp=Z,0.7nm,0.3s,baz=248,slow=5.0,SNR=6.8
EIL                                   Sn    Sn      09 39 15.8   -15
              comp=Z,0.7nm,0.3s,baz=92,slow=18,SNR=2.3
EIL                                   LR    LR      09 44 28.2
              comp=Z,180nm,20.3s,baz=306,slow=45
WLF    Walferdange        15.06 322  dP     P       09 36 55.2  +2.4
WLF    Walferdange        15.06 322   P     Pn      09 36 45.0  -2.4
WLF                                   pmax  pmax
              comp=Z,54nm,0.9s
WLF    Walferdange        15.06 322         Pn      09 36 45.0  -2.4
WLF                                   IAmb  IAmb    09 36 56.9
              comp=Z,54nm,0.9s
SOC    Sochi              15.28  65  eP     Pn      09 36 49.5  -0.9
SOC                                  e              09 39 40.5
SOC                                   MLR   MLR
              comp=Z,213nm,14.0s
SUW    Suwalki            15.48   6  eP     P       09 36 56.6  -0.8
SUW    Suwalki            15.48   6   P     Pn      09 36 50.8  -2.2
SUW                                   pmax  pmax
              comp=Z,112nm,1.0s
SUW    Suwalki            15.48   6         Pn      09 36 50.8  -2.2
BTNL   Ternell            15.70 324  dP     P       09 37 02.4  +2.5
              comp=Z,19nm,1.2s
BTNL                                 dx     x       09 37 14.2
MEM    Membach            15.77 324  dP     P       09 37 03.1  +2.5
              comp=Z,25nm,1.0s
BCLA   Clavier            15.97 322  dP     P       09 37 05.1  +2.2
DOU    Dourbes            16.11 320  dP     P       09 37 06.1  +1.7
              comp=Z,28nm,1.0s
SNF    Seneffe            16.53 321  dP     P       09 37 11.3  +2.3
NACGM  Naroch             16.81  13  i P    Pn      09 37 09.9  -0.1
BSEG   Bad Segeberg       16.82 339   P     Pn      09 37 09.0  -1.0
BSEG                                  pmax  pmax
              comp=Z,23nm,1.5s
PABE   Paberze            17.03   7  eP     Pn      09 37 11.2  -1.5
PABE                                  IAmb  IAmb    09 37 22.1
              comp=Z,58nm,0.9s
PABE   Paberze            17.03   7   Pn    Pn      09 37 11.0  -1.7
PABE                                  IAmb  IAmb    09 37 11.6
              comp=Z,115nm,1.1s
ISAL   Salakas            17.35  11  eP     Pn      09 37 15.5  -1.3
NEY    Neytrino           17.38  68  i P    P       09 37 18.8  +0.1
SHA1   Shidzhatmaz        17.41  66  i P    P       09 37 19.8  +0.7
PBUR   Paburge            17.42   3   IAmb  IAmb    09 37 29.8
              comp=Z,145nm,1.1s
KIV    Kislovodsk         17.46  65  eP     P       09 37 20.5  +0.9
KIV                                  eS     Sn      09 40 36.3  +3.5
KIV                                   pmax  pmax
              comp=Z,25nm,1.1s
KIV                                   MLR   MLR
              comp=Z,108nm,14.0s
KIV    Kislovodsk         17.46  65   P     Pn      09 37 17.0  -1.4
KBZ    Khabaz             17.58  66   Pn    P       09 37 22.8  +2.2
              comp=Z,0.2nm,0.3s,baz=266,slow=11,SNR=17
KBZ    Khabaz             17.58  66ceP      P       09 37 21.8  +1.1
PYA1   Pyatigorsk         17.77  65  i P    P       09 37 24.8  +1.9
ONI    Oni                17.84  70   P     Pn      09 37 22.9  -0.1
ONI                                   pmax  pmax
              comp=Z,11nm,0.8s
ONI    Oni                17.84  70   P     Pn      09 37 22.9  -0.1
GOF    Gofitskoye         17.94  62⇑eP      P       09 37 26.2  +1.6
GOF                                   pmax  pmax
              comp=Z,41nm,0.6s
BLEU   Blekinge           17.95 351  i P    Pn      09 37 23.3  -0.8
NCK    Nalchik            18.05  67  i P    P       09 37 27.8  +1.9
NCK                                   pmax  pmax
              comp=Z,23nm,0.7s
VSR    Storozhevoye       18.17  40  eP     Pn      09 37 25.9  -0.9
VSR                                   pmax  pmax
              comp=Z,10.0nm,0.5s
ZEI    Tsey               18.19  69  eP     P       09 37 31.8  +4.1
ZEI                                   pmax  pmax
              comp=Z,5.0nm,0.9s
DEL    Delary             18.38 348  i P    Pn      09 37 29.3  -0.1
GNI    Garni              18.77  78   Pn    Pn      09 37 37.4  +2.9
              comp=Z,1.2nm,0.3s,baz=64,slow=2.5,SNR=5.0
GNI                                   LR    LR      09 46 03.1
              comp=Z,252nm,20.2s,baz=274,slow=41
GNI    Garni              18.77  78ceP      Pn      09 37 36.3  +1.8
GNI                                   pmax  pmax
              comp=Z,32nm,1.7s
GNI    Garni              18.77  78   P     P       09 37 31.1  -3.0
LPSR   Galich'ya Gora     18.91  36  eP     P       09 37 34.5  -0.8
LPSR                                  pmax  pmax
              comp=Z,20nm,0.7s
ESBB   Sonseca Array      19.00 281   P     P       09 37 36.6  +0.2
ESDC   Sonseca Array      19.00 281   Pn    Pn      09 37 36.9  -0.3
              comp=Z,0.3nm,0.3s,baz=76,slow=11,SNR=17
ESDC                                  LR    LR      09 45 09.2
              comp=Z,206nm,18.2s,baz=95,slow=38
ESDC   Sonseca Array      19.00 281   P     P       09 37 36.2  -0.3
FABU   Falkenberg         19.08 347  i P    P       09 37 37.2  +0.1
PAB    San Pablo          19.31 281   P     P       09 37 39.2  -0.7
PAB                                   pmax  pmax
              comp=Z,13nm,1.2s
PAB    San Pablo          19.31 281   P     P       09 37 39.2  -0.7
BORU   Boraas             19.67 348  i P    P       09 37 43.5   0.0
OBN    Obninsk            19.72  28   P     P       09 37 44.5  +0.5
              comp=Z,1.5nm,0.3s,baz=36,slow=22,SNR=5.8
OBN                                   LR    LR      09 46 38.3
              comp=Z,85nm,18.2s,baz=201,slow=41
OBN    Obninsk            19.72  28  i P    P       09 37 42.0  -2.0
OBN                                  i S    S       09 41 11.8   -14
OBN                                   pmax  pmax
              comp=Z,53nm,1.3s
OBN                                   MLR   MLR
              comp=Z,375nm,15.0s
OBN    Obninsk            19.72  28   P     P       09 37 42.1  -2.0
OBN                                   IAmb  IAmb    09 37 45.4

              comp=Z,28nm,0.6s
MTSE   Matsula            20.20   5  eP     P       09 37 48.6  -0.7
VSU    Vasula             20.24   9  eP     P       09 37 49.2  -0.6
VSU    Vasula             20.24   9  i P    P       09 37 49.0  -0.8
VSU                                   pmax  pmax
              comp=Z,247nm,0.8s
TJOU   Tjoern             20.25 346  i P    P       09 37 49.6  -0.3
MOS    Moscow             20.58  28  eP     P       09 37 51.2  -2.3
MOS                                  eS     S       09 41 45.5  +2.1
MOS                                   pmax  pmax
              comp=Z,55nm,0.8s
MOS                                   MLR   MLR
              comp=Z,600nm,12.0s
MAK    Makhachkala        20.84  69  eP     P       09 37 54.2  -2.2
MAK                                  eS     S       09 41 46.8  -2.0
MAK                                   pmax  pmax
              comp=Z,199nm,1.0s
PBRG   Braganca           21.02 287  eP     P       09 38 02.9  +4.5
              comp=Z,39nm,1.7s
MDT    Midelt             21.18 262   P     P       09 38 02.0  +1.8
              comp=Z,5.0nm,0.8s,baz=82,slow=7.0,SNR=13
MDT                                   LR    LR      09 47 23.8
              comp=Z,111nm,20.4s,baz=66,slow=40
MVO    Moncorvo           21.25 286  eP     P       09 38 04.7  +3.8
              comp=Z,37nm,1.6s
MVO                                  eLR    LR      09 45 22.8
              comp=Z,235nm,16.0s
UPP    Uppsala            21.32 356  eP     P       09 38 00.4  -1.0
AAL    Aland              21.56 359  eP     P       09 38 02.9  -1.1
PMRV   Marv??o            21.66 281  eP     P       09 38 05.1  -0.2
              comp=Z,34nm,1.6s
PMRV                                 eLR    LR      09 45 17.4
              comp=Z,141nm,22.0s
PCBR   Castelo Branco     21.68 282  eP     P       09 38 05.7  +0.2
              comp=Z,32nm,1.3s
MTE    Manteigas          21.69 284  eP     P       09 38 05.8  +0.2
              comp=Z,38nm,1.5s
MTE                                  eLR    LR      09 45 17.8
              comp=Z,273nm,18.0s
MTE    Manteigas          21.69 284   P     P       09 38 04.9  -0.7
MTE                                   IAmb  IAmb    09 38 09.5
              comp=Z,27nm,1.2s
PESTR  Estremoz           21.89 279  eP     P       09 38 07.3  -0.5
              comp=Z,24nm,2.6s
PESTR  Estremoz           21.89 279   P     P       09 38 06.3  -1.5
PVIS   Viseu              21.93 284  eP     P       09 38 08.4  +0.2
              comp=Z,44nm,1.6s
HFS    Hagfors            21.94 351   P     P       09 38 06.5  -1.6
              comp=Z,19nm,0.6s,baz=161,slow=9.4,SNR=67
HFS                                   LR    LR      09 46 55.8
              comp=Z,247nm,20.9s,baz=176,slow=38
PUL    Pulkovo            22.05  13  i P    P       09 38 07.6  -1.7
PUL                                   pmax  pmax
              comp=Z,110nm,1.2s
KONO   Kongsberg          22.15 345  i P    P       09 38 07.7  -2.6
KONO                                  pmax  pmax
              comp=Z,103nm,2.4s
KONO   Kongsberg          22.15 345  eP     P       09 38 10.0  -0.4
PGAV   Gavieira, Arco     22.16 288  eLR    LR      09 45 38.4
              comp=Z,197nm,18.0s
OSL    Oslo               22.21 347  eP     P       09 38 11.0  +0.1
PBEJ   Beja               22.24 277  eP     P       09 38 10.8  -0.7
              comp=Z,24nm,1.3s
PVAQ   Vaqueiros          22.25 276  eP     P       09 38 12.5  +0.9
              comp=Z,18nm,1.6s
PVAQ                                 eLR    LR      09 44 41.9
              comp=Z,110nm,18.0s
EVO    Evora              22.27 279  eP     P       09 38 10.8  -1.0
              comp=Z,29nm,1.3s
PMTG   Montargil          22.35 280  eP     P       09 38 11.5  -1.2
              comp=Z,41nm,1.4s
PCVE   Castro Verde       22.45 276  eP     P       09 38 14.4  +0.6
              comp=Z,33nm,1.4s
MESJ   Messejana          22.55 277  eP     P       09 38 15.0  +0.2
              comp=Z,21nm,1.7s
BLS5   Blasjo             22.66 341  eP     P       09 38 15.7  -0.1
PNCL   Nicolau / Gran     22.74 278  eP     P       09 38 16.4  -0.4
              comp=Z,29nm,1.8s
NC602  NORSAR Array S     22.82 349  eP     P       09 38 17.2  -0.3
NC602  NORSAR Array S     22.82 349   P     P       09 38 17.0  -0.5
NORES  NORESS Array B     22.82 349   P     P       09 38 16.9  -0.6
NAO01  NORSAR Array S     23.03 348   P     P       09 38 19.6  -0.1
EKA    Eskdalemuir Ar     23.05 324   P     P       09 38 19.5  -0.4
              comp=Z,47nm,0.8s,baz=123,slow=11,SNR=49
ESK    Eskdalemuir        23.06 324   P     P       09 38 19.4  -0.6
ESK                                   pmax  pmax
              comp=Z,89nm,0.9s
ESK    Eskdalemuir        23.06 324   P     P       09 38 19.4  -0.6
FINES  FINESS Array B     23.09   7   P     P       09 38 17.9  -2.4
              comp=Z,25nm,0.5s,baz=171,slow=11,SNR=55
FINES                                 PcP   PcP     09 42 09.1  +0.3
              comp=Z,5.8nm,1.1s,baz=222,slow=5.1,SNR=3.4
FINES                                 LR    LR      09 48 10.3
              comp=Z,492nm,19.4s,baz=192,slow=39
FINES  FINESS Array B     23.09   7   P     P       09 38 18.2  -2.1
FIA1   FINESS Array S     23.09   7   P     P       09 38 18.2  -2.1
NC405  NORSAR Array S     23.16 349   P     P       09 38 18.5  -2.4
NB2    NORSAR Subarra     23.16 348   P     P       09 38 19.0  -2.1
              comp=Z,28nm,1.1s,baz=161,slow=11
NOA    NORSAR Array B     23.16 348   P     P       09 38 19.6  -1.5
              comp=Z,11nm,0.7s,baz=158,slow=9.1,SNR=40
NOA                                   LR    LR      09 48 06.8
              comp=Z,167nm,21.7s,baz=170,slow=39
BELG   Belogornoye        23.28  45   P     P       09 38 22.1  -0.1
              comp=Z,48nm,0.9s,baz=229,slow=6.2,SNR=6.0
BELG                                  LR    LR      09 48 31.4
              comp=Z,335nm,18.8s,baz=314,slow=40
BELG   Belogornoye        23.28  45  i P    P       09 38 19.6  -2.6
BELG                                  pmax  pmax
              comp=Z,16nm,1.3s
SKAR   Skarslia           23.36 345  eP     P       09 38 23.1  +0.1
VALR   Valaam             23.64  12  i P    P       09 38 24.1  -1.6
VALR                                  pmax  pmax
              comp=Z,125nm,0.9s
HYA    Hoyanger           24.25 343  eP     P       09 38 31.3  -0.3
DOMB   Dombas             24.47 347  eP     P       09 38 33.6   0.0
AKN    Aaknes             24.99 345  eP     P       09 38 38.4  +0.2
KLMR   Klimovskoe         25.21  22  eP     P       09 38 38.8  -1.4
KLMR                                 e              09 42 13.9
KLMR                                  pmax  pmax
              comp=Z,43nm,1.1s
KLMR   Klimovskoe         25.21  22  eP     P       09 38 38.8  -1.4
KLMR                                  AMP           09 38 43.9
              comp=Z,43nm,1.1s
KLMR                                 ePcP   PcP     09 42 13.9  +0.5
KLMR                                  LQ    LQ      09 46 31.4
KLMR                                  LQ    LQ      09 46 31.4
KLMR                                  LR    LR      09 48 26.5
RAYN   Ar Rayn            26.06 118   P     P       09 38 49.9  +1.6
RAYN                                  pmax  pmax
              comp=Z,7.0nm,1.0s
RAYN   Ar Rayn            26.06 118   P     P       09 38 49.9  +1.6
NSS    Namsos             26.42 352  eP     P       09 38 50.6  -0.5
KIRV   Kirov              27.27  34   LR    LR      09 50 23.4
              comp=Z,462nm,19.2s,baz=235,slow=38
KIRV   Kirov              27.27  34ceP      P       09 38 56.7  -2.1
PRGR   Permogore          27.75  26  eP     P       09 39 01.1  -2.0
PRGR                                  pmax  pmax
              comp=Z,33nm,0.9s
KONS   Konsvik            28.22 354  eP     P       09 39 07.1  -0.2
AKTO   Aktyubinsk         28.91  54   P     P       09 39 13.6   0.0
              comp=Z,2.2nm,0.4s,baz=221,slow=4.1,SNR=6.5
AKTO                                  LR    LR      09 52 05.4
              comp=Z,161nm,19.4s,baz=282,slow=39
FAUS   Fauske             28.94 356  eP     P       09 39 14.2  +0.5
GEYT   Alibeck            29.39  79   P     P       09 39 19.0  +1.0
              comp=Z,5.7nm,0.6s,baz=344,slow=4.8,SNR=5.4
GEYT                                  LR    LR      09 53 38.6
              comp=Z,83nm,19.9s,baz=245,slow=42
GEYT   Alibeck            29.39  79   P     P       09 39 20.2  +2.1
GEYT                                  IAmb  IAmb    09 39 32.9
              comp=Z,7.0nm,0.8s
STEI   Steigen            29.49 356  eP     P       09 39 18.2  -0.3
ABKAR  Akbulak array      29.99  56   P     P       09 39 22.4  -0.8
ABKAR  Akbulak array      29.99  56   P     P       09 39 22.3  -0.8
ABKAR                                 IAmb  IAmb    09 39 50.3
              comp=Z,4.2nm,1.0s
TORD   Torodi Ar. Bea     30.39 218   P     P       09 39 26.9  -0.1
              comp=Z,3.9nm,0.5s,baz=27,slow=9.6,SNR=16
TORD   Torodi Ar. Bea     30.39 218   P     P       09 39 25.6  -1.4
ARU    Arti               30.72  42   P     P       09 39 29.3  -0.3
              comp=Z,1.4nm,0.3s,baz=266,slow=4.7,SNR=5.4
ARU                                   LR    LR      09 51 57.4
              comp=Z,227nm,18.7s,baz=229,slow=37
ARU    Arti               30.72  42d iP     P       09 39 27.6  -1.9

ARU                                   S     S       09 44 29.0  -3.1
ARU                                   pmax  pmax
              comp=Z,12nm,1.3s
ARU    Arti               30.72  42   P     P       09 39 28.4  -1.1
ARU                                   IAmb  IAmb    09 39 49.0
              comp=Z,16nm,1.3s
TRO    Tromso             31.07 359  eP     P       09 39 31.9  -0.5
ARCES  ARCESS Array B     31.07   3   P     P       09 39 31.2  -1.3
              comp=Z,8.6nm,0.8s,baz=187,slow=9.5,SNR=17
ARCES                                 LR    LR      09 51 32.1
              comp=Z,214nm,20.6s,baz=220,slow=36
ARCES  ARCESS Array B     31.07   3   P     P       09 39 31.5  -1.0
ARCES                                 pmax  pmax
              comp=Z,65nm,1.5s
ARCES  ARCESS Array B     31.07   3   P     P       09 39 31.5  -1.0
KEV    Kevo               31.37   4   P     P       09 39 34.1  -1.0
KEV                                   pmax  pmax
              comp=Z,47nm,1.5s
KEV    Kevo               31.37   4   P     P       09 39 34.1  -1.0
SVE    Sverdlovsk         31.93  42  eP     P       09 39 40.1  -0.1
HAMF   Hammerfest         32.11   2  eP     P       09 39 41.5  -0.1
KOWA   Kowa               32.36 229   P     P       09 39 44.6  +0.2
              comp=Z,3.6nm,0.8s,baz=38,slow=9.9,SNR=7.4
KOWA   Kowa               32.36 229   P     P       09 39 44.4   0.0
UOSS   Minazif            33.05 104   P     P       09 39 52.5  +2.2
UOSS                                  IAmb  IAmb    09 39 55.3
              comp=Z,9.0nm,0.7s
BRVK   Borovoye           36.76  50ceP      P       09 40 21.3  -0.8
BRVK                                  pmax  pmax
              comp=Z,9.0nm,0.8s
BRVK   Borovoye           36.76  50   P     P       09 40 21.9  -0.2
BRVK                                  IAmb  IAmb    09 40 24.7
              comp=Z,8.9nm,0.9s
BVAR   Borovoye Array     36.82  50   P     P       09 40 21.8  -0.9
              comp=Z,3.3nm,0.6s,baz=253,slow=15,SNR=15
KKAR   Karatay Array      37.61  67   P     P       09 40 28.6  -0.9
KKAR   Karatay Array      37.61  67   P     P       09 40 28.6  -0.9
CHGR   Chuyangaron        37.63  74   P     P       09 40 31.5  +1.7
GAR    Garm               38.41  73   P     P       09 40 38.3  +2.0
BTK    Batken             38.50  72   P     P       09 40 37.9  +0.8
BTK                                   pmax  pmax
              comp=Z,9.0nm,0.8s
BTK    Batken             38.50  72   P     P       09 40 37.9  +0.8
BTK                                   IAmb  IAmb    09 40 44.0
              comp=Z,8.9nm,0.8s
SCO    Scoresbysund       38.75 339   P     P       09 40 39.6  +0.9
SCO                                   pmax  pmax
              comp=Z,18nm,1.3s
SCO    Scoresbysund       38.75 339  i P    P       09 40 38.7   0.0
SCO                                   IAmb  IAmb    09 40 40.3
              comp=Z,3.2nm,0.8s
SCO    Scoresbysund       38.75 339   P     P       09 40 39.6  +0.9
SCO                                   IAmb  IAmb    09 41 01.5
              comp=Z,18nm,1.3s
DBIC   Dimbokro           39.23 222   P     P       09 40 42.2  -1.0
              comp=Z,6.4nm,1.0s,baz=64,slow=5.0,SNR=3.3
DBIC                                  LR    LR      09 57 48.5
              comp=Z,228nm,19.5s,baz=44,slow=38
SPA0   Spitsbergen Ar     39.69 359  eP     P       09 40 47.5  +1.1
SPITS  Spitsbergen Ar     39.69 359   P     P       09 40 46.2  -0.2
              comp=Z,19nm,1.1s,baz=152,slow=9.4,SNR=2.4
AAK    Ala-Archa          40.58  67   P     P       09 40 53.6  -0.8
              comp=Z,3.0nm,0.6s,baz=226,slow=2.9,SNR=7.7
AAK                                   LR    LR      10 00 22.6
              comp=Z,69nm,18.3s,baz=312,slow=40
AAK    Ala-Archa          40.58  67ceP      P       09 40 55.5  +1.0
AAK                                   pmax  pmax
              comp=Z,14nm,0.8s
AAK    Ala-Archa          40.58  67   P     P       09 40 53.9  -0.6
BOOM   Boomskoye usch     41.65  66   P     P       09 41 03.6  +0.3
BOOM                                  pmax  pmax
              comp=Z,11nm,0.7s
BOOM   Boomskoye usch     41.65  66   P     P       09 41 03.6  +0.3
BOOM                                  IAmb  IAmb    09 41 08.1
              comp=Z,11nm,0.7s
DAG    Danmarks Havn      41.84 347  i P    P       09 41 03.0  -1.3
DAG                                   IAmb  IAmb    09 41 04.5
              comp=Z,1.8nm,0.7s
KURBB  Kurchatov Arra     41.96  54   P     P       09 41 04.2  -1.3
              comp=Z,4.1nm,0.7s,baz=284,slow=8.8,SNR=25
KURK   Kurchatov          42.00  54ceP      P       09 41 04.4  -1.5
KURK                                  pmax  pmax
              comp=Z,12nm,1.7s
KURK   Kurchatov          42.00  54   P     P       09 41 05.5  -0.4
NIL    Nilore             42.39  80   P     P       09 41 07.7  -1.6
NIL                                   pmax  pmax
              comp=Z,15nm,0.9s
NIL    Nilore             42.39  80   P     P       09 41 07.7  -1.6
NIL                                   IAmb  IAmb    09 41 15.3
              comp=Z,15nm,0.9s
KSH    Kashi              42.47  71   P     P       09 41 11.6  +1.6
KSH                                   pP    sP      09 41 16.4  +2.1
KSH                                   pmax  pmax
              comp=Z,8.0nm,0.7s
TARG   Taragay, Kyrgy     43.18  67   P     P       09 41 17.5  +1.4
TARG                                  IAmb  IAmb    09 41 20.2
              comp=Z,6.1nm,0.8s
SUMG   Summit             44.39 338  i P    P       09 41 24.8  -0.5
SUMG                                  IAmb  IAmb    09 41 26.3
              comp=Z,3.7nm,0.8s
MAKZ   Makanchi           44.85  59   P     P       09 41 29.8  +0.8
MAKZ                                  pmax  pmax
              comp=Z,4.0nm,0.8s
MAKZ   Makanchi           44.85  59   P     P       09 41 29.8  +0.8
MAKZ                                  IAmb  IAmb    09 41 39.1
              comp=Z,4.5nm,0.8s
NOR    Nord               45.02 353  i P    P       09 41 29.1  -0.7
NOR                                   IAmb  IAmb    09 41 29.6
              comp=Z,2.9nm,0.9s
MK31   Makanchi Array     45.06  59  i P    P       09 41 30.1  -0.5
MK31   Makanchi Array     45.06  59   P     P       09 41 30.4  -0.3
MK31                                  IAmb  IAmb    09 41 40.8
              comp=Z,5.8nm,0.7s
MKAR   Makanchi Array     45.06  59   P     P       09 41 29.2  -1.5
              comp=Z,2.2nm,0.4s,baz=279,slow=7.3,SNR=30
MKAR                                  LR    LR      10 03 58.5
              comp=Z,91nm,19.0s,baz=285,slow=41
MKAR   Makanchi Array     45.06  59ceP      P       09 41 29.3  -1.3
MKAR                                  pmax  pmax
              comp=Z,2.0nm,0.4s
MKAR   Makanchi Array     45.06  59   P     P       09 41 29.9  -0.7
ZALV   Zalesovo Beam      45.39  48   P     P       09 41 31.7  -1.3
              comp=Z,15nm,0.5s,baz=279,slow=8.2,SNR=5.9
ZALV                                  LR    LR      10 03 27.4
              comp=Z,57nm,19.3s,baz=288,slow=40
ZALV   Zalesovo Beam      45.39  48  i P    P       09 41 35.4  +2.4
ZALV                                  pmax  pmax
              comp=Z,15nm,0.5s
NRIK   Noril'sk           46.38  27   P     P       09 41 41.4  +0.7
              comp=Z,3.6nm,0.6s,baz=93,slow=7.4,SNR=4.9
NRIK                                  LR    LR      10 01 57.8
              comp=Z,251nm,21.4s,baz=264,slow=37
NRIK   Noril'sk           46.38  27ceP      P       09 41 40.7   0.0
NRIK                                  pmax  pmax
              comp=Z,7.0nm,0.9s
NRIK   Noril'sk           46.38  27   P     P       09 41 41.0  +0.3
NRIK                                  IAmb  IAmb    09 41 48.0
              comp=Z,6.5nm,0.8s
DGZ    Jazzator, Alta     47.75  54  i P    P       09 41 51.4  -0.5
DGZ                                   pmax  pmax
              comp=Z,17nm,1.0s
WMQ    Urumqi             49.54  61  eP     P       09 42 06.9  +1.3
WMQ                                   pP    sP      09 42 12.3  +2.4
WMQ                                   pmax  pmax
              comp=Z,14nm,0.7s
WMQ                                   pmax  pmax
              comp=Z,45nm,3.7s
SCHQ   Schefferville      58.12 317   P     P       09 43 08.3  +0.2
              comp=Z,5.8nm,0.6s,baz=64,slow=4.3,SNR=18
SCHQ                                  LR    LR      10 06 27.7
              comp=Z,99nm,20.3s,baz=78,slow=34
SCHQ   Schefferville      58.12 317   P     P       09 43 07.9  -0.2
TIXI   Tiksi              59.22  20   P     P       09 43 15.0  -0.5
              comp=Z,2.1nm,0.2s,baz=319,slow=7.2,SNR=3.4
TIXI   Tiksi              59.22  20ceP      P       09 43 15.0  -0.5
TIXI                                  pmax  pmax
              comp=Z,12nm,1.7s
TIXI   Tiksi              59.22  20   P     P       09 43 16.4  +0.9
TIXI                                  IAmb  IAmb    09 43 18.7
              comp=Z,4.7nm,0.8s
SONM   Songino Array      60.17  51   P     P       09 43 21.5  -1.1
              comp=Z,3.1nm,0.8s,baz=284,slow=7.6,SNR=12
SONM                                  LR    LR      10 11 58.7
              comp=Z,112nm,19.6s,baz=307,slow=39
SONM   Songino Array      60.17  51   P     P       09 43 22.2  -0.4
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SONM				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SONM	**Songino Array**	**60.17**	**51**	P	**P**	**09 43 22.1**	**-0.4**
SONM				IAmb	IAmb	09 43 25.2	
	comp=Z,2.8nm,0.9s						
ULN	**Ulaanbaatar**	**60.55**	**51**	*ce*P	**P**	**09 43 24.4**	**-0.8**
ULN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ULN	**Ulaanbaatar**	**60.55**	**51**	P	**P**	**09 43 25.0**	**-0.3**
ULN				IAmb	IAmb	09 43 30.9	
	comp=Z,5.0nm,0.7s						
YAK	**Yakutsk**	**64.71**	**30**	*ce*P	**P**	**09 43 54.8**	**+2.3**
YAK				pmax	pmax		
	comp=Z,20nm,0.7s						
HHC	**Hu-ho-hao-te**	**66.78**	**56**	*e*P	**P**	**09 44 06.9**	**+0.5**
HHC				pmax	pmax		
	comp=Z,12nm,0.8s						
HHC				pmax	pmax		
	comp=Z,100nm,5.7s						
BOSA	**Boshof**	**67.05**	**175**	LR	LR	10 15 27.6	
	comp=Z,138nm,18.2s,baz=3.0,slow=38						
XAN	**Xi'an**	**68.62**	**63**	P	**P**	**09 44 18.1**	**+0.1**
XAN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**69.83**	**82**	P	**P**	**09 44 26.6**	**+0.9**
	comp=Z,0.8nm,0.3s,baz=307,slow=7.8,SNR=1.8						
BILL	**Bilibino**	**70.57**	**13**	*i* P	**P**	**09 44 30.1**	**+0.7**
BILL				*i*		09 44 44.2	
BILL				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BILL				MLR	MLR		
	comp=Z,122nm,19.0s						
INK	**Inuvik**	**71.61**	**350**	P	**P**	**09 44 35.5**	**-0.2**
	comp=Z,1.2nm,0.6s,baz=359,slow=5.9,SNR=4.2						
INK	**Inuvik**	**71.61**	**350**	P	**P**	**09 44 35.2**	**-0.4**
INK				IAmb	IAmb	09 44 35.6	
	comp=Z,4.4nm,1.2s						
SEY	**Seymchan**	**71.71**	**21**	LR	LR	10 17 23.0	
	comp=Z,24nm,21.9s,baz=298,slow=37						
YKA	**Yellowknife Ar**	**72.95**	**340**	P	**P**	**09 44 44.9**	**+1.0**
	comp=Z,0.7nm,0.8s,baz=50,slow=6.8,SNR=5.6						
YKA				LR	LR	10 18 01.6	
	comp=Z,66nm,19.1s,baz=0.0,slow=37						
KLR	**Kul'dur**	**73.52**	**40**	P	**P**	**09 44 49.6**	**+2.2**
	comp=Z,2.2nm,0.8s,baz=316,slow=4.1,SNR=6.0						
KLR	**Kul'dur**	**73.52**	**40**	*i* P	**P**	**09 44 48.6**	**+1.2**
KLR				pmax	pmax		
	comp=Z,19nm,2.7s						
ULM	**Lac du Bonnet**	**75.33**	**324**	LR	LR	10 17 10.0	
	comp=Z,40nm,22.0s,baz=82,slow=35						
H21K	**Melozitna Rive**	**75.91**	**357**	P	**P**	**09 45 02.2**	**+1.2**
H21K				IAmb	IAmb	09 45 03.6	
	comp=Z,13nm,1.1s						
MDM	**Murphy Dome**	**76.36**	**355**	P	**P**	**09 45 02.5**	**-1.1**
ILAR	**Eielson Array**	**76.45**	**354**	P	**P**	**09 45 04.8**	**+0.7**
	comp=Z,0.9nm,0.9s,baz=9.5,slow=6.1,SNR=7.2						
ILAR				LR	LR	10 21 01.0	
	comp=Z,53nm,19.3s,baz=350,slow=38						
ILAR	**Eielson Array**	**76.45**	**354**	P	**P**	**09 45 04.5**	**+0.5**
NJ2	**Nanjing**	**76.58**	**60**	*e*P	**P**	**09 45 05.0**	**-0.4**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
USRK	**Ussuriysk Ar.**	**76.95**	**43**	P	**P**	**09 45 06.2**	**-1.0**
	comp=Z,3.3nm,0.7s,baz=329,slow=2.9,SNR=6.6						
KSAR	**Wonju Array Be**	**79.02**	**51**	P	**P**	**09 45 18.2**	**-0.7**
KSAR	**Wonju Array Be**	**79.02**	**51**	P	**P**	**09 45 18.2**	**-0.7**
KSRS	**Korea Array**	**79.04**	**51**	P	**P**	**09 45 18.6**	**-0.4**
	comp=Z,2.3nm,0.7s,baz=322,slow=4.4,SNR=7.1						
KSRS				LR	LR	10 25 55.3	
	comp=Z,68nm,18.5s,baz=320,slow=40						
PSI	**Prapat**	**79.20**	**95**	LR	LR	10 24 46.9	
	comp=Z,40nm,18.8s,baz=297,slow=39						
PETK	**Petropavlovsk-**	**81.38**	**24**	LR	LR	10 26 41.6	
	comp=Z,121nm,18.7s,baz=318,slow=40						
PET	**Petropavlovsk**	**81.76**	**24**	*i* P	**P**	**09 45 34.9**	**+1.6**
PET				pmax	pmax		
	comp=Z,53nm,1.3s						
JTMT	**Jette**	**85.04**	**331**	P	**P**	**09 45 51.5**	**+1.0**
JTMT				IAmb	IAmb	09 46 01.5	
	comp=Z,6.9nm,1.0s						
MJAR	**Matsushiro Arr**	**85.67**	**46**	P	**P**	**09 45 53.3**	**-0.4**
	comp=Z,3.8nm,0.7s,baz=326,slow=3.9,SNR=4.8						
MJAR	**Matsushiro Arr**	**85.67**	**46**	P	**P**	**09 45 52.7**	**-1.0**
MJAR				IAmb	IAmb	09 46 02.0	
	comp=Z,5.1nm,1.1s						
BOZ	**Bozeman (W)**	**85.76**	**329**	P	**P**	**09 45 54.9**	**+0.7**
BOZ				pmax	pmax		
	comp=Z,5.0nm,1.2s						
BOZ	**Bozeman (W)**	**85.76**	**329**	P	**P**	**09 45 54.9**	**+0.7**
BOZ				IAmb	IAmb	09 45 58.3	
	comp=Z,4.8nm,1.1s						
C09A	**Chrisman Ranch**	**86.44**	**334**	P	**P**	**09 45 58.2**	**+0.9**
C09A				IAmb	IAmb	09 46 07.8	
	comp=Z,8.6nm,1.2s						
PDAR	**Pinedale Array**	**87.17**	**326**	P	**P**	**09 46 00.8**	**-0.4**
	comp=Z,0.3nm,0.7s,baz=11,slow=0.9,SNR=3.0						
PDAR				LR	LR	10 26 31.1	
	comp=Z,65nm,18.5s,baz=38,slow=37						
PTLB	**Pontes e Lacer**	**91.66**	**252**	P	**P**	**09 46 21.0**	**-1.3**
PTLB				IAmb	IAmb	09 46 27.7	
	comp=Z,3.2nm,0.6s						
NVAR	**Mina Array Bea**	**94.47**	**329**	LR	LR	10 32 53.1	
	comp=Z,68nm,18.6s,baz=28,slow=38						
TXAR	**Lajitas Array**	**94.65**	**314**	LR	LR	10 29 02.7	
	comp=Z,58nm,18.7s,baz=0.0,slow=35						
CPUP	**Villa Florida**	**97.26**	**242**	LR	LR	10 32 38.5	
	comp=Z,84nm,18.1s,baz=46,slow=37						
WRA	**Warramunga Arr**	**120.56**	**92**	PKP	**PKiKP**	**09 52 08.5**	**+1.5**
	comp=Z,0.8nm,0.8s,baz=326,slow=1.8,SNR=9.1						
WRA	**Warramunga Arr**	**120.56**	**92**	PKIKP	**PKiKP**	**09 52 08.3**	**+1.3**
WRA	**Warramunga Arr**	**120.56**	**92**		**PKiKP**	**09 52 08.3**	**+1.3**
ASAR	**Alice Springs**	**122.22**	**96**	PKP	**PKiKP**	**09 52 10.8**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=312,slow=1.4,SNR=12						
ASAR	**Alice Springs**	**122.22**	**96**		**PKiKP**	**09 52 11.6**	**+1.4**

IDC 20 09:34:37.0±2.8**,54°.08N**×**86°.55E,h0**^{km}**,mb1 3.3**/2**, mb1mx3.1**/54**,mbtmp3.3**/2**,ML2.9**/2 **Error ellipse: s-maj=24.6km s-min=14.2km az=46.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.03**	**263**	*i*		09 40 00.0	
	baz=83,slow=338,SNR=6.2						
ZALV	**Zalesovo Beam**	**1.03**	**263**	Pg	Pg	09 34 55.3	-1.4
	1.4nm,0.3s,baz=79,slow=19,SNR=11						
ZALV				Lg	Lg	09 35 11.6	
	4.0nm,0.3s,baz=75,slow=35,SNR=13						
ZALV				Rg	Rg	09 35 15.9	
	5.3nm,0.4s,baz=79,slow=31,SNR=11						
KURBB	**Kurchatov Arra**	**6.01**	**238**	Pn	Pn	09 36 08.2	+1.1
	0.1nm,0.3s,baz=56,slow=13,SNR=9.3						
MKAR	**Makanchi Array**	**7.78**	**202**	Pn	Pn	09 36 32.3	+0.9
	0.4nm,0.3s,baz=24,slow=14,SNR=18						

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*TUL **20** 09:45:46.6±1.1,36°.74N±0°.01×98°.34W±0°.02,h6^{km}±6^{km}, ML2.6,mb_Lg2.1/7(NEIC),Error ellipse: s-maj=2.5km s-min=1.7km az=97.0*

NEIC 20 09:45:47±1.1**,36°.74N**±0°.02×**98°.33W**±0°.01**,h9**^{km}±4^{km}**, Error ellipse: s-maj=2.9km s-min=0.8km az=154.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK032	**Salt Plains WL**	**0.12**	**56**		Pg	09 45 49.8	0.0
OK032				Sg	Sg	09 45 52.1	+0.3
CROK	**Carrier**	**0.36**	**130**	Pg	Pg	09 45 54.1	-0.1
CROK				Sg	Sg	09 45 59.6	+0.5
KAN14	**Manchester OK**	**0.37**	**54**		Pg	09 45 54.4	+0.1
KAN14				Sg	Sg	09 45 59.7	+0.5
GC02	**Grant County #**	**0.40**	**73**	Pg	Pg	09 45 54.8	0.0
GC02				Sg	Sg	09 46 00.6	+0.6
KAN10	**Anthony SW Sta**	**0.43**	**26**	Pg	Pg	09 45 55.4	0.0
KAN10				Sg	Sg	09 46 01.8	+0.7
KAN05	**Bluff City Nor**	**0.52**	**45**	Pg	Pg	09 45 56.8	-0.4
KAN05				Sg	Sg	09 46 03.6	-0.4
KAN16	**Harper SW Stat**	**0.53**	**24**	Pg	Pg	09 45 57.2	-0.1
KAN16				Sg	Sg	09 46 04.2	-0.2
KAN17	**Caldwell West**	**0.55**	**56**		Pg	09 45 57.3	-0.3
KAN17				Sg	Sg	09 46 05.0	+0.1
KAN08	**Anthony NE Sta**	**0.57**	**31**	Pg	Pg	09 45 58.0	0.0
KAN08				Sg	Sg	09 46 05.5	0.0
KAN01	**Argonia South**	**0.62**	**48**		Pg	09 45 58.6	-0.4
KAN01				Sg	Sg	09 46 07.2	+0.1
KAN12	**Harper NE Stat**	**0.62**	**26**	Pg	Pg	09 45 57.5	-1.5
KAN12				Sg	Sg	09 46 07.4	+0.2
KAN06	**Argonia West S**	**0.63**	**37**	Pg	Pg	09 45 59.1	-0.2
KAN06				Sg	Sg	09 46 07.9	+0.3
U32A	**Winter Ranch,**	**0.65**	**237**	Pg	Pg	09 45 58.9	-0.6
U32A				Sg	Sg	09 46 07.9	-0.1
KAN09	**Caldwell North**	**0.70**	**55**		Pg	09 46 00.3	-0.1
KAN09				Sg	Sg	09 46 09.1	-0.5
KAN13	**South Haven SW**	**0.74**	**68**	Pg	Pg	09 46 00.5	-0.8
KAN13				Sg	Sg	09 46 10.3	-0.5
BLOK	**Blackwell**	**0.90**	**88**		Pg	09 46 04.0	-0.3
BLOK				Sg	Sg	09 46 15.8	-0.2
OK029	**Liberty Lake**	**1.18**	**143**	Pg	Pb	09 46 08.6	-0.9
OK029				Sg	Sb	09 46 24.7	-0.1
BCOK	**Bluff Creek, N**	**1.23**	**151**	Pg	Pn	09 46 09.2	-1.1
BCOK				Sg	Sb	09 46 26.0	-0.3
QUOK	**Quay**	**1.43**	**113**	Pn	Pn	09 46 13.3	+0.2
OK031	**S. Brethren Rd**	**1.44**	**123**		Pn	09 46 13.1	-0.1
T35A	**Sooner Cattle**	**1.47**	**83**	Pn	Pn	09 46 14.0	+0.4
OK030	**Cody Creek RV**	**1.49**	**122**		Pn	09 46 14.2	+0.3
OKCFA	**Oklahoma City**	**1.50**	**151**	Pn	Pn	09 46 13.2	-0.8
FNO	**Franklin**	**1.66**	**153**	Pn	Pn	09 46 16.5	+0.2
R32A	**Long Quarter,**	**1.71**	**350**		Pb	09 46 17.8	-0.8
R32A				IAmb_Lg		09 46 41.7	
	comp=Z,9.5nm,0.8s						
WMOK	**Wichita Mounta**	**2.03**	**190**	Pn	Pn	09 46 21.9	+0.6
WMOK				IAmb_Lg		09 46 54.3	
	comp=Z,5.4nm,0.8s						
X34A	**Smith Ranch, M**	**2.17**	**169**		Pb	09 46 25.2	-1.2
TUL1	**Leonard**	**2.21**	**111**		Pb	09 46 25.9	-1.3
TUL1				IAmb_Lg		09 46 57.9	
	comp=Z,10nm,0.9s						
CBKS	**Cedar Bluff**	**2.35**	**332**	Pn	Pn	09 46 25.1	-0.7
CBKS				IAmb_Lg		09 47 02.9	
	comp=Z,8.9nm,0.7s						
KSU1	**Kansas State U**	**2.72**	**29**	Pn	Pn	09 46 30.7	-0.2
LOOK	**Love County**	**2.90**	**161**	Pn	Pn	09 46 34.1	+0.9
U38A	**Gravette**	**3.19**	**94**		Pn	09 46 38.7	+1.4
X37A	**Clayton**	**3.23**	**131**		Pn	09 46 38.5	+0.7
AMTX	**Amarillo**	**3.29**	**237**		Pn	09 46 39.5	+0.7
S39A	**Bolivar**	**4.11**	**75**	Pn	Pn	09 46 50.3	+0.3
U40A	**Yellville**	**4.43**	**93**	Pn	Pn	09 46 55.3	+1.0
U40A				IAmb_Lg		09 48 05.9	
	comp=Z,5.7nm,0.7s						
MIAR	**Mount Ida**	**4.45**	**118**	Pn	Pn	09 46 55.5	+1.0
R40A	**Maddies Statio**	**5.06**	**70**	Pn	Pn	09 47 02.7	-0.3
FCAR	**Ozark Folk Cen**	**5.08**	**98**	Pn	Pn	09 47 02.6	-0.7
WHAR	**Wooly Hollow**	**5.11**	**105**	Pn	Pn	09 47 04.8	+1.2
SDCO	**Great Sand Dun**	**5.81**	**282**	Pn	Pn	09 47 12.1	-1.4

IDC 20 09:47:43.3±3.0**,26°.21N**×**142°.09E,h0**^{km}**,mb4.0**/3**, mb1 4.1**/4**,mb1mx3.5**/48**,mbtmp3.9**/4**,ML2.9**/1**,Error ellipse: s-maj=144.9km s-min=28.7km az=81.0,Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**0.89**	**6**	LR	LR	09 48 07.5	
	comp=Z,99nm,19.1s,baz=118,slow=27						
JCJ				Sn	Sn	09 48 18.3	+1.5
	510nm,0.3s,baz=292,slow=21,SNR=7.8						
MJAR	**Matsushiro Arr**	**10.82**	**343**	Pn	Pn	09 50 18.9	-0.6
	0.1nm,0.3s,baz=157,slow=13,SNR=4.3						
WRA	**Warramunga Arr**	**46.49**	**190**	P	P	09 56 12.2	-0.2
	0.6nm,0.4s,baz=9.9,slow=8.4,SNR=5.8						
KURBB	**Kurchatov Arra**	**53.60**	**315**	P	P	09 57 06.2	+0.1
	0.5nm,0.3s,baz=94,slow=7.3,SNR=4.7						
FINES	**FINESS Array B**	**78.70**	**334**	P	P	09 59 47.2	0.0
	1.6nm,0.6s,baz=67,slow=3.9,SNR=8.0						

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*IDC **20** 09:49:38.0±2.4,7°.83N×93°.15E,h0^{km},mb3.8/5,mb1 3.9/6, mb1mx3.5/53,mbtmp3.8/6,ML4.4/1,MS4.0/1,Ms1 4.0/1, ms1mx2.5/40,Error ellipse: s-maj=82.8km s-min=22.3km az=65.0*

ISC 20 09:49:40.0±1.6**,7°.8N**±0°.2×**93°.3E**±0°.3**,h10**^{km}**,n17,** σ**1^{s}.53**/10**,mb3.7**/6**,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**11.97**	**27**	Pn	**Pn**	**09 52 31.9**	**+1.0**
	0.7nm,0.3s,baz=218,slow=14,SNR=2.6						
RAMN	**Ramite**	**20.10**	**342**	*e*P	Pn	09 54 16.9	+0.8
	13nm,0.5s						
TAPN	**Taplejung**	**20.18**	**346**	*e*P	Pn	09 54 16.4	-0.6
	13nm,0.5s						
JIRN	**Jiri**	**20.89**	**342**	*e*P	Pn	09 54 25.1	-0.3
	5.5nm,0.5s						
PKI	**Pulchoki**	**21.05**	**340**	*e*P	**P**	**09 54 26.4**	**+1.7**
GUN	**Gumba**	**21.22**	**342**	*e*P	**P**	**09 54 27.4**	**+0.9**
	11nm,0.6s						
GKN	**Gorkha**	**21.72**	**339**	*e*P	**P**	**09 54 33.3**	**+1.6**
DANN	**Dangsing**	**22.35**	**337**	*e*P	**P**	**09 54 40.0**	**+1.4**
H08S3	**Diego Garcia H**	**25.75**	**234**	T	T	10 22 16.7	
	baz=60						
H08S2	**Diego Garcia H**	**25.76**	**234**	T	T	10 22 18.6	
	baz=60						
H08S1	**Diego Carcia H**	**25.77**	**234**	T	T	10 22 13.2	
	baz=60						
MKAR	**Makanchi Array**	**40.01**	**348**	P	**P**	**09 57 14.2**	**-0.8**
	0.6nm,0.7s,baz=151,slow=6.6,SNR=4.5						
SONM	**Songino Array**	**41.46**	**13**	P	**P**	**09 57 24.9**	**-2.3**
	0.6nm,0.5s,baz=195,slow=8.1,SNR=4.2						
ZALV	**Zalesovo Beam**	**46.55**	**353**	P	**P**	**09 58 06.9**	**-0.9**
	2.0nm,0.4s,baz=178,slow=9.3,SNR=6.7						
WRA	**Warramunga Arr**	**48.91**	**125**	P	**P**	**09 58 26.9**	**+0.2**
	0.6nm,0.7s,baz=304,slow=8.6,SNR=6.2						
USRK	**Ussuriysk Ar.**	**49.51**	**36**	LR	LR	10 21 34.6	
	comp=Z,147nm,19.0s,baz=314,slow=39						
ASAR	**Alice Springs**	**50.52**	**129**	P	**P**	**09 58 39.5**	**+0.7**
	0.6nm,0.7s,baz=307,slow=7.8,SNR=7.1						

IDC 20 09:50:30.6±2.4**,54°.30N**×**85°.92E,h0**^{km}**,mb1 3.3**/2**, mb1mx3.1**/50**,mbtmp3.3**/2**,ML3.1**/2**,Error ellipse: s-maj=18.0km s-min=9.9km az=53.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.74**	**242**	*i*		09 54 50.0	
	baz=61,slow=338,SNR=3.7						
ZALV	**Zalesovo Beam**	**0.74**	**242**	Pg	Pg	09 50 43.4	-1.3
	1.9nm,0.3s,baz=62,slow=17,SNR=11						
ZALV				Lg	Lg	09 50 55.6	
	9.6nm,0.3s,baz=62,slow=30,SNR=28						
ZALV				Rg	Rg	09 51 00.1	
	7.0nm,0.3s,baz=65,slow=34,SNR=4.3						
KURBB	**Kurchatov Arra**	**5.83**	**234**	Pn	Pn	09 51 59.5	+1.3
	0.3nm,0.3s,baz=49,slow=13,SNR=12						
MKAR	**Makanchi Array**	**7.86**	**199**	Pn	Pn	09 52 26.7	+0.6
	0.5nm,0.3s,baz=24,slow=13,SNR=12						

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*NNC **20** 10:06:38.3±1.9,41°.76N×80°.37E,h0^{km},mb3.7,mpv3.4, Error ellipse: s-maj=12.6km s-min=9.1km az=149.0*

*SOME **20** 10:06:38.1,41°.85N×80°.37E,h5^{km}*

*KRNET **20** 10:06:38.7±0.1,41°.86N×80°.49E,h15^{km},mb3.6*

ISC 20 10:06:36.2±2.5**,41°.75N**±0°.09×**80°.60E**±0°.07**,h0**^{km}±12^{km}**, n50,**σ**1^{s}.56**/81**,9C-8D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**1.64**	**329**	*e*P	**Pn**	**10 07 04.6**	**-1.8**
	57nm,0.1s						
SHLS				*e*S	**Sn**	**10 07 23.6**	**-4.6**
	80nm,0.5s						
SHLS	**Shalkode**	**1.64**	**329**	P	**Pn**	**10 07 04.5**	**-1.9**
	67nm,0.3s						
SHLS				S	**Sn**	**10 07 23.6**	**-4.6**
	80nm,0.5s						
SHLS	**Shalkode**	**1.64**	**329**	*e*P	**Pn**	**10 07 04.6**	**-1.8**
	baz=41						
SHLS				*e*S	**Sn**	**10 07 23.6**	**-4.6**
	baz=41						
KTMS	**Ketmen**	**1.70**	**354**	*e*P	**Pg**	**10 07 07.9**	**-1.0**
	6.8nm,0.0s						
KTMS				*e*S	**Sn**	**10 07 29.2**	**-0.5**
	81nm,0.4s						
KTMS	**Ketmen**	**1.70**	**354**	P	**Pb**	**10 07 07.6**	**-0.8**
	12nm,0.3s						
KTMS				S	**Sn**	**10 07 29.2**	**-0.5**
	81nm,0.4s						
KTMS	**Ketmen**	**1.70**	**354**	*e*P	**Pg**	**10 07 07.9**	**-1.0**
	baz=56						
KTMS				*e*S	**Sn**	**10 07 29.3**	**-0.5**
	baz=56						
PDGK	**Podgornoye**	**1.78**	**333**	P	**Pb**	**10 07 08.8**	**-0.9**
	5.4nm,0.3s						
PDGK				S	**Sn**	**10 07 31.1**	**-0.6**
	71nm,0.5s						
PDGK	**Podgornoye**	**1.78**	**333**	⇓Pn	**Pb**	**10 07 08.6**	**-1.1**
	10nm,0.7s						
PDGK				⇑Sn	**Sg**	**10 07 36.7**	**+3.4**
	93nm,0.5s						
PRZ	**Przheval'sk**	**1.79**	**295**	⇑*i*P	**Pg**	**10 07 10.1**	**-0.5**
	baz=93						
PRZ				⇑*i*S	**Sn**	**10 07 32.2**	**+0.1**
	baz=93						
UZB	**Uzynbulak**	**1.82**	**320**	*e*P	**Pb**	**10 07 09.7**	**-0.8**
	14nm,0.1s						
UZB				*e*S	**Sn**	**10 07 32.4**	**-0.3**
	132nm,0.4s						
UZB	**Uzynbulak**	**1.82**	**320**	P	**Pb**	**10 07 09.7**	**-0.8**
	20nm,0.4s						
UZB				S	**Sn**	**10 07 32.4**	**-0.3**
	132nm,0.4s						
UZB	**Uzynbulak**	**1.82**	**320**	*e*P	**Pb**	**10 07 09.7**	**-0.8**
	baz=20						
UZB				*e*S	**Sn**	**10 07 32.4**	**-0.3**
	baz=20						
SATY	**Saty**	**2.08**	**309**	*e*P	**Pb**	**10 07 15.1**	**+0.1**
	5.8nm,0.1s						
SATY				*e*S	**Sb**	**10 07 41.2**	**-0.2**
	36nm,0.0s						
SATY	**Saty**	**2.08**	**309**	Pg	**Pb**	**10 07 15.1**	**+0.1**
	19nm,0.5s						
SATY				Lg	Lg	10 07 41.2	
	64nm,0.4s						
SATY	**Saty**	**2.08**	**309**	*e*P	**Pb**	**10 07 15.1**	**+0.1**
	baz=9.0						
SATY				*e*S	**Sb**	**10 07 41.3**	**-0.2**
	baz=9.0						
KPKS	**Kokpek**	**2.22**	**321**	*e*P	**Pb**	**10 07 17.0**	**-0.3**
	28nm,0.3s						
KPKS				*e*S	**Sn**	**10 07 44.5**	**+1.9**
	154nm,0.4s						
KPKS	**Kokpek**	**2.22**	**321**	*e*P	**Pb**	**10 07 17.0**	**-0.3**
	baz=21						
KPKS				*e*S	**Sn**	**10 07 44.5**	**+1.9**
	baz=21						
ANVS	**Anan'yevo**	**2.41**	**296**	⇑*i*P	**Pb**	**10 07 20.2**	**-0.3**
	baz=95						
ANVS				⇑*i*S	**Sn**	**10 07 49.2**	**+1.9**
	baz=95						
KURS	**Kuram**	**2.50**	**315**	*e*P	**Pb**	**10 07 22.1**	**+0.2**
	32nm,0.7s						
KURS				*e*S	**Sb**	**10 07 53.7**	**+0.5**
	27nm,0.1s						
KURS	**Kuram**	**2.50**	**315**	Pg	**Pb**	**10 07 21.7**	**-0.2**
	32nm,0.7s						
KURS				Lg	Lg	10 07 53.7	
	18nm,0.6s						
KDJ	**Kajisay**	**2.58**	**280**	⇓*i*P	**Pb**	**10 07 22.1**	**-1.4**
	baz=77						
KDJ				⇓*i*S	**Sn**	**10 07 53.6**	**+2.1**
	baz=77						
DJR	**Jarkent**	**2.65**	**347**	*e*P	**Pb**	**10 07 24.7**	**+0.2**
	8.3nm,0.1s						
DJR				*e*S	**Sb**	**10 07 58.0**	**+0.5**
	43nm,0.6s						
DJR	**Jarkent**	**2.65**	**347**	Pg	**Pb**	**10 07 24.7**	**+0.2**
	13nm,0.3s						
DJR				Lg	Lg	10 07 58.0	
	43nm,0.6s						
BLB	**Baldybastay**	**2.81**	**327**	Pg	**Pb**	**10 07 27.5**	**+0.1**
	30nm,0.3s						
BLB				Lg	Lg	10 08 02.9	
	90nm,0.3s						
KOTS	**Kotyrbulak**	**2.98**	**301**	*e*P	**Pb**	**10 07 30.7**	**+0.5**
	9.8nm,0.6s						
KOTS				*e*S	**Sb**	**10 08 08.3**	**+1.2**
	44nm,0.1s						
KOTS	**Kotyrbulak**	**2.98**	**301**	Pg	**Pb**	**10 07 30.7**	**+0.5**
	9.8nm,0.6s						
KOTS				Lg	Lg	10 08 08.3	
	88nm,0.5s						
MDOK	**Medeo**	**2.98**	**299**	*e*P	**Pb**	**10 07 30.6**	**+0.3**
	13nm,0.4s						
MDOK				*e*S	**Sb**	**10 08 08.0**	**+0.6**
	30nm,0.6s						
MDOK	**Medeo**	**2.98**	**299**	Pg	**Pb**	**10 07 29.9**	**-0.5**
	8.5nm,0.4s						
MDOK				Lg	Lg	10 08 08.1	
	20nm,0.5s						
MDOK	**Medeo**	**2.98**	**299**	Pg	**Pb**	**10 07 30.6**	**+0.3**
	13nm,0.4s						
MDOK				Lg	Lg	10 08 07.9	
	30nm,0.6s						
TNSS	**Tian-Shan**	**3.00**	**297**	*e*P	**Pb**	**10 07 31.1**	**+0.4**
	7.4nm,0.1s						
TNSS				*e*S	**Sb**	**10 08 08.7**	**+0.8**
	21nm,0.1s						
TNSS	**Tian-Shan**	**3.00**	**297**	Pg	**Pb**	**10 07 31.1**	**+0.4**
	7.4nm,0.3s						
TNSS				Lg	Lg	10 08 08.7	
	17nm,0.3s						
ARXS	**Arharly**	**3.19**	**321**	*e*P	**Pb**	**10 07 33.8**	**0.0**
	7.7nm,0.5s						
ARXS				*e*S	**Sb**	**10 08 13.6**	**+0.3**
	38nm,0.6s						
ARXS	**Arharly**	**3.19**	**321**	Pg	**Pb**	**10 07 33.8**	**0.0**
	7.7nm,0.5s						
ARXS				Lg	Lg	10 08 13.6	
	38nm,0.6s						
MTBS	**Maitube**	**3.38**	**295**	*e*P	**Pb**	**10 07 37.9**	**+0.8**
	4.7nm,0.2s						
MTBS				*e*S	**Sb**	**10 08 19.9**	**+1.2**
	35nm,0.1s						
CHKK	**Chushkaly**	**3.39**	**309**	*e*P	**Pb**	**10 07 37.7**	**+0.6**
	2.9nm,0.0s						
CHKK				*e*S	**Sb**	**10 08 20.1**	**+1.3**
	53nm,0.4s						
CHKK	**Chushkaly**	**3.39**	**309**	Pg	**Pb**	**10 07 37.7**	**+0.6**
	4.3nm,0.4s						
CHKK				Lg	Lg	10 08 20.1	
	53nm,0.4s						
KTBS	**Karatobe**	**3.49**	**305**	*e*P	**Pb**	**10 07 39.1**	**+0.3**
	4.2nm,0.3s						
KTBS				*e*S	**Sb**	**10 08 22.9**	**+1.1**
	50nm,0.4s						
KTBS	**Karatobe**	**3.49**	**305**	Pg	**Pb**	**10 07 39.2**	**+0.3**
	4.2nm,0.3s						
KTBS				Lg	Lg	10 08 22.9	
	50nm,0.4s						
KAPS	**Kapalarasan**	**3.64**	**346**	*e*P	**Pb**	**10 07 41.4**	**-0.1**
	3.0nm,0.1s						
KAPS				*e*S	**Sb**	**10 08 26.8**	**+0.6**
	21nm,0.6s						
KAPS	**Kapalarasan**	**3.64**	**346**	Pg	**Pb**	**10 07 41.4**	**-0.1**
	3.3nm,0.7s						
KAPS				Lg	Lg	10 08 26.8	
	21nm,0.6s						
KST	**Kastek**	**3.67**	**292**	*e*P	**Pb**	**10 07 43.2**	**+1.2**
	9.0nm,0.5s						
KST				*e*S	**Sb**	**10 08 29.4**	**+2.3**
	24nm,1.0s						
KST	**Kastek**	**3.67**	**292**	Pg	**Pb**	**10 07 43.2**	**+1.2**
	9.0nm,0.5s						
KST				Lg	Lg	10 08 29.4	
	24nm,1.0s						
KUU	**Kurty**	**3.80**	**306**	*e*P	**Pb**	**10 07 44.6**	**+0.6**
	2.2nm,0.1s						
KUU				*e*S	**Sb**	**10 08 31.9**	**+1.4**
	19nm,0.2s						
KUU	**Kurty**	**3.80**	**306**	Pg	**Pb**	**10 07 44.6**	**+0.6**
	4.2nm,0.8s						
KUU				Lg	Lg	10 08 31.9	
	14nm,0.6s						
DGS	**Degeres**	**3.87**	**294**	*e*P	**Pb**	**10 07 44.4**	**-1.0**
	2.8nm,0.1s						
DGS				*e*S	**Sb**	**10 08 31.6**	**-1.1**
	12nm,0.2s						
DGS	**Degeres**	**3.87**	**294**	Pg	**Pb**	**10 07 44.4**	**-1.0**
	5.9nm,0.5s						
DGS				Lg	Lg	10 08 31.7	
	12nm,0.5s						
TKM2	**Tokmak 2**	**3.89**	**289**	⇑Pg	**Pb**	**10 07 43.3**	**-2.5**
	4.8nm,0.7s						
TKM2				⇓Lg	Lg	10 08 35.6	
	8.0nm,0.7s						

AAK	**Ala-Archa** 3.7nm,0.8s	**4.62**	**283**	⇑Pg	**Pb**	**10 07 59.2**	**+0.9**
AAK	7.3nm,1.1s			⇓Lg	Lg	10 08 58.9	
MAKZ	**Makanchi** 2.0nm,0.5s	**5.15**	**11**	⇓Pn	Pb	10 07 58.9	-8.2
MAKZ	1.7nm,0.8s			⇑Sn	**Sn**	**10 08 59.4**	**+4.8**
MAKZ	2.0nm,0.8s			⇑Lg	Lg	10 09 28.1	
MK31	**Makanchi Array** 0.3nm,0.2s,baz=199,slow=13,SNR=30	**5.18**	**13**	Pn	Pn	10 07 58.9	+3.9
MK31	0.6nm,0.3s,baz=187,slow=24,SNR=5.1			⇓Sn	**Sn**	**10 09 00.3**	**+4.8**
MK31	2.5nm,0.6s,baz=193,slow=28,SNR=4.7			⇓Lg	Lg	10 09 26.4	

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*NNC **20** 10:19:57.2±1.9, 51°.83N×75°.45E, h0^{km}, mb3.2, mpv2.8, Error ellipse: s-maj=26.3km s-min=12.0km az=18.0, Suspected Mining explosion.*

*IDC **20** 10:19:58.2±5.4, 51°.64N×75°.45E, h0^{km}, mb1 2.9/2, mb1mx2.7/45, mbtmp2.9/2, ML2.1/2, Error ellipse: s-maj=58.3km s-min=28.0km az=80.0*

ISC 20 10:19:58.1±1.2**, 51°.65N**±0°.07×**75°.42E**±0°.07**, h0**^{km}**, n8,** σ**0**^{s}**67**/10**, 3C-6D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra** 6.5nm,0.7s,baz=306,slow=18	**2.22**	**116**	⇑Pn	**Pn**	**10 20 36.8**	**+0.8**
KURBB	26nm,0.6s,baz=306,slow=31			⇓Sn	**Sb**	**10 21 07.1**	**+0.2**
KURK	**Kurchatov** 3.2nm,0.6s	**2.22**	**114**	⇑Pn	**Pn**	**10 20 36.6**	**+0.4**
KURK	8.8nm,0.8s			⇓Sn	**Sn**	**10 21 04.2**	**-0.1**
BRVK	**Borovoye** 2.3nm,0.7s	**3.45**	**296**	⇓Pg	**Pb**	**10 20 59.9**	**-0.1**
BRVK	5.3nm,0.7s			⇑Lg	Lg	10 21 44.1	
OTUK	**Ortayu** 1.6nm,0.8s	**3.95**	**211**	⇓Pg	**Pb**	**10 21 09.0**	**+0.5**
OTUK	3.9nm,0.9s			⇓Lg	Lg	10 22 08.2	
ZALV	**Zalesovo Beam** 0.1nm,0.3s,baz=257,slow=12,SNR=5.1	**6.15**	**64**	Pn	**Pn**	**10 21 30.4**	**+0.4**
ZALV	0.2nm,0.3s,baz=270,slow=22,SNR=2.5			Sn	**Sn**	**10 22 40.4**	**-0.6**
I46RU	**ZALESOVO INFRA** baz=248,slow=323,SNR=1.5	**6.15**	**64**	*i*		10 59 00.0	
MK31	**Makanchi Array** 1.9nm,0.6s,baz=324,slow=27,SNR=6.0	**6.62**	**135**	⇓Lg	Lg	10 23 27.7	
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=318,slow=12,SNR=2.6	**6.62**	**135**	Pn	**Pn**	**10 21 35.6**	**-1.1**
MKAR	0.1nm,0.3s,baz=342,slow=25,SNR=2.8			Sn	**Sn**	**10 22 52.2**	**-0.6**
MKAR	0.2nm,0.3s,baz=337,slow=26,SNR=6.7			Lg	Lg	10 23 25.1	

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*IDC **20** 10:21:03.9±1.0, 23°.46N×121°.72E, h0^{km}, mb3.7/6, mb1 3.8/8, mb1mx3.4/43, mbtmp3.7/8, ML3.1/2, MS3.4/3, Ms1 3.4/3, ms1mx2.7/49, Error ellipse: s-maj=32.0km s-min=19.7km az=62.0*

*JMA **20** 10:21:07.8±0.1, 23°.53N×121°.52E, h38^{km}±2^{km}, M3.5*

*TAP **20** 10:21:08.3, 23°.55N×121°.54E, h30^{km}, ML4.2, C*

ISC 20 10:21:08.5±0.7**, 23°.54N**±0°.02×**121°.59E**±0°.02**, h32**^{km}±4^{km}**, n139,** σ**1**^{s}**11**/221**, mb3.7**/6**, 6C-33D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HGSD	**Ruisui** baz=241	**0.16**	**252**	⇑*i*P	**Pb**	**10 21 14.1**	**-0.4**
HGSD	baz=241			*i* S	**Sb**	**10 21 20.0**	**+1.3**
TEGC	**Jichi Village** baz=357	**0.17**	**345**	⇑*i*P	**Pn**	**10 21 14.3**	**-0.6**
TEGC	baz=357			S	**Sb**	**10 21 19.1**	**+0.3**
EGFH	**Guangfu** baz=308	**0.19**	**310**	⇓*i*P	**Pb**	**10 21 14.4**	**-0.5**
EGFH	baz=308			*i* S	**Sb**	**10 21 18.9**	**-0.4**
EHY	**Hungye** baz=267	**0.25**	**262**	⇓*i*P	**Pb**	**10 21 14.5**	**-1.0**
EHY	baz=267			*i* S	**Sb**	**10 21 18.6**	**-1.6**
ECBN	**Changbin** baz=197	**0.26**	**209**	⇑P	**Pb**	**10 21 15.6**	**-0.1**
ECBN	baz=197			S	**Sb**	**10 21 20.7**	**+0.3**
ESL	**Shilin** baz=332	**0.30**	**332**	⇓*i*P	**Pb**	**10 21 15.3**	**-0.9**
ESL	baz=332			S	**Sb**	**10 21 20.1**	**-1.4**
YULB	**Yu-li** baz=247	**0.31**	**241**	⇓*i*P	**Pb**	**10 21 15.4**	**-0.8**
YULB	baz=247			*i* S	**Sb**	**10 21 20.1**	**-1.4**
EYUL	**Yuli** baz=237	**0.32**	**232**	P	**Pb**	**10 21 15.9**	**-0.4**
EYUL	baz=237			S	**Sb**	**10 21 20.9**	**-0.7**
TEYL	**Yanliau Villag** baz=21	**0.32**	**2**	⇑*i*P	**Pn**	**10 21 16.8**	**-0.2**
TEYL	baz=21			S	**Sn**	**10 21 24.0**	**+1.3**
TWF1	**Yuli** baz=239	**0.33**	**235**	⇓*i*P	**Pb**	**10 21 15.8**	**-0.7**
TWF1	baz=239			*i* S	**Sb**	**10 21 20.9**	**-1.1**
HWA	**Hwalien** baz=20	**0.43**	**2**	P	**Pb**	**10 21 17.7**	**-0.4**
HWA	baz=20			S	**Sn**	**10 21 25.8**	**+0.4**
FULB	**Fuli** baz=228	**0.44**	**218**	⇓*i*P	**Pb**	**10 21 18.2**	**+0.1**
FULB	baz=228			S	**Sn**	**10 21 25.3**	**-0.2**
VWDT	**VWDT** baz=302	**0.46**	**297**	⇓*i*P	**Pb**	**10 21 17.8**	**-0.7**
CHKT	**Chengkung** baz=186	**0.49**	**205**	⇓*i*P	**Pb**	**10 21 18.6**	**-0.3**
CHKT	baz=186			*i* S	**Sb**	**10 21 26.2**	**+0.3**
TWD	**Chiawan** baz=354	**0.54**	**1**	⇓*i*P	**Pb**	**10 21 19.0**	**-0.6**
TWD	baz=354			*i* S	**Sn**	**10 21 27.7**	**-0.2**
OWD	**Renai** baz=320	**0.56**	**317**	⇓*i*P	**Pb**	**10 21 19.1**	**-1.0**
OWD	baz=320			S	**Sb**	**10 21 25.8**	**-2.2**
ETL	**Fush Village** baz=356	**0.61**	**3**	*e*P	**Pb**	**10 21 19.9**	**-1.0**
EDH	**Donghe** baz=216	**0.62**	**205**	P	**Pb**	**10 21 20.6**	**-0.5**
EDH	baz=216			S	**Sb**	**10 21 29.2**	**-0.5**
NACB	**Ninganchiao** baz=353	**0.63**	**1**	⇓*i*P	**Pb**	**10 21 20.0**	**-1.2**
NACB	baz=353			*i* S	**Sn**	**10 21 29.9**	**-0.3**
SSLB	**Suanglung** baz=293	**0.63**	**293**	⇓*i*P	**Pb**	**10 21 19.9**	**-1.3**
SSLB	baz=293			S	**Sb**	**10 21 29.4**	**-0.4**
ELDTW	**Lidau** baz=237	**0.63**	**236**	⇓*i*P	**Pb**	**10 21 19.8**	**-1.5**
ELDTW	baz=237			S	**Sb**	**10 21 27.7**	**-2.3**
CHGB	**Renai** baz=325	**0.64**	**324**	⇓*i*P	**Pb**	**10 21 20.6**	**-0.9**
CHGB	baz=325			*i* S	**Sb**	**10 21 28.9**	**-1.5**
ETLH	**Xiulin Townshi** baz=353	**0.67**	**352**	⇓*i*P	**Pb**	**10 21 20.5**	**-1.3**
ETLH	baz=353			S	**Sb**	**10 21 29.6**	**-1.3**
WHF	**Hehuan Shan** baz=337	**0.67**	**334**	⇓*i*P	**Pb**	**10 21 20.7**	**-1.4**
WHF	baz=337			*i* S	**Sb**	**10 21 30.0**	**-1.4**
SMLT	**Sun Moon Lake** baz=303	**0.72**	**298**	⇓*i*P	**Pb**	**10 21 21.6**	**-1.1**
SMLT	baz=303			*i* S	**Sn**	**10 21 32.2**	**-0.3**
ALS	**Alishan** baz=273	**0.72**	**268**	⇓*i*P	**Pb**	**10 21 22.2**	**-0.7**
ALS	baz=273			*i* S	**Sb**	**10 21 31.3**	**-1.3**
LONT	**Longtian** baz=195	**0.76**	**214**	P	**Pb**	**10 21 21.5**	**-1.9**
TYC	**Yuchr** baz=305	**0.76**	**298**	⇓*i*P	**Pb**	**10 21 22.2**	**-1.1**
TYC	baz=305			S	**Sb**	**10 21 32.8**	**-0.6**
FUSS	**Fushou** baz=337	**0.77**	**336**	⇓P	**Pb**	**10 21 22.7**	**-1.0**
FUSS	baz=337			S	**Sb**	**10 21 32.3**	**-1.6**
EHP	**Heping Village** baz=357	**0.78**	**10**	*e*P	**Pn**	**10 21 23.2**	**-0.1**
EHP	baz=357			*e*S	**Sn**	**10 21 35.4**	**+1.6**
TWT	**Tachien** baz=332	**0.80**	**332**	P	**Pb**	**10 21 23.5**	**-0.7**
TWT	baz=332			S	**Sb**	**10 21 32.9**	**-1.9**
WCS	**Beigang Elemen** baz=312	**0.80**	**310**	⇓*i*P	**Pb**	**10 21 23.1**	**-0.9**
WCS	baz=312			S	**Sb**	**10 21 33.3**	**-1.4**
TDCB	**Techi** baz=332	**0.81**	**331**	⇓*i*P	**Pb**	**10 21 23.5**	**-0.8**
TDCB	baz=332			*i* S	**Sb**	**10 21 32.8**	**-2.2**
STYH	**Taoyuan** baz=242	**0.83**	**244**	P	**Pb**	**10 21 23.8**	**-0.7**
STYH	baz=242			S	**Sb**	**10 21 33.7**	**-1.7**
WJS	**Zhushan** baz=290	**0.84**	**290**	P	**Pn**	**10 21 24.4**	**+0.3**
WJS	baz=290			S	**Sn**	**10 21 35.6**	**+0.3**
CHN5	**Tsauling** baz=274	**0.84**	**274**	⇓*i*P	**Pn**	**10 21 24.2**	**0.0**
CHN5	baz=274			*i* S	**Sn**	**10 21 35.6**	**+0.2**
TWGBT	**Beinan** baz=211	**0.86**	**213**	P	**Pb**	**10 21 22.7**	**-2.3**
TWGBT	baz=211			*e*S	**Sb**	**10 21 32.6**	**-3.6**
TWG	**Pinlang** baz=211	**0.86**	**214**	⇑P	**Pb**	**10 21 22.7**	**-2.3**
TWG	baz=211			*e*S	**Sb**	**10 21 32.8**	**-3.5**
LDUT	**Ludao** baz=172	**0.87**	**187**	*e*P	**Pb**	**10 21 23.1**	**-2.0**
LDUT	baz=172			*e*S	**Sb**	**10 21 34.1**	**-2.5**
TTN	**Taitung** baz=202	**0.88**	**207**	*e*P	**Pb**	**10 21 24.8**	**-0.6**
TTN	baz=202			*e*S	**Sb**	**10 21 36.9**	**0.0**
ENA	**Nanau** baz=357	**0.89**	**9**	*e*P	**Pb**	**10 21 24.3**	**-1.3**
WNT	**Mingjian** baz=292	**0.89**	**292**	⇓*i*P	**Pn**	**10 21 25.3**	**+0.4**
WNT	baz=292			*i* S	**Sn**	**10 21 37.5**	**+0.7**
NNSB	**Datong** baz=359	**0.90**	**348**	P	**Pb**	**10 21 24.3**	**-1.5**
NNSB	baz=359			S	**Sb**	**10 21 34.9**	**-2.6**
TPUB	**Ta-pu** baz=254	**0.91**	**255**	⇓P	**Pb**	**10 21 25.3**	**-0.6**
TPUB	baz=254			S	**Sb**	**10 21 37.2**	**-0.6**
EWUT	**Wuta** baz=359	**0.92**	**11**	*e*P	**Pn**	**10 21 25.3**	**+0.1**
NNS	**Nan Shan** baz=358	**0.92**	**348**	P	**Pb**	**10 21 24.6**	**-1.5**
NNS	baz=358			S	**Sb**	**10 21 35.4**	**-2.5**
WHP	**Taichung City** baz=325	**0.94**	**321**	P	**Pb**	**10 21 25.4**	**-1.0**
WHP	baz=325			*e*S	**Sb**	**10 21 37.1**	**-1.4**
WTP	**Ta-pu** baz=252	**0.94**	**252**	⇓*i*P	**Pb**	**10 21 25.8**	**-0.6**
WTP	baz=252			*i* S	**Sb**	**10 21 38.1**	**-0.5**
WDLH	**Douliu** baz=279	**0.97**	**279**	*e*P	**Pb**	**10 21 26.3**	**-0.6**
WDLH	baz=279			S	**Sn**	**10 21 39.1**	**+0.4**
CHN2	**Minshiung** baz=270	**1.02**	**270**	*e*P	**Pb**	**10 21 27.9**	**+0.2**
CHN2	baz=270			S	**Sn**	**10 21 41.4**	**+1.5**
TCU	**Taichung** baz=306	**1.03**	**306**	*e*P	**Pb**	**10 21 27.4**	**-0.4**
TCU	baz=306			*e*S	**Sn**	**10 21 41.5**	**+1.3**
SGST	**Jiashian** baz=243	**1.03**	**244**	⇑P	**Pn**	**10 21 26.4**	**-0.4**
SGST	baz=243			S	**Sn**	**10 21 41.3**	**+1.2**
CHN1	**Nanshi** baz=250	**1.04**	**250**	⇓*i*P	**Pb**	**10 21 27.5**	**-0.5**
CHN1	baz=250			S	**Sn**	**10 21 41.9**	**+1.6**
TWK	**Hsinying** baz=255	**1.05**	**255**	P	**Pb**	**10 21 27.7**	**-0.5**
TWK	baz=255			S	**Sn**	**10 21 41.8**	**+1.2**
SNST	**Tainan City** baz=253	**1.05**	**252**	*e*P	**Pn**	**10 21 27.2**	**+0.2**
SNST	baz=253			*e*S	**Sn**	**10 21 41.9**	**+1.2**
CHY	**Chiayi** baz=268	**1.07**	**268**	*e*P	**Pb**	**10 21 28.4**	**-0.1**
CHY	baz=268			S	**Sn**	**10 21 41.6**	**+0.5**
WCHH	**Zhanghua** baz=299	**1.08**	**300**	*e*P	**Pb**	**10 21 28.1**	**-0.6**
WCHH	baz=299			*e*S	**Sn**	**10 21 42.4**	**+1.0**
TWC	**Suao** baz=358	**1.09**	**13**	*e*P	**Pb**	**10 21 27.9**	**-0.9**
TWC	baz=358			*e*S	**Sn**	**10 21 43.2**	**+1.6**
NDS	**Dongshan** baz=354	**1.09**	**6**	*e*P	**Pb**	**10 21 28.2**	**-0.7**
ENTT	**Nioudou** baz=359	**1.09**	**359**	⇓P	**Pn**	**10 21 27.2**	**-0.5**
TWQ1	**Liyutan** baz=325	**1.09**	**317**	⇓*i*P	**Pb**	**10 21 28.8**	**-0.2**
TWQ1	baz=325			*i* S	**Sn**	**10 21 43.6**	**+1.8**
ECL	**Taimali** baz=194	**1.11**	**212**	*e*P	**Pn**	**10 21 26.3**	**-1.5**
WTK	**Tuku** baz=278	**1.11**	**278**	*e*P	**Pb**	**10 21 28.8**	**-0.4**
WTK	baz=278			S	**Sn**	**10 21 43.1**	**+1.1**
YHNB	**Yeheng** baz=349	**1.14**	**350**	⇓P	**Pn**	**10 21 28.3**	**0.0**
YHNB	baz=349			*e*S	**Sn**	**10 21 42.3**	**-0.6**
NSK	**Sanguang** baz=348	**1.15**	**349**	⇓*i*P	**Pn**	**10 21 28.5**	**0.0**
NSK	baz=348			S	**Sn**	**10 21 42.0**	**-1.1**
NSY	**Sanyi** baz=318	**1.15**	**319**	⇓*i*P	**Pb**	**10 21 30.0**	**0.0**
NSY	baz=318			S	**Sb**	**10 21 45.8**	**+1.2**
WRL	**Guolierlin Hig** baz=288	**1.17**	**288**	*e*P	**Pn**	**10 21 28.8**	**+0.2**
WRL	baz=288			*e*S	**Sn**	**10 21 43.7**	**+0.3**
TWE	**Neicheng** baz=3.0	**1.18**	**3**	*e*P	**Pn**	**10 21 28.9**	**+0.1**
WDJ	**Dajia District** baz=312	**1.18**	**313**	*e*P	**Pb**	**10 21 30.4**	**0.0**
WDJ	baz=312			*e*S	**Sb**	**10 21 46.2**	**+0.8**
SSD	**Sandimen** baz=226	**1.19**	**228**	P	**Pn**	**10 21 28.5**	**-0.4**
SSD	baz=226			*e*S	**Sn**	**10 21 44.4**	**+0.5**
TSMG	**Majia** baz=226	**1.20**	**226**	*e*P	**Pb**	**10 21 31.3**	**+0.5**
TSMG	baz=226			S	**Sb**	**10 21 45.9**	**-0.1**
NSTT	**Nanjuang** baz=344	**1.21**	**334**	⇓P	**Pb**	**10 21 30.3**	**-0.5**
NSTT	baz=344			S	**Sn**	**10 21 44.8**	**+0.2**
ICHU	**Yijhu** baz=262	**1.22**	**262**	*e*P	**Pn**	**10 21 30.0**	**+0.7**
ICHU	baz=262			*e*S	**Sb**	**10 21 45.5**	**-0.8**
LIOB	**Emei** baz=345	**1.22**	**335**	P	**Pb**	**10 21 30.6**	**-0.4**
LIOB	baz=345			S	**Sn**	**10 21 44.7**	**-0.1**
CHN3	**Shinhua** baz=261	**1.22**	**248**	*e*P	**Pb**	**10 21 31.7**	**+0.7**
CHN3	baz=261			*e*S	**Sb**	**10 21 48.9**	**+2.6**
NMLH	**Miaoli** baz=322	**1.23**	**324**	*e*P	**Pb**	**10 21 30.5**	**-0.7**
NMLH	baz=322			*e*S	**Sb**	**10 21 46.5**	**-0.3**
NWLT	**Wulai** baz=6.0	**1.23**	**356**	*e*P	**Pn**	**10 21 29.7**	**+0.1**
WTCT	**Ta-ch'eng** baz=285	**1.24**	**285**	*e*P	**Pb**	**10 21 30.3**	**-1.0**
WTCT	baz=285			S	**Sb**	**10 21 46.8**	**-0.2**
WSF	**Szhu** baz=275	**1.26**	**275**	*e*P	**Pb**	**10 21 30.6**	**-1.0**
WSF	baz=275			S	**Sb**	**10 21 46.5**	**-1.0**
MASBT	**Mashibuluo** baz=226	**1.28**	**224**	*e*P	**Pn**	**10 21 29.8**	**-0.4**
MASBT	baz=226			*e*S	**Sb**	**10 21 47.8**	**-0.3**
CHN8	**Yiju** baz=262	**1.28**	**261**	*e*P	**Pn**	**10 21 30.9**	**+0.7**
CHN8	baz=262			S	**Sb**	**10 21 47.6**	**-0.5**
TWM1	**Shoushan** baz=251	**1.29**	**237**	*e*P	**Pb**	**10 21 33.2**	**+0.9**
TWM1	baz=251			*e*S	**Sb**	**10 21 52.2**	**+3.7**
NTC	**Toucheng** baz=357	**1.32**	**10**	*e*P	**Pb**	**10 21 31.6**	**-1.2**
SCLT	**Jiali** baz=255	**1.33**	**254**	*e*S	**Sb**	**10 21 49.5**	**-0.2**
EGS		**1.33**	**14**	*e*P	**Pb**	**10 21 32.6**	**-0.3**
EAST	**Anshuo** baz=195	**1.34**	**211**	P	**Pn**	**10 21 29.7**	**-1.4**
TAW	**Tawu** baz=191	**1.34**	**209**	*e*P	**Pn**	**10 21 29.8**	**-1.2**
SBCB	**Hsinchu** baz=334	**1.36**	**336**	*e*P	**Pb**	**10 21 33.0**	**-0.5**
SBCB	baz=334			*e*S	**Sb**	**10 21 51.0**	**+0.5**
HSN	**Hsinchu** baz=323	**1.38**	**336**	*e*P	**Pb**	**10 21 34.0**	**+0.3**
HSN	baz=323			*e*S	**Sb**	**10 21 51.5**	**+0.6**
SSPT	**Xinbi** baz=218	**1.41**	**222**	*e*P	**Pb**	**10 21 33.4**	**-0.9**
NHDH	**Xindian Distri** baz=5.0	**1.42**	**358**	*e*P	**Pn**	**10 21 32.5**	**+0.4**
TWA	**Mucha** baz=7.0	**1.43**	**360**	*e*P	**Pn**	**10 21 32.8**	**+0.4**
TIPB	**Shuangxi** baz=357	**1.44**	**9**	*e*P	**Pb**	**10 21 33.6**	**-1.2**
NCUH	**Zhongli** baz=343	**1.47**	**346**	*e*P	**Pn**	**10 21 33.5**	**+0.7**
NCUH	baz=343			*e*S	**Sb**	**10 21 54.0**	**+0.5**
SCZT	**Fangliau** baz=224	**1.47**	**218**	P	**Pb**	**10 21 34.5**	**-0.7**
SCZT	baz=224			S	**Sb**	**10 21 53.8**	**+0.2**
LAY	**Lan-yu** baz=167	**1.50**	**181**	P	**Pn**	**10 21 32.0**	**-1.2**
SLIU	**Shizi** baz=193	**1.51**	**209**	*e*P	**Pn**	**10 21 34.6**	**+1.3**
NWF	**Wu-fen Shan** baz=4.0	**1.53**	**7**	*e*P	**Pn**	**10 21 34.5**	**+0.7**
JYNG	**Yonagunijimaku**	**1.54**	**54**	P	**Pn**	**10 21 34.8**	**+1.1**
JYNG				S	**Sn**	**10 21 53.8**	**+1.2**
TWS1	**Kuangyinshan** baz=3.0	**1.56**	**354**	*e*P	**Pn**	**10 21 35.0**	**+0.9**
TWS1	baz=3.0			*e*S	**Sb**	**10 21 55.9**	**-0.3**
YOJ	**Yonaguni jima** baz=60	**1.59**	**55**	*e*P	**Pn**	**10 21 35.4**	**+0.9**
YOJ	baz=60			*e*S	**Sn**	**10 21 55.0**	**+1.1**
YOJ	**Yonaguni jima**	**1.59**	**55**	P	**Pn**	**10 21 35.5**	**+1.0**
YOJ				*e*S	**Sn**	**10 21 55.2**	**+1.3**
YM01	**YM01** baz=357	**1.60**	**359**	*e*P	**Pn**	**10 21 35.5**	**+0.9**
ANP	**Anpu** baz=356	**1.64**	**358**	*e*P	**Pb**	**10 21 36.7**	**-1.4**
TWK1	**Hengchun** baz=187	**1.75**	**205**	*e*P	**Pn**	**10 21 37.4**	**+0.7**
TWKBT	**Hengchun** baz=187	**1.75**	**204**	*e*P	**Pn**	**10 21 37.3**	**+0.7**
TSEB	**Hengchuen, Pin** baz=186	**1.75**	**201**	*e*P	**Pn**	**10 21 37.6**	**+0.9**
PHUB	**P'eng-hu** baz=270	**1.85**	**270**	*e*P	**Pn**	**10 21 38.2**	**+0.2**
PHUB	baz=270			*e*S	**Sn**	**10 21 59.8**	**-0.6**
PNG	**Penghu** baz=271	**1.87**	**271**	*e*P	**Pn**	**10 21 38.5**	**+0.3**
PNG	baz=271			*e*S	**Sn**	**10 22 00.1**	**-0.6**
HATJ	**Hateruma jima**	**2.09**	**75**	P	**Pn**	**10 21 42.0**	**+0.6**
HATJ				S	**Sn**	**10 22 07.1**	**+0.7**
IRIF	**Iriomote-Funau**	**2.11**	**68**	P	**Pn**	**10 21 42.7**	**+1.1**
IRIF				S	**Sn**	**10 22 08.4**	**+1.6**
JKRS	**Kuro-shima**	**2.32**	**72**	P	**Pn**	**10 21 45.7**	**+1.2**
JKRS				S	**Sn**	**10 22 13.4**	**+1.4**
JIJ	**Ishigaki jima**	**2.48**	**70**	P	**Pn**	**10 21 47.4**	**+0.8**
JIJ				*e*S	**Sn**	**10 22 15.9**	**+0.1**
JISG	**Ishigakijimahi**	**2.70**	**67**	P	**Pn**	**10 21 49.9**	**+0.2**
JISG				*e*S	**Sn**	**10 22 21.1**	**-0.2**
PTMZ	**Houxiangcun** baz=303	**2.70**	**304**	*e*P	**Pn**	**10 21 50.3**	**+0.6**
MATB	**Ma-tsu** baz=328	**3.00**	**330**	*e*P	**Pn**	**10 21 53.4**	**-0.4**
KNM	**Kinmen** baz=287	**3.01**	**287**	*e*P	**Pn**	**10 21 55.5**	**+1.5**
JTJ	**Tarama**	**3.05**	**68**	P	**Pn**	**10 21 55.5**	**+1.0**
JTJ				*e*S	**Sn**	**10 22 30.7**	**+0.8**
LYJJ	**Jianjiangzhen** baz=330	**3.42**	**331**	*e*P	**Pn**	**10 21 59.1**	**-0.5**
JIRB	**Irabujima**	**3.52**	**68**	P	**Pn**	**10 22 01.7**	**+0.8**
JIRB				S	**Sn**	**10 22 41.2**	**-0.2**
AXDP	**Jialang** baz=293	**3.57**	**293**	*e*P	**Pn**	**10 22 03.5**	**+1.8**
JMJ2	**Miyako jima3**	**3.62**	**70**	P	**Pn**	**10 22 03.4**	**+1.0**
JMJ2				*e*S	**Sn**	**10 22 44.6**	**+0.6**
JOGS	**Gusukube**	**3.69**	**70**	*e*S	**Sn**	**10 22 48.3**	**+2.5**
JOW	**Kunigami** 1.5nm,0.3s,baz=230,slow=19,SNR=2.3	**6.88**	**60**	Pn	**Pn**	**10 22 46.2**	**-1.1**
KSRS	**Korea Array** 0.0nm,0.3s,baz=201,slow=9.9,SNR=3.0	**14.89**	**20**	Pn	**Pn**	**10 24 37.2**	**+0.5**
JHJ	**Hachijo jima 2** comp=Z,1µm,20.4s,baz=34,slow=34	**18.62**	**55**	LR	LR	10 31 44.2	
CMAR	**Chiang Mai Arr** 0.7nm,0.4s,baz=67,slow=8.0,SNR=1.3	**21.73**	**261**	P	**P**	**10 25 59.3**	**+2.0**
CMAR	comp=Z,23nm,20.8s,baz=55,slow=38			LR	LR	10 34 54.8	
MKAR	**Makanchi Array** 1.4nm,0.6s,baz=107,slow=10,SNR=13	**39.05**	**316**	P	**P**	**10 28 33.6**	**+1.1**
ZALV	**Zalesovo Beam** 1.0nm,0.6s,baz=111,slow=8.1,SNR=3.0	**40.98**	**327**	P	**P**	**10 28 48.1**	**-0.1**
H11N1	**WAKE ISLAND Hy** baz=283,slow=74,SNR=16	**42.16**	**86**	T	T	11 14 00.6	
H11N2	**WAKE ISLAND Hy** baz=283,slow=74,SNR=17	**42.16**	**86**	T	T	11 14 00.5	
H11N3	**WAKE ISLAND Hy** baz=283,slow=74,SNR=16	**42.17**	**86**	T	T	11 14 01.6	
H11S3	**WAKE ISLAND Hy** baz=284,slow=74,SNR=46	**42.27**	**88**	T	T	11 14 10.3	
H11S1	**WAKE ISLAND Hy** baz=284,slow=74,SNR=19	**42.28**	**88**	T	T	11 14 10.7	
H11S2	**WAKE ISLAND Hy** baz=284,slow=74,SNR=19	**42.29**	**88**	T	T	11 14 11.6	
AAK	**Ala-Archa**	**43.19**	**308**	LR	LR	10 49 14.4	

	comp=Z,24nm,19.6s,baz=33,slow=39						
WRA	Warramunga Arr	44.98	163	P	P	10 29 19.4	-1.5
	0.5nm,0.5s,baz=346,slow=8.8,SNR=14						
ASAR	Alice Springs	48.43	165	P	P	10 29 47.6	-0.4
	0.2nm,0.3s,baz=351,slow=6.7,SNR=4.6						
STKA	Stephens Creek	58.34	160	P	P	10 30 60.0	-0.6
	1.9nm,1.0s,baz=343,slow=7.6,SNR=3.3						

BEO ***20*** *10:37:01.5±6.6, 37°.06N×20°.41E, h144^{km}±6^{km}, ML3.9/9*

IDC ***20*** *10:37:12.3±1.6, 38°.59N×20°.40E, h0^{km}, mb3.7/4, mb1 3.8/5, mb1mx3.4/50, mbtmp3.7/5, ML3.5/1, MS3.1/3, Ms1 3.0/3, ms1mx2.6/40, Error ellipse: s-maj=35.4km s-min=27.3km az=109.0*

THE ***20*** *10:37:14.8, 38°.47N×20°.43E, h10^{km}, ML3.7/12, Error ellipse: s-maj=0.9km s-min=0.4km az=103.0*

ATH ***20*** *10:37:15.0, 38°.46N×20°.48E, h15^{km}, ML3.6/14, Error ellipse: s-maj=1.4km s-min=0.6km az=279.0*

ISC 20 10:37:13.8±0.8, **38°.48N**±0°.02×**20°.38E**±0°.03, **h14**^{km}±5^{km}, **n109**, σ**1^{s}06**/140, **mb3.7**/4, **MS2.9**/3, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FSK	Fiskardo	0.15	99	P	Pg	10 37 17.5	0.0
FSK				S	Sg	10 37 19.5	-0.6
	120µm,0.2s						
FSK	Fiskardo	0.15	99	P	Pg	10 37 17.5	0.0
FSK				S	Sg	10 37 19.4	-0.7
FSK				AML	AML	10 37 19.6	
FSK				AML	AML	10 37 19.7	
KEF4	Livadi, Kephal	0.23	171	P	Pg	10 37 19.2	+0.4
KEF4				S	Sb	10 37 23.3	-0.3
KEF4	Livadi, Kephal	0.23	171	P	Pg	10 37 19.2	+0.4
KEF4				S	Sb	10 37 23.3	-0.3
DMLN	Damoulianata-K	0.24	181	P	Pg	10 37 19.7	+0.6
DMLN				S	Sb	10 37 23.9	-0.3
	21µm,0.6s						
DMLN	Damoulianata-K	0.24	181	P	Pg	10 37 19.7	+0.6
DMLN				S	Sb	10 37 24.2	+0.1
DRAG	Dragano-Lefkad	0.25	37	P	Pg	10 37 19.6	+0.3
DRAG				S	Sg	10 37 23.5	+0.5
	154µm,0.2s						
DRAG	Dragano-Lefkad	0.25	37	P	Pg	10 37 19.7	+0.3
DRAG				S	Sb	10 37 24.4	-0.1
EVGI	Lefkada island	0.26	57	P	Pg	10 37 19.6	+0.2
EVGI				S	Sg	10 37 23.1	0.0
	17µm,0.5s						
EVGI	Lefkada island	0.26	57	P	Pg	10 37 19.7	+0.3
EVGI				S	Sg	10 37 23.5	+0.4
KEF3	Kipouria, Keph	0.28	185	P	Pg	10 37 19.9	+0.2
KEF3				S	Sg	10 37 24.4	+0.8
KEF3	Kipouria, Keph	0.28	185	P	Pg	10 37 20.0	+0.2
KEF3				S	Sg	10 37 24.2	+0.6
LXRA	Lixouri, Kepha	0.28	171	P	Pg	10 37 20.2	+0.5
LXRA				S	Sb	10 37 24.9	-0.4
ARGA	Argostoli. Kep	0.31	165	P	Pb	10 37 21.5	+0.3
NYDR	Nydri-Lefkada	0.34	47	P	Pg	10 37 21.0	+0.2
NYDR				S	Sg	10 37 26.1	+0.5
	44µm,0.6s						
NYDR	Nydri-Lefkada	0.34	47	P	Pg	10 37 21.1	+0.3
NYDR				S	Sg	10 37 26.0	+0.5
VLS	Valsamata	0.35	151	P	Pg	10 37 20.8	-0.1
VLS				S	Sg	10 37 25.1	-0.6
	18µm,0.4s						
VLS	Valsamata	0.35	151	P	Pg	10 37 20.8	-0.1
VLS				S	Sg	10 37 25.5	-0.2
VLS				AML	AML	10 37 26.2	
	comp=E,40715µm,0.3s						
VLS				AML	AML	10 37 26.4	
	comp=N,38524µm,0.3s						
LKD2	Lefkada island	0.38	35	P	Pg	10 37 21.8	+0.3
LKD2				S	Sg	10 37 27.3	+0.6
	comp=N,13µm,0.3s						
LKD2	Lefkada island	0.38	35	P	Pg	10 37 21.9	+0.5
LKD2				S	Sb	10 37 27.7	-0.4
LKD2				AML	AML	10 37 28.5	
	comp=N,20295µm,0.2s						
LKD2				AML	AML	10 37 33.4	
	comp=E,30972µm,0.5s						
PSDA	Pessada-Kefalo	0.40	156	P	Pg	10 37 21.9	0.0
PSDA				S	Sg	10 37 27.6	+0.3
PSDA	Pessada-Kefalo	0.40	156	P	Pg	10 37 21.8	0.0
PSDA				S	Sg	10 37 27.4	+0.1
TSLK	Tsoukalades, L	0.41	32	P	Pg	10 37 22.5	+0.5
TSLK				S	Sb	10 37 28.6	-0.3
	comp=E,19µm,0.5s						
TSLK	Tsoukalades, L	0.41	32	P	Pg	10 37 22.7	+0.7
TSLK				S	Sb	10 37 28.9	0.0
TSLK				AML	AML	10 37 30.4	
	comp=N,35820µm,0.4s						
TSLK				AML	AML	10 37 30.9	
	comp=E,43958µm,0.5s						
VTN	Vitineika	0.85	131	P	Pg	10 37 30.6	+0.3
VTN	Vitineika	0.85	131	P	Pb	10 37 30.2	-0.2
LTHK	Lithakia	0.85	155	P	Pb	10 37 29.5	-0.8
LTHK				AML	AML	10 37 48.2	
	comp=N,9075µm,0.5s						
LTHK				AML	AML	10 37 51.2	
	comp=E,8828µm,0.5s						
PVO	Paravola	0.91	81	P	Pb	10 37 31.0	-0.4
PVO				S	Sn	10 37 43.8	-1.3
	comp=E,5µm,0.4s						
PVO	Paravola	0.91	81	P	Pb	10 37 31.0	-0.4
PVO				AML	AML	10 37 51.0	
	comp=N,9402µm,0.4s						
PVO				AML	AML	10 37 51.7	
	comp=E,11396µm,0.4s						
RLS	Riolos of Patr	0.96	116	P	Pb	10 37 31.5	-0.7
RLS				S	Sn	10 37 45.6	-0.6
	comp=E,4µm,0.5s						
RLS	Riolos of Patr	0.96	116	P	Pb	10 37 31.4	-0.8
RLS				AML	AML	10 37 52.1	
	comp=E,3592µm,0.5s						
RLS				AML	AML	10 37 56.8	
	comp=N,3862µm,0.5s						
IGT	Igoumenitsa	1.05	358	P	Pn	10 37 34.5	+0.3
IGT				S	Sn	10 37 49.9	+1.2
	comp=N,1µm,0.3s						
IGT	Igoumenitsa	1.05	358	P	Pn	10 37 34.5	+0.3
DRO	Drossia	1.18	116	P	Pn	10 37 35.1	-0.8
DRO				S	Sg	10 37 53.4	+1.6
	comp=N,4µm,0.5s						
DRO	Drossia	1.18	116	P	Pn	10 37 35.2	-0.7
DRO				AML	AML	10 37 59.8	
	comp=N,7827µm,0.5s						
DRO				AML	AML	10 38 01.7	
	comp=E,7445µm,0.4s						
EFP	Efpalio	1.20	92	P	Pn	10 37 35.5	-0.7
EFP	Efpalio	1.20	92	P	Pn	10 37 35.2	-1.0
EFP				AML	AML	10 37 58.7	
	comp=N,6492µm,0.4s						
EFP				AML	AML	10 37 59.0	
	comp=E,17248µm,0.6s						
EVR	Evrytania	1.20	68	P	Pn	10 37 36.0	-0.3
EVR	Evrytania	1.20	68	P	Pn	10 37 36.0	-0.3
EVR				AML	AML	10 38 03.6	
	comp=E,3109µm,0.7s						
EVR				AML	AML	10 38 04.5	
	comp=N,2447µm,0.5s						
ANX	Ano Chora	1.22	84	P	Pn	10 37 35.8	-0.7
ANX	Ano Chora	1.22	84	P	Pn	10 37 35.8	-0.7
ANX				AML	AML	10 38 00.5	
	comp=N,6961µm,0.4s						
ANX				AML	AML	10 38 02.8	
	comp=E,5575µm,0.4s						
JAN	Janina	1.23	17	P	Pg	10 37 37.7	+0.2
JAN	Janina	1.23	17	P	Pg	10 37 38.0	+0.5
JAN				AML	AML	10 38 04.9	
	comp=E,3175µm,0.5s						
JAN				AML	AML	10 38 07.2	
	comp=N,2120µm,0.4s						
LAKA	Lakka	1.28	100	P	Pn	10 37 36.8	-0.6
LAKA	Lakka	1.28	100	P	Pn	10 37 36.7	-0.7
LAKA				AML	AML	10 38 01.0	
	comp=E,16246µm,0.7s						
LAKA				AML	AML	10 38 03.8	
	comp=N,8351µm,0.7s						
KASA	Kassiopi	1.31	345	P	Pg	10 37 39.9	+0.9
KEK	Kerkira	1.31	340	P	Pb	10 37 39.3	+1.1
KEK	Kerkira	1.31	340	P	Pg	10 37 39.6	+0.6
KEK				AML	AML	10 38 03.5	
	comp=N,3090µm,0.4s						
KEK				AML	AML	10 38 09.9	
	comp=E,2587µm,0.6s						
TRIZ	Trizonia	1.34	94	P	Pn	10 37 37.7	-0.4
TRIZ	Trizonia	1.34	94	P	Pn	10 37 37.9	-0.2
ALIK	Aliki, Aigiali	1.38	99	P	Pn	10 37 38.7	0.0
KLV	Kalavryta, Ach	1.46	107	P	Pn	10 37 39.7	-0.2
KLV	Kalavryta, Ach	1.46	107	P	Pn	10 37 39.7	-0.2
MAKR	Makrakomi, Fth	1.47	68	P	Pb	10 37 41.1	+0.1
MAKR	Makrakomi, Fth	1.47	68	P	Pb	10 37 40.7	-0.3
AGG	Agios Georgios	1.62	70	P	Pb	10 37 43.3	-0.2
AGG	Agios Georgios	1.62	70	P	Pb	10 37 43.2	-0.3
GUR	Goura	1.64	109	P	Pn	10 37 42.8	+0.4
KPRO	Kipourio	1.66	27	P	Pn	10 37 42.8	+0.2
THL	Klokotos Trika	1.67	49	P	Pb	10 37 44.6	+0.2
LSK	Leskovik	1.68	6	P	Pn	10 37 43.7	+0.9
ITM	Ithomi	1.79	136	P	Pb	10 37 45.3	-1.1
OHR	Ohrid	2.65	7	*e*Pn	Pb	10 37 59.2	-1.9
OHR				*e*Sn	Sn	10 38 30.1	+2.0
OHR	Ohrid	2.65	7	*i* Pn	Pb	10 37 59.5	-1.6
TIR	Tirane	2.89	352	*e*Pn	Pn	10 38 02.4	+2.9
VAY	Valandovo	3.30	30	*i* Pn	Pn	10 38 06.5	+1.4
STIP	Stip	3.50	23	*i* Pn	Pb	10 38 12.8	-2.7
DRME	Dracevica, Mon	3.81	347	*e*Pn	Pn	10 38 13.3	+1.2
PDG	Podgorica	4.04	348	*e*Pn	Pn	10 38 16.9	+1.7
PDG				*e*Sn	Sn	10 39 02.4	+0.1
PDG	Podgorica	4.04	348	*e*Pn	Pn	10 38 16.0	+0.8
HCY	Herceg Novi	4.21	341	*e*Pn	Pn	10 38 17.5	-0.2
BARS	Barje	4.47	14	*e*Pn	Pn	10 38 22.9	+1.8
TREB	Trebinje	4.50	341	*e*Pn	Pn	10 38 22.7	+1.1
TREB	Trebinje	4.50	341	*e*Pn	Pn	10 38 21.8	+0.2
DBRK	Dubrovnik	4.51	339	*e*Pn	Pn	10 38 21.7	-0.1
BRY	Bratogost	4.63	343	*e*Pn	Pn	10 38 23.6	+0.1
SJES	Sjenica	4.79	356	*e*Pn	Pn	10 38 27.9	+2.3
STON	Ston	4.83	336	*e*Pn	Pn	10 38 27.1	+1.0
STON	Ston	4.83	336	*e*Pn	Pn	10 38 26.8	+0.7
STON	Ston	4.83	336	*e*Pn	Pn	10 38 26.6	+0.5
STON				Sn	Sn	10 39 19.4	-2.5
LSTV	Lastovo	5.04	329	*e*Pn	Pn	10 38 29.4	+0.5
BOVS	Bovan	5.25	11	*e*Pn	Pn	10 38 32.4	+0.6
GRUS	Gruza	5.41	3	*e*Pn	Pn	10 38 35.3	+1.2
BBLS	Lazići	5.43	353	*e*Pn	Pn	10 38 36.9	+2.5
MAKA	Makarska	5.43	333	*e*Pn	Pn	10 38 34.9	+0.5
HVAR	Hvar	5.56	329	*e*Pn	Pn	10 38 36.3	+0.2
HVAR				Sn	Sn	10 39 37.2	-2.6
RICI	Ricice	5.58	335	*e*Pn	Pn	10 38 37.2	+0.8
RICI				Sn	Sn	10 39 38.5	-1.8
DIVS	Divibare	5.62	357	*e*Pn	Pn	10 38 37.8	+0.8
DIVS	Divibare	5.62	357	*e*Pn	Pn	10 38 36.1	-0.9
HAPS	Han Pijesak,BI	5.70	350	*e*Pn	Pn	10 38 36.9	-1.3
TRUS	Trudelj	5.74	0	*e*Pn	Pn	10 38 40.5	+1.9
KIJV	Kijevo	6.28	333	*e*Pn	Pn	10 38 47.3	+1.3
ZIRJ	Zirje	6.28	327	*e*Pn	Pn	10 38 46.9	+0.9
MGRS	Mrkonjic Grad	6.42	338	*e*Pn	Pn	10 38 51.6	+3.5
DUGI	Dugi Otok	6.81	326	*e*Pn	Pn	10 38 54.7	+1.4
MRAK	Mrakovica	7.02	339	*e*Pn	Pn	10 38 56.6	+0.3
NVLJ	Novalja	7.35	328	*e*Pn	Pn	10 39 01.5	+0.9
CRES	Cresnjev	8.20	335	*e*Pn	Pn	10 39 12.2	-0.1
CEY	Cerknica	8.49	331	*e*Pn	Pn	10 39 17.0	+0.6
SOKA	Soboth	9.09	336	*i* Sn	Sn	10 41 02.2	-4.5
	comp=E,3.9nm,0.6s						
SOKA	Soboth	9.09	336	*i* Pn	Pn	10 39 25.1	+0.5
	comp=E,1.8nm,0.2s						
OBKA	Obir	9.10	334	*i* Pn	Pn	10 39 26.3	+1.5
	comp=E,2.0nm,0.3s						
OBKA				*i* Sn	Sn	10 41 04.6	-2.5
	comp=E,4.8nm,0.3s						
GERES	GERESS Array B	11.43	337	Pn	Pn	10 39 56.5	-0.2
	comp=E,0.1nm,0.3s,baz=160,slow=14,SNR=2.0						
FINES	FINESS Array B	23.26	7	P	P	10 42 20.2	-0.4
	comp=E,3.5nm,0.7s,baz=180,slow=10,SNR=7.0						
FINES				LR	LR	10 52 54.7	
	comp=E,33nm,18.9s,baz=26,slow=41						
TORD	Torodi Ar. Bea	30.20	218	P	P	10 43 25.3	+1.4
	comp=E,0.3nm,0.8s,baz=23,slow=7.1,SNR=1.5						
KMBO	Kilima Mbogo	42.37	154	LR	LR	11 04 16.1	
	comp=E,16nm,18.6s,baz=89,slow=38						
MKAR	Makanchi Array	45.24	59	P	P	10 45 30.4	-0.2
	comp=E,0.2nm,0.4s,baz=283,slow=7.0,SNR=2.2						
ZALV	Zalesovo Beam	45.57	48	P	P	10 45 33.0	-0.1
	comp=E,1.4nm,0.5s,baz=284,slow=8.5,SNR=5.4						
BOSA	Boshof	66.90	175	LR	LR	11 23 15.2	
	comp=E,21nm,19.3s,baz=178,slow=41						

BEO 20 10:37:40.4±1.3, **42°.85N**×**23°.51E**, **h0**^{km}, **ML1.6**/3, **Mining explosion., Bulgaria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VTS	Vitosha	0.30	221	*e*Pg	Pg	10 37 45.9	-0.3
VTS				*e*Sg	Sg	10 37 50.8	+0.7
BOSS	Bosilegrad	0.83	246	*e*Pg	Pg	10 37 56.4	0.0
BOSS				*e*Sg	Sg	10 38 07.4	+0.3
ZAGS	Zajecar	1.34	317	*e*Pg	Pg	10 38 04.7	-1.4
ZAGS				*e*Sg	Sg	10 38 22.6	-0.9

KRSC ***20*** *10:49:05.8±0.9, 55°.72N×163°.05E, h36^{km}±17^{km}, ML4.5*

MOS ***20*** *10:49:07.4±1.0, 55°.83N×162°.98E, h46^{km}, mb4.5/14, Error ellipse: s-maj=7.5km s-min=4.6km az=73.9*

IDC ***20*** *10:49:08.6±0.8, 55°.84N×162°.61E, h32^{km}±5^{km}, mb3.8/16, mb1 4.0/19, mb1mx3.8/47, mbtmp4.0/19, ML3.5/3, MS3.5/20, Ms1 3.5/20, ms1mx3.2/62, Error ellipse: s-maj=16.9km s-min=13.0km az=154.0*

NEIC ***20*** *10:49:12.7±0.7, 55°.9N±0°.1×162°.4E±0°.2, h69^{km}±7^{km}, mb4.4/12, Error ellipse: s-maj=21.1km s-min=14.7km az=140.0*

ISC 20 10:49:07.3±0.6, **55°.77N**±0°.03×**162°.96E**±0°.03, **h27**^{km}±4^{km}, **n160**, σ**1^{s}62**/168, **mb4.2**/30, **MS3.5**/16, **10C**, **Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.44	350	PN	Pb	10 49 16.1	-0.6
KBTR	Krutoberegovo	0.44	350	*e*P	Pb	10 49 16.1	-0.6
KBG	Krutoberegovo	0.51	344	PN	Pb	10 49 17.0	-0.7
KBG				S	Sn	10 49 25.9	-0.7
KBG	Krutoberegovo	0.51	344	*e*P	Pb	10 49 17.0	-0.7
KBG				*e*S	Sn	10 49 25.9	-0.7
SMKR	Semkarok	1.17	315	PN	Pb	10 49 27.9	-0.9
SMKR	Semkarok	1.17	315	*e*P	Pb	10 49 27.9	-0.9
ZLN	Zelenaya	1.24	282	PN	Pb	10 49 29.1	-1.0
ZLN	Zelenaya	1.24	282	*e*P	Pb	10 49 29.1	-1.0
BDR	Baidarnaya	1.26	310	PN	Pb	10 49 29.5	-1.0
BDR				S	Sb	10 49 46.9	+0.5
BDR	Baidarnaya	1.26	310	*e*P	Pb	10 49 29.5	-1.0
BDR				*e*S	Sb	10 49 46.9	+0.5
CIRR	Tsirk	1.29	286	PN	Pb	10 49 29.8	-1.2
CIRR	Tsirk	1.29	286	*e*P	Pb	10 49 29.8	-1.2
LGNR	Loginova	1.32	285	PN	Pb	10 49 30.3	-1.2
LGNR	Loginova	1.32	285	*e*P	Pb	10 49 30.3	-1.2
SRKR	Sorokina	1.34	312	PN	Pb	10 49 30.7	-1.0
SRKR	Sorokina	1.34	312	*e*P	Pb	10 49 30.7	-1.0
BZWR	Bezymyannyi-We	1.40	279	PN	Pb	10 49 31.6	-1.3
BZWR	Bezymyannyi-We	1.40	279	*e*P	Pb	10 49 31.6	-1.3
KLY	Klyuchi	1.41	294	PN	Pn	10 49 29.8	-1.3
KLY				S	Sb	10 49 47.5	-2.8
KLY	Klyuchi	1.41	294	*e*P	Pn	10 49 29.8	-1.3
KLY				*e*S	Sb	10 49 47.5	-2.8
MKZ	Mys Kozlova	1.41	211	PN	Pn	10 49 30.6	-0.6
MKZ				S	Sn	10 49 48.7	-0.2
MKZ	Mys Kozlova	1.41	211	*e*P	Pn	10 49 30.6	-0.6
MKZ				*e*S	Sn	10 49 48.7	-0.2
KRSR	Krestovskiy	1.42	289	PN	Pn	10 49 31.2	-0.3
KRSR				S	Sb	10 49 49.3	-1.5
KRSR	Krestovskiy	1.42	289	*e*P	Pn	10 49 31.2	-0.3
KRSR				*e*S	Sb	10 49 49.3	-1.5
KIRR	Kirishev	1.49	278	PN	Pb	10 49 32.9	-1.5
KIRR	Kirishev	1.49	278	*e*P	Pb	10 49 32.9	-1.5
KMNR	Kamenistaya	1.54	271	PN	Pn	10 49 33.7	+0.6
KMNR	Kamenistaya	1.54	271	*e*P	Pn	10 49 33.7	+0.6
KPT	Kopyto	1.56	278	PN	Pb	10 49 34.0	-1.5
KPT	Kopyto	1.56	278	*e*P	Pb	10 49 34.0	-1.5
TUMR	Tumrok	1.67	254	PN	Pn	10 49 36.1	+1.1
TUMR	Tumrok	1.67	254	*e*P	Pn	10 49 36.1	+1.1
BKI	Bering	1.81	107	PN	Pn	10 49 36.0	-0.6
BKI				S	Sn	10 49 58.3	-0.3
BKI	Bering	1.81	107	*e*P	Pn	10 49 36.0	-0.6
BKI				*e*S	Sn	10 49 58.3	-0.3
ESO	Esso	2.41	275	PN	Pb	10 49 50.8	+0.9
ESO	Esso	2.41	275	*e*P	Pb	10 49 50.8	+0.9
KII	Karymskiy	2.67	231	PN	Pn	10 49 50.5	+1.8
KII	Karymskiy	2.67	231	*e*P	Pn	10 49 50.5	+1.8
SPN	Mys Shipunski	3.18	214	PN	Pn	10 49 55.6	0.0
SPN				S	Sn	10 50 31.8	-0.8
SPN	Mys Shipunski	3.18	214	*e*P	Pn	10 49 55.6	0.0
SPN				*e*S	Sn	10 50 31.8	-0.8
NLC	Nalytchevo	3.35	220	PN	Pn	10 49 59.0	+1.1
NLC				S	Sn	10 50 37.5	+0.7
NLC	Nalytchevo	3.35	220	*e*P	Pn	10 49 59.0	+1.1
NLC				*e*S	Sn	10 50 37.5	+0.7
SDLR	Sedlovina	3.45	225	PN	Pn	10 50 01.1	+1.7
SDLR	Sedlovina	3.45	225	*e*P	Pn	10 50 01.1	+1.7
KRER	Koryakskii	3.48	227	PN	Pn	10 50 01.8	+1.9
KRER	Koryakskii	3.48	227	*e*P	Pn	10 50 01.8	+1.9
OSSR	Ossora	3.49	1	PN	Pn	10 50 00.4	+0.7
OSSR	Ossora	3.49	1	*e*P	Pn	10 50 00.4	+0.7
SMAR	Somma	3.49	226	PN	Pn	10 50 01.8	+1.7
SMAR	Somma	3.49	226	*e*P	Pn	10 50 01.8	+1.7
AVH	Avacha	3.52	226	PN	Pn	10 50 02.3	+2.0
AVH	Avacha	3.52	226	*e*P	Pn	10 50 02.3	+2.0
UGLR	Uglovaya	3.52	225	PN	Pn	10 50 02.2	+1.8
UGLR	Uglovaya	3.52	225	*e*P	Pn	10 50 02.2	+1.8
KOK	Koryaka	3.54	227	PN	Pn	10 50 02.4	+1.8
KOK	Koryaka	3.54	227	*e*P	Pn	10 50 02.4	+1.8
GNL	Ganaly	3.58	236	*e*P	Pn	10 50 03.0	+1.9
DALK	Dalny	3.69	224	PN	Pn	10 50 03.8	+1.3
DALK	Dalny	3.69	224	*e*P	Pn	10 50 03.8	+1.3
PALN	Palana	3.70	335	PN	Pn	10 50 05.8	+3.2
PALN	Palana	3.70	335	*e*P	Pn	10 50 05.8	+3.2
PET	Petropavlovsk	3.73	224	*e*PN	Pn	10 50 05.2	+2.1
PET				*e*S	Sn	10 50 47.3	+1.2
PET				pmax	pmax		
	comp=Z,101nm,0.6s						
PET				smax	smax		
	comp=E,262nm,0.7s						
PET				smax	smax		
	comp=N,311nm,0.6s						
PET	Petropavlovsk	3.73	224	*e*P	Pn	10 50 05.0	+1.9
PET				*e*S	Sn	10 50 48.1	+2.0
PET	Petropavlovsk	3.73	224		Pn	10 50 04.8	+1.7
PEA0B	Petropavlovsk-	4.07	231	*ce*PN	Pn	10 50 08.7	+0.9
PEA0B	Petropavlovsk-	4.07	231		Pn	10 50 10.2	+2.4
PETK	Petropavlovsk-	4.07	231	Pn	Pn	10 50 09.0	+1.2
	comp=N,4.5nm,0.3s,baz=68,slow=15,SNR=132						
PETK				Sn	Sn	10 50 56.1	+1.6
	comp=N,3.4nm,0.3s,baz=249,slow=24,SNR=2.1						
PETK				LR	LR	10 51 53.4	
	comp=N,281nm,18.9s,baz=53,slow=42						
PETK	Petropavlovsk-	4.07	231	PN	Pn	10 50 09.0	+1.2
PETK	Petropavlovsk-	4.07	231		Pn	10 50 10.2	+2.4
RUS	Russkaya	4.25	220	PN	Pn	10 50 11.9	+1.7
RUS	Russkaya	4.25	220	*e*P	Pn	10 50 11.9	+1.7
GRL	Gorelyy	4.32	224	PN	Pn	10 50 14.6	+3.3
GRL	Gorelyy	4.32	224	*e*P	Pn	10 50 14.6	+3.3
MTVR	Mutnovka	4.33	222	PN	Pn	10 50 14.2	+2.7
MTVR	Mutnovka	4.33	222	*e*P	Pn	10 50 14.2	+2.7
APC	Apacha	4.43	232	PN	Pn	10 50 15.3	+2.5
APC	Apacha	4.43	232	*e*P	Pn	10 50 15.3	+2.5
ASAK	Asacha	4.52	223	PN	Pn	10 50 16.5	+2.5
ASAK	Asacha	4.52	223	*e*P	Pn	10 50 16.5	+2.5
KDTR	Khodutka, Kamc	4.91	218	PN	Pn	10 50 20.4	+1.1
KDTR	Khodutka, Kamc	4.91	218	*e*P	Pn	10 50 20.4	+1.1
PAU	Pauzhetka	5.66	223	PN	Pn	10 50 32.0	+2.5
PAU	Pauzhetka	5.66	223	*e*P	Pn	10 50 32.0	+2.5
SKR	Severo-Kuril's	6.55	222	*i* PN	Pn	10 50 42.5	+0.7
MA2	Magadan	7.56	305	LR	LR	10 54 13.7	
	comp=N,265nm,18.3s,baz=126,slow=42						
SEY	Seymchan	8.97	327	LR	LR	10 55 00.8	
	comp=N,268nm,19.8s,baz=158,slow=40						
ASAJ	Asahikawa	17.47	237	Pn	Pn	10 53 09.7	+0.8
	comp=N,0.7nm,0.3s,baz=72,slow=6.3,SNR=7.8						
ASAJ				LR	LR	11 00 08.1	
	comp=N,105nm,18.7s,baz=66,slow=38						
YAK	Yakutsk	18.14	304	LR	LR	11 00 04.3	
	comp=N,74nm,18.6s,baz=93,slow=37						
YAK	Yakutsk	18.14	304	*i* P	Pn	10 53 16.5	-0.4
ERM	Erimo	18.85	231	*i* P	P	10 53 23.0	-2.1
ERM	Erimo	18.85	231	P	P	10 53 23.8	-1.3
KLR	Kul'dur	19.97	264	P	P	10 53 37.8	+0.5
	comp=N,0.1nm,0.3s,baz=62,slow=10,SNR=4.6						
KLR				LR	LR	11 02 32.2	
	comp=N,89nm,18.4s,baz=63,slow=41						
KLR	Kul'dur	19.97	264	*i* P	P	10 53 37.9	+0.5
KLR				pmax	pmax		
	comp=Z,11nm,1.8s						
TIXI	Tiksi	21.44	331	P	P	10 53 53.2	+0.3
	comp=Z,12nm,0.6s,baz=115,slow=12,SNR=13						
TIXI				LR	LR	11 03 32.6	
	comp=Z,116nm,19.0s,baz=264,slow=41						
TIXI	Tiksi	21.44	331	*ce*P	P	10 53 52.9	-0.1
TIXI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TIXI	Tiksi	21.44	331	P	P	10 53 53.3	+0.3
TIXI				IAmb	IAmb	10 53 56.5	
	comp=Z,14nm,0.8s						
USRK	Ussuriysk Ar.	22.83	253	LR	LR	11 04 10.2	
	comp=Z,108nm,18.6s,baz=31,slow=40						
MAJO	Matsushiro	25.53	231	*i* P	P	10 54 32.0	-1.5
MAJO				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MJAR	Matsushiro Arr	25.53	231	P	P	10 54 33.1	-0.5
	comp=Z,2.8nm,0.9s,baz=20,slow=8.1,SNR=7.0						
KSRS	Korea Array	29.80	247	LR	LR	11 06 24.4	
	comp=Z,38nm,20.3s,baz=90,slow=35						
INK	Inuvik	30.73	41	P	P	10 55 20.5	+0.9
	comp=Z,0.7nm,0.5s,baz=294,slow=3.7,SNR=5.0						
INK	Inuvik	30.73	41	P	P	10 55 20.3	+0.7
INK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
INK	Inuvik	30.73	41	P	P	10 55 20.3	+0.7
NRIK	Noril'sk	34.73	323	LR	LR	11 11 15.6	
	comp=Z,65nm,18.4s,baz=118,slow=38						
SONM	Songino Array	34.97	281	P	P	10 55 55.3	-1.8
	comp=Z,0.4nm,0.4s,baz=297,slow=3.3,SNR=4.4						
SONM				LR	LR	11 11 26.6	
	comp=Z,44nm,19.8s,baz=324,slow=38						
H11N2	WAKE ISLAND Hy	36.11	174	T	T	11 34 43.5	
	baz=356,slow=76,SNR=526						
H11N3	WAKE ISLAND Hy	36.12	174	T	T	11 34 39.9	
	baz=356,slow=76,SNR=252						
H11N1	WAKE ISLAND Hy	36.12	174	T	T	11 34 40.2	
	baz=356,slow=76,SNR=390						
ZALV	Zalesovo Beam	42.77	302	LR	LR	11 16 21.6	
	comp=Z,35nm,19.0s,baz=336,slow=38						
DGZ	Jazzator, Alta	44.02	295	*i* P	P	10 57 11.5	-0.9
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KURK	Kurchatov	47.76	301	*ce*P	P	10 57 39.3	-2.3
KURK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KURK	Kurchatov	47.76	301	P	P	10 57 39.0	-2.6
KURK				IAmb	IAmb	10 57 41.3	
	comp=Z,4.6nm,0.9s						
MK31	Makanchi Array	48.52	295	*i* P	P	10 57 49.4	+1.8
MKAR	Makanchi Array	48.52	295	P	P	10 57 45.3	-2.3
	comp=Z,1.0nm,0.7s,baz=54,slow=6.0,SNR=6.4						
MKAR	Makanchi Array	48.52	295	*ce*P	P	10 57 46.2	-1.4
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRVK	Borovoye	50.07	308	*i* P	P	10 57 57.3	-2.0
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ARCES	ARCESS Array B	51.25	342	P	P	10 58 07.2	-0.8
	comp=Z,2.9nm,0.9s,baz=1.9,slow=8.1,SNR=1.9						
ARU	Arti	52.56	317	LR	LR	11 22 47.9	
	comp=Z,50nm,19.3s,baz=38,slow=39						
ARU	Arti	52.56	317	*c i*P	P	10 58 18.8	+0.9
ARU				S	S	11 05 46.4	+3.6
ARU				SS	SS	11 09 23.7	+3.4
ARU				pmax	pmax		
	comp=Z,8.0nm,1.4s						
NVAR	Mina Array Bea	53.32	74	P	P	10 58 26.3	+2.2
	comp=Z,0.8nm,0.7s,baz=291,slow=7.2,SNR=8.8						
KIRV	Kirov	54.23	324	LR	LR	11 24 47.8	
	comp=Z,45nm,20.1s,baz=26,slow=40						
KIRV	Kirov	54.23	324	*ce*P	P	10 58 29.2	-0.9
PDAR	Pinedale Array	54.80	64	P	P	10 58 36.3	+1.5
	comp=Z,0.8nm,0.7s,baz=319,slow=2.9,SNR=7.9						
PDAR	Pinedale Array	54.80	64	P	P	10 58 35.9	+1.1
AAK	Ala-Archa	55.39	296	*ce*P	P	10 58 37.2	-1.8
AAK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
PRN	Pahroc Range	55.82	72	P	P	10 58 44.1	+1.9
PRN				IAmb	IAmb	10 58 45.1	

	comp=Z,2.6nm,0.7s						
SRU	**San Rafael Swe**	**56.97**	**68**	P	**P**	**10 58 52.4**	**+2.0**
SRU				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SRU	**San Rafael Swe**	**56.97**	**68**	P	**P**	**10 58 52.4**	**+2.0**
SRU				IAmb	IAmb	10 58 53.2	
	comp=Z,3.2nm,0.7s						
KKAR	**Karatay Array**	**57.04**	**299**	P	**P**	**10 58 48.7**	**-1.9**
KKAR	**Karatay Array**	**57.04**	**299**	P	**P**	**10 58 48.7**	**-1.9**
ABKAR	**Akbulak array**	**57.32**	**311**	P	**P**	**10 58 50.7**	**-1.8**
ABKAR				IAmb	IAmb	10 58 51.5	
	comp=Z,6.9nm,1.4s						
FINES	**FINESS Array B**	**58.31**	**337**	P	**P**	**10 58 58.7**	**-0.5**
	comp=Z,2.7nm,0.8s,baz=41,slow=7.8,SNR=6.8						
FINES				pP	**pP**	**10 59 08.2**	**+1.1**
	comp=Z,1.5nm,0.5s,baz=46,slow=8.2,SNR=2.3						
FINES	**FINESS Array B**	**58.31**	**337**	*ce*P	**P**	**10 58 59.7**	**+0.5**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
FINES	**FINESS Array B**	**58.31**	**337**	P	**P**	**10 58 57.9**	**-1.3**
NB2	**NORSAR Subarra**	**61.41**	**345**	P	**P**	**10 59 20.0**	**-0.6**
	comp=Z,0.6nm,0.5s,baz=18,slow=6.9						
NOA	**NORSAR Array B**	**61.41**	**345**	P	**P**	**10 59 20.2**	**-0.4**
	comp=Z,1.3nm,0.6s,baz=19,slow=6.9,SNR=4.7						
ANMO	**Albuquerque**	**62.24**	**68**	P	**P**	**10 59 28.1**	**+1.4**
	comp=Z,0.8nm,0.7s,baz=327,slow=9.9,SNR=4.0						
ANMO				LR	LR	11 24 34.2	
	comp=Z,26nm,20.1s,baz=41,slow=34						
MNK	**Minsk**	**64.10**	**333**	*i* P	P	10 59 28.0	-11
MNK				*i* S	S	11 08 03.6	-10
MNK				*i*		11 09 21.3	
MNK				*i* SS	**SS**	**11 12 25.6**	**+4.4**
MNK				*i* SSS	SSS	11 15 15.5	
MNK				pmax	pmax		
	comp=E,2.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,12nm,0.9s						
MNK				pmax	pmax		
	comp=N,19nm,1.0s						
MNK				MLR	MLR		
	comp=Z,46nm,17.0s						
MNK				MLR	MLR		
	comp=N,157nm,20.0s						
MNK				MLR	MLR		
	comp=E,11nm,19.0s						
MNK	**Minsk**	**64.10**	**333**	*i* P	P	10 59 28.0	-10
	comp=E,2.0nm,0.8s						
MNK				*i* P	P	10 59 28.0	-10
	comp=N,19nm,1.0s						
MNK				*i* P	P	10 59 28.0	-10
	comp=Z,12nm,0.8s,baz=206						
MNK				*i* PcP	sP	10 59 59.9	+11
MNK				*i* PP	PP	11 01 49.0	-10
MNK				*i* PPP	PPP	11 03 15.2	
MNK				*i* S	S	11 08 03.6	-9.5
MNK				*i* SS	**SS**	**11 12 25.6**	**+4.4**
MNK				*i* SSS	SSS	11 15 15.6	
MNK				*i* LQ	LQ	11 23 18.4	
MNK				*i* LR	LR	11 27 13.6	
MNK				*i* LRM	MLR	11 29 46.2	
	comp=Z,46nm,17.4s						
MNK				*i* LRM	MLR	11 29 52.3	
	comp=N,157nm,19.6s						
MNK				*i* LRM	MLR	11 30 00.7	
	comp=E,11nm,18.8s						
HNR	**Honiara**	**65.01**	**183**	LR	LR	11 27 49.5	
	comp=E,285nm,18.2s,baz=64,slow=36						
AKASG	**Malin Array Be**	**67.15**	**330**	P	**P**	**10 59 57.4**	**-0.9**
	comp=E,1.7nm,0.4s,baz=29,slow=6.6,SNR=7.6						
AKASG				LR	LR	11 32 41.1	
	comp=E,43nm,19.1s,baz=0.0,slow=39						
TX31	**Lajitas Ar. Si**	**68.09**	**70**	P	**P**	**11 00 06.3**	**+1.6**
TX32	**Lajitas Array**	**68.09**	**70**	P	**P**	**11 00 06.5**	**+1.8**
TXAR	**Lajitas Array**	**68.09**	**70**	P	**P**	**11 00 06.8**	**+2.2**
	comp=E,1.6nm,0.6s,baz=300,slow=4.4,SNR=21						
TXAR				pP	**sP**	**11 00 16.1**	**+0.6**
	comp=E,1.1nm,0.8s,baz=295,slow=4.3,SNR=6.5						
KBZ	**Khabaz**	**68.71**	**318**	*ce*P	**P**	**11 00 07.2**	**-0.9**
KBZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GERES	**GERESS Array B**	**72.63**	**339**	LR	LR	11 36 23.9	
	comp=Z,22nm,18.1s,baz=295,slow=39						
TKL	**Tuckaleechee C**	**72.72**	**52**	LR	LR	11 33 23.4	
	comp=Z,39nm,18.8s,baz=342,slow=36						
BRTR	**Keskin Array B**	**75.58**	**322**	P	**P**	**11 00 49.0**	**-0.5**
	comp=Z,1.1nm,0.7s,baz=79,slow=2.9,SNR=6.8						
BRTR	**Keskin Array B**	**75.58**	**322**	P	**P**	**11 00 48.4**	**-1.1**
WB0	**Warramunga Arr**	**79.05**	**207**	P	**P**	**11 01 08.2**	**-0.6**
WB0				IAmb	IAmb	11 01 29.0	
	comp=Z,3.4nm,1.1s						
WRA	**Warramunga Arr**	**79.23**	**207**	P	**P**	**11 01 09.9**	**+0.1**
	comp=Z,0.8nm,1.0s,baz=13,slow=5.9,SNR=5.2						
WRA	**Warramunga Arr**	**79.23**	**207**	*ce*P	**P**	**11 01 10.6**	**+0.8**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WRA	**Warramunga Arr**	**79.23**	**207**	P	**P**	**11 01 09.7**	**-0.1**
ASAR	**Alice Springs**	**82.90**	**207**	P	**P**	**11 01 29.1**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=13,slow=5.6,SNR=7.4						
ASAR				pP	**pP**	**11 01 39.5**	**+2.5**
	comp=Z,0.5nm,0.8s,baz=14,slow=5.4,SNR=3.0						
ASAR	**Alice Springs**	**82.90**	**207**	P	**P**	**11 01 29.4**	**+0.1**
RAR	**Rarotonga**	**82.95**	**145**	LR	LR	11 29 19.5	
	comp=Z,127nm,20.8s,baz=34,slow=29						
RAYN	**Ar Rayn**	**84.94**	**305**	P	**P**	**11 01 38.5**	**-1.5**
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
RAYN	**Ar Rayn**	**84.94**	**305**	P	**P**	**11 01 38.5**	**-1.5**
QSPA	**South Pole Qui**	**145.52**	**180**	PKPbc	**PKPdf**	**11 08 40.8**	**-0.6**
	comp=Z,1.5nm,0.7s,baz=301,slow=1.3,SNR=12						
QSPA	**South Pole Qui**	**145.52**	**180**		**PKPdf**	**11 08 40.6**	**-0.8**

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*IDC **20** 11:22:03.8±0.4, 36°.69N×98°.68W, h0^{km}, mb3.4/1, mb1 3.8/5, mb1mx3.5/38, mbtmp3.4/5, ML4.0/3, Error ellipse: s-maj=4.1km s-min=3.6km az=42.0*

*ANF **20** 11:22:05.0±0.3, 36°.67N×98°.44W, h5^{km}, ML4.3/17, Error ellipse: s-maj=3.4km s-min=2.4km az=57.0*

*TUL **20** 11:22:05.1±1.5, 36°.65N±0°.02×98°.47W±0°.03, h7^{km}±6^{km}, ML3.5, mb_Lg3.5/93(NEIC), Error ellipse: s-maj=3.9km s-min=2.7km az=103.0*

*NEIC **20** 11:22:05.4±1.4, 36°.637N±0°.003×98°.44W±0°.03, h5^{km}±2^{km}, Error ellipse: s-maj=4.7km s-min=3.0km az=273.0*

ISC 20 11:22:05.7±0.9**, 36°.66N**±0°.02×**98°.42W**±0°.02**, h9**^{km}±7^{km}**,**
n161, **σ1^{s}.38**/189**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK032	**Salt Plains WL**	**0.22**	**50**		**Pg**	**11 22 10.5**	**+0.3**
OK032				Sg	**Sg**	**11 22 14.5**	**+1.2**
CROK	**Carrier**	**0.39**	**114**	Pg	**Pg**	**11 22 13.4**	**+0.1**
CROK				Sg	**Sg**	**11 22 19.5**	**+1.1**
KAN14	**Manchester OK**	**0.47**	**51**		**Pg**	**11 22 14.3**	**-0.5**
KAN14				Sg	**Sg**	**11 22 22.0**	**+1.0**
GC02	**Grant County #**	**0.49**	**67**	Pg	**Pg**	**11 22 15.6**	**+0.4**
GC02				Sg	**Sb**	**11 22 23.0**	**-0.7**
KAN10	**Anthony SW Sta**	**0.53**	**30**		**Pg**	**11 22 16.1**	**+0.1**
KAN10				Sg	**Sb**	**11 22 24.0**	**-0.9**
U32A	**Winter Ranch,**	**0.55**	**239**		**Pg**	**11 22 15.4**	**-1.0**
U32A				Sg	**Sg**	**11 22 22.3**	**-1.2**
U32A	**Winter Ranch,**	**0.55**	**239**	P	**Pg**	**11 22 15.0**	**-1.3**
	baz=58,SNR=92						
U32A				S	**Sg**	**11 22 22.1**	**-1.4**
	baz=58						
KAN05	**Bluff City Nor**	**0.62**	**45**		**Pg**	**11 22 18.0**	**+0.2**
KAN05				Sg	**Sg**	**11 22 26.6**	**+0.6**
KAN16	**Harper SW Stat**	**0.63**	**27**	Pg	**Pg**	**11 22 17.9**	**0.0**
KAN16				Sg	**Sg**	**11 22 26.3**	**+0.2**
KAN17	**Caldwell West**	**0.65**	**54**	Pg	**Pg**	**11 22 18.4**	**+0.1**
KAN17				Sg	**Sb**	**11 22 27.9**	**-0.5**
KAN08	**Anthony NE Sta**	**0.67**	**33**		**Pg**	**11 22 18.6**	**0.0**
KAN08				Sg	**Sg**	**11 22 27.8**	**+0.4**
KAN12	**Harper NE Stat**	**0.72**	**28**		**Pg**	**11 22 19.4**	**-0.1**
KAN12				Sg	**Sb**	**11 22 29.7**	**-0.6**
KAN01	**Argonia South**	**0.72**	**47**	Pg	**Pg**	**11 22 19.6**	**0.0**
KAN01				Sg	**Sg**	**11 22 29.3**	**+0.3**
KAN06	**Argonia West S**	**0.74**	**38**		**Pg**	**11 22 19.8**	**-0.1**
KAN06				Sg	**Sg**	**11 22 29.6**	**0.0**
KAN09	**Caldwell North**	**0.80**	**54**		**Pg**	**11 22 20.9**	**-0.1**
KAN09				Sg	**Sg**	**11 22 31.7**	**+0.2**
KAN13	**South Haven SW**	**0.83**	**65**		**Pg**	**11 22 21.6**	**-0.1**
KAN13				Sg	**Sg**	**11 22 32.6**	**0.0**
BLOK	**Blackwell**	**0.97**	**84**		**Pg**	**11 22 24.2**	**-0.2**
BLOK				Sg	**Sg**	**11 22 37.5**	**+0.4**
OK029	**Liberty Lake**	**1.17**	**138**	Pg	**Pg**	**11 22 27.1**	**-1.0**
OK029				Sg	**Sg**	**11 22 42.4**	**-0.8**
BCOK	**Bluff Creek, N**	**1.20**	**147**		**Pg**	**11 22 27.4**	**-1.3**
BCOK				Sg	**Sg**	**11 22 43.6**	**-0.7**
OK009	**Oakdale Elemen**	**1.35**	**143**		**Pn**	**11 22 30.6**	**-0.1**
OK001	**Jones High Sch**	**1.43**	**140**	Pn	**Pn**	**11 22 31.9**	**+0.1**
OK031	**S. Brethren Rd**	**1.46**	**119**		**Pn**	**11 22 32.5**	**+0.3**
QUOK	**Quay**	**1.47**	**109**		**Pn**	**11 22 32.6**	**+0.3**
OKCFA	**Oklahoma City**	**1.47**	**147**		**Pn**	**11 22 32.0**	**-0.4**
OKCFA	**Oklahoma City**	**1.47**	**147**	P	**Pn**	**11 22 32.0**	**-0.4**
	baz=327,SNR=7.2						
OKCFA				S	**Sb**	**11 22 52.3**	**+0.3**
	baz=327						
OKCSW	**OKLAHOMA CITY**	**1.49**	**147**		**Pn**	**11 22 32.5**	**-0.1**
OK030	**Cody Creek RV**	**1.51**	**119**		**Pn**	**11 22 33.3**	**+0.4**
T35A	**Sooner Cattle**	**1.55**	**80**		**Pn**	**11 22 33.3**	**-0.2**
T35B	**Sooner Cattle**	**1.55**	**80**	P	**Pb**	**11 22 34.2**	**-0.4**
	baz=261,SNR=237						
T35B				S	**Sg**	**11 22 55.5**	**-0.1**
	baz=261						
FNO	**Franklin**	**1.63**	**149**		**Pn**	**11 22 34.1**	**-0.4**
R32A	**Long Quarter,**	**1.77**	**353**		**Pn**	**11 22 36.7**	**+0.2**
R32A	**Long Quarter,**	**1.77**	**353**	P	**Pb**	**11 22 37.5**	**-0.9**
	baz=173,SNR=206						
R32A				S	**Sb**	**11 23 00.8**	**+0.1**
	baz=173						
OK011	**Prague**	**1.83**	**129**	Pn	**Pn**	**11 22 37.1**	**-0.2**
WMOK	**Wichita Mounta**	**1.94**	**189**	P	**Pn**	**11 22 38.5**	**-0.4**
	baz=7.8,SNR=59						
WMOK				S	**Sn**	**11 23 04.0**	**+0.6**
	baz=7.8						
WMOK	**Wichita Mounta**	**1.94**	**189**		**Pn**	**11 22 38.5**	**-0.4**
WMOK	**Wichita Mounta**	**1.94**	**189**	P	**Pn**	**11 22 38.7**	**-0.2**
	baz=7.8,SNR=319						
WMOK				S	**Sn**	**11 23 04.3**	**+0.8**
	baz=7.8						
X34A	**Smith Ranch, M**	**2.11**	**167**	Pn	**Pn**	**11 22 41.8**	**+0.6**
TUL1	**Leonard**	**2.25**	**109**	P	**Pn**	**11 22 43.4**	**+0.3**
	baz=290						
TUL1				Sb	**Sb**	**11 23 15.3**	**+0.8**
	baz=290						
TUL1	**Leonard**	**2.25**	**109**		**Pn**	**11 22 43.5**	**+0.3**
TUL1				IAmb_Lg		11 23 17.2	
	comp=Z,235nm,0.9s						
TUL1	**Leonard**	**2.25**	**109**	P	**Pn**	**11 22 44.6**	**+1.5**
	baz=290,SNR=94						
CBKS	**Cedar Bluff**	**2.39**	**334**	P	**Pn**	**11 22 45.2**	**+0.2**
	baz=155,SNR=17						
CBKS				Sb	**Sb**	**11 23 18.5**	**+0.1**
	baz=155						
CBKS	**Cedar Bluff**	**2.39**	**334**		**Pb**	**11 22 46.6**	**-2.2**
CBKS	**Cedar Bluff**	**2.39**	**334**	S	**Sn**	**11 23 15.7**	**+1.3**
	baz=155						
KSU1	**Kansas State U**	**2.82**	**30**	P	**Pn**	**11 22 51.7**	**+0.7**
	baz=211,SNR=9.8						
KSU1	**Kansas State U**	**2.82**	**30**		**Pn**	**11 22 51.7**	**+0.7**
KSU1	**Kansas State U**	**2.82**	**30**	P	**Pn**	**11 22 52.0**	**+1.1**
	baz=211,SNR=8.6						
LOOK	**Love County**	**2.85**	**159**	Pn	**Pn**	**11 22 51.5**	**+0.1**
LOOK				IAmb_Lg		11 23 41.9	
	comp=Z,96nm,0.7s						
AMTX	**Amarillo**	**3.19**	**237**	P	**Pn**	**11 22 55.7**	**-0.4**
	baz=55						
AMTX				Sb	**Sb**	**11 23 42.9**	**+1.2**
	baz=55						
AMTX	**Amarillo**	**3.19**	**237**	Pn	**Pn**	**11 22 56.6**	**+0.5**
X37A	**Clayton**	**3.23**	**129**	Pn	**Pn**	**11 22 57.0**	**+0.4**
X37A				IAmb_Lg		11 23 56.9	
	comp=Z,136nm,0.9s						
X37A	**Clayton**	**3.23**	**129**	P	**Pn**	**11 22 57.3**	**+0.7**
	baz=310,SNR=7.1						
U38A	**Gravette**	**3.26**	**93**	Pn	**Pn**	**11 22 57.8**	**+0.8**
U38A				IAmb_Lg		11 23 50.8	
	comp=Z,105nm,0.7s						
U38A	**Gravette**	**3.26**	**93**	P	**Pn**	**11 22 58.2**	**+1.2**
	baz=275,SNR=21						
Z35A	**Perchaven, San**	**3.46**	**164**		**Pn**	**11 22 59.2**	**-0.6**
HHAR	**Hobbs**	**3.63**	**95**		**Pn**	**11 23 03.4**	**+1.3**
HHAR				IAmb_Lg		11 24 03.3	
	comp=Z,74nm,0.9s						
W39A	**Magazine**	**4.04**	**110**	P	**Pn**	**11 23 08.0**	**+0.3**
	baz=292,SNR=6.5						
W39A				Sb	**Sb**	**11 24 10.2**	**+4.3**
	baz=292						
W39A	**Magazine**	**4.04**	**110**		**Pn**	**11 23 09.5**	**+1.9**
W39A				IAmb_Lg		11 24 20.1	
	comp=Z,109nm,0.8s						
KSCO	**Kaye Shedlock'**	**4.07**	**306**	P	**Pn**	**11 23 08.1**	**-0.1**
	baz=124						
KSCO				Sb	**Sb**	**11 24 10.8**	**+3.8**
	baz=124						
KSCO	**Kaye Shedlock'**	**4.07**	**306**		**Pn**	**11 23 06.5**	**-1.7**
KSCO				IAmb_Lg		11 24 14.3	
	comp=Z,112nm,0.7s						
ABTX	**Abilene, Hawle**	**4.16**	**194**	P	**Pn**	**11 23 08.9**	**-0.4**
	baz=13						
ABTX				Sb	**Sb**	**11 24 11.4**	**+2.1**
	baz=13						
ABTX	**Abilene, Hawle**	**4.16**	**194**	Pn	**Pn**	**11 23 08.6**	**-0.7**
S39A	**Bolivar**	**4.20**	**74**	Pn	**Pn**	**11 23 11.4**	**+1.5**
S39A				IAmb_Lg		11 24 24.9	
	comp=Z,70nm,0.7s						
S39A	**Bolivar**	**4.20**	**74**	P	**Pn**	**11 23 10.5**	**+0.6**
	baz=257,SNR=16						
Z38A	**Mt. Pleasant**	**4.42**	**139**		**Pn**	**11 23 12.1**	**-0.7**
Z38A				IAmb_Lg		11 24 28.7	
	comp=Z,98nm,0.9s						
MSTX	**Muleshoe**	**4.46**	**234**	P	**Pn**	**11 23 14.0**	**+0.4**
	baz=52						
MSTX				Sb	**Sb**	**11 24 21.5**	**+3.4**
	baz=52						
MSTX	**Muleshoe**	**4.46**	**234**		**Pn**	**11 23 15.5**	**+2.0**
MIAR	**Mount Ida**	**4.48**	**117**	P	**Pn**	**11 23 14.4**	**+0.7**
	baz=299						
MIAR				S	**Sn**	**11 24 05.8**	**-0.1**
	baz=299						
MIAR	**Mount Ida**	**4.48**	**117**	Pn	**Pn**	**11 23 15.7**	**+2.0**
MIAR				IAmb_Lg		11 24 36.4	
	comp=Z,98nm,1.1s						
MIAR	**Mount Ida**	**4.48**	**117**	P	**Pn**	**11 23 14.7**	**+1.0**
	baz=299,SNR=44						
U40A	**Yellville**	**4.50**	**92**	P	**Pn**	**11 23 14.7**	**+0.8**
	baz=275						
U40A	**Yellville**	**4.50**	**92**	Pn	**Pn**	**11 23 14.8**	**+0.8**
U40A				IAmb_Lg		11 24 27.1	
	comp=Z,94nm,1.0s						
N35A	**Tabor**	**4.72**	**27**	Pn	**Pn**	**11 23 16.9**	**-0.2**
N35A	**Tabor**	**4.72**	**27**	P	**Pn**	**11 23 17.3**	**+0.2**
	baz=208						
WHTX	**Lake Whitney,**	**4.73**	**170**	P	**Pn**	**11 23 16.6**	**-0.6**
	baz=350,SNR=12						
WHTX				Sb	**Sb**	**11 24 30.0**	**+4.2**
	baz=350						
WHTX	**Lake Whitney,**	**4.73**	**170**	Pn	**Pn**	**11 23 16.1**	**-1.1**
WHTX	**Lake Whitney,**	**4.73**	**170**	P	**Pn**	**11 23 16.6**	**-0.6**
	baz=350,SNR=23						
BGNE	**Belgrade**	**4.74**	**2**	P	**Pn**	**11 23 17.5**	**+0.1**
	baz=183,SNR=5.2						
BGNE				Sb	**Sg**	**11 24 32.0**	**-6.0**
	baz=183						
BGNE	**Belgrade**	**4.74**	**2**		**Pn**	**11 23 17.4**	**0.0**
BGNE				IAmb_Lg		11 24 49.0	
	comp=Z,81nm,0.8s						
BGNE	**Belgrade**	**4.74**	**2**	P	**Pn**	**11 23 17.3**	**0.0**
	baz=183,SNR=11						
T25A	**Trinidad**	**4.82**	**277**	P	**Pn**	**11 23 18.3**	**-0.4**
	baz=94,SNR=5.5						
T25A				Sb	**Sb**	**11 24 33.2**	**+4.4**
	baz=94						
T25A	**Trinidad**	**4.82**	**277**		**Pn**	**11 23 17.8**	**-0.9**
P38A	**Dawn**	**4.86**	**51**		**Pn**	**11 23 21.2**	**+2.3**
P38A				IAmb_Lg		11 24 49.4	
	comp=Z,68nm,0.8s						
MGMO	**Mountain Grove**	**4.95**	**83**		**Pn**	**11 23 21.1**	**+0.9**
X40A	**Basin Creek Fa**	**5.04**	**114**	P	**Pn**	**11 23 22.2**	**+0.8**
	baz=297						
X40A				S	**Sn**	**11 24 21.1**	**+1.2**
	baz=297						
X40A	**Basin Creek Fa**	**5.04**	**114**		**Pn**	**11 23 22.9**	**+1.4**
OGNE	**Ogallala**	**5.12**	**328**	P	**Pn**	**11 23 23.6**	**+0.9**
	baz=146,SNR=7.3						
OGNE				Sb	**Sb**	**11 24 42.2**	**+5.1**
	baz=146						
OGNE	**Ogallala**	**5.12**	**328**	Pn	**Pn**	**11 23 23.7**	**+1.1**
237A	**Washetta, Mont**	**5.13**	**154**		**Pn**	**11 23 21.6**	**-1.1**
237A				IAmb_Lg		11 24 57.6	
	comp=Z,73nm,1.0s						
FCAR	**Ozark Folk Cen**	**5.14**	**97**		**Pn**	**11 23 25.0**	**+2.1**
R40A	**Maddies Statio**	**5.16**	**70**		**Pn**	**11 23 24.3**	**+1.3**
R40A				IAmb_Lg		11 24 50.1	
	comp=Z,69nm,0.9s						
WHAR	**Wooly Hollow**	**5.16**	**104**	Pn	**Pn**	**11 23 23.4**	**+0.4**
WHAR				IAmb_Lg		11 24 48.3	
	comp=Z,70nm,0.8s						
W41B	**Gary Mavity, V**	**5.22**	**105**	P	**Pn**	**11 23 25.2**	**+1.2**
	baz=288						
W41B				S	**Sn**	**11 24 25.3**	**+0.9**
	baz=288						
W41B	**Gary Mavity, V**	**5.22**	**105**	P	**Pn**	**11 23 24.4**	**+0.5**
	baz=288,SNR=19						
WLAR	**White Oak Lake**	**5.26**	**123**	Pn	**Pn**	**11 23 25.2**	**+0.7**
WLAR				IAmb_Lg		11 24 59.8	
	comp=Z,52nm,0.8s						
L34A	**Svendsen Farm,**	**5.53**	**16**		**Pn**	**11 23 28.5**	**+0.4**
L34A				IAmb_Lg		11 25 08.9	
	comp=Z,88nm,0.8s						
Z41A	**Richland Creek**	**5.73**	**125**	P	**Pn**	**11 23 31.9**	**+1.0**
	baz=308						
Z41A				S	**Sn**	**11 24 34.9**	**-1.8**
	baz=308						
SDCO	**Great Sand Dun**	**5.75**	**283**	P	**Pn**	**11 23 31.5**	**0.0**
	baz=99,SNR=5.9						
SDCO	**Great Sand Dun**	**5.75**	**283**	Pn	**Pn**	**11 23 31.2**	**-0.3**
N38A	**Joes South For**	**5.78**	**43**	Pn	**Pn**	**11 23 32.4**	**+0.8**
P40A	**Paris**	**5.78**	**58**		**Pn**	**11 23 34.6**	**+3.0**
NATX	**Nacogdoches**	**5.80**	**146**	IAmb_Lg		11 25 23.0	
	comp=Z,70nm,1.0s						
Q24A	**Divide**	**5.80**	**295**	P	**Pn**	**11 23 31.7**	**-0.5**
	baz=112						
Q24A				Sb	**Sb**	**11 25 01.6**	**+4.7**
	baz=112						
CCM	**Cathedral Cave**	**5.88**	**74**		**Pn**	**11 23 35.8**	**+2.8**
CCM				IAmb_Lg		11 25 14.9	
	comp=Z,115nm,1.0s						
T42A	**Van Buren**	**5.89**	**84**	Pn	**Pn**	**11 23 35.5**	**+2.4**
T42A				IAmb_Lg		11 25 16.4	
	comp=Z,47nm,0.7s						
LCAR	**Lake Charles**	**5.89**	**94**		**Pn**	**11 23 34.4**	**+1.3**
435B	**Jarrell**	**5.91**	**173**		**Pn**	**11 23 31.2**	**-2.2**
435B				IAmb_Lg		11 25 23.7	
	comp=Z,71nm,0.8s						
K31A	**O'Neill**	**5.96**	**358**		**Pn**	**11 23 35.9**	**+1.9**
K31A				IAmb_Lg		11 25 23.8	
	comp=Z,71nm,0.8s						
CCAR	**Cane Creek**	**6.09**	**115**	Pn	**Pn**	**11 23 37.4**	**+1.6**
CCAR				IAmb_Lg		11 25 33.0	
	comp=Z,55nm,1.0s						
JCT	**Junction City**	**6.28**	**191**	Pn	**Pn**	**11 23 37.6**	**-0.9**
JCT				IAmb_Lg		11 25 32.4	
	comp=Z,60nm,1.0s						
PBMO	**Poplar Bluff**	**6.42**	**87**		**Pn**	**11 23 40.2**	**-0.2**
PBMO				IAmb_Lg		11 25 32.3	
	comp=Z,39nm,0.8s						
ISCO	**Idaho Springs**	**6.47**	**301**	P	**Pn**	**11 23 41.1**	**-0.3**
	baz=117						
ISCO	**Idaho Springs**	**6.47**	**301**	Pn	**Pn**	**11 23 40.8**	**-0.5**
ISCO				IAmb_Lg		11 25 34.3	
	comp=Z,39nm,0.8s						
FVM	**French Village**	**6.50**	**76**	Pn	**Pn**	**11 23 42.6**	**+1.1**
FVM				IAmb_Lg		11 25 33.0	
	comp=Z,99nm,0.7s						
SCIA	**State Center**	**6.61**	**36**		**Pn**	**11 23 42.9**	**-0.1**
SCIA				IAmb_Lg		11 25 37.5	
	comp=Z,56nm,0.8s						
ANMO	**Albuquerque**	**6.75**	**258**	Pn	**Pn**	**11 23 43.2**	**-1.9**
	comp=Z,0.1nm,0.3s,baz=346,slow=19,SNR=2.1						
ANMO				Pg	**Pb**	**11 24 03.9**	**+0.6**
	comp=Z,0.8nm,0.3s,baz=74,slow=13,SNR=9.1						
ANMO				Lg	Lg	11 25 30.5	
	comp=Z,2.8nm,0.3s,baz=338,slow=16,SNR=7.8						
ANMO	**Albuquerque**	**6.75**	**258**		**Pn**	**11 23 46.1**	**+1.0**
SLM	**Saint Louis**	**6.79**	**71**	Pn	**Pn**	**11 23 47.1**	**+1.7**
SLM				IAmb_Lg		11 25 42.3	
	comp=Z,51nm,0.7s						
GNAR	**Gosnell**	**6.82**	**93**	IAmb_Lg		11 25 48.7	
	comp=Z,75nm,0.9s						
PARMO	**Parma**	**6.97**	**87**	Pn	**Pn**	**11 23 46.6**	**-1.3**
BNM	**Barren Site**	**7.16**	**252**	Pn	**Pn**	**11 23 48.9**	**-1.8**
N41A	**Harden Midland**	**7.16**	**53**	IAmb_Lg		11 25 52.9	
	comp=Z,69nm,0.8s						
PHWY	**Pilot Hill**	**7.17**	**312**	IAmb_Lg		11 25 53.3	
	comp=Z,44nm,0.9s						
ECSD	**EROS Data Cent**	**7.20**	**11**	P	**Pn**	**11 23 49.8**	**-1.3**
	baz=192						
ECSD	**EROS Data Cent**	**7.20**	**11**	Pn	**Pn**	**11 23 50.2**	**-0.8**
N23A	**Red Feather La**	**7.24**	**308**	P	**Pn**	**11 23 52.0**	**+0.2**
	baz=124						
HALT	**Halls**	**7.37**	**93**	IAmb_Lg		11 26 14.9	
	comp=Z,64nm,1.0s						
S44A	**Carbondale**	**7.39**	**79**	Pn	**Pn**	**11 23 56.1**	**+2.4**
S44A				IAmb_Lg		11 26 02.2	
	comp=Z,74nm,0.7s						
K38A	**Parkersburg**	**7.39**	**34**	Pn	**Pn**	**11 23 53.0**	**-0.8**
K38A				IAmb_Lg		11 26 07.4	
	comp=Z,63nm,0.9s						
HICK	**Hickman**	**7.39**	**88**	Pn	**Pn**	**11 23 55.5**	**+1.7**
LENM	**Lemitar**	**7.42**	**253**	Pn	**Pn**	**11 23 54.1**	**-0.1**
SIUC	**Southern Illin**	**7.42**	**79**	IAmb_Lg		11 26 04.1	
	comp=Z,81nm,0.7s						
MNTX	**Cornudas Mount**	**7.60**	**231**	P	**Pn**	**11 23 56.0**	**-0.6**
	baz=47						
MNTX	**Cornudas Mount**	**7.60**	**231**	Pn	**Pn**	**11 23 56.3**	**-0.3**
P43A	**Skaggs, Pawnee**	**7.62**	**64**	Pn	**Pn**	**11 23 58.5**	**+1.7**
W45A	**Hickory Valley**	**7.64**	**99**	Pn	**Pn**	**11 23 57.8**	**+0.6**
W45A				IAmb_Lg		11 26 06.7	
	comp=Z,57nm,0.7s						
L40A	**Anamosa**	**7.75**	**44**	Pn	**Pn**	**11 23 59.9**	**+1.2**
L40A				IAmb_Lg		11 26 26.0	
	comp=Z,48nm,0.7s						
Q44A	**Meyer Farm, Va**	**7.77**	**70**	Pn	**Pn**	**11 24 01.4**	**+2.4**
Y45A	**Yeager Farm, C**	**7.78**	**108**	Pn	**Pn**	**11 24 00.0**	**+1.0**
SUSD	**Miller**	**7.78**	**357**	P	**Pn**	**11 23 59.5**	**+0.4**
	baz=177						
735A	**Kenedy**	**7.80**	**176**	IAmb_Lg		11 26 30.1	
	comp=Z,36nm,0.8s						
T45A	**Paducah**	**7.85**	**84**	IAmb_Lg		11 26 24.6	
	comp=Z,66nm,0.9s						
HDIL	**Hopedale**	**8.13**	**59**	Pn	**Pn**	**11 24 03.9**	**0.0**
I37A	**Lemond, Waseca**	**8.28**	**26**	IAmb_Lg		11 26 37.2	
	comp=Z,35nm,0.9s						
TX31	**Lajitas Ar. Si**	**8.53**	**213**		**Pn**	**11 24 08.8**	**-0.7**
TX32	**Lajitas Array**	**8.53**	**213**		**Pn**	**11 24 08.6**	**-0.9**
TXAR	**Lajitas Array**	**8.53**	**213**	Pn	**Pn**	**11 24 07.2**	**-2.3**
	comp=Z,0.4nm,0.3s,baz=29,slow=11,SNR=27						
TXAR				Pg	Pg	11 24 39.1	-10
	comp=Z,1.5nm,0.3s,baz=32,slow=15,SNR=14						
TXAR				Lg	Lg	11 26 31.0	
	comp=Z,1.4nm,0.3s,baz=42,slow=32,SNR=2.5						
TXAR	**Lajitas Array**	**8.53**	**213**		**Pn**	**11 24 08.6**	**-0.9**
WVT	**Waverly**	**8.56**	**90**	P	**Pn**	**11 24 10.5**	**+0.8**
	baz=277						
WVT	**Waverly**	**8.56**	**90**	Pn	**Pn**	**11 24 10.8**	**+1.1**
RSSD	**Black Hills**	**8.59**	**332**	P	**Pn**	**11 24 10.1**	**-0.3**
	baz=148						
RSSD	**Black Hills**	**8.59**	**332**	Pn	**Pn**	**11 24 10.5**	**+0.1**
L42A	**Oliver, Polo**	**8.62**	**49**	IAmb_Lg		11 26 40.6	
	comp=Z,57nm,0.9s						
K22A	**Casper**	**8.65**	**316**	IAmb_Lg		11 27 00.8	
	comp=Z,38nm,0.9s						
JFWS	**Jewell Farm**	**8.86**	**43**	IAmb_Lg		11 26 59.9	
	comp=Z,30nm,0.7s						
F33A	**5 Mile Ranch,**	**9.31**	**9**	IAmb_Lg		11 27 02.3	
	comp=Z,28nm,1.0s						
K43A	**Burlington**	**9.84**	**49**	Pn	**Pn**	**11 24 26.8**	**-0.5**
PDAR	**Pinedale Array**	**10.52**	**309**	Pn	**Pn**	**11 24 35.0**	**-1.8**
	comp=Z,0.2nm,0.3s,baz=123,slow=13,SNR=6.0						
PDAR				Pg		11 25 16.6	
	comp=Z,0.5nm,0.3s,baz=110,slow=16,SNR=5.9						
PDAR				Lg	Lg	11 27 32.4	
	comp=Z,0.4nm,0.3s,baz=104,slow=34,SNR=4.4						
PDAR	**Pinedale Array**	**10.52**	**309**	Pn	**Pn**	**11 24 36.3**	**-0.5**
G40A	**Rib Lake**	**10.60**	**33**	Pn	**Pn**	**11 24 37.6**	**-0.1**
TKL	**Tuckaleechee C**	**11.88**	**90**	Pn	**Pn**	**11 24 56.6**	**+1.3**
	comp=Z,0.6nm,0.3s,baz=226,slow=8.9,SNR=6.9						
TKL				Lg	Lg	11 28 16.9	
	comp=Z,0.6nm,0.3s,baz=137,slow=14,SNR=4.4						
ILAR	**Eielson Array**	**40.03**	**330**	P	**P**	**11 29 40.3**	**-0.4**
	comp=Z,0.5nm,0.8s,baz=105,slow=8.6,SNR=4.4						

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*ISK **20** 11:26:15.0, 37°.04N×36°.89E, h8^{km}, ML2.9/22*

*DDA **20** 11:26:15.5, 37°.07N×36°.88E, h8^{km}±2^{km}, MW3.1*

ISC 20 11:26:15.4±1.0**, 37°.05N**±0°.02×**36°.89E**±0°.02**, h10**^{km}±8^{km}**, n48, σ0ˢ.72**/66**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAMA	**Osmaniye**	**0.22**	**307**	*i* P	**Pg**	**11 26 20.1**	**+0.1**
KAMA				IAML		11 26 23.0	
	comp=N,6μm,0.1s						
KAMA				IAML		11 26 23.0	
	comp=E,6μm,0.1s						
KAMA				*i* S	**Sg**	**11 26 23.2**	**0.0**
GAZ	**Gaziantep**	**0.28**	**64**	PG	**Pg**	**11 26 20.7**	**-0.5**
GAZ				SG	**Sg**	**11 26 25.9**	**+0.9**
HCB	**Kahramanmara**	**0.29**	**3**	*i* P	**Pg**	**11 26 21.2**	**-0.2**
HCB				IAML		11 26 25.0	
	comp=E,3μm,0.2s						
HCB				*i* S	**Sg**	**11 26 25.3**	**0.0**
HCB				IAML		11 26 26.0	
	comp=N,2μm,0.2s						
KUZU	**Kuzuini**	**0.31**	**152**	*i* P	**Pb**	**11 26 22.7**	**-0.5**
KUZU				IAML		11 26 27.0	
	comp=N,5μm,0.3s						
KUZU				*i* S	**Sb**	**11 26 27.7**	**-0.7**
KUZU				IAML		11 26 28.0	
	comp=E,2μm,0.4s						
KHMN	**Narli-Kahraman**	**0.40**	**32**	PG	**Pg**	**11 26 23.7**	**+0.3**
KHMN				SG	**Sb**	**11 26 29.9**	**-1.1**
KMRS	**Kahramanmaras**	**0.46**	**1**	PG	**Pg**	**11 26 24.6**	**+0.3**
KMRS				SG	**Sg**	**11 26 31.1**	**+0.7**
KAHM	**Kahramanmaras,**	**0.47**	**9**	*i* P	**Pg**	**11 26 24.0**	**-0.6**
KAHM				*i* S	**Sg**	**11 26 30.8**	**-0.1**
KAHM				IAML		11 26 32.0	
	comp=E,947nm,0.3s						
KAHM				IAML		11 26 32.0	
	comp=N,421nm,0.4s						
GZT	**Gaziantep**	**0.62**	**60**	*i* P	**Pb**	**11 26 27.9**	**-0.6**
GZT				*i* S	**Sg**	**11 26 36.2**	**+0.6**
GZT				IAML		11 26 40.0	
	comp=N,498nm,0.3s						
GZT				IAML		11 26 42.0	
	comp=E,379nm,0.3s						
ANDN	**Andirin**	**0.69**	**321**	*i* P	**Pg**	**11 26 28.6**	**0.0**
TAHT	**Tahtakopru-Hat**	**0.88**	**220**	PG	**Pg**	**11 26 32.3**	**0.0**
TAHT				SG	**Sb**	**11 26 44.6**	**0.0**
CEYT	**Ceyhan**	**0.92**	**268**	PG	**Pb**	**11 26 33.1**	**-0.3**
KOZT	**Kozan**	**0.95**	**297**	PG	**Pb**	**11 26 33.9**	**-0.1**
KOZT				SG	**Sn**	**11 26 47.7**	**-0.9**
YURE	**YUREGIR**	**1.03**	**258**	*i* P	**Pn**	**11 26 35.8**	**-0.2**
SAIM	**ADANA**	**1.13**	**325**	*i* P	**Pg**	**11 26 35.7**	**-1.4**
SAIM				*i* S	**Sg**	**11 26 51.3**	**-0.4**
YAYL	**Yayladag**	**1.19**	**212**	PN	**Pb**	**11 26 38.1**	**-0.1**
YAYL				SN	**Sn**	**11 26 54.8**	**+0.1**
ATAB	**Bozova**	**1.20**	**69**	*i* P	**Pn**	**11 26 39.1**	**+0.9**
ATAB				*i* S	**Sn**	**11 26 54.7**	**+0.1**
ATAB				IAML		11 26 56.0	
	comp=N,336nm,0.3s						
ATAB				IAML		11 26 57.0	
	comp=E,492nm,0.4s						
AKO	**Adana**	**1.22**	**290**	*i* P	**Pb**	**11 26 38.5**	**-0.2**
AKO				*i* S	**Sb**	**11 26 54.4**	**-0.2**
ELBS	**KAHRAMANMARAS**	**1.29**	**9**	*i* P	**Pg**	**11 26 40.6**	**+0.5**
ELBS				*i* S	**Sn**	**11 26 57.8**	**+0.8**
ELBS				IAML		11 26 59.0	
	comp=E,535nm,0.4s						
ELBS				IAML		11 26 59.0	
	comp=N,419nm,0.7s						
KRTS	**Karatas**	**1.31**	**249**	PN	**Pg**	**11 26 40.3**	**-0.2**
SARI	**SarD1z-Kayseri**	**1.41**	**345**	PN	**Pb**	**11 26 41.8**	**-0.1**
KARA	**Karaisali**	**1.48**	**279**	PN	**Pb**	**11 26 42.9**	**-0.2**
AKCD	**Akcadag**	**1.49**	**33**	*i* P	**Pb**	**11 26 43.1**	**-0.2**
AKCD				IAML		11 27 07.0	
	comp=N,410nm,0.2s						
AKCD				IAML		11 27 07.0	
	comp=E,404nm,0.4s						
URFA	**Urfa**	**1.59**	**75**	PN	**Pn**	**11 26 44.2**	**+0.5**
DARE	**Darende-Malaty**	**1.59**	**17**	PN	**Pb**	**11 26 44.5**	**-0.5**
YAHY	**KAYSERI_Yahyal**	**1.60**	**311**	*i* P	**Pb**	**11 26 44.6**	**-0.5**
YAHY				*i* S	**Sb**	**11 27 05.8**	**+0.3**
YAHY				IAML		11 27 10.0	
	comp=N,45nm,0.8s						
YAHY				IAML		11 27 11.0	
	comp=E,36nm,0.5s						
CMRD	**Camardi-Nigde**	**1.63**	**293**	PN	**Pn**	**11 26 44.4**	**0.0**
SANL	**SANLIURFA_Merk**	**1.68**	**85**	*i* P	**Pg**	**11 26 47.2**	**-0.5**
SANL				*i* S	**Sg**	**11 27 08.8**	**-0.7**
SANL				IAML		11 27 10.0	
	comp=N,148nm,0.3s						
SANL				IAML		11 27 11.0	
	comp=E,170nm,0.5s						
GULE	**Gulek**	**1.71**	**279**	*i* P	**Pn**	**11 26 45.7**	**+0.3**
GULE				*i* S	**Sn**	**11 27 07.7**	**+0.3**
MALT	**Malatya**	**1.75**	**44**	PN	**Pn**	**11 26 46.6**	**+0.6**
MERS	**Mersin**	**1.91**	**265**	PN	**Pn**	**11 26 48.8**	**+0.7**
BNN	**Bunyan**	**1.98**	**336**	PN	**Pn**	**11 26 50.0**	**+0.8**
HEKM	**Malatya_Hekimh**	**2.01**	**24**	*i* P	**Pg**	**11 26 53.2**	**-0.8**
HEKM				IAML		11 27 22.0	
	comp=N,256nm,0.4s						
HEKM				IAML		11 27 26.0	
	comp=E,231nm,0.7s						
ELZG	**Elazig**	**2.20**	**48**	*i* P	**Pn**	**11 26 52.8**	**+0.6**
CUAYA	**Sivas-Altinyay**	**2.21**	**357**	*i* P	**Pb**	**11 26 54.4**	**-1.3**
CUAYA				IAML		11 27 31.0	
	comp=N,32nm,1.1s						
CUAYA				IAML		11 27 37.0	
	comp=E,38nm,0.9s						
KIZK	**Mersin**	**2.28**	**256**	PN	**Pn**	**11 26 53.3**	**+0.2**
CUKAN	**kangal_SIVAS**	**2.31**	**11**	*i* P	**Pb**	**11 26 55.5**	**-1.8**
CUKAN				IAML		11 27 34.0	
	comp=E,23nm,0.3s						
CUKAN				IAML		11 27 47.0	
	comp=N,19nm,0.8s						
SVRC	**Sivrice-ELAZID**	**2.33**	**55**	PN	**Pn**	**11 26 54.0**	**0.0**
GULA	**Gulagac**	**2.47**	**302**	PN	**Pn**	**11 26 57.0**	**+1.1**
YESY	**Yesilyurt**	**2.61**	**287**	PN	**Pn**	**11 26 59.2**	**+1.4**
KEBE	**Keben-Mersin**	**2.62**	**258**	PN	**Pn**	**11 26 58.8**	**+0.9**
IKL	**Isikli**	**2.70**	**254**	PN	**Pn**	**11 26 59.2**	**+0.3**
DIYA	**Diyarbakir**	**2.71**	**70**	*i* P	**Pg**	**11 27 07.5**	**+0.1**
DYBB	**Diyarbakir**	**2.74**	**70**	PN	**Pn**	**11 27 00.7**	**+1.2**
ILIC	**ilic-Erzincan**	**2.74**	**28**	PN	**Pn**	**11 27 00.7**	**+1.1**
TEVE	**Tevekalti-Mers**	**2.84**	**259**	PN	**Pn**	**11 27 01.5**	**+0.6**
SVSK	**Karacayir**	**2.86**	**2**	PN	**Pn**	**11 27 02.7**	**+1.5**
YOZ	**Yozgat**	**2.87**	**335**	PN	**Pn**	**11 27 02.7**	**+1.4**
MAZI	**Mazidag**	**2.87**	**81**	PN	**Pn**	**11 27 02.8**	**+1.5**

*IDC **20** 11:31:34.1±1.2, 4°.47S×152°.05E, h0^{km}, mb3.9/8, mb1 4.1/9, mb1mx3.8/33, mbtmp3.9/9, ML2.2/1, MS2.9/2, Ms1 2.9/2, ms1mx2.4/35, Error ellipse: s-maj=58.9km s-min=18.7km az=129.0*

ISC 20 11:31:39.6±1.2**, 4°.5S**±0°.3×**152°.0E**±0°.3**, h35**^{km}**, n11, σ1ˢ.07**/11**, mb3.9**/7**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.89**	**224**	Pn	**Pn**	**11 33 18.1**	**-0.1**
	2.8nm,0.3s,baz=165,slow=5.8,SNR=2.5						
PMG				Sn	**Sn**	**11 34 36.8**	**+1.3**
	2.7nm,0.3s,baz=116,slow=20,SNR=2.5						
PMG				LR	LR	11 35 59.5	
	comp=Z,92nm,18.9s,baz=207,slow=38						
WRA	**Warramunga Arr**	**23.10**	**227**	P	**P**	**11 36 41.5**	**-1.1**
	0.9nm,0.4s,baz=53,slow=10,SNR=8.8						
ASAR	**Alice Springs**	**25.89**	**221**	P	**P**	**11 37 08.0**	**-0.5**
	0.5nm,0.4s,baz=57,slow=8.9,SNR=13						
FITZ	**Fitzroy Crossi**	**29.15**	**240**	P	**P**	**11 37 37.1**	**-0.6**
	1.4nm,0.5s,baz=50,slow=7.2,SNR=2.9						
PETK	**Petropavlovsk-**	**57.55**	**4**	LR	LR	12 02 13.1	
	comp=Z,11nm,19.7s,baz=73,slow=32						
MKAR	**Makanchi Array**	**79.55**	**319**	P	**P**	**11 43 42.6**	**-0.6**
	0.4nm,0.8s,baz=236,slow=48,SNR=2.5						
ZALV	**Zalesovo Beam**	**80.44**	**326**	P	**P**	**11 43 49.5**	**+1.8**
	0.7nm,0.5s,baz=120,slow=6.5,SNR=2.6						
ILAR	**Eielson Array**	**82.13**	**22**	P	**P**	**11 43 55.7**	**-0.8**
	1.0nm,0.8s,baz=251,slow=5.6,SNR=11						
NVAR	**Mina Array Bea**	**92.48**	**52**	P	**P**	**11 44 48.7**	**+1.0**
	0.7nm,0.9s,baz=245,slow=7.1,SNR=5.0						
PDAR	**Pinedale Array**	**99.19**	**48**	P	**Pdif**	**11 45 17.7**	**-0.5**
	0.1nm,0.4s,baz=212,slow=36,SNR=2.5						
TORD	**Torodi Ar. Bea**	**149.46**	**288**	PKPbc	**PKPbc**	**11 51 26.0**	**-0.3**
	1.7nm,0.7s,baz=63,slow=2.8,SNR=14						

*IDC **20** 11:49:25.3±4.2, 9°.38S×124°.31E, h99^{km}±50^{km}, mb3.0/1, mb1 3.3/4, mb1mx2.9/46, mbtmp3.5/4, Error ellipse: s-maj=91.2km s-min=27.2km az=46.0*

ISC 20 11:49:27.2±1.3**, 9°.6S**±0°.1×**124°.38E**±0°.10**, h100**^{km}**, n11, σ2ˢ.88**/14**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	**0.94**	**228**	P	**Pn**	**11 49 46.5**	**-0.6**
	13nm,0.3s,baz=92,slow=3.4,SNR=13						
BATI				S	**Sn**	**11 50 02.1**	**+0.1**
	37nm,0.3s,baz=160,slow=21,SNR=6.0						
DRS	**Darwin Rock St**	**7.01**	**115**	P	**Pn**	**11 51 08.8**	**+1.6**
	8.8nm,0.8s						
MTN	**Manton Dam**	**7.38**	**117**	P	**Pn**	**11 51 13.6**	**+1.2**
	18nm,0.6s						
KNRA	**Kununurra**	**7.42**	**145**	P	**Pn**	**11 51 14.1**	**+1.1**
FITZ	**Fitzroy Crossi**	**8.56**	**172**	P	**Pn**	**11 51 29.5**	**+1.0**
	1.8nm,0.3s,baz=157,slow=0.0,SNR=39						
FITZ				S	**Sn**	**11 53 00.9**	**-2.5**
	2.5nm,0.3s,baz=343,slow=15,SNR=14						
WRA	**Warramunga Arr**	**14.10**	**138**	P	**Pn**	**11 52 41.8**	**-0.8**
	0.3nm,0.3s,baz=314,slow=14,SNR=17						
WRA				S	Sn	11 55 09.7	-8.4
	1.1nm,0.3s,baz=281,slow=17,SNR=12						
WRAB	**Tennant Creek**	**14.10**	**138**	P	**Pn**	**11 52 43.5**	**+0.9**
WRKA	**Warakurna**	**15.83**	**167**	P	**P**	**11 53 11.5**	**+5.2**
ASAR	**Alice Springs**	**16.71**	**148**	P	**P**	**11 53 17.0**	**+0.9**
	0.2nm,0.3s,baz=321,slow=11,SNR=17						
ASAR				S	**Sn**	**11 56 16.1**	**-5.0**
	0.4nm,0.3s,baz=314,slow=20,SNR=9.3						
QIS	**Mount Isa**	**18.30**	**128**	P	**Pn**	**11 53 38.4**	**+3.7**
	7.4nm,1.0s						
MKAR	**Makanchi Array**	**67.49**	**330**	P	**P**	**12 00 09.3**	**-3.2**
	0.3nm,0.8s,baz=117,slow=5.9,SNR=2.0						

*TUL **20** 12:07:45.3±1.0, 36°.66N±0°.02×98°.47W±0°.03, h6^{km}±7^{km}, ML3.0, mb_Lg2.8/25(NEIC), Error ellipse: s-maj=3.7km s-min=2.4km az=93.0*

NEIC 20 12:07:45.6±1.0**, 36°.63N**±0°.02×**98°.46W**±0°.03**, h5**^{km}±2^{km}**, Error ellipse: s-maj=4.6km s-min=3.0km az=278.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK032	**Salt Plains WL**	**0.27**	**50**		Pg	12 07 50.8	0.0
OK032				Sg	Sg	12 07 54.5	+0.3
CROK	**Carrier**	**0.41**	**108**		Pg	12 07 53.7	+0.2
CROK				Sg	Sg	12 07 59.8	+1.0
U32A	**Winter Ranch,**	**0.50**	**240**		Pg	12 07 55.2	0.0
U32A				Sg	Sg	12 08 02.5	+0.7
KAN14	**Manchester OK**	**0.52**	**51**		Pg	12 07 55.4	-0.1
KAN14				Sg	Sg	12 08 02.4	+0.1
GC02	**Grant County #**	**0.53**	**65**	Pg	Pg	12 07 55.7	-0.1
GC02				Sg	Sg	12 08 03.1	+0.4
KAN10	**Anthony SW Sta**	**0.57**	**31**		Pg	12 07 56.2	-0.4
KAN10				Sg	Sg	12 08 04.0	0.0
KAN05	**Bluff City Nor**	**0.67**	**45**	Pg	Pg	12 07 58.2	-0.3
KAN05				Sg	Sg	12 08 07.1	-0.1
KAN16	**Harper SW Stat**	**0.67**	**28**	Pg	Pg	12 07 58.0	-0.5
KAN16				Sg	Sg	12 08 07.1	-0.1
KAN17	**Caldwell West**	**0.69**	**53**	Pg	Pg	12 07 58.6	-0.3
KAN17				Sg	Sg	12 08 07.9	0.0
KAN08	**Anthony NE Sta**	**0.71**	**33**	Pg	Pg	12 07 58.8	-0.4
KAN08				Sg	Sg	12 08 08.1	-0.4
KAN01	**Argonia South**	**0.77**	**47**	Pg	Pg	12 07 60.0	-0.4
KAN01				Sg	Sg	12 08 09.8	-0.4
KAN06	**Argonia West S**	**0.78**	**38**		Pg	12 08 00.1	-0.5
KAN06				Sg	Sg	12 08 10.5	-0.2
KAN09	**Caldwell North**	**0.84**	**53**		Pg	12 08 01.3	-0.5
KAN09				Sg	Sg	12 08 12.0	-0.7
KAN13	**South Haven SW**	**0.88**	**64**		Pg	12 08 02.1	-0.3
KAN13				Sg	Sg	12 08 12.9	-0.9
BLOK	**Blackwell**	**1.01**	**82**		Pg	12 08 04.4	-0.6
BLOK				Sg	Sg	12 08 18.0	-0.1
OK029	**Liberty Lake**	**1.17**	**135**		Pg	12 08 07.3	-0.6
OK029				Sg	Sb	12 08 23.4	-0.2
BCOK	**Bluff Creek, N**	**1.19**	**144**		Pg	12 08 07.6	-0.8
BCOK				Sg	Sb	12 08 24.2	-0.2
OKCFA	**Oklahoma City**	**1.46**	**146**	Pn	Pn	12 08 12.4	-0.3
OK031	**S. Brethren Rd**	**1.48**	**117**		Pn	12 08 12.8	0.0
OKCSW	**OKLAHOMA CITY**	**1.48**	**146**	Pn	Pn	12 08 12.9	0.0
QUOK	**Quay**	**1.49**	**107**	Pn	Pn	12 08 12.9	0.0
OK030	**Cody Creek RV**	**1.53**	**117**		Pn	12 08 13.4	-0.2
T35A	**Sooner Cattle**	**1.59**	**79**		Pn	12 08 14.6	+0.1
FNO	**Franklin**	**1.62**	**148**		Pn	12 08 14.8	0.0
R32A	**Long Quarter,**	**1.80**	**354**		Pn	12 08 17.7	+0.4
WMOK	**Wichita Mounta**	**1.91**	**188**	Pn	Pn	12 08 18.8	0.0
X34A	**Smith Ranch, M**	**2.09**	**166**		Pn	12 08 21.2	-0.1
X34A				IAmb_Lg		12 08 53.7	
	comp=Z,53nm,0.7s						
TUL1	**Leonard**	**2.27**	**108**	IAmb_Lg		12 08 58.1	
	comp=Z,36nm,0.8s						
LOOK	**Love County**	**2.83**	**158**	Pn	Pn	12 08 31.9	+0.4
AMTX	**Amarillo**	**3.15**	**237**	IAmb_Lg		12 09 26.3	
	comp=Z,34nm,0.9s						
X37A	**Clayton**	**3.24**	**128**	Pn	Pn	12 08 36.9	-0.2
X37A				IAmb_Lg		12 09 32.1	
	comp=Z,20nm,0.8s						
U38A	**Gravette**	**3.29**	**92**		Pn	12 08 38.0	+0.3
Z35A	**Perchaven, San**	**3.44**	**163**	Pn	Pn	12 08 39.1	-0.7
HHAR	**Hobbs**	**3.66**	**94**		Pn	12 08 43.0	+0.1
W39A	**Magazine**	**4.06**	**109**	IAmb_Lg		12 10 01.1	
	comp=Z,21nm,0.8s						
KSCO	**Kaye Shedlock'**	**4.06**	**307**	IAmb_Lg		12 10 02.9	
	comp=Z,16nm,0.8s						
S39A	**Bolivar**	**4.24**	**74**		Pn	12 08 50.4	-0.4
Z38A	**Mt. Pleasant**	**4.41**	**139**	IAmb_Lg		12 10 06.8	
	comp=Z,18nm,0.8s						
MSTX	**Muleshoe**	**4.41**	**234**	IAmb_Lg		12 10 10.7	
	comp=Z,14nm,1.0s						
MIAR	**Mount Ida**	**4.49**	**116**	Pn	Pn	12 08 55.1	+0.9
U40A	**Yellville**	**4.53**	**92**		Pn	12 08 56.1	+1.4
WHTX	**Lake Whitney,**	**4.70**	**170**		Pn	12 08 57.3	+0.1
BGNE	**Belgrade**	**4.78**	**3**		Pn	12 08 58.8	+0.6
T25A	**Trinidad**	**4.80**	**278**		Pn	12 08 55.9	-2.8
T25A				IAmb_Lg		12 10 19.5	
	comp=Z,19nm,0.9s						
P38A	**Dawn**	**4.90**	**51**	Pn	Pn	12 08 59.8	-0.1
MGMO	**Mountain Grove**	**4.99**	**82**	Pn	Pn	12 09 02.0	+0.9
MGMO				IAmb_Lg		12 10 32.2	
	comp=Z,16nm,1.1s						
X40A	**Basin Creek Fa**	**5.06**	**113**	Pn	Pn	12 09 03.2	+1.1
OGNE	**Ogallala**	**5.13**	**328**		Pn	12 09 03.7	+0.5
OGNE				IAmb_Lg		12 10 32.5	
	comp=Z,24nm,0.7s						
FCAR	**Ozark Folk Cen**	**5.17**	**96**	Pn	Pn	12 09 04.9	+1.2
WHAR	**Wooly Hollow**	**5.18**	**103**	Pn	Pn	12 09 04.8	+1.0
R40A	**Maddies Statio**	**5.20**	**70**		Pn	12 09 03.3	-0.7
R40A				IAmb_Lg		12 10 30.2	
	comp=Z,10nm,0.9s						
SDCO	**Great Sand Dun**	**5.73**	**283**	Pn	Pn	12 09 09.7	-1.9
P40A	**Paris**	**5.83**	**58**	Pn	Pn	12 09 13.0	+0.3
CCM	**Cathedral Cave**	**5.92**	**74**	Pn	Pn	12 09 14.8	+0.9
T42A	**Van Buren**	**5.92**	**84**	Pn	Pn	12 09 12.3	-1.6
JCT	**Junction City**	**6.24**	**191**	Pn	Pn	12 09 18.2	-0.2
ISCO	**Idaho Springs**	**6.46**	**301**	Pn	Pn	12 09 20.7	-0.9
ISCO				IAmb_Lg		12 11 14.1	
	comp=Z,7.6nm,0.9s						
ECSD	**EROS Data Cent**	**7.23**	**11**	Pn	Pn	12 09 29.8	-2.2

NOU 20 12:18:12.9, 16°.32S×167°.95E, h149^{km}**, mb4.3**/10**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**1.13**	**320**	P	Pn	12 18 38.5	-0.2
DVP	**Devils Point**	**1.42**	**171**	P	Pn	12 18 42.1	+0.6
LIFNC	**LIFOU**	**4.48**	**189**	P	Pn	12 19 19.8	+0.3
KOUNC	**Koumac, New Ca**	**5.46**	**219**	P	Pn	12 19 32.8	+0.4
PINNC	**Pines Island,**	**6.28**	**184**	P	Pn	12 19 42.9	-0.4

IDC 20 12:19:49.5±3.5**, 28°.56S×178°.47W, h0**^{km}**, mb3.6**/2**, mb1 3.8**/2**, mb1mx3.2**/30**, mbtmp3.6**/2**, Error ellipse: s-maj=101.8km s-min=18.0km az=39.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.84**	**145**	Pn	Pn	12 20 09.2	+0.5
	36nm,0.3s,baz=60,slow=24,SNR=1.3						
RAO				Sn	Sn	12 20 22.0	+0.2
	280nm,0.3s,baz=89,slow=21,SNR=13						
ASAR	**Alice Springs**	**42.82**	**265**	P	P	12 27 49.1	-0.4
	0.2nm,0.4s,baz=106,slow=7.7,SNR=7.2						
WRA	**Warramunga Arr**	**43.64**	**270**	P	P	12 27 56.4	+0.2
	0.5nm,0.3s,baz=110,slow=8.0,SNR=14						
H03S2	**Juan Fernandez**	**81.83**	**124**	T	T	14 01 07.7	
	baz=238,slow=74,SNR=5.7						
H03S1	**Juan Fernandez**	**81.84**	**124**	T	T	14 01 08.6	
	baz=238,slow=74,SNR=5.5						
H03S3	**Juan Fernandez**	**81.84**	**124**	T	T	14 01 08.8	
	baz=238,slow=74,SNR=7.7						
FINES	**FINESS Array B**	**143.28**	**340**	PKP	PKPbc	12 39 23.1	+1.0
	1.6nm,0.8s,baz=29,slow=3.2,SNR=5.4						

IDC 20 12:23:17.9±2.8**, 6°.55S×154°.63E, h0**^{km}**, mb3.3**/2**, mb1 3.6**/2**, mb1mx3.0**/37**, mbtmp3.3**/2**, Error ellipse: s-maj=154.4km s-min=30.9km az=130.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.78**	**234**	P	P	12 28 32.5	+0.1
	0.6nm,0.5s,baz=58,slow=9.6,SNR=6.3						
ASAR	**Alice Springs**	**26.20**	**227**	P	P	12 28 54.2	-0.3
	0.4nm,1.0s,baz=62,slow=9.2,SNR=2.0						
TORD	**Torodi Ar. Bea**	**152.55**	**286**	PKPbc	PKPbc	12 43 17.4	0.0
	0.3nm,0.7s,baz=60,slow=3.1,SNR=3.7						

IDC 20 12:40:33.5±9.6**, 15°.46S×174°.95W, h0**^{km}**, mb3.5**/3**, mb1 3.8**/3**, mb1mx3.3**/29**, mbtmp3.5**/3**, Error ellipse: s-maj=427.9km s-min=37.1km az=139.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**48.37**	**257**	P	P	12 49 17.5	-0.1
	0.3nm,0.8s,baz=92,slow=7.5,SNR=5.1						
ASAR	**Alice Springs**	**48.67**	**252**	P	P	12 49 19.8	-0.1
	1.1nm,0.7s,baz=87,slow=8.0,SNR=17						
ILAR	**Eielson Array**	**82.81**	**12**	P	P	12 52 59.2	0.0
	0.3nm,0.8s,baz=225,slow=5.1,SNR=5.3						

IDC 20 13:59:49.5±2.2**, 5°.34S×127°.83E, h0**^{km}**, mb3.1**/1**, mb1 3.6**/3**, mb1mx3.2**/48**, mbtmp3.4**/3**, ML3.3**/2**, Error ellipse: s-maj=154.9km s-min=31.4km az=66.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.84**	**157**	Pn	Pn	14 03 34.6	+0.6
	0.1nm,0.3s,baz=336,slow=11,SNR=1.6						
ASAR	**Alice Springs**	**19.14**	**163**	P	P	14 04 14.3	-0.2
	0.2nm,0.3s,baz=344,slow=12,SNR=23						
MKAR	**Makanchi Array**	**65.67**	**327**	P	P	14 10 35.8	0.0
	0.1nm,0.5s,baz=118,slow=8.8,SNR=1.2						

*IDC **20** 14:06:18.4±3.6, 16°.57S×173°.91W, h142^{km}±23^{km}, mb3.7/5, mb1 4.0/8, mb1mx3.5/31, mbtmp4.2/8, MS2.8/3, Ms1 2.8/3, ms1mx2.6/38, Error ellipse: s-maj=107.9km s-min=16.2km az=146.0*

*NEIC **20** 14:06:20.9±1.8, 16°.4S±0°.3×173°.8W±0°.2, h166^{km}±20^{km}, mb4.2/12, Error ellipse: s-maj=45.6km s-min=16.1km az=203.0*

*NOU **20** 14:06:21.2, 16°.31S×173°.94W, h103^{km}, MLv4.7/11, Tonga Islands*

ISC 20 14:06:19.7±0.7**, 16°.30S**±0°.10×**173°.89W**±0°.08**, h150**^{km}**, n29, σ1ˢ.52**/30**, mb4.2**/10**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.13**	**41**	P	**Pn**	**14 07 08.9**	**0.0**
	56nm,0.3s,baz=189,slow=2.1,SNR=108						
AFI				S	**Sn**	**14 07 44.7**	**-2.3**
	65nm,0.3s,baz=218,slow=23,SNR=11						
AFI				LR	LR	14 07 59.4	
	comp=Z,98nm,18.5s,baz=346,slow=30						
NIUE	**Niue**	**4.68**	**127**	Pn	**Pn**	**14 07 29.6**	**+0.7**
NIUE	**Niue**	**4.68**	**127**	P	**Pn**	**14 07 29.8**	**+0.9**
DGTI	**Dogotuki**	**6.12**	**269**	P	**Pn**	**14 07 48.5**	**+0.4**
MSVF	**Nonsavu**	**7.84**	**258**	P	**Pn**	**14 08 10.6**	**-0.5**
	0.7nm,0.3s,baz=114,slow=12,SNR=8.9						
MSVF				LR	LR	14 10 11.9	
	comp=Z,49nm,19.9s,baz=7.4,slow=30						
MSVF	**Nonsavu**	**7.84**	**258**	Pn	**Pn**	**14 08 12.3**	**+1.2**
MSVF	**Nonsavu**	**7.84**	**258**	P	**Pn**	**14 08 12.3**	**+1.2**
RAO	**Raoul Island**	**13.41**	**195**	P	**P**	**14 09 27.4**	**-0.9**
	427nm,1.0s						
OUENC	**Ouen Island, N**	**19.16**	**248**	P	**P**	**14 10 33.0**	**+1.2**
DZM	**Mont Dzumac**	**19.43**	**250**	P	**P**	**14 10 34.7**	**-0.1**
	0.7nm,0.3s,baz=87,slow=19,SNR=8.1						
DZM				LR	LR	14 16 08.8	
	comp=Z,47nm,18.9s,baz=192,slow=31						
DZM	**Mont Dzumac**	**19.43**	**250**	P	**P**	**14 10 36.6**	**+1.8**
DZM				IAmb	IAmb	14 10 39.3	
	comp=Z,17nm,0.9s						
DZM	**Mont Dzumac**	**19.43**	**250**	P	**Pn**	**14 10 39.0**	**+1.5**
NOUC	**Port Laguerre**	**19.57**	**250**	P	**Pn**	**14 10 40.4**	**+1.4**
ARMA	**Armidale**	**34.48**	**240**	P	**P**	**14 12 52.0**	**-1.6**
STKA	**Stephens Creek**	**43.18**	**241**	P	**P**	**14 14 04.2**	**-1.7**
	comp=Z,5.8nm,0.9s,baz=57,slow=10,SNR=6.7						
STKA	**Stephens Creek**	**43.18**	**241**	P	**P**	**14 14 04.8**	**-1.1**
BBOO	**Buckleboo**	**47.95**	**240**	P	**P**	**14 14 41.6**	**-1.8**
BBOO				IAmb	IAmb	14 14 56.9	
	comp=Z,18nm,1.2s						
WR0	**Warramunga Arr**	**48.99**	**258**	P	**P**	**14 14 50.4**	**-1.2**
WR0				IAmb	IAmb	14 15 18.7	
	comp=Z,4.9nm,1.1s						
WB0	**Warramunga Arr**	**49.15**	**258**	P	**P**	**14 14 51.5**	**-1.2**
WB0				IAmb	IAmb	14 14 59.7	
	comp=Z,7.4nm,1.4s						
WB2	**Warramunga Arr**	**49.17**	**258**	P	**P**	**14 14 51.1**	**-1.8**
WB2				IAmb	IAmb	14 15 09.9	
	comp=Z,10nm,1.4s						
WRA	**Warramunga Arr**	**49.18**	**258**	P	**P**	**14 14 50.4**	**-2.6**
	comp=Z,0.7nm,0.5s,baz=98,slow=6.2,SNR=19						
WRA	**Warramunga Arr**	**49.18**	**258**	P	**P**	**14 14 51.2**	**-1.8**
AS31	**Alice Springs**	**49.39**	**253**	P	**P**	**14 14 52.5**	**-2.0**
ASAR	**Alice Springs**	**49.39**	**253**	P	**P**	**14 14 52.3**	**-2.2**
	comp=Z,6.9nm,0.7s,baz=88,slow=8.4,SNR=93						
KNRA	**Kununurra**	**54.97**	**262**	P	**P**	**14 15 35.0**	**-0.7**
VNDA	**Vanda**	**62.44**	**186**	P	**P**	**14 16 25.7**	**-0.7**
VNDA				IAmb	IAmb	14 16 54.7	
	comp=Z,2.7nm,1.4s						
PDAR	**Pinedale Array**	**83.25**	**42**	P	**P**	**14 18 31.3**	**+1.5**
	comp=Z,0.5nm,0.7s,baz=232,slow=4.4,SNR=4.1						
ILAR	**Eielson Array**	**83.42**	**11**	P	**P**	**14 18 31.1**	**+1.3**
	comp=Z,0.7nm,0.9s,baz=208,slow=5.1,SNR=3.6						
BRTR	**Keskin Array B**	**146.54**	**320**	PKPbc	**PKPdf**	**14 25 44.0**	**+1.8**
	comp=Z,1.2nm,0.9s,baz=64,slow=2.9,SNR=4.3						

IDC 20 14:27:59.5±2.2**, 0°.79N×126°.97E, h0**^{km}**, mb3.2**/3**, mb1 3.5**/3**, mb1mx3.3**/29**, mbtmp3.3**/3**, Error ellipse: s-maj=166.7km s-min=28.6km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.83**	**161**	P	P	14 32 53.4	-0.3
	0.5nm,0.7s,baz=340,slow=11,SNR=6.5						
ASAR	**Alice Springs**	**25.22**	**165**	P	P	14 33 27.4	+0.2
	0.6nm,0.7s,baz=342,slow=8.5,SNR=7.2						
MKAR	**Makanchi Array**	**60.11**	**326**	P	P	14 38 08.6	-0.1
	0.2nm,0.6s,baz=125,slow=7.6,SNR=1.7						

*ATH **20** 14:42:32.6, 38°.37N×20°.47E, h12^{km}±1^{km}, ML3.3/8, Error ellipse: s-maj=1.8km s-min=0.6km az=273.0*

*THE **20** 14:42:32.3, 38°.38N×20°.41E, h11^{km}±1^{km}, ML3.4/15, Error ellipse: s-maj=1.4km s-min=0.3km az=264.0*

*IDC **20** 14:42:33.8±0.9, 38°.55N×20°.84E, h0^{km}, mb3.5/5, mb1 3.6/5, mb1mx3.4/38, mbtmp3.6/5, Error ellipse: s-maj=21.8km s-min=15.7km az=111.0*

ISC 20 14:42:32.8±0.8**, 38°.37N**±0°.02×**20°.47E**±0°.03**, h11**^{km}±5^{km}**, n54, σ0ˢ.71**/81**, mb3.5**/5**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FSK	**Fiskardo**	**0.12**	**40**	P	**Pg**	**14 42 35.3**	**-0.4**
FSK				S	**Sg**	**14 42 37.4**	**-0.5**
	20μm,0.3s						

FSK	Fiskardo	0.12	40	P	Pg	14 42 35.4	-0.4
FSK				S	Sg	14 42 37.2	-0.7
FSK				AML	AML	14 42 37.8	
	comp=N,39546µm,0.4s						
FSK				AML	AML	14 42 37.9	
	comp=E,39536µm,0.2s						
KEF4	Livadi, Kephal	0.12	197	P	Pg	14 42 35.2	-0.5
KEF4				S	Sg	14 42 37.6	-0.2
	comp=E,478µm,0.2s						
KEF4	Livadi, Kephal	0.12	197	P	Pg	14 42 35.4	-0.4
KEF4				S	Sg	14 42 37.7	-0.1
DMLN	Damoulianata-K	0.15	209	P	Pg	14 42 35.8	-0.4
DMLN				S	Sg	14 42 38.5	-0.2
	comp=E,36µm,0.4s						
DMLN	Damoulianata-K	0.15	209	P	Pg	14 42 35.8	-0.4
DMLN				S	Sg	14 42 38.6	-0.1
LXRA	Lixouri, Kepha	0.17	188	P	Pg	14 42 36.4	-0.1
LXRA				S	Sg	14 42 39.7	+0.6
KEF3	Kipouria, Keph	0.19	209	P	Pg	14 42 36.0	-0.9
KEF3				S	Sg	14 42 38.8	-0.9
	comp=E,53µm,0.2s						
KEF3	Kipouria, Keph	0.19	209	P	Pg	14 42 36.0	-0.9
KEF3				S	Sg	14 42 38.6	-1.1
ARGA	Argostoli. Kep	0.19	177	P	Pb	14 42 37.6	-0.8
ARGA				S	Sg	14 42 40.4	+0.6
VLS	Valsamata	0.22	153	P	Pg	14 42 37.0	-0.3
VLS				S	Sg	14 42 40.7	+0.3
	comp=E,17µm,0.3s						
VLS	Valsamata	0.22	153	P	Pg	14 42 37.0	-0.3
VLS				S	Sg	14 42 40.2	-0.3
VLS				AML	AML	14 42 41.0	
	comp=E,31458µm,0.2s						
VLS				AML	AML	14 42 41.1	
	comp=N,35113µm,0.3s						
PSDA	Pessada-Kefalo	0.27	160	P	Pg	14 42 38.1	-0.3
PSDA				S	Sg	14 42 42.6	+0.6
	comp=N,3µm,0.2s						
PSDA	Pessada-Kefalo	0.27	160	P	Pg	14 42 38.0	-0.3
PSDA				S	Sg	14 42 42.5	+0.4
EVGI	Lefkada island	0.29	31	P	Pg	14 42 38.4	-0.3
EVGI				S	Sg	14 42 43.4	+0.7
	comp=N,13µm,0.2s						
EVGI	Lefkada island	0.29	31	P	Pg	14 42 38.5	-0.3
EVGI				S	Sg	14 42 43.3	+0.7
DRAG	Dragano-Lefkad	0.32	15	P	Pg	14 42 38.9	-0.4
DRAG				S	Sb	14 42 44.7	-1.2
	comp=N,22µm,0.3s						
DRAG	Dragano-Lefkad	0.32	15	P	Pg	14 42 38.9	-0.4
DRAG				S	Sg	14 42 44.0	+0.3
NYDR	Nydri-Lefkada	0.39	28	P	Pg	14 42 39.9	-0.6
NYDR				S	Sg	14 42 46.0	+0.4
	comp=N,4µm,0.3s						
NYDR	Nydri-Lefkada	0.39	28	P	Pg	14 42 39.9	-0.6
NYDR				S	Sg	14 42 45.8	+0.2
LKD2	Lefkada island	0.44	20	P	Pg	14 42 40.9	-0.6
LKD2	Lefkada island	0.44	20	P	Pg	14 42 40.9	-0.6
LKD2				S	Sg	14 42 47.7	+0.3
LKD2				AML	AML	14 42 53.0	
	comp=N,3904µm,0.3s						
LKD2				AML	AML	14 42 53.0	
	comp=E,3549µm,0.3s						
TSLK	Tsoukalades, L	0.48	18	P	Pg	14 42 41.6	-0.5
TSLK				S	Sg	14 42 48.7	+0.2
	comp=E,3µm,0.5s						
TSLK	Tsoukalades, L	0.48	18	P	Pg	14 42 41.7	-0.4
TSLK				S	Sg	14 42 48.9	+0.4
TSLK				AML	AML	14 42 54.6	
	comp=E,6898µm,0.3s						
TSLK				AML	AML	14 42 54.9	
	comp=N,5510µm,0.4s						
LTHK	Lithakia	0.72	156	P	Pg	14 42 45.7	-1.0
LTHK				S	Sb	14 42 57.9	+0.7
	comp=N,4µm,0.4s						
LTHK	Lithakia	0.72	156	P	Pg	14 42 45.8	-0.9
LTHK				AML	AML	14 42 59.2	
	comp=N,9094µm,0.3s						
LTHK				AML	AML	14 43 03.1	
	comp=E,7360µm,0.5s						
VTN	Vitineika	0.72	128	P	Pg	14 42 46.6	-0.2
RLS	Riolos of Patr	0.85	111	P	Pg	14 42 48.5	-0.6
RLS	Riolos of Patr	0.85	111	P	Pg	14 42 48.4	-0.7
PVO	Paravola	0.87	73	P	Pg	14 42 49.2	-0.3
PVO				S	Sn	14 43 03.4	-0.1
	comp=E,2µm,0.5s						
PVO	Paravola	0.87	73	P	Pg	14 42 49.4	-0.1
PVO				AML	AML	14 43 08.7	
	comp=N,4872µm,0.5s						
PVO				AML	AML	14 43 09.4	
	comp=E,4127µm,0.5s						
DRO	Drossia	1.06	113	P	Pb	14 42 52.6	-0.6
EFP	Efpalio	1.13	87	P	Pb	14 42 53.1	-1.2
EFP				S	Sn	14 43 11.3	+1.2
	comp=E,2µm,0.7s						
EFP	Efpalio	1.13	87	P	Pb	14 42 53.1	-1.2
ANX	Ano Chora	1.16	79	P	Pb	14 42 54.1	-0.8
ANX	Ano Chora	1.16	79	P	Pb	14 42 54.4	-0.5
IGT	Igoumenitsa	1.17	355	P	Pb	14 42 54.5	-0.4
EVR	Evrytania	1.18	62	P	Pb	14 42 54.3	-1.0
EVR				AML	AML	14 43 20.7	
	comp=N,1238µm,0.7s						
EVR				AML	AML	14 43 22.0	
	comp=E,1284µm,0.7s						
LAKA	Lakka	1.20	96	P	Pb	14 42 54.5	-1.0
LAKA				S	Sn	14 43 12.9	+1.2
	comp=E,2µm,0.7s						
LAKA	Lakka	1.20	96	P	Pb	14 42 54.2	-1.2
LAKA				AML	AML	14 43 18.1	
	comp=E,4938µm,0.8s						
LAKA				AML	AML	14 43 23.6	
	comp=N,3400µm,0.6s						
TRIZ	Trizonia	1.26	90	P	Pn	14 42 55.3	-1.0
TRIZ				S	Sg	14 43 13.6	+0.2
	comp=N,390nm,0.6s						
TRIZ	Trizonia	1.26	90	P	Pn	14 42 55.2	-1.2
KLV	Kalavryta, Ach	1.37	103	P	Pn	14 42 57.3	-0.5
KEK	Kerkira	1.44	339	P	Pb	14 42 59.2	-0.4
MAKR	Makrakomi, Fth	1.45	63	P	Pn	14 42 59.2	+0.2
GUR	Goura	1.54	106	P	Pn	14 43 00.1	-0.2
AGG	Agios Georgios	1.60	65	P	Pb	14 43 01.7	-0.6
ITM	Ithomi	1.66	135	P	Pn	14 43 01.7	-0.1
THL	Klokotos Trika	1.70	45	P	Pb	14 43 04.0	0.0
FINES	FINESS Array B	23.36	7	P	P	14 47 40.9	0.0
	comp=N,0.7nm,0.4s,baz=188,slow=10,SNR=7.2						
NOA	NORSAR Array B	23.42	349	P	P	14 47 44.4	+2.8
	comp=N,0.9nm,0.9s,baz=161,slow=11,SNR=2.5						
TORD	Torodi Ar. Bea	30.15	219	P	P	14 48 48.1	+5.3
	comp=N,0.3nm,0.5s,baz=38,slow=12,SNR=2.5						
MKAR	Makanchi Array	45.24	59	P	P	14 50 49.9	-0.1
	comp=N,0.4nm,0.5s,baz=284,slow=6.7,SNR=6.3						
ZALV	Zalesovo Beam	45.59	48	P	P	14 50 53.0	+0.3
	comp=N,0.5nm,0.4s,baz=274,slow=8.2,SNR=3.7						

IDC ***20*** *14:50:02.9±1.4, 22°.28S×174°.26W, h0^{km}, mb3.9/6, mb1 4.3/7, mb1mx4.0/44, mbtmp4.0/7, ML5.5/1, MS3.0/1, Ms1 3.0/1, ms1mx2.4/38, Error ellipse: s-maj=64.9km s-min=23.4km az=159.0*

NOU ***20*** *14:50:06.6, 18°.80S×172°.84W, h240^{km}, mb4.4/10, Tonga Islands Region*

ISC 20 14:50:13.9±1.7**, 21°.2S**±0°.2×**174°.2W**±0°.2**, h100^{km}, n21, σ1^{s}22**/14**, mb3.9**/6**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGTI	Dogotuki	7.52	309	P	Pn	14 51 53.8	-7.2
AFI	Afiamalu	7.61	18	Pn	Pn	14 52 03.1	+0.8
	4.5nm,0.3s,baz=263,slow=3.7,SNR=8.6						
MSVF	Nonsavu	8.07	294	Pn	Pn	14 52 07.5	-1.1
	1.9nm,0.3s,baz=125,slow=15,SNR=25						
MSVF				LR	LR	14 54 42.0	
	comp=Z,102nm,20.3s,baz=38,slow=33						
MSVF	Nonsavu	8.07	294	P	Pn	14 52 08.9	+0.4
RAO	Raoul Island	8.69	202	P	Pn	14 52 43.0	+26
PINNC	Pines Island,	17.08	262	P	P	14 54 08.2	+1.5
YATNC	Mamie plateau,	17.59	264	P	Pn	14 54 13.7	+0.9
DZM	Mont Dzumac	18.00	264	P	Pn	14 54 16.6	-1.3
	0.8nm,0.3s,baz=55,slow=22,SNR=8.0						
DZM	Mont Dzumac	18.00	264	P	Pn	14 54 18.0	+0.1
NOUC	Port Laguerre	18.14	264	P	Pn	14 54 20.1	+0.7
QRZ	Quartz Range	22.57	207	P	P	14 55 11.1	+5.2
KHZ	Kahutara	23.52	203	P	P	14 55 19.3	+4.3
RPZ	Rata Peaks	25.58	205	P	P	14 55 38.0	+4.3
ASAR	Alice Springs	47.81	257	P	P	14 58 41.0	-0.7
	0.7nm,0.3s,baz=97,slow=7.5,SNR=6.5						
ASAR				PcP	PcP	15 00 09.9	+0.8
	0.7nm,0.5s,baz=113,slow=3.8,SNR=4.5						
WRA	Warramunga Arr	48.01	262	P	P	14 58 41.9	-1.4
	1.0nm,0.5s,baz=91,slow=7.9,SNR=8.1						
FITZ	Fitzroy Crossi	56.44	262	P	P	14 59 46.4	+0.8
	1.1nm,0.5s,baz=97,slow=24,SNR=2.0						
NVAR	Mina Array Bea	79.15	41	P	P	15 02 14.1	+6.1
	1.7nm,0.8s,baz=224,slow=8.0,SNR=8.4						
TXAR	Lajitas Array	84.48	56	P	P	15 02 41.7	+5.7
	0.3nm,0.9s,baz=204,slow=4.0,SNR=2.5						
ILAR	Eielson Array	88.25	11	P	P	15 03 02.4	+8.8
	0.7nm,1.0s,baz=214,slow=8.9,SNR=4.3						
AKASG	Malin Array Be	145.28	334	PKPbc	PKiKP	15 09 43.0	-0.7
	1.6nm,0.3s,baz=43,slow=4.5,SNR=11						
BRTR	Keskin Array B	149.90	314	PKPbc	PKPab	15 09 56.5	-2.3
	0.7nm,0.5s,baz=148,slow=4.6,SNR=4.3						

IDC ***20*** *14:50:38.0±0.5, 0°.99N×127°.59E, h0^{km}, mb4.6/29, mb1 4.6/32, mb1mx4.5/65, mbtmp4.6/32, ML4.2/3, MS3.9/22, Ms1 3.9/22, ms1mx3.8/30, Error ellipse: s-maj=18.1km s-min=10.7km az=81.0*

MOS ***20*** *14:50:38.9±0.9, 1°.09N×127°.45E, h17^{km}, mb5.1/34, Error ellipse: s-maj=13.0km s-min=6.3km az=111.1*

NEIC ***20*** *14:50:40.3±1.3, 1°.00N±0°.08×127°.48E±0°.08, h10^{km}±1^{km}, mb5.1/47, Error ellipse: s-maj=15.5km s-min=12.1km az=40.0*

DJA ***20*** *14:50:41.9±0.2, 1°N±2°×12°8E±°, h10^{km}, M4.7/45, mb4.8/45, mB5.3/27, MLv4.8/17, Mw(mB)4.7/27, MwMwp5.1/5, Mwp5.3/5*

GCMT ***20*** *14:50:42.3±0.2, 1°.11N±0°.02×127°.48E±0°.01, h12^{km}, MW5.0/111, Moment Tensor Solution. s44,c52; s111,c176; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.63±.08; $M_{\theta\theta}$-0.37±.07; $M_{\phi\phi}$4.00±.07; $M_{r\theta}$0.27±.28; $M_{\theta\phi}$-0.21±.06; $M_{\phi r}$-0.36±.21; Best double couple: $M_0$3.84800×10^{16} NP1:ϕ_s182.00000°,δ42.00000°, λ-84.00000°. NP2:ϕ_s353.00000°,δ48.00000°, λ-96.00000°. Principal axes: T 4.0280, Plg3.0000°, Azm87.0000°; N -0.3600, Plg4.0000°, Azm357.0000°; P -3.6670, Plg85.0000°, Azm210.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

KLM ***20*** *14:50:46, 1°.03N×127°.77E, h79^{km}, mb5.0*

ISC 20 14:50:43.2±0.3**, 1°.04N**±0°.04×**127°.51E**±0°.05**, h35^{km}, n267, σ2^{s}21**/270**, mb4.9**/109**, MS4.1**/35**, 11C-1D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBMI	Labuha	1.67	180	P	Pn	14 51 09.1	-0.9
SGSI	Sangihe	3.29	323	P	Pn	14 51 35.1	+2.8
SANI	Sanana	3.43	206	P	Pn	14 51 33.0	-1.2
SANI	Sanana	3.43	206	P	Pn	14 51 32.9	-1.3
KMSI	Cibinong	3.56	263	P	Pn	14 51 36.2	+0.2
SWI	Sorong	4.20	117	P	Pn	14 51 46.4	+1.6
SWI	Sorong	4.20	117	P	Pn	14 51 46.2	+1.4
SIJI	Sorong	4.21	117	Pn	Pn	14 51 44.0	-0.9
	7.5nm,0.3s,baz=129,slow=23,SNR=30						
SIJI				Sn	Sn	14 52 34.2	+1.2
	3.4nm,0.3s,baz=48,slow=23,SNR=1.3						
SIJI				LR	LR	14 52 56.1	
	comp=Z,1µm,18.9s,baz=300,slow=34						
GTOI	Gorontalo	4.52	265	P	Pn	14 51 50.8	+1.6
MSAI	Masohi	4.58	162	P	Pn	14 51 52.7	+2.6
AAI	Ambon	4.75	172	P	Pn	14 51 54.8	+2.5
AAI	Ambon	4.75	172	P	Pn	14 51 55.5	+3.2
LUWI	Luwuk	5.17	246	P	Pn	14 52 00.3	+2.1
	2.6nm3µm289nm,0.9s						
LUWI	Luwuk	5.17	246		Pn	14 51 59.3	+1.1
MRSI	Marisa	5.60	264	P	Pn	14 52 04.2	+0.2
	0.7nm5µm2µm180nm,0.6s						
FAKI	Fak Fak	6.16	130		Pn	14 52 13.8	+2.1
APSI	Ampana	6.17	252	P	Pn	14 52 13.5	+1.5
	0.7nm2µm2µm168nm,0.8s						
TOLI2	Tolitoli	6.73	271	Pn	Pn	14 52 19.6	0.0
BUKP	Musuan	7.22	340	⇑eP	Pn	14 52 26.1	-0.2
MPSI	Mapaga	7.64	265	P	Pn	14 52 33.8	+1.6
	0.2nm3µm1µm61nm,0.7s						
TTSI	Tana Toraja	8.69	242	P	Pn	14 52 45.8	-0.8
	1µm98nm,0.8s						
BNSI	Bone	9.16	234	P	Pn	14 52 52.7	-0.3
	2µm118nm,0.7s						
SPSI	Sidrap Palu	9.20	237	P	Pn	14 52 53.7	+0.2
	2µm117nm,0.7s						
I39PW	PALAU INFRASON	9.53	47	*i*		15 50 10.0	
	baz=227,slow=312,SNR=2.5						
BKSI	Bulukumba	9.72	229	P	Pn	14 53 02.6	+2.0
	1µm60nm,0.7s						
KAPI	Kappang	9.81	232	Pn	Pn	14 53 02.8	+0.9
	3.8nm,0.3s,baz=110,slow=1.5,SNR=12						
KAPI	Kappang	9.81	232	P	Pn	14 53 02.0	+0.1
KAPI	Kappang	9.81	232	Pn	Pn	14 53 02.0	+0.1
KAPI	Kappang	9.81	232	P	Pn	14 53 04.4	+2.5
BSSI	Bau Bau, Buton	10.00	224	P	Pn	14 53 05.1	+0.6
	584nm26nm,1.0s						
EDFI	Ende, Flores	11.32	211	P	Pn	14 53 23.8	+1.1
	24nm,1.2s						
SPMM	Sapulut	11.62	288	P	Pn	14 53 31.0	+4.3
KKM	Kota Kinabalu	12.32	294		Pn	14 53 38.7	+2.4
BBKI	Banjar Baru	13.43	250	P	Pn	14 53 53.3	+1.8
	23nm,1.0s						
JAY	Jayapura	13.66	105	LR	LR	14 59 24.5	
	comp=Z,2µm,19.4s,baz=306,slow=39						
MTN	Manton Dam	14.26	166	P	Pn	14 54 02.7	-0.1
	baz=14,SNR=7.9						
MTN	Manton Dam	14.26	166	P	Pn	14 54 05.5	+2.8
MTN	Manton Dam	14.26	166	P	Pn	14 53 53.4	-9.3
	30nm,0.9s						
LQP	Lukban	14.27	336	⇑eP	P	14 54 06.4	-3.5
TWSI	Taliwang, Sumb	14.37	227	P	P	14 54 07.0	-3.8
	453nm28nm,1.0s						
SRBI	Singaraja	15.25	233	P	P	14 54 21.1	+0.5
	92nm,1.0s						
SBUM	Sibu	15.35	275	P	P	14 54 24.0	+2.3
SBUM	Sibu	15.35	275	P	P	14 54 21.7	+0.1
KMMI	Kalianget	15.72	239	P	P	14 54 27.0	+1.2
	2µm193nm,1.1s						
STKI	Sintang	16.06	267	P	P	14 54 27.6	-2.0
	6µm22nm,1.3s						
JAGI	Jajag, Banyuwa	16.33	234		Pn	14 54 29.4	-0.6
JAGI				IAmb	IAmb	14 54 39.7	
	comp=Z,138nm,1.1s						
KNRA	Kununurra	16.66	176	P	Pn	14 54 32.6	-1.5
	baz=16,SNR=12						
KNRA	Kununurra	16.66	176	Pn	Pn	14 54 32.6	-1.5
GMJI	Gumukmas	16.80	236	P	P	14 54 36.5	-1.3
	comp=Z,69nm,2.1s						
KSM	Kuching	17.20	272	P	P	14 54 44.0	+1.7
KSM	Kuching	17.20	272	Pn	Pn	14 54 39.6	-1.4
NGJI	Ngawi	18.06	242	P	P	14 54 55.9	+4.2
	comp=Z,41nm,1.0s						
PCJI	Pacitan	18.69	240	P	Pn	14 55 01.6	+2.4
	comp=Z,4µmcomp=Z,128nm,1.1s						
FITZ	Fitzroy Crossi	19.11	185	P	P	14 55 01.4	-1.8
	comp=Z,0.5nm,0.3s,baz=4.7,slow=6.1,SNR=12						
FITZ	Fitzroy Crossi	19.11	185	P	P	14 55 01.5	-1.7
	baz=19,SNR=12						
GUMO	Guam	21.23	53	LR	LR	15 03 06.6	
	comp=Z,852nm,19.2s,baz=242,slow=35						
LEM	Lembang	21.34	248	LR	LR	15 05 45.8	
	comp=Z,395nm,19.5s,baz=30,slow=42						
COEN	Coen	21.52	134	P	P	14 55 30.1	+0.7
COEN				IAmb	IAmb	14 55 38.1	
	comp=Z,47nm,1.4s						
WB0	Warramunga Arr	21.75	162	P	P	14 55 31.2	-0.7
WB0				IAmb	IAmb	14 55 35.9	
	comp=Z,208nm,1.4s						
WRAB	Tennant Creek	21.90	163	*ce*P	P	14 55 33.0	-0.4
WRAB				pmax	pmax		
	comp=Z,162nm,1.7s						
WRAB	Tennant Creek	21.90	163	P	P	14 55 33.0	-0.4
WRAB				IAmb	IAmb	14 55 37.3	
	comp=Z,158nm,1.4s						
WRAB	Tennant Creek	21.90	163	P	P	14 55 33.5	+0.1
WRA	Warramunga Arr	21.90	163	P	P	14 55 33.7	+0.2
	comp=Z,31nm,0.6s,baz=340,slow=11,SNR=120						
WRA				LR	LR	15 04 57.4	
	comp=Z,278nm,20.6s,baz=5.0,slow=39						
WRA	Warramunga Arr	21.90	163	P	P	14 55 32.1	-1.4
WB2	Warramunga Arr	21.91	163	P	P	14 55 32.8	-0.8
WB2				IAmb	IAmb	14 55 37.4	
	comp=Z,147nm,1.3s						
CBJI	Citeko	21.91	250	P	P	14 55 34.5	+0.8
WR0	Warramunga Arr	21.98	162	P	P	14 55 34.0	-0.4
WR0				IAmb	IAmb	14 55 42.0	
	comp=Z,88nm,1.1s						
DBJI	Dramaga	22.05	250	P	P	14 55 39.8	+4.6
	comp=Z,41µmcomp=Z,51nm,1.1s						
PMG	Port Moresby	22.15	118	LR	LR	15 05 51.7	
	comp=Z,1µm,20.1s,baz=318,slow=41						
DSRI	Dabo	22.98	266	P	P	14 55 46.9	+1.8
	comp=Z,485nmcomp=Z,12nm,1.3s						
YULB	Yu-li	23.02	345	P	P	14 55 45.0	-0.3
YULB				IAmb	IAmb	14 55 51.2	
	comp=Z,35nm,1.0s						
TPUB	Ta-pu	23.11	344	P	P	14 55 45.1	-1.2
MBWA	Marble Bar	23.34	199	P	P	14 55 48.1	-0.4
KLSI		23.46	256	P	P	14 55 51.9	+2.1
	comp=Z,9.3nm,1.0s						
MYKOM	Kota Tinggi	23.66	272	P	P	14 55 53.0	+1.2
PSA00	Pilbara Seismi	23.69	198	P	P	14 55 51.2	-0.7
PSA00				IAmb	IAmb	14 55 54.2	
	comp=Z,28nm,1.0s						
PSA00	Pilbara Seismi	23.69	198	P	P	14 55 51.3	-0.7
PSA00				IAmb	IAmb	14 55 54.2	
	comp=Z,22nm,1.2s						
KASI	Kota Agung	23.89	254	P	P	14 55 57.5	+3.6
	comp=Z,1µmcomp=Z,116nm,1.1s						
MDSI	Maura Dua	23.95	257	P	P	14 55 57.1	+2.6
	comp=Z,17nm,1.2s						
YHNB	Yeheng	24.23	346	P	P	14 55 57.5	+0.5
QIS	Mount Isa	24.52	152	P	P	14 55 59.0	-0.6
	baz=24,SNR=8.7						
QIS	Mount Isa	24.52	152	P	P	14 56 01.8	+2.2
	comp=Z,47nm,1.4s						
QIZ	Qiongzhong	24.89	317	P	P	14 56 04.3	+1.3
QIZ				S	S	15 00 27.0	+2.9
QIZ				pmax	pmax		
	comp=Z,32nm,1.4s						
QIZ				pmax	pmax		
	comp=Z,340nm,2.4s						
QIZ				LR	LR		
	comp=N,620nm,19.3s						
QIZ				LR	LR		
	comp=E,490nm,17.6s						
QIZ				LR	LR		
	comp=Z,410nm,29.2s						
QIZ	Qiongzhong	24.89	317	P	P	14 56 02.7	-0.3
QIZ				IAmb	IAmb	14 56 05.8	
	comp=Z,72nm,1.4s						
AS31	Alice Springs	25.33	166	P	P	14 56 06.4	-0.6
AS31				IAmb	IAmb	14 56 13.1	
	comp=Z,19nm,1.1s						
ASAR	Alice Springs	25.33	166	P	P	14 56 06.5	-0.5
	comp=Z,20nm,0.8s,baz=343,slow=7.4,SNR=91						
ASAR				S	S	15 00 39.2	+8.1
	comp=Z,1.4nm,0.9s,baz=349,slow=19,SNR=5.0						
MASI	Maura Aman, Be	25.60	261	P	P	14 56 12.6	+3.0
	comp=Z,122nm,1.1s						
JOW	Kunigami	25.65	2	P	P	14 56 11.9	+2.1
	comp=Z,45nm,0.8s,baz=190,slow=12,SNR=8.3						
JOW				LR	LR	15 05 57.0	
	comp=Z,295nm,21.0s,baz=192,slow=36						
WRKA	Warakurna	25.94	178	P	P	14 56 12.0	-0.4
	baz=26,SNR=13						
WRKA	Warakurna	25.94	178	P	P	14 56 13.6	+1.1
	comp=Z,42nm,1.1s						
PDSI	Padang	27.12	266	P	P	14 56 26.6	+3.3
	comp=Z,17nm,0.8s						
PPI	Padang Panjang	27.15	267	P	P	14 56 25.6	+2.1
PSI	Prapat	28.62	274	P	P	14 56 36.3	-0.6
	comp=Z,11nm,0.9s,baz=59,slow=3.9,SNR=11						
MEEK	Meekatharra	28.82	197	P	P	14 56 38.2	-0.1
	baz=29,SNR=3.2						
JCJ	Chichijima	29.49	27	LR	LR	15 06 05.4	
	comp=Z,162nm,21.0s,baz=220,slow=31						
OOD	Oodnadatta	29.73	165	P	P	14 56 48.7	+2.4
	comp=Z,14nm,1.1s						
FORT	Forrest	31.65	179	P	P	14 57 01.7	-1.5
FORT				IAmb	IAmb	14 57 18.4	
	comp=Z,25nm,0.8s						
FORT	Forrest	31.65	179	P	P	14 57 06.1	+2.9
	comp=Z,31nm,0.8s						
MORW	Morawa	31.89	199	P	P	14 57 05.0	-0.3
MORW				IAmb	IAmb	14 57 31.4	
	comp=Z,18nm,1.2s						
NJ2	Nanjing	31.91	346	*e*P	P	14 57 07.3	+1.8
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
GYA	Guiyang	32.26	323	⇑P	P	14 57 09.6	+0.8
GYA				pmax	pmax		
	comp=Z,13nm,0.5s						
GYA				LR	LR		
	comp=Z,210nm,18.8s						
LCRK	Leigh Creek	32.93	163	P	P	14 57 17.6	+3.1
	comp=Z,22nm,0.8s						
CMAR	Chiang Mai Arr	32.95	303	P	P	14 57 15.2	+0.4
	comp=Z,3.6nm,0.9s,baz=122,slow=6.8,SNR=14						
KMI	Kunming	33.84	317	⇑P	P	14 57 26.8	+4.0
KMI				PP	PP	14 58 47.5	+7.7
KMI				S	S	15 02 48.5	+3.5
KMI				sS	sS	15 03 03.8	+1.9
KMI				SS	SS	15 05 06.3	-5.9
KMI				pmax	pmax		
	comp=Z,14nm,1.1s						
KMI				LR	LR		
	comp=N,420nm,16.5s						
KMI				LR	LR		
	comp=E,380nm,20.2s						
KMI				LR	LR		
	comp=Z,290nm,18.3s						
JHS	Saijyo	34.19	8	P	P	14 57 25.8	+0.4
JHS				IAmb	IAmb	14 57 39.4	
	comp=Z,57nm,1.5s						
BBOO	Buckleboo	34.62	167	P	P	14 57 28.4	-0.8
	baz=35,SNR=20						
BBOO	Buckleboo	34.62	167	P	P	14 57 28.2	-1.0
BBOO				IAmb	IAmb	14 57 31.2	
	comp=Z,26nm,1.1s						
EIDS	Eidsvold	34.78	141	P	P	14 57 30.2	-0.4
	baz=35,SNR=4.1						
EIDS	Eidsvold	34.78	141	P	P	14 57 30.0	-0.7
EIDS				IAmb	IAmb	14 57 38.2	
	comp=Z,19nm,1.2s						
JWT	Wachi	34.85	11	P	P	14 57 31.5	+0.4
JWT				IAmb	IAmb	14 57 37.9	
	comp=Z,20nm,0.8s						
TJN	Taejon	35.16	360	*i* P	P	14 57 33.9	+0.2
STKA	Stephens Creek	35.36	159	P	P	14 57 34.8	-0.7
	comp=Z,8.1nm,0.7s,baz=334,slow=6.9,SNR=16						
STKA				LR	LR	15 13 39.5	
	comp=Z,110nm,18.6s,baz=1.7,slow=39						
STKA	Stephens Creek	35.36	159	P	P	14 57 35.7	+0.2
	baz=35,SNR=16						
STKA	Stephens Creek	35.36	159	P	P	14 57 35.4	-0.1
STKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
STKA	Stephens Creek	35.36	159	P	P	14 57 35.4	-0.1
HTT	Hallett	35.94	164	P	P	14 57 40.2	-0.3
	baz=36,SNR=4.0						
KSRS	Korea Array	36.24	1	P	P	14 57 43.1	+0.2
	comp=Z,4.2nm,0.7s,baz=177,slow=9.5,SNR=16						
KSRS				LR	LR	15 15 39.1	
	comp=Z,98nm,19.2s,baz=174,slow=41						
MAJO	Matsushiro	36.69	14	*i* P	P	14 57 46.8	-0.1
MAJO				pmax	pmax		
	comp=Z,25nm,0.9s						
MAJO	Matsushiro	36.69	14	P	P	14 57 47.0	+0.2
MAJO				IAmb	IAmb	14 57 50.8	
	comp=Z,31nm,0.9s						
MAT	Matsushiro	36.69	14	P	P	14 57 46.0	-0.9
MJAR	Matsushiro Arr	36.69	14	P	P	14 57 45.9	-1.0
	comp=Z,12nm,0.8s,baz=190,slow=9.0,SNR=18						
MJAR				LR	LR	15 12 10.3	
	comp=Z,293nm,18.9s,baz=205,slow=35						
MJAR	Matsushiro Arr	36.69	14	P	P	14 57 47.0	+0.1
MJAR				pmax	pmax		
	comp=Z,9.0nm,1.1s						
MJAR	Matsushiro Arr	36.69	14	P	P	14 57 47.0	+0.1
XAN	Xi'an	37.16	334	P	P	14 57 49.3	-1.6
XAN				pP	pP	14 57 59.8	-1.4
XAN				sP	sP	14 58 04.1	-1.4
XAN				PP	PP	14 59 09.0	-7.1
XAN				S	S	15 03 32.4	-2.9
XAN				sS	sS	15 03 45.8	-6.5
XAN				pmax	pmax		
	comp=Z,13nm,1.2s						
XAN				pmax	pmax		

	comp=Z,290nm,4.6s						
XAN				LR	LR		
	comp=N,140nm,16.3s						
XAN				LR	LR		
	comp=E,150nm,17.0s						
XAN				LR	LR		
	comp=Z,250nm,16.8s						
ARMA	Armidale	38.81	146	P	P	14 58 03.7	-1.4
	baz=39,SNR=4.2						
ARMA	Armidale	38.81	146	P	P	14 58 04.4	-0.6
BJI	Beijing	40.16	346	P	P	14 58 20.3	+4.3
BJI				S	S	15 04 20.0	-0.4
BJI				pmax	pmax		
	comp=Z,49nm,1.1s						
LZH	Lanzhou	41.21	330	eP	P	14 58 23.8	-1.1
LZH				pP	pP	14 58 28.0	-7.3
LZH				PP	PcP	15 00 14.8	-8.8
LZH				eS	S	15 04 39.8	+3.4
LZH				sS	sS	15 05 01.9	+8.4
LZH				SS	SnSn	15 08 02.1	+12
LZH				pmax	pmax		
	comp=Z,22nm,1.3s						
LZH				pmax	pmax		
	comp=Z,360nm,4.9s						
LZH				LR	LR		
	comp=N,670nm,16.3s						
LZH				LR	LR		
	comp=E,420nm,14.1s						
LZH				LR	LR		
	comp=Z,690nm,17.0s						
VLA	Vladivostok	42.08	5	i P	P	14 58 32.5	+0.8
VLA				pmax	pmax		
	comp=Z,21nm,0.9s						
SHL	Shillong	42.12	308	P	P	14 58 31.2	-1.3
SHL				pmax	pmax		
	comp=Z,20nm,0.7s						
SHL	Shillong	42.12	308	P	P	14 58 31.2	-1.3
SHL				IAmb	IAmb	14 58 36.2	
	comp=Z,20nm,0.7s						
HHC	Hu-ho-hao-te	42.18	342	eP	P	14 58 34.3	+1.6
HHC				pmax	pmax		
	comp=Z,19nm,1.2s						
HHC				pmax	pmax		
	comp=Z,200nm,6.6s						
USRK	Ussuriysk Ar.	43.16	5	P	P	14 58 39.8	-0.6
	comp=Z,5.0nm,0.8s,baz=182,slow=3.9,SNR=6.8						
USRK				LR	LR	15 18 22.9	
	comp=Z,86nm,18.8s,baz=162,slow=38						
MDJ	Mudanjiang	43.43	2	P	P	14 58 44.4	+1.8
MDJ				pmax	pmax		
	comp=Z,11nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,350nm,4.3s						
DZM	Mont Dzumac	44.38	124	eLR	LR	15 11 09.0	
	comp=Z,360nm,25.1s						
ASAJ	Asahikawa	44.94	15	P	P	14 58 54.8	0.0
	comp=Z,4.1nm,0.9s,baz=243,slow=10.0,SNR=7.3						
GTA	Gaotai	45.79	330	⇓P	P	14 59 01.9	+0.1
GTA				pP	pP	14 59 11.3	-1.0
GTA				sP	sP	14 59 15.3	-1.2
GTA				S	S	15 05 35.9	-7.5
GTA				sS	sS	15 05 51.4	-9.3
GTA				pmax	pmax		
	comp=Z,5.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,420nm,7.4s						
GTA				LR	LR		
	comp=N,130nm,15.5s						
GTA				LR	LR		
	comp=E,140nm,16.7s						
GTA				LR	LR		
	comp=Z,230nm,17.9s						
TAPN	Taplejung	46.25	308	eP	P	14 59 07.7	+1.9
	comp=Z,18nm,0.8s						
ODAN	Odare	46.28	307	eP	P	14 59 07.7	+1.7
	comp=Z,27nm,0.8s						
RAMN	Ramite	46.95	307	eP	P	14 59 13.2	+2.0
	comp=Z,12nm,0.7s						
JIRN	Jiri	47.59	308	eP	P	14 59 18.1	+1.7
	comp=Z,28nm,0.9s						
YSS	Yuzh-Sakhalins	47.63	14	i P	P	14 59 15.9	+0.1
YSS				pmax	pmax		
	comp=Z,37nm,1.3s						
GUN	Gumba	47.95	308	eP	P	14 59 20.9	+1.8
	comp=Z,44nm,0.9s						
KLR	Kul'dur	48.14	4	P	P	14 59 19.3	-0.5
	comp=Z,3.5nm,0.8s,baz=192,slow=4.8,SNR=7.8						
KLR	Kul'dur	48.14	4	ceP	P	14 59 18.6	-1.2
KLR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
PKI	Pulchoki	48.17	307	eP	P	14 59 22.1	+1.3
	comp=Z,24nm,1.2s						
PKIN	Phulchoki	48.19	307	eP	P	14 59 22.6	+1.7
	comp=Z,11nm,0.8s						
KKN	Kakani	48.37	307	eP	P	14 59 23.8	+1.6
	comp=Z,24nm,1.0s						
DMN	Daman	48.43	307	eP	P	14 59 24.6	+1.8
	comp=Z,41nm,1.1s						
NFK	Norfolk Island	48.87	131	P	P	14 59 22.6	-3.2
	baz=49,SNR=3.1						
GKN	Gorkha	48.98	307	eP	P	14 59 28.4	+1.6
	comp=Z,28nm,0.9s						
KOLN	Koldanda	49.71	306	eP	P	14 59 34.0	+1.5
	comp=Z,68nm,0.8s						
DANN	Dangsing	49.83	307	eP	P	14 59 35.2	+1.8
	comp=Z,62nm,0.8s						
ULN	Ulaanbaatar	49.90	342	ceP	P	14 59 33.6	+0.1
ULN				pmax	pmax		
	comp=Z,30nm,1.3s						
SONM	Songino Array	50.08	342	P	P	14 59 34.9	+0.1
	comp=Z,4.3nm,0.8s,baz=153,slow=8.0,SNR=22						
SONM				LR	LR	15 21 39.8	
	comp=Z,134nm,19.6s,baz=155,slow=37						
SONM	Songino Array	50.08	342	P	P	14 59 34.1	-0.7
SONM				pmax	pmax		
	comp=Z,25nm,1.3s						
SONM	Songino Array	50.08	342	P	P	14 59 34.1	-0.7
SONM				IAmb	IAmb	14 59 41.3	
	comp=Z,25nm,1.3s						
PYUN	Piuthan	50.34	306	eP	P	14 59 38.4	+1.2
	comp=Z,78nm,0.9s						
HYB	Hyderabad	50.79	292	i P	P	14 59 40.0	-0.6
ZEA	Zeya	52.52	360	eP	P	14 59 52.5	-0.3
ZEA				e		15 00 02.4	
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ZAK	Zakamensk	53.30	341	eP	P	15 00 02.7	+3.9
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.4s						
MOY	Mondy	55.16	340	eP	P	15 00 17.4	+5.1
MOY				pmax	pmax		
	comp=Z,46nm,1.7s						
WMQ	Urumqi	55.37	326	eP	P	15 00 14.8	+0.9
WMQ				pP	sP	15 00 26.4	-2.3
WMQ				sP	pP	15 00 34.1	+10
WMQ				S	S	15 08 02.5	+6.5
WMQ				pmax	pmax		
	comp=Z,110nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,200nm,6.1s						
WMQ				LR	LR		
	comp=E,340nm,20.3s						
WMQ				LR	LR		
	comp=Z,200nm,21.7s						
PETK	Petropavlovsk-	57.63	21	P	P	15 00 29.5	-0.2
	comp=Z,3.3nm,0.6s,baz=196,slow=9.9,SNR=3.7						
PETK				LR	LR	15 25 24.1	
	comp=Z,66nm,19.9s,baz=216,slow=36						
DGZ	Jazzator, Alta	59.30	331	i P	P	15 00 41.7	0.0
DGZ				pmax	pmax		
	comp=Z,33nm,1.2s						
SHLS	Shalkode	59.91	321	eP	P	15 00 45.4	-0.6
SHLS				pmax	pmax		
	comp=Z,17nm,0.8s						
UZB	Uzynbulak	60.18	321	eP	P	15 00 48.7	+0.8
UZB				pmax	pmax		
	comp=Z,17nm,0.8s						
MK31	Makanchi Array	60.20	326	i P	P	15 00 48.4	+0.6
MK31	Makanchi Array	60.20	326	P	P	15 00 47.5	-0.3
MK31				IAmb	IAmb	15 00 53.5	
	comp=Z,28nm,0.8s						
MKAR	Makanchi Array	60.20	326	P	P	15 00 47.8	0.0
	comp=Z,13nm,0.9s,baz=121,slow=8.3,SNR=44						
MKAR				LR	LR	15 29 37.8	
	comp=Z,164nm,18.2s,baz=113,slow=39						
MKAR	Makanchi Array	60.20	326	i P	P	15 00 47.7	0.0
MKAR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MKAR	Makanchi Array	60.20	326	P	P	15 00 47.9	+0.2
MAKZ	Makanchi	60.38	326	P	P	15 00 50.3	+1.3
MAKZ	Makanchi	60.38	326	P	P	15 00 49.4	+0.4
KSH	Kashi	60.49	316	P	P	15 00 51.8	+1.7
KSH				pP	pP	15 01 01.1	+0.3
KSH				S	S	15 09 01.3	-2.1
KSH				pmax	pmax		
	comp=Z,36nm,1.1s						
KSH				pmax	pmax		
	comp=Z,310nm,4.5s						
KPKS	Kokpek	60.55	321	eP	P	15 00 51.4	+1.1
KPKS				pmax	pmax		
	comp=Z,27nm,1.1s						
YAK	Yakutsk	60.86	1	eP	P	15 00 51.6	-0.3
YAK				e*PP	pP	15 01 00.6	-2.1
YAK				e		15 01 37.4	
YAK				e		15 03 14.7	
YAK				eS	S	15 09 08.8	+1.9
YAK				e*SS	sS	15 09 27.1	+2.4
YAK				e		15 10 44.2	
YAK				eSS	SS	15 13 08.8	+2.3
YAK				pmax	pmax		
	comp=Z,20nm,0.8s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,173nm,4.6s						
YAK				pmax	pmax		
	comp=E,110nm,4.0s						
YAK				pmax	pmax		
	comp=N,99nm,3.7s						
YAK				smax	smax		
	comp=E,83nm,2.4s						
YAK				smax	smax		
	comp=N,21nm,2.6s						
YAK				MLR	MLR		
	comp=Z,142nm,22.0s						
MDOK	Medeo	61.44	320	P	P	15 00 57.1	+0.6
ARXS	Arharly	61.46	321	eP	P	15 01 00.0	+3.5
BOOM	Boomskoye usch	61.85	319	P	P	15 01 00.8	+1.5
BOOM				pmax	pmax		
	comp=Z,32nm,1.2s						
BOOM	Boomskoye usch	61.85	319	P	P	15 01 00.8	+1.5
BOOM				IAmb	IAmb	15 01 05.0	
	comp=Z,32nm,1.2s						
KBK	Karagaybulak	62.58	319	P	P	15 01 08.0	+3.8
	SNR=16						
UCH	Uchtor	62.67	318	P	P	15 01 07.1	+2.0
	SNR=44						
CHMS	Chumysh	62.86	319	P	P	15 01 08.9	+3.1
	SNR=9.0						
AAK	Ala-Archa	62.87	319	P	P	15 01 07.3	+1.3
	comp=Z,10nm,0.9s,baz=130,slow=6.5,SNR=15						
AAK	Ala-Archa	62.87	319	P	P	15 01 07.8	+1.7
	SNR=11						
AAK	Ala-Archa	62.87	319	i P	P	15 01 07.8	+1.7
	SNR=16						
AAK	Ala-Archa	62.87	319	ceP	P	15 01 06.0	0.0
AAK				pmax	pmax		
	comp=Z,86nm,1.7s						
AAK	Ala-Archa	62.87	319	P	P	15 01 07.3	+1.3
AAK				IAmb	IAmb	15 01 13.6	
	comp=Z,18nm,1.1s						
USP	Ospenovka	63.14	319	P	P	15 01 12.5	+4.8
	SNR=14						
AML	Almayashu	63.18	318	P	P	15 01 09.9	+1.5
	SNR=46						
AML	Almayashu	63.18	318	i P	P	15 01 10.3	+1.8
	SNR=52						
ZAA0	Zalesovo Array	63.32	333	P	P	15 01 10.9	+2.3
ZAA0				IAmb	IAmb	15 01 13.7	
	comp=Z,28nm,1.4s						
ZALV	Zalesovo Beam	63.32	333	P	P	15 01 09.7	+1.1
	comp=Z,16nm,1.1s,baz=122,slow=5.6,SNR=18						
ZALV				LR	LR	15 31 16.0	
	comp=Z,79nm,19.8s,baz=134,slow=38						
ZALV	Zalesovo Beam	63.32	333	i P	P	15 01 11.6	+3.0
ZALV				pmax	pmax		
	comp=Z,16nm,1.1s						
ZALV	Zalesovo Beam	63.32	333	P	P	15 01 09.4	+0.8
EKS2	Erkin-Say	63.35	318	P	P	15 01 11.2	+1.9
	SNR=26						
KBL	Kabul	63.78	308	P	P	15 01 12.2	-0.1
KBL				pmax	pmax		
	comp=Z,35nm,0.9s						
KBL	Kabul	63.78	308	P	P	15 01 12.2	-0.1
GAR	Garm	64.31	313	P	P	15 01 16.4	+0.8
KURBB	Kurchatov Arra	64.41	328	P	P	15 01 15.3	-0.5
KURK	Kurchatov	64.41	328	ceP	P	15 01 15.4	-0.4
KURK				pmax	pmax		
	comp=Z,98nm,1.3s						
KURK	Kurchatov	64.41	328	P	P	15 01 15.7	-0.2
SEY	Seymchan	64.47	12	P	P	15 01 16.2	+0.3
	comp=Z,7.5nm,0.9s,baz=213,slow=8.2,SNR=8.1						
CHGR	Chuyangaron	65.04	313	P	P	15 01 20.7	+0.4
KK31	Karatay Array	65.72	318	P	P	15 01 24.7	+0.1
KKAR	Karatay Array	65.72	318	P	P	15 01 24.7	+0.1
KKAR	Karatay Array	65.72	318	P	P	15 01 24.6	+0.1
BRZS	Berezniki	67.32	325	eP	P	15 01 38.0	+3.4
BRZS				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HRA	Herat	69.14	307	P	P	15 01 45.5	-1.0
HRA				IAmb	IAmb	15 01 50.9	
	comp=Z,15nm,1.1s						
BVAR	Borovoye Array	69.99	327	P	P	15 01 51.8	+0.6
	comp=Z,6.1nm,0.9s,baz=185,slow=14,SNR=18						
BRVK	Borovoye	70.06	327	ceP	P	15 01 52.1	+0.5
BRVK				pmax	pmax		
	comp=Z,24nm,1.3s						
BRVK	Borovoye	70.06	327	P	P	15 01 52.0	+0.5
BRVK				IAmb	IAmb	15 01 57.3	
	comp=Z,21nm,1.1s						
WSAR	Wadi Sarin	70.22	294	P	P	15 01 54.2	+1.0
	comp=Z,6.9nm,0.9s,baz=114,slow=9.8,SNR=4.9						
TIXI	Tiksi	70.50	0	P	P	15 01 54.1	+0.1
	comp=Z,2.0nm,0.3s,baz=38,slow=3.0,SNR=3.2						
TIXI	Tiksi	70.50	0	ceP	P	15 01 52.8	-1.1
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.4s						
HATD	Hatta, Dubai	72.68	296	P	P	15 02 05.2	-2.9
MSFE	Esma-Masafi	72.72	296	P	P	15 02 10.5	+2.2
ASHO	Ashiyiah	72.73	295	P	P	15 02 10.8	+2.4
ALNE	Al Ain	72.94	295	i P	P	15 02 11.9	+2.3
	SNR=8.1						
FAQ	Al Faqa, Dubai	73.16	295	P	P	15 02 09.8	-1.1
GEYT	Alibeck	73.18	309	P	P	15 02 12.5	+1.7
	comp=Z,7.2nm,0.8s,baz=179,slow=7.4,SNR=6.9						
NRIK	Noril'sk	73.21	346	P	P	15 02 11.3	+1.1
	comp=Z,7.2nm,0.8s,baz=132,slow=8.8,SNR=9.6						
NRIK	Noril'sk	73.21	346	i P	P	15 02 10.3	+0.1
NRIK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ASUD	Al Ashush, Dub	73.39	295	i P	P	15 02 11.6	-0.5
	SNR=5.9						
SOCY	Socotra	73.68	282	P	P	15 02 11.7	-2.5
AB31	Akbulak array	74.72	321	i P	P	15 02 19.3	-0.1
ABKAR	Akbulak array	74.72	321	P	P	15 02 20.4	+1.0
AKTO	Aktyubinsk	76.24	322	P	P	15 02 30.6	+2.4
	comp=Z,4.2nm,0.7s,baz=109,slow=7.4,SNR=13						
AKTO	Aktyubinsk	76.24	322	P	P	15 02 29.3	+1.1
SVE	Sverdlovsk	76.65	329	eP	P	15 02 32.8	+2.5
SVE				pmax	pmax		
	comp=Z,17nm,1.1s						
ARU	Arti	77.61	328	P	P	15 02 35.7	-0.1
	comp=Z,0.5nm,0.3s,baz=163,slow=9.9,SNR=3.7						
ARU	Arti	77.61	328	i P	P	15 02 33.7	-2.1
ARU				pmax	pmax		
	comp=Z,8.0nm,1.0s						
VNDA	Vanda	80.68	173	P	P	15 02 51.1	-1.0
	comp=Z,1.7nm,0.9s,baz=322,slow=6.4,SNR=9.0						
VNDA	Vanda	80.68	173	P	P	15 02 50.6	-1.5
VNDA				pmax	pmax		
	comp=Z,7.0nm,1.2s						
VNDA	Vanda	80.68	173	P	P	15 02 50.6	-1.5
MAW	Mawson	81.52	200	P	P	15 02 55.6	-1.1
	comp=Z,3.0nm,0.9s,baz=360,slow=3.5,SNR=4.1						
MAW				LR	LR	15 37 45.6	
	comp=Z,47nm,20.2s,baz=58,slow=35						
MAW	Mawson	81.52	200	P	P	15 02 57.2	+0.4
MAW				pmax	pmax		
	comp=Z,1.0nm,1.0s						
MAW	Mawson	81.52	200	P	P	15 02 57.2	+0.4
RAYN	Ar Rayn	82.25	293	i P	P	15 03 02.5	+0.9
	SNR=16						
KIRV	Kirov	82.91	329	i P	P	15 03 05.2	+1.0
PPT	Papeete	83.56	108	LR	LR	15 36 21.2	
	comp=Z,112nm,20.9s,baz=204,slow=33						
PPT2	Papeete2	83.56	108	eLR	LR	15 29 20.2	
	comp=Z,330nm,28.5s						
GNI	Garni	83.80	310	i P	P	15 03 08.4	-1.1
GNI				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TBI	Tubuai	84.01	113	eLR	LR	15 29 38.2	
	comp=Z,380nm,36.2s						
IMAR	Indian Mountai	84.47	24	P	P	15 03 13.4	+1.3
ZEI	Tsey	84.60	313	eP	P	15 03 16.6	+3.1
ZEI				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KBZ	Khabaz	85.38	314	LR	LR	15 46 16.5	
	comp=Z,24nm,19.7s,baz=66,slow=39						
KBZ	Khabaz	85.38	314	i P	P	15 03 14.9	-2.2
KBZ				pmax	pmax		
	comp=Z,4.0nm,1.3s						
NEY	Neytrino	85.49	313	i P	P	15 03 18.5	+0.6
NEY				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KIV	Kislovodsk	85.55	314	eP	P	15 03 17.5	-0.6
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
TOLK	Toolik Lake Re	86.45	21	P	P	15 03 21.8	-0.2
KLMR	Klimovskoe	88.11	331	eP	P	15 03 27.9	-2.1
KLMR				e		15 06 55.7	
KLMR				pmax	pmax		
	comp=Z,15nm,1.5s						
KLMR	Klimovskoe	88.11	331	eP	P	15 03 28.0	-2.1
KLMR				AMP		15 03 29.0	
	comp=Z,15nm,1.5s						
KLMR				ePP	PP	15 06 55.8	-1.2
BMAR	Burnt Mountain	88.24	23		P	15 03 31.4	+0.8
OBN	Obninsk	89.69	325	i P	P	15 03 38.4	+0.8
OBN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,90nm,18.0s						
ASF	Jabal al Asfar	89.97	302	P	P	15 03 41.2	+1.6
	comp=Z,1.5nm,0.7s,baz=98,slow=3.8,SNR=3.1						
KMBO	Kilima Mbogo	90.28	269	LR	LR	15 40 30.7	
	comp=Z,86nm,22.0s,baz=94,slow=33						
QSPA	South Pole Qui	90.97	180	P	P	15 03 41.8	-1.7
BRTR	Keskin Array B	92.33	310	P	P	15 03 51.9	+1.4
	comp=Z,0.6nm,0.7s,baz=152,slow=6.5,SNR=2.8						
BRTR				LR	LR	15 50 58.3	
	comp=Z,16nm,21.2s,baz=98,slow=39						
TAOE	Nuku Hiva Isla	92.47	99	eLR	LR	15 33 22.3	
	comp=Z,429nm,26.6s						
ARCES	ARCESS Array B	93.22	340	P	P	15 03 55.2	+1.4
	comp=Z,12nm,1.1s,baz=15,slow=5.0,SNR=3.9						
ARCES				LR	LR	15 52 03.6	
	comp=Z,56nm,18.2s,baz=15,slow=40						
MNK	Minsk	94.75	325	i P	P	15 03 54.3	-6.8
MNK				i S	SKSac	15 14 28.8	-5.1
MNK				i PS	PS	15 16 25.4	-7.1
MNK				i SS	SS	15 21 31.9	-4.2
MNK				i SSS	SSS	15 25 14.0	
MNK				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MNK				pmax	pmax		
	comp=E,2.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,18nm,0.8s						
MNK				MLR	MLR		
	comp=E,24nm,27.0s						
MNK				MLR	MLR		
	comp=Z,108nm,19.0s						
MNK				MLR	MLR		
	comp=N,50nm,15.0s						
MNK	Minsk	94.75	325	i P	P	15 03 54.4	-6.7
	comp=E,2.0nm,0.9s						
MNK				i P	P	15 03 54.4	-6.7
	comp=N,18nm,0.8s						
MNK				i P	P	15 03 54.4	-6.7
	comp=Z,10.0nm,0.6s,baz=82						
MNK				i PP	PP	15 07 42.3	-7.3
MNK				i PPP	PPP	15 09 43.8	
MNK				i S	SKSac	15 14 28.9	-5.0
MNK				i PS	PS	15 16 25.4	-7.0
MNK				i SS	SS	15 21 31.9	-4.2
MNK				i SSS	SSS	15 25 14.0	
MNK				i LQ	LQ	15 37 34.8	
MNK				i LR	LR	15 42 56.1	
MNK				i LRM	MLR	15 46 37.2	
	comp=E,24nm,26.8s						
MNK				i LRM	MLR	15 46 50.6	
	comp=Z,108nm,19.2s						
MNK				i LRM	MLR	15 46 53.8	
	comp=N,50nm,15.3s						
MBAR	Mbarara	96.78	270	i P	P	15 04 07.5	-3.9
CLL	Collm	104.26	324	eP	Pdif	15 04 44.0	+0.2
CLL				ePP	PP	15 09 06.0	+4.1
TORD	Torodi Ar. Bea	124.46	287	PKP	PKiKP	15 09 39.3	-0.9
	comp=N,1.0nm,1.1s,baz=94,slow=2.8,SNR=2.6						

IDC 20 14:54:24.0±0.8**, 1°.08N**×**127°.51E, h0^{km}, mb3.8**/4**, mb1 3.9**/5**, mb1mx3.5**/61**, mbtmp3.7**/5**, ML2.9**/1**, Error ellipse: s-maj=17.8km s-min=9.6km az=37.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SIJI	Sorong	4.23	117	Pn	Pn	14 55 30.4	+0.6
	0.7nm,0.3s,baz=156,slow=20,SNR=1.8						
SIJI				Sn	Sn	14 56 20.7	+0.8
	0.6nm,0.3s,baz=199,slow=23,SNR=1.6						
WRA	Warramunga Arr	21.94	163	P	P	14 59 18.6	-0.7
	3.7nm,0.7s,baz=342,slow=10,SNR=7.5						
ASAR	Alice Springs	25.37	166	P	P	14 59 53.7	+0.6
	2.5nm,0.6s,baz=347,slow=9.7,SNR=8.4						
MKAR	Makanchi Array	60.17	326	P	P	15 04 33.7	+0.1
	0.3nm,0.6s,baz=115,slow=7.3,SNR=2.6						
KURBB	Kurchatov Arra	64.38	328	P	P	15 05 01.2	-0.5
	0.7nm,0.9s,baz=123,slow=6.8,SNR=1.4						

IDC 20 14:57:39.1±1.1**, 1°.03N**×**127°.41E, h0^{km}, mb3.9**/4**, mb1 4.1**/5**, mb1mx3.6**/42**, mbtmp3.9**/5**, ML3.2**/1**, Error ellipse: s-maj=64.2km s-min=19.7km az=61.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SIJI	Sorong	4.29	116	Pn	Pn	14 58 44.8	-0.9
	1.3nm,0.3s,baz=322,slow=22,SNR=4.6						
WRA	Warramunga Arr	21.93	162	P	P	15 02 34.2	0.0
	2.4nm,0.6s,baz=340,slow=11,SNR=13						
ASAR	Alice Springs	25.35	166	P	P	15 03 08.3	+0.3
	3.0nm,0.8s,baz=338,slow=8.5,SNR=12						
MKAR	Makanchi Array	60.15	326	P	P	15 07 49.0	+0.3
	1.2nm,0.7s,baz=120,slow=7.5,SNR=7.8						
KURBB	Kurchatov Arra	64.36	328	P	P	15 08 16.4	-0.4
	1.5nm,0.7s,baz=129,slow=6.2,SNR=8.9						

IDC 20 14:59:57.3±0.8**, 0°.97N**×**127°.47E, h0^{km}, mb3.3**/4**, mb1 3.4**/5**, mb1mx3.3**/36**, mbtmp3.3**/5**, ML2.6**/1**, Error ellipse: s-maj=30.2km s-min=12.6km az=54.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SIJI	Sorong	4.21	116	Pn	Pn	15 01 02.8	-0.1
	0.4nm,0.3s,baz=229,slow=19,SNR=1.1						
WRA	Warramunga Arr	21.84	162	P	P	15 04 51.4	-0.2
	0.4nm,0.7s,baz=340,slow=11,SNR=3.8						
ASAR	Alice Springs	25.27	166	P	P	15 05 25.9	+0.4
	0.4nm,0.6s,baz=344,slow=10.0,SNR=1.7						
MKAR	Makanchi Array	60.24	326	P	P	15 10 06.4	-1.1
	0.3nm,0.7s,baz=115,slow=9.5,SNR=2.1						
KURBB	Kurchatov Arra	64.45	328	P	P	15 10 36.3	+0.7
	0.5nm,0.6s,baz=130,slow=6.4,SNR=4.3						

*IDC **20** 15:10:53.1±1.5, 0°.97N×127°.38E, h0^{km}, mb3.6/3, mb1 3.8/4, mb1mx3.5/32, mbtmp3.6/4, ML3.1/1, Error ellipse: s-maj=62.3km s-min=23.6km az=60.0*

*DJA **20** 15:10:54.8±0.4, 1°N±3°×12°7E±°, h10^{km}, M3.7/7, mb4.1/1, MLv3.5/7*

ISC 20 15:10:55.1±1.3**, 1°.0N**±0°.1×**127°.52E**±0°.08**, h10km, n10, σ1s.24**/12**, mb3.7**/3**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBMI	**Labuha**	**1.66**	**181**	P	**Pn**	**15 11 23.8**	**-0.6**
LBMI				S	**Sn**	**15 11 48.2**	**+2.4**
SANI	**Sanana**	**3.43**	**207**	P	**Pn**	**15 11 47.8**	**-0.8**
KMSI	**Cibinong**	**3.57**	**263**	P	**Pn**	**15 11 50.2**	**-0.4**
SWI	**Sorong**	**4.19**	**117**	P	**Pn**	**15 11 59.9**	**+0.8**
SIJI	**Sorong**	**4.20**	**117**	Pn	**Pn**	**15 11 59.9**	**+0.6**
	1.1nm,0.3s,baz=219,slow=23,SNR=6.9						
GTOI	**Gorontalo**	**4.53**	**265**	P	**Pn**	**15 12 04.8**	**+1.0**
GTOI				S	**Sn**	**15 12 57.9**	**+1.4**
TTSI	**Tana Toraja**	**8.70**	**242**	P	**Pn**	**15 13 00.0**	**-1.1**
WRA	**Warramunga Arr**	**21.90**	**163**	P	**P**	**15 15 48.0**	**-0.6**
	1.3nm,0.5s,baz=341,slow=11,SNR=23						
ASAR	**Alice Springs**	**25.33**	**166**	P	**P**	**15 16 21.4**	**-1.0**
	1.4nm,0.7s,baz=346,slow=8.7,SNR=19						
MKAR	**Makanchi Array**	**60.21**	**326**	P	**P**	**15 21 02.9**	**-0.5**
	0.3nm,0.5s,baz=122,slow=8.4,SNR=7.6						

*IDC **20** 15:23:54.1±1.1, 0°.93N×127°.31E, h0km, mb3.8/5, mb1 4.0/6, mb1mx3.7/38, mbtmp3.8/6, ML3.0/1, Error ellipse: s-maj=54.2km s-min=19.3km az=68.0*

*DJA **20** 15:23:56.0±0.5, 1°N±4°×12°8E±°, h10km, M3.6/7, mb3.9/1, MLv3.5/7*

ISC 20 15:23:56.2±1.0**, 0°.94N**±0°.10×**127°.53E**±0°.07**, h10km, n10, σ1s.41**/11**, mb3.9**/5**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBMI	**Labuha**	**1.57**	**181**	P	**Pn**	**15 24 25.0**	**+0.9**
SANI	**Sanana**	**3.35**	**207**	P	**Pn**	**15 24 48.7**	**+0.1**
KMSI	**Cibinong**	**3.56**	**264**	P	**Pn**	**15 24 52.2**	**+0.6**
KMSI				S	**Sn**	**15 25 34.4**	**+0.6**
SIJI	**Sorong**	**4.15**	**116**	Pn	**Pn**	**15 25 01.8**	**+2.1**
	0.8nm,0.3s,baz=177,slow=19,SNR=2.6						
GTOI	**Gorontalo**	**4.53**	**266**	P	**Pn**	**15 25 07.5**	**+2.7**
WRA	**Warramunga Arr**	**21.80**	**163**	P	**P**	**15 28 48.9**	**+0.3**
	2.1nm,0.4s,baz=340,slow=11,SNR=34						
ASAR	**Alice Springs**	**25.23**	**166**	P	**P**	**15 29 22.1**	**-0.4**
	1.6nm,0.6s,baz=345,slow=9.5,SNR=24						
STKA	**Stephens Creek**	**35.26**	**159**	P	**P**	**15 30 50.6**	**-0.5**
	1.9nm,0.8s,baz=329,slow=13,SNR=2.8						
KSRS	**Korea Array**	**36.33**	**1**	P	**P**	**15 30 59.0**	**-1.2**
	0.7nm,0.8s,baz=184,slow=9.3,SNR=1.7						
MKAR	**Makanchi Array**	**60.29**	**326**	P	**P**	**15 34 04.2**	**-0.8**
	1.0nm,0.7s,baz=127,slow=7.4,SNR=8.3						

ROM 20 15:26:46.6±0.1**, 43°.469N**±0°.004×**11°.029E**±0°.006**, h7km, ML1.5**/3**, 4C-8D, Error ellipse: s-maj=0.5km s-min=0.4km az=52.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OSSC	**Osservatorio P**	**0.17**	**71**	P	Pg	15 26 50.8	+0.8
OSSC				S	Sg	15 26 53.7	+1.2
OSSC				AML	AML		
	comp=N,191µm,0.7s						
OSSC				AML	AML		
	comp=E,237µm,0.5s						
OSSC	**Osservatorio P**	**0.17**	**71**	⇓P	Pg	15 26 50.9	+0.8
OSSC				AML	AML		
	comp=E,237µm,0.5s						
OSSC				AML	AML		
	comp=N,191µm,0.7s						
OSSC				AML	AML		
	comp=E,237µm,0.5s						
OSSC				AML	AML		
	comp=N,191µm,0.7s						
OSSC				AML	AML		
	comp=E,237µm,0.5s						
OSSC				AML	AML		
	comp=N,191µm,0.7s						
CSNT	**Castellina Chi**	**0.19**	**89**	P	Pg	15 26 50.8	+0.3
CSNT				S	Sg	15 26 54.0	+0.9
CSNT				AML	AML		
	comp=E,180µm,0.5s						
CSNT				AML	AML		
	comp=N,126µm,1.3s						
CSNT	**Castellina Chi**	**0.19**	**89**	⇑P	Pg	15 26 50.9	+0.4
CSNT				AML	AML		
	comp=E,180µm,0.5s						
CSNT				AML	AML		
	comp=N,126µm,1.3s						
CSNT				AML	AML		
	comp=E,180µm,0.5s						
CSNT				AML	AML		
	comp=N,126µm,1.3s						
CSNT				AML	AML		
	comp=E,180µm,0.5s						
CSNT				AML	AML		
	comp=N,126µm,1.3s						
CSNT				AML	AML		
	comp=E,14µm,1.6s						
CSNT				AML	AML		
	comp=N,15µm,1.6s						
CRMI	**Carmignano**	**0.32**	**352**	P	Pb	15 26 54.0	-0.7
CRMI				S	Sb	15 26 59.7	-0.5
CRMI	**Carmignano**	**0.32**	**352**	⇓P	Pb	15 26 54.0	-0.7
PII	**Pisa**	**0.45**	**305**	⇓P	Pb	15 26 56.1	-0.7
PII				S	Sb	15 27 02.8	-0.8
PII				AML	AML		
	comp=N,260µm,0.8s						
PII				AML	AML		
	comp=E,190µm,0.3s						
PII	**Pisa**	**0.45**	**305**	⇓P	Pb	15 26 56.1	-0.7
PII	**Pisa**	**0.45**	**305**	⇓P	Pb	15 26 56.1	-0.7
PII				AML	AML		
	comp=E,73µm,1.0s						
PII				AML	AML		
	comp=N,104µm,0.3s						
PII				AML	AML		
	comp=E,190µm,0.3s						
PII				AML	AML		
	comp=N,260µm,0.8s						
PII				AML	AML		
	comp=E,190µm,0.3s						
PII				AML	AML		
	comp=N,260µm,0.8s						
PII				AML	AML		
	comp=E,190µm,0.3s						
PII				AML	AML		
	comp=N,260µm,0.8s						
RUFI	**Rufina**	**0.51**	**43**	P	Pb	15 26 57.2	-0.6
RUFI				S	Sb	15 27 05.0	-0.5
RUFI	**Rufina**	**0.51**	**43**	P	Pb	15 26 57.3	-0.6
RUFI				AML	AML		
	comp=E,74µm,1.6s						
RUFI				AML	AML		
	comp=N,46µm,1.6s						
MAIM	**Mastiano**	**0.59**	**319**	⇑P	Pb	15 26 58.9	-0.4
MAIM				S	Sb	15 27 07.0	-0.9
CASP	**Castiglione de**	**0.69**	**190**	P	Pb	15 27 00.6	-0.4
ARCI	**Arcidosso**	**0.70**	**152**	P	Pg	15 27 00.6	+0.5
ARCI				S	Sb	15 27 10.6	-0.4
EQUI	**Equi**	**0.94**	**318**	S	Sb	15 27 18.0	0.0
PE3	**Peglio**	**1.09**	**77**	S	Sg	15 27 20.0	-1.7
MNTV	**Mantova**	**1.69**	**354**	S	Sg	15 27 41.0	+0.1
BOB	**Bobbio (Coli)**	**1.73**	**319**	⇑P	Pg	15 27 21.6	+1.9
BOB				AML	AML		
	comp=E,201µm,1.5s						
BOB				AML	AML		
	comp=N,298µm,1.4s						
FIAM	**Fiamignano**	**1.95**	**127**	P	Pn	15 27 14.2	-6.0
FIAM				AML	AML		
	comp=E,1160µm,0.7s						
FIAM				AML	AML		
	comp=N,1006µm,0.7s						
FIAM				AML	AML		
	comp=E,1160µm,0.7s						
FIAM				AML	AML		
	comp=N,1006µm,0.7s						
OFFI	**Offida**	**2.01**	**104**	P	Pn	15 27 17.8	-3.1
OFFI				AML	AML		
	comp=E,106µm,0.4s						
OFFI				AML	AML		
	comp=N,134µm,0.8s						
OFFI				AML	AML		
	comp=E,106µm,0.4s						
OFFI				AML	AML		
	comp=N,134µm,0.8s						
LEOD	**Capriano del C**	**2.09**	**342**	P	Pg	15 27 28.1	+1.4
QLNO	**Quiliano**	**2.12**	**295**	S	Sg	15 27 55.0	+0.3
EUCT	**Pavia**	**2.20**	**323**	S	Sn	15 27 48.0	-3.0
VARA	**Varagna**	**2.36**	**358**	P	Pn	15 27 23.1	-2.8
VARA				S	Sg	15 28 04.0	+1.6
MIDA	**Miranda**	**3.00**	**126**	S	Sn	15 28 13.0	+2.1
MIDA				AML	AML		
	comp=E,21µm,0.4s						
MIDA				AML	AML		
	comp=N,24µm,1.6s						
KOSI	**Kohlern**	**3.00**	**5**	S	Sg	15 28 25.0	+1.9
BOSI	**Bolzano**	**3.03**	**4**	⇓P	Pg	15 27 45.7	+1.0
STAL	**STALIGIAL**	**3.04**	**23**	P	Pn	15 27 32.0	-3.0
LSD	**Lago del Serru**	**3.43**	**307**	S	Sn	15 28 24.0	+2.4
TREM	**Isole Tremiti**	**3.56**	**111**	P	Pn	15 27 35.8	-6.4
TREM				AML	AML		
	comp=E,3215µm,1.5s						
TREM				AML	AML		
	comp=N,5430µm,1.4s						
PAOL	**Paolisi**	**3.58**	**132**	P	Pn	15 27 45.6	+3.0
SGRT	**San Giovanni R**	**3.88**	**115**	P	Pn	15 27 46.1	-0.6
SGRT				AML	AML		
	comp=E,63µm,0.8s						
SGRT				AML	AML		
	comp=N,52µm,1.4s						
MCEL	**Monticello**	**4.75**	**130**	P	Pn	15 28 04.2	+5.6
KOGS	**Kog**	**4.75**	**49**	P	Pb	15 28 09.6	-0.6
TDS	**Terranova Siba**	**5.51**	**132**	P	Pb	15 28 20.1	-3.0
TDS				AML	AML		
	comp=E,10µm,1.6s						
TDS				AML	AML		
	comp=N,12µm,1.6s						
ISTR	**Stromboli Gino**	**5.63**	**145**	⇓P	Pn	15 28 12.1	+1.4
ISTR				AML	AML		
	comp=E,354µm,0.6s						
ISTR				AML	AML		
	comp=N,432µm,0.5s						
IST3	**Stromboli F**	**5.64**	**144**	⇓P	Pn	15 28 01.7	-9.1
IST3				AML	AML		
	comp=E,188µm,1.2s						
IST3				AML	AML		
	comp=N,224µm,0.6s						
SPS2	**Spezzano della**	**5.77**	**134**	P	Pn	15 28 19.7	+7.0
VPL	**Vulcano Piano**	**5.90**	**148**	P	Pb	15 28 24.1	-5.7
PLLN	**Pollina**	**5.96**	**156**	⇑P	Pn	15 28 17.6	+2.4
GALF	**Gagliano Caste**	**6.35**	**154**	P	Pn	15 28 22.9	+2.2

ROM 20 15:27:16.9±0.2**, 43°.632N**±0°.004×**12°.358E**±0°.004**, h8km**±1km**, Md1.1**/5**, Error ellipse: s-maj=0.4km s-min=0.2km az=189.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PARC	**Parchiule**	**0.09**	**281**	P	Pg	15 27 19.6	+0.4
PARC				S	Sg	15 27 21.4	+0.5
PARC				END			
BADI	**Badiali**	**0.15**	**214**	P	Pg	15 27 20.7	+0.6
BADI				S	Sg	15 27 23.4	+1.1
PIEI	**Pieia**	**0.16**	**127**	P	Pg	15 27 20.8	+0.5
PIEI				S	Sg	15 27 23.6	+0.9
PIEI				AML	AML		
	comp=E,19µm,1.6s						
PIEI				AML	AML		
	comp=N,12µm,1.1s						
PIEI				END			
NARO	**Abbazia di Nar**	**0.16**	**97**	P	Pg	15 27 21.0	+0.7
NARO				S	Sg	15 27 23.9	+1.2
NARO				END			
CPGN	**Carpegna, Ital**	**0.17**	**351**	AML	AML		
	comp=E,130µm,1.6s						
CPGN				AML	AML		
	comp=N,250µm,1.6s						
ATPI	**Pietralunga -**	**0.18**	**170**	P	Pg	15 27 20.7	0.0
ATPI				S	Sg	15 27 24.6	+1.2
ATPI				END			
ATVO	**AVT- Monte Val**	**0.25**	**172**	P	Pb	15 27 23.0	-0.7
ATVO				S	Sb	15 27 27.1	-1.1
ATVO				AML	AML		
	comp=E,16µm,1.5s						
ATVO				AML	AML		
	comp=N,17µm,1.6s						
FRON	**Frontone**	**0.29**	**113**	P	Pg	15 27 23.4	+0.7
FRON				S	Sb	15 27 28.7	-0.7
FRON				END			
MPAG	**Monte Paganucc**	**0.29**	**90**	AML	AML		
	comp=N,18µm,1.5s						
MPAG				AML	AML		
	comp=E,1376µm,1.6s						
MPAG				AML	AML		
	comp=N,1336µm,1.6s						
MPAG				AML	AML		
	comp=E,20µm,1.1s						
FSSB	**Fossombrone**	**0.31**	**79**	AML	AML		
	comp=E,39µm,0.4s						
FSSB				AML	AML		
	comp=N,50µm,0.5s						
SSFR	**Montelago di S**	**0.36**	**122**	AML	AML		
	comp=N,42µm,0.3s						
SSFR				AML	AML		
	comp=E,56µm,0.3s						
MURB	**Monte Urbino**	**0.39**	**162**	AML	AML		
	comp=E,88µm,1.1s						
MURB				AML	AML		
	comp=N,82µm,0.9s						
ATTE	**AVT- Monte Tez**	**0.43**	**180**	AML	AML		
	comp=E,17µm,0.8s						
ATTE				AML	AML		
	comp=N,21µm,1.4s						
SFI	**Santa Sofia**	**0.46**	**307**	AML	AML		
	comp=N,22µm,0.9s						
SFI				AML	AML		
	comp=E,25µm,0.4s						
SNTG	**Esanatoglia**	**0.57**	**131**	AML	AML		
	comp=E,22µm,0.5s						
SNTG				AML	AML		
	comp=N,20µm,0.5s						
MTL1	**Matelica**	**0.60**	**128**	AML	AML		
	comp=E,1870µm,1.6s						
MTL1				AML	AML		
	comp=N,2290µm,1.6s						
ASSB	**Assisi San Ben**	**0.63**	**159**	AML	AML		
	comp=N,63µm,0.1s						
ASSB				AML	AML		
	comp=E,52µm,1.1s						
SENI	**Senigallia**	**0.64**	**83**	AML	AML		
	comp=E,50000µm,1.6s						
SENI				AML	AML		
	comp=N,25000µm,1.6s						
LMD	**Lutirano**	**0.65**	**314**	AML	AML		
	comp=E,17µm,1.6s						
LMD				AML	AML		
	comp=N,15µm,1.6s						
CING	**Cingoli**	**0.66**	**113**	AML	AML		
	comp=N,44µm,1.4s						
CING				AML	AML		
	comp=E,29µm,0.7s						
MGAB	**Montegabbione**	**0.74**	**194**	AML	AML		
	comp=E,37µm,1.3s						
MGAB				AML	AML		
	comp=N,35µm,1.3s						
FDMO	**Fiordimonte**	**0.80**	**138**	AML	AML		
	comp=E,81µm,0.2s						
FDMO				AML	AML		
	comp=E,82µm,0.2s						
FDMO				AML	AML		
	comp=N,48µm,0.9s						
FIR	**Firenze**	**0.81**	**280**	AML	AML		
	comp=E,218µm,0.2s						
FIR				AML	AML		
	comp=N,307µm,0.1s						
NRCA	**Norcia**	**0.97**	**145**	AML	AML		
	comp=E,297µm,0.6s						
NRCA				AML	AML		
	comp=E,296µm,0.6s						
NRCA				AML	AML		
	comp=N,178µm,0.1s						
CESX	**Cesi**	**1.03**	**171**	AML	AML		
	comp=N,46µm,1.5s						
CESX				AML	AML		
	comp=E,36µm,1.4s						
CESX				AML	AML		
	comp=E,36µm,1.4s						
FNVD	**Fontana Vidola**	**1.04**	**301**	AML	AML		
	comp=E,478µm,0.3s						
FNVD				AML	AML		
	comp=N,536µm,0.5s						
LNSS	**Leonessa**	**1.14**	**154**	AML	AML		
	comp=E,397µm,0.9s						
LNSS				AML	AML		
	comp=E,396µm,0.9s						
LNSS				AML	AML		
	comp=N,387µm,1.4s						
LNSS				AML	AML		
	comp=N,388µm,1.4s						
ZCCA	**Zocca**	**1.23**	**306**	AML	AML		
	comp=N,500µm,0.4s						
ZCCA				AML	AML		
	comp=E,306µm,0.3s						
POPM	**Popiglio**	**1.23**	**290**	AML	AML		
	comp=E,872µm,0.2s						
POPM				AML	AML		
	comp=N,1000µm,0.8s						
SMA1	**SAN MARTINO**	**1.23**	**144**	AML	AML		
	comp=N,477µm,0.5s						
SMA1				AML	AML		
	comp=E,588µm,0.2s						
SMA1				AML	AML		
	comp=N,476µm,0.5s						
GUMA	**Gualdo di Mace**	**1.28**	**116**	AML	AML		
	comp=E,222µm,0.3s						
GUMA				AML	AML		
	comp=N,212µm,0.7s						
RM33	**Pellescritta (**	**1.29**	**150**	AML	AML		
	comp=E,846µm,0.8s						
RM33				AML	AML		
	comp=E,858µm,0.8s						
RM33				AML	AML		
	comp=N,920µm,0.5s						
RM33				AML	AML		
	comp=E,848µm,0.8s						
RM33				AML	AML		
	comp=N,934µm,0.5s						
RM33				AML	AML		
	comp=E,860µm,0.8s						
RM33				AML	AML		
	comp=N,918µm,0.5s						
RM33				AML	AML		
	comp=N,934µm,0.5s						
CAMP	**Campotosto**	**1.34**	**145**	AML	AML		
	comp=N,138µm,1.6s						
CAMP				AML	AML		
	comp=E,115µm,1.2s						
CAMP				AML	AML		
	comp=N,137µm,1.6s						
BDI	**Bagni Di Lucca**	**1.34**	**289**	AML	AML		
	comp=N,194µm,0.7s						
BDI				AML	AML		
	comp=E,237µm,1.1s						
TERO	**Teramo**	**1.36**	**137**	AML	AML		
	comp=N,49µm,0.4s						
TERO				AML	AML		
	comp=E,54µm,0.6s						
TERO				AML	AML		
	comp=N,49µm,0.4s						
TERO				AML	AML		
	comp=E,54µm,0.6s						
SRES	**S.Oreste - Sor**	**1.40**	**175**	AML	AML		
	comp=N,30µm,1.2s						
SRES				AML	AML		
	comp=N,30µm,1.2s						
SRES				AML	AML		
	comp=E,31µm,1.5s						
GIGS	**Gran Sasso**	**1.48**	**143**	AML	AML		
	comp=E,87µm,1.3s						
GIGS				AML	AML		
	comp=E,87µm,1.3s						
GIGS				AML	AML		
	comp=N,79µm,0.3s						
GIGS				AML	AML		
	comp=N,79µm,0.3s						
AQU	**L'Aquila**	**1.49**	**149**	AML	AML		
	comp=E,878µm,0.5s						
AQU				AML	AML		
	comp=E,854µm,0.5s						
AQU				AML	AML		
	comp=N,562µm,0.4s						
AQU				AML	AML		
	comp=N,560µm,0.4s						
AQU				AML	AML		
	comp=E,854µm,0.5s						
AQU				AML	AML		
	comp=N,562µm,0.4s						
VLC	**Villacollemand**	**1.52**	**291**	AML	AML		
	comp=E,100µm,0.2s						
VLC				AML	AML		
	comp=E,106µm,1.6s						
VLC				AML	AML		
	comp=N,130µm,1.4s						
VLC				AML	AML		
	comp=N,129µm,0.7s						
MTCE	**Montecelio**	**1.63**	**170**	AML	AML		
	comp=E,73µm,0.9s						
MTCE				AML	AML		
	comp=N,61µm,0.8s						
FAGN	**Fagnano**	**1.64**	**146**	AML	AML		
	comp=N,848µm,0.5s						
FAGN				AML	AML		
	comp=E,682µm,0.3s						
FAGN				AML	AML		
	comp=N,849µm,0.5s						
FAGN				AML	AML		
	comp=E,682µm,0.3s						
VCEL	**Villa Celiera**	**1.65**	**138**	AML	AML		
	comp=E,195µm,0.7s						
VCEL				AML	AML		
	comp=N,144µm,0.3s						
CERT	**Cerreto**	**1.74**	**165**	AML	AML		
	comp=N,208µm,0.2s						
CERT				AML	AML		
	comp=E,388µm,1.1s						
T0110	**Collepietro**	**1.75**	**143**	AML	AML		
	comp=E,163µm,1.4s						
T0110				AML	AML		
	comp=N,160µm,0.3s						
SBPO	**S.Benedetto Po**	**1.75**	**324**	AML	AML		
	comp=E,2750µm,0.1s						
SBPO				AML	AML		
	comp=N,1283µm,1.6s						
PTQR	**Pietraquaria**	**1.78**	**154**	AML	AML		
	comp=E,246µm,0.2s						
PTQR				AML	AML		
	comp=N,216µm,0.2s						
CELB	**S.Piero in Cam**	**1.80**	**241**	AML	AML		
	comp=N,54µm,0.2s						
CELB				AML	AML		
	comp=E,86µm,0.1s						
RMP	**Rome, Mte Porz**	**1.84**	**172**	AML	AML		
	comp=E,125µm,0.3s						
RMP				AML	AML		
	comp=E,125µm,0.3s						
RMP				AML	AML		
	comp=N,113µm,0.4s						
RMP				AML	AML		
	comp=N,113µm,0.4s						
MA9	**Marino**	**1.87**	**173**	AML	AML		
	comp=N,90µm,0.4s						
MA9				AML	AML		
	comp=E,90µm,0.6s						
MA9				AML	AML		
	comp=E,90µm,0.6s						
MA9				AML	AML		
	comp=N,90µm,0.4s						
RDP	**Rocca di Papa**	**1.89**	**172**	AML	AML		
	comp=N,168µm,0.5s						
RDP				AML	AML		
	comp=E,181µm,0.4s						
RDP				AML	AML		
	comp=E,180µm,0.4s						
VIVA	**Pratoni del Vi**	**1.91**	**171**	AML	AML		
	comp=N,216µm,0.4s						
VIVA				AML	AML		
	comp=E,197µm,0.5s						
VIVA				AML	AML		
	comp=E,198µm,0.5s						
GUAR	**Guarcino**	**1.97**	**159**	AML	AML		
	comp=N,99µm,0.3s						
GUAR				AML	AML		
	comp=E,84µm,0.5s						
LAV9	**Lanuvio**	**1.97**	**173**	AML	AML		
	comp=E,259µm,0.4s						
LAV9				AML	AML		
	comp=E,258µm,0.4s						
LAV9				AML	AML		
	comp=N,236µm,0.4s						

VVLD	**Villa Vallelon**	**1.99**	**152**	AML	AML		
	comp=N,96µm,0.7s						
VVLD				AML	AML		
	comp=E,58µm,0.4s						
LPEL	**Lama dei Pelig**	**2.08**	**139**	AML	AML		
	comp=E,51µm,0.4s						
LPEL				AML	AML		
	comp=E,51µm,0.4s						
LPEL				AML	AML		
	comp=N,45µm,0.2s						
RNI2	**Rionero Sannit**	**2.34**	**145**	AML	AML		
	comp=E,42µm,1.2s						
RNI2				AML	AML		
	comp=N,43µm,1.4s						
CIMO	**Cimolais**	**2.68**	**1**	AML	AML		
	comp=N,15µm,1.6s						
CIMO				AML	AML		
	comp=E,16µm,1.6s						
PTRJ	**Pietraroja**	**2.78**	**144**	AML	AML		
	comp=E,18µm,0.8s						
PTRJ				AML	AML		
	comp=N,21µm,1.3s						
PTCC	**Patocco-Chiusa**	**2.86**	**14**	AML	AML		
	comp=E,14µm,1.6s						
PTCC				AML	AML		
	comp=N,15µm,1.6s						
ZOU	**Zoufplan**	**2.96**	**8**	AML	AML		
	comp=E,23µm,1.6s						
ZOU				AML	AML		
	comp=N,27µm,1.6s						
FVI	**Forni Avoltri**	**2.98**	**6**	AML	AML		
	comp=N,12µm,1.6s						
FVI				AML	AML		
	comp=E,6µm,1.5s						
MOCO	**Biccari - m.te**	**3.06**	**137**	AML	AML		
	comp=N,19µm,1.6s						
MOCO				AML	AML		
	comp=E,23µm,1.6s						
MCRV	**Calabrutti - M**	**3.53**	**143**	AML	AML		
	comp=N,10µm,1.6s						
MCRV				AML	AML		
	comp=E,8µm,1.6s						
TUE	**Stuetta**	**3.55**	**324**	AML	AML		
	comp=E,29µm,1.6s						
TUE				AML	AML		
	comp=N,23µm,1.6s						
RSP	**Reno Superiore**	**3.95**	**294**	AML	AML		
	comp=E,29µm,1.6s						
RSP				AML	AML		
	comp=N,35µm,1.6s						
SLCN	**Sala Consilina**	**4.05**	**142**	AML	AML		
	comp=E,236µm,1.4s						
SLCN				AML	AML		
	comp=N,298µm,1.3s						
CGL	**Cagliari Serpe**	**4.84**	**209**	AML	AML		
	comp=E,28µm,1.6s						
CGL				AML	AML		
	comp=N,20µm,1.4s						
MPG	**Monte Pellegri**	**5.52**	**172**	AML	AML		
	comp=N,36µm,1.3s						
MPG				AML	AML		
	comp=E,21µm,1.4s						
LLI	**Lipari**	**5.54**	**158**	AML	AML		
	comp=N,1179µm,0.5s						
LLI				AML	AML		
	comp=E,1995µm,0.1s						
EPZF	**Pizzo Felice**	**6.10**	**161**	AML	AML		
	comp=N,272µm,1.2s						
EPZF				AML	AML		
	comp=E,178µm,0.8s						
EMSG	**Monte Spagnolo**	**6.13**	**160**	AML	AML		
	comp=E,506µm,0.8s						
EMSG				AML	AML		
	comp=N,497µm,0.7s						
ESLN	**Serra La Nave**	**6.26**	**161**	AML	AML		
	comp=E,1016µm,1.0s						
ESLN				AML	AML		
	comp=N,662µm,1.0s						
ESML	**S. M. di Licod**	**6.30**	**161**	AML	AML		
	comp=E,130µm,0.6s						
ESML				AML	AML		
	comp=N,122µm,0.8s						
HLNI	**Lentini**	**6.56**	**162**	AML	AML		
	comp=N,24µm,1.4s						
HLNI				AML	AML		
	comp=E,28µm,1.2s						

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*KRSZO **20** 15:27:48.3±0.9, 43°.62N×18°.35E, h3^{km}±8^{km}, ML2.8/7, Error ellipse: s-maj=2.6km s-min=2.3km az=146.0*

*PDG **20** 15:27:49.4±0.1, 43°.58N×18°.39E, h4^{km}, ML2.5/12, Error ellipse: s-maj=0.2km s-min=0.2km az=0.0*

*RHSSO **20** 15:27:49.5±0.2, 43°.62N×18°.39E, h4^{km}±2^{km}, ML2.6/13*

BEO 20 15:27:49.8±0.3**, 43°.63N×18°.34E, h7**^{km}±4^{km}**, ML2.5**/8**, 15C-10D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UPM	**Unac-Piva**	**0.60**	**136**	⇑*i*Pg	Pg	15 27 59.5	-1.8
UPM				*e*Sg	Sg	15 28 07.7	-1.5
UPM	**Unac-Piva**	**0.60**	**136**	⇑*i*Pg	Pg	15 27 59.2	-2.1
UPM				*i* Sg	Sg	15 28 07.5	-1.7
HAPS	**Han Pijesak,Bl**	**0.63**	**44**	*e*Pg	Pg	15 28 01.1	-0.9
HAPS				*e*Sg	Sg	15 28 09.6	-0.7
BRY	**Bratogost**	**0.75**	**169**	⇑*i*Pg	Pg	15 28 01.9	-2.3
BRY				*e*Sg	Sg	15 28 12.7	-1.2
BRY	**Bratogost**	**0.75**	**169**	⇓*i*Pg	Pg	15 28 02.1	-2.1
BRY				*e*Sg	Sg	15 28 12.8	-1.1
RUDO	**Rudo**	**0.75**	**91**	⇓*i*Pg	Pg	15 28 01.6	-2.6
RUDO				*e*Sg	Sg	15 28 11.6	-2.4
BBLS	**Lazići**	**0.81**	**73**	*e*Pg	Pg	15 28 04.0	-1.3
BBLS	**Lazići**	**0.81**	**73**	⇑*i*Pg	Pg	15 28 03.9	-1.4
BBLS				*e*Sg	Sg	15 28 13.9	-1.9
BBLS	**Lazići**	**0.81**	**73**	Pb	Pg	15 28 04.0	-1.3
	comp=Z,2.3nm,SNR=18						
BBLS				Sg	Sg	15 28 14.3	-1.5
PLE	**Pljevlja**	**0.82**	**111**	⇑*i*Pg	Pg	15 28 03.5	-2.1
PLE				*i* Sg	Sg	15 28 15.5	-0.8
RICI	**Ricice**	**0.89**	**261**	*e*Pg	Pg	15 28 05.4	-1.5
STON	**Ston**	**0.89**	**212**	*e*Pg	Pg	15 28 05.4	-1.5
STON				*e*Sg	Sb	15 28 19.1	-0.6
STON	**Ston**	**0.89**	**212**	*e*Pg	Pg	15 28 04.9	-2.0
STON				*e*Sg	Sg	15 28 18.6	+0.1
STON	**Ston**	**0.89**	**212**	*e*Pg	Pg	15 28 05.5	-1.4
STON				Sg	Sg	15 28 18.3	-0.2
STON	**Ston**	**0.89**	**212**	⇑P	Pg	15 28 05.7	-1.3
TREB	**Trebinje**	**0.92**	**179**	*e*Pg	Pg	15 28 06.3	-1.1
TREB				*e*Sg	Sb	15 28 20.1	-0.3
TREB	**Trebinje**	**0.92**	**179**	⇑*i*Pg	Pg	15 28 06.1	-1.3
TREB				*e*Sg	Sg	15 28 18.8	-0.5
NKY	**Niksic**	**0.95**	**149**	⇓*i*Pg	Pg	15 28 05.7	-2.3
NKY				*i* Sg	Sg	15 28 19.6	-0.8
DBRK	**Dubrovnik**	**0.97**	**188**	*e*Pg	Pg	15 28 06.9	-1.6
NKME	**Niksic**	**0.98**	**152**	⇓*i*Pg	Pg	15 28 06.0	-2.5
NKME				*e*Sg	Sg	15 28 20.4	-0.8
MAKA	**Makarska**	**1.02**	**251**	*e*Pg	Pg	15 28 08.2	-1.2
MAKA				Sg	Sg	15 28 22.0	-0.6
DOB	**Doboj**	**1.11**	**351**	*e*Sg	Sb	15 28 26.1	+0.1
KOME	**Kolasin**	**1.16**	**132**	⇑*i*Pg	Pg	15 28 09.7	-2.4
KOME				*i* Sg	Sg	15 28 26.8	-0.4
CEME	**Cevo**	**1.17**	**158**	⇓*i*Pg	Pg	15 28 09.3	-2.9
CEME				*i* Sg	Sg	15 28 26.9	-0.4
HCY	**Herceg Novi**	**1.19**	**174**	⇑*i*Pg	Pg	15 28 11.2	-1.4
HCY				*e*Sg	Sg	15 28 27.6	-0.5
HCY	**Herceg Novi**	**1.19**	**174**	⇓*i*Pg	Pg	15 28 10.4	-2.2
HCY				*e*Sg	Sb	15 28 28.3	0.0
MGRS	**Mrkonjic Grad**	**1.20**	**311**	⇑*i*Pg	Pg	15 28 11.2	-1.5
MGRS				*e*Sg	Sn	15 28 29.0	-0.5
SJES	**Sjenica**	**1.25**	**107**	*e*Pg	Pg	15 28 11.3	-2.4
SJES				*e*Sg	Sg	15 28 28.5	-1.4
TEKS	**Tekeris**	**1.25**	**43**	*e*Pg	Pn	15 28 12.9	-0.9
TEKS	**Tekeris**	**1.25**	**43**	*e*Pg	Pn	15 28 12.3	-1.5
TEKS				*e*Sg	Sg	15 28 29.5	-0.7
DIVS	**Divibare**	**1.28**	**68**	*e*Pg	Pn	15 28 13.6	-0.6
DIVS				*e*Sg	Sg	15 28 31.1	0.0
DIVS	**Divibare**	**1.28**	**68**	⇑*i*Pg	Pn	15 28 12.2	-2.0
DIVS				*e*Sg	Sb	15 28 29.6	-1.5
DIVS	**Divibare**	**1.28**	**68**	Pn	Pn	15 28 13.4	-0.9
	comp=Z,0.4nm,SNR=18						
DIVS				Sn	Sb	15 28 28.5	-2.6
LSTV	**Lastovo**	**1.37**	**231**	*e*Pg	Pn	15 28 13.9	-1.4
IVA	**Berane**	**1.37**	**123**	⇑*i*Pg	Pn	15 28 13.4	-2.0
IVA				*i* Sg	Sg	15 28 33.7	-0.1
PDG	**Podgorica**	**1.38**	**150**	*e*Pg	Pn	15 28 13.7	-1.7
PDG				*e*Sg	Sb	15 28 33.1	-0.6
PDG	**Podgorica**	**1.38**	**150**	⇑*i*Pg	Pn	15 28 12.8	-2.6
PDG				*e*Sg	Sb	15 28 32.2	-1.5
TTG	**Podgorica**	**1.38**	**150**	⇓*i*Pg	Pn	15 28 13.6	-1.8
TTG				*i* Sg	Sb	15 28 33.6	-0.1
BLY	**Banja Luka**	**1.39**	**324**	*e*Pg	Pn	15 28 15.5	-0.1
BLY				*e*Sg	Sb	15 28 34.0	0.0
BLY	**Banja Luka**	**1.39**	**324**	⇑*i*Pg	Pn	15 28 15.2	-0.4
BLY				*e*Sg	Sg	15 28 34.7	+0.2
BLY	**Banja Luka**	**1.39**	**324**	⇓P	Pn	15 28 15.5	-0.1
BLY	**Banja Luka**	**1.39**	**324**	Pb	Pn	15 28 15.4	-0.2
	comp=Z,0.4nm,SNR=13						
BLY				Sg	Sn	15 28 34.3	+0.1
BUM	**Brajici-Budva**	**1.39**	**163**	⇑*i*Pg	Pn	15 28 13.9	-1.8
BUM				*e*Sg	Sg	15 28 35.0	+0.4
KIJV	**Kijevo**	**1.45**	**286**	*e*Pn	Pn	15 28 16.2	-0.2
DRME	**Dracevica, Mon**	**1.57**	**156**	*e*Pn	Pn	15 28 17.3	-0.9
DRME				*e*Sn	Sn	15 28 39.0	+0.2
DRME	**Dracevica, Mon**	**1.57**	**156**	⇓*i*Pg	Pn	15 28 17.4	-0.8
DRME				*i* Sg	Sg	15 28 40.8	+0.4
MRAK	**Mrakovica**	**1.72**	**324**	*e*Pn	Pn	15 28 20.1	-0.2
MRAK				*e*Sn	Sb	15 28 43.2	-0.5
GRUS	**Gruza**	**1.74**	**81**	*e*Pg	Pb	15 28 21.9	-0.2
ULC	**Ulcinj**	**1.80**	**158**	⇓*i*Pn	Pn	15 28 21.3	+0.1
ULC				*i* Sn	Sb	15 28 46.5	+0.7
FRGS	**Fruska Gora**	**1.85**	**34**	*e*Pn	Pn	15 28 22.0	0.0
FRGS				*e*Sn	Sn	15 28 45.9	+0.2
MORI	**Morici**	**1.92**	**278**	*e*Pn	Pb	15 28 24.6	-0.5
MORI				Sn	Sg	15 28 50.8	-0.6
ZIRJ	**Zirje**	**1.96**	**272**	*e*Pn	Pb	15 28 25.2	-0.5
ZIRJ				Sn	Sg	15 28 51.9	-0.7
SELS	**Selova**	**2.07**	**101**	*e*Pg	Pb	15 28 27.1	-0.6
DUGI	**Dugi Otok**	**2.40**	**280**	*e*Pn	Pb	15 28 31.5	-1.9
BOVS	**Bovan**	**2.45**	**89**	*e*Pg	Pb	15 28 33.1	-1.0
KOVH	**Kovagotottos**	**2.46**	**356**	*e*PN	Pn	15 28 30.1	-0.3
KOVH	**Kovagotottos**	**2.46**	**356**	*e*S	Sn	15 28 59.4	-1.2
KOVH	**Kovagotottos**	**2.46**	**356**	Pn	Pn	15 28 30.1	-0.3
	SNR=1.6						
KOVH				Sn	Sn	15 28 59.4	-1.2
MORH	**Mrgy, Hungar**	**2.59**	**5**	*e*PN	Pn	15 28 31.3	-0.8
MORH	**Mrgy, Hungar**	**2.59**	**5**	*e*Pn	Pn	15 28 32.2	+0.1
MORH	**Mrgy, Hungar**	**2.59**	**5**	Pg	Pn	15 28 31.3	-0.8
	SNR=2.3						
NVLJ	**Novalja**	**2.66**	**292**	*e*Pn	Pn	15 28 34.1	+1.0
BARS	**Barje**	**2.67**	**107**	*e*Pn	Pn	15 28 33.0	-0.2
PRVS	**Prvonek**	**2.96**	**111**	*e*Pn	Pn	15 28 37.1	-0.2
CRES	**Cresnjev**	**3.00**	**318**	*e*Pn	Pn	15 28 38.2	+0.4
CRES	**Cresnjev**	**3.00**	**318**	Pn	Pn	15 28 38.4	+0.6
	comp=Z,0.3nm,SNR=2.2						
BZS	**Buzias**	**3.07**	**49**	*e*Pn	Pn	15 28 39.9	+1.2
BZS	**Buzias**	**3.07**	**49**	Pn	Pn	15 28 39.3	+0.6
	SNR=1.4						
BZS				Sn	Sn	15 29 11.9	-3.7
ZAPS	**Zavoj**	**3.15**	**95**	*e*Pn	Pn	15 28 40.4	+0.6
CEY	**Cerknica**	**3.49**	**308**	*e*Pn	Pn	15 28 45.2	+0.6
SOKA	**Soboth**	**3.84**	**324**	*i* Sn	Sn	15 29 32.7	-2.0
	comp=Z,3.0nm,0.6s						
ARSA	**Arzberg**	**4.12**	**332**	*i* Pn	Pn	15 28 52.8	-0.4
	comp=Z,4.5nm,0.3s						
ARSA				*i* Sn	Sn	15 29 38.7	-3.0
	comp=Z,1.1nm,0.3s						
MODS	**Modra-Piesok**	**4.80**	**352**	*e*SN	Sn	15 29 56.5	-1.8
VYHS	**Vyhne**	**4.87**	**4**	*e*SN	Sn	15 30 00.1	-0.1

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*NOU **20** 15:31:24.3, 27°.59S×177°.42W, h260^{km}, mb4.5/23, Kermadec Islands Region*

*IDC **20** 15:31:25.9±0.8, 27°.33S×178°.28W, h227^{km}±7^{km}, mb3.8/15, mb1 4.1/17, mb1mx3.9/33, mbtmp4.4/17, Error ellipse: s-maj=15.9km s-min=11.9km az=73.0*

ISC 20 15:31:26.7±0.6**, 27°.97S**±0°.06×**178°.1W**±0°.1**, h250**^{km}**, n64, σ2**^{s}**53**/61**, mb4.0**/15**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.29**	**172**	P	Pn	15 32 06.4	+2.9
	910nm,0.3s,baz=86,slow=5.3,SNR=30						
RAO				S	**S**	**15 32 37.4**	**+4.9**
	1µm,0.3s,baz=78,slow=24,SNR=10						
RAO	**Raoul Island**	**1.29**	**172**	P	Pn	15 32 06.3	+2.9
GLKZ	**Green Lake**	**1.30**	**172**	P	**Pn**	**15 32 06.1**	**+2.6**
GLKZ				S	**S**	**15 32 36.5**	**+3.9**
MXZ	**Matakaoa Point**	**10.02**	**196**	S	**S**	**15 35 41.1**	**+3.1**
HAZ	**Te Kaha**	**10.34**	**198**	P	**Pn**	**15 33 48.9**	**-0.6**
HAZ				S	**S**	**15 35 48.7**	**+3.2**
PKGZ	**Pakihiroa**	**10.39**	**197**	P	**Pn**	**15 33 49.8**	**-0.4**
PKGZ				S	**S**	**15 35 40.3**	**-6.4**
MSVF	**Nonsavu**	**10.78**	**340**	P	Pn	15 33 48.4	-6.9
	10nm,0.3s,baz=151,slow=10,SNR=97						
MSVF	**Nonsavu**	**10.78**	**340**	P	Pn	15 33 49.5	-5.8
URZ	**Urewera**	**11.01**	**200**	P	**Pn**	**15 33 56.9**	**-0.8**
	1.1nm,0.3s,baz=121,slow=23,SNR=10						
URZ				S	**S**	**15 36 01.0**	**+0.1**
	5.3nm,0.3s,baz=294,slow=23,SNR=2.7						
URZ	**Urewera**	**11.01**	**200**	P	**P**	**15 34 00.6**	**-1.5**
DGTI	**Dogotuki**	**11.78**	**350**	P	Pn	15 33 59.9	-7.8
BKZ	**Black Stump Fm**	**12.03**	**200**	P	**P**	**15 34 15.6**	**+2.0**
MRZ	**Mangatainoka R**	**13.68**	**201**	P	Pn	15 34 24.2	-6.6
MRZ				S	**S**	**15 37 01.1**	**-1.2**
HOWZ	**Holdsworth Sta**	**13.91**	**200**	P	**Pn**	**15 34 31.0**	**-2.7**
HOWZ				S	**S**	**15 37 01.2**	**-6.5**
OGWZ	**Otaki Gorge**	**13.95**	**202**	P	**Pn**	**15 34 32.4**	**-1.7**
TMWZ	**Te Maipa**	**13.99**	**199**	P	**P**	**15 34 35.5**	**+0.2**
KIW	**Kapiti Island**	**14.07**	**202**	P	**P**	**15 34 36.5**	**+0.3**
KIW				P	**S**	**15 37 08.4**	**-3.0**
PINNC	**Pines Island,**	**14.09**	**289**	P	**P**	**15 34 38.7**	**+2.1**
MARNC	**Mare, Loyalty**	**14.13**	**294**	P	**P**	**15 34 39.2**	**+2.2**
MTW	**Mount Morrison**	**14.15**	**200**	P	**Pn**	**15 34 35.2**	**-1.4**
CAW	**Cannon Point**	**14.24**	**201**	P	**Pn**	**15 34 35.1**	**-2.6**
CAW				P	**S**	**15 37 12.1**	**-3.2**
TRWZ	**Traveller**	**14.32**	**199**	P	**Pn**	**15 34 36.4**	**-2.2**
TRWZ				S	**S**	**15 37 11.7**	**-5.4**
DUWZ	**D'Urville Isla**	**14.37**	**205**	P	**Pn**	**15 34 37.7**	**-1.6**
DUWZ				S	**S**	**15 37 15.5**	**-2.8**
MSWZ	**Moikau Station**	**14.47**	**200**	P	**Pn**	**15 34 38.9**	**-1.5**
BHW	**Baring Head**	**14.58**	**201**	P	**Pn**	**15 34 39.6**	**-2.1**
BHW				P	**S**	**15 37 19.9**	**-3.0**
PLWZ	**Palliser**	**14.61**	**200**	P	P	15 34 36.8	-5.4
YATNC	**Mamie plateau,**	**14.79**	**290**	P	**Pn**	**15 34 47.7**	**+3.2**
LIFNC	**LIFOU**	**15.12**	**295**	P	**P**	**15 34 49.1**	**+1.1**
DZM	**Mont Dzumac**	**15.16**	**289**	P	**P**	**15 34 45.3**	**-3.2**
	0.2nm,0.3s,baz=104,slow=4.4,SNR=1.4						
DZM	**Mont Dzumac**	**15.16**	**289**	P	**Pn**	**15 34 51.5**	**+2.5**
AFI	**Afiamalu**	**15.19**	**24**	P	P	15 34 36.4	-12
	5.1nm,0.3s,baz=152,slow=3.8,SNR=12						
AFI				S	S	15 37 07.0	-30
	17nm,0.3s,baz=98,slow=22,SNR=8.8						
NOUC	**Port Laguerre**	**15.27**	**289**	P	**Pn**	**15 34 51.6**	**+1.4**
KHZ	**Kahutara**	**15.93**	**203**	P	**Pn**	**15 34 59.7**	**+1.9**
RTV	**Rentapao**	**15.99**	**306**	P	**P**	**15 34 58.0**	**+0.5**
	656µm,1.0s						
KOUNC	**Koumac, New Ca**	**17.64**	**291**	P	**P**	**15 35 16.9**	**+1.4**
CTAO	**Charters Tower**	**33.37**	**276**	P	**P**	**15 37 43.1**	**+1.2**
ASAR	**Alice Springs**	**43.18**	**264**	P	**P**	**15 39 04.4**	**+1.0**
	0.4nm,0.5s,baz=95,slow=7.5,SNR=15						
ASAR				ScP	**ScP**	**15 44 19.3**	**+4.1**
	1.1nm,0.9s,baz=122,slow=4.1,SNR=6.5						
WRA	**Warramunga Arr**	**43.95**	**270**	P	**P**	**15 39 09.6**	**+0.1**
	0.7nm,0.4s,baz=108,slow=6.2,SNR=10						
VNDA	**Vanda**	**50.49**	**186**	P	P	15 40 05.2	+6.3
	1.7nm,0.9s,baz=5.3,slow=6.6,SNR=16						
SIJI	**Sorong**	**55.37**	**290**	P	**P**	**15 40 32.8**	**-2.6**
	6.3nm,0.6s,baz=135,slow=10,SNR=4.5						
MAW	**Mawson**	**74.53**	**200**	P	P	15 42 42.5	+4.9
	4.6nm,0.6s,baz=137,slow=7.9,SNR=17						
MJAR	**Matsushiro Arr**	**76.19**	**325**	P	**P**	**15 42 44.8**	**-2.6**
	14nm,0.7s,baz=159,slow=5.1,SNR=31						
MAT	**Matsushiro**	**76.19**	**325**	P	**P**	**15 42 45.7**	**-1.8**
SNAA	**Sanae**	**80.58**	**178**	P	P	15 43 15.8	+4.8
VNA3	**Neumayer Olymp**	**80.73**	**176**	P	P	15 43 16.5	+4.8
VNA2	**Neumayer--Watz**	**81.16**	**177**	P	P	15 43 19.2	+5.2
	baz=186,slow=5.0						
VNA1	**Neumayer--Stat**	**81.39**	**177**	P	P	15 43 20.4	+5.2
KSRS	**Korea Array**	**82.43**	**320**	P	**P**	**15 43 20.5**	**-0.5**
	3.6nm,0.9s,baz=134,slow=5.8,SNR=14						
PETK	**Petropavlovsk-**	**83.44**	**346**	P	**P**	**15 43 24.3**	**-1.5**
	2.1nm,0.5s,baz=140,slow=8.1,SNR=12						
PLCA	**Paso Flores**	**84.24**	**133**	P	P	15 43 35.2	+4.7
	6.0nm,0.8s,baz=226,slow=4.0,SNR=10						
USRK	**Ussuriysk Ar.**	**85.08**	**326**	P	**P**	**15 43 33.3**	**-1.0**
	3.3nm,0.6s,baz=114,slow=3.5,SNR=7.0						
NVAR	**Mina Array Bea**	**86.54**	**43**	P	**P**	**15 43 41.6**	**-0.2**
	2.0nm,0.7s,baz=221,slow=8.6,SNR=16						
TXAR	**Lajitas Array**	**91.18**	**57**	P	**P**	**15 44 04.7**	**+1.0**
	0.9nm,0.9s,baz=189,slow=7.2,SNR=6.1						
CMAR	**Chiang Mai Arr**	**92.49**	**289**	P	**P**	**15 44 11.1**	**+1.2**
	0.4nm,0.7s,baz=148,slow=4.3,SNR=2.9						
PDAR	**Pinedale Array**	**94.46**	**43**	P	**P**	**15 44 18.0**	**-0.6**
	1.2nm,1.0s,baz=209,slow=2.7,SNR=5.1						
ILAR	**Eielson Array**	**95.59**	**13**	P	**P**	**15 44 21.1**	**-1.9**
	0.6nm,0.7s,baz=221,slow=6.2,SNR=6.3						
ARCES	**ARCESS Array B**	**136.20**	**348**	PKP	**PKPdf**	**15 50 15.7**	**-1.7**
	3.0nm,0.8s,baz=19,slow=4.1,SNR=5.0						
FINES	**FINESS Array B**	**142.83**	**341**	PKhKP	PKPpre	15 50 25.5	
	0.9nm,0.3s,baz=60,slow=2.9,SNR=16						
NB2	**NORSAR Subarra**	**146.34**	**352**	PKP	**PKPbc**	**15 50 36.5**	**-1.0**
	comp=Z,4.5nm,0.7s,baz=21,slow=2.6						
NOA	**NORSAR Array B**	**146.34**	**352**	PKPbc	**PKPab**	**15 50 37.1**	**-1.7**
	comp=Z,2.9nm,0.6s,baz=16,slow=2.7,SNR=17						
AKASG	**Malin Array Be**	**149.28**	**325**	PKPbc	**PKiKP**	**15 50 45.4**	**-1.1**
	comp=Z,4.2nm,0.5s,baz=44,slow=3.6,SNR=23						
BRTR	**Keskin Array B**	**151.28**	**302**	PKPbc	**PKiKP**	**15 50 51.4**	**+0.2**
	comp=Z,1.2nm,0.6s,baz=123,slow=4.6,SNR=6.2						
GERES	**GERESS Array B**	**157.24**	**340**	PKPab	**PKPab**	**15 51 23.3**	**-1.5**
	comp=Z,0.7nm,0.7s,baz=5.7,slow=4.0,SNR=4.8						
TORD	**Torodi Ar. Bea**	**165.25**	**179**	PKPab	**PKPab**	**15 52 04.1**	**+3.7**
	comp=Z,3.1nm,0.9s,baz=182,slow=3.1,SNR=9.8						

IDC 20 15:35:20.3±1.8**, 29°.68N×141°.29E, h0**^{km}**, mb3.4**/3**, mb1 3.6**/4**, mb1mx3.4**/40**, mbtmp3.4**/4**, ML2.6**/1**, Error ellipse: s-maj=85.0km s-min=10.3km az=80.0, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**7.32**	**340**	Pn	Pn	15 37 08.1	-0.4
	0.1nm,0.3s,baz=160,slow=13,SNR=7.2						
MKAR	**Makanchi Array**	**48.25**	**308**	P	P	15 44 02.9	-0.1
	0.4nm,0.8s,baz=79,slow=7.5,SNR=3.6						
WRA	**Warramunga Arr**	**49.79**	**189**	P	P	15 44 14.8	0.0
	0.3nm,0.4s,baz=6.1,slow=7.5,SNR=4.6						
ASAR	**Alice Springs**	**53.51**	**188**	P	P	15 44 42.4	-0.3
	0.2nm,0.8s,baz=10,slow=7.8,SNR=1.5						

IDC 20 15:37:39.7±1.8**, 0°.69N×126°.75E, h0**^{km}**, mb3.4**/3**, mb1 3.7**/3**, mb1mx3.4**/34**, mbtmp3.5**/3**, Error ellipse: s-maj=198.5km s-min=13.2km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.82**	**160**	P	P	15 42 34.0	+0.2
	0.9nm,0.6s,baz=340,slow=11,SNR=5.1						
ASAR	**Alice Springs**	**25.19**	**164**	P	P	15 43 07.1	-0.1
	1.0nm,0.7s,baz=346,slow=9.9,SNR=9.2						
MKAR	**Makanchi Array**	**60.06**	**326**	P	P	15 47 48.6	0.0
	0.2nm,0.5s,baz=120,slow=8.8,SNR=4.9						

IDC 20 15:38:25.2±1.1**, 1°.12N×127°.38E, h0**^{km}**, mb3.5**/3**, mb1 3.7**/4**, mb1mx3.4**/36**, mbtmp3.5**/4**, ML3.0**/1**, Error ellipse: s-maj=18.2km s-min=14.7km az=35.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**4.35**	**117**	Pn	Pn	15 39 32.8	0.0
	0.8nm,0.3s,baz=320,slow=23,SNR=6.4						
WRA	**Warramunga Arr**	**22.01**	**162**	P	P	15 43 20.9	-0.5
	1.6nm,0.6s,baz=340,slow=11,SNR=9.8						
ASAR	**Alice Springs**	**25.44**	**166**	P	P	15 43 55.4	+0.4
	1.1nm,0.6s,baz=344,slow=8.9,SNR=11						
MKAR	**Makanchi Array**	**60.07**	**326**	P	P	15 48 33.9	-0.3
	0.1nm,0.4s,baz=130,slow=8.1,SNR=2.2						

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*TUL **20** 15:42:32.4±0.9, 36°.51N±0°.02×98°.61W±0°.04, h5^{km}±7^{km}, ML3.3, mb_Lg2.8/32(NEIC), Error ellipse: s-maj=4.6km s-min=2.0km az=62.0*

NEIC 20 15:42:32.5±1.0**, 36°.49N**±0°.02×**98°.59W**±0°.04**, h5**^{km}±2^{km}**, Error ellipse: s-maj=6.1km s-min=3.4km az=82.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	**Winter Ranch,**	**0.35**	**251**	Pg	Pg	15 42 39.1	-0.2
OK032	**Salt Plains WL**	**0.44**	**44**		Pg	15 42 40.6	-0.3
OK032				Sg	Sg	15 42 47.1	+0.5
CROK	**Carrier**	**0.49**	**88**		Pg	15 42 42.5	+0.6
CROK				Sg	Sg	15 42 49.5	+1.2
KAN14	**Manchester OK**	**0.69**	**47**		Pg	15 42 45.6	0.0
GC02	**Grant County #**	**0.69**	**58**		Pg	15 42 45.8	+0.1
KAN10	**Anthony SW Sta**	**0.74**	**32**	Pg	Pg	15 42 46.6	-0.2
KAN16	**Harper SW Stat**	**0.84**	**30**		Pg	15 42 48.4	-0.3
KAN17	**Caldwell West**	**0.86**	**50**		Pg	15 42 48.8	-0.3
KAN08	**Anthony NE Sta**	**0.89**	**34**	Pg	Pg	15 42 49.2	-0.2
KAN12	**Harper NE Stat**	**0.93**	**30**	Pg	Pg	15 42 50.2	-0.2
KAN01	**Argonia South**	**0.94**	**45**	Pg	Pg	15 42 50.1	-0.4
KAN06	**Argonia West S**	**0.96**	**38**	Pg	Pg	15 42 50.4	-0.4
KAN09	**Caldwell North**	**1.01**	**50**	Pg	Pg	15 42 51.6	-0.3
BLOK	**Blackwell**	**1.14**	**76**		Pg	15 42 53.9	-0.5
BCOK	**Bluff Creek, N**	**1.15**	**136**	Pg	Pg	15 42 54.2	-0.4
OK029	**Liberty Lake**	**1.15**	**127**		Pg	15 42 54.2	-0.3
OKCFA	**Oklahoma City**	**1.42**	**139**	Pn	Pn	15 42 58.2	-0.7
QUOK	**Quay**	**1.55**	**101**	Pn	Pn	15 43 00.3	-0.5
FNO	**Franklin**	**1.57**	**142**	Pn	Pn	15 43 01.2	+0.3
OK030	**Cody Creek RV**	**1.57**	**111**		Pn	15 43 01.1	+0.1
T35A	**Sooner Cattle**	**1.72**	**75**	Pn	Pn	15 43 03.8	+0.6
WMOK	**Wichita Mounta**	**1.76**	**185**	Pn	Pn	15 43 03.7	+0.1
R32A	**Long Quarter,**	**1.93**	**357**		Pn	15 43 06.8	+0.8
X34A	**Smith Ranch, M**	**1.99**	**162**	Pn	Pb	15 43 08.3	-0.8
TUL1	**Leonard**	**2.34**	**104**		Pn	15 43 11.6	+0.1
TUL1				IAmb_Lg		15 43 48.6	
	comp=Z,30nm,0.7s						
CBKS	**Cedar Bluff**	**2.49**	**339**		Pn	15 43 15.3	+1.5
LOOK	**Love County**	**2.75**	**155**	IAmb_Lg		15 44 07.2	
	comp=Z,33nm,0.9s						
X37A	**Clayton**	**3.24**	**125**		Pn	15 43 24.5	+0.5
X37A				IAmb_Lg		15 44 23.6	
	comp=Z,32nm,0.8s						
KSCO	**Kaye Shedlock'**	**4.07**	**309**	IAmb_Lg		15 44 50.1	
	comp=Z,34nm,0.8s						
S39A	**Bolivar**	**4.38**	**73**		Pn	15 43 39.5	-0.1
S39A				IAmb_Lg		15 44 54.1	
	comp=Z,18nm,0.8s						
U40A	**Yellville**	**4.63**	**90**		Pn	15 43 43.4	+0.3
U40A				IAmb_Lg		15 45 04.0	
	comp=Z,19nm,0.7s						
BGNE	**Belgrade**	**4.92**	**4**	IAmb_Lg		15 45 05.4	
	comp=Z,24nm,0.9s						
P38A	**Dawn**	**5.07**	**50**	IAmb_Lg		15 45 24.7	
	comp=Z,20nm,0.9s						
X40A	**Basin Creek Fa**	**5.11**	**111**	IAmb_Lg		15 45 24.6	
	comp=Z,23nm,0.7s						
FCAR	**Ozark Folk Cen**	**5.26**	**95**	IAmb_Lg		15 45 28.8	
	comp=Z,18nm,0.8s						
WLAR	**White Oak Lake**	**5.29**	**120**	IAmb_Lg		15 45 23.1	
	comp=Z,18nm,0.8s						
R40A	**Maddies Statio**	**5.34**	**68**	IAmb_Lg		15 45 22.0	
	comp=Z,14nm,0.7s						
435B	**Jarrell**	**5.76**	**171**	IAmb_Lg		15 45 48.4	
	comp=Z,12nm,0.8s						
CCM	**Cathedral Cave**	**6.06**	**73**	IAmb_Lg		15 45 46.9	
	comp=Z,15nm,0.8s						
JCT	**Junction City**	**6.08**	**190**	IAmb_Lg		15 46 01.2	
	comp=Z,20nm,1.0s						
ISCO	**Idaho Springs**	**6.44**	**303**	IAmb_Lg		15 46 04.3	
	comp=Z,11nm,0.8s						

IDC 20 15:44:41.2±1.5**, 0°.94N×127°.21E, h0**^{km}**, mb3.6**/3**, mb1 3.8**/4**, mb1mx3.5**/36**, mbtmp3.6**/4**, ML2.9**/1**, Error ellipse: s-maj=64.1km s-min=24.0km az=60.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**4.43**	**114**	Pn	Pn	15 45 49.6	-0.1
	0.6nm,0.3s,baz=162,slow=22,SNR=2.9						
WRA	**Warramunga Arr**	**21.90**	**162**	P	P	15 49 36.2	+0.1
	1.2nm,0.6s,baz=340,slow=11,SNR=12						
ASAR	**Alice Springs**	**25.31**	**166**	P	P	15 50 09.7	-0.1
	1.6nm,0.8s,baz=344,slow=11,SNR=15						
MKAR	**Makanchi Array**	**60.12**	**326**	P	P	15 54 50.5	0.0
	0.6nm,0.7s,baz=117,slow=8.0,SNR=7.2						

*IDC **20** 16:08:25.2±1.2, 7.°61S×117.°11E, h305^{km}±12^{km}, mb3.6/14, mb1 3.7/19, mb1mx3.5/50, mbtmp4.3/19, Error ellipse: s-maj=16.2km s-min=9.4km az=55.0*

*DJA **20** 16:08:25.8±0.2, 8°S±4°×11°7E±°, h296^{km}±3^{km}, M4.0/19, mb4.2/16, mB4.6/10, MLv4.2/19, Mw(mB)3.9/10*

ISC 20 16:08:25.1±0.5, **7.°72S**±0.°06×**117.°09E**±0.°05, **h302**^{km}, **n69**, σ**1^{s}32**/75, **mb4.0**/23, **Bali Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWSI	Taliwang, Sumb	1.03	191	P	Pn	16 09 05.6	-0.2
TWSI				S	S	16 09 36.3	-1.9
SRBI	Singaraja	1.89	259	P	Pn	16 09 12.0	+0.8
SRBI				S	S	16 09 47.9	0.0
DNP	Denpasar	2.09	243	P	Pn	16 09 13.7	+1.0
IGBI	Denpasar	2.21	240	P	Pn	16 09 14.2	+0.5
KMMI	Kalianget	3.17	282	P	Pn	16 09 24.3	+1.6
BLJI	Banyuglugur	3.46	269	P	Pn	16 09 27.1	+1.4
GMJI	Gumukmas	3.65	261	P	Pn	16 09 27.9	+0.2
KAPI	Kappang	3.77	45	P	Pn	16 09 27.9	-1.1
	2.7nm,0.3s,baz=214,slow=2.7,SNR=5.0						
BKSI	Bulukumba	3.84	52	P	Pn	16 09 30.7	+0.9
BASI	Baing, Sumba	4.25	126	P	Pn	16 09 34.3	+0.2
BNSI	Bone	4.46	42	P	Pn	16 09 38.7	+2.1
KBKI	Kotabaru	4.49	348	P	Pn	16 09 39.8	+2.9
EDFI	Ende, Flores	4.67	103	P	Pn	16 09 38.1	-0.9
BBKI	Banjar Baru	4.79	332	P	Pn	16 09 42.8	+2.5
TTSI	Tana Toraja	5.38	30	P	Pn	16 09 49.5	+2.3
	0.1nm784nm20nm,1.1s						
PCJI	Pacitan	5.87	265	P	Pn	16 09 53.3	+0.3
	3.5nm11µm784nm,0.7s						
UGM	Wanagama	6.51	268	P	Pn	16 10 00.8	+0.2
BATI	Baumata	6.95	111	P	Pn	16 10 05.1	-0.8
	6.7nm,0.3s,baz=304,slow=3.9,SNR=8.8						
BATI				S	S	16 11 24.9	-2.5
	46nm,0.3s,baz=104,slow=18,SNR=9.6						
MTKI	Muara Teweh, K	7.08	342	P	Pn	16 10 07.3	-0.3
LEM	Lembang	9.44	275	P	Pn	16 10 37.0	+0.4
	2.1nm,0.3s,baz=42,slow=10.0,SNR=6.8						
STKI	Sintang	9.55	324	P	Pn	16 10 39.5	+1.7
	4.7nm,0.4s						
SANI	Sanana	10.50	58	P	Pn	16 10 50.1	+0.6
	644nm61nm,0.9s						
SANI	Sanana	10.50	58	P	P	16 10 53.7	+1.3
AAI	Ambon	11.75	71	P	P	16 11 06.8	+0.5
	1µm66nm,0.9s						
PPBI	Pangkal Pinang	12.23	296	P	P	16 11 12.5	+0.9
LBMI	Labuha	12.54	56	P	P	16 11 15.8	+0.8
	421nm29nm,1.3s						
MSAI	Masohi	12.56	70	P	Pn	16 11 13.6	-0.9
	318nm8.9nm,0.5s						
KLSI		12.65	283	P	P	16 11 17.6	+1.3
	15nm,1.0s						
MDSI	Maura Dua	13.23	283	P	P	16 11 24.4	+1.7
	969nm9.0nm,1.1s						
FITZ	Fitzroy Crossi	13.25	142	P	P	16 11 24.6	+1.7
	0.7nm,0.3s,baz=340,slow=8.0,SNR=24						
FITZ				S	S	16 14 00.7	+11
	0.8nm,0.3s,baz=185,slow=21,SNR=6.5						
MBWA	Marble Bar	13.60	169	P	Pn	16 11 28.1	+1.2
KKM	Kota Kinabalu	13.71	356	P	Pn	16 11 30.5	+2.2
KNRA	Kununurra	13.89	126	P	Pn	16 11 31.3	+0.9
	10nm,0.8s						
DRS	Darwin Rock St	14.38	110	P	Pn	16 11 37.6	+1.4
	18nm,0.9s						
MTN	Manton Dam	14.72	111	P	Pn	16 11 40.0	-0.3
	26nm,0.6s						
SWI	Sorong	15.68	65	P	Pn	16 11 51.7	+0.1
	1µm145nm,0.9s						
SIJI	Sorong	15.68	65	P	P	16 11 49.1	-0.7
	5.9nm,0.3s,baz=262,slow=6.5,SNR=41						
KDU	Kakadu	15.92	109	P	P	16 11 52.7	+0.5
	14nm,1.5s						
WRKA	Warakurna	20.27	149	P	P	16 12 39.8	+1.0
	6.9nm,2.2s						
WRA	Warramunga Arr	20.66	128	P	P	16 12 42.9	+0.2
	3.1nm,0.6s,baz=288,slow=12,SNR=38						
WRAB	Tennant Creek	20.67	128	P	P	16 12 43.3	+0.6
PSI	Prapat	20.92	299	P	P	16 12 43.6	-1.8
	8.6nm,0.6s,baz=121,slow=11,SNR=12						
GSI	Gunungsitoli	21.43	294	P	P	16 12 52.0	+2.0
ASAR	Alice Springs	22.61	136	P	P	16 13 01.9	+1.3
	2.2nm,0.5s,baz=316,slow=9.4,SNR=63						
ASAR				PcP	PcP	16 16 43.0	-0.4
	0.7nm,0.4s,baz=305,slow=1.5,SNR=10						
ASAR				ScP	ScP	16 19 50.1	-1.9
	1.0nm,0.7s,baz=332,slow=1.9,SNR=7.6						
QIS	Mount Isa	25.24	123	P	P	16 13 26.8	+2.3
	3.0nm,2.4s						
CMAR	Chiang Mai Arr	31.58	326	P	P	16 14 21.0	+0.6
	2.4nm,0.5s,baz=152,slow=6.6,SNR=18						
CMAR				ScP	ScP	16 20 17.4	-1.7
	0.5nm,0.3s,baz=195,slow=2.7,SNR=5.1						
TAPN	Taplejung	45.00	322	*e*P	P	16 16 10.9	-0.8
	10.0nm,0.6s						
RAMN	Ramite	45.40	321	*e*P	P	16 16 14.2	-0.6
	7.8nm,0.5s						
KSRS	Korea Array	46.07	12	P	P	16 16 19.1	-0.4
	2.3nm,0.9s,baz=185,slow=8.8,SNR=9.8						
JIRN	Jiri	46.16	321	*e*P	P	16 16 19.8	-1.0
	14nm,0.5s						
GUN	Gumba	46.53	321	*e*P	P	16 16 22.5	-1.2
	12nm,0.6s						
PKI	Pulchoki	46.59	320	*e*P	P	16 16 22.5	-1.6
	5.0nm,0.5s						
PKIN	Phulchoki	46.60	320	*e*P	P	16 16 22.4	-1.7
	5.1nm,0.4s						
KKN	Kakani	46.83	320	*e*P	P	16 16 24.5	-1.3
GKN	Gorkha	47.38	320	*e*P	P	16 16 28.4	-1.6
	5.7nm,0.4s						
KOLN	Koldanda	47.89	319	*e*P	P	16 16 32.4	-1.6
DANN	Dangsing	48.18	319	*e*P	P	16 16 34.6	-1.6
	15nm,0.5s						
MJAR	Matsushiro Arr	48.29	23	P	P	16 16 34.8	-1.8
	1.8nm,0.6s,baz=186,slow=7.6,SNR=5.0						
PYUN	Piuthan	48.51	319	*e*P	P	16 16 37.2	-1.5
	7.9nm,0.6s						
GTA	Gaotai	49.56	342	*e*P	P	16 16 46.3	+0.1
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
USRK	Ussuriysk Ar.	53.41	13	P	P	16 17 13.2	-1.1
	comp=Z,4.0nm,0.7s,baz=194,slow=6.3,SNR=8.7						
SONM	Songino Array	56.12	351	P	P	16 17 33.3	-0.5
	comp=Z,7.0nm,0.6s,baz=170,slow=8.6,SNR=58						
KLR	Kul'dur	58.15	11	P	P	16 17 46.4	-1.3
	comp=Z,0.8nm,0.8s,baz=173,slow=7.9,SNR=4.1						
MKAR	Makanchi Array	62.48	334	P	P	16 18 15.6	-1.3
	comp=Z,2.2nm,0.6s,baz=151,slow=6.0,SNR=26						
ZALV	Zalesovo Beam	67.19	340	P	P	16 18 45.0	-1.9
	comp=Z,1.7nm,0.3s,baz=134,slow=3.5,SNR=8.0						
VNDA	Vanda	73.54	171	P	P	16 19 25.0	+0.2
	comp=Z,0.4nm,0.4s,baz=314,slow=7.2,SNR=6.4						
ASF	Jabal al Asfar	85.85	303	P	P	16 20 30.6	-0.9
	comp=Z,2.3nm,0.5s,baz=142,slow=12,SNR=5.4						
MMAI	Mount Meron Ar	87.25	304	P	P	16 20 38.3	+0.1
	comp=Z,1.2nm,0.6s,baz=90,slow=9.3,SNR=4.2						
CPUP	Villa Florida	145.72	189	PKPbc	PKPbc	16 27 29.4	-0.1
	comp=Z,2.6nm,0.5s,baz=164,slow=5.6,SNR=5.0						

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*TUL **20** 16:09:46.4±1.3, 36.°52N±0.°02×98.°61W±0.°01, h4^{km}±7^{km}, ML2.6, mb_Lg2.2/4(NEIC), Error ellipse: s-maj=2.3km s-min=1.3km az=173.0*

NEIC 20 16:09:46.6±0.8, **36.°53N**±0.°02×**98.°62W**±0.°02, **h9**^{km}±5^{km}, **Error ellipse: s-maj=3.5km s-min=1.1km az=148.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	Winter Ranch,	0.34	244		Pg	16 09 53.4	0.0
U32A				Sg	Sg	16 09 58.5	+0.6
OK032	Salt Plains WL	0.43	50		Pg	16 09 55.2	+0.2
OK032				Sg	Sg	16 09 59.2	-1.4
CROK	Carrier	0.51	93		Pg	16 09 56.5	0.0
CROK				Sg	Sg	16 10 03.7	+0.4
KAN14	Manchester OK	0.68	51	Pg	Pg	16 09 59.4	-0.3
GC02	Grant County #	0.69	62		Pg	16 09 59.9	-0.1
KAN16	Harper SW Stat	0.82	32	Pg	Pg	16 10 02.6	+0.1
KAN17	Caldwell West	0.86	53	Pg	Pg	16 10 02.9	-0.2
KAN17				IAmb_Lg		16 10 15.8	
	comp=Z,28nm,0.7s						
KAN09	Caldwell North	1.00	53	Pg	Pg	16 10 05.7	-0.2
KAN13	South Haven SW	1.03	62	Pg	Pg	16 10 06.0	-0.5
BLOK	Blackwell	1.15	78	Pg	Pb	16 10 08.0	-0.7
BCOK	Bluff Creek, N	1.19	137	Pg	Pb	16 10 08.5	-0.9
OKCFA	Oklahoma City	1.46	139	Pn	Pn	16 10 12.8	-0.3
QUOK	Quay	1.58	102	Pn	Pb	16 10 15.8	-0.2
T35A	Sooner Cattle	1.73	77		Pb	16 10 17.8	-0.8
WMOK	Wichita Mounta	1.79	184		Pn	16 10 17.7	-0.1
R32A	Long Quarter,	1.89	358		Pb	16 10 20.7	-0.7
X34A	Smith Ranch, M	2.03	161	Pn	Pb	16 10 22.5	-1.1
TUL1	Leonard	2.37	104	IAmb_Lg		16 11 00.6	
	comp=Z,10nm,0.8s						

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*JMA **20** 16:15:09.6±0.2, 30.°29N×138.°96E, h483^{km}, M3.7*

*IDC **20** 16:15:11.6±0.8, 30.°26N×138.°68E, h430^{km}±11^{km}, mb3.1/7, mb1 3.3/14, mb1mx3.0/60, mbtmp4.1/14, Error ellipse: s-maj=28.4km s-min=9.3km az=78.0*

ISC 20 16:15:12.0±0.7, **30.°31N**±0.°06×**138.°9E**±0.°1, **h450**^{km}, **n36**, σ**1^{s}67**/43, **mb3.8**/12, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHCJ	Hachijojimakas	2.86	16	P	P	16 16 19.3	+1.4
JHJ	Hachijo jima 2	2.90	15	P	P	16 16 18.9	+0.6
	53nm,0.3s,baz=252,slow=20,SNR=8.3						
JHJ				S	S	16 17 10.2	-1.9
	14nm,0.3s,baz=60,slow=18,SNR=1.9						
JHJ2	Mitsune	2.90	16	P	P	16 16 19.6	+1.4
CBIJ	Chichi jima	4.33	137	P	P	16 16 29.8	-0.4
CBIJ				*e*S	S	16 17 31.6	-2.1
JCJ	Chichijima	4.33	137	P	P	16 16 29.9	-0.3
	15nm,0.3s,baz=280,slow=21,SNR=11						
JCJ				S	S	16 17 31.7	-2.0
	37nm,0.3s,baz=286,slow=22,SNR=13						
JIE	Ise	4.46	336	P	P	16 16 32.6	+1.4
BSO1	Boso 1	4.68	22	P	P	16 16 33.4	+0.8
BSO1				*e*S	S	16 17 39.0	+0.6
BSO4	Boso 4	4.82	14	*e*S	S	16 17 41.4	-0.4
JOD2	Odawara 2	4.94	2	P	P	16 16 36.5	+0.8
JNY	Yasuok	5.10	351	P	P	16 16 38.9	+1.6
JHU	Hanno	5.53	3	P	P	16 16 41.5	0.0
JHU				*e*S	S	16 17 49.6	-5.0
JRY	Ryogami san	5.69	0	P	P	16 16 43.8	+0.7
JYT	Yasato	6.00	10	P	P	16 16 45.7	-0.5
JAG	Ashikaga	6.11	4	P	P	16 16 46.9	-0.5
JAG				*e*S	S	16 17 59.7	-5.7
MJAR	Matsushiro Arr	6.24	355	P	P	16 16 47.1	-1.6
	0.3nm,0.3s,baz=175,slow=11,SNR=16						
MAT	Matsushiro	6.24	355	P	P	16 16 48.6	-0.1
MAT				*e*S	S	16 18 05.0	-2.7
JHO	Hitachi	6.44	12	P	P	16 16 51.0	+0.3
KSRS	Korea Array	11.55	311	P	P	16 17 45.6	-0.2
	0.5nm,0.3s,baz=127,slow=10,SNR=5.1						
ASAJ	Asahikawa	14.09	11	P	P	16 18 15.6	+2.3
	0.6nm,0.3s,baz=229,slow=11,SNR=7.3						
USRK	Ussuriysk Ar.	14.90	340	P	P	16 18 22.3	+0.5
	baz=148,slow=9.2,SNR=17						
KLR	Kul'dur	19.65	346	P	P	16 19 10.8	+0.9
	0.3nm,0.3s,baz=151,slow=7.9,SNR=10						
SONM	Songino Array	30.39	314	P	P	16 20 45.3	-0.5
	0.3nm,0.6s,baz=133,slow=11,SNR=2.2						
RAMN	Ramite	45.68	279	*e*P	P	16 22 50.4	-1.1
	3.6nm,0.3s						
JIRN	Jiri	45.82	280	*e*P	P	16 22 52.2	-0.6
	9.3nm,0.3s						
GUN	Gumba	46.02	281	*e*P	P	16 22 53.5	-0.7
PKIN	Phulchoki	46.52	281	*e*P	P	16 22 56.9	-1.1
GKN	Gorkha	47.04	281	*e*P	P	16 23 01.1	-0.8
	2.5nm,0.3s						
DANN	Dangsing	47.69	282	*e*P	P	16 23 06.6	-0.3
	7.2nm,0.3s						
KOLN	Koldanda	47.99	281	*e*P	P	16 23 08.0	-1.1
PYUN	Piuthan	48.41	282	*e*P	P	16 23 11.8	-0.4
	26nm,0.3s						
FITZ	Fitzroy Crossi	49.79	197	P	P	16 23 22.9	+0.7
	1.5nm,0.8s,baz=45,slow=10.0,SNR=2.2						
WRA	Warramunga Arr	50.16	186	P	P	16 23 25.3	+0.4
	1.9nm,0.4s,baz=0.4,slow=7.7,SNR=92						
ASAR	Alice Springs	53.88	186	P	P	16 23 52.5	+0.6
	0.9nm,0.4s,baz=356,slow=5.3,SNR=60						
ILAR	Eielson Array	56.33	30	P	P	16 24 10.9	+2.4
	0.3nm,0.7s,baz=257,slow=4.8,SNR=4.5						
STKA	Stephens Creek	61.91	177	P	P	16 24 47.7	+1.2
	0.6nm,0.4s,baz=313,slow=8.3,SNR=3.5						
ARCES	ARCESS Array B	69.54	340	P	P	16 25 34.7	+0.7
	3.1nm,0.8s,baz=34,slow=3.2,SNR=6.1						

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*BEO **20** 16:21:32.5±3.8, 37.°83N×20.°38E, h48^{km}±7^{km}, ML3.7/9*

*IDC **20** 16:21:35.0±2.1, 38.°34N×20.°04E, h0^{km}, mb3.8/6, mb1 3.7/11, mb1mx3.5/63, mbtmp3.6/11, ML3.7/4, MS2.6/3, Ms1 2.7/3, ms1mx2.3/56, Error ellipse: s-maj=39.1km s-min=19.9km az=49.0*

*THE **20** 16:21:39.8, 38.°71N×20.°62E, h0^{km}±1^{km}, ML3.6/10, Error ellipse: s-maj=1.5km s-min=0.5km az=359.0*

ISC 20 16:21:39.2±0.8, **38.°71N**±0.°02×**20.°58E**±0.°03, **h6**^{km}±5^{km}, **n56**, σ**1^{s}39**/65, **mb3.5**/6, **10C-3D**, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRAG	Dragano-Lefkad	0.03	182	P	Pg	16 21 40.5	+0.1
DRAG				S	Sg	16 21 41.5	+0.3
	413µm,0.6s						
NYDR	Nydri-Lefkada	0.10	89	P	Pg	16 21 40.9	-0.4
NYDR				S	Sg	16 21 41.8	-0.9
	152µm,0.6s						
LKD2	Lefkada island	0.10	39	P	Pg	16 21 41.1	-0.4
EVGI	Lefkada island	0.11	145	P	Pg	16 21 41.7	+0.1
TSLK	Tsoukalades, L	0.13	29	P	Pg	16 21 42.0	+0.1
FSK	Fiskardo	0.25	182	P	Pg	16 21 44.8	+0.6
FSK				S	Sg	16 21 49.2	+1.7
	22µm,0.3s						
KEF4	Livadi, Kephal	0.47	195	P	Pb	16 21 48.7	-1.2
KEF4				S	Sb	16 21 56.6	-0.4
	33µm,0.5s						
DMLN	Damoulianata-K	0.50	199	P	Pb	16 21 49.3	-1.1
DMLN				S	Sb	16 21 56.9	-1.0
	8µm,0.5s						
VLS	Valsamata	0.53	179	P	Pg	16 21 49.3	-0.2
VLS				S	Sb	16 21 58.3	-0.7
	5µm,0.5s						
KEF3	Kipouria, Keph	0.54	199	P	Pg	16 21 49.3	-0.3
PSDA	Pessada-Kefalo	0.60	179	P	Pg	16 21 50.7	0.0
PSDA				S	Sb	16 22 00.3	-0.4
	752nm,0.4s						
PVO	Paravola	0.75	97	P	Pg	16 21 53.5	-0.1
PVO				S	Sb	16 22 04.9	-0.3
	5µm,0.7s						
IGT	Igoumenitsa	0.84	347	P	Pg	16 21 55.0	-0.4
IGT				S	Sn	16 22 09.5	-0.9
	2µm,0.5s						
RLS	Riolos of Patr	0.96	133	P	Pg	16 21 57.3	-0.3
JAN	Janina	0.97	13	P	Pg	16 21 58.2	+0.4
JAN				S	Sn	16 22 13.1	-0.5
	2µm,0.7s						
ANX	Ano Chora	1.06	96	P	Pg	16 21 59.1	-0.5
EFP	Efpalio	1.08	105	P	Pg	16 21 59.0	-1.0
LAKA	Lakka	1.20	113	P	Pg	16 22 00.9	-1.3
TRIZ	Trizonia	1.22	106	P	Pg	16 22 01.6	-1.1
OHR	Ohrid	2.40	4	*e*Pn	Pb	16 22 22.3	-0.6
OHR				*e*Sn	Sg	16 22 56.9	+0.4
OHR	Ohrid	2.40	4	*e*Pn	Pb	16 22 23.0	+0.1
TIR	Tirane	2.69	349	*e*Pn	Pn	16 22 25.4	+2.3
TIR				*e*Sn	Sb	16 23 03.3	+2.3
VAY	Valandovo	3.02	30	*e*Pn	Pn	16 22 29.6	+2.0
VAY	Valandovo	3.02	30	*e*Pn	Pb	16 22 31.4	-2.0
MATE	Matera	3.56	304	⇑P	Pb	16 22 42.3	-0.3
MATE				⇓S	Sb	16 23 22.1	-4.0
PDG	Podgorica	3.85	345	⇑P	Pn	16 22 41.0	+2.0
PDG				⇓S	Sn	16 23 24.6	+0.1
PDG	Podgorica	3.85	345	*e*Pn	Pn	16 22 40.5	+1.5
PRVS	Prvonek	3.96	16	*e*Pn	Pn	16 22 42.9	+2.3
BARS	Barje	4.21	13	*e*Pn	Pn	16 22 45.0	+1.1
APE	Apeiranthos	4.25	111	⇑P	Pn	16 22 46.6	+2.0
TREB	Trebinje	4.34	338	*e*Pn	Pn	16 22 45.1	-0.7
VTS	Vitosha	4.39	27	⇑P	Pn	16 22 48.9	+2.3
VTS				⇑S	Sn	16 23 37.3	-1.0
VTS	Vitosha	4.39	27	*e*Pn	Pn	16 22 47.3	+0.6
VTS				*e*Sn	Sn	16 23 42.6	+4.4
SANT	Santorini	4.53	120	⇑P	Pn	16 22 52.0	+3.6
SJES	Sjenica	4.57	354	*e*Pn	Pn	16 22 50.6	+1.6
STON	Ston	4.69	333	*e*Pn	Pn	16 22 50.2	-0.4
IDI	Anoyia	4.86	133	Pn	Pn	16 22 52.7	-0.3
	0.2nm,0.3s,baz=317,slow=19,SNR=2.7						
IDI				Sn	Sn	16 23 49.8	+0.2
	2.3nm,0.3s,baz=282,slow=16,SNR=5.4						
BOVS	Bovan	4.99	9	⇑P	Pn	16 23 00.4	+5.7
DIVS	Divibare	5.40	356	*e*Pn	Pn	16 23 00.6	+0.2
TRUS	Trudelj	5.51	359	*e*Pn	Pn	16 23 00.9	-0.9
VOIR		7.50	25	⇑P	Pn	16 23 35.5	+6.4
MLR	Muntele Rosu	7.86	29	⇓P	Pn	16 23 43.4	+9.2
MLR	Muntele Rosu	7.86	29	Pn	Pn	16 23 40.9	+6.7
	0.8nm,0.3s,baz=7.7,slow=1.6,SNR=5.0						
PLOR	Plostina	8.43	30	⇑P	Pn	16 23 49.2	+7.2
VRI	Vrincioaia	8.48	31	⇑P	Pn	16 23 49.4	+6.8
BRTR	Keskin Array B	10.19	80	Pn	Pn	16 24 11.1	+4.9
	0.1nm,0.3s,baz=267,slow=13,SNR=4.8						
BRTR				LR	LR	16 28 57.1	
	comp=Z,30nm,18.2s,baz=310,slow=41						
VRAC	Vranov	10.97	346	LR	LR	16 28 39.4	
	comp=Z,33nm,19.6s,baz=176,slow=38						
GERES	GERESS Array B	11.28	336	Pn	Pn	16 24 20.7	-0.3
	0.1nm,0.3s,baz=170,slow=14,SNR=3.2						
MMAI	Mount Meron Ar	13.30	111	Pn	Pn	16 24 48.1	-0.5
	0.5nm,0.3s,baz=312,slow=12,SNR=4.5						
HFS	Hagfors	21.88	351	P	P	16 26 32.1	-0.5
	1.4nm,0.7s,baz=174,slow=14,SNR=1.7						
FINES	FINESS Array B	23.01	7	P	P	16 26 45.0	+0.4
	2.0nm,0.7s,baz=152,slow=8.2,SNR=8.8						
NOA	NORSAR Array B	23.11	348	P	P	16 26 45.7	+0.1
	0.5nm,0.7s,baz=153,slow=11,SNR=2.3						
NOA				LR	LR	16 36 05.7	
	comp=Z,16nm,19.1s,baz=15,slow=37						
KURBB	Kurchatov Arra	41.88	54	P	P	16 29 31.8	+1.7
	0.3nm,0.5s,baz=282,slow=9.1,SNR=1.7						
MKAR	Makanchi Array	44.99	59	P	P	16 29 55.4	+0.1
	0.4nm,0.6s,baz=278,slow=7.3,SNR=7.7						
ZALV	Zalesovo Beam	45.30	48	P	P	16 29 57.6	0.0
	1.8nm,0.5s,baz=284,slow=8.6,SNR=7.2						
ASAR	Alice Springs	122.19	96	PKP	PKPdf	16 40 32.9	-2.4
	0.3nm,0.8s,baz=315,slow=1.7,SNR=5.1						

IDC 20 16:22:46.4±1.3, **0.°78N**×**127.°15E**, **h0**^{km}, **mb3.5**/4, **mb1 3.6**/5, **mb1mx3.4**/45, **mbtmp3.5**/5, **ML2.8**/1, **Error ellipse: s-maj=62.9km s-min=22.4km az=60.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.43	112	Pn	Pn	16 23 54.2	-0.7
	0.5nm,0.3s,baz=279,slow=19,SNR=1.8						
WRA	Warramunga Arr	21.77	161	P	P	16 27 40.1	+0.2
	0.7nm,0.6s,baz=339,slow=11,SNR=7.1						
ASAR	Alice Springs	25.17	165	P	P	16 28 13.8	+0.1
	1.1nm,0.9s,baz=344,slow=8.2,SNR=9.0						
MKAR	Makanchi Array	60.21	326	P	P	16 32 55.2	-1.2
	0.3nm,0.7s,baz=120,slow=8.8,SNR=1.6						
KURBB	Kurchatov Arra	64.44	328	P	P	16 33 25.6	+1.1
	0.3nm,0.2s,baz=128,slow=5.6,SNR=1.7						

IDC 20 16:26:10.8±675.0, **30.°66N**×**106.°99E**, **h0**^{km}, **Error ellipse: s-maj=306.3km s-min=189.3km az=72.0, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I34MN	SONGINO INFRAS	17.13	359	*i*		18 11 10.0	
	baz=177,slow=342,SNR=2.4						
I45RU	USSURIYSK INFR	23.89	49	*i*		18 51 00.0	
	baz=242,slow=309,SNR=1.7						
I39PW	PALAU INFRASON	34.55	126	*i*		20 00 10.0	
	baz=308,slow=315,SNR=0.8						
I44RU	PETROPAVLOVSK	42.80	43	*i*		20 48 10.0	
	baz=253,slow=332						

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*MAN **20** 16:36:52.6, 6.°72N×123.°74E, h15^{km}, mb5.0, ML3.9, MS4.0*

*IDC **20** 16:36:58.0±6.0, 8.°01N×127.°02E, h109^{km}±53^{km}, mb3.4/4, mb1 3.5/4, mb1mx3.1/45, mbtmp3.7/4, MS3.1/1, Ms1 3.1/1, ms1mx2.3/36, Error ellipse: s-maj=69.5km s-min=22.4km az=63.0*

ISC 20 16:36:56.1±1.5, **6.°69N**±0.°08×**123.°67E**±0.°09, **h56**^{km}±18^{km}, **n13**, σ**2^{s}38**/18, **mb3.5**/4, **5C**, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAGZ	Pagadian	1.18	346	⇑*e*P	Pn	16 37 13.7	-2.7
PAGZ				*e*S	Sn	16 37 32.5	+0.9
GSPH	General Santos	1.41	115	⇑*i*P	Pn	16 37 19.1	-0.4
GSPH				*i* S	Sn	16 37 40.8	+3.7
BUKP	Musuan	1.82	49	⇑*i*P	Pn	16 37 22.8	-2.2
BUKP				*i* S	Sn	16 37 48.4	+1.3
DMPH	Davao City--Mi	1.87	78	⇑*e*P	Pn	16 37 21.4	-4.2
DMPH				*e*S	Sn	16 37 52.5	+4.3
DAV	Davao City (W)	1.93	79	P	Pn	16 37 26.5	-0.1
	107nm,0.3s,baz=238,slow=0.8,SNR=14						
DAV				S	Sn	16 37 49.8	0.0
	70nm,0.3s,baz=272,slow=24,SNR=15						
SNPH	Sibulan	2.67	351	*e*P	Pn	16 37 38.1	+1.4
TBP	Tagbilaran	2.99	4	*e*P	Pn	16 37 40.3	-0.7
TBP				*i* S	Sn	16 38 16.0	+0.4
CNOP	Candoni, Negro	3.28	342	⇑*e*P	Pn	16 37 44.6	-0.4
WRA	Warramunga Arr	28.47	159	P	P	16 42 44.4	-1.7
	0.9nm,0.7s,baz=344,slow=9.4,SNR=10						
ASAR	Alice Springs	31.79	162	P	P	16 43 14.5	-0.8
	0.4nm,0.5s,baz=345,slow=7.8,SNR=8.1						
STKA	Stephens Creek	42.00	157	P	P	16 44 40.6	-1.3
	2.3nm,0.6s,baz=352,slow=12,SNR=4.5						
MKAR	Makanchi Array	53.40	326	P	P	16 46 12.7	+2.6
	0.3nm,0.5s,baz=128,slow=8.2,SNR=4.9						
SEY	Seymchan	59.91	15	LR	LR	17 10 39.0	
	comp=Z,17nm,19.3s,baz=291,slow=35						

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*IDC **20** 16:41:43.4±1.3, 26.°20N×142.°11E, h0^{km}, mb3.7/5, mb1 3.9/5, mb1mx3.5/46, mbtmp3.7/5, MS2.6/2, Ms1 2.6/2, ms1mx2.3/58, Error ellipse: s-maj=68.0km s-min=14.5km az=94.0*

ISC 20 16:41:45.9±2.0, **26.°3N**±0.°2×**143.°0E**±0.°4, **h35**^{km}, **n8**, σ**1^{s}28**/7, **mb4.0**/5, **Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	1.07	317	Pn	Pn	16 42 03.5	-0.9
	64nm,0.3s,baz=282,slow=20,SNR=27						
JCJ				Sn	Sn	16 42 19.5	+1.5
	372nm,0.3s,baz=280,slow=23,SNR=18						
JOW	Kunigami	13.20	276	LR	LR	16 47 56.3	
	comp=Z,21nm,20.0s,baz=57,slow=30						
KSRS	Korea Array	16.93	315	LR	LR	16 51 24.2	
	comp=Z,30nm,20.7s,baz=130,slow=35						
WRA	Warramunga Arr	46.75	191	P	P	16 50 12.5	+0.6
	0.6nm,0.3s,baz=9.9,slow=6.4,SNR=23						
FITZ	Fitzroy Crossi	47.27	203	P	P	16 50 16.1	+0.2
	1.3nm,0.8s,baz=14,slow=13,SNR=2.2						
ASAR	Alice Springs	50.47	191	P	P	16 50 40.6	+0.2
	0.1nm,0.4s,baz=1.9,slow=5.4,SNR=5.1						
MKAR	Makanchi Array	51.53	310	P	P	16 50 46.9	-1.4
	0.1nm,0.4s,baz=92,slow=8.3,SNR=4.5						
FINES	FINESS Array B	78.97	334	P	P	16 53 46.8	+1.0
	2.7nm,0.9s,baz=72,slow=6.2,SNR=5.6						

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*IDC **20** 16:57:02.0±1.0, 31.°25N×128.°72E, h0^{km}, mb3.5/6, mb1 3.6/10, mb1mx3.5/65, mbtmp3.5/10, ML2.9/3, MS3.2/12, Ms1 3.2/12, ms1mx2.9/45, Error ellipse: s-maj=28.7km s-min=16.5km az=87.0*

*JMA **20** 16:57:02.2±0.4, 31.°24N×128.°73E, h19^{km}±4^{km}, M4.1*

*NIED **20** 16:57:02.3, 31.°25N×128.°73E, h19^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.45; M$_{\theta\theta}$0.31; M$_{\phi\phi}$0.14; M$_{r\theta}$-0.40; M$_{\theta\phi}$1.14; M$_{\phi r}$0.40; Fault plane solution: M$_{0}$1.33000×10^{15} NP1:ϕ_{s}87.00000°, δ68.00000°, λ-26.00000°. NP2:ϕ_{s}187.00000°, δ66.00000°, λ-155.00000°.*

ISC 20 16:57:03.1±0.8, **31.°22N**±0.°06×**128.°80E**±0.°05, **h10**^{km}, **n38**, σ**1^{s}31**/31, **mb3.5**/6, **MS3.3**/8, **2D**, **Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.91	60	⇓P	Pg	16 57 19.4	-1.1
JSJ				*e*S	Sg	16 57 31.7	-0.6
JKC	Kuchinoerabu	1.42	122	P	Pn	16 57 27.6	-1.4
JFU	Fukue jima 2	1.43	358	P	Pn	16 57 27.3	-1.7
JSU	Suzuyama	1.45	78	P	Pn	16 57 29.0	-0.3
JNN	Nakanoshima	1.66	146	P	Pn	16 57 31.0	-1.3
JTN	Tanegashima 3	1.96	106	P	Pn	16 57 35.9	-0.5
JMTN	Minamitane	1.99	114	P	Pn	16 57 36.0	-0.8

JTZ	Takazaki	2.07	70	⇓P	Pn	16 57 37.6	-0.3
JIU3	Izumi3	2.16	52	P	Pn	16 57 38.8	-0.4
JNU	Nakatsue	2.59	42	Pn	Pn	16 57 46.1	+1.1
	baz=267,slow=0.1						
GOS1	Gosan-ri	3.02	314	P	Pn	16 57 49.6	-1.3
	SNR=8.2						
GOS2	Gosang-Q330s	3.02	314	P	Pn	16 57 49.5	-1.4
	SNR=8.3						
HALB	Hallimjungang-	3.05	316	P	Pn	16 57 50.0	-1.3
	SNR=14						
GMDB	Geomundo	3.08	336	P	Pn	16 57 51.0	-0.9
	SNR=8.4						
CJD	Chujado	3.45	323	P	Pn	16 57 55.2	-1.6
	SNR=21						
KOHB	KOHEUNG	3.62	340	P	Pn	16 57 58.0	-1.2
	SNR=14						
WAN2	Wando-Q330s	3.62	331	P	Pb	16 58 10.0	+2.8
	SNR=7.5						
BOSB	Boseong-gun	3.77	340	P	Pn	16 58 00.1	-1.2
	SNR=13						
HANB	Haenam	3.81	331	P	Pn	16 58 01.0	-0.9
	SNR=16						
HUK2	Heuksan-myeon	4.45	322	P	Pn	16 58 09.3	-1.3
	SNR=21						
UJN	ULJIN	5.78	5	P	Pn	16 58 21.6	-7.2
	SNR=6.5						
KSRS	Korea Array	6.26	354	Pn	Pn	16 58 35.6	+0.2
	0.5nm,0.3s,baz=176,slow=14,SNR=18						
KSRS				Sn	Sn	16 59 45.3	-1.7
	1.6nm,0.3s,baz=173,slow=25,SNR=6.5						
KSRS				Lg	Lg	17 00 21.6	
	1.8nm,0.3s,baz=174,slow=30,SNR=7.0						
KSRS				LR	LR	17 00 31.8	
	comp=Z,28nm,20.0s,baz=178,slow=34						
MJAR	Matsushiro Arr	9.45	53	Pn	Pn	16 59 20.8	+1.6
	0.1nm,0.3s,baz=255,slow=15,SNR=1.7						
MJAR				LR	LR	17 03 22.4	
	comp=Z,100nm,18.0s,baz=240,slow=40						
JCJ	Chichijima	12.40	106	LR	LR	17 04 23.6	
	comp=Z,48nm,19.3s,baz=284,slow=35						
ASAJ	Asahikawa	16.85	36	LR	LR	17 06 45.0	
	comp=Z,55nm,20.5s,baz=153,slow=35						
KLR	Kul'dur	18.12	6	P	Pn	17 01 13.5	-1.3
	0.1nm,0.3s,baz=180,slow=20,SNR=1.2						
SONM	Songino Array	23.82	321	P	P	17 02 15.5	-0.8
	0.4nm,0.7s,baz=141,slow=14,SNR=3.2						
SONM				LR	LR	17 12 06.5	
	comp=Z,77nm,18.4s,baz=167,slow=38						
YAK	Yakutsk	30.82	1	LR	LR	17 16 20.3	
	comp=Z,27nm,18.5s,baz=94,slow=38						
ZALV	Zalesovo Beam	38.70	319	LR	LR	17 21 50.3	
	comp=Z,45nm,18.3s,baz=21,slow=38						
MKAR	Makanchi Array	38.75	307	P	P	17 04 26.6	-0.9
	0.5nm,0.9s,baz=99,slow=8.9,SNR=2.5						
MKAR				LR	LR	17 21 30.6	
	comp=Z,24nm,19.8s,baz=51,slow=38						
WRA	Warramunga Arr	51.15	173	P	P	17 06 06.0	-0.4
	0.5nm,0.9s,baz=353,slow=8.3,SNR=2.6						
ARU	Arti	53.85	320	LR	LR	17 29 26.2	
	comp=Z,40nm,18.7s,baz=96,slow=36						
AKTO	Aktyubinsk	54.77	312	LR	LR	17 31 42.5	
	comp=Z,89nm,18.1s,baz=92,slow=38						
ASAR	Alice Springs	54.80	174	P	P	17 06 34.7	+1.4
	0.4nm,0.6s,baz=3.7,slow=14,SNR=7.7						
KIRV	Kirov	58.53	323	LR	LR	17 33 44.9	
	comp=Z,25nm,19.2s,baz=336,slow=38						
ILAR	Eielson Array	59.84	30	P	P	17 07 08.2	-0.1
	0.3nm,0.6s,baz=285,slow=8.1,SNR=5.7						
FINES	FINESS Array B	68.79	330	P	P	17 08 09.3	+2.2
	1.3nm,0.8s,baz=78,slow=13,SNR=1.5						
HFS	Hagfors	74.65	332	LR	LR	17 42 40.4	
	comp=Z,34nm,18.9s,baz=54,slow=37						

NEIC ***20*** *17:05:41.9±1.9,24.°23S±0.°06×66.°86W±0.°09,h184^{km}±6^{km}, mb4.6/89,Md4.3(SJA),Error ellipse: s-maj=11.4km s-min=8.2km az=81.0*

IDC ***20*** *17:05:42.0±1.1,24.°10S×66.°72W,h179^{km}±9^{km},mb4.0/12, mb1 4.1/17,mb1mx4.0/33,mbtmp4.4/17,MS2.6/1, Ms1 2.6/1,ms1mx2.3/23,Error ellipse: s-maj=13.4km s-min=11.8km az=28.0*

SJA ***20*** *17:05:42±2.4,24.°20S±0.°05×66.°95W±0.°08,h195^{km}±4^{km}, Error ellipse: s-maj=10.8km s-min=6.8km az=79.0*

VAO ***20*** *17:05:43.3±0.4,24.°07S×66.°83W,h202^{km}±5^{km},mb4.2*

GUC ***20*** *17:05:44.5±0.6,24.°14S×67.°24W,h234^{km}±10^{km},ML4.6*

ISC 20 17:05:41.9±0.6,**24.°20S**±0.°03×**66.°96W**±0.°03,**h189**^{km}±5^{km}, **n250,**σ**1.**^{s}**48**/308,**mb4.5**/49,**18C-14D,Fault plane solution: NP1:**φ$_{s}$231.16162°,δ28.97697°,λ-26.30048°. **NP2:**φ$_{s}$344.54379°,δ77.60483°,λ-116.40245°. **Principal axes:** T Plg27.8271°, Azm95.3708°; N Plg25.7413°, Azm350.6266°; P Plg50.3871°, Azm224.9959°; **Fault plane solution: NP1:**φ$_{s}$11.88124°,δ59.61376°, λ-72.14771°. **NP2:**φ$_{s}$159.39536°,δ34.80502°, λ-117.60118°. **Principal axes:** T Plg12.8813°, Azm89.0330°; N Plg15.3345°, Azm182.6283°; P Plg69.7644°, Azm320.6904°; **Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLA	San Lorenzo	1.42	112	⇓iP	Pn	17 06 16.0	+1.8
SLA				eS	Sn	17 06 40.8	+1.6
SLA				IAML		17 06 41.6	
	comp=N,1µm,0.5s						
SLA	San Lorenzo	1.42	112	iP	Pn	17 06 16.1	+1.9
SLA				eS	Sn	17 06 40.0	+0.8
SLA				IAML		17 06 41.4	
	comp=Z,1µm,0.7s						
AZAP	Zapla	1.73	91	iP	Pn	17 06 18.3	+1.2
AZAP				eS	Sn	17 06 44.0	-0.4
AZAP				IAML		17 06 48.7	
	comp=Z,695nm,1.0s						
HJA	Humahuaca	1.73	56	eP	Pn	17 06 18.8	+1.5
FSA	Cafayete	2.10	155	iP	Pn	17 06 22.5	+1.6
FSA				eS	Sn	17 06 51.1	-0.2
ASTB	Santa Barbara	2.30	84	iP	Pn	17 06 24.0	+0.9
ASTB				eS	Sn	17 06 57.0	+1.9
LVC	Limon Verde	2.39	311	P	Pn	17 06 25.8	+1.5
	comp=Z,102nm,0.3s,baz=135,slow=7.0,SNR=684						
LVC				S	Sn	17 06 58.4	+1.2
	comp=Z,121nm,0.3s,baz=291,slow=1.1,SNR=11						
LVC				LR	LR	17 07 23.2	
	comp=Z,97nm,18.2s,baz=176,slow=40						
LVC	Limon Verde	2.39	311	eP	Pn	17 06 26.3	+1.9
LVC				iS	Sn	17 06 58.4	+1.2
LVC	Limon Verde	2.39	311	eP	Pn	17 06 26.5	+2.2
LVC	Limon Verde	2.39	311		Pn	17 06 26.2	+1.9
LVC				Sn	Sn	17 06 58.4	+1.2
LVC	Limon Verde	2.39	311	iP	Pn	17 06 26.5	+2.2
LVC				iS	Sn	17 06 59.1	+1.9
LVC				IAML		17 07 02.8	
	comp=Z,694nm,0.8s						
YJA	Yavi	2.41	34	iP	Pn	17 06 26.1	+1.4
YJA				iS	Sn	17 06 58.8	+1.0
PB15	IPOC Station P	2.50	293	⇑iP	Pn	17 06 27.7	+2.2
PB15				iS	Sn	17 07 00.6	+1.3
PB15	IPOC Station P	2.50	293		Pn	17 06 27.6	+2.1
PB15				Sn	Sn	17 07 00.0	+0.7
PB15	IPOC Station P	2.50	293	iP	Pn	17 06 27.7	+2.2
PB15				eS	Sn	17 07 00.6	+1.3
ALOL	LOMAS DE OLMED	2.75	83	iP	Pn	17 06 28.8	+0.7
ALOL				eS	Sn	17 07 04.1	+0.1
PB06	IPOC Station P	2.82	301	⇑iP	Pn	17 06 31.1	+2.0
PB06				iS	Sn	17 07 06.4	+0.5
PB06				IAML		17 07 08.6	
	comp=N,2µm,0.1s						
PB06	IPOC Station P	2.82	301		Pn	17 06 30.6	+1.5
PB06				Sn	Sn	17 07 05.7	-0.2
PB06	IPOC Station P	2.82	301	iP	Pn	17 06 31.2	+2.1
PB06				eS	Sn	17 07 06.3	+0.5
PB06				IAML		17 07 08.1	
	comp=Z,2µm,0.4s						
AHML	Horco Molle	2.96	151	iP	Pn	17 06 31.7	+1.1
AHML				eS	Sn	17 07 08.4	-0.4
AHML	Horco Molle	2.96	151	iP	Pn	17 06 32.0	+1.4
AHML				eS	Sn	17 07 08.3	-0.5
AHML				IAML		17 07 09.5	
	comp=Z,145nm,1.0s						
PB14	IPOC Station P	3.17	262	⇑iP	Pn	17 06 34.8	+1.4
PB14				iS	Sn	17 07 12.8	-0.7
PB14	IPOC Station P	3.17	262		Pn	17 06 34.5	+1.2
PB14				Sn	Sn	17 07 12.1	-1.4
PB14	IPOC Station P	3.17	262	eP	Pn	17 06 34.9	+1.5
PB14				iS	Sn	17 07 13.2	-0.3
PB14				IAML		17 07 18.9	
	comp=Z,1µm,0.8s						
PB09	IPOC Station P	3.18	318	⇑iP	Pn	17 06 35.4	+2.0
PB09				iS	Sn	17 07 14.1	+0.4
PB09	IPOC Station P	3.18	318		Pn	17 06 35.1	+1.7
PB09				Sn	Sn	17 07 13.8	+0.2
PB09	IPOC Station P	3.18	318	iP	Pn	17 06 35.6	+2.2
PB09				iS	Sn	17 07 14.3	+0.6
PB09				IAML		17 07 19.8	
	comp=Z,630nm,0.8s						
PB05	IPOC Station P	3.26	294	⇑iP	Pn	17 06 35.7	+1.3
PB05				iS	Sn	17 07 14.3	-1.0
PB05	IPOC Station P	3.26	294	iP	Pn	17 06 36.0	+1.6
PB05				eS	Sn	17 07 14.5	-0.8
PB05				IAML		17 07 18.2	
	comp=Z,518nm,0.4s						
AC02	Maricunga	3.28	216	⇑iP	Pn	17 06 37.2	+2.3
AC02				eS	Sn	17 07 17.9	+1.6
AC02	Maricunga	3.28	216		Pn	17 06 37.2	+2.3
AC02	Maricunga	3.28	216	iP	Pn	17 06 37.3	+2.3
AC02				eS	Sn	17 07 18.8	+2.5
PB03	IPOC Station P	3.34	309	⇑iP	Pn	17 06 36.7	+1.3
PB03				iS	Sn	17 07 16.0	-1.2
PB03	IPOC Station P	3.34	309	eP	Pn	17 06 36.9	+1.4
PB03				eS	Sn	17 07 16.5	-0.7
PB03				IAML		17 07 18.1	
	comp=Z,2µm,0.4s						
PB10	IPOC Station P	3.36	281	⇑iP	Pn	17 06 37.2	+1.8
PB10				iS	Sn	17 07 16.2	-1.0
PB10	IPOC Station P	3.36	281		Pn	17 06 37.2	+1.8
PB10	IPOC Station P	3.36	281	eP	Pn	17 06 37.3	+1.9
PB10				eS	Sn	17 07 16.7	-0.5
PB10				IAML		17 07 19.7	
	comp=Z,705nm,0.5s						
PB04	IPOC Station P	3.47	302	⇑iP	Pn	17 06 38.2	+1.2
PB04				iS	Sn	17 07 18.8	-1.1
PB04	IPOC Station P	3.47	302		Pn	17 06 38.1	+1.2
PB04	IPOC Station P	3.47	302	eP	Pn	17 06 38.3	+1.3
PB04				eS	Sn	17 07 19.0	-0.9
PB07	IPOC Station P	3.65	312	⇑iP	Pn	17 06 40.3	+1.1
PB07				iS	Sn	17 07 22.4	-1.5
PB07	IPOC Station P	3.65	312		Pn	17 06 40.1	+0.9
PB07	IPOC Station P	3.65	312	eP	Pn	17 06 40.4	+1.2
PB07				eS	Sn	17 07 22.6	-1.4
PB07				IAML		17 07 25.1	
	comp=Z,1µm,0.4s						
PB01	IPOC Station P	3.91	323	⇑iP	Pn	17 06 43.1	+0.7
PB01				iS	Sn	17 07 28.2	-1.6
PB01	IPOC Station P	3.91	323		Pn	17 06 43.1	+0.7
PB01	IPOC Station P	3.91	323	eP	Pn	17 06 43.2	+0.8
PB01				eS	Sn	17 07 28.3	-1.4
PB01				IAML		17 07 34.0	
	comp=Z,697nm,0.5s						
PB02	IPOC Station P	3.94	316	⇑iP	Pn	17 06 43.4	+0.7
PB02				iS	Sn	17 07 28.0	-2.5
PB02	IPOC Station P	3.94	316	eP	Pn	17 06 43.5	+0.7
PB02				eS	Sn	17 07 28.5	-1.9
PB02				IAML		17 07 38.5	
	comp=Z,1µm,0.4s						
CYA	Choya	4.35	166	iP	Pn	17 06 49.4	+1.6
GO03	Copiap	4.49	220	⇑iP	Pn	17 06 49.8	+0.3
GO03				iS	Sn	17 07 41.4	-1.3
GO03	Copiap	4.49	220	Pn	Pn	17 06 49.9	+0.4
GO03	Copiap	4.49	220	iP	Pn	17 06 50.0	+0.4
GO03				eS	Sn	17 07 40.7	-2.1
PB08	IPOC Station P	4.52	333	⇑iP	Pn	17 06 51.6	+1.3
PB08				iS	Sn	17 07 43.4	-0.6
PB08	IPOC Station P	4.52	333	Pn	Pn	17 06 50.5	+0.1
PB08	IPOC Station P	4.52	333	eP	Pn	17 06 51.7	+1.3
PB08				eS	Sn	17 07 43.8	-0.3
PB08				IAML		17 07 49.5	
	comp=Z,381nm,0.6s						
VCA	Vinchina	4.66	194	iP	Pn	17 06 54.5	+2.7
VCA				iS	Sn	17 07 50.7	+3.9
VCA				IAML		17 08 06.5	
	comp=Z,46nm,0.5s						
TA01	Diego Aracena	4.69	320	eP	Pn	17 06 51.7	-0.4
TA01				eS	Sn	17 07 45.1	-2.1
TA01	Diego Aracena	4.69	320		Pn	17 06 52.0	-0.1
TA01	Diego Aracena	4.69	320	eP	Pn	17 06 51.8	-0.3
TA01				eS	Sn	17 07 44.7	-2.5
TA02	Huaiquique	4.89	322		Pn	17 06 54.1	-0.6
PB11	IPOC Station P	5.08	330	Pn	Pn	17 06 56.8	-0.5
PB11	IPOC Station P	5.08	330	eP	Pn	17 06 56.9	-0.4
PB11				eS	Sn	17 07 53.1	-3.4
PB11				IAML		17 07 58.7	
	comp=Z,467nm,0.3s						
ACLC	CERRO LA CRUZ	5.21	180	iP	Pn	17 06 59.8	+0.9
ACLC				eS	Sn	17 07 58.9	-0.7
AC04	Llanos de Chal	5.44	222		Pn	17 07 02.1	+0.4
AC04	Llanos de Chal	5.44	222	eP	Pn	17 07 01.9	+0.1
AC04				eS	Sn	17 07 57.5	-7.2
LCO	Las Campanas	5.85	214	Pn	Pn	17 07 08.0	+0.7
LCO	Las Campanas	5.85	214	eP	Pn	17 07 07.0	-0.3
LCO				eS	Sn	17 08 04.9	-10
APLL	PUNTA DE LOS L	6.19	177	eP	Pn	17 07 11.5	0.0
APLL				eS	Sn	17 08 18.4	-3.9
AROD	Rodeo	6.35	200	eP	Pn	17 07 16.1	+2.2
AROD				eS	Sn	17 08 24.7	-1.9
PB12	IPOC Station P	6.38	330		Pn	17 07 12.0	-2.2
PB12	IPOC Station P	6.38	330	eP	Pn	17 07 12.5	-1.7
PB12				eS	Sn	17 08 17.3	-10
PB12				IAML		17 08 31.9	
	comp=Z,113nm,0.6s						
ACCO	Cerro Coronel	6.63	196	eP	Pn	17 07 18.8	+1.2
ACCO				eS	Sn	17 08 32.7	-0.6
ACCO				IAML		17 08 36.5	
	comp=Z,32nm,0.7s						
CO05	La Serena	6.86	213	Pn	Pn	17 07 20.6	+0.4
GO04	Tololo Observa	6.86	209	Pn	Pn	17 07 19.1	-1.4
ZON	Zonda	7.48	191	Pn	Pn	17 07 27.2	-1.2
CO06	Fray Jorge	7.67	212	Pn	Pn	17 07 28.3	-2.6
RTCV	Cerro Valdivia	7.76	190	eP	Pn	17 07 32.3	+0.2
RTCV				eS	Sn	17 08 54.8	-4.8
RTCV				IAML		17 09 06.4	
	comp=Z,8.5nm,1.3s						
RTCV				IAML		17 09 06.4	
	comp=Z,8.5nm,1.3s						
RTCV				IAML		17 09 06.4	
	comp=Z,8.5nm,1.3s						
RTLS	Leoncito	7.85	195	iP	Pn	17 07 34.0	+0.5
RTLS				IAML		17 09 05.9	
	comp=Z,7.8nm,0.9s						
RTLS				IAML		17 09 05.9	
	comp=Z,7.8nm,0.9s						
AUSP	Uspallata	8.28	194	eP	Pn	17 07 40.2	+1.1
AUSP				eP	Pn	17 07 40.2	+1.1
AUSP				eS	Sn	17 09 00.6	-12
ASAL	Salagasta	8.52	191	eP	Pn	17 07 42.1	0.0
ASAL				eS	Sn	17 09 13.1	-4.6
ASAL				IAML		17 09 16.8	
	comp=Z,11nm,0.4s						
ARCO	CERRO ARCO	8.79	191	eP	Pn	17 07 46.4	+0.8
CPUP	Villa Florida	8.97	106	P	Pn	17 07 46.2	-1.7
	comp=Z,0.5nm,0.3s,baz=296,slow=12,SNR=7.7						
CPUP	Villa Florida	8.97	106	eP	Pn	17 07 47.8	-0.2
CPUP	Villa Florida	8.97	106	Pn	Pn	17 07 46.1	-1.9
AAGR	Agrelo	9.01	190	eP	Pn	17 07 48.5	0.0
AAGR				eS	Sn	17 09 26.4	-2.8
AAGR				IAML		17 09 52.5	
	comp=Z,18nm,2.0s						
VA03	San Esteban	9.10	199	Pn	Pn	17 07 49.0	-0.7
VA01	Torpederas	9.71	204	Pn	Pn	17 07 57.4	-0.1
MT02	Curacav	9.74	201	Pn	Pn	17 07 55.3	-2.7
SIV	San Ignacio	9.86	35	P	Pn	17 07 57.4	-2.2
	comp=Z,1.3nm,0.3s,baz=215,slow=10,SNR=20						
SIV				S	Sn	17 09 44.9	-4.8
	comp=Z,0.1nm,0.3s,baz=119,slow=23,SNR=3.0						
MT09	Talagante	10.17	199	Pn	Pn	17 08 00.3	-3.3
MT01	Popeta	10.34	200	Pn	Pn	17 08 03.9	-1.8
ITQB	Itaqui	10.71	123	eP	Pn	17 08 11.4	+0.9
ITQB	Itaqui	10.71	123		Pn	17 08 09.3	-1.2
AQDB	Aquidauana	11.06	73	eP	Pn	17 08 14.4	-0.7
BO02	Sierra Bellavi	11.07	197	Pn	Pn	17 08 15.3	+0.1
PTLB	Pontes e Lacer	11.39	42	eP	Pn	17 08 18.1	-1.3
PTLB	Pontes e Lacer	11.39	42	Pn	Pn	17 08 17.3	-2.1
TRCB	Terra Rica	13.22	87	eP	Pn	17 08 42.0	-0.7
TRCB	Terra Rica	13.22	87		Pn	17 08 41.6	-1.0
SALV	Santo Antonio	13.41	54	eP	Pn	17 08 43.5	-1.6
CPSB	Cacapava Do Su	13.51	120	eP	Pn	17 08 46.4	+0.2
PTGB	Pitanga	13.58	95	eP	Pn	17 08 47.7	+0.5
ITAB	Concordia	13.70	106	eP	Pn	17 08 47.6	-1.0
ITAB	Concordia	13.70	106	Pn	Pn	17 08 46.2	-2.5
PLTB	Pedras Altas	13.99	126	Pn	Pn	17 08 49.3	-3.0
ETMB	Extrema	14.32	3	eP	Pn	17 08 55.4	-0.9
ETMB	Extrema	14.32	3		Pn	17 08 55.8	-0.6
PCMB	Pacaembu	14.69	83	eP	Pn	17 09 00.0	-0.9
CNLB	Canela	15.26	113	eP	Pn	17 09 06.8	-1.1
SAML	Samuel	15.59	14		Pn	17 09 10.8	-1.1
PDRB	Porto dos Gac	15.84	40	eP	P	17 09 13.7	-1.3
ITRB	Iturama	16.03	77	eP	P	17 09 16.2	-0.8
ARAG	Araguaiana, MT	16.55	62	eP	P	17 09 22.5	-0.2
TER01	Tubaro-SC	16.55	109	eP	P	17 09 22.4	-0.3
PLCA	Paso Flores	16.76	190	P	Pn	17 09 26.2	+0.3
	comp=Z,0.4nm,0.3s,baz=5.5,slow=8.0,SNR=7.6						
PLCA				PcP	PcP	17 14 04.3	+1.9
	comp=Z,0.1nm,0.3s,baz=10.0,slow=4.9,SNR=3.4						
PLCA	Paso Flores	16.76	190	eP	Pn	17 09 27.2	+1.3
PLCA	Paso Flores	16.76	190	P	Pn	17 09 25.7	-0.2
PLCA				IAmb	IAmb	17 09 34.6	
	comp=Z,13nm,0.8s						
CLDB	Colider	16.98	41	eP	P	17 09 26.5	-1.0
CZSB	Cruzeiro do Su	17.27	340	eP	P	17 09 30.1	-0.7
CZSB	Cruzeiro do Su	17.27	340	P	P	17 09 30.9	+0.2
CZSB				IAmb	IAmb	17 09 32.9	
	comp=Z,17nm,0.8s						
LL04	Puerto Octay	17.28	194	P	P	17 09 30.5	0.0
LL04				IAmb	IAmb	17 09 32.5	
	comp=Z,16nm,1.0s						
BB19B	Bebedouro	17.30	83	eP	P	17 09 31.0	0.0
LL03	Petrohue	17.50	194		P	17 09 32.8	-0.1
LL03				IAmb	IAmb	17 09 47.8	
	comp=Z,35nm,0.8s						
IPMB	Ipameri, GO	18.55	74	eP	P	17 09 43.6	-0.9
LL01	San Ignacio de	18.69	193	P	P	17 09 46.0	+0.2
LL01				IAmb	IAmb	17 09 48.3	
	comp=Z,21nm,0.9s						
LL02	Futaleuf	19.37	191	P	P	17 09 54.9	+1.7
PARB	Paraibuna	19.55	92	eP	P	17 09 55.0	-0.4
GO07	Milladeo Hill,	19.66	195	P	P	17 09 57.2	+0.9
BDFB	Brasilia	19.72	68	P	P	17 09 55.9	-1.5
	comp=Z,3.3nm,0.3s,baz=241,slow=12,SNR=15						
BDFB	Brasilia	19.72	68	P	P	17 09 56.4	-1.0
BDFB				IAmb	IAmb	17 09 59.4	
	comp=Z,16nm,0.5s						
TBTG	Tabatinga, AM	20.10	351	P	P	17 10 01.5	+0.2
NPGB	Novo Progresso	20.36	35	eP	P	17 10 01.6	-2.5
BSCB	Bom Sucesso	20.73	86	eP	P	17 10 06.5	-1.5
ITTB	Itaituba	22.49	30	eP	P	17 10 24.0	-1.8
MC01	Montes Claros	22.80	75	eP	P	17 10 27.0	-1.6
PTGA	Pitinga	24.29	17	P	P	17 10 41.1	-1.0
	comp=Z,2.6nm,0.3s,baz=306,slow=22,SNR=5.9						
PTGA	Pitinga	24.29	17	IAmb	IAmb	17 10 41.8	
	comp=Z,3.1nm,0.6s						
MALB	Monte Alegre	25.38	31	eP	P	17 10 50.4	-1.6
BOAV	Boa Vista	27.16	14	eP	P	17 11 07.2	-0.7
BOAV	Boa Vista	27.16	14	P	P	17 11 06.8	-1.2
GO09	Cerro Castillo	27.35	187	P	P	17 11 08.5	-0.7
NBIT	Itapeh - BA	27.48	75	eP	P	17 11 09.8	-1.0
GDU01	Guandu, BA	27.86	73	eP	P	17 11 12.5	-1.7
TMAB	Tom-Au,PA,Br	28.34	43	eP	P	17 11 17.1	-1.3
MG02	Cerro Sombrero	28.59	183	P	P	17 11 19.6	-0.6
NBPN	Ponto Novo - B	28.69	67	eP	P	17 11 19.3	-2.3
NBLA	Lagarto - SE	30.67	70	eP	P	17 11 36.8	-2.2
NBPS	Pedro II - PI	31.49	55	eP	P	17 11 44.4	-1.8
ZARC	Zaragoza, Cauc	32.43	345	P	P	17 11 52.0	-2.3
MOTC	Monteria, Cord	33.86	344	P	P	17 12 05.2	-1.5
NBCL	Cascavel-CE	34.01	59	eP	P	17 12 07.7	-0.4
CAP2	Capurgana	34.19	341	P	P	17 12 08.9	-0.7
CAP2				IAmb	IAmb	17 12 36.7	
	comp=Z,25nm,1.0s						
SJCC	San Jacinto, C	34.82	346	P	P	17 12 14.2	-0.9
SJCC				IAmb	IAmb	17 12 31.9	
	comp=Z,16nm,1.3s						
NBPV	Pedro Velho	35.15	65	eP	P	17 12 16.9	-1.0
TOSP	Speyside	35.83	11	P	P	17 12 23.1	-0.4
MLPR	Magueyes Islan	41.91	360	P	P	17 13 13.2	-0.8
MLPR				IAmb	IAmb	17 13 15.0	
	comp=Z,23nm,0.8s						
CRPR	Cabo Rojo, PR	41.95	360	P	P	17 13 12.9	-1.3
MTO3	Montecristo	44.16	328	P	P	17 13 33.9	+1.5
MTO3				IAmb	IAmb	17 13 35.2	
	comp=Z,21nm,1.5s						
SOR	Soroa	49.24	340	P	P	17 14 12.0	+0.6
SOR				IAmb	IAmb	17 14 13.2	
	comp=Z,14nm,0.9s						
061Z	Ochoppi	51.57	344	P	P	17 14 29.9	+1.2
VNA3	Neumayer Olymp	56.95	161	P	P	17 15 08.7	+1.6
VNA2	Neumayer--Watz	57.52	160	P	P	17 15 12.3	+1.2
	baz=286,slow=7.9						
SNAA	Sanae	59.15	161	P	P	17 15 23.2	+0.8
SNAA	Sanae	59.15	161	P	P	17 15 23.6	+1.2
SNAA				IAmb	IAmb	17 15 24.6	
	comp=Z,10nm,1.4s						
GOGA	Godfrey	59.41	344	P	P	17 15 24.6	+0.1
GOGA				IAmb	IAmb	17 15 45.7	
	comp=Z,26nm,1.4s						
X48A	Hartselle	61.37	341	P	P	17 15 38.0	+0.2
W50A	Signal Mountai	61.58	343	P	P	17 15 39.7	+0.4
W50A				IAmb	IAmb	17 15 45.0	
	comp=Z,25nm,1.5s						
CPCT	Cooper Cave	61.61	344	P	P	17 15 39.5	+0.1
CPCT				IAmb	IAmb	17 15 43.2	
	comp=Z,11nm,1.2s						
TKL	Tuckaleechee C	61.62	344	P	P	17 15 39.8	+0.3
SWET	Sewanee	61.77	342	P	P	17 15 40.6	+0.1
SWET				IAmb	IAmb	17 15 41.2	
	comp=Z,11nm,0.8s						
435B	Jarrell	62.05	330	P	P	17 15 42.6	+0.1
W45A	Hickory Valley	62.68	340	P	P	17 15 46.6	+0.1
WHTX	Lake Whitney,	63.02	331	P	P	17 15 49.4	+0.6
WHTX				IAmb	IAmb	17 16 18.1	
	comp=Z,8.7nm,0.7s						
WVT	Waverly	63.16	341	P	P	17 15 49.4	-0.2
TXAR	Lajitas Array	63.86	324	P	P	17 15 56.0	+1.5
	comp=Z,1.3nm,0.7s,baz=154,slow=8.4,SNR=17						
TXAR	Lajitas Array	63.86	324	P	P	17 15 54.8	+0.2
TX31	Lajitas Ar. Si	63.86	324	P	P	17 15 54.2	-0.3
TX31				IAmb	IAmb	17 16 02.6	
	comp=Z,15nm,1.5s						
TX32	Lajitas Array	63.86	324	P	P	17 15 53.4	-1.1
FCAR	Ozark Folk Cen	64.33	337	P	P	17 15 56.8	-0.5
FCAR				IAmb	IAmb	17 16 00.3	
	comp=Z,18nm,1.6s						
PBMO	Poplar Bluff	64.56	339	P	P	17 15 58.5	-0.3
U40A	Yellville	65.00	337	P	P	17 16 01.7	0.0
U40A				IAmb	IAmb	17 16 16.9	
	comp=Z,6.8nm,1.1s						
CCM	Cathedral Cave	65.99	339	P	P	17 16 08.4	+0.5
QSPA	South Pole Qui	66.01	180	P	P	17 16 10.0	+2.0
QSPA				IAmb	IAmb	17 16 10.8	
	comp=Z,10nm,0.7s						
QUOK	Quay	66.30	334	P	P	17 16 11.2	+1.3
QUOK				IAmb	IAmb	17 16 11.9	
	comp=Z,23nm,1.3s						
S39A	Bolivar	66.36	337	P	P	17 16 11.4	+1.0
S39A				IAmb	IAmb	17 16 12.0	
	comp=Z,16nm,0.8s						
R40A	Maddies Statio	66.54	338	P	P	17 16 11.7	+0.3
R40A				IAmb	IAmb	17 16 12.4	
	comp=Z,4.2nm,0.7s						
MNTX	Cornudas Mount	66.63	325	P	P	17 16 13.1	+0.9
P38A	Dawn	68.17	338	P	P	17 16 22.1	+0.5
319A	Douglas	68.51	322	P	P	17 16 26.5	+2.4
319A				IAmb	IAmb	17 16 27.5	
	comp=Z,8.5nm,0.6s						
L40A	Anamosa	69.64	341	P	P	17 16 30.6	0.0
L40A				IAmb	IAmb	17 16 32.2	
	comp=Z,17nm,0.8s						
ANMO	Albuquerque	69.73	326	P	P	17 16 33.4	+1.7
F64A	Sherman	69.74	359	P	P	17 16 32.0	+0.9
LMN	Caledonia Moun	69.74	2	P	P	17 16 31.7	+0.5
JFWS	Jewell Farm	70.14	342	P	P	17 16 34.0	+0.2
T25A	Trinidad	70.47	329	P	P	17 16 36.9	+0.7
T25A				IAmb	IAmb	17 16 40.1	
	comp=Z,3.7nm,0.7s						
E62A	Clayton Lake	70.52	358	P	P	17 16 36.3	+0.4
E62A				IAmb	IAmb	17 16 39.2	
	comp=Z,25nm,1.4s						
BGNE	Belgrade	71.40	336	P	P	17 16 42.6	+1.3
SDCO	Great Sand Dun	71.47	329	P	P	17 16 43.8	+1.6
X16A	Lo Mia Camp, P	71.98	322	P	P	17 16 45.2	-0.1
X16A				IAmb	IAmb	17 16 49.0	
	comp=Z,9.5nm,1.4s						

WUAZ	Wupatki	72.76	323	P	P	17 16 52.0	+2.3
ECSD	EROS Data Cent	72.88	338	P	P	17 16 50.2	+0.1
ECSD				IAmb	IAmb	17 16 52.2	
	comp=Z,8.9nm,1.0s						
DRLN	Deer Lake	73.61	6	P	P	17 16 54.8	+0.6
DRLN				IAmb	IAmb	17 17 14.3	
	comp=Z,27nm,1.4s						
F36A	Milaca	73.79	341	P	P	17 16 55.8	+0.5
F36A				IAmb	IAmb	17 16 56.5	
	comp=Z,7.8nm,0.7s						
VNDA	Vanda	74.51	190	P	P	17 17 01.2	+2.0
	comp=Z,1.9nm,0.9s,baz=116,slow=3.9,SNR=5.6						
SRU	San Rafael Swe	75.01	326	P	P	17 17 03.8	+1.1
CCUT	Cedar City	75.34	323	P	P	17 17 07.7	+3.0
CCUT				IAmb	IAmb	17 17 09.0	
	comp=Z,5.3nm,0.8s						
PRN	Pahroc Range	76.16	322	P	P	17 17 11.7	+2.4
GWY	Greenwater Val	76.22	321	P	P	17 17 10.8	+1.1
PSUT	Pine Spring	76.32	324	P	P	17 17 11.7	+1.5
TORD	Torodi Ar. Bea	76.60	69	P	P	17 17 11.8	-0.3
	comp=Z,2.4nm,0.5s,baz=258,slow=5.4,SNR=14						
TORD	Torodi Ar. Bea	76.60	69	P	P	17 17 11.3	-0.8
SPR3	Spring Creek 3	76.91	324	P	P	17 17 15.3	+1.6
R11A	Troy Canyon, C	77.13	323	P	P	17 17 16.8	+2.0
PDAR	Pinedale Array	77.34	329	P	P	17 17 17.6	+1.7
	comp=Z,1.1nm,0.5s,baz=133,slow=7.1,SNR=9.2						
HWUT	Hardware Ranch	77.41	327	P	P	17 17 17.1	+0.9
BGU	Big Grassy Mou	77.64	326	P	P	17 17 18.2	+0.7
ULM	Lac du Bonnet	78.43	342	P	P	17 17 21.9	+0.5
	comp=Z,4.8nm,0.4s,baz=154,slow=7.4,SNR=8.6						
ELK	Elko	78.66	325	P	P	17 17 23.6	+0.4
SCHQ	Schefferville	78.70	0	P	P	17 17 23.6	+0.8
	comp=Z,3.9nm,0.8s,baz=210,slow=9.5,SNR=2.2						
NVAR	Mina Array Bea	78.72	321	P	P	17 17 25.3	+1.7
	comp=Z,1.0nm,0.7s,baz=151,slow=5.4,SNR=8.6						
KVN	Kaiserville	79.03	322	P	P	17 17 25.9	+0.7
KVN				IAmb	IAmb	17 17 28.1	
	comp=Z,4.5nm,0.7s						
YMR	Madison River	79.45	330	P	P	17 17 29.2	+1.8
YMR				IAmb	IAmb	17 17 31.1	
	comp=Z,5.9nm,0.8s						
YHH	Holmes Hill	79.49	330	P	P	17 17 28.7	+1.0
YHH				IAmb	IAmb	17 17 31.3	
	comp=Z,5.6nm,0.7s						
PAHR	Pah Rah Range	80.20	322	P	P	17 17 32.8	+1.3
PAHR				IAmb	IAmb	17 17 35.0	
	comp=Z,5.5nm,0.8s						
HLID	Hailey	80.27	327	P	P	17 17 33.2	+1.4
HLID				IAmb	IAmb	17 17 35.4	
	comp=Z,6.3nm,0.8s						
MCMT	McKenzie Canyo	80.45	329	P	P	17 17 34.5	+1.8
BOSA	Boshof	80.61	117	P	P	17 17 34.3	+0.3
	comp=Z,4.2nm,1.0s,baz=245,slow=3.8,SNR=4.0						
BOSA	Boshof	80.61	117	IAmb	IAmb	17 17 42.3	
	comp=Z,19nm,1.4s						
MAW	Mawson	81.24	163	P	P	17 17 37.3	+1.0
	comp=Z,6.8nm,0.6s,baz=213,slow=5.4,SNR=19						
MAW	Mawson	81.24	163	P	P	17 17 37.0	+0.6
MDT	Midelt	82.13	49	P	P	17 17 41.2	-0.5
	comp=Z,2.8nm,0.9s,baz=275,slow=6.2,SNR=5.9						
PLID	Pearl Lake	82.16	327	P	P	17 17 42.4	+0.6
PLID				IAmb	IAmb	17 17 44.6	
	comp=Z,7.3nm,0.8s						
J08A	Circle Bar Ran	82.20	325	P	P	17 17 43.8	+1.9
J08A				IAmb	IAmb	17 17 45.0	
	comp=Z,6.4nm,0.6s						
F10A	Beach Ranch, E	83.40	327	P	P	17 17 49.7	+1.7
F10A				IAmb	IAmb	17 17 54.7	
	comp=Z,3.7nm,0.6s						
PINE	Pine Mountain	83.81	324	P	P	17 17 52.1	+1.8
PINE				IAmb	IAmb	17 17 53.1	
	comp=Z,5.9nm,0.8s						
C09A	Chrisman Ranch	85.19	328	P	P	17 17 58.0	+1.2
C09A				IAmb	IAmb	17 17 59.3	
	comp=Z,8.0nm,0.7s						
YKA	Yellowknife Ar	94.32	340	P	P	17 18 40.5	+1.1
	comp=Z,1.8nm,0.7s,baz=124,slow=5.8,SNR=13						
ASAR	Alice Springs	128.29	205	PKP	PKiKP	17 24 27.3	+0.1
	comp=Z,2.5nm,0.7s,baz=136,slow=1.7,SNR=43						
WRA	Warramunga Arr	131.47	207	PKP	PKiKP	17 24 34.0	+0.4
	comp=Z,2.1nm,0.5s,baz=158,slow=1.8,SNR=63						
WRA	Warramunga Arr	131.47	207		PKiKP	17 24 33.9	+0.3
PETK	Petropavlovsk-	135.79	323	PKP	PKiKP	17 24 41.5	+0.2
	comp=Z,1.3nm,0.6s,baz=161,slow=3.3,SNR=9.9						
FITZ	Fitzroy Crossi	136.20	197	PKP	PKiKP	17 24 43.5	+0.2
	baz=200,slow=7.9						
BVAR	Borovoye Array	136.93	37	PKP	PKiKP	17 24 43.2	-0.5
	comp=Z,0.7nm,0.5s,baz=241,slow=4.8,SNR=3.6						
ZALV	Zalesovo Beam	143.55	28	PKP	PKPbc	17 24 52.6	+1.0
	comp=Z,5.5nm,0.5s,baz=303,slow=4.3,SNR=31						
ZALV	Zalesovo Beam	143.55	28		PKPbc	17 24 52.4	+0.8
KSH	Kashi	145.28	55	PKP	PKPdf	17 24 57.1	-0.3
MKAR	Makanchi Array	146.65	40	PKPbc	PKPbc	17 25 00.7	-0.6
	comp=Z,11nm,0.7s,baz=313,slow=1.7,SNR=79						
LEM	Lembang	148.71	170	PKPbc	PKiKP	17 25 09.6	+0.4
	comp=Z,30nm,0.7s,baz=304,slow=3.3,SNR=9.8						
SIJI	Sorong	149.44	218	PKP	PKPdf	17 25 06.6	+1.7
	comp=Z,9.9nm,0.7s,baz=358,slow=5.8,SNR=7.7						
SIJI				PKPbc	PKPbc	17 25 10.0	+0.5
	comp=Z,9.9nm,0.7s,baz=151,slow=21,SNR=5.8						
SONM	Songino Array	155.82	11	PKP	PKPdf	17 25 14.1	+0.7
	comp=Z,0.6nm,0.8s,baz=233,slow=1.8,SNR=4.0						
SONM				PKPbc	PKPbc	17 25 24.0	
	comp=Z,0.7nm,0.7s,baz=324,slow=3.5,SNR=4.2						
SONM				PKPab	PKPab	17 25 41.4	+0.4
	comp=Z,0.9nm,0.7s,baz=332,slow=3.9,SNR=5.1						

*IDC **20** 17:09:26.1±1.4, 6°.26N×93°.30E, h0^{km}, mb3.5/7, mb1 3.7/9, mb1mx3.5/71, mbtmp3.5/9, ML3.5/2, MS3.3/5, Ms1 3.3/5, ms1mx2.9/30 Error ellipse: s-maj=61.1km s-min=19.9km az=54.0*

ISC 20 17:09:31.0±1.2, **6°.3N**±0°.2×**93°.4E**±0°.2, **h32**^{km}, **n16**, σ**1^{s}35**/9, **mb3.4**/7, **MS3.4**/5, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	Prapat	6.54	122	Pn	Pn	17 11 05.2	0.0
	0.4nm,0.3s,baz=302,slow=13,SNR=1.6						
CMAR	Chiang Mai Arr	13.26	24	Pn	Pn	17 12 37.5	+0.4
	0.1nm,0.3s,baz=222,slow=14,SNR=4.8						
H08S3	Diego Garcia H	25.00	237	T	T	17 41 51.2	
	baz=56,slow=74,SNR=38						
H08S2	Diego Garcia H	25.00	237	T	T	17 41 49.5	
	baz=56,slow=74,SNR=9.4						
H08S1	Diego Carcia H	25.02	237	T	T	17 41 54.1	
	baz=56						
KAPI	Kappang	28.64	113	LR	LR	17 26 28.3	
	comp=Z,31nm,21.9s,baz=307,slow=36						
MKAR	Makanchi Array	41.46	349	P	P	17 17 13.3	-1.6
	0.2nm,0.6s,baz=174,slow=7.4,SNR=2.5						
SONM	Songino Array	42.86	13	LR	LR	17 35 37.9	
	comp=Z,36nm,21.9s,baz=293,slow=37						
KURBB	Kurchatov Arra	45.89	347	P	P	17 17 52.0	+1.6
	1.2nm,0.2s,baz=162,slow=6.5,SNR=6.3						
WRA	Warramunga Arr	48.00	124	P	P	17 18 07.3	-0.1
	0.4nm,0.9s,baz=308,slow=8.3,SNR=1.7						
ZALV	Zalesovo Beam	48.02	353	P	P	17 18 06.3	-0.7
	0.3nm,0.3s,baz=178,slow=7.2,SNR=1.9						
ASAR	Alice Springs	49.52	128	P	P	17 18 19.2	+0.1
	0.3nm,0.7s,baz=302,slow=7.9,SNR=7.7						
ASAR				LR	LR	17 40 53.9	
	comp=Z,36nm,19.6s,baz=354,slow=38						
STKA	Stephens Creek	59.60	133	LR	LR	17 48 00.2	
	comp=Z,28nm,18.1s,baz=24,slow=39						
BRTR	Keskin Array B	62.88	312	LR	LR	17 49 30.7	
	comp=Z,37nm,18.4s,baz=46,slow=38						
GERES	GERESS Array B	78.48	318	P	P	17 21 30.8	+1.6
	0.2nm,0.6s,baz=109,slow=5.3,SNR=1.8						
NOA	NORSAR Array B	80.72	331	P	P	17 21 39.4	-1.6
	0.8nm,1.0s,baz=106,slow=5.4,SNR=1.8						

*FUNV **20** 17:20:05.1, 8°.45N×71°.38W, h2^{km}, MW3.1*

ISC 20 17:20:04.0±1.2, **8°.48N**±0°.03×**71°.39W**±0°.02, **h9**^{km}±10^{km}, **n26**, σ**1^{s}27**/46, **1C**, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	Socops	0.56	111	eP	Pg	17 20 15.3	+0.4
SOCV				eS	Sb	17 20 24.1	-0.1
SOCV	Socops	0.56	111	⇑iP	Pg	17 20 15.3	+0.4
SOCV				eS	Sb	17 20 24.2	-0.1
SDV	Santo Domingo	0.84	62	eP	Pb	17 20 21.1	0.0
SDV				eS	Sb	17 20 32.2	-0.4
CAPV	Capacho	1.10	236	eP	Pg	17 20 24.8	-0.5
CAPV				eS	Sn	17 20 41.1	-0.3
PAMC	Pamplona, Colo	1.73	229	eP	Pb	17 20 36.6	+0.3
PAMC				eS	Sg	17 21 00.8	+1.1
MCQV	Machiques	1.93	324	eP	Pb	17 20 38.7	-0.7
MCQV				eS	Sb	17 21 03.9	+0.4
OCAC	Ocana	1.93	263	eP	Pb	17 20 38.8	-0.7
OCAC				eS	Sb	17 21 03.7	0.0
TAMC	Tame, Arauca	2.08	191	eP	Pg	17 20 44.2	+0.4
TAMC				eS	Sg	17 21 10.5	-0.3
ELOV	Elorza	2.39	128	eP	Pb	17 20 47.4	0.0
ELOV				eS	Sb	17 21 18.3	+1.3
ELOV	Elorza	2.39	128	eP	Pn	17 20 44.3	+0.9
ELOV				eS	Sn	17 21 13.2	+0.2
BARC	Barichara	2.59	224	eP	Pb	17 20 49.3	-1.5
BARC				eS	Sb	17 21 24.6	+1.8
SIQV	Siquisique	2.66	36	eP	Pn	17 20 48.5	+1.4
SIQV				eS	Sn	17 21 20.7	+1.2
SMLC	San Martn de	2.67	277	eP	Pn	17 20 47.8	+0.5
SMLC				eS	Sn	17 21 19.7	-0.2
BRRC	Barranca, Sant	2.68	239	eP	Pb	17 20 51.4	-0.8
BRRC				eS	Sg	17 21 29.3	-1.0
RUSC	La Rusia	3.08	213	eP	Pn	17 20 55.3	+2.0
RUSC				eS	Sb	17 21 34.2	-2.9
URIC	Uribia, Colomb	3.25	349	eP	Pn	17 20 43.8	-12
URIC				eS	Sn	17 21 32.4	-1.8
BAUV	El Baul	3.34	82	eP	Pn	17 20 58.1	+1.7
BAUV				eS	Sn	17 21 35.7	-0.6
ZARC	Zaragoza, Cauc	3.58	254	eP	Pn	17 21 01.2	+1.4
ZARC				eS	Sb	17 21 50.1	-1.0
JACV	Jacura	3.61	44	eP	Pn	17 21 01.6	+1.3
MONV	Montecano	3.72	22	eP	Pn	17 21 03.4	+1.7
MONV				eS	Sn	17 21 45.3	-0.4
SPBC	San Pablo de B	3.88	224	eP	Pn	17 21 06.3	+2.4
BENV	Beln	4.02	68	eP	Pn	17 21 07.0	+1.1
BENV				eS	Sn	17 21 52.2	-0.9
UREC	San Jos de Ur	4.17	260	eP	Pn	17 21 09.5	+1.6
UREC				eS	Sn	17 21 56.6	-0.2
PAYV	Puerto Ayacuch	4.79	129	eP	Pn	17 21 16.8	+0.3
CACV	CAICARA DEL OR	4.89	100	eP	Pb	17 21 26.1	-3.8
BIRV	Birongo	5.42	68	eP	Pn	17 21 25.5	+0.3

IDC 20 17:25:47.4±0.9, **1°.15N**×**127°.57E**, **h0**^{km}, **mb3.4**/3, **mb1 3.6**/4, **mb1mx3.4**/36, **mbtmp3.4**/4, **ML2.8**/1, **Error ellipse: s-maj=22.7km s-min=13.3km az=57.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	4.20	118	Pn	Pn	17 26 52.8	-0.1
	0.6nm,0.3s,baz=343,slow=7.3,SNR=4.3						
WRA	Warramunga Arr	21.98	163	P	P	17 30 43.3	+0.1
	1.1nm,0.7s,baz=340,slow=11,SNR=9.4						
ASAR	Alice Springs	25.42	166	P	P	17 31 16.9	0.0
	0.7nm,0.8s,baz=349,slow=10,SNR=9.4						
MKAR	Makanchi Array	60.15	326	P	P	17 35 57.0	0.0
	0.3nm,0.5s,baz=117,slow=8.2,SNR=4.1						

*IDC **20** 17:28:10.2±1.3, 38°.79N×20°.37E, h0^{km}, mb3.7/5, mb1 3.7/11, mb1mx3.4/54, mbtmp3.6/11, ML3.6/6, MS2.6/5, Ms1 2.6/5, ms1mx2.4/57, Error ellipse: s-maj=24.6km s-min=16.7km az=61.0*

*BEO **20** 17:28:11.3±2.7, 38°.30N×20°.00E, h43^{km}±8^{km}, ML3.4/7*

*THE **20** 17:28:12.1, 38°.71N×20°.62E, h2^{km}±42^{km}, ML3.6/10, Error ellipse: s-maj=42.5km s-min=0.6km az=256.0*

*ATH **20** 17:28:12.1, 38°.71N×20°.63E, h4^{km}±2^{km}, ML3.5/17, Error ellipse: s-maj=2.2km s-min=0.7km az=285.0*

ISC 20 17:28:11.5±0.8, **38°.71N**±0°.02×**20°.55E**±0°.03, **h6**^{km}±4^{km}, **n111**, σ**1^{s}48**/137, **mb3.6**/5, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRAG	Dragano-Lefkad	0.03	136	P	Pg	17 28 12.9	+0.2
DRAG				S	Sg	17 28 13.9	+0.3
	435μm,0.3s						
DRAG	Dragano-Lefkad	0.03	136	P	Pg	17 28 13.0	+0.2
DRAG				S	Sg	17 28 13.9	+0.3
LKD2	Lefkada island	0.12	47	P	Pg	17 28 13.5	-0.5
LKD2	Lefkada island	0.12	47	P	Pg	17 28 13.5	-0.5
LKD2				S	Sg	17 28 14.9	-0.9
LKD2				AML	AML	17 28 16.7	
	comp=E,99757μm,0.6s						
LKD2				AML	AML	17 28 18.0	
NYDR	Nydri-Lefkada	0.12	87	P	Pg	17 28 13.3	-0.7
NYDR	Nydri-Lefkada	0.12	87	P	Pg	17 28 13.3	-0.7
NYDR				S	Sg	17 28 14.3	-1.4
EVGI	Lefkada island	0.12	135	P	Pg	17 28 14.2	+0.1
EVGI				S	Sg	17 28 15.2	-0.6
	comp=E,64μm,0.3s						
EVGI	Lefkada island	0.12	135	P	Pg	17 28 14.2	+0.1
EVGI				S	Sg	17 28 16.2	+0.4
TSLK	Tsoukalades, L	0.14	36	P	Pg	17 28 14.4	-0.1
TSLK	Tsoukalades, L	0.14	36	P	Pg	17 28 14.4	-0.1
TSLK				S	Sg	17 28 16.3	-0.1
TSLK				AML	AML	17 28 20.5	
	comp=E,82028μm,0.5s						
TSLK				AML	AML	17 28 21.2	
FSK	Fiskardo	0.25	177	P	Pg	17 28 17.2	+0.9
FSK				S	Sg	17 28 21.8	+2.2
	comp=E,33μm,0.2s						
FSK	Fiskardo	0.25	177	P	Pg	17 28 17.3	+0.9
FSK				S	Sg	17 28 21.4	+1.8
FSK				AML	AML	17 28 22.4	
	comp=N,54777μm,0.3s						
FSK				AML	AML	17 28 22.7	
	comp=E,77157μm,0.2s						
KEF4	Livadi, Kephal	0.46	192	P	Pb	17 28 20.8	-1.1
KEF4				S	Sb	17 28 29.2	+0.3
	comp=E,27μm,0.5s						
KEF4	Livadi, Kephal	0.46	192	P	Pb	17 28 20.9	-1.0
KEF4				S	Sb	17 28 28.5	-0.4
DMLN	Damoulianata-K	0.49	196	P	Pb	17 28 21.5	-0.9
DMLN				S	Sb	17 28 29.8	0.0
	comp=E,7μm,0.5s						
DMLN	Damoulianata-K	0.49	196	P	Pb	17 28 21.5	-0.9
DMLN				S	Sb	17 28 29.9	+0.1
LXRA	Lixouri, Kepha	0.51	190	P	Pb	17 28 21.9	-0.9
KEF3	Kipouria, Keph	0.53	197	P	Pb	17 28 21.5	-1.6
KEF3				S	Sb	17 28 29.6	-1.3
	comp=E,9μm,0.4s						
KEF3	Kipouria, Keph	0.53	197	P	Pb	17 28 21.8	-1.3
KEF3				S	Sb	17 28 29.4	-1.5
VLS	Valsamata	0.53	176	P	Pb	17 28 21.6	-1.6
VLS				S	Sb	17 28 30.8	-0.3
	comp=E,5μm,0.3s						
VLS	Valsamata	0.53	176	P	Pb	17 28 21.8	-1.4
VLS				AML	AML	17 28 31.6	
	comp=E,9849μm,0.4s						
VLS				AML	AML	17 28 32.1	
	comp=N,9329μm,0.3s						
ARGA	Argostoli. Kep	0.53	186	P	Pb	17 28 23.0	-0.1
PSDA	Pessada-Kefalo	0.59	177	P	Pb	17 28 22.9	-1.3
PSDA				S	Sb	17 28 32.9	+0.1
	comp=N,772nm,0.3s						
PSDA	Pessada-Kefalo	0.59	177	P	Pb	17 28 22.9	-1.3
PVO	Paravola	0.77	96	P	Pb	17 28 26.1	-1.2
PVO	Paravola	0.77	96	P	Pb	17 28 26.2	-1.0
PVO				AML	AML	17 28 43.5	
	comp=E,7408μm,0.8s						
PVO				AML	AML	17 28 45.7	
	comp=N,5518μm,0.6s						
IGT	Igoumenitsa	0.84	349	P	Pg	17 28 27.6	0.0
IGT				S	Sb	17 28 41.4	+1.4
	comp=N,3μm,0.5s						
IGT	Igoumenitsa	0.84	349	P	Pg	17 28 27.6	0.0
IGT				AML	AML	17 28 46.1	
	comp=E,4442μm,0.4s						
IGT				AML	AML	17 28 46.3	
	comp=N,6348μm,0.6s						
VTN	Vitineika	0.94	147	P	Pb	17 28 29.5	-0.5
RLS	Riolos of Patr	0.97	132	P	Pb	17 28 29.5	-1.2
RLS	Riolos of Patr	0.97	132	P	Pb	17 28 29.5	-1.2
RLS				AML	AML	17 28 51.4	
	comp=N,7462μm,0.7s						
RLS				AML	AML	17 28 52.7	
	comp=E,6331μm,0.8s						
JAN	Janina	0.98	14	P	Pg	17 28 30.5	+0.3
JAN	Janina	0.98	14	P	Pb	17 28 30.9	+0.1
JAN				AML	AML	17 28 49.8	
	comp=N,2788μm,0.4s						
JAN				AML	AML	17 28 49.9	
	comp=E,4270μm,0.7s						
EVR	Evrytania	1.01	78	P	Pg	17 28 30.0	-0.8
EVR				AML	AML	17 28 55.0	
	comp=N,2098μm,0.6s						
EVR				AML	AML	17 28 55.1	
	comp=E,1954μm,0.8s						
LTHK	Lithakia	1.02	167	P	Pb	17 28 30.2	-1.4
LTHK				AML	AML	17 28 53.3	
	comp=N,7156μm,0.6s						
LTHK				AML	AML	17 28 59.7	
	comp=E,4400μm,0.9s						
ANX	Ano Chora	1.08	96	P	Pg	17 28 31.1	-1.1
ANX	Ano Chora	1.08	96	P	Pg	17 28 31.2	-1.1
ANX				AML	AML	17 28 56.1	
	comp=N,8628μm,0.5s						
ANX				AML	AML	17 28 56.7	
	comp=E,6220μm,0.7s						
EFP	Efpalio	1.10	104	P	Pg	17 28 31.4	-1.2
EFP	Efpalio	1.10	104	P	Pg	17 28 31.4	-1.2
EFP				AML	AML	17 28 55.8	
	comp=E,5376μm,0.8s						
EFP				AML	AML	17 28 57.8	
	comp=N,4420μm,0.5s						
KASA	Kassiopi	1.14	336	P	Pn	17 28 34.4	+0.5
KEK	Kerkira	1.16	330	P	Pn	17 28 34.7	+0.5
KEK	Kerkira	1.16	330	P	Pn	17 28 34.7	+0.5
KEK				AML	AML	17 29 00.2	
	comp=E,1863μm,0.6s						
KEK				AML	AML	17 29 08.4	
	comp=N,1896μm,0.7s						
DRO	Drossia	1.19	129	P	Pg	17 28 33.0	-1.2
DRO				AML	AML	17 29 00.6	
	comp=E,6707μm,0.7s						
DRO				AML	AML	17 29 01.0	
	comp=N,9258μm,0.8s						
LAKA	Lakka	1.22	112	P	Pg	17 28 33.3	-1.5
LAKA	Lakka	1.22	112	P	Pg	17 28 33.3	-1.5
SERG	Sergoula	1.22	103	P	Pg	17 28 33.6	-1.3
SERG				AML	AML	17 29 01.4	
	comp=N,3188μm,0.5s						
SERG				AML	AML	17 29 01.8	
	comp=E,3831μm,0.7s						
TRIZ	Trizonia	1.25	105	P	Pg	17 28 34.0	-1.3
TRIZ	Trizonia	1.25	105	P	Pg	17 28 33.8	-1.5
MAKR	Makrakomi, Fth	1.28	76	P	Pg	17 28 35.2	-0.7
KPRO	Kipourio	1.40	27	P	Pb	17 28 38.4	+0.4
KPRO	Kipourio	1.40	27	P	Pb	17 28 38.3	+0.4
KLV	Kalavryta, Ach	1.43	117	P	Pn	17 28 36.5	-1.4
KLV	Kalavryta, Ach	1.43	117	P	Pn	17 28 36.6	-1.4
KLV				AML	AML	17 29 07.1	
	comp=E,2622μm,1.0s						
KLV				AML	AML	17 29 11.7	
	comp=N,1701μm,1.1s						
AGG	Agios Georgios	1.43	77	P	Pn	17 28 37.8	-0.1
AGG				S	Sn	17 28 58.5	+1.4
	comp=N,1μm,0.8s						
AGG	Agios Georgios	1.43	77	P	Pn	17 28 37.6	-0.4
THL	Klokotos Trika	1.43	53	P	Pn	17 28 37.8	-0.1
THL				AML	AML	17 29 05.5	
	comp=E,3093μm,0.8s						
THL				AML	AML	17 29 06.0	
	comp=N,3189μm,0.8s						
GUR	Goura	1.61	118	P	Pn	17 28 40.4	-0.1
THAL	Thalero	1.79	111	P	Pb	17 28 44.0	-0.7
XOR	Xorichti	2.16	71	P	Pb	17 28 50.1	-0.9
VIL2	Platees	2.19	102	P	Pb	17 28 50.7	-0.9
OHR	Ohrid	2.41	5	ePn	Pb	17 28 54.6	-0.6
OHR	Ohrid	2.41	5	i Pn	Pb	17 28 54.4	-0.8
TIR	Tirane	2.69	349	ePn	Pn	17 28 57.1	+1.9
TIR				eSn	Sb	17 29 32.3	-0.9
VAY	Valandovo	3.04	30	i Pn	Pb	17 29 04.7	-1.2
STIP	Stip	3.24	22	i Pn	Pb	17 29 06.9	-2.4
SKO	Skopje	3.33	12	ePn	Pn	17 29 06.6	+2.5
DRME	Dracevica, Mon	3.63	344	ePn	Pn	17 29 08.5	+0.4
PDG	Podgorica	3.85	346	ePn	Pn	17 29 12.3	+1.1
PDG				eSn	Sn	17 29 57.6	+1.0
PDG	Podgorica	3.85	346	ePn	Pn	17 29 12.2	+1.1
PRVS	Prvonek	3.97	17	ePn	Pn	17 29 15.9	+3.0
HCY	Herceg Novi	4.05	338	ePn	Pn	17 29 13.4	-0.5
BOSS	Bosilegrad	4.06	21	ePn	Pn	17 29 18.5	+4.4
BARS	Barje	4.22	13	ePn	Pn	17 29 18.5	+2.3
TREB	Trebinje	4.34	338	ePn	Pn	17 29 17.6	-0.3
TREB				eSn	Sn	17 30 06.7	-2.1
TREB	Trebinje	4.34	338	ePn	Pn	17 29 17.1	-0.8
DBRK	Dubrovnik	4.36	336	ePn	Pn	17 29 17.2	-0.9
DBRK				Sn	Sn	17 30 06.6	-2.6
VTS	Vitosha	4.41	27	ePn	Pn	17 29 21.7	+2.7
VTS				eSn	Sn	17 30 15.9	+5.1
BRY	Bratogost	4.46	341	ePn	Pn	17 29 19.3	-0.4
SELS	Selova	4.53	5	ePn	Pn	17 29 23.6	+3.0
SJES	Sjenica	4.57	355	ePn	Pn	17 29 22.5	+1.3
STON	Ston	4.69	333	eSn	Sn	17 30 14.8	-2.5
STON	Ston	4.69	333	ePn	Pn	17 29 20.2	-2.5
STON	Ston	4.69	333	ePn	Pn	17 29 21.7	-1.0
IDI	Anoyia	4.87	133	Pn	Pn	17 29 28.8	+3.5
	comp=N,0.4nm,0.3s,baz=335,slow=12,SNR=5.9						
IDI				Sn	Sn	17 30 24.3	+2.3
	comp=N,2.1nm,0.3s,baz=159,slow=17,SNR=4.7						
IDI				LR	LR	17 31 13.0	
	comp=N,23nm,21.0s,baz=311,slow=36						
LSTV	Lastovo	4.92	327	ePn	Pn	17 29 24.7	-1.1
LSTV				Sn	Sn	17 30 19.5	-3.5
RUDO	Rudo	4.99	350	ePn	Pn	17 29 26.6	-0.2
GRUS	Gruza	5.18	1	ePn	Pn	17 29 30.5	+1.1
GRUS				eSn	Sn	17 30 30.5	+1.0
BBLS	Lazići	5.22	351	ePn	Pn	17 29 31.4	+1.2
BBLS	Lazići	5.22	351	ePn	Pn	17 29 28.7	-1.5
ZAGS	Zajecar	5.26	13	ePn	Pn	17 29 34.9	+4.4
DIVS	Divibare	5.40	356	ePn	Pn	17 29 33.2	+0.6
DIVS				eSn	Sn	17 30 35.7	+0.6
DIVS	Divibare	5.40	356	ePn	Pn	17 29 32.8	+0.2
RICI	Ricice	5.43	333	ePn	Pn	17 29 32.2	-0.7
KIJV	Kijevo	6.14	331	ePn	Pn	17 29 42.0	-0.7
ZIRJ	Zirje	6.17	325	ePn	Pn	17 29 42.3	-0.8
MORI	Morici	6.31	326	ePn	Pn	17 29 44.7	-0.3
MRAK	Mrakovica	6.86	338	ePn	Pn	17 29 50.9	-1.7
MLR	Muntele Rosu	7.88	29	Pn	Pn	17 30 09.1	+2.5
	comp=N,0.3nm,0.3s,baz=207,slow=4.5,SNR=1.6						
MLR				LR	LR	17 33 39.2	
	comp=N,68nm,18.8s,baz=67,slow=42						
CRES	Cresnjev	8.05	334	ePn	Pn	17 30 07.3	-1.6
CEY	Cerknica	8.36	329	ePn	Pn	17 30 11.9	-1.3
BRTR	Keskin Array B	10.21	80	Pn	Pn	17 30 41.8	+3.1
	comp=N,0.1nm,0.3s,baz=254,slow=12,SNR=3.2						
VRAC	Vranov	10.97	346	Pn	Pn	17 30 47.8	-1.0
	comp=N,0.6nm,0.3s,baz=150,slow=23,SNR=5.2						
VRAC				LR	LR	17 36 19.5	
	comp=N,55nm,18.0s,baz=170,slow=45						
DAVOX	Davos/Dischmat	11.24	319	LR	LR	17 36 13.7	
	comp=N,34nm,18.4s,baz=262,slow=44						
GERES	GERESS Array B	11.27	336	Pn	Pn	17 30 50.7	-2.4
	comp=N,0.1nm,0.3s,baz=161,slow=12,SNR=2.6						
MMAI	Mount Meron Ar	13.32	111	Pn	Pn	17 31 21.6	+0.6
	comp=N,0.3nm,0.3s,baz=310,slow=12,SNR=4.9						
HFS	Hagfors	21.88	351	P	P	17 33 04.8	0.0
	comp=N,3.2nm,0.9s,baz=171,slow=10,SNR=5.6						
FINES	FINESS Array B	23.02	7	P	P	17 33 15.4	-1.4
	comp=N,1.1nm,0.6s,baz=159,slow=12,SNR=8.4						
NOA	NORSAR Array B	23.10	348	LR	LR	17 42 26.3	
	comp=N,12nm,20.0s,baz=315,slow=37						
TORD	Torodi Ar. Bea	30.45	218	P	P	17 34 24.9	-0.1
	comp=N,0.2nm,0.3s,baz=25,slow=9.3,SNR=2.2						
MKAR	Makanchi Array	45.01	59	P	P	17 36 27.9	+0.3
	comp=N,0.4nm,0.5s,baz=274,slow=6.9,SNR=4.7						
ZALV	Zalesovo Beam	45.33	48	P	P	17 36 29.3	-0.7
	comp=N,1.0nm,0.4s,baz=277,slow=8.2,SNR=6.0						

*IDC **20** 17:28:51.4±0.8, 8°.47N×71°.43W, h0^{km}, mb3.5/5, mb1 3.9/7, mb1mx3.5/42, mbtmp3.7/7, ML3.0/2, MS2.9/1, Ms1 2.9/1, ms1mx2.2/30, Error ellipse: s-maj=25.9km s-min=9.9km az=155.0*

*FUNV **20** 17:28:54.0, 8°.52N×71°.36W, h1^{km}, MW3.7*

ISC 20 17:28:54.8±0.7, **8°.55N**±0°.03×**71°.33W**±0°.02, **h21**^{km}±3^{km}, **n49**, σ**1^{s}21**/77, **mb3.7**/5, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	Socops	0.54	119	eP	Pb	17 29 03.8	-1.9
SOCV				eS	Sb	17 29 12.2	-0.8
SOCV	Socops	0.54	119	eP	Pb	17 29 03.8	-1.9
SOCV				eS	Sb	17 29 12.5	-0.5
SDV	Santo Domingo	0.77	64	Pg	Pb	17 29 09.6	-0.1

	23nm,0.3s,baz=235,slow=16,SNR=28						
SDV				Lg	Lg	17 29 20.4	
	99nm,0.3s,baz=360,slow=13,SNR=16						
SDV	**Santo Domingo**	**0.77**	**64**	*e*P	**Pb**	**17 29 09.5**	**-0.1**
SDV				*e*S	**Sb**	**17 29 20.7**	**+1.0**
SDV				*i*		17 29 24.7	
	comp=Z,302nm,0.5s						
CAPV	**Capacho**	**1.18**	**235**	*e*S	**Sb**	**17 29 31.4**	**-0.3**
PAMC	**Pamplona, Colo**	**1.81**	**229**	*e*P	**Pn**	**17 29 25.8**	**+0.6**
PAMC				*e*S	**Sb**	**17 29 49.5**	**-0.4**
PAMC				*i*		17 29 54.1	
	comp=Z,547nm,0.3s						
MCQV	**Machiques**	**1.91**	**322**	*e*P	**Pn**	**17 29 27.0**	**+0.9**
MCQV				*e*S	**Sb**	**17 29 51.8**	**-0.5**
OCAC	**Ocana**	**1.99**	**261**	*e*P	**Pn**	**17 29 27.1**	**-0.2**
OCAC				*e*S	**Sn**	**17 29 52.5**	**+0.8**
OCAC				*i*		17 29 54.7	
	comp=Z,3µm,0.4s						
TAMC	**Tame, Arauca**	**2.15**	**192**	*e*P	**Pb**	**17 29 33.4**	**+0.4**
TAMC				*e*S	**Sb**	**17 29 58.8**	**-0.4**
TAMC				*i*		17 30 05.4	
	comp=Z,533nm,0.4s						
LL6C	**La Loma 6 Bece**	**2.25**	**302**	*e*P	**Pn**	**17 29 31.5**	**+0.7**
LL6C				*e*S	**Sn**	**17 29 58.8**	**+0.9**
ELOV	**Elorza**	**2.39**	**130**	*e*P	**Pn**	**17 29 35.5**	**+2.7**
ELOV				*e*S	**Sb**	**17 30 06.8**	**+0.6**
ELOV	**Elorza**	**2.39**	**130**	*e*P	**Pn**	**17 29 33.1**	**+0.3**
ELOV				*e*S	**Sn**	**17 30 02.6**	**+1.1**
SIQV	**Siquisique**	**2.58**	**36**	*e*P	**Pn**	**17 29 37.0**	**+1.6**
SIQV				*e*S	**Sn**	**17 30 08.6**	**+2.6**
BARC	**Barichara**	**2.67**	**223**	*e*P	**Pn**	**17 29 38.0**	**+1.2**
BARC				*e*S	**Sn**	**17 30 11.2**	**+2.6**
BARC				*i*		17 30 16.6	
	comp=Z,244nm,0.4s						
SMLC	**San Martn de**	**2.72**	**276**	*e*P	**Pn**	**17 29 36.6**	**-0.7**
SMLC				*e*S	**Sn**	**17 30 09.1**	**-0.5**
SMLC				*i*		17 30 14.5	
	comp=Z,406nm,0.6s						
BRRC	**Barranca, Sant**	**2.76**	**239**	*e*P	**Pn**	**17 29 38.1**	**+0.3**
BRRC				*e*S	**Sb**	**17 30 17.3**	**+0.5**
BRRC				*i*		17 30 24.7	
	comp=Z,89nm,0.6s						
ARGC	**Ariguani, Magd**	**3.16**	**295**	*e*P	**Pb**	**17 29 51.4**	**+1.1**
ARGC				*e*S	**Sn**	**17 30 20.1**	**-0.3**
ARGC				*i*		17 30 34.7	
	comp=Z,41nm,0.3s						
RUSC	**La Rusia**	**3.16**	**213**	*e*P	**Pn**	**17 29 44.4**	**+0.7**
RUSC				*e*S	**Sn**	**17 30 22.2**	**+1.2**
URIC	**Uribia, Colomb**	**3.20**	**348**	*e*P	**Pn**	**17 29 44.1**	**+0.2**
URIC				*e*S	**Sn**	**17 30 20.5**	**-1.0**
URIC				*i*		17 30 38.2	
	comp=Z,85nm,0.6s						
BAUV	**El Baul**	**3.28**	**83**	*e*P	**Pn**	**17 29 46.6**	**+1.6**
BAUV				*e*S	**Sn**	**17 30 23.7**	**+0.4**
JACV	**Jacura**	**3.53**	**44**	*e*P	**Pn**	**17 29 49.5**	**+1.0**
MONV	**Montecano**	**3.64**	**21**	*e*P	**Pn**	**17 29 50.7**	**+0.7**
MONV				*e*S	**Sn**	**17 30 32.8**	**+0.4**
ZARC	**Zaragoza, Cauc**	**3.64**	**254**	*e*P	**Pn**	**17 29 49.7**	**-0.3**
ZARC				*e*S	**Sn**	**17 30 30.7**	**-1.7**
ZARC				*i*		17 30 44.7	
	comp=Z,96nm,0.5s						
SMRC	**Santa Marta, M**	**3.86**	**313**	*e*P	**Pn**	**17 29 51.1**	**-1.9**
SMRC				*e*S	**Sn**	**17 30 34.6**	**-3.0**
SMRC				*i*		17 30 47.3	
	comp=Z,72nm,0.4s						
TURV	**Turiamo**	**3.93**	**61**	*e*P	**Pn**	**17 29 55.1**	**+1.2**
BENV	**Beln**	**3.95**	**69**	*e*P	**Pn**	**17 29 55.5**	**+1.3**
BENV				*e*S	**Sn**	**17 30 39.5**	**-0.4**
SPBC	**San Pablo de B**	**3.96**	**224**	*e*P	**Pn**	**17 29 55.0**	**+0.6**
SPBC				*e*S	**Sn**	**17 30 42.3**	**+2.0**
SPBC				*i*		17 31 03.3	
	comp=Z,94nm,0.8s						
SJCC	**San Jacinto, C**	**4.03**	**290**	*e*P	**Pn**	**17 29 56.1**	**+0.8**
SJCC				*e*S	**Sn**	**17 30 43.5**	**+1.6**
SJCC				*i*		17 30 47.7	
	comp=Z,68nm,0.7s						
UREC	**San Jos de Ur**	**4.23**	**260**	*e*P	**Pn**	**17 29 56.8**	**-1.3**
UREC				*e*S	**Sn**	**17 30 45.8**	**-1.1**
UREC				*i*		17 31 04.8	
	comp=Z,33nm,0.2s						
MOTC	**Monteria, Cord**	**4.29**	**273**	*e*P	**Pn**	**17 29 59.1**	**+0.2**
MOTC				*e*S	**Sn**	**17 30 50.0**	**+1.7**
MOTC				*i*		17 31 12.2	
	comp=Z,30nm,0.5s						
ROSC	**El Rosal**	**4.73**	**219**	Pn	**Pn**	**17 30 04.6**	**-0.7**
	comp=Z,5.6nm,0.3s,baz=271,slow=12,SNR=8.8						
HELC	**Santa Helena**	**4.77**	**241**	*e*P	**Pn**	**17 30 05.5**	**-0.4**
HELC				*e*S	**Sn**	**17 31 03.2**	**+2.4**
PAYV	**Puerto Ayacuch**	**4.79**	**130**	*e*P	**Pn**	**17 30 06.2**	**+0.4**
PAYV				*e*S	**Sn**	**17 30 58.9**	**-1.9**
CACV	**CAICARA DEL OR**	**4.85**	**101**	*e*P	Pb	17 30 14.9	-4.1
VILC	**Villavicencio,**	**4.99**	**208**	*e*P	**Pn**	**17 30 09.1**	**+0.4**
VILC				*e*S	**Sn**	**17 31 05.1**	**-0.7**
VILC				*i*		17 31 14.9	
	comp=Z,4µm,0.4s						
BIRV	**Birongo**	**5.35**	**69**	*e*P	**Pn**	**17 30 14.2**	**+0.8**
CBOC	**Ciudad Bolivar**	**5.35**	**240**	*e*P	**Pn**	**17 30 15.9**	**+2.3**
PRAC	**Prado**	**5.96**	**217**	*e*P	**Pn**	**17 30 21.3**	**-0.6**
PRAC				*e*S	**Sn**	**17 31 29.4**	**-0.2**
PRAC				*i*		17 31 36.5	
	comp=Z,19nm,0.5s						
PRGV	**PARIAGUAN**	**6.62**	**88**	*e*P	**Pn**	**17 30 31.5**	**+0.6**
PCRV	**Puerto La Cruz**	**6.80**	**76**	Pn	**Pn**	**17 30 35.8**	**+2.3**
	comp=Z,1.4nm,0.3s,baz=37,slow=3.3,SNR=2.7						
PCRV	**Puerto La Cruz**	**6.80**	**76**	*e*P	**Pn**	**17 30 33.6**	**+0.1**
NNA	**Nana**	**21.12**	**195**	LR	LR	17 41 37.1	
	comp=Z,28nm,19.0s,baz=14,slow=36						
TXAR	**Lajitas Array**	**36.71**	**309**	P	**P**	**17 36 00.2**	**-0.6**
	comp=Z,0.1nm,0.4s,baz=112,slow=8.9,SNR=2.3						
PDAR	**Pinedale Array**	**47.77**	**322**	P	**P**	**17 37 31.5**	**+0.6**
	comp=Z,0.5nm,0.4s,baz=122,slow=9.5,SNR=11						
PLCA	**Paso Flores**	**49.04**	**179**	P	**P**	**17 37 39.8**	**-0.6**
	comp=Z,1.1nm,0.7s,baz=354,slow=11,SNR=3.3						
TORD	**Torodi Ar. Bea**	**71.66**	**79**	P	**P**	**17 40 15.9**	**+0.2**
	comp=Z,0.6nm,0.9s,baz=294,slow=5.0,SNR=2.9						
ILAR	**Eielson Array**	**76.16**	**335**	P	**P**	**17 40 40.8**	**-0.3**
	comp=Z,0.2nm,0.7s,baz=126,slow=4.6,SNR=2.3						
ASAR	**Alice Springs**	**151.55**	**235**	PKPbc	**PKPbc**	**17 48 47.4**	**-0.9**
	comp=Z,0.8nm,0.6s,baz=119,slow=2.6,SNR=13						
WRA	**Warramunga Arr**	**152.71**	**243**	PKPbc	**PKPbc**	**17 48 50.2**	**-0.8**
	comp=Z,1.1nm,0.5s,baz=108,slow=2.8,SNR=25						

*FUNV **20** 17:41:44.5, 8°.47N×71°.34W, $h16^{km}$, MW3.0*

ISC 20 17:41:40.7±1.4**, 8°.49N**±0°.05×**71°.28W**±0°.03**, $h5^{km}\pm13^{km}$, n11, $\sigma1^{s}.89$**/20**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	**Socops**	**0.47**	**117**	*e*P	**Pn**	**17 41 53.9**	**-0.2**
SOCV				*e*S	**Sb**	**17 42 02.0**	**+3.2**
SOCV	**Socops**	**0.47**	**117**	*e*P	**Pn**	**17 41 54.3**	**+0.2**
SOCV				*e*S	**Sb**	**17 42 01.9**	**+3.2**
SDV	**Santo Domingo**	**0.75**	**59**	*e*P	**Pg**	**17 41 55.2**	**+0.2**
SDV				*e*S	**Sn**	**17 42 09.4**	**-0.6**
CAPV	**Capacho**	**1.20**	**239**	*e*P	**Pg**	**17 42 05.4**	**+1.6**
CAPV				*e*S	**Sn**	**17 42 20.8**	**-0.5**
PAMC	**Pamplona, Colo**	**1.82**	**231**	*e*P	**Pg**	**17 42 15.7**	**+0.1**
PAMC				*e*S	**Sg**	**17 42 39.3**	**+0.1**
PAMC				*i*		17 42 44.0	
	comp=Z,19nm,0.3s						
CURV	**Curarigua**	**1.99**	**41**	*e*P	**Pb**	**17 42 17.0**	**-0.5**
CURV				*e*S	**Sb**	**17 42 42.8**	**+0.1**
OCAC	**Ocana**	**2.04**	**263**	*e*P	**Pb**	**17 42 17.4**	**-1.0**
OCAC				*e*S	**Sb**	**17 42 42.3**	**-1.8**
OCAC				*i*		17 42 44.7	
	comp=Z,116nm,0.4s						
SIQV	**Siquisique**	**2.58**	**34**	*e*P	**Pb**	**17 42 26.2**	**-1.4**
BAUV	**El Baul**	**3.23**	**82**	*e*P	**Pb**	**17 42 34.7**	**-3.9**
BAUV				*e*S	**Sn**	**17 43 11.4**	**+0.4**
MONV	**Montecano**	**3.67**	**20**	*e*P	**Pn**	**17 42 40.5**	**+2.3**
MONV				*e*S	**Sn**	**17 43 21.4**	**-0.6**
CACV	**CAICARA DEL OR**	**4.78**	**101**	*e*P	**Pb**	**17 43 02.7**	**-2.3**

NNC 20 17:50:08.3±6.5**, 36°.74N**×**70°.72E, $h0^{km}$, mb3.9, mpv3.5, 4C-2D, Error ellipse: s-maj=56.9km s-min=30.8km az=167.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**6.57**	**25**	⇑P	Pn	17 51 47.5	+1.2
	1.3nm,0.3s						
AAK				⇓S	Sn	17 53 02.2	+0.2
	11nm,0.5s						
AB31	**Akbulak array**	**14.77**	**331**	⇑P	Pn	17 53 38.2	-0.1
	1.4nm,0.6s,baz=147,slow=12,SNR=21						
AB31				⇓S	Sn	17 56 25.0	+2.4
	1.4nm,0.9s,baz=146,slow=23						
AKTO	**Aktyubinsk**	**16.46**	**330**	⇑P	Pn	17 53 58.3	-2.3
	1.5nm,0.7s						
AKTO				⇑S	Sn	17 57 06.5	+2.6
	1.7nm,1.1s						

*IDC **20** 17:53:09.0±0.8, 8°.58N×71°.48W, $h0^{km}$, mb3.9/5, mb1 4.1/8, mb1mx3.7/41, mbtmp4.0/8, ML3.5/3, Error ellipse: s-maj=23.5km s-min=10.0km az=157.0*

*FUNV **20** 17:53:11.8, 8°.49N×71°.38W, $h1^{km}$, MW3.9*

*NEIC **20** 17:53:11.6±2.5, 8°.62N±0°.06×71°.39W±0°.04, $h10^{km}\pm1^{km}$, mb4.4/6, Mwr3.9(CAR), Error ellipse: s-maj=11.1km s-min=5.2km az=162.0*

*CAR **20** 17:53:12.6±3.0, 8°.50N±0°.06×71°.37W±0°.03, $h5^{km}\pm4^{km}$, Error ellipse: s-maj=0.0km s-min=0.0km az=64.0*

ISC 20 17:53:10.8±1.6**, 8°.49N**±0°.04×**71°.37W**±0°.03**, $h11^{km}\pm11^{km}$, n53, $\sigma1^{s}.51$**/60**, mb4.1**/6**, 1C, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	**Socops**	**0.55**	**112**	*e*P	**Pg**	**17 53 21.7**	**+0.3**
SOCV				*e*S	**Sb**	**17 53 31.0**	**+0.7**
SDV	**Santo Domingo**	**0.82**	**62**	Pg	**Pb**	**17 53 26.9**	**-0.3**
	54nm,0.3s,baz=226,slow=7.3,SNR=36						
SDV				Lg	Lg	17 53 38.2	
	283nm,0.3s,baz=261,slow=17,SNR=28						
SDV	**Santo Domingo**	**0.82**	**62**		**Pb**	**17 53 26.7**	**-0.5**
SDV					**Sb**	**17 53 38.3**	**-0.1**
CAPV	**Capacho**	**1.12**	**236**	*e*S	**Sn**	**17 53 48.2**	**0.0**
MCQV	**Machiques**	**1.93**	**323**	*e*P	**Pn**	**17 53 44.8**	**+1.3**
MCQV				*e*S	**Sb**	**17 54 09.7**	**-0.4**
OCAC	**Ocana**	**1.95**	**263**	Pn	**Pn**	**17 53 45.3**	**+1.4**
OCAC				Sn	**Sn**	**17 54 08.6**	**+0.2**
CURV	**Curarigua**	**2.05**	**43**	*e*P	**Pb**	**17 53 47.4**	**-0.7**
ELOV	**Elorza**	**2.38**	**128**	*e*P	**Pn**	**17 53 50.5**	**+0.7**
ELOV				*e*S	**Sn**	**17 54 19.7**	**+0.6**
DABV	**Dabajuro**	**2.52**	**17**	*e*P	**Pn**	**17 53 53.5**	**+1.8**
SIQV	**Siquisique**	**2.64**	**36**	*e*P	**Pn**	**17 53 55.1**	**+1.8**
SIQV				*e*S	**Sn**	**17 54 26.7**	**+1.3**
URIC	**Uribia, Colomb**	**3.25**	**349**	Pn	**Pn**	**17 54 01.2**	**-0.4**
BAUV	**El Baul**	**3.32**	**82**	⇑*e*P	**Pn**	**17 54 04.6**	**+2.0**
BAUV				*e*S	**Sn**	**17 54 42.8**	**+0.7**
BAUV	**El Baul**	**3.32**	**82**	Pn	**Pn**	**17 54 04.7**	**+2.0**
JACV	**Jacura**	**3.59**	**44**	*e*P	**Pn**	**17 54 07.7**	**+1.2**
ZARC	**Zaragoza, Cauc**	**3.60**	**254**	Pn	**Pn**	**17 54 07.8**	**+1.4**
MONV	**Montecano**	**3.71**	**22**	*e*P	**Pn**	**17 54 09.4**	**+1.5**
MONV				*e*S	**Sn**	**17 54 51.8**	**+0.2**
TURV	**Turiamo**	**3.99**	**61**	*e*P	**Pn**	**17 54 12.1**	**+0.3**
BENV	**Beln**	**4.00**	**68**	*e*P	**Pn**	**17 54 13.5**	**+1.4**
BENV				*e*S	**Sn**	**17 54 57.8**	**-1.2**
SJCC	**San Jacinto, C**	**4.01**	**291**		**Pn**	**17 54 13.9**	**+1.6**
MOTC	**Monteria, Cord**	**4.26**	**274**	Pn	**Pn**	**17 54 17.1**	**+1.5**
HATO	**Hato, Curacao**	**4.36**	**33**	Pn	Pn	17 54 12.2	-4.8
ROSC	**El Rosal**	**4.67**	**219**	Pn	**Pn**	**17 54 22.9**	**+1.4**
	6.0nm,0.3s,baz=229,slow=7.8,SNR=10						
ROSC	**El Rosal**	**4.67**	**219**		**Pn**	**17 54 25.1**	**+3.5**
PAYV	**Puerto Ayacuch**	**4.79**	**129**	*e*P	**Pn**	**17 54 23.9**	**+1.1**
PAYV				*e*S	**Sn**	**17 55 16.6**	**-1.7**
CACV	**CAICARA DEL OR**	**4.87**	**101**	*e*P	**Pb**	**17 54 32.5**	**-3.6**
BIRV	**Birongo**	**5.40**	**68**	*e*P	**Pn**	**17 54 32.7**	**+1.4**
BIRV	**Birongo**	**5.40**	**68**	Pn	**Pn**	**17 54 33.8**	**+2.4**
CAP2	**Capurgana**	**5.93**	**272**	Pn	**Pn**	**17 54 38.4**	**-0.1**
PRGV	**PARIAGUAN**	**6.65**	**87**	*e*P	**Pn**	**17 54 49.2**	**+0.7**
PCRV	**Puerto La Cruz**	**6.85**	**75**	Pn	**Pn**	**17 54 54.2**	**+2.9**
	2.8nm,0.3s,baz=319,slow=3.5,SNR=17						
PCRV	**Puerto La Cruz**	**6.85**	**75**	*e*P	**Pn**	**17 54 52.2**	**+0.9**
PLCV	**Puerto La Cruz**	**6.89**	**76**		**Pn**	**17 54 54.2**	**+2.3**
PCDR	**Punta Cana, DR**	**10.38**	**16**	Pn	**Pn**	**17 55 38.1**	**-1.5**
DR12	**Loma Pena Alta**	**10.41**	**10**	Pn	**Pn**	**17 55 39.7**	**-0.5**
CELP	**Cerrillos**	**10.60**	**26**	Pn	**Pn**	**17 55 40.9**	**-1.8**
AOPR	**Arecibo Observ**	**10.77**	**24**	Pn	**Pn**	**17 55 40.9**	**-4.2**
OTAV	**Otavalo**	**10.82**	**221**	Pn	**Pn**	**17 55 46.7**	**+0.6**
BOAV	**Boa Vista**	**12.38**	**119**	Pn	**Pn**	**17 56 07.6**	**+0.6**
PTGA	**Pitinga**	**14.60**	**128**	Pn	**Pn**	**17 56 37.5**	**+0.1**
	0.8nm,0.3s,baz=313,slow=18,SNR=4.8						
SIV	**San Ignacio**	**26.38**	**157**	P	**P**	**17 58 49.3**	**+2.0**
	2.4nm,0.8s,baz=310,slow=9.5,SNR=5.2						
SDCO	**Great Sand Dun**	**42.40**	**319**	P	**P**	**18 01 07.2**	**+1.4**
LOHW	**Long Hollow**	**48.90**	**322**	P	**P**	**18 01 56.5**	**-0.5**
LOHW				IAmb	IAmb	18 02 00.2	
	comp=Z,2.5nm,0.8s						
REDW	**Red Top Meadow**	**48.91**	**322**	P	**P**	**18 01 56.5**	**-0.7**
PLCA	**Paso Flores**	**48.99**	**179**	P	**P**	**18 01 57.7**	**+0.2**
	comp=Z,2.5nm,0.8s,baz=2.8,slow=8.8,SNR=5.7						
PLCA	**Paso Flores**	**48.99**	**179**	IAmb	IAmb	18 01 58.5	
	comp=Z,7.1nm,1.1s						
TORD	**Torodi Ar. Bea**	**71.71**	**79**	P	**P**	**18 04 32.5**	**-1.0**
	comp=Z,0.7nm,0.7s,baz=289,slow=5.3,SNR=3.7						
TORD	**Torodi Ar. Bea**	**71.71**	**79**	IAmb	IAmb	18 04 34.0	
	comp=Z,4.8nm,1.4s						
INK	**Inuvik**	**72.06**	**340**	P	**P**	**18 04 34.3**	**-0.3**
	comp=Z,1.3nm,0.7s,baz=98,slow=7.1,SNR=5.2						
ILAR	**Eielson Array**	**76.20**	**335**	P	**P**	**18 04 58.7**	**-0.2**
	comp=Z,0.3nm,0.7s,baz=106,slow=4.3,SNR=2.2						
ASAR	**Alice Springs**	**151.49**	**235**	PKPbc	**PKPbc**	**18 13 05.2**	**-0.6**
	comp=Z,0.9nm,0.7s,baz=115,slow=2.7,SNR=11						
ASAR	**Alice Springs**	**151.49**	**235**		**PKPbc**	**18 13 04.0**	**-1.8**
WRA	**Warramunga Arr**	**152.65**	**243**	PKPbc	**PKPbc**	**18 13 08.2**	**-0.3**
	comp=Z,0.9nm,0.4s,baz=109,slow=2.6,SNR=25						
WRA	**Warramunga Arr**	**152.65**	**243**		**PKPbc**	**18 13 07.6**	**-0.9**

*NIC **20** 17:58:09.3±0.0, 35°.72N×27°.39E, $h10^{km}\pm3^{km}$, Ml3.4/2*

*ATH **20** 17:58:09.2, 35°.85N×27°.30E, $h15^{km}\pm8^{km}$, ML3.0/4, Error ellipse: s-maj=8.8km s-min=1.1km az=14.0*

*ISK **20** 17:58:10.5, 35°.87N×27°.28E, $h44^{km}\pm2^{km}$, ML2.9/22*

*THE **20** 17:58:10.1, 35°.84N×27°.33E, $h13^{km}\pm2^{km}$, ML2.9/6, Error ellipse: s-maj=2.8km s-min=0.7km az=110.0*

*DDA **20** 17:58:11.2, 36°.01N×27°.40E, $h7^{km}\pm3^{km}$, ML2.6*

ISC 20 17:58:09.0±1.1**, 35°.85N**±0°.02×**27°.32E**±0°.02**, $h19^{km}\pm3^{km}$, n67, $\sigma0^{s}.71$**/98**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**0.75**	**61**	P	**Pg**	**17 58 23.7**	**0.0**
ARG				S	**Sn**	**17 58 34.5**	**-0.8**
	2µm,0.4s						
ARG	**Arkhangelos**	**0.75**	**61**	P	**Pg**	**17 58 23.8**	**+0.1**
ARG				S	**Sn**	**17 58 34.3**	**-1.0**
ARG				AML	AML	17 58 37.4	
	comp=N,3474µm,0.3s						
ARG				AML	AML	17 58 38.9	
	comp=E,3858µm,0.2s						
ARG	**Arkhangelos**	**0.75**	**61**	P	**Pg**	**17 58 23.8**	**+0.1**
ARG				S	**Sn**	**17 58 34.7**	**-0.6**
NISR	**Nisiros**	**0.77**	**349**	P	**Pn**	**17 58 24.6**	**-0.3**
NISR	**Nisiros**	**0.77**	**349**	P	**Pn**	**17 58 24.8**	**0.0**
NISR				S	**Sg**	**17 58 34.6**	**+0.1**
NISR				AML	AML	17 58 38.3	
	comp=N,601µm,0.3s						
NISR				AML	AML	17 58 40.0	
	comp=E,1572µm,0.4s						
DAT	**Datca**	**0.90**	**13**	P	**Pn**	**17 58 26.9**	**+0.2**
DAT				S	**Sn**	**17 58 40.3**	**+1.1**
DAT	**Datca**	**0.90**	**13**	*i* P	**Pb**	**17 58 25.8**	**-0.2**
DAT				*i* S	**Sn**	**17 58 39.5**	**+0.3**
DAT				IAML		17 58 41.0	
	comp=N,290nm,0.2s						
DAT				IAML		17 58 41.0	
	comp=E,206nm,0.6s						
DAT	**Datca**	**0.90**	**13**	PG	**Pn**	**17 58 27.1**	**+0.4**
DAT				SG	**Sn**	**17 58 39.6**	**+0.3**
KOSK	**Kos Island**	**0.94**	**343**	PG	**Pg**	**17 58 27.4**	**+0.1**
KOSK				SG	**Sn**	**17 58 40.4**	**+0.4**
MRSB	**Marmaris-Mugla**	**1.11**	**39**	PN	**Pg**	**17 58 30.6**	**-0.1**
MRSB				SN	**Sg**	**17 58 45.1**	**-0.2**
ZKR	**Zakros**	**1.16**	**231**	P	**Pb**	**17 58 30.7**	**+0.2**
ZKR				S	**Sg**	**17 58 46.4**	**-0.4**
	comp=E,552nm,0.3s						
ZKR	**Zakros**	**1.16**	**231**	P	**Pb**	**17 58 30.6**	**+0.1**
ZKR				S	**Sg**	**17 58 46.2**	**-0.6**
ZKR				AML	AML	17 58 49.1	
	comp=E,1490µm,0.3s						
ZKR				AML	AML	17 58 50.3	
	comp=N,728µm,0.3s						
ZKR	**Zakros**	**1.16**	**231**	PN	**Pb**	**17 58 30.7**	**+0.2**
ZKR				SN	**Sn**	**17 58 45.7**	**+0.1**
ZKR	**Zakros**	**1.16**	**231**	P	**Pb**	**17 58 30.6**	**+0.1**
ZKR				S	**Sg**	**17 58 46.9**	**0.0**
TURN	**Turunc**	**1.19**	**39**	*i* P	**Pb**	**17 58 31.0**	**+0.2**
TURN				*i* S	**Sb**	**17 58 45.6**	**-0.2**
TURN				IAML		17 58 50.0	
	comp=N,178nm,0.4s						
TURN				IAML		17 58 50.0	
	comp=E,196nm,0.3s						
TURN	**Turunc**	**1.19**	**39**	PN	**Pg**	**17 58 31.5**	**-0.5**
TURN				SN	**Sg**	**17 58 46.9**	**-0.6**
STIA	**Sitia Lasithi**	**1.20**	**237**	P	**Pb**	**17 58 31.3**	**+0.3**
STIA				S	**Sn**	**17 58 46.5**	**+0.1**
BODT	**Bodrum**	**1.21**	**360**	PN	**Pb**	**17 58 31.5**	**+0.3**
BDRM	**Kayabasi**	**1.21**	**5**	*i* P	**Pb**	**17 58 31.3**	**0.0**
BDRM				*i* S	**Sb**	**17 58 45.6**	**-1.1**
DALY	**Dalyan (Mula)**	**1.44**	**48**	*i* P	**Pb**	**17 58 35.8**	**+0.5**
DALY				*i* S	**Sb**	**17 58 53.7**	**+0.5**
DALY				IAML		17 59 03.0	
	comp=E,104nm,0.6s						
DALY				IAML		17 59 04.0	
	comp=N,133nm,0.5s						
DALY	**Dalyan (Mula)**	**1.44**	**48**	PN	**Pb**	**17 58 35.2**	**-0.1**
MLSB	**Milas**	**1.48**	**14**	PN	**Pb**	**17 58 35.6**	**-0.4**
MLSB				SN	**Sn**	**17 58 53.9**	**+0.3**
YER	**Yerkesik**	**1.50**	**31**	P	**Pb**	**17 58 36.1**	**-0.1**
YER				S	**Sb**	**17 58 55.2**	**+0.4**
YER	**Yerkesik**	**1.50**	**31**	PN	**Pb**	**17 58 35.9**	**-0.3**
YER				SN	**Sb**	**17 58 54.4**	**-0.4**
NPS	**Neapolis**	**1.51**	**248**	P	**Pn**	**17 58 35.5**	**+0.4**
NPS				S	**Sn**	**17 58 54.3**	**+0.1**
	comp=N,618nm,0.5s						
NPS	**Neapolis**	**1.51**	**248**	P	**Pn**	**17 58 35.5**	**+0.4**
NPS				S	**Sb**	**17 58 54.9**	**-0.4**
NPS				AML	AML	17 58 55.8	
	comp=E,1348µm,0.4s						
NPS				AML	AML	17 58 57.6	
	comp=N,1109µm,0.4s						
FRMA	**Ierapetra Chan**	**1.54**	**238**	P	**Pn**	**17 58 35.6**	**+0.1**
FRMA				S	**Sn**	**17 58 54.2**	**-0.7**
	comp=N,182nm,0.4s						
THR8	**Santorini-Mono**	**1.59**	**291**	P	**Pn**	**17 58 36.4**	**+0.3**
SANT	**Santorini**	**1.59**	**289**	P	**Pn**	**17 58 36.5**	**+0.3**
SANT				S	**Sn**	**17 58 56.4**	**+0.1**
	comp=N,268nm,0.3s						
SANT	**Santorini**	**1.59**	**289**	PN	**Pn**	**17 58 36.5**	**+0.3**
SANT				SN	**Sn**	**17 58 55.8**	**-0.5**
MULA	**Mugla, Merkez-**	**1.61**	**30**	*i* P	**Pb**	**17 58 38.8**	**+0.6**
MULA				*i* S	**Sn**	**17 58 56.4**	**-0.5**
MULA				IAML		17 59 03.0	
	comp=E,108nm,0.5s						
FETY	**Fethiye**	**1.62**	**61**	*i* P	**Pb**	**17 58 38.6**	**+0.2**
FETY				*i* S	**Sg**	**17 59 00.6**	**-0.9**
FETY				IAML		17 59 08.0	
	comp=N,90nm,0.3s						
FETY	**Fethiye**	**1.62**	**61**	PN	**Pb**	**17 58 38.1**	**-0.3**
THR6	**Thira Island,**	**1.64**	**288**	P	**Pn**	**17 58 37.2**	**+0.5**
STAX	**Taxiarchis Har**	**1.64**	**290**	P	**Pn**	**17 58 37.4**	**+0.6**
THR3	**Thira Island,**	**1.65**	**290**	P	**Pn**	**17 58 37.3**	**+0.4**
CMBO	**Columbo, Santo**	**1.67**	**292**	P	**Pn**	**17 58 37.7**	**+0.5**
THR9	**Santorini-Faro**	**1.67**	**288**	P	**Pb**	**17 58 38.1**	**-1.0**
THR5	**Thira Island,**	**1.69**	**290**	P	**Pn**	**17 58 38.2**	**+0.7**
GCAM	**G?zelcaml?**	**1.84**	**358**	PN	**Pn**	**17 58 40.7**	**+1.1**
AYDN	**Tasoluk**	**1.86**	**14**	*i* P	**Pb**	**17 58 41.4**	**-1.0**
KSL	**Kastellorizon**	**1.86**	**80**	P	**Pb**	**17 58 42.3**	**-0.1**
KSL	**Kastellorizon**	**1.86**	**80**	P	**Pb**	**17 58 41.6**	**-0.8**
APE	**Apeiranthos**	**1.88**	**311**	PN	**Pn**	**17 58 40.6**	**+0.4**
HRKL	**Herakleio**	**1.89**	**254**	PN	**Pn**	**17 58 41.1**	**+0.9**
AKAS	**Kas**	**1.89**	**78**	*i* P	**Pb**	**17 58 42.7**	**-0.3**
AKAS	**Kas**	**1.89**	**78**	PN	**Pb**	**17 58 41.9**	**-1.1**
SMG	**Samos**	**1.89**	**348**	P	**Pn**	**17 58 40.5**	**+0.2**
CAME	**Cameli-Denizli**	**1.93**	**55**	PN	**Pb**	**17 58 42.3**	**-1.4**
CAEL	**Denizli, Camel**	**2.05**	**51**	*i* P	**Pg**	**17 58 48.1**	**-0.3**
TAVA	**DENIZLI_Tavas**	**2.06**	**38**	*i* P	**Pb**	**17 58 45.8**	**0.0**
TAVA				*i* S	**Sb**	**17 59 10.8**	**-0.2**
TAVA				IAML		17 59 20.0	
	comp=E,52nm,0.8s						
IDI	**Anoyia**	**2.06**	**255**	P	**Pn**	**17 58 42.8**	**+0.2**
IDI				S	**Sn**	**17 59 07.9**	**+0.1**
	comp=E,130nm,0.4s						
IDI	**Anoyia**	**2.06**	**255**	P	**Pb**	**17 58 44.6**	**-1.2**
AYDB	**Zeytinkoy-Aydi**	**2.14**	**12**	PN	**Pn**	**17 58 45.2**	**+1.4**
ELL	**Elmali**	**2.27**	**66**	PN	**Pb**	**17 58 47.5**	**-2.0**
ELL	**Elmali**	**2.27**	**66**	P	**Pn**	**17 58 47.3**	**+1.6**
KORT	**Korkueli**	**2.70**	**64**	PN	**Pn**	**17 58 53.0**	**+1.5**
IMMV	**Iera Moni Meta**	**2.75**	**263**	PN	**Pn**	**17 58 53.2**	**+1.2**
GVD	**Gavdhos**	**2.83**	**250**	PN	**Pn**	**17 58 54.6**	**+1.4**
KULA	**Kula-Manisa**	**2.86**	**22**	PN	**Pn**	**17 58 55.3**	**+1.6**
BASM	**Basmaki-Afyon**	**3.01**	**46**	PN	**Pn**	**17 58 57.2**	**+1.5**
KNDR	**Palaiochora Ch**	**3.03**	**259**	PN	**Pn**	**17 58 57.8**	**+1.9**
OSC1	**CSNet OBS 1**	**4.02**	**125**	P	**Pn**	**17 59 09.7**	**+0.2**
OSC1				S	**Sn**	**17 59 56.6**	**+0.5**
AKMS	**Akamas**	**4.18**	**100**	P	**Pn**	**17 59 12.7**	**+0.9**
AKMS				AML	AML	18 00 01.2	
	comp=E,0.2nm,0.4s						
AKMS				AML	AML	18 00 01.3	
	comp=E,0.1nm,0.2s						
ALFC	**Alefka**	**4.36**	**98**	P	**Pn**	**17 59 14.9**	**+0.6**
ALFC				AML	AML	18 00 05.2	
	comp=E,0.1nm,0.4s						
ALFC				AML	AML	18 00 05.3	
	comp=E,0.1nm,0.6s						
NATA	**Nata**	**4.42**	**103**	P	**Pn**	**17 59 16.0**	**+0.8**
ASGA	**Asgata**	**4.96**	**101**	P	**Pn**	**17 59 23.1**	**+0.6**

*NEIC **20** 18:00:04.4±1.6, 8°.50N±0°.02×71°.37W±0°.04, $h10^{km}\pm1^{km}$, mb5.0/161, Mwr4.8(CAR), Error ellipse: s-maj=7.4km s-min=2.8km az=111.0*

*FUNV **20** 18:00:04.9, 8°.52N×71°.41W, $h1^{km}$, MW4.8*

*CAR **20** 18:00:06.1±1.6, 8°.51N±0°.06×71°.38W±0°.04, $h5^{km}\pm3^{km}$, Error ellipse: s-maj=8.5km s-min=4.0km az=156.0*

*IDC **20** 18:00:06.4±2.4, 8°.52N×71°.32W, $h22^{km}\pm15^{km}$, mb4.4/27, mb1 4.6/31, mb1mx4.4/43, mbtmp4.6/31, ML4.2/4, MS4.0/28, Ms1 4.0/28, ms1mx3.9/33, Error ellipse: s-maj=13.6km s-min=11.1km az=51.0*

*GCMT **20** 18:00:07.4±0.4, 8°.53N±0°.02×71°.40W±0°.03, $h14^{km}\pm1^{km}$, MW4.7/73, Moment Tensor Solution. s17,c20; s73,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.95±.12; $M_{\theta\theta}$1.43±.09; $M_{\phi\phi}$-0.47±.07; $M_{r\theta}$0.11±.15; $M_{\theta\phi}$0.84±.06; $M_{\phi r}$-0.53±.20; Best double couple: $M_0$1.58400×10^{16} NP1:ϕ_s283.00000°, δ56.00000°, λ-38.00000°. NP2: ϕ_s36.00000°, δ59.00000°, λ-139.00000°. Principal axes: T 1.7490, Plg2.0000°, Azm159.0000°; N -0.3310, Plg41.0000°, Azm67.0000°; P -1.4180, Plg49.0000°, Azm251.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*VAO **20** 18:00:08.4±0.6, 8°.39N×71°.35W, $h25^{km}$, mb4.8*

ISC 20 18:00:03.0±0.7**, 8°.48N**±0°.02×**71°.42W**±0°.02**, $h4^{km}\pm4^{km}$, n573, $\sigma1^{s}.42$**/589**, mb5.0**/121**, MS4.0**/24**, 1C, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	**Socops**	**0.59**	**109**	*e*P	**Pb**	**18 00 15.4**	**-0.6**
SOCV				*e*S	**Sg**	**18 00 22.9**	**+0.8**
SOCV	**Socops**	**0.59**	**109**	*e*P	**Pb**	**18 00 15.5**	**-0.4**
SOCV				*e*S	**Sb**	**18 00 25.4**	**+0.7**
SDV	**Santo Domingo**	**0.88**	**63**	Pg	**Pg**	**18 00 20.4**	**+0.5**
	632nm,0.3s,baz=241,slow=17,SNR=264						
SDV				Lg	Lg	18 00 32.2	
	1µm,0.3s,baz=302,slow=22,SNR=14						
SDV				LR	LR	18 00 55.8	
	comp=Z,8µm,20.5s,baz=324,slow=64						
SDV	**Santo Domingo**	**0.88**	**63**	*e*P	**Pg**	**18 00 20.4**	**+0.5**
SDV				*e*S	**Sg**	**18 00 32.2**	**+0.9**
SDV	**Santo Domingo**	**0.88**	**63**		**Pg**	**18 00 20.2**	**+0.3**
SDV					**Sg**	**18 00 30.9**	**-0.4**
CAPV	**Capacho**	**1.07**	**235**	*e*P	**Pn**	**18 00 24.8**	**-0.2**
CAPV				*e*S	**Sn**	**18 00 41.5**	**+1.0**
PAMC	**Pamplona, Colo**	**1.70**	**228**	*e*P	**Pg**	**18 00 37.0**	**+1.3**
PAMC				*e*S	**Sg**	**18 01 00.3**	**+2.6**
OCAC	**Ocana**	**1.89**	**263**	*e*P	**Pb**	**18 00 38.4**	**+0.2**
OCAC				*e*S	**Sg**	**18 01 02.9**	**-1.1**
OCAC	**Ocana**	**1.89**	**263**		**Pb**	**18 00 37.9**	**-0.4**
OCAC					**Sb**	**18 01 02.5**	**+0.2**
MCQV	**Machiques**	**1.91**	**325**	*e*P	**Pb**	**18 00 37.9**	**-0.5**
MCQV				*e*S	**Sb**	**18 01 01.7**	**-0.9**
TAMC	**Tame, Arauca**	**2.06**	**190**	*e*P	**Pg**	**18 00 43.4**	**+0.8**
TAMC				*e*S	**Sg**	**18 01 10.0**	**+0.6**

CURV	Curarigua	2.10	43	eP	Pb	18 00 41.0	-0.7
LL6C	La Loma 6 Bece	2.21	304	eP	Pn	18 00 41.7	+1.2
LL6C				eS	Sb	18 01 10.9	-0.4
LL1C	La Loma 1 Cana	2.36	297	eP	Pb	18 00 46.9	+0.8
LL1C				eS	Sb	18 01 15.7	+0.1
ELOV	Elorza	2.42	127	eP	Pb	18 00 47.4	+0.3
ELOV				eS	Sb	18 01 16.2	-1.0
ELOV	Elorza	2.42	127	eP	Pn	18 00 45.1	+1.8
ELOV				eS	Sn	18 01 14.0	+0.6
BARC	Barichara	2.56	223	eP	Pg	18 00 51.5	-0.7
BARC				eS	Sb	18 01 23.2	+1.5
LL5C	La Loma 5 El P	2.60	299	eP	Pb	18 00 50.7	+0.5
LL5C				eS	Sb	18 01 20.8	-1.7
SMLC	San Martn de	2.64	277	eP	Pn	18 00 47.7	+1.3
SMLC				eS	Sb	18 01 22.3	-1.4
BRRC	Barranca, Sant	2.65	239	eP	Pb	18 00 49.8	-1.2
BRRC				eS	Sg	18 01 27.3	-0.9
SIQV	Siquisique	2.68	36	eP	Pn	18 00 48.6	+1.7
SIQV				eS	Sn	18 01 20.1	+0.2
CVALL	Valledupar, Ce	2.71	318	eP	Pn	18 00 48.2	+0.9
CVALL				eS	Sn	18 01 20.0	-0.7
RUSC	La Rusia	3.06	213	eP	Pb	18 00 55.9	-2.4
RUSC				eS	Sb	18 01 33.5	-2.5
ARGC	Ariguani, Magd	3.11	296	eP	Pn	18 00 54.3	+1.4
ARGC				eS	Sn	18 01 29.4	-1.1
URIC	Uribia, Colomb	3.25	350	eP	Pn	18 00 55.4	+0.6
URIC				eS	Sn	18 01 32.3	-1.6
URIC	Uribia, Colomb	3.25	350		Pn	18 00 53.8	-1.0
BAUV	El Baul	3.37	82	eP	Pn	18 00 57.5	+1.0
BAUV				eS	Sn	18 01 35.6	-1.4
ZARC	Zaragoza, Cauc	3.54	254	eP	Pn	18 01 01.5	+2.6
ZARC				eS	Sn	18 01 42.5	+1.3
ZARC	Zaragoza, Cauc	3.54	254		Pn	18 01 00.5	+1.7
JACV	Jacura	3.64	44	eP	Pn	18 01 00.9	+0.7
MONV	Montecano	3.74	22	eP	Pn	18 01 01.5	0.0
MONV				eS	Sn	18 01 44.3	-1.7
SMRC	Santa Marta, M	3.84	314	eP	Pn	18 01 06.0	+3.1
SMRC				eS	Sn	18 01 46.0	-2.5
SPBC	San Pablo de B	3.85	223	eP	Pn	18 01 06.1	+2.9
SPBC				eS	Sb	18 01 53.5	-5.1
SJCC	San Jacinto, C	3.97	291	Pn	Pn	18 01 07.3	+2.6
TURV	Turiamo	4.04	61	eP	Pn	18 01 06.4	+0.8
BENV	Beln	4.05	68	eP	Pn	18 01 07.0	+1.2
BENV				eS	Sn	18 01 52.2	-1.6
UREC	San Jos de Ur	4.13	260	eP	Pn	18 01 10.2	+3.2
UREC				eS	Sn	18 01 59.7	+3.9
MOTC	Monteria, Cord	4.21	274	eP	Pn	18 01 10.9	+3.0
MOTC				eS	Sn	18 02 00.2	+2.7
MOTC	Monteria, Cord	4.21	274		Pn	18 01 10.3	+2.3
PTGC	Puerto Gaitan,	4.31	190	eP	Pn	18 01 12.2	+2.7
PTGC				eS	Sg	18 02 20.1	-1.5
HATO	Hato, Curacao	4.40	33		Pn	18 01 11.8	+1.1
NORC	Norcasia	4.49	230	eP	Pn	18 01 15.3	+3.5
NORC				eS	Sn	18 02 07.5	+3.0
ROSC	El Rosal	4.62	219	Pn	Pn	18 01 16.1	+2.0
	58nm,0.3s,baz=205,slow=2.2,SNR=61						
ROSC				Sn	Sn	18 02 13.5	+5.2
	34nm,0.3s,baz=206,slow=23,SNR=6.0						
ROSC				Lg	Lg	18 02 33.0	
	36nm,0.3s,baz=15,slow=21,SNR=4.2						
ROSC				LR	LR	18 03 22.6	
	comp=Z,2µm,20.6s,baz=357,slow=42						
ROSC	El Rosal	4.62	219	eP	Pn	18 01 18.0	+4.0
ROSC				eS	Sb	18 02 16.3	-4.9
ROSC	El Rosal	4.62	219		Pn	18 01 16.4	+2.3
HELC	Santa Helena	4.67	241	eP	Pn	18 01 17.6	+3.0
HELC				eS	Sb	18 02 17.1	-5.3
PAYV	Puerto Ayacuch	4.82	129	eP	Pn	18 01 17.9	+1.6
CARV	Caracas	4.87	65	eP	Pn	18 01 18.1	+1.0
VILC	Villavicencio,	4.89	208	eP	Pn	18 01 20.2	+2.7
VILC				eS	Sn	18 02 11.2	-3.5
LCBC	Los crdobas,	4.91	275	eP	Pn	18 01 20.0	+2.4
LCBC				eS	Sn	18 02 19.9	+5.1
CACV	CAICARA DEL OR	4.92	100	eP	Pb	18 01 25.9	-3.9
DBBC	Dabeiba	4.96	253	eP	Pn	18 01 22.3	+3.8
CBOC	Ciudad Bolivar	5.25	241	eP	Pn	18 01 27.0	+4.6
CBOC				eS	Sn	18 02 26.8	+3.4
BIRV	Birongo	5.46	68	eP	Pn	18 01 25.7	+0.5
ANIL	Santa Ana	5.60	225	eP	Pn	18 01 31.8	+4.4
ANIL				eS	Sn	18 02 37.1	+4.8
PRAC	Prado	5.86	216	eP	Pn	18 01 33.2	+2.5
PRAC				eS	Sn	18 02 40.8	+2.5
CAPC	Capurgana	5.87	272	eP	Pn	18 01 31.8	+1.0
CAPC				eS	Sn	18 02 35.8	-2.8
CAP2	Capurgana	5.88	272	Pn	Pn	18 01 30.8	-0.1
ORTC	Ortega, Tolima	5.92	220	eP	Pn	18 01 33.9	+2.3
ORTC				eS	Sn	18 02 40.8	+0.8
PLMC	San Jos del P	5.99	234	eP	Pn	18 01 36.5	+3.9
PLMC				eS	Sn	18 02 46.6	+4.8
GUVC	San Jose del G	6.02	192	eP	Pn	18 01 34.7	+1.8
GUVC				eS	Sn	18 02 42.5	+0.3
YOTC	Yotoco, Valle	6.63	228	eP	Pn	18 01 43.5	+2.1
YOTC				eS	Sn	18 02 59.1	+1.7
PRGV	PARIAGUAN	6.71	87	eP	Pn	18 01 42.5	+0.2
MACC	Macarena, Meta	6.74	201	eP	Pn	18 01 43.8	+1.0
MACC				eS	Sn	18 02 58.7	-1.4
PCRV	Puerto La Cruz	6.90	75	Pn	Pn	18 01 47.1	+2.0
	3.9nm,0.3s,baz=336,slow=2.8,SNR=14						
PCRV				Sn	Sn	18 03 06.5	+2.3
	22nm,0.3s,baz=151,slow=21,SNR=7.9						
PCRV				LR	LR	18 05 25.9	
	comp=Z,3µm,18.6s,slow=47						
PCRV	Puerto La Cruz	6.90	75	eP	Pn	18 01 45.3	+0.2
BETC	Betania	7.01	215	eP	Pn	18 01 48.3	+1.7
BCIP	Isla Barro Col	8.35	275	eP	Pn	18 02 05.8	+1.0
BCIP				eS	Sn	18 03 35.6	-4.0
BCIP	Isla Barro Col	8.35	275		Pn	18 02 05.7	+0.8
CRUV	Carupano	8.36	74	eP	Pn	18 02 05.4	+0.3
RIOV	Rio Grande	9.52	92	eP	Pn	18 02 20.7	-0.3
LUEV	Luepa	10.22	104	eP	Pn	18 02 29.7	-1.1
MLPR	Magueyes Islan	10.35	24		Pn	18 02 29.9	-2.4
PCDR	Punta Cana, DR	10.40	16	Pn	Pn	18 02 32.1	-0.9
DR12	Loma Pena Alta	10.44	11		Pn	18 02 31.5	-2.1
SDDR	Presa de Saban	10.44	1		Pn	18 02 34.2	+0.5
CELP	Cerrillos	10.64	26		Pn	18 02 34.0	-2.2
OTAV	Otavalo	10.78	221	eP	Pn	18 02 41.0	+2.4
OTAV	Otavalo	10.78	221		Pn	18 02 38.9	+0.3
AOPR	Arecibo Observ	10.80	24		Pn	18 02 37.4	-1.2
PDPR	Patillas Dam,	10.84	28		Pn	18 02 37.7	-1.3
SJG	San Juan	10.86	28	Pn	Pn	18 02 38.1	-1.2
	9.9nm,0.3s,baz=205,slow=16,SNR=8.4						
SJG				Sn	Sn	18 04 36.1	-5.3
	1.6nm,0.3s,baz=179,slow=22,SNR=3.3						
SJG	San Juan	10.86	28		Pn	18 02 37.7	-1.6
GCPR	Guaynabo City	11.06	27	Pn	Pn	18 02 40.9	-1.2
CBYP	Canovanas	11.13	28	Pn	Pn	18 02 42.1	-1.1
CDVI	St. Croix	11.26	34	Pn	Pn	18 02 43.6	-1.2
MTDJ	Mount Denham	11.37	329	Pn	Pn	18 02 45.7	-0.6
CUPR	Culebra, Puert	11.45	31	Pn	Pn	18 02 45.8	-1.6
STVI	Saint Thomas	11.65	32	Pn	Pn	18 02 48.1	-2.1
FDF	Fort de France	11.82	57		Pn	18 02 50.4	-2.2
SRBA	San Rafael, Bu	11.82	275		Pn	18 02 53.0	+0.3
GTBY	Guantanamo Bay	11.93	343	Pn	Pn	18 02 54.3	+0.4
BOAV	Boa Vista	12.41	119	eP	Pn	18 03 01.0	+0.3
BOAV	Boa Vista	12.41	119	Pn	Pn	18 02 59.1	-1.5
TBTG	Tabatinga, AM	12.67	173	eP	Pn	18 03 05.3	+1.1
JTS	Las Juntas de	13.47	279	LR	LR	18 10 19.7	
	comp=Z,285nm,20.0s,baz=146,slow=45						
PTGA	Pitinga	14.63	128	Pn	Pn	18 03 30.0	-0.9
	1.8nm,0.3s,baz=317,slow=15,SNR=7.8						
PTGA				Sn	Sn	18 06 10.1	-3.6
	2.1nm,0.3s,baz=38,slow=20,SNR=4.1						
PTGA				Lg	Lg	18 07 45.6	
	4.6nm,0.3s,baz=226,slow=23,SNR=4.9						
PTGA				LR	LR	18 09 34.8	
	comp=Z,1µm,19.5s,baz=308,slow=39						
PTGA	Pitinga	14.63	128		Pn	18 03 30.4	-0.6
CZSB	Cruzeiro do Su	16.15	185		Pn	18 03 50.7	-0.4
CZSB				IAmb	IAmb	18 03 59.4	
	comp=Z,100nm,1.1s						
TGUH	Tegucigalpa,Un	16.50	291	Pn	Pn	18 03 52.2	-3.4
TGUH				IAmb	IAmb	18 04 05.4	
	comp=Z,149nm,1.5s						
MTO3	Montecristo	18.54	290	P	P	18 04 16.7	-4.3
ETMB	Extrema	18.90	164	eP	Pn	18 04 26.5	+1.2
ETMB	Extrema	18.90	164		P	18 04 22.5	-2.3
ETMB				IAmb	IAmb	18 04 36.8	
	comp=Z,119nm,1.6s						
ITTB	Itaituba	20.19	129	eP	Pn	18 04 41.5	+0.8
MCPB	Macapa, AP	21.20	114	eP	P	18 04 50.2	+0.4
CCIG	Comitan	21.65	293	P	P	18 04 51.6	-3.3
NPGB	Novo Progresso	22.23	133	eP	P	18 05 01.9	+1.0
VILB	Vilhena	24.03	152	eP	P	18 05 19.1	-0.2
VILB	Vilhena	24.03	152	P	P	18 05 18.4	-1.0
CMIG	Matias Romero	24.41	293	LR	LR	18 16 24.1	
	comp=Z,424nm,19.1s,baz=112,slow=40						
CLDB	Colider	24.73	141	eP	P	18 05 26.2	+0.6
PDRB	Porto dos Gac	24.74	144	eP	P	18 05 27.2	+1.5
Y59A	Loris	26.30	346	P	P	18 05 38.9	-0.8
SIV	San Ignacio	26.39	157	P	P	18 05 42.9	+2.1
	comp=Z,46nm,1.2s,baz=326,slow=8.8,SNR=31						
SIV				LR	LR	18 16 44.3	
	comp=Z,1µm,19.7s,baz=330,slow=38						
PTLB	Pontes e Lacer	26.71	153	eP	P	18 05 45.3	+1.7
PTLB	Pontes e Lacer	26.71	153	P	P	18 05 43.1	-0.5
PB16	IPOC Station P	26.71	176	P	P	18 05 43.5	-0.8
152A	Waverly Hall	27.04	335	P	P	18 05 45.7	-0.7
152A				IAmb	IAmb	18 05 53.8	
	comp=Z,18nm,0.9s						
GOGA	Godfrey	27.19	338	P	P	18 05 49.4	+1.6
	baz=153						
KMSC	Kings Mountain	28.05	343	P	P	18 05 57.6	+2.2
	baz=159						
PB11	IPOC Station P	28.12	176	P	P	18 05 54.4	-1.9
PB11				IAmb	IAmb	18 06 01.1	
	comp=Z,25nm,0.9s						
PB08	IPOC Station P	28.53	176	P	P	18 06 00.1	-0.2
PB08				IAmb	IAmb	18 06 03.1	
	comp=Z,37nm,1.3s						
SALV	Santo Antonio	28.80	147	eP	P	18 06 04.1	+1.8
TKL	Tuckaleechee C	29.32	339	P	P	18 06 08.7	+2.0
	comp=Z,4.3nm,0.7s,baz=164,slow=9.1,SNR=4.1						
TKL				LR	LR	18 19 54.1	
	comp=Z,420nm,18.3s,baz=154,slow=40						
PB01	IPOC Station P	29.40	176	P	P	18 06 07.1	-0.6
PB01				IAmb	IAmb	18 06 13.5	
	comp=Z,47nm,1.4s						
X48A	Hartselle	29.57	333	P	P	18 06 08.4	-0.6
BLA	Blacksburg	29.75	345	P	P	18 06 12.8	+2.2
	baz=162						
Q61A	Milford	30.47	354	P	P	18 06 18.2	+1.3
	baz=172						
PLAL	Pickwick Lake	30.48	332	P	P	18 06 17.0	0.0
PLAL				IAmb	IAmb	18 06 21.8	
	comp=Z,40nm,1.4s						
PEXB	Peixe	30.77	131	eP	P	18 06 21.7	+1.8
ARAG	Araguaiana, MT	30.90	141	eP	P	18 06 21.5	+0.5
T50A	Nancy	30.91	339	P	P	18 06 21.1	+0.2
T50A				IAmb	IAmb	18 06 25.5	
	comp=Z,12nm,0.9s						
LVC	Limon Verde	31.00	175	eP	P	18 06 23.2	+1.1
LVC	Limon Verde	31.00	175	P	P	18 06 22.0	-0.1
LVC				IAmb	IAmb	18 06 31.9	
	comp=Z,35nm,1.6s						
W45A	Hickory Valley	31.14	331	P	P	18 06 23.7	+0.8
HKT	Hockley	31.29	316	P	P	18 06 24.3	+0.1
WVT	Waverly	31.33	334	P	P	18 06 26.1	+1.6
	baz=147						
WVT	Waverly	31.33	334	P	P	18 06 25.0	+0.5
WVT				IAmb	IAmb	18 06 28.3	
	comp=Z,14nm,1.0s						
Z41A	Richland Creek	31.60	324	P	P	18 06 29.1	+2.2
	baz=136						
WLAR	White Oak Lake	32.08	325	P	P	18 06 31.0	-0.2
WLAR				IAmb	IAmb	18 06 35.5	
	comp=Z,25nm,0.9s						
LUPA	Lehigh Univers	32.18	354	P	P	18 06 31.2	-0.7
O56A	Blue Knob Stat	32.29	350	P	P	18 06 34.4	+1.4
	baz=166						
PAL	Palisades	32.47	356	P	P	18 06 36.3	+1.8
	baz=175						
P52A	Corning	32.47	344	P	P	18 06 36.3	+1.7
	baz=160						
X40A	Basin Creek Fa	32.51	326	P	P	18 06 36.7	+1.7
	baz=138						
WCI	Wyandotte Cave	32.52	338	P	P	18 06 37.0	+2.0
	baz=152						
N59A	State Game Lan	32.53	354	P	P	18 06 36.8	+1.6
	baz=172						
SSPA	Standing Stone	32.53	351	P	P	18 06 36.4	+1.2
	baz=168						
AQDB	Aquidauana	32.67	152	eP	P	18 06 36.9	+0.5
AQDB	Aquidauana	32.67	152	P	P	18 06 37.5	+1.1
W41B	Gary Mavity, V	32.71	327	P	P	18 06 38.2	+1.5
	baz=139						
WHAR	Wooly Hollow	32.82	327	P	P	18 06 38.6	+1.0
WHAR				IAmb	IAmb	18 06 43.4	
	comp=Z,22nm,1.0s						
LCAR	Lake Charles	32.83	330	P	P	18 06 38.3	+0.6
LCAR				IAmb	IAmb	18 06 42.1	
	comp=Z,28nm,1.4s						
MIAR	Mount Ida	32.97	325	P	P	18 06 40.1	+1.1
	baz=137						
MIAR	Mount Ida	32.97	325	P	P	18 06 39.2	+0.2
435B	Jarrell	33.00	316	P	P	18 06 40.5	+1.2
	baz=127						
435B	Jarrell	33.00	316	P	P	18 06 39.6	+0.3
P49A	Miami Univ. Ec	33.14	341	P	P	18 06 41.2	+0.8
	baz=155						
FCAR	Ozark Folk Cen	33.19	328	P	P	18 06 40.6	-0.3
FCAR				IAmb	IAmb	18 06 44.8	
	comp=Z,27nm,1.4s						
N54A	Moraine State	33.23	348	P	P	18 06 43.0	+1.8
	baz=164						
ACSO	Alum Creek Sta	33.26	344	P	P	18 06 43.3	+1.8
	baz=159						
S44A	Carbondale	33.26	334	P	P	18 06 41.2	-0.3
S44A				IAmb	IAmb	18 06 46.4	
	comp=Z,23nm,0.9s						
SIUC	Southern Illin	33.26	334	P	P	18 06 41.6	+0.2
BDFB	Brasilia	33.35	136	P	P	18 06 43.6	+1.0
	comp=Z,6.4nm,0.7s,baz=307,slow=13,SNR=8.0						
BDFB				LR	LR	18 20 58.8	
	comp=Z,640nm,20.5s,baz=315,slow=38						
BDFB	Brasilia	33.35	136	P	P	18 06 42.6	0.0
BDFB				IAmb	IAmb	18 06 47.0	
	comp=Z,39nm,1.4s						
SDBA	SAO DESIDERIO	33.55	128	eP	P	18 06 45.1	+0.8
W39A	Magazine	33.56	326	P	P	18 06 45.9	+1.8
	baz=137						
W39A	Magazine	33.56	326	P	P	18 06 44.6	+0.4
W39A				IAmb	IAmb	18 06 49.2	
	comp=Z,29nm,1.1s						
T42A	Van Buren	33.56	331	P	P	18 06 43.9	-0.2
T42A				IAmb	IAmb	18 07 12.4	
	comp=Z,20nm,1.4s						
WHTX	Lake Whitney,	33.64	318	P	P	18 06 45.8	+0.9
	baz=128						
OLIL	Olney	33.65	336	P	P	18 06 44.6	-0.3
M54A	Oil Creek Stat	33.69	349	P	P	18 06 46.3	+1.1
	baz=165						
BINY	Binghamton	33.83	354	P	P	18 06 48.1	+1.7
	baz=172						
M53A	WI Miller and	33.83	347	P	P	18 06 47.2	+0.8
	baz=163						
L61B	Northampton	33.85	358	P	P	18 06 47.3	+0.7
	baz=178						
HRV	Adam Dziewonsk	33.89	360	P	P	18 06 47.0	+0.1
	baz=180						
U40A	Yellville	33.92	328	P	P	18 06 48.5	+1.2
	baz=140,SNR=12						
U40A	Yellville	33.92	328	P	P	18 06 47.2	-0.1
U40A				IAmb	IAmb	18 06 53.5	
	comp=Z,18nm,0.8s						
FVM	French Village	34.02	333	P	P	18 06 47.5	-0.6
ERPA	Erie	34.34	349	P	P	18 06 51.5	+0.7
	baz=165						
JCT	Junction City	34.38	313	P	P	18 06 52.3	+0.8
	baz=124						
CCM	Cathedral Cave	34.46	332	P	P	18 06 53.0	+1.1
	baz=144						
CCM	Cathedral Cave	34.46	332	P	P	18 06 52.3	+0.4
CCM				IAmb	IAmb	18 06 58.3	
	comp=Z,15nm,0.9s						
NBPB	Pedra_Branca-C	34.67	113	eP	P	18 06 56.7	+2.6
SFIN	Lafayette	34.70	339	P	P	18 06 55.7	+1.7
	baz=152						
IPMB	Ipameri, GO	34.88	139	eP	P	18 06 57.1	+1.2
P43A	Skaggs, Pawnee	35.00	335	P	P	18 06 56.7	+0.1
S39A	Bolivar	35.19	329	P	P	18 06 58.8	+0.6
TUL1	Leonard	35.21	324	P	P	18 07 00.2	+1.7
	baz=135						
NBCL	Cascavel-CE	35.37	110	eP	P	18 07 02.8	+2.8
ABTX	Abilene, Hawle	35.50	317	P	P	18 07 02.5	+1.4
	baz=126						
ABTX	Abilene, Hawle	35.50	317	P	P	18 07 02.0	+1.0
ABTX				IAmb	IAmb	18 07 07.1	
	comp=Z,19nm,0.8s						
JANB	Januaria	35.62	131	eP	P	18 07 03.4	+1.1
LBNH	Lisbon	35.63	359	P	P	18 07 03.8	+1.9
	baz=179						
PCMB	Pacaembu	35.85	147	eP	P	18 07 05.7	+1.6
QUOK	Quay	35.92	324	P	P	18 07 04.4	-0.2
LONY	Lake Ozonia	36.11	356	P	P	18 07 06.6	+0.6
	baz=174						
NBMA	Muriti-CE	36.16	115	eP	P	18 07 08.9	+2.0
WMOK	Wichita Mounta	36.23	320	P	P	18 07 07.9	+0.6
	baz=130						
WMOK	Wichita Mounta	36.23	320	P	P	18 07 07.0	-0.2
NBPN	Ponto Novo - B	36.52	121	eP	P	18 07 11.9	+2.0
BLOK	Blackwell	36.63	324	P	P	18 07 09.9	-0.7
BLOK				IAmb	IAmb	18 07 16.1	
	comp=Z,20nm,0.7s						
TXAR	Lajitas Array	36.68	309	P	P	18 07 11.7	+0.4
	comp=Z,1.6nm,0.7s,baz=129,slow=8.9,SNR=20						
TXAR				PcP	PcP	18 09 35.8	+1.5
	comp=Z,1.8nm,0.7s,baz=139,slow=4.5,SNR=10						
TXAR	Lajitas Array	36.68	309	P	P	18 07 11.0	-0.3
TX31	Lajitas Ar. Si	36.69	309	P	P	18 07 11.1	-0.3
TX31				IAmb	IAmb	18 07 43.3	
	comp=Z,77nm,2.0s						
TX32	Lajitas Array	36.69	309	P	P	18 07 10.7	-0.6
SADO	Sadowa	36.77	351	P	P	18 07 12.2	+0.5
	comp=Z,17nm,0.6s,baz=182,slow=2.8,SNR=11						
SADO				LR	LR	18 24 49.9	
	comp=Z,55nm,18.2s,baz=162,slow=40						
SADO	Sadowa	36.77	351	P	P	18 07 11.4	-0.2
SADO				IAmb	IAmb	18 07 14.9	
	comp=Z,17nm,0.7s						
MC01	Montes Claros	36.95	133	eP	P	18 07 15.4	+1.8
BB19B	Bebedouro	36.99	143	eP	P	18 07 15.8	+1.9
NBPA	Parau_RN	37.02	111	eP	P	18 07 17.1	+2.9
CPUP	Villa Florida	37.21	159	eP	P	18 07 16.7	+1.1
NBLV	Livramento - P	37.82	114	eP	P	18 07 20.8	-0.2
KSU1	Kansas State U	37.95	327	P	P	18 07 22.6	+0.8
	baz=137						
PTGB	Pitanga	38.01	151	eP	P	18 07 23.4	+0.9
JFWS	Jewell Farm	38.07	337	P	P	18 07 24.1	+1.4
	baz=149						
JFWS	Jewell Farm	38.07	337	P	P	18 07 22.9	+0.2
JFWS				IAmb	IAmb	18 07 30.6	
	comp=Z,32nm,1.1s						
FRTB	Fartura	38.18	146	eP	P	18 07 25.0	+1.1
DIAM	Diamantina, MG	38.18	134	eP	P	18 07 25.4	+1.2
AMTX	Amarillo	38.20	318	P	P	18 07 25.1	+1.0
	baz=126						
AMTX	Amarillo	38.20	318	P	P	18 07 23.6	-0.6
AMTX				IAmb	IAmb	18 07 30.1	
	comp=Z,28nm,1.2s						
MSTX	Muleshoe	38.41	316	P	P	18 07 26.9	+0.9
	baz=124						
MSTX	Muleshoe	38.41	316	P	P	18 07 25.2	-0.7
MSTX				IAmb	IAmb	18 07 32.1	
	comp=Z,22nm,1.1s						
SCIA	State Center	38.45	334	P	P	18 07 27.0	+1.0
	baz=144						
SCIA	State Center	38.45	334	P	P	18 07 25.6	-0.4
GDU01	Guandu, BA	38.55	125	eP	P	18 07 28.8	+1.7
NBLA	Lagarto - SE	38.65	119	eP	P	18 07 29.0	+1.0
N35A	Tabor	38.77	330	P	P	18 07 28.9	+0.3
N35A				IAmb	IAmb	18 07 34.2	
	comp=Z,58nm,1.2s						
NBPV	Pedro Velho	38.94	111	eP	P	18 07 31.7	+1.3
MNTX	Cornudas Mount	39.11	311	P	P	18 07 33.1	+1.4
	baz=119,SNR=11						
MNTX	Cornudas Mount	39.11	311	P	P	18 07 31.3	-0.4
BSCB	Bom Sucesso	39.29	139	eP	P	18 07 33.6	+0.3
NBIT	Itapeh - BA	39.33	126	eP	P	18 07 36.2	+2.6
NBAN	Anadia - AL	39.37	117	eP	P	18 07 34.3	+0.3
VAO	Valinhos	39.40	143	eP	P	18 07 36.0	+1.8
CBKS	Cedar Bluff	39.49	324	P	P	18 07 35.5	+0.8
	baz=132						
CMC01	Camacan, BA	39.50	127	eP	P	18 07 37.0	+1.9
ZON	Zonda	39.88	176	P	P	18 07 38.2	+0.1
GUA01	Guaratinga, BA	39.98	129	eP	P	18 07 41.5	+2.5
BGNE	Belgrade	40.44	329	P	P	18 07 43.8	+1.2
	baz=137						
PARB	Paraibuna	40.46	142	eP	P	18 07 44.4	+1.4
ITQB	Itaqui	40.52	160	eP	P	18 07 44.4	+1.1
VA03	San Esteban	41.02	179	P	P	18 07 47.6	+0.1
VA03				IAmb	IAmb	18 07 52.1	
	comp=Z,54nm,1.3s						
RIB01	Linhares ES	41.20	132	eP	P	18 07 50.1	+1.0
121A	Cookes Peak, D	41.30	311	P	P	18 07 49.9	-0.1
T25A	Trinidad	41.31	319	P	P	18 07 52.1	+1.9
	baz=125,SNR=8.2						
T25A	Trinidad	41.31	319	P	P	18 07 51.5	+1.4
ECSD	EROS Data Cent	41.43	332	P	P	18 07 51.4	+0.7
	baz=140						
ANMO	Albuquerque	41.50	315	P	P	18 07 54.1	+2.4
	comp=Z,1.1nm,0.7s,baz=109,slow=22,SNR=3.0						
ANMO				LR	LR	18 28 48.2	
	comp=Z,57nm,18.9s,baz=126,slow=41						
ANMO	Albuquerque	41.50	315	P	P	18 07 52.5	+0.7
	baz=121						
ANMO	Albuquerque	41.50	315	P	P	18 07 52.3	+0.5
K31A	O'Neill	41.63	329	P	P	18 07 51.5	-0.9
F36A	Milaca	41.82	337	P	P	18 07 54.2	+0.3
MT09	Talagante	42.02	179	P	P	18 07 56.5	+0.7
OGNE	Ogallala	42.22	325	P	P	18 07 58.4	+1.0
	baz=131						
SDCO	Great Sand Dun	42.37	319	P	P	18 08 00.4	+1.5
	baz=125,SNR=21						
SDCO	Great Sand Dun	42.37	319	P	P	18 07 58.5	-0.3
TER01	Tubaro-SC	42.63	150	eP	P	18 08 01.9	+1.2
BO01	Tunca	42.64	180	P	P	18 07 59.9	-0.7
BO01				IAmb	IAmb	18 08 04.0	
	comp=Z,59nm,1.4s						
EYMN	Ely	42.85	340	P	P	18 08 03.5	+1.2
	baz=150						
BO02	Sierra Bellavi	43.04	179	P	P	18 08 04.2	+0.2
SUSD	Miller	43.07	331	P	P	18 08 05.3	+1.2
	baz=138						
S22A	4UR Ranch, Cre	43.24	318	P	P	18 08 07.6	+1.7
	baz=123,SNR=12						
GO05	Huala	43.26	181	P	P	18 08 05.7	0.0
TUC	Tucson	43.49	309	P	P	18 08 08.6	+0.8
	baz=114						
ISCO	Idaho Springs	43.63	321	P	P	18 08 10.1	+1.0
	baz=126,SNR=9.4						
W18A	Petrified Fore	43.93	313	P	P	18 08 12.7	+1.2
	baz=118,SNR=7.6						
W18A	Petrified Fore	43.93	313	P	P	18 08 11.4	0.0
W18A				IAmb	IAmb	18 08 18.9	
	comp=Z,27nm,1.2s						
ML02	Panimavida	44.00	180	P	P	18 08 11.1	-0.6
MVCO	Mesa Verde	44.09	316	P	P	18 08 13.2	+0.5
	baz=121						
MVCO	Mesa Verde	44.09	316	P	P	18 08 10.8	-1.9
MVCO				IAmb	IAmb	18 08 18.8	
	comp=Z,28nm,1.6s						
SMCO	Snowmass	44.13	320	P	P	18 08 13.1	-0.2
SMCO				IAmb	IAmb	18 08 20.7	
	comp=Z,18nm,1.0s						
N23A	Red Feather La	44.49	322	P	P	18 08 16.7	+0.8
	baz=127						
AGMN	Agassiz Nation	44.73	337	P	P	18 08 18.5	+1.1
	baz=144						
AGMN	Agassiz Nation	44.73	337	P	P	18 08 17.8	+0.4
AGMN				IAmb	IAmb	18 08 29.2	
	comp=Z,31nm,1.4s						
214A	Organ Pipe Nat	44.93	307	P	P	18 08 20.0	+0.7
	baz=112						
WUAZ	Wupatki	45.30	313	P	P	18 08 23.3	+0.9
	baz=117						
RSSD	Black Hills	45.44	327	P	P	18 08 24.4	+1.1
	baz=132						
RSSD	Black Hills	45.44	327	P	P	18 08 23.7	+0.4
RSSD				IAmb	IAmb	18 08 45.4	
	comp=Z,9.9nm,0.8s						
O20A	White River Ci	45.48	320	P	P	18 08 24.6	+0.9
	baz=124						
RWWY	Rawlins	45.73	322	P	P	18 08 23.4	-2.3
RWWY				IAmb	IAmb	18 08 32.4	
	comp=Z,14nm,0.9s						
K22A	Casper	45.90	324	P	P	18 08 27.8	+0.8
	baz=128						
K22A	Casper	45.90	324	P	P	18 08 27.3	+0.3
K22A				IAmb	IAmb	18 08 30.5	
	comp=Z,13nm,1.1s						
MDND	Maddock	45.92	334	P	P	18 08 27.7	+0.8
	baz=139						

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ULM   Lac du Bonnet    46.34 338   P      P       18 08 30.7 +0.6
      comp=Z,7.5nm,0.5s,baz=157,slow=9.4,SNR=8.4
ULM                                LR     LR      18 28 27.0
      comp=Z,363nm,21.2s,baz=118,slow=37
SCHQ  Schefferville    46.37   4   P      P       18 08 31.1 +0.9
      comp=Z,7.0nm,0.7s,baz=184,slow=6.7,SNR=12
SCHQ                               LR     LR      18 26 41.0
      comp=Z,205nm,21.3s,baz=223,slow=34
U15A  North Rim        46.38 313   IAmb   IAmb    18 08 37.9
      comp=Z,12nm,1.3s
SRU   San Rafael Swe   46.43 317   IAmb   IAmb    18 08 37.7
      comp=Z,13nm,1.1s
W13A  Hualapai Mount   46.98 311   P      P       18 08 35.7  0.0
KNB   Kanab            47.02 314   IAmb   IAmb    18 08 42.2
      comp=Z,9.8nm,0.9s
MTPU  Mount Pierson    47.04 315   IAmb   IAmb    18 08 42.5
      comp=Z,19nm,1.6s
LC01  Cunco            47.14 180   P      P       18 08 35.6 -0.9
MSU   Marysvale        47.26 316   P      P       18 08 38.1 +0.4
LCMT  Little Creek M   47.32 313   P      P       18 08 37.4 -0.8
LCMT                               IAmb   IAmb    18 08 43.6
      comp=Z,30nm,2.0s
IRM   Iron Mountain    47.57 309   P      P       18 08 41.0 +0.9
      baz=112
SWSC  Sam W. Stewart   47.64 307   P      P       18 08 41.4 +0.9
      baz=110
PD31  Pinedale Array   47.77 322   IAmb   IAmb    18 08 46.4
      comp=Z,16nm,1.1s
PDAR  Pinedale Array   47.77 322   P      P       18 08 42.5 +0.8
      comp=Z,8.3nm,0.6s,baz=127,slow=9.4,SNR=56
PDAR                               LR     LR      18 31 34.6
      comp=Z,89nm,20.3s,baz=120,slow=40
IKP   In-Ko-Pah, Jac   47.78 307   P      P       18 08 42.6 +0.8
      baz=110
JLU   Jordanelle       47.80 319   P      P       18 08 41.7 -0.3
NLU   North Lily Min   47.89 318   IAmb   IAmb    18 08 49.2
      comp=Z,16nm,1.5s
BELC  Belle Mtn. Jos   48.17 309   P      P       18 08 45.2 +0.3
      baz=111
GMRC  Granite Mounta   48.20 310   P      P       18 08 45.8 +0.7
      baz=112
LAO   LASA Array       48.28 328   P      P       18 08 46.5 +1.1
      baz=131
TPFO  Pinon Flats      48.38 308   P      P       18 08 46.4 -0.1
      baz=110
PFO   Pinyon Flats O   48.39 308   LR     LR      18 33 16.4
      comp=Z,110nm,18.4s,baz=124,slow=41
PFO   Pinyon Flats O   48.39 308   P      P       18 08 46.4 -0.1
      baz=110
PSUT  Pine Spring      48.43 315   P      P       18 08 47.3 +0.4
DGMT  Dagmar           48.48 331   P      P       18 08 47.9 +1.1
      baz=134,SNR=7.3
DUG   Dugway, Tooele   48.50 317   P      P       18 08 47.7 +0.4
      baz=119
TUQ   Turquoise Moun   48.65 310   P      P       18 08 49.2 +0.7
      baz=112,SNR=5.4
AHID  Auburn Hatcher   48.72 321   IAmb   IAmb    18 08 55.1
      comp=Z,18nm,1.1s
LOHW  Long Hollow      48.88 322   P      P       18 08 50.1 -0.1
LOHW                               IAmb   IAmb    18 08 56.7
      comp=Z,16nm,0.9s
PLCA  Paso Flores      48.97 179   P      P       18 08 51.0 +0.3
      comp=Z,21nm,0.8s,baz=1.2,slow=8.0,SNR=16
PLCA  Paso Flores      48.97 179  eP      P       18 08 51.9 +1.2
PLCA  Paso Flores      48.97 179   P      P       18 08 50.7  0.0
BGU   Big Grassy Mou   49.00 318   IAmb   IAmb    18 08 54.4
      comp=Z,8.2nm,0.7s
TPAW  Teton Pass       49.02 322   P      P       18 08 51.2 -0.2
MOOW  Moose Ponds      49.04 323   IAmb   IAmb    18 08 55.1
      comp=Z,7.4nm,0.8s
FXWY  Fox Creek        49.15 322   IAmb   IAmb    18 08 59.0
      comp=Z,10nm,1.1s
YMP   Mirror Lake Pl   49.26 324   P      P       18 08 53.0 -0.2
YMP                                IAmb   IAmb    18 09 09.7
      comp=Z,12nm,0.9s
H17A  Grant Village    49.30 323   P      P       18 08 54.0 +0.4
      baz=124
BFSC  Mount Baldy Ra   49.54 308   P      P       18 08 55.8 +0.4
      baz=110
R11A  Troy Canyon, C   49.58 314   P      P       18 08 56.3 +0.7
      baz=115
YHH   Holmes Hill      49.69 324   IAmb   IAmb    18 09 05.2
      comp=Z,31nm,1.8s
YMR   Madison River    49.69 323   IAmb   IAmb    18 09 01.4
      comp=Z,22nm,1.2s
SCI2  San Clemente I   49.83 306   P      P       18 08 57.3 -0.1
      baz=108
CIS   Catalina Islan   49.86 307   P      P       18 08 58.0 +0.3
      baz=109
LRMC  Laurel Mtn Rad   50.00 310   P      P       18 08 59.0 +0.2
      baz=111
EDW2  Edwards Air Fo   50.02 309   P      P       18 08 59.2 +0.3
      baz=110
QLMT  Earthquake Lak   50.05 323   P      P       18 08 59.3 +0.2
MPMC  Manual Prospec   50.06 310   P      P       18 08 59.4  0.0
      baz=112
ELK   Elko             50.39 317   P      P       18 09 03.1 +1.2
      comp=Z,1.2nm,0.5s,baz=103,slow=8.0,SNR=5.4
BOZ   Bozeman (W)      50.60 324   P      P       18 09 03.2  0.0
      baz=124,SNR=9.7
LL01  San Ignacio de   50.62 181   P      P       18 09 01.8 -1.3
CWC   Cottonwood Cre   50.65 311   P      P       18 09 03.9 +0.2
      baz=111
SNCC  San Nicolas Is   50.69 306   P      P       18 09 04.5 +0.5
      baz=108
MCMT  McKenzie Canyo   50.90 323   P      P       18 09 05.2 -0.4
EGMT  Eagleton         50.99 328   P      P       18 09 06.9 +0.9
      baz=128
EGMT  Eagleton         50.99 328   IAmb   IAmb    18 09 12.3
      comp=Z,21nm,1.1s
SCZ2  Santa Cruz Isl   51.01 307   P      P       18 09 06.9 +0.5
      baz=108
DLMT  Dillon           51.04 323   IAmb   IAmb    18 09 13.2
      comp=Z,21nm,1.2s
VES   Vestal, Richgr   51.19 310   P      P       18 09 08.7 +1.1
      baz=110
HLID  Hailey           51.20 321   P      P       18 09 08.9 +1.0
      baz=120,SNR=11
HLID  Hailey           51.20 321   P      P       18 09 09.0 +1.1
LL02  Futaleuf         51.42 180   IAmb   IAmb    18 09 12.2
      comp=Z,29nm,1.2s
PKM   Mcpherson Peak   51.44 308   P      P       18 09 09.6 -0.1
      baz=109
NVAR  Mina Array Bea   51.56 313   P      P       18 09 11.8 +1.2
      comp=Z,1.8nm,0.6s,baz=117,slow=7.0,SNR=15
NVAR                               PcP    PcP     18 10 26.4 +1.6
      comp=Z,1.3nm,0.7s,baz=135,slow=4.7,SNR=5.2
NVAR                               LR     LR      18 34 03.1
      comp=Z,172nm,20.5s,baz=124,slow=40
KVN   Kaiserville      51.66 314   P      P       18 09 11.4  0.0
YERR  Yerington        52.45 313   P      P       18 09 17.6 +0.3
MSO   Missoula         52.62 324   P      P       18 09 18.8 +0.6
      baz=123
PNTR  Pine Nut         52.75 313   P      P       18 09 19.0 -0.5
MPK   Martis Peak      53.13 313   IAmb   IAmb    18 09 28.7
      comp=Z,12nm,0.9s
JTMT  Jette            53.31 325   IAmb   IAmb    18 09 29.9
      comp=Z,20nm,0.9s
F10A  Beach Ranch, E   54.13 322   P      P       18 09 29.5 +0.1
F10A                               IAmb   IAmb    18 09 38.6
      comp=Z,12nm,0.8s
O03E  Paynes Creek     54.77 314   P      P       18 09 34.9 +0.7
      baz=111
G08A  Pilot Rock       54.89 320   P      P       18 09 34.7 -0.2
G08A                               IAmb   IAmb    18 09 41.0
      comp=Z,12nm,1.0s
E09A  Wood Farm, Sta   54.95 322   IAmb   IAmb    18 09 41.7
      comp=Z,23nm,1.2s
FRB   Frobisher Bay    55.21   2   P      P       18 09 36.2 -0.4
      comp=Z,24nm,1.1s,baz=187,slow=4.1,SNR=3.5
FRB                                LR     LR      18 32 12.7
      comp=Z,380nm,21.3s,baz=183,slow=35
M04C  Macdoel          55.34 316   P      P       18 09 39.0 +0.7
      baz=112
O02D  Mt. Diablo Mer   55.44 313   P      P       18 09 38.7 -0.2
      baz=110
J05D  Fort Rock, OR    55.51 317   P      P       18 09 40.0 +0.5
      baz=114
PINE  Pine Mountain    55.52 318   IAmb   IAmb    18 09 45.6
      comp=Z,20nm,1.1s
C09A  Chrisman Ranch   55.65 323   P      P       18 09 40.5 +0.3
L04D  Klamath Falls    55.83 316   P      P       18 09 42.0 +0.2
      baz=112
M02C  Callahan         55.91 315   P      P       18 09 42.8 +0.5
      baz=111
YBH   Yreka Blue Hor   55.93 315   P      P       18 09 42.6 +0.1
      comp=Z,1.2nm,0.6s,baz=270,slow=3.4,SNR=3.7
YBH                                LR     LR      18 36 49.6
      comp=Z,136nm,20.4s,baz=92,slow=39
YBH   Yreka Blue Hor   55.93 315   IAmb   IAmb    18 10 31.5
      comp=Z,26nm,1.9s
I05D  Terrebonne, OR   56.01 319   P      P       18 09 43.2 +0.2
      baz=114
J04D  Umpqua Nationa   56.08 317   P      P       18 09 43.2 -0.5
      baz=113
G05D  Wamic, OR        56.37 320   P      P       18 09 44.7 -0.7
      baz=115
I04A  Tendick Farm,    56.50 318   P      P       18 09 46.7 +0.2
      baz=113
B08A  Colville Reser   56.54 324   IAmb   IAmb    18 09 52.3
      comp=Z,21nm,1.1s
L02E  Cave Junction    56.70 315   P      P       18 09 48.1 +0.2
      baz=111
LTY   Liberty          56.83 322   IAmb   IAmb    18 09 55.1
      comp=Z,21nm,1.3s
K02D  Willamette Mer   56.94 316   P      P       18 09 49.6 -0.1
      baz=111
H04D  Lebanon          57.00 318   P      P       18 09 50.2 +0.3
      baz=113
I03D  Drain, OR        57.09 317   P      P       18 09 51.2 +0.6
      baz=112
J01E  Myrtle Point     57.29 316   P      P       18 09 51.6 -0.4
      baz=111
LON   Longmire         57.31 321   P      P       18 09 52.5 +0.3
I02E  Swisshome, OR    57.58 317   P      P       18 09 53.7 -0.3
      baz=112
D05A  Enumclaw         57.61 321   IAmb   IAmb    18 09 57.2
      comp=Z,21nm,0.9s
E04D  Cinebar          57.71 321   P      P       18 09 55.9 +1.0
      baz=114
D04E  Lakebay          58.09 321   P      P       18 09 57.9 +0.4
      baz=114
B05A  Bryant           58.14 323   P      P       18 09 58.8 +0.9
      baz=116
D03D  Eldon            58.44 321   P      P       18 10 01.0 +1.0
      baz=114
LLLB  Lillooet         59.06 325   IAmb   IAmb    18 10 10.1
      comp=Z,13nm,1.2s
DY2G  Dye2             60.42  11  iP      P       18 10 13.1 -0.6
DY2G                               IAmb   IAmb    18 10 16.6
      comp=Z,6.4nm,0.5s
YKA   Yellowknife Ar   62.31 339   P      P       18 10 26.1 -0.1
      comp=Z,5.2nm,0.7s,baz=122,slow=8.2,SNR=17
YKA                                LR     LR      18 37 57.3
      comp=Z,188nm,21.5s,baz=0.0,slow=36
MORF  Marmelete        63.30  53  eP      P       18 10 35.5 +2.1
PNCL  Nicolau / Gran   63.54  52  eP      P       18 10 36.0 +1.2
MESJ  Messejana        63.73  52  eP      P       18 10 37.2 +1.1
PCVE  Castro Verde     63.84  52  eP      P       18 10 38.5 +1.7
      comp=Z,33nm,1.6s
PCAS  Casmilo, Conde   63.93  50  eP      P       18 10 38.3 +0.9
PMTG  Montargil        63.95  51  eP      P       18 10 38.2 +0.7
ICESG Greenland Ices   63.98  12  iP      P       18 10 37.5 -0.1
ICESG                              IAmb   IAmb    18 10 39.9
      comp=Z,19nm,1.0s
EVO   Evora            64.01  51  eP      P       18 10 39.0 +1.0
PBEJ  Beja             64.04  52  eP      P       18 10 39.5 +1.3
PVAQ  Vaqueiros        64.05  53  eP      P       18 10 40.9 +2.7
      comp=Z,25nm,1.9s
PESTR Estremoz         64.40  51  eP      P       18 10 41.5 +1.0
PGAV  Gavieira, Arco   64.48  48  eP      P       18 10 43.0 +1.9
      comp=Z,73nm,1.7s
PVIS  Viseu            64.51  49  eP      P       18 10 41.9 +0.6
PMRV  Marv??o          64.65  50  eP      P       18 10 43.8 +1.6
PCBR  Castelo Branco   64.66  50  eP      P       18 10 43.9 +1.7
      comp=Z,29nm,1.6s
PBAR  Barrancos        64.71  52  eP      P       18 10 43.5 +1.0
POLO  Lamas de Olo     64.71  48  eP      P       18 10 43.3 +0.7
MVO   Moncorvo         65.24  49  eP      P       18 10 46.4 +0.4
TIC   Toumodi          65.78  87  eP      P       18 10 50.3 +0.4
LIC   Lamto            65.82  87  eP      P       18 10 48.9 -1.3
      comp=Z,48nm,1.7s
DBIC  Dimbokro         65.94  86   P      P       18 10 50.4 -0.6
      comp=Z,2.7nm,0.6s,baz=286,slow=6.0,SNR=5.7
DBIC  Dimbokro         65.94  86   IAmb   IAmb    18 10 51.6
      comp=Z,43nm,1.9s
KIC   Kosan Boka       66.09  87  eP      P       18 10 51.7 -0.2
      comp=Z,14nm,0.7s
KOWA  Kowa             66.14  78   P      P       18 10 51.4 -0.8
KOWA                               IAmb   IAmb    18 10 55.6
      comp=Z,8.5nm,0.6s
DLBC  Dease Lake       66.69 331   P      P       18 10 56.0 +1.0
      comp=Z,11nm,0.7s,baz=140,slow=5.7,SNR=16
SUMG  Summit           67.06  10  iP      P       18 10 57.0 -0.6
SUMG                               IAmb   IAmb    18 10 59.7
      comp=Z,14nm,0.7s
SUMG  Summit           67.06  10   P      P       18 10 56.8 -0.8
TGTN  Hyland Airport   67.18 334   P      P       18 10 59.0 +0.9
      baz=116
ESDC  Sonseca Array    67.30  51   P      P       18 10 59.9 +0.6
      comp=Z,1.5nm,0.6s,baz=264,slow=6.8,SNR=12
ESDC  Sonseca Array    67.30  51   P      P       18 10 58.6 -0.7
ESDC                               IAmb   IAmb    18 12 23.0
      comp=Z,19nm,1.9s
RES   Resolute Bay     67.52 353   P      P       18 10 59.5 -0.4
      comp=Z,2.3nm,0.9s,baz=138,slow=8.7,SNR=4.4
RES   Resolute Bay     67.52 353   IAmb   IAmb    18 11 35.8
      comp=Z,14nm,1.4s
P33M  Teslin, Yukon    68.69 332   P      P       18 11 08.3 +0.6
      baz=111
SIT   Sitka            68.87 328   P      P       18 11 09.2 +0.5
      baz=108
MMPY  Sheldon Lake,    68.92 335   P      P       18 11 09.7 +0.7
      baz=114
SKAG  Skagway          69.63 331   P      P       18 11 14.4 +1.1
      baz=108
FARO  Faro, Yukon      69.67 334   P      P       18 11 14.2 +0.6
      baz=111
NEEM  North Greenlan   69.77   5  iP      P       18 11 14.6 +0.3
NEEM                               IAmb   IAmb    18 11 16.6
      comp=Z,23nm,0.7s
WHY   Whitehorse       69.81 332   P      P       18 11 14.6  0.0
      baz=109
M31M  Drury Creek, Y   70.11 334   P      P       18 11 16.8 +0.4
      baz=110
N31M  Braeburn, Yuko   70.49 333   P      P       18 11 19.0 +0.3
      baz=109
HYT   Haines Junctio   71.08 332   P      P       18 11 22.2 -0.2
      baz=107
A36M  Sachs Harbour    71.28 345   P      P       18 11 22.7 -0.5
      baz=122,SNR=8.2
M30M  Minto, Yukon     71.29 334   P      P       18 11 24.0 +0.4
      baz=108,SNR=11
YUK6  Outpost Mounta   71.52 332   P      P       18 11 24.6 -0.6
      baz=106
PNL   Peninsula        71.67 330   P      P       18 11 25.4 -0.4
      baz=105
TORD  Torodi Ar. Bea   71.76  79   P      P       18 11 26.4 -0.8
      comp=Z,3.2nm,0.7s,baz=281,slow=5.1,SNR=16
TORD                               LR     LR      18 43 00.8
      comp=Z,52nm,19.1s,baz=75,slow=36
YUK4  Talbot Arm       71.76 332   P      P       18 11 26.3 -0.3
      baz=106
DBG   Daneborg         71.96  13  iP      P       18 11 27.7 +0.4
DBG                                IAmb   IAmb    18 11 30.1
      comp=Z,1.5nm,0.8s
INK   Inuvik           72.06 340   P      P       18 11 28.1 +0.1
      comp=Z,5.5nm,0.6s,baz=72,slow=5.7,SNR=28
INK                                LR     LR      18 43 53.1
      comp=Z,185nm,21.0s,baz=115,slow=36
INK   Inuvik           72.06 340   P      P       18 11 28.6 +0.7
      baz=113,SNR=7.5
INK   Inuvik           72.06 340   P      P       18 11 27.6 -0.4
J29M  Klondike Camp    72.48 335   P      P       18 11 31.3 +0.6
      baz=108
EPYK  Eagle Plains     72.50 337   P      P       18 11 31.4 +0.6
      baz=110
YUK3  Moose Creek      72.72 332   P      P       18 11 32.8 +0.5
      baz=104
I29M  Ogilvie Camp,    72.79 336   P      P       18 11 33.2 +0.7
      baz=108
DAWY  Dawson           72.86 335   P      P       18 11 33.5 +0.6
      baz=106
MESA  MESA             73.04 330   P      P       18 11 34.4 +0.1
      baz=103
BVCY  Beaver Creek     73.06 333   P      P       18 11 33.9 -0.2
      baz=104
M27K  Edge Creek, AK   73.51 333   P      P       18 11 36.5 -0.4
      baz=103
M27K  Edge Creek, AK   73.51 333   IAmb   IAmb    18 11 43.7
      comp=Z,22nm,1.1s
L27K  Beaver Creek,    73.65 333   P      P       18 11 37.8 +0.2
      baz=104
L27K  Beaver Creek,    73.65 333   P      P       18 11 36.8 -0.8
L27K                               IAmb   IAmb    18 11 41.3
      comp=Z,16nm,1.2s
BGLC  Bering Glacier   73.68 330   P      P       18 11 38.4 +0.6
      baz=102
DAG   Danmarks Havn    73.72  11  iP      P       18 11 36.7 -1.0
DAG                                IAmb   IAmb    18 11 39.8
      comp=Z,3.7nm,0.8s
KAIM  Kayak Island     74.20 330   P      P       18 11 41.1 +0.2
      baz=100
L26K  Log Cabin Wild   74.32 333   P      P       18 11 42.0 +0.6
      baz=102
BMRM  Bremner River    74.49 331   P      P       18 11 41.8 -0.8
      baz=100
N25K  Chitina, Valde   74.60 332   P      P       18 11 42.2 -1.0
      baz=101
J26L  Joseph Creek     74.73 335   P      P       18 11 42.8 -1.1
      baz=102
SCRK  Sand Creek       74.80 334   P      P       18 11 43.6 -0.8
      baz=102
PAX   Paxson           75.25 333   P      P       18 11 46.9 -0.1
      baz=100
M24K  Tolsona, Glenn   75.43 332   P      P       18 11 47.9 -0.1
      baz=99
GLI   Glacier Island   75.67 331   P      P       18 11 49.7 +0.4
      baz=98
PRP   Porcupine Dome   75.75 336   P      P       18 11 49.8 -0.1
      baz=101
PRP   Porcupine Dome   75.75 336   IAmb   IAmb    18 11 52.9
      comp=Z,7.3nm,0.8s
BMAR  Burnt Mountain   75.77 338   P      P       18 11 49.5 -0.3
SCM   Sheep Creek Mo   75.92 332   P      P       18 11 51.0 +0.2
      baz=98
DHY   Denali Highway   76.13 333   P      P       18 11 51.4 -0.7
      baz=99
SENIN Lac Senin/Sane   76.13  44   P      P       18 11 52.4 -0.2
SENIN                              IAmb   IAmb    18 11 55.8
      comp=Z,9.1nm,0.7s
HDA   Harding Lake     76.15 334   P      P       18 11 51.5 -0.5
      baz=99
ILAR  Eielson Array    76.19 335   P      P       18 11 52.3 +0.1
      comp=Z,3.1nm,0.7s,baz=111,slow=4.0,SNR=7.3
ILAR                               LR     LR      18 46 43.9
      comp=Z,262nm,21.0s,baz=118,slow=37
WAT6  Susitna Watana   76.22 332   P      P       18 11 51.5 -1.2
      baz=98
PWL   Port Wells       76.27 331   P      P       18 11 52.7 -0.1
      baz=97
SML   Sawmill          76.39 332   P      P       18 11 53.3 -0.1
      baz=97
KNK   Knik Glacier     76.40 331   P      P       18 11 53.3 -0.2
      baz=97
POKR  Poker Plat Res   76.47 335   P      P       18 11 53.7 -0.1
      baz=99
WAT1  Susitna Watana   76.63 333   P      P       18 11 55.5 +0.7
      baz=98
SEW   Seward           76.73 330   P      P       18 11 56.1 +0.8
      baz=96
PMR   Palmer           76.74 331   P      P       18 11 55.9 +0.6
      baz=97
NOR   Nord             76.77   7  iP      P       18 11 54.5 -0.7
NOR                                IAmb   IAmb    18 11 57.4
      comp=Z,6.1nm,0.9s
MCK   McKinley         76.92 334   P      P       18 11 57.8 +1.4
      baz=97
RC01  Rabbit Creek A   76.97 331   P      P       18 11 57.2 +0.5
      baz=96
NEA2  Nenana           77.09 334   P      P       18 11 57.9 +0.6
      baz=97
NEA2  Nenana           77.09 334   IAmb   IAmb    18 12 03.2
      comp=Z,21nm,1.3s
I23K  Minto, Yukon-K   77.28 335   P      P       18 11 58.7 +0.3
      baz=97
I23K  Minto, Yukon-K   77.28 335   P      P       18 11 57.0 -1.3
I23K                               IAmb   IAmb    18 12 01.8
      comp=Z,7.2nm,0.8s
BRSE  Bradley Lake S   77.34 329   P      P       18 11 59.5 +0.7
      baz=95
TRF   Thorofare Moun   77.48 333   P      P       18 12 00.2 +0.4
      baz=96
HOM   Homer            77.79 329   P      P       18 12 00.3 -1.0
      baz=94
TOLK  Toolik Lake Re   77.83 338   P      P       18 12 00.4 -1.1
      baz=98
MLY   Manley           77.85 335   P      P       18 12 01.0 -0.6
      baz=96
MLY   Manley           77.85 335   IAmb   IAmb    18 12 08.2
      comp=Z,28nm,1.5s
BPAW  Bear Paw Mtn.    77.86 334   P      P       18 12 01.0 -0.7
      baz=96
BPAW  Bear Paw Mtn.    77.86 334   IAmb   IAmb    18 12 05.0
      comp=Z,15nm,1.0s
COLD  Coldfoot         77.89 337   P      P       18 12 01.4 -0.3
      baz=97
DAVA  Damuels          77.93  43  eP      P       18 12 03.5 +0.9
      comp=Z,9.0nm,1.0s
SPCR  Spurr Chakacha   78.18 331   P      P       18 12 03.2 -0.3
      baz=94
PPLA  Purkeypile       78.29 333   P      P       18 12 03.9 -0.3
      baz=94
O20K  Slope Mountain   78.31 330   P      P       18 12 03.6 -0.7
      baz=93
I21K  Tanana           78.39 335   P      P       18 12 04.1 -0.4
      baz=95
I21K  Tanana           78.39 335   IAmb   IAmb    18 12 08.2
      comp=Z,14nm,1.0s
CHUM  Lake Minchumin   78.42 334   P      P       18 12 04.9 +0.2
      baz=94
FETA  Feichten         78.50  44  eP      P       18 12 06.6 +0.8
      comp=Z,12nm,0.8s
OHAK  Old Harbor       78.52 327   P      P       18 12 05.6 +0.2
      baz=92
RETA  Reutte           78.53  43  eP      P       18 12 06.3 +0.5
      comp=Z,3.5nm,0.6s
P19K  Oil Pt           78.59 329   P      P       18 12 06.0 +0.2
      baz=93
MOTA  Moosalm          78.76  43  eP      P       18 12 07.7 +0.5
      comp=Z,6.3nm,0.8s
H21K  Melozitna Rive   78.77 335   P      P       18 12 07.0 +0.3
      baz=94
Q19K  Cape Douglas,    78.77 328   P      P       18 12 06.9  0.0
      baz=92
SQTA  Sankt Quirin     78.83  44  eP      P       18 12 08.0 +0.5
      comp=Z,6.5nm,0.7s
L20K  Farewell, AK     79.05 332   P      P       18 12 08.6 +0.4
      baz=93
NB2   NORSAR Subarra   79.06  29   P      P       18 12 09.6 +1.2
      comp=Z,2.8nm,0.8s,baz=268,slow=5.6
NOA   NORSAR Array B   79.06  29   P      P       18 12 08.7 +0.3
      comp=Z,1.5nm,0.7s,baz=270,slow=5.4,SNR=7.5
NOA                                LR     LR      18 43 14.1
      comp=Z,29nm,21.7s,baz=350,slow=33
WATA  Walderalm        79.08  43  eP      P       18 12 09.8 +0.9
      comp=Z,14nm,1.4s
WTTA  Wattenberg       79.12  44  iP      P       18 12 09.7 +0.5
      comp=Z,6.8nm,0.6s
K20K  Telida           79.17 333   P      P       18 12 09.0 +0.1
      baz=93
IMAR  Indian Mountai   79.18 336   P      P       18 12 08.2 -0.7
J20K  Nowinta River    79.25 334   P      P       18 12 09.5 +0.2
      baz=93
N19K  Bonanza Creek    79.27 330   P      P       18 12 09.3 -0.3
      baz=92
L19K  White Mountain   79.49 332   P      P       18 12 10.8 +0.1
      baz=92
P18K  Big Mountain,    79.60 329   P      P       18 12 11.5 +0.1
      baz=91
NKC   Novy Kostel      79.62  40  eP      P       18 12 13.8 +2.2
CLL   Collm            79.96  39  eP      P       18 12 14.0 +0.6
TTA   Tatalina         80.04 332   P      P       18 12 13.6 -0.1
      baz=91
KBA   Koelnbreinsper   80.29  44  eP      P       18 12 15.8 +0.3
      comp=Z,6.7nm,1.1s
KHC   Kasperske Hory   80.38  42  eP      P       18 12 15.9 +0.1
GERES GERESS Array B   80.47  42   P      P       18 12 15.9 -0.5
      comp=Z,2.2nm,0.7s,baz=260,slow=3.9,SNR=14
A21K  Barrow           80.48 341   P      P       18 12 15.8 +0.1
      baz=92
MYKA  Terra Mystica    80.51  44  eP      P       18 12 16.9 +0.3
      comp=Z,6.6nm,0.9s
PRU   Pruhonice        80.98  41  eP      P       18 12 19.7 +0.8
CHGN  Chignik          81.34 326   P      P       18 12 21.3 +0.7
      baz=88
PPT   Papeete          81.39 251   LR     LR      18 39 25.8
      comp=Z,35nm,21.8s,baz=32,slow=29
CONA  Conrad Observa   81.95  43  eP      P       18 12 24.8 +0.6
      comp=Z,5.5nm,1.3s
CHNA  Chernabura Isl   82.08 324   P      P       18 12 24.9 +0.3
      baz=86
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DPC	**Dobruska-Polom**	**82.10**	**40**	*e*P	**P**	**18 12 25.5**	**+0.6**
KRLC	**Kraliky**	**82.41**	**41**	*e*P	**P**	**18 12 27.6**	**+1.0**
SDPT	**Sand Point**	**82.56**	**325**	P	**P**	**18 12 27.4**	**+0.3**
	baz=86						
RDOG	**Red Dog Mine**	**82.75**	**338**	P	**P**	**18 12 27.8**	**-0.1**
	baz=85						
ANM	**Nome**	**84.11**	**334**	P	**P**	**18 12 34.9**	**-0.1**
	baz=83						
FALS	**False Pass**	**84.28**	**324**	P	**P**	**18 12 36.2**	**+0.2**
	baz=83						
ARCES	**ARCESS Array B**	**84.54**	**21**	P	**P**	**18 12 37.5**	**+0.5**
	comp=Z,4.5nm,0.9s,baz=310,slow=2.7,SNR=6.6						
ARCES				LR	LR	18 48 50.6	
	comp=Z,14nm,19.1s,baz=20,slow=35						
TNA	**Tin City**	**85.03**	**335**	P	**P**	**18 12 39.5**	**0.0**
	baz=80						
FINES	**FINESS Array B**	**86.19**	**29**	P	**P**	**18 12 44.6**	**-0.8**
	comp=Z,3.2nm,0.7s,baz=298,slow=4.1,SNR=6.1						
FINES				LR	LR	18 44 21.2	
	comp=Z,75nm,21.9s,baz=247,slow=31						
UNV	**Unalaska Valle**	**86.21**	**324**	P	**P**	**18 12 45.5**	**-0.2**
	baz=81						
GAMB	**Gambell**	**86.97**	**334**	P	**P**	**18 12 49.2**	**0.0**
	baz=77						
SPIA	**Saint Paul Isl**	**87.70**	**327**	P	**P**	**18 12 52.9**	**+0.1**
	baz=78						
NACGM	**Naroch**	**87.82**	**35**	*i*P	**P**	**18 12 55.6**	**+2.1**
VNA3	**Neumayer Olymp**	**89.27**	**163**	P	**P**	**18 13 01.1**	**+1.2**
VNA1	**Neumayer--Stat**	**89.38**	**163**	P	**P**	**18 13 02.1**	**+1.6**
VNA2	**Neumayer--Watz**	**89.77**	**163**	P	**P**	**18 13 03.4**	**+1.2**
AKASG	**Malin Array Be**	**90.18**	**39**	P	**P**	**18 13 04.3**	**-0.4**
	comp=Z,0.3nm,0.2s,baz=275,slow=4.0,SNR=5.5						
AKASG				LR	LR	18 52 12.9	
	comp=Z,42nm,19.8s,baz=335,slow=35						
SNAA	**Sanae**	**91.42**	**163**	P	**P**	**18 13 11.0**	**+1.0**
SNAA	**Sanae**	**91.42**	**163**	P	**P**	**18 13 09.0**	**-1.0**
SNAA				IAmb	IAmb	18 13 18.7	
	comp=Z,10nm,1.3s						
BILL	**Bilibino**	**93.62**	**341**	P	**P**	**18 13 20.8**	**+0.5**
BRTR	**Keskin Array B**	**96.03**	**48**	LR	LR	18 53 01.8	
	comp=Z,26nm,20.1s,baz=278,slow=33						
BOSA	**Boshof**	**99.84**	**118**	LR	LR	18 57 41.6	
	comp=Z,68nm,18.1s,baz=273,slow=35						
MKAR	**Makanchi Array**	**120.19**	**21**	PKP	**PKPdf**	**18 18 55.0**	**-0.5**
	comp=Z,0.5nm,0.8s,baz=321,slow=2.6,SNR=2.9						
KSH	**Kashi**	**123.49**	**30**	PKP	**PKiKP**	**18 19 06.8**	**+4.3**
MDJ	**Mudanjiang**	**123.84**	**342**	PKP	**PKPdf**	**18 18 58.3**	**-4.3**
SONM	**Songino Array**	**123.90**	**2**	PKP	**PKPdf**	**18 19 02.9**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=239,slow=2.1,SNR=3.1						
WMQ	**Urumqi**	**124.60**	**18**	*e*PKP	**PKPdf**	**18 19 03.3**	**-0.9**
HHC	**Hu-ho-hao-te**	**130.84**	**357**	*e*PKP	**PKPdf**	**18 19 13.8**	**-2.5**
GTA	**Gaotai**	**131.66**	**9**	PKP	**PKPdf**	**18 19 18.1**	**+0.2**
NJ2	**Nanjing**	**138.52**	**347**	*e*P	**PKPdf**	**18 19 29.5**	**-1.1**
NJ2	**Nanjing**	**138.52**	**347**	*e*PKP	**PKPdf**	**18 19 29.6**	**-1.1**
NJ2	**Nanjing**	**138.52**	**347**	pmax	pmax		
	comp=Z,16nm,0.6s						
CD2	**Chengdu**	**140.56**	**7**	PKP	**PKPdf**	**18 19 32.1**	**-2.4**
GYA	**Guiyang**	**145.22**	**3**	⇑*i*PKPbc	**PKPbc**	**18 19 42.4**	**-0.1**
ASAR	**Alice Springs**	**151.44**	**235**	PKPbc	**PKPbc**	**18 19 58.5**	**-0.7**
	comp=Z,4.5nm,0.7s,baz=118,slow=2.5,SNR=40						
ASAR	**Alice Springs**	**151.44**	**235**	PKPdf	**PKPdf**	**18 19 50.3**	**-2.8**
ASAR					**sPKPdf**	**18 19 55.4**	**-0.3**
CMAR	**Chiang Mai Arr**	**151.59**	**20**	PKPbc	**PKPbc**	**18 19 58.0**	**-1.6**
	comp=Z,2.4nm,0.9s,baz=319,slow=3.6,SNR=10						
WRA	**Warramunga Arr**	**152.60**	**243**	PKP	**PKPdf**	**18 19 56.4**	**+1.5**
	comp=Z,4.1nm,0.6s,baz=108,slow=2.5,SNR=12						
WRA				PKPbc	**PKPbc**	**18 20 01.1**	**-0.8**
	comp=Z,4.0nm,0.5s,baz=109,slow=2.7,SNR=22						
WRA	**Warramunga Arr**	**152.60**	**243**		**PKPdf**	**18 19 53.5**	**-1.3**
WRA				PKPbc	**sPKPdf**	**18 19 57.7**	**+0.1**

BEO ***20*** *18:07:36.9±4.5, 38°.10N×20°.26E, h100^{km}±3^{km}, ML3.4/7*
ATH ***20*** *18:07:37.5, 38°.46N×20°.48E, h14^{km}, ML3.3/15, Error ellipse: s-maj=1.4km s-min=0.6km az=278.0*
THE ***20*** *18:07:37.1, 38°.46N×20°.45E, h14^{km}, ML3.6/12, Error ellipse: s-maj=0.9km s-min=0.2km az=285.0*
ISC 20 18:07:36.4±0.9**, 38°.47N**±0°.02×**20°.43E**±0°.03**, h18**^{km}±3^{km}**, n79, σ1^{s}14**/112**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FSK	**Fiskardo**	**0.10**	**97**	P	**Pg**	**18 07 40.1**	**0.0**
FSK				S	**Sg**	**18 07 42.0**	**-0.6**
	57μm,0.2s						
FSK	**Fiskardo**	**0.10**	**97**	P	**Pg**	**18 07 40.2**	**0.0**
FSK				S	**Sg**	**18 07 41.8**	**-0.8**
FSK				AML	AML	18 07 42.1	
FSK				AML	AML	18 07 42.5	
KEF4	**Livadi, Kephal**	**0.21**	**181**	P	**Pg**	**18 07 41.8**	**+0.3**
KEF4				S	**Sg**	**18 07 45.6**	**+0.6**
	133μm,0.1s						
KEF4	**Livadi, Kephal**	**0.21**	**181**	P	**Pg**	**18 07 41.8**	**+0.3**
KEF4				S	**Sg**	**18 07 45.6**	**+0.6**
EVGI	**Lefkada island**	**0.23**	**50**	P	**Pg**	**18 07 42.2**	**+0.4**
EVGI				S	**Sb**	**18 07 46.1**	**+0.4**
	24μm,0.4s						
EVGI	**Lefkada island**	**0.23**	**50**	P	**Pg**	**18 07 42.2**	**+0.4**
EVGI				S	**Sb**	**18 07 46.0**	**+0.3**
DMLN	**Damoulianata-K**	**0.24**	**191**	P	**Pg**	**18 07 42.2**	**+0.3**
DMLN				S	**Sb**	**18 07 46.3**	**+0.5**
	12μm,0.4s						
DMLN	**Damoulianata-K**	**0.24**	**191**	P	**Pg**	**18 07 42.3**	**+0.3**
DMLN				S	**Sb**	**18 07 46.6**	**+0.7**
DRAG	**Dragano-Lefkad**	**0.24**	**28**	P	**Pg**	**18 07 42.2**	**+0.2**
DRAG				S	**Sb**	**18 07 46.6**	**+0.6**
	77μm,0.3s						
DRAG	**Dragano-Lefkad**	**0.24**	**28**	P	**Pg**	**18 07 42.2**	**+0.2**
DRAG				S	**Sb**	**18 07 46.6**	**+0.6**
LXRA	**Lixouri, Kepha**	**0.27**	**179**	P	**Pb**	**18 07 42.9**	**+0.2**
LXRA				S	**Sb**	**18 07 47.3**	**+0.3**
KEF3	**Kipouria, Keph**	**0.28**	**194**	P	**Pg**	**18 07 42.5**	**0.0**
KEF3				S	**Sg**	**18 07 46.8**	**+0.1**
	17μm,0.2s						
KEF3	**Kipouria, Keph**	**0.28**	**194**	P	**Pg**	**18 07 42.5**	**0.0**
KEF3				S	**Sg**	**18 07 46.7**	**0.0**
ARGA	**Argostoli. Kep**	**0.30**	**173**	P	**Pb**	**18 07 44.1**	**+0.9**
ARGA				S	**Sb**	**18 07 48.7**	**+1.0**
NYDR	**Nydri-Lefkada**	**0.32**	**41**	P	**Pg**	**18 07 43.5**	**+0.2**
NYDR				S	**Sg**	**18 07 48.5**	**+0.6**
	18μm,0.6s						
NYDR	**Nydri-Lefkada**	**0.32**	**41**	P	**Pg**	**18 07 43.5**	**+0.2**
NYDR				S	**Sg**	**18 07 48.3**	**+0.4**
VLS	**Valsamata**	**0.32**	**157**	P	**Pg**	**18 07 43.3**	**0.0**
VLS				S	**Sg**	**18 07 48.2**	**+0.2**
	14μm,0.2s						
VLS	**Valsamata**	**0.32**	**157**	P	**Pg**	**18 07 43.4**	**0.0**
VLS				S	**Sg**	**18 07 47.9**	**0.0**
VLS				AML	AML	18 07 48.8	
	comp=N,31155μm,0.3s						
VLS				AML	AML	18 07 49.6	
	comp=E,25221μm,0.2s						
LKD2	**Lefkada island**	**0.36**	**29**	P	**Pg**	**18 07 44.3**	**+0.2**
LKD2				S	**Sb**	**18 07 50.0**	**+0.2**
	comp=E,5μm,0.3s						
LKD2	**Lefkada island**	**0.36**	**29**	P	**Pg**	**18 07 44.3**	**+0.2**
LKD2				S	**Sb**	**18 07 50.1**	**+0.3**
LKD2				AML	AML	18 07 51.0	
	comp=N,8182μm,0.3s						
LKD2				AML	AML	18 07 55.9	
	comp=E,12359μm,0.5s						
PSDA	**Pessada-Kefalo**	**0.38**	**161**	P	**Pg**	**18 07 44.4**	**+0.1**
PSDA				S	**Sg**	**18 07 50.0**	**+0.4**
	comp=E,2μm,0.3s						
PSDA	**Pessada-Kefalo**	**0.38**	**161**	P	**Pg**	**18 07 44.4**	**+0.1**
PSDA				S	**Sg**	**18 07 49.9**	**+0.4**
TSLK	**Tsoukalades, L**	**0.39**	**27**	P	**Pg**	**18 07 45.0**	**+0.4**
TSLK				S	**Sb**	**18 07 51.3**	**+0.7**
	comp=E,8μm,0.5s						
TSLK	**Tsoukalades, L**	**0.39**	**27**	P	**Pg**	**18 07 45.0**	**+0.4**
TSLK				S	**Sb**	**18 07 51.3**	**+0.7**
TSLK				AML	AML	18 07 53.4	
	comp=E,19818μm,0.6s						
TSLK				AML	AML	18 07 54.3	
	comp=N,13885μm,0.4s						
VTN	**Vitineika**	**0.81**	**133**	P	**Pg**	**18 07 52.7**	**+0.4**
LTHK	**Lithakia**	**0.83**	**157**	P	**Pb**	**18 07 51.8**	**-0.4**
LTHK				S	**Sn**	**18 08 04.8**	**-0.1**
	comp=N,2μm,0.3s						
LTHK	**Lithakia**	**0.83**	**157**	P	**Pb**	**18 07 52.0**	**-0.2**
LTHK				S	**Sg**	**18 08 04.0**	**+0.6**
LTHK				AML	AML	18 08 10.3	
	comp=N,5348μm,0.3s						
LTHK				AML	AML	18 08 13.8	
	comp=E,3954μm,0.3s						
PVO	**Paravola**	**0.87**	**80**	P	**Pb**	**18 07 53.4**	**+0.4**
PVO	**Paravola**	**0.87**	**80**	P	**Pg**	**18 07 53.7**	**+0.3**
PVO				AML	AML	18 08 14.1	
	comp=E,4587μm,0.3s						
PVO				AML	AML	18 08 14.1	
	comp=N,3210μm,0.4s						
RLS	**Riolos of Patr**	**0.92**	**117**	P	**Pb**	**18 07 53.9**	**+0.2**
RLS	**Riolos of Patr**	**0.92**	**117**	P	**Pb**	**18 07 53.9**	**+0.2**
RLS				AML	AML	18 08 14.5	
	comp=E,1961μm,0.6s						
RLS				AML	AML	18 08 19.3	
	comp=N,1772μm,0.5s						
IGT	**Igoumenitsa**	**1.06**	**356**	P	**Pb**	**18 07 56.5**	**+0.2**
IGT	**Igoumenitsa**	**1.06**	**356**	P	**Pn**	**18 07 56.9**	**+0.5**
IGT				AML	AML	18 08 18.2	
	comp=E,1108μm,0.7s						
IGT				AML	AML	18 08 21.4	
	comp=N,1165μm,0.3s						
DRO	**Drossia**	**1.13**	**117**	P	**Pn**	**18 07 57.7**	**+0.3**
DRO	**Drossia**	**1.13**	**117**	P	**Pn**	**18 07 57.7**	**+0.3**
DRO				AML	AML	18 08 22.3	
	comp=N,2962μm,0.4s						
DRO				AML	AML	18 08 24.1	
	comp=E,3908μm,0.4s						
EFP	**Efpalio**	**1.16**	**92**	P	**Pn**	**18 07 57.9**	**+0.2**
EFP	**Efpalio**	**1.16**	**92**	P	**Pn**	**18 07 57.7**	**0.0**
EFP				AML	AML	18 08 20.8	
	comp=E,7060μm,0.6s						
EFP				AML	AML	18 08 21.1	
	comp=N,2871μm,0.6s						
EVR	**Evrytania**	**1.17**	**67**	P	**Pb**	**18 07 58.5**	**+0.4**
ANX	**Ano Chora**	**1.18**	**84**	P	**Pb**	**18 07 58.6**	**+0.3**
ANX	**Ano Chora**	**1.18**	**84**	P	**Pn**	**18 07 58.4**	**+0.3**
ANX				AML	AML	18 08 22.9	
	comp=N,3260μm,0.4s						
ANX				AML	AML	18 08 23.8	
	comp=E,2650μm,0.4s						
LAKA	**Lakka**	**1.24**	**100**	P	**Pn**	**18 07 59.3**	**+0.4**
LAKA	**Lakka**	**1.24**	**100**	P	**Pn**	**18 07 59.2**	**+0.4**
LAKA				AML	AML	18 08 23.4	
	comp=E,6913μm,0.6s						
LAKA				AML	AML	18 08 28.7	
	comp=N,3514μm,0.9s						
SERG	**Sergoula**	**1.28**	**92**	P	**Pn**	**18 07 59.9**	**+0.5**
TRIZ	**Trizonia**	**1.29**	**94**	P	**Pb**	**18 08 00.2**	**0.0**
TRIZ	**Trizonia**	**1.29**	**94**	P	**Pb**	**18 08 00.2**	**0.0**
KASA	**Kassiopi**	**1.33**	**343**	P	**Pg**	**18 08 02.8**	**+0.7**
KEK	**Kerkira**	**1.33**	**339**	P	**Pg**	**18 08 02.1**	**0.0**
KLV	**Kalavryta, Ach**	**1.42**	**107**	P	**Pb**	**18 08 02.2**	**-0.2**
KLV	**Kalavryta, Ach**	**1.42**	**107**	P	**Pb**	**18 08 02.3**	**-0.2**
MAKR	**Makrakomi, Fth**	**1.44**	**67**	P	**Pb**	**18 08 03.4**	**+0.7**
MAKR				AML	AML	18 08 28.4	
	comp=N,682μm,1.0s						
MAKR				AML	AML	18 08 31.9	
	comp=E,1256μm,0.4s						
AGG	**Agios Georgios**	**1.58**	**69**	P	**Pb**	**18 08 05.8**	**+0.6**
GUR	**Goura**	**1.60**	**109**	P	**Pb**	**18 08 05.3**	**-0.2**
GUR				AML	AML	18 08 35.7	
	comp=N,1530μm,0.4s						
GUR				AML	AML	18 08 36.9	
	comp=E,1052μm,0.4s						
THL	**Klokotos Trika**	**1.65**	**48**	P	**Pb**	**18 08 06.9**	**+0.7**
THL				AML	AML	18 08 35.4	
	comp=E,1134μm,0.8s						
THL				AML	AML	18 08 35.8	
	comp=N,1142μm,0.6s						
KPRO	**Kipourio**	**1.65**	**26**	P	**Pg**	**18 08 08.4**	**+0.2**
PYL	**PYLOS**	**1.89**	**146**	P	**Pb**	**18 08 10.0**	**-0.3**
VIL2	**Platees**	**2.25**	**96**	P	**Pb**	**18 08 16.3**	**-0.2**
XOR	**Xorichti**	**2.33**	**67**	P	**Pb**	**18 08 17.2**	**-0.8**
OHR	**Ohrid**	**2.65**	**6**	*e*Pn	**Pn**	**18 08 20.6**	**+2.3**
OHR				*e*Sn	**Sn**	**18 08 47.2**	**-2.8**
TIR	**Tirane**	**2.91**	**352**	*e*Pn	**Pn**	**18 08 25.1**	**+3.4**
TIR				*e*Sn	**Sn**	**18 08 52.9**	**-3.3**
PRVS	**Prvonek**	**4.22**	**17**	*e*Pn	**Pn**	**18 08 42.9**	**+3.0**
BARS	**Barje**	**4.47**	**13**	*e*Pn	**Pn**	**18 08 45.2**	**+2.0**
BARS				*e*Sn	**Sn**	**18 09 31.7**	**-3.0**
TREB	**Trebinje**	**4.53**	**340**	*e*Pn	**Pn**	**18 08 44.9**	**+0.9**
DBRK	**Dubrovnik**	**4.54**	**338**	*e*Pn	**Pn**	**18 08 44.6**	**+0.4**
VTS	**Vitosha**	**4.66**	**26**	*e*Pn	**Pn**	**18 08 47.6**	**+1.6**
STON	**Ston**	**4.86**	**336**	*e*Pn	**Pn**	**18 08 49.7**	**+1.1**
STON	**Ston**	**4.86**	**336**	*e*Pn	**Pn**	**18 08 49.0**	**+0.4**
LSTV	**Lastovo**	**5.07**	**329**	*e*Pn	**Pn**	**18 08 51.8**	**+0.4**
LSTV				Sn	**Sn**	**18 09 45.9**	**-3.6**
BBLS	**Lazići**	**5.44**	**352**	*e*Pn	**Pn**	**18 08 58.7**	**+2.0**
MAKA	**Makarska**	**5.46**	**333**	*e*Pn	**Pn**	**18 08 57.6**	**+0.8**
MAKA				Sn	**Sn**	**18 09 56.0**	**-3.2**
HVAR	**Hvar**	**5.59**	**329**	*e*Pn	**Pn**	**18 08 59.4**	**+0.8**
HVAR				Sn	**Sn**	**18 09 59.3**	**-3.0**
RICI	**Ricice**	**5.60**	**335**	*e*Pn	**Pn**	**18 08 59.6**	**+0.8**
DIVS	**Divibare**	**5.63**	**357**	*e*Pn	**Pn**	**18 09 00.6**	**+1.3**
KIJV	**Kijevo**	**6.30**	**333**	*e*Pn	**Pn**	**18 09 09.8**	**+1.3**
ZIRJ	**Zirje**	**6.31**	**327**	*e*Pn	**Pn**	**18 09 09.2**	**+0.7**
MORI	**Morici**	**6.46**	**328**	*e*Pn	**Pn**	**18 09 11.8**	**+1.3**
MORI				Sn	**Sn**	**18 10 21.1**	**-2.6**
DUGI	**Dugi Otok**	**6.84**	**325**	*e*Pn	**Pn**	**18 09 16.9**	**+1.1**
UDBI	**Udbina**	**6.99**	**331**	*e*Pn	**Pn**	**18 09 20.3**	**+2.4**
NVLJ	**Novalja**	**7.38**	**327**	*e*Pn	**Pn**	**18 09 24.7**	**+1.6**
RABC	**Rab**	**7.56**	**328**	*e*Pn	**Pn**	**18 09 27.6**	**+1.9**

NEIC ***20*** *18:08:39.5±1.2, 59°.85N±0°.02×152°.92W±0°.06, h100^{km}±4^{km}, Error ellipse: s-maj=5.0km s-min=2.2km az=110.0*
ANF ***20*** *18:08:39.8±0.3, 59°.82N×152°.93W, h96^{km}±3^{km}, ML3.5/39, Error ellipse: s-maj=2.8km s-min=2.5km az=164.0*
AEIC ***20*** *18:08:41±1.6, 59°.83N±0°.05×152°.90W±0°.04, h93^{km}±4^{km}, ML3.1, ML3.4/120(NEIC), Error ellipse: s-maj=6.8km s-min=3.0km az=189.0*
ISC 20 18:08:39.4±1.4**, 59°.81N**±0°.04×**152°.91W**±0°.04**, h102**^{km}±7^{km}**, n197, σ0^{s}72**/226**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ILS	**Iliamna Low So**	**0.17**	**332**		**Pn**	**18 08 53.7**	**-0.1**
ILS					**Sn**	**18 09 03.8**	**-0.8**
ILSW	**Iliamna Southw**	**0.21**	**326**		**Pn**	**18 08 53.6**	**-0.4**
ILSW					**Sn**	**18 09 04.0**	**-0.9**
IVE	**Iliamna Volcan**	**0.21**	**346**		**Pn**	**18 08 53.6**	**-0.4**
IVE					**Sn**	**18 09 04.0**	**-0.9**
OPT	**Oil Point**	**0.23**	**226**		**Pn**	**18 08 54.2**	**+0.2**
P19K	**Oil Pt**	**0.23**	**226**	P	**Pn**	**18 08 54.2**	**+0.2**
	baz=43,SNR=13						
P19K				S	**Sn**	**18 09 04.1**	**-0.7**
	baz=43						
P19K	**Oil Pt**	**0.23**	**226**		**Pn**	**18 08 54.0**	**+0.1**
P19K				Sn	**Sn**	**18 09 03.6**	**-1.2**
O20K	**Slope Mountain**	**0.31**	**28**	P	**Pn**	**18 08 54.4**	**0.0**
	baz=209,SNR=17						
O20K				S	**Sn**	**18 09 04.9**	**-0.6**
	baz=209						
O20K	**Slope Mountain**	**0.31**	**28**		**Pn**	**18 08 54.4**	**0.0**
O20K					**Sn**	**18 09 05.0**	**-0.5**
AU22	**Augustine Moun**	**0.50**	**207**		**Pn**	**18 08 55.6**	**+0.3**
AU22					**Sn**	**18 09 07.1**	**-0.1**
AUL	**Augustine Lava**	**0.51**	**212**		**Pn**	**18 08 56.0**	**+0.6**
AUL					**Sn**	**18 09 07.7**	**+0.3**
AUQ	**Augustine Qik’**	**0.52**	**209**		**Pn**	**18 08 56.1**	**+0.5**
AUW	**Augustine West**	**0.53**	**213**		**Pn**	**18 08 56.1**	**+0.6**
RED	**Redoubt Volcan**	**0.61**	**7**		**Pn**	**18 08 56.1**	**-0.2**
RED					**Sn**	**18 09 07.9**	**-1.1**
RSO	**Redoubt South**	**0.66**	**7**		**Pn**	**18 08 56.8**	**-0.1**
HOM	**Homer**	**0.66**	**103**	P	**Pn**	**18 08 57.3**	**+0.7**
	baz=286,SNR=9.7						
HOM				S	**Sn**	**18 09 10.4**	**+0.9**
	baz=286						
HOM	**Homer**	**0.66**	**103**		**Pn**	**18 08 57.2**	**+0.6**
HOM				Sn	**Sn**	**18 09 09.8**	**+0.3**
HOM				IAML		18 09 11.0	
	comp=E,3μm,0.5s						
HOM				IAML		18 09 11.2	
	comp=N,3μm,0.7s						
RDWB	**Redoubt West**	**0.68**	**3**		**Pn**	**18 08 56.8**	**-0.2**
NCT	**North Crescent**	**0.75**	**359**		**Pn**	**18 08 57.5**	**-0.1**
NCT					**Sn**	**18 09 10.2**	**-1.1**
DFR	**Drift River**	**0.79**	**8**		**Pn**	**18 08 57.9**	**0.0**
O19K	**Port Alsworth**	**0.81**	**299**	P	**Pn**	**18 08 58.2**	**+0.3**
	baz=117						
O19K				S	**Sn**	**18 09 11.5**	**-0.4**
	baz=117						
O19K	**Port Alsworth**	**0.81**	**299**		**Pn**	**18 08 58.1**	**+0.3**
O19K				Sn	**Sn**	**18 09 11.3**	**-0.5**
O19K				IAML		18 09 12.1	
	comp=N,2μm,0.4s						
O19K				IAML		18 09 12.8	
	comp=E,1μm,0.5s						
CNPM	**China Poot**	**0.90**	**108**		**Pn**	**18 08 59.2**	**+0.3**
CNPM				Sn	**Sn**	**18 09 13.1**	**-0.5**
Q19K	**Cape Douglas,**	**0.96**	**203**	P	**Pn**	**18 08 59.9**	**+0.4**
	baz=22,SNR=11						
Q19K				S	**Sn**	**18 09 14.9**	**+0.2**
	baz=22						
Q19K	**Cape Douglas,**	**0.96**	**203**		**Pn**	**18 08 59.9**	**+0.4**
BRLK	**Bradley Lake**	**1.03**	**92**		**Pn**	**18 09 00.3**	**0.0**
BRSE	**Bradley Lake S**	**1.10**	**93**	P	**Pn**	**18 09 01.2**	**+0.2**
	baz=276,SNR=11						
BRSE				S	**Sn**	**18 09 16.9**	**-0.5**
	baz=276						
BRSE	**Bradley Lake S**	**1.10**	**93**		**Pn**	**18 09 01.3**	**+0.2**
P18K	**Big Mountain,**	**1.25**	**251**	P	**Pn**	**18 09 03.0**	**+0.2**
	baz=69						
P18K				S	**Sn**	**18 09 19.4**	**-1.0**
	baz=69						
P18K	**Big Mountain,**	**1.25**	**251**		**Pn**	**18 09 03.0**	**+0.2**
N19K	**Bonanza Creek**	**1.27**	**323**	P	**Pn**	**18 09 03.4**	**+0.2**
	baz=141,SNR=46						
N19K				S	**Sn**	**18 09 20.3**	**-0.7**
	baz=141						
N19K	**Bonanza Creek**	**1.27**	**323**		**Pn**	**18 09 03.1**	**0.0**
CAPN	**Captain Cook N**	**1.30**	**42**	P	**Pn**	**18 09 05.0**	**+1.8**
	baz=223						
CAPN				S	**Sn**	**18 09 24.0**	**+2.6**
	baz=223						
CAPN	**Captain Cook N**	**1.30**	**42**	Pn	**Pn**	**18 09 05.1**	**+1.8**
CAPN				IAML		18 09 25.3	
	comp=E,609nm,0.7s						
SPCR	**Spurr Chakacha**	**1.44**	**14**	P	**Pn**	**18 09 05.3**	**+0.3**
	baz=194,SNR=5.3						
SPCR				S	**Sn**	**18 09 23.7**	**-0.7**
	baz=194						
SPCR	**Spurr Chakacha**	**1.44**	**14**		**Pn**	**18 09 05.3**	**+0.3**
SPCR					**Sn**	**18 09 23.6**	**-0.9**
SPU	**Mount Spurr**	**1.44**	**17**		**Pn**	**18 09 05.3**	**+0.2**
SPCN	**Chakachatna No**	**1.47**	**14**		**Pn**	**18 09 05.8**	**+0.5**
SPBG	**Spurr Blockage**	**1.48**	**10**		**Pn**	**18 09 06.1**	**+0.5**
SPBG					**Sn**	**18 09 25.0**	**-0.3**
SLKM	**Skilak Lake**	**1.52**	**61**		**Pn**	**18 09 06.3**	**+0.4**
SPCG	**Spurr Capps Gl**	**1.55**	**16**		**Pn**	**18 09 06.8**	**+0.4**
SPCG					**Sn**	**18 09 26.5**	**-0.5**
O22K	**Cooper Landing**	**1.73**	**66**	P	**Pn**	**18 09 09.3**	**+0.7**
	baz=249						
O22K				S	**Sn**	**18 09 30.4**	**-0.3**
	baz=249						
O22K	**Cooper Landing**	**1.73**	**66**	Pn	**Pn**	**18 09 09.1**	**+0.5**
O22K				IAML		18 09 39.3	
	comp=N,595nm,0.8s						
O22K				IAML		18 09 43.1	
	comp=E,561nm,0.7s						
SEW	**Seward**	**1.77**	**79**	P	**Pn**	**18 09 09.0**	**0.0**
	baz=262						
SEW				S	**Sn**	**18 09 30.6**	**-0.9**
	baz=262						
SEW	**Seward**	**1.77**	**79**		**Pn**	**18 09 09.0**	**0.0**
STLK	**Strandline Lak**	**1.78**	**17**		**Pn**	**18 09 09.7**	**+0.5**
SVW2	**Sparrevohn**	**1.85**	**315**		**Pn**	**18 09 10.0**	**0.0**
FIS	**Fire Island**	**1.89**	**44**		**Pn**	**18 09 11.6**	**+1.1**
FIS				IAML		18 09 40.5	
	comp=N,345nm,0.3s						
FIS				IAML		18 09 43.8	
	comp=E,294nm,0.4s						
KABU	**Katmai Buttres**	**1.97**	**219**		**Pn**	**18 09 13.0**	**+1.3**
RC01	**Rabbit Creek A**	**2.03**	**49**	P	**Pn**	**18 09 13.0**	**+0.6**
	baz=232,SNR=15						
RC01				S	**Sn**	**18 09 37.1**	**-0.5**
	baz=232						
RC01	**Rabbit Creek A**	**2.03**	**49**		**Pn**	**18 09 12.8**	**+0.5**
RC01				IAML		18 09 37.6	
	comp=E,421nm,0.3s						
M19K	**Big River Lodg**	**2.22**	**342**		**Pn**	**18 09 15.1**	**+0.2**
M22K	**Willow**	**2.38**	**34**	P	**Pn**	**18 09 17.9**	**+1.0**
	baz=216						
M22K				S	**Sn**	**18 09 46.2**	**+0.6**
	baz=216						
M22K	**Willow**	**2.38**	**34**		**Pn**	**18 09 18.1**	**+1.2**
PWL	**Port Wells**	**2.51**	**63**	P	**Pn**	**18 09 18.2**	**-0.5**
	baz=248						
PWL	**Port Wells**	**2.51**	**63**		**Pn**	**18 09 18.1**	**-0.5**
PWL				IAML		18 09 48.1	
	comp=E,241nm,0.4s						
L19K	**White Mountain**	**2.56**	**339**	P	**Pn**	**18 09 19.8**	**+0.5**
	baz=157,SNR=42						
L19K	**White Mountain**	**2.56**	**339**	Pn	**Pn**	**18 09 19.6**	**+0.3**
PMR	**Palmer**	**2.58**	**45**	P	**Pn**	**18 09 19.6**	**+0.1**
	baz=228						
PMR	**Palmer**	**2.58**	**45**		**Pn**	**18 09 19.4**	**-0.1**
PMR				IAML		18 09 49.0	
	comp=E,149nm,0.3s						
PMR				IAML		18 09 49.4	
	comp=N,154nm,0.3s						
OHAK	**Old Harbor**	**2.60**	**184**	P	**Pn**	**18 09 19.9**	**0.0**
	baz=4.2						
OHAK	**Old Harbor**	**2.60**	**184**	Pn	**Pn**	**18 09 19.8**	**0.0**
L20K	**Farewell, AK**	**2.72**	**350**	P	**Pn**	**18 09 22.1**	**+0.7**
	baz=170,SNR=11						
L20K	**Farewell, AK**	**2.72**	**350**		**Pn**	**18 09 22.1**	**+0.7**
KNK	**Knik Glacier**	**2.72**	**52**	P	**Pn**	**18 09 21.3**	**-0.1**
	baz=236,SNR=8.4						
KNK	**Knik Glacier**	**2.72**	**52**		**Pn**	**18 09 21.0**	**-0.5**
GHO	**Glory Hole Cre**	**2.77**	**43**		**Pn**	**18 09 21.6**	**-0.5**
GHO				IAML		18 09 55.5	
	comp=N,207nm,0.2s						
CUT	**Chulitna**	**2.90**	**25**	P	**Pn**	**18 09 24.8**	**+1.0**
	baz=208						
CUT	**Chulitna**	**2.90**	**25**		**Pn**	**18 09 24.6**	**+0.8**
CUT				IAML		18 10 04.9	
	comp=E,170nm,0.2s						
SML	**Sawmill**	**3.01**	**46**	P	**Pn**	**18 09 25.3**	**+0.1**
	baz=230						
SML	**Sawmill**	**3.01**	**46**	Pn	**Pn**	**18 09 24.9**	**-0.3**
SML				IAML		18 10 00.4	
	comp=E,107nm,0.4s						
SML				IAML		18 10 00.7	
	comp=N,85nm,0.3s						
GLI	**Glacier Island**	**3.08**	**67**	P	**Pn**	**18 09 25.1**	**-1.2**
	baz=252						
GLI	**Glacier Island**	**3.08**	**67**	Pn	**Pn**	**18 09 24.2**	**-2.0**
GLI				IAML		18 10 00.1	
	comp=E,149nm,0.5s						
GLI				IAML		18 10 00.8	
	comp=N,98nm,0.3s						
PPLA	**Purkeypile**	**3.12**	**6**	P	**Pn**	**18 09 24.9**	**-1.9**
	baz=187						
PPLA	**Purkeypile**	**3.12**	**6**		**Pn**	**18 09 24.8**	**-1.9**
HIN	**Hinchinbrook I**	**3.26**	**77**	Pn	**Pn**	**18 09 27.3**	**-1.3**
HIN				IAML		18 10 11.0	
	comp=E,126nm,2.2s						
HIN				IAML		18 11 13.5	
	comp=N,116nm,2.5s						
FID	**Port Fidalgo**	**3.34**	**71**	Pn	**Pn**	**18 09 28.0**	**-1.7**
FID				IAML		18 10 06.2	
	comp=E,123nm,0.3s						
FID				IAML		18 10 07.8	
	comp=N,113nm,0.4s						
Q23K	**Middleton Isla**	**3.36**	**94**	Pn	**Pn**	**18 09 29.5**	**-0.3**
MID	**Middleton Isla**	**3.36**	**94**	Pn	**Pn**	**18 09 28.9**	**-1.0**
SCM	**Sheep Creek Mo**	**3.41**	**51**	P	**Pn**	**18 09 30.5**	**-0.1**
	baz=236						
SCM	**Sheep Creek Mo**	**3.41**	**51**	Pn	**Pn**	**18 09 30.1**	**-0.5**
SCM				IAML		18 10 11.3	
	comp=E,114nm,0.2s						
SCM				IAML		18 10 13.2	
	comp=N,88nm,0.5s						
TT01	**Tatalina**	**3.45**	**336**		**Pn**	**18 09 31.4**	**+0.3**
TTA	**Tatalina**	**3.47**	**336**	P	**Pn**	**18 09 31.6**	**+0.1**
	baz=153,SNR=7.6						
TTA	**Tatalina**	**3.47**	**336**	Pn	**Pn**	**18 09 29.6**	**-1.8**
K20K	**Telida**	**3.60**	**352**	P	**Pn**	**18 09 33.7**	**+0.6**
	baz=170,SNR=10						
K20K	**Telida**	**3.60**	**352**	Pn	**Pn**	**18 09 31.5**	**-1.7**
WAT7	**Susitna Watana**	**3.61**	**31**		**Pn**	**18 09 34.2**	**+0.8**
EYAK	**Cordova Ski Ar**	**3.65**	**75**	P	**Pn**	**18 09 34.2**	**+0.4**
	baz=262						
EYAK	**Cordova Ski Ar**	**3.65**	**75**	Pn	**Pn**	**18 09 32.3**	**-1.5**
WAT1	**Susitna Watana**	**3.69**	**33**	P	**Pn**	**18 09 34.9**	**+0.6**
	baz=217						
WAT6	**Susitna Watana**	**3.74**	**40**	P	**Pn**	**18 09 35.4**	**+0.3**
	baz=224						

WAT6	**Susitna Watana**	**3.74**	**40**		**Pn**	**18 09 35.4**	**+0.3**
DIV	**Divide**	**3.77**	**66**	Pn	**Pn**	**18 09 33.4**	**-2.1**
KLU	**Klutina**	**3.83**	**61**	P	**Pn**	**18 09 35.8**	**-0.5**
	baz=247						
KLU	**Klutina**	**3.83**	**61**		**Pn**	**18 09 35.7**	**-0.6**
KLU				IAML		18 10 20.0	
	comp=E,66nm,0.3s						
TRF	**Thorofare Moun**	**3.86**	**18**	P	**Pn**	**18 09 37.7**	**+0.9**
	baz=200,SNR=10.0						
TRF	**Thorofare Moun**	**3.86**	**18**		**Pn**	**18 09 37.5**	**+0.7**
TRF				IAML		18 10 18.1	
	comp=N,33nm,3.2s						
TRF				IAML		18 10 29.6	
	comp=E,32nm,1.7s						
KTH	**Kantishna Hill**	**3.87**	**13**		**Pn**	**18 09 37.2**	**+0.3**
M24K	**Tolsona, Glenn**	**4.01**	**52**	P	**Pn**	**18 09 39.0**	**+0.3**
	baz=238						
M24K	**Tolsona, Glenn**	**4.01**	**52**		**Pn**	**18 09 38.6**	**-0.1**
M24K				IAML		18 10 27.0	
	comp=N,80nm,1.7s						
RND	**Reindeer**	**4.10**	**26**		**Pn**	**18 09 40.1**	**+0.3**
RND				IAML		18 10 35.4	
	comp=E,29nm,4.3s						
CHUM	**Lake Minchumin**	**4.10**	**4**	P	**Pn**	**18 09 40.7**	**+0.9**
	baz=184,SNR=7.9						
RAGM	**Ragged Mountai**	**4.17**	**78**	Pn	**Pn**	**18 09 39.6**	**-1.2**
DHY	**Denali Highway**	**4.22**	**37**	P	**Pn**	**18 09 41.9**	**+0.4**
	baz=222						
DHY	**Denali Highway**	**4.22**	**37**		**Pn**	**18 09 40.5**	**-1.1**
DHY				IAML		18 10 31.9	
	comp=N,48nm,0.2s						
DHY				IAML		18 10 32.3	
	comp=E,60nm,0.3s						
BMRM	**Bremner River**	**4.28**	**71**	P	**Pn**	**18 09 42.5**	**+0.1**
	baz=258						
BMRM	**Bremner River**	**4.28**	**71**	Pn	**Pn**	**18 09 41.3**	**-1.1**
BMRM				IAML		18 10 42.1	
	comp=E,35nm,2.8s						
BMRM				IAML		18 11 58.7	
	comp=N,33nm,3.2s						
KAIM	**Kayak Island**	**4.28**	**85**	P	**Pn**	**18 09 42.8**	**+0.5**
	baz=272						
KAIM	**Kayak Island**	**4.28**	**85**	Pn	**Pn**	**18 09 42.2**	**-0.1**
MCK	**McKinley**	**4.37**	**24**	P	**Pn**	**18 09 44.4**	**+0.9**
	baz=207,SNR=5.2						
MCK	**McKinley**	**4.37**	**24**	Pn	**Pn**	**18 09 43.6**	**+0.2**
MCK				IAML		18 12 25.4	
	comp=N,30nm,4.6s						
HMT	**Hamilton**	**4.37**	**79**	Pn	**Pn**	**18 09 43.5**	**0.0**
BPAW	**Bear Paw Mtn.**	**4.40**	**11**	P	**Pn**	**18 09 44.4**	**+0.5**
	baz=193						
BPAW	**Bear Paw Mtn.**	**4.40**	**11**		**Pn**	**18 09 43.5**	**-0.4**
BPAW				IAML		18 12 06.5	
	comp=N,23nm,4.6s						
J20K	**Nowinta River**	**4.42**	**353**	P	**Pn**	**18 09 44.7**	**+0.6**
	baz=172,SNR=13						
J20K	**Nowinta River**	**4.42**	**353**	Pn	**Pn**	**18 09 43.6**	**-0.6**
J20K				IAML		18 10 32.9	
	comp=E,21nm,4.2s						
N25K	**Chitina, Valde**	**4.46**	**63**	P	**Pn**	**18 09 44.4**	**-0.5**
	baz=250						
N25K	**Chitina, Valde**	**4.46**	**63**	Pn	**Pn**	**18 09 44.2**	**-0.6**
N25K				IAML		18 10 35.4	
	comp=N,23nm,0.6s						
N25K				IAML		18 10 35.9	
	comp=E,27nm,0.7s						
HARP	**HAARP**	**4.57**	**52**	P	**Pn**	**18 09 46.8**	**+0.5**
	baz=239						
SUCK	**Suckling Hills**	**4.60**	**83**	Pn	**Pn**	**18 09 46.1**	**-0.5**
BERG	**Berg Lake**	**4.65**	**79**	Pn	**Pn**	**18 09 47.4**	**+0.1**
BWN	**Browne**	**4.67**	**19**	Pn	**Pn**	**18 09 47.8**	**+0.3**
BWN				IAML		18 10 32.2	
	comp=E,39nm,3.1s						
BWN				IAML		18 10 50.0	
	comp=N,38nm,3.2s						
GLB	**Gilahina Butte**	**4.77**	**66**	Pn	**Pn**	**18 09 48.3**	**-0.7**
GLB				IAML		18 11 13.5	
	comp=N,23nm,4.0s						
GLB				IAML		18 11 16.4	
	comp=E,20nm,2.4s						
PAX	**Paxson**	**4.78**	**45**	P	**Pn**	**18 09 49.5**	**+0.4**
	baz=232						
PAX	**Paxson**	**4.78**	**45**		**Pn**	**18 09 49.4**	**+0.3**
GRIN	**Grindle Hills**	**4.83**	**80**		**Pn**	**18 09 50.4**	**+0.6**
VRDI	**Verde Repeater**	**4.89**	**69**	Pn	**Pn**	**18 09 49.7**	**-0.9**
VRDI				IAML		18 10 58.6	
	comp=N,26nm,3.2s						
VRDI				IAML		18 12 03.3	
	comp=E,23nm,4.6s						
CRQM	**Cirque**	**4.96**	**75**	Pn	**Pn**	**18 09 50.4**	**-1.2**
CRQM				IAML		18 10 48.8	
	comp=E,40nm,1.7s						
CRQE	**Cirque**	**4.98**	**75**	P	**Pn**	**18 09 52.2**	**+0.3**
	baz=264						
SNH	**Sunshine Point**	**5.07**	**81**	Pn	**Pn**	**18 09 53.5**	**+0.5**
WAX	**Waxell Ridge**	**5.07**	**78**	Pn	**Pn**	**18 09 52.2**	**-0.8**
TGL	**Tana Glacier**	**5.11**	**75**	Pn	**Pn**	**18 09 53.2**	**-0.3**
TGL				IAML		18 10 54.3	
	comp=N,34nm,2.7s						
TGL				IAML		18 12 56.1	
	comp=E,29nm,3.8s						
MCARA	**McCarthy VSAT**	**5.12**	**68**	P	**Pn**	**18 09 54.4**	**+0.7**
	baz=257						
MCARA	**McCarthy VSAT**	**5.12**	**68**	Pn	**Pn**	**18 09 53.2**	**-0.4**
MCARA				IAML		18 10 59.1	
	comp=E,29nm,1.3s						
MCARA				IAML		18 11 26.1	
	comp=N,35nm,2.8s						
NEA2	**Nenana**	**5.12**	**19**	P	**Pn**	**18 09 53.9**	**+0.2**
	baz=202,SNR=9.5						
NEA2	**Nenana**	**5.12**	**19**		**Pn**	**18 09 53.4**	**-0.3**
NEA2				IAML		18 10 58.8	
	comp=E,20nm,4.4s						
NEA2				IAML		18 11 11.8	
	comp=N,19nm,4.7s						
WRH	**Wood River Hil**	**5.20**	**24**		**Pn**	**18 09 53.7**	**-0.9**
WRH				IAML		18 11 17.5	
	comp=N,15nm,4.8s						
WRH				IAML		18 11 32.6	
	comp=E,17nm,4.5s						
ISLE	**Juniper Island**	**5.33**	**77**	Pn	**Pn**	**18 09 56.5**	**-0.2**
MLY	**Manley**	**5.34**	**10**	P	**Pn**	**18 09 57.3**	**+0.7**
	baz=192						
MLY	**Manley**	**5.34**	**10**	Pn	**Pn**	**18 09 56.0**	**-0.6**
MLY				IAML		18 11 43.2	
	comp=E,16nm,4.9s						
MLY				IAML		18 12 08.9	
	comp=N,16nm,4.4s						
PTPK	**Patty Peak**	**5.35**	**71**		**Pn**	**18 09 56.6**	**-0.3**
KIAG	**Kiagna River**	**5.36**	**73**		**Pn**	**18 09 57.5**	**+0.5**
BALM	**Baldy**	**5.38**	**72**		**Pn**	**18 09 56.5**	**-0.7**
HDA	**Harding Lake**	**5.40**	**29**	P	**Pn**	**18 09 57.8**	**+0.4**
	baz=214						
HDA	**Harding Lake**	**5.40**	**29**		**Pn**	**18 09 56.9**	**-0.5**
HDA				IAML		18 10 57.4	
	comp=E,30nm,0.5s						
HDA				IAML		18 10 59.1	
	comp=N,26nm,0.3s						
I21K	**Tanana**	**5.41**	**4**	P	**Pn**	**18 09 58.2**	**+0.7**
	baz=185						
CCB	**Clear Creek Bu**	**5.41**	**24**		**Pn**	**18 09 56.8**	**-0.7**
CCB				IAML		18 10 50.0	
	comp=E,14nm,3.9s						
CCB				IAML		18 11 56.7	
	comp=N,16nm,4.8s						
MESA	**MESA**	**5.52**	**81**	P	**Pn**	**18 10 00.0**	**+0.9**
	baz=271						
MESA	**MESA**	**5.52**	**81**	Pn	**Pn**	**18 09 59.1**	**0.0**
TCOL	**CIGO, UAF Yank**	**5.60**	**23**	P	**Pn**	**18 10 00.2**	**+0.2**
	baz=207						
TCOL	**CIGO, UAF Yank**	**5.60**	**23**		**Pn**	**18 09 59.9**	**-0.2**
COLA	**College**	**5.60**	**23**	P	**Pn**	**18 10 00.3**	**+0.2**
	baz=207						
COLA	**College**	**5.60**	**23**		**Pn**	**18 09 59.9**	**-0.2**
I23K	**Minto, Yukon-K**	**5.60**	**16**	P	**Pn**	**18 10 00.7**	**+0.6**
	baz=199,SNR=13						
I23K	**Minto, Yukon-K**	**5.60**	**16**		**Pn**	**18 10 00.9**	**+0.7**
MDM	**Murphy Dome**	**5.61**	**21**		**Pn**	**18 10 00.3**	**0.0**
YAH	**Yahtse**	**5.62**	**80**	Pn	**Pn**	**18 10 00.2**	**-0.4**
GRNC	**Granite Creek**	**5.63**	**76**	Pn	**Pn**	**18 10 00.6**	**-0.2**
BARN	**Barnard Glacie**	**5.71**	**72**		**Pn**	**18 10 01.7**	**-0.1**
IL31		**5.72**	**27**		**Pn**	**18 10 01.5**	**-0.1**
ILAR	**Eielson Array**	**5.72**	**27**		**Pn**	**18 10 01.4**	**-0.3**
CTG	**Chitna Glacier**	**5.86**	**74**	P	**Pn**	**18 10 04.2**	**+0.4**
	baz=264						
CTGM	**Chitina Glacie**	**5.86**	**74**	Pn	**Pn**	**18 10 03.9**	**+0.1**
H21K	**Melozitna Rive**	**5.87**	**0**	P	**Pn**	**18 10 03.9**	**+0.1**
	baz=180						
H21K	**Melozitna Rive**	**5.87**	**0**		**Pn**	**18 10 03.6**	**-0.2**
POKR	**Poker Plat Res**	**5.90**	**23**	P	**Pn**	**18 10 04.3**	**+0.1**
	baz=208						
POKR	**Poker Plat Res**	**5.90**	**23**	Pn	**Pn**	**18 10 04.1**	**0.0**
TABL	**Table Mountain**	**5.92**	**79**	Pn	**Pn**	**18 10 05.0**	**+0.3**
M27K	**Edge Creek, AK**	**5.93**	**60**	P	**Pn**	**18 10 05.2**	**+0.5**
	baz=250						
M27K	**Edge Creek, AK**	**5.93**	**60**	Pn	**Pn**	**18 10 04.1**	**-0.7**
SCRK	**Sand Creek**	**5.94**	**41**	P	**Pn**	**18 10 05.0**	**+0.2**
	baz=229						
SCRK	**Sand Creek**	**5.94**	**41**	Pn	**Pn**	**18 10 04.3**	**-0.5**
J25K	**Salcha River,**	**5.97**	**33**	P	**Pn**	**18 10 05.4**	**+0.2**
	baz=220						
J25K	**Salcha River,**	**5.97**	**33**		**Pn**	**18 10 05.3**	**+0.2**
LOGN	**Logan Glacier**	**6.01**	**75**	Pn	**Pn**	**18 10 04.2**	**-1.6**
IM03		**6.21**	**357**		**Pn**	**18 10 09.6**	**+1.2**
IMAR	**Indian Mountai**	**6.21**	**357**	Pn	**Pn**	**18 10 09.0**	**+0.7**
PCA	**Pinnacle**	**6.37**	**82**	Pn	**Pn**	**18 10 10.4**	**-0.2**
PINM	**Pinnacle**	**6.37**	**82**	P	**Pn**	**18 10 11.7**	**+1.1**
	baz=273						
BVCY	**Beaver Creek**	**6.40**	**61**	P	**Pn**	**18 10 11.7**	**+0.7**
	baz=251						
YUK3	**Moose Creek**	**6.41**	**67**	P	**Pn**	**18 10 11.8**	**+0.5**
	baz=258						
J26L	**Joseph Creek**	**6.42**	**39**	P	**Pn**	**18 10 12.0**	**+0.6**
	baz=227						
YUK8	**Steele Glacier**	**6.65**	**72**		**Pn**	**18 10 16.0**	**+1.4**
PRP	**Porcupine Dome**	**6.66**	**28**	P	**Pn**	**18 10 15.0**	**+0.4**
	baz=214,SNR=5.6						
PRP	**Porcupine Dome**	**6.66**	**28**		**Pn**	**18 10 14.0**	**-0.5**
BCPM	**Bancas Point**	**6.69**	**83**	Pn	**Pn**	**18 10 15.5**	**+0.6**
PNL	**Peninsula**	**6.83**	**85**	P	**Pn**	**18 10 17.4**	**+0.4**
	baz=277						
YUK6	**Outpost Mounta**	**7.30**	**75**	P	**Pn**	**18 10 24.3**	**+0.8**
	baz=268						
YUK6	**Outpost Mounta**	**7.30**	**75**		**Pn**	**18 10 24.4**	**+1.0**
YUK7	**Dusty Glacier**	**7.41**	**78**		**Pn**	**18 10 25.6**	**+0.8**
COLD	**Coldfoot**	**7.54**	**8**	P	**Pn**	**18 10 26.8**	**+0.3**
	baz=190						
COLD	**Coldfoot**	**7.54**	**8**	Pn	**Pn**	**18 10 25.6**	**-0.9**
HYT	**Haines Junctio**	**7.72**	**76**	Pn	**Pn**	**18 10 28.6**	**-0.4**
BM03	**Burnt Mountain**	**8.48**	**22**		**Pn**	**18 10 38.1**	**-1.0**
BMAR	**Burnt Mountain**	**8.49**	**22**	Pn	**Pn**	**18 10 39.1**	**-0.3**
WHY	**Whitehorse**	**9.01**	**77**	Pn	**Pn**	**18 10 46.5**	**0.0**
BESE	**Bessie Mountai**	**9.35**	**90**	Pn	**Pn**	**18 10 51.2**	**+0.2**
JIS	**Juneau Island**	**9.67**	**91**	Pn	**Pn**	**18 10 53.7**	**-1.6**

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*NOU **20** 18:13:10.7, 21°.64S×178°.52W, h526^{km}, mb4.2/15, Fiji Islands Region*

*NEIC **20** 18:13:12.5±1.4, 21°.6S±0°.1×178°.7W±0°.1, h541^{km}±9^{km}, mb4.3/29, Error ellipse: s-maj=19.4km s-min=17.2km az=149.0*

*IDC **20** 18:13:13.4±0.9, 21°.40S×178°.94W, h543^{km}±4^{km}, mb3.5/8, mb1 3.6/9, mb1mx3.2/41, mbtmp4.4/9, Error ellipse: s-maj=18.1km s-min=6.6km az=133.0*

ISC 20 18:13:12.0±0.6, **21°.57S**±0°.10×**178°.74W**±0°.09, **h536**^{km}, **n60, σ0^{s}.88**/57, **mb4.2**/26, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.87**	**321**	P	**P**	**18 14 39.8**	**-0.3**
	15nm,0.3s,baz=139,slow=6.0,SNR=84						
MSVF	**Nonsavu**	**4.87**	**321**	P	**P**	**18 14 39.7**	**-0.5**
MSVF	**Nonsavu**	**4.87**	**321**	P	**P**	**18 14 39.6**	**-0.5**
TAVE	**Taveuni**	**4.96**	**347**	P	**P**	**18 14 40.5**	**-0.4**
DGTI	**Dogotuki**	**5.44**	**344**	P	**P**	**18 14 44.2**	**-0.8**
NIUE	**Niue**	**8.64**	**75**	P	**P**	**18 15 16.6**	**+0.7**
MARNC	**Mare, Loyalty**	**12.31**	**268**		**P**	**18 15 54.6**	**+0.7**
MARNC	**Mare, Loyalty**	**12.31**	**268**	P	**P**	**18 15 54.9**	**+1.1**
	1.5nm,0.9s						
DZM	**Mont Dzumac**	**13.77**	**265**	P	**P**	**18 16 09.4**	**+0.3**
URZ	**Urewera**	**17.01**	**191**	P	**P**	**18 16 38.9**	**-2.4**
PLWZ	**Palliser**	**20.57**	**193**	P	**P**	**18 17 11.1**	**-2.8**
QRZ	**Quartz Range**	**20.57**	**199**	P	**P**	**18 17 12.6**	**-1.2**
QRZ	**Quartz Range**	**20.57**	**199**	P	**P**	**18 17 13.0**	**-0.8**
THZ	**Tophouse**	**21.32**	**197**	P	**P**	**18 17 19.7**	**-1.0**
KHZ	**Kahutara**	**21.77**	**196**	P	**P**	**18 17 24.8**	**+0.3**
LTZ	**Lake Taylor**	**22.45**	**198**	P	**P**	**18 17 31.6**	**+0.9**
EIDS	**Eidsvold**	**27.91**	**256**	P	**P**	**18 18 19.5**	**+0.3**
EIDS				IAmb	IAmb	18 18 38.4	
	comp=Z,10nm,1.2s						
EIDS	**Eidsvold**	**27.91**	**256**	P	**P**	**18 18 20.4**	**+1.2**
ARMA	**Armidale**	**27.98**	**246**	P	**P**	**18 18 20.3**	**+0.4**
ARMA	**Armidale**	**27.98**	**246**	P	**P**	**18 18 20.9**	**+1.0**
	comp=Z,28nm,2.3s						
CNB	**Canberra Magne**	**31.06**	**237**	P	**P**	**18 18 47.1**	**+0.7**
	comp=Z,20nm,2.2s						
CAN	**Canberra**	**31.34**	**237**	P	**P**	**18 18 49.4**	**+0.6**
CTAO	**Charters Tower**	**32.71**	**266**	P	**P**	**18 19 00.6**	**0.0**
CTAO				IAmb	IAmb	18 19 27.4	
	comp=Z,21nm,1.4s						
CTAO	**Charters Tower**	**32.71**	**266**	P	**P**	**18 19 00.9**	**+0.3**
	comp=Z,11nm,1.8s						
CMSA	**Cobar Meteorol**	**33.20**	**245**	P	**P**	**18 19 04.6**	**0.0**
	comp=Z,12nm,1.8s						
QLP	**Quilpie**	**34.09**	**254**	P	**P**	**18 19 12.0**	**-0.2**
	comp=Z,14nm,2.0s						
TOO	**Toolangi**	**34.71**	**235**	P	**P**	**18 19 18.0**	**+0.8**
TOO				IAmb	IAmb	18 19 20.5	
	comp=Z,16nm,1.1s						
TOO	**Toolangi**	**34.71**	**235**	P	**P**	**18 19 17.6**	**+0.3**
	comp=Z,19nm,1.1s						
STKA	**Stephens Creek**	**36.70**	**245**	P	**P**	**18 19 34.5**	**+0.7**
	comp=Z,2.0nm,0.5s,baz=94,slow=13,SNR=11						
STKA	**Stephens Creek**	**36.70**	**245**	IAmb	IAmb	18 19 42.9	
	comp=Z,1.6nm,1.2s						
COEN	**Coen**	**36.97**	**275**	P	**P**	**18 19 36.8**	**+0.6**
BBOO	**Buckleboo**	**41.45**	**244**	P	**P**	**18 20 11.6**	**-0.6**
WR0	**Warramunga Arr**	**43.59**	**263**	P	**P**	**18 20 28.5**	**-0.6**
WR0				IAmb	IAmb	18 20 30.0	
	comp=Z,11nm,1.3s						
AS31	**Alice Springs**	**43.60**	**258**	P	**P**	**18 20 28.8**	**-0.4**
ASAR	**Alice Springs**	**43.61**	**258**	P	**P**	**18 20 29.3**	**+0.1**
	comp=Z,6.7nm,0.8s,baz=86,slow=8.5,SNR=38						
ASAR	**Alice Springs**	**43.61**	**258**	P	**P**	**18 20 28.7**	**-0.5**
WB0	**Warramunga Arr**	**43.76**	**264**	P	**P**	**18 20 29.9**	**-0.5**
WB0				IAmb	IAmb	18 20 42.3	
	comp=Z,5.0nm,0.9s						
WB2	**Warramunga Arr**	**43.76**	**263**	P	**P**	**18 20 29.5**	**-1.0**
WB2				IAmb	IAmb	18 20 30.8	
	comp=Z,7.1nm,0.8s						
WRAB	**Tennant Creek**	**43.77**	**263**	P	**P**	**18 20 29.9**	**-0.6**
WRAB				IAmb	IAmb	18 20 30.8	
	comp=Z,7.4nm,0.9s						
WRA	**Warramunga Arr**	**43.77**	**263**	P	**P**	**18 20 29.5**	**-1.1**
	comp=Z,1.6nm,0.4s,baz=93,slow=8.1,SNR=45						
WRA	**Warramunga Arr**	**43.77**	**263**	IAmb	IAmb	18 20 30.8	
	comp=Z,0.6nm,0.8s						
FORT	**Forrest**	**48.24**	**247**	P	**P**	**18 21 03.7**	**-0.6**
FORT				IAmb	IAmb	18 21 38.6	
	comp=Z,22nm,0.9s						
MTN	**Manton Dam**	**48.49**	**272**	P	**P**	**18 21 06.2**	**-0.2**
MTN				IAmb	IAmb	18 21 06.5	
	comp=Z,18nm,1.2s						
KNRA	**Kununurra**	**49.91**	**267**	P	**P**	**18 21 16.9**	**0.0**
KNRA				IAmb	IAmb	18 21 18.3	
	comp=Z,9.8nm,0.8s						
SIJI	**Sorong**	**52.85**	**286**	P	**P**	**18 21 37.8**	**-0.5**
	comp=Z,14nm,0.8s,baz=78,slow=5.3,SNR=10						
BATI	**Baumata**	**56.26**	**272**	P	**P**	**18 22 03.1**	**+0.9**
	comp=Z,12nm,0.6s,baz=112,slow=2.8,SNR=4.8						
PSA00	**Pilbara Seismi**	**56.76**	**258**	P	**P**	**18 22 04.3**	**-1.1**
PSA00	**Pilbara Seismi**	**56.76**	**258**	P	**P**	**18 22 03.6**	**-1.8**
PSA00				IAmb	IAmb	18 22 31.3	
	comp=Z,13nm,1.1s						
VNDA	**Vanda**	**56.78**	**185**	P	**P**	**18 22 05.8**	**+1.2**
	comp=Z,0.9nm,1.0s,baz=30,slow=5.5,SNR=2.3						
VNDA	**Vanda**	**56.78**	**185**	P	**P**	**18 22 05.2**	**+0.6**
MORW	**Morawa**	**58.78**	**248**	P	**P**	**18 22 18.4**	**-0.7**
MORW				IAmb	IAmb	18 22 21.6	
	comp=Z,24nm,1.3s						
TOLI2	**Tolitoli**	**63.16**	**283**	P	**P**	**18 22 47.5**	**-0.5**
TOLI2				IAmb	IAmb	18 22 58.3	
	comp=Z,5.0nm,0.8s						
QSPA	**South Pole Qui**	**68.50**	**180**	P	**P**	**18 23 21.1**	**+0.5**
TPUB	**Ta-pu**	**73.98**	**304**	P	**P**	**18 23 53.1**	**-0.2**
PEA0B	**Petropavlovsk-**	**77.13**	**346**	P	**P**	**18 24 10.3**	**+0.3**
PETK	**Petropavlovsk-**	**77.13**	**346**	P	**P**	**18 24 10.5**	**+0.5**
	comp=Z,4.1nm,1.0s,baz=175,slow=3.9,SNR=10						
PAGB	**Antelope Grade**	**79.44**	**45**	P	**P**	**18 24 22.0**	**-0.9**
PAGB				IAmb	IAmb	18 24 24.8	
	comp=Z,16nm,1.3s						
CMAR	**Chiang Mai Arr**	**89.82**	**290**	P	**P**	**18 25 15.6**	**+1.4**
	comp=Z,1.1nm,0.8s,baz=131,slow=3.9,SNR=5.8						
AKASG	**Malin Array Be**	**143.60**	**330**	PKP	PKPbc	18 31 43.8	-0.6
	comp=Z,1.1nm,0.5s,baz=36,slow=4.3,SNR=9.5						
BRTR	**Keskin Array B**	**147.03**	**311**	PKPbc	**PKPbc**	**18 31 55.0**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=64,slow=1.9,SNR=4.9						

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*FUNV **20** 18:15:05.2, 8°.42N×71°.40W, h5^{km}, MW3.0*

ISC 20 18:15:04.9±1.2, **8°.44N**±0°.05×**71°.38W**±0°.03, **h12**^{km}±10^{km}, **n12, σ0^{s}.94**/20, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SOCV	**Socops**	**0.54**	**106**	*e*P	**Pg**	**18 15 15.5**	**0.0**
SOCV				*e*S	**Sg**	**18 15 24.0**	**+1.4**
SOCV	**Socops**	**0.54**	**106**	*e*P	**Pg**	**18 15 15.6**	**0.0**
SOCV				*e*S	**Sb**	**18 15 24.4**	**+0.3**
SDV	**Santo Domingo**	**0.86**	**59**	*e*P	**Pg**	**18 15 21.5**	**-0.1**
SDV				*e*S	**Sg**	**18 15 31.3**	**-1.6**
CAPV	**Capacho**	**1.09**	**238**	*e*P	**Pg**	**18 15 25.5**	**-0.4**
CAPV				*e*S	**Sg**	**18 15 39.2**	**-0.9**
PAMC	**Pamplona, Colo**	**1.70**	**230**	*e*P	**Pg**	**18 15 37.4**	**-0.3**
PAMC				*e*S	**Sg**	**18 16 00.7**	**+0.8**
OCAC	**Ocana**	**1.93**	**264**	*e*P	**Pn**	**18 15 38.6**	**+0.9**
OCAC				*e*S	**Sn**	**18 16 02.1**	**0.0**
CURV	**Curarigua**	**2.10**	**42**	*e*P	**Pn**	**18 15 41.6**	**+1.6**
SIQV	**Siquisique**	**2.69**	**35**	*e*P	**Pn**	**18 15 48.8**	**+0.7**
BAUV	**El Baul**	**3.34**	**81**	*e*P	**Pn**	**18 15 57.7**	**+0.7**
BAUV				*e*S	**Sn**	**18 16 35.8**	**-0.8**
MONV	**Montecano**	**3.76**	**22**	*e*P	**Pn**	**18 16 03.2**	**+0.4**
MONV				*e*S	**Sn**	**18 16 45.8**	**-1.2**
BENV	**Beln**	**4.03**	**68**	*e*P	**Pn**	**18 16 07.1**	**+0.6**
PAYV	**Puerto Ayacuch**	**4.76**	**129**	*e*P	**Pn**	**18 16 15.6**	**-0.9**

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*IDC **20** 18:30:55.6±5.5, 8°.47N×71°.31W, h20^{km}±38^{km}, mb3.2/2, mb1 3.7/4, mb1mx3.2/32, mbtmp3.6/4, ML2.9/2, Error ellipse: s-maj=37.0km s-min=21.9km az=148.0*

*FUNV **20** 18:30:55.3, 8°.51N×71°.33W, h1^{km}, MW3.8*

ISC 20 18:30:54.8±1.4, **8°.51N**±0°.05×**71°.29W**±0°.04, **h11**^{km}±10^{km}, **n30, σ1^{s}.28**/34, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SOCV	**Socops**	**0.48**	**118**	*e*P	**Pg**	**18 31 04.9**	**+0.6**
SOCV				*e*S	**Sb**	**18 31 13.1**	**+0.6**
SDV	**Santo Domingo**	**0.75**	**60**	Pg	**Pb**	**18 31 09.9**	**0.0**
	baz=293,slow=15						
SDV				Lg	Lg	18 31 21.5	
	baz=327,slow=17						
SDV				LR	LR	18 31 44.6	
	comp=Z,438nm,20.6s,baz=287,slow=63						
CAPV	**Capacho**	**1.20**	**238**	*e*S	**Sg**	**18 31 33.5**	**-0.1**
MCQV	**Machiques**	**1.96**	**321**	*e*P	**Pn**	**18 31 29.1**	**+1.1**
MCQV				*e*S	**Sn**	**18 31 53.5**	**+0.8**
CURV	**Curarigua**	**1.99**	**41**	*e*P	**Pb**	**18 31 30.4**	**-0.7**
CURV				*e*S	**Sn**	**18 31 55.1**	**+1.7**
ELOV	**Elorza**	**2.33**	**130**	*e*P	**Pn**	**18 31 34.5**	**+1.3**
ELOV				*e*S	**Sn**	**18 32 03.4**	**+1.5**
SIQV	**Siquisique**	**2.58**	**34**	*e*P	**Pn**	**18 31 37.5**	**+1.0**
SIQV				*e*S	**Sn**	**18 32 09.0**	**+1.0**
BARC	**Barichara**	**2.68**	**225**	*e*P	Pn	18 31 26.1	-12
SMLC	**San Martn de**	**2.77**	**276**	*e*S	**Sn**	**18 32 14.4**	**+1.8**
BRRC	**Barranca, Sant**	**2.78**	**240**	*e*P	Pn	18 31 26.1	-13
RUSC	**La Rusia**	**3.15**	**215**	*e*P	Pn	18 31 31.5	-13
BAUV	**El Baul**	**3.24**	**82**	*e*P	**Pn**	**18 31 47.2**	**+1.6**
BAUV				*e*S	**Sn**	**18 32 25.1**	**+0.9**
JACV	**Jacura**	**3.52**	**43**	*e*P	**Pn**	**18 31 50.0**	**+0.4**
MONV	**Montecano**	**3.66**	**21**	*e*P	**Pn**	**18 31 52.0**	**+0.6**
MONV				*e*S	**Sn**	**18 32 33.9**	**-0.7**
BENV	**Beln**	**3.92**	**68**	*e*P	**Pn**	**18 31 56.4**	**+1.3**
BENV				*e*S	**Sn**	**18 32 41.2**	**+0.1**
SJCC	**San Jacinto, C**	**4.08**	**290**	*e*P	**Pn**	**18 31 57.1**	**-0.2**
MOTC	**Monteria, Cord**	**4.34**	**274**	*e*P	Pn	18 31 53.0	-7.7
ROSC	**El Rosal**	**4.73**	**220**	Pn	**Pn**	**18 32 07.5**	**+1.1**
	3.5nm,0.3s,baz=114,slow=23,SNR=5.3						
CARV	**Caracas**	**4.73**	**65**	*e*P	**Pn**	**18 32 06.8**	**+0.5**
PAYV	**Puerto Ayacuch**	**4.74**	**130**	*e*P	**Pn**	**18 32 07.1**	**+0.9**
CACV	**CAICARA DEL OR**	**4.79**	**101**	*e*P	**Pb**	**18 32 15.5**	**-3.4**
MERV	**Las Mercedes**	**4.99**	**81**	*e*P	**Pn**	**18 32 10.4**	**+0.7**
BIRV	**Birongo**	**5.32**	**68**	*e*P	**Pn**	**18 32 14.7**	**+0.4**
PRGV	**PARIAGUAN**	**6.57**	**87**	*e*P	**Pn**	**18 32 31.6**	**+0.1**
PCRV	**Puerto La Cruz**	**6.77**	**75**	Pn	**Pn**	**18 32 37.0**	**+2.8**
	1.3nm,0.3s,baz=207,slow=9.0,SNR=1.7						
PCRV	**Puerto La Cruz**	**6.77**	**75**	*e*P	**Pn**	**18 32 34.9**	**+0.6**
TXAR	**Lajitas Array**	**36.77**	**309**	P	**P**	**18 38 02.0**	**-0.7**
	0.1nm,0.4s,baz=116,slow=8.1,SNR=2.1						
PDAR	**Pinedale Array**	**47.83**	**322**	P	**P**	**18 39 33.1**	**+0.2**
	0.5nm,0.5s,baz=128,slow=13,SNR=5.1						
ASAR	**Alice Springs**	**151.56**	**235**	PKPbc	**PKPbc**	**18 50 48.6**	**-1.5**
	0.5nm,0.8s,baz=112,slow=3.2,SNR=5.3						
WRA	**Warramunga Arr**	**152.73**	**243**	PKPbc	**PKPbc**	**18 50 51.2**	**-1.6**
	0.6nm,0.5s,baz=110,slow=2.9,SNR=8.9						

IDC 20 18:32:47.7±1.5, **0°.81N**×**127°.26E, h0**^{km}, **mb3.9**/4, **mb1 4.0**/5, **mb1mx3.6**/34, **mbtmp3.8**/5, **ML2.9**/1, **MS3.7**/2, **Ms1 3.7**/2, **ms1mx2.5**/32, **Error ellipse: s-maj=60.6km s-min=23.8km az=61.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SIJI	**Sorong**	**4.34**	**113**	Pn	Pn	18 33 54.1	-0.9
	0.6nm,0.3s,baz=284,slow=23,SNR=2.9						
GUMO	**Guam**	**21.56**	**53**	LR	LR	18 44 37.9	
	comp=Z,180nm,20.4s,baz=106,slow=33						
WRA	**Warramunga Arr**	**21.76**	**162**	P	P	18 37 41.1	0.0
	2.5nm,0.6s,baz=340,slow=11,SNR=20						
ASAR	**Alice Springs**	**25.17**	**166**	P	P	18 38 15.8	+0.8
	3.1nm,0.8s,baz=342,slow=9.1,SNR=28						
STKA	**Stephens Creek**	**35.23**	**159**	P	P	18 39 43.2	-0.8
	2.1nm,0.9s,baz=338,slow=5.4,SNR=3.1						
PETK	**Petropavlovsk-**	**57.93**	**21**	LR	LR	19 04 04.8	
	comp=Z,83nm,21.7s,baz=68,slow=32						
MKAR	**Makanchi Array**	**60.25**	**326**	P	P	18 42 57.8	-0.1
	0.5nm,0.6s,baz=123,slow=7.1,SNR=5.6						

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*FUNV **20** 18:38:38.7, 8°.50N×71°.35W, h1^{km}, MW3.0*

ISC 20 18:38:37.5±1.3, **8°.49N**±0°.04×**71°.34W**±0°.02, **h8**^{km}±11^{km}, **n24, σ1^{s}.34**/39, **1D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SOCV	**Socops**	**0.52**	**113**	*e*P	**Pg**	**18 38 48.1**	**+0.5**
SOCV				*e*S	**Sb**	**18 38 56.9**	**+0.2**
SOCV	**Socops**	**0.52**	**113**⇓	*e*P	**Pg**	**18 38 48.2**	**+0.5**
SOCV				*e*S	**Sb**	**18 38 56.7**	**0.0**
SDV	**Santo Domingo**	**0.81**	**60**	*e*P	**Pb**	**18 38 53.3**	**-0.6**
SDV				*e*S	**Sb**	**18 39 05.0**	**-0.1**
CAPV	**Capacho**	**1.14**	**237**	*e*S	**Sn**	**18 39 16.1**	**0.0**
PAMC	**Pamplona, Colo**	**1.76**	**230**	*e*P	**Pn**	**18 39 09.1**	**+0.2**
PAMC				*e*S	**Sb**	**18 39 32.8**	**-0.1**
MCQV	**Machiques**	**1.95**	**323**	*e*P	**Pb**	**18 39 12.6**	**-0.8**
OCAC	**Ocana**	**1.97**	**263**	*e*P	**Pn**	**18 39 11.2**	**-0.2**
CURV	**Curarigua**	**2.04**	**42**	*e*P	**Pb**	**18 39 14.1**	**-0.8**
TAMC	**Tame, Arauca**	**2.08**	**192**	*e*S	**Sg**	**18 39 44.5**	**-0.1**
ELOV	**Elorza**	**2.36**	**129**	*e*P	**Pg**	**18 39 25.7**	**+2.9**
ELOV				*e*S	**Sg**	**18 39 52.8**	**-0.6**
ELOV	**Elorza**	**2.36**	**129**	*e*P	**Pb**	**18 39 18.8**	**-1.6**
ELOV				*e*S	**Sn**	**18 39 47.2**	**+1.4**
BARC	**Barichara**	**2.62**	**224**	*e*P	**Pb**	**18 39 23.6**	**-1.3**
BARC				*e*S	**Sb**	**18 39 59.2**	**+1.8**
SIQV	**Siquisique**	**2.63**	**35**	*e*P	**Pn**	**18 39 21.7**	**+1.3**
SIQV				*e*S	**Sn**	**18 39 52.9**	**+0.4**
SMLC	**San Martn de**	**2.72**	**277**	*e*P	**Pn**	**18 39 23.4**	**+1.8**
SMLC				*e*S	**Sn**	**18 39 56.0**	**+1.4**
RUSC	**La Rusia**	**3.10**	**214**	*e*P	**Pb**	**18 39 34.5**	**+1.2**
RUSC				*e*S	**Sg**	**18 40 15.5**	**-1.8**
BAUV	**El Baul**	**3.29**	**82**	*e*P	**Pn**	**18 39 30.9**	**+1.4**
BAUV				*e*S	**Sn**	**18 40 08.8**	**-0.1**
ZARC	**Zaragoza, Cauc**	**3.62**	**254**	*e*P	**Pn**	**18 39 34.6**	**+0.6**
ZARC				*e*S	**Sn**	**18 40 16.6**	**-0.4**
PTBC	**PUERTO BERRIO,**	**3.64**	**238**	*e*P	**Pb**	**18 39 39.6**	**-2.7**
PTBC				*e*S	**Sb**	**18 40 25.2**	**-1.4**
MONV	**Montecano**	**3.70**	**21**	*e*P	**Pn**	**18 39 35.7**	**+0.6**
MONV				*e*S	**Sn**	**18 40 17.1**	**-1.8**
BENV	**Beln**	**3.98**	**68**	*e*P	**Pn**	**18 39 40.3**	**+1.4**
BENV				*e*S	**Sn**	**18 40 25.0**	**-0.8**
MOTC	**Monteria, Cord**	**4.29**	**274**	*e*P	**Pn**	**18 39 42.9**	**-0.2**
PAYV	**Puerto Ayacuch**	**4.76**	**130**	*e*P	**Pn**	**18 39 49.6**	**-0.1**

CACV	CAICARA DEL OR	4.84	101	eP	Pb	18 39 59.2	-3.5
BIRV	Birongo	5.38	68	eP	Pn	18 39 58.8	+0.6

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*KRNET **20** 18:42:18.1±0.1, 40°.37N×73°.23E, h14^{km}, mb3.4*
*ISU **20** 18:42:18, 40°.30N×73°.20E, h0^{km}*
*KNET **20** 18:42:19.9±0.5, 40°.47N×73°.30E, h9^{km}±4^{km}, ml3.1, Error ellipse: s-maj=6.6km s-min=3.7km az=87.0*
*SOME **20** 18:42:19.2, 40°.53N×73°.27E, h0^{km}*
*NNC **20** 18:42:22.3±1.4, 40°.57N×73°.24E, h0^{km}, mb3.6, mpv3.3, Error ellipse: s-maj=11.1km s-min=6.5km az=173.0*
ISC 20 18:42:17.1±1.1, **40°.42N**±0°.02×**73°.30E**±0°.02, **h2**^{km}±11^{km}, **n61**, σ1^{s}.**25**/105, **36C-12D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	Osh	0.40	285	eP	Pg	18 42 25.0	+0.2
OHH				eS	Sg	18 42 31.0	+0.9
OHH	Osh baz=94	0.40	285	⇑iP	Pg	18 42 25.0	+0.2
OHH	baz=94			⇑iS	Sg	18 42 30.2	+0.1
SFK	Sufi-Kurgan	0.44	159	eP	Pg	18 42 26.0	+0.6
SFK				eS	Sg	18 42 31.0	-0.1
SFK	Sufi-Kurgan baz=49	0.44	159	⇑eP	Pg	18 42 25.7	+0.3
SFK	baz=49			⇑eS	Sg	18 42 31.9	+0.8
SALK	Salom-Alik baz=41	0.61	41	⇓eP	Pb	18 42 31.2	+0.6
SALK	baz=41			⇓eS	Sb	18 42 40.6	+0.9
ANR	Andizhan	0.79	296	eP	Pb	18 42 34.0	+0.5
ANR				eS	Sb	18 42 45.0	+0.3
FRG	Fergana	1.16	268	eP	Pn	18 42 42.0	+1.7
FRG				eS	Sb	18 42 55.0	-0.3
DRK	Karamyk baz=31	1.48	231	⇑iP	Pn	18 42 44.7	-0.4
DRK	baz=31			⇑iS	Sb	18 43 03.8	-1.2
AML	Almayashu 106nm,0.2s,SNR=151	1.74	10	⇑P	Pg	18 42 51.6	+1.2
AML	237nm,0.3s			⇑S	Sg	18 43 16.2	+3.3
AML	Almayashu baz=11	1.74	10	⇑iP	Pg	18 42 51.2	+0.8
AML	baz=11			⇑iS	Sg	18 43 15.3	+2.4
MINT	Mingtut	1.77	272	eP	Pg	18 42 51.0	0.0
MINT				eS	Sg	18 43 15.0	+1.0
BTK	Batken	1.93	260	eP	Pb	18 42 53.0	-0.1
BTK				eS	Sg	18 43 19.0	-0.1
BTK	Batken baz=61	1.93	260	⇑eP	Pb	18 42 52.5	-0.6
BTK	baz=61			⇑iS	Sb	18 43 17.3	-0.4
TRKS	Terek-Say baz=6.0	1.97	305	⇓iP	Pb	18 42 53.0	-0.9
TRKS	baz=6.0			⇓iS	Sb	18 43 18.5	-0.5
UCH	Uchtor 6.6nm,0.1s,SNR=23	2.03	27	⇓P	Pg	18 42 56.6	+0.7
UCH	74nm,0.4s			⇑S	Sg	18 43 25.2	+3.0
UCH	Uchtor baz=27	2.03	27	⇑iP	Pg	18 42 55.9	0.0
UCH	baz=27			⇑iS	Sg	18 43 22.7	+0.5
MNAS	Manas baz=46	2.15	344	⇓iP	Pb	18 42 57.3	+0.4
MNAS	baz=46			⇓iS	Sg	18 43 25.5	-0.7
EKS2	Erkin-Say 7.0nm,0.2s,SNR=11	2.27	9	⇑P	Pg	18 42 59.9	-0.7
EKS2	44nm,0.2s			⇑S	Sg	18 43 30.5	+0.5
EKS2	Erkin-Say baz=10.0	2.27	9	⇑iP	Pb	18 42 59.2	+0.3
EKS2	baz=10.0			⇑iS	Sg	18 43 28.6	-1.4
MRKS	Merke 20nm,0.4s	2.33	359	eP	Pg	18 43 01.6	0.0
MRKS	192nm,0.3s			eS	Sg	18 43 33.0	+1.3
MRKS	Merke 20nm,0.4s	2.33	359	Pg	Pg	18 43 01.6	0.0
MRKS	192nm,0.3s			Lg	Lg	18 43 33.0	
AAK	Ala-Archa SNR=16	2.39	22	P	Pb	18 43 01.8	+0.8
AAK	Ala-Archa 14nm,0.7s	2.39	22	⇓Pn	Pg	18 43 03.1	+0.1
AAK	84nm,0.9s			⇑Lg	Lg	18 43 34.9	
AAK	Ala-Archa baz=22	2.39	22	⇑iP	Pb	18 43 01.0	0.0
AAK	baz=22			⇑iS	Sb	18 43 31.5	+0.5
KBK	Karagaybulak 6.7nm,0.1s,SNR=11	2.56	28	⇑P	Pb	18 43 04.5	+0.7
KBK	Karagaybulak baz=29	2.56	28	⇓iP	Pb	18 43 03.4	-0.4
KBK	baz=29			⇓iS	Sb	18 43 35.5	-0.3
FRU1	Bishkek baz=23	2.59	22	⇑eP	Pb	18 43 04.0	-0.3
FRU1	baz=23			⇑iS	Sb	18 43 36.7	+0.1
GAR	Garm baz=39	2.70	239	⇑iP	Pn	18 43 03.4	+1.7
GAR	baz=39			⇑iS	Sn	18 43 35.8	+0.8
CHMS	Chumysh baz=23	2.80	22	⇑iP	Pb	18 43 06.7	-1.1
CHMS	baz=23			⇑iS	Sb	18 43 41.1	-1.5
CHRV	Charvak	2.81	297	eP	Pn	18 43 05.0	+1.9
CHRV				eS	Sg	18 43 45.0	-2.3
ULHL	Ulahol 2.8nm,0.2s,SNR=8.8	2.87	50	⇑P	Pb	18 43 07.9	-1.3
ULHL	Ulahol baz=50	2.87	50	⇓eP	Pb	18 43 07.8	-1.4
ULHL	baz=50			⇓iS	Sb	18 43 43.0	-1.9
DZA	Taraz 22nm,0.1s	2.88	330	eP	Pg	18 43 11.4	-0.8
DZA	154nm,0.1s			eS	Sg	18 43 49.3	-0.2
DZA	Taraz 36nm,0.2s	2.88	330	Pg	Pg	18 43 11.4	-0.8
DZA	151nm,0.4s			Lg	Lg	18 43 49.3	
USP	Ospenovka baz=18	2.98	17	⇑iP	Pb	18 43 09.2	-1.8
USP	baz=18			⇑iS	Sb	18 43 45.6	-2.4
TAS	Tashkent	3.17	288	eS	Sg	18 43 57.0	-1.7
KST	Kastek 3.5nm,0.1s	3.29	36	eP	Pg	18 43 20.7	+0.5
KST	19nm,0.4s			eS	Sg	18 44 05.1	+2.2
KST	Kastek 6.4nm,0.8s	3.29	36	Pg	Pg	18 43 20.7	+0.5
KST	19nm,0.4s			Lg	Lg	18 44 05.1	
CHM	Chimkent 5.4nm,0.5s	3.37	306	eP	Pg	18 43 20.9	-0.6
CHM	156nm,0.3s			eS	Sg	18 44 05.2	0.0
DGS	Degeres 1.4nm,0.1s	3.37	32	eP	Pg	18 43 21.9	+0.2
DGS	25nm,0.3s			eS	Sg	18 44 07.5	+2.1
DGS	Degeres 6.6nm,0.5s	3.37	32	Pg	Pg	18 43 22.0	+0.2
DGS	25nm,0.7s			Lg	Lg	18 44 07.5	
KDJ	Kajisay baz=58	3.39	58	⇑iP	Pb	18 43 15.0	-3.0
KDJ	baz=58			⇑iS	Sb	18 43 55.9	-3.9
MTBS	Maitube 1.7nm,0.1s	3.58	40	eP	Pg	18 43 25.5	-0.2
MTBS	19nm,0.1s			eS	Sg	18 44 13.2	+1.1
MTBS	Maitube 5.9nm,0.7s	3.58	40	Pg	Pg	18 43 25.5	-0.2
MTBS	12nm,0.5s			Lg	Lg	18 44 13.2	
CHGR	Chuyangaron baz=43	3.65	243	⇑eP	Pn	18 43 16.7	+2.0
CHGR	baz=43			⇑iS	Sn	18 43 58.7	+0.3
TNSS	Tian-Shan 3.8nm,0.5s	3.78	45	eP	Pg	18 43 29.4	-0.1
TNSS	11nm,0.1s			eS	Sg	18 44 19.9	+1.3
TNSS	Tian-Shan 3.8nm,0.5s	3.78	45	Pg	Pg	18 43 29.4	-0.1
TNSS	8.4nm,0.4s			Lg	Lg	18 44 19.9	
MDOK	Medeo 7.5nm,1.2s	3.92	44	eP	Pg	18 43 31.9	-0.3
MDOK	12nm,0.9s			eS	Sg	18 44 24.0	+0.9
MDOK	Medeo 7.5nm,1.2s	3.92	44	Pg	Pg	18 43 31.9	-0.3
MDOK	12nm,0.9s			Lg	Lg	18 44 24.0	
KOTS	Kotyrbulak 1.8nm,0.1s	4.00	44	eP	Pg	18 43 33.8	0.0
KOTS	29nm,0.2s			eS	Sg	18 44 27.6	+1.9
KOTS	Kotyrbulak 4.5nm,0.5s	4.00	44	Pg	Pg	18 43 33.8	0.0
KOTS	32nm,0.6s			Lg	Lg	18 44 27.6	
KUU	Kurty 1.3nm,0.3s	4.14	32	eP	Pg	18 43 35.3	-1.2
KUU	24nm,0.2s			eS	Sg	18 44 29.9	-0.2
KUU	Kurty 3.6nm,0.8s	4.14	32	Pg	Pg	18 43 35.3	-1.2
KUU	20nm,0.6s			Lg	Lg	18 44 30.0	
KTBS	Karatobe 2.2nm,0.6s	4.14	36	eP	Pg	18 43 35.4	-1.0
KTBS	27nm,0.1s			eS	Sg	18 44 30.3	+0.1
KTBS	Karatobe 2.2nm,0.6s	4.14	36	Pg	Pg	18 43 35.4	-1.0
KTBS	27nm,0.5s			Lg	Lg	18 44 30.3	
CHKK	Chushkaly 0.6nm,0.2s	4.39	37	eP	Pg	18 43 40.0	-1.3
CHKK	15nm,0.4s			eS	Sg	18 44 38.6	+0.4
CHKK	Chushkaly 1.7nm,0.4s	4.39	37	Pg	Pg	18 43 40.0	-1.3
CHKK	15nm,0.4s			Lg	Lg	18 44 38.6	
SATY	Saty 2.4nm,0.1s	4.64	54	eP	Pg	18 43 45.4	-0.7
SATY	11nm,0.3s			eS	Sg	18 44 47.0	+0.8
BTLS	Baital 2.0nm,0.8s	4.65	7	eP	Pg	18 43 43.6	-2.6
BTLS	9.5nm,0.8s			eS	Sg	18 44 44.1	-2.4
BTLS	Baital 2.0nm,0.8s	4.65	7	Pg	Pg	18 43 43.6	-2.6
BTLS	9.5nm,0.8s			Lg	Lg	18 44 44.1	
UZB	Uzynbulak 2.3nm,0.1s	5.08	56	eP	Pg	18 43 52.9	-1.4
UZB	7.9nm,0.2s			eS	Sg	18 44 59.9	-0.2

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*REN **20** 18:48:07.5±2.0, 36°.52N±0°.03×113°.53W±0°.05, h12^{km}±5^{km}, Error ellipse: s-maj=6.5km s-min=4.5km az=111.0*
*NEIC **20** 18:48:07.2±2.0, 36°.51N±0°.03×113°.54W±0°.03, h9^{km}±8^{km}, ML2.9/93, ML2.8/7(REN), Error ellipse: s-maj=4.5km s-min=3.7km az=184.0*
*ANF **20** 18:48:07.0±1.3, 36°.48N×113°.52W, h4^{km}±10^{km}, ML3.1/20, Error ellipse: s-maj=4.0km s-min=2.9km az=149.0*
ISC 20 18:48:06.6±1.3, **36°.53N**±0°.02×**113°.52W**±0°.02, **h1**^{km}±14^{km}, **n69**, σ1^{s}.**38**/78, **Western Arizona**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCMT	Little Creek M	0.53	24		Pg	18 48 17.8	+0.9
LCMT				IAML		18 48 26.5	
LCMT	comp=N,526nm,0.2s			IAML		18 48 29.3	
	comp=E,695nm,0.2s						
LCMT	Little Creek M	0.53	24		Sg	18 48 25.6	+1.9
ICU	Indian Springs	0.70	332		Pg	18 48 21.2	+1.1
ICU					Sb	18 48 31.1	-0.9
KNB	Kanab	0.74	48		Pg	18 48 21.7	+0.9
KNB					Sb	18 48 32.7	-0.5
KNB	Kanab comp=N,524nm,0.2s	0.74	48	IAML		18 48 32.9	
KNB	comp=E,339nm,0.5s			IAML		18 48 34.4	
U15A	North Rim	0.99	95		Pg	18 48 25.6	0.0
CCUT	Cedar City	1.03	7		Pg	18 48 27.4	+1.0
CCUT					Sb	18 48 41.4	-0.1
SZCU	Shurtz Canyon	1.12	18		Pb	18 48 28.8	-0.1
SZCU	comp=N,382nm,0.2s			IAML		18 48 47.0	
SHPR	Sheep Range	1.32	270		Pn	18 48 30.8	-1.6
SHPR	comp=E,167nm,0.6s			IAML		18 48 50.6	
PKCU	Pink Cliffs	1.33	46		Pb	18 48 32.6	+0.1
PKCU	comp=N,299nm,0.3s			IAML		18 48 53.9	
W13A	Hualapai Mount	1.45	192		Pn	18 48 32.5	-1.7
W13A	comp=E,111nm,0.2s			IAML		18 48 52.4	
W13A	comp=N,156nm,0.4s			IAML		18 48 54.0	
PRN	Pahroc Range	1.51	306	Pn	Pb	18 48 35.2	-0.3
MTPU	Mount Pierson	1.85	35		Pb	18 48 41.3	-0.2
MTPU	comp=E,96nm,0.7s			IAML		18 49 10.9	
MTPU	comp=N,111nm,0.8s			IAML		18 49 12.2	
NEE2	Needles Airpor baz=26	1.97	207	Pb	Pb	18 48 43.0	-0.3
NEE2	baz=26			Sb	Sb	18 49 08.5	+0.2
WUAZ	Wupatki baz=300,SNR=85	2.01	119	P	Pn	18 48 42.1	+0.3
WUAZ	baz=300			S	Sb	18 49 08.2	-1.3
WUAZ	Wupatki	2.01	119		Pn	18 48 42.0	+0.3
PSUT	Pine Spring	2.02	352		Pn	18 48 41.8	-0.3
MVU	Marysvale	2.23	27		Pb	18 48 46.5	-1.4
TUQ	Turquoise Moun baz=60,SNR=9.3	2.23	242	Pb	Pb	18 48 47.4	-0.5
TUQ	baz=60			Sb	Sb	18 49 16.7	+0.6
TCRU	Three Creeks R	2.25	22		Pb	18 48 47.6	-0.6
TCRU	comp=E,57nm,0.8s			IAML		18 49 27.4	
TCRU	comp=N,48nm,0.7s			IAML		18 49 33.0	
MSU	Marysvale	2.25	28		Pn	18 48 43.9	-1.3
PDMCI	Parker Dam,Lak baz=12	2.27	193	Sb	Sb	18 49 17.3	+0.2
SHOC	Shoshone, Teco baz=74	2.32	255	Sb	Sb	18 49 19.0	+0.7
R11A	Troy Canyon, C baz=138,SNR=24	2.46	318	Pb	Pb	18 48 51.7	0.0
R11A	baz=138			Sb	Sg	18 49 24.4	-1.1
R11A	Troy Canyon, C	2.46	318		Pn	18 48 47.5	-0.4
R11A	comp=E,38nm,0.3s			IAML		18 49 27.3	
GMRC	Granite Mounta baz=44	2.46	226	P	Pn	18 48 46.9	-1.1
GMRC	baz=44			Sb	Sb	18 49 23.2	+0.6
SPR3	Spring Creek 3	2.55	346	Pn	Pn	18 48 46.9	-2.5
GWY	Greenwater Val	2.57	263		Pn	18 48 49.4	-0.1
GWY	comp=E,43nm,0.6s			IAML		18 49 03.0	
GWY	comp=N,33nm,0.9s			IAML		18 49 39.0	
Y14A	Wickenburg	2.61	171		Pn	18 48 48.9	-1.1
Y14A	comp=N,48nm,0.2s			IAML		18 49 29.0	
Y14A	comp=E,53nm,0.4s			IAML		18 49 31.5	
FURC	Furnace Creek, baz=88	2.70	270	Pb	Pb	18 48 55.8	+0.2
X16A	Lo Mia Camp, P	2.70	141		Pn	18 48 50.8	-0.5
X16A	comp=N,40nm,0.5s			IAML		18 49 31.1	
X16A	comp=E,61nm,0.5s			IAML		18 49 32.4	
IRM	Iron Mountain baz=29	2.71	210	Sb	Sb	18 49 30.9	+1.3
QSM	Queen of Sheba	2.77	259		Pn	18 48 51.4	-0.6
HEC	Hector,Ludlow baz=53,SNR=6.3	2.85	234	P	Pn	18 48 52.1	-1.2
HEC	baz=53			Sb	Sg	18 49 36.3	-1.9
GSC	Goldstone, Bar	2.94	246		Pn	18 48 53.3	-1.1
GSC	comp=E,42nm,0.7s			IAML		18 49 44.3	
GSC	comp=N,25nm,0.8s			IAML		18 49 47.9	
Q16A	Castle Valley	3.03	37		Pn	18 48 54.5	-1.3
Q16A	comp=N,35nm,0.7s			IAML		18 49 46.2	
Q16A	comp=E,28nm,0.7s			IAML		18 49 53.3	
BELC	Belle Mtn. Jos baz=38	3.24	220	Sb	Sb	18 49 46.5	+1.6
MPMC	Manual Prospec baz=81	3.24	263	Pb	Pb	18 49 04.7	-0.4
BC3	Big Chuckawall baz=28	3.27	210	Sb	Sg	18 49 48.8	-3.0
TPH	Tonopah	3.34	299		Pn	18 48 59.9	-0.2
W18A	Petrified Fore baz=296	3.38	113	Pb	Pb	18 49 08.3	+1.0
W18A	baz=296			Sb	Sb	18 49 50.0	+1.1
W18A	Petrified Fore	3.38	113		Pn	18 49 00.1	-0.6
LCH	Last Change Ra	3.39	283		Pn	18 48 59.8	-0.9
SRU	San Rafael Swe	3.50	42		Pn	18 49 02.1	-0.3
SRU	comp=N,35nm,0.8s			IAML		18 49 58.6	
SRU	comp=E,36nm,0.7s			IAML		18 49 59.9	
X18A	Snowflake	3.52	123		Pn	18 49 01.6	-1.0
GLA	Glamis baz=17	3.63	198	Sb	Sb	18 49 58.9	+2.8
GLA	Glamis	3.63	198		Pn	18 49 01.9	-2.0
GLA	comp=N,22nm,0.7s			IAML		18 50 07.2	
P17A	Butcher Ranch,	3.67	36		Pn	18 49 02.7	-1.9
P17A	comp=N,21nm,1.0s			IAML		18 50 05.0	
P17A	comp=E,29nm,1.3s			IAML		18 50 05.7	
DUG	Dugway, Tooele baz=189	3.71	8	Sb	Sg	18 50 04.5	-1.2
DUG	Dugway, Tooele	3.71	8		Pn	18 49 04.4	-0.7
DUG	comp=E,12nm,2.1s			IAML		18 50 10.9	
113A	Mohawk Valley,	3.75	183	Pn	Pn	18 49 04.1	-1.5
113A	comp=N,15nm,0.9s			IAML		18 50 08.3	
PFO	Pinyon Flats O baz=39	3.78	221	Sb	Sb	18 50 03.5	+3.0
PFO	Pinyon Flats O	3.78	221	Pn	Pn	18 49 05.3	-0.8
EDW2	Edwards Air Fo baz=64	4.00	247	Sb	Sb	18 50 10.5	+3.8
P18A	Preston Nutter	4.03	39		Pn	18 49 08.3	-1.4
P18A	comp=E,20nm,1.1s			IAML		18 50 18.7	
P18A	comp=N,23nm,1.1s			IAML		18 50 21.4	
MVCO	Mesa Verde baz=262	4.08	79	Sb	Sb	18 50 12.7	+3.4
MVCO	Mesa Verde	4.08	79		Pn	18 49 10.6	+0.3
ISA	Isabella, Lake	4.11	259		Pn	18 49 10.9	+0.4
NV11	Mina Array Sit	4.15	299	Pn	Pn	18 49 11.3	0.0
NV11	comp=N,12nm,4.5s			IAML		18 50 36.5	
MURC	Murrieta baz=45	4.20	227	Sb	Sb	18 50 15.8	+3.4
LHV	Little Huntoon	4.33	295		Pn	18 49 14.5	+1.0
LHV	comp=N,12nm,2.5s			IAML		18 50 26.6	
KVN	Kaiserville	4.42	306		Pn	18 49 13.6	-1.4
KVN	comp=E,8.1nm,0.9s			IAML		18 50 34.8	
ELK	Elko	4.42	343	Pn	Pn	18 49 13.0	-2.1
RYN	Ryan	4.50	299		Pn	18 49 16.4	+0.4
RYN	comp=E,10nm,0.9s			IAML		18 50 35.5	
RYN	comp=N,11nm,0.5s			IAML		18 50 38.8	
MDPB	Devils Postpil	4.58	286	Pn	Pn	18 49 17.4	+0.1
MDPB	comp=N,6.4nm,4.7s			IAML		18 50 35.7	
214A	Organ Pipe Nat	4.59	173	Pn	Pn	18 49 15.4	-1.8
214A	comp=E,10nm,0.5s			IAML		18 50 31.3	
214A	comp=N,13nm,1.2s			IAML		18 50 35.9	
BAR	Barrett	4.63	215	Pn	Pn	18 49 17.8	0.0
BAR	comp=E,9.4nm,4.5s			IAML		18 50 13.1	
BAR	comp=N,9.2nm,4.3s			IAML		18 51 32.7	
TUC	Tucson	4.77	151	Pn	Pn	18 49 19.7	0.0
TUC	comp=N,6.2nm,4.2s			IAML		18 50 08.9	
TUC	comp=N,6.2nm,4.7s			IAML		18 50 59.7	
RDMU	Red Mountain	5.09	36		Pn	18 49 22.1	-2.1

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*SJA **20** 18:56:30±3.0, 23°.10S±0°.07×66°.7W±0°.1, h229^{km}±6^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=160.0*
*NEIC **20** 18:56:30.8±2.3, 23°.14S±0°.07×66°.7W±0°.1, h212^{km}±8^{km}, mb4.0/8, Md3.7(SJA), Error ellipse: s-maj=14.2km s-min=10.3km az=79.0*
*GUC **20** 18:56:31.2±0.5, 23°.09S×66°.95W, h250^{km}, ML4.0*
*IDC **20** 18:56:37.9±11.0, 22°.05S×66°.43W, h250^{km}±83^{km}, mb3.3/2, mb1 3.5/3, mb1mx3.3/16, mbtmp4.0/3, Error ellipse: s-maj=125.5km s-min=27.6km az=19.0*
ISC 20 18:56:30.1±0.7, **23°.12S**±0°.05×**66°.73W**±0°.07, **h223**^{km}±8^{km}, **n50**, σ1^{s}.**28**/62, **mb4.0**/5, **12C-2D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLA	San Lorenzo	1.95	145	⇓iP	Pn	18 57 10.9	+0.8
LVC	Limon Verde	2.07	284	⇑iP	Pn	18 57 12.5	+1.1
LVC				iS	S	18 57 44.0	+0.5
LVC	Limon Verde	2.07	284		Pn	18 57 12.6	+1.1
PB15	IPOC Station P	2.52	267	⇑iP	Pn	18 57 17.1	+1.2
PB15				iS	S	18 57 52.1	+0.6
PB15	IPOC Station P	2.52	267		Pn	18 57 17.0	+1.0
PB06	IPOC Station P	2.65	278	⇑iP	Pn	18 57 18.1	+0.9
PB06				iS	S	18 57 53.9	-0.1
PB06	comp=N,355nm,0.5s			IAML		18 57 54.8	
PB06	IPOC Station P	2.65	278		Pn	18 57 18.3	+1.0
PB09	IPOC Station P	2.67	299	⇑iP	Pn	18 57 19.1	+1.6
PB09				iS	S	18 57 55.3	+1.0
PB09	comp=N,177nm,0.3s			IAML		18 57 58.4	
PB09	IPOC Station P	2.67	299		Pn	18 57 19.0	+1.6
PB03	IPOC Station P	2.99	290	⇑iP	Pn	18 57 21.8	+0.8
PB03				iS	S	18 57 60.0	-0.7
PB05	IPOC Station P	3.21	274	⇑iP	Pn	18 57 24.3	+0.8
PB05				iS	S	18 58 04.3	-0.9
PB07	IPOC Station P	3.23	295	⇑iP	Pn	18 57 24.6	+0.8
PB07				iS	S	18 58 04.7	-1.1
PB07	IPOC Station P	3.23	295		Pn	18 57 24.5	+0.7
PB04	IPOC Station P	3.25	283	⇑iP	Pn	18 57 24.9	+0.8
PB04				iS	S	18 58 05.2	-0.9
PB04	IPOC Station P	3.25	283		Pn	18 57 24.7	+0.6
PB01	IPOC Station P	3.29	308	⇑iP	Pn	18 57 25.0	+0.7
PB01				iS	S	18 58 06.3	-0.5
PB01	IPOC Station P	3.29	308		Pn	18 57 25.1	+0.7
PB02	IPOC Station P	3.44	301	⇑iP	Pn	18 57 26.6	+0.5
PB02				iS	S	18 58 08.6	-1.4
PB10	IPOC Station P	3.54	263		Pn	18 57 28.2	+1.0
PB14	IPOC Station P	3.68	245	⇑iP	Pn	18 57 30.0	+0.7

PB14				*i* S	S	18 58 14.4	-1.1
PB14	IPOC Station P	3.68	245		Pn	18 57 29.7	+0.5
PB08	IPOC Station P	3.72	322	⇑*i*P	Pn	18 57 31.3	+1.5
PB08				*i* S	S	18 58 17.3	+0.7
PB08	IPOC Station P	3.72	322		Pn	18 57 30.8	+1.0
TA01	Diego Aracena	4.09	308	*e*P	Pn	18 57 34.2	+0.4
TA01				*i* S	S	18 58 21.3	-2.6
TA01	Diego Aracena	4.09	308		Pn	18 57 33.2	-0.7
TA02	Huaiquique	4.24	311	Pn	Pn	18 57 35.1	-0.6
AC02	Maricunga	4.29	210	⇓*i*P	Pn	18 57 37.7	+0.9
AC02				*e*S	S	18 58 30.7	+1.4
AC02	Maricunga	4.29	210		Pn	18 57 37.7	+0.9
PB11	IPOC Station P	4.31	320	Pn	Pn	18 57 36.2	-0.5
PB16	IPOC Station P	5.42	331		Pn	18 57 51.9	+0.9
GO03	Copiap	5.47	215	Pn	Pn	18 57 50.0	-1.0
PB12	IPOC Station P	5.60	322		Pn	18 57 50.9	-2.0
AC04	Llanos de Chal	6.40	217	Pn	Pn	18 57 59.2	-3.7
BO02	Sierra Bellavi	12.16	196	Pn	Pn	18 59 17.4	+1.0
TRCB	Terra Rica	12.99	91	Pn	Pn	18 59 27.1	+0.2
ITAB	Concordia	13.84	110	Pn	Pn	18 59 36.1	-1.2
PLTB	Pedras Altas	14.48	129	Pn	Pn	18 59 43.3	-1.8
SAML	Samuel	14.49	14	Pn	Pn	18 59 44.4	-1.0
TRQA	Tornquist	15.44	166	P	P	18 59 52.8	-3.6
TRQA				IAmb	IAmb	19 00 14.1	
	comp=Z,5.8nm,1.2s						
BDFB	Brasilia	19.15	70	P	P	19 00 36.6	-0.4
	comp=Z,0.5nm,0.3s,baz=234,slow=12,SNR=7.9						
BDFB	Brasilia	19.15	70	IAmb	IAmb	19 00 38.0	
	comp=Z,9.4nm,0.8s						
BOAV	Boa Vista	26.07	14	P	P	19 01 43.3	-0.1
BOAV				IAmb	IAmb	19 01 51.1	
	comp=Z,4.1nm,1.3s						
MOTC	Monteria, Cord	32.88	344	P	P	19 02 42.8	-0.6
SNAA	Sanae	60.10	161	P	P	19 06 15.0	+1.3
SNAA				IAmb	IAmb	19 06 34.5	
	comp=Z,5.1nm,1.3s						
TORD	Torodi Ar. Bea	76.02	69	P	P	19 07 54.6	+1.2
	comp=Z,0.6nm,0.5s,baz=260,slow=5.3,SNR=8.2						
TORD	Torodi Ar. Bea	76.02	69	IAmb	IAmb	19 07 56.1	
	comp=Z,2.1nm,1.2s						
PDAR	Pinedale Array	76.52	329	P	P	19 07 56.4	+0.5
	comp=Z,0.6nm,0.7s,baz=121,slow=7.1,SNR=4.1						
HLID	Hailey	79.48	327	P	P	19 08 14.5	+2.4
PLID	Pearl Lake	81.37	327	P	P	19 08 24.0	+1.9
PLID				IAmb	IAmb	19 08 25.8	
	comp=Z,2.4nm,0.8s						
MKAR	Makanchi Array	145.69	39	PKP	PKPab	19 15 44.1	+0.7
	comp=Z,0.7nm,0.6s,baz=333,slow=2.7,SNR=10						

INET ***20*** *18:57:57.7, 10°.27N×84°.34W, h69^{km}, MW3.2*

UCR 20 18:58:01.3±1.2**, 10°.11N×84°.38W, h78^{km}±3^{km}, MW4.2, 1C-12D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRA1	San Ramn	0.10	256	*e*P	Pn	18 58 12.5	-0.3
HDC	Heredia	0.29	112	*e*P	Pn	18 58 13.2	-0.2
FORC	Fortuna	0.45	322	⇓*i*P	Pn	18 58 14.6	0.0
FORC				*i* S	Sn	18 58 25.2	+0.9
CASO	Castillo	0.47	313	⇓*i*P	Pn	18 58 14.7	-0.1
CEDE	Laguna Cedeo	0.49	320	*e*P	Pn	18 58 15.0	+0.1
CEDE				⇓*i*P	Pn	18 58 15.0	+0.1
LCR2	La Lucha 2	0.52	134	*e*P	Pn	18 58 15.2	-0.1
LCR2				*e*S	Sn	18 58 26.3	+0.6
RAFA	San Farael, Vo	0.58	105	*e*P	Pn	18 58 16.4	+0.4
JTS	Las Juntas de	0.59	288	*e*P	Pn	18 58 15.4	-0.3
JTS				*e*S	Sn	18 58 26.7	+0.2
LAFE	Finca La Fe, P	0.60	240	*e*P	Pn	18 58 16.5	+0.7
COVE	Coope Vega, Sa	0.61	358	*e*P	Pn	18 58 15.3	-0.6
RIMA	Rio Macho	0.61	124	*e*P	Pn	18 58 16.1	-0.1
ACAL	Aguas Claras	0.83	309	⇓*i*P	Pn	18 58 18.4	+0.1
ACAL				*i* S	Sn	18 58 32.0	+1.0
PTEN	Parque Tenorio	0.85	315	⇓*i*P	Pn	18 58 18.5	-0.1
CUI	Cuipilapa	0.94	305	⇓*i*P	Pn	18 58 19.6	0.0
COLC	Colonia	0.98	304	⇓*i*P	Pn	18 58 20.0	0.0
HORNC	Hornillas	0.99	308	⇓*i*P	Pn	18 58 20.1	-0.1
EDDO	Dominical	0.99	149	*e*P	Pn	18 58 20.8	+0.6
EDDO				*e*S	Sn	18 58 35.2	+1.0
PEZE	Perez Zeledon,	1.00	136	*e*P	Pn	18 58 20.6	+0.2
VMAR	Armenia, Volca	1.01	314	*e*P	Pn	18 58 20.5	+0.1
LIM1	Limonal	1.04	304	⇓*i*P	Pn	18 58 20.7	-0.1
GUAI	GUAI	1.12	278	⇑*i*P	Pn	18 58 22.3	+0.6
INDI	Punta indio, G	1.13	258	*e*P	Pn	18 58 21.5	-0.3
BUAI	Buenos Aires	1.21	309	⇓*i*P	Pn	18 58 22.6	-0.2
LAPC	Finca la Perla	1.22	302	⇓*i*P	Pn	18 58 22.7	-0.3
GBS3	Finca Las Img	1.25	302	⇓*i*P	Pn	18 58 22.9	-0.5
SAJU	San Juanillo,	1.31	268	*e*P	Pn	18 58 23.7	-0.4
HZTE	Horizontes, Gu	1.34	297	*e*P	Pn	18 58 24.6	+0.1
EDBA	Buenos Aires	1.44	131	*e*P	Pn	18 58 26.0	+0.1
EDBA				*e*S	Sn	18 58 44.9	+0.5
EDPN	Palmar Norte	1.46	141	*e*P	Pn	18 58 26.7	+0.7
EDPN				*e*S	Sn	18 58 45.7	+0.9
POTG	Potrero Grande	1.63	130	*e*P	Pn	18 58 29.5	+1.1

IDC 20 18:58:13.1±4.8**, 7°.54S×124°.42E, h262^{km}±56^{km}, mb2.7**/1**, mb1 2.7**/5**, mb1mx2.4**/27**, mbtmp3.2**/5**, Error ellipse: s-maj=112.7km s-min=25.9km az=52.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	2.75	196	P	Pn	18 59 05.5	+1.7
	17nm,0.3s,baz=302,slow=9.5,SNR=33						
BATI				S	S	18 59 43.9	-0.1
	22nm,0.3s,baz=314,slow=20,SNR=16						
FITZ	Fitzroy Crossi	10.56	174	P	Pn	19 00 38.9	+0.3
	0.0nm,0.3s,baz=351,slow=13,SNR=0.7						
WRA	Warramunga Arr	15.63	143	P	P	19 01 38.8	-0.6
	0.1nm,0.3s,baz=319,slow=13,SNR=7.3						
ASAR	Alice Springs	18.44	151	P	P	19 02 10.2	+0.3
	0.1nm,0.3s,baz=332,slow=14,SNR=7.7						
MKAR	Makanchi Array	65.77	330	P	P	19 08 29.9	-0.3
	0.2nm,0.5s,baz=131,slow=6.4,SNR=1.7						

FUNV ***20*** *19:01:39.6, 8°.45N×71°.33W, h5^{km}, MW3.0*

ISC 20 19:01:38.6±1.6**, 8°.51N**±0°.03×**71°.30W**±0°.03**, h7^{km}**±12^{km}**, n22,** σ1^{s}.**34**/39**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.49	117	*e*P	Pg	19 01 48.5	+0.4
SOCV				*e*S	Sb	19 01 57.4	+0.4
SOCV	Socops	0.49	117	*e*P	Pg	19 01 48.5	+0.4
SOCV				*e*S	Sb	19 01 56.7	-0.3
SDV	Santo Domingo	0.75	60	*e*P	Pg	19 01 54.0	+0.9
SDV				*e*S	Sb	19 02 05.4	+0.6
CAPV	Capacho	1.20	238	*e*S	Sb	19 02 16.2	-1.3
PAMC	Pamplona, Colo	1.81	230	*e*P	Pn	19 02 10.7	-0.1
PAMC				*e*S	Sn	19 02 34.2	-0.1
CURV	Curarigua	1.99	41	*e*P	Pn	19 02 13.6	+0.8
CURV				*e*S	Sb	19 02 40.5	+0.2
OCAC	Ocana	2.02	262	*e*P	Pn	19 02 11.8	-1.5
OCAC				*e*S	Sn	19 02 36.4	-2.5
TAMC	Tame, Arauca	2.12	193	*e*P	Pb	19 02 18.6	+1.2
TAMC				*e*S	Sb	19 02 45.7	+1.7
ELOV	Elorza	2.34	130	*e*S	Sb	19 02 51.5	+1.2
ELOV	Elorza	2.34	130	*e*P	Pn	19 02 16.9	-0.6
ELOV				*e*S	Sn	19 02 46.4	-0.2
SIQV	Siquisique	2.58	34	*e*P	Pn	19 02 22.3	+1.4
SIQV				*e*S	Sn	19 02 54.3	+1.7
BARC	Barichara	2.67	225	*e*P	Pn	19 02 24.1	+1.7
BARC				*e*S	Sn	19 02 56.9	+1.8
SMLC	San Martn de	2.76	276	*e*P	Pn	19 02 23.2	-0.2
SMLC				*e*S	Sn	19 02 57.8	+0.8
RUSC	La Rusia	3.15	214	*e*P	Pn	19 02 28.9	-0.2
RUSC				*e*S	Sn	19 03 06.5	-0.8
BAUV	El Baul	3.25	82	*e*P	Pn	19 02 31.1	+1.1
BAUV				*e*S	Sn	19 03 09.1	+0.2
MONV	Montecano	3.66	21	*e*P	Pn	19 02 36.2	+0.4
MONV				*e*S	Sn	19 03 19.4	+0.1
ZARC	Zaragoza, Cauc	3.67	254	*e*P	Pn	19 02 36.8	+0.9
ZARC				*e*S	Sn	19 03 22.2	+2.7
BENV	Beln	3.92	68	*e*P	Pn	19 02 40.2	+0.8
BENV				*e*S	Sn	19 03 25.4	-0.4
MOTC	Monteria, Cord	4.33	274	*e*P	Pn	19 02 43.6	-1.3
MOTC				*e*S	Sn	19 03 34.5	-1.2
PAYV	Puerto Ayacuch	4.74	130	*e*P	Pn	19 02 50.6	0.0
CACV	CAICARA DEL OR	4.80	101	*e*P	Pb	19 02 59.0	-4.2
BIRV	Birongo	5.33	68	*e*P	Pn	19 02 59.1	+0.4

TUL ***20*** *19:12:08.7±1.4, 36°.27N±0°.02×96°.66W±0°.05, h3^{km}±3^{km}, ML2.6, mb_Lg2.0/9(NEIC), Error ellipse: s-maj=5.4km s-min=3.2km az=80.0*

NEIC 20 19:12:09.0±1.3**, 36°.28N**±0°.02×**96°.69W**±0°.02**, h8^{km}**±7^{km}**, Error ellipse: s-maj=3.2km s-min=2.4km az=192.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QUOK	Quay	0.11	187		Pg	19 12 11.4	-0.1
OK031	S. Brethren Rd	0.35	200	Pg	Pg	19 12 16.0	+0.1
OK030	Cody Creek RV	0.36	192	Pg	Pg	19 12 16.1	0.0
BLOK	Blackwell	0.64	319		Pg	19 12 21.6	+0.3
T35A	Sooner Cattle	0.65	13		Pg	19 12 21.5	0.0
OK029	Liberty Lake	0.79	232	Pg	Pg	19 12 24.1	0.0
TUL1	Leonard	0.82	117	Pg	Pg	19 12 24.1	-0.6
OK025	Westminster Rd	0.88	217	Pg	Pg	19 12 25.7	-0.1
KAN13	South Haven SW	0.96	319		Pg	19 12 27.6	+0.1
BCOK	Bluff Creek, N	0.97	230	Pg	Pg	19 12 27.4	-0.2
OKCFA	Oklahoma City	1.06	216	Pg	Pg	19 12 28.8	-0.6
CROK	Carrier	1.07	282		Pg	19 12 29.4	-0.1
GC02	Grant County #	1.10	301	Pg	Pg	19 12 30.1	0.0
KAN09	Caldwell North	1.13	319	Pg	Pg	19 12 30.5	-0.2
FNO	Franklin	1.18	210	Pg	Pb	19 12 30.7	-0.9
FNO				IAmb_Lg		19 12 48.0	
	comp=Z,11nm,0.7s						
OK032	Salt Plains WL	1.33	293	Pn	Pn	19 12 33.2	-0.7
KAN06	Argonia West S	1.34	316	Pn	Pn	19 12 33.0	-1.0
KAN16	Harper SW Stat	1.45	311	Pn	Pb	19 12 36.2	0.0
U38A	Gravette	1.87	85		Pn	19 12 42.2	+0.9
X34A	Smith Ranch, M	1.92	209	Pn	Pn	19 12 42.4	+0.4
X37A	Clayton	2.00	147	Pn	Pn	19 12 44.0	+0.9
HHAR	Hobbs	2.22	89		Pn	19 12 45.5	-0.7
HHAR				IAmb_Lg		19 13 21.0	
	comp=Z,9.3nm,1.0s						
WMOK	Wichita Mounta	2.30	228		Pn	19 12 48.8	+1.6
WMOK				IAmb_Lg		19 13 20.7	
	comp=Z,5.0nm,0.7s						
LOOK	Love County	2.32	190	Pn	Pn	19 12 47.7	+0.3
W39A	Magazine	2.60	114	IAmb_Lg		19 13 33.9	
	comp=Z,12nm,1.1s						
S39A	Bolivar	3.04	61	Pn	Pn	19 12 56.3	-1.1
MIAR	Mount Ida	3.08	123	Pn	Pn	19 12 58.6	+0.7
U40A	Yellville	3.10	88	Pn	Pn	19 12 59.1	+0.9
X40A	Basin Creek Fa	3.62	119	Pn	Pn	19 13 06.7	+1.3
MGMO	Mountain Grove	3.66	75	Pn	Pn	19 13 06.3	+0.5
WHAR	Wooly Hollow	3.71	104	Pn	Pn	19 13 07.2	+0.6
FCAR	Ozark Folk Cen	3.72	95	Pn	Pn	19 13 06.2	-0.5
R40A	Maddies Statio	4.06	59	Pn	Pn	19 13 11.9	+0.6
P38A	Dawn	4.17	36	Pn	Pn	19 13 12.8	0.0
LCAR	Lake Charles	4.48	91	Pn	Pn	19 13 16.6	-0.6
T42A	Van Buren	4.56	79	Pn	Pn	19 13 18.7	+0.4
CCM	Cathedral Cave	4.70	66	Pn	Pn	19 13 19.7	-0.4
P40A	Paris	4.90	47	Pn	Pn	19 13 21.3	-1.6
ANMO	Albuquerque	8.06	263	IAmb_Lg		19 16 36.6	
	comp=Z,1.1nm,1.1s						

CNRM ***20*** *19:32:31.1, 37°.20N×2°.11W, h0^{km}, ml2.1*

MDD ***20*** *19:32:33.8±0.3, 37°.32N×2°.04W, h12^{km}, mbLg2.8/18, Error ellipse: s-maj=4.3km s-min=2.3km az=142.0, PRXIMO*

MDD EMS: III INTENSIDAD MAXIMA.

INMG ***20*** *19:32:33.6±1.3, 37°.35N×2°.09W, h4^{km}±2^{km}, ML2.7, Error ellipse: s-maj=2.0km s-min=1.8km az=158.0*

IGIL ***20*** *19:32:34.9, 37°.34N×2°.06W, h14^{km}*

ISC 20 19:32:32.3±1.1**, 37°.36N**±0°.02×**2°.05W**±0°.02**, h15^{km}**±9^{km}**, n67,** σ1^{s}.**34**/125**, 3C, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENIJ	Nijar	0.41	198	Pg	Pg	19 32 41.2	+0.6
	5.2nm,0.1s,SNR=7.9						
ENIJ				Lg	Lg	19 32 46.4	
	1μm,0.2s,SNR=7.9						
TLOR	Lorca, Murcia	0.41	44	Pg	Pb	19 32 41.6	+0.3
	275nm,0.1s,SNR=7.9						
TLOR				Lg	Lg	19 32 47.6	
	946nm,0.2s,SNR=7.9						
GORA	Gorafe	0.80	279	Pg	Pb	19 32 47.8	-0.2
	21nm,0.2s,SNR=7.9						
GORA				Lg	Lg	19 32 59.2	
	192nm,0.2s,SNR=7.9						
EMUR	La Murta	0.81	53	⇑Pg	Pn	19 32 48.6	-0.6
	23nm,0.3s,SNR=18						
EMUR				Lg	Lg	19 33 00.1	
	171nm,0.4s,SNR=16						
EBER	Berja	0.81	236	⇑Pg	Pb	19 32 48.1	-0.2
	107nm,0.2s,SNR=18						
EBER				Lg	Lg	19 32 57.8	
	158nm,0.3s,SNR=13						
SESP	Santiago Espad	0.85	333	Pg	Pb	19 32 49.0	0.0
	19nm,0.3s,SNR=7.9						
SESP				Lg	Lg	19 33 03.6	
	84nm,0.2s,SNR=7.9						
CART	Cartagena	0.87	75	P	Pn	19 32 49.8	-0.2
CART				S	Sg	19 33 01.1	+0.6
CART	Cartagena	0.87	75	P	Pn	19 32 49.8	-0.2
CART				S	Sg	19 33 01.1	+0.6
CART	Cartagena	0.87	75	P	Pn	19 32 49.7	-0.2
CART				S	Sn	19 33 01.7	-0.7
ETOB	Tobarra	1.34	17	Pg	Pg	19 32 58.4	+0.2
	1.4nm,0.1s,SNR=91						
ETOB				Lg	Lg	19 33 17.5	
	142nm,0.3s,SNR=19						
ELGU	Los Guajares,	1.35	249	⇑Pg	Pn	19 32 57.3	+0.5
	SNR=18						
ELGU				Lg	Lg	19 33 12.7	
	58nm,0.2s,SNR=7.9						
EGOR	Sierra Gorda,	1.66	262	Pg	Pb	19 33 03.2	+0.5
	21nm,0.3s,SNR=7.9						
EGOR				Lg	Lg	19 33 28.2	
	58nm,0.4s,SNR=7.9						
AFON	Font Roja	1.77	42	Pg	Pb	19 33 04.6	0.0
	0.5nm,0.1s,SNR=7.9						
AFON				Lg	Lg	19 33 28.1	
	33nm,0.5s,SNR=7.9						
EBEN2	Beniarda presa	1.97	48	Pn	Pn	19 33 06.3	+1.1
	0.6nm,0.1s,SNR=7.9						
EBEN2				Sn	Sn	19 33 30.2	+0.5
	7.4nm,0.1s,SNR=7.9						
EMAL	Malaga-Limoner	1.99	253	P	Pb	19 33 08.2	0.0
EMAL				S	Sb	19 33 34.5	+1.6
EADA	Adamuz	2.16	293	Pn	Pn	19 33 09.2	+1.4
	11nm,0.2s,SNR=68						
EADA				Sn	Sn	19 33 35.3	+1.0
	14nm,0.2s,SNR=9.8						
EADA				Lg	Lg	19 33 42.2	
	40nm,0.2s,SNR=7.2						
CHAS	Isla Isabel II	2.19	188	P	Pb	19 33 10.5	-1.2
CHAS				S	Sn	19 33 35.6	+0.5
EMIJ	Mijas	2.32	251	Pg	Pb	19 33 13.0	-0.9
	0.5nm,0.2s,SNR=7.3						
EMIJ				Lg	Lg	19 33 40.3	
	5.3nm,0.3s,SNR=7.9						
ECHE	Chera	2.38	21	Pn	Pn	19 33 12.6	+1.6
	0.3nm,0.2s,SNR=7.9						
ECHE				Pg	Pg	19 33 17.9	-0.1
	1.7nm,0.5s,SNR=4.0						
ECHE				Lg	Lg	19 33 49.3	
	24nm,0.5s,SNR=7.9						
ESDC	Sonseca Array	2.75	328	Pn	Pn	19 33 17.9	+1.9
	1.4nm,0.2s,baz=146,slow=12,SNR=13						
ESDC				Pg	Pb	19 33 23.2	+1.9
	0.3nm,0.4s,baz=148,slow=16,SNR=29						
ESDC				Sn	Sn	19 33 49.1	0.0
	2.6nm,0.5s,baz=145,slow=22,SNR=7.8						
ESDC				Lg	Lg	19 33 56.3	
	19nm,0.5s,baz=147,slow=29,SNR=9.1						
ECAB	El Cabril	2.76	286	Pn	Pn	19 33 17.1	+1.0
	37nm,0.2s,SNR=232						
ECAB				Sn	Sn	19 33 49.8	+0.6
	27nm,0.2s,SNR=20						
ECAB				Lg	Lg	19 34 01.8	
	46nm,0.4s,SNR=11						
PAB	San Pablo	2.83	321	Pn	Pn	19 33 18.8	+1.7
	0.2nm,0.3s,SNR=7.9						
PAB				Pg	Pg	19 33 24.9	-1.7
	3.2nm,0.4s,SNR=7.9						
PAB				Sn	Sn	19 33 50.4	-0.5
	2.3nm,0.2s,SNR=7.9						
PAB				Lg	Lg	19 34 00.5	
	7.5nm,0.3s,SNR=7.9						
JBK	JBK	3.05	188	P	Pn	19 33 22.6	+2.4
JBK				S	Sn	19 33 55.0	-1.5
UCM	Universidad Co	3.09	343	P	Pb	19 33 24.8	-2.2
UCM				S	Sn	19 33 56.6	-0.7
UCM	Universidad Co	3.09	343	S	Sn	19 33 56.6	-0.7
EIBI	Ibiza	3.15	57	Pn	Pn	19 33 22.5	+1.1
	1.9nm,0.2s,SNR=8.1						
EIBI				Sn	Sn	19 33 57.2	-1.6
	15nm,0.4s,SNR=5.0						
EMOS	Mosqueruela	3.24	22	Pn	Pn	19 33 25.8	+2.9
	0.4nm,0.2s,SNR=7.9						
EMOS				Lg	Lg	19 34 14.8	
	2.4nm,0.3s,SNR=7.9						
ETOR	Torete	3.45	360	Pn	Pn	19 33 27.7	+2.0
	1.5nm,0.3s,SNR=11						
ETOR				Pg	Pg	19 33 36.8	-1.7
	0.3nm,0.2s,SNR=9.9						
ETOR				Sn	Sn	19 34 07.3	+0.9
	18nm,0.3s,SNR=7.9						
ETOR				Lg	Lg	19 34 21.7	
	32nm,0.3s,SNR=7.0						
EMIN	Mina Concepcio	3.69	278	Pn	Pn	19 33 29.3	+0.4
	1.7nm,0.2s,SNR=14						
EMIN				Sn	Sn	19 34 12.2	+0.1
	2.1nm,0.3s,SNR=5.0						
PBAR	Barrancos	4.03	283	*e*Pn	Pn	19 33 34.6	+1.0
PBAR				A	A	19 34 53.4	
	7.9nm,0.6s						
EPLA	Plasencia	4.15	312	Pn	Pn	19 33 35.0	-0.2
	0.6nm,0.3s,SNR=7.9						
EPLA				Sn	Sn	19 34 23.4	0.0
	0.7nm,0.5s,SNR=7.9						
EPLA				Lg	Lg	19 34 41.5	
	5.1nm,0.3s,SNR=6.0						
EBAD	Badajoz	4.16	291	Pn	Pn	19 33 36.0	+0.8
	0.1nm,0.2s,SNR=15						
EBAD				Sn	Sn	19 34 22.1	-1.4
	8.8nm,0.2s,SNR=5.0						
EGRO	El Granado	4.32	274	Pn	Pn	19 33 37.8	+0.2
	1.9nm,0.3s,SNR=6.1						
EGRO				Sn	Sn	19 34 27.8	+0.1
	6.6nm,0.4s,SNR=5.0						
ETOS	Mallorca	4.51	56	Pn	Pn	19 33 41.7	+1.6
	1.1nm,0.3s,SNR=9.9						
ETOS				Sn	Sn	19 34 30.9	-1.4
	0.8nm,0.7s,SNR=4.0						
PVAQ	Vaqueiros	4.51	272	*e*Pn	Pn	19 33 40.9	+0.7
PVAQ				*e*Sn	Sn	19 34 32.1	-0.2
PVAQ				A	A	19 34 35.9	
	6.8nm,0.3s						
PVAQ				*e*Sg	Sg	19 34 58.9	+1.7
PVAQ	Vaqueiros	4.51	272	P	Pn	19 33 40.8	+0.7
PVAQ				S	Sn	19 34 32.3	0.0
PESTR	Estremoz	4.62	291	*e*Pn	Pn	19 33 42.3	+0.7
PESTR				*e*Sn	Sn	19 34 34.7	-0.3
PESTR				*e*Sg	Sg	19 35 00.3	-0.3
PESTR				A	A	19 35 05.3	
	11nm,0.6s						
PBEJ	Beja	4.66	280	*e*Pn	Pn	19 33 42.8	+0.7
PBEJ				*e*Sn	Sn	19 34 35.0	-1.0
PBEJ				*e*Sg	Sg	19 35 00.9	-1.0
PMRV	Marv??o	4.67	298	*e*Pn	Pn	19 33 43.2	+0.8
PMRV				*e*Sn	Sn	19 34 36.3	-0.1
PMRV				*e*Sg	Sg	19 35 02.0	-0.4
PMRV				A	A	19 35 05.2	
	12nm,0.4s						
PBDV	Barranco-do-Ve	4.69	270	*e*Pn	Pn	19 33 43.6	+1.0
PBDV				*e*Sn	Sn	19 34 37.0	+0.3
PBDV				A	A	19 35 03.6	
	3.7nm,0.6s						
PCVE	Castro Verde	4.77	275	*e*Pn	Pn	19 33 44.5	+0.9
PCVE				*e*Sn	Sn	19 34 38.8	+0.1
PCVE				A	A	19 35 08.6	
	5.4nm,0.6s						
EVO	Evora	4.85	286	P	Pn	19 33 46.4	+1.6
EVO				S	Sn	19 34 40.0	-0.8
EVO	Evora	4.85	286	*e*Pn	Pn	19 33 45.9	+1.1
EVO				*e*Sn	Sn	19 34 40.6	-0.2
EVO				A	A	19 35 12.8	
	7.4nm,0.4s						
EVO	Evora	4.85	286	P	Pn	19 33 46.4	+1.6
EVO				S	Sn	19 34 40.0	-0.8
PCBR	Castelo Branco	4.92	302	*e*Pn	Pn	19 33 47.9	+2.2
PCBR				*e*Sn	Sn	19 34 42.3	0.0
PCBR				*e*Sg	Sg	19 35 08.3	-1.9
PCBR				A	A	19 35 22.0	
	6.3nm,0.5s						
MESJ	Messejana	4.92	277	*e*P	Pn	19 33 46.4	+0.7
MESJ	Messejana	4.92	277	*e*Pn	Pn	19 33 46.8	+1.1
MESJ				*e*Sn	Sn	19 34 42.0	-0.4
MESJ				*e*Sg	Sg	19 35 10.6	+0.3
MESJ				A	A	19 35 13.8	
	5.2nm,0.5s						
MESJ	Messejana	4.92	277	P	Pn	19 33 46.4	+0.7
MDT	Midelt	5.00	206	P	Pn	19 33 47.2	+0.3
MDT				S	Sn	19 34 42.0	-2.4
MD31	MD31	5.00	207	P	Pn	19 33 46.8	-0.1
MD31				S	Sn	19 34 42.0	-2.5
PMTG	Montargil	5.15	291	*e*Pn	Pn	19 33 50.1	+1.2
PMTG				*e*Sn	Sn	19 34 47.0	-1.1
PMTG				*e*Sg	Sg	19 35 13.3	-4.4
PMTG				A	A	19 35 19.5	
	8.8nm,0.5s						
PNCL	Nicolau / Gran	5.19	280	*e*Pn	Pn	19 33 50.8	+1.4
PNCL				*e*Sn	Sn	19 34 48.1	-0.9
PNCL				A	A	19 35 34.6	
	4.2nm,0.5s						
MTE	Manteigas	5.25	307	*e*Pn	Pn	19 33 51.9	+1.6
MTE				*e*Sg	Sg	19 35 19.5	-1.3
MORF	Marmelete	5.26	271	*e*Pn	Pn	19 33 51.5	+1.1
PTEO	Sao Teotonio	5.31	274	*e*Pn	Pn	19 33 53.3	+2.2
MVO	Moncorvo	5.42	316	*e*Pn	Pn	19 33 53.4	+0.8
MVO				*e*Sn	Sn	19 34 54.3	-0.4
MVO				*e*Sg	Sg	19 35 24.5	-1.6
MVO				A	A	19 35 31.4	
	7.2nm,0.6s						
MVO	Moncorvo	5.42	316	Pn	Pn	19 33 54.8	+2.2
	0.9nm,0.5s,SNR=7.9						
MVO				Sn	Sn	19 34 54.5	-0.2
	1.2nm,0.6s,SNR=7.9						
MVO				Lg	Lg	19 35 24.1	
	2.2nm,0.2s,SNR=7.9						
EORO	Oroz-Betelu	5.55	6	Pn	Pn	19 33 57.7	+3.2
	0.6nm,0.2s,SNR=7.9						
EORO				Pg	Pg	19 34 17.1	-1.5
	1.4nm,0.3s,SNR=4.0						
EORO				Lg	Lg	19 35 33.7	
	SNR=7.9						
PVIS	Viseu	5.65	308	*e*Pn	Pn	19 33 58.2	+2.4
PVIS				*e*Sn	Sn	19 35 00.7	+0.3
PVIS				*e*Sg	Sg	19 35 33.1	-0.5
PVIS				A	A	19 35 49.8	
	4.5nm,0.8s						
PCAS	Casmilo, Conde	5.71	300	*e*Pn	Pn	19 33 58.5	+1.9
PCAS				*e*Sn	Sn	19 35 01.5	-0.4
PCAS				*e*Sg	Sg	19 35 35.2	-0.4
PCAS				A	A	19 35 40.8	
	13nm,0.5s						
PSBE	So Bento	5.71	294	*e*Pn	Pn	19 33 58.5	+1.8
PBRG	Braganca	5.73	322	*e*Sg	Sg	19 35 35.6	-0.5
ATE	Arette	5.81	10	Pn	Pn	19 34 01.1	+3.1
	0.7nm,0.3s,SNR=7.9						
PMAFR	Mafra	5.92	288	Pn	Pn	19 34 01.1	+1.6
	4.9nm,0.3s,SNR=7.9						
PMAFR				Sn	Sn	19 35 06.7	-0.2
	20nm,0.3s,SNR=4.0						
ELAN	Lanestosa	5.96	350	Pn	Pn	19 34 02.0	+2.0
	0.3nm,0.2s,SNR=7.9						
ELAN				Lg	Lg	19 35 42.0	
	SNR=7.9						
EARI	Arriondas	6.40	339	Pn	Pn	19 34 08.8	+2.7
	0.9nm,0.3s,SNR=7.9						
EARI				Sn	Sn	19 35 16.0	-3.0
	0.8nm,0.3s,SNR=7.9						
EARI				Lg	Lg	19 35 52.0	
	SNR=7.9						
ELOB	Lobios	6.46	316	Pn	Pn	19 34 09.0	+2.0
	0.3nm,0.2s,SNR=7.9						
ELOB				Sn	Sn	19 35 19.2	-1.3
	1.0nm,0.2s,SNR=7.9						
ELOB				Lg	Lg	19 35 55.0	
	SNR=7.9						

*IDC **20** 19:35:05.7±1.0, 8°.45N×71°.40W, h0^{km}, mb3.5/4, mb1 3.9/7, mb1mx3.5/43, mbtmp3.7/7, ML3.3/3, MS2.9/4, Ms1 2.9/4, ms1mx2.5/30, Error ellipse: s-maj=24.8km s-min=10.2km az=154.0*

*FUNV **20** 19:35:07.1, 8°.53N×71°.38W, h1^{km}, MW3.7*

ISC 20 19:35:06.8±1.1, **8°.54N**±0°.03×**71°.37W**±0°.02, **h9**^{km}±8^{km}, **n56**, σ1^s.**64**/90, **mb3.6**/4, **MS2.8**/3, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	Socops	0.57	116	eP	Pg	19 35 17.4	-0.5
SOCV				eS	Sg	19 35 26.1	+0.7
SOCV	Socops	0.57	116	eP	Pg	19 35 17.4	-0.5
SOCV				eS	Sg	19 35 26.4	+1.0
SDV	Santo Domingo	0.81	65	Pg	Pg	19 35 22.7	+0.3
	72nm,0.3s,baz=355,slow=0.8,SNR=102						
SDV				Lg	Lg	19 35 34.4	
	90nm,0.3s,baz=318,slow=20,SNR=13						
SDV				LR	LR	19 35 57.3	
	comp=Z,394nm,20.5s,baz=22,slow=59						
SDV	Santo Domingo	0.81	65	eP	Pg	19 35 22.7	+0.3
SDV				eS	Sg	19 35 34.6	+1.6
CAPV	Capacho	1.15	234	eS	Sg	19 35 44.4	+0.5
PAMC	Pamplona, Colo	1.77	228	eP	Pn	19 35 38.2	+0.1
PAMC				eS	Sn	19 36 02.7	+1.6
MCQV	Machiques	1.89	323	eP	Pn	19 35 40.7	+1.4
MCQV				eS	Sn	19 36 04.6	+1.3
OCAC	Ocana	1.95	261	eP	Pn	19 35 40.2	-0.1
OCAC				eS	Sn	19 36 06.3	+1.3
CURV	Curarigua	2.02	43	eS	Sn	19 36 07.5	+0.8
TAMC	Tame, Arauca	2.13	191	eP	Pn	19 35 45.0	+2.3
TAMC				eS	Sn	19 36 11.9	+2.5
LL6C	La Loma 6 Bece	2.22	303	eP	Pn	19 35 44.4	+0.6
LL6C				eS	Sn	19 36 12.6	+1.2
LL1C	La Loma 1 Cana	2.37	295	eP	Pb	19 35 49.5	-0.3
LL1C				eS	Sb	19 36 19.2	0.0
ELOV	Elorza	2.42	129	eP	Pn	19 35 47.0	+0.4
ELOV				eS	Sn	19 36 17.2	+0.8
SIQV	Siquisique	2.60	36	eP	Pn	19 35 50.0	+0.9
SIQV				eS	Sn	19 36 21.2	+0.2
LL5C	La Loma 5 El P	2.61	298	eP	Pn	19 35 47.3	-1.9
LL5C				eS	Sb	19 36 27.6	+1.6
BARC	Barichara	2.64	223	eP	Pn	19 35 51.2	+1.3
SMLC	San Martn de	2.68	276	eP	Pn	19 35 50.0	-0.2
SMLC				eS	Sn	19 36 21.9	-1.0
BRRC	Barranca, Sant	2.72	239	eS	Sb	19 36 30.2	+1.0
RUSC	La Rusia	3.13	213	eP	Pn	19 35 57.6	+0.8
RUSC				eS	Sn	19 36 35.5	+0.9
URIC	Uribia, Colomb	3.20	349	eP	Pn	19 35 56.3	-1.0
URIC				eS	Sn	19 36 33.5	-2.2
BAUV	El Baul	3.32	83	eP	Pn	19 35 60.0	+1.0
BAUV				eS	Sn	19 36 37.8	-0.8
JACV	Jacura	3.56	45	eP	Pn	19 36 01.9	-0.4
JACV				eS	Sn	19 36 43.6	-1.0
ZARC	Zaragoza, Cauc	3.60	253	eP	Pn	19 36 03.0	+0.1
ZARC				eS	Sb	19 36 53.9	-0.8
PTBC	PUERTO BERRIO,	3.65	237	eP	Pn	19 36 03.0	-0.5
PTBC				eS	Sb	19 36 53.5	-2.4
MONV	Montecano	3.66	22	eP	Pn	19 36 04.2	+0.5
MONV				eS	Sn	19 36 45.6	-1.5
SMRC	Santa Marta, M	3.83	313	eP	Pn	19 36 06.3	+0.3
SMRC				eS	Sn	19 36 48.5	-2.8
SPBC	San Pablo de B	3.92	223	eP	Pn	19 36 08.7	+1.2
SPBC				eS	Pg	19 36 20.2	-1.9
BENV	Beln	3.98	69	eP	Pn	19 36 08.7	+0.4
BENV				eS	Sn	19 36 53.1	-2.1
SJCC	San Jacinto, C	3.99	290	eP	Pn	19 36 08.4	+0.1
SJCC				eS	Sn	19 36 56.1	+0.8
UREC	San Jos de Ur	4.19	260	eP	Pn	19 36 11.8	+0.8
UREC				eS	Sn	19 36 59.5	-0.6
MOTC	Monteria, Cord	4.25	274	eP	Pn	19 36 12.5	+0.7
MOTC				eS	Sn	19 37 03.7	+2.1
PTGC	Puerto Gaitan,	4.38	190	eP	Pg	19 36 28.8	-2.0
PTGC				eS	Sn	19 37 07.9	+3.1
NORC	Norcasia	4.56	230	eP	Pn	19 36 18.6	+2.5
ROSC	El Rosal	4.70	219	Pn	Pn	19 36 16.5	-1.8
	7.2nm,0.3s,baz=37,slow=23,SNR=8.0						
ROSC	El Rosal	4.70	219	eP	Pn	19 36 22.1	+3.8
ROSC				eS	Sn	19 37 16.0	+2.8
PAYV	Puerto Ayacuch	4.82	130	eP	Pn	19 36 19.8	+0.2
PAYV				eS	Sn	19 37 12.0	-3.6
CACV	CAICARA DEL OR	4.88	101	eP	Pb	19 36 27.7	-4.9
VILC	Villavicencio,	4.97	208	eP	Pn	19 36 23.0	+1.3
MERV	Las Mercedes	5.07	82	eP	Pn	19 36 23.2	+0.2
MERV				eS	Sn	19 37 18.9	-2.9
BIRV	Birongo	5.39	69	eP	Pn	19 36 27.5	0.0
BIRV				eS	Sn	19 37 26.1	-3.7
ANIL	Santa Ana	5.67	225	eP	Pn	19 36 33.3	+1.6
ANIL				eS	Sn	19 37 39.6	+2.4
PRAC	Prado	5.93	216	eP	Pn	19 36 32.4	-2.6
PRAC				eS	Sn	19 37 43.3	+0.1
ORTC	Ortega, Tolima	6.00	220	eP	Pn	19 36 36.2	+0.3
ORTC				eP	Pn	19 36 37.1	+1.2
ORTC				eS	Sn	19 37 44.7	-0.1
PLMC	San Jos del P	6.07	234	eP	Pn	19 36 38.9	+2.0
PLMC				eP	Pn	19 36 39.0	+2.2
PLMC				eS	Sn	19 37 49.9	+3.3
YOTC	Yotoco, Valle	6.70	228	eP	Pn	19 36 47.1	+1.5
MACC	Macarena, Meta	6.81	201	eP	Pn	19 36 45.7	-1.4
MACC				eS	Sn	19 38 00.9	-3.9
PCRV	Puerto La Cruz	6.84	76	Pn	Pn	19 36 49.9	+2.4
	1.3nm,0.3s,baz=145,slow=6.6,SNR=4.0						
PTGA	Pitinga	14.63	128	Pn	Pn	19 38 32.3	-1.9
	0.6nm,0.3s,baz=328,slow=19,SNR=2.0						
PTGA				LR	LR	19 44 38.0	
	comp=Z,42nm,20.1s,baz=62,slow=39						
NNA	Nana	21.11	195	LR	LR	19 47 54.5	
	comp=Z,32nm,19.9s,baz=24,slow=37						
SIV	San Ignacio	26.42	157	LR	LR	19 52 50.7	
	comp=Z,30nm,18.7s,baz=81,slow=40						
TKL	Tuckaleechee C	29.28	339	LR	LR	19 54 38.5	
	comp=Z,22nm,19.8s,baz=99,slow=40						
TXAR	Lajitas Array	36.68	309	P	P	19 42 14.6	+0.2
	0.2nm,0.6s,baz=139,slow=10,SNR=2.4						
PDAR	Pinedale Array	47.76	322	P	P	19 43 45.2	+0.5
	0.6nm,0.5s,baz=128,slow=11,SNR=7.0						
PLCA	Paso Flores	49.03	179	P	P	19 43 54.3	+0.1
	1.6nm,0.8s,baz=356,slow=9.0,SNR=3.9						
ILAR	Eielson Array	76.15	335	P	P	19 46 56.2	+1.1
	0.2nm,0.7s,baz=76,slow=5.0,SNR=1.5						
ASAR	Alice Springs	151.51	235	PKPbc	PKPbc	19 55 01.8	-0.5
	0.3nm,0.7s,baz=127,slow=2.9,SNR=6.4						

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*NEIC **20** 19:48:44.1±1.8, 7°.41S±0°.06×105°.27E±0°.06, h10^{km}±4^{km}, mb4.8/45, Error ellipse: s-maj=9.2km s-min=8.3km az=119.0*

*IDC **20** 19:48:45.2±0.7, 6°.84S×105°.81E, h0^{km}, mb4.3/21, mb1 4.3/22, mb1mx4.1/63, mbtmp4.3/22, ML5.0/1, MS3.7/4, Ms1 3.8/4, ms1mx3.2/35, Error ellipse: s-maj=29.5km s-min=13.1km az=42.0*

*DJA **20** 19:48:51.2±0.3, 7°S±3°×10°6E±°, h47^{km}±3^{km}, M4.5/24, mB5.1/7, mb4.6/24, MLv4.5/18, Mw(mB)4.5/7*

ISC 20 19:48:47.6±0.4, **7°.47S**±0°.04×**105°.34E**±0°.04, **h35**^{km}, **n133**, σ1^s.**86**/135, **mb4.6**/45, **MS3.8**/5, **1D**, **Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SBJI	Serang	1.56	30	P	Pn	19 49 11.0	-1.8
DBJI	Dramaga	1.67	57	P	Pn	19 49 12.6	-1.8
DBJI				S	Sn	19 49 31.4	-3.2
CNJI	Cibinong	1.78	85	P	Pn	19 49 15.2	-0.7
CBJI	Citeko	1.82	55	P	Pn	19 49 14.0	-2.5
CBJI				S	Sn	19 49 35.5	-2.9
TNG	Tangerang	1.83	45	P	Pn	19 49 16.7	+0.1
TNG				P	Pn	19 49 18.6	+2.0
BLSI	Bandar Lampung	2.09	357	P	Pn	19 49 19.4	-0.9
KASI	Kota Agung	2.11	336	P	Pn	19 49 21.6	+1.1
LEM	Lembang	2.35	74	Pn	Pn	19 49 23.5	-0.3
	60nm,0.3s,baz=301,slow=3.3,SNR=58						
LEM				Lg	Lg	19 49 53.4	
	115nm,0.3s,baz=152,slow=21,SNR=17						
KLI	Kotabumi	2.64	349	P	Pn	19 49 29.8	+2.1
LWLI	Liwa	2.75	332	P	Pn	19 49 31.7	+2.3
KLSI		2.83	348	P	Pn	19 49 31.1	+0.7
XMI	Christmas Isla	2.98	173	P	Pn	19 49 33.3	+0.9
XMIS	Christmas Isla	3.00	174		Pn	19 49 32.4	-0.4
XMIS				Sn	Sn	19 50 03.4	-4.3
XMIS	Christmas Isla	3.00	174	P	Pn	19 49 32.3	-0.5
CMJI	Cimerak	3.09	96	P	Pn	19 49 37.3	+3.3
MDSI	Maura Dua	3.19	339	P	Pn	19 49 36.4	+1.1
LHSI	Lahat	4.05	333	P	Pn	19 49 50.6	+3.5
KSI	Kapahiang	4.68	324	P	Pn	19 49 58.4	+2.5
UGM	Wanagama	5.15	95	Pn	Pn	19 50 02.0	-0.4
UGM				Sn	Sn	19 50 59.0	-1.6
UGM	Wanagama	5.15	95	P	Pn	19 50 02.1	-0.3
MASI	Maura Aman, Be	5.30	324	P	Pn	19 50 06.9	+2.5
	1.2nm3µm155nm,0.8s						
PPBI	Pangkal Pinang	5.33	9	P	Pn	19 50 07.3	+2.5
	0.4nm3µm24nm,0.7s						
DSRI	Dabo	6.99	354	P	Pn	19 50 27.4	-0.2
	0.1nm354nm23nm,1.4s						
GMJI	Gumukmas	8.06	96	P	Pn	19 50 44.6	+2.3
	0.2nm57nm,1.1s						
JAGI	Jajag, Banyuwa	8.78	97		Pn	19 50 50.6	-1.5
JAGI				Sn	Sn	19 52 29.2	-0.8
JAGI	Jajag, Banyuwa	8.78	97	P	Pn	19 50 53.1	+0.9
ABJI	Asem Bagus	8.82	93	P	Pn	19 50 57.1	+4.4
	191nm,0.9s						
TWSI	Taliwang, Sumb	11.49	97	P	Pn	19 51 30.0	+0.6
	16nm,0.6s						
GSI	Gunungsitoli	11.66	318	Pn	Pn	19 51 26.9	-4.8
SBUM	Sibu	12.01	35		Pn	19 51 34.7	-1.7
KAPI	Kappang	14.53	81	LR	LR	19 58 51.7	
	comp=Z,305nm,18.8s,baz=287,slow=43						
BKSI	Bulukumba	14.84	83	P	Pn	19 52 16.0	+0.9
	19nm,0.9s						
EDFI	Ende, Flores	16.23	96	P	Pn	19 52 29.6	-3.7
	13nm,0.7s						
MPSI	Mapaga	16.46	62	P	Pn	19 52 36.8	+0.8
	15nm,1.0s						
MMRI	Maumere	16.77	95	P	P	19 52 40.8	-1.1
	65nm,1.1s						
MMRI	Maumere	16.77	95	Pn	Pn	19 52 38.4	-1.5
MMRI				IAmb	IAmb	19 52 51.0	
	comp=Z,63nm,0.9s						
KKM	Kota Kinabalu	17.26	39	Pn	Pn	19 52 43.1	-3.0
KKM				IAmb	IAmb	19 52 47.7	
	comp=Z,108nm,1.6s						
GIRL	Giralia	17.34	151		Pn	19 52 46.5	-0.6
TOLI2	Tolitoli	17.60	62	P	P	19 52 50.7	-0.4
BATI	Baumata	18.30	100	P	P	19 52 57.0	-1.9
	comp=Z,4.6nm,0.3s,baz=217,slow=5.8,SNR=13						
BATI				S	S	19 56 29.5	+3.0
	comp=Z,1.4nm,0.3s,baz=104,slow=22,SNR=2.8						
BATI	Baumata	18.30	100	P	Pn	19 53 01.1	+2.1
	comp=Z,24nm,0.6s						
PSA00	Pilbara Seismi	19.81	137	P	P	19 53 13.1	-2.2
SANI	Sanana	21.26	76	P	P	19 53 29.9	-1.2
	comp=Z,7.5nm,0.8s						
LBMI	Labuha	23.11	74	P	P	19 53 50.7	-0.1
	comp=Z,21nm,1.0s						
KNRA	Kununurra	24.33	112	P	P	19 54 02.4	+0.1
KNRA				IAmb	IAmb	19 54 04.7	
	comp=Z,22nm,0.7s						
MTN	Manton Dam	25.93	104	P	P	19 54 16.4	-0.4
MTN				IAmb	IAmb	19 54 55.1	
	comp=Z,73nm,1.8s						
CMAR	Chiang Mai Arr	26.53	346	P	P	19 54 20.4	-1.8
	comp=Z,1.2nm,0.7s,baz=180,slow=9.3,SNR=12						
CMAR				LR	LR	20 07 05.1	
	comp=Z,228nm,18.1s,baz=155,slow=42						
CMAR	Chiang Mai Arr	26.53	346	P	P	19 54 19.9	-2.3
SWI	Sorong	26.66	77	P	P	19 54 24.6	+1.1
	comp=Z,19nm,1.1s						
SIJI	Sorong	26.66	77	P	P	19 54 20.9	-2.7
	comp=Z,8.6nm,0.9s,baz=320,slow=5.4,SNR=5.0						
QIZ	Qiongzhong	26.71	10	P	P	19 54 25.4	+1.6
QIZ				S	S	19 59 03.5	+6.4
QIZ				LR	LR		
	comp=N,340nm,14.7s						
QIZ				LR	LR		
	comp=E,610nm,17.6s						
QIZ				LR	LR		
	comp=Z,310nm,15.9s						
CHTO	Chiang Mai	26.87	346	P	P	19 54 23.9	-1.4
H01W3	Cape Leeuwin H	28.45	165	T	T	20 25 00.2	
	baz=344,slow=76,SNR=66						
H01W1	Cape Leeuwin H	28.47	165	T	T	20 25 01.7	
	baz=344,slow=76,SNR=65						
H01W2	Cape Leeuwin H	28.47	165	T	T	20 25 01.3	
	baz=344,slow=76,SNR=71						
WB0	Warramunga Arr	30.70	116	P	P	19 54 58.5	-1.0
WRA	Warramunga Arr	30.71	117	P	P	19 55 00.8	+1.3
	comp=Z,0.8nm,0.4s,baz=288,slow=12,SNR=15						
WRA				LR	LR	20 08 08.9	
	comp=Z,93nm,20.6s,baz=290,slow=38						
WRA	Warramunga Arr	30.71	117	P	P	19 54 59.7	+0.1
WRAB	Tennant Creek	30.72	117	P	P	19 55 00.8	+1.2
WRAB				IAmb	IAmb	19 55 11.6	
	comp=Z,5.2nm,0.8s						
WB2	Warramunga Arr	30.72	117	P	P	19 55 01.1	+1.5
WB2				IAmb	IAmb	19 55 11.6	
	comp=Z,5.6nm,0.8s						
WR0	Warramunga Arr	30.89	117	P	P	19 55 02.9	+1.7
ASAR	Alice Springs	31.77	124	P	P	19 55 11.2	+2.3
	comp=Z,4.0nm,0.9s,baz=299,slow=7.9,SNR=29						
ASAR				S	S	20 00 19.0	+2.0
	comp=Z,1.5nm,1.1s,baz=305,slow=15,SNR=5.7						
ASAR				LR	LR	20 08 26.7	
	comp=Z,151nm,21.4s,baz=302,slow=37						
ASAR	Alice Springs	31.77	124	P	P	19 55 10.1	+1.2
AS31	Alice Springs	31.77	124	P	P	19 55 10.1	+1.2
H08S2	Diego Garcia H	32.56	268	T	T	20 29 42.5	
	baz=91,slow=74,SNR=16						
H08S3	Diego Garcia H	32.57	268	T	T	20 29 52.5	
	baz=91,slow=74,SNR=38						
H08S1	Diego Carcia H	32.58	268	T	T	20 29 43.2	
	baz=91,slow=74,SNR=5.1						
MNCI	Minicoy	35.78	295	P	P	19 55 41.9	-2.0
COEN	Coen	37.69	103	P	P	19 55 58.2	-1.9
COEN				IAmb	IAmb	19 56 18.3	
	comp=Z,13nm,1.0s						
PKI	Pulchoki	39.82	332	eP	P	19 56 18.4	+0.3
PKIN	Phulchoki	39.83	332	eP	P	19 56 18.3	+0.2
GUN	Gumba	39.89	333	eP	P	19 56 19.9	+1.2
DMN	Daman	40.00	331	eP	P	19 56 19.7	+0.2
KKN	Kakani	40.07	332	eP	P	19 56 20.5	+0.5
GKN	Gorkha	40.55	331	eP	P	19 56 24.2	+0.2
DANN	Dangsing	41.26	331	eP	P	19 56 30.1	+0.1
	comp=Z,45nm,1.0s						
NJ2	Nanjing	41.37	17	eP	P	19 56 32.8	+2.4
NJ2	Nanjing	41.37	17	eP	P	19 56 33.0	+2.6
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
STKA	Stephens Creek	41.56	131	P	P	19 56 35.2	+3.1
	comp=Z,12nm,0.8s,baz=312,slow=9.0,SNR=21						
STKA	Stephens Creek	41.56	131	P	P	19 56 34.3	+2.2
HHC	Hu-ho-hao-te	48.42	6	eP	P	19 57 29.3	+2.7
HHC				pmax	pmax		
	comp=Z,15nm,0.8s						
HHC				pmax	pmax		
	comp=Z,180nm,6.6s						
HHC				LR	LR		
	comp=N,240nm,14.2s						
HHC				LR	LR		
	comp=E,160nm,11.4s						
HHC				LR	LR		
	comp=Z,200nm,16.1s						
CAN	Canberra	48.62	131	P	P	19 57 30.1	+1.9
KSRS	Korea Array	49.43	24	P	P	19 57 32.0	-2.2
	comp=Z,0.9nm,0.6s,baz=221,slow=9.4,SNR=4.6						
MSEY	Mahe Island	49.64	270	P	P	19 57 36.0	-0.4
MSEY				IAmb	IAmb	19 57 46.6	
	comp=Z,13nm,1.1s						
JHS	Saijyo	49.72	30	P	P	19 57 34.9	-1.7
NIL	Nilore	50.99	325	P	P	19 57 45.3	-0.9
NIL				IAmb	IAmb	19 57 47.5	
	comp=Z,22nm,1.1s						
WMQ	Urumqi	53.50	344	eP	P	19 58 06.8	+2.1
KBL	Kabul	54.07	323	P	P	19 58 07.8	-1.4
KBL				IAmb	IAmb	19 58 10.9	
	comp=Z,8.1nm,1.0s						
KSH	Kashi	54.09	332	P	P	19 58 08.3	-0.8
KSH				pP	pP	19 58 14.8	-4.2
KSH				sP	pwP	19 58 16.8	-5.2
KSH				pmax	pmax		
	comp=Z,7.0nm,1.5s						
SONM	Songino Array	55.07	1	P	P	19 58 15.3	-0.8
	comp=Z,0.4nm,0.5s,baz=182,slow=9.1,SNR=5.3						
SONM				PcP	PcP	19 59 18.5	+1.2
	comp=Z,0.9nm,0.7s,baz=186,slow=3.5,SNR=3.7						
SONM	Songino Array	55.07	1	P	P	19 58 15.4	-0.8
GAR	Garm	56.51	328	P	P	19 58 25.8	-0.8
CHGR	Chuyangaron	56.89	327	P	P	19 58 28.1	-1.2
BTK	Batken	57.03	329	P	P	19 58 29.2	-1.0
BTK				IAmb	IAmb	19 58 32.1	
	comp=Z,17nm,1.3s						
MK31	Makanchi Array	57.79	341	P	P	19 58 33.7	-1.7
MKAR	Makanchi Array	57.79	341	P	P	19 58 34.6	-0.8
	comp=Z,1.4nm,0.8s,baz=140,slow=7.8,SNR=12						
MKAR	Makanchi Array	57.79	341	P	P	19 58 34.2	-1.2
VOI	Vohitsoka	58.10	249	P	P	19 58 37.5	-0.7
KKAR	Karatay Array	59.46	331	P	P	19 58 46.4	-0.7
KURBB	Kurchatov Arra	62.35	341	P	P	19 59 06.5	0.0
	comp=Z,0.5nm,0.3s,baz=148,slow=5.8,SNR=9.8						
KURK	Kurchatov	62.40	341	P	P	19 59 06.0	-0.9
KURK				IAmb	IAmb	19 59 08.8	
	comp=Z,21nm,1.8s						
GEYT	Alibeck	63.04	319	P	P	19 59 13.7	+2.3
	comp=Z,2.4nm,0.6s,baz=206,slow=17,SNR=5.5						
ZAA0	Zalesovo Array	63.59	347	P	P	19 59 14.1	-0.7
ZAA0				IAmb	IAmb	19 59 15.3	
	comp=Z,5.0nm,0.9s						
ZALV	Zalesovo Beam	63.59	347	P	P	19 59 14.1	-0.7
	comp=Z,2.0nm,0.4s,baz=131,slow=4.5,SNR=12						
ZALV	Zalesovo Beam	63.59	347	P	P	19 59 13.5	-1.2
RAYN	Ar Rayn	66.05	300		P	19 59 31.4	0.0
RAYN				IAmb	IAmb	19 59 44.2	
	comp=Z,8.2nm,1.3s						
BVAR	Borovoye Array	67.17	338	P	P	19 59 38.3	+0.4
	comp=Z,1.3nm,0.6s,baz=185,slow=15,SNR=11						
BRVK	Borovoye	67.24	338	P	P	19 59 37.8	-0.5
BRVK				IAmb	IAmb	19 59 39.7	
	comp=Z,14nm,1.6s						
ABKAR	Akbulak array	68.99	330	P	P	19 59 49.7	+0.3
AKTO	Aktyubinsk	70.70	330	P	P	20 00 00.4	+0.5
	comp=Z,5.0nm,1.1s,baz=132,slow=7.2,SNR=6.9						
ARU	Arti	74.35	335	P	P	20 00 22.3	+0.8
	comp=Z,1.5nm,0.8s,baz=151,slow=3.3,SNR=7.8						
ARU	Arti	74.35	335	P	P	20 00 21.5	0.0
ARU				IAmb	IAmb	20 00 23.9	
	comp=Z,13nm,1.1s						
GURO	Guroymak-BITLI	74.39	313	P	P	20 00 23.1	+0.8
GURO				IAmb	IAmb	20 00 35.1	
	comp=Z,5.6nm,1.0s						
SYO	Syowa Base	74.50	200⇓	eP	P	20 00 21.4	-0.8
ASF	Jabal al Asfar	76.08	306	P	P	20 00 35.8	+3.6
	comp=Z,2.2nm,0.8s,baz=337,slow=3.5,SNR=4.4						
GAZ	Gaziantep	77.45	311	P	P	20 00 38.3	-1.5
GAZ				IAmb	IAmb	20 00 51.9	
	comp=Z,7.5nm,0.8s						
MMAI	Mount Meron Ar	77.54	306	P	P	20 00 43.9	+3.5
	comp=Z,1.4nm,0.6s,baz=116,slow=9.4,SNR=5.5						
NRIK	Noril'sk	77.62	354	P	P	20 00 39.5	-0.4
	comp=Z,4.0nm,0.5s,baz=141,slow=1.2,SNR=5.3						
NRIK	Noril'sk	77.62	354	P	P	20 00 39.4	-0.5
NRIK				IAmb	IAmb	20 00 41.0	
	comp=Z,29nm,1.5s						
CSS	Mathiatis	79.76	307	P	P	20 00 51.7	-0.7
CSS				IAmb	IAmb	20 01 06.2	
	comp=Z,16nm,0.9s						
BR131	Keskin Array S	80.92	312	P	P	20 00 57.3	-1.5
BR131				IAmb	IAmb	20 01 11.3	
	comp=Z,8.4nm,0.8s						
BRTR	Keskin Array B	80.92	312	P	P	20 01 00.4	+1.7
	comp=Z,3.3nm,0.9s,baz=129,slow=6.1,SNR=12						
BRTR	Keskin Array B	80.92	312	P	P	20 00 56.9	-1.9
AKASG	Malin Array Be	87.04	322	P	P	20 01 31.3	+1.8
	comp=Z,0.2nm,0.3s,baz=99,slow=3.3,SNR=2.0						
AKASG	Malin Array Be	87.04	322	IAmb	IAmb	20 01 31.9	
	comp=Z,1.8nm,1.1s						
MLR	Muntele Rosu	87.91	316	P	P	20 01 36.9	+2.9
	comp=Z,4.2nm,0.9s,baz=97,slow=6.7,SNR=4.8						
MLR	Muntele Rosu	87.91	316	P	P	20 01 33.4	-0.6
BUR08	Bucovina Ar. S	88.88	318	P	P	20 01 39.4	+0.9
BUR08				IAmb	IAmb	20 01 45.6	
	comp=Z,5.1nm,1.1s						
FINES	FINESS Array B	91.41	332	P	P	20 01 51.0	+1.2
	comp=Z,1.9nm,0.8s,baz=76,slow=14,SNR=2.1						
CLL	Collm	97.24	321	eP	P	20 02 16.0	-0.8
BDFB	Brasilia	145.01	229	PKPbc	PKiKP	20 08 28.8	+2.5
	comp=Z,1.5nm,0.4s,baz=121,slow=5.9,SNR=1.6						
TXAR	Lajitas Array	145.10	48	PKP	PKPdf	20 08 23.0	+0.8
	comp=Z,0.5nm,0.6s,baz=262,slow=1.5,SNR=6.8						
TXAR	Lajitas Array	145.10	48		PKPbc	20 08 19.0	-2.7

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*FUNV **20** 20:00:32.7, 8°.46N×71°.40W, h5^{km}, MW3.0*

ISC 20 20:00:32.4±1.2, **8°.52N**±0°.04×**71°.39W**±0°.03, **h11**^{km}±10^{km}, **n24**, σ1^s.**21**/39, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	Socops	0.58	114	eP	Pg	20 00 43.8	+0.1
SOCV				eS	Sg	20 00 51.8	+0.4
SOCV	Socops	0.58	114	eP	Pg	20 00 43.4	-0.3
SOCV				eS	Sg	20 00 51.5	0.0
SDV	Santo Domingo	0.83	64	eP	Pg	20 00 48.6	0.0
SDV				eS	Sg	20 00 59.1	-0.5
CAPV	Capacho	1.12	235	eP	Pb	20 00 52.5	-1.5
CAPV				eS	Sb	20 01 08.1	-0.5
PAMC	Pamplona, Colo	1.75	228	eP	Pb	20 01 04.3	-0.5
PAMC				eS	Sg	20 01 29.6	+0.9
MCQV	Machiques	1.90	324	eP	Pn	20 01 05.6	+0.9
OCAC	Ocana	1.93	262	eP	Pn	20 01 06.3	+1.0
OCAC				eS	Sb	20 01 31.8	-0.1
TAMC	Tame, Arauca	2.11	191	eP	Pb	20 01 11.4	+0.8
TAMC				eS	Sg	20 01 39.8	-0.4
ELOV	Elorza	2.42	128	eP	Pn	20 01 13.8	+1.9
ELOV				eS	Sb	20 01 46.6	+0.8
ELOV	Elorza	2.42	128	eP	Pn	20 01 11.5	-0.4
ELOV				eS	Sn	20 01 41.8	+0.3
DABV	Dabajuro	2.50	17	eP	Pn	20 01 14.4	+1.3
BARC	Barichara	2.61	223	eP	Pb	20 01 19.5	+0.2
BARC				eS	Sb	20 01 51.2	-0.3
SIQV	Siquisique	2.63	36	eP	Pn	20 01 16.5	+1.6
SIQV				eS	Sn	20 01 47.9	+1.0
SMLC	San Martn de	2.66	276	eP	Pn	20 01 15.6	+0.3
SMLC				eS	Sb	20 01 52.0	-0.9
RUSC	La Rusia	3.10	213	eP	Pn	20 01 23.0	+1.2
RUSC				eS	Sn	20 02 01.9	+2.8
BAUV	El Baul	3.34	82	eP	Pn	20 01 24.7	+0.1
BAUV				eS	Sn	20 02 03.9	-0.3
ZARC	Zaragoza, Cauc	3.58	254	eP	Pn	20 01 29.1	+1.2
ZARC				eS	Sn	20 02 10.7	+0.4
PTBC	PUERTO BERRIO,	3.62	237	eS	Sn	20 02 06.8	-4.4
MONV	Montecano	3.69	22	eP	Pn	20 01 29.7	+0.3
BENV	Beln	4.01	69	eP	Pn	20 01 34.5	+0.6
BENV				eS	Sn	20 02 19.9	-1.0
PAYV	Puerto Ayacuch	4.82	129	eP	Pn	20 01 43.7	-1.3
CACV	CAICARA DEL OR	4.90	101	eP	Pb	20 01 53.3	-4.9
MERV	Las Mercedes	5.09	81	eP	Pn	20 01 48.0	-0.6
BIRV	Birongo	5.41	69	eP	Pn	20 01 52.8	-0.4

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*IDC **20** 20:03:01.4±1.1, 7°.00S×105°.56E, h0^{km}, mb4.1/14, mb1 4.2/15, mb1mx3.9/53, mbtmp4.2/15, ML5.2/1, MS3.7/13, Ms1 3.7/13, ms1mx3.4/36, Error ellipse: s-maj=45.2km s-min=13.9km az=45.0*

*NEIC **20** 20:03:05.2±2.6, 7°.44S±0°.05×105°.32E±0°.08, h29^{km}±5^{km}, mb4.8/29, Error ellipse: s-maj=11.5km s-min=5.9km az=110.0*

*DJA **20** 20:03:06.6±0.4, 7°S±3°×10°6E±°, h44^{km}±4^{km}, M4.5/14, mb4.5/12, mB5.1/2, MLv4.4/14, Mw(mB)4.4/2*

ISC 20 20:03:05.5±0.5, **7°.35S**±0°.05×**105°.41E**±0°.05, **h35**^{km}, **n88**, σ1^s.**52**/82, **mb4.4**/27, **MS3.7**/12, **Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SBJI	Serang	1.42	30	P	Pn	20 03 27.7	-1.1
SBJI				S	Sn	20 03 46.2	-0.1
DBJI	Dramaga	1.55	59	P	Pn	20 03 30.0	-0.7
DBJI				S	Sn	20 03 47.2	-2.4
TNG	Tangerang	1.70	46	P	Pn	20 03 32.3	-0.4
TNG				P	Pn	20 03 33.6	+0.9
TNG				S	Sn	20 03 53.6	+0.4
CBJI	Citeko	1.71	57	P	Pn	20 03 31.9	-0.9
CNJI	Cibinong	1.71	89	P	Pn	20 03 31.8	-1.0
CNJI				S	Sn	20 03 52.6	-0.8
BLSI	Bandar Lampung	1.98	355	P	Pn	20 03 35.7	-0.9
KASI	Kota Agung	2.03	333	P	Pn	20 03 38.2	+1.0
LEM	Lembang	2.25	77	Pn	Pn	20 03 41.5	+1.1
	126nm,0.3s,baz=126,slow=24,SNR=45						
LEM				Lg	Lg	20 04 10.8	
	132nm,0.3s,baz=246,slow=19,SNR=4.0						
KLI	Kotabumi	2.53	347	P	Pn	20 03 45.6	+1.4

LWLI	Liwa	2.68	330	P	Pn	20 03 50.6	+4.3
KLSI		2.73	346	P	Pn	20 03 47.4	+0.5
CMJI	Cimerak	3.04	98	P	Pn	20 03 54.5	+3.3
MDSI	Maura Dua	3.10	337	P	Pn	20 03 53.2	+1.2
XMIS	Christmas Isla	3.12	176	Pn	Pn	20 03 49.4	-2.8
XMIS				Sn	Sn	20 04 25.3	-3.0
LHSI	Lahat	3.97	332	P	Pn	20 04 06.7	+2.7
TPI	Tanjungpandan	5.08	26	P	Pn	20 04 21.6	+2.3
	39nm,0.9s						
UGM	Wanagama	5.10	97	Pn	Pn	20 04 18.1	-1.5
UGM				Sn	Sn	20 05 17.1	-0.1
PPBI	Pangkal Pinang	5.21	8	P	Pn	20 04 24.3	+3.3
	0.4nm3µm35nm,1.2s						
MASI	Maura Aman, Be	5.24	323	P	Pn	20 04 24.7	+3.2
	0.9nm151nm,1.4s						
DSRI	Dabo	6.88	353	P	Pn	20 04 44.6	+0.7
	0.1nm8.8nm,1.0s						
JAGI	Jajag, Banyuwa	8.73	98		Pn	20 05 10.8	+1.3
JAGI				Sn	Sn	20 06 44.7	-2.1
ABJI	Asem Bagus	8.76	93	P	Pn	20 05 09.3	-0.5
	154nm,0.9s						
KAPI	Kappang	14.45	82	LR	LR	20 13 09.3	
	comp=Z,292nm,19.1s,baz=284,slow=43						
EDFI	Ende, Flores	16.18	96	P	Pn	20 06 46.7	-3.8
	7.5nm,0.5s						
BSI	Banda Aceh	16.27	321	P	Pn	20 06 50.2	-1.3
	18µm,0.8s						
MMRI	Maumere	16.71	96	Pn	Pn	20 06 58.1	+0.9
GIRL	Giralia	17.42	152	P	Pn	20 07 05.2	-0.7
BATI	Baumata	18.26	100	P	P	20 07 16.1	-0.2
	7.6nm,0.3s,baz=123,slow=4.2,SNR=12						
BATI				S	S	20 10 46.2	+2.7
	1.3nm,0.3s,baz=168,slow=23,SNR=2.0						
BATI	Baumata	18.26	100	P	Pn	20 07 18.2	+1.8
	17nm,0.6s						
LBMI	Labuha	23.01	74	P	P	20 08 16.9	+9.2
KNRA	Kununurra	24.31	112	P	P	20 08 20.8	+0.7
KNRA				IAmb	IAmb	20 08 22.0	
	comp=Z,78nm,1.6s						
MTN	Manton Dam	25.89	104	P	P	20 08 34.7	+0.2
MTN				IAmb	IAmb	20 09 14.6	
	comp=Z,39nm,1.5s						
CMAR	Chiang Mai Arr	26.43	346	P	P	20 08 37.1	-2.0
	comp=Z,0.7nm,0.7s,baz=182,slow=8.5,SNR=6.8						
CMAR				LR	LR	20 20 35.8	
	comp=Z,193nm,19.0s,baz=211,slow=40						
SIJI	Sorong	26.57	77	P	P	20 08 38.2	-2.4
	comp=Z,6.5nm,0.8s,baz=274,slow=15,SNR=3.9						
SIJI				LR	LR	20 21 03.0	
	comp=Z,97nm,18.8s,baz=279,slow=41						
FAKI	Fak Fak	27.09	82	P	P	20 08 46.0	+0.8
FAKI				IAmb	IAmb	20 09 15.2	
	comp=Z,24nm,1.1s						
H01W3	Cape Leeuwin H	28.55	165	T	T	20 39 19.5	
	baz=344,slow=76,SNR=69						
H01W1	Cape Leeuwin H	28.57	165	T	T	20 39 20.7	
	baz=344,slow=76,SNR=62						
H01W2	Cape Leeuwin H	28.57	165	T	T	20 39 20.8	
	baz=344,slow=76,SNR=90						
WB0	Warramunga Arr	30.70	117	P	P	20 09 17.8	+0.5
WB0				IAmb	IAmb	20 09 31.1	
	comp=Z,18nm,1.6s						
WRA	Warramunga Arr	30.71	117	P	P	20 09 18.6	+1.2
	comp=Z,0.8nm,0.6s,baz=288,slow=13,SNR=13						
WRA				LR	LR	20 22 15.6	
	comp=Z,116nm,21.3s,baz=290,slow=38						
WRA	Warramunga Arr	30.71	117	P	P	20 09 17.4	0.0
WRAB	Tennant Creek	30.71	117	P	P	20 09 18.5	+1.1
WB2	Warramunga Arr	30.72	117	P	P	20 09 17.5	0.0
WB2				IAmb	IAmb	20 09 29.1	
	comp=Z,16nm,1.2s						
WR0	Warramunga Arr	30.89	117	P	P	20 09 20.5	+1.5
WR0				IAmb	IAmb	20 09 38.5	
	comp=Z,16nm,1.4s						
ASAR	Alice Springs	31.79	124	P	P	20 09 28.6	+1.6
	comp=Z,1.8nm,0.7s,baz=302,slow=7.8,SNR=22						
ASAR				LR	LR	20 22 45.0	
	comp=Z,143nm,21.3s,baz=308,slow=37						
ASAR	Alice Springs	31.79	124	P	P	20 09 27.4	+0.5
AS31	Alice Springs	31.79	124	P	P	20 09 28.0	+1.1
H08S2	Diego Garcia H	32.63	267	T	T	20 44 01.5	
	baz=91,slow=75,SNR=18						
H08S3	Diego Garcia H	32.64	267	T	T	20 43 55.7	
	baz=91,slow=75,SNR=55						
H08S1	Diego Carcia H	32.65	267	T	T	20 43 59.7	
	baz=91,slow=75,SNR=6.2						
STKA	Stephens Creek	41.59	131	P	P	20 10 52.7	+2.4
	comp=Z,8.0nm,0.8s,baz=299,slow=9.1,SNR=13						
STKA	Stephens Creek	41.59	131	P	P	20 10 51.9	+1.6
KSRS	Korea Array	49.29	24	LR	LR	20 34 04.6	
	comp=Z,49nm,18.1s,baz=210,slow=38						
NIL	Nilore	50.92	325	P	P	20 12 02.8	-0.8
NIL				IAmb	IAmb	20 12 04.4	
	comp=Z,21nm,1.1s						
KSH	Kashi	54.01	332	P	P	20 12 24.8	-1.7
KSH				sP	sP	20 12 47.0	+6.6
KSH				pmax	pmax		
	comp=Z,6.0nm,1.5s						
SONM	Songino Array	54.95	1	P	P	20 12 33.3	+0.1
	comp=Z,0.6nm,0.8s,baz=167,slow=5.9,SNR=4.8						
SONM	Songino Array	54.95	1	IAmb	IAmb	20 12 38.5	
	comp=Z,3.3nm,1.5s						
DRK	Karamyk	56.02	329	P	P	20 12 41.5	+0.2
DRK				IAmb	IAmb	20 12 43.5	
	comp=Z,21nm,1.4s						
GAR	Garm	56.45	327	P	P	20 12 43.1	-0.9
CHGR	Chuyangaron	56.83	326	P	P	20 12 45.6	-1.1
BTK	Batken	56.96	329	P	P	20 12 47.2	-0.4
BTK				IAmb	IAmb	20 12 49.1	
	comp=Z,11nm,1.2s						
MKAR	Makanchi Array	57.70	341	P	P	20 12 52.0	-0.7
	comp=Z,0.4nm,0.5s,baz=161,slow=8.7,SNR=9.7						
MKAR	Makanchi Array	57.70	341	P	P	20 12 52.1	-0.5
KURBB	Kurchatov Arra	62.25	341	P	P	20 13 22.8	-1.0
	comp=Z,0.7nm,0.3s,baz=156,slow=6.1,SNR=9.2						
KURK	Kurchatov	62.30	341	P	P	20 13 24.1	0.0
KURK				IAmb	IAmb	20 13 25.6	
	comp=Z,8.0nm,1.2s						
GEYT	Alibeck	62.99	319	P	P	20 13 29.9	+0.9
	comp=Z,2.7nm,0.8s,baz=180,slow=14,SNR=2.9						
GEYT				LR	LR	20 43 21.1	
	comp=Z,29nm,19.4s,baz=20,slow=38						
ZAA0	Zalesovo Array	63.49	347	P	P	20 13 31.3	-0.6
ZAA0				IAmb	IAmb	20 13 32.9	
	comp=Z,6.8nm,1.1s						
ZALV	Zalesovo Beam	63.49	347	P	P	20 13 31.1	-0.9
	comp=Z,1.6nm,0.5s,baz=129,slow=4.0,SNR=11						
ZALV	Zalesovo Beam	63.49	347	P	P	20 13 31.1	-0.8
MAW	Mawson	66.58	196	LR	LR	20 35 45.0	
	comp=Z,48nm,20.7s,baz=55,slow=29						
BVAR	Borovoye Array	67.08	338	P	P	20 13 55.6	+0.3
	comp=Z,1.5nm,0.6s,baz=191,slow=15,SNR=6.8						
ABKAR	Akbulak array	68.92	330	P	P	20 14 07.2	+0.3
ABKAR	Akbulak array	68.92	330	P	P	20 14 07.1	+0.3
ABKAR				IAmb	IAmb	20 14 08.4	
	comp=Z,16nm,1.0s						
ARU	Arti	74.27	335	P	P	20 14 39.5	+0.7
	comp=Z,1.8nm,1.0s,baz=147,slow=5.4,SNR=6.6						
ARU				LR	LR	20 51 27.0	
	comp=Z,73nm,19.1s,baz=132,slow=39						
ARU	Arti	74.27	335	P	P	20 14 39.6	+0.7
ARU				IAmb	IAmb	20 14 40.8	
	comp=Z,12nm,1.2s						
PETK	Petropavlovsk-	74.67	30	LR	LR	20 49 10.8	
	comp=Z,34nm,19.0s,baz=209,slow=37						
MA2	Magadan	75.80	22	LR	LR	20 49 30.3	
	comp=Z,39nm,18.6s,baz=244,slow=37						
VNDA	Vanda	75.92	169	LR	LR	20 44 46.1	
	comp=Z,42nm,18.0s,baz=310,slow=33						
NRIK	Noril'sk	77.51	354	P	P	20 14 55.3	-1.9
	comp=Z,2.9nm,0.7s,baz=128,slow=6.0,SNR=4.1						
NRIK				LR	LR	20 53 31.5	
	comp=Z,77nm,19.2s,baz=180,slow=39						
NRIK	Noril'sk	77.51	354	P	P	20 14 56.7	-0.5
CSS	Mathiatis	79.74	307	P	P	20 15 10.2	0.0
CSS				IAmb	IAmb	20 15 23.2	
	comp=Z,14nm,1.0s						
BR131	Keskin Array S	80.89	312	P	P	20 15 17.1	+0.7
BR131				IAmb	IAmb	20 15 28.3	
	comp=Z,8.4nm,1.1s						
BRTR	Keskin Array B	80.89	312	P	P	20 15 15.9	-0.6
	comp=Z,1.7nm,0.8s,baz=140,slow=7.8,SNR=8.9						
BRTR	Keskin Array B	80.89	312	P	P	20 15 16.6	+0.1
KLMR	Klimovskoe	84.98	333	*e*P	P	20 15 36.0	-1.0
KLMR				AMP		20 15 38.2	
	comp=Z,15nm,1.5s						
MLR	Muntele Rosu	87.87	316	P	P	20 15 52.8	+1.1
TXAR	Lajitas Array	144.98	48	PKP	PKPdf	20 22 40.7	+0.8
	comp=Z,0.4nm,0.6s,baz=326,slow=3.2,SNR=4.4						
TXAR	Lajitas Array	144.98	48		PKPbc	20 22 39.2	0.0

NIED ***20*** *20:13:01.2, 31°.37N×128°.70E, h14^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-0.89; M$_{\theta\theta}$1.91; M$_{\phi\phi}$-1.03; M$_{r\theta}$-0.45; M$_{\theta\phi}$1.76; M$_{\phi r}$1.01; Fault plane solution: M$_0$2.66000×10^{14} NP1: ϕ_s205.00000°, δ68.00000°, λ-155.00000°. NP2: ϕ_s105.00000°, δ67.00000°, λ-25.00000°.*

JMA 20 20:13:01.2±0.3**, 31°.37N×128°.70E, h15**^{km}±3^{km}**, M3.7, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.92	70	P	Pb	20 13 18.2	-0.7
JSJ				*e*S	Sb	20 13 30.4	-0.5
JFU	Fukue jima 2	1.28	2	P	Pn	20 13 24.6	0.0
JSU	Suzuyama	1.51	84	P	Pb	20 13 28.3	-0.6
JYAK	Yakushimahirau	1.92	125	P	Pn	20 13 30.8	-2.6
JTN	Tanegashima 3	2.08	109	P	Pn	20 13 35.9	+0.3
JTZ	Takazaki	2.10	75	P	Pn	20 13 36.7	+0.8
JMTN	Minamitane	2.13	117	P	Pn	20 13 37.7	+1.5
JIU3	Izumi3	2.15	56	P	Pn	20 13 37.4	+0.9

GUC ***20*** *20:20:00.0±0.7, 31°.00S×71°.33W, h54^{km}±18^{km}, ML3.4*

SJA ***20*** *20:20:03.0, 31°.25S×71°.74W, h10^{km}, ML4.0*

ISC 20 20:19:59.7±1.1**, 31°.28S**±0°.03×**71°.78W**±0°.07**, h10**^{km}**, n28, σ1^s.75**/33**, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.61	12	*i* P	Pg	20 20 11.6	+0.1
CO06				*e*S	Sg	20 20 19.6	0.0
CO06				IAML		20 20 21.6	
	comp=E,7µm,0.2s						
VA06	Catapilco	1.34	162	*e*P	Pn	20 20 24.2	-0.4
VA06				*e*S	Sb	20 20 41.8	-0.4
VA06				IAML		20 20 47.9	
	comp=E,837nm,0.5s						
ROCH	El Roble	1.81	159	*e*P	Pn	20 20 31.1	-0.1
ROCH				*e*S	Sg	20 20 59.6	+1.6
ROCH				IAML		20 21 02.0	
	comp=N,373nm,0.5s						
VA03	San Esteban	1.81	145	*e*P	Pn	20 20 31.8	+0.7
VA03				*e*S	Sb	20 20 56.1	+0.2
VA03				IAML		20 20 57.4	
	comp=E,617nm,0.1s						
VA03	San Esteban	1.81	145	*i* P	Pb	20 20 32.0	-1.0
PEL	Peldehue	2.08	154	*e*P	Pn	20 20 35.8	+1.1
PEL				*e*S	Sb	20 21 02.9	-0.6
PEL				IAML		20 21 07.2	
	comp=N,265nm,0.4s						
PEL	Peldehue	2.08	154	*i* P	Pb	20 20 37.0	-0.6
RTLS	Leoncito	2.18	104	*i* P	Pb	20 20 39.0	-0.4
AUSP	Uspallata	2.25	116	*i* P	Pb	20 20 40.0	-0.5
MT05	Renca	2.29	158	*i* P	Pb	20 20 40.0	-1.1
ACCO	Cerro Coronel	2.43	74	*i* P	Pb	20 20 43.0	-0.7
MT01	Popeta	2.62	170	*i* P	Pb	20 20 45.0	-1.7
ZON	Zonda	2.66	97	*i* P	Pb	20 20 47.0	-0.5
ASAL	Salagasta	2.83	118	*i* P	Pb	20 20 49.0	-1.3
ARCO	CERRO ARCO	2.88	124	*i* P	Pb	20 20 51.0	-0.2
BO04	La Punta	2.88	160	*e*P	Pn	20 20 46.5	+0.8
AAGR	Agrelo	3.08	127	*i* P	Pb	20 20 54.0	-0.7
AC04	Llanos de Chal	3.12	11	*i* P	Pb	20 20 54.0	-1.3
BO01	Tunca	3.16	170	*i* P	Pb	20 20 55.0	-1.0
BO02	Sierra Bellavi	3.61	167	*i* P	Pn	20 20 59.0	+3.3
AVFE	Valle Fertil	3.76	82	*i* P	Pn	20 20 59.0	+1.1
VCA	Vinchina	4.00	52	*e*P	Pn	20 21 04.3	+3.1
VCA				*e*S	Sg	20 22 03.5	-4.7
VCA	Vinchina	4.00	52	*i* P	Pn	20 21 05.0	+3.8
ACHE	Chepes	4.38	90	*i* P	Pn	20 21 10.0	+3.5
RFA	San Rafael	4.46	142	*i* P	Pn	20 21 12.0	+4.6
APLL	PUNTA DE LOS L	4.60	80	*i* P	Pn	20 21 10.0	+0.6
AC02	Maricunga	4.99	28	*i* P	Pn	20 21 17.0	+1.8
CYA	Choya	5.91	63	*i* P	Pn	20 21 28.0	+0.7

IDC 20 20:28:51.9±1.6**, 7°.88S×117°.70E, h0**^{km}**, mb3.2**/3**, mb1 3.5**/3**, mb1mx3.3**/31**, mbtmp3.3**/3**, Error ellipse: s-maj=123.6km s-min=11.9km az=49.0, Bali Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	20.09	128	P	P	20 33 27.4	+0.1
	0.3nm,0.4s,baz=305,slow=11,SNR=9.3						
ASAR	Alice Springs	22.09	137	P	P	20 33 48.6	-0.2
	0.2nm,0.6s,baz=319,slow=8.6,SNR=5.1						
MKAR	Makanchi Array	62.88	333	P	P	20 39 19.9	0.0
	0.5nm,0.6s,baz=142,slow=7.4,SNR=5.4						

IDC ***20*** *21:00:32.0±3.0, 16°.76S×174°.26W, h102^{km}±28^{km}, mb3.9/6, mb1 4.1/7, mb1mx3.7/35, mbtmp4.3/7, Error ellipse: s-maj=35.7km s-min=21.4km az=126.0*

NEIC ***20*** *21:00:33.0±1.1, 16°.79S±0°.04×173°.95W±0°.10, h124^{km}±10^{km}, mb4.3/21, Error ellipse: s-maj=14.6km s-min=3.1km az=71.0*

ISC 20 21:00:32.7±0.6**, 16°.79S**±0°.07×**173°.94W**±0°.07**, h124**^{km}**, n39, σ1^s.34**/40**, mb4.2**/16**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	3.54	36	P	Pn	21 01 27.4	+1.0
	37nm,0.3s,baz=182,slow=1.9,SNR=18						
AFI				S	Sn	21 02 05.0	-2.8
	259nm,0.3s,baz=56,slow=22,SNR=39						
NIUE	Niue	4.44	121		Pn	21 01 38.9	+0.6
NIUE					Sn	21 02 28.0	-1.2
MSVF	Nonsavu	7.71	262	Pn	Pn	21 02 23.6	+1.3
MARNC	Mare, Loyalty	17.66	252	P	Pn	21 04 30.1	-0.9
URZ	Urewera	22.79	198	P	P	21 05 26.0	+1.4
URZ				IAmb	IAmb	21 05 27.7	
	comp=Z,30nm,1.1s						
BKZ	Black Stump Fm	23.81	199	P	P	21 05 34.3	+0.1
BKZ				IAmb	IAmb	21 05 51.5	
	comp=Z,13nm,1.1s						
LTZ	Lake Taylor	28.45	202	P	P	21 06 11.7	-4.2
LTZ				IAmb	IAmb	21 06 24.2	
	comp=Z,14nm,1.0s						
MLZ	Mavora Lakes	32.21	204	P	P	21 06 48.9	-0.2
MLZ				IAmb	IAmb	21 07 00.1	
	comp=Z,14nm,1.0s						
EIDS	Eidsvold	33.66	249	P	P	21 07 01.1	-0.7
ARMA	Armidale	34.20	240	P	P	21 07 06.4	-0.2
TOO	Toolangi	41.19	232	P	P	21 08 04.7	-0.6
TOO				IAmb	IAmb	21 08 24.6	
	comp=Z,8.5nm,0.9s						
COEN	Coen	41.39	268	P	P	21 08 07.5	+0.4
COEN				IAmb	IAmb	21 08 16.1	
	comp=Z,8.4nm,1.1s						
STKA	Stephens Creek	42.90	241	P	P	21 08 19.1	-0.1
	comp=Z,1.4nm,0.4s,baz=99,slow=8.7,SNR=6.3						
STKA	Stephens Creek	42.90	241	P	P	21 08 19.0	-0.1
BBOO	Buckleboo	47.67	241	P	P	21 08 56.3	-0.6
BBOO				IAmb	IAmb	21 09 03.4	
	comp=Z,2.7nm,0.8s						
WR0	Warramunga Arr	48.84	258	P	P	21 09 05.5	-0.5
WB0	Warramunga Arr	49.00	258	P	P	21 09 06.3	-0.8
WB2	Warramunga Arr	49.02	258	P	P	21 09 06.4	-0.9
WB2				IAmb	IAmb	21 09 17.4	
	comp=Z,3.1nm,1.1s						
WRAB	Tennant Creek	49.03	258	P	P	21 09 05.0	-2.4
WRAB				IAmb	IAmb	21 09 11.6	
	comp=Z,3.3nm,1.0s						
WRA	Warramunga Arr	49.03	258	P	P	21 09 06.2	-1.3
	comp=Z,1.0nm,0.3s,baz=97,slow=6.9,SNR=35						
WRA	Warramunga Arr	49.03	258	P	P	21 09 06.6	-0.9
AS31	Alice Springs	49.20	253	P	P	21 09 08.1	-0.6
ASAR	Alice Springs	49.20	253	P	P	21 09 07.7	-1.0
	comp=Z,20nm,0.5s,baz=88,slow=8.5,SNR=425						
ASAR	Alice Springs	49.20	253	P	P	21 09 08.0	-0.7
FORT	Forrest	54.34	244	P	P	21 09 45.1	-1.6
FAKI	Fak Fak	54.59	279	P	P	21 09 46.8	-2.0
KNRA	Kununurra	54.86	262	P	P	21 09 49.2	-1.4
KNRA				IAmb	IAmb	21 09 51.6	
	comp=Z,6.4nm,0.8s						
SOEI	Soe	60.36	268	P	P	21 10 31.0	+1.7
VNDA	Vanda	61.95	186	P	P	21 10 40.6	+1.8
	comp=Z,1.6nm,1.0s,baz=14,slow=8.2,SNR=7.4						
VNDA	Vanda	61.95	186	IAmb	IAmb	21 10 41.8	
	comp=Z,1.8nm,0.9s						
PSA00	Pilbara Seismi	62.32	254	P	P	21 10 41.6	-0.7
PETK	Petropavlovsk-	73.79	343	P	P	21 11 54.4	+1.1
	comp=Z,1.9nm,0.7s,baz=131,slow=7.4,SNR=4.4						
PETK	Petropavlovsk-	73.79	343	P	P	21 11 54.7	+1.5
CMAR	Chiang Mai Arr	92.56	288	P	P	21 13 31.8	+1.1
	comp=Z,0.5nm,0.6s,baz=114,slow=2.4,SNR=4.2						
MKAR	Makanchi Array	111.42	314	PKiKP	PKiKP	21 18 52.0	-0.2
	comp=Z,0.2nm,0.4s,baz=162,slow=1.0,SNR=6.1						
KMBO	Kilima Mbogo	144.46	243	PKP	PKPdf	21 19 55.6	-0.1
	comp=Z,1.7nm,0.6s,baz=58,slow=7.4,SNR=5.9						
BRTR	Keskin Array B	146.89	319	PKPbc	PKPbc	21 20 01.5	+0.5
	comp=Z,1.7nm,0.7s,baz=131,slow=3.7,SNR=11						
GERES	GERESS Array B	147.43	351	PKPbc	PKPbc	21 20 03.1	+1.0
	comp=Z,0.5nm,0.7s,baz=306,slow=16,SNR=3.5						
MMAI	Mount Meron Ar	149.01	307	PKPbc	PKiKP	21 20 08.3	+0.3
	comp=Z,1.5nm,0.6s,baz=66,slow=3.1,SNR=5.9						

NEIC ***20*** *21:11:13.8±0.8, 36°.72N±0°.02×98°.06W±0°.02, h5^{km}±2^{km}, Error ellipse: s-maj=3.5km s-min=2.9km az=309.0*

TUL ***20*** *21:11:13.8±1.2, 36°.76N±0°.02×98°.08W±0°.05, h7^{km}±5^{km}, ML3.4, mb_Lg3.1/63(NEIC), Error ellipse: s-maj=5.2km s-min=2.4km az=99.0*

ANF ***20*** *21:11:14.1±0.3, 36°.76N×98°.05W, h7^{km}, ML3.5/8, Error ellipse: s-maj=3.8km s-min=3.3km az=157.0*

ISC 20 21:11:14.0±1.2**, 36°.74N**±0°.02×**98°.07W**±0°.03**, h6**^{km}±10^{km}**, n79, σ0^s.71**/56**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK032	Salt Plains WL	0.13	298	Pg	Pg	21 11 16.6	-0.2
GC02	Grant County #	0.20	56	Pg	Pg	21 11 18.1	+0.1
KAN14	Manchester OK	0.23	21	Pg	Pg	21 11 18.5	-0.1
CROK	Carrier	0.24	164	Pg	Pg	21 11 19.1	+0.3
KAN10	Anthony SW Sta	0.38	356	Pg	Pg	21 11 21.3	-0.1
KAN17	Caldwell West	0.39	38	Pg	Pg	21 11 21.2	-0.3
KAN05	Bluff City Nor	0.40	23		Pg	21 11 21.4	-0.3
KAN01	Argonia South	0.48	31		Pg	21 11 23.1	-0.1
KAN16	Harper SW Stat	0.48	0	Pg	Pg	21 11 23.1	-0.3
KAN08	Anthony NE Sta	0.49	9		Pg	21 11 23.3	-0.2
KAN06	Argonia West S	0.53	18		Pg	21 11 24.4	+0.2
KAN09	Caldwell North	0.53	42	Pg	Pg	21 11 24.3	0.0
KAN13	South Haven SW	0.54	60	Pg	Pb	21 11 24.8	-1.1
KAN12	Harper NE Stat	0.56	6	Pg	Pg	21 11 24.6	-0.2
BLOK	Blackwell	0.68	88	Pg	Pg	21 11 27.1	-0.1
U32A	Winter Ranch,	0.84	245	Pg	Pg	21 11 29.7	-0.3
U32A	Winter Ranch,	0.84	245	P	Pg	21 11 29.5	-0.5
	baz=63						
OK029	Liberty Lake	1.06	152	Pg	Pg	21 11 33.8	-0.6
BCOK	Bluff Creek, N	1.14	161		Pg	21 11 35.3	-0.6
QUOK	Quay	1.23	117	Pn	Pb	21 11 37.2	-0.5
T35A	Sooner Cattle	1.26	82	Pn	Pn	21 11 37.3	-0.8
T35B	Sooner Cattle	1.26	82	P	Pn	21 11 37.2	-0.9
	baz=263						
T35B				S	Sn	21 11 54.5	-0.8
	baz=263						
OK031	S. Brethren Rd	1.26	128		Pn	21 11 37.3	-0.9
OK009	Oakdale Elemen	1.27	156		Sn	21 11 57.1	+1.6
OK025	Westminster Rd	1.30	153	Pn	Pn	21 11 38.3	-0.4
OK030	Cody Creek RV	1.31	128	Pn	Pn	21 11 37.2	-1.7
OK030					Sn	21 11 56.8	+0.1
OK001	Jones High Sch	1.33	152	Pn	Pn	21 11 37.6	-1.5
OKCFA	Oklahoma City	1.41	159		Pn	21 11 38.4	-1.8
OKCFA	Oklahoma City	1.41	159	P	Pn	21 11 39.9	-0.4
	baz=340						
OKCFA				S	Sg	21 11 59.9	+0.5
	baz=340						
OKCSW	OKLAHOMA CITY	1.43	159	Pn	Pn	21 11 39.9	-0.5
FNO	Franklin	1.58	160		Pn	21 11 42.7	+0.3
R32A	Long Quarter,	1.75	343	Pn	Pn	21 11 45.1	+0.1
R32A	Long Quarter,	1.75	343	P	Pn	21 11 45.2	+0.2
	baz=163						
TUL1	Leonard	2.01	114		Pn	21 11 49.0	+0.5
TUL1				IAmb_Lg		21 12 18.5	
	comp=Z,86nm,0.8s						
TUL1	Leonard	2.01	114	P	Pb	21 11 49.8	-1.2
	baz=296						
WMOK	Wichita Mounta	2.08	196		Pn	21 11 49.5	+0.1
WMOK	Wichita Mounta	2.08	196	P	Pn	21 11 49.9	+0.5
	baz=16						
WMOK				S	Sb	21 12 18.4	+0.1
	baz=16						
X34A	Smith Ranch, M	2.14	175		Pn	21 11 49.7	-0.6
X34A				IAmb_Lg		21 12 25.5	
	comp=Z,68nm,0.7s						
CBKS	Cedar Bluff	2.46	328		Pn	21 11 53.3	-1.3
CBKS	Cedar Bluff	2.46	328	P	Pn	21 11 54.5	-0.1
	baz=147						
CBKS				S	Sn	21 12 25.8	+0.8
	baz=147						
KSU1	Kansas State U	2.62	26		Pn	21 11 57.1	+0.2
KSU1				IAmb_Lg		21 12 43.2	
	comp=Z,72nm,0.9s						
LOOK	Love County	2.84	165		Pn	21 12 00.1	+0.3
U38A	Gravette	2.98	95		Pb	21 12 08.8	+1.4
X37A	Clayton	3.07	134		Pb	21 12 10.2	+1.2
HHAR	Hobbs	3.35	97	Pg	Pb	21 12 14.1	+0.3
Z35A	Perchaven, San	3.47	169	Pn	Pn	21 12 08.1	-0.4
AMTX	Amarillo	3.47	239		Pb	21 12 15.7	-0.2
AMTX				IAmb_Lg		21 13 11.6	
	comp=Z,43nm,0.8s						
S39A	Bolivar	3.90	75		Pn	21 12 14.8	+0.3
S39A	Bolivar	3.90	75	P	Pn	21 12 14.7	+0.2
	baz=258						
U40A	Yellville	4.21	94	IAmb_Lg		21 13 27.3	
	comp=Z,57nm,0.7s						
U40A	Yellville	4.21	94	P	Pn	21 12 18.7	0.0
	baz=277						
U40A				P	Pn	21 12 18.7	0.0
	baz=277						
MIAR	Mount Ida	4.26	120	IAmb_Lg		21 13 30.9	
	comp=Z,43nm,1.0s						
Z38A	Mt. Pleasant	4.29	143	IAmb_Lg		21 13 34.6	
	comp=Z,46nm,0.8s						
ABTX	Abilene, Hawle	4.31	198	IAmb_Lg		21 13 30.4	
	comp=Z,39nm,0.9s						
P38A	Dawn	4.59	50	IAmb_Lg		21 13 47.7	
	comp=Z,43nm,0.8s						
BGNE	Belgrade	4.66	359	IAmb_Lg		21 13 53.7	
	comp=Z,48nm,0.8s						
MGMO	Mountain Grove	4.66	83	IAmb_Lg		21 13 44.1	
	comp=Z,27nm,0.7s						
X40A	Basin Creek Fa	4.82	116	IAmb_Lg		21 13 50.1	
	comp=Z,64nm,0.7s						
FCAR	Ozark Folk Cen	4.87	98	IAmb_Lg		21 13 59.3	
	comp=Z,31nm,1.3s						
WHAR	Wooly Hollow	4.90	105	IAmb_Lg		21 13 52.9	
	comp=Z,33nm,1.0s						
WLAR	White Oak Lake	5.07	125	IAmb_Lg		21 14 01.4	
	comp=Z,27nm,0.7s						
OGNE	Ogallala	5.22	325	IAmb_Lg		21 14 11.0	
	comp=Z,34nm,0.8s						
P40A	Paris	5.50	58	IAmb_Lg		21 14 12.2	
	comp=Z,31nm,0.8s						
N38A	Joes South For	5.53	42	IAmb_Lg		21 14 22.7	
	comp=Z,43nm,0.7s						
CCM	Cathedral Cave	5.59	74	IAmb_Lg		21 14 13.2	
	comp=Z,26nm,0.7s						
LCAR	Lake Charles	5.61	95	IAmb_Lg		21 14 16.2	
	comp=Z,21nm,0.9s						
K31A	O'Neill	5.90	355	IAmb_Lg		21 14 23.5	
	comp=Z,44nm,0.9s						
435B	Jarrell	5.96	176	IAmb_Lg		21 14 38.1	
	comp=Z,20nm,0.7s						
PBMO	Poplar Bluff	6.13	87	IAmb_Lg		21 14 30.1	
	comp=Z,31nm,0.8s						
FVM	French Village	6.21	76	IAmb_Lg		21 14 33.3	
	comp=Z,25nm,0.8s						
SCIA	State Center	6.38	35	IAmb_Lg		21 14 37.4	
	comp=Z,34nm,0.7s						
SLM	Saint Louis	6.49	71	IAmb_Lg		21 14 38.4	
	comp=Z,20nm,0.8s						
S44A	Carbondale	7.09	80	IAmb_Lg		21 15 15.8	
	comp=Z,28nm,0.7s						
P43A	Skaggs, Pawnee	7.33	64	IAmb_Lg		21 15 04.9	
	comp=Z,32nm,0.9s						
PHWY	Pilot Hill	7.34	311	IAmb_Lg		21 15 17.5	
	comp=Z,16nm,1.0s						
Q44A	Meyer Farm, Va	7.48	71	IAmb_Lg		21 15 16.1	
	comp=Z,33nm,1.0s						
JFWS	Jewell Farm	8.61	42	IAmb_Lg		21 16 00.5	
	comp=Z,19nm,0.7s						

RWWY	Rawlins	8.65	308	IAmb_Lg		21 15 53.6	
	comp=Z,20nm,1.2s						
121A	Cookes Peak, D	9.04	245	IAmb_Lg		21 16 05.8	
	comp=Z,12nm,1.0s						

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*IDC **20** 21:11:53.5±2.7, 38°.81N×20°.52E, h0^{km}, mb3.7/7, mb1 3.7/10, mb1mx3.5/47, mbtmp3.6/10, ML3.4/3, MS2.6/4, Ms1 2.6/4, ms1mx2.3/42, Error ellipse: s-maj=53.8km s-min=16.6km az=43.0*

*BEO **20** 21:11:54.1±2.4, 38°.33N×20°.24E, h53^{km}±6^{km}, ML3.5/9*

*ATH **20** 21:11:54.2, 38°.71N×20°.62E, h8^{km}±1^{km}, ML3.5/21, Error ellipse: s-maj=1.4km s-min=0.7km az=294.0*

ISC 20 21:11:53.8±0.7, **38°.72N**±0°.02×**20°.58E**±0°.03, **h8**^{km}±4^{km}, **n113**, σ1ˢ.**42**/135, **mb3.8**/7, **5C-2D**, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRAG	Dragano-Lefkad	0.04	192	P	Pg	21 11 55.4	-0.1
DRAG				S	Sg	21 11 56.4	-0.3
NYDR	Nydri-Lefkada	0.09	93	P	Pg	21 11 55.8	-0.2
NYDR				S	Sg	21 11 57.1	-0.6
LKD2	Lefkada island	0.09	39	P	Pg	21 11 56.1	0.0
LKD2				S	Sg	21 11 57.5	-0.3
LKD2				AML	AML	21 11 59.2	
LKD2				AML	AML	21 12 01.3	
EVGI	Lefkada island	0.11	150	P	Pg	21 11 56.7	+0.3
EVGI				S	Sg	21 11 58.8	+0.6
TSLK	Tsoukalades, L	0.12	28	P	Pg	21 11 56.8	+0.3
TSLK				S	Sg	21 11 59.3	+0.8
TSLK				AML	AML	21 12 03.7	
TSLK				AML	AML	21 12 05.1	
	comp=E,84026µm,0.4s						
FSK	Fiskardo	0.26	184	P	Pg	21 11 59.7	+0.7
FSK				S	Sg	21 12 03.7	+1.2
FSK				AML	AML	21 12 04.8	
	comp=N,47317µm,0.3s						
FSK				AML	AML	21 12 05.0	
	comp=E,52968µm,0.3s						
KEF4	Livadi, Kephal	0.48	195	P	Pg	21 12 03.4	+0.3
KEF4				S	Sg	21 12 09.2	-0.1
DMLN	Damoulianata-K	0.51	199	P	Pg	21 12 04.0	+0.3
DMLN				S	Sg	21 12 10.7	+0.4
LXRA	Lixouri, Kepha	0.53	193	P	Pg	21 12 04.1	+0.1
LXRA				S	Sg	21 12 11.7	+0.7
VLS	Valsamata	0.54	180	P	Pg	21 12 04.0	-0.2
VLS				AML	AML	21 12 13.9	
	comp=E,8595µm,0.3s						
VLS				AML	AML	21 12 14.7	
	comp=N,10561µm,0.4s						
KEF3	Kipouria, Keph	0.55	200	P	Pg	21 12 04.1	-0.3
KEF3				S	Sg	21 12 12.0	+0.4
PSDA	Pessada-Kefalo	0.60	180	P	Pg	21 12 05.3	-0.2
PSDA				S	Sg	21 12 14.1	+0.7
PVO	Paravola	0.74	98	P	Pb	21 12 08.6	-0.4
PVO				AML	AML	21 12 23.5	
	comp=E,9726µm,0.6s						
PVO				AML	AML	21 12 25.9	
	comp=N,8669µm,0.4s						
IGT	Igoumenitsa	0.84	347	P	Pg	21 12 10.0	+0.1
IGT				AML	AML	21 12 28.4	
	comp=N,8524µm,0.3s						
IGT				AML	AML	21 12 28.6	
	comp=E,5373µm,0.4s						
VTN	Vitineika	0.93	149	P	Pb	21 12 11.9	-0.2
RLS	Riolos of Patr	0.96	133	P	Pg	21 12 11.5	-0.7
RLS				AML	AML	21 12 34.4	
	comp=N,7989µm,0.6s						
RLS				AML	AML	21 12 35.0	
	comp=E,5662µm,0.6s						
JAN	Janina	0.96	12	P	Pb	21 12 13.0	+0.3
JAN				AML	AML	21 12 32.3	
	comp=N,5435µm,0.4s						
JAN				AML	AML	21 12 33.1	
	comp=E,5777µm,0.5s						
EVR	Evrytania	0.98	78	P	Pg	21 12 12.5	-0.1
EVR				AML	AML	21 12 37.4	
	comp=N,3314µm,0.5s						
EVR				AML	AML	21 12 39.0	
	comp=E,2929µm,0.7s						
LTHK	Lithakia	1.03	169	P	Pg	21 12 12.4	-1.2
LTHK				AML	AML	21 12 35.4	
	comp=N,6623µm,0.6s						
LTHK				AML	AML	21 12 45.9	
	comp=E,4438µm,0.5s						
ANX	Ano Chora	1.05	96	P	Pg	21 12 12.9	-1.2
ANX				AML	AML	21 12 38.6	
	comp=N,15828µm,0.5s						
ANX				AML	AML	21 12 39.2	
	comp=E,6708µm,0.4s						
EFP	Efpalio	1.08	105	P	Pg	21 12 13.2	-1.3
EFP				AML	AML	21 12 37.8	
	comp=N,5645µm,0.4s						
EFP				AML	AML	21 12 38.2	
	comp=E,7666µm,0.6s						
KEK	Kerkira	1.17	329	P	Pn	21 12 16.9	+0.5
KEK				AML	AML	21 12 42.6	
	comp=N,1679µm,0.4s						
KEK				AML	AML	21 12 43.4	
	comp=E,2256µm,0.6s						
DRO	Drossia	1.17	130	P	Pb	21 12 14.8	-1.5
DRO				AML	AML	21 12 43.4	
	comp=N,8681µm,0.6s						
DRO				AML	AML	21 12 44.3	
	comp=E,9336µm,0.4s						
LAKA	Lakka	1.19	113	P	Pb	21 12 15.3	-1.3
LAKA				AML	AML	21 12 43.2	
	comp=N,2074µm,0.5s						
LAKA				AML	AML	21 12 48.8	
	comp=E,2731µm,0.7s						
SERG	Sergoula	1.19	104	P	Pb	21 12 15.1	-1.6
SERG				AML	AML	21 12 43.5	
	comp=N,4132µm,0.4s						
SERG				AML	AML	21 12 47.1	
	comp=E,4766µm,0.7s						
TRIZ	Trizonia	1.22	106	P	Pb	21 12 16.3	-0.8
MAKR	Makrakomi, Fth	1.24	76	P	Pg	21 12 17.8	+0.1
MAKR				AML	AML	21 12 46.1	
	comp=E,7241µm,0.4s						
MAKR				AML	AML	21 12 46.5	
	comp=N,5947µm,0.7s						
KPRO	Kipourio	1.37	26	P	Pg	21 12 20.5	+0.3
KPRO				AML	AML	21 12 50.4	
	comp=E,2968µm,0.5s						
KPRO				AML	AML	21 12 54.9	
	comp=N,2978µm,0.8s						
AGG	Agios Georgios	1.40	77	P	Pn	21 12 19.6	+0.1
THL	Klokotos Trika	1.40	52	P	Pb	21 12 19.7	-0.3
THL				AML	AML	21 12 49.0	
	comp=N,3117µm,0.8s						
THL				AML	AML	21 12 49.5	
	comp=E,2921µm,0.8s						
KLV	Kalavryta, Ach	1.40	118	P	Pn	21 12 18.5	-1.1
KLV				AML	AML	21 12 52.2	
	comp=E,2164µm,0.8s						
KLV				AML	AML	21 12 53.6	
	comp=N,2146µm,0.9s						
GUR	Goura	1.59	119	P	Pn	21 12 22.1	-0.1
ITM	Ithomi	1.87	145	P	Pb	21 12 28.3	+0.1
ITM				AML	AML	21 13 02.2	
	comp=N,1413µm,0.6s						
ITM				AML	AML	21 13 08.2	
	comp=E,1536µm,0.5s						
LTK	Loutraki	2.00	110	P	Pn	21 12 28.8	+1.0
VIL2	Platees	2.17	103	P	Pb	21 12 33.0	-0.3
OHR	Ohrid	2.40	4	*e*Pn	Pb	21 12 37.3	+0.1
OHR				*e*Sn	Sb	21 13 07.8	+0.9
OHR	Ohrid	2.40	4	*i* Pn	Pb	21 12 37.4	+0.2
KRND	KRANIDI	2.42	123	P	Pb	21 12 36.0	-1.6
TIR	Tirane	2.68	348	*e*Pn	Pb	21 12 40.0	-2.0
TIR				*e*Sn	Sb	21 13 13.5	-1.6
VAY	Valandovo	3.01	30	*e*Pn	Pb	21 12 45.7	-1.9
VAY	Valandovo	3.01	30	*i* Pn	Pb	21 12 45.8	-1.9
STIP	Stip	3.21	22	*i* Pn	Pb	21 12 49.0	-2.1
MATE	Matera	3.56	304	⇑P	Pg	21 13 03.7	+1.7
DRME	Dracevica, Mon	3.62	343	*e*Pn	Pn	21 12 51.2	+1.0
PDG	Podgorica	3.84	345	⇑P	Sn	21 13 36.6	-1.9
PDG	Podgorica	3.84	345	*e*Pn	Pn	21 12 54.8	+1.6
PDG				*e*Sn	Sn	21 13 38.5	0.0
PDG	Podgorica	3.84	345	*e*Pn	Pn	21 12 54.7	+1.6
PRVS	Prvonek	3.95	16	*e*Pn	Pn	21 12 58.4	+3.7
PRVS				*e*Sn	Sn	21 13 43.4	+2.2
BOSS	Bosilegrad	4.04	20	*e*Pn	Pn	21 12 59.0	+3.1
HCY	Herceg Novi	4.05	338	*e*Pn	Pn	21 12 55.7	-0.3
BARS	Barje	4.20	12	*e*Pn	Pn	21 13 00.3	+2.2
BARS				*e*Sn	Sn	21 13 47.8	+0.5
TREB	Trebinje	4.34	338	*e*Pn	Pn	21 12 59.7	-0.3
TREB	Trebinje	4.34	338	*e*Pn	Pn	21 12 59.8	-0.3
DBRK	Dubrovnik	4.36	336	*e*Pn	Pn	21 13 00.6	+0.3
DBRK				Sn	Sn	21 13 49.5	-1.7
VTS	Vitosha	4.38	27	*e*Pn	Pn	21 13 03.6	+2.8
VTS				*e*Sn	Sn	21 13 55.1	+3.0
BRY	Bratogost	4.46	340	*e*Pn	Pn	21 13 01.9	+0.1
SELS	Selova	4.51	5	*e*Pn	Pn	21 13 04.5	+2.1
STON	Ston	4.69	333	*e*Pn	Pn	21 13 05.0	+0.2
STON				*e*Sn	Sn	21 13 55.7	-3.6
STON	Ston	4.69	333	*e*Pn	Pn	21 13 03.7	-1.1
STON	Ston	4.69	333	*e*Pn	Pn	21 13 04.7	-0.1
ZAPS	Zavoj	4.81	18	*e*Pn	Pn	21 13 09.2	+2.7
IDI	Anoyia	4.86	134	Pn	Pn	21 13 09.8	+2.6
	comp=E,0.6nm,0.3s,baz=208,slow=4.2,SNR=11						
IDI				Sn	Sn	21 14 04.7	+1.1
	comp=E,2.5nm,0.3s,baz=352,slow=11,SNR=7.6						
IDI				LR	LR	21 14 55.6	
	comp=E,19nm,20.0s,baz=320,slow=37						
LSTV	Lastovo	4.92	326	*e*Pn	Pn	21 13 07.8	-0.2
LSTV				Sn	Sn	21 14 02.5	-2.5
RUDO	Rudo	4.98	350	*e*Pn	Pn	21 13 07.3	-1.5
BOVS	Bovan	4.98	9	*e*Pn	Pn	21 13 10.1	+1.3
GRUS	Gruza	5.17	1	*e*Pn	Pn	21 13 12.6	+1.2
BBLS	Lazići	5.22	351	*e*Pn	Pn	21 13 13.6	+1.5
BBLS	Lazići	5.22	351	*e*Pn	Pn	21 13 13.2	+1.1
ZAGS	Zajecar	5.24	13	*e*Pn	Pn	21 13 14.6	+2.3
MAKA	Makarska	5.30	331	*e*Pn	Pn	21 13 13.5	+0.3
MAKA				Sn	Sn	21 14 12.9	-1.5
DIVS	Divibare	5.39	355	*e*Pn	Pn	21 13 15.1	+0.5
DIVS	Divibare	5.39	355	*e*Pn	Pn	21 13 14.1	-0.5
RICI	Ricice	5.44	332	*e*Pn	Pn	21 13 15.0	-0.1
RICI				Sn	Sn	21 14 16.6	-1.2
HVAR	Hvar	5.44	326	*e*Pn	Pn	21 13 15.1	-0.1
HAPS	Han Pijesak,Bl	5.50	348	*e*Pn	Pn	21 13 16.3	+0.2
TRUS	Trudelj	5.50	359	*e*Pn	Pn	21 13 17.8	+1.8
KIJV	Kijevo	6.14	331	*e*Pn	Pn	21 13 24.8	0.0
ZIRJ	Zirje	6.18	324	*e*Pn	Pn	21 13 24.6	-0.6
MORI	Morici	6.32	326	*e*Pn	Pn	21 13 27.5	+0.4
FRGS	Fruska Gora	6.46	355	⇓P	Pn	21 13 29.0	-0.1
FRGS	Fruska Gora	6.46	355	*e*Pn	Pn	21 13 29.4	+0.3
BLY	Banja Luka	6.54	338	*e*Pn	Pn	21 13 31.9	+1.7
BLY	Banja Luka	6.54	338	*e*Pn	Pn	21 13 30.7	+0.5
DUGI	Dugi Otok	6.71	323	*e*Pn	Pn	21 13 33.6	+1.0
MRAK	Mrakovica	6.86	338	*e*Pn	Pn	21 13 33.9	-0.8
NVLJ	Novalja	7.24	326	*e*Pn	Pn	21 13 40.5	+0.7
MORH	Mrgy, Hungar	7.63	350	*e*Pn	Pn	21 13 44.5	-0.6
MLR	Muntele Rosu	7.85	29	⇑P	Pn	21 13 58.0	+10
MLR	Muntele Rosu	7.85	29	LR	LR	21 17 25.3	
	comp=E,44nm,21.5s,baz=173,slow=42						
NEHR	Nehoiu	7.93	31	⇓P	Pn	21 13 56.1	+6.7
CRES	Cresnjev	8.05	334	*e*Pn	Pn	21 13 51.2	+0.2
CEY	Cerknica	8.37	329	*e*Pn	Pn	21 13 54.9	-0.4
PLOR	Plostina	8.42	30	⇑P	Pn	21 14 03.3	+7.2
VRI	Vrincioaia	8.47	31	⇑P	Pn	21 14 01.3	+4.6
SOKA	Soboth	8.94	335	*i* Pn	Pn	21 14 03.2	0.0
	comp=E,1.0nm,0.3s						
SOKA				*e*Sn	Sn	21 15 39.3	-4.8
	comp=E,1.3nm,0.4s						
OBKA	Obir	8.96	332	*i* Pn	Pn	21 14 05.1	+1.5
	comp=E,1.9nm,0.3s						
KBA	Koelnbreinsper	9.89	330	*e*Pn	Pn	21 14 18.0	+1.6
	comp=E,1.3nm,0.4s						
ABTA	Abfaltersbach	9.98	326	*i* Pn	Pn	21 14 18.2	+0.8
	comp=E,2.4nm,0.6s						
ABTA				*e*Sn	Sn	21 16 06.5	-3.1
	comp=E,2.2nm,0.7s						
BRTR	Keskin Array B	10.18	80	Pn	Pn	21 14 25.6	+5.3
	comp=E,0.2nm,0.3s,baz=265,slow=11,SNR=6.4						
MOA	Molln	10.22	335	*e*Pn	Pn	21 14 20.3	-0.3
	comp=E,1.4nm,0.4s						
MOA				*e*Sn	Sn	21 16 14.2	-1.2
	comp=E,0.8nm,0.5s						
WTTA	Wattenberg	10.76	325	*i* Pn	Pn	21 14 30.6	+2.4
	comp=E,1.0nm,0.4s						
WTTA				*e*Sn	Sn	21 16 29.1	+0.3
	comp=E,2.3nm,0.5s						
WATA	Walderalm	10.84	326	*e*Pn	Pn	21 14 32.1	+2.8
	comp=E,1.2nm,0.3s						
VRAC	Vranov	10.97	346	LR	LR	21 19 29.8	
	comp=E,60nm,19.2s,baz=192,slow=42						
GERES	GERESS Array B	11.27	336	Pn	Pn	21 14 35.7	+0.6
	comp=E,0.2nm,0.3s,baz=156,slow=15,SNR=5.7						
GERES				Sn	Sn	21 16 38.5	-2.8
	comp=E,0.2nm,0.3s,baz=151,slow=22,SNR=4.4						
MMAI	Mount Meron Ar	13.29	111	Pn	Pn	21 15 01.8	-1.1
	comp=E,0.5nm,0.3s,baz=309,slow=12,SNR=5.5						
HFS	Hagfors	21.88	351	P	P	21 16 48.2	+1.5
	comp=E,1.0nm,0.5s,baz=155,slow=11,SNR=8.1						
FINES	FINESS Array B	23.00	7	P	P	21 16 58.6	-0.2
	comp=E,1.5nm,0.5s,baz=159,slow=11,SNR=15						
EKA	Eskdalemuir Ar	23.02	324	P	P	21 16 58.2	-0.7
	comp=E,2.1nm,0.8s,baz=125,slow=11,SNR=2.2						
NB2	NORSAR Subarra	23.10	348	P	P	21 17 00.6	+0.8
	comp=Z,0.6nm,0.6s,baz=156,slow=10						
NOA	NORSAR Array B	23.10	348	P	P	21 16 59.7	-0.1
	comp=Z,0.6nm,0.6s,baz=158,slow=9.3,SNR=3.5						
NOA				LR	LR	21 26 32.2	
	comp=Z,17nm,18.6s,baz=335,slow=38						
ARCES	ARCESS Array B	30.99	3	P	P	21 18 11.2	0.0
	comp=Z,1.2nm,0.8s,baz=190,slow=10,SNR=0.9						
MKAR	Makanchi Array	44.98	59	P	P	21 20 10.1	+0.7
	comp=Z,0.6nm,0.5s,baz=281,slow=6.6,SNR=8.8						
ZALV	Zalesovo Beam	45.29	49	P	P	21 20 12.2	+0.5
	comp=Z,1.9nm,0.5s,baz=278,slow=8.2,SNR=7.2						

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*IDC **20** 21:28:55.6±0.9, 6°.69S×80°.65W, h38^{km}±7^{km}, mb3.7/7, mb1 4.0/8, mb1mx3.8/34, mbtmp4.0/8, ML4.4/1, MS3.4/12, Ms1 3.4/12, ms1mx3.1/36, Error ellipse: s-maj=37.9km s-min=17.0km az=45.0*

*ARE **20** 21:28:55±2.2, 6°.74S±0°.07×80°.84W±0°.09, h39^{km}±5^{km}, Error ellipse: s-maj=12.8km s-min=9.1km az=58.0*

*NEIC **20** 21:28:57.7±1.8, 6°.60S±0°.07×80°.52W±0°.09, h53^{km}±7^{km}, mb4.6/73, ML4.5(ARE), Error ellipse: s-maj=13.9km s-min=9.5km az=61.0*

ISC 20 21:28:54.8±0.4, **6°.68S**±0°.06×**80°.65W**±0°.07, **h35**^{km}, **n124**, σ1ˢ.**20**/113, **mb4.6**/40, **MS3.2**/7, **Near coast of northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAH	Atahualpa	2.28	101	Pn	Pn	21 29 32.9	+2.6
	94nm,0.3s,baz=357,slow=5.7,SNR=381						
ATAH				Sn	Sn	21 30 03.0	+5.5
	210nm,0.3s,baz=311,slow=21,SNR=9.4						
ATAH				LR	LR	21 30 33.3	
	comp=Z,844nm,18.8s,baz=290,slow=43						
NNA	Nana	6.47	145	Pn	Pn	21 30 31.9	+4.2
	1.7nm,0.3s,baz=332,slow=17,SNR=2.1						
NNA				Sn	Sn	21 31 36.3	-4.1
	4.5nm,0.3s,baz=203,slow=18,SNR=1.5						
NNA				LR	LR	21 33 33.9	
	comp=Z,119nm,19.9s,baz=305,slow=43						
NNA	Nana	6.47	145		Pn	21 30 29.4	+1.7
OTAV	Otavalo	7.21	18		Pn	21 30 38.2	-0.1
CZSB	Cruzeiro do Su	7.95	98		Pn	21 30 48.7	+0.8
TBTG	Tabatinga, AM	10.97	77	Pn	Pn	21 31 30.5	+1.1
PAYG	Puerto Ayora	11.32	301	Pn	Pn	21 31 37.8	+3.6
ETMB	Extrema	14.62	103	Pn	Pn	21 32 17.7	-1.6
ZARC	Zaragoza, Cauc	15.22	22	Pn	Pn	21 32 24.5	-2.8
LPAZ	La Paz	15.53	129	Pn	Pn	21 32 30.1	-1.8
OCAC	Ocana	16.52	26		PcP	21 37 35.7	+1.2
PB11	IPOC Station P	16.82	142		P	21 32 49.9	+0.1
TA02	Huaiquique	16.93	144		P	21 32 50.5	-0.2
TA02				IAmb	IAmb	21 33 01.8	
	comp=Z,42nm,1.1s						
JTS	Las Juntas de	17.40	346	LR	LR	21 38 32.0	
	comp=Z,111nm,18.4s,baz=240,slow=33						
PB08	IPOC Station P	17.42	141	Pn	Pn	21 32 55.2	-0.4
SAML	Samuel	17.45	99		Pn	21 32 54.8	-0.9
SDV	Santo Domingo	18.41	33	LR	LR	21 41 24.3	
	comp=Z,127nm,20.2s,baz=146,slow=41						
PB09	IPOC Station P	18.63	145	P	P	21 33 10.0	+0.2
ACON	Acoyapa	19.07	346	P	P	21 33 15.0	+0.6
ESPN	Las Esperanzas	19.10	349	P	P	21 33 14.4	-0.4
LVC	Limon Verde	19.46	146	LR	LR	21 41 39.0	
	comp=Z,60nm,18.9s,baz=312,slow=39						
VILB	Vilhena	21.08	109	P	P	21 33 36.2	-0.1
VILB				IAmb	IAmb	21 33 51.0	
	comp=Z,18nm,1.0s						
SIV	San Ignacio	21.29	117	P	P	21 33 39.2	+0.6
	comp=Z,3.5nm,0.8s,baz=297,slow=9.1,SNR=9.4						
SIV				LR	LR	21 42 15.3	
	comp=Z,127nm,19.4s,baz=261,slow=38						
PTGA	Pitinga	21.46	75	LR	LR	21 42 35.1	
	comp=Z,54nm,21.2s,baz=263,slow=38						
BOAV	Boa Vista	22.02	66	P	P	21 33 47.0	+0.6
HATO	Hato, Curacao	22.05	32	P	P	21 33 45.4	-1.3
BIRV	Birongo	22.26	40	P	P	21 33 47.7	-1.3
MTO3	Montecristo	22.66	338	P	P	21 33 52.0	-1.5
PTLB	Pontes e Lacer	22.82	114	P	P	21 33 55.1	+0.2
AC02	Maricunga	22.84	153	P	P	21 33 56.4	+0.7
AC02				IAmb	IAmb	21 34 00.1	
	comp=Z,22nm,1.4s						
MTDJ	Mount Denham	24.94	7	P	P	21 34 15.3	+0.2
H03N2	Juan Fernandez	26.67	177	T	T	22 02 06.0	
	baz=356,slow=76,SNR=55						
H03N1	Juan Fernandez	26.68	177	T	T	22 02 08.1	
	baz=356,slow=76,SNR=122						
H03N3	Juan Fernandez	26.69	177	T	T	22 02 10.4	
	baz=356,slow=76,SNR=118						
VA04	Juan Fernndez	26.88	177	P	P	21 34 33.4	+1.0
GTBY	Guantanamo Bay	27.00	12	P	P	21 34 31.7	-1.9
CMIG	Matias Romero	27.50	329	LR	LR	21 43 04.0	
	comp=Z,41nm,21.7s,baz=72,slow=31						
DR12	Loma Pena Alta	27.64	24	P	P	21 34 39.9	+0.4
SJG	San Juan	28.49	30	LR	LR	21 47 28.2	
	comp=Z,39nm,20.8s,baz=170,slow=39						
CPUP	Villa Florida	29.59	134	LR	LR	21 47 28.0	
	comp=Z,51nm,18.0s,baz=328,slow=38						
TRCB	Terra Rica	31.37	124	P	P	21 35 10.9	-1.7
061Z	Ochoppi	32.35	360	P	P	21 35 20.3	-0.7
LC01	Cunco	33.04	167	P	P	21 35 26.4	-0.5
LC01				IAmb	IAmb	21 35 28.3	
	comp=Z,4.4nm,0.8s						
PLCA	Paso Flores	35.09	167	P	P	21 35 45.7	+0.9
	comp=Z,2.6nm,0.7s,baz=325,slow=8.8,SNR=6.2						
PLCA	Paso Flores	35.09	167	P	P	21 35 45.8	+1.0
PLCA				IAmb	IAmb	21 35 48.7	
	comp=Z,12nm,1.4s						
LL01	San Ignacio de	36.29	170	P	P	21 35 55.8	+0.8
HKT	Hockley	39.23	339	P	P	21 36 20.6	+0.7
HKT				IAmb	IAmb	21 36 23.6	
	comp=Z,16nm,1.5s						
GOGA	Godfrey	39.96	356	P	P	21 36 25.7	-0.3
GOGA				IAmb	IAmb	21 36 31.9	
	comp=Z,18nm,1.4s						
Y45A	Yeager Farm, C	41.20	349	P	P	21 36 36.7	+0.5
JCT	Junction City	41.26	335	P	P	21 36 36.8	-0.1
FPAL	Fort Paine	41.27	354	P	P	21 36 36.4	-0.5
FPAL				IAmb	IAmb	21 36 36.8	
	comp=Z,6.7nm,0.7s						
W57A	Gilead	41.62	1	P	P	21 36 38.5	-1.1
CPCT	Cooper Cave	42.06	355	P	P	21 36 44.2	+0.9
TXAR	Lajitas Array	42.11	329	P	P	21 36 44.8	+1.0
	comp=Z,0.2nm,0.6s,baz=158,slow=11,SNR=2.6						
TXAR				PcP	PcP	21 38 39.0	+0.8
	comp=Z,0.4nm,0.7s,baz=138,slow=5.6,SNR=3.9						
TXAR	Lajitas Array	42.11	329	P	P	21 36 44.7	+0.8
TX31	Lajitas Ar. Si	42.11	329	P	P	21 36 44.3	+0.4
V48A	Smith Brothers	42.59	353	P	P	21 36 47.9	+0.3
V48A				IAmb	IAmb	21 36 48.5	
	comp=Z,20nm,1.4s						
MIAR	Mount Ida	42.79	344	P	P	21 36 50.2	+1.0
ABTX	Abilene, Hawle	43.07	336	P	P	21 36 50.5	-1.1
ABTX				IAmb	IAmb	21 36 53.7	
	comp=Z,8.7nm,0.8s						
WVT	Waverly	43.12	351	P	P	21 36 51.0	-0.8
WHAR	Wooly Hollow	43.17	346	P	P	21 36 53.1	+0.9
WHAR				IAmb	IAmb	21 36 54.6	
	comp=Z,14nm,1.3s						
X37A	Clayton	43.34	342	P	P	21 36 55.0	+1.3
X37A				IAmb	IAmb	21 37 13.3	
	comp=Z,8.9nm,1.0s						
T57A	Hurt	43.47	2	P	P	21 36 54.4	-0.3
LCAR	Lake Charles	43.66	348	P	P	21 36 56.4	+0.2
LCAR				IAmb	IAmb	21 36 57.5	
	comp=Z,12nm,0.8s						
FCAR	Ozark Folk Cen	43.70	346	P	P	21 36 57.0	+0.5
FCAR				IAmb	IAmb	21 36 58.5	
	comp=Z,12nm,1.0s						
U40A	Yellville	44.32	346	P	P	21 37 02.1	+0.6
U40A				IAmb	IAmb	21 37 04.0	
	comp=Z,12nm,1.1s						
T42A	Van Buren	44.57	348	P	P	21 37 03.3	-0.2
T42A				IAmb	IAmb	21 37 03.9	
	comp=Z,6.3nm,0.7s						
WMOK	Wichita Mounta	44.62	339	P	P	21 37 04.3	+0.4
OK025	Westminster Rd	44.88	341	P	P	21 37 06.2	+0.2
MNTX	Cornudas Mount	44.88	330	P	P	21 37 06.5	+0.4
MNTX				IAmb	IAmb	21 37 22.7	
	comp=Z,9.6nm,1.4s						
SIUC	Southern Illin	44.89	350	P	P	21 37 05.0	-1.0
SIUC				IAmb	IAmb	21 37 06.6	
	comp=Z,9.7nm,0.7s						
MGMO	Mountain Grove	44.94	347	P	P	21 37 06.9	+0.4
MGMO				IAmb	IAmb	21 37 08.2	
	comp=Z,6.5nm,0.8s						
CCM	Cathedral Cave	45.59	348	P	P	21 37 12.0	+0.4
S39A	Bolivar	45.70	346	P	P	21 37 12.7	+0.2
S39A				IAmb	IAmb	21 37 14.4	
	comp=Z,11nm,0.9s						
T35A	Sooner Cattle	45.84	342	P	P	21 37 13.7	0.0
R40A	Maddies Statio	46.03	347	P	P	21 37 14.7	-0.4
R40A				IAmb	IAmb	21 37 16.4	
	comp=Z,8.7nm,0.9s						
319A	Douglas	46.70	326	P	P	21 37 19.3	-1.3
319A				IAmb	IAmb	21 37 23.2	
	comp=Z,8.8nm,1.2s						
ANMO	Albuquerque	48.04	331	P	P	21 37 30.9	-0.2
ANMO				IAmb	IAmb	21 37 33.4	
	comp=Z,5.9nm,1.1s						
K43A	Burlington	49.65	353	P	P	21 37 42.9	-0.1
W18A	Petrified Fore	49.81	329	P	P	21 37 44.7	+0.1
W18A				IAmb	IAmb	21 37 47.2	
	comp=Z,11nm,1.2s						
WUAZ	Wupatki	50.97	328	P	P	21 37 53.1	-0.3
WUAZ				IAmb	IAmb	21 37 58.0	
	comp=Z,4.2nm,1.1s						
H43A	Windswept, Lux	51.32	353	P	P	21 37 54.3	-1.3
I37A	Lemond, Waseca	51.76	348	P	P	21 37 59.3	+0.3
I37A				IAmb	IAmb	21 38 11.7	
	comp=Z,6.2nm,0.8s						
SZCU	Shurtz Canyon	53.44	328	P	P	21 38 11.0	-0.8
SZCU				IAmb	IAmb	21 38 24.2	
	comp=Z,2.9nm,0.7s						
HWUT	Hardware Ranch	55.77	332	P	P	21 38 29.2	+0.6
HWUT				IAmb	IAmb	21 38 47.6	
	comp=Z,4.5nm,0.9s						
PDAR	Pinedale Array	55.80	335	P	P	21 38 28.6	-0.2
	comp=Z,0.5nm,0.6s,baz=152,slow=7.7,SNR=4.4						
LHV	Little Huntoon	56.90	325	P	P	21 38 36.1	-0.3
LHV				IAmb	IAmb	21 38 38.6	
	comp=Z,9.4nm,1.3s						
ELK	Elko	56.90	329	P	P	21 38 36.8	+0.1
NVAR	Mina Array Bea	56.90	325	P	P	21 38 38.2	+1.5
	comp=Z,1.5nm,0.9s,baz=137,slow=6.4,SNR=8.7						
NVAR				pP	pP	21 38 48.9	+1.5
	comp=Z,0.3nm,0.5s,baz=126,slow=6.8,SNR=2.6						
NVAR	Mina Array Bea	56.90	325	P	P	21 38 37.3	+0.5
PNTR	Pine Nut	58.09	325	P	P	21 38 45.3	+0.1
YHL	Hebgen Lake	58.18	335	P	P	21 38 46.5	+0.8
YHL				IAmb	IAmb	21 38 48.3	
	comp=Z,5.8nm,0.9s						
GCMT	Greycliff	58.32	336	P	P	21 38 46.5	0.0
HLID	Hailey	58.61	332	P	P	21 38 49.0	+0.4
ORV	Oroville	59.50	324	P	P	21 38 55.0	+0.4
ORV				IAmb	IAmb	21 38 57.1	
	comp=Z,4.7nm,1.0s						
MOD	Modoc Plateau	60.40	327	P	P	21 39 00.4	-0.6
MOD				IAmb	IAmb	21 39 02.8	
	comp=Z,6.9nm,1.1s						
K05A	Summer Lake	61.28	327	P	P	21 39 07.9	+0.9
K05A				IAmb	IAmb	21 39 09.5	
	comp=Z,6.7nm,0.9s						
PPT	Papeete	67.95	254	LR	LR	22 01 58.3	
	comp=Z,72nm,21.9s,baz=350,slow=29						
VNA3	Neumayer Olymp	77.64	162	P	P	21 40 47.4	+0.1
VNA1	Neumayer--Stat	77.92	161	P	P	21 40 49.2	+0.3
VNA2	Neumayer--Watz	78.27	161	P	P	21 40 50.7	-0.2
	baz=298,slow=6.4						
KOWA	Kowa	78.83	74	P	P	21 40 55.4	+0.4
KOWA				IAmb	IAmb	21 40 56.9	
	comp=Z,14nm,1.4s						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNAA	Sanae	79.86	162	P	P	21 40 59.3	-0.3
SNAA	Sanae	79.86	162	P	P	21 40 59.5	-0.1
SNAA				IAmb	IAmb	21 41 00.2	
	comp=Z,4.6nm,0.7s						
INK	Inuvik	83.36	343	P	P	21 41 18.3	+0.4
	comp=Z,4.5nm,1.1s,baz=117,slow=2.2,SNR=3.9						
INK	Inuvik	83.36	343	IAmb	IAmb	21 41 20.4	
	comp=Z,7.2nm,1.4s						
A36M	Sachs Harbour	83.67	347	P	P	21 41 19.4	-0.1
TORD	Torodi Ar. Bea	84.10	76	P	P	21 41 22.6	-0.2
	comp=Z,1.5nm,0.7s,baz=292,slow=6.1,SNR=10						
TORD	Torodi Ar. Bea	84.10	76	P	P	21 41 22.8	0.0
MSVF	Nonsavu	98.66	251	LR	LR	22 16 43.1	
	comp=Z,73nm,20.3s,baz=183,slow=29						
H11N3	WAKE ISLAND Hy	113.33	289	T	T	23 50 38.1	
	baz=90,slow=75,SNR=41						
H11N2	WAKE ISLAND Hy	113.34	289	T	T	23 50 45.5	
	baz=90,slow=75,SNR=36						
H11N1	WAKE ISLAND Hy	113.35	289	T	T	23 50 46.0	
	baz=90,slow=75,SNR=45						
H11S2	WAKE ISLAND Hy	113.54	287	T	T	23 50 49.7	
	baz=90,slow=75,SNR=71						
H11S1	WAKE ISLAND Hy	113.55	287	T	T	23 50 54.7	
	baz=90,slow=75,SNR=74						
H11S3	WAKE ISLAND Hy	113.56	287	T	T	23 50 50.8	
	baz=90,slow=75,SNR=65						
BVAR	Borovoye Array	128.10	22	PKP	PKPdf	21 47 56.8	-0.5
	comp=Z,0.8nm,0.8s,baz=212,slow=14,SNR=4.5						
ZALV	Zalesovo Beam	131.42	11	PKP	PKPdf	21 48 03.5	0.0
	comp=Z,1.4nm,0.6s,baz=330,slow=2.1,SNR=8.0						
ZALV				pPKP	pPKPdf	21 48 15.1	+0.1
	comp=Z,1.1nm,0.6s,baz=300,slow=2.9,SNR=2.9						
ASAR	Alice Springs	134.75	227	PKP	PKPdf	21 48 09.9	-0.9
	comp=Z,0.7nm,0.8s,baz=134,slow=2.7,SNR=5.5						
WRA	Warramunga Arr	136.59	232	PKP	PKPdf	21 48 13.3	-1.0
	comp=Z,1.3nm,0.9s,baz=119,slow=2.0,SNR=8.9						
MKAR	Makanchi Array	137.43	17	PKP	PKPdf	21 48 13.4	-1.7
	comp=Z,1.4nm,0.9s,baz=339,slow=1.6,SNR=6.5						
MKAR				pPKP	pPKPdf	21 48 26.7	+0.1
	comp=Z,0.5nm,0.7s,baz=22,slow=3.6,SNR=3.4						
SONM	Songino Array	138.56	353	PKP	PKPdf	21 48 15.1	-2.2
	comp=Z,0.6nm,0.7s,baz=296,slow=2.6,SNR=4.6						
KSRS	Korea Array	139.84	324	PKP	PKPdf	21 48 19.2	-0.5
	comp=Z,1.1nm,0.6s,baz=34,slow=0.8,SNR=2.5						
KSRS				pPKP	pPKPdf	21 48 31.7	+0.5
	comp=Z,1.4nm,0.8s,baz=92,slow=1.6,SNR=3.1						
CMAR	Chiang Mai Arr	168.29	2	PKP	PKPdf	21 48 59.0	+0.2
	comp=Z,0.8nm,0.3s,baz=342,slow=8.3,SNR=4.4						
CMAR				PKPab	PKPab	21 50 06.7	-0.4
	comp=Z,0.6nm,0.4s,baz=331,slow=6.1,SNR=4.7						

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*SOF **20** 22:01:04.3, 41°.08N×24°.24E, h11^{km}, MD2.5*
*ATH **20** 22:01:05.6, 41°.17N×24°.20E, h12^{km}±1^{km}, ML2.1/7, Error ellipse: s-maj=2.0km s-min=0.8km az=219.0*
*BEO **20** 22:01:16.2±1.1, 41°.44N×23°.80E, h22^{km}, ML1.9/4*
ISC 20 22:01:05.5±0.9**, 41°.17N**±0°.03×**24°.22E**±0°.02**, h13**^{km}±8^{km}**, n28, σ1^{s}.07**/38**, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KVLA	Kavala	0.27	151	P	Pg	22 01 11.1	0.0
KVLA				S	Sg	22 01 15.2	+0.4
KVLA				AML	AML	22 01 15.5	
	comp=N,771μm,0.3s						
KVLA				AML	AML	22 01 15.6	
	comp=E,716μm,0.2s						
KAVA	Kavala	0.28	127	P	Pg	22 01 11.2	-0.3
KAVA				S	Sg	22 01 16.0	+0.7
KAVA				AML	AML	22 01 18.2	
	comp=N,1008μm,0.2s						
KAVA				AML	AML	22 01 23.6	
	comp=E,723μm,0.1s						
NVR	Nevrokopi	0.32	304	P	Pg	22 01 12.0	-0.1
NVR				S	Sg	22 01 16.6	0.0
NVR				AML	AML	22 01 18.4	
	comp=N,370μm,0.2s						
NVR				AML	AML	22 01 19.7	
	comp=E,581μm,0.4s						
SRS	Serrai	0.47	264	P	Pg	22 01 14.4	-0.5
MMB	Musomiste	0.56	319	*i* P	Pg	22 01 16.5	0.0
RZN	Rozhen	0.64	36	*i* P	Pb	22 01 18.7	0.0
THAS	Thassos island	0.68	146	P	Pg	22 01 18.6	-0.2
THAS				AML	AML	22 01 31.7	
	comp=E,624μm,0.2s						
THAS				AML	AML	22 01 31.9	
	comp=N,620μm,0.2s						
SOH	Sokhos	0.74	242	P	Pg	22 01 19.5	-0.3
OUR	Ouranopolis	0.85	192	P	Pb	22 01 21.9	-0.3
OUR				AML	AML	22 01 35.9	
	comp=E,821μm,0.3s						
OUR				AML	AML	22 01 36.5	
	comp=N,670μm,0.3s						
PLG	Polygyros	0.99	217	P	Pb	22 01 23.9	-0.6
PLG				AML	AML	22 01 38.0	
	comp=E,297μm,0.4s						
PLG				AML	AML	22 01 40.2	
	comp=N,210μm,0.5s						
KNT	Kendrikon	0.99	270	P	Pb	22 01 23.5	-1.1
RDO	Rodhopi	1.00	91	P	Pb	22 01 24.0	-0.7
RDO				S	Sg	22 01 38.3	+0.5
RDO				AML	AML	22 01 42.2	
	comp=N,283μm,0.2s						
RDO				AML	AML	22 01 42.3	
	comp=E,246μm,0.4s						
KDZ	Kurdzhali	1.02	62	*i* P	Pb	22 01 23.8	-1.3
KKB	Krupnik	1.10	310	*i* P	Pb	22 01 25.8	-0.6
SMTH	Samothraki Isl	1.22	125	P	Pb	22 01 28.6	+0.1
VAY	Valandovo	1.25	277	*e*Pg	Pg	22 01 33.6	+4.0
VAY				*e*Sg	Sg	22 01 46.3	+0.5
VAY	Valandovo	1.25	277	*i* Pn	Pg	22 01 31.0	+1.5
VAY				*i* Sg	Sg	22 01 47.5	+1.7
PAIG	Paliouri	1.31	198	P	Pb	22 01 29.4	-0.5
DIM	Dimitrovgrad	1.32	48	*i* P	Pg	22 01 31.7	+0.7
ALN	Alexandroupoli	1.41	101	P	Pb	22 01 31.7	0.0
ALN				S	Sb	22 01 50.3	+0.7
LIA	Limnos Island	1.47	150	P	Pn	22 01 31.8	+0.2
STIP	Stip	1.61	290	*i* Pn	Pn	22 01 32.9	-0.8
STIP				*i* Sg	Sn	22 01 53.6	-0.8
VTS	Vitosha	1.62	334	*e*Pg	Pg	22 01 38.7	+2.0
VTS				*e*Sg	Sb	22 01 55.8	0.0
VTS	Vitosha	1.62	334	*i* P	Pg	22 01 36.6	-0.1
BOSS	Bosilegrad	1.85	316	*e*Pg	Pg	22 01 42.4	+1.3
PRVS	Prvonek	2.08	311	*e*Pg	Pg	22 01 46.1	+0.6
PRVS				*e*Sg	Sb	22 02 08.9	-0.1
ZAPS	Zavoj	2.41	331	*e*Pg	Pg	22 01 51.9	+0.2
BOVS	Bovan	3.09	324	*e*Pn	Pb	22 01 58.4	-1.9

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*ISK **20** 22:20:12.9, 37°.09N×28°.78E, h3^{km}, ML1.5/5*
DDA 20 22:20:12.6, 37°.12N×28°.77E, h7^{km}±2^{km}**, ML1.6, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DALY	Dalyan (Mula)	0.32	196	*i* P	Pg	22 20 19.1	+0.3
DALY	Dalyan (Mula)	0.32	196	PG	Pg	22 20 19.7	+0.9
TAVA	DENIZLI_Tavas	0.36	19	*i* P	Pg	22 20 19.5	-0.2
TAVA				*i* S	Sg	22 20 24.8	+0.4
MULA	Mugla, Merkez-	0.38	291	*i* P	Pb	22 20 22.7	+1.0
YER	Yerkesik	0.39	272	PG	Pb	22 20 21.7	-0.1
YER				SG	Sb	22 20 28.0	0.0
CAEL	Denizli, Camel	0.44	90	*i* P	Pg	22 20 20.4	-0.8
CAME	Cameli-Denizli	0.47	113	PG	Pg	22 20 22.4	+0.7
CAME				SG	Sb	22 20 29.3	-1.1
TURN	Turunc	0.54	230	PG	Pb	22 20 23.9	-0.5
FETY	Fethiye	0.55	152	*i* P	Pg	22 20 23.4	+0.2
FETY				*i* S	Sb	22 20 32.1	-0.6
FETY	Fethiye	0.55	152	PG	Pg	22 20 23.6	+0.4
FETY				SG	Sg	22 20 31.5	+1.1
AYDN	Tasoluk	0.89	307	*i* P	Pb	22 20 30.1	-0.2
AYDN				*i* S	Sb	22 20 42.5	+0.1
PASA	Karahalli, USA	1.35	25	*i* P	Pn	22 20 34.4	-3.6
PASA				*i* S	Sb	22 20 42.5	-13
PASA				IAML		22 20 45.0	
	comp=E,6.7nm,0.3s						

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*ISK **20** 22:20:20.8, 39°.12N×29°.52E, h7^{km}, ML2.0/7*
DDA 20 22:20:20.6, 39°.08N×29°.48E, h12^{km}±1^{km}**, ML1.6, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GDZ	Gediz	0.01	4	*i* P	Pg	22 20 23.0	+0.1
GDZ				IAML		22 20 24.0	
	comp=E,723nm,0.1s						
GDZ				*i* S	Sg	22 20 24.4	0.0
GDZ				IAML		22 20 25.0	
	comp=N,603nm,0.3s						
GEDZ	Gediz	0.06	239	PG	Pg	22 20 23.8	+0.7
GEDZ				SG	Sg	22 20 25.9	+1.0
SHAP	Saphane-Kutahy	0.21	255	PG	Pb	22 20 26.3	-0.1
TVSB	Tavsanli	0.37	358	PG	Pg	22 20 27.9	-0.2
TVSB				SG	Sg	22 20 33.1	0.0
SIMA	Simav-Kutahya	0.39	271	PG	Pb	22 20 29.5	0.0
USAK	Uak-Merkez	0.51	225	*i* P	Pb	22 20 31.4	-0.2
USAK				*i* S	Sb	22 20 38.7	-0.3
USAK				IAML		22 20 51.0	
	comp=E,116nm,0.9s						
ANDZ	Kutahya, Merke	0.54	37	*i* P	Pg	22 20 30.7	-0.5
ANDZ				*i* S	Sg	22 20 37.0	-1.4
ANDZ				IAML		22 20 38.0	
	comp=N,37nm,0.2s						
ANDZ				IAML		22 20 39.0	
	comp=E,26nm,0.2s						
DEMI	Demirci	0.60	267	*i* P	Pb	22 20 32.9	-0.1
DEMI				*i* S	Sg	22 20 40.7	+0.6
DEMI				IAML		22 20 42.0	
	comp=N,50nm,0.4s						
DEMI				IAML		22 20 42.0	
	comp=E,76nm,0.2s						
PASA	Karahalli, USA	0.73	180	*i* P	Pg	22 20 34.9	+0.2
PASA				*i* S	Sg	22 20 44.2	-0.1
KULA	Kula-Manisa	0.85	229	PG	Pb	22 20 37.6	+0.2
MANT	Manisa	0.93	231	*i* P	Pg	22 20 38.7	+0.1
MANT				*i* S	Sg	22 20 49.6	-1.1
MANT				IAML		22 20 54.0	
	comp=N,14nm,0.4s						
MANT				IAML		22 20 54.0	
	comp=E,12nm,0.3s						
MANT	Manisa	0.93	231	*i* P	Pb	22 20 39.2	+0.4
MANT				*i* S	Sg	22 20 50.2	-0.4
MANT				IAML		22 20 54.0	
	comp=E,12nm,0.3s						
DURS	Dursunbey	0.94	304	*i* P	Pb	22 20 39.1	+0.2
DURS				*i* S	Sb	22 20 52.0	+0.6
KZIL	AFYON_Kizioren	0.97	147	*i* P	Pb	22 20 39.5	+0.1
KZIL				*i* S	Sg	22 20 51.2	-0.7
BORA	Eskisehir	1.10	43	*i* P	Pb	22 20 41.0	-0.6
BORA				*i* S	Sb	22 20 54.4	-1.6
BORA				IAML		22 20 58.0	
	comp=E,8.1nm,0.5s						
BORA				IAML		22 21 08.0	
	comp=N,8.9nm,1.0s						
BORA	Eskisehir	1.10	43	PG	Pb	22 20 41.4	-0.2
BILE	Bilecik/Merkez	1.12	16	*i* P	Pb	22 20 41.4	-0.7
SGAZ	Eskisehir, Sey	1.15	66	*i* P	Pb	22 20 42.2	-0.2
SGAZ				*i* S	Sb	22 20 54.8	-2.5
SRCK	Saricakaya, Es	1.31	42	PN	Pb	22 20 45.3	+0.1
SRCK				SN	Sg	22 21 03.1	+0.3
GULT	Gulveren	1.57	30	PN	Pb	22 20 49.1	-0.6

KRSC 20 22:26:27.2±1.9**, 48°.10N×156°.40E, h31**^{km}±34^{km}**, ML4.1, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.59	356	*e*P	Pn	22 27 08.0	+1.1
SKR				*e*S	Sn	22 27 39.9	+2.7
PAU	Pauzhetka	3.38	4	*e*P	Pn	22 27 21.6	+3.9
PAU				*e*S	Sb	22 28 02.8	-4.1
KDTR	Khodutka, Kamc	3.87	16	*e*P	Pn	22 27 28.3	+3.9
KDTR				*e*S	Sb	22 28 15.3	-5.6
ASAK	Asacha	4.39	12	*e*P	Pn	22 27 36.3	+4.6
MTVR	Mutnovka	4.53	14	*e*P	Pn	22 27 38.1	+4.4
RUS	Russkaya	4.54	17	*e*P	Pn	22 27 37.4	+3.7
RUS				*e*S	Sn	22 28 30.8	+5.4
GRL	Gorelyy	4.58	13	*e*P	Pn	22 27 38.8	+4.4
UGLR	Uglovaya	5.34	16	*e*P	Pn	22 27 49.6	+4.8
AVH	Avacha	5.38	15	*e*P	Pn	22 27 51.1	+5.8
SMAR	Somma	5.39	16	*e*P	Pn	22 27 51.0	+5.5
NLC	Nalytchevo	5.41	19	*e*S	Sn	22 28 51.9	+5.2
KRER	Koryakskii	5.42	15	*e*P	Pn	22 27 51.9	+6.0
SDLR	Sedlovina	5.42	16	*e*P	Pn	22 27 49.9	+4.1
SPN	Mys Shipunski	5.51	23	*e*P	Pn	22 27 52.9	+5.9
MKZ	Mys Kozlova	7.27	25	*e*P	Pn	22 28 16.8	+5.7

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*IDC **20** 22:40:39.5±0.5, 37°.04N×97°.84W, h0^{km}, mb4.2/15, mb1 4.4/21, mb1mx4.1/58, mbtmp4.2/21, ML4.5/4, MS3.4/18, Ms1 3.4/18, ms1mx3.2/67, Error ellipse: s-maj=11.0km s-min=9.6km az=145.0*
*TUL **20** 22:40:40.3±0.7, 36°.948N±0°.010×97°.83W±0°.01, h5^{km}±3^{km}, ML4.5, mb4.4/11(NEIC), mb_Lg4.6/120(NEIC), Mwr4.1/73(NEIC), Error ellipse: s-maj=1.7km s-min=1.3km az=115.0*
*NEIC **20** 22:40:41.0±0.5, 36°.943N±0°.009×97°.82W±0°.01, h1^{km}±5^{km}, Error ellipse: s-maj=1.5km s-min=1.0km az=140.0*
*NEIC **20** 22:40:40.7, 36°.93N×97°.82W, h5^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-1.44; $M_{\theta\theta}$1.38; $M_{\phi\phi}$0.06; $M_{r\theta}$-0.53; $M_{\theta\phi}$0.62; $M_{\phi r}$0.18; Fault plane solution: $M_0$1.64000×10^{15} NP1:ϕ_s82.13000°, δ54.48000°, λ-72.56000°. NP2:ϕ_s233.73000°, δ39.06000°, λ-112.77000°. Principal axes: T 1.6842, Plg8.0000°, Azm160.0000°; N -0.0927, Plg14.0000°, Azm252.0000°; P -1.5916, Plg74.0000°, Azm41.0000°;*
*ANF **20** 22:40:42.5±1.0, 36°.95N×97°.80W, h29^{km}±10^{km}, ML5.3/17 Error ellipse: s-maj=2.6km s-min=2.2km az=25.0*
ISC 20 22:40:40.1±0.8**, 36°.94N**±0°.02×**97°.81W**±0°.02**, h8**^{km}±5^{km}**, n276, σ1^{s}.20**/283**, mb4.2**/17**, MS3.5**/10**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.09	203	Pg	Pg	22 40 42.6	+0.2
GC02				Sg	Sg	22 40 44.1	+0.1
KAN17	Caldwell West	0.11	20	Pg	Pg	22 40 43.1	+0.5
KAN17				Sg	Sg	22 40 45.0	+0.5
KAN14	Manchester OK	0.12	279	Pg	Pg	22 40 42.9	+0.1
KAN14				Sg	Sg	22 40 44.0	-0.7
KAN05	Bluff City Nor	0.18	345		Pg	22 40 44.1	+0.4
KAN05				Sg	Sg	22 40 45.7	-0.6
KAN01	Argonia South	0.22	11		Pg	22 40 45.0	+0.5
KAN01				Sg	Sg	22 40 48.0	+0.5
KAN09	Caldwell North	0.25	38	Pg	Pg	22 40 45.7	+0.6
KAN09				Sg	Sg	22 40 49.4	+0.9
KAN13	South Haven SW	0.28	74	Pg	Pg	22 40 46.3	+0.7
KAN13				Sg	Sg	22 40 49.3	-0.1
KAN10	Anthony SW Sta	0.29	309	Pg	Pg	22 40 46.1	+0.2
KAN10				Sg	Sg	22 40 50.2	+0.4
KAN06	Argonia West S	0.31	353		Pg	22 40 46.6	+0.4
KAN06				Sg	Sg	22 40 51.0	+0.6
KAN08	Anthony NE Sta	0.31	336		Pg	22 40 46.6	+0.3
KAN08				Sg	Sg	22 40 51.3	+0.8
OK032	Salt Plains WL	0.34	247	Pg	Pg	22 40 47.0	+0.1
KAN16	Harper SW Stat	0.35	325	Pg	Pg	22 40 47.2	+0.2
KAN16				Sg	Sg	22 40 52.1	+0.5
KAN12	Harper NE Stat	0.39	338	Pg	Pg	22 40 48.0	+0.3
KAN12				Sg	Sg	22 40 53.2	+0.4
CROK	Carrier	0.45	198	Pg	Pg	22 40 49.2	+0.3
CROK				Sg	Sg	22 40 55.7	+0.9
BLOK	Blackwell	0.51	110	Pg	Pg	22 40 50.5	+0.5
BLOK				Sg	Sg	22 40 57.4	+0.7
T35A	Sooner Cattle	1.04	91	Pg	Pb	22 41 00.3	-0.1
T35A				Sg	Sb	22 41 14.7	+0.4
T35B	Sooner Cattle	1.04	91	Pb	Pb	22 41 00.3	-0.1
	baz=272,SNR=1000						
T35B				S	Sb	22 41 14.2	-0.1
	baz=272						
U32A	Winter Ranch,	1.11	240	Pg	Pb	22 41 00.8	-0.6
U32A				Sg	Sg	22 41 16.3	+0.6
U32A	Winter Ranch,	1.11	240	P	Pb	22 41 00.9	-0.6
	baz=58,SNR=215						
QUOK	Quay	1.17	130	Pg	Pb	22 41 02.5	-0.1
OK029	Liberty Lake	1.18	166	Pg	Pb	22 41 02.3	-0.3
OK031	S. Brethren Rd	1.26	141	Pg	Pn	22 41 03.9	-0.1
OK031				Sg	Sg	22 41 21.5	+0.9
BCOK	Bluff Creek, N	1.29	173	Pg	Pn	22 41 04.3	-0.2
BCOK				Sg	Sg	22 41 22.5	+0.9
OK030	Cody Creek RV	1.31	140		Pn	22 41 04.7	+0.1
OK005	Luther M Schoo	1.38	158		Pb	22 41 06.0	-0.1
OK009	Oakdale Elemen	1.39	167		Pb	22 41 06.4	0.0
OK025	Westminster Rd	1.41	164		Pb	22 41 06.5	-0.1
OKCFA	Oklahoma City	1.55	169		Pb	22 41 08.7	-0.4
OKCFA				IAmb_Lg		22 41 32.8	
	comp=Z,3μm,0.7s						
OKCFA	Oklahoma City	1.55	169	Pb	Pb	22 41 08.9	-0.1
	baz=349,SNR=39						
OKCFA				S	Sg	22 41 30.0	+0.1
	baz=349						
OKCSW	OKLAHOMA CITY	1.56	169		Pb	22 41 08.9	-0.3
R32A	Long Quarter,	1.64	335		Pb	22 41 10.4	-0.3
R32A	Long Quarter,	1.64	335	P	Pb	22 41 10.5	-0.2
	baz=154,SNR=340						
R32A				S	Sb	22 41 31.9	+0.3
	baz=154						
FNO	Franklin	1.71	169	Pn	Pn	22 41 10.9	+0.7
FNO				IAmb_Lg		22 41 39.2	
	comp=Z,4μm,0.8s						
TUL1	Leonard	1.93	122	P	Pn	22 41 14.2	+1.0
	baz=303,SNR=428						
TUL1				Sb	Sg	22 41 41.4	-0.6
	baz=303						
TUL1	Leonard	1.93	122	Pn	Pn	22 41 14.1	+1.0
TUL1	Leonard	1.93	122	P	Pn	22 41 14.2	+1.0
	baz=303,SNR=449						
TUL1				S	Sb	22 41 40.7	+1.0
	baz=303						
WMOK	Wichita Mounta	2.33	200	P	Pn	22 41 19.2	+0.4
	baz=19,SNR=163						
WMOK				S	Sn	22 41 48.6	+0.9
	baz=19						
WMOK	Wichita Mounta	2.33	200	Pn	Pn	22 41 19.2	+0.4
WMOK	Wichita Mounta	2.33	200	P	Pn	22 41 19.5	+0.7
	baz=19,SNR=360						
WMOK				S	Sn	22 41 49.3	+1.6
	baz=19						
X34A	Smith Ranch, M	2.33	180	Pn	Pn	22 41 20.1	+1.3
X34A				IAmb_Lg		22 41 58.2	
	comp=Z,2μm,0.8s						
KSU1	Kansas State U	2.36	23	P	Pn	22 41 20.3	+1.2
	baz=204,SNR=194						
KSU1				Sb	Sb	22 41 53.1	+1.0
	baz=204						
KSU1	Kansas State U	2.36	23	Pn	Pn	22 41 20.3	+1.2
KSU1	Kansas State U	2.36	23	P	Pn	22 41 20.3	+1.2
	baz=204,SNR=108						
KSU1				S	Sb	22 41 50.9	-1.3
	baz=204						
CBKS	Cedar Bluff	2.41	321	P	Pn	22 41 20.9	+0.9
	baz=140,SNR=74						
CBKS				S	Sn	22 41 51.0	+1.3
	baz=140						
CBKS	Cedar Bluff	2.41	321		Pn	22 41 20.9	+0.9
CBKS				IAmb_Lg		22 42 02.1	
	comp=Z,1μm,1.1s						
CBKS	Cedar Bluff	2.41	321	P	Pn	22 41 21.1	+1.1
	baz=140,SNR=66						
CBKS				S	Sb	22 41 53.1	-0.7
	baz=140						
U38A	Gravette	2.80	99	Pn	Pn	22 41 26.3	+1.1
U38A	Gravette	2.80	99	P	Pn	22 41 26.6	+1.3
	baz=282,SNR=141						
LOOK	Love County	2.98	170	Pn	Pn	22 41 28.7	+0.9
LOOK				IAmb_Lg		22 42 21.5	
	comp=Z,1μm,1.0s						
X37A	Clayton	3.07	139	Pn	Pn	22 41 30.0	+1.0
X37A				IAmb_Lg		22 42 22.6	
	comp=Z,2μm,0.8s						
X37A	Clayton	3.07	139	P	Pn	22 41 29.9	+1.0
	baz=320,SNR=87						
HHAR	Hobbs	3.19	101	Pn	Pn	22 41 31.8	+1.3
HHAR				IAmb_Lg		22 42 30.5	
	comp=Z,2μm,0.9s						
HHAR	Hobbs	3.19	101	P	Pn	22 41 32.0	+1.5
	baz=283						
Z35A	Perchaven, San	3.63	173		Pn	22 41 37.5	+0.9
Z35A	Perchaven, San	3.63	173	P	Pn	22 41 37.9	+1.3
	baz=353,SNR=46						
Z35A				S	Sn	22 42 21.5	+1.9
	baz=353						
S39A	Bolivar	3.66	77		Pn	22 41 37.4	+0.4
S39A					Pb	22 41 46.9	+1.9
S39A				IAmb_Lg		22 42 38.6	
	comp=Z,1μm,0.7s						
S39A	Bolivar	3.66	77	P	Pn	22 41 37.7	+0.7
	baz=260,SNR=133						
W39A	Magazine	3.70	117	P	Pn	22 41 38.3	+0.8
	baz=299,SNR=21						
W39A				S	Sn	22 42 21.7	+0.3
	baz=299						
W39A	Magazine	3.70	117	Pn	Pn	22 41 38.4	+0.8
W39A					Pb	22 41 47.2	+1.6
W39A	Magazine	3.70	117	P	Pn	22 41 38.3	+0.8
	baz=299,SNR=33						
AMTX	Amarillo	3.75	238	P	Pn	22 41 39.3	+0.9
	baz=55						
AMTX	Amarillo	3.75	238	Pn	Pn	22 41 39.8	+1.4
AMTX				IAmb_Lg		22 42 48.5	
	comp=Z,900nm,1.1s						
AMTX	Amarillo	3.75	238	P	Pn	22 41 40.1	+1.7
	baz=55						
U40A	Yellville	4.03	97	P	Pn	22 41 42.9	+0.8
	baz=280,SNR=65						
U40A				S	Sn	22 42 30.0	+0.5
	baz=280						
U40A	Yellville	4.03	97	P	Pn	22 41 43.1	+1.0
	baz=280,SNR=103						
U40A				P	Pn	22 41 43.1	+1.0
	baz=280,SNR=103						
U40A				S	Sn	22 42 30.2	+0.7
	baz=280						
U40A				S	Sn	22 42 30.2	+0.7
	baz=280						
MIAR	Mount Ida	4.19	123	P	Pn	22 41 45.2	+0.9
	baz=306,SNR=51						
MIAR				S	Sn	22 42 35.4	+1.9
	baz=306						
MIAR	Mount Ida	4.19	123		Pn	22 41 44.8	+0.5
MIAR				IAmb_Lg		22 42 55.1	
	comp=Z,1μm,0.9s						
MIAR	Mount Ida	4.19	123	P	Pn	22 41 45.5	+1.2
	baz=306,SNR=45						
N35A	Tabor	4.27	23	P	Pn	22 41 46.0	+0.7
	baz=204,SNR=25						
P38A	Dawn	4.31	50	Pn	Pn	22 41 46.5	+0.6
P38A				Pg	Pg	22 42 01.2	-1.4
P38A				IAmb_Lg		22 42 58.1	
	comp=Z,1μm,0.8s						
P38A	Dawn	4.31	50	P	Pn	22 41 46.9	+1.0
	baz=233,SNR=75						
KSCO	Kaye Shedlock'	4.33	300	P	Pn	22 41 46.7	+0.3
	baz=117						
KSCO				S	Sn	22 42 36.9	-0.2
	baz=117						
Z38A	Mt. Pleasant	4.34	147	IAmb_Lg		22 43 05.9	
	comp=Z,2μm,0.8s						
MGMO	Mountain Grove	4.44	86		Pn	22 41 48.6	+0.9
MGMO				IAmb_Lg		22 43 07.8	
	comp=Z,1μm,0.7s						
BGNE	Belgrade	4.47	357	P	Pn	22 41 48.7	+0.5
	baz=177,SNR=28						
BGNE				S	Sn	22 42 41.1	+0.6
	baz=177						
BGNE	Belgrade	4.47	357	Pn	Pn	22 41 49.2	+1.0
BGNE	Belgrade	4.47	357	P	Pn	22 41 49.2	+1.0
	baz=177,SNR=33						
ABTX	Abilene, Hawle	4.56	200	P	Pn	22 41 49.7	+0.3
	baz=18						
ABTX				S	Sn	22 42 42.9	+0.3
	baz=18						
ABTX	Abilene, Hawle	4.56	200		Pn	22 41 49.8	+0.3
ABTX	Abilene, Hawle	4.56	200	P	Pn	22 41 50.1	+0.6
	baz=18,SNR=20						
R40A	Maddies Statio	4.61	71		Pn	22 41 50.5	+0.5
R40A				IAmb_Lg		22 43 08.9	
	comp=Z,954nm,0.8s						
R40A	Maddies Statio	4.61	71	P	Pn	22 41 50.6	+0.5
	baz=255,SNR=241						
FCAR	Ozark Folk Cen	4.71	101		Pn	22 41 51.8	+0.3
X40A	Basin Creek Fa	4.73	120	P	Pn	22 41 52.8	+1.1
	baz=303,SNR=28						
X40A				S	Sn	22 42 47.5	+0.7
	baz=303						
X40A	Basin Creek Fa	4.73	120	IAmb_Lg		22 43 20.0	
	comp=Z,938nm,0.8s						
X40A	Basin Creek Fa	4.73	120	P	Pn	22 41 52.8	+1.1
	baz=303,SNR=50						
X40A				P	Pn	22 41 52.8	+1.1
	baz=303,SNR=50						
WHAR	Wooly Hollow	4.76	109	Pn	Pn	22 41 52.5	+0.3
WHAR					Pb	22 42 02.6	-1.3
W41B	Gary Mavity, V	4.84	110	P	Pn	22 41 54.0	+0.7

	baz=293,SNR=9.0						
W41B				S	Sn	22 42 49.5	0.0
	baz=293						
W41B	Gary Mavity, V	4.84	110	P	Pn	22 41 53.9	+0.7
	baz=293,SNR=41						
WHTX	Lake Whitney,	4.94	176	P	Pn	22 41 54.9	+0.2
	baz=357,SNR=16						
WHTX				S	Sn	22 42 51.1	-0.9
	baz=357						
WHTX	Lake Whitney,	4.94	176	IAmb_Lg		22 43 30.2	
	comp=Z,720nm,1.3s						
WHTX	Lake Whitney,	4.94	176	P	Pn	22 41 55.2	+0.5
	baz=357,SNR=62						
WLAR	White Oak Lake	5.03	129	IAmb_Lg		22 43 23.9	
	comp=Z,1µm,0.7s						
OGNE	Ogallala	5.18	322	P	Pn	22 41 59.5	+1.5
	baz=139,SNR=10.0						
OGNE				S	Sn	22 42 58.0	0.0
	baz=139						
OGNE	Ogallala	5.18	322	Pg	Pg	22 42 18.3	-1.0
OGNE				IAmb_Lg		22 43 34.8	
	comp=Z,1µm,1.1s						
237A	Washetta, Mont	5.20	161	IAmb_Lg		22 43 39.2	
	comp=Z,924nm,1.1s						
237A	Washetta, Mont	5.20	161	P	Pn	22 41 58.1	-0.1
	baz=342,SNR=15						
P40A	Paris	5.22	59		Pn	22 41 58.9	+0.3
P40A					Pg	22 42 16.9	-3.3
P40A				IAmb_Lg		22 43 32.2	
	comp=Z,1µm,0.8s						
P40A	Paris	5.22	59	P	Pn	22 41 59.0	+0.5
	baz=242,SNR=16						
N38A	Joes South For	5.25	41		Pn	22 41 59.1	+0.2
N38A					Pg	22 42 17.0	-3.7
N38A	Joes South For	5.25	41	P	Pn	22 41 59.5	+0.6
	baz=224,SNR=18						
T25A	Trinidad	5.28	274	P	Pn	22 41 59.6	0.0
	baz=90,SNR=12						
T25A	Trinidad	5.28	274		Pn	22 41 59.7	+0.2
T25A					Pg	22 42 19.0	-2.3
CCM	Cathedral Cave	5.34	76	P	Pn	22 42 00.2	+0.1
	baz=260						
CCM				S	Sn	22 43 01.3	-0.6
	baz=260						
CCM	Cathedral Cave	5.34	76	Pn	Pn	22 42 00.1	+0.1
CCM					Pg	22 42 18.8	-3.6
CCM				IAmb_Lg		22 43 34.9	
	comp=Z,1µm,0.9s						
CCM	Cathedral Cave	5.34	76	P	Pn	22 42 00.3	+0.1
	baz=260,SNR=24						
T42A	Van Buren	5.38	87	IAmb_Lg		22 43 38.9	
	comp=Z,735nm,0.9s						
LCAR	Lake Charles	5.43	97	IAmb_Lg		22 43 34.5	
	comp=Z,758nm,1.0s						
LCAR	Lake Charles	5.43	97	P	Pn	22 42 02.5	+1.1
	baz=281,SNR=17						
Z41A	Richland Creek	5.51	130	P	Pn	22 42 03.0	+0.6
	baz=313						
Z41A				S	Sn	22 43 04.3	-1.6
	baz=313						
K31A	O'Neill	5.72	353	Pg	Pg	22 42 26.0	-3.7
CCAR	Cane Creek	5.78	120	IAmb_Lg		22 43 59.0	
	comp=Z,1µm,0.8s						
NATX	Nacogdoches	5.79	152	P	Pn	22 42 06.3	0.0
	baz=334						
NATX				S	Sn	22 43 10.7	-2.2
	baz=334						
FVM	French Village	5.97	78	IAmb_Lg		22 43 50.4	
	comp=Z,543nm,0.8s						
SCIA	State Center	6.11	34	P	Pn	22 42 11.4	+0.7
	baz=217,SNR=9.0						
SCIA				S	Sn	22 43 19.7	-1.0
	baz=217						
SCIA	State Center	6.11	34	Pg	Pb	22 42 30.9	+4.2
SCIA				IAmb_Lg		22 43 58.3	
	comp=Z,1µm,0.8s						
SCIA	State Center	6.11	34	P	Pn	22 42 11.9	+1.2
	baz=217,SNR=7.1						
Q24A	Divide	6.14	291	P	Pn	22 42 11.6	+0.2
	baz=107						
435B	Jarrell	6.14	178	P	Pn	22 42 10.8	-0.4
	baz=358,SNR=9.7						
435B				S	Sn	22 43 19.6	-2.0
	baz=358						
435B	Jarrell	6.14	178	IAmb_Lg		22 44 06.6	
	comp=Z,746nm,0.9s						
435B	Jarrell	6.14	178	P	Pn	22 42 11.0	-0.2
	baz=358,SNR=12						
SDCO	Great Sand Dun	6.18	280	P	Pn	22 42 11.6	-0.3
	baz=95						
SLM	Saint Louis	6.24	72	IAmb_Lg		22 44 01.2	
	comp=Z,886nm,0.7s						
PVMO	Portageville	6.54	92	IAmb_Lg		22 44 21.5	
	comp=Z,1µm,0.7s						
N41A	Harden Midland	6.61	53		Pn	22 42 18.2	+0.7
N41A	Harden Midland	6.61	53	P	Pn	22 42 18.6	+1.1
	baz=238,SNR=18						
MET	Memphis--Engin	6.64	104	IAmb_Lg		22 44 25.4	
	comp=Z,1µm,0.9s						
JCT	Junction City	6.65	195	P	Pn	22 42 18.0	-0.3
	baz=14,SNR=9.0						
JCT	Junction City	6.65	195	Pn	Pn	22 42 17.8	-0.4
JCT				IAmb_Lg		22 44 13.6	
	comp=Z,524nm,1.0s						
JCT	Junction City	6.65	195	P	Pn	22 42 17.9	-0.3
	baz=14,SNR=28						
143A	Socs Landing,	6.75	127	IAmb_Lg		22 44 25.8	
	comp=Z,491nm,0.8s						
ISCO	Idaho Springs	6.76	297	P	Pn	22 42 20.1	+0.2
	baz=113,SNR=11						
ISCO	Idaho Springs	6.76	297	P	Pn	22 42 20.8	+0.8
	baz=113,SNR=35						
ECSD	EROS Data Cent	6.85	7	P	Pn	22 42 20.1	-0.8
	baz=188,SNR=31						
ECSD	EROS Data Cent	6.85	7	IAmb_Lg		22 44 26.5	
	comp=Z,630nm,1.0s						
ECSD	EROS Data Cent	6.85	7	P	Pn	22 42 20.4	-0.5
	baz=188,SNR=65						
S44A	Carbondale	6.86	81	P	Pn	22 42 20.9	-0.1
	baz=266,SNR=26						
SIUC	Southern Illin	6.89	81	IAmb_Lg		22 44 20.4	
	comp=Z,939nm,0.8s						
HALT	Halls	6.91	96	IAmb_Lg		22 44 34.3	
	comp=Z,1µm,0.8s						
P43A	Skaggs, Pawnee	7.06	65	IAmb_Lg		22 44 25.2	
	comp=Z,894nm,0.8s						
P43A	Skaggs, Pawnee	7.06	65	P	Pn	22 42 23.6	-0.1
	baz=250,SNR=21						
W45A	Hickory Valley	7.21	102	IAmb_Lg		22 44 30.6	
	comp=Z,944nm,0.7s						
L40A	Anamosa	7.22	43	IAmb_Lg		22 44 46.2	
	comp=Z,730nm,0.8s						
L40A	Anamosa	7.22	43	P	Pn	22 42 26.3	+0.3
	baz=227,SNR=6.1						
Q44A	Meyer Farm, Va	7.22	72	IAmb_Lg		22 44 34.2	
	comp=Z,1µm,0.9s						
Q44A	Meyer Farm, Va	7.22	72	P	Pn	22 42 26.3	+0.3
	baz=257,SNR=7.8						
S22A	4UR Ranch, Cre	7.23	279	P	Pn	22 42 26.9	+0.5
	baz=94						
ANMO	Albuquerque	7.29	257	Pn	Pn	22 42 28.5	+1.5
	comp=Z,0.2nm,0.3s,baz=103,slow=11,SNR=3.2						
ANMO				Lg	Lg	22 44 27.1	
	comp=Z,4.1nm,0.3s,baz=318,slow=18,SNR=6.8						
ANMO				LR	LR	22 45 12.2	
	comp=Z,50nm,21.1s,baz=72,slow=37						
ANMO	Albuquerque	7.29	257	P	Pn	22 42 27.7	+0.7
	baz=72						
Y45A	Yeager Farm, C	7.42	112	IAmb_Lg		22 44 48.4	
	comp=Z,689nm,1.0s						
N23A	Red Feather La	7.47	304	P	Pn	22 42 30.2	+0.6
	baz=119,SNR=11						
SUSD	Miller	7.55	354	P	Pn	22 42 30.1	-0.3
	baz=173,SNR=6.5						
SUSD	Miller	7.55	354	Pn	Pn	22 42 30.1	-0.3
SUSD				Pg	Pg	22 42 59.3	-5.3
SUSD				IAmb_Lg		22 44 42.6	
	comp=Z,859nm,0.9s						
SUSD	Miller	7.55	354	P	Pn	22 42 30.2	-0.3
	baz=173,SNR=18						
HDIL	Hopedale	7.57	59	P	Pn	22 42 31.0	+0.2
	baz=244,SNR=23						
HDIL	Hopedale	7.57	59	P	Pn	22 42 32.1	+1.3
	baz=244,SNR=14						
BNM	Barren Site	7.70	251		Pn	22 42 33.7	+0.9
I37A	Lemond, Waseca	7.83	24	IAmb_Lg		22 44 59.0	
	comp=Z,750nm,0.8s						
OLIL	Olney	7.89	74	IAmb_Lg		22 44 55.3	
	comp=Z,552nm,0.9s						
O44A	Mansfield	8.00	63	IAmb_Lg		22 45 02.7	
	comp=Z,740nm,0.7s						
735A	Kenedy	8.06	180	IAmb_Lg		22 45 09.8	
	comp=Z,378nm,0.9s						
WVT	Waverly	8.08	93	P	Pn	22 42 37.2	-0.5
	baz=279						
WVT	Waverly	8.08	93	IAmb_Lg		22 44 55.5	
	comp=Z,642nm,1.2s						
L42A	Oliver, Polo	8.08	49	IAmb_Lg		22 45 07.9	
	comp=Z,946nm,0.8s						
PLAL	Pickwick Lake	8.13	101		Pn	22 42 38.8	+0.3
PLAL				IAmb_Lg		22 45 01.6	
	comp=Z,371nm,0.9s						
MNTX	Cornudas Mount	8.15	232	P	Pn	22 42 39.1	+0.3
	baz=48,SNR=30						
MNTX	Cornudas Mount	8.15	232	P	Pn	22 42 39.1	+0.3
	baz=48,SNR=24						
JFWS	Jewell Farm	8.33	42	P	Pn	22 42 40.3	-0.8
	baz=227,SNR=40						
JFWS	Jewell Farm	8.33	42	IAmb_Lg		22 45 17.4	
	comp=Z,550nm,0.7s						
JFWS	Jewell Farm	8.33	42	P	Pn	22 42 40.5	-0.6
	baz=227,SNR=44						
RSSD	Black Hills	8.60	329	P	Pn	22 42 45.9	+0.9
	baz=145						
RSSD	Black Hills	8.60	329	IAmb_Lg		22 45 34.3	
	comp=Z,350nm,1.1s						
RWWY	Rawlins	8.69	306	IAmb_Lg		22 45 23.9	
	comp=Z,404nm,1.2s						
833A	Chaparral WMA,	8.69	189	P	Pn	22 42 45.3	-0.9
	baz=8.3						
M44A	Midewin, Midew	8.79	57	IAmb_Lg		22 45 26.2	
	comp=Z,891nm,0.9s						
K22A	Casper	8.80	313	P	Pn	22 42 47.8	0.0
	baz=128						
K22A	Casper	8.80	313	IAmb_Lg		22 45 34.6	
	comp=Z,374nm,1.0s						
Z47A	Carrollton	8.81	112	IAmb_Lg		22 45 44.8	
	comp=Z,326nm,0.9s						
F33A	5 Mile Ranch,	8.97	7	IAmb_Lg		22 45 29.5	
	comp=Z,456nm,1.0s						
TX31	Lajitas Ar. Si	9.03	215		Pn	22 42 51.0	+0.1
TX31	Lajitas Ar. Si	9.03	215	P	Pn	22 42 50.5	-0.4
	baz=31,SNR=29						
TX32	Lajitas Array	9.03	215	Pn	Pn	22 42 51.0	+0.1
TXAR	Lajitas Array	9.03	215	Pn	Pn	22 42 49.7	-1.2
	comp=Z,1.9nm,0.3s,baz=44,slow=12,SNR=55						
TXAR				Lg	Lg	22 45 22.1	
	comp=Z,4.2nm,0.3s,baz=39,slow=24,SNR=5.7						
SFIN	Lafayette	9.06	64	P	Pn	22 42 50.9	-0.3
	baz=251,SNR=6.8						
SFIN	Lafayette	9.06	64	Pn	Pn	22 42 52.1	+1.0
SPMN	Marine on St.	9.10	23	P	Pn	22 42 51.5	-0.2
	baz=206,SNR=5.1						
HQIL	Hanson Quary C	9.11	55	IAmb_Lg		22 45 34.0	
	comp=Z,756nm,1.1s						
WCI	Wyandotte Cave	9.24	79	P	Pn	22 42 53.0	-0.6
	baz=266						
WCI	Wyandotte Cave	9.24	79	P	Pn	22 42 53.1	-0.5
	baz=266,SNR=10						
L44A	Lake County Fo	9.26	53	P	Pn	22 42 53.1	-0.8
	baz=239						
L44A	Lake County Fo	9.26	53	IAmb_Lg		22 45 34.9	
	comp=Z,752nm,0.9s						
121A	Cookes Peak, D	9.31	245	P	Pn	22 42 54.1	-0.7
	baz=59						
I42A	Draeger Farm,	9.71	42		Pn	22 42 58.9	-1.1
I42A				IAmb_Lg		22 46 03.7	
	comp=Z,344nm,1.0s						
I42A	Draeger Farm,	9.71	42	P	Pn	22 42 59.4	-0.6
	baz=227,SNR=12						
E28A	Huff	9.87	348	IAmb_Lg		22 46 02.3	
	comp=Z,759nm,1.2s						
P48A	Milroy	10.07	72	Pn	Pn	22 43 03.3	-1.8
R49A	Shelbyville	10.12	79	P	Pn	22 43 04.8	-0.9
	baz=266,SNR=6.3						
R49A				P	Pn	22 43 04.8	-0.9
	baz=266,SNR=6.3						
T50A	Nancy	10.38	86		Pn	22 43 09.1	-0.2
P49A	Miami Univ. Ec	10.62	72	P	Pn	22 43 11.3	-1.3
	baz=260						
H43A	Windswept, Lux	10.70	42	P	Pn	22 43 12.6	-1.1
	baz=229,SNR=16						
PDAR	Pinedale Array	10.74	306	Pn	Pn	22 43 13.1	-1.2
	comp=Z,0.6nm,0.3s,baz=92,slow=14,SNR=17						
PDAR				Lg	Lg	22 46 15.0	
	comp=Z,1.5nm,0.3s,baz=108,slow=29,SNR=6.1						
PDAR				LR	LR	22 47 59.1	
	comp=Z,117nm,21.6s,baz=118,slow=41						
CPCT	Cooper Cave	10.85	94		Pn	22 43 16.2	+0.6
V51A	Loudon	10.91	92		Pn	22 43 16.9	+0.3
MDND	Maddock	10.98	354	P	Pn	22 43 15.2	-2.3
	baz=172						
S51A	Beattyville	11.35	82		Pn	22 43 22.1	-0.5
S51A	Beattyville	11.35	82	P	Pn	22 43 22.8	+0.2
	baz=271,SNR=14						
S51A				P	Pn	22 43 22.8	+0.2
	baz=271,SNR=14						
TKL	Tuckaleechee C	11.40	92	Pn	Pn	22 43 22.9	-0.4
	comp=Z,4.1nm,0.3s,baz=231,slow=9.1,SNR=29						
TKL				Lg	Lg	22 46 33.7	
	comp=Z,6.2nm,0.3s,baz=114,slow=5.7,SNR=16						
F42A	Maple Grove Fa	11.42	36	Pn	Pn	22 43 21.3	-2.1
AGMN	Agassiz Nation	11.44	7	P	Pn	22 43 20.2	-3.6
	baz=188,SNR=10.0						
AGMN	Agassiz Nation	11.44	7	Pn	Pn	22 43 21.0	-2.8
TZTN	Tazewell	11.45	88	P	Pn	22 43 24.0	0.0
	baz=276						
LAO	LASA Array	11.58	330	P	Pn	22 43 22.7	-3.0
	baz=144						
B35A	Bob, Littlefor	11.80	13	Pn	Pn	22 43 27.5	-1.2
RLMT	Red Lodge	11.89	317	P	Pn	22 43 28.1	-2.0
	baz=130						
EYMN	Ely	11.94	21	P	Pn	22 43 27.1	-3.5
	baz=205						
EYMN	Ely	11.94	21	P	Pn	22 43 27.6	-3.1
	baz=205,SNR=16						
ACSO	Alum Creek Sta	12.06	70	P	Pn	22 43 29.9	-2.4
	baz=259						
ACSO	Alum Creek Sta	12.06	70	Pn	Pn	22 43 30.4	-1.9
AAM	Ann Arbor	12.15	60	P	Pn	22 43 32.0	-1.5
	baz=248						
GOGA	Godfrey	12.26	102	P	Pn	22 43 34.2	-0.7
	baz=291						
DGMT	Dagmar	12.44	340	P	Pn	22 43 35.4	-2.0
	baz=156						
Q52A	Bidwell	12.44	76		Pn	22 43 35.9	-1.5
GCMT	Greycliff	12.54	319		Pn	22 43 38.5	-0.4
P52A	Corning	12.61	73	P	Pn	22 43 37.5	-2.3
	baz=263						
GLMI	Grayling	12.71	48	P	Pn	22 43 38.5	-2.5
	baz=236,SNR=28						
GLMI	Grayling	12.71	48	P	Pn	22 43 38.6	-2.5
	baz=236,SNR=7.2						
ULM	Lac du Bonnet	13.38	5	Pn	Pn	22 43 45.0	-5.3
	comp=Z,1.1nm,0.3s,baz=195,slow=9.7,SNR=10						
ULM				Sn	Sn	22 46 09.0	-10
	comp=Z,1.4nm,0.3s,baz=128,slow=19,SNR=2.9						
ULM				Lg	Lg	22 47 30.5	
	comp=Z,1.9nm,0.3s,baz=252,slow=18,SNR=3.0						
ULM				LR	LR	22 49 03.7	
	comp=Z,238nm,19.3s,baz=170,slow=38						
O53A	New Philadelph	13.40	71	P	Pn	22 43 48.5	-2.0
	baz=261						
KMSC	Kings Mountain	13.46	93	P	Pn	22 43 50.5	-0.9
	baz=282						
BLA	Blacksburg	13.89	84	P	Pn	22 43 55.9	-1.5
	baz=274						
M53A	WI Miller and	14.03	66	P	Pn	22 43 56.8	-2.3
	baz=257						
ELK	Elko	14.10	291	LR	LR	22 49 29.9	
	comp=Z,91nm,19.1s,baz=90,slow=38						
EGMT	Eagleton	14.13	325	P	Pn	22 43 59.0	-1.6
	baz=137						
IRM	Iron Mountain	14.38	264	P	Pn	22 44 05.1	+1.1
	baz=74						
N54A	Moraine State	14.44	68	P	Pn	22 44 01.2	-3.5
	baz=260						
PFO	Pinyon Flats O	15.59	263	Lg	Lg	22 48 49.8	
	comp=Z,0.1nm,0.3s,baz=213,slow=19,SNR=1.6						
PFO				LR	LR	22 50 38.1	
	comp=Z,52nm,18.1s,baz=6.5,slow=38						
SSPA	Standing Stone	15.97	71	P	Pn	22 44 22.2	-2.8
	baz=263						
SADO	Sadowa	16.13	55	Pn	Pn	22 44 22.1	-4.9
	comp=Z,0.6nm,0.3s,baz=270,slow=12,SNR=3.7						
SADO				Lg	Lg	22 49 00.2	
	comp=Z,2.9nm,0.3s,baz=93,slow=2.3,SNR=6.9						
SADO	Sadowa	16.13	55	IAmb	IAmb	22 44 24.4	
	comp=Z,40nm,1.2s						
NVAR	Mina Array Bea	16.29	281	Pn	P	22 44 31.8	-0.7
	baz=89,slow=11,SNR=3.5						
NVAR	Mina Array Bea	16.29	281	P	P	22 44 34.7	+2.2
NEW	Newport	18.11	315	P	P	22 44 53.8	+1.4
	baz=114,slow=15,SNR=5.1						
NEW				Lg	Lg	22 50 07.3	
	comp=Z,0.1nm,0.3s,baz=46,slow=17,SNR=1.3						
NEW				LR	LR	22 52 22.7	
	comp=Z,138nm,19.0s,baz=103,slow=39						
EDM	Edmonton	19.56	331	P	Pn	22 45 09.0	-0.5
EDM				IAmb	IAmb	22 45 09.7	
	comp=Z,17nm,0.9s						
YBH	Yreka Blue Hor	19.82	292	P	Pn	22 45 13.7	+1.0
	comp=Z,0.2nm,0.3s,baz=115,slow=6.8,SNR=9.9						
YBH				LR	LR	22 53 27.0	
	comp=Z,156nm,18.1s,baz=95,slow=39						
CMIG	Matias Romero	19.94	172	P	Pn	22 45 15.7	+1.5
	comp=Z,4.7nm,1.0s,baz=41,slow=9.2,SNR=3.3						
CMIG				LR	LR	22 54 41.6	
	comp=Z,43nm,20.1s,baz=24,slow=42						
BBB	Bella Bella	26.18	315	LR	LR	22 57 23.9	
	comp=Z,116nm,18.7s,baz=134,slow=38						
YKA	Yellowknife Ar	27.61	343	P	P	22 46 27.4	-0.3
	comp=Z,3.7nm,0.9s,baz=141,slow=10,SNR=3.6						
SCHQ	Schefferville	27.69	40	P	P	22 46 28.1	-0.4
	comp=Z,7.5nm,0.9s,baz=239,slow=8.9,SNR=3.5						
JTS	Las Juntas de	28.96	153	LR	LR	22 59 27.3	
	comp=Z,54nm,20.5s,baz=42,slow=39						
DLBC	Dease Lake	30.06	326	LR	LR	22 59 16.0	
	comp=Z,78nm,18.5s,baz=122,slow=37						
FRB	Frobisher Bay	32.14	24	LR	LR	22 59 50.6	
	comp=Z,107nm,21.3s,baz=164,slow=36						
INK	Inuvik	37.12	339	P	P	22 47 50.2	-0.5
	comp=Z,1.4nm,0.9s,baz=133,slow=6.2,SNR=3.7						
INK	Inuvik	37.12	339	IAmb	IAmb	22 48 13.0	
	comp=Z,14nm,1.6s						
ILAR	Eielson Array	40.04	330	P	P	22 48 16.4	+1.1
	comp=Z,10nm,0.8s,baz=107,slow=7.1,SNR=82						
ILAR				LR	LR	23 05 41.0	
	comp=Z,82nm,20.1s,baz=118,slow=38						
RSO	Redoubt South	41.60	322	P	P	22 48 29.1	+0.6
I21K	Tanana	42.23	329	P	P	22 48 34.4	+1.1
I21K				IAmb	IAmb	22 48 36.2	
	comp=Z,15nm,0.8s						
TOLK	Toolik Lake Re	42.40	335	P	P	22 48 35.9	+1.1
TOLK				IAmb	IAmb	22 48 37.0	
	comp=Z,5.3nm,1.0s						
JMIC	Jan Mayen	55.35	23	LR	LR	23 13 33.8	
	comp=Z,80nm,18.8s,baz=272,slow=36						
SIV	San Ignacio	63.02	140	P	P	22 51 08.0	+0.2
	comp=Z,1.0nm,0.7s,baz=330,slow=7.3,SNR=4.1						
ARCES	ARCESS Array B	66.09	19	P	P	22 51 26.9	-0.3
	comp=Z,5.6nm,0.9s,baz=313,slow=6.7,SNR=11						
ARCES				LR	LR	23 19 32.6	
	comp=Z,41nm,18.6s,baz=355,slow=35						
NOA	NORSAR Array B	66.70	30	P	P	22 51 31.1	-0.2
	comp=Z,1.4nm,0.9s,baz=307,slow=6.2,SNR=2.4						
NOA				LR	LR	23 18 47.0	
	comp=Z,17nm,21.2s,baz=310,slow=34						
TIXI	Tiksi	66.83	345	LR	LR	23 22 49.8	
	comp=Z,44nm,18.5s,baz=262,slow=38						
ESDC	Sonseca Array	70.19	55	P	P	22 51 54.1	+0.6
	comp=Z,2.2nm,1.0s,baz=311,slow=8.2,SNR=5.4						
ESDC	Sonseca Array	70.19	55	IAmb	IAmb	22 51 58.8	
	comp=Z,8.7nm,1.6s						
FINES	FINESS Array B	71.94	25	P	P	22 52 03.8	+0.2
	comp=Z,3.6nm,0.8s,baz=302,slow=11,SNR=5.2						
GERES	GERESS Array B	75.22	39	P	P	22 52 23.9	+0.6
	comp=Z,1.1nm,0.7s,baz=329,slow=5.0,SNR=8.5						
AKASG	Malin Array Be	81.09	31	P	P	22 52 55.8	+0.2
	comp=Z,1.2nm,0.5s,baz=315,slow=4.4,SNR=8.9						
AKASG	Malin Array Be	81.09	31	IAmb	IAmb	22 52 56.7	
	comp=Z,2.1nm,0.9s						
KLR	Kul'dur	83.61	330	LR	LR	23 32 53.6	
	comp=Z,22nm,18.3s,baz=41,slow=38						
ZALV	Zalesovo Beam	89.45	358	P	P	22 53 37.6	+0.2
	comp=Z,0.9nm,0.7s,baz=331,slow=5.8,SNR=4.6						
SONM	Songino Array	92.88	344	P	P	22 53 55.2	+1.6
	comp=Z,0.5nm,0.7s,baz=358,slow=5.6,SNR=3.7						
MKAR	Makanchi Array	96.64	360	P	P	22 54 10.4	-0.3
	comp=Z,0.9nm,1.1s,baz=336,slow=3.2,SNR=3.9						
HHC	Hu-ho-hao-te	98.03	338	*e*P	P	22 54 15.1	-2.1
HHC				pmax	pmax		
	comp=Z,13nm,0.7s						
HHC				pmax	pmax		
	comp=Z,84nm,6.6s						
WRA	Warramunga Arr	131.71	276	PKP	PKiKP	22 59 56.6	+1.5
	comp=Z,0.5nm,0.8s,baz=75,slow=2.6,SNR=4.9						
ASAR	Alice Springs	133.94	272	PKP	PKiKP	23 00 00.6	+1.0
	comp=Z,0.3nm,0.7s,baz=56,slow=1.4,SNR=4.8						
MAW	Mawson	147.40	166	PKPbc	PKPbc	23 00 24.0	+0.6
	comp=Z,3.7nm,0.8s,baz=280,slow=8.0,SNR=7.8						

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*TUL **20** 22:51:51.8±0.9, 36°.945N±0°.009×97°.84W±0°.02, h4^{km}±6^{km}, ML2.5, mb_Lg2.5/6(NEIC), Error ellipse: s-maj=2.3km s-min=1.2km az=106.0*

NEIC 20 22:51:52.1±0.6**, 36°.932N**±0°.009×**97°.83W**±0°.02**, h5**^{km}±5^{km}**, Error ellipse: s-maj=2.2km s-min=0.8km az=118.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
GC02	Grant County #	0.08	196	Pg	Pg	22 51 53.7	-0.2
GC02				Sg	Sg	22 51 54.5	-0.7
KAN14	Manchester OK	0.11	283	Pg	Pg	22 51 54.3	-0.1
KAN14				Sg	Sg	22 51 55.5	-0.4
KAN17	Caldwell West	0.12	25	Pg	Pg	22 51 54.4	-0.3
KAN17				Sg	Sg	22 51 56.9	+0.5
KAN05	Bluff City Nor	0.18	350		Pg	22 51 55.4	-0.3
KAN05				Sg	Sg	22 51 58.0	-0.1
KAN01	Argonia South	0.23	15		Pg	22 51 56.6	0.0
KAN01				Sg	Sg	22 51 59.5	-0.1
KAN09	Caldwell North	0.27	40	Pg	Pg	22 51 57.4	+0.1
KAN09				Sg	Sg	22 52 01.2	+0.3
KAN10	Anthony SW Sta	0.28	312	Pg	Pg	22 51 57.7	0.0
KAN13	South Haven SW	0.29	74		Pg	22 51 57.9	+0.1
KAN08	Anthony NE Sta	0.32	339		Pg	22 51 58.1	-0.1
KAN06	Argonia West S	0.32	356		Pg	22 51 58.2	0.0
OK032	Salt Plains WL	0.33	247		Pg	22 51 58.6	+0.1
KAN16	Harper SW Stat	0.35	328	Pg	Pg	22 51 58.6	-0.2
CROK	Carrier	0.44	196	Pg	Pg	22 52 00.9	+0.2
BLOK	Blackwell	0.52	109	Pg	Pg	22 52 02.4	+0.2
T35A	Sooner Cattle	1.06	90	Pg	Pg	22 52 12.1	-0.3
U32A	Winter Ranch,	1.09	240	Pg	Pg	22 52 12.7	-0.3
OK029	Liberty Lake	1.17	165	Pg	Pg	22 52 14.2	-0.4
QUOK	Quay	1.18	130	Pg	Pg	22 52 14.5	-0.2
OK031	S. Brethren Rd	1.26	140	Pg	Pg	22 52 15.9	-0.4
BCOK	Bluff Creek, N	1.28	172	Pn	Pn	22 52 15.9	-0.8
OK030	Cody Creek RV	1.31	140	Pn	Pn	22 52 16.6	-0.4
OK025	Westminster Rd	1.41	163	Pn	Pn	22 52 18.4	0.0
OK025				IAmb_Lg		22 52 39.2	
	comp=Z,14nm,0.8s						
OKCFA	Oklahoma City	1.54	168	IAmb_Lg		22 52 44.4	
	comp=Z,59nm,0.7s						
R32A	Long Quarter,	1.64	335	Pn	Pn	22 52 21.5	-0.2
R32A				IAmb_Lg		22 52 42.8	
	comp=Z,22nm,1.1s						
FNO	Franklin	1.71	168	Pn	Pn	22 52 22.6	+0.1
TUL1	Leonard	1.94	121	Pn	Pn	22 52 26.6	+0.9
WMOK	Wichita Mounta	2.32	200	Pn	Pn	22 52 31.7	+0.7
KSU1	Kansas State U	2.37	24	IAmb_Lg		22 53 10.5	
	comp=Z,26nm,0.8s						

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*TUL **20** 22:53:47.9±0.7, 36°.95N±0°.02×97°.85W±0°.03, h5^{km}±7^{km}, ML3.5, mb_Lg3.1/67(NEIC), Error ellipse: s-maj=3.0km s-min=2.7km az=114.0*

NEIC 20 22:53:48.1±1.1**, 36°.91N**±0°.02×**97°.83W**±0°.03**, h4**^{km}±7^{km}**, Error ellipse: s-maj=3.3km s-min=2.6km az=58.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
GC02	Grant County #	0.06	205	Pg	Pg	22 53 50.3	+0.7
KAN14	Manchester OK	0.12	294	Pg	Pg	22 53 50.4	-0.2
KAN17	Caldwell West	0.14	20	Pg	Pg	22 53 50.8	-0.2
KAN05	Bluff City Nor	0.20	350		Pg	22 53 51.7	-0.4
KAN01	Argonia South	0.25	12		Pg	22 53 52.7	-0.3
KAN09	Caldwell North	0.28	36	Pg	Pg	22 53 53.4	-0.2
KAN13	South Haven SW	0.30	69	Pg	Pg	22 53 54.1	+0.2
KAN10	Anthony SW Sta	0.30	315	Pg	Pg	22 53 53.6	-0.4

OK032	Salt Plains WL	0.32	252	Pg	Pg	22 53 54.6	+0.2
KAN08	Anthony NE Sta	0.34	340		Pg	22 53 54.2	-0.5
KAN06	Argonia West S	0.34	356		Pg	22 53 54.2	-0.5
KAN16	Harper SW Stat	0.37	329	Pg	Pg	22 53 54.8	-0.5
KAN12	Harper NE Stat	0.41	341	Pg	Pg	22 53 55.5	-0.6
CROK	Carrier	0.42	197	Pg	Pg	22 53 56.9	+0.6
BLOK	Blackwell	0.51	106	Pg	Pg	22 53 58.3	+0.3
T35A	Sooner Cattle	1.05	89	Pg	Pg	22 54 08.0	-0.3
U32A	Winter Ranch,	1.08	241		Pg	22 54 08.8	0.0
OK029	Liberty Lake	1.15	165		Pg	22 54 10.2	0.0
QUOK	Quay	1.16	129	Pg	Pg	22 54 10.2	-0.1
OK031	S. Brethren Rd	1.24	140		Pg	22 54 11.6	-0.3
BCOK	Bluff Creek, N	1.26	172		Pg	22 54 11.9	-0.3
OK030	Cody Creek RV	1.29	139		Pg	22 54 12.4	-0.5
OK025	Westminster Rd	1.38	163		Pn	22 54 14.0	-0.1
OKCFA	Oklahoma City	1.52	168		Pn	22 54 16.0	-0.1
OKCSW	OKLAHOMA CITY	1.53	168		Pn	22 54 16.5	+0.3
R32A	Long Quarter,	1.67	335	Pn	Pn	22 54 18.1	-0.1
FNO	Franklin	1.68	168	Pn	Pn	22 54 18.9	+0.6
FNO				IAmb_Lg		22 54 43.8	
	comp=Z,91nm,0.7s						
TUL1	Leonard	1.92	121	Pn	Pn	22 54 22.6	+1.1
WMOK	Wichita Mounta	2.30	200	Pn	Pn	22 54 27.6	+0.8
X34A	Smith Ranch, M	2.30	180		Pn	22 54 28.1	+1.3
KSU1	Kansas State U	2.39	23	Pn	Pn	22 54 27.9	-0.2
CBKS	Cedar Bluff	2.43	322		Pn	22 54 29.0	+0.4
U38A	Gravette	2.81	99	Pn	Pn	22 54 33.6	-0.1
X37A	Clayton	3.06	138	Pn	Pn	22 54 38.6	+1.4
X37A				IAmb_Lg		22 55 34.6	
	comp=Z,90nm,0.8s						
HHAR	Hobbs	3.19	100	Pn	Pn	22 54 39.5	+0.4
HHAR				IAmb_Lg		22 55 37.8	
	comp=Z,57nm,0.8s						
Z35A	Perchaven, San	3.60	172	Pn	Pn	22 54 44.9	+0.3
S39A	Bolivar	3.68	76	Pn	Pn	22 54 45.5	-0.2
W39A	Magazine	3.69	116	IAmb_Lg		22 55 51.2	
	comp=Z,65nm,0.8s						
AMTX	Amarillo	3.72	238	Pn	Pn	22 54 46.6	+0.1
AMTX				IAmb_Lg		22 55 50.8	
	comp=Z,45nm,0.8s						
U40A	Yellville	4.04	96	IAmb_Lg		22 56 00.9	
	comp=Z,38nm,0.7s						
MIAR	Mount Ida	4.18	123	IAmb_Lg		22 56 06.7	
	comp=Z,30nm,0.7s						
Z38A	Mt. Pleasant	4.32	147	IAmb_Lg		22 56 17.6	
	comp=Z,37nm,0.8s						
P38A	Dawn	4.33	50	IAmb_Lg		22 56 06.2	
	comp=Z,61nm,1.0s						
KSCO	Kaye Shedlock'	4.34	300	IAmb_Lg		22 56 13.6	
	comp=Z,31nm,0.7s						
MGMO	Mountain Grove	4.45	85	IAmb_Lg		22 56 17.1	
	comp=Z,32nm,0.8s						
BGNE	Belgrade	4.50	357	IAmb_Lg		22 56 18.8	
	comp=Z,48nm,0.7s						
R40A	Maddies Statio	4.62	71	IAmb_Lg		22 56 16.7	
	comp=Z,26nm,0.9s						
FCAR	Ozark Folk Cen	4.71	101	IAmb_Lg		22 56 21.0	
	comp=Z,33nm,0.9s						
X40A	Basin Creek Fa	4.73	119	IAmb_Lg		22 56 18.4	
	comp=Z,38nm,0.7s						
WLAR	White Oak Lake	5.02	128	IAmb_Lg		22 56 36.4	
	comp=Z,53nm,0.9s						
OGNE	Ogallala	5.20	322	IAmb_Lg		22 56 40.8	
	comp=Z,50nm,0.8s						
P40A	Paris	5.25	58	IAmb_Lg		22 56 46.0	
	comp=Z,26nm,0.8s						
N38A	Joes South For	5.28	41	IAmb_Lg		22 56 49.9	
	comp=Z,36nm,0.8s						
CCM	Cathedral Cave	5.36	76	IAmb_Lg		22 56 43.1	
	comp=Z,38nm,1.1s						
PBMO	Poplar Bluff	5.93	89	IAmb_Lg		22 56 56.8	
	comp=Z,37nm,0.8s						
435B	Jarrell	6.11	178	IAmb_Lg		22 57 14.9	
	comp=Z,33nm,0.9s						
SCIA	State Center	6.14	34	IAmb_Lg		22 57 04.2	
	comp=Z,38nm,0.7s						
JCT	Junction City	6.62	195	IAmb_Lg		22 57 28.3	
	comp=Z,24nm,0.8s						
S44A	Carbondale	6.88	81	IAmb_Lg		22 57 38.0	
	comp=Z,23nm,0.8s						
ECSD	EROS Data Cent	6.88	7	IAmb_Lg		22 57 34.8	
	comp=Z,21nm,0.9s						
SIUC	Southern Illin	6.91	81	IAmb_Lg		22 57 35.9	
	comp=Z,23nm,0.8s						
P43A	Skaggs, Pawnee	7.08	65	IAmb_Lg		22 57 32.9	
	comp=Z,35nm,0.9s						
Q44A	Meyer Farm, Va	7.25	71	IAmb_Lg		22 57 49.8	
	comp=Z,32nm,0.9s						
SUSD	Miller	7.58	354	IAmb_Lg		22 58 04.2	
	comp=Z,30nm,0.7s						
L42A	Oliver, Polo	8.11	49	IAmb_Lg		22 58 17.9	
	comp=Z,23nm,0.8s						
JFWS	Jewell Farm	8.36	42	IAmb_Lg		22 58 30.3	
	comp=Z,20nm,0.7s						
RSSD	Black Hills	8.62	329	IAmb_Lg		22 58 28.7	
	comp=Z,17nm,0.9s						
F33A	5 Mile Ranch,	9.00	7	IAmb_Lg		22 58 33.5	
	comp=Z,20nm,1.0s						
SPMN	Marine on St.	9.13	23	IAmb_Lg		22 58 48.6	
	comp=Z,16nm,0.7s						

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*IDC **20** 22:55:51.1±0.8, 37°.00N×97°.84W, h0^{km}, mb4.5/3, mb1 4.3/9, mb1mx3.7/62, mbtmp4.0/9, ML3.8/5, MS2.8/1, Ms1 2.8/1, ms1mx2.3/62, Error ellipse: s-maj=13.0km s-min=11.1km az=158.0*

*NEIC **20** 22:55:51.5±0.7, 36°.92N±0°.01×97°.81W±0°.02, h6^{km}±4^{km}, Error ellipse: s-maj=2.3km s-min=1.8km az=86.0*

*TUL **20** 22:55:51.2±1.0, 36°.94N±0°.01×97°.83W±0°.02, h4^{km}±5^{km}, ML4.0, mb_Lg3.9/110(NEIC), Mwr3.5/14(NEIC), Error ellipse: s-maj=2.8km s-min=1.6km az=90.0*

*NEIC **20** 22:55:51.5, 36°.92N×97°.82W, h8^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-1.53; $M_{\theta\theta}$1.61; $M_{\phi\phi}$-0.09; $M_{r\theta}$-1.15; $M_{\theta\phi}$0.73; $M_{\phi r}$-0.00; Fault plane solution: $M_0$2.08000×10^{14} NP1:ϕ_s82.48000°, δ62.49000°, λ-76.05000°. NP2:ϕ_s234.20000°, δ30.60000°, λ-114.85000°. Principal axes: T 2.2036, Plg16.0000°, Azm162.0000°; N -0.2699, Plg12.0000°, Azm256.0000°; P -1.9337, Plg69.0000°, Azm21.0000°;*

*ANF **20** 22:55:51.8±1.0, 36°.99N×97°.83W, h6^{km}±8^{km}, ML4.8/11 Error ellipse: s-maj=3.3km s-min=2.8km az=70.0*

ISC 20 22:55:51.4±0.7, **36°.95N**±0°.02×**97°.81W**±0°.02, **h10**^{km}±5^{km}, **n126**, σ**1^{s}22**/105, **mb4.2**/3, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN17	Caldwell West	0.10	23	Pg	Pg	22 55 54.1	+0.1
KAN17				Sg	Sg	22 55 56.1	+0.3
GC02	Grant County #	0.11	201	Pg	Pg	22 55 53.6	-0.5
GC02				Sg	Sg	22 55 55.1	-0.9
KAN14	Manchester OK	0.12	272	Pg	Pg	22 55 54.0	-0.3
KAN14				Sg	Sg	22 55 55.9	-0.5
KAN05	Bluff City Nor	0.16	343		Pg	22 55 55.2	+0.2
KAN05				Sg	Sg	22 55 57.7	+0.3
KAN01	Argonia South	0.20	12		Pg	22 55 56.0	+0.3
KAN01				Sg	Sg	22 55 59.2	+0.6
KAN09	Caldwell North	0.24	40	Pg	Pg	22 55 56.7	+0.3
KAN09				Sg	Sg	22 56 00.3	+0.7
KAN13	South Haven SW	0.27	77	Pg	Pg	22 55 57.3	+0.3
KAN13				Sg	Sg	22 56 01.2	+0.5
KAN10	Anthony SW Sta	0.28	307	Pg	Pg	22 55 57.2	+0.1
KAN10				Sg	Sg	22 56 01.3	+0.4
KAN06	Argonia West S	0.30	353		Pg	22 55 57.6	+0.2
KAN06				Sg	Sb	22 56 02.1	-1.8
KAN08	Anthony NE Sta	0.30	335		Pg	22 55 57.7	+0.2
KAN08				Sg	Sg	22 56 02.3	+0.8
KAN16	Harper SW Stat	0.34	323	Pg	Pg	22 55 58.4	+0.2
OK032	Salt Plains WL	0.35	245	Pg	Pg	22 55 58.0	-0.4
KAN12	Harper NE Stat	0.37	337	Pg	Pg	22 55 59.0	+0.1
CROK	Carrier	0.47	197	Pg	Pg	22 56 00.2	-0.3
BLOK	Blackwell	0.52	112	Pg	Pg	22 56 01.4	-0.1
T35A	Sooner Cattle	1.04	92	Pg	Pg	22 56 11.1	-0.3
T35B	Sooner Cattle	1.04	92	P	Pg	22 56 11.2	-0.3
	baz=272,SNR=35						
T35B				S	Sb	22 56 25.2	-0.2
	baz=272						
U32A	Winter Ranch,	1.11	239		Pb	22 56 11.9	-1.0
U32A	Winter Ranch,	1.11	239	P	Pb	22 56 11.9	-1.0
	baz=59,SNR=15						
QUOK	Quay	1.18	131		Pb	22 56 13.3	-0.7
OK029	Liberty Lake	1.19	166		Pn	22 56 13.3	-0.9
OK031	S. Brethren Rd	1.27	142		Pn	22 56 14.6	-0.7
BCOK	Bluff Creek, N	1.30	173		Pn	22 56 15.1	-0.7
OK030	Cody Creek RV	1.32	141		Pn	22 56 15.5	-0.4
OK005	Luther M Schoo	1.39	159		Pn	22 56 17.1	+0.1
OK009	Oakdale Elemen	1.41	167		Pn	22 56 17.4	+0.2
OK025	Westminster Rd	1.42	164		Pn	22 56 17.3	-0.1
OK025				IAmb_Lg		22 56 38.7	
	comp=Z,628nm,0.7s						
OK001	Jones High Sch	1.45	163	Pn	Pn	22 56 18.0	+0.2
OKCFA	Oklahoma City	1.56	169		Pn	22 56 19.3	0.0
OKCFA				IAmb_Lg		22 56 43.4	
	comp=Z,921nm,0.9s						
OKCFA	Oklahoma City	1.56	169	P	Pn	22 56 19.7	+0.4
	baz=349,SNR=37						
OKCFA				Sb	Sb	22 56 41.1	+0.8
	baz=349						
R32A	Long Quarter,	1.63	334	P	Pb	22 56 21.6	-0.1
	baz=154,SNR=62						
R32A				S	Sb	22 56 42.6	+0.3
	baz=154						
FNO	Franklin	1.73	169	Pn	Pn	22 56 22.1	+0.5
FNO				IAmb_Lg		22 56 47.7	
	comp=Z,688nm,0.8s						
TUL1	Leonard	1.93	122	P	Pn	22 56 25.6	+1.2
	baz=303						
TUL1				S	Sb	22 56 51.7	+0.8
	baz=303						
TUL1	Leonard	1.93	122		Pn	22 56 25.0	+0.5
TUL1	Leonard	1.93	122	P	Pn	22 56 25.1	+0.7
	baz=303,SNR=28						
TUL1				S	Sb	22 56 51.8	+0.8
	baz=303						
KSU1	Kansas State U	2.34	24	P	Pn	22 56 31.2	+1.1
	baz=204						
KSU1				Sb	Sg	22 57 04.4	-2.3
	baz=204						
KSU1	Kansas State U	2.34	24	Pn	Pn	22 56 30.8	+0.7
KSU1	Kansas State U	2.34	24	P	Pn	22 56 31.1	+1.0
	baz=204,SNR=14						
KSU1				S	Sb	22 57 01.9	-0.9
	baz=204						
WMOK	Wichita Mounta	2.35	200	P	Pn	22 56 31.4	+1.3
	baz=19						
WMOK				S	Sb	22 57 02.6	-0.3
	baz=19						
WMOK	Wichita Mounta	2.35	200	IAmb_Lg		22 57 07.8	
	comp=Z,334nm,0.7s						
WMOK	Wichita Mounta	2.35	200	P	Pn	22 56 30.4	+0.2
	baz=19,SNR=19						
WMOK				S	Sn	22 56 59.6	+0.6
	baz=19						
X34A	Smith Ranch, M	2.35	180	Pn	Pn	22 56 30.7	+0.6
X34A				IAmb_Lg		22 57 07.5	
	comp=Z,450nm,0.7s						
CBKS	Cedar Bluff	2.40	321	Pb	Pb	22 56 35.2	+0.3
	baz=141						
CBKS				Sb	Sb	22 57 05.5	+0.9
	baz=141						
CBKS	Cedar Bluff	2.40	321		Pn	22 56 32.1	+1.3
CBKS	Cedar Bluff	2.40	321	P	Pn	22 56 32.2	+1.3
	baz=141						
CBKS				S	Sb	22 57 05.4	+0.9
	baz=141						
U38A	Gravette	2.80	100		Pn	22 56 37.2	+0.9
LOOK	Love County	3.00	170		Pn	22 56 39.6	+0.6
X37A	Clayton	3.08	139		Pn	22 56 40.8	+0.6
X37A				IAmb_Lg		22 57 36.3	
	comp=Z,408nm,0.8s						
HHAR	Hobbs	3.19	101		Pn	22 56 42.9	+1.2
HHAR				IAmb_Lg		22 57 39.2	
	comp=Z,257nm,0.8s						
Z35A	Perchaven, San	3.64	173		Pn	22 56 47.9	0.0
Z35A	Perchaven, San	3.64	173	P	Pn	22 56 48.5	+0.6
	baz=353,SNR=15						
Z35A				S	Sn	22 57 32.3	+1.3
	baz=353						
S39A	Bolivar	3.65	77		Pn	22 56 48.9	+0.8
W39A	Magazine	3.70	117	Pb	Pb	22 56 58.0	+1.1
	baz=299						
W39A				Sb	Sg	22 57 47.0	-3.4
	baz=299						
W39A	Magazine	3.70	117		Pb	22 56 58.3	+1.3
W39A	Magazine	3.70	117	S	Sn	22 57 33.7	+1.2
	baz=299						
AMTX	Amarillo	3.76	238	Sb	Sb	22 57 48.6	+4.9
	baz=56						
AMTX	Amarillo	3.76	238	Pg	Pb	22 56 59.8	+1.8
AMTX				IAmb_Lg		22 57 56.9	
	comp=Z,291nm,0.8s						
U40A	Yellville	4.03	97	S	Sn	22 57 41.5	+0.9
	baz=280						
U40A	Yellville	4.03	97	IAmb_Lg		22 58 00.2	
	comp=Z,303nm,0.8s						
U40A	Yellville	4.03	97	S	Sn	22 57 41.3	+0.8
	baz=280						
U40A				S	Sn	22 57 41.3	+0.8
	baz=280						
MIAR	Mount Ida	4.20	124	IAmb_Lg		22 58 08.3	
	comp=Z,233nm,0.9s						
MIAR	Mount Ida	4.20	124	S	Sn	22 57 46.3	+1.5
	baz=306						
N35A	Tabor	4.25	23		Pn	22 56 58.1	+1.8
P38A	Dawn	4.29	50	IAmb_Lg		22 58 09.3	
	comp=Z,281nm,1.1s						
KSCO	Kaye Shedlock'	4.32	300		Pn	22 56 58.5	+1.1
KSCO				IAmb_Lg		22 58 13.1	
	comp=Z,336nm,1.0s						
Z38A	Mt. Pleasant	4.35	147		Pn	22 56 58.2	+0.5
MGMO	Mountain Grove	4.44	86	IAmb_Lg		22 58 11.0	
	comp=Z,202nm,0.8s						
BGNE	Belgrade	4.46	357	P	Pn	22 57 00.1	+0.9
	baz=177						
ABTX	Abilene, Hawle	4.57	200	Pn	Pn	22 57 01.0	+0.2
ABTX				IAmb_Lg		22 58 14.7	
	comp=Z,178nm,0.9s						
R40A	Maddies Statio	4.60	71	Pn	Pn	22 57 02.0	+1.0
FCAR	Ozark Folk Cen	4.71	101	IAmb_Lg		22 58 19.3	
	comp=Z,258nm,0.7s						
X40A	Basin Creek Fa	4.74	120	IAmb_Lg		22 58 31.1	
	comp=Z,183nm,0.8s						
WHAR	Wooly Hollow	4.77	109	IAmb_Lg		22 58 25.0	
	comp=Z,281nm,0.8s						
W41B	Gary Mavity, V	4.84	110	Sb	Sb	22 58 20.3	+5.5
	baz=293						
WHTX	Lake Whitney,	4.96	176	P	Pn	22 57 06.0	0.0
	baz=357						
WHTX	Lake Whitney,	4.96	176		Pn	22 57 05.8	-0.2
WHTX	Lake Whitney,	4.96	176	P	Pn	22 57 05.9	0.0
	baz=357,SNR=9.7						
WLAR	White Oak Lake	5.04	129	IAmb_Lg		22 58 39.9	
	comp=Z,280nm,1.1s						
OGNE	Ogallala	5.17	322	Pg	Pg	22 57 30.1	-0.3
	baz=139						
237A	Washetta, Mont	5.21	161	IAmb_Lg		22 58 49.4	
	comp=Z,150nm,1.0s						
P40A	Paris	5.21	59	IAmb_Lg		22 58 47.4	
	comp=Z,139nm,0.8s						
N38A	Joes South For	5.24	42	IAmb_Lg		22 58 53.2	
	comp=Z,204nm,0.7s						
N38A	Joes South For	5.24	42	P	Pn	22 57 10.4	+0.5
	baz=224,SNR=6.4						
T25A	Trinidad	5.28	274	IAmb_Lg		22 58 54.0	
	comp=Z,152nm,0.9s						
T42A	Van Buren	5.38	87	IAmb_Lg		22 58 45.8	
	comp=Z,136nm,1.1s						
CCAR	Cane Creek	5.79	120	IAmb_Lg		22 58 58.7	
	comp=Z,204nm,0.9s						
PBMO	Poplar Bluff	5.92	89	IAmb_Lg		22 59 05.0	
	comp=Z,165nm,0.8s						
FVM	French Village	5.96	78	IAmb_Lg		22 58 58.2	
	comp=Z,142nm,1.2s						
435B	Jarrell	6.16	178	IAmb_Lg		22 59 12.4	
	comp=Z,222nm,0.9s						
SLM	Saint Louis	6.23	72	IAmb_Lg		22 59 06.4	
	comp=Z,170nm,1.2s						
ISCO	Idaho Springs	6.75	297	IAmb_Lg		22 59 32.0	
	comp=Z,96nm,0.8s						
ECSD	EROS Data Cent	6.83	7	IAmb_Lg		22 59 40.1	
	comp=Z,99nm,0.8s						
S44A	Carbondale	6.86	81	IAmb_Lg		22 59 25.4	
	comp=Z,123nm,0.8s						
SIUC	Southern Illin	6.89	81	IAmb_Lg		22 59 27.0	
	comp=Z,118nm,0.8s						
HALT	Halls	6.91	96	IAmb_Lg		22 59 38.9	
	comp=Z,170nm,0.9s						
P43A	Skaggs, Pawnee	7.05	65	IAmb_Lg		22 59 34.3	
	comp=Z,131nm,0.9s						
L40A	Anamosa	7.21	43	IAmb_Lg		22 59 47.1	
	comp=Z,109nm,0.9s						
W45A	Hickory Valley	7.21	102	IAmb_Lg		22 59 54.6	
	comp=Z,150nm,0.8s						
Q44A	Meyer Farm, Va	7.22	72	IAmb_Lg		22 59 47.3	
	comp=Z,160nm,0.9s						
ANMO	Albuquerque	7.29	257	Pn	Pn	22 57 37.2	-1.0
	comp=Z,0.8nm,0.3s,baz=325,slow=19,SNR=6.5						
ANMO				Lg	Lg	22 59 37.5	
	comp=Z,4.2nm,0.3s,baz=340,slow=14,SNR=9.2						
T45A	Paducah	7.34	87	IAmb_Lg		22 59 43.3	
	comp=Z,149nm,0.7s						
PHWY	Pilot Hill	7.36	308	IAmb_Lg		22 59 56.6	
	comp=Z,103nm,0.8s						
Y45A	Yeager Farm, C	7.42	112	IAmb_Lg		22 59 55.5	
	comp=Z,83nm,0.7s						
SUSD	Miller	7.53	354	IAmb_Lg		22 59 53.9	
	comp=Z,148nm,0.8s						
I37A	Lemond, Waseca	7.81	24	IAmb_Lg		23 00 09.4	
	comp=Z,152nm,0.8s						
O44A	Mansfield	7.99	64	IAmb_Lg		23 00 08.0	
	comp=Z,111nm,0.7s						
L42A	Oliver, Polo	8.07	49	IAmb_Lg		23 00 18.3	
	comp=Z,116nm,0.8s						
735A	Kenedy	8.08	180	IAmb_Lg		23 00 25.0	
	comp=Z,95nm,0.8s						
JFWS	Jewell Farm	8.32	42	IAmb_Lg		23 00 28.3	
	comp=Z,92nm,0.8s						
RSSD	Black Hills	8.58	328	IAmb_Lg		23 00 32.2	
	comp=Z,71nm,0.9s						
RWWY	Rawlins	8.68	306	IAmb_Lg		23 00 37.1	
	comp=Z,80nm,0.8s						
K22A	Casper	8.79	313	IAmb_Lg		23 00 38.7	
	comp=Z,78nm,0.7s						
F33A	5 Mile Ranch,	8.95	7	IAmb_Lg		23 00 35.5	
	comp=Z,91nm,1.0s						
TXAR	Lajitas Array	9.04	215	Pn	Pn	22 58 01.1	-1.1
	comp=Z,0.9nm,0.3s,baz=42,slow=11,SNR=10.0						
TXAR				Lg	Lg	23 00 33.0	
	comp=Z,2.1nm,0.3s,baz=39,slow=27,SNR=7.8						
L44A	Lake County Fo	9.25	53	IAmb_Lg		23 00 47.6	
	comp=Z,74nm,0.7s						
K43A	Burlington	9.28	49	IAmb_Lg		23 00 47.0	
	comp=Z,93nm,0.9s						
E28A	Huff	9.85	348	IAmb_Lg		23 01 07.7	
	comp=Z,82nm,0.9s						
PDAR	Pinedale Array	10.73	306	Pn	Pn	22 58 25.5	+0.1
	comp=Z,0.2nm,0.3s,baz=116,slow=14,SNR=2.2						
PDAR				Lg	Lg	23 01 26.4	
	comp=Z,0.3nm,0.3s,baz=112,slow=30,SNR=4.3						
PDAR				LR	LR	23 02 58.4	
	comp=Z,49nm,20.8s,baz=98,slow=40						
TKL	Tuckaleechee C	11.40	92	Pn	Pn	22 58 34.6	+0.2
	comp=Z,1.3nm,0.3s,baz=238,slow=6.6,SNR=9.4						
TKL				Lg	Lg	23 01 45.9	
	comp=Z,1.5nm,0.3s,baz=29,slow=7.6,SNR=10						
ULM	Lac du Bonnet	13.37	5	Pn	Pn	22 58 56.5	-4.6
	comp=Z,1.2nm,0.3s,baz=182,slow=13,SNR=7.0						
ULM				Lg	Lg	23 02 46.7	
	comp=Z,0.5nm,0.3s,baz=107,slow=19,SNR=4.0						
NVAR	Mina Array Bea	16.29	281	Pn	P	22 59 42.9	-0.7
	baz=98,slow=12,SNR=2.4						
YKA	Yellowknife Ar	27.60	343	LR	LR	23 14 04.4	
	comp=Z,5µm,21.2s,baz=0.0,slow=40						
SCHQ	Schefferville	27.68	40	P	P	23 01 40.3	+0.8
	comp=Z,4.0nm,0.8s,baz=259,slow=10,SNR=1.7						
ILAR	Eielson Array	40.03	330	P	P	23 03 27.3	+1.0
	comp=Z,3.7nm,0.7s,baz=108,slow=7.2,SNR=40						
ARCES	ARCESS Array B	66.07	19	P	P	23 06 37.7	-0.4
	comp=Z,8.2nm,1.1s,baz=330,slow=6.0,SNR=4.1						
MAW	Mawson	147.41	166	PKPbc	PKiKP	23 15 37.0	+0.3
	comp=Z,0.6nm,0.3s,baz=225,slow=5.7,SNR=4.4						

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*TUL **20** 22:59:50.4±0.7, 36°.944N±0°.009×97°.83W±0°.02, h5^{km}±5^{km}, ML2.7, mb_Lg2.7/5(NEIC), Error ellipse: s-maj=1.9km s-min=1.3km az=99.0*

NEIC 20 22:59:50.8±0.6, **36°.930N**±0°.009×**97°.82W**±0°.02, **h7**^{km}±4^{km}, **Error ellipse: s-maj=2.0km s-min=1.3km az=86.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.09	204	Pg	Pg	22 59 52.8	-0.1
GC02				Sg	Sg	22 59 54.4	+0.1
KAN14	Manchester OK	0.12	283	Pg	Pg	22 59 53.1	-0.4
KAN14				Sg	Sg	22 59 54.9	-0.4
KAN17	Caldwell West	0.12	20	Pg	Pg	22 59 53.4	-0.1
KAN17				Sg	Sg	22 59 55.4	0.0
KAN05	Bluff City Nor	0.18	346		Pg	22 59 54.3	-0.2
KAN05				Sg	Sg	22 59 55.9	-1.2
KAN01	Argonia South	0.23	12		Pg	22 59 55.3	-0.1
KAN01				Sg	Sg	22 59 58.5	+0.1
KAN09	Caldwell North	0.26	38	Pg	Pg	22 59 56.0	0.0
KAN09				Sg	Sg	22 59 59.8	+0.3
KAN13	South Haven SW	0.28	73	Pg	Pg	22 59 56.4	0.0
KAN10	Anthony SW Sta	0.29	311	Pg	Pg	22 59 56.4	-0.2
KAN10				Sg	Sg	23 00 00.4	-0.2
KAN06	Argonia West S	0.32	354		Pg	22 59 56.9	-0.2
KAN08	Anthony NE Sta	0.32	337		Pg	22 59 56.7	-0.4
KAN16	Harper SW Stat	0.36	326	Pg	Pg	22 59 57.4	-0.4
KAN12	Harper NE Stat	0.40	339	Pg	Pg	22 59 58.2	-0.3
CROK	Carrier	0.45	198	Pg	Pg	22 59 59.5	+0.1
BLOK	Blackwell	0.51	109	Pg	Pg	23 00 00.7	+0.1
T35A	Sooner Cattle	1.05	90	Pg	Pg	23 00 10.8	0.0
OK029	Liberty Lake	1.17	165	Pg	Pg	23 00 12.6	-0.6
QUOK	Quay	1.17	130	Pg	Pg	23 00 12.7	-0.6
OK031	S. Brethren Rd	1.25	141	Pn	Pn	23 00 14.0	-0.7
BCOK	Bluff Creek, N	1.28	172	Pn	Pn	23 00 14.6	-0.4
OK030	Cody Creek RV	1.30	140	Pn	Pn	23 00 15.3	0.0
OK025	Westminster Rd	1.40	164	Pn	Pn	23 00 16.8	+0.1
OKCFA	Oklahoma City	1.54	169	Pn	Pn	23 00 18.6	0.0
OKCFA				IAmb_Lg		23 00 43.4	
	comp=Z,53nm,0.9s						
OKCSW	OKLAHOMA CITY	1.55	168	Pn	Pn	23 00 19.0	+0.2
R32A	Long Quarter,	1.65	335	Pn	Pn	23 00 20.6	+0.4
FNO	Franklin	1.70	168	Pn	Pn	23 00 20.8	-0.1
TUL1	Leonard	1.92	121	Pn	Pn	23 00 24.2	+0.4
TUL1				IAmb_Lg		23 00 54.5	
	comp=Z,49nm,0.8s						
X34A	Smith Ranch, M	2.32	180	Pn	Pn	23 00 29.6	+0.2

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*IDC **20** 23:01:00.5±1.3, 38°.80N×20°.47E, h0^{km}, mb3.4/6, mb1 3.4/9, mb1mx3.3/72, mbtmp3.3/9, ML3.4/3, MS2.7/1, Ms1 2.7/1, ms1mx2.3/22, Error ellipse: s-maj=23.3km s-min=19.1km az=42.0*

*ATH **20** 23:01:01.5, 38°.71N×20°.62E, h8^{km}±1^{km}, ML3.5/12, Error ellipse: s-maj=1.5km s-min=0.8km az=286.0*

*THE **20** 23:01:01.5, 38°.70N×20°.55E, h0^{km}±1^{km}, ML3.5/23, Error ellipse: s-maj=1.9km s-min=0.6km az=231.0*

*BEO **20** 23:01:03.0±3.6, 38°.46N×20°.15E, h54^{km}±7^{km}, ML3.6/9*

ISC 20 23:01:01.1±0.7, **38°.71N**±0°.02×**20°.56E**±0°.02, **h7**^{km}±4^{km}, **n143**, σ**1^{s}41**/178, **mb3.3**/6, **5C-3D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRAG	Dragano-Lefkad	0.03	156	P	Pg	23 01 02.7	+0.3
DRAG				S	Sg	23 01 03.2	-0.2
	299µm,0.2s						
DRAG	Dragano-Lefkad	0.03	156	P	Pg	23 01 02.8	+0.3
DRAG				S	Sg	23 01 04.3	+0.9
LKD2	Lefkada island	0.11	46	P	Pg	23 01 03.2	-0.3
LKD2				S	Sg	23 01 05.1	-0.1
	88µm,0.4s						
LKD2	Lefkada island	0.11	46	P	Pg	23 01 03.2	-0.3
LKD2				AML	AML	23 01 05.2	
LKD2				AML	AML	23 01 05.4	
NYDR	Nydri-Lefkada	0.11	90	P	Pg	23 01 03.1	-0.3
NYDR				S	Sg	23 01 04.9	-0.2
	65µm,0.3s						
NYDR	Nydri-Lefkada	0.11	90	P	Pg	23 01 03.2	-0.3
NYDR				S	Sg	23 01 04.7	-0.4
EVGI	Lefkada island	0.12	140	P	Pg	23 01 04.0	+0.3
EVGI				S	Sg	23 01 05.8	+0.4
	28µm,0.1s						
EVGI	Lefkada island	0.12	140	P	Pg	23 01 04.0	+0.3
EVGI				S	Sg	23 01 05.8	+0.4
TSLK	Tsoukalades, L	0.14	35	P	Pg	23 01 03.9	0.0
TSLK				S	Sg	23 01 06.2	+0.3
	110µm,0.4s						
TSLK	Tsoukalades, L	0.14	35	P	Pg	23 01 04.1	+0.2
TSLK				S	Sg	23 01 06.5	+0.7
FSK	Fiskardo	0.25	179	P	Pg	23 01 07.2	+1.1
FSK	Fiskardo	0.25	179	P	Pg	23 01 06.9	+0.9

FSK				S	Sg	23 01 10.9	+1.4
FSK				AML	AML	23 01 16.2	
	comp=E,24646µm,0.3s						
FSK				AML	AML	23 01 17.7	
	comp=N,21486µm,0.7s						
KEF4	Livadi, Kephal	0.47	193	P	Pg	23 01 10.7	+0.6
KEF4				S	Sg	23 01 16.4	+0.2
KEF4	Livadi, Kephal	0.47	193	P	Pg	23 01 10.9	+0.8
DMLN	Damoulianata-K	0.50	197	P	Pg	23 01 11.0	+0.4
DMLN				S	Sb	23 01 19.1	-0.5
	comp=N,7µm,0.4s						
DMLN	Damoulianata-K	0.50	197	P	Pg	23 01 10.7	+0.1
LXRA	Lixouri, Kepha	0.52	190	P	Pg	23 01 11.8	+0.7
KEF3	Kipouria, Keph	0.54	198	P	Pg	23 01 11.3	-0.1
KEF3				S	Sg	23 01 19.6	+1.2
KEF3	Kipouria, Keph	0.54	198	P	Pg	23 01 11.4	-0.1
VLS	Valsamata	0.54	177	P	Pg	23 01 11.3	-0.1
VLS	Valsamata	0.54	177	P	Pg	23 01 11.6	+0.2
VLS				AML	AML	23 01 26.0	
	comp=E,6697µm,0.4s						
VLS				AML	AML	23 01 30.7	
	comp=N,8445µm,0.6s						
PSDA	Pessada-Kefalo	0.60	178	P	Pg	23 01 12.4	-0.2
PSDA				S	Sg	23 01 20.9	+0.5
PSDA	Pessada-Kefalo	0.60	178	P	Pg	23 01 12.6	0.0
PVO	Paravola	0.76	97	P	Pg	23 01 15.3	-0.5
PVO				S	Sb	23 01 27.4	+0.1
	comp=N,6µm,0.5s						
PVO	Paravola	0.76	97	P	Pg	23 01 15.5	-0.3
PVO				AML	AML	23 01 29.2	
	comp=N,10358µm,0.6s						
PVO				AML	AML	23 01 29.7	
	comp=E,13514µm,0.5s						
IGT	Igoumenitsa	0.84	348	P	Pg	23 01 17.1	0.0
IGT				S	Sb	23 01 29.9	+0.5
	comp=E,5µm,0.4s						
IGT	Igoumenitsa	0.84	348	P	Pg	23 01 16.9	-0.2
IGT				AML	AML	23 01 35.0	
	comp=N,10301µm,0.5s						
IGT				AML	AML	23 01 35.3	
	comp=E,8141µm,0.3s						
VTN	Vitineika	0.94	148	P	Pg	23 01 19.2	+0.2
JAN	Janina	0.97	14	P	Pg	23 01 20.1	+0.4
JAN				S	Sn	23 01 35.6	+0.4
	comp=E,2µm,0.5s						
JAN	Janina	0.97	14	P	Pg	23 01 20.3	+0.6
RLS	Riolos of Patr	0.97	132	P	Pg	23 01 19.2	-0.5
RLS				S	Sn	23 01 34.6	-0.5
	comp=E,2µm,0.6s						
RLS	Riolos of Patr	0.97	132	P	Pg	23 01 19.2	-0.5
RLS				AML	AML	23 01 41.1	
	comp=E,3588µm,0.5s						
RLS				AML	AML	23 01 44.5	
	comp=N,3532µm,0.7s						
EVR	Evrytania	1.00	78	P	Pg	23 01 19.5	-0.7
EVR				S	Sb	23 01 35.4	+1.2
	comp=N,1µm,1.0s						
EVR	Evrytania	1.00	78	P	Pg	23 01 19.7	-0.6
EVR				AML	AML	23 01 44.6	
	comp=E,2434µm,1.1s						
EVR				AML	AML	23 01 45.3	
	comp=N,2390µm,0.9s						
LTHK	Lithakia	1.03	168	P	Pg	23 01 19.6	-1.2
LTHK				S	Sb	23 01 35.5	+0.7
	comp=N,2µm,0.6s						
LTHK	Lithakia	1.03	168	P	Pg	23 01 19.9	-0.9
ANX	Ano Chora	1.07	96	P	Pg	23 01 20.7	-1.0
ANX				S	Sn	23 01 38.5	+0.6
	comp=N,4µm,0.4s						
ANX	Ano Chora	1.07	96	P	Pg	23 01 20.7	-1.0
ANX				AML	AML	23 01 45.3	
	comp=N,7490µm,0.4s						
ANX				AML	AML	23 01 45.5	
	comp=E,8101µm,0.4s						
EFP	Efpalio	1.09	105	P	Pg	23 01 21.0	-1.1
EFP				S	Sn	23 01 38.9	+0.7
	comp=E,4µm,0.5s						
EFP	Efpalio	1.09	105	P	Pg	23 01 20.9	-1.1
EFP				AML	AML	23 01 44.1	
	comp=E,7835µm,0.4s						
EFP				AML	AML	23 01 45.7	
	comp=N,5746µm,0.6s						
KASA	Kassiopi	1.14	335	P	Pn	23 01 23.7	+0.2
KEK	Kerkira	1.16	330	P	Pg	23 01 23.7	+0.4
KEK				S	Sn	23 01 40.1	+0.2
	comp=N,1µm,0.5s						
KEK	Kerkira	1.16	330	P	Pg	23 01 23.6	+0.4
DRO	Drossia	1.18	130	P	Pb	23 01 22.3	-1.6
DRO	Drossia	1.18	130	P	Pb	23 01 22.7	-1.2
DRO				AML	AML	23 01 52.8	
	comp=N,5343µm,0.6s						
DRO				AML	AML	23 01 57.0	
	comp=E,6252µm,0.5s						
LAKA	Lakka	1.21	113	P	Pb	23 01 22.8	-1.6
LAKA				S	Sn	23 01 43.0	+1.8
	comp=E,4µm,0.8s						
LAKA	Lakka	1.21	113	P	Pb	23 01 22.8	-1.6
SERG	Sergoula	1.21	104	P	Pb	23 01 23.0	-1.4
TRIZ	Trizonia	1.24	106	P	Pn	23 01 23.2	-1.6
TRIZ	Trizonia	1.24	106	P	Pn	23 01 23.5	-1.3
SRN	Sarande	1.24	340	P	Pn	23 01 24.6	-0.3
MAKR	Makrakomi, Fth	1.27	76	P	Pn	23 01 24.6	-0.6
MAKR				S	Sn	23 01 44.3	+1.8
	comp=E,3µm,0.5s						
MAKR	Makrakomi, Fth	1.27	76	P	Pn	23 01 24.7	-0.6
MAKR				AML	AML	23 01 50.3	
	comp=N,2655µm,0.8s						
MAKR				AML	AML	23 01 52.2	
	comp=E,1864µm,0.4s						
ALIK	Aliki, Aigiali	1.30	110	P	Pn	23 01 24.8	-0.9
ALIK				S	Sn	23 01 45.8	+2.5
KPRO	Kipourio	1.39	27	P	Pn	23 01 27.2	+0.2
KPRO				S	Sg	23 01 49.4	+3.7
	comp=E,1µm,0.9s						
THL	Klokotos Trika	1.42	53	P	Pn	23 01 26.9	-0.4
AGG	Agios Georgios	1.42	77	P	Pn	23 01 27.3	0.0
AGG				S	Sg	23 01 48.5	+1.8
	comp=E,1µm,0.7s						
AGG	Agios Georgios	1.42	77	P	Pn	23 01 27.4	0.0
AGG				AML	AML	23 01 54.0	
	comp=E,2074µm,0.6s						
AGG				AML	AML	23 01 54.3	
	comp=N,2758µm,0.4s						
KLV	Kalavryta, Ach	1.42	118	P	Pn	23 01 26.2	-1.2
KLV	Kalavryta, Ach	1.42	118	P	Pn	23 01 26.1	-1.3
LSK	Leskovik	1.44	1	P	Pg	23 01 29.4	+0.8
GUR	Goura	1.60	118	P	Pn	23 01 29.3	-0.7
GUR	Goura	1.60	118	P	Pn	23 01 29.3	-0.7
NEST	Nestorio	1.74	12	P	Pg	23 01 34.9	+0.4
THAL	Thalero	1.79	112	P	Pb	23 01 34.5	+0.3
KZN	Kozani	1.85	30	P	Pb	23 01 35.9	+0.7
KZN				S	Sb	23 01 59.0	+0.4
	comp=N,415nm,0.6s						
ITM	Ithomi	1.88	144	P	Pb	23 01 35.0	-0.7
ITM	Ithomi	1.88	144	P	Pb	23 01 35.5	-0.2
LKR	Lokris	1.91	91	P	Pb	23 01 36.4	+0.1
LKR				S	Sb	23 02 00.3	-0.1
	comp=N,312nm,0.6s						
LTK	Loutraki	2.02	109	P	Pb	23 01 37.3	-0.8
LTK				S	Sb	23 02 04.3	+0.9
	comp=N,480nm,0.6s						
LTK	Loutraki	2.02	109	P	Pb	23 01 37.5	-0.5
PYL	PYLOS	2.04	152	P	Pn	23 01 37.2	+1.3
FNA	Florina	2.16	17	P	Pn	23 01 38.2	+0.6
VILL	Villia	2.23	103	P	Pn	23 01 40.4	+1.9
EPID	Epidavros	2.30	118	P	Pn	23 01 40.9	+1.5
OHR	Ohrid	2.40	4	*e*Pn	Pb	23 01 43.2	-1.5
OHR				*e*Sn	Sb	23 02 13.6	-0.9
OHR	Ohrid	2.40	4	*i* Pn	Pb	23 01 43.4	-1.2
KRND	KRANIDI	2.44	122	P	Pn	23 01 43.5	+2.2
GRG	Griva	2.65	32	P	Pn	23 01 46.5	+2.2
PTL	Penteli	2.68	103	P	Pn	23 01 46.8	+2.1
PTL				S	Sn	23 02 19.1	+1.6
	comp=N,232nm,0.7s						
TIR	Tirane	2.68	349	⇑P	Pn	23 01 47.1	+2.4
TIR	Tirane	2.68	349	*e*Pn	Pn	23 01 46.5	+1.8
TIR				*e*Sn	Sn	23 02 15.9	-1.6
VLY	Voula,Athens	2.69	108	P	Pn	23 01 46.0	+1.2
DION	Dionisos Attik	2.73	102	P	Pn	23 01 47.2	+1.9
TIP	Timpagrande	3.00	280	⇓P	Pn	23 01 50.7	+1.6
SOH	Sokhos	3.01	45	P	Pn	23 01 51.4	+2.1
VAY	Valandovo	3.03	30	*e*Pn	Pn	23 01 52.7	+3.3
VAY	Valandovo	3.03	30	*i* Pn	Pn	23 01 52.4	+3.0
KNT	Kendrikon	3.04	36	P	Pn	23 01 51.3	+1.7
STIP	Stip	3.23	22	*i* Pn	Pb	23 01 56.5	-2.2
DRME	Dracevica, Mon	3.62	344	*e*Pn	Pn	23 01 58.3	+0.7
PDG	Podgorica	3.84	345	⇑P	Pn	23 02 01.9	+1.3
PDG	Podgorica	3.84	345	*e*Pn	Pn	23 02 02.1	+1.5
PDG	Podgorica	3.84	345	*e*Pn	Pn	23 02 00.6	0.0
PRVS	Prvonek	3.96	16	*e*Pn	Pn	23 02 05.5	+3.2
HCY	Herceg Novi	4.05	338	*e*Pn	Pn	23 02 01.9	-1.5
BOSS	Bosilegrad	4.05	21	*e*Pn	Pn	23 02 06.2	+2.7
BARS	Barje	4.21	13	*e*Pn	Pn	23 02 07.8	+2.1
APE	Apeiranthos	4.26	111	⇑P	Pn	23 02 07.7	+1.2
TREB	Trebinje	4.34	338	*e*Pn	Pn	23 02 07.0	-0.4
TREB	Trebinje	4.34	338	*e*Pn	Pn	23 02 06.8	-0.6
DBRK	Dubrovnik	4.36	336	*e*Pn	Pn	23 02 08.1	+0.4
VTS	Vitosha	4.40	27	⇓P	Pn	23 02 11.2	+2.8
VTS	Vitosha	4.40	27	*e*Pn	Pn	23 02 11.5	+3.1
BRY	Bratogost	4.46	341	*e*Pn	Pn	23 02 08.1	-1.1
SJES	Sjenica	4.56	355	*e*Pn	Pn	23 02 12.8	+2.1
STON	Ston	4.69	333	*e*Pn	Pn	23 02 12.3	+0.1
STON	Ston	4.69	333	*e*Pn	Pn	23 02 09.4	-2.8
STON	Ston	4.69	333	*e*Pn	Pn	23 02 11.4	-0.8
LSTV	Lastovo	4.92	327	*e*Pn	Pn	23 02 15.1	-0.3
LSTV				Sn	Sn	23 03 08.6	-3.8
RUDO	Rudo	4.98	350	*e*Pn	Pn	23 02 14.1	-2.2
GRUS	Gruza	5.17	1	*e*Pn	Pn	23 02 20.1	+1.2
BBLS	Lazići	5.22	351	*e*Pn	Pn	23 02 24.5	+4.9
DIVS	Divibare	5.40	356	*e*Pn	Pn	23 02 22.5	+0.4
DIVS	Divibare	5.40	356	*e*Pn	Pn	23 02 21.9	-0.2
RICI	Ricice	5.43	333	*e*Pn	Pn	23 02 21.9	-0.6
RICI				Sn	Sn	23 03 22.4	-2.8
HVAR	Hvar	5.44	326	*e*Pn	Pn	23 02 22.4	-0.1
HAPS	Han Pijesak,Bl	5.50	348	*e*Pn	Pn	23 02 19.5	-4.0
KIJV	Kijevo	6.14	331	*e*Pn	Pn	23 02 32.1	-0.1
KIJV				Sn	Sn	23 03 39.8	-2.9
ZIRJ	Zirje	6.17	325	*e*Pn	Pn	23 02 32.1	-0.5
MORI	Morici	6.31	326	*e*Pn	Pn	23 02 34.2	-0.3
FRGS	Fruska Gora	6.46	355	*e*Pn	Pn	23 02 34.4	-2.2
BLY	Banja Luka	6.54	338	*e*Pn	Pn	23 02 39.1	+1.5
MRAK	Mrakovica	6.86	338	*e*Pn	Pn	23 02 41.6	-0.5
MLR	Muntele Rosu	7.87	29	⇓P	Pn	23 03 03.0	+7.0
CRES	Cresnjev	8.05	334	*e*Pn	Pn	23 02 57.6	-0.8
CEY	Cerknica	8.36	329	*e*Pn	Pn	23 03 01.8	-0.9
PLOR	Plostina	8.44	30	⇑P	Pn	23 03 11.3	+7.5
VRI	Vrincioaia	8.48	31	⇑P	Pn	23 03 12.0	+7.7
SOKA	Soboth	8.94	335	*e*Pn	Pn	23 03 10.2	-0.4
	comp=N,2.2nm,0.6s						
SOKA				*e*Sn	Sn	23 04 45.0	-6.6
	comp=N,2.0nm,0.5s						
ABTA	Abfaltersbach	9.97	326	*e*Pn	Pn	23 03 26.3	+1.5
	comp=N,1.2nm,0.5s						
BRTR	Keskin Array B	10.20	80	Pn	Pn	23 03 33.3	+5.2
	comp=N,0.1nm,0.3s,baz=263,slow=12,SNR=3.0						
MOA	Molln	10.21	335	*e*Pn	Pn	23 03 29.0	+0.9
	comp=N,0.8nm,0.3s						
MOTA	Moosalm	11.05	324	*e*Pn	Pn	23 03 40.8	+1.2
	comp=N,1.7nm,0.6s						
MOTA				*e*Sn	Sn	23 05 43.4	-0.1
	comp=N,2.1nm,0.4s						
GERES	GERESS Array B	11.27	336	Pn	Pn	23 03 41.4	-1.2
	comp=N,0.1nm,0.3s,baz=169,slow=11,SNR=3.0						
GERES				Sn	Sn	23 05 45.3	-3.5
	comp=N,0.2nm,0.3s,baz=154,slow=23,SNR=5.2						
GERES				LR	LR	23 08 29.7	
	comp=N,38nm,18.2s,baz=283,slow=40						
RETA	Reutte	11.31	324	*e*Sn	Sn	23 05 49.4	-0.4
	comp=N,1.3nm,0.3s						
ESDC	Sonseca Array	19.02	281	P	Pn	23 05 24.9	+0.7
	comp=N,0.0nm,0.3s,baz=76,slow=11,SNR=2.1						
FINES	FINESS Array B	23.01	7	P	P	23 06 06.0	-0.3
	comp=N,0.8nm,0.5s,baz=171,slow=9.8,SNR=5.4						
NOA	NORSAR Array B	23.10	348	P	P	23 06 07.9	+0.6
	comp=N,0.9nm,1.0s,baz=160,slow=9.8,SNR=2.4						
TORD	Torodi Ar. Bea	30.47	218	P	P	23 07 14.5	-0.1
	comp=N,0.2nm,0.5s,baz=31,slow=9.3,SNR=1.7						
KURBB	Kurchatov Arra	41.89	54	P	P	23 08 53.2	+1.3
	comp=N,0.2nm,0.6s,baz=284,slow=8.5,SNR=1.5						
MKAR	Makanchi Array	45.00	59	P	P	23 09 16.9	-0.2
	comp=N,0.2nm,0.4s,baz=272,slow=7.3,SNR=6.4						
ZALV	Zalesovo Beam	45.31	48	P	P	23 09 19.6	+0.2
	comp=N,0.8nm,0.5s,baz=275,slow=9.0,SNR=4.2						

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*IDC **20** 23:05:52.0±0.6, 8°.47N×71°.41W, h0^{km}, mb4.1/13, mb1 4.4/17, mb1mx4.0/50, mbtmp4.2/17, ML4.1/4, MS3.4/14, Ms1 3.4/14, ms1mx3.3/34, Error ellipse: s-maj=15.8km s-min=9.5km az=154.0*

*CAR **20** 23:05:53.8±0.0, 8°.47N×71°.37W, h5^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=90.0*

*NEIC **20** 23:05:54.1±1.7, 8°.52N±0°.05×71°.37W±0°.04, h8^{km}±4^{km}, mb4.6/30, Mwr4.2(CAR), Error ellipse: s-maj=8.3km s-min=3.1km az=140.0*

*FUNV **20** 23:05:54.0, 8°.51N×71°.38W, h1^{km}, MW4.1*

*VAO **20** 23:05:57.1±0.4, 8°.51N×71°.18W, h10^{km}, mb4.4*

ISC 20 23:05:53.7±1.0**, 8°.54N**±0°.02×**71°.37W**±0°.02**, h8**^{km}±7^{km}**, n169, **σ1^{s}.**40**/197**, mb4.5**/24**, MS3.4**/10**, 2C-2D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOCV	Socops	0.56	116	*e*P	Pg	23 06 04.4	-0.3
SOCV				*e*S	Sg	23 06 12.7	+0.5
SOCV	Socops	0.56	116	⇑*i*P	Pg	23 06 04.5	-0.3
SOCV				*e*S	Sg	23 06 12.9	+0.8
SDV	Santo Domingo	0.81	64	Pg	Pg	23 06 09.7	+0.4
	191nm,0.3s,baz=242,slow=16,SNR=126						
SDV				Lg	Lg	23 06 20.8	
	443nm,0.3s,baz=297,slow=20,SNR=14						
SDV				LR	LR	23 06 44.1	
	comp=Z,2µm,19.9s,baz=117,slow=60						
SDV	Santo Domingo	0.81	64	*e*P	Pg	23 06 09.8	+0.4
SDV				*e*S	Sb	23 06 21.4	+0.2
SDV	Santo Domingo	0.81	64	*e*P	Pg	23 06 09.8	+0.6
SDV	Santo Domingo	0.81	64		Pg	23 06 09.7	+0.4
SDV				Sg	Sg	23 06 21.1	+1.3
CAPV	Capacho	1.15	235	⇓*i*P	Pg	23 06 13.9	-2.0
CAPV				*e*S	Sg	23 06 30.9	0.0
PAMC	Pamplona, Colo	1.78	228	*e*P	Pn	23 06 25.8	+0.6
PAMC				*e*S	Sg	23 06 51.3	+0.3
MCQV	Machiques	1.89	323	*e*P	Pn	23 06 26.6	+0.3
MCQV				*e*S	Sn	23 06 50.9	+0.4
OCAC	Ocana	1.95	261	*e*P	Pn	23 06 28.1	+0.8
OCAC				*e*S	Sn	23 06 53.3	+1.2
OCAC	Ocana	1.95	261		Pn	23 06 27.2	-0.1
OCAC				Sn	Sn	23 06 53.3	+1.2
TAMC	Tame, Arauca	2.13	191	*e*P	Pb	23 06 32.1	-0.5
TAMC				*e*S	Sg	23 07 01.1	-1.2
LL6C	La Loma 6 Bece	2.22	303	*e*P	Pn	23 06 31.3	+0.3
LL6C				*e*S	Sb	23 07 01.3	-0.6
LL1C	La Loma 1 Cana	2.38	295	*e*P	Pn	23 06 34.6	+1.6
LL1C				*e*S	Sb	23 07 05.9	-0.5
ELOV	Elorza	2.41	129	*e*P	Pb	23 06 36.0	-1.4
ELOV				*e*S	Sb	23 07 08.0	+0.7
ELOV	Elorza	2.41	129	*e*P	Pn	23 06 34.5	+1.0
ELOV				*e*S	Sn	23 07 02.9	-0.3
DABV	Dabajuro	2.48	17	*e*P	Pn	23 06 35.7	+1.3
SIQV	Siquisique	2.60	36	*e*P	Pn	23 06 37.0	+0.9
SIQV				*e*S	Sn	23 07 08.2	+0.2
BARC	Barichara	2.64	223	⇑*i*P	Pb	23 06 41.3	-0.1
BARC				*e*S	Sb	23 07 15.9	+1.8
SMLC	San Martn de	2.69	276	*e*P	Pb	23 06 40.5	-1.6
SMLC				*e*S	Sn	23 07 06.5	-3.5
BRRC	Barranca, Sant	2.72	239	*e*P	Pn	23 06 38.9	+1.2
BRRC				*e*S	Sb	23 07 18.3	+2.0
RUSC	La Rusia	3.13	213	*e*P	Pn	23 06 43.4	-0.4
RUSC				*e*S	Sn	23 07 23.8	+2.1
URIC	Uribia, Colomb	3.21	349	*e*P	Pb	23 06 52.0	+1.1
URIC				*e*S	Sn	23 07 20.9	-1.9
URIC	Uribia, Colomb	3.21	349	Pn	Pn	23 06 47.3	+2.9
URIC				Sn	Sn	23 07 22.1	-0.8
BAUV	El Baul	3.31	83	*e*P	Pn	23 06 46.2	+0.3
BAUV				*e*S	Sn	23 07 24.2	-1.3
BAUV	El Baul	3.31	83	Pn	Pn	23 06 47.6	+1.7
JACV	Jacura	3.56	44	*e*P	Pn	23 06 50.1	+0.8
ZARC	Zaragoza, Cauc	3.61	254	*e*P	Pn	23 06 49.1	-0.8
ZARC				*e*S	Sn	23 07 35.3	+2.5
ZARC	Zaragoza, Cauc	3.61	254	Pn	Pn	23 06 49.9	-0.1
PTBC	PUERTO BERRIO,	3.65	237	*e*P	Pn	23 06 50.1	-0.4
PTBC				*e*S	Sb	23 07 41.0	-1.9
MONV	Montecano	3.67	22	*e*P	Pn	23 06 51.3	+0.5
SMRC	Santa Marta, M	3.84	313	*e*P	Pn	23 06 52.8	-0.3
SMRC				*e*S	Sn	23 07 37.0	-1.5
SPBC	San Pablo de B	3.93	223	*e*P	Pn	23 06 54.9	+0.5
SPBC				*e*S	Sn	23 07 42.9	+2.2
TURV	Turiamo	3.97	61	*e*P	Pn	23 06 55.0	+0.1
BENV	Beln	3.98	69	*e*P	Pn	23 06 55.5	+0.3
BENV				*e*S	Sn	23 07 40.5	-1.5
SJCC	San Jacinto, C	4.00	290	*e*P	Pn	23 06 56.8	+1.4
SJCC				*e*S	Sn	23 07 42.0	-0.5
SJCC	San Jacinto, C	4.00	290	Pn	Pn	23 06 56.4	+1.0
UREC	San Jos de Ur	4.20	260	*e*P	Pn	23 06 56.8	-1.2
UREC				*e*S	Sn	23 07 49.8	+2.5
MOTC	Monteria, Cord	4.25	274	⇓*i*P	Pn	23 06 59.7	+0.8
MOTC				*e*S	Sn	23 07 50.5	+1.8
MOTC	Monteria, Cord	4.25	274	Pn	Pn	23 06 59.7	+0.8
HATO	Hato, Curacao	4.33	33		Pn	23 07 01.4	+1.5
PTGC	Puerto Gaitan,	4.38	190	*e*P	Pg	23 07 18.0	+0.3
PTGC				*e*S	Sg	23 08 09.9	-4.5
NORC	Norcasia	4.56	230	*e*P	Pn	23 07 04.6	+1.4
NORC				*e*S	Sn	23 07 56.5	+0.1
ROSC	El Rosal	4.70	219	Pn	Pn	23 07 06.9	+1.6
	12nm,0.3s,baz=154,slow=2.5,SNR=41						
ROSC				Sn	Sn	23 08 01.9	+1.6
	14nm,0.3s,baz=181,slow=22,SNR=3.5						
ROSC				LR	LR	23 09 10.9	
	comp=Z,599nm,19.6s,baz=292,slow=43						
ROSC	El Rosal	4.70	219	*e*P	Pn	23 07 07.6	+2.2
ROSC	El Rosal	4.70	219	Pn	Pn	23 07 07.8	+2.5
HELC	Santa Helena	4.74	241	*e*P	Pn	23 07 06.7	+0.8
HELC				*e*S	Sn	23 08 04.3	+3.1
CARV	Caracas	4.79	66	*e*P	Pn	23 07 06.4	0.0
PAYV	Puerto Ayacuch	4.81	130	*e*P	Pn	23 07 06.0	-0.5
CACV	CAICARA DEL OR	4.88	101	*e*P	Pb	23 07 15.0	-4.5
LCBC	Los crdobas,	4.95	274	*e*P	Pn	23 07 08.6	+0.1
LCBC				*e*S	Sn	23 08 08.1	+2.1
VILC	Villavicencio,	4.97	208	*e*P	Pn	23 07 07.4	-1.4
VILC				*e*S	Sn	23 07 42.1	-24
MERV	Las Mercedes	5.06	82	*e*P	Pn	23 07 10.2	+0.3
CBOC	Ciudad Bolivar	5.32	240	*e*P	Pn	23 07 15.4	+1.8
BIRV	Birongo	5.39	69	*e*P	Pn	23 07 14.2	-0.3
BIRV	Birongo	5.39	69	Pn	Pn	23 07 16.7	+2.3
CAP2	Capurgana	5.93	272	Pn	Pn	23 07 19.7	-2.2
PRAC	Prado	5.93	216	*e*P	Pn	23 07 22.7	+0.7
PRAC				*e*S	Sn	23 08 31.0	+0.8
ORTC	Ortega, Tolima	6.00	220	*e*P	Pn	23 07 23.1	+0.2
PLMC	San Jos del P	6.07	234	*e*P	Pn	23 07 25.0	+1.1
PRGV	PARIAGUAN	6.65	88	*e*P	Pn	23 07 31.1	-0.7
YOTC	Yotoco, Valle	6.70	228	*e*P	Pn	23 07 34.3	+1.7
YOTC				*e*S	Sn	23 08 56.1	+6.8
PCRV	Puerto La Cruz	6.84	76	Pn	Pn	23 07 36.0	+1.6
	4.1nm,0.3s,baz=213,slow=6.2,SNR=14						
PCRV				Sn	Sn	23 08 52.6	0.0
	4.6nm,0.3s,baz=3.7,slow=17,SNR=3.0						
PCRV	Puerto La Cruz	6.84	76	*e*P	Pn	23 07 34.4	-0.1
PLCV	Puerto La Cruz	6.88	76		Pn	23 07 36.0	+1.0
MARP	Paez Belalcaza	7.27	219	*e*P	Pn	23 07 39.8	-0.7
GARC	Garzon, Huila	7.53	213	*e*P	Pn	23 07 44.1	0.0
PCON	Cinco Dias	7.94	219	*e*P	Pn	23 07 50.7	+0.6
CRUV	Carupano	8.29	75	*e*P	Pn	23 07 53.4	-1.0
BCIP	Isla Barro Col	8.39	275	Pn	Pn	23 07 55.9	+0.2
LUEV	Luepa	10.19	105	*e*P	Pn	23 08 18.3	-2.2
MLPR	Magueyes Islan	10.28	24	Pn	Pn	23 08 19.9	-1.6
DR12	Loma Pena Alta	10.37	11		Pn	23 08 22.9	0.0
SDDR	Presa de Saban	10.38	0		Pn	23 08 23.3	+0.2
PRSN	Puerto Rico Se	10.46	23	Pn	Pn	23 08 24.9	+0.8
CELP	Cerrillos	10.56	26	Pn	Pn	23 08 24.5	-1.0
AOPR	Arecibo Observ	10.73	24	Pn	Pn	23 08 26.7	-1.2
PDPR	Patillas Dam,	10.76	28	Pn	Pn	23 08 28.6	+0.3
SJG	San Juan	10.79	28	Pn	Pn	23 08 27.6	-0.9
	3.9nm,0.3s,baz=201,slow=20,SNR=5.2						
SJG				LR	LR	23 13 32.4	
	comp=Z,141nm,18.8s,baz=232,slow=42						
OTAV	Otavalo	10.85	221	*e*P	Pn	23 08 32.7	+2.8
OTAV	Otavalo	10.85	221		Pn	23 08 29.4	-0.5
CBYP	Canovanas	11.06	28		Sn	23 10 36.8	+0.4
MTDJ	Mount Denham	11.34	329	Pn	Pn	23 08 36.0	-0.3
CUPR	Culebra, Puert	11.37	31	Pn	Pn	23 08 37.9	+1.3
STVI	Saint Thomas	11.58	32	Pn	Pn	23 08 39.6	+0.2
FDF	Fort de France	11.75	57	Pn	Pn	23 08 42.1	+0.3
CVTR	Volcan Turrial	12.32	278		Pn	23 08 47.2	-2.8
BOAV	Boa Vista	12.40	119	*e*P	Pn	23 08 50.1	-0.6
BOAV	Boa Vista	12.40	119	Pn	Pn	23 08 50.0	-0.6
TBTG	Tabatinga, AM	12.72	173	*e*P	Pn	23 08 59.1	+4.0
JTS	Las Juntas de	13.52	278	LR	LR	23 16 10.1	
	comp=Z,72nm,20.8s,baz=151,slow=46						
PTGA	Pitinga	14.62	128	Pn	Pn	23 09 18.9	-2.2
	0.9nm,0.3s,baz=307,slow=14,SNR=9.0						
PTGA				Sn	Sn	23 11 59.2	-4.4
	0.5nm,0.3s,baz=318,slow=22,SNR=1.8						
PTGA				Lg	Lg	23 13 30.9	
	1.3nm,0.3s,baz=354,slow=20,SNR=2.6						
PTGA				LR	LR	23 15 24.1	
	comp=Z,266nm,20.7s,baz=310,slow=39						
PTGA	Pitinga	14.62	128		Pn	23 09 19.8	-1.4
CZSB	Cruzeiro do Su	16.21	185	*e*P	P	23 09 46.1	+0.8
ATAH	Atahualpa	17.07	204	Pn	Pn	23 09 53.1	-0.3
	0.2nm,0.3s,baz=53,slow=15,SNR=3.8						
ETMB	Extrema	18.94	164	*e*P	P	23 10 15.9	+0.6
ETMB	Extrema	18.94	164		Pn	23 10 16.4	+0.5
SAML	Samuel	19.19	155	P	P	23 10 18.1	+0.1
MALB	Monte Alegre	19.93	120	*e*P	P	23 10 27.1	+0.9
ITTB	Itaituba	20.18	129	*e*P	Pn	23 10 31.2	+0.3
NNA	Nana	21.10	195	LR	LR	23 19 53.6	
	comp=Z,132nm,19.8s,baz=11,slow=40						
MCPB	Macapa, AP	21.18	114	*e*P	P	23 10 41.3	+1.5
NPGB	Novo Progresso	22.23	134	*e*P	P	23 10 52.2	+1.1
CMIG	Matias Romero	24.43	293	LR	LR	23 21 53.2	
	comp=Z,96nm,20.7s,baz=115,slow=39						
CLDB	Colider	24.74	141	*e*P	P	23 11 17.1	+1.2
PDRB	Porto dos Gac	24.75	144	*e*P	P	23 11 16.6	+0.6
PRPB	Parauapebas	25.99	124	*e*P	P	23 11 29.7	+2.4
SIV	San Ignacio	26.42	157	P	P	23 11 31.5	+0.4
	4.7nm,0.9s,baz=316,slow=8.5,SNR=9.4						
SIV				LR	LR	23 22 32.7	
	comp=Z,222nm,19.9s,baz=332,slow=38						
PTLB	Pontes e Lacer	26.73	153	*e*P	P	23 11 36.0	+2.1
PB16	IPOC Station P	26.76	176	P	P	23 11 33.8	-1.0
SNDB	Serra Nova Dou	28.52	135	*e*P	P	23 11 51.5	+1.5
TKL	Tuckaleechee C	29.28	339	LR	LR	23 25 15.2	
	comp=Z,83nm,19.0s,baz=152,slow=40						
SMTB	Santa Maria do	29.32	126	*e*P	P	23 11 59.4	+2.2
ROSB	Rosrio	29.44	112	*e*P	P	23 12 01.2	+3.0
PEXB	Peixe	30.76	131	*e*P	P	23 12 12.3	+2.4
BDFB	Brasilia	33.35	136	LR	LR	23 26 47.1	
	comp=Z,151nm,18.3s,baz=351,slow=38						
SDBA	SAO DESIDERIO	33.54	128	*e*P	P	23 12 36.2	+1.9
NBPN	Ponto Novo - B	36.51	121	*e*P	P	23 13 01.2	+1.2
TXAR	Lajitas Array	36.69	309	LR	LR	23 29 30.3	
	comp=Z,13nm,19.4s,baz=0.0,slow=39						
SADO	Sadowa	36.72	351	P	P	23 13 02.8	+1.5
	6.5nm,1.0s,baz=253,slow=3.5,SNR=4.7						
SADO	Sadowa	36.72	351	P	P	23 13 01.6	+0.2
SADO				IAmb	IAmb	23 13 03.4	
	comp=Z,14nm,1.1s						
CPUP	Villa Florida	37.25	159	LR	LR	23 28 14.2	
	comp=Z,54nm,20.4s,baz=1.5,slow=36						
ULM	Lac du Bonnet	46.30	338	LR	LR	23 35 25.5	
	comp=Z,38nm,18.4s,baz=64,slow=38						
SCHQ	Schefferville	46.31	4	P	P	23 14 18.6	-1.3
	comp=Z,4.7nm,0.9s,baz=207,slow=9.3,SNR=1.5						
SCHQ				LR	LR	23 31 33.1	
	comp=Z,28nm,20.2s,baz=94,slow=33						
SCHQ	Schefferville	46.31	4	P	P	23 14 20.2	+0.3
SCHQ				IAmb	IAmb	23 14 23.8	
	comp=Z,8.2nm,1.1s						
LC01	Cunco	47.19	181	P	P	23 14 26.1	-0.8
PD31	Pinedale Array	47.76	322	P	P	23 14 32.5	+0.7
PD31				IAmb	IAmb	23 14 37.4	
	comp=Z,4.5nm,1.1s						
PDAR	Pinedale Array	47.76	322	P	P	23 14 31.2	-0.5
	comp=Z,3.2nm,0.6s,baz=119,slow=9.4,SNR=9.9						
LOHW	Long Hollow	48.87	322	P	P	23 14 39.8	-0.5
LOHW				IAmb	IAmb	23 14 42.9	
	comp=Z,3.8nm,0.7s						
SNOW	Snow King Moun	48.88	322	P	P	23 14 39.3	-1.1
REDW	Red Top Meadow	48.88	322	P	P	23 14 39.8	-0.5
REDW				IAmb	IAmb	23 14 45.8	
	comp=Z,7.1nm,1.0s						
PLCA	Paso Flores	49.03	179	P	P	23 14 40.2	-1.0
	comp=Z,3.4nm,0.6s,baz=2.0,slow=8.7,SNR=9.1						
PLCA	Paso Flores	49.03	179	IAmb	IAmb	23 14 42.5	
	comp=Z,6.3nm,0.9s						
YHL	Hebgen Lake	49.91	323	P	P	23 14 48.0	-0.3
YHL				IAmb	IAmb	23 14 55.2	
	comp=Z,5.5nm,0.8s						
QLMT	Earthquake Lak	50.04	323	P	P	23 14 49.7	+0.5
MCMT	McKenzie Canyo	50.88	323	P	P	23 14 56.2	+0.6

BCYI	Bear Canyon	50.95	322	P	P	23 14 54.3	-1.8
EGMT	Eagleton	50.97	328	P	P	23 14 54.5	-1.5
EGMT				IAmb	IAmb	23 14 58.6	
	comp=Z,7.9nm,0.9s						
LRM	Limekiln Ridge	51.19	324	P	P	23 14 57.0	-0.9
HLID	Hailey	51.19	320	P	P	23 14 57.7	-0.1
HRY	Holter Researc	51.33	325	P	P	23 14 59.3	+0.6
NVAR	Mina Array Bea	51.56	313	P	P	23 15 01.1	+0.4
	comp=Z,0.4nm,0.5s,baz=119,slow=7.3,SNR=6.2						
NVAR				LR	LR	23 39 51.3	
	comp=Z,40nm,20.0s,baz=92,slow=40						
JTMT	Jette	53.30	325	P	P	23 15 13.3	-0.1
SAO	San Andreas Ge	53.30	310	P	P	23 15 12.9	-0.6
SAO				IAmb	IAmb	23 15 13.8	
	comp=Z,16nm,1.1s						
WVOR	Wild Horse Val	53.42	317	P	P	23 15 13.6	-0.8
BMO	Blue Mountains	53.64	321	P	P	23 15 16.1	+0.2
F10A	Beach Ranch, E	54.12	322	P	P	23 15 19.2	-0.2
F10A				IAmb	IAmb	23 15 21.3	
	comp=Z,3.6nm,0.6s						
G08A	Pilot Rock	54.88	320	P	P	23 15 25.5	+0.6
E09A	Wood Farm, Sta	54.94	322	P	P	23 15 25.3	0.0
E09A				IAmb	IAmb	23 15 27.5	
	comp=Z,5.5nm,1.2s						
NEW	Newport	55.19	324	P	P	23 15 27.7	+0.6
	comp=Z,2.2nm,1.0s,baz=122,slow=5.9,SNR=4.8						
NEW	Newport	55.19	324	P	P	23 15 26.8	-0.3
NEW				IAmb	IAmb	23 15 28.9	
	comp=Z,3.3nm,0.8s						
C09A	Chrisman Ranch	55.63	323	P	P	23 15 30.5	+0.3
B08A	Colville Reser	56.52	324	P	P	23 15 37.0	+0.4
B08A				IAmb	IAmb	23 15 38.7	
	comp=Z,4.2nm,0.8s						
HOOD	Mount Hood Mea	56.61	319	P	P	23 15 36.3	-1.1
HOOD				IAmb	IAmb	23 15 40.7	
	comp=Z,8.2nm,0.9s						
E03A	Lebam	58.32	320	P	P	23 15 49.5	+0.3
E03A				IAmb	IAmb	23 16 01.6	
	comp=Z,8.6nm,0.9s						
RADR	Rader Ridge	58.42	320	P	P	23 15 50.4	+0.4
ESDC	Sonseca Array	67.23	51	P	P	23 16 48.5	-0.4
	comp=Z,0.9nm,0.8s,baz=260,slow=6.1,SNR=5.1						
A36M	Sachs Harbour	71.24	345	P	P	23 17 12.7	-0.3
A36M				IAmb	IAmb	23 17 14.6	
	comp=Z,4.8nm,0.7s						
TORD	Torodi Ar. Bea	71.70	79	P	P	23 17 16.2	-0.7
	comp=Z,0.6nm,0.6s,baz=288,slow=6.6,SNR=9.5						
INK	Inuvik	72.02	340	P	P	23 17 17.7	-0.1
	comp=Z,1.6nm,0.7s,baz=82,slow=4.5,SNR=4.5						
ILAR	Eielson Array	76.16	335	P	P	23 17 41.8	-0.3
	comp=Z,1.1nm,1.0s,baz=102,slow=4.7,SNR=1.7						
MURB	Monte Urbino	79.77	48	P	P	23 18 02.5	-0.2
GERES	GERESS Array B	80.39	42	P	P	23 18 05.3	-0.7
	comp=Z,0.7nm,0.8s,baz=269,slow=8.5,SNR=3.8						
FINES	FINESS Array B	86.11	29	P	P	23 18 34.9	-0.2
	comp=Z,2.2nm,0.9s,baz=258,slow=7.0,SNR=3.5						
MKAR	Makanchi Array	120.12	21	PKP	PKiKP	23 24 47.3	+1.7
	comp=Z,0.4nm,0.9s,baz=332,slow=2.4,SNR=2.8						
ASAR	Alice Springs	151.51	235	PKPbc	PKPbc	23 25 48.0	-1.4
	comp=Z,1.8nm,0.6s,baz=113,slow=2.8,SNR=18						
CMAR	Chiang Mai Arr	151.52	20	PKPbc	PKPbc	23 25 48.0	-1.4
	comp=Z,0.8nm,0.3s,baz=1.1,slow=4.6,SNR=4.1						
WRA	Warramunga Arr	152.67	243	PKPbc	PKPbc	23 25 51.0	-1.0
	comp=Z,2.7nm,0.5s,baz=109,slow=2.7,SNR=40						
WRA	Warramunga Arr	152.67	243		PKPbc	23 25 51.1	-0.9

*IDC **20** 23:06:09.3±0.7, 9°.37S×66°.93E, h0^{km}, mb3.8/16, mb1 3.9/16, mb1mx3.7/63, mbtmp3.8/16, MS3.8/10, Ms1 3.8/10, ms1mx3.5/43, Error ellipse: s-maj=20.2km s-min=18.7km az=101.0*

*NEIC **20** 23:06:10.8±1.4, 9°.4S±0°.1×67°.0E±0°.1, h10^{km}±1^{km}, mb4.4/16, Error ellipse: s-maj=22.6km s-min=19.4km az=183.0*

*GCMT **20** 23:06:15.8±0.3, 9°.39S±0°.02×66°.88E±0°.02, h16^{km}±1^{km}, MW4.8/77, Moment Tensor Solution. s18,c21; s77,c98; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.10±.10; $M_{\theta\theta}$-1.83±.08; $M_{\phi\phi}$1.93±.09; $M_{r\theta}$-0.55±.26; $M_{\theta\phi}$0.41±.08; $M_{\phi r}$1.10±.30; Best double couple: $M_0$2.27100×10^{16} NP1:ϕ_s53.00000°,δ58.00000°,λ2.00000°. NP2: ϕ_s322.00000°,δ88.00000°,λ148.00000°. Principal axes: T 2.4180, Plg23.0000°, Azm272.0000°; N -0.2950, Plg58.0000°, Azm139.0000°; P -2.1240, Plg21.0000°, Azm12.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 23:06:11.3±0.7, **9°.4S**±0°.1×**67°.0E**±0°.1, **h15**^{km}, **n48**, σ**0^{s}.92**/35, **mb4.0**/22, **MS3.8**/10, **Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	5.72	73	T	T	23 14 08.4	
	baz=248						
H08S3	Diego Garcia H	5.73	73	T	T	23 14 08.8	
	baz=248,slow=74						
H08S2	Diego Garcia H	5.74	73	T	T	23 14 00.5	
	baz=248,slow=74						
MSEY	Mahe Island	12.30	291	Pn	Pn	23 09 06.9	+0.8
PALK	Pallekele	21.46	40	LR	LR	23 17 20.1	
	comp=Z,150nm,19.7s,baz=323,slow=31						
KMBO	Kilima Mbogo	30.66	284	P	P	23 12 26.8	+0.9
	0.5nm,0.3s,baz=109,slow=11,SNR=4.1						
KMBO	Kilima Mbogo	30.66	284	P	P	23 12 25.1	-0.7
LODK	Lodwar	33.95	291	P	P	23 12 53.9	-0.6
LODK				IAmb	IAmb	23 12 57.5	
	comp=Z,8.2nm,1.4s						
PSI	Prapat	34.07	71	LR	LR	23 25 45.7	
	comp=Z,186nm,18.6s,baz=252,slow=34						
UOSS	Minazif	35.66	343	P	P	23 13 08.4	-0.7
UOSS				IAmb	IAmb	23 13 11.3	
	comp=Z,11nm,1.4s						
LSZ	Lusaka	38.29	257	P	P	23 13 31.0	-0.7
LEM	Lembang	40.32	90	LR	LR	23 26 46.1	
	comp=Z,183nm,19.1s,baz=106,slow=31						
CMAR	Chiang Mai Arr	41.95	49	LR	LR	23 29 12.8	
	comp=Z,42nm,19.4s,baz=280,slow=33						
LBTB	Lobatse	42.27	243	P	P	23 14 04.9	+0.3
	comp=Z,4.9nm,1.1s,baz=79,slow=10,SNR=2.4						
BOSA	Boshof	43.55	238	P	P	23 14 14.7	-0.3
	comp=Z,1.7nm,0.5s,baz=70,slow=11,SNR=7.8						
BOSA				LR	LR	23 32 02.4	
	comp=Z,59nm,18.2s,baz=76,slow=36						
UBPT	Khong Chiam	45.34	58	P	P	23 14 27.4	-1.8
UBPT				IAmb	IAmb	23 14 33.6	
	comp=Z,4.5nm,0.9s						
GEYT	Alibeck	47.76	351	LR	LR	23 34 21.7	
	comp=Z,61nm,18.1s,baz=155,slow=35						
CHGR	Chuyangaron	47.80	2	P	P	23 14 48.2	-0.1
GAR	Garm	48.20	4	P	P	23 14 52.3	+0.8
BTK	Batken	49.29	4	P	P	23 14 59.9	+0.1
H01W3	Cape Leeuwin H	49.96	128	T	T	00 08 53.0	
	baz=290,slow=75,SNR=48						
H01W2	Cape Leeuwin H	49.96	128	T	T	00 08 53.0	
	baz=290,slow=75,SNR=81						
H01W1	Cape Leeuwin H	49.97	128	T	T	00 08 52.0	
	baz=290,slow=75,SNR=50						
MMAI	Mount Meron Ar	51.75	326	P	P	23 15 20.2	+1.7
	comp=Z,0.9nm,0.6s,baz=120,slow=8.5,SNR=2.8						
GURO	Guroymak-BITLI	53.02	336	P	P	23 15 29.4	+1.5
CSS	Mathiatis	54.35	326	P	P	23 15 36.2	-1.3
CSS				IAmb	IAmb	23 15 39.5	
	comp=Z,3.6nm,1.0s						
MKAR	Makanchi Array	57.55	12	P	P	23 16 00.1	-0.1
	comp=Z,0.6nm,0.7s,baz=209,slow=8.0,SNR=4.8						
MKAR				LR	LR	23 40 39.7	
	comp=Z,61nm,19.3s,baz=186,slow=36						
ELL	Elmali	57.56	325	P	P	23 15 59.5	-1.2
BR131	Keskin Array S	57.77	330	P	P	23 16 01.4	-0.7
BR131				IAmb	IAmb	23 16 17.6	
	comp=Z,2.8nm,1.0s						
BRTR	Keskin Array B	57.77	330	P	P	23 16 01.9	-0.3
	comp=Z,0.7nm,0.8s,baz=140,slow=7.6,SNR=3.5						
MAW	Mawson	58.24	182	P	P	23 16 05.1	+0.3
	comp=Z,1.4nm,0.8s,baz=34,slow=7.3,SNR=2.0						
MAW				LR	LR	23 35 04.8	
	comp=Z,135nm,21.6s,baz=56,slow=30						
ABKAR	Akbulak array	58.68	355	P	P	23 16 08.6	+0.5
ABKAR				IAmb	IAmb	23 16 21.5	
	comp=Z,6.5nm,1.4s						
ABKAR	Akbulak array	58.68	355	P	P	23 16 08.0	-0.1
AKTO	Aktyubinsk	60.05	353	P	P	23 16 17.2	-0.3
	comp=Z,1.1nm,0.7s,baz=189,slow=7.9,SNR=4.2						
KURBB	Kurchatov Arra	60.57	8	P	P	23 16 21.2	+0.2
	comp=Z,1.0nm,0.8s,baz=207,slow=6.7,SNR=6.6						
KURK	Kurchatov	60.67	8	P	P	23 16 21.2	-0.5
KURK	Kurchatov	60.67	8	IAmb	IAmb	23 16 23.8	
	comp=Z,5.2nm,1.1s						
BVAR	Borovoye Array	62.20	2	P	P	23 16 32.1	0.0
	comp=Z,0.2nm,0.4s,baz=206,slow=12,SNR=2.8						
ZALV	Zalesovo Beam	64.85	12	P	P	23 16 52.0	+2.5
	comp=Z,0.7nm,0.6s,baz=222,slow=3.7,SNR=3.7						
ZALV	Zalesovo Beam	64.85	12	P	P	23 16 50.3	+0.7
ASAR	Alice Springs	65.25	112	P	P	23 16 53.0	0.0
	comp=Z,0.6nm,0.7s,baz=276,slow=6.0,SNR=8.0						
WRA	Warramunga Arr	65.68	108	P	P	23 16 56.7	+0.9
	comp=Z,0.9nm,0.8s,baz=276,slow=6.0,SNR=4.3						
SONM	Songino Array	66.78	28	P	P	23 17 03.8	+1.4
	comp=Z,1.1nm,0.9s,baz=218,slow=5.0,SNR=7.4						
SONM				LR	LR	23 45 30.3	
	comp=Z,119nm,19.8s,baz=232,slow=35						
AKASG	Malin Array Be	68.18	335	P	P	23 17 10.3	-0.6
	comp=Z,0.4nm,0.4s,baz=135,slow=5.9,SNR=1.8						
KEST	Kesra	70.35	313	LR	LR	23 47 07.6	
	comp=Z,222nm,18.8s,baz=359,slow=35						
ESDC	Sonseca Array	81.58	312	P	P	23 18 28.8	-0.1
	comp=Z,0.6nm,0.7s,baz=114,slow=3.9,SNR=4.9						
PDAR	Pinedale Array	146.58	355	PKPbc	PKPbc	23 25 52.9	0.0
	comp=Z,0.6nm,0.7s,baz=45,slow=1.4,SNR=6.4						
TXAR	Lajitas Array	158.26	337	PKPab	PKPab	23 26 42.7	0.0
	comp=Z,0.5nm,0.7s,baz=60,slow=2.8,SNR=4.8						

*TUL **20** 23:09:28.4±1.0, 36°.66N±0°.04×98°.46W±0°.03, h8^{km}±7^{km}, ML3.4, mb_Lg3.3/76(NEIC), Error ellipse: s-maj=6.0km s-min=0.7km az=146.0*

*NEIC **20** 23:09:28.6±1.1, 36°.64N±0°.02×98°.45W±0°.01, h5^{km}±2^{km}, Error ellipse: s-maj=3.2km s-min=3.0km az=152.0*

*ANF **20** 23:09:29.4±1.1, 36°.62N×98°.39W, h7^{km}±7^{km}, ML4.0/7, Error ellipse: s-maj=4.3km s-min=2.5km az=63.0*

ISC 20 23:09:29.1±1.2, **36°.63N**±0°.02×**98°.42W**±0°.03, **h3**^{km}±11^{km}, **n87**, σ**0^{s}.85**/76, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK032	Salt Plains WL	0.24	45	Pg	Pg	23 09 33.3	-0.4
OK032				Sg	Sg	23 09 37.3	+0.4
CROK	Carrier	0.38	110	Pg	Pg	23 09 36.6	+0.3
CROK				Sg	Sg	23 09 42.5	+1.2
KAN14	Manchester OK	0.49	49	Pg	Pg	23 09 38.1	-0.3
KAN14				Sg	Sg	23 09 45.0	+0.2
GC02	Grant County #	0.50	64	Pg	Pg	23 09 38.6	-0.1
GC02				Sg	Sg	23 09 45.9	+0.6
U32A	Winter Ranch,	0.53	242		Pg	23 09 38.5	-0.7
U32A				Sg	Sg	23 09 45.6	-0.5
KAN10	Anthony SW Sta	0.56	28	Pg	Pg	23 09 39.1	-0.6
KAN10				Sg	Sg	23 09 46.7	-0.2
KAN05	Bluff City Nor	0.65	43		Pg	23 09 41.0	-0.4
KAN16	Harper SW Stat	0.66	26	Pg	Pg	23 09 40.6	-1.0
KAN17	Caldwell West	0.67	52	Pg	Pg	23 09 41.4	-0.5
KAN08	Anthony NE Sta	0.69	31		Pg	23 09 41.7	-0.7
KAN01	Argonia South	0.74	46		Pg	23 09 42.8	-0.6
KAN12	Harper NE Stat	0.74	27	Pg	Pg	23 09 42.5	-0.9
KAN06	Argonia West S	0.76	36		Pg	23 09 43.0	-0.7
KAN09	Caldwell North	0.82	52	Pg	Pg	23 09 44.1	-0.6
KAN13	South Haven SW	0.85	63	Pg	Pg	23 09 44.8	-0.5
BLOK	Blackwell	0.98	82	Pg	Pg	23 09 47.2	-0.6
OK029	Liberty Lake	1.15	137		Pg	23 09 50.4	-0.6
BCOK	Bluff Creek, N	1.18	146		Pg	23 09 50.7	-0.9
OK009	Oakdale Elemen	1.33	142	Pn	Pn	23 09 53.4	-1.2
OK025	Westminster Rd	1.37	140		Pn	23 09 53.9	-1.2
OK031	S. Brethren Rd	1.45	117	Pn	Pn	23 09 55.3	-0.9
OKCFA	Oklahoma City	1.45	147		Pn	23 09 55.5	-0.7
OKCFA	Oklahoma City	1.45	147	P	Pn	23 09 55.4	-0.8
	baz=327						
OKCFA				S	Sb	23 10 15.6	0.0
	baz=327						
QUOK	Quay	1.46	108	Pn	Pn	23 09 55.8	-0.5
OKCSW	OKLAHOMA CITY	1.46	147	Pn	Pn	23 09 55.4	-1.0
T35B	Sooner Cattle	1.56	79	P	Pn	23 09 57.4	-0.4
	baz=261,SNR=137						
T35B				S	Sb	23 10 18.5	-0.3
	baz=261						
FNO	Franklin	1.60	149	Pn	Pn	23 09 58.3	-0.1
R32A	Long Quarter,	1.80	353	Pn	Pn	23 10 00.3	-0.8
R32A	Long Quarter,	1.80	353	P	Pn	23 10 00.6	-0.5
	baz=174,SNR=78						
R32A				S	Sn	23 10 24.2	-0.3
	baz=174						
WMOK	Wichita Mounta	1.91	189	Pn	Pn	23 10 01.9	-0.8
WMOK	Wichita Mounta	1.91	189	P	Pn	23 10 02.0	-0.6
	baz=7.6,SNR=119						
X34A	Smith Ranch, M	2.08	166	Pn	Pn	23 10 05.4	+0.5
X34A				IAmb_Lg		23 10 38.7	
	comp=Z,237nm,0.8s						
TUL1	Leonard	2.25	108		Pn	23 10 06.1	-1.1
TUL1				IAmb_Lg		23 10 41.1	
	comp=Z,97nm,0.9s						
TUL1	Leonard	2.25	108	P	Pn	23 10 06.8	-0.3
	baz=290,SNR=37						
TUL1				Sb	Sb	23 10 38.8	+0.3
	baz=290						
CBKS	Cedar Bluff	2.41	335		Pn	23 10 09.4	-0.1
CBKS				IAmb_Lg		23 10 44.3	
	comp=Z,90nm,0.8s						
CBKS	Cedar Bluff	2.41	335	P	Pn	23 10 10.6	+1.1
	baz=154						
CBKS				S	Sb	23 10 41.9	-1.5
	baz=154						
LOOK	Love County	2.83	159	Pn	Pn	23 10 14.5	-0.6
KSU1	Kansas State U	2.85	30	Pn	Pn	23 10 15.6	+0.1
AMTX	Amarillo	3.17	238		Pn	23 10 19.7	-0.3
AMTX				IAmb_Lg		23 11 17.1	
	comp=Z,107nm,0.7s						
X37A	Clayton	3.22	128		Pn	23 10 20.5	0.0
X37A				IAmb_Lg		23 11 19.8	
	comp=Z,73nm,1.0s						
U38A	Gravette	3.26	92		Pn	23 10 21.2	+0.1
Z35A	Perchaven, San	3.43	163		Pb	23 10 29.2	-1.3
Z35A	Perchaven, San	3.43	163	Sb	Sb	23 11 15.4	+2.7
	baz=344						
HHAR	Hobbs	3.63	94		Pn	23 10 25.9	-0.3
W39A	Magazine	4.03	109		Pn	23 10 32.0	+0.4
W39A				IAmb_Lg		23 11 44.0	
	comp=Z,80nm,0.9s						
KSCO	Kaye Shedlock’	4.09	307	IAmb_Lg		23 11 39.8	
	comp=Z,76nm,0.7s						
ABTX	Abilene, Hawle	4.12	194	Pn	Pn	23 10 32.0	-1.0
ABTX				Pg	Pb	23 10 41.6	-0.7
S39A	Bolivar	4.21	74		Pn	23 10 34.2	0.0
S39A				IAmb_Lg		23 11 44.7	
	comp=Z,60nm,0.7s						
S39A	Bolivar	4.21	74	P	Pn	23 10 33.6	-0.5
	baz=257,SNR=5.3						
Z38A	Mt. Pleasant	4.39	139	IAmb_Lg		23 11 52.2	
	comp=Z,47nm,0.8s						
MIAR	Mount Ida	4.47	116		Pn	23 10 38.7	+1.0
U40A	Yellville	4.50	92	IAmb_Lg		23 11 49.5	
	comp=Z,58nm,0.7s						
WHTX	Lake Whitney,	4.70	170	Pn	Pn	23 10 39.8	-1.1
WHTX				Pg	Pb	23 10 52.6	+0.5
N35A	Tabor	4.75	26	Pn	Pn	23 10 42.3	+0.8
N35A				IAmb_Lg		23 12 06.4	
	comp=Z,98nm,0.7s						
BGNE	Belgrade	4.77	2		Pn	23 10 41.5	-0.5
BGNE				IAmb_Lg		23 12 03.9	
	comp=Z,56nm,0.8s						
T25A	Trinidad	4.83	278		Pb	23 10 56.9	+2.5
T25A				IAmb_Lg		23 12 13.9	
	comp=Z,56nm,0.9s						
P38A	Dawn	4.88	51	Pn	Pn	23 10 43.4	+0.1
MGMO	Mountain Grove	4.96	82		Pn	23 10 44.6	+0.1
MGMO				IAmb_Lg		23 12 17.6	
	comp=Z,61nm,0.8s						
X40A	Basin Creek Fa	5.03	114		Pn	23 10 46.2	+0.7
237A	Washetta, Mont	5.10	154	IAmb_Lg		23 12 22.2	
	comp=Z,52nm,0.9s						
FCAR	Ozark Folk Cen	5.14	96	Pn	Pn	23 10 47.6	+0.6
OGNE	Ogallala	5.15	328	IAmb_Lg		23 12 24.5	
	comp=Z,90nm,0.8s						
WHAR	Wooly Hollow	5.15	103		Pn	23 10 47.8	+0.7
R40A	Maddies Statio	5.17	69		Pn	23 10 47.3	0.0
R40A				IAmb_Lg		23 12 13.1	
	comp=Z,45nm,1.1s						
WLAR	White Oak Lake	5.25	122	IAmb_Lg		23 12 21.6	
	comp=Z,37nm,0.8s						
L34A	Svendsen Farm,	5.56	16	IAmb_Lg		23 12 26.3	
	comp=Z,50nm,0.7s						
SDCO	Great Sand Dun	5.76	283	Pn	Pn	23 10 56.2	+0.5
N38A	Joes South For	5.80	43		Pn	23 10 53.5	-2.6
N38A				IAmb_Lg		23 12 42.1	
	comp=Z,77nm,0.8s						
435B	Jarrell	5.88	173	IAmb_Lg		23 12 50.1	
	comp=Z,35nm,0.9s						
LCAR	Lake Charles	5.89	93	Pn	Pn	23 10 57.9	+0.6
T42A	Van Buren	5.89	84	IAmb_Lg		23 12 47.1	
	comp=Z,33nm,0.8s						
K31A	O'Neill	5.99	358	IAmb_Lg		23 12 37.7	
	comp=Z,33nm,0.8s						
JCT	Junction City	6.25	191		Pn	23 11 02.4	+0.2
JCT				IAmb_Lg		23 13 04.9	
	comp=Z,46nm,1.0s						
HBAR	Harrisburg	6.38	97	IAmb_Lg		23 13 02.2	
	comp=Z,71nm,0.7s						
ISCO	Idaho Springs	6.48	301	IAmb_Lg		23 13 09.1	
	comp=Z,38nm,0.9s						
SCIA	State Center	6.64	36	IAmb_Lg		23 13 18.0	
	comp=Z,38nm,0.8s						
SLM	Saint Louis	6.80	70	IAmb_Lg		23 13 17.7	
	comp=Z,46nm,0.7s						
PARMO	Parma	6.97	87	IAmb_Lg		23 13 19.8	
	comp=Z,54nm,0.7s						
N41A	Harden Midland	7.18	53	IAmb_Lg		23 13 25.0	
	comp=Z,54nm,1.0s						
MNTX	Cornudas Mount	7.58	232	IAmb_Lg		23 13 44.5	
	comp=Z,24nm,0.7s						
W45A	Hickory Valley	7.64	98	IAmb_Lg		23 13 43.7	
	comp=Z,58nm,0.8s						
L40A	Anamosa	7.78	44	IAmb_Lg		23 13 52.5	
	comp=Z,38nm,0.8s						
SUSD	Miller	7.81	357	IAmb_Lg		23 13 49.8	
	comp=Z,30nm,0.8s						
RWWY	Rawlins	8.49	309	IAmb_Lg		23 14 14.5	
	comp=Z,28nm,0.9s						
RSSD	Black Hills	8.62	332	IAmb_Lg		23 14 23.8	
	comp=Z,23nm,0.9s						
K22A	Casper	8.67	316	IAmb_Lg		23 14 23.6	
	comp=Z,24nm,0.7s						
JFWS	Jewell Farm	8.88	43	IAmb_Lg		23 14 25.3	
	comp=Z,32nm,1.0s						

IDC 20 23:11:37.6±8.9, **26°.40S**×**177°.66W**, **h63**^{km}±79^{km}, **mb3.2**/2, **mb1 3.5**/2, **mb1mx3.2**/34, **mbtmp3.5**/2, **ML4.6**/1, **MS3.3**/2, **Ms1 3.3**/2, **ms1mx3.0**/13, **Error ellipse: s-maj=65.8km s-min=52.5km az=26.0**, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.85	185	P	Pn	23 12 21.2	+0.6
	93nm,0.3s,baz=72,slow=23,SNR=3.4						
RAO				S	Sn	23 12 54.2	+0.5
	51nm,0.3s,baz=286,slow=23,SNR=7.0						
DZM	Mont Dzumac	15.13	283	LR	LR	23 19 53.3	
	comp=Z,132nm,19.1s,baz=96,slow=33						
DZM	Mont Dzumac	15.13	283	*e*LR	LR	23 18 49.0	
	comp=Z,302nm,25.7s						
TBI	Tubuai	25.74	89	*e*LR	LR	23 23 17.0	
	comp=Z,157nm,27.5s						
TBI	Tubuai	25.74	89	*e*T	T	23 43 07.7	
	13nm,0.3s						
PAE	Paea	27.40	77	*e*T	T	23 45 09.7	
	4.0nm,0.4s						
PPT2	Papeete2	27.43	77	*e*LR	LR	23 23 53.7	
	comp=Z,189nm,27.0s						
PPT2	Papeete2	27.43	77	*e*T	T	23 45 12.4	
	13nm,0.2s						
PPT	Papeete	27.44	77	LR	LR	23 25 00.0	
	comp=Z,55nm,20.5s,baz=179,slow=29						
VAH	Vaihoa	30.11	74	*e*T	T	23 48 31.6	
	6.4nm,0.3s						
ASAR	Alice Springs	43.77	263	P	P	23 19 35.7	-1.5
	0.7nm,1.0s,baz=97,slow=7.7,SNR=3.7						
WRA	Warramunga Arr	44.40	268	P	P	23 19 43.3	+1.1
	0.6nm,1.0s,baz=102,slow=8.2,SNR=1.7						
H03S2	Juan Fernandez	82.43	124	T	T	00 54 20.2	
	baz=242,slow=74,SNR=59						
H03S1	Juan Fernandez	82.44	124	T	T	00 54 20.8	
	baz=242,slow=74,SNR=78						
H03S3	Juan Fernandez	82.44	124	T	T	00 54 20.2	
	baz=242,slow=74,SNR=70						
H03N3	Juan Fernandez	82.60	124	T	T	00 54 29.3	
	baz=237,slow=22,SNR=15						
H03N2	Juan Fernandez	82.60	124	T	T	00 54 28.4	
	baz=237,slow=22,SNR=22						
H03N1	Juan Fernandez	82.61	124	T	T	00 54 28.4	
	baz=237,slow=22,SNR=31						
NOA	NORSAR Array B	144.85	353	PKP	PKPab	23 31 04.5	-1.5
	0.9nm,0.9s,baz=7.3,slow=2.4,SNR=3.3						
BRTR	Keskin Array B	150.76	305	PKPbc	PKiKP	23 31 23.9	+0.2
	0.8nm,0.9s,baz=94,slow=2.4,SNR=2.6						

*SSNC **20** 23:22:33.3±1.1, 19°.17N×76°.42W, h4^{km}±6^{km}, MD3.1, ML2.9, MW2.9*

*JSN **20** 23:22:36.8±0.4, 18°.86N×76°.50W, h0^{km}±179^{km}, MD3.6*

ISC 20 23:22:28.7±1.4, **19°.16N**±0°.04×**76°.42W**±0°.04, **h4**^{km}±12^{km}, **n11**, σ**1^{s}.15**/19, **Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMJ	Castle Mountai	1.02	177	*i* P	Pn	23 22 50.7	+0.8
LMGC	Las Mercedes	1.06	329	*e*P	Pn	23 22 50.5	+0.2
LMGC				*e*S	Sb	23 23 03.0	-0.8
LMGC				IAML		23 23 03.5	
	comp=N,350nm,0.2s						
LMGC				IAML		23 23 04.4	
	comp=E,404nm,0.1s						
GWJ	Greenwich	1.12	195	*i* P	Pn	23 22 52.0	+0.7
STH	Stony Hill	1.14	199	*i* P	Pn	23 22 52.4	+0.9
STH				*i* S	Sg	23 23 04.1	-1.2
HOJ	Hope	1.19	195	*i* P	Pn	23 22 53.4	+1.2
MTDJ	Mount Denham	1.40	229	*e*P	Pg	23 22 55.3	-0.3
MTDJ				*e*S	Sn	23 23 14.7	+0.4
GTBY	Guantanamo Bay	1.45	58	*e*P	Pg	23 22 57.1	+0.5
GTBY				*e*S	Sn	23 23 13.5	-1.9
GTMO	Guantanamo	1.52	53	*e*P	Pg	23 22 58.4	+0.5
GTMO				*e*S	Sb	23 23 17.0	-0.1
HLGC	Holguin	1.76	11	*e*P	Pg	23 23 02.6	+0.1
HLGC				*e*S	Sg	23 23 24.4	-0.8
HLGC				IAML		23 23 26.5	
	comp=N,160nm,0.5s						
HLGC				IAML		23 23 26.7	
	comp=E,170nm,0.5s						
MOAC	Moa	2.03	42	*e*P	Pg	23 23 08.1	+0.4
MOAC				*e*S	Sb	23 23 31.5	-0.4
MOAC				IAML		23 23 37.0	
	comp=E,42nm,0.3s						
MOAC				IAML		23 23 37.2	
	comp=N,56nm,0.6s						
MGV	Manicaragua	4.44	312	*e*P	Pn	23 23 39.6	+2.7
MGV				*e*S	Sn	23 24 27.8	-1.4
MGV				IAML		23 24 32.2	
	comp=N,2.7nm,0.3s						
MGV				IAML		23 24 33.5	
	comp=E,5.5nm,0.3s						

*IDC **20** 23:25:39.2±0.5, 11°.65S×165°.53E, h0^{km}, mb4.8/23, mb1 4.8/26, mb1mx4.7/37, mbtmp4.8/26, ML2.9/1, MS4.0/20, Ms1 4.0/20, ms1mx3.8/38, Error ellipse: s-maj=16.7km s-min=13.7km az=110.0*

*NEIC **20** 23:25:41.4±1.2, 11°.64S±0°.07×165°.51E±0°.08, h10^{km}±1^{km}, mb5.1/94, Error ellipse: s-maj=15.3km s-min=9.9km az=48.0*

*GCMT **20** 23:25:44.4±0.2, 11°.49S±0°.02×165°.37E±0°.01, h15^{km}, MW5.0/90, Moment Tensor Solution. s36,c39; s90,c120; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.04±.17; $M_{\theta\theta}$0.01±.11; $M_{\phi\phi}$3.03±.12; $M_{r\theta}$0.71±.27; $M_{\theta\phi}$-1.17±.08; $M_{\phi r}$-0.13±.21; Best double couple: $M_0$3.32500×10^{16} NP1:ϕ_s174.00000°,δ43.00000°,λ-72.00000°. NP2: ϕ_s329.00000°,δ49.00000°,λ-107.00000°. Principal axes: T 3.4500, Plg3.0000°, Azm71.0000°; N -0.2480, Plg13.0000°, Azm340.0000°; P -3.2000, Plg77.0000°, Azm175.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **20** 23:25:44.9±0.0, 10°.98S×165°.54E, h30^{km}, mB5.2/30, mb5.0/54, Ms4.8/17, Ms7 4.4/15*

*NOU **20** 23:25:45.0, 11°.67S×165°.62E, h31^{km}, mb4.9/46, Santa*

Cruz Islands

ISC 20 23:25:43.3±0.3, **11°.67S**±0°.05×**165°.51E**±0°.05, **h24^{km}**, **n304**, σ**1^{s}.27**/294, **mb5.0**/118, **MS4.2**/25, **1C-2D**, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	4.10	157		Pn	23 26 44.1	-0.4
SANVU				Sn	Sn	23 27 30.6	-1.1
SANVU	Saraoutou	4.10	157	P	Pn	23 26 44.3	-0.2
HNR	Honiara	5.91	292	Pn	Pn	23 27 08.8	-0.5
	54nm,0.3s,baz=174,slow=8.4,SNR=8.6						
HNR				Sn	Sn	23 28 13.6	-2.7
	41nm,0.3s,baz=218,slow=24,SNR=14						
HNR				LR	LR	23 29 23.3	
	comp=Z,3µm,21.8s,baz=130,slow=38						
HNR	Honiara	5.91	292		Pn	23 27 07.8	-1.5
HNR					Sn	23 28 14.1	-2.3
HNR	Honiara	5.91	292	P	Pn	23 27 10.0	+0.7
KOUNC	Koumac, New Ca	8.91	187	P	Pn	23 27 51.6	+1.0
LIFNC	LIFOU	9.21	170	Pn	Pn	23 27 53.1	-1.6
MARNC	Mare, Loyalty	10.05	166	Pn	Pn	23 28 03.8	-2.5
DZM	Mont Dzumac	10.38	175	Pn	Pn	23 28 11.6	+0.8
	7.9nm,0.3s,baz=77,slow=3.9,SNR=114						
DZM				Sn	Sn	23 30 02.9	-3.6
	1.3nm,0.3s,baz=359,slow=20,SNR=1.2						
DZM				LR	LR	23 31 27.2	
	comp=Z,415nm,18.7s,baz=46,slow=34						
DZM	Mont Dzumac	10.38	175	*e*Pn	Pn	23 28 11.6	+0.8
	63nm,0.5s						
DZM				*e*Sn	Sn	23 30 03.0	-3.6
	18nm,0.5s						
DZM				*e*LR	LR	23 30 34.6	
	comp=Z,641nm,20.7s						
DZM	Mont Dzumac	10.38	175	Pn	Pn	23 28 10.4	-0.5
DZM	Mont Dzumac	10.38	175	P	Pn	23 28 11.7	+0.8
NOUC	Port Laguerre	10.40	176	P	Pn	23 28 12.7	+1.7
YATNC	Mamie plateau,	10.42	173	P	Pn	23 28 11.2	0.0
ONTNC	Ouen Toro	10.62	175		Pn	23 28 14.6	+0.6
ONTNC	Ouen Toro	10.62	175	P	Pn	23 28 15.4	+1.4
OUENC	Ouen Island, N	10.77	173		Pn	23 28 16.2	+0.2
PINNC	Pines Island,	11.04	171		Pn	23 28 20.5	+0.8
MSVF	Nonsavu	13.54	118	LR	LR	23 33 32.0	
	comp=Z,1µm,19.1s,baz=335,slow=35						
MSVF	Nonsavu	13.54	118	Pn	Pn	23 28 54.0	0.0
PMG	Port Moresby	18.18	275	P	P	23 29 54.9	+0.5
	1.3nm,0.3s,baz=67,slow=7.7,SNR=6.4						
PMG				LR	LR	23 36 30.6	
	comp=Z,1µm,18.8s,baz=110,slow=36						
PMG	Port Moresby	18.18	275	P	Pn	23 29 53.6	-0.7
PMG	Port Moresby	18.18	275	P	P	23 29 57.2	+2.8
PMG	Port Moresby	18.18	275	P	P	23 29 57.8	+3.4
RK1H	Rockhampton Ha	18.44	229	P	Pn	23 30 00.4	+3.0
	20nm,1.0s						
EIDS	Eidsvold	19.29	223	P	Pn	23 30 07.5	-0.1
	baz=19,SNR=6.7						
EIDS	Eidsvold	19.29	223	P	P	23 30 05.3	-1.2
EIDS	Eidsvold	19.29	223	P	Pn	23 30 08.7	+1.1
	44nm,1.4s						
PATS	Pohnpei	19.73	338	P	Pn	23 30 12.4	-0.5
	baz=20,SNR=3.2						
PATS	Pohnpei	19.73	338	P	P	23 30 09.9	-1.4
CTA	Charters Tower	20.31	243	P	Pn	23 30 22.2	+2.4
	32nm,1.0s						
CTAO	Charters Tower	20.31	243	P	P	23 30 17.1	-0.6
CTAO	Charters Tower	20.31	243	P	Pn	23 30 18.9	-0.9
MANU	Manus Island	20.38	297	P	P	23 30 17.8	-0.7
MANU				IAmb	IAmb	23 30 19.9	
	comp=Z,106nm,1.0s						
MTSU	Mount Surprise	21.46	250	P	P	23 30 29.7	-0.4
	baz=22,SNR=19						
MTSU	Mount Surprise	21.46	250	P	P	23 30 31.3	+1.1
	comp=Z,46nm,1.0s						
RMQ	Roma	21.59	225	P	P	23 30 31.3	-0.2
	baz=22,SNR=11						
RMQ	Roma	21.59	225	P	P	23 30 32.7	+1.2
	comp=Z,37nm,0.9s						
COEN	Coen	21.90	262	P	P	23 30 34.3	-0.6
COEN	Coen	21.90	262	P	P	23 30 39.4	+4.5
	comp=Z,26nm,0.8s						
AFI	Afiamalu	22.26	98	LR	LR	23 37 46.8	
	comp=Z,323nm,21.4s,baz=291,slow=33						
ARMA	Armidale	22.67	213	P	P	23 30 44.1	+0.9
	baz=23,SNR=7.7						
ARMA	Armidale	22.67	213	P	P	23 30 42.9	-0.2
ARMA				IAmb	IAmb	23 30 46.3	
	comp=Z,90nm,1.2s						
ARMA	Armidale	22.67	213	P	P	23 30 44.9	+1.7
	comp=Z,68nm,1.2s						
KNTN	Kanton	24.23	70	P	P	23 30 57.0	-1.6
KNTN				IAmb	IAmb	23 31 23.2	
	comp=Z,79nm,1.2s						
QLP	Quilpie	24.93	230	P	P	23 31 05.9	+1.2
	comp=Z,20nm,2.0s						
JAY	Jayapura	26.22	288	P	P	23 31 10.3	-6.3
	comp=Z,11nm,0.5s,baz=79,slow=16,SNR=5.9						
QIS	Mount Isa	26.38	247	P	P	23 31 18.0	-0.1
	baz=26,SNR=11						
QIS	Mount Isa	26.38	247	P	P	23 31 18.2	+0.2
	comp=Z,16nm,1.1s						
CMSA	Cobar Meteorol	26.94	220	P	P	23 31 23.1	+0.2
	baz=27,SNR=8.8						
CMSA	Cobar Meteorol	26.94	220	P	P	23 31 25.5	+2.6
	comp=Z,27nm,1.1s						
INKA	Innaminka	28.18	232	P	P	23 31 34.7	+0.6
	comp=Z,45nm,1.2s						
URZ	Urewera	28.44	161	P	P	23 31 38.1	+1.9
	comp=Z,181nm,1.6s						
STKA	Stephens Creek	29.84	224	P	P	23 31 47.9	-0.9
	comp=Z,11nm,0.9s,baz=34,slow=9.0,SNR=13						
STKA	Stephens Creek	29.84	224	P	P	23 31 49.2	+0.4
	baz=30,SNR=8.4						
STKA	Stephens Creek	29.84	224	P	P	23 31 48.0	-0.8
STKA	Stephens Creek	29.84	224	P	P	23 31 49.2	+0.4
	comp=Z,3.4nm,1.1s						
THZ	Tophouse	30.67	169	P	P	23 31 55.8	-0.3
THZ				IAmb	IAmb	23 32 01.9	
	comp=Z,26nm,0.9s						
BHW	Baring Head	30.74	166	P	P	23 31 56.1	-0.5
MSWZ	Moikau Station	30.84	166	P	P	23 31 57.4	-0.1
WR0	Warramunga Arr	30.88	251	P	P	23 31 57.1	-1.0
WR0				IAmb	IAmb	23 31 58.5	
	comp=Z,27nm,1.1s						
WB0	Warramunga Arr	30.98	251	P	P	23 31 58.1	-0.9
WRAB	Tennant Creek	31.05	251	P	P	23 31 58.6	-1.0
WRAB				IAmb	IAmb	23 31 60.0	
	comp=Z,42nm,1.1s						
WRAB	Tennant Creek	31.05	251	P	P	23 32 00.1	+0.5
WB2	Warramunga Arr	31.05	251	P	P	23 31 58.6	-1.0
WRA	Warramunga Arr	31.06	251	P	P	23 31 58.7	-1.0
	comp=Z,25nm,0.9s,baz=79,slow=9.2,SNR=67						
WRA				PcP	PcP	23 34 55.6	+0.3
	comp=Z,2.1nm,0.8s,baz=84,slow=3.0,SNR=4.9						
WRA				LR	LR	23 43 10.0	
	comp=Z,218nm,21.4s,baz=75,slow=34						
OOD	Oodnadatta	32.21	236	P	P	23 32 10.2	+0.5
	comp=Z,31nm,1.1s						
KDU	Kakadu	32.30	265	P	P	23 32 09.4	-1.2
	baz=32,SNR=5.7						
KDU	Kakadu	32.30	265	P	P	23 32 12.2	+1.5
	comp=Z,16nm,1.2s						
AS31	Alice Springs	32.31	244	P	P	23 32 09.2	-1.6
ASAR	Alice Springs	32.31	244	P	P	23 32 09.3	-1.4
	comp=Z,11nm,1.0s,baz=75,slow=9.4,SNR=57						
ASAR				PcP	PcP	23 34 58.5	-0.1
	comp=Z,2.7nm,1.0s,baz=75,slow=3.5,SNR=6.7						
ASAR				LR	LR	23 44 12.9	
	comp=Z,495nm,19.3s,baz=66,slow=34						
ASAR	Alice Springs	32.31	244	P	P	23 32 08.2	-2.6
HTT	Hallett	32.57	224	P	P	23 32 13.1	+0.2
	baz=33,SNR=4.6						
HTT	Hallett	32.57	224	P	P	23 32 13.8	+0.9
	comp=Z,33nm,2.2s						
MTN	Manton Dam	33.60	264	P	P	23 32 20.6	-1.4
MTN				IAmb	IAmb	23 32 28.4	
	comp=Z,18nm,1.1s						
MULG	Mulgathing	34.55	233	P	P	23 32 30.6	+0.5
	comp=Z,28nm,1.4s						
KNRA	Kununurra	35.90	259	P	P	23 32 41.2	-0.8
	baz=36,SNR=9.2						
KNRA	Kununurra	35.90	259	P	P	23 32 41.1	-0.8
KNRA	Kununurra	35.90	259	P	P	23 32 41.5	-0.4
	comp=Z,58nm,1.3s						
WRKA	Warakurna	37.61	244	P	P	23 32 55.3	-1.1
	baz=38,SNR=9.3						
WRKA	Warakurna	37.61	244	P	P	23 32 55.8	-0.6
	comp=Z,27nm,2.1s						
FITZ	Fitzroy Crossi	39.00	256	P	P	23 33 07.2	-0.9
	comp=Z,28nm,0.8s,baz=84,slow=7.4,SNR=64						
FITZ				LR	LR	23 48 48.0	
	comp=Z,501nm,18.4s,baz=66,slow=36						
FITZ	Fitzroy Crossi	39.00	256	P	P	23 33 07.4	-0.8
	baz=39,SNR=29						
LBMI	Labuha	39.29	283	P	P	23 33 12.4	+1.8
	comp=Z,1µmcomp=Z,20nm,0.8s						
FORT	Forrest	39.50	235	P	P	23 33 11.5	-0.7
FORT				IAmb	IAmb	23 33 12.8	
	comp=Z,58nm,1.1s						
SANI	Sanana	40.34	281	P	P	23 33 19.8	+0.5
	comp=Z,14nm,1.0s						
SANI	Sanana	40.34	281	P	P	23 33 21.2	+1.9
BATI	Baumata	41.09	268	P	P	23 33 25.3	-0.3
	comp=Z,17nm,0.5s,baz=117,slow=18,SNR=5.2						
BATI				LR	LR	23 51 13.9	
	comp=Z,233nm,18.2s,baz=123,slow=37						
MMRI	Maumere	42.67	270	P	P	23 33 39.5	+0.9
MMRI	Maumere	42.67	270	P	P	23 33 37.6	-0.9
MMRI				IAmb	IAmb	23 33 39.2	
	comp=Z,46nm,1.0s						
MMRI	Maumere	42.67	270	P	P	23 33 39.4	+0.9
EDFI	Ende, Flores	43.20	270	P	P	23 33 45.2	+2.3
	comp=Z,5.7nm,1.3s						
LUWI	Luwuk	43.70	281	P	P	23 33 45.1	-1.8
LUWI				IAmb	IAmb	23 33 59.8	
	comp=Z,33nm,1.0s						
PPT	Papeete	43.77	103	LR	LR	23 48 25.1	
	comp=Z,129nm,20.5s,baz=340,slow=31						
PPT2	Papeete2	43.77	103	*e*S	S	23 40 26.4	+9.4
	comp=Z,134nm,27.5s						
PPT2				*e*LQ	LQ	23 44 19.0	
	comp=Z,588nm,26.0s						
PPT2				*e*LR	LR	23 46 08.8	
	comp=Z,853nm,32.0s						
GTOI	Gorontalo	43.95	283	P	P	23 33 49.9	+1.1
	comp=Z,9.9nm,0.8s						
TBI	Tubuai	44.31	111	*e*LQ	LQ	23 44 32.5	
	comp=Z,411nm,29.8s						
TBI				*e*LR	LR	23 46 26.1	
	comp=Z,621nm,31.0s						
PSA00	Pilbara Seismi	44.71	251	P	P	23 33 54.4	-0.5
PSA00				IAmb	IAmb	23 34 07.5	
	comp=Z,22nm,1.4s						
PSA00	Pilbara Seismi	44.71	251	P	P	23 33 53.9	-1.0
PSA00				IAmb	IAmb	23 34 07.4	
	comp=Z,44nm,1.4s						
BNSI	Bone	45.49	275	P	P	23 34 02.1	+1.0
	comp=Z,2µmcomp=Z,62nm,0.8s						
KAPI	Kappang	45.71	274	P	P	23 34 02.9	0.0
	comp=Z,9.8nm,0.7s,baz=109,slow=8.3,SNR=4.9						
KAPI				LR	LR	23 56 01.5	
	comp=Z,38nm,18.1s,baz=120,slow=40						
KAPI	Kappang	45.71	274	P	P	23 34 02.5	-0.4
KAPI				IAmb	IAmb	23 34 04.0	
	comp=Z,15nm,0.8s						
TOLI2	Tolitoli	46.22	283	P	P	23 34 04.1	-2.8
MEEK	Meekatharra	46.47	244	P	P	23 34 08.0	-0.8
	baz=46,SNR=9.8						
MEEK	Meekatharra	46.47	244	P	P	23 34 09.0	+0.2
	comp=Z,53nm,1.2s						
MPSI	Mapaga	46.84	282	P	P	23 34 11.6	-0.2
	comp=Z,18nm,0.7s						
TWSI	Taliwang, Sumb	47.91	269	P	P	23 34 22.4	+2.3
	comp=Z,19nm,1.2s						
KLBR	Kellerberrin	48.19	238	P	P	23 34 21.4	-0.6
	baz=48,SNR=7.4						
KLBR	Kellerberrin	48.19	238	P	P	23 34 22.2	+0.2
MORW	Morawa	49.13	242	P	P	23 34 29.0	-0.3
	baz=49,SNR=7.3						
MORW	Morawa	49.13	242	P	P	23 34 28.9	-0.3
MORW	Morawa	49.13	242	P	P	23 34 29.8	+0.5
MUN	Mundaring	49.55	238	P	P	23 34 32.5	0.0
	baz=50,SNR=3.5						
BBKI	Banjar Baru	50.82	275	P	P	23 34 43.5	+1.1
KKM	Kota Kinabalu	52.10	287	P	P	23 34 51.2	-0.8
JOW	Kunigami	52.65	317	P	P	23 34 56.5	+0.7
	comp=Z,38nm,1.1s,baz=153,slow=13,SNR=5.7						
JOW	Kunigami	52.65	317	P	P	23 34 55.5	-0.3
JOW				IAmb	IAmb	23 34 57.4	
	comp=Z,35nm,0.9s						
PCJI	Pacitan	53.57	268	P	P	23 35 03.4	+0.6
	comp=Z,184nm,0.9s						
JGF	Kuroka	54.03	332	P	P	23 35 05.5	-0.3
JGF				IAmb	IAmb	23 35 06.9	
	comp=Z,11nm,0.7s						
JMN	Monobe	54.27	327	P	P	23 35 06.8	-0.7
MJAR	Matsushiro Arr	54.42	333	P	P	23 35 07.2	-1.4
	comp=Z,13nm,0.8s,baz=162,slow=8.9,SNR=10						
MJAR	Matsushiro Arr	54.42	333	P	P	23 35 07.5	-1.1
MAJO	Matsushiro	54.42	333	P	P	23 35 07.2	-1.4
MAJO				IAmb	IAmb	23 35 08.4	
	comp=Z,17nm,0.8s						
MAJO	Matsushiro	54.42	333	P	P	23 35 08.3	-0.3
MAT	Matsushiro	54.42	333	P	P	23 35 07.1	-1.5
SMRI	Semarang	54.47	270	P	P	23 35 08.9	-0.5
JSU	Suzuyama	54.52	323	P	P	23 35 09.1	-0.4
JSU				IAmb	IAmb	23 35 10.4	
	comp=Z,32nm,1.0s						
SBUM	Sibu	54.80	281	P	P	23 35 10.8	-1.0
YULB	Yu-li	55.55	309	P	P	23 35 16.4	-0.6
JHS	Saijyo	55.65	328	P	P	23 35 16.4	-1.1
NACB	Ninganchiao	55.76	310	P	P	23 35 16.2	-2.3
NACB				IAmb	IAmb	23 35 19.8	
	comp=Z,20nm,0.7s						
TPUB	Ta-pu	56.01	309	P	P	23 35 19.6	-0.7
TPUB	Ta-pu	56.01	309	P	P	23 35 21.1	+0.8
SSLB	Suanglung	56.03	309	P	P	23 35 18.8	-1.7
KSM	Kuching	56.38	280	P	P	23 35 22.6	-0.6
KSM				IAmb	IAmb	23 35 24.0	
	comp=Z,31nm,1.1s						
KSM	Kuching	56.38	280	P	P	23 35 24.0	+0.8
LEM	Lembang	57.27	269	P	P	23 35 29.6	-0.1
	baz=153,slow=16						
LEM				LR	LR	00 02 17.9	
	comp=Z,103nm,18.4s,baz=217,slow=38						
TPI	Tanjungpandan	57.98	274	P	P	23 35 36.7	+2.2
	comp=Z,13nm,1.4s						
DBJI	Dramaga	58.16	269	P	P	23 35 38.5	+2.7
	comp=Z,10µmcomp=Z,47nm,0.4s						
KSRS	Korea Array	60.26	326	P	P	23 35 49.4	-0.3
	comp=Z,5.1nm,0.8s,baz=136,slow=7.5,SNR=16						
KSRS				LR	LR	00 02 38.3	
	comp=Z,50nm,18.0s,baz=149,slow=37						
KSAR	Wonju Array Be	60.27	326	P	P	23 35 49.0	-0.9
MDSI	Maura Dua	61.05	271	P	P	23 35 56.6	+0.9
	comp=Z,7.3nm,1.5s						
NJ2	Nanjing	62.30	316	*e*P	P	23 36 04.9	+1.2
NJ2				pmax	pmax		
	comp=Z,18nm,0.6s						
USA0B	Ussuriysk Arra	63.40	334	P	P	23 36 10.6	-0.2
USRK	Ussuriysk Ar.	63.40	334	P	P	23 36 10.7	-0.1
	comp=Z,8.9nm,0.7s,baz=147,slow=6.6,SNR=13						
USRK	Ussuriysk Ar.	63.40	334	P	P	23 36 10.5	-0.3
MDJ	Mudanjiang	64.79	332	P	P	23 36 20.3	+0.4
MDJ				pmax	pmax		
	comp=Z,21nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,130nm,3.6s						
PETK	Petropavlovsk-	64.86	355	P	P	23 36 19.9	-0.3
	comp=Z,3.1nm,0.8s,baz=161,slow=9.2,SNR=3.8						
UBPT	Khong Chiam	65.20	293	P	P	23 36 22.9	-0.2
UBPT				IAmb	IAmb	23 36 38.1	
	comp=Z,28nm,1.3s						
VNDA	Vanda	65.87	181	P	P	23 36 26.7	+0.2
	comp=Z,1.6nm,0.8s,baz=356,slow=8.6,SNR=8.6						
VNDA				LR	LR	00 02 22.6	
	comp=Z,156nm,18.7s,baz=334,slow=33						
VNDA	Vanda	65.87	181	P	P	23 36 27.3	+0.8
IPM	Ipoh	66.11	280	P	P	23 36 28.9	-0.3
IPM	Ipoh	66.11	280	P	P	23 36 30.4	+1.3
CN2	Changchun	66.16	329	*e*P	P	23 36 28.0	-0.8
CN2				*e*pP	sP	23 36 38.5	+1.8
CN2				*e*sP	pwP	23 36 42.5	+0.2
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
CN2				LR	LR		
	comp=Z,110nm,17.0s						
CN2				LR	LR		
	comp=Z,170nm,17.0s						
CN2				LR	LR		
	comp=Z,90nm,18.0s						
MNSI	Mandailing Nat	66.63	276	P	P	23 36 31.9	-0.6
	comp=Z,38nm,1.0s						
KULM	Kulim	66.67	281	P	P	23 36 31.9	-0.8
PSI	Prapat	67.73	278	LR	LR	00 09 50.7	
	comp=Z,39nm,18.3s,baz=128,slow=39						
ENH	Enshi	68.11	309	P	P	23 36 40.7	-0.8
GSI	Gunungsitoli	68.70	276	P	P	23 36 46.0	+0.5
	comp=Z,2µmcomp=Z,54nm,1.0s						
GSI	Gunungsitoli	68.70	276	P	P	23 36 45.1	-0.4
GSI	Gunungsitoli	68.70	276	P	P	23 36 49.2	+3.7
SLVN	Son La	68.80	298	P	P	23 36 45.8	-0.3
SLVN				IAmb	IAmb	23 36 48.1	
	comp=Z,23nm,1.3s						
XAN	Xi'an	70.37	313	P	P	23 36 55.5	0.0
XAN				pP	pP	23 37 01.8	+0.5
XAN				pmax	pmax		
	comp=Z,22nm,0.9s						
XAN				pmax	pmax		
	comp=Z,250nm,4.8s						
XAN				LR	LR		
	comp=Z,250nm,16.5s						
XAN				LR	LR		
	comp=Z,210nm,17.7s						
MLSI	Meulaboh, Aceh	70.52	279	P	P	23 36 57.8	+1.0
	comp=Z,30nm,1.0s						
KMI	Kunming	71.25	302	⇓P	P	23 37 02.5	+1.2
KMI				sP	pwP	23 37 14.0	-1.0
KMI				PP	PP	23 39 44.0	+4.4
KMI				S	S	23 46 16.1	-1.7
KMI				pmax	pmax		
	comp=Z,29nm,1.3s						
KMI				pmax	pmax		
	comp=Z,120nm,3.5s						
KMI				LR	LR		
	comp=Z,160nm,15.1s						
KMI				LR	LR		
	comp=Z,120nm,18.5s						
KMI				LR	LR		
	comp=Z,110nm,20.2s						
CMAR	Chiang Mai Arr	72.15	294	P	P	23 37 07.5	+0.9
	comp=Z,9.5nm,0.7s,baz=122,slow=4.5,SNR=36						
CMAR				LR	LR	00 06 58.0	
	comp=Z,29nm,21.8s,baz=122,slow=34						
HHC	Hu-ho-hao-te	72.16	320	*e*P	P	23 37 07.3	+1.0
HHC				pmax	pmax		
	comp=Z,16nm,1.1s						
HHC				pmax	pmax		
	comp=Z,120nm,6.6s						
CHTO	Chiang Mai	72.27	294	P	P	23 37 07.2	0.0
CHTO				IAmb	IAmb	23 37 08.9	
	comp=Z,32nm,1.4s						
CHTO	Chiang Mai	72.27	294	P	P	23 37 09.8	+2.6
CD2	Chengdu	72.80	308	P	P	23 37 11.1	+0.9
CD2				pmax	pmax		
	comp=Z,40nm,0.5s						
LZH	Lanzhou	75.01	312	*e*P	P	23 37 24.5	+1.3
LZH				pP	sP	23 37 30.9	-0.3
LZH				sP	pwP	23 37 33.9	-2.9
LZH				pmax	pmax		
	comp=Z,23nm,1.1s						
LZH				pmax	pmax		
	comp=Z,170nm,5.4s						
LZH				LR	LR		
	comp=Z,220nm,14.1s						
LZH				LR	LR		
	comp=Z,220nm,14.6s						
LZH				LR	LR		
	comp=Z,270nm,15.1s						
QSPA	South Pole Qui	78.34	180	P	P	23 37 41.3	-0.1
	comp=Z,8.3nm,0.9s,baz=345,slow=3.0,SNR=15						
QSPA	South Pole Qui	78.34	180	P	P	23 37 41.5	0.0
QSPA				IAmb	IAmb	23 37 59.1	
	comp=Z,19nm,0.9s						
ULN	Ulaanbaatar	78.67	324	P	P	23 37 43.5	-0.1
ULN				IAmb	IAmb	23 37 45.1	
	comp=Z,16nm,0.9s						
SONM	Songino Array	79.03	324	P	P	23 37 45.5	0.0
	comp=Z,3.9nm,0.8s,baz=140,slow=6.4,SNR=30						
SONM	Songino Array	79.03	324	P	P	23 37 45.1	-0.4
GTA	Gaotai	79.32	314	⇓P	P	23 37 48.0	+0.7
GTA				pP	PcP	23 37 57.4	+1.9
GTA				sP	pwP	23 38 01.8	+0.8
GTA				pmax	pmax		
	comp=Z,14nm,1.2s						
BILL	Bilibino	79.50	0	P	P	23 37 46.7	-0.8
M19K	Big River Lodg	79.76	18	P	P	23 37 49.6	+0.6
	baz=220						
L19K	White Mountain	79.84	18	P	P	23 37 49.8	+0.3
	baz=219						
TTA	Tatalina	80.08	17	P	P	23 37 51.1	+0.2
	baz=218						
L20K	Farewell, AK	80.36	18	P	P	23 37 54.7	+2.5
	baz=220						
SHL	Shillong	80.61	299	P	P	23 37 54.8	+0.2
SHL				IAmb	IAmb	23 37 56.0	
	comp=Z,24nm,1.2s						
PWL	Port Wells	80.97	21	P	P	23 37 56.8	+1.2
	baz=226						
M24K	Tolsona, Glenn	82.58	21	P	P	23 38 04.8	+0.7
	baz=228						
RND	Reindeer	82.60	19	P	P	23 38 04.5	+0.3
RND				IAmb	IAmb	23 38 18.7	
	comp=Z,24nm,1.2s						
MCK	McKinley	82.80	19	P	P	23 38 05.8	+0.7
MCK				IAmb	IAmb	23 38 19.6	
	comp=Z,14nm,1.0s						
N25K	Chitina, Valde	82.81	22	P	P	23 38 05.3	-0.1
	baz=229						
H21K	Melozitna Rive	83.09	16	P	P	23 38 06.3	-0.3
	baz=221						
NEA2	Nenana	83.38	18	P	P	23 38 08.5	+0.5
NEA2				IAmb	IAmb	23 38 21.0	
	comp=Z,9.5nm,1.2s						
WRH	Wood River Hil	83.59	18	IAmb	IAmb	23 38 22.1	
	comp=Z,8.8nm,0.8s						
CCB	Clear Creek Bu	83.80	18	IAmb	IAmb	23 38 25.3	
	comp=Z,9.2nm,1.2s						
O02D	Mt. Diablo Mer	83.88	47	P	P	23 38 11.3	-0.1
	baz=249						
MDM	Murphy Dome	83.89	18	IAmb	IAmb	23 38 23.1	
	comp=Z,8.2nm,1.0s						
M26K	Nabesna, AK	83.90	22	P	P	23 38 10.1	-0.8
	baz=230						
HDA	Harding Lake	83.90	19	P	P	23 38 10.4	-0.4
	baz=227						
MAW	Mawson	84.06	202	P	P	23 38 12.1	+0.4
	comp=Z,5.5nm,1.0s,baz=134,slow=4.6,SNR=6.8						
MAW				LR	LR	00 09 20.6	
	comp=Z,42nm,21.7s,baz=62,slow=31						
MAW	Mawson	84.06	202	P	P	23 38 12.6	+1.0
	baz=84,SNR=5.2						
MAW	Mawson	84.06	202	P	P	23 38 11.4	-0.2
RIDG	Independent Ri	84.13	20	P	P	23 38 11.5	-0.5
	baz=229						
IL31		84.17	19	P	P	23 38 11.0	-1.1
IL31				IAmb	IAmb	23 38 26.0	
	comp=Z,22nm,1.5s						
ILAR	Eielson Array	84.17	19	P	P	23 38 11.7	-0.5
	comp=Z,3.0nm,0.6s,baz=238,slow=5.2,SNR=56						
L26K	Log Cabin Wild	84.18	21	P	P	23 38 12.3	0.0
POKR	Poker Plat Res	84.24	18	P	P	23 38 10.4	-2.1
	baz=226						
M02C	Callahan	84.27	46	P	P	23 38 13.3	0.0
	baz=249						
YBH	Yreka Blue Hor	84.49	46	P	P	23 38 14.3	-0.1
YBH				IAmb	IAmb	23 38 29.1	
	comp=Z,13nm,1.2s						
HOLB	Holberg	84.54	36	P	P	23 38 15.2	+0.8
HOLB				IAmb	IAmb	23 38 18.3	
	comp=Z,12nm,0.6s						
J25K	Salcha River,	84.54	19	P	P	23 38 14.1	0.0
	baz=228						
SCRK	Sand Creek	84.58	20	P	P	23 38 14.4	0.0
	baz=229						
SCRK	Sand Creek	84.58	20	P	P	23 38 14.3	-0.1
TAPN	Taplejung	84.71	299	*e*P	P	23 38 16.1	0.0
	comp=Z,20nm,1.0s						
L27K	Beaver Creek,	84.74	21	P	P	23 38 16.8	+1.7
L27K				IAmb	IAmb	23 38 28.6	
	comp=Z,13nm,1.1s						
ODAN	Odare	84.85	299	*e*P	P	23 38 16.8	+0.1
	comp=Z,39nm,0.7s						
I04A	Tendick Farm,	85.43	44	P	P	23 38 18.4	-0.7
	baz=249						
RAMN	Ramite	85.55	299	*e*P	P	23 38 20.0	-0.3
	comp=Z,4.6nm,0.5s						
EDW2	Edwards Air Fo	85.77	53	P	P	23 38 20.6	-0.3
	baz=253						

EGAK	Eagle	86.04	20	P	P	23 38 21.9	+0.4
	baz=232						
EGAK	Eagle	86.04	20	P	P	23 38 21.8	+0.4
EGAK				IAmb	IAmb	23 38 36.3	
	comp=Z,19nm,0.8s						
J05D	Fort Rock, OR	86.05	45	P	P	23 38 22.0	-0.2
	baz=250						
JIRN	Jiri	86.09	299	eP	P	23 38 23.1	0.0
TOLK	Toolik Lake Re	86.15	15	P	P	23 38 23.0	+1.0
	baz=224						
CWC	Cottonwood Cre	86.17	52	P	P	23 38 22.2	-0.8
	baz=253						
LRMC	Laurel Mtn Rad	86.19	53	P	P	23 38 22.7	-0.4
	baz=253						
DAWY	Dawson	86.22	21	P	P	23 38 22.9	+0.4
	baz=234						
DAWY	Dawson	86.22	21	P	P	23 38 22.9	+0.4
DAWY				IAmb	IAmb	23 38 36.8	
	comp=Z,9.8nm,1.1s						
GUN	Gumba	86.42	299	eP	P	23 38 24.6	-0.1
	comp=Z,20nm,0.9s						
PINE	Pine Mountain	86.42	44	IAmb	IAmb	23 38 50.8	
	comp=Z,10nm,1.2s						
MPMC	Manual Prospec	86.51	52	P	P	23 38 24.2	-0.6
	baz=253						
NVAR	Mina Array Bea	86.60	50	P	P	23 38 24.4	-0.7
	comp=Z,3.1nm,1.0s,baz=232,slow=7.6,SNR=12						
NVAR				LR	LR	00 08 50.1	
	comp=Z,146nm,21.9s,baz=274,slow=30						
TPFO	Pinon Flats	86.63	55	P	P	23 38 25.1	-0.2
	baz=254						
TIXI	Tiksi	86.66	349	P	P	23 38 24.0	-0.4
BMAR	Burnt Mountain	86.67	17	P	P	23 38 25.2	+0.6
NV11	Mina Array Sit	86.71	50	P	P	23 38 24.2	-1.4
NV11				IAmb	IAmb	23 38 38.5	
	comp=Z,9.9nm,1.1s						
PKI	Pulchoki	86.74	299	eP	P	23 38 25.6	-0.6
	comp=Z,28nm,1.0s						
PKIN	Phulchoki	86.75	299	eP	P	23 38 25.7	-0.5
	comp=Z,26nm,1.1s						
KKN	Kakani	86.90	299	eP	P	23 38 26.6	-0.3
	comp=Z,28nm,1.1s						
DMN	Daman	87.01	299	eP	P	23 38 27.0	-0.4
	comp=Z,61nm,1.2s						
BELC	Belle Mtn. Jos	87.10	55	P	P	23 38 27.3	-0.3
	baz=254						
I29M	Ogilvie Camp,	87.36	20	P	P	23 38 28.2	+0.2
	baz=234						
BC3	Big Chuckawall	87.44	55	P	P	23 38 29.4	+0.2
	baz=254						
GKN	Gorkha	87.51	299	eP	P	23 38 28.9	-0.8
	comp=Z,27nm,0.9s						
GMRC	Granite Mounta	87.59	54	P	P	23 38 29.3	-0.6
	baz=254						
IRM	Iron Mountain	87.83	55	P	P	23 38 30.6	-0.3
	baz=254						
J08A	Circle Bar Ran	87.98	45	IAmb	IAmb	23 38 33.2	
	comp=Z,7.5nm,1.1s						
G08A	Pilot Rock	88.25	43	P	P	23 38 32.4	-0.5
KOLN	Koldanda	88.34	299	eP	P	23 38 32.5	-1.3
	comp=Z,18nm,0.9s						
DANN	Dangsing	88.34	299	eP	P	23 38 33.0	-0.9
	comp=Z,25nm,0.8s						
EPYK	Eagle Plains	88.47	20	P	P	23 38 35.9	+2.6
	baz=236						
R11A	Troy Canyon, C	88.62	51	P	P	23 38 34.5	-0.3
	baz=254						
R11A	Troy Canyon, C	88.62	51	IAmb	IAmb	23 38 48.5	
	comp=Z,9.8nm,1.4s						
PDMCI	Parker Dam,Lak	88.67	55	P	P	23 38 34.7	-0.2
	baz=255						
PYUN	Piuthan	88.94	299	eP	P	23 38 35.5	-1.1
	comp=Z,28nm,0.9s						
214A	Organ Pipe Nat	89.16	57	P	P	23 38 37.8	+0.5
	baz=256						
WMQ	Urumqi	89.37	315	eP	P	23 38 38.3	+0.2
WMQ				pP	pP	23 38 43.8	-0.2
WMQ				sP	pwP	23 38 52.1	+0.4
WMQ				pmax	pmax		
	comp=Z,11nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,66nm,4.9s						
WMQ				LR	LR		
	comp=Z,250nm,19.7s						
WMQ				LR	LR		
	comp=Z,230nm,15.7s						
PSUT	Pine Spring	89.98	51	P	P	23 38 40.0	-1.2
U15A	North Rim	90.66	53	P	P	23 38 44.0	-0.5
U15A				IAmb	IAmb	23 38 58.2	
	comp=Z,7.7nm,0.9s						
HLID	Hailey	90.87	46	P	P	23 38 45.4	+0.2
	baz=255						
HLID	Hailey	90.87	46	P	P	23 38 45.3	0.0
TUC	Tucson	90.91	57	P	P	23 38 45.9	+0.4
	baz=257						
SYO	Syowa Base	91.12	197	⇑eP	P	23 38 44.0	-1.7
MTPU	Mount Pierson	91.13	52	P	P	23 38 45.8	-1.0
MTPU				IAmb	IAmb	23 39 00.8	
	comp=Z,6.3nm,0.9s						
WUAZ	Wupatki	91.17	54	P	P	23 38 46.7	-0.1
	baz=257						
DUG	Dugway, Tooele	91.17	49	P	P	23 38 46.3	-0.4
	baz=256						
HVU	Hansel Valley	91.59	48	P	P	23 38 47.4	-1.2
HVU				IAmb	IAmb	23 39 02.0	
	comp=Z,7.5nm,1.0s						
MK31	Makanchi Array	93.82	317	IAmb	IAmb	23 38 59.4	
	comp=Z,8.6nm,0.8s						
MKAR	Makanchi Array	93.82	317	P	P	23 38 58.3	-0.3
	comp=Z,9.6nm,0.7s,baz=94,slow=6.5,SNR=86						
ZAA0	Zalesovo Array	93.92	324	IAmb	IAmb	23 38 58.6	
	comp=Z,9.2nm,0.9s						
ZALV	Zalesovo Beam	93.92	324	P	P	23 38 57.0	-1.8
	comp=Z,6.7nm,0.8s,baz=108,slow=4.4,SNR=30						
MAKZ	Makanchi	94.03	317	P	P	23 38 59.2	-0.3
MAKZ				IAmb	IAmb	23 39 00.3	
	comp=Z,12nm,1.0s						
PDAR	Pinedale Array	94.14	47	P	P	23 38 59.7	-0.7
	comp=Z,0.8nm,0.8s,baz=262,slow=4.5,SNR=5.0						
A36M	Sachs Harbour	94.76	17	P	P	23 39 02.2	-0.1
A36M				IAmb	IAmb	23 39 15.2	
	comp=Z,9.6nm,0.9s						
TXAR	Lajitas Array	96.33	61	P	P	23 39 10.3	-0.3
	comp=Z,0.3nm,0.8s,baz=258,slow=2.7,SNR=2.3						
TXAR				LR	LR	00 14 52.3	
	comp=Z,110nm,21.0s,baz=0.0,slow=31						
SNAA	Sanae	96.48	184	P	P	23 39 11.5	+1.1
NRIK	Noril'sk	96.62	340	P	P	23 39 09.5	-1.3
	comp=Z,3.5nm,0.7s,baz=104,slow=5.5,SNR=5.4						
VNA2	Neumayer--Watz	97.46	182	P	Pdif	23 39 15.9	+1.1
USHA	Ushuaia	99.77	152	LR	LR	00 17 08.2	
	comp=Z,30nm,18.1s,baz=231,slow=31						
ARCES	ARCESS Array B	116.88	345	PKP	PKPdf	23 44 25.0	-0.3
	comp=Z,1.9nm,0.6s,baz=56,slow=2.3,SNR=6.3						
FINES	FINESS Array B	122.26	338	PKP	PKPdf	23 44 35.4	-0.4
	comp=Z,1.8nm,0.7s,baz=72,slow=4.5,SNR=1.7						
AKASG	Malin Array Be	127.25	326	PKP	PKPdf	23 44 45.6	-0.1
	comp=Z,0.2nm,0.3s,baz=57,slow=1.8,SNR=1.5						
SAML	Samuel	127.43	111		PKPdf	23 44 47.2	0.0
OKC	Ostrava-Krasne	133.41	331	AMS	AMS	23 44 50.0	
	comp=Z,2µm,10.5s						
CLL	Collm	134.58	336	e(PKPdf)	PKiKP	23 45 04.0	+3.0
TREC	Trest	135.03	332	AMS	AMS	23 45 00.0	
	comp=Z,3µm,13.5s						
EKA	Eskdalemuir Ar	135.54	351	PKP	PKiKP	23 45 02.9	+0.1
	comp=Z,2.8nm,0.8s,baz=10,slow=4.4,SNR=2.3						
KEST	Kesra	147.77	322	PKPbc	PKPbc	23 45 26.6	-0.1
	comp=Z,8.3nm,0.9s,baz=18,slow=6.4,SNR=3.7						
POLO	Lamas de Olo	149.83	350	ePKPbc	PKiKP	23 45 32.4	-0.4
MVO	Moncorvo	149.90	349	ePKPdf	PKPdf	23 45 29.1	+2.0
PVRL	Vila Real	149.91	350	ePKPbc	PKPbc	23 45 32.1	+0.2
PVIS	Viseu	150.49	350	ePKPab	PKPab	23 45 39.9	+0.1
ESDC	Sonseca Array	150.59	343	PKPbc	PKiKP	23 45 34.0	-0.3
	comp=Z,3.2nm,0.8s,baz=38,slow=2.5,SNR=13						
MTE	Manteigas	150.73	349	ePKPbc	PKPbc	23 45 34.1	+0.2
PMRV	Marv??o	151.64	348	ePKPbc	PKiKP	23 45 36.5	0.0
PMTG	Montargil	152.15	350	ePKPbc	PKPbc	23 45 37.1	0.0
PMTG	Montargil	152.15	350	ePKPab	PKPab	23 45 48.3	+1.6
PBAR	Barrancos	152.78	347	ePKPdf	PKPdf	23 45 32.2	+0.7
PBAR	Barrancos	152.78	347	ePKPab	PKPab	23 45 50.4	+1.1
PBEJ	Beja	153.09	348	ePKPbc	PKiKP	23 45 42.9	+3.4
PBEJ	Beja	153.09	348	ePKPab	PKPab	23 45 52.1	+1.4
PNCL	Nicolau / Gran	153.13	350	ePKPab	PKPab	23 45 51.9	+1.1
MESJ	Messejana	153.34	349	ePKPbc	PKPbc	23 45 38.0	-1.8
MESJ	Messejana	153.34	349	ePKPab	PKPab	23 45 52.6	+0.9
PTEO	Sao Teotonio	153.72	350	ePKPbc	PKiKP	23 45 46.6	+5.9
PTEO	Sao Teotonio	153.72	350	ePKPab	PKPab	23 45 54.8	+1.5
TORD	Torodi Ar. Bea	164.13	277	PKP	PKPdf	23 45 45.3	-0.4
	comp=Z,1.6nm,0.9s,baz=83,slow=1.2,SNR=4.0						
TORD				PKPab	PKPab	23 46 39.0	-0.3
	comp=Z,1.1nm,0.7s,baz=85,slow=2.9,SNR=5.3						

BEO ***20*** *23:36:49.3±0.9, 37°.54N×20°.06E, h0^{km}, ML4.8/13*

IDC ***20*** *23:37:03.0±0.5, 38°.78N×20°.50E, h0^{km}, mb4.4/31, mb1 4.4/46, mb1mx4.3/58, mbtmp4.3/46, ML4.0/13, MS3.9/26, Ms1 3.9/26, ms1mx3.7/53, Error ellipse: s-maj=9.8km s-min=9.0km az=128.0*

HLW ***20*** *23:37:02.2, 38°.86N×21°.04E, h10^{km}±31^{km}, Md4.6, Ml5.0*

IASPEI ***20*** *23:37:03.6±0.9, 38°.71N±0°.02×20°.61E±0°.03, h10^{km}±4^{km}, mb4.6/84, MS4.0/21, Error ellipse: s-maj=4.0km s-min=2.6km az=92.3, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

THE ***20*** *23:37:03.8, 38°.73N×20°.60E, h8^{km}, ML4.5/6, Error ellipse: s-maj=1.0km s-min=0.4km az=299.0*

MOS ***20*** *23:37:03.2±1.2, 38°.72N×20°.39E, h13^{km}, mb4.8/19, MS4.2/11, Error ellipse: s-maj=4.0km s-min=2.4km az=82.9*

ATH ***20*** *23:37:04.1, 38°.71N×20°.62E, h9^{km}±1^{km}, ML4.4/17, Error ellipse: s-maj=1.4km s-min=0.9km az=282.0*

MED_RC ***20*** *23:37:04.0±0.4, 38°.62N×20°.63E, h10^{km}, MW4.6/29, Moment Tensor Solution. Body waves: s1,c1;Mantle waves: s29,c37; Duration: 1^{s}0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.56±.05; $M_{\theta\theta}$1.03±.04; $M_{\phi\phi}$-0.47±.05; $M_{r\theta}$-0.30±.17; $M_{\theta\phi}$0.36±.04; $M_{\phi r}$-0.50±.16; Best double couple: $M_0$1.11000×10^{16} NP1:ϕ_s293.00000°,δ47.00000°, λ-29.00000°. NP2:ϕ_s44.00000°,δ69.00000°, λ-133.00000°. Principal axes: T 1.2100, Plg14.0000°, Azm164.0000°; N -0.1900, Plg40.0000°, Azm62.0000°; P -1.0200, Plg47.0000°, Azm269.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=35s.*

PDG ***20*** *23:37:04.9±0.7, 38°.72N×20°.38E, h19^{km}±1^{km}, MD4.6/1, ML4.6/12 Error ellipse: s-maj=0.8km s-min=1.0km az=0.0*

NEIC ***20*** *23:37:05.4, 38°.75N×20°.49E, h14^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-1.21; $M_{\theta\theta}$-0.06; $M_{\phi\phi}$1.27; $M_{r\theta}$0.27; $M_{\theta\phi}$-0.18; $M_{\phi r}$0.43; Fault plane solution: $M_0$1.35000×10^{16} NP1:ϕ_s186.30000°, δ55.45000°,λ-73.29000°. NP2:ϕ_s338.41000°,δ37.92000°, λ-112.66000°. Principal axes: T 1.3522, Plg9.0000°, Azm264.0000°; N -0.0005, Plg14.0000°, Azm357.0000°; P -1.3517, Plg73.0000°, Azm142.0000°;*

NEIC ***20*** *23:37:05.5±2.0, 38°.76N±0°.02×20°.47E±0°.06, h10^{km}±1^{km}, mb4.6/66, Mwr4.7/41, ML4.7(THE) Error ellipse: s-maj=8.6km s-min=3.7km az=254.0*

ISC 20 23:37:04.0±0.5**, 38°.71N**±0°.01×**20°.60E**±0°.02**, h8**^{km}±3^{km}**,**
n651, σ1^{s}85/714**, mb4.6**/84**, MS4.0**/21**, 47C-44D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRAG	Dragano-Lefkad	0.03	225	P	Pg	23 37 05.3	-0.2
DRAG				S	Sg	23 37 06.7	+0.1
DRAG	Dragano-Lefkad	0.03	225	P	Pg	23 37 05.4	-0.2
NYDR	Nydri-Lefkada	0.07	84	P	Pg	23 37 05.7	-0.3
NYDR	Nydri-Lefkada	0.07	84	P	Pg	23 37 05.8	-0.3
NYDR				S	Sg	23 37 07.4	0.0
EVGI	Lefkada island	0.09	154	P	Pg	23 37 06.5	+0.3
EVGI				S	Sg	23 37 08.4	+0.5
EVGI	Lefkada island	0.09	154	P	Pg	23 37 06.6	+0.3
EVGI				S	Sg	23 37 08.9	+1.0
LKD2	Lefkada island	0.09	28	P	Pg	23 37 05.7	-0.6
LKD2				S	Sg	23 37 07.2	-0.8
	578µm,0.7s						
LKD2	Lefkada island	0.09	28	P	Pg	23 37 05.9	-0.5
LKD2				S	Sg	23 37 07.5	-0.5
LKD2				AML	AML	23 37 07.8	
LKD2				AML	AML	23 37 08.1	
TSLK	Tsoukalades, L	0.13	19	P	Pg	23 37 06.7	-0.1
TSLK				S	Sg	23 37 08.5	-0.2
	519µm,1.2s						
TSLK	Tsoukalades, L	0.13	19	P	Pg	23 37 06.8	0.0
TSLK				S	Sg	23 37 09.3	+0.6
TSLK				AML	AML	23 37 10.9	
TSLK				AML	AML	23 37 11.5	
FSK	Fiskardo	0.25	187	P	Pg	23 37 09.4	+0.5
FSK				S	Sg	23 37 14.1	+1.8
	153µm,0.4s						
FSK	Fiskardo	0.25	187	P	Pg	23 37 09.5	+0.5
FSK				AML	AML	23 37 16.0	
FSK				AML	AML	23 37 21.4	
KEF4	Livadi, Kephal	0.47	197	P	Pg	23 37 13.1	0.0
KEF4				S	Sb	23 37 20.6	-0.9
KEF4	Livadi, Kephal	0.47	197	P	Pg	23 37 13.1	0.0
DMLN	Damoulianata-K	0.50	201	P	Pg	23 37 13.6	-0.1
DMLN				S	Sb	23 37 22.2	-0.3
	64µm,0.7s						
LXRA	Lixouri, Kepha	0.52	194	P	Pg	23 37 14.3	+0.2
VLS	Valsamata	0.53	181	P	Pg	23 37 13.9	-0.3
VLS				S	Sb	23 37 22.6	-0.7
	40µm,0.6s						
VLS	Valsamata	0.53	181	P	Pg	23 37 14.0	-0.2
VLS				S	Sb	23 37 22.4	-0.9
VLS				AML	AML	23 37 26.4	
	comp=E,74688µm,0.5s						
VLS				AML	AML	23 37 31.1	
	comp=N,97882µm,0.7s						
VLS	Valsamata	0.53	181	P	Pg	23 37 13.9	-0.3
VLS				S	Sb	23 37 22.6	-0.7
ARGA	Argostoli. Kep	0.54	190	P	Pb	23 37 15.2	-0.4
KEF3	Kipouria, Keph	0.54	202	P	Pg	23 37 13.8	-0.6
KEF3				S	Sb	23 37 23.3	-0.3
KEF3	Kipouria, Keph	0.54	202	P	Pg	23 37 13.8	-0.6
PSDA	Pessada-Kefalo	0.59	181	P	Pg	23 37 15.0	-0.4
PSDA				S	Sb	23 37 24.4	-0.7
PSDA	Pessada-Kefalo	0.59	181	P	Pg	23 37 15.1	-0.4
PVO	Paravola	0.73	97	P	Pg	23 37 18.4	+0.4
PVO	Paravola	0.73	97	P	Pg	23 37 18.4	+0.4
PVO				AML	AML	23 37 37.6	
	comp=E,85079µm,0.9s						
PVO				AML	AML	23 37 39.0	
	comp=N,84102µm,1.1s						
IGT	Igoumenitsa	0.85	346	P	Pg	23 37 19.1	-1.3
IGT	Igoumenitsa	0.85	346	P	Pg	23 37 19.6	-0.8
IGT				AML	AML	23 37 39.4	
	comp=E,32733µm,0.7s						
IGT				AML	AML	23 37 40.5	
	comp=N,24652µm,0.4s						
IGT	Igoumenitsa	0.85	346	P	Pg	23 37 19.6	-0.8
IGT				S	Sb	23 37 32.9	+0.2
VTN	Vitineika	0.91	150	P	Pg	23 37 21.7	+0.2
VTN	Vitineika	0.91	150	P	Pg	23 37 21.7	+0.2
RLS	Riolos of Patr	0.94	133	P	Pg	23 37 21.2	-0.8
RLS	Riolos of Patr	0.94	133	P	Pg	23 37 21.5	-0.5
RLS				AML	AML	23 37 45.1	
	comp=E,42738µm,0.9s						
RLS				AML	AML	23 37 47.0	
	comp=N,98706µm,1.2s						
EVR	Evrytania	0.97	77	P	Pg	23 37 21.9	-0.7
EVR	Evrytania	0.97	77	P	Pg	23 37 22.0	-0.5
EVR				AML	AML	23 37 46.5	
	comp=E,28687µm,1.0s						
EVR				AML	AML	23 37 47.5	
	comp=N,36325µm,0.7s						
JAN	Janina	0.97	11	P	Pg	23 37 21.6	-1.0
JAN	Janina	0.97	11	P	Pg	23 37 22.6	0.0
JAN				AML	AML	23 37 46.2	
	comp=E,37115µm,1.0s						
JAN				AML	AML	23 37 49.1	
	comp=N,19060µm,0.7s						
JAN	Janina	0.97	11	P	Pg	23 37 21.6	-1.0
LTHK	Lithakia	1.01	169	P	Pg	23 37 22.0	-1.4
LTHK	Lithakia	1.01	169	P	Pg	23 37 22.2	-1.2
UPR	University Cam	1.02	114	P	Pg	23 37 23.5	-0.1
ANX	Ano Chora	1.04	96	P	Pg	23 37 23.1	-0.8
ANX	Ano Chora	1.04	96	P	Pg	23 37 23.1	-0.8
ANX				AML	AML	23 37 49.2	
	comp=E,76596µm,0.7s						
ANX				AML	AML	23 37 50.1	
	comp=N,82405µm,0.5s						
EFP	Efpalio	1.06	105	P	Pg	23 37 23.2	-1.1
EFP	Efpalio	1.06	105	P	Pg	23 37 23.5	-0.8
EFP				AML	AML	23 37 48.2	
	comp=E,52788µm,0.6s						
EFP				AML	AML	23 37 51.9	
	comp=N,47473µm,0.7s						
DRO	Drossia	1.15	130	P	Pg	23 37 24.7	-1.4
DRO	Drossia	1.15	130	P	Pg	23 37 25.2	-0.9
DRO				AML	AML	23 37 51.4	
	comp=N,63588µm,0.8s						
DRO				AML	AML	23 37 55.5	
	comp=E,63556µm,0.7s						
KASA	Kassiopi	1.16	334	P	Pb	23 37 26.1	-0.2
KASA				AML	AML	23 37 47.6	
	comp=E,26497µm,1.2s						
KASA				AML	AML	23 37 51.8	
	comp=N,24548µm,1.5s						
LAKA	Lakka	1.18	113	P	Pb	23 37 25.3	-1.3
LAKA	Lakka	1.18	113	P	Pb	23 37 25.4	-1.2
KEK	Kerkira	1.18	328	P	Pb	23 37 26.2	-0.5
KEK	Kerkira	1.18	328	P	Pb	23 37 26.2	-0.5
KEK				AML	AML	23 37 58.6	
	comp=N,11810µm,0.6s						
KEK				AML	AML	23 38 03.8	
	comp=E,15074µm,0.9s						
TRIZ	Trizonia	1.20	106	P	Pb	23 37 25.8	-1.2
TRIZ	Trizonia	1.20	106	P	Pb	23 37 26.1	-0.9
MAKR	Makrakomi, Fth	1.23	75	P	Pn	23 37 27.2	-0.4
KPRO	Kipourio	1.38	25	P	Pn	23 37 29.8	+0.2
KLV	Kalavryta, Ach	1.39	118	P	Pn	23 37 28.7	-1.0
KLV	Kalavryta, Ach	1.39	118	P	Pn	23 37 28.6	-1.0
AGG	Agios Georgios	1.39	76	P	Pn	23 37 29.6	-0.1
AGG	Agios Georgios	1.39	76	P	Pn	23 37 29.5	-0.1
AGG				AML	AML	23 38 01.3	
	comp=E,43757µm,1.0s						
AGG				AML	AML	23 38 03.4	
	comp=N,41243µm,1.1s						
AGG	Agios Georgios	1.39	76	P	Pg	23 37 31.9	+1.3
AGG	Agios Georgios	1.39	76	Pn	Pg	23 37 31.9	+1.3
THL	Klokotos Trika	1.39	52	P	Pn	23 37 29.3	-0.4
THL	Klokotos Trika	1.39	52	P	Pn	23 37 29.6	-0.1
LSK	Leskovik	1.44	360	P	Pn	23 37 30.7	+0.2
GUR	Goura	1.57	119	P	Pn	23 37 31.6	-0.6
ITM	Ithomi	1.85	145	P	Pb	23 37 37.5	-0.5
ITM				AML	AML	23 38 11.8	
	comp=E,22420µm,1.2s						
ITM				AML	AML	23 38 23.4	
	comp=N,15048µm,1.7s						
ITM	Ithomi	1.85	145		Pb	23 37 38.2	+0.1
KBN	Korca	1.92	4	P	Pb	23 37 39.0	-0.3
KBN	Korca	1.92	4		Pb	23 37 39.0	-0.3
VLO	Vlora	1.96	334	P	Pn	23 37 37.8	+0.3
VLO	Vlora	1.96	334		Pn	23 37 37.8	+0.3
PYL	PYLOS	2.02	153	P	Pb	23 37 39.8	-1.1
PYL				AML	AML	23 38 33.6	
	comp=E,11708µm,1.6s						
PYL				AML	AML	23 38 34.0	
	comp=N,9652µm,0.9s						
SCTE	Santa Cesarea	2.15	310		Pn	23 37 39.8	-0.3
FNA	Florina	2.16	16	P	Pb	23 37 42.2	-1.2
FNA	Florina	2.16	16		Pb	23 37 42.2	-1.2
OHR	Ohrid	2.41	4	ePn	Pb	23 37 47.0	-0.6
OHR				eSn	Sg	23 38 29.4	+8.0
OHR	Ohrid	2.41	4	P	Pn	23 37 45.7	+1.9
OHR	Ohrid	2.41	4	i Pn	Pn	23 37 45.6	+1.8
GRG	Griva	2.64	31	P	Pn	23 37 49.1	+2.2
THE	Thessaloniki	2.65	43	P	Pb	23 37 49.5	-2.2
PAIG	Paliouri	2.68	62	P	Pb	23 37 50.2	-2.0
TIR	Tirane	2.70	348	ePn	Pn	23 37 49.6	+1.9
TIR				eSn	Sg	23 38 32.7	+2.0
TIR	Tirane	2.70	348	P	Pn	23 37 48.7	+1.0
TIR	Tirane	2.70	348		Pn	23 37 48.7	+1.0
PLG	Polygyros	2.76	52	P	Pn	23 37 49.6	+1.0
PHP	Peshkopia	2.98	358	P	Pn	23 37 52.8	+1.2
SOH	Sokhos	2.99	44	P	Pn	23 37 54.2	+2.4
VAY	Valandovo	3.02	29	ePn	Pb	23 37 55.8	-2.2
VAY				eSn	Sg	23 38 45.1	+4.2
VAY	Valandovo	3.02	29	P	Pn	23 37 54.3	+2.2
VAY	Valandovo	3.02	29	i Pn	Pn	23 37 54.2	+2.2
KNT	Kendrikon	3.02	35	P	Pn	23 37 54.5	+2.3
TIP	Timpagrande	3.03	280		Pn	23 37 51.5	-0.9
OUR	Ouranopolis	3.08	57	P	Pb	23 37 56.6	-2.4
STIP	Stip	3.22	22	i Pn	Pb	23 37 58.4	-3.1
SKO	Skopje	3.33	11	P	Pn	23 37 58.0	+1.7
SKO	Skopje	3.33	11	i Pn	Pn	23 37 58.7	+2.3
SRS	Serrai	3.33	43	P	Pn	23 37 58.6	+2.2
ULC	Ulcinj	3.42	343	P	Pn	23 37 57.9	+0.3
ULC	Ulcinj	3.42	343	⇓iPn	Pn	23 37 57.7	+0.1
ULC				i Sn	Sn	23 38 37.4	-0.9
MATE	Matera	3.58	304	⇓P	Pn	23 37 56.3	-3.5
DRME	Dracevica, Mon	3.64	343	⇑iPn	Pn	23 38 01.0	+0.3
DRME	Dracevica, Mon	3.64	343	⇓iPn	Pn	23 38 00.7	0.0
DRME				i Sn	Sn	23 38 42.9	-0.9
CEL	Celeste	3.72	265		Pn	23 38 01.2	-0.6
BUM	Brajici-Budva	3.82	341	⇑iPn	Pn	23 38 02.9	-0.3
BUM				i Sn	Sn	23 38 47.0	-1.3
PDG	Podgorica	3.86	345	ePn	Pn	23 38 04.7	+1.1
PDG	Podgorica	3.86	345	⇑iPn	Pn	23 38 03.6	0.0
PDG	Podgorica	3.86	345	Pn	Pn	23 38 03.4	-0.2
TTG	Podgorica	3.86	345	⇑iPn	Pn	23 38 03.9	+0.3
TTG				i Sn	Sn	23 38 48.2	-0.9
PVY	Plav	3.92	353	⇑iPn	Pn	23 38 05.0	+0.5
PVY				i Sn	Sn	23 38 50.2	-0.6
PRVS	Prvonek	3.96	16	ePn	Pn	23 38 08.4	+3.3
CEME	Cevo	4.04	342	⇑iPn	Pn	23 38 06.0	-0.3
CEME				i Sn	Sn	23 38 52.7	-1.2
BOSS	Bosilegrad	4.05	20	ePn	Pn	23 38 08.6	+2.3
HCY	Herceg Novi	4.07	337	P	Pn	23 38 06.5	0.0
HCY	Herceg Novi	4.07	337	ePn	Pn	23 38 04.7	-1.8
HCY	Herceg Novi	4.07	337	⇓iPn	Pn	23 38 05.8	-0.7
HCY				i Sn	Sn	23 38 52.7	-1.6
IVA	Berane	4.20	353	⇑iPn	Pn	23 38 09.2	+0.8
IVA				i Sn	Sn	23 38 57.0	-0.6
BARS	Barje	4.21	12	ePn	Pn	23 38 12.4	+3.9
KOME	Kolasin	4.22	349	⇑iPn	Pn	23 38 09.1	+0.4
KOME				i Sn	Sn	23 38 57.2	-1.1
APE	Apeiranthos	4.23	111	⇑P	Pn	23 38 12.2	+3.5
APE	Apeiranthos	4.23	111	P	Pn	23 38 12.2	+3.5
NKME	Niksic	4.25	343	⇓iPn	Pn	23 38 09.2	+0.2
NKME				i Sn	Sn	23 38 57.5	-1.3
NKY	Niksic	4.28	344	P	Pn	23 38 12.2	+2.6
NKY	Niksic	4.28	344	⇑iPn	Pn	23 38 09.4	-0.2
NKY				i Sn	Sn	23 38 58.4	-1.3
TREB	Trebinje	4.36	338	ePn	Pn	23 38 10.0	-0.5
TREB	Trebinje	4.36	338	ePn	Pn	23 38 09.3	-1.2
VAM	Vamos	4.37	138	P	Pn	23 38 12.7	+2.0
DBRK	Dubrovnik	4.38	336	i Pn	Pn	23 38 09.9	-0.8
DBRK				Sn	Sn	23 38 58.5	-3.5
VTS	Vitosha	4.39	26	⇑P	Pn	23 38 13.9	+2.8
VTS	Vitosha	4.39	26	ePn	Pn	23 38 12.1	+1.0
VTS	Vitosha	4.39	26	P	Pn	23 38 12.1	+1.0
VTS	Vitosha	4.39	26	Pn	Pn	23 38 12.1	+1.0
PRK	Paraskevi	4.45	81	P	Pn	23 38 16.1	+4.3
BRY	Bratogost	4.47	340	P	Pn	23 38 13.0	+0.8
BRY	Bratogost	4.47	340	ePn	Pn	23 38 11.1	-1.1
BRY	Bratogost	4.47	340	⇑iPn	Pn	23 38 11.3	-0.9
BRY				i Sn	Sn	23 39 02.8	-1.7
SANT	Santorini	4.51	120		Pn	23 38 15.5	+2.9
SJES	Sjenica	4.58	354	ePn	Pn	23 38 14.5	+0.9
EZN	Ezine	4.58	74	P	Pn	23 38 18.6	+5.1
PLD	Plovdiv	4.62	41	P	Pn	23 38 17.9	+3.8
STON	Ston	4.71	333	ePn	Pn	23 38 14.6	-0.7
STON	Ston	4.71	333	ePn	Pn	23 38 14.1	-1.2
STON				ePn	Sn	23 39 06.5	-3.6
STON	Ston	4.71	333	ePn	Pn	23 38 14.0	-1.3
STON				Sn	Sn	23 39 05.9	-4.1
PLE	Pljevlja	4.71	349	P	Pn	23 38 20.0	+4.5
PLE	Pljevlja	4.71	349	⇓iPn	Pn	23 38 15.5	0.0
PLE				i Sn	Sn	23 39 09.2	-1.1
ALN	Alexandroupoli	4.73	61	P	Pn	23 38 18.1	+2.5
ALN	Alexandroupoli	4.73	61		Pn	23 38 18.1	+2.5
SGRT	San Giovanni R	4.81	311		Pn	23 38 16.2	-0.6
IDI	Anoyia	4.84	134	Pn	Pn	23 38 19.1	+1.9
	comp=N,2.5nm,0.3s,baz=290,slow=6.9,SNR=35						
IDI				Sn	Sn	23 39 15.6	+2.2
	comp=N,6.7nm,0.3s,baz=115,slow=11,SNR=3.9						
LSTV	Lastovo	4.94	326	ePn	Pn	23 38 16.7	-1.8
LSTV				Sn	Sn	23 39 12.3	-3.5
BOVS	Bovan	5.00	9	ePn	Pn	23 38 21.8	+2.6
RUDO	Rudo	5.00	350	ePn	Pn	23 38 17.9	-1.4
VAE	Valguarnera	5.04	258	Pn	Pn	23 38 20.0	+0.1
	comp=N,0.7nm,0.3s,baz=76,slow=12,SNR=4.2						

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VAE                                 Sn     Sn     23 39 18.1  -0.2
      comp=N,3.5nm,0.3s,baz=10.0,slow=23,SNR=3.2
BLKB  Belogradchik      5.16  17 ⇓P     Pn     23 38 24.2  +2.7
GRUS  Gruza             5.18   1 ePn    Pn     23 38 22.1  +0.3
PAOL  Paolisi           5.19 298        Pn     23 38 22.5  +0.5
BBLS  Lazi&#263;i       5.23 350 ePn    Pn     23 38 23.3  +0.7
BBLS  Lazi&#263;i       5.23 350⇑iPn    Pn     23 38 22.9  +0.3
ZAGS  Zajecar           5.25  13 ePn    Pn     23 38 24.8  +2.1
NPS   Neapolis          5.28 129  P     Pn     23 38 24.7  +1.5
MAKA  Makarska          5.32 331 ePn    Pn     23 38 22.9  -0.8
DIVS  Divibare          5.41 355 ePn    Pn     23 38 25.1  +0.1
DIVS  Divibare          5.41 355⇑iPn    Pn     23 38 23.8  -1.2
DIVS  Divibare          5.41 355        Pn     23 38 24.0  -1.0
RICI  Ricice            5.45 332 i Pn   Pn     23 38 24.4  -1.2
HVAR  Hvar              5.46 326 ePn    Pn     23 38 24.6  -1.1
TRUS  Trudelj           5.51 359 ePn    Pn     23 38 26.1  -0.3
HAPS  Han Pijesak,Bl    5.52 348 ePn    Pn     23 38 23.0  -3.5
SVIS  Svilajnac         5.57   5 ePn    Pn     23 38 28.2  +1.0
BAIL  Bailesti          5.70  20 ⇓P     Pn     23 38 32.3  +3.5
BALB  Balikesir         5.73  78  Pn    Pn     23 38 32.6  +3.2
KUBS  Kucevo            5.76   8 ePn    Pn     23 38 30.2  +0.5
CORL  Corleone          5.80 264  Pn    Pn     23 38 31.8  +1.4
TEKS  Tekeris           5.89 353 ePn    Pn     23 38 32.9  +1.3
TEKS  Tekeris           5.89 353 ePn    Pn     23 38 27.4  -4.2
CLTB  Caltabellotta     5.93 261  Pn    Pn     23 38 32.5  +0.3
VLAD  Vladila           6.01  27 ⇓P     Pn     23 38 35.9  +2.7
BEO   Beograd           6.10 359  P     Pn     23 38 34.8  +0.4
ZIMR                    6.11  34 ⇓P     Pn     23 38 38.6  +4.0
DJES  Djerdap           6.13  13 ⇓P     Pn     23 38 38.0  +3.2
MDVR  Moldovita         6.13   7 ⇓P     Pn     23 38 35.4  +0.6
KIJV  Kijevo            6.16 331 ePn    Pn     23 38 34.1  -1.2
KIJV                                Sn     Sn     23 39 43.1  -2.9
ZIRJ  Zirje             6.20 324 ePn    Pn     23 38 34.1  -1.7
YER   Yerkesik          6.27 102  P     Pn     23 38 42.9  +6.0
MGRS  Mrkonjic Grad     6.29 336 ePn    Pn     23 38 36.5  -0.5
HERR  Herculane         6.32  12 ⇓P     Pn     23 38 38.9  +1.5
MORI  Morici            6.34 326 ePn    Pn     23 38 36.8  -0.9
COPA  Copaceanca        6.44  31 ⇑P     Pn     23 38 42.2  +3.1
FRGS  Fruska Gora       6.47 355 ePn    Pn     23 38 40.9  +1.3
FRGS  Fruska Gora       6.47 355 ePn    Pn     23 38 37.0  -2.6
BLY   Banja Luka        6.56 338 ePn    Pn     23 38 40.2  -0.5
BLY   Banja Luka        6.56 338 ePn    Pn     23 38 36.7  -4.0
AQU   L'Aquila          6.58 306  P     Pn     23 38 42.0  +0.9
AQU   L'Aquila          6.58 306 ePn    Pn     23 38 41.6  +0.5
AQU   L'Aquila          6.58 306  Pn    Pn     23 38 42.0  +0.9
RAZG  Razgrad           6.59  41 ⇑P     Pn     23 38 45.6  +4.4
HUMR  Humele            6.68  28 ⇓P     Pn     23 38 45.0  +2.7
DUGI  Dugi Otok         6.73 323 ePn    Pn     23 38 42.1  -0.9
SGRR  Singureni         6.83  34 ⇑P     Pn     23 38 47.2  +2.8
GZR   Gura Zlata        6.88  13 ⇓P     Pn     23 38 45.5  +0.3
GZR   Gura Zlata        6.88  13  P     Pn     23 38 45.4  +0.3
MRAK  Mrakovica         6.88 338 ePn    Pn     23 38 44.0  -1.2
PRIJ  Prijedor          6.90 336 ePn    Pn     23 38 42.3  -3.1
BZS   Buzias            6.95   6 ⇑P     Pn     23 38 47.7  +1.7
BZS   Buzias            6.95   6 ePn    Pn     23 38 46.5  +0.5
BZS   Buzias            6.95   6  P     Pn     23 38 47.3  +1.3
BZS                                 pmax   pmax
      comp=Z,17nm,0.8s
LOT   Lotru             7.14  18 ⇑P     Pn     23 38 51.3  +2.5
NVLJ  Novalja           7.26 326 ePn    Pn     23 38 49.4  -0.9
ARR   Arges             7.30  23 ⇑P     Pn     23 38 53.7  +2.7
SULR                    7.31  34 ⇑P     Pn     23 38 55.1  +4.1
RABC  Rab               7.44 326 ePn    Pn     23 38 52.5  -0.3
VOIR                    7.49  25 ⇑P     Pn     23 38 55.3  +1.7
VOIR                    7.49  25  P     Pn     23 38 56.4  +2.8
VOIR                                pmax   pmax
      comp=Z,35nm,0.9s
SECR                    7.52  31 ⇑P     Pn     23 38 58.1  +4.2
KOVH  Kovagotottos      7.61 347 ePN    Pn     23 38 53.3  -1.7
KOVH  Kovagotottos      7.61 347 eP     Pn     23 38 54.5  -0.6
KOVH  Kovagotottos      7.61 347 eSN    Sn     23 40 15.2  -6.2
MURB  Monte Urbino      7.62 309        Pn     23 38 57.1  +1.8
ELL   Elmali            7.63 102  P     Pn     23 38 59.5  +3.9
ELL   Elmali            7.63 102        Pn     23 38 59.5  +3.9
ISR   Istrita           7.79  33 ⇓P     Pn     23 39 01.8  +4.2
ISR   Istrita           7.79  33  P     Pn     23 39 01.8  +4.2
ISR                                 pmax   pmax
      comp=Z,94nm,0.8s
ISP   Isparta           7.85  93  P     Pn     23 39 02.9  +4.3
ISP   Isparta           7.85  93  Pn    Pn     23 39 02.9  +4.3
MLR   Muntele Rosu      7.86  29 ⇑P     Pn     23 39 02.1  +3.5
MLR   Muntele Rosu      7.86  29  Pn    Pn     23 39 01.6  +2.9
      comp=Z,2.1nm,0.3s,baz=207,slow=4.7,SNR=16
MLR                                 Sn     Sn     23 40 32.6  +4.8
      baz=304,slow=16,SNR=1.1
MLR                                 LR     LR     23 42 43.8
      comp=Z,2µm,18.9s,baz=202,slow=44
MLR   Muntele Rosu      7.86  29        Pn     23 38 60.0  +1.3
BOJS  Bojanci           7.87 331 i Pn   Pn     23 38 57.9  -0.8
ZAG   Zagreb            7.89 336 ePn    Pn     23 39 02.9  +3.9
NEHR  Nehoiu            7.94  30 ⇓P     Pn     23 39 03.2  +3.6
PTJ   Puntijarka        7.97 336  P     Pn     23 38 59.8  -0.4
TLBR  Topalu            8.07  41 ⇓P     Pn     23 39 04.6  +3.2
CRES  Cresnjev          8.07 333⇑iPn    Pn     23 38 59.0  -2.5
DOPR  Dopca             8.07  24 ⇑P     Pn     23 39 04.1  +2.6
SLUM  Salum             8.13 151  P     Pn     23 39 01.1  -1.2
      baz=153
SLUM                                AMP           23 40 00.0
      baz=153
GRER                    8.18  33 ⇓P     Pn     23 39 07.4  +4.4
TIRR  Tirgusor          8.20  43 ⇓P     Pn     23 39 06.5  +3.2
TIRR  Tirgusor          8.20  43  P     Pn     23 39 06.4  +3.2
BISRR Bisoca            8.20  32 ⇓P     Pn     23 39 07.3  +3.9
LEGS  Legarje           8.23 333 i Pn   Pn     23 39 02.4  -1.2
DRGR                    8.23  10 ⇑P     Pn     23 39 05.3  +1.6
DRGR                    8.23  10  P     Pn     23 39 06.1  +2.4
DRGR                                pmax   pmax
      comp=Z,8.0nm,1.6s
COVR  Voineasa-Covas    8.25  28 ⇓P     Pn     23 39 08.2  +4.1
OZUR                    8.32  26 ⇓P     Pn     23 39 08.0  +3.0
MDUB  Mudurnu           8.37  75        Pn     23 39 08.3  +2.7
CEY   Cerknica          8.39 329⇑iPn    Pn     23 39 04.2  -1.6
PLOR  Plostina          8.43  30 ⇑P     Pn     23 39 09.6  +3.2
PLOR  Plostina          8.43  30  P     Pn     23 39 09.6  +3.2
VRI   Vrincioaia        8.47  30 ⇑P     Pn     23 39 10.2  +3.2
VRI   Vrincioaia        8.47  30  P     Pn     23 39 11.7  +4.7
VRI                                 pmax   pmax
      comp=Z,91nm,1.3s
OSSC  Osservatorio P    8.54 307        Pn     23 39 08.0   0.0
LJU   Ljubljana         8.60 330⇑iPn    Pn     23 39 08.8  +0.1
MPLH  Magyarpolny       8.75 346 ePN    Pn     23 39 09.6  -1.2
MPLH  Magyarpolny       8.75 346 eP     Pn     23 39 10.3  -0.5
MPLH  Magyarpolny       8.75 346 eSN    Sn     23 40 48.7  -0.9
VSL   Villasalto        8.76 279  Pn    Pn     23 39 10.7  -0.3
BUD   Budapest          8.85 353 ePN    Pn     23 39 11.9  -0.2
BUD   Budapest          8.85 353 eP     Pn     23 39 16.6  +4.5
BUD   Budapest          8.85 353  P     Pn     23 39 13.2  +1.1
BUD                                 pmax   pmax
      comp=Z,23nm,0.6s
SCTR  Scanteiesti       8.86  36 ⇓P     Pn     23 39 15.6  +3.3
PERS  Pernice           8.89 335 i Pn   Pn     23 39 11.3  -1.5
SOKA  Soboth            8.96 335 ePn    Pn     23 39 12.2  -1.5
      comp=Z,23nm,0.8s,SNR=11
SOKA                                eSn    Sn     23 40 50.4  -4.4
      comp=Z,17nm,0.8s
VARL  Varlezi           8.97  34 ⇑P     Pn     23 39 17.3  +3.5
OBKA  Obir              8.98 332 ePn    Pn     23 39 13.4  -0.6
      comp=Z,22nm,0.6s
OBKA                                i Sn   Sn     23 40 55.3  -0.2
      comp=Z,11nm,0.4s
TESR  Tescani           8.98  28 ⇑P     Pn     23 39 17.6  +3.6
VLDR  Vladesti          9.03  35 ⇓P     Pn     23 39 18.4  +3.8
MATC  Matruh            9.13 142  P     Pn     23 39 16.4  +0.3
      baz=144
PSZ   Piszkesteto       9.22 357 ⇓P     Pn     23 39 17.8  +0.5
PSZ   Piszkesteto       9.22 357 eP     Pn     23 39 18.7  +1.4
PSZ   Piszkesteto       9.22 357  P     Pn     23 39 18.7  +1.4
PSZ                                 pmax   pmax
      comp=Z,17nm,1.5s
ARSA  Arzberg           9.31 338 ePn    Pn     23 39 17.5  -1.0
      comp=Z,6.2nm,0.4s
TEOL  Teolo             9.40 318        Pn     23 39 19.9  +0.2
MYKA  Terra Mystica     9.43 329 ePn    Pn     23 39 19.4  -0.7
      comp=Z,11nm,0.7s
MYKA                                eSn    Sn     23 41 05.3  -1.1
      comp=Z,6.6nm,0.6s
KEST  Kesra             9.46 255  Pn    Pn     23 39 20.8  +0.2
      comp=Z,0.5nm,0.3s,baz=53,slow=15,SNR=5.8
KEST  Kesra             9.46 255  P     Pn     23 39 22.7  +2.1
KEST  Kesra             9.46 255  Pn    Pn     23 39 22.5  +1.9
BR231 Keskin MP Arra    9.51  79  Pn    Pn     23 39 24.1  +2.8
BURAR Bucovina Array    9.52  19 ⇓P     Pn     23 39 25.2  +3.7
BURAR Bucovina Array    9.52  19  P     Pn     23 39 25.1  +3.7
BURAR Bucovina Array    9.52  19  Pn    Pn     23 39 23.9  +2.5
ANTO  Ankara            9.53  79  P     Pn     23 39 24.2  +2.7
ANTO  Ankara            9.53  79  P     Pn     23 39 19.5  -2.0
ANTO  Ankara            9.53  79  Pn    Pn     23 39 24.2  +2.7
TRPA  Tarpa             9.53   8 ⇓P     Pn     23 39 22.1  +0.7
BUR08 Bucovina Ar. S    9.54  19        Pn     23 39 22.6  +0.8
CONA  Conrad Observa    9.84 341 ePn    Pn     23 39 25.8  -0.1
      comp=Z,3.6nm,0.5s
VYHS  Vyhne             9.87 353 eP     Pn     23 39 26.6  +0.5
VYHS                             e             23 41 16.1
VYHS  Vyhne             9.87 353 ePN    Pn     23 39 26.6  +0.5
VYHS                             eSN    Sn     23 41 16.1  -0.9
CTI   Castel Tesino     9.88 321  P     Pn     23 39 24.6  -1.8
CTI   Castel Tesino     9.88 321  Pn    Pn     23 39 24.6  -1.8
KBA   Koelnbreinsper    9.91 330 ePn    Pn     23 39 26.4  -0.5
      comp=Z,7.2nm,0.5s
KBA   Koelnbreinsper    9.91 330  P     Pn     23 39 26.4  -0.5
KBA                                 pmax   pmax
      comp=Z,18nm,1.2s
MODS  Modra-Piesok      9.96 347 eP     Pn     23 39 25.9  -1.5
MODS                             e             23 41 12.8
MODS                                MLR    MLR
      comp=Z,5µm,15.0s
MODS  Modra-Piesok      9.96 347 ePN    Pn     23 39 25.9  -1.5
MODS                             eSN    Sn     23 41 12.8  -6.5
MODS                             eL     L      23 44 07.0
ABTA  Abfaltersbach     9.99 326 ePn    Pn     23 39 26.0  -1.9
      comp=Z,11nm,0.6s
ABTA                                eSn    Sn     23 41 18.6  -1.6
      comp=Z,35nm,1.3s
KOLL  Kolacno          10.00 352 ePN    Pn     23 39 27.9   0.0
KOLL                             eSN    Sn     23 41 16.5  -3.7
UZH   Uzhgorod         10.00   6 eP     Pn     23 39 28.3  +0.5
UZH                              eS     Sn     23 41 20.4  +0.3
UZH                                 MLR    MLR
      comp=Z,250nm,12.0s
SMOL  Smolenice        10.07 348 eP     Pn     23 39 30.1  +1.2
SMOL  Smolenice        10.07 348 ePN    Pn     23 39 30.1  +1.2
BR131 Keskin Array S   10.17  80  P     Pn     23 39 34.2  +3.8
BR131 Keskin Array S   10.17  80  P     Pn     23 39 35.5  +5.1
BR131 Keskin Array S   10.17  80        Pn     23 39 34.1  +3.8
BRTR  Keskin Array B   10.17  80  Pn    Pn     23 39 35.1  +4.7
      comp=Z,0.8nm,0.3s,baz=262,slow=12,SNR=32
BRTR                                Sn     Sn     23 41 24.2  -0.5
      comp=Z,0.0nm,0.3s,baz=150,slow=31,SNR=0.8
BRTR                                LR     LR     23 44 32.5
      comp=Z,464nm,20.0s,baz=279,slow=44
BRTR  Keskin Array B   10.17  80        Pn     23 39 33.9  +3.5
SALO  Salr             10.18 316  Pn    Pn     23 39 31.1  +0.8
MILM  Milestii Mici    10.18  34 ⇓P     Pn     23 39 34.3  +3.9
MILM  Milestii Mici    10.18  34 eP     Pn     23 39 33.0  +2.7
MILM                                MLR    MLR
      comp=Z,1µm,12.0s
CRVS  Cervenica-Dubn   10.21   3 eP     Pn     23 39 31.3  +0.5
CRVS                                MLR    MLR
      comp=Z,2µm,16.8s
CRVS  Cervenica-Dubn   10.21   3 ePN    Pn     23 39 31.3  +0.5
CRVS                             eL     L      23 44 01.3
MOA   Molln            10.24 335 ePn    Pn     23 39 30.0  -1.1
      comp=Z,8.5nm,0.4s,SNR=7.7
MOA                                 eSn    Sn     23 41 23.9  -2.2
      comp=Z,6.3nm,0.5s
SWA2                   10.26 155  P     Pn     23 39 30.3  -1.2
      baz=157
JAVC  Velka Javorina   10.37 349 ePN    Pn     23 39 33.9  +0.9
LEF   Lefka            10.47 106 ⇓P     Pn     23 39 36.2  +1.9
LANS  Liptovska Anna   10.47 356 eP     Pn     23 39 36.1  +1.6
LANS  Liptovska Anna   10.47 356 ePN    Pn     23 39 36.0  +1.6
NIE   Niedzica         10.71 359  P     Pn     23 39 40.9  +3.2
NIE                                 pmax   pmax
      comp=Z,8.0nm,1.1s
WTTA  Wattenberg       10.78 325 ePn    Pn     23 39 37.4  -1.3
      comp=Z,9.4nm,0.6s,SNR=8.0
WTTA                                eSn    Sn     23 41 38.2  -1.4
      comp=Z,16nm,0.6s
WTTA  Wattenberg       10.78 325  P     Pn     23 39 38.9  +0.2
WTTA                                pmax   pmax
      comp=Z,35nm,1.3s
KRUC  Moravsky         10.79 345  P     Pn     23 39 38.2  -0.5
KRUC                                pmax   pmax
      comp=Z,6.0nm,2.2s
KRUC  Moravsky         10.79 345 ePN    Pn     23 39 38.0  -0.7
WATA  Walderalm        10.86 325 ePn    Pn     23 39 39.4  -0.3
      comp=Z,13nm,0.8s,SNR=17
WATA                                eSn    Sn     23 41 40.1  -1.4
      comp=Z,27nm,0.8s
CSS   Mathiatis        10.86 106  Pn    Pn     23 39 41.4  +1.7
SQTA  Sankt Quirin     10.94 324 i Pn   Pn     23 39 41.5  +0.6
      comp=Z,4.7nm,0.5s
SQTA                                i Sn   Sn     23 41 40.8  -2.6
      comp=Z,9.9nm,0.7s
VRAC  Vranov           10.98 346  Pn    Pn     23 39 40.1  -1.3
      comp=Z,0.4nm,0.3s,baz=179,slow=9.5,SNR=5.2
VRAC                                LR     LR     23 45 23.0
      comp=Z,2µm,19.5s,baz=174,slow=46
VRAC  Vranov           10.98 346 ePN    Pn     23 39 40.8  -0.6
FETA  Feichten         11.02 322 ePn    Pn     23 39 44.3  +2.3
      comp=Z,3.7nm,0.6s
FETA                                eSn    Sn     23 41 44.5  -0.9
      comp=Z,6.3nm,0.7s
KWP   Kalwaria Pacla   11.03   7  P     Pn     23 39 43.1  +1.1
KWP   Kalwaria Pacla   11.03   7  Pn    Pn     23 39 43.1  +1.1
MOTA  Moosalm          11.08 324 ePn    Pn     23 39 42.5  -0.3
      comp=Z,21nm,1.1s,SNR=9.2
MOTA                                eSn    Sn     23 41 45.9  -1.0
      comp=Z,11nm,0.6s
CKRC  Cesky Krumlov    11.08 338 eP     Pn     23 39 40.8  -1.9
CKRC                                AMS    AMS    23 44 50.0
      comp=Z,2µm,9.9s
DAVOX Davos/Dischmat   11.27 319  Pn    Pn     23 39 44.8  -0.7
      comp=Z,0.4nm,0.3s,baz=138,slow=19,SNR=2.9
DAVOX                               Sn     Sn     23 41 47.4  -4.4
      comp=Z,0.3nm,0.3s,baz=130,slow=19,SNR=1.2
MORC  Moravsky Berou   11.28 350 ⇓P     Pn     23 39 45.8  +0.3
MORC  Moravsky Berou   11.28 350  P     Pn     23 39 46.1  +0.6
MORC  Moravsky Berou   11.28 350 ePN    Pn     23 39 45.5   0.0
MORC  Moravsky Berou   11.28 350  Pn    Pn     23 39 46.1  +0.6
GERES GERESS Array B   11.29 336  Pn    Pn     23 39 44.4  -1.2
      comp=Z,0.5nm,0.3s,baz=157,slow=13,SNR=21
GERES                               Sn     Sn     23 41 46.2  -5.8
      comp=Z,0.4nm,0.3s,baz=153,slow=22,SNR=1.7
GERES                               LR     LR     23 45 02.8
      comp=Z,481nm,21.0s,baz=151,slow=43
GERES GERESS Array B   11.29 336  Pn    Pn     23 39 44.3  -1.3
RETA  Reutte           11.34 324 ePn    Pn     23 39 47.4  +1.1
      comp=Z,3.1nm,0.5s
RETA                                eSn    Sn     23 41 51.1  -2.1
      comp=Z,7.3nm,0.7s
TUE   Stuetta          11.35 317        Pn     23 39 46.5  -0.1
LVV   L'vov            11.38  11 eP     Pn     23 39 50.7  +4.0
LVV                              eS     Sn     23 41 55.8  +1.8
OJC   Ojcow            11.53 357  P     Pn     23 39 49.7  +0.9
OJC   Ojcow            11.53 357  Pn    Pn     23 39 49.7  +0.9
KHC   Kasperske Hory   11.58 336 eP     Pn     23 39 47.9  -1.7
KHC                                 MLR    MLR
      comp=Z,2µm,9.4s
KHC   Kasperske Hory   11.58 336 eP     Pn     23 39 47.9  -1.7
KHC                                 AMS    AMS    23 46 10.0
      comp=Z,2µm,9.4s
KRLC  Kraliky          11.69 348 eP     Pn     23 39 50.5  -0.6
KRLC                                MLR    MLR
      comp=Z,2µm,13.6s
KRLC  Kraliky          11.69 348 eP     Pn     23 39 50.5  -0.6
KRLC                                AMS    AMS    23 45 20.0
      comp=Z,2µm,13.6s
WET   Wettzell         11.82 334  P     Pn     23 39 50.8  -2.0
WET                                 pmax   pmax
      comp=Z,12nm,1.5s
BNN   Bunyan           11.90  85        Pn     23 39 58.0  +3.9
DPC   Dobruska-Polom   12.03 347 eP     Pn     23 39 55.6  -0.2
DPC                                 MLR    MLR
      comp=Z,4µm,13.3s
DPC   Dobruska-Polom   12.03 347 eP     Pn     23 39 55.6  -0.2
DPC                                 AMS    AMS    23 45 20.0
      comp=Z,4µm,13.3s
BNI   Bardonecchia     12.15 306  P     Pn     23 39 58.5  +1.0
BNI   Bardonecchia     12.15 306  Pn    Pn     23 39 58.5  +1.0
PRA   Prague           12.18 341 eP     Pn     23 39 57.6  -0.1
PRA                                 MLR    MLR
      comp=Z,2µm,12.8s
PRA   Prague           12.18 341 eP     Pn     23 39 57.6  -0.1
PRA                                 AMS    AMS    23 45 40.0
      comp=Z,2µm,12.8s
OSTC  Ostas            12.25 347 eP     Pn     23 39 58.6  -0.1
OSTC                                AMS    AMS    23 45 30.0
      comp=Z,4µm,14.0s
CHVC  Chvalec          12.31 346 eP     Pn     23 39 59.6  +0.1
CHVC                                AMS    AMS    23 45 30.0
      comp=Z,3µm,14.6s
SENIN Lac Senin/Sane   12.43 312        Pn     23 40 01.7  +0.3
RYAN  Fayoum           12.51 137  P     Pn     23 40 00.2  -2.1
      baz=139
RYAN                                S      Sn     23 42 13.4  -8.4
      baz=139
GRA1  Grafenberg Arr   12.87 332  Pn    Pn     23 40 05.1  -2.0
GRF   Grafenberg Arr   12.87 332  P     Pn     23 40 05.1  -2.0
GRFO  Grafenberg       12.87 332  P     Pn     23 40 04.4  -2.7
GRFO  Grafenberg       12.87 332  Pn    Pn     23 40 04.4  -2.7
GLL   Jalalah          12.93 131  P     Pn     23 40 05.9  -2.2
      baz=133
STU   Stuttgart        12.99 324  P     Pn     23 40 08.4  -0.5
STU   Stuttgart        12.99 324  Pn    Pn     23 40 08.3  -0.5
BRG   Berggiesshubel   13.04 341 eP     P      23 40 21.1  +1.1
BRG                                 Amp           23 40 23.3
      comp=Z,7.6nm,1.1s
BRG                                 Amp           23 46 18.0
      comp=N,1.9nm,12.1s
BRG                                 Amp           23 46 22.0
      comp=Z,3.0nm,11.3s
BRG                                 Amp           23 46 24.0
      comp=E,1.1nm,11.0s
GAZ   Gaziantep        13.20  91        Pn     23 40 14.1  +2.2
HFRF  Wahat Farafira   13.21 148  P     Pn     23 40 10.4  -1.5
      baz=150
HFRF                                AMP    AMP    23 42 27.7
      baz=150
HFRF                                S      Sn     23 42 27.7  -11
      baz=150
MMAI  Mount Meron Ar   13.27 111  Pn    Pn     23 40 12.2  -0.6
      comp=E,2.3nm,0.3s,baz=312,slow=11,SNR=19
MMAI                                Sn     Sn     23 42 35.1  -5.5
      comp=E,1.0nm,0.3s,baz=307,slow=25,SNR=3.0
NBNS  Bani Suef        13.42 135  P     Pn     23 40 12.7  -2.1
      baz=137
SUZ   Suez             13.42 128  P     Pn     23 40 13.4  -1.4
      baz=129
AKASG Malin Array Be   13.46  24  Pn    Pn     23 40 14.8  -0.3
      comp=E,0.7nm,0.3s,baz=210,slow=12,SNR=5.9
AKBB  Malin Array Si   13.46  24  P     Pn     23 40 15.4  +0.3
AKBB  Malin Array Si   13.46  24  Pn    Pn     23 40 15.4  +0.3
MOX   Moxa             13.53 335  P     Pn     23 40 14.7  -1.4
MOX                                 pmax   pmax
      comp=Z,13nm,0.9s
ECH   Echery           13.61 319  P     Pn     23 40 15.9  -1.4
ECH   Echery           13.61 319  Pn    Pn     23 40 15.9  -1.4
CDF   Champ du Feu     13.67 319 eP     Pn     23 40 18.4  +0.2
CDF                                 pmax   pmax
      comp=Z,84nm,2.0s
CLL   Collm            13.69 339 eP     Pn     23 40 22.0  +3.7
MALT  Malatya          13.97  86  P     P      23 40 29.6  -0.9
GHAJ  Ghor Haditha     14.30 117  Pn    Pn     23 40 27.9  +1.1
GKP   Gorka Klasztor   14.75 352  P     P      23 40 36.3  -2.6
GKP                                 pmax   pmax
      comp=Z,39nm,1.4s
ASF   Jabal al Asfar   14.79 111  Pn    Pn     23 40 33.7  +0.2
      comp=Z,0.3nm,0.3s,baz=286,slow=4.1,SNR=4.7
ASF                                 Sn     Sn     23 43 18.8  +1.2
      comp=Z,0.1nm,0.3s,baz=9.5,slow=23,SNR=1.1
EIL   Elat             14.89 123  Pn    Pn     23 40 32.0  -2.9
      comp=Z,1.3nm,0.3s,baz=209,slow=2.5,SNR=12
EIL                                 Sn     Sn     23 43 11.4  -8.6
      comp=Z,0.9nm,0.3s,baz=196,slow=20,SNR=4.2
EIL                                 LR     LR     23 48 17.5
      comp=Z,127nm,21.0s,baz=300,slow=45
KTUT  Trabzon          14.90  75 ⇑P     P      23 40 38.5  -2.1
AVF   Avril sur Loir   15.01 308 eP     P      23 40 43.7  +1.9
AVF                                 pmax   pmax
      comp=Z,15nm,1.1s
SSF   Saint Saulge     15.04 309 eP     P      23 40 44.0  +1.8
SSF                                 pmax   pmax
      comp=Z,37nm,1.2s
WLF   Walferdange      15.05 321 dP     P      23 40 45.7  +3.4
      comp=Z,24nm,1.4s
WLF   Walferdange      15.05 321  P     Pn     23 40 37.7  +0.8
WLF   Walferdange      15.05 321        Pn     23 40 37.7  +0.8
CAF   Calviac          15.14 300 eP     P      23 40 41.4  -2.0
CAF                                 pmax   pmax
      comp=Z,33nm,1.5s
SOC   Sochi            15.20  65 eP     Pn     23 40 38.0  -0.8
SOC                              e             23 43 28.3
SOC                                 MLR    MLR
      comp=Z,152nm,14.0s
BGF   Bois d'Agland    15.22 307 eP     P      23 40 46.7  +2.5
BGF                                 pmax   pmax
      comp=Z,114nm,2.0s
SUW   Suwalki          15.41   6  P     Pn     23 40 43.2  +1.6
SUW                                 pmax   pmax
      comp=Z,60nm,0.9s
SUW   Suwalki          15.41   6  Pn    Pn     23 40 43.2  +1.6
TCF   Toulx Ste Croi   15.52 305 eP     P      23 40 48.5  +1.0
TCF                                 pmax   pmax
      comp=Z,59nm,1.8s
BHOU  Houvegnez        15.59 323 dP     P      23 40 51.2  +3.0
BHOU                             dPP    PbPb   23 41 35.8  +0.6
BTNL  Ternell          15.69 324 dP     P      23 40 51.9  +2.6
BTNL                             dx     x      23 41 06.9
      comp=Z,18nm,0.9s
MEM   Membach          15.76 324 dP     P      23 40 52.5  +2.4
      comp=Z,10.0nm,0.0s
RCHB  Rochefort        15.83 321 dP     P      23 40 53.1  +2.3
BCLA  Clavier          15.96 322 dP     Pn     23 40 46.4  -2.3
      comp=Z,8.0nm,1.4s
GIVF  Givet            15.99 321 eP     P      23 40 54.7  +2.0
GIVF                                pmax   pmax
      comp=Z,21nm,1.0s
BGES  Gesves           16.04 322 dP     P      23 40 54.6  +1.3
BGES                             dPP    PbPb   23 41 42.1  -0.9
DOU   Dourbes          16.10 320 dP     P      23 40 55.1  +1.2
      comp=Z,13nm,0.9s
BAIF  Baives           16.27 320 eP     P      23 40 57.8  +2.0
BAIF                                pmax   pmax
      comp=Z,78nm,1.7s
MNK   Minsk            16.56  15 i P    Pn     23 40 53.4  -3.0
MNK                              i S    Sn     23 43 56.4  -3.8
MNK                                 pmax   pmax
      comp=N,22nm,0.9s
MNK                                 pmax   pmax
      comp=Z,32nm,0.8s
MNK                                 pmax   pmax
      comp=E,2.0nm,0.9s
MNK                                 MLR    MLR
      comp=E,119nm,16.0s
MNK                                 MLR    MLR
      comp=Z,884nm,19.0s
MNK                                 MLR    MLR
      comp=N,444nm,17.0s
MNK   Minsk            16.56  15 i P    Pn     23 40 53.4  -3.0
      comp=E,2.0nm,0.8s
MNK                              i P    Pn     23 40 53.4  -3.0
      comp=N,22nm,0.9s
MNK                              i P    Pn     23 40 53.4  -3.0
      comp=Z,32nm,0.8s,baz=21
MNK                              i PP   sP     23 41 02.5  +0.1
MNK                              i PPP  PPP    23 41 10.2
MNK                              i S    Sn     23 43 56.4  -3.8
MNK                              i SS   S      23 44 11.2  -0.9
MNK                              i SSS  SSS    23 44 23.8
MNK                              i LQ   LQ     23 45 44.6
MNK                              i LR   LR     23 46 28.1
MNK                              i LRM  MLR    23 47 54.5
      comp=E,119nm,15.8s
MNK                              i LRM  MLR    23 47 59.5
      comp=Z,884nm,19.0s
MNK                              i LRM  MLR    23 48 03.5
      comp=N,444nm,17.2s
NACGM Naroch           16.73  12 i P    Pn     23 40 59.1  +0.5
GURO  Guroymak-BITLI   16.75  84  P     P      23 41 01.8  +0.5
BSEG  Bad Segeberg     16.78 339  P     P      23 41 01.3  -0.1
BSEG                                pmax   pmax
      comp=Z,34nm,1.3s
PABE  Paberze          16.96   7        Pn     23 41 00.3  -1.1
PABE                                IAmb   IAmb   23 41 04.1
      comp=Z,33nm,0.7s
MFF   Saint Martin d   17.15 304 eP     P      23 41 07.7  +2.1
MFF                                 pmax   pmax
      comp=Z,185nm,2.1s
SIRT  Sirnak           17.23  87  P     P      23 41 07.7  +1.1
NEY   Neytrino         17.30  68 i P    P      23 41 08.3  +0.9
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NEY				pmax	pmax		
	comp=Z,16nm,1.4s						
SHA1	Shidzhatmaz	17.32	66	*i* P	P	23 41 07.5	-0.3
KIV	Kislovodsk	17.38	65	P	P	23 41 10.2	+2.0
KIV	Kislovodsk	17.38	65	*e*P	P	23 41 08.8	+0.6
KIV				pmax	pmax		
	comp=Z,22nm,1.0s						
KIV				MLR	MLR		
	comp=Z,116nm,14.0s						
KIV	Kislovodsk	17.38	65	P	Pn	23 41 07.2	+0.3
KIV				P	Pn	23 41 07.2	+0.3
KIV	Kislovodsk	17.38	65	P	P	23 41 08.8	+0.6
KARS	Kars	17.41	77	P	P	23 41 09.8	+1.1
KARS				pmax	pmax		
	comp=Z,74nm,1.1s						
KARS	Kars	17.41	77	P	P	23 41 09.8	+1.1
KARS				IAmb	IAmb	23 41 27.7	
	comp=Z,74nm,1.1s						
KBZ	Khabaz	17.49	66	P	P	23 41 10.6	+1.2
	comp=Z,0.2nm,0.3s,baz=276,slow=10,SNR=20						
KBZ	Khabaz	17.49	66	*ce*P	P	23 41 10.1	+0.8
PYA1	Pyatigorsk	17.69	65	*i* P	P	23 41 11.6	0.0
ONI	Oni	17.76	70	P	P	23 41 13.8	+1.4
ONI				pmax	pmax		
	comp=Z,12nm,0.8s						
ONI	Oni	17.76	70	P	P	23 41 13.8	+1.4
GOF	Gofitskoye	17.85	62	⇑*e*P	P	23 41 14.8	+1.5
GOF				pmax	pmax		
	comp=Z,35nm,0.9s						
NCK	Nalchik	17.96	67	*i* P	P	23 41 15.4	+0.8
NCK				pmax	pmax		
	comp=Z,25nm,1.0s						
VORD	Divnogorie	17.99	41	*e*P	P	23 41 14.9	+0.1
VORD				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VSR	Storozhevoye	18.07	40	*e*P	Pn	23 41 15.2	-0.1
VSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ZEI	Tsey	18.10	70	*e*P	Pn	23 41 16.2	+0.2
ZEI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GNI	Garni	18.69	78	P	Pn	23 41 25.1	+1.9
	comp=Z,1.6nm,0.3s,baz=148,slow=16,SNR=3.8						
GNI				LR	LR	23 49 50.4	
	comp=Z,225nm,18.7s,baz=264,slow=41						
GNI	Garni	18.69	78	*ce*P	Pn	23 41 24.4	+1.2
GNI				pmax	pmax		
	comp=Z,27nm,1.7s						
GNI	Garni	18.69	78	P	Pn	23 41 23.1	-0.1
GNI	Garni	18.69	78	P	Pn	23 41 25.2	+2.1
GNI				IAmb	IAmb	23 41 44.1	
	comp=Z,32nm,1.1s						
LPSR	Galich'ya Gora	18.82	36	*e*P	Pn	23 41 24.6	+0.2
LPSR				pmax	pmax		
	comp=Z,20nm,0.8s						
ESBB	Sonseca Array	19.05	281	P	P	23 41 26.5	-0.2
ESDC	Sonseca Array	19.06	281	P	P	23 41 26.1	-0.6
	comp=Z,0.2nm,0.3s,baz=75,slow=11,SNR=17						
PAB	San Pablo	19.36	280	P	P	23 41 29.7	-0.4
PAB				pmax	pmax		
	comp=Z,8.0nm,1.0s						
PAB	San Pablo	19.36	280	P	P	23 41 29.7	-0.4
VRH	Novokhopyorsk	19.40	43	*e*P	Pn	23 41 31.7	+0.3
VRH				pmax	pmax		
	comp=Z,20nm,0.8s						
OBN	Obninsk	19.63	28	P	Pn	23 41 34.2	+0.2
	comp=Z,0.7nm,0.3s,baz=258,slow=17,SNR=3.7						
OBN				LR	LR	23 50 04.8	
	comp=Z,183nm,18.9s,baz=210,slow=40						
OBN	Obninsk	19.63	28	*i* P	P	23 41 32.5	-0.2
OBN				*i* S	S	23 45 07.0	-7.2
OBN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,768nm,17.0s						
OBN	Obninsk	19.63	28	P	Pn	23 41 33.8	-0.3
DDFL	Dedoflistskaro	19.70	74	P	Pn	23 41 38.4	+3.3
VSU	Vasula	20.17	9	*i* P	P	23 41 39.0	+0.4
VSU				pmax	pmax		
	comp=Z,104nm,0.9s						
MOS	Moscow	20.49	28	*e*P	P	23 41 39.9	-2.3
MOS				*e*S	S	23 45 31.5	0.0
MOS				pmax	pmax		
	comp=Z,54nm,1.3s						
MOS				MLR	MLR		
	comp=Z,600nm,12.0s						
MAK	Makhachkala	20.76	70	*e*P	P	23 41 41.1	-4.0
MAK				*e*S	S	23 45 32.5	-4.4
MAK				pmax	pmax		
	comp=Z,242nm,1.1s						
MDT	Midelt	21.25	262	P	P	23 41 51.5	+0.8
	comp=Z,4.9nm,1.0s,baz=92,slow=14,SNR=6.1						
MVO	Moncorvo	21.30	285	*e*LR	LR	23 49 24.1	
	comp=Z,204nm,18.0s						
PBAR	Barrancos	21.63	277	*e*P	P	23 41 54.1	-0.5
	comp=Z,43nm,2.0s						
PMRV	Marv??o	21.72	281	*e*P	P	23 41 55.1	-0.5
	comp=Z,49nm,1.4s						
PMRV				*e*LR	LR	23 49 14.3	
	comp=Z,183nm,16.0s						
MTE	Manteigas	21.73	283	*e*LR	LR	23 50 28.9	
	comp=Z,183nm,18.0s						
PCBR	Castelo Branco	21.74	282	*e*P	P	23 41 55.3	-0.4
	comp=Z,36nm,1.7s						
HFS	Hagfors	21.89	351	P	P	23 41 56.3	-0.9
	comp=Z,13nm,0.7s,baz=167,slow=9.1,SNR=18						
HFS				LR	LR	23 52 52.4	
	comp=Z,363nm,18.1s,baz=176,slow=44						
PESTR	Estremoz	21.95	279	*e*P	P	23 41 56.2	-1.8
	comp=Z,60nm,1.6s						
PESTR	Estremoz	21.95	279	P	P	23 41 56.2	-1.8
PVIS	Viseu	21.98	284	*e*P	P	23 41 58.8	+0.4
KONO	Kongsberg	22.10	345	*ce*P	P	23 41 57.6	-1.9
KONO				pmax	pmax		
	comp=Z,34nm,1.7s						
PGAV	Gavieira, Arco	22.20	288	*e*LR	LR	23 49 36.6	
	comp=Z,202nm,16.0s						
PVAQ	Vaqueiros	22.31	276	*e*P	P	23 42 01.7	-0.2
	comp=Z,48nm,1.3s						
PVAQ				*e*LR	LR	23 50 12.9	
	comp=Z,101nm,16.0s						
PVAQ	Vaqueiros	22.31	276	P	P	23 42 00.3	-1.6
PVAQ				IAmb	IAmb	23 42 04.3	
	comp=Z,17nm,1.1s						
EVO	Evora	22.32	279	*e*P	P	23 42 00.7	-1.4
	comp=Z,38nm,1.4s						
PMTG	Montargil	22.41	280	*e*P	P	23 42 01.2	-1.7
	comp=Z,36nm,1.4s						
MESJ	Messejana	22.61	277	*e*P	P	23 42 05.7	+0.6
	comp=Z,48nm,1.9s						
NC602	NORSAR Array S	22.77	348	P	P	23 42 06.6	0.0
NC602				IAmb	IAmb	23 42 09.5	
	comp=Z,37nm,1.0s						
NORES	NORESS Array B	22.77	348	P	P	23 42 08.4	+1.8
PNCL	Nicolau / Gran	22.80	278	*e*P	P	23 42 06.2	-0.9
	comp=Z,48nm,1.8s						
NAO01	NORSAR Array S	22.98	348	IAmb	IAmb	23 42 10.9	
	comp=Z,24nm,0.8s						
FINES	FINESS Array B	23.02	7	P	P	23 42 08.7	-0.4
	comp=Z,20nm,0.8s,baz=168,slow=9.8,SNR=27						
FINES	FINESS Array B	23.02	7	*i* P	P	23 42 08.6	-0.5
FINES				pmax	pmax		
	comp=Z,20nm,0.8s						
FINES	FINESS Array B	23.02	7	P	P	23 42 08.3	-0.8
FIA1	FINESS Array S	23.02	7	P	P	23 42 08.9	-0.3
FIA1				IAmb	IAmb	23 42 10.5	
	comp=Z,41nm,1.1s						
EKA	Eskdalemuir Ar	23.04	324	P	P	23 42 09.0	-0.4
	comp=Z,48nm,1.0s,baz=124,slow=11,SNR=24						
EKA	Eskdalemuir Ar	23.04	324	P	P	23 42 09.0	-0.4
ESK	Eskdalemuir	23.05	324	P	P	23 42 08.3	-1.2
ESK				pmax	pmax		
	comp=Z,89nm,1.1s						
ESK	Eskdalemuir	23.05	324	P	P	23 42 08.3	-1.2
NB2	NORSAR Subarra	23.11	348	P	P	23 42 08.9	-1.3
	comp=Z,219nm,3.3s,baz=157,slow=10						
NOA	NORSAR Array B	23.11	348	P	P	23 42 09.1	-1.1
	comp=Z,11nm,0.8s,baz=158,slow=9.5,SNR=19						
NOA				LR	LR	23 53 15.1	
	comp=Z,361nm,21.2s,baz=165,slow=42						
BELG	Belogornoye	23.18	45	P	P	23 42 12.3	+1.4
	comp=Z,28nm,0.6s,baz=260,slow=3.9,SNR=11						
BELG	Belogornoye	23.18	45	*c i*P	P	23 42 11.8	+0.9
BELG				pmax	pmax		
	comp=Z,10.0nm,0.9s						
NC303	NORSAR Array S	23.27	349	IAmb	IAmb	23 42 12.7	
	comp=Z,25nm,0.8s						
NC300	NORSAR Array S	23.29	349	P	P	23 42 11.7	-0.3
NC300				IAmb	IAmb	23 42 12.9	
	comp=Z,22nm,0.8s						
NC204	NORSAR Array S	23.41	348	P	P	23 42 13.9	+0.6
NC204				IAmb	IAmb	23 42 28.4	
	comp=Z,20nm,1.0s						
KLMR	Klimovskoe	25.13	22	*e*P	P	23 42 27.6	-1.5
KLMR				pmax	pmax		
	comp=Z,24nm,1.0s						
KLMR	Klimovskoe	25.13	22	*e*P	P	23 42 27.7	-1.4
KLMR				AMP		23 42 38.4	
	comp=Z,24nm,1.0s						
KLMR				LQ	LQ	23 50 10.1	
KLMR				LQ	LQ	23 50 10.1	
KLMR				LR	LR	23 52 22.4	
RAYN	Ar Rayn	26.03	118	*i* P	P	23 42 37.8	0.0
	SNR=8.9						
RAYN	Ar Rayn	26.03	118	P	P	23 42 39.6	+1.8
RAYN				pmax	pmax		
	comp=Z,11nm,1.1s						
RAYN	Ar Rayn	26.03	118	P	P	23 42 40.0	+2.2
RAYN	Ar Rayn	26.03	118	P	P	23 42 39.6	+1.8
RAYN				IAmb	IAmb	23 42 57.4	
	comp=Z,11nm,1.1s						
KIRV	Kirov	27.18	34	P	P	23 42 47.3	-0.3
	comp=Z,6.0nm,0.5s,baz=215,slow=12,SNR=2.6						
KIRV				LR	LR	23 53 38.7	
	comp=Z,361nm,18.2s,baz=234,slow=37						
KIRV	Kirov	27.18	34	*ce*P	P	23 42 46.7	-1.0
PRGR	Permogore	27.66	26	*e*P	P	23 42 52.0	0.0
PRGR				pmax	pmax		
	comp=Z,29nm,1.1s						
AKTO	Aktyubinsk	28.81	54	P	P	23 43 02.4	0.0
	comp=Z,3.7nm,0.6s,baz=264,slow=10,SNR=13						
AKTO				LR	LR	23 55 20.2	
	comp=Z,150nm,21.4s,baz=283,slow=38						
GEYT	Alibeck	29.31	80	P	P	23 43 08.3	+1.3
	comp=Z,8.5nm,0.6s,baz=255,slow=11,SNR=13						
GEYT				LR	LR	23 55 46.5	
	comp=Z,64nm,18.2s,baz=30,slow=38						
GYA0B	ALIBECK ARRAY	29.31	80	P	P	23 43 08.0	+1.0
GYA0B				IAmb	IAmb	23 43 14.2	
	comp=Z,13nm,0.7s						
ABKAR	Akbulak array	29.90	56	P	P	23 43 12.7	+0.7
ABKAR	Akbulak array	29.90	56	P	P	23 43 12.0	0.0
ABKAR					PcP	23 46 15.6	+0.9
TORD	Torodi Ar. Bea	30.48	218	P	P	23 43 17.1	-0.4
	comp=Z,2.5nm,0.6s,baz=31,slow=7.3,SNR=26						
ARU	Arti	30.62	42	P	P	23 43 18.5	+0.1
	comp=Z,0.6nm,0.4s,baz=251,slow=11,SNR=5.4						
ARU	Arti	30.62	42	*d i*P	P	23 43 17.7	-0.7
ARU				S	S	23 48 22.0	+1.5
ARU				pmax	pmax		
	comp=Z,10.0nm,1.3s						
ARU	Arti	30.62	42	IAmb	IAmb	23 43 18.9	
	comp=Z,6.8nm,1.1s						
ARCES	ARCESS Array B	31.00	3	P	P	23 43 20.5	-1.0
	comp=Z,5.9nm,0.8s,baz=192,slow=8.3,SNR=9.1						
ARCES				LR	LR	23 56 52.7	
	comp=Z,398nm,21.8s,baz=190,slow=38						
SVE	Sverdlovsk	31.84	42	*e*P	P	23 43 29.7	+0.6
SVE				pmax	pmax		
	comp=Z,21nm,1.5s						
MZWR	Madinat Zayed	31.91	108	P	P	23 43 31.1	+1.1
UMQ	Umm Al-Quwin	32.27	104	P	P	23 43 34.5	+1.4
AJN	Ajban	32.29	106	P	P	23 43 34.4	+1.1
SHME	Shamm	32.36	102	P	P	23 43 33.4	-0.5
SHME	Shamm	32.36	102	P	P	23 43 33.7	-0.3
SHME				P	P	23 43 33.7	-0.3
KOWA	Kowa	32.45	229	P	P	23 43 34.7	-0.2
	comp=Z,2.5nm,0.6s,baz=33,slow=11,SNR=8.8						
KOWA	Kowa	32.45	229	P	P	23 43 35.5	+0.6
KOWA				IAmb	IAmb	23 43 39.8	
	comp=Z,3.9nm,0.8s						
ASUD	Al Ashush, Dub	32.51	105	P	P	23 43 36.6	+1.3
BANOM	Banah	32.54	102	*i* P	P	23 43 35.0	-0.6
	SNR=9.0						
BANOM	Banah	32.54	102	P	P	23 43 35.6	-0.1
NAZ	Nazwa, Dubai	32.56	104	*i* P	P	23 43 36.1	+0.4
	SNR=8.1						
NAZ	Nazwa, Dubai	32.56	104	P	P	23 43 36.3	+0.6
	SNR=8.1						
FAQ	Al Faqa, Dubai	32.64	105	P	P	23 43 37.0	+0.6
FAQ	Al Faqa, Dubai	32.64	105	P	P	23 43 37.5	+1.0
MASF	Masafi	32.73	103	P	P	23 43 38.1	+0.8
MSFE	Esma-Masafi	32.74	103	P	P	23 43 37.7	+0.4
MDH	Madha	32.88	103	P	P	23 43 39.1	+0.6
MDH	Madha	32.88	103	P	P	23 43 39.0	+0.6
UOSS	Minazif	33.00	104	P	P	23 43 39.8	+0.3
UOSS	Minazif	33.00	104	P	P	23 43 40.0	+0.5
UOSS				P	P	23 43 40.0	+0.5
UOSS	Minazif	33.00	104	P	P	23 43 40.1	+0.5
HATD	Hatta, Dubai	33.01	104	*i* P	P	23 43 39.8	+0.1
	SNR=11						
HATD	Hatta, Dubai	33.01	104	P	P	23 43 40.5	+0.8
ASHO	Ashiyiah	33.03	105	*i* P	P	23 43 39.8	-0.1
	SNR=11						
ASHO	Ashiyiah	33.03	105	P	P	23 43 41.0	+1.1
	SNR=11						
ALNE	Al Ain	33.15	106	*i* P	P	23 43 41.3	+0.4
	SNR=11						
ALNE	Al Ain	33.15	106	P	P	23 43 42.1	+1.2
	SNR=11						
HRA	Herat	33.52	84	P	P	23 43 44.9	+0.5
HRA				IAmb	IAmb	23 43 46.2	
	comp=Z,3.6nm,0.8s						
ATD	Arta Tunnel	33.55	138	P	P	23 43 47.4	+3.0
SOHO	SOHO	33.69	105	*i* P	P	23 43 46.2	+0.5
	SNR=22						
SOHO	SOHO	33.69	105	P	P	23 43 46.6	+1.0
SOHO				P	P	23 43 46.6	+1.0
ARQ	Araqi	34.14	106	P	P	23 43 50.4	+0.9
HOQ	Hoqain	34.59	105	P	P	23 43 54.2	+0.7
	SNR=10						
BSY	Bisya	34.99	106	P	P	23 43 57.7	+0.8
BIDO	Bidbid	35.24	104	P	P	23 44 00.2	+1.1
DOK	Doka	35.30	115	P	P	23 44 00.8	+1.2
SMDO	Samad	35.45	105	P	P	23 44 01.4	+0.5
	SNR=12						
SMDO				P	P	23 44 01.4	+0.5
	SNR=12						
WHFO	Wadi Hawf	35.51	116	P	P	23 44 02.8	+1.3
ABTO	Aybut	35.56	118	P	P	23 44 03.7	+1.7
WSAR	Wadi Sarin	35.78	104	P	P	23 44 04.3	+0.5
JMDO	Jabal Madar	35.88	106	P	P	23 44 06.0	+1.4
	SNR=8.7						
RBK	Rabkut	36.09	116	P	P	23 44 07.9	+1.4
WBK	Wadi Bani Khal	36.40	105	P	P	23 44 11.0	+1.9
	SNR=7.6						
BRVK	Borovoye	36.67	50	*ce*P	P	23 44 11.2	+0.2
BRVK				pmax	pmax		
	comp=Z,23nm,1.7s						
BRVK	Borovoye	36.67	50	P	P	23 44 11.0	+0.1
BRVK				IAmb	IAmb	23 44 14.3	
	comp=Z,11nm,0.8s						
KKAR	Karatay Array	37.53	67	P	P	23 44 19.1	+0.6
KKAR	Karatay Array	37.53	67	P	P	23 44 19.1	+0.6
CHGR	Chuyangaron	37.55	74	P	P	23 44 20.1	+1.4
LODK	Lodwar	37.61	155	P	P	23 44 20.9	+1.5
GAR	Garm	38.32	73	P	P	23 44 26.6	+1.2
BTK	Batken	38.42	72	IAmb	IAmb	23 44 38.2	
	comp=Z,8.9nm,0.8s						
SCO	Scoresbysund	38.72	339	P	P	23 44 29.1	+1.0
SCO				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SCO	Scoresbysund	38.72	339	P	P	23 44 29.1	+1.0
KBL	Kabul	38.74	81	P	P	23 44 29.6	+0.6
KBL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KBL	Kabul	38.74	81	P	P	23 44 29.6	+0.6
DBIC	Dimbokro	39.32	222	P	P	23 44 33.6	-0.1
	comp=Z,6.8nm,0.8s,baz=35,slow=11,SNR=5.2						
DBIC				LR	LR	00 02 03.4	
	comp=Z,113nm,21.2s,baz=40,slow=38						
DBIC	Dimbokro	39.32	222	P	P	23 44 34.5	+0.8
DBIC				pmax	pmax		
	comp=Z,14nm,1.0s						
DBIC	Dimbokro	39.32	222	P	P	23 44 34.5	+0.8
DBIC				IAmb	IAmb	23 44 35.2	
	comp=Z,14nm,1.0s						
TIC	Toumodi	39.43	223	*e*P	P	23 44 34.3	-0.4
KIC	Kosan Boka	39.52	222	*e*P	P	23 44 35.1	-0.3
	comp=Z,42nm,1.3s						
LIC	Lamto	39.79	222	*e*P	P	23 44 33.6	-4.0
	comp=Z,71nm,1.3s						
AML	Almayashu	40.03	68	P	P	23 44 41.0	+1.1
MBAR	Mbarara	40.21	164	P	P	23 44 43.3	+2.1
	comp=Z,1.9nm,0.2s,baz=334,slow=19,SNR=3.6						
MBAR	Mbarara	40.21	164	*i* P	P	23 44 42.1	+0.8
MBAR	Mbarara	40.21	164	P	P	23 44 41.7	+0.5
KBS	Kingsbay	40.49	357	P	P	23 44 42.1	-0.6
KBS				pmax	pmax		
	comp=Z,29nm,1.0s						
KBS	Kingsbay	40.49	357	P	P	23 44 42.1	-0.6
AAK	Ala-Archa	40.49	67	P	P	23 44 45.1	+1.7
AAK	Ala-Archa	40.49	67	*i* P	P	23 44 43.5	+0.1
AAK				pmax	pmax		
	comp=Z,17nm,0.9s						
AAK	Ala-Archa	40.49	67	P	P	23 44 44.9	+1.5
AAK				IAmb	IAmb	23 44 50.5	
	comp=Z,5.8nm,0.8s						
FRU1	Bishkek	40.55	66	P	P	23 44 45.3	+1.5
FRU1				pmax	pmax		
	comp=Z,21nm,1.1s						
FRU1	Bishkek	40.55	66	P	P	23 44 45.3	+1.5
FRU1				IAmb	IAmb	23 44 54.2	
	comp=Z,21nm,1.1s						
KURK	Kurchatov	41.91	54	*ce*P	P	23 44 54.5	-0.3
KURK				pmax	pmax		
	comp=Z,13nm,1.7s						
KURK	Kurchatov	41.91	54	P	P	23 44 55.2	+0.5
KURK				IAmb	IAmb	23 45 08.8	
	comp=Z,6.5nm,0.9s						
NIL	Nilore	42.32	80	P	P	23 44 59.0	+0.7
NIL				pmax	pmax		
	comp=Z,16nm,0.9s						
NIL	Nilore	42.32	80	P	P	23 44 59.0	+0.7
NIL				IAmb	IAmb	23 45 10.5	
	comp=Z,16nm,0.9s						
KSH	Kashi	42.39	71	P	P	23 44 58.4	-0.6
KSH				pP	sP	23 45 03.3	+0.7
KSH				sP	pP	23 45 05.1	+3.5
KSH				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KMBO	Kilima Mbogo	42.50	155	LR	LR	00 05 34.6	
	comp=Z,88nm,18.4s,baz=27,slow=40						
MAKZ	Makanchi	44.76	59	P	P	23 45 18.4	+0.5
MAKZ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MAKZ	Makanchi	44.76	59	P	P	23 45 18.4	+0.5
MAKZ				IAmb	IAmb	23 45 31.2	
	comp=Z,3.9nm,0.9s						
MK31	Makanchi Array	44.97	59	*i* P	P	23 45 19.7	+0.1
MK31	Makanchi Array	44.97	59	IAmb	IAmb	23 45 23.8	
	comp=Z,3.4nm,0.7s						
MKAR	Makanchi Array	44.97	59	P	P	23 45 18.4	-1.1
	comp=Z,4.3nm,0.6s,baz=275,slow=7.2,SNR=27						
MKAR				LR	LR	00 07 46.6	
	comp=Z,66nm,18.0s,baz=304,slow=41						
MKAR	Makanchi Array	44.97	59	*ce*P	P	23 45 19.5	-0.1
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ZALV	Zalesovo Beam	45.29	48	P	P	23 45 20.8	-1.2
	comp=Z,10nm,0.6s,baz=278,slow=7.9,SNR=40						
ZALV				LR	LR	00 04 56.6	
	comp=Z,128nm,18.6s,baz=282,slow=37						
ZALV	Zalesovo Beam	45.29	48	*i* P	P	23 45 21.3	-0.7
ZALV				pmax	pmax		
	comp=Z,11nm,0.6s						
NRIK	Noril'sk	46.30	27	P	P	23 45 30.6	+1.0
	comp=Z,1.1nm,0.3s,baz=225,slow=7.1,SNR=1.8						
NRIK				LR	LR	00 07 39.3	
	comp=Z,225nm,19.4s,baz=262,slow=40						
NRIK	Noril'sk	46.30	27	*ce*P	P	23 45 30.7	+1.0
NRIK				pmax	pmax		
	comp=Z,16nm,2.1s						
DGZ	Jazzator, Alta	47.66	54	*i* P	P	23 45 40.4	-0.4
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.7s						
WMQ	Urumqi	49.45	61	*e*P	P	23 46 00.4	+5.8
WMQ				sP	sP	23 46 08.3	+10
WMQ				pmax	pmax		
	comp=Z,17nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,120nm,4.5s						
PYUN	Piuthan	52.25	82	*e*P	P	23 46 15.8	-0.3
	comp=Z,17nm,0.6s						
DANN	Dangsing	52.73	81	*e*P	P	23 46 19.9	+0.2
	comp=Z,26nm,0.8s						
KOLN	Koldanda	52.88	82	*e*P	P	23 46 20.6	-0.2
GKN	Gorkha	53.58	81	*e*P	P	23 46 25.5	-0.3
	comp=Z,10nm,0.7s						
DMN	Daman	54.13	81	*e*P	P	23 46 29.7	-0.3
PKIN	Phulchoki	54.37	81	*e*P	P	23 46 31.4	-0.3
PKI	Pulchoki	54.38	81	*e*P	P	23 46 31.7	-0.2
GUN	Gumba	54.58	81	*e*P	P	23 46 33.6	+0.2
JIRN	Jiri	54.94	81	*e*P	P	23 46 36.6	+0.6
RAMN	Ramite	55.61	81	*e*P	P	23 46 40.6	-0.1
	comp=Z,7.1nm,0.6s						
TAPN	Taplejung	56.27	80	*e*P	P	23 46 46.4	+0.9
TSUM	Tsumeb	57.67	183	P	P	23 46 55.1	0.0
SCHQ	Schefferville	58.12	317	P	P	23 46 57.0	-0.8
	comp=Z,11nm,1.0s,baz=65,slow=9.7,SNR=4.9						
TIXI	Tiksi	59.13	21	*ce*P	P	23 47 03.9	-0.7
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
TIXI	Tiksi	59.13	21	P	P	23 47 05.9	+1.4
TIXI				IAmb	IAmb	23 47 07.9	
	comp=Z,4.6nm,0.9s						
GTA	Gaotai	59.52	62	⇓P	P	23 47 08.3	+0.4
GTA				pP	sP	23 47 12.5	+0.9
GTA				sP	pP	23 47 15.5	+4.9
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SONM	Songino Array	60.08	51	P	P	23 47 11.9	+0.3
	comp=Z,2.3nm,0.8s,baz=278,slow=10,SNR=9.6						
SONM	Songino Array	60.08	51	P	P	23 47 12.5	+0.8
SONM				pmax	pmax		
	comp=Z,7.0nm,1.2s						
SONM	Songino Array	60.08	51	P	P	23 47 12.4	+0.8
SONM				IAmb	IAmb	23 47 17.1	
	comp=Z,6.6nm,1.2s						
ULN	Ulaanbaatar	60.46	51	*ce*P	P	23 47 14.4	+0.1
ULN				pmax	pmax		
	comp=Z,7.0nm,1.7s						
ULN	Ulaanbaatar	60.46	51	P	P	23 47 15.5	+1.2
ULN				IAmb	IAmb	23 47 28.7	
	comp=Z,4.6nm,1.0s						
D62A	Allapoint, All	62.75	310	P	P	23 47 30.9	+1.3
HHC	Hu-ho-hao-te	66.68	56	*e*P	P	23 47 56.9	+1.4
HHC				pmax	pmax		
	comp=Z,11nm,0.8s						
HHC				pmax	pmax		
	comp=Z,71nm,6.6s						
A36M	Sachs Harbour	67.02	349	P	P	23 47 57.8	+0.9
A36M				IAmb	IAmb	23 48 08.7	
	comp=Z,6.4nm,0.9s						
BOSA	Boshof	67.11	176	P	P	23 47 58.8	+0.7
	comp=Z,5.6nm,1.2s,baz=13,slow=2.7,SNR=3.8						
BOSA				LR	LR	00 20 01.5	
	comp=Z,218nm,18.2s,baz=11,slow=38						
XAN	Xi'an	68.53	63	P	P	23 48 04.5	-2.7
XAN				pmax	pmax		
	comp=Z,5.0nm,1.2s						
KMI	Kunming	68.90	74	⇑P	P	23 48 08.8	-1.0
KMI				pmax	pmax		
	comp=Z,6.0nm,1.1s						
CMAR	Chiang Mai Arr	69.75	82	P	P	23 48 14.9	0.0
	comp=Z,1.2nm,0.4s,baz=301,slow=7.0,SNR=3.1						
BILL	Bilibino	70.49	13	*i* P	P	23 48 15.0	-3.6
BILL				*i*		23 48 37.9	
BILL				pmax	pmax		
	comp=Z,5.0nm,1.3s						
BILL				MLR	MLR		
	comp=Z,141nm,18.0s						
INK	Inuvik	71.56	350	P	P	23 48 26.3	+1.3
	comp=Z,1.1nm,0.7s,baz=12,slow=8.0,SNR=1.7						
INK	Inuvik	71.56	350	IAmb	IAmb	23 48 31.2	
	comp=Z,1.8nm,0.9s						
ULM	Lac du Bonnet	75.31	324	P	P	23 48 47.3	-0.2
	comp=Z,5.5nm,0.9s,baz=51,slow=6.5,SNR=2.2						
ULM				LR	LR	00 22 29.8	
	comp=Z,80nm,18.0s,baz=72,slow=36						
ULM	Lac du Bonnet	75.31	324	P	P	23 48 47.4	-0.2
ULM				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ULM	Lac du Bonnet	75.31	324	IAmb	IAmb	23 48 54.5	
	comp=Z,5.2nm,0.8s						
ILAR	Eielson Array	76.39	355	P	P	23 48 52.7	-0.7
	comp=Z,0.7nm,0.8s,baz=353,slow=2.9,SNR=6.7						

ILAR				LR	LR	00 22 41.2	
	comp=Z,77nm,21.7s,baz=346,slow=36						
NJ2	Nanjing	76.49	60	*e*P	P	23 48 56.3	+1.7
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.5s						
USRK	Ussuriysk Ar.	76.85	43	LR	LR	00 26 26.6	
	comp=Z,127nm,18.5s,baz=310,slow=39						
KSAR	Wonju Array Be	78.93	51	P	P	23 49 08.3	+0.2
KSAR	Wonju Array Be	78.93	51	P	P	23 49 08.3	+0.2
KSRS	Korea Array	78.95	51	P	P	23 49 08.8	+0.7
	comp=Z,2.4nm,0.6s,baz=324,slow=4.9,SNR=9.1						
PETK	Petropavlovsk-	81.30	25	LR	LR	00 29 45.7	
	comp=Z,133nm,19.8s,baz=319,slow=39						
BDFB	Brasilia	83.80	244	P	P	23 49 35.4	+1.2
	comp=Z,3.7nm,0.7s,baz=41,slow=7.5,SNR=5.6						
BDFB	Brasilia	83.80	244	P	P	23 49 34.5	+0.3
BDFB				IAmb	IAmb	23 49 37.7	
	comp=Z,7.7nm,0.9s						
T35A	Sooner Cattle	85.03	314	P	P	23 49 41.5	+1.3
MJAR	Matsushiro Arr	85.57	46	P	P	23 49 43.2	+0.3
	comp=Z,4.1nm,0.8s,baz=325,slow=3.9,SNR=7.8						
MJAR	Matsushiro Arr	85.57	46	P	P	23 49 44.3	+1.4
MJAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MJAR	Matsushiro Arr	85.57	46	P	P	23 49 44.3	+1.4
MJAR				IAmb	IAmb	23 49 44.9	
	comp=Z,4.3nm,0.9s						
KAN14	Manchester OK	85.81	315	P	P	23 49 43.9	-0.2
OK031	S. Brethren Rd	85.90	314	P	P	23 49 43.3	-1.3
PDAR	Pinedale Array	87.15	326	P	P	23 49 51.1	+0.2
	comp=Z,0.3nm,0.5s,baz=39,slow=7.2,SNR=2.2						
PDAR				LR	LR	00 29 27.4	
	comp=Z,57nm,20.0s,baz=28,slow=36						
PTLB	Pontes e Lacer	91.75	252	P	P	23 50 12.5	+0.1
PTLB				IAmb	IAmb	23 50 15.3	
	comp=Z,4.6nm,1.1s						
NVAR	Mina Array Bea	94.45	329	P	P	23 50 25.6	+0.6
	comp=Z,0.2nm,0.5s,baz=79,slow=4.7,SNR=2.7						
NVAR				LR	LR	00 36 57.8	
	comp=Z,130nm,19.2s,baz=44,slow=38						
TXAR	Lajitas Array	94.66	314	P	P	23 50 26.7	+0.7
	comp=Z,0.9nm,0.9s,baz=74,slow=4.6,SNR=5.1						
CPUP	Villa Florida	97.35	242	LR	LR	00 35 32.4	
	comp=Z,57nm,18.9s,baz=40,slow=36						
WRA	Warramunga Arr	120.49	92	PKP	PKPdf	23 55 55.8	-0.7
	comp=Z,1.2nm,0.6s,baz=323,slow=1.6,SNR=20						
ASAR	Alice Springs	122.17	96	PKP	PKPdf	23 55 59.0	-0.6
	comp=Z,2.1nm,0.7s,baz=317,slow=1.7,SNR=24						
ASAR	Alice Springs	122.17	96	PKIKP	PKPdf	23 55 59.0	-0.6

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*TUL **20** 23:43:30±1.1, 36°.94N±0°.01×97°.82W±0°.01, h6^{km}±3^{km}, ML2.8, mb_Lg2.4/18(NEIC), Error ellipse: s-maj=1.9km s-min=1.2km az=137.0*

NEIC 20 23:43:30.2±1.0**, 36°.91N**±0°.01×**97°.81W**±0°.01**, h5**^{km}±4^{km}**, Error ellipse: s-maj=2.1km s-min=1.5km az=144.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.07	213	Pg	Pg	23 43 32.4	+0.6
GC02				Sg	Sg	23 43 33.9	+0.9
KAN14	Manchester OK	0.13	292	Pg	Pg	23 43 32.6	-0.3
KAN14				Sg	Sg	23 43 34.6	0.0
KAN17	Caldwell West	0.14	16	Pg	Pg	23 43 33.0	-0.1
KAN17				Sg	Sg	23 43 34.9	-0.1
KAN05	Bluff City Nor	0.20	347		Pg	23 43 34.0	-0.3
KAN05				Sg	Sg	23 43 36.6	-0.4
KAN01	Argonia South	0.25	10	Pg	Pg	23 43 34.8	-0.2
KAN01				Sg	Sg	23 43 38.0	-0.3
KAN09	Caldwell North	0.28	35	Pg	Pg	23 43 35.4	-0.2
KAN09				Sg	Sg	23 43 39.0	-0.3
KAN13	South Haven SW	0.29	69	Pg	Pg	23 43 35.9	+0.1
KAN13				Sg	Sg	23 43 40.1	+0.5
KAN10	Anthony SW Sta	0.31	314	Pg	Pg	23 43 36.0	-0.3
KAN10				Sg	Sg	23 43 40.1	-0.2
OK032	Salt Plains WL	0.34	252	Pg	Pg	23 43 36.8	0.0
KAN06	Argonia West S	0.34	354		Pg	23 43 36.5	-0.3
KAN06				Sg	Sb	23 43 43.0	-1.5
KAN08	Anthony NE Sta	0.34	338		Pg	23 43 36.4	-0.4
KAN08				Sg	Sg	23 43 41.1	-0.3
KAN16	Harper SW Stat	0.37	328	Pg	Pg	23 43 37.0	-0.4
CROK	Carrier	0.43	199	Pg	Pg	23 43 39.0	+0.5
BLOK	Blackwell	0.50	107	Pg	Pg	23 43 40.0	+0.2
T35A	Sooner Cattle	1.04	89	Pg	Pg	23 43 50.0	-0.2
U32A	Winter Ranch,	1.09	241	Pg	Pg	23 43 50.1	-1.1
OK029	Liberty Lake	1.15	165	Pn	Pg	23 43 52.1	-0.1
QUOK	Quay	1.16	129	Pn	Pg	23 43 52.1	-0.2
OK031	S. Brethren Rd	1.24	140	Pn	Pg	23 43 53.6	-0.3
OK031					Sn	23 44 12.3	+1.1
BCOK	Bluff Creek, N	1.26	172		Pg	23 43 54.1	-0.3
OK030	Cody Creek RV	1.28	139		Pn	23 43 54.5	-0.3
OK025	Westminster Rd	1.38	164		Pn	23 43 56.0	-0.1
OKCFA	Oklahoma City	1.52	169		Pn	23 43 58.4	+0.3
OKCFA				IAmb_Lg		23 44 21.6	
	comp=Z,31nm,0.8s						
OKCSW	OKLAHOMA CITY	1.53	168		Pn	23 43 58.5	+0.3
R32A	Long Quarter,	1.67	335		Pn	23 44 00.4	+0.2
FNO	Franklin	1.68	168		Pb	23 44 00.9	-0.7
TUL1	Leonard	1.91	121	Pn	Pn	23 44 04.1	+0.7
X34A	Smith Ranch, M	2.30	180		Pn	23 44 09.1	+0.3
X34A				IAmb_Lg		23 44 43.5	
	comp=Z,13nm,1.1s						
WMOK	Wichita Mounta	2.31	200		Pn	23 44 09.1	+0.2
WMOK				IAmb_Lg		23 44 48.0	
	comp=Z,9.0nm,0.7s						
KSU1	Kansas State U	2.39	23	Pn	Pn	23 44 09.9	0.0
KSU1				IAmb_Lg		23 44 50.7	
	comp=Z,41nm,0.7s						
CBKS	Cedar Bluff	2.44	322	Pn	Pn	23 44 09.1	-1.6
LOOK	Love County	2.96	170	Pn	Pn	23 44 17.9	+0.1
X37A	Clayton	3.05	139		Pn	23 44 19.5	+0.4
HHAR	Hobbs	3.18	100	Pn	Pn	23 44 21.4	+0.6
S39A	Bolivar	3.66	76	Pn	Pn	23 44 28.2	+0.7
S39A				IAmb_Lg		23 45 35.7	
	comp=Z,8.6nm,1.0s						
AMTX	Amarillo	3.73	238	IAmb_Lg		23 45 35.6	
	comp=Z,12nm,0.8s						
MIAR	Mount Ida	4.18	123	IAmb_Lg		23 45 44.4	
	comp=Z,10nm,0.8s						
PBMO	Poplar Bluff	5.92	89	IAmb_Lg		23 46 43.5	
	comp=Z,6.8nm,0.8s						

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*NCEDC **20** 23:43:35.3±1.4, 37°.57N±0°.03×118°.63W±0°.03, h10^{km}±7^{km}, Md3.0/45, ML2.9/4(REN), ML2.4/52(NEIC), Error ellipse: s-maj=5.1km s-min=3.7km az=197.0*

*REN **20** 23:43:35.2±1.7, 37°.56N±0°.04×118°.64W±0°.02, h12^{km}±7^{km}, Error ellipse: s-maj=5.2km s-min=2.6km az=166.0*

NEIC 20 23:43:36.9±2.9**, 37°.63N**±0°.03×**118°.74W**±0°.03**, h10**^{km}±1^{km}**, Error ellipse: s-maj=6.0km s-min=3.8km az=323.0, California-Nevada border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MDRNC	Doe Ridge	0.08	276		Pg	23 43 39.6	+0.1
MDCM	Deadman Creek	0.26	288		Pg	23 43 42.5	+0.3
MRDM	Red Cones	0.26	263		Pg	23 43 42.2	-0.1
MDPB	Devils Postpil	0.27	271		Pg	23 43 42.5	0.0
MTUM	Tungsten Hills	0.31	153		Pg	23 43 40.1	-3.1
KCC	Kaiser Creek	0.56	237		Pg	23 43 46.6	-1.1
LHV	Little Huntoon	0.65	16		Pg	23 43 48.7	-0.7
LHV				IAML		23 44 01.1	
	comp=E,192nm,0.5s						
LHV				IAML		23 44 02.5	
	comp=N,184nm,0.6s						
NVAR	Mina Array Bea	0.87	23		Pg	23 43 51.2	-2.5
NV11	Mina Array Sit	0.92	30		Pg	23 43 53.2	-1.5
LCH	Last Change Ra	0.95	114		Pg	23 43 51.2	-4.1
HELL	Mitchell Peak,	0.97	194		Pg	23 43 52.7	-3.0
RYN	Ryan	1.01	10		Pg	23 43 55.7	-0.7
RYN				IAML		23 44 10.4	
	comp=E,95nm,0.2s						
TPH	Tonopah	1.28	69		Pn	23 43 58.4	-2.6
CMB	Columbia Colle	1.37	288		Pn	23 44 02.0	-0.1
CMB	Columbia Colle	1.37	288	Pn	Pn	23 44 01.9	-0.3
CMB	Columbia Colle	1.37	288	IAML		23 44 22.5	
	comp=E,49nm,0.2s						
CMB				IAML		23 44 24.3	
	comp=N,56nm,0.4s						
YERR	Yerington	1.41	344		Pn	23 44 02.6	-0.2
YERR				IAML		23 44 24.7	
	comp=E,72nm,0.3s						
YERR				IAML		23 44 24.7	
	comp=N,54nm,0.4s						
KVN	Kaiserville	1.50	19	Pn	Pn	23 44 04.0	-0.1
PNTR	Pine Nut	1.61	335		Pn	23 44 05.9	+0.3
PNTR				IAML		23 44 34.4	
	comp=N,40nm,0.6s						
PNTR				IAML		23 44 34.4	
	comp=E,53nm,0.6s						
EMB	Emerald Bay	1.72	322		Pn	23 44 07.9	+0.7
EMB				IAML		23 44 38.7	
	comp=N,37nm,1.1s						
EMB				IAML		23 44 55.4	
	comp=E,34nm,1.4s						
VCNR	Virginia City	1.81	337		Pb	23 44 10.9	+0.6
VCNR				IAML		23 44 38.0	
	comp=E,25nm,0.9s						
VCNR				IAML		23 44 39.2	
	comp=N,31nm,0.6s						
PDRM	Domengine Ranc	1.84	226		Pn	23 44 09.2	+0.6
MPK	Martis Peak	1.95	329	Pn	Pn	23 44 10.5	+0.1
MPK				IAML		23 44 34.5	
	comp=N,31nm,1.3s						
MPK				IAML		23 44 56.2	
	comp=E,36nm,1.3s						
ISA	Isabella, Lake	1.98	174		Pn	23 44 10.1	-0.4
PAHR	Pah Rah Range	2.13	346		Pb	23 44 15.8	0.0
PMPB	Monarch Peak	2.17	230	Pg	Pb	23 44 15.1	-1.3
BBNM	San Benito	2.18	240		Pb	23 44 15.5	-1.0
GWY	Greenwater Val	2.20	130	Pn	Pn	23 44 10.3	-3.3
GWY				IAML		23 44 43.9	
	comp=N,20nm,0.6s						
GWY				IAML		23 44 50.5	
	comp=E,22nm,0.5s						
GHS	Gilroy Hot Spr	2.22	257		Pn	23 44 15.5	+1.6
QSM	Queen of Sheba	2.24	137		Pn	23 44 15.4	+1.3
QSM				IAML		23 44 44.8	
	comp=E,24nm,0.3s						
QSM				IAML		23 44 44.8	
	comp=N,19nm,0.3s						
PAGB	Antelope Grade	2.25	213	Pn	Pn	23 44 11.3	-2.9
SAO	San Andreas Ge	2.33	249	Pn	Pn	23 44 14.4	-0.9
R11A	Troy Canyon, C	2.59	73		Pb	23 44 21.4	-2.2
GSC	Goldstone, Bar	2.80	146		Pb	23 44 25.1	-2.0
GSC				IAML		23 44 55.2	
	comp=E,16nm,0.1s						
GSC				IAML		23 45 10.9	
	comp=N,14nm,2.1s						
ORV	Oroville	2.90	312	Pg	Pb	23 44 29.6	+0.9
PRN	Pahroc Range	2.94	93		Pb	23 44 29.0	-0.5
PRN				IAML		23 45 10.5	
	comp=E,20nm,0.5s						
PRN				IAML		23 45 23.9	
	comp=N,15nm,0.9s						
BMN	Battle Mountai	3.04	22	Pg	Pb	23 44 32.5	+1.3
BMN				IAML		23 45 13.6	
	comp=N,10.0nm,0.4s						
BMN				IAML		23 45 15.1	
	comp=E,9.1nm,0.3s						
SHPR	Sheep Range	3.07	110	Pn	Pb	23 44 30.1	-1.6
SPR3	Spring Creek 3	3.73	67		Pb	23 44 43.8	+0.8
PSUT	Pine Spring	3.96	75		Pb	23 44 48.4	+1.5
U15A	North Rim	5.29	101	Pg	Pb	23 45 11.0	+1.2

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*TUL **20** 23:59:09.1±1.1, 36°.67N±0°.02×98°.46W±0°.02, h5^{km}±6^{km}, ML2.5, mb_Lg2.3/6(NEIC), Error ellipse: s-maj=2.8km s-min=2.0km az=120.0*

NEIC 20 23:59:09.4±1.9**, 36°.63N**±0°.02×**98°.47W**±0°.02**, h9**^{km}±5^{km}**, Error ellipse: s-maj=3.2km s-min=1.9km az=129.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK032	Salt Plains WL	0.27	50	Pg	Pg	23 59 14.1	-0.7
OK032				Sg	Sg	23 59 18.3	-0.1
CROK	Carrier	0.41	108	Pg	Pg	23 59 17.7	+0.3
CROK				Sg	Sg	23 59 23.2	+0.4
U32A	Winter Ranch,	0.50	240		Pg	23 59 18.6	-0.4
U32A				Sg	Sb	23 59 26.7	-1.0
KAN14	Manchester OK	0.52	51	Pg	Pg	23 59 19.1	-0.4
KAN14				Sg	Sb	23 59 27.5	-0.8
GC02	Grant County #	0.54	65	Pg	Pg	23 59 19.4	-0.4
GC02				Sg	Sg	23 59 26.8	0.0
KAN10	Anthony SW Sta	0.57	31	Pg	Pg	23 59 20.1	-0.5
KAN16	Harper SW Stat	0.68	28	Pg	Pg	23 59 21.5	-0.9
KAN17	Caldwell West	0.70	54		Pg	23 59 21.7	-1.2
KAN08	Anthony NE Sta	0.72	34		Pg	23 59 22.5	-0.7
KAN12	Harper NE Stat	0.76	29	Pg	Pg	23 59 23.5	-0.6
KAN01	Argonia South	0.77	47	Pg	Pg	23 59 23.6	-0.7
KAN09	Caldwell North	0.85	53	Pg	Pg	23 59 24.8	-0.9
KAN13	South Haven SW	0.88	64	Pg	Pg	23 59 25.9	-0.4
BLOK	Blackwell	1.01	82	Pg	Pg	23 59 28.1	-0.7
OK029	Liberty Lake	1.17	135	Pg	Pb	23 59 31.1	-0.6
BCOK	Bluff Creek, N	1.19	144	Pg	Pn	23 59 32.2	0.0
OK025	Westminster Rd	1.39	139		Pn	23 59 34.2	-0.7
OK031	S. Brethren Rd	1.48	117		Pg	23 59 37.5	-0.2
QUOK	Quay	1.49	107		Pn	23 59 36.4	+0.2
OK030	Cody Creek RV	1.53	117	Pn	Pn	23 59 36.8	0.0
T35A	Sooner Cattle	1.59	79		Pn	23 59 38.0	+0.3
FNO	Franklin	1.62	147	Pn	Pb	23 59 38.8	-0.6
R32A	Long Quarter,	1.80	354		Pn	23 59 41.3	+0.7
R32A				IAmb_Lg		00 00 04.0	
	comp=Z,4.8nm,0.8s						
WMOK	Wichita Mounta	1.91	188		Pn	23 59 42.8	+0.8
WMOK	Wichita Mounta	1.91	188		Pn	23 59 43.1	+1.1
X34A	Smith Ranch, M	2.09	166		Pn	23 59 45.1	+0.5
TUL1	Leonard	2.28	108	Pn	Pn	23 59 47.7	+0.6
CBKS	Cedar Bluff	2.40	336	Pn	Pn	23 59 50.1	+1.2
CBKS				IAmb_Lg		00 00 28.9	
	comp=Z,22nm,0.8s						
LOOK	Love County	2.83	158	Pn	Pn	23 59 55.7	+0.9
KSU1	Kansas State U	2.87	30	Pn	Pn	23 59 55.4	+0.1
AMTX	Amarillo	3.14	237	IAmb_Lg		00 00 58.0	
	comp=Z,12nm,0.7s						
ABTX	Abilene, Hawle	4.11	194		Pn	00 00 10.2	-2.2

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*TUL **21** 00:06:58.1±1.1, 36°.941N±0°.009×97°.81W±0°.01, h1^{km}±6^{km}, ML2.9, mb_Lg2.5/21(NEIC), Error ellipse: s-maj=1.5km s-min=1.3km az=88.0*

NEIC 21 00:06:58.6±0.5**, 36°.938N**±0°.010×**97°.81W**±0°.01**, h6**^{km}±4^{km}**, Error ellipse: s-maj=1.7km s-min=1.4km az=91.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.10	207	Pg	Pg	00 07 00.7	-0.1
GC02				Sg	Sg	00 07 02.4	+0.1
KAN17	Caldwell West	0.11	17	Pg	Pg	00 07 01.0	0.0
KAN17				Sg	Sg	00 07 02.7	+0.1
KAN14	Manchester OK	0.13	279	Pg	Pg	00 07 01.0	-0.3
KAN14				Sg	Sg	00 07 02.7	-0.4
KAN05	Bluff City Nor	0.18	343		Pg	00 07 02.2	0.0
KAN05				Sg	Sg	00 07 04.7	0.0
KAN01	Argonia South	0.22	10		Pg	00 07 02.9	0.0
KAN09	Caldwell North	0.25	37	Pg	Pg	00 07 03.5	0.0
KAN09				Sg	Sg	00 07 07.0	+0.2
KAN13	South Haven SW	0.27	74	Pg	Pg	00 07 04.1	+0.1
KAN13				Sg	Sg	00 07 07.8	+0.2
KAN10	Anthony SW Sta	0.30	309	Pg	Pg	00 07 04.3	-0.1
KAN10				Sg	Sg	00 07 08.4	0.0
KAN06	Argonia West S	0.31	352		Pg	00 07 04.7	-0.1
KAN06				Sg	Sg	00 07 08.6	-0.3
KAN08	Anthony NE Sta	0.32	335		Pg	00 07 04.7	-0.1
OK032	Salt Plains WL	0.35	248	Pg	Pg	00 07 05.3	-0.1
OK032				Sg	Sg	00 07 10.0	0.0
KAN16	Harper SW Stat	0.35	324	Pg	Pg	00 07 05.3	-0.2
KAN16				Sg	Sg	00 07 10.3	+0.1
KAN12	Harper NE Stat	0.39	337	Pg	Pg	00 07 06.0	-0.2
KAN12				Sg	Sg	00 07 11.3	0.0
CROK	Carrier	0.46	198	Pg	Pg	00 07 07.4	0.0
CROK				Sg	Sg	00 07 13.8	+0.5
BLOK	Blackwell	0.51	110	Pg	Pg	00 07 08.3	0.0
BLOK				Sg	Sg	00 07 15.5	+0.6
T35A	Sooner Cattle	1.04	91	Pg	Pg	00 07 17.9	-0.5
T35A				Sg	Sg	00 07 31.6	-0.3
QUOK	Quay	1.17	131		Pg	00 07 20.3	-0.7
QUOK				Sg	Sg	00 07 36.2	+0.1
OK029	Liberty Lake	1.17	166		Pg	00 07 20.4	-0.7
OK029					Sn	00 07 38.7	+0.9
OK031	S. Brethren Rd	1.25	141		Pn	00 07 21.7	-0.9
BCOK	Bluff Creek, N	1.29	173		Pn	00 07 22.1	-0.9
OK030	Cody Creek RV	1.30	140		Pn	00 07 22.5	-0.8
OK025	Westminster Rd	1.41	164		Pn	00 07 24.5	-0.2
OKCFA	Oklahoma City	1.55	169		Pn	00 07 26.6	0.0
OKCFA				IAmb_Lg		00 07 49.9	
	comp=Z,41nm,0.9s						
OKCSW	OKLAHOMA CITY	1.56	169		Pn	00 07 26.9	+0.1
R32A	Long Quarter,	1.65	334	Pn	Pn	00 07 28.4	+0.4
FNO	Franklin	1.71	169		Pn	00 07 28.9	0.0
TUL1	Leonard	1.92	122	Pn	Pn	00 07 32.1	+0.3
TUL1				IAmb_Lg		00 08 01.8	
	comp=Z,45nm,0.8s						
X34A	Smith Ranch, M	2.33	181		Pn	00 07 36.9	-0.5
WMOK	Wichita Mounta	2.33	200	Pn	Pn	00 07 37.9	+0.4
KSU1	Kansas State U	2.36	23	Pn	Pn	00 07 37.8	+0.1
CBKS	Cedar Bluff	2.42	321	Pn	Pn	00 07 38.3	-0.4
U38A	Gravette	2.79	99	Pn	Pn	00 07 44.0	+0.2
LOOK	Love County	2.98	170	Pn	Pn	00 07 46.4	0.0
X37A	Clayton	3.07	139	Pn	Pn	00 07 48.0	+0.5
X37A				IAmb_Lg		00 08 44.1	
	comp=Z,23nm,1.1s						
HHAR	Hobbs	3.18	101	Pn	Pn	00 07 49.2	+0.1
HHAR				IAmb_Lg		00 08 36.8	
	comp=Z,10.0nm,0.9s						
Z35A	Perchaven, San	3.63	173	Pn	Pn	00 07 54.6	-0.7
Z35A				IAmb_Lg		00 09 02.1	
	comp=Z,12nm,1.1s						
S39A	Bolivar	3.65	77	Pn	Pn	00 07 55.6	0.0
AMTX	Amarillo	3.75	238	Pn	Pn	00 07 57.4	+0.3
AMTX				IAmb_Lg		00 09 04.6	
	comp=Z,15nm,0.7s						
U40A	Yellville	4.02	97	Pn	Pn	00 08 01.3	+0.6
U40A				IAmb_Lg		00 09 07.6	
	comp=Z,11nm,0.8s						
MIAR	Mount Ida	4.19	124	IAmb_Lg		00 09 17.4	
	comp=Z,8.3nm,0.8s						
ABTX	Abilene, Hawle	4.56	200	Pn	Pn	00 08 07.7	-0.4
ABTX				IAmb_Lg		00 09 30.8	
	comp=Z,12nm,1.2s						
R40A	Maddies Statio	4.60	71	Pn	Pn	00 08 08.7	+0.2
R40A				IAmb_Lg		00 09 29.7	
	comp=Z,9.8nm,1.1s						
FCAR	Ozark Folk Cen	4.70	101	Pn	Pn	00 08 11.2	+1.3
FCAR				IAmb_Lg		00 09 28.0	
	comp=Z,8.0nm,0.8s						
X40A	Basin Creek Fa	4.73	120	Pn	Pn	00 08 11.1	+0.7

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*IDC **21** 00:12:33.8±3.3, 32°.91S×70°.06W, h95^{km}±29^{km}, mb3.7/7, mb1 3.8/10, mb1mx3.7/24, mbtmp3.9/10, Error ellipse: s-maj=26.6km s-min=18.1km az=90.0*

*GUC **21** 00:12:34.3±0.7, 32°.97S×70°.28W, h107^{km}±3^{km}, ML4.5*

*NEIC **21** 00:12:34.6±1.6, 32°.96S±0°.03×70°.18W±0°.06, h107^{km}±4^{km}, mb4.4/17, ML4.5(GUC), Error ellipse: s-maj=8.1km s-min=2.9km az=71.0*

ISC 21 00:12:34.4±0.6**, 32°.96S**±0°.04×**70°.19W**±0°.05**, h108**^{km}±5^{km}**, n92, σ1^{s}04**/111**, mb4.2**/15**, 6C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA03	San Esteban	0.37	303	*e*P	Pn	00 12 50.4	0.0
VA03				*e*S	Sn	00 13 02.6	+0.1
VA03				IAML		00 13 03.3	
	comp=E,52µm,0.3s						
VA03	San Esteban	0.37	303		Pn	00 12 50.4	0.0
VA03				Sn	Sn	00 13 02.4	0.0
FCH	Farellones	0.38	194	⇓*e*P	Pn	00 12 50.8	0.0
FCH				*e*S	Sn	00 13 03.5	+0.5
FCH				IAML		00 13 04.7	
	comp=E,15µm,0.1s						
PEL	Peldehue	0.46	247	⇑*e*P	Pn	00 12 50.3	-0.6
PEL				*e*S	Sn	00 13 02.8	-0.5
PEL				IAML		00 13 04.8	
	comp=E,30µm,0.5s						
PEL	Peldehue	0.46	247		Pn	00 12 50.5	-0.4
PEL				Sn	Sn	00 13 03.4	+0.1
MT05	Renca	0.63	227	⇑*e*P	Pn	00 12 52.4	+0.3
MT05				*e*S	Sn	00 13 05.8	+0.3
MT05	Renca	0.63	227	Pn	Pn	00 12 52.2	+0.1
MT05				Sn	Sn	00 13 06.5	+1.0
ROCH	El Roble	0.69	269	*e*P	Pn	00 12 53.0	+0.1
ROCH				⇑*e*P	Pn	00 12 52.9	+0.1
ROCH				*e*S	Sn	00 13 06.7	0.0
ROCH				*e*S	Sn	00 13 06.9	+0.2
ROCH				IAML		00 13 08.3	
	comp=N,41µm,0.5s						
ROCH				IAML		00 13 08.5	
	comp=N,47µm,0.3s						
MT02	Curacav	0.85	249	⇑*e*P	Pn	00 12 54.1	0.0
MT02				*e*S	Sn	00 13 08.9	+0.1
MT02	Curacav	0.85	249		Pn	00 12 54.0	0.0
MT02				Sn	Sn	00 13 08.9	+0.1
LMEL	Las Melosas	0.88	181	*e*P	Pn	00 12 54.9	+0.4
LMEL				*e*S	Sn	00 13 11.6	+1.9
LMEL				IAML		00 13 17.2	
	comp=E,10µm,0.1s						
VA06	Catapilco	1.02	293	*e*P	Pn	00 12 55.4	-0.2
VA06				*e*S	Sn	00 13 11.4	-0.3
VA06				IAML		00 13 14.4	
	comp=E,12µm,0.5s						
MT09	Talagante	1.05	219	*e*P	Pn	00 12 56.4	+0.1
MT09				*e*S	Sn	00 13 13.3	+0.7
MT09				IAML		00 13 13.8	
	comp=E,16µm,0.2s						
MT09	Talagante	1.05	219		Pn	00 12 56.4	+0.1
MT09				Sn	Sn	00 13 13.0	+0.4
BO04	La Punta	1.08	199	*e*P	Pn	00 12 57.0	+0.5
BO04				*e*S	Sn	00 13 13.9	+0.8
BO04				IAML		00 13 15.3	
	comp=E,10µm,0.2s						
VA01	Torpederas	1.23	267	⇑*e*P	Pn	00 12 57.3	-0.6
VA01				*i* S	Sn	00 13 15.4	-0.4
VA01	Torpederas	1.23	267		Pn	00 12 57.9	-0.1
VA01				Sn	Sn	00 13 15.6	-0.2
MT01	Popeta	1.27	224	⇑*e*P	Pn	00 12 58.2	-0.2
MT01				*e*S	Sn	00 13 16.4	-0.2
MT01				IAML		00 13 17.3	
	comp=N,6µm,0.1s						
MT01	Popeta	1.27	224		Pn	00 12 58.2	-0.2
MT01				Sn	Sn	00 13 16.2	-0.4
VA05	Santo Domingo	1.38	240	*e*P	Pn	00 12 59.3	-0.5
VA05				*e*S	Sn	00 13 18.3	-0.6
VA05				IAML		00 13 23.4	
	comp=E,8µm,0.3s						
VA05	Santo Domingo	1.38	240		Pn	00 12 59.8	+0.1
BO01	Tunca	1.61	208	*e*P	Pn	00 13 02.4	-0.1
BO01				*e*S	Sn	00 13 24.1	+0.3
BO01	Tunca	1.61	208		Pn	00 13 02.6	+0.1
BO02	Sierra Bellavi	1.89	195	*e*P	Pn	00 13 06.6	+0.6
BO02				*e*S	Sn	00 13 31.1	+0.9
BO02				IAML		00 13 33.8	
	comp=N,4µm,0.2s						
BO02	Sierra Bellavi	1.89	195		Pn	00 13 07.0	+0.9
ZON	Zonda	1.90	43		Pn	00 13 06.2	0.0
GO05	Huala	2.50	215	*e*P	Pn	00 13 12.9	-0.9
GO05				*e*S	Sn	00 13 40.4	-3.8
GO05	Huala	2.50	215	Pn	Pn	00 13 13.2	-0.7
CO06	Fray Jorge	2.59	331	*e*P	Pn	00 13 15.3	+0.3
CO06	Fray Jorge	2.59	331	Pn	Pn	00 13 15.1	+0.1
GO04	Tololo Observa	2.83	349	Pn	Pn	00 13 18.1	-0.3
ML02	Panimavida	2.98	200	*e*P	Pn	00 13 19.3	-0.7
ML02				*e*S	Sn	00 13 54.3	-0.9
ML02				IAML		00 13 55.4	
	comp=N,896nm,0.6s						
ML02	Panimavida	2.98	200	Pn	Pn	00 13 19.7	-0.3
CO05	La Serena	3.16	343	Pn	Pn	00 13 21.9	-0.7
LCO	Las Campanas	3.96	353	Pn	Pn	00 13 32.7	-0.8
BI05	Punta Hualpn	4.51	212	*e*P	Pn	00 13 39.3	-1.3
BI05				*e*S	Sn	00 14 28.4	-3.6
VCA	Vinchina	4.54	23	*e*P	Pn	00 13 42.0	+0.8
AC04	Llanos de Chal	4.80	351	Pn	Pn	00 13 44.0	-0.6
GO03	Copiap	5.35	360	Pn	Pn	00 13 51.5	-0.5
LC01	Cunco	6.08	193	Pn	Pn	00 14 01.2	-0.6
AC02	Maricunga	6.17	9	Pn	Pn	00 14 03.1	-0.5
VA04	Juan Fernndez	7.27	262	Pn	Pn	00 14 17.4	-0.6
H03N1	Juan Fernandez	7.33	264	T	T	00 21 17.1	
	baz=86,slow=74,SNR=129						
H03N3	Juan Fernandez	7.34	264	T	T	00 21 12.8	
	baz=86,slow=74,SNR=151						
H03S1	Juan Fernandez	7.35	261	T	T	00 20 47.6	
	baz=87,slow=75,SNR=8.7						
H03N2	Juan Fernandez	7.35	264	T	T	00 21 14.1	

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             baz=86,slow=74,SNR=123
H03S3 Juan Fernandez      7.35 261   T       T        00 20 48.6
             baz=87,slow=75,SNR=43
H03S2 Juan Fernandez      7.36 261   T       T        00 20 52.7
             baz=87,slow=75,SNR=9.3
PLCA  Paso Flores         7.76 182   P       Pn       00 14 24.3  -0.4
             comp=N,0.3nm,0.3s,baz=342,slow=12,SNR=8.4
PLCA  Paso Flores         7.76 182   Pn      Pn       00 14 23.6  -1.1
PB14  IPOC Station P      8.31 359   Pn      Pn       00 14 29.4  -3.0
TRQA  Tornquist           8.40 130   Pn      Pn       00 14 32.0  -1.3
ITQB  Itaqui             12.05  78   Pn      Pn       00 15 18.8  -3.8
CPUP  Villa Florida      12.98  63   P       Pn       00 15 33.8  -1.0
             comp=N,0.4nm,0.3s,baz=226,slow=11,SNR=3.3
PLTB  Pedras Altas       14.07  90   Pn      Pn       00 15 46.4  -2.5
SIV   San Ignacio        18.80  28   P       P        00 16 45.0  -0.6
             comp=N,0.3nm,0.3s,baz=224,slow=12,SNR=5.1
MG04  Isla Riesco        19.91 182   P       P        00 16 55.0  -2.3
EFI   East Falkland      20.69 158   P       P        00 17 04.6  -1.0
ETMB  Extrema            23.32  10   P       P        00 17 33.9  +0.8
BDFB  Brasilia           26.47  55   P       P        00 18 00.4  -1.3
             comp=N,1.3nm,0.5s,baz=198,slow=9.6,SNR=2.2
BDFB  Brasilia           26.47  55   P       P        00 18 00.7  -1.0
ZARC  Zaragoza, Cauc     40.47 353   P       P        00 20 01.9  -0.7
ZARC                                 IAmb    IAmb     00 20 31.3
             comp=Z,1.9nm,0.7s
BAUV  El Baul            41.72   3   P       P        00 20 12.2  -0.6
BAUV                                 IAmb    IAmb     00 20 41.0
             comp=Z,5.7nm,1.0s
MOTC  Monteria, Cord     41.83 352   P       P        00 20 13.8   0.0
VNA3  Neumayer Olymp     49.74 158   P       P        00 21 15.8  +0.6
VNA1  Neumayer--Stat     50.03 157   P       P        00 21 18.2  +0.8
VNA2  Neumayer--Watz     50.37 158   P       P        00 21 21.2  +1.1
             baz=292,slow=9.0
SNAA  Sanae              51.97 158   P       P        00 21 33.3  +1.2
SNAA  Sanae              51.97 158   P       P        00 21 33.4  +1.4
             comp=Z,3.4nm,0.7s,baz=273,slow=6.8,SNR=26
SNAA  Sanae              51.97 158   P       P        00 21 33.2  +1.2
SNAA                                 IAmb    IAmb     00 21 34.0
             comp=Z,4.0nm,0.7s
QSPA  South Pole Qui     57.27 180   P       P        00 22 12.6  +2.1
QSPA                                 IAmb    IAmb     00 22 13.1
             comp=Z,5.5nm,0.8s
W50A  Signal Mountai     69.27 347   P       P        00 23 30.3  +0.5
W50A                                 IAmb    IAmb     00 23 52.1
             comp=Z,11nm,1.1s
V53A  Saluda             69.29 349   P       P        00 23 30.1  +0.3
V53A                                 IAmb    IAmb     00 23 35.8
             comp=Z,4.5nm,1.1s
TXAR  Lajitas Array      69.61 329   P       P        00 23 33.2  +1.2
             comp=Z,0.7nm,0.5s,baz=161,slow=8.8,SNR=14
TX31  Lajitas Ar. Si     69.61 329   P       P        00 23 33.7  +1.7
TX31                                 IAmb    IAmb     00 23 34.1
             comp=Z,5.5nm,0.9s
TX32  Lajitas Array      69.61 329   P       P        00 23 33.6  +1.5
WVT   Waverly            70.69 345   P       P        00 23 38.4  +0.1
LCAR  Lake Charles       71.42 342   P       P        00 23 43.2  +0.5
LCAR                                 IAmb    IAmb     00 23 44.0
             comp=Z,3.8nm,0.6s
CCM   Cathedral Cave     73.33 343   P       P        00 23 54.4  +0.4
CCM                                  IAmb    IAmb     00 23 55.1
             comp=Z,3.6nm,0.5s
MAW   Mawson             73.73 163   P       P        00 23 57.2  +1.1
             comp=Z,1.3nm,0.8s,baz=186,slow=4.8,SNR=2.5
R40A  Maddies Statio     73.81 342   P       P        00 23 57.5  +0.7
TORD  Torodi Ar. Bea     82.40  69   P       P        00 24 45.0  +0.2
             comp=Z,1.0nm,0.7s,baz=278,slow=6.6,SNR=6.8
PDAR  Pinedale Array     83.56 332   P       P        00 24 51.2  +0.7
             comp=Z,0.3nm,0.6s,baz=134,slow=7.8,SNR=2.8
NVAR  Mina Array Bea     83.94 324   P       P        00 24 53.8  +1.3
             comp=Z,1.2nm,0.8s,baz=126,slow=7.5,SNR=7.4
NVAR  Mina Array Bea     83.94 324   P       P        00 24 51.2  -1.3
WRA   Warramunga Arr    122.41 208   PKP     PKPdf    00 31 17.5   0.0
             comp=Z,0.4nm,0.4s,baz=158,slow=1.7,SNR=15
H11S2 WAKE ISLAND Hy    127.34 269   T       T        02 50 58.8
             baz=118,slow=75,SNR=8.6
H11S1 WAKE ISLAND Hy    127.35 269   T       T        02 51 07.9
             baz=118,slow=75,SNR=11
H11S3 WAKE ISLAND Hy    127.36 269   T       T        02 51 09.6
             baz=118,slow=75,SNR=8.0
ZALV  Zalesovo Beam     152.52  33   PKPbc   PKiKP    00 32 18.2  +0.5
             comp=Z,6.0nm,0.5s,baz=316,slow=3.7,SNR=25
ZALV  Zalesovo Beam     152.52  33           PKiKP    00 32 18.0  +0.3
MKAR  Makanchi Array    154.92  49   PKPbc   PKiKP    00 32 23.4  +0.5
             comp=Z,0.3nm,0.7s,baz=275,slow=2.3,SNR=2.4
MKAR                                 PKPab   PKPab    00 32 39.1  +0.4
             comp=Z,0.2nm,0.4s,baz=296,slow=2.8,SNR=6.7
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IDC ***21*** *00:15:38.5±0.6, 41°.64N×71°.55E, h0*^{km}*, mb4.0/20, mb1 4.1/29, mb1mx4.0/52, mbtmp4.0/29, ML3.6/6, MS3.6/17, Ms1 3.6/17, ms1mx3.4/53, Error ellipse: s-maj=10.7km s-min=6.9km az=167.0*

KRNET ***21*** *00:15:40.6±0.1, 41°.73N×71°.56E, h12*^{km}*, mb4.9*

NNC ***21*** *00:15:40.5±1.0, 41°.74N×71°.51E, h0*^{km}*, mb5.1, mpv4.9, Error ellipse: s-maj=9.7km s-min=4.1km az=14.0*

KNET ***21*** *00:15:40.6±1.4, 41°.90N×71°.55E, h4*^{km}*±13*^{km}*, ml4.7, Error ellipse: s-maj=19.8km s-min=12.2km az=166.0*

SOME ***21*** *00:15:41.0, 41°.65N×71°.72E, h15*^{km}*, MS4.0*

ISU ***21*** *00:15:41, 41°.67N×71°.47E, h5*^{km}

BJI ***21*** *00:15:42.7±0.0, 41°.48N×71°.06E, h43*^{km}*, mB4.5/13, mb4.2/15, ML4.4/6, Ms4.1/13, Ms7 3.8/12*

MOS ***21*** *00:15:43.1±1.2, 41°.82N×71°.35E, h37*^{km}*, mb4.6/24, Error ellipse: s-maj=5.3km s-min=4.6km az=69.3*

NEIC ***21*** *00:15:43.9±2.1, 41°.82N±0°.03×71°.38E±0°.05, h26*^{km}*±4*^{km}*, mb4.5/37, Error ellipse: s-maj=6.3km s-min=3.7km az=66.0*

ISC 21 00:15:42.6±0.9**, 41°.69N**±0°.02×**71°.48E**±0°.02**, h25**^{km}±6^{km}**,**
n295, σ**2**ˢ**.23**/365**, mb4.3**/47**, MS3.6**/15**, 50C-38D,**
Kyrgyzstan

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Code  Station Name        Δ°    AZ°   Phase ID          Time      Res
                                     Op      ISC      h  m  s    ISC
TRKS  Terek-Say           0.30 238⇑iP      Pb       00 15 48.7  -1.1
             baz=27
TRKS                              ⇑iS      Sb       00 15 53.9  -0.8
             baz=27
NAM   Namangan            0.71 169 eP      Pb       00 15 56.0  -0.4
NAM                                eS      Sn       00 16 07.0  -0.2
MNAS  Manas               1.10  44 i P     Pn       00 16 00.5  -2.1
MNAS                               i S     Sb       00 16 14.7  -2.5
MNAS  Manas               1.10  44⇑iP      Pn       00 16 00.5  -2.1
             baz=43
MNAS                              ⇑iS      Sb       00 16 14.7  -2.5
             baz=43
ANR   Andizhan            1.15 144 eP      Pb       00 16 04.0  +0.2
ANR                                eS      Sb       00 16 20.0  +1.7
DZA   Taraz               1.21 355 eP      Pn       00 16 03.6  -0.3
             1μm,0.4s
DZA                                eS      Sn       00 16 19.1  -0.4
             14μm,0.2s
DZA   Taraz               1.21 355 eP      Pn       00 16 02.5  -1.4
             baz=351
DZA                                i S     Sn       00 16 18.9  -0.6
             baz=351
DZA   Taraz               1.21 355 eP      Pn       00 16 02.5  -1.4
DZA                                i S     Sn       00 16 18.8  -0.6
DZA   Taraz               1.21 355 eP      Pn       00 16 03.6  -0.3
             baz=52
DZA                                eS      Sn       00 16 19.1  -0.4
             baz=52
OHH   Osh                 1.53 139 i P     Pn       00 16 09.3  +1.0
OHH   Osh                 1.53 139 eP      Pn       00 16 09.0  +0.7
OHH                                eS      Sb       00 16 30.0  +0.8
OHH   Osh                 1.53 139⇓iP      Pn       00 16 09.3  +1.0
             baz=42
OHH                               ⇓iS      Sb       00 16 30.4  +1.1
             baz=42
CHM   Chimkent            1.53 295 eP      Pb       00 16 11.0  +0.7
             6.2nm,0.2s
CHM                                eS      Sb       00 16 32.5  +3.2
             14μm,0.5s
TCH   Chimkent            1.53 295 eP      Pb       00 16 11.0  +0.8
             baz=93
TCH                                eS      Sb       00 16 32.5  +3.3
             baz=93
KKAR  Karatay Array       1.58 333         Pn       00 16 09.2  +0.2
KKAR                                 Sn    Sn       00 16 28.0  -0.7
KK09  Karatay Array       1.60 334   P     Pn       00 16 09.7  +0.3
KK09                                 S     Sb       00 16 30.1  -1.3
MRKS  Merke               1.67  50 eP      Pn       00 16 10.8  +0.4
             176nm,0.3s
MRKS                               eS      Sb       00 16 32.2  -1.3
             5μm,0.4s
MRKS  Merke               1.67  50 eP      Pn       00 16 10.8  +0.4
             baz=50
MRKS                               eS      Sb       00 16 32.2  -1.3
             baz=50
TAS   Tashkent            1.68 258   PN    Pb       00 16 12.9  +0.1
TAS   Tashkent            1.68 258 eP      Pb       00 16 14.0  +1.2
TAS                                eS      Sb       00 16 37.0  +3.5
TAS   Tashkent            1.68 258         Pb       00 16 12.9  +0.1
TAS   Tashkent            1.68 258⇓iP      Pb       00 16 12.9  +0.1
             baz=57
TAS                               ⇓iS      Sb       00 16 36.2  +2.7
             baz=57
BTK   Batken              1.71 197   PN    Pb       00 16 12.6  -0.7
BTK   Batken              1.71 197 eP      Pb       00 16 13.0  -0.3
BTK                                eS      Sn       00 16 28.0  -3.8
BTK   Batken              1.71 197         Pb       00 16 12.6  -0.7
BTK   Batken              1.71 197⇑iP      Pb       00 16 13.3   0.0
             baz=99
BTK                               ⇑iS      Sb       00 16 37.6  +3.2
             baz=99
AML   Almayashu           1.71  74   P     Pn       00 16 11.5  +0.3
             744nm,0.1s,SNR=1930
AML                               ⇓S       Sb       00 16 33.5  -1.4
             11μm,0.5s
AML   Almayashu           1.71  74 i PN    Pn       00 16 11.5  +0.3
AML                                i S     Sb       00 16 33.7  -1.2
AML   Almayashu           1.71  74⇓iP      Pn       00 16 11.5  +0.3
             baz=75
AML                               ⇓iS      Sb       00 16 33.7  -1.2
             baz=75
BRLS  Borolday            1.81 318 eP      Pb       00 16 17.4  +2.3
             2μm,0.3s
BRLS                               eS      Sb       00 16 44.5  +7.3
             1μm,0.2s
SALK  Salom-Alik          1.94 114⇑eP      Pb       00 16 15.9  -1.5
             baz=16
SALK                              ⇑eS      Sb       00 16 42.1  +0.8
             baz=16
EKS2  Erkin-Say           1.97  60 ⇑P      Pn       00 16 15.6  +1.2
             260nm,0.4s,SNR=489
EKS2                               ⇓S      Sb       00 16 41.1  -0.8
             745nm,0.0s
EKS2  Erkin-Say           1.97  60 i PN    Pb       00 16 15.8  -2.0
EKS2                               i S     Sb       00 16 41.5  -0.4
EKS2  Erkin-Say           1.97  60⇑iP      Pb       00 16 15.8  -2.0
             baz=60
EKS2                              ⇑iS      Sb       00 16 41.5  -0.4
             baz=60
DRK   Karamyk             2.22 174         Pn       00 16 20.0  +1.9
DRK   Karamyk             2.22 174⇓iP      Pb       00 16 21.4  -0.8
             baz=75
DRK                               ⇓iS      Sb       00 16 51.0  +1.6
             baz=75
SFK   Sufi-Kurgan         2.27 137⇑eP      Pb       00 16 21.7  -1.4
             baz=39
SFK                               ⇑eS      Sb       00 16 51.5  +0.7
             baz=39
UCH   Uchtor              2.33  76 ⇓P      Pn       00 16 21.1  +1.4
             201nm,0.2s,SNR=375
UCH                                ⇑S      Sb       00 16 52.7   0.0
             3μm,0.3s
UCH   Uchtor              2.33  76 i PN    Pn       00 16 21.3  +1.6
UCH                                i S     Sb       00 16 51.3  -1.3
UCH   Uchtor              2.33  76⇓iP      Pn       00 16 21.3  +1.6
             baz=76
UCH                               ⇓iS      Sb       00 16 51.3  -1.3
             baz=76
AAK   Ala-Archa           2.44  66   Pn    Pb       00 16 23.0  -2.7
             168nm,0.3s,baz=228,slow=4.5,SNR=674
AAK                                  Pg    Pn       00 16 24.5  +3.6
             191nm,0.3s,baz=231,slow=4.6,SNR=398
AAK                                  Lg    Lg       00 16 55.9
             253nm,0.3s,baz=11,slow=22,SNR=4.9
AAK                                  LR    LR       00 17 30.4
             comp=Z,681nm,19.4s,baz=260,slow=46
AAK   Ala-Archa           2.44  66 ⇑P      Pn       00 16 22.9  +2.0
             600nm,0.4s,SNR=726
AAK                                ⇑S      Sb       00 16 55.4   0.0
             1μm,0.3s
AAK   Ala-Archa           2.44  66   PN    Pn       00 16 22.7  +1.8
AAK                                                 00 16 51.5
AAK   Ala-Archa           2.44  66 ⇑Pn     Pn       00 16 21.8  +0.9
             796nm,0.6s
AAK                               ⇓Lg      Lg       00 16 58.8
             2μm,0.8s
AAK   Ala-Archa           2.44  66         Pn       00 16 22.7  +1.8
AAK                                        Sn       00 16 51.5  +1.6
FRU1  Bishkek             2.59  63   PN    Pn       00 16 25.2  +2.2
FRU1  Bishkek             2.59  63         Pn       00 16 25.2  +2.2
FRU1  Bishkek             2.59  63⇑eP      Pn       00 16 24.9  +1.9
             baz=63
FRU1                              ⇑iS      Sb       00 16 57.1  -2.8
             baz=63
USP   Ospenovka           2.74  54 ⇓P      Pn       00 16 25.6  +0.6
             240nm,0.3s,SNR=143
USP   Ospenovka           2.74  54 i PN    Pn       00 16 26.9  +2.0
USP                                i S     Sb       00 17 00.3  -3.6
USP   Ospenovka           2.74  54⇓iP      Pn       00 16 26.9  +2.0
             baz=54
USP                               ⇓iS      Sb       00 17 00.3  -3.6
             baz=54
KBK   Karagaybulak        2.75  68 ⇑P      Pn       00 16 27.6  +2.3
             367nm,0.3s,SNR=48
KBK   Karagaybulak        2.75  68 ePN     Pn       00 16 27.3  +2.0
KBK                                i S     Sb       00 17 01.3  -3.3
KBK   Karagaybulak        2.75  68⇑eP      Pn       00 16 27.3  +2.0
             baz=69
KBK                               ⇑iS      Sb       00 17 01.3  -3.3
             baz=69
CHMS  Chumysh             2.76  61 ⇑P      Pn       00 16 25.9  +0.7
             345nm,0.5s,SNR=36
CHMS  Chumysh             2.76  61 i PN    Pn       00 16 27.0  +1.8
CHMS                               i S     Sb       00 17 01.1  -3.5
CHMS  Chumysh             2.76  61⇓iP      Pn       00 16 27.0  +1.8
             baz=61
CHMS                              ⇓iS      Sb       00 17 01.1  -3.5
             baz=61
GAR   Garm                2.83 199   Pn    Pn       00 16 29.0  +2.7
GAR   Garm                2.83 199⇑iP      Pb       00 16 29.8  -2.7
             baz=0.0
GAR                               ⇑iS      Sb       00 17 06.2  -0.5
             baz=0.0
BOOM  Boomskoye usch      3.42  75⇑iP      Pn       00 16 36.3  +1.9
             baz=75
BOOM                              ⇑iS      Sn       00 17 17.0  +2.8
             baz=75
CHGR  Chuyangaron         3.51 211   Pn    Pn       00 16 39.0  +3.3
CHGR  Chuyangaron         3.51 211⇑iP      Pn       00 16 39.3  +3.7
             baz=12
CHGR                              ⇑iS      Sb       00 17 22.6  -3.7
             baz=12
DGS   Degeres             3.54  63 eP      Pb       00 16 43.3  -1.2
             166nm,0.4s
DGS                                eS      Sb       00 17 28.4  +1.4
             772nm,0.4s
DGS   Degeres             3.54  63   Pg    Pb       00 16 43.3  -1.2
             166nm,0.4s
DGS                                  Lg    Lg       00 17 28.4
             772nm,0.4s
KST   Kastek              3.59  66 eP      Pb       00 16 45.4   0.0
             215nm,0.4s
KST                                eS      Sb       00 17 31.4  +2.9
             2μm,0.6s
KST   Kastek              3.59  66   Pg    Pb       00 16 45.4   0.0
             215nm,0.4s
KST                                  Lg    Lg       00 17 31.4
             2μm,0.6s
ULHL  Ulahol              3.60  80 ⇓P      Pn       00 16 38.4  +1.5
             55nm,0.3s,SNR=12
ULHL  Ulahol              3.60  80⇓eP      Pn       00 16 39.1  +2.2
             baz=80
ULHL                              ⇓iS      Sn       00 17 21.8  +3.1
             baz=80
MTBS  Maitube             3.94  67 eP      Pb       00 16 51.8  +0.4
             67nm,0.4s
MTBS                               eS      Sb       00 17 42.4  +3.8
             835nm,0.5s
KSH   Kashi               4.05 121   P     Pn       00 16 44.3  +1.2
KSH                                  S     Sn       00 17 31.8  +2.0
KSH                                  pmax  pmax
             comp=Z,76nm,0.7s
KSH                                  smax  smax
             comp=N,720nm,0.7s
KSH                                  smax  smax
             comp=E,510nm,0.7s
KUU   Kurty               4.20  57 eP      Pb       00 16 55.3  -0.5
             214nm,0.3s
KUU                                eS      Sb       00 17 48.5  +2.4
             870nm,0.6s
KUU   Kurty               4.20  57 eP      Pn       00 16 46.3  +1.2
             baz=59
KUU   Kurty               4.20  57 ePN     Pn       00 16 46.2  +1.2
TNSS  Tian-Shan           4.27  70 eP      Pb       00 16 57.9  +0.7
             92nm,0.3s
TNSS                               eS      Sb       00 17 53.0  +4.6
             354nm,0.6s
TNSS  Tian-Shan           4.27  70 ePn     Pn       00 16 48.6  +2.2
             baz=72
TNSS                               ePg     Pb       00 16 57.9  +0.7
             baz=72
TNSS                               eLg     Lg       00 17 53.8
             baz=72
TNSS  Tian-Shan           4.27  70   Pg    Pb       00 16 57.9  +0.7
             92nm,0.3s
TNSS                                 Lg    Lg       00 17 53.0
             354nm,0.6s
KDJ   Kajisay             4.28  82   PN    Pb       00 16 51.6  -5.6
KDJ   Kajisay             4.28  82   Pn    Pb       00 16 51.6  -5.6
KDJ   Kajisay             4.28  82⇓eP      Pn       00 16 48.4  +2.1
             baz=83
KDJ                               ⇓iS      Sn       00 17 38.4  +2.9
             baz=83
AAA   Alma-Ata            4.30  68 eP      Pb       00 16 57.8  +0.3
             100nm,0.6s
AAA                                eS      Sb       00 17 53.3  +4.4
             856nm,0.8s
AAA   Alma-Ata            4.30  68 ePg     Pb       00 17 00.9  +3.4
             baz=70
AAA                                eLg     Lg       00 17 56.6
             baz=70
AAA   Alma-Ata            4.30  68 ePN     Pb       00 17 00.9  +3.4
AAA   Alma-Ata            4.30  68   Pg    Pb       00 16 57.8  +0.3
             100nm,0.6s
AAA                                  Lg    Lg       00 17 53.3
             856nm,0.8s
KTBS  Karatobe            4.34  60 eP      Pb       00 16 58.2  +0.1
             192nm,0.6s
KTBS                               eS      Sb       00 17 53.4  +3.4
             835nm,0.8s
KNDC  Almaty              4.34  68   PN    Pb       00 16 58.1   0.0
KNDC  Almaty              4.34  68 ⇓Pg     Pb       00 16 59.3  +1.2
             475nm,0.8s
KNDC                               ⇓Lg     Lg       00 17 57.4
             2μm,0.9s
MDOK  Medeo               4.38  69 eP      Pb       00 16 59.6  +0.8
             93nm,0.3s
MDOK                               eS      Sb       00 17 56.2  +4.9
             507nm,0.9s
MDOK  Medeo               4.38  69 ePn     Pn       00 16 50.1  +2.4
             baz=71
MDOK                               ePg     Pb       00 17 01.0  +2.1
             baz=71
MDOK                               eLg     Lg       00 17 57.1
             baz=71
MDOK  Medeo               4.38  69 ePN     Pn       00 16 50.0  +2.4
MDOK  Medeo               4.38  69 ⇓Pg     Pb       00 16 59.7  +0.8
             248nm,0.6s
MDOK                               ⇑Lg     Lg       00 17 59.9
             462nm,0.6s
MDOK  Medeo               4.38  69   Pg    Pb       00 16 59.6  +0.8
             93nm,0.3s
MDOK                                 Lg    Lg       00 17 56.2
             507nm,0.9s
KOTS  Kotyrbulak          4.45  68 eP      Pb       00 17 01.0  +1.0
             274nm,0.6s
KOTS                               eS      Sb       00 17 57.9  +4.7
             1μm,0.9s
KOTS  Kotyrbulak          4.45  68   Pg    Pb       00 17 01.0  +1.0
             274nm,0.6s
KOTS                                 Lg    Lg       00 17 57.9
             1μm,0.9s
CHKK  Chushkaly           4.60  60 eP      Pb       00 17 03.1  +0.6
             130nm,0.7s
CHKK                               eS      Sb       00 18 01.5  +4.1
             538nm,0.4s
CHKK  Chushkaly           4.60  60 ePn     Pn       00 16 51.7  +1.2
             baz=62
CHKK                               i Pg    Pb       00 17 05.4  +2.9
             baz=62
CHKK                               eLg     Lg       00 18 03.9
             baz=62
CHKK  Chushkaly           4.60  60   Pg    Pb       00 17 03.1  +0.6
             130nm,0.7s
CHKK                                 Lg    Lg       00 18 01.5
             538nm,0.4s
ANVS  Anan'yevo           4.72  75⇓iP      Pn       00 16 54.8  +2.4
             baz=75
ANVS                              ⇓iS      Sn       00 17 48.6  +2.2
             baz=75
TARG  Taragay, Kyrgy      4.74  87         Pn       00 16 54.8  +2.0
PRZ   Przheval'sk         5.21  79⇑eP      Pn       00 17 01.7  +2.6
             baz=79
PRZ                               ⇑iS      Sn       00 18 00.4  +1.9
             baz=79
KURS  Kuram               5.26  68 eP      Pb       00 17 16.1  +2.3
             33nm,0.5s
KURS                               eS      Sb       00 18 23.7  +7.3
             217nm,0.8s
KURS  Kuram               5.26  68   Pg    Pb       00 17 16.1  +2.3
             33nm,0.5s
KURS                                 Lg    Lg       00 18 23.7
             217nm,0.8s
ARXS  Arharly             5.30  59 ePN     Pn       00 17 02.4  +2.2
SATY  Saty                5.31  73 eP      Pb       00 17 15.6  +0.8
             202nm,1.0s
SATY                               eS      Sb       00 18 24.0  +5.9
             408nm,0.6s
SATY  Saty                5.31  73 ePn     Pn       00 17 04.2  +3.8
             baz=75
SATY                               ePg     Pb       00 17 19.4  +4.6
             baz=75
SATY                               eLg     Lg       00 18 26.7
             baz=75
SATY  Saty                5.31  73 ePN     Pn       00 17 04.2  +3.8
SATY  Saty                5.31  73   Pg    Pb       00 17 15.6  +0.8
             202nm,1.0s
SATY                                 Lg    Lg       00 18 24.0
             408nm,0.6s
KPKS  Kokpek              5.61  69 eP      Pb       00 17 22.2  +2.4
             80nm,0.3s
KPKS                               eS      Sb       00 18 34.2  +7.6
             578nm,0.7s
KPKS  Kokpek              5.61  69 ePn     Pn       00 17 10.8  +6.3
             baz=71
KPKS                               i Pg    Pb       00 17 23.3  +3.5
             baz=71
KPKS                               eLg     Lg       00 18 34.5
             baz=71
KPKS  Kokpek              5.61  69 ePN     Pn       00 17 10.8  +6.3
UZB   Uzynbulak           5.77  73 eP      Pb       00 17 23.5  +0.9
             46nm,0.5s
UZB                                eS      Sb       00 18 37.7  +6.4
             156nm,0.4s
UZB   Uzynbulak           5.77  73 ePn     Pn       00 17 13.4  +6.7
             baz=75
UZB                                ePg     Pb       00 17 23.9  +1.3
             baz=75
UZB                                eLg     Lg       00 18 39.6
             baz=75
UZB   Uzynbulak           5.77  73 ePN     Pn       00 17 13.4  +6.7
UZB   Uzynbulak           5.77  73   Pg    Pb       00 17 23.5  +0.9
             46nm,0.5s
UZB                                  Lg    Lg       00 18 37.7
             156nm,0.4s
TDK   Taldyqorghan        6.04  54 eP      Pb       00 17 28.9  +1.8
             34nm,0.6s
TDK                                eS      Sb       00 18 45.7  +6.8
             566nm,0.8s
TDK   Taldyqorghan        6.04  54 ePn     Pn       00 17 16.5  +6.2
             baz=56
TDK                                ePg     Pb       00 17 32.6  +5.5
             baz=56
TDK                                eLg     Lg       00 18 47.4
             baz=56
TDK   Taldyqorghan        6.04  54 ePN     Pn       00 17 16.5  +6.2
PDGK  Podgornoye          6.14  72   PN    Pb       00 17 20.4  -8.5
PDGK  Podgornoye          6.14  72 ⇑Pn     Pn       00 17 14.6  +2.7
             34nm,0.6s
PDGK                               ⇑Lg     Lg       00 18 55.1
             320nm,0.8s
OTUK  Ortayu              6.58   5   PN    Pn       00 17 18.7  +1.0
OTUK  Ortayu              6.58   5 ⇓Pn     Pn       00 17 18.3  +0.6
             52nm,1.0s
OTUK                               ⇓Lg     Lg       00 19 08.2
             1μm,1.1s
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KAPS	**Kapalarasan**	**6.76**	**55**	*e*P	Pb	00 17 43.8	+4.4
	28nm,0.6s						
KAPS				*e*S	Sb	00 19 11.2	+11
	222nm,0.8s						
KAPS	**Kapalarasan**	**6.76**	**55**	Pg	Pb	00 17 43.8	+4.4
	28nm,0.6s						
KAPS				Lg	Lg	00 19 11.2	
	222nm,0.8s						
KBL	**Kabul**	**7.39**	**196**	P	**Pn**	**00 17 31.7**	**+2.7**
KBL	**Kabul**	**7.39**	**196**		**Pn**	**00 17 31.7**	**+2.7**
CEP	**Cherat**	**7.86**	**177**	P	**Pn**	**00 17 38.8**	**+3.4**
CHCP	**Chirah Chowk**	**8.14**	**169**	P	**Pn**	**00 17 42.1**	**+2.9**
NIL	**Nilore**	**8.15**	**169**	P	**Pn**	**00 17 41.2**	**+1.9**
NIL	**Nilore**	**8.15**	**169**	Pn	**Pn**	**00 17 41.2**	**+1.9**
BRZS	**Berezniki**	**8.34**	**5**	*e*Pn	**Pn**	**00 17 41.6**	**-0.2**
	baz=5.2						
BRZS	**Berezniki**	**8.34**	**5**	*e*P	**Pn**	**00 17 41.5**	**-0.2**
THW	**Thamme Wali**	**8.88**	**179**	P	**Pn**	**00 17 51.4**	**+2.1**
MAKZ	**Makanchi**	**9.11**	**52**	P	**Pn**	**00 17 53.5**	**+1.2**
MAKZ	**Makanchi**	**9.11**	**52**	⇓Pn	**Pn**	**00 17 54.2**	**+1.9**
	9.2nm,0.7s						
MAKZ				⇑Lg	Lg	00 20 31.3	
	60nm,1.0s						
MAKZ	**Makanchi**	**9.11**	**52**		**Pn**	**00 17 53.5**	**+1.2**
MK31	**Makanchi Array**	**9.29**	**53**	*e*P	**Pn**	**00 17 56.5**	**+1.7**
MK31	**Makanchi Array**	**9.29**	**53**	⇓Pn	**Pn**	**00 17 55.5**	**+0.7**
	7.6nm,0.5s,baz=233,slow=12,SNR=462						
MK31				⇑Lg	Lg	00 20 36.7	
	29nm,0.6s,baz=236,slow=28,SNR=4.1						
MK31	**Makanchi Array**	**9.29**	**53**	Pn	**Pn**	**00 17 55.8**	**+1.0**
MKAR	**Makanchi Array**	**9.29**	**53**	Pn	**Pn**	**00 17 55.2**	**+0.4**
	0.8nm,0.3s,baz=240,slow=16,SNR=51						
MKAR				Sn	**Sn**	**00 19 39.7**	**+1.4**
	baz=246,slow=18,SNR=1.8						
MKAR				Lg	Lg	00 20 31.8	
	4.0nm,0.3s,baz=232,slow=26,SNR=5.4						
MKAR	**Makanchi Array**	**9.29**	**53**	*i* P	**Pn**	**00 17 55.7**	**+0.9**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
MKAR	**Makanchi Array**	**9.29**	**53**	Pn	**Pn**	**00 17 55.5**	**+0.7**
KURBB	**Kurchatov Arra**	**10.18**	**26**	Pn	**Pn**	**00 18 05.3**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=215,slow=13,SNR=21						
KURBB				Sn	**Sn**	**00 19 58.4**	**-1.8**
	comp=Z,0.3nm,0.3s,baz=215,slow=17,SNR=4.1						
KURBB				Lg	Lg	00 20 58.1	
	comp=Z,0.7nm,0.3s,baz=213,slow=31,SNR=7.3						
KURBB	**Kurchatov Arra**	**10.18**	**26**	⇓Pn	**Pn**	**00 18 08.8**	**+1.8**
	comp=Z,15nm,1.1s						
KURBB				⇑Lg	Lg	00 21 04.0	
	comp=Z,215nm,0.8s						
KURK	**Kurchatov**	**10.29**	**26**	P	**Pn**	**00 18 05.4**	**-3.1**
KURK						00 19 58.4	
KURK	**Kurchatov**	**10.29**	**26**	⇑Pn	**Pn**	**00 18 08.8**	**+0.3**
	comp=Z,12nm,1.2s						
KURK				⇑Lg	Lg	00 21 05.3	
	comp=Z,212nm,1.2s						
KURK	**Kurchatov**	**10.29**	**26**	Pn	**Pn**	**00 18 07.1**	**-1.4**
HRA	**Herat**	**10.30**	**228**	Pn	**Pn**	**00 18 08.2**	**-0.7**
GEYT	**Alibeck**	**10.94**	**254**	Pn	**Pn**	**00 18 15.0**	**-2.5**
	comp=Z,0.8nm,0.3s,baz=95,slow=11,SNR=6.2						
GEYT				Sn	**Sn**	**00 20 17.7**	**-1.3**
	comp=Z,3.2nm,0.3s,baz=66,slow=3.6,SNR=2.6						
GEYT				LR	LR	00 23 43.8	
	comp=Z,82nm,20.0s,baz=220,slow=44						
GYA0B	**ALIBECK ARRAY**	**10.94**	**254**	⇑Pn	**Pn**	**00 18 18.0**	**+0.5**
GYA0B				⇑Sn	**Sn**	**00 20 20.9**	**+1.9**
GYA0B	**ALIBECK ARRAY**	**10.94**	**254**	Pn	**Pn**	**00 18 15.4**	**-2.1**
AB31	**Akbulak array**	**11.07**	**317**	P	**Pn**	**00 18 18.4**	**-0.8**
AB31	**Akbulak array**	**11.07**	**317**	⇓Pn	**Pn**	**00 18 18.3**	**-0.9**
	comp=Z,22nm,0.9s,baz=128,slow=13,SNR=129						
AB31				⇓Sn	**Sn**	**00 20 26.3**	**+4.2**
	comp=Z,9.7nm,0.6s						
ABKAR	**Akbulak array**	**11.07**	**317**	Pn	**Pn**	**00 18 18.3**	**-0.9**
ABKAR	**Akbulak array**	**11.07**	**317**		**Pn**	**00 18 17.7**	**-1.5**
ZSN	**Zaisan**	**11.15**	**54**	*e*P	**Pn**	**00 18 22.8**	**+2.5**
	baz=55						
ZSN	**Zaisan**	**11.15**	**54**	*e*P	**Pn**	**00 18 22.7**	**+2.5**
BVAR	**Borovoye Array**	**11.36**	**357**	Pn	**Pn**	**00 18 21.7**	**-1.5**
	comp=Z,2.7nm,0.3s,baz=191,slow=20,SNR=38						
BVAR				Sn	**Sn**	**00 20 24.1**	**-5.1**
	comp=Z,5.3nm,0.3s,baz=182,slow=31,SNR=8.8						
BVAR				Lg	Lg	00 21 38.2	
	comp=Z,1.8nm,0.3s,baz=187,slow=30,SNR=2.4						
BRVK	**Borovoye**	**11.40**	**356**	c*e*P	**Pn**	**00 18 21.1**	**-2.6**
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BRVK	**Borovoye**	**11.40**	**356**	⇑Pn	**Pn**	**00 18 23.6**	**-0.1**
	comp=Z,7.7nm,0.8s						
BRVK				⇑Sn	**Sn**	**00 20 34.7**	**+4.6**
	comp=Z,18nm,0.7s						
BRVK				⇑Lg	Lg	00 21 43.7	
	comp=Z,59nm,0.9s						
BRVK	**Borovoye**	**11.40**	**356**	Pn	**Pn**	**00 18 22.3**	**-1.4**
WMQ	**Urumqi**	**12.11**	**74**	*e*P	P	00 18 40.0	-6.0
WMQ				S	Sn	00 20 58.1	+10
WMQ				LR	LR		
	comp=Z,360nm,7.3s						
WMQ				LR	LR		
	comp=Z,190nm,11.9s						
AKTO	**Aktyubinsk**	**12.78**	**318**	Pn	**Pn**	**00 18 41.3**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=128,slow=15,SNR=5.8						
AKTO				Sn	**Sn**	**00 21 02.1**	**-1.8**
	comp=Z,0.9nm,0.3s,baz=17,slow=10,SNR=1.5						
AKTO				Lg	Lg	00 22 26.5	
	comp=Z,0.4nm,0.3s,baz=229,slow=19,SNR=1.8						
AKTO				LR	LR	00 23 56.2	
	comp=Z,566nm,18.4s,baz=109,slow=39						
AKTO	**Aktyubinsk**	**12.78**	**318**	⇓Pn	**Pn**	**00 18 41.9**	**-0.7**
	comp=Z,43nm,1.1s						
AKTO				⇓Sn	**Sn**	**00 21 06.8**	**+2.8**
	comp=Z,32nm,1.2s						
DGZ	**Jazzator, Alta**	**13.71**	**49**	*i* P	**Pn**	**00 18 55.6**	**+0.2**
DGZ				pmax	pmax		
	comp=Z,9.0nm,1.1s						
ZAA0	**Zalesovo Array**	**15.15**	**31**		**Pn**	**00 19 16.6**	**+1.8**
ZAA0				IAmb	IAmb	00 19 26.4	
	comp=Z,26nm,1.1s						
ZALV	**Zalesovo Beam**	**15.15**	**31**	Pn	**Pn**	**00 19 13.3**	**-1.5**
	comp=Z,0.7nm,0.3s,baz=230,slow=14,SNR=8.7						
ZALV				Sn	**Sn**	**00 21 57.8**	**-3.9**
	comp=Z,0.4nm,0.3s,baz=221,slow=15,SNR=1.9						
ZALV				LR	LR	00 24 11.9	
	comp=Z,50nm,18.3s,baz=225,slow=34						
ZALV	**Zalesovo Beam**	**15.15**	**31**	P	**Pn**	**00 19 16.1**	**+1.3**
ZALV	**Zalesovo Beam**	**15.15**	**31**	Pn	**Pn**	**00 19 16.1**	**+1.3**
PYUN	**Piuthan**	**16.50**	**142**	*e*P	**Pn**	**00 19 27.6**	**-4.9**
	comp=Z,44nm,0.3s						
DANN	**Dangsing**	**16.66**	**139**	*e*P	**Pn**	**00 19 29.3**	**-5.3**
SVE	**Sverdlovsk**	**16.69**	**339**	*e*P	**Pn**	**00 19 33.5**	**-0.9**
SVE				*e*S	**Sn**	**00 22 31.2**	**-7.6**
SVE				pmax	pmax		
	comp=Z,20nm,1.7s						
SVE				MLR	MLR		
	comp=Z,716nm,10.0s						
ARU	**Arti**	**16.96**	**335**	P	**Pn**	**00 19 36.7**	**-1.2**
	comp=Z,0.0nm,0.3s,baz=149,slow=10.0,SNR=6.0						
ARU				LR	LR	00 26 26.1	
	comp=Z,497nm,18.6s,baz=137,slow=38						
ARU	**Arti**	**16.96**	**335**	c *i*P	**Pn**	**00 19 37.2**	**-0.7**
ARU				S	**Sn**	**00 22 47.2**	**+1.7**
ARU				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ARU	**Arti**	**16.96**	**335**	Pn	**Pn**	**00 19 36.3**	**-1.6**
KOLN	**Koldanda**	**17.07**	**141**	*e*P	**Pn**	**00 19 34.8**	**-4.8**
GKN	**Gorkha**	**17.38**	**138**	*e*P	**Pn**	**00 19 38.6**	**-4.9**
MAK	**Makhachkala**	**17.76**	**282**	*e*P	**P**	**00 19 48.6**	**0.0**
MAK				*e*S	**Sn**	**00 23 04.8**	**-0.3**
MAK				pmax	pmax		
	comp=Z,203nm,1.3s						
MAK				MLR	MLR		
	comp=Z,386nm,14.0s						
KKN	**Kakani**	**17.88**	**136**	*e*P	**Pn**	**00 19 45.0**	**-4.8**
DMN	**Daman**	**17.94**	**137**	*e*P	**Pn**	**00 19 45.3**	**-5.2**
GUN	**Gumba**	**18.10**	**135**	*e*P	**Pn**	**00 19 48.0**	**-4.6**
PKIN	**Phulchoki**	**18.11**	**137**	*e*P	**Pn**	**00 19 48.1**	**-4.6**
PKI	**Pulchoki**	**18.13**	**137**	*e*P	**Pn**	**00 19 48.2**	**-4.7**
JIRN	**Jiri**	**18.46**	**135**	*e*P	**P**	**00 19 53.3**	**-3.6**
RAMN	**Ramite**	**19.25**	**135**	*e*P	**P**	**00 20 01.9**	**-3.4**
	comp=Z,20nm,0.6s						
BELG	**Belogornoye**	**19.37**	**312**	P	**P**	**00 20 06.6**	**+0.4**
	comp=Z,0.7nm,0.3s,baz=281,slow=4.2,SNR=3.3						
BELG				LR	LR	00 28 31.9	
	comp=Z,245nm,21.2s,baz=67,slow=40						
TAPN	**Taplejung**	**19.54**	**132**	*e*P	**P**	**00 20 07.7**	**-0.8**
	comp=Z,10nm,0.4s						
ODAN	**Odare**	**19.74**	**134**	*e*P	**P**	**00 20 08.6**	**-2.1**
	comp=Z,69nm,1.1s						
LSA	**Lhasa**	**19.91**	**121**	P	**Pn**	**00 20 14.8**	**+0.3**
LSA				pmax	pmax		
	comp=Z,18nm,1.3s						
LSA	**Lhasa**	**19.91**	**121**	P	**Pn**	**00 20 14.8**	**+0.3**
GNI	**Garni**	**20.24**	**275**	P	Pn	00 20 17.5	-0.4
	comp=Z,11nm,1.0s,baz=164,slow=4.2,SNR=7.0						
GNI				LR	LR	00 29 34.9	
	comp=Z,110nm,19.9s,baz=82,slow=41						
GNI	**Garni**	**20.24**	**275**	c*e*P	Pn	00 20 17.7	-0.3
GNI				pmax	pmax		
	comp=Z,29nm,1.7s						
GNI	**Garni**	**20.24**	**275**	P	**P**	**00 20 15.9**	**-0.1**
GNI				IAmb	IAmb	00 20 27.1	
	comp=Z,23nm,1.1s						
ZEI	**Tsey**	**20.42**	**282**	*e*P	Pn	00 20 25.8	+5.7
ZEI				pmax	pmax		
	comp=Z,4.0nm,1.4s						
NCK	**Nalchik**	**20.57**	**284**	*i* P	**P**	**00 20 18.1**	**-1.3**
NCK				pmax	pmax		
	comp=Z,20nm,1.4s						
ONI	**Oni**	**20.77**	**282**	P	**P**	**00 20 21.8**	**+0.2**
ONI				pmax	pmax		
	comp=Z,15nm,1.3s						
ONI	**Oni**	**20.77**	**282**	P	**P**	**00 20 21.8**	**+0.2**
PYA1	**Pyatigorsk**	**20.89**	**286**	*i* P	**P**	**00 20 22.3**	**-0.6**
UOSS	**Minazif**	**20.96**	**222**	P	Pn	00 20 25.8	-0.6
KBZ	**Khabaz**	**21.06**	**285**	P	**P**	**00 20 24.9**	**+0.3**
	comp=Z,1.9nm,0.9s,baz=53,slow=22,SNR=2.3						
KBZ				LR	LR	00 29 39.1	
	comp=Z,144nm,19.9s,baz=92,slow=40						
KVAR	**Kislovodsk Arr**	**21.19**	**286**	P	**P**	**00 20 30.2**	**+4.0**
	comp=Z,4.8nm,0.9s,baz=114,slow=20,SNR=2.6						
KVAR				LR	LR	00 29 56.1	
	comp=Z,103nm,19.8s,baz=18,slow=40						
KIV	**Kislovodsk**	**21.20**	**286**	*e*P	**P**	**00 20 23.6**	**-2.6**
KIV				*e*S	**S**	**00 24 16.8**	**-3.8**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,64nm,14.0s						
KIV	**Kislovodsk**	**21.20**	**286**	P	**P**	**00 20 26.2**	**0.0**
WSAR	**Wadi Sarin**	**21.31**	**214**	P	**P**	**00 20 27.2**	**-0.3**
	comp=Z,2.8nm,0.7s,baz=48,slow=12,SNR=3.0						
WSAR				LR	LR	00 30 54.5	
	comp=Z,91nm,18.1s,baz=59,slow=43						
GTA	**Gaotai**	**21.61**	**87**	*e*P	**P**	**00 20 36.3**	**+5.5**
GTA				pP	sP	00 20 45.9	+4.0
GTA				sP	pP	00 20 50.4	+12
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,61nm,4.8s						
GTA				LR	LR		
	comp=Z,210nm,12.7s						
GTA				LR	LR		
	comp=Z,160nm,13.5s						
GTA				LR	LR		
	comp=Z,190nm,14.2s						
KIRV	**Kirov**	**21.87**	**328**	P	**P**	**00 20 33.7**	**+0.6**
	comp=Z,5.1nm,0.5s,baz=114,slow=7.5,SNR=3.5						
KIRV				LR	LR	00 29 31.6	
	comp=Z,449nm,19.4s,baz=113,slow=38						
VRH	**Novokhopyorsk**	**22.46**	**305**	*e*P	**P**	**00 20 43.5**	**+3.9**
VRH				pmax	pmax		
	comp=Z,30nm,0.8s						
GURO	**Guroymak-BITLI**	**22.68**	**272**	P	**P**	**00 20 42.2**	**-0.1**
SIRT	**Sirnak**	**22.71**	**269**	P	**P**	**00 20 41.6**	**-0.9**
SIRT				IAmb	IAmb	00 20 52.0	
	comp=Z,27nm,1.2s						
SHL	**Shillong**	**23.30**	**127**	P	**P**	**00 20 50.7**	**+1.9**
SHL				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SHL	**Shillong**	**23.30**	**127**	P	**P**	**00 20 50.7**	**+1.9**
SHL				IAmb	IAmb	00 20 58.9	
	comp=Z,9.7nm,0.7s						
ZAK	**Zakamensk**	**23.58**	**58**	*e*P	**P**	**00 20 49.6**	**-1.6**
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.5s						
VORD	**Divnogorie**	**23.91**	**304**	*e*P	**P**	**00 20 52.7**	**-1.5**
VORD				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HYB	**Hyderabad**	**24.94**	**164**	*i* P	**P**	**00 21 09.0**	**+5.1**
PRGR	**Permogore**	**25.30**	**331**	*e*P	**P**	**00 21 02.4**	**-4.4**
PRGR				pmax	pmax		
	comp=Z,12nm,1.2s						
SONM	**Songino Array**	**25.39**	**64**	P	**P**	**00 21 07.9**	**0.0**
	comp=Z,0.5nm,0.7s,baz=354,slow=5.0,SNR=3.1						
OBN	**Obninsk**	**26.46**	**312**	⇑*e*P	**P**	**00 21 16.3**	**-1.0**
OBN				*i*		00 22 03.9	
OBN				pmax	pmax		
	comp=Z,42nm,2.4s						
OBN				MLR	MLR		
	comp=Z,235nm,16.0s						
KLMR	**Klimovskoe**	**27.27**	**326**	*e*P	**P**	**00 21 23.7**	**-0.8**
KLMR				pmax	pmax		
	comp=Z,17nm,1.5s						
KLMR	**Klimovskoe**	**27.27**	**326**	*e*P	**P**	**00 21 23.8**	**-0.8**
KLMR				AMP		00 21 25.8	
	comp=Z,17nm,1.5s						
RAYN	**Ar Rayn**	**28.24**	**238**	P	**P**	**00 21 34.5**	**+0.9**
RAYN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
RAYN	**Ar Rayn**	**28.24**	**238**	P	**P**	**00 21 34.5**	**+0.9**
BRTR	**Keskin Array B**	**28.60**	**279**	P	**P**	**00 21 37.9**	**+1.0**
	comp=Z,0.5nm,0.6s,baz=79,slow=8.7,SNR=2.6						
NRIK	**Noril'sk**	**28.97**	**12**	LR	LR	00 35 10.4	
	comp=Z,313nm,18.3s,baz=188,slow=40						
NRIK	**Noril'sk**	**28.97**	**12**	c*e*P	**P**	**00 21 38.1**	**-1.5**
NRIK				pmax	pmax		
	comp=Z,17nm,3.5s						
HHC	**Hu-ho-hao-te**	**29.96**	**78**	*e*P	**P**	**00 21 50.5**	**+1.7**
HHC				S	**S**	**00 26 49.5**	**+4.5**
HHC				SS	**ScP**	**00 28 26.9**	**-4.3**
HHC				pmax	pmax		
	comp=Z,12nm,0.9s						
HHC				pmax	pmax		
	comp=Z,99nm,4.7s						
HHC				LR	LR		
	comp=Z,150nm,12.4s						
HHC				LR	LR		
	comp=Z,230nm,11.1s						
HHC				LR	LR		
	comp=Z,200nm,14.7s						
AKASG	**Malin Array Be**	**30.24**	**302**	P	**P**	**00 21 50.4**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=77,slow=8.2,SNR=7.0						
AKASG				LR	LR	00 35 38.6	
	comp=Z,120nm,18.0s,baz=65,slow=40						
AKBB	**Malin Array Si**	**30.24**	**302**	c*e*P	**P**	**00 21 50.7**	**-0.4**
MLR	**Muntele Rosu**	**32.86**	**292**	P	**P**	**00 22 14.8**	**+0.5**
MLR				pmax	pmax		
	comp=Z,27nm,1.4s						
MLR	**Muntele Rosu**	**32.86**	**292**	P	**P**	**00 22 14.8**	**+0.5**
CMAR	**Chiang Mai Arr**	**32.93**	**126**	P	**P**	**00 22 13.7**	**-1.3**
	comp=Z,1.7nm,0.3s,baz=315,slow=8.8,SNR=2.3						
BUR08	**Bucovina Ar. S**	**33.05**	**296**	P	**P**	**00 22 15.5**	**-0.5**
BUR08				IAmb	IAmb	00 22 18.6	
	comp=Z,4.7nm,1.2s						
SOCY	**Socotra**	**33.13**	**213**	P	**P**	**00 22 16.0**	**-0.9**
FINES	**FINESS Array B**	**33.51**	**322**	P	**P**	**00 22 20.2**	**+0.6**
	comp=Z,3.1nm,0.9s,baz=116,slow=10,SNR=8.0						
FINES				LR	LR	00 36 24.9	
	comp=Z,308nm,18.9s,baz=65,slow=37						
FINES	**FINESS Array B**	**33.51**	**322**	*i* P	**P**	**00 22 20.7**	**+1.1**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
FINES	**FINESS Array B**	**33.51**	**322**	P	**P**	**00 22 20.0**	**+0.3**
SLVN	**Son La**	**34.00**	**117**	P	**P**	**00 22 26.2**	**+1.8**
SLVN				IAmb	IAmb	00 22 35.5	
	comp=Z,5.2nm,0.9s						
SUW	**Suwalki**	**34.01**	**308**	P	**P**	**00 22 22.2**	**-1.9**
SUW				pmax	pmax		
	comp=Z,17nm,1.2s						
SUW	**Suwalki**	**34.01**	**308**	P	**P**	**00 22 22.2**	**-1.9**
SUW				IAmb	IAmb	00 22 23.3	
	comp=Z,16nm,1.2s						
KWP	**Kalwaria Pacla**	**34.47**	**300**	P	**P**	**00 22 28.0**	**-0.2**
KWP				pmax	pmax		
	comp=Z,164nm,1.5s						
KWP	**Kalwaria Pacla**	**34.47**	**300**	P	**P**	**00 22 28.0**	**-0.2**
VTS	**Vitosha**	**35.39**	**288**	P	**P**	**00 22 36.9**	**+0.5**
VTS				pmax	pmax		
	comp=Z,11nm,1.3s						
VTS	**Vitosha**	**35.39**	**288**	P	**P**	**00 22 36.9**	**+0.5**
VTS				IAmb	IAmb	00 22 39.5	
	comp=Z,11nm,1.3s						
OJC	**Ojcow**	**36.28**	**302**	P	**P**	**00 22 43.8**	**+0.1**
OJC				pmax	pmax		
	comp=Z,7.0nm,1.2s						
OJC	**Ojcow**	**36.28**	**302**	P	**P**	**00 22 43.8**	**+0.1**
OJC				IAmb	IAmb	00 22 45.0	
	comp=Z,6.7nm,1.2s						
ARCES	**ARCESS Array B**	**36.55**	**335**	P	**P**	**00 22 46.2**	**+0.5**
	comp=Z,2.4nm,0.5s,baz=112,slow=8.5,SNR=23						
ARCES				LR	LR	00 38 39.0	
	comp=Z,186nm,18.3s,baz=250,slow=38						
ARCES	**ARCESS Array B**	**36.55**	**335**	P	**P**	**00 22 45.6**	**-0.2**
PSZ	**Piszkesteto**	**36.55**	**298**	P	**P**	**00 22 46.5**	**+0.4**
PSZ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
PSZ	**Piszkesteto**	**36.55**	**298**	P	**P**	**00 22 46.5**	**+0.4**
FNA	**Florina**	**37.25**	**286**	P	**P**	**00 22 50.8**	**-1.4**
FNA				pmax	pmax		
	comp=Z,14nm,1.3s						
FNA	**Florina**	**37.25**	**286**	P	**P**	**00 22 50.8**	**-1.4**
FNA				IAmb	IAmb	00 22 54.4	
	comp=Z,14nm,1.3s						
DPC	**Dobruska-Polom**	**38.47**	**302**	*e*P	**P**	**00 23 03.3**	**+1.0**
DPC	**Dobruska-Polom**	**38.47**	**302**	*e*P	**P**	**00 23 03.3**	**+1.0**
BRG	**Berggiesshubel**	**39.88**	**304**	*e*P	**P**	**00 23 15.2**	**+1.1**
BRG				Amp		00 23 17.8	
	comp=Z,3.9nm,1.0s						
CKRC	**Cesky Krumlov**	**40.03**	**300**	*e*P	**P**	**00 23 17.2**	**+1.8**
CLL	**Collm**	**40.39**	**304**	*e*P	**P**	**00 23 19.0**	**+0.8**
	comp=Z,11nm,1.3s						
CLL				*e*PP	**PP**	**00 24 52.0**	**+0.8**
CLL	**Collm**	**40.39**	**304**	*e*P	**P**	**00 23 19.0**	**+0.8**
CLL				pmax	pmax		
	comp=Z,11nm,1.3s						
GEC2	**GERESS Array S**	**40.42**	**300**	P	**P**	**00 23 18.7**	**0.0**
GEC2				IAmb	IAmb	00 23 21.2	
	comp=Z,15nm,1.4s						
GERES	**GERESS Array B**	**40.42**	**300**	P	**P**	**00 23 20.0**	**+1.3**
	comp=Z,2.3nm,0.6s,baz=74,slow=7.1,SNR=16						
GERES	**GERESS Array B**	**40.42**	**300**	P	**P**	**00 23 20.0**	**+1.3**
GERES	**GERESS Array B**	**40.42**	**300**	P	**P**	**00 23 19.4**	**+0.8**
KHC	**Kasperske Hory**	**40.44**	**301**	*e*P	**P**	**00 23 20.2**	**+1.4**
KHC	**Kasperske Hory**	**40.44**	**301**	*e*P	**P**	**00 23 20.2**	**+1.4**
NB2	**NORSAR Subarra**	**40.57**	**319**	P	**P**	**00 23 19.7**	**+0.1**
	comp=Z,1.0nm,0.8s,baz=92,slow=8.6						
NOA	**NORSAR Array B**	**40.57**	**319**	P	**P**	**00 23 19.9**	**+0.4**
	comp=Z,2.6nm,1.0s,baz=93,slow=7.6,SNR=5.3						
NOA	**NORSAR Array B**	**40.57**	**319**	P	**P**	**00 23 20.0**	**+0.4**
TIXI	**Tiksi**	**40.86**	**24**	P	**P**	**00 23 20.9**	**-0.9**
	comp=Z,1.9nm,0.6s,baz=280,slow=4.0,SNR=7.0						
TIXI	**Tiksi**	**40.86**	**24**	P	**P**	**00 23 21.3**	**-0.5**
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
TIXI	**Tiksi**	**40.86**	**24**	P	**P**	**00 23 21.3**	**-0.5**
TIXI				IAmb	IAmb	00 23 36.4	
	comp=Z,4.6nm,0.8s						
TIP	**Timpagrande**	**41.14**	**285**	P	**P**	**00 23 24.1**	**-0.6**
TIP				IAmb	IAmb	00 23 38.1	
	comp=Z,14nm,1.3s						
KLR	**Kul'dur**	**41.94**	**58**	P	**P**	**00 23 30.8**	**-0.3**
	comp=Z,1.6nm,0.7s,baz=276,slow=8.0,SNR=3.7						
KSRS	**Korea Array**	**43.06**	**76**	LR	LR	00 43 08.9	
	comp=Z,58nm,19.2s,baz=320,slow=38						
SENIN	**Lac Senin/Sane**	**45.26**	**299**	P	**P**	**00 23 57.1**	**-0.9**
TWG	**Pinlang**	**45.30**	**99**	P	**P**	**00 23 58.5**	**+0.1**
IPM	**Ipoh**	**45.49**	**136**	P	**P**	**00 24 01.3**	**+1.3**
BNI	**Bardonecchia**	**46.10**	**297**	P	**P**	**00 24 03.1**	**-1.5**
BNI				pmax	pmax		
	comp=Z,14nm,1.3s						
BNI	**Bardonecchia**	**46.10**	**297**	P	**P**	**00 24 03.1**	**-1.5**
BNI				IAmb	IAmb	00 24 05.8	
	comp=Z,14nm,1.3s						
GSI	**Gunungsitoli**	**46.58**	**143**	P	**P**	**00 24 10.2**	**+1.8**
DAG	**Danmarks Havn**	**49.88**	**342**	*i* P	**P**	**00 24 33.9**	**+0.7**
DAG				IAmb	IAmb	00 24 34.6	
	comp=Z,5.8nm,0.6s						
LODK	**Lodwar**	**49.96**	**230**	P	**P**	**00 24 33.2**	**-1.5**
LODK				IAmb	IAmb	00 24 51.6	
	comp=Z,3.2nm,1.1s						
DBG	**Daneborg**	**50.84**	**339**	*i* P	**P**	**00 24 40.9**	**+0.4**
ESDC	**Sonseca Array**	**55.48**	**295**	P	**P**	**00 25 15.3**	**0.0**
	comp=Z,1.1nm,1.0s,baz=69,slow=8.1,SNR=4.3						
MBAR	**Mbarara**	**55.91**	**232**	LR	LR	00 50 05.7	
	comp=Z,53nm,20.3s,baz=42,slow=37						
SUMG	**Summit**	**56.30**	**340**	P	**P**	**00 25 20.2**	**-0.8**
SUMG				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SUMG	**Summit**	**56.30**	**340**	*i* P	**P**	**00 25 21.2**	**+0.2**
SUMG	**Summit**	**56.30**	**340**	P	**P**	**00 25 20.2**	**-0.8**
SUMG				IAmb	IAmb	00 25 23.4	
	comp=Z,9.9nm,0.9s						
ICESG	**Greenland Ices**	**58.56**	**337**	*i* P	**P**	**00 25 37.8**	**+0.8**
JCJ	**Chichijima**	**58.62**	**80**	P	**P**	**00 25 37.2**	**-0.3**
PFVI	**Vila Bisbo**	**60.06**	**295**	P	**P**	**00 25 46.6**	**-0.7**
DY2G	**Dye2**	**62.16**	**336**	*i* P	**P**	**00 26 01.5**	**0.0**
TORD	**Torodi Ar. Bea**	**66.30**	**267**	P	**P**	**00 26 28.4**	**-0.6**
	comp=Z,1.4nm,0.8s,baz=50,slow=6.0,SNR=9.2						
ILAR	**Eielson Array**	**69.70**	**16**	P	**P**	**00 26 48.5**	**-1.1**
	comp=Z,0.3nm,0.8s,baz=324,slow=5.9,SNR=2.3						
KOWA	**Kowa**	**69.72**	**272**	P	**P**	**00 26 50.6**	**+0.1**
KOWA				IAmb	IAmb	00 26 57.2	
	comp=Z,7.1nm,1.0s						
DBIC	**Dimbokro**	**75.39**	**266**	P	**P**	**00 27 25.7**	**+1.4**
	comp=Z,4.0nm,0.8s,baz=345,slow=7.0,SNR=3.0						
DBIC	**Dimbokro**	**75.39**	**266**	P	**P**	**00 27 23.8**	**-0.5**
DBIC				IAmb	IAmb	00 27 30.4	
	comp=Z,10nm,1.1s						
WRA	**Warramunga Arr**	**84.45**	**123**	P	**P**	**00 28 12.2**	**-0.9**
	comp=Z,0.7nm,0.9s,baz=324,slow=4.5,SNR=4.9						
WRA	**Warramunga Arr**	**84.45**	**123**	*i* P	**P**	**00 28 13.1**	**0.0**
WRA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ASAR	**Alice Springs**	**86.94**	**126**	P	**P**	**00 28 24.4**	**-1.0**
	comp=Z,1.4nm,1.0s,baz=328,slow=5.5,SNR=7.4						

RHSSO ***21*** *00:17:04.5±0.4, 42°.71N×16°.52E, h11^{km}±2^{km}, ML3.2/15*
PRU ***21*** *00:17:07.9±0.0, 42°.94N×16°.51E, h0^{km}*
BEO ***21*** *00:17:07.1±0.7, 42°.91N×16°.61E, h0^{km}, ML3.0/14*
VIE ***21*** *00:17:07.8±0.7, 42°.86N×16°.09E, h10^{km}, mb3.0/12, ml2.8/8, ms3.6/3, Error ellipse: s-maj=6.8km s-min=5.3km az=57.0 79 km SSW of Split*
LDG ***21*** *00:17:16.0±0.7, 43°.88N×15°.75E, h10^{km}, Ml3.2/13, Error ellipse: s-maj=14.2km s-min=11.5km az=41.0*
ISC 21 00:17:03.5±1.2**, 42°.70N**±0°.03×**16°.44E**±0°.03**, h9**^{km}±9^{km}**, n96,** σ1^{s}.**42**/142**, 1C, Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSTV	**Lastovo**	**0.34**	**79**	*i* Pg	**Pb**	**00 17 12.7**	**+1.0**
LSTV				Sg	**Sb**	**00 17 17.5**	**+0.2**
HVAR	**Hvar**	**0.47**	**1**	*e*Pg	**Pb**	**00 17 14.8**	**+0.7**
HVAR				Sg	**Sb**	**00 17 20.8**	**-0.4**
MAKA	**Makarska**	**0.72**	**36**	*e*Pg	**Pg**	**00 17 17.8**	**+0.3**
MAKA				Sg	**Sg**	**00 17 27.3**	**+0.4**
RICI	**Ricice**	**0.94**	**32**	*e*Pg	**Pg**	**00 17 21.4**	**-0.2**
RICI				Sg	**Sg**	**00 17 32.4**	**-1.4**
STON	**Ston**	**0.94**	**79**	*e*Pg	**Pg**	**00 17 21.5**	**-0.2**
STON				*e*Sg	**Sg**	**00 17 33.4**	**-0.5**
STON	**Ston**	**0.94**	**79**	⇑*i*Pg	**Pg**	**00 17 21.0**	**-0.6**
STON				*e*Sg	**Sg**	**00 17 33.1**	**-0.8**
STON	**Ston**	**0.94**	**79**	*e*Pg	**Pg**	**00 17 21.4**	**-0.2**
STON				Sg	**Sg**	**00 17 33.5**	**-0.5**
ZIRJ	**Zirje**	**1.11**	**329**	*e*Pg	**Pg**	**00 17 24.7**	**-0.2**
ZIRJ				Sg	**Sg**	**00 17 39.4**	**-0.1**
DBRK	**Dubrovnik**	**1.26**	**91**	*e*Pg	**Pn**	**00 17 26.7**	**-0.6**
DBRK				Sg	**Sb**	**00 17 42.5**	**-1.3**
MORI	**Morici**	**1.28**	**336**	*e*Pg	**Pn**	**00 17 27.2**	**-0.4**
MORI				Sg	**Sb**	**00 17 44.5**	**+0.1**
KIJV	**Kijevo**	**1.30**	**359**	*e*Pg	**Pn**	**00 17 27.3**	**-0.6**
KIJV				Sg	**Sb**	**00 17 43.7**	**-1.3**
TREB	**Trebinje**	**1.41**	**89**	*e*Pg	**Pn**	**00 17 28.9**	**-0.5**
TREB				*e*Sg	**Sn**	**00 17 46.0**	**-2.1**
TREB	**Trebinje**	**1.41**	**89**	*e*Pg	**Pn**	**00 17 28.8**	**-0.6**
TREB				*e*Sg	**Sn**	**00 17 47.2**	**-0.9**
HCY	**Herceg Novi**	**1.54**	**99**	*e*Pg	**Pn**	**00 17 30.6**	**-0.6**
HCY				*e*Sg	**Sn**	**00 17 51.7**	**+0.4**
BRY	**Bratogost**	**1.56**	**82**	*e*Pg	**Pn**	**00 17 30.8**	**-0.8**
BRY				*e*Sg	**Sn**	**00 17 51.9**	**-0.1**
DUGI	**Dugi Otok**	**1.64**	**322**	*e*Pn	**Pn**	**00 17 33.4**	**+0.8**
DUGI				Sn	**Sn**	**00 17 53.3**	**-0.5**
MGRS	**Mrkonjic Grad**	**1.78**	**15**	*e*Pn	**Pn**	**00 17 35.4**	**+0.9**
MGRS				*e*Sn	**Sn**	**00 17 57.0**	**-0.3**
UDBI	**Udbina**	**1.89**	**345**	*e*Pn	**Pn**	**00 17 37.4**	**+1.3**

UDBI				Sn	Sn	00 18 01.4	+1.3
DRME	Dracevica, Mon	2.10	103	*e*Pn	Pn	00 17 38.7	-0.2
DRME				*e*Sn	Sn	00 18 04.0	-1.1
PDG	Podgorica	2.10	97	*e*Pg	Pb	00 17 43.0	+1.3
PDG				*e*Sg	Sg	00 18 11.7	+0.8
PDG	Podgorica	2.10	97	*e*Pn	Pn	00 17 39.4	+0.5
PDG				*e*Sn	Sn	00 18 03.9	-1.2
BLY	Banja Luka	2.12	15	*e*Pg	Pb	00 17 41.7	-0.4
BLY				*e*Sg	Sn	00 18 07.2	+1.6
BLY	Banja Luka	2.12	15	*e*Pn	Pn	00 17 39.6	+0.5
BLY				*e*Sn	Sn	00 18 05.3	-0.3
NVLJ	Novalja	2.18	329	*e*Pn	Pn	00 17 40.7	+0.7
PLIT	Plitvice	2.25	345	*e*Pn	Pn	00 17 42.3	+1.2
AQU	L'Aquila	2.27	262	*e*Pn	Pn	00 17 43.0	+1.7
AQU				*e*Sn	Sn	00 18 11.4	+1.9
PRIJ	Prijedor	2.28	5	*e*Pn	Pn	00 17 41.6	+0.2
PRIJ				*e*Sn	Sn	00 18 09.5	-0.1
HAPS	Han Pijesak,BI	2.29	52	*e*Pn	Pn	00 17 41.8	+0.1
HAPS				*e*Sn	Sn	00 18 08.9	-1.2
RUDO	Rudo	2.33	66	*e*Pn	Pn	00 17 42.4	+0.3
RUDO				*e*Sn	Sn	00 18 09.8	-1.1
MRAK	Mrakovica	2.33	8	*e*Pn	Pn	00 17 42.9	+0.7
MRAK				*e*Sn	Sn	00 18 11.5	+0.5
RABC	Rab	2.37	330	*e*Pn	Pn	00 17 44.1	+1.5
BBLS	Lazići	2.46	61	*e*Pg	Pn	00 17 46.6	+2.7
BBLS				*e*Sg	Sb	00 18 19.0	+0.6
BBLS	Lazići	2.46	61	*e*Pn	Pn	00 17 44.0	+0.1
BBLS				*e*Sn	Sn	00 18 13.2	-0.9
SJES	Sjenica	2.65	77	*e*Pn	Pn	00 17 49.1	+2.5
SJES				*e*Sn	Sn	00 18 20.5	+1.5
SMRN	Sveta Marina	2.86	325	*e*Pn	Pn	00 17 50.4	+1.1
TEKS	Tekeris	2.90	50	*e*Pn	Pn	00 17 50.6	+0.6
BLJ	Bijeljina	2.92	44	*e*Pn	Pn	00 17 50.0	-0.1
BLJ				*e*Sn	Sn	00 18 23.9	-1.4
BOJS	Bojanci	2.93	343	*i* Pn	Pn	00 17 51.6	+1.3
DIVS	Divibare	2.94	60	*e*Pn	Pn	00 17 52.6	+2.0
DIVS	Divibare	2.94	60	*e*Pn	Pn	00 17 49.8	-0.8
DIVS				*e*Sn	Sn	00 18 25.3	-0.7
RIY	Rijeka	2.98	332	*e*Pn	Pn	00 17 51.9	+0.9
RIY				*e*Sn	Sn	00 18 27.1	+0.3
OZLJ	Ozalj	2.99	347	*e*Pn	Pn	00 17 52.0	+0.9
ZAG	Zagreb	3.14	354	*e*Pn	Pn	00 17 54.2	+1.0
ZAG				*e*Sn	Sn	00 18 30.9	+0.1
CRES	Cresnjev	3.20	348	*e*Pn	Pn	00 17 54.8	+0.7
CRES				*e*Sn	Sn	00 18 32.2	-0.2
TRUS	Trudelj	3.26	61	*e*Pn	Pn	00 17 56.7	+1.8
GRUS	Gruza	3.34	68	*e*Pn	Pn	00 17 58.9	+3.0
CEY	Cerknica	3.36	335	*e*Pn	Pn	00 17 56.9	+0.6
CEY				*e*Sn	Sn	00 18 37.1	+0.7
FRGS	Fruska Gora	3.46	44	*e*Pn	Pn	00 17 57.9	+0.3
FRGS				*e*Sn	Sn	00 18 37.5	-1.2
LOBO	Lobor	3.46	356	*e*Pn	Pn	00 17 57.8	+0.1
SELS	Selova	3.47	80	*e*Pn	Pn	00 17 59.8	+2.0
KOVH	Kovagotottos	3.59	19	*e*PN	Pn	00 17 59.6	+0.2
LJU	Ljubljana	3.61	338	*e*Pn	Pn	00 18 00.4	+0.7
LJU				*e*Sn	Sn	00 18 42.5	0.0
MORH	Mrgy, Hungar	3.85	23	*e*PN	Pn	00 18 04.9	+2.0
MORH	Mrgy, Hungar	3.85	23	*e*Pn	Pn	00 18 03.3	+0.4
BARS	Barje	3.96	87	*e*Pn	Pn	00 18 06.8	+2.3
BARS	Barje	3.96	87	*e*Pn	Pb	00 18 11.5	-2.0
OBKA	Obir	4.04	341	*i* Pn	Pn	00 18 07.2	+1.6
	1.9nm,0.2s						
OBKA				*e*Sn	Sn	00 18 51.7	-1.4
	12nm,0.3s						
SOKA	Soboth	4.10	346	*e*Pn	Pn	00 18 07.2	+0.7
	3.7nm,0.4s						
SOKA				*e*Sn	Sn	00 18 54.8	+0.2
	3.6nm,0.5s						
PRVS	Prvonek	4.17	91	*e*Pn	Pn	00 18 09.6	+2.3
BOSS	Bosilegrad	4.46	91	*e*Pn	Pn	00 18 12.9	+1.5
MPLH	Magyarpolny	4.53	10	*e*PN	Pn	00 18 14.4	+2.0
ARSA	Arzberg	4.59	352	*i* Pn	Pn	00 18 14.4	+1.2
	8.6nm,0.4s						
ARSA				*e*Sn	Sn	00 19 06.6	-0.2
	5.6nm,0.5s						
BZS	Buzias	4.73	50	*e*Pn	Pn	00 18 17.4	+2.4
ABTA	Abfaltersbach	4.92	327	*i* Pn	Pn	00 18 18.6	+0.9
	0.8nm,0.3s						
ABTA				*i* Sn	Sn	00 19 12.1	-2.7
	8.6nm,0.6s						
CONA	Conrad Observa	5.24	356	*i* Pn	Pn	00 18 23.6	+1.5
	1.2nm,0.2s						
CONA				*e*Sn	Sn	00 19 23.7	+0.9
	1.3nm,0.4s						
SRO	Srobarova	5.28	14	*e*SN	Sn	00 19 24.8	+1.3
MOA	Molln	5.37	344	*e*Pn	Pn	00 18 25.1	+1.2
	2.3nm,0.5s						
MOA				*i* Sn	Sn	00 19 22.9	-2.9
	3.7nm,0.5s						
PGF	Pioggiola	5.49	271	*e*P	Pb	00 18 35.9	-3.8
PGF				*e*Sn	Sn	00 19 26.1	-2.9
WTTA	Wattenberg	5.69	325	*e*Pn	Pn	00 18 28.6	+0.2
	1.8nm,0.3s						
WTTA				*i* Sn	Sn	00 19 32.0	-2.0
	5.3nm,0.5s						
MODS	Modra-Piesok	5.70	6	*e*PN	Pn	00 18 36.6	+8.2
MODS				*e*SN	Sn	00 19 36.9	+2.9
WATA	Walderalm	5.77	325	*i* Pn	Pn	00 18 30.3	+0.8
	0.7nm,0.2s						
WATA				*i* Sn	Sn	00 19 34.8	-1.2
	2.5nm,0.2s						
SQTA	Sankt Quirin	5.84	322	*e*Pn	Pn	00 18 31.6	+1.1
	2.6nm,0.3s						
SQTA				*e*Sn	Sn	00 19 35.6	-2.0
	5.8nm,0.5s						
FETA	Feichten	5.92	319	*i* Sn	Sn	00 19 36.7	-3.0
	2.5nm,0.5s						
MOTA	Moosalm	5.99	323	*e*Pn	Pn	00 18 33.9	+1.4
	2.0nm,0.3s						
MOTA				*i* Sn	Sn	00 19 40.8	-0.4
	2.8nm,0.3s						
VYHS	Vyhne	6.03	15	*e*PN	Pn	00 18 39.0	+6.1
VYHS				*e*SN	Sn	00 19 41.8	-0.3
RETA	Reutte	6.25	322	*e*Pn	Pn	00 18 39.0	+3.0
	0.4nm,0.2s						
RETA				*i* Sn	Sn	00 19 46.5	-1.0
	2.0nm,0.2s						
KRUC	Moravsky	6.36	360	*e*PN	Pn	00 18 40.2	+2.8
DAVA	Damuels	6.53	317	*e*Sn	Sn	00 19 52.1	-2.5
	6.2nm,0.6s						
VRAC	Vranov	6.61	1	*e*PN	Pn	00 18 42.2	+1.4
SBF	Sospel	6.67	283	*e*Pn	Pn	00 18 42.9	+1.1
SBF				*e*Sn	Sn	00 19 47.4	-11
	10nm,0.4s						
KHC	Kasperske Hory	6.73	344	*e*PN	Pn	00 18 42.5	-0.1
KHC				*e*x	x	00 19 43.0	
KHC				*e*SN	Sn	00 19 56.1	-3.3
FRF	La Foret Royal	7.22	280	*e*Pn	Pn	00 18 51.2	+2.0
FRF	La Foret Royal	7.22	280	*e*P	Pn	00 18 55.5	+6.3
FRF				*e*Sn	Sn	00 20 02.4	-8.9
	1.0nm,0.2s						
MBDF	Montbardon	7.29	289	*e*Pn	Pn	00 18 50.3	-0.1
MBDF				*e*Sn	Sn	00 19 58.7	-15
	1.6nm,0.2s						
LPG	La Plagne	7.51	295	*e*Pn	Pn	00 18 50.5	-3.0
LPG				*e*Sn	Sn	00 20 00.2	-19
	1.6nm,0.2s						
LPL	La Plagne	7.53	295	*e*Pn	Pn	00 18 51.4	-2.3
LPL				*e*Sn	Sn	00 20 00.4	-19
	2.3nm,0.3s						
ORIF	Oris-en-Rattie	7.95	290	*e*Pn	Pn	00 18 58.3	-1.1
ORIF	Oris-en-Rattie	7.95	290	*e*P	Pn	00 19 03.1	+3.7
ORIF				*e*Sn	Sn	00 20 13.5	-16
	3.5nm,0.4s						
SMRF	Simiane la Rot	8.02	283	*e*Pn	Pn	00 19 00.5	+0.2
CABF	La Chapelle	8.35	301	*e*Pn	Pn	00 19 02.0	-2.8
HAU	Haudompre	8.86	310	*e*P	Pn	00 19 11.4	-0.4
HAU				*e*Sn	Sn	00 20 29.4	-22
	1.5nm,0.3s						
HAU				*e*S		00 20 41.0	
LASF	Ste Croix	9.27	283	*e*P	Pn	00 19 23.8	+6.5
SMF	Signal de Mont	9.80	298	*e*P	Pn	00 19 26.9	+2.3
SMF				*e*Sn	Sn	00 20 56.1	-19
	3.1nm,0.4s						
LOR	Lormes	10.01	301	*e*Pn	Pn	00 19 22.4	-5.1
	baz=115						
LOR				*e*Sn	Sn	00 21 02.3	-18
	7.7nm,0.5s						
SSF	Saint Saulge	10.16	300	*e*Sn	Sn	00 21 06.1	-17
	0.7nm,0.3s						
AVF	Avril sur Loir	10.17	298	*e*Pn	Pn	00 19 26.1	-3.5
AVF				*e*Sn	Sn	00 21 05.4	-18
	0.7nm,0.4s						

TUL ***21*** *00:27:17±0.6, 36°.94N±0°.02×97°.84W±0°.03, h6km±1km, ML2.7, mb_Lg2.6/14(NEIC), Error ellipse: s-maj=4.0km s-min=2.6km az=71.0*

NEIC 21 00:27:17.4±0.8, 36°.93N±0°.01×97°.82W±0°.05, h7km±5km, Error ellipse: s-maj=6.4km s-min=1.5km az=79.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GC02	Grant County #	0.08	200	Pg	Pg	00 27 19.4	-0.1
GC02				Sg	Sg	00 27 20.9	+0.1
KAN14	Manchester OK	0.12	285	Pg	Pg	00 27 19.6	-0.3
KAN14				Sg	Sg	00 27 21.5	-0.2
KAN17	Caldwell West	0.13	22	Pg	Pg	00 27 20.0	-0.1
KAN17				Sg	Sg	00 27 22.0	0.0
KAN05	Bluff City Nor	0.18	348		Pg	00 27 21.0	-0.2
KAN05				Sg	Sg	00 27 23.7	0.0
KAN01	Argonia South	0.23	13		Pg	00 27 21.9	-0.2
KAN01				Sg	Sg	00 27 25.1	0.0
KAN09	Caldwell North	0.27	38	Pg	Pg	00 27 22.6	-0.1
KAN13	South Haven SW	0.29	73	Pg	Pg	00 27 23.0	-0.1
KAN13				Sg	Sg	00 27 27.3	+0.3
KAN10	Anthony SW Sta	0.29	312	Pg	Pg	00 27 23.0	-0.2
KAN10				Sg	Sg	00 27 26.9	-0.1
KAN06	Argonia West S	0.32	355		Pg	00 27 23.5	-0.3
KAN08	Anthony NE Sta	0.32	339		Pg	00 27 23.5	-0.2
KAN08				Sg	Sg	00 27 28.1	+0.2
OK032	Salt Plains WL	0.33	248	Pg	Pg	00 27 23.3	-0.7
KAN16	Harper SW Stat	0.35	327	Pg	Pg	00 27 24.0	-0.4
KAN12	Harper NE Stat	0.39	339	Pg	Pg	00 27 24.8	-0.3
CROK	Carrier	0.44	197	Pg	Pg	00 27 26.0	+0.1
BLOK	Blackwell	0.52	109		Pg	00 27 27.2	-0.2
T35A	Sooner Cattle	1.05	90	Pg	Pg	00 27 37.1	-0.5
OK029	Liberty Lake	1.17	165		Pg	00 27 39.2	-0.6
QUOK	Quay	1.17	130	Pg	Pg	00 27 39.2	-0.7
OK031	S. Brethren Rd	1.26	140	Pn	Pn	00 27 40.5	-0.8
BCOK	Bluff Creek, N	1.28	172		Pn	00 27 41.0	-0.7
OK030	Cody Creek RV	1.30	140		Pn	00 27 41.6	-0.4
OK025	Westminster Rd	1.40	164		Pn	00 27 43.4	0.0
OKCFA	Oklahoma City	1.54	169		Pn	00 27 45.4	+0.1
OKCFA				IAmb_Lg		00 28 08.7	
	comp=Z,32nm,0.8s						
OKCSW	OKLAHOMA CITY	1.55	168		Pn	00 27 45.7	+0.2
R32A	Long Quarter,	1.65	335		Pn	00 27 47.2	+0.3
FNO	Franklin	1.70	168		Pn	00 27 48.0	+0.4
FNO				IAmb_Lg		00 28 13.9	
	comp=Z,25nm,0.8s						
TUL1	Leonard	1.93	121		Pn	00 27 51.5	+0.9
TUL1				IAmb_Lg		00 28 21.3	
	comp=Z,43nm,0.8s						
WMOK	Wichita Mounta	2.32	200		Pn	00 27 56.1	0.0
X34A	Smith Ranch, M	2.32	180		Pn	00 27 56.4	+0.4
X34A				IAmb_Lg		00 28 32.4	
	comp=Z,33nm,1.1s						
KSU1	Kansas State U	2.37	23		Pn	00 27 56.9	+0.2
KSU1				IAmb_Lg		00 28 35.1	
	comp=Z,35nm,0.8s						
CBKS	Cedar Bluff	2.42	322	Pn	Pn	00 27 56.9	-0.5
CBKS				IAmb_Lg		00 28 36.3	
	comp=Z,17nm,0.7s						
U38A	Gravette	2.81	99	Pn	Pn	00 28 03.0	+0.3
LOOK	Love County	2.98	170	Pn	Pn	00 28 05.5	+0.5
X37A	Clayton	3.07	139		Pn	00 28 07.8	+1.5
HHAR	Hobbs	3.19	100	Pn	Pn	00 28 08.2	+0.2
Z35A	Perchaven, San	3.62	172	Pn	Pn	00 28 14.1	+0.2
S39A	Bolivar	3.67	77	Pn	Pn	00 28 15.0	+0.5
W39A	Magazine	3.70	117	Pn	Pn	00 28 16.5	+1.5
AMTX	Amarillo	3.74	238	IAmb_Lg		00 29 26.1	
	comp=Z,11nm,0.9s						

LJU 21 00:41:03.8, 45°.97N×14°.90E, h8km, ML0.7, 1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PDKS	Podkum	0.11	36	⇓*i*Pg	Pg	00 41 06.7	+0.3
PDKS				*i* Sg	Sg	00 41 08.5	+0.2
PDKS				IAML		00 41 08.7	
	comp=Z,15nm,0.1s						
VISS	Visnje	0.17	195	*i* Pg	Pg	00 41 07.7	+0.3
VISS				*i* Sg	Sg	00 41 10.2	+0.4
VISS				IAML		00 41 10.6	
	comp=Z,13nm,0.1s						
VNDS	Vrh nad Dolski	0.19	313	*i* Pg	Pg	00 41 08.1	+0.3
VNDS				*i* Sg	Sg	00 41 10.6	+0.1
VNDS				IAML		00 41 12.1	
	comp=Z,4.0nm,0.1s						
LEGS	Legarje	0.29	94	*i* Pg	Pg	00 41 09.8	+0.2
LEGS				*i* Sg	Sg	00 41 13.8	+0.4
GBAS	Gorenja Brezov	0.32	264	*i* Pg	Pg	00 41 10.4	+0.2
GBAS				*i* Sg	Sg	00 41 14.5	0.0
GBAS				IAML		00 41 16.8	
	comp=Z,1.8nm,0.1s						
CESS	Cesta pri Krsk	0.39	89	*i* Sg	Sg	00 41 17.2	+0.6
CESS				IAML		00 41 18.2	
	comp=Z,7.7nm,0.2s						
CRES	Cresnjev	0.41	110	*i* Sg	Sg	00 41 17.4	+0.2
CRES				IAML		00 41 19.7	
	comp=Z,0.7nm,0.1s						
DOBS	Dobrina	0.43	65	*i* Pg	Pg	00 41 12.3	+0.1
DOBS				*i* Sg	Sg	00 41 18.3	+0.4
DOBS				IAML		00 41 19.3	
	comp=Z,3.8nm,0.1s						
GOLS	Golise	0.50	85	*i* Pg	Pg	00 41 13.8	+0.2
GOLS				IAML		00 41 23.0	
	comp=Z,1.7nm,0.1s						
GCIS	Gornji Cirnik	0.52	101	*i* Pg	Pg	00 41 14.1	+0.3
GCIS				*i* Sg	Sg	00 41 21.4	+0.8
GCIS				IAML		00 41 22.8	
	comp=Z,0.9nm,0.1s						

MED_RC ***21*** *00:41:55.0±0.3, 38°.70N×20°.65E, h17km±1km, MW4.7/26, Moment Tensor Solution.Mantle waves: s26,c40; Duration: 1s0 Moment tensor: Scale 10^16Nm; M_{rr}-0.30±.08; $M_{\theta\theta}$1.24±.06; $M_{\phi\phi}$-0.95±.05; $M_{r\theta}$0.01±.11; $M_{\theta\phi}$0.73±.04; $M_{\phi r}$-0.05±.11; Best double couple: $M_0$1.32000×10^16 NP1:ϕ_s298.00000°,δ87.00000°, λ-2.00000°. NP2:ϕ_s28.00000°,δ88.00000°,λ-177.00000°. Principal axes: T 1.4600, Plg0.0000°, Azm163.0000°; N -0.2900, Plg86.0000°, Azm69.0000°; P -1.1700, Plg4.0000°, Azm253.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

TIR ***21*** *00:41:55.0, 38°.68N×20°.59E, h7km±1km, Ml5.0*

IDC ***21*** *00:41:55.3±0.5, 38°.75N×20°.54E, h0km, mb4.5/27, mb1 4.5/41, mb1mx4.4/53, mbtmp4.4/41, ML3.9/13, MS3.9/42, Ms1 3.9/42, ms1mx3.9/58, Error ellipse: s-maj=10.7km s-min=9.2km az=142.0*

BEO ***21*** *00:41:55.4±1.8, 38°.28N×20°.38E, h63km±2km, ML4.7/19*

UPSL ***21*** *00:41:56.3, 38°.72N×20°.62E, h9km, Mw4.5, Moment Tensor Solution. s7 Moment tensor: M_{rr}-0.28; $M_{\theta\theta}$5.44; $M_{\phi\phi}$-5.16; $M_{r\theta}$-1.77; $M_{\theta\phi}$3.91; $M_{\phi r}$-3.50; Fault plane solution: NP1:ϕ_s297.00000°,δ59.00000°,λ-2.00000°. NP2:ϕ_s27.00000°,δ89.00000°,λ-149.00000°.*

MOS ***21*** *00:41:56.0±1.0, 38°.80N×20°.47E, h13km, mb4.8/23, MS4.1/14 Error ellipse: s-maj=4.8km s-min=3.0km az=87.7*

THE ***21*** *00:41:56.2, 38°.72N×20°.60E, h8km±1km, ML4.6/5, Error ellipse: s-maj=1.0km s-min=0.4km az=80.0*

ATH ***21*** *00:41:56.3, 38°.72N×20°.62E, h9km±1km, ML4.6/13, Error ellipse: s-maj=2.3km s-min=1.0km az=298.0*

NEIC ***21*** *00:41:57.7, 38°.78N×20°.47E, h17km, Moment Tensor Solution. Moment tensor: Scale 10^16Nm; M_{rr}-1.09; $M_{\theta\theta}$-0.24; $M_{\phi\phi}$1.33; $M_{r\theta}$0.47; $M_{\theta\phi}$-0.33; $M_{\phi r}$0.44; Fault plane solution: $M_0$1.42000×10^16 NP1:ϕ_s323.94000°, δ43.34000°,λ-129.66000°. NP2:ϕ_s192.68000°, δ58.11000°,λ-58.94000°. Principal axes: T 1.4441, Plg8.0000°, Azm261.0000°; N -0.0401, Plg26.0000°, Azm355.0000°; P -1.4040, Plg63.0000°, Azm155.0000°;*

PDG ***21*** *00:41:57.9±0.5, 38°.80N×20°.38E, h18km±1km, MD4.6/2, ML4.6/13 Error ellipse: s-maj=0.7km s-min=0.8km az=0.0*

NEIC ***21*** *00:41:57.5±1.7, 38°.73N±0°.05×20°.48E±0°.06, h10km±1km, mb4.7/75, Mwr4.7/30, ML4.6(THE), Error ellipse: s-maj=8.8km s-min=8.6km az=183.0*

HLW ***21*** *00:41:58.0, 38°.53N×21°.14E, h2km±33km, Ml5.1*

SOF ***21*** *00:42:34.9, 41°.16N×22°.32E, h2km, MD3.5*

ISC 21 00:41:56.2±0.6, 38°.72N±0°.01×20°.58E±0°.02, h6km±3km, n661, σ1s81/730, mb4.7/83, MS4.0/36, 37C-42D, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRAG	Dragano-Lefkad	0.04	192	P	Pg	00 41 57.7	+0.2
DRAG				S	Sg	00 41 58.8	+0.4
DRAG	Dragano-Lefkad	0.04	192	P	Pg	00 41 57.7	+0.2
LKD2	Lefkada island	0.09	40	P	Pg	00 41 58.1	-0.2
LKD2				S	Sg	00 42 00.1	+0.4
	775µm,0.5s						
LKD2	Lefkada island	0.09	40	P	Pg	00 41 58.1	-0.2
LKD2				S	Sg	00 42 00.2	+0.5
LKD2				AML	AML	00 42 00.6	
LKD2				AML	AML	00 42 01.9	
LKD2	Lefkada island	0.09	40	P	Pg	00 41 58.1	-0.2
	baz=27						
LKD2				S	Sg	00 42 00.1	+0.4
	baz=27						
NYDR	Nydri-Lefkada	0.09	95	P	Pg	00 41 57.8	-0.4
NYDR				S	Sg	00 41 59.3	-0.3
NYDR	Nydri-Lefkada	0.09	95	P	Pg	00 41 58.0	-0.2
NYDR				S	Sg	00 41 59.3	-0.3
EVGI	Lefkada island	0.11	151	P	Pg	00 41 58.7	+0.1
EVGI				S	Sg	00 42 00.6	+0.3
EVGI	Lefkada island	0.11	151	P	Pg	00 41 58.8	+0.1
EVGI				S	Sg	00 42 00.8	+0.5
TSLK	Tsoukalades, L	0.12	28	P	Pg	00 41 59.0	+0.3
TSLK				S	Sg	00 42 01.1	+0.7
TSLK	Tsoukalades, L	0.12	28	P	Pg	00 41 59.2	+0.5
TSLK				AML	AML	00 42 03.5	
TSLK				AML	AML	00 42 04.2	
FSK	Fiskardo	0.26	184	P	Pg	00 42 01.9	+0.6
FSK				S	Sg	00 42 05.9	+1.1
	141µm,1.1s						
FSK	Fiskardo	0.26	184	P	Pg	00 42 01.9	+0.6
FSK				AML	AML	00 42 07.2	
FSK				AML	AML	00 42 13.5	
KEF4	Livadi, Kephal	0.48	195	P	Pg	00 42 05.5	+0.1
KEF4				S	Sg	00 42 12.8	+1.1
KEF4	Livadi, Kephal	0.48	195	P	Pg	00 42 05.6	+0.1
DMLN	Damoulianata-K	0.51	199	P	Pg	00 42 06.0	-0.1
DMLN	Damoulianata-K	0.51	199	P	Pg	00 42 05.9	-0.1
LXRA	Lixouri, Kepha	0.53	193	P	Pg	00 42 06.6	+0.1
VLS	Valsamata	0.54	180	P	Pg	00 42 06.2	-0.5
VLS				S	Sg	00 42 14.3	+0.6
	36µm,0.6s						
VLS	Valsamata	0.54	180	P	Pg	00 42 06.3	-0.4
VLS				S	Sg	00 42 14.7	+1.0
VLS				AML	AML	00 42 16.6	
	comp=E,93015µm,0.8s						
VLS				AML	AML	00 42 23.6	
	comp=N,74690µm,0.6s						
ARGA	Argostoli. Kep	0.55	189	P	Pb	00 42 07.6	-0.7
KEF3	Kipouria, Keph	0.55	200	P	Pg	00 42 06.2	-0.6
KEF3				S	Sb	00 42 15.1	-1.3
	comp=N,134µm,0.9s						
KEF3	Kipouria, Keph	0.55	200	P	Pg	00 42 06.2	-0.6
PSDA	Pessada-Kefalo	0.61	180	P	Pg	00 42 07.4	-0.5
PSDA				S	Sb	00 42 17.0	-1.0
PSDA	Pessada-Kefalo	0.61	180	P	Pg	00 42 07.7	-0.2
PVO	Paravola	0.74	98	P	Pg	00 42 10.6	+0.1
PVO	Paravola	0.74	98	P	Pg	00 42 10.8	+0.3
PVO				AML	AML	00 42 24.5	
PVO				AML	AML	00 42 25.0	
IGT	Igoumenitsa	0.83	346	P	Pg	00 42 11.4	-0.8
IGT	Igoumenitsa	0.83	346	P	Pg	00 42 12.1	-0.2
IGT				AML	AML	00 42 30.4	
	comp=N,95804µm,0.5s						
IGT				AML	AML	00 42 30.7	
	comp=E,82717µm,0.5s						
IGT	Igoumenitsa	0.83	346	P	Pg	00 42 12.1	-0.2
	baz=347						
IGT				S	Sb	00 42 25.4	+0.7
	baz=347						
VTN	Vitineika	0.93	149	P	Pg	00 42 14.1	0.0
VTN	Vitineika	0.93	149	P	Pg	00 42 13.9	-0.2
JAN	Janina	0.96	12	P	Pg	00 42 14.0	-0.6
JAN	Janina	0.96	12	P	Pg	00 42 14.6	0.0
JAN				AML	AML	00 42 34.6	
	comp=N,47975µm,0.4s						
JAN				AML	AML	00 42 34.7	
	comp=E,55678µm,1.0s						
RLS	Riolos of Patr	0.96	133	P	Pg	00 42 13.6	-1.0
RLS	Riolos of Patr	0.96	133	P	Pg	00 42 13.8	-0.8
RLS				AML	AML	00 42 38.0	
	comp=E,69613µm,1.1s						
RLS				AML	AML	00 42 39.1	
	comp=N,61901µm,0.6s						
ZAK2	Zakynthos	0.96	165	P	Pg	00 42 14.4	-0.3
EVR	Evrytania	0.98	78	P	Pg	00 42 14.5	-0.5
EVR	Evrytania	0.98	78	P	Pg	00 42 14.5	-0.5
EVR				AML	AML	00 42 39.7	
	comp=N,30134µm,0.8s						
EVR				AML	AML	00 42 42.5	
	comp=E,27076µm,1.1s						
LTHK	Lithakia	1.03	169	P	Pg	00 42 14.2	-1.7
LTHK	Lithakia	1.03	169	P	Pg	00 42 14.7	-1.2
ANX	Ano Chora	1.05	97	P	Pg	00 42 15.2	-1.2
ANX	Ano Chora	1.05	97	P	Pg	00 42 15.6	-0.8
EFP	Efpalio	1.08	105	P	Pg	00 42 15.5	-1.4
EFP	Efpalio	1.08	105	P	Pg	00 42 15.7	-1.1
EFP				AML	AML	00 42 39.1	
EFP				AML	AML	00 42 39.4	
	comp=E,79533µm,0.5s						
KEK	Kerkira	1.16	329	P	Pn	00 42 19.2	+0.1
DRO	Drossia	1.17	131	P	Pg	00 42 17.2	-1.5
DRO	Drossia	1.17	131	P	Pg	00 42 17.3	-1.3
DRO				AML	AML	00 42 44.7	
	comp=N,63424µm,0.9s						
DRO				AML	AML	00 42 47.5	
	comp=E,69596µm,0.6s						
MAKR	Makrakomi, Fth	1.24	76	P	Pg	00 42 19.3	-0.8
SRN	Sarande	1.24	339	P	Pn	00 42 20.1	0.0
	baz=340						
SRN				S	Sn	00 42 38.4	+1.1
	baz=340						
SRN				AMP			
	comp=N,30nm,0.7s,baz=340						
AGG	Agios Georgios	1.40	77	P	Pn	00 42 22.3	0.0
AGG	Agios Georgios	1.40	77	P	Pn	00 42 22.2	0.0
AGG				AML	AML	00 42 48.2	
	comp=N,28515µm,1.3s						
AGG				AML	AML	00 42 51.5	
	comp=E,50688µm,1.1s						
AGG	Agios Georgios	1.40	77	P	Pn	00 42 22.4	+0.1
AGG	Agios Georgios	1.40	77	Pn	Pn	00 42 22.4	0.0
KLV	Kalavryta, Ach	1.40	118	P	Pn	00 42 20.9	-1.5
LSK	Leskovik	1.43	0	P	Pg	00 42 23.9	+0.3
	baz=0.0						
LSK				S	Sn	00 42 43.6	+1.7
	baz=0.0						
LSK				AMP			
	comp=N,89nm,1.1s,baz=0.0						
GUR	Goura	1.59	119	P	Pn	00 42 23.8	-1.2
GUR				AML	AML	00 42 56.4	
	comp=E,28912µm,0.7s						
GUR				AML	AML	00 42 56.4	
	comp=N,41741µm,0.9s						
ITM	Ithomi	1.87	145		Pb	00 42 30.8	0.0
KBN	Korca	1.91	5	P	Pb	00 42 31.4	-0.1
KBN	Korca	1.91	5		Pb	00 42 31.4	-0.1
KBN	Korca	1.91	5	P	Pg	00 42 32.7	-0.1
	baz=4.0						
KBN				S	Sg	00 43 00.3	+2.8
	baz=4.0						
KBN				AMP			
	comp=E,23nm,0.9s,baz=4.0						
VLO	Vlora	1.94	335	P	Pn	00 42 30.2	+0.5
VLO	Vlora	1.94	335		Pn	00 42 30.2	+0.5
VLO	Vlora	1.94	335	P	Pb	00 42 30.9	-1.0
	baz=336						
VLO				AMP			
	comp=E,62nm,1.2s,baz=336						
SCTE	Santa Cesarea	2.12	310	Pn	Pn	00 42 31.6	-0.7
SCTE	Santa Cesarea	2.12	310	P	Pn	00 42 32.2	0.0
	baz=312						
FNA	Florina	2.15	16	P	Pn	00 42 34.0	+1.3
FNA	Florina	2.15	16		Pn	00 42 34.0	+1.3
FNA	Florina	2.15	16	P	Pb	00 42 34.6	-1.0
	baz=16						
FNA				S	Sg	00 43 04.5	-0.8
	baz=16						

OHR	Ohrid	2.39	4	ePn	Pb	00 42 38.8	-1.0
OHR				eSn	Sn	00 43 06.5	+0.8
OHR	Ohrid	2.39	4	i Pn	Pb	00 42 38.5	-1.3
TIR	Tirane	2.68	348	ePn	Pn	00 42 41.3	+1.4
TIR				eSn	Sn	00 43 10.5	-2.2
TIR	Tirane	2.68	348	P	Pn	00 42 40.8	+0.9
TIR	Tirane	2.68	348	Pn	Pn	00 42 40.8	+0.9
TIR	Tirane	2.68	348	P	Pn	00 42 41.6	+1.6
	baz=349						
PHP	Peshkopia	2.96	358	P	Pn	00 42 45.5	+1.6
	baz=358						
PHP				AMP			
	comp=N,12nm,1.0s,baz=358						
VAY	Valandovo	3.01	30	ePn	Pn	00 42 47.2	+2.7
VAY				eSn	Sn	00 43 18.5	-2.4
VAY	Valandovo	3.01	30	i Pn	Pn	00 42 46.7	+2.2
TIP	Timpagrande	3.02	280	⇑P	Pn	00 42 43.8	-0.8
TIP	Timpagrande	3.02	280	Pn	Pn	00 42 44.1	-0.5
STIP	Stip	3.21	22	i Pn	Pn	00 42 50.2	+2.9
SKO	Skopje	3.31	11	i Pn	Pn	00 42 51.1	+2.5
ULC	Ulcinj	3.40	343	⇑iPn	Pn	00 42 49.6	-0.2
ULC				i Sn	Sn	00 43 29.1	-1.3
MATE	Matera	3.56	304	⇓P	Pn	00 42 50.6	-1.3
DRME	Dracevica, Mon	3.62	343	ePn	Pn	00 42 53.2	+0.3
DRME	Dracevica, Mon	3.62	343	⇓iPn	Pn	00 42 53.0	+0.1
DRME				i Sn	Sn	00 43 34.6	-1.4
BCI	Bajram Curri	3.66	354	P	Pn	00 42 55.6	+2.2
	baz=355						
BCI				AMP			
	comp=E,14nm,1.8s,baz=355						
KKB	Krupnik	3.68	31	i P	Pn	00 42 52.8	-0.8
CEL	Celeste	3.71	264	Pn	Pn	00 42 53.6	-0.5
MMB	Musomiste	3.74	39	i P	Pn	00 42 57.6	+3.0
BUM	Brajici-Budva	3.80	341	⇑iPn	Pn	00 42 55.1	-0.3
BUM				i Sn	Sn	00 43 38.8	-1.6
PDG	Podgorica	3.84	345	⇑P	Pn	00 42 57.0	+1.2
PDG	Podgorica	3.84	345	ePn	Pn	00 42 55.9	+0.1
PDG				eSn	Sn	00 43 40.5	-0.8
PDG	Podgorica	3.84	345	ePn	Pn	00 42 56.0	+0.1
PDG	Podgorica	3.84	345	Pn	Pn	00 42 55.7	-0.1
TTG	Podgorica	3.84	345	⇑iPn	Pn	00 42 56.1	+0.3
TTG				i Sn	Sn	00 43 40.0	-1.3
PVY	Plav	3.90	353	⇑iPn	Pn	00 42 58.7	+1.9
PVY				i Sn	Sn	00 43 42.0	-0.9
PRVS	Prvonek	3.95	16	ePn	Pn	00 42 59.1	+1.7
CEME	Cevo	4.03	342	⇓iPn	Pn	00 42 58.1	-0.4
CEME				i Sn	Sn	00 43 44.3	-1.7
BOSS	Bosilegrad	4.04	20	ePn	Pn	00 43 00.9	+2.3
HCY	Herceg Novi	4.05	338	ePn	Pn	00 42 57.7	-1.0
HCY	Herceg Novi	4.05	338	⇑iPn	Pn	00 42 58.1	-0.6
HCY				i Sn	Sn	00 43 44.7	-1.8
IVA	Berane	4.18	353	⇓iPn	Pn	00 43 01.2	+0.6
IVA				i Sn	Sn	00 43 48.8	-1.0
BARS	Barje	4.20	12	ePn	Pn	00 43 02.6	+1.8
BARS	Barje	4.20	12	ePn	Pg	00 43 19.3	+2.7
KOME	Kolasin	4.21	349	⇑iPn	Pn	00 43 01.4	+0.4
KOME				i Sn	Sn	00 43 49.2	-1.2
NKME	Niksic	4.23	343	⇑iPn	Pn	00 43 00.8	-0.4
NKME				i Sn	Sn	00 43 49.4	-1.5
APE	Apeiranthos	4.25	111	⇓P	Pn	00 43 05.4	+3.9
NKY	Niksic	4.26	344	⇑iPn	Pn	00 43 02.0	+0.2
NKY				i Sn	Sn	00 43 50.3	-1.6
RZN	Rozhen	4.33	46	i P	Pb	00 43 09.3	-3.6
TREB	Trebinje	4.34	338	ePn	Pn	00 43 02.2	-0.5
TREB				eSn	Sn	00 43 51.0	-2.6
TREB	Trebinje	4.34	338	ePn	Pn	00 43 01.6	-1.1
DBRK	Dubrovnik	4.36	336	ePn	Pn	00 43 02.2	-0.7
VTS	Vitosha	4.38	27	ePn	Pn	00 43 05.2	+1.7
VTS				eSn	Sn	00 43 56.0	+1.1
VTS	Vitosha	4.38	27	P	Pn	00 43 04.2	+0.8
VTS	Vitosha	4.38	27	i P	Pn	00 43 05.7	+2.2
VTS	Vitosha	4.38	27	Pn	Pn	00 43 04.2	+0.8
BRY	Bratogost	4.46	340	ePn	Pn	00 43 03.6	-0.8
BRY	Bratogost	4.46	340	⇓iPn	Pn	00 43 04.3	-0.1
BRY				i Sn	Sn	00 43 54.7	-2.0
SELS	Selova	4.51	5	ePn	Pn	00 43 06.0	+0.9
SANT	Santorini	4.53	120	⇓P	Pn	00 43 07.3	+2.0
SANT	Santorini	4.53	120	Pn	Pn	00 43 08.2	+2.9
SJES	Sjenica	4.56	354	ePn	Pn	00 43 07.2	+1.4
SJES				eSn	Sn	00 43 59.3	+0.1
PLD	Plovdiv	4.62	42	i P	Pb	00 43 12.9	-4.7
UPM	Unac-Piva	4.66	345	ePn	Pn	00 43 07.8	+0.6
STON	Ston	4.69	333	ePn	Pn	00 43 06.7	-0.8
STON				eSn	Sn	00 43 58.9	-3.3
STON	Ston	4.69	333	ePn	Pn	00 43 06.2	-1.3
STON	Ston	4.69	333	ePn	Pn	00 43 06.9	-0.6
STON				Sn	Sn	00 43 58.9	-3.3
PLE	Pljevlja	4.69	349	⇑iPn	Pn	00 43 09.1	+1.4
PLE				i Sn	Sn	00 44 01.1	-1.4
PGB	Panagyurishte	4.70	34	i P	Pn	00 43 10.8	+3.1
KDZ	Kurdzhali	4.72	50	i P	Pb	00 43 15.9	-3.4
ALN	Alexandroupoli	4.73	61	P	Pn	00 43 09.7	+1.6
ALN	Alexandroupoli	4.73	61		Pn	00 43 09.7	+1.6
SGRT	San Giovanni R	4.79	311	Pn	Pn	00 43 08.3	-0.6
ZAPS	Zavoj	4.80	18	ePn	Pn	00 43 10.8	+1.6
IDI	Anoyia	4.86	134	Pn	Pn	00 43 10.2	+0.3
	comp=E,2.0nm,0.3s,baz=288,slow=18,SNR=32						
IDI				Sn	Sn	00 44 07.1	+0.5
	comp=E,16nm,0.3s,baz=299,slow=18,SNR=8.0						
LSTV	Lastovo	4.92	326	ePn	Pn	00 43 09.5	-1.2
LSTV				Sn	Sn	00 44 03.9	-4.1
RUDO	Rudo	4.98	350	ePn	Pn	00 43 11.4	-0.1
BOVS	Bovan	4.98	9	ePn	Pn	00 43 11.9	+0.4
BOVS				eSn	Sn	00 44 08.8	-0.6
VAE	Valguarnera	5.02	258	Pn	Pn	00 43 12.8	+0.6
	comp=E,3.8nm,0.3s,baz=120,slow=4.4,SNR=8.0						
VAE				Sn	Sn	00 44 11.7	+1.1
	comp=E,8.3nm,0.3s,baz=12,slow=18,SNR=1.7						
VAE				LR	LR	00 45 26.2	
	comp=E,553nm,21.5s,baz=54,slow=42						
DIM	Dimitrovgrad	5.03	47	i P	Pb	00 43 20.2	-4.5
RAFF	Raffo Rosso	5.14	255		Pn	00 43 12.6	-1.1
BLKB	Belogradchik	5.14	17	⇑P	Pn	00 43 16.1	+2.3
GRUS	Gruza	5.16	1	ePn	Pn	00 43 14.8	+0.8
GRUS				eSn	Sn	00 44 14.0	+0.1
PAOL	Paolisi	5.17	298	Pn	Pn	00 43 14.5	+0.3
MPEP	Malo Peshtene	5.21	26	i P	Pb	00 43 21.3	-6.4
BBLS	Lazići	5.22	351	ePn	Pn	00 43 15.4	+0.6
BBLS				eSn	Sn	00 44 13.6	-1.7
BBLS	Lazići	5.22	351	ePn	Pn	00 43 14.4	-0.4
ZAGS	Zajecar	5.24	13	ePn	Pn	00 43 16.7	+1.7
MAKA	Makarska	5.30	331	ePn	Pn	00 43 15.3	-0.5
DIVS	Divibare	5.39	355	ePn	Pn	00 43 17.2	0.0
DIVS	Divibare	5.39	355	ePn	Pn	00 43 17.1	-0.1
DIVS	Divibare	5.39	355	Pn	Pn	00 43 17.2	0.0
RICI	Ricice	5.43	332	ePn	Pn	00 43 16.4	-1.4
HVAR	Hvar	5.44	326	ePn	Pn	00 43 17.6	-0.3
HVAR				Sn	Sn	00 44 18.2	-2.6
HAPS	Han Pijesak,BI	5.50	348	ePn	Pn	00 43 18.8	0.0
TRUS	Trudelj	5.50	359	ePn	Pn	00 43 19.8	+1.1
TRUS				eSn	Sn	00 44 19.8	-2.4
BAIL	Bailesti	5.69	21	⇑P	Pn	00 43 25.0	+3.8
BALB	Balikesir	5.74	79	Pn	Pn	00 43 24.6	+2.6
CORL	Corleone	5.79	264	Pn	Pn	00 43 22.5	-0.1
TEKS	Tekeris	5.88	353	ePn	Pn	00 43 23.0	-0.9
TEKS				eSn	Sn	00 44 28.8	-2.7
TEKS	Tekeris	5.88	353	ePn	Pn	00 43 22.4	-1.5
CLTB	Caltabellotta	5.92	261		Pn	00 43 23.9	-0.6
VLAD	Vladila	6.00	27	⇑P	Pn	00 43 28.8	+3.3
SZH	Strazhica	6.08	40	i P	Pn	00 43 30.9	+4.3
MDVR	Moldovita	6.12	8	⇓P	Pn	00 43 28.1	+1.0
BLJ	Bijeljina	6.14	351	ePn	Pn	00 43 22.1	-5.3
KIJV	Kijevo	6.14	331	ePn	Pn	00 43 26.9	-0.6
ZIRJ	Zirje	6.18	324	ePn	Pn	00 43 26.7	-1.2
MGRS	Mrkonjic Grad	6.27	336	ePn	Pn	00 43 28.5	-0.7
HERR	Herculane	6.31	12	⇑P	Pn	00 43 31.1	+1.4
MORI	Morici	6.32	326	ePn	Pn	00 43 29.3	-0.6
FRGS	Fruska Gora	6.46	355	⇓P	Pn	00 43 31.5	-0.3
FRGS	Fruska Gora	6.46	355	ePn	Pn	00 43 31.2	-0.6
FRGS				eSn	Sn	00 44 42.3	-3.5
FRGS	Fruska Gora	6.46	355	ePn	Pn	00 43 31.3	-0.6
BLY	Banja Luka	6.54	338	ePn	Pn	00 43 33.1	+0.2
BLY				eSn	Sn	00 44 45.2	-2.6
BLY	Banja Luka	6.54	338	ePn	Pn	00 43 31.5	-1.4
AQU	L'Aquila	6.56	306	P	Pn	00 43 34.4	+1.1
AQU	L'Aquila	6.56	306	ePn	Pn	00 43 34.1	+0.8
AQU	L'Aquila	6.56	306	Pn	Pn	00 43 34.4	+1.1
RAZG	Razgrad	6.59	41	⇑P	Pn	00 43 37.9	+4.3
HUMR	Humele	6.67	28	⇓P	Pn	00 43 37.7	+3.0
DUGI	Dugi Otok	6.71	323	ePn	Pn	00 43 35.1	-0.1
SGRR	Singureni	6.83	35	⇑P	Pn	00 43 40.7	+3.9
PRD	Provadia	6.83	47	i P	Pn	00 43 43.9	+7.0
MRAK	Mrakovica	6.86	338	ePn	Pn	00 43 36.5	-0.9
GZR	Gura Zlata	6.86	13	⇓P	Pn	00 43 38.2	+0.8
PRIJ	Prijedor	6.88	336	ePn	Pn	00 43 37.7	0.0
BZS	Buzias	6.93	6	⇓P	Pn	00 43 38.8	+0.5
BZS	Buzias	6.93	6	ePn	Pn	00 43 39.0	+0.7
BZS				eSn	Sn	00 44 55.3	-2.2
STFAR	Stefanesti-Arg	6.95	27	⇓P	Pn	00 43 41.1	+2.5
NRCA	Norcia	7.00	308		Pn	00 43 39.5	+0.2
LOT	Lotru	7.13	18	⇓P	Pn	00 43 43.1	+2.0
NVLJ	Novalja	7.24	326	ePn	Pn	00 43 41.8	-0.7
ARR	Arges	7.29	23	⇓P	Pn	00 43 45.5	+2.2
SULR		7.31	34	⇓P	Pn	00 43 47.6	+4.1
RABC	Rab	7.42	326	ePn	Pn	00 43 43.9	-1.1
VOIR		7.49	25	⇑P	Pn	00 43 49.0	+2.9
SECR		7.52	31	⇓P	Pn	00 43 50.4	+4.0
KOVH	Kovagotottos	7.59	347	ePN	Pn	00 43 45.8	-1.5
KOVH	Kovagotottos	7.59	347	eP	Pn	00 43 46.3	-1.0
KOVH	Kovagotottos	7.59	347	eSN	Sn	00 45 06.8	-6.8
MURB	Monte Urbino	7.60	309		Pn	00 43 48.3	+0.8
MORH	Mrgy, Hungar	7.62	350	ePn	Pn	00 43 46.6	-1.2
AMBH	Ambrzfalva	7.63	1	ePN	Pn	00 43 49.1	+1.3
ELL	Elmali	7.65	102	P	Pn	00 43 52.7	+4.4
ELL	Elmali	7.65	102		Pn	00 43 52.7	+4.4
ISR	Istrita	7.78	33	⇑P	Pn	00 43 54.4	+4.4
BOJS	Bojanci	7.85	331	i Pn	Pn	00 43 50.5	-0.4
BOJS				eSn	Sn	00 45 14.7	-5.4
MLR	Muntele Rosu	7.85	29	⇑P	Pn	00 43 55.2	+4.2
MLR	Muntele Rosu	7.85	29	Pn	Pn	00 43 53.1	+2.1
	comp=E,0.5nm,0.3s,baz=248,slow=8.0,SNR=12						
MLR				LR	LR	00 47 36.2	
	comp=E,2µm,18.9s,baz=200,slow=44						
MLR	Muntele Rosu	7.85	29	P	Pn	00 43 53.3	+2.3
MLR	Muntele Rosu	7.85	29	Pn	Pn	00 43 53.3	+2.3
ISP	Isparta	7.87	93	P	Pn	00 43 54.3	+3.0
ISP	Isparta	7.87	93	Pn	Pn	00 43 54.3	+3.0
ZAG	Zagreb	7.88	336	ePn	Pn	00 43 49.5	-1.7
NEHR	Nehoiu	7.93	31	⇑P	Pn	00 43 55.0	+2.9
RIY	Rijeka	8.01	327	ePn	Pn	00 43 52.0	-1.1
CRES	Cresnjev	8.05	334	ePn	Pn	00 43 52.1	-1.6
DOPR	Dopca	8.07	25	⇓P	Pn	00 43 57.0	+3.0
HARR	Harsova	8.11	40	⇓P	Pn	00 43 57.7	+3.3
SLUM	Salum	8.15	151	P	Pn	00 43 54.6	-0.4
	baz=153						
SLUM				AMP		00 45 00.0	
	baz=153						
SLUM				S	Sn	00 45 16.2	-11
	baz=153						
GRER		8.18	33	⇑P	Pn	00 43 59.7	+4.4
BISRR	Bisoca	8.20	32	⇓P	Pn	00 43 58.5	+2.7
COVR	Voineasa-Covas	8.25	29	⇓P	Pn	00 43 59.3	+2.9
OZUR		8.31	26	⇓P	Pn	00 44 00.6	+3.3
CEY	Cerknica	8.37	329	ePn	Pn	00 43 57.0	-1.0
MDUB	Mudurnu	8.38	75	Pn	Pn	00 44 00.3	+2.1
CASP	Castiglione de	8.42	302	Pn	Pn	00 43 58.9	+0.1
PLOR	Plostina	8.42	30	⇓P	Pn	00 44 02.6	+3.8
VRI	Vrincioaia	8.47	31	⇑P	Pn	00 44 03.4	+4.0
ODBI	Odobesti	8.52	32	⇑P	Pn	00 44 04.3	+4.3
OSSC	Osservatorio P	8.52	307		Pn	00 44 00.6	+0.4
CFR	Carcaliu	8.56	39	⇑P	Pn	00 44 03.7	+3.1
LJU	Ljubljana	8.58	330	ePn	Pn	00 43 59.9	-1.0
MPLH	Magyarpolny	8.73	346	eP	Pn	00 44 02.8	-0.2
MPLH	Magyarpolny	8.73	346	ePN	Pn	00 44 02.4	-0.7
MPLH				eSN	Sn	00 45 37.9	-3.9
VSL	Villasalto	8.75	279	Pn	Pn	00 44 02.2	-1.1
CSKK	Cskako	8.80	350	ePN	Pn	00 44 05.6	+1.6
CSKK	Cskako	8.80	350	eP	Pn	00 44 08.0	+4.0
CSKK	Cskako	8.80	350	eSN	Sn	00 45 39.4	-4.1
BUD	Budapest	8.83	353	ePN	Pn	00 44 04.2	-0.2
BUD	Budapest	8.83	353	eP	Pn	00 44 05.9	+1.5
BUD	Budapest	8.83	353	eSN	Sn	00 45 37.1	-7.1
SCTR	Scanteiesti	8.86	36	⇓P	Pn	00 44 09.6	+4.9
TLCR		8.90	41	⇓P	Pn	00 44 09.4	+4.1
SOKA	Soboth	8.94	335	ePn	Pn	00 44 04.6	-1.3
	comp=E,50nm,1.0s,SNR=41						
SOKA				eSn	Sn	00 45 39.4	-7.5
	comp=E,22nm,0.9s						
OBKA	Obir	8.96	332	Pn	Pn	00 44 06.0	-0.3
	comp=E,22nm,0.7s,SNR=13						
OBKA				eSn	Sn	00 45 41.6	-5.9
	comp=E,41nm,0.5s						
TESR	Tescani	8.97	28	⇓P	Pn	00 44 08.7	+2.4
EGYH	Egyhazaskeszo	9.01	346	ePN	Pn	00 44 07.4	+0.6
EGYH	Egyhazaskeszo	9.01	346	eP	Pn	00 44 11.8	+5.0
EGYH	Egyhazaskeszo	9.01	346	eSN	Sn	00 45 43.6	-4.9
VLDR	Vladesti	9.03	36	⇑P	Pn	00 44 10.1	+3.0
ZCCA	Zocca	9.14	311	Pn	Pn	00 44 09.3	+0.7
MATC	Matruh	9.15	141	P	Pn	00 44 08.4	-0.4
	baz=143						
PSZ	Piszkesteto	9.21	357	⇑P	Pn	00 44 10.1	+0.5
PSZ	Piszkesteto	9.21	357	ePN	Pn	00 44 09.6	0.0
PSZ	Piszkesteto	9.21	357	eP	Pn	00 44 10.2	+0.7
PSZ	Piszkesteto	9.21	357	eSN	Sn	00 45 46.5	-7.0
ARSA	Arzberg	9.29	338	ePn	Pn	00 44 10.1	-0.6
	comp=E,11nm,0.6s,SNR=13						
MYKA	Terra Mystica	9.41	329	ePn	Pn	00 44 11.3	-1.0
	comp=E,6.6nm,0.6s						
MYKA				eSn	Sn	00 45 54.1	-4.4
	comp=E,10nm,0.6s						
KEST	Kesra	9.45	255	Pn	Pn	00 44 13.3	+0.4
	comp=E,0.5nm,0.3s,baz=58,slow=9.8,SNR=8.7						
KEST				Sn	Sn	00 45 56.2	-3.2
	comp=E,0.2nm,0.3s,baz=32,slow=13,SNR=1.9						
KEST				LR	LR	00 48 50.9	
	comp=E,514nm,21.0s,baz=7.5,slow=44						
KEST	Kesra	9.45	255		Pn	00 44 12.9	0.0
BURAR	Bucovina Array	9.51	19	⇑P	Pn	00 44 16.4	+2.6
BURAR	Bucovina Array	9.51	19	Pn	Pn	00 44 15.0	+1.2
TRPA	Tarpa	9.51	8	⇑P	Pn	00 44 14.4	+0.8
TRPA	Tarpa	9.51	8	ePN	Pn	00 44 14.8	+1.1
TRPA	Tarpa	9.51	8	eP	Pn	00 44 15.5	+1.9
BUR08	Bucovina Ar. S	9.53	19		Pn	00 44 15.2	+1.1
ANTO	Ankara	9.54	79	P	Pn	00 44 17.1	+3.0
ANTO	Ankara	9.54	79	Pn	Pn	00 44 17.1	+3.0
PRAR	RASCA	9.57	24	⇓P	Pn	00 44 18.0	+3.5
PRMA	PARMA	9.76	311		Pn	00 44 17.1	0.0
ZST	Bratislava	9.80	346	eP	Pn	00 44 16.9	-0.8
ZST				e		00 46 01.0	
ZST				MLR	MLR		
	comp=Z,2µm,11.7s						
ZST	Bratislava	9.80	346	ePN	Pn	00 44 16.9	-0.8
ZST				eSN	Sn	00 46 01.0	-7.0
ZST				eL	L	00 48 59.0	
CONA	Conrad Observa	9.82	341	ePn	Pn	00 44 17.0	-1.0
	comp=Z,11nm,0.7s						
CONA				eSn	Sn	00 46 03.9	-4.7
	comp=Z,12nm,0.8s						
VYHS	Vyhne	9.85	353	eP	Pn	00 44 18.6	+0.2
VYHS				e		00 46 05.1	
VYHS				MLR	MLR		
	comp=Z,2µm,21.4s						
VYHS	Vyhne	9.85	353	ePN	Pn	00 44 18.6	+0.2
VYHS				eSN	Sn	00 46 05.0	-4.2
VYHS				eL	L	00 48 56.9	
CTI	Castel Tesino	9.86	321	P	Pn	00 44 17.2	-1.4
CTI	Castel Tesino	9.86	321	Pn	Pn	00 44 17.2	-1.4
KBA	Koelnbreinsper	9.89	330	ePn	Pn	00 44 19.7	+0.6
	comp=Z,20nm,1.2s						
MODS	Modra-Piesok	9.94	347	eP	Pn	00 44 18.7	-0.9
MODS				e		00 46 03.6	
MODS				MLR	MLR		
	comp=Z,5µm,14.9s						
MODS	Modra-Piesok	9.94	347	ePN	Pn	00 44 18.7	-0.9
MODS				eSN	Sn	00 46 03.6	-7.9
MODS				eL	L	00 49 01.4	
ABTA	Abfaltersbach	9.97	326	ePn	Pn	00 44 18.8	-1.3
	comp=Z,18nm,0.8s						
ABTA				eSn	Sn	00 46 05.8	-6.6
	comp=Z,53nm,0.7s						
UZH	Uzhgorod	9.98	7	eP	Pn	00 44 19.8	-0.3
UZH				eS	Sn	00 46 12.5	+0.1
UZH				MLR	MLR		
	comp=N,280nm,12.5s						
UZH				MLR	MLR		
	comp=E,340nm,12.5s						
UZH				MLR	MLR		
	comp=Z,230nm,12.5s						
SMOL	Smolenice	10.05	348	eP	Pn	00 44 21.3	+0.2
SMOL	Smolenice	10.05	348	ePN	Pn	00 44 21.3	+0.2
SALO	Salr	10.16	316		Pn	00 44 22.7	+0.1
MILM	Milestii Mici	10.18	34	⇓P	Pn	00 44 28.1	+5.3
MILM	Milestii Mici	10.18	34	eP	Pn	00 44 30.0	+7.2
MILM				eS	Sn	00 46 28.0	+11
MILM				MLR	MLR		
	comp=Z,1µm,12.0s						
BR131	Keskin Array S	10.18	80	P	Pn	00 44 25.2	+2.2
BR131	Keskin Array S	10.18	80		Pn	00 44 25.2	+2.2
BRTR	Keskin Array B	10.18	80	Pn	Pn	00 44 26.6	+3.5
	comp=Z,0.6nm,0.3s,baz=260,slow=12,SNR=21						
BRTR				LR	LR	00 49 04.3	
	comp=Z,979nm,21.6s,baz=274,slow=42						
BRTR	Keskin Array B	10.18	80	Pn	Pn	00 44 26.0	+3.0
CRVS	Cervenica-Dubn	10.20	3	eP	Pn	00 44 24.5	+1.4
CRVS				MLR	MLR		
	comp=Z,2µm,16.5s						
CRVS	Cervenica-Dubn	10.20	3	ePN	Pn	00 44 24.5	+1.4
CRVS				eL	L	00 48 55.4	
MOA	Molln	10.22	335	ePn	Pn	00 44 22.4	-1.0
	comp=Z,19nm,0.7s,SNR=23						
MOA				eSn	Sn	00 46 15.2	-3.1
	comp=Z,11nm,0.5s						
SWA2		10.28	155	P	Pn	00 44 22.3	-1.9
	baz=157						
KOLS	Kolonicke sedl	10.28	6	eP	Pn	00 44 26.1	+1.9
KOLS	Kolonicke sedl	10.28	6	ePN	Pn	00 44 26.1	+1.9
JAVC	Velka Javorina	10.35	349	ePN	Pn	00 44 26.0	+0.8
LANS	Liptovska Anna	10.46	356	eP	Pn	00 44 33.5	+6.8
LANS	Liptovska Anna	10.46	356	ePN	Pn	00 44 33.5	+6.8
NIE	Niedzica	10.70	359	eP	Pn	00 44 32.9	+2.9
NIE				eL	L	00 49 20.8	
	comp=Z,3µm,14.4s						
WTTA	Wattenberg	10.76	325	ePn	Pn	00 44 30.7	-0.2
	comp=Z,11nm,0.6s,SNR=14						
WTTA				eSn	Sn	00 46 28.0	-3.7
	comp=Z,57nm,0.9s						
KRUC	Moravsky	10.77	345	ePN	Pn	00 44 30.6	-0.3
WATA	Walderalm	10.84	326	ePn	Pn	00 44 32.8	+0.8
	comp=Z,21nm,0.7s,SNR=20						
WATA				eSn	Sn	00 46 29.5	-4.1
	comp=Z,54nm,1.1s						
CSS	Mathiatis	10.88	106	Pn	Pn	00 44 31.4	-1.1
SQTA	Sankt Quirin	10.92	324	ePn	Pn	00 44 33.3	+0.3
	comp=Z,12nm,0.5s,SNR=8.2						
SQTA				eSn	Sn	00 46 32.6	-2.9
	comp=Z,31nm,1.0s						
VRAC	Vranov	10.96	346	⇓P	Pn	00 44 33.5	-0.1
VRAC	Vranov	10.96	346	Pn	Pn	00 44 33.6	0.0
	comp=Z,0.2nm,0.3s,baz=174,slow=12,SNR=16						
VRAC				LR	LR	00 50 15.1	
	comp=Z,2µm,19.1s,baz=176,slow=46						
VRAC	Vranov	10.96	346	ePN	Pn	00 44 33.4	-0.2
FETA	Feichten	11.00	322	ePn	Pn	00 44 36.9	+2.7
	comp=Z,12nm,0.9s						
FETA				Sn	Sn	00 46 33.1	-4.5
	comp=Z,5.7nm,0.5s						
KWP	Kalwaria Pacla	11.01	7	P	Pn	00 44 34.2	-0.1
KWP	Kalwaria Pacla	11.01	7		Pn	00 44 34.2	-0.1
MOTA	Moosalm	11.06	324	ePn	Pn	00 44 34.9	0.0
	comp=Z,30nm,1.0s,SNR=14						
MOTA				eSn	Sn	00 46 35.0	-4.0
	comp=Z,44nm,0.7s						
CKRC	Cesky Krumlov	11.06	338	eP	Pn	00 44 34.0	-0.9
CKRC				AMS	AMS	00 49 40.0	
	comp=Z,2µm,9.6s						
OKC	Ostrava-Krasne	11.25	352	eP	Pn	00 44 38.1	+0.6
OKC				AMS	AMS	00 49 40.0	
	comp=Z,2µm,12.2s						
OKC	Ostrava-Krasne	11.25	352	eP	Pn	00 44 38.1	+0.6
OKC				MLR	MLR		
	comp=Z,2µm,12.2s						
DAVOX	Davos/Dischmat	11.25	319	Pn	Pn	00 44 38.8	+1.1
	comp=Z,1.0nm,0.3s,baz=148,slow=19,SNR=6.7						
DAVOX				Sn	Sn	00 46 38.4	-5.4
	comp=Z,1.6nm,0.3s,baz=299,slow=23,SNR=3.0						
DAVOX				LR	LR	00 49 46.4	
	comp=Z,650nm,19.1s,baz=250,slow=42						
MORC	Moravsky Berou	11.27	350	⇓P	Pn	00 44 38.4	+0.7
MORC	Moravsky Berou	11.27	350	P	Pn	00 44 38.2	+0.4
MORC	Moravsky Berou	11.27	350	ePN	Pn	00 44 37.8	+0.1
MORC	Moravsky Berou	11.27	350	Pn	Pn	00 44 38.1	+0.4
GERES	GERESS Array B	11.27	336	Pn	Pn	00 44 36.5	-1.4
	comp=Z,1.2nm,0.3s,baz=158,slow=14,SNR=33						
GERES				Sn	Sn	00 46 36.3	-7.8
	comp=Z,0.6nm,0.3s,baz=148,slow=24,SNR=2.0						
GERES				LR	LR	00 49 36.0	
	comp=Z,585nm,20.6s,baz=154,slow=41						
RETA	Reutte	11.32	324	ePn	Pn	00 44 38.8	+0.3
	comp=Z,6.6nm,0.6s						
RETA				eSn	Sn	00 46 42.9	-2.4
	comp=Z,10nm,0.5s						
OJC	Ojcow	11.51	357	P	Pn	00 44 41.2	+0.1
OJC	Ojcow	11.51	357	Pn	Pn	00 44 41.1	+0.1
KHC	Kasperske Hory	11.56	336	eP	Pn	00 44 40.5	-1.3
KHC				ex	x	00 45 47.5	
KHC				eS	Sn	00 46 42.1	-9.1
KHC				AMS	AMS	00 51 00.0	
	comp=Z,2µm,7.5s						
KHC	Kasperske Hory	11.56	336	eP	Pn	00 44 40.5	-1.3
KHC				eS	Sn	00 46 42.1	-9.1
KHC				MLR	MLR		
	comp=Z,2µm,7.5s						
DAVA	Damuels	11.60	321	i Pn	Pn	00 44 43.5	+1.2
	comp=Z,3.3nm,0.5s						
DAVA				eSn	Sn	00 46 49.6	-2.6
	comp=Z,16nm,0.4s						
KRLC	Kraliky	11.67	348	eP	Pn	00 44 43.9	+0.6
KRLC				AMS	AMS	00 51 00.0	
	comp=Z,2µm,10.4s						
KRLC	Kraliky	11.67	348	eP	Pn	00 44 43.9	+0.6
KRLC				MLR	MLR		
	comp=Z,2µm,10.4s						
BNN	Bunyan	11.91	85	Pn	Pn	00 44 49.2	+2.5
DPC	Dobruska-Polom	12.02	347	eP	Pn	00 44 47.9	-0.1
DPC				AMS	AMS	00 50 10.0	
	comp=Z,3µm,13.1s						
DPC	Dobruska-Polom	12.02	347	eP	Pn	00 44 47.9	-0.1
DPC				MLR	MLR		
	comp=Z,3µm,13.1s						
PRU	Pruhonice	12.06	341	eP	Pn	00 44 48.5	-0.1
PRU				AMS	AMS	00 50 20.0	
PRU	Pruhonice	12.06	341	eP	Pn	00 44 48.5	-0.1
PRU				MLR	MLR		
	comp=N,2µm,11.2s						
PRA	Prague	12.16	341	eP	Pn	00 44 49.2	-0.8
PRA				AMS	AMS	00 50 30.0	
	comp=N,2µm,11.4s						
PRA	Prague	12.16	341	eP	Pn	00 44 49.2	-0.8
PRA				MLR	MLR		
	comp=Z,2µm,11.4s						
OSTC	Ostas	12.23	347	eP	Pn	00 44 50.0	-0.9
OSTC				AMS	AMS	00 50 20.0	
	comp=Z,3µm,13.3s						
CHVC	Chvalec	12.29	346	eP	Pn	00 44 51.7	-0.1
CHVC				AMS	AMS	00 50 20.0	
	comp=Z,3µm,15.4s						
SENIN	Lac Senin/Sane	12.41	312	Pn	Pn	00 44 53.7	+0.2
RYAN	Fayoum	12.53	137	P	Pn	00 44 52.0	-3.1
	baz=138						
RYAN				S	Sn	00 47 49.6	+35
	baz=138						
RYAN				AMP		00 47 51.4	
	baz=138						
GRA1	Grafenberg Arr	12.85	332	Pn	Pn	00 44 59.4	0.0
GRF	Grafenberg Arr	12.85	332	P	Pn	00 44 59.4	0.0
GRF	Grafenberg Arr	12.85	332	ePn	Pn	00 44 57.1	-2.2
GRFO	Grafenberg	12.85	332	P	Pn	00 45 00.2	+0.9
GRFO	Grafenberg	12.85	332	Pn	Pn	00 45 00.2	+0.9
GLL	Jalalah	12.95	131	P	Pn	00 44 58.2	-2.7
	baz=132						
STU	Stuttgart	12.97	324	P	Pn	00 44 59.3	-1.8
STU	Stuttgart	12.97	324	Pn	Pn	00 44 59.3	-1.8
BRG	Berggiesshubel	13.03	341	eP	Pn	00 45 01.6	-0.2
BRG				Amp		00 45 03.4	
	comp=Z,16nm,1.4s						
BRG	Berggiesshubel	13.03	341	P	P	00 45 14.5	+2.1
BRG				Amp		00 45 17.4	
	comp=Z,14nm,1.1s						
BRG				Amp		00 51 10.0	
	comp=N,1.8nm,11.8s						
BRG				Amp		00 51 14.0	
	comp=Z,2.7nm,11.4s						
BRG				Amp		00 51 16.0	
	comp=E,1.1nm,10.4s						
BFO	Black Forest	13.07	321	P	Pn	00 45 01.5	-0.9
BFO	Black Forest	13.07	321	Pn	Pn	00 45 01.5	-0.9
GAZ	Gaziantep	13.22	92		Pn	00 45 06.2	+1.7

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HFRF  Wahat Farafira    13.23 148  P      Pn      00 45 01.6 -3.1
      baz=150
HFRF                               S      Sn      00 47 35.1 +3.0
      baz=150
MMAI  Mount Meron Ar    13.29 111  Pn     Pn      00 45 03.3 -2.2
      comp=E,2.2nm,0.3s,baz=310,slow=12,SNR=25
MMAI                               Sn     Sn      00 47 25.1 -8.6
      comp=E,1.2nm,0.3s,baz=311,slow=26,SNR=2.4
NBNS  Bani Suef         13.44 135  P      Pn      00 45 04.5 -3.0
      baz=136
SUZ   Suez              13.44 128  P      Pn      00 45 05.9 -1.6
      baz=128
AKASG Malin Array Be    13.45  24  Pn     Pn      00 45 07.2 -0.3
      comp=E,0.9nm,0.3s,baz=214,slow=12,SNR=5.7
AKASG                              LR     LR      00 51 04.1
      comp=E,932nm,18.7s,baz=215,slow=41
AKBB  Malin Array Si    13.45  24  P      Pn      00 45 09.3 +1.8
AKBB  Malin Array Si    13.45  24  Pn     Pn      00 45 09.3 +1.8
ECH   Echery            13.59 319  P      Pn      00 45 08.1 -1.4
ECH   Echery            13.59 319         Pn      00 45 08.1 -1.4
SSB   Saint Sauveur     13.60 304  P      Pn      00 45 10.0 +0.3
SSB   Saint Sauveur     13.60 304  Pn     Pn      00 45 10.0 +0.3
CLL   Collm             13.67 339 eP      Pn      00 45 13.0 +2.5
CLL                               e(sP)   P       00 45 18.0 -1.4
CLL                               i PP    PnPn    00 45 21.1 +2.7
      comp=Z,72nm,1.4s
CLL                               i               00 45 29.7
CLL                                Lmax           00 51 00.0
CLL   Collm             13.67 339 eP      Pn      00 45 13.0 +2.5
CLL   Collm             13.67 339         Pn      00 45 11.0 +0.5
GHAJ  Ghor Haditha      14.32 117  Pn     Pn      00 45 19.6 +0.1
RUE   Ruedersdorf       14.55 343 eP      P       00 45 29.0 -0.2
GRB   Gharib            14.55 132  P      Pn      00 45 21.3 -1.5
      baz=133
GKP   Gorka Klasztor    14.73 352 eP      P       00 45 30.7 -0.5
ASF   Jabal al Asfar    14.81 111  Pn     Pn      00 45 26.1 -0.1
      comp=Z,0.3nm,0.3s,baz=296,slow=13,SNR=6.1
EIL   Elat              14.91 123  Pn     Pn      00 45 24.8 -2.8
      comp=Z,1.3nm,0.3s,baz=276,slow=2.6,SNR=13
EIL                                Sn     Sn      00 48 01.4  -12
      comp=Z,0.9nm,0.3s,baz=200,slow=13,SNR=5.5
EIL                                LR     LR      00 53 20.7
      comp=Z,90nm,20.7s,baz=300,slow=46
WLF   Walferdange       15.03 321 dP      P       00 45 36.4 +1.9
      comp=Z,39nm,1.1s
WLF   Walferdange       15.03 321  P      Pn      00 45 29.8 +0.7
WLF   Walferdange       15.03 321  Pn     Pn      00 45 29.8 +0.7
SUW   Suwalki           15.40   6 eP      Pn      00 45 35.2 +1.4
SUW   Suwalki           15.40   6  P      Pn      00 45 34.9 +1.0
SUW                                pmax   pmax
      comp=Z,46nm,0.9s
SUW   Suwalki           15.40   6  Pn     Pn      00 45 34.9 +1.0
SUW                                IAmb   IAmb    00 45 53.7
      comp=Z,46nm,0.9s
BHOU  Houvegnez         15.56 323 dPP     PbPb    00 46 26.0 -1.2
GTR   Jabal at Tayr     15.63 144  P      Pn      00 45 36.1 -1.1
      baz=146
BTNL  Ternell           15.67 324 dP      P       00 45 44.1 +2.5
      comp=Z,11nm,1.1s
MEM   Membach           15.74 324 dP      P       00 45 44.8 +2.3
      comp=Z,18nm,1.0s
BCLA  Clavier           15.94 322 dP      P       00 45 46.8 +2.1
      comp=Z,11nm,1.3s
BEBN  Eben Emael        16.02 324 dP      P       00 45 52.4 +6.9
BGES  Gesves            16.02 322 dP      P       00 45 47.8 +2.2
DOU   Dourbes           16.08 320 dP      P       00 45 46.7 +0.5
      comp=Z,24nm,1.0s
BMRD  Maredsous         16.13 321 dP      P       00 45 45.8 -0.9
MNK   Minsk             16.55  15 i P     Pn      00 45 46.3 -2.4
MNK                               i S     Sn      00 48 50.3 -2.3
MNK                                pmax   pmax
      comp=N,22nm,0.8s
MNK                                pmax   pmax
      comp=Z,39nm,0.8s
MNK                                pmax   pmax
      comp=E,1.0nm,0.8s
MNK                                MLR    MLR
      comp=E,118nm,17.0s
MNK                                MLR    MLR
      comp=Z,642nm,17.0s
MNK                                MLR    MLR
      comp=N,442nm,17.0s
MNK   Minsk             16.55  15 i P     Pn      00 45 46.3 -2.4
      comp=E,1.0nm,0.8s
MNK                               i P     Pn      00 45 46.3 -2.4
      comp=N,22nm,0.8s
MNK                               i P     Pn      00 45 46.3 -2.4
      comp=Z,39nm,0.8s,baz=201
MNK                               i S     Sn      00 48 50.4 -2.2
MNK                               i LQ    LQ      00 50 38.8
MNK                               i LR    LR      00 51 54.1
MNK                               i LRM   MLR     00 52 08.8
      comp=E,118nm,16.6s
MNK                               i LRM   MLR     00 52 27.5
      comp=Z,642nm,16.6s
MNK                               i LRM   MLR     00 52 31.0
      comp=N,442nm,16.6s
UCC   Uccle             16.64 322 dP      P       00 45 54.7 +2.2
UCC   Uccle             16.64 322  P      Pn      00 45 50.0  0.0
UCC                                pmax   pmax
      comp=Z,18nm,1.1s
UCC   Uccle             16.64 322         Pn      00 45 50.0  0.0
NACGM Naroch            16.72  13 i P     Pn      00 45 49.6 -1.4
GURO  Guroymak-BITLI    16.76  84         P       00 45 53.1 -0.9
PABE  Paberze           16.95   7 eP      Pn      00 45 53.2 -0.6
PABE                               IAmb   IAmb    00 46 16.3
      comp=Z,181nm,1.8s
PABE  Paberze           16.95   7  Pn     Pn      00 45 52.5 -1.3
PABE                               IAmb   IAmb    00 45 56.3
      comp=Z,47nm,0.8s
SIRT  Sirnak            17.24  87  P      P       00 45 59.4 +0.1
ISAL  Salakas           17.26  11  IAmb   IAmb    00 45 59.8
      comp=Z,9.2nm,0.9s
NEY   Neytrino          17.30  68 i P     P       00 46 01.5 +1.5
NEY                                pmax   pmax
      comp=Z,12nm,1.1s
SHA1  Shidzhatmaz       17.33  66 i P     P       00 45 59.7 -0.6
KIV   Kislovodsk        17.38  65 i P     P       00 46 02.6 +1.8
      SNR=8.3
KIV   Kislovodsk        17.38  65 eP      P       00 46 01.0 +0.2
KIV                               eS      Sn      00 49 17.2 +4.0
KIV                                pmax   pmax
      comp=Z,29nm,1.1s
KIV                                MLR    MLR
      comp=Z,149nm,14.0s
KIV   Kislovodsk        17.38  65  Pn     Pn      00 45 60.0 +0.5
KARS  Kars              17.42  77  P      P       00 46 01.7 +0.4
KARS                               pmax   pmax
      comp=Z,47nm,0.9s
KARS  Kars              17.42  77  P      P       00 46 01.7 +0.4
KARS                               IAmb   IAmb    00 46 18.2
      comp=Z,47nm,0.9s
KBZ   Khabaz            17.50  66  P      P       00 46 02.5 +0.5
      comp=Z,0.1nm,0.3s,baz=302,slow=6.8,SNR=17
KBZ   Khabaz            17.50  66ceP      P       00 46 03.0 +1.1
ONI   Oni               17.76  70  P      P       00 46 05.7 +0.7
ONI                                pmax   pmax
      comp=Z,11nm,0.8s
ONI   Oni               17.76  70  P      P       00 46 05.7 +0.7
GOF   Gofitskoye        17.85  62⇑eP      P       00 46 07.2 +1.3
GOF                                pmax   pmax
      comp=Z,40nm,0.8s
NCK   Nalchik           17.97  67 i P     P       00 46 08.4 +1.2
NCK                                pmax   pmax
      comp=Z,33nm,0.9s
VSR   Storozhevoye      18.07  40 eP      P       00 46 08.5 +0.3
VSR                                pmax   pmax
      comp=Z,10.0nm,0.7s
ZEI   Tsey              18.11  70 eP      P       00 46 10.0 +1.0
ZEI                                pmax   pmax
      comp=Z,8.0nm,1.0s
VORR  Voronezh          18.37  39 eP      Pn      00 46 11.0 -0.4
VORR                               pmax   pmax
      comp=Z,250nm,1.2s
GNI   Garni             18.70  78  P      Pn      00 46 17.1 +1.3
      comp=Z,0.3nm,0.3s,baz=27,slow=2.4,SNR=8.3
GNI                                LR     LR      00 54 44.2
      comp=Z,340nm,20.7s,baz=266,slow=41
GNI   Garni             18.70  78  P      Pn      00 46 17.4 +1.6
GNI   Garni             18.70  78ceP      Pn      00 46 18.2 +2.4
GNI                                pmax   pmax
      comp=Z,29nm,1.7s
GNI   Garni             18.70  78  P      Pn      00 46 16.4 +0.6
LPSR  Galich'ya Gora    18.82  37 eP      Pn      00 46 17.8 +0.9
LPSR                               pmax   pmax
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```
      comp=Z,50nm,1.3s
TAF   Taforalt          18.82 265  P      Pn      00 46 18.0 +0.8
FIGM  Figuig            18.96 256  P      Pn      00 46 18.6 -0.2
ESBB  Sonseca Array     19.04 281  P      P       00 46 18.3 -0.7
ESDC  Sonseca Array     19.04 281  P      P       00 46 18.7 -0.3
      comp=Z,0.2nm,0.3s,baz=75,slow=10,SNR=30
ESDC                               LR     LR      00 53 17.7
      comp=Z,341nm,21.6s,baz=85,slow=36
ESDC  Sonseca Array     19.04 281  P      P       00 46 18.4 -0.7
JBK   JBK               19.10 264  P      Pn      00 46 21.0 +0.4
TDRA  Tendrara          19.16 260  P      Pn      00 46 23.0 +1.6
PAB   San Pablo         19.35 280  P      P       00 46 21.9 -0.6
PAB                                pmax   pmax
      comp=Z,13nm,0.9s
PAB   San Pablo         19.35 280  P      P       00 46 21.9 -0.6
VRH   Novokhopyorsk     19.39  43 eP      P       00 46 22.2 -0.5
VRH                                pmax   pmax
      comp=Z,10.0nm,0.8s
OBN   Obninsk           19.62  28  P      Pn      00 46 25.9 -0.6
      comp=Z,0.6nm,0.3s,baz=140,slow=4.0,SNR=4.5
OBN                                LR     LR      00 55 06.6
      comp=Z,164nm,18.1s,baz=202,slow=40
OBN   Obninsk           19.62  28deP      Pn      00 46 26.3 -0.1
OBN                                pmax   pmax
      comp=Z,42nm,1.7s
OBN                                MLR    MLR
      comp=Z,591nm,17.0s
OBN   Obninsk           19.62  28  P      Pn      00 46 26.4 -0.1
OBN                                IAmb   IAmb    00 46 28.0
      comp=Z,15nm,0.7s
VSU   Vasula            20.16   9 eP      P       00 46 31.1 +0.2
VSU   Vasula            20.16   9 i P     P       00 46 31.2 +0.2
VSU                                pmax   pmax
      comp=Z,128nm,0.7s
MOS   Moscow            20.49  28 eP      P       00 46 31.6 -3.0
MOS                               eS      S       00 50 23.6 -0.4
MOS                                pmax   pmax
      comp=Z,77nm,1.3s
MOS                                MLR    MLR
      comp=Z,900nm,18.0s
MAK   Makhachkala       20.77  70 eP      P       00 46 37.3 -0.4
MAK                               e               00 46 54.9
MAK                               eS      S       00 50 29.2 -0.6
MAK                               eSS     SnSn    00 50 52.4 +3.2
MAK                                pmax   pmax
      comp=Z,230nm,0.9s
CHEFC Chefchaouen       21.02 268  P      P       00 46 42.0 +1.3
MDT   Midelt            21.24 262  P      P       00 46 43.6 +0.5
      comp=Z,7.5nm,0.9s,baz=92,slow=11,SNR=9.9
MDT                                LR     LR      00 56 06.6
      comp=Z,133nm,19.9s,baz=74,slow=40
MDT   Midelt            21.24 262  P      P       00 46 44.3 +1.2
UPP   Uppsala           21.24 356 eP      P       00 46 42.4 -0.3
MVO   Moncorvo          21.28 285 eP      P       00 46 43.1 -0.3
MVO                               eLR     LR      00 54 12.6
      comp=Z,197nm,18.0s
PBAR  Barrancos         21.61 277 eP      P       00 46 46.7 -0.2
      comp=Z,52nm,1.4s
PMRV  Marv??o           21.70 281 eP      P       00 46 47.2 -0.7
      comp=Z,79nm,1.3s
PMRV                              eLR     LR      00 53 59.9
      comp=Z,190nm,22.0s
MTE   Manteigas         21.72 283 eP      P       00 46 47.5 -0.6
      comp=Z,71nm,1.4s
MTE                               eLR     LR      00 53 01.2
      comp=Z,356nm,18.0s
MTE   Manteigas         21.72 283  P      P       00 46 46.4 -1.8
MTE                                IAmb   IAmb    00 46 48.4
      comp=Z,44nm,1.1s
PCBR  Castelo Branco    21.72 282 eP      P       00 46 47.2 -0.8
      comp=Z,39nm,1.9s
HFS   Hagfors           21.87 351  P      P       00 46 49.4 -0.1
      comp=Z,14nm,0.7s,baz=169,slow=11,SNR=24
HFS                                LR     LR      00 57 07.7
      comp=Z,478nm,21.5s,baz=175,slow=42
PESTR Estremoz          21.93 279 eP      P       00 46 49.1 -1.2
      comp=Z,55nm,1.1s
PESTR Estremoz          21.93 279  P      P       00 46 48.0 -2.4
PESTR                              IAmb   IAmb    00 46 50.0
      comp=Z,21nm,1.0s
PESTR Estremoz          21.93 279  P      P       00 46 49.2 -1.2
PVIS  Viseu             21.96 284 eP      P       00 46 50.5 -0.2
      comp=Z,55nm,1.4s
KONO  Kongsberg         22.09 345  P      P       00 46 51.1 -0.7
KONO                               pmax   pmax
      comp=Z,36nm,1.2s
KONO  Kongsberg         22.09 345 eP      P       00 46 51.1 -0.7
KONO  Kongsberg         22.09 345  P      P       00 46 51.0 -0.7
KONO                               IAmb   IAmb    00 46 52.3
      comp=Z,36nm,1.1s
OSL   Oslo              22.14 347 eP      P       00 46 52.1 -0.2
PGAV  Gavieira, Arco    22.18 288 eLR     LR      00 54 27.6
      comp=Z,208nm,20.0s
PBEJ  Beja              22.28 277 eP      P       00 46 55.1 +1.0
      comp=Z,28nm,1.6s
PVAQ  Vaqueiros         22.29 276 eP      P       00 46 53.6 -0.6
      comp=Z,38nm,1.5s
PVAQ                              eLR     LR      00 55 35.4
      comp=Z,123nm,20.0s
PVAQ  Vaqueiros         22.29 276  P      P       00 46 52.1 -2.1
PVAQ                               IAmb   IAmb    00 46 57.2
      comp=Z,15nm,1.0s
EVO   Evora             22.31 279 eP      P       00 46 53.0 -1.4
      comp=Z,48nm,1.2s
PMTG  Montargil         22.39 280 eP      P       00 46 53.6 -1.7
      comp=Z,59nm,1.2s
COI   Coimbra           22.40 283 eP      P       00 46 55.3  0.0
COI   Coimbra           22.40 283  P      P       00 46 53.4 -1.9
COI                                pmax   pmax
      comp=Z,46nm,1.2s
COI   Coimbra           22.40 283  P      P       00 46 53.4 -1.9
COI                                IAmb   IAmb    00 46 57.1
      comp=Z,46nm,1.1s
PCAS  Casmilo, Conde    22.48 283 eP      P       00 46 55.5 -0.7
      comp=Z,57nm,1.5s
PBDV  Barranco-do-Ve    22.49 275 eP      P       00 46 57.4 +1.0
      comp=Z,63nm,1.4s
MESJ  Messejana         22.59 277 eP      P       00 46 56.7 -0.7
      comp=Z,39nm,1.8s
KMY   Karmoy            22.74 339 eP      P       00 46 58.5 -0.3
NC602 NORSAR Array S    22.76 348 eP      P       00 46 58.6 -0.3
NC602 NORSAR Array S    22.76 348  IAmb   IAmb    00 47 10.7
      comp=Z,34nm,1.1s
PNCL  Nicolau / Gran    22.78 278 eP      P       00 46 59.2 -0.2
      comp=Z,57nm,1.2s
TZRR  Tazzarine         22.85 258  P      P       00 47 01.0 +0.7
NAO01 NORSAR Array S    22.96 348  P      P       00 47 00.1 -1.1
NAO01                              IAmb   IAmb    00 47 08.7
      comp=Z,48nm,1.1s
FINES FINESS Array B    23.00   7  P      P       00 46 59.7 -1.8
      comp=Z,32nm,0.8s,baz=161,slow=12,SNR=41
FINES                              PcP    PcP     00 50 50.8 -0.1
      comp=Z,2.5nm,0.7s,baz=128,slow=5.6,SNR=3.7
FINES                              LR     LR      00 58 40.7
      comp=Z,353nm,19.4s,baz=192,slow=44
FINES FINESS Array B    23.00   7  P      P       00 47 01.5  0.0
FINES                                             00 50 50.8
FINES FINESS Array B    23.00   7  P      P       00 47 01.5  0.0
FIA1  FINESS Array S    23.00   7  P      P       00 47 02.0 +0.5
EKA   Eskdalemuir Ar    23.02 324  P      P       00 47 00.7 -1.0
      comp=Z,64nm,0.9s,baz=124,slow=10,SNR=42
ESK   Eskdalemuir       23.03 324  P      P       00 47 01.0 -0.8
ESK                                pmax   pmax
      comp=Z,129nm,1.1s
ESK   Eskdalemuir       23.03 324  P      P       00 47 01.0 -0.8
PTEO  Sao Teotonio      23.04 276 eP      P       00 47 02.3 +0.1
NC405 NORSAR Array S    23.09 349  P      P       00 47 01.0 -1.4
NC405                                     pP      00 47 01.2 -2.8
NB201 NORSAR Array S    23.09 348  P      P       00 47 01.6 -0.9
NB2   NORSAR Subarra    23.10 348  P      P       00 47 01.3 -1.2
      comp=Z,135nm,1.7s,baz=157,slow=10
NOA   NORSAR Array B    23.10 348  P      P       00 47 01.6 -0.9
      comp=Z,5.4nm,0.8s,baz=159,slow=9.6,SNR=23
NOA                                LR     LR      00 57 21.5
      comp=Z,239nm,19.3s,baz=170,slow=40
NBO00 NORSAR Array S    23.16 348  P      P       00 47 01.8 -1.4
BELG  Belogornoye       23.18  45  P      P       00 47 04.3 +0.9
      comp=Z,21nm,0.6s,baz=302,slow=1.5,SNR=14
BELG                               LR     LR      00 56 06.6
      comp=Z,128nm,20.2s,baz=325,slow=37
ZGR   Zagora            23.20 256  P      P       00 47 04.0  0.0
NC303 NORSAR Array S    23.25 349  P      P       00 47 03.4 -0.6
SKAR  Skarslia          23.29 345 eP      P       00 47 04.7 +0.1
NC204 NORSAR Array S    23.39 348  P      P       00 47 05.2 -0.4
DOMB  Dombas            24.40 347 eP      P       00 47 15.1 -0.1
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AKN   Aaknes            24.92 345 eP      P       00 47 19.2 -0.6
KLMR  Klimovskoe        25.12  22 eP      P       00 47 19.8 -1.8
KLMR                               pmax   pmax
      comp=Z,43nm,1.2s
KLMR  Klimovskoe        25.12  22 eP      P       00 47 19.9 -1.7
KLMR                               AMP            00 47 25.4
      comp=Z,43nm,1.2s
KLMR                               LQ     LQ      00 54 57.8
KLMR                               LQ     LQ      00 54 57.8
KLMR                               LR     LR      00 56 52.9
RAYN  Ar Rayn           26.05 118 i P     P       00 47 30.9 +0.5
      SNR=13
RAYN  Ar Rayn           26.05 118  P      P       00 47 32.0 +1.5
RAYN                               pmax   pmax
      comp=Z,8.0nm,0.8s
RAYN  Ar Rayn           26.05 118  P      P       00 47 33.1 +2.6
RAYN  Ar Rayn           26.05 118  P      P       00 47 32.0 +1.5
RAYN                               IAmb   IAmb    00 47 35.4
      comp=Z,8.0nm,0.8s
NSS   Namsos            26.34 352 eP      P       00 47 32.3 -0.4
KIRV  Kirov             27.18  34  LR     LR      00 59 02.1
      comp=Z,471nm,18.6s,baz=236,slow=38
KIRV  Kirov             27.18  34 i P     P       00 47 41.2 +1.0
PRGR  Permogore         27.65  26 eP      P       00 47 45.1 +0.7
PRGR                               pmax   pmax
      comp=Z,30nm,0.8s
KONS  Konsvik           28.15 354 eP      P       00 47 48.4 -0.4
AKTO  Aktyubinsk        28.82  54  P      P       00 47 55.0  0.0
      comp=Z,7.5nm,1.1s,baz=254,slow=8.5,SNR=11
AKTO                               LR     LR      01 00 12.2
      comp=Z,228nm,21.8s,baz=281,slow=38
GEYT  Alibeck           29.32  80  P      P       00 48 00.1 +0.4
      comp=Z,7.2nm,0.7s,baz=247,slow=22,SNR=9.4
GEYT                               LR     LR      01 02 52.4
      comp=Z,101nm,20.4s,baz=250,slow=43
GYA0B ALIBECK ARRAY     29.32  80  P      P       00 47 59.3 -0.4
GYA0B                              IAmb   IAmb    00 48 11.1
      comp=Z,16nm,0.8s
STEI  Steigen           29.41 356 eP      P       00 47 59.5 -0.6
AB31  Akbulak array     29.90  56 i P     P       00 48 05.0 +0.4
ABKAR Akbulak array     29.90  56  P      P       00 48 04.3 -0.3
ABKAR Akbulak array     29.90  56  P      P       00 48 05.0 +0.4
TORD  Torodi Ar. Bea    30.48 218  P      P       00 48 09.5 -0.5
      comp=Z,5.2nm,0.9s,baz=31,slow=9.6,SNR=32
TORD  Torodi Ar. Bea    30.48 218  P      P       00 48 09.8 -0.2
ARU   Arti              30.62  42d iP     P       00 48 10.9  0.0
ARU                                               00 49 07.9
ARU                                S      S       00 53 15.0 +1.7
ARU                                SS     SnSn    00 54 47.9 -1.9
ARU                                pmax   pmax
      comp=Z,12nm,2.0s
TRO   Tromso            30.99 359 eP      P       00 48 13.7 -0.2
ARCES ARCESS Array B    30.99   3  P      P       00 48 13.1 -0.9
      comp=Z,9.5nm,0.9s,baz=186,slow=9.8,SNR=11
ARCES                              LR     LR      01 00 51.9
      comp=Z,322nm,18.9s,baz=185,slow=37
ARCES ARCESS Array B    30.99   3  IAmb   IAmb    00 48 14.8
      comp=Z,12nm,0.9s
SVE   Sverdlovsk        31.84  42 eP      P       00 48 21.5 -0.1
SVE                               eS      S       00 53 32.4 +0.2
SVE                                pmax   pmax
      comp=Z,21nm,1.3s
UMQ   Umm Al-Quwin      32.29 104  P      P       00 48 27.9 +2.0
SHME  Shamm             32.37 102  P      P       00 48 26.7 +0.1
SHME  Shamm             32.37 102  P      P       00 48 27.2 +0.6
KOWA  Kowa              32.45 229  P      P       00 48 27.2 -0.1
      comp=Z,5.0nm,0.8s,baz=30,slow=8.4,SNR=13
KOWA  Kowa              32.45 229  P      P       00 48 26.8 -0.5
KOWA                               IAmb   IAmb    00 48 35.2
      comp=Z,9.2nm,1.1s
KOWA  Kowa              32.45 229  P      P       00 48 27.5 +0.2
BANOM Banah             32.56 102 i P     P       00 48 27.5 -0.8
      SNR=7.8
BANOM Banah             32.56 102  P      P       00 48 28.9 +0.6
NAZ   Nazwa, Dubai      32.58 104 i P     P       00 48 28.2 -0.3
      SNR=11
NAZ   Nazwa, Dubai      32.58 104  P      P       00 48 29.3 +0.9
FAQ   Al Faqa, Dubai    32.66 105  P      P       00 48 29.6 +0.5
FAQ   Al Faqa, Dubai    32.66 105  P      P       00 48 29.8 +0.7
MASF  Masafi            32.75 103  P      P       00 48 30.1 +0.1
MDH   Madha             32.89 103  P      P       00 48 30.9 -0.3
MDH   Madha             32.89 103  P      P       00 48 31.8 +0.6
UOSS  Minazif           33.01 104 i P     P       00 48 31.6 -0.6
      SNR=7.0
UOSS  Minazif           33.01 104  P      P       00 48 32.7 +0.5
UOSS  Minazif           33.01 104  P      P       00 48 32.7 +0.5
HATD  Hatta, Dubai      33.02 104 i P     P       00 48 31.2 -1.1
      SNR=13
HATD  Hatta, Dubai      33.02 104  P      P       00 48 32.8 +0.5
      SNR=13
ASHO  Ashiyiah          33.05 105 i P     P       00 48 31.7 -0.9
      SNR=10
ASHO  Ashiyiah          33.05 105  P      P       00 48 32.4 -0.2
      SNR=10
ALNE  Al Ain            33.16 106 i P     P       00 48 33.6  0.0
      SNR=16
ALNE  Al Ain            33.16 106  P      P       00 48 34.7 +1.1
HRA   Herat             33.53  84  P      P       00 48 37.0  0.0
SOHO  SOHO              33.71 105 i P     P       00 48 37.3 -1.0
      SNR=22
SOHO  SOHO              33.71 105  P      P       00 48 38.2 -0.1
ARQ   Araqi             34.15 106  P      P       00 48 43.0 +0.8
      SNR=19
HOQ   Hoqain            34.61 105  P      P       00 48 47.0 +0.9
BIDO  Bidbid            35.26 104  P      P       00 48 53.2 +1.4
DOK   Doka              35.32 115  P      P       00 48 50.1 -2.2
SMDO  Samad             35.46 105  P      P       00 48 53.1 -0.5
WHFO  Wadi Hawf         35.53 116  P      P       00 48 50.8 -3.4
WSAR  Wadi Sarin        35.80 104  P      P       00 48 57.2 +0.7
JMDO  Jabal Madar       35.90 106  P      P       00 48 57.4 +0.1
RBK   Rabkut            36.11 116  P      P       00 49 00.0 +0.9
WBK   Wadi Bani Khal    36.41 105  P      P       00 49 03.0 +1.3
      SNR=6.1
DMTO  DMTO              36.49 115  P      P       00 49 02.2 -0.2
      SNR=6.1
BRVK  Borovoye          36.67  50  P      P       00 49 03.5  0.0
BRVK                               pmax   pmax
      comp=Z,12nm,1.0s
BRVK  Borovoye          36.67  50  P      P       00 49 03.5  0.0
BRVK                               IAmb   IAmb    00 49 09.2
      comp=Z,12nm,0.9s
JLN   Jalan Bani Buh    37.01 105  P      P       00 49 07.7 +1.0
SCO   Scoresbysund      38.70 339  P      P       00 49 21.4 +1.0
SCO                                pmax   pmax
      comp=Z,11nm,1.1s
SCO   Scoresbysund      38.70 339  P      P       00 49 21.4 +1.0
SCO                                IAmb   IAmb    00 49 24.5
      comp=Z,11nm,1.1s
KBL   Kabul             38.75  81  P      P       00 49 22.5 +0.9
KBL                                pmax   pmax
      comp=Z,6.0nm,1.1s
KBL   Kabul             38.75  81  P      P       00 49 22.5 +0.9
DBIC  Dimbokro          39.33 222  P      P       00 49 26.0 -0.3
      comp=Z,7.9nm,0.9s,baz=33,slow=10,SNR=6.0
DBIC  Dimbokro          39.33 222  P      P       00 49 26.0 -0.3
DBIC  Dimbokro          39.33 222  P      P       00 49 25.1 -1.2
DBIC                               IAmb   IAmb    00 49 27.3
      comp=Z,9.6nm,0.8s
TIC   Toumodi           39.43 223 eP      P       00 49 25.1 -2.1
KIC   Kosan Boka        39.53 222 eP      P       00 49 26.9 -1.1
      comp=Z,15nm,0.9s
SPITS Spitsbergen Ar    39.61 359  P      P       00 49 28.1 +0.1
      comp=Z,9.7nm,1.0s,baz=190,slow=7.3,SNR=1.7
LIC   Lamto             39.79 222 eP      P       00 49 25.7 -4.5
      comp=Z,71nm,1.1s
KURBB Kurchatov Arra    41.87  54  P      P       00 49 47.1 +0.1
KURK  Kurchatov         41.91  54ceP      P       00 49 47.2 -0.1
KURK                               pmax   pmax
      comp=Z,4.0nm,1.0s
KURK  Kurchatov         41.91  54  P      P       00 49 46.7 -0.6
NIL   Nilore            42.33  80  P      P       00 49 51.5 +0.5
NIL                                pmax   pmax
      comp=Z,19nm,1.1s
NIL   Nilore            42.33  80  P      P       00 49 51.5 +0.5
NIL                                IAmb   IAmb    00 50 05.7
      comp=Z,19nm,1.1s
KMBO  Kilima Mbogo      42.52 155  LR     LR      01 08 06.9
      comp=Z,194nm,21.4s,baz=79,slow=37
KMBO  Kilima Mbogo      42.52 155ceP      P       00 49 55.5 +2.6
KMBO                               pmax   pmax
      comp=Z,1.0nm,0.3s
KMBO  Kilima Mbogo      42.52 155  P      P       00 49 53.2 +0.4
SUMG  Summit            44.34 338  P      P       00 50 07.2 +0.1
SUMG                               pmax   pmax
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	comp=Z,8.0nm,1.0s						
SUMG	**Summit**	**44.34**	**338**	P	**P**	**00 50 07.2**	**+0.1**
SUMG				IAmb	IAmb	00 50 09.0	
	comp=Z,7.7nm,1.0s						
MAKZ	**Makanchi**	**44.76**	**59**	P	**P**	**00 50 10.6**	**+0.1**
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MAKZ	**Makanchi**	**44.76**	**59**	P	**P**	**00 50 10.6**	**+0.1**
MK31	**Makanchi Array**	**44.98**	**59**	*e*P	**P**	**00 50 11.6**	**-0.6**
MK31						00 51 51.8	
MK31	**Makanchi Array**	**44.98**	**59**	P	**P**	**00 50 12.5**	**+0.3**
MKAR	**Makanchi Array**	**44.98**	**59**	P	**P**	**00 50 12.2**	**+0.1**
	comp=Z,2.8nm,0.6s,baz=278,slow=6.6,SNR=20						
MKAR				LR	LR	01 12 47.4	
	comp=Z,113nm,18.8s,baz=288,slow=41						
ZALV	**Zalesovo Beam**	**45.29**	**49**	P	**P**	**00 50 14.1**	**-0.5**
	comp=Z,12nm,0.5s,baz=275,slow=8.7,SNR=50						
ZALV				LR	LR	01 09 48.6	
	comp=Z,141nm,18.8s,baz=279,slow=37						
NRIK	**Noril'sk**	**46.29**	**27**	P	**P**	**00 50 22.9**	**+0.7**
	comp=Z,1.6nm,0.5s,baz=252,slow=6.4,SNR=3.9						
NRIK				LR	LR	01 10 48.1	
	comp=Z,238nm,21.6s,baz=263,slow=37						
NRIK	**Noril'sk**	**46.29**	**27**	P	**P**	**00 50 23.5**	**+1.3**
NRIK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
NRIK	**Noril'sk**	**46.29**	**27**	P	**P**	**00 50 23.5**	**+1.3**
NRIK				IAmb	IAmb	00 50 29.2	
	comp=Z,9.2nm,1.1s						
DGZ	**Jazzator, Alta**	**47.66**	**54**	*i* P	**P**	**00 50 33.2**	**-0.2**
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.6s						
SFJD	**Kangerlussuaq**	**47.79**	**330**	LR	LR	01 11 36.3	
	comp=Z,130nm,19.1s,baz=82,slow=37						
WMQ	**Urumqi**	**49.45**	**61**	*e*P	**P**	**00 50 50.8**	**+3.6**
WMQ				LR	LR		
	comp=N,470nm,29.2s						
WMQ				LR	LR		
	comp=E,620nm,28.8s						
WMQ				LR	LR		
	comp=Z,78nm,28.3s						
SCHQ	**Schefferville**	**58.10**	**317**	P	**P**	**00 51 49.9**	**-0.3**
	comp=Z,12nm,0.8s,baz=52,slow=4.7,SNR=13						
SCHQ				LR	LR	01 15 09.3	
	comp=Z,116nm,21.5s,baz=80,slow=34						
SCHQ	**Schefferville**	**58.10**	**317**	P	**P**	**00 51 49.8**	**-0.4**
SCHQ				IAmb	IAmb	00 51 59.0	
	comp=Z,14nm,1.1s						
TIXI	**Tiksi**	**59.12**	**21**	P	**P**	**00 51 57.9**	**+0.8**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.1s						
TIXI	**Tiksi**	**59.12**	**21**	P	**P**	**00 51 57.9**	**+0.8**
TIXI				IAmb	IAmb	00 52 00.4	
	comp=Z,6.2nm,1.1s						
GTA	**Gaotai**	**59.52**	**62**	*e*P	**P**	**00 52 00.4**	**-0.1**
GTA				pP	sP	00 52 04.4	+1.1
GTA				sP	pP	00 52 07.6	+5.1
GTA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GTA				pmax	pmax		
	comp=Z,60nm,6.0s						
GTA				LR	LR		
	comp=N,83nm,17.1s						
GTA				LR	LR		
	comp=E,150nm,17.5s						
GTA				LR	LR		
	comp=Z,120nm,16.0s						
SONM	**Songino Array**	**60.08**	**51**	P	**P**	**00 52 04.5**	**+0.3**
	comp=Z,2.2nm,0.8s,baz=282,slow=7.8,SNR=11						
SONM				LR	LR	01 19 03.4	
	comp=Z,128nm,18.8s,baz=307,slow=37						
SONM	**Songino Array**	**60.08**	**51**	IAmb	IAmb	00 52 20.8	
	comp=Z,7.0nm,1.2s						
ULN	**Ulaanbaatar**	**60.46**	**51**	*i* P	**P**	**00 52 08.9**	**+2.0**
ULN				pmax	pmax		
	comp=Z,6.0nm,1.2s						
HHC	**Hu-ho-hao-te**	**66.69**	**56**	*e*P	**P**	**00 52 48.0**	**-0.1**
HHC				S	**S**	**01 01 39.4**	**-0.8**
HHC	**Hu-ho-hao-te**	**66.69**	**56**	SS	SS	01 06 05.3	+8.2
HHC				pmax	pmax		
	comp=Z,24nm,1.1s						
HHC				pmax	pmax		
	comp=Z,62nm,5.6s						
HHC				LR	LR		
	comp=N,230nm,16.0s						
HHC				LR	LR		
	comp=E,240nm,17.0s						
HHC				LR	LR		
	comp=Z,210nm,15.0s						
BOSA	**Boshof**	**67.13**	**176**	P	**P**	**00 52 51.9**	**+1.1**
	comp=Z,3.5nm,0.9s,baz=349,slow=9.7,SNR=3.1						
BOSA				LR	LR	01 25 04.6	
	comp=Z,202nm,18.9s,baz=360,slow=39						
XAN	**Xi'an**	**68.53**	**63**	P	**P**	**00 53 00.3**	**+0.6**
XAN				sP	sP	00 53 07.4	+4.9
XAN				PcP	**PcP**	**00 53 26.4**	**+1.5**
XAN				pmax	pmax		
	comp=Z,5.0nm,1.2s						
CMAR	**Chiang Mai Arr**	**69.77**	**82**	P	**P**	**00 53 07.2**	**-0.3**
	comp=Z,1.6nm,0.6s,baz=304,slow=7.4,SNR=8.1						
CMAR				LR	LR	01 28 28.6	
	comp=Z,63nm,20.9s,baz=4.0,slow=40						
BILL	**Bilibino**	**70.48**	**13**	⇑*e*P	**P**	**00 53 10.9**	**-0.2**
BILL				*e*		00 53 33.4	
BILL				*e*		00 55 54.1	
BILL				*e*S	**SKiKP**	**01 02 53.4**	**-2.2**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.1s						
BILL				MLR	MLR		
	comp=Z,99nm,17.0s						
YKA	**Yellowknife Ar**	**72.90**	**340**	LR	LR	01 26 51.5	
	comp=Z,128nm,18.9s,baz=0.0,slow=37						
CN2	**Changchun**	**73.48**	**47**	*e*P	**P**	**00 53 30.3**	**+0.8**
CN2				*e*S	**S**	**01 02 57.6**	**-1.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,15.0s						
CN2				LR	LR		
	comp=E,200nm,15.0s						
CN2				LR	LR		
	comp=Z,200nm,14.4s						
ULM	**Lac du Bonnet**	**75.29**	**324**	P	**P**	**00 53 40.9**	**+0.9**
	comp=Z,5.8nm,0.8s,baz=35,slow=6.0,SNR=4.0						
ULM				LR	LR	01 28 44.4	
	comp=Z,77nm,18.7s,baz=19,slow=37						
ULM	**Lac du Bonnet**	**75.29**	**324**	IAmb	IAmb	00 53 47.0	
	comp=Z,11nm,1.0s						
H21K	**Melozitna Rive**	**75.83**	**357**	IAmb	IAmb	00 53 60.0	
	comp=Z,5.6nm,0.9s						
MDM	**Murphy Dome**	**76.28**	**355**	P	**P**	**00 53 46.4**	**+0.9**
MDM				IAmb	IAmb	00 53 59.2	
	comp=Z,4.5nm,1.0s						
DAWY	**Dawson**	**76.33**	**351**	P	**P**	**00 53 46.7**	**+1.0**
DAWY				IAmb	IAmb	00 53 59.7	
	comp=Z,5.6nm,1.1s						
COLA	**College**	**76.34**	**355**	*i* P	**P**	**00 53 45.2**	**-0.5**
COLA				pmax	pmax		
	comp=Z,10.0nm,1.6s						
MLY	**Manley**	**76.36**	**356**	P	**P**	**00 53 46.7**	**+0.8**
MLY				IAmb	IAmb	00 54 07.6	
	comp=Z,4.8nm,1.2s						
ILAR	**Eielson Array**	**76.37**	**355**	P	**P**	**00 53 47.0**	**+1.1**
	comp=Z,0.7nm,1.0s,baz=344,slow=3.7,SNR=5.8						
ILAR				LR	LR	01 27 00.1	
	comp=Z,63nm,21.6s,baz=12,slow=35						
ILAR	**Eielson Array**	**76.37**	**355**	P	**P**	**00 53 47.0**	**+1.1**
NJ2	**Nanjing**	**76.50**	**60**	*e*P	**P**	**00 53 47.3**	**+0.1**
NJ2				pmax	pmax		
	comp=Z,18nm,0.5s						
USRK	**Ussuriysk Ar.**	**76.85**	**43**	LR	LR	01 30 13.4	
	comp=Z,148nm,18.4s,baz=315,slow=38						
KSAR	**Wonju Array Be**	**78.93**	**51**	P	**P**	**00 54 00.0**	**-0.7**
KSAR	**Wonju Array Be**	**78.93**	**51**	P	**P**	**00 53 60.0**	**-0.7**
KSRS	**Korea Array**	**78.95**	**51**	P	**P**	**00 53 60.0**	**-0.7**
	comp=Z,0.9nm,0.4s,baz=335,slow=5.5,SNR=5.0						
KSRS				LR	LR	01 32 58.6	
	comp=Z,48nm,19.8s,baz=305,slow=39						
KSRS	**Korea Array**	**78.95**	**51**	P	**P**	**00 54 00.0**	**-0.7**
U49A	**Red Boiling Sp**	**78.96**	**308**	P	**P**	**00 54 00.4**	**-0.4**
U49A				IAmb	IAmb	00 54 02.8	
	comp=Z,7.5nm,1.1s						
T47A	**Sharon Grove**	**79.46**	**309**	P	**P**	**00 54 03.7**	**+0.1**
BMRM	**Bremner River**	**79.93**	**353**	P	**P**	**00 54 05.9**	**+0.1**
X48A	**Hartselle**	**81.08**	**307**	P	**P**	**00 54 11.5**	**-0.9**
X48A				IAmb	IAmb	00 54 14.7	
	comp=Z,11nm,1.1s						
PETK	**Petropavlovsk-**	**81.29**	**25**	LR	LR	01 35 00.5	
	comp=Z,180nm,18.1s,baz=311,slow=39						
P38A	**Dawn**	**81.44**	**315**	P	**P**	**00 54 14.3**	**+0.2**
P38A				IAmb	IAmb	00 54 16.6	
	comp=Z,9.0nm,0.9s						
PDSI	**Padang**	**82.67**	**97**	P	**P**	**00 54 20.2**	**-0.8**
EGMT	**Eagleton**	**83.00**	**329**	P	**P**	**00 54 22.9**	**+0.6**
BDFB	**Brasilia**	**83.80**	**244**	P	**P**	**00 54 27.4**	**+0.7**
	comp=Z,4.0nm,0.8s,baz=177,slow=3.3,SNR=6.2						
BDFB	**Brasilia**	**83.80**	**244**	P	**P**	**00 54 26.2**	**-0.5**
MIAR	**Mount Ida**	**84.99**	**311**	P	**P**	**00 54 32.8**	**+0.2**
MIAR				IAmb	IAmb	00 54 35.1	
	comp=Z,7.0nm,1.0s						
JTMT	**Jette**	**84.99**	**331**	P	**P**	**00 54 33.2**	**+0.6**
JTMT				IAmb	IAmb	00 54 50.8	
	comp=Z,6.3nm,1.0s						
T35A	**Sooner Cattle**	**85.01**	**314**	P	**P**	**00 54 32.8**	**+0.1**
SDV	**Santo Domingo**	**85.46**	**278**	P	**P**	**00 54 35.4**	**0.0**
SDV				IAmb	IAmb	00 54 37.9	
	comp=Z,8.3nm,1.1s						
MJAR	**Matsushiro Arr**	**85.57**	**46**	P	**P**	**00 54 35.0**	**-0.5**
	comp=Z,3.1nm,0.8s,baz=308,slow=4.6,SNR=5.0						
MJAR				LR	LR	01 38 50.2	
	comp=Z,69nm,18.0s,baz=325,slow=40						
MJAR	**Matsushiro Arr**	**85.57**	**46**	P	**P**	**00 54 36.3**	**+0.8**
MJAR				pmax	pmax		
	comp=Z,8.0nm,1.2s						
MJAR	**Matsushiro Arr**	**85.57**	**46**	P	**P**	**00 54 36.3**	**+0.8**
MJAR				IAmb	IAmb	00 54 43.7	
	comp=Z,8.0nm,1.2s						
QUOK	**Quay**	**85.65**	**314**	P	**P**	**00 54 36.1**	**+0.3**
OK030	**Cody Creek RV**	**85.87**	**314**	P	**P**	**00 54 38.3**	**+1.4**
YHH	**Holmes Hill**	**86.06**	**328**	P	**P**	**00 54 38.4**	**+0.2**
C09A	**Chrisman Ranch**	**86.39**	**334**	IAmb	IAmb	00 54 41.5	
	comp=Z,4.5nm,0.9s						
PDAR	**Pinedale Array**	**87.13**	**326**	P	**P**	**00 54 43.1**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=67,slow=3.9,SNR=4.3						
PDAR				LR	LR	01 34 49.4	
	comp=Z,79nm,19.5s,baz=37,slow=36						
TNG	**Tangerang**	**90.75**	**97**	P	P	00 55 11.3	+11
TNG				P	P	00 55 12.8	+12
ROSC	**El Rosal**	**90.83**	**277**	LR	LR	01 32 26.8	
	comp=Z,37nm,20.0s,baz=50,slow=33						
PTLB	**Pontes e Lacer**	**91.74**	**252**	P	**P**	**00 55 04.5**	**-0.4**
PTLB				IAmb	IAmb	00 55 07.0	
	comp=Z,6.0nm,1.1s						
ANMO	**Albuquerque**	**91.83**	**319**	*ce*P	**P**	**00 55 04.3**	**-1.2**
ANMO				pmax	pmax		
	comp=Z,10.0nm,3.5s						
NVAR	**Mina Array Bea**	**94.43**	**329**	LR	LR	01 41 48.1	
	comp=Z,101nm,18.3s,baz=61,slow=38						
TXAR	**Lajitas Array**	**94.64**	**314**	P	**P**	**00 55 18.7**	**+0.3**
	comp=Z,0.5nm,0.9s,baz=58,slow=3.1,SNR=3.5						
TXAR				LR	LR	01 37 10.0	
	comp=Z,73nm,20.6s,baz=0.0,slow=35						
CPUP	**Villa Florida**	**97.34**	**242**	LR	LR	01 41 22.3	
	comp=Z,89nm,18.4s,baz=42,slow=37						
WRA	**Warramunga Arr**	**120.51**	**92**	PKP	**PKPdf**	**01 00 47.7**	**-1.4**
	comp=Z,0.7nm,0.6s,baz=323,slow=1.8,SNR=10						
WRA	**Warramunga Arr**	**120.51**	**92**	*c i*PKIKP	**PKPdf**	**01 00 49.0**	**-0.1**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ASAR	**Alice Springs**	**122.18**	**96**	PKP	**PKPdf**	**01 00 51.0**	**-1.2**
	comp=Z,0.7nm,0.5s,baz=307,slow=1.4,SNR=11						
ASAR	**Alice Springs**	**122.18**	**96**	PKIKP	**PKPdf**	**01 00 51.0**	**-1.2**

IDC 21 00:44:46.8±1.2, **55°.61S**×**27°.20W**, **h0^{km}**, **mb3.7**/2, **mb1 3.9**/2, **mb1mx3.2**/19, **mbtmp3.7**/2, **Error ellipse: s-maj=92.8km s-min=32.9km az=101.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**47.02**	**183**	P	P	00 53 19.1	+0.1
	1.0nm,0.6s,baz=186,slow=7.7,SNR=14						
H10S2	**ASCENSION HYDR**	**47.58**	**17**	T	T	01 44 51.1	
	baz=189,slow=74,SNR=4.8						
H10S3	**ASCENSION HYDR**	**47.58**	**17**	T	T	01 44 51.1	
	baz=31,slow=74,SNR=12						
H10N1	**ASCENSION HYDR**	**48.69**	**17**	T	T	01 46 18.2	
	baz=189,slow=75,SNR=6.0						
H10N3	**ASCENSION HYDR**	**48.70**	**17**	T	T	01 46 13.4	
	baz=189,slow=75,SNR=8.8						
H10N2	**ASCENSION HYDR**	**48.71**	**17**	T	T	01 46 17.4	
	baz=189,slow=75,SNR=8.1						
TORD	**Torodi Ar. Bea**	**72.67**	**30**	P	P	00 56 16.6	+0.5
	0.4nm,0.6s,baz=201,slow=5.7,SNR=5.0						
ILAR	**Eielson Array**	**149.82**	**312**	PKPbc	PKPbc	01 04 36.5	-0.6
	0.7nm,0.7s,baz=133,slow=2.8,SNR=8.0						
SONM	**Songino Array**	**150.70**	**86**	PKPbc	PKPbc	01 04 39.0	-1.0
	0.4nm,0.5s,baz=227,slow=2.8,SNR=4.0						

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*IDC **21** 00:46:12.1±1.1, 38°.83N×20°.46E, h0^{km}, mb3.7/7, mb1 3.7/12, mb1mx3.6/43, mbtmp3.6/12, ML3.3/4, Error ellipse: s-maj=20.5km s-min=19.4km az=21.0*

*ATH **21** 00:46:13.4, 38°.73N×20°.59E, h6^{km}±3^{km}, ML3.5/4, Error ellipse: s-maj=3.4km s-min=1.1km az=82.0*

*THE **21** 00:46:13.5, 38°.72N×20°.60E, h5^{km}±1^{km}, ML3.7/8, Error ellipse: s-maj=1.7km s-min=0.4km az=51.0*

ISC 21 00:46:12.7±0.7, **38°.73N**±0°.02×**20°.60E**±0°.03, **h8^{km}**±4^{km}, **n47**, σ**0^{s}.82**/66, **mb3.7**/7, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRAG	**Dragano-Lefkad**	**0.05**	**201**	P	**Pg**	**00 46 14.5**	**+0.1**
DRAG				S	**Sg**	**00 46 15.8**	**0.0**
DRAG	**Dragano-Lefkad**	**0.05**	**201**	P	**Pg**	**00 46 14.6**	**+0.1**
DRAG				S	**Sg**	**00 46 15.7**	**0.0**
LKD2	**Lefkada island**	**0.08**	**39**	P	**Pg**	**00 46 15.0**	**+0.2**
LKD2				S	**Sg**	**00 46 16.7**	**+0.3**
	55µm,0.9s						
LKD2	**Lefkada island**	**0.08**	**39**	P	**Pg**	**00 46 14.8**	**0.0**
NYDR	**Nydri-Lefkada**	**0.08**	**102**	P	**Pg**	**00 46 15.3**	**+0.5**
NYDR				S	**Sg**	**00 46 16.3**	**0.0**
	135µm,0.2s						
NYDR	**Nydri-Lefkada**	**0.08**	**102**	P	**Pg**	**00 46 14.8**	**-0.1**
NYDR				S	**Sg**	**00 46 16.9**	**+0.6**
TSLK	**Tsoukalades, L**	**0.10**	**26**	P	**Pg**	**00 46 15.7**	**+0.5**
TSLK				S	**Sg**	**00 46 17.6**	**+0.6**
	64µm,1.0s						
TSLK	**Tsoukalades, L**	**0.10**	**26**	P	**Pg**	**00 46 15.7**	**+0.5**
TSLK				S	**Sg**	**00 46 18.0**	**+1.0**
EVGI	**Lefkada island**	**0.12**	**157**	P	**Pg**	**00 46 15.2**	**-0.2**
EVGI				S	**Sg**	**00 46 17.7**	**+0.4**
EVGI	**Lefkada island**	**0.12**	**157**	P	**Pg**	**00 46 15.4**	**0.0**
EVGI				S	**Sg**	**00 46 18.8**	**+1.5**
FSK	**Fiskardo**	**0.27**	**186**	P	**Pg**	**00 46 18.4**	**+0.3**
FSK				S	**Sg**	**00 46 22.6**	**+0.9**
	36µm,0.3s						
FSK	**Fiskardo**	**0.27**	**186**	P	**Pg**	**00 46 18.4**	**+0.3**
FSK				S	**Sb**	**00 46 23.6**	**-1.0**
FSK				AML	AML	00 46 24.3	
	comp=N,50283µm,0.4s						
FSK				AML	AML	00 46 24.9	
	comp=E,95871µm,0.3s						
KEF4	**Livadi, Kephal**	**0.49**	**196**	P	**Pg**	**00 46 22.5**	**+0.3**
KEF4				S	**Sg**	**00 46 29.7**	**+1.1**
KEF4	**Livadi, Kephal**	**0.49**	**196**	P	**Pg**	**00 46 22.6**	**+0.3**
KEF4				S	**Sb**	**00 46 30.2**	**-0.7**
DMLN	**Damoulianata-K**	**0.52**	**200**	P	**Pg**	**00 46 23.2**	**+0.4**
DMLN				S	**Sb**	**00 46 31.1**	**-0.7**
	comp=E,8µm,0.7s						
DMLN	**Damoulianata-K**	**0.52**	**200**	P	**Pg**	**00 46 22.7**	**-0.1**
DMLN				S	**Sb**	**00 46 31.3**	**-0.4**
LXRA	**Lixouri, Kepha**	**0.54**	**193**	P	**Pg**	**00 46 23.6**	**+0.3**
VLS	**Valsamata**	**0.55**	**181**	P	**Pg**	**00 46 23.5**	**+0.1**
VLS				S	**Sb**	**00 46 31.7**	**-0.9**
	comp=E,5µm,0.3s						
VLS	**Valsamata**	**0.55**	**181**	P	**Pg**	**00 46 23.4**	**0.0**
VLS				S	**Sb**	**00 46 32.5**	**-0.1**
VLS				AML	AML	00 46 34.9	
	comp=N,11392µm,0.4s						
VLS				AML	AML	00 46 38.4	
	comp=E,8531µm,0.4s						
ARGA	**Argostoli. Kep**	**0.56**	**190**	P	**Pb**	**00 46 24.8**	**+0.1**
KEF3	**Kipouria, Keph**	**0.56**	**200**	P	**Pg**	**00 46 23.0**	**-0.6**
KEF3				S	**Sg**	**00 46 31.9**	**+1.0**
	comp=E,18µm,0.7s						
PSDA	**Pessada-Kefalo**	**0.61**	**181**	P	**Pg**	**00 46 24.3**	**-0.3**
PSDA				S	**Sb**	**00 46 33.8**	**-0.6**
PSDA	**Pessada-Kefalo**	**0.61**	**181**	P	**Pg**	**00 46 24.3**	**-0.3**
PSDA				S	**Sb**	**00 46 34.3**	**-0.1**
PVO	**Paravola**	**0.74**	**99**	P	**Pn**	**00 46 27.7**	**-1.6**
PVO	**Paravola**	**0.74**	**99**	P	**Pn**	**00 46 28.1**	**-1.3**
PVO				AML	AML	00 46 46.4	
	comp=E,7738µm,0.7s						
PVO				AML	AML	00 46 47.6	
	comp=N,12557µm,0.6s						
IGT	**Igoumenitsa**	**0.83**	**346**	P	**Pn**	**00 46 29.6**	**-1.0**
IGT				AML	AML	00 46 48.3	
	comp=E,3759µm,0.7s						
IGT				AML	AML	00 46 49.2	
	comp=N,6146µm,0.6s						
VTN	**Vitineika**	**0.94**	**150**	P	**Pn**	**00 46 31.4**	**-0.7**
JAN	**Janina**	**0.95**	**12**	P	**Pn**	**00 46 32.8**	**+0.5**
RLS	**Riolos of Patr**	**0.96**	**134**	P	**Pn**	**00 46 31.1**	**-1.3**
EVR	**Evrytania**	**0.96**	**78**	P	**Pn**	**00 46 32.0**	**-0.6**
LTHK	**Lithakia**	**1.04**	**169**	P	**Pb**	**00 46 31.8**	**-1.0**
EFP	**Efpalio**	**1.07**	**106**	P	**Pn**	**00 46 33.1**	**-0.8**
DRO	**Drossia**	**1.17**	**131**	P	**Pg**	**00 46 35.3**	**+0.2**
AGG	**Agios Georgios**	**1.38**	**77**	P	**Pg**	**00 46 39.9**	**+0.6**
IDI	**Anoyia**	**4.86**	**134**	Pn	**Pn**	**00 47 29.0**	**+2.9**
	comp=N,0.4nm,0.3s,baz=27,slow=20,SNR=1.0						
IDI				Sn	**Sn**	**00 48 24.2**	**+1.7**
	comp=N,1.7nm,0.3s,baz=99,slow=20,SNR=2.1						
VAE	**Valguarnera**	**5.04**	**258**	Pn	**Pn**	**00 47 29.9**	**+1.4**
	comp=N,1.1nm,0.3s,baz=105,slow=16,SNR=1.3						
MLR	**Muntele Rosu**	**7.84**	**29**	Pn	Pn	00 48 13.4	+6.4
	comp=N,0.3nm,0.3s,baz=214,slow=18,SNR=1.3						
BRTR	**Keskin Array B**	**10.17**	**80**	Pn	Pn	00 48 44.0	+5.0
	comp=N,0.1nm,0.3s,baz=280,slow=26,SNR=1.6						
GERES	**GERESS Array B**	**11.27**	**336**	Pn	**Pn**	**00 48 52.9**	**-1.1**
	baz=151,slow=14,SNR=1.3						
ESDC	**Sonseca Array**	**19.05**	**281**	P	**Pn**	**00 50 36.0**	**0.0**
	comp=N,0.1nm,0.3s,baz=79,slow=11,SNR=4.1						
HFS	**Hagfors**	**21.87**	**351**	P	**P**	**00 51 05.6**	**0.0**
	comp=N,1.4nm,0.7s,baz=172,slow=16,SNR=4.0						
FINES	**FINESS Array B**	**22.99**	**7**	P	**P**	**00 51 17.3**	**-0.2**
	comp=N,4.5nm,0.9s,baz=170,slow=13,SNR=3.8						
EKA	**Eskdalemuir Ar**	**23.02**	**324**	P	**P**	**00 51 16.9**	**-1.0**
	comp=N,3.2nm,0.8s,baz=122,slow=11,SNR=3.8						
NOA	**NORSAR Array B**	**23.09**	**348**	P	**P**	**00 51 17.9**	**-0.8**
	comp=N,0.6nm,0.8s,baz=156,slow=9.5,SNR=3.3						
TORD	**Torodi Ar. Bea**	**30.50**	**218**	P	**P**	**00 52 25.9**	**-0.3**
	comp=N,0.6nm,0.8s,baz=33,slow=9.0,SNR=4.5						
MKAR	**Makanchi Array**	**44.96**	**59**	P	**P**	**00 54 29.7**	**+1.6**
	comp=N,0.7nm,0.6s,baz=271,slow=7.4,SNR=4.2						
ZALV	**Zalesovo Beam**	**45.28**	**49**	P	**P**	**00 54 30.9**	**+0.4**
	comp=N,1.6nm,0.6s,baz=279,slow=7.9,SNR=4.0						

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*KRNET **21** 00:46:57.7±0.1, 41°.74N×71°.55E, h14^{km}, mb3.6*

*SOME **21** 00:46:58.6, 41°.72N×71°.65E, h10^{km}*

*ISU **21** 00:46:58, 41°.62N×71°.39E, h5^{km}*

*KNET **21** 00:46:58.6±0.8, 41°.68N×71°.76E, h0^{km}±5^{km}, ml3.4, Error ellipse: s-maj=12.7km s-min=5.7km az=164.0*

*NNC **21** 00:47:02.2±0.7, 42°.04N×71°.65E, h0^{km}, mb3.9, mpv3.5, Error ellipse: s-maj=6.2km s-min=2.2km az=16.0*

ISC 21 00:46:57.2±1.1, **41°.78N**±0°.02×**71°.65E**±0°.02, **h1^{km}**±10^{km}, **n76**, σ**1^{s}.74**/127, **42C-25D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRKS	**Terek-Say**	**0.46**	**237**	⇑*i*P	**Pg**	**00 47 05.3**	**-0.7**
	baz=26						
TRKS				⇑*i*S	**Sg**	**00 47 10.8**	**-1.1**
	baz=26						
NAM	**Namangan**	**0.79**	**180**	*e*P	**Pg**	**00 47 13.0**	**+0.7**
NAM				*e*S	**Sg**	**00 47 23.0**	**+0.5**
MNAS	**Manas**	**0.95**	**42**	⇑*i*P	**Pb**	**00 47 17.0**	**+0.5**
	baz=43						
MNAS				⇑*i*S	**Sn**	**00 47 31.4**	**-0.6**
	baz=43						
DZA	**Taraz**	**1.13**	**348**	*e*P	**Pn**	**00 47 20.4**	**+0.2**
	108nm,0.2s						
DZA				*e*S	**Sn**	**00 47 35.9**	**-0.5**
	817nm,0.2s						
DZA	**Taraz**	**1.13**	**348**	*e*P	**Pn**	**00 47 20.4**	**+0.2**
	baz=52						
DZA				*e*S	**Sn**	**00 47 35.9**	**-0.5**
	baz=52						
ANR	**Andizhan**	**1.16**	**152**	*e*P	**Pn**	**00 47 21.0**	**+0.5**
ANR				*e*S	**Sn**	**00 47 37.0**	**0.0**
CHRV	**Charvak**	**1.28**	**264**	*e*P	**Pg**	**00 47 20.0**	**-1.7**
CHRV				*e*S	**Sg**	**00 47 37.0**	**-1.3**
FRG	**Fergana**	**1.41**	**176**	*e*P	**Pg**	**00 47 25.0**	**+0.8**
FRG				*e*S	**Sn**	**00 47 44.0**	**+0.7**
MRKS	**Merke**	**1.51**	**50**	*e*P	**Pg**	**00 47 28.2**	**+2.0**
	23nm,0.1s						
MRKS				*e*S	**Sg**	**00 47 49.0**	**+3.2**
	208nm,0.2s						
MRKS	**Merke**	**1.51**	**50**	*e*P	**Pg**	**00 47 28.2**	**+2.0**
	baz=50						
MRKS				*e*S	**Sg**	**00 47 49.0**	**+3.2**
	baz=50						
OHH	**Osh**	**1.52**	**145**	⇓*i*P	**Pn**	**00 47 26.0**	**+0.4**
	baz=42						
OHH				⇓*i*S	**Sg**	**00 47 46.5**	**+0.5**
	baz=42						
AML	**Almayashu**	**1.56**	**76**	⇓P	**Pg**	**00 47 28.3**	**+1.2**
	58nm,0.2s,SNR=214						
AML				⇓S	**Sg**	**00 47 50.3**	**+2.9**
	618nm,0.5s						
AML	**Almayashu**	**1.56**	**76**	⇓*i*P	**Pg**	**00 47 28.1**	**+1.0**
	baz=75						
AML				⇓*i*S	**Sg**	**00 47 50.3**	**+2.9**
	baz=75						
KK08	**Karatay Array**	**1.58**	**327**	⇓P	**Pn**	**00 47 26.8**	**+0.5**
	15nm,0.4s,baz=138,slow=16						
KK08				⇑S	**Sn**	**00 47 46.7**	**-0.7**
	67nm,0.3s,baz=141,slow=30						
TGS	**TashGRES**	**1.64**	**258**	*e*P	**Pg**	**00 47 30.0**	**+1.4**
TGS				*e*S	**Sg**	**00 47 52.0**	**+2.2**
EKS2	**Erkin-Say**	**1.81**	**60**	⇑P	**Pg**	**00 47 33.1**	**+1.4**
	13nm,0.2s,SNR=42						
EKS2				⇓S	**Sg**	**00 47 58.5**	**+3.3**
	55nm,0.3s						
EKS2	**Erkin-Say**	**1.81**	**60**	⇓*i*P	**Pg**	**00 47 32.2**	**+0.4**
	baz=60						
EKS2				⇓*i*S	**Sg**	**00 47 57.8**	**+2.6**
	baz=60						
TAS	**Tashkent**	**1.83**	**256**	*e*P	**Pn**	**00 47 30.0**	**+0.3**
TAS				*e*S	**Sg**	**00 47 56.0**	**+0.2**
TAS	**Tashkent**	**1.83**	**256**	⇓*i*P	**Pn**	**00 47 29.7**	**0.0**
	baz=57						
TAS				⇓*i*S	**Sn**	**00 47 53.2**	**-0.3**
	baz=57						
BRLS	**Borolday**	**1.83**	**313**	*e*P	**Pb**	**00 47 31.1**	**-0.4**
	90nm,0.4s						
BRLS				*e*S	**Sg**	**00 48 04.3**	**+8.2**
	283nm,0.3s						
BTK	**Batken**	**1.84**	**200**	*e*P	**Pn**	**00 47 31.0**	**+1.1**
BTK				*e*S	**Sb**	**00 47 55.0**	**-0.1**
BTK	**Batken**	**1.84**	**200**	⇑*i*P	**Pn**	**00 47 30.2**	**+0.3**
	baz=99						
BTK				⇑*i*S	**Sn**	**00 47 54.0**	**+0.2**
	baz=99						
SALK	**Salom-Alik**	**1.86**	**118**	⇑*e*P	**Pg**	**00 47 33.1**	**+0.2**
	baz=16						
SALK				⇑*e*S	**Sg**	**00 47 58.9**	**+1.8**
	baz=16						
UCH	**Uchtor**	**2.18**	**77**	⇑P	**Pb**	**00 47 38.0**	**+0.3**
	13nm,0.1s,SNR=60						
UCH				⇑S	**Sg**	**00 48 08.8**	**+1.7**
	117nm,0.2s						
UCH	**Uchtor**	**2.18**	**77**	⇑*i*P	**Pb**	**00 47 37.7**	**+0.1**
	baz=76						
UCH				⇑*i*S	**Sg**	**00 48 07.0**	**-0.1**
	baz=76						
SFK	**Sufi-Kurgan**	**2.26**	**141**	⇓*e*P	**Pb**	**00 47 38.1**	**-0.8**
	baz=39						
SFK				⇓*e*S	**Sb**	**00 48 07.4**	**0.0**
	baz=39						
AAK	**Ala-Archa**	**2.28**	**67**	⇓P	**Pb**	**00 47 40.0**	**+0.8**
	12nm,0.2s,SNR=28						
AAK				⇑S	**Sg**	**00 48 12.6**	**+2.3**
	46nm,0.3s						
AAK	**Ala-Archa**	**2.28**	**67**	⇑Pn	**Pg**	**00 47 41.4**	**+0.6**
	20nm,0.5s						
AAK				⇑Lg	Lg	00 48 12.8	
	66nm,0.7s						
AAK	**Ala-Archa**	**2.28**	**67**	⇓*i*P	**Pb**	**00 47 39.0**	**-0.2**
	baz=67						
AAK				⇓*i*S	**Sg**	**00 48 09.2**	**-1.1**
	baz=67						

DRK	Karamyk baz=75	2.30	177	⇑iP	Pn	00 47 37.7	+1.2
DRK	baz=75			⇑iS	Sn	00 48 07.0	+1.3
FRU1	Bishkek baz=63	2.44	64	⇑iP	Pb	00 47 41.2	-0.6
FRU1	baz=63			⇑iS	Sb	00 48 13.0	+0.6
USP	Ospenovka 19nm,0.3s,SNR=9.3	2.58	54	⇑P	Pb	00 47 43.4	-0.7
USP	96nm,0.3s			⇓S	Sg	00 48 19.7	-0.2
USP	Ospenovka baz=54	2.58	54	⇑iP	Pb	00 47 42.9	-1.3
USP	baz=54			⇑iS	Sb	00 48 16.0	-0.3
CHMS	Chumysh 6.5nm,0.2s,SNR=8.7	2.60	61	⇑P	Pb	00 47 44.6	+0.1
CHMS	78nm,0.4s			⇑S	Sg	00 48 20.9	+0.3
CHMS	Chumysh baz=61	2.60	61	⇓eP	Pb	00 47 43.5	-1.0
CHMS	baz=61			⇓iS	Sb	00 48 17.0	0.0
KBK	Karagaybulak 17nm,0.2s,SNR=17	2.60	69	⇑P	Pb	00 47 44.7	+0.1
KBK	118nm,0.3s			⇑S	Sg	00 48 21.1	+0.4
KBK	Karagaybulak baz=69	2.60	69	⇑iP	Pb	00 47 43.5	-1.1
KBK	baz=69			⇑iS	Sb	00 48 17.0	-0.1
GAR	Garm baz=99	2.96	201	⇑iP	Pn	00 47 46.4	+1.0
GAR	baz=99			⇑iS	Sn	00 48 22.1	+0.5
BOOM	Boomskoye usch baz=76	3.27	76	⇑iP	Pb	00 47 53.1	-2.9
BOOM	baz=76			⇑iS	Sb	00 48 32.8	-3.5
DGS	Degeres 3.1nm,0.2s	3.38	63	eP	Pg	00 48 01.0	-0.9
DGS	39nm,0.2s			eS	Sg	00 48 45.2	-0.4
DGS	Degeres 3.1nm,0.2s	3.38	63	Pg	Pg	00 48 01.0	-0.9
DGS	39nm,0.2s			Lg	Lg	00 48 45.2	
KST	Kastek 9.0nm,0.5s	3.43	67	eP	Pg	00 48 02.4	-0.5
KST	39nm,0.5s			eS	Sg	00 48 48.5	+1.1
KST	Kastek 9.0nm,0.5s	3.43	67	Pg	Pg	00 48 02.4	-0.5
KST	39nm,0.5s			Lg	Lg	00 48 48.5	
CHGR	Chuyangaron baz=12	3.66	212	⇑eP	Pn	00 47 55.5	+0.5
CHGR	baz=12			⇑iS	Sn	00 48 38.1	-0.7
KUU	Kurty 8.4nm,0.5s	4.04	57	eP	Pg	00 48 13.3	-1.3
KUU	34nm,0.6s			eS	Sg	00 49 06.1	-0.8
KUU	Kurty 8.4nm,0.5s	4.04	57	Pg	Pg	00 48 13.3	-1.3
KUU	34nm,0.6s			Lg	Lg	00 49 06.1	
TNSS	Tian-Shan 4.8nm,0.3s	4.12	71	eP	Pg	00 48 15.6	-0.4
TNSS	13nm,0.6s			eS	Sg	00 49 10.2	+0.8
TNSS	Tian-Shan 4.8nm,0.3s	4.12	71	Pg	Pg	00 48 15.6	-0.4
TNSS	13nm,0.6s			Lg	Lg	00 49 10.2	
KDJ	Kajisay baz=83	4.14	83	⇓iP	Pn	00 48 05.3	+3.7
KDJ	baz=83			⇓iS	Sn	00 48 54.1	+3.4
KTBS	Karatobe 4.4nm,0.4s	4.18	61	eP	Pg	00 48 15.9	-1.3
KTBS	26nm,0.7s			eS	Sg	00 49 10.5	-0.7
KTBS	Karatobe 4.4nm,0.4s	4.18	61	Pg	Pg	00 48 15.9	-1.3
KTBS	26nm,0.7s			Lg	Lg	00 49 10.5	
KNDC	Almaty 12nm,0.4s	4.18	68	⇑Pg	Pg	00 48 18.5	+1.2
KNDC	28nm,0.4s			⇓Lg	Lg	00 49 11.8	
MDOK	Medeo 3.9nm,0.8s	4.22	69	eP	Pg	00 48 16.5	-1.5
MDOK	17nm,0.7s			eS	Sg	00 49 12.1	-0.7
MDOK	Medeo 8.7nm,0.7s	4.22	69	⇑Pg	Pg	00 48 19.8	+1.7
MDOK	19nm,0.6s			⇓Lg	Lg	00 49 13.2	
MDOK	Medeo 3.9nm,0.8s	4.22	69	Pg	Pg	00 48 16.5	-1.5
MDOK	17nm,0.7s			Lg	Lg	00 49 12.1	
KOTS	Kotyrbulak 4.6nm,0.3s	4.29	68	eP	Pg	00 48 17.6	-1.7
KOTS	33nm,0.5s			eS	Sg	00 49 13.6	-1.3
KOTS	Kotyrbulak 4.6nm,0.3s	4.29	68	Pg	Pg	00 48 17.6	-1.7
KOTS	33nm,0.5s			Lg	Lg	00 49 13.6	
CHKK	Chushkaly 1.8nm,0.3s	4.44	60	eP	Pg	00 48 21.0	-1.2
CHKK	22nm,0.4s			eS	Sg	00 49 19.0	-0.6
CHKK	Chushkaly 1.8nm,0.3s	4.44	60	Pg	Pg	00 48 21.0	-1.2
CHKK	22nm,0.4s			Lg	Lg	00 49 19.0	
KURS	Kuram 4.1nm,0.9s	5.10	68	eP	Pg	00 48 32.8	-2.1
KURS	9.3nm,0.7s			eS	Sg	00 49 39.1	-1.8
KURS	Kuram 4.1nm,0.9s	5.10	68	Pg	Pg	00 48 32.8	-2.1
KURS	9.3nm,0.7s			Lg	Lg	00 49 39.1	
ARXS	Arharly 4.3nm,0.6s	5.14	60	eP	Pg	00 48 32.8	-2.8
ARXS	18nm,0.6s			eS	Sg	00 49 39.4	-2.8
ARXS	Arharly 4.3nm,0.6s	5.14	60	Pg	Pg	00 48 32.8	-2.8
ARXS	18nm,0.6s			Lg	Lg	00 49 39.4	
SATY	Saty 5.6nm,0.9s	5.16	73	eP	Pg	00 48 34.8	-1.2
SATY	16nm,0.9s			eS	Sg	00 49 42.6	-0.2
SATY	Saty 5.6nm,0.9s	5.16	73	Pg	Pg	00 48 34.8	-1.2
SATY	16nm,0.9s			Lg	Lg	00 49 42.6	
KPKS	Kokpek 4.8nm,0.3s	5.45	70	eP	Pg	00 48 39.5	-2.1
KPKS	17nm,0.9s			eS	Sg	00 49 50.8	-1.5
BLB	Baldybastay 2.3nm,0.5s	5.52	63	Pg	Pg	00 48 39.0	-3.9
BLB	20nm,0.4s			Lg	Lg	00 49 50.0	
UZB	Uzynbulak 2.1nm,0.4s	5.62	74	eP	Pg	00 48 42.1	-2.7
UZB	8.8nm,0.4s			eS	Sg	00 49 55.5	-2.1
UZB	Uzynbulak 2.1nm,0.4s	5.62	74	Pg	Pg	00 48 42.1	-2.7
UZB	8.8nm,0.4s			Lg	Lg	00 49 55.5	
PDGK	Podgornoye 1.2nm,1.1s	5.99	72	Pg	Pg	00 48 47.7	-4.2
PDGK	5.6nm,0.8s			Lg	Lg	00 50 04.8	
PDGK	Podgornoye 4.9nm,1.2s	5.99	72	⇑Pg	Pg	00 48 52.1	+0.1
PDGK	22nm,1.2s			⇑Lg	Lg	00 50 09.2	
OTUK	Ortayu 9.9nm,1.1s	6.48	4	⇑Lg	Lg	00 50 21.3	
KAPS	Kapalarasan 2.4nm,0.9s	6.60	55	eP	Pg	00 49 01.0	-2.6
KAPS	12nm,0.8s			eS	Sg	00 50 27.6	-1.5
KAPS	Kapalarasan 2.4nm,0.9s	6.60	55	Pg	Pg	00 49 01.0	-2.6
KAPS	12nm,0.8s			Lg	Lg	00 50 27.6	
MK31	Makanchi Array 2.7nm,0.6s	9.12	53	⇑Lg	Lg	00 51 48.2	
KURBB	Kurchatov Arra 10.0nm,0.8s	10.04	26	⇓Lg	Lg	00 52 13.2	

*GUC **21** 00:55:52.7±0.8,33°.41S×71°.40W,h60^{km}±2^{km},ML3.5*
*SJA **21** 00:55:52.0,33°.41S×71°.56W,h25^{km},ML4.1*
ISC 21 00:55:53.3±1.4**,33°.41S**±0°.03×**71°.45W**±0°.04**,h50**^{km}±8^{km}**,**
n43,σ**0^{s}.89**/60**,4C-2D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VA05	Santo Domingo	0.28	209	eP	Pn	00 56 02.5	+0.3
VA05				eS	Sn	00 56 09.7	+1.0
VA05	comp=N,4µm,0.5s			IAML		00 56 10.7	
MT02	Curacav	0.30	60	eP	Pn	00 56 02.2	-0.2
MT02				eS	Sn	00 56 08.9	-0.1
MT02	Curacav	0.30	60	i P	Pn	00 56 02.0	-0.5
VA01	Torpederas	0.42	337	⇑eP	Pn	00 56 03.9	+0.3
VA01				eS	Sn	00 56 12.1	+1.2
VA01	comp=E,9µm,0.1s			IAML		00 56 12.9	
VA01	Torpederas	0.42	337	i P	Pn	00 56 04.0	+0.3
MT01	Popeta	0.48	160	⇓eP	Pn	00 56 04.1	-0.3
MT01				eS	Sn	00 56 12.3	0.0
MT01	comp=E,5µm,0.3s			IAML		00 56 12.5	
MT01	Popeta	0.48	160	i P	Pn	00 56 04.0	-0.3
MT09	Talagante	0.53	134	eP	Pn	00 56 05.1	0.0
MT09				eS	Sn	00 56 13.6	+0.1
MT09	comp=N,5µm,0.3s			IAML		00 56 15.4	
ROC1	El Roble	0.57	40	i P	Pn	00 56 05.0	-0.6
ROCH	El Roble	0.57	40	eP	Pn	00 56 05.4	-0.3
ROCH				⇑eP	Pn	00 56 05.4	-0.3
ROCH				eS	Sn	00 56 14.4	-0.1
ROCH				eS	Sn	00 56 14.9	+0.4
ROCH	comp=N,4µm,0.2s			IAML		00 56 15.8	
ROCH	comp=N,6µm,0.3s			IAML		00 56 15.9	
MT05	Renca	0.60	88	eP	Pn	00 56 05.3	-0.5
MT05				eS	Sn	00 56 14.6	-0.2
MT05	comp=E,4µm,0.4s			IAML		00 56 16.0	
MT05	Renca	0.60	88	i P	Pn	00 56 05.0	-0.8
PEL	Peldehue	0.69	68	⇑iPg	Pn	00 56 06.3	-0.7
PEL				eS	Sn	00 56 16.8	-0.2
PEL	comp=N,2µm,0.3s			IAML		00 56 17.6	
PEL	Peldehue	0.69	68	i P	Pn	00 56 06.0	-1.0
VA06	Catapilco	0.86	9	⇓eP	Pn	00 56 08.8	-0.2
VA06				eS	Sn	00 56 20.4	-0.2
VA06	comp=N,2µm,0.4s			IAML		00 56 20.8	
BO04	La Punta	0.91	130	⇑eP	Pn	00 56 09.6	-0.3
BO04				i S	Sn	00 56 22.1	+0.1
BO04	comp=E,2µm,0.3s			IAML		00 56 24.5	
FCH	Farellones	0.97	85	eP	Pn	00 56 10.2	-0.7
FCH				eS	Sn	00 56 23.1	-0.9
FCH	comp=E,2µm,0.2s			IAML		00 56 24.5	
VA03	San Esteban	0.99	50	eP	Pn	00 56 10.7	-0.3
VA03				eS	Sn	00 56 24.0	-0.1
VA03	San Esteban	0.99	50	i P	Pn	00 56 10.0	-1.0
BO01	Tunca	1.03	163	eP	Pn	00 56 11.0	-0.4
BO01				eS	Sn	00 56 24.8	+0.1
BO01	Tunca	1.03	163	i P	Pn	00 56 11.0	-0.4
LMEL	Las Melosas	1.13	113	eP	Pn	00 56 12.6	-0.3
LMEL				eS	Sn	00 56 27.2	-0.3
LMEL	comp=N,5µm,0.2s			IAML		00 56 28.8	
BO02	Sierra Bellavi	1.49	158	eP	Pn	00 56 17.5	-0.2
BO02				eS	Sn	00 56 36.3	+0.3
BO02	comp=N,761nm,0.3s			IAML		00 56 46.0	
BO02	Sierra Bellavi	1.49	158	i P	Pn	00 56 18.0	+0.3
GO05	Huala	1.64	194	eP	Pn	00 56 19.3	-0.6
GO05	Huala	1.64	194	i P	Pn	00 56 19.0	-0.8
AUSP	Uspallata	2.10	56	i P	Pn	00 56 28.0	+1.7
ARCO	CERRO ARCO	2.19	76	i P	Pn	00 56 30.0	+2.6
AAGR	Agrelo	2.22	82	i P	Pn	00 56 30.0	+2.2
ASAL	Salagasta	2.34	70	i P	Pn	00 56 31.0	+1.5
RTLS	Leoncito	2.43	49	i P	Pn	00 56 32.0	+1.2
RFA	San Rafael	2.83	120	i P	Pn	00 56 37.0	+1.0
RTCV	Cerro Valdivia	2.90	59	i P	Pn	00 56 39.0	+2.0
GO04	Tololo Observa	3.27	10	i P	Pn	00 56 42.0	-0.4
ACCO	Cerro Coronel	3.47	36	i P	Pn	00 56 46.0	+0.9
AROD	Rodeo	3.65	28	i P	Pn	00 56 49.0	+1.5
LCO	Las Campanas	4.43	9	i P	Pn	00 56 57.0	-1.3
APLL	PUNTA DE LOS L	5.15	56	i P	Pn	00 57 07.0	-1.0
AC04	Llanos de Chal	5.20	4	i P	Pn	00 57 09.0	+0.5
VCA	Vinchina	5.43	32	eP	Pn	00 57 11.9	+0.1
VCA	Vinchina	5.43	32	i P	Pn	00 57 12.0	+0.1
ACLC	CERRO LA CRUZ	5.53	45	i P	Pn	00 57 12.0	-1.2
AC02	Maricunga	6.85	18	i P	Pn	00 57 30.0	-1.7

*CRAAG **21** 01:01:13.6,36°.77N×3°.53E,Ml3.0*
*MDD **21** 01:01:14.1±0.7,36°.86N×3°.53E,h0^{km},mb3.8/11,Error ellipse: s-maj=13.1km s-min=4.5km az=85.0,PRXIMO*
ISC 21 01:01:13.3±1.1**,36°.88N**±0°.06×**3°.51E**±0°.05**,h12**^{km}**,n25,**
σ**2^{s}.28**/34**,Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABMS	Boumerdes	0.14	190	P	Pg	01 01 15.7	-0.9
ABMS	Boumerdes	0.14	190	P	Pg	01 01 15.7	-0.9
ADJB	Djebel Djouab	0.73	185	P	Pg	01 01 27.2	-0.2
ADJB	Djebel Djouab	0.73	185	P	Pg	01 01 27.2	-0.2
EMHD	Djebel Mahouad	0.82	214	P	Pg	01 01 29.6	+0.6
EMHD	Djebel Mahouad	0.82	214	P	Pg	01 01 29.6	+0.6
AKET	Djebel Ketaf	0.89	160	P	Pg	01 01 29.9	-0.5
AKET	Djebel Ketaf	0.89	160	P	Pg	01 01 29.9	-0.5
SET	Setif	1.67	114	P	Pg	01 01 47.0	+1.7
CAEH	'Ain El Ouahch	2.68	91	P	Pn	01 01 55.8	-0.5
EIBI	Ibiza 2.1nm,0.1s,SNR=6.9	2.74	322	P	Pn	01 01 58.8	+1.7
EIBI	6.9nm,0.2s,SNR=7.9			S	Sn	01 02 28.5	-1.6
ETOS	Mallorca 2.5nm,0.1s,SNR=9.8	2.93	349	P	Pn	01 02 01.0	+1.3
ETOS	4.3nm,0.3s,SNR=5.3			S	Sn	01 02 33.0	-1.9
ETOB	Tobarra 1.3nm,0.1s,SNR=7.9	4.38	295	P	Pn	01 02 21.9	+2.3
ETOB	2.6nm,0.5s,SNR=7.9			S	Sn	01 03 07.1	-3.4
ECHE	Chera 2.2nm,0.2s,SNR=7.9	4.44	309	P	Pn	01 02 23.1	+2.6
EMOS	Mosqueruela 0.7nm,0.1s,SNR=7.9	4.67	319	P	Pn	01 02 25.5	+1.7
EMOS	1.4nm,0.3s,SNR=7.9			S	Sn	01 03 15.4	-2.5
ERTA	Horta de San J 0.9nm,0.2s,SNR=4.0	4.76	330	S	Sn	01 03 14.4	-5.6
EPOB	Poblet 0.4nm,0.1s,SNR=7.9	4.85	338	P	Pn	01 02 30.5	+4.5
EPOB	1.6nm,0.5s,SNR=7.9			S	Sn	01 03 20.8	-1.4
CFON	Fontmartina 4.3nm,0.1s,SNR=7.9	4.94	351	P	Pn	01 02 28.3	+0.9
CFON	2.6nm,0.2s,SNR=7.9			S	Sn	01 03 20.5	-4.0
EJON	La Jonquera 2.8nm,0.2s,SNR=11	5.58	355	P	Pn	01 02 38.3	+2.2
EJON	1.3nm,0.3s,SNR=7.9			S	Sn	01 03 37.5	-2.6
SJAF	Saint Jean de 1.2nm,0.1s,SNR=7.9	5.62	355	P	Pn	01 02 38.4	+1.9
SJAF	1.9nm,0.4s,SNR=7.9			S	Sn	01 03 37.6	-3.4
CLLI	Llivia 0.3nm,0.1s,SNR=6.0	5.71	349	P	Pn	01 02 41.0	+3.0
CLLI	0.4nm,0.5s,SNR=7.9			S	Sn	01 03 41.0	-2.5
CSOR	Sort 0.7nm,0.1s,SNR=7.2	5.78	342	P	Pn	01 02 40.3	+1.3
CSOR	1.0nm,0.5s,SNR=7.9			S	Sn	01 03 43.4	-1.9
ETOR	Torete 0.6nm,0.3s,SNR=7.9	5.86	314	P	Pn	01 02 44.4	+4.4
ESDC	Sonseca Array 0.5nm,0.3s,baz=109,slow=14,SNR=4.3	6.51	298	P	Pn	01 02 50.3	+1.5
PAB	San Pablo 0.1nm,0.2s,SNR=7.9	6.73	296	P	Pn	01 02 54.1	+2.1

*UPP **21** 01:04:23.4±0.1,67°.85N×20°.22E,h1^{km},ML2.3,Explosion*
*HEL **21** 01:04:24.0±0.1,67°.85N×20°.21E,h0^{km},ML2.1,ML2.3(UPP),Explosion*
*IDC **21** 01:04:24.4±1.3,67°.82N×20°.59E,h0^{km},mb1 3.0/3,mb1mx2.9/45,mbtmp2.9/3,ML1.9/3,Error ellipse: s-maj=18.7km s-min=7.3km az=115.0*
ISC 21 01:04:23.4±0.8**,67°.84N**±0°.02×**20°.23E**±0°.02**,h0**^{km}**,n34,**
σ**1^{s}.01**/53**,Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RATU	Laukkuluspa	0.24	266	P	Pg	01 04 28.1	+0.1
RATU	Laukkuluspa	0.24	266	i P	Pg	01 04 28.1	+0.1
KOVU	Salmi	0.38	356	P	Pg	01 04 30.4	-0.3
KOVU				S	Sg	01 04 35.8	+0.1
KOVU	Salmi	0.38	356	i P	Pg	01 04 30.4	-0.3
KOVU				i S	Sg	01 04 35.8	+0.1
NIKU	Nikkaluokta	0.45	274	P	Pg	01 04 31.8	-0.2
NIKU				S	Sg	01 04 38.0	+0.1
NIKU	Nikkaluokta	0.45	274	i P	Pg	01 04 31.8	-0.2
NIKU				i S	Sg	01 04 38.0	+0.1
LANU	Lannavaara	0.69	72	P	Pg	01 04 36.6	0.0
LANU	Lannavaara	0.69	72	eP	Pg	01 04 36.5	-0.1
LANU				eS	Sg	01 04 46.3	+0.7
DUNU	Dundret	0.74	170	P	Pg	01 04 37.3	-0.1
DUNU	Dundret	0.74	170	i P	Pg	01 04 37.3	-0.1
SALU	Saltoluokta	0.81	236	P	Pg	01 04 38.5	-0.3
SALU	Saltoluokta	0.81	236	i P	Pg	01 04 38.5	-0.3
KIF	Kilpisjarvi	1.19	10	eP	Pn	01 04 47.4	+0.2
KIF	Kilpisjarvi	1.19	10	eP	Pg	01 04 46.0	-0.1
KIF	comp=Z,31nm,0.2s			MSG		01 05 00.9	
KIF				eS	Sg	01 05 01.4	0.0
PAJU	Pajala	1.38	125	P	Pg	01 04 48.9	-1.0
PAJU	Pajala	1.38	125	eP	Pg	01 04 48.7	-1.1
PAJU				eSB	Sg	01 05 07.4	-0.3
HEF	Hetta	1.41	65	eP	Pn	01 04 48.7	-1.5
HEF	Hetta baz=248	1.41	65	ePG	Pn	01 04 49.2	-0.9
HEF	comp=Z,14nm,0.2s			MSG		01 05 06.9	
HEF				eSB	Sg	01 05 07.9	-0.5
ERTU	Ertsjaerv	1.50	149	P	Pn	01 04 51.0	-0.5
ERTU	Ertsjaerv	1.50	149	eP	Pn	01 04 50.9	-0.6
ERTU				eSB	Sg	01 05 11.4	-0.2
KLF	Kolari	1.56	111	eP	Pn	01 04 51.9	-0.4
KLF				eSN	Sg	01 05 13.5	+0.2
HARU	Harads	1.71	170	P	Pn	01 04 54.4	+0.1
HARU	Harads	1.71	170	eP	Pn	01 04 54.4	+0.1
KALU	Kalix baz=332	2.34	147	ePB	Pn	01 05 04.2	+1.2
KALU				eSB	Sb	01 05 34.8	-1.0
TOF	Tornio baz=320	2.39	136	ePB	Pn	01 05 05.3	+1.6
TOF	comp=Z,8.2nm,0.2s			MSG		01 05 34.6	
TOF				eSG	Sb	01 05 37.5	+0.3
SGF	Sodankyl	2.44	97	eP	Pn	01 05 05.5	+1.2
SGF				eSG	Sb	01 05 38.7	+0.1
RNF	Rovaniemi	2.57	116	ePB	Pn	01 05 07.8	+1.7
RNF				eSG	Sb	01 05 43.0	+0.7
ARA0	ARCESS Array S	2.57	46	eSB	Sb	01 05 42.0	-0.3
ARCES	ARCESS Array B baz=228,slow=13,SNR=21	2.57	46	Pn	Pn	01 05 06.2	+0.1
ARCES	baz=222,slow=17,SNR=2.1			Pg	Pb	01 05 08.5	-1.8
ARCES	baz=225,slow=26,SNR=18			Sn	Sn	01 05 38.7	+0.6
ARCES	baz=227,slow=29,SNR=8.6			Lg	Lg	01 05 42.2	
KEV	Kevo	3.12	49	eP	Pn	01 05 15.0	+1.3
KEV				eS	Sn	01 05 52.8	+1.1
KEV	comp=Z,4.8nm,0.2s			MSG		01 05 56.1	
MSF	Maaselka	3.98	115	eP	Pn	01 05 27.1	+1.6
KU6	Riekki baz=297	4.21	111	eP	Pn	01 05 30.2	+1.4
KU6				eSG	Sb	01 06 34.0	+4.4
FINES	FINESS Array B comp=Z,0.1nm,0.3s,baz=351,slow=10,SNR=3.4	6.89	156	Pn	Pn	01 06 06.4	+0.9
FINES	comp=Z,0.1nm,0.3s,baz=345,slow=26,SNR=1.9			Sn	Sn	01 07 23.2	-1.3
FINES	comp=Z,0.4nm,0.3s,baz=341,slow=27,SNR=6.8			Lg	Lg	01 07 57.5	
NOA	NORSAR Array B comp=Z,0.0nm,0.3s,baz=25,slow=12,SNR=1.9	7.85	214	Pn	Pn	01 06 19.2	+0.5
NOA	comp=Z,0.0nm,0.3s,baz=130,slow=17,SNR=1.1			Lg	Lg	01 08 28.8	

*IDC **21** 01:12:20.7±1.1,38°.81N×20°.60E,h0^{km},mb3.5/5,mb1 3.6/11,mb1mx3.4/48,mbtmp3.5/11,ML3.5/5,Error ellipse: s-maj=21.7km s-min=17.8km az=80.0*
*IASPEI **21** 01:12:21.2±0.9,38°.72N±0°.02×20°.63E±0°.03,h7^{km}±5^{km},mb3.6/5,Error ellipse: s-maj=4.2km s-min=2.8km az=107.3,GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*
*ATH **21** 01:12:21.5,38°.71N×20°.63E,h5^{km}±1^{km},ML3.3/19,Error ellipse: s-maj=1.6km s-min=0.6km az=304.0*
*THE **21** 01:12:21.5,38°.72N×20°.60E,h4^{km}±1^{km},ML3.5/6,Error ellipse: s-maj=1.5km s-min=0.4km az=344.0*
ISC 21 01:12:21.3±0.7**,38°.72N**±0°.02×**20°.63E**±0°.02**,h7**^{km}±4^{km}**,**
n63,σ**0^{s}.88**/84**,mb3.6**/5**,Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NYDR	Nydri-Lefkada	0.05	99	P	Pg	01 12 22.8	-0.1
NYDR	106µm,0.6s			S	Sg	01 12 24.2	+0.1
NYDR	Nydri-Lefkada	0.05	99	P	Pg	01 12 22.7	-0.1
NYDR				S	Sg	01 12 24.2	+0.1
DRAG	Dragano-Lefkad	0.06	229	P	Pg	01 12 22.6	-0.4
DRAG	340µm,0.4s			S	Sg	01 12 23.5	-0.7
DRAG	Dragano-Lefkad	0.06	229	P	Pg	01 12 22.6	-0.4
DRAG				S	Sg	01 12 23.6	-0.7
LKD2	Lefkada island	0.07	18	P	Pg	01 12 23.2	0.0
LKD2	48µm,0.7s			S	Sg	01 12 25.0	+0.4
LKD2	Lefkada island	0.07	18	P	Pg	01 12 23.2	0.0
LKD2				S	Sg	01 12 25.0	+0.4
LKD2	comp=E,93463µm,0.5s			AML	AML	01 12 26.4	
LKD2	comp=N,93976µm,0.7s			AML	AML	01 12 27.9	
EVGI	Lefkada island	0.10	169	P	Pg	01 12 23.6	0.0
EVGI				S	Sg	01 12 25.6	+0.4
EVGI	Lefkada island	0.10	169	P	Pg	01 12 23.6	0.0
EVGI				S	Sg	01 12 25.3	0.0
TSLK	Tsoukalades, L	0.10	11	P	Pg	01 12 24.1	+0.4
TSLK	comp=N,36µm,0.3s			S	Sg	01 12 26.3	+1.0
TSLK	Tsoukalades, L	0.10	11	P	Pg	01 12 23.3	-0.4
TSLK				S	Sg	01 12 25.4	+0.1
TSLK	comp=E,64073µm,0.6s			AML	AML	01 12 30.8	
TSLK	comp=N,78547µm,1.0s			AML	AML	01 12 31.1	
FSK	Fiskardo	0.27	192	P	Pg	01 12 26.8	+0.2
FSK	comp=N,24µm,0.3s			S	Sg	01 12 30.9	+0.8
FSK	Fiskardo	0.27	192	P	Pg	01 12 26.8	+0.2

FSK				S	Sg	01 12 30.5	+0.3
FSK				AML	AML	01 12 31.7	
	comp=N,35726µm,0.4s						
FSK				AML	AML	01 12 31.9	
	comp=E,58377µm,0.2s						
KEF4	Livadi, Kephal	0.49	199	P	Pg	01 12 30.5	-0.3
KEF4				S	Sg	01 12 37.7	+0.5
KEF4	Livadi, Kephal	0.49	199	P	Pg	01 12 30.4	-0.3
KEF4				S	Sg	01 12 37.4	+0.2
DMLN	Damoulianata-K	0.52	203	P	Pg	01 12 31.0	-0.4
DMLN	Damoulianata-K	0.52	203	P	Pg	01 12 30.9	-0.4
DMLN				S	Sg	01 12 39.0	+0.7
LXRA	Lixouri, Kepha	0.54	196	P	Pg	01 12 31.5	-0.2
VLS	Valsamata	0.55	183	P	Pg	01 12 31.4	-0.4
VLS				S	Sg	01 12 40.1	+1.2
	comp=E,3µm,0.5s						
VLS	Valsamata	0.55	183	P	Pg	01 12 31.2	-0.6
VLS				S	Sg	01 12 39.1	+0.1
VLS				AML	AML	01 12 40.9	
	comp=E,6116µm,0.4s						
VLS				AML	AML	01 12 47.9	
	comp=N,7637µm,0.4s						
KEF3	Kipouria, Keph	0.56	203	P	Pg	01 12 31.2	-0.9
KEF3	Kipouria, Keph	0.56	203	P	Pg	01 12 31.3	-0.8
KEF3				S	Sg	01 12 39.0	-0.5
PSDA	Pessada-Kefalo	0.61	183	P	Pg	01 12 32.4	-0.6
PSDA				S	Sg	01 12 41.6	+0.7
PSDA	Pessada-Kefalo	0.61	183	P	Pg	01 12 32.4	-0.6
PVO	Paravola	0.71	98	P	Pb	01 12 35.8	-0.1
PVO	Paravola	0.71	98	P	Pb	01 12 35.1	-0.8
PVO				AML	AML	01 12 49.5	
	comp=N,6028µm,0.6s						
PVO				AML	AML	01 12 49.6	
	comp=E,5857µm,0.4s						
IGT	Igoumenitsa	0.84	344	P	Pg	01 12 37.4	0.0
IGT				AML	AML	01 12 57.2	
	comp=E,2076µm,0.7s						
IGT				AML	AML	01 12 58.1	
	comp=N,2211µm,0.6s						
VTN	Vitineika	0.92	151	P	Pb	01 12 39.2	-0.2
RLS	Riolos of Patr	0.93	135	P	Pg	01 12 38.7	-0.5
RLS				AML	AML	01 13 01.3	
	comp=N,4158µm,0.6s						
RLS				AML	AML	01 13 01.9	
	comp=E,2119µm,0.6s						
EVR	Evrytania	0.94	78	P	Pb	01 12 39.4	-0.5
EVR				AML	AML	01 13 04.3	
	comp=N,1431µm,0.9s						
EVR				AML	AML	01 13 05.9	
	comp=E,1582µm,0.6s						
JAN	Janina	0.95	10	P	Pb	01 12 39.9	-0.1
JAN				AML	AML	01 13 02.8	
	comp=N,1608µm,0.4s						
JAN				AML	AML	01 13 07.0	
	comp=E,2948µm,0.7s						
ANX	Ano Chora	1.02	97	P	Pg	01 12 40.3	-0.5
ANX				AML	AML	01 13 07.6	
	comp=N,4422µm,0.5s						
ANX				AML	AML	01 13 09.3	
	comp=E,5118µm,0.8s						
EFP	Efpalio	1.04	106	P	Pb	01 12 41.1	-0.5
EFP	Efpalio	1.04	106	P	Pg	01 12 40.7	-0.6
EFP				AML	AML	01 13 04.7	
	comp=N,3240µm,0.6s						
EFP				AML	AML	01 13 05.1	
	comp=E,2366µm,0.6s						
DRO	Drossia	1.15	132	P	Pg	01 12 42.6	-0.7
DRO				AML	AML	01 13 06.9	
	comp=E,5129µm,0.6s						
DRO				AML	AML	01 13 08.6	
	comp=N,4324µm,0.5s						
SERG	Sergoula	1.16	105	P	Pg	01 12 42.8	-0.7
SERG				AML	AML	01 13 10.7	
	comp=N,1994µm,0.5s						
SERG				AML	AML	01 13 11.2	
	comp=E,2661µm,0.8s						
LAKA	Lakka	1.16	114	P	Pg	01 12 42.5	-1.1
LAKA				AML	AML	01 13 14.2	
	comp=E,1547µm,1.0s						
LAKA				AML	AML	01 13 16.8	
	comp=N,1316µm,0.8s						
KEK	Kerkira	1.18	327	P	Pb	01 12 44.4	+0.4
KEK				AML	AML	01 13 13.2	
	comp=N,1041µm,0.7s						
KEK				AML	AML	01 13 17.1	
	comp=E,1209µm,0.7s						
TRIZ	Trizonia	1.19	107	P	Pg	01 12 43.0	-1.0
MAKR	Makrakomi, Fth	1.21	76	P	Pn	01 12 44.6	0.0
MAKR				AML	AML	01 13 12.9	
	comp=E,4490µm,0.5s						
MAKR				AML	AML	01 13 15.3	
	comp=N,3337µm,0.7s						
AGG	Agios Georgios	1.36	77	P	Pg	01 12 47.3	-0.1
AGG				AML	AML	01 13 15.0	
	comp=N,2030µm,0.7s						
AGG				AML	AML	01 13 16.1	
	comp=E,2050µm,0.5s						
THL	Klokotos Trika	1.37	52	P	Pg	01 12 47.4	-0.1
THL	Klokotos Trika	1.37	52	P	Pg	01 12 47.2	-0.3
THL				AML	AML	01 13 14.8	
	comp=N,1767µm,0.7s						
THL				AML	AML	01 13 15.4	
	comp=E,1185µm,0.6s						
KLV	Kalavryta, Ach	1.37	119	P	Pn	01 12 46.0	-0.9
KLV				AML	AML	01 13 16.5	
	comp=E,1760µm,1.0s						
KLV				AML	AML	01 13 21.2	
	comp=N,1076µm,0.7s						
GUR	Goura	1.56	120	P	Pn	01 12 49.6	+0.1
ITM	Ithomi	1.85	146	P	Pb	01 12 55.6	+0.2
LTK	Loutraki	1.96	110	P	Pb	01 12 57.1	-0.3
VIL2	Platees	2.13	103	P	Pb	01 12 59.9	-0.3
OHR	Ohrid	2.39	3	*e*Pn	Pb	01 13 04.6	-0.1
VAY	Valandovo	2.99	29	*e*Pn	Pb	01 13 12.9	-2.0
STIP	Stip	3.20	21	*e*Pn	Pb	01 13 15.2	-3.2
IDI	Anoyia	4.83	134	Pn	Pn	01 13 36.1	+1.6
	comp=N,0.4nm,0.3s,baz=212,slow=15,SNR=1.8						
IDI				Sn	Sn	01 14 31.1	+0.4
	comp=N,0.7nm,0.3s,baz=9.1,slow=19,SNR=2.9						
VAE	Valguarnera	5.06	258	Pn	Pn	01 13 40.2	+2.6
	comp=N,0.3nm,0.3s,baz=176,slow=23,SNR=1.3						
VAE				Sn	Sn	01 14 32.3	-4.0
	comp=N,0.6nm,0.3s,baz=225,slow=21,SNR=1.9						
MLR	Muntele Rosu	7.83	29	Pn	Pn	01 14 17.3	+1.6
	comp=N,0.1nm,0.3s,baz=323,slow=19,SNR=1.9						
BRTR	Keskin Array B	10.14	80	Pn	Pn	01 14 48.1	+0.6
	comp=N,0.1nm,0.3s,baz=256,slow=11,SNR=1.5						
VRAC	Vranov	10.97	346	Pn	Pn	01 14 58.1	-0.5
	comp=N,0.2nm,0.3s,baz=80,slow=11,SNR=2.7						
GERES	GERESS Array B	11.28	336	Pn	Pn	01 15 02.4	-0.6
	comp=N,0.1nm,0.3s,baz=153,slow=15,SNR=2.9						
MMAI	Mount Meron Ar	13.26	111	Pn	Pn	01 15 30.1	+0.1
	comp=N,0.4nm,0.3s,baz=301,slow=15,SNR=2.2						
HFS	Hagfors	21.88	351	P	P	01 17 14.9	+0.5
	comp=N,1.3nm,0.6s,baz=150,slow=12,SNR=7.9						
FINES	FINESS Array B	23.00	7	P	P	01 17 26.4	+0.2
	comp=N,1.6nm,0.7s,baz=180,slow=9.7,SNR=9.1						
TORD	Torodi Ar. Bea	30.51	219	P	P	01 18 35.5	+0.5
	comp=N,0.2nm,0.4s,baz=28,slow=9.9,SNR=1.9						
MKAR	Makanchi Array	44.95	59	P	P	01 20 36.9	+0.2
	comp=N,0.4nm,0.5s,baz=278,slow=6.8,SNR=9.1						
ZALV	Zalesovo Beam	45.27	49	P	P	01 20 38.7	-0.4
	comp=N,0.5nm,0.4s,baz=286,slow=7.6,SNR=3.0						
ASAR	Alice Springs	122.14	96	PKP	PKiKP	01 31 17.8	+0.7
	comp=N,0.3nm,0.6s,baz=336,slow=2.0,SNR=2.1						

IDC 21 01:17:37.6±2.4**,2°.56N**×**127°.71E,h0**^{km}**,mb3.2**/3**,**
mb1 3.4/3**,mb1mx3.2**/43**,mbtmp3.2**/3**,Error ellipse:**
s-maj=162.2km s-min=28.6km az=67.0,Northern
Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.29	164	P	P	01 22 45.8	-1.5
	0.4nm,0.4s,baz=343,slow=10,SNR=9.9						
ASAR	Alice Springs	26.75	167	P	P	01 23 20.5	+1.2
	0.2nm,0.9s,baz=346,slow=11,SNR=1.6						
MKAR	Makanchi Array	59.07	325	P	P	01 27 40.1	+0.3
	0.2nm,0.4s,baz=124,slow=8.5,SNR=1.8						

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*KRSC **21** 01:26:32.8±2.5,49°.07N×156°.57E,h16^{km}±32^{km},ML5.0*
*MOS **21** 01:26:36.6±1.0,49°.33N×155°.40E,h78^{km},mb4.7/9,Error ellipse: s-maj=11.0km s-min=3.6km az=73.4*
MOS Felt (II) at Severo-Kuril'sk.
*NEIC **21** 01:26:39.2±1.1,49°.5N±0°.1×155°.2E±0°.2,h76^{km}±7^{km}, mb4.6/59,Error ellipse: s-maj=20.2km s-min=10.8km az=133.0*
*IDC **21** 01:26:39.8±2.1,49°.41N×155°.23E,h87^{km}±18^{km},mb3.8/28, mb1 4.0/34,mb1mx3.9/62,mbtmp4.2/34,MS3.4/8, Ms1 3.4/8,ms1mx3.0/48,Error ellipse: s-maj=15.8km s-min=9.9km az=152.0*

ISC 21 01:26:35.4±0.5**,49°.21N**±0°.07×**155°.52E**±0°.07**,h51**^{km}**,n208,**
σ**1**^{s}**83**/211**,mb4.5**/66**,MS3.6**/8**,5C,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.52	14	PN	Pn	01 27 00.3	+0.1
SKR				S	Sn	01 27 19.3	+0.4
SKR	Severo-Kuril's	1.52	14	*e*P	Pn	01 27 00.3	+0.1
SKR				*e*S	Sn	01 27 19.3	+0.4
PAU	Pauzhetka	2.41	20	PN	Pn	01 27 13.0	+0.7
PAU				S	Sn	01 27 41.4	+0.9
PAU	Pauzhetka	2.41	20	*e*P	Pn	01 27 13.0	+0.7
PAU				*e*S	Sn	01 27 41.4	+0.9
KDTR	Khodutka, Kamc	3.07	31	PN	Pn	01 27 21.3	-0.1
KDTR				S	Sn	01 27 54.6	-2.2
KDTR	Khodutka, Kamc	3.07	31	*e*P	Pn	01 27 21.3	-0.1
KDTR				*e*S	Sn	01 27 54.6	-2.2
MIPR	Malaya Ipel'ka	3.17	14	PN	Pn	01 27 24.1	+1.3
MIPR	Malaya Ipel'ka	3.17	14	*i* P	Pn	01 27 24.1	+1.3
ASAK	Asacha	3.52	25	PN	Pn	01 27 29.2	+1.6
ASAK				S	Sn	01 28 10.2	+2.3
ASAK	Asacha	3.52	25	*e*P	Pn	01 27 29.2	+1.6
ASAK				*e*S	Sn	01 28 10.2	+2.3
MTVR	Mutnovka	3.69	26	PN	Pn	01 27 31.6	+1.6
MTVR				S	Sn	01 28 14.5	+2.3
MTVR	Mutnovka	3.69	26	*i* P	Pn	01 27 31.6	+1.6
MTVR				*e*S	Sn	01 28 14.5	+2.3
GRL	Gorelyy	3.72	25	PN	Pn	01 27 32.2	+1.8
GRL				S	Sn	01 28 16.6	+3.7
GRL	Gorelyy	3.72	25	*i* P	Pn	01 27 32.2	+1.8
GRL				*e*S	Sn	01 28 16.6	+3.7
RUS	Russkaya	3.74	29	PN	Pn	01 27 30.7	+0.1
RUS				S	Sn	01 28 12.5	-0.8
RUS	Russkaya	3.74	29	*i* P	Pn	01 27 30.7	+0.1
RUS				*e*S	Sn	01 28 12.5	-0.8
APC	Apacha	3.86	15	PN	Pn	01 27 34.9	+2.7
APC	Apacha	3.86	15	*e*P	Pn	01 27 34.9	+2.7
PEA0B	Petropavlovsk-	4.14	19	*ce*PN	Pn	01 27 39.1	+3.1
PEA0B	Petropavlovsk-	4.14	19		Pn	01 27 37.5	+1.4
PETK	Petropavlovsk-	4.14	19	P	Pn	01 27 38.1	+2.1
	7.1nm,0.3s,baz=177,slow=11,SNR=80						
PETK	Petropavlovsk-	4.14	19		Pn	01 27 37.1	+1.1
PET	Petropavlovsk	4.30	26	PN	Pn	01 27 39.9	+1.7
PET	Petropavlovsk	4.30	26	*i* P	Pn	01 27 39.9	+1.7
PET	Petropavlovsk	4.30	26		Pn	01 27 39.6	+1.4
DALK	Dalny	4.33	27	PN	Pn	01 27 40.1	+1.4
DALK				S	Sn	01 28 29.3	+1.4
DALK	Dalny	4.33	27	*e*P	Pn	01 27 40.1	+1.4
DALK				*e*S	Sn	01 28 29.3	+1.4
UGLR	Uglovaya	4.51	26	PN	Pn	01 27 43.5	+2.3
UGLR	Uglovaya	4.51	26	*i* P	Pn	01 27 43.5	+2.3
KOK	Koryaka	4.53	24	PN	Pn	01 27 44.7	+3.2
KOK				S	Sn	01 28 36.1	+3.2
KOK	Koryaka	4.53	24	*i* P	Pn	01 27 44.7	+3.2
KOK				*e*S	Sn	01 28 36.1	+3.2
AVH	Avacha	4.54	25	PN	Pn	01 27 44.2	+2.7
AVH				S	Sn	01 28 37.6	+4.6
AVH	Avacha	4.54	25	*i* P	Pn	01 27 44.2	+2.7
AVH				*e*S	Sn	01 28 37.6	+4.6
SMAR	Somma	4.55	26	PN	Pn	01 27 44.3	+2.4
SMAR	Somma	4.55	26	*i* P	Pn	01 27 44.3	+2.4
KRER	Koryakskii	4.57	25	PN	Pn	01 27 44.9	+2.7
KRER				S	Sn	01 28 37.8	+3.7
KRER	Koryakskii	4.57	25	*i* P	Pn	01 27 44.9	+2.7
KRER				*e*S	Sn	01 28 37.8	+3.7
SDLR	Sedlovina	4.59	26	PN	Pn	01 27 44.3	+2.0
SDLR				S	Sn	01 28 36.7	+2.4
SDLR	Sedlovina	4.59	26	*i* P	Pn	01 27 44.3	+2.0
SDLR				*e*S	Sn	01 28 36.7	+2.4
GNL	Ganaly	4.74	18	*e*P	Pn	01 27 47.9	+3.5
SPN	Mys Shipunski	4.81	34	PN	Pn	01 27 45.5	+0.2
SPN				S	Sn	01 28 39.2	-0.5
SPN	Mys Shipunski	4.81	34	*e*P	Pn	01 27 45.5	+0.2
SPN				*e*S	Sn	01 28 39.2	-0.5
KII	Karymskiy	5.42	25	PN	Pn	01 27 57.2	+3.6
KII	Karymskiy	5.42	25	*e*P	Pn	01 27 57.2	+3.6
MKZ	Mys Kozlova	6.59	33	PN	Pn	01 28 08.9	-0.7
MKZ	Mys Kozlova	6.59	33	*i* P	Pn	01 28 08.9	-0.7
TUMD	Tumrok D	6.71	25	*e*P	Pn	01 28 12.9	+1.7
TUMR	Tumrok	6.71	23	PN	Pn	01 28 14.1	+2.7
TUMR	Tumrok	6.71	23	*e*P	Pn	01 28 14.1	+2.7
KMNR	Kamenistaya	7.16	22	PN	Pn	01 28 20.4	+2.9
KMNR	Kamenistaya	7.16	22	*i* P	Pn	01 28 20.4	+2.9
KPT	Kopyto	7.35	21	PN	Pn	01 28 22.9	+2.9
KPT	Kopyto	7.35	21	*e*P	Pn	01 28 22.9	+2.9
KIRR	Kirishev	7.36	22	PN	Pn	01 28 24.1	+3.8
KIRR	Kirishev	7.36	22	*e*P	Pn	01 28 24.1	+3.8
LGNR	Loginova	7.56	23	PN	Pn	01 28 25.6	+2.4
LGNR	Loginova	7.56	23	*e*P	Pn	01 28 25.6	+2.4
KRSR	Krestovskiy	7.66	22	PN	Pn	01 28 26.3	+2.0
KRSR	Krestovskiy	7.66	22	*e*P	Pn	01 28 26.3	+2.0
SRKR	Sorokina	8.20	22	PN	Pn	01 28 32.9	+1.2
SRKR	Sorokina	8.20	22	*e*P	Pn	01 28 32.9	+1.2
SMKR	Semkarok	8.21	24	PN	Pn	01 28 32.7	+0.8
SMKR	Semkarok	8.21	24	*e*P	Pn	01 28 32.7	+0.8
KBTR	Krutoberegovo	8.29	30	PN	Pn	01 28 32.6	-0.2
KBTR	Krutoberegovo	8.29	30	*e*P	Pn	01 28 32.6	-0.2
JKA	Kamikawa-asahi	10.23	245	Pn	Pn	01 29 02.2	+2.6
ASAJ	Asahikawa	10.24	245	P	Pn	01 29 02.8	+3.2
	5.3nm,0.3s,baz=78,slow=15,SNR=16						
ASAJ				LR	LR	01 32 36.9	
	comp=Z,125nm,20.5s,baz=342,slow=35						
MA2	Magadan	10.74	347	P	Pn	01 29 07.6	+1.2
	1.4nm,0.3s,baz=162,slow=14,SNR=5.6						
ERM	Erimo	11.25	235	PN	Pn	01 29 14.2	+0.8
ERM	Erimo	11.25	235	Pn	Pn	01 29 14.2	+0.8
SEY	Seymchan	13.86	354	P	Pn	01 29 51.1	+2.2
	0.4nm,0.3s,baz=145,slow=7.6,SNR=5.6						
KLR	Kul'dur	15.52	279	LR	LR	01 36 15.9	
	comp=Z,102nm,18.3s,baz=23,slow=38						
KLR	Kul'dur	15.52	279	*i* P	Pn	01 30 12.0	+1.2
USRK	Ussuriysk Ar.	16.87	262	P	P	01 30 30.1	+0.9
	baz=64,slow=13,SNR=5.3						
MJA0	Matsu Arr-Jizo	17.85	231	*e*P	P	01 30 43.3	+3.1
MAJO	Matsushiro	17.87	231	P	P	01 30 41.7	+1.4
MAJO				pmax	pmax		
	comp=Z,58nm,0.5s						
MAJO	Matsushiro	17.87	231	P	P	01 30 41.7	+1.4
MJAR	Matsushiro Arr	17.87	231	P	P	01 30 40.9	+0.5
	comp=Z,0.2nm,0.3s,baz=18,slow=12,SNR=5.3						
YAK	Yakutsk	19.26	321	LR	LR	01 38 02.6	
	comp=Z,56nm,20.5s,baz=89,slow=36						
BILL	Bilibino	19.64	12	⇑*e*P	P	01 30 58.4	-1.0
BILL				*e*S	S	01 34 36.8	-1.2
BILL				MLR	MLR		
	comp=Z,34nm,16.0s						
BILL	Bilibino	19.64	12		P	01 30 58.8	-0.7
KSRS	Korea Array	23.12	250	P	P	01 31 38.0	+1.0
	comp=Z,1.9nm,0.5s,baz=45,slow=10,SNR=6.2						
KSRS	Korea Array	23.12	250	*e*P	P	01 31 38.8	+1.9
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KS19	Wonju Array Si	23.13	250	P	P	01 31 37.8	+0.8
KS19				IAmb	IAmb	01 31 39.3	
	comp=Z,24nm,1.3s						
TIXI	Tiksi	25.61	341	P	P	01 31 56.9	-2.6
	comp=Z,2.8nm,0.3s,baz=290,slow=1.2,SNR=6.8						
TIXI	Tiksi	25.61	341	P	P	01 31 57.3	-2.2
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.1s						
TIXI	Tiksi	25.61	341	P	P	01 31 57.3	-2.2
JSU	Suzuyama	25.84	236	P	P	01 32 02.3	+0.3
H11N2	WAKE ISLAND Hy	30.80	159	T	T	02 05 30.9	
	baz=345,slow=76,SNR=64						
H11N1	WAKE ISLAND Hy	30.81	159	T	T	02 05 34.5	
	baz=345,slow=76,SNR=39						
H11N3	WAKE ISLAND Hy	30.81	159	T	T	02 05 31.6	
	baz=345,slow=76,SNR=62						
IMAR	Indian Mountai	30.83	38	P	P	01 32 46.8	+0.7
HHC	Hu-ho-hao-te	31.79	272	*e*P	P	01 32 55.3	+0.4
HHC				pmax	pmax		
	comp=Z,14nm,1.0s						
HHC				pmax	pmax		
	comp=Z,130nm,4.2s						
HHC				LR	LR		
	comp=N,240nm,16.4s						
HHC				LR	LR		
	comp=E,230nm,14.6s						
HHC				LR	LR		
	comp=Z,120nm,15.1s						
H11S1	WAKE ISLAND Hy	31.93	160	T	T	02 06 58.8	
	baz=346,slow=76,SNR=1344						
H11S3	WAKE ISLAND Hy	31.94	160	T	T	02 06 53.0	
	baz=346,slow=76,SNR=2586						
H11S2	WAKE ISLAND Hy	31.95	160	T	T	02 06 51.4	
	baz=346,slow=76,SNR=1225						
SONM	Songino Array	32.11	287	LR	LR	01 46 11.2	
	comp=Z,62nm,19.7s,baz=142,slow=37						
NEA2	Nenana	32.68	41	P	P	01 33 03.1	+0.8
NEA2				IAmb	IAmb	01 33 05.1	
	comp=Z,7.1nm,0.8s						
TOLK	Toolik Lake Re	32.80	34	P	P	01 33 03.8	+0.4
MDM	Murphy Dome	33.05	40	P	P	01 33 06.5	+0.9
MDM				IAmb	IAmb	01 33 07.7	
	comp=Z,6.7nm,0.8s						
SML	Sawmill	33.09	46	P	P	01 33 06.4	+0.4
TCOL	CIGO, UAF Yank	33.20	41	P	P	01 33 07.6	+0.7
TCOL				IAmb	IAmb	01 33 09.0	
	comp=Z,11nm,0.7s						
COLA	College	33.21	41	P	P	01 33 07.8	+0.9
COLA				pmax	pmax		
	comp=Z,12nm,0.6s						
COLA	College	33.21	41	P	P	01 33 07.8	+0.9
CCB	Clear Creek Bu	33.23	41	P	P	01 33 07.8	+0.7
IL31		33.62	41	P	P	01 33 10.6	+0.1
ILAR	Eielson Array	33.62	41	P	P	01 33 10.6	0.0
	comp=Z,2.0nm,0.7s,baz=256,slow=5.7,SNR=27						
ILAR	Eielson Array	33.62	41	*e*P	P	01 33 10.8	+0.2
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
PRP	Porcupine Dome	34.19	39	P	P	01 33 16.3	+0.7
PRP				IAmb	IAmb	01 33 18.2	
	comp=Z,9.2nm,1.0s						
FYU	Fort Yukon	34.31	38	P	P	01 33 17.3	+0.8
BMAR	Burnt Mountain	34.58	36	P	P	01 33 19.7	+0.9
L27K	Beaver Creek,	35.97	44	IAmb	IAmb	01 33 33.4	
	comp=Z,9.8nm,1.0s						
EGAK	Eagle	36.07	41	IAmb	IAmb	01 33 32.4	
	comp=Z,5.6nm,0.8s						
INK	Inuvik	38.70	34	P	P	01 33 54.8	+0.9
	comp=Z,5.3nm,0.6s,baz=290,slow=7.3,SNR=34						
INK				PcP	PcP	01 36 05.2	+0.6
	comp=Z,0.8nm,0.5s,baz=250,slow=2.6,SNR=4.0						
INK	Inuvik	38.70	34	P	P	01 33 54.5	+0.7
INK				IAmb	IAmb	01 33 55.6	
	comp=Z,5.7nm,0.7s						
LZH	Lanzhou	39.45	270	*e*P	P	01 34 02.1	+1.4
LZH				pP	sP	01 34 22.4	+2.5
LZH				sP	pP	01 34 30.3	+16
LZH				pmax	pmax		
	comp=Z,16nm,1.2s						
GTA	Gaotai	40.22	278	*e*P	P	01 34 02.8	-4.2
GTA				pP	pP	01 34 11.8	-8.5
GTA				sP	sP	01 34 16.8	-9.4
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
A36M	Sachs Harbour	40.92	28	P	P	01 34 12.8	+0.5
A36M				IAmb	IAmb	01 34 13.9	
	comp=Z,9.1nm,0.7s						
ZALV	Zalesovo Beam	42.52	304	P	P	01 34 22.8	-2.7
	comp=Z,0.3nm,0.3s,baz=318,slow=38,SNR=1.7						
ZALV				PcP	PcP	01 36 16.2	-0.9
	comp=Z,0.9nm,0.5s,baz=63,slow=4.4,SNR=4.5						
ZALV				LR	LR	01 52 23.3	
	comp=Z,40nm,19.1s,baz=46,slow=36						
ZALV	Zalesovo Beam	42.52	304	P	P	01 34 22.2	-3.3
DLBC	Dease Lake	42.73	48	P	P	01 34 29.4	+2.2
	comp=Z,4.6nm,0.9s,baz=217,slow=7.5,SNR=4.8						
WMQ	Urumqi	45.57	290	*e*P	P	01 34 51.4	+1.3
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,64nm,4.7s						
WMQ				LR	LR		
	comp=N,380nm,29.1s						
WMQ				LR	LR		
	comp=E,81nm,29.0s						
WMQ				LR	LR		
	comp=Z,90nm,28.8s						
EUNU	Eureka	46.38	12	P	P	01 34 56.2	+0.1
EUNU				IAmb	IAmb	01 34 56.7	
	comp=Z,5.3nm,0.8s						
MK31	Makanchi Array	47.27	296	*i* P	P	01 35 02.1	-1.3
MKAR	Makanchi Array	47.27	296	P	P	01 35 02.7	-0.7
	comp=Z,0.4nm,0.4s,baz=66,slow=7.5,SNR=11						
MKAR				LR	LR	01 55 53.6	
	comp=Z,74nm,20.4s,baz=41,slow=37						
MKAR	Makanchi Array	47.27	296	P	P	01 35 03.1	-0.3
MKAR	Makanchi Array	47.27	296	P	P	01 35 03.1	-0.3
KURK	Kurchatov	47.37	303	P	P	01 35 03.5	-0.5
KURK						01 36 33.6	
KURK	Kurchatov	47.37	303	P	P	01 35 03.0	-1.1
KURK				IAmb	IAmb	01 35 34.5	
	comp=Z,15nm,1.8s						
KURBB	Kurchatov Arra	47.47	303	P	P	01 35 03.5	-1.3
	comp=Z,0.8nm,0.3s,baz=66,slow=7.9,SNR=1.7						
KURBB				PcP	PcP	01 36 33.6	-0.7
	comp=Z,0.4nm,0.3s,baz=63,slow=3.9,SNR=4.7						
RES	Resolute Bay	47.98	20	P	P	01 35 08.6	+0.1
	comp=Z,1.4nm,0.4s,baz=316,slow=2.6,SNR=10.0						
YKA	Yellowknife Ar	47.99	39	P	P	01 35 08.8	+0.1
	comp=Z,3.1nm,0.8s,baz=288,slow=10.0,SNR=4.4						
YKA	Yellowknife Ar	47.99	39	*ce*P	P	01 35 09.5	+0.8
YKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BVAR	Borovoye Array	50.56	309	P	P	01 35 28.3	-0.1
	comp=Z,0.7nm,0.5s,baz=72,slow=4.8,SNR=4.8						
BVAR				PcP	PcP	01 36 44.8	-0.7
	comp=Z,0.7nm,0.4s,baz=219,slow=12,SNR=4.6						
B08A	Colville Reser	53.17	56	P	P	01 35 48.5	+0.5
CHTO	Chiang Mai	54.26	257	P	P	01 35 56.5	+0.3
CHTO				pmax	pmax		
	comp=Z,18nm,1.4s						
CHTO	Chiang Mai	54.26	257	P	P	01 35 56.5	+0.3
ARU	Arti	54.30	317	P	P	01 35 54.2	-1.8
	comp=Z,2.0nm,0.3s,baz=72,slow=2.1,SNR=16						
ARU	Arti	54.30	317	*c i*P	P	01 35 54.0	-2.0
ARU				*PP	pP	01 36 10.8	+0.9
ARU						01 37 53.0	
ARU				S	S	01 43 27.7	-2.0
ARU				SS	SKiKP	01 47 05.9	+4.4
ARU				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ARU	Arti	54.30	317	IAmb	IAmb	01 35 55.1	
	comp=Z,5.8nm,0.4s						
NEW	Newport	54.42	55	P	P	01 35 56.7	-0.4
	comp=Z,1.6nm,0.7s,baz=306,slow=7.7,SNR=4.0						
NEW	Newport	54.42	55	IAmb	IAmb	01 36 17.0	
	comp=Z,21nm,2.0s						
CMAR	Chiang Mai Arr	54.52	257	P	P	01 35 58.5	+0.4
	comp=Z,2.7nm,0.5s,baz=30,slow=7.1,SNR=18						
CMAR	Chiang Mai Arr	54.52	257	*e*P	P	01 35 58.7	+0.6
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
CMAR	Chiang Mai Arr	54.52	257	P	P	01 35 58.1	0.0
E09A	Wood Farm, Sta	54.90	57	P	P	01 36 01.3	+0.7
E09A				IAmb	IAmb	01 36 02.3	
	comp=Z,4.6nm,0.8s						
ARCES	ARCESS Array B	56.05	341	P	P	01 36 05.9	-2.6
	comp=Z,3.0nm,1.0s,baz=41,slow=5.3,SNR=5.2						
ARCES	ARCESS Array B	56.05	341	*e*P	P	01 36 07.6	-0.9
ARCES				pmax	pmax		
	comp=Z,5.0nm,1.1s						
BMO	Blue Mountains	56.38	59	P	P	01 36 12.3	+0.9
BMO				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BMO	Blue Mountains	56.38	59	P	P	01 36 12.2	+0.9
TAS	Tashkent	58.05	298	P	P	01 36 21.4	-1.7
TAS				pmax	pmax		
	comp=Z,69nm,0.7s						
TAS	Tashkent	58.05	298	P	P	01 36 21.4	-1.7
ABKAR	Akbulak array	58.09	310	P	P	01 36 21.8	-1.4
ABKAR				IAmb	IAmb	01 37 37.1	
	comp=Z,11nm,1.7s						
AKTO	Aktyubinsk	58.29	312	P	P	01 36 22.4	-2.1
	comp=Z,0.7nm,0.5s,baz=71,slow=12,SNR=2.5						
HLID	Hailey	58.81	58	IAmb	IAmb	01 38 21.8	
	comp=Z,15nm,1.9s						
BCYI	Bear Canyon	58.89	57	P	P	01 36 29.5	+0.3

BOZ	Bozeman (W)	59.02	55	IAmb	IAmb	01 36 32.2	
	comp=Z,5.3nm,0.7s						
KVN	Kaiserville	59.61	64	IAmb	IAmb	01 36 37.0	
	comp=Z,4.7nm,1.3s						
NVAR	Mina Array Bea	59.89	65	P	P	01 36 37.4	+1.3
	comp=Z,1.0nm,0.7s,baz=301,slow=7.1,SNR=8.0						
YHH	Holmes Hill	59.97	55	IAmb	IAmb	01 36 39.0	
	comp=Z,5.7nm,0.8s						
RLMT	Red Lodge	60.59	54	IAmb	IAmb	01 36 44.5	
	comp=Z,4.9nm,0.8s						
LOHW	Long Hollow	60.88	56	IAmb	IAmb	01 36 45.8	
	comp=Z,7.3nm,1.3s						
SNOW	Snow King Moun	60.89	56	P	P	01 36 44.3	+1.4
SNOW				IAmb	IAmb	01 36 46.1	
	comp=Z,4.2nm,0.8s						
REDW	Red Top Meadow	60.91	56	IAmb	IAmb	01 36 52.4	
	comp=Z,5.2nm,1.1s						
DUG	Dugway, Tooele	61.92	60	IAmb	IAmb	01 36 52.2	
	comp=Z,4.3nm,1.0s						
BW06	Boulder Array	62.01	56	IAmb	IAmb	01 36 52.5	
	comp=Z,5.1nm,0.9s						
PD31	Pinedale Array	62.01	56	IAmb	IAmb	01 36 52.5	
	comp=Z,5.0nm,0.9s						
PDAR	Pinedale Array	62.01	56	P	P	01 36 51.6	+1.2
	comp=Z,4.1nm,0.8s,baz=316,slow=2.1,SNR=33						
FINES	FINESS Array B	62.49	335	P	P	01 36 50.7	-2.3
	comp=Z,1.3nm,0.5s,baz=39,slow=7.5,SNR=18						
SRU	San Rafael Swe	63.95	60	IAmb	IAmb	01 37 05.4	
	comp=Z,4.9nm,0.8s						
RSSD	Black Hills	64.02	52	P	P	01 37 04.1	+0.4
RSSD				pmax	pmax		
	comp=Z,6.0nm,0.7s						
RSSD	Black Hills	64.02	52	P	P	01 37 04.1	+0.4
RSSD				IAmb	IAmb	01 37 05.3	
	comp=Z,5.9nm,0.7s						
ISCO	Idaho Springs	66.21	56	P	P	01 37 19.2	+1.1
ISCO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ISCO	Idaho Springs	66.21	56	P	P	01 37 19.2	+1.1
ISCO				IAmb	IAmb	01 37 20.4	
	comp=Z,5.5nm,0.9s						
NOA	NORSAR Array B	66.40	342	P	P	01 37 15.6	-3.1
	comp=Z,1.1nm,0.8s,baz=26,slow=6.4,SNR=4.2						
ANMO	Albuquerque	69.19	60	ceP	P	01 37 36.8	0.0
ANMO				pmax	pmax		
	comp=Z,5.0nm,2.5s						
ANMO	Albuquerque	69.19	60	P	P	01 37 38.0	+1.2
KVAR	Kislovodsk Arr	70.22	315	LR	LR	02 10 51.3	
	comp=Z,48nm,18.4s,baz=135,slow=38						
KIV	Kislovodsk	70.22	315	eP	P	01 37 42.1	-0.8
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,28nm,17.0s						
AKASG	Malin Array Be	70.38	327	LR	LR	02 10 16.2	
	comp=Z,32nm,18.4s,baz=210,slow=37						
SCHQ	Schefferville	70.41	24	P	P	01 37 44.1	+0.4
	comp=Z,3.2nm,0.5s,baz=331,slow=6.4,SNR=15						
WRA	Warramunga Arr	71.38	201	P	P	01 37 49.3	-0.6
	comp=Z,0.4nm,0.4s,baz=16,slow=6.9,SNR=3.3						
WMOK	Wichita Mounta	73.61	56	P	P	01 38 04.0	+0.7
WMOK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
WMOK	Wichita Mounta	73.61	56	P	P	01 38 04.0	+0.7
DPC	Dobruska-Polom	74.83	334	eP	P	01 38 09.4	-0.7
DPC	Dobruska-Polom	74.83	334	eP	P	01 38 09.4	-0.7
TX31	Lajitas Ar. Si	74.90	63	IAmb	IAmb	01 38 12.8	
	comp=Z,10nm,0.8s						
TXAR	Lajitas Array	74.90	63	P	P	01 38 11.7	+0.8
	comp=Z,2.6nm,0.8s,baz=298,slow=4.5,SNR=30						
TXAR	Lajitas Array	74.90	63	P	P	01 38 11.8	+0.9
ASAR	Alice Springs	75.07	200	P	P	01 38 11.8	+0.2
	comp=Z,0.7nm,0.6s,baz=13,slow=5.2,SNR=9.2						
U40A	Yellville	75.49	51	IAmb	IAmb	01 38 15.1	
	comp=Z,12nm,1.1s						
PRU	Pruhonice	75.66	335	eP	P	01 38 14.2	-0.6
PRU	Pruhonice	75.66	335	eP	P	01 38 14.2	-0.6
KHC	Kasperske Hory	76.70	335	eP	P	01 38 20.2	-0.6
KHC	Kasperske Hory	76.70	335	eP	P	01 38 20.2	-0.6
GERES	GERESS Array B	76.92	335	P	P	01 38 21.4	-0.8
	comp=Z,0.6nm,0.3s,baz=41,slow=5.6,SNR=10						
ASF	Jabal al Asfar	82.32	311	P	P	01 38 51.1	-0.5
	comp=Z,2.6nm,0.9s,baz=154,slow=2.2,SNR=3.9						
MMAI	Mount Meron Ar	82.36	313	P	P	01 38 51.6	-0.3
	comp=Z,2.8nm,0.4s,baz=42,slow=6.7,SNR=29						
RAYN	Ar Rayn	84.63	300	P	P	01 39 02.4	-1.2
RAYN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
RAYN	Ar Rayn	84.63	300	P	P	01 39 02.4	-1.2
ESDC	Sonseca Array	89.65	344	P	P	01 39 25.5	-2.2
	comp=Z,0.4nm,0.7s,baz=5.1,slow=5.0,SNR=2.4						
H03N2	Juan Fernandez	137.13	89	T	T	04 18 31.2	
	baz=313,slow=77,SNR=6.4						
H03N1	Juan Fernandez	137.14	89	T	T	04 18 39.2	
	baz=313,slow=77,SNR=8.1						
H03N3	Juan Fernandez	137.14	89	T	T	04 18 43.9	
	baz=313,slow=77,SNR=6.6						
SNAA	Sanae	155.37	196	PKPdf	PKPdf	01 46 23.7	+2.1
VNA2	Neumayer--Watz	156.79	194	PKPdf	PKPdf	01 46 26.3	+2.9
VNA3	Neumayer Olymp	156.84	192	PKPdf	PKPdf	01 46 25.6	+2.1
VNA1	Neumayer--Stat	157.17	194	PKPdf	PKPdf	01 46 25.4	+1.6

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*IDC **21** 01:27:40.3±0.8, 28°.65S×178°.45W, h280^{km}±10^{km}, mb3.0/2, mb1 3.3/3, mb1mx3.0/27, mbtmp3.9/3, Error ellipse: s-maj=40.0km s-min=25.7km az=132.0*

ISC 21 01:27:40.1±1.2**, 28°.8S**±0°.1×**178°.2W**±0°.2**, h300^{km}, n7,** σ**1^{s}.58**/10**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.52	155	P	Pn	01 28 17.6	-1.1
	165nm,0.3s,baz=19,slow=23,SNR=9.4						
RAO				S	S	01 28 47.4	-2.0
	203nm,0.3s,baz=92,slow=22,SNR=5.8						
URZ	Urewera	10.24	201	P	Pn	01 30 02.8	+1.9
	0.3nm,0.3s,baz=122,slow=23,SNR=7.1						
URZ				S	S	01 31 55.0	-1.1
	1.6nm,0.3s,baz=120,slow=23,SNR=1.5						
ASAR	Alice Springs	43.07	265	P	P	01 35 11.3	0.0
	0.4nm,0.6s,baz=96,slow=7.3,SNR=8.5						
ASAR				PcP	PP	01 36 57.2	-1.1
	0.3nm,0.5s,baz=106,slow=3.8,SNR=2.0						
WRA	Warramunga Arr	43.91	271	P	P	01 35 17.6	-0.4
	0.4nm,0.3s,baz=108,slow=6.2,SNR=13						
FINES	FINESS Array B	143.58	341	PKP	PKPdf	01 46 38.0	-0.4
	7.3nm,1.1s,baz=51,slow=3.7,SNR=5.3						
AKASG	Malin Array Be	149.91	324	PKPbc	PKiKP	01 46 56.5	+1.2
	1.3nm,0.4s,baz=42,slow=2.6,SNR=6.3						
BRTR	Keskin Array B	151.67	301	PKPbc	PKiKP	01 47 01.7	+2.1
	0.5nm,0.5s,baz=135,slow=4.4,SNR=2.3						

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*IDC **21** 01:34:07.9±5.4, 36°.12N×70°.40E, h144^{km}±48^{km}, mb3.4/9, mb1 3.5/13, mb1mx3.2/45, mbtmp3.9/13, MS3.5/3, Ms1 3.5/3, ms1mx2.7/37, Error ellipse: s-maj=36.9km s-min=19.7km az=31.0*

*NNC **21** 01:34:16.6±5.3, 37°.17N×69°.99E, h0^{km}, mb4.3, mpv4.1, Error ellipse: s-maj=42.6km s-min=29.0km az=169.0*

ISC 21 01:34:14.2±0.7**, 36°.57N**±0°.06×**70°.48E**±0°.10**, h200^{km}, n33,** σ**2^{s}.16**/35**, mb3.6**/8**, 4C-3D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	2.98	156	P	Pn	01 35 04.1	+0.3
CEP				S	Sn	01 35 41.0	-1.4
CHCP	Chirah Chowk	3.69	141	P	Pn	01 35 13.1	+0.8
THW	Thamme Wali	3.91	164	P	Pn	01 35 14.9	0.0
KSH	Kashi	5.24	54	Pn	Pn	01 35 27.8	-4.0
KSH				Sn	Sn	01 36 18.4	-15
KSH				pmax	pmax		
	comp=Z,25nm,0.6s						
KSH				smax	smax		
	comp=N,87nm,0.6s						
KSH				smax	smax		
	comp=E,73nm,0.6s						
AML	Almayashu	6.09	23	P	Pn	01 35 43.8	+0.9
	SNR=112						
UCH	Uchtor	6.46	28	P	Pn	01 35 48.8	+1.0
	SNR=49						
KK09	Karatay Array	6.55	0	⇑P	Pn	01 35 47.7	-0.7
	comp=E,13nm,0.6s,baz=178,slow=12						
KK09				⇓S	Sn	01 36 56.8	-6.5
	comp=E,17nm,0.7s,baz=185,slow=26						
EKS2	Erkin-Say	6.60	22	P	Pn	01 35 50.4	+1.2
	SNR=32						
AAK	Ala-Archa	6.81	26	P	Pn	01 35 53.2	+1.1
	comp=E,4.0nm,0.3s,baz=200,slow=6.8,SNR=51						
AAK				S	Sn	01 37 08.6	-1.0
	comp=E,1.2nm,0.3s,baz=330,slow=21,SNR=18						
AAK	Ala-Archa	6.81	26	P	Pn	01 35 53.1	+1.1
	SNR=18						
AAK	Ala-Archa	6.81	26	P	Pn	01 35 53.2	+1.1
AAK	Ala-Archa	6.81	26	⇑P	Pn	01 35 53.0	+1.0
	comp=E,5.4nm,0.5s						
AAK				⇑S	Sn	01 37 08.1	-1.5
	comp=E,28nm,0.7s						
KBK	Karagaybulak	6.99	28	P	Pn	01 35 55.8	+1.4
	SNR=14						
CHMS	Chumysh	7.22	26	P	Pn	01 35 58.2	+1.0
	SNR=9.3						
USP	Ospenovka	7.37	24	P	Pn	01 35 59.9	+0.7
	SNR=14						
MKAR	Makanchi Array	13.49	37	P	P	01 37 19.3	-0.9
	comp=E,0.2nm,0.3s,baz=203,slow=10.0,SNR=10						
AB31	Akbulak array	14.82	332	⇑P	P	01 37 36.9	+1.9
	comp=E,0.4nm,0.3s,baz=147,slow=12,SNR=26						
AB31				⇓S	S	01 40 14.4	-4.1
	comp=E,1.3nm,0.7s,baz=162,slow=24,SNR=5.4						
KURBB	Kurchatov Arra	15.20	20	P	P	01 37 40.3	+1.3
	comp=E,0.1nm,0.3s,baz=208,slow=10,SNR=1.4						
AKTO	Aktyubinsk	16.52	331	P	Pn	01 37 55.8	+1.3
	comp=E,0.8nm,0.3s,baz=148,slow=11,SNR=31						
AKTO	Aktyubinsk	16.52	331	⇓P	Pn	01 37 58.2	+3.7
	comp=E,9.7nm,0.7s						
ZALV	Zalesovo Beam	20.03	25	P	P	01 38 33.5	+1.8
	comp=E,1.3nm,0.4s,baz=221,slow=11,SNR=7.7						
ARU	Arti	21.43	342	P	P	01 38 49.8	+3.3
	comp=E,1.6nm,0.7s,baz=151,slow=4.1,SNR=6.8						
BELG	Belogornoye	22.57	322	P	P	01 38 59.0	+1.6
	comp=E,11nm,0.9s,baz=201,slow=2.7,SNR=3.9						
FINES	FINESS Array B	37.19	326	P	P	01 41 07.6	+1.8
	comp=E,1.7nm,0.6s,baz=110,slow=8.9,SNR=9.6						
ARCES	ARCESS Array B	40.92	338	P	P	01 41 38.8	+2.2
	comp=E,3.1nm,0.6s,baz=106,slow=7.7,SNR=13						
NB2	NORSAR Subarra	44.07	323	P	P	01 42 03.4	+1.3
	comp=Z,1.0nm,0.6s,baz=96,slow=7.9						
NOA	NORSAR Array B	44.07	323	P	P	01 42 03.2	+1.2
	comp=Z,1.2nm,0.6s,baz=97,slow=7.8,SNR=6.3						
VAE	Valguarnera	44.20	289	LR	LR	02 03 15.9	
	comp=Z,54nm,18.2s,baz=53,slow=39						
KEST	Kesra	48.61	288	LR	LR	02 06 15.8	
	comp=Z,71nm,21.5s,baz=294,slow=40						
ESDC	Sonseca Array	57.05	298	LR	LR	02 14 16.1	
	comp=Z,23nm,18.4s,baz=320,slow=42						
TORD	Torodi Ar. Bea	65.30	268	P	P	01 44 33.2	-1.8
	comp=Z,0.3nm,0.5s,baz=47,slow=5.4,SNR=7.9						
WRA	Warramunga Arr	82.39	122	P	P	01 46 12.9	-1.1
	comp=Z,0.2nm,0.4s,baz=324,slow=4.7,SNR=1.7						
ASAR	Alice Springs	84.64	125	P	P	01 46 24.8	-0.6
	comp=Z,0.2nm,0.5s,baz=306,slow=5.4,SNR=4.0						

WEL 21 01:47:22.4±0.9**, 33°S**±17°×**17°9E**±3°4**, h412^{km}**±19^{km}**, M4.3**/5**, mB4.2**/3**, ML4.8**/9**, MLv4.4**/5**, Mw(mB)3.3**/3**, Error ellipse: s-maj=0.0km s-min=0.0km az=114.7, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	4.89	188	P	P	01 48 44.3	+0.7
HAZ	Te Kaha	4.93	194	P	P	01 48 44.3	+0.3
HAZ				S	S	01 49 49.9	-0.8
RUGZ	Raukumara Rang	5.16	195	P	P	01 48 46.5	+0.1
RUGZ				S	S	01 49 52.9	-2.2
PUZ	Puketiti	5.16	189	P	P	01 48 47.3	+1.0
PUZ				S	S	01 49 54.2	-0.8
URZ	Urewera	5.57	198	P	P	01 48 50.5	0.0
URZ				S	S	01 50 04.3	+1.6
RTZ	Ruatahuna	5.94	198	P	P	01 48 52.1	-2.4
MRHZ	Matea Rd	6.30	201	P	P	01 48 58.6	+0.2
WHHZ	Waihua	6.32	195	P	P	01 49 00.0	+1.5
WHHZ				S	S	01 50 19.5	+2.1
NMHZ	Naumai	6.44	198	P	P	01 49 01.0	+1.2
NMHZ				S	S	01 50 22.7	+2.8
ARHZ	Aropaoanui	6.55	196	P	P	01 49 02.1	+0.5
ARHZ				S	S	01 50 22.9	+0.9
BKZ	Black Stump Fm	6.59	199	P	P	01 49 01.9	-0.2
KAHZ	Kahuranaki	7.08	195	P	P	01 49 07.7	+0.2
KAHZ				S	S	01 50 32.4	-0.5
PXZ	Pawanui	7.31	195	P	P	01 49 09.9	-0.1
PXZ				S	S	01 50 37.2	-0.3
MRZ	Mangatainoka R	8.23	200	P	P	01 49 19.3	-0.8
MRZ				S	S	01 50 57.9	+1.4
HOWZ	Holdsworth Sta	8.47	200	P	P	01 49 21.9	-0.8
CAW	Cannon Point	8.80	201	P	P	01 49 25.8	-0.5
CAW				S	S	01 51 07.4	-0.8
MSWZ	Moikau Station	9.03	200	P	P	01 49 28.8	-0.1
TCW	Tory Channel	9.15	205	P	P	01 49 30.3	+0.1
TCW				S	S	01 51 15.8	+0.3
PLWZ	Palliser	9.17	199	P	P	01 49 30.6	+0.2
TUWZ	Tuamarina	9.46	205	P	P	01 49 33.7	+0.1
NNZ	Nelson	9.49	208	P	P	01 49 33.8	-0.2
NNZ				S	S	01 51 24.1	+1.5
QRZ	Quartz Range	9.53	213	P	P	01 49 34.8	+0.3
THZ	Tophouse	10.14	208	P	P	01 49 41.5	+0.3
THZ				S	S	01 51 35.3	-0.6

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*JMA **21** 01:58:21.0±0.2, 30°.97N×128°.56E, h16^{km}, M3.6*

*NIED **21** 01:58:21.0, 30°.97N×128°.56E, h16^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-1.22; M$_{\theta\theta}$0.88; M$_{\phi\phi}$0.34; M$_{r\theta}$0.78; M$_{\theta\phi}$0.49; M$_{\phi r}$-0.19; Fault plane solution: M$_0$1.43000×10^{15} NP1: φ$_s$260.00000°, δ61.00000°, λ-71.00000°. NP2:φ$_s$44.00000°, δ34.00000°, λ-121.00000°.*

*IDC **21** 01:58:23.3±0.9, 30°.75N×128°.49E, h0^{km}, mb3.7/9, mb1 3.9/13, mb1mx3.7/61, mbtmp3.7/13, ML3.2/3, MS3.3/7, Ms1 3.3/7, ms1mx2.9/54 Error ellipse: s-maj=24.3km s-min=19.9km az=81.0*

ISC 21 01:58:23.9±0.8**, 30°.96N**±0°.05×**128°.78E**±0°.06**, h6^{km}, n26,** σ**1^{s}.82**/26**, mb3.6**/9**, MS3.4**/5**, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	1.08	48	P	Pg	01 58 42.9	-1.7
JKC	Kuchinoerabu	1.32	112	P	Pn	01 58 47.7	-1.1
JKC				eS	Sn	01 59 07.8	+1.1
JNN	Nakanoshima	1.46	139	P	Pn	01 58 48.7	-2.1
JSU	Suzuyama	1.54	69	P	Pn	01 58 50.8	-1.1
JYAK	Yakushimahirau	1.66	115	P	Pn	01 58 51.6	-1.9
JFU	Fukue jima 2	1.69	359	P	Pn	01 58 50.8	-3.2
JFU				eS	Sn	01 59 11.9	-4.1
JMTN	Minamitane	1.91	106	P	Pn	01 58 55.6	-1.4
JTN	Tanegashima 3	1.92	99	P	Pn	01 58 55.8	-1.3
JTN				eS	Sb	01 59 22.1	-1.4
JTZ	Takazaki	2.19	64	P	Pn	01 59 00.4	-0.4
JNU	Nakatsue	2.80	39	Pn	Pb	01 59 14.7	+0.3
	3.8nm,0.3s,baz=208,slow=1.0,SNR=2.3						
JNU				Sn	Sb	01 59 49.9	+1.0
	1.4nm,0.3s,baz=351,slow=16,SNR=1.6						
JOW	Kunigami	4.14	186	LR	LR	02 01 16.7	
	comp=Z,294nm,19.5s,baz=16,slow=44						
KSRS	Korea Array	6.52	354	Pn	Pn	02 00 01.1	+0.9
	0.3nm,0.3s,baz=174,slow=14,SNR=7.0						
KSRS				Sn	Sn	02 01 13.2	-1.7
	0.5nm,0.3s,baz=183,slow=22,SNR=1.7						
KSRS				Lg	Lg	02 01 46.8	
	0.7nm,0.3s,baz=170,slow=32,SNR=5.9						
MJAR	Matsushiro Arr	9.62	52	Pn	Pn	02 00 49.6	+6.6
	baz=260,slow=13,SNR=1.5						
KLR	Kul'dur	18.39	6	P	Pn	02 02 41.8	+2.4
	0.1nm,0.3s,baz=229,slow=6.9,SNR=10						
KLR				LR	LR	02 09 23.6	
	comp=Z,44nm,18.7s,baz=227,slow=36						
SONM	Songino Array	24.01	321	P	P	02 03 39.1	-0.4
	1.0nm,0.8s,baz=138,slow=9.1,SNR=7.1						
SONM				LR	LR	02 13 39.0	
	comp=Z,81nm,19.1s,baz=166,slow=38						
ZALV	Zalesovo Beam	38.88	319	P	P	02 05 50.5	+0.5
	0.4nm,0.4s,baz=92,slow=16,SNR=3.7						
MKAR	Makanchi Array	38.89	307	P	P	02 05 50.4	+0.2
	1.3nm,0.8s,baz=96,slow=12,SNR=8.9						
MKAR				LR	LR	02 22 30.6	
	comp=Z,26nm,19.5s,baz=356,slow=37						
PMG	Port Moresby	43.84	153	LR	LR	02 25 37.0	
	comp=Z,40nm,18.5s,baz=76,slow=37						
WRA	Warramunga Arr	50.89	173	P	P	02 07 25.4	-0.5
	0.5nm,0.7s,baz=354,slow=8.0,SNR=2.4						
ASAR	Alice Springs	54.54	174	P	P	02 07 50.6	-2.2
	0.8nm,0.9s,baz=358,slow=8.3,SNR=4.2						
ILAR	Eielson Array	60.08	29	P	P	02 08 32.6	+1.1
	0.7nm,0.9s,baz=291,slow=8.2,SNR=6.9						
ARCES	ARCESS Array B	65.81	338	LR	LR	02 42 38.5	
	comp=Z,35nm,18.3s,baz=30,slow=40						
BRTR	Keskin Array B	74.54	307	P	P	02 10 04.5	+0.7
	1.3nm,0.9s,baz=90,slow=3.7,SNR=4.8						
NOA	NORSAR Array B	75.30	334	LR	LR	02 45 55.6	
	comp=Z,22nm,20.3s,baz=50,slow=38						
NVAR	Mina Array Bea	86.90	46	P	P	02 11 12.5	+2.4
	0.3nm,0.7s,baz=277,slow=7.0,SNR=3.5						
PDAR	Pinedale Array	89.18	39	P	P	02 11 23.2	+2.3
	0.9nm,0.9s,baz=325,slow=2.7,SNR=4.5						

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*BEO **21** 01:58:11.5±0.9, 37°.60N×20°.31E, h0^{km}, ML4.2/9*

*ATH **21** 01:58:25.7, 38°.60N×20°.59E, h14^{km}±1^{km}, ML4.2/11, Error ellipse: s-maj=1.7km s-min=0.8km az=283.0*

*THE **21** 01:58:25.3, 38°.62N×20°.54E, h14^{km}, ML4.2/9, Error ellipse: s-maj=0.9km s-min=0.3km az=292.0*

*MOS **21** 01:58:25.7±1.1, 38°.66N×20°.46E, h32^{km}, mb4.5/16, Error ellipse: s-maj=7.1km s-min=3.9km az=84.6*

*NEIC **21** 01:58:25.4±2.1, 38°.66N±0°.06×20°.54E±0°.06, h10^{km}±1^{km}, Error ellipse: s-maj=10.1km s-min=8.4km az=170.0*

*UPSL **21** 01:58:25.7, 38°.60N×20°.59E, h14^{km}, Mw4.1, Moment Tensor Solution. s6 Moment tensor: M$_{rr}$0.33; M$_{\theta\theta}$0.86; M$_{\phi\phi}$-1.19; M$_{r\theta}$0.94; M$_{\theta\phi}$0.72; M$_{\phi r}$-0.35; Fault plane solution: NP1:φ$_s$121.00000°, δ81.00000°, λ40.00000°. NP2:φ$_s$24.00000°, δ51.00000°, λ168.00000°.*

*IDC **21** 01:58:28.2±1.9, 38°.70N×20°.57E, h35^{km}±16^{km}, mb4.0/21, mb1 4.1/31, mb1mx4.0/54, mbtmp4.2/31, ML3.9/10, MS3.4/13, Ms1 3.4/13, ms1mx3.1/52 Error ellipse: s-maj=13.8km s-min=10.4km az=154.0*

ISC 21 01:58:25.2±0.6**, 38°.63N**±0°.02×**20°.55E**±0°.02**, h16^{km}**±3^{km}**, n360,** σ**1^{s}.54**/393**, mb4.2**/40**, MS3.4**/9**, 20C-9D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRAG	Dragano-Lefkad	0.06	15	P	Pg	01 58 28.1	-0.2
DRAG				S	Sg	01 58 30.4	+0.1
	236μm,0.3s						
DRAG	Dragano-Lefkad	0.06	15	P	Pg	01 58 28.2	-0.1
EVGI	Lefkada island	0.08	93	P	Pg	01 58 28.1	-0.3
EVGI				S	Sg	01 58 30.1	-0.4
EVGI	Lefkada island	0.08	93	P	Pg	01 58 28.2	-0.3
EVGI				S	Sg	01 58 30.2	-0.4
NYDR	Nydri-Lefkada	0.14	52	P	Pg	01 58 29.1	0.0
NYDR				S	Sg	01 58 31.8	+0.1
	44μm,0.5s						
NYDR	Nydri-Lefkada	0.14	52	P	Pg	01 58 29.1	0.0
FSK	Fiskardo	0.17	178	P	Pg	01 58 29.6	+0.2
FSK				S	Sg	01 58 31.9	-0.3
	150μm,0.4s						
FSK	Fiskardo	0.17	178	P	Pg	01 58 29.6	+0.2
FSK				AML	AML	01 58 32.5	
FSK				AML	AML	01 58 32.8	
LKD2	Lefkada island	0.18	26	P	Pg	01 58 29.8	+0.1
LKD2				S	Sg	01 58 33.1	+0.3
	64μm,0.7s						
LKD2	Lefkada island	0.18	26	P	Pg	01 58 29.8	+0.1
LKD2				S	Sg	01 58 33.2	+0.5
LKD2				AML	AML	01 58 33.9	
	comp=E,87207μm,0.5s						
LKD2				AML	AML	01 58 34.6	
TSLK	Tsoukalades, L	0.21	22	P	Pg	01 58 30.5	+0.3
TSLK				S	Sg	01 58 34.1	+0.5
	comp=E,62μm,0.5s						
TSLK	Tsoukalades, L	0.21	22	P	Pg	01 58 30.6	+0.4
TSLK				S	Sg	01 58 34.6	+1.0
TSLK				AML	AML	01 58 35.4	
TSLK				AML	AML	01 58 35.8	
KEF4	Livadi, Kephal	0.38	196	P	Pg	01 58 32.9	-0.1
KEF4				S	Sb	01 58 39.0	-0.2
KEF4	Livadi, Kephal	0.38	196	P	Pg	01 58 33.1	+0.1
DMLN	Damoulianata-K	0.41	200	P	Pg	01 58 33.4	-0.2
DMLN				S	Sg	01 58 39.6	+0.4
	comp=E,55μm,0.5s						
DMLN	Damoulianata-K	0.41	200	P	Pg	01 58 33.5	0.0
DMLN				S	Sg	01 58 39.8	+0.5
LXRA	Lixouri, Kepha	0.43	192	P	Pg	01 58 33.9	0.0
VLS	Valsamata	0.45	176	P	Pg	01 58 33.8	-0.4
VLS				S	Sg	01 58 40.6	+0.3
	comp=E,34μm,0.4s						
VLS	Valsamata	0.45	176	P	Pg	01 58 33.9	-0.4
VLS				S	Sg	01 58 40.9	+0.6
VLS				AML	AML	01 58 43.0	
	comp=N,80324μm,0.4s						
VLS				AML	AML	01 58 43.6	
	comp=E,71723μm,0.2s						
ARGA	Argostoli. Kep	0.45	188	P	Pb	01 58 34.9	+0.1
KEF3	Kipouria, Keph	0.45	201	P	Pg	01 58 33.6	-0.7
KEF3				S	Sg	01 58 39.9	-0.5
	comp=E,80μm,0.5s						
KEF3	Kipouria, Keph	0.45	201	P	Pg	01 58 33.7	-0.6
PSDA	Pessada-Kefalo	0.51	177	P	Pg	01 58 34.9	-0.4
PSDA				S	Sg	01 58 42.5	+0.3
PSDA	Pessada-Kefalo	0.51	177	P	Pg	01 58 35.0	-0.4
PVO	Paravola	0.76	90	P	Pg	01 58 40.1	+0.1
PVO				S	Sb	01 58 52.1	+1.9
	comp=E,14μm,0.6s						
PVO	Paravola	0.76	90	P	Pg	01 58 40.1	+0.1
PVO				AML	AML	01 58 57.2	
	comp=N,29722μm,0.8s						
PVO				AML	AML	01 59 00.0	
	comp=E,25417μm,0.4s						
VTN	Vitineika	0.86	145	P	Pb	01 58 41.7	-0.2
VTN	Vitineika	0.86	145	P	Pb	01 58 41.6	-0.2
RLS	Riolos of Patr	0.91	128	P	Pb	01 58 42.4	-0.3
RLS	Riolos of Patr	0.91	128	P	Pb	01 58 42.1	-0.6
RLS				AML	AML	01 59 02.0	
	comp=N,24743μm,0.5s						
RLS				AML	AML	01 59 03.4	
	comp=E,28873μm,0.5s						
IGT	Igoumenitsa	0.92	349	P	Pb	01 58 42.2	-0.7
IGT	Igoumenitsa	0.92	349	P	Pb	01 58 42.6	-0.3
LTHK	Lithakia	0.94	166	P	Pb	01 58 41.9	-1.2
LTHK	Lithakia	0.94	166	P	Pb	01 58 42.1	-1.0
EVR	Evrytania	1.02	73	P	Pb	01 58 44.4	-0.2
EVR	Evrytania	1.02	73	P	Pb	01 58 44.6	0.0
EVR				AML	AML	01 59 13.5	
	comp=E,7407μm,0.5s						
EVR				AML	AML	01 59 14.5	
	comp=N,6258μm,0.7s						
JAN	Janina	1.06	13	P	Pb	01 58 44.9	-0.3
JAN	Janina	1.06	13	P	Pn	01 58 46.1	+0.6
ANX	Ano Chora	1.07	91	P	Pb	01 58 44.9	-0.5
ANX	Ano Chora	1.07	91	P	Pb	01 58 45.0	-0.4
ANX				AML	AML	01 59 07.9	
	comp=N,31947μm,0.6s						
ANX				AML	AML	01 59 08.2	
	comp=E,28987μm,0.7s						
EFP	Efpalio	1.08	100	P	Pb	01 58 44.4	-1.1
EFP	Efpalio	1.08	100	P	Pb	01 58 44.5	-1.1
EFP				AML	AML	01 59 07.3	
	comp=N,30814μm,0.7s						
EFP				AML	AML	01 59 08.0	
	comp=E,27813μm,0.5s						
DRO	Drossia	1.13	126	P	Pb	01 58 45.7	-0.7
DRO	Drossia	1.13	126	P	Pb	01 58 45.8	-0.7
DRO				AML	AML	01 59 10.3	
	comp=N,33598μm,0.7s						
DRO				AML	AML	01 59 13.5	
	comp=E,31992μm,0.5s						
LAKA	Lakka	1.18	109	P	Pn	01 58 46.1	-1.0
KASA	Kassiopi	1.22	337	P	Pg	01 58 49.3	+0.6
TRIZ	Trizonia	1.22	102	P	Pn	01 58 47.0	-0.6
KEK	Kerkira	1.23	332	P	Pb	01 58 48.8	+0.6
KEK	Kerkira	1.23	332	P	Pg	01 58 49.3	+0.2
MAKR	Makrakomi, Fth	1.29	72	P	Pn	01 58 49.5	+0.8
KLV	Kalavryta, Ach	1.38	114	P	Pn	01 58 49.6	-0.4
AGG	Agios Georgios	1.44	73	P	Pn	01 58 51.9	+1.2
AGG	Agios Georgios	1.44	73	P	Pn	01 58 52.0	+1.2
AGG	Agios Georgios	1.44	73	P	Pn	01 58 52.0	+1.2
AGG	Agios Georgios	1.44	73		Pn	01 58 52.0	+1.2
GUR	Goura	1.57	115	P	Pn	01 58 52.4	-0.1
GUR				AML	AML	01 59 27.5	
	comp=N,15940μm,0.5s						
GUR				AML	AML	01 59 27.8	
	comp=E,12296μm,0.7s						

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ITM   Ithomi             1.81 143        Pb       01 58 58.3 +0.4
PYL   PYLOS              1.97 151   P    Pn       01 58 59.8 +1.9
KBN   Korca              2.00   5   P    Pn       01 59 00.6 +2.1
KBN   Korca              2.00   5        Pn       01 59 00.6 +2.1
VLO   Vlora              2.02 336   P    Pn       01 58 59.5 +0.9
VLO   Vlora              2.02 336        Pn       01 58 59.5 +0.9
SCTE  Santa Cesarea      2.17 312        Pn       01 59 01.6 +0.9
FNA   Florina            2.25  16   P    Pn       01 59 03.8 +2.0
FNA   Florina            2.25  16        Pn       01 59 03.8 +2.0
OHR   Ohrid              2.49   4 ePn    Pb       01 59 08.3 -1.4
OHR                               eSn    Sg       01 59 50.2 +4.9
OHR   Ohrid              2.49   4 i Pn   Pb       01 59 08.2 -1.4
TIR   Tirane             2.77 349 ⇑P     Pn       01 59 10.9 +2.0
TIR   Tirane             2.77 349 ePn    Pn       01 59 11.9 +2.9
TIR                               eSn    Sg       01 59 54.2  0.0
TIR   Tirane             2.77 349   P    Pn       01 59 10.0 +1.0
TIR   Tirane             2.77 349        Pn       01 59 09.9 +1.0
TIP   Timpagrande        3.01 282 ⇑P     Pn       01 59 13.2 +0.9
TIP   Timpagrande        3.01 282        Pn       01 59 13.3 +0.9
VAY   Valandovo          3.11  29 ePn    Pn       01 59 15.5 +1.9
VAY                               eSn    Sg       02 00 02.6 -2.4
VAY   Valandovo          3.11  29 i Pn   Pn       01 59 15.4 +1.8
STIP  Stip               3.31  22 i Pn   Pn       01 59 20.5 +4.1
SKO   Skopje             3.41  11 i Pn   Pn       01 59 20.2 +2.4
CEL   Celeste            3.68 266        Pn       01 59 22.4 +0.9
DRME  Dracevica, Mon     3.71 344 ePn    Pn       01 59 22.5 +0.7
PDG   Podgorica          3.93 346 ePn    Pn       01 59 26.1 +1.3
PDG   Podgorica          3.93 346 ePn    Pn       01 59 25.5 +0.7
PDG   Podgorica          3.93 346   Pn   Pn       01 59 25.6 +0.7
PRVS  Prvonek            4.05  16 ePn    Pn       01 59 28.4 +1.9
HCY   Herceg Novi        4.13 338 ePn    Pn       01 59 27.0 -0.6
BOSS  Bosilegrad         4.14  20 ePn    Pn       01 59 30.1 +2.4
APE   Apeiranthos        4.23 110 ⇑P     Pn       01 59 34.3 +5.2
BARS  Barje              4.29  12 ePn    Pn       01 59 31.5 +1.6
BARS  Barje              4.29  12 ePn    Pg       01 59 48.0 +0.5
TREB  Trebinje           4.42 338 ePn    Pn       01 59 31.9 +0.3
TREB  Trebinje           4.42 338 ePn    Pn       01 59 31.5 -0.1
DBRK  Dubrovnik          4.43 336 ePn    Pn       01 59 32.0 +0.1
DBRK                                Sn   Sn       02 00 21.8 -1.3
VTS   Vitosha            4.48  26 ⇑P     Pn       01 59 34.4 +1.9
VTS   Vitosha            4.48  26 ePn    Pn       01 59 34.9 +2.3
VTS   Vitosha            4.48  26   P    Pn       01 59 33.8 +1.2
VTS   Vitosha            4.48  26        Pn       01 59 33.8 +1.2
SANT  Santorini          4.50 118   Pn   Pn       01 59 35.0 +2.2
BRY   Bratogost          4.54 341 ePn    Pn       01 59 33.4  0.0
SELS  Selova             4.61   5 ePn    Pn       01 59 35.0 +0.7
SJES  Sjenica            4.65 355 ePn    Pn       01 59 36.2 +1.3
UPM   Unac-Piva          4.74 345 ePn    Pn       01 59 37.6 +1.4
STON  Ston               4.76 334 ePn    Pn       01 59 36.2 -0.1
STON  Ston               4.76 334 ePn    Pn       01 59 36.0 -0.3
STON  Ston               4.76 334 ePn    Pn       01 59 36.4 +0.1
ALN   Alexandroupoli     4.80  60   P    Pn       01 59 38.8 +2.0
ALN   Alexandroupoli     4.80  60   Pn   Pn       01 59 38.8 +2.0
IDI   Anoyia             4.81 132   Pn   Pn       01 59 39.5 +2.5
      comp=E,2.0nm,0.3s,baz=307,slow=15,SNR=24
IDI                                 Sn   Sn       02 00 32.5 -0.1
      comp=E,9.6nm,0.3s,baz=101,slow=22,SNR=3.3
SGRT  San Giovanni R     4.83 312   Pn   Pn       01 59 37.9 +0.5
ZAPS  Zavoj              4.90  18 ePn    Pn       01 59 40.7 +2.4
VAE   Valguarnera        4.98 259   Pn   Pn       01 59 41.5 +2.2
      comp=E,2.4nm,0.3s,baz=122,slow=7.7,SNR=15
VAE                                 Sn   Sn       02 00 37.0 +0.3
      comp=E,3.8nm,0.3s,baz=118,slow=17,SNR=1.4
LSTV  Lastovo            4.99 327 ePn    Pn       01 59 39.4  0.0
RUDO  Rudo               5.07 350 ePn    Pn       01 59 40.6 +0.1
BOVS  Bovan              5.08   9 ⇓P     Pn       01 59 40.4 -0.3
BOVS  Bovan              5.08   9 ePn    Pn       01 59 40.9 +0.2
RAFF  Raffo Rosso        5.09 256        Pn       01 59 41.0 +0.2
PAOL  Paolisi            5.20 299        Pn       01 59 43.3 +1.0
BLKB  Belogradchik       5.24  17 ⇑P     Pn       01 59 44.9 +1.9
GRUS  Gruza              5.26   1 ePn    Pn       01 59 44.2 +1.0
BBLS  Lazi&#263;i        5.31 351 ePn    Pn       01 59 44.6 +0.7
ZAGS  Zajecar            5.33  13 ePn    Pn       01 59 44.8 +0.6
MAKA  Makarska           5.37 331 ePn    Pn       01 59 44.9 +0.2
DIVS  Divibare           5.49 356 ePn    Pn       01 59 46.7 +0.3
DIVS  Divibare           5.49 356 ePn    Pn       01 59 46.5 +0.2
DIVS  Divibare           5.49 356   Pn   Pn       01 59 46.6 +0.3
HVAR  Hvar               5.51 327 ePn    Pn       01 59 46.6  0.0
RICI  Ricice             5.51 333 ePn    Pn       01 59 46.5 -0.1
HAPS  Han Pijesak,Bl     5.59 348 ePn    Pn       01 59 47.3 -0.5
BALB  Balikesir          5.79  78        Pn       01 59 53.1 +2.7
CLTB  Caltabellotta      5.88 262        Pn       01 59 53.2 +1.4
TEKS  Tekeris            5.97 353 ePn    Pn       01 59 53.1 +0.2
TEKS  Tekeris            5.97 353 ePn    Pn       01 59 50.6 -2.3
VLAD  Vladila            6.10  27 ⇑P     Pn       01 59 57.1 +2.4
MDVR  Moldovita          6.21   8 ⇓P     Pn       01 59 57.0 +0.8
KIJV  Kijevo             6.22 331 ePn    Pn       01 59 57.0 +0.7
BLJ   Bijeljina          6.23 352 ePn    Pn       01 59 55.9 -0.5
ZIRJ  Zirje              6.24 325 ePn    Pn       01 59 56.7 +0.1
MGRS  Mrkonjic Grad      6.34 337 ePn    Pn       01 59 58.9 +0.8
MORI  Morici             6.38 327 ePn    Pn       01 59 59.3 +0.7
HERR  Herculane          6.40  12 ⇑P     Pn       02 00 00.2 +1.4
FRGS  Fruska Gora        6.55 355 ⇓P     Pn       02 00 00.8 -0.1
FRGS  Fruska Gora        6.55 355 ePn    Pn       02 00 01.0 +0.1
FRGS  Fruska Gora        6.55 355 ePn    Pn       02 00 00.4 -0.5
AQU   L'Aquila           6.60 307   P    Pn       02 00 03.3 +1.7
AQU   L'Aquila           6.60 307 ePn    Pn       02 00 04.7 +3.1
AQU   L'Aquila           6.60 307        Pn       02 00 03.3 +1.7
BLY   Banja Luka         6.62 339 ePn    Pn       02 00 02.2 +0.4
BLY   Banja Luka         6.62 339 ePn    Pn       02 00 01.4 -0.4
DUGI  Dugi Otok          6.77 324 ePn    Pn       02 00 04.4 +0.5
UDBI  Udbina             6.90 330 ePn    Pn       02 00 07.1 +1.3
MRAK  Mrakovica          6.94 338 ePn    Pn       02 00 05.6 -0.7
GZR   Gura Zlata         6.96  13 ⇑P     Pn       02 00 07.7 +1.1
BZS   Buzias             7.03   6 ⇑P     Pn       02 00 08.0 +0.5
BZS   Buzias             7.03   6 ePn    Pn       02 00 07.9 +0.5
NRCA  Norcia             7.04 309        Pn       02 00 08.9 +1.2
PLIT  Plitvice           7.25 331 ePn    Pn       02 00 11.5 +0.9
NVLJ  Novalja            7.30 326 ePn    Pn       02 00 11.7 +0.5
ARR   Arges              7.39  23 ⇑P     Pn       02 00 15.1 +2.7
RABC  Rab                7.49 327 ePn    Pn       02 00 14.3 +0.6
MOSL  Moslavina          7.53 339 ePn    Pn       02 00 13.9 -0.4
VOIR                     7.58  25 ⇑P     Pn       02 00 17.8 +2.7
MURB  Monte Urbino       7.64 310   Pn   Pn       02 00 15.8 -0.1
ELL   Elmali             7.65 101   P    Pn       02 00 17.8 +1.7
ELL   Elmali             7.65 101        Pn       02 00 17.8 +1.7
KOVH  Kovagotottos       7.68 347 ePN    Pn       02 00 15.2 -1.2
KOVH                              eSN    Sn       02 01 36.5 -6.4
MORH  Mrgy, Hungar       7.71 350 ePn    Pn       02 00 15.3 -1.5
OZLJ  Ozalj              7.94 333 i Pn   Pn       02 00 20.2 +0.3
MLR   Muntele Rosu       7.95  29 ⇓P     Pn       02 00 23.6 +3.5
MLR   Muntele Rosu       7.95  29   Pn   Pn       02 00 22.6 +2.5
      comp=E,0.9nm,0.3s,baz=240,slow=8.1,SNR=15
MLR                                 LR   LR       02 04 00.8
      comp=E,308nm,21.9s,baz=204,slow=42
MLR   Muntele Rosu       7.95  29        Pn       02 00 22.2 +2.1
ZAG   Zagreb             7.95 336 ePn    Pn       02 00 17.9 -2.2
SMRN  Sveta Marina       7.99 325 ePn    Pn       02 00 21.2 +0.6
NEHR  Nehoiu             8.03  30 ⇓P     Pn       02 00 24.2 +3.1
BRJN  Brijuni            8.07 323 ePn    Pn       02 00 22.1 +0.4
RIY   Rijeka             8.08 328 ePn    Pn       02 00 22.2 +0.4
RIY   Rijeka             8.08 328 ePn    Pn       02 00 22.2 +0.4
KALN  Kalnik             8.09 339 ePn    Pn       02 00 21.1 -0.9
CRES  Cresnjev           8.13 334 ePn    Pn       02 00 22.1 -0.4
DOPR  Dopca              8.16  24 ⇑P     Pn       02 00 25.7 +2.7
LOBO  Lobor              8.22 338 ePn    Pn       02 00 23.3 -0.5
BISRR Bisoca             8.29  31 ⇑P     Pn       02 00 29.6 +4.8
COVR  Voineasa-Covas     8.34  28 ⇓P     Pn       02 00 28.8 +3.3
OZUR                     8.41  26 ⇑P     Pn       02 00 29.4 +3.0
MDUB  Mudurnu            8.43  74        Pn       02 00 28.5 +1.7
CEY   Cerknica           8.44 329 ePn    Pn       02 00 26.7 -0.1
PLOR  Plostina           8.52  30 ⇑P     Pn       02 00 31.1 +3.2
VRI   Vrincioaia         8.56  30 ⇓P     Pn       02 00 32.5 +4.0
LJU   Ljubljana          8.65 331 ePn    Pn       02 00 29.2 -0.5
VSL   Villasalto         8.74 279   Pn   Pn       02 00 29.5 -1.4
MPLH  Magyarpolny        8.82 346 ePN    Pn       02 00 31.4 -0.7
MPLH                              eSN    Sn       02 02 05.4 -5.7
SOKA  Soboth             9.02 335 ePn    Pn       02 00 34.4 -0.3
      comp=E,34nm,0.9s,SNR=40
SOKA                              eSn    Sn       02 02 09.8 -6.1
      comp=E,5.2nm,0.8s
OBKA  Obir               9.04 333 ePn    Pn       02 00 35.4 +0.3
      comp=E,8.3nm,0.4s
OBKA                              eSn    Sn       02 02 14.4 -2.1
      comp=E,20nm,0.7s
TESR  Tescani            9.07  28 ⇑P     Pn       02 00 39.3 +3.8
VLDR  Vladesti           9.12  35 ⇓P     Pn       02 00 39.9 +3.8
PSZ   Piszkesteto        9.30 357 ⇓P     Pn       02 00 39.7 +1.0
PSZ   Piszkesteto        9.30 357 ePN    Pn       02 00 38.5 -0.1
PSZ                               eSN    Sn       02 02 10.6  -12
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PSZ   Piszkesteto        9.30 357   P    Pn       02 00 38.7  0.0
PSZ   Piszkesteto        9.30 357   Pn   Pn       02 00 38.7  0.0
PRED  Cave del Predi     9.36 329        Pn       02 00 38.5 -1.0
ARSA  Arzberg            9.37 338 ePn    Pn       02 00 39.4 -0.3
      comp=E,5.7nm,0.5s,SNR=5.9
KEST  Kesra              9.40 256   Pn   Pn       02 00 43.2 +3.2
      comp=E,0.5nm,0.3s,baz=11,slow=8.3,SNR=8.7
KEST  Kesra              9.40 256   Pn   Pn       02 00 39.0 -1.0
VLC   Villacollemand     9.43 309   Pn   Pn       02 00 40.9 +0.5
TEOL  Teolo              9.43 318        Pn       02 00 40.6 +0.2
MYKA  Terra Mystica      9.48 330 ePn    Pn       02 00 40.9 -0.2
      comp=E,7.5nm,0.8s
MYKA                              eSn    Sn       02 02 25.8 -1.5
      comp=E,5.2nm,0.7s
STAL  STALIGIAL          9.58 325        Pn       02 00 41.8 -0.6
ZOU   Zoufplan           9.69 327   Pn   Pn       02 00 43.7 -0.4
CIMO  Cimolais           9.74 325        Pn       02 00 43.3 -1.3
PRMA  PARMA              9.81 312   Pn   Pn       02 00 45.8 +0.3
ZST   Bratislava         9.89 346 eP     Pn       02 00 46.8 +0.2
ZST   Bratislava         9.89 346 ePN    Pn       02 00 46.8 +0.2
CONA  Conrad Observa     9.91 341 ePn    Pn       02 00 46.6 -0.4
      comp=E,2.3nm,0.5s
CTI   Castel Tesino      9.92 321   P    Pn       02 00 47.3 +0.1
CTI   Castel Tesino      9.92 321        Pn       02 00 47.3 +0.1
VYHS  Vyhne              9.94 353 eP     Pn       02 00 48.6 +1.2
VYHS  Vyhne              9.94 353 ePN    Pn       02 00 48.6 +1.2
MODS  Modra-Piesok      10.03 347 eP     Pn       02 00 48.4 -0.2
MODS  Modra-Piesok      10.03 347 ePN    Pn       02 00 48.4 -0.2
ABTA  Abfaltersbach     10.04 327 ePn    Pn       02 00 48.8  0.0
      comp=E,4.8nm,0.4s,SNR=9.2
ABTA                              eSn    Sn       02 02 37.3 -3.8
      comp=E,18nm,0.7s
UZH   Uzhgorod          10.08   7 eP     Pn       02 00 54.5 +5.2
UZH                               eS     Sn       02 02 48.6 +6.7
UZH                                 MLR  MLR
      comp=N,60nm,12.0s
UZH                                 MLR  MLR
      comp=E,44nm,12.0s
UZH                                 MLR  MLR
      comp=Z,60nm,12.0s
BR131 Keskin Array S    10.22  80   P    Pn       02 00 51.0 -0.4
BR131 Keskin Array S    10.22  80        Pn       02 00 51.0 -0.4
BRTR  Keskin Array B    10.22  80   Pn   Pn       02 00 55.9 +4.5
      comp=Z,0.5nm,0.3s,baz=261,slow=12,SNR=20
BRTR  Keskin Array B    10.22  80   Pn   Pn       02 00 52.6 +1.2
MOA   Molln             10.29 336 ePn    Pn       02 00 52.3 +0.1
      comp=Z,7.0nm,0.5s,SNR=21
MOA                               eSn    Sn       02 02 46.3 -0.9
      comp=Z,2.6nm,0.4s
CRVS  Cervenica-Dubn    10.29   3 eP     Pn       02 00 53.3 +1.1
CRVS  Cervenica-Dubn    10.29   3 ePN    Pn       02 00 53.3 +1.1
JAVC  Velka Javorina    10.44 349 ePN    Pn       02 00 55.5 +1.3
WTTA  Wattenberg        10.82 326 ePn    Pn       02 01 00.9 +1.4
      comp=Z,7.8nm,0.4s,SNR=13
WTTA                              eSn    Sn       02 02 56.9 -3.5
      comp=Z,13nm,0.7s
KRUC  Moravsky          10.86 345 ePN    Pn       02 01 01.0 +1.1
WATA  Walderalm         10.90 326 ePn    Pn       02 01 02.0 +1.3
      comp=Z,13nm,0.6s,SNR=11
WATA                              eSn    Sn       02 03 00.4 -1.9
      comp=Z,6.6nm,0.5s
SQTA  Sankt Quirin      10.98 324 ePn    Pn       02 01 03.5 +1.8
      comp=Z,5.5nm,0.4s,SNR=7.8
SQTA                              eSn    Sn       02 03 01.9 -2.3
      comp=Z,12nm,0.7s
VRAC  Vranov            11.05 346   LR   LR       02 06 50.9
      comp=Z,234nm,18.8s,baz=175,slow=46
VRAC  Vranov            11.05 346 ePN    Pn       02 01 02.8 +0.2
FETA  Feichten          11.06 323 ePn    Pn       02 01 03.8 +1.0
      comp=Z,4.7nm,0.8s
FETA                              eSn    Sn       02 03 04.7 -1.5
      comp=Z,9.5nm,0.8s
MOTA  Moosalm           11.12 325 ePn    Pn       02 01 04.3 +0.7
      comp=Z,25nm,0.8s,SNR=7.9
MOTA                              eSn    Sn       02 03 05.4 -2.3
      comp=Z,11nm,0.8s
CKRC  Cesky Krumlov     11.14 338 eP     Pn       02 01 02.6 -1.2
DAVOX Davos/Dischmat    11.31 320   Pn   Pn       02 01 08.2 +1.9
      comp=Z,0.8nm,0.3s,baz=128,slow=21,SNR=9.0
DAVOX                               Sn   Sn       02 03 04.1 -8.3
      comp=Z,0.4nm,0.3s,baz=333,slow=20,SNR=2.5
GEC2  GERESS Array S    11.35 336   Pn   Pn       02 01 05.8 -0.9
GERES GERESS Array B    11.35 336   Pn   Pn       02 01 06.0 -0.7
      comp=Z,0.8nm,0.3s,baz=154,slow=13,SNR=33
GERES                               Sn   Sn       02 03 05.9 -7.3
      comp=Z,0.3nm,0.3s,baz=157,slow=23,SNR=1.9
GERES                               LR   LR       02 06 05.8
      comp=Z,100nm,20.2s,baz=238,slow=41
MORC  Moravsky Berou    11.36 350   P    Pn       02 01 06.8  0.0
MORC  Moravsky Berou    11.36 350 ePN    Pn       02 01 07.0 +0.2
MORC  Moravsky Berou    11.36 350   Pn   Pn       02 01 06.8  0.0
RETA  Reutte            11.38 324 ePn    Pn       02 01 08.1 +1.0
      comp=Z,2.0nm,0.5s
RETA                              eSn    Sn       02 03 12.7 -1.2
      comp=Z,3.2nm,0.4s
TUE   Stuetta           11.38 317   Pn   Pn       02 01 07.3  0.0
KHC   Kasperske Hory    11.64 337 eP     Pn       02 01 09.2 -1.4
KHC                               ex     x        02 03 18.0
KHC   Kasperske Hory    11.64 337 eP     Pn       02 01 09.2 -1.4
KHC                               e               02 03 18.0
DAVA  Damuels           11.66 321 ePn    Pn       02 01 11.9 +0.9
      comp=Z,3.1nm,0.5s
DAVA                              eSn    Sn       02 03 17.4 -3.4
      comp=Z,16nm,0.9s
KRLC  Kraliky           11.76 348 eP     Pn       02 01 12.7 +0.4
KRLC  Kraliky           11.76 348 eP     Pn       02 01 12.7 +0.4
PRU   Pruhonice         12.14 341 eP     Pn       02 01 17.9 +0.4
PRU   Pruhonice         12.14 341 eP     Pn       02 01 17.9 +0.4
PRA   Prague            12.25 341 eP     Pn       02 01 18.8 -0.1
PRA   Prague            12.25 341 eP     Pn       02 01 18.8 -0.1
OSTC  Ostas             12.32 347 eP     Pn       02 01 20.8 +0.9
SENIN Lac Senin/Sane    12.46 313        Pn       02 01 22.4 +0.3
BFO   Black Forest      13.13 322   P    Pn       02 01 31.3 +0.3
BFO   Black Forest      13.13 322   Pn   Pn       02 01 31.3 +0.3
MMAI  Mount Meron Ar    13.28 110   Pn   Pn       02 01 31.0 -2.1
      comp=Z,0.8nm,0.3s,baz=320,slow=13,SNR=2.4
MMAI                                Sn   Sn       02 03 52.2 -8.4
      comp=Z,1.1nm,0.3s,baz=299,slow=28,SNR=5.8
AKASG Malin Array Be    13.55  24   Pn   Pn       02 01 37.3 +0.7
      comp=Z,0.7nm,0.3s,baz=211,slow=11,SNR=1.4
AKBB  Malin Array Si    13.55  24 i P    Pn       02 01 37.3 +0.7
ECH   Echery            13.64 319   P    Pn       02 01 37.8 -0.2
ECH   Echery            13.64 319   Pn   Pn       02 01 37.8 -0.2
CLL   Collm             13.75 340 i PP   P        02 01 49.8 +1.9
      comp=Z,16nm,1.3s
CLL                                 LmV           02 08 00.0
      comp=Z,100nm,18.2s
CLL   Collm             13.75 340 i P    P        02 01 49.8 +1.9
GHAJ  Ghor Haditha      14.30 116   Pn   Pn       02 01 47.9 +0.8
EIL   Elat              14.88 123   Pn   Pn       02 01 54.5 -0.5
      comp=Z,0.3nm,0.3s,baz=320,slow=4.7,SNR=6.1
EIL                                 Sn   Sn       02 04 27.3  -12
      comp=Z,1.3nm,0.3s,baz=240,slow=22,SNR=8.1
WLF   Walferdange       15.09 322   P    Pn       02 01 58.2 +0.5
WLF                                 pmax pmax
      comp=Z,29nm,1.0s
WLF   Walferdange       15.09 322        Pn       02 01 58.2 +0.5
SUW   Suwalki           15.50   6 eP     Pn       02 02 03.2 +0.2
SUW   Suwalki           15.50   6   P    Pn       02 02 02.7 -0.2
SUW                                 pmax pmax
      comp=Z,46nm,0.9s
SUW   Suwalki           15.50   6   Pn   Pn       02 02 02.7 -0.2
MNK   Minsk             16.65  15 i P    Pn       02 02 14.0 -3.7
MNK                               i S    Sn       02 05 17.9 -4.2
MNK                                 pmax pmax
      comp=Z,18nm,0.7s
MNK                                 pmax pmax
      comp=N,2.0nm,0.7s
MNK                                 MLR  MLR
      comp=E,26nm,17.0s
MNK                                 MLR  MLR
      comp=Z,108nm,17.0s
MNK                                 MLR  MLR
      comp=N,69nm,17.0s
MNK   Minsk             16.65  15 i P    Pn       02 02 14.1 -3.6
MNK                               i P    Pn       02 02 14.1 -3.6
      comp=N,2.0nm,0.7s
MNK                               i P    Pn       02 02 14.1 -3.6
      comp=Z,18nm,0.7s,baz=201
MNK                               i S    Sn       02 05 17.9 -4.1
MNK                               i LQ   LQ       02 07 06.2
MNK                               i LR   LR       02 08 21.4
MNK                               i LRM  MLR      02 08 47.5
      comp=E,26nm,17.1s
MNK                               i LRM  MLR      02 09 05.6
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      comp=Z,108nm,17.1s
MNK                               i LRM  MLR      02 09 29.1
      comp=N,69nm,17.2s
GURO  Guroymak-BITLI    16.79  84   Pn   Pn       02 02 18.8 -1.0
NACGM Naroch            16.82  13 i P    Pn       02 02 19.6 -0.3
PABE  Paberze           17.04   7 eP     Pn       02 02 21.3 -1.4
PABE  Paberze           17.04   7   Pn   Pn       02 02 20.8 -1.9
PABE                                IAmb IAmb     02 02 25.0
      comp=Z,26nm,0.9s
SIRT  Sirnak            17.27  87   Pn   Pn       02 02 25.4 -0.3
SIRT                                IAmb IAmb     02 02 44.5
      comp=Z,39nm,1.0s
SHA1  Shidzhatmaz       17.39  66 i P    Pn       02 02 27.0 -0.3
KIV   Kislovodsk        17.45  65 eP     Pn       02 02 26.5 -1.4
KIV                                 pmax pmax
      comp=Z,5.0nm,1.1s
KIV                                 MLR  MLR
      comp=Z,22nm,14.0s
KBZ   Khabaz            17.56  66 i P    P        02 02 31.7 +1.5
KBZ                                 pmax pmax
      comp=Z,6.0nm,1.1s
VORD  Divnogorie        18.08  41 eP     P        02 02 37.1 +1.2
VORD                                pmax pmax
      comp=Z,10.0nm,0.6s
VSR   Storozhevoye      18.16  40 eP     Pn       02 02 36.8 +0.3
VSR                                 pmax pmax
      comp=Z,10.0nm,1.1s
LPSR  Galich'ya Gora    18.91  36 eP     P        02 02 44.4 -0.6
LPSR                                pmax pmax
      comp=Z,10.0nm,1.3s
ESDC  Sonseca Array     19.03 281   P    P        02 02 47.3 +0.8
      comp=Z,0.1nm,0.3s,baz=73,slow=10,SNR=18
OBN   Obninsk           19.72  28   LR   LR       02 10 55.4
      comp=Z,30nm,18.3s,baz=245,slow=38
OBN   Obninsk           19.72  28 i P    P        02 02 53.6 -0.2
OBN                                 pmax pmax
      comp=Z,12nm,0.6s
OBN                                 MLR  MLR
      comp=Z,138nm,15.0s
VSU   Vasula            20.25   9 eP     P        02 02 59.3 -0.3
MDT   Midelt            21.20 262   P    P        02 03 12.6 +2.3
      comp=Z,2.4nm,0.9s,baz=127,slow=5.6,SNR=5.2
MDT                                 LR   LR       02 11 28.1
      comp=Z,38nm,18.4s,baz=56,slow=37
UPP   Uppsala           21.34 356 eP     P        02 03 11.2  0.0
HFS   Hagfors           21.96 351   P    P        02 03 17.9 -0.1
      comp=Z,11nm,0.7s,baz=165,slow=12,SNR=36
HFS                                 LR   LR       02 13 45.0
      comp=Z,102nm,19.5s,baz=262,slow=42
NC602 NORSAR Array S    22.84 349   P    P        02 03 27.6 +0.2
NC602                               IAmb IAmb     02 03 43.4
      comp=Z,11nm,1.0s
NAO01 NORSAR Array S    23.05 348   P    P        02 03 28.8 -0.8
NAO01                               IAmb IAmb     02 03 31.7
      comp=Z,16nm,1.0s
EKA   Eskdalemuir Ar    23.08 324   P    P        02 03 29.7 -0.2
      comp=Z,16nm,0.8s,baz=118,slow=11,SNR=14
FINES FINESS Array B    23.10   7   P    P        02 03 28.8 -1.3
      comp=Z,16nm,0.8s,baz=174,slow=11,SNR=48
FINES                               PcP  PcP      02 07 18.9 +0.5
      comp=Z,1.8nm,0.9s,baz=190,slow=2.1,SNR=5.3
FINES                               LR   LR       02 13 42.7
      comp=Z,103nm,18.3s,baz=186,slow=40
FINES FINESS Array B    23.10   7   P    P        02 03 30.5 +0.4
FINES FINESS Array B    23.10   7   P    P        02 03 30.5 +0.4
NC405 NORSAR Array S    23.18 349   P    P        02 03 29.8 -1.2
NB2   NORSAR Subarra    23.19 348   P    P        02 03 30.3 -0.7
      comp=Z,6.2nm,0.9s,baz=161,slow=11
NOA   NORSAR Array B    23.19 348   P    P        02 03 31.5 +0.5
      comp=Z,2.7nm,0.7s,baz=166,slow=10,SNR=11
NBO00 NORSAR Array S    23.25 348   P    P        02 03 31.0 -0.6
NBO00                               IAmb IAmb     02 03 34.7
      comp=Z,16nm,0.9s
BELG  Belogornoye       23.27  45   P    P        02 03 32.3 +0.5
      comp=Z,19nm,0.6s,baz=156,slow=3.0,SNR=6.3
BELG                                LR   LR       02 13 52.3
      comp=Z,161nm,20.5s,baz=7.4,slow=40
BELG  Belogornoye       23.27  45 i P    P        02 03 32.4 +0.6
BELG                                pmax pmax
      comp=Z,5.0nm,0.9s
KLMR  Klimovskoe        25.22  22 eP     P        02 03 49.5 -0.4
KLMR                                pmax pmax
      comp=Z,16nm,0.9s
KLMR  Klimovskoe        25.22  22 eP     P        02 03 49.6 -0.4
KLMR                                AMP           02 03 51.3
      comp=Z,16nm,0.9s
KIRV  Kirov             27.27  33   LR   LR       02 15 03.9
      comp=Z,96nm,18.6s,baz=244,slow=37
PRGR  Permogore         27.75  26 eP     P        02 04 12.1 -0.7
PRGR                                pmax pmax
      comp=Z,3.0nm,0.6s
AKTO  Aktyubinsk        28.89  54   P    P        02 04 22.9 -0.3
      comp=Z,1.0nm,0.4s,baz=270,slow=6.4,SNR=8.8
AKTO                                LR   LR       02 17 04.7
      comp=Z,53nm,18.1s,baz=297,slow=39
ABKAR Akbulak array     29.97  56   P    P        02 04 32.5 -0.2
ABKAR Akbulak array     29.97  56   P    P        02 04 32.2 -0.5
ABKAR                               IAmb IAmb     02 04 46.0
      comp=Z,3.6nm,1.1s
TORD  Torodi Ar. Bea    30.39 218   P    P        02 04 37.2 +0.5
      comp=Z,2.0nm,0.5s,baz=28,slow=9.6,SNR=30
TORD  Torodi Ar. Bea    30.39 218   IAmb IAmb     02 04 37.9
      comp=Z,1.1nm,0.7s
ARU   Arti              30.71  42c iP    P        02 04 40.1 +1.0
ARU                                 S    S        02 09 43.3 +2.2
ARU                                 SS   ScP      02 11 19.1 +0.6
ARU                                 pmax pmax
      comp=Z,9.0nm,1.4s
ARCES ARCESS Array B    31.09   3   P    P        02 04 41.8 -0.5
      comp=Z,1.1nm,0.5s,baz=187,slow=11,SNR=13
KOWA  Kowa              32.37 229   P    P        02 04 54.8 +0.7
      comp=Z,1.4nm,0.8s,baz=42,slow=10,SNR=6.4
BRVK  Borovoye          36.75  50   P    P        02 05 31.3 -0.3
BRVK                                pmax pmax
      comp=Z,3.0nm,0.7s
BRVK  Borovoye          36.75  50   P    P        02 05 31.3 -0.3
BRVK                                IAmb IAmb     02 05 36.0
      comp=Z,3.5nm,0.7s
KKAR  Karatay Array     37.59  67   P    P        02 05 38.8 -0.2
KKAR  Karatay Array     37.59  67   P    P        02 05 38.8 -0.2
CHGR  Chuyangaron       37.60  74   P    P        02 05 38.8 -0.4
GAR   Garm              38.38  73   P    P        02 05 46.6 +0.8
GAR                                 IAmb IAmb     02 05 53.7
      comp=Z,6.3nm,0.7s
BTK   Batken            38.48  72   P    P        02 05 47.8 +1.2
BTK                                 pmax pmax
      comp=Z,3.0nm,0.8s
BTK   Batken            38.48  72   P    P        02 05 47.8 +1.2
BTK                                 IAmb IAmb     02 05 59.1
      comp=Z,3.5nm,0.8s
DBIC  Dimbokro          39.24 222   LR   LR       02 23 13.4
      comp=Z,58nm,19.2s,baz=44,slow=38
SPITS Spitsbergen Ar    39.70 359   P    P        02 05 57.7 +1.5
SPITS                               pmax pmax
      comp=Z,6.0nm,1.0s
AAK   Ala-Archa         40.55  67   P    P        02 06 04.0 +0.1
      comp=Z,0.8nm,0.4s,baz=238,slow=9.5,SNR=3.1
AAK   Ala-Archa         40.55  67 i P    P        02 06 05.5 +1.6
AAK                                 pmax pmax
      comp=Z,11nm,1.1s
KBS   Kingsbay          40.57 357ceP     P        02 06 03.9 +0.5
KBS                                 pmax pmax
      comp=Z,67nm,2.5s
KURBB Kurchatov Arra    41.94  54   P    P        02 06 14.6 -0.4
      comp=Z,1.4nm,0.3s,baz=282,slow=9.0,SNR=9.7
KURK  Kurchatov         41.99  54ceP     P        02 06 16.0 +0.6
KURK                                pmax pmax
      comp=Z,4.0nm,1.3s
KURK  Kurchatov         41.99  54   P    P        02 06 14.6 -0.8
KURK  Kurchatov         41.99  54   IAmb IAmb     02 06 22.7
      comp=Z,3.0nm,1.0s
MK31  Makanchi Array    45.05  59   P    P        02 06 39.9 -0.2
MK31                                pmax pmax
      comp=Z,1.0nm,0.8s
MK31  Makanchi Array    45.05  59   P    P        02 06 39.9 -0.2
MKAR  Makanchi Array    45.05  59   P    P        02 06 39.7 -0.4
      comp=Z,1.0nm,0.3s,baz=281,slow=7.6,SNR=46
MKAR  Makanchi Array    45.05  59   P    P        02 06 39.9 -0.3
MKAR  Makanchi Array    45.05  59   P    P        02 06 39.9 -0.3
ZAA0  Zalesovo Array    45.37  48   P    P        02 06 41.8 -0.8
ZALV  Zalesovo Beam     45.37  48   P    P        02 06 42.2 -0.4
      comp=Z,10nm,0.5s,baz=278,slow=8.9,SNR=42
ZALV  Zalesovo Beam     45.37  48   P    P        02 06 41.5 -1.1
NRIK  Noril'sk          46.38  27   LR   LR       02 27 06.2
      comp=Z,145nm,18.4s,baz=237,slow=37
NRIK  Noril'sk          46.38  27 i P    P        02 06 51.5 +1.2
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Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRIK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
DGZ	**Jazzator, Alta**	47.74	54	*i* P	P	02 07 03.0	+1.6
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
WMQ	**Urumqi**	49.52	61	*e*P	P	02 07 19.5	+4.4
LSA	**Lhasa**	57.80	76	P	P	02 08 14.8	-1.7
LSA				pmax	pmax		
	comp=Z,3.0nm,0.5s						
LSA	**Lhasa**	57.80	76	P	P	02 08 14.8	-1.7
SCHQ	**Schefferville**	58.15	317	P	P	02 08 18.5	+0.5
	comp=Z,3.8nm,0.7s,baz=31,slow=5.9,SNR=1.9						
GTA	**Gaotai**	59.59	62	*e*P	P	02 08 27.5	-0.9
GTA				pP	sP	02 08 36.6	+1.2
GTA				sP	pP	02 08 42.3	+8.8
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SONM	**Songino Array**	60.16	51	P	P	02 08 32.1	0.0
	comp=Z,1.6nm,0.9s,baz=283,slow=10,SNR=8.8						
SONM	**Songino Array**	60.16	51	P	P	02 08 32.1	0.0
SONM				pmax	pmax		
	comp=Z,1.0nm,0.9s						
SONM	**Songino Array**	60.16	51	IAmb	IAmb	02 08 33.0	
	comp=Z,1.4nm,0.9s						
ULN	**Ulaanbaatar**	60.54	51	*ce*P	P	02 08 33.9	-0.9
ULN				pmax	pmax		
	comp=Z,11nm,2.5s						
HHC	**Hu-ho-hao-te**	66.76	56	*e*P	P	02 09 17.5	+1.6
HHC				pmax	pmax		
	comp=Z,20nm,1.1s						
HHC				pmax	pmax		
	comp=Z,180nm,6.1s						
KLR	**Kul'dur**	73.51	40	P	P	02 09 57.1	+0.1
	comp=Z,0.8nm,0.5s,baz=300,slow=8.3,SNR=4.2						
ILAR	**Eielson Array**	76.47	354	P	P	02 10 14.3	+0.5
	comp=Z,0.5nm,0.9s,baz=6.9,slow=5.1,SNR=5.2						
USRK	**Ussuriysk Ar.**	76.94	43	P	P	02 10 15.1	-1.7
	comp=Z,2.4nm,0.7s,baz=291,slow=5.7,SNR=4.9						
KSRS	**Korea Array**	79.03	51	P	P	02 10 27.6	-0.9
	comp=Z,0.5nm,0.4s,baz=318,slow=5.1,SNR=5.2						
MJAR	**Matsushiro Arr**	85.66	46	P	P	02 11 03.5	+0.3
	comp=Z,3.1nm,0.8s,baz=335,slow=3.0,SNR=6.0						
MJAR	**Matsushiro Arr**	85.66	46	P	P	02 11 03.5	+0.3
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MJAR	**Matsushiro Arr**	85.66	46	IAmb	IAmb	02 11 04.5	
	comp=Z,2.1nm,0.8s						
CPUP	**Villa Florida**	97.28	242	LR	LR	02 57 26.9	
	comp=Z,36nm,18.1s,baz=179,slow=36						

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*NNC **21** 02:20:31.1±0.3, 43°.40N×70°.28E, h0^{km}, mb3.8, mpv3.4, Error ellipse: s-maj=2.3km s-min=1.4km az=80.0, Suspected Mining explosion.*
*SOME **21** 02:20:31.4, 43°.37N×70°.30E, h5^{km}*
*KRNET **21** 02:20:32.4±0.1, 43°.38N×70°.29E, mb2.9*
ISC 21 02:20:32.1±1.2, **43°.42N**±0°.04×**70°.47E**±0°.05, **h0**^{km}**, n35,** σ1^{s}**50**/62**, 36C-5D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK09	**Karatay Array**	0.30	176	⇑P	Pg	02 20 37.3	-0.5
	3.2nm,0.2s,baz=333,slow=14						
KK09				⇑S	Sg	02 20 42.1	+0.3
	28nm,0.2s						
KK05	**Karatay Array**	0.31	172	⇑P	Pg	02 20 37.7	-0.3
KK05				⇓S	Sg	02 20 42.7	+0.8
KK04	**Karatay Array**	0.31	175	⇑P	Pg	02 20 37.7	-0.4
KK04				⇑S	Sg	02 20 42.6	+0.4
KK01	**Karatay Array**	0.32	175	⇑P	Pg	02 20 37.7	-0.5
KK01				⇓S	Sg	02 20 42.8	+0.5
KK08	**Karatay Array**	0.32	177	⇓P	Pg	02 20 37.6	-0.5
KK08				⇑S	Sg	02 20 42.4	+0.1
KK02	**Karatay Array**	0.32	174	⇑P	Pg	02 20 37.8	-0.5
KK02				⇑S	Sg	02 20 42.7	+0.4
KK03	**Karatay Array**	0.32	176	⇑P	Pg	02 20 37.8	-0.5
KK03				⇓S	Sg	02 20 42.8	+0.4
KK06	**Karatay Array**	0.33	173	⇑P	Pg	02 20 38.0	-0.4
KK06				⇑S	Sg	02 20 43.2	+0.5
KK07	**Karatay Array**	0.33	176	⇑P	Pg	02 20 37.9	-0.6
KK07				⇑S	Sg	02 20 43.0	+0.2
MNAS	**Manas**	1.76	121	⇑*i*P	Pg	02 21 06.4	+0.5
	baz=18						
MNAS				⇑*i*S	Sg	02 21 31.7	+3.0
	baz=18						
TRKS	**Terek-Say**	1.96	165	⇑*i*P	Pg	02 21 09.4	-0.2
	baz=61						
TRKS				⇑*i*S	Sg	02 21 36.6	+1.7
	baz=61						
MRKS	**Merke**	2.13	108	*e*P	Pg	02 21 13.1	+0.1
	4.7nm,0.2s						
MRKS				*e*S	Sg	02 21 44.6	+4.1
	33nm,0.5s						
MRKS	**Merke**	2.13	108	Pg	Pg	02 21 13.1	+0.1
	4.7nm,0.2s						
MRKS				Lg	Lg	02 21 44.6	
	33nm,0.5s						
EKS2	**Erkin-Say**	2.54	106	⇑*i*P	Pb	02 21 18.0	-0.7
	baz=4.0						
EKS2				⇑*i*S	Sb	02 21 51.5	+0.9
	baz=4.0						
AML	**Almayashu**	2.70	117	⇑*i*P	Pb	02 21 20.5	-1.1
	baz=15						
AML				⇑*i*S	Sb	02 21 55.6	+0.2
	baz=15						
USP	**Ospenovka**	2.94	92	⇑*i*P	Pb	02 21 24.1	-1.4
	baz=91						
USP				⇑*i*S	Sb	02 22 01.5	-0.6
	baz=91						
AAK	**Ala-Archa**	3.06	104	⇑Pg	Pg	02 21 29.9	-0.8
	2.7nm,0.4s						
AAK				⇑Lg	Lg	02 22 11.9	
	8.0nm,0.5s						
AAK	**Ala-Archa**	3.06	104	⇑*i*P	Pb	02 21 25.5	-1.9
	baz=2.0						
AAK				⇑*i*S	Sb	02 22 03.9	-1.4
	baz=2.0						
CHMS	**Chumysh**	3.16	96	⇑*i*P	Pb	02 21 27.0	-2.2
	baz=95						
CHMS				⇑*i*S	Sb	02 22 06.6	-1.6
	baz=95						
UCH	**Uchtor**	3.21	110	⇑*e*P	Pb	02 21 27.6	-2.6
	baz=9.0						
UCH				⇑*i*S	Sb	02 22 07.9	-2.1
	baz=9.0						
BTK	**Batken**	3.37	175	⇑*i*P	Pn	02 21 27.7	+1.6
	baz=73						
BTK				⇑*i*S	Sn	02 22 07.9	+1.0
	baz=73						
DGS	**Degeres**	3.87	91	*e*P	Pg	02 21 44.6	-1.8
	3.5nm,0.3s						
DGS				*e*S	Sg	02 22 37.1	+0.6
	9.5nm,0.6s						
DGS	**Degeres**	3.87	91	Pg	Pg	02 21 44.6	-1.8
	3.5nm,0.3s						
DGS				Lg	Lg	02 22 37.1	
	9.5nm,0.6s						
KST	**Kastek**	4.03	94	*e*P	Pg	02 21 47.3	-2.1
	7.0nm,0.6s						
KST				*e*S	Sg	02 22 41.9	+0.2
	10nm,0.7s						
KST	**Kastek**	4.03	94	Pg	Pg	02 21 47.3	-2.1
	7.0nm,0.6s						
KST				Lg	Lg	02 22 41.9	
	10nm,0.7s						
KUU	**Kurty**	4.29	82	*e*P	Pg	02 21 53.8	-0.5
	2.0nm,0.1s						
KUU				*e*S	Sg	02 22 52.7	+2.9
	12nm,0.1s						
KUU	**Kurty**	4.29	82	Pg	Pg	02 21 53.8	-0.5
	2.0nm,0.1s						
KUU				Lg	Lg	02 22 52.7	
	12nm,0.1s						
MTBS	**Maitube**	4.36	92	*e*P	Pg	02 21 55.0	-0.7
	2.7nm,0.5s						
MTBS				*e*S	Sg	02 22 54.9	+2.6
	10nm,0.7s						
TNSS	**Tian-Shan**	4.75	92	*e*P	Pg	02 22 00.5	-2.6
	4.6nm,0.9s						
TNSS				*e*S	Sg	02 23 04.4	-0.3
	4.9nm,0.9s						
TNSS	**Tian-Shan**	4.75	92	Pg	Pg	02 22 00.5	-2.6
	4.6nm,0.9s						
TNSS				Lg	Lg	02 23 04.4	
	4.9nm,0.9s						
CHKK	**Chushkaly**	4.75	83	*e*P	Pg	02 22 01.8	-1.3
	1.4nm,0.1s						
CHKK				*e*S	Sg	02 23 06.5	+1.8
	5.5nm,0.6s						
CHKK	**Chushkaly**	4.75	83	Pg	Pg	02 22 01.8	-1.3
	1.4nm,0.1s						
CHKK				Lg	Lg	02 23 06.5	
	5.5nm,0.6s						
KOTS	**Kotyrbulak**	4.85	90	*e*P	Pg	02 22 03.1	-2.0
	3.1nm,0.4s						
KOTS				*e*S	Sg	02 23 08.9	+1.0
	9.0nm,0.5s						
KOTS	**Kotyrbulak**	4.85	90	Pg	Pg	02 22 03.1	-2.0
	3.1nm,0.4s						
KOTS				Lg	Lg	02 23 08.9	
	9.0nm,0.5s						
OTUK	**Ortayu**	5.00	15	⇑Pn	Pn	02 21 49.5	+1.2
	1.2nm,0.4s						
OTUK				⇑Sn	Sn	02 22 48.7	+1.9
	0.7nm,0.3s						
OTUK				⇓Lg	Lg	02 23 12.5	
	1.6nm,0.6s						

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*VAO **21** 02:31:36.3±0.6, 22°.10S×69°.06W, h140^{km}±5^{km}, mb3.8*
*GUC **21** 02:31:39.0±0.5, 21°.99S×68°.74W, h116^{km}±3^{km}, ML3.5*
ISC 21 02:31:37.5±0.7, **21°.99S**±0°.04×**68°.83W**±0°.08, **h131**^{km}±9^{km}, **n28,** σ0^{s}**93**/39**, 7C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	0.43	296	⇑*i*P	Pn	02 31 56.6	+0.1
PB09				*e*S	Sn	02 32 10.0	-0.9
PB09				IAML		02 32 12.3	
	comp=N,1μm,0.3s						
LVC	**Limon Verde**	0.62	187	*e*P	Pn	02 31 57.4	-0.6
PB03	**IPOC Station P**	0.86	266	⇑*i*P	Pn	02 31 60.0	+0.5
PB03				*e*S	Sn	02 32 16.1	+0.1
PB03				IAML		02 32 17.7	
	comp=N,690nm,0.2s						
PB06	**IPOC Station P**	0.99	224	⇑*i*P	Pn	02 32 01.0	+0.3
PB06				*e*S	Sn	02 32 18.3	+0.1
PB06				IAML		02 32 19.6	
	comp=N,2μm,0.4s						
PB07	**IPOC Station P**	1.01	285	⇑*i*P	Pn	02 32 01.6	+0.7
PB07				*e*S	Sn	02 32 18.6	+0.1
PB07				IAML		02 32 20.5	
	comp=N,1μm,0.3s						
PB01	**IPOC Station P**	1.12	327	*i* P	Pn	02 32 01.9	0.0
PB01				*e*S	Sn	02 32 19.5	-0.8
PB01				IAML		02 32 21.6	
	comp=E,1μm,0.6s						
PB02	**IPOC Station P**	1.19	304	⇑*i*P	Pn	02 32 03.0	+0.5
PB02				*e*S	Sn	02 32 21.4	-0.2
PB02				IAML		02 32 22.5	
	comp=N,1μm,0.4s						
PB04	**IPOC Station P**	1.27	254	⇑*i*P	Pn	02 32 04.1	+0.7
PB04				*e*S	Sn	02 32 23.5	+0.4
PB04				IAML		02 32 28.5	
	comp=E,895nm,0.4s						
PB15	**IPOC Station P**	1.35	206	*i* P	Pn	02 32 04.2	-0.1
PB15				*e*S	Sn	02 32 25.1	+0.4
PB05	**IPOC Station P**	1.54	236	⇑*i*P	Pn	02 32 06.9	+0.7
PB05				*e*S	Sn	02 32 28.1	0.0
PB08	**IPOC Station P**	1.86	351	*e*P	Pn	02 32 10.9	+0.6
PB08				*e*S	Sn	02 32 35.6	+0.2
TA01	**Diego Aracena**	1.89	318	*e*P	Pn	02 32 10.6	+0.3
TA01				*e*S	Sn	02 32 35.0	-0.3
PB10	**IPOC Station P**	2.20	226	*e*P	Pn	02 32 14.7	+0.6
PB10				IAML		02 32 43.7	
	comp=E,237nm,0.3s						
PB11	**IPOC Station P**	2.35	341	*e*P	Pn	02 32 15.8	-0.2
LPAZ	**La Paz**	5.71	7	*e*P	Pn	02 33 01.1	+0.3
PTLB	**Pontes e Lacer**	11.25	56	*e*P	Pn	02 34 16.9	+2.3
CPUP	**Villa Florida**	11.35	115	*e*P	Pn	02 34 16.8	+0.8
SALV	**Santo Antonio**	13.82	66	*e*P	Pn	02 34 49.7	+1.7
CZSB	**Cruzeiro do Su**	14.66	345	*e*P	Pn	02 34 57.7	-0.9
TRCB	**Terra Rica**	15.00	96	*e*P	Pn	02 35 03.6	+0.6
PDRB	**Porto dos Gac**	15.50	50	*e*P	Pn	02 35 11.0	+1.8
PCMB	**Pacaembu**	16.32	92	*e*P	Pn	02 35 20.8	+1.5
CLDB	**Colider**	16.67	51	*e*P	Pn	02 35 23.6	0.0
TRQA	**Tornquist**	17.07	161	*e*P	P	02 35 25.6	-2.3
ARAG	**Araguaiana, MT**	17.27	72	*e*P	P	02 35 28.4	-1.9
IPMB	**Ipameri, GO**	19.78	82	*e*P	P	02 35 58.1	+0.4
BOAV	**Boa Vista**	25.56	20	*e*P	P	02 36 54.2	-0.2
NBIT	**Itapeh - BA**	28.72	81	*e*P	P	02 37 23.1	+0.4

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*DJA **21** 02:32:58.7±1.5, 3°N±4°×12°8E±°, h28^{km}±14^{km}, M4.5/8, mb4.3/7, mB4.8/2, MLv4.6/8, Mw(mB)4.0/2*
*IDC **21** 02:33:01.5±1.8, 2°.52N×127°.99E, h0^{km}, mb3.7/3, mb1 3.9/4, mb1mx3.4/51, mbtmp3.8/4, ML3.9/1, Error ellipse: s-maj=79.8km s-min=24.4km az=58.0*
*NEIC **21** 02:33:08.0±1.6, 2°.3N±0°.1×127°.6E±0°.1, h40^{km}±8^{km}, mb4.1/8, Error ellipse: s-maj=20.3km s-min=12.2km az=46.0*
ISC 21 02:33:07.0±0.9, **2°.4N**±0°.1×**127°.8E**±0°.1, **h35**^{km}**, n20,** σ1^{s}**34**/21**, mb4.1**/6**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	1.67	195	Pn	Pn	02 33 31.1	-2.7
SWI	**Sorong**	4.74	133	P	Pn	02 34 15.2	-0.9
	0.3nm32nm,0.7s						
SIJI	**Sorong**	4.75	133	Pn	Pn	02 34 15.1	-1.1
	5.0nm,0.3s,baz=237,slow=24,SNR=8.1						
SIJI				Sn	Sn	02 35 11.9	+1.7
	3.5nm,0.3s,baz=205,slow=24,SNR=12						
GTOI	**Gorontalo**	5.09	250	P	Pn	02 34 22.5	+1.6
	0.2nm11nm,0.5s						
MRSI	**Marisa**	6.15	252	P	Pn	02 34 36.7	+1.2
	0.3nm1μm66nm,0.6s						
FAKI	**Fak Fak**	6.91	140	Pn	Pn	02 34 46.5	+0.6
TOLI2	**Tolitoli**	7.12	260	Pn	Pn	02 34 46.8	-2.0
MPSI	**Mapaga**	8.15	256	P	Pn	02 35 04.7	+1.7
MTKI	**Muara Teweh, K**	13.31	256	P	Pn	02 36 13.2	-0.5
SBUM	**Sibu**	15.56	271	P	Pn	02 36 45.1	+1.2
SBUM				IAmb	IAmb	02 37 03.0	
	comp=Z,8.1nm,1.0s						
WB0	**Warramunga Arr**	22.96	164	P	P	02 38 07.3	-1.3
WB0				IAmb	IAmb	02 38 27.8	
	comp=Z,18nm,1.5s						
WRA	**Warramunga Arr**	23.11	164	P	P	02 38 09.8	-0.3
	comp=Z,3.6nm,0.9s,baz=347,slow=10,SNR=13						
WRA	**Warramunga Arr**	23.11	164	P	P	02 38 10.2	+0.1
WB2	**Warramunga Arr**	23.12	164	P	P	02 38 10.1	-0.1
WB2				IAmb	IAmb	02 38 30.2	
	comp=Z,12nm,1.1s						
WR0	**Warramunga Arr**	23.18	164	P	P	02 38 10.4	-0.4
WR0				IAmb	IAmb	02 38 11.1	
	comp=Z,7.5nm,1.1s						
AS31	**Alice Springs**	26.58	167	P	P	02 38 41.1	-1.0
ASAR	**Alice Springs**	26.58	167	P	P	02 38 41.1	-1.0
	comp=Z,0.3nm,0.6s,baz=354,slow=8.3,SNR=5.3						
HIA	**Hailar**	47.20	353	P	P	02 41 36.9	+0.6
MKAR	**Makanchi Array**	59.25	325	P	P	02 43 05.5	+0.5
	comp=Z,0.7nm,0.4s,baz=108,slow=7.7,SNR=2.2						
ARU	**Arti**	76.62	328	P	P	02 44 52.7	-1.3

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*IDC **21** 02:35:45.8±1.0, 41°.61N×71°.49E, h0^{km}, mb3.8/7, mb1 3.9/14, mb1mx3.7/62, mbtmp3.7/14, ML3.4/7, MS3.2/2, Ms1 3.2/2, ms1mx2.5/54, Error ellipse: s-maj=14.7km s-min=9.3km az=168.0*
*MOS **21** 02:35:48.3±1.9, 41°.78N×71°.34E, h20^{km}, mb4.3/4, Error ellipse: s-maj=10.5km s-min=6.4km az=83.5*
*KRNET **21** 02:35:48.1±0.1, 41°.72N×71°.58E, h15^{km}, mb4.4*
*SOME **21** 02:35:49.4, 41°.90N×71°.68E, h0^{km}*
*KNET **21** 02:35:49.6±0.9, 41°.69N×71°.83E, h0^{km}, ml3.9, Error ellipse: s-maj=16.8km s-min=4.3km az=170.0*
*ISU **21** 02:35:49, 41°.63N×71°.42E, h15^{km}*
*NNC **21** 02:35:50.9±0.9, 41°.92N×71°.62E, h0^{km}, mb4.5, mpv4.2, Error ellipse: s-maj=9.5km s-min=2.3km az=21.0*
*NEIC **21** 02:35:52.1±1.9, 41°.81N±0°.02×71°.45E±0°.07, h41^{km}±7^{km}, mb4.1/7, Error ellipse: s-maj=8.4km s-min=1.7km az=111.0*
ISC 21 02:35:50.1±0.9, **41°.73N**±0°.02×**71°.45E**±0°.02, **h23**^{km}±8^{km}, **n138,** σ1^{s}**97**/183**, mb3.9**/8**, 40C-33D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRKS	**Terek-Say**	0.30	229	⇑*i*P	Pb	02 35 55.8	-1.4
	baz=30						
TRKS				⇑*i*S	Sb	02 36 01.3	-0.7
	baz=30						
MNAS	**Manas**	1.09	46	⇓*e*P	Pn	02 36 07.7	-2.4
	baz=42						
MNAS				⇓*i*S	Sb	02 36 21.5	-2.8
	baz=42						
CHMG	**Chimgan**	1.09	261	*e*P	Pb	02 36 11.0	+0.6
CHMG				*e*S	Sn	02 36 26.0	+1.4
DZA	**Taraz**	1.17	356	*e*P	Pn	02 36 10.8	-0.2
	750nm,0.2s						
DZA				*e*S	Sb	02 36 26.2	-0.1
	4μm,0.3s						
DZA	**Taraz**	1.17	356	*e*P	Pn	02 36 10.8	-0.2
	baz=51						
DZA				*e*S	Sb	02 36 26.2	-0.1
	baz=51						
ANR	**Andizhan**	1.19	144	*e*P	Pn	02 36 11.0	-0.3
ANR				*e*S	Sn	02 36 27.0	+0.2
FRG	**Fergana**	1.38	169	*e*P	Pb	02 36 15.0	-0.2
FRG				*e*S	Sb	02 36 35.0	+2.7
KKAR	**Karatay Array**	1.54	334	PG	Pn	02 36 16.4	+0.2
KKAR	**Karatay Array**	1.54	334		Pn	02 36 16.4	+0.2
KK09	**Karatay Array**	1.56	334	⇓P	Pn	02 36 17.2	+0.7
	57nm,0.3s						
KK09				⇑S	Sb	02 36 38.2	+0.6
	665nm,0.6s						
OHH	**Osh**	1.57	140	⇑*i*P	Pn	02 36 16.2	-0.4
	baz=42						
OHH				⇑*i*S	Sn	02 36 35.8	-0.5
	baz=42						
MRKS	**Merke**	1.67	52	*e*P	Pn	02 36 18.0	0.0
MRKS				*e*S	Sn	02 36 39.0	+0.4
TAS	**Tashkent**	1.67	257	PN	Pb	02 36 19.9	-0.2
TAS	**Tashkent**	1.67	257	*e*S	Sb	02 36 45.0	+4.4
TAS	**Tashkent**	1.67	257		Pb	02 36 19.9	-0.2
TAS	**Tashkent**	1.67	257	⇑*i*P	Pb	02 36 20.5	+0.4
	baz=58						
TAS				⇑*i*S	Sb	02 36 43.9	+3.3
	baz=58						
AML	**Almayashu**	1.72	76	⇓P	Pn	02 36 18.4	-0.6
	301nm,0.2s,SNR=245						
AML				⇓S	Sn	02 36 38.9	-1.6
	1μm,0.2s						
AML	**Almayashu**	1.72	76	⇑*i*P	Pn	02 36 18.5	-0.5
	baz=75						
AML				⇑*i*S	Sn	02 36 40.2	-0.3
	baz=75						
BTK	**Batken**	1.74	196	PN	Pb	02 36 20.6	-0.7
BTK	**Batken**	1.74	196	*e*P	Pb	02 36 21.0	-0.3
BTK				*e*S	Sb	02 36 45.0	+2.3
BTK	**Batken**	1.74	196	Pn	Pb	02 36 20.6	-0.7
BTK	**Batken**	1.74	196	⇓*i*P	Pb	02 36 20.6	-0.7
	baz=99						
BTK				⇓*i*S	Sb	02 36 43.8	+1.1
	baz=99						
BRLS	**Borolday**	1.77	318	*e*P	Pb	02 36 26.9	+5.1
	588nm,0.4s						
BRLS				*e*S	Sb	02 36 54.0	+10
	1μm,0.3s						
EKS2	**Erkin-Say**	1.97	61	⇑P	Pn	02 36 22.9	+0.8
	44nm,0.2s,SNR=138						
EKS2				⇑S	Sb	02 36 47.9	-1.6
	107nm,0.2s						
EKS2	**Erkin-Say**	1.97	61	⇑*i*P	Pn	02 36 22.8	+0.7
	baz=59						
EKS2				⇑*e*S	Sb	02 36 47.8	-1.6
	baz=59						
DRK	**Karamyk**	2.26	173	Pn	Pn	02 36 28.2	+1.9
DRK	**Karamyk**	2.26	173	⇓*i*P	Pn	02 36 27.7	+1.4
	baz=75						
DRK				⇓*i*S	Sb	02 36 56.5	-1.6
	baz=75						
SFK	**Sufi-Kurgan**	2.32	137	*e*P	Pn	02 36 27.0	0.0
SFK				*e*S	Sb	02 36 59.0	-0.6
SFK	**Sufi-Kurgan**	2.32	137	⇓*e*P	Pn	02 36 27.9	+0.9
	baz=39						
SFK				⇓*e*S	Sn	02 36 56.6	+1.7
	baz=39						
UCH	**Uchtor**	2.34	77	⇓P	Pn	02 36 28.5	+0.9
	66nm,0.1s,SNR=94						
UCH				⇑S	Sb	02 36 58.9	-1.5
	350nm,0.2s						
UCH	**Uchtor**	2.34	77	⇑*e*P	Pn	02 36 27.8	+0.3
	baz=76						
UCH				⇑*i*S	Sn	02 36 56.8	+1.0
	baz=76						
AAK	**Ala-Archa**	2.44	67	Pn	Pb	02 36 31.6	-1.8
	43nm,0.3s,baz=214,slow=2.8,SNR=170						
AAK				Lg	Lg	02 37 02.9	
	53nm,0.3s,baz=159,slow=19,SNR=11						
AAK				LR	LR	02 37 35.6	
	comp=Z,130nm,18.5s,baz=274,slow=45						
AAK	**Ala-Archa**	2.44	67	⇑P	Pn	02 36 30.2	+1.6
	58nm,0.2s,SNR=166						
AAK				⇑S	Sb	02 37 03.0	-0.1
	197nm,0.3s						
AAK	**Ala-Archa**	2.44	67	PN	Pb	02 36 31.7	-1.7
AAK						02 37 03.7	
AAK	**Ala-Archa**	2.44	67	⇓Pn	Pn	02 36 30.4	+1.7
	64nm,0.3s						
AAK				⇑Lg	Lg	02 37 03.8	
	206nm,0.7s						
AAK	**Ala-Archa**	2.44	67	Pn	Pn	02 36 30.4	+1.7
AAK	**Ala-Archa**	2.44	67	⇓*i*P	Pn	02 36 29.4	+0.8
	baz=66						
AAK				⇓*i*S	Sn	02 36 59.1	+1.3
	baz=66						
FRU1	**Bishkek**	2.60	64	PN	Pb	02 36 34.1	-1.9
FRU1	**Bishkek**	2.60	64		Pb	02 36 34.0	-1.9
FRU1	**Bishkek**	2.60	64	⇑*e*P	Pn	02 36 31.4	+0.7
	baz=63						
FRU1				⇑*i*S	Sn	02 37 03.0	+1.4
	baz=63						
USP	**Ospenovka**	2.73	55	⇑*i*P	Pn	02 36 33.4	+0.9
	baz=53						
USP				⇑*i*S	Sn	02 37 06.2	+1.4
	baz=53						
CHMS	**Chumysh**	2.76	61	⇑P	Pn	02 36 34.1	+1.2
	43nm,0.2s,SNR=27						
CHMS				⇑S	Sb	02 37 11.2	-0.9
	259nm,0.3s						
CHMS	**Chumysh**	2.76	61	⇑*i*P	Pn	02 36 33.7	+0.8
	baz=60						
CHMS				⇑*i*S	Sn	02 37 06.8	+1.3
	baz=60						
KBK	**Karagaybulak**	2.76	69	⇓P	Pn	02 36 34.9	+1.8
	57nm,0.2s,SNR=82						
KBK	**Karagaybulak**	2.76	69	⇓*i*P	Pn	02 36 33.6	+0.5
	baz=68						
KBK				⇓*i*S	Sn	02 37 06.6	+0.8
	baz=68						
GAR	**Garm**	2.86	198	Pn	Pn	02 36 37.2	+2.8
GAR	**Garm**	2.86	198	⇓*i*P	Pn	02 36 36.5	+2.1
	baz=0.0						
GAR				⇓*i*S	Sn	02 37 11.7	+3.6
	baz=0.0						
BOOM	**Boomskoye usch**	3.43	76	⇑*i*P	Pn	02 36 42.4	+0.2
	baz=75						
BOOM				⇑*i*S	Sn	02 37 23.0	+0.8
	baz=75						
DGS	**Degeres**	3.54	63	*e*P	Pb	02 36 50.7	-1.4
	32nm,0.3s						
DGS				*e*S	Sb	02 37 35.4	+0.9
	234nm,0.7s						
DGS	**Degeres**	3.54	63	Pg	Pb	02 36 50.7	-1.4
	32nm,0.3s						
DGS				Lg	Lg	02 37 35.4	
	234nm,0.7s						
KST	**Kastek**	3.59	67	*e*P	Pb	02 36 52.7	-0.3
	62nm,0.3s						
KST				*e*S	Sb	02 37 38.4	+2.2
	330nm,0.5s						
KST	**Kastek**	3.59	67	Pg	Pb	02 36 52.7	-0.3
	62nm,0.3s						
KST				Lg	Lg	02 37 38.4	
	330nm,0.5s						
ULHL	**Ulahol**	3.61	80	⇑*i*P	Pn	02 36 45.3	+0.5
	baz=80						
ULHL				⇑*i*S	Sn	02 37 27.0	+0.2
	baz=80						
MTBS	**Maitube**	3.94	68	*e*P	Pb	02 36 59.2	+0.2
	20nm,0.3s						
MTBS				*e*S	Sb	02 37 48.8	+2.6
	144nm,0.5s						
IZV	**Izvestkoviy**	4.04	69	*e*P	Pb	02 37 00.6	-0.1
	30nm,0.3s						

IZV				*e*S	**Sb**	**02 37 52.4**	**+3.2**
	207nm,0.7s						
IZV	**Izvestkoviy**	**4.04**	**69**	Pg	**Pb**	**02 37 00.6**	**-0.1**
	30nm,0.3s						
IZV				Lg	Lg	02 37 52.4	
	207nm,0.7s						
KSH	**Kashi**	**4.09**	**121**	Pn	**Pn**	**02 36 51.8**	**+0.5**
KSH				Sn	**Sn**	**02 37 38.6**	**+0.1**
KSH				smax	smax		
	comp=N,110nm,0.6s						
KSH				smax	smax		
	comp=E,150nm,0.8s						
KUU	**Kurty**	**4.20**	**57**	*e*P	**Pb**	**02 37 03.4**	**+0.2**
	comp=E,24nm,0.3s						
KUU				*e*S	**Sb**	**02 37 56.3**	**+2.8**
	comp=E,103nm,0.5s						
KUU	**Kurty**	**4.20**	**57**	Pg	**Pb**	**02 37 03.4**	**+0.2**
	comp=E,24nm,0.3s						
KUU				Lg	Lg	02 37 56.3	
	comp=E,103nm,0.5s						
TNSS	**Tian-Shan**	**4.28**	**70**	*e*P	**Pb**	**02 37 05.6**	**+0.7**
	comp=E,23nm,0.4s						
TNSS				*e*S	**Sb**	**02 37 59.8**	**+3.7**
	comp=E,54nm,0.8s						
TNSS	**Tian-Shan**	**4.28**	**70**	Pg	**Pb**	**02 37 05.6**	**+0.7**
	comp=E,23nm,0.4s						
TNSS				Lg	Lg	02 37 59.8	
	comp=E,54nm,0.8s						
KDJ	**Kajisay**	**4.29**	**83**	⇓*i*P	**Pn**	**02 36 55.0**	**+0.8**
	baz=83						
KDJ				⇓*e*S	**Sn**	**02 37 43.6**	**0.0**
	baz=83						
AAA	**Alma-Ata**	**4.31**	**68**	*e*P	**Pb**	**02 37 06.6**	**+1.5**
	comp=E,50nm,0.3s						
AAA				*e*S	**Sb**	**02 38 01.5**	**+4.8**
	comp=E,188nm,0.4s						
AAA	**Alma-Ata**	**4.31**	**68**	Pg	**Pb**	**02 37 06.6**	**+1.5**
	comp=E,50nm,0.3s						
AAA				Lg	Lg	02 38 01.5	
	comp=E,188nm,0.4s						
KTBS	**Karatobe**	**4.34**	**61**	*e*P	**Pb**	**02 37 05.5**	**-0.1**
	comp=E,15nm,0.2s						
KTBS				*e*S	**Sb**	**02 37 59.9**	**+2.4**
	comp=E,146nm,0.5s						
KTBS	**Karatobe**	**4.34**	**61**	Pg	**Pb**	**02 37 05.5**	**-0.1**
	comp=E,15nm,0.2s						
KTBS				Lg	Lg	02 37 59.9	
	comp=E,146nm,0.5s						
KNDC	**Almaty**	**4.34**	**68**	PN	Pb	02 37 10.5	+4.8
KNDC						02 38 04.2	
KNDC	**Almaty**	**4.34**	**68**	⇑Pg	Pb	02 37 10.6	+4.9
	comp=E,75nm,0.5s						
KNDC				⇓Lg	Lg	02 38 04.4	
	comp=E,176nm,0.6s						
MDOK	**Medeo**	**4.38**	**69**	*e*P	**Pb**	**02 37 06.7**	**+0.2**
	comp=E,25nm,0.4s						
MDOK				*e*S	**Sb**	**02 38 01.9**	**+3.0**
	comp=E,84nm,0.5s						
MDOK	**Medeo**	**4.38**	**69**	PN	**Pn**	**02 37 00.0**	**+4.6**
MDOK						02 38 02.2	
MDOK	**Medeo**	**4.38**	**69**	⇓Pn	**Pn**	**02 36 56.8**	**+1.4**
	comp=E,28nm,0.5s						
MDOK				⇓Lg	Lg	02 38 07.8	
	comp=E,126nm,0.8s						
MDOK	**Medeo**	**4.38**	**69**	Pg	**Pb**	**02 37 06.7**	**+0.2**
	comp=E,25nm,0.4s						
MDOK				Lg	Lg	02 38 01.9	
	comp=E,84nm,0.5s						
KOTS	**Kotyrbulak**	**4.45**	**68**	*e*P	**Pb**	**02 37 08.3**	**+0.7**
	comp=E,21nm,0.5s						
KOTS				*e*S	**Sb**	**02 38 05.0**	**+4.1**
	comp=E,163nm,0.6s						
KOTS	**Kotyrbulak**	**4.45**	**68**	Pg	**Pb**	**02 37 08.3**	**+0.7**
	comp=E,21nm,0.5s						
KOTS				Lg	Lg	02 38 05.0	
	comp=E,163nm,0.6s						
CHKK	**Chushkaly**	**4.60**	**61**	*e*P	**Pb**	**02 37 10.3**	**+0.3**
	comp=E,17nm,0.4s						
CHKK				*e*S	**Sb**	**02 38 08.4**	**+3.5**
	comp=E,115nm,0.2s						
CHKK	**Chushkaly**	**4.60**	**61**	Pg	**Pb**	**02 37 10.3**	**+0.3**
	comp=E,17nm,0.4s						
CHKK				Lg	Lg	02 38 08.4	
	comp=E,115nm,0.2s						
KURS	**Kuram**	**5.26**	**68**	*e*P	**Pb**	**02 37 23.2**	**+1.9**
	comp=E,11nm,0.6s						
KURS				*e*S	**Sb**	**02 38 30.1**	**+5.9**
	comp=E,44nm,0.8s						
KURS	**Kuram**	**5.26**	**68**	Pg	**Pb**	**02 37 23.2**	**+1.9**
	comp=E,11nm,0.6s						
KURS				Lg	Lg	02 38 30.1	
	comp=E,44nm,0.8s						
SATY	**Saty**	**5.32**	**73**	*e*P	**Pb**	**02 37 24.3**	**+1.8**
	comp=E,21nm,0.8s						
SATY				*e*S	**Sb**	**02 38 31.9**	**+6.0**
	comp=E,92nm,0.7s						
SATY	**Saty**	**5.32**	**73**	Pg	**Pb**	**02 37 24.3**	**+1.8**
	comp=E,21nm,0.8s						
SATY				Lg	Lg	02 38 31.9	
	comp=E,92nm,0.7s						
KPKS	**Kokpek**	**5.62**	**70**	*e*P	**Pb**	**02 37 29.4**	**+2.0**
	comp=E,12nm,0.5s						
KPKS				*e*S	**Sb**	**02 38 41.0**	**+6.7**
	comp=E,90nm,0.7s						
UZB	**Uzynbulak**	**5.78**	**73**	*e*P	**Pb**	**02 37 32.9**	**+2.6**
	comp=E,7.3nm,0.3s						
UZB				*e*S	**Sb**	**02 38 46.6**	**+7.5**
	comp=E,53nm,0.6s						
UZB	**Uzynbulak**	**5.78**	**73**	Pg	**Pb**	**02 37 32.9**	**+2.6**
	comp=E,7.3nm,0.3s						
UZB				Lg	Lg	02 38 46.6	
	comp=E,53nm,0.6s						
PDGK	**Podgornoye**	**6.15**	**72**	Pg	**Pb**	**02 37 38.2**	**+1.6**
	comp=E,3.1nm,0.5s						
PDGK				Lg	Lg	02 38 55.9	
	comp=E,28nm,0.8s						
PDGK	**Podgornoye**	**6.15**	**72**	⇑Pg	Pb	02 37 42.1	+5.5
	comp=E,18nm,0.9s						
PDGK				⇓Lg	Lg	02 39 01.4	
	comp=E,54nm,0.7s						
OTUK	**Ortayu**	**6.55**	**5**	PN	**Pn**	**02 37 25.8**	**+0.9**
OTUK	**Ortayu**	**6.55**	**5**	⇓Pn	**Pn**	**02 37 25.9**	**+0.9**
	comp=E,7.8nm,0.5s						
OTUK				⇓Lg	Lg	02 39 12.5	
	comp=E,234nm,1.1s						
KAPS	**Kapalarasan**	**6.76**	**56**	*e*P	**Pb**	**02 37 49.9**	**+3.0**
	comp=E,9.7nm,0.6s						
KAPS				*e*S	Sb	02 39 16.1	+9.0
	comp=E,37nm,0.6s						
KAPS	**Kapalarasan**	**6.76**	**56**	Pg	**Pb**	**02 37 49.9**	**+3.0**
	comp=E,9.7nm,0.6s						
KAPS				Lg	Lg	02 39 16.2	
	comp=E,37nm,0.6s						
KBL	**Kabul**	**7.42**	**196**	P	**Pn**	**02 37 35.4**	**-1.7**
KBL	**Kabul**	**7.42**	**196**	Pn	**Pn**	**02 37 35.4**	**-1.7**
NIL	**Nilore**	**8.19**	**169**	P	**Pn**	**02 37 48.0**	**+0.5**
NIL	**Nilore**	**8.19**	**169**	Pn	**Pn**	**02 37 48.0**	**+0.5**
MAKZ	**Makanchi**	**9.10**	**53**	P	**Pn**	**02 37 59.0**	**-0.9**
MAKZ	**Makanchi**	**9.10**	**53**	⇓Pn	**Pn**	**02 38 01.5**	**+1.6**
	comp=E,1.7nm,0.5s						
MAKZ				⇑Lg	Lg	02 40 35.6	
	comp=E,13nm,0.8s						
MAKZ	**Makanchi**	**9.10**	**53**	Pn	**Pn**	**02 37 59.0**	**-0.9**
MK31	**Makanchi Array**	**9.28**	**53**	*e*P	**Pn**	**02 38 04.5**	**+2.1**
MK31	**Makanchi Array**	**9.28**	**53**	⇓Pn	**Pn**	**02 38 04.5**	**+2.1**
	comp=E,2.7nm,0.5s,baz=234,slow=15,SNR=86						
MK31				⇑Lg	Lg	02 40 40.2	
	comp=E,6.4nm,0.7s,baz=239,slow=29,SNR=4.5						
MK31	**Makanchi Array**	**9.28**	**53**		**Pn**	**02 38 02.4**	**0.0**
MKAR	**Makanchi Array**	**9.28**	**53**	Pn	**Pn**	**02 38 02.9**	**+0.5**
	comp=E,0.3nm,0.3s,baz=234,slow=13,SNR=11						
MKAR				Lg	Lg	02 40 45.1	
	comp=E,1.4nm,0.3s,baz=244,slow=29,SNR=7.8						
MKAR	**Makanchi Array**	**9.28**	**53**		**Pn**	**02 38 02.3**	**-0.1**
KURBB	**Kurchatov Arra**	**10.16**	**26**	Pn	**Pn**	**02 38 12.4**	**-1.9**
	comp=E,0.1nm,0.3s,baz=217,slow=13,SNR=4.1						
KURBB				Sn	**Sn**	**02 40 06.0**	**-1.4**
	comp=E,0.1nm,0.3s,baz=195,slow=14,SNR=2.3						
KURBB				Lg	Lg	02 41 06.6	
	comp=E,0.3nm,0.3s,baz=216,slow=29,SNR=7.7						
KURBB	**Kurchatov Arra**	**10.16**	**26**	⇑Lg	Lg	02 41 07.2	
	comp=E,64nm,0.8s						
KURK	**Kurchatov**	**10.27**	**26**	P	**Pn**	**02 38 12.5**	**-3.3**
KURK						02 40 06.1	
KURK	**Kurchatov**	**10.27**	**26**	⇓Lg	Lg	02 41 08.6	
	comp=E,54nm,1.1s						
KURK	**Kurchatov**	**10.27**	**26**	Pn	**Pn**	**02 38 14.8**	**-1.1**
HRA	**Herat**	**10.31**	**228**	Pn	**Pn**	**02 38 15.3**	**-1.4**
GEYT	**Alibeck**	**10.93**	**254**	Pn	**Pn**	**02 38 21.7**	**-3.4**
	comp=E,0.5nm,0.3s,baz=14,slow=40,SNR=1.9						
AB31	**Akbulak array**	**11.03**	**317**	P	**Pn**	**02 38 25.6**	**-0.7**
AB31	**Akbulak array**	**11.03**	**317**	Pn	**Pn**	**02 38 28.6**	**+2.3**
	comp=E,2.9nm,0.7s,baz=127,slow=14,SNR=38						
AB31				⇑Sn	**Sn**	**02 40 34.9**	**+6.0**
	comp=E,1.9nm,0.4s,baz=122,slow=24,SNR=4.3						
ABKAR	**Akbulak array**	**11.03**	**317**		**Pn**	**02 38 25.4**	**-0.9**
BVAR	**Borovoye Array**	**11.32**	**357**	Pn	**Pn**	**02 38 29.7**	**-0.6**
	comp=E,0.4nm,0.3s,baz=186,slow=25,SNR=5.7						
BVAR				Sn	**Sn**	**02 40 32.2**	**-3.9**
	comp=E,2.5nm,0.3s,baz=185,slow=30,SNR=13						
BVAR				Lg	Lg	02 41 41.9	
	comp=E,0.4nm,0.3s,baz=189,slow=28,SNR=2.1						
BRVK	**Borovoye**	**11.36**	**356**	P	**Pn**	**02 38 30.7**	**-0.1**
BRVK	**Borovoye**	**11.36**	**356**	⇑Pn	**Pn**	**02 38 31.3**	**+0.5**
	comp=E,2.2nm,0.5s						
BRVK				⇑Lg	Lg	02 41 49.8	
	comp=E,31nm,1.2s						
BRVK	**Borovoye**	**11.36**	**356**	Pn	**Pn**	**02 38 30.7**	**-0.1**
AKTO	**Aktyubinsk**	**12.74**	**318**	Pn	**Pn**	**02 38 49.8**	**+0.1**
	comp=E,0.4nm,0.3s,baz=113,slow=11,SNR=9.0						
AKTO				Sn	**Sn**	**02 41 08.2**	**-2.5**
	comp=E,0.4nm,0.3s,baz=311,slow=18,SNR=2.4						
AKTO	**Aktyubinsk**	**12.74**	**318**	⇑Pn	**Pn**	**02 38 50.1**	**+0.4**
	comp=E,4.8nm,0.9s						
AKTO				⇓Sn	**Sn**	**02 41 15.1**	**+4.4**
	comp=E,3.7nm,0.6s						
AKTO				⇓Lg	Lg	02 42 31.4	
	comp=E,16nm,1.1s						
ZAA0	**Zalesovo Array**	**15.13**	**32**	Pn	**Pn**	**02 39 20.9**	**-1.3**
ZAA0				IAmb	IAmb	02 39 33.3	
	comp=Z,5.7nm,0.9s						
ZALV	**Zalesovo Beam**	**15.13**	**32**	Pn	**Pn**	**02 39 21.0**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=227,slow=11,SNR=2.5						
ZALV				Sn	**Sn**	**02 42 06.6**	**-2.3**
	comp=Z,0.2nm,0.3s,baz=218,slow=14,SNR=1.8						
ARU	**Arti**	**16.92**	**335**	P	**P**	**02 39 49.9**	**+3.0**
AKASG	**Malin Array Be**	**30.20**	**302**	P	**P**	**02 41 59.1**	**+0.7**
	comp=Z,0.2nm,0.2s,baz=80,slow=7.9,SNR=4.8						
AKASG	**Malin Array Be**	**30.20**	**302**	P	**P**	**02 41 59.2**	**+0.7**
AKASG				pmax	pmax		
	comp=Z,2.0nm,1.3s						
AKASG	**Malin Array Be**	**30.20**	**302**	IAmb	IAmb	02 42 07.9	
	comp=Z,1.6nm,1.2s						
FINES	**FINESS Array B**	**33.47**	**322**	P	**P**	**02 42 27.1**	**0.0**
	comp=Z,0.7nm,0.5s,baz=110,slow=16,SNR=5.0						
ARCES	**ARCESS Array B**	**36.51**	**335**	P	**P**	**02 42 53.0**	**-0.1**
	comp=Z,3.3nm,0.8s,baz=106,slow=9.7,SNR=12						
ARCES	**ARCESS Array B**	**36.51**	**335**	P	**P**	**02 42 53.0**	**-0.1**
ARCES				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ARCES	**ARCESS Array B**	**36.51**	**335**	IAmb	IAmb	02 43 05.6	
	comp=Z,3.9nm,1.1s						
GEC2	**GERESS Array S**	**40.38**	**300**	P	**P**	**02 43 26.9**	**+0.8**
GEC2				IAmb	IAmb	02 43 45.6	
	comp=Z,6.6nm,1.4s						
GERES	**GERESS Array B**	**40.38**	**300**	P	**P**	**02 43 27.0**	**+0.8**
	comp=Z,1.0nm,0.5s,baz=72,slow=7.4,SNR=12						
GERES	**GERESS Array B**	**40.38**	**300**	P	**P**	**02 43 25.1**	**-1.1**
NOA	**NORSAR Array B**	**40.52**	**319**	P	**P**	**02 43 25.9**	**-1.1**
	comp=Z,1.0nm,0.7s,baz=92,slow=8.3,SNR=3.3						
PEA0B	**Petropavlovsk-**	**56.04**	**46**	P	**P**	**02 45 25.4**	**-1.4**
PEA0B				pmax	pmax		
	comp=Z,27nm,1.3s						
PEA0B	**Petropavlovsk-**	**56.04**	**46**	P	**P**	**02 45 25.4**	**-1.4**
PEA0B				IAmb	IAmb	02 45 42.1	
	comp=Z,27nm,1.3s						
PETK	**Petropavlovsk-**	**56.04**	**46**	LR	LR	03 10 12.4	
	comp=Z,76nm,18.1s,baz=213,slow=37						
TORD	**Torodi Ar. Bea**	**66.28**	**267**	P	**P**	**02 46 35.9**	**-0.8**
	comp=Z,1.1nm,0.7s,baz=55,slow=5.1,SNR=7.5						
BRLK	**Bradley Lake**	**73.03**	**21**	P	**P**	**02 47 16.9**	**-0.7**
WRA	**Warramunga Arr**	**84.49**	**123**	P	**P**	**02 48 18.3**	**-2.8**
	comp=Z,0.3nm,0.7s,baz=309,slow=7.9,SNR=1.9						
WRA	**Warramunga Arr**	**84.49**	**123**	IAmb	IAmb	02 48 24.2	
	comp=Z,0.4nm,1.5s						

IDC ***21*** *02:35:55.2±0.7, 0.°98N×127.°48E, h0^{km}, mb4.4/11, mb1 4.5/13, mb1mx4.1/48, mbtmp4.3/13, ML3.9/2, MS3.8/12, Ms1 3.8/12, ms1mx3.4/41, Error ellipse: s-maj=25.5km s-min=13.4km az=79.0*

NEIC ***21*** *02:35:57.3±2.4, 0.°89N±0.°10×127.°34E±0.°06, h10^{km}±1^{km}, mb4.7/27, Error ellipse: s-maj=17.7km s-min=6.2km az=24.0*

DJA ***21*** *02:35:58.1±0.2, 1˚N±2˚×12˚7E±˚, h10^{km}, M4.5/23, mb4.8/23, mB5.1/10, MLv4.4/17, Mw(mB)4.5/10, MwMwp4.6/2, Mwp5.0/2*

GCMT ***21*** *02:35:58.3±0.3, 1.°07N±0.°03×127.°49E±0.°02, h12^{km}±1^{km}, MW4.8/81, Moment Tensor Solution. s16,c16; s81,c103; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.95±.14; $M_{\theta\theta}$-0.16±.08; $M_{\phi\phi}$2.11±.10; $M_{r\theta}$0.07±.31; $M_{\theta\phi}$0.01±.06; $M_{\phi r}$0.50±.21; Best double couple: $M_0$2.09200×10^{16} NP1:ϕ_s358.00000°, δ38.00000°, λ-94.00000°. NP2: ϕ_s182.00000°, δ52.00000°, λ-87.00000°. Principal axes: T 2.1710, Plg7.0000°, Azm270.0000°; N -0.1560, Plg2.0000°, Azm1.0000°; P -2.0140, Plg83.0000°, Azm108.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 21 02:35:56.9±0.4, **0.°93N**±0.°05×**127.°47E**±0.°06, **h10**^{km}**, n92,** σ1ˢ**97**/83**, mb4.6**/36**, MS3.7**/14**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.19**	**214**	P	**Pg**	**02 36 02.6**	**+1.6**
TNTI				S	**Sg**	**02 36 07.1**	**+3.4**
LBMI	**Labuha**	**1.56**	**179**	P	**Pb**	**02 36 26.1**	**+0.2**
SANI	**Sanana**	**3.31**	**207**	P	**Pn**	**02 36 51.0**	**+2.2**
KMSI	**Cibinong**	**3.51**	**264**	P	**Pn**	**02 36 52.6**	**+1.1**
SWI	**Sorong**	**4.19**	**115**	P	**Pn**	**02 37 02.3**	**+1.5**
SIJI	**Sorong**	**4.19**	**115**	Pn	**Pn**	**02 37 00.4**	**-0.5**
	3.6nm,0.3s,baz=328,slow=6.0,SNR=14						
GTOI	**Gorontalo**	**4.47**	**266**	P	**Pn**	**02 37 07.5**	**+2.7**
MSAI	**Masohi**	**4.49**	**161**	P	**Pn**	**02 37 08.1**	**+3.0**
AAI	**Ambon**	**4.64**	**171**	P	**Pn**	**02 37 11.9**	**+4.7**
MRSI	**Marisa**	**5.55**	**265**	P	**Pn**	**02 37 21.9**	**+2.3**
	0.3nm3µm1µm76nm,0.7s						
APSI	**Ampana**	**6.11**	**253**	P	Pn	02 37 31.1	+3.9
	0.5nm1µm113nm,0.9s						
TOLI2	**Tolitoli**	**6.69**	**272**	Pn	**Pn**	**02 37 34.3**	**-1.0**
MPSI	**Mapaga**	**7.60**	**266**	P	**Pn**	**02 37 49.9**	**+2.2**
	0.2nm42nm,0.8s						
TTSI	**Tana Toraja**	**8.61**	**243**	P	**Pn**	**02 38 02.2**	**+0.5**
	2µm2µm40nm,0.6s						
BNSI	**Bone**	**9.07**	**234**	P	**Pn**	**02 38 09.2**	**+1.3**
	63nm,0.8s						
SPSI	**Sidrap Palu**	**9.11**	**238**	P	**Pn**	**02 38 09.0**	**+0.5**
	1µm57nm,0.6s						
BKSI	**Bulukumba**	**9.62**	**230**	P	**Pn**	**02 38 18.8**	**+3.3**
	612nm54nm,0.7s						
KAPI	**Kappang**	**9.71**	**232**	Pn	**Pn**	**02 38 18.7**	**+1.9**
	1.9nm,0.3s,baz=74,slow=10,SNR=5.9						
KAPI	**Kappang**	**9.71**	**232**	Pn	**Pn**	**02 38 15.4**	**-1.4**
MMRI	**Maumere**	**10.84**	**209**	Pn	**Pn**	**02 38 31.3**	**-1.0**
EDFI	**Ende, Flores**	**11.21**	**211**	P	**Pn**	**02 38 39.9**	**+2.5**
	8.5nm,1.5s						
JAY	**Jayapura**	**13.66**	**105**	LR	LR	02 44 06.4	
	comp=Z,962nm,19.6s,baz=348,slow=36						
TWSI	**Taliwang, Sumb**	**14.27**	**227**	P	**P**	**02 39 22.8**	**-3.7**
	20nm,1.0s						
SBUM	**Sibu**	**15.32**	**276**	Pn	**Pn**	**02 39 31.4**	**-2.0**
SBUM				IAmb	IAmb	02 39 41.0	
	comp=Z,12nm,0.8s						
KMMI	**Kalianget**	**15.64**	**239**	P	**P**	**02 39 38.9**	**-2.8**
	comp=Z,96nm,1.1s						
KNRA	**Kununurra**	**16.55**	**176**	Pn	**Pn**	**02 39 49.1**	**-0.2**
KSM	**Kuching**	**17.17**	**272**	Pn	**Pn**	**02 39 53.9**	**-3.2**
KSM				IAmb	IAmb	02 40 05.2	
	comp=Z,64nm,1.3s						
NGJI	**Ngawi**	**17.98**	**242**	P	**P**	**02 40 11.1**	**+3.5**
	comp=Z,40nm,0.6s						
FITZ	**Fitzroy Crossi**	**19.00**	**185**	P	**P**	**02 40 18.1**	**-0.8**
	baz=9.5,slow=12						
LEM	**Lembang**	**21.26**	**248**	LR	LR	02 48 53.7	
	comp=Z,207nm,20.9s,baz=78,slow=37						
GUMO	**Guam**	**21.32**	**53**	LR	LR	02 47 53.4	
	comp=Z,378nm,21.9s,baz=248,slow=34						
WB0	**Warramunga Arr**	**21.66**	**162**	P	**P**	**02 40 48.6**	**+0.8**
WB0				IAmb	IAmb	02 40 52.7	
	comp=Z,49nm,0.9s						
WRAB	**Tennant Creek**	**21.81**	**162**	P	**P**	**02 40 49.6**	**+0.2**
WRAB				IAmb	IAmb	02 40 54.2	
	comp=Z,50nm,0.9s						
WRA	**Warramunga Arr**	**21.81**	**162**	P	**P**	**02 40 50.2**	**+0.8**
	comp=Z,26nm,0.6s,baz=341,slow=11,SNR=47						
WRA				LR	LR	02 50 13.8	
	comp=Z,97nm,20.4s,baz=20,slow=39						
WRA	**Warramunga Arr**	**21.81**	**162**	P	**P**	**02 40 49.9**	**+0.5**
WB2	**Warramunga Arr**	**21.82**	**162**	P	**P**	**02 40 50.3**	**+0.8**
WR0	**Warramunga Arr**	**21.89**	**162**	P	**P**	**02 40 51.4**	**+1.1**
WR0				IAmb	IAmb	02 40 55.2	
	comp=Z,33nm,0.8s						
PMG	**Port Moresby**	**22.13**	**118**	LR	LR	02 51 40.8	
	comp=Z,464nm,18.0s,baz=340,slow=43						
PMG	**Port Moresby**	**22.13**	**118**	P	**P**	**02 40 53.4**	**+0.5**
PMG				IAmb	IAmb	02 41 15.8	
	comp=Z,29nm,1.2s						
QIZ	**Qiongzhong**	**24.95**	**317**	P	**P**	**02 41 22.8**	**+2.2**
QIZ				S	**S**	**02 45 47.4**	**+3.1**
QIZ				pmax	pmax		
	comp=Z,19nm,2.9s						
QIZ				LR	LR		
	comp=N,340nm,17.1s						
QIZ				LR	LR		
	comp=E,290nm,21.4s						
QIZ				LR	LR		
	comp=Z,210nm,24.5s						
AS31	**Alice Springs**	**25.24**	**166**	P	**P**	**02 41 21.5**	**-1.8**
AS31				IAmb	IAmb	02 41 30.0	
	comp=Z,6.1nm,0.7s						
ASAR	**Alice Springs**	**25.24**	**166**	P	**P**	**02 41 23.4**	**+0.2**
	comp=Z,18nm,0.7s,baz=342,slow=8.8,SNR=53						
ASAR	**Alice Springs**	**25.24**	**166**	P	**P**	**02 41 22.0**	**-1.3**
MASI	**Maura Aman, Be**	**25.55**	**261**	P	**P**	**02 41 27.3**	**+1.1**
	comp=Z,3µmcomp=Z,91nm,1.0s						
PSI	**Prapat**	**28.59**	**274**	P	**P**	**02 41 52.0**	**-1.7**
	comp=Z,2.3nm,0.6s,baz=114,slow=10.0,SNR=2.2						
NJ2	**Nanjing**	**32.00**	**346**	*e*P	**P**	**02 42 26.1**	**+2.6**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CMAR	**Chiang Mai Arr**	**32.98**	**304**	LR	LR	02 55 01.6	
	comp=Z,62nm,21.6s,baz=175,slow=35						
CMAR	**Chiang Mai Arr**	**32.98**	**304**	P	**P**	**02 42 30.6**	**-1.6**
CHTO	**Chiang Mai**	**33.15**	**304**	P	**P**	**02 42 32.0**	**-1.8**
EIDS	**Eidsvold**	**34.72**	**140**	P	**P**	**02 42 47.0**	**-0.3**
STKA	**Stephens Creek**	**35.27**	**159**	P	**P**	**02 42 52.1**	**+0.2**
	comp=Z,7.2nm,0.8s,baz=330,slow=9.7,SNR=11						
STKA	**Stephens Creek**	**35.27**	**159**	P	**P**	**02 42 52.6**	**+0.7**
KSRS	**Korea Array**	**36.34**	**1**	P	**P**	**02 42 60.0**	**-1.1**
	comp=Z,1.3nm,0.5s,baz=178,slow=9.7,SNR=2.5						
MJAR	**Matsushiro Arr**	**36.80**	**15**	P	**P**	**02 43 03.1**	**-1.9**
	comp=Z,7.0nm,0.9s,baz=184,slow=9.3,SNR=9.7						
MJAR				LR	LR	02 56 11.5	
	comp=Z,150nm,21.6s,baz=195,slow=33						
XAN	**Xi'an**	**37.24**	**334**	P	**P**	**02 43 11.3**	**+2.5**
XAN				pP	sP	02 43 27.9	+15
XAN				sP	pP	02 43 35.8	+24
XAN				pmax	pmax		
	comp=Z,7.0nm,1.8s						
XAN				pmax	pmax		
	comp=Z,120nm,5.5s						
CD2	**Chengdu**	**37.34**	**325**	*e*P	**P**	**02 43 10.3**	**+0.6**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BJI	**Beijing**	**40.26**	**347**	P	**P**	**02 43 34.1**	**+0.1**
BJI				S	**S**	**02 49 49.3**	**+7.9**
BJI				pmax	pmax		
	comp=Z,8.0nm,0.7s						
LZH	**Lanzhou**	**41.28**	**331**	*e*P	**P**	**02 43 43.4**	**+0.6**
LZH				pP	sP	02 43 47.0	-0.1
LZH				sP	pP	02 43 49.8	+3.9
LZH				pmax	pmax		
	comp=Z,15nm,1.1s						
SHL	**Shillong**	**42.16**	**308**	P	**P**	**02 43 49.2**	**-0.9**
HHC	**Hu-ho-hao-te**	**42.27**	**342**	*e*P	**P**	**02 43 49.4**	**-1.3**
HHC				pmax	pmax		
	comp=Z,29nm,1.0s						
HHC				pmax	pmax		
	comp=Z,230nm,5.4s						
USA0B	**Ussuriysk Arra**	**43.27**	**5**	P	**P**	**02 44 00.1**	**+1.5**
USA0B				IAmb	IAmb	02 44 07.3	
	comp=Z,10.0nm,0.9s						
USRK	**Ussuriysk Ar.**	**43.27**	**5**	P	**P**	**02 43 59.2**	**+0.6**
	comp=Z,4.5nm,0.8s,baz=187,slow=6.2,SNR=5.6						
USRK	**Ussuriysk Ar.**	**43.27**	**5**	P	**P**	**02 43 60.0**	**+1.4**
MDJ	**Mudanjiang**	**43.54**	**2**	P	**P**	**02 44 02.3**	**+1.5**
MDJ				pmax	pmax		
	comp=Z,13nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,190nm,4.4s						
DZM	**Mont Dzumac**	**44.35**	**123**	LR	LR	03 03 43.6	
	comp=Z,118nm,18.6s,baz=324,slow=38						
ASAJ	**Asahikawa**	**45.05**	**15**	LR	LR	03 04 13.0	
	comp=Z,123nm,18.1s,baz=196,slow=38						
GTA	**Gaotai**	**45.87**	**330**	*e*P	**P**	**02 44 20.8**	**+1.1**
GTA				pP	sP	02 44 24.0	0.0
GTA				sP	pP	02 44 26.8	+4.0
GTA				pmax	pmax		
	comp=Z,4.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,94nm,4.7s						
GTA				LR	LR		
	comp=N,77nm,15.6s						
GTA				LR	LR		
	comp=E,97nm,15.6s						
GTA				LR	LR		
	comp=Z,83nm,18.2s						
ULN	**Ulaanbaatar**	**49.99**	**342**	P	**P**	**02 44 51.9**	**+0.4**
ULN				IAmb	IAmb	02 45 01.1	
	comp=Z,7.5nm,1.0s						
SONM	**Songino Array**	**50.17**	**342**	P	**P**	**02 44 53.1**	**+0.3**
	comp=Z,2.5nm,0.8s,baz=155,slow=7.0,SNR=13						
SONM	**Songino Array**	**50.17**	**342**	P	**P**	**02 44 53.7**	**+0.9**
WMQ	**Urumqi**	**55.43**	**326**	*e*P	**P**	**02 45 34.3**	**+2.5**
WMQ				sP	sP	02 45 50.1	+14
WMQ				pmax	pmax		
	comp=Z,9.0nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,160nm,3.7s						
WMQ				LR	LR		
	comp=N,410nm,29.0s						
WMQ				LR	LR		
	comp=E,510nm,28.9s						
WMQ				LR	LR		
	comp=Z,8.0nm,28.9s						
PETK	**Petropavlovsk-**	**57.74**	**21**	P	**P**	**02 45 47.6**	**-0.3**
	comp=Z,1.6nm,0.7s,baz=199,slow=17,SNR=4.5						
MK31	**Makanchi Array**	**60.27**	**326**	IAmb	IAmb	02 46 11.4	
	comp=Z,9.2nm,1.4s						
MKAR	**Makanchi Array**	**60.27**	**326**	P	**P**	**02 46 05.7**	**+0.1**
	comp=Z,2.6nm,0.7s,baz=120,slow=8.0,SNR=14						
MKAR	**Makanchi Array**	**60.27**	**326**	P	**P**	**02 46 05.1**	**-0.5**
MAKZ	**Makanchi**	**60.45**	**326**	P	**P**	**02 46 06.7**	**-0.2**
MAKZ				IAmb	IAmb	02 46 12.6	
	comp=Z,9.0nm,1.2s						
KSH	**Kashi**	**60.55**	**316**	P	**P**	**02 46 08.0**	**+0.2**
KSH				pP	sP	02 46 14.8	+2.6
KSH				pmax	pmax		
	comp=Z,10.0nm,1.6s						
AAK	**Ala-Archa**	**62.92**	**319**	P	**P**	**02 46 24.5**	**+0.7**
AAK				IAmb	IAmb	02 46 38.1	
	comp=Z,12nm,1.4s						
ZALV	**Zalesovo Beam**	**63.40**	**333**	P	**P**	**02 46 25.2**	**-1.4**
	comp=Z,1.0nm,0.6s,baz=157,slow=7.8,SNR=3.3						
ZALV	**Zalesovo Beam**	**63.40**	**333**	P	**P**	**02 46 27.0**	**+0.5**
KBL	**Kabul**	**63.82**	**308**	P	**P**	**02 46 29.0**	**-1.0**
BTK	**Batken**	**64.39**	**315**	P	**P**	**02 46 32.0**	**-1.5**
KURK	**Kurchatov**	**64.49**	**328**	P	**P**	**02 46 32.6**	**-1.1**
SEY	**Seymchan**	**64.58**	**12**	LR	LR	03 11 03.2	
	comp=Z,42nm,21.2s,baz=198,slow=33						
KKAR	**Karatay Array**	**65.78**	**318**	P	**P**	**02 46 41.1**	**-1.2**
ABKAR	**Akbulak array**	**74.78**	**321**	P	**P**	**02 47 35.9**	**-1.4**
VNDA	**Vanda**	**80.58**	**173**	P	**P**	**02 48 07.3**	**-1.8**
VNDA				IAmb	IAmb	02 48 19.5	
	comp=Z,4.6nm,0.8s						
MAW	**Mawson**	**81.41**	**200**	LR	LR	03 23 40.0	
	comp=Z,36nm,18.6s,baz=60,slow=35						
RAYN	**Ar Rayn**	**82.26**	**293**	P	**P**	**02 48 16.2**	**-3.1**
RAYN				IAmb	IAmb	02 48 31.9	
	comp=Z,8.9nm,1.4s						
PPT	**Papeete**	**83.56**	**108**	LR	LR	03 21 38.9	
	comp=Z,57nm,21.1s,baz=312,slow=33						
GURO	**Guroymak-BITLI**	**85.85**	**308**	P	**P**	**02 48 35.1**	**-2.2**
GURO				IAmb	IAmb	02 48 46.3	
	comp=Z,3.6nm,1.0s						
VYHS	**Vyhne**	**101.56**	**320**	*e*PDIFF	**Pdif**	**02 49 48.3**	**-1.2**

IDC 21 02:39:24.5±2.3,**5°.74N**×**126°.14E,h0**^{km}**,mb3.6**/4,**mb1 3.8**/4,**mb1mx3.5**/47,**mbtmp3.6**/4,**Error ellipse: s-maj=130.2km s-min=27.8km az=69.0,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	23.69	181	P	P	02 44 37.9	-0.2
	1.6nm,0.9s						
WRA	Warramunga Arr	26.77	163	P	P	02 45 05.0	-1.2
	1.1nm,0.6s,baz=342,slow=11,SNR=3.5						
ASAR	Alice Springs	30.19	166	P	P	02 45 38.7	+1.9
	0.4nm,0.6s,baz=341,slow=8.1,SNR=2.0						
MKAR	Makanchi Array	55.58	325	P	P	02 49 01.8	-0.2
	0.8nm,0.9s,baz=113,slow=9.1,SNR=3.1						

IDC 21 02:45:54.0±2.0,**0°.62N**×**126°.65E,h0**^{km}**,mb3.6**/3,**mb1 3.9**/3,**mb1mx3.5**/40,**mbtmp3.7**/3,**Error ellipse: s-maj=171.1km s-min=25.0km az=65.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.78	160	P	P	02 50 48.9	+1.3
	1.7nm,0.8s,baz=339,slow=11,SNR=12						
ASAR	Alice Springs	25.15	164	P	P	02 51 19.8	-1.3
	1.2nm,0.8s,baz=348,slow=12,SNR=3.5						
MKAR	Makanchi Array	60.07	326	P	P	02 56 03.0	0.0
	0.5nm,0.5s,baz=121,slow=7.5,SNR=11						

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*BJI **21** 02:49:15.0±0.0,5°.30N×126°.77E,h70^{km},mB5.0/8,mb4.8/27,Ms4.5/2,Ms7 4.2/2*

*IDC **21** 02:49:20.3±2.4,5°.97N×126°.17E,h65^{km}±22^{km},mb4.1/14,mb1 4.3/17,mb1mx4.0/46,mbtmp4.4/17,MS3.2/1,Ms1 3.2/1,ms1mx2.6/48,Error ellipse: s-maj=32.5km s-min=11.5km az=78.0*

*MAN **21** 02:49:21.0,5°.85N×126°.12E,h45^{km},mb4.7,ML3.6,MS3.4*

*NEIC **21** 02:49:21.6±1.6,5°.87N±0°.04×126°.2E±0°.1,h71^{km}±7^{km},mb4.5/25,Error ellipse: s-maj=17.9km s-min=3.7km az=74.0*

*DJA **21** 02:49:21.8±0.3,6°N±3°×12°6E±°,h69^{km}±4^{km},M4.9/23,mb4.8/23,mB5.4/9,MLv5.1/8,Mw(mB)4.8/9,MwMwp6.1/1,Mwp6.1/1*

ISC 21 02:49:21.3±0.4,**5°.88N**±0°.05×**126°.28E**±0°.09,**h71**^{km}**,n95,**σ**1**^{s}**38**/93,**mb4.5**/38,**2C,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	1.37	330	P	Pn	02 49 44.5	-0.1
	157nm,0.3s,baz=95,slow=3.5,SNR=9.7						
DAV	Davao City (W)	1.37	330	Pn	Pn	02 49 44.3	-0.4
DAV	Davao City (W)	1.37	330	P	Pn	02 49 44.7	0.0
SGSI	Sangihe	2.31	199	P	Pn	02 49 56.8	-0.3
GTOI	Gorontalo	6.15	212	P	Pn	02 50 49.8	+0.2
	1.0nm3µm260nm,0.6s						
RCP	Roxas	6.64	328	⇑eP	Pn	02 50 57.5	+1.2
MRSI	Marisa	6.90	219	P	Pn	02 51 01.2	+1.4
	1.3nm3µm309nm,0.6s						
TOLI2	Tolitoli	7.25	229	Pn	Pn	02 51 03.2	-1.5
LUWI	Luwuk	7.72	207		Pn	02 51 15.3	+4.3
SANI	Sanana	7.88	182	P	Pn	02 51 13.2	-0.1
	0.4nm2µm70nm,0.7s						
SANI	Sanana	7.88	182	P	Pn	02 51 12.9	-0.4
	71nm,0.7s						
APSI	Ampana	8.18	215	P	Pn	02 51 21.7	+4.4
	1µm57nm,0.6s						
SWI	Sorong	8.34	143	P	Pn	02 51 21.0	+1.4
	29nm,0.7s						
SIJI	Sorong	8.35	143	P	Pn	02 51 19.4	-0.3
	2.0nm,0.3s,baz=221,slow=19,SNR=2.9						
MPSI	Mapaga	8.42	229	P	Pn	02 51 19.2	-1.4
	31nm,0.5s						
TTSI	Tana Toraja	10.96	216	P	Pn	02 51 58.1	+2.7
	32nm,0.5s						
SPSI	Sidrap Palu	11.74	214	P	Pn	02 52 07.3	+1.3
	15nm,0.8s						
KAPI	Kappang	12.63	211	P	Pn	02 52 17.6	-0.5
	0.6nm,0.3s,baz=69,slow=17,SNR=3.7						
KAPI	Kappang	12.63	211	Pn	Pn	02 52 16.7	-1.5
KAPI	Kappang	12.63	211	P	P	02 52 24.7	-2.2
	32nm,1.1s						
SBUM	Sibu	14.43	257	Pn	Pn	02 52 42.0	-0.1
EDFI	Ende, Flores	15.24	198	P	P	02 52 54.4	-1.6
	19nm,0.9s						
BATI	Baumata	16.19	189	P	P	02 53 06.0	-0.6
	25nm,0.3s,baz=55,slow=0.6,SNR=6.9						
BATI	Baumata	16.19	189	P	P	02 53 06.2	-0.3
	1µm68nm,0.6s						
TWSI	Taliwang, Sumb	17.28	213	P	P	02 53 19.4	+0.9
	16nm,0.8s						
DRS	Darwin Rock St	18.76	166	P	Pn	02 53 36.7	+0.7
	19nm,1.1s						
TPI	Tanjungpandan	20.49	246	P	P	02 53 54.4	+0.8
	26nm,1.1s						
KNRA	Kununurra	21.56	173	P	P	02 54 04.8	-0.3
KNRA	Kununurra	21.56	173	P	P	02 54 05.9	+0.9
	55nm,0.8s						
FITZ	Fitzroy Crossi	23.83	182	P	P	02 54 28.9	+0.8
	11nm,0.3s,baz=180,slow=20						
KLSI		23.94	244	P	P	02 54 30.0	+0.8
	11nm,0.7s						
MDSI	Maura Dua	24.36	245	P	P	02 54 34.7	+1.8
	8.7nm,0.8s						
WB0	Warramunga Arr	26.71	163	P	P	02 54 53.9	-0.3
WB0				IAmb	IAmb	02 55 11.8	
	comp=Z,28nm,1.4s						
WRAB	Tennant Creek	26.85	163	P	P	02 54 55.6	+0.2
	comp=Z,13nm,1.2s						
WRA	Warramunga Arr	26.86	163	P	P	02 54 55.6	+0.2
	comp=Z,3.9nm,0.4s,baz=343,slow=10,SNR=46						
WRA	Warramunga Arr	26.86	163	P	P	02 54 55.2	-0.3
WB2	Warramunga Arr	26.86	163	P	P	02 54 55.2	-0.3
WB2				IAmb	IAmb	02 55 18.5	
	comp=Z,10nm,0.6s						
WR0	Warramunga Arr	26.93	163	P	P	02 54 55.9	-0.3
WR0				IAmb	IAmb	02 55 01.5	
	comp=Z,12nm,1.0s						
NJ2	Nanjing	26.95	346	eP	P	02 54 59.0	+2.9
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PSA00	Pilbara Seismi	28.00	193	P	P	02 55 04.3	-1.4
QIS	Mount Isa	29.35	154	P	P	02 55 18.5	+0.8
	comp=Z,31nm,0.7s						
AS31	Alice Springs	30.29	166	P	P	02 55 26.0	0.0
ASAR	Alice Springs	30.29	166	P	P	02 55 26.4	+0.4
	comp=Z,4.4nm,0.4s,baz=345,slow=7.1,SNR=95						
ASAR				ScP	ScP	03 02 01.9	+0.5
	comp=Z,0.2nm,0.4s,baz=335,slow=2.8,SNR=2.3						
ASAR	Alice Springs	30.29	166	P	P	02 55 25.7	-0.3
KSRS	Korea Array	31.46	3	LR	LR	03 09 31.3	
	comp=Z,43nm,19.6s,baz=190,slow=39						
XAN	Xi'an	32.31	332	⇑P	P	02 55 46.3	+2.6
XAN				pP	pP	02 56 02.0	+2.0
XAN				pmax	pmax		
	comp=Z,31nm,0.7s						
XAN	Xi'an	32.31	332	P	P	02 55 46.3	+2.6
OOD	Oodnadatta	34.69	165	P	P	02 56 06.2	+1.9
	comp=Z,30nm,0.7s						
BJT	Baijiatuau	35.19	346	P	P	02 56 08.4	-0.1
BJI	Beijing	35.21	346	P	P	02 56 09.8	+1.1
BJI				pmax	pmax		
	comp=Z,27nm,0.7s						
MORW	Morawa	36.12	195	P	P	02 56 16.1	-0.5
QLP	Quilpie	36.66	152	P	P	02 56 22.2	+0.9
HHC	Hu-ho-hao-te	37.23	341	eP	P	02 56 25.5	-0.6
HHC				pmax	pmax		
	comp=Z,24nm,1.0s						
LCRK	Leigh Creek	37.89	163	P	P	02 56 33.4	+1.8
	comp=Z,49nm,1.0s						
SHL	Shillong	38.27	305	P	P	02 56 35.5	+0.3
USRK	Ussuriysk Ar.	38.49	7	P	P	02 56 35.6	-0.9
	comp=Z,3.9nm,0.7s,baz=186,slow=7.8,SNR=6.5						
USRK	Ussuriysk Ar.	38.49	7	P	P	02 56 37.7	+1.2
MDJ	Mudanjiang	38.69	4	P	P	02 56 39.8	+1.6
MDJ				pmax	pmax		
	comp=Z,11nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,150nm,5.7s						
BBOO	Buckleboo	39.58	167	P	P	02 56 45.3	-0.5
BBOO	Buckleboo	39.58	167	P	P	02 56 46.7	+0.9
	comp=Z,50nm,0.7s						
STKA	Stephens Creek	40.29	160	P	P	02 56 52.7	+1.1
	comp=Z,10nm,0.5s,baz=335,slow=8.4,SNR=45						
STKA				PcP	PcP	02 58 54.5	+0.3
	comp=Z,3.1nm,0.5s,baz=338,slow=6.4,SNR=3.6						
STKA	Stephens Creek	40.29	160	P	P	02 56 52.1	+0.5
GTA	Gaotai	41.04	328	eP	P	02 57 02.3	+4.4
GTA				pP	pwP	02 57 16.8	-1.2
GTA				sP	sP	02 57 24.3	+1.8
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
H11N1	WAKE ISLAND Hy	41.79	67	T	T	03 41 48.0	
	baz=255,slow=75,SNR=5.3						
H11N2	WAKE ISLAND Hy	41.80	67	T	T	03 41 48.1	
	baz=255,slow=75,SNR=5.1						
H11N3	WAKE ISLAND Hy	41.81	67	T	T	03 41 50.7	
	baz=255,slow=75,SNR=5.3						
ULN	Ulaanbaatar	44.95	342	P	P	02 57 29.0	-0.4
ULN				IAmb	IAmb	02 57 32.1	
	comp=Z,4.7nm,0.8s						
SONM	Songino Array	45.13	341	P	P	02 57 29.9	-0.9
	comp=Z,1.7nm,0.7s,baz=153,slow=7.7,SNR=12						
SONM				PcP	PcP	02 59 10.7	+0.4
	comp=Z,0.7nm,0.6s,baz=150,slow=4.8,SNR=4.2						
SONM	Songino Array	45.13	341	P	P	02 57 31.7	+0.9
WMQ	Urumqi	50.72	324	eP	P	02 58 16.6	+2.6
PETK	Petropavlovsk-	53.63	23	P	P	02 58 34.6	-0.7
	comp=Z,2.4nm,0.8s,baz=251,slow=4.4,SNR=3.2						
MK31	Makanchi Array	55.55	325	P	P	02 58 48.3	-1.1
MKAR	Makanchi Array	55.55	325	P	P	02 58 48.1	-1.3
	comp=Z,1.0nm,0.3s,baz=115,slow=7.4,SNR=21						
MKAR	Makanchi Array	55.55	325	P	P	02 58 48.4	-1.1
MAKZ	Makanchi	55.74	325	P	P	02 58 50.5	-0.2
MAKZ				IAmb	IAmb	02 59 09.4	
	comp=Z,2.3nm,0.6s						
ZALV	Zalesovo Beam	58.48	333	P	P	02 59 08.6	-1.3
	comp=Z,0.7nm,0.3s,baz=97,slow=6.4,SNR=4.8						
ZALV	Zalesovo Beam	58.48	333	P	P	02 59 09.2	-0.7
KURK	Kurchatov	59.70	327	P	P	02 59 17.5	-0.9
KURK				IAmb	IAmb	02 59 30.5	
	comp=Z,4.3nm,0.6s						
KBL	Kabul	59.88	307	P	P	02 59 18.8	-1.4
KBL				IAmb	IAmb	02 59 24.2	
	comp=Z,3.5nm,0.7s						
BTK	Batken	60.12	313	P	P	02 59 21.5	-0.2
BTK				IAmb	IAmb	02 59 27.4	
	comp=Z,2.9nm,0.7s						
KKAR	Karatay Array	61.37	316	P	P	02 59 30.5	+0.5
TIXI	Tiksi	65.71	1	P	P	02 59 57.8	-0.2
TIXI				IAmb	IAmb	02 59 58.7	
	comp=Z,6.7nm,0.8s						
NRIK	Noril'sk	68.25	346	P	P	03 00 13.0	-1.2
	comp=Z,3.2nm,0.5s,baz=130,slow=8.4,SNR=5.1						
NRIK	Noril'sk	68.25	346	P	P	03 00 13.4	-0.8
NRIK				IAmb	IAmb	03 00 14.5	
	comp=Z,4.2nm,0.7s						
ABKAR	Akbulak array	70.22	320	P	P	03 00 25.6	-1.1
MLY	Manley	81.73	25	P	P	03 01 32.1	+0.1
MLY				IAmb	IAmb	03 01 39.4	
	comp=Z,4.6nm,1.0s						
KLMR	Klimovskoe	83.33	331	eP	P	03 01 33.3	-7.0
KLMR				AMP		03 01 47.2	
	comp=Z,16nm,1.4s						
ILAR	Eielson Array	83.37	26	P	P	03 01 39.9	-0.6
	comp=Z,0.5nm,0.5s,baz=253,slow=5.5,SNR=12						
VNDA	Vanda	85.60	173	P	P	03 01 51.5	+0.2
	comp=Z,1.3nm,0.6s,baz=317,slow=6.5,SNR=24						
VNDA	Vanda	85.60	173	P	P	03 01 51.6	+0.2
VNDA				IAmb	IAmb	03 01 52.5	
	comp=Z,5.4nm,1.4s						
ARCES	ARCESS Array B	88.29	340	P	P	03 02 03.1	-1.6
	comp=Z,2.7nm,1.0s,baz=79,slow=5.3,SNR=8.2						
FINES	FINESS Array B	89.74	332	P	P	03 02 10.2	-1.4
	comp=Z,1.6nm,0.6s,baz=64,slow=4.4,SNR=8.0						
TORD	Torodi Ar. Bea	121.81	289	PKP	PKPdf	03 08 05.6	-2.7
	comp=Z,0.8nm,0.4s,baz=33,slow=2.8,SNR=16						
DBIC	Dimbokro	129.67	284	PKP	PKPdf	03 08 23.4	0.0
	comp=Z,1.7nm,0.7s,baz=135,slow=1.4,SNR=3.0						
DBIC	Dimbokro	129.67	284		PKPdf	03 08 21.9	-1.5

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*KRNET **21** 02:50:48.9±0.1,41°.73N×71°.54E,h14^{km},mb2.5*

*SOME **21** 02:50:49.5,41°.70N×71°.65E,h5^{km}*

*NNC **21** 02:50:52.5±1.6,41°.93N×71°.56E,h0^{km},mb3.0,mpv3.0,Error ellipse: s-maj=13.1km s-min=5.3km az=15.0*

ISC 21 02:50:49.5±1.1,**41°.69N**±0°.03×**71°.62E**±0°.03,**h8**^{km}±11^{km},**n22,**σ**1**^{s}**36**/40,**19C-11D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRKS	Terek-Say	0.40	246	⇑iP	Pg	02 50 56.6	-0.7
	baz=26						
TRKS				⇑iS	Sg	02 51 01.7	-0.8
	baz=26						
MNAS	Manas	1.03	39	⇑iP	Pg	02 51 08.6	-0.7
	baz=43						
MNAS				⇑iS	Sg	02 51 23.0	+0.3
	baz=43						
OHH	Osh	1.46	143	⇓iP	Pn	02 51 16.7	+0.4
	baz=42						
OHH				⇓iS	Sg	02 51 38.1	+1.6
	baz=42						
MRKS	Merke	1.59	48	eP	Pb	02 51 19.3	+0.1
	2.8nm,0.3s						
MRKS				eS	Sg	02 51 40.5	-0.1
	9.9nm,0.4s						
MRKS	Merke	1.59	48	P	Pb	02 51 19.3	+0.1
	2.8nm,0.3s						
MRKS				S	Sg	02 51 40.5	-0.1
	9.9nm,0.4s						
AML	Almayashu	1.61	74	⇑iP	Pb	02 51 19.7	0.0
	baz=75						
AML				⇑iS	Sg	02 51 41.9	+0.6
	baz=75						
KK09	Karatay Array	1.65	330	⇑P	Pn	02 51 18.8	0.0
	1.3nm,0.3s,baz=148,slow=14						
KK09				⇓S	Sn	02 51 38.4	-1.8
	5.4nm,0.5s,baz=147,slow=29						
BTK	Batken	1.74	201	⇓iP	Pb	02 51 21.5	-0.3
	baz=98						
BTK				⇓iS	Sg	02 51 45.0	-0.5
	baz=98						
SALK	Salom-Alik	1.85	115	⇓eP	Pb	02 51 24.0	+0.4
	baz=16						
SALK				⇓eS	Sg	02 51 49.8	+0.9
	baz=16						
EKS2	Erkin-Say	1.87	58	⇑eP	Pb	02 51 24.0	0.0
	baz=60						
EKS2				⇑iS	Sg	02 51 49.5	-0.2
	baz=60						
BRLS	Borolday	1.88	316	Pg	Pg	02 51 27.9	+2.4
	16nm,0.3s						
BRLS				Lg	Lg	02 51 55.5	
	12nm,0.2s						
SFK	Sufi-Kurgan	2.21	139	⇓eP	Pb	02 51 29.1	-0.7
	baz=38						
SFK				⇓eS	Sb	02 51 58.1	+0.8
	baz=38						
DRK	Karamyk	2.22	176	⇑iP	Pb	02 51 29.0	-1.0
	baz=75						
DRK				⇑iS	Sb	02 51 58.0	+0.3
	baz=75						
UCH	Uchtor	2.22	75	⇑iP	Pb	02 51 29.2	-1.0
	baz=76						
UCH				⇑iS	Sb	02 51 58.6	+0.5
	baz=76						
AAK	Ala-Archa	2.34	65	⇑Pn	Pg	02 51 33.4	-0.9
	2.0nm,0.3s						
AAK				⇑Lg	Lg	02 52 05.1	
	3.2nm,0.4s						
AAK	Ala-Archa	2.34	65	⇑iP	Pb	02 51 30.5	-1.4
	baz=67						
AAK				⇑iS	Sb	02 52 00.6	-0.4
	baz=67						
USP	Ospenovka	2.65	53	⇑iP	Pn	02 51 34.6	+2.1
	baz=54						
USP				⇑iS	Sb	02 52 07.7	-2.2
	baz=54						
KBK	Karagaybulak	2.66	68	⇓iP	Pn	02 51 34.9	+2.1
	baz=69						
KBK				⇓iS	Sb	02 52 08.4	-1.8
	baz=69						
DGS	Degeres	3.44	62	eP	Pb	02 51 52.2	+1.5
	1.4nm,0.2s						
DGS				eS	Sg	02 52 36.9	-3.1
	2.8nm,0.4s						
DGS	Degeres	3.44	62	Pg	Pb	02 51 52.2	+1.5
	1.4nm,0.2s						
DGS				Lg	Lg	02 52 36.9	
	2.8nm,0.4s						
KST	Kastek	3.49	66	eP	Pb	02 51 53.7	+2.1
	2.1nm,0.3s						
KST				eS	Sg	02 52 39.3	-2.3
	3.9nm,0.7s						
KST	Kastek	3.49	66	Pg	Pb	02 51 53.7	+2.1
	2.1nm,0.3s						
KST				Lg	Lg	02 52 39.3	
	3.9nm,0.7s						

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*IDC **21** 02:59:33.5±2.1,0°.89N×127°.30E,h0^{km},mb3.8/3,mb1 4.0/3,mb1mx3.5/38,mbtmp3.8/3,Error ellipse: s-maj=167.3km s-min=24.8km az=66.0*

*NEIC **21** 02:59:36.7±1.1,0°.8N±0°.2×127°.3E±0°.3,h10^{km}±8^{km},mb4.2/6,Error ellipse: s-maj=52.1km s-min=20.2km az=71.0*

ISC 21 02:59:36.2±2.8,**0°.8N**±0°.2×**127°.3E**±0°.4,**h13**^{km}±18^{km}**,n11,**σ**1**^{s}**02**/10,**mb4.2**/7,**Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.09	84		Pg	02 59 39.0	0.0
WRA	Warramunga Arr	21.71	162	P	P	03 04 26.0	-1.2
	1.8nm,0.6s,baz=340,slow=11,SNR=18						
WRA	Warramunga Arr	21.71	162	IAmb	IAmb	03 04 26.1	
	comp=Z,0.7nm,1.7s						
WB2	Warramunga Arr	21.71	162	P	P	03 04 27.0	-0.2
WB2				IAmb	IAmb	03 04 46.8	
	comp=Z,14nm,1.5s						
AS31	Alice Springs	25.12	166	P	P	03 05 01.4	+0.3
AS31				IAmb	IAmb	03 05 14.8	
	comp=Z,1.6nm,1.3s						
ASAR	Alice Springs	25.12	166	P	P	03 05 02.5	+1.5
	comp=Z,1.7nm,0.7s,baz=346,slow=10.0,SNR=20						
MJAR	Matsushiro Arr	37.01	15	P	P	03 06 45.7	0.0
MJAR				IAmb	IAmb	03 06 47.4	
	comp=Z,14nm,1.8s						
MKAR	Makanchi Array	60.30	326	P	P	03 09 43.4	-1.3
	comp=Z,1.8nm,1.0s,baz=124,slow=8.1,SNR=7.4						
MAKZ	Makanchi	60.48	326	P	P	03 09 46.4	+0.5
MAKZ				IAmb	IAmb	03 09 48.7	
	comp=Z,6.2nm,1.4s						
KURK	Kurchatov	64.53	328	P	P	03 10 13.4	+0.6
ABKAR	Akbulak array	74.79	321	P	P	03 11 16.1	-0.1

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*IDC **21** 03:04:08.3±1.1,1°.10N×127°.61E,h0^{km},mb3.9/5,mb1 4.1/6,mb1mx3.8/40,mbtmp3.9/6,ML3.3/1,Error ellipse: s-maj=48.1km s-min=18.4km az=71.0*

*NEIC **21** 03:04:09.7±0.8,1°.03N±0°.06×127°.54E±0°.08,h10^{km}±3^{km},mb4.4/13,Error ellipse: s-maj=13.6km s-min=4.9km az=128.0*

*DJA **21** 03:04:11.0±0.4,1°N±3°×12°8E±°,h10^{km},M3.9/8,mb4.0/2,mB5.5/1,MLv3.8/8,Mw(mB)5.0/1*

ISC 21 03:04:09.3±0.8,**1°.02N**±0°.07×**127°.64E**±0°.07,**h10**^{km}**,n28,**σ**1**^{s}**26**/29,**mb4.2**/11,**Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.36	228	P	Pg	03 04 15.9	-0.6
TNTI	Ternate	0.36	228		Pg	03 04 15.9	-0.6
TNTI				Sg	Sg	03 04 19.9	-1.4
LBMI	Labuha	1.65	185	P	Pg	03 04 41.7	+0.7
SANI	Sanana	3.46	208	P	Pn	03 05 03.4	+0.1
KMSI	Cibinong	3.68	263	P	Pn	03 05 07.1	+0.8
SIJI	Sorong	4.08	117	Pn	Pn	03 05 13.1	+1.2
	1.7nm,0.3s,baz=270,slow=20,SNR=2.1						
GTOI	Gorontalo	4.64	265	P	Pn	03 05 22.4	+2.9
GTOI				S	Sn	03 06 15.2	+1.7
LUWI	Luwuk	5.28	247	Pn	Pn	03 05 26.9	-1.3
MRSI	Marisa	5.72	265	P	Pn	03 05 36.6	+2.3
MPSI	Mapaga	7.76	265	P	Pn	03 06 02.9	+0.4
WB0	Warramunga Arr	21.69	163	P	P	03 08 59.3	-1.3
WB0				IAmb	IAmb	03 09 06.4	
	comp=Z,20nm,1.4s						
WRAB	Tennant Creek	21.84	163	P	P	03 09 02.5	+0.4
WRAB				IAmb	IAmb	03 09 09.3	
	comp=Z,14nm,0.8s						
WRA	Warramunga Arr	21.84	163	P	P	03 09 03.4	+1.3
	comp=Z,4.0nm,0.9s,baz=340,slow=11,SNR=14						
WB2	Warramunga Arr	21.84	163	P	P	03 09 03.6	+1.4
AS31	Alice Springs	25.28	166	P	P	03 09 38.1	+2.1
ASAR	Alice Springs	25.28	166	P	P	03 09 37.3	+1.2
	comp=Z,3.3nm,0.8s,baz=345,slow=10,SNR=30						
ASAR	Alice Springs	25.28	166	P	P	03 09 36.0	0.0
MJAR	Matsushiro Arr	36.68	14	P	P	03 11 15.5	-0.9
	comp=Z,2.0nm,0.8s,baz=193,slow=10.0,SNR=5.9						
MJAR	Matsushiro Arr	36.68	14	IAmb	IAmb	03 11 18.0	
	comp=Z,1.0nm,0.9s						
SONM	Songino Array	50.14	341	P	P	03 13 05.5	+0.5
	comp=Z,0.9nm,1.0s,baz=148,slow=6.0,SNR=5.2						
MK31	Makanchi Array	60.29	326	P	P	03 14 17.9	-0.3
MK31				IAmb	IAmb	03 14 24.4	
	comp=Z,2.3nm,1.1s						
MKAR	Makanchi Array	60.29	326	P	P	03 14 18.2	0.0
	comp=Z,0.8nm,0.5s,baz=117,slow=8.1,SNR=11						
NIL	Nilore	60.30	309	P	P	03 14 17.1	-1.4
MAKZ	Makanchi	60.47	326	P	P	03 14 17.9	-1.6
MAKZ				IAmb	IAmb	03 14 20.9	
	comp=Z,2.5nm,0.8s						
ZAA0	Zalesovo Array	63.40	333	P	P	03 14 38.7	-0.3
ZAA0				IAmb	IAmb	03 14 39.5	
	comp=Z,5.1nm,1.5s						
GAR	Garm	64.42	313	P	P	03 14 45.9	-0.3
KURK	Kurchatov	64.50	328	P	P	03 14 45.8	-0.5
BRVK	Borovoye	70.15	327	P	P	03 15 21.6	-0.5
BRVK				IAmb	IAmb	03 15 30.8	
	comp=Z,3.3nm,1.2s						

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*CRAAG **21** 03:18:56.8,36°.52N×2°.99E,Ml3.0*

*IDC **21** 03:18:57.3±2.3,36°.49N×2°.86E,h0^{km},mb3.0/1,mb1 3.1/4,mb1mx2.9/48,mbtmp3.1/4,ML3.0/3,MS3.0/1,Ms1 3.0/1,ms1mx2.2/17,Error ellipse: s-maj=39.9km s-min=26.7km az=24.0*

*MDD **21** 03:18:59.1±0.5,36°.52N×2°.99E,h7^{km}±6^{km},mb3.7/17,Error ellipse: s-maj=7.0km s-min=4.6km az=108.0,PRXIMO*

*LDG **21** 03:19:03.7±0.4,36°.87N×2°.74E,h30^{km},Ml2.9/10,Error ellipse: s-maj=7.6km s-min=4.0km az=148.0*

*CNRM **21** 03:19:09.1,36°.15N×1°.72E,h277^{km},ml3.0*

ISC 21 03:18:58.4±0.7,**36°.56N**±0°.03×**3°.00E**±0°.03,**h18**^{km}**,n89,**σ**2**^{s}**54**/115,**Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABA	Alger-Bouzarea	0.24	6	P	Pg	03 19 04.1	0.0
ABA	Alger-Bouzarea	0.24	6	P	Pg	03 19 04.1	0.0
EMHD	Djebel Mahouad	0.36	186	P	Pg	03 19 04.7	-1.4
EMHD	Djebel Mahouad	0.36	186	P	Pg	03 19 04.7	-1.4
ABMS	Boumerdes	0.43	63	P	Pg	03 19 07.4	+0.1
ABMS	Boumerdes	0.43	63	P	Pg	03 19 07.4	+0.1
ADJB	Djebel Djouab	0.53	138	P	Sn	03 19 20.5	+0.7
AKET	Djebel Ketaf	0.88	125	P	Pb	03 19 15.0	-0.2
AKET	Djebel Ketaf	0.88	125	P	Pb	03 19 15.0	-0.2
EBNR	Beni Rached	1.22	258	P	Sg	03 19 42.2	+4.3
ECHA	Ech Chlef	1.38	253	P	Sg	03 19 46.0	+2.9
SET	Setif	1.97	100	P	Pg	03 19 38.0	+1.7
OKGL	Djebel Kef Gue	1.98	255	P	Sn	03 19 53.0	-2.3
OJGS	Djebel Guires	2.11	241	P	Sg	03 20 02.0	-4.3
OJBR	Djebel Berber	2.36	246	P	Pg	03 19 45.0	+1.2
EIBI	Ibiza	2.79	332	P	Pn	03 19 43.7	+1.5
	3.5nm,0.2s,SNR=7.9						
EIBI				S	Sn	03 20 14.9	-0.6
	25nm,0.2s,SNR=7.9						
ODJA	Bouhanifia	2.84	245	P	Pg	03 19 57.0	+4.2
ETOS	Mallorca	3.21	357	P	Pn	03 19 49.0	+1.0
	6.6nm,0.2s,SNR=9.8						
ETOS				S	Sn	03 20 24.3	-1.4
	12nm,0.3s,SNR=7.9						
CART	Cartagena	3.36	289	P	Pn	03 19 50.9	+0.9
CART				S	Sn	03 20 27.4	-2.1
CART	Cartagena	3.36	289	P	Pn	03 19 50.9	+0.9
CART				S	Sn	03 20 27.4	-2.1
EMUR	La Murta	3.62	292	P	Pn	03 19 53.5	-0.2
	2.2nm,0.3s,SNR=7.9						
EMUR				S	Sn	03 20 33.6	-2.4
	3.7nm,0.3s,SNR=7.9						
ETOB	Tobarra	4.17	301	P	Pn	03 20 02.6	+1.4
	4.6nm,0.2s,SNR=19						
ETOB				S	Sn	03 20 48.6	-0.9
	11nm,0.4s,SNR=7.9						

ENIJ	**Nijar**	**4.20**	**277**	S	**Sn**	**03 20 48.1**	**-2.1**
	8.5nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	**4.68**	**325**	P	**Pn**	**03 20 09.1**	**+0.8**
	5.1nm,0.3s,SNR=7.9						
EMOS				S	**Sn**	**03 20 60.0**	**-2.2**
	6.6nm,0.4s,SNR=7.9						
SESP	**Santiago Espad**	**4.69**	**291**	P	**Pn**	**03 20 10.5**	**+2.1**
	4.3nm,0.4s,SNR=7.9						
SESP				S	**Sn**	**03 21 00.3**	**-2.1**
	16nm,0.6s,SNR=7.9						
TAF	**Taforalt**	**4.74**	**250**	P	**Pn**	**03 20 09.3**	**+0.3**
TAF				S	**Sn**	**03 21 00.9**	**-2.7**
EBER	**Berja**	**4.75**	**276**	P	**Pn**	**03 20 11.9**	**+2.7**
	0.4nm,0.2s,SNR=7.9						
EBER				S	**Sn**	**03 21 02.2**	**-1.7**
	9.1nm,0.5s,SNR=7.9						
ERTA	**Horta de San J**	**4.86**	**335**	P	**Pn**	**03 20 12.8**	**+2.1**
	SNR=7.9						
ERTA				S	**Sn**	**03 21 04.0**	**-2.5**
	11nm,0.6s,SNR=7.9						
EPOB	**Poblet**	**5.02**	**343**	P	**Pn**	**03 20 14.5**	**+1.6**
	0.6nm,0.3s,SNR=7.9						
EPOB				S	**Sn**	**03 21 07.3**	**-3.1**
	2.5nm,0.4s,SNR=7.9						
JBK	**JBK**	**5.06**	**246**	P	**Pn**	**03 20 14.6**	**+1.0**
JBK				S	**Sn**	**03 21 05.6**	**-6.0**
KEST	**Kesra**	**5.20**	**97**	Pn	**Pn**	**03 20 19.5**	**+4.1**
	0.4nm,0.3s,baz=212,slow=3.1,SNR=7.0						
KEST				Sn	**Sn**	**03 21 15.7**	**+0.7**
	0.1nm,0.3s,baz=192,slow=19,SNR=2.0						
CFON	**Fontmartina**	**5.22**	**355**	P	**Pn**	**03 20 17.1**	**+1.5**
	2.7nm,0.3s,SNR=7.9						
CFON				S	**Sn**	**03 21 11.5**	**-3.9**
	6.3nm,0.3s,SNR=7.9						
ELGU	**Los Guajares,**	**5.33**	**275**	S	**Sn**	**03 21 13.1**	**-5.1**
	SNR=7.9						
TDRA	**Tendrara**	**5.43**	**231**	P	**Pn**	**03 20 18.8**	**+0.2**
TDRA				S	**Sn**	**03 21 21.0**	**+0.2**
EMIR	**Miracle**	**5.47**	**348**	P	**Pn**	**03 20 21.7**	**+2.6**
	11nm,0.4s,SNR=7.9						
EMIR				S	**Sn**	**03 21 19.2**	**-2.4**
	17nm,0.4s,SNR=7.9						
FIGM	**Figuig**	**5.65**	**220**	P	**Pn**	**03 20 22.3**	**+0.6**
FIGM				S	**Sn**	**03 21 21.0**	**-5.2**
ETOR	**Torete**	**5.81**	**319**	P	**Pn**	**03 20 28.1**	**+4.3**
	2.7nm,0.3s,SNR=7.9						
EJON	**La Jonquera**	**5.88**	**359**	P	**Pn**	**03 20 26.4**	**+1.7**
	5.2nm,0.4s,SNR=7.9						
EJON				S	**Sn**	**03 21 27.8**	**-3.9**
	6.6nm,0.6s,SNR=7.9						
SJAF	**Saint Jean de**	**5.92**	**359**	P	**Pn**	**03 20 27.0**	**+1.8**
	1.4nm,0.4s,SNR=7.9						
SJAF				S	**Sn**	**03 21 28.4**	**-4.2**
	3.7nm,0.5s,SNR=7.9						
CLLI	**Llivia**	**5.97**	**353**	P	**Pn**	**03 20 28.8**	**+2.8**
	1.7nm,0.4s,SNR=7.9						
CLLI				S	**Sn**	**03 21 30.9**	**-3.0**
	1.4nm,0.4s,SNR=7.9						
CSOR	**Sort**	**5.99**	**347**	P	**Pn**	**03 20 28.0**	**+1.8**
	1.0nm,0.3s,SNR=7.9						
CSOR				S	**Sn**	**03 21 32.3**	**-2.1**
	7.8nm,0.6s,SNR=7.9						
EADA	**Adamuz**	**6.25**	**287**	P	**Pn**	**03 20 30.3**	**+0.5**
	0.2nm,0.3s,SNR=7.9						
EADA				S	**Sn**	**03 21 37.5**	**-3.2**
	0.6nm,0.2s,SNR=7.9						
EMIJ	**Mijas**	**6.26**	**272**	S	**Sn**	**03 21 36.5**	**-4.4**
	SNR=7.9						
ESDC	**Sonseca Array**	**6.31**	**302**	Pn	**Pn**	**03 20 31.5**	**+0.8**
	0.2nm,0.3s,baz=117,slow=13,SNR=5.3						
ESDC				Sn	**Sn**	**03 21 41.3**	**-1.0**
	0.2nm,0.3s,baz=114,slow=24,SNR=4.6						
ESDC	**Sonseca Array**	**6.31**	**302**	P	**Pn**	**03 20 31.2**	**+0.5**
	1.7nm,0.4s,baz=117,slow=13,SNR=14						
ESDC				S	**Sn**	**03 21 39.3**	**-3.0**
	0.5nm,0.3s,baz=113,slow=24,SNR=3.6						
PAB	**San Pablo**	**6.52**	**299**	P	**Pn**	**03 20 34.8**	**+1.2**
	2.2nm,0.5s,SNR=7.9						
EPF	**Esparros**	**6.78**	**343**	*e*P	**Pn**	**03 20 38.4**	**+1.3**
EPF				*e*Sn	Sn	03 21 43.8	-10
	0.6nm,0.2s						
EPF	**Esparros**	**6.78**	**343**	P	**Pn**	**03 20 38.4**	**+1.3**
EPF				Sn	Sn	03 21 43.8	-10
	0.3nm,0.2s						
MTLF	**Montolieu**	**6.80**	**355**	*e*P	**Pn**	**03 20 39.3**	**+2.0**
MTLF				*e*Sn	Sn	03 21 44.7	-10
	1.3nm,0.2s						
MTLF	**Montolieu**	**6.80**	**355**	P	**Pn**	**03 20 39.3**	**+2.0**
ECAB	**El Cabril**	**6.88**	**285**	P	**Pn**	**03 20 39.8**	**+1.4**
	0.0nm,0.2s,SNR=7.9						
ECAB				S	**Sn**	**03 21 54.8**	**-1.5**
	0.4nm,0.4s,SNR=7.9						
ETSF	**Etsaut**	**6.90**	**338**	*e*P	**Pn**	**03 20 41.2**	**+2.5**
ETSF				*e*Sn	Sn	03 21 45.7	-11
	1.5nm,0.3s						
ETSF	**Etsaut**	**6.90**	**338**	P	**Pn**	**03 20 41.2**	**+2.5**
ATE	**Arette**	**7.11**	**338**	P	**Pn**	**03 20 44.3**	**+2.7**
	SNR=7.9						
ATE				S	**Sn**	**03 21 58.9**	**-3.1**
	1.6nm,0.2s,SNR=7.9						
EORO	**Oroz-Betelu**	**7.14**	**334**	P	Pn	03 20 47.3	+5.2
	1.6nm,0.4s,SNR=7.9						
EORO				S	**Sn**	**03 22 00.3**	**-2.5**
	1.1nm,0.4s,SNR=7.9						
MDT	**Midelt**	**7.29**	**241**	Pn	**Pn**	**03 20 45.4**	**+1.2**
	0.1nm,0.3s,baz=333,slow=2.3,SNR=6.1						
MDT				Lg	Lg	03 22 50.1	
	0.1nm,0.3s,baz=131,slow=20,SNR=1.6						
MDT	**Midelt**	**7.29**	**241**	P	**Pn**	**03 20 42.4**	**-1.8**
MDT				S	Sn	03 21 54.1	-12
SJPF	**Ste Jean**	**7.31**	**335**	*e*P	**Pn**	**03 20 46.4**	**+2.1**
SJPF				*e*Sn	Sn	03 21 55.1	-12
	0.9nm,0.2s						
SJPF	**Ste Jean**	**7.31**	**335**	P	**Pn**	**03 20 46.4**	**+2.1**
MD31	**MD31**	**7.37**	**242**	P	**Pn**	**03 20 42.2**	**-3.1**
MD31				S	Sn	03 21 53.9	-15
FRF	**La Foret Royal**	**7.53**	**21**	*e*Pn	**Pn**	**03 20 46.6**	**-0.7**
FRF				*e*Sn	**Sn**	**03 22 03.9**	**-8.3**
	2.0nm,0.4s						
FRF	**La Foret Royal**	**7.53**	**21**	P	**Pn**	**03 20 46.6**	**-0.7**
LASF	**Ste Croix**	**7.54**	**5**	*e*Pn	**Pn**	**03 20 46.3**	**-1.1**
LASF	**Ste Croix**	**7.54**	**5**	*e*P	**Pn**	**03 20 49.2**	**+1.8**
LASF				*e*Sn	Sn	03 22 02.8	-10
	0.4nm,0.3s						
LASF	**Ste Croix**	**7.54**	**5**	P	**Pn**	**03 20 49.2**	**+1.8**
SMRF	**Simiane la Rot**	**7.67**	**14**	*e*P	**Pn**	**03 20 52.2**	**+3.0**
SMRF	**Simiane la Rot**	**7.67**	**14**	P	**Pn**	**03 20 52.2**	**+3.0**
SBF	**Sospel**	**8.04**	**24**	*e*Pn	**Pn**	**03 20 54.6**	**+0.2**
SBF				*e*Sn	Sn	03 22 15.5	-9.5
	3.6nm,0.3s						
SBF	**Sospel**	**8.04**	**24**	Pn	**Pn**	**03 20 54.6**	**+0.2**
VIVF	**Saint-Julien-l**	**8.39**	**8**	*e*P	**Pn**	**03 21 02.0**	**+2.9**
VIVF				*e*Sn	Sn	03 22 23.5	-10
	0.9nm,0.4s						
VIVF	**Saint-Julien-l**	**8.39**	**8**	P	**Pn**	**03 21 02.0**	**+2.9**
CAF	**Calviac**	**8.39**	**355**	*e*P	**Pn**	**03 21 02.2**	**+3.1**
CAF	**Calviac**	**8.39**	**355**	P	**Pn**	**03 21 02.2**	**+3.1**
LFF	**La Frestale**	**8.55**	**349**	*e*P	**Pn**	**03 21 03.2**	**+2.0**
LFF	**La Frestale**	**8.55**	**349**	P	**Pn**	**03 21 03.2**	**+2.0**
ORIF	**Oris-en-Rattie**	**8.63**	**14**	*e*P	**Pn**	**03 21 06.1**	**+3.6**
MBDF	**Montbardon**	**8.65**	**18**	*e*Sn	Sn	03 22 31.0	-8.9
	0.9nm,0.4s						
RJF	**Les Rejaudoux**	**8.81**	**353**	*e*P	**Pn**	**03 21 08.2**	**+3.3**
RJF	**Les Rejaudoux**	**8.81**	**353**	P	**Pn**	**03 21 08.2**	**+3.3**
AVF	**Avril sur Loir**	**10.23**	**1**	*e*P	**Pn**	**03 21 27.1**	**+2.8**
AVF	**Avril sur Loir**	**10.23**	**1**	P	**Pn**	**03 21 27.1**	**+2.8**
MFF	**Saint Martin d**	**10.31**	**348**	*e*P	**Pn**	**03 21 27.5**	**+2.1**
MFF	**Saint Martin d**	**10.31**	**348**	P	**Pn**	**03 21 27.5**	**+2.1**
QUIF	**Quistinic**	**12.23**	**340**	*e*P	**Pn**	**03 21 54.7**	**+3.1**
QUIF	**Quistinic**	**12.23**	**340**	P	**Pn**	**03 21 54.7**	**+3.1**
ROSF	**Rostrenen**	**12.64**	**341**	*e*P	**Pn**	**03 21 58.5**	**+1.2**
ROSF	**Rostrenen**	**12.64**	**341**	P	**Pn**	**03 21 58.5**	**+1.2**
KOWA	**Kowa**	**22.85**	**198**	LR	LR	03 33 30.7	
	comp=Z,35nm,19.4s,baz=308,slow=38						
TORD	**Torodi Ar. Bea**	**23.34**	**183**	P	**P**	**03 24 04.8**	**-1.0**
	0.6nm,1.0s,baz=14,slow=8.7,SNR=3.1						

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*NEIC **21** 03:21:21.6±0.9, 0°.8N±0°.2×127°.04E±0°.06, h6^{km}±8^{km}, mb4.1/6, Error ellipse: s-maj=23.2km s-min=6.1km az=194.0*

*IDC **21** 03:21:21.5±1.3, 0°.68N×126°.85E, h0^{km}, mb4.0/5, mb1 4.2/5, mb1mx3.8/40, mbtmp4.0/5, MS3.4/2, Ms1 3.3/2, ms1mx2.5/46, Error ellipse: s-maj=131.2km s-min=19.6km az=68.0*

*DJA **21** 03:21:23.4±0.3, 1°N±2°×12°8E±°, h10^{km}, M3.9/10, mb3.9/2, MLv3.9/10*

ISC 21 03:21:21.6±0.7, **0°.76N**±0°.06×**127°.05E**±0°.04, **h10**^{km}, **n25**, σ**1§55**/23, **mb4.1**/9, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.32**	**89**	P	**Pg**	**03 21 27.5**	**-0.4**
TNTI				S	**Sg**	**03 21 32.2**	**0.0**
TNTI	**Ternate**	**0.32**	**89**	Pg	**Pg**	**03 21 28.0**	**+0.1**
LBMI	**Labuha**	**1.46**	**162**	P	**Pg**	**03 21 51.5**	**+1.8**
LBMI				S	**Sn**	**03 22 03.0**	**-4.3**
SANI	**Sanana**	**2.99**	**201**	P	**Pb**	**03 22 14.7**	**-0.3**
KMSI	**Cibinong**	**3.07**	**267**	P	**Pg**	**03 22 19.4**	**-1.1**
GTOI	**Gorontalo**	**4.04**	**268**	P	**Pb**	**03 22 33.6**	**+0.7**
SWI	**Sorong**	**4.51**	**111**	P	**Pn**	**03 22 28.4**	**-1.6**
LUWI	**Luwuk**	**4.64**	**247**	Pn	**Pn**	**03 22 32.1**	**+0.4**
MRSI	**Marisa**	**5.12**	**267**	P	**Pb**	**03 22 48.7**	**-2.5**
TOLI2	**Tolitoli**	**6.28**	**273**	Pn	**Pn**	**03 22 54.2**	**-0.1**
MPSI	**Mapaga**	**7.16**	**267**	P	Pb	03 23 17.3	-8.8
WB0	**Warramunga Arr**	**21.64**	**161**	P	**P**	**03 26 13.3**	**+1.0**
WB0				IAmb	IAmb	03 26 18.0	
	comp=Z,8.4nm,0.9s						
WRA	**Warramunga Arr**	**21.78**	**161**	P	**P**	**03 26 15.6**	**+1.7**
	comp=Z,5.1nm,0.6s,baz=340,slow=11,SNR=36						
WB2	**Warramunga Arr**	**21.79**	**161**	P	**P**	**03 26 14.1**	**+0.2**
WB2				IAmb	IAmb	03 26 18.9	
	comp=Z,25nm,1.4s						
WR0	**Warramunga Arr**	**21.87**	**161**	P	**P**	**03 26 15.4**	**+0.8**
WR0				IAmb	IAmb	03 26 20.4	
	comp=Z,9.5nm,1.1s						
PMG	**Port Moresby**	**22.43**	**117**	LR	LR	03 38 02.7	
	comp=Z,71nm,18.3s,baz=210,slow=44						
AS31	**Alice Springs**	**25.18**	**165**	P	**P**	**03 26 47.3**	**-0.1**
AS31				IAmb	IAmb	03 26 52.9	
	comp=Z,2.2nm,0.8s						
ASAR	**Alice Springs**	**25.18**	**165**	P	**P**	**03 26 49.0**	**+1.6**
	comp=Z,5.8nm,0.8s,baz=345,slow=11,SNR=49						
ASAR	**Alice Springs**	**25.18**	**165**	P	**P**	**03 26 47.1**	**-0.3**
STKA	**Stephens Creek**	**35.27**	**158**	P	**P**	**03 28 16.9**	**+0.3**
	comp=Z,3.2nm,0.8s,baz=333,slow=12,SNR=5.3						
STKA	**Stephens Creek**	**35.27**	**158**	IAmb	IAmb	03 28 21.8	
	comp=Z,1.1nm,1.1s						
SONM	**Songino Array**	**50.20**	**342**	P	**P**	**03 30 20.2**	**+2.5**
	comp=Z,0.5nm,0.7s,baz=160,slow=9.3,SNR=3.7						
MKAR	**Makanchi Array**	**60.17**	**326**	P	**P**	**03 31 30.3**	**+0.7**
	comp=Z,0.9nm,0.6s,baz=118,slow=7.7,SNR=7.9						
KURK	**Kurchatov**	**64.40**	**328**	P	**P**	**03 31 58.8**	**+0.9**
MAW	**Mawson**	**81.10**	**200**	LR	LR	04 08 02.5	
	comp=Z,23nm,20.4s,baz=70,slow=35						

IDC 21 03:26:22.4±8.9, **15°.96S**×**175°.08W**, **h291**^{km}±289^{km}, **mb3.7**/3, **mb1 3.8**/4, **mb1mx3.2**/34, **mbtmp4.3**/4, **ML4.0**/1, **Error ellipse: s-maj=341.7km s-min=129.5km az=95.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.79**	**58**	P	Pn	03 27 27.0	+1.1
	11nm,0.3s,baz=6.4,slow=0.6,SNR=13						
AFI				S	S	03 28 16.6	-0.1
	6.2nm,0.3s,baz=38,slow=19,SNR=3.7						
STKA	**Stephens Creek**	**42.36**	**240**	P	P	03 33 48.1	-0.7
	0.6nm,0.3s,baz=90,slow=11,SNR=2.8						
WRA	**Warramunga Arr**	**48.15**	**257**	P	P	03 34 34.0	-0.2
	1.8nm,0.8s,baz=93,slow=7.4,SNR=14						
ASAR	**Alice Springs**	**48.40**	**252**	P	P	03 34 36.2	+0.1
	13nm,0.6s,baz=87,slow=7.8,SNR=240						

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*IDC **21** 03:39:02.0±0.8, 0°.99N×127°.45E, h0^{km}, mb4.3/9, mb1 4.4/12, mb1mx4.0/48, mbtmp4.2/12, ML3.7/3, MS3.1/12, Ms1 3.1/12, ms1mx2.9/41, Error ellipse: s-maj=25.1km s-min=13.9km az=72.0*

*NEIC **21** 03:39:05.0±1.6, 0°.94N±0°.06×127°.43E±0°.05, h15^{km}±3^{km}, mb4.5/21, Error ellipse: s-maj=10.0km s-min=5.6km az=144.0*

*DJA **21** 03:39:04.7±0.3, 1°N±3°×12°8E±°, h10^{km}, M4.3/14, mb4.7/13, mB4.9/5, MLv4.1/14, Mw(mB)4.2/5*

ISC 21 03:39:03.7±0.6, **0°.99N**±0°.05×**127°.51E**±0°.06, **h10**^{km}, **n61**, σ**1§18**/53, **mb4.5**/19, **MS3.0**/10, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.27**	**214**	P	**Pg**	**03 39 09.1**	**0.0**
TNTI				S	**Sg**	**03 39 13.4**	**+0.7**
TNTI	**Ternate**	**0.27**	**214**		**Pg**	**03 39 09.4**	**+0.4**
TNTI				Sg	**Sg**	**03 39 12.3**	**-0.4**
LBMI	**Labuha**	**1.62**	**180**	P	**Pn**	**03 39 32.9**	**+0.5**
SANI	**Sanana**	**3.39**	**207**	P	**Pn**	**03 39 56.3**	**-0.3**
KMSI	**Cibinong**	**3.56**	**263**	P	**Pn**	**03 40 01.2**	**+2.2**
SWI	**Sorong**	**4.17**	**116**	P	**Pn**	**03 40 10.1**	**+2.6**
SIJI	**Sorong**	**4.18**	**116**	Pn	**Pn**	**03 40 08.7**	**+1.0**
	1.9nm,0.3s,baz=285,slow=9.1,SNR=5.2						
SIJI				Sn	**Sn**	**03 40 58.6**	**+1.9**
	2.0nm,0.3s,baz=233,slow=20,SNR=2.4						
SIJI				LR	LR	03 41 36.6	
	comp=Z,219nm,18.6s,baz=307,slow=36						
GTOI	**Gorontalo**	**4.52**	**266**	P	**Pn**	**03 40 15.0**	**+2.8**
AAI	**Ambon**	**4.70**	**172**	P	**Pn**	**03 40 13.2**	**-1.5**
LUWI	**Luwuk**	**5.16**	**247**	Pn	**Pn**	**03 40 19.6**	**-1.4**
MRSI	**Marisa**	**5.60**	**265**	P	**Pn**	**03 40 28.4**	**+1.3**
	0.3nm78nm,0.6s						
APSI	**Ampana**	**6.16**	**252**	P	**Pn**	**03 40 36.6**	**+1.8**
	0.2nm638nm64nm,0.5s						
TOLI2	**Tolitoli**	**6.73**	**271**	Pn	**Pn**	**03 40 40.5**	**-2.2**
MPSI	**Mapaga**	**7.64**	**265**	P	**Pn**	**03 40 57.2**	**+2.0**
	0.1nm21nm,0.7s						
TTSI	**Tana Toraja**	**8.68**	**242**	P	**Pn**	**03 41 09.0**	**-0.4**
	42nm,0.6s						
BNSI	**Bone**	**9.14**	**234**	P	**Pn**	**03 41 17.2**	**+1.5**
	46nm,0.9s						
SPSI	**Sidrap Palu**	**9.17**	**237**	P	**Pn**	**03 41 17.3**	**+1.1**
	697nm53nm,0.5s						
BKSI	**Bulukumba**	**9.69**	**230**	P	**Pn**	**03 41 25.1**	**+1.8**
	501nm19nm,0.7s						
KAPI	**Kappang**	**9.79**	**232**	Pn	**Pn**	**03 41 25.4**	**+0.8**
	1.4nm,0.3s,baz=172,slow=1.7,SNR=9.0						
KAPI				LR	LR	03 45 09.9	
	comp=Z,42nm,18.1s,baz=76,slow=38						
EDFI	**Ende, Flores**	**11.29**	**211**	P	**Pn**	**03 41 48.0**	**+2.7**
	8.1nm,0.8s						
BATI	**Baumata**	**11.77**	**199**	LR	LR	03 46 49.6	
	comp=Z,56nm,20.4s,baz=310,slow=40						
SBUM	**Sibu**	**15.36**	**276**	Pn	**Pn**	**03 42 40.4**	**-0.2**
SBUM				IAmb	IAmb	03 42 46.8	
	comp=Z,9.9nm,0.8s						
FITZ	**Fitzroy Crossi**	**19.06**	**185**	P	**P**	**03 43 24.4**	**-1.9**
	comp=Z,0.2nm,0.3s,baz=25,slow=8.8,SNR=6.2						
LEM	**Lembang**	**21.32**	**248**	LR	LR	03 52 09.2	
	comp=Z,37nm,21.9s,baz=14,slow=37						
WB0	**Warramunga Arr**	**21.71**	**162**	P	**P**	**03 43 55.1**	**0.0**
WB0				IAmb	IAmb	03 43 59.5	
	comp=Z,31nm,1.1s						
WRAB	**Tennant Creek**	**21.85**	**162**	P	**P**	**03 43 56.2**	**-0.4**
WRAB				IAmb	IAmb	03 44 00.9	
	comp=Z,29nm,1.1s						
WRA	**Warramunga Arr**	**21.86**	**163**	P	**P**	**03 43 57.4**	**+0.7**
	comp=Z,15nm,0.6s,baz=340,slow=11,SNR=135						
WRA				LR	LR	03 52 41.2	
	comp=Z,64nm,21.5s,baz=45,slow=38						
WRA	**Warramunga Arr**	**21.86**	**163**	P	**P**	**03 43 56.1**	**-0.6**
WB2	**Warramunga Arr**	**21.86**	**162**	P	**P**	**03 43 56.3**	**-0.5**
WB2				IAmb	IAmb	03 44 01.0	
	comp=Z,29nm,1.0s						
WR0	**Warramunga Arr**	**21.93**	**162**	P	**P**	**03 43 56.3**	**-1.3**
WR0				IAmb	IAmb	03 43 59.2	
	comp=Z,12nm,0.6s						
PMG	**Port Moresby**	**22.12**	**118**	LR	LR	03 54 46.1	
	comp=Z,150nm,19.1s,baz=298,slow=43						
AS31	**Alice Springs**	**25.29**	**166**	P	**P**	**03 44 30.5**	**0.0**
AS31				IAmb	IAmb	03 44 34.0	
	comp=Z,5.6nm,0.7s						
ASAR	**Alice Springs**	**25.29**	**166**	P	**P**	**03 44 30.6**	**+0.1**
	comp=Z,16nm,0.7s,baz=343,slow=9.5,SNR=78						
CTA	**Charters Tower**	**27.86**	**140**	LR	LR	03 56 42.5	
	comp=Z,3µm,21.0s,baz=98,slow=38						
PSI	**Prapat**	**28.63**	**274**	P	**P**	**03 45 00.1**	**-0.8**
	comp=Z,1.9nm,0.4s,baz=108,slow=6.4,SNR=4.2						
CMAR	**Chiang Mai Arr**	**32.98**	**303**	LR	LR	04 00 09.7	
	comp=Z,19nm,18.1s,baz=171,slow=38						
BBOO	**Buckleboo**	**34.58**	**167**	P	**P**	**03 45 52.3**	**-0.5**
STKA	**Stephens Creek**	**35.31**	**159**	P	**P**	**03 45 59.6**	**+0.4**
	comp=Z,5.5nm,0.7s,baz=342,slow=8.6,SNR=11						
STKA	**Stephens Creek**	**35.31**	**159**	IAmb	IAmb	03 46 00.8	
	comp=Z,1.3nm,0.8s						
KSRS	**Korea Array**	**36.28**	**1**	P	**P**	**03 46 06.8**	**-0.6**
	comp=Z,1.3nm,0.7s,baz=177,slow=11,SNR=3.6						
KSRS				LR	LR	04 03 24.1	
	comp=Z,11nm,19.6s,baz=170,slow=40						
MJAR	**Matsushiro Arr**	**36.73**	**14**	P	**P**	**03 46 11.4**	**+0.2**
	comp=Z,2.7nm,0.8s,baz=186,slow=9.4,SNR=7.9						
MJAR				LR	LR	04 02 04.3	
	comp=Z,28nm,18.3s,baz=180,slow=38						
SONM	**Songino Array**	**50.12**	**342**	P	**P**	**03 47 59.2**	**-0.1**
	comp=Z,1.4nm,0.8s,baz=154,slow=8.5,SNR=9.5						
SONM	**Songino Array**	**50.12**	**342**	IAmb	IAmb	03 48 07.0	
	comp=Z,3.4nm,1.3s						
URZ	**Urewera**	**60.03**	**136**	LR	LR	04 13 47.3	
	comp=Z,35nm,21.8s,baz=211,slow=35						
NIL	**Nilore**	**60.22**	**309**	P	**P**	**03 49 12.3**	**-0.1**
NIL				IAmb	IAmb	03 49 20.1	
	comp=Z,4.3nm,0.7s						
MK31	**Makanchi Array**	**60.24**	**326**	P	**P**	**03 49 11.5**	**-0.7**
MK31				IAmb	IAmb	03 49 15.1	
	comp=Z,3.4nm,0.8s						
MKAR	**Makanchi Array**	**60.24**	**326**	P	**P**	**03 49 11.9**	**-0.3**
	comp=Z,3.2nm,0.7s,baz=119,slow=8.2,SNR=17						
MKAR	**Makanchi Array**	**60.24**	**326**	P	**P**	**03 49 12.1**	**-0.2**
MAKZ	**Makanchi**	**60.42**	**326**	P	**P**	**03 49 13.8**	**+0.2**
MAKZ				IAmb	IAmb	03 49 16.8	
	comp=Z,7.0nm,1.1s						
MA2	**Magadan**	**61.16**	**13**	LR	LR	04 12 49.1	
	comp=Z,23nm,21.3s,baz=336,slow=33						
ZALV	**Zalesovo Beam**	**63.37**	**333**	P	**P**	**03 49 33.2**	**+0.1**
KBL	**Kabul**	**63.81**	**308**	P	**P**	**03 49 36.2**	**-0.5**
GAR	**Garm**	**64.35**	**313**	P	**P**	**03 49 40.3**	**+0.2**
KURK	**Kurchatov**	**64.46**	**328**	P	**P**	**03 49 40.3**	**0.0**
SEY	**Seymchan**	**64.51**	**12**	LR	LR	04 17 14.2	
	comp=Z,7.9nm,19.4s,baz=41,slow=36						
KKAR	**Karatay Array**	**65.76**	**318**	P	**P**	**03 49 49.5**	**+0.5**
BRVK	**Borovoye**	**70.10**	**327**	P	**P**	**03 50 16.1**	**0.0**
BRVK				IAmb	IAmb	03 50 38.9	
	comp=Z,6.6nm,1.4s						
ABKAR	**Akbulak array**	**74.75**	**321**	P	**P**	**03 50 44.6**	**+0.6**
VNDA	**Vanda**	**80.63**	**173**	P	**P**	**03 51 15.2**	**-1.0**
	comp=Z,1.0nm,0.8s,baz=320,slow=6.8,SNR=6.5						
VNDA	**Vanda**	**80.63**	**173**	IAmb	IAmb	03 51 16.7	
	comp=Z,1.7nm,1.1s						
RAYN	**Ar Rayn**	**82.28**	**293**	P	**P**	**03 51 26.0**	**-0.1**
RAYN				IAmb	IAmb	03 51 29.4	
	comp=Z,5.7nm,1.2s						

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*NIC **21** 03:49:41.9±0.0, 34°.76N×26°.85E, h32^{km}±25^{km}, Ml4.0/3*

*DDA **21** 03:49:41.0, 35°.01N×26°.67E, h93^{km}±49^{km}, MW3.8*

*ATH **21** 03:49:43.6, 35°.21N×26°.79E, h51^{km}±6^{km}, ML3.8/4, Error ellipse: s-maj=8.1km s-min=2.1km az=171.0*

*ISK **21** 03:49:44.2, 35°.34N×26°.78E, h10^{km}, ML3.7/15*

*THE **21** 03:49:44.5, 35°.12N×26°.86E, h12^{km}±1^{km}, ML3.7/4, Error ellipse: s-maj=3.5km s-min=1.0km az=158.0*

*IDC **21** 03:49:44.7±1.7, 34°.94N×26°.93E, h53^{km}±19^{km}, mb3.6/7, mb1 3.7/13, mb1mx3.5/53, mbtmp3.7/13, ML3.4/6, MS2.9/5, Ms1 2.9/5, ms1mx2.5/46, Error ellipse: s-maj=23.7km s-min=13.3km az=175.0*

*HLW **21** 03:49:51.1, 34°.47N×27°.49E, h6^{km}±16^{km}, Md4.1, Ml4.0*

ISC 21 03:49:42.9±1.1, **34°.97N**±0°.04×**26°.87E**±0°.02, **h33**^{km}±4^{km}, **n105**, σ**1§44**/122, **mb3.8**/7, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.55**	**285**	P	**Pb**	**03 49 54.5**	**+0.2**
ZKR				S	**Sn**	**03 50 03.5**	**+1.0**
	21µm,0.4s						
ZKR	**Zakros**	**0.55**	**285**	P	**Pb**	**03 49 54.5**	**+0.2**
ZKR				S	**Sn**	**03 50 04.1**	**+1.7**
ZKR				AML	AML	03 50 04.5	
	comp=N,44180µm,0.6s						
ZKR				AML	AML	03 50 04.7	
	comp=E,67475µm,0.6s						
ZKR	**Zakros**	**0.55**	**285**	PG	**Pb**	**03 49 54.5**	**+0.2**
ZKR				SG	**Sb**	**03 50 02.5**	**+0.4**
ZKR	**Zakros**	**0.55**	**285**	P	**Pb**	**03 49 54.4**	**+0.1**
ZKR				S	**Sn**	**03 50 03.8**	**+1.3**
STIA	**Sitia Lasithi**	**0.68**	**290**	P	**Pn**	**03 49 56.2**	**+0.1**
STIA				S	**Sn**	**03 50 06.2**	**+0.7**
FRMA	**Ierapetra Chan**	**0.93**	**273**	P	**Pn**	**03 49 59.7**	**+0.1**
FRMA				S	**Sb**	**03 50 12.7**	**+0.1**
	comp=E,4µm,0.5s						
NPS	**Neapolis**	**1.07**	**286**	P	**Pb**	**03 50 03.2**	**+0.4**
NPS				S	**Sb**	**03 50 16.8**	**+0.3**
	comp=E,7µm,0.5s						
NPS	**Neapolis**	**1.07**	**286**	P	**Pb**	**03 50 03.3**	**+0.4**
NPS				S	**Sb**	**03 50 16.8**	**+0.3**
NPS				AML	AML	03 50 23.3	
	comp=E,15590µm,0.6s						
NPS				AML	AML	03 50 25.8	
	comp=N,11297µm,0.9s						
HRKL	**Herakleio**	**1.48**	**284**	PN	**Pb**	**03 50 09.9**	**0.0**
KSTL	**Kastelli Herak**	**1.51**	**283**	P	**Pn**	**03 50 06.4**	**-1.2**
KSTL				S	**Sn**	**03 50 22.9**	**-3.2**
	comp=N,2µm,0.5s						
ARG	**Arkhangelos**	**1.61**	**39**	P	**Pb**	**03 50 10.9**	**-1.2**
ARG	**Arkhangelos**	**1.61**	**39**	P	**Pb**	**03 50 11.3**	**-0.7**
ARG				AML	AML	03 50 43.8	
	comp=E,1883µm,0.5s						
ARG				AML	AML	03 50 44.0	
	comp=N,2194µm,0.8s						
ARG	**Arkhangelos**	**1.61**	**39**	PN	**Pb**	**03 50 10.7**	**-1.3**
ARG				SN	**Sn**	**03 50 29.9**	**+1.2**
ARG	**Arkhangelos**	**1.61**	**39**	P	**Pb**	**03 50 10.8**	**-1.2**
ARG				S	**Sb**	**03 50 32.5**	**+0.5**
IDI	**Anoyia**	**1.65**	**282**	P	**Pb**	**03 50 12.5**	**-0.2**
	comp=N,35nm,0.3s,baz=65,slow=18,SNR=226						
IDI				LR	LR	03 51 07.9	
	comp=N,461nm,18.0s,baz=80,slow=49						
IDI	**Anoyia**	**1.65**	**282**	P	**Pb**	**03 50 12.5**	**-0.2**
IDI				AML	AML	03 50 37.8	
	comp=E,2099µm,0.5s						
IDI				AML	AML	03 50 40.1	
	comp=N,2666µm,0.6s						
NISR	**Nisiros**	**1.65**	**7**	P	**Pn**	**03 50 09.3**	**-0.2**
NISR	**Nisiros**	**1.65**	**7**	P	**Pn**	**03 50 09.2**	**-0.4**
KOSK	**Kos Island**	**1.78**	**3**	PN	**Pn**	**03 50 10.9**	**-0.4**
SANT	**Santorini**	**1.81**	**321**	P	**Pn**	**03 50 12.2**	**+0.5**
SANT	**Santorini**	**1.81**	**321**	P	**Pn**	**03 50 12.2**	**+0.5**
SANT	**Santorini**	**1.81**	**321**	*i* P	**Pn**	**03 50 11.7**	**-0.1**
SANT	**Santorini**	**1.81**	**321**	PN	**Pn**	**03 50 11.6**	**-0.1**
THR8	**Santorini-Mono**	**1.82**	**322**	P	**Pn**	**03 50 12.3**	**+0.4**
THR8	**Santorini-Mono**	**1.82**	**322**	P	**Pn**	**03 50 12.3**	**+0.4**
THR6	**Thira Island,**	**1.83**	**320**	P	**Pn**	**03 50 12.6**	**+0.6**
DAT	**Datca**	**1.85**	**18**	P	**Pn**	**03 50 12.3**	**-0.1**
DAT	**Datca**	**1.85**	**18**	PN	**Pn**	**03 50 12.2**	**-0.1**
STAX	**Taxiarchis Har**	**1.85**	**321**	P	**Pn**	**03 50 13.5**	**+1.2**
STAX	**Taxiarchis Har**	**1.85**	**321**	P	**Pn**	**03 50 13.5**	**+1.2**
THT2	**Imerovigli**	**1.87**	**322**	P	**Pn**	**03 50 13.2**	**+0.6**
THT2	**Imerovigli**	**1.87**	**322**	P	**Pn**	**03 50 13.4**	**+0.8**
THR5	**Thira Island,**	**1.90**	**320**	P	**Pn**	**03 50 14.2**	**+1.2**
THR5	**Thira Island,**	**1.90**	**320**	P	**Pn**	**03 50 14.2**	**+1.2**
CMBO	**Columbo, Santo**	**1.91**	**322**	P	**Pn**	**03 50 13.9**	**+0.8**
BODT	**Bodrum**	**2.12**	**10**	PN	**Pn**	**03 50 15.8**	**-0.2**
TURN	**Turunc**	**2.12**	**32**	*i* P	**Pn**	**03 50 16.6**	**+0.6**
TURN				*i* S	**Sn**	**03 50 42.8**	**+1.6**
TURN				IAML		03 50 57.0	
	comp=N,183nm,1.0s						
TURN	**Turunc**	**2.12**	**32**	PN	**Pn**	**03 50 16.9**	**+0.9**
BDRM	**Kayabasi**	**2.14**	**12**	*i* P	**Pn**	**03 50 18.3**	**+2.0**
GVD	**Gavdhos**	**2.29**	**267**	PN	**Pb**	**03 50 21.6**	**-1.9**
DALY	**Dalyan (Mula)**	**2.34**	**38**	PN	**Pn**	**03 50 20.5**	**+1.4**
APE	**Apeiranthos**	**2.35**	**333**	*i* P	**Pn**	**03 50 18.8**	**-0.5**
APE				*i* S	**Sn**	**03 50 44.2**	**-2.9**
APE	**Apeiranthos**	**2.35**	**333**	PN	**Pn**	**03 50 19.0**	**-0.3**
IMMV	**Iera Moni Meta**	**2.41**	**282**	P	**Pb**	**03 50 23.3**	**-2.2**
IMMV	**Iera Moni Meta**	**2.41**	**282**	PN	**Pb**	**03 50 23.4**	**-2.2**
MLSB	**Milas**	**2.43**	**17**	PN	**Pn**	**03 50 20.7**	**+0.4**
YER	**Yerkesik**	**2.44**	**28**	P	**Pn**	**03 50 21.4**	**+0.9**
YER	**Yerkesik**	**2.44**	**28**	PN	**Pn**	**03 50 21.2**	**+0.7**
DDIM	**Aydin, Didim**	**2.50**	**7**	*i* P	**Pb**	**03 50 25.5**	**-1.6**
AKAS	**Kas**	**2.56**	**60**	*i* P	**Pn**	**03 50 22.8**	**+0.6**
MULA	**Mugla, Merkez-**	**2.57**	**27**	*i* P	**Pn**	**03 50 21.7**	**-0.5**
MULA				*i* S	**Sb**	**03 50 58.7**	**-0.8**
MULA				IAML		03 51 09.0	
	comp=N,98nm,0.7s						
MULA				IAML		03 51 10.0	
	comp=E,151nm,0.7s						

KNDR	**Palaiochora Ch**	**2.62**	**277**	PN	**Pb**	**03 50 26.7**	**-2.4**
GCAM	**G?zelcaml?**	**2.74**	**6**	i P	**Pn**	**03 50 27.1**	**+2.6**
AYDN	**Tasoluk**	**2.81**	**17**	i P	**Pn**	**03 50 24.3**	**-1.2**
TAVA	**DENIZLI_Tavas**	**2.99**	**33**	i P	**Pn**	**03 50 28.4**	**+0.4**
TAVA				i S	**Sb**	**03 51 08.9**	**-2.7**
TAVA				IAML		03 51 24.0	
	comp=E,89nm,1.2s						
ELL	**Elmali**	**3.04**	**53**	P	**Pn**	**03 50 30.4**	**+1.6**
DGB	**zmir**	**3.07**	**0**	i P	**Pn**	**03 50 27.1**	**-2.0**
AKUM	**Antalya-Kumluc**	**3.14**	**64**	i P	**Pn**	**03 50 29.4**	**-0.5**
ZEYE	**Izmir, Urla-Ze**	**3.27**	**355**	i P	**Pn**	**03 50 29.9**	**-1.9**
URLA	**Izmir**	**3.39**	**356**	i P	**Pn**	**03 50 33.0**	**-0.5**
MATC	**Matruh**	**3.63**	**175**	P	**Pn**	**03 50 40.2**	**+3.5**
	baz=185						
SLUM	**Salum**	**3.74**	**202**	P	**Pn**	**03 50 41.0**	**+2.8**
	baz=214						
SLUM				S	**Sn**	**03 51 22.8**	**+1.6**
	baz=214						
BRDR	**BURDUR-Merkez**	**3.75**	**43**	i P	**Pb**	**03 50 49.7**	**+1.3**
MANT	**Manisa**	**3.77**	**21**	i P	**Pn**	**03 50 37.1**	**-1.7**
OSC1	**CSNet OBS 1**	**3.94**	**111**	S	**Sn**	**03 51 24.8**	**-1.2**
PASA	**Karahalli, USA**	**3.97**	**31**	i P	**Pn**	**03 50 40.2**	**-1.4**
ZEDA	**zmir-Bergama**	**3.99**	**2**	i P	**Pn**	**03 50 41.7**	**0.0**
USAK	**Uak-Merkez**	**4.11**	**24**	i P	**Pn**	**03 50 42.2**	**-1.2**
AKMS	**Akamas**	**4.49**	**88**	P	**Pn**	**03 50 48.7**	**+0.1**
AKMS				AML	AML	03 51 38.8	
	comp=E,0.4nm,0.5s						
AKMS				AML	AML	03 51 38.8	
	comp=E,0.4nm,0.5s						
AKMS				AML	AML	03 51 39.8	
	comp=E,0.5nm,0.5s						
AKMS				AML	AML	03 51 39.8	
	comp=E,0.5nm,0.5s						
AKMS				S	**Sn**	**03 51 40.3**	**+0.6**
BUHA	**Balikesir, Bur**	**4.52**	**2**	i P	**Pn**	**03 50 47.4**	**-1.7**
GDZ	**Gediz**	**4.61**	**26**	i P	**Pn**	**03 50 50.5**	**+0.1**
NATA	**Nata**	**4.69**	**91**	P	**Pn**	**03 50 51.9**	**+0.4**
ALFC	**Alefka**	**4.71**	**86**	P	**Pn**	**03 50 51.0**	**-0.6**
ALFC				AML	AML	03 51 44.1	
	comp=E,0.3nm,0.8s						
ALFC				AML	AML	03 51 44.1	
	comp=E,0.7nm,0.7s						
DURS	**Dursunbey**	**4.79**	**15**	i P	**Pn**	**03 50 54.5**	**+1.7**
ASGA	**Asgata**	**5.25**	**90**	P	**Pn**	**03 50 59.2**	**+0.1**
ASGA				AML	AML	03 51 58.6	
	comp=E,0.2nm,1.0s						
ASGA				AML	AML	03 51 59.8	
	comp=E,0.4nm,0.5s						
CSS	**Mathiatis**	**5.31**	**88**	P	**Pn**	**03 51 00.2**	**+0.3**
AGG	**Agios Georgios**	**5.43**	**319**	i P	**Pn**	**03 50 57.4**	**-4.1**
AGG				i S	**Pb**	**03 51 18.9**	**+1.9**
AGG				IAML		03 51 26.0	
	comp=N,119nm,0.4s						
MVOU	**Mavrovouni**	**5.55**	**88**	P	**Pn**	**03 51 03.5**	**+0.3**
SWA2		**5.84**	**192**	P	**Pn**	**03 51 09.9**	**+2.8**
	baz=199						
SWA2				AMP		03 52 00.0	
	baz=199						
SWA2				S	**Sn**	**03 52 13.4**	**+0.5**
	baz=199						
RYAN	**Fayoum**	**6.55**	**153**	S	**Sn**	**03 52 31.6**	**+1.1**
	baz=155						
HSAF	**As Saff**	**6.65**	**142**	P	**Pn**	**03 51 19.9**	**+1.6**
	baz=143						
GLL	**Jalalah**	**6.76**	**141**	P	**Pn**	**03 51 20.2**	**+0.3**
	baz=142						
BRTR	**Keskin Array B**	**7.18**	**47**	P	**Pn**	**03 51 28.7**	**+3.0**
	comp=N,0.1nm,0.3s,baz=218,slow=14,SNR=2.8						
BRTR				LR	LR	03 54 33.5	
	comp=N,53nm,20.3s,baz=220,slow=40						
SUZ	**Suez**	**7.18**	**134**	P	**Pn**	**03 51 26.1**	**+0.4**
	baz=134						
FNA	**Florina**	**7.24**	**325**	i P	Pn	03 51 05.7	-21
MMAI	**Mount Meron Ar**	**7.36**	**103**	P	**Pn**	**03 51 27.2**	**-0.8**
	comp=N,0.8nm,0.3s,baz=302,slow=12,SNR=9.5						
NBNS	**Bani Suef**	**7.37**	**148**	P	**Pn**	**03 51 30.4**	**+2.3**
	baz=149						
NBNS				AMP		03 53 00.0	
	baz=149						
HFRF	**Wahat Farafira**	**7.90**	**171**	P	**Pn**	**03 51 37.8**	**+2.4**
	baz=174						
HFRF				S	**Sn**	**03 52 57.7**	**-5.9**
	baz=174						
EIL	**Elat**	**8.64**	**125**	P	**Pn**	**03 51 46.2**	**+0.5**
	comp=N,0.3nm,0.3s,baz=296,slow=2.6,SNR=11						
HBST	**Basata**	**8.80**	**129**	P	**Pn**	**03 51 49.8**	**+2.1**
	baz=128						
ASF	**Jabal al Asfar**	**8.82**	**106**	P	**Pn**	**03 51 47.0**	**-1.1**
	comp=N,0.1nm,0.3s,baz=270,slow=8.1,SNR=2.0						
MLR	**Muntele Rosu**	**10.53**	**356**	LR	LR	03 56 21.0	
	comp=N,100nm,21.6s,baz=208,slow=38						
AKASG	**Malin Array Be**	**15.81**	**6**	P	**Pn**	**03 53 24.2**	**+1.3**
	comp=N,0.4nm,0.3s,baz=194,slow=11,SNR=9.5						
CKRC	**Cesky Krumlov**	**16.66**	**330**	eP	**Pn**	**03 53 34.2**	**+0.4**
CKRC				ex	x	03 53 48.0	
GERES	**GERESS Array B**	**16.94**	**329**	P	**Pn**	**03 53 37.9**	**+0.6**
	comp=N,0.1nm,0.3s,baz=138,slow=12,SNR=14						
GERES				LR	LR	04 01 56.0	
	comp=N,36nm,18.2s,baz=94,slow=43						
DPC	**Dobruska-Polom**	**17.18**	**337**	eP	**Pn**	**03 53 39.9**	**-0.4**
DPC				ex	x	03 53 51.3	
KHC	**Kasperske Hory**	**17.21**	**329**	eP	**Pn**	**03 53 40.9**	**+0.2**
KHC				ex	x	03 53 54.3	
ESDC	**Sonseca Array**	**24.89**	**290**	P	**P**	**03 55 02.2**	**-0.5**
	comp=N,1.7nm,0.7s,baz=83,slow=9.0,SNR=17						
MDT	**Midelt**	**26.16**	**274**	P	**P**	**03 55 15.3**	**+1.0**
	comp=N,2.9nm,0.9s,baz=96,slow=7.5,SNR=6.6						
NOA	**NORSAR Array B**	**27.95**	**344**	LR	LR	04 08 01.4	
	comp=N,18nm,18.8s,baz=35,slow=39						
TORD	**Torodi Ar. Bea**	**31.46**	**233**	P	**P**	**03 56 02.0**	**+0.5**
	comp=N,1.7nm,0.5s,baz=34,slow=8.8,SNR=21						
TORD				LR	LR	04 11 48.7	
	comp=N,30nm,19.4s,baz=95,slow=42						
MKAR	**Makanchi Array**	**42.71**	**57**	P	**P**	**03 57 37.4**	**+0.7**
	comp=N,1.0nm,0.6s,baz=277,slow=7.1,SNR=8.3						
ZALV	**Zalesovo Beam**	**44.13**	**46**	P	**P**	**03 57 46.8**	**-1.2**
	comp=N,1.4nm,0.5s,baz=266,slow=8.1,SNR=5.5						
SONM	**Songino Array**	**58.52**	**51**	P	**P**	**03 59 36.4**	**+0.3**
	comp=N,0.6nm,0.8s,baz=275,slow=5.7,SNR=3.6						
ILAR	**Eielson Array**	**80.46**	**357**	P	**P**	**04 01 49.5**	**-1.5**
	comp=N,0.3nm,0.7s,baz=333,slow=2.7,SNR=5.7						

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*ATH **21** 03:50:25.7, 38.°50N×20.°50E, h13^{km}±1^{km}, ML3.1/10, Error ellipse: s-maj=1.8km s-min=0.7km az=289.0*

*THE **21** 03:50:25.4, 38.°50N×20.°47E, h12^{km}±2^{km}, ML3.6/6, Error ellipse: s-maj=2.3km s-min=0.4km az=105.0*

ISC 21 03:50:24.9±0.8**, 38.°50N**±0.°02×**20.°51E**±0.°03**, h16**^{km}±5^{km}**, n40, σ0.^{s}38**/59**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FSK	**Fiskardo**	**0.05**	**134**	P	**Pg**	**03 50 27.7**	**-0.2**
FSK				S	**Sg**	**03 50 29.4**	**-0.6**
	52µm,0.3s						
FSK	**Fiskardo**	**0.05**	**134**	P	**Pg**	**03 50 27.7**	**-0.2**
FSK				S	**Sg**	**03 50 29.3**	**-0.6**
FSK				AML	AML	03 50 29.6	
FSK				AML	AML	03 50 29.7	
EVGI	**Lefkada island**	**0.17**	**42**	P	**Pg**	**03 50 29.4**	**+0.2**
EVGI				S	**Sg**	**03 50 32.9**	**+0.8**
EVGI	**Lefkada island**	**0.17**	**42**	P	**Pg**	**03 50 29.5**	**+0.2**
EVGI				S	**Sg**	**03 50 33.0**	**+0.8**
DRAG	**Dragano-Lefkad**	**0.19**	**15**	P	**Pg**	**03 50 29.3**	**-0.3**
DRAG				S	**Sg**	**03 50 33.4**	**+0.6**
	43µm,0.5s						
DRAG	**Dragano-Lefkad**	**0.19**	**15**	P	**Pg**	**03 50 29.4**	**-0.2**
DRAG				S	**Sg**	**03 50 33.4**	**+0.6**
KEF4	**Livadi, Kephal**	**0.25**	**196**	P	**Pg**	**03 50 30.5**	**+0.1**
KEF4				S	**Sb**	**03 50 34.6**	**-0.5**
KEF4	**Livadi, Kephal**	**0.25**	**196**	P	**Pg**	**03 50 30.5**	**+0.1**
KEF4				S	**Sb**	**03 50 35.4**	**+0.3**
NYDR	**Nydri-Lefkada**	**0.26**	**34**	P	**Pg**	**03 50 30.8**	**+0.1**
NYDR				S	**Sb**	**03 50 35.5**	**0.0**
NYDR	**Nydri-Lefkada**	**0.26**	**34**	P	**Pb**	**03 50 30.9**	**-0.3**
NYDR				S	**Sb**	**03 50 35.7**	**+0.2**
DMLN	**Damoulianata-K**	**0.28**	**203**	P	**Pg**	**03 50 31.0**	**0.0**
DMLN				S	**Sb**	**03 50 35.9**	**-0.1**
	20µm,0.4s						
DMLN	**Damoulianata-K**	**0.28**	**203**	P	**Pg**	**03 50 31.1**	**0.0**
DMLN				S	**Sb**	**03 50 36.3**	**+0.3**
LXRA	**Lixouri, Kepha**	**0.30**	**191**	P	**Pb**	**03 50 31.7**	**-0.2**
LXRA				S	**Sb**	**03 50 37.4**	**+0.8**
LKD2	**Lefkada island**	**0.31**	**21**	P	**Pg**	**03 50 31.6**	**0.0**
LKD2				S	**Sb**	**03 50 37.0**	**0.0**
	3µm,0.6s						
LKD2	**Lefkada island**	**0.31**	**21**	P	**Pg**	**03 50 31.8**	**+0.2**
LKD2				AML	AML	03 50 38.6	
	comp=E,6339µm,0.4s						
LKD2				AML	AML	03 50 45.7	
	comp=N,5468µm,0.6s						
ARGA	**Argostoli. Kep**	**0.32**	**185**	P	**Pb**	**03 50 33.0**	**+0.7**
KEF3	**Kipouria, Keph**	**0.32**	**204**	P	**Pg**	**03 50 31.2**	**-0.5**
KEF3				S	**Sg**	**03 50 36.4**	**+0.1**
	comp=N,23µm,0.5s						
KEF3	**Kipouria, Keph**	**0.32**	**204**	P	**Pg**	**03 50 31.3**	**-0.3**
KEF3				S	**Sg**	**03 50 36.5**	**+0.3**
VLS	**Valsamata**	**0.33**	**169**	P	**Pg**	**03 50 31.9**	**+0.1**
VLS				S	**Sb**	**03 50 37.5**	**+0.2**
	comp=N,6µm,0.3s						
VLS	**Valsamata**	**0.33**	**169**	P	**Pg**	**03 50 31.9**	**+0.1**
VLS				S	**Sb**	**03 50 37.8**	**+0.5**
VLS				AML	AML	03 50 38.3	
	comp=E,13950µm,0.3s						
VLS				AML	AML	03 50 40.8	
	comp=N,11507µm,0.4s						
TSLK	**Tsoukalades, L**	**0.35**	**19**	P	**Pg**	**03 50 32.2**	**+0.1**
TSLK	**Tsoukalades, L**	**0.35**	**19**	P	**Pb**	**03 50 32.5**	**-0.2**
PSDA	**Pessada-Kefalo**	**0.39**	**172**	P	**Pb**	**03 50 33.0**	**-0.3**
PSDA				S	**Sb**	**03 50 39.7**	**+0.7**
PSDA	**Pessada-Kefalo**	**0.39**	**172**	P	**Pb**	**03 50 33.1**	**-0.3**
VTN	**Vitineika**	**0.79**	**137**	P	**Pn**	**03 50 41.0**	**-0.3**
PVO	**Paravola**	**0.80**	**81**	P	**Pn**	**03 50 41.5**	**-0.1**
PVO				AML	AML	03 51 05.5	
	comp=N,2052µm,0.5s						
PVO				AML	AML	03 51 06.9	
	comp=E,1632µm,0.5s						
LTHK	**Lithakia**	**0.83**	**162**	P	**Pb**	**03 50 40.7**	**-0.1**
RLS	**Riolos of Patr**	**0.87**	**120**	P	**Pn**	**03 50 42.6**	**+0.1**
RLS				AML	AML	03 51 00.7	
	comp=N,1764µm,0.3s						
RLS				AML	AML	03 51 09.8	
	comp=E,1166µm,0.5s						
IGT	**Igoumenitsa**	**1.04**	**352**	P	**Pb**	**03 50 44.6**	**0.0**
DRO	**Drossia**	**1.09**	**120**	P	**Pg**	**03 50 46.2**	**+0.3**
DRO				AML	AML	03 51 08.7	
	comp=E,3010µm,0.3s						
DRO				AML	AML	03 51 09.6	
	comp=N,3397µm,0.4s						
EFP	**Efpalio**	**1.10**	**93**	P	**Pg**	**03 50 45.8**	**-0.3**
EFP				AML	AML	03 51 09.2	
	comp=E,1386µm,0.6s						
EFP				AML	AML	03 51 12.4	
	comp=N,1284µm,0.4s						
EVR	**Evrytania**	**1.10**	**67**	P	**Pg**	**03 50 46.1**	**0.0**
ANX	**Ano Chora**	**1.11**	**85**	P	**Pg**	**03 50 46.3**	**-0.1**
ANX				AML	AML	03 51 12.3	
	comp=N,1893µm,0.6s						
ANX				AML	AML	03 51 19.6	
	comp=E,1644µm,0.7s						
LAKA	**Lakka**	**1.18**	**102**	P	**Pg**	**03 50 47.2**	**-0.5**
SERG	**Sergoula**	**1.22**	**93**	P	**Pg**	**03 50 48.1**	**-0.3**
SERG				AML	AML	03 51 16.7	
	comp=N,1590µm,0.4s						
SERG				AML	AML	03 51 16.8	
	comp=E,1255µm,0.6s						
TRIZ	**Trizonia**	**1.23**	**96**	P	**Pg**	**03 50 48.3**	**-0.4**
KEK	**Kerkira**	**1.34**	**336**	P	**Pg**	**03 50 50.3**	**-0.4**
KLV	**Kalavryta, Ach**	**1.37**	**109**	P	**Pb**	**03 50 50.4**	**+0.3**
AGG	**Agios Georgios**	**1.52**	**69**	P	**Pg**	**03 50 53.5**	**-0.6**
AGG				AML	AML	03 51 26.8	
	comp=N,578µm,0.5s						
AGG				AML	AML	03 51 27.5	
	comp=E,670µm,0.9s						
GUR	**Goura**	**1.55**	**111**	P	**Pb**	**03 50 52.6**	**-0.6**

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*KRSC **21** 03:57:21.6±1.6, 49.°05N×153.°44E, h399^{km}±17^{km}, ML4.5*

*IDC **21** 03:57:21.2±3.2, 49.°83N×151.°27E, h332^{km}±25^{km}, mb3.2/10, mb1 3.4/11, mb1mx3.0/60, mbtmp3.9/11, Error ellipse: s-maj=38.4km s-min=17.8km az=177.0*

ISC 21 03:57:22.6±1.1**, 49.°9N**±0.°2×**151.°74E**±0.°09**, h350**^{km}**, n29, σ2.^{s}39**/35**, mb3.4**/10**, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDTR	**Khodutka, Kamc**	**4.47**	**62**	eP	**Pn**	**03 58 34.5**	**-1.8**
KDTR				eS	**S**	**03 59 30.7**	**-5.2**
ASAK	**Asacha**	**4.63**	**54**	eP	**Pn**	**03 58 39.0**	**+0.8**
PETK	**Petropavlovsk-**	**4.95**	**47**	P	**Pn**	**03 58 40.6**	**-0.9**
	0.1nm,0.3s,baz=229,slow=11,SNR=3.0						
RUS	**Russkaya**	**4.99**	**56**	eP	**Pn**	**03 58 41.3**	**-0.6**
RUS				eS	**S**	**03 59 42.3**	**-3.7**
DALK	**Dalny**	**5.42**	**51**	eS	**S**	**03 59 54.6**	**-0.1**
KOK	**Koryaka**	**5.51**	**49**	eP	**Pn**	**03 58 49.1**	**+1.3**
AVH	**Avacha**	**5.54**	**49**	eP	**Pn**	**03 58 49.3**	**+1.2**
UGLR	**Uglovaya**	**5.55**	**50**	eP	**Pn**	**03 58 49.7**	**+1.4**
UGLR				eS	**S**	**03 59 57.1**	**-0.6**
KRER	**Koryakskii**	**5.57**	**49**	eP	**Pn**	**03 58 50.1**	**+1.5**
SMAR	**Somma**	**5.57**	**49**	eP	**Pn**	**03 58 49.4**	**+0.8**
SDLR	**Sedlovina**	**5.62**	**50**	eP	**Pn**	**03 58 50.0**	**+0.9**
SPN	**Mys Shipunski**	**6.11**	**55**	eP	**Pn**	**03 58 52.9**	**-1.6**
SPN				eS	**S**	**04 00 03.3**	**-5.8**
TUMD	**Tumrok D**	**7.52**	**41**	eP	**Pn**	**03 59 12.0**	**+1.1**
TUMD				eS	**S**	**04 00 38.1**	**-1.0**
MKZ	**Mys Kozlova**	**7.73**	**49**	eP	**Pn**	**03 59 12.2**	**-1.1**
MKZ				eS	**S**	**04 00 37.4**	**-6.2**
KMNR	**Kamenistaya**	**7.84**	**38**	eP	**Pn**	**03 59 17.1**	**+2.4**
KBTR	**Krutoberegovo**	**9.22**	**42**	eP	**Pn**	**03 59 31.2**	**+0.3**
KBTR				eS	**S**	**04 01 13.3**	**-2.7**
BKI	**Bering**	**10.19**	**53**	eS	S	04 01 28.6	-8.7
KLR	**Kul'dur**	**13.00**	**275**	P	**P**	**04 00 12.9**	**-2.1**
	0.6nm,0.3s,baz=81,slow=11,SNR=13						
TIXI	**Tiksi**	**24.23**	**343**	P	**P**	**04 02 07.8**	**-0.7**
	0.5nm,0.3s,baz=135,slow=10.0,SNR=1.2						
ILAR	**Eielson Array**	**34.76**	**41**	P	**P**	**04 03 43.2**	**+2.7**
	0.5nm,0.3s,baz=270,slow=4.7,SNR=25						
INK	**Inuvik**	**39.56**	**34**	P	**P**	**04 04 22.8**	**+2.4**
	1.1nm,0.3s,baz=289,slow=6.8,SNR=55						
MKAR	**Makanchi Array**	**44.77**	**294**	P	**P**	**04 05 00.3**	**-2.1**
	0.3nm,0.7s,baz=68,slow=5.4,SNR=2.0						
YKA	**Yellowknife Ar**	**49.01**	**38**	P	**P**	**04 05 35.9**	**+1.4**
	1.3nm,0.7s,baz=303,slow=6.9,SNR=4.4						
FINES	**FINESS Array B**	**60.85**	**333**	P	**P**	**04 06 57.2**	**-1.2**
	5.2nm,1.0s,baz=36,slow=7.3,SNR=4.6						
NVAR	**Mina Array Bea**	**61.82**	**63**	P	**P**	**04 07 07.8**	**+2.3**
	0.2nm,0.6s,baz=294,slow=6.8,SNR=2.7						
PDAR	**Pinedale Array**	**63.67**	**54**	P	**P**	**04 07 18.6**	**+1.1**
	0.4nm,0.6s,baz=327,slow=3.5,SNR=6.0						
SCHQ	**Schefferville**	**70.80**	**22**	P	**P**	**04 08 02.0**	**+0.6**
	2.1nm,0.7s,baz=321,slow=6.5,SNR=5.7						
TXAR	**Lajitas Array**	**76.75**	**60**	P	**P**	**04 08 38.3**	**+2.0**
	0.4nm,0.5s,baz=292,slow=5.3,SNR=12						
PLCA	**Paso Flores**	**149.24**	**89**	PKPbc	**PKiKP**	**04 16 31.2**	**+0.6**
	2.5nm,1.0s,baz=305,slow=5.2,SNR=2.9						

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*JMA **21** 04:01:12.9±0.1, 23.°18N×121.°57E, h23^{km}±2^{km}, M2.8*

*TAP **21** 04:01:14.5, 23.°21N×121.°41E, h24^{km}, ML3.4, C*

ISC 21 04:01:13.9±0.9**, 23.°18N**±0.°02×**121.°50E**±0.°02**, h27**^{km}±5^{km}**, n93, σ0.^{s}81**/159**, 1C-1D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ECBN	**Changbin**	**0.14**	**342**	i P	**Pn**	**04 01 19.4**	**-0.9**
	baz=19						
ECBN				i S	**Sb**	**04 01 22.8**	**+0.2**
	baz=19						
CHKT	**Chengkung**	**0.15**	**235**	⇑iP	**Pb**	**04 01 19.5**	**+0.3**
	baz=188						
CHKT				i S	**Sb**	**04 01 22.8**	**+0.1**
	baz=188						
FULB	**Fuli**	**0.19**	**275**	eP	**Pb**	**04 01 19.1**	**-0.4**
	baz=265						
FULB				eS	**Sb**	**04 01 22.5**	**-0.9**
	baz=265						
EYUL	**Yuli**	**0.23**	**315**	i P	**Pb**	**04 01 20.1**	**0.0**
	baz=330						
EYUL				i S	**Sb**	**04 01 23.9**	**-0.4**
	baz=330						
TWF1	**Yuli**	**0.25**	**312**	⇓iP	**Pb**	**04 01 20.1**	**-0.2**
	baz=312						
TWF1				i S	**Sb**	**04 01 24.2**	**-0.6**
	baz=312						
ECS	**Chishang**	**0.27**	**251**	P	**Pb**	**04 01 21.1**	**+0.4**
	baz=249						
ECS				S	**Sn**	**04 01 26.2**	**-1.2**
	baz=249						
EDH	**Donghe**	**0.28**	**220**	i P	**Pb**	**04 01 20.8**	**+0.1**
	baz=208						
EDH				i S	**Sb**	**04 01 25.7**	**+0.4**
	baz=208						
YULB	**Yu-li**	**0.28**	**318**	i P	**Pb**	**04 01 20.1**	**-0.6**
	baz=317						
YULB				i S	**Sb**	**04 01 24.4**	**-1.0**
	baz=317						
HGSD	**Ruisui**	**0.31**	**348**	P	**Pb**	**04 01 21.1**	**-0.2**
	baz=12						
HGSD				eS	**Sb**	**04 01 26.3**	**0.0**
	baz=12						
EHY	**Hungye**	**0.36**	**333**	i P	**Pb**	**04 01 21.2**	**-0.7**
	baz=334						
EHY				i S	**Sb**	**04 01 27.2**	**-0.2**
	baz=334						
LONT	**Longtian**	**0.44**	**231**	i P	**Pb**	**04 01 23.0**	**-0.1**
	baz=229						
LONT				i S	**Sb**	**04 01 29.4**	**0.0**
	baz=229						
ELDTW	**Lidau**	**0.44**	**271**	i P	**Pb**	**04 01 22.2**	**-1.1**
	baz=267						
ELDTW				i S	**Sb**	**04 01 27.4**	**-2.3**
	baz=267						
EGFH	**Guangfu**	**0.49**	**352**	i P	**Pb**	**04 01 23.8**	**-0.2**
	baz=349						
LDUT	**Ludao**	**0.51**	**183**	i P	**Pb**	**04 01 24.7**	**+0.5**
	baz=173						
LDUT				S	**Sb**	**04 01 32.5**	**+1.1**
	baz=173						
TEGC	**Jichi Village**	**0.52**	**4**	eP	**Pn**	**04 01 25.4**	**-0.2**
	baz=20						
TWGBT	**Beinan**	**0.53**	**227**	i P	**Pb**	**04 01 24.2**	**-0.4**
	baz=228						
TWGBT				i S	**Sb**	**04 01 31.4**	**-0.6**
	baz=228						
TWG	**Pinlang**	**0.53**	**227**	i P	**Pb**	**04 01 24.2**	**-0.5**
	baz=228						
TWG				i S	**Sb**	**04 01 31.5**	**-0.6**
	baz=228						
TTN	**Taitung**	**0.54**	**217**	eP	**Pn**	**04 01 25.5**	**-0.2**
	baz=206						
TTN				eS	**Sn**	**04 01 34.1**	**+0.2**
	baz=206						
ESL	**Shilin**	**0.63**	**355**	i P	**Pb**	**04 01 25.7**	**-0.7**
	baz=352						
ESL				i S	**Sb**	**04 01 33.8**	**-1.0**
	baz=352						
VWDT	**VWDT**	**0.66**	**330**	i P	**Pb**	**04 01 26.3**	**-0.4**
	baz=336						
VWDT				i S	**Sb**	**04 01 34.4**	**-1.0**
	baz=336						
STYH	**Taoyuan**	**0.66**	**269**	i P	**Pb**	**04 01 26.1**	**-0.8**
	baz=266						
STYH				i S	**Sb**	**04 01 34.3**	**-1.5**
	baz=266						
STYT	**Tauyuan**	**0.68**	**268**	i P	**Pb**	**04 01 26.6**	**-0.6**
	baz=266						
STYT				i S	**Sb**	**04 01 34.8**	**-1.5**
	baz=266						
TEYL	**Yanliau Villag**	**0.69**	**8**	eP	**Pn**	**04 01 28.2**	**+0.3**
	baz=359						
ALS	**Alishan**	**0.71**	**297**	i P	**Pb**	**04 01 27.3**	**-0.6**
	baz=292						
ALS				i S	**Sb**	**04 01 36.2**	**-1.3**
	baz=292						
ECL	**Taimali**	**0.77**	**221**	P	**Pb**	**04 01 27.1**	**-1.6**
	baz=213						
ECL				eS	**Sb**	**04 01 37.6**	**-1.1**
	baz=213						
ETM	**Tongmen**	**0.78**	**360**	eP	**Pb**	**04 01 28.1**	**-0.7**
	baz=354						
SSLB	**Suanglung**	**0.78**	**320**	i P	**Pb**	**04 01 27.9**	**-1.0**
	baz=333						
SSLB				S	**Sb**	**04 01 37.5**	**-1.6**
	baz=333						
HWA	**Hwalien**	**0.80**	**7**	eP	**Pn**	**04 01 29.9**	**+0.6**
	baz=360						
SLGT	**Liugui**	**0.81**	**257**	eS	**Sb**	**04 01 39.8**	**0.0**
	baz=255						
TPUB	**Ta-pu**	**0.81**	**278**	i P	**Pb**	**04 01 29.1**	**-0.2**
	baz=278						
TPUB				S	**Sb**	**04 01 39.3**	**-0.6**
	baz=278						
WTP	**Ta-pu**	**0.81**	**275**	i P	**Pb**	**04 01 29.3**	**-0.2**
	baz=273						
WTP				S	**Sb**	**04 01 40.0**	**-0.1**
	baz=273						
OWD	**Renai**	**0.82**	**339**	eP	**Pb**	**04 01 28.9**	**-0.7**
	baz=344						
OWD				eS	**Sb**	**04 01 39.3**	**-1.1**
	baz=344						
SGST	**Jiashian**	**0.85**	**263**	eS	**Sb**	**04 01 40.3**	**-0.7**
	baz=260						
CHN5	**Tsauling**	**0.86**	**299**	P	**Pn**	**04 01 30.1**	**-0.2**
	baz=300						
CHN5				eS	**Sn**	**04 01 42.0**	**0.0**
	baz=300						
SMLT	**Sun Moon Lake**	**0.89**	**322**	i P	**Pb**	**04 01 30.2**	**-0.5**
	baz=330						
SMLT				eS	**Sn**	**04 01 42.9**	**+0.1**
	baz=330						
CHN1	**Nanshi**	**0.89**	**270**	i P	**Pb**	**04 01 30.2**	**-0.5**
	baz=269						
CHN1				S	**Sn**	**04 01 42.7**	**-0.1**
	baz=269						
TWD	**Chiawan**	**0.90**	**6**	P	**Pb**	**04 01 29.9**	**-0.9**
	baz=359						
TWD				eS	**Sn**	**04 01 43.6**	**+0.7**
	baz=359						
SSD	**Sandimen**	**0.91**	**242**	P	**Pb**	**04 01 30.0**	**-1.0**
	baz=233						
TSMG	**Majia**	**0.92**	**239**	eP	**Pb**	**04 01 31.0**	**-0.1**
	baz=226						
SNST	**Tainan City**	**0.92**	**272**	P	**Pn**	**04 01 31.6**	**+0.6**
	baz=271						
SNST				eS	**Sn**	**04 01 43.8**	**+0.3**
	baz=271						
CHGB	**Renai**	**0.92**	**341**	i P	**Pb**	**04 01 30.4**	**-1.0**
	baz=346						
CHGB				S	**Sb**	**04 01 42.3**	**-1.0**
	baz=346						
TYC	**Yuchr**	**0.93**	**321**	P	**Pn**	**04 01 31.1**	**0.0**
	baz=333						
TYC				eS	**Sn**	**04 01 43.5**	**-0.1**
	baz=333						
TWK	**Hsinying**	**0.93**	**275**	i P	**Pn**	**04 01 31.3**	**0.0**
	baz=274						
TWK				S	**Sn**	**04 01 43.8**	**0.0**
	baz=274						
WJS	**Zhushan**	**0.95**	**312**	P	**Pn**	**04 01 32.4**	**+0.9**
	baz=314						
WJS				eS	**Sn**	**04 01 44.6**	**+0.4**
	baz=314						
ETL	**Fush Village**	**0.98**	**7**	eP	**Pn**	**04 01 32.2**	**+0.3**
	baz=360						
MASBT	**Mashibuluo**	**0.98**	**235**	P	**Pb**	**04 01 31.4**	**-0.8**
	baz=228						
MASBT				eS	**Sb**	**04 01 44.5**	**-0.2**
	baz=228						
WHF	**Hehuan Shan**	**0.98**	**347**	P	**Pb**	**04 01 31.3**	**-1.2**
	baz=3.0						
WHF				eS	**Sb**	**04 01 44.4**	**-0.8**
	baz=3.0						
NACB	**Ninganchiao**	**0.99**	**5**	P	**Pb**	**04 01 31.1**	**-1.3**
	baz=359						
NACB				eS	**Sb**	**04 01 43.8**	**-1.3**
	baz=359						
WGK	**Gukeng**	**0.99**	**300**	eP	**Pn**	**04 01 33.2**	**+1.1**
	baz=301						
DPDB	**Guoxing**	**0.99**	**328**	eP	**Pn**	**04 01 32.4**	**+0.2**
	baz=342						
EAST	**Anshuo**	**1.00**	**217**	eP	**Pn**	**04 01 31.3**	**-0.9**
	baz=212						
CHN2	**Minshiung**	**1.00**	**290**	eP	**Pb**	**04 01 33.5**	**+1.0**
	baz=290						
WDLH	**Douliu**	**1.01**	**300**	eP	**Pb**	**04 01 34.0**	**+1.2**
	baz=300						
WDLH				eS	**Sn**	**04 01 47.6**	**+1.9**
	baz=300						
WNT	**Mingjian**	**1.02**	**313**	i P	**Pb**	**04 01 33.4**	**+0.5**
	baz=315						
WNT				S	**Sn**	**04 01 46.9**	**+1.0**
	baz=315						
ETLH	**Xiulin Townshi**	**1.02**	**359**	eP	**Pn**	**04 01 31.6**	**-0.9**
	baz=5.0						
ETLH				eS	**Sn**	**04 01 43.8**	**-2.2**
	baz=5.0						
WCS	**Beigang Elemen**	**1.02**	**328**	P	**Pn**	**04 01 32.5**	**0.0**
	baz=338						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WCS	baz=338			eS	Sb	04 01 45.2	-0.7
CHY	Chiayi baz=288	1.03	288	P	Pb	04 01 33.4	+0.3
CHY	baz=288			eS	Sn	04 01 47.1	+0.8
WNT1	Nantou City baz=316	1.04	314	eP	Pb	04 01 33.3	+0.1
TWM1	Shoushan baz=238	1.05	250	eP	Pb	04 01 34.7	+1.2
FUSS	Fushou baz=5.0	1.08	348	P	Pn	04 01 33.4	-0.2
FUSS	baz=5.0			eS	Sb	04 01 46.5	-1.5
TDCB	Techi baz=347	1.11	344	eP	Pn	04 01 33.9	+0.1
WWF	Wufeng baz=321	1.13	320	eP	Pb	04 01 34.9	+0.2
WWF	baz=321			eS	Sn	04 01 49.7	+1.2
ICHU	Yijhu baz=278	1.13	279	P	Pn	04 01 34.2	+0.2
ICHU	baz=278			eS	Sn	04 01 49.7	+1.0
WTK	Tuku baz=297	1.14	296	P	Pb	04 01 35.0	+0.2
WTK	baz=297			eS	Sn	04 01 49.5	+0.7
LAY	Lan-yu baz=163	1.14	178	eP	Pn	04 01 34.2	+0.1
LAY	baz=163			eS	Sn	04 01 47.8	-1.1
SCZT	Fangliau baz=216	1.14	225	eP	Pb	04 01 34.8	-0.1
SLIU	Shizi baz=201	1.16	214	eP	Pb	04 01 35.0	-0.3
CHN8	Yiju baz=277	1.19	278	eS	Sb	04 01 52.0	+1.1
WHP	Taichung City baz=343	1.20	335	eP	Pb	04 01 36.6	+0.6
WHP	baz=343			eS	Sb	04 01 52.6	+1.4
TCU	Taichung baz=324	1.22	322	P	Pb	04 01 35.5	-0.7
TCU	baz=324			eS	Sb	04 01 53.1	+1.4
WCHH	Zhanghua baz=317	1.24	316	eP	Pb	04 01 36.9	+0.3
WCHH	baz=317			eS	Sb	04 01 53.2	+1.1
WRL	Guolierlin Hig baz=318	1.25	305	P	Pb	04 01 36.3	-0.5
WRL	baz=318			eS	Sb	04 01 52.5	-0.1
NNS	Nan Shan baz=11	1.26	355	eP	Pn	04 01 35.8	0.0
NNS	baz=11			eS	Sn	04 01 51.0	-0.9
WSF	Szhu baz=291	1.26	291	eP	Pb	04 01 36.5	-0.3
WSF	baz=291			eS	Sb	04 01 52.8	+0.1
ENA	Nanau baz=3.0	1.26	10	P	Pn	04 01 35.8	+0.1
ENA	baz=3.0			eS	Sb	04 01 52.3	-0.5
TWQ1	Liyutan baz=333	1.34	330	P	Pb	04 01 38.7	+0.5
TWQ1	baz=333			eS	Sb	04 01 56.0	+1.1
TWKBT	Hengchun baz=193	1.39	207	eP	Pn	04 01 37.1	-0.4
TWKBT	baz=193			eS	Sn	04 01 55.6	+0.6
NSY	Sanyi baz=333	1.40	331	P	Pb	04 01 40.1	+0.7
NSY	baz=333			eS	Sb	04 01 58.5	+1.7
WDJ	Dajia District baz=327	1.40	326	eP	Pb	04 01 39.7	+0.3
WDJ	baz=327			eS	Sb	04 01 58.5	+1.7
NDT	Datong Townshi baz=16	1.41	1	eP	Pb	04 01 39.4	-0.2
ENTT	Nioudou baz=6.0	1.45	2	eP	Pn	04 01 38.5	+0.1
NDS	Dongshan baz=13	1.46	8	eP	Pb	04 01 39.4	-0.9
NDS	baz=13			eS	Sb	04 01 58.0	-0.5
YHNB	Yeheng baz=360	1.48	356	eP	Pn	04 01 39.3	+0.4
YHNB	baz=360			eS	Sn	04 01 58.0	+0.5
NSK	Sanguang baz=359	1.49	355	eP	Pb	04 01 40.0	-1.0
NSK	baz=359			eS	Sn	04 01 58.0	+0.3
NMLH	Miaoli baz=351	1.50	334	eP	Pb	04 01 41.4	+0.5
NMLH	baz=351			eS	Sb	04 02 00.3	+0.7
NSTT	Nanjuang baz=346	1.51	343	eP	Pb	04 01 40.6	-0.7
NSTT	baz=346			eS	Sb	04 01 59.6	-0.4
LIOB	Emei baz=346	1.52	343	eP	Pb	04 01 40.5	-1.0
LIOB	baz=346			eS	Sb	04 02 00.8	+0.5
NWLT	Wulai baz=17	1.59	0	eP	Pn	04 01 40.7	+0.4
NWLT	baz=17			eS	Sn	04 02 00.7	+0.7
YOJ	Yonaguni jima	1.88	47	eS	Sn	04 02 08.2	+1.0
HATJ	Hateruma jima	2.29	67	eS	Sn	04 02 17.2	0.0
IRIF	Iriomote-Funau	2.34	60	P	Pn	04 01 52.7	+2.1
JIJ	Ishigaki jima	2.69	64	S	Sn	04 02 27.7	+0.5
JISG	Ishigakijimahi	2.93	61	S	Sn	04 02 33.4	+0.4

IDC 21 04:05:24.3±3.7**, 22°.68S×178°.55W, h0^{km}, mb4.3**/4**, mb1 4.4**/4**, mb1mx3.9**/34**, mbtmp4.3**/4**, Error ellipse: s-maj=166.5km s-min=51.1km az=151.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek 1.0nm,0.4s,baz=58,slow=9.5,SNR=2.8	36.42	247	P	P	04 12 30.9	+0.2
ASAR	Alice Springs 2.0nm,0.5s,baz=96,slow=7.2,SNR=32	43.56	259	P	P	04 13 30.4	+0.1
WRA	Warramunga Arr 3.1nm,0.3s,baz=102,slow=8.3,SNR=62	43.83	264	P	P	04 13 32.6	+0.1
FITZ	Fitzroy Crossi 1.7nm,0.6s,baz=100,slow=6.5,SNR=10	52.26	264	P	P	04 14 36.9	-0.9
AKASG	Malin Array Be 0.6nm,0.4s,baz=38,slow=4.0,SNR=5.3	144.64	329	PKP	PKPab	04 24 59.8	-1.6
BRTR	Keskin Array B 0.6nm,0.6s,baz=89,slow=3.1,SNR=3.2	147.87	309	PKPbc	PKiKP	04 25 12.9	-0.8

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*JMA **21** 04:09:21.3±0.1, 23°.17N×121°.60E, h12^{km}±2^{km}, M3.2*
*TAP **21** 04:09:23.8, 23°.21N×121°.40E, h22^{km}, ML3.7, C*
ISC 21 04:09:22.4±1.0**, 23°.19N**±0°.02×**121°.50E**±0°.02**, h16^{km}**±8^{km}**, n96, σ0^{s}.81**/163**, 8C-3D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ECBN	Changbin baz=25	0.13	341	P	Pb	04 09 28.5	+1.9
ECBN	baz=25			S	Sb	04 09 31.8	+2.4
CHKT	Chengkung baz=183	0.15	234	⇑iP	Pb	04 09 28.5	+1.6
CHKT	baz=183			i S	Sb	04 09 31.9	+2.0
FULB	Fuli baz=263	0.19	273	P	Pb	04 09 28.3	+0.7
FULB	baz=263			eS	Sb	04 09 32.2	+1.2
EYUL	Yuli baz=331	0.23	313	i P	Pb	04 09 29.2	+1.0
EYUL	baz=331			S	Sb	04 09 33.4	+1.3
TWF1	Yuli baz=321	0.25	311	⇓iP	Pb	04 09 29.2	+0.7
TWF1	baz=321			i S	Sb	04 09 33.3	+0.7
YULB	Yu-li baz=319	0.27	317	⇓iP	Pb	04 09 29.6	+0.5
YULB	baz=319			S	Sb	04 09 34.0	+0.5
ECS	Chishang baz=248	0.27	250	P	Pb	04 09 30.2	+1.2
ECS	baz=248			S	Sb	04 09 35.4	+1.9
EDH	Donghe baz=199	0.28	220	P	Pb	04 09 30.1	+1.0
EDH	baz=199			S	Sn	04 09 36.3	-1.5
HGSD	Ruisui baz=14	0.31	347	eP	Pb	04 09 30.2	+0.6
HGSD	baz=14			eS	Sn	04 09 37.3	-1.3
EHY	Hungye baz=333	0.35	333	P	Pb	04 09 30.6	+0.2
EHY	baz=333			eS	Sb	04 09 36.2	+0.4
LONT	Longtian baz=230	0.44	230	eP	Pb	04 09 32.3	+0.5
LONT	baz=230			eS	Sb	04 09 38.6	+0.3
ELDTW	Lidau baz=267	0.44	270	⇓iP	Pg	04 09 31.4	0.0
ELDTW	baz=267			i S	Sg	04 09 36.5	-0.9
EGFH	Guangfu baz=350	0.48	352	eP	Pb	04 09 32.9	+0.3
EGFH	baz=350			eS	Sn	04 09 41.7	-1.1
LDUT	Ludao baz=171	0.52	183	eP	Pn	04 09 34.2	-1.0
LDUT	baz=171			eS	Sb	04 09 41.6	+1.2
TWGBT	Beinan baz=229	0.54	226	⇑iP	Pg	04 09 33.4	+0.4
TWGBT	baz=229			S	Sg	04 09 40.3	+0.1
TWG	Pinlang baz=229	0.54	227	⇑iP	Pg	04 09 33.4	+0.3
TWG	baz=229			S	Sg	04 09 40.6	+0.3
TTN	Taitung baz=205	0.54	217	eP	Pn	04 09 34.8	-0.7
YUS	Yu-Shan baz=299	0.58	301	eP	Pg	04 09 34.3	+0.2
YUS	baz=299			eS	Sg	04 09 41.1	-0.9
ESL	Shilin baz=352	0.62	354	eP	Pn	04 09 36.5	-0.2
ESL	baz=352			eS	Sg	04 09 42.9	-0.1
VWDT	VWDT baz=336	0.65	330	P	Pb	04 09 35.6	+0.2
VWDT	baz=336			S	Sg	04 09 43.6	-0.2
STYH	Taoyuan baz=267	0.67	268	eP	Pg	04 09 35.4	0.0
STYH	baz=267			S	Sg	04 09 43.3	-1.0
TEYL	Yanliau Villag baz=3.0	0.68	8	eP	Pn	04 09 37.9	+0.4
TEYL	baz=3.0			eS	Sn	04 09 48.8	+1.0
STYT	Tauyuan baz=266	0.68	268	⇑iP	Pg	04 09 35.6	-0.2
STYT	baz=266			i S	Sg	04 09 43.9	-1.0
ALS	Alishan baz=292	0.71	297	⇑iP	Pg	04 09 36.6	+0.2
ALS	baz=292			i S	Sg	04 09 45.4	-0.6
ECL	Taimali baz=213	0.78	220	eP	Pb	04 09 36.6	-0.9
SSLB	Suanglung baz=324	0.78	320	eP	Pb	04 09 37.2	-0.4
HWA	Hwalien baz=2.0	0.79	7	eP	Pn	04 09 38.5	-0.4
HWA	baz=2.0			eS	Sn	04 09 51.2	+0.7
TPUB	Ta-pu baz=278	0.81	278	P	Pb	04 09 38.2	+0.1
TPUB	baz=278			S	Sb	04 09 48.5	-0.3
OWD	Renai baz=344	0.82	339	eP	Pb	04 09 38.0	-0.4
OWD	baz=344			eS	Sb	04 09 47.9	-1.3
WTP	Ta-pu baz=273	0.82	274	⇑iP	Pg	04 09 38.5	+0.2
WTP	baz=273			i S	Sb	04 09 49.0	-0.1
CHN4	Tsaushan baz=281	0.85	281	⇑iP	Pb	04 09 37.5	-1.3
CHN4	baz=281			eS	Sb	04 09 48.6	-1.4
SGST	Jiashian baz=259	0.85	263	eP	Pb	04 09 38.1	-0.8
SGST	baz=259			eS	Sb	04 09 49.5	-0.5
CHN5	Tsauling baz=300	0.86	298	P	Pg	04 09 39.5	+0.4
CHN5	baz=300			eS	Sb	04 09 50.4	+0.1
SMLT	Sun Moon Lake baz=331	0.88	322	⇑iP	Pb	04 09 39.3	-0.2
SMLT	baz=331			S	Sb	04 09 50.6	-0.4
TWD	Chiawan baz=358	0.89	6	eP	Pb	04 09 39.2	-0.3
CHN1	Nanshi baz=269	0.89	270	P	Pg	04 09 40.0	+0.3
CHN1	baz=269			eS	Sn	04 09 53.2	+0.1
SSD	Sandimen baz=234	0.91	241	eP	Pb	04 09 39.7	-0.2
CHGB	Renai baz=346	0.92	341	P	Pb	04 09 39.8	-0.3
CHGB	baz=346			eS	Sb	04 09 50.9	-1.3
SNST	Tainan City baz=272	0.92	272	eP	Pg	04 09 40.6	+0.3
SNST	baz=272			eS	Sn	04 09 53.5	-0.2
TSMG	Majia baz=226	0.92	239	eP	Pn	04 09 41.0	+0.2
TYC	Yuchr baz=330	0.92	320	eP	Pb	04 09 40.1	0.0
TWK	Hsinying baz=275	0.93	275	P	Pb	04 09 40.5	+0.2
TWK	baz=275			S	Sb	04 09 52.8	+0.4
WJS	Zhushan baz=314	0.95	312	eP	Pn	04 09 41.2	+0.1
WJS	baz=314			eS	Sg	04 09 53.8	+0.6
WHF	Hehuan Shan baz=4.0	0.97	347	P	Pb	04 09 40.9	-0.4
WHF	baz=4.0			eS	Sb	04 09 53.7	-0.3
NACB	Ninganchiao baz=359	0.98	5	eP	Pb	04 09 40.1	-1.0
NACB	baz=359			eS	Sb	04 09 52.4	-1.5
MASBT	Mashibuluo baz=222	0.98	234	eP	Pb	04 09 40.7	-0.4
CHN2	Minshiung baz=291	1.00	290	eP	Pg	04 09 42.8	+1.0
CHN2	baz=291			eS	Sn	04 09 56.0	+0.3
EAST	Anshuo baz=199	1.00	217	eP	Pb	04 09 40.6	-0.8
ETLH	Xiulin Townshi baz=4.0	1.01	359	eP	Pb	04 09 40.8	-0.9
WDLH	Douliu baz=301	1.01	300	eP	Pg	04 09 42.9	+0.9
WDLH	baz=301			eS	Sn	04 09 56.5	+0.6
WNT	Mingjian baz=314	1.01	313	eP	Pg	04 09 42.4	+0.4
WNT	baz=314			eS	Sg	04 09 55.8	+0.4
WCS	Beigang Elemen baz=338	1.02	328	eP	Pb	04 09 41.5	-0.1
WCS	baz=338			eS	Sb	04 09 55.3	+0.4
CHY	Chiayi baz=288	1.03	287	eP	Pn	04 09 42.4	+0.1
CHY	baz=288			eS	Sg	04 09 55.9	0.0
CHN3	Shinhua baz=264	1.05	264	eP	Pg	04 09 43.7	+1.0
CHN3	baz=264			eS	Sn	04 09 58.7	+1.9
TWM1	Shoushan baz=248	1.06	250	P	Pg	04 09 44.4	+1.6
FUSS	Fushou baz=3.0	1.08	348	eP	Pb	04 09 42.5	-0.4
FUSS	baz=3.0			eS	Sb	04 09 55.4	-1.5
TWT	Tachien baz=347	1.10	344	eP	Pb	04 09 43.1	-0.1
TDCB	Techi baz=347	1.10	344	eP	Pb	04 09 42.9	-0.3
ICHU	Yijhu baz=279	1.13	279	P	Pg	04 09 44.2	-0.1
ICHU	baz=279			S	Sg	04 09 59.4	+0.2
LAY	Lan-yu baz=161	1.15	178	eP	Pn	04 09 43.0	-0.9
SCZT	Fangliau baz=215	1.15	225	eP	Pn	04 09 43.6	-0.3
SLIU	Shizi baz=198	1.17	214	eP	Pn	04 09 43.5	-0.6
CHN8	Yiju baz=278	1.19	278	eP	Pg	04 09 45.3	-0.1
CHN8	baz=278			eS	Sg	04 10 01.4	+0.3
WHP	Taichung City baz=344	1.20	335	eP	Pg	04 09 46.0	+0.5
WHP	baz=344			eS	Sg	04 10 02.2	+1.1
TCU	Taichung baz=323	1.22	322	eP	Pg	04 09 46.2	+0.3
TCU	baz=323			eS	Sn	04 10 01.4	+0.4
WCHH	Zhanghua baz=317	1.24	316	eP	Pg	04 09 46.1	-0.2
WCHH	baz=317			eS	Sg	04 10 02.3	-0.1
NNS	Nan Shan baz=15	1.25	355	eP	Pn	04 09 44.4	-1.0
WRL	Guolierlin Hig baz=305	1.25	305	eP	Pb	04 09 45.7	+0.1
WRL	baz=305			eS	Sb	04 10 01.3	-0.2
WSF	Szhu baz=291	1.25	291	eP	Pn	04 09 44.1	-1.2
WSF	baz=291			eS	Sn	04 10 02.0	+0.1
EWUT	Wuta baz=2.0	1.27	12	eP	Pb	04 09 46.2	+0.1
EWUT	baz=2.0			eS	Sg	04 10 03.8	+0.1
TWQ1	Liyutan baz=331	1.33	330	P	Pg	04 09 47.9	-0.1
TWQ1	baz=331			S	Sg	04 10 05.5	0.0
NSY	Sanyi baz=332	1.40	331	eP	Pg	04 09 48.9	-0.4
NSY	baz=332			S	Sg	04 10 07.5	0.0
WDJ	Dajia District baz=337	1.40	326	eP	Pg	04 09 48.9	-0.4
WDJ	baz=337			eS	Sg	04 10 07.3	-0.2
TWKBT	Hengchun baz=192	1.40	207	eP	Pb	04 09 47.9	-0.2
ENTT	Nioudou baz=7.0	1.45	2	eP	Pn	04 09 48.2	+0.2
NDS	Dongshan baz=12	1.45	8	eP	Pb	04 09 49.8	+0.7
YHNB	Yeheng baz=13	1.48	356	eP	Pn	04 09 48.9	+0.4
NSK	Sanguang baz=13	1.48	355	eP	Pn	04 09 48.9	+0.3
NSTT	Nanjuang baz=343	1.50	342	P	Pb	04 09 50.1	+0.1
NSTT	baz=343			eS	Sb	04 10 09.8	+0.9
LIOB	Emei baz=343	1.52	343	eP	Pb	04 09 50.5	+0.3
LIOB	baz=343			eS	Sb	04 10 09.6	+0.4
NWLT	Wulai baz=20	1.58	0	eP	Pb	04 09 50.9	-0.4
PHUB	P'eng-hu baz=280	1.80	281	eP	Pn	04 09 52.5	-0.3
PHUB	baz=280			eS	Sn	04 10 13.9	-1.5
JYNG	Yonagunijimaku	1.82	46	P	Pn	04 09 52.2	-1.0
JYNG				S	Sn	04 10 15.8	-0.2
PNG	Penghu baz=282	1.82	282	eP	Pn	04 09 53.3	+0.1
PNG	baz=282			eS	Sn	04 10 14.0	-2.0
YOJ	Yonaguni jima	1.88	47	S	Sn	04 10 17.9	+0.6
NWF	Wu-fen Shan baz=11	1.89	8	eP	Pb	04 09 56.9	+0.2
YM01	YM01 baz=5.0	1.95	2	eP	Pn	04 09 56.3	+1.3
HATJ	Hateruma jima	2.29	67	P	Pb	04 10 02.2	-1.1
HATJ				S	Sn	04 10 27.4	+0.1
IRIF	Iriomote-Funau	2.34	60	P	Pn	04 10 02.1	+1.8
IRIF				S	Sn	04 10 29.6	+0.9
JKRS	Kuro-shima	2.53	65	P	Pn	04 10 04.4	+1.6
JKRS				S	Sn	04 10 34.1	+0.8
JIJ	Ishigaki jima	2.69	64	P	Pn	04 10 06.2	+1.1
JIJ				S	Sn	04 10 36.6	-0.8
PTMZ	Houxiangcun baz=310	2.85	311	eP	Pn	04 10 07.2	0.0
JISG	Ishigakijimahi	2.93	61	P	Pn	04 10 08.8	+0.5
JISG				S	Sn	04 10 41.6	-1.6
KNMB	Chin-men Tao baz=294	3.12	295	eP	Pn	04 10 10.4	-0.6
JTJ	Tarama	3.27	63	P	Pn	04 10 12.5	-0.5
JTJ				S	Sn	04 10 50.5	-1.1
MATB	Ma-tsu baz=334	3.27	335	eP	Pn	04 10 12.5	-0.6

IDC 21 04:14:52.1±2.3**, 0°.75N×127°.20E, h0^{km}, mb3.3**/3**, mb1 3.6**/3**, mb1mx3.3**/29**, mbtmp3.4**/3**, Error ellipse: s-maj=169.1km s-min=28.4km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr 0.6nm,0.6s,baz=341,slow=11,SNR=8.0	21.72	162	P	P	04 19 46.1	+1.1
ASAR	Alice Springs 0.8nm,0.8s,baz=345,slow=9.9,SNR=8.9	25.12	165	P	P	04 20 18.2	-0.7
MKAR	Makanchi Array 0.2nm,0.6s,baz=126,slow=9.8,SNR=1.8	60.27	326	P	P	04 25 02.5	0.0

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*IDC **21** 04:23:42.2±1.6, 4°.08S×129°.35E, h0^{km}, mb3.7/1, mb1 3.5/4, mb1mx3.4/38, mbtmp3.4/4, ML3.2/3, Error ellipse: s-maj=57.5km s-min=26.4km az=81.0*
*DJA **21** 04:23:45.6±1.2, 4°S±5°×12°9E±°, h26^{km}±11^{km}, M3.6/7, mb4.2/1, MLv3.3/7*
ISC 21 04:23:46.5±1.0**, 4°.05S**±0°.08×**129°.38E**±0°.06**, h36^{km}, n8, σ1^{s}.07**/11**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.83	327	P	Pn	04 24 01.0	-0.8
MSAI				S	Sn	04 24 12.8	-0.1
AAI	Ambon	1.24	287	P	Pn	04 24 07.1	-0.2
AAI				S	Sn	04 24 22.9	+0.2
FAKI	Fak Fak	3.08	69	P	Pn	04 24 32.9	+0.2
SIJI	Sorong 5.3nm,0.3s,baz=39,slow=22,SNR=17	3.68	31	Pn	Pn	04 24 41.1	+0.1
SIJI	2.5nm,0.3s,baz=311,slow=19,SNR=2.7			Sn	Sn	04 25 21.8	-1.4
SWI	Sorong	3.69	31	P	Pn	04 24 41.6	+0.6
WRA	Warramunga Arr 0.1nm,0.3s,baz=353,slow=13,SNR=2.8	16.52	163	Pn	Pn	04 27 33.6	-1.9
ASAR	Alice Springs 0.1nm,0.3s,baz=345,slow=9.5,SNR=11	19.98	168	P	P	04 28 16.9	+0.9
MKAR	Makanchi Array 0.3nm,0.4s,baz=110,slow=7.7,SNR=7.4	65.44	326	P	P	04 34 27.0	+1.2

*IDC **21** 04:31:05.0±0.7, 14°.80N×55°.00E, h0^{km}, mb4.0/16, mb1 4.1/16, mb1mx3.8/61, mbtmp4.0/16, MS3.2/13, Ms1 3.2/13, ms1mx3.0/43, Error ellipse: s-maj=21.4km s-min=16.1km az=131.0*

*NEIC **21** 04:31:06.2±1.7, 14°.74N±0°.07×54°.9E±0°.1, h10^{km}±1^{km}, mb4.2/21, Error ellipse: s-maj=21.4km s-min=11.0km az=106.0*

ISC 21 04:31:06.1±0.7**, 14°.78N**±0°.09×**55°.0E**±0°.1**, h10^{km}, n53, σ1^s.03**/42**, mb4.1**/26**, MS3.1**/12**, Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCY	Socotra	2.75	201	Pn	Pn	04 31 44.4	-6.0
UOSS	Minazif	10.18	6	Pn	Pn	04 33 31.1	-1.3
ATD	Arta Tunnel	12.26	256	LR	LR	04 37 33.1	
	comp=Z,98nm,21.4s,baz=110,slow=32						
RAYN	Ar Rayn	12.48	316		Pn	04 34 03.0	-1.0
HRA	Herat	20.59	17	P	P	04 35 45.9	+0.2
LODK	Lodwar	22.40	242	P	P	04 36 03.1	-2.0
LODK				IAmb	IAmb	04 36 09.7	
	comp=Z,10nm,1.4s						
GEYT	Alibeck	23.23	6	P	P	04 36 14.2	+0.7
	comp=Z,3.0nm,0.6s,baz=188,slow=7.0,SNR=2.8						
GEYT				LR	LR	04 46 31.2	
	comp=Z,70nm,20.6s,baz=155,slow=40						
GEYT	Alibeck	23.23	6	IAmb	IAmb	04 36 21.4	
	comp=Z,2.3nm,0.8s						
GYA0B	ALIBECK ARRAY	23.23	6	P	P	04 36 12.9	-0.6
GYA0B				IAmb	IAmb	04 36 18.9	
	comp=Z,7.5nm,0.6s						
KBL	Kabul	23.41	30	P	P	04 36 14.6	-1.0
KBL				IAmb	IAmb	04 36 23.5	
	comp=Z,4.2nm,0.8s						
KMBO	Kilima Mbogo	23.62	229	P	P	04 36 18.9	+1.1
	comp=Z,0.7nm,0.3s,baz=39,slow=14,SNR=4.3						
KMBO	Kilima Mbogo	23.62	229	P	P	04 36 15.6	-2.3
KIBK	Kibwezi	23.89	226	P	P	04 36 19.1	-1.2
KIBK				IAmb	IAmb	04 36 49.5	
	comp=Z,22nm,2.0s						
SIRT	Sirnak	25.23	336	P	P	04 36 33.0	+0.6
PALK	Pallekele	26.30	104	LR	LR	04 44 32.6	
	comp=Z,47nm,20.7s,baz=357,slow=31						
GURO	Guroymak-BITLI	26.30	337	P	P	04 36 41.1	-1.0
GURO				IAmb	IAmb	04 36 47.0	
	comp=Z,4.9nm,1.2s						
GNI	Garni	26.82	342	LR	LR	04 49 23.1	
	comp=Z,70nm,21.2s,baz=176,slow=41						
GNI	Garni	26.82	342	P	P	04 36 46.6	-0.2
BTK	Batken	28.75	26	P	P	04 37 04.5	+0.6
BTK				IAmb	IAmb	04 37 06.5	
	comp=Z,5.7nm,1.1s						
KBZ	Khabaz	30.65	343	LR	LR	04 51 43.1	
	comp=Z,39nm,20.5s,baz=157,slow=40						
KVAR	Kislovodsk Arr	30.92	343	LR	LR	04 51 49.7	
	comp=Z,38nm,21.7s,baz=70,slow=40						
BRTR	Keskin Array B	31.11	327	LR	LR	04 51 42.8	
	comp=Z,36nm,18.5s,baz=136,slow=40						
KKAR	Karatay Array	31.22	22	P	P	04 37 26.4	+0.7
ABKAR	Akbulak array	34.62	6	P	P	04 37 55.2	-0.2
AKTO	Aktyubinsk	35.65	3	P	P	04 38 04.5	+0.2
	comp=Z,3.5nm,0.7s,baz=165,slow=13						
MAKZ	Makanchi	39.08	30	P	P	04 38 33.5	+0.1
MAKZ				IAmb	IAmb	04 38 41.1	
	comp=Z,4.8nm,1.1s						
MK31	Makanchi Array	39.22	30	P	P	04 38 34.7	+0.1
MKAR	Makanchi Array	39.22	30	P	P	04 38 35.5	+1.0
	comp=Z,0.9nm,0.5s,baz=213,slow=8.6,SNR=11						
MKAR				PcP	PcP	04 40 43.5	-0.2
	comp=Z,0.3nm,0.6s,baz=256,slow=5.8,SNR=2.4						
KURBB	Kurchatov Arra	40.51	23	P	P	04 38 45.6	+0.4
	comp=Z,1.5nm,0.8s,baz=223,slow=8.2,SNR=9.5						
KURK	Kurchatov	40.62	23	P	P	04 38 45.6	-0.5
KURK	Kurchatov	40.62	23	IAmb	IAmb	04 38 47.1	
	comp=Z,2.6nm,0.7s						
AKASG	Malin Array Be	41.44	335	P	P	04 38 53.1	+0.2
	comp=Z,0.2nm,0.3s,baz=135,slow=8.2,SNR=5.3						
AKASG	Malin Array Be	41.44	335	IAmb	IAmb	04 39 02.4	
	comp=Z,8.3nm,1.9s						
CM31	Chiang Mai Arr	42.20	79	P	P	04 38 58.9	-0.7
CMAR	Chiang Mai Arr	42.20	79	P	P	04 39 00.0	+0.4
	comp=Z,2.3nm,0.3s,baz=278,slow=9.3,SNR=13						
ZAA0	Zalesovo Array	45.53	24	P	P	04 39 25.4	-0.4
ZAA0				IAmb	IAmb	04 39 25.9	
	comp=Z,3.6nm,0.8s						
ZALV	Zalesovo Beam	45.53	24	P	P	04 39 25.3	-0.5
	comp=Z,3.9nm,0.6s,baz=227,slow=8.1,SNR=16						
ZALV				LR	LR	05 02 03.7	
	comp=Z,17nm,18.8s,baz=36,slow=41						
GERES	GERESS Array B	47.90	324	P	P	04 39 47.7	+3.1
	comp=Z,0.2nm,0.3s,baz=125,slow=9.7,SNR=4.3						
FINES	FINESS Array B	51.01	343	P	P	04 40 08.0	0.0
	comp=Z,1.3nm,0.6s,baz=184,slow=5.5,SNR=3.8						
FINES				LR	LR	05 04 11.0	
	comp=Z,28nm,21.4s,baz=141,slow=39						
TORD	Torodi Ar. Bea	51.65	275	P	P	04 40 14.4	+0.9
	comp=Z,1.1nm,0.9s,baz=83,slow=6.3,SNR=5.9						
TORD				PcP	PcP	04 41 28.2	+0.9
	comp=Z,0.7nm,0.9s,baz=56,slow=2.3,SNR=2.6						
TORD				LR	LR	05 03 15.1	
	comp=Z,28nm,18.8s,baz=80,slow=37						
TORD	Torodi Ar. Bea	51.65	275	P	P	04 40 12.7	-0.8
BOSA	Boshof	51.84	214	P	P	04 40 15.8	+0.9
	comp=Z,6.0nm,0.9s,baz=72,slow=7.8,SNR=5.7						
BOSA				LR	LR	05 04 21.2	
	comp=Z,52nm,18.1s,baz=186,slow=38						
SONM	Songino Array	53.57	41	P	P	04 40 28.4	+1.0
	comp=Z,1.1nm,0.8s,baz=232,slow=8.2,SNR=7.9						
NOA	NORSAR Array B	55.85	336	P	P	04 40 43.3	-0.4
	comp=Z,1.8nm,1.0s,baz=119,slow=7.5,SNR=2.9						
NOA				LR	LR	05 07 25.6	
	comp=Z,18nm,20.0s,baz=275,slow=39						
ESDC	Sonseca Array	56.89	308	P	P	04 40 51.6	+0.1
	comp=Z,1.1nm,0.9s,baz=79,slow=7.7,SNR=4.5						
ARCES	ARCESS Array B	57.76	348	P	P	04 40 56.3	-0.7
	comp=Z,1.8nm,0.6s,baz=152,slow=7.9,SNR=8.4						
ARCES				LR	LR	05 09 18.6	
	comp=Z,44nm,18.7s,baz=115,slow=40						
H01W3	Cape Leeuwin H	74.72	133	T	T	06 04 10.5	
	baz=302,slow=75,SNR=15						
H01W2	Cape Leeuwin H	74.73	133	T	T	06 04 08.8	
	baz=302,slow=75,SNR=16						
H01W1	Cape Leeuwin H	74.74	133	T	T	06 04 08.2	
	baz=302,slow=75,SNR=18						
ASAR	Alice Springs	86.03	116	P	P	04 43 46.5	-1.0
	comp=Z,0.6nm,0.7s,baz=287,slow=4.2,SNR=5.9						
PDAR	Pinedale Array	121.00	347	PKP	PKPdf	04 49 58.6	-1.0
	comp=Z,0.4nm,0.6s,baz=321,slow=1.9,SNR=4.1						
PDAR	Pinedale Array	121.00	347		PKPdf	04 49 58.2	-1.5
NVAR	Mina Array Bea	126.70	353	PKP	PKiKP	04 50 12.4	+1.2
	comp=Z,0.2nm,0.4s,baz=354,slow=0.9,SNR=8.2						

IDC 21 04:34:51.0±1.8**, 0°.79N**×**127°.10E, h0^{km}, mb3.8**/4**, mb1 4.0**/4**, mb1mx3.4**/49**, mbtmp3.8**/4**, Error ellipse: s-maj=160.8km s-min=22.0km az=67.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.79	161	P	P	04 39 44.8	0.0
	3.2nm,0.7s,baz=340,slow=11,SNR=17						
ASAR	Alice Springs	25.20	165	P	P	04 40 18.4	0.0
	4.2nm,1.0s,baz=349,slow=10,SNR=21						
MKAR	Makanchi Array	60.17	326	P	P	04 45 00.7	+0.1
	0.4nm,0.7s,baz=136,slow=8.6,SNR=2.8						
KURBB	Kurchatov Arra	64.40	328	P	P	04 45 28.8	-0.1
	1.4nm,1.0s,baz=135,slow=6.5,SNR=5.5						

IDC 21 04:36:47.3±10.0**, 2°.22N**×**128°.12E, h398^{km}**±114^{km}**, mb3.3**/7**, mb1 3.4**/8**, mb1mx2.9**/50**, mbtmp4.0**/8**, Error ellipse: s-maj=92.7km s-min=18.3km az=56.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	Kappang	11.03	229	P	P	04 39 16.5	+0.1
	1.2nm,0.3s,baz=83,slow=8.1,SNR=5.3						
FITZ	Fitzroy Crossi	20.34	187	P	P	04 40 55.5	+0.4
	1.6nm,0.7s,baz=25,slow=19,SNR=5.7						
WRA	Warramunga Arr	22.86	165	P	P	04 41 17.4	-0.7
	1.0nm,0.3s,baz=343,slow=10,SNR=45						
ASAR	Alice Springs	26.34	168	P	P	04 41 49.5	+0.3
	0.8nm,0.3s,baz=350,slow=7.8,SNR=16						
STKA	Stephens Creek	36.24	160	P	P	04 43 14.6	0.0
	1.8nm,0.4s,baz=342,slow=8.9,SNR=7.4						
MKAR	Makanchi Array	59.58	325	P	P	04 46 10.7	-0.2
	0.1nm,0.3s,baz=107,slow=9.2,SNR=1.7						
KURBB	Kurchatov Arra	63.75	327	P	P	04 46 38.4	+0.1
	0.4nm,0.5s,baz=119,slow=6.7,SNR=3.0						
ARCES	ARCESS Array B	92.33	340	P	P	04 49 13.2	0.0
	3.5nm,0.9s,baz=81,slow=5.6,SNR=1.5						

*NEIC **21** 04:38:25.4±2.2, 1°.1N±0°.1×127°.51E±0°.09, h15^{km}±6^{km}, mb4.5/19, Error ellipse: s-maj=15.7km s-min=11.8km az=203.0*

*DJA **21** 04:38:26.1±0.5, 1°N±2°×12°7E±°, h11^{km}±4^{km}, M4.4/13, mb4.7/13, mB5.3/2, MLv4.3/12, Mw(mB)4.8/2*

*IDC **21** 04:38:28.2±3.8, 0°.99N×127°.44E, h40^{km}±37^{km}, mb3.9/11, mb1 4.1/14, mb1mx3.7/52, mbtmp4.1/14, ML3.7/3, MS3.5/11, Ms1 3.5/11, ms1mx3.2/39, Error ellipse: s-maj=29.3km s-min=15.1km az=76.0*

ISC 21 04:38:24.8±0.5**, 1°.02N**±0°.05×**127°.50E**±0°.09**, h10^{km}, n69, σ1^s.56**/59**, mb4.4**/26**, MS3.5**/11**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.28	209	P	Pb	04 38 33.7	+1.7
TNTI	Ternate	0.28	209		Pg	04 38 30.3	-0.3
LBMI	Labuha	1.65	180	P	Pn	04 38 54.0	+0.2
LBMI				S	Sb	04 39 18.0	+1.9
SANI	Sanana	3.40	206	P	Pn	04 39 20.6	+2.6
KMSI	Cibinong	3.55	263	P	Pn	04 39 21.1	+1.1
SIJI	Sorong	4.21	116	Pn	Pn	04 39 28.7	-0.4
	4.7nm,0.3s,baz=317,slow=22,SNR=4.7						
GTOI	Gorontalo	4.51	265	P	Pn	04 39 36.7	+3.5
MSAI	Masohi	4.56	162	P	Pn	04 39 40.1	+6.1
MRSI	Marisa	5.59	265	P	Pn	04 39 50.3	+2.2
	0.2nm53nm,0.9s						
APSI	Ampana	6.16	252	P	Pn	04 39 58.0	+2.1
	0.2nm573nm60nm,1.0s						
TOLI2	Tolitoli	6.72	271	Pn	Pn	04 40 03.1	-0.6
MPSI	Mapaga	7.63	265	P	Pn	04 40 16.4	+0.2
	0.1nm14nm,0.8s						
TTSI	Tana Toraja	8.68	242	P	Pn	04 40 29.1	-1.4
	30nm,0.9s						
BNSI	Bone	9.14	234	P	Pn	04 40 37.8	+0.9
	34nm,0.9s						
SPSI	Sidrap Palu	9.18	237	P	Pn	04 40 38.6	+1.2
	51nm,0.5s						
BKSI	Bulukumba	9.70	229	P	Pn	04 40 45.4	+0.9
	26nm,0.7s						
KAPI	Kappang	9.79	232	Pn	Pn	04 40 46.4	+0.6
	0.8nm,0.3s,baz=83,slow=8.1,SNR=4.6						
SGKI	Sangatta, Kali	10.02	261	P	Pn	04 40 49.1	+0.2
	6µm534nm,0.8s						
SOEI	Soe	11.18	197	Pn	Pn	04 41 04.3	-0.7
EDFI	Ende, Flores	11.30	211	P	Pn	04 41 09.0	+2.4
	7.4nm,1.1s						
MTKI	Muara Teweh, K	12.76	261	P	Pn	04 41 25.7	-0.7
JAY	Jayapura	13.66	105	LR	LR	04 46 34.4	
	comp=Z,529nm,19.9s,baz=336,slow=36						
SBUM	Sibu	15.34	276	Pn	Pn	04 42 00.2	-1.4
KNRA	Kununurra	16.64	176	Pn	Pn	04 42 16.0	-2.2
KNRA				IAmb	IAmb	04 42 26.8	
	comp=Z,43nm,1.4s						
FITZ	Fitzroy Crossi	19.09	185	P	P	04 42 48.0	+0.2
	comp=Z,0.2nm,0.3s,baz=19,slow=10.0,SNR=4.3						
GUMO	Guam	21.25	53	LR	LR	04 50 51.8	
	comp=Z,211nm,19.7s,baz=261,slow=35						
WB0	Warramunga Arr	21.73	162	P	P	04 43 14.5	-2.0
WB0				IAmb	IAmb	04 43 21.1	
	comp=Z,34nm,1.2s						
WRAB	Tennant Creek	21.88	162	P	P	04 43 17.7	-0.4
WRAB				IAmb	IAmb	04 43 23.2	
	comp=Z,21nm,0.9s						
WRA	Warramunga Arr	21.88	163	P	P	04 43 17.9	-0.2
	comp=Z,8.8nm,0.6s,baz=339,slow=11,SNR=31						
WRA	Warramunga Arr	21.88	163	P	P	04 43 16.6	-1.5
WB2	Warramunga Arr	21.89	162	P	P	04 43 16.7	-1.5
WB2				IAmb	IAmb	04 43 23.3	
	comp=Z,35nm,1.1s						
WR0	Warramunga Arr	21.96	162	P	P	04 43 17.2	-1.8
WR0				IAmb	IAmb	04 43 24.1	
	comp=Z,16nm,0.8s						
PMG	Port Moresby	22.15	118	LR	LR	04 54 35.3	
	comp=Z,305nm,18.6s,baz=34,slow=44						
AS31	Alice Springs	25.31	166	P	P	04 43 52.0	+0.1
ASAR	Alice Springs	25.32	166	P	P	04 43 51.2	-0.7
	comp=Z,3.2nm,0.8s,baz=351,slow=8.2,SNR=16						
ASAR	Alice Springs	25.32	166	P	P	04 43 51.9	0.0
NJ2	Nanjing	31.93	346	*e*P	P	04 44 55.1	+4.3
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
CMAR	Chiang Mai Arr	32.95	303	LR	LR	05 00 03.5	
	comp=Z,20nm,18.7s,baz=115,slow=39						
HNR	Honiara	33.94	109	LR	LR	04 59 40.5	
	comp=Z,130nm,18.1s,baz=55,slow=37						
JHJ	Hachijo jima 2	33.95	19	LR	LR	04 56 43.1	
	comp=Z,62nm,20.1s,baz=260,slow=32						
STKA	Stephens Creek	35.34	159	P	P	04 45 19.9	-0.7
	comp=Z,3.5nm,0.8s,baz=334,slow=10.0,SNR=4.6						
KSRS	Korea Array	36.26	1	LR	LR	05 03 33.8	
	comp=Z,28nm,19.3s,baz=176,slow=42						
MJAR	Matsushiro Arr	36.71	14	P	P	04 45 32.0	-0.2
	comp=Z,3.0nm,0.6s,baz=188,slow=9.2,SNR=7.1						
MJAR	Matsushiro Arr	36.71	14	IAmb	IAmb	04 45 34.2	
	comp=Z,3.2nm,1.0s						
SHL	Shillong	42.12	308	P	P	04 46 14.2	-3.6
SHL				IAmb	IAmb	04 46 25.1	
	comp=Z,4.7nm,0.7s						
HHC	Hu-ho-hao-te	42.20	342	*e*P	P	04 46 19.3	+1.2
HHC				S	S	04 52 39.0	+0.6
HHC				pmax	pmax		
	comp=Z,11nm,0.8s						
HHC				pmax	pmax		
	comp=Z,93nm,4.7s						
MDJ	Mudanjiang	43.45	2	P	P	04 46 30.5	+2.5
MDJ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,81nm,3.8s						
DZM	Mont Dzumac	44.38	124	LR	LR	05 06 42.7	
	comp=Z,56nm,18.7s,baz=56,slow=38						
GTA	Gaotai	45.81	330	*e*P	P	04 46 47.3	+0.1
GTA				pP	pP	04 46 50.4	+0.1
GTA				sP	sP	04 46 53.3	+1.8
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
SONM	Songino Array	50.10	342	P	P	04 47 19.4	-0.8
	comp=Z,2.0nm,1.0s,baz=162,slow=6.9,SNR=8.0						
SONM				LR	LR	05 10 21.7	
	comp=Z,27nm,19.1s,baz=112,slow=38						
SONM	Songino Array	50.10	342	IAmb	IAmb	04 47 41.6	
	comp=Z,3.8nm,1.2s						
WMQ	Urumqi	55.38	326	*e*P	P	04 48 00.1	+0.8
WMQ				PP	PP	04 50 05.0	+1.8
WMQ				pmax	pmax		
	comp=Z,19nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,52nm,3.7s						
WMQ				LR	LR		
	comp=N,270nm,27.1s						
WMQ				LR	LR		
	comp=E,340nm,29.1s						
WMQ				LR	LR		
	comp=Z,98nm,24.9s						
PETK	Petropavlovsk-	57.65	21	P	P	04 48 15.7	+0.4
	comp=Z,3.4nm,0.9s,baz=199,slow=4.1,SNR=5.0						
MK31	Makanchi Array	60.21	326	P	P	04 48 32.7	-0.5
MK31				IAmb	IAmb	04 48 37.7	
	comp=Z,2.5nm,0.8s						
MKAR	Makanchi Array	60.21	326	P	P	04 48 32.5	-0.7
	comp=Z,1.8nm,0.5s,baz=121,slow=8.2,SNR=18						
MAKZ	Makanchi	60.40	326	P	P	04 48 34.8	+0.3
MAKZ				IAmb	IAmb	04 48 38.9	
	comp=Z,3.2nm,0.8s						
KSH	Kashi	60.51	316	P	P	04 48 36.5	+1.0
KSH				pP	sP	04 48 40.9	+1.0
KSH				sP	pP	04 48 43.3	+4.6
KSH				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ZALV	Zalesovo Beam	63.34	333	P	P	04 48 52.9	-1.1
	comp=Z,0.3nm,0.4s,baz=127,slow=3.8,SNR=1.8						
KBL	Kabul	63.79	308	P	P	04 48 55.0	-2.7
KBL				IAmb	IAmb	04 49 15.3	
	comp=Z,4.1nm,0.8s						
GAR	Garm	64.33	313	P	P	04 49 00.7	-0.4
BTK	Batken	64.35	315	P	P	04 49 00.8	-0.4
KURBB	Kurchatov Arra	64.43	328	P	P	04 48 58.7	-2.6
	comp=Z,3.8nm,0.6s,baz=127,slow=6.1,SNR=16						
KURK	Kurchatov	64.43	328	P	P	04 49 01.2	-0.1
KKAR	Karatay Array	65.73	318	P	P	04 49 08.8	-1.2
NRIK	Noril'sk	73.23	346	LR	LR	05 24 31.5	
	comp=Z,35nm,18.7s,baz=186,slow=38						
ABKAR	Akbulak array	74.73	321	P	P	04 50 04.0	-0.9
ABKAR				IAmb	IAmb	04 50 16.4	
	comp=Z,4.5nm,1.4s						
AKTO	Aktyubinsk	76.25	322	P	P	04 50 13.1	-0.6
	comp=Z,1.2nm,0.8s,baz=82,slow=10,SNR=3.0						
VNDA	Vanda	80.66	173	P	P	04 50 35.6	-1.9
	comp=Z,0.3nm,0.4s,baz=308,slow=6.9,SNR=1.9						
PPT	Papeete	83.56	108	LR	LR	05 24 25.5	
	comp=Z,26nm,20.6s,baz=252,slow=33						

*IDC **21** 04:41:46.6±1.2, 0°.75N×127°.04E, h0^{km}, mb3.9/6, mb1 4.1/6, mb1mx3.7/50, mbtmp4.0/6, MS3.1/1, Ms1 3.1/1, ms1mx2.6/42, Error ellipse: s-maj=131.9km s-min=18.8km az=68.0*

*NEIC **21** 04:41:47.6±1.2, 0°.7N±0°.1×127°.12E±0°.06, h6^{km}±8^{km}, mb4.3/8, Error ellipse: s-maj=20.2km s-min=5.2km az=160.0*

*DJA **21** 04:41:48.0±0.5, 1°N±3°×12°7E±°, h10^{km}, M3.5/6, MLv3.5/6*

ISC 21 04:41:47.6±0.7**, 0°.81N**±0°.06×**127°.13E**±0°.06**, h10^{km}, n23, σ1^s.50**/23**, mb4.1**/9**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.24	99	P	Pg	04 41 52.8	+0.2
TNTI				S	Sg	04 41 56.6	+0.7
TNTI	Ternate	0.24	99		Pg	04 41 52.7	+0.2
LBMI	Labuha	1.48	165	P	Pg	04 42 15.8	-0.3
LBMI				S	Sg	04 42 38.9	+3.5
KMSI	Cibinong	3.15	266	P	Pb	04 42 44.3	+0.5
LUWI	Luwuk	4.73	247	Pn	Pn	04 42 57.0	-2.0
TOLI2	Tolitoli	6.35	273	Pn	Pn	04 43 20.7	-0.6
WB0	Warramunga Arr	21.65	161	P	P	04 46 37.3	-1.1
WB0				IAmb	IAmb	04 46 41.9	
	comp=Z,13nm,1.6s						
WRA	Warramunga Arr	21.80	161	P	P	04 46 40.3	+0.3
	comp=Z,3.8nm,0.6s,baz=341,slow=11,SNR=16						
WB2	Warramunga Arr	21.80	161	P	P	04 46 39.2	-0.9
WB2				IAmb	IAmb	04 46 41.5	
	comp=Z,4.6nm,0.6s						
WR0	Warramunga Arr	21.88	161	P	P	04 46 40.0	-0.9
PMG	Port Moresby	22.38	117	P	P	04 46 42.8	-3.5
PMG				IAmb	IAmb	04 47 28.3	
	comp=Z,11nm,0.9s						
AS31	Alice Springs	25.20	165	P	P	04 47 12.4	-1.2
ASAR	Alice Springs	25.20	165	P	P	04 47 14.1	+0.4
	comp=Z,3.3nm,0.7s,baz=347,slow=12,SNR=14						
ASAR	Alice Springs	25.20	165	P	P	04 47 12.7	-1.0
STKA	Stephens Creek	35.28	158	P	P	04 48 42.9	+0.2
	comp=Z,1.0nm,0.3s,baz=329,slow=12,SNR=3.2						
ULN	Ulaanbaatar	50.00	342	P	P	04 50 43.3	+1.0
SONM	Songino Array	50.18	342	P	P	04 50 45.0	+1.4
	comp=Z,0.6nm,0.8s,baz=163,slow=9.6,SNR=2.3						
SONM	Songino Array	50.18	342	P	P	04 50 45.0	+1.4
SONM	Songino Array	50.18	342	IAmb	IAmb	04 51 00.3	
	comp=Z,13nm,1.9s						
PETK	Petropavlovsk-	57.98	21	LR	LR	05 11 52.4	
	comp=Z,18nm,21.6s,baz=208,slow=31						
MKAR	Makanchi Array	60.17	326	P	P	04 51 54.9	-0.8
	comp=Z,0.4nm,0.4s,baz=124,slow=7.8,SNR=5.2						
KURBB	Kurchatov Arra	64.40	328	P	P	04 52 25.7	+1.8
	comp=Z,0.8nm,0.6s,baz=128,slow=6.0,SNR=1.8						
KURK	Kurchatov	64.41	328	P	P	04 52 25.0	+1.1

IDC 21 04:51:24.0±2.0**, 4°.34S**×**146°.61E, h0^{km}, mb3.3**/3**, mb1 3.5**/4**, mb1mx3.3**/34**, mbtmp3.2**/4**, ML3.2**/1**, Error ellipse: s-maj=84.9km s-min=29.0km az=112.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.58	217	P	P	04 55 54.3	+0.5
	0.1nm,0.3s,baz=42,slow=11,SNR=4.6						
ASAR	Alice Springs	22.79	211	P	P	04 56 28.1	-0.4
	0.2nm,0.4s,baz=48,slow=8.9,SNR=2.0						
MKAR	Makanchi Array	75.98	320	P	P	05 03 13.1	+0.1
	0.2nm,0.5s,baz=96,slow=7.9,SNR=3.0						
ILAR	Eielson Array	84.12	23	P	P	05 03 56.6	0.0
	0.1nm,0.4s,baz=253,slow=6.1,SNR=5.0						

*IDC **21** 04:54:59.7±32.0, 15°.59N×55°.70E, h0^{km}, mb3.8/4, mb1 3.9/4, mb1mx3.5/34, mbtmp3.8/4, Error ellipse: s-maj=640.9km s-min=61.5km az=53.0*

*NEIC **21** 04:55:01.9±2.2, 15°.8N±0°.1×55°.40E±0°.06, h10^{km}±2^{km}, mb4.0/4, Error ellipse: s-maj=18.4km s-min=8.5km az=197.0*

ISC 21 04:54:59.6±1.0**, 15°.6N**±0°.1×**55°.4E**±0°.1**, h10^{km}, n12, σ1^s.15**/9**, mb3.9**/6**, Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCY	Socotra	3.70	202		Pn	04 55 57.2	+0.1
RAYN	Ar Rayn	12.20	312	Pn	Pn	04 57 53.5	-0.2
MAKZ	Makanchi	38.13	30	P	P	05 02 20.2	+1.3
MAKZ				IAmb	IAmb	05 02 24.6	
	comp=Z,5.1nm,1.6s						
MK31	Makanchi Array	38.27	30	P	P	05 02 20.9	+0.7
MKAR	Makanchi Array	38.27	30	P	P	05 02 21.1	+1.0
	comp=Z,0.6nm,0.6s,baz=209,slow=9.3,SNR=5.2						
CMAR	Chiang Mai Arr	41.63	80	P	P	05 02 48.3	-0.1
	comp=Z,0.9nm,0.3s,baz=276,slow=8.6,SNR=4.3						
ZAA0	Zalesovo Array	44.58	24	P	P	05 03 12.0	+0.2
ZAA0				IAmb	IAmb	05 03 23.0	
	comp=Z,1.9nm,0.9s						
ZALV	Zalesovo Beam	44.58	24	P	P	05 03 13.5	+1.7
	comp=Z,1.4nm,0.6s,baz=240,slow=8.4,SNR=6.8						
SONM	Songino Array	52.65	41	P	P	05 04 12.8	-1.4
	comp=Z,0.4nm,0.8s,baz=263,slow=5.8,SNR=2.3						
H01W3	Cape Leeuwin H	75.00	133	T	T	06 27 57.4	
	baz=302,slow=75,SNR=9.7						
H01W2	Cape Leeuwin H	75.00	133	T	T	06 27 58.4	
	baz=302,slow=75,SNR=15						
H01W1	Cape Leeuwin H	75.01	133	T	T	06 27 59.2	
	baz=302,slow=75,SNR=14						

*IDC **21** 05:07:54.3±2.0, 7°.55S×127°.00E, h0^{km}, mb3.5/1, mb1 4.3/3, mb1mx3.7/21, mbtmp4.1/3, ML4.4/2, Error ellipse: s-maj=269.6km s-min=31.1km az=63.0*

*DJA **21** 05:08:11.1±0.5, 8°S±3°×12°8E±°, h122^{km}±27^{km}, M4.2/8, mb4.3/3, mB5.3/2, MLv4.2/8, Mw(mB)4.7/2*

ISC 21 05:08:08.0±1.0**, 7°.78S**±0°.06×**128°.17E**±0°.07**, h150^{km}, n8, σ2^s.11**/12**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAI	Ambon	4.07	0	P	Pn	05 09 09.6	+0.4
MSAI	Masohi	4.47	10	P	Pn	05 09 15.9	+1.4
BATI	Baumata	5.06	241	P	Pn	05 09 23.9	+1.6
BATI				S	Sn	05 10 19.0	-1.2
SANI	Sanana	6.09	339	P	Pn	05 09 35.9	-0.2
	0.1nm18nm,0.5s						
EDFI	Ende, Flores	6.48	261	P	Pn	05 09 42.2	+0.9
	0.0nm2.5nm,0.8s						
EDFI				S	Sn	05 10 53.4	-1.0
	0.0nm2.5nm,0.8s						
WRA	Warramunga Arr	13.49	154	Pn	P	05 11 16.5	-1.1
	2.4nm,0.3s,baz=328,slow=14,SNR=70						
WRA				Sn	Sn	05 13 40.9	-2.1
	3.0nm,0.3s,baz=332,slow=22,SNR=19						
ASAR	Alice Springs	16.73	161	P	Pn	05 11 58.5	+4.7
	1.0nm,0.3s,baz=336,slow=11,SNR=56						
ASAR				S	S	05 14 57.8	-2.0
	0.9nm,0.3s,baz=320,slow=16,SNR=5.9						
MKAR	Makanchi Array	67.90	328	P	P	05 18 49.6	-0.8
	0.3nm,0.5s,baz=117,slow=7.9,SNR=7.4						

*IDC **21** 05:40:17.5±0.6, 26°.29N×142°.55E, h0^{km}, mb4.2/21, mb1 4.4/23, mb1mx4.3/44, mbtmp4.2/23, ML3.2/2, MS3.7/20, Ms1 3.7/20, ms1mx3.5/39, Error ellipse: s-maj=19.1km s-min=13.2km az=73.0*

*JMA **21** 05:40:17.0±0.1, 26°.36N×143°.07E, h16^{km}±1^{km}, M4.6*

JMA Felt I J1.

NIED ***21*** *05:40:17.0, 26°.36N×143°.07E, h16^{km}, MW4.5, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.58; M$_{\theta\theta}$0.81; M$_{\phi\phi}$-0.23; M$_{r\theta}$-0.80; M$_{\theta\phi}$-1.97; M$_{\phi r}$5.18; Fault plane solution: M$_0$5.64000×10^{15} NP1: φ$_s$170.00000°, δ87.00000°, λ-69.00000°. NP2: φ$_s$267.00000°, δ21.00000°, λ-172.00000°.*

BJI ***21*** *05:40:19.6±0.0, 26°.13N×142°.67E, h36^{km}, mB4.8/26, mb4.4/37, Ms4.3/19, Ms7 4.0/19*

NEIC ***21*** *05:40:20.1±1.1, 26°.35N±0°.06×142°.6E±0°.1, h10^{km}±1^{km}, mb4.8/38, Error ellipse: s-maj=22.5km s-min=6.7km az=246.0*

ISC 21 05:40:22.7±0.5**, 26°.41N**±0°.06×**142°.64E**±0°.08**, h31**^{km}**, n116, σ1^{s}32**/108**, mb4.6**/50**, MS3.9**/24**, 3C, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHH2	Haha-jima-NKT2	0.47	299	P	Pn	05 40 32.9	-0.5
CBIJ	Chichi jima	0.80	329	P	Pn	05 40 36.9	-1.0
CBIJ				S	Sb	05 40 51.0	+2.3
JCJ	Chichijima	0.80	329	Pn	Pn	05 40 37.0	-0.9
	627nm,0.3s,baz=93,slow=23,SNR=94						
JCJ				Sn	Sb	05 40 51.7	+3.0
	1μm,0.3s,baz=287,slow=19,SNR=36						
JCJ				LR	LR	05 41 02.1	
	comp=Z,1μm,21.8s,baz=120,slow=52						
JCJ	Chichijima	0.80	329	Pg	Pn	05 40 36.4	-1.4
JCJ					Sn	05 40 46.5	-2.2
JHJ2	Mitsune	7.12	341	Pn	Pn	05 42 04.1	-0.6
JHJ	Hachijo jima 2	7.14	340	LR	LR	05 44 37.1	
	comp=Z,320nm,21.2s,baz=218,slow=36						
BSO3	Boso 3	8.57	348	P	Pn	05 42 24.3	0.0
BSO4	Boso 4	8.78	348	P	Pn	05 42 28.3	+0.9
JHU	Hanno	9.85	344	P	Pn	05 42 40.9	-1.2
JYT	Yasato	10.01	349		Pn	05 42 43.7	-0.7
JHO	Hitachi	10.33	351	P	Pn	05 42 47.5	-1.2
JAG	Ashikaga	10.35	346	P	Pn	05 42 47.6	-1.4
JAG				*e*S	Sn	05 44 42.0	-2.0
MJAR	Matsushiro Arr	10.79	341	Pn	Pn	05 42 52.5	-2.5
	0.2nm,0.3s,baz=160,slow=14,SNR=3.9						
MJAR				LR	LR	05 46 37.1	
	comp=Z,95nm,20.0s,baz=205,slow=35						
MJAR	Matsushiro Arr	10.79	341		Pn	05 42 56.8	+1.7
MAT	Matsushiro	10.79	341	P	Pn	05 42 55.9	+0.8
MAT				*e*S	Sn	05 44 52.9	-1.9
JFK	Kawauchi	11.03	353	P	Pn	05 42 56.6	-1.8
JMM	Marumori	11.53	353		Pn	05 43 03.8	-1.4
JOW	Kunigami	12.86	275	LR	LR	05 47 31.7	
	comp=Z,343nm,22.0s,baz=35,slow=34						
JTM	Tenmabayashi	14.40	355	Pn	Pn	05 43 44.5	+0.2
KSRS	Korea Array	16.63	315	Pn	P	05 44 15.2	-0.5
	0.3nm,0.3s,baz=117,slow=12,SNR=4.4						
KSRS				LR	LR	05 50 29.4	
	comp=Z,483nm,18.2s,baz=111,slow=37						
USRK	Ussuriysk Ar.	19.74	337	P	Pn	05 44 50.4	-1.0
	baz=138,slow=28,SNR=4.7						
USRK				LR	LR	05 51 33.7	
	comp=Z,138nm,21.0s,baz=147,slow=34						
MDJ	Mudanjiang	21.00	333	P	P	05 45 04.8	+1.3
MDJ				pP	sP	05 45 18.1	+3.0
MDJ				S	S	05 48 56.1	+0.4
MDJ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,72nm,4.9s						
MDJ				LR	LR		
	comp=N,170nm,17.3s						
MDJ				LR	LR		
	comp=E,270nm,17.3s						
MDJ				LR	LR		
	comp=Z,340nm,19.7s						
NJ2	Nanjing	21.49	291	*e*P	P	05 45 08.3	-0.6
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
H11N2	WAKE ISLAND Hy	23.26	102	T	T	06 09 13.0	
	baz=291,slow=75,SNR=6.1						
H11N1	WAKE ISLAND Hy	23.26	102	T	T	06 09 12.1	
	baz=291,slow=75,SNR=7.0						
H11N3	WAKE ISLAND Hy	23.28	102	T	T	06 09 13.6	
	baz=291,slow=75,SNR=12						
H11S3	WAKE ISLAND Hy	23.55	105	T	T	06 09 39.4	
	baz=295,slow=75,SNR=16						
H11S1	WAKE ISLAND Hy	23.56	105	T	T	06 09 39.8	
	baz=295,slow=75,SNR=9.2						
H11S2	WAKE ISLAND Hy	23.57	105	T	T	06 09 40.8	
	baz=295,slow=75,SNR=11						
KLR	Kul'dur	24.31	342	P	P	05 45 38.7	+1.4
	5.7nm,0.5s,baz=149,slow=7.0,SNR=15						
WHN	Wuhan	25.18	286	⇑P	P	05 45 44.9	-0.5
WHN				S	S	05 50 14.8	+6.1
WHN				LR	LR		
	comp=E,670nm,14.2s						
WHN				LR	LR		
	comp=Z,680nm,14.9s						
HHC	Hu-ho-hao-te	29.44	307	*e*P	P	05 46 23.9	+0.2
HHC				pmax	pmax		
	comp=Z,14nm,0.7s						
HHC				pmax	pmax		
	comp=Z,87nm,5.1s						
HHC				LR	LR		
	comp=N,150nm,12.7s						
HHC				LR	LR		
	comp=E,200nm,14.7s						
HHC				LR	LR		
	comp=Z,230nm,14.3s						
XAN	Xi'an	30.01	293	⇑P	P	05 46 27.1	-1.7
XAN				pP	pP	05 46 36.8	-0.6
XAN				sP	sP	05 46 41.6	+0.8
XAN				pmax	pmax		
	comp=Z,14nm,1.1s						
XAN				pmax	pmax		
	comp=Z,160nm,4.1s						
XAN				LR	LR		
	comp=N,230nm,15.1s						
XAN				LR	LR		
	comp=Z,170nm,14.4s						
CD2	Chengdu	34.30	287	*e*P	P	05 47 05.0	-1.4
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
LZH	Lanzhou	34.35	296	*e*P	P	05 47 06.5	-0.5
LZH				pP	pP	05 47 14.8	-0.8
LZH				pmax	pmax		
	comp=Z,19nm,1.1s						
LZH				LR	LR		
	comp=N,220nm,10.8s						
LZH				LR	LR		
	comp=E,270nm,14.1s						
LZH				LR	LR		
	comp=Z,240nm,14.6s						
SONM	Songino Array	35.49	317	P	P	05 47 15.7	-0.9
	0.4nm,0.3s,baz=122,slow=8.2,SNR=6.2						
SONM				PcP	PcP	05 49 46.2	+0.6
	0.4nm,0.4s,baz=97,slow=1.0,SNR=3.2						
SONM				LR	LR	06 02 02.4	
	comp=Z,114nm,21.3s,baz=116,slow=37						
KMI	Kunming	35.86	277	⇑P	P	05 47 20.0	-0.1
KMI				pP	pP	05 47 28.0	-0.8
KMI				pmax	pmax		
	comp=Z,10.0nm,0.5s						
GTA	Gaotai	37.88	301	*e*P	P	05 47 37.8	+0.7
GTA				pP	sP	05 47 47.4	-1.7
GTA				sP	pwP	05 47 52.1	+3.7
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,61nm,5.2s						
GTA				LR	LR		
	comp=N,150nm,15.3s						
GTA				LR	LR		
	comp=E,250nm,15.3s						
GTA				LR	LR		
	comp=Z,190nm,18.2s						
CHTO	Chiang Mai	40.89	269	P	P	05 48 01.5	-0.8
CM31	Chiang Mai Arr	41.00	268	P	P	05 48 02.7	-0.5
CMAR	Chiang Mai Arr	41.00	268	P	P	05 48 02.6	-0.6
	1.8nm,0.6s,baz=62,slow=8.5,SNR=8.4						
CMAR				LR	LR	06 05 59.0	
	comp=Z,72nm,18.3s,baz=141,slow=38						
WR0	Warramunga Arr	46.75	190	P	P	05 48 48.6	-0.6
WB2	Warramunga Arr	46.77	191	P	P	05 48 47.8	-1.5
WRA	Warramunga Arr	46.77	191	P	P	05 48 47.7	-1.6
	5.0nm,0.4s,baz=11,slow=8.4,SNR=37						
WRA	Warramunga Arr	46.77	191	P	P	05 48 47.7	-1.6
WMQ	Urumqi	47.31	306	*e*P	P	05 48 55.3	+1.8
ZALV	Zalesovo Beam	50.28	319	P	P	05 49 14.2	-1.8
	1.0nm,0.3s,baz=115,slow=7.3,SNR=6.7						
ZALV				PcP	PcP	05 50 33.8	-0.8
	1.8nm,0.7s,baz=113,slow=3.9,SNR=4.4						
ZALV				LR	LR	06 11 11.3	
	comp=Z,85nm,19.1s,baz=78,slow=37						
ZALV	Zalesovo Beam	50.28	319	P	P	05 49 16.2	+0.2
ASAR	Alice Springs	50.49	190	P	P	05 49 16.2	-1.7
	0.5nm,0.6s,baz=9.0,slow=7.8,SNR=8.1						
ASAR	Alice Springs	50.49	190	P	P	05 49 17.7	-0.2
MK31	Makanchi Array	51.23	310	P	P	05 49 22.3	-1.0
MKAR	Makanchi Array	51.23	310	P	P	05 49 21.9	-1.4
	1.0nm,0.4s,baz=89,slow=9.2,SNR=18						
MKAR				PcP	PcP	05 50 37.1	-1.2
	0.6nm,0.5s,baz=93,slow=3.8,SNR=2.5						
MKAR	Makanchi Array	51.23	310	P	P	05 49 22.0	-1.4
DZM	Mont Dzumac	53.42	152	*e*LR	LR	06 05 16.3	
	comp=Z,110nm,21.9s						
NRIK	Noril'sk	53.44	339	P	P	05 49 40.9	+1.6
	3.5nm,0.7s,baz=114,slow=8.5,SNR=3.0						
KURK	Kurchatov	53.76	315	P	P	05 49 41.3	-0.7
KURK				IAmb	IAmb	05 49 42.4	
	comp=Z,12nm,1.4s						
K20K	Telida	54.79	30	P	P	05 49 50.5	+1.2
K20K				IAmb	IAmb	05 50 10.7	
	comp=Z,12nm,1.4s						
J20K	Nowinta River	54.92	29	P	P	05 49 51.9	+1.6
J20K				IAmb	IAmb	05 50 05.3	
	comp=Z,4.5nm,0.8s						
IMAR	Indian Mountai	55.48	26	P	P	05 49 55.7	+1.4
H21K	Melozitna Rive	55.79	27	P	P	05 49 57.8	+1.3
H21K				IAmb	IAmb	05 50 15.0	
	comp=Z,8.9nm,1.2s						
BOOM	Boomskoye usch	55.94	305	P	P	05 49 57.8	-0.4
BOOM				IAmb	IAmb	05 50 13.3	
	comp=Z,20nm,1.4s						
KSH	Kashi	56.28	301	P	P	05 50 03.0	+2.4
KSH				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TRF	Thorofare Moun	56.48	30	P	P	05 50 02.2	+0.5
TRF				IAmb	IAmb	05 50 13.7	
	comp=Z,9.0nm,1.3s						
AAK	Ala-Archa	56.98	305	LR	LR	06 16 31.1	
	comp=Z,51nm,18.2s,baz=88,slow=38						
AAK	Ala-Archa	56.98	305	P	P	05 50 05.3	-0.3
DHY	Denali Highway	57.75	30	P	P	05 50 11.5	+0.9
DHY				IAmb	IAmb	05 50 18.7	
	comp=Z,12nm,1.3s						
STKA	Stephens Creek	57.97	181	P	P	05 50 14.0	+1.8
	comp=Z,2.1nm,0.6s,baz=14,slow=7.7,SNR=4.5						
STKA	Stephens Creek	57.97	181	P	P	05 50 12.8	+0.5
ILAR	Eielson Array	58.12	28	P	P	05 50 13.0	0.0
	comp=Z,0.8nm,0.8s,baz=267,slow=5.7,SNR=7.8						
FORT	Forrest	58.55	195	P	P	05 50 17.1	+0.9
BRVK	Borovoye	58.89	318	P	P	05 50 18.3	-0.3
BRVK				IAmb	IAmb	05 50 19.4	
	comp=Z,15nm,1.4s						
BBOO	Buckleboo	59.22	186	P	P	05 50 21.1	+0.1
BMAR	Burnt Mountain	59.30	25	P	P	05 50 23.6	+2.3
SCRK	Sand Creek	59.33	29	P	P	05 50 22.2	+0.7
SCRK				IAmb	IAmb	05 50 31.9	
	comp=Z,3.5nm,0.9s						
KKAR	Karatay Array	59.82	306	P	P	05 50 24.8	-0.4
GAR	Garm	60.70	302	P	P	05 50 31.4	0.0
GAR				IAmb	IAmb	05 50 33.3	
	comp=Z,7.4nm,0.7s						
CHGR	Chuyangaron	61.65	301	P	P	05 50 37.6	-0.2
PALK	Pallekele	61.70	264	LR	LR	06 20 17.8	
	comp=Z,26nm,18.2s,baz=160,slow=39						
EPYK	Eagle Plains	62.38	27	P	P	05 50 43.8	+1.6
EPYK				IAmb	IAmb	05 50 52.1	
	comp=Z,7.7nm,0.9s						
INK	Inuvik	63.48	24	P	P	05 50 49.9	+0.6
	comp=Z,1.0nm,0.6s,baz=333,slow=5.7,SNR=7.8						
INK	Inuvik	63.48	24	IAmb	IAmb	05 51 00.3	
	comp=Z,5.6nm,1.2s						
ARU	Arti	65.22	323	P	P	05 51 01.1	+0.1
ABKAR	Akbulak array	65.87	315	P	P	05 51 05.0	-0.3
ABKAR	Akbulak array	65.87	315	P	P	05 51 05.1	-0.2
ABKAR				IAmb	IAmb	05 51 05.6	
	comp=Z,9.3nm,1.1s						
GEYT	Alibeck	70.22	303	LR	LR	06 26 47.6	
	comp=Z,46nm,18.3s,baz=195,slow=40						
EUNU	Eureka	70.53	8	P	P	05 51 35.0	+1.0
EUNU				IAmb	IAmb	05 51 47.6	
	comp=Z,9.0nm,1.4s						
KLMR	Klimovskoe	73.38	330	*e*P	P	05 51 53.8	+2.4
KLMR				AMP		05 51 57.3	
	comp=Z,7.0nm,1.4s						
KEV	Kevo	73.76	341	P	P	05 51 55.5	+2.0
KEV				IAmb	IAmb	05 52 02.6	
	comp=Z,14nm,1.0s						
ARCES	ARCESS Array B	74.32	341	P	P	05 51 58.0	+1.2
	comp=Z,4.9nm,0.8s,baz=80,slow=9.0,SNR=14						
ARCES				LR	LR	06 29 05.2	
	comp=Z,71nm,18.6s,baz=55,slow=39						
K05A	Summer Lake	77.02	49	P	P	05 52 13.7	+0.7
K05A				IAmb	IAmb	05 52 35.7	
	comp=Z,12nm,1.3s						
NEW	Newport	77.14	42	P	P	05 52 13.6	+0.3
	comp=Z,0.8nm,0.6s,baz=337,slow=7.7,SNR=2.9						
FIA1	FINESS Array S	78.74	334	P	P	05 52 22.1	+0.3
FIA1				IAmb	IAmb	05 52 27.4	
	comp=Z,12nm,0.9s						
FINES	FINESS Array B	78.74	334	P	P	05 52 22.1	+0.2
	comp=Z,4.4nm,0.3s,baz=73,slow=5.0,SNR=104						
FINES				LR	LR	06 29 40.7	
	comp=Z,28nm,18.8s,baz=48,slow=38						
KBZ	Khabaz	78.78	313	P	P	05 52 22.8	+0.4
	comp=Z,6.0nm,0.8s,baz=79,slow=3.3,SNR=9.1						
KBZ				LR	LR	06 29 33.9	
	comp=Z,106nm,21.9s,baz=55,slow=38						
PPT	Papeete	79.00	116	LR	LR	06 22 03.8	
	comp=Z,104nm,21.1s,baz=234,slow=32						
PPT2	Papeete2	79.01	116	*e*LR	LR	06 16 58.9	
	comp=Z,49nm,21.2s						
PMOR	Pomariorio Ree	79.03	113	*e*T	T	07 18 36.8	
	comp=Z,3.8nm,0.2s						
JTMT	Jette	79.08	42	P	P	05 52 24.9	+0.7
CMB	Columbia Colle	79.31	53	P	P	05 52 26.1	+0.5
NVAR	Mina Array Bea	80.62	52	P	P	05 52 33.2	+0.4
	comp=Z,0.8nm,0.7s,baz=292,slow=5.7,SNR=8.5						
ELK	Elko	81.69	49	P	P	05 52 38.7	+0.1
	comp=Z,0.7nm,0.5s,baz=340,slow=7.9,SNR=3.6						
TBI	Tubuai	82.19	121	*e*LR	LR	06 18 27.7	
	comp=Z,102nm,38.2s						
GWY	Greenwater Val	82.80	53	P	P	05 52 44.5	+0.2
GWY				IAmb	IAmb	05 52 50.8	
	comp=Z,3.1nm,0.9s						
AKASG	Malin Array Be	83.41	324	P	P	05 52 46.4	-0.6
	comp=Z,1.5nm,0.4s,baz=52,slow=5.1,SNR=10						
AKASG				LR	LR	06 32 05.2	
	comp=Z,52nm,20.1s,baz=40,slow=37						
AKBB	Malin Array Si	83.41	324	P	P	05 52 46.4	-0.5
AKBB				IAmb	IAmb	05 52 55.3	
	comp=Z,5.1nm,1.0s						
NC405	NORSAR Array S	84.18	338	P	P	05 52 49.5	-1.3
NB2	NORSAR Subarra	84.40	338	P	P	05 52 50.2	-1.7
	comp=Z,7.4nm,1.2s,baz=42,slow=5.3						
NOA	NORSAR Array B	84.40	338	P	P	05 52 51.1	-0.8
	comp=Z,0.4nm,0.5s,baz=55,slow=6.5,SNR=6.8						
NOA				LR	LR	06 34 48.3	
	comp=Z,24nm,18.8s,baz=15,slow=39						
PDAR	Pinedale Array	84.41	45	LR	LR	06 23 27.2	
	comp=Z,39nm,20.7s,baz=292,slow=31						
RAYN	Ar Rayn	85.80	294	P	P	05 52 59.6	0.0
RAYN				IAmb	IAmb	05 53 08.4	
	comp=Z,9.0nm,0.9s						
BRTR	Keskin Array B	86.77	313	P	P	05 53 03.4	-0.8
	comp=Z,0.9nm,0.6s,baz=77,slow=4.5,SNR=3.3						
BRTR				LR	LR	06 35 53.3	
	comp=Z,44nm,18.2s,baz=67,slow=38						
CLL	Collm	90.85	331	*e*P	P	05 53 24.0	+0.9
	comp=Z,95nm,2.7s						
GERES	GERESS Array B	92.31	329	P	P	05 53 29.6	-0.5
	comp=Z,0.7nm,0.6s,baz=39,slow=6.8,SNR=6.4						
GERES				LR	LR	06 39 36.3	
	comp=Z,48nm,19.3s,baz=334,slow=38						
TXAR	Lajitas Array	95.69	53	P	P	05 53 46.5	+0.6
	comp=Z,0.4nm,0.8s,baz=336,slow=2.7,SNR=3.8						
TORD	Torodi Ar. Bea	125.34	311	PKP	PKiKP	05 59 20.8	-0.8
	comp=Z,0.4nm,0.8s,baz=32,slow=3.6,SNR=2.4						
PLCA	Paso Flores	149.08	126	PKPbc	PKiKP	06 00 08.1	-1.2
	comp=Z,2.2nm,1.0s,baz=292,slow=1.9,SNR=3.1						

IDC ***21*** *05:51:19.4±1.2, 11°.38S×162°.59E, h0^{km}, mb3.8/6, mb1 4.1/8, mb1mx3.8/33, mbtmp3.9/8, ML4.3/2, MS3.5/6, Ms1 3.5/6, ms1mx3.1/32, Error ellipse: s-maj=28.0km s-min=26.8km az=140.0*

ISC 21 05:51:25.0±0.9**, 11°.5S**±0°.1×**162°.6E**±0°.1**, h39**^{km}**, n13, σ0^{s}99**/10**, mb3.7**/6**, MS3.4**/4**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	3.29	308	Pn	Pn	05 52 13.4	-0.6
	177nm,0.3s,baz=140,slow=4.5,SNR=18						
HNR				Sn	Sn	05 52 53.6	+1.7
	76nm,0.3s,baz=146,slow=17,SNR=2.6						
HNR				LR	LR	05 53 34.3	
	comp=Z,887nm,18.0s,baz=70,slow=42						
DZM	Mont Dzumac	11.18	161	Pn	Pn	05 54 03.3	+0.9
	0.4nm,0.3s,baz=261,slow=15,SNR=6.2						
DZM				Sn	Sn	05 56 05.6	-0.5
	0.3nm,0.3s,baz=288,slow=19,SNR=1.5						
DZM	Mont Dzumac	11.18	161	*e*LR	LR	05 56 15.2	
	comp=Z,120nm,22.6s						
MSVF	Nonsavu	16.20	114	LR	LR	06 00 18.4	
	comp=Z,101nm,20.1s,baz=147,slow=33						
RAO	Raoul Island	25.37	137	LR	LR	06 04 31.1	
	comp=Z,108nm,20.2s,baz=80,slow=31						
STKA	Stephens Creek	28.07	220	LR	LR	06 07 51.5	
	comp=Z,135nm,18.5s,baz=26,slow=35						
WRA	Warramunga Arr	28.44	249	P	P	05 57 16.4	0.0
	0.5nm,0.5s,baz=79,slow=9.2,SNR=6.1						
ASAR	Alice Springs	29.85	242	P	P	05 57 28.8	-0.1
	0.7nm,0.7s,baz=66,slow=9.9,SNR=14						
ASAR				LR	LR	06 08 01.8	
	comp=Z,71nm,20.7s,baz=64,slow=34						
GUMO	Guam	30.47	324	LR	LR	06 09 28.0	
	comp=Z,93nm,20.1s,baz=105,slow=36						
SONM	Songino Array	77.20	325	P	P	06 03 14.8	-0.3
	0.9nm,0.8s,baz=152,slow=7.5,SNR=5.4						
ILAR	Eielson Array	84.91	19	P	P	06 03 55.5	0.0
	0.6nm,0.9s,baz=234,slow=4.6,SNR=4.2						
NVAR	Mina Array Bea	88.66	50	P	P	06 04 15.5	+0.8
	0.3nm,0.7s,baz=233,slow=8.9,SNR=2.8						
MKAR	Makanchi Array	91.72	317	P	P	06 04 27.1	-1.4
	0.4nm,0.7s,baz=116,slow=8.0,SNR=2.0						

TUL ***21*** *06:12:42.3±0.7, 36°.94N±0°.02×97°.83W±0°.03, h4^{km}±7^{km}, ML2.7, mb_Lg2.5/19(NEIC), Error ellipse: s-maj=3.9km s-min=2.3km az=217.0*

NEIC 21 06:12:42.5±0.8**, 36°.91N**±0°.02×**97°.81W**±0°.03**, h5**^{km}±4^{km}**, Error ellipse: s-maj=4.3km s-min=1.8km az=223.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.07	216	Pg	Pg	06 12 44.6	+0.5
KAN14	Manchester OK	0.13	291	Pg	Pg	06 12 45.0	-0.2
KAN17	Caldwell West	0.14	15	Pg	Pg	06 12 45.3	-0.1
KAN05	Bluff City Nor	0.21	346	Pg	Pg	06 12 46.3	-0.3
KAN01	Argonia South	0.25	9	Pg	Pg	06 12 47.2	-0.2
KAN09	Caldwell North	0.27	34	Pg	Pg	06 12 47.9	0.0
KAN10	Anthony SW Sta	0.31	313	Pg	Pg	06 12 48.3	-0.4
OK032	Salt Plains WL	0.34	252	Pg	Pg	06 12 49.1	0.0
KAN06	Argonia West S	0.34	353		Pg	06 12 49.0	-0.2
KAN16	Harper SW Stat	0.38	327	Pg	Pg	06 12 49.6	-0.3
CROK	Carrier	0.43	199	Pg	Pg	06 12 51.3	+0.6
BLOK	Blackwell	0.50	107	Pg	Pg	06 12 52.6	+0.5
T35A	Sooner Cattle	1.04	89	Pg	Pg	06 13 02.4	-0.1
OK029	Liberty Lake	1.15	165	Pg	Pg	06 13 04.4	-0.1
QUOK	Quay	1.15	129		Pg	06 13 04.5	-0.1
BCOK	Bluff Creek, N	1.26	173		Pg	06 13 06.5	-0.2
OK030	Cody Creek RV	1.28	140		Pg	06 13 06.9	-0.2
OK025	Westminster Rd	1.38	164	Pn	Pg	06 13 08.9	0.0
OKCFA	Oklahoma City	1.52	169		Pn	06 13 10.8	+0.4
OKCFA				IAmb_Lg		06 13 34.4	
	comp=Z,42nm,0.9s						
OKCSW	OKLAHOMA CITY	1.53	169		Pb	06 13 11.2	-0.2
R32A	Long Quarter,	1.67	335		Pn	06 13 12.8	+0.2
FNO	Franklin	1.68	169		Pb	06 13 13.4	-0.6
FNO				IAmb_Lg		06 13 39.1	
	comp=Z,25nm,0.8s						
TUL1	Leonard	1.91	121	Pn	Pn	06 13 16.7	+1.0
KSU1	Kansas State U	2.38	23	IAmb_Lg		06 14 00.3	
	comp=Z,31nm,0.8s						
CBKS	Cedar Bluff	2.44	322	IAmb_Lg		06 13 57.0	
	comp=Z,20nm,1.1s						
X37A	Clayton	3.05	139	IAmb_Lg		06 14 27.0	
	comp=Z,15nm,0.8s						
Z38A	Mt. Pleasant	4.31	147	IAmb_Lg		06 15 11.9	
	comp=Z,8.3nm,0.7s						
P38A	Dawn	4.32	50	IAmb_Lg		06 14 58.7	
	comp=Z,6.9nm,0.8s						
R40A	Maddies Statio	4.61	71	IAmb_Lg		06 15 10.1	
	comp=Z,6.0nm,1.1s						
FCAR	Ozark Folk Cen	4.70	101	IAmb_Lg		06 15 14.8	
	comp=Z,10nm,1.1s						
PBMO	Poplar Bluff	5.92	89	IAmb_Lg		06 15 55.7	
	comp=Z,7.2nm,0.7s						

SOF ***21*** *06:13:52.4, 41°.69N×25°.46E, h12^{km}, MD2.8*

ISK ***21*** *06:13:52.5, 41°.67N×25°.39E, h7^{km}, ML2.9/12*

IASPEI ***21*** *06:13:52.8±1.0, 41°.70N±0°.03×25°.46E±0°.02, h12^{km}±7^{km}, Error ellipse: s-maj=3.8km s-min=3.3km az=23.8, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

DDA ***21*** *06:13:53.0, 41°.72N×25°.57E, h7^{km}±4^{km}, ML2.9*

ATH ***21*** *06:13:53.6, 41°.67N×25°.43E, h8^{km}±3^{km}, ML2.5/7, Error ellipse: s-maj=4.0km s-min=1.3km az=181.0*

THE ***21*** *06:13:53.3, 41°.67N×25°.43E, h0^{km}±4^{km}, ML2.6/10, Error ellipse: s-maj=4.6km s-min=1.6km az=50.0*

BEO ***21*** *06:13:56.7±1.1, 41°.83N×25°.32E, h0^{km}, ML2.4/4*

ISC 21 06:13:53.3±0.9**, 41°.68N**±0°.02×**25°.45E**±0°.02**, h11**^{km}±7^{km}**, n69, σ1^{s}00**/100**, 7C-4D, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDZ	Kurdzhali	0.04	218	*i* Pg	Pg	06 13 55.5	+0.1
DIM	Dimitrovgrad	0.38	10	*i* Pg	Pg	06 14 00.2	-0.6
RDO	Rodhopi	0.54	173	P	Pg	06 14 03.6	-0.1
RDO				S	Sg	06 14 10.9	0.0
	810nm,0.2s						
RDO	Rodhopi	0.54	173	P	Pg	06 14 03.7	-0.1
RDO				S	Sg	06 14 10.5	-0.4
RDO				AML	AML	06 14 11.4	
	comp=E,993μm,0.3s						
RDO				AML	AML	06 14 11.5	
	comp=N,2200μm,0.2s						
RDO	Rodhopi	0.54	173	PG	Pg	06 14 03.4	-0.4
RDO				SG	Sg	06 14 11.2	+0.3
RZN	Rozhen	0.55	271	*i* Pg	Pg	06 14 03.3	-0.7
PLD	Plovdiv	0.70	308	PG	Pg	06 14 06.1	-0.8
PLD				SG	Sg	06 14 15.5	-0.5
PLD	Plovdiv	0.70	308	*i* Pg	Pg	06 14 06.1	-0.8
ALN	Alexandroupoli	0.90	150	P	Pg	06 14 10.7	0.0
ALN	Alexandroupoli	0.90	150	P	Pg	06 14 10.4	-0.2
ALN				S	Sg	06 14 22.9	+0.5
ALN				AML	AML	06 14 26.6	
	comp=E,611μm,0.3s						
ALN				AML	AML	06 14 27.1	
	comp=N,493μm,0.4s						
ALN	Alexandroupoli	0.90	150	PG	Pg	06 14 10.6	-0.1
KAVA	Kavala	0.98	226	P	Pg	06 14 11.4	-0.8
KAVA				S	Sg	06 14 25.1	+0.1
	comp=N,380nm,0.2s						
KAVA	Kavala	0.98	226	P	Pg	06 14 11.4	-0.8
KAVA				S	Sg	06 14 25.0	+0.1
KAVA				AML	AML	06 14 28.9	
	comp=E,870μm,0.3s						
KAVA				AML	AML	06 14 30.8	
	comp=N,1117μm,0.5s						
EDRB	Edirne	0.98	80	P	Pg	06 14 10.8	-1.4
EDRB	Edirne	0.98	80	PG	Pg	06 14 11.0	-1.2
UKOP	Uzunkopru-Edir	1.05	121	PN	Pb	06 14 13.6	+0.2
ENEZ	Enez	1.08	150	PN	Pb	06 14 14.2	+0.2
ENEZ				SN	Sn	06 14 29.6	+0.3
KVLA	Kavala	1.09	227	P	Pb	06 14 13.8	-0.3
CAVK	Edirne/Enez-Ca	1.13	151	*i* P	Pb	06 14 12.7	-2.1
CAVK				*i* S	Sn	06 14 30.5	+0.1
CAVK				IAML		06 14 33.0	
	comp=N,409nm,0.6s						
CAVK				IAML		06 14 33.0	

	comp=E,402nm,0.2s						
JMB	Yambol	1.15	47	*i* P	Pb	06 14 14.1	-1.1
THAS	Thassos island	1.21	207	P	Pn	06 14 15.3	-0.7
THAS				S	Sn	06 14 32.6	+0.3
	comp=E,202nm,0.4s						
THAS	Thassos island	1.21	207	P	Pn	06 14 15.3	-0.7
THAS				S	Sg	06 14 32.3	+0.2
THAS				AML	AML	06 14 34.6	
	comp=E,425µm,0.5s						
THAS				AML	AML	06 14 34.8	
	comp=N,395µm,0.3s						
SMTH	Samothraki Isl	1.21	177	P	Pn	06 14 16.2	+0.1
SMTH				S	Sn	06 14 34.1	+1.6
	comp=N,105nm,0.2s						
SMTH	Samothraki Isl	1.21	177	P	Pn	06 14 16.2	+0.1
SMTH				AML	AML	06 14 36.2	
	comp=E,181µm,0.2s						
SMTH				AML	AML	06 14 37.2	
	comp=N,233µm,0.2s						
NVR	Nevrokopi	1.24	255	P	Pn	06 14 16.0	-0.5
NVR				S	Sb	06 14 32.5	-0.1
	comp=N,172nm,0.2s						
NVR	Nevrokopi	1.24	255	P	Pn	06 14 16.0	-0.5
NVR				S	Sb	06 14 32.5	-0.1
NVR				AML	AML	06 14 37.0	
	comp=E,340µm,0.3s						
NVR				AML	AML	06 14 38.4	
	comp=N,348µm,0.2s						
KIRK	Kırklareli	1.24	85	*i* P	Pn	06 14 15.6	-0.9
KIRK				*i* S	Sb	06 14 31.5	-1.1
KESN	Edirne-Kesan	1.26	132	*i* P	Pg	06 14 17.8	+0.2
KESN				*i* S	Sg	06 14 34.3	+0.4
ERIK	Erikli-Kesan	1.29	141	PN	Pn	06 14 16.6	-0.6
PGB	Panagyurishte	1.29	313	*i* P	Pn	06 14 16.7	-0.6
MMB	Musomiste	1.29	267	*i* P	Pn	06 14 17.1	-0.2
ARMN	Kirklareli, Me	1.49	82	*i* P	Pn	06 14 19.3	-0.7
ARMN				*i* S	Sn	06 14 38.0	-1.4
GELI	Tayfur-Gelibol	1.50	148	PN	Pn	06 14 20.7	+0.7
SRS	Serrai	1.51	249	P	Pb	06 14 21.2	-0.1
SRS				S	Sb	06 14 40.8	+0.5
	comp=N,232nm,0.2s						
SRS	Serrai	1.51	249	P	Pb	06 14 21.1	-0.1
GADA	Gvkgeada	1.53	167	PN	Pn	06 14 20.8	+0.4
GADA				SN	Sb	06 14 41.3	+0.4
GOKA	anakkale-Gk	1.53	167	*i* P	Pg	06 14 22.4	-0.2
GOKA				*i* S	Sb	06 14 41.1	+0.2
GOKA				IAML		06 14 45.0	
	comp=E,218nm,0.7s						
SZH	Strazhica	1.63	13	*i* P	Pb	06 14 22.7	-0.6
MAR4	Marsite Statio	1.66	122	PN	Pn	06 14 23.1	+0.8
MAR3	Marsite Statio	1.68	123	PN	Pn	06 14 23.4	+0.9
MAR6	Marsite Statio	1.68	125	PN	Pn	06 14 23.4	+0.8
OUR	Ouranopolis	1.74	220	P	Pn	06 14 23.3	-0.1
OUR				S	Sg	06 14 48.7	-0.6
	comp=E,170nm,0.5s						
OUR	Ouranopolis	1.74	220	P	Pn	06 14 23.3	-0.1
OUR	Ouranopolis	1.74	220	PN	Pn	06 14 23.1	-0.3
KKB	Krupnik	1.78	277	*i* P	Pb	06 14 25.8	-0.1
VIZE	Kirklareli, Vi	1.80	92	*i* P	Pn	06 14 23.9	-0.3
SOH	Sokhos	1.80	242	P	Pb	06 14 26.1	-0.1
SOH				S	Sb	06 14 48.1	-0.6
	comp=E,162nm,0.5s						
VTS	Vitosha	1.89	300	⇓P	Pn	06 14 25.8	+0.1
VTS				⇑S	Sg	06 14 54.0	-0.2
VTS	Vitosha	1.89	300	*e*Pg	Pb	06 14 27.6	-0.3
VTS				*e*Sg	Sb	06 14 52.0	+0.4
VTS	Vitosha	1.89	300	*i* P	Pb	06 14 27.8	-0.1
MRMT	Marmara Adasi	1.95	123	PN	Pn	06 14 27.0	+0.7
KNT	Kendrikon	1.99	256	P	Pb	06 14 28.8	-0.6
KNT				S	Sg	06 14 56.0	-1.1
	comp=E,145nm,0.3s						
KNT	Kendrikon	1.99	256	P	Pb	06 14 28.9	-0.5
PLG	Polygyros	2.00	230	P	Pb	06 14 30.1	+0.5
PLG				AML	AML	06 14 59.5	
	comp=N,207µm,0.4s						
PLG				AML	AML	06 14 59.6	
	comp=E,217µm,0.4s						
VAY	Valandovo	2.19	262	*e*Pg	Pg	06 14 35.2	-0.1
VAY				*e*Sg	Sg	06 15 03.0	-0.7
VAY	Valandovo	2.19	262	*i* Pn	Pg	06 14 34.9	-0.4
BOSS	Bosilegrad	2.35	291	*e*Pg	Pb	06 14 36.3	+0.6
BOSS				*e*Sg	Sg	06 15 08.0	-0.9
STIP	Stip	2.44	271	*i* Pn	Pn	06 14 34.4	+1.3
PRVS	Prvonek	2.64	289	*e*Pg	Pb	06 14 41.8	+1.2
PRVS				*e*Sg	Sg	06 15 17.5	-0.7
BARS	Barje	2.93	294	*e*Pg	Pb	06 14 47.3	+1.9
BARS				*e*Sg	Sg	06 15 25.3	-2.0
ZAGS	Zajecar	3.19	313	*e*Sg	Sb	06 15 31.3	+2.7
BOVS	Bovan	3.38	307	⇑P	Pn	06 14 45.1	-0.8
BOVS				⇑S	Sb	06 15 30.8	-3.4
BOVS	Bovan	3.38	307	*e*Pg	Pb	06 14 54.4	+1.2
ARR	Arges	3.73	351	⇑P	Pn	06 14 52.6	+1.7
VOIR		3.77	356	⇓P	Pn	06 14 53.8	+2.5
VOIR				⇓S	Sb	06 15 47.8	+2.3
MLR	Muntele Rosu	3.83	5	⇓P	Pn	06 14 54.4	+2.2
HERR	Herculane	3.89	326	⇑S	Sb	06 15 47.7	-1.2
GZR	Gura Zlata	4.19	333	⇑P	Pn	06 14 59.3	+2.2
VRI	Vrincioaia	4.29	12	⇑P	Pn	06 15 00.8	+2.4

*THE **21** 06:36:03.4, 38°.42N×20°.45E, h19^{km}±3^{km}, ML2.0/2, Error ellipse: s-maj=3.3km s-min=1.1km az=263.0*
*ATH **21** 06:36:04.3, 38°.42N×20°.45E, h13^{km}±3^{km}, ML2.3/5, Error ellipse: s-maj=3.6km s-min=1.2km az=17.0*
ISC 21 06:35:59.1±1.9**, 38°.64N**±0°.05×**20°.28E**±0°.08**, h12**^{km}±13^{km}**, n27, σ1^{s}.22**/40**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRAG	Dragano-Lefkad	0.24	78	P	Pg	06 36 06.0	+1.9
FSK	Fiskardo	0.28	128	P	Pb	06 36 07.3	+1.2
FSK	Fiskardo	0.28	128	P	Pb	06 36 07.4	+1.2
FSK				S	Sg	06 36 09.3	+0.5
FSK				AML	AML	06 36 09.4	
	comp=N,1382µm,0.2s						
FSK				AML	AML	06 36 11.3	
	comp=E,2494µm,0.1s						
EVGI	Lefkada island	0.30	93	P	Pb	06 36 07.0	+0.7
EVGI				S	Sg	06 36 09.4	+0.2
LKD2	Lefkada island	0.33	63	P	Pg	06 36 05.8	0.0
LKD2				S	Sg	06 36 07.7	-2.7
LKD2				AML	AML	06 36 07.9	
	comp=N,6421µm,0.2s						
LKD2				AML	AML	06 36 08.0	
	comp=E,7504µm,0.1s						
NYDR	Nydri-Lefkada	0.34	77	P	Pg	06 36 06.0	+0.2
NYDR				S	Sg	06 36 07.6	-2.8
TSLK	Tsoukalades, L	0.35	57	P	Pg	06 36 06.9	+0.8
TSLK				AML	AML	06 36 09.5	
	comp=E,2231µm,0.3s						
TSLK				AML	AML	06 36 11.8	
	comp=N,2694µm,0.4s						
KEF4	Livadi, Kephal	0.40	163	P	Pb	06 36 08.1	+0.1
KEF4				S	Sg	06 36 10.8	-1.4
KEF4	Livadi, Kephal	0.40	163	P	Pb	06 36 08.1	+0.1
KEF4				S	Sg	06 36 10.9	-1.3
DMLN	Damoulianata-K	0.41	169	P	Pb	06 36 08.6	+0.4
DMLN				S	Sg	06 36 11.9	-0.6
	comp=N,602nm,0.3s						
DMLN	Damoulianata-K	0.41	169	P	Pb	06 36 08.7	+0.4
DMLN				S	Sg	06 36 11.1	-1.4
KEF3	Kipouria, Keph	0.44	173	P	Pg	06 36 08.8	+1.1
KEF3				S	Sg	06 36 12.8	-0.7
KEF3	Kipouria, Keph	0.44	173	P	Pg	06 36 08.7	+1.0
KEF3				S	Sg	06 36 12.1	-1.4
ARGA	Argostoli. Kep	0.48	161	P	Pb	06 36 09.7	+0.1
VLS	Valsamata	0.52	152	P	Pg	06 36 09.6	+0.3
VLS				S	Sg	06 36 13.7	-2.4
	comp=N,398nm,0.1s						
VLS	Valsamata	0.52	152	P	Pg	06 36 09.6	+0.3
VLS				S	Sg	06 36 13.8	-2.4
VLS				AML	AML	06 36 14.9	
	comp=E,877µm,0.1s						
VLS				AML	AML	06 36 14.9	
	comp=N,888µm,0.1s						
PSDA	Pessada-Kefalo	0.57	155	P	Pg	06 36 10.8	+0.5
PSDA				S	Sg	06 36 16.2	-1.7
PVO	Paravola	0.98	91	P	Pg	06 36 18.8	+0.9
PVO	Paravola	0.98	91	P	Pg	06 36 18.9	+1.0
PVO				AML	AML	06 36 32.6	
	comp=N,247µm,0.2s						
PVO				AML	AML	06 36 33.2	
	comp=E,215µm,0.4s						
RLS	Riolos of Patr	1.10	121	P	Pg	06 36 21.1	+0.9
ANX	Ano Chora	1.29	91	P	Pg	06 36 24.5	+0.7
EFP	Efpalio	1.29	99	P	Pg	06 36 24.2	+0.2
DRO	Drossia	1.32	121	P	Pg	06 36 25.1	+0.7
LAKA	Lakka	1.39	106	P	Pg	06 36 26.1	+0.3
SERG	Sergoula	1.41	99	P	Pb	06 36 25.7	+0.4
KLV	Kalavryta, Ach	1.59	111	P	Pg	06 36 29.7	+0.1
GUR	Goura	1.77	113	P	Pb	06 36 32.4	+0.9

*IDC **21** 06:54:21.6±1.5, 4°.24N×126°.64E, h0^{km}, mb3.7/5, mb1 4.0/5, mb1mx3.4/43, mbtmp3.8/5, Error ellipse: s-maj=101.7km s-min=21.0km az=68.0*
*DJA **21** 06:54:32.9±0.8, 4°N±7°×12°6E±°, h59^{km}±8^{km}, M4.2/6, mb4.4/4, MLv4.1/6*
ISC 21 06:54:28.2±1.2**, 4°.1N**±0°.1×**126°.4E**±0°.1**, h45**^{km}**, n9, σ0^{s}.79**/10**, mb3.6**/5**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	0.92	245	P	Pn	06 54 44.7	0.0
SGSI				S	Sn	06 54 57.5	+0.7
GTOI	Gorontalo	4.78	224	P	Pn	06 55 37.4	-0.4
MRSI	Marisa	5.68	231	P	Pn	06 55 48.6	-1.5
	0.8nm33nm,0.4s						
SWI	Sorong	6.93	135	P	Pn	06 56 13.3	+6.0
	0.9nm8.1nm,0.5s						
FITZ	Fitzroy Crossi	22.05	182	P	P	06 59 20.1	+0.9
	1.1nm,0.5s,baz=5.5,slow=11,SNR=1.8						
WRA	Warramunga Arr	25.13	162	P	P	06 59 48.9	-0.3
	3.2nm,0.6s,baz=343,slow=10,SNR=35						
ASAR	Alice Springs	28.54	165	P	P	07 00 19.4	-0.5
	0.4nm,0.5s,baz=346,slow=7.4,SNR=16						
STKA	Stephens Creek	38.58	159	P	P	07 01 47.4	+0.5
	1.6nm,0.6s,baz=315,slow=5.5,SNR=5.6						
MKAR	Makanchi Array	57.06	325	P	P	07 04 09.7	-0.1
	0.2nm,0.5s,baz=136,slow=8.0,SNR=3.1						
MKAR				PcP	PcP	07 05 04.6	+0.2
	0.2nm,0.5s,baz=113,slow=3.7,SNR=2.2						

*DJA **21** 06:57:34.8±0.6, 5°N±3°×12°7E±°, h129^{km}±7^{km}, M4.3/6, mb4.2/4, mB4.7/4, MLv4.4/6, Mw(mB)3.9/4*
*IDC **21** 06:57:36.6±2.0, 5°.40N×126°.46E, h97^{km}±15^{km}, mb3.7/9, mb1 3.9/9, mb1mx3.5/42, mbtmp4.1/9, MS2.6/1, Ms1 2.6/1, ms1mx2.2/38, Error ellipse: s-maj=98.1km s-min=11.7km az=70.0*
*MAN **21** 06:57:38.8, 5°.56N×126°.74E, h29^{km}, mb4.5, ML3.4, MS3.2*
ISC 21 06:57:36.5±0.8**, 5°.42N**±0°.07×**126°.7E**±0°.1**, h100**^{km}**, n16, σ1^{s}.41**/19**, mb3.9**/9**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	1.97	327	P	Pn	06 58 09.3	+0.6
	30nm,0.3s,baz=243,slow=11,SNR=1.3						
DAV				S	Sn	06 58 31.2	-2.0
	113nm,0.3s,baz=166,slow=22,SNR=9.6						
DAV				LR	LR	06 59 02.1	
	comp=Z,145nm,20.7s,baz=318,slow=46						
SGSI	Sangihe	2.06	213	P	Pn	06 58 10.3	+0.4
SGSI				S	Sn	06 58 35.9	+0.5
GTOI	Gorontalo	5.99	218	P	Pn	06 59 02.4	-0.3
	0.1nm258nm17nm,0.7s						
SANI	Sanana	7.45	185	P	Pn	06 59 19.5	-3.0
	0.2nm888nm23nm,0.7s						
MSAI	Masohi	8.99	165	P	Pn	06 59 41.3	-2.3
MSAI	Masohi	8.99	165	P	Pn	06 59 41.0	-2.6
FITZ	Fitzroy Crossi	23.39	182	P	P	07 02 37.5	+1.0
	1.6nm,0.5s,baz=354,slow=4.6,SNR=8.1						
WRA	Warramunga Arr	26.30	164	P	P	07 03 02.4	-0.6
	1.0nm,0.8s,baz=350,slow=9.6,SNR=22						
ASAR	Alice Springs	29.76	167	P	P	07 03 34.3	+0.6
	0.9nm,0.6s,baz=349,slow=7.2,SNR=17						
ASAR				PcP	PcP	07 06 36.5	+1.1
	0.7nm,0.7s,baz=348,slow=2.4,SNR=6.5						
MJAR	Matsushiro Arr	32.74	17	LR	LR	07 18 02.3	
	comp=Z,11nm,20.7s,baz=185,slow=37						
STKA	Stephens Creek	39.72	160	P	P	07 05 00.5	+1.2
	3.6nm,0.7s,baz=327,slow=5.8,SNR=8.0						
SONM	Songino Array	45.69	341	P	P	07 05 47.7	+0.2
	0.9nm,0.6s,baz=155,slow=8.6,SNR=6.4						
MKAR	Makanchi Array	56.15	325	P	P	07 07 04.8	-1.0
	0.5nm,0.4s,baz=118,slow=7.8,SNR=9.8						
MKAR				PcP	PcP	07 08 02.4	-0.2
	1.1nm,0.8s,baz=106,slow=4.0,SNR=5.5						
ZALV	Zalesovo Beam	59.07	333	P	P	07 07 26.4	+0.3
	1.6nm,0.9s,baz=126,slow=7.5,SNR=5.4						
ARCES	ARCESS Array B	88.86	340	P	P	07 10 18.9	-0.3
	6.3nm,1.0s,baz=76,slow=7.5,SNR=5.6						
FINES	FINESS Array B	90.33	332	P	P	07 10 26.1	-0.1
	1.6nm,0.8s,baz=66,slow=3.5,SNR=1.2						

DJA 21 06:58:47.9±1.8**, 1°S**±12°×**13°1E**±1°5**, h21**^{km}±4^{km}**, M2.8**/4**, MLv2.8**/4**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SWI	Sorong	0.22	162	P	Pb	06 58 54.9	+1.0
SWI				S	Sb	06 59 00.5	+2.5
LBMI	Labuha	3.69	270	P	Pn	06 59 43.8	+0.1

*ATH **21** 07:06:35.9, 38°.72N×20°.61E, h6^{km}±2^{km}, ML2.5/8, Error ellipse: s-maj=2.4km s-min=0.8km az=318.0*
*THE **21** 07:06:36.5, 38°.71N×20°.59E, h0^{km}±1^{km}, ML2.5/13, Error ellipse: s-maj=1.6km s-min=0.6km az=141.0*
ISC 21 07:06:35.9±0.9**, 38°.71N**±0°.02×**20°.59E**±0°.03**, h4**^{km}±5^{km}**, n35, σ1^{s}.00**/56**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRAG	Dragano-Lefkad	0.03	211	P	Pg	07 06 37.1	+0.2
DRAG				S	Sg	07 06 38.0	+0.4
	78µm,0.2s						
DRAG	Dragano-Lefkad	0.03	211	P	Pg	07 06 37.0	+0.2
DRAG				S	Sg	07 06 38.5	+1.0
NYDR	Nydri-Lefkada	0.08	87	P	Pg	07 06 37.6	-0.1
NYDR				S	Sg	07 06 39.1	+0.3
	9µm,0.3s						
NYDR	Nydri-Lefkada	0.08	87	P	Pg	07 06 37.6	-0.1
NYDR				S	Sg	07 06 38.8	0.0
LKD2	Lefkada island	0.09	32	P	Pg	07 06 37.7	-0.2
LKD2				S	Sg	07 06 39.3	0.0
	6µm,0.5s						
LKD2	Lefkada island	0.09	32	P	Pg	07 06 37.7	-0.2
LKD2				S	Sg	07 06 39.4	0.0
LKD2				AML	AML	07 06 39.7	
	comp=E,13253µm,0.5s						
LKD2				AML	AML	07 06 41.2	
	comp=N,10358µm,0.6s						
EVGI	Lefkada island	0.10	151	P	Pg	07 06 38.4	+0.4
EVGI				S	Sg	07 06 40.3	+0.9
	comp=N,5µm,0.2s						
EVGI	Lefkada island	0.10	151	P	Pg	07 06 38.3	+0.3
TSLK	Tsoukalades, L	0.13	23	P	Pg	07 06 38.5	0.0
TSLK				S	Sg	07 06 41.0	+0.8
	comp=N,4µm,0.5s						
TSLK	Tsoukalades, L	0.13	23	P	Pg	07 06 38.5	0.0
TSLK				AML	AML	07 06 41.3	
	comp=E,5881µm,0.4s						
TSLK				AML	AML	07 06 44.4	
	comp=N,8741µm,0.5s						
FSK	Fiskardo	0.25	186	P	Pg	07 06 41.3	+0.5
FSK				S	Sg	07 06 46.0	+1.9
	comp=N,2µm,0.3s						
FSK	Fiskardo	0.25	186	P	Pg	07 06 41.3	+0.5
FSK				S	Sg	07 06 45.2	+1.1
FSK				AML	AML	07 06 47.3	
	comp=E,4920µm,0.3s						
FSK				AML	AML	07 06 47.6	
	comp=N,3638µm,0.3s						
KEF4	Livadi, Kephal	0.47	197	P	Pg	07 06 45.5	+0.6
KEF4				S	Sg	07 06 52.7	+1.7
	comp=N,2µm,0.1s						
KEF4	Livadi, Kephal	0.47	197	P	Pg	07 06 45.2	+0.2
KEF4				S	Sg	07 06 52.3	+1.2
DMLN	Damoulianata-K	0.50	200	P	Pg	07 06 45.7	+0.2
DMLN				S	Sb	07 06 53.9	-1.0
	comp=N,545nm,0.5s						
DMLN	Damoulianata-K	0.50	200	P	Pg	07 06 45.8	+0.2
VLS	Valsamata	0.53	180	P	Pg	07 06 46.0	-0.1
VLS	Valsamata	0.53	180	P	Pg	07 06 45.9	-0.2
VLS				S	Sg	07 06 53.6	+0.6
VLS				AML	AML	07 06 56.1	
	comp=N,941µm,0.4s						
VLS				AML	AML	07 06 56.4	
	comp=E,709µm,0.2s						
KEF3	Kipouria, Keph	0.54	201	P	Pg	07 06 45.8	-0.5
KEF3	Kipouria, Keph	0.54	201	P	Pg	07 06 45.8	-0.5
PSDA	Pessada-Kefalo	0.59	181	P	Pg	07 06 47.2	-0.1
PSDA				S	Sb	07 06 56.6	-1.0
PSDA	Pessada-Kefalo	0.59	181	P	Pg	07 06 47.2	-0.1
PSDA				S	Sg	07 06 56.1	+1.1
PVO	Paravola	0.74	97	P	Pg	07 06 50.4	+0.4
PVO				S	Sn	07 07 02.7	-2.0
	comp=E,368nm,0.6s						
PVO	Paravola	0.74	97	P	Pg	07 06 49.9	-0.1
PVO				AML	AML	07 07 04.4	
	comp=N,408µm,0.4s						
PVO				AML	AML	07 07 09.9	
	comp=E,492µm,0.4s						
IGT	Igoumenitsa	0.85	346	P	Pb	07 06 52.5	-0.7
IGT				S	Sn	07 07 06.6	-0.9
	comp=E,245nm,0.4s						
ANX	Ano Chora	1.05	96	P	Pb	07 06 56.3	-0.3
ANX				S	Sn	07 07 12.9	+0.4
	comp=E,248nm,0.8s						
ANX	Ano Chora	1.05	96	P	Pg	07 06 56.1	+0.1
ANX				AML	AML	07 07 20.8	
	comp=E,434µm,0.9s						
ANX				AML	AML	07 07 23.0	
	comp=N,581µm,0.7s						
EFP	Efpalio	1.07	105	P	Pg	07 06 55.7	-0.7
EFP				S	Sn	07 07 13.6	+0.8
	comp=N,215nm,0.5s						
EFP	Efpalio	1.07	105	P	Pg	07 06 55.6	-0.7
EFP				AML	AML	07 07 19.4	
	comp=E,423µm,0.5s						
EFP				AML	AML	07 07 20.3	
	comp=N,381µm,0.4s						
DRO	Drossia	1.16	130	P	Pg	07 06 57.3	-0.8
DRO				AML	AML	07 07 24.6	
	comp=E,682µm,0.5s						
DRO				AML	AML	07 07 26.3	
	comp=N,415µm,0.6s						
LAKA	Lakka	1.18	113	P	Pg	07 06 58.6	0.0
LAKA	Lakka	1.18	113	P	Pg	07 06 57.7	-0.9
AGG	Agios Georgios	1.39	76	P	Pb	07 07 02.2	-0.3
KLV	Kalavryta, Ach	1.39	118	P	Pb	07 07 02.3	-0.2
THL	Klokotos Trika	1.40	52	P	Pg	07 07 04.6	+1.9
THL				S	Sg	07 07 25.5	+4.7
	comp=N,72nm,0.6s						

*IDC **21** 07:16:42.1±1.0, 38°.77N×20°.50E, h0^{km}, mb3.9/8, mb1 3.9/14, mb1mx3.7/50, mbtmp3.7/14, ML3.6/6, MS3.1/15, Ms1 3.1/15, ms1mx2.9/55, Error ellipse: s-maj=19.2km s-min=15.8km az=56.0*
*THE **21** 07:16:43.7, 38°.73N×20°.63E, h7^{km}±1^{km}, ML4.1/6, Error ellipse: s-maj=1.3km s-min=0.6km az=302.0*
*BEO **21** 07:16:43.6±0.9, 38°.67N×20°.20E, h0^{km}, ML3.8/12*
*ATH **21** 07:16:43.6, 38°.74N×20°.66E, h8^{km}±1^{km}, ML3.8/5, Error ellipse: s-maj=2.9km s-min=0.8km az=89.0*
*NEIC **21** 07:16:44.4±1.8, 38°.72N±0°.03×20°.58E±0°.06, h10^{km}±7^{km}, Error ellipse: s-maj=7.7km s-min=3.0km az=65.0*
ISC 21 07:16:43.4±0.7**, 38°.73N**±0°.02×**20°.61E**±0°.03**, h9**^{km}±4^{km}**, n156, σ1^{s}.59**/190**, mb3.9**/10**, MS2.9**/9**, 12C-10D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRAG	Dragano-Lefkad	0.06	209	P	Pg	07 16 44.9	-0.4
DRAG				S	Sg	07 16 46.4	-0.3
DRAG	Dragano-Lefkad	0.06	209	P	Pg	07 16 44.9	-0.4
DRAG				S	Sg	07 16 46.4	-0.3
LKD2	Lefkada island	0.07	34	P	Pg	07 16 44.9	-0.6
LKD2				S	Sg	07 16 46.8	-0.2
	366µm,0.4s						
LKD2	Lefkada island	0.07	34	P	Pg	07 16 45.1	-0.4
LKD2				S	Sg	07 16 46.7	-0.2
NYDR	Nydri-Lefkada	0.07	105	P	Pg	07 16 45.0	-0.5
NYDR				S	Sg	07 16 46.4	-0.5
	414µm,0.3s						
NYDR	Nydri-Lefkada	0.07	105	P	Pg	07 16 45.0	-0.5
NYDR				S	Sg	07 16 46.5	-0.5
TSLK	Tsoukalades, L	0.10	22	P	Pg	07 16 45.9	+0.1
TSLK				S	Sg	07 16 48.4	+0.8
	265µm,0.7s						
TSLK	Tsoukalades, L	0.10	22	P	Pg	07 16 45.9	+0.1
TSLK				S	Sg	07 16 48.2	+0.6
EVGI	Lefkada island	0.12	162	P	Pg	07 16 46.0	-0.1
EVGI				S	Sg	07 16 48.3	+0.3
	108µm,0.4s						
EVGI	Lefkada island	0.12	162	P	Pg	07 16 46.0	-0.1
EVGI				S	Sg	07 16 48.7	+0.7
FSK	Fiskardo	0.28	188	P	Pg	07 16 49.3	+0.4
FSK				S	Sg	07 16 53.9	+1.4
FSK				AML	AML	07 16 54.6	
	comp=E,84501µm,0.2s						
FSK				AML	AML	07 16 55.1	
	comp=N,50163µm,0.3s						
KEF4	Livadi, Kephal	0.50	197	P	Pg	07 16 52.9	-0.1
KEF4				S	Sb	07 17 01.2	-0.4
KEF4	Livadi, Kephal	0.50	197	P	Pg	07 16 52.9	-0.1
KEF4				S	Sb	07 17 01.2	-0.4
DMLN	Damoulianata-K	0.53	201	P	Pg	07 16 53.3	-0.3
DMLN				S	Sb	07 17 02.0	-0.6
	comp=N,15µm,0.6s						
DMLN	Damoulianata-K	0.53	201	P	Pg	07 16 53.3	-0.3
DMLN				S	Sb	07 17 02.2	-0.4
LXRA	Lixouri, Kepha	0.55	194	P	Pg	07 16 54.0	0.0
LXRA				S	Sb	07 17 02.8	-0.4
VLS	Valsamata	0.56	182	P	Pg	07 16 53.6	-0.5
VLS				S	Sb	07 17 02.6	-0.8
	comp=N,9µm,0.4s						
VLS	Valsamata	0.56	182	P	Pg	07 16 53.6	-0.5
VLS				S	Sb	07 17 02.5	-0.8
VLS				AML	AML	07 17 05.6	
	comp=E,22747µm,0.3s						
VLS				AML	AML	07 17 09.5	
	comp=N,15359µm,0.5s						
ARGA	Argostoli. Kep	0.56	190	P	Pb	07 16 55.4	0.0
ARGA				S	Sb	07 17 03.4	-0.2
KEF3	Kipouria, Keph	0.57	201	P	Pg	07 16 53.6	-0.7
KEF3	Kipouria, Keph	0.57	201	P	Pg	07 16 53.7	-0.7
KEF3				S	Sg	07 17 02.4	+0.6
PSDA	Pessada-Kefalo	0.62	182	P	Pg	07 16 54.9	-0.4
PSDA				S	Sb	07 17 04.5	-0.6
PSDA	Pessada-Kefalo	0.62	182	P	Pg	07 16 54.9	-0.4
PSDA				S	Sb	07 17 04.8	-0.4
IGT	Igoumenitsa	0.83	345	P	Pg	07 16 59.0	-0.3
IGT	Igoumenitsa	0.83	345	P	Pg	07 16 59.1	-0.2
IGT				S	Sb	07 17 11.5	+0.2
IGT				AML	AML	07 17 16.9	
	comp=N,21740µm,0.4s						
IGT				AML	AML	07 17 17.2	
	comp=E,12077µm,0.5s						
VTN	Vitineika	0.93	151	P	Pg	07 17 01.2	-0.1
JAN	Janina	0.94	11	P	Pg	07 17 02.1	+0.6
RLS	Riolos of Patr	0.95	135	P	Pg	07 17 01.0	-0.7
EVR	Evrytania	0.95	79	P	Pg	07 17 01.5	-0.3
UPR	University Cam	1.03	116	P	Pg	07 17 03.7	+0.6
LTHK	Lithakia	1.04	170	P	Pg	07 17 02.0	-1.3
LTHK	Lithakia	1.04	170	P	Pg	07 17 01.8	-1.5
LTHK				S	Sb	07 17 17.6	+0.4
LTHK				AML	AML	07 17 26.4	
	comp=N,11232µm,0.5s						
LTHK				AML	AML	07 17 29.7	
	comp=E,11780µm,0.6s						
EFP	Efpalio	1.06	106	P	Pg	07 17 02.7	-1.1
KEK	Kerkira	1.16	328	P	Pb	07 17 06.0	+0.3
KEK	Kerkira	1.16	328	P	Pb	07 17 06.0	+0.3
KEK				S	Sn	07 17 22.4	+0.5
KEK				AML	AML	07 17 27.7	
	comp=N,5509µm,0.6s						
KEK				AML	AML	07 17 31.4	
	comp=E,4660µm,0.5s						
THL	Klokotos Trika	1.37	52	P	Pn	07 17 08.8	+0.1
AGG	Agios Georgios	1.37	77		Pn	07 17 09.0	+0.2
KLV	Kalavryta, Ach	1.39	119	P	Pn	07 17 08.0	-1.1
ITM	Ithomi	1.87	146		Pn	07 17 16.9	+1.3
KBN	Korca	1.89	4	Pn	Pb	07 17 18.6	+0.4
VLO	Vlora	1.94	334		Pn	07 17 16.7	+0.2
SCTE	Santa Cesarea	2.13	310		Pn	07 17 20.1	+0.9
FNA	Florina	2.13	16		Pb	07 17 21.8	-0.5

OHR	Ohrid	2.38	3	ePn	Pn	07 17 25.0	+2.3
OHR				eSn	Sb	07 17 55.9	-0.1
OHR	Ohrid	2.38	3	ePn	Pb	07 17 25.3	-1.1
TIR	Tirane	2.67	348	⇑P	Pn	07 17 25.8	-0.9
TIR				⇓S	Sn	07 17 57.8	-1.4
TIR	Tirane	2.67	348	ePn	Pn	07 17 29.0	+2.4
TIR				eSn	Sn	07 18 02.4	+3.2
TIR	Tirane	2.67	348		Pn	07 17 28.6	+2.0
VAY	Valandovo	2.99	30	ePn	Pb	07 17 36.7	-0.2
VAY	Valandovo	2.99	30	ePn	Pb	07 17 35.1	-1.7
TIP	Timpagrande	3.04	280	⇓P	Pn	07 17 33.1	+1.5
TIP				⇑S	Sn	07 18 09.0	+0.8
TIP	Timpagrande	3.04	280		Pn	07 17 31.8	+0.1
STIP	Stip	3.19	22	ePn	Pb	07 17 37.9	-2.4
MATE	Matera	3.57	304	⇑P	Pn	07 17 40.3	+1.4
DRME	Dracevica, Mon	3.62	343	ePn	Pn	07 17 39.6	0.0
PDG	Podgorica	3.83	345	⇓P	Pn	07 17 43.2	+0.6
PDG				⇓S	Sn	07 18 26.1	-1.7
PDG	Podgorica	3.83	345	ePn	Pn	07 17 44.1	+1.5
PDG	Podgorica	3.83	345	ePn	Pn	07 17 43.8	+1.2
PDG	Podgorica	3.83	345		Pn	07 17 43.6	+1.0
PRVS	Prvonek	3.93	16	ePn	Pn	07 17 47.2	+3.2
BOSS	Bosilegrad	4.02	20	ePn	Pn	07 17 48.9	+3.7
HCY	Herceg Novi	4.04	337	ePn	Pn	07 17 44.7	-0.8
APE	Apeiranthos	4.23	112	⇓P	Pn	07 17 53.6	+5.5
APE				⇓S	Sb	07 18 45.7	-3.6
TREB	Trebinje	4.33	337	ePn	Pn	07 17 48.9	-0.6
TREB	Trebinje	4.33	337	ePn	Pn	07 17 48.5	-1.0
DBRK	Dubrovnik	4.36	335	ePn	Pn	07 17 49.2	-0.5
DBRK				Sn	Sn	07 18 38.1	-2.5
VTS	Vitosha	4.36	26	⇑P	Pn	07 17 52.2	+2.2
VTS				⇑S	Sn	07 18 40.4	-0.7
VTS	Vitosha	4.36	26		Pn	07 17 51.8	+1.8
SELS	Selova	4.50	5	ePn	Pn	07 17 52.8	+1.0
SJES	Sjenica	4.55	354	ePn	Pn	07 17 54.9	+2.4
STON	Ston	4.69	333	ePn	Pn	07 17 53.9	-0.4
STON	Ston	4.69	333	ePn	Pn	07 17 51.4	-2.9
STON	Ston	4.69	333	ePn	Pn	07 17 53.7	-0.6
SGRT	San Giovanni R	4.79	311	Pn	Pn	07 17 56.0	+0.2
IDI	Anoyia	4.85	134	Pn	Pn	07 17 57.5	+0.9
	comp=E,0.8nm,0.3s,baz=16,slow=15,SNR=2.3						
IDI				Sn	Sn	07 18 52.2	-0.9
	comp=E,2.6nm,0.3s,baz=288,slow=20,SNR=2.5						
LSTV	Lastovo	4.92	326	ePn	Pn	07 17 56.9	-0.6
BOVS	Bovan	4.97	9	⇑P	Pn	07 17 58.9	+0.7
BOVS	Bovan	4.97	9	ePn	Pn	07 17 59.2	+1.0
RUDO	Rudo	4.97	350	ePn	Pn	07 17 58.8	+0.6
BLKB	Belogradchik	5.13	17	⇑P	Pn	07 18 02.5	+2.1
GRUS	Gruza	5.15	1	ePn	Pn	07 18 01.7	+1.0
PAOL	Paolisi	5.18	298	Pn	Pn	07 18 02.7	+1.5
BBLS	Lazići	5.21	350	ePn	Pn	07 18 03.8	+2.3
BBLS	Lazići	5.21	350	ePn	Pn	07 18 03.0	+1.5
MAKA	Makarska	5.30	330	ePn	Pn	07 18 02.5	-0.1
DIVS	Divibare	5.38	355	ePn	Pn	07 18 04.7	+0.8
DIVS	Divibare	5.38	355	ePn	Pn	07 18 04.1	+0.2
DIVS	Divibare	5.38	355	Pn	Pn	07 18 04.6	+0.7
RICI	Ricice	5.43	332	ePn	Pn	07 18 04.2	-0.4
HVAR	Hvar	5.44	326	ePn	Pn	07 18 03.7	-1.0
TRUS	Trudelj	5.49	358	ePn	Pn	07 18 06.6	+1.3
HAPS	Han Pijesak,Bl	5.49	347	ePn	Pn	07 18 03.5	-2.0
MDVR	Moldovita	6.10	7	⇓P	Pn	07 18 15.2	+1.4
KIJV	Kijevo	6.14	330	ePn	Pn	07 18 14.0	-0.4
ZIRJ	Zirje	6.18	324	ePn	Pn	07 18 14.2	-0.6
MGRS	Mrkonjic Grad	6.26	336	ePn	Pn	07 18 15.0	-1.0
MORI	Morici	6.32	326	ePn	Pn	07 18 16.4	-0.3
FRGS	Fruska Gora	6.45	355	⇓P	Pn	07 18 18.8	+0.3
FRGS				⇑S	Sn	07 19 29.9	-2.4
FRGS	Fruska Gora	6.45	355	ePn	Pn	07 18 18.1	-0.5
FRGS	Fruska Gora	6.45	355	ePn	Pn	07 18 18.0	-0.5
BLY	Banja Luka	6.53	338	ePn	Pn	07 18 18.9	-0.8
DUGI	Dugi Otok	6.71	323	ePn	Pn	07 18 22.4	+0.3
UDBI	Udbina	6.83	329	ePn	Pn	07 18 24.3	+0.5
MRAK	Mrakovica	6.86	337	ePn	Pn	07 18 23.2	-1.0
NRCA	Norcia	7.01	308		Pn	07 18 27.8	+1.5
ARR	Arges	7.27	23	⇓P	Pn	07 18 31.9	+2.0
VOIR		7.47	25	⇑P	Pn	07 18 35.8	+3.3
MURB	Monte Urbino	7.61	309	Pn	Pn	07 18 37.1	+2.7
MORH	Mrgy, Hungar	7.62	350	ePn	Pn	07 18 31.4	-3.1
MLR	Muntele Rosu	7.83	29	⇑P	Pn	07 18 39.5	+1.9
MLR	Muntele Rosu	7.83	29	Pn	Pn	07 18 39.5	+1.9
	comp=E,0.2nm,0.3s,baz=162,slow=20,SNR=1.6						
MLR				LR	LR	07 21 42.4	
	comp=E,61nm,18.6s,baz=128,slow=38						
MLR	Muntele Rosu	7.83	29	Pn	Pn	07 18 38.9	+1.3
CRES	Cresnjev	8.05	333	ePn	Pn	07 18 39.8	-0.7
CEY	Cerknica	8.37	329	ePn	Pn	07 18 44.4	-0.5
PLOR	Plostina	8.40	30	⇑P	Pn	07 18 48.2	+2.8
VRI	Vrincioaia	8.45	30	⇑P	Pn	07 18 48.1	+2.2
SOKA	Soboth	8.94	334	ePn	Pn	07 18 52.2	-0.5
	comp=E,6.7nm,0.8s						
SOKA				eSn	Sn	07 20 26.3	-7.2
	comp=E,2.8nm,0.5s						
OBKA	Obir	8.96	332	i Pn	Pn	07 18 54.0	+1.0
	comp=E,3.0nm,0.4s						
OBKA				eSn	Sn	07 20 32.0	-2.1
	comp=E,15nm,0.7s						
PSZ	Piszkesteto	9.20	357	⇓P	Pn	07 18 57.6	+1.3
STAL	STALIGIAL	9.51	325	Pn	Pn	07 19 00.3	-0.3
ZOU	Zoufplan	9.63	327		Pn	07 19 02.0	-0.3
CTI	Castel Tesino	9.86	321	Pn	Pn	07 19 05.2	-0.2
ABTA	Abfaltersbach	9.97	326	ePn	Pn	07 19 10.3	+3.3
	comp=E,3.0nm,0.6s						
ABTA				eSn	Sn	07 20 53.8	-5.3
	comp=E,7.8nm,0.8s						
BRTR	Keskin Array B	10.16	80	Pn	Pn	07 19 13.6	+4.0
	comp=E,0.1nm,0.3s,baz=251,slow=14,SNR=2.4						
BRTR				LR	LR	07 23 50.5	
	comp=E,104nm,20.4s,baz=269,slow=42						
WTTA	Wattenberg	10.76	325	i Pn	Pn	07 19 18.7	+1.0
	comp=E,1.3nm,0.3s						
WTTA				eSn	Sn	07 21 16.0	-2.4
	comp=E,8.2nm,0.5s						
WATA	Walderalm	10.84	325	ePn	Pn	07 19 20.8	+2.0
	comp=E,3.0nm,0.4s						
WATA				i Sn	Sn	07 21 18.6	-1.6
	comp=E,2.6nm,0.3s						
VRAC	Vranov	10.96	346	Pn	Pn	07 19 20.3	0.0
	comp=E,0.2nm,0.3s,baz=180,slow=11,SNR=2.1						
VRAC				LR	LR	07 24 52.7	
	comp=E,172nm,18.1s,baz=172,slow=45						
FETA	Feichten	11.00	322	eSn	Sn	07 21 21.1	-3.1
	comp=E,3.0nm,0.6s						
MOTA	Moosalm	11.06	324	ePn	Pn	07 19 23.4	+1.6
	comp=E,4.8nm,0.6s						
MOTA				eSn	Sn	07 21 22.5	-3.2
	comp=E,5.2nm,0.7s						
DAVOX	Davos/Dischmat	11.26	319	LR	LR	07 24 22.8	
	comp=E,98nm,18.5s,baz=163,slow=41						
GERES	GERESS Array B	11.27	336	Pn	Pn	07 19 24.5	-0.2
	comp=E,0.3nm,0.3s,baz=156,slow=15,SNR=9.4						
GERES				Sn	Sn	07 21 22.8	-7.9
	comp=E,0.2nm,0.3s,baz=144,slow=26,SNR=2.0						
GERES				LR	LR	07 24 23.0	
	comp=E,40nm,18.6s,baz=265,slow=41						
RETA	Reutte	11.32	324	eSn	Sn	07 21 29.4	-2.6
	comp=E,3.3nm,0.5s						
SENIN	Lac Senin/Sane	12.42	312	Pn	Pn	07 19 41.1	+0.7
GNI	Garni	18.68	78	LR	LR	07 29 39.9	
	comp=E,31nm,19.7s,baz=274,slow=42						
ESDC	Sonseca Array	19.06	281	P	P	07 21 04.9	-1.1
	comp=E,0.1nm,0.3s,baz=74,slow=12,SNR=2.5						
MDT	Midelt	21.26	262	LR	LR	07 30 05.4	
	comp=E,22nm,20.4s,baz=69,slow=38						
HFS	Hagfors	21.86	351	P	P	07 21 36.3	+0.1
	comp=E,2.4nm,0.6s,baz=141,slow=9.6,SNR=7.0						
HFS				LR	LR	07 30 34.0	
	comp=E,36nm,18.9s,baz=246,slow=38						
FINES	FINESS Array B	22.99	7	P	P	07 21 47.6	-0.5
	comp=E,4.1nm,0.7s,baz=165,slow=9.0,SNR=10						
FINES				LR	LR	07 33 19.6	
	comp=E,45nm,19.4s,baz=213,slow=43						
EKA	Eskdalemuir Ar	23.02	324	P	P	07 21 46.9	-1.6
	comp=E,4.0nm,0.7s,baz=120,slow=11,SNR=5.8						
NC405	NORSAR Array S	23.08	349	P	P	07 21 48.2	-0.9
NB2	NORSAR Subarra	23.09	348	P	P	07 21 50.2	+1.0
	comp=Z,1.6nm,0.7s,baz=156,slow=10						
NOA	NORSAR Array B	23.09	348	P	P	07 21 49.2	0.0
	comp=Z,2.4nm,0.7s,baz=158,slow=9.5,SNR=7.0						
NOA				LR	LR	07 30 57.5	
	comp=Z,35nm,21.8s,baz=170,slow=37						
KIRV	Kirov	27.15	34	LR	LR	07 33 49.6	
	comp=Z,67nm,18.1s,baz=236,slow=38						
AKTO	Aktyubinsk	28.79	54	P	P	07 22 41.8	+0.3
	comp=Z,1.2nm,0.6s,baz=281,slow=11,SNR=3.7						
AKTO				LR	LR	07 34 44.9	
	comp=Z,22nm,20.8s,baz=274,slow=38						
ABKAR	Akbulak array	29.88	56	P	P	07 22 51.9	+0.8
TORD	Torodi Ar. Bea	30.51	218	P	P	07 22 56.6	-0.3
	comp=Z,0.6nm,0.7s,baz=28,slow=9.1,SNR=3.7						
ARCES	ARCESS Array B	30.98	3	LR	LR	07 37 15.8	
	comp=Z,32nm,20.1s,baz=135,slow=40						
KKAR	Karatay Array	37.51	67	P	P	07 23 59.2	+1.6
DBIC	Dimbokro	39.35	222	P	P	07 24 14.4	+1.3
DBIC				IAmb	IAmb	07 24 24.7	
	comp=Z,16nm,1.4s						
MK31	Makanchi Array	44.95	59	P	P	07 24 59.3	+0.6
MK31				IAmb	IAmb	07 25 09.8	
	comp=Z,1.9nm,1.2s						
MKAR	Makanchi Array	44.95	59	P	P	07 24 58.8	+0.1
	comp=Z,0.7nm,0.5s,baz=276,slow=8.1,SNR=11						
ZALV	Zalesovo Beam	45.27	49	P	P	07 25 01.1	0.0
	comp=Z,2.0nm,0.5s,baz=274,slow=9.0,SNR=9.6						
USRK	Ussuriysk Ar.	76.83	43	LR	LR	08 04 07.2	
	comp=Z,35nm,18.3s,baz=183,slow=37						
TXAR	Lajitas Array	94.64	314	LR	LR	08 13 54.8	
	comp=Z,18nm,19.8s,baz=0.0,slow=36						
WRA	Warramunga Arr	120.49	92	PKP	PKiKP	07 35 36.5	+0.6
	comp=Z,0.3nm,0.5s,baz=326,slow=2.0,SNR=7.5						
ASAR	Alice Springs	122.16	96	PKP	PKPdf	07 35 39.3	+0.4
	comp=Z,0.4nm,0.6s,baz=308,slow=1.3,SNR=9.3						

SJA ***21*** *07:38:22.0, 30°.53S×72°.06W, h10^{km}, ML4.0*

GUC ***21*** *07:38:24.4±0.7, 30°.66S×71°.64W, h36^{km}±2^{km}, ML3.7*

ISC 21 07:38:21.3±1.6**, 30°.58S**±0°.03×**71°.97W**±0°.08**, h23**^{km}±11^{km}**,**
n43, σ**2**^{s}**.57**/56**, 6C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.30	107	⇑eP	Pb	07 38 29.7	+1.5
CO06				eS	Sb	07 38 33.1	+0.2
CO06				IAML		07 38 33.6	
	comp=N,34μm,0.1s						
CO05	La Serena	0.92	44	⇑eP	Pb	07 38 39.2	+0.7
CO05				eS	Sb	07 38 50.5	+0.2
CO05				IAML		07 38 53.1	
	comp=N,3μm,0.4s						
GO04	Tololo Observa	1.09	68	⇑eP	Pb	07 38 41.2	-0.4
GO04				eS	Sb	07 38 52.8	-2.8
GO04				IAML		07 38 57.1	
	comp=E,6μm,0.5s						
GO04	Tololo Observa	1.09	68	i P	Pb	07 38 41.0	-0.7
LCO	Las Campanas	1.92	36	eP	Pn	07 38 53.4	+0.6
LCO				eS	Sn	07 39 16.0	-0.4
LCO	Las Campanas	1.92	36	i P	Pn	07 38 55.0	+2.2
VA06	Catapilco	2.05	164	⇑eP	Pn	07 38 56.0	+1.6
VA06				eS	Sn	07 39 20.2	+0.9
VA06				IAML		07 39 31.2	
	comp=N,735nm,0.4s						
AROD	Rodeo	2.20	80	i P	Pb	07 39 00.0	-0.6
VA03	San Esteban	2.49	151	⇑eP	Pn	07 39 02.7	+2.2
VA03				eS	Sn	07 39 30.5	+0.2
VA03				IAML		07 39 42.0	
	comp=E,455nm,0.1s						
VA03	San Esteban	2.49	151	i P	Pn	07 39 03.0	+2.5
AC04	Llanos de Chal	2.50	19	i P	Pn	07 39 02.0	+1.5
ACDV	Cuesta del Vie	2.50	81	i P	Pb	07 39 04.0	-1.6
ACCO	Cerro Coronel	2.51	91	i P	Pb	07 39 04.0	-1.8
ROCH	El Roble	2.52	161	eP	Pb	07 39 03.4	-2.5
ROCH				eP	Pn	07 39 03.1	+2.1
ROCH				eS	Sn	07 39 32.1	+1.0
ROCH				eS	Sb	07 39 32.5	-4.1
ROCH				IAML		07 39 42.7	
	comp=N,276nm,0.5s						
ROCH				IAML		07 39 42.8	
	comp=N,345nm,0.5s						
RTLS	Leoncito	2.59	119	i P	Pb	07 39 06.0	-1.3
MT02	Curacav	2.76	165	eP	Pn	07 39 07.6	+3.5
MT02				eS	Sn	07 39 38.7	+1.9
MT02	Curacav	2.76	165	i P	Pn	07 39 07.0	+2.8
PEL	Peldehue	2.78	157	eP	Pn	07 39 06.3	+1.9
PEL				eS	Sn	07 39 38.3	+1.0
PEL				IAML		07 39 51.2	
	comp=N,192nm,0.1s						
PEL	Peldehue	2.78	157	i P	Pn	07 39 08.0	+3.6
ZON	Zonda	2.98	110	i P	Pb	07 39 11.0	-2.8
MT05	Renca	2.99	160	eP	Pb	07 39 12.1	-1.8
MT05				eS	Sb	07 39 48.4	-1.6
MT05				IAML		07 39 58.6	
	comp=E,375nm,0.7s						
MT05	Renca	2.99	160	i P	Pb	07 39 12.0	-1.9
FCH	Farellones	3.09	153	⇑eP	Pn	07 39 11.2	+2.2
FCH				eS	Sn	07 39 46.0	+0.7
FCH				IAML		07 40 03.0	
	comp=E,157nm,0.3s						
RTCV	Cerro Valdivia	3.21	114	i P	Pn	07 39 14.0	+3.7
MT01	Popeta	3.33	170	eP	Pn	07 39 14.3	+2.4
MT01	Popeta	3.33	170	i P	Pn	07 39 15.0	+3.0
ASAL	Salagasta	3.34	128	i P	Pn	07 39 16.0	+3.8
GO03	Copiap	3.34	27	i P	Pn	07 39 15.0	+2.7
ARCO	CERRO ARCO	3.43	132	i P	Pb	07 39 19.0	-2.5
AAGR	Agrelo	3.66	134	i P	Pb	07 39 22.0	-3.3
VCA	Vinchina	3.76	62	i P	Pb	07 39 23.2	-3.9
VCA				eS	Sb	07 40 07.3	-5.0
VCA				IAML		07 40 17.2	
	comp=E,211nm,0.4s						
VCA	Vinchina	3.76	62	i P	Pn	07 39 23.0	+4.9
BO01	Tunca	3.87	169	i P	Pn	07 39 23.0	+3.6
AVFE	Valle Fertil	3.90	92	i P	Pn	07 39 22.0	+2.2
BO02	Sierra Bellavi	4.32	167	i P	Pn	07 39 30.0	+4.4
GO05	Huala	4.41	180	i P	Pn	07 39 28.0	+1.1
AC02	Maricunga	4.49	34	i P	Pn	07 39 31.0	+2.6
ACLC	CERRO LA CRUZ	4.50	76	i P	Pn	07 39 31.0	+2.7
ACHE	Chepes	4.60	99	i P	Pn	07 39 33.0	+3.4
APLL	PUNTA DE LOS L	4.70	89	i P	Pn	07 39 34.0	+3.1
RFA	San Rafael	5.12	146	i P	Pn	07 39 40.0	+3.4
CYA	Choya	5.79	70	i P	Pn	07 39 48.0	+2.2
FSA	Cafayete	6.91	51	i P	Pn	07 40 05.0	+3.6

MAN 21 07:51:28.0, 18°.97N×121°.25E, h14^{km}**, mb4.2, ML3.1,**
MS2.8, Luzon

IDC 21 07:56:05.8±2.2**, 2°.73N×128°.06E, h0**^{km}**, mb3.4**/3**,**
mb1 3.6/3**, mb1mx3.3**/36**, mbtmp3.4**/3**, MS3.5**/2**, Ms1 3.5**/2**,**
ms1mx2.7/23**, Error ellipse: s-maj=163.9km**
s-min=25.1km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LEM	Lembang	22.51	245	LR	LR	08 09 59.1	
	comp=Z,293nm,20.9s,baz=206,slow=37						
WRA	Warramunga Arr	23.36	165	P	P	08 01 16.6	+0.4
	0.8nm,0.5s,baz=345,slow=10,SNR=9.6						
ASAR	Alice Springs	26.85	168	P	P	08 01 47.5	-0.9
	0.2nm,0.7s,baz=354,slow=7.5,SNR=1.4						
KLR	Kul'dur	46.43	3	LR	LR	08 24 17.1	
	comp=Z,19nm,18.0s,baz=126,slow=36						
MKAR	Makanchi Array	59.13	325	P	P	08 06 08.5	+0.2
	0.4nm,0.4s,baz=122,slow=7.8,SNR=9.5						

IDC 21 08:00:28.4±2.1**, 8°.04S×125°.79E, h0**^{km}**, mb3.1**/1**,**
mb1 3.3/3**, mb1mx3.2**/41**, mbtmp3.1**/3**, ML3.0**/2**, MS3.3**/1**,**
Ms1 3.3/1**, ms1mx2.5**/17**, Error ellipse: s-maj=189.7km**
s-min=33.9km az=60.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.45	146	Pn	Pn	08 03 53.3	-1.1
	0.1nm,0.3s,baz=319,slow=13,SNR=4.1						
DAV	Davao City (W)	15.01	359	LR	LR	08 09 26.7	
	comp=Z,130nm,20.3s,baz=343,slow=36						
ASAR	Alice Springs	17.38	154	P	P	08 04 33.3	-0.7
	0.0nm,0.3s,baz=328,slow=12,SNR=4.4						
MKAR	Makanchi Array	66.88	329	P	P	08 11 22.4	0.0
	0.1nm,0.6s,baz=124,slow=6.6,SNR=1.6						

IDC ***21*** *08:05:11.9±2.1, 2°.93N×125°.66E, h72^{km}±17^{km}, mb4.1/20,*
mb1 4.2/21, mb1mx4.0/46, mbtmp4.4/21, MS2.9/5,
Ms1 2.9/5, ms1mx2.7/34, Error ellipse: s-maj=29.6km
s-min=9.2km az=75.0

KLM ***21*** *08:05:11, 3°.27N×126°.47E, h78^{km}, mb5.0*

BJI ***21*** *08:05:12.7±0.0, 2°.94N×126°.35E, h95^{km}, mB5.0/12,*
mb4.6/21

DJA ***21*** *08:05:13.5±0.3, 3°N±3°×12°6E±°, h79^{km}±3^{km}, M5.0/19,*
mb4.9/19, mB5.5/12, MLv4.9/15, Mw(mB)5.0/12,
MwMwp5.5/1, Mwp5.7/1

NEIC ***21*** *08:05:15.0±2.7, 3°.03N±0°.06×126°.11E±0°.08, h92^{km}±2^{km},*
mb4.8/27, Error ellipse: s-maj=12.3km s-min=8.1km
az=75.0

ISC 21 08:05:12.8±0.3**, 3°.01N**±0°.04×**126°.10E**±0°.07**, h72**^{km}**, n110,**
σ**2**^{s}**.06**/107**, mb4.7**/39**, 2C-1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	0.88	320	P	Pn	08 05 30.3	+0.3
SGSI				S	Sn	08 05 44.3	+1.6
TNTI	Ternate	2.56	150		Pn	08 05 53.7	+1.7
KMSI	Cibinong	3.21	221	P	Pn	08 06 04.7	+3.8
GTOI	Gorontalo	3.88	233	P	Pn	08 06 12.1	+2.0
LBMI	Labuha	3.88	159	P	Pn	08 06 12.8	+2.7
DAV	Davao City (W)	4.07	353	P	Pn	08 06 15.0	+2.4
	36nm,0.3s,baz=277,slow=2.9,SNR=3.9						
DAV				S	Sn	08 07 07.0	+7.9
	103nm,0.3s,baz=139,slow=20,SNR=1.8						
DAV	Davao City (W)	4.07	353	Pn	Pn	08 06 15.1	+2.4
DAV	Davao City (W)	4.07	353	P	Pn	08 06 23.5	+11
MRSI	Marisa	4.86	239	P	Pn	08 06 26.4	+3.0
	2.1nm8μm456nm,1.0s						
SANI	Sanana	5.03	181	P	Pn	08 06 25.2	-0.5
	1.1nm9μm158nm,0.6s						
SANI	Sanana	5.03	181	P	Pn	08 06 25.5	-0.2
LUWI	Luwuk	5.22	220	P	Pn	08 06 32.4	+4.0
	2.6nm5μm446nm,0.9s						
LUWI	Luwuk	5.22	220		Pn	08 06 32.1	+3.7
LUWI	Luwuk	5.22	220	P	Pn	08 06 29.3	+0.9
TOLI2	Tolitoli	5.63	251	Pn	Pn	08 06 35.6	+1.6
TOLI2	Tolitoli	5.63	251	P	Pn	08 06 35.2	+1.1
APSI	Ampana	5.91	229	P	Pn	08 06 41.9	+4.1
	1.0nm3μm192nm,1.1s						
SIJI	Sorong	6.45	127	P	Pn	08 06 46.5	+1.3
	3.4nm,0.3s,baz=326,slow=18,SNR=2.4						
SIJI				LR	LR	08 09 36.7	
	comp=Z,167nm,20.2s,baz=243,slow=39						
MPSI	Mapaga	6.74	247	P	Pn	08 06 53.5	+4.3
	0.3nm3μm71nm,0.9s						
AAI	Ambon	6.97	162	P	Pn	08 06 54.8	+2.4
	0.6nm3μm116nm,0.5s						
FAKI	Fak Fak	8.51	134		Pn	08 07 15.4	+2.0
FAKI	Fak Fak	8.51	134	P	Pn	08 07 14.3	+0.9
TTSI	Tana Toraja	8.69	226	P	Pn	08 07 19.7	+3.9
	0.3nm4μm66nm,1.4s						
SPSI	Sidrap Palu	9.38	222	P	Pn	08 07 32.7	+7.5
BNSI	Bone	9.48	219	P	Pn	08 07 29.9	+3.2
	33nm,1.0s						
SPMM	Sapulut	9.76	280	P	Pn	08 07 34.0	+3.5
KKM	Kota Kinabalu	10.30	287	Pn	Pn	08 07 39.5	+1.5
MTKI	Muara Teweh, K	11.86	251	P	Pn	08 08 03.2	+4.0
EDFI	Ende, Flores	12.48	201	P	P	08 08 22.6	+5.8
SBUM	Sibu	13.87	268	Pn	Pn	08 08 27.1	+0.9
STKI	Sintang	14.90	259	P	P	08 08 43.6	0.0
KSM	Kuching	15.85	265	P	P	08 08 54.9	+0.8
KSM				IAmb	IAmb	08 08 58.7	
	comp=Z,69nm,1.2s						
MTN	Manton Dam	16.52	162		Pn	08 08 59.0	-1.1
MTN				IAmb	IAmb	08 09 00.1	
	comp=Z,31nm,0.8s						
KNRA	Kununurra	18.75	172		P	08 09 26.4	+0.2
PPBI	Pangkal Pinang	20.60	256	P	P	08 09 46.8	+0.5
	comp=Z,34μmcomp=Z,139nm,0.5s						
FITZ	Fitzroy Crossi	20.98	181	P	P	08 09 48.6	-1.7
	baz=17,slow=20						
KLSI		22.68	250	P	P	08 10 09.2	+0.6
	comp=Z,7μmcomp=Z,17nm,0.9s						
MDSI	Maura Dua	23.13	251	P	P	08 10 16.1	+2.9
JOW	Kunigami	23.78	5	P	P	08 10 19.2	+0.3
	comp=Z,19nm,0.8s,baz=182,slow=14,SNR=4.1						
JOW				LR	LR	08 20 58.8	
	comp=Z,29nm,19.0s,baz=206,slow=40						
WB0	Warramunga Arr	24.06	161	P	P	08 10 20.6	-0.9
WB0				IAmb	IAmb	08 10 22.8	
	comp=Z,48nm,0.8s						
WRAB	Tennant Creek	24.20	161	P	P	08 10 22.2	-0.6
WRAB				IAmb	IAmb	08 10 24.3	
	comp=Z,77nm,1.1s						
WRA	Warramunga Arr	24.20	161	P	P	08 10 22.2	-0.6
	comp=Z,38nm,0.8s,baz=339,slow=11,SNR=147						
WRA				S	S	08 14 33.2	-3.1
	comp=Z,2.2nm,1.0s,baz=339,slow=19,SNR=4.8						
WRA				ScP	ScP	08 17 32.7	-1.7
	comp=Z,1.2nm,0.8s,baz=335,slow=3.3,SNR=6.1						
WRA	Warramunga Arr	24.20	161	P	P	08 10 21.4	-1.4
PSI	Prapat	27.14	270	LR	LR	08 24 37.1	
	comp=Z,21nm,18.6s,baz=243,slow=44						
AS31	Alice Springs	27.58	164	P	P	08 10 52.5	-0.9
ASAR	Alice Springs	27.58	164	P	P	08 10 53.0	-0.4
	comp=Z,4.2nm,0.8s,baz=342,slow=7.7,SNR=52						
ASAR				S	S	08 15 30.4	+0.5
	comp=Z,1.5nm,1.0s,baz=351,slow=23,SNR=4.7						
ASAR				ScP	ScP	08 17 42.5	-1.7
	comp=Z,0.3nm,0.7s,baz=8.7,slow=3.5,SNR=4.4						
ASAR	Alice Springs	27.58	164	P	P	08 10 52.7	-0.7
NJ2	Nanjing	29.68	348	eP	P	08 11 13.1	+1.2
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
CMAR	Chiang Mai Arr	30.70	302	LR	LR	08 23 45.2	
	comp=Z,20nm,19.4s,baz=171,slow=37						
KMI	Kunming	31.45	316	⇑P	P	08 11 29.3	+1.4
KMI				pP	pP	08 11 47.6	+2.7
KMI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MORW	Morawa	33.32	196	P	P	08 11 43.8	-0.1
MORW				IAmb	IAmb	08 11 44.4	
	comp=Z,31nm,1.5s						
FORT	Forrest	33.65	177	P	P	08 11 47.2	+0.4
KSRS	Korea Array	34.32	3	P	P	08 11 52.5	+0.1
	comp=Z,2.6nm,0.7s,baz=177,slow=9.7,SNR=8.9						
KSRS				LR	LR	08 25 31.0	
	comp=Z,14nm,21.9s,baz=170,slow=35						
XAN	Xi'an	34.78	335	P	P	08 11 57.9	+1.3
XAN				pP	sP	08 12 20.0	-2.0
XAN				sP	pP	08 12 31.0	+17
XAN				pmax	pmax		
	comp=Z,5.0nm,0.6s						
CD2	Chengdu	34.86	325	eP	P	08 11 58.0	+0.7
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BBOO	Buckleboo	36.85	166	P	P	08 12 14.3	0.0
BBOO				IAmb	IAmb	08 12 39.7	
	comp=Z,16nm,1.1s						
EIDS	Eidsvold	37.19	141	P	P	08 12 16.8	-0.4
EIDS				IAmb	IAmb	08 12 18.6	
	comp=Z,18nm,1.1s						
STKA	Stephens Creek	37.69	158	P	P	08 12 21.4	+0.1
	comp=Z,16nm,0.8s,baz=329,slow=9.5,SNR=30						
STKA	Stephens Creek	37.69	158	P	P	08 12 21.2	-0.2
BJI	Beijing	37.95	348	P	P	08 12 26.8	+3.4
BJI				S	S	08 18 08.4	-1.6
BJI				pmax	pmax		
	comp=Z,10.0nm,2.4s						
HHC	Hu-ho-hao-te	39.89	343	eP	P	08 12 38.6	-1.2
HHC				pmax	pmax		
	comp=Z,22nm,0.9s						
HHC				pmax	pmax		
	comp=Z,80nm,5.5s						
CN2	Changchun	40.63	359	eP	P	08 12 47.0	+1.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ARMA	Armidale	41.22	146	P	P	08 12 52.1	+1.2
USRK	Ussuriysk Ar.	41.35	6	P	P	08 12 52.6	+0.9
	comp=Z,2.8nm,0.6s,baz=190,slow=5.9,SNR=5.5						
H11S3	WAKE ISLAND Hy	42.60	66	T	T	09 00 21.4	
	baz=255,slow=74,SNR=1.5						
H11S2	WAKE ISLAND Hy	42.62	66	T	T	09 00 04.0	
	baz=314,slow=74,SNR=4.5						
GTA	Gaotai	43.40	330	eP	P	08 13 14.5	+6.0
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CAN	Canberra	43.76	153	P	P	08 13 13.1	+1.7
CAN				IAmb	IAmb	08 13 13.3	
	comp=Z,13nm,0.9s						
KLR	Kul'dur	46.30	5	P	P	08 13 29.8	-1.5
	comp=Z,2.2nm,0.6s,baz=193,slow=5.1,SNR=7.4						
DZM	Mont Dzumac	46.65	124	P	P	08 13 35.8	+1.3
	comp=Z,13nm,1.0s,baz=106,slow=15,SNR=3.9						
SONM	Songino Array	47.78	342	P	P	08 13 41.1	-1.9
	comp=Z,1.2nm,0.7s,baz=162,slow=6.3,SNR=8.0						

SONM				PcP	PcP	08 15 08.3	-2.7
	comp=Z,0.8nm,0.7s,baz=163,slow=5.0,SNR=2.7						
SONM	Songino Array	47.78	342	IAmb	IAmb	08 13 42.3	
	comp=Z,1.2nm,0.8s						
WMQ	Urumqi	52.95	326	eP	P	08 14 23.8	+1.7
PETK	Petropavlovsk-	56.33	22	P	P	08 14 48.4	+2.2
	comp=Z,2.2nm,0.8s,baz=219,slow=12,SNR=4.1						
PETK	Petropavlovsk-	56.33	22	P	P	08 14 45.9	-0.3
MK31	Makanchi Array	57.79	326	P	P	08 14 54.5	-2.2
MKAR	Makanchi Array	57.79	326	P	P	08 14 54.7	-2.0
	comp=Z,1.5nm,0.5s,baz=121,slow=8.5,SNR=22						
MKAR				PcP	PcP	08 15 48.0	-0.7
	comp=Z,3.8nm,0.5s,baz=119,slow=4.0,SNR=19						
MKAR	Makanchi Array	57.79	326	P	P	08 14 54.5	-2.2
ZALV	Zalesovo Beam	60.94	334	P	P	08 15 15.3	-2.9
	comp=Z,1.0nm,0.6s,baz=116,slow=6.7,SNR=3.1						
LBZ	Lake Benmore	61.45	145	P	P	08 15 22.8	+0.9
KURK	Kurchatov	62.01	328	P	P	08 15 23.1	-2.4
KURK				IAmb	IAmb	08 15 23.9	
	comp=Z,6.2nm,0.6s						
BKZ	Black Stump Fm	62.48	138	P	P	08 15 28.6	-0.3
SEY	Seymchan	62.87	13	P	P	08 15 33.0	+2.0
	comp=Z,0.7nm,0.3s,baz=253,slow=4.7,SNR=4.4						
KKAR	Karatay Array	63.33	317	P	P	08 15 32.9	-1.5
TIXI	Tiksi	68.57	1	P	P	08 16 07.8	+0.3
TIXI				IAmb	IAmb	08 16 08.4	
	comp=Z,7.8nm,0.4s						
CASY	Casey	70.03	187	P	P	08 16 18.1	+1.5
CASY				IAmb	IAmb	08 16 46.4	
	comp=Z,13nm,1.2s						
NRIK	Noril'sk	70.98	346	P	P	08 16 21.7	-0.7
	comp=Z,12nm,0.7s,baz=132,slow=6.0,SNR=25						
NRIK	Noril'sk	70.98	346	P	P	08 16 22.0	-0.3
NRIK				IAmb	IAmb	08 16 22.3	
	comp=Z,14nm,0.7s						
ABKAR	Akbulak array	72.31	321	P	P	08 16 28.6	-2.1
ABKAR	Akbulak array	72.31	321	P	P	08 16 28.3	-2.4
VOI	Vohitsoka	81.21	247	P	P	08 17 22.4	+0.8
VOI				IAmb	IAmb	08 17 22.9	
	comp=Z,8.6nm,0.8s						
VNDA	Vanda	82.80	173	P	P	08 17 29.2	+0.6
	comp=Z,1.0nm,0.8s,baz=321,slow=5.2,SNR=5.7						
J20K	Nowinta River	82.84	26	P	P	08 17 30.2	+1.1
J20K				IAmb	IAmb	08 17 57.4	
	comp=Z,12nm,1.5s						
IMAR	Indian Mountai	83.25	24	P	P	08 17 32.2	+1.0
RC01	Rabbit Creek A	84.56	29	P	P	08 17 38.4	+0.5
KLMR	Klimovskoe	85.72	331	eP	P	08 17 40.7	-3.0
KLMR				AMP		08 17 42.2	
	comp=Z,7.0nm,0.7s						
ILAR	Eielson Array	86.02	25	P	P	08 17 44.0	-1.3
	comp=Z,0.2nm,0.6s,baz=260,slow=4.8,SNR=5.6						
BMAR	Burnt Mountain	86.98	23	P	P	08 17 50.5	+0.5
ARCES	ARCESS Array B	90.90	340	P	P	08 18 06.1	-2.2
	comp=Z,12nm,1.1s,baz=349,slow=2.5,SNR=6.4						
ARCES	ARCESS Array B	90.90	340	IAmb	IAmb	08 18 28.0	
	comp=Z,14nm,1.4s						
SYO	Syowa Base	91.53	201	⇑eP	P	08 18 12.0	+0.9
SYO	Syowa Base	91.53	201	⇓epP	pP	08 18 37.6	+7.3
AKASG	Malin Array Be	92.05	321	P	P	08 18 11.1	-2.9
	comp=Z,0.4nm,0.4s,baz=73,slow=5.1,SNR=4.4						
FINES	FINESS Array B	92.17	332	P	P	08 18 12.3	-1.9
	comp=Z,3.4nm,0.6s,baz=44,slow=6.2,SNR=17						
NOA	NORSAR Array B	99.15	333	P	Pdif	08 18 43.0	-3.2
	comp=Z,0.8nm,0.7s,baz=78,slow=7.3,SNR=3.8						
SNAA	Sanae	104.36	195	PKiKP	PKiKP	08 23 21.9	-3.2
VNA2	Neumayer--Watz	105.97	194	PKiKP	PKiKP	08 23 27.9	-0.1
VNA1	Neumayer--Stat	106.37	194	PKiKP	PKiKP	08 23 28.5	-0.2
H06S1	SOCORRO T	119.87	67	T	T	10 36 52.9	
	SNR=12						
TORD	Torodi Ar. Bea	122.54	288	PKP	PKPdf	08 24 00.0	-1.1
	comp=Z,0.6nm,0.6s,baz=40,slow=2.4,SNR=3.8						

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*IDC **21** 08:13:51.6±4.8, 14°.59S×167°.33E, h174^{km}±43^{km}, mb3.3/6, mb1 3.5/7, mb1mx3.2/46, mbtmp3.8/7, Error ellipse: s-maj=33.7km s-min=31.4km az=9.0*

ISC 21 08:13:50.6±1.4**, 14°.5S**±0°.1×**167°.4E**±0°.2**, h170^{km}, n7,** σ**0^{s}66**/7**, mb3.5**/5**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	7.57	186	P	Pn	08 15 38.6	+0.2
	0.7nm,0.3s,baz=359,slow=8.1,SNR=12						
DZM				S	Sn	08 17 02.9	-0.5
	0.1nm,0.3s,baz=90,slow=20,SNR=2.9						
STKA	Stephens Creek	29.21	229	P	P	08 19 37.2	+0.9
	1.4nm,0.5s,baz=51,slow=7.5,SNR=4.7						
WRA	Warramunga Arr	31.97	256	P	P	08 20 00.3	-0.5
	0.4nm,0.8s,baz=85,slow=8.5,SNR=2.4						
ASAR	Alice Springs	32.84	249	P	P	08 20 07.8	-0.6
	0.4nm,0.4s,baz=81,slow=8.9,SNR=11						
VNDA	Vanda	63.08	181	P	P	08 23 59.3	-0.1
	0.6nm,0.6s,baz=357,slow=8.5,SNR=5.8						
ILAR	Eielson Array	86.29	18	P	P	08 26 12.7	-0.1
	0.4nm,0.8s,baz=231,slow=5.7,SNR=2.6						
MKAR	Makanchi Array	97.11	316	P	Pdif	08 27 05.8	+2.3
	0.2nm,0.7s,baz=86,slow=5.9,SNR=2.8						

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*IDC **21** 08:32:04.5±1.5, 15°.52S×174°.80W, h0^{km}, mb3.9/7, mb1 4.3/7, mb1mx4.0/23, mbtmp3.9/7, MS3.8/7, Ms1 3.8/7, ms1mx3.5/31, Error ellipse: s-maj=76.2km s-min=23.7km az=151.0*

ISC 21 08:32:04.9±1.5**, 15°.7S**±0°.4×**174°.6W**±0°.2**, h10^{km}, n30,** σ**1^{s}68**/9**, mb4.0**/7**, MS3.8**/6**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	3.20	58	Pn	Pn	08 32 53.7	-1.6
	8.1nm,0.3s,baz=179,slow=5.7,SNR=12						
AFI				LR	LR	08 33 51.9	
	comp=Z,383nm,18.5s,baz=206,slow=32						
AFI				T	T	08 36 12.0	
	9.6nm,0.3s,baz=268,slow=23,SNR=4.7						
MSVF	Nonsavu	7.38	253	LR	LR	08 36 20.7	
	comp=Z,629nm,20.3s,baz=170,slow=36						
RAO	Raoul Island	13.89	192	LR	LR	08 39 57.5	
	comp=Z,702nm,19.2s,baz=61,slow=34						
RAR	Rarotonga	15.08	114	LR	LR	08 40 21.7	
	comp=Z,324nm,18.8s,baz=275,slow=32						
DZM	Mont Dzumac	19.07	248	eLR	LR	08 40 37.5	
	comp=Z,168nm,22.6s						
URZ	Urewera	23.69	196	LR	LR	08 45 44.3	
	comp=Z,142nm,18.2s,baz=31,slow=34						
PAE	Paea	24.01	98	eT	T	09 02 04.2	
	4.6nm,0.3s						
PPT	Papeete	24.01	98	LR	LR	08 44 36.9	
	comp=Z,134nm,19.3s,baz=244,slow=31						
PPT2	Papeete2	24.01	98	eLR	LR	08 43 00.0	
	comp=Z,467nm,26.5s						
PPT2	Papeete2	24.01	98	eT	T	09 02 04.9	
	5.7nm,0.3s						
TIAR	Tiarei	24.23	98	eT	T	09 02 21.3	
	0.2nm,0.2s						
TBI	Tubuai	24.84	112	eLR	LR	08 43 25.8	
	comp=Z,632nm,26.8s,baz=293						
TBI	Tubuai	24.84	112	eT	T	09 03 17.1	
	7.3nm,0.2s						
HNR	Honiara	25.63	281	LR	LR	08 45 57.5	
	comp=Z,653nm,21.6s,baz=126,slow=33						
TAOE	Nuku Hiva Isla	34.26	83	eLR	LR	08 47 41.5	
	comp=Z,244nm,27.1s						
TAOE	Nuku Hiva Isla	34.26	83	eT	T	09 14 39.7	
	49nm,0.2s						
H11S2	WAKE ISLAND Hy	38.62	331	T	T	09 20 13.6	
	baz=150,slow=75,SNR=310						
H11S3	WAKE ISLAND Hy	38.63	331	T	T	09 20 14.5	
	baz=150,slow=75,SNR=108						
H11S1	WAKE ISLAND Hy	38.64	331	T	T	09 20 14.9	
	baz=150,slow=75,SNR=175						
H11N3	WAKE ISLAND Hy	39.59	332	T	T	09 21 27.6	
	baz=151,slow=76,SNR=206						
H11N1	WAKE ISLAND Hy	39.59	332	T	T	09 21 29.0	
	baz=151,slow=76,SNR=407						
H11N2	WAKE ISLAND Hy	39.61	332	T	T	09 21 29.9	
	baz=151,slow=76,SNR=289						
WRA	Warramunga Arr	48.70	257	P	P	08 40 49.4	-0.5
	0.6nm,0.9s,baz=90,slow=7.6,SNR=2.7						
ASAR	Alice Springs	48.97	252	P	P	08 40 51.6	-0.4
	2.1nm,0.8s,baz=86,slow=8.0,SNR=19						
PETK	Petropavlovsk-	72.53	343	P	P	08 43 32.1	+0.2
	3.8nm,1.0s,baz=91,slow=6.2,SNR=4.0						
NVAR	Mina Array Bea	75.26	42	P	P	08 43 51.0	+2.5
	2.0nm,0.9s,baz=229,slow=9.9,SNR=13						
TXAR	Lajitas Array	81.68	56	P	P	08 44 25.1	+1.1
	0.4nm,0.9s,baz=238,slow=9.5,SNR=3.9						
ILAR	Eielson Array	82.91	12	P	P	08 44 29.1	-0.3
	1.2nm,1.1s,baz=234,slow=5.4,SNR=4.3						
PDAR	Pinedale Array	83.20	42	P	P	08 44 33.0	+1.2
	0.8nm,0.8s,baz=256,slow=4.4,SNR=5.4						
GERES	GERESS Array B	146.21	350	PKPbc	PKiKP	08 51 46.8	-2.1
	0.8nm,0.9s,baz=111,slow=7.3,SNR=4.5						

OTT 21 08:51:45.5±0.5**, 42°.85N×56°.23W, h18^{km}, ML3.8**/6**, Atlantic Ocean. 453km southeast from Louisbourg, Ns, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GBN	Guysborough	4.58	306	PN	Pn	08 52 54.2	+0.2
GBN				SN	Sn	08 53 44.3	-2.4
GBN				Trac		08 53 48.9	
	comp=Z,6.2nm,0.2s						
CHEG	Cheticamp, Nov	5.07	323	PN	Pn	08 52 59.4	-1.2
CHEG				SN	Sn	08 53 55.8	-2.9
CHEG				Trac		08 54 03.7	
	comp=Z,9.3nm,0.3s						
HAL	Halifax	5.63	291	SN	Sn	08 54 07.7	-4.7
DRLN	Deer Lake	6.47	353	PN	Pn	08 53 18.7	-1.1
DRLN				SN	Sn	08 54 28.2	-5.0
DRLN				Trac		08 54 35.1	
	comp=Z,88nm,1.4s						
LMN	Caledonia Moun	6.84	299	PN	Pn	08 53 23.9	-1.1
LMN				SN	Sn	08 54 36.1	-6.2
LMN				Trac		08 54 41.7	
	comp=Z,120nm,1.4s						
ELNB	Elgin, New Bru	7.07	298	PN	Pn	08 53 27.1	-0.9
ELNB				SN	Sn	08 54 43.2	-4.6
ELNB				Trac		08 54 53.9	
	comp=Z,86nm,1.3s						
WCNB	Wards Creek	7.23	296	PN	Pn	08 53 29.5	-0.7
WCNB				SN	Sn	08 54 46.6	-5.1
WCNB				Trac		08 54 48.1	
	comp=Z,18nm,0.4s						
HKNB	Havelock Quarr	7.26	299	PN	Pn	08 53 29.5	-1.2
HKNB				SN	Sn	08 54 46.8	-5.8
HKNB				Trac		08 54 50.1	
SRNB	Snider Mountai	7.38	297	PN	Pn	08 53 31.4	-0.8
SRNB				SN	Sn	08 54 50.0	-5.4
SRNB				Trac		08 54 56.2	
	comp=Z,163nm,1.2s						
GGN	Saint George	7.99	290	SN	Sn	08 55 02.1	-8.2
PKME	Peaks-Kenny Pk	9.71	289	SN	Sn	08 55 44.1	-8.7
PKME				Trac		08 55 47.6	
	comp=Z,328nm,2.5s						

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*MOS **21** 09:06:06.6±0.9, 7°.10S×129°.88E, h39^{km}, mb6.3/72, MS5.0/15, Error ellipse: s-maj=7.8km s-min=4.4km az=112.9*

*NEIC **21** 09:06:11.7, 7°.15S×129°.94E, h84^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.60; $M_{\theta\theta}$-0.84; $M_{\phi\phi}$0.24; $M_{r\theta}$0.46; $M_{\theta\phi}$0.65; $M_{\phi r}$0.50; Fault plane solution: $M_0$1.20000×10^{18} NP1:ϕ_s80.14000°, δ65.08000°, λ41.97000°. NP2:ϕ_s329.38000°, δ52.67000°, λ148.00000°. Principal axes: T 1.2259, Plg47.0000°, Azm300.0000°; N -0.0538, Plg42.0000°, Azm105.0000°; P -1.1721, Plg8.0000°, Azm202.0000°;*

*BJI **21** 09:06:11.0±0.0, 7°.25S×130°.05E, h90^{km}, mB5.8/68, mb5.8/91, Ms5.5/94, Ms7 5.2/89*

*IDC **21** 09:06:12.4±1.0, 7°.10S×130°.03E, h82^{km}±7^{km}, mb5.6/40, mb1 5.6/44, mb1mx5.5/47, mbtmp5.9/44, MS5.0/27, Ms1 5.0/27, ms1mx4.8/40, Error ellipse: s-maj=12.1km s-min=9.4km az=78.0*

*NEIC **21** 09:06:13.5±1.8, 7°.15S±0°.05×129°.94E±0°.06, h82^{km}±1^{km}, mb6.0/185, Mwb6.0/39, Mwc6.0/56, Mww6.1, Mwc6.0(GCMT), Error ellipse: s-maj=10.8km s-min=7.6km az=48.0*

*DJA **21** 09:06:13.9±0.2, 7°S±2°×13°0E±°, h82^{km}±2^{km}, M5.8/107, mB6.2/92, mb6.0/107, MLv6.5/12, Mw6.0/55, Mw(mB)5.9/92, MwMwp5.7/85, Mwp5.8/85*

*NEIC **21** 09:06:13, 7°.31S×130°.23E, h80^{km}, Moment Tensor Solution. Duration: 2^{s}0 Moment tensor: Scale 10^{18}Nm; M_{rr}0.91; $M_{\theta\theta}$-1.11; $M_{\phi\phi}$0.20; $M_{r\theta}$0.21; $M_{\theta\phi}$0.83; $M_{\phi r}$0.73; Fault plane solution: $M_0$1.52000×10^{18} NP1:ϕ_s84.00000°, δ54.00000°, λ39.00000°. NP2:ϕ_s328.00000°, δ60.00000°, λ137.00000°. Principal axes: T 1.5233, Plg51.0000°, Azm293.0000°; N -0.0053, Plg39.0000°, Azm120.0000°; P -1.5180, Plg3.0000°, Azm27.0000°;*

*GCMT **21** 09:06:15.5±0.1, 7°.22S×130°.11E, h100^{km}, MW6.0/157, Moment Tensor Solution. s156,c353; s157,c536; Duration: 2^{s}6 Moment tensor: Scale 10^{18}Nm; M_{rr}0.86±.01; $M_{\theta\theta}$-1.05±.01; $M_{\phi\phi}$0.18±.01; $M_{r\theta}$0.22±.01; $M_{\theta\phi}$0.84±.01; $M_{\phi r}$0.62±.01; Best double couple: $M_0$1.44200×10^{18} NP1:ϕ_s84.00000°, δ55.00000°, λ39.00000°. NP2:ϕ_s329.00000°, δ59.00000°, λ138.00000°. Principal axes: T 1.4040, Plg50.0000°, Azm295.0000°; N 0.0800, Plg39.0000°, Azm119.0000°; P -1.4810, Plg2.0000°, Azm28.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **21** 09:06:17, 7°.20S×130°.10E, h103^{km}, Moment Tensor Solution. Duration: 5^{s}2 Moment tensor: Scale 10^{18}Nm; M_{rr}0.85; $M_{\theta\theta}$-1.06; $M_{\phi\phi}$0.21; $M_{r\theta}$0.21; $M_{\theta\phi}$0.90; $M_{\phi r}$0.63; Fault plane solution: $M_0$1.48000×10^{18} NP1:ϕ_s84.00000°, δ55.00000°, λ37.00000°. NP2:ϕ_s331.00000°, δ60.00000°, λ139.00000°. Principal axes: T 1.4288, Plg49.0000°, Azm295.0000°; N 0.1059, Plg41.0000°, Azm121.0000°; P -1.5346, Plg3.0000°, Azm28.0000°;*

*NEIC **21** 09:06:32.7, 6°.99S×129°.89E, h80^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.91; $M_{\theta\theta}$-1.05; $M_{\phi\phi}$0.15; $M_{r\theta}$0.16; $M_{\theta\phi}$0.80; $M_{\phi r}$0.57; Fault plane solution: $M_0$1.40000×10^{18} NP1:ϕ_s327.09000°, δ57.81000°, λ134.33000°. NP2:ϕ_s85.70000°, δ52.75000°, λ42.02000°. Principal axes: T 1.3359, Plg54.0000°, Azm293.0000°; N 0.1252, Plg36.0000°, Azm120.0000°; P -1.4611, Plg3.0000°, Azm27.0000°;*

ISC 21 09:06:12.9±0.3**, 7°.16S**±0°.03×**129°.99E**±0°.03**, h90^{km}**±2^{km}**, h92^{km}:pP-P, n1503,** σ**1^{s}84**/1668**, mb6.0**/220**, 131C-77D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAI	Ambon	3.88	333	P	Pn	09 07 13.8	+3.4
MSAI	Masohi	3.93	344	P	Pn	09 07 15.3	+4.3
FAKI	Fak Fak	4.77	28		Pn	09 07 21.8	-0.8
FAKI	Fak Fak	4.77	28	P	Pn	09 07 22.6	+0.1
DRS	Darwin Rock St	5.32	170	P	Pn	09 07 27.8	-2.1
	5µm,0.8s						
MTN	Manton Dam	5.76	169	P	Pn	09 07 34.3	-1.7
	baz=5.7,SNR=484						
MTN				S	Sn	09 08 35.1	-5.6
	baz=5.7						
MTN	Manton Dam	5.76	169	⇓P	Pn	09 07 32.9	-3.1
MTN	Manton Dam	5.76	169	Pn	Pn	09 07 35.1	-0.9
MTN	Manton Dam	5.76	169	P	Pn	09 07 33.9	-2.1
	6µm,0.5s						
KDU	Kakadu	6.02	156	P	Pn	09 07 36.8	-2.6
	baz=6.0,SNR=1000						
KDU				S	Sn	09 08 40.0	-7.0
	baz=6.0						
KDU	Kakadu	6.02	156	⇑P	Pn	09 07 36.9	-2.6
KDU	Kakadu	6.02	156	P	Pn	09 07 36.6	-2.8
	9µm,0.7s						
SOEI	Soe	6.22	245		Pn	09 07 44.0	+1.7
SOEI	Soe	6.22	245	P	Pn	09 07 44.5	+2.2
SIJI	Sorong	6.37	12	P	Pn	09 07 42.9	-1.4
	462nm,0.3s,baz=29,slow=13,SNR=186						
SIJI				S	Sn	09 08 52.0	-3.8
	628nm,0.3s,baz=254,slow=23,SNR=10						
SWI	Sorong	6.38	12	P	Pn	09 07 44.3	-0.1
	21nm95µm63µm3µm,0.9s						
SANI	Sanana	6.45	322	P	Pn	09 07 50.3	+5.0
	7.3nm51µm22µm2µm,0.9s						
SANI	Sanana	6.45	322	P	Pn	09 07 51.0	+5.7
LBMI	Labuha	6.93	339	P	Pn	09 07 56.9	+5.0
	13nm37µm38µm4µm,1.1s						
BATI	Baumata	6.95	244	P	Pn	09 07 53.6	+1.5
	1µm,0.3s,baz=130,slow=3.3,SNR=247						
BATI				S	Sn	09 09 07.3	-2.4
	2µm,0.3s,baz=101,slow=22,SNR=19						
BATI	Baumata	6.95	244	P	Pn	09 07 53.6	+1.5
	53nm48µm53µm4µm,0.7s						
MMRI	Maumere	7.81	259	P	Pn	09 08 06.1	+2.1
	13nm43µm22µm2µm,0.8s						
MMRI	Maumere	7.81	259	Pn	Pn	09 08 05.5	+1.5
MMRI	Maumere	7.81	259	P	Pn	09 08 06.5	+2.5
EDFI	Ende, Flores	8.37	259	P	Pn	09 08 13.3	+1.7
	5.6nm24µm7µm482nm,0.8s						
KNRA	Kununurra	8.55	188	P	Pn	09 08 10.5	-3.5
	baz=8.5,SNR=1000						
KNRA	Kununurra	8.55	188	Pn	Pn	09 08 11.3	-2.7
KNRA	Kununurra	8.55	188	P	Pn	09 08 10.9	-3.1
	15µm,0.6s						
WAMI	Wamena	9.27	70	P	Pn	09 08 26.1	+2.3
	37µm42µm5µm,0.8s						
LUWI	Luwuk	9.41	310	P	Pn	09 08 34.0	+8.2
	32µm20µm843nm,1.0s						
LUWI	Luwuk	9.41	310		Pn	09 08 31.5	+5.7
LUWI	Luwuk	9.41	310	P	Pn	09 08 30.5	+4.7
BSSI	Bau Bau, Buton	9.49	276	P	Pn	09 08 32.0	+5.2
	17µm9µm463nm,0.9s						
KMSI	Cibinong	9.74	322	P	Pn	09 08 36.3	+6.1
	804nm19µm2µm,1.1s						
BASI	Baing, Sumba	9.79	251	P	Pn	09 08 31.8	+1.0
	37µm39µm3µm,0.5s						
BKSI	Bulukumba	9.97	280	P	Pn	09 08 37.9	+4.5
	25µm15µm677nm,1.3s						
SMPI	Sarmi	10.10	60	P	Pn	09 08 35.3	+0.2
	27µm22µm1µm,0.8s						
BNSI	Bone	10.20	285	P	Pn	09 08 41.2	+4.7
	25µm11µm1µm,1.2s						
APSI	Ampana	10.37	306	P	Pn	09 08 45.2	+6.4
	21µm21µm2µm,1.1s						
MMPI	Merauke	10.38	98	P	Pn	09 08 37.9	-1.1
	44µm4µm,0.7s						
KAPI	Kappang	10.40	281	P	Pn	09 08 43.5	+4.3
	5.7nm,0.3s,baz=135,slow=7.0,SNR=63						
KAPI				S	Sn	09 10 32.5	-1.4
	baz=47,slow=22,SNR=1.0						
KAPI				LR	LR	09 12 35.6	
	comp=Z,8µm,19.9s,baz=132,slow=37						
KAPI	Kappang	10.40	281	P	Pn	09 08 43.2	+4.0
KAPI	Kappang	10.40	281	P	Pn	09 08 44.5	+5.3
KAPI	Kappang	10.40	281		Pn	09 08 43.2	+4.0
SPSI	Sidrap Palu	10.65	287	P	Pn	09 08 46.7	+4.1
	30µm10µm760nm,0.9s						
TTSI	Tana Toraja	10.92	291	P	Pn	09 08 52.9	+6.6
	31µm8µm1µm,1.0s						
MRSI	Marisa	11.04	313	P	Pn	09 08 53.5	+5.6
	29µm49µm6µm,1.1s						
JAY	Jayapura	11.63	67	P	Pn	09 08 52.8	-3.1
	19nm,0.3s,baz=273,slow=6.2,SNR=50						
JAY				S	Sn	09 10 55.9	-8.1
	9.8nm,0.3s,baz=330,slow=11,SNR=2.0						
JAY				LR	LR	09 14 47.5	
	comp=Z,15µm,20.5s,baz=210,slow=44						
JAY	Jayapura	11.63	67	P	Pn	09 08 56.1	+0.1
	13µm8µm565nm,1.0s						
SGSI	Sangihe	11.65	337	P	Pn	09 09 02.9	+6.7
	2µm,0.8s						
FITZ	Fitzroy Crossi	11.67	201	P	Pn	09 08 51.9	-4.6
	136nm,0.3s,baz=33,slow=11,SNR=179						
FITZ				S	Sn	09 10 51.1	-14
	baz=95,slow=16						
TOLI2	Tolitoli	12.32	311		P	09 09 09.5	-4.2
MPSI	Mapaga	12.52	306	P	P	09 09 13.2	-2.7
	37µm17µm459nm,1.2s						
TWSI	Taliwang, Sumb	13.07	262	P	Pn	09 09 14.7	-0.6
	17µm4µm336nm,0.9s						
WB0	Warramunga Arr	13.25	162		Pn	09 09 11.1	-6.4
WRAB	Tennant Creek	13.39	162	P	Pn	09 09 13.0	-6.4
WRAB	Tennant Creek	13.39	162	⇓P	Pn	09 09 12.9	-6.5
WRAB	Tennant Creek	13.39	162		Pn	09 09 13.0	-6.4
WRA	Warramunga Arr	13.39	162	P	Pn	09 09 12.7	-6.7
	221nm,0.3s,baz=333,slow=14,SNR=1104						
WRA				S	Sn	09 11 28.8	-18
	326nm,0.3s,baz=348,slow=21,SNR=12						
WRA				LR	LR	09 15 23.7	
	comp=Z,13µm,18.6s,baz=340,slow=41						
WRA				P3KPbc		09 45 07.5	
	0.1nm,0.3s,baz=157,slow=2.8,SNR=4.5						
WRA	Warramunga Arr	13.39	162	P	Pn	09 09 13.8	-5.7
WRA	Warramunga Arr	13.39	162	Pn	Pn	09 09 13.8	-5.6
WB2	Warramunga Arr	13.40	162	P	Pn	09 09 13.5	-6.1
	baz=13						
WB2				S	Sn	09 11 31.3	-16
	baz=13						
WB2	Warramunga Arr	13.40	162	Pn	Pn	09 09 13.1	-6.4
WR0	Warramunga Arr	13.47	161	Pn	Pn	09 09 13.7	-6.8
KBKI	Kotabaru	14.28	285	P	P	09 09 36.9	+1.4
	1µm6µm616nm,0.7s						
SMKI	Samarinda	14.38	297	P	P	09 09 39.2	+2.6
	44µm30µm2µm,1.3s						
COEN	Coen	14.62	119	P	Pn	09 09 31.3	-4.0
	baz=15						
COEN	Coen	14.62	119	⇓P	Pn	09 09 30.1	-5.2
COEN	Coen	14.62	119	Pn	Pn	09 09 32.8	-2.5
SRBI	Singaraja	14.67	265	P	P	09 09 39.2	-0.7
	24µm290nm,0.9s						
IGBI	Denpasar	14.79	263	P	P	09 09 40.3	-0.9
	14µm8µm430nm,0.6s						
DAV	Davao City (W)	14.80	343	P	Pn	09 09 38.8	+1.1
	66nm,0.3s,baz=209,slow=10,SNR=1.9						
DAV				S	Sn	09 12 21.2	+0.4
	38nm,0.3s,baz=85,slow=8.6,SNR=1.1						
DAV				LR	LR	09 15 59.4	
	comp=Z,8µm,21.3s,baz=114,slow=40						
DAV	Davao City (W)	14.80	343	⇓P	P	09 09 42.0	+0.7
BBKI	Banjar Baru	15.52	283	P	P	09 09 51.1	+1.8
	26µm31µm4µm,0.8s						
ABJI	Asem Bagus	15.63	267	P	Pn	09 09 47.9	-0.3
	27µm5µm640nm,1.0s						
JAGI	Jajag, Banyuwa	15.74	264	⇑P	Pn	09 09 49.6	-0.1
JAGI	Jajag, Banyuwa	15.74	264		Pn	09 09 49.2	-0.4
KMMI	Kalianget	15.90	269	P	P	09 09 52.6	-0.9
	26µm12µm1µm,1.3s						
QIS	Mount Isa	16.26	146	P	Pn	09 09 51.0	-5.0
	baz=16,SNR=388						
MTKI	Muara Teweh, K	16.26	292	P	P	09 09 58.9	+1.4
	21µm16µm1µm,0.9s						
BLJI	Banyuglugur	16.26	267	P	Pn	09 09 55.9	-0.2
	14µm4µm408nm,0.6s						
GMJI	Gumukmas	16.43	265	P	P	09 10 01.2	+1.8
	19µm3µm257nm,1.0s						
AS31	Alice Springs	16.84	168	Pn	Pn	09 09 59.9	-3.4
AS31				IAmb	IAmb	09 10 07.1	
	comp=Z,470nm,0.5s						
ASAR	Alice Springs	16.84	168	P	Pn	09 09 58.5	-4.8
	comp=Z,42nm,0.3s,baz=344,slow=14,SNR=637						
ASAR				S	Sn	09 12 45.1	-25
	comp=Z,15nm,0.3s,baz=327,slow=16,SNR=4.3						
ASAR				LR	LR	09 17 10.9	
	comp=Z,15µm,19.8s,baz=348,slow=39						
ASAR				ScP	ScP	09 18 12.1	-0.9
	baz=341,slow=1.5,SNR=5.0						
ASAR				P3KPbc		09 44 55.5	
	comp=Z,0.1nm,0.3s,baz=157,slow=3.2,SNR=7.1						
ASAR	Alice Springs	16.84	168	P	Pn	09 10 00.6	-2.7
ASAR	Alice Springs	16.84	168	Pn	Pn	09 10 00.6	-2.7
ASPA	Alice Springs	16.84	168	P	Pn	09 09 58.5	-4.8
	baz=17						
MBWA	Marble Bar	17.09	214	⇓P	Pn	09 10 03.1	-3.2
PMG	Port Moresby	17.14	99	P	Pn	09 10 05.8	-1.2
	comp=Z,125nm,0.3s,baz=331,slow=3.6,SNR=84						
PMG				S	Sn	09 13 02.6	-15
	comp=Z,15nm,0.3s,baz=38,slow=22,SNR=1.8						
PMG				LR	LR	09 17 59.3	
	comp=Z,14µm,18.8s,baz=296,slow=41						
PMG	Port Moresby	17.14	99	P	P	09 10 07.2	0.0
PMG				pmax	pmax		
	comp=Z,668nm,1.0s						
PMG	Port Moresby	17.14	99	⇑P	Pn	09 10 07.0	+0.1
PMG	Port Moresby	17.14	99		P	09 10 07.2	0.0
PMG				IAmb	IAmb	09 11 07.0	
	comp=Z,668nm,1.0s						
BWJI	Bawean	17.27	273	P	P	09 10 10.1	+1.5
	comp=Z,15µmcomp=Z,12µmcomp=Z,1µm,1.1s						
PSA00	Pilbara Seismi	17.36	213		Pn	09 10 06.5	-3.1
PSA00				IAmb	IAmb	09 10 11.6	
	comp=Z,763nm,0.8s						
MTSU	Mount Surprise	17.72	129	P	P	09 10 11.3	-2.3
	baz=18,SNR=386						
WRKA	Warakurna	17.86	185	P	P	09 10 11.6	-3.5
	baz=18,SNR=1000						
WRKA	Warakurna	17.86	185	⇓P	P	09 10 11.2	-3.9
MANU	Manus Island	18.05	74	⇓P	Pn	09 10 19.7	+1.7

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MANU   Manus Island     18.05  74   P     Pn    09 10 19.5 +1.5
NGJI   Ngawi            18.38 268   P     Pn    09 10 24.8 +2.9
       comp=Z,2µmcomp=Z,298nm,1.0s
PCJI   Pacitan          18.67 266   P     Pn    09 10 24.9 -0.5
       comp=Z,17µmcomp=Z,6µmcomp=Z,553nm,1.3s
PBKI   Pangkalan Bun    18.77 283   P     Pn    09 10 28.4 +1.7
       comp=Z,40µmcomp=Z,6µm,1.0s
UWJI   Ujung Watu       18.92 271   P     Pn    09 10 30.7 +2.3
       comp=Z,7µmcomp=Z,476nm,1.1s
KKM    Kota Kinabalu    18.99 313  ⇑P     Pn    09 10 28.9 -0.5
KKM    Kota Kinabalu    18.99 313   P     Pn    09 10 28.8 -0.5
UGM    Wanagama         19.31 267   P     Pn    09 10 32.5 -0.5
       comp=Z,19µmcomp=Z,650nm,1.1s
YOGI   Yogyakarta       19.54 267   P     Pn    09 10 35.1 -0.6
       comp=Z,11µmcomp=Z,295nm,0.9s
STKI   Sintang          19.81 290   P     Pn    09 10 39.0 +0.2
       comp=Z,12µmcomp=Z,602nm,1.1s
SBUM   Sibu             20.14 298  ⇑P     Pn    09 10 41.5 -1.2
SBUM   Sibu             20.14 298   P     Pn    09 10 43.0 +0.4
SBUM   Sibu             20.14 298   P     P     09 10 39.3 -0.8
CTAO   Charters Tower   20.35 131   P     P     09 10 42.5 +0.2
CTAO                                pmax  pmax
       comp=Z,359nm,0.9s
CTAO   Charters Tower   20.35 131  ⇓P     P     09 10 43.0 +0.7
CTAO   Charters Tower   20.35 131         P     09 10 42.5 +0.2
CMJI   Cimerak          21.36 267   P     P     09 10 52.8 -0.4
       comp=Z,10µmcomp=Z,3µmcomp=Z,345nm,1.0s
KSM    Kuching          21.42 293  ⇑P     P     09 10 53.7 -0.2
KSM    Kuching          21.42 293   P     P     09 10 56.0 +2.1
KSM    Kuching          21.42 293   P     P     09 10 53.4 -0.5
KSM                                 IAmb  IAmb  09 11 00.9
       comp=Z,550nm,0.8s
GIRL   Giralia          21.62 223   P     P     09 10 57.3 +1.5
       baz=22,SNR=35
GIRL   Giralia          21.62 223  ⇑P     P     09 10 57.4 +1.5
GIRL   Giralia          21.62 223   P     P     09 10 55.9 +0.1
MEEK   Meekatharra      22.19 208   P     P     09 11 01.2 -0.8
       baz=22,SNR=199
LEM    Lembang          22.20 269   P     P     09 10 59.4 -3.0
       comp=Z,87nm,0.6s,baz=161,slow=23,SNR=3.8
LEM                                 S     S     09 14 53.8 -7.8
       comp=Z,70nm,0.7s,baz=157,slow=22,SNR=2.2
LEM                                 ScS   ScS   09 22 09.5 -1.6
       comp=Z,20nm,0.6s,baz=124,slow=23,SNR=1.3
RABL   Rabaul           22.26  84  ⇓P     P     09 11 00.5 -2.4
RABL   Rabaul           22.26  84   P     P     09 11 03.1 +0.2
RABL                                IAmb  IAmb  09 11 24.0
       comp=Z,305nm,0.8s
TPI    Tanjungpandan    22.67 280   P     P     09 11 08.8 +1.7
       comp=Z,6µmcomp=Z,233nm,1.1s
CNJI   Cibinong         22.68 268   P     P     09 11 07.4 +0.3
       comp=Z,15µmcomp=Z,11µmcomp=Z,2µm,1.0s
TGY    Tagaytay City    22.95 337   P     P     09 11 11.0 +1.1
       comp=Z,2µm,0.7s,baz=242,slow=1.1,SNR=44
TGY    Tagaytay City    22.95 337   P     P     09 11 11.0 +1.1
DBJI   Dramaga          23.08 270   P     P     09 11 10.9 -0.3
       comp=Z,36µmcomp=Z,174nm,1.0s
FORT   Forrest          23.57 184   P     P     09 11 15.1 -0.4
       baz=24,SNR=101
FORT   Forrest          23.57 184  ⇑P     P     09 11 14.0 -1.5
FORT   Forrest          23.57 184   P     P     09 11 15.1 -0.4
QLP    Quilpie          23.60 147   P     P     09 11 15.7 -0.2
       baz=24,SNR=61
QLP    Quilpie          23.60 147  ⇑P     P     09 11 15.7 -0.2
SBJI   Serang           23.72 271   P     P     09 11 17.6 +0.6
       comp=Z,299nm,1.2s
XMIS   Christmas Isla   24.27 260   P     P     09 11 21.5 -0.5
PPBI   Pangkal Pinang   24.27 281   P     P     09 11 24.3 +2.3
       comp=Z,16µmcomp=Z,726nm,1.0s
KLI    Kotabumi         25.09 274   P     P     09 11 33.0 +3.5
       comp=Z,15µmcomp=Z,262nm,1.2s
KLSI                    25.24 274   P     P     09 11 33.6 +2.8
       comp=Z,4µmcomp=Z,836nmcomp=Z,71nm,1.1s
GUMO   Guam             25.36  36   P     P     09 11 32.9 +1.0
       comp=Z,345nm,0.9s,baz=155,slow=5.4,SNR=6.0
GUMO   Guam             25.36  36   P     P     09 11 32.6 +0.7
GUMO                                IAmb  IAmb  09 12 28.9
       comp=Z,606nm,1.1s
MORW   Morawa           25.46 209   P     P     09 11 32.8 +0.1
       baz=26,SNR=12
MORW   Morawa           25.46 209  ⇑P     P     09 11 32.7 +0.1
MORW   Morawa           25.46 209   P     P     09 11 32.8 +0.1
MORW                                IAmb  IAmb  09 12 00.2
       comp=Z,584nm,1.2s
MDSI   Maura Dua        25.81 274   P     P     09 11 36.7 +0.7
       comp=Z,8µmcomp=Z,894nmcomp=Z,48nm,1.0s
LWLI   Liwa             25.87 273   P     P     09 11 35.8 -0.8
       comp=Z,145nm,0.6s
BBOO   Buckleboo        26.14 168   P     P     09 11 38.0 -0.8
       baz=26,SNR=81
BBOO   Buckleboo        26.14 168   P     P     09 11 38.5 -0.3
BBOO                                IAmb  IAmb  09 12 19.6
       comp=Z,403nm,0.7s
DSRI   Dabo             26.19 284   P     P     09 11 42.8 +3.4
       comp=Z,8µmcomp=Z,3µmcomp=Z,278nm,1.0s
RMQ    Roma             26.24 139   P     P     09 11 39.9 +0.1
       baz=26,SNR=15
BLDU   Ballidu          26.45 206   P     P     09 11 41.6  0.0
       baz=26,SNR=55
JMBI   JAMBI            26.82 281   P     P     09 11 48.0 +2.9
       comp=Z,5µmcomp=Z,292nm,0.8s
KLBR   Kellerberrin     26.86 204   P     P     09 11 45.5 +0.2
       baz=27,SNR=49
STKA   Stephens Creek   26.88 158   P     P     09 11 45.0 -0.3
       comp=Z,78nm,0.8s,baz=330,slow=8.9,SNR=106
STKA                                S     S     09 16 17.8 +2.1
       comp=Z,61nm,0.8s,baz=116,slow=19,SNR=2.0
STKA                                LR    LR    09 23 28.5
       comp=Z,9µm,19.9s,baz=331,slow=38
STKA   Stephens Creek   26.88 158   P     P     09 11 45.4  0.0
STKA                                pmax  pmax
       comp=Z,70nm,0.9s
STKA   Stephens Creek   26.88 158   P     P     09 11 45.4  0.0
EIDS   Eidsvold         27.09 134   P     P     09 11 45.9 -1.5
       baz=27,SNR=5.7
EIDS   Eidsvold         27.09 134   P     P     09 11 45.4 -2.0
HTT    Hallett          27.43 164   P     P     09 11 50.0 -0.4
       baz=28,SNR=45
HTT    Hallett          27.43 164  ⇓P     P     09 11 50.3 -0.1
KSI    Kapahiang        27.49 276   P     P     09 11 52.0 +0.8
MYKOM  Kota Tinggi      27.55 288   P     P     09 11 52.7 +1.1
MYKOM                               IAmb  IAmb  09 11 57.1
       comp=Z,248nm,0.7s
MUN    Mundaring        27.84 206   P     P     09 11 54.6 +0.6
       baz=28,SNR=25
MASI   Maura Aman, Be   27.91 277   P     P     09 11 59.1 +4.2
       comp=Z,7µmcomp=Z,10µmcomp=Z,390nm,1.0s
CMSA   Cobar Meteorol   28.35 151   P     P     09 11 58.6 +0.1
       baz=28,SNR=101
JRMM   Jerantut         29.57 291   P     P     09 12 10.0 +0.5
HNR    Honiara          29.73  96   P     P     09 12 09.3 -1.7
       comp=Z,104nm,0.7s,baz=250,slow=2.4,SNR=6.3
HNR                                 S     S     09 16 56.9 -4.0
       comp=Z,69nm,0.9s,baz=145,slow=10,SNR=1.5
HNR                                 LR    LR    09 24 33.3
       comp=Z,3µm,20.6s,baz=274,slow=37
HNR    Honiara          29.73  96   P     P     09 12 10.9 -0.1
HNR                                 pmax  pmax
       comp=Z,307nm,1.0s
HNR    Honiara          29.73  96   P     P     09 12 10.9 -0.1
HNR                                 IAmb  IAmb  09 12 52.5
       comp=Z,307nm,1.0s
BKNI   Bangkinang       29.82 283   P     P     09 12 12.6 +0.8
       comp=Z,9µmcomp=Z,12µmcomp=Z,514nm,1.0s
BKNI   Bangkinang       29.82 283   P     P     09 12 11.6 -0.2
BKNI                                IAmb  IAmb  09 12 16.3
       comp=Z,452nm,1.0s
PDSI   Padang           30.08 281   P     P     09 12 16.2 +2.0
       comp=Z,5µmcomp=Z,42nm,0.7s
ARMA   Armidale         30.79 142   P     P     09 12 21.5 +1.3
       baz=31,SNR=11
ARMA   Armidale         30.79 142  ⇑P     P     09 12 21.6 +1.3
ARMA   Armidale         30.79 142   P     P     09 12 20.7 +0.4
ARMA                                IAmb  IAmb  09 13 23.3
       comp=Z,542nm,1.9s
TWG    Pinlang          31.04 344   P     P     09 12 21.8 -0.7
IPM    Ipoh             31.13 291   P     P     09 12 23.2 -0.2
ARPS   Mount Arapiles   31.40 162   P     P     09 12 25.8 +0.4
       baz=31,SNR=51
PATS   Pohnpei          31.49  64   P     P     09 12 28.9 +2.4
       baz=32,SNR=6.3
PATS   Pohnpei          31.49  64   P     P     09 12 26.7 +0.2
YULB   Yu-li            31.53 345   P     P     09 12 26.1 -0.6
TPUB   Ta-pu            31.62 343   P     P     09 12 27.4 -0.2
KULM   Kulim            31.78 292  ⇑P     P     09 12 28.6 -0.4
KULM   Kulim            31.78 292   P     P     09 12 29.0 -0.1
KULM   Kulim            31.78 292   P     P     09 12 28.0 -1.1
KULM                                IAmb  IAmb  09 12 33.6
       comp=Z,262nm,1.4s
YNG    Young            31.91 150   P     P     09 12 30.6 +0.6
       baz=32,SNR=39
SSLB   Suanglung        31.99 344   P     P     09 12 29.8 -1.1
YOJ    Yonaguni jima    32.15 348   P     P     09 12 33.0 +0.8
YOJ                                 pmax  pmax
       comp=Z,150nm,0.8s
YOJ    Yonaguni jima    32.15 348   P     P     09 12 33.0 +0.8
YOJ                                 IAmb  IAmb  09 12 34.5
       comp=Z,150nm,0.8s
MGCD   Mangrove Creek   32.49 146   P     P     09 12 36.7 +1.6
       baz=32,SNR=7.5
PSI    Prapat           32.54 287   LR    LR    09 28 58.1
       comp=Z,4µm,19.5s,baz=116,slow=42
YHNB   Yeheng           32.73 345   P     P     09 12 40.0 +2.7
QIZ    Qiongzhong       32.73 323   P     P     09 12 38.1 +0.8
QIZ                                 pP    pwP   09 13 01.3 +1.0
QIZ                                 S     S     09 17 44.8 -2.8
QIZ                                 PcS   PcS   09 19 05.0 -1.6
QIZ                                 pmax  pmax
       comp=Z,86nm,1.2s
QIZ                                 pmax  pmax
       comp=Z,1µm,4.8s
QIZ                                 LR    LR
       comp=Z,5µm,17.8s
QIZ                                 LR    LR
       comp=Z,4µm,22.5s
QIZ                                 LR    LR
       comp=Z,4µm,37.3s
UBPT   Khong Chiam      32.97 313  ⇑P     P     09 12 39.5 +0.1
UBPT   Khong Chiam      32.97 313   P     P     09 12 39.7 +0.2
CAN    Canberra         33.03 151   P     P     09 12 40.5 +0.7
CAN                                 pmax  pmax
       comp=Z,315nm,1.3s
CAN    Canberra         33.03 151  ⇑P     P     09 12 40.6 +0.7
CAN    Canberra         33.03 151   P     P     09 12 40.5 +0.7
CAN                                 IAmb  IAmb  09 13 45.7
       comp=Z,315nm,1.3s
TSI    Tuntungan        33.10 288   P     P     09 12 44.1 +3.5
       comp=Z,9µmcomp=Z,164nm,0.5s
CNB    Canberra Magne   33.20 150   P     P     09 12 42.1 +0.8
       baz=33,SNR=7.4
TOO    Toolangi         33.40 157   P     P     09 12 44.3 +1.4
       baz=33,SNR=21
TOO    Toolangi         33.40 157   P     P     09 12 43.2 +0.2
TOO                                 pmax  pmax
       comp=Z,170nm,1.1s
TOO    Toolangi         33.40 157  ⇑P     P     09 12 44.3 +1.4
TOO    Toolangi         33.40 157   P     P     09 12 43.2 +0.2
TOO                                 IAmb  IAmb  09 13 51.0
       comp=Z,170nm,1.1s
KNMB   Chin-men Tao     33.40 341   P     P     09 12 42.7 -0.3
KNMB                                IAmb  IAmb  09 12 45.5
       comp=Z,216nm,0.9s
GSI    Gunungsitoli     33.41 283  ⇑P     P     09 12 41.7 -1.7
GSI                                ⇓P     PcP   09 15 26.1 +3.0
GSI    Gunungsitoli     33.41 283   P     P     09 12 43.3 -0.1
QZH    Quanzhou         33.78 341⇑iP     P     09 12 43.4 -2.9
QZH                                 pP    pP    09 13 05.6 -0.6
QZH                                 S     S     09 17 56.9 -6.7
QZH                                 pmax  pmax
       comp=Z,53nm,0.5s
QZH                                 pmax  pmax
       comp=Z,720nm,7.7s
QZH                                 LR    LR
       comp=Z,1µm,17.5s
QZH                                 LR    LR
       comp=Z,2µm,19.4s
QZH                                 LR    LR
       comp=Z,2µm,19.4s
JOW    Kunigami         33.83 357  ⇑P     P     09 12 47.1 +0.5
JOW    Kunigami         33.83 357   P     P     09 12 47.2 +0.5
JOW    Kunigami         33.83 357   P     P     09 12 50.2 +3.5
SRIT   Nakonsritamara   34.09 297   P     P     09 12 48.3 -0.9
SRIT                                IAmb  IAmb  09 12 54.2
       comp=Z,130nm,0.7s
MILA   Mila             34.51 152   P     P     09 12 54.3 +1.7
       baz=34,SNR=5.7
LHMI   Lhok Sumawe      35.19 290   P     P     09 12 57.8 -0.9
JCJ    Chichijima       36.04  19   P     P     09 13 04.8 -1.0
SANVU  Saraoutou        37.36 106  ⇓P     P     09 13 18.4 +1.1
SANVU  Saraoutou        37.36 106   P     P     09 13 18.0 +0.8
DZM    Mont Dzumac      38.14 117  eP     P     09 13 24.3 +0.5
       comp=Z,134nm,1.4s
DZM                                eS     S     09 19 13.5 +2.8
       comp=Z,2µm,24.7s
DZM                                eLQ    LQ    09 22 13.8
       comp=Z,5µm,26.2s
DZM                                eLR    LR    09 23 52.8
       comp=Z,12µm,35.2s
DZM    Mont Dzumac      38.14 117  ⇓P     P     09 13 24.5 +0.7
DZM    Mont Dzumac      38.14 117   P     P     09 13 24.2 +0.5
DZM                                 IAmb  IAmb  09 13 51.8
       comp=Z,224nm,1.8s
SLVN   Son La           38.17 318   P     P     09 13 24.1 +0.1
JSU    Suzuyama         38.45   1  ⇓P     P     09 13 26.4 +0.3
JSU                                ⇓P     PcP   09 15 40.1 +2.4
JSU    Suzuyama         38.45   1   P     P     09 13 26.4 +0.3
JSU                                 IAmb  IAmb  09 13 29.2
       comp=Z,201nm,0.9s
OUENC  Ouen Island, N   38.59 117   P     P     09 13 29.0 +1.5
OUENC                               IAmb  IAmb  09 13 54.4
       comp=Z,267nm,1.8s
SSE    Sheshan          38.95 348   P     P     09 13 31.5 +1.2
SSE                                 S     S     09 19 19.6 -2.8
SSE                                 pmax  pmax
       comp=Z,29nm,0.7s
SSE                                 pmax  pmax
       comp=Z,510nm,10.0s
SSE                                 LR    LR
       comp=Z,470nm,18.7s
SSE                                 LR    LR
       comp=Z,1µm,16.4s
PINNC  Pines Island,    39.18 117   P     P     09 13 33.5 +1.1
PINNC                               IAmb  IAmb  09 14 05.8
       comp=Z,133nm,1.0s
MARNC  Mare, Loyalty    39.38 115   P     P     09 13 35.4 +1.2
CMAR   Chiang Mai Arr   39.82 310   P     P     09 13 37.1 -0.7
       comp=Z,199nm,0.6s,baz=139,slow=7.1,SNR=293
CMAR                                PcP   PcP   09 15 44.5 +2.2
       comp=Z,87nm,0.9s,baz=162,slow=3.0,SNR=16
CMAR                                ScP   ScP   09 19 23.6 +0.3
       comp=Z,16nm,0.9s,baz=152,slow=3.4,SNR=9.1
CMAR                                LR    LR    09 31 36.9
       comp=Z,3µm,20.9s,baz=164,slow=38
CMAR   Chiang Mai Arr   39.82 310   P     P     09 13 38.0 +0.3
CHTO   Chiang Mai       40.03 311   P     P     09 13 39.5  0.0
CHTO                                pmax  pmax
       comp=Z,385nm,0.8s
CHTO   Chiang Mai       40.03 311  ⇑P     P     09 13 39.5  0.0
CHTO   Chiang Mai       40.03 311   P     P     09 13 39.5  0.0
JNU    Nakatsue         40.06   1   P     P     09 13 40.3 +0.7
JNU                                 IAmb  IAmb  09 13 42.5
       comp=Z,232nm,1.1s
JNU    Nakatsue         40.06   1   P     P     09 13 41.8 +2.2
GYA    Guiyang          40.35 327⇑iP     P     09 13 43.8 +1.6
GYA                                 sP    sP    09 14 10.3 -2.0
GYA                                 PP    PP    09 15 16.9  0.0
GYA                                 PcP   PcP   09 15 46.8 +2.8
GYA                                 ScP   ScP   09 19 26.6 +1.2
GYA                                 S     S     09 19 42.5 -1.3
GYA                                 pmax  pmax
       comp=Z,150nm,1.1s
GYA                                 pmax  pmax
       comp=Z,1µm,5.8s
GYA                                 LR    LR
       comp=Z,2µm,15.3s
GYA                                 LR    LR
       comp=Z,940nm,13.7s
GYA                                 LR    LR
       comp=Z,3µm,15.2s
WHN    Wuhan            40.37 339  ⇓P     P     09 13 43.8 +1.7
WHN                                 S     S     09 19 38.8 -4.8
WHN                                 pmax  pmax
       comp=Z,780nm,1.0s
WHN                                 LR    LR
       comp=Z,5µm,16.1s
WHN                                 LR    LR
       comp=Z,7µm,13.2s
WHN                                 LR    LR
       comp=Z,22µm,51.6s
NJ2    Nanjing          40.41 345⇑iP     P     09 13 41.9 -0.5
NJ2                                 PcP   PcP   09 15 46.8 +2.9
NJ2                                 ScP   ScP   09 19 25.0 -0.3
NJ2                                 S     S     09 19 42.3 -1.8
NJ2                                 ScS   ScS   09 23 39.0 -0.5
NJ2                                 pmax  pmax
       comp=Z,150nm,1.0s
NJ2                                 pmax  pmax
       comp=Z,1µm,3.5s
NJ2                                 LR    LR
       comp=Z,2µm,16.1s
NJ2                                 LR    LR
       comp=Z,1µm,13.7s
NJ2                                 LR    LR
       comp=Z,2µm,19.4s
HALB   Hallimjungang-   40.49 355   P     P     09 13 46.0 +3.0
       SNR=7.3
JMN    Monobe           40.83   5  ⇓P     P     09 13 46.5 +0.6
JMN    Monobe           40.83   5   P     P     09 13 46.9 +1.1
JMN                                 IAmb  IAmb  09 13 49.5
       comp=Z,239nm,1.1s
CJD    Chujado          41.04 355   P     P     09 13 50.0 +2.5
       SNR=13
JTU    Tsushima         41.46 359   P     P     09 13 52.3 +1.4
KSJDO  Jindo            41.54 355   P     P     09 13 54.4 +2.7
       SNR=16
HANB   Haenam           41.61 356   P     P     09 13 54.0 +1.8
       SNR=11
KMI    Kunming          41.63 321  ⇑P     P     09 13 53.3 +0.5
KMI                                 pP    pP    09 14 11.9 -1.7
KMI                                 sP    sP    09 14 21.0 -2.7
KMI                                 PP    PP    09 15 29.8 -1.0
KMI                                 PcP   PcP   09 15 51.8 +3.5
KMI                                 S     S     09 19 59.8 -3.1
KMI                                 SS    SS    09 23 12.9 +1.3
KMI                                 pmax  pmax
       comp=Z,130nm,1.2s
KMI                                 pmax  pmax
       comp=Z,1µm,5.9s
KMI                                 LR    LR
       comp=Z,1µm,22.1s
KMI                                 LR    LR
       comp=Z,1µm,20.2s
KMI                                 LR    LR
       comp=Z,2µm,20.8s
JHS    Saijyo           42.03   4  ⇑P     P     09 13 56.8 +1.1
JHS    Saijyo           42.03   4   P     P     09 13 56.5 +0.8
JHS                                 IAmb  IAmb  09 13 59.2
       comp=Z,298nm,1.2s
KSBSA  Busan_acc        42.04 359   P     P     09 13 58.5 +2.8
       SNR=6.8
KSMAS  Masan            42.12 358   P     P     09 13 58.5 +2.2
       SNR=10
KSKWJ  Gwangju          42.18 356   P     P     09 13 59.0 +2.1
       SNR=28
KSBUS  Busan            42.18 359   P     P     09 13 59.4 +2.6
       SNR=9.4
EURB   Uiryeong-eup     42.28 358   P     P     09 13 60.0 +2.4
       SNR=10.0
SUCA   Sunchang         42.38 357   P     P     09 14 01.1 +2.6
       SNR=17
NAWB   Namwon           42.42 357   P     P     09 14 01.0 +2.2
       SNR=13
HAMB   Hamyang          42.49 357   P     P     09 14 01.0 +1.6
       SNR=26
JWT    Wachi            42.52   7  ⇑P     P     09 13 59.8 +0.2
JWT    Wachi            42.52   7   P     P     09 13 59.9 +0.3
JWT                                 IAmb  IAmb  09 14 03.0
       comp=Z,280nm,0.8s
KSKCH  Geochang         42.58 358   P     P     09 14 02.8 +2.7
       SNR=14
INU    Inuyama          42.79   8  ⇓P     P     09 14 02.8 +1.0
INU    Inuyama          42.79   8   P     P     09 14 02.5 +0.8
INU    Inuyama          42.79   8   P     P     09 14 04.5 +2.7
JGF    Kuroka           43.09   9  ⇓P     P     09 14 06.0 +1.7
TJN    Taejon           43.37 357ceP     P     09 14 07.0 +0.6
TJN    Taejon           43.37 357   P     P     09 14 09.6 +3.2
MJAR   Matsushiro Arr   44.15  10   P     P     09 14 11.1 -1.6
       comp=Z,38nm,0.7s,baz=181,slow=10,SNR=57
MJAR                                PcP   PP    09 15 57.2 -0.1
       comp=Z,25nm,0.9s,baz=203,slow=3.4,SNR=4.8
MJAR                                ScP   ScP   09 19 40.3  0.0
       comp=Z,27nm,0.7s,baz=169,slow=5.7,SNR=21
MJAR   Matsushiro Arr   44.15  10   P     P     09 14 11.7 -1.0
MAJO   Matsushiro       44.15  10c iP     P     09 14 11.7 -1.0
MAJO                                pmax  pmax
       comp=Z,121nm,1.2s
MAJO                                MLR   MLR
       comp=Z,3µm,18.0s
MAJO   Matsushiro       44.15  10  ⇓P     P     09 14 11.8 -0.9
MAJO   Matsushiro       44.15  10   P     P     09 14 12.3 -0.4
MAJO   Matsushiro       44.15  10   P     P     09 14 13.3 +0.6
MAT    Matsushiro       44.15  10   P     P     09 14 11.1 -1.6
MAT                                 S     S     09 20 34.6 -4.5
MJB9   Matsu-Tunnel     44.15  10   P     P     09 14 12.3 -0.4
MJB9                                IAmb  IAmb  09 14 45.3
       comp=Z,113nm,0.8s
JYT    Yasato           44.21  12  ⇑P     P     09 14 12.8 -0.4
JYT    Yasato           44.21  12   P     P     09 14 13.1  0.0
JYT                                 IAmb  IAmb  09 14 15.8
       comp=Z,143nm,0.4s
KSAR   Wonju Array Be   44.41 358   P     P     09 14 15.2 +0.5
KSAR   Wonju Array Be   44.41 358   P     P     09 14 15.2 +0.5
KSRS   Korea Array      44.42 358   P     P     09 14 13.9 -0.9
       comp=Z,53nm,0.7s,baz=175,slow=9.0,SNR=134
KSRS                                PcP   PcP   09 15 58.6 +1.5
       comp=Z,38nm,0.8s,baz=189,slow=3.6,SNR=12
KSRS                                ScP   ScP   09 19 40.9 -0.3
       comp=Z,8.3nm,0.8s,baz=170,slow=4.5,SNR=7.2
KSRS                                S     S     09 20 41.7 -1.2
       comp=Z,1.0nm,0.4s,baz=236,slow=41,SNR=1.1
KSRS                                LR    LR    09 32 15.6
       comp=Z,1µm,19.5s,baz=157,slow=35
INCN   Inchon           44.52 356   P     P     09 14 17.3 +1.7
INCN                                pmax  pmax
       comp=Z,341nm,1.7s
INCN   Inchon           44.52 356   P     P     09 14 17.2 +1.7
INCN                                IAmb  IAmb  09 14 19.1
       comp=Z,341nm,1.7s
INCN   Inchon           44.52 356   P     P     09 14 18.2 +2.6
       comp=Z,123nm,1.3s
TIA    Tai'an           44.80 345  ⇓P     P     09 14 18.3 +0.4
TIA                                 pP    pwP   09 14 42.1 -0.1
TIA                                 PP    PP    09 16 08.4 +4.1
TIA                                 S     S     09 20 43.4 -5.1
TIA                                 ScS   ScS   09 24 05.9 -0.7
TIA                                 pmax  pmax
       comp=Z,80nm,1.1s
TIA                                 pmax  pmax
       comp=Z,960nm,11.8s
TIA                                 LR    LR
       comp=Z,820nm,20.4s
TIA                                 LR    LR
       comp=Z,2µm,24.7s
TIA                                 LR    LR
       comp=Z,2µm,24.3s
CD2    Chengdu          45.43 328  ⇓P     P     09 14 23.8 +0.8
CD2                                 PP    PP    09 16 10.8 -0.3
CD2                                 S     S     09 20 51.8 -6.1
CD2                                 sS    sS    09 21 33.4 +0.7
CD2                                 pmax  pmax
       comp=Z,320nm,0.7s
CD2                                 pmax  pmax
       comp=Z,2µm,7.5s
CD2                                 LR    LR
       comp=Z,5µm,26.0s
CD2                                 LR    LR
       comp=Z,6µm,17.7s
CD2                                 LR    LR
       comp=Z,4µm,17.2s
XAN    Xi'an            45.57 335  ⇑P     P     09 14 23.1 -1.0
XAN                                 pP    pP    09 14 46.3 +1.8
XAN                                 sP    sP    09 14 56.8 +2.5
XAN                                 PcP   PcP   09 16 03.3 +2.0
XAN                                 PP    PP    09 16 11.3 -1.3
XAN                                 ScP   ScP   09 19 46.3 +0.1
XAN                                 PcS   PcS   09 19 54.8 -0.8
XAN                                 S     S     09 20 52.6 -7.3
XAN                                 ScS   ScS   09 24 09.5 -2.3
XAN                                 pmax  pmax
       comp=Z,640nm,1.1s
XAN                                 pmax  pmax
       comp=Z,2µm,9.3s
XAN                                 LR    LR
       comp=Z,2µm,19.2s
XAN                                 LR    LR
       comp=Z,1µm,20.6s
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XAN				LR	LR		
	comp=Z,3µm,20.6s						
JSD	**Sado**	**45.62**	**9**	⇓P	**P**	**09 14 25.4**	**+1.1**
JSD	**Sado**	**45.62**	**9**	P	**P**	**09 14 25.1**	**+0.8**
JMM	**Marumori**	**45.91**	**12**	⇑P	**P**	**09 14 27.3**	**+0.7**
JMM	**Marumori**	**45.91**	**12**	P	**P**	**09 14 27.7**	**+1.1**
JMM				IAmb	IAmb	09 15 08.5	
	comp=Z,238nm,1.0s						
DL2	**Dalian**	**46.48**	**351**	P	**P**	**09 14 32.3**	**+1.3**
DL2				sP	**sP**	**09 15 02.4**	**+0.5**
DL2				PcP	**PcP**	**09 16 06.5**	**+2.3**
DL2				S	**S**	**09 21 09.4**	**-3.1**
DL2				pmax	pmax		
	comp=Z,110nm,1.0s						
DL2				pmax	pmax		
	comp=Z,720nm,5.0s						
IMP	**Imphal**	**47.36**	**313**	*e*P	**P**	**09 14 38.4**	**+0.2**
IMP				IAmb	IAmb	09 14 40.7	
	comp=Z,70nm,0.2s						
IMP				*i* x	x	09 16 09.1	
TIY	**Taiyuan**	**47.55**	**341**	⇑P	**P**	**09 14 41.0**	**+1.5**
TIY				S	**S**	**09 21 20.6**	**-7.4**
TIY				pmax	pmax		
	comp=Z,200nm,1.0s						
TIY				pmax	pmax		
	comp=Z,940nm,3.6s						
TIY				LR	LR		
	comp=Z,970nm,13.1s						
TIY				LR	LR		
	comp=Z,520nm,11.9s						
TIY				LR	LR		
	comp=Z,3µm,35.7s						
LKP	**Lekhapani**	**47.61**	**317**	*e*P	**P**	**09 14 40.0**	**-0.1**
LKP				IAmb	IAmb	09 14 42.1	
	comp=Z,76nm,0.7s						
LKP				*i* PCP	**PcP**	**09 16 09.5**	**+1.0**
KOHI	**KOHIMA**	**47.79**	**314**	*e*P	**P**	**09 14 40.5**	**-1.1**
MOKO	**MOKOCHONG**	**47.88**	**315**	*e*P	**P**	**09 14 42.3**	**0.0**
MSVF	**Nonsavu**	**47.97**	**107**	⇑*e*P	**P**	**09 14 45.0**	**+1.8**
MSVF				pmax	pmax		
	comp=Z,130nm,2.2s						
MSVF				MLR	MLR		
	comp=Z,2µm,16.0s						
SILR	**SILCHAR**	**48.16**	**312**	*e*P	**P**	**09 14 46.2**	**+1.8**
BJI	**Beijing**	**48.66**	**346**	P	**P**	**09 14 48.1**	**+0.2**
BJI				pP	**pP**	**09 15 07.3**	**-1.1**
BJI				sP	**sP**	**09 15 16.5**	**-1.5**
BJI				PcP	**PcP**	**09 16 15.3**	**+3.3**
BJI				S	**S**	**09 21 39.6**	**-3.8**
BJI				sS	**sS**	**09 22 17.4**	**-1.2**
BJI				ScS	**ScS**	**09 24 33.9**	**+2.2**
BJI				pmax	pmax		
	comp=Z,360nm,0.9s						
BJI				pmax	pmax		
	comp=Z,1µm,6.2s						
BJI				LR	LR		
	comp=Z,940nm,18.6s						
BJI				LR	LR		
	comp=Z,2µm,20.6s						
BJI				LR	LR		
	comp=Z,2µm,28.4s						
FUNA	**Funafuti**	**48.74**	**95**	P	**P**	**09 14 49.6**	**+0.5**
FUNA				IAmb	IAmb	09 15 36.1	
	comp=Z,137nm,1.1s						
OUZ	**Omahuta**	**48.75**	**131**	⇓P	**P**	**09 14 51.0**	**+2.2**
JTM	**Tenmabayashi**	**48.78**	**11**	⇑P	**P**	**09 14 50.0**	**+1.2**
SNY	**Shenyang**	**49.10**	**354**	⇑P	**P**	**09 14 51.8**	**+0.6**
SNY				pP	**pwP**	**09 15 16.3**	**-1.4**
SNY				ScS	ScS	09 24 34.3	-0.3
SNY				SS	**SS**	**09 25 16.8**	**-5.2**
SNY				pmax	pmax		
	comp=Z,100nm,0.8s						
SNY				LR	LR		
	comp=Z,1µm,17.0s						
SNY				LR	LR		
	comp=Z,930nm,22.5s						
SNY				LR	LR		
	comp=Z,2µm,20.1s						
SHL	**Shillong**	**49.29**	**313**	P	**P**	**09 14 52.8**	**-0.5**
SHL				pmax	pmax		
	comp=Z,184nm,0.8s						
SHL	**Shillong**	**49.29**	**313**	*e*P	**P**	**09 14 51.2**	**-2.1**
SHL	**Shillong**	**49.29**	**313**	P	**P**	**09 14 54.0**	**+0.7**
	SNR=59						
SHL	**Shillong**	**49.29**	**313**	P	**P**	**09 14 52.8**	**-0.5**
SHL				IAmb	IAmb	09 16 18.2	
	comp=Z,184nm,0.8s						
MSHR	**Mys Shultsa**	**49.51**	**1**	*de*P	**P**	**09 14 55.9**	**+1.6**
MSHR				pmax	pmax		
	comp=Z,170nm,0.8s						
MSHR				MLR	MLR		
	comp=Z,861nm,18.0s						
LZH	**Lanzhou**	**49.53**	**332**	*e*P	**P**	**09 14 55.3**	**+0.4**
LZH				pP	pP	09 15 12.5	-3.2
LZH				PcP	**PcP**	**09 16 18.9**	**+3.4**
LZH				ScP	**ScP**	**09 20 04.0**	**+1.0**
LZH				S	**S**	**09 21 52.8**	**-3.4**
LZH				SS	**SS**	**09 25 30.5**	**+0.9**
LZH				pmax	pmax		
	comp=Z,610nm,1.0s						
LZH				pmax	pmax		
	comp=Z,2µm,4.1s						
LZH				LR	LR		
	comp=Z,4µm,15.4s						
LZH				LR	LR		
	comp=Z,3µm,17.1s						
LZH				LR	LR		
	comp=Z,3µm,17.9s						
VLA	**Vladivostok**	**50.06**	**2**	*c i*P	**P**	**09 15 00.3**	**+1.8**
VLA				pmax	pmax		
	comp=Z,213nm,1.0s						
QRZ	**Quartz Range**	**50.55**	**138**	IAmb	IAmb	09 15 30.3	
	comp=Z,125nm,1.0s						
HHC	**Hu-ho-hao-te**	**50.69**	**342**	*e*P	**P**	**09 15 03.6**	**+0.2**
HHC				S	**S**	**09 22 10.3**	**-1.6**
HHC				ScS	**ScS**	**09 24 41.3**	**-4.5**
HHC				pmax	pmax		
	comp=Z,200nm,1.1s						
HHC				pmax	pmax		
	comp=Z,2µm,5.0s						
HHC				LR	LR		
	comp=Z,840nm,17.4s						
HHC				LR	LR		
	comp=Z,2µm,17.8s						
HHC				LR	LR		
	comp=Z,3µm,20.6s						
JEW	**Eniwo**	**50.84**	**11**	⇑P	**P**	**09 15 06.8**	**+2.4**
CN2	**Changchun**	**50.88**	**356**	*e*P	**P**	**09 15 05.3**	**+0.6**
CN2				*e*S	**S**	**09 22 09.9**	**-4.4**
CN2				pmax	pmax		
	comp=Z,800nm,12.4s						
CN2				LR	LR		
	comp=Z,1µm,22.0s						
CN2				LR	LR		
	comp=Z,1µm,22.0s						
CN2				LR	LR		
	comp=Z,1µm,21.0s						
BTO	**Baotou**	**50.96**	**340**	*e*P	**P**	**09 15 04.1**	**-1.4**
BTO				S	**S**	**09 22 14.6**	**-1.1**
BTO				LR	LR		
	comp=Z,3µm,22.6s						
BTO				LR	LR		
	comp=Z,4µm,23.0s						
LBZ	**Lake Benmore**	**50.97**	**143**	P	**P**	**09 15 06.0**	**+0.5**
LBZ				IAmb	IAmb	09 15 30.2	
	comp=Z,124nm,1.2s						
RPZ	**Rata Peaks**	**51.12**	**142**	P	**P**	**09 15 07.7**	**+1.1**
RPZ				IAmb	IAmb	09 15 36.7	
	comp=Z,204nm,1.2s						
USA0B	**Ussuriysk Arra**	**51.15**	**2**	IAmb	IAmb	09 15 10.0	
	comp=Z,258nm,1.4s						
USRK	**Ussuriysk Ar.**	**51.15**	**2**	P	**P**	**09 15 06.4**	**-0.3**
	comp=Z,67nm,0.6s,baz=186,slow=7.0,SNR=81						
USRK				ScP	**ScP**	**09 20 09.4**	**-0.1**
	comp=Z,18nm,0.9s,baz=202,slow=4.3,SNR=7.3						
USRK				S	**S**	**09 22 15.6**	**-2.3**
	comp=Z,16nm,1.2s,baz=188,slow=12,SNR=5.2						
USRK				ScS	**ScS**	**09 24 49.2**	**+0.8**
	comp=Z,1.1nm,0.6s,baz=154,slow=39,SNR=1.9						
USRK				LR	LR	09 35 47.9	
	comp=Z,1µm,21.2s,baz=166,slow=35						
USRK				PKP2ab		09 46 32.7	
	comp=Z,3.7nm,0.9s,baz=340,slow=5.1,SNR=4.5						
USRK	**Ussuriysk Ar.**	**51.15**	**2**	P	**P**	**09 15 06.8**	**+0.2**
PALK	**Pallekele**	**51.20**	**285**	ScP	**ScP**	**09 20 10.6**	**+0.1**
	comp=Z,5.7nm,0.7s,baz=226,slow=1.3,SNR=3.8						
PALK	**Pallekele**	**51.20**	**285**	P	**P**	**09 15 06.2**	**-1.5**
PALK				pmax	pmax		
	comp=Z,134nm,1.1s						
PALK	**Pallekele**	**51.20**	**285**	P	**P**	**09 15 08.5**	**+0.8**
PALK	**Pallekele**	**51.20**	**285**	⇑P	**P**	**09 15 07.3**	**-0.4**
PALK	**Pallekele**	**51.20**	**285**	P	**P**	**09 15 06.2**	**-1.5**
PALK				IAmb	IAmb	09 16 26.4	
	comp=Z,134nm,1.1s						
THZ	**Tophouse**	**51.26**	**139**	P	**P**	**09 15 08.7**	**+0.9**
MDJ	**Mudanjiang**	**51.53**	**360**	P	**P**	**09 15 09.5**	**-0.1**
MDJ				S	**S**	**09 22 22.8**	**-0.4**
MDJ				ScS	**ScS**	**09 24 49.8**	**-1.4**
MDJ				SS	**SS**	**09 25 53.8**	**-6.9**
MDJ				pmax	pmax		
	comp=Z,43nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,980nm,5.5s						
MDJ				LR	LR		
	comp=Z,1µm,19.6s						
MDJ				LR	LR		
	comp=Z,790nm,18.6s						
MDJ				LR	LR		
	comp=Z,4µm,23.5s						
TUWZ	**Tuamarina**	**51.78**	**138**	P	**P**	**09 15 12.5**	**+1.0**
KHZ	**Kahutara**	**52.00**	**140**	⇑P	**P**	**09 15 13.5**	**+0.4**
JKA	**Kamikawa-asahi**	**52.29**	**11**	IAmb	IAmb	09 15 18.3	
	comp=Z,255nm,1.4s						
TEY	**Ternei**	**52.29**	**6**	⇓*e*P	**P**	**09 15 15.5**	**+0.3**
TEY				*e*		09 16 28.0	
TEY				pmax	pmax		
	comp=Z,20nm,1.7s						
TEY				pmax	pmax		
	comp=N,20nm,1.7s						
TEY				pmax	pmax		
	comp=Z,200nm,0.9s						
TEY				pmax	pmax		
	comp=Z,200nm,1.1s						
TEY				pmax	pmax		
	comp=E,20nm,0.5s						
TEY				pmax	pmax		
	comp=N,50nm,0.8s						
TEY				pmax	pmax		
	comp=Z,190nm,0.8s						
TEY				pmax	pmax		
	comp=Z,100nm,8.7s						
LSA	**Lhasa**	**52.30**	**316**	P	**P**	**09 15 16.8**	**+0.7**
LSA				S	**S**	**09 22 32.0**	**-3.2**
LSA				pmax	pmax		
	comp=Z,270nm,0.9s						
LSA				LR	LR		
	comp=Z,4µm,26.3s						
LSA				LR	LR		
	comp=Z,3µm,28.5s						
LSA				LR	LR		
	comp=Z,5µm,31.3s						
URZ	**Urewera**	**52.57**	**133**	⇓P	**P**	**09 15 17.2**	**-0.2**
GTK	**Tadong**	**52.70**	**312**	*e*P	**P**	**09 15 19.3**	**+0.6**
MDRS	**Chennai**	**53.34**	**292**	*e*P	**P**	**09 15 22.1**	**-1.3**
ODAN	**Odare**	**53.35**	**311**	*e*P	**P**	**09 15 23.4**	**-0.2**
	comp=Z,459nm,0.5s						
TAPN	**Taplejung**	**53.38**	**312**	*e*P	**P**	**09 15 23.8**	**-0.1**
	comp=Z,541nm,0.4s						
RAMN	**Ramite**	**53.99**	**311**	*e*P	**P**	**09 15 28.7**	**+0.4**
	comp=Z,941nm,0.5s						
GTA	**Gaotai**	**54.10**	**331**	⇑P	**P**	**09 15 29.3**	**+0.5**
GTA				pP	pwP	09 15 54.3	-0.9
GTA				sP	sP	09 16 05.3	+6.3
GTA				PcP	**PcP**	**09 16 33.0**	**+0.5**
GTA				ScP	**ScP**	**09 20 23.5**	**+0.8**
GTA				S	**S**	**09 22 55.1**	**-3.6**
GTA				ScS	**ScS**	**09 25 09.3**	**-0.5**
GTA				SS	**SS**	**09 26 42.3**	**+0.6**
GTA				pmax	pmax		
	comp=Z,280nm,1.1s						
GTA				pmax	pmax		
	comp=Z,2µm,7.0s						
GTA				LR	LR		
	comp=Z,2µm,18.5s						
GTA				LR	LR		
	comp=Z,2µm,21.5s						
GTA				LR	LR		
	comp=Z,3µm,20.4s						
KUR	**Kuril'sk**	**54.57**	**15**	⇑*e*P	**P**	**09 15 33.7**	**+1.9**
KUR				pmax	pmax		
	comp=Z,449nm,1.2s						
KUR				MLR	MLR		
	comp=Z,1µm,21.0s						
JIRN	**Jiri**	**54.68**	**311**	*e*P	**P**	**09 15 33.4**	**-0.1**
	comp=Z,315nm,0.6s						
GUN	**Gumba**	**55.04**	**311**	*e*P	**P**	**09 15 36.0**	**-0.1**
	comp=Z,679nm,0.5s						
YSS	**Yuzh-Sakhalins**	**55.05**	**11**	*ce*P	**P**	**09 15 36.1**	**+0.8**
YSS				pmax	pmax		
	comp=Z,185nm,1.7s						
YSS	**Yuzh-Sakhalins**	**55.05**	**11**	⇑P	**P**	**09 15 36.6**	**+1.3**
YSS	**Yuzh-Sakhalins**	**55.05**	**11**	P	**P**	**09 15 36.0**	**+0.6**
YSS				IAmb	IAmb	09 15 41.0	
	comp=Z,69nm,0.5s						
TRD	**Trivandrum**	**55.10**	**286**	*e*P	**P**	**09 15 33.0**	**-3.3**
TRD				*i* x	x	09 18 57.1	
PKI	**Pulchoki**	**55.22**	**311**	*e*P	**P**	**09 15 37.0**	**-0.3**
	comp=Z,348nm,0.5s						
PKIN	**Phulchoki**	**55.23**	**311**	*e*P	**P**	**09 15 37.0**	**-0.3**
	comp=Z,275nm,0.5s						
KKN	**Kakani**	**55.43**	**311**	*e*P	**P**	**09 15 38.3**	**-0.4**
	comp=Z,308nm,0.5s						
DMN	**Daman**	**55.46**	**311**	*e*P	**P**	**09 15 38.7**	**-0.3**
	comp=Z,339nm,0.7s						
GKN	**Gorkha**	**56.02**	**311**	*e*P	**P**	**09 15 42.7**	**-0.2**
	comp=Z,663nm,0.6s						
KLR	**Kul'dur**	**56.17**	**1**	ScP	**ScP**	**09 20 30.4**	**-1.0**
KLR				S	**S**	**09 23 23.4**	**-2.3**
	comp=Z,12nm,1.2s,baz=22,slow=17,SNR=9.1						
KLR				ScS	**ScS**	**09 25 20.6**	**-3.2**
	comp=Z,2.8nm,1.0s,baz=19,slow=18,SNR=2.1						
KLR				LR	LR	09 38 33.4	
	comp=Z,1µm,21.3s,baz=182,slow=35						
KLR	**Kul'dur**	**56.17**	**1**	*ce*P	**P**	**09 15 44.1**	**+0.8**
KLR				pmax	pmax		
	comp=Z,154nm,1.1s						
HYB	**Hyderabad**	**56.37**	**296**	*i* P	**P**	**09 15 45.0**	**-0.4**
HYB				*e*PcP	**PcP**	**09 16 42.5**	**+0.9**
HYB	**Hyderabad**	**56.37**	**296**	*e*P	**P**	**09 15 45.4**	**0.0**
KOLN	**Koldanda**	**56.69**	**310**	*e*P	**P**	**09 15 47.4**	**-0.3**
	comp=Z,676nm,0.8s						
DANN	**Dangsing**	**56.86**	**311**	*e*P	**P**	**09 15 48.8**	**-0.2**
	comp=Z,224nm,0.5s						
UGL	**Uglegorsk**	**56.99**	**9**	*e*P	**P**	**09 15 51.7**	**+2.7**
UGL				*e*S	**S**	**09 23 36.3**	**-0.1**
UGL				pmax	pmax		
	comp=Z,500nm,1.2s						
UGL				smax	smax		
	comp=N,6µm,7.4s						
PYUN	**Piuthan**	**57.32**	**310**	*e*P	**P**	**09 15 52.4**	**+0.3**
	comp=N,836nm,0.6s						
KAAM	**Kaadhehdhoo**	**57.35**	**275**	P	**P**	**09 15 55.8**	**+3.5**
GRNR	**Gornyy**	**57.96**	**5**	⇑*i*P	**P**	**09 15 58.3**	**+2.4**
GRNR				*e*S	S	09 23 58.3	+9.1
GRNR				pmax	pmax		
	comp=N,20nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,50nm,1.1s						
GRNR				smax	smax		
	comp=N,5.0nm,0.9s						
KNTN	**Kanton**	**58.21**	**89**	P	**P**	**09 15 58.3**	**-0.1**
KNTN				IAmb	IAmb	09 16 41.0	
	comp=Z,115nm,1.1s						
ULN	**Ulaanbaatar**	**58.41**	**342**	*c i*P	**P**	**09 15 59.9**	**+0.6**
ULN				*i* *PP	**pP**	**09 16 16.7**	**-3.8**
ULN				pmax	pmax		
	comp=Z,308nm,0.8s						
ULN	**Ulaanbaatar**	**58.41**	**342**	⇑P	**P**	**09 16 00.0**	**+0.8**
ULN	**Ulaanbaatar**	**58.41**	**342**	P	**P**	**09 16 00.0**	**+0.8**
SONM	**Songino Array**	**58.58**	**342**	P	**P**	**09 16 00.7**	**+0.2**
	comp=Z,72nm,0.6s,baz=159,slow=7.8,SNR=217						
SONM				PcP	**PcP**	**09 16 51.2**	**+1.4**
	comp=Z,48nm,0.9s,baz=147,slow=3.7,SNR=5.3						
SONM				S	**S**	**09 23 55.9**	**-1.7**
	comp=Z,1.8nm,0.9s,baz=8.4,slow=40,SNR=2.1						
SONM				LR	LR	09 45 00.4	
	comp=Z,806nm,18.5s,baz=150,slow=40						
SONM				PKP2bc		09 45 49.2	
	comp=Z,4.7nm,1.0s,baz=323,slow=2.0,SNR=6.9						
SONM				P4KPbc		09 53 10.5	
	comp=Z,1.5nm,1.1s,baz=169,slow=1.5,SNR=3.6						
SONM	**Songino Array**	**58.58**	**342**	P	**P**	**09 16 01.1**	**+0.7**
SONM				IAmb	IAmb	09 16 04.4	
	comp=Z,234nm,1.3s						
TYV	**Tymovskoe**	**58.81**	**9**	*e*P	**P**	**09 16 03.3**	**+1.5**
TYV				*e*S	**S**	**09 24 01.2**	**+1.0**
TYV				pmax	pmax		
	comp=Z,75nm,1.0s						
TYV				pmax	pmax		
	comp=Z,800nm,3.6s						
TYV				smax	smax		
	comp=N,21nm,1.6s						
TYV				smax	smax		
	comp=N,4µm,4.5s						
TYV				smax	smax		
	comp=E,1µm,4.5s						
AKL	**Akola**	**58.94**	**299**	*e*P	**P**	**09 16 03.4**	**+0.1**
BHPL	**Bhopal**	**59.58**	**302**	*e*P	**P**	**09 16 07.3**	**-0.4**
BHPL				IAmb	IAmb	09 16 10.6	
	comp=Z,457nm,1.5s						
CASY	**Casey**	**60.55**	**189**	⇑P	**P**	**09 16 14.1**	**+0.5**
CASY	**Casey**	**60.55**	**189**	P	**P**	**09 16 14.0**	**+0.5**
CASY				IAmb	IAmb	09 16 15.9	
	comp=Z,70nm,0.8s						
ZEA	**Zeya**	**60.71**	**358**	*e*P	**P**	**09 16 14.4**	**-0.3**
ZEA				*e*		09 17 01.0	
ZEA				*e*S	**S**	**09 24 28.1**	**+3.6**
ZEA				*e*		09 25 56.4	
ZEA				pmax	pmax		
	comp=E,20nm,0.5s						
ZEA				pmax	pmax		
	comp=N,90nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,180nm,1.0s						
ZEA				pmax	pmax		
	comp=E,100nm,3.9s						
ZEA				pmax	pmax		
	comp=N,200nm,8.6s						
ZEA				pmax	pmax		
	comp=Z,400nm,8.5s						
ZEA				smax	smax		
	comp=E,500nm,13.8s						
NKL	**Nikolayevsk**	**60.76**	**7**	*e*P	**P**	**09 16 14.9**	**-0.1**
NKL				*e*S	**S**	**09 24 24.6**	**-0.5**
NKL				pmax	pmax		
	comp=N,1µm,1.0s						
NKL				pmax	pmax		
	comp=E,16nm,1.1s						
NKL				pmax	pmax		
	comp=Z,216nm,1.1s						
NKL				pmax	pmax		
	comp=Z,191nm,2.5s						
NKL				smax	smax		
	comp=N,591nm,0.8s						
NKL				smax	smax		
	comp=E,9.0nm,0.8s						
NKL				MLR	MLR		
	comp=E,113nm,19.0s						
NKL				MLR	MLR		
	comp=N,239nm,14.0s						
NKL				MLR	MLR		
	comp=Z,559nm,18.0s						
POO	**Poona**	**60.95**	**296**	*e*P	**P**	**09 16 15.7**	**-1.5**
POO				*i* x	x	09 20 03.1	
ZAK	**Zakamensk**	**61.80**	**341**	*e*P	**P**	**09 16 24.3**	**+1.9**
ZAK				pmax	pmax		
	comp=Z,111nm,1.2s						
SKR	**Severo-Kuril's**	**61.88**	**19**	⇓*e*P	**P**	**09 16 24.3**	**+1.6**
SONA	**Sohna**	**61.98**	**307**	*e*P	**P**	**09 16 23.9**	**+0.1**
AYAN	**Aya Nagar**	**62.05**	**307**	*e*P	**P**	**09 16 24.0**	**-0.3**
NDI	**New Delhi**	**62.07**	**308**	*e*P	**P**	**09 16 24.2**	**-0.2**
KUDL	**Kundal**	**62.41**	**307**	*e*P	**P**	**09 16 25.8**	**-0.9**
IRK	**Irkutsk**	**63.12**	**343**	*e*P	**P**	**09 16 32.6**	**+1.6**
IRK				pmax	pmax		
	comp=Z,258nm,2.2s						
AJM	**Ajmer**	**63.20**	**304**	*e*P	**P**	**09 16 31.1**	**-0.9**
SMLA	**Simla**	**63.22**	**310**	*e*P	**P**	**09 16 32.5**	**+0.5**
WMQ	**Urumqi**	**63.52**	**327**	P	**P**	**09 16 35.8**	**+1.9**
WMQ				ScP		09 20 58.8	
WMQ				S	**S**	**09 25 02.3**	**+1.9**
WMQ				ScS	**SKSac**	**09 26 15.4**	**-3.6**
WMQ				SS	**SS**	**09 29 13.0**	**+3.7**
WMQ				pmax	pmax		
	comp=Z,350nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,1µm,3.6s						
WMQ				LR	LR		
	comp=Z,2µm,19.7s						
WMQ				LR	LR		
	comp=Z,2µm,19.7s						
WMQ				LR	LR		
	comp=Z,2µm,21.1s						
MOY	**Mondy**	**63.66**	**340**	*e*P	**P**	**09 16 37.0**	**+2.3**
MOY				pmax	pmax		
	comp=Z,355nm,1.6s						
BHK	**Bhakra**	**63.92**	**310**	*e*P	**P**	**09 16 37.9**	**+1.2**
DHRM	**DHARAMSHALA**	**64.39**	**311**	*e*P	**P**	**09 16 39.7**	**-0.3**
PEA0B	**Petropavlovsk-**	**64.47**	**18**	P	**P**	**09 16 41.3**	**+1.4**
PEA0B				pmax	pmax		
	comp=Z,382nm,1.0s						
PEA0B	**Petropavlovsk-**	**64.47**	**18**	P	**P**	**09 16 41.3**	**+1.4**
PETK	**Petropavlovsk-**	**64.47**	**18**	P	**P**	**09 16 39.8**	**-0.1**
	comp=Z,251nm,0.9s,baz=94,slow=3.9,SNR=123						
PETK				LR	LR	09 42 54.1	
	comp=Z,778nm,21.0s,baz=215,slow=34						
PETK	**Petropavlovsk-**	**64.47**	**18**	P	**P**	**09 16 40.6**	**+0.7**
PETK	**Petropavlovsk-**	**64.47**	**18**	P	**P**	**09 16 40.6**	**+0.7**
PET	**Petropavlovsk**	**64.70**	**19**	*ce*P	**P**	**09 16 42.0**	**+0.7**
PET				pmax	pmax		
	comp=Z,435nm,1.3s						
PET				MLR	MLR		
	comp=Z,573nm,17.0s						
PET	**Petropavlovsk**	**64.70**	**19**	⇑P	**P**	**09 16 42.8**	**+1.5**
PET	**Petropavlovsk**	**64.70**	**19**	P	**P**	**09 16 42.2**	**+0.9**
BOD	**Bodaibo**	**66.05**	**351**	*e*P	**P**	**09 16 51.6**	**+1.7**
BOD				pmax	pmax		
	comp=Z,126nm,1.3s						
JASL	**Jaisalmer**	**66.45**	**303**	*e*P	**P**	**09 16 53.8**	**+0.6**
NIL	**Nilore**	**67.31**	**311**	P	**P**	**09 16 58.2**	**-0.3**
NIL				pmax	pmax		
	comp=Z,133nm,0.6s						
NIL	**Nilore**	**67.31**	**311**	P	**P**	**09 16 58.1**	**-0.3**
NIL				IAmb	IAmb	09 17 03.3	
	comp=Z,133nm,0.6s						
ZSN	**Zaisan**	**67.40**	**329**	*e*P	**P**	**09 16 58.9**	**+0.1**
	comp=Z,106nm,0.9s,baz=329						
ZSN				*i* S	**S**	**09 25 45.2**	**-2.3**
	comp=Z,130nm,4.6s,baz=329						
ZSN	**Zaisan**	**67.40**	**329**	*e*P	**P**	**09 16 58.8**	**+0.1**
ZSN				*i* S	**S**	**09 25 45.2**	**-2.3**
ZSN				pmax	pmax		
	comp=Z,106nm,0.9s						
ZSN				smax	smax		
	comp=E,130nm,4.6s						
DGZ	**Jazzator, Alta**	**67.63**	**332**	*c i*P	**P**	**09 17 00.7**	**+0.3**
DGZ				pmax	pmax		
	comp=Z,533nm,1.1s						
DGZ				MLR	MLR		
	comp=Z,1µm,18.0s						
PDGK	**Podgornoye**	**67.91**	**323**	P	**P**	**09 17 03.1**	**+0.9**
TARG	**Taragay, Kyrgy**	**68.08**	**320**	P	**P**	**09 17 04.4**	**+0.7**
UZB	**Uzynbulak**	**68.09**	**322**	⇑*i*P	**P**	**09 17 03.4**	**0.0**
	comp=Z,125nm,1.3s,baz=322						
UZB				*i* S	**S**	**09 25 53.3**	**-3.0**
	comp=Z,60nm,4.3s,baz=322						
UZB	**Uzynbulak**	**68.09**	**322**	*c i*P	**P**	**09 17 03.4**	**0.0**
UZB				*i* S	**S**	**09 25 53.3**	**-3.0**
UZB				pmax	pmax		
	comp=Z,125nm,1.3s						
UZB				smax	smax		
	comp=E,60nm,4.3s						
PRZ	**Przheval'sk**	**68.11**	**321**	P	**P**	**09 17 03.7**	**+0.1**
PRZ				pmax	pmax		
	comp=Z,369nm,1.3s						
PRZ	**Przheval'sk**	**68.11**	**321**	P	**P**	**09 17 03.7**	**+0.1**
KSH	**Kashi**	**68.12**	**318**	P	**P**	**09 17 04.1**	**+0.5**
KSH				S	**S**	**09 25 55.8**	**-0.9**
KSH				pmax	pmax		
	comp=Z,200nm,1.0s						
KSH				pmax	pmax		
	comp=Z,2µm,6.1s						
KSH				LR	LR		
	comp=Z,2µm,22.0s						
KSH				LR	LR		
	comp=Z,950nm,19.9s						
KSH				LR	LR		

	comp=Z,2μm,28.9s						
MK31	Makanchi Array	68.35	327	P	P	09 17 05.8	+1.1
MK31				pmax	pmax		
	comp=Z,514nm,0.8s						
MK31	Makanchi Array	68.35	327	P	P	09 17 05.8	+1.1
MKAR	Makanchi Array	68.35	327	P	P	09 17 05.0	+0.3
	comp=Z,520nm,0.6s,baz=118,slow=6.5,SNR=939						
MKAR				S	S	09 25 55.0	-3.9
	comp=Z,1.1nm,0.8s,baz=118,slow=9.7,SNR=1.0						
MKAR				PKP2bc		09 45 16.4	
	comp=Z,1.1nm,0.9s,baz=15,slow=5.0,SNR=5.0						
MKAR				LR	LR	09 48 17.7	
	comp=Z,603nm,21.8s,baz=122,slow=37						
MKAR				P4KPbc		09 53 52.8	
	comp=Z,0.6nm,0.6s,baz=108,slow=4.7,SNR=4.6						
SATY	Saty	68.42	322	⇑iP	P	09 17 06.0	+0.5
	comp=Z,113nm,0.9s,baz=322						
SATY				eS	S	09 25 58.5	-1.6
	comp=Z,86nm,5.0s,baz=322						
SATY	Saty	68.42	322	c iP	P	09 17 05.9	+0.5
SATY				eS	S	09 25 58.5	-1.6
SATY				pmax	pmax		
	comp=Z,113nm,0.9s						
SATY				smax	smax		
	comp=E,86nm,5.0s						
KPKS	Kokpek	68.48	322	⇑eP	P	09 17 05.8	+0.1
	comp=E,160nm,1.0s,baz=322						
KPKS				eS	S	09 25 58.3	-2.4
	baz=322						
KPKS	Kokpek	68.48	322	ceP	P	09 17 05.8	+0.1
KPKS				eS	S	09 25 58.3	-2.4
KPKS				pmax	pmax		
	comp=Z,160nm,1.0s						
MAKZ	Makanchi	68.53	327	P	P	09 17 06.7	+0.8
MAKZ				pmax	pmax		
	comp=Z,504nm,0.7s						
MAKZ	Makanchi	68.53	327	P	P	09 17 06.7	+0.8
MA2	Magadan	68.55	11	P	P	09 17 07.4	+1.7
MA2				pmax	pmax		
	comp=Z,336nm,1.0s						
MA2	Magadan	68.55	11	⇑P	P	09 17 06.7	+1.0
MA2	Magadan	68.55	11	P	P	09 17 07.4	+1.7
KDJ	Kajisay	68.68	320	P	P	09 17 08.8	+1.7
KDJ				pmax	pmax		
	comp=Z,108nm,0.9s						
KDJ	Kajisay	68.68	320	P	P	09 17 08.8	+1.7
KDJ				IAmb	IAmb	09 17 11.2	
	comp=Z,108nm,0.8s						
YAK	Yakutsk	68.98	360	S	S	09 26 03.6	-2.1
	comp=Z,4.2nm,0.4s,baz=148,slow=23,SNR=14						
YAK				LR	LR	09 45 50.7	
	comp=Z,550nm,21.8s,baz=168,slow=34						
YAK	Yakutsk	68.98	360	eP	P	09 17 08.3	0.0
YAK				e		09 17 34.0	
YAK				ePPP	PPP	09 21 20.3	
YAK				eS	S	09 26 03.9	-1.8
YAK				e*SS	pS	09 26 31.0	-0.7
YAK				e		09 26 58.7	
YAK				eSS	SS	09 30 34.1	+0.9
YAK				pmax	pmax		
	comp=Z,504nm,0.9s						
YAK				pmax	pmax		
	comp=E,41nm,1.3s						
YAK				pmax	pmax		
	comp=N,206nm,1.0s						
YAK				pmax	pmax		
	comp=Z,34nm,0.9s						
YAK				pmax	pmax		
	comp=E,38nm,1.0s						
YAK				pmax	pmax		
	comp=N,199nm,2.5s						
YAK				smax	smax		
	comp=E,870nm,2.4s						
YAK				smax	smax		
	comp=N,518nm,1.7s						
YAK	Yakutsk	68.98	360	⇑P	P	09 17 08.5	+0.2
YAK	Yakutsk	68.98	360	P	P	09 17 08.8	+0.5
TNSS	Tian-Shan	69.31	321	eP	P	09 17 11.5	+0.2
	baz=321						
MDOK	Medeo	69.31	321	i P	P	09 17 10.7	-0.3
	baz=321						
MDOK				i S	S	09 26 09.0	-1.8
	baz=321						
MDOK	Medeo	69.31	321	i P	P	09 17 10.6	-0.3
MDOK				i S	S	09 26 08.9	-1.8
ULHL	Ulahol	69.34	320	P	P	09 17 13.1	+1.8
	SNR=36						
KNDC	Almaty	69.39	321	P	P	09 17 13.4	+2.0
AAA	Alma-Ata	69.42	321	eP	P	09 17 11.6	0.0
	baz=321						
AAA				i S	S	09 26 10.7	-1.2
	baz=321						
AAA	Alma-Ata	69.42	321	eP	P	09 17 11.5	0.0
AAA				i S	S	09 26 10.6	-1.2
TDK	Taldyqorghan	69.50	324	eP	P	09 17 12.2	+0.2
	comp=N,585nm,1.5s,baz=324						
TDK				i S	S	09 26 09.9	-2.6
	baz=324						
TDK	Taldyqorghan	69.50	324	eP	P	09 17 12.1	+0.2
TDK				i S	S	09 26 09.9	-2.6
TDK				pmax	pmax		
	comp=Z,585nm,1.5s						
BOOM	Boomskoye usch	69.66	320	P	P	09 17 13.4	+0.2
BOOM				pmax	pmax		
	comp=Z,264nm,0.9s						
BOOM	Boomskoye usch	69.66	320	P	P	09 17 13.3	+0.2
BOOM				IAmb	IAmb	09 17 17.1	
	comp=Z,264nm,0.9s						
CHKK	Chushkaly	69.72	322	eP	P	09 17 14.1	+0.8
	baz=322						
KRAR	Krasnoyarsk	70.00	339	⇑iP	P	09 17 15.7	+1.0
TKM2	Tokmak 2	70.09	321	P	P	09 17 16.3	+0.5
	SNR=392						
TKM2	Tokmak 2	70.09	321	P	P	09 17 16.4	+0.5
KUU	Kurty	70.14	322	⇑iP	P	09 17 16.1	+0.3
	baz=322						
KUU				eS	S	09 26 18.4	-1.7
	baz=322						
KUU	Kurty	70.14	322	c iP	P	09 17 16.1	+0.3
KUU				eS	S	09 26 18.3	-1.8
KBK	Karagaybulak	70.37	320	P	P	09 17 19.9	+2.4
	SNR=136						
SMY	Shemya	70.42	27	P	P	09 17 19.8	+2.5
SMY				pmax	pmax		
	comp=Z,409nm,1.1s						
SMY	Shemya	70.42	27	⇓P	P	09 17 20.3	+3.0
SMY	Shemya	70.42	27	P	P	09 17 19.8	+2.5
UCH	Uchtor	70.43	320	P	P	09 17 20.9	+2.7
	SNR=249						
AAK	Ala-Archa	70.65	320	P	P	09 17 19.6	+0.4
	comp=Z,180nm,0.7s,baz=130,slow=5.1,SNR=245						
AAK				S	S	09 26 22.9	-3.5
	comp=Z,1.8nm,0.8s,baz=246,slow=20,SNR=1.3						
AAK	Ala-Archa	70.65	320	P	P	09 17 21.6	+2.4
	SNR=250						
AAK	Ala-Archa	70.65	320	i P	P	09 17 20.4	+1.2
	SNR=36						
AAK	Ala-Archa	70.65	320	P	P	09 17 21.2	+2.0
AAK	Ala-Archa	70.65	320	P	P	09 17 21.4	+2.2
AAK	Ala-Archa	70.65	320	P	P	09 17 20.0	+0.8
AAK				IAmb	IAmb	09 17 23.4	
	comp=Z,238nm,0.8s						
FRU1	Bishkek	70.65	320	P	P	09 17 20.4	+1.3
FRU1				pmax	pmax		
	comp=Z,110nm,0.6s						
FRU1	Bishkek	70.65	320	P	P	09 17 20.4	+1.3
FRU1				IAmb	IAmb	09 17 22.9	
	comp=Z,110nm,0.6s						
CHMS	Chumysh	70.67	320	P	P	09 17 20.9	+1.8
	SNR=57						
KBL	Kabul	70.85	310	P	P	09 17 20.9	+0.2
KBL				pmax	pmax		
	comp=Z,146nm,1.1s						
KBL	Kabul	70.85	310	P	P	09 17 20.9	+0.2
KBL				IAmb	IAmb	09 17 23.8	
	comp=Z,146nm,1.1s						
AML	Almayashu	70.92	319	P	P	09 17 23.6	+2.5
	SNR=349						
AML	Almayashu	70.92	319	i P	P	09 17 22.2	+1.1
	SNR=37						
DRK	Karamyk	70.94	316	P	P	09 17 22.0	+0.8
DRK				IAmb	IAmb	09 17 25.0	
	comp=Z,209nm,0.7s						
USP	Ospenovka	70.96	320	P	P	09 17 22.9	+1.9
	SNR=51						
EKS2	Erkin-Say	71.12	320	P	P	09 17 24.6	+2.6
	SNR=235						
SEM	Semipalatinsk	71.62	329	⇑iP	P	09 17 24.2	-0.7
	comp=Z,131nm,0.9s,baz=329						
SEM	Semipalatinsk	71.62	329	c iP	P	09 17 24.2	-0.7
SEM				pmax	pmax		
	comp=Z,131nm,0.9s						
ZAA0	Zalesovo Array	71.72	334	P	P	09 17 24.5	-0.7
ZAA0				IAmb	IAmb	09 17 27.8	
	comp=Z,264nm,0.9s						
ZALV	Zalesovo Beam	71.72	334	P	P	09 17 24.5	-0.7
	comp=Z,263nm,0.9s,baz=127,slow=5.6,SNR=300						
ZALV				S	S	09 26 31.9	-6.0
	comp=Z,19nm,1.0s,baz=126,slow=7.5,SNR=6.7						
ZALV				PKP2ab		09 45 09.2	
	comp=Z,1.1nm,0.8s,baz=258,slow=4.2,SNR=4.8						
ZALV				LR	LR	09 51 58.2	
	comp=Z,306nm,19.0s,baz=136,slow=38						
ZALV	Zalesovo Beam	71.72	334	P	P	09 17 25.6	+0.4
ZALV	Zalesovo Beam	71.72	334	P	P	09 17 25.6	+0.4
GAR	Garm	71.77	315	P	P	09 17 25.9	-0.1
BTK	Batken	71.88	316	P	P	09 17 27.2	+0.7
BTK				pmax	pmax		
	comp=Z,109nm,0.8s						
BTK	Batken	71.88	316	P	P	09 17 27.2	+0.7
BTK				IAmb	IAmb	09 17 29.7	
	comp=Z,109nm,0.8s						
SEY	Seymchan	71.96	11	S	S	09 26 40.0	-0.3
	comp=Z,5.9nm,1.2s,baz=298,slow=22,SNR=11						
SEY				ScS	ScS	09 27 24.0	+0.1
	comp=Z,1.2nm,0.8s,baz=192,slow=24,SNR=1.2						
VNDA	Vanda	72.30	173	P	P	09 17 28.3	0.0
	comp=Z,36nm,0.8s,baz=315,slow=6.6,SNR=165						
VNDA				S	S	09 26 40.2	-3.8
	comp=Z,1.4nm,1.0s,baz=296,slow=7.4,SNR=1.8						
VNDA				PKPPKP	P'P'df	09 45 15.1	+1.0
	comp=Z,3.9nm,1.1s,baz=245,slow=2.6,SNR=4.9						
VNDA				LR	LR	09 49 25.4	
	comp=Z,2μm,18.1s,baz=342,slow=36						
VNDA	Vanda	72.30	173	P	P	09 17 28.7	+0.4
VNDA				pmax	pmax		
	comp=Z,50nm,1.0s						
VNDA	Vanda	72.30	173	P	P	09 17 28.7	+0.4
CHGR	Chuyangaron	72.44	314	P	P	09 17 30.0	+0.1
KURBB	Kurchatov Arra	72.63	329	P	P	09 17 30.8	+0.1
	comp=Z,225nm,0.6s,baz=130,slow=5.0,SNR=313						
KURBB				S	S	09 26 44.2	-4.3
	comp=Z,0.7nm,0.3s,baz=126,slow=13,SNR=8.0						
KURBB	Kurchatov Arra	72.63	329	P	P	09 17 31.7	+1.0
KURK	Kurchatov	72.64	329	P	P	09 17 31.1	+0.4
KURK				pmax	pmax		
	comp=Z,679nm,1.3s						
KURK	Kurchatov	72.64	329	⇑P	P	09 17 30.9	+0.1
KURK				⇑P	P	09 17 31.0	+0.2
KURK	Kurchatov	72.64	329	P	P	09 17 31.1	+0.4
RER	Riviere de l'E	72.78	250	⇓P	P	09 17 35.3	+2.9
RER	Riviere de l'E	72.78	250	P	P	09 17 33.3	+0.9
DZA	Taraz	72.82	319	eP	P	09 17 32.1	+0.1
	baz=319						
DZA				eS	S	09 26 49.2	-1.8
	baz=319						
DZA	Taraz	72.82	319	eP	P	09 17 32.1	+0.1
DZA				eS	S	09 26 49.2	-1.8
KKAR	Karatay Array	73.45	319	P	P	09 17 36.0	+0.3
KKAR	Karatay Array	73.45	319	P	P	09 17 36.0	+0.3
TAS	Tashkent	73.47	317	P	P	09 17 37.3	+1.4
TAS				pmax	pmax		
	comp=Z,745nm,0.6s						
TAS	Tashkent	73.47	317	P	P	09 17 37.3	+1.4
MSEY	Mahe Island	74.08	267	i P	P	09 17 40.9	+0.8
	SNR=11						
MSEY	Mahe Island	74.08	267	P	P	09 17 40.4	+0.3
MSEY				pmax	pmax		
	comp=Z,88nm,1.0s						
MSEY	Mahe Island	74.08	267	P	P	09 17 42.1	+2.1
MSEY	Mahe Island	74.08	267	⇑P	P	09 17 41.1	+1.0
MSEY				⇑P	P	09 17 42.2	+2.1
MSEY	Mahe Island	74.08	267	P	P	09 17 40.4	+0.3
ADK	Adak	74.32	31	P	P	09 17 42.6	+2.0
ADK				pmax	pmax		
	comp=Z,349nm,1.4s						
ADK	Adak	74.32	31	⇑P	P	09 17 43.1	+2.5
ADK	Adak	74.32	31	P	P	09 17 42.6	+2.0
ADK				IAmb	IAmb	09 17 44.1	
	comp=Z,349nm,1.4s						
OTUK	Ortayu	74.76	324	P	P	09 17 43.9	+0.7
MAW	Mawson	74.80	201	P	P	09 17 43.8	+0.7
	comp=Z,101nm,1.0s,baz=78,slow=6.7,SNR=84						
MAW				S	S	09 27 07.7	-4.7
	comp=Z,0.5nm,0.3s,baz=286,slow=12,SNR=1.5						
MAW				PKPPKP	P'P'df	09 45 07.0	-3.0
	comp=Z,4.4nm,0.9s,baz=276,slow=5.7,SNR=5.0						
MAW				LR	LR	09 48 44.5	
	comp=Z,2μm,18.4s,baz=54,slow=34						
MAW	Mawson	74.80	201	P	P	09 17 44.2	+1.1
	baz=75,SNR=84						
MAW	Mawson	74.80	201	P	P	09 17 44.3	+1.1
MAW				pmax	pmax		
	comp=Z,36nm,1.3s						
MAW	Mawson	74.80	201	⇑P	P	09 17 44.1	+1.0
MAW				⇑P	P	09 17 44.1	+1.1
MAW	Mawson	74.80	201	P	P	09 17 44.3	+1.1
JLN	Jalan Bani Buh	74.96	295	P	P	09 17 47.0	+2.1
	SNR=17						
BRZS	Berezniki	75.43	326	⇑iP	P	09 17 46.9	-0.2
	comp=Z,78nm,0.7s,baz=326						
BRZS				eS	S	09 27 19.1	-1.0
	baz=326						
BRZS	Berezniki	75.43	326	c iP	P	09 17 46.8	-0.2
BRZS				eS	S	09 27 19.0	-1.0
BRZS				pmax	pmax		
	comp=Z,78nm,0.7s						
WBK	Wadi Bani Khal	75.46	295	P	P	09 17 50.0	+2.1
	SNR=32						
ATKA	Atka Island	75.78	32	⇓P	P	09 17 50.1	+1.2
ATKA				⇑P	P	09 17 50.4	+1.5
WSAR	Wadi Sarin	75.92	296	S	S	09 27 21.9	-4.5
	comp=Z,3.3nm,0.9s,baz=212,slow=7.4,SNR=1.7						
WSAR	Wadi Sarin	75.92	296	P	P	09 17 52.0	+1.5
	SNR=41						
HRA	Herat	76.04	308	P	P	09 17 51.9	+0.8
HRA				IAmb	IAmb	09 17 54.5	
	comp=Z,162nm,1.1s						
KIP	Kipapa	76.07	66	⇓eP	P	09 17 53.0	+1.8
KIP				pmax	pmax		
	comp=Z,335nm,1.4s						
DQM	DQM	76.13	292	P	P	09 17 55.0	+3.4
	SNR=8.8						
JMDO	Jabal Madar	76.18	295	P	P	09 17 54.1	+2.1
	SNR=23						
SMDO	Samad	76.40	296	P	P	09 17 55.0	+1.7
	SNR=42						
BIDO	Bidbid	76.44	296	P	P	09 17 55.0	+1.6
	SNR=113						
BSY	Bisya	77.08	295	P	P	09 17 59.0	+2.0
	SNR=21						
HOQ	Hoqain	77.18	296	P	P	09 17 60.0	+2.5
	SNR=76						
SHAO	Shalim	77.50	290	i P	P	09 17 59.6	+0.2
	SNR=20						
SHAO	Shalim	77.50	290	P	P	09 18 00.9	+1.5
	SNR=20						
SOCY	Socotra	77.95	284	⇑P	P	09 18 01.0	-1.1
SOCY	Socotra	77.95	284	P	P	09 18 02.5	+0.5
SOCY				IAmb	IAmb	09 18 07.4	
	comp=Z,221nm,1.2s						
SOHO	SOHO	78.00	296	i P	P	09 18 01.8	-0.2
	SNR=74						
SOHO	SOHO	78.00	296	P	P	09 18 03.7	+1.6
DMTO	DMTO	78.07	290	P	P	09 18 03.5	+0.9
DMTO				P	P	09 18 03.6	+1.1
	SNR=6.0						
BVAR	Borovoye Array	78.19	328	P	P	09 18 02.2	-0.2
	comp=Z,159nm,0.9s,baz=184,slow=12,SNR=226						
BRVK	Borovoye	78.26	328	P	P	09 18 02.9	+0.1
BRVK				pmax	pmax		
	comp=Z,264nm,1.0s						
BRVK	Borovoye	78.26	328	P	P	09 18 04.4	+1.6
BRVK	Borovoye	78.26	328	P	P	09 18 02.9	+0.1
BRVK				IAmb	IAmb	09 18 06.1	
	comp=Z,264nm,0.9s						
MDH	Madha	78.48	298	i P	P	09 18 04.1	-0.6
	SNR=6.5						
MDH	Madha	78.48	298	P	P	09 18 05.9	+1.2
	SNR=7.7						
UOSS	Minazif	78.48	297	i P	P	09 18 04.7	-0.1
	SNR=26						
UOSS	Minazif	78.48	297	P	P	09 18 05.8	+1.1
UOSS	Minazif	78.48	297	P	P	09 18 04.4	-0.3
HATD	Hatta, Dubai	78.52	297	i P	P	09 18 04.8	-0.1
	SNR=35						
HATD	Hatta, Dubai	78.52	297	P	P	09 18 07.0	+2.1
	SNR=14						
ASHO	Ashiyiah	78.55	297	i P	P	09 18 05.3	+0.2
	SNR=56						
ASHO	Ashiyiah	78.55	297	P	P	09 18 08.0	+2.8
	SNR=20						
TBI	Tubuai	78.55	112	eS	S	09 27 54.1	-0.8
	comp=Z,2μm,28.2s						
TBI	Tubuai	78.55	112	eLQ	LQ	09 39 16.4	
	comp=Z,2μm,33.0s						
TBI				eLR	LR	09 42 33.3	
	comp=Z,3μm,38.8s						
MSFE	Esma-Masafi	78.62	298	i P	P	09 18 05.8	+0.3
	SNR=39						
MASF	Masafi	78.62	298	P	P	09 18 07.2	+1.7
	SNR=20						
BANOM	Banah	78.63	298	i P	P	09 18 05.8	+0.3
	SNR=54						
BANOM	Banah	78.63	298	P	P	09 18 07.4	+1.9
	SNR=8.8						
BANOM				P	P	09 18 09.0	+3.5
	SNR=21						
TIXI	Tiksi	78.64	360	S	S	09 27 50.4	-3.6
	comp=Z,23nm,1.1s,baz=20,slow=19,SNR=25						
TIXI	Tiksi	78.64	360	ceP	P	09 18 04.5	-0.1
TIXI				i *PP	PcP	09 18 17.2	+4.0
TIXI				pmax	pmax		
	comp=Z,245nm,1.1s						
TIXI				MLR	MLR		
	comp=Z,1μm,20.0s						
TIXI	Tiksi	78.64	360	⇑P	P	09 18 03.0	-1.5
TIXI	Tiksi	78.64	360	P	P	09 18 04.2	-0.4
TIXI				IAmb	IAmb	09 18 08.1	
	comp=Z,177nm,0.8s						
ALNE	Al Ain	78.68	296	i P	P	09 18 06.1	+0.3
	SNR=15						
ALNE	Al Ain	78.68	296	P	P	09 18 08.7	+2.9
	SNR=12						
RBK	Rabkut	78.72	289	P	P	09 18 09.0	+2.8
	SNR=17						
SBV	Sambava	78.75	258	P	P	09 18 11.0	+4.7
PPT2	Papeete2	78.79	106	eS	S	09 27 58.8	+1.0
	comp=Z,2μm,28.0s						
PPT2	Papeete2	78.79	106	eLQ	LQ	09 39 19.8	
	comp=Z,4μm,28.8s						
PPT2				eLR	LR	09 42 44.3	
	comp=Z,1μm,25.2s						
PPT	Papeete	78.79	106	LR	LR	09 49 20.6	
	comp=Z,254nm,21.9s,baz=270,slow=33						
SHME	Shamm	78.79	298	i P	P	09 18 06.6	+0.3
	SNR=23						
SHME	Shamm	78.79	298	P	P	09 18 09.2	+2.8
	SNR=12						
NAZ	Nazwa, Dubai	78.97	297	i P	P	09 18 06.9	-0.5
	SNR=10						
NAZ	Nazwa, Dubai	78.97	297	P	P	09 18 10.0	+2.6
	SNR=5.8						
FAQ	Al Faqa, Dubai	78.98	297	i P	P	09 18 07.3	-0.1
	SNR=32						
FAQ	Al Faqa, Dubai	78.98	297	P	P	09 18 10.0	+2.6
	SNR=11						
DOK	Doka	79.01	290	P	P	09 18 10.0	+2.3
	SNR=17						
UMQ	Umm Al-Quwin	79.09	298	P	P	09 18 09.6	+1.6
ASUD	Al Ashush, Dub	79.18	297	i P	P	09 18 09.2	+0.7
	SNR=10						
ASUD	Al Ashush, Dub	79.18	297	P	P	09 18 12.0	+3.4
	SNR=5.3						
WHFO	Wadi Hawf	79.21	290	P	P	09 18 09.3	+0.5
	SNR=12						
WHFO				P	P	09 18 11.0	+2.1
	SNR=22						
BILL	Bilibino	79.27	13	c iP	P	09 18 09.1	+1.0
BILL				e		09 18 19.2	
BILL				e		09 21 09.2	
BILL				pmax	pmax		
	comp=Z,46nm,1.3s						
BILL				MLR	MLR		
	comp=Z,429nm,19.0s						
BILL	Bilibino	79.27	13	P	P	09 18 09.3	+1.3
AJN	Ajban	79.47	297	P	P	09 18 10.0	-0.1
ABTO	Aybut	79.54	289	P	P	09 18 13.0	+2.3
	SNR=18						
MZWR	Madinat Zayed	80.28	296	P	P	09 18 16.5	+2.0
GEYT	Alibeck	80.30	310	P	P	09 18 14.4	0.0
	comp=Z,84nm,0.7s,baz=176,slow=5.7,SNR=67						
GEYT				LR	LR	09 59 07.0	
	comp=Z,432nm,19.7s,baz=190,slow=40						
GEYT	Alibeck	80.30	310	P	P	09 18 14.9	+0.6
GEYT				IAmb	IAmb	09 18 17.6	
	comp=Z,100nm,0.8s						
GYA0B	ALIBECK ARRAY	80.30	310	P	P	09 18 14.9	+0.6
GYA0B				IAmb	IAmb	09 18 18.0	
	comp=Z,334nm,1.4s						
UNV	Unalaska Valle	80.64	33	P	P	09 18 17.5	+1.8
	baz=244						
UNV	Unalaska Valle	80.64	33	P	P	09 18 17.5	+1.8
UNV				IAmb	IAmb	09 18 19.0	
	comp=Z,224nm,1.2s						
UNV	Unalaska Valle	80.64	33	P	P	09 18 17.8	+2.1
OPO	Ambohidratompo	80.96	252	P	P	09 18 18.6	+0.1
	comp=Z,91nm,0.9s,baz=84,slow=4.6,SNR=82						
VOI	Vohitsoka	81.08	249	⇑P	P	09 18 19.5	+0.5
VOI				⇓P	P	09 18 19.8	+0.8
VOI	Vohitsoka	81.08	249	P	P	09 18 19.3	+0.3
VOI	Vohitsoka	81.08	249	P	P	09 18 20.2	+1.3
GHWR	Ruwais	81.23	296	P	P	09 18 21.7	+2.2
JRN	Qarnain Island	81.45	296	P	P	09 18 21.9	+1.3
NRIK	Noril'sk	81.70	346	P	P	09 18 21.2	+0.1
	comp=Z,194nm,0.9s,baz=138,slow=5.3,SNR=79						
NRIK				S	S	09 28 23.3	-2.9
	comp=Z,1.0nm,0.4s,baz=339,slow=20,SNR=6.0						
NRIK				LR	LR	09 59 26.7	
	comp=Z,1μm,18.6s,baz=142,slow=39						
NRIK	Noril'sk	81.70	346	P	P	09 18 21.6	+0.6
NRIK				pmax	pmax		
	comp=Z,212nm,1.0s						
NRIK	Noril'sk	81.70	346	P	P	09 18 21.6	+0.6
NRIK				IAmb	IAmb	09 18 25.9	
	comp=Z,212nm,1.0s						
SLWR	Sila	82.31	295	P	P	09 18 27.4	+2.2
AB31	Akbulak array	82.62	322	i P	P	09 18 26.1	-0.2
ABKAR	Akbulak array	82.62	322	⇑P	P	09 18 26.0	-0.2
ABKAR				⇓P	P	09 18 26.7	+0.5
ABKAR	Akbulak array	82.62	322	P	P	09 18 26.3	0.0
ABKAR				IAmb	IAmb	09 18 29.3	
	comp=Z,147nm,1.0s						
ABKAR	Akbulak array	82.62	322	P	P	09 18 27.2	+1.0
KHOR	Al-Khor Airpor	82.77	297	P	P	09 18 29.9	+2.3
QSPA	South Pole Qui	82.82	180	PKKPbc	PKKPbc	09 36 51.9	-1.8
	baz=220,slow=1.5						
TRNA	Turayna	82.87	296	P	P	09 18 29.2	+1.1
SHMA	Al-Shehemyia	83.30	297	P	P	09 18 31.8	+1.5
SYO	Syowa Base	83.51	201	⇑iP	P	09 18 31.0	+0.5
SYO	Syowa Base	83.51	201	⇑ePcP	PcP	09 18 35.4	+0.8
SYO	Syowa Base	83.51	201	⇑epP	pP	09 18 55.0	+1.6
SAKB	Bahrain	83.70	297	P	P	09 18 33.8	+1.5
AKTO	Aktyubinsk	84.19	322	P	P	09 18 34.2	-0.1
	comp=Z,53nm,0.6s,baz=106,slow=6.3,SNR=101						
AKTO				S	SKSac	09 28 46.5	-3.2
	comp=Z,0.9nm,0.6s,baz=206,slow=21,SNR=1.7						
SDPT	Sand Point	84.46	33	P	P	09 18 36.5	+1.0
	baz=249,SNR=7.1						
SDPT	Sand Point	84.46	33	P	P	09 18 36.5	+1.0
SVE	Sverdlovsk	84.89	329	deP	P	09 18 37.7	0.0
SVE				eS	SKSac	09 28 52.6	-1.3
SVE				pmax	pmax		
	comp=Z,389nm,1.3s						
ARU	Arti	85.83	328	P	P	09 18 42.0	-0.3
	comp=Z,30nm,0.6s,baz=107,slow=2.8,SNR=86						
ARU	Arti	85.83	328	d iP	P	09 18 43.0	+0.6
ARU				*PP	pP	09 19 02.4	-2.3
ARU						09 21 56.4	
ARU				PPP	PPP	09 23 57.0	
ARU				S	SKSac	09 29 02.9	+3.1
ARU				pmax	pmax		
	comp=Z,200nm,0.9s						
ARU				MLR	MLR		
	comp=Z,633nm,18.0s						
ARU	Arti	85.83	328	P	P	09 18 42.8	+0.4
ARU				IAmb	IAmb	09 18 45.3	
	comp=Z,155nm,0.8s						

QRN	Al-Qurain	86.50	299	eP	P	09 18 45.8	-0.6
KBD	Kabd	86.77	300	eP	P	09 18 47.3	-0.3
UMR	Umm Al-Rimmam	86.81	300	eP	P	09 18 47.3	-0.5
RDF	Al-Radifah	86.85	300	eP	P	09 18 47.1	-0.9
MIB	Mutribah	87.18	300	eP	P	09 18 48.9	-0.7
RAYN	Ar Rayn	87.80	294	i P	P	09 18 52.8	+0.1
	SNR=27						
RAYN	Ar Rayn	87.80	294	P	P	09 18 52.7	-0.1
RAYN				pmax	pmax		
	comp=Z,289nm,0.9s						
RAYN	Ar Rayn	87.80	294	P	P	09 18 54.4	+1.6
RAYN	Ar Rayn	87.80	294	P	P	09 18 52.6	-0.1
RDOG	Red Dog Mine	88.25	20	P	P	09 19 00.8	+6.9
	baz=246,SNR=20						
ATD	Arta Tunnel	88.63	282	P	P	09 18 57.2	+0.3
	comp=Z,58nm,0.9s,baz=36,slow=1.6,SNR=23						
ATD	Arta Tunnel	88.63	282	P	P	09 19 00.3	+3.5
	SNR=9.1						
ATD	Arta Tunnel	88.63	282	P	P	09 18 57.8	+0.9
ATD				IAmb	IAmb	09 19 01.2	
	comp=Z,70nm,0.9s						
SVW2	Sparrevohn	88.78	28	P	P	09 18 58.2	+1.7
TAOE	Nuku Hiva Isla	88.78	99	eS	S	09 29 35.7	-2.6
	comp=Z,1µm,28.4s						
TAOE	Nuku Hiva Isla	88.78	99	eLR	LR	09 47 19.4	
	comp=Z,1µm,26.3s						
OHAK	Old Harbor	88.85	32	P	P	09 18 57.7	+0.9
	baz=255						
OHAK	Old Harbor	88.85	32	P	P	09 18 57.9	+1.1
TTA	Tatalina	89.14	26	P	P	09 18 59.5	+1.3
TTA	Tatalina	89.14	26	P	P	09 18 59.4	+1.3
	baz=253,SNR=18						
TTA	Tatalina	89.14	26	P	P	09 18 59.5	+1.3
N19K	Bonanza Creek	89.22	28	P	P	09 19 01.1	+2.4
	baz=254						
GCSA	Galena City Sc	89.33	24	P	P	09 19 00.1	+1.2
	baz=252,SNR=28						
MAK	Makhachkala	89.35	313	eP	P	09 18 57.8	-1.7
MAK				e		09 22 33.5	
MAK				ePPP	PPP	09 24 32.0	
MAK				e		09 29 21.1	
MAK				eSS	SS	09 35 44.6	+5.4
MAK				eSSS	SSS	09 39 21.7	
MAK				pmax	pmax		
	comp=Z,267nm,1.2s						
L19K	White Mountain	89.43	27	P	P	09 19 01.7	+2.2
	baz=254						
L19K	White Mountain	89.43	27	P	P	09 19 01.2	+1.6
L19K				IAmb	IAmb	09 19 04.1	
	comp=Z,69nm,1.1s						
M19K	Big River Lodg	89.56	27	P	P	09 19 03.1	+2.9
	baz=254						
L20K	Farewell, AK	89.95	27	P	P	09 19 04.0	+2.0
	baz=254						
K20K	Telida	90.10	26	P	P	09 19 04.2	+1.6
	baz=254,SNR=14						
K20K	Telida	90.10	26	P	P	09 19 03.8	+1.1
J20K	Nowinta River	90.29	25	P	P	09 19 04.4	+0.9
	baz=254,SNR=21						
J20K	Nowinta River	90.29	25	P	P	09 19 04.1	+0.6
J20K				IAmb	IAmb	09 19 06.8	
	comp=Z,217nm,1.8s						
PPLA	Purkeypile	90.81	27	P	P	09 19 06.7	+0.5
	baz=256,SNR=6.4						
GNI	Garni	90.94	310	P	P	09 19 06.9	-0.4
	comp=Z,51nm,1.0s,baz=148,slow=5.1,SNR=16						
GNI				S	SKSac	09 29 30.0	-1.4
	comp=Z,4.8nm,0.4s,baz=189,slow=13,SNR=1.8						
GNI	Garni	90.94	310	P	P	09 19 08.1	+0.8
GNI	Garni	90.94	310	ceP	P	09 19 07.8	+0.5
GNI				pmax	pmax		
	comp=Z,99nm,1.3s						
GNI	Garni	90.94	310	P	P	09 19 09.9	+2.6
IMAR	Indian Mountai	90.94	23	P	P	09 19 07.1	+0.6
BELG	Belogornoye	90.97	323	P	P	09 19 06.6	-0.2
	comp=Z,98nm,1.1s,baz=23,slow=2.3,SNR=17						
BELG				S	SKSac	09 29 28.9	-1.7
	comp=Z,27nm,1.1s,baz=119,slow=16,SNR=11						
CHUM	Lake Minchumin	91.00	26	P	P	09 19 08.1	+1.4
	baz=256,SNR=26						
KIRV	Kirov	91.16	329	P	P	09 19 07.2	-0.4
	comp=Z,35nm,0.8s,baz=110,slow=1.3,SNR=18						
KIRV				PP	PP	09 22 46.3	+0.7
	comp=Z,13nm,0.5s,baz=138,slow=15,SNR=4.1						
H21K	Melozitna Rive	91.23	24	P	P	09 19 09.1	+1.3
	baz=256						
I21K	Tanana	91.45	24	P	P	09 19 10.1	+1.3
	baz=256,SNR=11						
I21K	Tanana	91.45	24	P	P	09 19 10.2	+1.3
SEW	Seward	91.47	30	P	P	09 19 09.9	+0.9
	baz=258						
A21K	Barrow	91.48	18	P	P	09 19 09.6	+0.8
	baz=252						
A21K	Barrow	91.48	18	P	P	09 19 10.0	+1.2
KTH	Kantishna Hill	91.52	26	P	P	09 19 09.9	+0.6
KTH				IAmb	IAmb	09 19 12.0	
	comp=Z,66nm,1.1s						
BPAW	Bear Paw Mtn.	91.62	26	P	P	09 19 11.0	+1.3
	baz=257,SNR=7.1						
KIBK	Kibwezi	91.64	267	P	P	09 19 11.3	+0.4
KIBK				IAmb	IAmb	09 19 14.8	
	comp=Z,83nm,1.1s						
TRF	Thorofare Moun	91.78	26	P	P	09 19 11.1	+0.4
	baz=258,SNR=8.3						
TRF	Thorofare Moun	91.78	26	IAmb	IAmb	09 19 12.6	
	comp=Z,57nm,1.2s						
PMR	Palmer	91.92	28	P	P	09 19 11.8	+0.8
	baz=259						
MLY	Manley	91.93	25	P	P	09 19 11.1	0.0
	baz=257,SNR=26						
MLY	Manley	91.93	25	P	P	09 19 12.1	+0.9
MLY				IAmb	IAmb	09 19 14.9	
	comp=Z,52nm,1.2s						
ZEI	Tsey	91.94	313	eP	P	09 19 11.4	-0.5
ZEI				pmax	pmax		
	comp=Z,54nm,1.4s						
AKH	Akhalkalaki	92.06	311	⇑P	P	09 19 15.0	+2.5
KNK	Knik Glacier	92.20	28	P	P	09 19 13.6	+1.2
	baz=259,SNR=5.1						
ONI	Oni	92.24	312	P	P	09 19 15.3	+2.2
ONI				pmax	pmax		
	comp=Z,77nm,1.4s						
ONI	Oni	92.24	312	P	P	09 19 15.3	+2.2
ONI				IAmb	IAmb	09 19 17.0	
	comp=Z,77nm,1.4s						
KARS	Kars	92.26	310	P	P	09 19 15.1	+1.7
KARS				pmax	pmax		
	comp=Z,250nm,1.0s						
KARS	Kars	92.26	310	P	P	09 19 15.1	+1.7
SML	Sawmill	92.33	28	P	P	09 19 14.1	+1.0
	baz=259,SNR=5.6						
RND	Reindeer	92.40	26	P	P	09 19 13.9	+0.5
RND				pmax	pmax		
	comp=Z,107nm,1.0s						
RND	Reindeer	92.40	26	P	P	09 19 13.8	+0.5
MCK	McKinley	92.43	26	P	P	09 19 13.9	+0.4
	baz=259,SNR=18						
MCK	McKinley	92.43	26	IAmb	IAmb	09 19 15.4	
	comp=Z,78nm,1.1s						
I23K	Minto, Yukon-K	92.52	25	P	P	09 19 14.1	+0.3
	baz=259,SNR=63						
I23K	Minto, Yukon-K	92.52	25	P	P	09 19 14.3	+0.5
NEA2	Nenana	92.54	25	P	P	09 19 15.4	+1.5
	baz=259,SNR=17						
NEA2	Nenana	92.54	25	P	P	09 19 15.2	+1.3
KMBO	Kilima Mbogo	92.57	269	P	P	09 19 15.6	+0.1
	comp=Z,40nm,1.0s,baz=57,slow=4.9,SNR=47						
KMBO	Kilima Mbogo	92.57	269	i P	P	09 19 16.7	+1.2
	SNR=11						
KMBO	Kilima Mbogo	92.57	269	i P	P	09 19 17.6	+2.1
KMBO				pmax	pmax		
	comp=Z,40nm,1.0s						
KMBO	Kilima Mbogo	92.57	269	P	P	09 19 16.1	+0.6
KMBO				IAmb	IAmb	09 19 19.4	
	comp=Z,81nm,1.2s						
COLD	Coldfoot	92.62	23	P	P	09 19 14.5	+0.3
	baz=258,SNR=50						
COLD	Coldfoot	92.62	23	P	P	09 19 15.0	+0.8
COLD				IAmb	IAmb	09 19 17.3	
	comp=Z,60nm,1.0s						
WAT6	Susitna Watana	92.75	27	P	P	09 19 15.9	+0.8
	baz=260,SNR=6.0						
KBZ	Khabaz	92.79	314	P	P	09 19 15.2	-0.3
	comp=Z,25nm,0.8s,baz=88,slow=1.0,SNR=21						
KBZ				LR	LR	10 07 25.4	
	comp=Z,519nm,20.1s,baz=76,slow=40						
KBZ	Khabaz	92.79	314	⇓eP	P	09 19 16.1	+0.6
KBZ				pmax	pmax		
	comp=Z,40nm,1.1s						
SCM	Sheep Creek Mo	92.81	28	P	P	09 19 16.4	+1.1
SCM				pmax	pmax		
	comp=Z,83nm,1.2s						
SCM	Sheep Creek Mo	92.81	28	P	P	09 19 17.0	+1.7
	baz=260						
SCM	Sheep Creek Mo	92.81	28	P	P	09 19 16.4	+1.1
SCM				IAmb	IAmb	09 19 18.6	
	comp=Z,83nm,1.2s						
GURO	Guroymak-BITLI	92.81	308	P	P	09 19 16.8	+0.9
GOF	Gofitskoye	92.85	315	⇑iP	P	09 19 17.2	+1.4
GOF				pmax	pmax		
	comp=Z,143nm,1.2s						
NEY	Neytrino	92.86	313	⇑eP	P	09 19 18.4	+2.3
NEY				pmax	pmax		
	comp=Z,13nm,1.3s						
WRH	Wood River Hil	92.93	25	P	P	09 19 15.6	-0.1
MDM	Murphy Dome	92.96	25	IAmb	IAmb	09 19 19.1	
	comp=Z,47nm,1.2s						
KIV	Kislovodsk	92.97	314	⇓P	P	09 19 19.3	+2.8
KIV	Kislovodsk	92.97	314	P	P	09 19 16.6	+0.1
KIV	Kislovodsk	92.97	314	eP	P	09 19 17.9	+1.4
KIV				e		09 23 00.9	
KIV				eSS	SS	09 36 33.8	+2.3
KIV				pmax	pmax		
	comp=Z,25nm,1.1s						
KIV				pmax	pmax		
	comp=Z,157nm,3.8s						
KIV	Kislovodsk	92.97	314	P	P	09 19 16.2	-0.3
DHY	Denali Highway	93.00	27	P	P	09 19 16.8	+0.5
	baz=260						
DHY	Denali Highway	93.00	27	IAmb	IAmb	09 19 18.9	
	comp=Z,77nm,1.1s						
CCB	Clear Creek Bu	93.08	25	P	P	09 19 16.7	+0.4
TCOL	CIGO, UAF Yank	93.10	25	P	P	09 19 17.6	+1.1
	baz=260,SNR=7.2						
TCOL	CIGO, UAF Yank	93.10	25	P	P	09 19 16.7	+0.2
TCOL				IAmb	IAmb	09 19 18.7	
	comp=Z,40nm,0.9s						
COLA	College	93.10	25	P	P	09 19 16.9	+0.5
COLA				pmax	pmax		
	comp=Z,37nm,0.9s						
COLA	College	93.10	25	P	P	09 19 16.9	+0.5
COLA				IAmb	IAmb	09 19 18.7	
	comp=Z,37nm,0.9s						
TOLK	Toolik Lake Re	93.14	21	P	P	09 19 17.4	+0.8
	baz=259,SNR=16						
TOLK	Toolik Lake Re	93.14	21	P	P	09 19 17.3	+0.6
TOLK				IAmb	IAmb	09 19 19.8	
	comp=Z,62nm,1.1s						
CHVG	Ch'k'valeri	93.26	312	⇑P	P	09 19 20.8	+3.1
H24K	Noodor Dome	93.26	24	P	P	09 19 17.4	+0.1
	baz=260						
M24K	Tolsona, Glenn	93.39	28	P	P	09 19 20.2	+2.3
	baz=261						
M24K	Tolsona, Glenn	93.39	28	P	P	09 19 19.8	+1.8
HDA	Harding Lake	93.41	26	P	P	09 19 17.0	-0.9
	baz=261,SNR=29						
HDA	Harding Lake	93.41	26	P	P	09 19 17.6	-0.4
HDA				IAmb	IAmb	09 19 19.7	
	comp=Z,58nm,0.9s						
DIV	Divide	93.43	29	P	P	09 19 19.0	+0.8
DIV				IAmb	IAmb	09 19 21.6	
	comp=Z,82nm,1.0s						
IL31		93.49	25	P	P	09 19 17.4	-0.8
IL31				IAmb	IAmb	09 19 19.2	
	comp=Z,43nm,0.9s						
ILAR	Eielson Array	93.49	25	P	P	09 19 16.6	-1.7
	comp=Z,33nm,0.9s,baz=277,slow=3.5,SNR=117						
ILAR				PP	PP	09 23 00.6	-3.2
	comp=Z,2.4nm,1.0s,baz=257,slow=6.0,SNR=2.1						
ILAR				PKiKP	PKiKP	09 24 04.0	+0.3
	comp=Z,1.9nm,0.7s,baz=258,slow=3.5,SNR=2.5						
ILAR				PKKPbc	PKKPdf	09 36 25.5	+0.2
	comp=Z,3.2nm,0.9s,baz=37,slow=1.5,SNR=13						
ILAR				LR	LR	09 57 53.0	
	comp=Z,579nm,22.0s,baz=274,slow=33						
PRGR	Permogore	93.56	332	eP	P	09 19 18.2	-0.4
PRGR				e		09 19 30.3	
PRGR				e		09 23 00.1	
PRGR				pmax	pmax		
	comp=Z,103nm,1.1s						
PAX	Paxson	93.84	27	P	P	09 19 21.4	+1.4
	baz=262,SNR=14						
HARP	HAARP	93.90	28	P	P	09 19 22.7	+2.5
	baz=262						
BMRM	Bremner River	93.97	29	P	P	09 19 22.4	+1.7
	baz=263,SNR=5.3						
N25K	Chitina, Valde	94.06	29	P	P	09 19 22.7	+1.6
	baz=263						
PRP	Porcupine Dome	94.17	25	P	P	09 19 19.8	-1.7
	baz=262						
RIDG	Independent Ri	94.22	26	P	P	09 19 22.9	+1.2
	baz=262,SNR=9.9						
RIDG	Independent Ri	94.22	26	P	P	09 19 22.7	+0.9
RIDG				IAmb	IAmb	09 19 24.1	
	comp=Z,77nm,1.0s						
VRH	Novokhopyorsk	94.43	321	eP	P	09 19 22.3	-0.6
VRH				pmax	pmax		
	comp=Z,40nm,1.0s						
FYU	Fort Yukon	94.43	24	P	P	09 19 24.0	+1.5
DOT	Dot Lake	94.56	27	P	P	09 19 24.1	+0.8
DOT				IAmb	IAmb	09 19 25.7	
	comp=Z,52nm,1.0s						
MENT	Mentasta	94.63	27	P	P	09 19 24.7	+1.1
SCRK	Sand Creek	94.63	26	P	P	09 19 24.4	+0.7
	baz=263,SNR=13						
SCRK	Sand Creek	94.63	26	P	P	09 19 24.4	+0.7
CRQE	Cirque	94.68	29	P	P	09 19 25.0	+1.0
	baz=264,SNR=5.2						
BMAR	Burnt Mountain	94.80	23	P	P	09 19 24.9	+0.6
KTUT	Trabzon	94.80	311	⇓P	P	09 19 27.1	+2.2
L26K	Log Cabin Wild	94.81	27	P	P	09 19 25.2	+0.8
	baz=264,SNR=12						
L26K	Log Cabin Wild	94.81	27	P	P	09 19 25.1	+0.7
J26L	Joseph Creek	94.87	26	P	P	09 19 24.6	-0.2
	baz=264,SNR=57						
M26K	Nabesna, AK	94.90	28	P	P	09 19 26.1	+1.3
	baz=264						
LODK	Lodwar	95.00	273	P	P	09 19 27.1	+0.6
M27K	Edge Creek, AK	95.42	28	P	P	09 19 28.3	+1.0
	baz=265,SNR=6.5						
L27K	Beaver Creek,	95.50	27	P	P	09 19 28.5	+0.9
	baz=265,SNR=23						
L27K	Beaver Creek,	95.50	27	IAmb	IAmb	09 19 30.7	
	comp=Z,49nm,0.9s						
SNAA	Sanae	95.51	193	P	P	09 19 28.0	+0.4
SNAA	Sanae	95.51	193	PKKPbc	PKKPbc	09 36 19.0	-2.6
SNAA	Sanae	95.51	193	P	P	09 19 27.4	-0.2
	comp=Z,50nm,0.8s,baz=128,slow=3.4,SNR=10						
SNAA				S	SKSac	09 29 52.4	-2.9
	comp=Z,2.5nm,1.0s,baz=188,slow=21,SNR=8.8						
SNAA				PKKPbc	PKKPdf	09 36 18.8	-2.1
	comp=Z,7.0nm,0.9s,baz=252,slow=1.7,SNR=9.6						
SNAA	Sanae	95.51	193	P	P	09 19 28.3	+0.7
SNAA				pmax	pmax		
	comp=Z,49nm,0.8s						
SNAA	Sanae	95.51	193	P	P	09 19 28.3	+0.7
SNAA				IAmb	IAmb	09 19 30.3	
	comp=Z,49nm,0.8s						
BCAR	Beaver Creek A	95.52	27	P	P	09 19 28.4	+0.7
BVCY	Beaver Creek	95.89	28	P	P	09 19 30.8	+1.4
	baz=266,SNR=5.9						
EGAK	Eagle	95.93	26	P	P	09 19 29.9	+0.4
	baz=266						
EGAK	Eagle	95.93	26	IAmb	IAmb	09 19 32.1	
	comp=Z,70nm,1.0s						
VORD	Divnogorie	95.94	321	eP	P	09 19 29.5	-0.2
VORD				pmax	pmax		
	comp=Z,80nm,0.8s						
VSR	Storozhevoye	96.03	321	eP	P	09 19 29.8	-0.4
VSR				pmax	pmax		
	comp=Z,60nm,1.0s						
YUK3	Moose Creek	96.04	29	P	P	09 19 32.1	+1.8
	baz=266						
LPSR	Galich'ya Gora	96.27	322	eP	P	09 19 31.3	+0.1
LPSR				pmax	pmax		
	comp=Z,60nm,1.5s						
ASF	Jabal al Asfar	96.37	302	P	P	09 19 33.4	+1.0
	comp=Z,43nm,0.9s,baz=84,slow=1.6,SNR=38						
KLMR	Klimovskoe	96.42	330	eP	P	09 19 28.9	-2.8
KLMR				eS	SKSac	09 29 59.9	-0.2
KLMR				eSS	SS	09 37 18.5	-0.8
KLMR				pmax	pmax		
	comp=Z,105nm,1.1s						
KLMR	Klimovskoe	96.42	330	eP	P	09 19 29.0	-2.8
KLMR				AMP		09 19 32.8	
	comp=Z,105nm,1.1s						
KLMR				ePP	PP	09 23 20.7	-5.9
KLMR				ePPP	PPP	09 25 26.1	
KLMR				eS	SKSac	09 29 59.9	-0.2
KLMR				eS	SKSac	09 29 59.9	-0.2
KLMR				eSS	SS	09 37 18.6	-0.8
KLMR				eSS	SS	09 37 18.6	-0.8
KLMR				LQ	LQ	09 54 06.0	
KLMR				LQ	LQ	09 54 06.0	
KLMR				LR	LR	10 00 37.4	
GAZ	Gaziantep	96.48	307	P	P	09 19 32.0	-0.6
GAZ				IAmb	IAmb	09 19 34.9	
	comp=Z,52nm,1.0s						
DAWY	Dawson	96.65	26	P	P	09 19 33.6	+0.8
	baz=267						
DAWY	Dawson	96.65	26	P	P	09 19 33.8	+1.0
VNA2	Neumayer--Watz	97.08	193	P	Pdif	09 19 35.2	+0.6
	baz=121,slow=4.2						
VNA2	Neumayer--Watz	97.08	193	PKKPbc	PKKPbc	09 36 14.1	-3.2
I29M	Ogilvie Camp,	97.17	25	P	Pdif	09 19 35.3	+0.1
	baz=269						
MOS	Moscow	97.19	325	eP	P	09 19 34.0	-1.3
MOS				e		09 23 32.9	
MOS				e		09 30 42.9	
MOS				pmax	pmax		
	comp=Z,48nm,0.9s						
MOS				pmax	pmax		
	comp=Z,100nm,1.3s						
VNA3	Neumayer Olymp	97.33	192	P	Pdif	09 19 36.4	+0.6
VNA3	Neumayer Olymp	97.33	192	PKKPbc	PKKPbc	09 36 14.4	-2.3
HYT	Haines Junctio	97.42	30	P	Pdif	09 19 37.7	+1.2
	baz=269						
VNA1	Neumayer--Stat	97.47	193	P	Pdif	09 19 37.0	+0.6
VNA1	Neumayer--Stat	97.47	193	PKKPbc	PKKPbc	09 36 13.4	-2.8
MMAI	Mount Meron Ar	97.68	302	P	Pdif	09 19 39.0	+0.7
	comp=Z,46nm,1.0s,baz=91,slow=6.8,SNR=32						
MMAI				PKiKP	PKiKP	09 24 12.8	+0.7
	comp=Z,0.4nm,0.3s,baz=72,slow=4.7,SNR=2.7						
OBN	Obninsk	97.77	325	P	P	09 19 36.6	-1.3
	comp=Z,7.0nm,0.5s,baz=152,slow=3.4,SNR=10						
OBN	Obninsk	97.77	325	c iP	P	09 19 37.9	0.0
OBN				e		09 23 34.2	
OBN				eSSS	SSS	09 41 28.1	
OBN				pmax	pmax		
	comp=Z,48nm,0.7s						
M30M	Minto, Yukon	97.79	28	P	Pdif	09 19 39.1	+1.1
	baz=270						
EPYK	Eagle Plains	97.83	24	P	Pdif	09 19 39.1	+1.0
	baz=270						
EPYK	Eagle Plains	97.83	24	IAmb	IAmb	09 19 40.7	
	comp=Z,70nm,1.2s						
EIL	Elat	97.86	299	P	Pdif	09 19 39.2	+0.2
	comp=Z,11nm,0.9s,baz=150,slow=1.3,SNR=14						
EIL				PKKP	PKKPdf	09 36 15.9	-0.6
	comp=Z,2.2nm,0.7s,baz=170,slow=1.1,SNR=3.8						
MATP	Matopo	98.19	248	P	Pdif	09 19 41.3	+0.4
	comp=Z,8.0nm,1.0s,baz=105,slow=9.8,SNR=4.8						
MATP				PP	PP	09 23 40.6	-0.7
	comp=Z,7.0nm,1.0s,baz=112,slow=11,SNR=3.9						
N31M	Braeburn, Yuko	98.26	29	Pdiff	Pdif	09 19 41.7	+1.6
	baz=270						
LVZ	Lovozero	98.59	338	⇑eP	Pdif	09 19 42.1	+0.6
LVZ				pmax	pmax		
	comp=Z,129nm,2.3s						
WHY	Whitehorse	98.71	30	Pdiff	P	09 19 42.1	-0.1
	baz=271						
WHY	Whitehorse	98.71	30	P	Pdif	09 19 43.2	+0.9
INK	Inuvik	99.01	22	PKiKP	PKiKP	09 24 13.4	+0.1
	comp=Z,4.5nm,0.6s,baz=318,slow=4.1,SNR=16						
INK				S	SKSac	09 30 09.8	-3.1
	comp=Z,2.8nm,0.9s,baz=151,slow=31,SNR=11						
INK				PKKPbc	PKKPbc	09 36 10.4	-1.7
	comp=Z,6.7nm,1.1s,baz=76,slow=0.9,SNR=13						
INK	Inuvik	99.01	22	Pdiff	Pdif	09 19 44.0	+0.8
	baz=273						
INK	Inuvik	99.01	22	IAmb	IAmb	09 19 46.0	
	comp=Z,51nm,1.2s						
MBAR	Mbarara	99.10	268	P	Pdif	09 19 45.3	+0.2
	comp=Z,4.1nm,0.2s,baz=81,slow=7.1,SNR=10						
MBAR	Mbarara	99.10	268	ceP	Pdif	09 19 45.9	+0.8
MBAR	Mbarara	99.10	268	P	Pdif	09 19 45.5	+0.4
BZK	Bozkurt	99.18	311	⇓P	pP	09 20 08.0	+0.8
BOSA	Boshof	99.37	240	P	Pdif	09 19 45.5	-0.5
	comp=Z,19nm,1.0s,baz=94,slow=3.9,SNR=12						
BOSA				LR	LR	09 59 15.3	
	comp=Z,670nm,21.4s,baz=103,slow=32						
BOSA	Boshof	99.37	240	P	Pdif	09 19 45.8	-0.2
BOSA				pmax	pmax		
	comp=Z,21nm,1.0s						
BOSA	Boshof	99.37	240		Pdif	09 19 45.8	-0.2
FARO	Faro, Yukon	99.40	28	Pdiff	Pdif	09 19 45.8	+0.6
	baz=273						
BR131	Keskin Array S	99.40	309	P	Pdif	09 19 45.9	+0.1
BR131				pmax	pmax		
	comp=Z,18nm,1.0s						
BR131	Keskin Array S	99.40	309	P	Pdif	09 19 46.2	+0.3
BR131	Keskin Array S	99.40	309		Pdif	09 19 45.9	0.0
BRTR	Keskin Array B	99.40	309	P	Pdif	09 19 46.0	+0.1
	comp=Z,8.0nm,0.9s,baz=129,slow=6.2,SNR=29						
BRTR				PKKPbc	PKKPbc	09 36 09.8	-0.4
	comp=Z,2.3nm,0.9s,baz=204,slow=2.7,SNR=6.0						
BRTR				LR	LR	10 11 39.7	
	comp=Z,334nm,20.4s,baz=106,slow=40						
BRTR	Keskin Array B	99.40	309	i P	Pdif	09 19 46.2	+0.3
BRTR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BRTR	Keskin Array B	99.40	309		Pdif	09 19 46.1	+0.3
LSZ	Lusaka	99.41	253	P	Pdif	09 19 46.2	-0.2
	comp=Z,30nm,0.9s,baz=103,slow=4.2,SNR=31						
LSZ				PKiKP	PKiKP	09 24 16.8	+1.1
	comp=Z,8.3nm,1.0s,baz=118,slow=4.0,SNR=3.7						
P33M	Teslin, Yukon	99.75	30	Pdiff	Pdif	09 19 48.4	+1.6
	baz=273						
LEF	Lefka	99.87	304	⇓P	Pdif	09 19 49.5	+1.7
LBTB	Lobatse	99.89	243	P	Pdif	09 19 49.1	+0.8
	comp=Z,21nm,0.8s,baz=121,slow=5.1,SNR=22						
MMPY	Sheldon Lake,	100.34	28	Pdiff	Pdif	09 19 51.2	+1.8
	baz=274						
A36M	Sachs Harbour	101.32	18	Pdiff	Pdif	09 19 54.4	+1.0
	baz=282,SNR=11						
SPA0	Spitsbergen Ar	101.72	349	ePdif	Pdif	09 19 56.2	+1.1
SPITS	Spitsbergen Ar	101.72	349	P	Pdif	09 19 55.7	+0.5
	comp=Z,28nm,0.9s,baz=96,slow=8.0,SNR=14						
ARA0	ARCESS Array S	101.72	340	ePdif	Pdif	09 19 56.1	+0.8
ARCES	ARCESS Array B	101.72	340	P	Pdif	09 19 55.7	+0.4
	comp=Z,38nm,1.0s,baz=57,slow=4.5,SNR=18						
ARCES				PKiKP	PKiKP	09 24 18.3	+0.1
	comp=Z,3.7nm,0.8s,baz=108,slow=1.0,SNR=15						
ARCES				PKKPbc	PKKPbc	09 36 01.3	-3.1
	comp=Z,6.1nm,1.0s,baz=263,slow=3.1,SNR=6.0						
HAMF	Hammerfest	102.09	341	ePP	PP	09 24 10.6	+1.2
HAMF				eSKSac	SKSac	09 30 27.9	0.0
HAMF				eSP	SP	09 33 06.5	+1.6
HAMF				eSS	SS	09 38 41.0	+2.9
KBS	Kingsbay	102.22	350	ePdif	Pdif	09 19 56.0	-1.3
KBS				ePP	PP	09 24 12.2	+2.1
KBS				eSS	SS	09 38 41.2	+1.8
AKASG	Malin Array Be	102.32	320	P	Pdif	09 19 58.3	0.0
	comp=Z,7.2nm,0.8s,baz=81,slow=4.4,SNR=21						
AKASG				PP	PP	09 24 11.1	-0.6
	comp=Z,0.6nm,0.3s,baz=73,slow=7.0,SNR=4.1						
AKASG				PKiKP	PKiKP	09 24 18.1	-1.6
	comp=Z,7.6nm,0.8s,baz=60,slow=1.2,SNR=4.8						
HSPB	Hornsund (broa	102.33	348	ePP	PP	09 24 15.0	+4.0
HSPB				eSKSac	SKSac	09 30 25.3	-3.5
HSPB				eSS	SS	09 38 44.3	+3.3
BJO1	Bjornoya	102.40	345	ePdif	Pdif	09 19 59.4	+1.2
KIS	Kishinev	102.81	316	eP	Pdif	09 20 02.0	+1.4
KIS	Kishinev	102.81	316	ePP	PP	09 24 19.0	+3.5
	comp=Z,200nm,8.5s						
KIS				eLR	LR	09 59 20.0	
	comp=Z,300nm,18.0s						
KIS	Kishinev	102.81	316	eP	Pdif	09 20 02.0	+1.4
KIS				e		09 24 19.0	
KIS				pmax	pmax		
	comp=Z,200nm,8.5s						
KIS				MLR	MLR		
	comp=Z,300nm,18.0s						
MNK	Minsk	102.82	324	i P	Pdif	09 19 58.6	-1.9
MNK				i		09 24 13.0	
MNK				i PPP	PPP	09 26 23.5	
MNK				i S	SKSac	09 30 32.8	+0.8

MNK				i PS	PS	09 33 22.5	-2.4
MNK				pmax	pmax		
	comp=E,2.0nm,1.0s						
MNK				pmax	pmax		
	comp=N,9.0nm,1.0s						
MNK				pmax	pmax		
	comp=Z,43nm,1.0s						
MNK				MLR	MLR		
	comp=N,389nm,20.0s						
MNK				MLR	MLR		
	comp=E,73nm,20.0s						
MNK				MLR	MLR		
	comp=Z,617nm,20.0s						
MNK	**Minsk**	**102.82**	**324**	i P	**Pdif**	**09 19 58.6**	**-1.8**
	comp=E,2.0nm,1.0s						
MNK				i P	**Pdif**	**09 19 58.6**	**-1.8**
	comp=N,9.0nm,1.0s						
MNK				i P	**Pdif**	**09 19 58.6**	**-1.8**
	comp=Z,43nm,1.0s,baz=84						
MNK				i pP	**pPdif**	**09 20 15.7**	**-7.3**
MNK				i sP	**sPdif**	**09 20 22.5**	**-10**
MNK				i PP	**PP**	**09 24 13.1**	**-2.2**
MNK				i PPP	PPP	09 26 23.5	
MNK				i S	**SKSac**	**09 30 32.9**	**+0.9**
MNK				i sS	**SKKSac**	**09 31 03.5**	**-8.7**
MNK				i PS	PS	09 33 22.6	-2.4
MNK				i SS	**SS**	**09 38 38.6**	**-10**
MNK				i SSS	SSS	09 43 22.3	
MNK				i LQ	LQ	09 59 04.9	
MNK				i LR	LR	10 04 28.2	
MNK				i LRM	MLR	10 09 08.6	
	comp=N,389nm,19.7s						
MNK				i LRM	MLR	10 09 15.0	
	comp=E,73nm,19.7s						
MNK				i LRM	MLR	10 09 15.2	
	comp=Z,617nm,19.7s						
MILM	**Milestii Mici**	**102.82**	**316**	eP	**Pdif**	**09 20 04.0**	**+3.3**
MILM				e		09 24 18.0	
MILM				pmax	pmax		
	comp=Z,400nm,16.5s						
MILM				MLR	MLR		
	comp=Z,900nm,26.0s						
FINES	**FINESS Array B**	**102.89**	**331**	P	**Pdif**	**09 20 00.4**	**-0.2**
	comp=Z,2.4nm,0.6s,baz=40,slow=5.1,SNR=16						
FINES				PP	**PP**	**09 24 13.0**	**-2.6**
	comp=Z,22nm,1.1s,baz=101,slow=5.8,SNR=5.1						
FINES				PKiKP	**PKiKP**	**09 24 21.6**	**+1.1**
	comp=Z,13nm,0.7s,baz=60,slow=2.1,SNR=12						
FINES				PKKPbc	**PKKPbc**	**09 35 59.8**	**-0.9**
	comp=Z,4.8nm,0.8s,baz=250,slow=3.5,SNR=7.1						
TLCR		**102.91**	**315**	⇑P	**Pdif**	**09 20 02.7**	**+1.6**
SORM	**Soroca**	**103.06**	**318**	⇑P	**Pdif**	**09 20 02.5**	**+0.9**
SORM	**Soroca**	**103.06**	**318**	⇓P	**PKiKP**	**09 24 22.7**	**+1.5**
MANR	**Mangalia**	**103.14**	**313**	⇑P	**Pdif**	**09 19 59.4**	**-2.8**
TPGR	**Topolog**	**103.21**	**314**	⇓P	**Pdif**	**09 20 04.5**	**+2.1**
TIRR	**Tirgusor**	**103.23**	**314**	⇓P	**Pdif**	**09 20 02.2**	**-0.3**
MFTR	**Murfatlar**	**103.24**	**314**	⇓P	**Pdif**	**09 20 05.0**	**+2.4**
VLDR	**Vladesti**	**103.39**	**315**	⇓P	PKiKP	09 24 34.2	+12
CFR	**Carcaliu**	**103.39**	**315**	⇓P	**Pdif**	**09 20 05.7**	**+2.4**
CFR	**Carcaliu**	**103.39**	**315**	⇑P	**PKiKP**	**09 24 22.7**	**+0.9**
NACGM	**Naroch**	**103.41**	**325**	i P	**Pdif**	**09 20 04.5**	**+1.5**
JETT	**Jettan, Norway**	**103.45**	**340**	ePdif	**Pdif**	**09 20 04.1**	**+1.0**
JETT				ePP	**PP**	**09 24 20.1**	**+0.5**
HARR	**Harsova**	**103.56**	**314**	⇓P	**Pdif**	**09 20 06.5**	**+2.5**
TRO	**Tromso**	**103.93**	**340**	ePdif	**Pdif**	**09 20 06.0**	**+0.9**
TRO				ePP	**PP**	**09 24 26.0**	**+2.9**
TRO				eSP	SP	09 33 27.7	+3.6
TRO				eSS	**SS**	**09 39 08.7**	**+5.4**
VRI	**Vrincioaia**	**104.33**	**315**	⇑P	**Pdif**	**09 20 10.0**	**+2.5**
VRI	**Vrincioaia**	**104.33**	**315**	⇑P	PKiKP	09 24 32.3	+8.6
TESR	**Tescani**	**104.33**	**316**	⇑P	**Pdif**	**09 20 08.6**	**+1.1**
TESR	**Tescani**	**104.33**	**316**	⇓P	**PKiKP**	**09 24 22.2**	**-1.4**
BISRR	**Bisoca**	**104.37**	**315**	⇑P	**Pdif**	**09 19 56.0**	**-12**
PLOR	**Plostina**	**104.39**	**315**	⇑P	**Pdif**	**09 20 09.3**	**+1.6**
PLOR	**Plostina**	**104.39**	**315**	⇑P	**PKiKP**	**09 24 29.2**	**+5.5**
NEHR	**Nehoiu**	**104.67**	**315**	⇑P	**Pdif**	**09 20 12.0**	**+3.0**
NEHR	**Nehoiu**	**104.67**	**315**	⇑P	**PKiKP**	**09 24 25.0**	**+0.8**
MLR	**Muntele Rosu**	**104.91**	**315**	⇓P	**Pdif**	**09 20 12.1**	**+1.9**
MLR	**Muntele Rosu**	**104.91**	**315**	⇑P	**PKiKP**	**09 24 26.4**	**+1.6**
MLR	**Muntele Rosu**	**104.91**	**315**	Pdiff	**Pdif**	**09 20 10.4**	**+0.2**
	comp=Z,11nm,0.9s,baz=112,slow=1.6,SNR=11						
MLR				PKiKP	**PKiKP**	**09 24 25.8**	**+0.9**
	comp=Z,7.6nm,0.7s,baz=203,slow=4.6,SNR=4.9						
MLR				PKKPbc	**PKKPbc**	**09 35 53.3**	**-1.0**
	comp=Z,2.8nm,0.8s,baz=245,slow=19,SNR=2.3						
BUR01	**Bucovina Ar. S**	**105.20**	**317**	⇓P	**PKKPbc**	**09 35 54.8**	**+1.4**
BURAR	**Bucovina Array**	**105.20**	**317**	⇑P	**Pdif**	**09 20 13.5**	**+2.1**
BURAR	**Bucovina Array**	**105.20**	**317**	⇑P	**PKiKP**	**09 24 29.1**	**+3.8**
BURAR	**Bucovina Array**	**105.20**	**317**	⇓P	**PKKPbc**	**09 35 53.9**	**+0.5**
DOPR	**Dopca**	**105.25**	**316**	⇓P	**Pdif**	**09 20 14.6**	**+3.0**
DOPR	**Dopca**	**105.25**	**316**	⇓P	**PKiKP**	**09 24 29.1**	**+3.8**
VOIR		**105.54**	**315**	⇓P	**Pdif**	**09 20 17.0**	**+4.1**
VOIR		**105.54**	**315**	⇓P	**PKKPbc**	**09 35 54.0**	**+1.7**
HUMR	**Humele**	**105.68**	**314**	⇑P	**Pdif**	**09 20 15.9**	**+2.5**
LVV	**L'vov**	**105.72**	**320**	eP	**Pdif**	**09 20 14.5**	**+1.0**
STEI	**Steigen**	**105.75**	**339**	ePdif	**Pdif**	**09 20 14.1**	**+0.9**
STEI				ePP	**PP**	**09 24 39.1**	**+2.5**
STEI				eSS	SS	09 39 30.2	+2.0
ARR	**Arges**	**105.84**	**315**	⇑P	**Pdif**	**09 20 15.2**	**+0.9**
ARR	**Arges**	**105.84**	**315**	⇓P	**PKiKP**	**09 24 30.6**	**+4.1**
ARR	**Arges**	**105.84**	**315**	⇑P	**PKKPbc**	**09 35 51.1**	**-0.3**
FAUS	**Fauske**	**105.93**	**339**	ePdif	**Pdif**	**09 20 14.5**	**+0.5**
FAUS				ePP	**PP**	**09 24 40.3**	**+2.4**
FAUS				eSS	SS	09 39 34.2	+3.5
LOF	**Lofoten**	**106.28**	**340**	ePdif	**Pdif**	**09 20 15.6**	**0.0**
LOF				IVmB_BB		09 20 19.4	
	comp=Z,1µm,3.1s						
LOF				eSKSac	**SKSac**	**09 30 46.0**	**-1.1**
LOF				eSS	**SS**	**09 39 39.3**	**+4.0**
LOF				IVMs_BB	IVMs_BB	10 04 05.2	
	comp=Z,2µm,4.2s						
BMR	**Baia Mare**	**106.35**	**318**	⇑P	**Pdif**	**09 20 16.9**	**+0.6**
IDI	**Anoyia**	**106.41**	**305**	Pdiff	**Pdif**	**09 20 17.2**	**+0.2**
	comp=Z,8.0nm,0.7s,baz=330,slow=6.8,SNR=6.0						
IDI				PKiKP	**PKiKP**	**09 24 28.9**	**+1.0**
	comp=Z,22nm,0.7s,baz=80,slow=2.1,SNR=15						
IDI				PKKPbc	**PKKPbc**	**09 35 49.2**	**0.0**
	comp=Z,6.4nm,0.7s,baz=16,slow=7.8,SNR=4.6						
D03D	**Eldon**	**106.66**	**43**	PKiKP	**PKiKP**	**09 24 31.1**	**+3.3**
	baz=278						
MOR8	**Moi Rana**	**106.67**	**338**	ePdif	**Pdif**	**09 20 17.5**	**+0.1**
MOR8				ePP	**PP**	**09 24 45.8**	**+2.3**
MOR8				eSKSac	**SKSac**	**09 30 49.1**	**0.0**
MOR8				eSS	**SS**	**09 39 40.8**	**0.0**
K02D	**Willamette Mer**	**106.83**	**48**	PKiKP	**PKiKP**	**09 24 30.9**	**+2.4**
	baz=276						
TRPA	**Tarpa**	**106.93**	**318**	⇓P	**Pdif**	**09 20 20.6**	**+1.7**
TRPA	**Tarpa**	**106.93**	**318**	⇑P	**PKiKP**	**09 24 30.1**	**+1.8**
TRPA	**Tarpa**	**106.93**	**318**	⇑P	**PKKPbc**	**09 35 48.4**	**+0.4**
I03D	**Drain, OR**	**106.95**	**47**	PKiKP	**PKiKP**	**09 24 31.1**	**+2.6**
	baz=276						
KOLS	**Kolonicke sedl**	**106.98**	**319**	eP	**Pdif**	**09 20 22.2**	**+3.0**
KOLS	**Kolonicke sedl**	**106.98**	**319**	ePDIFF	**Pdif**	**09 20 22.2**	**+3.0**
DRGR		**107.00**	**317**	⇓P	**Pdif**	**09 20 21.6**	**+2.2**
DRGR		**107.00**	**317**	⇓P	**PKiKP**	**09 24 30.1**	**+1.5**
UZH	**Uzhgorod**	**107.02**	**319**	⇓eP	**Pdif**	**09 20 20.7**	**+1.4**
UZH				e		09 24 47.7	
UZH				e		09 31 29.8	
UZH				e		09 39 51.4	
UZH				MLR	MLR		
	comp=N,270nm,20.0s						
UZH				MLR	MLR		
	comp=E,110nm,20.0s						
UZH				MLR	MLR		
	comp=Z,80nm,20.0s						
KONS	**Konsvik**	**107.05**	**338**	ePdif	**Pdif**	**09 20 20.3**	**+1.3**
VTS	**Vitosha**	**107.13**	**312**	⇓P	**Pdif**	**09 20 21.4**	**+1.2**
VTS	**Vitosha**	**107.13**	**312**	⇓P	**PKiKP**	**09 24 30.9**	**+1.9**
VTS	**Vitosha**	**107.13**	**312**	⇑P	**PKKPbc**	**09 35 47.9**	**+0.6**
GZR	**Gura Zlata**	**107.14**	**315**	⇑P	**Pdif**	**09 20 21.6**	**+1.6**
GZR	**Gura Zlata**	**107.14**	**315**	⇑P	**PKiKP**	**09 24 30.6**	**+1.7**
GZR	**Gura Zlata**	**107.14**	**315**	⇑P	**PKKPbc**	**09 35 48.0**	**+0.7**
B05A	**Bryant**	**107.22**	**42**	PKiKP	**PKiKP**	**09 24 31.5**	**+2.6**
	baz=279,SNR=9.6						
H04D	**Lebanon**	**107.29**	**46**	PKiKP	**PKiKP**	**09 24 31.8**	**+2.6**
	baz=277						
HERR	**Herculane**	**107.46**	**315**	⇑P	**Pdif**	**09 20 23.2**	**+1.8**
HERR	**Herculane**	**107.46**	**315**	⇑P	**PKiKP**	**09 24 32.0**	**+2.6**
HERR	**Herculane**	**107.46**	**315**	⇑P	**PKKPbc**	**09 35 47.4**	**+1.2**
CRVS	**Cervenica-Dubn**	**107.52**	**319**	eP	**Pdif**	**09 20 24.1**	**+2.5**
CRVS	**Cervenica-Dubn**	**107.52**	**319**	ePDIFF	**Pdif**	**09 20 24.1**	**+2.5**
M02C	**Callahan**	**107.56**	**49**	PKiKP	**PKiKP**	**09 24 32.8**	**+3.0**
	baz=276,SNR=6.2						

I04A	**Tendick Farm,**	**107.62**	**46**	PKiKP	**PKiKP**	**09 24 31.4**	**+1.6**
	baz=277,SNR=5.7						
N02D	**Trinity Center**	**107.72**	**49**	PKiKP	**PKiKP**	**09 24 32.5**	**+2.3**
	baz=276,SNR=5.3						
O02D	**Mt. Diablo Mer**	**107.74**	**50**	PKiKP	**PKiKP**	**09 24 32.1**	**+1.9**
	baz=276,SNR=6.0						
SIRR	**Siria**	**107.79**	**316**	⇑P	**Pdif**	**09 20 25.0**	**+2.2**
SIRR	**Siria**	**107.79**	**316**	⇓P	**PKiKP**	**09 24 27.9**	**-2.1**
RES	**Resolute Bay**	**107.83**	**11**	PKKPbc	PKKPbc	09 35 42.6	-3.3
	comp=Z,3.6nm,0.9s,baz=166,slow=7.1,SNR=4.6						
L04D	**Klamath Falls**	**107.88**	**48**	PKiKP	**PKiKP**	**09 24 32.7**	**+2.2**
	baz=277,SNR=6.0						
YKA	**Yellowknife Ar**	**107.89**	**26**	Pdiff	**Pdif**	**09 20 23.2**	**+0.3**
	comp=Z,2.2nm,0.9s,baz=304,slow=3.7,SNR=3.6						
YKA				PKiKP	**PKiKP**	**09 24 30.2**	**+0.5**
	comp=Z,12nm,0.6s,baz=352,slow=0.5,SNR=33						
YKA				PKKPbc	**PKKPbc**	**09 35 42.8**	**-2.7**
	comp=Z,4.4nm,0.8s,baz=101,slow=4.6,SNR=7.4						
YKA				PKKPab	**PKKPab**	**09 35 56.7**	**-0.4**
	comp=Z,3.3nm,1.0s,baz=92,slow=5.1,SNR=3.9						
J04D	**Umpqua Nationa**	**107.90**	**47**	PKiKP	**PKiKP**	**09 24 33.3**	**+2.7**
	baz=277,SNR=6.7						
BZS	**Buzias**	**107.92**	**316**	⇑P	**Pdif**	**09 20 25.9**	**+2.5**
BZS	**Buzias**	**107.92**	**316**	⇑P	**PKiKP**	**09 24 32.5**	**+2.2**
BZS	**Buzias**	**107.92**	**316**	⇓P	**PKKPbc**	**09 35 45.4**	**+0.6**
MDVR	**Moldovita**	**107.97**	**315**	⇑P	**PKiKP**	**09 24 31.6**	**+1.2**
MDVR	**Moldovita**	**107.97**	**315**	⇑P	**PKKPbc**	**09 35 46.2**	**+1.5**
BOVS	**Bovan**	**108.12**	**313**	⇑P	**Pdif**	**09 20 25.6**	**+1.2**
BOVS	**Bovan**	**108.12**	**313**	⇑P	**PKiKP**	**09 24 32.3**	**+1.6**
K04D	**Chiloquin, OR**	**108.24**	**48**	PKiKP	**PKiKP**	**09 24 33.8**	**+2.7**
	baz=277						
NSS	**Namsos**	**108.25**	**336**	ePdif	**Pdif**	**09 20 24.4**	**0.0**
M04C	**Macdoel**	**108.28**	**48**	PKiKP	**PKiKP**	**09 24 33.3**	**+2.1**
	baz=277						
I05D	**Terrebonne, OR**	**108.31**	**46**	PKiKP	**PKiKP**	**09 24 33.3**	**+2.2**
	baz=278,SNR=7.1						
O03E	**Paynes Creek**	**108.48**	**50**	PKiKP	**PKiKP**	**09 24 33.4**	**+1.8**
	baz=276						
J05D	**Fort Rock, OR**	**108.53**	**47**	PKiKP	**PKiKP**	**09 24 33.6**	**+1.9**
	baz=278						
BSZH	**Besenyszg**	**108.57**	**317**	⇑P	**PKKPbc**	**09 35 42.8**	**0.0**
PSZ	**Piszkesteto**	**108.72**	**318**	⇑P	**PKiKP**	**09 24 33.6**	**+1.8**
PSZ	**Piszkesteto**	**108.72**	**318**	eP	**PKiKP**	**09 24 34.3**	**+2.6**
LANS	**Liptovska Anna**	**108.77**	**319**	eP	**Pdif**	**09 20 30.4**	**+3.3**
LANS	**Liptovska Anna**	**108.77**	**319**	ePDIFF	**Pdif**	**09 20 30.4**	**+3.3**
HFS	**Hagfors**	**109.09**	**332**	Pdiff	**Pdif**	**09 20 28.5**	**+0.2**
	comp=Z,4.6nm,0.7s,baz=114,slow=3.7,SNR=10						
HFS				PKiKP	**PKiKP**	**09 24 33.2**	**+1.2**
	comp=Z,5.8nm,0.6s,baz=106,slow=3.2,SNR=6.4						
HFS				PKKPbc	**PKKPbc**	**09 35 39.8**	**-1.7**
	comp=Z,4.6nm,0.7s,baz=201,slow=3.5,SNR=15						
FRGS	**Fruska Gora**	**109.24**	**315**	⇓P	**PKiKP**	**09 24 35.3**	**+2.5**
FRGS	**Fruska Gora**	**109.24**	**315**	⇑P	**PKKPab**	**09 35 53.1**	**+1.7**
VYHS	**Vyhne**	**109.30**	**319**	eP	**Pdif**	**09 20 31.6**	**+2.1**
VYHS	**Vyhne**	**109.30**	**319**	ePDIFF	**Pdif**	**09 20 31.6**	**+2.1**
OKC	**Ostrava-Krasne**	**109.47**	**320**	ePKP	**PKiKP**	**09 24 35.5**	**+2.5**
NEEM	**North Greenlan**	**109.74**	**0**	i P	**PKiKP**	**09 24 34.0**	**+0.8**
MORC	**Moravsky Berou**	**109.86**	**320**	⇑P	**PKiKP**	**09 24 36.0**	**+2.2**
MORC	**Moravsky Berou**	**109.86**	**320**	ePKIKP	**PKiKP**	**09 24 35.8**	**+2.0**
NC602	**NORSAR Array S**	**109.88**	**333**	ePdif	**Pdif**	**09 20 31.4**	**-0.3**
NC602				ePP	**PP**	**09 25 07.5**	**+0.6**
NC602				eSP	SP	09 34 24.9	-0.5
NC602				eSS	**SS**	**09 40 24.2**	**0.0**
NB2	**NORSAR Subarra**	**109.91**	**333**	P	**Pdif**	**09 20 32.3**	**+0.4**
	comp=Z,17nm,1.1s,baz=68,slow=4.4						
NOA	**NORSAR Array B**	**109.91**	**333**	Pdiff	**Pdif**	**09 20 31.8**	**-0.1**
	comp=Z,6.3nm,0.9s,baz=70,slow=4.4,SNR=12						
NOA				PKiKP	**PKiKP**	**09 24 34.3**	**+0.7**
	comp=Z,2.2nm,0.8s,baz=66,slow=2.2,SNR=25						
NOA				PKKPbc	**PKKPbc**	**09 35 37.1**	**-2.0**
	comp=Z,1.1nm,0.7s,baz=239,slow=3.1,SNR=9.6						
JAVC	**Velka Javorina**	**109.98**	**319**	ePKIKP	**PKiKP**	**09 24 37.0**	**+2.9**
DEL	**Delary**	**110.20**	**328**	i P	**PKiKP**	**09 24 35.7**	**+1.5**
KOVH	**Kovagotottos**	**110.26**	**316**	eP	**PKiKP**	**09 24 36.7**	**+2.1**
KRLC	**Kraliky**	**110.28**	**321**	ePKP	**PKiKP**	**09 24 37.2**	**+2.6**
KRLC	**Kraliky**	**110.28**	**321**	ePKIKP	**PKiKP**	**09 24 37.2**	**+2.6**
BORU	**Boraas**	**110.39**	**329**	i P	**PKiKP**	**09 24 35.6**	**+1.1**
MPLH	**Magyarpolny**	**110.42**	**318**	eP	**PKiKP**	**09 24 37.2**	**+2.3**
SMMC	**Simmler**	**110.43**	**55**	PKiKP	**PKiKP**	**09 24 38.5**	**+3.2**
	baz=276						
DOMB	**Dombas**	**110.45**	**334**	ePdif	**Pdif**	**09 20 35.6**	**+1.2**
DOMB				ePP	**PP**	**09 25 12.4**	**+1.4**
DOMB				eSP	SP	09 34 32.2	+1.4
NEW	**Newport**	**110.49**	**41**	PKiKP	**PKiKP**	**09 24 37.0**	**+1.9**
	baz=283,SNR=8.7						
DPC	**Dobruska-Polom**	**110.50**	**321**	ePKP	**PKiKP**	**09 24 37.5**	**+2.5**
DPC	**Dobruska-Polom**	**110.50**	**321**	ePKIKP	**PKiKP**	**09 24 37.5**	**+2.5**
OSTC	**Ostas**	**110.51**	**321**	ePKP	**PKiKP**	**09 24 37.9**	**+2.9**
OSTC				ePP	**PP**	**09 25 15.3**	**+3.4**
OSL	**Oslo**	**110.56**	**332**	eSS	SS	09 40 36.4	+3.1
VRAC	**Vranov**	**110.57**	**320**	⇑P	**PKiKP**	**09 24 37.2**	**+2.0**
VRAC	**Vranov**	**110.57**	**320**	Pdiff	**Pdif**	**09 20 34.7**	**-0.5**
	comp=Z,1.6nm,0.3s,baz=174,slow=5.3,SNR=4.6						
VRAC				PKiKP	**PKiKP**	**09 24 36.3**	**+1.1**
	comp=Z,9.8nm,0.8s,baz=86,slow=1.2,SNR=11						
VRAC	**Vranov**	**110.57**	**320**	ePKIKP	**PKiKP**	**09 24 36.9**	**+1.8**
CHVC	**Chvalec**	**110.61**	**322**	ePKP	**PKiKP**	**09 24 37.0**	**+1.8**
PKM	**Mcpherson Peak**	**110.62**	**56**	PKiKP	**PKiKP**	**09 24 38.3**	**+2.4**
	baz=276,SNR=7.0						
FABU	**Falkenberg**	**110.63**	**329**	i P	**PKiKP**	**09 24 36.0**	**+1.0**
UPC	**Upice**	**110.65**	**321**	ePKP	**PKiKP**	**09 24 37.7**	**+2.5**
UPC				ePP	**PP**	**09 25 16.0**	**+3.1**
UPC	**Upice**	**110.65**	**321**	ePKIKP	**PKiKP**	**09 24 37.7**	**+2.5**
UPC				e		09 25 16.0	
STRU	**Stroemstad**	**110.68**	**331**	i P	**PKiKP**	**09 24 35.4**	**+0.4**
LUNU	**Lund**	**110.69**	**327**	i P	**PKiKP**	**09 24 35.5**	**+0.4**
KRUC	**Moravsky**	**110.76**	**320**	ePKIKP	**PKiKP**	**09 24 37.6**	**+2.1**
BJUU	**Bjuv**	**110.78**	**328**	i P	**PKiKP**	**09 24 36.2**	**+1.0**
TJOU	**Tjoern**	**110.83**	**330**	i P	**PKiKP**	**09 24 36.5**	**+1.2**
ONAU	**Onsala**	**110.90**	**329**	i P	**PKiKP**	**09 24 37.0**	**+1.5**
SNCC	**San Nicolas Is**	**111.01**	**57**	PKiKP	**PKiKP**	**09 24 38.9**	**+2.5**
	baz=275						
VES	**Vestal, Richgr**	**111.11**	**54**	PKiKP	**PKiKP**	**09 24 38.5**	**+2.0**
	baz=277,SNR=5.4						
KONO	**Kongsberg**	**111.19**	**332**	ePP	**PP**	**09 25 16.9**	**+0.6**
KONO				eSP	SP	09 34 39.5	+1.9
KONO				eSS	**SS**	**09 40 45.1**	**+3.3**
AKN	**Aaknes**	**111.27**	**335**	ePdif	**Pdif**	**09 20 39.9**	**+1.9**
TREC	**Trest**	**111.28**	**320**	ePKP	**PKiKP**	**09 24 38.8**	**+2.3**
TREC	**Trest**	**111.28**	**320**	ePKIKP	**PKiKP**	**09 24 38.8**	**+2.3**
SKAR	**Skarslia**	**111.36**	**333**	ePP	**PP**	**09 25 19.9**	**+2.4**
SKAR				eSP	SP	09 34 41.1	+1.9
CONA	**Conrad Observa**	**111.37**	**319**	eP	**PKiKP**	**09 24 38.2**	**+1.4**
	comp=Z,8.4nm,0.8s						
ARVC	**Arvin**	**111.40**	**55**	PKiKP	**PKiKP**	**09 24 38.8**	**+1.7**
	baz=276,SNR=5.1						
NVAR	**Mina Array Bea**	**111.40**	**52**	Pdiff	**Pdif**	**09 20 40.5**	**+1.2**
	comp=Z,0.2nm,0.5s,baz=321,slow=1.2,SNR=3.0						
NVAR				PKiKP	**PKiKP**	**09 24 37.8**	**+0.5**
	comp=Z,8.5nm,0.9s,baz=256,slow=2.9,SNR=24						
NVAR				PKKPbc	**PKKPbc**	**09 35 34.3**	**+0.7**
	comp=Z,1.7nm,0.6s,baz=123,slow=3.9,SNR=12						
NVAR				PKKPab	**PKKPab**	**09 35 42.7**	**+0.4**
	comp=Z,3.9nm,0.9s,baz=120,slow=4.9,SNR=9.1						
RICI	**Ricice**	**111.43**	**314**	i P	**PKiKP**	**09 24 38.5**	**+1.6**
PVCC	**Panska Ves**	**111.54**	**322**	ePKP	**PKiKP**	**09 24 38.5**	**+1.6**
PVCC	**Panska Ves**	**111.54**	**322**	ePKIKP	**PKiKP**	**09 24 38.5**	**+1.6**
ISA	**Isabella, Lake**	**111.62**	**55**	PKiKP	**PKiKP**	**09 24 39.9**	**+2.2**
	baz=277,SNR=6.3						
PRU	**Pruhonice**	**111.70**	**321**	ePKP	**PKiKP**	**09 24 39.2**	**+2.0**
PRU				ePP	**PP**	**09 25 19.3**	**-1.0**
PRU				AMS	AMS	10 13 40.0	
	comp=Z,900nm,18.1s						
PRU	**Pruhonice**	**111.70**	**321**	ePKIKP	**PKiKP**	**09 24 39.2**	**+2.0**
PRU				e		09 25 19.3	
PRU				MLR	MLR		
	comp=Z,900nm,18.1s						
ARSA	**Arzberg**	**111.75**	**318**	eP	**PKiKP**	**09 24 38.8**	**+1.3**
	comp=Z,9.6nm,0.8s						
BRG	**Berggiesshubel**	**111.82**	**322**	eP	**Pdif**	**09 20 43.0**	**+2.3**
BRG				Amp		09 20 45.4	
	comp=Z,5.6nm,1.2s						
BRG	**Berggiesshubel**	**111.82**	**322**	i PKP	**PKiKP**	**09 24 39.0**	**+1.5**
BRG				Amp		09 24 39.4	
	comp=Z,16nm,0.8s						
BRG	**Berggiesshubel**	**111.82**	**322**	PP	**PP**	**09 25 27.0**	**+5.8**
BRG	**Berggiesshubel**	**111.82**	**322**	SS	SS	09 40 57.0	+6.2
CWC	**Cottonwood Cre**	**111.84**	**54**	PKiKP	**PKiKP**	**09 24 39.9**	**+1.7**
	baz=277						
KIJV	**Kijevo**	**111.85**	**315**	i P	**PKiKP**	**09 24 39.3**	**+1.6**
CIS	**Catalina Islan**	**111.92**	**57**	PKiKP	**PKiKP**	**09 24 39.9**	**+1.6**
	baz=276,SNR=6.6						
EDW2	**Edwards Air Fo**	**112.11**	**55**	PKiKP	**PKiKP**	**09 24 40.7**	**+2.2**
	baz=277,SNR=27						

CKRC	**Cesky Krumlov**	**112.15**	**320**	ePKP	**PKiKP**	**09 24 39.6**	**+1.4**
CKRC				ePP	**PP**	**09 25 24.9**	**+1.2**
PERS	**Pernice**	**112.16**	**318**	i PKiKP	**PKiKP**	**09 24 39.8**	**+1.5**
UDBI	**Udbina**	**112.19**	**315**	i P	**PKiKP**	**09 24 39.5**	**+1.1**
SOKA	**Soboth**	**112.21**	**318**	eP	**PKiKP**	**09 24 39.9**	**+1.5**
	comp=Z,19nm,0.8s,SNR=5.2						
MATE	**Matera**	**112.25**	**311**	⇑P	**PKiKP**	**09 24 40.4**	**+1.9**
HOMB	**Homborsund**	**112.27**	**331**	i P	**PKiKP**	**09 24 39.5**	**+1.5**
HOMB	**Homborsund**	**112.27**	**331**	ePP	**PP**	**09 25 24.7**	**+0.7**
CLL	**Collm**	**112.27**	**323**	ePdif	**Pdif**	**09 20 44.0**	**+1.4**
CLL				i		09 22 22.9	
CLL				i PKiKP	**PKiKP**	**09 24 38.8**	**+0.5**
	comp=Z,24nm,0.9s						
CLL				e		09 24 54.0	
CLL				ePP	**PP**	**09 25 25.0**	**+0.6**
CLL				ePPlp		09 25 27.0	
	comp=Z,400nm,18.6s						
CLL				ePPP	PPP	09 27 48.0	
CLL				eSKSac	**SKSac**	**09 31 12.0**	**-1.1**
CLL				epSKSac	**pSKSac**	**09 31 48.0**	**+3.1**
CLL				eSdif	**Sdif**	**09 32 54.0**	**-3.5**
CLL				eSP	**SP**	**09 34 42.0**	**-6.0**
CLL				ePS	**PS**	**09 35 02.0**	**+2.7**
CLL				ePPS	PPS	09 36 06.0	
CLL				eSS	**SS**	**09 40 51.0**	**-5.7**
CLL				epPPPrev		09 43 36.0	
CLL				eSSS	SSS	09 45 06.0	
CLL				e		09 47 18.0	
CLL				e		09 52 24.0	
CLL				e		09 53 30.0	
CLL				LmV		10 19 00.0	
	comp=Z,800nm,19.1s						
CLL	**Collm**	**112.27**	**323**	eP	**Pdif**	**09 20 44.0**	**+1.4**
CLL				i		09 24 38.8	
CLL				e		09 24 54.0	
CLL				e		09 25 25.0	
CLL				pmax	pmax		
	comp=Z,24nm,0.9s						
LRMC	**Laurel Mtn Rad**	**112.29**	**55**	PKiKP	**PKiKP**	**09 24 41.7**	**+2.7**
	baz=277,SNR=6.9						
BOJS	**Bojanci**	**112.33**	**316**	i PKiKP	**PKiKP**	**09 24 40.7**	**+2.1**
FOO	**Floro**	**112.36**	**335**	ePP	**PP**	**09 25 24.1**	**-0.5**
FOO				eSP	SP	09 34 46.8	-1.3
MPMC	**Manual Prospec**	**112.37**	**54**	PKiKP	**PKiKP**	**09 24 41.1**	**+1.9**
	baz=278,SNR=23						
MORI	**Morici**	**112.37**	**315**	i P	**PKiKP**	**09 24 40.2**	**+1.5**
MOA	**Molln**	**112.43**	**319**	i P	**PKiKP**	**09 24 40.0**	**+1.2**
	comp=Z,17nm,1.2s						
BFSC	**Mount Baldy Ra**	**112.46**	**56**	PKiKP	**PKiKP**	**09 24 40.9**	**+1.5**
	baz=277,SNR=5.5						
ZIRJ	**Zirje**	**112.46**	**314**	i P	**PKiKP**	**09 24 39.9**	**+1.1**
TIP	**Timpagrande**	**112.46**	**309**	⇓P	**PKiKP**	**09 24 38.6**	**-0.5**
GERES	**GERESS Array B**	**112.53**	**320**	Pdiff	**Pdif**	**09 20 44.2**	**+0.2**
	comp=Z,0.6nm,0.8s,baz=294,slow=1.3,SNR=4.6						
GERES				PKiKP	**PKiKP**	**09 24 38.9**	**-0.1**
	comp=Z,23nm,0.6s,baz=82,slow=2.2,SNR=84						
KHC	**Kasperske Hory**	**112.53**	**320**	ePKP	**PKiKP**	**09 24 40.1**	**+1.2**
KHC				ex	x	09 25 26.5	
KHC				eSP	SP	09 34 50.0	-0.6
KHC				AMS	AMS	10 16 30.0	
	comp=Z,600nm,16.9s						
KHC	**Kasperske Hory**	**112.53**	**320**	ePKIKP	**PKiKP**	**09 24 40.1**	**+1.2**
KHC				e		09 25 26.5	
KHC				eSP	SP	09 34 50.0	-0.6
KHC				MLR	MLR		
	comp=Z,600nm,16.9s						
OBKA	**Obir**	**112.57**	**318**	eP	**PKiKP**	**09 24 39.8**	**+0.7**
	comp=Z,17nm,1.0s						
LJU	**Ljubljana**	**112.70**	**317**	i PKiKP	**PKiKP**	**09 24 41.4**	**+2.1**
DUGI	**Dugi Otok**	**112.80**	**315**	i P	**PKiKP**	**09 24 40.7**	**+1.2**
BER	**Bergen**	**112.81**	**334**	ePP	**PP**	**09 25 29.5**	**+1.7**
BER				eSP	SP	09 34 57.0	+4.7
FURC	**Furnace Creek,**	**112.81**	**54**	PKiKP	**PKiKP**	**09 24 42.0**	**+2.3**
	baz=278,SNR=14						
ASK	**Askoy**	**112.82**	**334**	ePdif	**Pdif**	**09 20 46.1**	**+1.3**
RABC	**Rab**	**112.83**	**316**	i P	**PKiKP**	**09 24 41.1**	**+1.6**
SNART	**Snartemo**	**112.86**	**331**	i P	**PKiKP**	**09 24 39.9**	**+0.8**
MURC	**Murrieta**	**112.91**	**57**	PKiKP	**PKiKP**	**09 24 42.2**	**+2.1**
	baz=277						
MSO	**Missoula**	**112.92**	**42**	PKiKP	**PKiKP**	**09 24 40.6**	**+0.8**
	baz=285,SNR=24						
NKC	**Novy Kostel**	**112.92**	**322**	ePKP	**PKiKP**	**09 24 41.4**	**+1.8**
NKC				ePKP	**PKiKP**	**09 24 41.7**	**+2.1**
NKC	**Novy Kostel**	**112.92**	**322**	ePKIKP	**PKiKP**	**09 24 41.4**	**+1.8**
GSC	**Goldstone, Bar**	**113.02**	**55**	PKiKP	**PKiKP**	**09 24 42.5**	**+2.1**
	baz=278,SNR=23						
109C	**Camp Elliot, M**	**113.07**	**57**	PKiKP	**PKiKP**	**09 24 43.0**	**+2.6**
	baz=277						
MYKA	**Terra Mystica**	**113.15**	**318**	eP	**PKiKP**	**09 24 41.2**	**+0.9**
	comp=Z,8.9nm,0.7s						
KBA	**Koelnbreinsper**	**113.23**	**318**	eP	**PKiKP**	**09 24 41.2**	**+0.7**
	comp=Z,30nm,1.4s						
SHOC	**Shoshone, Teco**	**113.36**	**54**	PKiKP	**PKiKP**	**09 24 43.5**	**+2.6**
	baz=278,SNR=7.2						
HLID	**Hailey**	**113.37**	**46**	PKiKP	**PKiKP**	**09 24 42.6**	**+1.7**
	baz=283,SNR=43						
HEC	**Hector,Ludlow**	**113.47**	**55**	PKiKP	**PKiKP**	**09 24 43.7**	**+2.5**
	baz=278						
PFO	**Pinyon Flats O**	**113.52**	**57**	PKiKP	**PKiKP**	**09 24 43.2**	**+1.8**
	baz=277,SNR=24						
R11A	**Troy Canyon, C**	**113.52**	**51**	PKiKP	**PKiKP**	**09 24 43.2**	**+1.8**
	baz=280,SNR=15						
TPFO	**Pinon Flats**	**113.53**	**57**	P	**PKiKP**	**09 24 43.3**	**+1.9**
	baz=277,SNR=29						
MONP2	**Monument Peak**	**113.64**	**57**	P	**PKiKP**	**09 24 43.9**	**+2.2**
	baz=277,SNR=14						
GRF	**Grafenberg Arr**	**113.84**	**322**	ePKiKP	**PKiKP**	**09 24 43.3**	**+1.9**
	baz=72,slow=0.8						
BELC	**Belle Mtn. Jos**	**113.85**	**56**	P	**PKiKP**	**09 24 44.2**	**+2.1**
	baz=278,SNR=27						
ABTA	**Abfaltersbach**	**113.87**	**318**	eP	**PKiKP**	**09 24 42.6**	**+1.0**
	comp=Z,52nm,0.8s,SNR=15						
IKP	**In-Ko-Pah, Jac**	**113.93**	**58**	P	**PKiKP**	**09 24 44.1**	**+2.0**
	baz=277,SNR=14						
GMRC	**Granite Mounta**	**114.02**	**55**	P	**PKiKP**	**09 24 44.5**	**+2.2**
	baz=278,SNR=29						
SWSC	**Sam W. Stewart**	**114.15**	**57**	P	**PKiKP**	**09 24 45.0**	**+2.5**
	baz=277,SNR=6.0						
SCO	**Scoresbysund**	**114.26**	**350**	i P	**PKiKP**	**09 24 42.8**	**+1.3**
SUMG	**Summit**	**114.26**	**356**	i P	**PKiKP**	**09 24 42.2**	**+0.2**
SUMG				IAmb	IAmb	09 24 45.1	
	comp=Z,38nm,1.0s						
WTTA	**Wattenberg**	**114.30**	**319**	eP	**PKiKP**	**09 24 43.0**	**+0.5**
	comp=Z,111nm,0.6s,SNR=32						
WATA	**Walderalm**	**114.32**	**319**	eP	**PKiKP**	**09 24 43.5**	**+1.0**
	comp=Z,35nm,0.7s,SNR=12						
BC3	**Big Chuckawall**	**114.35**	**56**	P	**PKiKP**	**09 24 45.2**	**+2.2**
	baz=278,SNR=9.8						
IRM	**Iron Mountain**	**114.53**	**56**	P	**PKiKP**	**09 24 45.4**	**+2.2**
	baz=278,SNR=8.0						
SQTA	**Sankt Quirin**	**114.59**	**319**	eP	**PKiKP**	**09 24 44.7**	**+1.7**
	comp=Z,31nm,0.7s,SNR=11						
MOTA	**Moosalm**	**114.62**	**319**	eP	**PKiKP**	**09 24 43.7**	**+0.6**
	comp=Z,42nm,0.6s,SNR=14						
BOZ	**Bozeman (W)**	**114.79**	**43**	P	PKPdf	09 24 45.6	+2.1
	baz=286,SNR=13						
RETA	**Reutte**	**114.80**	**319**	i P	PKPdf	09 24 44.6	+1.2
	comp=Z,19nm,0.7s						
GLA	**Glamis**	**114.95**	**57**	P	**PKiKP**	**09 24 47.2**	**+3.1**
	baz=278						
FETA	**Feichten**	**114.96**	**319**	eP	PKPdf	09 24 44.7	+0.9
	comp=Z,26nm,0.7s,SNR=7.7						
DUG	**Dugway, Tooele**	**115.28**	**49**	i PKIKP	**PKPdf**	**09 24 46.5**	**+1.9**
DUG	**Dugway, Tooele**	**115.28**	**49**	P	**PKPdf**	**09 24 46.5**	**+1.9**
	baz=283,SNR=26						
DUG	**Dugway, Tooele**	**115.28**	**49**	PKiKP	**PKPdf**	**09 24 46.5**	**+1.9**
EGMT	**Eagleton**	**115.30**	**40**	P	**PKPdf**	**09 24 45.6**	**+1.3**
	baz=289						
PDMCI	**Parker Dam,Lak**	**115.33**	**55**	P	**PKPdf**	**09 24 47.1**	**+2.4**
	baz=279						
STU	**Stuttgart**	**115.39**	**321**	PKIKP	**PKiKP**	**09 24 44.2**	**-0.2**
STU	**Stuttgart**	**115.39**	**321**		**PKiKP**	**09 24 44.2**	**-0.2**
DAVA	**Damuels**	**115.44**	**319**	i P	**PKPdf**	**09 24 45.1**	**+0.4**
	comp=Z,56nm,0.6s,SNR=18						
YHH	**Holmes Hill**	**115.54**	**44**		**PKPdf**	**09 24 46.9**	**+1.7**
LCMT	**Little Creek M**	**115.59**	**52**		**PKiKP**	**09 24 46.4**	**+1.1**
DAVOX	**Davos/Dischmat**	**115.59**	**319**	PKP	**PKPdf**	**09 24 45.1**	**+0.1**
	comp=Z,47nm,0.7s,baz=219,slow=3.8,SNR=59						
DAVOX				PKKPbc	**PKKPbc**	**09 35 19.5**	**-0.2**
	comp=Z,6.3nm,0.8s,baz=276,slow=9.2,SNR=6.2						
FXWY	**Fox Creek**	**115.74**	**45**		**PKPdf**	**09 24 45.6**	**+0.1**
TPAW	**Teton Pass**	**115.83**	**45**		**PKiKP**	**09 24 46.2**	**+0.5**
H17A	**Grant Village**	**115.84**	**44**	P	**PKiKP**	**09 24 49.3**	**+3.6**
	baz=286,SNR=9.2						
FLWY	**Flagg Ranch**	**115.84**	**44**		**PKPdf**	**09 24 45.4**	**-0.3**

113A	Mohawk Valley,	115.87	57		PKiKP	09 24 46.0	+0.3
NLU	North Lily Min	115.88	49		PKiKP	09 24 46.0	+0.2
MOOW	Moose Ponds	115.90	45		PKiKP	09 24 47.0	+1.2
AHID	Auburn Hatcher	115.91	46		PKiKP	09 24 46.2	+0.4
CTU	Camp Tracy	115.95	48		PKiKP	09 24 46.2	+0.2
TUE	Stuetta	116.04	319		PKiKP	09 24 46.1	+0.2
BFO	Black Forest	116.08	321	PKIKP	PKPdf	09 24 45.2	-0.6
BFO	Black Forest	116.08	321		PKPdf	09 24 45.1	-0.6
TCUT	Toone Canyon	116.11	48		PKiKP	09 24 46.5	+0.2
MSU	Marysvale	116.12	51	PKIKP	PKPdf	09 24 46.0	-0.4
MSU	Marysvale	116.12	51		PKPdf	09 24 46.0	-0.4
MPU	Maple Canyon	116.20	49		PKPdf	09 24 46.1	-0.4
Y14A	Wickenburg	116.32	56		PKiKP	09 24 46.7	+0.1
USHA	Ushuaia	116.35	168	PKKPbc	PKKPbc	09 35 16.5	-0.7
	comp=Z,9.1nm,0.9s,baz=29,slow=4.8,SNR=5.7						
RLMT	Red Lodge	116.52	43	P	PKiKP	09 24 48.9	+2.0
	baz=288,SNR=11						
BTNL	Ternell	116.60	324	*d*PKPdf	PKiKP	09 24 48.0	+1.3
MEM	Membach	116.66	324	*d*PKPdf	PKiKP	09 24 48.4	+1.7
TMUT	Trail Mountain	116.68	50	PKPdf	PKiKP	09 24 49.5	+1.9
BHOU	Houvegnez	116.76	323	*d*PKPdf	PKiKP	09 24 49.4	+2.5
214A	Organ Pipe Nat	116.79	58	P	PKiKP	09 24 50.4	+2.8
	baz=279,SNR=9.5						
ECH	Echery	116.86	321	PKIKP	PKiKP	09 24 48.2	+1.0
ECH	Echery	116.86	321	PKPdf	PKiKP	09 24 48.2	+1.0
WLF	Walferdange	116.94	323	*d*PKPdf	PKiKP	09 24 49.2	+1.9
P17A	Butcher Ranch,	117.00	49		PKiKP	09 24 48.9	+0.9
BW06	Boulder Array	117.01	45	P	PKiKP	09 24 49.3	+1.3
	baz=286						
PD31	Pinedale Array	117.01	45	PKPdf	PKiKP	09 24 48.5	+0.5
PDAR	Pinedale Array	117.01	45	PKP	PKiKP	09 24 48.3	+0.3
	comp=Z,15nm,0.8s,baz=233,slow=1.4,SNR=79						
PDAR				PKKPbc	PKKPbc	09 35 13.6	-1.2
	comp=Z,2.3nm,0.7s,baz=119,slow=6.3,SNR=11						
PDAR	Pinedale Array	117.01	45	PKPdf	PKiKP	09 24 48.5	+0.5
FFC	Flin Flon	117.09	31	PKIKP	PKiKP	09 24 47.8	+0.4
FFC	Flin Flon	117.09	31	PKPdf	PKiKP	09 24 47.8	+0.4
BCLA	Clavier	117.15	324	*d*PKPdf	PKiKP	09 24 49.6	+1.9
BCLA				*d*pPKPdf	pPKPdf	09 25 08.1	-3.1
SRU	San Rafael Swe	117.24	50	PKIKP	PKiKP	09 24 49.6	+1.1
SRU	San Rafael Swe	117.24	50		PKiKP	09 24 49.6	+1.1
BGES	Gesves	117.29	324	*d*PKPdf	PKiKP	09 24 49.1	+1.1
P18A	Preston Nutter	117.33	49		PKiKP	09 24 49.5	+0.7
WUAZ	Wupatki	117.36	54	P	PKiKP	09 24 50.7	+1.9
	baz=281,SNR=74						
BMRD	Maredsous	117.51	324	*d*PKPdf	PKiKP	09 24 50.5	+2.1
RDMU	Red Mountain	117.59	48	PKPdf	PKiKP	09 24 49.7	+0.6
DOU	Dourbes	117.70	324	*d*PKPdf	PKiKP	09 24 50.4	+1.6
SNF	Seneffe	117.71	324	*d*PKPdf	PKiKP	09 24 50.5	+1.8
ICESG	Greenland Ices	117.77	356	*i*	PKPdf	09 24 41.9	-6.9
ICESG				*i* P	PKiKP	09 24 48.6	-0.2
ICESG				IAmb	IAmb	09 24 50.5	
	comp=Z,19nm,0.8s						
VSL	Villasalto	117.99	311		PKiKP	09 24 50.4	+0.7
LAO	LASA Array	118.01	40	P	PKiKP	09 24 51.3	+1.8
	baz=291,SNR=47						
LAO	LASA Array	118.01	40	PKPdf	PKiKP	09 24 51.5	+1.9
BNI	Bardonecchia	118.26	318	PKIKP	PKiKP	09 24 50.5	+0.3
BNI	Bardonecchia	118.26	318	PKPdf	PKiKP	09 24 50.5	+0.3
MG05	Puerto Natales	118.30	164		PKiKP	09 24 50.4	+0.5
TUC	Tucson	118.43	57	P	PKiKP	09 24 52.5	+1.7
	baz=280						
DGMT	Dagmar	118.61	38	P	PKiKP	09 24 52.6	+2.0
	baz=294,SNR=19						
O20A	White River Ci	118.69	48	P	PKiKP	09 24 52.9	+1.6
	baz=286,SNR=86						
W18A	Petrified Fore	118.75	54	P	PKiKP	09 24 53.5	+1.9
	baz=282,SNR=5.5						
KEST	Kesra	118.91	307	PKP	PKiKP	09 24 53.4	+1.7
	comp=Z,70nm,0.9s,baz=256,slow=1.8,SNR=36						
KEST				PKKPbc	PKKPbc	09 35 07.4	-0.1
	comp=Z,7.1nm,0.9s,baz=200,slow=1.2,SNR=4.2						
EBL	Broad Law	118.99	332	*e*P	PKiKP	09 24 52.8	+1.7
KAC	Achnashellach	119.00	334	*e*P	PKiKP	09 24 52.2	+1.2
INVG	Invergeldie, C	119.08	333	*e*P	PKiKP	09 24 52.4	+1.1
K22A	Casper	119.18	45	P	PKiKP	09 24 52.9	+0.7
	baz=289,SNR=28						
MVCO	Mesa Verde	119.25	51	P	PKiKP	09 24 54.5	+2.0
	baz=284,SNR=38						
KPL	Plockton	119.25	334	*e*P	PKiKP	09 24 52.9	+1.4
EKA	Eskdalemuir Ar	119.29	331	PKP	PKiKP	09 24 52.2	+0.5
	comp=Z,14nm,0.6s,baz=22,slow=2.9,SNR=28						
EKA				PKKPbc	PKKPab	09 35 06.8	0.0
	comp=Z,2.8nm,0.7s,baz=231,slow=2.7,SNR=5.2						
EAB	Aberfoyle	119.36	333	*e*P	PKiKP	09 24 53.7	+1.9
LBWR	Ladybower, Pea	119.63	329	*e*P	PKiKP	09 24 54.1	+1.6
KESW	Keswick, Cumbr	119.68	331	*e*P	PKiKP	09 24 54.4	+1.9
NEWG	New Galloway	119.92	332	*e*P	PKiKP	09 24 54.1	+1.2
NEWG				IAmb	IAmb	09 24 55.4	
	comp=Z,39nm,1.0s						
N23A	Red Feather La	120.14	47	P	PKiKP	09 24 56.2	+2.0
	baz=288,SNR=16						
SFJD	Kangerlussuaq	120.25	0	PKIKP	PKiKP	09 24 53.3	+0.1
SFJD	Kangerlussuaq	120.25	0	*i* P	PKiKP	09 24 53.6	+0.4
SFJD				IAmb	IAmb	09 24 55.2	
	comp=Z,33nm,0.8s						
SFJD	Kangerlussuaq	120.25	0		PKiKP	09 24 53.3	+0.1
GAL1	Galloway	120.29	332	*e*P	PKiKP	09 24 54.6	+1.0
GAL1				IAmb	IAmb	09 24 56.1	
	comp=Z,76nm,0.8s						
RSSD	Black Hills	120.38	42	PKIKP	PKPdf	09 24 54.1	-0.3
RSSD	Black Hills	120.38	42	P	PKiKP	09 24 55.0	+0.5
	baz=292						
RSSD	Black Hills	120.38	42	PKPdf	PKPdf	09 24 54.1	-0.3
S22A	4UR Ranch, Cre	120.40	50	P	PKiKP	09 24 57.0	+2.1
	baz=286,SNR=65						
SWN1	Swindon	120.65	327	*e*P	PKiKP	09 24 56.4	+1.9
SWN1				IAmb	IAmb	09 24 57.1	
	comp=Z,186nm,0.7s						
WIM	Isle of Man	120.69	331	*e*P	PKiKP	09 24 56.5	+2.0
STRD	Stroud	120.71	328	*e*P	PKiKP	09 24 55.8	+1.2
STRD				IAmb	IAmb	09 24 57.3	
	comp=Z,100nm,0.8s						
ISCO	Idaho Springs	120.72	48	P	PKiKP	09 24 57.6	+2.2
	baz=288,SNR=14						
DY2G	Dye2	120.72	358	*i* P	PKiKP	09 24 54.5	0.0
DY2G				IAmb	IAmb	09 24 56.9	
	comp=Z,142nm,0.9s						
CLGH	Cloghs, Cushen	120.82	332	*e*P	PKiKP	09 24 56.0	+1.3
CLGH				IAmb	IAmb	09 24 57.1	
	comp=Z,85nm,0.9s						
121A	Cookes Peak, D	120.88	56	P	PKiKP	09 24 57.5	+1.7
	baz=282,SNR=45						
LLW	Llanuwychllyn	120.92	329	*e*P	PKiKP	09 24 56.8	+1.8
ANGG	Ammassalik, Gr	120.99	354	*i* P	PKPdf	09 24 53.8	-0.8
MCH1	Michaelchurch	121.03	328	*e*P	PKiKP	09 24 56.3	+1.1
MCH1				IAmb	IAmb	09 24 58.6	
	comp=Z,101nm,1.2s						
WLF1	Llynfaes	121.04	330	*e*P	PKiKP	09 24 56.3	+1.1
WLF1				IAmb	IAmb	09 24 57.3	
	comp=Z,142nm,0.9s						
YRC	Rhoscolyn	121.15	330	*e*P	PKiKP	09 24 56.6	+1.2
ISOG	Isortoq, Green	121.19	355	*i* P	PKiKP	09 24 55.2	+0.1
Y22D	IRIS PASSCAL I	121.25	54	P	PKiKP	09 24 58.7	+2.3
	baz=284,SNR=11						
Q24A	Divide	121.31	48	P	PKiKP	09 24 59.0	+2.4
	baz=288,SNR=11						
SDCO	Great Sand Dun	121.41	50	P	PKiKP	09 24 58.4	+1.6
	baz=287,SNR=44						
ANMO	Albuquerque	121.41	53*c*	*i*PKIKP	PKiKP	09 24 58.4	+1.6
ANMO				pmax	pmax		
	comp=Z,83nm,1.3s						
ANMO	Albuquerque	121.41	53	P	PKiKP	09 24 58.4	+1.6
	baz=284						
ANMO	Albuquerque	121.41	53	PKPdf	PKPdf	09 24 56.6	0.0
MAHO	Mahon	121.65	313	P	PP	09 26 29.2	-0.8
MDND	Maddock	121.65	37	P	PKiKP	09 24 57.5	+0.9
	baz=298,SNR=20						
FRB	Frobisher Bay	121.95	10	PKP	PKiKP	09 24 56.8	+0.2
	comp=Z,72nm,0.8s						
HTL	Hartland	122.36	328	*e*P	PKiKP	09 24 59.6	+1.8
HTL				IAmb	IAmb	09 25 01.8	
	comp=Z,261nm,1.4s						
DYA	Yadsworthy	122.36	327	*e*P	PKiKP	09 24 59.5	+1.7
T25A	Trinidad	122.41	50	P	PKiKP	09 25 00.5	+1.8
	baz=287,SNR=15						
ULM	Lac du Bonnet	122.58	33	PKP	PKiKP	09 24 58.4	0.0
	comp=Z,50nm,0.6s,baz=297,slow=2.1,SNR=42						
ULM				PKKPbc	PKKPab	09 34 52.5	-0.1
	comp=Z,9.3nm,0.9s,baz=145,slow=1.6,SNR=6.4						
ULM	Lac du Bonnet	122.58	33	PKPdf	PKiKP	09 24 58.2	-0.1
OGNE	Ogallala	122.91	45	P	PKiKP	09 25 01.1	+1.7
	baz=291,SNR=11						
OGNE	Ogallala	122.91	45	PKPdf	PKiKP	09 24 59.8	+0.4
MNTX	Cornudas Mount	123.05	57	P	PKiKP	09 25 01.3	+1.4
	baz=283,SNR=156						
MNTX	Cornudas Mount	123.05	57	PKPdf	PKiKP	09 25 00.2	+0.4
NUUK	Nuuk	123.06	1	*i* P	PKiKP	09 24 59.3	+0.4
NUUK				IAmb	IAmb	09 25 01.6	
	comp=Z,59nm,1.0s						
KSCO	Kaye Shedlock'	123.16	48	P	PKiKP	09 25 02.3	+2.3
	baz=290						
D32A	Dogwood Acres,	123.53	37		PKiKP	09 25 00.7	+0.4
SUSD	Miller	123.59	40	P	PKiKP	09 25 02.0	+1.4
	baz=296,SNR=6.0						
SUSD	Miller	123.59	40	PKPdf	PKiKP	09 25 01.1	+0.6
AGMN	Agassiz Nation	123.62	35	P	PKiKP	09 25 01.4	+0.9
	baz=301,SNR=5.3						
AGMN	Agassiz Nation	123.62	35	PKPdf	PKiKP	09 25 00.9	+0.4
HPIG		123.75	62		PKiKP	09 25 02.4	+0.8
COYC	Coyhaique	123.91	161	PKPdf	PKiKP	09 25 01.6	+0.5
K31A	O'Neill	124.51	42	PKPdf	PKiKP	09 25 03.1	+0.7
MSTX	Muleshoe	124.60	53	P	PKiKP	09 25 04.2	+1.2
	baz=286						
F33A	5 Mile Ranch,	124.61	38		PKiKP	09 25 03.1	+0.6
B35A	Bob, Littlefor	124.79	34		PKPdf	09 25 02.2	-0.3
TXAR	Lajitas Array	125.02	59	PKP	PKiKP	09 25 03.9	0.0
	comp=Z,26nm,0.9s,baz=216,slow=1.9,SNR=88						
TXAR				PKKPbc	PKKPab	09 34 42.4	-0.5
	comp=Z,2.8nm,1.0s,baz=112,slow=6.1,SNR=11						
TXAR	Lajitas Array	125.02	59	PKIKP	PKiKP	09 25 04.1	+0.2
TXAR	Lajitas Array	125.02	59	PKPdf	PKiKP	09 25 04.1	+0.2
AMTX	Amarillo	125.20	52	P	PKiKP	09 25 05.8	+1.7
	baz=288						
CBKS	Cedar Bluff	125.34	47	P	PKiKP	09 25 05.7	+1.5
	baz=292,SNR=9.0						
ECSD	EROS Data Cent	125.41	40	P	PKiKP	09 25 04.8	+0.7
	baz=298,SNR=50						
BGNE	Belgrade	125.43	43	P	PKiKP	09 25 05.1	+0.8
	baz=295,SNR=21						
NRS	Narsarsuaq	126.00	357	*i* P	PKiKP	09 25 05.0	+0.3
NRS				IAmb	IAmb	09 25 06.8	
	comp=Z,237nm,0.9s						
IVI	Ivigtut	126.05	359	*i* P	PKPdf	09 25 04.0	-0.4
LL02	Futaleuf	126.11	160		PKPdf	09 25 05.0	-0.2
EYMN	Ely	126.26	34	P	PKiKP	09 25 06.3	+0.6
	baz=306,SNR=18						
SPMN	Marine on St.	127.03	37	P	PKiKP	09 25 08.0	+0.7
	baz=302,SNR=18						
I37A	Lemond, Waseca	127.30	39	PKPdf	PKiKP	09 25 08.2	+0.3
N35A	Tabor	127.37	43	PKPdf	PKPdf	09 25 07.0	-0.6
KSU1	Kansas State U	127.47	45	P	PKiKP	09 25 10.3	+1.9
	baz=295,SNR=6.7						
ABTX	Abilene, Hawle	127.50	54	P	PKiKP	09 25 10.3	+1.6
	baz=288,SNR=5.2						
WMOK	Wichita Mounta	127.51	51	P	PKiKP	09 25 10.2	+1.5
	baz=290						
ESBB	Sonseca Array	127.60	315		PKiKP	09 25 08.7	0.0
ESDC	Sonseca Array	127.60	315	PKP	PKiKP	09 25 09.0	+0.2
	comp=Z,23nm,1.1s,baz=21,slow=2.6,SNR=37						
ESDC				PP	PP	09 27 11.5	+1.7
	comp=Z,11nm,1.0s,baz=52,slow=6.0,SNR=7.5						
PAB	San Pablo	127.93	315	P	PKiKP	09 25 11.4	+2.0
JCT	Junction City	127.99	57	P	PKiKP	09 25 10.4	+0.6
	baz=286,SNR=61						
FIGM	Figuig	128.36	306	P	PKiKP	09 25 13.0	+2.4
D41A	Chassel	128.38	33		PKiKP	09 25 09.8	-0.1
TAF	Taforalt	128.38	309	P	PKiKP	09 25 14.0	+3.5
T35A	Sooner Cattle	128.42	48	PKPdf	PKiKP	09 25 11.6	+1.2
PBRG	Braganca	128.49	319	*e*PKPdf	PKiKP	09 25 12.4	+2.0
PBRG	Braganca	128.49	319	*e*PP	PP	09 27 19.4	+3.9
G40A	Rib Lake	128.53	36		PKiKP	09 25 10.6	+0.2
JBK	JBK	128.67	309	P	PKiKP	09 25 14.0	+2.8
TDRA	Tendrara	128.68	307	P	PKiKP	09 25 14.1	+2.9
PLCA	Paso Flores	128.74	160	PKP	PKiKP	09 25 11.1	0.0
	comp=Z,22nm,0.8s,baz=196,slow=4.5,SNR=4.2						
PLCA				SKPbc	SKPbc	09 28 22.2	
	comp=Z,11nm,0.9s,baz=193,slow=6.9,SNR=6.4						
PLCA	Paso Flores	128.74	160	PKIKP	PKiKP	09 25 11.5	+0.5
PLCA	Paso Flores	128.74	160	*e*P	PKiKP	09 25 11.3	+0.2
PLCA	Paso Flores	128.74	160	PKPdf	PKiKP	09 25 11.5	+0.5
TORD	Torodi Ar. Bea	128.83	281	PKP	PKiKP	09 25 11.7	-0.1
	comp=Z,111nm,0.7s,baz=62,slow=2.1,SNR=146						
TORD				PP	PP	09 27 19.1	+0.2
	comp=Z,9.1nm,0.9s,baz=71,slow=7.1,SNR=3.7						
TORD				SKPbc	SKPbc	09 28 22.9	
	comp=Z,22nm,0.8s,baz=44,slow=1.8,SNR=12						
833A	Chaparral WMA,	128.90	59	P	PKiKP	09 25 13.2	+1.6
	baz=285						
MVO	Moncorvo	128.99	319	*e*PKPdf	PKiKP	09 25 14.0	+2.5
MVO	Moncorvo	128.99	319	*e*PP	PP	09 27 19.6	+0.8
MVO				*e*SKP	SKPab	09 28 24.8	
MVO	Moncorvo	128.99	319	*e*LR	LR	10 07 55.7	
	comp=Z,396nm,18.0s						
TUL1	Leonard	129.35	49	P	PKiKP	09 25 14.4	+2.1
	baz=293,SNR=13						
PCAB	Cabril	129.37	320	*e*PKPdf	PKiKP	09 25 14.9	+2.7
PCAB				*e*SKP	SKPab	09 28 26.3	+1.9
P38A	Dawn	129.37	43	PKPdf	PKiKP	09 25 13.2	+1.1
PVRL	Vila Real	129.38	319	*e*PKPdf	PKiKP	09 25 15.1	+2.9
PVRL	Vila Real	129.38	319	*e*PP	PP	09 27 29.1	+7.7
PVRL				*e*SKP	SKPab	09 28 25.9	+1.4
POLO	Lamas de Olo	129.39	319	*e*PKPdf	PKiKP	09 25 14.8	+2.5
POLO	Lamas de Olo	129.39	319	*e*PP	PP	09 27 24.5	+3.1
POLO				*e*SKP	SKPab	09 28 25.9	+1.3
PGAV	Gavieira, Arco	129.39	320	*e*PKPdf	PKiKP	09 25 13.8	+1.5
PGAV	Gavieira, Arco	129.39	320	*e*PP	PP	09 27 24.8	+3.4
PGAV	Gavieira, Arco	129.39	320	*e*LR	LR	10 10 16.6	
	comp=Z,540nm,20.0s						
WHTX	Lake Whitney,	129.46	54	P	PKiKP	09 25 14.3	+1.7
	baz=289						
L40A	Anamosa	129.68	40		PKiKP	09 25 12.9	+0.2
MTE	Manteigas	129.71	318	*e*PKPdf	PKiKP	09 25 15.5	+2.6
MTE	Manteigas	129.71	318	*e*PP	PP	09 27 25.9	+2.4
MTE				*e*SKP	SKPab	09 28 27.6	+1.6
MTE	Manteigas	129.71	318	*e*LR	LR	10 10 02.4	
	comp=Z,451nm,20.0s						
435B	Jarrell	129.73	56	P	PKiKP	09 25 15.8	+2.6
	baz=288,SNR=7.2						
PVIS	Viseu	129.78	318	*e*PKPdf	PKiKP	09 25 15.2	+2.1
PVIS	Viseu	129.78	318	*e*PP	PP	09 27 30.6	+6.6
PVIS				*e*SKP	SKPab	09 28 27.4	+1.1
JFWS	Jewell Farm	129.83	38	P	PKiKP	09 25 13.2	+0.2
	baz=304,SNR=17						
PCBR	Castelo Branco	129.94	317	*e*PKPdf	PKiKP	09 25 15.6	+2.3
PCBR	Castelo Branco	129.94	317	*e*PP	PP	09 27 30.8	+5.9
PCBR				*e*SKP	SKPab	09 28 28.3	+1.5
PMRV	Marv??o	130.08	317	*e*PKPdf	PKiKP	09 25 16.1	+2.5
PMRV	Marv??o	130.08	317	*e*PP	PP	09 27 27.3	+1.4
PMRV				*e*SKP	SKPab	09 28 28.5	+1.0
PMRV	Marv??o	130.08	317	*e*LR	LR	10 08 23.6	
	comp=Z,440nm,18.0s						
I42A	Draeger Farm,	130.08	36		PKPdf	09 25 12.0	-0.7
SMIR	Smir Dam	130.30	311	P	PKiKP	09 25 17.0	+2.8
SMIR	Smir Dam	130.30	311	P	SKPab	09 28 29.0	+0.4
PBAR	Barrancos	130.42	315	*e*PKPdf	PKiKP	09 25 16.9	+2.6
PBAR	Barrancos	130.42	315	*e*PP	PP	09 27 29.1	+0.9
PBAR				*e*SKP	SKPab	09 28 29.0	0.0
PESTR	Estremoz	130.48	316	*e*PKPdf	PKiKP	09 25 16.2	+1.7
PESTR	Estremoz	130.48	316	*e*PP	PP	09 27 29.8	+1.3
PESTR				*e*SKP	SKPab	09 28 29.8	+0.6
PESTR	Estremoz	130.48	316	P	SKPab	09 28 29.9	+0.6
CHEFC	Chefchaouen	130.50	311	P	PKiKP	09 25 17.1	+2.4
PCAS	Casmilo, Conde	130.51	318	*e*PKPdf	PKiKP	09 25 16.3	+1.8
PCAS	Casmilo, Conde	130.51	318	*e*PP	PP	09 27 33.3	+4.6
PCAS				*e*SKP	SKPab	09 28 30.3	+1.0
SCHQ	Schefferville	130.58	13	PKP	PKiKP	09 25 14.2	+0.1
	comp=Z,35nm,1.0s,baz=342,slow=2.2,SNR=14						
SCHQ				SKPbc	SKPbc	09 28 29.0	-0.1
	comp=Z,202nm,0.8s,baz=353,slow=4.3,SNR=73						
LCRM	LCR	130.68	309	P	PKiKP	09 25 18.1	+2.9
LCRM	LCR	130.68	309	P	SKPab	09 28 31.0	+0.6
MDT	Midelt	130.80	308	SKPbc	SKPab	09 28 31.2	+0.3
	comp=Z,20nm,0.9s,baz=90,slow=7.1,SNR=7.0						
MDT	Midelt	130.80	308	P	PKiKP	09 25 18.1	+2.7
MDT	Midelt	130.80	308	P	SKPab	09 28 31.3	+0.4
PMTG	Montargil	130.82	317	*e*PKPdf	PKiKP	09 25 17.1	+2.0
PMTG	Montargil	130.82	317	*e*PP	PP	09 27 32.9	+2.2
PMTG				*e*SKP	SKPab	09 28 31.1	+0.5
EVO	Evora	130.93	316	*e*PKPdf	PKiKP	09 25 17.6	+2.2
EVO	Evora	130.93	316	*e*PP	PP	09 27 33.2	+1.8
EVO				*e*SKP	SKPab	09 28 31.7	+0.6
Z38A	Mt. Pleasant	130.98	52	PKPdf	PKiKP	09 25 16.7	+1.1
PSBE	So Bento	130.98	318	*e*PKPdf	PKiKP	09 25 17.8	+2.3
PSBE	So Bento	130.98	318	*e*PP	PP	09 27 34.4	+2.6
PSBE				*e*SKP	SKPab	09 28 31.9	+0.5
CZD	Col de Zad	131.06	308	P	PKiKP	09 25 20.0	+3.8
PBEJ	Beja	131.07	315	*e*PKPdf	PKiKP	09 25 17.9	+2.2
PBEJ	Beja	131.07	315	*e*PP	PP	09 27 33.6	+1.3
PBEJ				*e*SKP	SKPab	09 28 32.0	+0.3
E46A	Sault Ste Mari	131.07	31	PKPdf	PKiKP	09 25 15.2	-0.2
W39A	Magazine	131.14	49	P	PKiKP	09 25 16.7	+0.8
	baz=294						
PVAQ	Vaqueiros	131.25	315	*e*PKPdf	PKiKP	09 25 16.5	+0.5
PVAQ	Vaqueiros	131.25	315	*e*PP	PP	09 27 36.7	+3.1
PVAQ				*e*SKP	SKPab	09 28 32.8	+0.3
PVAQ	Vaqueiros	131.25	315	*e*LR	LR	10 10 29.5	
	comp=Z,308nm,20.0s						
PVAQ	Vaqueiros	131.25	315	P	SKPab	09 28 32.6	+0.1
U40A	Yellville	131.33	47	P	PKiKP	09 25 16.7	+0.4
	baz=296,SNR=6.7						
PCVE	Castro Verde	131.37	315	*e*PKPdf	PKiKP	09 25 18.2	+1.9
PCVE	Castro Verde	131.37	315	*e*PP	PP	09 27 36.1	+1.8
PCVE				*e*SKP	SKPab	09 28 33.5	+0.5
MESJ	Messejana	131.40	315	*e*PKPdf	PKiKP	09 25 16.9	+0.6
MESJ				*e*PP	PP	09 27 36.2	+1.8
MESJ	Messejana	131.40	315	*e*PKPdf	PKiKP	09 25 19.0	+2.7
MESJ	Messejana	131.40	315	*e*PP	PP	09 27 36.5	+2.0
MESJ				*e*SKP	SKPab	09 28 33.5	+0.4
GOLM	Goulmima	131.46	306	P	PKiKP	09 25 20.0	+3.2
PBDV	Barranco-do-Ve	131.47	314	*e*PKPdf	PKiKP	09 25 17.0	+0.5
PBDV	Barranco-do-Ve	131.47	314	*e*PP	PP	09 27 38.2	+3.1
PBDV				*e*SKP	SKPab	09 28 34.0	+0.5
PNCL	Nicolau / Gran	131.49	316	*e*PKPdf	PKiKP	09 25 19.1	+2.6
PNCL	Nicolau / Gran	131.49	316	*e*PP	PP	09 27 37.8	+2.8
PNCL				*e*SKP	SKPab	09 28 33.8	+0.3
MIAR	Mount Ida	131.56	49	P	PKiKP	09 25 19.5	+2.7
	baz=294						
PMAFR	Mafra	131.59	317	*e*PKPdf	PKiKP	09 25 18.9	+2.2
PMAFR	Mafra	131.59	317	*e*PP	PP	09 27 40.0	+4.3
LIS	Lisbon	131.62	317	*e*PP	PP	09 27 37.7	+1.9
LIS	Lisbon	131.62	317	*e*PP	PP	09 27 40.8	+5.0
PMST	Lisbon--Monsan	131.63	317	*e*PP	PP	09 27 39.9	+4.0
L44A	Lake County Fo	131.67	38	P	PKiKP	09 25 17.8	+1.1
	baz=305						
CCM	Cathedral Cave	131.69	44	P	PKiKP	09 25 17.3	+0.4
	baz=299						
HDIL	Hopedale	131.71	40	P	PKiKP	09 25 17.5	+0.7
	baz=303,SNR=16						
HDIL	Hopedale	131.71	40	PKPdf	PKPdf	09 25 16.3	+0.5
NATX	Nacogdoches	131.77	53	P	PKiKP	09 25 18.9	+1.6
	baz=291,SNR=7.3						
PTEO	Sao Teotonio	131.89	315	*e*PKPdf	PKiKP	09 25 19.6	+2.3
PTEO	Sao Teotonio	131.89	315	*e*PP	PP	09 27 44.9	+7.3
PTEO				*e*SKP	SKPab	09 28 35.6	+0.4
GLMI	Grayling	131.93	33	P	PKiKP	09 25 18.2	+1.0
	baz=311						
MORF	Marmelete	131.95	315	*e*PKPdf	PKiKP	09 25 18.1	+0.5
MORF				*e*PP	PP	09 27 39.9	+1.8
MORF	Marmelete	131.95	315	*e*PKPdf	PKiKP	09 25 19.4	+1.9
MORF	Marmelete	131.95	315	*e*PP	PP	09 27 41.4	+3.3
MORF				*e*SKP	SKPab	09 28 35.4	-0.2
P43A	Skaggs, Pawnee	132.05	41	PKPdf	PKiKP	09 25 17.8	+0.2
ZHG	ZHG	132.14	309	P	PKiKP	09 25 20.0	+1.9
ZHG	ZHG	132.14	309	P	SKPab	09 28 37.0	+0.4
PFVI	Vila Bisbo	132.16	315	*e*PKPdf	PKiKP	09 25 19.7	+1.8
PFVI	Vila Bisbo	132.16	315	*e*PP	PP	09 27 44.2	+4.8
PFVI				*e*SKP	SKPbc	09 28 35.6	+0.2
TZRR	Tazzarine	132.28	305	P	PKiKP	09 25 22.0	+3.5
TZRR	Tazzarine	132.28	305	P	SKPab	09 28 38.1	+0.9
FVM	French Village	132.29	44	PKIKP	PKiKP	09 25 18.3	+0.2
FVM	French Village	132.29	44	PKPdf	PKiKP	09 25 18.3	+0.2
W41B	Gary Mavity, V	132.29	48	P	PKPdf	09 25 16.8	-0.2
	baz=296,SNR=5.9						
O44A	Mansfield	132.46	40		PKPdf	09 25 17.7	+0.4
ZGR	Zagora	132.54	305	P	PKiKP	09 25 22.0	+3.0
ZGR	Zagora	132.54	305	P	SKPab	09 28 40.0	+1.5
Z41A	Richland Creek	132.66	51	P	PKiKP	09 25 20.5	+1.5
	baz=294,SNR=9.3						
Q44A	Meyer Farm, Va	132.77	42		PKiKP	09 25 18.5	-0.5
OUZM	OUZ	133.19	306	P	PKiKP	09 25 24.0	+3.6
OUZM	OUZ	133.19	306	P	SKPab	09 28 43.0	+1.7
SFIN	Lafayette	133.20	39	P	PKiKP	09 25 20.7	+0.8
	baz=305						
SIUC	Southern Illin	133.25	43		PKiKP	09 25 20.2	+0.1
SRHM	Skhour des Reh	133.50	309	P	PKiKP	09 25 23.0	+2.2
SRHM	Skhour des Reh	133.50	309	P	SKPab	09 28 43.0	+0.5
OUK	Oukaimeden	133.96	307	P	PKiKP	09 25 24.0	+1.8
AAM	Ann Arbor	134.09	35	P	PKiKP	09 25 21.7	0.0
	baz=310						
TTIG	Tnine Tigouga,	134.67	306	P	PKiKP	09 25 26.0	+2.6
SADO	Sadowa	134.77	29	PKP	PKiKP	09 25 22.7	-0.2
	comp=Z,64nm,0.9s,baz=287,slow=2.0,SNR=24						
SADO				SKPbc	SKPbc	09 28 43.9	+0.1
	comp=Z,62nm,0.9s,baz=310,slow=2.1,SNR=15						
VBMS	Vicksburg	134.85	51	P	PKiKP	09 25 24.2	+0.8
	baz=295						
WCI	Wyandotte Cave	134.93	41	P	PKiKP	09 25 23.2	-0.2
	baz=304						
WVT	Waverly	135.01	45	P	PKiKP	09 25 23.6	-0.1
	baz=301						
KIC	Kosan Boka	135.05	272	*e*PKP1	PKPpre	09 25 12.1	
	comp=Z,196nm,0.8s						
CMIG	Matias Romero	135.13	73	SKPbc	SKPbc	09 28 46.9	+1.1
	comp=Z,4.9nm,0.9s,baz=353,slow=7.3,SNR=3.2						
EAH	EAH	135.14	308	P	PKiKP	09 25 27.0	+2.9
DBIC	Dimbokro	135.18	272	PKhKP	PKPpre	09 25 08.8	
	comp=Z,31nm,0.9s,baz=120,slow=2.0,SNR=7.3						
DBIC				PKP	PKiKP	09 25 23.9	-0.7
	comp=Z,127nm,0.9s,baz=116,slow=2.0,SNR=26						
DBIC				PP	PP	09 27 59.4	-0.4
	comp=Z,14nm,1.0s,baz=61,slow=3.6,SNR=3.2						
DBIC				SKPbc	SKPbc	09 28 45.6	-0.5
	comp=Z,36nm,0.8s,baz=79,slow=3.7,SNR=10.0						
P49A	Miami Univ. Ec	135.18	39	P	PKiKP	09 25 23.9	-0.1
	baz=307,SNR=12						
LIC	Lamto	135.32	272	*e*PKP1	PKPpre	09 25 12.5	
	comp=Z,436nm,1.0s						
LIC	Lamto	135.32	272	*e*PKP1	SKPbc	09 28 45.3	-1.3
	comp=Z,116nm,1.0s						
TIC	Toumodi	135.34	272	*e*PKP1	PKPpre	09 25 11.6	
TIC	Toumodi	135.34	272	*e*PKP1	SKPbc	09 28 45.4	-1.2
ACSO	Alum Creek Sta	135.80	37	P	PKiKP	09 25 24.9	-0.3
	baz=309,SNR=7.4						
M53A	WI Miller and	136.33	34	P	PKiKP	09 25 26.1	-0.2
	baz=313,SNR=6.8						
P52A	Corning	136.69	37	P	PKiKP	09 25 26.6	-0.4
	baz=310,SNR=11						
O53A	New Philadelph	136.83	35	P	PKiKP	09 25 27.2	0.0
	baz=311,SNR=6.8						
M54A	Oil Creek Stat	136.84	33	P	PKiKP	09 25 27.2	-0.1
	baz=314,SNR=10						
LONY	Lake Ozonia	136.98	26	P	PKiKP	09 25 27.3	-0.1
	baz=323,SNR=6.5						
N54A	Moraine State	137.04	34	P	PKiKP	09 25 27.6	-0.1
	baz=314						
TZTN	Tazewell	137.69	41	P	PKiKP	09 25 29.2	+0.1
	baz=306						
MCWV	Mont Chateau	138.00	35	P	PKiKP	09 25 29.0	-0.7
	baz=313						
TKL	Tuckaleechee C	138.04	43	PKP	PKPdf	09 25 28.8	+1.0
	comp=Z,27nm,0.9s,baz=116,slow=6.7,SNR=5.3						
TKL				SKPbc	SKPbc	09 28 54.0	0.0
	comp=Z,30nm,0.8s,baz=22,slow=2.7,SNR=12						
BINY	Binghamton	138.22	29	P	PKiKP	09 25 29.8	-0.3
	baz=319,SNR=8.6						
O56A	Blue Knob Stat	138.30	33	P	PKiKP	09 25 30.1	-0.2
	baz=315						
LBNH	Lisbon	138.40	24	P	PKiKP	09 25 32.2	+1.8
	baz=326						
SSPA	Standing Stone	138.40	32	P	PKiKP	09 25 30.2	-0.3
	baz=316						
BLA	Blacksburg	139.27	38	P	PKiKP	09 25 32.1	-0.3
	baz=310						
N59A	State Game Lan	139.29	30	P	PKiKP	09 25 31.4	-0.9
	baz=319						
GOGA	Godfrey	139.49	45	P	PKPdf	09 25 31.0	+0.4
	baz=303						
PMPST	Porto Santo, M	139.51	314	*e*PKPdf	PKiKP	09 25 33.0	0.0
PMPST	Porto Santo, M	139.51	314	*e*PP	PP	09 28 28.1	+2.5
L61B	Northampton	139.54	26	P	PKiKP	09 25 32.1	-0.6
	baz=324						
KMSC	Kings Mountain	139.96	41	P	PKPdf	09 25 31.8	+0.4
	baz=307						
HRV	Adam Dziewonsk	139.98	25	P	PKPdf	09 25 32.2	+1.0
	baz=326						
PMAR	Madeira	140.11	314	*e*PKPdf	PKiKP	09 25 36.6	+2.2
PMAR	Madeira	140.11	314	*e*PP	PP	09 28 35.4	+5.9
PAL	Palisades	140.13	29	PKIKP	PKPdf	09 25 31.3	-0.2
PAL	Palisades	140.13	29	P	PKPdf	09 25 32.4	+1.0
	baz=321						
PAL	Palisades	140.13	29		PKPdf	09 25 31.3	-0.2

WES	Weston	140.18	25	PKIKP	PKPdf	09 25 29.1	-2.4
WES	Weston	140.18	25		PKPdf	09 25 29.1	-2.4
P60A	Greenville	140.18	31	P	PKiKP	09 25 33.1	-1.0
	baz=318						
PMOZ	Porto Moniz, M	140.26	314	*e*PKPdf	PKiKP	09 25 35.3	+0.7
PMOZ	Porto Moniz, M	140.26	314	*e*PP	PP	09 28 35.0	+4.7
WSPT	Westport, CT	140.27	28		PKPdf	09 25 31.4	-0.4
CBN	Corbin Frederi	140.40	35	P	PKiKP	09 25 33.5	-1.1
	baz=314						
TIGA	Tifton	140.43	48	P	PKiKP	09 25 33.8	-1.1
	baz=301						
ASCN	Ascension	141.42	248	PKPdf	PKPdf	09 25 32.2	-2.3
RGRS	Roger Stewart	142.04	43		PKPdf	09 25 33.4	-1.7
Y59A	Loris	142.27	41		PKPdf	09 25 33.6	-1.9
TGUH	Tegucigalpa,Un	142.78	76	*e*P	PKPdf	09 25 35.8	-1.3
ITQB	Itaqui	142.84	170	PKPdf	PKPdf	09 25 34.8	-1.9
ROSA	Rosais	142.94	331		PKPdf	09 25 35.9	-0.7
PB10	IPOC Station P	143.50	147	PKPdf	PKPdf	09 25 37.9	-0.2
DWPF	Disney Wildern	143.71	51		PKPdf	09 25 37.9	-0.3
PB15	IPOC Station P	144.32	148		PKPdf	09 25 39.7	-0.1
TER01	Tubaro-SC	144.51	181	*e*P	PKPab	09 25 37.8	-0.4
LVC	Limon Verde	145.11	148	SKPbc	SKiKP	09 29 13.7	+0.1
	comp=Z,37nm,0.9s,baz=255,slow=2.7,SNR=7.5						
LVC	Limon Verde	145.11	148	*e*P	PKPbc	09 25 40.6	-0.3
JTS	Las Juntas de	145.34	82	*e*P	PKPab	09 25 42.4	+0.7
ITAB	Concordia	145.75	177	*e*P	PKPdf	09 25 41.6	-0.3
CPUP	Villa Florida	145.97	168	PKPbc	PKPab	09 25 43.5	-0.1
	comp=Z,126nm,0.8s,baz=192,slow=2.2,SNR=115						
CPUP				SKP	SKPdf	09 29 09.7	+1.1
	comp=Z,23nm,1.0s,baz=259,slow=2.0,SNR=2.8						
CPUP				SKPbc	SKPbc	09 29 14.4	+0.1
	comp=Z,46nm,1.0s,baz=225,slow=3.8,SNR=5.9						
CPUP	Villa Florida	145.97	168	*e*P	PKPbc	09 25 43.3	+0.3
CPUP	Villa Florida	145.97	168		PKPdf	09 25 42.2	0.0
PB08	IPOC Station P	146.98	146		PKPdf	09 25 45.4	+0.8
NNA	Nana	147.24	125	PKPbc	PKPbc	09 25 47.1	0.0
	comp=Z,202nm,0.9s,baz=247,slow=9.1,SNR=42						
NNA	Nana	147.24	125	PKPbc	PKPbc	09 25 46.1	-1.0
PB12	IPOC Station P	147.49	142		PKPbc	09 25 46.9	-0.8
BRU2	Volcan	147.60	85		PKPdf	09 25 45.6	+0.2
BRU2				PKPbc	PKPbc	09 25 48.4	+0.1
TIJ01	Guaruva-PR	147.70	182	*e*P	PKPdf	09 25 45.9	+0.6
PTGB	Pitanga	148.26	176	*e*P	PKPdf	09 25 47.5	+1.3
LCCY	Blossom Villag	148.29	64		PKPdf	09 25 46.5	+0.3
LCCY					PKiKP	09 25 51.8	+0.5
ATAH	Atahualpa	148.33	116	PKPbc	PKPbc	09 25 50.2	-0.3
	comp=Z,181nm,0.8s,baz=2.6,slow=2.3,SNR=30						
PET01	Itanhaem-SP	148.63	185	*e*P	PKPdf	09 25 47.5	+0.8
MAN01	Angra dos Reis	149.58	191	*e*P	PKPdf	09 25 49.3	+0.9
FRTB	Fartura	149.69	181	*e*P	PKPdf	09 25 49.4	+0.9
VAO	Valinhos	149.88	186	*e*P	PKPdf	09 25 50.2	+1.4
DUB01	Friburgo-RJ	150.00	194	*e*P	PKPdf	09 25 49.8	+0.8
VAS01	Vassouras-RJ	150.05	192	*e*P	PKPdf	09 25 49.8	+0.8
TRCB	Terra Rica	150.12	175	*e*P	PKPdf	09 25 50.1	+0.9
TRCB	Terra Rica	150.12	175	PKPdf	PKPdf	09 25 51.1	+1.9
TRCB				PKPbc	PKiKP	09 25 55.6	+0.5
BCIP	Isla Barro Col	150.42	84	*e*P	PKPdf	09 25 49.7	-0.1
PAC1	Pacto, Paraso	150.50	102	*e*P	PKiKP	09 25 56.5	+0.2
LPAZ	La Paz	150.60	143	*e*P	PKPdf	09 25 50.4	-0.4
OTAV	Otavalo	150.82	102	PKIKP	PKPdf	09 25 51.2	+0.1
OTAV	Otavalo	150.82	102	*e*P	PKPdf	09 25 53.5	+2.5
OTAV	Otavalo	150.82	102	*e*P	PKPdf	09 25 52.1	+1.1
OTAV	Otavalo	150.82	102		PKPdf	09 25 51.1	+0.1
CUSE	Cuicocha Este	150.89	102	*e*P	PKiKP	09 25 59.2	+1.7
TUMC	Tumaco	150.90	99	*e*P	PKPdf	09 25 52.1	+1.5
ALF01	Guarapari-ES	150.93	198	*e*P	PKPdf	09 25 51.5	+1.0
MTDJ	Mount Denham	151.03	65	*e*P	PKPdf	09 25 50.5	-0.2
PCMB	Pacaembu	151.39	178	*e*P	PKPdf	09 25 52.1	+0.9
BBSR	BB Station	151.43	27		PKPdf	09 25 50.7	-0.1
BBSR				PKPbc	PKiKP	09 25 59.1	+1.6
BSCB	Bom Sucesso	151.55	190	*e*P	PKPdf	09 25 52.6	+1.1
TULM	Tulcn-Chalpat	151.58	102	*e*P	PKPdf	09 25 53.6	+1.4
BB19B	Bebedouro	151.92	183	*e*P	PKPdf	09 25 53.3	+1.3
AQDB	Aquidauana	151.98	169	*e*P	PKPdf	09 25 53.0	+1.0
RIB01	Linhares ES	152.04	200	*e*P	PKPdf	09 25 53.3	+1.1
GCUF	Volcan Galeras	152.12	101	*e*P	PKPdf	09 25 55.4	+2.3
PTAC	Punta Ardita,	152.42	88	*e*P	PKPdf	09 25 55.7	+2.8
GTBY	Guantanamo Bay	152.55	60	*e*P	PKPdf	09 25 55.7	+2.8
BSFB	Barra de Sao F	152.64	199	*e*P	PKPdf	09 25 54.6	+1.6
SJMB	Sao Joao De Ma	152.87	199	*e*P	PKPdf	09 25 54.8	+1.4
CZSB	Cruzeiro do Su	152.97	123	*e*P	PKPdf	09 25 55.1	+1.4
SOTA	Rioblanco	153.04	99	*e*P	PKPdf	09 25 57.7	+3.3
PCON	Cinco Dias	153.28	99	*e*P	PKPdf	09 25 57.9	+3.0
ITRB	Iturama	153.31	179	*e*P	PKPdf	09 25 55.2	+1.2
NAN01	Guarapari, ES	153.31	201	*e*P	PKPdf	09 25 55.3	+1.3
YOTC	Yotoco, Valle	153.61	95	*e*P	PKPdf	09 25 54.1	-0.6
PLMC	San Jos del P	153.78	93	*e*P	PKPdf	09 25 57.3	+2.4
MARP	Paez Belalcaza	153.81	98	*e*P	PKPdf	09 25 57.0	+1.8
DIAM	Diamantina, MG	153.95	194	*e*P	PKPdf	09 25 55.2	+0.1
CBOC	Ciudad Bolivar	154.14	91	*e*P	PKPdf	09 25 55.1	-0.5
GARC	Garzon, Huila	154.14	100	*e*P	PKPdf	09 25 58.4	+2.7
PTLC	Puerto Leguiza	154.33	105	*e*P	PKPdf	09 25 57.6	+1.9
GUA01	Guaratinga, BA	154.34	203	*e*P	PKPdf	09 25 57.4	+1.8
SIV	San Ignacio	154.53	155	PKP	PKPdf	09 25 57.2	+1.3
	comp=Z,14nm,0.7s						
MOTC	Monteria, Cord	154.55	85	*e*P	PKPdf	09 25 56.8	+0.9
ANIL	Santa Ana	154.61	95	*e*P	PKPdf	09 25 58.3	+1.9
HELC	Santa Helena	154.64	91	*e*P	PKPdf	09 25 56.8	+0.3
ORTC	Ortega, Tolima	154.68	96	*e*P	PKPdf	09 25 57.0	+0.9
UREC	San Jos de Ur	154.69	87	*e*P	PKPdf	09 25 54.6	-1.5
PP1B	Ponte de Pedra	154.94	169	*e*P	PKPdf	09 25 57.5	+1.1
IPMB	Ipameri, GO	154.96	184	*e*P	PKPdf	09 25 57.6	+1.2
SJCC	San Jacinto, C	154.97	82	*e*P	PKPdf	09 25 57.7	+1.2
PRAC	Prado	155.01	97	*e*P	PKPdf	09 25 57.9	+1.2
NORC	Norcasia	155.25	92	*e*P	PKPdf	09 25 57.9	+0.9
CMC01	Camacan, BA	155.33	205	*e*P	PKPdf	09 25 58.1	+1.2
ZARC	Zaragoza, Cauc	155.36	88	*e*P	PKPdf	09 25 54.1	-2.9
ZARC	Zaragoza, Cauc	155.36	88	PKPdf	PKPdf	09 25 55.5	-1.5
ZARC				PKPbc	PKPbc	09 26 07.7	
ZARC				PKPab	PKPab	09 26 25.8	+3.0
MC01	Montes Claros	155.54	194	*e*P	PKPdf	09 25 58.8	+1.5
NBIT	Itapeh - BA	155.68	206	*e*P	PKPdf	09 25 59.5	+2.1
ROSC	El Rosal	155.72	94	PKP	PKPdf	09 25 58.7	+0.7
	comp=Z,20nm,0.7s,baz=75,slow=3.0,SNR=16						
ROSC	El Rosal	155.72	94	*e*P	PKPdf	09 25 59.2	+1.2
PTBC	PUERTO BERRIO,	155.72	90	*e*P	PKPdf	09 25 58.7	+1.1
SMRC	Santa Marta, M	155.77	79	*e*P	PKPdf	09 25 58.2	+0.7
PTLB	Pontes e Lacer	155.79	158	*e*P	PKPdf	09 25 58.5	+1.0
SPBC	San Pablo de B	156.05	92	*e*P	PKPdf	09 25 58.2	+0.1
SMLC	San Martn de	156.12	84	*e*P	PKPdf	09 25 55.7	-2.4
SDDR	Presa de Saban	156.21	58	*e*P	PKPdf	09 26 00.6	+2.5
VILC	Villavicencio,	156.25	96	*e*P	PKPdf	09 26 00.2	+1.8
SALV	Santo Antonio	156.41	166	*e*P	PKPdf	09 25 58.8	+0.4
BRRC	Barranca, Sant	156.49	89	*e*P	PKPdf	09 25 59.3	+0.8
ETMB	Extrema	156.66	136	*e*P	PKPdf	09 25 59.6	+0.9
GDU01	Guandu, BA	156.81	207	*e*P	PKPdf	09 26 00.0	+1.1
OCAC	Ocana	156.88	86	*e*P	PKPdf	09 26 00.0	+0.8
BARC	Barichara	156.99	90	*e*P	PKPdf	09 26 01.2	+1.8
RUSC	La Rusia	157.05	92	*e*P	PKPdf	09 26 00.0	+0.2
TBTG	Tabatinga, AM	157.17	119	*e*P	PKPdf	09 25 57.7	-1.7
TBTG	Tabatinga, AM	157.17	119	*e*P	PKPdf	09 26 00.9	+1.5
JANB	Januaria	157.22	194	*e*P	PKPdf	09 26 00.9	+1.4
BDFB	Brasilia	157.26	185	PKP	PKPdf	09 26 00.3	+0.7
	comp=Z,23nm,0.9s,baz=151,slow=3.3,SNR=20						
PAMC	Pamplona, Colo	157.50	88	*e*P	PKPdf	09 26 01.6	+1.2
VILB	Vilhena	157.61	153	*e*P	PKPdf	09 26 01.3	+1.4
PTGC	Puerto Gaitan,	157.80	96	*e*P	PKPdf	09 25 59.8	-0.5
URIC	Uribia, Colomb	157.86	77	*e*P	PKPdf	09 26 00.2	0.0
NBLA	Lagarto - SE	158.25	214	*e*P	PKPdf	09 26 02.3	+1.6
NBRF	Rio Formoso -	158.38	224	*e*P	PKPdf	09 26 02.6	+1.7
NBAN	Anadia - AL	158.40	220	*e*P	PKPdf	09 26 02.3	+1.4
SOCV	Socops	159.32	86	*e*P	PKPdf	09 26 00.2	-1.8
SDV	Santo Domingo	159.51	84	PKP	PKPdf	09 26 03.0	+0.5
	comp=Z,84nm,1.0s,baz=134,slow=0.4,SNR=49						
SDV	Santo Domingo	159.51	84	*e*P	PKPdf	09 26 04.1	+1.6
SDV	Santo Domingo	159.51	84	*e*P	PKPdf	09 26 03.4	+1.0
NBPN	Ponto Novo - B	159.62	209	*e*P	PKPdf	09 26 04.0	+1.6
SDBA	SAO DESIDERIO	159.91	195	*e*P	PKPdf	09 26 04.4	+1.7
NBPV	Pedro Velho	160.06	228	*e*P	PKPdf	09 26 04.7	+1.8
CRPR	Cabo Rojo, PR	160.15	55	PKPdf	PKPdf	09 26 02.9	+0.1
CRPR				PKPab	PKPab	09 26 44.6	+1.3
PDRB	Porto dos Gac	160.19	160	*e*P	PKPdf	09 26 04.1	+1.1
NBLV	Livramento - P	160.55	222	*e*P	PKPdf	09 26 05.7	+2.2
ELOV	Elorza	160.68	89	*e*P	PKPdf	09 26 03.0	-0.5
PEXB	Peixe	160.79	185	*e*P	PKPdf	09 26 05.1	+1.5
SJG	San Juan	160.88	54	PKP	PKPdf	09 26 04.1	+0.5
	comp=Z,38nm,0.8s,baz=40,slow=5.5,SNR=12						
SJG	San Juan	160.88	54	*e*P	PKPdf	09 26 00.2	-3.3
SNDB	Serra Nova Dou	160.95	176	*e*P	PKPdf	09 26 04.3	+0.5
PTGA	Pitinga	167.35	128	PKP	PKPdf	09 26 10.1	+0.5
	comp=Z,29nm,1.0s,baz=266,slow=1.2,SNR=41						

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*THE **21** 09:09:27.9, 38.°69N×20.°63E, h0^{km}±1^{km}, ML3.0/7, Error ellipse: s-maj=1.6km s-min=0.6km az=214.0*
*ATH **21** 09:09:27.7, 38.°71N×20.°62E, h7^{km}±2^{km}, ML2.9/2, Error ellipse: s-maj=3.2km s-min=1.0km az=88.0*
ISC 21 09:09:27.8±0.9, **38.°69N**±0.°02×**20.°62E**±0.°03, **h5**^{km}±5^{km}, **n30, σ0.^{s}70**/47, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRAG	Dragano-Lefkad	0.04	254	P	Pg	09 09 28.8	-0.2
DRAG				S	Sg	09 09 30.0	+0.2
	116µm,0.4s						
DRAG	Dragano-Lefkad	0.04	254	P	Pg	09 09 28.8	-0.2
DRAG				S	Sg	09 09 29.8	0.0
NYDR	Nydri-Lefkada	0.06	72	P	Pg	09 09 29.0	-0.3
NYDR				S	Sg	09 09 30.2	-0.1
	51µm,0.5s						
NYDR	Nydri-Lefkada	0.06	72	P	Pg	09 09 29.0	-0.3
NYDR				S	Sg	09 09 30.4	+0.1
EVGI	Lefkada island	0.08	160	P	Pg	09 09 29.7	+0.2
EVGI				S	Sg	09 09 31.0	+0.3
EVGI	Lefkada island	0.08	160	P	Pg	09 09 29.8	+0.3
EVGI				S	Sg	09 09 32.0	+1.2
LKD2	Lefkada island	0.10	17	P	Pg	09 09 29.4	-0.5
LKD2				S	Sg	09 09 31.3	-0.1
	19µm,0.5s						
LKD2	Lefkada island	0.10	17	P	Pg	09 09 29.4	-0.5
LKD2				S	Sg	09 09 31.3	-0.1
TSLK	Tsoukalades, L	0.13	11	P	Pg	09 09 30.3	-0.2
TSLK				S	Sg	09 09 34.0	+1.7
	18µm,0.6s						
TSLK	Tsoukalades, L	0.13	11	P	Pg	09 09 30.4	-0.1
TSLK				S	Sg	09 09 32.7	+0.3
FSK	Fiskardo	0.24	191	P	Pg	09 09 31.9	-0.5
FSK				S	Sg	09 09 37.2	+1.6
FSK				AML	AML	09 09 38.1	
	comp=E,19807µm,0.3s						
FSK				AML	AML	09 09 38.3	
	comp=N,8924µm,0.4s						
KEF4	Livadi, Kephal	0.46	200	P	Pg	09 09 37.0	+0.2
DMLN	Damoulianata-K	0.49	203	P	Pg	09 09 37.1	-0.2
VLS	Valsamata	0.52	183	P	Pg	09 09 36.9	-0.8
VLS				S	Sb	09 09 46.2	-0.9
VLS				AML	AML	09 09 47.2	
	comp=E,2279µm,0.2s						
VLS				AML	AML	09 09 48.8	
	comp=N,1814µm,0.3s						
KEF3	Kipouria, Keph	0.54	204	P	Pg	09 09 37.1	-1.0
KEF3				S	Sg	09 09 46.0	+0.9
PSDA	Pessada-Kefalo	0.58	183	P	Pg	09 09 38.6	-0.3
PSDA				S	Sb	09 09 48.1	-0.8
PVO	Paravola	0.71	96	P	Pg	09 09 41.5	0.0
IGT	Igoumenitsa	0.87	345	P	Pg	09 09 44.0	-0.4
IGT				S	Sb	09 09 57.4	+0.1
	comp=N,490nm,0.6s						
IGT	Igoumenitsa	0.87	345	P	Pg	09 09 44.0	-0.4
RLS	Riolos of Patr	0.92	133	P	Pg	09 09 44.6	-0.8
EVR	Evrytania	0.95	76	P	Pg	09 09 45.6	-0.5
UPR	University Cam	1.00	114	P	Pg	09 09 47.3	+0.3
ANX	Ano Chora	1.02	95	P	Pg	09 09 46.9	-0.5
EFP	Efpalio	1.04	104	P	Pg	09 09 46.9	-0.9
LAKA	Lakka	1.16	113	P	Pg	09 09 48.9	-1.1
LAKA				S	Sb	09 10 06.2	+0.5
	comp=N,635nm,1.0s						
KEK	Kerkira	1.20	328	P	Pg	09 09 50.7	-0.2
ALIK	Aliki, Aigiali	1.25	110	P	Pg	09 09 51.5	-0.2
KLV	Kalavryta, Ach	1.37	118	P	Pn	09 09 52.4	-1.2
AGG	Agios Georgios	1.37	76	P	Pn	09 09 53.7	0.0
THL	Klokotos Trika	1.39	51	P	Pn	09 09 53.5	-0.4
THL				S	Sn	09 10 14.4	+1.8
	comp=N,360nm,0.6s						

JMA 21 09:13:14.5, 34.°14N×135.°38E, h5^{km}±1^{km}**, M-0.7, Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWY	Kouya	0.19	66	P	Pg	09 13 18.3	0.0
JWY				S	Sg	09 13 21.4	+0.5

IDC 21 09:17:06.7±4.8**, 27.°31S×66.°84E, h0**^{km}**, mb4.2**/5**, mb1 4.4**/5**, mb1mx3.7**/62**, mbtmp4.2**/5**, Error ellipse: s-maj=133.1km s-min=43.0km az=57.0, Indian Ocean Triple Junction**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	Cape Leeuwin H	40.90	113	T	T	10 07 47.7	
	baz=268,slow=75,SNR=9.8						
H01W3	Cape Leeuwin H	40.90	113	T	T	10 07 48.2	
	baz=268,slow=75,SNR=8.6						
H01W1	Cape Leeuwin H	40.91	113	T	T	10 07 49.0	
	baz=268,slow=75,SNR=8.3						
CMAR	Chiang Mai Arr	55.12	38	P	P	09 26 39.6	-1.3
	3.4nm,0.9s,baz=228,slow=7.0,SNR=9.0						
ASAR	Alice Springs	60.00	103	P	P	09 27 16.3	+0.8
	1.9nm,0.8s,baz=252,slow=6.7,SNR=2.2						
WRA	Warramunga Arr	61.64	99	P	P	09 27 26.6	-0.1
	3.1nm,0.9s,baz=243,slow=6.7,SNR=1.9						
ZALV	Zalesovo Beam	82.40	11	P	P	09 29 30.9	+0.7
	1.7nm,0.6s,baz=181,slow=3.2,SNR=3.7						
SONM	Songino Array	82.82	26	P	P	09 29 33.0	+0.3
	1.6nm,0.9s,baz=212,slow=5.3,SNR=3.5						

MAN 21 09:21:49.6, 13.°26N×121.°17E, h34^{km}**, mb4.1, ML2.9, MS2.6, Mindoro**

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*ANF **21** 09:22:39.0±0.4, 36.°83N×98.°25W, h6^{km}±3^{km}, ML3.2/10, Error ellipse: s-maj=3.2km s-min=1.6km az=57.0*
*TUL **21** 09:22:38.5±0.6, 36.°85N±0.°02×98.°23W±0.°04, h5^{km}±6^{km}, ML2.8, mb_Lg2.8/38(NEIC), Error ellipse: s-maj=5.2km s-min=1.6km az=105.0*
*NEIC **21** 09:22:38.7±1.0, 36.°83N±0.°02×98.°26W±0.°03, h5^{km}±2^{km}, Error ellipse: s-maj=5.3km s-min=3.0km az=119.0*
ISC 21 09:22:39.0±0.9, **36.°83N**±0.°02×**98.°24W**±0.°03, **h6**^{km}±6^{km}, **n61, σ0.^{s}48**/48, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK032	Salt Plains WL	0.03	141	Pg	Pg	09 22 40.2	0.0
OK032				Sg	Sg	09 22 41.3	+0.3
KAN14	Manchester OK	0.25	60	Pg	Pg	09 22 43.9	-0.1
GC02	Grant County #	0.30	86	Pg	Pg	09 22 44.6	-0.3
KAN10	Anthony SW Sta	0.32	21	Pg	Pg	09 22 44.8	-0.4
CROK	Carrier	0.38	148	Pg	Pg	09 22 46.6	+0.2
KAN05	Bluff City Nor	0.40	46	Pg	Pg	09 22 46.7	-0.1
KAN16	Harper SW Stat	0.42	19	Pg	Pg	09 22 46.7	-0.4
KAN17	Caldwell West	0.43	60	Pg	Pg	09 22 47.4	0.0
KAN08	Anthony NE Sta	0.45	28	Pg	Pg	09 22 47.3	-0.4
KAN01	Argonia South	0.50	49	Pg	Pg	09 22 48.4	-0.2
KAN12	Harper NE Stat	0.51	22	Pg	Pg	09 22 48.2	-0.5
KAN06	Argonia West S	0.52	36	Pg	Pg	09 22 48.5	-0.4
KAN09	Caldwell North	0.58	58	Pg	Pg	09 22 49.9	-0.2
U32A	Winter Ranch,	0.76	234		Pb	09 22 54.0	-0.7
U32A	Winter Ranch,	0.76	234	P	Pg	09 22 53.4	-0.2
	baz=54,SNR=9.1						
BLOK	Blackwell	0.82	94	Pg	Pg	09 22 54.4	-0.3
OK029	Liberty Lake	1.21	148	Pg	Pg	09 23 01.6	-0.5
BCOK	Bluff Creek, N	1.27	156		Pg	09 23 02.5	-0.9
T35A	Sooner Cattle	1.38	86		Pn	09 23 04.3	-0.5
T35B	Sooner Cattle	1.39	86	P	Pn	09 23 04.4	-0.5
	baz=267,SNR=47						
QUOK	Quay	1.39	118		Pn	09 23 05.0	0.0
OK025	Westminster Rd	1.44	149		Pn	09 23 05.7	+0.1
OKCFA	Oklahoma City	1.55	156	Pn	Pb	09 23 07.7	-0.3
OKCFA				IAmb_Lg		09 23 31.2	
	comp=Z,34nm,0.8s						
OKCFA	Oklahoma City	1.55	156	S	Sg	09 23 28.5	-0.2
	baz=337						
R32A	Long Quarter,	1.64	347	Pn	Pn	09 23 08.4	+0.1
R32A	Long Quarter,	1.64	347	P	Pn	09 23 08.4	+0.1
	baz=166,SNR=19						
R32A				S	Sb	09 23 30.5	0.0
	baz=166						
FNO	Franklin	1.71	156		Pn	09 23 09.9	+0.6
WMOK	Wichita Mounta	2.13	192	Pn	Pn	09 23 14.6	-0.6
TUL1	Leonard	2.17	114		Pn	09 23 16.0	+0.4
TUL1				IAmb_Lg		09 23 49.3	
	comp=Z,40nm,1.0s						
TUL1	Leonard	2.17	114	P	Pn	09 23 16.1	+0.4
	baz=296,SNR=15						
TUL1				S	Sn	09 23 44.1	+1.1
	baz=296						
X34A	Smith Ranch, M	2.25	172	IAmb_Lg		09 23 51.6	
	comp=Z,27nm,0.9s						
CBKS	Cedar Bluff	2.31	329	Pn	Pn	09 23 19.0	+1.4
CBKS	Cedar Bluff	2.31	329	P	Pn	09 23 18.0	+0.4
	baz=148						
CBKS				S	Sn	09 23 47.3	+0.9
	baz=148						
KSU1	Kansas State U	2.61	29	Pn	Pn	09 23 21.0	-0.6
LOOK	Love County	2.96	163	Pn	Pn	09 23 27.0	+0.5
U38A	Gravette	3.12	96		Pn	09 23 28.6	-0.1
X37A	Clayton	3.23	133	Pn	Pn	09 23 30.3	+0.1
X37A	Clayton	3.23	133	P	Pn	09 23 30.3	+0.1
	baz=315,SNR=12						
AMTX	Amarillo	3.41	236	Pn	Pn	09 23 32.7	0.0
AMTX				IAmb_Lg		09 24 36.5	
	comp=Z,14nm,0.8s						
HHAR	Hobbs	3.50	98	Pn	Pn	09 23 33.9	-0.1
Z35A	Perchaven, San	3.58	167	Pn	Pn	09 23 35.1	+0.1
S39A	Bolivar	4.01	76	P	Pn	09 23 41.2	+0.2
	baz=259,SNR=8.6						
MIAR	Mount Ida	4.42	120	IAmb_Lg		09 24 58.3	
	comp=Z,12nm,0.9s						
MIAR	Mount Ida	4.42	120	P	Pn	09 23 47.4	+0.8
	baz=303,SNR=11						
N35A	Tabor	4.51	26	IAmb_Lg		09 25 11.9	
	comp=Z,40nm,0.8s						
BGNE	Belgrade	4.57	1	P	Pn	09 23 48.5	-0.2
	baz=181,SNR=6.7						
P38A	Dawn	4.64	52	IAmb_Lg		09 25 15.8	
	comp=Z,63nm,0.7s						
MGMO	Mountain Grove	4.79	84	IAmb_Lg		09 25 18.4	
	comp=Z,32nm,0.9s						
WHTX	Lake Whitney,	4.87	172	IAmb_Lg		09 25 27.1	
	comp=Z,15nm,1.1s						
WHTX	Lake Whitney,	4.87	172	P	Pn	09 23 52.9	+0.1
	baz=353,SNR=6.1						
T25A	Trinidad	4.95	275	IAmb_Lg		09 25 17.6	
	comp=Z,26nm,0.9s						
X40A	Basin Creek Fa	4.98	116	IAmb_Lg		09 25 28.5	
	comp=Z,10nm,0.8s						
FCAR	Ozark Folk Cen	5.02	99	IAmb_Lg		09 25 19.3	
	comp=Z,21nm,0.9s						
L34A	Svendsen Farm,	5.33	15	IAmb_Lg		09 25 33.3	
	comp=Z,32nm,0.7s						
N38A	Joes South For	5.56	43	IAmb_Lg		09 25 47.7	
	comp=Z,18nm,0.8s						
CCM	Cathedral Cave	5.70	75	IAmb_Lg		09 25 43.0	
	comp=Z,28nm,1.3s						
435B	Jarrell	6.05	175	IAmb_Lg		09 25 59.9	
	comp=Z,12nm,0.7s						
FVM	French Village	6.32	77	IAmb_Lg		09 25 57.9	
	comp=Z,15nm,1.0s						
143A	Socs Landing,	6.97	124	IAmb_Lg		09 26 24.5	
	comp=Z,12nm,0.9s						
SMCO	Snowmass	7.29	291	IAmb_Lg		09 26 44.6	
	comp=Z,6.4nm,1.2s						
SUSD	Miller	7.63	356	IAmb_Lg		09 26 35.8	
	comp=Z,21nm,0.9s						

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*IDC **21** 09:31:04.4±1.4, 52.°25N×154.°08E, h370^{km}±15^{km}, mb2.9/8, mb1 3.2/10, mb1mx3.0/42, mbtmp3.6/10, Error ellipse: s-maj=23.0km s-min=14.3km az=148.0*
*KRSC **21** 09:31:05.7±2.8, 51.°93N×155.°46E, h404^{km}±31^{km}, ML4.2*
ISC 21 09:31:05.9±0.8, **52.°0N**±0.°1×**154.°6E**±0.°1, **h400**^{km}**, n29, σ2.^{s}22**/30**, mb3.2**/8**, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAU	Pauzhetka	1.49	111	*e*P	Pn	09 31 57.2	-1.8
APC	Apacha	1.82	59	*e*P	Pn	09 31 57.9	-2.7
ASAK	Asacha	2.07	79	*e*P	Pn	09 32 00.7	-1.6
KDTR	Khodutka, Kamc	2.17	94	*e*P	Pn	09 32 00.3	-2.6
PETK	Petropavlovsk-	2.19	59	P	Pn	09 31 59.8	-3.2
	6.4nm,0.3s,baz=228,slow=4.3,SNR=193						
MTVR	Mutnovka	2.26	77	*e*P	Pn	09 32 04.4	+0.8
RUS	Russkaya	2.45	79	*e*P	Pn	09 32 02.8	-2.0
RUS				*e*S	S	09 32 47.2	-5.2
GNL	Ganaly	2.64	49	*e*P	Pn	09 32 03.9	-2.4
DALK	Dalny	2.74	67	*e*P	Pn	09 32 05.2	-1.7
KOK	Koryaka	2.78	61	*e*P	Pn	09 32 05.9	-1.4
AVH	Avacha	2.82	62	*e*P	Pn	09 32 06.1	-1.5
KRER	Koryakskii	2.84	61	*e*P	Pn	09 32 06.4	-1.6
UGLR	Uglovaya	2.84	64	*e*P	Pn	09 32 06.8	-1.1
SMAR	Somma	2.85	62	*e*P	Pn	09 32 06.8	-1.3
SDLR	Sedlovina	2.91	63	*e*P	Pn	09 32 06.8	-1.6
NLC	Nalytchevo	3.12	66	*e*P	Pn	09 32 08.1	-1.9
SPN	Mys Shipunski	3.49	70	*e*P	Pn	09 32 10.6	-2.5
SPN				*e*S	S	09 32 59.8	-7.9
TUMR	Tumrok	4.65	43	*e*P	Pn	09 32 23.9	-0.4
MKZ	Mys Kozlova	4.98	56	*e*P	Pn	09 32 25.4	-2.1
MKZ				*e*S	S	09 33 25.8	-8.2
KMNR	Kamenistaya	5.02	40	*e*P	Pn	09 32 28.5	+0.5
MJAR	Matsushiro Arr	19.34	223	P	P	09 35 04.7	+0.5
	0.0nm,0.3s,baz=23,slow=11,SNR=4.8						
INK	Inuvik	36.75	36	P	P	09 37 37.3	+0.8
	0.9nm,0.4s,baz=296,slow=9.7,SNR=4.5						
ZALV	Zalesovo Beam	40.50	301	P	P	09 38 04.7	-2.8
	0.4nm,0.3s,baz=59,slow=8.6,SNR=2.4						
MKAR	Makanchi Array	45.55	294	P	P	09 38 45.4	-2.1
	0.6nm,0.4s,baz=64,slow=7.8,SNR=12						
NVAR	Mina Array Bea	59.26	66	P	P	09 40 29.8	+2.6
	0.4nm,0.6s,baz=316,slow=7.4,SNR=2.1						
PDAR	Pinedale Array	60.96	57	P	P	09 40 40.6	+2.2
	0.9nm,0.7s,baz=300,slow=2.0,SNR=5.0						
WRA	Warramunga Arr	73.81	200	P	P	09 41 59.1	+1.2
	0.5nm,1.0s,baz=15,slow=6.2,SNR=1.9						
TXAR	Lajitas Array	74.14	63	P	P	09 42 02.3	+2.4
	0.1nm,0.4s,baz=301,slow=5.6,SNR=5.2						
ASAR	Alice Springs	77.51	199	P	P	09 42 20.4	+1.9
	0.4nm,0.8s,baz=14,slow=6.1,SNR=5.2						

IDC 21 09:47:44.1±2.1**, 1.°12N×127.°55E, h0**^{km}**, mb3.6**/3**, mb1 3.9**/3**, mb1mx3.3**/39**, mbtmp3.7**/3**, MS4.6**/1**, Ms1 4.6**/1**, ms1mx3.2**/44**, Error ellipse: s-maj=167.7km s-min=25.3km az=67.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.21	118	LR	LR	09 50 15.6	
	comp=Z,8µm,21.1s,baz=352,slow=36						
WRA	Warramunga Arr	21.96	163	P	P	09 52 38.9	-0.8
	2.4nm,0.9s,baz=342,slow=11,SNR=13						
ASAR	Alice Springs	25.40	166	P	P	09 53 14.0	+0.6
	0.9nm,0.7s,baz=345,slow=9.4,SNR=11						
MKAR	Makanchi Array	60.16	326	P	P	09 57 53.6	-0.1
	0.6nm,0.6s,baz=120,slow=8.4,SNR=6.5						

NOU 21 09:53:12.3, 20.°81S×169.°32E, h10^{km}**, MLv4.0**/13**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	1.38	241	P	Pn	09 53 37.0	-0.6
LIFNC	LIFOU	1.95	271	P	Pn	09 53 44.8	-0.6
PINNC	Pines Island,	2.50	224	P	Pn	09 53 52.2	-0.8
YATNC	Mamie plateau,	2.58	241	P	Pn	09 53 53.4	-0.8
OUENC	Ouen Island, N	2.81	235	P	Pn	09 53 57.5	+0.2
DZM	Mont Dzumac	2.96	244	P	Pn	09 53 59.8	+0.3
ONTNC	Ouen Toro	3.06	240	P	Pn	09 54 01.3	+0.6
NOUC	Port Laguerre	3.09	245	P	Pn	09 54 01.7	+0.5
RTV	Rentapao	3.12	344	P	Pn	09 54 02.4	+0.9
DVP	Devils Point	3.25	341	P	Pn	09 54 03.2	-0.2

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*JMA **21** 09:57:11.0±0.1, 23.°94N×121.°69E, h37^{km}±2^{km}, M3.1*
*TAP **21** 09:57:12.2, 24.°02N×121.°66E, h37^{km}, ML3.8, B*
ISC 21 09:57:12.1±0.9, **23.°99N**±0.°02×**121.°71E**±0.°02, **h31**^{km}±6^{km}, **n123, σ1.^{s}13**/215, **19C-9D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	Hwalien	0.10	265	⇑*i*P	Pb	09 57 18.4	+0.9
	baz=223						
HWA				*e*S	Sb	09 57 23.3	+2.2
	baz=223						
TWD	Chiawan	0.14	312	⇑*i*P	Pn	09 57 18.4	+0.1

	baz=324						
TWD				iS	Sn	09 57 23.0	+1.1
	baz=324						
TEYL	Yanliau Villag	0.16	221	P	Pn	09 57 18.6	+0.1
	baz=203						
TEYL				eS	Sn	09 57 23.9	+1.6
	baz=203						
ETL	Fush Village	0.19	335	iP	Pn	09 57 18.7	-0.3
	baz=348						
ETL				S	Sn	09 57 24.0	+0.8
	baz=348						
ETM	Tongmen	0.20	264	⇑iP	Pn	09 57 18.9	-0.2
	baz=251						
ETM				eS	Sn	09 57 23.6	+0.2
	baz=251						
NACB	Ninganchiao	0.21	330	⇑iP	Pn	09 57 18.9	-0.4
	baz=340						
NACB				S	Sn	09 57 23.9	+0.1
	baz=340						
ETLH	Xiulin Townshi	0.30	316	⇑iP	Pb	09 57 19.7	0.0
	baz=320						
ETLH				iS	Sn	09 57 25.1	-0.9
	baz=320						
ESL	Shilin	0.31	236	⇑iP	Pb	09 57 19.7	0.0
	baz=224						
ESL				eS	Sn	09 57 25.1	-0.9
	baz=224						
TEGC	Jichi Village	0.32	210	eP	Pb	09 57 20.5	+0.6
	baz=198						
EHP	Heping Village	0.32	5	eS	Sb	09 57 27.4	+2.0
	baz=16						
EGFH	Guangfu	0.41	219	iP	Pb	09 57 20.9	-0.3
	baz=211						
EGFH				eS	Sb	09 57 27.5	+0.2
	baz=211						
WHF	Hehuan Shan	0.44	291	⇑iP	Pb	09 57 21.7	-0.3
	baz=290						
WHF				eS	Sb	09 57 28.4	-0.2
	baz=290						
ENA	Nanau	0.44	4	P	Pb	09 57 21.6	-0.1
	baz=12						
ENA				eS	Sb	09 57 28.5	+0.3
	baz=12						
EWUT	Wuta	0.46	8	⇓iP	Pb	09 57 21.9	-0.1
	baz=15						
EWUT				eS	Sb	09 57 29.1	+0.4
	baz=15						
OWD	Renai	0.49	266	⇑iP	Pb	09 57 22.4	-0.1
	baz=262						
OWD				iS	Sb	09 57 29.3	-0.4
	baz=262						
CHGB	Renai	0.50	279	⇑iP	Pb	09 57 22.6	-0.1
	baz=276						
CHGB				eS	Sb	09 57 29.9	-0.1
	baz=276						
FUSS	Fushou	0.50	301	eS	Sb	09 57 30.0	-0.1
	baz=301						
NNS	Nan Shan	0.55	326	⇑iP	Pb	09 57 23.2	-0.2
	baz=329						
NNS				S	Sb	09 57 31.1	-0.1
	baz=329						
TWT	Tachien	0.56	299	iP	Pb	09 57 23.7	+0.1
	baz=297						
TWT				eS	Sb	09 57 31.4	-0.1
	baz=297						
HGSD	Ruisui	0.56	208	P	Pb	09 57 23.9	+0.4
	baz=202						
HGSD				eS	Sb	09 57 33.3	+2.0
	baz=202						
TDCB	Techi	0.57	298	⇑iP	Pb	09 57 23.8	-0.1
	baz=297						
TDCB				S	Sb	09 57 31.4	-0.4
	baz=297						
VWDT	VWDT	0.57	246	P	Pb	09 57 23.8	0.0
	baz=241						
VWDT				eS	Sb	09 57 31.4	-0.2
	baz=241						
EHY	Hungye	0.60	217	⇓P	Pn	09 57 23.0	-1.5
	baz=210						
EHY				eS	Sb	09 57 31.1	-1.3
	baz=210						
TWC	Suao	0.63	11	P	Pn	09 57 24.6	-0.4
	baz=18						
TWC				eS	Sb	09 57 35.0	+1.6
	baz=18						
NDT	Datong Townshi	0.64	344	P	Pn	09 57 24.6	-0.5
	baz=347						
NDT				eS	Sb	09 57 33.4	-0.2
	baz=347						
NDS	Dongshan	0.64	0	P	Pn	09 57 24.6	-0.6
	baz=5.0						
NDS				eS	Sb	09 57 33.4	-0.3
	baz=5.0						
ENTT	Nioudou	0.66	349	P	Pn	09 57 25.0	-0.5
	baz=353						
ENTT				eS	Sb	09 57 33.9	-0.4
	baz=353						
WPL	Puli Township	0.69	272	⇑P	Pn	09 57 25.4	-0.4
	baz=270						
WPL				eS	Sn	09 57 35.0	-0.5
	baz=270						
YULB	Yu-li	0.70	213	P	Pn	09 57 24.4	-1.6
	baz=208						
YULB				eS	Sn	09 57 33.7	-2.1
	baz=208						
ECBN	Changbin	0.71	200	eP	Pn	09 57 25.7	-0.4
	baz=195						
ECBN				eS	Sn	09 57 37.0	+1.1
	baz=195						
DPDB	Guoxing	0.72	274	⇑eP	Pn	09 57 26.0	-0.2
	baz=271						
SSLB	Suanglung	0.72	254	⇑P	Pn	09 57 25.6	-0.7
	baz=250						
SSLB				eS	Sn	09 57 34.8	-1.5
	baz=250						
EYUL	Yuli	0.73	210	eP	Pn	09 57 25.0	-1.3
	baz=205						
EYUL				eS	Sn	09 57 34.7	-1.7
	baz=205						
TWE	Neicheng	0.73	357	⇓P	Pn	09 57 26.0	-0.4
	baz=2.0						
TWE				eS	Sn	09 57 35.4	-1.1
	baz=2.0						
WCS	Beigang Elemen	0.73	276	⇑iP	Pn	09 57 26.1	-0.3
	baz=273						
WCS				eS	Sn	09 57 35.9	-0.7
	baz=273						
TWF1	Yuli	0.74	211	⇓iP	Pn	09 57 24.9	-1.5
	baz=206						
TWF1				eS	Sn	09 57 34.9	-1.8
	baz=206						
YHNB	Yeheng	0.75	336	⇓P	Pn	09 57 26.3	-0.3
	baz=339						
YHNB				eS	Sn	09 57 35.9	-1.1
	baz=339						
SMLT	Sun Moon Lake	0.75	262	⇑P	Pn	09 57 26.2	-0.5
	baz=259						
SMLT				eS	Sn	09 57 36.4	-0.7
	baz=259						
WHP	Taichung City	0.76	293	⇑P	Pn	09 57 26.5	-0.3
	baz=292						
WHP				eS	Sn	09 57 36.6	-0.7
	baz=292						
NSK	Sanguang	0.76	335	⇓P	Pn	09 57 26.4	-0.4
	baz=338						
NSK				eS	Sn	09 57 36.3	-1.0
	baz=338						
ILA	Ilan	0.78	2	eP	Pn	09 57 27.0	0.0
	baz=7.0						
ILA				eS	Sn	09 57 40.0	+2.4
	baz=7.0						
TYC	Yuchr	0.79	264	P	Pn	09 57 26.6	-0.5
	baz=261						
TYC				eS	Sn	09 57 36.5	-1.3
	baz=261						
NWLT	Wulai	0.81	346	⇓eP	Pn	09 57 27.0	-0.5
	baz=350						
NWLT				eS	Sn	09 57 37.2	-1.3
	baz=350						
NTC	Toucheng	0.87	7	eP	Pn	09 57 28.7	+0.4
	baz=11						
NTC				eS	Sn	09 57 41.2	+1.2
	baz=11						
FULB	Fuli	0.87	206	eP	Pn	09 57 27.5	-0.8
	baz=202						
FULB				eS	Sn	09 57 41.3	+1.3
	baz=202						
EGS		0.88	13	eP	Pn	09 57 29.5	+1.1
	baz=18						
NSTT	Nanjuang	0.91	315	⇑P	Pn	09 57 29.5	+0.7
	baz=316						
NSTT				eS	Sn	09 57 41.2	+0.2
	baz=316						
LIOB	Emei	0.91	316	⇑P	Pn	09 57 29.7	+0.8
	baz=317						
LIOB				eS	Sn	09 57 41.4	+0.4
	baz=317						
WJS	Zhushan	0.92	260	eP	Pn	09 57 29.6	+0.7
	baz=257						
WJS				eS	Sn	09 57 42.0	+1.0
	baz=257						
WWF	Wufeng	0.93	274	eP	Pn	09 57 30.2	+1.2
	baz=272						
TWQ1	Liyutan	0.93	293	eP	Pn	09 57 29.9	+0.8
	baz=292						
TWQ1				eS	Sn	09 57 42.2	+0.7
	baz=292						
CHKT	Chengkung	0.94	200	eP	Pn	09 57 28.2	-1.0
	baz=196						
WNT	Mingjian	0.95	264	eP	Pn	09 57 30.2	+0.9
	baz=261						
WNT1	Nantou City	0.95	265	eP	Pn	09 57 30.4	+1.1
	baz=263						
ALS	Alishan	0.96	240	eP	Pn	09 57 29.6	-0.2
	baz=237						
ALS				eS	Sn	09 57 42.1	-0.3
	baz=237						
TCU	Taichung	0.96	280	eP	Pn	09 57 30.5	+1.0
	baz=278						
TCU				eS	Sn	09 57 43.8	+1.6
	baz=278						
NSY	Sanyi	0.97	296	eP	Pn	09 57 30.4	+0.8
	baz=296						
NSY				eS	Sn	09 57 44.4	+2.0
	baz=296						
TIPB	Shuangxi	0.99	6	eP	Pn	09 57 30.3	+0.4
	baz=9.0						
TIPB				eS	Sn	09 57 44.4	+1.6
	baz=9.0						
ECS	Chishang	0.99	207	eP	Pn	09 57 29.4	-0.6
	baz=204						
TWA	Mucha	1.00	353	eP	Pn	09 57 29.9	-0.1
	baz=357						
TWA				eS	Sn	09 57 43.4	+0.3
	baz=357						
NMLH	Miaoli	1.00	303	eP	Pn	09 57 30.8	+0.7
	baz=303						
NMLH				eS	Sn	09 57 44.4	+1.2
	baz=303						
TATO	Taipei	1.00	348	⇓eP	Pn	09 57 30.3	+0.2
	baz=351						
TATO				eS	Sn	09 57 43.3	0.0
	baz=351						
ELDTW	Lidau	1.02	219	eP	Pn	09 57 29.0	-1.4
	baz=215						
ELDTW				eS	Sn	09 57 42.8	-1.0
	baz=215						
CHN5	Tsauling	1.02	248	⇓P	Pn	09 57 30.9	+0.5
	baz=245						
CHN5				eS	Sn	09 57 45.0	+1.2
	baz=245						
SBCB	Hsinchu	1.04	321	eP	Pn	09 57 31.6	+1.0
	baz=322						
SBCB				eS	Sn	09 57 46.3	+2.2
	baz=322						
WDJ	Dajia District	1.04	290	eP	Pn	09 57 31.6	+1.0
	baz=290						
TWB1	Santiao Chiao	1.05	14	eP	Pn	09 57 31.8	+1.1
	baz=18						
TWB1				eS	Sn	09 57 46.4	+2.1
	baz=18						
HSN	Hsinchu	1.06	320	eP	Pn	09 57 32.1	+1.3
	baz=324						
HSN				eS	Sn	09 57 46.2	+1.7
	baz=324						
WCHH	Zhanghua	1.06	275	eP	Pn	09 57 31.7	+0.8
	baz=274						
WCHH				eS	Sn	09 57 46.2	+1.7
	baz=274						
EDH	Donghe	1.08	200	eP	Pn	09 57 30.2	-0.9
	baz=197						
EDH				eS	Sn	09 57 44.4	-0.6
	baz=197						
NWF	Wu-fen Shan	1.08	3	eP	Pn	09 57 31.7	+0.4
	baz=6.0						
NWF				eS	Sn	09 57 47.0	+1.7
	baz=6.0						
NCUH	Zhongli	1.09	334	eP	Pn	09 57 31.8	+0.5
	baz=336						
NCUH				eS	Sn	09 57 47.0	+1.6
	baz=336						
NCU	National Centr	1.09	334	eP	Pn	09 57 32.2	+0.9
	baz=336						
NCU				eS	Sn	09 57 47.2	+1.8
	baz=336						
WDLH	Douliu	1.11	255	eP	Pn	09 57 32.6	+1.0
	baz=252						
WDLH				eS	Sn	09 57 47.3	+1.4
	baz=252						
TWS1	Kuangyinshan	1.14	347	eP	Pn	09 57 32.2	+0.2
	baz=349						
TWS1				eS	Sn	09 57 47.3	+0.6
	baz=349						
YM01	YM01	1.16	354	eP	Pn	09 57 32.2	-0.2
	baz=356						
YM01				eS	Sn	09 57 47.5	+0.3
	baz=356						
STYH	Taoyuan	1.18	227	eP	Pn	09 57 32.6	+0.1
	baz=224						
STYH				eS	Sn	09 57 47.8	+0.2
	baz=224						
NTST	Danshui	1.20	349	eP	Pn	09 57 33.1	+0.4
	baz=351						
LONT	Longtian	1.20	207	eP	Pn	09 57 31.4	-1.4
	baz=204						
TPUB	Ta-pu	1.20	236	eP	Pn	09 57 33.6	+0.7
	baz=233						
TPUB				eS	Sn	09 57 49.7	+1.5
	baz=233						
JYNG	Yonagunijimaku	1.22	67	P	Pn	09 57 32.9	-0.1
JYNG				S	Sn	09 57 48.8	+0.3
CHN2	Minshiung	1.22	248	eP	Pn	09 57 34.8	+1.7
	baz=246						
CHN2				eS	Sn	09 57 50.2	+1.7
	baz=246						
WRL	Guolierlin Hig	1.22	266	eP	Pn	09 57 34.1	+1.0
	baz=264						
WRL				eS	Sn	09 57 50.1	+1.4
	baz=264						
WTK	Tuku	1.25	256	eP	Pn	09 57 34.4	+0.9
	baz=254						
WTK				eS	Sn	09 57 50.6	+1.4
	baz=254						
WTP	Ta-pu	1.25	234	eP	Pn	09 57 34.3	+0.8
	baz=231						
WTP				eS	Sn	09 57 51.0	+1.7
	baz=231						
CHY	Chiayi	1.28	248	eP	Pn	09 57 34.9	+1.1
	baz=245						
CHY				eS	Sn	09 57 51.6	+1.7
	baz=245						
YOJ	Yonaguni jima	1.28	68	eP	Pn	09 57 34.4	+0.5
	baz=70						
YOJ				eS	Sn	09 57 50.8	+0.8
	baz=70						
YOJ	Yonaguni jima	1.28	68	P	Pn	09 57 34.2	+0.3
YOJ				S	Sn	09 57 50.1	+0.1
TWG	Pinlang	1.30	207	eP	Pn	09 57 32.4	-1.8
	baz=204						
TWG				eS	Sn	09 57 47.9	-2.6
	baz=204						
TWGBT	Beinan	1.30	207	eP	Pn	09 57 32.4	-1.8
	baz=204						
TWGBT				eS	Sn	09 57 48.1	-2.4
	baz=204						
WTCT	Ta-ch'eng	1.31	265	eP	Pn	09 57 35.7	+1.3
	baz=263						
WTCT				eS	Sn	09 57 53.2	+2.3
	baz=263						
LDUT	Ludao	1.33	190	eP	Pn	09 57 32.8	-1.7
	baz=187						
TWK	Hsinying	1.33	238	eP	Pn	09 57 35.5	+0.8
	baz=235						
TWK				eS	Sn	09 57 52.9	+1.5
	baz=235						
CHN1	Nanshi	1.35	234	P	Pn	09 57 35.7	+0.8
	baz=231						
CHN1				eS	Sn	09 57 53.8	+2.0
	baz=231						
SNST	Tainan City	1.35	236	eP	Pn	09 57 35.8	+0.9
	baz=233						
SNST				eS	Sn	09 57 53.9	+2.2
	baz=233						
SGST	Jiashian	1.37	229	eP	Pn	09 57 35.4	+0.2
	baz=226						
SGST				eS	Sn	09 57 53.5	+1.2
	baz=226						
SLGT	Liugui	1.39	225	eP	Pn	09 57 36.4	+0.9
	baz=222						
SLGT				eS	Sn	09 57 54.9	+2.1
	baz=222						
WSF	Szhu	1.41	256	eP	Pn	09 57 36.9	+1.2
	baz=254						
WSF				eS	Sn	09 57 55.1	+2.0
	baz=254						
ICHU	Yijhu	1.45	245	eP	Pn	09 57 37.1	+0.9
	baz=243						
ICHU				eS	Sn	09 57 56.0	+1.7
	baz=243						
CHN8	Yiju	1.52	245	eP	Pn	09 57 36.0	-1.2
	baz=243						
CHN8				eS	Sn	09 57 58.0	+2.2
	baz=243						
ECL	Taimali	1.55	207	eP	Pn	09 57 36.3	-1.3
	baz=204						
SSD	Sandimen	1.58	219	eP	Pn	09 57 38.5	+0.4
	baz=216						
SSD				eS	Sn	09 58 00.0	+2.5
	baz=216						
TSMG	Majia	1.61	218	eP	Pn	09 57 39.5	+1.1
	baz=215						
SCLT	Jiali	1.61	240	eP	Pn	09 57 38.6	+0.1
	baz=238						
SCLT				eS	Sn	09 58 00.6	+2.5
	baz=238						
TWM1	Shoushan	1.66	226	eP	Pn	09 57 41.8	+2.7
	baz=223						
TWM1				eS	Sb	09 58 04.5	+2.0
	baz=223						
MASBT	Mashibuluo	1.69	216	eP	Pn	09 57 39.5	-0.1
	baz=214						
EAST	Anshuo	1.78	207	eP	Pn	09 57 39.6	-1.3
	baz=204						
IRIF	Iriomote-Funau	1.88	79	P	Pn	09 57 42.4	+0.3
IRIF				eS	Sn	09 58 05.0	+0.2
SCZT	Fangliau	1.90	212	eP	Pn	09 57 43.7	+1.3
	baz=210						
SCZT				eS	Sn	09 58 06.9	+1.7
	baz=210						
HATJ	Hateruma jima	1.92	87	P	Pn	09 57 43.3	+0.7
HATJ				S	Sn	09 58 06.1	+0.4
SLIU	Shizi	1.95	206	eP	Pn	09 57 43.6	+0.4
	baz=204						
PHUB	P'eng-hu	2.02	257	eP	Pn	09 57 44.0	0.0
	baz=255						
PHUB				eS	Sn	09 58 07.7	-0.5
	baz=255						
PNG	Penghu	2.02	259	eP	Pn	09 57 44.4	+0.3
	baz=257						
WLCH	Liuqiu	2.04	217	eP	Pn	09 57 48.0	+3.7
	baz=215						
JKRS	Kuro-shima	2.12	83	P	Pn	09 57 46.2	+0.8
JKRS				S	Sn	09 58 12.5	+1.9
VCHM	Qimei	2.23	250	eP	Pn	09 57 47.3	+0.3
	baz=248						
JIJ	Ishigaki jima	2.25	80	P	Pn	09 57 47.4	+0.1
JIJ				S	Sn	09 58 13.2	-0.8
JISG	Ishigakijimahi	2.45	75	P	Pn	09 57 50.0	+0.1
JISG				S	Sn	09 58 18.1	-0.7
PTMZ	Houxiangcun	2.58	294	eP	Pn	09 57 51.3	-0.5
	baz=294						
PTMZ				eS	Sn	09 58 19.4	-2.8
	baz=294						
JTJ	Tarama	2.81	76	P	Pn	09 57 55.4	+0.5
JTJ				eS	Sn	09 58 28.8	+1.1
JIRB	Irabujima	3.27	74	P	Pn	09 58 01.6	+0.4
JIRB				S	Sn	09 58 40.0	+1.0
JIKM	Ikemajima	3.35	73	S	Sn	09 58 42.4	+1.1
JMJ2	Miyako jima3	3.38	76	P	Pn	09 58 03.6	+0.8
JMJ2				S	Sn	09 58 42.7	+0.8

IDC 21 09:59:15.9±3.7**,23°.41N**×**96°.12E,h0^{km},mb3.6**/3**,**
mb1 3.8/3**,mb1mx3.3**/44**,mbtmp3.6**/3**,Error ellipse:**
s-maj=363.7km s-min=25.3km az=59.0,Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	25.85	338	P	P	10 04 49.1	0.0
	0.5nm,0.4s,baz=150,slow=10,SNR=13						
WRA	Warramunga Arr	56.98	136	P	P	10 09 03.6	+0.1
	0.1nm,0.5s,baz=323,slow=7.4,SNR=10						
ASAR	Alice Springs	59.47	139	P	P	10 09 20.8	-0.2
	0.3nm,0.5s,baz=322,slow=7.3,SNR=9.5						

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*IDC **21** 10:02:12.0±3.1,33°.59S×178°.76W,h0^{km},mb3.8/2,*
mb1 4.1/3,mb1mx3.6/30,mbtmp3.9/3,ML4.4/1,Error
ellipse: s-maj=71.3km s-min=45.5km az=124.0
*NEIC **21** 10:02:15.4±0.4,33°.7S±0°.1×178°.9W±0°.2,h10^{km}±2^{km},*
mb4.2/11,Error ellipse: s-maj=26.7km s-min=19.3km
az=123.0
*WEL **21** 10:02:17.1±1.1,34°S±19°×17°9W±2°4,h174^{km}±38^{km},*
M4.0/16,mB4.5/9,ML4.6/20,MLv4.3/16,Mw(mB)3.7/9,
Error ellipse: s-maj=0.0km s-min=0.0km az=124.9
ISC 21 10:02:19.3±1.1**,33°.71S**±0°.09×**178°.9W**±0°.1**,h48^{km},n45,**
σ**1^s.45**/64**,mb4.0**/8**,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.46	210	P	Pn	10 03 23.5	-0.8
MXZ				S	Sn	10 04 14.6	-0.3
WMGZ	Waiomatatini S	4.64	207	P	Pn	10 03 25.6	-1.2
WMGZ				S	Sn	10 04 22.0	+2.7
PKGZ	Pakihiroa	4.83	209	P	Pn	10 03 27.0	-2.5
PKGZ				S	Sn	10 04 25.6	+1.5
HAZ	Te Kaha	4.84	213	P	Pn	10 03 28.5	-1.1
HAZ				S	Sn	10 04 28.4	+4.0
PUZ	Puketiti	4.92	207	P	Pn	10 03 28.5	-2.1
PUZ				S	Sn	10 04 28.6	+2.4
RUGZ	Raukumara Rang	5.07	212	P	Pn	10 03 32.5	-0.3
TWGZ	Tauwhareparae	5.12	208	P	Pn	10 03 32.4	-1.0
TWGZ				S	Sn	10 04 32.1	+0.9
CNGZ	Carnagh Statio	5.30	205	P	Pn	10 03 34.5	-1.3
TKGZ	Te Karaka	5.40	208	P	Pn	10 03 36.6	-0.6
TKGZ				S	Sn	10 04 37.4	-0.6
MWZ	Matawai	5.44	211	P	Pn	10 03 35.4	-2.3
MWZ				S	Sn	10 04 38.8	-0.2
OPRZ	Ohinepanea	5.52	220	P	Pn	10 03 39.4	+0.5
URZ	Urewera	5.56	214	Pn	Pn	10 03 38.3	-1.2
	9.7nm,0.3s,baz=121,slow=23,SNR=42						
URZ				Sn	Sn	10 04 42.0	0.0
	3.9nm,0.3s,baz=151,slow=20,SNR=5.4						
URZ	Urewera	5.56	214	P	Pn	10 03 36.9	-2.5
URZ				S	Sn	10 04 42.2	+0.2
URZ	Urewera	5.56	214		Pn	10 03 37.7	-1.8
URZ				Sn	Sn	10 04 42.9	+0.9
MARZ	Manawahe	5.56	219	P	Pn	10 03 39.8	+0.3
RIGZ	Rimuhau	5.66	207	P	Pn	10 03 39.8	-1.0
RIGZ				S	Sn	10 04 43.4	-1.1
PRGZ	Paritu Road	5.81	205	P	Pn	10 03 42.4	-0.4
PRGZ				S	Sn	10 04 49.4	+1.3
SNGZ	Shannon Statio	5.89	210	P	Pn	10 03 43.4	-0.6
SNGZ				S	Sn	10 04 50.9	+0.6
MUGZ	Murupara	5.90	215	P	Pn	10 03 41.8	-2.2
MUGZ				S	Sn	10 04 49.7	-0.6
RTZ	Ruatahuna	5.91	213	P	Pn	10 03 43.4	-0.9
KNZ	Kokohu	5.97	206	P	Pn	10 03 42.2	-2.8
KNZ				S	Sn	10 04 49.0	-3.1
MHGZ	Mahia Peninsul	6.00	204	P	Pn	10 03 42.8	-2.7
RAHZ	Arahi	6.11	211	P	Pn	10 03 45.4	-1.6
RAHZ				S	Sn	10 04 55.0	-0.6
MTHZ	Maungataniwha	6.17	212	P	Pn	10 03 47.2	-0.6
MTHZ				S	Sn	10 04 57.0	0.0
NMHZ	Naumai	6.38	211	P	Pn	10 03 50.3	-0.5
NMHZ				S	Sn	10 05 02.5	+0.1
ARHZ	Aropaoanui	6.44	209	P	Pn	10 03 50.2	-1.3
BKZ	Black Stump Fm	6.58	213		Pn	10 03 51.7	-1.8
MCHZ	McNeill Hill	6.72	210	P	Pn	10 03 53.9	-1.4
KWHZ	Kaweka Forest	6.82	212	P	Pn	10 03 55.0	-1.8

NTVZ	**North Tongarir**	**6.92**	**217**	P	**Pn**	**10 03 57.1**	**-1.1**
EIDS	**Eidsvold**	**27.31**	**280**	P	**P**	**10 07 59.5**	**0.0**
EIDS				IAmb	IAmb	10 08 02.4	
	comp=Z,4.2nm,1.1s						
TOO	**Toolangi**	**29.06**	**252**	P	**P**	**10 08 13.8**	**-1.3**
AS31	**Alice Springs**	**42.26**	**271**	P	**P**	**10 10 08.2**	**+0.1**
ASAR	**Alice Springs**	**42.26**	**271**	P	**P**	**10 10 08.3**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=111,slow=7.5,SNR=17						
WR0	**Warramunga Arr**	**43.37**	**276**	P	**P**	**10 10 17.1**	**0.0**
WR0				IAmb	IAmb	10 10 23.9	
	comp=Z,4.3nm,1.4s						
WB2	**Warramunga Arr**	**43.53**	**276**	P	**P**	**10 10 18.6**	**+0.1**
WB2				IAmb	IAmb	10 10 33.2	
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**43.55**	**276**	P	**P**	**10 10 18.6**	**0.0**
	comp=Z,0.9nm,0.4s,baz=117,slow=7.1,SNR=23						
WRA	**Warramunga Arr**	**43.55**	**276**	P	**P**	**10 10 18.8**	**+0.3**
WB0	**Warramunga Arr**	**43.58**	**276**	P	**P**	**10 10 18.9**	**0.0**
WB0				IAmb	IAmb	10 10 19.4	
	comp=Z,5.6nm,1.4s						
VNDA	**Vanda**	**44.74**	**186**	P	**P**	**10 10 27.7**	**+0.4**
VNDA				IAmb	IAmb	10 10 50.8	
	comp=Z,2.1nm,1.4s						
PSA00	**Pilbara Seismi**	**54.87**	**266**	P	**P**	**10 11 45.5**	**+0.5**
PSA00				IAmb	IAmb	10 11 53.2	
	comp=Z,4.3nm,1.1s						
QSPA	**South Pole Qui**	**56.41**	**180**	P	**P**	**10 11 58.2**	**+2.6**
PMSA	**Palmer Station**	**69.59**	**155**	P	**P**	**10 13 22.8**	**0.0**
FINES	**FINESS Array B**	**147.93**	**338**	PKPbc	**PKPbc**	**10 21 57.6**	**-0.7**
	comp=Z,2.0nm,0.8s,baz=46,slow=6.0,SNR=5.6						
FINES	**FINESS Array B**	**147.93**	**338**		**PKPbc**	**10 21 57.4**	**-0.9**

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*IDC **21** 10:09:43.7±3.6, 53.°77N×90.°76E, h0^{km}, mb1 3.6/3, mb1mx3.3/49, mbtmp3.6/3, ML3.2/3, Error ellipse: s-maj=37.7km s-min=23.5km az=28.0*

*NNC **21** 10:09:45.4±1.8, 53.°77N×90.°49E, h0^{km}, mb4.0, mpv3.7, Error ellipse: s-maj=15.7km s-min=10.6km az=27.0, Suspected Mining explosion.*

ISC 21 10:09:45.9±4.0**, 53.°7N**±0.°2×**90.°5E**±0.°2**, h0^{km}, n9,** σ**0.^{s}59**/11**, 7C-5D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.39**	**277**	*i*		10 31 15.3	
	baz=88,slow=345,SNR=2.1						
ZAA0	**Zalesovo Array**	**3.39**	**277**	⇑Pg	**Pb**	**10 10 45.9**	**-0.9**
	3.3nm,0.6s						
ZAA0				⇑Lg	Lg	10 11 33.6	
	12nm,0.8s						
ZALV	**Zalesovo Beam**	**3.39**	**277**	Pn	**Pn**	**10 10 40.9**	**+0.8**
	4.2nm,0.3s,baz=89,slow=12,SNR=29						
ZALV				Lg	Lg	10 11 35.8	
	5.0nm,0.3s,baz=86,slow=28,SNR=10.0						
KURK	**Kurchatov**	**7.89**	**253**	⇓Pn	**Pn**	**10 11 42.4**	**+0.6**
	2.0nm,0.5s						
KURK				⇑Sn	**Sn**	**10 13 12.1**	**+0.4**
	10.0nm,1.0s						
KURK				⇓Lg	Lg	10 13 58.2	
	26nm,1.0s						
KURBB	**Kurchatov Arra**	**7.98**	**252**	Pn	**Pn**	**10 11 43.1**	**0.0**
	0.4nm,0.3s,baz=64,slow=14,SNR=12						
KURBB				Sn	**Sn**	**10 13 13.8**	**-0.2**
	0.1nm,0.3s,baz=66,slow=25,SNR=6.1						
KURBB				Lg	Lg	10 14 02.2	
	0.1nm,0.3s,baz=60,slow=30,SNR=8.3						
KURBB	**Kurchatov Arra**	**7.98**	**252**	⇑Pn	**Pn**	**10 11 43.4**	**+0.3**
	4.2nm,0.5s						
KURBB				⇓Sn	**Sn**	**10 13 14.6**	**+0.6**
	28nm,0.7s						
KURBB				⇓Lg	Lg	10 14 00.4	
	74nm,0.9s						
MK31	**Makanchi Array**	**8.67**	**221**	⇑Pn	**Pn**	**10 11 52.7**	**+0.1**
	2.9nm,0.7s,baz=35,slow=13,SNR=32						
MK31				⇓Lg	Lg	10 14 22.8	
	7.2nm,0.8s,baz=41,slow=30,SNR=4.0						
MKAR	**Makanchi Array**	**8.67**	**221**	Pn	**Pn**	**10 11 53.1**	**+0.5**
	0.6nm,0.3s,baz=37,slow=13,SNR=30						
MKAR				Lg	Lg	10 14 17.1	
	baz=48,slow=32,SNR=1.8						
MAKZ	**Makanchi**	**8.78**	**222**	⇑Pn	**Pn**	**10 11 54.3**	**+0.2**
	3.0nm,0.9s						
MAKZ				⇑Lg	Lg	10 14 26.1	
	17nm,1.1s						

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*IDC **21** 10:10:45.4±1.9, 37.°44N×77.°41E, h0^{km}, mb3.7/4, mb1 3.9/5, mb1mx3.5/45, mbtmp3.7/5, ML3.1/1, Error ellipse: s-maj=50.1km s-min=28.2km az=74.0*

*NNC **21** 10:10:51.5±4.0, 38.°03N×78.°48E, h0^{km}, mb4.2, mpv3.8, Error ellipse: s-maj=33.0km s-min=28.5km az=97.0*

ISC 21 10:10:50.4±2.1**, 38.°0N**±0.°1×**78.°1E**±0.°1**, h10^{km}, n16,** σ**2.^{s}45**/18**, mb3.7**/4**, 7C-2D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNSS	**Tian-Shan**	**5.13**	**350**	Pg	**Pg**	**10 12 25.6**	**-3.1**
	14nm,0.4s						
TNSS				Lg	Lg	10 13 36.7	
	7.4nm,0.7s						
MDOK	**Medeo**	**5.24**	**351**	Pg	**Pg**	**10 12 29.2**	**-1.5**
	10nm,0.5s						
MDOK				Lg	Lg	10 13 39.7	
	28nm,0.8s						
TKM2	**Tokmak 2**	**5.30**	**339**	⇑Pg	**Pg**	**10 12 28.0**	**-3.8**
	8.6nm,1.1s						
TKM2				⇑Lg	Lg	10 13 42.6	
	12nm,0.8s						
KST	**Kastek**	**5.32**	**343**	Pg	**Pb**	**10 12 27.2**	**+3.7**
	5.5nm,0.4s						
KST				Lg	Lg	10 13 39.4	
	13nm,1.0s						
AAK	**Ala-Archa**	**5.42**	**330**	Pn	**Pn**	**10 12 13.6**	**+2.2**
	0.5nm,0.3s,baz=156,slow=10.0,SNR=2.9						
AAK				Pg	**Pb**	**10 12 26.7**	**+1.5**
	0.7nm,0.3s,baz=7.2,slow=7.2,SNR=4.2						
AAK				Lg	Lg	10 13 45.4	
	1.3nm,0.3s,baz=351,slow=23,SNR=5.3						
AAK	**Ala-Archa**	**5.42**	**330**	⇓Pg	**Pg**	**10 12 30.6**	**-3.5**
	7.3nm,0.7s						
AAK				⇓Lg	Lg	10 13 46.6	
	46nm,0.9s						
PDGK	**Podgornoye**	**5.44**	**11**	⇑Pn	**Pn**	**10 12 13.2**	**+1.5**
	7.6nm,0.5s						
PDGK				⇑Lg	Lg	10 13 39.7	
	34nm,0.8s						
CHKK	**Chushkaly**	**5.93**	**352**	Pg	**Pg**	**10 12 42.4**	**-1.5**
	5.6nm,0.3s						
CHKK				Lg	Lg	10 14 05.5	
	9.4nm,0.2s						
MRKS	**Merke**	**6.05**	**323**	Pg	**Pb**	**10 12 36.6**	**+0.6**
	3.8nm,0.4s						
MRKS				Lg	Lg	10 13 55.8	
	14nm,0.8s						
KK09	**Karatay Array**	**7.75**	**314**	⇑Pn	**Pn**	**10 12 45.9**	**+2.6**
	0.7nm,0.5s,baz=127,slow=13						
KK09				⇑Pg	**Pg**	**10 13 18.5**	**-0.3**
	0.5nm,0.5s						
KK09				⇑Lg	Lg	10 15 02.3	
	2.3nm,0.7s,baz=122,slow=27						
MKAR	**Makanchi Array**	**9.32**	**18**	Pn	**Pn**	**10 13 05.4**	**+0.5**
	0.5nm,0.3s,baz=201,slow=12,SNR=8.3						
MKAR				Sn	**Sn**	**10 14 50.4**	**+0.6**
	0.4nm,0.3s,baz=207,slow=28,SNR=2.4						
FINES	**FINESS Array B**	**39.56**	**323**	P	**P**	**10 18 19.0**	**-2.4**
	6.1nm,1.1s,baz=139,slow=11,SNR=2.1						
NB2	**NORSAR Subarra**	**46.67**	**322**	P	**P**	**10 19 15.8**	**-3.1**
	comp=Z,0.4nm,0.4s,baz=88,slow=7.9						
NOA	**NORSAR Array B**	**46.67**	**322**	P	**P**	**10 19 17.7**	**-1.3**
	comp=Z,0.5nm,0.5s,baz=89,slow=7.7,SNR=3.6						
TORD	**Torodi Ar. Bea**	**71.40**	**272**	P	P	10 22 03.5	-7.6
	comp=Z,0.2nm,0.4s,baz=56,slow=5.6,SNR=1.9						
ILAR	**Eielson Array**	**71.68**	**19**	P	**P**	**10 22 12.6**	**+0.6**
	comp=Z,0.5nm,0.9s,baz=330,slow=5.3,SNR=5.3						

NNC 21 10:32:00.9±7.5**, 37.°60N**×**69.°08E, h0^{km}, mb3.8, mpv3.5, 5C-2D, Error ellipse: s-maj=75.4km s-min=36.3km az=169.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK09	**Karatay Array**	**5.63**	**11**	⇑P	Pn	10 33 28.4	+2.6
	0.7nm,0.3s						
AAK	**Ala-Archa**	**6.52**	**38**	⇑P	Pn	10 33 38.0	-0.2
	3.4nm,0.5s						
AAK				⇑S	Sn	10 34 55.7	+2.3
	2.4nm,0.5s						
TKM2	**Tokmak 2**	**7.29**	**41**	⇓P	Pn	10 33 47.5	-1.3
	2.3nm,0.4s						
TKM2				⇑S	Sn	10 35 11.7	-0.6
	1.9nm,0.7s						
AB31	**Akbulak array**	**13.40**	**333**	⇑P	Pn	10 35 10.6	-1.6
	0.4nm,0.4s,baz=158,slow=13,SNR=22						
AB31				⇓S	Sn	10 37 40.9	-0.9
	1.3nm,0.9s,baz=159,slow=24,SNR=4.2						

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*IDC **21** 10:32:19.2±4.8, 3.°55N×127.°98E, h75^{km}±47^{km}, mb3.4/6, mb1 3.5/7, mb1mx3.2/45, mbtmp3.7/7, ML3.6/1, Error ellipse: s-maj=75.9km s-min=23.2km az=69.0*

*DJA **21** 10:32:19.0±1.0, 4.°N±6.°×12.°8E±.°, h50^{km}±38^{km}, M4.2/6, mb4.4/6, mB4.7/3, MLv4.2/6, Mw(mB)4.0/3*

ISC 21 10:32:20.4±1.4**, 3.°4N**±0.°2×**128.°0E**±0.°1**, h84^{km}, n11,** σ**1.^{s}39**/12**, mb3.6**/6**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.38**	**142**	P	**Pn**	**10 33 39.1**	**+0.9**
	1.7nm,0.3s,baz=324,slow=22,SNR=2.1						
SIJI				S	**Sn**	**10 34 36.4**	**-2.5**
	1.0nm,0.3s,baz=185,slow=23,SNR=1.4						
GTOI	**Gorontalo**	**5.64**	**241**	P	**Pn**	**10 33 41.8**	**0.0**
	0.0nm234nm10nm,0.5s						
SANI	**Sanana**	**5.75**	**200**	P	**Pn**	**10 33 42.9**	**-0.3**
	0.2nm812nm22nm,0.5s						
MRSI	**Marisa**	**6.66**	**244**	P	**Pn**	**10 33 54.7**	**-1.0**
	0.4nm1μm139nm,0.6s						
MPSI	**Mapaga**	**8.60**	**250**	P	**Pn**	**10 34 21.6**	**-0.5**
FITZ	**Fitzroy Crossi**	**21.47**	**186**	P	**P**	**10 37 03.8**	**+1.5**
	0.9nm,0.5s,baz=4.8,slow=10,SNR=2.2						
WRA	**Warramunga Arr**	**24.02**	**165**	P	**P**	**10 37 28.5**	**+0.8**
	2.0nm,0.7s,baz=344,slow=11,SNR=29						
ASAR	**Alice Springs**	**27.51**	**168**	P	**P**	**10 38 00.2**	**+1.0**
	0.2nm,0.5s,baz=355,slow=7.9,SNR=7.5						
STKA	**Stephens Creek**	**37.40**	**161**	P	**P**	**10 39 24.4**	**-0.9**
	0.6nm,0.3s,baz=343,slow=11,SNR=5.2						
MKAR	**Makanchi Array**	**58.53**	**325**	P	**P**	**10 42 07.1**	**-1.1**
	0.4nm,0.5s,baz=119,slow=8.3,SNR=7.3						
VNDA	**Vanda**	**82.94**	**173**	P	**P**	**10 44 37.3**	**+1.7**
	1.1nm,1.2s,baz=315,slow=5.4,SNR=2.0						

NNC 21 10:38:26.5±9.8**, 37.°10N**×**71.°17E, h0^{km}, mb3.6, mpv3.2, 2C-4D, Error ellipse: s-maj=75.9km s-min=63.3km az=167.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK08	**Karatay Array**	**6.02**	**355**	⇑Pn	Pn	10 39 55.5	-1.2
	1.2nm,0.6s,baz=173,slow=12						
KK08				⇓Sn	Sn	10 41 06.0	-0.3
	1.3nm,0.5s,baz=168,slow=24						
AAK	**Ala-Archa**	**6.09**	**24**	⇑Pn	Pn	10 39 58.9	+1.0
	1.7nm,0.7s						
AAK				⇓Sn	Sn	10 41 10.8	+2.4
	3.2nm,0.6s						
TKM2	**Tokmak 2**	**6.73**	**29**	⇓Pn	Pn	10 40 06.0	-0.7
	1.6nm,0.8s						
TKM2				⇓Sn	Sn	10 41 26.7	+2.5
	1.0nm,0.6s						

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*IDC **21** 10:41:23.3±2.3, 0.°89N×126.°98E, h0^{km}, mb3.4/3, mb1 3.7/3, mb1mx3.4/41, mbtmp3.5/3, MS3.3/1, Ms1 3.3/1, ms1mx2.7/24, Error ellipse: s-maj=194.2km s-min=27.8km az=66.0*

*DJA **21** 10:41:25.9±0.4, 1.°N±2.°×12.°7E±.°, h10^{km}, M3.4/5, MLv3.4/5*

ISC 21 10:41:24.2±1.6**, 1.°05N**±0.°10×**127.°6E**±0.°1**, h10^{km}, n7,** σ**1.^{s}52**/7**, mb3.6**/3**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.34**	**216**	P	**Pg**	**10 41 29.4**	**-1.6**
LBMI	**Labuha**	**1.68**	**182**	P	**Pn**	**10 41 54.5**	**+0.8**
LBMI				S	**Sb**	**10 42 17.2**	**+0.8**
KMSI	**Cibinong**	**3.62**	**263**	P	**Pn**	**10 42 21.9**	**+1.6**
LEM	**Lembang**	**21.39**	**248**	LR	LR	10 53 54.6	
	comp=Z,94nm,20.8s,baz=7.5,slow=36						
WRA	**Warramunga Arr**	**21.89**	**163**	P	**P**	**10 46 17.1**	**-0.5**
	0.9nm,0.9s,baz=340,slow=11,SNR=3.2						
ASAR	**Alice Springs**	**25.33**	**166**	P	**P**	**10 46 52.8**	**+1.4**
	1.0nm,0.7s,baz=343,slow=9.7,SNR=11						
MKAR	**Makanchi Array**	**60.22**	**326**	P	**P**	**10 51 31.8**	**-0.9**
	0.3nm,0.6s,baz=125,slow=7.8,SNR=3.8						

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*JMA **21** 10:50:58.5±0.2, 24.°31N×121.°87E, h58^{km}±3^{km}, M2.7*

*TAP **21** 10:50:59.5, 24.°42N×121.°94E, h30^{km}, ML3.4, B*

ISC 21 10:50:58.4±1.0**, 24.°34N**±0.°02×**122.°01E**±0.°02**, h15^{km}**±8^{km}**, n93,** σ**0.^{s}78**/156**, 1C-3D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EWUT	**Wuta**	**0.23**	**297**	*i* P	**Pb**	**10 51 05.4**	**+1.0**
	baz=282						
EWUT				S	**Sb**	**10 51 09.1**	**+0.8**
	baz=282						
EHP	**Heping Village**	**0.24**	**264**	*e*P	**Pb**	**10 51 05.9**	**+1.3**
	baz=238						
EHP				*e*S	**Sb**	**10 51 11.2**	**+2.6**
	baz=238						
ENA	**Nanau**	**0.26**	**290**	*i* P	**Pb**	**10 51 05.7**	**+0.9**
	baz=274						
ENA				*e*S	**Sb**	**10 51 10.2**	**+1.2**
	baz=274						
TWC	**Suao**	**0.31**	**332**	⇑*i*P	**Pb**	**10 51 06.1**	**+0.5**
	baz=340						
TWC				S	**Sb**	**10 51 10.3**	**-0.1**
	baz=340						
ETL	**Fush Village**	**0.39**	**243**	*e*P	**Pn**	**10 51 08.5**	**-1.1**
	baz=232						
ETL				*e*S	**Sn**	**10 51 15.6**	**-1.2**
	baz=232						
NDS	**Dongshan**	**0.40**	**318**	*i* P	**Pb**	**10 51 07.4**	**+0.3**
	baz=317						
NDS				S	**Sb**	**10 51 13.1**	**0.0**
	baz=317						
NACB	**Ninganchiao**	**0.41**	**247**	*i* P	**Pb**	**10 51 08.2**	**+0.8**
	baz=236						
NACB				S	**Sn**	**10 51 15.6**	**-1.6**
	baz=236						
TWD	**Chiawan**	**0.45**	**236**	*e*P	**Pn**	**10 51 09.4**	**-1.0**
	baz=231						
TWD				*e*S	**Sn**	**10 51 17.0**	**-1.2**
	baz=231						
ILA	**Ilan**	**0.49**	**331**	*e*P	**Pb**	**10 51 08.8**	**+0.1**
	baz=330						
ILA				*e*S	**Sb**	**10 51 15.6**	**0.0**
	baz=330						
TWE	**Neicheng**	**0.49**	**321**	⇓*i*P	**Pb**	**10 51 08.7**	**0.0**
	baz=322						
TWE				*e*S	**Sg**	**10 51 14.2**	**-0.6**
	baz=322						
ETLH	**Xiulin Townshi**	**0.50**	**255**	P	**Pb**	**10 51 09.6**	**+0.7**
	baz=243						
ETLH				*e*S	**Sb**	**10 51 17.1**	**+1.1**
	baz=243						
ENTT	**Nioudou**	**0.50**	**307**	*i* P	**Pb**	**10 51 08.9**	**0.0**
	baz=304						
ENTT				S	**Sg**	**10 51 15.5**	**+0.4**
	baz=304						
EGS		**0.51**	**352**	*e*P	**Pb**	**10 51 09.5**	**+0.4**
	baz=360						
EGS				*e*S	**Sb**	**10 51 16.3**	**0.0**
	baz=360						
NDT	**Datong Townshi**	**0.52**	**300**	⇓*i*P	**Pb**	**10 51 09.4**	**+0.1**
	baz=296						
NDT				*e*S	**Sg**	**10 51 15.5**	**-0.2**
	baz=296						
NTC	**Toucheng**	**0.54**	**343**	*e*P	**Pb**	**10 51 09.5**	**-0.1**
	baz=346						
NTC				*e*S	**Sg**	**10 51 16.8**	**+0.6**
	baz=346						
NNS	**Nan Shan**	**0.59**	**280**	P	**Pb**	**10 51 10.4**	**-0.1**
	baz=276						
NNS				*e*S	**Sg**	**10 51 18.3**	**+0.5**
	baz=276						
NWLT	**Wulai**	**0.63**	**314**	*e*P	**Pg**	**10 51 10.7**	**-0.1**
	baz=312						
NWLT				*e*S	**Sg**	**10 51 18.7**	**-0.6**
	baz=312						
TIPB	**Shuangxi**	**0.65**	**345**	P	**Pb**	**10 51 11.7**	**+0.1**
	baz=352						
TIPB				*e*S	**Sg**	**10 51 19.7**	**-0.2**
	baz=352						
YHNB	**Yeheng**	**0.66**	**300**	*i* P	**Pg**	**10 51 11.6**	**+0.2**
	baz=301						
YHNB				S	**Sg**	**10 51 19.9**	**-0.3**
	baz=301						
TWB1	**Santiao Chiao**	**0.67**	**359**	*e*P	**Pb**	**10 51 12.3**	**+0.6**
	baz=4.0						
TWB1				*e*S	**Sg**	**10 51 20.5**	**+0.2**
	baz=4.0						
NSK	**Sanguang**	**0.68**	**300**	⇓*i*P	**Pg**	**10 51 11.7**	**0.0**
	baz=296						
NSK				*e*S	**Sg**	**10 51 20.4**	**-0.4**
	baz=296						
FUSS	**Fushou**	**0.70**	**263**	P	**Pb**	**10 51 13.0**	**+0.5**
	baz=255						
FUSS				*e*S	**Sb**	**10 51 22.8**	**+0.8**
	baz=255						
WHF	**Hehuan Shan**	**0.70**	**254**	P	**Pb**	**10 51 13.2**	**+0.6**
	baz=246						
WHF				*e*S	**Sb**	**10 51 23.2**	**+0.9**
	baz=246						
ESL	**Shilin**	**0.74**	**225**	*e*P	**Pb**	**10 51 13.1**	**+0.1**
	baz=231						
ESL				*e*S	**Sn**	**10 51 23.9**	**-1.4**
	baz=231						
TWA	**Mucha**	**0.75**	**329**	*e*P	**Pb**	**10 51 13.3**	**+0.2**
	baz=324						
TWA				*e*S	**Sg**	**10 51 22.1**	**-0.7**
	baz=324						
NWF	**Wu-fen Shan**	**0.76**	**344**	P	**Pb**	**10 51 13.7**	**+0.3**
	baz=340						
NWF				*e*S	**Sg**	**10 51 23.1**	**-0.1**
	baz=340						
NHDH	**Xindian Distri**	**0.76**	**325**	*e*P	**Pb**	**10 51 12.9**	**-0.5**
	baz=321						
NHDH				*e*S	**Sg**	**10 51 22.7**	**-0.6**
	baz=321						
TWT	**Tachien**	**0.76**	**264**	*e*P	**Pb**	**10 51 13.8**	**+0.3**
	baz=257						
TWT				*e*S	**Sb**	**10 51 24.3**	**+0.5**
	baz=257						
TDCB	**Techi**	**0.78**	**264**	P	**Pb**	**10 51 14.2**	**+0.4**
	baz=257						
TDCB				*e*S	**Sb**	**10 51 24.5**	**+0.3**
	baz=257						
CHGB	**Renai**	**0.81**	**250**	P	**Pn**	**10 51 14.9**	**-0.6**
	baz=243						
CHGB				*e*S	**Sn**	**10 51 26.5**	**-0.8**
	baz=243						
OWD	**Renai**	**0.85**	**243**	*e*P	**Pg**	**10 51 14.9**	**0.0**
	baz=228						
OWD				*e*S	**Sg**	**10 51 26.4**	**+0.2**
	baz=228						
EGFH	**Guangfu**	**0.85**	**219**	*e*P	**Pn**	**10 51 15.6**	**-0.3**
	baz=200						
JYNG	**Yonagunijimaku**	**0.86**	**82**	P	**Pn**	**10 51 16.5**	**+0.5**
JYNG				S	**Sn**	**10 51 29.4**	**+1.0**
YM01	**YM01**	**0.90**	**334**	P	**Pb**	**10 51 15.7**	**0.0**
	baz=345						
YM01				*e*S	**Sb**	**10 51 26.8**	**-0.8**
	baz=345						
YOJ	**Yonaguni jima**	**0.92**	**82**	P	**Pn**	**10 51 17.1**	**+0.2**
	baz=82						
YOJ				*e*S	**Sn**	**10 51 31.0**	**+1.1**
	baz=82						
YOJ	**Yonaguni jima**	**0.92**	**82**	P	**Pn**	**10 51 17.3**	**+0.5**
YOJ				S	**Sn**	**10 51 31.0**	**+1.1**
TWS1	**Kuangyinshan**	**0.93**	**325**	P	**Pb**	**10 51 16.3**	**+0.1**
	baz=335						
TWS1				*e*S	**Sg**	**10 51 29.1**	**+0.5**
	baz=335						
ANP	**Anpu**	**0.95**	**332**	*e*P	**Pb**	**10 51 15.4**	**-1.3**
	baz=334						
LIOB	**Emei**	**0.95**	**289**	*e*P	**Pn**	**10 51 17.2**	**-0.1**
	baz=286						
LIOB				*e*S	**Sg**	**10 51 29.8**	**+0.5**
	baz=286						
NSTT	**Nanjuang**	**0.96**	**288**	*e*P	**Pn**	**10 51 17.3**	**-0.1**
	baz=284						
NSTT				*e*S	**Sb**	**10 51 29.6**	**+0.2**
	baz=284						
NTST	**Danshui**	**0.97**	**328**	*e*P	**Pb**	**10 51 16.5**	**-0.3**
	baz=337						
NTST				*e*S	**Sb**	**10 51 29.8**	**+0.3**
	baz=337						
WHP	**Taichung City**	**0.97**	**267**	*e*P	**Pn**	**10 51 17.8**	**+0.2**
	baz=261						
WHP				*e*S	**Sg**	**10 51 29.9**	**0.0**
	baz=261						
NCU	**National Centr**	**0.98**	**310**	*e*P	**Pb**	**10 51 17.1**	**0.0**
	baz=309						
NCU				*e*S	**Sn**	**10 51 31.1**	**-0.1**
	baz=309						
NCUH	**Zhongli**	**0.98**	**310**	*e*P	**Pb**	**10 51 16.9**	**-0.1**
	baz=308						
NCUH				*e*S	**Sn**	**10 51 31.1**	**-0.1**
	baz=308						
VWDT	**VWDT**	**0.98**	**234**	*e*P	**Pn**	**10 51 18.2**	**+0.6**
	baz=219						
HGSD	**Ruisui**	**1.00**	**212**	*e*P	**Pn**	**10 51 17.6**	**-0.2**
	baz=201						
HGSD				*e*S	**Sn**	**10 51 34.2**	**+2.6**
	baz=201						
TWY	**Chenhua**	**1.00**	**338**	*e*P	**Pb**	**10 51 17.5**	**-0.1**
	baz=340						
TWY				*e*S	**Sb**	**10 51 29.8**	**-0.8**
	baz=340						
SBCB	**Hsinchu**	**1.03**	**296**	*e*P	**Pb**	**10 51 17.6**	**-0.4**
	baz=293						
SBCB				*e*S	**Sg**	**10 51 32.4**	**+0.4**
	baz=293						
EHY	**Hungye**	**1.04**	**217**	*e*P	**Pb**	**10 51 17.1**	**-1.0**
	baz=211						
WCS	**Beigang Elemen**	**1.04**	**255**	*e*P	**Pn**	**10 51 18.2**	**-0.3**
	baz=248						
SSLB	**Suanglung**	**1.11**	**241**	*e*P	**Pb**	**10 51 18.9**	**-0.3**
	baz=235						
SMLT	**Sun Moon Lake**	**1.11**	**246**	*e*P	**Pg**	**10 51 19.8**	**0.0**
	baz=232						
TWQ1	**Liyutan**	**1.12**	**271**	*e*P	**Pg**	**10 51 20.3**	**+0.2**
	baz=266						
TWQ1				*e*S	**Sg**	**10 51 35.4**	**+0.6**
	baz=266						
NMLH	**Miaoli**	**1.13**	**280**	*e*P	**Pg**	**10 51 20.0**	**-0.1**
	baz=276						
NMLH				*e*S	**Sg**	**10 51 36.0**	**+1.2**
	baz=276						
TYC	**Yuchr**	**1.14**	**248**	*e*P	**Pg**	**10 51 20.0**	**-0.3**
	baz=242						
TYC				*e*S	**Sg**	**10 51 37.3**	**+2.1**
	baz=242						
NSY	**Sanyi**	**1.14**	**274**	*e*P	**Pg**	**10 51 20.6**	**+0.2**
	baz=269						
NSY				*e*S	**Sg**	**10 51 36.5**	**+1.2**
	baz=269						
YULB	**Yu-li**	**1.14**	**215**	*e*P	**Pn**	**10 51 19.0**	**-0.9**
	baz=210						
EYUL	**Yuli**	**1.17**	**213**	*e*P	**Pg**	**10 51 21.9**	**+0.9**
	baz=221						
WJS	**Zhushan**	**1.28**	**247**	*e*P	**Pg**	**10 51 23.1**	**+0.1**
	baz=241						
WNT	**Mingjian**	**1.29**	**250**	*e*P	**Pg**	**10 51 23.2**	**-0.1**
	baz=244						
WNT				*e*S	**Sg**	**10 51 41.5**	**+1.3**
	baz=244						
FULB	**Fuli**	**1.31**	**210**	*e*P	**Pg**	**10 51 22.8**	**-0.8**
	baz=219						
CHKT	**Chengkung**	**1.37**	**206**	*e*P	**Pb**	**10 51 23.7**	**0.0**
	baz=188						
ALS	**Alishan**	**1.37**	**233**	*e*P	**Pg**	**10 51 24.5**	**-0.4**
	baz=220						
ALS				*e*S	**Sg**	**10 51 44.7**	**+1.9**
	baz=220						
CHN5	**Tsauling**	**1.42**	**239**	*e*P	**Pg**	**10 51 25.5**	**-0.3**
	baz=235						
CHN5				*e*S	**Sg**	**10 51 46.0**	**+1.7**
	baz=235						
WDLH	**Douliu**	**1.49**	**245**	*e*P	**Pg**	**10 51 26.6**	**-0.5**
	baz=240						
WDLH				*e*S	**Sg**	**10 51 47.0**	**+0.6**
	baz=240						
EDH	**Donghe**	**1.50**	**206**	*e*P	**Pn**	**10 51 24.5**	**-0.4**
	baz=192						
WRL	**Guolierlin Hig**	**1.55**	**254**	*e*P	**Pb**	**10 51 26.1**	**-0.7**
	baz=250						
WRL				*e*S	**Sb**	**10 51 45.9**	**-0.4**

	baz=250						
IRIF	Iriomote-Funau	1.57	90	P	Pb	10 51 26.5	-0.7
IRIF				*e*S	Sb	10 51 47.0	+0.1
CHN2	Minshiung	1.61	241	*e*P	Pg	10 51 28.5	-0.9
	baz=237						
CHN2				*e*S	Sg	10 51 51.2	+0.7
	baz=237						
WTK	Tuku	1.61	247	*e*P	Pb	10 51 27.3	-0.6
	baz=242						
STYH	Taoyuan	1.62	224	*e*P	Pb	10 51 27.9	-0.1
	baz=214						
STYH				*e*S	Sg	10 51 50.2	-0.4
	baz=214						
TPUB	Ta-pu	1.63	231	*e*P	Pb	10 51 27.8	-0.4
	baz=215						
TPUB				*e*S	Sg	10 51 50.4	-0.5
	baz=215						
CHY	Chiayi	1.67	240	*e*P	Pb	10 51 28.3	-0.6
	baz=251						
WTP	Ta-pu	1.68	230	*e*P	Pb	10 51 28.9	-0.1
	baz=227						
WTP				*e*S	Sg	10 51 51.6	-0.8
	baz=227						
TWGBT	Beinan	1.74	210	*e*P	Pn	10 51 26.7	-1.4
	baz=195						
TWK	Hsinying	1.75	233	*e*P	Pb	10 51 29.7	-0.6
	baz=229						
TWK				*e*S	Sg	10 51 53.3	-1.6
	baz=229						
CHN1	Nanshi	1.78	230	*e*P	Pb	10 51 30.6	-0.1
	baz=227						
SGST	Jiashian	1.81	227	*e*P	Pb	10 51 30.5	-0.7
	baz=211						
SLGT	Liugui	1.83	223	*e*P	Pb	10 51 31.4	-0.2
	baz=220						
JKRS	Kuro-shima	1.83	93	P	Pb	10 51 31.0	-0.6
JKRS				*e*S	Sb	10 51 54.0	-0.3
ICHU	Yijhu	1.86	239	*e*P	Pb	10 51 30.9	-1.1
	baz=235						
JIJ	Ishigaki jima	1.95	89	P	Pb	10 51 32.0	-1.6
JIJ				S	Sn	10 51 55.5	+0.3
ECL	Taimali	1.98	209	*e*P	Pn	10 51 31.6	+0.1
	baz=198						
SSD	Sandimen	2.02	219	*e*P	Pb	10 51 34.8	-0.1
	baz=216						
TSMG	Majia	2.05	218	*e*P	Pb	10 51 35.2	-0.1
	baz=215						
JISG	Ishigakijimahi	2.11	83	P	Pn	10 51 34.1	+0.9
JISG				*e*S	Sn	10 52 00.0	+0.7
MASBT	Mashibuluo	2.13	217	*e*P	Pb	10 51 34.8	-2.0
	baz=214						
EAST	Anshuo	2.22	209	*e*P	Pn	10 51 35.2	+0.5
	baz=199						
PHUB	P'eng-hu	2.37	250	*e*P	Pn	10 51 35.3	-1.5
	baz=247						
SLIU	Shizi	2.39	208	*e*P	Pn	10 51 37.8	+0.8
	baz=199						
VCHM	Qimei	2.62	245	*e*P	Pn	10 51 39.8	-0.4
	baz=242						
PTMZ	Houxiangcun	2.72	286	*e*P	Pn	10 51 40.5	-1.1
	baz=281						
AXDP	Jialang	3.72	279	*e*P	Pn	10 51 55.8	+0.6
	baz=274						

*ANF **21** 11:00:17.6±0.5, 36°.95N×97°.79W, h2^{km}±3^{km}, ML3.3/9, Error ellipse: s-maj=2.4km s-min=2.2km az=52.0*

*TUL **21** 11:00:17.5±1.4, 36°.94N±0°.02×97°.806W±0°.009, h3^{km}±7^{km}, ML2.9, mb_Lg2.7/33(NEIC), Error ellipse: s-maj=2.3km s-min=1.0km az=189.0*

*NEIC **21** 11:00:17.9±1.1, 36°.93N±0°.01×97°.79W±0°.01, h5^{km}±1^{km}, Error ellipse: s-maj=2.9km s-min=2.1km az=244.0*

ISC 21 11:00:17.8±0.9**, 36°.93N**±0°.02×**97°.80W**±0°.02**, h6**^{km}±7^{km}**, n75, σ0^{s}.71**/99**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GC02	Grant County #	0.09	214	Pg	Pg	11 00 20.0	+0.2
GC02				Sg	Sg	11 00 21.6	+0.4
KAN17	Caldwell West	0.12	12	Pg	Pg	11 00 20.2	-0.1
KAN17				Sg	Sg	11 00 22.0	0.0
KAN14	Manchester OK	0.14	282	Pg	Pg	11 00 20.4	-0.2
KAN14				Sg	Sg	11 00 22.3	-0.2
KAN05	Bluff City Nor	0.19	341	Pg	Pg	11 00 21.4	-0.2
KAN05				Sg	Sg	11 00 24.0	-0.2
KAN01	Argonia South	0.23	7		Pg	11 00 22.1	-0.2
KAN01				Sg	Sg	11 00 25.2	-0.1
KAN09	Caldwell North	0.25	34	Pg	Pg	11 00 22.8	0.0
KAN09				Sg	Sg	11 00 26.2	+0.1
KAN13	South Haven SW	0.27	72	Pg	Pg	11 00 23.6	+0.5
KAN10	Anthony SW Sta	0.31	309		Pg	11 00 23.6	-0.2
KAN10				Sg	Sg	11 00 27.3	-0.7
KAN06	Argonia West S	0.32	351		Pg	11 00 23.8	-0.3
KAN06				Sg	Sg	11 00 28.1	-0.4
KAN08	Anthony NE Sta	0.33	335	Pg	Pg	11 00 24.0	-0.3
KAN08				Sg	Sg	11 00 28.4	-0.2
OK032	Salt Plains WL	0.35	250	Pg	Pg	11 00 24.6	-0.1
OK032				Sg	Sg	11 00 29.2	-0.2
KAN16	Harper SW Stat	0.37	324	Pg	Pg	11 00 24.6	-0.4
KAN16				Sg	Sg	11 00 29.3	-0.5
KAN12	Harper NE Stat	0.40	336	Pg	Pg	11 00 25.2	-0.4
KAN12				Sg	Sg	11 00 30.9	-0.1
CROK	Carrier	0.45	200	Pg	Pg	11 00 26.6	+0.1
CROK				Sg	Sg	11 00 32.9	+0.5
BLOK	Blackwell	0.49	110	Pg	Pg	11 00 27.5	+0.1
BLOK				Sg	Sg	11 00 33.7	-0.1
T35A	Sooner Cattle	1.03	90	Pg	Pg	11 00 37.1	-0.4
T35A					Sg	11 00 51.2	+0.3
T35B	Sooner Cattle	1.03	90	P	Pg	11 00 37.1	-0.5
	baz=271						
T35B				S	Sg	11 00 51.0	+0.1
	baz=271						
U32A	Winter Ranch,	1.11	241	Pg	Pg	11 00 39.2	0.0
U32A				Sg	Sb	11 00 54.3	0.0
U32A	Winter Ranch,	1.11	241	P	Pg	11 00 38.4	-0.8
	baz=60						
QUOK	Quay	1.16	130		Pg	11 00 39.6	-0.4
QUOK				Sg	Sg	11 00 55.1	+0.1
OK029	Liberty Lake	1.16	166		Pg	11 00 39.6	-0.5
OK029				Sg	Sg	11 00 55.3	+0.1
OK031	S. Brethren Rd	1.24	141		Pg	11 00 41.0	-0.6
OK031					Sb	11 00 58.0	0.0
BCOK	Bluff Creek, N	1.28	173		Pg	11 00 41.5	-0.8
BCOK				Sg	Sg	11 00 58.6	-0.3
OK030	Cody Creek RV	1.29	140		Pn	11 00 42.1	-0.3
OK030				Sg	Sg	11 00 58.4	-0.8
OK025	Westminster Rd	1.39	164		Pn	11 00 43.6	-0.2
OKCFA	Oklahoma City	1.54	169		Pn	11 00 46.2	+0.4
OKCFA	Oklahoma City	1.54	169	P	Pn	11 00 46.1	+0.3
	baz=350						
OKCFA				S	Sg	11 01 07.5	+0.3
	baz=350						
OKCSW	OKLAHOMA CITY	1.55	169		Pn	11 00 46.4	+0.5
R32A	Long Quarter,	1.66	334		Pn	11 00 48.0	+0.5
R32A	Long Quarter,	1.66	334	P	Pn	11 00 47.9	+0.4
	baz=154						
R32A				S	Sn	11 01 09.2	0.0
	baz=154						
FNO	Franklin	1.70	169		Pn	11 00 48.6	+0.6
TUL1	Leonard	1.91	122		Pn	11 00 51.0	+0.1
TUL1	Leonard	1.91	122	P	Pn	11 00 51.8	+0.9
	baz=303						
X34A	Smith Ranch, M	2.32	181		Pn	11 00 57.4	+0.8
X34A				IAmb_Lg		11 01 32.5	
	comp=Z,26nm,0.7s						
WMOK	Wichita Mounta	2.33	200	Pn	Pn	11 00 57.9	+1.2
WMOK				IAmb_Lg		11 01 33.8	
	comp=Z,23nm,0.7s						
WMOK	Wichita Mounta	2.33	200	P	Pn	11 00 57.8	+1.0
	baz=20						
KSU1	Kansas State U	2.36	23	Pn	Pn	11 00 57.0	-0.1
KSU1	Kansas State U	2.36	23	P	Pn	11 00 57.5	+0.3
	baz=204						
KSU1				S	Sn	11 01 27.7	+1.2
	baz=204						
CBKS	Cedar Bluff	2.43	321		Pn	11 00 59.4	+1.2
CBKS	Cedar Bluff	2.43	321	P	Pn	11 00 58.5	+0.4
	baz=140						
CBKS				S	Sn	11 01 29.3	+1.1
	baz=140						
U38A	Gravette	2.78	99		Pn	11 01 04.3	+1.3
LOOK	Love County	2.97	170	Pn	Pn	11 01 04.8	-0.7
X37A	Clayton	3.06	139		Pn	11 01 08.5	+1.8
X37A				IAmb_Lg		11 01 59.7	
	comp=Z,20nm,0.8s						
X37A	Clayton	3.06	139	P	Pn	11 01 07.3	+0.6
	baz=321						
HHAR	Hobbs	3.17	101	Pn	Pn	11 01 08.8	+0.5
S39A	Bolivar	3.65	77		Pn	11 01 15.5	+0.7
S39A	Bolivar	3.65	77	P	Pn	11 01 14.7	-0.1
	baz=259						
S39A				S	Sn	11 01 58.6	+0.4
	baz=259						
W39A	Magazine	3.68	117		Pn	11 01 16.2	+0.9
W39A				IAmb_Lg		11 02 16.8	
	comp=Z,19nm,0.8s						
AMTX	Amarillo	3.76	238	IAmb_Lg		11 02 23.4	
	comp=Z,19nm,0.8s						
U40A	Yellville	4.01	97		Pn	11 01 20.6	+0.7
U40A				IAmb_Lg		11 02 26.8	
	comp=Z,20nm,0.8s						
MIAR	Mount Ida	4.17	123		Pn	11 01 22.2	+0.1
MIAR				IAmb_Lg		11 02 33.9	
	comp=Z,20nm,1.0s						
P38A	Dawn	4.30	50		Pn	11 01 24.5	+0.7
P38A				IAmb_Lg		11 02 33.1	
	comp=Z,13nm,0.7s						
Z38A	Mt. Pleasant	4.33	147		Pn	11 01 25.3	+1.2
Z38A				IAmb_Lg		11 02 44.0	
	comp=Z,14nm,0.8s						
KSCO	Kaye Shedlock'	4.35	300		Pn	11 01 24.9	+0.3
MGMO	Mountain Grove	4.43	85		Pn	11 01 24.3	-1.3
MGMO				IAmb_Lg		11 02 36.2	
	comp=Z,12nm,1.0s						
BGNE	Belgrade	4.48	357		Pn	11 01 26.2	-0.1
R40A	Maddies Statio	4.59	71	Pn	Pn	11 01 27.1	-0.8
FCAR	Ozark Folk Cen	4.69	101		Pn	11 01 29.4	+0.3
X40A	Basin Creek Fa	4.71	120		Pn	11 01 30.6	+1.2
X40A				IAmb_Lg		11 02 57.6	
	comp=Z,11nm,0.8s						
WHAR	Wooly Hollow	4.75	108	Pn	Pn	11 01 29.0	-1.0
WHAR				IAmb_Lg		11 02 49.1	
	comp=Z,19nm,0.9s						
WHTX	Lake Whitney,	4.93	177	Pn	Pn	11 01 32.0	-0.5
WHTX				IAmb_Lg		11 03 06.4	
	comp=Z,11nm,1.0s						
L34A	Svendsen Farm,	5.15	12	Pn	Pn	11 01 34.4	-1.1
237A	Washetta, Mont	5.18	161	Pn	Pn	11 01 34.5	-1.4
OGNE	Ogallala	5.20	322	Pn	Pn	11 01 35.9	-0.3
T42A	Van Buren	5.37	87	Pn	Pn	11 01 37.3	-1.2
T42A				IAmb_Lg		11 03 21.1	
	comp=Z,9.7nm,1.1s						
PBMO	Poplar Bluff	5.91	89	IAmb_Lg		11 03 28.0	
	comp=Z,15nm,0.7s						
FVM	French Village	5.96	78	Pn	Pn	11 01 44.7	-1.9
435B	Jarrell	6.13	178	IAmb_Lg		11 03 35.3	
	comp=Z,15nm,0.9s						
SDCO	Great Sand Dun	6.19	280	Pn	Pn	11 01 48.2	-1.9
N41A	Harden Midland	6.60	53	Pn	Pn	11 01 55.3	-0.1
JCT	Junction City	6.64	195	Pn	Pn	11 01 54.9	-1.2
ECSD	EROS Data Cent	6.86	7	Pn	Pn	11 01 57.6	-1.3
ECSD				IAmb_Lg		11 04 06.2	
	comp=Z,8.2nm,1.0s						
P43A	Skaggs, Pawnee	7.05	65	Pn	Pn	11 02 01.9	+0.3
L40A	Anamosa	7.22	43	Pn	Pn	11 02 02.3	-1.6
RSSD	Black Hills	8.61	328	Pn	Pn	11 02 23.7	+0.5

*TUL **21** 11:01:29.6±0.8, 36°.66N±0°.02×98°.47W±0°.04, h8^{km}±2^{km}, ML2.9, mb_Lg2.8/31(NEIC), Error ellipse: s-maj=5.0km s-min=2.5km az=74.0*

NEIC 21 11:01:29.3±0.9**, 36°.66N**±0°.01×**98°.50W**±0°.04**, h5**^{km}±2^{km}**, Error ellipse: s-maj=6.1km s-min=3.0km az=70.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK032	Salt Plains WL	0.28	58	Pg	Pg	11 01 35.0	+0.3
OK032				Sg	Sg	11 01 38.7	+0.3
CROK	Carrier	0.45	110	Pg	Pg	11 01 37.9	+0.1
CROK				Sg	Sg	11 01 43.9	+0.2
KAN14	Manchester OK	0.53	55	Pg	Pg	11 01 39.5	+0.1
KAN14				Sg	Sg	11 01 46.6	+0.3
KAN10	Anthony SW Sta	0.57	35	Pg	Pg	11 01 39.9	-0.4
KAN10				Sg	Sg	11 01 48.0	+0.4
KAN16	Harper SW Stat	0.67	32	Pg	Pg	11 01 41.3	-0.8
KAN16				Sg	Sg	11 01 51.4	+0.6
KAN17	Caldwell West	0.71	57	Pg	Pg	11 01 42.8	-0.1
KAN17				Sg	Sg	11 01 52.2	+0.1
KAN08	Anthony NE Sta	0.71	37	IAmb_Lg		11 01 52.4	
	comp=Z,154nm,0.7s						
KAN12	Harper NE Stat	0.76	32	Pg	Pg	11 01 44.1	+0.3
KAN12				Sg	Sg	11 01 53.5	-0.1
KAN01	Argonia South	0.77	50	Pg	Pg	11 01 44.1	-0.1
KAN01				Sg	Sg	11 01 54.2	-0.1
KAN06	Argonia West S	0.78	41	Pg	Pg	11 01 44.3	0.0
KAN06				Sg	Sg	11 01 54.4	-0.1
KAN09	Caldwell North	0.85	56	Pg	Pg	11 01 45.6	-0.1
KAN09				Sg	Sg	11 01 56.9	+0.1
KAN13	South Haven SW	0.90	66	IAmb_Lg		11 01 56.9	
	comp=Z,128nm,0.9s						
BLOK	Blackwell	1.04	84	Pg	Pg	11 01 48.8	-0.4
BLOK					Sg	11 02 02.3	-0.4
OK029	Liberty Lake	1.21	135		Pg	11 01 52.1	-0.3
BCOK	Bluff Creek, N	1.23	144		Pg	11 01 52.5	-0.5
OK025	Westminster Rd	1.43	138		Pb	11 01 56.4	0.0
OKCFA	Oklahoma City	1.50	145	Pn	Pn	11 01 56.9	-0.1
OK031	S. Brethren Rd	1.52	117	Pn	Pn	11 01 56.9	-0.2
QUOK	Quay	1.53	108	Pn	Pn	11 01 56.8	-0.4
T35A	Sooner Cattle	1.62	80	Pn	Pn	11 01 58.5	0.0
FNO	Franklin	1.66	147	Pn	Pn	11 01 59.2	+0.1
R32A	Long Quarter,	1.77	355	Pn	Pb	11 02 01.6	-0.6
WMOK	Wichita Mounta	1.93	187	Pn	Pn	11 02 03.6	+0.8
X34A	Smith Ranch, M	2.12	165	Pn	Pn	11 02 05.5	0.0
TUL1	Leonard	2.31	108	IAmb_Lg		11 02 41.5	
	comp=Z,45nm,0.8s						
CBKS	Cedar Bluff	2.37	336	IAmb_Lg		11 02 48.0	
	comp=Z,34nm,0.8s						
AMTX	Amarillo	3.13	237	IAmb_Lg		11 03 14.8	
	comp=Z,35nm,0.8s						
KSCO	Kaye Shedlock'	4.02	307	IAmb_Lg		11 03 43.8	
	comp=Z,18nm,0.7s						
MSTX	Muleshoe	4.40	234	IAmb_Lg		11 03 58.0	
	comp=Z,12nm,1.1s						
T25A	Trinidad	4.76	278	IAmb_Lg		11 04 07.9	
	comp=Z,14nm,0.8s						
FCAR	Ozark Folk Cen	5.21	97	Pn	Pn	11 02 45.3	-2.6
L34A	Svendsen Farm,	5.55	17	IAmb_Lg		11 04 32.8	
	comp=Z,16nm,0.7s						
P40A	Paris	5.84	59		Pn	11 02 59.0	+2.4
P40A				IAmb_Lg		11 04 38.6	
	comp=Z,21nm,0.8s						
435B	Jarrell	5.91	172	IAmb_Lg		11 04 51.1	
	comp=Z,12nm,0.9s						
K31A	O'Neill	5.96	358	IAmb_Lg		11 04 42.7	
	comp=Z,16nm,0.8s						
PBMO	Poplar Bluff	6.49	87	IAmb_Lg		11 05 09.8	
	comp=Z,9.3nm,0.8s						
FVM	French Village	6.57	76	IAmb_Lg		11 04 57.3	
	comp=Z,19nm,0.8s						
ECSD	EROS Data Cent	7.21	11	Pn	Pn	11 03 13.3	-2.1
N41A	Harden Midland	7.22	54	IAmb_Lg		11 05 18.3	
	comp=Z,14nm,0.8s						
RSSD	Black Hills	8.56	332	IAmb_Lg		11 06 09.0	
	comp=Z,6.0nm,0.9s						

*TUL **21** 11:08:49±1.3, 36°.66N±0°.05×98°.46W±0°.06, h7^{km}±7^{km}, ML2.7, mb_Lg2.4/13(NEIC), Error ellipse: s-maj=6.6km s-min=6.1km az=217.0*

NEIC 21 11:08:49.1±1.7**, 36°.63N**±0°.04×**98°.47W**±0°.04**, h6**^{km}±7^{km}**, Error ellipse: s-maj=6.8km s-min=2.8km az=223.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK032	Salt Plains WL	0.27	49	Pg	Pg	11 08 54.3	-0.2
CROK	Carrier	0.41	107		Pg	11 08 57.3	+0.3
U32A	Winter Ranch,	0.50	241	Pg	Pg	11 08 59.1	+0.4
GC02	Grant County #	0.54	65	Pg	Pg	11 08 59.2	-0.3
KAN16	Harper SW Stat	0.68	28	Pg	Pg	11 09 01.4	-0.8
KAN06	Argonia West S	0.79	38	Pg	Pg	11 09 03.8	-0.5
KAN09	Caldwell North	0.85	53	Pg	Pg	11 09 05.3	-0.2
BLOK	Blackwell	1.01	82	Pg	Pg	11 09 08.0	-0.7
OK029	Liberty Lake	1.16	135	Pg	Pg	11 09 10.6	-0.9
BCOK	Bluff Creek, N	1.19	144	Pn	Pg	11 09 11.7	-0.3
OK025	Westminster Rd	1.39	138		Pn	11 09 15.0	-0.1
QUOK	Quay	1.49	107		Pn	11 09 16.3	-0.1
OK030	Cody Creek RV	1.53	117	Pn	Pb	11 09 18.0	+0.2
T35A	Sooner Cattle	1.59	79	Pn	Pn	11 09 17.6	-0.3
T35A				IAmb_Lg		11 09 41.5	
	comp=Z,18nm,1.0s						
FNO	Franklin	1.62	147	Pn	Pn	11 09 18.2	0.0
R32A	Long Quarter,	1.81	354		Pn	11 09 21.6	+0.7
WMOK	Wichita Mounta	1.90	188	Pn	Pn	11 09 23.0	+0.9
WMOK				IAmb_Lg		11 09 52.4	
	comp=Z,19nm,0.8s						
X34A	Smith Ranch, M	2.08	165		Pb	11 09 26.1	-1.3
X34A				IAmb_Lg		11 10 01.4	
	comp=Z,14nm,0.7s						
TUL1	Leonard	2.27	107	Pn	Pn	11 09 28.9	+1.6
TUL1				IAmb_Lg		11 10 05.6	
	comp=Z,15nm,0.9s						
CBKS	Cedar Bluff	2.41	336	Pn	Pn	11 09 29.9	+0.7
AMTX	Amarillo	3.14	237	IAmb_Lg		11 10 35.6	
	comp=Z,11nm,0.8s						
X37A	Clayton	3.24	128	Pn	Pn	11 09 41.8	+1.4
U38A	Gravette	3.29	92	Pn	Pn	11 09 41.4	+0.2
U38A				IAmb_Lg		11 10 34.5	
	comp=Z,8.8nm,1.0s						
KSCO	Kaye Shedlock'	4.07	307	IAmb_Lg		11 11 06.9	
	comp=Z,9.5nm,0.9s						
S39A	Bolivar	4.24	74	Pn	Pn	11 09 53.6	-0.7
MIAR	Mount Ida	4.49	116	Pn	Pn	11 09 58.1	+0.4
U40A	Yellville	4.53	92	Pn	Pn	11 09 59.3	+1.1
T25A	Trinidad	4.79	278	Pn	Pn	11 10 01.2	-0.9
P38A	Dawn	4.91	51	Pn	Pn	11 10 02.7	-0.8
X40A	Basin Creek Fa	5.06	113	Pn	Pn	11 10 04.7	-0.9
WHAR	Wooly Hollow	5.18	103	Pn	Pn	11 10 06.7	-0.6
P40A	Paris	5.83	58	Pn	Pn	11 10 17.3	+1.2
CCM	Cathedral Cave	5.93	74	Pn	Pn	11 10 16.3	-1.2
T42A	Van Buren	5.93	84	Pn	Pn	11 10 17.6	+0.2
PBMO	Poplar Bluff	6.46	86	Pn	Pn	11 10 23.6	-1.1

*TAP **21** 11:26:08.9, 23°.27N×122°.04E, h46^{km}, ML3.1, D*

*JMA **21** 11:26:08.2±0.1, 23°.29N×122°.05E, h32^{km}, M2.5*

ISC 21 11:26:07.8±1.2**, 23°.28N**±0°.02×**122°.05E**±0°.03**, h21**^{km}±5^{km}**, n82, σ0^{s}.73**/131**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECBN	Changbin	0.55	274	*i* P	Pn	11 26 19.8	-0.6
	baz=270						
ECBN				*i* S	Sb	11 26 27.6	+1.4
	baz=270						
HGSD	Ruisui	0.61	291	P	Pb	11 26 20.2	+0.4
	baz=292						
CHKT	Chengkung	0.65	254	P	Pb	11 26 20.6	+0.1
	baz=250						
CHKT				*e*S	Sb	11 26 29.0	-0.1
	baz=250						
EYUL	Yuli	0.67	276	P	Pn	11 26 21.7	-0.4
	baz=272						
EYUL				*e*S	Sb	11 26 30.5	+0.8
	baz=272						
EGFH	Guangfu	0.69	305	*e*P	Pb	11 26 21.7	+0.6
	baz=312						
EGFH				*e*S	Sb	11 26 30.8	+0.6
	baz=312						
FULB	Fuli	0.70	264	P	Pb	11 26 21.4	+0.1
	baz=258						
FULB				*e*S	Sb	11 26 30.4	0.0
	baz=258						
YULB	Yu-li	0.70	280	P	Pb	11 26 21.7	+0.4
	baz=274						
YULB				*e*S	Sb	11 26 31.5	+1.1
	baz=274						
EHY	Hungye	0.70	289	P	Pb	11 26 21.8	+0.4
	baz=290						
EHY				*e*S	Sn	11 26 31.9	-0.9
	baz=290						
EDH	Donghe	0.75	246	P	Pb	11 26 22.3	+0.2
	baz=244						
EDH				*e*S	Sb	11 26 31.9	+0.1
	baz=244						
ESL	Shilin	0.78	314	P	Pb	11 26 22.6	+0.1
	baz=315						
ESL				*e*S	Sb	11 26 32.3	-0.3
	baz=315						
LDUT	Ludao	0.80	222	P	Pb	11 26 22.7	-0.3
	baz=221						
LDUT				*e*S	Sb	11 26 32.6	-0.8
	baz=221						
HWA	Hwalien	0.81	330	*e*P	Pn	11 26 23.6	-0.3
	baz=338						
TWD	Chiawan	0.90	333	*e*P	Pb	11 26 24.6	-0.1
	baz=334						
TWD				*e*S	Sb	11 26 35.9	-0.3
	baz=334						
LONT	Longtian	0.92	246	P	Pb	11 26 24.7	-0.4
	baz=243						
LONT				*e*S	Sb	11 26 35.9	-0.9
	baz=243						
ELDTW	Lidau	0.95	265	*i* P	Pb	11 26 25.3	-0.3
	baz=265						
ELDTW				*e*S	Sb	11 26 36.4	-1.4
	baz=265						
VWDT	VWDT	0.95	300	*e*P	Pb	11 26 25.4	-0.2
	baz=308						
NACB	Ninganchiao	0.98	335	P	Pb	11 26 25.5	-0.6
	baz=336						
NACB				*e*S	Sb	11 26 37.7	-0.9
	baz=336						
TWGBT	Beinan	1.00	243	P	Pb	11 26 26.0	-0.4
	baz=240						
TWGBT				*e*S	Sb	11 26 38.9	-0.3
	baz=240						
OWD	Renai	1.04	310	P	Pb	11 26 27.2	0.0
	baz=311						
OWD				*e*S	Sb	11 26 40.1	-0.4
	baz=311						
ETLH	Xiulin Townshi	1.06	331	P	Pn	11 26 27.2	-0.3
	baz=338						
ETLH				*e*S	Sb	11 26 39.5	-1.4
	baz=338						
CHGB	Renai	1.12	314	P	Pn	11 26 28.4	0.0
	baz=315						
CHGB				*e*S	Sb	11 26 41.9	-0.7
	baz=315						
WHF	Hehuan Shan	1.12	321	*e*P	Pn	11 26 28.3	-0.4
	baz=321						
WHF				*e*S	Sb	11 26 42.7	-0.3
	baz=321						
SSLB	Suanglung	1.12	297	P	Pb	11 26 28.5	0.0
	baz=305						
ALS	Alishan	1.16	282	P	Pb	11 26 29.8	+0.5
	baz=282						
ALS				*e*S	Sb	11 26 44.2	+0.2
	baz=282						
STYH	Taoyuan	1.17	265	*e*P	Pb	11 26 29.3	0.0
	baz=262						
STYH				*e*S	Sb	11 26 42.9	-1.1
	baz=262						
ENA	Nanau	1.18	346	*e*P	Pn	11 26 29.1	+0.1
	baz=347						
ENA				*e*S	Sb	11 26 43.8	-0.5
	baz=347						
EWUT	Wuta	1.19	348	*e*P	Pn	11 26 29.1	-0.1
	baz=342						
EWUT				*e*S	Sb	11 26 44.1	-0.4
	baz=342						
SMLT	Sun Moon Lake	1.21	300	*e*P	Pn	11 26 29.3	-0.3
	baz=307						
ECL	Taimali	1.21	236	*e*P	Pn	11 26 28.6	-0.9
	baz=245						
ECL				*e*S	Sn	11 26 42.4	-2.9
	baz=245						
FUSS	Fushou	1.21	323	P	Pb	11 26 30.0	-0.2
	baz=333						
FUSS				*e*S	Sb	11 26 44.6	-0.8
	baz=333						
TWT	Tachien	1.26	321	*e*P	Pb	11 26 31.1	+0.3
	baz=313						
TWT				*e*S	Sn	11 26 45.7	-1.0
	baz=313						
TYC	Yuchr	1.26	300	*e*P	Pb	11 26 30.9	+0.2
	baz=306						
TDCB	Techi	1.27	320	P	Pb	11 26 31.1	+0.1
	baz=313						
TDCB				*e*S	Sn	11 26 45.0	-1.9
	baz=313						
CHN5	Tsauling	1.29	284	*e*P	Pb	11 26 32.5	+1.0
	baz=291						

CHN5				eS	Sb	11 26 48.8	+1.1
	baz=291						
WCS	Beigang Elemen	1.30	307	eP	Pb	11 26 31.5	0.0
	baz=314						
WCS				eS	Sn	11 26 47.0	-0.4
	baz=314						
TPUB	Ta-pu	1.30	271	eP	Pb	11 26 31.9	+0.4
	baz=271						
TPUB				eS	Sb	11 26 48.7	+0.9
	baz=271						
NNS	Nan Shan	1.31	332	eP	Pn	11 26 31.3	+0.3
	baz=333						
NNS				eS	Sn	11 26 46.7	-1.3
	baz=333						
WTP	Ta-pu	1.32	269	eP	Pb	11 26 32.2	+0.3
	baz=262						
WTP				eS	Sb	11 26 48.9	+0.6
	baz=262						
SLGT	Liugui	1.32	258	eP	Pb	11 26 31.7	-0.1
	baz=254						
WJS	Zhushan	1.32	294	eP	Pb	11 26 33.1	+1.1
	baz=294						
TWC	Suao	1.34	352	eP	Pb	11 26 31.8	-0.3
	baz=353						
TWC				eS	Sn	11 26 48.4	-0.1
	baz=353						
SGST	Jiashian	1.36	262	eP	Pn	11 26 31.8	+0.3
	baz=262						
SGST				eS	Sb	11 26 50.6	+1.1
	baz=262						
NDS	Dongshan	1.38	347	eP	Pb	11 26 32.5	-0.4
	baz=348						
WNT	Mingjian	1.38	296	eP	Pb	11 26 35.0	+2.1
	baz=296						
CHN1	Nanshi	1.40	267	eP	Pb	11 26 33.9	+0.7
	baz=261						
CHN1				eS	Sb	11 26 51.9	+1.3
	baz=261						
NDT	Datong Townshi	1.41	340	eP	Pb	11 26 33.0	-0.3
	baz=340						
NDT				eS	Sn	11 26 50.2	+0.1
	baz=340						
SSD	Sandimen	1.41	248	eP	Pn	11 26 32.3	+0.1
	baz=242						
TSMG	Majia	1.41	246	eP	Pn	11 26 32.2	0.0
	baz=240						
WHP	Taichung City	1.42	315	eP	Pb	11 26 33.7	+0.1
	baz=321						
EAST	Anshuo	1.42	231	eP	Pn	11 26 31.8	-0.6
	baz=238						
ENTT	Nioudou	1.43	342	eP	Pn	11 26 32.8	+0.3
	baz=343						
ENTT				eS	Sn	11 26 50.7	+0.1
	baz=343						
SNST	Tainan City	1.43	268	eP	Pb	11 26 34.4	+0.8
	baz=267						
SNST				eS	Sb	11 26 52.6	+1.3
	baz=267						
TWK	Hsinying	1.43	270	eP	Pb	11 26 34.1	+0.3
	baz=269						
TWK				eS	Sb	11 26 53.4	+1.8
	baz=269						
WDLH	Douliu	1.44	287	eP	Pb	11 26 34.4	+0.5
	baz=286						
MASBT	Mashibuluo	1.46	243	eP	Pn	11 26 33.2	+0.2
	baz=238						
YOJ	Yonaguni jima	1.47	37	eP	Pn	11 26 33.0	-0.1
	baz=46						
YOJ				eS	Sn	11 26 51.3	-0.5
	baz=46						
YOJ	Yonaguni jima	1.47	37	P	Pn	11 26 33.7	+0.6
YOJ				S	Sn	11 26 51.9	+0.1
TWE	Neicheng	1.48	347	eP	Pn	11 26 33.5	+0.4
	baz=347						
YHNB	Yeheng	1.52	336	eP	Pn	11 26 34.2	+0.5
	baz=337						
YHNB				eS	Sn	11 26 52.3	-0.7
	baz=337						
NSK	Sanguang	1.53	336	eP	Pn	11 26 34.5	+0.5
	baz=336						
NSK				eS	Sn	11 26 52.2	-1.0
	baz=336						
SLIU	Shizi	1.56	228	eP	Pn	11 26 34.0	-0.3
	baz=227						
TWM1	Shoushan	1.56	253	eP	Pb	11 26 37.5	+1.5
	baz=253						
NWLT	Wulai	1.57	342	eP	Pn	11 26 34.8	+0.3
	baz=342						
TWQ1	Liyutan	1.58	313	eP	Pb	11 26 36.7	+0.5
	baz=313						
SCZT	Fangliau	1.59	236	eP	Pn	11 26 35.7	+0.9
	baz=238						
ICHU	Yijhu	1.63	273	eP	Pb	11 26 36.9	-0.2
	baz=273						
NSTT	Nanjuang	1.65	325	eP	Pb	11 26 37.4	-0.1
	baz=333						
NSTT				eS	Sb	11 26 57.4	-0.4
	baz=333						
LIOB	Emei	1.66	326	eP	Pb	11 26 37.9	+0.3
	baz=312						
WDJ	Dajia District	1.67	310	eP	Pb	11 26 37.8	0.0
	baz=310						
TIPB	Shuangxi	1.70	353	eP	Pb	11 26 37.6	-0.7
	baz=4.0						
TIPB				eS	Sn	11 26 58.2	+0.8
	baz=4.0						
NHDH	Xindian Distri	1.74	344	eP	Pb	11 26 38.1	-1.0
	baz=345						
TWA	Mucha	1.75	346	eP	Pn	11 26 37.9	+1.0
	baz=340						
HATJ	Hateruma jima	1.79	64	P	Pn	11 26 37.7	+0.2
HATJ				eS	Sn	11 26 58.9	-0.7
NWF	Wu-fen Shan	1.80	352	eP	Pb	11 26 39.2	-0.9
	baz=353						
IRIF	Iriomote-Funau	1.87	55	P	Pn	11 26 39.1	+0.6
IRIF				S	Sn	11 27 02.1	+0.6
YM01	YM01	1.91	347	eP	Pn	11 26 40.4	+1.2
	baz=334						
JKRS	Kuro-shima	2.04	62	P	Pn	11 26 41.6	+0.7
JIJ	Ishigaki jima	2.20	60	P	Pn	11 26 43.2	0.0
JIJ				eS	Sn	11 27 09.1	-0.7
JISG	Ishigakijimahi	2.45	57	P	Pn	11 26 46.5	0.0
JISG				eS	Sn	11 27 15.6	-0.2
JTJ	Tarama	2.78	60	eS	Sn	11 27 24.4	+0.3
JIRB	Irabujima	3.25	61	P	Pn	11 26 57.9	+0.4
JMJ2	Miyako jima3	3.34	63	P	Pn	11 26 59.5	+0.8

DJA 21 11:37:59.0±0.6, 7°S±4°×10°5E±°, h10^{km}, M4.1/7, mb4.4/1, MLv3.9/7, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CGJI	Cibinong	0.34	40	P	Pb	11 38 06.8	-0.5
SBJI	Serang	1.00	41	P	Pb	11 38 18.4	0.0
SBJI				S	Sb	11 38 32.3	+0.6
DBJI	Dramaga	1.31	76	P	Pn	11 38 22.8	-0.6
DBJI				S	Sb	11 38 40.6	-0.1
TNG	Tangerang	1.36	59	P	Pn	11 38 23.4	-0.7
CBJI	Citeko	1.45	72	P	Pn	11 38 25.2	0.0
BLSI	Bandar Lampung	1.52	352	P	Pn	11 38 26.0	-0.3
KASI	Kota Agung	1.66	324	P	Pn	11 38 27.8	-0.4
CNJI	Cibinong	1.70	105	P	Pn	11 38 27.2	-1.6
CMJI	Cimerak	3.09	107	P	Pn	11 38 47.7	-0.1
KPJI	Karang Pucung	3.46	98	P	Pn	11 38 54.7	+1.7
PCJI	Pacitan	5.81	103	P	Pn	11 39 25.2	-0.1

GUC 21 11:41:49.8±0.7, 32°.22S×70°.31W, h105^{km}±3^{km}, ML3.6, 1C-4D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA03	San Esteban	0.58	200	⇓iP	Pn	11 42 07.6	+0.7
VA03				eS	Sn	11 42 21.1	+1.4
VA03				IAML		11 42 22.3	
	comp=N,7µm,0.3s						
VA06	Catapilco	0.90	247	eP	Pn	11 42 10.2	+0.6
VA06				i S	Sn	11 42 25.9	+1.4
VA06				IAML		11 42 26.9	
	comp=N,2µm,0.3s						
ROCH	El Roble	0.96	218	⇓iP		11 42 11.4	
ROCH				⇓iP	Pn	11 42 11.3	+0.9
ROCH				eS	Sn	11 42 27.9	+1.9
ROCH				eS		11 42 28.0	
ROCH				IAML		11 42 29.8	
	comp=N,1µm,0.3s						
ROCH				IAML		11 42 33.3	
	comp=N,1µm,0.5s						
PEL	Peldehue	0.97	199	eP	Pn	11 42 11.1	+0.6
PEL				i S	Sn	11 42 27.7	+1.7
PEL				IAML		11 42 30.4	
	comp=N,920nm,0.2s						
FCH	Farellones	1.11	179	⇓iP	Pn	11 42 13.3	+1.2
FCH				eS	Sn	11 42 31.1	+2.1
FCH				IAML		11 42 35.7	
	comp=E,1µm,0.2s						
MT05	Renca	1.23	197	eP	Pn	11 42 14.4	+1.2
MT05				eS	Sn	11 42 33.3	+2.4
MT05				IAML		11 42 35.9	
	comp=N,2µm,0.3s						
MT02	Curacav	1.25	214	eP	Pn	11 42 14.2	+0.8
LMEL	Las Melosas	1.63	177	eP	Pn	11 42 19.3	+1.2
LMEL				IAML		11 42 48.9	
	comp=N,804nm,0.1s						
MT09	Talagante	1.66	200	eP	Pn	11 42 19.1	+0.7
MT09				IAML		11 42 47.4	
	comp=E,534nm,0.2s						
BO04	La Punta	1.78	188	i P	Pn	11 42 20.9	+1.0
BO04				i S	Sn	11 42 45.2	+2.3
BO04				IAML		11 42 46.9	
	comp=E,435nm,0.2s						
VA05	Santo Domingo	1.81	217	eP	Pn	11 42 21.6	+1.5
VA05				IAML		11 42 53.7	
	comp=E,882nm,0.4s						
MT01	Popeta	1.82	205	eP	Pn	11 42 21.0	+0.6
MT01				IAML		11 42 52.9	
	comp=N,478nm,0.2s						
CO06	Fray Jorge	1.91	323	i P	Pn	11 42 20.8	-0.7
CO06				eS	Sn	11 42 45.4	-0.2
CO06				IAML		11 42 54.1	
	comp=E,591nm,0.4s						
BO01	Tunca	2.26	196	eP	Pn	11 42 26.5	+0.5
BO01				eS	Sn	11 42 55.2	+1.5
CO05	La Serena	2.43	341	eP	Pn	11 42 26.4	-1.7
CO05				IAML		11 42 57.6	
	comp=N,802nm,0.4s						
BO02	Sierra Bellavi	2.60	189	⇑iP	Pn	11 42 31.3	+0.8
BO02				eS	Sn	11 43 03.6	+2.0
BO02				IAML		11 43 07.0	
	comp=N,259nm,0.6s						
GO05	Huala	3.10	205	eP	Pn	11 42 36.4	-0.6
VCA	Vinchina	3.92	28	eP	Pn	11 42 46.9	-1.3
AC04	Llanos de Chal	4.05	350	eP	Pn	11 42 48.5	-1.3
AC04				eS	Sn	11 43 32.7	-3.7
CYA	Choya	5.42	47	eP	Pn	11 43 03.8	-4.5
CYA				eS	Sn	11 44 01.2	-8.2

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*SOME **21** 11:44:44.6, 43°.87N×74°.42E, h10^{km}*

*NNC **21** 11:44:44.3±1.3, 43°.91N×74°.40E, h0^{km}, mb2.6, mpv2.5, Error ellipse: s-maj=13.3km s-min=7.4km az=6.0*

*KRNET **21** 11:44:45.4±0.1, 43°.74N×74°.49E, h11^{km}, mb1.9*

ISC 21 11:44:43.5±1.5, 43°.85N±0°.05×74°.38E±0°.03, h1^{km}±11^{km}, n21, σ0^s.64/39, 14C, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
USP	Ospenovka	0.58	171	⇑iP	Pg	11 44 54.8	+0.1
	baz=79						
USP				⇑iS	Sg	11 45 01.7	-0.5
	baz=79						
DGS	Degeres	1.18	120	eP	Pn	11 45 07.7	+0.5
	1.0nm,0.2s						
DGS				eS	Sn	11 45 25.0	+1.1
	2.2nm,0.4s						
DGS	Degeres	1.18	120	P	Pn	11 45 07.7	+0.5
	1.0nm,0.2s						
DGS				S	Sn	11 45 25.0	+1.1
	2.2nm,0.4s						
AAK	Ala-Archa	1.21	176	⇑eP	Pg	11 45 06.6	-0.1
	baz=80						
AAK				⇑iS	Sg	11 45 22.3	0.0
	baz=80						
TKM2	Tokmak 2	1.28	136	⇑iP	Pg	11 45 07.6	-0.4
	baz=35						
TKM2				⇑iS	Sg	11 45 23.6	-1.0
	baz=35						
MRKS	Merke	1.39	218	eP	Pn	11 45 10.4	+0.3
	1.2nm,0.2s						
MRKS				eS	Sn	11 45 29.5	+0.5
	1.8nm,0.3s						
KST	Kastek	1.41	124	eP	Pn	11 45 10.2	-0.1
	2.2nm,0.4s						
KST				eS	Sn	11 45 29.4	-0.2
	2.4nm,0.4s						
KST	Kastek	1.41	124	P	Pn	11 45 10.3	-0.1
	2.2nm,0.4s						
KST				S	Sn	11 45 29.4	-0.2
	2.4nm,0.4s						
KUU	Kurty	1.42	87	eP	Pn	11 45 09.6	-0.8
	0.8nm,0.2s						
KUU				eS	Sb	11 45 28.5	-0.9
	1.8nm,0.3s						
KUU	Kurty	1.42	87	P	Pn	11 45 09.6	-0.8
	0.8nm,0.2s						
KUU				S	Sb	11 45 28.5	-0.9
	1.8nm,0.3s						
UCH	Uchtor	1.62	176	⇑iP	Pn	11 45 14.0	+0.4
	baz=79						
UCH				⇑iS	Sn	11 45 35.0	-0.3
	baz=79						
MTBS	Maitube	1.65	115	eP	Pg	11 45 15.5	+0.3
	0.7nm,0.1s						
MTBS				eS	Sg	11 45 38.2	+1.6
	4.2nm,0.3s						
KTBS	Karatobe	1.67	94	eP	Pb	11 45 15.3	+0.1
	2.1nm,0.3s						
KTBS				eS	Sg	11 45 38.3	+1.1
	7.0nm,0.5s						
KTBS	Karatobe	1.67	94	P	Pb	11 45 15.3	+0.1
	2.1nm,0.3s						
KTBS				S	Sg	11 45 38.3	+1.1
	7.0nm,0.5s						
BOOM	Boomskoye usch	1.77	139	⇑eP	Pb	11 45 16.6	-0.3
	baz=39						
BOOM				⇑iS	Sb	11 45 39.0	-0.6
	baz=39						
AML	Almayashu	1.79	197	⇑iP	Pb	11 45 17.4	+0.2
	baz=0.0						
AML				⇑iS	Sg	11 45 41.5	+0.7
	baz=0.0						
TNSS	Tian-Shan	2.04	112	eP	Pb	11 45 21.6	0.0
	1.0nm,0.3s						
TNSS				eS	Sg	11 45 48.8	-0.1
	2.2nm,0.4s						
TNSS	Tian-Shan	2.04	112	Pg	Pb	11 45 21.6	0.0
	1.0nm,0.3s						
TNSS				Lg	Lg	11 45 48.8	
	2.2nm,0.4s						
KOTS	Kotyrbulak	2.08	106	eP	Pb	11 45 22.3	+0.2
	1.1nm,0.2s						
KOTS				eS	Sg	11 45 50.1	-0.1
	3.4nm,0.5s						
KOTS	Kotyrbulak	2.08	106	Pg	Pb	11 45 22.3	+0.2
	1.1nm,0.2s						
KOTS				Lg	Lg	11 45 50.1	
	3.4nm,0.5s						
KK09	Karatay Array	2.92	257	⇑Pg	Pg	11 45 39.1	-0.3
	0.5nm,0.7s,baz=72,slow=15						
KK09				⇑Lg	Lg	11 46 14.6	
	0.6nm,0.5s,baz=74,slow=27						

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*MAN **21** 11:50:47.3, 5°.92N×126°.31E, h49^{km}, mb4.6, ML3.5, MS3.3*

*NEIC **21** 11:50:48.9±0.9, 6°.00N±0°.09×126°.05E±0°.08, h103^{km}±9^{km}, mb4.0/12, Error ellipse: s-maj=15.8km s-min=6.0km az=139.0*

*IDC **21** 11:50:49.0±1.1, 5°.83N×126°.01E, h110^{km}±11^{km}, mb3.6/9, mb1 3.8/9, mb1mx3.4/53, mbtmp4.0/9, MS2.8/1, Ms1 2.8/1, ms1mx2.4/37, Error ellipse: s-maj=99.4km s-min=12.9km az=70.0*

ISC 21 11:50:48.2±0.7, 5°.90N±0°.07×126°.2E±0°.2, h100^{km}, n29, σ1^s.08/30, mb4.0/14, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	1.30	333	P	Pn	11 51 11.8	-0.2
	143nm,0.3s,baz=174,slow=2.7,SNR=7.6						
DAV				S	Sn	11 51 32.7	+2.7
	84nm,0.3s,baz=78,slow=21,SNR=4.0						
DAV	Davao City (W)	1.30	333		Pn	11 51 11.3	-0.7
TOLI2	Tolitoli	7.18	229	Pn	Pn	11 52 30.6	0.0
MTN	Manton Dam	19.27	165	P	P	11 55 06.5	+1.4
MTN				IAmb	IAmb	11 55 16.6	
	comp=Z,12nm,1.1s						
KNRA	Kununurra	21.59	173	P	P	11 55 30.4	+0.3
FITZ	Fitzroy Crossi	23.86	181	P	P	11 55 53.0	+0.5
	comp=Z,0.9nm,0.4s,baz=354,slow=13,SNR=2.2						
WB0	Warramunga Arr	26.76	163	P	P	11 56 20.1	+1.3
WB0				IAmb	IAmb	11 56 21.0	
	comp=Z,2.8nm,0.7s						
WRAB	Tennant Creek	26.91	163	P	P	11 56 21.9	+1.8
WRAB				IAmb	IAmb	11 56 46.2	
	comp=Z,5.7nm,1.2s						
WRA	Warramunga Arr	26.91	163	P	P	11 56 19.8	-0.3
	comp=Z,1.7nm,0.5s,baz=339,slow=10,SNR=25						
WRA	Warramunga Arr	26.91	163	P	P	11 56 20.2	0.0
WB2	Warramunga Arr	26.92	163	P	P	11 56 21.9	+1.7
WB2				IAmb	IAmb	11 56 22.2	
	comp=Z,4.1nm,1.1s						
WR0	Warramunga Arr	26.99	162	P	P	11 56 22.6	+1.7
WR0				IAmb	IAmb	11 56 29.3	
	comp=Z,5.3nm,1.1s						
AS31	Alice Springs	30.34	166	P	P	11 56 50.3	-0.3
ASAR	Alice Springs	30.34	166	P	P	11 56 49.7	-0.9
	comp=Z,0.4nm,0.5s,baz=343,slow=7.4,SNR=15						
ASAR				PcP	PcP	11 59 48.7	+0.1
	comp=Z,0.3nm,0.4s,baz=344,slow=2.5,SNR=2.8						
ASAR	Alice Springs	30.34	166	P	P	11 56 51.2	+0.6
KSRS	Korea Array	31.44	3	LR	LR	12 09 47.8	
	comp=Z,19nm,21.6s,baz=260,slow=36						
BBOO	Buckleboo	39.63	167	P	P	11 58 10.8	+0.5
STKA	Stephens Creek	40.35	160	P	P	11 58 15.9	-0.3
	comp=Z,2.0nm,0.5s,baz=329,slow=8.4,SNR=8.6						
STKA	Stephens Creek	40.35	160	P	P	11 58 16.6	+0.4
MK31	Makanchi Array	55.47	325	P	P	12 00 11.4	-1.2
MK31				IAmb	IAmb	12 00 36.7	
	comp=Z,2.1nm,1.4s						
MKAR	Makanchi Array	55.47	325	P	P	12 00 11.1	-1.6
	comp=Z,0.3nm,0.5s,baz=112,slow=7.2,SNR=5.7						
MKAR	Makanchi Array	55.47	325	P	P	12 00 11.4	-1.2
KURBB	Kurchatov Arra	59.62	327	P	P	12 00 41.4	-0.2
	comp=Z,0.4nm,0.7s,baz=125,slow=7.2,SNR=4.1						
NRIK	Noril'sk	68.20	346	P	P	12 01 38.4	+0.9
	comp=Z,1.7nm,0.5s,baz=123,slow=6.2,SNR=2.1						
ABKAR	Akbulak array	70.13	320	P	P	12 01 49.3	-0.5
CASY	Casey	72.90	187	P	P	12 02 07.0	+1.0
ARCES	ARCESS Array B	88.23	340	P	P	12 03 27.0	-0.9
	comp=Z,3.4nm,0.9s,baz=90,slow=6.3,SNR=2.2						
FINES	FINESS Array B	89.66	332	P	P	12 03 33.9	-0.8
	comp=Z,2.8nm,1.0s,baz=64,slow=6.3,SNR=1.3						
TORD	Torodi Ar. Bea	121.69	289	PKP	PKPdf	12 09 31.6	+0.1
	comp=Z,0.2nm,0.3s,baz=59,slow=1.5,SNR=1.9						

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*SKO **21** 11:51:51.0, 41°.14N×20°.16E, h0^{km}*

TIR 21 11:51:48.9, 41°.11N×20°.22E, h3^{km}±1^{km}, Md2.5, Ml2.3, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.36	313	ePg	Pg	11 51 56.4	+0.6
TIR	Tirane	0.36	313	P	Pg	11 51 56.6	+0.7
	baz=313						
TIR				S	Sb	11 52 02.5	-1.5
	baz=313						
TIR				AMP			
	comp=N,1.5nm,0.3s,baz=313						
OHR	Ohrid	0.44	89	i Pg	Pb	11 51 58.8	-0.6
OHR				eSg	Sb	11 52 06.3	-0.1
OHR				eLg	Lg	11 52 06.4	
	comp=N,252nm,0.3s						
OHR				eLg	Lg	11 52 06.5	
	comp=E,248nm,0.5s						
PHP	Peshkopia	0.60	16	P	Pb	11 52 01.4	-0.8
	baz=16						
PHP				S	Sb	11 52 10.6	-0.5
	baz=16						
PHP				AMP			
	comp=N,1.0nm,0.3s,baz=16						
FNA	Florina	0.94	110	i Pg	Pb	11 52 07.6	-0.2
FNA				eSg	Sn	11 52 24.2	+1.3
FNA	Florina	0.94	110	P	Pb	11 52 07.8	0.0
	baz=109						
FNA				S	Sn	11 52 21.9	-1.0
	baz=109						
SKO	Skopje	1.26	46	i Pg	Pn	11 52 16.1	+2.6
SKO				eSg	Sn	11 52 31.4	+0.4
STIP	Stip	1.60	68	i Pg	Pg	11 52 23.8	+4.3
STIP				eSg	Sg	11 52 47.9	+7.7
GRG	Griva	1.66	94	i Pg	Pg	11 52 21.1	+0.4

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*IDC **21** 11:52:37.0±1.1, 46°.42N×12°.79E, h0^{km}, mb3.4/6, mb1 3.6/9, mb1mx3.4/48, mbtmp3.5/9, ML3.5/3, Error ellipse: s-maj=16.1km s-min=10.7km az=155.0*

*ROM **21** 11:52:37.7±0.1, 46°.436N±0°.005×12°.739E±0°.006, h6^{km}, ML3.4/43, Error ellipse: s-maj=0.7km s-min=0.3km az=343.0*

*VIE **21** 11:52:37.5±0.2, 46°.45N×12°.72E, h6^{km}±3^{km}, mb3.3/20, ml3.7/20, Error ellipse: s-maj=1.9km s-min=0.9km az=20.0 7 km WNW of Ampezzo*

*PRU **21** 11:52:39.4±0.0, 46°.47N×12°.78E, h6^{km}*

*LDG **21** 11:52:39.9±0.1, 46°.43N×12°.90E, h6^{km}, Ml3.3/31, Error ellipse: s-maj=3.7km s-min=2.4km az=160.0*

*BGR **21** 11:52:41.2±0.6, 46°.52N×12°.80E, h10^{km}, ML3.4/10, Error ellipse: s-maj=13.3km s-min=6.7km az=175.0*

*STR **21** 11:52:45.0±1.0, 47°N±5°×1°2E±°, h10^{km}, MLv3.6/7, preliminary*

*BNS **21** 11:52:45.8±0.3, 46°.64N×12°.43E, h10^{km}, ML3.3*

ISC 21 11:52:38.2±0.7, 46°.44N±0°.01×12°.74E±0°.01, h12^{km}±4^{km}, n285, σ1^s.72/400, mb3.5/6, 25C-26D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CSMI	Casera Mimoias	0.09	321	⇓ePg	Pg	11 52 40.2	-1.0
CSMI				eSg	Sg	11 52 41.9	-1.4
CLUD	Cludinico	0.10	80	⇑ePg	Pg	11 52 40.6	-0.5
CLUD				eSg	Sg	11 52 42.7	-0.6
CLUD	Cludinico	0.10	80	⇑P	Pg	11 52 40.6	-0.5
CLUD				S	Sg	11 52 42.6	-0.6
CLUD				AML	AML		
	comp=N,32350µm,0.5s						
CLUD				AML	AML		
	comp=E,34600µm,0.7s						
FVI	Forni Avoltri	0.16	11	⇓P	Pg	11 52 41.5	-0.6
FVI				S	Sg	11 52 44.0	-0.6
FVI				AML	AML		
FVI				AML	AML		
	comp=N,68450µm,0.4s						
STAL	STALIGIAL	0.18	186	⇑P	Pg	11 52 41.7	-0.6
STAL				S	Sg	11 52 44.9	-0.1
STAL				AML	AML		
	comp=E,40650µm,1.2s						
STAL				AML	AML		
	comp=E,32900µm,0.1s						
STAL				AML	AML		
	comp=N,73550µm,0.3s						
STAL				AML	AML		
	comp=N,55750µm,0.2s						
FUSE	Fusea	0.18	98	⇑ePg	Pg	11 52 42.1	-0.3
FUSE				eSg	Sg	11 52 45.4	+0.2
ZOU	Zoufplan	0.20	54	⇓ePg	Pg	11 52 42.7	-0.1
ZOU				eSg	Sg	11 52 45.9	0.0
ZOU	Zoufplan	0.20	54	P	Pg	11 52 42.5	-0.3
ZOU				S	Sg	11 52 45.9	0.0
ZOU				AML	AML		
	comp=N,14700µm,0.4s						
ZOU				AML	AML		
	comp=E,15100µm,0.6s						
CIMO	Cimolais	0.24	238	⇑ePg	Pg	11 52 42.2	-1.1
CIMO	Cimolais	0.24	238	P	Pg	11 52 42.2	-1.1
CIMO				S	Sg	11 52 46.1	-0.7
CIMO				AML	AML		
	comp=N,4025µm,1.3s						
CIMO				AML	AML		
	comp=E,2870µm,0.8s						
MPRI	Monte Prat	0.26	138	⇓ePg	Pg	11 52 43.3	-0.4
MPRI	Monte Prat	0.26	138	⇓P	Pg	11 52 43.3	-0.4
MPRI				S	Sg	11 52 48.1	+0.7
MPRI				AML	AML		
	comp=N,29250µm,0.4s						
MPRI				AML	AML		
	comp=E,15600µm,0.4s						

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BOO   Bordano          0.28 115⇓ePg   Pg    11 52 43.6 -0.3
BOO                             eSg   Sg    11 52 48.3 +0.5
MLNI  Malnisio         0.30 197⇑ePg   Pg    11 52 43.8 -0.7
PLRO  Paularo          0.30  69⇑ePg   Pg    11 52 44.3 -0.2
PLRO                            eSg   Sg    11 52 49.4 +0.7
CSO   Casso            0.33 240⇑ePg   Pg    11 52 43.8 -1.1
CSO                             eSg   Sg    11 52 48.6 -0.8
ABTA  Abfaltersbach    0.34 333 ePg   Pg    11 52 44.8 -0.5
      comp=E,330nm,0.1s,SNR=471
ABTA                            i Sg  Sg    11 52 49.2 -0.7
      comp=E,455nm,0.1s
AFL   Alpe Faloria     0.40 283⇑ePg   Pg    11 52 45.5 -0.7
AFL                             eSg   Sg    11 52 51.1 -0.4
BAD   Bernadia         0.41 120⇓ePg   Pg    11 52 45.9 -0.4
BAD                             eSg   Sb    11 52 52.8 -0.8
VINO  Villanova        0.42 116⇓ePg   Pg    11 52 46.1 -0.5
VINO                            eSg   Sg    11 52 52.7 +0.6
VINO  Villanova        0.42 116 ⇓P    Pg    11 52 46.0 -0.5
VINO                             S    Sg    11 52 52.8 +0.6
VINO                             AML  AML
      comp=N,6570µm,1.5s
VINO                             AML  AML
      comp=E,6085µm,0.2s
PTCC  Patocco-Chiusa   0.43  94 ⇓P    Pg    11 52 46.5 -0.3
PTCC                             S    Sb    11 52 54.0 -0.3
PTCC                             AML  AML
      comp=N,12400µm,1.3s
PTCC                             AML  AML
      comp=E,11550µm,0.6s
POLC  Polcenigo        0.44 202  P    Pg    11 52 46.7 -0.3
POLC                             S    Sb    11 52 54.5 -0.1
POLC                             AML  AML
      comp=E,14750µm,0.6s
POLC                             AML  AML
      comp=N,9690µm,0.7s
CAE   Caneva           0.48 206 ePg   Pg    11 52 46.8 -0.9
AGOR  Agordo           0.50 252 ePg   Pg    11 52 47.5 -0.6
AGOR  Agordo           0.50 252  P    Pg    11 52 47.9 -0.2
AGOR                             AML  AML
      comp=N,3005µm,0.4s
AGOR                             AML  AML
      comp=E,2615µm,0.4s
AGOR                             AML  AML
      comp=N,3000µm,0.4s
COLI  Coloredo         0.54 124 ePg   Pg    11 52 48.6 -0.2
ACOM  Acomizza, Ital   0.55  78⇓ePg   Pg    11 52 49.0  0.0
ACOM                            eSg   Sb    11 52 57.2 -0.6
ACOM  Acomizza, Ital   0.55  78 ⇓P    Pg    11 52 48.8 -0.1
ACOM                             S    Sb    11 52 57.3 -0.6
ACOM                             AML  AML
      comp=E,22050µm,0.3s
ACOM                             AML  AML
      comp=N,19400µm,0.2s
LSR   Lussari          0.55  86 ePg   Pg    11 52 48.6 -0.3
FAU   Forcella Aurin   0.56 249 ePg   Pg    11 52 48.3 -1.0
ROBS  Robic            0.57 110⇓iPg   Pg    11 52 48.5 -0.8
ROBS                            i Sg  Sg    11 52 57.2 +0.4
ROBS                             IAML       11 53 00.4
      comp=Z,288nm,0.1s
PRED  Cave del Predi   0.57  89⇓ePg   Pg    11 52 48.9 -0.5
PRED                            eSg   Sb    11 52 58.5 +0.1
TLI   Talmassons       0.58 154 ePg   Pg    11 52 49.2 -0.2
VARN  Col Varnada, M   0.63 225 ePg   Pg    11 52 49.9 -0.5
VARN  Col Varnada, M   0.63 225  P    Pg    11 52 48.8 -1.6
VARN                             AML  AML
      comp=E,3350µm,0.7s
VARN                             AML  AML
      comp=N,2490µm,1.5s
MYKA  Terra Mystica    0.65  73 ePg   Pg    11 52 50.4 -0.5
      comp=N,76nm,0.2s,SNR=35
MYKA                            eSg   Sg    11 52 59.7 +0.2
      comp=N,355nm,0.2s
RISI  Rein             0.68 319 ⇓P    Pg    11 52 50.9 -0.6
RISI                             AML  AML
      comp=E,4685µm,0.6s
RISI                             AML  AML
      comp=N,4830µm,0.4s
DRE   Drenchia         0.68 113 ePg   Pg    11 52 51.1 -0.4
ED06  Collalto TV      0.69 212 ePg   Pg    11 52 50.8 -0.8
CADS  Cadrg            0.72 107 i Pg  Pg    11 52 51.2 -1.0
CADS                            i Sg  Sb    11 53 02.8 +0.1
CADS                             IAML       11 53 06.6
      comp=Z,782nm,0.2s
BRES  Bressanone       0.74 291  P    Pg    11 52 51.6 -1.0
BRES                             AML  AML
      comp=E,1324µm,0.9s
BRES                             AML  AML
      comp=N,1506µm,1.1s
BRES                             AML  AML
      comp=N,1509µm,1.1s
BRES                             AML  AML
      comp=E,1326µm,0.9s
KBA   Koelnbreinsper   0.76  33 ePg   Pg    11 52 52.6 -0.5
      comp=E,30nm,0.1s,SNR=30
KBA                             eSg   Sg    11 53 02.7 -0.4
      comp=E,463nm,0.3s
KBA   Koelnbreinsper   0.76  33 ePg   Pg    11 52 52.7 -0.4
KBA                             eSg   Sg    11 53 02.8 -0.3
MTLO  Montello         0.77 216 ePg   Pg    11 52 52.7 -0.4
CTI   Castel Tesino    0.85 243  P    Pg    11 52 54.3 -0.3
CTI                              S    Sb    11 53 06.8 +0.4
CTI                              AML  AML
      comp=N,3095µm,0.9s
CTI                              AML  AML
      comp=E,2410µm,1.4s
CGRP  Cima Grappa      0.86 230 ePg   Pg    11 52 53.9 -0.9
CGRP  Cima Grappa      0.86 230  P    Pg    11 52 55.1 +0.3
CGRP                             AML  AML
      comp=N,1600µm,0.6s
CGRP                             AML  AML
      comp=E,2440µm,0.6s
GORS  Gorjuse          0.88  98 i Pg  Pg    11 52 54.1 -1.1
GORS                            i Sg  Sb    11 53 08.0 +0.7
GORS                             IAML       11 53 12.9
      comp=Z,358nm,0.2s
VOJS  Vojsko           0.89 117 ePg   Pg    11 52 54.2 -1.3
VOJS                            eSg   Sn    11 53 08.8 -0.9
VOJS                             IAML       11 53 09.6
      comp=Z,456nm,0.2s
KOSI  Kohlern          0.94 272  P    Pg    11 52 55.9 -0.5
KOSI                             S    Sg    11 53 08.7 +0.1
KOSI                             AML  AML
      comp=E,1375µm,0.5s
KOSI                             AML  AML
      comp=N,1173µm,0.9s
ABSI  Aberstueckl      1.02 287  P    Pg    11 52 56.8 -1.1
ABSI                             AML  AML
      comp=E,2110µm,0.6s
ABSI                             AML  AML
      comp=N,2095µm,0.8s
ROSI  Rosskopf         1.03 299 ⇓P    Pg    11 52 57.3 -0.9
ROSI                             AML  AML
      comp=E,1410µm,0.9s
ROSI                             AML  AML
      comp=N,1480µm,1.2s
APPI  Appiano          1.04 273  P    Pg    11 52 57.4 -0.9
APPI                             S    Sg    11 53 10.4 -1.5
APPI                             AML  AML
      comp=E,1160µm,0.3s
APPI                             AML  AML
      comp=N,1108µm,0.5s
APPI                             AML  AML
      comp=N,1107µm,0.5s
JAVS  Javornik         1.07 120 i Pg  Pg    11 52 57.3 -1.6
JAVS                            i           11 52 60.0
JAVS                            i Sg  Sb    11 53 13.2 +0.4
JAVS                            i           11 53 14.1
JAVS                             IAML       11 53 20.3
      comp=Z,541nm,0.3s
CRNS  Crni Vrh         1.12 108 i Pg  Pb    11 52 58.4 -1.1
CRNS                            i Sg  Sn    11 53 16.9 +1.8
CRNS                             IAML       11 53 20.7
      comp=Z,1µm,0.4s
WTTA  Wattenberg       1.12 318 ePg   Pg    11 52 59.2 -0.6
      comp=Z,254nm,0.2s,SNR=74
WTTA                            eSg   Sg    11 53 14.0 -0.3
      comp=Z,231nm,0.4s
WTTA  Wattenberg       1.12 318 ⇓P    Pg    11 52 59.2 -0.6
WTTA                             AML  AML
      comp=E,973µm,0.6s
WTTA                             AML  AML
      comp=N,1120µm,0.8s
WTTA  Wattenberg       1.12 318 ePg   Pg    11 52 59.2 -0.6
MOZS  Mozjanca         1.19  96 i Pg  Pb    11 53 00.3 -0.4
MOZS                            eSg   Sn    11 53 18.6 +1.6
MOZS                             IAML       11 53 23.2
      comp=Z,353nm,0.3s
WATA  Walderalm        1.20 319 ePg   Pb    11 53 00.6 -0.4
      comp=Z,132nm,0.2s,SNR=70
WATA                             Sg   Sb    11 53 15.8 -0.7
      comp=Z,137nm,0.3s
DOSS  Dosso del Somm   1.21 243  P    Pb    11 53 01.0 -0.3
DOSS                             AML  AML
      comp=N,2100µm,0.7s
DOSS                             AML  AML
      comp=E,2110µm,0.7s
DOSS                             AML  AML
      comp=N,2975µm,0.5s
DOSS                             AML  AML
      comp=E,2860µm,0.5s
OBKA  Obir             1.25  86 ePg   Pn    11 53 01.5 -0.2
      comp=E,101nm,0.3s,SNR=34
OBKA                            eSg   Sn    11 53 19.7 +1.2
      comp=E,618nm,0.5s
OBKA  Obir             1.25  86 ePn   Pn    11 53 01.5 -0.2
SKDS  Skadanscina      1.26 135 i Pg  Pn    11 53 00.7 -1.0
SKDS                            i           11 53 02.7
SKDS                            e           11 53 21.0
SKDS                             IAML       11 53 23.1
      comp=Z,364nm,0.1s
GAGG  Gaggia           1.28 255  P    Pn    11 53 02.0 -0.2
GAGG                             AML  AML
      comp=E,1330µm,1.1s
GAGG                             AML  AML
      comp=N,1335µm,0.9s
GAGG                             AML  AML
      comp=E,1275µm,0.9s
GAGG                             AML  AML
      comp=N,1295µm,1.1s
GBAS  Gorenja Brezov   1.29 112 i Pn  Pn    11 53 01.6 -0.5
GBAS                            i Sn  Sn    11 53 20.4 +1.1
GBAS                            i           11 53 22.4
GBAS                             IAML       11 53 23.6
      comp=Z,954nm,0.3s
LJU   Ljubljana        1.30 107 ePn   Pg    11 53 03.2 -0.1
LJU   Ljubljana        1.30 107  P    Pn    11 53 02.1 -0.2
LJU                              AML  AML
      comp=N,42150µm,1.3s
LJU                              AML  AML
      comp=E,31950µm,0.5s
LJU   Ljubljana        1.30 107 i Pg  Pn    11 53 02.0 -0.2
LJU                             i           11 53 04.0
LJU                             i Sg  Sg    11 53 21.6 +1.4
LJU                              IAML       11 53 23.9
      comp=Z,804nm,0.3s
SQTA  Sankt Quirin     1.31 307 ePg   Pn    11 53 02.2 -0.3
      comp=Z,118nm,0.4s,SNR=62
SQTA                             Sg   Sb    11 53 20.1 +0.4
      comp=Z,255nm,0.4s
TEOL  Teolo            1.31 215  P    Pb    11 53 03.1 +0.3
TEOL                             S    Sg    11 53 21.7 +1.3
TEOL                             AML  AML
      comp=E,12475µm,0.9s
TEOL                             AML  AML
      comp=N,11400µm,0.7s
TEOL                             AML  AML
      comp=E,12470µm,0.9s
CEY   Cerknica         1.37 120 ePn   Pg    11 53 04.5  0.0
ROVR  Rover Verones    1.40 236  P    Pb    11 53 04.5  0.0
ROVR                             S    Sg    11 53 24.5 +1.0
ROVR                             AML  AML
      comp=E,1510µm,1.1s
ROVR                             AML  AML
      comp=N,939µm,0.9s
ROVR                             AML  AML
      comp=N,938µm,0.9s
ROVR                             AML  AML
      comp=N,2345µm,0.9s
ROVR                             AML  AML
      comp=E,1505µm,1.1s
ROVR                             AML  AML
      comp=E,590µm,1.4s
VNDS  Vrh nad Dolski   1.40 103 i Pg  Pn    11 53 03.6 -0.1
VNDS                            i Sg  Sn    11 53 22.5 +0.3
VNDS                            i           11 53 24.8
VNDS                             IAML       11 53 27.5
      comp=Z,599nm,0.4s
MOTA  Moosalm          1.44 310 ePg   Pn    11 53 04.5 +0.2
      comp=Z,87nm,0.3s,SNR=42
MOTA                             Sg   Sg    11 53 24.7 +0.1
      comp=Z,888nm,0.9s
FETA  Feichten         1.50 294 ePg   Pn    11 53 05.7 +0.5
      comp=Z,42nm,0.3s,SNR=22
FETA                            eSn   Sn    11 53 24.7  0.0
      comp=Z,189nm,0.6s
MOSI  Grossmontoni     1.52 277 ⇓P    Pn    11 53 06.1 +0.6
MOSI                             S    Sg    11 53 26.9 -0.3
MOSI                             AML  AML
      comp=N,3905µm,0.9s
MOSI                             AML  AML
      comp=E,2040µm,0.8s
PART  Garmisch-Parte   1.54 314 ePn   Pb    11 53 06.4 -0.2
ZUGS  Zugspitze, Sch   1.55 310 ePn   Pb    11 53 06.8 -0.2
MABI  Malga Bissina    1.59 257  P    Pb    11 53 07.3 -0.3
MABI                             AML  AML
      comp=E,645µm,0.6s
MABI                             AML  AML
      comp=N,748µm,1.4s
SOKA  Soboth           1.60  81  Pg   Pb    11 53 07.6 -0.2
      comp=N,26nm,0.2s,SNR=26
SOKA                            eSg   Sg    11 53 30.1 +0.3
      comp=N,184nm,0.6s
MAGA  Magasa           1.61 246  P    Pb    11 53 07.9 -0.1
MAGA                             AML  AML
      comp=N,2580µm,1.2s
MAGA                             AML  AML
      comp=E,6075µm,0.5s
BRMO  Bormio           1.63 272  P    Pb    11 53 08.0 -0.4
BRMO                             S    Sb    11 53 29.3 +0.3
BRMO                             AML  AML
      comp=N,530µm,0.9s
BRMO                             AML  AML
      comp=E,550µm,0.8s
RIY   Rijeka           1.65 132 ePn   Pb    11 53 08.5 -0.1
RIY   Rijeka           1.65 132 ePn   Pb    11 53 08.3 -0.3
RIY                              Sn   Sg    11 53 31.8 +0.4
PERS  Pernice          1.66  82 i Pn  Pb    11 53 08.4 -0.3
PERS                             IAML       11 53 36.6
      comp=Z,277nm,0.3s
BRJN  Brijuni          1.69 155 ePn   Pn    11 53 08.4 +0.9
BRJN                             Sn   Sg    11 53 32.3 -0.3
GBRS  Gornja Briga     1.71 121 i Pn  Pb    11 53 09.6  0.0
GBRS                            i Sn  Sg    11 53 33.1  0.0
GBRS                             IAML       11 53 35.5
      comp=Z,745nm,0.2s
RETA  Reutte           1.71 309 ePn   Pb    11 53 09.0 -0.6
      comp=Z,1.4nm,0.3s,SNR=97
RETA                            eSg   Sg    11 53 33.8 +0.5
      comp=Z,98nm,0.3s
SMRN  Sveta Marina     1.72 144 ePn   Pn    11 53 08.9 +0.9
SMRN                             Sn   Sb    11 53 32.0 +0.7
MOA   Molln            1.75  36 ePg   Pg    11 53 11.1 -0.8
      comp=Z,67nm,0.3s,SNR=27
MOA                              Sg   Sg    11 53 35.0 +0.3
      comp=Z,310nm,0.5s
MOA   Molln            1.75  36 ePn   Pg    11 53 11.1 -0.8
BERNI Berninapass      1.88 270  P    Pb    11 53 12.2 -0.5
BERNI                            AML  AML
      comp=N,385µm,0.9s
BERNI                            AML  AML
      comp=E,419µm,0.9s
OBER  Oberstdorf       1.93 301 ePn   Pb    11 53 13.8 +0.3
OBER                            eSg   Sg    11 53 42.3 +1.9
BOJS  Bojanci          1.99 117  P    Pb    11 53 13.2 -1.2
BOJS                             AML  AML
      comp=E,4830µm,0.3s
BOJS                             AML  AML
      comp=N,6515µm,0.4s
BOJS  Bojanci          1.99 117  IAML       11 53 44.8
      comp=Z,295nm,0.2s
BOJS  Bojanci          1.99 117 i Pn  Pb    11 53 13.4 -0.9
BOJS  Bojanci          1.99 117 eSn   Sb    11 53 39.4 +0.4
CRES  Cresnjev         1.99 107 ePn   Pb    11 53 13.1 -1.3
CRES  Cresnjev         1.99 107 i Pn  Pn    11 53 13.0 +1.3
CRES                            eSn   Sb    11 53 39.3 +0.2
CRES                             IAML       11 53 43.5
      comp=Z,136nm,0.2s
FUR   Furstenfeldbru   1.99 331 ePn   Pb    11 53 14.3 -0.1
DAVOX Davos/Dischmat   2.00 281  Pg   Pb    11 53 14.5 -0.1
      comp=Z,25nm,0.3s,baz=113,slow=13,SNR=125
DAVOX                            Lg   Lg    11 53 41.5
      comp=Z,30nm,0.3s,baz=67,slow=13,SNR=12
DAVOX Davos/Dischmat   2.00 281  P    Pb    11 53 14.3 -0.3
OZLJ  Ozalj            2.07 112 ePn   Pb    11 53 14.6 -1.2
ARSA  Arzberg          2.08  66 ePn   Pb    11 53 14.8 -1.2
      comp=Z,34nm,0.3s,SNR=24
ARSA                             Sn   Sb    11 53 42.4 +0.7
      comp=Z,76nm,0.5s
ARSA  Arzberg          2.08  66  P    Pb    11 53 14.7 -1.2
ARSA                             AML  AML
      comp=N,222µm,0.6s
ARSA                             AML  AML
      comp=E,265µm,1.2s
ARSA  Arzberg          2.08  66 ePn   Pb    11 53 14.7 -1.2
DAVA  Damuels          2.13 294  Pg   Pb    11 53 17.4 +0.4
      comp=E,67nm,0.3s,SNR=22
DAVA                            eSg   Sg    11 53 46.6 -0.2
      comp=E,92nm,0.3s
DAVA  Damuels          2.13 294 ePn   Pb    11 53 17.4 +0.4
UBR   Ueberruh         2.18 306 ePn   Pb    11 53 17.3 -0.4
MDI   Monti di Nese    2.21 254  P    Pn    11 53 16.2 +1.5
MDI                              AML  AML
      comp=N,412µm,1.0s
MDI                              AML  AML
      comp=E,405µm,1.2s
RABC  Rab              2.22 139 ePn   Pn    11 53 15.8 +1.0
PTJ   Puntijarka       2.31 102 ePn   Pn    11 53 17.2 +1.0
LOBO  Lobor            2.33  96 ePn   Pn    11 53 17.9 +1.5
ZAG   Zagreb           2.34 104 ePn   Pb    11 53 20.4  0.0
ZAG   Zagreb           2.34 104 ePn   Pn    11 53 18.2 +1.6
TUE   Stuetta          2.34 272  P    Pb    11 53 19.6 -0.9
TUE                              AML  AML
      comp=E,203µm,1.4s
TUE                              AML  AML
      comp=N,258µm,1.0s
TUE                              AML  AML
      comp=E,264µm,1.4s
TUE                              AML  AML
      comp=N,305µm,1.0s
PLONS Plons/SG         2.39 286  P    Pb    11 53 20.8 -0.4
NVLJ  Novalja          2.40 141 ePn   Pn    11 53 18.2 +0.8
NVLJ                             Sn   Sn    11 53 48.4 +1.7
KOGS  Kog              2.43  89  P    Pn    11 53 18.5 +0.8
KOGS                             AML  AML
      comp=N,4290µm,0.7s
KOGS                             AML  AML
      comp=E,3995µm,0.5s
KOGS  Kog              2.43  89  IAML       11 54 05.0
      comp=Z,186nm,0.0s
KOGS  Kog              2.43  89 i Pn  Pn    11 53 18.7 +0.9
KOGS  Kog              2.43  89 eSn   Sn    11 53 49.3 +1.9
GEC2  GERESS Array S   2.49  15 ePn   Pn    11 53 20.3 +1.5
GERES GERESS Array B   2.49  15  Pn   Pn    11 53 20.2 +1.5
      comp=Z,7.9nm,0.3s,baz=189,slow=13,SNR=61
GERES                            Lg   Lg    11 53 54.4
      comp=Z,37nm,0.3s,baz=191,slow=26,SNR=9.0
PLIT  Plitvice         2.56 127 ePn   Pn    11 53 20.9 +1.4
SEI   Scarperia        2.58 203  P    Pn    11 53 20.9 +1.1
SEI                              AML  AML
      comp=N,541µm,0.5s
SEI                              AML  AML
      comp=E,426µm,1.0s
KALN  Kalnik           2.60  95 ePn   Pn    11 53 20.6 +0.5
CONA  Conrad Observa   2.60  54  Pn   Pn    11 53 22.1 +1.9
      comp=E,16nm,0.4s,SNR=8.9
CONA                             Sn   Sb    11 53 54.7 -2.1
      comp=E,106nm,0.7s
CKRC  Cesky Krumlov    2.61  23 ePN   Pn    11 53 21.9 +1.6
CKRC                            ePG   Pb    11 53 25.7 +0.8
CKRC                            eSG   Sb    11 53 59.3 +2.3
      comp=E,220nm,0.4s
MUGIO Muggio           2.62 260  P    Pb    11 53 23.2 -2.0
MTCR  Monte La Croce   2.71 208  P    Pn    11 53 22.4 +0.7
WET   Wettzell         2.71   2 ePn   Pn    11 53 22.5 +0.8
KHC   Kasperske Hory   2.75  12 ePN   Pn    11 53 23.7 +1.4
KHC                             ePG   Pg    11 53 29.2 -1.8
KHC                             eSG   Sg    11 54 05.6 -1.0
      comp=E,208nm,0.6s
SARO  Sassorosso       2.79 217  AML  AML
      comp=E,102µm,0.6s
SARO                             AML  AML
      comp=N,99µm,1.3s
EUCT  Pavia            2.81 245  AML  AML
      comp=N,6545µm,0.2s
EUCT                             AML  AML
      comp=E,5610µm,1.4s
UDBI  Udbina           2.86 131 ePn   Pn    11 53 25.5 +1.7
SOP   Sopron           2.89  63 eP    Pn    11 53 25.6 +1.5
SOP                             eS    Sn    11 53 59.0 +0.1
MOSL  Moslavina        2.92 105 ePn   Pn    11 53 25.1 +0.6
CRMI  Carmignano       2.93 206  P    Pn    11 53 25.4 +0.7
CRMI                             AML  AML
      comp=E,220µm,0.9s
CRMI                             AML  AML
      comp=N,231µm,0.6s
DUGI  Dugi Otok        2.95 145 ePn   Pn    11 53 26.1 +1.2
BADI  Badiali          2.95 187  P    Pn    11 53 26.0 +1.1
BADI                             AML  AML
      comp=E,238µm,1.1s
BADI                             AML  AML
      comp=N,274µm,1.5s
GUT   Gutenstein       2.96 305  Pn   Pn    11 53 27.4 +2.3
ZUR   Degenried        3.00 290  Pn   Pb    11 53 29.0 -2.6
CING  Cingoli          3.08 174  AML  AML
      comp=E,200µm,1.0s
CING                             AML  AML
      comp=N,196µm,1.4s
CAFI  Castiglion Fio   3.16 190  P    Pn    11 53 28.3 +0.5
CAFI                             AML  AML
      comp=E,134µm,1.6s
CAFI                             AML  AML
      comp=E,138µm,1.6s
CAFI                             AML  AML
      comp=N,146µm,1.0s
CAFI                             AML  AML
      comp=N,125µm,1.0s
MORI  Morici           3.32 140 ePn   Pn    11 53 32.4 +2.3
MPLH  Magyarpolny      3.38  76 eP    Pn    11 53 31.9 +1.1
MPLH                            eS    Sn    11 54 10.2 -0.6
EMBD  Embd, Matterta   3.41 268  Pn   Pb    11 53 35.3 -3.3
TREC  Trest            3.41  32 ePN   Pn    11 53 32.4 +1.2
FDMO  Fiordimonte      3.41 176  P    Pn    11 53 31.8 +0.5
FDMO                             AML  AML
      comp=N,200µm,0.8s
FDMO                             AML  AML
      comp=E,202µm,1.2s
CESI  CESI - Serrava   3.44 178  AML  AML
      comp=E,126µm,0.6s
CESI                             AML  AML
      comp=N,156µm,0.8s
ZST   Bratislava       3.45  58 ePN   Pn    11 53 31.6 -0.2
ZST                             ePG   Pg    11 53 43.3 -1.0
ZST                             eSG   Sg    11 54 30.6 +1.6
ZST                             eLG   Lg    11 54 39.7
ZIRJ  Zirje            3.46 142 ePn   Pn    11 53 33.9 +1.9
PCP   Piancastagn      3.51 239  P    Pn    11 53 34.3 +1.7
PCP                              AML  AML
      comp=E,140µm,0.8s
PCP                              AML  AML
      comp=N,118µm,1.0s
FELD  Feldberg im Sc   3.53 296  Pn   Pn    11 53 34.7 +1.6
BLY   Banja Luka       3.55 117 ePn   Pb    11 53 37.2 -3.8
KIJV  Kijevo           3.56 132 ePn   Pn    11 53 35.2 +1.9
BALST Balsthal         3.57 286  Pn   Pn    11 53 36.1 +2.5
KRUC  Moravsky         3.60  42 ePN   Pn    11 53 34.8 +0.9
KRUC                            ePG   Pg    11 53 46.2 -1.0
KRUC                            eSG   Sg    11 54 29.7 -4.2
NRCA  Norcia           3.62 176  AML  AML
      comp=N,3540µm,0.1s
NRCA                             AML  AML
      comp=E,1131µm,0.9s
NRCA                             AML  AML
      comp=E,1260µm,0.1s
NRCA                             AML  AML
      comp=N,3235µm,0.1s
KIZ   Kirchzarten      3.62 297  Pn   Pn    11 53 35.9 +1.7
MODS  Modra-Piesok     3.64  56 ePN   Pn    11 53 34.9 +0.5
MODS                            ePG   Pb    11 53 44.4 +1.9
MODS                            eSG   Sg    11 54 33.4 -1.7
MODS                            eLG   Lg    11 54 42.4
MGRS  Mrkonjic Grad    3.67 122 ePn   Pn    11 53 30.8 -4.0
OPP   Oppenau          3.71 305  Pn   Pn    11 53 37.7 +2.3
KOVH  Kovagotottos     3.74  93 eP    Pn    11 53 36.1 +0.3
KOVH                            eS    Sn    11 54 19.8 +0.1
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PRU	Pruhonice	3.75	18	*e*PN	Pn	11 53 37.5	+1.6
PRU				*e*PG	Pg	11 53 47.2	-2.9
PRU				*e*SG	Sg	11 54 35.7	-2.9
	comp=N,135nm,0.8s						
SMOL	Smolenice	3.80	55	*e*PN	Pn	11 53 38.3	+1.7
SMOL				*e*PG	Pg	11 53 51.2	+0.2
NKC	Novy Kostel	3.80	357	*e*PN	Pn	11 53 38.3	+1.7
NKC				*e*SG	Sg	11 54 40.3	0.0
	comp=N,114nm,0.6s						
PRA	Prague	3.81	17	*e*SG	Sg	11 54 39.2	-1.2
	comp=N,151nm,0.7s						
VRAC	Vranov	3.87	41	⇓P	Pb	11 53 46.7	+0.3
VRAC				⇑S	Sb	11 54 36.1	+2.9
VRAC	Vranov	3.87	41	Pn	Pn	11 53 38.2	+0.7
	comp=N,0.9nm,0.3s,baz=231,slow=15,SNR=4.9						
VRAC				Pg	Pb	11 53 46.7	+0.3
	comp=N,4.6nm,0.3s,baz=224,slow=13,SNR=11						
VRAC				Lg	Lg	11 54 38.1	
	comp=N,6.2nm,0.3s,baz=149,slow=22,SNR=5.4						
VRAC	Vranov	3.87	41	*e*PN	Pn	11 53 38.3	+0.7
VRAC				*e*SG	Sg	11 54 38.1	-4.3
TORNY	Torny/Romont	4.00	277	Pn	Pn	11 53 42.6	+3.2
SRO	Srobarova	4.05	68	*e*PN	Pn	11 53 39.7	-0.3
SRO				*e*PG	Pg	11 53 57.5	+1.8
SRO				*e*SN	Sn	11 54 28.6	+1.3
MORH	Mrgy, Hungar	4.10	91	⇓P	Pn	11 53 41.1	+0.5
MORH				⇑S	Sn	11 54 27.4	-1.2
MORH	Mrgy, Hungar	4.10	91	*e*Pn	Pn	11 53 40.5	-0.2
JAVC	Velka Javorina	4.12	52	*e*PN	Pn	11 53 44.0	+2.9
WLS	Welschbruch	4.15	300	Pn	Pn	11 53 43.8	+2.3
ECH	Echery	4.19	297	Pn	Pn	11 53 43.8	+1.8
HVAR	Hvar	4.20	140	*e*Pn	Pn	11 53 42.8	+0.7
CDF	Champ du Feu	4.20	300	*e*Pn	Pn	11 53 43.9	+1.7
CDF				*e*Sn	Sn	11 54 34.5	+3.3
	comp=N,12nm,0.5s						
HINF	Hinteralfeld	4.25	291	*e*Pn	Pn	11 53 44.5	+1.7
HINF				*e*Sn	Sn	11 54 35.0	+2.7
	comp=N,40nm,0.5s						
CHMF	Charmoille	4.25	283	Pn	Pn	11 53 44.6	+1.7
CHMF				Sn	Sn	11 54 27.5	-5.0
LPG	La Plagne	4.28	259	*e*Pn	Pn	11 53 44.4	+1.0
LPG	La Plagne	4.28	259	*e*P	Pn	11 53 48.6	+5.2
LPG				*e*Sn	Sn	11 54 34.3	+0.9
	comp=N,5.5nm,0.4s						
LPL	La Plagne	4.29	260	*e*Pn	Pn	11 53 45.2	+1.7
LPL				*e*Sn	Sn	11 54 31.9	-1.6
	comp=N,7.8nm,0.4s						
RICI	Ricice	4.29	132	*e*Pn	Pn	11 53 45.0	+1.7
RSL	Roselend	4.32	262	Pn	Pn	11 53 47.8	+3.9
BRANT	Les Verrieres	4.34	279	Sn	Sn	11 54 31.0	-3.7
BRANT	Les Verrieres	4.34	279	Pn	Pn	11 53 46.6	+2.5
OGMO	Fort Saint-Gob	4.41	256	Pn	Pn	11 53 49.9	+4.8
BRG	Berggiesshubel	4.51	10	Pn	Pn	11 53 47.3	+1.0
BRG				Pg	Pg	11 54 01.6	-3.0
BRG				Sn	Sn	11 54 37.9	-0.8
BRG				Sg	Sg	11 54 59.2	-3.7
BRG				Amp		11 55 11.0	
	comp=Z,107nm,0.7s						
MBDF	Montbardon	4.52	250	*e*Pn	Pn	11 53 48.0	+1.3
MBDF	Montbardon	4.52	250	*e*P	Pn	11 53 51.6	+4.9
MBDF				*e*Sn	Sn	11 54 37.9	-1.4
	comp=Z,15nm,0.5s						
KRLC	Kraliky	4.53	35	*e*PN	Pn	11 53 47.6	+0.9
KRLC				*e*SG	Sg	11 55 01.9	-1.8
	comp=Z,106nm,0.7s						
SBF	Sospel	4.55	237	*e*Pn	Pn	11 53 47.8	+0.8
SBF	Sospel	4.55	237	*e*P	Pn	11 53 50.6	+3.6
SBF				*e*Sn	Sn	11 54 37.3	-2.5
	comp=Z,51nm,0.6s						
DPC	Dobruska-Polom	4.58	30	*e*PN	Pn	11 53 47.9	+0.5
DPC				*e*SG	Sg	11 55 02.1	-3.3
CABF	La Chapelle	4.59	275	*e*Pn	Pn	11 53 50.3	+2.7
CABF				*e*Sn	Sn	11 54 41.6	+0.7
	comp=Z,12nm,0.3s						
VYHS	Vyhne	4.62	61	*e*PN	Pn	11 53 48.6	+0.7
VYHS				*e*SN	Sn	11 54 41.3	-0.1
HAU	Haudompre	4.63	292	*e*Pn	Pn	11 53 50.2	+2.2
HAU				*e*Sn	Sn	11 54 43.8	+2.2
	comp=Z,65nm,0.6s						
MORC	Moravsky Berou	4.64	42	⇓S	Sb	11 54 55.1	-0.3
MORC	Moravsky Berou	4.64	42	*e*PN	Pn	11 53 49.8	+1.6
MORC				*e*SG	Sg	11 55 02.5	-4.6
MORC	Moravsky Berou	4.64	42	⇑P	Pb	11 53 57.0	-2.5
CHVC	Chvalec	4.70	27	*e*PN	Pn	11 53 49.6	+0.6
LSTV	Lastovo	4.72	140	*e*Pn	Pn	11 53 50.2	+1.0
PGF	Pioggiola	4.72	216	*e*Pn	Pn	11 53 49.9	+0.6
PGF				*e*Sn	Sn	11 54 39.3	-4.8
	comp=Z,15nm,0.5s						
OSTC	Ostas	4.72	28	*e*PN	Pn	11 53 50.1	+0.8
CLL	Collm	4.88	2	*e*Pn	Pn	11 53 53.0	+1.6
CLL				*e*		11 53 54.0	
CLL				*e*		11 54 16.0	
CLL				*e*Sn	Sn	11 54 36.0	-12
CLL				*e*		11 55 00.0	
CLL				*e*Sg	Sg	11 55 12.0	-2.7
	comp=Z,136nm,0.8s						
ABH	Alteburg	4.89	317	Pn	Pn	11 53 53.7	+2.1
ABH	Alteburg	4.89	317	Sn	Sn	11 54 42.9	-5.2
HAPS	Han Pijesak,Bl	4.98	116	*e*Pn	Pn	11 53 54.9	+2.0
OG35	Corcelles	4.99	268	Pn	Pn	11 53 55.7	+2.8
STON	Ston	5.03	133	*e*Pn	Pn	11 53 54.7	+1.3
STON	Ston	5.03	133	*e*Pn	Pn	11 53 54.9	+1.5
ORIF	Oris-en-Rattie	5.04	255	*e*Pn	Pn	11 53 55.0	+1.3
ORIF	Oris-en-Rattie	5.04	255	*e*P	Pn	11 53 58.9	+5.2
ORIF				*e*Sn	Sn	11 54 51.2	-0.7
	comp=Z,7.0nm,0.3s						
PSZ	Piszkesteto	5.10	71	*e*P	Pn	11 53 55.5	+1.0
PSZ				*e*S	Sn	11 54 53.0	-0.4
FRGS	Fruska Gora	5.11	102	*e*Pn	Pn	11 53 55.4	+0.8
TEKS	Tekeris	5.14	109	*e*Pn	Pn	11 53 55.8	+0.8
FRF	La Foret Royal	5.19	239	*e*Pn	Pn	11 53 56.3	+0.6
FRF	La Foret Royal	5.19	239	*e*P	Pn	11 54 00.7	+5.0
FRF				*e*Sn	Sn	11 54 52.6	-2.9
	comp=Z,4.9nm,0.4s						
KOE	Koeppel	5.20	322	*e*Pn	Pn	11 53 58.6	+2.8
PAGF	Fort de Pagny	5.20	297	*e*Pn	Pn	11 53 58.8	+2.9
PAGF				*e*Sn	Sn	11 54 56.8	+1.0
	comp=Z,7.8nm,0.3s						
BGG	Burgeitz	5.21	318	*e*Pn	Pn	11 53 58.5	+2.5
DBRK	Dubrovnik	5.40	132	*e*Pn	Pn	11 53 59.6	+1.0
WLF	Walferdange	5.47	309	Pn	Pn	11 54 02.6	+3.1
TREB	Trebinje	5.47	131	*e*Pn	Pn	11 54 00.9	+1.4
RUDO	Rudo	5.48	119	*e*Pn	Pn	11 53 58.1	-1.6
SFTF	Sexfontaines	5.52	291	*e*Pn	Pn	11 54 02.9	+2.6
	baz=117						
SFTF				*e*Sn	Sn	11 55 03.5	-0.2
	comp=Z,6.8nm,0.3s						
HILG	Hillesheim	5.58	316	*e*Pn	Pn	11 54 03.7	+2.6
SAVF	Savonnieres en	5.60	296	*e*Pn	Pn	11 54 04.2	+2.9
SAVF				*e*Sn	Sn	11 55 07.2	+1.7
	comp=Z,5.1nm,0.3s						
MEZF	Maizieres J'vi	5.60	294	*e*Pn	Pn	11 54 04.1	+2.7
	baz=111						
MEZF				*e*Sn	Sn	11 55 07.5	+1.9
	comp=Z,3.8nm,0.3s						
SMRF	Simiane la Rot	5.63	247	*e*Pn	Pn	11 54 01.8	+0.1
SMRF	Simiane la Rot	5.63	247	*e*P	Pn	11 54 06.4	+4.7
SMRF				*e*Sn	Sn	11 55 03.4	-2.9
	comp=Z,5.0nm,0.5s						
DIVS	Divibare	5.63	112	*e*Pn	Pn	11 54 03.2	+1.4
STB	Steinbach	5.71	319	*e*Pn	Pn	11 54 05.6	+2.8
STB				*e*Sn	Sn	11 55 06.0	-2.3
	comp=Z,14nm,0.9s						
HOBG	Hohbusch	5.78	324	*e*Pn	Pn	11 54 06.7	+2.9
VIVF	Saint-Julien-l	5.87	257	*e*Pn	Pn	11 54 05.9	+0.8
VIVF	Saint-Julien-l	5.87	257	*e*P	Pn	11 54 10.4	+5.3
VIVF				*e*Sn	Sn	11 55 11.2	-1.1
	comp=Z,13nm,0.8s						
KLL	Kalltalsperre	5.99	317	*e*Pn	Pn	11 54 09.2	+2.5
DREG	Dreilaegerbach	6.04	317	*e*Pn	Pn	11 54 10.3	+2.9
SMF	Signal de Mont	6.14	275	*e*Pn	Pn	11 54 10.2	+1.4
SMF				*e*Sn	Sn	11 55 18.1	-0.8
	comp=Z,6.5nm,0.4s						
LOR	Lormes	6.15	281	*e*Pn	Pn	11 54 10.4	+1.6
	baz=102						
LOR				*e*Sn	Sn	11 55 19.3	+0.3
	comp=Z,6.1nm,0.4s						
PDG	Podgorica	6.15	128	⇓P	Pn	11 54 06.6	-2.3
PDG				⇓S	Sn	11 55 12.7	-6.4
PDG	Podgorica	6.15	128	*e*Pn	Pn	11 54 06.8	-2.1
SIRR	Siria	6.18	88	⇓S	Sn	11 55 17.6	-2.2
BZS	Buzias	6.24	94	⇑P	Pn	11 54 10.6	+0.5
BZS				⇑S	Sn	11 55 19.1	-2.2
DRME	Dracevica, Mon	6.28	130	*e*Pn	Pn	11 54 12.1	+1.4
SSF	Saint Saulge	6.37	279	*e*Pn	Pn	11 54 13.6	+1.6
SSF				*e*Sn	Sn	11 55 24.5	-0.1
	comp=Z,1.9nm,0.2s						
GIVF	Givet	6.43	308	*e*Pn	Pn	11 54 15.9	+3.2
GIVF				*e*Sn	Sn	11 55 27.1	+1.2
	comp=Z,7.0nm,0.3s						
MATE	Matera	6.46	152	⇓S	Sn	11 55 18.9	-7.9
AVF	Avril sur Loir	6.47	277	*e*Pn	Pn	11 54 15.4	+2.1
MDVR	Moldovita	6.51	102	⇑P	Pn	11 54 14.1	+0.2
MDVR				⇑S	Sn	11 55 24.7	-3.4
DOU	Dourbes	6.55	307	Pn	Pn	11 54 17.6	+3.3
LASF	Ste Croix	6.70	253	*e*Pn	Pn	11 54 17.1	+0.7
LASF	Ste Croix	6.70	253	*e*P	Pn	11 54 21.5	+5.1
LASF				*e*Sn	Sn	11 55 29.2	-3.5
	comp=Z,4.7nm,0.6s						
BAIF	Baives	6.75	306	*e*Pn	Pn	11 54 20.4	+3.3
BAIF				*e*Sn	Sn	11 55 34.4	+0.6
	comp=Z,4.9nm,0.5s						
BGF	Bois d'Agland	6.83	275	*e*Pn	Pn	11 54 20.2	+2.0
BGF				*e*Sn	Sn	11 55 36.1	+0.3
	comp=Z,14nm,0.3s						
DRGR		6.88	83	⇑S	Sn	11 55 36.4	-0.8
BOVS	Bovan	6.95	111	⇑P	Pn	11 54 19.3	-0.4
BOVS				⇑S	Sn	11 55 33.2	-5.5
HERR	Herculane	6.96	99	⇑S	Sn	11 55 36.1	-3.0
HYF	Humbligny	6.97	280	*e*Pn	Pn	11 54 22.8	+2.6
HYF				*e*Sn	Sn	11 55 39.5	+0.1
GZR	Gura Zlata	7.08	95	⇓P	Pn	11 54 21.9	+0.1
GZR				⇑S	Sn	11 55 39.7	-2.4
TCF	Toulx Ste Croi	7.29	273	*e*Pn	Pn	11 54 26.7	+2.2
TCF				*e*Sn	Sn	11 55 46.0	-1.1
	comp=Z,2.4nm,0.3s						
BLKB	Belogradchik	7.58	108	⇑P	Pn	11 54 27.4	-1.2
BLKB				⇑S	Sn	11 55 49.5	-4.9
CAF	Calviac	7.63	262	*e*Pn	Pn	11 54 31.4	+2.2
CAF				*e*Sn	Sn	11 55 52.5	-3.0
	comp=Z,0.7nm,0.2s						
MTLF	Montolieu	8.09	251	*e*P	Pn	11 54 40.7	+5.2
BURAR	Bucovina Array	8.61	78	⇑P	Pn	11 54 45.3	+2.6
VOIR		8.64	92	⇑S	Sn	11 56 18.4	-2.2
MFF	Saint Martin d	8.89	276	*e*Pn	Pn	11 54 48.9	+2.5
MFF				*e*Sn	Sn	11 56 23.9	-2.5
	comp=Z,1.4nm,0.2s						
LDF	La Druitiere	8.97	289	*e*Pn	Pn	11 54 50.0	+2.5
FLN	La Foliniere	9.23	289	*e*Pn	Pn	11 54 52.5	+1.4
	baz=112						
FLN				*e*Sn	Sn	11 56 32.7	-2.1
	comp=Z,0.4nm,0.2s						
GRR	Gorron	9.42	287	*e*Pn	Pn	11 54 56.7	+3.0
SGMF	Saint Gilles	10.54	285	*e*P	Pn	11 55 14.8	+5.8
EKA	Eskdalemuir Ar	13.39	317	Pn	Pn	11 55 50.4	+2.6
	baz=126,slow=15,SNR=3.6						
FINES	FINESS Array B	16.90	22	Pn	P	11 56 39.6	+3.2
	comp=Z,0.1nm,0.3s,baz=211,slow=11,SNR=4.0						
KBZ	Khabaz	21.41	86	P	P	11 57 27.8	+2.0
	comp=Z,0.5nm,0.3s,baz=304,slow=11,SNR=1.7						
TORD	Torodi Ar. Bea	34.47	199	P	P	11 59 24.9	-1.0
	comp=Z,0.5nm,0.8s,baz=20,slow=11,SNR=2.1						
KURBB	Kurchatov Arra	42.49	59	P	P	12 00 32.1	-0.9
	comp=Z,0.3nm,0.6s,baz=294,slow=9.0,SNR=2.9						
ZALV	Zalesovo Beam	44.90	53	P	P	12 00 52.5	+0.1
	comp=Z,0.4nm,0.4s,baz=302,slow=8.3,SNR=1.8						
MKAR	Makanchi Array	46.30	63	P	P	12 01 03.5	-0.1
	comp=Z,0.3nm,0.6s,baz=304,slow=7.7,SNR=4.4						
SONM	Songino Array	59.73	51	P	P	12 02 44.2	+1.4
	comp=Z,0.2nm,0.4s,baz=309,slow=6.9,SNR=2.4						

NNC 21 12:02:43.4±14.0, $38\overset{\circ}{.}72$N×$74\overset{\circ}{.}04$E, h0^{km}, mb3.8, mpv3.4, 3C-2D, Error ellipse: s-maj=112.5km s-min=81.6km az=153.0, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	3.42	356	P	Pn	12 03 39.1	+0.7
	SNR=57						
UCH	Uchtor	3.52	6	P	Pn	12 03 40.5	+0.7
	SNR=21						
AAK	Ala-Archa	3.93	5	⇑Pn	Pn	12 03 45.5	+0.4
	2.6nm,0.6s						
AAK				⇓Sn	Sn	12 04 34.8	+2.8
	3.8nm,0.9s						
EKS2	Erkin-Say	3.94	357	P	Pn	12 03 46.6	+1.3
	SNR=16						
KBK	Karagaybulak	3.99	10	P	Pn	12 03 46.8	+0.8
	SNR=6.6						
CHMS	Chumysh	4.31	7	P	Pn	12 03 50.7	+0.4
	SNR=5.9						
TKM2	Tokmak 2	4.36	15	P	Pn	12 03 51.2	+0.1
	SNR=7.6						
TKM2	Tokmak 2	4.36	15	⇑Pn	Pn	12 03 50.5	-0.6
	5.8nm,0.6s						
TKM2				⇑Sn	Sn	12 04 44.3	+1.7
	3.7nm,0.8s						
KK09	Karatay Array	5.15	330	Pn	Pn	12 03 59.9	-1.9
	4.7nm,0.7s,baz=132,slow=12						
KK09				⇓Sn	Sn	12 05 01.0	-1.0
	8.1nm,0.6s,baz=135,slow=22						

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*DJA **21** 12:24:01.5±0.5, 1°N±4°×12°8E±°, h121^{km}±5^{km}, M3.9/9, mb4.0/5, mB4.9/2, MLv3.8/9, Mw(mB)4.2/2*

*IDC **21** 12:24:05.0±1.6, $1\overset{\circ}{.}00$N×$127\overset{\circ}{.}39$E, h0^{km}, mb3.9/3, mb1 4.1/4, mb1mx3.6/33, mbtmp3.9/4, ML3.0/1, MS2.7/1, Ms1 2.7/1, ms1mx2.2/33, Error ellipse: s-maj=65.0km s-min=25.7km az=60.0*

ISC 21 12:24:07.0±1.4, **$1\overset{\circ}{.}06$N**±$0\overset{\circ}{.}09$×**$127\overset{\circ}{.}6$E**±$0\overset{\circ}{.}1$, **h10^{km}, n13, $\sigma 1\overset{s}{.}61$**/13, **mb3.9**/3, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBMI	Labuha	1.69	184	P	Pn	12 24 36.1	-0.5
LBMI				S	Sg	12 25 03.9	+2.6
SANI	Sanana	3.49	208	P	Pn	12 25 00.9	-0.5
KMSI	Cibinong	3.67	263	P	Pn	12 25 03.7	-0.1
SWI	Sorong	4.11	118	P	Pn	12 24 57.6	-12
SIJI	Sorong	4.12	118	Pn	Pn	12 25 11.1	+1.0
	0.9nm,0.3s,baz=204,slow=21,SNR=1.9						
SIJI				LR	LR	12 26 31.0	
	comp=Z,97nm,21.9s,baz=58,slow=34						
GTOI	Gorontalo	4.62	265	P	Pn	12 25 20.0	+3.0
	0.0nm7.2nm,1.1s						
MRSI	Marisa	5.70	264	P	Pn	12 25 31.4	-0.5
TTSI	Tana Toraja	8.79	242	P	Pn	12 26 12.9	-1.4
	1μm11nm,0.6s						
BNSI	Bone	9.26	234	P	Pn	12 26 19.2	-1.5
	12nm,0.7s						
SPSI	Sidrap Palu	9.29	238	P	Pn	12 26 19.4	-1.8
WRA	Warramunga Arr	21.88	163	P	P	12 29 00.4	+0.1
	3.3nm,0.6s,baz=340,slow=11,SNR=34						
ASAR	Alice Springs	25.32	166	P	P	12 29 33.5	-0.7
	3.2nm,0.7s,baz=344,slow=10,SNR=35						
MKAR	Makanchi Array	60.25	326	P	P	12 34 14.7	-0.9
	1.0nm,0.9s,baz=126,slow=7.6,SNR=4.1						

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*TUL **21** 13:21:03.8±0.9, $36\overset{\circ}{.}42$N±$0\overset{\circ}{.}01$×$96\overset{\circ}{.}87$W±$0\overset{\circ}{.}02$, h4^{km}±5^{km}, ML2.7, mb_Lg2.6/29(NEIC), Error ellipse: s-maj=2.4km s-min=1.7km az=64.0*

NEIC 21 13:21:04±1.3, **$36\overset{\circ}{.}421$N**±$0\overset{\circ}{.}007$×**$96\overset{\circ}{.}88$W**±$0\overset{\circ}{.}02$, **h9^{km}**±4^{km}, **Error ellipse: s-maj=2.4km s-min=0.9km az=104.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QUOK	Quay	0.28	151	Pg	Pg	13 21 09.7	+0.1
QUOK				Sg	Sg	13 21 13.5	0.0
BLOK	Blackwell	0.43	321	Pg	Pg	13 21 12.8	+0.3
OK031	S. Brethren Rd	0.47	176	Pg	Pg	13 21 13.0	-0.1
OK030	Cody Creek RV	0.50	171	Pg	Pg	13 21 13.2	-0.4
T35A	Sooner Cattle	0.57	31	Pg	Pg	13 21 15.2	0.0
T35A				Sg	Sg	13 21 22.6	-0.1
KAN13	South Haven SW	0.76	321	Pg	Pg	13 21 18.9	+0.2
OK029	Liberty Lake	0.78	217		Pg	13 21 19.0	0.0
CROK	Carrier	0.90	276	Pg	Pg	13 21 21.2	0.0
GC02	Grant County #	0.90	299		Pg	13 21 21.3	0.0
OK025	Westminster Rd	0.92	204		Pg	13 21 21.2	-0.4
KAN09	Caldwell North	0.93	320	Pg	Pg	13 21 21.6	-0.2
KAN17	Caldwell West	0.95	311		Pg	13 21 22.1	-0.1
BCOK	Bluff Creek, N	0.97	218		Pg	13 21 22.4	-0.2
TUL1	Leonard	1.01	120	Pg	Pg	13 21 23.1	-0.5
KAN01	Argonia South	1.02	316		Pg	13 21 23.5	-0.1
KAN14	Manchester OK	1.02	302		Pg	13 21 23.5	-0.2
OKCFA	Oklahoma City	1.11	205	Pg	Pg	13 21 23.6	-1.7
OK032	Salt Plains WL	1.14	290		Pg	13 21 25.4	-0.4
KAN06	Argonia West S	1.14	317		Pg	13 21 25.7	-0.2
FNO	Franklin	1.24	200		Pn	13 21 26.6	-0.9
KAN16	Harper SW Stat	1.25	311		Pn	13 21 27.6	-0.1
U32A	Winter Ranch,	1.71	269		Pb	13 21 35.6	-0.1
X34A	Smith Ranch, M	1.98	204	Pn	Pb	13 21 39.8	-0.4
X34A				IAmb_Lg		13 22 07.2	
	comp=Z,25nm,1.1s						
U38A	Gravette	2.01	89	Pn	Pn	13 21 38.8	+0.7
X37A	Clayton	2.20	146	Pn	Pn	13 21 41.3	+0.5
WMOK	Wichita Mounta	2.29	223	Pn	Pb	13 21 43.8	-1.6
R32A	Long Quarter,	2.48	324		Pn	13 21 45.4	+0.8
KSU1	Kansas State U	2.68	4	IAmb_Lg		13 22 31.9	
	comp=Z,18nm,0.7s						
S39A	Bolivar	3.11	65		Pn	13 21 53.9	+0.6
S39A				IAmb_Lg		13 22 48.4	
	comp=Z,23nm,1.0s						
U40A	Yellville	3.25	90	Pn	Pn	13 21 55.8	+0.6
U40A				IAmb_Lg		13 22 48.1	
	comp=Z,20nm,0.8s						
MIAR	Mount Ida	3.28	124	Pn	Pn	13 21 55.1	-0.6
MIAR				IAmb_Lg		13 22 52.3	
	comp=Z,14nm,1.0s						
MGMO	Mountain Grove	3.77	77	IAmb_Lg		13 23 05.0	
	comp=Z,10nm,0.7s						
X40A	Basin Creek Fa	3.82	119		Pn	13 22 04.1	+1.0
X40A				IAmb_Lg		13 23 12.3	
	comp=Z,13nm,0.7s						
FCAR	Ozark Folk Cen	3.88	96	IAmb_Lg		13 23 17.5	
	comp=Z,12nm,1.0s						
WHAR	Wooly Hollow	3.90	105	IAmb_Lg		13 23 15.7	
	comp=Z,18nm,0.8s						
R40A	Maddies Statio	4.12	62		Pn	13 22 07.9	+0.8
R40A					LR	13 23 13.0	
R40A				IAmb_Lg		13 23 17.1	
	comp=Z,8.7nm,0.9s						
AMTX	Amarillo	4.20	250	IAmb_Lg		13 23 21.3	
	comp=Z,11nm,0.8s						
ABTX	Abilene, Hawle	4.42	212	IAmb_Lg		13 23 32.2	
	comp=Z,10nm,1.1s						
T42A	Van Buren	4.69	81		Sn	13 23 12.4	+2.9
T42A				IAmb_Lg		13 23 43.2	
	comp=Z,10nm,1.0s						
PBMO	Poplar Bluff	5.20	84		Sb	13 23 37.3	-0.4
PBMO				IAmb_Lg		13 23 50.5	
	comp=Z,13nm,0.8s						
N38A	Joes South For	5.21	32	IAmb_Lg		13 23 55.4	
	comp=Z,14nm,0.8s						

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*VIE **21** 13:30:24.8±2.1, $42\overset{\circ}{.}35$N×$14\overset{\circ}{.}80$E, h10^{km}, mb3.1/2, ml2.9/6, ms3.7/2, Error ellipse: s-maj=24.3km s-min=14.6km az=71.0   175 km NNE of Naples*

ISC 21 13:30:23.1±3.2, **$42\overset{\circ}{.}4$N**±$0\overset{\circ}{.}1$×**$15\overset{\circ}{.}14$E**±$0\overset{\circ}{.}08$, **h5^{km}**±17^{km}, **n16, $\sigma 1\overset{s}{.}13$**/22, **Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HVAR	Hvar	1.26	49	*e*Pg	Pg	13 30 47.9	+0.6
HVAR				Sg	Sb	13 31 03.3	-0.6
ZIRJ	Zirje	1.34	16	*e*Pg	Pb	13 30 48.5	-0.2
ZIRJ				Sg	Sb	13 31 06.4	+0.3
LSTV	Lastovo	1.36	72	*e*Pg	Pb	13 30 48.1	-0.8
LSTV				Sg	Sg	13 31 06.9	+0.2
MORI	Morici	1.56	15	*e*Pn	Pb	13 30 51.6	-0.8
MORI				Sn	Sb	13 31 13.0	+0.6
DUGI	Dugi Otok	1.63	358	*e*Pn	Pb	13 30 53.0	-0.5
RICI	Ricice	1.85	52	*e*Pn	Pb	13 30 56.0	-1.3
KIJV	Kijevo	1.89	29	*e*Pn	Pb	13 30 56.7	-1.2
KIJV				Sn	Sb	13 31 22.4	+0.6
NVLJ	Novalja	2.21	355	*e*Pn	Pb	13 31 01.8	-1.6
NVLJ				Sn	Sb	13 31 29.4	-1.6
UDBI	Udbina	2.21	12	*e*Pn	Pb	13 31 02.5	-1.1
RABC	Rab	2.40	354	*e*Pn	Pn	13 31 03.7	+0.8
ABTA	Abfaltersbach	4.77	338	*e*Sn	Sn	13 32 29.4	-1.8
	3.1nm,0.5s						
WTTA	Wattenberg	5.50	334	*e*Sn	Sn	13 32 51.1	+1.8
	6.4nm,0.5s						
WATA	Walderalm	5.58	334	*e*Sn	Sn	13 32 51.6	+0.3
	4.1nm,0.5s						
FETA	Feichten	5.62	328	*i* Sn	Sn	13 32 53.0	+0.7
	2.5nm,0.4s						
MOTA	Moosalm	5.75	331	*i* Sn	Sn	13 32 56.9	+1.5
	3.4nm,0.3s						
RETA	Reutte	5.99	330	*e*Sn	Sn	13 33 00.8	-0.5
	2.8nm,0.5s						

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*VIE **21** 13:36:57.7±0.9, $42\overset{\circ}{.}54$N×$15\overset{\circ}{.}05$E, h10^{km}, mb3.1/4, ml3.0/10, ms3.8/2, Error ellipse: s-maj=7.6km s-min=7.2km az=4.0   158 km SW of Split*

ISC 21 13:36:55.3±2.3, **$42\overset{\circ}{.}3$N**±$0\overset{\circ}{.}1$×**$15\overset{\circ}{.}14$E**±$0\overset{\circ}{.}06$, **h21^{km}**±7^{km}, **n25, $\sigma 0\overset{s}{.}90$**/40, **Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HVAR	Hvar	1.31	47	*e*Pg	Pn	13 37 17.6	-0.8
HVAR				Sg	Sn	13 37 34.8	-0.4
LSTV	Lastovo	1.38	69	*e*Pn	Pn	13 37 18.3	-1.1
LSTV				Sg	Sb	13 37 37.7	+0.1
ZIRJ	Zirje	1.41	15	*e*Pg	Pn	13 37 19.0	-0.7
ZIRJ				Sg	Sn	13 37 37.8	+0.1
MORI	Morici	1.62	15	*e*Pn	Pn	13 37 22.2	-0.5
MORI				Sn	Sn	13 37 42.0	-0.9
DUGI	Dugi Otok	1.70	358	*e*Pn	Pn	13 37 22.3	-1.4
DUGI				Sn	Sn	13 37 44.5	-0.2
MAKA	Makarska	1.71	54	*e*Pn	Pn	13 37 24.6	+0.9
MAKA				Sn	Sn	13 37 46.0	+1.0
RICI	Ricice	1.90	50	*e*Pn	Pn	13 37 26.0	-0.5
KIJV	Kijevo	1.94	28	*e*Pn	Pn	13 37 26.8	-0.3
STON	Ston	1.98	72	*e*Pn	Pn	13 37 27.6	+0.1
STON				Sn	Sn	13 37 52.1	+0.4
NVLJ	Novalja	2.28	355	*e*Pn	Pn	13 37 31.5	-0.1
NVLJ				Sn	Sn	13 37 60.0	+1.0
UDBI	Udbina	2.28	11	*e*Pn	Pn	13 37 32.4	+0.6
UDBI				Sn	Sn	13 38 00.2	+1.0
RABC	Rab	2.47	354	*e*Pn	Pn	13 37 34.3	0.0
PLIT	Plitvice	2.61	8	*e*Pn	Pn	13 37 36.6	+0.4
OZLJ	Ozalj	3.33	4	*e*Pn	Pn	13 37 47.8	+1.7
OBKA	Obir	4.24	355	*i* Pn	Pn	13 37 58.9	+0.2
	0.8nm,0.1s						
SOKA	Soboth	4.38	359	*e*Pn	Pn	13 38 00.5	-0.2
	0.6nm,0.2s						
ABTA	Abfaltersbach	4.83	338	*i* Pn	Pn	13 38 06.4	-0.5
	0.8nm,0.3s						
ABTA				*e*Sn	Sn	13 39 00.0	-2.1
	1.6nm,0.2s						
WTTA	Wattenberg	5.56	335	*e*Pn	Pn	13 38 17.3	+0.4
	0.5nm,0.2s						
WTTA				*e*Sn	Sn	13 39 19.9	-0.3
	11nm,0.5s						
MOA	Molln	5.59	354	*e*Pn	Pn	13 38 17.7	+0.5
	1.0nm,0.3s						
MOA				*e*Sn	Sn	13 39 20.0	-0.7
	3.6nm,0.5s						
WATA	Walderalm	5.64	335	*i* Pn	Pn	13 38 18.6	+0.6
	2.1nm,0.3s						
WATA				*i* Sn	Sn	13 39 21.3	-0.8
	5.4nm,0.3s						
SQTA	Sankt Quirin	5.66	332	*e*Sn	Sn	13 39 23.5	+0.8
	7.9nm,0.4s						
FETA	Feichten	5.67	328	*e*Pn	Pn	13 38 19.0	+0.5
	0.3nm,0.2s						
FETA				*e*Sn	Sn	13 39 23.4	+0.4
	4.5nm,0.4s						
MOTA	Moosalm	5.81	332	*i* Sn	Sn	13 39 28.0	+1.7
	8.2nm,0.3s						
RETA	Reutte	6.05	331	*e*Pn	Pn	13 38 24.6	+1.1
	0.7nm,0.3s						
RETA				*i* Sn	Sn	13 39 31.9	-0.2
	6.3nm,0.5s						
DAVA	Damuels	6.24	325	*e*Sn	Sn	13 39 35.0	-1.9
	12nm,0.5s						

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*TEH **21** 13:56:28.2, $39\overset{\circ}{.}14$N×$48\overset{\circ}{.}24$E, h17^{km}, ML3.1*

*AZER **21** 13:56:29.2±0.2, $39\overset{\circ}{.}15$N×$48\overset{\circ}{.}33$E, h25^{km}±1^{km}, ml3.3/21, Error ellipse: s-maj=4.1km s-min=2.9km az=258.0*

ISC 21 13:56:30.1±1.0, **$39\overset{\circ}{.}13$N**±$0\overset{\circ}{.}02$×**$48\overset{\circ}{.}19$E**±$0\overset{\circ}{.}03$, **h18^{km}**±6^{km}, **n38, $\sigma 1\overset{s}{.}28$**/61, **Iran-Armenia-Azerbaijan border region**

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

GLBA	**Clilabad**	**0.20**	**53**	P	**Pg**	**13 56 35.3**	**+0.3**
GLBA				S	**Sg**	**13 56 39.8**	**+1.6**
LKRN	**Lenkeran, Azer**	**0.62**	**132**	P	**Pb**	**13 56 41.5**	**-0.9**
LKRN				S	**Sb**	**13 56 50.4**	**-0.3**
QRD	**Qoradiz**	**0.75**	**297**	P	**Pb**	**13 56 43.9**	**-0.9**
QRD				S	**Sb**	**13 56 54.9**	**+0.1**
SAAT	**Saatly**	**0.76**	**14**	P	**Pg**	**13 56 43.9**	**-1.0**
SAAT				S	**Sb**	**13 56 55.7**	**+0.9**
AHAR	**Ahar**	**1.09**	**235**	*e*Pg	**Pb**	**13 56 49.8**	**-0.8**
AHAR				*e*Sg	**Sb**	**13 57 04.8**	**+0.2**
AHAR				*e*		13 57 08.2	
	comp=Z,11µm,0.2s						
IHRS	**Heris**	**1.21**	**228**	*e*Pg	**Pb**	**13 56 51.6**	**-1.0**
IHRS				*e*Sg	**Sn**	**13 57 08.7**	**+0.3**
IHRS				*e*		13 57 09.7	
	comp=Z,15µm,0.3s						
KDMR	**Kurdemir**	**1.25**	**360**	P	**Pg**	**13 56 52.4**	**-1.9**
KDMR				S	**Sn**	**13 57 10.5**	**+1.3**
AGDM	**Agdam**	**1.29**	**320**	Pn	**Pg**	**13 56 52.8**	**-2.2**
AGDM				Sn	**Sb**	**13 57 10.7**	**+0.5**
ISRB	**Sarab**	**1.36**	**198**	*e*Pg	**Pb**	**13 56 54.5**	**-0.8**
ISRB				*e*Sg	**Sn**	**13 57 14.4**	**+2.2**
ISRB				*e*		13 57 17.5	
	comp=Z,3µm,0.2s						
BRDA	**Brd**	**1.38**	**326**	Pn	**Pg**	**13 56 55.6**	**-1.2**
BRDA				Sn	**Sn**	**13 57 15.4**	**+3.1**
IML	**Ismayilli**	**1.67**	**360**	Pn	**Pn**	**13 56 58.1**	**-0.5**
IML				Sn	**Sn**	**13 57 19.8**	**+0.3**
PQL	**Pirkuli**	**1.69**	**10**	Pn	**Pn**	**13 56 59.2**	**+0.2**
PQL				Sn	**Sn**	**13 57 21.9**	**+1.7**
CSN1	**Caspian**	**1.71**	**155**	*e*Pg	**Pb**	**13 56 59.9**	**-1.2**
CSN1				*e*		13 57 27.6	
	comp=Z,4µm,0.3s						
IBST	**Bostanabad**	**1.75**	**216**	*e*		13 57 02.2	
	comp=Z,2µm,0.2s						
IBST				*e*Pg	**Pb**	**13 57 01.2**	**-0.7**
ATGJ	**Altiaghaj**	**1.83**	**18**	Pn	**Pn**	**13 57 01.6**	**+0.8**
ATGJ				Sn	**Sn**	**13 57 23.1**	**-0.4**
ITBZ	**Tabriz**	**1.83**	**242**	*e*		13 57 05.3	
	comp=Z,1µm,0.2s						
ITBZ				*e*Pn	**Pb**	**13 57 01.7**	**-1.5**
QBL	**Gabala**	**1.84**	**352**	Pn	**Pn**	**13 57 00.6**	**-0.4**
QBL				Sn	**Sn**	**13 57 24.1**	**+0.3**
MNGR	**Mingechevir, A**	**1.85**	**333**	Pn	**Pn**	**13 57 01.3**	**+0.2**
MNGR				Sn	**Sb**	**13 57 27.4**	**+1.1**
IHSH	**Hashtrud**	**1.96**	**202**	*e*Pn	**Pn**	**13 57 03.2**	**+0.4**
IMRD	**Marand**	**1.98**	**259**	*e*		13 57 35.1	
	comp=Z,5µm,0.2s						
IMRD				*e*Pn	**Pb**	**13 57 04.2**	**-1.6**
XNQ	**Khinaliq**	**2.04**	**359**	Pn	**Pn**	**13 57 03.1**	**-0.8**
XNQ				Sn	**Sn**	**13 57 28.8**	**-0.3**
SBZ	**Shahbuz**	**2.07**	**278**	Pn	**Pb**	**13 57 05.5**	**-1.7**
SBZ				Sn	**Sb**	**13 57 33.0**	**+0.4**
GANJ	**Ganja**	**2.09**	**317**	Pn	**Pn**	**13 57 04.3**	**-0.1**
GANJ				Sn	**Sn**	**13 57 30.8**	**+0.8**
ISHB	**Shabestar**	**2.18**	**248**	*e*		13 57 08.9	
	comp=Z,807nm,0.1s						
ISHB				*e*Pn	**Pn**	**13 57 06.6**	**+0.8**
SEKA	**Sheki**	**2.22**	**340**	Pn	**Pn**	**13 57 05.8**	**-0.3**
SEKA				Sn	**Sn**	**13 57 34.3**	**+1.2**
QUBA	**Quba, Azerbaij**	**2.24**	**6**	Pn	**Pn**	**13 57 07.6**	**+1.2**
IAZR	**Azarshahr**	**2.26**	**231**	*e*Pn	**Pb**	**13 57 08.3**	**-2.3**
QSAR	**Qusar**	**2.39**	**1**	Pn	**Pn**	**13 57 09.5**	**+1.0**
QSAR				Sn	**Sn**	**13 57 37.6**	**+0.3**
HYR	**Heyderabad**	**2.65**	**284**	Pn	**Pb**	**13 57 15.9**	**-1.2**
HYR				Sn	**Sn**	**13 57 47.4**	**+3.5**
JIR1	**Jirandeh**	**2.73**	**152**	*e*Pn	**Pn**	**13 57 13.5**	**+0.2**
ZKTA	**Zakatala**	**2.78**	**335**	Pn	**Pn**	**13 57 14.3**	**+0.4**
ZKTA				Sn	**Sn**	**13 57 47.9**	**+0.9**
QZX	**Qazax, Azerbai**	**2.90**	**313**	Pn	**Pn**	**13 57 16.7**	**+1.3**
QZX				Sn	**Sn**	**13 57 53.7**	**+3.8**
IGZV	**Ghazvin**	**3.17**	**149**	*e*Pn	**Pn**	**13 57 19.7**	**+0.3**
QALM	**Alamut, Qazvin**	**3.32**	**143**	*e*Pn	**Pn**	**13 57 22.1**	**+0.7**
QABG	**Abgarm-Qazvin**	**3.59**	**162**	*e*Pn	**Pn**	**13 57 24.8**	**-0.3**
IPRN	**Peran**	**4.37**	**130**	*e*Pn	**Pn**	**13 57 34.9**	**-0.9**
IGLO	**Ghaloghah**	**5.18**	**119**	*e*Pn	**Pn**	**13 57 47.0**	**+0.1**
ISHM	**Shahmirzad**	**5.24**	**128**	*e*Pn	**Pn**	**13 57 48.2**	**+0.3**

*IDC **21** 14:00:38.0±2.2, 6°.18N×126°.77E, h0^{km}, mb3.3/4, mb1 3.5/4, mb1mx3.3/39, mbtmp3.4/4, Error ellipse: s-maj=92.3km s-min=20.6km az=60.0*

*MAN **21** 14:00:43.9, 6°.08N×126°.35E, h6^{km}, mb4.6, ML4.4, MS3.3*

ISC 21 14:00:38.4±1.8**, 6°.3N**±0°.3×**127°.1E**±0°.3**, h10^{km}, n11, σ2^{s}.03**/6**, mb3.3**/4**, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.69**	**296**	Pn	**Pn**	**14 01 06.2**	**-1.8**
	35nm,0.3s,baz=205,slow=4.2,SNR=5.3						
DAV				Sn	**Sn**	**14 01 31.9**	**+2.2**
	92nm,0.3s,baz=293,slow=22,SNR=6.5						
FITZ	**Fitzroy Crossi**	**24.30**	**183**	P	**P**	**14 05 54.9**	**-1.4**
	1.3nm,0.7s,baz=0.0,slow=15,SNR=2.2						
WRA	**Warramunga Arr**	**27.05**	**165**	P	**P**	**14 06 22.1**	**+0.9**
	0.3nm,0.8s,baz=345,slow=10,SNR=2.2						
ASAR	**Alice Springs**	**30.53**	**168**	P	**P**	**14 06 53.4**	**+1.2**
	0.2nm,0.7s,baz=346,slow=6.9,SNR=4.1						
H11S3	**WAKE ISLAND Hy**	**40.41**	**69**	T	T	14 52 11.7	
	baz=258,slow=75						
H11S1	**WAKE ISLAND Hy**	**40.42**	**69**	T	T	14 52 13.6	
	baz=258,slow=75						
H11S2	**WAKE ISLAND Hy**	**40.43**	**69**	T	T	14 52 12.8	
	baz=258,slow=75						
H11N1	**WAKE ISLAND Hy**	**40.87**	**67**	T	T	14 52 51.7	
	baz=256						
H11N2	**WAKE ISLAND Hy**	**40.88**	**67**	T	T	14 52 49.1	
	baz=256						
H11N3	**WAKE ISLAND Hy**	**40.89**	**67**	T	T	14 52 53.2	
	baz=256						
MKAR	**Makanchi Array**	**55.67**	**324**	P	**P**	**14 10 15.3**	**+0.3**
	0.2nm,0.4s,baz=108,slow=8.1,SNR=5.1						

*TUL **21** 14:04:13.6±0.9, 36°.945N±0°.010×97°.82W±0°.03, h4^{km}±6^{km}, ML3.0, mb_Lg2.6/25(NEIC), Error ellipse: s-maj=3.3km s-min=1.4km az=95.0*

NEIC 21 14:04:13.8±0.8**, 36°.92N**±0°.02×**97°.81W**±0°.03**, h6^{km}**±6^{km}**, Error ellipse: s-maj=3.9km s-min=1.9km az=66.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	**Grant County #**	**0.08**	**214**	Pg	Pg	14 04 16.1	+0.4
GC02				Sg	Sg	14 04 17.2	+0.2
KAN17	**Caldwell West**	**0.13**	**14**	Pg	Pg	14 04 16.6	0.0
KAN17				Sg	Sg	14 04 18.7	+0.2
KAN14	**Manchester OK**	**0.13**	**288**	Pg	Pg	14 04 16.4	-0.1
KAN05	**Bluff City Nor**	**0.20**	**344**	Pg	Pg	14 04 17.6	-0.2
KAN01	**Argonia South**	**0.24**	**9**		Pg	14 04 18.5	-0.1
KAN01				Sg	Sg	14 04 21.6	-0.1
KAN09	**Caldwell North**	**0.27**	**34**	Pg	Pg	14 04 19.1	+0.1
KAN10	**Anthony SW Sta**	**0.31**	**312**	Pg	Pg	14 04 19.5	-0.4
KAN06	**Argonia West S**	**0.33**	**353**		Pg	14 04 20.2	-0.2
OK032	**Salt Plains WL**	**0.34**	**251**	Pg	Pg	14 04 20.5	0.0
KAN16	**Harper SW Stat**	**0.37**	**326**	Pg	Pg	14 04 20.7	-0.3
KAN12	**Harper NE Stat**	**0.41**	**338**	Pg	Pg	14 04 21.5	-0.3
CROK	**Carrier**	**0.44**	**199**	Pg	Pg	14 04 22.8	+0.5
BLOK	**Blackwell**	**0.50**	**108**	Pg	Pg	14 04 23.9	+0.4
T35A	**Sooner Cattle**	**1.04**	**90**		Pg	14 04 33.6	0.0
OK029	**Liberty Lake**	**1.15**	**166**	Pg	Pg	14 04 35.8	-0.2
QUOK	**Quay**	**1.16**	**130**	Pg	Pg	14 04 35.9	-0.1
OK031	**S. Brethren Rd**	**1.24**	**141**	Pg	Pg	14 04 37.3	-0.3
BCOK	**Bluff Creek, N**	**1.27**	**173**	Pg	Pn	14 04 37.8	-0.3
OK030	**Cody Creek RV**	**1.29**	**140**		Pb	14 04 38.4	0.0
OKCFA	**Oklahoma City**	**1.53**	**169**	IAmb_Lg		14 05 05.8	
	comp=Z,46nm,0.9s						
R32A	**Long Quarter,**	**1.67**	**335**		Pn	14 04 44.0	+0.5
FNO	**Franklin**	**1.69**	**169**	Pn	Pb	14 04 44.7	-0.6
FNO				IAmb_Lg		14 05 10.6	
	comp=Z,34nm,0.8s						
TUL1	**Leonard**	**1.91**	**121**		Pb	14 04 48.0	-1.0
WMOK	**Wichita Mounta**	**2.31**	**200**	Pn	Pn	14 04 53.9	+1.4
KSU1	**Kansas State U**	**2.38**	**23**		Pn	14 04 53.7	+0.4
X37A	**Clayton**	**3.05**	**139**		Pn	14 05 02.8	+0.2
X37A				IAmb_Lg		14 05 57.8	
	comp=Z,26nm,0.8s						
HHAR	**Hobbs**	**3.17**	**100**	Pn	Pn	14 05 03.3	-1.0
S39A	**Bolivar**	**3.66**	**76**	Pn	Pn	14 05 11.1	+0.2
W39A	**Magazine**	**3.68**	**117**	IAmb_Lg		14 06 13.4	
	comp=Z,20nm,0.8s						
AMTX	**Amarillo**	**3.74**	**238**	IAmb_Lg		14 06 19.8	
	comp=Z,14nm,0.8s						
U40A	**Yellville**	**4.02**	**97**	Pn	Pn	14 05 14.7	-1.2
MIAR	**Mount Ida**	**4.17**	**123**	IAmb_Lg		14 06 31.2	
	comp=Z,11nm,0.7s						
P38A	**Dawn**	**4.31**	**50**	IAmb_Lg		14 06 28.7	
	comp=Z,17nm,1.0s						
X40A	**Basin Creek Fa**	**4.72**	**119**	IAmb_Lg		14 06 51.1	
	comp=Z,9.2nm,0.7s						
N38A	**Joes South For**	**5.26**	**41**	IAmb_Lg		14 07 03.2	
	comp=Z,14nm,0.7s						
PBMO	**Poplar Bluff**	**5.92**	**89**	IAmb_Lg		14 07 34.0	
	comp=Z,9.5nm,0.7s						
JCT	**Junction City**	**6.63**	**195**	IAmb_Lg		14 07 47.9	
	comp=Z,12nm,0.9s						

MAN 21 14:26:58.1, 13°.58N×120°.95E, h1^{km}, mb3.8, ML2.6, MS2.1, Mindoro

IDC 21 14:44:40.5±64.0**, 19°.32S×176°.99W, h0^{km}, mb3.9**/3**, mb1 4.0**/3**, mb1mx3.7**/21**, mbtmp3.9**/3**, Error ellipse: s-maj=1174.0km s-min=171.4km az=82.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.16**	**243**	P	P	14 52 10.5	+0.3
	1.5nm,0.8s,baz=93,slow=11,SNR=4.0						
WRA	**Warramunga Arr**	**45.72**	**261**	P	P	14 53 03.2	-0.5
	0.5nm,0.3s,baz=97,slow=8.3,SNR=16						
ASAR	**Alice Springs**	**45.72**	**255**	P	P	14 53 03.8	0.0
	0.9nm,0.6s,baz=93,slow=8.0,SNR=22						

*IDC **21** 15:12:31.8±1.8, 22°.83N×143°.67E, h47^{km}±16^{km}, mb4.0/24, mb1 4.1/27, mb1mx4.0/47, mbtmp4.3/27, ML3.9/3, MS3.2/12, Ms1 3.2/12, ms1mx2.9/49, Error ellipse: s-maj=18.0km s-min=9.6km az=90.0*

*NEIC **21** 15:12:33.0±1.9, 22°.82N±0°.07×143°.7E±0°.2, h53^{km}±7^{km}, mb4.6/26, Error ellipse: s-maj=20.7km s-min=8.2km az=75.0*

*JMA **21** 15:12:33.8±0.1, 23°.44N×144°.63E, h70^{km}, M5.1*

ISC 21 15:12:31.4±1.5**, 22°.84N**±0°.06×**143°.72E**±0°.10**, h43^{km}**±12^{km}**, n108, σ1^{s}.17**/105**, mb4.5**/56**, MS3.1**/9**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHH2	**Haha-jima-NKT2**	**4.03**	**340**	P	**Pn**	**15 13 32.3**	**+1.7**
JHH2				*e*S	**Sn**	**15 14 16.9**	**+0.4**
CBIJ	**Chichi jima**	**4.46**	**342**	P	**Pn**	**15 13 37.6**	**+1.1**
CBIJ				*e*S	**Sn**	**15 14 26.4**	**-0.8**
JCJ	**Chichijima**	**4.46**	**342**	P	**Pn**	**15 13 37.2**	**+0.7**
	24nm,0.3s,baz=11,slow=20,SNR=41						
JCJ				S	**Sn**	**15 14 26.2**	**-0.9**
	55nm,0.3s,baz=138,slow=22,SNR=8.6						
JCJ	**Chichijima**	**4.46**	**342**	Pn	**Pn**	**15 13 38.1**	**+1.6**
GUMO	**Guam**	**9.27**	**173**	LR	LR	15 17 48.3	
	comp=Z,249nm,19.6s,baz=61,slow=34						
JOD2	**Odawara 2**	**13.02**	**343**	P	**Pn**	**15 15 33.8**	**0.0**
JHU	**Hanno**	**13.53**	**344**	P	**Pn**	**15 15 39.7**	**-1.0**
JHU				*e*S	**Sn**	**15 18 03.9**	**-5.7**
JRY	**Ryogami san**	**13.78**	**343**	P	**Pn**	**15 15 42.9**	**-1.3**
JAG	**Ashikaga**	**14.04**	**346**	P	**Pn**	**15 15 45.2**	**-2.4**
JAG				*e*S	Sn	15 18 11.7	-10
MJAR	**Matsushiro Arr**	**14.46**	**342**	P	**Pn**	**15 15 51.6**	**-1.8**
	0.1nm,0.3s,baz=161,slow=13,SNR=4.6						
MJAR				LR	LR	15 21 22.0	
	comp=Z,144nm,21.2s,baz=40,slow=37						
MJAR	**Matsushiro Arr**	**14.46**	**342**	Pn	**Pn**	**15 15 53.5**	**+0.1**
MAJO	**Matsushiro**	**14.47**	**342**	Pn	**Pn**	**15 15 53.9**	**+0.4**
MAT	**Matsushiro**	**14.47**	**342**	P	**Pn**	**15 15 51.8**	**-1.6**
JOW	**Kunigami**	**14.57**	**289**	LR	LR	15 20 41.8	
	comp=Z,150nm,20.9s,baz=228,slow=34						
JMM	**Marumori**	**15.19**	**351**		**Pn**	**15 16 02.3**	**-0.6**
JMM				IAmb	IAmb	15 16 08.8	
	comp=Z,66nm,1.4s						
KSRS	**Korea Array**	**19.92**	**321**	P	**Pn**	**15 17 01.2**	**-0.2**
	comp=Z,0.8nm,0.3s,baz=136,slow=11,SNR=19						
KSRS				LR	LR	15 23 42.2	
	comp=Z,73nm,21.1s,baz=146,slow=34						
KS19	**Wonju Array Si**	**19.99**	**321**	P	**P**	**15 17 00.2**	**0.0**
SSLB	**Suanglung**	**20.92**	**277**	P	Pn	15 17 13.3	-0.1
SSLB				IAmb	IAmb	15 17 16.0	
	comp=Z,37nm,0.9s						
ASAJ	**Asahikawa**	**21.24**	**358**	P	**P**	**15 17 14.5**	**+0.8**
	comp=Z,6.7nm,1.1s,baz=260,slow=18,SNR=1.2						
TPUB	**Ta-pu**	**21.24**	**276**	P	**P**	**15 17 16.1**	**+2.2**
H11N1	**WAKE ISLAND Hy**	**21.82**	**94**	T	T	15 39 49.0	
	baz=283,slow=74						
H11N2	**WAKE ISLAND Hy**	**21.82**	**94**	T	T	15 39 59.5	
	baz=283,slow=74						
H11N3	**WAKE ISLAND Hy**	**21.83**	**94**	T	T	15 39 57.1	
	baz=283,slow=74						
H11S3	**WAKE ISLAND Hy**	**21.92**	**97**	T	T	15 40 02.1	
	baz=283						
H11S1	**WAKE ISLAND Hy**	**21.93**	**97**	T	T	15 40 11.2	
	baz=283,slow=74						
H11S2	**WAKE ISLAND Hy**	**21.93**	**97**	T	T	15 40 12.8	
	baz=283,slow=74						
USA0B	**Ussuriysk Arra**	**23.39**	**338**	P	**P**	**15 17 35.4**	**-0.9**
USA0B				IAmb	IAmb	15 17 40.2	
	comp=Z,15nm,0.9s						
USRK	**Ussuriysk Ar.**	**23.39**	**338**	P	**P**	**15 17 36.5**	**+0.2**
	comp=Z,13nm,0.9s,baz=155,slow=8.4,SNR=15						
USRK				LR	LR	15 26 18.2	
	comp=Z,50nm,18.3s,baz=164,slow=35						
NJ2	**Nanjing**	**23.85**	**298**	*e*P	**P**	**15 17 41.1**	**+0.4**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
MDJ	**Mudanjiang**	**24.62**	**335**	P	**P**	**15 17 50.0**	**+2.4**
MDJ				pP	sP	15 18 02.6	+0.2
MDJ				sP	pwP	15 18 07.3	+3.2
MDJ				pmax	pmax		
	comp=Z,13nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,250nm,4.6s						
SIJI	**Sorong**	**26.50**	**209**	P	**P**	**15 18 04.0**	**-0.9**
	comp=Z,4.2nm,0.7s,baz=197,slow=19,SNR=2.6						
KLR	**Kul'dur**	**27.99**	**343**	P	**P**	**15 18 19.0**	**+1.1**
	comp=Z,4.7nm,0.8s,baz=137,slow=8.9,SNR=11						
PETK	**Petropavlovsk-**	**32.05**	**16**	LR	LR	15 30 55.1	
	comp=Z,33nm,20.0s,baz=180,slow=34						
PMG	**Port Moresby**	**32.22**	**174**	P	**P**	**15 18 55.7**	**0.0**
	comp=Z,6.7nm,0.6s,baz=14,slow=4.2,SNR=2.1						
XAN	**Xi'an**	**32.42**	**298**	P	**P**	**15 18 59.0**	**+1.6**
XAN				sP	pwP	15 19 14.8	+1.0
XAN				pmax	pmax		
	comp=Z,4.0nm,1.1s						
HHC	**Hu-ho-hao-te**	**32.44**	**311**	*e*P	**P**	**15 18 58.3**	**+0.7**
HHC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,84nm,5.0s						
COEN	**Coen**	**36.57**	**181**	P	**P**	**15 19 33.0**	**-0.3**
COEN				IAmb	IAmb	15 19 35.1	
	comp=Z,8.1nm,0.7s						
SBUM	**Sibu**	**36.65**	**241**	P	**P**	**15 19 33.2**	**-0.8**
SBUM				IAmb	IAmb	15 19 35.7	
	comp=Z,5.6nm,0.6s						
LZH	**Lanzhou**	**36.89**	**300**	*e*P	P	15 19 43.9	+7.8
LZH				pP	sP	15 19 50.4	-0.7
LZH				sP	pwP	15 19 53.3	+0.6
LZH				pmax	pmax		
	comp=Z,31nm,1.4s						
MTN	**Manton Dam**	**37.54**	**200**	P	**P**	**15 19 41.6**	**0.0**
SOEI	**Soe**	**37.58**	**213**	P	**P**	**15 19 39.8**	**-2.2**
SONM	**Songino Array**	**38.79**	**319**	P	**P**	**15 19 51.7**	**-0.2**
	comp=Z,1.1nm,0.5s,baz=127,slow=6.4,SNR=9.8						
SONM				LR	LR	15 35 14.0	
	comp=Z,31nm,21.0s,baz=146,slow=35						
SONM	**Songino Array**	**38.79**	**319**	P	**P**	**15 19 52.6**	**+0.7**
SEY	**Seymchan**	**40.50**	**6**	LR	LR	15 35 21.9	
	comp=Z,9.5nm,21.0s,baz=200,slow=34						
GTA	**Gaotai**	**40.62**	**304**	*e*P	**P**	**15 20 08.3**	**+1.0**
GTA				pP	pP	15 20 21.1	+3.3
GTA				sP	pwP	15 20 25.9	+1.9
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KNRA	**Kununurra**	**40.98**	**202**	P	**P**	**15 20 08.2**	**-2.1**
CMAR	**Chiang Mai Arr**	**42.01**	**273**	P	**P**	**15 20 18.9**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=67,slow=7.8,SNR=7.2						
CTAO	**Charters Tower**	**42.74**	**176**	P	**P**	**15 20 24.9**	**+0.3**
CTAO				IAmb	IAmb	15 20 25.8	
	comp=Z,15nm,0.8s						
WB0	**Warramunga Arr**	**43.31**	**193**	P	**P**	**15 20 28.9**	**-0.3**
WB0				IAmb	IAmb	15 20 30.8	
	comp=Z,10nm,1.4s						
WR0	**Warramunga Arr**	**43.47**	**193**		**P**	**15 20 30.4**	**-0.1**
WR0				IAmb	IAmb	15 21 00.2	
	comp=Z,17nm,1.6s						
WRAB	**Tennant Creek**	**43.48**	**193**	P	**P**	**15 20 30.0**	**-0.6**
WRAB				IAmb	IAmb	15 20 32.8	
	comp=Z,7.4nm,0.9s						
WB2	**Warramunga Arr**	**43.49**	**193**	P	**P**	**15 20 30.5**	**-0.2**
WB2				IAmb	IAmb	15 20 32.9	
	comp=Z,9.0nm,0.9s						
WRA	**Warramunga Arr**	**43.49**	**193**	P	**P**	**15 20 30.2**	**-0.5**
	comp=Z,3.5nm,0.5s,baz=17,slow=8.9,SNR=87						
WRA				PcP	**PcP**	**15 22 18.0**	**-0.2**
	comp=Z,2.1nm,0.9s,baz=9.3,slow=3.9,SNR=5.1						
WRA				ScP	**ScP**	**15 26 04.4**	**-1.8**
	comp=Z,0.9nm,1.0s,baz=21,slow=3.9,SNR=3.7						
WRA	**Warramunga Arr**	**43.49**	**193**	P	**P**	**15 20 30.3**	**-0.4**
FITZ	**Fitzroy Crossi**	**44.36**	**205**	P	**P**	**15 20 37.2**	**-0.4**
	comp=Z,2.9nm,0.6s,baz=24,slow=8.1,SNR=14						
FITZ				PcP	**PcP**	**15 22 21.4**	**+0.3**
	comp=Z,1.5nm,0.7s,baz=90,slow=5.1,SNR=2.0						
LEM	**Lembang**	**46.00**	**234**	P	**P**	**15 20 51.2**	**+0.2**
	comp=Z,16nm,0.5s,baz=30,slow=12,SNR=4.2						
AS31	**Alice Springs**	**47.20**	**192**	P	**P**	**15 20 59.7**	**-0.3**
ASAR	**Alice Springs**	**47.20**	**192**	P	**P**	**15 20 59.8**	**-0.3**
	comp=Z,1.3nm,0.4s,baz=13,slow=6.7,SNR=50						
ASAR				PcP	**PcP**	**15 22 31.1**	**0.0**
	comp=Z,1.2nm,0.8s,baz=18,slow=3.8,SNR=8.4						
ASAR				ScP	**ScP**	**15 26 18.9**	**-2.6**
	comp=Z,0.2nm,0.8s,baz=2.4,slow=4.0,SNR=2.5						
ASAR	**Alice Springs**	**47.20**	**192**	P	**P**	**15 20 59.5**	**-0.5**
ASAR					**PcP**	**15 22 30.4**	**-0.6**
DZM	**Mont Dzumac**	**49.83**	**152**	P	**P**	**15 21 20.3**	**0.0**
	comp=Z,5.6nm,0.9s,baz=344,slow=7.4,SNR=2.3						
WMQ	**Urumqi**	**50.25**	**309**	*e*P	**P**	**15 21 26.0**	**+2.6**
WMQ				sP	pwP	15 21 43.3	+3.0
WMQ				pmax	pmax		
	comp=Z,10.0nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,17nm,3.7s						
WMQ				LR	LR		
	comp=N,270nm,29.3s						
WMQ				LR	LR		
	comp=E,640nm,28.9s						
WMQ				LR	LR		
	comp=Z,65nm,24.9s						
TAPN	**Taplejung**	**50.57**	**287**	*e*P	**P**	**15 21 27.0**	**+0.7**
	comp=Z,8.9nm,0.5s						
ODAN	**Odare**	**50.92**	**287**	*e*P	**P**	**15 21 29.0**	**+0.1**
	comp=Z,11nm,0.6s						
RAMN	**Ramite**	**51.60**	**287**	*e*P	**P**	**15 21 34.4**	**+0.4**
	comp=Z,7.0nm,0.4s						
JIRN	**Jiri**	**51.86**	**288**	*e*P	**P**	**15 21 36.5**	**+0.4**
	comp=Z,16nm,0.7s						
GUN	**Gumba**	**52.10**	**288**	*e*P	**P**	**15 21 39.1**	**+1.3**
	comp=Z,6.1nm,0.4s						
PKI	**Pulchoki**	**52.56**	**288**	*e*P	**P**	**15 21 41.6**	**+0.4**
	comp=Z,5.5nm,0.5s						
PKIN	**Phulchoki**	**52.57**	**288**	*e*P	**P**	**15 21 42.0**	**+0.8**
	comp=Z,6.6nm,0.5s						
KKN	**Kakani**	**52.64**	**288**	*e*P	**P**	**15 21 41.9**	**+0.2**
	comp=Z,6.4nm,0.4s						
DMN	**Daman**	**52.82**	**288**	*e*P	**P**	**15 21 44.1**	**+1.0**
GKN	**Gorkha**	**53.17**	**289**	*e*P	**P**	**15 21 46.5**	**+1.0**
	comp=Z,10nm,0.6s						
ZALV	**Zalesovo Beam**	**53.63**	**321**	P	**P**	**15 21 47.5**	**-0.8**
	comp=Z,0.9nm,0.4s,baz=97,slow=8.3,SNR=5.4						
ZALV				PcP	**PcP**	**15 22 53.0**	**-1.2**
	comp=Z,0.6nm,0.3s,baz=122,slow=4.2,SNR=1.6						
ZALV				LR	LR	15 44 53.9	
	comp=Z,23nm,19.7s,baz=82,slow=36						
DANN	**Dangsing**	**53.88**	**289**	*e*P	**P**	**15 21 51.3**	**+0.4**
	comp=Z,51nm,0.7s						
KOLN	**Koldanda**	**54.11**	**289**	*e*P	**P**	**15 21 52.6**	**+0.1**
	comp=Z,9.2nm,0.7s						
MK31	**Makanchi Array**	**54.30**	**312**	P	**P**	**15 21 54.0**	**+0.7**
MK31				IAmb	IAmb	15 22 13.7	
	comp=Z,6.7nm,0.9s						
MKAR	**Makanchi Array**	**54.30**	**312**	P	**P**	**15 21 54.0**	**+0.7**
	comp=Z,1.9nm,0.4s,baz=87,slow=9.4,SNR=43						
STKA	**Stephens Creek**	**54.44**	**182**	P	**P**	**15 21 53.5**	**-0.9**
	comp=Z,2.7nm,0.5s,baz=11,slow=8.2,SNR=13						
STKA	**Stephens Creek**	**54.44**	**182**	P	**P**	**15 21 53.3**	**-1.1**
MAKZ	**Makanchi**	**54.51**	**312**	P	**P**	**15 21 55.5**	**+0.6**
PYUN	**Piuthan**	**54.59**	**289**	*e*P	**P**	**15 21 56.3**	**+0.3**
	comp=Z,12nm,0.4s						
KURK	**Kurchatov**	**56.98**	**317**	P	**P**	**15 22 12.1**	**-0.3**
NRIK	**Noril'sk**	**57.10**	**339**	LR	LR	15 47 39.4	
	comp=Z,14nm,22.0s,baz=166,slow=37						
KSH	**Kashi**	**59.01**	**303**	P	**P**	**15 22 29.8**	**+2.7**
KSH				pP	sP	15 22 42.6	+0.1
KSH				sP	pwP	15 22 47.0	+2.8
KSH				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ILAR	**Eielson Array**	**60.80**	**27**	P	**P**	**15 22 38.6**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=253,slow=5.0,SNR=9.4						
ILAR	**Eielson Array**	**60.80**	**27**	P	**P**	**15 22 37.5**	**-1.3**
BRVK	**Borovoye**	**62.19**	**319**	P	**P**	**15 22 48.1**	**-0.2**
BRVK				IAmb	IAmb	15 23 09.2	
	comp=Z,6.5nm,0.7s						
KKAR	**Karatay Array**	**62.74**	**308**	P	**P**	**15 22 52.9**	**+0.7**
INK	**Inuvik**	**66.33**	**24**	P	**P**	**15 23 15.4**	**+0.3**
	comp=Z,0.5nm,0.3s,baz=293,slow=7.8,SNR=9.5						
ABKAR	**Akbulak array**	**69.08**	**316**	P	**P**	**15 23 32.5**	**-0.3**
ABKAR	**Akbulak array**	**69.08**	**316**	P	**P**	**15 23 32.5**	**-0.3**
ABKAR				IAmb	IAmb	15 23 53.8	
	comp=Z,3.7nm,0.8s						
YKA	**Yellowknife Ar**	**75.22**	**28**	P	**P**	**15 24 10.2**	**+1.0**
	comp=Z,1.5nm,0.5s,baz=301,slow=4.2,SNR=7.5						
ARCES	**ARCESS Array B**	**78.00**	**342**	P	**P**	**15 24 24.8**	**-0.1**
	comp=Z,2.2nm,0.8s,baz=68,slow=7.9,SNR=3.7						
CMB	**Columbia Colle**	**80.68**	**53**	P	**P**	**15 24 41.3**	**+1.1**
CMB				IAmb	IAmb	15 24 42.7	
	comp=Z,4.8nm,0.8s						
KBZ	**Khabaz**	**81.93**	**314**	P	**P**	**15 24 46.2**	**-0.3**
	comp=Z,5.0nm,0.9s,baz=74,slow=6.3,SNR=6.9						
KVAR	**Kislovodsk Arr**	**81.98**	**314**	LR	LR	16 05 32.3	
	comp=Z,9.5nm,21.1s,baz=78,slow=39						
NVAR	**Mina Array Bea**	**82.05**	**52**	P	**P**	**15 24 48.3**	**+0.7**
	comp=Z,2.4nm,0.7s,baz=273,slow=5.5,SNR=23						
NVAR	**Mina Array Bea**	**82.05**	**52**	P	**P**	**15 24 49.0**	**+1.3**
FINES	**FINESS Array B**	**82.37**	**335**	P	**P**	**15 24 47.4**	**-1.1**
	comp=Z,2.0nm,0.5s,baz=69,slow=4.4,SNR=24						
RLMT	**Red Lodge**	**85.33**	**43**	P	**P**	**15 25 05.3**	**+1.0**
RLMT				IAmb	IAmb	15 25 07.3	
	comp=Z,5.6nm,0.8s						
PDAR	**Pinedale Array**	**86.24**	**45**	P	**P**	**15 25 08.3**	**-0.6**
	comp=Z,0.9nm,0.8s,baz=225,slow=0.2,SNR=5.9						
PDAR				LR	LR	15 59 00.2	
	comp=Z,19nm,19.5s,baz=296,slow=32						
AKASG	**Malin Array Be**	**86.87**	**325**	P	**P**	**15 25 09.7**	**-1.7**
	comp=Z,0.4nm,0.4s,baz=51,slow=5.4,SNR=6.3						
SNAA	**Sanae**	**127.56**	**193**	PKPdf	**PKiKP**	**15 31 31.8**	**+0.2**
TORD	**Torodi Ar. Bea**	**128.40**	**310**	PKP	**PKPdf**	**15 31 33.9**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=20,slow=4.6,SNR=3.1						
VNA2	**Neumayer--Watz**	**129.05**	**192**	PKPdf	**PKiKP**	**15 31 35.8**	**+1.3**
VNA3	**Neumayer Olymp**	**129.20**	**191**	PKPdf	**PKiKP**	**15 31 35.7**	**+0.9**
VNA1	**Neumayer--Stat**	**129.44**	**192**	PKPdf	**PKPdf**	**15 31 34.8**	**+0.3**
PLCA	**Paso Flores**	**146.12**	**130**	PKPbc	**PKPdf**	**15 32 06.5**	**+0.5**
	comp=Z,4.2nm,0.6s,baz=259,slow=2.4,SNR=9.1						
PLCA	**Paso Flores**	**146.12**	**130**	PKPbc	**PKPab**	**15 32 08.2**	**+0.5**

NOU 21 15:27:17.4, 18°.82S×168°.99E, h115^{km}, MLv4.2/18**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTV	**Rentapao**	**1.15**	**332**	P	Pn	15 27 41.5	+0.9
DVP	**Devils Point**	**1.33**	**325**	P	Pn	15 27 43.3	+0.8
LIFNC	**LIFOU**	**2.55**	**220**	P	Pn	15 27 56.4	-1.2
MARNC	**Mare, Loyalty**	**2.80**	**199**	P	Pn	15 27 59.9	-1.0
SANVU	**Saraoutou**	**3.76**	**333**	P	Pn	15 28 13.2	-0.5
YATNC	**Mamie plateau,**	**3.78**	**211**	P	Pn	15 28 12.6	-1.3
DZM	**Mont Dzumac**	**4.02**	**216**	P	Pn	15 28 17.7	+0.5
PINNC	**Pines Island,**	**4.04**	**201**	P	Pn	15 28 18.2	+0.8
OUENC	**Ouen Island, N**	**4.11**	**209**	P	Pn	15 28 19.3	+1.0
NOUC	**Port Laguerre**	**4.12**	**217**	P	Pn	15 28 19.1	+0.6
ONTNC	**Ouen Toro**	**4.21**	**214**	P	Pn	15 28 20.4	+0.8
KOUNC	**Koumac, New Ca**	**4.75**	**248**	P	Pn	15 28 27.2	+0.2

NEIC ***21*** *15:32:12.3±2.5,0°.99N±0°.08×127°.6E±0°.1,h10^{km}±1^{km}, mb4.5/13,Error ellipse: s-maj=18.1km s-min=13.0km az=241.0*

DJA ***21*** *15:32:14.4±0.5,1°N±2°×12°7E±°,h13^{km}±4^{km},M4.3/17, mb4.8/13,mB4.8/7,MLv4.2/17,Mw(mB)4.1/7*

IDC ***21*** *15:32:16.3±3.2,0°.93N×127°.56E,h41^{km}±32^{km},mb4.1/11, mb1 4.2/14,mb1mx3.8/38,mbtmp4.3/14,ML3.7/3,MS3.4/17, Ms1 3.4/17,ms1mx3.2/45,Error ellipse: s-maj=26.0km s-min=13.8km az=83.0*

ISC 21 15:32:12.7±0.5,**0°.97N**±0°.05×**127°.59E**±0°.05,**h10**^{km},**n71,** σ**1^s.97**/67,**mb4.5**/22,**MS3.4**/14,**1C,Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	0.30	229		Pg	15 32 17.5	-1.2
LBMI	Labuha	1.60	183	P	Pn	15 32 41.2	+0.1
LBMI				S	Sg	15 33 04.1	-0.1
SANI	Sanana	3.40	208	P	Pn	15 33 04.7	-1.1
SANI				S	Sn	15 33 49.4	+3.1
KMSI	Cibinong	3.63	264	P	Pn	15 33 09.2	+0.2
KMSI				S	Sn	15 33 51.0	-1.0
SWI	Sorong	4.09	116	P	Pn	15 33 17.7	+2.3
SWI				S	Sn	15 34 07.6	+4.2
SIJI	Sorong	4.10	116	P	Pn	15 33 17.0	+1.5
	3.3nm,0.3s,baz=108,slow=23,SNR=29						
SIJI				S	Sn	15 33 58.3	-5.4
	1.3nm,0.3s,baz=291,slow=16,SNR=3.7						
MSAI	Masohi	4.49	163	P	Pn	15 33 24.7	+3.9
GTOI	Gorontalo	4.59	266	P	Pn	15 33 23.7	+1.5
GTOI				S	Sn	15 34 16.2	+0.5
AAI	Ambon	4.66	173	P	Pn	15 33 28.4	+5.2
LUWI	Luwuk	5.22	248	P	Pn	15 33 32.2	+1.4
	0.7nm2µm104nm,0.7s						
LUWI	Luwuk	5.22	248	Pn	Pn	15 33 31.6	+0.8
MRSI	Marisa	5.67	265	P	Pn	15 33 38.7	+1.6
	0.3nm817nm59nm,0.6s						
FAKI	Fak Fak	6.05	130	Pn	Pn	15 33 45.4	+3.0
APSI	Ampana	6.23	253	P	Pn	15 33 47.0	+2.2
	0.2nm529nm48nm,0.9s						
TOLI2	Tolitoli	6.81	271		Pn	15 33 52.7	-0.1
MPSI	Mapaga	7.72	265	P	Pn	15 34 06.8	+1.6
	0.1nm391nm24nm,0.7s						
TTSI	Tana Toraja	8.73	243	P	Pn	15 34 18.8	-0.4
	0.2nm811nm49nm,0.6s						
BNSI	Bone	9.19	234	P	Pn	15 34 25.0	-0.4
	56nm,0.7s						
SPSI	Sidrap Palu	9.23	238	P	Pn	15 34 27.2	+1.3
	686nm75nm,0.6s						
BKSI	Bulukumba	9.73	230	P	Pn	15 34 33.0	+0.1
	34nm,0.7s						
KAPI	Kappang	9.83	233	P	Pn	15 34 34.4	+0.2
	2.3nm,0.3s,baz=64,slow=12,SNR=8.3						
KAPI				LR	LR	15 39 25.9	
	comp=Z,91nm,21.8s,baz=74,slow=44						
EDFI	Ende, Flores	11.30	211	P	Pn	15 34 55.9	+1.4
	9.3nm,1.0s						
BATI	Baumata	11.77	199	LR	LR	15 39 57.1	
	comp=Z,167nm,20.4s,baz=16,slow=39						
JAY	Jayapura	13.56	105	LR	LR	15 40 24.4	
	comp=Z,350nm,20.0s,baz=298,slow=36						
MTN	Manton Dam	14.16	166	Pn	Pn	15 35 36.6	+3.1
KNRA	Kununurra	16.58	176		Pn	15 36 03.6	-1.9
FITZ	Fitzroy Crossi	19.04	186	P	P	15 36 33.8	-1.4
	0.1nm,0.3s,baz=270,slow=24,SNR=18						
GUMO	Guam	21.21	53	P	P	15 36 58.8	+0.1
	37nm,0.3s,baz=233,slow=19,SNR=2.0						
LEM	Lembang	21.38	248	LR	LR	15 46 29.3	
	comp=Z,89nm,19.0s,baz=24,slow=40						
WB0	Warramunga Arr	21.66	162	P	P	15 37 02.5	-1.1
WB0				IAmb	IAmb	15 37 09.4	
	comp=Z,18nm,0.8s						
WRAB	Tennant Creek	21.80	163	P	P	15 37 05.4	+0.3
WRA	Warramunga Arr	21.81	163	P	P	15 37 05.0	-0.2
	comp=Z,18nm,0.6s,baz=341,slow=11,SNR=114						
WRA	Warramunga Arr	21.81	163	P	P	15 37 04.3	-0.9
WB2	Warramunga Arr	21.81	163	P	P	15 37 04.1	-1.2
WR0	Warramunga Arr	21.89	162	P	P	15 37 06.2	+0.1
WR0				IAmb	IAmb	15 37 11.8	
	comp=Z,14nm,0.7s						
PMG	Port Moresby	22.05	118	LR	LR	15 48 15.2	
	comp=Z,219nm,19.9s,baz=299,slow=44						
AS31	Alice Springs	25.24	166	P	P	15 37 38.0	-1.1
AS31				IAmb	IAmb	15 37 46.6	
	comp=Z,7.1nm,0.7s						
ASAR	Alice Springs	25.25	166	P	P	15 37 38.6	-0.5
	comp=Z,13nm,0.7s,baz=352,slow=6.8,SNR=78						
ASAR	Alice Springs	25.25	166	P	P	15 37 37.4	-1.8
PSI	Prapat	28.71	274	LR	LR	15 49 36.1	
	comp=Z,61nm,21.4s,baz=90,slow=36						
CMAR	Chiang Mai Arr	33.05	303	LR	LR	15 51 28.9	
	comp=Z,31nm,20.8s,baz=184,slow=35						
HNR	Honiara	33.84	109	LR	LR	15 55 02.4	
	comp=Z,101nm,18.9s,baz=247,slow=40						
STKA	Stephens Creek	35.26	159	P	P	15 39 06.8	-0.9
	comp=Z,6.4nm,0.6s,baz=335,slow=9.1,SNR=18						
STKA				LR	LR	15 53 51.9	
	comp=Z,73nm,21.1s,baz=8.2,slow=37						
KSRS	Korea Array	36.31	0	P	P	15 39 15.9	-0.7
	comp=Z,0.9nm,0.7s,baz=185,slow=12,SNR=2.0						
KSRS				LR	LR	15 58 32.5	
	comp=Z,13nm,18.5s,baz=168,slow=43						
MJAR	Matsushiro Arr	36.74	14	P	P	15 39 18.8	-1.5
	comp=Z,1.4nm,0.8s,baz=171,slow=11,SNR=2.7						
MJAR				LR	LR	15 52 29.4	
	comp=Z,63nm,22.0s,baz=240,slow=33						
MAT	Matsushiro	36.74	14	P	P	15 39 24.0	+3.7
XAN	Xi'an	37.26	334	⇑P	P	15 39 24.4	-0.4
XAN				pmax	pmax		
	comp=Z,7.0nm,1.4s						
LZH	Lanzhou	41.31	330	*e*P	P	15 40 02.8	+4.0
LZH				pmax	pmax		
	comp=Z,16nm,1.1s						
HHC	Hu-ho-hao-te	42.27	342	*e*P	P	15 40 10.3	+3.7
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,140nm,5.4s						
ASAJ	Asahikawa	44.99	15	P	P	15 40 29.0	+0.7
	comp=Z,27nm,1.4s,baz=170,slow=19,SNR=1.3						
ASAJ				LR	LR	16 00 39.3	
	comp=Z,48nm,18.1s,baz=150,slow=38						
GTA	Gaotai	45.90	330	*e*P	P	15 40 38.9	+3.2
GTA				pmax	pmax		
	comp=Z,3.0nm,1.4s						
ULN	Ulaanbaatar	49.99	342	P	P	15 41 08.0	+0.7
ULN				IAmb	IAmb	15 41 14.0	
	comp=Z,5.1nm,1.1s						
SONM	Songino Array	50.17	342	P	P	15 41 08.1	-0.6
	comp=Z,1.1nm,0.8s,baz=161,slow=9.1,SNR=6.5						
SONM				LR	LR	16 03 03.2	
	comp=Z,23nm,19.2s,baz=216,slow=37						
WMQ	Urumqi	55.47	326	*e*P	P	15 41 50.1	+2.3
PETK	Petropavlovsk-	57.66	21	LR	LR	16 04 56.3	
	comp=Z,26nm,21.8s,baz=180,slow=34						
MK31	Makanchi Array	60.30	326	P	P	15 42 20.2	-1.4
MK31				IAmb	IAmb	15 42 32.2	
	comp=Z,2.5nm,0.9s						
MKAR	Makanchi Array	60.30	326	P	P	15 42 21.1	-0.6
	comp=Z,2.1nm,0.6s,baz=119,slow=7.1,SNR=30						
MKAR				LR	LR	16 11 19.8	
	comp=Z,42nm,18.3s,baz=154,slow=39						
MKAR	Makanchi Array	60.30	326	P	P	15 42 19.9	-1.8
MAKZ	Makanchi	60.49	326	P	P	15 42 20.5	-2.5
MAKZ				IAmb	IAmb	15 42 35.4	
	comp=Z,3.6nm,0.9s						
KSH	Kashi	60.60	316	P	P	15 42 25.0	+1.0
KSH				pmax	pmax		
	comp=Z,9.0nm,1.4s						
ZALV	Zalesovo Beam	63.42	333	P	P	15 42 42.3	-0.2
	comp=Z,0.4nm,0.4s,baz=136,slow=11,SNR=1.6						
ZALV				LR	LR	16 10 59.2	
	comp=Z,24nm,18.1s,baz=102,slow=37						
GAR	Garm	64.42	313	P	P	15 42 48.3	-1.3
KKAR	Karatay Array	65.83	318	P	P	15 42 57.9	-0.7
ABKAR	Akbulak array	74.82	321	P	P	15 43 53.9	+0.5
VNDA	Vanda	80.60	173	P	P	15 44 23.7	-1.3
	comp=Z,0.9nm,0.9s,baz=306,slow=8.8,SNR=4.7						
PPT	Papeete	83.46	108	LR	LR	16 18 06.6	
	comp=Z,27nm,21.3s,baz=256,slow=33						
KOLS	Kolonicke sedl	99.30	320	*e*PDIFF	Pdif	15 45 55.2	0.0
VYHS	Vyhne	101.61	320	*e*PDIFF	Pdif	15 46 04.3	-1.2
VNA2	Neumayer--Watz	104.37	194	Pdiff	Pdif	15 46 13.8	-3.5
VNA3	Neumayer Olymp	104.68	193	Pdiff	Pdif	15 46 15.1	-3.5
VNA1	Neumayer--Stat	104.77	194	Pdiff	Pdif	15 46 15.9	-3.1

INET ***21*** *15:34:50.7,10°.28N×84°.27W,h15^{km},ML3.0*

UCR 21 15:34:53.7±0.9,**10°.18N**×**84°.27W,h86**^{km}±2^{km},**MW3.6, 10D,Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRPO	Crater poas	0.04	71	*e*P	Pn	15 35 06.1	-0.1
SRA1	San Ramn	0.23	246	*e*P	Pn	15 35 06.2	-0.3
SRA1				*e*S	Sn	15 35 16.0	+0.1
HDC	Heredia	0.23	140	*e*P	Pn	15 35 06.5	0.0
HDC3	Heredia 3	0.23	139	*e*P	Pn	15 35 06.5	0.0
RIFO	Rio Frio, Sara	0.36	68	*e*P	Pn	15 35 07.0	0.0
LCR2	La Lucha 2	0.51	149	*e*P	Pn	15 35 08.2	-0.2
VTUC	Crater, Volcan	0.52	107	*e*P	Pn	15 35 08.7	+0.1
ARE1	Arenal 1	0.52	302	*e*P	Pn	15 35 08.5	+0.2
CASO	Castillo	0.52	299	⇓*i*P	Pn	15 35 08.4	+0.2
CEDE	Laguna Cedeo	0.53	305	⇓*i*P	Pn	15 35 08.4	+0.1
CEDE				*i* S	Sn	15 35 20.2	+1.0
COVE	Coope Vega, Sa	0.55	346	*e*P	Pn	15 35 08.2	-0.3
RIMA	Rio Macho	0.57	136	*e*P	Pn	15 35 08.8	-0.1
JTS	Las Juntas de	0.68	279	*e*P	Pn	15 35 09.6	-0.1
LAFE	Finca La Fe, P	0.73	240	*e*P	Pn	15 35 11.0	+0.8
CDM	Cerro de Muert	0.80	141	*e*P	Pn	15 35 11.1	-0.3
ACAL	Aguas Claras	0.88	301	*i* P	Pn	15 35 12.0	+0.2
PTEN	Parque Tenorio	0.89	307	*i* P	Pn	15 35 11.9	0.0
CUI	Cuipilapa	1.00	298	⇓*i*P	Pn	15 35 13.3	+0.1
CUI				*e*P		15 35 13.4	
CUI				*e*S	Sn	15 35 28.5	+0.7
EDDO	Dominical	1.00	157	*e*P	Pn	15 35 13.9	+0.7
EDDO				*e*S	Sn	15 35 28.5	+0.8
COLC	Colonia	1.04	298	⇓*i*P	Pn	15 35 13.7	+0.1
HORNC	Hornillas	1.04	301	⇓*i*P	Pn	15 35 13.7	0.0
PLVR	Palo Verde	1.08	279	*e*P	Pn	15 35 14.2	-0.1
GUAB	Guayabo de Bag	1.08	299	⇓*i*P	Pn	15 35 14.2	+0.1
LIM1	Limonal	1.10	298	⇓*i*P	Pn	15 35 14.4	+0.1
DUNO	Dulce Nombre,	1.21	265	*e*P	Pn	15 35 16.0	+0.3
GUAI	GUAI	1.23	274	*i* P	Pn	15 35 16.5	+0.7
VRLE	La Escondida,	1.24	299	*e*P	Pn	15 35 16.2	+0.1
BUAI	Buenos Aires	1.25	304	⇓*i*P	Pn	15 35 16.2	0.0
INDI	Punta indio, G	1.26	256	*e*P	Pn	15 35 15.8	-0.4
GB1A	Borinquen Arri	1.28	300	*i* P	Pn	15 35 16.8	+0.2
LAPC	Finca la Perla	1.29	297	⇓*i*P	Pn	15 35 16.5	-0.1
SRBA	San Rafael, Bu	1.30	136	*e*P	Pn	15 35 16.8	-0.1
GBS3	Finca Las Img	1.31	297	⇓*i*P	Pn	15 35 16.8	-0.1
DRK0	Durika	1.36	132	*e*P	Pn	15 35 17.6	-0.1
GRZA	Playa Garza	1.37	259	*e*P	Pn	15 35 17.2	-0.4
SAJU	San Juanillo,	1.43	266	*e*P	Pn	15 35 17.8	-0.5

IDC ***21*** *15:51:24.4±1.4,25°.47N×130°.90E,h0^{km},mb3.5/2, mb1 3.8/6,mb1mx3.4/49,mbtmp3.7/6,ML3.1/3,Error ellipse: s-maj=44.0km s-min=20.9km az=81.0*

JMA ***21*** *15:51:27.5,25°.60N×130°.84E,h30^{km}±2^{km},M4.1*

ISC 21 15:51:27.3±1.2,**25°.55N**±0°.07×**130°.82E**±0°.06,**h21**^{km}±5^{km}, **n25,**σ**1^s.72**/42,**Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMZ	Minamidaito 2	0.45	54	P	Pb	15 51 36.3	-0.2
JMZ				*e*S	Sb	15 51 42.5	-0.3
JKDJ	Kitadaitoujima	0.59	47	P	Pb	15 51 38.2	-0.8
JKDJ				*e*S	Sb	15 51 46.0	-0.9
JYRO	Yoronjima	2.58	305	P	Pn	15 52 09.2	+1.4
JYRO				S	Sn	15 52 37.8	-0.8
JOW	Kunigami	2.62	300	Pn	Pn	15 52 09.1	+0.8
	20nm,0.3s,baz=113,slow=22,SNR=94						
JOW				Sn	Sn	15 52 38.2	-1.2
	128nm,0.3s,baz=102,slow=25,SNR=25						
JOW	Kunigami	2.62	300	P	Pn	15 52 09.7	+1.4
JOW				S	Sn	15 52 38.7	-0.8
JNTH	Nagotoyohara	2.69	292	P	Pn	15 52 09.5	+0.2
JNTH				S	Sn	15 52 39.8	-1.5
JOKE	Okinoerabujima	2.70	312	P	Pn	15 52 10.9	+1.4
JOKE				S	Sn	15 52 40.7	-0.9
JTK	Tokunoshima	2.78	324	P	Pn	15 52 11.9	+1.3
JTK				S	Sn	15 52 43.3	-0.3
JJT3	Tamagusuku3	2.80	283	P	Pn	15 52 12.0	+1.2
JJT3				S	Sn	15 52 44.3	+0.4
JZK	Kikaishima	2.85	345	S	Sn	15 52 47.2	+1.9
JIH	Iheya	2.96	301	P	Pn	15 52 14.6	+1.7
JIH				S	Sn	15 52 47.1	-0.7
JAM	Amami Oshima	3.05	340	P	Pn	15 52 15.4	+1.2
JAM				S	Sn	15 52 49.8	-0.3
JAMN	Amaminishikomi	3.06	332	P	Pn	15 52 15.3	+0.9
JAMN				S	Sn	15 52 49.6	-0.7
JAGN	Aguni-jima	3.38	289	P	Pn	15 52 19.5	+0.7
JAGN				S	Sn	15 52 58.2	0.0
JKE	Kume jima 2	3.71	283	S	Sn	15 53 04.4	-2.0
JTAJ	Takarajima	3.87	339	P	Pn	15 52 26.3	+0.8
JTAJ				S	Sn	15 53 08.4	-1.8
JNN	Nakanoshima	4.36	349	S	Sn	15 53 21.8	-0.6
JOGS	Gusukube	4.96	262	S	Sn	15 53 35.5	-1.9
JTJ	Tarama	5.62	262	P	Pn	15 52 49.3	-0.3
JTJ				S	Sn	15 53 49.8	-3.7
JTZ	Takazaki	6.33	2	P	Pn	15 53 00.8	+1.4
JTZ				S	Sn	15 54 07.4	-3.7
JNU	Nakatsue	7.55	0	Pn	Pn	15 53 16.7	+0.6
	baz=124,slow=1.0,SNR=1.0						
JNU				Sn	Sn	15 54 34.8	-6.2
	2.1nm,0.3s,baz=175,slow=3.3,SNR=2.1						
KSRS	Korea Array	12.12	349	Pn	Pn	15 54 20.4	+1.7
	0.1nm,0.3s,baz=170,slow=14,SNR=2.9						
MJAR	Matsushiro Arr	12.65	28	Pn	Pn	15 54 26.6	+0.6
	0.0nm,0.3s,baz=240,slow=10,SNR=1.5						
WRA	Warramunga Arr	45.35	175	P	P	15 59 43.1	-1.0
	0.3nm,0.8s,baz=355,slow=8.5,SNR=8.9						
ASAR	Alice Springs	49.02	176	P	P	16 00 12.8	+0.1
	0.4nm,0.6s,baz=0.0,slow=11,SNR=11						

IDC ***21*** *16:11:26.5±1.1,34°.92S×71°.58W,h0^{km},mb4.2/9, mb1 4.2/10,mb1mx4.0/37,mbtmp4.2/10,ML3.6/1,MS3.0/3, Ms1 2.9/3,ms1mx2.7/21,Error ellipse: s-maj=40.1km s-min=19.5km az=97.0*

NEIC ***21*** *16:11:33.7±1.6,34°.94S±0°.04×71°.72W±0°.09,h47^{km}±3^{km}, Error ellipse: s-maj=10.3km s-min=5.7km az=93.0*

GUC ***21*** *16:11:34.2±0.5,34°.95S×71°.63W,h46^{km}±2^{km},ML4.2*

SJA ***21*** *16:11:34.0,34°.85S×71°.72W,h21^{km},ML4.4*

ISC 21 16:11:33.2±0.7,**34°.95S**±0°.03×**71°.70W**±0°.05,**h47**^{km}±7^{km}, **n110,**σ**1^s.49**/106,**mb4.3**/9,**5C-6D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO05	Huala	0.20	252	⇓*i*P	Pn	16 11 42.4	+1.1
GO05				*i* S	Sn	16 11 48.6	+1.5
GO05				IAML		16 11 49.6	
	comp=N,17µm,0.2s						
GO05	Huala	0.20	252		Pn	16 11 42.4	+1.1
GO05	Huala	0.20	252	*i* P	Pn	16 11 42.0	+0.7
BO01	Tunca	0.75	42	⇓*i*P	Pn	16 11 47.9	+0.3
BO01				*i* S	Sn	16 11 57.9	0.0
BO01	Tunca	0.75	42		Pn	16 11 47.8	+0.3
BO01	Tunca	0.75	42	*i* P	Pn	16 11 47.0	-0.5
BO02	Sierra Bellavi	0.77	79	⇓*i*P	Pn	16 11 48.0	+0.1
BO02				*i* S	Sn	16 11 58.3	-0.2
BO02	Sierra Bellavi	0.77	79		Pn	16 11 47.7	-0.1
BO02	Sierra Bellavi	0.77	79	*i* P	Pn	16 11 47.0	-0.8
ML02	Panimavida	0.84	164	⇑*i*P	Pn	16 11 49.2	+0.4
ML02				*i* S	Sn	16 12 00.5	+0.4
ML02				IAML		16 12 02.2	
	comp=E,6µm,0.6s						
ML02	Panimavida	0.84	164		Pn	16 11 49.1	+0.4
MT01	Popeta	1.14	19	⇓*i*P	Pn	16 11 53.8	+1.0
MT01				*i* S	Sn	16 12 08.3	+0.9
MT01				IAML		16 12 11.5	
	comp=E,11µm,0.2s						
MT01	Popeta	1.14	19		Pn	16 11 53.8	+1.0
MT01	Popeta	1.14	19	*i* P	Pn	16 11 54.0	+1.2
VA05	Santo Domingo	1.29	3	⇑*i*P	Pn	16 11 55.4	+0.6
VA05	Santo Domingo	1.29	3		Pn	16 11 55.2	+0.5
MT09	Talagante	1.31	27	⇓*i*P	Pn	16 11 55.9	+0.6
MT09				*i* S	Sn	16 12 12.6	+1.0
MT09				IAML		16 12 15.8	
	comp=N,16µm,0.2s						
MT09	Talagante	1.31	27		Pn	16 11 55.8	+0.6
BO04	La Punta	1.31	44	⇓*i*P	Pn	16 11 55.4	+0.2
BO04				*i* S	Sn	16 12 12.0	+0.4
BO04				IAML		16 12 15.3	
	comp=E,14µm,0.2s						
LMEL	Las Melosas	1.65	49	*e*P	Pn	16 12 00.6	+0.7
LMEL				*i* S	Sn	16 12 20.9	+0.9
LMEL				IAML		16 12 24.3	
	comp=N,5µm,0.2s						
MT05	Renca	1.75	27	*e*P	Pn	16 12 02.1	+1.0
MT05				*e*S	Sn	16 12 24.6	+2.5
MT05				IAML		16 12 30.6	
	comp=E,5µm,0.2s						
MT05	Renca	1.75	27		Pn	16 12 02.0	+0.9
MT05	Renca	1.75	27	*i* P	Pn	16 12 02.0	+0.9
MT02	Curacav	1.75	16	⇑*i*P	Pn	16 12 02.0	+0.9
MT02	Curacav	1.75	16	Pn	Pn	16 12 02.0	+0.9
MT02	Curacav	1.75	16	*i* P	Pn	16 12 02.0	+0.9
VA01	Torpederas	1.92	1		Pn	16 12 04.1	+0.7
VA01	Torpederas	1.92	1	*i* P	Pn	16 12 04.0	+0.6
PEL	Peldehue	1.99	25		Pn	16 12 05.5	+1.1
PEL	Peldehue	1.99	25	*i* P	Pn	16 12 05.0	+0.6
ROC1	El Roble	2.05	16	*i* P	Pn	16 12 06.0	+0.6
EDS3	Malargue	2.05	114	*i* P	Pn	16 12 09.0	+3.7
ROCH	El Roble	2.05	16	⇑*i*P	Pn	16 12 06.5	+1.0
BI05	Punta Hualpn	2.17	214	*e*P	Pn	16 12 08.3	+1.5
VA03	San Esteban	2.38	24	*e*P	Pn	16 12 11.2	+1.4
VA03				*e*S	Sn	16 12 42.0	+4.1
VA03				IAML		16 12 48.6	
	comp=E,2µm,0.6s						
VA03	San Esteban	2.38	24		Pn	16 12 11.2	+1.4
VA03	San Esteban	2.38	24	*i* P	Pn	16 12 11.0	+1.2
VA06	Catapilco	2.41	8	⇑*i*P	Pn	16 12 10.7	+0.6
VA06				*e*S	Sn	16 12 45.2	+6.9
VA06				IAML		16 12 51.6	
	comp=E,3µm,0.3s						
RFA	San Rafael	2.66	87	*i* P	Pn	16 12 15.0	+1.3
AAGR	Agrelo	3.02	53	*i* P	Pn	16 12 21.0	+2.4
AUSP	Uspallata	3.33	36	*i* P	Pn	16 12 26.0	+2.9
ASAL	Salagasta	3.35	46	*i* P	Pn	16 12 26.0	+2.9
RTLS	Leoncito	3.73	33	*i* P	Pn	16 12 31.0	+2.5
LC01	Cunco	3.94	182	*e*P	Pn	16 12 32.5	+1.3
LC01	Cunco	3.94	182	Pn	Pn	16 12 32.4	+1.3
RTCV	Cerro Valdivia	4.05	42	*i* P	Pn	16 12 35.0	+2.2
CO03	El Pedregal	4.18	12		Pn	16 12 35.3	+0.7
CO03	El Pedregal	4.18	12	*i* P	Pn	16 12 35.0	+0.4
ZON	Zonda	4.23	38	Pn	Pn	16 12 36.7	+1.5
ZON	Zonda	4.23	38	*i* P	Pn	16 12 39.0	+3.8
CO06	Fray Jorge	4.26	1	*e*P	Pn	16 12 35.1	-0.5
CO06	Fray Jorge	4.26	1		Pn	16 12 35.1	-0.5
LR03	Panguipulli	4.70	186		Pn	16 12 41.0	-0.6
GO04	Tololo Observa	4.82	9		Pn	16 12 43.4	-0.1
GO04	Tololo Observa	4.82	9	*i* P	Pn	16 12 44.0	+0.5
ACCO	Cerro Coronel	4.88	28	*i* P	Pn	16 12 45.0	+0.6
AROD	Rodeo	5.12	22	*i* P	Pn	16 12 49.0	+1.3
ACDV	Cuesta del Vie	5.24	25	*i* P	Pn	16 12 50.0	+0.9
AVFE	Valle Fertil	5.57	41	*i* P	Pn	16 12 54.0	+0.4
ACHE	Chepes	5.67	50	*i* P	Pn	16 12 56.0	+1.0
PLCA	Paso Flores	5.84	171	Pn	Pn	16 12 59.9	+2.5
	comp=E,1.9nm,0.3s,baz=347,slow=14,SNR=24						
PLCA				Lg	Lg	16 14 35.7	
	comp=E,0.2nm,0.3s,baz=233,slow=21,SNR=1.7						
PLCA				LR	LR	16 15 09.6	
	comp=E,58nm,19.5s,baz=356,slow=38						
PLCA	Paso Flores	5.84	171	Pn	Pn	16 12 59.1	+1.8
PLCA	Paso Flores	5.84	171	*i* P	Pn	16 13 00.0	+2.7
LL04	Puerto Octay	5.98	185	Pn	Pn	16 12 58.8	-0.2
LCO	Las Campanas	5.98	8	Pn	Pn	16 13 00.1	+0.7
LCO	Las Campanas	5.98	8	*i* P	Pn	16 12 59.0	-0.4
VA04	Juan Fernndez	6.04	280	Pn	Pn	16 13 00.4	+0.4
H03S1	Juan Fernandez	6.06	278	T	T	16 18 50.4	
	baz=100,slow=75,SNR=1419						
H03S3	Juan Fernandez	6.07	279	T	T	16 18 51.8	
	baz=100,slow=75,SNR=1738						
H03S2	Juan Fernandez	6.08	278	T	T	16 18 49.3	
	baz=100,slow=75,SNR=1629						
H03N1	Juan Fernandez	6.16	282	T	T	16 19 09.7	
	baz=116,slow=73,SNR=42						
H03N3	Juan Fernandez	6.17	282	T	T	16 19 09.1	
	baz=116,slow=73,SNR=36						
H03N2	Juan Fernandez	6.18	282	T	T	16 19 12.4	
	baz=116,slow=73,SNR=35						
APLL	PUNTA DE LOS L	6.29	45	*i* P	Pn	16 13 03.0	-0.5
AC04	Llanos de Chal	6.74	5	Pn	Pn	16 13 08.6	-1.1
AC04	Llanos de Chal	6.74	5	*i* P	Pn	16 13 09.0	-0.6
VCA	Vinchina	6.87	27	*i* P	Pn	16 13 12.0	+0.5
GO03	Copiap	7.44	10	Pn	Pn	16 13 17.6	-1.6
AC02	Maricunga	8.38	16	Pn	Pn	16 13 31.4	-1.2
AC02	Maricunga	8.38	16	*i* P	Pn	16 13 31.0	-1.5
LVC	Limon Verde	12.53	12	Pn	Pn	16 14 27.4	-1.8
	comp=E,0.4nm,0.3s,baz=180,slow=16,SNR=1.8						
PB03	IPOC Station P	12.97	8	*i* P	Pn	16 14 35.0	+0.1
PB07	IPOC Station P	13.27	7	Pn	Pn	16 14 36.1	-3.0
PB08	IPOC Station P	14.92	9	P	P	16 15 04.6	-1.7
CPUP	Villa Florida	15.04	59	LR	LR	16 21 44.4	
	comp=E,33nm,21.2s,baz=214,slow=41						
PLTB	Pedras Altas	15.45	83	Pn	Pn	16 15 07.7	-0.3
AQDB	Aquidauana	20.17	49	P	P	16 16 03.7	0.0
SIV	San Ignacio	21.15	29	P	P	16 16 12.9	-1.4
	comp=E,4.3nm,0.8s,baz=214,slow=11,SNR=17						
PTGA	Pitinga	35.76	20	P	P	16 18 26.7	-1.0
	comp=E,1.2nm,0.3s,baz=26,slow=9.9,SNR=5.8						
VNA2	Neumayer--Watz	49.03	157	P	P	16 20 15.0	+0.1
	baz=288,slow=8.4						
SNAA	Sanae	50.60	158	P	P	16 20 26.9	+0.1
	comp=E,0.8nm,0.7s,baz=268,slow=7.2,SNR=5.7						
SNAA	Sanae	50.60	158	P	P	16 20 27.0	+0.1
SNAA				IAmb	IAmb	16 21 14.9	
	comp=Z,3.6nm,1.3s						
QSPA	South Pole Qui	55.29	180	P	P	16 21 02.5	+1.0
	comp=Z,2.0nm,0.9s,baz=144,slow=2.5,SNR=12						
QSPA	South Pole Qui	55.29	180	P	P	16 21 02.6	+1.0
QSPA				IAmb	IAmb	16 21 03.6	
	comp=Z,4.8nm,1.1s						
CMIG	Matias Romero	56.25	333	LR	LR	16 38 55.2	
	comp=Z,44nm,19.7s,baz=294,slow=29						
TXAR	Lajitas Array	70.70	331	P	P	16 22 44.6	+0.4
	comp=Z,0.5nm,0.5s,baz=156,slow=8.9,SNR=2.0						
DBIC	Dimbokro	75.22	71	P	P	16 23 10.7	-0.5
	comp=Z,2.3nm,0.6s,baz=210,slow=7.2,SNR=1.8						
BOSA	Boshof	79.38	117	P	P	16 23 34.1	-0.4
	comp=Z,1.9nm,0.7s,baz=211,slow=5.9,SNR=4.1						
BOSA	Boshof	79.38	117	P	P	16 23 34.2	-0.4
KOWA	Kowa	80.78	65	P	P	16 23 41.8	-0.2
	comp=Z,4.5nm,0.5s,baz=240,slow=5.3,SNR=14						
TORD	Torodi Ar. Bea	84.27	70	P	P	16 23 59.8	-0.4
	comp=Z,2.5nm,0.7s,baz=230,slow=4.5,SNR=13						
TORD	Torodi Ar. Bea	84.27	70	IAmb	IAmb	16 24 00.4	
	comp=Z,2.3nm,0.8s						
TORD	Torodi Ar. Bea	84.27	70	P	P	16 24 00.0	-0.2
WRA	Warramunga Arr	120.07	208	PKP	PKPdf	16 30 18.2	-1.0
	comp=Z,0.2nm,0.5s,baz=172,slow=1.6,SNR=4.7						
H11S2	WAKE ISLAND Hy	126.03	268	T	T	18 49 10.3	
	baz=118						
H11S1	WAKE ISLAND Hy	126.04	268	T	T	18 49 09.7	
	baz=118,slow=74						
H11S3	WAKE ISLAND Hy	126.05	268	T	T	18 49 11.2	
	baz=118,slow=74						
H11N3	WAKE ISLAND Hy	126.47	270	T	T	18 49 39.4	
	baz=120,slow=76,SNR=3.9						
H11N1	WAKE ISLAND Hy	126.48	270	T	T	18 49 41.4	
	baz=120,slow=76,SNR=6.8						
H11N2	WAKE ISLAND Hy	126.48	270	T	T	18 49 39.8	
	baz=120,slow=76,SNR=5.0						

DJA ***21*** *16:13:25.7±0.4,1°N±3°×12°8E±°,h10^{km},M3.3/6,MLv3.3/6*

IDC 21 16:13:24.8±2.3,**0°.36N**×**127°.14E,h0**^{km},**mb3.2**/3, **mb1 3.4**/3,**mb1mx3.2**/49,**mbtmp3.2**/3,**MS3.2**/1,**Ms1 3.2**/1, **ms1mx2.2**/17,**Error ellipse: s-maj=182.5km s-min=28.7km az=66.0,Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	Labuha	1.05	160	P	Pn	16 13 49.4	+2.6
SANI	Sanana	2.66	206	P	Pg	16 14 16.3	+0.5
WRA	Warramunga Arr	21.37	161	P	P	16 18 14.1	+0.1
	0.6nm,0.8s,baz=340,slow=11,SNR=7.5						
PMG	Port Moresby	22.16	116	LR	LR	16 29 59.0	
	comp=Z,61nm,19.8s,baz=261,slow=45						
ASAR	Alice Springs	24.77	165	P	P	16 18 48.4	-0.1
	0.2nm,0.7s,baz=344,slow=10.0,SNR=2.9						
MKAR	Makanchi Array	60.55	326	P	P	16 23 37.1	0.0
	0.5nm,0.8s,baz=131,slow=8.2,SNR=3.7						

IDC ***21*** *16:17:48.8±0.7,38°.84N×20°.52E,h0^{km},mb4.1/17, mb1 4.1/28,mb1mx4.0/65,mbtmp4.1/28,ML3.6/10,*

MS3.4/17,Ms1 3.4/17,ms1mx3.1/49,Error ellipse: s-maj=13.9km s-min=11.1km az=45.0
*ATH **21** 16:17:50.3,38°.71N×20°.63E,h6^{km}±2^{km},ML4.0/22,Error ellipse: s-maj=2.3km s-min=0.6km az=293.0*
*THE **21** 16:17:50.1,38°.72N×20°.59E,h11^{km}±1^{km},ML4.2/5,Error ellipse: s-maj=2.5km s-min=0.6km az=295.0*
*BEO **21** 16:17:51.2±0.9,38°.83N×20°.44E,h0^{km},ML3.9/12*
*NEIC **21** 16:17:53.3±2.6,38°.70N±0°.05×20°.49E±0°.06,h43^{km}±13^{km}, Error ellipse: s-maj=7.5km s-min=7.1km az=178.0*
ISC 21 16:17:49.7±0.8,**38°.74N**±0°.02×**20°.54E**±0°.03,**h10**^{km}±5^{km}, **n228,**σ**1ˢ.44**/247,**mb4.2**/19,**MS3.5**/12,**17C-15D,Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKD2	Lefkada island	0.10	63	P	Pg	16 17 51.9	-0.4
LKD2				S	Sg	16 17 54.6	+0.4
	132µm,0.7s						
LKD2	Lefkada island	0.10	63	P	Pg	16 17 52.0	-0.4
LKD2				S	Sg	16 17 53.7	-0.5
LKD2				AML	AML	16 17 56.8	
LKD2				AML	AML	16 17 59.3	
FSK	Fiskardo	0.28	177	P	Pg	16 17 55.5	+0.1
FSK				S	Sg	16 18 00.0	+0.8
	96µm,0.3s						
FSK	Fiskardo	0.28	177	P	Pg	16 17 55.5	+0.1
FSK				S	Sg	16 17 58.9	-0.3
FSK				AML	AML	16 18 00.6	
FSK				AML	AML	16 18 01.1	
KEF4	Livadi, Kephal	0.49	191	P	Pg	16 17 59.3	0.0
KEF4				S	Sb	16 18 06.6	-1.0
	112µm,0.6s						
KEF4	Livadi, Kephal	0.49	191	P	Pg	16 17 59.2	0.0
KEF4				S	Sg	16 18 05.9	+0.2
LXRA	Lixouri, Kepha	0.55	189	P	Pg	16 18 00.3	-0.1
LXRA				AML	AML	16 18 13.7	
	comp=E,90705µm,0.6s						
LXRA				AML	AML	16 18 25.3	
	comp=N,88311µm,1.0s						
KEF3	Kipouria, Keph	0.56	196	P	Pg	16 17 59.9	-0.6
KEF3				S	Sb	16 18 09.1	-0.5
	comp=N,49µm,0.8s						
KEF3	Kipouria, Keph	0.56	196	P	Pg	16 17 59.8	-0.8
KEF3				S	Sg	16 18 08.1	+0.2
VLS	Valsamata	0.56	176	P	Pg	16 18 00.0	-0.7
VLS				S	Sb	16 18 08.6	-1.2
	comp=N,15µm,0.6s						
VLS	Valsamata	0.56	176	P	Pg	16 17 59.9	-0.8
VLS				S	Sg	16 18 08.0	-0.1
VLS				AML	AML	16 18 10.8	
	comp=E,25965µm,0.3s						
VLS				AML	AML	16 18 13.1	
	comp=N,34134µm,0.5s						
DSL	Palaion Diasel	0.58	48	P	Pg	16 18 01.3	+0.3
PVO	Paravola	0.78	99	P	Pg	16 18 04.2	-0.5
PVO				AML	AML	16 18 23.3	
	comp=E,33668µm,0.6s						
PVO				AML	AML	16 18 27.7	
	comp=N,33783µm,0.6s						
IGT	Igoumenitsa	0.81	348	P	Pb	16 18 05.8	0.0
IGT				AML	AML	16 18 24.3	
	comp=E,12678µm,0.5s						
IGT				AML	AML	16 18 25.4	
	comp=N,17201µm,0.5s						
JAN	Janina	0.94	15	P	Pn	16 18 09.2	+0.1
JAN	Janina	0.94	15	P	Pn	16 18 08.8	-0.3
VTN	Vitineika	0.97	148	P	Pg	16 18 07.8	-0.5
RLS	Riolos of Patr	1.00	133	P	Pg	16 18 07.6	-1.3
RLS				AML	AML	16 18 30.3	
	comp=N,17696µm,0.6s						
RLS				AML	AML	16 18 31.2	
	comp=E,13988µm,0.6s						
EVR	Evrytania	1.00	80	P	Pg	16 18 08.6	-0.4
EVR	Evrytania	1.00	80	P	Pg	16 18 08.0	-1.0
EVR				AML	AML	16 18 33.0	
	comp=N,13875µm,0.8s						
EVR				AML	AML	16 18 48.6	
	comp=E,7518µm,1.5s						
LTHK	Lithakia	1.06	167	P	Pg	16 18 09.1	-0.9
LTHK	Lithakia	1.06	167	P	Pg	16 18 08.3	-1.7
ANX	Ano Chora	1.09	97	P	Pg	16 18 09.8	-0.8
ANX	Ano Chora	1.09	97	P	Pg	16 18 09.6	-1.0
ANX				AML	AML	16 18 35.2	
	comp=E,30855µm,1.0s						
ANX				AML	AML	16 18 36.8	
	comp=N,29094µm,0.5s						
KASA	Kassiopi	1.11	335	P	Pn	16 18 12.0	+0.8
EFP	Efpalio	1.11	106	P	Pb	16 18 09.8	-1.2
EFP	Efpalio	1.11	106	P	Pb	16 18 09.6	-1.4
EFP				AML	AML	16 18 34.4	
	comp=E,33134µm,0.6s						
EFP				AML	AML	16 18 34.7	
	comp=N,20643µm,0.4s						
KEK	Kerkira	1.13	329	P	Pn	16 18 12.7	+1.1
KEK				S	Sn	16 18 29.2	+2.1
KEK				AML	AML	16 18 49.3	
	comp=E,6979µm,0.7s						
KEK				AML	AML	16 18 52.1	
	comp=N,5937µm,0.7s						
DRO	Drossia	1.21	130	P	Pn	16 18 12.6	-0.1
DRO	Drossia	1.21	130	P	Pb	16 18 11.4	-1.3
DRO				AML	AML	16 18 37.8	
	comp=N,30164µm,0.5s						
DRO				AML	AML	16 18 37.9	
	comp=E,39158µm,0.6s						
SERG	Sergoula	1.23	105	P	Pn	16 18 12.0	-1.0
SERG				AML	AML	16 18 38.0	
	comp=N,12840µm,0.9s						
SERG				AML	AML	16 18 40.5	
	comp=E,17387µm,1.1s						
LAKA	Lakka	1.23	114	P	Pn	16 18 11.6	-1.4
LAKA				AML	AML	16 18 36.0	
	comp=E,39957µm,0.9s						
LAKA				AML	AML	16 18 36.6	
	comp=N,43440µm,0.7s						
TRIZ	Trizonia	1.26	107	P	Pn	16 18 12.2	-1.1
MAKR	Makrakomi, Fth	1.27	77	P	Pn	16 18 13.3	-0.2
MAKR				AML	AML	16 18 44.3	
	comp=E,9671µm,1.0s						
MAKR				AML	AML	16 18 44.8	
	comp=N,11739µm,1.1s						
KPRO	Kipourio	1.37	27	P	Pb	16 18 15.7	+0.3
KPRO				AML	AML	16 18 46.6	
	comp=E,9019µm,1.1s						
KPRO				AML	AML	16 18 52.2	
	comp=N,7882µm,1.0s						
THL	Klokotos Trika	1.41	54	P	Pb	16 18 16.0	0.0
THL				AML	AML	16 18 43.9	
	comp=E,7911µm,0.9s						
THL				AML	AML	16 18 44.5	
	comp=N,8064µm,0.8s						
AGG	Agios Georgios	1.42	78	P	Pg	16 18 16.8	-0.2
AGG	Agios Georgios	1.42	78	P	Pb	16 18 16.2	-0.1
AGG				AML	AML	16 18 48.3	
	comp=E,10755µm,0.9s						
AGG				AML	AML	16 18 48.9	
	comp=N,10878µm,1.5s						
AGG	Agios Georgios	1.42	78		Pb	16 18 16.6	+0.3
AGG				Sn	Sn	16 18 31.9	-2.5
KLV	Kalavryta, Ach	1.44	118	P	Pn	16 18 14.9	-1.1
KLV				AML	AML	16 18 47.4	
	comp=N,10932µm,1.2s						
KLV				AML	AML	16 18 47.5	
	comp=E,7510µm,0.9s						
GUR	Goura	1.63	119	P	Pn	16 18 18.3	-0.2
GUR				AML	AML	16 18 52.4	
	comp=E,10640µm,0.6s						
GUR				AML	AML	16 18 56.0	
	comp=N,10665µm,0.9s						
KBN	Korca	1.89	6		Pg	16 18 25.5	-0.4
ITM	Ithomi	1.91	145	P	Pb	16 18 23.8	-0.8
ITM				AML	AML	16 19 03.3	
	comp=N,5603µm,1.7s						
ITM				AML	AML	16 19 16.5	
	comp=E,5824µm,2.2s						
ITM	Ithomi	1.91	145	Pn	Pb	16 18 25.1	+0.6
ITM				Sn	Sn	16 18 42.8	-3.5
VLO	Vlora	1.91	335		Pb	16 18 24.0	-0.5
LTK	Loutraki	2.04	110	P	Pb	16 18 26.0	-0.7
SCTE	Santa Cesarea	2.08	310	Pn	Pb	16 18 26.2	-1.4
FNA	Florina	2.14	17	Pn	Pb	16 18 28.2	-0.3
VIL2	Platees	2.20	103	P	Pb	16 18 28.9	-0.7
VIL2				AML	AML	16 19 15.8	
	comp=N,4850µm,1.1s						
VIL2				AML	AML	16 19 32.3	
	comp=E,4964µm,0.9s						
EPID	Epidavros	2.32	118	P	Pb	16 18 29.9	-1.7
OHR	Ohrid	2.38	5	*e*Pn	Pb	16 18 32.3	-0.3
OHR				*e*Sn	Sn	16 18 58.3	+0.3
OHR	Ohrid	2.38	5	*i* Pn	Pb	16 18 32.0	-0.6
TIR	Tirane	2.65	349	⇓P	Pb	16 18 35.1	-2.1
TIR	Tirane	2.65	349	*e*Pn	Pb	16 18 35.2	-2.1
TIR				*e*Sn	Sn	16 19 06.8	+2.0
TIR	Tirane	2.65	349		Pn	16 18 34.9	+2.4
TIP	Timpagrande	2.98	280	⇓P	Pn	16 18 38.4	+1.3
TIP	Timpagrande	2.98	280	Pn	Pn	16 18 38.7	+1.6
VAY	Valandovo	3.01	30	*e*Pn	Pn	16 18 39.2	+1.8
VAY	Valandovo	3.01	30	*i* Pn	Pn	16 18 39.4	+2.0
STIP	Stip	3.21	23	*i* Pn	Pb	16 18 43.9	-2.8
SKO	Skopje	3.30	12	*i* Pn	Pn	16 18 43.3	+1.9
MATE	Matera	3.52	304	⇑P	Pn	16 18 42.8	-1.6
DRME	Dracevica, Mon	3.59	344	*e*Pn	Pn	16 18 46.7	+1.3
CEL	Celeste	3.68	264	Pn	Pn	16 18 45.5	-1.1
PDG	Podgorica	3.81	346	⇑P	Pn	16 18 48.8	+0.4
PDG	Podgorica	3.81	346	*e*Pn	Pn	16 18 49.4	+1.0
PDG	Podgorica	3.81	346	*e*Pn	Pn	16 18 49.7	+1.3
PDG	Podgorica	3.81	346	Pn	Pn	16 18 49.6	+1.3
PRVS	Prvonek	3.94	17	*e*Pn	Pn	16 18 51.7	+1.5
BOSS	Bosilegrad	4.03	21	*e*Pn	Pn	16 18 53.6	+2.2
BARS	Barje	4.18	13	*e*Pn	Pn	16 18 55.1	+1.6
APE	Apeiranthos	4.28	111	⇓P	Pn	16 18 58.8	+3.9
TREB	Trebinje	4.31	338	*e*Pn	Pn	16 18 55.5	+0.3
TREB	Trebinje	4.31	338	*e*Pn	Pn	16 18 54.0	-1.2
DBRK	Dubrovnik	4.33	336	*e*Pn	Pn	16 18 55.3	-0.2
VTS	Vitosha	4.38	27	⇑P	Pn	16 18 58.3	+1.9
VTS	Vitosha	4.38	27	*e*Pn	Pn	16 18 57.9	+1.5
VTS	Vitosha	4.38	27	Pn	Pn	16 18 58.6	+2.2
SJES	Sjenica	4.54	355	*e*Pn	Pn	16 19 00.4	+1.9
STON	Ston	4.66	333	*e*Pn	Pn	16 19 00.3	+0.3
STON	Ston	4.66	333	*e*Pn	Pn	16 19 00.2	+0.2
SGRT	San Giovanni R	4.75	311	Pn	Pn	16 19 02.7	+1.3
ALN	Alexandroupoli	4.75	61	Pn	Pn	16 19 01.8	+0.4
IVAS	Ivanjica	4.84	357	*e*Pn	Pn	16 19 03.8	+1.2
LSTV	Lastovo	4.88	327	*e*Pn	Pn	16 19 01.9	-1.3
LSTV				Sn	Sn	16 19 56.5	-3.2
IDI	Anoyia	4.90	133	Pn	Pn	16 19 05.0	+1.6
	comp=E,1.8nm,0.3s,baz=315,slow=14,SNR=13						
IDI				Sn	Sn	16 20 00.5	+0.3
	comp=E,2.9nm,0.3s,baz=127,slow=20,SNR=1.9						
RUDO	Rudo	4.95	350	*e*Pn	Pn	16 19 04.3	+0.2
BOVS	Bovan	4.97	10	⇓P	Pn	16 19 05.0	+0.8
RAFF	Raffo Rosso	5.11	255	Pn	Pn	16 19 05.6	-0.8
PAOL	Paolisi	5.13	298	Pn	Pn	16 19 09.1	+2.4
BLKB	Belogradchik	5.13	18	⇓P	Pn	16 19 08.6	+2.0
GRUS	Gruza	5.14	1	*e*Pn	Pn	16 19 07.9	+1.2
BBLS	Lazići	5.19	351	*e*Pn	Pn	16 19 08.3	+0.9
BBLS	Lazići	5.19	351	*e*Pn	Pn	16 19 07.7	+0.3
MAKA	Makarska	5.26	331	*e*Pn	Pn	16 19 08.7	+0.3
DIVS	Divibare	5.37	356	*e*Pn	Pn	16 19 10.6	+0.7
DIVS	Divibare	5.37	356	*e*Pn	Pn	16 19 10.3	+0.4
DIVS	Divibare	5.37	356	Pn	Pn	16 19 10.6	+0.7
RICI	Ricice	5.40	333	*e*Pn	Pn	16 19 10.5	+0.2
TRUS	Trudelj	5.48	359	*e*Pn	Pn	16 19 12.1	+0.8
TEKS	Tekeris	5.85	353	*e*Pn	Pn	16 19 15.7	-0.7
TEKS	Tekeris	5.85	353	*e*Pn	Pn	16 19 15.8	-0.7
VLAD	Vladila	6.00	28	⇓P	Pn	16 19 22.6	+4.1
MDVR	Moldovita	6.10	8	⇑P	Pn	16 19 20.1	+0.2
KIJV	Kijevo	6.11	331	*e*Pn	Pn	16 19 20.2	+0.2
ZIRJ	Zirje	6.14	325	*e*Pn	Pn	16 19 20.5	0.0
MGRS	Mrkonjic Grad	6.23	337	*e*Pn	Pn	16 19 23.0	+1.3
MORI	Morici	6.28	326	*e*Pn	Pn	16 19 23.1	+0.7
HERR	Herculane	6.29	12	⇑P	Pn	16 19 23.8	+1.3
FRGS	Fruska Gora	6.43	355	⇑P	Pn	16 19 24.5	0.0
FRGS	Fruska Gora	6.43	355	*e*Pn	Pn	16 19 24.7	+0.2
FRGS	Fruska Gora	6.43	355	*e*Pn	Pn	16 19 24.5	0.0
LOZB	Loznitsa	6.50	43	⇑P	Pn	16 19 26.4	+1.0
BLY	Banja Luka	6.50	338	*e*Pn	Pn	16 19 26.3	+0.9
BLY	Banja Luka	6.50	338	*e*Pn	Pn	16 19 25.5	+0.1
AQU	L'Aquila	6.53	306	*e*Pn	Pn	16 19 27.3	+1.5
DUGI	Dugi Otok	6.67	324	*e*Pn	Pn	16 19 27.8	+0.1
UDBI	Udbina	6.80	330	*e*Pn	Pn	16 19 31.1	+1.6
MRAK	Mrakovica	6.83	338	*e*Pn	Pn	16 19 29.7	-0.2
GZR	Gura Zlata	6.85	13	⇑P	Pn	16 19 31.5	+1.3
BZS	Buzias	6.92	6	⇓P	Pn	16 19 30.9	-0.1
BZS	Buzias	6.92	6	*e*Pn	Pn	16 19 31.4	+0.3
PLIT	Plitvice	7.15	331	*e*Pn	Pn	16 19 35.4	+1.1
PLIT				Sn	Sn	16 20 55.0	-0.5
NVLJ	Novalja	7.20	326	*e*Pn	Pn	16 19 35.6	+0.7
ARR	Arges	7.29	23	⇓P	Pn	16 19 37.5	+1.3
MOSL	Moslavina	7.42	339	*e*Pn	Pn	16 19 37.5	-0.4
VOIR		7.48	25	⇓P	Pn	16 19 41.6	+2.7
SECR		7.52	31	⇑P	Pn	16 19 40.5	+1.2
KOVH	Kovagotottos	7.56	347	*e*PN	Pn	16 19 38.9	-1.0
KOVH	Kovagotottos	7.56	347	*e*P	Pn	16 19 41.9	+2.0
KOVH	Kovagotottos	7.56	347	*e*SN	Sn	16 21 00.6	-5.0
MORH	Mrgy, Hungar	7.60	350	⇓P	Pn	16 19 39.7	-0.7
MORH	Mrgy, Hungar	7.60	350	*e*PN	Pn	16 19 39.5	-0.9
MORH				*e*SN	Sn	16 20 57.6	-8.9
MORH	Mrgy, Hungar	7.60	350	*e*Pn	Pn	16 19 39.7	-0.7
ELL	Elmali	7.68	102	Pn	Pn	16 19 45.0	+3.3
ISR	Istrita	7.78	33	⇓P	Pn	16 19 47.0	+4.0
OZLJ	Ozalj	7.83	333	*e*Pn	Pn	16 19 44.7	+1.1
MLR	Muntele Rosu	7.85	29	⇓P	Pn	16 19 50.8	+6.8
MLR	Muntele Rosu	7.85	29	Pn	Pn	16 19 45.1	+1.1
	comp=E,0.1nm,0.3s,baz=222,slow=16,SNR=2.3						
MLR				LR	LR	16 23 29.2	
	comp=E,576nm,18.2s,baz=192,slow=44						
MLR	Muntele Rosu	7.85	29	Pn	Pn	16 19 46.9	+2.9
RIY	Rijeka	7.97	328	*e*Pn	Pn	16 19 43.7	-1.8
BRJN	Brijuni	7.97	323	*e*Pn	Pn	16 19 46.2	+0.6
KALN	Kalnik	7.98	339	*e*Pn	Pn	16 19 45.0	-0.7
CRES	Cresnjev	8.02	334	*e*Pn	Pn	16 19 45.5	-0.7
DOPR	Dopca	8.06	25	⇓P	Pn	16 19 48.8	+2.0
BISRR	Bisoca	8.20	32	⇑P	Pn	16 19 49.2	+0.5
DRGR		8.20	11	⇓P	Pn	16 19 44.3	-4.5
COVR	Voineasa-Covas	8.24	29	⇑P	Pn	16 19 53.1	+3.7
OZUR		8.31	26	⇑P	Pn	16 19 51.6	+1.4
CEY	Cerknica	8.33	329	*e*Pn	Pn	16 19 51.0	+0.5
PLOR	Plostina	8.42	31	⇑P	Pn	16 19 55.7	+3.9
VRI	Vrincioaia	8.46	31	⇑P	Pn	16 19 54.5	+2.2
MPLH	Magyarpolny	8.71	346	*e*PN	Pn	16 19 55.4	-0.2
MPLH	Magyarpolny	8.71	346	*e*P	Pn	16 19 57.2	+1.6
SOKA	Soboth	8.90	335	*e*Pn	Pn	16 19 58.2	-0.2
	comp=E,9.5nm,0.7s						
SOKA				*e*Sn	Sn	16 21 35.0	-3.8
	comp=E,6.4nm,0.9s						
OBKA	Obir	8.93	332	*i* Pn	Pn	16 19 59.6	+0.8
	comp=E,4.6nm,0.4s						
OBKA				*i* Sn	Sn	16 21 39.2	-0.2
	comp=E,16nm,0.8s						
PSZ	Piszkesteto	9.19	357	⇑P	Pn	16 20 01.5	-0.7
PSZ	Piszkesteto	9.19	357		Pn	16 20 03.1	+0.9
ARSA	Arzberg	9.26	338	*e*Pn	Pn	16 20 02.6	-0.7
	comp=E,4.2nm,0.7s						
TEOL	Teolo	9.34	318	Pn	Pn	16 20 03.0	-1.2
STAL	STALIGIAL	9.48	325	Pn	Pn	16 20 05.4	-0.8
TRPA	Tarpa	9.50	8	⇑P	Pn	16 20 06.2	-0.2
BURAR	Bucovina Array	9.50	20	⇑P	Pn	16 20 08.6	+2.0
ZOU	Zoufplan	9.59	327	Pn	Pn	16 20 08.4	+0.5
CONA	Conrad Observa	9.79	341	*e*Pn	Pn	16 20 11.8	+1.3
	comp=E,2.9nm,0.7s						
CTI	Castel Tesino	9.82	321	Pn	Pn	16 20 10.2	-0.8
VYHS	Vyhne	9.83	353	*e*PN	Pn	16 20 12.4	+1.4
MODS	Modra-Piesok	9.91	347	*e*PN	Pn	16 20 12.3	+0.1
ABTA	Abfaltersbach	9.94	326	*e*Pn	Pn	16 20 12.8	+0.2
	comp=E,6.3nm,0.6s						
ABTA				*e*Sn	Sn	16 22 02.4	-1.8
	comp=E,9.7nm,0.7s						
CRVS	Cervenica-Dubn	10.18	3	*e*PN	Pn	16 20 17.9	+2.1
MOA	Molln	10.18	335	*e*Pn	Pn	16 20 16.2	+0.3
	comp=E,6.3nm,0.6s						
MOA				*i* Sn	Sn	16 22 10.3	+0.2
	comp=E,3.4nm,0.5s						
BRTR	Keskin Array B	10.21	80	Pn	Pn	16 20 20.0	+3.6
	comp=E,0.3nm,0.3s,baz=267,slow=12,SNR=8.5						
BRTR				LR	LR	16 24 59.2	
	comp=E,82nm,21.5s,baz=256,slow=42						
BRTR	Keskin Array B	10.21	80		Pn	16 20 14.8	-1.6
KOLS	Kolonicke sedl	10.26	6	*e*PN	Pn	16 20 23.6	+6.6
WTTA	Wattenberg	10.72	325	*i* Pn	Pn	16 20 24.4	+1.0
	comp=E,5.2nm,0.6s						
WTTA				*e*Sn	Sn	16 22 22.7	-0.7
	comp=E,13nm,0.7s						
WATA	Walderalm	10.80	326	*e*Pn	Pn	16 20 25.6	+1.2
	comp=E,6.2nm,0.5s						
SQTA	Sankt Quirin	10.88	324	*e*Pn	Pn	16 20 27.5	+2.0
	comp=E,2.5nm,0.4s						
SQTA				*e*Sn	Sn	16 22 26.8	-0.5
	comp=E,2.8nm,0.4s						
CSS	Mathiatis	10.92	106	Pn	Pn	16 20 27.6	+1.6
VRAC	Vranov	10.94	346	LR	LR	16 25 28.1	
	comp=E,244nm,21.9s,baz=172,slow=42						
MOTA	Moosalm	11.02	324	*e*Pn	Pn	16 20 29.0	+1.5
	comp=E,9.4nm,0.9s						
MOTA				*i* Sn	Sn	16 22 30.4	-0.4
	comp=E,3.4nm,0.6s						
CKRC	Cesky Krumlov	11.03	338	*e*P	Pn	16 20 27.5	0.0
DAVOX	Davos/Dischmat	11.21	319	Pn	Pn	16 20 30.6	+0.5
	comp=E,0.2nm,0.3s,baz=166,slow=8.3,SNR=1.9						
DAVOX				Sn	Sn	16 22 35.6	-0.1
	comp=E,0.3nm,0.3s,baz=180,slow=20,SNR=2.6						
DAVOX				LR	LR	16 26 07.5	
	comp=E,129nm,20.7s,baz=110,slow=45						
GERES	GERESS Array B	11.24	336	Pn	Pn	16 20 30.4	0.0
	comp=E,0.3nm,0.3s,baz=156,slow=14,SNR=14						
GERES				Sn	Sn	16 22 30.7	-5.3
	comp=E,0.1nm,0.3s,baz=159,slow=23,SNR=1.4						
GERES				LR	LR	16 25 30.9	
	comp=E,118nm,21.8s,baz=151,slow=42						
GERES	GERESS Array B	11.24	336	Pn	Pn	16 20 29.6	-0.8
MORC	Moravsky Berou	11.24	350	⇓P	Pn	16 20 32.9	+2.5
MORC	Moravsky Berou	11.24	350	Pn	Pn	16 20 30.9	+0.6
KHC	Kasperske Hory	11.53	337	*e*P	Pn	16 20 33.5	-0.8
KHC				AMS	AMS	16 26 30.0	
	comp=E,400nm,13.9s						
SENIN	Lac Senin/Sane	12.37	312		Pn	16 20 47.4	+1.3
MMAI	Mount Meron Ar	13.33	111	Pn	Pn	16 21 00.1	+1.1
	comp=E,1.1nm,0.3s,baz=309,slow=11,SNR=7.3						
ASF	Jabal al Asfar	14.84	111	Pn	Pn	16 21 22.3	+2.6
	comp=E,0.1nm,0.3s,baz=250,slow=12,SNR=2.2						
EIL	Elat	14.95	123	Pn	Pn	16 21 22.7	+1.6
	comp=E,0.5nm,0.3s,baz=4.5,slow=6.9,SNR=5.8						
NACGM	Naroch	16.71	13	*i* P	P	16 21 45.6	-0.5
PABE	Paberze	16.93	7	Pn	Pn	16 21 45.7	-0.8
KBZ	Khabaz	17.52	66	P	P	16 21 56.0	+0.9
	comp=E,0.1nm,0.3s,baz=241,slow=10,SNR=3.2						
GNI	Garni	18.73	78	P	Pn	16 22 10.7	+1.6
	comp=E,0.5nm,0.3s,baz=350,slow=19,SNR=8.4						
ESDC	Sonseca Array	19.00	281	P	Pn	16 22 12.5	+0.2
	comp=E,0.1nm,0.3s,baz=76,slow=11,SNR=13						
ESDC	Sonseca Array	19.00	281	P	P	16 22 09.9	-1.6
HFS	Hagfors	21.85	351	P	P	16 22 42.0	-0.1
	comp=E,3.3nm,0.5s,baz=169,slow=11,SNR=14						
HFS				LR	LR	16 33 00.6	
	comp=E,156nm,20.3s,baz=216,slow=42						
EKA	Eskdalemuir Ar	22.98	324	P	P	16 22 54.5	+0.3
	comp=E,11nm,0.8s,baz=123,slow=11,SNR=17						
FINES	FINESS Array B	22.99	7	P	P	16 22 53.8	-0.4
	comp=E,10nm,0.8s,baz=169,slow=8.6,SNR=13						
FINES				LR	LR	16 33 54.3	
	comp=E,61nm,20.8s,baz=198,slow=42						
FINES	FINESS Array B	22.99	7	P	P	16 22 53.4	-0.8
NB2	NORSAR Subarra	23.07	348	P	P	16 22 55.1	0.0
	comp=Z,2.4nm,0.7s,baz=156,slow=10						
NOA	NORSAR Array B	23.07	348	P	P	16 22 55.1	0.0
	comp=Z,3.5nm,0.8s,baz=158,slow=9.5,SNR=10.0						
NOA				LR	LR	16 34 01.2	
	comp=Z,93nm,21.5s,baz=165,slow=42						
BELG	Belogornoye	23.19	45	P	P	16 22 56.6	+0.3
	comp=Z,18nm,1.0s,baz=60,slow=6.8,SNR=4.7						
KLMR	Klimovskoe	25.11	22	*e*	P	16 23 15.5	+1.2
KLMR				AMP		16 23 25.4	
	comp=Z,9.0nm,1.1s						
AKTO	Aktyubinsk	28.83	54	P	P	16 23 48.3	+0.4
	comp=Z,0.9nm,0.6s,baz=281,slow=9.6,SNR=3.0						
GEYT	Alibeck	29.35	80	P	P	16 23 53.6	+0.8
	comp=Z,2.0nm,0.5s,baz=235,slow=12,SNR=3.7						
TORD	Torodi Ar. Bea	30.48	218	LR	LR	16 36 53.8	
	comp=Z,40nm,21.3s,baz=355,slow=38						
ARCES	ARCESS Array B	30.97	3	P	P	16 24 06.5	-0.2
	comp=Z,2.0nm,0.7s,baz=188,slow=12,SNR=4.5						
ARCES				LR	LR	16 37 38.3	
	comp=Z,101nm,21.4s,baz=200,slow=38						
KOWA	Kowa	32.44	229	P	P	16 24 20.8	+0.7
	comp=Z,1.3nm,0.4s,baz=41,slow=10,SNR=3.6						
BRVK	Borovoye	36.68	50	P	P	16 24 54.5	-1.9
BRVK				IAmb	IAmb	16 24 57.7	
	comp=Z,6.0nm,1.1s						
KKAR	Karatay Array	37.56	67	P	P	16 25 02.6	-1.4
DBIC	Dimbokro	39.32	222	P	P	16 25 19.3	+0.3
	comp=Z,2.3nm,0.7s,baz=55,slow=5.9,SNR=3.6						
DBIC				LR	LR	16 42 41.9	
	comp=Z,44nm,19.6s,baz=95,slow=38						
MK31	Makanchi Array	44.99	59	P	P	16 26 04.7	-0.4
MK31				IAmb	IAmb	16 26 44.6	
	comp=Z,1.4nm,0.8s						
MKAR	Makanchi Array	44.99	59	P	P	16 26 05.0	-0.1
	comp=Z,1.1nm,0.6s,baz=276,slow=7.2,SNR=13						
MKAR	Makanchi Array	44.99	59	P	P	16 26 04.6	-0.5
ZALV	Zalesovo Beam	45.30	49	P	P	16 26 07.3	-0.1
	comp=Z,2.7nm,0.5s,baz=284,slow=9.0,SNR=10						
NRIK	Noril'sk	46.28	27	LR	LR	16 47 52.2	
	comp=Z,62nm,18.9s,baz=249,slow=39						
SCHQ	Schefferville	58.06	317	P	P	16 27 43.8	+1.1
	comp=Z,4.3nm,0.8s,baz=65,slow=4.7,SNR=5.0						
SONM	Songino Array	60.09	51	P	P	16 27 57.2	+0.2
	comp=Z,1.7nm,1.1s,baz=302,slow=6.8,SNR=4.8						
BOSA	Boshof	67.15	176	P	P	16 28 46.3	+2.6
	comp=Z,7.7nm,1.1s,baz=349,slow=4.9,SNR=2.5						
BOSA				LR	LR	16 59 28.9	
	comp=Z,79nm,18.8s,baz=172,slow=37						
CMAR	Chiang Mai Arr	69.79	82	P	P	16 29 00.2	-0.3
	comp=Z,0.8nm,0.7s,baz=304,slow=7.6,SNR=7.1						
YKA	Yellowknife Ar	72.87	340	LR	LR	17 05 22.8	
	comp=Z,33nm,18.9s,baz=0.0,slow=39						
ILAR	Eielson Array	76.35	354	LR	LR	17 04 33.5	
	comp=Z,23nm,19.8s,baz=328,slow=37						
PETK	Petropavlovsk-	81.28	25	LR	LR	17 11 12.4	
	comp=Z,47nm,18.8s,baz=267,slow=40						
MJAR	Matsushiro Arr	85.58	46	P	P	16 30 28.7	+0.4
	comp=Z,1.8nm,0.9s,baz=301,slow=6.0,SNR=4.3						
MJAR				LR	LR	17 10 05.3	
	comp=Z,25nm,18.8s,baz=195,slow=37						
WRA	Warramunga Arr	120.54	92	PKP	PKPdf	16 36 41.8	-0.1
	comp=Z,0.6nm,0.7s,baz=304,slow=3.1,SNR=5.2						
ASAR	Alice Springs	122.22	96	PKP	PKPdf	16 36 45.0	-0.1
	comp=Z,0.6nm,0.7s,baz=322,slow=1.5,SNR=11						

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*IDC **21** 16:39:04.6±0.7,0°.89N×127°.31E,h0^{km},mb4.0/10, mb1 4.1/12,mb1mx3.8/54,mbtmp4.0/12,ML3.5/2,Error ellipse: s-maj=31.2km s-min=13.4km az=66.0*
*NEIC **21** 16:39:06.2±1.0,0°.90N±0°.08×127°.4E±0°.1,h10^{km}±1^{km}, mb4.3/12,Error ellipse: s-maj=20.4km s-min=8.5km az=238.0*
*DJA **21** 16:39:07.7±0.9,1°N±2°×12°8E±°,h17^{km}±8^{km},M4.1/17, mb4.4/12,mB4.8/4,MLv4.0/17,Mw(mB)4.1/4*
ISC 21 16:39:06.7±0.7,**0°.89N**±0°.07×**127°.51E**±0°.07,**h10**^{km}**,n46,** σ**1ˢ.55**/42,**mb4.2**/15,**Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBMI	Labuha	1.51	180	P	Pn	16 39 34.9	+1.0
LBMI				S	Sn	16 39 55.1	+1.4
SANI	Sanana	3.29	207	P	Pn	16 39 58.1	-0.2
KMSI	Cibinong	3.54	265	P	Pn	16 40 03.8	+2.1
SWI	Sorong	4.14	115	P	Pn	16 40 07.2	-2.8
SIJI	Sorong	4.14	115	Pn	Pn	16 40 11.1	+1.0
	3.8nm,0.3s,baz=312,slow=15,SNR=19						
SIJI				Sn	Sn	16 41 03.6	+4.9
	0.2nm,0.3s,baz=330,slow=20,SNR=1.6						
MSAI	Masohi	4.44	161	P	Pn	16 40 14.3	+0.2
GTOI	Gorontalo	4.50	267	P	Pn	16 40 18.4	+3.4
AAI	Ambon	4.59	171	P	Pn	16 40 16.9	+0.6
LUWI	Luwuk	5.11	248	P	Pn	16 40 24.3	+1.0
	0.4nm2µm48nm,0.8s						
LUWI	Luwuk	5.11	248	Pn	Pn	16 40 18.8	-4.5
MRSI	Marisa	5.58	266	P	Pn	16 40 31.6	+1.8
	0.1nm27nm,0.6s						
FAKI	Fak Fak	6.06	129	Pn	Pn	16 40 35.1	-1.5
APSI	Ampana	6.12	253	P	Pn	16 40 38.9	+1.6
	0.1nm334nm25nm,0.6s						
TOLI2	Tolitoli	6.73	272	Pn	Pn	16 40 43.8	-1.8
MPSI	Mapaga	7.63	266	P	Pn	16 40 58.5	+0.5
	0.0nm10nm,0.8s						
TTSI	Tana Toraja	8.62	243	P	Pn	16 41 11.7	+0.1
	368nm16nm,0.9s						
BNSI	Bone	9.07	235	P	Pn	16 41 17.5	-0.3
	18nm,0.9s						
SPSI	Sidrap Palu	9.11	238	P	Pn	16 41 19.3	+1.0
	584nm48nm,0.6s						
BKSI	Bulukumba	9.61	230	P	Pn	16 41 25.8	+0.6

	14nm,0.7s						
EDFI	Ende, Flores	11.19	211	P	Pn	16 41 53.8	+6.8
KNRA	Kununurra	16.50	176	Pn	Pn	16 42 57.2	-1.2
KNRA				IAmb	IAmb	16 43 01.8	
	comp=Z,18nm,1.1s						
FITZ	Fitzroy Crossi	18.95	185	P	P	16 43 28.2	0.0
	comp=Z,0.1nm,0.3s,baz=30,slow=8.2,SNR=2.1						
WB0	Warramunga Arr	21.61	162	P	P	16 43 56.2	-0.9
WB0				IAmb	IAmb	16 44 05.7	
	comp=Z,14nm,1.0s						
WRA	Warramunga Arr	21.76	162	P	P	16 43 58.9	+0.2
	comp=Z,6.1nm,0.7s,baz=340,slow=11,SNR=38						
WRA	Warramunga Arr	21.76	162	P	P	16 43 58.4	-0.2
WB2	Warramunga Arr	21.76	162	P	P	16 43 58.6	-0.1
WB2				IAmb	IAmb	16 44 10.1	
	comp=Z,11nm,1.0s						
WR0	Warramunga Arr	21.84	162		P	16 43 58.5	-1.0
WR0				IAmb	IAmb	16 44 01.0	
	comp=Z,8.9nm,0.9s						
AS31	Alice Springs	25.18	166		P	16 44 31.8	-0.8
ASAR	Alice Springs	25.18	166	P	P	16 44 32.5	-0.1
	comp=Z,8.0nm,0.9s,baz=344,slow=7.6,SNR=43						
ASAR	Alice Springs	25.18	166		P	16 44 31.8	-0.9
RGRI	Rengat	25.20	267	P	P	16 44 36.9	+4.1
MORW	Morawa	31.74	199	P	P	16 45 28.6	-2.5
MORW				IAmb	IAmb	16 45 30.5	
	comp=Z,8.0nm,1.1s						
CMAR	Chiang Mai Arr	33.03	304	P	P	16 45 40.1	-2.4
	comp=Z,0.5nm,0.7s,baz=112,slow=6.4,SNR=5.2						
BBOO	Buckleboo	34.48	167		P	16 45 53.5	-1.4
STKA	Stephens Creek	35.21	159	P	P	16 46 01.4	0.0
	comp=Z,6.1nm,0.7s,baz=336,slow=8.1,SNR=12						
STKA	Stephens Creek	35.21	159	P	P	16 46 00.7	-0.6
KSRS	Korea Array	36.39	1	P	P	16 46 11.3	0.0
	comp=Z,0.7nm,0.7s,baz=175,slow=9.6,SNR=4.7						
MJAR	Matsushiro Arr	36.84	14	P	P	16 46 14.8	-0.4
	comp=Z,2.1nm,0.8s,baz=193,slow=8.6,SNR=6.5						
SONM	Songino Array	50.22	342	P	P	16 48 02.4	-0.6
	comp=Z,0.5nm,0.7s,baz=167,slow=8.4,SNR=3.8						
MK31	Makanchi Array	60.32	326	P	P	16 49 14.6	-1.2
MK31				IAmb	IAmb	16 49 20.7	
	comp=Z,2.7nm,0.8s						
MKAR	Makanchi Array	60.32	326	P	P	16 49 14.8	-1.1
	comp=Z,1.8nm,0.7s,baz=120,slow=7.7,SNR=21						
MKAR	Makanchi Array	60.32	326	P	P	16 49 14.3	-1.6
MAKZ	Makanchi	60.51	326	P	P	16 49 15.8	-1.3
KURBB	Kurchatov Arra	64.54	328	P	P	16 49 42.2	-1.7
	comp=Z,1.1nm,0.5s,baz=120,slow=5.9,SNR=8.0						
KURK	Kurchatov	64.54	328	P	P	16 49 42.1	-1.8
BVAR	Borovoye Array	70.11	327	P	P	16 50 17.7	-1.6
	comp=Z,0.9nm,0.8s,baz=185,slow=13,SNR=4.2						

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*IDC **21** 16:44:04.3±0.6, 8°.17S×124°.83E, h0km, mb4.5/16, mb1 4.6/20, mb1mx4.3/43, mbtmp4.5/20, ML4.2/4, MS3.7/8, Ms1 3.7/8, ms1mx3.3/28, Error ellipse: s-maj=20.1km s-min=13.4km az=70.0*

*NEIC **21** 16:44:05.7±2.6, 8°.23S±0°.06×124°.94E±0°.07, h10km±1km, mb4.9/22, Error ellipse: s-maj=12.7km s-min=10.1km az=70.0*

*DJA **21** 16:44:07.6±1.0, 8°S±2°×12°5E±°, h11km±7km, M4.6/51, mb4.8/51, mB5.2/24, MLv4.8/17, Mw(mB)4.5/24, MwMwp4.7/1, Mwp5.0/1*

*KLM **21** 16:44:12, 8°.24S×124°.85E, h59km, mb4.7*

ISC 21 16:44:07.6±0.3**, 8°.31S**±0°.04×**124°.95E**±0°.04**, h24**km**, n157, σ1s.89**/157**, mb4.8**/54**, MS3.9**/7**, 20C-26D, Fault plane solution: NP1:**φs20.85767°, δ53.17283°, λ-14.40189°. **NP2:**φs119.60806°, δ78.51633°, λ-142.29128°. **Principal axes:** T Plg16.4432°, Azm245.2888°; N Plg50.8316°, Azm134.0485°; P Plg34.3758°, Azm346.9370°; **Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.59	205		Pn	16 44 35.2	+0.8
SOEI	Soe	1.59	205	P	Pb	16 44 36.7	+0.3
BATI	Baumata	2.28	214	Pn	Pb	16 44 47.7	-0.3
	46nm,0.3s,baz=79,slow=0.4,SNR=48						
BATI				Sn	Sb	16 45 14.8	-1.0
	49nm,0.3s,baz=51,slow=15,SNR=7.0						
BATI	Baumata	2.28	214	P	Pb	16 44 47.0	-1.0
MMRI	Maumere	2.71	263	P	Pn	16 44 51.6	+2.0
MMRI	Maumere	2.71	263	Pn	Pn	16 44 50.2	+0.6
MMRI	Maumere	2.71	263	P	Pn	16 44 52.0	+2.4
EDFI	Ende, Flores	3.26	262	P	Pn	16 44 58.6	+1.3
BASI	Baing, Sumba	4.72	246	P	Pn	16 45 20.5	+3.2
BSSI	Bau Bau, Buton	4.92	296	P	Pn	16 45 20.2	+0.1
BKSI	Bulukumba	5.64	301	P	Pn	16 45 29.4	-0.6
	0.3nm624nm46nm,0.8s						
WBSI	Waikabubak, Su	5.65	256	P	Pn	16 45 34.1	+3.9
	0.8nm2μm236nm,1.4s						
KAPI	Kappang	6.12	302	Pn	Pn	16 45 39.4	+2.9
	2.2nm,0.3s,baz=103,slow=13,SNR=3.9						
KAPI				Sn	Sn	16 46 44.2	-1.6
	6.3nm,0.3s,baz=242,slow=23,SNR=13						
KAPI				LR	LR	16 47 54.1	
	comp=Z,477nm,21.7s,baz=146,slow=39						
BNSI	Bone	6.19	309	P	Pn	16 45 38.8	+1.3
	0.6nm1μm134nm,0.8s						
SANI	Sanana	6.30	9	P	Pn	16 45 38.5	-0.6
	0.5nm2μm105nm,0.4s						
SANI	Sanana	6.30	9	P	Pn	16 45 38.9	-0.2
SPSI	Sidrap Palu	6.72	310	P	Pn	16 45 45.5	+0.7
	0.3nm680nm44nm,0.9s						
PLAI	Plampang	7.12	265	P	Pn	16 45 52.0	+1.7
	0.5nm2μm102nm,1.3s						
PLAI	Plampang	7.12	265	P	Pn	16 45 52.3	+2.0
DRS	Darwin Rock St	7.14	126	P	Pn	16 45 52.4	+1.8
	50nm,0.9s						
TTSI	Tana Toraja	7.31	315	P	Pn	16 45 52.6	-0.3
	0.2nm483nm36nm,0.8s						
LUWI	Luwuk	7.54	343		Pn	16 45 55.2	-0.9
MTN	Manton Dam	7.56	127	P	Pn	16 45 58.6	+2.2
	baz=7.6,SNR=38						
MTN	Manton Dam	7.56	127	Pn	Pn	16 45 58.3	+1.9
MTN				Sn	Sn	16 47 21.8	+0.3
MTN	Manton Dam	7.56	127	P	Pn	16 45 58.5	+2.1
	132nm,0.4s						
TWSI	Taliwang, Sumb	8.00	266	P	Pn	16 46 04.0	+1.7
	601nm58nm,0.7s						
APSI	Ampana	8.05	336	P	Pn	16 46 01.9	-1.2
	0.3nm913nm82nm,0.9s						
KNRA	Kununurra	8.22	153	P	Pn	16 46 06.3	+1.0
	baz=8.3,SNR=104						
KNRA	Kununurra	8.22	153		Pn	16 46 06.0	+0.7
KNRA				Sn	Sn	16 47 35.0	-2.5
KNRA	Kununurra	8.22	153	P	Pn	16 46 06.3	+1.0
	177nm,0.9s						
KDU	Kakadu	8.58	121	P	Pn	16 46 11.6	+1.3
	baz=8.7,SNR=24						
KDU	Kakadu	8.58	121	P	Pn	16 46 11.7	+1.4
	63nm,0.8s						
FAKI	Fak Fak	9.02	54	P	Pn	16 46 18.2	+1.8
MRSI	Marisa	9.23	341	P	Pn	16 46 18.6	-0.7
	691nm39nm,1.2s						
SIJI	Sorong	9.70	41	Pn	Pn	16 46 25.9	+0.2
	1.0nm,0.3s,baz=257,slow=4.4,SNR=8.7						
SIJI				LR	LR	16 51 09.7	
	comp=Z,154nm,19.1s,baz=265,slow=44						
SWI	Sorong	9.70	41	P	Pn	16 46 25.5	-0.3
	36nm,0.9s						
FITZ	Fitzroy Crossi	9.75	176	Pn	Pn	16 46 26.9	+0.4
	1.6nm,0.3s,baz=355,slow=11,SNR=31						
FITZ				Sn	Sn	16 48 12.1	-3.3
	5.5nm,0.3s,baz=108,slow=6.8,SNR=16						
MPSI	Mapaga	9.96	329	P	Pn	16 46 28.7	-0.6
	14nm,0.9s						
ABJI	Asem Bagus	10.63	272	P	Pn	16 46 44.6	+6.2
	85nm,1.2s						
JAGI	Jajag, Banyuwa	10.69	268	P	Pn	16 46 47.8	+8.5
BBKI	Banjar Baru	11.15	295	P	Pn	16 46 50.2	+4.6
	37nm,1.3s						
MTKI	Muara Teweh, K	12.41	306	P	P	16 47 20.3	+5.7
BAKI	Biak	13.17	58	P	P	16 47 20.3	-2.7
PSA00	Pilbara Seismi	14.08	200		Pn	16 47 24.0	-1.6
WB0	Warramunga Arr	14.61	142		Pn	16 47 29.4	-3.5
WRAB	Tennant Creek	14.71	143		Pn	16 47 30.3	-3.9
WRA	Warramunga Arr	14.71	143	Pn	Pn	16 47 31.4	-2.8
	1.5nm,0.3s,baz=317,slow=13,SNR=51						
WRA				Sn	Sn	16 50 11.2	-5.4
	1.6nm,0.3s,baz=328,slow=22,SNR=9.3						
WRA	Warramunga Arr	14.71	143	Pn	Pn	16 47 30.0	-4.2
WB2	Warramunga Arr	14.71	143	Pn	Pn	16 47 31.7	-2.6
WR0	Warramunga Arr	14.84	142	Pn	Pn	16 47 33.7	-2.3
SPMM	Sapulut	15.46	326	P	P	16 47 51.0	+2.5
STKI	Sintang	15.80	301	P	Pn	16 47 50.6	+2.0
	23nm,1.4s						
SBUM	Sibu	16.60	310	P	P	16 48 04.0	+2.8
SBUM	Sibu	16.60	310		P	16 48 01.4	+0.2
LEM	Lembang	17.25	274	P	Pn	16 48 07.4	+0.2
	2.9nm,0.3s,baz=120,slow=17,SNR=2.0						
LEM				LR	LR	16 55 46.7	
	comp=Z,889nm,18.6s,baz=95,slow=41						
AS31	Alice Springs	17.51	152	Pn	Pn	16 48 09.4	-0.9
ASAR	Alice Springs	17.52	152	P	P	16 48 10.9	-0.5
	0.7nm,0.3s,baz=326,slow=11,SNR=35						
ASAR				S	Sn	16 51 18.4	-6.4
	0.9nm,0.3s,baz=313,slow=18,SNR=13						
ASAR	Alice Springs	17.52	152	Pn	Pn	16 48 08.9	-1.4
KSM	Kuching	17.54	303	P	P	16 48 16.0	+4.4
KSM	Kuching	17.54	303		P	16 48 11.4	-0.2
CBJI	Citeko	18.05	275	P	P	16 48 27.5	+10
TPI	Tanjungpandan	18.08	287	P	P	16 48 20.8	+3.3
	940nm27nm,1.6s						
DBJI	Dramaga	18.14	274	P	P	16 48 18.5	+0.3
	18μm68nm,1.4s						
QIS	Mount Isa	18.68	132	P	Pn	16 48 25.8	+1.2
	baz=19,SNR=19						
COEN	Coen	18.73	109	P	Pn	16 48 25.3	0.0
MEEK	Meekatharra	19.20	197	P	Pn	16 48 31.8	+1.0
	baz=19,SNR=13						
PPBI	Pangkal Pinang	19.70	287	P	Pn	16 48 38.8	+1.9
MTSU	Mount Surprise	21.21	119	P	P	16 48 54.7	+2.9
	baz=21,SNR=17						
DSRI	Dabo	21.74	290	P	P	16 48 58.9	+1.4
	681nm22nm,0.9s						
PMG	Port Moresby	21.97	95	P	P	16 49 02.3	+2.4
	11nm,0.7s,baz=290,slow=4.3,SNR=12						
PMG				LR	LR	16 59 17.9	
	comp=Z,414nm,18.1s,baz=266,slow=41						
PMG	Port Moresby	21.97	95	P	P	16 49 00.1	+0.2
PMG				IAmb	IAmb	16 49 16.9	
	comp=Z,65nm,1.1s						
MORW	Morawa	22.29	201	P	P	16 49 03.7	+0.4
	baz=22,SNR=5.8						
MORW	Morawa	22.29	201	P	P	16 49 03.2	-0.1
MORW				IAmb	IAmb	16 49 06.6	
	comp=Z,24nm,1.1s						
FORT	Forrest	22.54	173	P	P	16 49 07.5	+1.6
	baz=23,SNR=8.3						
FORT	Forrest	22.54	173	P	P	16 49 05.8	-0.2
FORT				IAmb	IAmb	16 49 23.8	
	comp=Z,48nm,0.9s						
MYKOM	Kota Tinggi	23.31	295	P	P	16 49 16.0	+2.0
BLDU	Ballidu	23.50	198	P	P	16 49 16.6	+0.9
	baz=24,SNR=24						
CTAO	Charters Tower	23.70	122	P	P	16 49 15.8	-2.0
KLBR	Kellerberrin	24.12	195	P	P	16 49 22.8	+1.2
	baz=24,SNR=6.7						
MUN	Mundaring	24.92	198	P	P	16 49 29.3	+0.4
	baz=25,SNR=3.9						
JRMM	Jerantut	25.48	298	P	P	16 49 38.0	+3.8
PPI	Padang Panjang	25.68	286	P	P	16 49 40.2	+4.2
	comp=Z,363nmcomp=Z,13nm,1.0s						
QLP	Quilpie	25.79	137	P	P	16 49 38.8	+2.0
	baz=26,SNR=11						
BBOO	Buckleboo	26.46	159	P	P	16 49 44.9	+2.0
BBOO				IAmb	IAmb	16 50 41.3	
	comp=Z,39nm,1.4s						
STKA	Stephens Creek	28.10	149	P	P	16 50 00.1	+2.5
	comp=Z,3.4nm,0.9s,baz=319,slow=11,SNR=5.5						
HTT	Hallett	28.14	155	P	P	16 50 00.2	+2.2
	baz=28,SNR=3.4						
PSI	Prapat	28.21	292	P	P	16 49 58.1	-0.8
	comp=Z,14nm,0.8s,baz=134,slow=9.7,SNR=10.0						
PSI				LR	LR	17 01 05.7	
	comp=Z,287nm,20.4s,baz=122,slow=36						
GUMO	Guam	29.40	42	LR	LR	17 00 58.4	
	comp=Z,55nm,19.9s,baz=202,slow=34						
TPTI		29.99	291	P	P	16 50 16.0	+1.4
	comp=Z,7.9nm,0.8s						
CMSA	Cobar Meteorol	30.12	143	P	P	16 50 17.3	+1.7
	baz=30,SNR=6.1						
MLSI	Meulaboh, Aceh	31.09	293	P	P	16 50 25.9	+1.6
	comp=Z,20nm,0.6s						
ARPS	Mount Arapiles	32.23	154	P	P	16 50 35.7	+1.7
	baz=32,SNR=7.8						
CMAR	Chiang Mai Arr	36.96	316	P	P	16 51 15.4	+0.2
	comp=Z,11nm,0.8s,baz=141,slow=6.7,SNR=93						
CMAR				LR	LR	17 09 57.0	
	comp=Z,80nm,18.1s,baz=190,slow=42						
CMAR	Chiang Mai Arr	36.96	316	P	P	16 51 14.9	-0.3
CHTO	Chiang Mai	37.21	317	P	P	16 51 17.1	-0.1
CHTO				IAmb	IAmb	16 51 18.5	
	comp=Z,24nm,1.0s						
GYA	Guiyang	38.86	333	⇑P	P	16 51 31.8	+0.6
GYA				pmax	pmax		
	comp=Z,17nm,0.9s						
KMI	Kunming	39.66	328	⇑P	P	16 51 39.6	+1.5
KMI				pP	pP	16 51 43.0	-2.5
KMI				pmax	pmax		
	comp=Z,19nm,0.9s						
KMI				pmax	pmax		
	comp=Z,160nm,4.6s						
NJ2	Nanjing	40.55	352	*e*P	P	16 51 46.3	+1.2
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
DZM	Mont Dzumac	42.16	114	*e*P	P	16 51 55.9	-2.8
	comp=Z,26nm,1.1s						
DZM	Mont Dzumac	42.16	114	*e*LR	LR	17 03 40.7	
	comp=Z,192nm,25.6s						
CD2	Chengdu	43.97	333	P	P	16 52 13.1	0.0
CD2				pmax	pmax		
	comp=Z,20nm,1.2s						
XAN	Xi'an	44.78	341	P	P	16 52 17.8	-1.7
XAN				pP	sP	16 52 32.1	+2.1
XAN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MAJO	Matsushiro	46.32	15	P	P	16 52 29.9	-1.7
MAJO				IAmb	IAmb	16 52 31.4	
	comp=Z,10nm,0.7s						
MAT	Matsushiro	46.32	15	P	P	16 52 30.5	-1.1
MJAR	Matsushiro Arr	46.32	15	P	P	16 52 31.0	-0.6
	comp=Z,11nm,0.8s,baz=184,slow=8.8,SNR=26						
MJAR	Matsushiro Arr	46.32	15	P	P	16 52 29.6	-2.0
MJAR				IAmb	IAmb	16 52 33.6	
	comp=Z,18nm,1.8s						
SHL	Shillong	46.57	317	P	P	16 52 32.6	-1.3
LZH	Lanzhou	48.42	337	*e*P	P	16 52 48.8	+0.6
LZH				pP	pP	16 52 52.4	-3.3
LZH				sP	sP	16 52 54.8	-3.9
LZH				pmax	pmax		
	comp=Z,17nm,1.0s						
LSA	Lhasa	49.85	321	P	P	16 52 59.6	0.0
LSA				pmax	pmax		
	comp=Z,130nm,1.1s						
HHC	Hu-ho-hao-te	50.45	347	*e*P	P	16 53 02.8	-0.7
HHC				pmax	pmax		
	comp=Z,12nm,0.9s						
HHC				pmax	pmax		
	comp=Z,100nm,5.3s						
ODAN	Odare	50.49	315	*e*P	P	16 53 03.3	-0.9
	comp=Z,22nm,1.0s						
TAPN	Taplejung	50.57	316	*e*P	P	16 53 04.0	-0.9
	comp=Z,45nm,1.0s						
RAMN	Ramite	51.09	315	*e*P	P	16 53 08.4	-0.4
	comp=Z,15nm,0.5s						
JIRN	Jiri	51.82	315	*e*P	P	16 53 13.4	-0.9
	comp=Z,28nm,1.0s						
GUN	Gumba	52.19	315	*e*P	P	16 53 16.1	-1.0
	comp=Z,38nm,0.9s						
PKI	Pulchoki	52.31	314	*e*P	P	16 53 16.8	-1.2
	comp=Z,13nm,0.6s						
PKIN	Phulchoki	52.33	314	*e*P	P	16 53 16.6	-1.4
	comp=Z,12nm,0.6s						
KKN	Kakani	52.54	315	*e*P	P	16 53 18.6	-0.9
DMN	Daman	52.55	314	*e*P	P	16 53 18.6	-1.1
	comp=Z,19nm,0.9s						
USRK	Ussuriysk Ar.	52.65	6	P	P	16 53 19.2	-0.5
	comp=Z,4.2nm,0.6s,baz=194,slow=6.8,SNR=25						
USRK	Ussuriysk Ar.	52.65	6	P	P	16 53 19.4	-0.4
MDJ	Mudanjiang	52.84	4	P	P	16 53 21.3	+0.1
MDJ				pP	pP	16 53 24.4	-4.4
MDJ				sP	sP	16 53 25.8	-5.9
MDJ				S	S	17 00 53.4	+4.9
MDJ				pmax	pmax		
	comp=Z,21nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,200nm,3.6s						
GTA	Gaotai	52.90	336	⇑P	P	16 53 22.1	+0.3
GTA				pP	sP	16 53 36.3	+3.9
GTA				sP	pP	16 53 41.0	+12
GTA				pmax	pmax		
	comp=Z,11nm,1.3s						
GKN	Gorkha	53.12	314	*e*P	P	16 53 22.5	-1.2
	comp=Z,15nm,0.8s						
KOLN	Koldanda	53.72	313	*e*P	P	16 53 27.0	-1.2
	comp=Z,21nm,0.8s						
DANN	Dangsing	53.95	314	*e*P	P	16 53 28.8	-1.2
	comp=Z,34nm,0.8s						
PYUN	Piuthan	54.35	313	*e*P	P	16 53 31.8	-1.0
	comp=Z,43nm,1.0s						
KLR	Kul'dur	57.60	5	P	P	16 53 55.0	-0.4
	comp=Z,3.1nm,0.7s,baz=190,slow=3.9,SNR=10						
ULN	Ulaanbaatar	58.13	346	P	P	16 53 56.6	-2.8
ULN				IAmb	IAmb	16 53 60.0	
	comp=Z,19nm,1.8s						
SONM	Songino Array	58.26	345	P	P	16 53 59.4	-0.9
	comp=Z,2.2nm,0.9s,baz=149,slow=6.6,SNR=9.9						
SONM	Songino Array	58.26	345	P	P	16 53 59.1	-1.2
WMQ	Urumqi	61.90	330	*e*P	P	16 54 25.3	+0.1
WMQ				pP	pP	16 54 30.0	-2.9
WMQ				pmax	pmax		
	comp=Z,12nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,99nm,3.9s						
NIL	Nilore	64.38	313	P	P	16 54 40.3	-1.5
NIL				IAmb	IAmb	16 54 41.3	
	comp=Z,11nm,1.1s						
KSH	Kashi	65.70	320	P	P	16 54 50.0	-0.5
KSH				pP	pP	16 54 54.3	-3.8
KSH				sP	sP	16 54 57.3	-4.0
KSH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MK31	Makanchi Array	66.69	330	P	P	16 54 56.0	-0.5
MKAR	Makanchi Array	66.69	330	P	P	16 54 56.0	-0.5
	comp=Z,10nm,0.8s,baz=133,slow=8.0,SNR=78						
MKAR	Makanchi Array	66.69	330	P	P	16 54 55.5	-1.0
MAKZ	Makanchi	66.86	329	P	P	16 54 56.3	-1.3
MAKZ				IAmb	IAmb	16 54 57.7	
	comp=Z,11nm,1.1s						
PETK	Petropavlovsk-	67.21	21	P	P	16 55 00.8	+1.1
	comp=Z,2.9nm,0.8s,baz=190,slow=7.3,SNR=5.0						
ZALV	Zalesovo Beam	70.64	336	P	P	16 55 19.4	-1.5
	comp=Z,11nm,0.8s,baz=131,slow=4.5,SNR=43						
KURBB	Kurchatov Arra	71.10	331	P	P	16 55 23.1	-0.7
	comp=Z,10.0nm,1.0s,baz=134,slow=5.1,SNR=34						
VNDA	Vanda	71.80	172	P	P	16 55 29.2	+1.5
	comp=Z,2.5nm,0.7s,baz=318,slow=7.3,SNR=18						
VNDA	Vanda	71.80	172	P	P	16 55 29.4	+1.7
VNDA				IAmb	IAmb	16 55 30.8	
	comp=Z,15nm,1.8s						
MAW	Mawson	71.93	201	P	P	16 55 30.3	+1.7
	comp=Z,3.7nm,0.8s,baz=71,slow=8.8,SNR=5.1						
BVAR	Borovoye Array	76.58	330	P	P	16 55 55.1	-0.8
	comp=Z,1.6nm,0.8s,baz=185,slow=15,SNR=8.8						
ABKAR	Akbulak array	80.47	323	P	P	16 56 16.4	-1.1
QSPA	South Pole Qui	81.68	180	P	P	16 56 24.8	+1.0
AKTO	Aktyubinsk	82.09	324	P	P	16 56 24.9	-1.2
	comp=Z,1.8nm,0.6s,baz=99,slow=6.3,SNR=6.7						
PPT2	Papeete2	83.24	107	*e*LR	LR	17 22 35.2	
	comp=Z,109nm,31.5s						
RAYN	Ar Rayn	83.72	295	P	P	16 56 33.6	-1.6
SNAA	Sanae	93.19	195	P	P	16 57 21.8	+2.2
SNAA	Sanae	93.19	195	P	P	16 57 19.3	-0.3
SNAA				IAmb	IAmb	16 57 22.4	
	comp=Z,4.3nm,1.0s						
VNA2	Neumayer--Watz	94.80	194	P	P	16 57 29.2	+2.2
KLMR	Klimovskoe	94.97	331	*e*P	P	16 57 24.7	-3.1
KLMR				AMP		16 57 29.9	
	comp=Z,12nm,1.5s						
VNA3	Neumayer Olymp	95.11	193	P	P	16 57 30.0	+1.6
BRTR	Keskin Array B	96.25	309	LR	LR	17 47 31.8	
	comp=Z,15nm,18.8s,baz=136,slow=40						
MEM	Membach	114.57	322	*d*PKiKP	PKiKP	17 02 45.5	-0.2

KMA 21 16:45:49.9±0.5**, 36°.34N**×**129°.85E, h7**km **Error ellipse: s-maj=8.4km s-min=1.5km az=269.0, South Korea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSYOD	Yeongdeok	0.39	293	P	Pg	16 45 57.6	+0.1
	SNR=24						
YODB	Yeongdeok	0.40	298	P	Pg	16 45 57.6	-0.1
	SNR=22						
KSULJ	Uljin	0.50	315	P	Pg	16 45 59.5	-0.1
	SNR=13						
KSADO	Andong	0.73	276	P	Pg	16 46 03.7	-0.2
	SNR=7.8						
CHYB	Chungyang	0.96	309	P	Pg	16 46 07.6	-0.7
	SNR=8.4						
KSDAG	Daegu	0.96	234	P	Pg	16 46 08.3	0.0
	SNR=9.0						
KSDAG				S	Sg	16 46 20.9	+0.2
KSMGY	Mungyeong	1.47	283	P	Pn	16 46 16.7	-0.1
	SNR=9.8						

IDC 21 16:49:46.3±2.5**, 8°.45N**×**125°.13E, h0**km**, mb3.9**/4**, mb1 4.0**/4**, mb1mx3.4**/34**, mbtmp3.9**/4**, Error ellipse: s-maj=241.0km s-min=24.0km az=65.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	29.63	162	P	P	16 55 53.4	-0.2
	1.0nm,0.7s,baz=341,slow=12,SNR=3.2						
ASAR	Alice Springs	33.05	165	P	P	16 56 23.8	+0.1
	0.3nm,0.6s,baz=353,slow=15,SNR=1.4						
MKAR	Makanchi Array	52.81	324	P	P	16 59 03.2	-0.3
	0.4nm,0.5s,baz=116,slow=8.2,SNR=5.0						
KURBB	Kurchatov Arra	56.94	326	P	P	16 59 33.4	+0.1
	1.3nm,0.2s,baz=135,slow=6.7,SNR=6.9						

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*IDC **21** 17:21:07.8±2.7, 6°.69S×129°.68E, h101km±37km, mb3.0/1, mb1 3.4/5, mb1mx3.1/37, mbtmp3.7/5, MS2.4/1, Ms1 2.4/1, ms1mx2.1/15, Error ellipse: s-maj=54.0km s-min=19.1km az=93.0*

ISC 21 17:21:07.8±1.1**, 6°.76S**±0°.07×**129°.9E**±0°.2**, h104**km**, n11, σ3s.36**/8**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	4.49	32	P	Pn	17 22 19.4	+5.6
DRS	Darwin Rock St	5.73	170	P	Pn	17 22 42.0	+12
	9.3nm,1.0s						
SIJI	Sorong	6.01	14	P	Pn	17 22 34.1	-0.3
	3.1nm,0.3s,baz=202,slow=22,SNR=47						
MTN	Manton Dam	6.17	168	P	Pn	17 22 47.1	+11
	14nm,1.5s						
KDU	Kakadu	6.43	157	P	Pn	17 22 51.3	+11
	9.1nm,1.0s						
KNRA	Kununurra	8.93	187	P	Pn	17 23 19.1	+5.1
	15nm,1.0s						
KAPI	Kappang	10.21	279	LR	LR	17 27 40.2	
	comp=Z,21nm,19.5s,baz=128,slow=39						
FITZ	Fitzroy Crossi	12.00	200	P	Pn	17 23 56.1	+0.7
	0.2nm,0.3s,baz=22,slow=13,SNR=12						
FITZ				S	Sn	17 26 07.3	-0.1
	baz=106,slow=20						
WRA	Warramunga Arr	13.81	162	P	Pn	17 24 20.7	+1.5
	0.1nm,0.3s,baz=343,slow=11,SNR=1.6						
WRA				S	Sn	17 26 52.6	+1.2
	0.1nm,0.3s,baz=340,slow=22,SNR=2.8						
ASAR	Alice Springs	17.25	167	P	Pn	17 25 04.4	+2.0
	0.8nm,0.3s,baz=344,slow=11,SNR=147						
ASAR				S	Sn	17 28 07.6	-6.9
	0.0nm,0.3s,baz=343,slow=18,SNR=1.3						
MKAR	Makanchi Array	67.95	327	P	P	17 31 54.8	-0.7
	0.1nm,0.4s,baz=120,slow=8.5,SNR=1.7						

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*NEIC **21** 17:30:25.5±0.8, 17°.7S±0°.2×178°.4W±0°.2, h597km±9km, mb4.3/22, Error ellipse: s-maj=28.5km s-min=17.3km az=133.0*

*IDC **21** 17:30:26.2±10.0, 17°.43S×178°.78W, h578km±104km, mb3.4/4, mb1 3.7/4, mb1mx3.1/19, mbtmp4.4/4, Error ellipse: s-maj=111.0km s-min=47.5km az=128.0*

ISC 21 17:30:25.8±1.0**, 17°.6S**±0°.2×**178°.5W**±0°.2**, h600**km**, n34, σ0s.58**/35**, mb4.3**/15**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.27	267	P	P	17 31 47.2	+0.5

MARNC	Mare, Loyalty	13.26	251	P	P	17 33 17.4	+0.2
OUENC	Ouen Island, N	14.57	248	P	P	17 33 30.0	0.0
DZM	Mont Dzumac	14.83	250	P	P	17 33 32.4	-0.2
ARMA	Armidale	30.01	239	P	P	17 35 48.1	+0.4
ARMA				IAmb	IAmb	17 36 11.3	
	comp=Z,15nm,1.1s						
CTAO	Charters Tower	33.40	260	P	P	17 36 16.2	-0.2
CTAO				IAmb	IAmb	17 36 47.6	
	comp=Z,16nm,1.6s						
CAN	Canberra	33.81	232	P	P	17 36 18.6	-1.2
COEN	Coen	37.00	270	P	P	17 36 46.1	-0.2
TOO	Toolangi	37.29	230	P	P	17 36 47.9	-0.4
TOO				IAmb	IAmb	17 37 21.5	
	comp=Z,16nm,1.4s						
STKA	Stephens Creek	38.69	241	P	P	17 37 00.3	+0.5
	comp=Z,3.1nm,0.5s,baz=90,slow=12,SNR=16						
STKA	Stephens Creek	38.69	241	IAmb	IAmb	17 37 01.1	
	comp=Z,1.6nm,1.1s						
BBOO	Buckleboo	43.47	241	P	P	17 37 37.4	0.0
BBOO				IAmb	IAmb	17 37 38.3	
	comp=Z,8.4nm,0.8s						
DHH	Diamond Head	43.63	29	P	P	17 37 38.2	-0.5
WR0	Warramunga Arr	44.40	259	P	P	17 37 44.5	-0.3
WR0				IAmb	IAmb	17 37 47.5	
	comp=Z,3.2nm,1.0s						
WB0	Warramunga Arr	44.55	259	P	P	17 37 45.8	-0.2
WB0				IAmb	IAmb	17 37 46.7	
	comp=Z,4.2nm,0.5s						
WB2	Warramunga Arr	44.58	259	P	P	17 37 46.0	-0.2
WB2				IAmb	IAmb	17 37 47.0	
	comp=Z,4.6nm,0.5s						
WRA	Warramunga Arr	44.59	259	P	P	17 37 46.3	0.0
	comp=Z,2.2nm,0.3s,baz=92,slow=7.3,SNR=71						
WRA				PcP	PcP	17 39 16.8	+0.8
	comp=Z,0.3nm,0.4s,baz=91,slow=3.9,SNR=1.8						
WRA	Warramunga Arr	44.59	259	P	P	17 37 45.4	-0.8
AS31	Alice Springs	44.77	254	P	P	17 37 48.0	+0.2
AS31				IAmb	IAmb	17 37 48.6	
	comp=Z,5.3nm,0.8s						
ASAR	Alice Springs	44.78	254	P	P	17 37 48.2	+0.5
	comp=Z,16nm,0.5s,baz=88,slow=8.5,SNR=343						
ASAR				PcP	PcP	17 39 17.6	+1.0
	comp=Z,0.6nm,0.5s,baz=98,slow=3.8,SNR=3.8						
ASAR	Alice Springs	44.78	254	P	P	17 37 47.9	+0.2
MIDW	Midway	45.56	1	P	P	17 37 52.3	-1.0
MTN	Manton Dam	48.70	268	P	P	17 38 17.5	+0.3
FORT	Forrest	50.05	244	P	P	17 38 26.4	-0.5
KNRA	Kununurra	50.42	264	P	P	17 38 29.6	-0.1
KNRA				IAmb	IAmb	17 38 54.8	
	comp=Z,21nm,1.3s						
PSA00	Pilbara Seismi	57.89	255	P	P	17 39 21.8	-0.3
PSA00	Pilbara Seismi	57.89	255	P	P	17 39 21.6	-0.4
PSA00				IAmb	IAmb	17 39 52.2	
	comp=Z,33nm,1.6s						
MORW	Morawa	60.51	246	P	P	17 39 39.0	-0.3
MORW				IAmb	IAmb	17 39 46.1	
	comp=Z,13nm,1.3s						
GIRL	Giralia	62.88	253	P	P	17 39 54.2	-0.6
UGM	Wanagama	69.55	268	P	P	17 40 36.6	+0.3
QSPA	South Pole Qui	72.45	180	P	P	17 40 52.2	-0.2
ILAR	Eielson Array	85.61	13	P	P	17 42 02.6	+1.3
	comp=Z,0.2nm,0.5s,baz=200,slow=5.7,SNR=2.6						
GERES	GERESS Array B	147.29	345	PKPbc	PKiKP	17 49 05.4	+0.8
	comp=Z,0.2nm,0.4s,baz=20,slow=3.1,SNR=2.0						
GERES	GERESS Array B	147.29	345		PKPbc	17 49 02.5	-0.4

TUL ***21*** *17:59:45.4±1.4, 36°.30N±0°.01×96°.88W±0°.01, h4^{km}±7^{km}, ML2.7, mb_Lg2.6/18(NEIC), Error ellipse: s-maj=1.6km s-min=1.0km az=154.0*

NEIC 21 17:59:45.5±0.9**, 36°.31N**±0°.01×**96°.88W**±0°.02**, h12**^{km}±1^{km}**, Error ellipse: s-maj=2.3km s-min=1.6km az=57.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
QUOK	Quay	0.19	134	Pg	Pg	17 59 49.6	-0.2
QUOK				Sg	Sg	17 59 52.4	-0.3
OK031	S. Brethren Rd	0.35	175	Pg	Pg	17 59 52.6	0.0
OK031				Sg	Sg	17 59 57.5	+0.1
OK030	Cody Creek RV	0.39	168		Pg	17 59 53.1	-0.1
OK030				Sg	Sg	17 59 58.5	+0.1
BLOK	Blackwell	0.53	329	Pg	Pg	17 59 56.0	+0.1
BLOK				Sg	Sg	18 00 03.2	+0.3
T35A	Sooner Cattle	0.68	26	Pg	Pg	17 59 58.7	0.0
T35A				Sg	Sg	18 00 07.6	-0.1
OK029	Liberty Lake	0.69	223	Pg	Pg	17 59 58.9	0.0
OK029				Sg	Sg	18 00 08.1	+0.1
OK025	Westminster Rd	0.81	207	Pg	Pg	18 00 00.8	-0.4
OK025				Sg	Sg	18 00 12.0	+0.2
KAN13	South Haven SW	0.85	326		Pg	18 00 01.6	-0.4
BCOK	Bluff Creek, N	0.88	223	Pg	Pg	18 00 02.4	-0.1
BCOK				Sg	Sg	18 00 13.8	-0.1
CROK	Carrier	0.91	283		Pg	18 00 02.9	-0.2
CROK				Sg	Sb	18 00 15.3	-0.1
GC02	Grant County #	0.96	305	Pg	Pg	18 00 03.7	-0.3
GC02				Sg	Sg	18 00 16.4	-0.1
TUL1	Leonard	0.97	114	Pg	Pg	18 00 03.7	-0.4
TUL1				Sg	Sg	18 00 16.3	-0.5
OKCFA	Oklahoma City	1.00	208	Pg	Pb	18 00 04.0	-0.8
OKCFA				Sg	Sg	18 00 17.5	-0.4
OKCSW	OKLAHOMA CITY	1.01	207	Pg	Pb	18 00 04.7	-0.2
OKCSW				Sg	Sb	18 00 18.3	+0.2
KAN09	Caldwell North	1.02	325	Pg	Pb	18 00 05.1	-0.1
KAN09				Sg	Sb	18 00 18.6	+0.1
KAN17	Caldwell West	1.02	316	Pg	Pb	18 00 05.0	-0.3
KAN17				Sg	Sg	18 00 18.3	-0.3
KAN14	Manchester OK	1.09	307		Pb	18 00 06.2	-0.1
KAN14				Sg	Sb	18 00 20.1	-0.3
KAN01	Argonia South	1.10	320	Pg	Pb	18 00 06.3	-0.2
KAN01				Sg	Sg	18 00 21.1	0.0
FNO	Franklin	1.13	202		Pb	18 00 06.3	-0.7
FNO				Sg	Sb	18 00 21.7	+0.1
KAN05	Bluff City Nor	1.13	315	Pg	Pn	18 00 07.2	0.0
KAN05				Sg	Sg	18 00 22.2	+0.2
OK032	Salt Plains WL	1.18	295		Pb	18 00 07.8	-0.1
OK032				Sg	Sg	18 00 23.6	0.0
KAN06	Argonia West S	1.23	320		Pb	18 00 08.8	+0.1
KAN06				Sg	Sn	18 00 24.9	-0.1
KAN08	Anthony NE Sta	1.27	317	Pn	Pb	18 00 09.5	+0.1
KAN10	Anthony SW Sta	1.27	310		Pb	18 00 09.3	-0.1
KAN16	Harper SW Stat	1.32	314		Pn	18 00 10.1	+0.2
KAN12	Harper NE Stat	1.34	318	Pn	Pn	18 00 10.0	0.0
U32A	Winter Ranch,	1.71	273	Pn	Pn	18 00 15.6	+0.3
X34A	Smith Ranch, M	1.87	205		Pb	18 00 19.2	-0.4
U38A	Gravette	2.02	85		Pn	18 00 20.6	+1.2
X37A	Clayton	2.11	144		Pn	18 00 22.0	+1.3
X37A				IAmb_Lg		18 00 57.3	
	comp=Z,24nm,0.7s						
WMOK	Wichita Mounta	2.20	225	Pn	Pn	18 00 22.9	+0.9
LOOK	Love County	2.32	186	Pn	Pn	18 00 23.6	0.0
HHAR	Hobbs	2.38	90		Pn	18 00 24.9	+0.6
KSU1	Kansas State U	2.80	4		Pn	18 00 30.1	-0.1
KSU1	Kansas State U	2.80	4	IAmb_Lg		18 01 17.4	
	comp=Z,21nm,1.0s						
S39A	Bolivar	3.17	63		Pn	18 00 37.3	+2.1
S39A				IAmb_Lg		18 01 31.8	
	comp=Z,15nm,0.8s						
MIAR	Mount Ida	3.22	122	Pn	Pn	18 00 38.5	+2.6
U40A	Yellville	3.25	88	Pn	Pn	18 00 37.6	+1.2
CBKS	Cedar Bluff	3.38	319		Pn	18 00 38.4	+0.2
X40A	Basin Creek Fa	3.77	118		Pn	18 00 40.8	-2.7
X40A				IAmb_Lg		18 01 49.8	
	comp=Z,17nm,0.9s						
MGMO	Mountain Grove	3.80	76		Pn	18 00 44.0	0.0
WHAR	Wooly Hollow	3.87	104		Pn	18 00 44.0	-0.9
WHAR				IAmb_Lg		18 01 51.2	
	comp=Z,11nm,0.8s						
FCAR	Ozark Folk Cen	3.87	95		Pn	18 00 43.2	-1.7
AMTX	Amarillo	4.16	251		Pn	18 00 48.4	-0.6
AMTX				IAmb_Lg		18 02 05.7	
	comp=Z,10nm,0.9s						
R40A	Maddies Statio	4.18	60		Pn	18 00 47.9	-1.2
P38A	Dawn	4.24	38		Pn	18 00 50.4	+0.5
N35A	Tabor	4.65	12		Pn	18 00 53.4	-2.3
N35A				IAmb_Lg		18 02 15.4	
	comp=Z,19nm,0.8s						
T42A	Van Buren	4.71	79	Pn	Pn	18 00 55.0	-1.4
T42A				IAmb_Lg		18 02 16.2	
	comp=Z,8.7nm,0.7s						
CCM	Cathedral Cave	4.83	67	Pn	Pn	18 00 56.9	-1.1
P40A	Paris	5.00	48	Pn	Pn	18 00 58.6	-1.7
FVM	French Village	5.42	70	Pn	Pn	18 01 08.0	+1.8
T25A	Trinidad	6.11	280	IAmb_Lg		18 03 00.8	
	comp=Z,7.9nm,0.9s						
JCT	Junction City	6.30	204	IAmb_Lg		18 03 22.8	
	comp=Z,7.3nm,0.9s						

MAN 21 18:13:50.2, 13°.72N×119°.24E, h58^{km}, mb4.6, ML3.4, MS3.3, Philippine Islands region

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IDC 21 18:24:37.6±6.3**, 19°.79S×179°.07W, h611**^{km}±49^{km}**, mb2.8**/2**, mb1 3.0**/3**, mb1mx2.7**/40**, mbtmp3.7**/3**, Error ellipse: s-maj=219.8km s-min=58.5km az=156.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.41	306	P	P	18 26 00.2	-0.1
	1.1nm,0.3s,baz=130,slow=5.5,SNR=6.5						
WRA	Warramunga Arr	43.71	262	P	P	18 31 50.7	+0.1
	0.3nm,0.3s,baz=96,slow=7.3,SNR=15						
ASAR	Alice Springs	43.71	256	P	P	18 31 50.4	-0.2
	1.0nm,0.5s,baz=93,slow=8.0,SNR=45						
ASAR				PcP	PcP	18 33 23.5	-0.1
	0.3nm,0.6s,baz=109,slow=3.4,SNR=5.8						
AKASG	Malin Array Be	141.91	331	PKP	PKPdf	18 42 59.5	-1.3
	0.4nm,0.5s,baz=47,slow=3.9,SNR=10						

AEIC ***21*** *18:28:20.3±1.1, 62°.89N±0°.03×148°.89W±0°.06, h71^{km}±5^{km}, ML3.2/128, ML3.5/155(NEIC), Error ellipse: s-maj=4.4km s-min=4.1km az=222.0*

NEIC ***21*** *18:28:20.4±1.4, 62°.87N±0°.02×148°.89W±0°.06, h64^{km}±6^{km}, Error ellipse: s-maj=4.2km s-min=3.3km az=81.0*

ISC 21 18:28:20.2±1.1**, 62°.89N**±0°.03×**148°.90W**±0°.03**, h68**^{km}±6^{km}**, n196, σ0^{s}78**/218**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
WAT7	Susitna Watana	0.06	155		Pn	18 28 30.5	+0.2
WAT7					Sn	18 28 38.1	+0.4
WAT1	Susitna Watana	0.17	110	P	Pn	18 28 30.6	+0.1
	baz=290						
WAT1				S	Sn	18 28 38.7	+0.6
	baz=290						
WAT1	Susitna Watana	0.17	110		Pn	18 28 30.6	+0.1
WAT1					Sn	18 28 38.7	+0.6
RND	Reindeer	0.52	2		Pn	18 28 33.6	+0.4
RND				Sn	Sn	18 28 43.2	+0.6
WAT6	Susitna Watana	0.62	119	P	Pn	18 28 33.8	-0.4
	baz=300						
WAT6				S	Sn	18 28 43.8	-0.7
	baz=300						
WAT6	Susitna Watana	0.62	119		Pn	18 28 33.8	-0.4
WAT6					Sn	18 28 43.8	-0.7
DHY	Denali Highway	0.72	74	P	Pn	18 28 35.6	+0.2
	baz=255						
DHY				S	Sn	18 28 47.2	+0.6
	baz=255						
DHY	Denali Highway	0.72	74		Pn	18 28 35.3	-0.1
DHY				Sn	Sn	18 28 46.4	-0.2
CUT	Chulitna	0.80	233	P	Pn	18 28 36.3	+0.2
	baz=52						
CUT				S	Sn	18 28 48.7	+0.9
	baz=52						
CUT	Chulitna	0.80	233		Pn	18 28 36.2	+0.2
CUT				Sn	Sn	18 28 48.0	+0.2
CUT				IAML		18 28 49.6	
	comp=N,2μm,0.4s						
TRF	Thorofare Moun	0.85	313	P	Pn	18 28 37.5	+0.7
	baz=131						
TRF				S	Sn	18 28 50.6	+1.4
	baz=131						
TRF	Thorofare Moun	0.85	313		Pn	18 28 37.5	+0.7
TRF				Sn	Sn	18 28 49.5	+0.4
TRF				IAML		18 28 51.0	
	comp=N,2μm,0.6s						
TRF				IAML		18 28 51.1	
	comp=E,2μm,0.6s						
MCK	McKinley	0.85	359	P	Pn	18 28 37.5	+0.7
	baz=179						
MCK				S	Sn	18 28 50.2	+1.2
	baz=179						
MCK	McKinley	0.85	359	Pn	Pn	18 28 37.4	+0.6
MCK				Sn	Sn	18 28 49.4	+0.4
MCK				IAML		18 28 51.0	
	comp=E,1μm,0.5s						
MCK				IAML		18 28 51.0	
	comp=N,1μm,0.7s						
SML	Sawmill	1.12	166	P	Pn	18 28 39.9	-0.2
	baz=347						
SML				S	Sn	18 28 56.3	+1.4
	baz=347						
SML	Sawmill	1.12	166		Pn	18 28 39.9	-0.2
SML				Sn	Sn	18 28 54.6	-0.4
SML				IAML		18 28 56.9	
	comp=N,559nm,0.5s						
GHO	Glory Hole Cre	1.12	181		Pn	18 28 40.1	-0.1
GHO				IAML		18 28 58.4	
	comp=E,1μm,0.5s						
GHO				IAML		18 28 59.2	
	comp=N,1μm,0.3s						
KTH	Kantishna Hill	1.13	307	Pn	Pn	18 28 41.3	+0.9
KTH				Sn	Sn	18 28 55.6	+0.2
KTH				IAML		18 28 58.1	
	comp=E,1μm,0.9s						
KTH				IAML		18 28 58.2	
	comp=N,2μm,0.7s						
M22K	Willow	1.27	207	P	Pn	18 28 42.4	+0.4
	baz=26						
M22K	Willow	1.27	207		Pn	18 28 42.4	+0.4
SCM	Sheep Creek Mo	1.29	145	P	Pn	18 28 42.6	+0.2
	baz=326						
SCM	Sheep Creek Mo	1.29	145		Pn	18 28 42.2	-0.1
SCM				Sn	Sn	18 29 00.7	+1.7
SCM				IAML		18 29 03.0	
	comp=N,1μm,0.7s						
PMR	Palmer	1.30	185	P	Pn	18 28 42.9	+0.5
	baz=4.8						
PMR	Palmer	1.30	185	Pn	Pn	18 28 42.8	+0.4
PMR				Sn	Sn	18 28 59.3	+0.2
PMR				IAML		18 29 01.1	
	comp=E,485nm,0.4s						
PMR				IAML		18 29 01.5	
	comp=N,460nm,0.7s						
BWN	Browne	1.31	349	Pn	Pn	18 28 43.5	+0.9
BWN				IAML		18 29 01.6	
	comp=N,500nm,0.6s						
BWN				IAML		18 29 02.2	
	comp=E,543nm,0.5s						
M24K	Tolsona, Glenn	1.49	121	P	Pn	18 28 46.2	+1.2
	baz=303						
M24K	Tolsona, Glenn	1.49	121		Pn	18 28 45.3	+0.3
M24K				Sn	Sn	18 29 06.3	+2.7
KNK	Knik Glacier	1.49	172	P	Pn	18 28 46.0	+1.0
	baz=352						
KNK	Knik Glacier	1.49	172		Pn	18 28 45.6	+0.6
KNK				Sn	Sn	18 29 05.5	+1.8
KNK				IAML		18 29 07.9	
	comp=N,1μm,0.4s						
PPLA	Purkeypile	1.51	272	P	Pn	18 28 46.0	+0.7
	baz=89						
PPLA	Purkeypile	1.51	272		Pn	18 28 45.9	+0.6
PS10	TAPS Pump St10	1.52	68		Pn	18 28 46.3	+1.0
BPAW	Bear Paw Mtn.	1.54	323	P	Pn	18 28 46.0	+0.4
	baz=142						
BPAW	Bear Paw Mtn.	1.54	323	Pn	Pn	18 28 45.9	+0.3
BPAW				IAML		18 29 05.2	
	comp=E,386nm,0.4s						
BPAW				IAML		18 29 05.5	
	comp=N,417nm,0.2s						
CAST	Castle Rocks	1.54	292	P	Pn	18 28 46.6	+1.0
	baz=109						
CAST	Castle Rocks	1.54	292	Pn	Pn	18 28 45.5	-0.2
PAX	Paxson	1.57	85	P	Pn	18 28 47.1	+1.0
	baz=268						
PAX	Paxson	1.57	85		Pn	18 28 47.0	+0.8
WRH	Wood River Hil	1.63	12		Pn	18 28 47.0	+0.3
WRH				IAML		18 29 07.6	
	comp=N,274nm,0.2s						
NEA2	Nenana	1.71	358	P	Pn	18 28 48.0	+0.1
	baz=177						
NEA2	Nenana	1.71	358		Pn	18 28 48.1	+0.1
NEA2				IAML		18 29 09.5	
	comp=N,631nm,0.4s						
NEA2				IAML		18 29 10.1	
	comp=E,439nm,0.3s						
HDA	Harding Lake	1.76	29	P	Pn	18 28 48.8	+0.3
	baz=210						
HDA				S	Sn	18 29 09.9	-0.1
	baz=210						
HDA				S	Sn	18 29 09.9	-0.1
	baz=210						
HDA	Harding Lake	1.76	29		Pn	18 28 48.8	+0.3
HDA				IAML		18 29 13.9	
	comp=E,696nm,0.3s						
HDA				IAML		18 29 14.8	
	comp=N,773nm,0.3s						
HDA	Harding Lake	1.76	29		Sn	18 29 09.9	-0.1
PS11	TAPS Pump St11	1.79	115		Pn	18 28 50.1	+1.2
HARP	HAARP	1.80	104	P	Pn	18 28 50.2	+1.2
	baz=288						
HARP	HAARP	1.80	104		Pn	18 28 50.2	+1.2
CCB	Clear Creek Bu	1.83	15		Pn	18 28 49.5	+0.1
CCB				IAML		18 29 11.2	
	comp=E,227nm,0.3s						
CCB				IAML		18 29 16.4	
	comp=N,219nm,0.2s						
CHUM	Lake Minchumin	1.83	305	P	Pn	18 28 49.9	+0.4
	baz=122						
CHUM	Lake Minchumin	1.83	305		Pn	18 28 49.9	+0.4
RC01	Rabbit Creek A	1.85	193	P	Pn	18 28 51.2	+1.5
	baz=12						
RC01	Rabbit Creek A	1.85	193		Pn	18 28 50.0	+0.3
FIS	Fire Island	1.86	200	Pn	Pn	18 28 49.8	0.0
PS08	TAPS Pump Stn8	1.90	28		Pn	18 28 50.7	+0.3
STLK	Strandline Lak	1.96	226		Pn	18 28 52.1	+0.9
KLU	Klutina	1.98	134	P	Pn	18 28 51.7	+0.2
	baz=316						
KLU	Klutina	1.98	134		Pn	18 28 51.6	0.0
KLU				IAML		18 29 18.8	
	comp=N,428nm,0.5s						
RIDG	Independent Ri	2.02	63	P	Pn	18 28 53.5	+1.4
	baz=247						
RIDG	Independent Ri	2.02	63		Pn	18 28 53.8	+1.7
RIDG				IAML		18 29 21.9	
	comp=N,409nm,0.6s						
TCOL	CIGO, UAF Yank	2.05	13	P	Pn	18 28 52.8	+0.4
	baz=193						
TCOL	CIGO, UAF Yank	2.05	13		Pn	18 28 52.7	+0.4
COLA	College	2.05	13		Pn	18 28 52.7	+0.4
PWL	Port Wells	2.05	172	P	Pn	18 28 53.0	+0.5
	baz=353						
PWL	Port Wells	2.05	172		Pn	18 28 52.8	+0.3
PWL				IAML		18 29 25.0	
	comp=N,391nm,0.5s						
PWL				IAML		18 29 25.6	
	comp=E,491nm,0.4s						
IL31		2.09	24		Pn	18 28 52.7	-0.3
ILAR	Eielson Array	2.09	24	Pn	Pn	18 28 52.8	-0.2
MDM	Murphy Dome	2.10	8		Pn	18 28 53.0	-0.1
MDM				IAML		18 29 18.8	
	comp=N,419nm,0.3s						
MDM				IAML		18 29 19.0	
	comp=E,180nm,0.3s						
JPK	Jack Peak	2.14	148		Pn	18 28 53.7	+0.1
VMT	TAPS Tl Valdez	2.17	145		Pn	18 28 54.3	+0.3
SPCG	Spurr Capps Gl	2.17	224		Pn	18 28 55.6	+1.5
PS12	TAPS Pump St12	2.26	127		Pn	18 28 55.7	+0.4
SPU	Mount Spurr	2.27	222		Pn	18 28 56.4	+1.0
I23K	Minto, Yukon-K	2.28	355	P	Pn	18 28 56.0	+0.6
	baz=175						
I23K	Minto, Yukon-K	2.28	355		Pn	18 28 55.9	+0.4
MLY	Manley	2.30	340	P	Pn	18 28 56.2	+0.4
	baz=158						
MLY	Manley	2.30	340		Pn	18 28 56.2	+0.4
MLY	Manley	2.30	340	IAML		18 29 24.1	
	comp=N,300nm,0.6s						
MLY				IAML		18 29 24.1	
	comp=E,244nm,0.6s						
DIV	Divide	2.30	139		Pn	18 28 55.3	-0.6
DOT	Dot Lake	2.32	69		Pn	18 28 56.2	+0.2
POKR	Poker Plat Res	2.33	15	P	Pn	18 28 56.7	+0.5
	baz=197						
POKR	Poker Plat Res	2.33	15		Pn	18 28 56.5	+0.3
POKR				IAML		18 29 28.0	
	comp=N,148nm,0.3s						
L20K	Farewell, AK	2.33	262	P	Pn	18 28 56.5	+0.3
	baz=78						
L20K	Farewell, AK	2.33	262		Pn	18 28 56.5	+0.3
MENT	Mentasta	2.37	86		Pn	18 28 57.3	+0.5
MENT				IAML		18 29 32.4	
	comp=N,200nm,0.5s						
MENT				IAML		18 29 37.7	
	comp=E,162nm,0.8s						
CAPN	Captain Cook N	2.38	208	Pn	Pn	18 28 57.9	+1.1
N25K	Chitina, Valde	2.39	121	P	Pn	18 28 57.8	+0.7
	baz=304						
N25K	Chitina, Valde	2.39	121	Pn	Pn	18 28 57.5	+0.4
N25K				IAML		18 29 34.2	
	comp=N,139nm,0.4s						
K20K	Telida	2.40	284	P	Pn	18 28 57.4	+0.3
	baz=99						
K20K	Telida	2.40	284	Pn	Pn	18 28 57.2	+0.1
O22K	Cooper Landing	2.45	190	P	Pn	18 28 58.4	+0.7
	baz=9.0						
O22K	Cooper Landing	2.45	190	Pn	Pn	18 28 56.4	-1.3
SCRK	Sand Creek	2.47	61	P	Pn	18 28 58.7	+0.6
	baz=246						
SCRK	Sand Creek	2.47	61	Pn	Pn	18 28 57.4	-0.8
SLKM	Skilak Lake	2.47	195		Pn	18 28 58.9	+0.7
L26K	Log Cabin Wild	2.54	84	P	Pn	18 29 00.4	+1.3
	baz=269						
L26K	Log Cabin Wild	2.54	84		Pn	18 28 59.7	+0.6
L26K				IAML		18 29 38.9	
	comp=E,178nm,0.5s						
L26K				IAML		18 29 46.8	
	comp=N,236nm,0.3s						
I21K	Tanana	2.67	331	P	Pn	18 29 01.5	+0.7
	baz=148						
I21K	Tanana	2.67	331		Pn	18 29 00.1	-0.7
I21K				IAML		18 29 33.6	
	comp=N,116nm,0.8s						
I21K				IAML		18 29 34.0	
	comp=E,100nm,0.8s						
J20K	Nowinta River	2.68	301	P	Pn	18 29 01.5	+0.5
	baz=116						
J20K	Nowinta River	2.68	301	Pn	Pn	18 29 01.1	+0.1
M19K	Big River Lodg	2.74	251	P	Pn	18 29 01.8	0.0
	baz=66						
M19K	Big River Lodg	2.74	251		Pn	18 29 01.7	0.0
HIN	Hinchinbrook I	2.75	154		Pn	18 29 01.7	-0.2
HIN				IAML		18 29 44.1	
	comp=E,266nm,0.6s						
HIN				IAML		18 29 50.1	
	comp=N,193nm,0.5s						
EYAK	Cordova Ski Ar	2.79	146	P	Pn	18 29 02.7	+0.4
	baz=329						
EYAK	Cordova Ski Ar	2.79	146		Pn	18 29 02.5	+0.1
GLB	Gilahina Butte	2.79	119		Pn	18 29 02.8	+0.3
GLB				IAML		18 29 43.7	
	comp=N,101nm,0.6s						
GLB				IAML		18 29 45.8	
	comp=E,99nm,0.4s						
BMRM	Bremner River	2.80	132	P	Pn	18 29 02.9	+0.2
	baz=315						
BMRM	Bremner River	2.80	132		Pn	18 29 02.0	-0.6
BMRM				IAML		18 29 45.8	
	comp=E,251nm,0.4s						
BMRM				IAML		18 29 47.0	
	comp=N,222nm,0.4s						
SEW	Seward	2.81	186	P	Pn	18 29 03.6	+1.0
	baz=5.3						
SEW	Seward	2.81	186		Pn	18 29 02.9	+0.2
L19K	White Mountain	2.85	258	P	Pn	18 29 03.5	+0.2
	baz=73						
L19K	White Mountain	2.85	258	Pn	Pn	18 29 03.2	0.0
J26L	Joseph Creek	2.88	53	P	Pn	18 29 04.6	+0.9
	baz=238						
J26L	Joseph Creek	2.88	53		Pn	18 29 04.6	+0.9
H24K	Noodor Dome	3.00	8	P	Pn	18 29 05.8	+0.5
	baz=189						
H24K	Noodor Dome	3.00	8		Pn	18 29 05.0	-0.3
PRP	Porcupine Dome	3.03	28	P	Pn	18 29 06.3	+0.6
	baz=211						
PRP	Porcupine Dome	3.03	28		Pn	18 29 06.0	+0.3
PRP				IAML		18 29 44.2	
	comp=E,94nm,0.8s						
RSO	Redoubt South	3.05	219		Pn	18 29 05.9	-0.3
GOAT	Goat Mountain	3.05	137		Pn	18 29 06.0	-0.1

VRDI	Verde Repeater	3.06	121		Pn	18 29 05.8	-0.4
VRDI				IAML		18 29 53.5	
	comp=N,92nm,0.9s						
MCARA	McCarthy VSAT	3.15	116		Pn	18 29 07.6	+0.4
MCARA				IAML		18 30 04.4	
	comp=N,166nm,0.7s						
MCARA				IAML		18 30 09.3	
	comp=E,178nm,0.9s						
RAGM	Ragged Mountai	3.22	139		Pn	18 29 08.5	+0.1
L27K	Beaver Creek,	3.23	84	P	Pn	18 29 08.7	+0.1
	baz=270						
L27K	Beaver Creek,	3.23	84		Pn	18 29 08.4	-0.2
TTA	Tatalina	3.25	274	P	Pn	18 29 08.9	0.0
	baz=88						
TTA	Tatalina	3.25	274	Pn	Pn	18 29 08.8	0.0
BC03		3.25	84		Pn	18 29 08.9	+0.2
BCAR	Beaver Creek A	3.25	84	Pn	Pn	18 29 08.5	-0.3
TT01	Tatalina	3.26	274		Pn	18 29 08.9	+0.1
H21K	Melozitna Rive	3.26	330	P	Pn	18 29 09.4	+0.5
	baz=147						
H21K	Melozitna Rive	3.26	330		Pn	18 29 09.0	+0.2
BRLK	Bradley Lake	3.28	198	Pn	Pn	18 29 08.8	-0.3
BRLK				IAML		18 29 59.2	
	comp=E,131nm,0.7s						
BRLK				IAML		18 29 59.4	
	comp=N,102nm,0.7s						
BRSE	Bradley Lake S	3.28	197	P	Pn	18 29 09.7	+0.5
	baz=15						
BRSE	Bradley Lake S	3.28	197		Pn	18 29 09.7	+0.5
M27K	Edge Creek, AK	3.29	96	P	Pn	18 29 10.3	+0.9
	baz=282						
M27K	Edge Creek, AK	3.29	96	Pn	Pn	18 29 08.6	-0.8
N19K	Bonanza Creek	3.37	234	Pn	Pn	18 29 10.0	-0.4
HMT	Hamilton	3.39	137		Pn	18 29 09.9	-0.7
CRQM	Cirque	3.47	125		Pn	18 29 11.4	-0.5
CRQM				IAML		18 30 04.9	
	comp=N,160nm,0.5s						
CRQM				IAML		18 30 10.9	
	comp=E,136nm,0.8s						
PTPK	Patty Peak	3.48	116		Pn	18 29 12.7	+0.6
CRQE	Cirque	3.49	125	P	Pn	18 29 12.2	+0.1
	baz=310						
HOM	Homer	3.50	203	Pn	Pn	18 29 11.7	-0.4
BERG	Berg Lake	3.52	133		Pn	18 29 11.0	-1.4
CNPM	China Poot	3.56	200	Pn	Pn	18 29 12.3	-0.6
CNPM				IAML		18 30 06.5	
	comp=N,108nm,0.5s						
CNPM				IAML		18 30 07.3	
	comp=E,129nm,0.5s						
TGL	Tana Glacier	3.59	124		Pn	18 29 12.3	-1.1
TGL				IAML		18 30 09.3	
	comp=N,126nm,0.8s						
TGL				IAML		18 30 10.2	
	comp=E,109nm,0.6s						
SVW2	Sparrevohn	3.63	243	Pn	Pn	18 29 13.9	+0.1
KIAG	Kiagna River	3.67	120		Pn	18 29 14.1	-0.4
KAIM	Kayak Island	3.67	142	Pn	Pn	18 29 14.4	0.0
BVCY	Beaver Creek	3.74	94	P	Pn	18 29 16.2	+0.8
	baz=281						
BVCY	Beaver Creek	3.74	94		Pn	18 29 16.2	+0.8
IM03		3.75	328		Pn	18 29 16.0	+0.5
IMAR	Indian Mountai	3.75	328	Pn	Pn	18 29 15.2	-0.3
WAX	Waxell Ridge	3.78	128	Pn	Pn	18 29 16.1	+0.1
P19K	Oil Pt	3.86	215	Pn	Pn	18 29 19.3	+2.2
P19K				IAML		18 30 11.6	
	comp=E,112nm,0.9s						
P19K				IAML		18 31 13.4	
	comp=N,131nm,3.5s						
ISLE	Juniper Island	3.87	123	Pn	Pn	18 29 15.5	-1.8
ISLE				IAML		18 30 12.8	
	comp=E,81nm,1.5s						
ISLE				IAML		18 30 19.4	
	comp=N,125nm,1.5s						
BARN	Barnard Glacie	3.88	115		Pn	18 29 16.8	-0.7
BARN				IAML		18 30 21.6	
	comp=E,41nm,0.8s						
YUK2	White River	3.92	103		Pn	18 29 18.7	+0.8
EGAK	Eagle	3.92	58		Pn	18 29 18.4	+0.6
EGAK				IAML		18 30 24.0	
	comp=E,48nm,0.7s						
EGAK				IAML		18 30 34.8	
	comp=E,38nm,0.9s						
YUK1	Sand Pete Hill	3.95	97		Pn	18 29 19.1	+0.7
SNH	Sunshine Point	3.98	130	Pn	Pn	18 29 19.7	+1.1
FYU	Fort Yukon	4.01	21	Pn	Pn	18 29 19.2	+0.2
FYU				IAML		18 30 08.8	
	comp=E,72nm,1.1s						
FYU				IAML		18 30 17.0	
	comp=N,54nm,1.8s						
GRNC	Granite Creek	4.02	119	Pn	Pn	18 29 19.0	-0.5
GRNC				IAML		18 29 52.1	
	comp=N,52nm,3.4s						
GRNC				IAML		18 30 33.9	
	comp=E,39nm,4.0s						
BAGL	Bagley Icefiel	4.04	123		Pn	18 29 19.2	-0.2
CTGM	Chitina Glacie	4.06	115	Pn	Pn	18 29 18.8	-1.2
CTGM				IAML		18 30 35.4	
	comp=N,42nm,2.4s						
CTGM				IAML		18 30 41.9	
	comp=E,35nm,3.3s						
YUK3	Moose Creek	4.09	102	P	Pn	18 29 20.7	+0.3
	baz=290						
YUK3	Moose Creek	4.09	102		Pn	18 29 20.7	+0.3
YAH	Yahtse	4.25	123	Pn	Pn	18 29 22.1	-0.5
YAH				IAML		18 30 39.0	
	comp=E,87nm,3.6s						
LOGN	Logan Glacier	4.28	115	Pn	Pn	18 29 23.0	+0.1
LOGN				IAML		18 30 28.2	
	comp=E,40nm,5.0s						
LOGN				IAML		18 30 32.9	
	comp=N,48nm,4.0s						
MESA	MESA	4.30	126	P	Pn	18 29 23.1	0.0
	baz=312						
MESA	MESA	4.30	126	Pn	Pn	18 29 23.2	+0.1
COLD	Coldfoot	4.39	353	P	Pn	18 29 25.0	+0.8
	baz=172						
COLD	Coldfoot	4.39	353	Pn	Pn	18 29 25.2	+1.0
DAWY	Dawson	4.43	70	P	Pn	18 29 25.0	+0.3
	baz=259						
DAWY	Dawson	4.43	70	Pn	Pn	18 29 25.1	+0.3
TABL	Table Mountain	4.44	120	Pn	Pn	18 29 23.7	-1.4
TABL				IAML		18 30 25.7	
	comp=E,66nm,4.2s						
TABL				IAML		18 31 09.7	
	comp=N,65nm,3.6s						
RKAV	Rock Avalanche	4.45	122		Pn	18 29 24.9	-0.3
Q19K	Cape Douglas,	4.60	212	P	Pn	18 29 26.5	-0.6
	baz=28						
Q19K	Cape Douglas,	4.60	212	Pn	Pn	18 29 25.0	-2.1
P18K	Big Mountain,	4.66	224	Pn	Pn	18 29 26.5	-1.5
P18K				IAML		18 30 46.2	
	comp=E,47nm,3.9s						
P18K				IAML		18 31 13.9	
	comp=N,26nm,3.0s						
BM03	Burnt Mountain	4.90	20		Pn	18 29 31.7	+0.5
BMAR	Burnt Mountain	4.91	20	Pn	Pn	18 29 31.2	-0.1
BM01	Burnt Mountain	4.94	20		Pn	18 29 32.2	+0.5
PCA	Pinnacle	5.00	120	Pn	Pn	18 29 31.3	-1.4
M30M	Minto, Yukon	5.58	88	P	Pn	18 29 40.2	-0.3
	baz=279						
M30M	Minto, Yukon	5.58	88		Pn	18 29 40.2	-0.3
PNL	Peninsula	5.61	121	P	Pn	18 29 40.7	-0.2
	baz=309						
PNL	Peninsula	5.61	121		Pn	18 29 40.7	-0.2
HYT	Haines Junctio	5.78	106	Pn	Pn	18 29 43.8	+0.4
TOLK	Toolik Lake Re	5.79	358	P	Pn	18 29 44.7	+1.4
	baz=177						
TOLK	Toolik Lake Re	5.79	358	Pn	Pn	18 29 44.9	+1.6
OHAK	Old Harbor	6.09	203	Pn	Pn	18 29 45.2	-2.2
INK	Inuvik	8.35	43	Pn	Pn	18 30 19.2	+0.9
JIS	Juneau Island	8.50	116	Pn	Pn	18 30 17.6	-2.7
A21K	Barrow	8.98	344	Pn	Pn	18 30 25.2	-1.6
MOBC	Moresby Island	13.21	130	Pn	Pn	18 31 22.5	-2.1

NEIC ***21*** *18:36:07.9±1.5, 18°.5S±0°.1×177°.8W±0°.1, h562^{km}±7^{km}, mb4.5/42, Error ellipse: s-maj=18.6km s-min=9.7km az=133.0*

IDC ***21*** *18:36:09.6±1.6, 18°.46S×178°.02W, h574^{km}±16^{km}, mb3.5/12, mb1 3.7/14, mb1mx3.4/32, mbtmp4.4/14, Error ellipse: s-maj=15.9km s-min=13.9km az=98.0*

ISC 21 18:36:07.2±0.6**, 18°.49S**±0°.10×**177°.88W**±0°.09**, h557**^{km}**, n70,** σ**0^{s}98**/70**, mb4.5**/31**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	3.95	280	P	P	18 37 31.6	+2.2
	11nm,0.3s,baz=263,slow=23,SNR=50						
MSVF	Nonsavu	3.95	280	P	P	18 37 31.4	+2.0
AFI	Afiamalu	7.42	53	P	P	18 37 59.3	-0.5
	4.2nm,0.3s,baz=84,slow=7.5,SNR=2.3						
MARNC	Mare, Loyalty	13.58	255	P	P	18 39 01.4	-0.7
OUENC	Ouen Island, N	14.84	252	P	P	18 39 17.2	+2.2
DZM	Mont Dzumac	15.13	254	P	P	18 39 18.7	+0.6
	0.7nm,0.3s,baz=280,slow=21,SNR=9.3						
DZM	Mont Dzumac	15.13	254	IAmb	IAmb	18 39 20.8	
	comp=Z,7.4nm,0.7s						
URZ	Urewera	20.18	192	P	P	18 40 02.4	-1.9
	comp=Z,6.6nm,0.7s,baz=308,slow=20,SNR=1.2						
URZ	Urewera	20.18	192	P	P	18 40 02.6	-1.8
KHZ	Kahutara	24.94	195	P	P	18 40 45.1	-1.8
EIDS	Eidsvold	29.55	251	P	P	18 41 26.5	-1.0
EIDS				IAmb	IAmb	18 41 40.0	
	comp=Z,23nm,1.6s						
ARMA	Armidale	30.09	241	P	P	18 41 32.5	+0.2
ARMA				IAmb	IAmb	18 42 04.2	
	comp=Z,22nm,1.4s						
CAN	Canberra	33.76	234	P	P	18 42 03.9	+0.6
CTAO	Charters Tower	33.85	261	P	P	18 42 04.4	+0.1
CTAO				IAmb	IAmb	18 42 05.1	
	comp=Z,11nm,0.8s						
PMG	Port Moresby	35.06	280	P	P	18 42 15.4	+1.0
TOO	Toolangi	37.20	232	P	P	18 42 32.5	+0.7
TOO				IAmb	IAmb	18 42 43.7	
	comp=Z,14nm,1.1s						
COEN	Coen	37.62	271	P	P	18 42 35.9	+0.5
COEN				IAmb	IAmb	18 42 36.7	
	comp=Z,12nm,0.8s						
STKA	Stephens Creek	38.80	242	P	P	18 42 45.5	+0.7
	comp=Z,8.3nm,0.7s,baz=90,slow=9.7,SNR=19						
STKA	Stephens Creek	38.80	242	P	P	18 42 45.1	+0.3
JAY	Jayapura	43.55	286	P	P	18 43 23.3	+0.5
	comp=Z,20nm,0.6s,baz=77,slow=2.2,SNR=6.2						
BBOO	Buckleboo	43.57	242	P	P	18 43 22.8	+0.2
BBOO				IAmb	IAmb	18 43 22.8	
	comp=Z,15nm,1.1s						
WR0	Warramunga Arr	44.84	260	P	P	18 43 31.6	-0.9
WB0	Warramunga Arr	45.00	260	P	P	18 43 33.0	-0.8
WB0				IAmb	IAmb	18 43 33.9	
	comp=Z,9.6nm,0.6s						
WB2	Warramunga Arr	45.02	260	P	P	18 43 33.1	-0.8
WB2				IAmb	IAmb	18 43 34.0	
	comp=Z,9.9nm,0.6s						
WB2				PcP	PcP	18 45 03.4	+0.4
WRA	Warramunga Arr	45.03	260	P	P	18 43 33.5	-0.6
	comp=Z,7.2nm,0.6s,baz=98,slow=6.8,SNR=125						
WRA	Warramunga Arr	45.03	260	P	P	18 43 33.4	-0.6
WRA				PcP	PcP	18 45 03.3	+0.2
AS31	Alice Springs	45.12	255	P	P	18 43 34.6	-0.1
AS31				IAmb	IAmb	18 43 35.7	
	comp=Z,7.9nm,0.5s						
ASAR	Alice Springs	45.12	255	P	P	18 43 34.6	-0.1
	comp=Z,20nm,0.6s,baz=87,slow=8.6,SNR=19						
ASAR				S	S	18 49 31.9	-2.1
	comp=Z,0.6nm,0.8s,baz=84,slow=16,SNR=5.3						
ASAR	Alice Springs	45.12	255	P	P	18 43 34.6	-0.1
ASAR				PcP	PcP	18 45 03.4	+0.1
MTN	Manton Dam	49.29	269	P	P	18 44 05.0	-1.0
FORT	Forrest	50.22	245	P	P	18 44 11.4	-1.2
FORT				IAmb	IAmb	18 44 12.5	
	comp=Z,12nm,0.6s						
KNRA	Kununurra	50.94	265	P	P	18 44 17.5	-0.5
KNRA				IAmb	IAmb	18 44 18.5	
	comp=Z,9.2nm,0.7s						
SOEI	Soe	56.58	270	P	P	18 44 58.6	+0.5
SOEI				IAmb	IAmb	18 45 00.7	
	comp=Z,32nm,1.2s						
PSA00	Pilbara Seismi	58.25	256	P	P	18 45 08.9	-0.4
PSA00	Pilbara Seismi	58.25	256	P	P	18 45 08.8	-0.4
PSA00				IAmb	IAmb	18 45 09.2	
	comp=Z,6.7nm,0.6s						
MMRI	Maumere	58.81	271	P	P	18 45 12.6	-0.5
MMRI				IAmb	IAmb	18 45 49.3	
	comp=Z,24nm,1.1s						
VNDA	Vanda	59.91	185	P	P	18 45 20.7	+1.4
	comp=Z,0.4nm,0.6s,baz=358,slow=5.8,SNR=5.6						
VNDA	Vanda	59.91	185	P	P	18 45 20.2	+0.8
LUWI	Luwuk	60.70	279	P	P	18 45 25.6	0.0
LUWI				IAmb	IAmb	18 46 05.0	
	comp=Z,19nm,1.0s						
MORW	Morawa	60.71	247	P	P	18 45 24.4	-1.2
MORW				IAmb	IAmb	18 45 43.7	
	comp=Z,33nm,1.6s						
GIRL	Giralia	63.21	253	P	P	18 45 42.7	+0.9
TOLI2	Tolitoli	63.32	281	P	P	18 45 43.0	+0.3
JAGI	Jajag, Banyuwa	66.53	269	P	P	18 46 01.0	-1.9
MJAR	Matsushiro Arr	68.67	323	P	P	18 46 15.2	-0.2
	comp=Z,2.1nm,0.6s,baz=156,slow=6.7,SNR=14						
MJAR	Matsushiro Arr	68.67	323	P	P	18 46 14.8	-0.7
MAJO	Matsushiro	68.68	323	P	P	18 46 15.9	+0.4
KKM	Kota Kinabalu	69.37	284	P	P	18 46 19.9	-0.3
KKM				IAmb	IAmb	18 46 27.2	
	comp=Z,22nm,1.2s						
UGM	Wanagama	70.13	268	P	P	18 46 24.7	0.0
JHS	Saijyo	70.67	319	P	P	18 46 28.0	+0.7
JHS				IAmb	IAmb	18 46 43.5	
	comp=Z,14nm,1.0s						
QSPA	South Pole Qui	71.56	180	P	P	18 46 33.1	+0.8
	comp=Z,1.5nm,0.6s,baz=338,slow=0.6,SNR=18						
SSLB	Suanglung	72.98	303	P	P	18 46 40.5	-0.5
SSLB				IAmb	IAmb	18 46 59.8	
	comp=Z,31nm,1.5s						
TPUB	Ta-pu	73.00	302	P	P	18 46 40.4	-0.8
KSM	Kuching	73.26	277	P	P	18 46 43.0	+0.1
KSM				IAmb	IAmb	18 46 45.0	
	comp=Z,9.4nm,0.9s						
PEA0B	Petropavlovsk-	74.37	345	P	P	18 46 49.3	+1.1
PETK	Petropavlovsk-	74.37	345	P	P	18 46 48.7	+0.4
	comp=Z,2.0nm,0.6s,baz=129,slow=6.6,SNR=9.4						
PETK	Petropavlovsk-	74.37	345	P	P	18 46 48.1	-0.2
PMSA	Palmer Station	83.08	157	P	P	18 47 35.7	+1.3
	comp=Z,4.4nm,0.5s,baz=352,slow=22,SNR=8.4						
PMSA	Palmer Station	83.08	157	IAmb	IAmb	18 47 58.0	
	comp=Z,27nm,1.3s						
ILAR	Eielson Array	86.34	13	P	P	18 47 50.4	+0.3
	comp=Z,0.5nm,0.4s,baz=217,slow=4.9,SNR=13						
CMAR	Chiang Mai Arr	89.56	290	P	P	18 48 07.8	+1.5
	comp=Z,1.2nm,0.8s,baz=110,slow=2.7,SNR=10.0						
CMAR	Chiang Mai Arr	89.56	290	P	P	18 48 06.4	+0.2
SNAA	Sanae	90.00	178	P	P	18 48 07.8	+0.4
	comp=Z,0.9nm,0.9s,baz=45,slow=19,SNR=2.9						
SNAA	Sanae	90.00	178	IAmb	IAmb	18 48 11.2	
	comp=Z,4.8nm,1.4s						
MKAR	Makanchi Array	109.90	314	PKiKP	PKiKP	18 53 35.0	-0.5
	comp=Z,0.2nm,0.5s,baz=168,slow=0.8,SNR=7.6						
ARCES	ARCESS Array B	126.98	350	PKP	PKiKP	18 54 07.8	-0.4
	comp=Z,2.8nm,0.8s,baz=17,slow=1.3,SNR=6.4						
FINES	FINESS Array B	133.88	344	PKP	PKiKP	18 54 21.3	-1.0
	comp=Z,7.4nm,1.1s,baz=191,slow=1.9,SNR=3.3						
AKASG	Malin Array Be	141.31	332	PKhKP	PKPpre	18 54 29.7	
	comp=Z,1.0nm,0.4s,baz=42,slow=3.9,SNR=10						
BRTR	Keskin Array B	145.55	315	PKPbc	PKPab	18 54 44.4	-1.4
	comp=Z,1.6nm,0.8s,baz=146,slow=5.0,SNR=7.2						
CLL	Collm	146.14	348	*i* PKPbc	PKPab	18 54 46.0	-1.4
	comp=Z,4.0nm,0.5s						
GERES	GERESS Array B	148.30	345	PKPbc	PKiKP	18 54 51.0	-1.4
	comp=Z,0.7nm,0.6s,baz=38,slow=2.4,SNR=8.6						

NOU 21 18:52:08.3, 17°.25S×168°.05E, h20^{km}**, MLv3.4**/7**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	0.49	165	P	Pb	18 52 19.1	+0.8
RTV	Rentapao	0.65	147	P	Pb	18 52 21.6	+0.6
SANVU	Saraoutou	1.97	335	P	Pn	18 52 40.6	+0.1

IDC ***21*** *19:01:54.8±0.7, 32°.78N×47°.81E, h0^{km}, mb4.3/28, mb1 4.3/38, mb1mx4.2/62, mbtmp4.3/38, ML3.3/6, MS3.4/20, Ms1 3.4/20, ms1mx3.2/53, Error ellipse: s-maj=15.6km s-min=9.7km az=0.0*

TEH ***21*** *19:01:56.9, 32°.80N×47°.78E, h8^{km}, ML4.5*

SGS ***21*** *19:01:56.7, 33°.06N×47°.65E, h7^{km}, Ml5.3*

MOS ***21*** *19:01:57.7±1.2, 32°.78N×47°.73E, h32^{km}, mb4.8/16, Error ellipse: s-maj=6.3km s-min=4.3km az=108.0*

THR ***21*** *19:01:59.4±0.4, 32°.88N×47°.80E, h14^{km}±9^{km}, ML3.8*

ISN ***21*** *19:02:00.2±3.5, 32°.81N×47°.50E, h11^{km}±24^{km}, ML4.4*

NEIC ***21*** *19:02:00.9±1.7, 32°.82N±0°.04×47°.72E±0°.06, h37^{km}±7^{km}, Error ellipse: s-maj=6.9km s-min=6.0km az=72.0*

DSN ***21*** *19:02:06.2±1.1, 32°.34N×48°.39E, h15^{km}, ML4.3/1, Error ellipse: s-maj=24.4km s-min=9.8km az=35.0*

OMAN ***21*** *19:02:09.3±0.1, 31°.89N×48°.06E, h10^{km}, mb5.6/26, ms3.3/8, Error ellipse: s-maj=1.7km s-min=1.1km az=230.0*

ISC 21 19:01:57.6±0.3**, 32°.74N**±0°.02×**47°.69E**±0°.03**, h21**^{km}±2^{km}**, n502,** σ**2^{s}25**/562**, mb4.6**/106**, MS3.5**/18**, 53C-7D, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DHL1	Dehloran	0.35	260	*e*Sg	Sn	19 02 13.0	-0.9
DHL1				*e*Pg	Pb	19 02 05.8	+0.7
IKFM	Kafar-mosalman	0.79	9	*e*Pg	Pb	19 02 10.9	-1.8
IKFM				*e*		19 02 24.2	
	comp=Z,8µm,0.4s						
IKFM	Kafar-mosalman	0.79	9	Pg	Pb	19 02 10.8	-1.9
IDOB	Doab	1.12	21	*e*Pg	Pn	19 02 16.7	-1.6
IDOB				*e*Sg	Sn	19 02 33.7	+0.6
IDOB	Doab	1.12	21	Pg	Pn	19 02 16.6	-1.7
IDOB					Sn	19 02 33.6	+0.5
BMDN	Meydan	1.33	45	*e*Pg	Pn	19 02 20.1	-1.0
BMDN				*e*		19 02 47.8	
	comp=Z,52µm,0.6s						
BMDN	Meydan	1.33	45		Pn	19 02 20.0	-1.0
AHWZ	Ahwaz	1.62	150	*e*Pg	Pb	19 02 28.8	+2.0
AHWZ				*e*Sg	Sb	19 02 51.9	+5.1
AHWZ	Ahwaz	1.62	150	Pg	Pb	19 02 28.8	+2.0
AHWZ				Sg	Sb	19 02 51.9	+5.1
KCHF	Cheshme Sefid,	1.62	341	*e*Pg	Pn	19 02 26.3	+1.1
KCHF				*e*		19 02 51.1	
	comp=Z,55µm,0.6s						
HSAM	Samen	1.65	27	*e*Pg	Pn	19 02 25.7	+0.1
HSAM	Samen	1.65	27		Pn	19 02 25.6	0.0
KER	Kermanshah	1.71	344	*e*Pg	Pb	19 02 27.9	-0.4
AMIS	Naft Sefid	1.73	128	*e*Pg	Pb	19 02 29.0	+0.4
AMIS				*e*Sg	Sb	19 02 54.1	+4.3
AMIS				*e*		19 03 03.8	
	comp=Z,60µm,0.4s						
IBZA	Bozab	1.73	5	*e*Pn	Pb	19 02 28.0	-0.8
IBZA				*e*		19 02 54.3	
	comp=Z,77µm,1.0s						
IBZA	Bozab	1.73	5	Pn	Pb	19 02 28.0	-0.8
IGHG	Ghaleghazi	1.84	330	*e*Pn	Pb	19 02 30.3	-0.5
IGHG				*e*		19 03 02.5	
	comp=Z,70µm,0.5s						
IGHG	Ghaleghazi	1.84	330	Pn	Pb	19 02 30.2	-0.5
KHMZ	Khomeyn	2.14	62	*e*Pn	Pb	19 02 35.0	-0.9
KHMZ	Khomeyn	2.14	62	*e*Pn	Pb	19 02 35.0	-0.9
IALM	Almabolaq	2.15	10	*e*Pn	Pb	19 02 34.6	-1.4
NSR	Nassriya	2.17	218	*e*Pg	Pn	19 02 29.0	-3.5
	baz=47						
NSR				*e*Sg	Sn	19 02 53.0	-5.8
NSR				AML	AML	19 03 03.6	
	comp=E,5µm,0.6s						
IDHR	Dehrash	2.24	331	*e*Pn	Pn	19 02 35.1	+1.5
IDHR				*e*		19 03 12.6	
	comp=Z,44µm,0.4s						
IDHR	Dehrash	2.24	331	Pn	Pn	19 02 35.0	+1.5
ILIN	Lien	2.25	345	*e*Pn	Pn	19 02 35.6	+1.7
ILIN				*e*		19 03 17.9	
	comp=Z,27µm,0.8s						
HAGD	Aghdareh	2.40	30	*e*Pn	Pn	19 02 38.0	+2.1
HAGD				*e*		19 03 17.3	
	comp=Z,15µm,0.8s						
HAGD	Aghdareh	2.40	30	Pn	Pn	19 02 38.0	+2.1
ASAO	Ashtian	2.65	47	*e*Pn	Pn	19 02 41.8	+2.4
ASAO				*e*Sg	Sb	19 03 17.6	+0.9
ASAO				IAML		19 03 30.9	
	comp=N,694nm,0.6s						
ASAO				IAML		19 03 34.9	
	comp=E,442nm,0.6s						
ASAO	Ashtian	2.65	47	*e*Pn	Pn	19 02 41.8	+2.4
ASAO	Ashtian	2.65	47	Pn	Pn	19 02 41.7	+2.4
IPIR	Pirpir	2.70	90	*e*Pn	Pb	19 02 43.0	-2.3
SHK1	Shahrekord	2.73	98	*e*Pn	Pn	19 02 42.4	+2.0
BHD	Baghdad	2.83	282	*e*Pn	Pn	19 02 44.0	+2.4
BHD				Sn	Sb	19 03 20.0	-1.7
MIB	Mutribah	2.94	186	*e*P	Pb	19 02 47.1	-2.3
ABEH	Behbahan	3.05	134	*e*Pn	Pn	19 02 47.6	+2.9
IBRJ	Brojen	3.13	104	*e*Pn	Pn	19 02 47.6	+1.6
IBRJ				*e*		19 03 45.4	
	comp=Z,2µm,0.7s						
UMR	Umm Al-Rimmam	3.18	180	*e*P	Pn	19 02 49.8	+3.4
IRAZ	Razeghan	3.24	34	*e*Pn	Pn	19 02 50.2	+2.8
IRAZ				*e*		19 03 57.7	
	comp=Z,18µm,1.0s						
QAMS	Qamsar	3.26	71	*e*Pn	Pn	19 02 50.4	+2.7
IKLH	Kolahrood	3.31	79	*e*Pn	Pn	19 02 50.7	+2.2
IKLH				*e*		19 03 42.8	
	comp=Z,7µm,0.4s						
QABG	Abgarm-Qazvin	3.35	27	*e*Pn	Pn	19 02 50.2	+1.3
GHVR	GHOM	3.47	59	*e*Pn	Pn	19 02 52.8	+2.3
GHVR				IAML		19 03 39.9	
	comp=E,311nm,0.6s						
GHVR				IAML		19 03 54.0	
	comp=N,266nm,0.6s						
GHVR	GHOM	3.47	59	*e*Pn	Pn	19 02 52.8	+2.3
IQOM	Qom	3.51	52	*e*Pn	Pn	19 02 52.8	+1.7
KBD	Kabd	3.56	180	*e*P	Pn	19 02 54.6	+3.0
IGAR	Gharneh	3.69	94	*e*Pn	Pn	19 02 55.2	+1.6
IGAR				*e*		19 04 07.4	
	comp=Z,6µm,1.0s						
KLNJ	Kolanjah	3.74	116	*e*Pn	Pn	19 02 56.2	+1.8
KLNJ				*e*		19 04 19.9	
	comp=Z,7µm,0.8s						
RDF	Al-Radifah	3.81	182	*e*P	Pn	19 02 58.7	+3.7
IMHD	Mahdasht	3.83	39	*e*Pn	Pn	19 02 56.9	+1.4
IZEF	Zefreh	3.91	86	*e*Pn	Pn	19 02 58.9	+2.3
KRSH	Karshahi	3.92	71	*e*Pn	Pn	19 02 58.6	+1.9
QRN	Al-Qurain	3.99	177	*e*P	Pn	19 03 01.1	+3.5
ZNJK	Zanjan	4.00	12	*e*Pn	Pn	19 03 00.4	+2.5
ZNJK				IAML		19 04 08.2	
	comp=N,40nm,0.6s						
ZNJK				IAML		19 04 10.0	
	comp=E,43nm,0.5s						
ZNJK	Zanjan	4.00	12	*e*Pn	Pn	19 03 00.4	+2.5
IHSB	Hasanabad	4.01	47	*e*Pn	Pn	19 02 59.8	+1.9
QCNT	Qazvin	4.02	28	*e*Pn	Pn	19 02 58.5	+0.4
IVRN	Varamin	4.04	55	*e*Pn	Pn	19 03 00.1	+1.8
IRAM	Ramesheh	4.08	102	*e*Pn	Pn	19 03 00.4	+1.4
ISFB	Sefidab	4.12	66	*e*Pn	Pn	19 03 01.0	+1.6
IGZV	Ghazvin	4.19	29	*e*Pn	Pn	19 03 02.3	+1.8
CHTH	Charan	4.25	41	*e*Pn	Pn	19 03 02.8	+1.5
CHTH				IAML		19 04 14.8	
	comp=E,52nm,0.6s						
CHTH	Charan	4.25	41	*e*Pn	Pn	19 03 02.8	+1.5
NASN	Na'in	4.31	88	*e*Pn	Pn	19 03 04.4	+2.2
NASN				IAML		19 03 56.1	
	comp=E,81nm,0.4s						
NASN				IAML		19 03 59.8	
	comp=N,61nm,0.4s						
NASN	Na'in	4.31	88	*e*Pn	Pn	19 03 04.4	+2.2
JIR1	Jirandeh	4.32	23	*e*Pn	Pn	19 03 04.1	+1.9
MAHB	Mahabad	4.34	338	*e*Pn	Pn	19 03 04.2	+1.8
QALM	Alamut, Qazvin	4.42	33	*e*Pn	Pn	19 03 05.0	+1.4
DAMV	Damavand	4.57	50	*e*Pn	Pn	19 03 07.1	+1.4
DAMV				IAML		19 04 23.5	
	comp=N,98nm,0.7s						
DAMV				IAML		19 04 30.5	
	comp=E,109nm,0.5s						
DAMV	Damavand	4.57	50	*e*Pn	Pn	19 03 07.1	+1.4
IDMV	Damavand	4.58	51	*e*Pn	Pn	19 03 07.2	+1.3
KAZ1	Kazerun	4.59	132	*e*Pn	Pn	19 03 08.7	+2.8
QYSM	Um Kedad	4.92	188	P	Pn	19 03 13.5	+3.1
CSN1	Caspian	4.95	13	*e*Pn	Pn	19 03 12.3	+1.7
AHBU	AHRAM	4.95	140	*e*Pn	Pn	19 03 16.1	+5.3
ISRB	Sarab	5.07	360	*e*Pn	Pn	19 03 14.7	+2.1
ANAR	Anarak	5.09	83	*e*Pn	Pn	19 03 13.9	+1.1
IFIR	Firoozkooh	5.09	54	*e*Pn	Pn	19 03 14.2	+1.2
ILAS	Lasjerd	5.10	57	*e*Pn	Pn	19 03 13.7	+0.6
IAZR	Azarshahr	5.12	345	*e*Pn	Pn	19 03 16.2	+2.9
ISAD	Sadrabad	5.14	98	*e*Pn	Pn	19 03 15.3	+1.7
IPRN	Peran	5.19	46	*e*Pn	Pn	19 03 16.6	+2.5
ISHM	Shahmirzad	5.55	55	*e*Pn	Pn	19 03 20.5	+1.2
IHRS	Heris	5.59	355	*e*Pn	Pn	19 03 21.9	+2.2
ITBZ	Tabriz	5.62	347	*e*Pn	Pn	19 03 21.4	+1.3
ICHK	Chekchek	5.70	93	*e*Pn	Pn	19 03 22.4	+1.2
AHAR	Ahar	5.76	355	*e*Pn	Pn	19 03 24.2	+2.2
ISHB	Shabestar	5.78	344	*e*Pn	Pn	19 03 24.2	+1.8

IMEH	Mehriz	6.03	101	*e*Pn	Pn	19 03 26.9	+1.1
IMRD	Marand	6.17	345	*e*Pn	Pn	19 03 29.9	+2.2
IGLO	Ghaloghah	6.30	52	*e*Pn	Pn	19 03 31.9	+2.5
SIRT	Sirnak	6.41	319	Pn	Pn	19 03 30.9	+0.1
SMAN	Sihmah	6.55	177	P	Pn	19 03 34.9	+2.2
SMAN				S	Sn	19 04 50.7	+3.9
GURO	Guroymak-BITLI	7.40	323		Pn	19 03 45.0	+0.4
RMAH	Rumah	7.40	186	P	Pn	19 03 46.6	+2.1
TNSJ	Nastanj	7.56	78	*e*Pn	Pn	19 03 47.2	+0.5
TPRV	Parvadeh(Tabas	7.57	85	*e*Pn	Pn	19 03 47.4	+0.6
GNI	Garni	7.76	343	Pn	Pn	19 03 50.2	+0.7
	comp=E,0.3nm,0.3s,baz=242,slow=19,SNR=3.0						
GNI				LR	LR	19 07 09.2	
	comp=E,332nm,18.2s,baz=164,slow=40						
TKDS	Koohdasht(Taba	7.95	81	*e*Pn	Pn	19 03 53.5	+1.4
NHRD	Haradh	8.07	171	P	Pn	19 03 55.9	+2.2
SLWS		8.33	161	P	Pn	19 03 59.0	+1.9
NGRK	Negar Kerman	8.33	109	*e*Pn	Pn	19 03 58.5	+0.9
TRNA	Turayna	8.55	158	P	Pn	19 04 01.4	+1.2
TRNA				S	Sn	19 05 30.5	-5.6
SBZV	Sabzevar	8.95	63	*e*Pn	Pn	19 04 07.1	+1.2
ASF	Jabal al Asfar	9.14	269	Pn	Pn	19 04 07.7	-0.6
	comp=E,0.3nm,0.3s,baz=45,slow=2.2,SNR=3.2						
ASF				Sn	Sn	19 05 47.8	-2.8
	comp=E,1.2nm,0.3s,baz=301,slow=22,SNR=1.4						
ASF				Lg	Lg	19 06 51.6	
	comp=E,2.1nm,0.3s,baz=278,slow=20,SNR=3.6						
SLWR	Sila	9.33	157	P	Pn	19 04 12.6	+1.8
SLWR				S	Sn	19 05 50.8	-4.3
RAYN	Ar Rayn	9.38	192	P	Pn	19 04 12.0	+0.3
RAYN	Ar Rayn	9.38	192	Pn	Pn	19 04 12.0	+0.3
ISFR	Sfrayin	9.49	60	*e*Pn	Pn	19 04 15.3	+1.9
GAZ	Gaziantep	9.67	300	Pn	Pn	19 04 17.2	+1.7
SHME	Shamm	9.93	130	P	Pn	19 04 19.2	+0.1
GEYT	Alibeck	9.96	56	Pn	Pn	19 04 18.1	-1.4
	comp=E,0.4nm,0.3s,baz=234,slow=17,SNR=1.2						
GEYT				LR	LR	19 09 09.2	
	comp=E,161nm,20.3s,baz=50,slow=44						
GEYT	Alibeck	9.96	56	Pn	Pn	19 04 16.5	-3.0
GYA0B	ALIBECK ARRAY	9.96	56	Pn	Pn	19 04 17.5	-2.1
IPAY	Payeh	10.02	65	*e*Pn	Pn	19 04 23.1	+2.5
IMON	Monand	10.07	84	*e*Pn	Pn	19 04 23.4	+2.2
BANOM	Banah	10.12	130	P	Pn	19 04 21.0	-0.7
BANOM				S	Sn	19 06 07.8	-6.9
BANOM	Banah	10.12	130	P	Pn	19 04 22.7	+0.9
BANOM				S	Sn	19 06 07.9	-6.9
MMAI	Mount Meron Ar	10.34	275	Pn	Pn	19 04 26.3	+1.6
	comp=E,0.4nm,0.3s,baz=306,slow=28,SNR=1.6						
MMAI				Lg	Lg	19 07 29.2	
	comp=E,0.7nm,0.3s,baz=102,slow=40,SNR=2.4						
MMAI				LR	LR	19 09 08.5	
	comp=E,140nm,20.8s,baz=65,slow=42						
AJN	Ajban	10.36	140	P	Pn	19 04 28.6	+3.6
AJN				S	Sn	19 06 17.8	-2.7
NAZ	Nazwa, Dubai	10.41	136	P	Pn	19 04 25.3	-0.3
NAZ	Nazwa, Dubai	10.41	136	P	Pn	19 04 27.5	+1.8
NAZ				P	Pn	19 04 27.5	+1.8
NAZ				S	Sn	19 06 17.9	-3.8
NAZ				S	Sn	19 06 17.9	-3.8
MASF	Masafi	10.43	133	P	Pn	19 04 27.3	+1.3
MASF				S	Sn	19 06 17.1	-5.1
MZWR	Madinat Zayed	10.47	147	P	Pn	19 04 29.1	+2.5
MZWR				S	Sn	19 06 21.3	-2.0
ASUD	Al Ashush, Dub	10.50	138	P	Pn	19 04 26.9	0.0
ASUD	Al Ashush, Dub	10.50	138	P	Pn	19 04 28.9	+2.0
	SNR=16						
ASUD				S	Sn	19 06 20.1	-3.8
FAQ	Al Faqa, Dubai	10.56	137	P	Pn	19 04 28.8	+1.1
FAQ	Al Faqa, Dubai	10.56	137	P	Pn	19 04 29.7	+2.0
FAQ				P	Pn	19 04 29.7	+2.0
FAQ				S	Sn	19 06 20.6	-4.7
FAQ				S	Sn	19 06 20.6	-4.7
MDH	Madha	10.57	132	P	Pn	19 04 28.8	+1.0
MDH	Madha	10.57	132	P	Pn	19 04 30.7	+2.9
MDH				S	Sn	19 06 19.7	-5.9
NHDN	Nehbandan	10.57	94	*e*Pn	Pn	19 04 30.8	+2.8
UOSS	Minazif	10.77	134	P	Pn	19 04 30.0	-0.5
UOSS	Minazif	10.77	134	P	Pn	19 04 31.5	+0.9
UOSS				P	Pn	19 04 31.5	+0.9
UOSS				S	Sn	19 06 24.2	-6.3
UOSS				S	Sn	19 06 24.2	-6.3
UOSS	Minazif	10.77	134	Pn	Pn	19 04 30.2	-0.3
TBJM	Torbat-e-JAM	10.79	73	*e*Pn	Pn	19 04 32.1	+1.1
HATD	Hatta, Dubai	10.81	135	P	Pn	19 04 31.2	0.0
HATD	Hatta, Dubai	10.81	135	P	Pn	19 04 32.3	+1.1
HATD				P	Pn	19 04 32.3	+1.1
HATD				S	Sn	19 06 26.1	-5.5
HATD				S	Sn	19 06 26.1	-5.5
IMYA	Miami	10.85	67	*e*Pn	Pn	19 04 33.8	+2.0
ASHO	Ashiyiah	10.88	135	P	Pn	19 04 31.4	-0.7
ASHO				S	Sn	19 06 27.5	-5.7
ASHO	Ashiyiah	10.88	135	P	Pn	19 04 33.0	+1.0
ASHO				S	Sn	19 06 28.6	-4.6
ALNE	Al Ain	11.18	139	P	Pn	19 04 36.2	-0.1
ALNE	Al Ain	11.18	139	P	Pn	19 04 36.8	+0.5
ALNE				S	Sn	19 06 36.9	-3.8
EIL	Elat	11.33	258	Pn	Pn	19 04 39.0	+0.8
	comp=E,0.6nm,0.3s,baz=44,slow=9.0,SNR=6.7						
EIL				Lg	Lg	19 07 59.0	
	comp=E,0.6nm,0.3s,baz=52,slow=14,SNR=2.3						
EIL				LR	LR	19 10 00.3	
	comp=E,206nm,20.7s,baz=86,slow=42						
BNN	Bunyan	11.38	306		Pn	19 04 40.5	+1.4
SOHO	SOHO	11.57	136	P	Pn	19 04 40.3	-1.3
SOHO	SOHO	11.57	136	P	Pn	19 04 43.8	+2.3
SOHO				P	Pn	19 04 43.8	+2.3
SOHO				S	Sn	19 06 44.9	-5.3
SOHO				S	Sn	19 06 44.9	-5.3
KBZ	Khabaz	11.60	342	Pn	Pn	19 04 43.4	+1.6
	comp=E,0.0nm,0.3s,baz=178,slow=10,SNR=1.7						
KBZ				LR	LR	19 09 50.2	
	comp=E,117nm,19.9s,baz=145,slow=41						
ZHSF	Zahedan	11.63	102	*e*Pn	Pn	19 04 46.9	+4.3
ZHSF	Zahedan	11.63	102	*e*Pn	Pn	19 04 46.9	+4.3
KVAR	Kislovodsk Arr	11.86	342	LR	LR	19 08 58.1	
	comp=E,233nm,18.1s,baz=52,slow=36						
KIV	Kislovodsk	11.86	342	*e*P	Pn	19 04 44.7	-0.9
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,69nm,11.0s						
ARQ	Araqi	12.18	138	P	Pn	19 04 52.2	+2.2
ARQ				S	Sn	19 07 01.0	-4.2
HRA	Herat	12.25	78	Pn	Pn	19 04 51.3	+0.2
HOQ	Hoqain	12.45	135	P	Pn	19 04 56.0	+2.3
HOQ				P	Pn	19 04 56.0	+2.3
HOQ				S	Sn	19 07 05.8	-6.0
HOQ				S	Sn	19 07 05.8	-6.0
BIDO	Bidbid	13.00	132	P	Pn	19 05 05.6	+4.5
BIDO				S	Sn	19 07 21.2	-3.9
BSY	Bisya	13.03	137	P	Pn	19 05 01.4	-0.2
BSY				P	Pn	19 05 01.4	-0.2
BSY				S	Sn	19 07 19.1	-6.9
BSY				S	Sn	19 07 19.1	-6.9
SMDO	Samad	13.29	134	P	Pn	19 05 07.4	+2.2
SMDO				S	Sn	19 07 28.0	-4.4
BR131	Keskin Array S	13.30	306	P	Pn	19 05 07.1	+1.8
BR131	Keskin Array S	13.30	306		Pn	19 05 07.1	+1.8
BRTR	Keskin Array B	13.30	306	Pn	Pn	19 05 08.4	+3.1
	comp=Z,0.1nm,0.3s,baz=127,slow=12,SNR=17						
BRTR	Keskin Array B	13.30	306	*i* P	Pn	19 05 09.3	+4.0
BRTR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BRTR	Keskin Array B	13.30	306	Pn	Pn	19 05 08.2	+2.8
WSAR	Wadi Sarin	13.52	132	Pn	Pn	19 05 06.8	-1.4
	comp=Z,1.6nm,0.3s,baz=350,slow=11,SNR=17						
WSAR				Sn	Sn	19 07 30.2	-7.6
	comp=Z,1.0nm,0.3s,baz=216,slow=13,SNR=3.1						
WSAR				LR	LR	19 11 28.3	
	comp=Z,172nm,19.1s,baz=334,slow=43						
WSAR	Wadi Sarin	13.52	132	P	Pn	19 05 11.0	+2.8
WSAR				S	Sn	19 07 31.8	-6.1
JMDO	Jabal Madar	13.85	136	P	P	19 05 17.4	-3.4
JMDO				S	Sn	19 07 41.1	-4.7
WBK	Wadi Bani Khal	14.19	133	P	P	19 05 22.3	-2.4
WBK				S	Sn	19 07 50.3	-4.0
ELL	Elmali	15.15	290	P	Pn	19 05 32.6	+2.1
ELL				pmax	pmax		
	comp=Z,45nm,0.8s						
ELL	Elmali	15.15	290	Pn	Pn	19 05 32.6	+2.1
ELL				IAmb	IAmb	19 05 47.5	
	comp=Z,45nm,0.8s						
DOK	Doka	15.21	156	P	Pn	19 05 28.9	-2.3
	SNR=10						
DOK				P	Pn	19 05 28.9	-2.3
	SNR=10						
DOK				S	Sn	19 08 08.0	-11
DOK				S	Sn	19 08 08.0	-11
WHFO	Wadi Hawf	15.74	158	P	Pn	19 05 35.9	-2.3
	SNR=23						
WHFO				S	Sn	19 08 21.8	-10
ABTO	Aybut	16.14	160	P	Pn	19 05 40.8	-2.4
	SNR=10.0						
ABTO				S	Sn	19 08 36.3	-5.3
RBK	Rabkut	16.27	157	P	Pn	19 05 42.0	-3.0
RBK				S	Sn	19 08 38.2	-6.8
SHAO	Shalim	16.30	152	P	Pn	19 05 45.1	-0.2
	SNR=9.8						
SHAO				S	Sn	19 08 38.2	-7.5
DMTO	DMTO	16.33	155	P	Pn	19 05 43.7	-1.9
	SNR=16						
DMTO				S	Sn	19 08 38.2	-8.1
KBL	Kabul	17.87	78	P	P	19 06 06.4	+0.7
KBL				pmax	pmax		
	comp=Z,32nm,1.2s						
KBL	Kabul	17.87	78		P	19 06 06.4	+0.7
CHGR	Chuyangaron	18.39	65	P	Pn	19 06 11.3	0.0
SANT	Santorini	18.66	287	P	Pn	19 06 15.9	+1.4
SANT				IAmb	IAmb	19 06 32.9	
	comp=Z,63nm,1.1s						
ABKAR	Akbulak array	18.87	25	P	P	19 06 16.2	-0.2
ABKAR	Akbulak array	18.87	25	P	P	19 06 16.0	-0.3
VRH	Novokhopyorsk	18.96	348	*e*P	P	19 06 16.5	-0.8
VRH				pmax	pmax		
	comp=Z,40nm,0.9s						
IDI	Anoyia	19.07	284	P	Pn	19 06 20.5	+1.0
	comp=Z,1.4nm,0.3s,baz=0.1,slow=7.5,SNR=11						
ALN	Alexandroupoli	19.11	301	P	Pn	19 06 20.8	+0.8
ALN				pmax	pmax		
	comp=Z,75nm,1.4s						
ALN	Alexandroupoli	19.11	301	P	Pn	19 06 20.8	+0.8
ALN				IAmb	IAmb	19 06 49.0	
	comp=Z,75nm,1.4s						
TLCR		19.18	316	⇑P	P	19 06 18.6	-1.1
TPGR	Topolog	19.23	315	⇑P	Pn	19 06 22.4	+1.0
VORD	Divnogorie	19.23	344	*e*P	P	19 06 18.8	-1.4
VORD				pmax	pmax		
	comp=Z,20nm,0.6s						
AKTO	Aktyubinsk	19.26	20	P	P	19 06 20.5	-0.1
	comp=Z,1.0nm,0.3s,baz=204,slow=11,SNR=44						
AKTO				LR	LR	19 15 58.4	
	comp=Z,85nm,18.5s,baz=189,slow=44						
TLBR	Topalu	19.29	313	⇑P	Pn	19 06 21.9	-0.2
GAR	Garm	19.35	65		P	19 06 22.3	+0.5
GAR				IAmb	IAmb	19 06 25.2	
	comp=Z,27nm,0.7s						
HARR	Harsova	19.44	314	⇑P	Pn	19 06 24.2	+0.3
VSR	Storozhevoye	19.49	344	*e*P	P	19 06 22.4	-0.7
VSR				pmax	pmax		
	comp=Z,40nm,0.9s						
CFR	Carcaliu	19.57	315	⇑P	P	19 06 23.9	-0.1
BELG	Belogornoye	19.64	360	P	P	19 06 24.7	0.0
	comp=Z,2.4nm,0.3s,baz=326,slow=1.1,SNR=18						
BELG				LR	LR	19 15 52.7	
	comp=Z,157nm,18.0s,baz=191,slow=43						
RAZG	Razgrad	19.80	309	⇓P	Pn	19 06 28.7	+0.5
VORR	Voronezh	19.91	344	*e*P	P	19 06 28.0	+0.4
VORR				pmax	pmax		
	comp=Z,350nm,1.2s						
BTK	Batken	19.96	62	P	P	19 06 28.7	+0.2
BTK				pmax	pmax		
	comp=Z,18nm,0.9s						
BTK	Batken	19.96	62	P	P	19 06 28.7	+0.2
VLDR	Vladesti	19.97	317	⇑P	Pn	19 06 32.4	+2.3
SGRR	Singureni	20.44	310	⇑P	P	19 06 31.1	-2.4
ISR	Istrita	20.51	313	⇑P	Pn	19 06 36.1	-0.4
DRK	Karamyk	20.57	64	P	P	19 06 35.9	+0.6
VASR	Vaslui	20.59	318	⇓P	Pn	19 06 41.1	+3.7
BISRR	Bisoca	20.62	314	⇑P	Pn	19 06 48.4	+10
KKAR	Karatay Array	20.70	53	P	P	19 06 35.0	-1.4
KKAR	Karatay Array	20.70	53	P	P	19 06 35.0	-1.4
SECR		20.76	313	⇑P	Pn	19 06 43.4	+3.9
VRI	Vrincioaia	20.78	315	⇑P	Pn	19 06 39.0	-0.7
NEHR	Nehoiu	20.81	314	⇑P	Pn	19 06 40.0	-0.1
PLOR	Plostina	20.82	315	⇑P	Pn	19 06 39.9	-0.2
LPSR	Galich'ya Gora	20.84	345	*e*P	P	19 06 36.8	-0.9
LPSR				pmax	pmax		
	comp=Z,120nm,0.8s						
MLR	Muntele Rosu	21.06	314	⇑P	P	19 06 46.0	+5.6
MLR	Muntele Rosu	21.06	314	P	P	19 06 42.5	+2.2
	comp=Z,20nm,0.8s,baz=172,slow=1.6,SNR=22						
MLR	Muntele Rosu	21.06	314	P	P	19 06 42.2	+1.8
MLR				IAmb	IAmb	19 06 56.2	
	comp=Z,28nm,0.8s						
COVR	Voineasa-Covas	21.08	315	⇑P	P	19 06 42.4	+2.0
TESR	Tescani	21.17	317	⇑P	P	19 06 42.4	+1.0
SORM	Soroca	21.20	322	⇑P	P	19 06 40.8	-0.9
HUMR	Humele	21.21	310	⇑P	P	19 06 43.5	+1.7
SOCY	Socotra	21.26	163	P	P	19 06 40.5	-2.1
	SNR=5.3						
SOCY	Socotra	21.26	163	P	P	19 06 40.5	-2.1
SOCY				IAmb	IAmb	19 06 48.3	
	comp=Z,63nm,1.2s						
VLAD	Vladila	21.37	308	⇑P	P	19 06 45.2	+1.7
STFAR	Stefanesti-Arg	21.38	311	⇑P	P	19 06 46.4	+2.8
NIL	Nilore	21.40	81	P	P	19 06 44.4	+0.4
NIL				pmax	pmax		
	comp=Z,37nm,0.9s						
NIL	Nilore	21.40	81	P	P	19 06 44.4	+0.4
NIL				IAmb	IAmb	19 06 46.6	
	comp=Z,37nm,0.9s						
OZUR		21.46	315	⇑P	P	19 06 45.6	+1.1
MTUR	Matau	21.48	312	⇑P	P	19 06 47.7	+3.0
ITM	Ithomi	21.55	289	P	P	19 06 45.2	-0.3
ITM				IAmb	IAmb	19 06 51.5	
	comp=Z,37nm,0.8s						
ATD	Arta Tunnel	21.58	193	LR	LR	19 15 57.0	
	comp=Z,154nm,18.5s,baz=0.5,slow=39						
VOIR		21.58	313	⇑P	P	19 06 47.8	+1.9
DOPR	Dopca	21.63	314	⇑P	P	19 06 48.5	+2.1
VTS	Vitosha	21.66	304	⇑P	P	19 06 46.7	-0.1
ARR	Arges	21.81	312	⇑P	P	19 06 50.1	+1.7
PRAR	RASCA	21.88	318	⇑P	P	19 06 54.0	+5.0
MDB	Medias	22.33	314	⇑P	P	19 06 57.6	+3.7
BLKB	Belogradchik	22.38	306	⇑P	P	19 06 57.0	+2.5
SRE	Strehaia	22.42	309	⇑P	P	19 07 01.5	+6.7
FNA	Florina	22.50	298	P	P	19 06 57.6	+1.8
FNA				pmax	pmax		
	comp=Z,15nm,1.0s						
FNA	Florina	22.50	298	P	P	19 06 57.6	+1.8
AKASG	Malin Array Be	22.52	328	P	P	19 06 55.2	-0.6
	comp=Z,3.0nm,0.7s,baz=136,slow=9.0,SNR=18						
AKASG				PcP	PcP	19 10 49.2	+0.2
	comp=Z,0.4nm,0.4s,baz=100,slow=1.9,SNR=4.2						
AKBB	Malin Array Si	22.52	328	⇑*e*P	P	19 06 55.1	-0.7
AKBB	Malin Array Si	22.52	328	P	P	19 06 55.2	-0.7
BURAR	Bucovina Array	22.59	318	⇑P	P	19 06 57.9	+1.1
BURAR	Bucovina Array	22.59	318	P	P	19 06 57.1	+0.3
BURAR				IAmb	IAmb	19 07 02.3	
	comp=Z,14nm,0.7s						
AML	Almayashu	22.60	58	P	P	19 06 58.0	+0.8
	SNR=10						
BUR08	Bucovina Ar. S	22.62	318	P	P	19 06 57.0	0.0
ARCR	ARCALIA	22.81	316	⇓P	P	19 07 02.4	+3.5
EKS2	Erkin-Say	22.81	57	P	P	19 06 59.0	-0.2
	SNR=6.7						
DJES	Djerdap	22.87	309	⇑P	P	19 07 00.8	+1.2
GZR	Gura Zlata	23.00	311	⇑P	P	19 07 01.4	+0.4
HERR	Herculane	23.02	309	⇑P	P	19 07 02.0	+0.9
BOVS	Bovan	23.05	306	⇑P	P	19 07 01.2	-0.2
AAK	Ala-Archa	23.31	57	P	P	19 07 03.5	-0.8
	comp=Z,2.5nm,0.8s,baz=227,slow=8.6,SNR=4.5						
AAK				LR	LR	19 17 27.8	
	comp=Z,215nm,19.1s,baz=264,slow=40						
AAK	Ala-Archa	23.31	57	P	P	19 07 04.4	+0.1
MDVR	Moldovita	23.45	308	⇑P	P	19 07 06.1	+0.6
FRU1	Bishkek	23.46	57	P	P	19 07 06.5	+0.9
FRU1				pmax	pmax		
	comp=Z,8.0nm,0.7s						
FRU1	Bishkek	23.46	57	P	P	19 07 06.5	+0.9
USP	Ospenovka	23.50	56	P	P	19 07 08.3	+2.3
	SNR=10						
CHMS	Chumysh	23.60	56	P	P	19 07 08.2	+1.2
	SNR=8.4						
BMR	Baia Mare	23.61	316	⇑P	P	19 07 08.1	+1.1
KBK	Karagaybulak	23.64	57	P	P	19 07 09.8	+2.3
	SNR=7.0						
DRGR		23.65	314	⇑P	P	19 07 09.0	+1.5
MESR	Meseseni	23.68	315	⇑P	P	19 07 09.6	+2.0
OBN	Obninsk	23.70	344	P	P	19 07 08.2	+0.5
	comp=Z,2.1nm,0.4s,baz=2.6,slow=2.1,SNR=6.4						
OBN	Obninsk	23.70	344	*d i*P	P	19 07 07.8	+0.1
OBN				*e*		19 07 38.2	
OBN				*e*S	Sn	19 12 03.0	+20
OBN				pmax	pmax		
	comp=Z,49nm,1.7s						
OBN				MLR	MLR		
	comp=Z,74nm,14.0s						
OBN	Obninsk	23.70	344	P	P	19 07 07.5	-0.2
OBN				IAmb	IAmb	19 07 15.5	
	comp=Z,22nm,0.8s						
KSH	Kashi	23.76	65	P	P	19 07 05.8	-2.9
KSH				pP	pP	19 07 08.3	-6.9
KSH				sP	sP	19 07 11.0	-6.9
KSH				pmax	pmax		
	comp=Z,25nm,0.9s						
KSH				LR	LR		
	comp=N,220nm,14.6s						
KSH				LR	LR		
	comp=E,640nm,15.8s						
KSH				LR	LR		
	comp=Z,690nm,18.6s						
BZS	Buzias	23.83	310	⇑P	P	19 07 07.4	-1.8
MOS	Moscow	24.05	346	*e*P	P	19 07 10.6	-0.4
MOS				pmax	pmax		
	comp=Z,30nm,0.9s						
BANR	Banloc	24.05	309	⇑P	P	19 07 10.8	-0.4
SIRR	Siria	24.07	312	⇑P	P	19 07 13.6	+2.2
TKM2	Tokmak 2	24.17	57	P	P	19 07 14.3	+1.7
	SNR=15						
BOOM	Boomskoye usch	24.30	58	P	P	19 07 15.0	+1.2
BOOM				pmax	pmax		
	comp=Z,14nm,1.0s						
BOOM	Boomskoye usch	24.30	58	P	P	19 07 15.0	+1.2
BOOM				IAmb	IAmb	19 07 17.3	
	comp=Z,14nm,0.9s						
TRPA	Tarpa	24.40	316	⇓P	P	19 07 16.0	+1.6
TRPA	Tarpa	24.40	316	*e*P	P	19 07 14.8	+0.5
LVV	L'vov	24.48	321	*e*P	P	19 07 14.3	-0.8
UZH	Uzhgorod	24.79	317	*e*P	P	19 07 18.5	+0.6
UZH				*i*		19 07 25.8	
UZH				*i*		19 07 32.4	
FRGS	Fruska Gora	24.84	308	⇑P	P	19 07 19.9	+1.5
ARU	Arti	24.86	14	P	P	19 07 18.4	0.0
	comp=Z,3.3nm,0.8s,baz=195,slow=9.4,SNR=16						
ARU				LR	LR	19 19 23.9	
	comp=Z,52nm,20.5s,baz=149,slow=42						
ARU	Arti	24.86	14*c*	*i*P	P	19 07 18.3	-0.1
ARU						19 07 48.3	
ARU				S	S	19 11 42.3	+2.3
ARU				pmax	pmax		
	comp=Z,26nm,1.1s						
ARU	Arti	24.86	14	P	P	19 07 18.1	-0.3
ARU				IAmb	IAmb	19 07 20.7	
	comp=Z,21nm,1.0s						
KOLS	Kolonicke sedl	24.96	318	*e*P	P	19 07 21.7	+2.3
KOLS				pmax	pmax		
	comp=Z,12nm,1.0s						
KOLS	Kolonicke sedl	24.96	318	*e*P	P	19 07 21.7	+2.3
KWP	Kalwaria Pacla	25.09	320	P	P	19 07 20.9	+0.3
KWP				pmax	pmax		
	comp=Z,202nm,0.9s						
KWP	Kalwaria Pacla	25.09	320	P	P	19 07 20.9	+0.3
KDJ	Kajisay	25.12	60	P	P	19 07 22.7	+1.6
KDJ				pmax	pmax		
	comp=Z,12nm,1.0s						
KDJ	Kajisay	25.12	60	P	P	19 07 22.7	+1.6
KDJ				IAmb	IAmb	19 07 25.5	
	comp=Z,12nm,0.9s						
CRVS	Cervenica-Dubn	25.41	317	*e*P	P	19 07 25.6	+2.1
CRVS				pmax	pmax		
	comp=Z,19nm,1.2s						
CRVS	Cervenica-Dubn	25.41	317	*e*P	P	19 07 25.6	+2.1
TARG	Taragay, Kyrgy	25.49	61	P	P	19 07 25.9	+1.0
TARG				IAmb	IAmb	19 07 29.4	
	comp=Z,14nm,0.9s						
TIP	Timpagrande	25.77	293	P	P	19 07 28.1	+1.1
TIP				IAmb	IAmb	19 07 29.7	
	comp=Z,17nm,1.0s						
PSZ	Piszkesteto	25.87	314	⇑P	P	19 07 29.8	+2.0
PSZ	Piszkesteto	25.87	314	*e*P	P	19 07 28.8	+1.0
PSZ	Piszkesteto	25.87	314	P	P	19 07 29.1	+1.3
PSZ				pmax	pmax		
	comp=Z,23nm,0.9s						
PSZ	Piszkesteto	25.87	314	P	P	19 07 29.1	+1.3
PSZ				IAmb	IAmb	19 07 31.6	
	comp=Z,22nm,0.9s						
KIRV	Kirov	25.87	2	P	P	19 07 28.1	+0.6
	comp=Z,31nm,0.6s,baz=139,slow=0.5,SNR=10						
KIRV				LR	LR	19 19 48.0	
	comp=Z,126nm,18.2s,baz=171,slow=42						
MNK	Minsk	25.88	333	*i* P	P	19 07 25.5	-2.2
MNK				*i* PPP	PPP	19 08 10.4	
MNK				*i*		19 10 54.3	
MNK				*i* S	S	19 11 56.1	-0.2
MNK				*i* SSS	SSS	19 13 17.0	
MNK				pmax	pmax		
	comp=N,18nm,1.0s						
MNK				pmax	pmax		
	comp=E,4.0nm,1.0s						
MNK				pmax	pmax		
	comp=Z,40nm,1.0s						
MNK				MLR	MLR		
	comp=E,8.0nm,16.0s						
MNK				MLR	MLR		
	comp=Z,77nm,16.0s						
MNK				MLR	MLR		
	comp=N,48nm,16.0s						
MNK	Minsk	25.88	333	*i* P	P	19 07 25.5	-2.2
	comp=E,4.0nm,1.0s						
MNK				*i* P	P	19 07 25.5	-2.2
	comp=N,18nm,1.0s						
MNK				*i* P	P	19 07 25.5	-2.2
	comp=Z,40nm,1.0s,baz=139						
MNK				*i* PP	PnPn	19 08 02.5	-2.7
MNK				*i* PPP	PPP	19 08 10.5	
MNK				*i* S	S	19 11 56.1	-0.2
MNK				*i* SS	SnSn	19 12 45.1	-8.0
MNK				*i* SSS	SSS	19 13 17.0	
MNK				*i* LQ	LQ	19 15 34.9	
MNK				*i* LR	LR	19 17 14.1	
MNK				*i* LRM	MLR	19 18 30.2	
	comp=E,8.0nm,16.0s						
MNK				*i* LRM	MLR	19 18 33.3	
	comp=Z,77nm,16.0s						
MNK				*i* LRM	MLR	19 18 35.4	
	comp=N,48nm,16.0s						
MORH	Mrgy, Hungar	25.98	310	⇑P	P	19 07 30.3	+1.6
MORH	Mrgy, Hungar	25.98	310	*e*P	P	19 07 29.3	+0.6
BRVK	Borovoye	26.00	32	P	P	19 07 28.9	+0.1
BRVK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BRVK	Borovoye	26.00	32	P	P	19 07 28.9	+0.1
BVAR	Borovoye Array	26.02	32	P	P	19 07 29.5	+0.5
	comp=Z,7.4nm,0.6s,baz=220,slow=18,SNR=35						
BUD	Budapest	26.22	313	*e*P	P	19 07 32.4	+1.5
KOVH	Kovagotottos	26.29	309	*e*P	P	19 07 32.9	+1.3
NACGM	Naroch	26.61	333	*i* P	P	19 07 34.3	0.0
CSKK	Cskako	26.65	312	*e*P	P	19 07 39.1	+4.3
LANS	Liptovska Anna	26.68	316	*e*P	P	19 07 37.0	+2.0
LANS				pmax	pmax		
	comp=Z,7.0nm,1.3s						
LANS	Liptovska Anna	26.68	316	*e*P	P	19 07 37.0	+2.0
VYHS	Vyhne	26.76	315	*e*P	P	19 07 38.4	+2.6
VYHS				pmax	pmax		
	comp=Z,10.0nm,1.4s						
VYHS	Vyhne	26.76	315	*e*P	P	19 07 38.4	+2.6
SRO	Srobarova	26.80	313	*e*P	P	19 07 40.1	+4.1
SRO	Srobarova	26.80	313	*e*P	P	19 07 40.1	+4.1
OJC	Ojcow	27.00	319	P	P	19 07 38.9	+1.0
OJC				pmax	pmax		
	comp=Z,17nm,0.9s						
OJC	Ojcow	27.00	319	P	P	19 07 38.9	+1.0
OJC				IAmb	IAmb	19 07 47.8	
	comp=Z,16nm,0.9s						
MPLH	Magyarpolny	27.04	311	*e*P	P	19 07 39.1	+0.9
SUW	Suwalki	27.49	328	P	P	19 07 42.4	+0.2
SUW				pmax	pmax		
	comp=Z,29nm,1.0s						
SUW	Suwalki	27.49	328	P	P	19 07 42.4	+0.2

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JAVC  Velka Javorina     27.61 315  eP     P      19 07 49.2 +5.7
MODS  Modra-Piesok       27.66 313  eP     P      19 07 47.6 +3.8
MODS                                pmax   pmax
      comp=Z,19nm,1.5s
MODS  Modra-Piesok       27.66 313  eP     P      19 07 47.6 +3.8
SOP   Sopron             27.84 312  eP     P      19 07 47.9 +2.5
MORC  Moravsky Berou     28.08 316 ⇑P      P      19 07 48.1 +0.4
MORC  Moravsky Berou     28.08 316   P     P      19 07 49.0 +1.4
MORC                                pmax   pmax
      comp=Z,6.0nm,1.1s
MORC  Moravsky Berou     28.08 316  eP     P      19 07 48.4 +0.8
MORC  Moravsky Berou     28.08 316   P     P      19 07 49.0 +1.4
ARSA  Arzberg            28.35 310  eP     P      19 07 51.8 +1.8
      comp=Z,3.2nm,0.7s
CONA  Conrad Observa     28.37 312  eP     P      19 07 51.6 +1.3
      comp=Z,1.3nm,0.5s
VRAC  Vranov             28.44 315  eP     P      19 07 51.6 +0.8
KRUC  Moravsky           28.46 314  eP     P      19 07 51.8 +0.8
KLMR  Klimovskoe         28.63 352  eP     P      19 07 50.3  -2.0
KLMR                                pmax   pmax
      comp=Z,18nm,1.0s
KLMR  Klimovskoe         28.63 352  eP     P      19 07 50.4  -1.9
KLMR                                AMP           19 07 57.3
      comp=Z,18nm,1.0s
KRLC  Kraliky            28.65 316  eP     P      19 07 53.4 +0.7
KRLC  Kraliky            28.65 316  eP     P      19 07 53.4 +0.7
KURBB Kurchatov Arra     28.85  43   P     P      19 07 55.5 +1.1
      comp=Z,4.3nm,0.8s,baz=248,slow=9.3,SNR=16
PRGR  Permogore          28.94 358  eP     P      19 07 53.7  -1.3
PRGR                                pmax   pmax
      comp=Z,4.0nm,0.6s
KURK  Kurchatov          28.94  42   P     P      19 07 56.0 +0.8
KURK                                pmax   pmax
      comp=Z,7.0nm,0.9s
KURK  Kurchatov          28.94  42   P     P      19 07 56.0 +0.8
NRCA  Norcia             28.95 300   P     P      19 07 57.2 +1.8
NRCA                                IAmb   IAmb   19 08 11.3
      comp=Z,25nm,1.2s
DPC   Dobruska-Polom     29.04 317  eP     P      19 07 57.4 +1.3
DPC   Dobruska-Polom     29.04 317  eP     P      19 07 57.4 +1.3
OSTC  Ostas              29.19 317  eP     P      19 07 58.7 +1.3
UPC   Upice              29.28 317  eP     P      19 07 59.5 +1.2
UPC   Upice              29.28 317  eP     P      19 07 59.5 +1.2
CHVC  Chvalec            29.29 317  eP     P      19 07 59.2 +0.8
CHVC                                ex     x      19 08 03.2
MOA   Molln              29.35 311  eP     P      19 07 60.0 +1.0
      comp=Z,5.2nm,0.6s
CKRC  Cesky Krumlov      29.65 313  eP     P      19 08 02.1 +0.5
MK31  Makanchi Array     29.80  52   P     P      19 08 03.6 +0.7
MK31                                pmax   pmax
      comp=Z,3.0nm,0.8s
MK31  Makanchi Array     29.80  52   P     P      19 08 03.6 +0.7
MKAR  Makanchi Array     29.80  52   P     P      19 08 03.9 +1.0
      comp=Z,3.9nm,0.8s,baz=248,slow=8.7,SNR=27
MKAR  Makanchi Array     29.80  52   P     P      19 08 03.5 +0.6
GEC2  GERESS Array S     30.04 312   P     P      19 08 06.6 +1.5
GERES GERESS Array B     30.04 312   P     P      19 08 05.5 +0.5
      comp=Z,1.6nm,0.7s,baz=120,slow=7.9,SNR=7.9
GERES                               PcP    PcP    19 11 07.6 +0.9
      comp=Z,1.1nm,0.8s,baz=132,slow=2.0,SNR=7.0
GERES GERESS Array B     30.04 312   P     P      19 08 06.2 +1.1
ABTA  Abfaltersbach      30.18 308  eP     P      19 08 07.6 +1.3
      comp=Z,2.2nm,0.7s
KHC   Kasperske Hory     30.21 313  eP     P      19 08 03.5  -3.0
KHC                                 ex     x      19 08 10.9
KHC   Kasperske Hory     30.21 313  eP     P      19 08 03.5  -3.0
KHC                                 e             19 08 10.9
CTI   Castel Tesino      30.59 306   P     P      19 08 10.6 +0.6
CTI                                 pmax   pmax
      comp=Z,10.0nm,0.9s
CTI   Castel Tesino      30.59 306   P     P      19 08 10.6 +0.6
CTI                                 IAmb   IAmb   19 08 15.8
      comp=Z,10nm,0.9s
WTTA  Wattenberg         30.89 309  eP     P      19 08 13.2 +0.5
      comp=Z,6.9nm,0.8s
WATA  Walderalm          30.95 309  eP     P      19 08 13.8 +0.6
      comp=Z,5.4nm,0.5s
VLC   Villacollemand     31.11 302   P     P      19 08 15.4 +0.9
SQTA  Sankt Quirin       31.16 308  eP     P      19 08 15.7 +0.6
      comp=Z,6.9nm,0.6s
MOTA  Moosalm            31.26 309  i P    P      19 08 16.3 +0.4
      comp=Z,5.5nm,0.7s
CLL   Collm              31.35 317  eP     P      19 08 17.0 +0.5
CLL                                 i sP   pP     19 08 22.5  -0.6
CLL                                 ePPP   PPP    19 09 30.0
CLL                                 eS     S      19 13 23.0 +0.6
CLL                                  LmV          19 21 00.0
      comp=Z,100nm,18.2s
CLL                                  LmV          19 22 00.0
      comp=Z,100nm,18.2s
CLL   Collm              31.35 317  eP     P      19 08 17.0 +0.5
CLL                                 i             19 08 22.5
CLL                                 eS     S      19 13 23.0 +0.6
FETA  Feichten           31.43 308  eP     P      19 08 18.4 +1.0
      comp=Z,5.4nm,0.7s
VSL   Villasalto         31.50 293   P     P      19 08 19.2 +1.2
KEST  Kesra              31.71 286   P     P      19 08 21.0 +1.1
KEST                                IAmb   IAmb   19 08 29.3
      comp=Z,23nm,1.4s
MSSA  Maissana           31.75 303   P     P      19 08 20.7 +0.4
GRA1  Grafenberg Arr     31.85 313   P     P      19 08 21.9 +1.0
GRF   Grafenberg Arr     31.85 313   P     P      19 08 21.9 +1.0
GRF                                 pmax   pmax
      comp=Z,19nm,1.0s
GRFO  Grafenberg         31.85 313   P     P      19 08 21.9 +1.0
GRFO                                pmax   pmax
      comp=Z,17nm,1.0s
GRFO  Grafenberg         31.85 313   P     P      19 08 21.9 +1.0
FINES FINESS Array B     31.95 340   P     P      19 08 21.7 +0.1
      comp=Z,1.6nm,0.3s,baz=142,slow=8.9,SNR=34
FINES                               LR     LR     19 22 00.6
      comp=Z,56nm,18.6s,baz=162,slow=38
FIA1  FINESS Array S     31.95 340   P     P      19 08 21.7 +0.1
FIA1                                IAmb   IAmb   19 08 36.0
      comp=Z,21nm,1.2s
BSD   Bornholm Skovb     32.04 324  eP     P      19 08 21.3  -1.1
DAVA  Damuels            32.05 308  eP     P      19 08 23.3 +0.3
      comp=Z,8.4nm,0.6s
TUE   Stuetta            32.24 307   P     P      19 08 25.6 +1.0
TUE                                 IAmb   IAmb   19 08 33.6
      comp=Z,14nm,1.1s
WMQ   Urumqi             33.00  59  eP     P      19 08 33.6 +2.4
WMQ                                 pmax   pmax
      comp=Z,13nm,0.7s
WMQ                                 pmax   pmax
      comp=Z,120nm,3.8s
WMQ                                 LR     LR
      comp=N,50nm,27.9s
WMQ                                 LR     LR
      comp=E,700nm,27.9s
WMQ                                 LR     LR
      comp=Z,29nm,29.0s
DEL   Delary             33.24 326  i P    P      19 08 32.2  -0.8
DEL                                 IAML          19 08 32.8
      comp=Z,5.4nm,0.7s
DEL                                 IAmb   IAmb   19 08 33.4
      comp=Z,8.2nm,0.7s
SENIN Lac Senin/Sane     33.61 306   P     P      19 08 37.3 +0.7
SENIN                               IAmb   IAmb   19 08 42.0
      comp=Z,17nm,1.2s
ZAA0  Zalesovo Array     33.76  40   P     P      19 08 37.6  0.0
ZAA0                                IAmb   IAmb   19 08 38.4
      comp=Z,10.0nm,1.1s
ZALV  Zalesovo Beam      33.76  40   P     P      19 08 37.7 +0.2
      comp=Z,2.3nm,0.3s,baz=252,slow=8.8,SNR=21
ZALV                                LR     LR     19 23 55.2
      comp=Z,39nm,18.5s,baz=211,slow=39
ZALV  Zalesovo Beam      33.76  40   P     P      19 08 37.6  0.0
BNI   Bardonecchia       33.85 303   P     P      19 08 39.5 +0.8
BNI                                 pmax   pmax
      comp=Z,32nm,0.7s
BNI   Bardonecchia       33.85 303   P     P      19 08 39.5 +0.8
DGZ   Jazzator, Alta     33.88  48⇓iP     P      19 08 40.0 +1.1
DGZ                                 pmax   pmax
      comp=Z,6.0nm,1.2s
KMBO  Kilima Mbogo       35.10 198  LR     LR     19 23 57.5
      comp=Z,76nm,18.2s,baz=86,slow=38
NC602 NORSAR Array S     36.56 331  eP     P      19 09 02.0 +0.4
NC405 NORSAR Array S     36.70 331   P     P      19 09 01.6  -1.2
KONO  Kongsberg          36.82 328  eP     P      19 09 04.8 +1.0
NB2   NORSAR Subarra     36.87 331   P     P      19 09 03.4  -0.9
      comp=Z,1.1nm,0.7s,baz=123,slow=8.6
NOA   NORSAR Array B     36.87 331   P     P      19 09 03.7  -0.6
      comp=Z,1.4nm,0.7s,baz=124,slow=8.6,SNR=5.5
LSA   Lhasa              37.10  83   P     P      19 09 07.8 +0.7
LSA                                 pmax   pmax
      comp=Z,52nm,1.1s
LSA   Lhasa              37.10  83   P     P      19 09 07.2 +0.1
LSA                                 pmax   pmax
      comp=Z,11nm,0.9s
LSA   Lhasa              37.10  83   P     P      19 09 07.2 +0.1
LSA                                 IAmb   IAmb   19 09 09.6
      comp=Z,11nm,0.9s
SKAR  Skarslia           37.89 329  eP     P      19 09 13.7 +0.8
DOMB  Dombas             38.28 332  eP     P      19 09 16.1  0.0
NSS   Namsos             38.63 336  eP     P      19 09 19.3 +0.3
KEV   Kevo               38.83 349   P     P      19 09 20.9 +0.3
KEV                                 pmax   pmax
      comp=Z,36nm,1.3s
KEV   Kevo               38.83 349   P     P      19 09 20.9 +0.3
KEV                                 IAmb   IAmb   19 09 30.2
      comp=Z,36nm,1.3s
KRAR  Krasnoyarsk        38.83  39⇑eP     P      19 09 21.3 +0.5
ARA0  ARCESS Array S     38.89 348  eP     P      19 09 20.9  -0.3
ARCES ARCESS Array B     38.89 348   P     P      19 09 21.1  -0.1
      comp=Z,1.4nm,0.5s,baz=159,slow=8.5,SNR=24
ARCES                               PcP    PcP    19 11 31.8 +0.1
      comp=Z,1.1nm,0.6s,baz=164,slow=4.7,SNR=1.0
ARCES ARCESS Array B     38.89 348   P     P      19 09 21.6 +0.4
ARCES                               IAmb   IAmb   19 09 45.9
      comp=Z,15nm,1.3s
MOR8  Moi Rana           38.91 339  eP     P      19 09 20.9  -0.5
SHL   Shillong           39.03  89   P     P      19 09 22.0  -1.1
SHL                                 pmax   pmax
      comp=Z,35nm,1.4s
SHL   Shillong           39.03  89   P     P      19 09 22.0  -1.1
SHL                                 IAmb   IAmb   19 09 24.5
      comp=Z,35nm,1.4s
STOK  Stokkvaagen        39.44 339  eP     P      19 09 26.5 +0.7
FAUS  Fauske             39.50 341  eP     P      19 09 26.3  0.0
KONS  Konsvik            39.52 339  eP     P      19 09 26.7 +0.2
JETT  Jettan, Norway     39.90 345  eP     P      19 09 30.7 +1.0
STEI  Steigen            39.90 342  eP     P      19 09 29.1  -0.6
HAMF  Hammerfest         40.17 348  eP     P      19 09 32.0 +0.2
TRO   Tromso             40.28 345  eP     P      19 09 32.4  -0.3
LOF   Lofoten            40.50 341  eP     P      19 09 35.1 +0.5
ESBB  Sonseca Array      41.77 295   P     P      19 09 46.5 +1.0
ESBB                                IAmb   IAmb   19 10 12.6
      comp=Z,14nm,1.2s
ESDC  Sonseca Array      41.77 295   P     P      19 09 46.8 +1.3
      comp=Z,2.4nm,0.7s,baz=72,slow=8.1,SNR=13
ESDC  Sonseca Array      41.77 295   P     P      19 09 46.6 +1.1
PAB   San Pablo          42.08 295   P     P      19 09 47.7  -0.4
PAB                                 pmax   pmax
      comp=Z,41nm,1.5s
PAB   San Pablo          42.08 295   P     P      19 09 47.7  -0.4
GTA   Gaotai             42.16  66  eP     P      19 09 49.3 +0.5
GTA                                 pP     pP     19 09 53.3  -2.3
GTA                                 sP     sP     19 09 56.4  -1.9
GTA                                 pmax   pmax
      comp=Z,3.0nm,1.0s
GTA                                 pmax   pmax
      comp=Z,77nm,5.0s
GTA                                 LR     LR
      comp=N,140nm,14.9s
GTA                                 LR     LR
      comp=E,96nm,16.4s
GTA                                 LR     LR
      comp=Z,120nm,14.9s
NRIK  Noril'sk           42.88  20   P     P      19 09 54.2 +0.3
      comp=Z,3.4nm,0.5s,baz=296,slow=4.1,SNR=5.6
NRIK                                LR     LR     19 31 57.0
      comp=Z,84nm,18.4s,baz=226,slow=42
NRIK  Noril'sk           42.88  20c iP     P      19 09 54.5 +0.5
NRIK  Noril'sk           42.88  20   P     P      19 09 54.3 +0.3
DSB   Dublin             43.33 315   P     P      19 09 58.5 +0.6
PBRG  Braganca           43.62 298  eP     P      19 10 01.9 +1.4
MVO   Moncorvo           43.91 297  eP     P      19 10 04.9 +2.1
BJO1  Bjornoya           44.17 349  eP     P      19 10 04.5 +0.1
PBAR  Barrancos          44.37 293  eP     P      19 10 07.8 +1.3
PVRL  Vila Real          44.41 298  eP     P      19 10 08.2 +1.4
PCBR  Castelo Branco     44.43 295  eP     P      19 10 08.8 +1.9
      comp=Z,68nm,1.9s
POLO  Lamas de Olo       44.45 298  eP     P      19 10 08.6 +1.4
PESTR Estremoz           44.67 294   P     P      19 10 10.8 +1.9
PESTR                               IAmb   IAmb   19 10 21.3
      comp=Z,11nm,1.1s
PGAV  Gavieira, Arco     44.73 299  eP     P      19 10 11.3 +1.8
PBEJ  Beja               45.04 293  eP     P      19 10 13.2 +1.4
LZH   Lanzhou            45.90  70  eP     P      19 10 19.4 +0.5
LZH                                 pP     pP     19 10 22.6  -3.2
LZH                                 sP     sP     19 10 24.8  -3.5
LZH                                 pmax   pmax
      comp=Z,19nm,0.9s
SONM  Songino Array      46.15  53   P     P      19 10 21.1 +0.5
      comp=Z,1.3nm,0.5s,baz=283,slow=9.0,SNR=9.0
SONM                                LR     LR     19 31 03.6
      comp=Z,29nm,19.3s,baz=265,slow=38
SONM  Songino Array      46.15  53   P     P      19 10 21.6 +0.9
SONM                                pmax   pmax
      comp=Z,2.0nm,0.9s
SONM  Songino Array      46.15  53   P     P      19 10 21.6 +0.9
TORD  Torodi Ar. Bea     46.21 256   P     P      19 10 23.5 +2.1
      comp=Z,3.0nm,0.8s,baz=46,slow=7.4,SNR=17
TORD                                LR     LR     19 32 37.9
      comp=Z,68nm,18.7s,baz=300,slow=40
TORD  Torodi Ar. Bea     46.21 256   P     P      19 10 23.9 +2.6
ULN   Ulaanbaatar        46.59  53c iP     P      19 10 24.8 +0.6
ULN                                 pmax   pmax
      comp=Z,15nm,1.0s
ULN   Ulaanbaatar        46.59  53   P     P      19 10 24.7 +0.6
SPB2  Spitsbergen Ar     47.53 352   P     P      19 10 31.4 +0.6
SPA0  Spitsbergen Ar     47.53 352  eP     P      19 10 31.6 +0.7
SPITS Spitsbergen Ar     47.53 352   P     P      19 10 31.5 +0.7
SPITS                               pmax   pmax
      comp=Z,54nm,1.5s
CHTO  Chiang Mai         47.76  94   P     P      19 10 32.9  -0.6
CHTO                                pmax   pmax
      comp=Z,8.0nm,0.9s
CHTO  Chiang Mai         47.76  94   P     P      19 10 32.9  -0.6
CHTO                                IAmb   IAmb   19 10 34.3
      comp=Z,7.9nm,0.9s
CM31  Chiang Mai Arr     47.93  94   P     P      19 10 34.6  -0.1
CM31                                IAmb   IAmb   19 10 35.6
      comp=Z,5.3nm,0.8s
CMAR  Chiang Mai Arr     47.93  94   P     P      19 10 34.8 +0.1
      comp=Z,3.5nm,0.9s,baz=296,slow=8.4,SNR=23
CMAR                                LR     LR     19 34 06.6
      comp=Z,28nm,19.9s,baz=244,slow=40
CMAR  Chiang Mai Arr     47.93  94   P     P      19 10 34.4  -0.3
KOWA  Kowa               50.23 262   P     P      19 10 53.6 +1.2
KOWA                                IAmb   IAmb   19 10 59.7
      comp=Z,13nm,1.2s
XAN   Xi'an              50.45  71 ⇑P      P      19 10 53.5  -0.4
XAN                                 pP     sP     19 11 06.5 +3.0
XAN                                 sP     pP     19 11 11.6  +11
XAN                                 PcP    PcP    19 12 15.0 +3.0
XAN                                 pmax   pmax
      comp=Z,12nm,1.7s
XAN                                 AMB    AMB
      comp=Z,160nm,3.9s
HHC   Hu-ho-hao-te       50.78  62  eP     P      19 10 55.8  -0.6
HHC                                 pmax   pmax
      comp=Z,15nm,1.0s
HHC                                 pmax   pmax
      comp=Z,78nm,4.6s
SCO   Scoresbysund       52.73 337   P     P      19 11 11.4 +1.0
SCO                                 pmax   pmax
      comp=Z,5.0nm,1.2s
SCO   Scoresbysund       52.73 337   P     P      19 11 11.3 +1.0
HIA   Hailar             54.77  50   P     P      19 11 26.3 +0.6
HIA                                 pmax   pmax
      comp=Z,11nm,0.9s
HIA   Hailar             54.77  50   P     P      19 11 26.3 +0.6
HIA                                 IAmb   IAmb   19 11 27.3
      comp=Z,11nm,0.9s
UBPT  Khong Chiam        54.92  94   P     P      19 11 26.2  -0.9
UBPT                                IAmb   IAmb   19 11 26.7
      comp=Z,10.0nm,1.2s
KIC   Kosan Boka         55.25 253  ePKP1  P      19 11 34.9 +5.3
      comp=Z,12nm,1.0s
TIC   Toumodi            55.32 254  ePKP1  P      19 11 34.4 +4.4
LIC   Lamto              55.56 254  ePKP1  P      19 11 35.4 +3.6
      comp=Z,18nm,0.9s
KULM  Kulim              56.30 107   P     P      19 11 36.1  -1.0
IPM   Ipoh               57.08 108   P     P      19 11 41.6  -1.0
SUMG  Summit             57.97 339   P     P      19 11 48.8 +0.3
SUMG                                pmax   pmax
      comp=Z,8.0nm,1.2s
SUMG  Summit             57.97 339   P     P      19 11 48.8 +0.3
SUMG                                IAmb   IAmb   19 12 12.5
      comp=Z,7.6nm,1.2s
YAK   Yakutsk            57.99  33   P     P      19 11 47.8  -0.5
      comp=Z,2.1nm,0.5s,baz=1.8,slow=2.6
YAK   Yakutsk            57.99  33⇑eP     P      19 11 48.3  0.0
YAK                                 pmax   pmax
      comp=Z,5.0nm,0.7s
YAK   Yakutsk            57.99  33   P     P      19 11 47.6  -0.7
YAK                                 IAmb   IAmb   19 11 56.4
      comp=Z,6.4nm,0.8s
NJ2   Nanjing            58.98  70  eP     P      19 11 55.3  -0.4
NJ2                                 pmax   pmax
      comp=Z,7.0nm,0.6s
KLR   Kul'dur            62.38  47   P     P      19 12 18.5  -0.1
      comp=Z,3.2nm,0.6s,baz=281,slow=7.7,SNR=14
KS19  Wonju Array Si     63.85  61   P     P      19 12 28.4  -0.2
KSRS  Korea Array        63.91  61   P     P      19 12 28.4  -0.6
      comp=Z,2.9nm,0.7s,baz=287,slow=7.1,SNR=11
USRK  Ussuriysk Ar.      64.27  53   P     P      19 12 30.0  -1.2
      comp=Z,4.7nm,0.7s,baz=291,slow=5.8,SNR=10
USRK  Ussuriysk Ar.      64.27  53   P     P      19 12 30.3  -0.9
USRK  Ussuriysk Ar.      64.27  53   P     P      19 12 30.3  -0.9
TNG   Tangerang          68.00 113   P     P      19 12 59.0 +3.5
      comp=Z,798nm,0.4s
TNG                                  P     pP     19 13 00.6  -1.9
KKM   Kota Kinabalu      68.70  97   P     P      19 12 59.9  -0.3
BILL  Bilibino           69.69  21⇓eP     P      19 13 05.5 +0.2
BILL                                pmax   pmax
      comp=Z,10.0nm,1.7s
BILL                                MLR    MLR
      comp=Z,27nm,14.0s
BILL  Bilibino           69.69  21   P     P      19 13 05.3  0.0
BILL                                IAmb   IAmb   19 13 06.5
      comp=Z,5.2nm,0.9s
MPSI  Mapaga             74.89 100   P     P      19 13 38.1 +0.9
A36M  Sachs Harbour      75.44 358   P     P      19 13 39.1  -0.3
A36M                                IAmb   IAmb   19 13 40.7
      comp=Z,8.1nm,0.8s
TOLK  Toolik Lake Re     78.11   6   P     P      19 13 55.0 +0.4
TOLK                                IAmb   IAmb   19 13 56.8
      comp=Z,12nm,1.1s
INK   Inuvik             79.25   0   P     P      19 14 00.6  -0.2
      comp=Z,1.0nm,0.7s,baz=3.6,slow=5.8,SNR=6.3
INK   Inuvik             79.25   0   P     P      19 14 00.7  -0.2
BMAR  Burnt Mountain     79.71   5   P     P      19 14 03.9 +0.4
IMAR  Indian Mountai     80.21   9   P     P      19 14 06.2 +0.1
H21K  Melozitna Rive     80.64   8   P     P      19 14 09.1 +0.6
H24K  Noodor Dome        81.00   6   P     P      19 14 11.2 +0.7
H24K                                IAmb   IAmb   19 14 16.9
      comp=Z,8.7nm,1.5s
J20K  Nowinta River      81.88   9   P     P      19 14 15.6 +0.6
J20K                                IAmb   IAmb   19 14 21.7
      comp=Z,9.4nm,1.4s
ILAR  Eielson Array      82.14   6   P     P      19 14 16.1  -0.2
      comp=Z,0.9nm,0.8s,baz=323,slow=3.8,SNR=9.8
ILAR  Eielson Array      82.14   6   P     P      19 14 16.4  0.0
ILAR  Eielson Array      82.14   6   P     P      19 14 16.4  0.0
D62A  Allapoint, All     82.31 322   P     P      19 14 17.8 +0.2
DHY   Denali Highway     83.75   7   P     P      19 14 26.6 +1.6
BATI  Baumata            83.89 106   P     P      19 14 25.5  -0.8
      comp=Z,16nm,0.9s,baz=45,slow=1.4,SNR=3.6
BCAR  Beaver Creek A     84.22   4   P     P      19 14 27.7 +0.5
WRA   Warramunga Arr     97.82 109   P     P      19 15 30.9  -0.9
      comp=Z,0.4nm,0.6s,baz=317,slow=4.1,SNR=1.6
ASAR  Alice Springs      99.43 112   P     Pdif   19 15 37.9  -1.1
      comp=Z,0.4nm,0.8s,baz=299,slow=4.2,SNR=9.1
ASAR  Alice Springs      99.43 112   P     Pdif   19 15 38.0  -0.9
ASAR  Alice Springs      99.43 112   P     Pdif   19 15 38.0  -0.9
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*IDC **21** 19:08:55.5±1.2, 27°.93N×85°.10E, $h0^{km}$, mb3.5/6, mb1 3.7/7, mb1mx3.4/69, mbtmp3.5/7, ML3.8/1, MS3.5/2, Ms1 3.5/2, ms1mx2.6/36, Error ellipse: s-maj=42.4km s-min=21.9km az=68.0*

ISC 21 19:08:57.3±1.2**, 27°.9N**±0°.2×**85°.1E**±0°.3**, $h12^{km}$, n9,** σ1ˢ.**39**/7**, mb3.3**/6**, Nepal**

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Code  Station Name       Δ°   AZ°   Phase ID       Time       Res
                                    Op     ISC    h  m  s     ISC
MKAR  Makanchi Array     18.97 354   P     Pn     19 13 19.5 +0.4
      0.3nm,0.3s,baz=172,slow=11,SNR=16
KURBB Kurchatov Arra     23.21 349   P     P      19 14 05.9 +1.8
      0.5nm,0.5s,baz=163,slow=9.6,SNR=4.2
GEYT  Alibeck            24.69 301   LR    LR     19 25 07.7
      comp=Z,32nm,18.9s,baz=330,slow=39
SONM  Songino Array      25.87  34   P     P      19 14 28.2  -0.8
      0.3nm,0.5s,baz=224,slow=8.0,SNR=1.9
DAV   Davao City (W)     43.52 111   LR    LR     19 36 48.9
      comp=Z,218nm,20.1s,baz=18,slow=38
WRA   Warramunga Arr     67.31 129   P     P      19 19 52.6 +0.3
      0.9nm,0.6s,baz=324,slow=6.6,SNR=16
ASAR  Alice Springs      69.60 133   P     P      19 20 07.8 +1.2
      0.4nm,0.6s,baz=316,slow=5.9,SNR=7.3
TORD  Torodi Ar. Bea     78.23 279   P     P      19 20 56.8  -0.6
      0.2nm,0.8s,baz=66,slow=6.2,SNR=1.4
ILAR  Eielson Array      79.19  20   P     P      19 21 00.6  -1.3
      0.2nm,0.8s,baz=302,slow=5.0,SNR=4.6
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*IDC **21** 19:11:01.9±0.8, 36°.58N×21°.81E, $h0^{km}$, mb4.0/15, mb1 4.0/25, mb1mx3.8/64, mbtmp3.9/25, ML3.4/12, MS3.0/2, Ms1 3.0/2, ms1mx2.6/45, Error ellipse: s-maj=15.7km s-min=12.6km az=10.0*

*BEO **21** 19:11:01.8±5.5, 36°.00N×21°.58E, $h69^{km}\pm8^{km}$, ML4.3/9*

*ATH **21** 19:11:06.3, 36°.52N×21°.59E, $h39^{km}\pm3^{km}$, ML3.8/13, Error ellipse: s-maj=4.6km s-min=1.6km az=46.0*

*NEIC **21** 19:11:07.9±2.4, 36°.58N±0°.05×21°.63E±0°.07, $h42^{km}\pm5^{km}$, mb4.2/16, ML3.8(ATH), ML3.7(THE), Error ellipse: s-maj=8.5km s-min=6.3km az=50.0*

*THE **21** 19:11:07.8, 36°.49N×21°.69E, $h15^{km}\pm1^{km}$, ML3.7/6, Error ellipse: s-maj=2.1km s-min=0.7km az=54.0*

ISC 21 19:11:03.6±0.5**, 36°.53N**±0°.03×**21°.60E**±0°.03**, $h15^{km}$, n192,** σ1ˢ.**77**/213**, mb4.2**/19**, Southern Greece**

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Code  Station Name       Δ°   AZ°   Phase ID       Time       Res
                                    Op     ISC    h  m  s     ISC
PYL   PYLOS               0.39  18   P     Pn     19 11 15.8 +1.1
PYL                                  S     Sn     19 11 22.8 +1.0
      18µm,0.3s
PYL   PYLOS               0.39  18   P     Pn     19 11 15.7 +1.1
PYL                                  S     Sn     19 11 22.5 +0.6
PYL                                  AML   AML    19 11 22.8
      comp=N,31541µm,0.3s
PYL                                  AML   AML    19 11 23.1
      comp=E,41633µm,0.4s
PYL   PYLOS               0.39  18         Pn     19 11 15.8 +1.1
PYL                                        Sn     19 11 22.8 +1.0
ITM   Ithomi              0.70  22   P     Pn     19 11 20.7 +1.6
ITM                                  S     Sn     19 11 31.6 +1.9
      comp=E,8µm,0.4s
ITM   Ithomi              0.70  22   P     Pn     19 11 20.7 +1.6
ITM                                  S     Sn     19 11 30.4 +0.7
ITM                                  AML   AML    19 11 34.7
      comp=N,13254µm,0.4s
ITM                                  AML   AML    19 11 38.8
      comp=E,18044µm,0.4s
ITM   Ithomi              0.70  22         Pn     19 11 20.7 +1.6
ITM                                  Sn    Sn     19 11 31.6 +1.9
VLI   Veliai              1.10  80   P     Pg     19 11 27.2 +2.4
VLI                                  S     Sn     19 11 42.5 +3.2
      comp=E,3µm,0.7s
VLI   Veliai              1.10  80   P     Pg     19 11 27.1 +2.3
VLI                                  S     Sn     19 11 41.8 +2.5
VLI                                  AML   AML    19 11 45.3
      comp=E,5801µm,0.7s
VLI                                  AML   AML    19 11 50.2
      comp=N,5288µm,0.6s
VLI   Veliai              1.10  80         Pg     19 11 27.2 +2.4
VLI                                        Sn     19 11 42.5 +3.2
KTHR  Kythira             1.17 103   P     Pg     19 11 27.8 +1.7
KTHR                                 S     Sg     19 11 42.2 +0.8
      comp=N,2µm,0.4s
KTHR  Kythira             1.17 103         Pg     19 11 27.8 +1.7
KTHR                                       Sg     19 11 42.2 +0.8
MNVA  Monemvasia          1.17  82   P     Pg     19 11 28.0 +1.8
KTHA  Kythira Island      1.21 102   P     Pg     19 11 28.7 +1.7
KTHA                                 S     Sg     19 11 44.1 +1.2
      comp=N,3µm,0.9s
KTHA  Kythira Island      1.21 102   P     Pg     19 11 28.3 +1.3
KTHA                                 AML   AML    19 11 52.9
      comp=E,7087µm,1.2s
KTHA                                 AML   AML    19 11 54.3
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	comp=N,3911µm,0.6s						
KTHA	Kythira Island	1.21	102		Pg	19 11 28.7	+1.7
KTHA					Sg	19 11 44.1	+1.2
DRO	Drossia	1.43	4	P	Pg	19 11 32.4	+1.3
DRO	Drossia	1.43	4	P	Pg	19 11 32.4	+1.3
DRO				AML	AML	19 12 04.3	
	comp=E,6759µm,0.5s						
DRO				AML	AML	19 12 06.3	
	comp=N,9181µm,0.5s						
DRO	Drossia	1.43	4		Pg	19 11 32.4	+1.3
KRND	KRANIDI	1.51	55	P	Pg	19 11 32.4	-0.3
KRND	KRANIDI	1.51	55		Pg	19 11 32.4	-0.3
GUR	Goura	1.53	23	P	Pg	19 11 33.8	+0.8
GUR				S	Sg	19 11 54.2	+1.3
	comp=N,3µm,0.6s						
GUR	Goura	1.53	23	P	Pg	19 11 33.9	+0.8
GUR				AML	AML	19 12 06.2	
	comp=E,5154µm,0.5s						
GUR				AML	AML	19 12 14.1	
	comp=N,7305µm,0.6s						
GUR	Goura	1.53	23		Pg	19 11 33.8	+0.8
GUR					Sg	19 11 54.2	+1.3
ANKY	Antikythira Is	1.53	115	P	Pg	19 11 33.1	+0.1
ANKY	Antikythira Is	1.53	115	P	Pg	19 11 33.2	+0.1
ANKY				AML	AML	19 12 09.6	
	comp=E,2439µm,0.7s						
ANKY				AML	AML	19 12 18.2	
	comp=N,1828µm,0.8s						
ANKY	Antikythira Is	1.53	115		Pg	19 11 33.1	+0.1
RLS	Riolos of Patr	1.53	356	P	Pg	19 11 34.2	+1.1
RLS	Riolos of Patr	1.53	356	P	Pg	19 11 33.6	+0.5
RLS				AML	AML	19 12 07.6	
	comp=E,2046µm,0.8s						
RLS				AML	AML	19 12 13.6	
	comp=N,2833µm,0.7s						
KLV	Kalavryta, Ach	1.58	16	P	Pg	19 11 34.6	+0.7
KLV				S	Sg	19 11 56.3	+1.8
KLV	Kalavryta, Ach	1.58	16	P	Pg	19 11 34.7	+0.7
KLV				AML	AML	19 12 09.5	
	comp=E,2309µm,0.6s						
KLV				AML	AML	19 12 17.2	
	comp=N,1948µm,0.8s						
EPID	Epidavros	1.63	48	P	Pg	19 11 34.3	-0.7
THAL	Thalero	1.73	29	P	Pb	19 11 35.9	+0.8
THAL	Thalero	1.73	29	P	Pg	19 11 36.3	-0.6
THAL				AML	AML	19 12 19.1	
	comp=N,6528µm,0.9s						
THAL				AML	AML	19 12 22.6	
	comp=E,9249µm,0.5s						
LAKA	Lakka	1.74	10	P	Pg	19 11 37.4	+0.4
LAKA	Lakka	1.74	10	P	Pg	19 11 37.3	+0.3
LAKA				AML	AML	19 12 21.8	
	comp=E,7138µm,1.0s						
LAKA				AML	AML	19 12 28.6	
	comp=N,7519µm,0.7s						
LTK	Loutraki	1.85	36	P	Pb	19 11 37.0	-0.2
TRIZ	Trizonia	1.87	12	P	Pg	19 11 39.9	+0.3
TRIZ	Trizonia	1.87	12	P	Pg	19 11 39.7	+0.1
EFP	Efpalio	1.91	7	P	Pg	19 11 40.1	-0.2
SERG	Sergoula	1.92	11	P	Pg	19 11 40.4	-0.1
SERG	Sergoula	1.92	11	P	Pg	19 11 40.1	-0.3
SERG				AML	AML	19 12 20.8	
	comp=E,1630µm,0.9s						
SERG				AML	AML	19 12 26.3	
	comp=N,2156µm,0.8s						
ANX	Ano Chora	2.08	7	P	Pg	19 11 43.0	-0.5
ANX	Ano Chora	2.08	7	P	Pg	19 11 43.1	-0.4
ANX				AML	AML	19 12 26.1	
	comp=N,2951µm,0.5s						
ANX				AML	AML	19 12 27.1	
	comp=E,2193µm,0.6s						
VILL	Villia	2.13	39	P	Pb	19 11 40.8	-1.2
VLY	Voula,Athens	2.20	52	P	Pb	19 11 41.7	-1.4
ATH	Athens Observa	2.22	49	P	Pb	19 11 41.9	-1.6
ATHU	Athens Univers	2.26	50	P	Pn	19 11 42.3	+1.8
VAM	Vamos	2.39	117	P	Pb	19 11 44.4	-1.9
EVR	Evrytania	2.39	4	P	Pb	19 11 47.9	+1.5
AGG	Agios Georgios	2.56	13	P	Pb	19 11 48.3	-0.9
AGG	Agios Georgios	2.56	13	Pn	Pb	19 11 48.1	-1.1
IDI	Anoyia	2.95	114	Pn	Pn	19 11 50.3	+0.3
	comp=E,1.4nm,0.3s,baz=301,slow=14,SNR=17						
IDI				Sn	Sn	19 12 21.1	-4.0
	comp=E,11nm,0.3s,baz=285,slow=12,SNR=9.0						
THL	Klokotos Trika	3.05	6	P	Pb	19 11 54.9	-2.7
SANT	Santorini	3.12	92	Pn	Pn	19 11 53.4	+1.1
IGT	Igoumenitsa	3.16	342	P	Pn	19 11 55.9	+3.1
KPRO	Kipourio	3.43	357	P	Pb	19 12 01.4	-2.7
KZN	Kozani	3.78	2	P	Pn	19 12 05.2	+3.8
KBN	Korca	4.14	351		Pn	19 12 09.7	+3.4
FNA	Florina	4.25	358		Pn	19 12 10.6	+2.7
SCTE	Santa Cesarea	4.31	326	Pn	Pn	19 12 10.2	+1.6
TIP	Timpagrande	4.65	306		Pn	19 12 15.3	+1.9
VAY	Valandovo	4.85	9	ePn	Pn	19 12 18.7	+2.7
VAY				eSn	Sn	19 13 11.3	-0.5
VAY	Valandovo	4.85	9	ePn	Pn	19 12 18.7	+2.7
CEL	Celeste	4.86	293	Pn	Pn	19 12 18.5	+2.3
TIR	Tirane	5.00	345	ePn	Pn	19 12 21.6	+3.5
TIR				eSn	Sn	19 13 16.8	+1.2
TIR	Tirane	5.00	345	Pn	Pn	19 12 19.0	+1.0
STIP	Stip	5.18	5	ePn	Pn	19 12 24.4	+3.8
VAE	Valguarnera	5.83	282	Pn	Pn	19 12 34.1	+4.6
	comp=E,0.9nm,0.3s,baz=102,slow=9.3,SNR=1.9						
VAE				Sn	Sn	19 13 36.5	+0.4
	comp=E,6.4nm,0.3s,baz=337,slow=5.6,SNR=6.0						
RAFF	Raffo Rosso	5.84	279	Pn	Pn	19 12 31.7	+2.0
PRVS	Prvonek	5.99	3	ePn	Pn	19 12 33.6	+1.9
BOSS	Bosilegrad	6.00	6	ePn	Pn	19 12 34.8	+2.9
PDG	Podgorica	6.17	344	ePn	Pn	19 12 36.2	+2.1
PDG	Podgorica	6.17	344	ePn	Pn	19 12 34.8	+0.7
PDG	Podgorica	6.17	344	Pn	Pn	19 12 34.8	+0.7
VTS	Vitosha	6.21	11		Pn	19 12 36.7	+1.8
BARS	Barje	6.28	1	ePn	Pn	19 12 37.8	+2.1
TREB	Trebinje	6.67	339	ePn	Pn	19 12 41.4	+0.4
TREB	Trebinje	6.67	339	ePn	Pn	19 12 40.7	-0.3
DBRK	Dubrovnik	6.69	338	ePn	Pn	19 12 39.9	-1.3
ELL	Elmali	6.69	86	Pn	Pn	19 12 45.2	+3.8
SELS	Selova	6.69	357	ePn	Pn	19 12 42.3	+0.9
CORL	Corleone	6.76	284	Pn	Pn	19 12 46.4	+4.2
ZAPS	Zavoj	6.79	6	ePn	Pn	19 12 45.7	+3.0
SGRT	San Giovanni R	6.92	321	Pn	Pn	19 12 45.9	+1.3
STON	Ston	7.01	336	ePn	Pn	19 12 46.1	+0.4
STON	Ston	7.01	336	ePn	Pn	19 12 45.3	-0.4
STON	Ston	7.01	336	ePg	Pn	19 12 45.2	-0.4
PAOL	Paolisi	7.09	311	Pn	Pn	19 12 49.1	+2.1
BOVS	Bovan	7.10	1	ePn	Pn	19 12 48.0	+1.1
IVAS	Ivanjica	7.13	352	ePn	Pn	19 12 48.2	+0.8
RUDO	Rudo	7.29	347	ePn	Pn	19 12 46.5	-3.0
GRUS	Gruza	7.38	355	ePn	Pn	19 12 51.9	+1.1
BBLS	Lazići	7.52	348	ePn	Pn	19 12 54.2	+1.4
BBLS	Lazići	7.52	348	ePn	Pn	19 12 53.5	+0.8
DIVS	Divibare	7.66	351	ePn	Pn	19 12 55.4	+0.7
DIVS	Divibare	7.66	351	ePn	Pn	19 12 54.7	0.0
DIVS	Divibare	7.66	351		Pn	19 12 55.2	+0.5
RICI	Ricice	7.75	335	ePn	Pn	19 12 56.1	+0.2
HAPS	Han Pijesak,BI	7.82	346	ePn	Pn	19 12 57.9	+1.0
TEKS	Tekeris	8.17	350	ePn	Pn	19 13 00.2	-1.4
ZIRJ	Zirje	8.45	329	ePn	Pn	19 13 06.2	+0.7
KIJV	Kijevo	8.46	334	ePn	Pn	19 13 06.5	+1.0
MGRS	Mrkonjic Grad	8.60	338	ePn	Pn	19 13 08.9	+1.4
MORI	Morici	8.60	330	ePn	Pn	19 13 08.4	+0.9
FRGS	Fruska Gora	8.73	352	ePn	Pn	19 13 09.1	-0.2
FRGS	Fruska Gora	8.73	352	ePn	Pn	19 13 08.9	-0.4
BLY	Banja Luka	8.87	339	ePn	Pn	19 13 09.5	-1.7
DUGI	Dugi Otok	8.97	328	ePn	Pn	19 13 14.0	+1.4
NRCA	Norcia	9.07	317	Pn	Pn	19 13 17.3	+3.2
UDBI	Udbina	9.14	333	ePn	Pn	19 13 17.0	+2.0
NVLJ	Novalja	9.52	330	ePn	Pn	19 13 21.1	+1.1
MLR	Muntele Rosu	9.54	19	Pn	Pn	19 13 20.3	-0.2
	comp=E,0.1nm,0.3s,baz=180,slow=18,SNR=1.9						
MLR	Muntele Rosu	9.54	19		Pn	19 13 23.5	+3.1
MOSL	Moslavina	9.78	340	ePn	Pn	19 13 23.6	-0.2
MORH	Mrgy, Hungar	9.93	348	ePn	Pn	19 13 23.4	-2.3
KEST	Kesra	9.94	269	Pn	Pn	19 13 29.9	+3.9
	comp=E,0.1nm,0.3s,baz=65,slow=18,SNR=1.5						
KEST				Sn	Sn	19 15 14.9	-2.4
	comp=E,0.1nm,0.3s,baz=155,slow=2.0,SNR=2.3						
BRTR	Keskin Array B	10.01	68	Pn	Pn	19 13 25.6	-1.5
	comp=E,0.1nm,0.3s,baz=257,slow=13,SNR=1.7						
OZLJ	Ozalj	10.19	335	ePn	Pn	19 13 29.9	+0.7
BRJN	Brijuni	10.27	327	ePn	Pn	19 13 31.5	+1.2
RIY	Rijeka	10.30	331	ePn	Pn	19 13 32.0	+1.3
KALN	Kalnik	10.34	340	ePn	Pn	19 13 30.9	-0.5
CRES	Cresnjev	10.37	335	ePn	Pn	19 13 31.1	-0.7
CEY	Cerknica	10.67	332	ePn	Pn	19 13 36.7	+0.8
SOKA	Soboth	11.26	336	iPn	Pn	19 13 44.1	0.0
	comp=E,2.1nm,0.3s						
SOKA				iSn	Sn	19 15 40.6	-9.0
	comp=E,1.8nm,0.5s						
OBKA	Obir	11.28	334	iPn	Pn	19 13 47.3	+3.0
	comp=E,1.3nm,0.2s						
OBKA				eSn	Sn	19 15 45.6	-4.5
	comp=E,6.3nm,0.5s						
BUR08	Bucovina Ar. S	11.43	12	Pn	Pn	19 13 48.6	+2.3
PSZ	Piszkesteto	11.45	354	Pn	Pn	19 13 47.6	+0.9
STAL	STALIGIAL	11.78	328	Pn	Pn	19 13 51.4	+0.3
MMAI	Mount Meron Ar	11.88	103	Pn	Pn	19 13 49.9	-2.7
	comp=E,0.5nm,0.3s,baz=307,slow=11,SNR=7.5						
MMAI				Sn	Sn	19 15 54.3	-11
	comp=E,0.5nm,0.3s,baz=299,slow=24,SNR=2.0						
ZOU	Zoufplan	11.91	330	Pn	Pn	19 13 52.3	-0.7
CTI	Castel Tesino	12.09	325	Pn	Pn	19 13 55.5	+0.1
MOA	Molln	12.54	337	iPn	Pn	19 14 03.2	+1.7
	comp=E,1.3nm,0.2s						
EIL	Elat	13.11	118	Pn	Pn	19 14 06.5	-2.8
	comp=E,0.2nm,0.3s,baz=194,slow=3.6,SNR=7.3						
EIL				Sn	Sn	19 16 22.9	-12
	comp=E,0.2nm,0.3s,baz=110,slow=11,SNR=1.4						
VRAC	Vranov	13.29	346	Sn	Sn	19 16 26.6	-12
	comp=E,0.2nm,0.3s,baz=312,slow=20,SNR=1.9						
MOTA	Moosalm	13.32	327	ePn	Pn	19 14 15.7	+3.5
	comp=E,0.9nm,0.3s						
MOTA				eSn	Sn	19 16 34.7	-5.4
	comp=E,1.6nm,0.4s						
ASF	Jabal al Asfar	13.37	105	Pn	Pn	19 14 10.4	-2.4
	comp=E,0.2nm,0.3s,baz=195,slow=22,SNR=1.8						
CKRC	Cesky Krumlov	13.39	339	eP	P	19 14 32.2	+10
DAVOX	Davos/Dischmat	13.46	323	Pn	Pn	19 14 14.7	+0.5
	comp=E,0.1nm,0.3s,baz=201,slow=8.6,SNR=1.7						
DAVOX				Sn	Sn	19 16 34.6	-9.0
	comp=E,0.3nm,0.3s,baz=296,slow=17,SNR=2.4						
GERES	GERESS Array B	13.60	337	Pn	Pn	19 14 15.6	-0.3
	comp=E,0.2nm,0.3s,baz=160,slow=15,SNR=5.9						
GERES				Sn	Sn	19 16 39.8	-6.9
	comp=E,0.2nm,0.3s,baz=150,slow=24,SNR=4.6						
GERES				LR	LR	19 20 53.3	
	comp=E,83nm,21.6s,baz=124,slow=43						
GERES	GERESS Array B	13.60	337		Pn	19 14 17.3	+1.4
KHC	Kasperske Hory	13.89	338	eP	P	19 14 31.5	+3.4
KHC				ex	x	19 14 35.6	
KRLC	Kraliky	13.98	347	eP	P	19 14 31.5	+2.4
DPC	Dobruska-Polom	14.33	346	eP	P	19 14 34.9	+1.9
SENIN	Lac Senin/Sane	14.52	317	Pn	Pn	19 14 32.4	+3.7
CHVC	Chvalec	14.61	346	eP	Pn	19 14 29.8	+0.1
AKBB	Malin Array Si	15.19	19	Pn	Pn	19 14 36.2	-1.3
AKASG	Malin Array Be	15.20	19	Pn	Pn	19 14 36.3	-1.2
	comp=E,0.6nm,0.3s,baz=208,slow=12,SNR=5.3						
SUW	Suwalki	17.52	3	P	P	19 15 08.5	+0.3
SUW				IAmb	IAmb	19 15 09.6	
	comp=Z,20nm,0.8s						
KBZ	Khabaz	17.78	60	P	Pn	19 15 10.6	+0.1
	comp=Z,0.1nm,0.3s,baz=248,slow=9.3,SNR=2.2						
PABE	Paberze	19.05	4	eP	P	19 15 25.4	+0.4
PABE				IAmb	IAmb	19 16 00.8	
	comp=Z,16nm,1.0s						
PABE	Paberze	19.05	4	P	P	19 15 24.7	-0.4
PABE				IAmb	IAmb	19 15 26.1	
	comp=Z,23nm,1.0s						
PBUR	Paburge	19.50	1	eP	P	19 15 30.7	+0.7
PBUR				IAmb	IAmb	19 16 10.0	
	comp=Z,35nm,1.0s						
ESDC	Sonseca Array	20.34	287	P	Pn	19 15 41.0	-0.4
	comp=Z,0.4nm,0.9s,baz=74,slow=9.9,SNR=1.8						
SLIT	Slitere, Latvi	21.12	1	eP	P	19 15 48.0	+0.6
VSU	Vasula	22.21	7	eP	P	19 15 59.7	+0.5
MTSE	Matsula	22.25	3	eP	P	19 16 00.2	+0.6
AAL	Aland	23.69	358	eP	P	19 16 14.1	-0.4
HFS	Hagfors	24.16	350	P	P	19 16 19.0	0.0
	comp=Z,2.9nm,0.4s,baz=163,slow=11,SNR=27						
BELG	Belogornoye	24.24	41	P	P	19 16 19.0	-0.7
	comp=Z,30nm,0.6s,baz=0.1,slow=1.5,SNR=21						
FINES	FINESS Array B	25.10	5	P	P	19 16 27.5	+0.1
	comp=Z,3.6nm,0.6s,baz=164,slow=11,SNR=26						
FINES	FINESS Array B	25.10	5	P	P	19 16 26.9	-0.5
FIA1	FINESS Array S	25.10	5	P	P	19 16 27.1	-0.4
EKA	Eskdalemuir Ar	25.27	326	P	P	19 16 30.2	+1.2
	comp=Z,1.2nm,0.6s,baz=127,slow=9.1,SNR=7.5						
NB2	NORSAR Subarra	25.40	348	P	P	19 16 30.1	-0.2
	comp=Z,1.1nm,0.6s,baz=157,slow=11						
NOA	NORSAR Array B	25.40	348	P	P	19 16 31.3	+1.0
	comp=Z,1.7nm,0.9s,baz=157,slow=9.9,SNR=7.4						
NC303	NORSAR Array S	25.55	349	P	P	19 16 32.0	+0.5
KLMR	Klimovskoe	26.88	19	e	P	19 16 42.4	-1.2
KLMR				AMP		19 16 47.2	
	comp=Z,7.0nm,0.8s						
GEYT	Alibeck	29.00	76	P	P	19 17 01.9	-0.9
	comp=Z,1.9nm,0.5s,baz=283,slow=13,SNR=3.1						
TORD	Torodi Ar. Bea	29.34	223	P	P	19 17 07.7	+1.7
	comp=Z,0.4nm,0.7s,baz=46,slow=9.4,SNR=3.1						
ABKAR	Akbulak array	30.50	53	P	P	19 17 15.0	-1.0
ABKAR	Akbulak array	30.50	53	P	P	19 17 15.0	-1.0
KOWA	Kowa	31.69	233	P	P	19 17 28.6	+1.9
	comp=Z,0.6nm,0.3s,baz=29,slow=10,SNR=2.2						
ARU	Arti	31.76	39	P	P	19 17 25.9	-1.0
	comp=Z,1.0nm,0.5s,baz=293,slow=8.1,SNR=5.7						
ARU	Arti	31.76	39	P	P	19 17 25.6	-1.3
ARU				IAmb	IAmb	19 17 27.2	
	comp=Z,3.1nm,0.7s						
ARCES	ARCESS Array B	33.13	3	P	P	19 17 38.6	-0.2
	comp=Z,2.2nm,0.7s,baz=190,slow=9.7,SNR=7.8						
CHGR	Chuyangaron	37.42	72	P	P	19 18 15.2	-1.0
KKAR	Karatay Array	37.70	65	P	P	19 18 17.8	-0.6
AAK	Ala-Archa	40.67	65	P	P	19 18 42.7	-0.7
	comp=Z,1.8nm,0.6s,baz=264,slow=5.4,SNR=7.9						
AAK	Ala-Archa	40.67	65	P	P	19 18 42.7	-0.7
AAK				IAmb	IAmb	19 18 45.6	
	comp=Z,2.9nm,0.9s						
BOOM	Boomskoye usch	41.75	65	P	P	19 18 52.1	-0.2
BOOM				IAmb	IAmb	19 18 54.3	
	comp=Z,4.0nm,0.6s						
NIL	Nilore	41.95	78	P	P	19 18 54.1	+0.2
KURBB	Kurchatov Arra	42.54	52	P	P	19 18 57.4	-1.1
	comp=Z,1.0nm,0.6s,baz=276,slow=8.8,SNR=6.7						
KURK	Kurchatov	42.59	52	P	P	19 18 57.7	-1.2
MK31	Makanchi Array	45.45	57	P	P	19 19 20.7	-1.2
MK31				IAmb	IAmb	19 19 37.9	
	comp=Z,4.4nm,1.4s						
MKAR	Makanchi Array	45.45	57	P	P	19 19 21.0	-0.9
	comp=Z,0.9nm,0.4s,baz=268,slow=7.8,SNR=35						
MKAR	Makanchi Array	45.45	57	P	P	19 19 20.6	-1.4
ZAA0	Zalesovo Array	46.17	47	P	P	19 19 26.5	-1.0
ZAA0				IAmb	IAmb	19 19 35.2	
	comp=Z,3.5nm,1.2s						
ZALV	Zalesovo Beam	46.17	47	P	P	19 19 26.1	-1.3
	comp=Z,1.6nm,0.3s,baz=266,slow=8.9,SNR=8.9						
ZALV				LR	LR	19 40 17.1	
	comp=Z,16nm,18.5s,baz=42,slow=38						
CMAR	Chiang Mai Arr	69.27	82	P	P	19 22 09.7	-0.7
	comp=Z,0.7nm,0.6s,baz=303,slow=8.4,SNR=7.4						
IMAR	Indian Mountai	77.75	358	P	P	19 23 00.3	+0.7
KSRS	Korea Array	79.71	51	P	P	19 23 10.8	-0.1
	comp=Z,1.6nm,0.6s,baz=306,slow=4.9,SNR=8.1						
ASAR	Alice Springs	121.12	98	PKP	PKPdf	19 29 55.9	-0.2
	comp=Z,0.3nm,0.6s,baz=300,slow=1.8,SNR=4.7						

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*GUC **21** 19:22:21.2±0.6, 30°.31S×71°.63W, h65^{km}±39^{km}, ML4.0*
*NEIC **21** 19:22:22.4±2.4, 30°.33S±0°.03×71°.62W±0°.05, h30^{km}±7^{km}, mb3.8/2, ML4.0(GUC), Error ellipse: s-maj=6.6km s-min=4.5km az=104.0*
ISC 21 19:22:21.2±1.3**, 30°.28S**±0°.04×**71°.71W**±0°.07**, h28**^{km}±9^{km}**, n33, σ1^{s}41**/48**, 3C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.40	170		Pb	19 22 30.0	0.0
CO06					Sb	19 22 35.8	-0.1
CO05	La Serena	0.55	49	Pn	Pb	19 22 32.9	+0.5
CO05					Sb	19 22 40.6	+0.7
GO04	Tololo Observa	0.80	82	Pn	Pb	19 22 36.4	-0.3
GO04				Sn	Sn	19 22 47.0	-0.9
CO03	El Pedregal	1.04	122	Pn	Pn	19 22 39.5	-0.6
CO03				Sn	Sn	19 22 52.3	-1.5
LCO	Las Campanas	1.54	35	⇓iP	Pn	19 22 48.4	+1.3
LCO				iS	Sb	19 23 08.9	+0.4
LCO	Las Campanas	1.54	35		Pn	19 22 48.2	+1.1
AC04	Llanos de Chal	2.14	15	eP	Pn	19 22 56.2	+1.1
AC04	Llanos de Chal	2.14	15	Pn	Pn	19 22 56.1	+0.9
VA06	Catapilco	2.30	171	eP	Pn	19 22 57.4	+0.1
VA06				iS	Sn	19 23 25.3	+0.7
VA06				IAML		19 23 40.0	
	comp=N,1µm,0.5s						
VA03	San Esteban	2.67	158	⇑iP	Pn	19 23 03.9	+1.5
VA03				iS	Sn	19 23 35.2	+1.4
VA03				IAML		19 23 48.4	
	comp=E,710nm,0.5s						
VA03	San Esteban	2.67	158	Pn	Pn	19 23 04.2	+1.7
ROCH	El Roble	2.75	168	⇓iP	Pb	19 23 06.9	-2.9
ROCH				eP	Pn	19 23 04.6	+0.9
ROCH				eS	Sn	19 23 37.1	+1.1
ROCH				eS	Sn	19 23 37.2	+1.1
ROCH				IAML		19 23 47.9	
	comp=N,461nm,0.5s						
ROCH				IAML		19 23 50.0	
	comp=N,754nm,0.6s						
GO03	Copiap	2.98	26	⇑iP	Pn	19 23 09.0	+2.3
GO03				iS	Sb	19 23 48.2	-1.3
GO03				IAML		19 23 59.0	
	comp=E,219nm,0.6s						
PEL	Peldehue	2.98	163	Pn	Pn	19 23 07.8	+1.0
MT02	Curacav	3.01	171	eP	Pn	19 23 07.6	+0.5
MT02				iS	Sn	19 23 42.5	+0.2
MT02	Curacav	3.01	171	Pn	Pn	19 23 07.5	+0.4
MT05	Renca	3.21	165	Pn	Pn	19 23 12.5	+2.6
FCH	Farellones	3.27	159	eP	Pn	19 23 12.5	+1.5
FCH				iS	Sn	19 23 50.7	+1.6
FCH				IAML		19 24 04.3	
	comp=E,176nm,0.5s						
VA05	Santo Domingo	3.37	179	Pn	Pn	19 23 13.8	+1.9
VCA	Vinchina	3.42	64	eP	Pb	19 23 18.3	-2.9
VCA				eS	Sb	19 24 00.9	-1.6
VCA				IAML		19 24 03.1	
	comp=E,349nm,0.4s						
MT09	Talagante	3.54	170	⇑iP	Pn	19 23 15.2	+0.8
MT09				iS	Sn	19 23 56.4	+0.9
MT09				IAML		19 24 13.8	
	comp=N,205nm,0.4s						
MT09	Talagante	3.54	170	Pn	Pn	19 23 15.5	+1.0
MT01	Popeta	3.59	174	Pn	Pn	19 23 16.1	+1.0
AC02	Maricunga	4.12	34	Pn	Pn	19 23 24.8	+2.1
BO01	Tunca	4.13	173	Pn	Pn	19 23 24.0	+1.5
BO02	Sierra Bellavi	4.57	170	eP	Pn	19 23 30.4	+1.8
BO02	Sierra Bellavi	4.57	170	Pn	Pn	19 23 29.3	+0.8
GO05	Huala	4.72	182	Pn	Pn	19 23 28.0	-2.6
VA04	Juan Fernndez	6.91	239	Pn	Pn	19 23 59.6	-1.2
LC01	Cunco	8.60	181	Pn	Pn	19 24 23.0	-0.8
TRQA	Tornquist	11.18	137	Pn	Pn	19 24 59.9	+0.7
SNAA	Sanae	54.93	159	P	P	19 31 49.3	+0.1
SNAA				IAmb	IAmb	19 32 04.5	
	comp=Z,0.4nm,0.8s						
QSPA	South Pole Qui	59.94	180	P	P	19 32 25.4	+0.6
QSPA				IAmb	IAmb	19 32 36.3	
	comp=Z,1.5nm,1.1s						

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*IDC **21** 19:37:53.4±0.7, 31°.53S×71°.55W, h0^{km}, mb4.4/9, mb1 4.4/12, mb1mx4.2/29, mbtmp4.3/12, ML4.0/3, MS3.5/7, Ms1 3.4/7, ms1mx3.3/25, Error ellipse: s-maj=25.9km s-min=17.7km az=100.0*
*SJA **21** 19:37:56.0, 31°.58S×72°.02W, h10^{km}, ML4.4*
*GUC **21** 19:37:57.5±0.8, 31°.59S×71°.72W, h45^{km}±4^{km}, ML4.4*
*NEIC **21** 19:37:58, 31°.55S×71°.74W, h40^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$3.30; M$_{\theta\theta}$0.02; M$_{\phi\phi}$-3.32; M$_{r\theta}$0.32; M$_{\theta\phi}$0.03; M$_{\phi r}$-0.38; Fault plane solution: M$_0$3.35000×10^{15} NP1:φ$_s$174.07000°, δ48.57000°, λ82.85000°. NP2:φ$_s$4.81000°, δ41.93000°, λ98.03000°. Principal axes: T 3.3520, Plg84.0000°, Azm31.0000°; N -0.0105, Plg5.0000°, Azm179.0000°; P -3.3415, Plg3.0000°, Azm269.0000°;*
*NEIC **21** 19:37:58.4±1.8, 31°.55S±0°.03×71°.73W±0°.07, h30^{km}±3^{km}, mb4.6/26, Mwr4.3/24, ML4.3(GUC) Error ellipse: s-maj=8.8km s-min=4.1km az=86.0*
ISC 21 19:37:56.1±1.4**, 31°.58S**±0°.02×**71°.75W**±0°.05**, h19**^{km}±5^{km}**, n160, σ1^{s}21**/173**, mb4.6**/21**, MS3.3**/4**, 10C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.91	6	⇑iP	Pn	19 38 14.4	+0.6
CO06				iS	Sn	19 38 26.8	+0.4
CO06				IAML		19 38 29.5	
	comp=E,11µm,0.4s						
CO06	Fray Jorge	0.91	6		Pn	19 38 14.5	+0.6
CO06					Sn	19 38 26.8	+0.4
VA06	Catapilco	1.05	158	eP	Pn	19 38 16.1	+0.3
VA06				iS	Sb	19 38 29.6	+0.5
VA06				IAML		19 38 34.0	
	comp=N,19µm,0.4s						
CO03	El Pedregal	1.17	51		Pn	19 38 17.8	+0.2
CO03				Sn	Sb	19 38 32.4	-0.3
VA01	Torpederas	1.44	176	eP	Pb	19 38 22.1	-0.3
VA01	Torpederas	1.44	176	Pn	Pb	19 38 22.3	0.0
VA01	Torpederas	1.44	176	iP	Pb	19 38 22.0	-0.3
ROCH	El Roble	1.52	156	eP	Pn	19 38 23.3	+0.7
ROCH				eP	Pn	19 38 23.2	+0.7
ROCH				iS	Sb	19 38 42.8	-0.1
ROCH				iS	Sn	19 38 43.2	+1.2
ROCH				IAML		19 38 46.6	
	comp=N,12µm,0.4s						
ROCH				IAML		19 38 46.9	
	comp=N,10µm,0.4s						
ROC1	El Roble	1.52	156	iP	Pn	19 38 23.0	+0.4
VA03	San Esteban	1.56	139	⇓iP	Pb	19 38 24.1	-0.4
VA03				iS	Sb	19 38 43.8	0.0
VA03				IAML		19 38 48.9	
	comp=E,16µm,0.5s						
VA03	San Esteban	1.56	139		Pb	19 38 24.1	-0.4
VA03				Sn	Sb	19 38 43.9	0.0
VA03	San Esteban	1.56	139	iP	Pb	19 38 24.0	-0.4
GO04	Tololo Observa	1.62	31	⇑iP	Pb	19 38 25.2	-0.4
GO04				iS	Sb	19 38 45.7	-0.1
GO04	Tololo Observa	1.62	31		Pb	19 38 25.2	-0.4
GO04				Sn	Sb	19 38 45.6	-0.2
GO04	Tololo Observa	1.62	31	iP	Pn	19 38 25.0	+1.0
CO05	La Serena	1.71	15	eP	Pb	19 38 26.4	-0.6
CO05				IAML		19 38 53.6	
	comp=E,6µm,0.4s						
CO05	La Serena	1.71	15		Pb	19 38 26.1	-0.9
MT02	Curacav	1.75	163	⇑iP	Pn	19 38 26.4	+0.8
MT02				IAML		19 38 54.6	
	comp=E,3µm,0.4s						
MT02	Curacav	1.75	163	Pn	Pn	19 38 26.3	+0.8
MT02	Curacav	1.75	163	iP	Pn	19 38 26.0	+0.5
PEL	Peldehue	1.80	150	⇑iP	Pb	19 38 27.8	-0.7
PEL				iS	Sn	19 38 49.2	+0.6
PEL				IAML		19 38 56.6	
	comp=N,4µm,0.4s						
PEL	Peldehue	1.80	150		Pb	19 38 27.9	-0.7
PEL				Sn	Sb	19 38 50.6	-0.1
PEL	Peldehue	1.80	150	iP	Pb	19 38 28.0	-0.5
MT05	Renca	2.00	155	eP	Pn	19 38 30.5	+1.6
MT05				iS	Sn	19 38 54.8	+1.3
MT05				IAML		19 38 59.3	
	comp=E,6µm,0.4s						
MT05	Renca	2.00	155		Pn	19 38 30.6	+1.7
MT05				Sn	Sb	19 38 56.6	+0.2
MT05	Renca	2.00	155	iP	Pn	19 38 30.0	+1.1
VA05	Santo Domingo	2.07	177	eP	Pn	19 38 30.5	+0.6
VA05				IAML		19 39 07.9	
	comp=N,3µm,0.4s						
VA05	Santo Domingo	2.07	177		Pn	19 38 30.7	+0.8
RTLS	Leoncito	2.10	97	iP	Pb	19 38 33.0	-0.9
AUSP	Uspallata	2.11	108	iP	Pb	19 38 34.0	0.0
FCH	Farellones	2.14	145	⇑iP	Pn	19 38 32.7	+1.7
FCH				iS	Sb	19 38 59.5	-1.2
FCH				IAML		19 39 08.2	
	comp=E,3µm,0.4s						
MT09	Talagante	2.28	164	⇑iP	Pn	19 38 34.6	+1.7
MT09				IAML		19 39 12.8	
	comp=E,3µm,0.6s						
MT09	Talagante	2.28	164		Pn	19 38 34.6	+1.7
MT01	Popeta	2.32	170	⇑iP	Pn	19 38 34.4	+1.1
MT01				IAML		19 39 11.6	
	comp=E,2µm,0.5s						
MT01	Popeta	2.32	170		Pn	19 38 34.4	+1.1
MT01	Popeta	2.32	170	iP	Pn	19 38 35.0	+1.8
AROD	Rodeo	2.41	55	iP	Pb	19 38 39.0	-0.1
BO04	La Punta	2.59	158	⇑iP	Pn	19 38 38.6	+1.6

BO04				i S	Sn	19 39 09.6	+1.7
BO04				IAML		19 39 16.9	
	comp=E,2µm,0.4s						
LMEL	Las Melosas	2.61	150	⇑iP	Pn	19 38 39.6	+2.2
LMEL				IAML		19 39 17.2	
	comp=N,2µm,0.3s						
ZON	Zonda	2.62	90	Pn	Pb	19 38 41.3	-1.2
ZON	Zonda	2.62	90	i P	Pb	19 38 41.0	-1.6
ACDV	Cuesta del Vie	2.67	59	i P	Pb	19 38 43.0	-0.3
ASAL	Salagasta	2.67	113	i P	Pb	19 38 43.0	-0.4
LCO	Las Campanas	2.72	20	⇑iP	Pn	19 38 40.1	+1.0
LCO				i S	Sn	19 39 12.5	+1.0
LCO	Las Campanas	2.72	20	Pn	Pn	19 38 40.4	+1.4
LCO				Sn	Sn	19 39 12.8	+1.4
LCO	Las Campanas	2.72	20	i P	Pn	19 38 40.0	+1.0
RTCV	Cerro Valdivia	2.75	97	i P	Pb	19 38 43.0	-1.8
BO01	Tunca	2.86	169	eP	Pn	19 38 42.1	+1.4
BO01				eS	Sb	19 39 19.2	-2.0
BO01				IAML		19 39 27.9	
	comp=N,713nm,0.6s						
BO01	Tunca	2.86	169		Pn	19 38 42.1	+1.4
BO01	Tunca	2.86	169	i P	Pn	19 38 42.0	+1.3
AAGR	Agrelo	2.90	122	i P	Pb	19 38 46.0	-1.2
BO02	Sierra Bellavi	3.31	166	eP	Pn	19 38 49.1	+2.1
BO02				eS	Sb	19 39 33.9	-0.2
BO02				IAML		19 39 40.6	
	comp=N,2µm,0.7s						
BO02	Sierra Bellavi	3.31	166		Pn	19 38 48.8	+1.9
BO02	Sierra Bellavi	3.31	166	i P	Pn	19 38 49.0	+2.1
AC04	Llanos de Chal	3.42	10	Pn	Pn	19 38 49.3	+0.9
AC04	Llanos de Chal	3.42	10	i P	Pn	19 38 51.0	+2.6
GO05	Huala	3.42	182	Pn	Pn	19 38 48.9	+0.4
GO05	Huala	3.42	182	i P	Pn	19 38 49.0	+0.5
AVFE	Valle Fertil	3.80	77	i P	Pn	19 38 56.0	+2.3
VCA	Vinchina	4.18	48	eP	Pn	19 39 04.3	+5.3
VCA				eS	Sb	19 39 58.2	-1.1
VCA	Vinchina	4.18	48	i P	Pn	19 39 04.0	+5.0
ML02	Panimavida	4.18	176	Pn	Pn	19 38 59.6	+0.8
GO03	Copiap	4.19	19	eP	Pn	19 39 00.1	+1.0
GO03				eS	Sn	19 39 53.5	+6.1
GO03	Copiap	4.19	19	Pn	Pn	19 38 59.9	+0.9
GO03	Copiap	4.19	19	i P	Pn	19 39 00.0	+1.0
RFA	San Rafael	4.21	140	i P	Pn	19 39 02.0	+2.7
ACHE	Chepes	4.37	86	i P	Pn	19 39 06.0	+4.3
APLL	PUNTA DE LOS L	4.64	77	i P	Pn	19 39 08.0	+2.8
ACLC	CERRO LA CRUZ	4.67	64	i P	Pn	19 39 08.0	+2.3
AC02	Maricunga	5.25	27	eP	Pn	19 39 15.5	+1.4
AC02	Maricunga	5.25	27	Pn	Pn	19 39 15.3	+1.2
AC02	Maricunga	5.25	27	i P	Pn	19 39 15.0	+0.9
H03N1	Juan Fernandez	6.33	251	T	T	19 46 04.3	
	baz=79,slow=72						
H03N3	Juan Fernandez	6.34	251	T	T	19 46 03.8	
	baz=79,slow=72						
H03N2	Juan Fernandez	6.34	251	T	T	19 46 06.1	
	baz=79,slow=72						
PB14	IPOC Station P	7.03	10	Pn	Pn	19 39 38.5	+0.1
LC01	Cunco	7.30	181	Pn	Pn	19 39 42.2	+0.4
LC01	Cunco	7.30	181	i P	Pn	19 39 42.0	+0.3
AHML	Horco Molle	7.37	51	i P	Pn	19 39 44.0	+1.3
FSA	Cafayete	7.44	44	i P	Pn	19 39 46.0	+2.2
PB15	IPOC Station P	8.58	14	Pn	Pn	19 39 58.1	-1.4
PLCA	Paso Flores	9.19	174	Pn	Pn	19 40 08.8	+1.2
	comp=N,0.5nm,0.3s,baz=332,slow=12,SNR=16						
PLCA				LR	LR	19 43 41.9	
	comp=N,179nm,18.1s,baz=344,slow=38						
PLCA	Paso Flores	9.19	174		Pn	19 40 08.1	+0.5
LVC	Limon Verde	9.29	17	Pn	Pn	19 40 07.7	-1.6
	comp=N,0.5nm,0.3s,baz=23,slow=18,SNR=1.6						
LVC				LR	LR	19 43 40.2	
	comp=N,186nm,21.0s,baz=209,slow=38						
LVC	Limon Verde	9.29	17		Pn	19 40 08.5	-0.8
PB04	IPOC Station P	9.32	9	Pn	Pn	19 40 10.8	+1.2
LL04	Puerto Octay	9.32	183		Pn	19 40 09.4	-0.1
PB07	IPOC Station P	9.96	10	Pn	Pn	19 40 18.8	+0.5
PB09	IPOC Station P	10.00	14	Pn	Pn	19 40 19.0	+0.1
TRQA	Tornquist	10.30	131		Pn	19 40 23.4	+0.5
PB01	IPOC Station P	10.69	11	Pn	Pn	19 40 27.1	-1.2
ITQB	Itaqui	13.17	86		Pn	19 41 01.8	-0.3
PB16	IPOC Station P	13.34	9	Pn	Pn	19 41 07.8	+2.7
CPUP	Villa Florida	13.67	71	Pn	Pn	19 41 07.1	-1.8
	comp=N,0.3nm,0.3s,baz=201,slow=19,SNR=1.6						
CPUP				Sn	Sn	19 43 39.8	-0.4
	comp=N,0.6nm,0.3s,baz=83,slow=15,SNR=4.5						
CPUP				LR	LR	19 46 49.5	
	comp=N,196nm,19.5s,baz=222,slow=40						
CPUP	Villa Florida	13.67	71	Pn	Pn	19 41 08.0	-0.9
PLTB	Pedras Altas	15.46	95	Pn	Pn	19 41 30.0	-3.2
ITAB	Concordia	17.63	81		Pn	19 42 01.2	+0.4
PTLB	Pontes e Lacer	19.76	39	P	P	19 42 24.6	-0.4
NNA	Nana	20.06	345	LR	LR	19 48 27.5	
	comp=N,83nm,20.9s,baz=189,slow=32						
VILB	Vilhena	21.37	32	P	P	19 42 41.1	-1.4
ETMB	Extrema	22.26	15	P	P	19 42 52.5	+0.5
EFI	East Falkland	22.46	157	P	P	19 42 53.4	-0.5
EFI				IAmb	IAmb	19 42 55.8	
	comp=Z,14nm,0.8s						
USHA	Ushuaia	23.36	175	P	P	19 43 04.3	+1.1
	comp=Z,8.9nm,0.9s,baz=8.1,slow=7.1,SNR=2.4						
USHA				LR	LR	19 52 57.3	
	comp=Z,151nm,18.1s,baz=352,slow=39						
ATAH	Atahualpa	25.10	344	LR	LR	19 51 01.7	
	comp=Z,64nm,21.4s,baz=216,slow=31						
BDFB	Brasilia	26.83	59	P	P	19 43 34.2	-1.4
	comp=Z,6.6nm,0.8s,baz=208,slow=7.9,SNR=8.3						
BDFB				LR	LR	19 55 20.1	
	comp=Z,238nm,18.6s,baz=140,slow=39						
BDFB	Brasilia	26.83	59	P	P	19 43 34.7	-0.9
BDFB				IAmb	IAmb	19 43 36.5	
	comp=Z,15nm,1.1s						
PTGA	Pitinga	32.65	22	P	P	19 44 26.1	-0.9
PTGA				IAmb	IAmb	19 44 27.5	
	comp=Z,7.8nm,1.1s						
VNA3	Neumayer Olymp	51.51	159	P	P	19 47 00.5	+0.4
VNA1	Neumayer--Stat	51.81	158	P	P	19 47 02.7	+0.4
VNA2	Neumayer--Watz	52.15	158	P	P	19 47 05.3	+0.5
	baz=290,slow=7.1						
SNAA	Sanae	53.74	159	P	P	19 47 16.8	+0.2
SNAA	Sanae	53.74	159	P	P	19 47 17.1	+0.5
SNAA				IAmb	IAmb	19 47 17.9	
	comp=Z,12nm,1.3s						
QSPA	South Pole Qui	58.65	180	P	P	19 47 52.7	+0.8
	comp=Z,3.1nm,0.6s,baz=182,slow=1.0,SNR=27						
QSPA	South Pole Qui	58.65	180	P	P	19 47 52.9	+1.0
QSPA				IAmb	IAmb	19 47 53.3	
	comp=Z,4.1nm,0.8s						
X48A	Hartselle	67.24	346	P	P	19 48 49.4	+0.3
X48A				IAmb	IAmb	19 48 49.6	
	comp=Z,3.4nm,0.6s						
V58A	Windy Hill, Pi	67.38	354	P	P	19 48 50.1	+0.2
V53A	Saluda	67.70	350	P	P	19 48 51.4	-0.6
V53A				IAmb	IAmb	19 48 54.6	
	comp=Z,4.1nm,0.9s						
TXAR	Lajitas Array	67.75	330	P	P	19 48 54.0	+1.4
	comp=Z,0.4nm,0.5s,baz=158,slow=5.8,SNR=2.4						
TKL	Tuckaleechee C	67.83	349	P	P	19 48 53.0	+0.2
TKL				IAmb	IAmb	19 48 53.2	
	comp=Z,3.9nm,0.8s						
WVT	Waverly	69.02	346	P	P	19 49 00.4	+0.2
WVT				IAmb	IAmb	19 49 00.7	
	comp=Z,5.6nm,0.8s						
LCAR	Lake Charles	69.71	343	P	P	19 49 04.8	+0.3
LCAR				IAmb	IAmb	19 49 04.9	
	comp=Z,4.2nm,0.7s						
M55A	Ridgway	72.97	354	P	P	19 49 24.5	+0.4
N49A	Columbus Grove	73.05	350	P	P	19 49 24.7	+0.2
N49A				IAmb	IAmb	19 49 26.5	
	comp=Z,15nm,1.2s						
LIC	Lamto	73.79	72	eP	P	19 49 28.3	-1.3
	comp=Z,15nm,0.5s						
TIC	Toumodi	74.04	72	eP	P	19 49 30.1	-1.0
KIC	Kosan Boka	74.10	72	eP	P	19 49 30.0	-1.4
	comp=Z,18nm,0.6s						
DBIC	Dimbokro	74.19	72	P	P	19 49 31.4	-0.4
	comp=Z,8.8nm,0.6s,baz=229,slow=5.4,SNR=20						
DBIC	Dimbokro	74.19	72	P	P	19 49 31.5	-0.4
MAW	Mawson	75.43	164	P	P	19 49 38.5	+0.4
	comp=Z,2.5nm,0.5s,baz=210,slow=4.8,SNR=7.0						
MAW	Mawson	75.43	164	P	P	19 49 38.6	+0.4
SUR	Sutherland	75.79	119	P	P	19 49 41.7	+0.5
SADO	Sadowa	76.28	355	P	P	19 49 43.2	0.0
KOWA	Kowa	79.42	66	P	P	19 50 00.9	-0.5
KOWA				IAmb	IAmb	19 50 01.8	
	comp=Z,5.5nm,0.8s						
BOSA	Boshof	80.98	118	P	P	19 50 09.7	-0.2
	comp=Z,2.4nm,0.7s,baz=275,slow=7.8,SNR=3.7						
BOSA	Boshof	80.98	118	P	P	19 50 09.8	-0.2
BOSA				IAmb	IAmb	19 50 24.6	
	comp=Z,9.8nm,1.1s						
NVAR	Mina Array Bea	82.04	325	P	P	19 50 16.6	+1.4
	comp=Z,0.5nm,0.7s,baz=158,slow=6.1,SNR=5.0						
LBTB	Lobatse	83.10	115	P	P	19 50 20.3	-0.7
TORD	Torodi Ar. Bea	83.16	70	P	P	19 50 20.7	-0.6
	comp=Z,5.6nm,0.8s,baz=237,slow=16,SNR=3.7						
TORD	Torodi Ar. Bea	83.16	70	P	P	19 50 20.7	-0.6
TORD				IAmb	IAmb	19 50 21.6	
	comp=Z,5.1nm,0.9s						
WRA	Warramunga Arr	122.98	210	PKP	PKPdf	19 56 50.9	-0.9
	comp=Z,0.9nm,0.9s,baz=155,slow=1.8,SNR=1.3						
H11S2	WAKE ISLAND Hy	126.01	271	T	T	22 15 53.9	
	baz=116,slow=75						
H11S1	WAKE ISLAND Hy	126.03	271	T	T	22 15 51.5	
	baz=116,slow=75						
H11S3	WAKE ISLAND Hy	126.03	271	T	T	22 15 51.7	
	baz=116,slow=75						
H11N3	WAKE ISLAND Hy	126.37	272	T	T	22 16 16.8	
	baz=116,slow=75						
H11N1	WAKE ISLAND Hy	126.38	272	T	T	22 16 16.8	
	baz=116,slow=75						
H11N2	WAKE ISLAND Hy	126.38	272	T	T	22 16 19.5	
	baz=116,slow=75						
YAK	Yakutsk	146.53	342	PKPbc	PKPbc	19 57 35.2	-0.1
	comp=Z,9.3nm,0.6s,baz=208,slow=0.6,SNR=13						
YAK	Yakutsk	146.53	342		PKPbc	19 57 35.0	-0.3
CHGR	Chuyangaron	147.44	67	PKPbc	PKPbc	19 57 38.7	-0.1
TOLI2	Tolitoli	147.46	204	PKPbc	PKPbc	19 57 38.5	-0.9
KKAR	Karatay Array	148.12	58	PKPbc	PKPbc	19 57 39.6	-0.8
GAR	Garm	148.34	66	PKPbc	PKPbc	19 57 41.4	+0.1
KURK	Kurchatov	150.92	40	PKPbc	PKPbc	19 57 47.2	+0.2
AAK	Ala-Archa	151.09	58	PKPbc	PKiKP	19 57 48.6	+0.1
ZAA0	Zalesovo Array	152.04	30	PKPbc	PKPbc	19 57 49.4	-0.1
ZALV	Zalesovo Beam	152.04	30	PKPbc	PKPbc	19 57 49.5	0.0
	comp=Z,20nm,0.5s,baz=310,slow=3.1,SNR=88						
ZALV	Zalesovo Beam	152.04	30		PKPbc	19 57 49.5	0.0
ZALV				PKPab	PKPab	19 57 59.5	+0.5
MK31	Makanchi Array	154.94	45	PKPbc	PKPbc	19 57 55.9	-0.3
MKAR	Makanchi Array	154.94	45	PKPbc	PKPbc	19 57 55.5	-0.7
	comp=Z,0.9nm,0.7s,baz=311,slow=2.0,SNR=7.4						
MKAR				PKPab	PKPab	19 58 10.9	-0.7
	comp=Z,1.5nm,0.8s,baz=272,slow=3.8,SNR=3.6						
MKAR	Makanchi Array	154.94	45		PKPbc	19 57 55.8	-0.4

NEIC 21 19:42:31.1±0.4, 36°.754N±0°.010×98°.06W±0°.01, h3km±4km, mb_Lg2.5/7, Error ellipse: s-maj=1.5km s-min=1.3km az=125.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
OK032	Salt Plains WL	0.13	292	Pg	Pg	19 42 33.7	-0.1
OK032				Sg	Sg	19 42 35.9	+0.4
GC02	Grant County #	0.19	58	Pg	Pg	19 42 34.6	-0.1
GC02				Sg	Sg	19 42 37.5	+0.2
KAN14	Manchester OK	0.22	20	Pg	Pg	19 42 35.2	-0.2
KAN14				Sg	Sg	19 42 38.5	+0.2
CROK	Carrier	0.26	167	Pg	Pg	19 42 35.8	-0.3
CROK				Sg	Sg	19 42 39.6	+0.2
KAN10	Anthony SW Sta	0.37	355	Pg	Pg	19 42 38.0	-0.3
KAN10				Sg	Sg	19 42 43.4	+0.2
KAN17	Caldwell West	0.37	39	Pg	Pg	19 42 38.0	-0.4
KAN17				Sg	Sg	19 42 43.3	+0.1
KAN05	Bluff City Nor	0.38	23	Pg	Pg	19 42 38.1	-0.4
KAN05				Sg	Sg	19 42 43.7	+0.1
KAN01	Argonia South	0.47	31	Pg	Pg	19 42 39.7	-0.4
KAN16	Harper SW Stat	0.47	359	Pg	Pg	19 42 39.9	-0.3
KAN08	Anthony NE Sta	0.48	8	Pg	Pg	19 42 40.0	-0.3
KAN06	Argonia West S	0.52	18	Pg	Pg	19 42 40.8	-0.3
KAN09	Caldwell North	0.52	42	Pg	Pg	19 42 40.6	-0.5
KAN13	South Haven SW	0.53	61	Pg	Pg	19 42 40.8	-0.5
KAN12	Harper NE Stat	0.55	5	Pg	Pg	19 42 40.6	-1.0
BLOK	Blackwell	0.68	89	Pg	Pg	19 42 43.4	-0.8
U32A	Winter Ranch,	0.85	244	Pg	Pg	19 42 46.5	-0.9
OK029	Liberty Lake	1.07	153	Pg	Pg	19 42 50.6	-1.1
BCOK	Bluff Creek, N	1.15	162	Pg	Pg	19 42 51.8	-1.4
QUOK	Quay	1.23	118		Pg	19 42 53.5	-1.3
T35A	Sooner Cattle	1.25	82		Pg	19 42 53.7	-1.4
OK025	Westminster Rd	1.31	153	Pg	Pg	19 42 54.8	-1.4
OK030	Cody Creek RV	1.32	128	IAmb_Lg		19 43 12.8	
	comp=Z,15nm,0.7s						
FNO	Franklin	1.58	160		Pn	19 42 59.2	-1.0
R32A	Long Quarter,	1.75	343		Pn	19 43 02.1	-0.3
TUL1	Leonard	2.01	114	IAmb_Lg		19 43 34.5	
	comp=Z,10nm,0.8s						
WMOK	Wichita Mounta	2.10	197	Pn	Pn	19 43 07.3	+0.1
X34A	Smith Ranch, M	2.16	175	Pn	Pn	19 43 07.8	-0.2
U38A	Gravette	2.97	95	Pn	Pn	19 43 19.1	-0.1
HHAR	Hobbs	3.35	97	IAmb_Lg		19 44 25.9	
	comp=Z,7.4nm,1.3s						
U40A	Yellville	4.21	94	Pn	Pn	19 43 35.4	-0.8
RWWY	Rawlins	8.64	308	IAmb_Lg		19 47 02.5	
	comp=Z,18nm,0.7s						
RSSD	Black Hills	8.65	330	IAmb_Lg		19 47 01.8	
	comp=Z,24nm,1.0s						

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*IDC **21** 19:45:33.9±0.4, 18°.14S×173°.06W, h0km, mb4.7/27, mb1 4.9/28, mb1mx4.8/39, mbtmp4.7/28, ML4.2/1, MS4.7/33, Ms1 4.7/33, ms1mx4.7/44, Error ellipse: s-maj=17.8km s-min=12.6km az=136.0*

*NEIC **21** 19:45:35.4±2.1, 18°.12S±0°.05×172°.61W±0°.06, h10km±1km, mb5.3/137, Error ellipse: s-maj=10.3km s-min=8.1km az=310.0*

*MOS **21** 19:45:36.2±1.1, 18°.11S×172°.74W, h26km, mb5.3/14, MS4.9/6, Error ellipse: s-maj=10.8km s-min=9.2km az=73.8*

*NOU **21** 19:45:37.9, 17°.81S×172°.38W, h68km, mb5.1/39, Tonga Islands Region*

*GCMT **21** 19:45:40.4±0.1, 18°.09S±0°.01×172°.72W±0°.01, h14km, MW5.3/138, Moment Tensor Solution. s92,c159; s138,c255; Duration: 1^{s}2 Moment tensor: Scale 10^{17} Nm; M$_{rr}$1.12±.02; M$_{\theta\theta}$-0.06±.01; M$_{\phi\phi}$-1.05±.02; M$_{r\theta}$0.31±.03; M$_{\theta\phi}$-0.39±.01; M$_{\phi r}$0.57±.03; Best double couple: M$_0$1.32700×10^{17} NP1:φ$_s$194.00000°, δ31.00000°, λ81.00000°. NP2:φ$_s$24.00000°, δ60.00000°, λ95.00000°. Principal axes: T 1.2970, Plg75.0000°, Azm308.0000°; N 0.0660, Plg4.0000°, Azm201.0000°; P -1.3560, Plg15.0000°, Azm110.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 21 19:45:34.9±0.2, 18°.27S±0°.05×172°.70W±0°.04, h10km, n631, σ1^{s}64/603, mb5.2/134, MS4.9/54, 32C-27D, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
NIUE	Niue	2.75	107	P	Pn	19 46 18.0	-1.1
	baz=2.7,SNR=69						
NIUE	Niue	2.75	107	Pn	Pn	19 46 17.8	-1.3
NIUE				Sn	Sn	19 46 49.9	-2.6
NIUE	Niue	2.75	107	P	Pn	19 46 18.2	-0.9
AFI	Afiamalu	4.42	12	Pn	Pn	19 46 35.0	-7.2
	24nm,0.3s,baz=167,slow=16,SNR=11						
AFI				Sn	Sn	19 47 21.6	-12
	92nm,0.3s,baz=82,slow=21,SNR=6.7						
AFI				LR	LR	19 48 19.1	
	comp=Z,2µm,21.0s,baz=184,slow=38						
TAVE	Taveuni	7.04	282	P	Pn	19 47 21.1	+2.9
MSVF	Nonsavu	8.81	272	Pn	Pn	19 47 45.8	+3.3
	5.5nm,0.3s,baz=108,slow=13,SNR=38						
MSVF				LR	LR	19 50 36.8	
	comp=Z,28µm,18.0s,baz=107,slow=36						
MSVF	Nonsavu	8.81	272	c iP	Pn	19 47 45.6	+3.1
MSVF				pmax	pmax		
	comp=Z,145nm,0.7s						
MSVF	Nonsavu	8.81	272	Pn	Pn	19 47 44.7	+2.1
RAO	Raoul Island	11.93	203	LR	LR	19 52 35.6	
	comp=Z,2µm,18.2s,baz=9.0,slow=35						
GLKZ	Green Lake	11.94	203	P	Pn	19 48 26.3	+1.1
GLKZ				S	Sn	19 50 33.9	-4.6
FUNA	Funafuti	12.48	320	Pn	Pn	19 48 30.8	-1.9
RAR	Rarotonga	12.52	106	Pn	Pn	19 48 32.2	-1.0
	comp=Z,14nm,0.3s,baz=266,slow=7.6,SNR=27						
RAR				LR	LR	19 52 42.5	
	comp=Z,3µm,18.5s,baz=256,slow=33						
RAR	Rarotonga	12.52	106	P	Pn	19 48 31.9	-1.3
RAR	Rarotonga	12.52	106		Pn	19 48 31.9	-1.3
MARNC	Mare, Loyalty	18.40	257		Pn	19 49 48.6	-1.6
MARNC	Mare, Loyalty	18.40	257	P	P	19 49 52.6	+2.4
LIFNC	LIFOU	19.07	259		P	19 49 57.8	+0.2
LIFNC				IAmb	IAmb	19 50 00.6	
	comp=Z,130nm,1.0s						
PINNC	Pines Island,	19.09	254	P	P	19 49 57.7	-0.2
SANVU	Saraoutou	19.43	275		P	19 50 02.2	+0.6
SANVU				IAmb	IAmb	19 50 34.8	
	comp=Z,171nm,1.3s						
YATNC	Mamie plateau,	19.52	255	P	Pn	19 50 06.7	+2.9
OUENC	Ouen Island, N	19.62	254	P	P	19 50 04.3	+0.7
OUENC				IAmb	IAmb	19 50 28.2	
	comp=Z,190nm,1.5s						
OUENC	Ouen Island, N	19.62	254	P	Pn	19 50 06.1	+1.1
DZM	Mont Dzumac	19.93	256	P	P	19 50 05.9	-1.3
	comp=Z,0.7nm,0.3s,baz=72,slow=18,SNR=11						
DZM				LR	LR	19 56 29.9	
	comp=Z,4µm,19.1s,baz=81,slow=33						
DZM	Mont Dzumac	19.93	256	eP	P	19 50 07.3	+0.1
	comp=Z,233nm,1.6s						
DZM	Mont Dzumac	19.93	256		P	19 50 07.6	+0.4
DZM	Mont Dzumac	19.93	256	P	P	19 50 07.7	+0.5
ONTNC	Ouen Toro	19.95	255		P	19 50 07.9	+0.6
NOUC	Port Laguerre	20.07	256	P	P	19 50 08.9	+0.4
GRZ	Great Barrier	20.74	208	P	P	19 50 17.3	+1.6
OUZ	Omahuta	20.81	213	P	P	19 50 17.3	+0.8
OUZ	Omahuta	20.81	213	P	P	19 50 18.9	+2.4
WCZ	Waipu Caves	21.00	210	P	P	19 50 23.1	+4.5
KUZ	Kuaotunu	21.04	207	P	P	19 50 20.8	+1.8
HAZ	Te Kaha	21.13	201	P	P	19 50 23.1	+3.2
PKGZ	Pakihiroa	21.15	201	P	P	19 50 25.3	+5.1
PUZ	Puketiti	21.26	200	P	P	19 50 24.9	+3.6
WIAZ	Waiheke Island	21.34	208	P	P	19 50 24.4	+2.3
RUGZ	Raukumara Rang	21.35	201	P	P	19 50 25.8	+3.4
MBAZ	Motutapu North	21.42	208	P	P	19 50 27.1	+4.0
TWGZ	Tauwhareparae	21.44	200	P	P	19 50 27.8	+4.5
TWGZ				S	S	19 54 20.5	-0.8
ETAZ	East Tamaki Re	21.56	208	P	P	19 50 27.6	+3.0
EPAZ	Eden Park BICE	21.58	208	P	P	19 50 28.8	+4.1
WTAZ	Waiatarua	21.70	208	P	P	19 50 28.0	+1.9
URZ	Urewera	21.82	202	P	P	19 50 27.8	+0.6
	comp=Z,49nm,0.5s,baz=121,slow=24,SNR=71						
URZ				S	S	19 54 25.6	-2.9
	comp=Z,14nm,0.7s,baz=310,slow=22,SNR=2.8						
URZ	Urewera	21.82	202	P	P	19 50 27.3	+0.1
URZ				S	S	19 54 27.0	-1.5
URZ	Urewera	21.82	202	P	P	19 50 28.1	+0.8
URZ	Urewera	21.82	202	P	P	19 50 27.9	+0.6
PAE	Paea	22.00	92	eT	T	20 13 10.6	
	comp=Z,7.8nm,0.3s						
PPT2	Papeete2	22.01	92	eS	S	19 54 29.7	-3.1
	comp=Z,619nm,21.8s						
PPT2				eLQ	LQ	19 54 46.1	
	comp=Z,4µm,26.0s						
PPT2				eLR	LR	19 55 47.6	
	comp=Z,6µm,26.5s						
PPT2	Papeete2	22.01	92	eT	T	20 13 12.6	
	comp=Z,9.6nm,0.3s						
PPT	Papeete	22.02	92	LR	LR	19 57 22.1	
	comp=Z,1µm,18.4s,baz=256,slow=32						
TBI	Tubuai	22.30	107	eP	P	19 50 34.0	+1.4
	comp=Z,384nm,1.2s						
TBI				eS	S	19 54 35.1	-2.9
	comp=Z,818nm,27.6s						
TBI				eLQ	LQ	19 54 57.7	
	comp=Z,1µm,27.8s						
TBI				eLR	LR	19 55 47.8	
	comp=Z,7µm,30.0s						
TBI	Tubuai	22.30	107	eT	T	20 13 35.6	
	comp=Z,12nm,0.3s						
BKZ	Black Stump Fm	22.84	202	P	P	19 50 39.2	+0.9
BKZ				IAmb	IAmb	19 51 00.6	
	comp=Z,120nm,1.4s						
BKZ	Black Stump Fm	22.84	202	P	P	19 50 39.5	+1.2
HIZ	Hauiti	22.91	206	P	P	19 50 41.7	+2.8
PMOR	Pomariorio Ree	23.99	86	eP	P	19 50 49.8	0.0
	comp=Z,167nm,1.1s						
VAH	Vaihoa	24.20	87	eP	P	19 50 51.9	+0.1
	comp=Z,94nm,0.9s						
VAH	Vaihoa	24.20	87	eT	T	20 15 53.9	
	comp=Z,10nm,0.3s						
BFZ	Birch Farm	24.28	201	P	P	19 50 54.2	+1.9
BFZ				IAmb	IAmb	19 51 01.4	
	comp=Z,57nm,0.7s						
BFZ	Birch Farm	24.28	201	P	P	19 50 53.9	+1.5
XMAS	Kiritimati	25.16	38	P	P	19 50 57.8	-2.7
XMAS				IAmb	IAmb	19 51 03.1	
	comp=Z,62nm,0.8s						
SNZO	South Karori	25.38	203	P	P	19 51 03.7	+1.5
SNZO	South Karori	25.38	203	P	P	19 51 03.8	+1.5
QRZ	Quartz Range	25.82	206	P	P	19 51 09.5	+3.2
CMWZ	Cape Campbell	25.94	203	P	P	19 51 09.4	+2.0
KHZ	Kahutara	26.77	203	P	P	19 51 16.8	+2.0
HNR	Honiara	27.93	285	LR	LR	20 00 51.5	
	comp=Z,5µm,18.5s,baz=126,slow=33						
RPZ	Rata Peaks	28.83	205	P	P	19 51 34.5	+1.2
ODZ	Otahua Downs	30.10	204	P	P	19 51 45.7	+1.1
TAOE	Nuku Hiva Isla	32.95	78	eLR	LR	20 00 42.1	
	comp=Z,2µm,27.5s						
TAOE	Nuku Hiva Isla	32.95	78	eT	T	20 26 48.2	
	comp=Z,100nm,0.3s						
EIDS	Eidsvold	34.28	252	P	P	19 52 20.0	-1.5
	baz=34,SNR=4.1						
EIDS	Eidsvold	34.28	252	P	P	19 52 18.4	-3.1
ARMA	Armidale	34.53	243	P	P	19 52 20.9	-2.8
ARMA				IAmb	IAmb	19 53 22.7	
	comp=Z,65nm,1.7s						
ARMA	Armidale	34.53	243	P	P	19 52 25.9	+2.1
RMQ	Roma	36.45	250	P	P	19 52 37.4	-2.8
	baz=36,SNR=5.3						
RMQ	Roma	36.45	250	P	P	19 52 42.6	+2.4
	comp=Z,11nm,0.6s						
CNB	Canberra Magne	37.61	235	P	P	19 52 47.3	-2.7
	baz=38,SNR=9.3						
CAN	Canberra	37.89	236	P	P	19 52 51.4	-1.0
CAN				pmax	pmax		
	comp=Z,97nm,1.9s						
CAN	Canberra	37.89	236	P	P	19 52 51.4	-1.0
CAN				IAmb	IAmb	19 53 17.8	
	comp=Z,97nm,1.9s						
CTAO	Charters Tower	38.74	260	P	P	19 52 55.8	-3.9
CTAO				pmax	pmax		
	comp=Z,24nm,0.8s						
CTAO	Charters Tower	38.74	260	P	P	19 52 55.8	-3.9
CTAO	Charters Tower	38.74	260	P	P	19 52 56.8	-2.9
CMSA	Cobar Meteorol	39.75	242	P	P	19 53 05.6	-2.4
	baz=40,SNR=8.4						
PMG	Port Moresby	39.88	277	LR	LR	20 07 50.3	
	comp=Z,2µm,18.1s,baz=110,slow=34						
QLP	Quilpie	40.50	250	P	P	19 53 10.6	-3.7
	baz=40,SNR=10						
MTSU	Mount Surprise	40.76	263	P	P	19 53 12.8	-3.8
	baz=41,SNR=5.6						
TOO	Toolangi	41.24	233	P	P	19 53 19.2	-1.0
	baz=41,SNR=6.5						
TOO	Toolangi	41.24	233	P	P	19 53 18.8	-1.4
TOO				pmax	pmax		
	comp=Z,16nm,0.9s						
TOO	Toolangi	41.24	233	P	P	19 53 18.8	-1.4
TOO	Toolangi	41.24	233	P	P	19 53 21.4	+1.1
	comp=Z,17nm,1.0s						
TAU	Tasmania Unive	41.73	225	P	P	19 53 25.5	+1.4
TAU				pmax	pmax		
	comp=Z,191nm,1.9s						
TAU	Tasmania Unive	41.73	225	P	P	19 53 25.5	+1.4
TAU	Tasmania Unive	41.73	225	P	P	19 53 24.5	+0.4
MANU	Manus Island	42.33	288	P	P	19 53 27.3	-2.2
BRAT	Ballarat	42.43	234	P	P	19 53 31.6	+1.7
	comp=Z,18nm,0.8s						
COEN	Coen	42.53	269	P	P	19 53 28.5	-2.5
COEN	Coen	42.53	269	P	P	19 53 29.9	-1.1
	comp=Z,27nm,0.9s						
STKA	Stephens Creek	43.25	243	P	P	19 53 33.8	-2.9
	comp=Z,10nm,0.8s,baz=92,slow=11,SNR=13						
STKA				LR	LR	20 09 58.0	
	comp=Z,2µm,18.4s,baz=69,slow=34						
STKA	Stephens Creek	43.25	243	eP	P	19 53 35.3	-1.4
STKA	Stephens Creek	43.25	243	P	P	19 53 34.7	-2.1
ARPS	Mount Arapiles	43.87	236	P	P	19 53 42.2	+0.6
	comp=Z,22nm,0.9s						
QIS	Mount Isa	44.92	259	P	P	19 53 49.4	-0.9
	baz=45,SNR=5.5						
QIS	Mount Isa	44.92	259	P	P	19 53 50.6	+0.4
	comp=Z,9.3nm,2.3s						

HTT	Hallett	45.68	241	P	P	19 53 54.6	-1.5
	baz=46,SNR=6.3						
HTT	Hallett	45.68	241	P	P	19 53 56.9	+0.7
	comp=Z,23nm,1.2s						
BBOO	Buckleboo	48.01	242	P	P	19 54 11.7	-2.7
	baz=48,SNR=9.6						
BBOO	Buckleboo	48.01	242	P	P	19 54 11.8	-2.6
BBOO				IAmb	IAmb	19 54 24.7	
	comp=Z,27nm,0.8s						
BBOO	Buckleboo	48.01	242	P	P	19 54 12.1	-2.3
	comp=Z,42nm,0.9s						
OOD	Oodnadatta	48.14	249	P	P	19 54 13.4	-2.0
	comp=Z,44nm,0.9s						
JAY	Jayapura	48.24	283	LR	LR	20 12 55.7	
	comp=Z,2µm,21.1s,baz=79,slow=34						
MULG	Mulgathing	49.59	246	P	P	19 54 23.7	-2.8
WB2	Warramunga Arr	49.89	259	P	P	19 54 24.9	-4.0
WB2				IAmb	IAmb	19 54 41.2	
	comp=Z,33nm,1.2s						
WRAB	Tennant Creek	49.89	259	P	P	19 54 25.4	-3.6
WRA	Warramunga Arr	49.90	259	P	P	19 54 25.6	-3.5
	comp=Z,7.9nm,0.6s,baz=97,slow=6.8,SNR=44						
WRA				S	S	20 01 29.8	-10
	comp=Z,1.1nm,0.8s,baz=95,slow=14,SNR=4.9						
WRA				LR	LR	20 14 59.4	
	comp=Z,2µm,18.1s,baz=100,slow=36						
WRA	Warramunga Arr	49.90	259	P	P	19 54 24.7	-4.4
WRA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
WRA	Warramunga Arr	49.90	259	P	P	19 54 24.7	-4.3
AS31	Alice Springs	49.91	254	P	P	19 54 25.7	-3.4
ASAR	Alice Springs	49.92	254	P	P	19 54 25.7	-3.4
	comp=Z,31nm,0.7s,baz=86,slow=8.6,SNR=159						
ASAR				S	S	20 01 31.9	-7.9
	comp=Z,2.2nm,0.7s,baz=93,slow=15,SNR=21						
ASAR				LR	LR	20 13 55.5	
	comp=Z,693nm,20.2s,baz=92,slow=34						
GUMO	Guam	52.46	304	LR	LR	20 14 38.2	
	comp=Z,821nm,19.8s,baz=98,slow=34						
MTN	Manton Dam	54.21	267	P	P	19 54 56.6	-4.6
MTN				IAmb	IAmb	19 54 59.5	
	comp=Z,20nm,0.7s						
FORT	Forrest	54.76	245	P	P	19 55 02.2	-2.9
	baz=55,SNR=7.5						
FORT	Forrest	54.76	245	P	P	19 55 02.0	-3.0
FORT				IAmb	IAmb	19 55 20.0	
	comp=Z,32nm,0.8s						
FORT	Forrest	54.76	245	P	P	19 55 03.7	-1.3
WRKA	Warakurna	54.90	252	P	P	19 55 02.9	-3.3
	baz=55,SNR=12						
WRKA	Warakurna	54.90	252	P	P	19 55 02.7	-3.4
KNRA	Kununurra	55.84	263	P	P	19 55 09.3	-3.7
	baz=56,SNR=9.9						
KNRA	Kununurra	55.84	263	P	P	19 55 06.8	-6.2
KNRA				IAmb	IAmb	19 55 20.5	
	comp=Z,24nm,0.8s						
KNRA	Kununurra	55.84	263	P	P	19 55 10.6	-2.4
SWI	Sorong	57.62	281	P	P	19 55 24.3	-1.4
	comp=Z,44nm,0.9s						
FITZ	Fitzroy Crossi	58.31	260	LR	LR	20 19 21.7	
	comp=Z,1µm,19.2s,baz=104,slow=35						
VNDA	Vanda	60.61	186	P	P	19 55 47.4	+1.9
	comp=Z,6.9nm,0.9s,baz=7.5,slow=6.7,SNR=28						
VNDA				LR	LR	20 17 15.0	
	comp=Z,232nm,21.9s,baz=16,slow=31						
VNDA	Vanda	60.61	186	P	P	19 55 46.5	+1.1
VNDA				pmax	pmax		
	comp=Z,19nm,1.4s						
VNDA	Vanda	60.61	186		P	19 55 46.5	+1.1
LBMI	Labuha	61.22	280	P	P	19 55 52.8	+2.2
SOEI	Soe	61.49	269	P	P	19 55 51.0	-1.6
SOEI	Soe	61.49	269	P	P	19 55 52.3	-0.3
BATI	Baumata	61.95	268	LR	LR	20 22 25.0	
	comp=Z,515nm,18.0s,baz=132,slow=36						
PSA00	Pilbara Seismi	63.06	255	P	P	19 55 59.6	-3.3
PSA00				IAmb	IAmb	19 56 02.8	
	comp=Z,23nm,0.8s						
PSA00	Pilbara Seismi	63.06	255	P	P	19 56 00.0	-2.8
PSA00				IAmb	IAmb	19 56 02.8	
	comp=Z,14nm,0.9s						
MBWA	Marble Bar	63.24	255	P	P	19 56 02.4	-1.6
MEEK	Meekatharra	63.38	249	P	P	19 56 02.3	-2.6
	baz=63,SNR=4.2						
KLBR	Kellerberrin	63.52	243	P	P	19 56 04.6	-1.2
	baz=64,SNR=7.5						
MMRI	Maumere	63.72	269	P	P	19 56 04.3	-3.0
EDFI	Ende, Flores	64.21	269	P	P	19 56 09.9	-0.8
	comp=Z,241nmcomp=Z,10nm,0.8s						
BLDU	Ballidu	64.52	244	P	P	19 56 11.7	-0.7
	baz=64,SNR=8.0						
MUN	Mundaring	64.79	243	P	P	19 56 12.7	-1.4
	baz=65,SNR=4.9						
MORW	Morawa	65.30	246	P	P	19 56 17.1	-0.3
	baz=65,SNR=3.1						
MORW	Morawa	65.30	246	P	P	19 56 16.8	-0.7
MORW				IAmb	IAmb	19 56 30.5	
	comp=Z,24nm,1.2s						
DAV	Davao City (W)	65.87	287	LR	LR	20 19 39.4	
	comp=Z,224nm,20.9s,baz=136,slow=31						
APSI	Ampana	66.63	277	P	P	19 56 40.6	+14
BNSI	Bone	66.98	273	P	P	19 56 28.5	+0.1
	comp=Z,17nm,1.0s						
CASY	Casey	68.10	205	P	P	19 56 35.9	+1.3
TOLI2	Tolitoli	68.12	279	P	P	19 56 34.3	-1.4
TOLI2				IAmb	IAmb	19 56 57.7	
	comp=Z,15nm,0.8s						
MPSI	Mapaga	68.69	278	P	P	19 56 38.1	-1.1
	comp=Z,399nmcomp=Z,36nm,0.8s						
TWSI	Taliwang, Sumb	68.78	268	P	P	19 56 38.0	-1.8
	comp=Z,18nm,0.8s						
MJAR	Matsushiro Arr	71.55	320	P	P	19 56 54.6	-1.7
	comp=Z,7.7nm,0.9s,baz=158,slow=5.0,SNR=13						
MJAR				LR	LR	20 22 37.4	
	comp=Z,688nm,21.6s,baz=115,slow=31						
MJAR	Matsushiro Arr	71.55	320	P	P	19 56 55.6	-0.7
MJAR				pmax	pmax		
	comp=Z,12nm,1.3s						
MJAR	Matsushiro Arr	71.55	320	P	P	19 56 55.6	-0.7
MAJO	Matsushiro	71.55	320	P	P	19 56 55.1	-1.2
MAJO				pmax	pmax		
	comp=Z,24nm,1.3s						
MAJO	Matsushiro	71.55	320	P	P	19 56 55.1	-1.2
MAJO				IAmb	IAmb	19 56 55.9	
	comp=Z,24nm,1.2s						
MAT	Matsushiro	71.55	320	P	P	19 56 54.7	-1.6
MAT				S	S	20 06 19.0	+3.5
QSPA	South Pole Qui	71.79	180	P	P	19 56 59.3	+1.8
QSPA				IAmb	IAmb	19 57 24.4	
	comp=Z,28nm,1.1s						
JWT	Wachi	72.51	318	P	P	19 57 00.8	-1.2
JMN	Monobe	72.56	315	P	P	19 57 01.3	-1.1
SPMM	Sapulut	73.41	281	P	P	19 57 07.0	-0.9
MWC	Mount Wilson	73.67	45	P	P	19 57 08.1	-1.1
MWC				pmax	pmax		
	comp=Z,17nm,1.0s						
MWC	Mount Wilson	73.67	45	P	P	19 57 08.1	-1.1
BAR	Barrett	73.72	47	P	P	19 57 08.9	-0.5
JHS	Saijyo	73.82	316	P	P	19 57 09.2	-0.7
JHS				IAmb	IAmb	19 57 10.4	
	comp=Z,38nm,1.1s						
MURC	Murrieta	73.89	46	P	P	19 57 11.6	+1.3
	baz=234						
BFSC	Mount Baldy Ra	73.95	45	P	P	19 57 11.7	+0.9
	baz=234						
VES	Vestal, Richgr	73.96	43	P	P	19 57 11.7	+1.1
	baz=233						
MONP2	Monument Peak	74.01	47	P	P	19 57 12.4	+1.1
	baz=235,SNR=9.2						
IKP	In-Ko-Pah, Jac	74.09	47	P	P	19 57 12.7	+1.1
	baz=235,SNR=6.5						
EDW2	Edwards Air Fo	74.10	44	P	P	19 57 12.4	+0.8
	baz=234,SNR=8.9						
KKM	Kota Kinabalu	74.11	282	P	P	19 57 11.6	-0.5
KKM				IAmb	IAmb	19 58 50.4	
	comp=Z,50nm,1.3s						
ISA	Isabella, Lake	74.25	43	P	P	19 57 13.7	+1.3
	baz=233,SNR=7.3						
JKA	Kamikawa-asahi	74.31	328	P	P	19 57 12.9	+0.5
ASAJ	Asahikawa	74.31	328	P	P	19 57 12.2	-0.3
	comp=Z,9.1nm,0.8s,baz=161,slow=5.6,SNR=4.3						
ASAJ	Asahikawa	74.31	328	P	P	19 57 12.9	+0.4
ASAJ				pmax	pmax		
	comp=Z,124nm,1.8s						
PFO	Pinyon Flats O	74.40	46	P	P	19 57 14.6	+1.2
	comp=Z,10nm,1.1s,baz=241,slow=2.5,SNR=8.3						
PFO				LR	LR	20 22 09.1	
	comp=Z,200nm,19.9s,baz=246,slow=29						
PFO	Pinyon Flats O	74.40	46	P	P	19 57 12.0	-1.4
PFO				pmax	pmax		
	comp=Z,16nm,1.2s						
PFO	Pinyon Flats O	74.40	46	P	P	19 57 14.9	+1.5
	baz=235,SNR=7.8						
PFO	Pinyon Flats O	74.40	46	P	P	19 57 12.0	-1.4
TPFO	Pinon Flats	74.40	46	P	P	19 57 14.7	+1.3
	baz=235,SNR=8.3						
O02D	Mt. Diablo Mer	74.42	37	P	P	19 57 15.2	+1.9
	baz=229,SNR=12						
SWSC	Sam W. Stewart	74.47	47	P	P	19 57 15.2	+1.6
	baz=236						
CMB	Columbia Colle	74.48	40	P	P	19 57 13.0	-0.7
CMB				pmax	pmax		
	comp=Z,11nm,1.0s						
CMB	Columbia Colle	74.48	40	P	P	19 57 13.0	-0.7
LRMC	Laurel Mtn Rad	74.66	44	P	P	19 57 16.4	+1.6
	baz=234						
KRMB	Red Mountain	74.68	36	P	P	19 57 15.2	+0.4
KRMB				IAmb	IAmb	19 57 35.5	
	comp=Z,38nm,1.5s						
ORV	Oroville	74.77	39	P	P	19 57 14.5	-0.8
ORV				pmax	pmax		
	comp=Z,17nm,1.3s						
ORV	Oroville	74.77	39	P	P	19 57 14.5	-0.8
BELC	Belle Mtn. Jos	74.93	46	P	P	19 57 17.9	+1.4
	baz=235,SNR=8.7						
CWC	Cottonwood Cre	74.97	43	P	P	19 57 18.0	+1.3
	baz=233						
N02D	Trinity Center	74.99	37	P	P	19 57 18.4	+1.8
	baz=229,SNR=10.0						
UGM	Wanagama	75.05	266	P	P	19 57 17.2	-0.3
O03E	Paynes Creek	75.07	38	P	P	19 57 18.1	+1.1
	baz=230,SNR=9.5						
BC3	Big Chuckawall	75.11	47	P	P	19 57 19.1	+1.6
	baz=236,SNR=7.3						
MPMC	Manual Prospec	75.13	44	P	P	19 57 18.7	+1.0
	baz=234,SNR=18						
GSC	Goldstone, Bar	75.14	44	P	P	19 57 18.5	+1.0
	baz=234,SNR=9.7						
HEC	Hector,Ludlow	75.18	45	P	P	19 57 18.7	+0.9
	baz=235,SNR=16						
M02C	Callahan	75.18	37	P	P	19 57 19.3	+1.6
	baz=229,SNR=9.9						
GLA	Glamis	75.21	47	P	P	19 57 20.4	+2.3
	baz=236						
TIN	Tinemaha, Big	75.24	42	P	P	19 57 20.0	+1.8
	baz=233						
L02E	Cave Junction	75.27	36	P	P	19 57 19.5	+1.3
	baz=228,SNR=6.6						
YBH	Yreka Blue Hor	75.48	36	P	P	19 57 20.9	+1.4
	comp=Z,15nm,1.0s,baz=182,slow=5.4,SNR=26						
YBH	Yreka Blue Hor	75.48	36	P	P	19 57 19.7	+0.3
YBH				pmax	pmax		
	comp=Z,26nm,1.2s						
YBH	Yreka Blue Hor	75.48	36	P	P	19 57 19.7	+0.3
YBH				IAmb	IAmb	19 57 22.3	
	comp=Z,26nm,1.2s						
PEA0B	Petropavlovsk-	75.55	342	⇑*i*P	P	19 57 19.3	-0.1
PEA0B	Petropavlovsk-	75.55	342	P	P	19 57 18.4	-1.0
PETK	Petropavlovsk-	75.55	342	P	P	19 57 19.3	-0.1
	comp=Z,7.7nm,1.1s,baz=102,slow=10,SNR=7.6						
PETK				LR	LR	20 27 43.9	
	comp=Z,372nm,19.4s,baz=164,slow=34						
PETK	Petropavlovsk-	75.55	342	P	P	19 57 17.5	-1.9
PETK	Petropavlovsk-	75.55	342	P	P	19 57 17.5	-1.9
K02D	Willamette Mer	75.60	35	P	P	19 57 21.3	+1.3
	baz=228,SNR=5.4						
IRM	Iron Mountain	75.61	46	P	P	19 57 21.6	+1.3
	baz=236,SNR=10						
GMRC	Granite Mounta	75.61	45	P	P	19 57 21.4	+1.0
	baz=235,SNR=6.7						
LCH	Last Change Ra	75.72	42	P	P	19 57 19.8	-1.1
FURC	Furnace Creek,	75.78	43	P	P	19 57 22.6	+1.5
	baz=234						
113A	Mohawk Valley,	75.80	48	P	P	19 57 21.2	-0.1
113A				IAmb	IAmb	19 57 32.0	
	comp=Z,68nm,1.9s						
M04C	Macdoel	76.01	37	P	P	19 57 23.7	+1.2
	baz=229,SNR=12						
NVAR	Mina Array Bea	76.02	41	P	P	19 57 23.9	+1.1
	comp=Z,15nm,1.1s,baz=226,slow=8.7,SNR=49						
NVAR				LR	LR	20 26 09.7	
	comp=Z,366nm,18.2s,baz=245,slow=32						
NVAR	Mina Array Bea	76.02	41	P	P	19 57 22.7	0.0
L04D	Klamath Falls	76.03	36	P	P	19 57 23.7	+1.1
	baz=229,SNR=12						
214A	Organ Pipe Nat	76.05	49	P	P	19 57 24.3	+1.5
	baz=238						
NV11	Mina Array Sit	76.11	41	P	P	19 57 22.8	-0.4
NV11				IAmb	IAmb	19 57 25.8	
	comp=Z,31nm,1.2s						
YSS	Yuzh-Sakhalins	76.29	330	*de*P	P	19 57 23.6	-0.2
YSS				pmax	pmax		
	comp=Z,51nm,1.1s						
PDMCI	Parker Dam,Lak	76.38	47	P	P	19 57 25.9	+1.4
	baz=236						
TPH	Tonopah	76.49	42	P	P	19 57 24.6	-0.8
TPH				pmax	pmax		
	comp=Z,164nm,1.3s						
TPH	Tonopah	76.49	42	P	P	19 57 24.6	-0.8
YULB	Yu-li	76.58	300	P	P	19 57 24.5	-1.5
YULB				IAmb	IAmb	19 58 08.8	
	comp=Z,52nm,1.5s						
K04D	Chiloquin, OR	76.61	36	P	P	19 57 27.4	+1.5
	baz=229						
SBUM	Sibu	76.63	277	P	P	19 57 26.0	-0.5
SBUM	Sibu	76.63	277	P	P	19 57 26.0	-0.5
SBUM				IAmb	IAmb	19 57 26.2	
	comp=Z,40nm,1.9s						
NACB	Ninganchiao	76.69	301	P	P	19 57 24.8	-1.8
J04D	Umpqua Nationa	76.81	35	P	P	19 57 28.7	+1.6
	baz=229,SNR=6.8						
W13A	Hualapai Mount	76.99	46	P	P	19 57 27.6	-0.7
I04A	Tendick Farm,	77.01	35	P	P	19 57 28.5	+0.4
	baz=228,SNR=5.1						
SSLB	Suanglung	77.04	301	P	P	19 57 27.3	-1.3
SSLB				IAmb	IAmb	19 57 46.6	
	comp=Z,25nm,1.0s						
TPUB	Ta-pu	77.08	300	P	P	19 57 26.5	-2.4
TATO	Taipei	77.14	302	P	P	19 57 28.0	-1.1
H04D	Lebanon	77.32	34	P	P	19 57 31.3	+1.6
	baz=228,SNR=5.4						
J05D	Fort Rock, OR	77.33	36	P	P	19 57 30.8	+0.9
	baz=230,SNR=26						
G03D	McMinnville, O	77.50	33	P	P	19 57 32.1	+1.5
	baz=228,SNR=5.6						
R11A	Troy Canyon, C	77.69	43	P	P	19 57 33.1	+0.9
	baz=235,SNR=13						
R11A	Troy Canyon, C	77.69	43	P	P	19 57 31.7	-0.5
TUC	Tucson	77.70	50	P	P	19 57 32.1	-0.1
TUC				pmax	pmax		
	comp=Z,16nm,1.0s						
TUC	Tucson	77.70	50	P	P	19 57 33.9	+1.7
	baz=239						
TUC	Tucson	77.70	50	P	P	19 57 32.1	-0.1
TUC				IAmb	IAmb	19 57 35.4	
	comp=Z,16nm,1.0s						
PINE	Pine Mountain	77.82	36	P	P	19 57 31.4	-1.3
I05D	Terrebonne, OR	77.95	35	P	P	19 57 33.8	+0.5
	baz=229,SNR=8.1						
KSM	Kuching	78.12	276	P	P	19 57 35.0	+0.2
KSM	Kuching	78.12	276	P	P	19 57 34.0	-0.9
LEM	Lembang	78.12	267	LR	LR	20 32 36.2	
	comp=Z,387nm,19.1s,baz=110,slow=36						
E03A	Lebam	78.25	32	P	P	19 57 34.8	+0.1
E03A				IAmb	IAmb	19 57 54.7	
	comp=Z,34nm,1.1s						
HOOD	Mount Hood Mea	78.43	34	P	P	19 57 35.5	-0.5
HOOD				IAmb	IAmb	19 57 55.8	
	comp=Z,32nm,1.2s						
LCMT	Little Creek M	78.48	45	P	P	19 57 36.6	+0.1
G05D	Wamic, OR	78.55	34	P	P	19 57 37.6	+1.1
	baz=229						
KSRS	Korea Array	78.66	316	P	P	19 57 37.9	+0.6
	comp=Z,13nm,1.0s,baz=127,slow=6.4,SNR=25						
KSRS				LR	LR	20 29 17.7	
	comp=Z,372nm,19.2s,baz=122,slow=34						
KSAR	Wonju Array Be	78.68	316	P	P	19 57 36.6	-0.8
KSAR	Wonju Array Be	78.68	316	P	P	19 57 36.6	-0.8
E04D	Cinebar	78.77	33	P	P	19 57 38.8	+1.1
	baz=228						
J08A	Circle Bar Ran	78.93	37	P	P	19 57 38.1	-0.7
J08A				IAmb	IAmb	19 57 41.2	
	comp=Z,30nm,1.2s						
WUAZ	Wupatki	78.95	47	P	P	19 57 40.7	+1.6
	baz=238						
HPIG		79.01	57	P	P	19 57 38.5	-1.3
D03D	Eldon	79.16	32	P	P	19 57 40.4	+0.6
	baz=227						
ELK	Elko	79.30	41	P	P	19 57 42.1	+1.1
	comp=Z,7.4nm,1.0s,baz=226,slow=4.2,SNR=18						
ELK	Elko	79.30	41	P	P	19 57 40.1	-0.9
ELK				pmax	pmax		
	comp=Z,21nm,1.4s						
ELK	Elko	79.30	41	P	P	19 57 40.1	-0.9
VLA	Vladivostok	79.47	322	⇑*e*P	P	19 57 42.6	+1.0
VLA				pmax	pmax		
	comp=Z,55nm,1.4s						
QZH	Quanzhou	79.48	301	⇓*i*P	P	19 57 40.4	-1.6
QZH				pmax	pmax		
	comp=Z,320nm,7.5s						
QZH				LR	LR		
	comp=Z,390nm,20.4s						
QZH				LR	LR		
	comp=Z,430nm,16.6s						
INCN	Inchon	79.54	315	P	P	19 57 42.5	+0.4
INCN				pmax	pmax		
	comp=Z,30nm,0.9s						
INCN	Inchon	79.54	315	P	P	19 57 42.5	+0.4
INCN				IAmb	IAmb	19 57 43.6	
	comp=Z,30nm,0.8s						
PGC	Sidney	79.74	31	P	P	19 57 42.3	-0.5
PGC				IAmb	IAmb	19 57 44.5	
	comp=Z,22nm,1.1s						
ZAIG	Zacatecas	79.74	62	P	P	19 57 43.2	-0.7
CBB	Campbell River	79.80	29	P	P	19 57 42.8	-0.4
CBB				IAmb	IAmb	19 57 45.5	
	comp=Z,28nm,1.2s						
MVU	Marysvale	79.98	44	P	P	19 57 44.2	-0.5
121A	Cookes Peak, D	80.01	51	P	P	19 57 47.4	+2.3
	baz=241						
USRK	Ussuriysk Ar.	80.06	323	P	P	19 57 44.7	-0.1
	comp=Z,4.2nm,0.9s,baz=96,slow=7.7,SNR=8.1						
USRK				LR	LR	20 32 36.3	
	comp=Z,727nm,18.2s,baz=125,slow=35						
USRK	Ussuriysk Ar.	80.06	323	P	P	19 57 44.5	-0.3
USRK	Ussuriysk Ar.	80.06	323	P	P	19 57 44.5	-0.3
USA0B	Ussuriysk Arra	80.06	323	P	P	19 57 43.9	-0.9
USA0B				pmax	pmax		
	comp=Z,62nm,1.7s						
USA0B	Ussuriysk Arra	80.06	323	P	P	19 57 43.9	-0.9
USA0B				IAmb	IAmb	19 57 46.0	
	comp=Z,62nm,1.6s						
B05A	Bryant	80.14	32	P	P	19 57 46.3	+1.2
	baz=228						
SSE	Sheshan	80.21	307	P	P	19 57 44.0	-1.9
SSE				S	S	20 07 47.4	-3.9
SSE				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SSE				pmax	pmax		
	comp=Z,42nm,3.7s						
SSE				LR	LR		
	comp=Z,120nm,23.5s						
SSE				LR	LR		
	comp=Z,200nm,22.5s						
HAWA	Hanford	80.25	34	P	P	19 57 45.6	-0.1
MFID	Camas Ranch	80.50	38	P	P	19 57 46.1	-1.2
DUG	Dugway, Tooele	80.51	42	P	P	19 57 48.5	+1.0
	baz=236						
BMO	Blue Mountains	80.51	36	P	P	19 57 46.7	-0.6
BMO				pmax	pmax		
	comp=Z,27nm,1.4s						
BMO	Blue Mountains	80.51	36	P	P	19 57 46.7	-0.6
Q16A	Castle Valley	80.89	44	P	P	19 57 48.0	-1.7
D08A	Wollman Farm,	81.00	34	P	P	19 57 49.0	-0.7
D08A				IAmb	IAmb	19 57 52.0	
	comp=Z,27nm,1.0s						
TLIG	Tlapa	81.12	68	P	P	19 57 49.8	-1.4
M19K	Big River Lodg	81.22	9	P	P	19 57 49.2	-1.4
M19K				IAmb	IAmb	19 57 58.3	
	comp=Z,25nm,1.3s						
PMSA	Palmer Station	81.30	156	P	P	19 57 53.7	+2.5
PMSA				IAmb	IAmb	19 57 55.7	
	comp=Z,30nm,1.1s						
MNTX	Cornudas Mount	81.41	53	P	P	19 57 54.0	+1.7
	baz=242						
MNTX	Cornudas Mount	81.41	53	P	P	19 57 51.4	-0.9
MNTX				IAmb	IAmb	19 58 03.5	
	comp=Z,52nm,1.8s						
SRU	San Rafael Swe	81.42	44	P	P	19 57 51.2	-1.2
SRU				pmax	pmax		
	comp=Z,32nm,1.6s						
SRU	San Rafael Swe	81.42	44	P	P	19 57 51.2	-1.2
SRU				IAmb	IAmb	19 58 08.0	
	comp=Z,32nm,1.6s						
HLID	Hailey	81.42	39	P	P	19 57 52.8	+0.5
	baz=235						
TX31	Lajitas Ar. Si	81.66	55	P	P	19 57 54.3	+0.5
TXAR	Lajitas Array	81.66	55	P	P	19 57 55.8	+2.0
	comp=Z,7.5nm,1.0s,baz=216,slow=6.2,SNR=26						
TXAR				LR	LR	20 26 16.0	
	comp=Z,209nm,21.6s,baz=0.0,slow=30						
TXAR	Lajitas Array	81.66	55	P	P	19 57 53.5	-0.3
TXAR	Lajitas Array	81.66	55	P	P	19 57 53.5	-0.3
MDJ	Mudanjiang	81.69	322	P	P	19 57 53.5	0.0
MDJ				pmax	pmax		
	comp=Z,22nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,560nm,6.8s						
MDJ				LR	LR		
	comp=Z,500nm,23.5s						
MDJ				LR	LR		
	comp=Z,680nm,22.8s						
MDJ				LR	LR		
	comp=Z,1µm,22.2s						
KNK	Knik Glacier	81.75	12	P	P	19 57 53.1	-0.3
MVCO	Mesa Verde	81.81	47	P	P	19 57 55.8	+1.2
	baz=240						
LLLB	Lillooet	81.82	30	P	P	19 57 52.9	-1.1
LLLB				IAmb	IAmb	19 58 01.9	
	comp=Z,24nm,1.1s						
GRNR	Gornyy	81.95	330	*e*P	P	19 57 53.1	-1.6
GRNR				MLR	MLR		
	comp=E,160nm,13.0s						
GRNR				MLR	MLR		
	comp=Z,220nm,18.0s						
GHO	Glory Hole Cre	81.99	11	P	P	19 57 53.3	-1.5
GHO				IAmb	IAmb	19 58 12.9	
	comp=Z,40nm,1.2s						
ANMO	Albuquerque	82.14	49	P	P	19 57 58.2	+1.8
	comp=Z,6.2nm,0.9s,baz=226,slow=4.5,SNR=14						
ANMO	Albuquerque	82.14	49	*ce*P	P	19 57 57.2	+0.9
ANMO				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ANMO	Albuquerque	82.14	49	P	P	19 57 58.3	+2.0
	baz=241						
ANMO	Albuquerque	82.14	49	P	P	19 57 55.9	-0.5
SCM	Sheep Creek Mo	82.35	12	P	P	19 57 55.8	-0.9
SCM				pmax	pmax		
	comp=Z,101nm,1.7s						
SCM	Sheep Creek Mo	82.35	12	P	P	19 57 55.8	-0.9
BCYI	Bear Canyon	82.45	39	P	P	19 57 57.0	-0.8
K20K	Telida	82.65	8	P	P	19 58 05.8	+7.7
	baz=198						
K20K	Telida	82.65	8	P	P	19 57 57.6	-0.5
NEW	Newport	82.70	34	P	P	19 57 59.4	+0.6
	comp=Z,7.1nm,0.9s,baz=249,slow=5.7,SNR=8.2						
NEW	Newport	82.70	34	P	P	19 57 59.3	+0.6
	baz=232						
MCMT	McKenzie Canyo	83.07	38	P	P	19 58 01.0	0.0
H03S2	Juan Fernandez	83.08	123	T	T	21 29 09.4	
	baz=250,slow=75,SNR=6.7						
MA2	Magadan	83.08	342	⇑*e*P	P	19 57 59.0	-1.4
MA2				pmax	pmax		
	comp=Z,43nm,1.7s						
H03S1	Juan Fernandez	83.09	123	T	T	21 29 04.3	
	baz=250,slow=75,SNR=7.2						
H03S3	Juan Fernandez	83.09	123	T	T	21 29 04.3	
	baz=250,slow=75,SNR=8.3						
S22A	4UR Ranch, Cre	83.22	47	P	P	19 58 03.3	+1.2
	baz=241						
KLR	Kul'dur	83.27	327	P	P	19 58 00.7	-0.9
	comp=Z,1.3nm,0.6s,baz=147,slow=1.8,SNR=4.4						
KLR	Kul'dur	83.27	327	⇓*e*P	P	19 58 01.3	-0.3
KLR				pmax	pmax		
	comp=Z,6.0nm,1.5s						
TRF	Thorofare Moun	83.31	10	P	P	19 58 03.6	+1.8
	baz=201						
TRF	Thorofare Moun	83.31	10	P	P	19 58 01.0	-0.7
TRF				IAmb	IAmb	19 58 13.0	

	comp=Z,26nm,0.9s						
J20K	**Nowinta River**	**83.43**	**8**	P	**P**	**19 58 01.8**	**-0.3**
	baz=198						
J20K	**Nowinta River**	**83.43**	**8**	P	**P**	**19 58 01.3**	**-0.8**
J20K				IAmb	IAmb	19 58 14.2	
	comp=Z,12nm,0.9s						
O20A	**White River Ci**	**83.45**	**44**	P	**P**	**19 58 04.4**	**+1.4**
	baz=240						
O20A	**White River Ci**	**83.45**	**44**	P	**P**	**19 58 01.5**	**-1.6**
O20A				IAmb	IAmb	19 58 43.0	
	comp=Z,22nm,1.1s						
REDW	**Red Top Meadow**	**83.47**	**40**	P	**P**	**19 58 03.0**	**-0.1**
FXWY	**Fox Creek**	**83.51**	**40**	P	**P**	**19 58 02.8**	**-0.6**
FXWY				IAmb	IAmb	19 58 24.3	
	comp=Z,34nm,1.5s						
RND	**Reindeer**	**83.52**	**11**	P	**P**	**19 58 01.9**	**-0.7**
RND				pmax	pmax		
	comp=Z,25nm,1.0s						
RND	**Reindeer**	**83.52**	**11**	P	**P**	**19 58 01.9**	**-0.7**
RND				IAmb	IAmb	19 58 14.5	
	comp=Z,25nm,1.0s						
MSO	**Missoula**	**83.58**	**36**	P	**P**	**19 58 03.6**	**+0.2**
	baz=235						
CN2	**Changchun**	**83.70**	**320**	*e*P	**P**	**19 58 03.3**	**-0.7**
CN2				pmax	pmax		
	comp=Z,20nm,2.1s						
CN2				pmax	pmax		
	comp=Z,400nm,8.2s						
CN2				LR	LR		
	comp=Z,300nm,22.0s						
CN2				LR	LR		
	comp=Z,300nm,22.0s						
CN2				LR	LR		
	comp=Z,400nm,27.0s						
YUK3	**Moose Creek**	**83.80**	**15**	P	P	19 58 10.1	+5.8
	baz=210						
MCK	**McKinley**	**83.80**	**10**	P	**P**	**19 58 03.2**	**-0.9**
	baz=202						
BPAW	**Bear Paw Mtn.**	**83.81**	**9**	P	**P**	**19 58 01.3**	**-2.8**
	baz=201						
SNY	**Shenyang**	**83.83**	**318**	⇓P	**P**	**19 58 05.0**	**+0.4**
SNY				pmax	pmax		
	comp=Z,29nm,1.5s						
SNY				LR	LR		
	comp=Z,370nm,16.6s						
SNY				LR	LR		
	comp=Z,390nm,17.8s						
SNY				LR	LR		
	comp=Z,550nm,19.9s						
QLMT	**Earthquake Lak**	**83.91**	**39**	P	**P**	**19 58 05.2**	**-0.1**
BW06	**Boulder Array**	**83.95**	**41**	P	**P**	**19 58 05.4**	**-0.3**
	baz=238						
BW06	**Boulder Array**	**83.95**	**41**	P	**P**	**19 58 04.9**	**-0.7**
BW06				IAmb	IAmb	19 58 07.4	
	comp=Z,14nm,1.1s						
PDAR	**Pinedale Array**	**83.95**	**41**	P	**P**	**19 58 06.3**	**+0.7**
	comp=Z,11nm,1.0s,baz=211,slow=3.2,SNR=50						
PDAR				LR	LR	20 31 22.4	
	comp=Z,221nm,18.4s,baz=254,slow=33						
PDAR	**Pinedale Array**	**83.95**	**41**	P	**P**	**19 58 05.2**	**-0.5**
DLBC	**Dease Lake**	**84.12**	**21**	P	**P**	**19 58 05.1**	**-0.8**
	comp=Z,7.8nm,1.1s,baz=187,slow=9.1,SNR=3.2						
SDCO	**Great Sand Dun**	**84.15**	**47**	P	**P**	**19 58 08.2**	**+1.4**
	baz=242						
H17A	**Grant Village**	**84.19**	**40**	P	**P**	**19 58 09.0**	**+2.2**
	baz=238						
BOZ	**Bozeman (W)**	**84.21**	**38**	P	**P**	**19 58 05.6**	**-1.1**
BOZ				pmax	pmax		
	comp=Z,17nm,1.0s						
BOZ	**Bozeman (W)**	**84.21**	**38**	P	**P**	**19 58 07.3**	**+0.6**
	baz=237						
BOZ	**Bozeman (W)**	**84.21**	**38**	P	**P**	**19 58 05.6**	**-1.1**
BOZ				IAmb	IAmb	19 58 09.1	
	comp=Z,17nm,0.9s						
YHH	**Holmes Hill**	**84.23**	**39**	P	**P**	**19 58 05.6**	**-1.5**
YHH				IAmb	IAmb	19 58 10.9	
	comp=Z,25nm,1.3s						
MYKOM	**Kota Tinggi**	**84.33**	**274**	P	**P**	**19 58 07.0**	**-0.9**
MYKOM	**Kota Tinggi**	**84.33**	**274**	P	**P**	**19 58 06.8**	**-1.1**
MSTX	**Muleshoe**	**84.39**	**52**	P	**P**	**19 58 09.8**	**+1.9**
	baz=244						
QIZ	**Qiongzhong**	**84.59**	**292**	P	**P**	**19 58 09.3**	**+0.3**
QIZ				LR	LR		
	comp=Z,390nm,20.1s						
QIZ				LR	LR		
	comp=Z,490nm,22.1s						
QIZ				LR	LR		
	comp=Z,570nm,26.0s						
L27K	**Beaver Creek,**	**84.60**	**14**	P	**P**	**19 58 12.1**	**+3.9**
	baz=209						
BCAR	**Beaver Creek A**	**84.61**	**14**	P	**P**	**19 58 08.1**	**-0.1**
T25A	**Trinidad**	**84.63**	**48**	P	**P**	**19 58 10.0**	**+0.9**
	baz=242						
I21K	**Tanana**	**84.68**	**9**	P	**P**	**19 58 08.5**	**+0.1**
	baz=200						
MLY	**Manley**	**84.72**	**9**	P	**P**	**19 58 08.1**	**-0.6**
	baz=201						
MLY	**Manley**	**84.72**	**9**	P	**P**	**19 58 07.5**	**-1.2**
HDA	**Harding Lake**	**84.78**	**11**	P	**P**	**19 58 08.8**	**-0.2**
	baz=204						
SCRK	**Sand Creek**	**84.95**	**12**	P	**P**	**19 58 08.6**	**-1.4**
	baz=207						
SCRK	**Sand Creek**	**84.95**	**12**	P	**P**	**19 58 09.5**	**-0.5**
Q24A	**Divide**	**84.97**	**46**	P	**P**	**19 58 12.4**	**+1.5**
	baz=242						
H21K	**Melozitna Rive**	**85.02**	**8**	P	**P**	**19 58 10.1**	**-0.1**
	baz=199						
H21K	**Melozitna Rive**	**85.02**	**8**	P	**P**	**19 58 09.4**	**-0.7**
H21K				IAmb	IAmb	19 58 21.6	
	comp=Z,16nm,1.1s						
TCOL	**CIGO, UAF Yank**	**85.04**	**10**	P	**P**	**19 58 10.1**	**-0.1**
	baz=204						
COLA	**College**	**85.04**	**10**	P	**P**	**19 58 09.0**	**-1.2**
COLA				pmax	pmax		
	comp=Z,41nm,0.8s						
COLA	**College**	**85.04**	**10**	P	**P**	**19 58 09.0**	**-1.2**
I23K	**Minto, Yukon-K**	**85.05**	**10**	P	**P**	**19 58 09.7**	**-0.6**
	baz=202						
IL31		**85.12**	**11**	P	**P**	**19 58 08.9**	**-1.7**
IL31				IAmb	IAmb	19 58 23.1	
	comp=Z,13nm,0.9s						
ILAR	**Eielson Array**	**85.12**	**11**	P	**P**	**19 58 09.9**	**-0.8**
	comp=Z,1.6nm,0.6s,baz=224,slow=5.7,SNR=29						
ILAR				LR	LR	20 31 40.3	
	comp=Z,349nm,20.1s,baz=208,slow=32						
ILAR	**Eielson Array**	**85.12**	**11**	P	**P**	**19 58 09.2**	**-1.5**
ILAR	**Eielson Array**	**85.12**	**11**	P	**P**	**19 58 09.2**	**-1.5**
IMAR	**Indian Mountai**	**85.21**	**8**	P	**P**	**19 58 09.8**	**-1.2**
MAW	**Mawson**	**85.30**	**198**	P	**P**	**19 58 12.9**	**+1.2**
	comp=Z,7.9nm,0.8s,baz=109,slow=5.5,SNR=9.6						
MAW				LR	LR	20 35 41.9	
	comp=Z,722nm,18.6s,baz=95,slow=35						
MAW	**Mawson**	**85.30**	**198**	P	**P**	**19 58 10.3**	**-1.4**
	baz=85,SNR=5.2						
MAW	**Mawson**	**85.30**	**198**	P	**P**	**19 58 13.0**	**+1.2**
MAW				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MAW	**Mawson**	**85.30**	**198**	P	**P**	**19 58 13.0**	**+1.2**
LL02	**Futaleuf**	**85.32**	**134**	P	**P**	**19 58 14.1**	**+1.7**
POKR	**Poker Plat Res**	**85.34**	**10**	P	**P**	**19 58 11.6**	**-0.2**
	baz=204						
N23A	**Red Feather La**	**85.35**	**44**	P	**P**	**19 58 13.2**	**+0.4**
	baz=241						
RLMT	**Red Lodge**	**85.36**	**39**	P	**P**	**19 58 13.4**	**+0.8**
	baz=238						
M30M	**Minto, Yukon**	**85.40**	**16**	P	P	19 58 18.2	+6.0
	baz=214						
SEY	**Seymchan**	**85.44**	**345**	P	**P**	**19 58 11.9**	**-0.4**
	comp=Z,3.9nm,0.5s,baz=130,slow=7.3,SNR=11						
J26L	**Joseph Creek**	**85.50**	**12**	P	**P**	**19 58 13.8**	**+1.1**
	baz=208						
TIA	**Tai'an**	**85.56**	**310**	⇑P	**P**	**19 58 13.1**	**-0.5**
TIA				S	**S**	**20 08 40.8**	**-4.8**
TIA				pmax	pmax		
	comp=Z,11nm,1.6s						
TIA				pmax	pmax		
	comp=Z,380nm,9.0s						
TIA				LR	LR		
	comp=Z,250nm,19.0s						
TIA				LR	LR		
	comp=Z,420nm,17.6s						
TIA				LR	LR		
	comp=Z,620nm,18.6s						
AMTX	**Amarillo**	**85.60**	**51**	P	**P**	**19 58 15.7**	**+1.8**
	baz=244						
H24K	**Noodor Dome**	**85.92**	**10**	P	**P**	**19 58 15.6**	**+0.8**
	baz=203						
DAWY	**Dawson**	**86.02**	**14**	P	**P**	**19 58 15.2**	**0.0**
	baz=211						
DAWY	**Dawson**	**86.02**	**14**	P	**P**	**19 58 15.1**	**-0.2**
DAWY				IAmb	IAmb	19 58 24.8	
	comp=Z,35nm,1.5s						
PRP	**Porcupine Dome**	**86.04**	**11**	P	**P**	**19 58 14.9**	**-0.5**
	baz=206						
ABTX	**Abilene, Hawle**	**86.19**	**54**	P	**P**	**19 58 18.6**	**+1.8**
	baz=246						
EGAK	**Eagle**	**86.25**	**13**	P	**P**	**19 58 15.4**	**-0.9**
EGAK				IAmb	IAmb	19 58 29.2	
	comp=Z,43nm,1.6s						
JRMM	**Jerantut**	**86.29**	**275**	P	**P**	**19 58 18.0**	**+0.3**
COLD	**Coldfoot**	**86.86**	**9**	P	**P**	**19 58 17.6**	**-1.6**
COLD				IAmb	IAmb	19 58 35.5	
	comp=Z,46nm,1.9s						
PLCA	**Paso Flores**	**87.11**	**132**	P	**P**	**19 58 23.6**	**+2.3**
	comp=Z,6.7nm,1.0s,baz=260,slow=7.1,SNR=6.3						
PLCA				LR	LR	20 29 37.7	
	comp=Z,514nm,21.6s,baz=250,slow=30						
PLCA	**Paso Flores**	**87.11**	**132**	P	**P**	**19 58 22.1**	**+0.8**
PLCA				pmax	pmax		
	comp=Z,24nm,1.4s						
PLCA	**Paso Flores**	**87.11**	**132**	P	**P**	**19 58 22.1**	**+0.8**
PLCA				IAmb	IAmb	19 58 26.3	
	comp=Z,24nm,1.4s						
I29M	**Ogilvie Camp,**	**87.37**	**14**	P	**P**	**19 58 22.1**	**+0.2**
	baz=212						
BILL	**Bilibino**	**87.42**	**352**	*de*P	**P**	**19 58 20.9**	**-1.1**
BILL				*e*S	**SKSac**	**20 08 50.0**	**+0.7**
BILL				pmax	pmax		
	comp=Z,12nm,1.1s						
BILL	**Bilibino**	**87.42**	**352**	P	**P**	**19 58 20.6**	**-1.3**
EDM	**Edmonton**	**87.58**	**31**	P	**P**	**19 58 22.2**	**-0.9**
EDM				pmax	pmax		
	comp=Z,93nm,1.6s						
EDM	**Edmonton**	**87.58**	**31**	P	**P**	**19 58 22.2**	**-0.9**
IPM	**Ipoh**	**87.85**	**275**	P	**P**	**19 58 26.0**	**+0.7**
IPM	**Ipoh**	**87.85**	**275**	P	**P**	**19 58 25.2**	**-0.1**
IPM				IAmb	IAmb	19 58 26.6	
	comp=Z,17nm,0.9s						
BJT	**Baijiatuau**	**87.91**	**313**	P	**P**	**19 58 24.3**	**-0.6**
BJT				pmax	pmax		
	comp=Z,112nm,2.0s						
BJT	**Baijiatuau**	**87.91**	**313**	P	**P**	**19 58 24.3**	**-0.6**
BJI	**Beijing**	**87.91**	**313**	P	**P**	**19 58 25.3**	**+0.4**
BJI				pmax	pmax		
	comp=Z,26nm,2.1s						
BJI				pmax	pmax		
	comp=Z,520nm,4.5s						
BJI				LR	LR		
	comp=Z,220nm,18.6s						
BJI				LR	LR		
	comp=Z,450nm,16.6s						
BJI				LR	LR		
	comp=Z,680nm,18.7s						
BMAR	**Burnt Mountain**	**87.93**	**10**	P	**P**	**19 58 24.3**	**-0.2**
RSSD	**Black Hills**	**88.12**	**42**	P	**P**	**19 58 26.5**	**+0.4**
	baz=242						
HKT	**Hockley**	**88.13**	**58**	⇑*e*P	**P**	**19 58 25.3**	**-0.8**
HKT				pmax	pmax		
	comp=Z,9.0nm,1.1s						
ZEA	**Zeya**	**88.21**	**329**	*e*P	**P**	**19 58 25.3**	**-0.7**
ZEA				*e*S	**S**	**20 09 11.1**	**+0.7**
ZEA				pmax	pmax		
	comp=E,10.0nm,1.4s						
ZEA				pmax	pmax		
	comp=N,10.0nm,1.5s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ZEA				smax	smax		
	comp=N,200nm,14.9s						
TOLK	**Toolik Lake Re**	**88.27**	**8**	P	**P**	**19 58 29.1**	**+3.0**
	baz=202						
ENH	**Enshi**	**89.01**	**302**	P	**P**	**19 58 29.6**	**-0.8**
TIY	**Taiyuan**	**89.60**	**310**	*e*P	**P**	**19 58 32.9**	**-0.2**
TIY				sP	pwP	19 59 01.8	+19
TIY				S	**SKSac**	**20 09 05.4**	**+1.6**
TIY				LR	LR		
	comp=N,220nm,13.5s						
TIY				LR	LR		
	comp=N,360nm,15.6s						
TIY				LR	LR		
	comp=N,470nm,19.6s						
HIA	**Hailar**	**89.87**	**323**	P	**P**	**19 58 32.9**	**-1.1**
HIA				pmax	pmax		
	comp=Z,16nm,1.1s						
HIA	**Hailar**	**89.87**	**323**	P	**P**	**19 58 32.9**	**-1.1**
HIA				IAmb	IAmb	19 58 45.2	
	comp=Z,16nm,1.1s						
SYO	**Syowa Base**	**89.93**	**191**	⇑*e*P	**P**	**19 58 34.4**	**+0.4**
SYO	**Syowa Base**	**89.93**	**191**	⇑*e*PcP	**P**	**19 58 35.8**	**+1.8**
SYO	**Syowa Base**	**89.93**	**191**	⇑*e*sP	sP	19 58 40.3	+4.7
VNA3	**Neumayer Olymp**	**89.96**	**175**	P	**P**	**19 58 35.8**	**+1.6**
GYA	**Guiyang**	**89.97**	**298**	⇓*i*P	**P**	**19 58 35.9**	**+0.8**
GYA				pmax	pmax		
	comp=Z,33nm,1.7s						
GYA				pmax	pmax		
	comp=Z,500nm,3.9s						
GYA				LR	LR		
	comp=Z,280nm,23.7s						
SNAA	**Sanae**	**90.02**	**177**	P	**P**	**19 58 36.0**	**+1.5**
SNAA	**Sanae**	**90.02**	**177**	*c i*P	**P**	**19 58 35.0**	**+0.5**
SNAA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SNAA	**Sanae**	**90.02**	**177**	P	**P**	**19 58 34.6**	**+0.1**
SNAA				IAmb	IAmb	19 58 37.8	
	comp=Z,10nm,0.9s						
DGMT	**Dagmar**	**90.05**	**38**	P	**P**	**19 58 33.5**	**-1.4**
DGMT				IAmb	IAmb	19 58 37.5	
	comp=Z,19nm,0.9s						
VNA2	**Neumayer--Watz**	**90.46**	**175**	P	**P**	**19 58 38.3**	**+1.9**
SRIT	**Nakonsritamara**	**90.48**	**279**	P	**P**	**19 58 36.8**	**-0.8**
SLVN	**Son La**	**90.61**	**292**	P	**P**	**19 58 37.8**	**-0.4**
SLVN				IAmb	IAmb	19 58 40.5	
	comp=Z,32nm,1.5s						
XAN	**Xi'an**	**90.84**	**306**	P	**P**	**19 58 38.3**	**-0.6**
XAN				pmax	pmax		
	comp=Z,22nm,1.9s						
XAN				pmax	pmax		
	comp=Z,410nm,7.4s						
XAN				LR	LR		
	comp=Z,380nm,19.9s						
XAN				LR	LR		
	comp=Z,340nm,19.9s						
XAN				LR	LR		
	comp=Z,530nm,24.7s						
INK	**Inuvik**	**90.88**	**14**	P	**P**	**19 58 38.0**	**-0.1**
	comp=Z,3.1nm,1.1s,baz=197,slow=4.5,SNR=4.0						
INK	**Inuvik**	**90.88**	**14**	P	**P**	**19 58 36.5**	**-1.7**
INK				pmax	pmax		
	comp=Z,22nm,1.7s						
INK	**Inuvik**	**90.88**	**14**	P	**P**	**19 58 36.5**	**-1.7**
INK				IAmb	IAmb	19 58 50.3	
	comp=Z,22nm,1.6s						
JTS	**Las Juntas de**	**91.07**	**80**	⇓*e*P	**P**	**19 58 41.9**	**+1.5**
JTS				pmax	pmax		
	comp=Z,25nm,1.0s						
JTS	**Las Juntas de**	**91.07**	**80**	P	**P**	**19 58 39.4**	**-0.9**
HHC	**Hu-ho-hao-te**	**91.45**	**313**	*e*P	**P**	**19 58 42.1**	**+0.4**
HHC				pmax	pmax		
	comp=Z,17nm,1.4s						
HHC				pmax	pmax		
	comp=Z,340nm,7.3s						
HHC				LR	LR		
	comp=Z,380nm,18.6s						
HHC				LR	LR		
	comp=Z,330nm,18.3s						
HHC				LR	LR		
	comp=Z,470nm,19.5s						
W39A	**Magazine**	**91.67**	**54**	P	**P**	**19 58 43.9**	**+1.2**
	baz=249						
BTO	**Baotou**	**92.44**	**312**	*e*P	**P**	**19 58 45.4**	**-0.9**
U40A	**Yellville**	**92.79**	**53**	P	**P**	**19 58 49.4**	**+1.6**
	baz=249						
U40A	**Yellville**	**92.79**	**53**	P	**P**	**19 58 47.2**	**-0.6**
U40A				IAmb	IAmb	19 58 50.3	
	comp=Z,18nm,1.1s						
ECSD	**EROS Data Cent**	**92.81**	**45**	P	**P**	**19 58 49.1**	**+1.3**
	baz=247						
W41B	**Gary Mavity, V**	**92.84**	**54**	P	**P**	**19 58 50.1**	**+2.0**
	baz=250						
KMI	**Kunming**	**92.86**	**295**	⇑P	**P**	**19 58 49.4**	**+0.7**
KMI				pmax	pmax		
	comp=Z,19nm,0.6s						
KMI				pmax	pmax		
	comp=Z,260nm,5.9s						
KMI				LR	LR		
	comp=Z,210nm,17.7s						
KMI				LR	LR		
	comp=Z,330nm,21.4s						
KMI				LR	LR		
	comp=Z,430nm,25.2s						
S39A	**Bolivar**	**92.91**	**51**	P	**P**	**19 58 47.6**	**-0.8**
S39A				IAmb	IAmb	19 58 50.7	
	comp=Z,7.9nm,0.9s						
MGMO	**Mountain Grove**	**93.51**	**52**	P	**P**	**19 58 51.0**	**-0.1**
CD2	**Chengdu**	**93.86**	**301**	P	**P**	**19 58 53.5**	**+0.5**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.4s						
R40A	**Maddies Statio**	**93.90**	**51**	P	**P**	**19 58 52.1**	**-0.7**
R40A				IAmb	IAmb	19 58 55.1	
	comp=Z,20nm,1.1s						
CMAR	**Chiang Mai Arr**	**94.14**	**288**	P	**P**	**19 58 55.1**	**+0.6**
	comp=Z,5.8nm,1.1s,baz=320,slow=24,SNR=11						
CMAR				LR	LR	20 38 24.9	
	comp=Z,396nm,19.8s,baz=126,slow=34						
CMAR	**Chiang Mai Arr**	**94.14**	**288**	P	**P**	**19 58 54.2**	**-0.2**
CMAR	**Chiang Mai Arr**	**94.14**	**288**	P	**P**	**19 58 54.2**	**-0.2**
CHTO	**Chiang Mai**	**94.24**	**288**	P	**P**	**19 58 54.3**	**-0.6**
CHTO				pmax	pmax		
	comp=Z,13nm,1.0s						
CHTO	**Chiang Mai**	**94.24**	**288**	P	**P**	**19 58 54.3**	**-0.6**
CHTO				IAmb	IAmb	19 58 56.5	
	comp=Z,13nm,1.0s						
CCM	**Cathedral Cave**	**94.58**	**52**	P	**P**	**19 58 57.1**	**+1.0**
	baz=250						
LZH	**Lanzhou**	**95.45**	**306**	*e*P	**P**	**19 59 01.8**	**+1.5**
LZH				pmax	pmax		
	comp=Z,23nm,1.3s						
LZH				pmax	pmax		
	comp=Z,140nm,4.6s						
LZH				LR	LR		
	comp=Z,200nm,13.0s						
LZH				LR	LR		
	comp=Z,340nm,13.6s						
LZH				LR	LR		
	comp=Z,340nm,14.4s						
A36M	**Sachs Harbour**	**95.52**	**13**	P	**P**	**19 59 02.2**	**+2.7**
	baz=225						
A36M	**Sachs Harbour**	**95.52**	**13**	P	**P**	**19 58 59.1**	**-0.4**
A36M				IAmb	IAmb	19 59 13.0	
	comp=Z,8.4nm,0.8s						
ULM	**Lac du Bonnet**	**95.73**	**39**	LR	LR	20 38 27.0	
	comp=Z,767nm,18.7s,baz=276,slow=33						
ULN	**Ulaanbaatar**	**97.00**	**318**	⇑*e*P	**P**	**19 59 08.1**	**+1.1**
ULN				pmax	pmax		
	comp=Z,2.0nm,1.2s						
SONM	**Songino Array**	**97.41**	**318**	P	**P**	**19 59 09.2**	**+0.3**
	comp=Z,0.6nm,0.8s,baz=131,slow=5.5,SNR=2.9						
SONM				LR	LR	20 38 05.4	
	comp=Z,292nm,21.5s,baz=112,slow=32						
SONM	**Songino Array**	**97.41**	**318**	P	**P**	**19 59 07.4**	**-1.4**
SONM				pmax	pmax		
	comp=Z,12nm,1.6s						
SONM	**Songino Array**	**97.41**	**318**	P	**P**	**19 59 07.4**	**-1.4**
SONM				IAmb	IAmb	19 59 20.8	
	comp=Z,12nm,1.6s						
ROSC	**El Rosal**	**99.45**	**88**	LR	LR	20 35 38.8	
	comp=Z,161nm,19.0s,baz=248,slow=30						
GTA	**Gaotai**	**99.48**	**308**	*e*P	**Pdif**	**19 59 18.0**	**-0.3**
GTA				pmax	pmax		
	comp=Z,3.0nm,2.0s						
GTA				pmax	pmax		
	comp=Z,140nm,6.1s						
GTA				LR	LR		
	comp=Z,220nm,18.5s						
GTA				LR	LR		
	comp=Z,550nm,22.9s						
GTA				LR	LR		
	comp=Z,620nm,20.0s						
ZALV	**Zalesovo Beam**	**111.88**	**322**	PKiKP	**PKiKP**	**20 04 09.7**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=122,slow=2.2,SNR=2.5						
MKAR	**Makanchi Array**	**113.29**	**314**	PKiKP	**PKiKP**	**20 04 12.3**	**-0.7**
	comp=Z,1.0nm,0.6s,baz=114,slow=0.8,SNR=11						
KURK	**Kurchatov**	**115.72**	**318**	⇓*i*PKIKP	**PKiKP**	**20 04 17.5**	**+0.1**
KURK	**Kurchatov**	**115.72**	**318**	PKPdf	**PKiKP**	**20 04 16.4**	**-1.0**
KURBB	**Kurchatov Arra**	**115.78**	**318**	PKP	**PKPdf**	**20 04 16.6**	**-0.9**
	baz=95,slow=1.8						
BOOM	**Boomskoye usch**	**117.75**	**309**	PKIKP	**PKPdf**	**20 04 21.5**	**-0.4**
BOOM	**Boomskoye usch**	**117.75**	**309**	PKPdf	**PKPdf**	**20 04 21.5**	**-0.4**
AAK	**Ala-Archa**	**118.82**	**309**	⇑*i*PKIKP	**PKiKP**	**20 04 25.8**	**+1.9**
BRVK	**Borovoye**	**120.59**	**321**	PKIKP	**PKPdf**	**20 04 26.1**	**-0.7**
BRVK	**Borovoye**	**120.59**	**321**		**PKPdf**	**20 04 26.1**	**-0.7**
DRK	**Karamyk**	**120.92**	**305**	PKPdf	**PKPdf**	**20 04 28.2**	**0.0**
KKAR	**Karatay Array**	**121.72**	**310**	PKIKP	**PKPdf**	**20 04 29.6**	**+0.3**
KKAR	**Karatay Array**	**121.72**	**310**	PKPdf	**PKPdf**	**20 04 29.6**	**+0.3**
GAR	**Garm**	**122.08**	**305**	PKPdf	**PKPdf**	**20 04 29.7**	**-0.5**
KBL	**Kabul**	**123.17**	**300**	PKIKP	**PKPdf**	**20 04 32.9**	**+0.3**
KBL	**Kabul**	**123.17**	**300**	PKPdf	**PKPdf**	**20 04 32.9**	**+0.3**
ANGG	**Ammassalik, Gr**	**124.24**	**21**	PKPdf	**PKPdf**	**20 04 34.8**	**+1.4**
SCO	**Scoresbysund**	**124.89**	**12**	PKIKP	**PKPdf**	**20 04 34.5**	**0.0**
SCO	**Scoresbysund**	**124.89**	**12**	PKPdf	**PKPdf**	**20 04 34.5**	**0.0**
ARU	**Arti**	**126.11**	**328**	PKP	**PKPdf**	**20 04 37.8**	**+0.5**
	comp=Z,1.1nm,0.6s,baz=25,slow=3.0,SNR=8.5						
ARU	**Arti**	**126.11**	**328**	*i* PKIKP	**PKPdf**	**20 04 36.5**	**-0.7**
ARU						20 06 31.0	
ARU						20 11 47.7	
ARU				SP	SP	20 16 33.9	+2.3
ARU				MLR	MLR		
	comp=Z,387nm,19.0s						
ARU	**Arti**	**126.11**	**328**	PKPdf	**PKPdf**	**20 04 36.7**	**-0.5**
ARCES	**ARCESS Array B**	**127.53**	**352**	PKP	**PKPdf**	**20 04 40.2**	**+0.6**
	comp=Z,3.7nm,1.0s,baz=352,slow=2.7,SNR=6.0						
ABKAR	**Akbulak array**	**127.81**	**319**	PKPdf	**PKPdf**	**20 04 40.8**	**+0.1**
ABKAR	**Akbulak array**	**127.81**	**319**	PKPdf	**PKPdf**	**20 04 41.6**	**+0.9**
HRA	**Herat**	**128.79**	**300**	PKPdf	**PKPdf**	**20 04 42.2**	**-1.1**
PRGR	**Permogore**	**129.03**	**338**	*e*PKIKP	**PKPdf**	**20 04 42.8**	**+0.2**
PRGR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KLMR	**Klimovskoe**	**131.70**	**340**	*e*PKIKP	**PKPdf**	**20 04 47.5**	**-0.2**
KLMR				pmax	pmax		
	comp=Z,14nm,1.3s						
KLMR	**Klimovskoe**	**131.70**	**340**	*e*PKPdf	**PKPdf**	**20 04 47.5**	**-0.2**
KLMR				AMP		20 04 48.7	
	comp=Z,14nm,1.3s						
FINES	**FINESS Array B**	**134.87**	**347**	PKP	**PKPdf**	**20 04 54.6**	**+1.0**
	comp=Z,3.2nm,0.9s,baz=60,slow=4.6,SNR=4.3						
FINES	**FINESS Array B**	**134.87**	**347**	PKIKP	**PKPdf**	**20 04 54.0**	**+0.3**
FINES	**FINESS Array B**	**134.87**	**347**	PKPdf	**PKPdf**	**20 04 54.0**	**+0.3**
OBN	**Obninsk**	**136.99**	**336**	*c i*PKIKP	**PKPdf**	**20 04 58.3**	**+0.5**
OBN				*e*PPP	PPP	20 10 39.5	
NACGM	**Naroch**	**140.51**	**342**	*i* PKP	PKiKP	20 05 17.0	+10
MNK	**Minsk**	**140.53**	**341**	*i* PKIKP	**PKPdf**	**20 05 02.0**	**-2.3**
MNK				*i* SS	SS	20 26 28.1	+1.0
MNK				pmax	pmax		
	comp=E,1.0nm,1.0s						
MNK				pmax	pmax		
	comp=N,7.0nm,1.0s						
MNK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MNK				MLR	MLR		
	comp=N,179nm,20.0s						
MNK				MLR	MLR		
	comp=Z,221nm,20.0s						
MNK	**Minsk**	**140.53**	**341**	*i* PKP	**PKPdf**	**20 05 02.1**	**-2.2**
	comp=E,1.0nm,1.0s,baz=32						
MNK				*i* PKP	**PKPdf**	**20 05 02.1**	**-2.2**
	comp=N,7.0nm,1.0s						
MNK				*i* PKP	**PKPdf**	**20 05 02.1**	**-2.2**
	comp=Z,6.0nm,1.0s						
MNK				*i* SKP		20 08 15.8	
MNK				*i* PKS	**PKSdf**	**20 08 38.0**	**-2.0**
MNK				*i* PPP	PPP	20 11 40.1	
MNK				*i* SKS		20 13 34.7	
MNK				*i* SS	**SS**	**20 26 28.2**	**+1.1**
MNK				*i* SSS	SSS	20 30 46.0	
MNK				*i* LR	LR	21 03 22.2	
MNK				*i* LRM	MLR	21 09 01.9	
	comp=N,179nm,20.1s						
MNK				*i* LRM	MLR	21 09 09.1	
	comp=Z,221nm,20.1s						
MNK				*i* LRM	MLR	21 11 02.6	
	comp=E,36nm,20.8s						
KIV	**Kislovodsk**	**140.80**	**319**	*i* PKIKP	**PKPdf**	**20 05 05.7**	**+0.4**
KIV				*e*		20 08 03.5	
KIV				*e*SS	SS	20 26 30.6	-1.3
KIV				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,344nm,24.0s						

AKASG	Malin Array Be	143.22	337	PKP	PKPbc	20 05 09.0	+2.8
	comp=Z,0.9nm,0.5s,baz=38,slow=4.2,SNR=6.8						
KIBK	Kibwezi	143.45	239	PKPdf	PKPab	20 05 08.8	+1.8
ANN	Anapa	143.50	323	eP	Pdif	20 02 33.9	+0.1
ANN				pmax	pmax		
	comp=Z,221nm,1.3s						
ANN				pmax	pmax		
	comp=Z,155nm,1.1s						
GURO	Guroymak-BITLI	143.67	311	PKPdf	PKPab	20 05 08.3	+1.0
SIRT	Sirnak	143.79	309	PKPdf	PKPab	20 05 08.1	+0.4
RAYN	Ar Rayn	144.00	285	PKIKP	PKPab	20 05 09.7	+0.8
RAYN	Ar Rayn	144.00	285	PKPdf	PKPab	20 05 09.7	+0.8
KMBO	Kilima Mbogo	144.79	240	PKP	PKPab	20 05 13.1	+0.8
	comp=Z,9.6nm,0.8s,baz=59,slow=5.4,SNR=22						
KMBO	Kilima Mbogo	144.79	240	PKIKP	PKPab	20 05 11.5	-0.8
KMBO	Kilima Mbogo	144.79	240		PKPab	20 05 11.5	-0.8
SORM	Soroca	145.62	335	⇓P	PKPdf	20 05 13.5	0.0
LVV	L'vov	145.77	341	ePKP2	PKPdf	20 05 13.6	-0.1
MILM	Milestii Mici	146.39	333	⇓P	PKPab	20 05 19.4	+2.5
OJC	Ojcow	146.59	345	PKP2	PKPdf	20 05 15.1	0.0
OJC	Ojcow	146.59	345	PKPdf	PKPdf	20 05 15.1	0.0
CLL	Collm	146.72	353	ePKPbc	PKPdf	20 05 16.0	+0.7
	comp=Z,31nm,1.2s						
CLL				ePKPlp		20 05 18.0	
	comp=Z,200nm,19.4s						
CLL				ePKiKP	sPKPbc	20 05 20.0	+1.4
CLL				epPKiKP	pPKiKP	20 05 24.0	+3.1
CLL				ePP	PP	20 08 42.0	+2.3
CLL				ePKSdf	PKSdf	20 08 49.0	-1.4
CLL				e		20 08 54.0	
CLL				e(SKSP)		20 18 43.0	
CLL				ePPS	PPS	20 21 21.0	
CLL				eSS	SS	20 27 33.0	-5.0
CLL				eSKSSKSac	S'S'ac	20 28 53.0	+0.2
CLL				eSSS	SSS	20 33 02.0	
CLL	Collm	146.72	353	ePKP2	PKPdf	20 05 16.0	+0.7
CLL				e		20 08 42.0	
CLL				pmax	pmax		
	comp=Z,31nm,1.2s						
CLL	Collm	146.72	353	PKPdf	PKPdf	20 05 15.0	-0.3
CHVC	Chvalec	147.00	350	ePKP	PKPdf	20 05 17.2	+1.4
CHVC				ex	x	20 05 25.7	
OSTC	Ostas	147.00	350	ePKP	PKPbc	20 05 19.0	+1.2
BRG	Berggiesshubel	147.04	352	ePKP	PKPdf	20 05 17.9	+2.0
BRG				Amp		20 05 26.7	
	comp=Z,38nm,1.2s						
VASR	Vaslui	147.04	334	⇑P	PKPab	20 05 20.8	+1.3
UPC	Upice	147.09	350	ePKP	PKPbc	20 05 20.3	+2.3
UPC				AMS	AMS	21 10 00.0	
	comp=Z,400nm,20.7s						
UPC	Upice	147.09	350	ePKP2	PKPbc	20 05 20.3	+2.3
UPC				MLR	MLR		
	comp=Z,400nm,20.7s						
KOLS	Kolonicke sedl	147.09	342	ePKP2	PKPbc	20 05 18.8	+0.7
KOLS	Kolonicke sedl	147.09	342	ePKP	PKPbc	20 05 18.8	+0.7
DPC	Dobruska-Polom	147.19	349	ePKP	PKPdf	20 05 18.6	+2.4
DPC	Dobruska-Polom	147.19	349	ePKP2	PKPdf	20 05 18.6	+2.4
BURAR	Bucovina Array	147.26	337	⇓P	PKPab	20 05 21.2	+0.7
BURAR	Bucovina Array	147.26	337		PKPdf	20 05 16.5	+0.1
PVCC	Panska Ves	147.29	351	ePKP	PKPbc	20 05 19.9	+1.3
PVCC	Panska Ves	147.29	351	ePKP2	PKPbc	20 05 19.9	+1.3
UZH	Uzhgorod	147.35	341	ePKIKP	PKPdf	20 05 16.0	-0.4
UZH				i		20 05 18.0	
UZH				e		20 05 25.2	
CRVS	Cervenica-Dubn	147.36	343	ePKP2	PKiKP	20 05 25.8	+4.7
CRVS	Cervenica-Dubn	147.36	343	ePKP	PKiKP	20 05 25.8	+4.7
MORC	Moravsky Berou	147.50	348	⇑P	PKPdf	20 05 19.4	+2.7
MORC	Moravsky Berou	147.50	348	PKIKP	PKPdf	20 05 16.9	+0.2
MORC	Moravsky Berou	147.50	348	ePKP	PKPdf	20 05 16.2	-0.5
MORC	Moravsky Berou	147.50	348	PKPdf	PKPdf	20 05 16.9	+0.2
TESR	Tescani	147.62	335	⇓P	PKPbc	20 05 21.3	+1.6
LANS	Liptovska Anna	147.66	345	ePKP2	PKPab	20 05 29.1	+7.2
LANS	Liptovska Anna	147.66	345	ePKP	PKPab	20 05 29.1	+7.2
GAZ	Gaziantep	147.71	312		PKPdf	20 05 16.9	-0.6
TLCR		147.72	331	⇓P	PKPbc	20 05 20.6	+0.7
TRPA	Tarpa	147.72	341	⇑P	PKPdf	20 05 19.6	+2.6
BMR	Baia Mare	147.81	339	⇓P	PKPab	20 05 27.7	+5.2
BNN	Bunyan	147.82	316		PKPdf	20 05 17.6	-0.1
PRU	Pruhonice	147.82	351	ePKP	PKPdf	20 05 19.9	+2.7
PRU				ex	x	20 05 31.3	
PRU				AMS	AMS	21 14 40.0	
	comp=Z,400nm,16.6s						
PRU	Pruhonice	147.82	351	ePKP2	PKPdf	20 05 19.9	+2.7
PRU				MLR	MLR		
	comp=Z,400nm,16.6s						
NKC	Novy Kostel	147.84	354	ePKP	PKiKP	20 05 22.7	+0.6
NKC	Novy Kostel	147.84	354	ePKP2	PKiKP	20 05 22.7	+0.6
ARCR	ARCALIA	148.02	338	⇑P	PKPab	20 05 24.5	+1.1
CFR	Carcaliu	148.03	332	⇑P	PKPdf	20 05 19.8	+2.1
VRI	Vrincioaia	148.10	334	⇑P	PKPdf	20 05 20.3	+2.5
VRAC	Vranov	148.14	348	⇓P	PKPbc	20 05 23.3	+2.4
VRAC	Vranov	148.14	348	PKPbc	PKPdf	20 05 19.9	+2.2
	comp=Z,1.2nm,0.4s,baz=339,slow=13,SNR=3.2						
VRAC	Vranov	148.14	348	ePKP	PKPdf	20 05 19.3	+1.6
PLOR	Plostina	148.15	334	⇓P	PKPdf	20 05 20.9	+3.0
TPGR	Topolog	148.15	331	⇓P	PKiKP	20 05 24.2	+1.3
COVR	Voineasa-Covas	148.34	334	⇑P	PKPab	20 05 27.7	+3.0
JAVC	Velka Javorina	148.34	347	ePKP	PKPbc	20 05 22.5	+0.9
KRUC	Moravsky	148.41	349	ePKP	PKPbc	20 05 21.6	0.0
VYHS	Vyhne	148.42	345	ePKP2	PKPbc	20 05 23.0	+1.3
VYHS	Vyhne	148.42	345	ePKP	PKPbc	20 05 23.0	+1.3
MESR	Meseseni	148.45	339	⇑P	PKPab	20 05 29.8	+4.8
TIRR	Tirgusor	148.46	330	⇓P	PKiKP	20 05 25.7	+2.2
GRF	Grafenberg Arr	148.49	355	ePKP	PKPdf	20 05 20.7	+2.4
	baz=7.6,slow=1.9						
GRF				eL	L	21 16 03.7	
	comp=Z,181nm,21.2s						
HARR	Harsova	148.50	331	⇓P	PKPab	20 05 27.0	+1.7
DOPR	Dopca	148.57	335	⇑P	PKPbc	20 05 23.0	+0.8
CJR	Cluj-Napoca	148.61	338	⇑P	PKiKP	20 05 26.2	+2.3
PSZ	Piszkesteto	148.69	344	⇑P	PKPab	20 05 30.0	+3.9
PSZ	Piszkesteto	148.69	344	PKIKP	PKPdf	20 05 18.2	-0.6
PSZ	Piszkesteto	148.69	344		PKPdf	20 05 18.2	-0.6
SMOL	Smolenice	148.72	347	ePKP2	PKPab	20 05 27.4	+1.3
SMOL	Smolenice	148.72	347	ePKP	PKPab	20 05 27.4	+1.3
SMOL				e		20 05 36.1	
MLR	Muntele Rosu	148.73	334	⇓P	PKPab	20 05 29.5	+3.1
MLR	Muntele Rosu	148.73	334	PKPbc	PKPbc	20 05 23.3	+0.5
	comp=Z,7.5nm,0.9s,baz=58,slow=1.5,SNR=5.3						
BR131	Keskin Array S	148.77	319	PKP2	PKPdf	20 05 21.6	+2.4
BR131	Keskin Array S	148.77	319	PKPbc	PKPdf	20 05 21.6	+2.4
BRTR	Keskin Array B	148.77	319	PKPbc	PKPdf	20 05 22.5	+3.3
	comp=Z,6.7nm,0.9s,baz=137,slow=1.7,SNR=12						
BRTR	Keskin Array B	148.77	319	PKP2	PKPdf	20 05 22.0	+2.8
BRTR	Keskin Array B	148.77	319		PKPdf	20 05 22.0	+2.8
ISR	Istrita	148.78	333	⇓P	PKiKP	20 05 26.3	+2.1
KHC	Kasperske Hory	148.79	352	ePKP	PKPbc	20 05 22.6	-0.1
KHC	Kasperske Hory	148.79	352	ePKP2	PKPbc	20 05 22.6	-0.1
LODK	Lodwar	148.81	245		PKPdf	20 05 20.1	+0.1
DRGR		148.84	339	⇑P	PKPbc	20 05 23.0	0.0
MODS	Modra-Piesok	148.89	347	ePKP2	PKiKP	20 05 26.8	+2.5
MODS	Modra-Piesok	148.89	347	ePKP	PKiKP	20 05 26.8	+2.5
CKRC	Cesky Krumlov	149.00	351	ePKP	PKPbc	20 05 23.3	+0.1
CKRC				AMS	AMS	21 11 40.0	
	comp=Z,500nm,17.3s						
GEC2	GERESS Array S	149.06	352		PKPbc	20 05 23.2	-0.2
GERES	GERESS Array B	149.06	352	PKPbc	PKPbc	20 05 23.4	-0.1
	comp=Z,1.3nm,0.6s,baz=30,slow=3.7,SNR=12						
GERES	GERESS Array B	149.06	352	PKP2	PKPdf	20 05 22.9	+3.5
GERES	GERESS Array B	149.06	352		PKPdf	20 05 22.9	+3.5
VOIR		149.14	335	⇓P	PKPbc	20 05 24.5	+0.7
ANTO	Ankara	149.21	320	PKP2	PKPbc	20 05 23.6	-0.5
ANTO	Ankara	149.21	320	PKPbc	PKPbc	20 05 23.6	-0.5
BR231	Keskin MP Arra	149.23	320	PKPbc	PKPdf	20 05 23.0	+3.0
ARR	Arges	149.36	336	⇓P	PKPbc	20 05 25.3	+1.0
CONA	Conrad Observa	149.60	349	eP	PKPbc	20 05 25.4	+0.6
	comp=Z,32nm,1.7s						
MOA	Molln	149.95	351	eP	PKPbc	20 05 25.9	+0.3
	comp=Z,13nm,1.2s						
GZR	Gura Zlata	150.03	338	⇑P	PKPbc	20 05 26.5	+0.6
COPA	Copaceanca	150.13	334	⇓P	PKPdf	20 05 20.2	-0.9
BZS	Buzias	150.24	340	⇑P	PKPdf	20 05 25.1	+3.9
ARSA	Arzberg	150.31	349	eP	PKPbc	20 05 26.8	+0.3
	comp=Z,12nm,1.1s						
HERR	Herculane	150.61	338	⇑P	PKiKP	20 05 30.7	+2.8
MOTA	Moosalm	150.83	355	eP	PKPbc	20 05 28.1	+0.2
	comp=Z,29nm,1.0s						
WTTA	Wattenberg	150.86	354	eP	PKPbc	20 05 28.1	+0.1
	comp=Z,12nm,0.6s						
MDVR	Moldovita	150.94	339	⇓P	PKPdf	20 05 26.1	+3.7
SQTA	Sankt Quirin	150.94	355	eP	PKPbc	20 05 28.4	+0.3
	comp=Z,30nm,1.3s						
SOKA	Soboth	150.96	349	eP	PKPbc	20 05 28.8	+0.7
	comp=Z,23nm,2.0s						
DAVA	Damuels	150.98	356	eP	PKPbc	20 05 28.5	+0.3
	comp=Z,20nm,1.1s						
FETA	Feichten	151.18	355	eP	PKPbc	20 05 29.2	+0.4
	comp=Z,36nm,1.2s						
FRGS	Fruska Gora	151.22	341	⇑P	PKiKP	20 05 34.0	+4.8
ABTA	Abfaltersbach	151.27	353	eP	PKPbc	20 05 28.3	-0.6
	comp=Z,34nm,1.0s						
DAVOX	Davos/Dischmat	151.48	356	PKPbc	PKPbc	20 05 30.2	+0.7
	comp=Z,13nm,0.8s,baz=286,slow=8.8,SNR=7.7						
LEF	Lefka	151.76	312	⇓P	PKPbc	20 05 30.1	-0.1
VTS	Vitosha	152.21	334	⇑P	PKPbc	20 05 30.7	-0.5
TIR	Tirane	154.60	338	⇓P	PKPdf	20 05 27.2	-0.6
TORD	Torodi Ar. Bea	172.59	133	PKP	PKPdf	20 05 44.1	-1.1
	comp=Z,2.1nm,1.0s,baz=282,slow=1.4,SNR=8.0						
TORD				PKPab	pPKPab	20 07 13.1	+1.6
	comp=Z,4.7nm,1.0s,baz=255,slow=4.2,SNR=9.9						
TORD	Torodi Ar. Bea	172.59	133		PKPdf	20 05 43.4	-1.8

NIED ***21*** *19:46:30.8, 31°.23N×128°.69E, h16^{km}, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-0.87; M$_{\theta\theta}$0.54; M$_{\phi\phi}$0.32; M$_{r\theta}$-0.15; M$_{\theta\phi}$2.05; M$_{\phi r}$-1.04; Fault plane solution: M$_0$2.36000×10^{14} NP1:ϕ_s7.00000°, δ78.00000°, λ-146.00000°. NP2:ϕ_s269.00000°, δ57.00000°, λ-15.00000°.*

JMA 21 19:46:30.8±0.5**, 31°.23N×128°.68E, h16^{km}**±4^{km}**, M3.5, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	0.99	63	P	Pb	19 46 48.7	-0.9
JSJ				eS	Sb	19 47 01.7	-0.8
JFU	Fukue jima 2	1.42	2	P	Pn	19 46 56.3	+0.3
JKC	Kuchinoerabu	1.51	120	P	Pb	19 46 58.3	-0.2
JSU	Suzuyama	1.54	79	P	Pn	19 46 58.1	+0.4
JNN	Nakanoshima	1.73	143	P	Pn	19 46 59.6	-0.6
JYAK	Yakushimahirau	1.86	122	P	Pn	19 47 01.3	-0.7
JTN	Tanegashima 3	2.06	106	P	Pn	19 47 04.7	0.0
JMTN	Minamitane	2.08	113	P	Pn	19 47 05.7	+0.6
JTZ	Takazaki	2.16	71	P	Pn	19 47 06.9	+0.7
JIU3	Izumi3	2.24	54	P	Pn	19 47 08.2	+0.9

ISN ***21*** *19:56:13.9±2.4, 32°.89N×47°.51E, h12^{km}±17^{km}, ML3.0*
TEH ***21*** *19:56:13.3, 32°.81N×47°.79E, h9^{km}, ML3.0*
ISC 21 19:56:13.2±0.9**, 32°.80N**±0°.04×**47°.69E**±0°.04**, h15^{km}, n36, σ2^{s}12**/38**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DHL1	Dehloran	0.37	251	ePg	Pb	19 56 21.9	+0.4
DHL1				eSg	Sb	19 56 29.1	+2.1
IKFM	Kafar-mosalman	0.73	10	ePg	Pg	19 56 27.0	-0.5
IKFM				e		19 56 39.9	
	comp=Z,14µm,0.4s						
IDOB	Doab	1.06	22	ePg	Pb	19 56 32.5	-1.0
BMDN	Meydan	1.29	47	ePg	Pn	19 56 36.6	-0.3
KCHF	Cheshme Sefid,	1.57	340	ePn	Pg	19 56 42.8	-0.6
KCHF				e		19 57 06.9	
	comp=Z,1µm,0.6s						
HSAM	Samen	1.60	28	ePn	Pn	19 56 42.1	+0.9
HSAM				e		19 56 44.4	
	comp=Z,2µm,0.2s						
KER	Kermanshah	1.65	344	ePn	Pg	19 56 44.2	-0.7
IBZA	Bozab	1.67	5	ePg	Pg	19 56 44.7	-0.7
AHWZ	Ahwaz	1.68	151	ePn	Pn	19 56 44.2	+2.2
AMIS	Naft Sefid	1.76	130	ePg	Pn	19 56 45.9	+2.6
IGHG	Ghaleghazi	1.79	329	ePn	Pg	19 56 47.5	-0.1
IGHG				e		19 57 35.3	
	comp=Z,1µm,0.6s						
IDHR	Dehrash	2.18	330	ePn	Pb	19 56 52.4	-0.2
IDHR				e		19 57 27.8	
	comp=Z,916nm,0.3s						
ILIN	Lien	2.20	344	ePn	Pb	19 56 52.0	-0.8
ILIN				e		19 57 32.5	
	comp=Z,664nm,0.4s						
NSR	Nassriya	2.22	217	ePg	Pn	19 56 44.0	-5.5
	baz=45						
NSR				eSg	Sn	19 57 09.0	-7.7
NSR				AML	AML	19 57 19.5	
	comp=E,153nm,0.5s						
HAGD	Aghdareh	2.35	31	ePn	Pn	19 56 53.6	+2.1
IPIR	Pirpir	2.70	92	ePn	Pn	19 56 58.4	+2.0
IPIR				e		19 57 41.9	
	comp=Z,435nm,0.6s						
SHK1	Shahrekord	2.74	99	ePn	Pn	19 56 58.5	+1.6
SHK1				e		19 57 39.4	
	comp=Z,504nm,0.6s						
BHD	Baghdad	2.82	280	ePn	Pn	19 56 59.0	+1.2
BHD				eSn	Sn	19 57 32.0	+0.5
BHD				AML	AML	19 57 41.2	
	comp=E,143nm,0.4s						
IBRJ	Brojen	3.15	105	ePn	Pn	19 57 03.8	+1.2
IRAZ	Razeghan	3.19	35	ePn	Pn	19 57 05.6	+2.5
IRAZ				e		19 58 08.0	
	comp=Z,229nm,0.6s						
QAMS	Qamsar	3.24	72	ePn	Pn	19 57 05.6	+1.8
QABG	Abgarm-Qazvin	3.29	28	ePn	Pn	19 57 06.7	+2.2
IKLH	Kolahrood	3.31	80	e		19 57 08.9	
	comp=Z,286nm,0.1s						
IKLH				ePn	Pn	19 57 07.3	+2.6
IQOM	Qom	3.47	53	ePn	Pn	19 57 08.6	+1.6
KLNJ	Kolanjah	3.77	117	ePn	Pn	19 57 12.8	+1.6
KRSH	Karshahi	3.90	71	ePn	Pn	19 57 14.5	+1.8
IZEF	Zefreh	3.91	87	ePn	Pn	19 57 15.3	+2.3
IVRN	Varamin	4.01	56	ePn	Pn	19 57 16.1	+1.9
IRAM	Ramesheh	4.09	103	ePn	Pn	19 57 17.0	+1.5
ISFB	Sefidab	4.10	67	ePn	Pn	19 57 17.0	+1.5
IGZV	Ghazvin	4.14	30	ePn	Pn	19 57 18.4	+2.3
JIR1	Jirandeh	4.27	23	ePn	Pn	19 57 20.0	+2.2
QALM	Alamut, Qazvin	4.37	33	ePn	Pn	19 57 20.8	+1.5
IDMV	Damavand	4.54	51	ePn	Pn	19 57 23.6	+1.9
IFIR	Firoozkooh	5.06	55	ePn	Pn	19 57 30.8	+2.0
ILAS	Lasjerd	5.07	58	ePn	Pn	19 57 29.9	+0.9

IDC ***21*** *20:02:29.8±0.8, 43°.69N×105°.45W, h0^{km}, mb3.9/6, mb1 3.9/14, mb1mx3.6/74, mbtmp3.7/14, ML3.4/7, MS3.3/4, Ms1 3.2/4, ms1mx2.8/54, Error ellipse: s-maj=15.8km s-min=7.5km az=148.0*
NEIC ***21*** *20:02:30.9±1.3, 43°.79N±0°.05×105°.29W±0°.08, h0^{km}±2^{km}, ML3.6/70, Error ellipse: s-maj=9.8km s-min=9.2km az=286.0*
ANF ***21*** *20:02:31.2±0.4, 43°.74N×105°.32W, h1^{km}, ML3.8/14, Error ellipse: s-maj=4.9km s-min=3.6km az=106.0*
ISC 21 20:02:30.3±0.6**, 43°.76N**±0°.03×**105°.26W**±0°.04**, h0^{km}, n110, σ1^{s}16**/115**, mb4.0**/6**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	Black Hills	0.95	67	P	Pb	20 02 49.6	-0.2
	baz=248						
RSSD	Black Hills	0.95	67	Pg	Pg	20 02 49.3	+0.8
K22A	Casper	1.44	220	P	Pn	20 02 56.3	-1.5
	baz=38,SNR=447						
K22A				S	Sb	20 03 17.4	+0.3
	baz=38						
K22A	Casper	1.44	220		Pn	20 02 56.3	-1.5
K22A				IAML		20 03 20.8	
	comp=N,809nm,0.6s						
K22A				IAML		20 03 22.2	
	comp=E,648nm,0.3s						
RWWY	Rawlins	2.52	215		Pn	20 03 13.9	+1.2
N23A	Red Feather La	2.91	190	P	Pn	20 03 19.1	+1.1
	baz=9.0,SNR=92						
N23A				Sb	Sb	20 04 00.7	+1.3
	baz=9.0						
LAO	LASA Array	3.01	347	P	Pn	20 03 20.9	+1.7
	baz=168						
LAO				Sb	Sb	20 04 03.1	+1.1
	baz=168						
LAO	LASA Array	3.01	347		Pn	20 03 19.7	+0.4
RLMT	Red Lodge	3.18	297	P	Pn	20 03 21.8	0.0
	baz=115,SNR=37						
RLMT	Red Lodge	3.18	297	Pn	Pn	20 03 21.6	-0.2
RLMT				IAML		20 04 12.8	
	comp=E,132nm,0.4s						
RLMT				IAML		20 04 14.1	
	comp=E,109nm,0.7s						
PD31	Pinedale Array	3.29	254	Pn	Pn	20 03 23.4	+0.1
PDAR	Pinedale Array	3.29	254	Pn	Pn	20 03 23.6	+0.2
	comp=E,9.1nm,0.3s,baz=68,slow=16,SNR=151						
PDAR				Lg	Lg	20 04 07.8	
	comp=E,19nm,0.3s,baz=75,slow=35,SNR=8.1						
PDAR				LR	LR	20 04 21.9	
	comp=E,63nm,20.9s,baz=140,slow=36						
PDAR	Pinedale Array	3.29	254	Pn	Pn	20 03 23.2	-0.1
BW06	Boulder Array	3.29	254	Pn	Pn	20 03 23.5	+0.2
	baz=71						
BW06				Pb	Pb	20 03 29.2	-0.5
	baz=71						
BW06	Boulder Array	3.29	254		Pn	20 03 23.3	0.0
BW06				IAML		20 04 11.7	
	comp=E,96nm,0.5s						
BW06				IAML		20 04 17.0	
	comp=E,109nm,0.6s						
YMP	Mirror Lake Pl	3.65	287		Pn	20 03 28.1	-0.3
OGNE	Ogallala	3.69	139	Pn	Pn	20 03 30.0	+1.4
GCMT	Greycliff	3.74	304		Pn	20 03 29.8	+0.4
LKWY	Lake	3.79	284		Pn	20 03 31.9	+1.8
LKWY				IAML		20 03 57.9	
	comp=E,78nm,0.8s						
LOHW	Long Hollow	3.88	270		Pn	20 03 31.8	+0.4
H17A	Grant Village	3.89	281	P	Pn	20 03 33.0	+1.5
	baz=98,SNR=7.7						
H17A				Sb	Sb	20 04 29.2	+1.8
	baz=98						
H17A	Grant Village	3.89	281		Pn	20 03 32.3	+0.9
H17A				IAML		20 04 34.4	
	comp=N,78nm,0.6s						
FLWY	Flagg Ranch	3.94	277		Pn	20 03 32.4	+0.1
FLWY				IAML		20 04 46.1	
	comp=N,83nm,1.0s						
FLWY				IAML		20 05 08.5	
	comp=N,83nm,1.1s						
ISCO	Idaho Springs	3.96	184	P	Pn	20 03 33.8	+1.2
	baz=3.1,SNR=8.1						
ISCO				Sb	Sb	20 04 32.3	+2.5
	baz=3.1						
ISCO	Idaho Springs	3.96	184	Pn	Pn	20 03 33.7	+1.1
MOOW	Moose Ponds	3.98	272	Pn	Pn	20 03 33.7	+1.0
SNOW	Snow King Moun	4.00	268		Pn	20 03 34.0	+0.9
SNOW				IAML		20 04 38.0	
	comp=N,79nm,0.9s						
SNOW				IAML		20 04 41.5	
	comp=N,68nm,0.9s						
YNR	Norris Junctio	4.01	286		Pn	20 03 33.0	-0.2
REDW	Red Top Meadow	4.09	266		Pn	20 03 34.0	-0.2
REDW				IAML		20 04 52.8	
	comp=N,81nm,1.1s						
TPAW	Teton Pass	4.14	268		Pn	20 03 35.8	+0.8
TPAW				IAML		20 04 55.9	
	comp=N,66nm,0.9s						
TPAW				IAML		20 05 03.2	
	comp=N,90nm,1.0s						
YHH	Holmes Hill	4.15	286	Pn	Pn	20 03 34.4	-0.7
YHH				IAML		20 04 47.6	
	comp=N,43nm,1.1s						
FXWY	Fox Creek	4.19	270		Pn	20 03 36.2	+0.7
YMR	Madison River	4.20	284		Pn	20 03 36.9	+1.1
YMR				IAML		20 05 02.3	
	comp=N,76nm,0.8s						
YMR				IAML		20 05 05.4	
	comp=E,79nm,1.0s						
O20A	White River Ci	4.25	213	P	Pn	20 03 37.5	+1.1
	baz=30,SNR=17						
O20A	White River Ci	4.25	213		Pn	20 03 37.2	+0.7
O20A				IAML		20 04 50.0	
	comp=N,84nm,0.7s						
O20A				IAML		20 04 50.7	
	comp=E,80nm,0.6s						
E28A	Huff	4.28	47		Pn	20 03 38.2	+1.5
AHID	Auburn Hatcher	4.38	259		Pn	20 03 38.5	+0.3
AHID				IAML		20 04 54.9	
	comp=E,47nm,0.9s						
AHID				IAML		20 04 57.8	
	comp=E,84nm,0.8s						
YHL	Hebgen Lake	4.39	286		Pn	20 03 38.1	-0.3
YHL				IAML		20 04 57.0	
	comp=E,71nm,1.2s						
YHL				IAML		20 05 00.4	
	comp=N,56nm,1.0s						
ECR	Eagle Creek	4.51	263		Pn	20 03 40.5	+0.5
RDMU	Red Mountain	4.52	227	Pn	Pn	20 03 40.2	+0.1
RDMU				IAML		20 04 59.1	
	comp=E,75nm,0.9s						
RDMU				IAML		20 05 02.2	
	comp=N,54nm,1.0s						
QLMT	Earthquake Lak	4.56	286		Pn	20 03 40.7	0.0
SUSD	Miller	4.59	79	Pb	Pb	20 03 52.1	+0.4
	baz=263						
SUSD	Miller	4.59	79		Pn	20 03 42.1	+1.2
DGMT	Dagmar	4.77	9	P	Pn	20 03 45.0	+1.6
	baz=190						
DGMT				Sb	Sb	20 04 57.3	+4.7
	baz=190						
DGMT	Dagmar	4.77	9	Pn	Pn	20 03 44.7	+1.3
Q24A	Divide	4.79	179	P	Pn	20 03 44.9	+1.0
	baz=358						
K31A	O'Neill	4.89	101		Pn	20 03 45.2	+0.2
BOZ	Bozeman (W)	4.90	294	Pn	Pn	20 03 45.6	+0.3
	baz=110						
BOZ				Pb	Pb	20 03 57.9	+0.9
	baz=110,SNR=6.4						
BOZ				Sb	Sb	20 04 58.9	+2.3
	baz=110						
BOZ	Bozeman (W)	4.90	294		Pn	20 03 45.5	+0.2
BOZ				IAML		20 05 03.2	
	comp=N,33nm,1.1s						
BOZ				IAML		20 05 12.4	
	comp=N,30nm,0.8s						
HWUT	Hardware Ranch	5.12	247		Pn	20 03 48.2	-0.2
KSCO	Kaye Shedlock'	5.14	156	P	Pn	20 03 49.2	+0.6
	baz=338,SNR=9.9						
KSCO	Kaye Shedlock'	5.14	156	Pn	Pn	20 03 49.0	+0.5
TCUT	Toone Canyon	5.26	242		Pn	20 03 49.9	-0.5
EGMT	Eagleton	5.30	325	Pn	Pn	20 03 50.5	-0.2
DLMT	Dillon	5.48	290		Pn	20 03 53.0	-0.4
HRY	Holter Researc	5.50	305		Pn	20 03 53.8	+0.2
P18A	Preston Nutter	5.56	224		Pn	20 03 54.9	+0.3
MDND	Maddock	5.69	42	Pb	Pg	20 04 14.9	-4.3
	baz=226,SNR=7.5						
MDND	Maddock	5.69	42	Pn	Pn	20 03 56.2	+0.2
BCYI	Bear Canyon	5.90	278		Pn	20 04 00.7	+1.6
P17A	Butcher Ranch,	5.93	226		Pn	20 04 00.3	+0.8
SDCO	Great Sand Dun	6.01	182	P	Pn	20 04 02.2	+1.5
	baz=1.2,SNR=5.3						
SDCO	Great Sand Dun	6.01	182	Pn	Pn	20 04 01.6	+0.9
MPU	Maple Canyon	6.05	234		Pn	20 04 00.9	-0.3
ECSD	EROS Data Cent	6.26	87	P	Pn	20 04 04.9	+1.1
	baz=273						
ECSD	EROS Data Cent	6.26	87		Pn	20 04 04.8	+0.9
TMUT	Trail Mountain	6.31	227		Pn	20 04 05.7	+0.9
NLU	North Lily Min	6.35	236	Pn	Pn	20 04 05.1	-0.2
CBKS	Cedar Bluff	6.46	138	Pn	Pn	20 04 06.7	+0.1
T25A	Trinidad	6.64	174	P	Pn	20 04 10.1	+0.8
	baz=354,SNR=6.3						
T25A	Trinidad	6.64	174		Pn	20 04 09.8	+0.5
HLID	Hailey	6.64	271	P	Pn	20 04 11.4	+2.1
	baz=85,SNR=5.9						
HLID	Hailey	6.64	271	Pn	Pn	20 04 10.9	+1.6
DUG	Dugway, Tooele	6.66	240	P	Pn	20 04 09.6	+0.1
	baz=55,SNR=7.2						
DUG	Dugway, Tooele	6.66	240	Pn	Pn	20 04 09.4	-0.1
D32A	Dogwood Acres,	6.71	57	Pn	Pn	20 04 11.7	+1.7
F33A	5 Mile Ranch,	6.71	69		Pn	20 04 12.5	+2.5
MSO	Missoula	6.85	300	P	Pn	20 04 11.8	-0.3
	baz=114						
MSO	Missoula	6.85	300	Pn	Pn	20 04 11.4	-0.7
MVCO	Mesa Verde	6.99	202	P	Pn	20 04 17.0	+2.9
	baz=19,SNR=6.1						
MVCO	Mesa Verde	6.99	202	Pn	Pn	20 04 16.1	+2.0
MSU	Marysvale	7.40	227	Pn	Pn	20 04 20.1	+0.5
MVU	Marysvale	7.42	227		Pn	20 04 19.9	-0.2
JTMT	Jette	7.47	305	Pn	Pn	20 04 20.4	-0.1
AGMN	Agassiz Nation	7.96	52	P	Pn	20 04 27.3	+0.2
	baz=239						
AGMN	Agassiz Nation	7.96	52	Pn	Pn	20 04 26.1	-1.0
WALA	Waterton Lakes	7.99	315	Pn	Pn	20 04 26.5	-1.2
ELK	Elko	7.99	251	Pn	Pn	20 04 28.2	+0.3
	comp=N,0.5nm,0.3s,baz=66,slow=7.1,SNR=5.3						
F36A	Milaca	8.60	72	Pn	Pn	20 04 35.1	-0.9
ANMO	Albuquerque	8.85	186	Pg	Pg	20 05 09.1	-11
	comp=N,0.1nm,0.3s,baz=335,slow=19,SNR=1.8						
I10CA	LAC DU BONNET	9.01	41	i		21 00 00.0	

	baz=220,slow=329,SNR=2.0						
SPMN	Marine on St.	9.02	76	Pn	Pn	20 04 41.9	+0.1
ULM	Lac du Bonnet	9.12	41	Pn	Pn	20 04 43.0	0.0
	comp=N,2.6nm,0.3s,baz=232,slow=11,SNR=15						
ULM				Lg	Lg	20 07 13.5	
	comp=N,0.8nm,0.3s,baz=135,slow=22,SNR=1.7						
ULM	Lac du Bonnet	9.12	41	Pn	Pn	20 04 42.5	-0.5
B35A	Bob, Littlefor	9.24	56	Pn	Pn	20 04 44.0	-0.7
NEW	Newport	9.40	303	Pn	Pn	20 04 46.2	-0.7
	comp=N,0.1nm,0.3s,baz=102,slow=19,SNR=1.7						
NEW				Lg	Lg	20 07 17.7	
	comp=N,0.1nm,0.3s,baz=64,slow=20,SNR=1.9						
FFC	Flin Flon	11.18	10	Pn	Pn	20 05 09.4	-1.8
NVAR	Mina Array Bea	11.19	246	Pn	Pn	20 05 11.7	0.0
	comp=N,0.3nm,0.3s,baz=50,slow=12,SNR=9.2						
NVAR				LR	LR	20 10 01.8	
	comp=N,104nm,20.7s,baz=290,slow=41						
NVAR	Mina Array Bea	11.19	246		Pn	20 05 12.8	+1.2
YBH	Yreka Blue Hor	12.99	267	Pn	Pn	20 05 36.2	+0.1
	comp=N,0.1nm,0.3s,baz=76,slow=8.3,SNR=1.5						
TXAR	Lajitas Array	14.45	174	Pn	Pn	20 05 57.0	+0.8
	comp=N,0.1nm,0.3s,baz=354,slow=13,SNR=1.5						
TXAR				Lg	Lg	20 09 57.8	
	comp=N,0.1nm,0.3s,baz=5.5,slow=29,SNR=2.3						
TKL	Tuckaleechee C	18.37	109	LR	LR	20 12 52.2	
	comp=N,88nm,18.6s,baz=254,slow=34						
YKA	Yellowknife Ar	19.55	347	P	P	20 06 58.8	-0.4
	comp=N,0.2nm,0.3s,baz=151,slow=10,SNR=4.2						
ILAR	Eielson Array	31.26	327	P	P	20 08 52.4	+1.0
	comp=N,0.2nm,0.6s,baz=119,slow=9.3,SNR=5.7						
ARCES	ARCESS Array B	61.40	18	P	P	20 12 46.1	-1.5
	comp=N,2.9nm,0.9s,baz=335,slow=8.0,SNR=6.3						
NRIK	Noril'sk	66.82	355	LR	LR	20 43 50.4	
	comp=N,182nm,21.3s,baz=84,slow=37						
ZALV	Zalesovo Beam	82.29	354	P	P	20 14 52.5	-0.8
	comp=N,1.2nm,0.5s,baz=7.2,slow=5.3,SNR=6.6						
BVAR	Borovoye Array	83.52	3	P	P	20 14 59.4	-0.3
	comp=N,0.5nm,0.5s,baz=308,slow=7.3,SNR=3.6						
SONM	Songino Array	84.62	339	P	P	20 15 05.5	-0.1
	comp=N,0.4nm,0.5s,baz=26,slow=3.7,SNR=2.1						
MKAR	Makanchi Array	89.58	355	P	P	20 15 28.9	-0.7
	comp=N,0.8nm,0.6s,baz=15,slow=4.0,SNR=8.3						

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*VAO **21** 20:04:01.1±0.6, 23°.64S×69°.81W, h10^{km}, mb4.3*
*GUC **21** 20:04:16.1±0.7, 23°.08S×69°.21W, h98^{km}±3^{km}, ML3.9*
ISC 21 20:04:15.2±0.7, **23°.11S**±0°.03×**69°.22W**±0°.06, **h101**^{km}±7^{km}, **n43**, σ1^{s}.**93**/57, **1C-8D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB15	IPOC Station P	0.26	246	⇓*i*P	Pn	20 04 30.2	+0.2
PB15				*i* S	Sn	20 04 40.8	-0.2
PB06	IPOC Station P	0.52	320	⇓*i*P	Pn	20 04 31.7	+0.3
PB06				*i* S	Sn	20 04 43.4	-0.1
LVC	Limon Verde	0.57	30	*e*P	Pn	20 04 32.0	-0.1
LVC				*i* S	Sn	20 04 43.4	-1.2
PB05	IPOC Station P	0.94	285	⇓*i*P	Pn	20 04 35.4	+0.1
PB05				*i* S	Sn	20 04 49.8	-0.5
PB05				IAML		20 04 50.6	
	comp=E,3μm,0.4s						
PB04	IPOC Station P	1.15	312	⇓*i*P	Pn	20 04 37.9	+0.3
PB04				*i* S	Sn	20 04 54.2	-0.2
PB04				IAML		20 04 57.3	
	comp=N,2μm,0.2s						
PB03	IPOC Station P	1.16	335	*i* P	Pn	20 04 38.2	+0.5
PB03				*i* S	Sn	20 04 54.6	0.0
PB03				IAML		20 04 55.8	
	comp=N,2μm,0.6s						
PB10	IPOC Station P	1.29	251	⇑*i*P	Pn	20 04 39.0	-0.1
PB10				*i* S	Sn	20 04 55.7	-1.5
PB10				IAML		20 05 00.5	
	comp=E,632nm,0.5s						
PB09	IPOC Station P	1.30	359	⇓*i*P	Pn	20 04 40.6	+1.2
PB09				*i* S	Sn	20 04 58.4	+0.8
PB09				IAML		20 05 01.0	
	comp=E,2μm,0.6s						
PB07	IPOC Station P	1.50	336	⇓*i*P	Pn	20 04 42.2	+0.4
PB07				*i* S	Sn	20 05 01.2	-0.7
PB07				IAML		20 05 04.5	
	comp=E,951nm,0.3s						
PB14	IPOC Station P	1.86	215	*e*P	Pn	20 04 46.1	-0.4
PB14				*i* S	Sn	20 05 08.9	-1.2
PB14				IAML		20 05 13.8	
	comp=N,372nm,0.6s						
PB02	IPOC Station P	1.89	340	⇓*i*P	Pn	20 04 46.9	+0.4
PB02				*e*S	Sn	20 05 10.3	+0.1
PB02				IAML		20 05 12.3	
	comp=E,2μm,0.6s						
PB01	IPOC Station P	2.07	353	*i* P	Pn	20 04 49.2	+0.4
TA01	Diego Aracena	2.68	340	*e*P	Pn	20 04 55.9	-0.9
TA01				*e*S	Sn	20 05 29.6	+0.9
TA01				IAML		20 05 38.9	
	comp=E,377nm,0.1s						
PB08	IPOC Station P	2.95	1	*i* P	Pn	20 05 01.1	+0.4
PB08				*e*S	Sn	20 05 30.1	-5.6
PB08				IAML		20 05 38.7	
	comp=E,206nm,0.5s						
PB11	IPOC Station P	3.35	353	*e*P	Pn	20 05 05.2	-0.7
PB11				*e*S	Sn	20 05 43.6	-1.5
PB11				IAML		20 06 12.7	
	comp=N,982nm,0.9s						
AC02	Maricunga	3.72	179	*i* P	Pn	20 05 11.8	+0.7
AC02				*e*S	Sn	20 05 54.9	+0.7
AC02				IAML		20 05 57.5	
	comp=E,298nm,0.4s						
PB12	IPOC Station P	4.59	347	⇓*i*P	Pn	20 05 20.5	-2.1
PB12				*e*S	Sn	20 06 10.1	-4.7
PB12				IAML		20 06 11.5	
	comp=E,133nm,0.6s						
ITQB	Itaqui	13.04	123	*e*P	Pn	20 07 09.2	-7.4
VILB	Vilhena	13.24	42	*e*P	Pn	20 07 19.8	+0.4
CPSB	Cacapava Do Su	15.85	121	*e*P	Pn	20 07 46.4	-6.2
PLTB	Pedras Altas	16.31	125	*e*P	Pn	20 07 52.2	-6.1
PDRB	Porto dos Gac	16.50	48	*e*P	Pn	20 08 02.4	+1.6
PCMB	Pacaembu	16.68	88	*e*P	Pn	20 08 03.2	+0.3
PLCA	Paso Flores	17.61	183	*e*P	P	20 07 59.3	-15
ITRB	Iturama	17.88	83	*e*P	P	20 08 17.6	+0.7
ARAG	Araguaiana, MT	17.98	69	*e*P	P	20 08 18.6	+0.6
TIJ01	Guaruva-PR	18.57	101	*e*P	P	20 08 23.3	-1.2
TER01	Tubaro-SC	18.87	111	*e*P	P	20 08 24.8	-2.8
IPMB	Ipameri, GO	20.31	79	*e*P	P	20 08 44.3	+0.9
VAO	Valinhos	20.48	94	*e*P	P	20 08 44.7	-0.5
NPGB	Novo Progresso	20.80	42	*e*P	P	20 08 50.8	+2.1
MACA	Manacapuru-AM	21.48	24	*e*P	P	20 08 57.8	+1.9
JANB	Januaria	24.83	76	*e*P	P	20 09 30.0	+1.5
SMTB	Santa Maria do	25.10	59	*e*P	P	20 09 32.9	+2.0
PRPB	Parauapebas	25.16	51	*e*P	P	20 09 33.1	+1.7
SDBA	SAO DESIDERIO	25.44	69	*e*P	P	20 09 35.9	+2.0
CAM01	Campos-RJ	25.49	93	*e*P	P	20 09 34.5	+0.2
ALF01	Guarapari-ES	26.54	90	*e*P	P	20 09 45.0	+1.2
BOAV	Boa Vista	26.73	20	*e*P	P	20 09 47.5	+2.1
GDU01	Guandu, BA	29.58	77	*e*P	P	20 10 11.9	+1.0
NBMA	Muriti-CE	33.18	67	*e*P	P	20 10 43.8	+1.2
NBCL	Cascavel-CE	35.29	63	*e*P	P	20 11 02.4	+1.7
NBPV	Pedro Velho	36.62	68	*e*P	P	20 11 14.0	+1.9

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*IDC **21** 20:10:25.3±1.0, 1°.04N×127°.53E, h0^{km}, mb4.1/6, mb1 4.2/7, mb1mx3.7/39, mbtmp4.0/7, ML2.9/1, Error ellipse: s-maj=41.1km s-min=17.6km az=63.0*
*DJA **21** 20:10:28.6±0.9, 1°N±4°×12°7E±°, h15^{km}±10^{km}, M3.7/10, mb3.9/5, mB4.3/1, MLv3.6/10, Mw(mB)3.5/1*
ISC 21 20:10:27.1±0.9, **1°.08N**±0°.08×**127°.55E**±0°.07, **h10**^{km}, **n15**, σ1^{s}.**48**/17, **mb4.1**/6, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBMI	Labuha	1.71	182	P	Pn	20 10 58.1	+1.1
LBMI				S	Sn	20 11 22.2	+3.3
SANI	Sanana	3.48	207	P	Pn	20 11 20.6	-0.7
KMSI	Cibinong	3.60	262	P	Pn	20 11 24.0	+1.0
KMSI				S	Sn	20 12 04.3	-1.4
SIJI	Sorong	4.19	118	Pn	Pn	20 11 32.1	+0.9
	0.7nm,0.3s,baz=333,slow=14,SNR=9.9						
SIJI				Sn	Sn	20 12 20.6	+0.3
	0.8nm,0.3s,baz=335,slow=24,SNR=7.3						
GTOI	Gorontalo	4.56	264	P	Pn	20 11 39.0	+2.8
MRSI	Marisa	5.64	264	P	Pn	20 11 51.6	+0.6
	0.1nm15nm,0.7s						
MPSI	Mapaga	7.69	265	P	Pn	20 12 20.4	+1.2
	0.0nm5.7nm,1.0s						
TTSI	Tana Toraja	8.75	242	P	Pn	20 12 28.9	-4.8
BNSI	Bone	9.22	234	P	Pn	20 12 39.1	-1.1
WRA	Warramunga Arr	21.93	163	P	P	20 15 20.3	-0.6
	3.3nm,0.6s,baz=341,slow=11,SNR=38						
ASAR	Alice Springs	25.37	166	P	P	20 15 53.9	-0.7
	3.3nm,0.7s,baz=345,slow=10,SNR=34						
STKA	Stephens Creek	35.38	159	P	P	20 17 22.1	-1.0
	1.0nm,0.3s,baz=310,slow=7.9,SNR=3.7						
PETK	Petropavlovsk-	57.57	21	P	P	20 20 16.0	-1.0
	2.2nm,0.9s,baz=197,slow=4.5,SNR=1.8						
MKAR	Makanchi Array	60.19	326	P	P	20 20 35.5	+0.3
	0.8nm,0.7s,baz=119,slow=8.3,SNR=6.9						
KURBB	Kurchatov Arra	64.40	328	P	P	20 21 03.6	+0.3
	1.3nm,0.4s,baz=119,slow=5.9,SNR=4.1						

NOU 21 20:18:02.0, 17°.74S×168°.42E, h60^{km}**, MLv3.3**/4**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTV	Rentapao	0.05	175	P	Pn	20 18 11.3	+0.4
DVP	Devils Point	0.22	274	P	Pn	20 18 12.9	+1.3

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*TUL **21** 20:22:39.6±1.2, 36°.735N±0°.009×98°.34W±0°.02, h5^{km}±6^{km}, ML2.6, mb_Lg2.3/11(NEIC), Error ellipse: s-maj=2.6km s-min=1.1km az=105.0*
NEIC 21 20:22:40.1±1.5, **36°.73N**±0°.02×**98°.34W**±0°.01, **h12**^{km}±6^{km}, **Error ellipse: s-maj=2.5km s-min=1.7km az=184.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK032	Salt Plains WL	0.13	55	Pg	Pg	20 22 42.8	-0.5
OK032				Sg	Sg	20 22 45.0	-0.7
CROK	Carrier	0.36	128	Pg	Pg	20 22 47.2	-0.2
CROK				Sg	Sg	20 22 52.5	+0.2
KAN14	Manchester OK	0.38	53	Pg	Pg	20 22 47.3	-0.4
KAN14				Sg	Sg	20 22 52.7	0.0
GC02	Grant County #	0.41	72	Pg	Pg	20 22 47.8	-0.3
GC02				Sg	Sg	20 22 53.5	0.0
KAN16	Harper SW Stat	0.54	24	Pg	Pg	20 22 50.4	-0.3
KAN16				Sg	Sg	20 22 57.8	-0.1
KAN17	Caldwell West	0.56	56	Pg	Pg	20 22 50.7	-0.3
KAN17				Sg	Sg	20 22 58.4	0.0
KAN01	Argonia South	0.63	48		Pg	20 22 51.5	-0.9
KAN12	Harper NE Stat	0.63	26	Pg	Pg	20 22 51.8	-0.6
U32A	Winter Ranch,	0.64	237	Pg	Pg	20 22 52.1	-0.4
U32A				Sg	Sg	20 23 00.9	+0.1
KAN09	Caldwell North	0.71	55	Pg	Pg	20 22 53.2	-0.5
KAN09				Sg	Sg	20 23 03.0	-0.1
BLOK	Blackwell	0.90	88	Pg	Pg	20 22 56.9	-0.7
OK029	Liberty Lake	1.18	142		Pb	20 23 01.6	-0.7
BCOK	Bluff Creek, N	1.22	151	Pg	Pn	20 23 02.5	-0.5
QUOK	Quay	1.43	112	Pn	Pn	20 23 06.1	+0.2
OK031	S. Brethren Rd	1.44	122		Pb	20 23 06.5	-0.3
OK031				IAmb_Lg		20 23 24.4	
	comp=Z,15nm,1.2s						
T35A	Sooner Cattle	1.48	82	Pn	Pn	20 23 06.9	+0.3
FNO	Franklin	1.66	152	Pn	Pn	20 23 09.6	+0.6
R32A	Long Quarter,	1.71	350		Pb	20 23 10.9	-0.7
R32A				IAmb_Lg		20 23 38.0	
	comp=Z,15nm,0.8s						
WMOK	Wichita Mounta	2.02	190	Pn	Pn	20 23 14.6	+0.6
X34A	Smith Ranch, M	2.16	169	Pn	Pn	20 23 17.6	+1.6
TUL1	Leonard	2.21	111	Pn	Pn	20 23 16.4	-0.2
CBKS	Cedar Bluff	2.36	332	IAmb_Lg		20 23 58.3	
	comp=Z,15nm,0.8s						
LOOK	Love County	2.89	161	Pn	Pn	20 23 27.1	+1.1
U38A	Gravette	3.20	94	Pn	Pn	20 23 31.8	+1.6
X37A	Clayton	3.23	131	Pn	Pn	20 23 29.8	-0.8
AMTX	Amarillo	3.28	237	IAmb_Lg		20 24 30.4	
	comp=Z,12nm,0.8s						
HHAR	Hobbs	3.57	96	Pn	Pn	20 23 36.5	+1.1
HHAR				IAmb_Lg		20 24 36.1	
	comp=Z,8.7nm,0.9s						
S39A	Bolivar	4.12	75	Pn	Pn	20 23 44.7	+1.9
U40A	Yellville	4.43	93	Pn	Pn	20 23 48.8	+1.6
MIAR	Mount Ida	4.45	118	Pn	Pn	20 23 49.3	+1.9
X40A	Basin Creek Fa	5.01	115	IAmb_Lg		20 25 24.9	
	comp=Z,9.3nm,1.1s						

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*SOME **21** 20:27:37.3, 40°.82N×73°.05E, h0^{km}*
*ISU **21** 20:27:37, 40°.48N×73°.07E, h5^{km}*
*KRNET **21** 20:27:37.3±0.1, 40°.68N×73°.06E, h17^{km}, mb3.2*
*KNET **21** 20:27:38.9±0.3, 40°.80N×73°.11E, h13^{km}±2^{km}, ml2.7, Error ellipse: s-maj=6.2km s-min=2.3km az=103.0*
*NNC **21** 20:27:40.4±1.3, 40°.85N×73°.16E, h0^{km}, mb3.6, mpv3.3, Error ellipse: s-maj=11.7km s-min=7.2km az=168.0*
ISC 21 20:27:34.4±1.2, **40°.59N**±0°.03×**73°.26E**±0°.02, **h1**^{km}±10^{km}, **n62**, σ1^{s}.**16**/106, **46C-8D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	Osh	0.37	260	*e*P	Pn	20 27 50.0	+3.1
OHH				*e*S	Sg	20 27 46.0	-0.2
OHH	Osh	0.37	260	⇑*i*P	Pb	20 27 42.6	-1.2
	baz=35						
OHH				⇑*i*S	Sg	20 27 46.6	+0.4
	baz=35						
SALK	Salom-Alik	0.52	55	⇑*e*P	Pn	20 27 48.9	-0.1
	baz=70						
SALK				⇑*e*S	Sn	20 27 57.9	-0.6
	baz=70						
SFK	Sufi-Kurgan	0.60	162	*e*P	Pn	20 27 50.0	-0.3
SFK				*e*S	Sn	20 28 01.0	+0.2
SFK	Sufi-Kurgan	0.60	162	⇑*e*P	Pn	20 27 50.7	+0.4
	baz=53						
SFK				⇑*e*S	Sn	20 28 01.9	+1.1
	baz=53						
ANR	Andizhan	0.71	284	*e*P	Pb	20 27 49.0	-0.5
ANR				*e*S	Sg	20 27 57.0	-0.1
FRG	Fergana	1.15	260	*e*P	Pn	20 27 57.0	-0.6
FRG				*e*S	Sg	20 28 11.0	-0.2
AML	Almayashu	1.58	12	⇓P	Pg	20 28 05.4	+0.9
	133nm,0.2s,SNR=152						
AML				⇑S	Sg	20 28 26.0	+1.0
	119nm,0.2s						
AML	Almayashu	1.58	12	⇑*i*P	Pg	20 28 05.5	+0.9
	baz=18						
AML				⇑*i*S	Sg	20 28 26.0	+1.0
	baz=18						
DRK	Karamyk	1.58	226	⇑*i*P	Pg	20 28 05.6	+1.0
	baz=19						
DRK				⇑*i*S	Sg	20 28 26.2	+1.2
	baz=19						
TRKS	Terek-Say	1.86	301	⇑*i*P	Pn	20 28 07.2	-0.3
	baz=99						
TRKS				⇑*i*S	Sn	20 28 29.0	-2.7
	baz=99						
UCH	Uchtor	1.89	29	⇑P	Pg	20 28 11.8	+1.2
	8.0nm,0.2s,SNR=37						
UCH				⇓S	Sg	20 28 37.2	+2.1
	86nm,0.2s						
UCH	Uchtor	1.89	29	⇑*i*P	Pg	20 28 11.8	+1.2
	baz=35						
UCH				⇑*i*S	Sg	20 28 37.0	+1.9
	baz=35						
BTK	Batken	1.94	255	*e*P	Pn	20 28 09.0	+0.5
BTK				*e*S	Sg	20 28 36.0	-0.8
BTK	Batken	1.94	255	⇑*e*P	Pb	20 28 10.5	-0.1
	baz=51						
BTK				⇑*i*S	Sb	20 28 34.8	-0.5
	baz=51						
MNAS	Manas	1.98	344	⇑*i*P	Pb	20 28 11.1	-0.2
	baz=47						
MNAS				⇑*i*S	Sn	20 28 35.6	+0.9
	baz=47						
EKS2	Erkin-Say	2.11	10	⇑P	Pg	20 28 14.3	-0.5
	8.9nm,0.2s,SNR=25						
EKS2				⇑S	Sg	20 28 41.3	-0.8
	26nm,0.3s						
EKS2	Erkin-Say	2.11	10	⇑*i*P	Pb	20 28 13.9	+0.5
	baz=15						
EKS2				⇑*i*S	Sb	20 28 40.4	+0.2
	baz=15						
MRKS	Merke	2.15	359	*e*P	Pg	20 28 15.0	-0.7
	27nm,0.3s						
MRKS				*e*S	Sb	20 28 42.4	+0.9
	407nm,0.4s						
MRKS	Merke	2.15	359	Pg	Pg	20 28 15.0	-0.7
	27nm,0.3s						
MRKS				Lg	Lg	20 28 42.4	
	407nm,0.4s						
AAK	Ala-Archa	2.25	24	⇓P	Pg	20 28 16.9	-0.5
	12nm,0.2s,SNR=17						
AAK				⇑S	Sg	20 28 46.3	-0.2
	67nm,0.3s						
AAK	Ala-Archa	2.25	24	⇑Pn	Pg	20 28 16.8	-0.6
	9.7nm,0.5s						
AAK				⇑Lg	Lg	20 28 46.7	
	23nm,0.4s						
AAK	Ala-Archa	2.25	24	⇑*i*P	Pb	20 28 16.3	+0.5
	baz=28						
AAK				⇑*i*S	Sb	20 28 44.8	+0.6
	baz=28						
KBK	Karagaybulak	2.42	31	⇑P	Pg	20 28 20.2	-0.6
	8.2nm,0.2s,SNR=23						
KBK				⇑S	Sg	20 28 51.8	-0.4
	52nm,0.2s						
FRU1	Bishkek	2.44	24	⇑*i*P	Pb	20 28 19.6	+0.4
	baz=28						
FRU1				⇑*i*S	Sb	20 28 50.0	+0.2
	baz=28						
CHMG	Chimgan	2.64	292	*e*P	Pg	20 28 24.0	-1.0
CHMG				*e*S	Sb	20 28 55.0	-0.5
CHMS	Chumysh	2.65	24	⇑P	Pb	20 28 21.7	-1.0
	11nm,0.4s,SNR=8.7						
CHMS	Chumysh	2.65	24	⇑*i*P	Pb	20 28 21.9	-0.8
	baz=28						
CHMS				⇑*i*S	Sb	20 28 54.3	-1.5
	baz=28						
CHRV	Charvak	2.71	294	*e*P	Pb	20 28 24.0	+0.3
CHRV				*e*S	Sb	20 28 56.0	-1.5
DZA	Taraz	2.72	329	*e*P	Pb	20 28 24.3	+0.5
	48nm,0.3s						
DZA				*e*S	Sb	20 28 58.0	+0.4
	166nm,0.4s						
BOOM	Boomskoye usch	2.77	46	⇑*i*P	Pb	20 28 24.4	-0.3
	baz=49						
BOOM				⇑*i*S	Sb	20 28 58.9	-0.3
	baz=49						
GAR	Garm	2.77	236	⇓*e*P	Pb	20 28 22.8	-1.9
	baz=32						
GAR				⇓*i*S	Sn	20 28 55.8	+1.8
	baz=32						
ULHL	Ulahol	2.79	53	⇑*i*P	Pb	20 28 25.1	0.0
	baz=56						
ULHL				⇑*i*S	Sb	20 28 59.8	0.0
	baz=56						
USP	Ospenovka	2.83	19	⇓P	Pb	20 28 24.2	-1.6
	10nm,0.2s,SNR=6.2						
USP	Ospenovka	2.83	19	⇓*i*P	Pb	20 28 24.1	-1.6
	baz=22						
USP				⇓*i*S	Sb	20 28 58.2	-2.7
	baz=22						
TKM2	Tokmak 2	2.91	36	⇑Pn	Pb	20 28 26.2	-1.0
	1.5nm,0.4s						
TKM2				⇑Lg	Lg	20 29 07.8	
	6.0nm,0.3s						
TKM2	Tokmak 2	2.91	36	⇑*i*P	Pb	20 28 26.0	-1.2
	baz=39						
TKM2				⇑*i*S	Sb	20 29 01.7	-1.7
	baz=39						
KST	Kastek	3.18	39	*e*P	Pg	20 28 35.2	-0.1
	3.9nm,0.4s						
KST				*e*S	Sg	20 29 16.7	+0.2
	15nm,0.6s						
KST	Kastek	3.18	39	Pg	Pg	20 28 35.2	-0.1
	3.9nm,0.4s						
KST				Lg	Lg	20 29 16.7	
	15nm,0.6s						
DGS	Degeres	3.25	34	*e*P	Pg	20 28 37.0	+0.4
	3.3nm,0.3s						
DGS				*e*S	Sg	20 29 20.1	+1.4
	15nm,0.5s						
DGS	Degeres	3.25	34	Pg	Pg	20 28 37.0	+0.4
	3.3nm,0.3s						
DGS				Lg	Lg	20 29 20.1	
	15nm,0.5s						
CHM	Chimkent	3.25	303	*e*P	Pb	20 28 33.5	+0.7
	4.7nm,0.3s						
CHM				*e*S	Sb	20 29 14.4	+1.6
	263nm,0.5s						
KK09	Karatay Array	3.27	322	⇑Pn	Pn	20 28 28.3	+1.6
	4.1nm,0.5s,baz=129,slow=13						
KK09				⇑Lg	Lg	20 29 13.1	
	14nm,0.4s,baz=133,slow=26						
TNSS	Tian-Shan	3.68	47	*e*P	Pg	20 28 45.8	+0.8
	2.0nm,0.2s						
TNSS				*e*S	Sg	20 29 34.8	+2.0
	3.9nm,0.5s						
TNSS	Tian-Shan	3.68	47	Pg	Pg	20 28 45.8	+0.8
	2.0nm,0.2s						
TNSS				Lg	Lg	20 29 34.8	
	3.9nm,0.5s						
MDOK	Medeo	3.82	46	*e*P	Pg	20 28 47.3	-0.3
	2.0nm,0.3s						
MDOK				*e*S	Sg	20 29 37.5	+0.4
	7.2nm,0.8s						
MDOK	Medeo	3.82	46	Pg	Pg	20 28 47.3	-0.3
	2.0nm,0.3s						
MDOK				Lg	Lg	20 29 37.5	
	7.2nm,0.8s						
KOTS	Kotyrbulak	3.90	46	*e*P	Pg	20 28 50.5	+1.3
	4.7nm,0.4s						
KOTS				*e*S	Sg	20 29 42.8	+3.0
	23nm,0.8s						
KOTS	Kotyrbulak	3.90	46	Pg	Pg	20 28 50.5	+1.3
	4.7nm,0.4s						
KOTS				Lg	Lg	20 29 42.8	
	23nm,0.8s						
KUU	Kurty	4.02	34	*e*P	Pg	20 28 49.8	-1.5
	1.3nm,0.2s						
KUU				*e*S	Sg	20 29 41.9	-1.5
	7.2nm,0.4s						
KUU	Kurty	4.02	34	Pg	Pg	20 28 49.8	-1.5
	1.3nm,0.2s						
KUU				Lg	Lg	20 29 41.9	
	7.2nm,0.4s						
KTBS	Karatobe	4.03	38	*e*P	Pg	20 28 50.6	-0.9
	1.8nm,0.3s						
KTBS				*e*S	Sg	20 29 43.3	-0.4
	13nm,0.6s						
KTBS	Karatobe	4.03	38	Pg	Pg	20 28 50.6	-0.9
	1.8nm,0.3s						
KTBS				Lg	Lg	20 29 43.3	
	13nm,0.6s						
SATY	Saty	4.57	56	*e*P	Pg	20 29 02.2	+0.3
	1.0nm,0.1s						
SATY				*e*S	Sg	20 30 03.1	+2.0
	4.8nm,0.4s						
SATY	Saty	4.57	56	Pg	Pg	20 29 02.2	+0.3
	1.0nm,0.1s						
SATY				Lg	Lg	20 30 03.1	
	4.8nm,0.4s						
ARXS	Arharly	4.95	42	*e*P	Pg	20 29 08.6	-0.7
	1.0nm,0.2s						
ARXS				*e*S	Sg	20 30 14.4	+0.9
	6.1nm,0.6s						
ARXS	Arharly	4.95	42	Pg	Pg	20 29 08.6	-0.7
	1.0nm,0.2s						
ARXS				Lg	Lg	20 30 14.4	
	6.1nm,0.6s						
KPKS	Kokpek	4.96	53	*e*P	Pg	20 29 08.8	-0.5
	2.3nm,0.3s						
KPKS				*e*S	Sg	20 30 14.8	+1.3
	5.9nm,0.6s						
UZB	Uzynbulak	5.00	57	*e*P	Pg	20 29 08.6	-1.6
	4.7nm,0.3s						
UZB				*e*S	Sg	20 30 14.1	-0.9
	3.4nm,0.3s						
UZB	Uzynbulak	5.00	57	Pg	Pg	20 29 08.6	-1.6
	4.7nm,0.3s						
UZB				Lg	Lg	20 30 14.1	
	3.4nm,0.3s						
BLB	Baldybastay	5.22	46	Pg	Pg	20 29 11.6	-2.8
	2.2nm,0.2s						
BLB				Lg	Lg	20 30 19.7	
	3.2nm,0.3s						
PDGK	Podgornoye	5.39	57	Pg	Pg	20 29 15.8	-1.9
	0.3nm,0.3s						
PDGK				Lg	Lg	20 30 26.8	
	1.8nm,0.8s						

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*IDC **21** 20:28:05.3±1.3, 43°.92N×105°.70W, h0^{km}, mb1 3.6/3, mb1mx3.1/58, mbtmp3.3/3, ML3.4/3, Error ellipse: s-maj=34.9km s-min=8.5km az=148.0*
*NEIC **21** 20:28:06.4±1.5, 43°.61N±0°.06×105°.30W±0°.09, h0^{km}±2^{km},*

ML3.6/48, Error ellipse: s-maj=10.5km s-min=9.5km az=90.0

ISC 21 20:28:05.2±1.0, **43°.58N**±0°.07×**105°.33W**±0°.06, **h0^{km}, n52, σ1^{s}.33**/50, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	1.08	60	Pg	Pg	20 28 25.6	-0.3
K22A	Casper	1.28	224		Pg	20 28 28.5	-1.1
K22A				IAML		20 28 52.4	
	comp=E,924nm,0.8s						
K22A				IAML		20 28 55.0	
	comp=N,1µm,0.3s						
RWWY	Rawlins	2.35	217		Pn	20 28 46.7	+1.5
RWWY				IAML		20 29 21.7	
	comp=N,422nm,0.9s						
LAO	LASA Array	3.17	349		Pn	20 28 57.6	+1.3
LAO				IAML		20 29 56.2	
	comp=N,231nm,1.5s						
LAO				IAML		20 29 59.9	
	comp=N,212nm,1.0s						
PD31	Pinedale Array	3.20	257		Pn	20 28 57.2	+0.4
PDAR	Pinedale Array	3.20	257	Pn	Pn	20 28 57.3	+0.4
	comp=N,3.5nm,0.3s,baz=77,slow=16,SNR=55						
PDAR				Lg	Lg	20 29 41.1	
	comp=N,25nm,0.3s,baz=70,slow=29,SNR=7.8						
PDAR	Pinedale Array	3.20	257	Pn	Pn	20 28 57.8	+0.9
BW06	Boulder Array	3.20	257		Pn	20 28 57.6	+0.7
BW06				IAML		20 29 47.0	
	comp=N,110nm,0.7s						
RLMT	Red Lodge	3.22	300		Pn	20 28 58.1	+1.0
RLMT				IAML		20 29 54.9	
	comp=N,168nm,0.5s						
OGNE	Ogallala	3.60	136		Pn	20 29 03.5	+1.3
YMP	Mirror Lake Pl	3.66	290		Pn	20 29 05.3	+2.0
ISCO	Idaho Springs	3.79	183		Pn	20 29 06.3	+1.3
ISCO				IAML		20 30 11.6	
	comp=N,59nm,1.2s						
GCMT	Greycliff	3.80	307		Pn	20 29 06.5	+1.4
LOHW	Long Hollow	3.83	272		Pn	20 29 06.9	+1.3
LOHW				IAML		20 30 08.9	
	comp=N,82nm,0.9s						
LOHW				IAML		20 30 15.4	
	comp=N,60nm,1.1s						
H17A	Grant Village	3.87	284		Pn	20 29 07.9	+1.7
H17A				IAML		20 30 13.6	
	comp=N,65nm,0.6s						
H17A				IAML		20 30 13.8	
	comp=E,63nm,1.1s						
MOOW	Moose Ponds	3.93	274		Pn	20 29 08.3	+1.4
REDW	Red Top Meadow	4.02	269		Pn	20 29 09.6	+1.4
O20A	White River Ci	4.07	213		Pn	20 29 10.1	+1.2
O20A				IAML		20 30 53.1	
	comp=N,107nm,1.6s						
YHH	Holmes Hill	4.15	289		Pn	20 29 11.7	+1.6
AHID	Auburn Hatcher	4.30	261		Pn	20 29 13.4	+1.4
AHID				IAML		20 30 25.3	
	comp=N,60nm,1.5s						
AHID				IAML		20 30 29.7	
	comp=N,78nm,0.7s						
RDMU	Red Mountain	4.36	228		Pn	20 29 14.7	+1.9
RDMU				IAML		20 30 29.8	
	comp=N,87nm,0.9s						
E28A	Huff	4.44	46		Pn	20 29 14.7	+0.9
SMCO	Snowmass	4.57	196		Pn	20 29 17.9	+2.0
SMCO				IAML		20 30 35.7	
	comp=N,56nm,0.9s						
SMCO				IAML		20 30 38.3	
	comp=N,62nm,0.7s						
BOZ	Bozeman (W)	4.93	296		Pn	20 29 22.5	+1.9
BOZ				IAML		20 30 56.6	
	comp=N,28nm,0.9s						
BOZ				IAML		20 30 56.6	
	comp=N,30nm,1.0s						
DGMT	Dagmar	4.95	9		Pn	20 29 21.9	+1.1
KSCO	Kaye Shedlock'	5.00	155		Pn	20 29 22.0	+0.4
HWUT	Hardware Ranch	5.01	249		Pn	20 29 23.1	+1.3
P18A	Preston Nutter	5.40	225		Pn	20 29 28.1	+0.9
EGMT	Eagleton	5.41	327	Pn	Pn	20 29 26.6	-0.6
LRM	Limekiln Ridge	5.55	296		Pn	20 29 28.8	-0.4
HRY	Holter Researc	5.56	306		Pn	20 29 29.8	+0.6
CTU	Camp Tracy	5.58	241		Pn	20 29 30.1	+0.5
BGNE	Belgrade	5.74	110	Pn	Pn	20 29 32.6	+1.1
HVU	Hansel Valley	5.78	254		Pn	20 29 32.8	+0.6
SDCO	Great Sand Dun	5.83	181		Pn	20 29 34.3	+1.2
MDND	Maddock	5.85	41	Pn	Pn	20 29 33.4	+0.2
BCYI	Bear Canyon	5.88	280		Pn	20 29 35.1	+1.4
ECSD	EROS Data Cent	6.33	86		Pn	20 29 39.3	-0.3
CBKS	Cedar Bluff	6.36	137	Pn	Pn	20 29 41.9	+1.7
T25A	Trinidad	6.47	173		Pn	20 29 43.5	+1.6
DUG	Dugway, Tooele	6.53	241	Pn	Pn	20 29 43.3	+0.8
HLID	Hailey	6.60	273	Pn	Pn	20 29 45.0	+1.4
MVCO	Mesa Verde	6.81	202		Pn	20 29 48.8	+2.3
MSO	Missoula	6.89	301	Pn	Pn	20 29 47.8	+0.2
R32A	Long Quarter,	7.18	134	Pn	Pn	20 29 52.7	+1.2
MSU	Marysvale	7.24	228		Pn	20 29 53.5	+1.1
MVU	Marysvale	7.26	228	Pn	Pn	20 29 54.2	+1.4
JTMT	Jette	7.53	307	Pn	Pn	20 29 57.7	+1.5
I10CA	LAC DU BONNET	9.18	41	*i*		21 24 50.0	
	baz=218,slow=332,SNR=2.3						
ULM	Lac du Bonnet	9.29	41	Pn	Pn	20 30 17.7	-2.5
	comp=N,1.7nm,0.3s,baz=235,slow=11,SNR=11						
ULM				Lg	Lg	20 32 48.1	
	comp=N,0.4nm,0.3s,baz=159,slow=22,SNR=1.3						
NVAR	Mina Array Bea	11.07	247	Pn	Pn	20 30 46.4	+1.6
	comp=N,0.1nm,0.3s,baz=70,slow=12,SNR=1.8						
NVAR				Lg	Lg	20 33 50.5	
	comp=N,0.1nm,0.3s,baz=42,slow=31,SNR=2.6						
TXAR	Lajitas Array	14.28	174	Pg	P	20 32 33.1	+57
	comp=N,0.1nm,0.3s,baz=3.9,slow=14,SNR=3.0						
TXAR				Lg	Lg	20 35 42.0	
	comp=N,0.1nm,0.3s,baz=2.0,slow=28,SNR=3.2						

*MOS **21** 20:39:09.8±0.8, 44°.00N×149°.54E, h27^{km}, mb4.0/3, Error ellipse: s-maj=16.8km s-min=11.2km az=33.3*
*NEIC **21** 20:39:10.1±1.6, 44°.0N±0°.1×149°.3E±0°.2, h10^{km}±1^{km}, mb4.4/15, Error ellipse: s-maj=19.4km s-min=17.8km az=145.0*
*SKHL **21** 20:39:11.9±0.1, 43°.80N×149°.50E, h50^{km}±9^{km}, mb4.4/3*
*JMA **21** 20:39:11.0±0.6, 44°.28N×149°.47E, h30^{km}, M3.8*
*IDC **21** 20:39:21.1±4.0, 43°.98N×148°.94E, h94^{km}±35^{km}, mb3.6/19, mb1 3.7/20, mb1mx3.5/58, mbtmp3.9/20, Error ellipse: s-maj=20.2km s-min=19.3km az=106.0*
ISC 21 20:39:13.5±0.7, **43°.77N**±0°.06×**149°.3E**±0°.1, **h39**^{km}±4^{km}, **n86, σ1^{s}.47**/92, **mb4.2**/26, **East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.78	326	*e*P	Pn	20 39 40.8	-0.9
KUR				AMB	AMB	20 39 43.1	
	240nm,0.4s						
KUR				*e*S	Sn	20 40 01.6	-1.4
KUR				A	A	20 40 04.8	
	400nm,0.7s						
KUR				A	A	20 40 04.8	
	300nm,0.7s						
YUK	Yuzh-Kuril'sk	2.48	277	*e*P	Pn	20 39 51.0	-0.3
YUK				AMB	AMB	20 39 54.0	
	62nm,0.4s						
YUK				*e*S	Sn	20 40 22.0	+1.6
YUK				A	A	20 40 23.0	
	95nm,0.5s						
YUK				A	A	20 40 23.0	
	218nm,0.5s						
GRPR	Tuman	2.54	276	*e*PN	Pn	20 39 52.1	-0.2
GRPR				*e*S	Sn	20 40 22.6	+0.7
GRPR				pmax	pmax		
	comp=Z,53nm,0.4s						
GRPR				smax	smax		
	comp=N,195nm,0.4s						
GRPR				smax	smax		
	comp=E,108nm,0.4s						
GRPR	Tuman	2.54	276	*e*P	Pn	20 39 52.0	-0.2
GRPR				AMB	AMB	20 39 52.0	
	comp=E,53nm,0.4s						
GRPR				*e*S	Sn	20 40 22.0	+0.1
GRPR				A	A	20 40 25.0	
	comp=E,195nm,0.4s						
GRPR				A	A	20 40 25.0	
	comp=E,108nm,0.4s						
NEM2	Nemuro 2	2.60	262	P	Pn	20 39 53.4	+0.4
NEM2				*e*S	Sn	20 40 24.3	+1.1
NMR	Nemuro--Hokkai	2.61	262	*e*P	Pn	20 39 53.0	-0.1
NMR				*e*S	Sn	20 40 24.0	+0.5
GLVR	Golovnino	2.72	271	PN	Pn	20 39 55.4	+0.8
GLVR				*e*S	Sn	20 40 28.9	+2.6
GLVR				smax	smax		
	comp=N,358nm,0.6s						
GLVR				smax	smax		
	comp=E,411nm,0.6s						
GLVR	Golovnino	2.72	271	*e*P	Pn	20 39 55.0	+0.4
GLVR				*e*S	Sn	20 40 28.0	+1.7
GLVR				A	A	20 40 35.0	
	comp=E,358nm,0.6s						
GLVR				A	A	20 40 35.0	
	comp=E,411nm,0.6s						
JRA	Rausu	3.01	275	P	Pn	20 40 00.0	+1.4
JAK	Akkeshi	3.42	259	P	Pn	20 40 05.3	+1.0
JAK				*e*S	Sn	20 40 45.9	+2.3
JTKR	Abashiri--Toko	3.88	275	P	Pn	20 40 12.2	+1.6
JAR	Ashorobuto	4.03	265	P	Pn	20 40 14.2	+1.5
JMP	Maruseppu	4.28	275	P	Pn	20 40 17.9	+1.8
JCH	Churui	4.47	257	P	Pn	20 40 20.7	+1.9
ERM	Erimo	4.82	251	PN	Pn	20 40 25.7	+2.1
ERM	Erimo	4.82	251	Pn	Pn	20 40 25.7	+2.1
JEM	Erimo	4.82	251	Pn	Pn	20 40 25.0	+1.4
JKA	Kamikawa-asahi	4.83	276	*e*P	Pn	20 40 26.6	+2.9
JKA	Kamikawa-asahi	4.83	276		Pn	20 40 24.6	+1.0
ASAJ	Asahikawa	4.83	276	P	Pn	20 40 26.6	+2.9
	comp=E,0.6nm,0.3s,baz=75,slow=18,SNR=1.7						
JNBK	Urakawa-nobuka	5.01	255	P	Pn	20 40 27.4	+1.3
JBT2	Biratori 2	5.14	261	P	Pn	20 40 29.6	+1.7
JEW	Eniwo	5.78	263	Pn	Pn	20 40 37.2	+0.4
JNB	Noboribetsu	6.17	261	P	Pn	20 40 43.6	+1.6
JKB	Kayabe	6.34	256	P	Pn	20 40 46.0	+1.6
JKB				*e*S	Sn	20 41 55.9	+0.3
JANG	Nango	6.70	242	P	Pn	20 40 49.8	+0.5
JANG				*e*S	Sn	20 42 02.6	-1.7
JTH	Tanohata	6.73	238	P	Pn	20 40 49.2	-0.5
JTH				*e*S	Sn	20 42 01.2	-3.8
JTM	Tenmabayashi	6.78	247	Pn	Pn	20 40 52.1	+1.7
OFUJ	Ofunato	7.39	233	*e*S	Sn	20 42 19.3	-2.0
JIO	Ouri	8.00	231	*e*S	Sn	20 42 32.2	-4.0
JMM	Marumori	8.72	230	Pn	Pn	20 41 17.5	+0.5
YAK	Yakutsk	21.61	335	P	P	20 43 56.3	-3.6
H11N2	WAKE ISLAND Hy	28.15	143	T	T	21 16 07.7	
	baz=333						
H11N1	WAKE ISLAND Hy	28.16	143	T	T	21 16 17.7	
	baz=333						
H11N3	WAKE ISLAND Hy	28.16	143	T	T	21 16 17.3	
	baz=333						
H11S1	WAKE ISLAND Hy	29.15	144	T	T	21 17 34.7	
	baz=329						
H11S3	WAKE ISLAND Hy	29.15	144	T	T	21 17 32.9	
	baz=329						
H11S2	WAKE ISLAND Hy	29.16	144	T	T	21 17 32.5	
	baz=329						
SONM	Songino Array	29.88	293	P	P	20 45 17.7	+0.3
	comp=E,1.5nm,0.7s,baz=85,slow=8.5,SNR=8.4						
SONM	Songino Array	29.88	293	P	P	20 45 16.8	-0.6
IMAR	Indian Mountai	37.76	34	P	P	20 46 24.4	-1.0
A21K	Barrow	37.87	25	P	P	20 46 25.2	-1.0
ILAR	Eielson Array	40.56	36	P	P	20 46 52.0	+3.3
	comp=E,0.5nm,0.8s,baz=273,slow=8.7,SNR=2.5						
BMAR	Burnt Mountain	41.50	32	P	P	20 46 56.4	-0.1
ZALV	Zalesovo Beam	42.21	307	P	P	20 47 02.7	+0.3
	comp=E,0.3nm,0.3s,baz=101,slow=7.5,SNR=1.9						
INK	Inuvik	45.61	30	P	P	20 47 30.6	+1.2
	comp=E,1.0nm,0.8s,baz=306,slow=3.7,SNR=5.3						
INK	Inuvik	45.61	30	P	P	20 47 29.9	+0.6
INK				IAmb	IAmb	20 47 34.9	
	comp=Z,4.1nm,1.2s						
MK31	Makanchi Array	45.93	298	P	P	20 47 32.5	+0.1
MK31				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MK31	Makanchi Array	45.93	298	P	P	20 47 32.5	+0.1
MK31				IAmb	IAmb	20 47 33.5	
	comp=Z,3.9nm,0.8s						
MKAR	Makanchi Array	45.93	298	P	P	20 47 32.8	+0.4
	comp=Z,3.6nm,0.8s,baz=81,slow=8.6,SNR=26						
MKAR	Makanchi Array	45.93	298	P	P	20 47 32.5	+0.2
MAKZ	Makanchi	46.13	298	P	P	20 47 33.7	-0.2
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MAKZ	Makanchi	46.13	298	P	P	20 47 33.7	-0.2
MAKZ				IAmb	IAmb	20 47 35.1	
	comp=Z,3.3nm,0.7s						
KURK	Kurchatov	46.79	305	P	P	20 47 38.9	0.0
KURK	Kurchatov	46.79	305	*e*P	P	20 47 38.9	0.0
KURBB	Kurchatov Arra	46.88	305	P	P	20 47 38.9	-0.7
	comp=Z,0.9nm,0.4s,baz=73,slow=8.1,SNR=2.3						
A36M	Sachs Harbour	47.71	25	P	P	20 47 46.4	+0.6
A36M				IAmb	IAmb	20 47 51.5	
	comp=Z,2.3nm,0.8s						
BVAR	Borovoye Array	50.67	310	P	P	20 48 09.2	+0.5
	comp=Z,0.3nm,0.4s,baz=64,slow=9.9,SNR=2.4						
AAK	Ala-Archa	52.73	297	P	P	20 48 24.6	+0.2
	comp=Z,1.1nm,0.8s,baz=53,slow=5.1,SNR=3.8						
KKAR	Karatay Array	55.06	299	P	P	20 48 41.2	-0.1
KKAR	Karatay Array	55.06	299	P	P	20 48 41.2	-0.1
ARU	Arti	55.38	318	P	P	20 48 41.5	-1.8
	comp=Z,0.6nm,0.5s,baz=119,slow=11,SNR=4.5						
ARU	Arti	55.38	318	P	P	20 48 41.8	-1.5
ARU				IAmb	IAmb	20 48 43.1	
	comp=Z,3.4nm,0.9s						
ABKAR	Akbulak array	58.24	310	P	P	20 49 03.8	0.0
ABKAR	Akbulak array	58.24	310	P	P	20 49 03.8	0.0
ABKAR				IAmb	IAmb	20 49 04.5	
	comp=Z,3.5nm,0.9s						
CHGR	Chuyangaron	58.25	295	P	P	20 49 03.8	-0.3
CHGR				IAmb	IAmb	20 49 05.0	
	comp=Z,3.3nm,0.8s						
BELG	Belogornoye	62.93	318	P	P	20 49 35.1	-0.5
	comp=Z,8.9nm,0.8s,baz=169,slow=4.6,SNR=6.0						
WB0	Warramunga Arr	64.68	196	P	P	20 49 49.1	+1.6
WB0				IAmb	IAmb	20 50 04.7	
	comp=Z,3.9nm,1.1s						
WRA	Warramunga Arr	64.86	196	P	P	20 49 50.2	+1.6
	comp=Z,0.5nm,0.7s,baz=18,slow=6.8,SNR=6.8						
WRA	Warramunga Arr	64.86	196	P	P	20 49 50.0	+1.4
WRA	Warramunga Arr	64.86	196	P	P	20 49 50.0	+1.4
FIA1	FINESS Array S	65.55	334	P	P	20 49 51.4	-1.2
FINES	FINESS Array B	65.55	334	P	P	20 49 51.5	-1.1
	comp=Z,3.0nm,0.7s,baz=23,slow=6.2,SNR=7.6						
NVAR	Mina Array Bea	66.26	59	P	P	20 50 00.8	+3.0
	comp=Z,0.1nm,0.3s,baz=278,slow=6.3,SNR=2.6						
ASAR	Alice Springs	68.57	195	P	P	20 50 15.1	+2.9
	comp=Z,0.2nm,0.6s,baz=13,slow=6.9,SNR=2.1						
NB201	NORSAR Array S	70.10	340	P	P	20 50 20.3	-1.0
NB2	NORSAR Subarra	70.13	340	P	P	20 50 20.5	-1.0
	comp=Z,5.1nm,0.8s,baz=31,slow=6.5						
NOA	NORSAR Array B	70.13	340	P	P	20 50 20.3	-1.2
	comp=Z,1.9nm,0.7s,baz=31,slow=6.6,SNR=12						
HFS	Hagfors	70.26	338	P	P	20 50 21.3	-1.0
	comp=Z,2.5nm,0.5s,baz=72,slow=4.8,SNR=12						
KBZ	Khabaz	70.93	313	P	P	20 50 27.0	+0.4
	comp=Z,2.2nm,0.8s,baz=88,slow=4.3,SNR=4.5						
AKASG	Malin Array Be	72.46	325	P	P	20 50 34.6	-1.1
	comp=Z,0.3nm,0.2s,baz=37,slow=6.0,SNR=4.5						
BUR08	Bucovina Ar. S	76.50	325	P	P	20 50 59.0	-0.3
BUR08				IAmb	IAmb	20 51 16.2	
	comp=Z,6.6nm,1.4s						
BURAR	Bucovina Array	76.52	325	P	P	20 50 59.0	-0.4
GERES	GERESS Array B	79.88	332	P	P	20 51 17.3	-0.7
	comp=Z,0.3nm,0.5s,baz=64,slow=3.1,SNR=3.5						
GERES	GERESS Array B	79.88	332	P	P	20 51 17.9	-0.1
GERES	GERESS Array B	79.88	332	P	P	20 51 17.9	-0.1

*TIF **21** 20:42:14.9, 40°.88N×47°.14E, h33^{km}±1^{km}*
*MOS **21** 20:42:15.5±0.0, 40°.93N×46°.95E, h12^{km}, MPVA3.3*
*DDA **21** 20:42:17.2, 40°.88N×46°.72E, h6^{km}±4^{km}, ML2.3*
*DRS **21** 20:42:19.5±0.0, 40°.87N×46°.72E, h20^{km}*
ISC 21 20:42:17.2±1.5, **40°.97N**±0°.05×**46°.90E**±0°.03, **h11**^{km}±10^{km}, **n29, σ1^{s}.89**/58, **Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDFL	Dedoflistskaro	0.76	309	P	Pn	20 42 35.5	+1.7
DDFL				S	Sn	20 42 48.8	+3.4
DDFL	Dedoflistskaro	0.76	309	*i* P	Pn	20 42 35.4	+1.6
DDFL				*i* S	Sn	20 42 49.2	+3.9
DDFL				IAML		20 42 54.0	
	comp=E,87nm,0.3s						
DDFL				IAML		20 42 55.0	
	comp=N,91nm,0.3s						
AKT	Akhty	0.81	51	*i* Pg	Pn	20 42 32.2	-2.4
AKT				*e*Sg	Sn	20 42 44.8	-1.7
LGD	Lagodekhi	0.99	330	P	Pn	20 42 36.7	-0.4
LGD				S	Sn	20 42 52.3	+1.2
KSMR	Kasumkent	1.12	55	*e*Pg	Pn	20 42 40.2	+1.4
KSMR				*e*Sg	Sn	20 42 57.0	+2.7
KMKR	Kumukh	1.17	7	*i* Pg	Pg	20 42 39.9	+0.2
KMKR				*e*Sg	Sn	20 42 57.4	+1.7
DGRG	David-gareji	1.25	293	P	Pg	20 42 41.0	-0.2
DGRG				S	Sg	20 43 00.7	+3.3
URKR	Urkarakh	1.31	24	*e*Pg	Pg	20 42 43.2	+0.8
URKR				*e*Sg	Sg	20 43 02.3	+2.8
GNBR	Gunib	1.42	2	*e*Pg	Pg	20 42 44.8	+0.4
GNBR				*e*Sg	Sg	20 43 04.6	+1.8
DRN	Derbent	1.51	45	*e*Pg	Pg	20 42 46.2	+0.1
DRN				*e*Sg	Sg	20 43 07.8	+2.1
XNZR	Khunzakh	1.58	355	*e*Pg	Pg	20 42 47.0	-0.5
XNZR				*e*Sg	Sg	20 43 09.6	+1.7
SGKR	Sergokala	1.59	21	*e*Pg	Pg	20 42 47.2	-0.5
SGKR				*e*Sg	Sg	20 43 10.5	+2.1
ARKR	Arakani	1.63	2	*e*Pg	Pg	20 42 48.2	-0.3
ARKR				*e*Sg	Sg	20 43 11.4	+1.7
BTNK	Botanikuri	1.74	295	P	Pb	20 42 47.5	-1.5
BTNK				S	Sb	20 43 11.7	+0.8
BTNK	Botanikuri	1.74	295	*i* P	Pb	20 42 47.5	-1.5
BTNK				*i* S	Sb	20 43 11.6	+0.7
BTNK				IAML		20 43 12.0	
	comp=E,260nm,0.4s						
BTNK				IAML		20 43 49.0	
	comp=N,23nm,6.7s						
UNCR	Uncukul	1.74	357	*e*Pg	Pg	20 42 50.0	-0.7
UNCR				*e*Sg	Sg	20 43 14.6	+1.4
BTLR	Botlikh	1.77	344	*e*Pg	Pg	20 42 49.5	-1.5
BTLR				*e*Sg	Sg	20 43 14.8	+0.8
KRNR	Karanay	1.85	0	*e*Pg	Pg	20 42 51.7	-1.1
KRNR				*e*Sg	Sg	20 43 18.3	+1.5
BUJR	Buynaksk	1.86	5	*e*Pg	Pg	20 42 51.6	-1.3
BUJR				*e*Sg	Sg	20 43 18.0	+1.0
DBC	Dubki	2.05	359	*e*Pg	Pb	20 42 53.5	-0.9
DBC				*e*Sg	Sg	20 43 21.5	-1.5
DVE	Vedeno	2.07	344	*e*Pg	Pb	20 42 54.8	+0.1
DVE				*e*Sg	Sg	20 43 22.0	-1.6
DMNI	Dmanisi	2.08	281	P	Pb	20 42 52.5	-2.4
DMNI				S	Sb	20 43 20.1	-0.7
DLMR	Dylym	2.11	355	*e*Pg	Pb	20 42 55.2	-0.2
DLMR				*e*Sg	Sg	20 43 24.2	-0.7
TRLG	Trialeti	2.19	286	P	Pb	20 42 54.4	-2.4
TRLG				S	Sb	20 43 23.4	-0.6
GUDG	Gudauri	2.35	310	P	Pb	20 42 58.0	-1.6
GUDG				S	Sb	20 43 28.2	-0.5
EAK	Akyaka	2.52	265	*i* P	Pb	20 43 00.7	-1.7
EAK				*i* S	Sb	20 43 32.1	-1.3
EAK				IAML		20 43 57.0	
	comp=N,28nm,2.6s						
EAK				IAML		20 44 15.0	
	comp=E,39nm,3.3s						
ZEI	Tsey	2.88	310	*e*Pn	Pb	20 43 05.6	-3.1
ZEI				*e*Sn	Sb	20 43 41.3	-2.8
KORR	Kora	2.99	316	*e*Pn	Pb	20 43 06.7	-3.7
KORR				*e*Sn	Sb	20 43 44.0	-2.9
DIGR	Digorskoe uzhe	3.14	309	*e*Pn	Pn	20 43 08.9	+2.1
DIGR				*e*Sn	Sb	20 43 47.7	-3.7

IDC 21 20:45:13.9±1.5, **27°.42S**×**67°.38E, h0^{km}, mb3.7**/5, **mb1 3.8**/5, **mb1mx3.3**/47, **mbtmp3.7**/5, **Error ellipse: s-maj=51.2km s-min=32.4km az=86.0, Indian Ocean Triple Junction**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	Cape Leeuwin H	40.40	113	T	T	21 34 33.3	
	baz=270,slow=75,SNR=12						
H01W3	Cape Leeuwin H	40.41	113	T	T	21 34 33.5	
	baz=270,slow=75,SNR=14						
H01W1	Cape Leeuwin H	40.42	113	T	T	21 34 34.6	
	baz=270,slow=75,SNR=11						
ASAR	Alice Springs	59.50	103	P	P	20 55 19.4	+0.1
	0.3nm,0.7s,baz=247,slow=6.6,SNR=5.6						
WRA	Warramunga Arr	61.14	99	P	P	20 55 30.4	-0.2
	0.6nm,1.1s,baz=247,slow=6.7,SNR=2.8						
QSPA	South Pole Qui	62.72	180	P	P	20 55 40.7	+0.1
	1.1nm,1.1s,baz=269,slow=7.3,SNR=6.7						
MKAR	Makanchi Array	75.08	11	P	P	20 56 56.9	-0.5
	0.6nm,0.8s,baz=191,slow=5.8,SNR=3.9						
ZALV	Zalesovo Beam	82.42	10	P	P	20 57 38.2	+0.6
	0.6nm,0.5s,baz=205,slow=5.7,SNR=2.9						

*IDC **21** 21:01:12.7±1.0, 43°.74N×105°.45W, h0^{km}, mb1 3.7/4, mb1mx3.3/38, mbtmp3.4/4, ML3.0/3, Error ellipse: s-maj=23.1km s-min=7.4km az=148.0*
*NEIC **21** 21:01:13.3±1.9, 43°.70N±0°.04×105°.26W±0°.04, h0^{km}±2^{km}, ML3.2/60, Error ellipse: s-maj=7.6km s-min=3.1km az=32.0*
ISC 21 21:01:12.4±0.9, **43°.72N**±0°.05×**105°.30W**±0°.05, **h0^{km}, n50, σ1^{s}.44**/51, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	1.00	66	Pg	Pg	21 01 31.8	+0.3
K22A	Casper	1.40	220		Pg	21 01 37.5	-1.7
K22A				IAML		21 02 00.3	
	comp=E,461nm,0.3s						
K22A				IAML		21 02 01.8	
	comp=N,529nm,0.3s						
RWWY	Rawlins	2.47	215		Pn	21 01 55.5	+1.3
RWWY				IAML		21 02 31.0	
	comp=N,136nm,1.1s						
LAO	LASA Array	3.04	348		Pn	21 02 03.4	+1.6
RLMT	Red Lodge	3.17	298		Pn	21 02 04.8	+1.0
RLMT				IAML		21 02 55.6	
	comp=N,47nm,0.6s						
RLMT				IAML		21 02 58.8	
	comp=N,56nm,0.3s						
BW06	Boulder Array	3.25	254		Pn	21 02 05.7	+0.8
BW06				IAML		21 02 54.2	
	comp=N,58nm,0.6s						
BW06				IAML		21 02 54.7	
	comp=N,49nm,0.4s						
PD31	Pinedale Array	3.25	254		Pn	21 02 05.2	+0.3
PDAR	Pinedale Array	3.25	254	Pn	Pn	21 02 05.4	+0.5
	comp=N,7.1nm,0.3s,baz=77,slow=13,SNR=84						
PDAR				Pg	Pg	21 02 14.2	-0.6
	comp=N,16nm,0.3s,baz=73,slow=19,SNR=19						
PDAR				Lg	Lg	21 02 49.9	
	comp=N,19nm,0.3s,baz=73,slow=30,SNR=2.3						
PDAR	Pinedale Array	3.25	254		Pn	21 02 05.3	+0.3
YMP	Mirror Lake Pl	3.64	288		Pn	21 02 11.1	+0.9
OGNE	Ogallala	3.68	138		Pn	21 02 10.7	0.0
GCMT	Greycliff	3.74	305		Pn	21 02 12.5	+1.0
LOHW	Long Hollow	3.85	270		Pn	21 02 15.1	+2.0
LOHW				IAML		21 03 13.4	
	comp=N,26nm,0.7s						
H17A	Grant Village	3.86	282		Pn	21 02 15.5	+2.2
H17A				IAML		21 03 16.0	
	comp=N,27nm,0.3s						
FLWY	Flagg Ranch	3.92	277		Pn	21 02 14.9	+0.9
FLWY				IAML		21 03 26.0	
	comp=N,42nm,1.0s						
ISCO	Idaho Springs	3.93	184		Pn	21 02 15.3	+1.1
MOOW	Moose Ponds	3.95	272		Pn	21 02 15.5	+1.0
SNOW	Snow King Moun	3.97	268		Pn	21 02 16.5	+1.7
SNOW				IAML		21 03 29.7	
	comp=N,47nm,1.1s						
SNOW				IAML		21 03 30.5	
	comp=N,41nm,1.0s						
TPAW	Teton Pass	4.11	269		Pn	21 02 17.9	+1.1
TPAW				IAML		21 03 34.9	
	comp=N,32nm,0.8s						
TPAW				IAML		21 04 42.7	
	comp=N,22nm,0.5s						
YHH	Holmes Hill	4.13	287		Pn	21 02 17.5	+0.5
FXWY	Fox Creek	4.16	271		Pn	21 02 18.5	+1.2
YMR	Madison River	4.18	285		Pn	21 02 19.3	+1.6
YMR				IAML		21 03 31.8	
	comp=E,32nm,1.1s						
O20A	White River Ci	4.20	212		Pn	21 02 18.7	+0.8
O20A				IAML		21 03 33.2	
	comp=E,41nm,0.8s						
O20A				IAML		21 03 42.0	
	comp=N,34nm,1.0s						
E28A	Huff	4.33	47		Pn	21 02 20.8	+1.3
AHID	Auburn Hatcher	4.34	259		Pn	21 02 21.1	+1.2

AHID				IAML		21 03 29.8	
	comp=N,35nm,0.3s						
AHID				IAML		21 03 35.3	
	comp=N,33nm,0.9s						
YHL	Hebgen Lake	4.37	287		Pn	21 02 20.7	+0.4
YHL				IAML		21 03 38.7	
	comp=E,25nm,0.7s						
YHL				IAML		21 03 39.5	
	comp=N,22nm,1.0s						
RDMU	Red Mountain	4.47	227		Pn	21 02 23.1	+1.4
RDMU				IAML		21 03 38.2	
	comp=E,31nm,1.0s						
RDMU				IAML		21 03 43.1	
	comp=N,24nm,0.9s						
ECR	Eagle Creek	4.48	264		Pn	21 02 25.1	+3.4
DGMT	Dagmar	4.81	9		Pn	21 02 28.0	+1.8
BOZ	Bozeman (W)	4.89	295		Pn	21 02 27.0	-0.3
BOZ				IAML		21 04 39.7	
	comp=N,12nm,4.8s						
HWUT	Hardware Ranch	5.08	248		Pn	21 02 30.4	+0.4
HWUT				IAML		21 04 03.9	
	comp=N,21nm,1.0s						
HWUT				IAML		21 04 09.0	
	comp=N,21nm,1.0s						
KSCO	Kaye Shedlock'	5.12	156		Pn	21 02 30.6	+0.2
TCUT	Toone Canyon	5.22	242		Pn	21 02 31.4	-0.5
EGMT	Eagleton	5.31	326		Pn	21 02 33.2	+0.2
DLMT	Dillon	5.47	290	Pn	Pn	21 02 36.8	+1.6
HRY	Holter Researc	5.50	305		Pn	21 02 36.3	+0.7
P18A	Preston Nutter	5.52	224		Pn	21 02 36.1	+0.1
BCYI	Bear Canyon	5.88	279	Pn	Pn	21 02 43.1	+2.1
SDCO	Great Sand Dun	5.97	182	Pn	Pn	21 02 43.8	+1.5
ECSD	EROS Data Cent	6.29	87	Pn	Pn	21 02 47.0	+0.6
HLID	Hailey	6.62	272	Pn	Pn	21 02 53.1	+2.0
DUG	Dugway, Tooele	6.62	240	Pn	Pn	21 02 51.0	-0.1
F33A	5 Mile Ranch,	6.75	69	Pn	Pn	21 02 54.0	+1.3
MSO	Missoula	6.84	300	Pn	Pn	21 02 54.8	+0.7
MVU	Marysvale	7.38	227	Pn	Pn	21 03 02.5	+1.0
MTPU	Mount Pierson	7.71	225	Pn	Pn	21 03 05.2	-0.9
I10CA	LAC DU BONNET	9.06	41	*i*		22 00 50.0	
	baz=219,slow=337,SNR=5.5						
ULM	Lac du Bonnet	9.17	41	Pn	Pn	21 03 24.6	-1.2
	comp=N,2.2nm,0.3s,baz=234,slow=11,SNR=15						
ULM				Sn	Sn	21 05 06.0	-3.7
	comp=N,0.3nm,0.3s,baz=270,slow=20,SNR=2.1						
ULM				Lg	Lg	21 05 56.1	
	comp=N,0.3nm,0.3s,baz=156,slow=20,SNR=1.1						
NVAR	Mina Array Bea	11.14	246	Pn	Pn	21 03 56.6	+3.4
	comp=N,0.0nm,0.3s,baz=58,slow=14,SNR=2.0						
TXAR	Lajitas Array	14.42	174	Pn	Pn	21 04 39.2	+1.4
	comp=N,0.1nm,0.3s,baz=7.9,slow=16,SNR=1.7						
TXAR				Lg	Lg	21 08 46.1	
	comp=N,0.1nm,0.3s,baz=359,slow=29,SNR=2.3						

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*NEIC **21** 21:18:26.6±2.8, 29°.91S±0°.04×64°.53W±0°.08, h18km±4km, mb4.7/18, Md4.3(SJA), Error ellipse: s-maj=10.0km s-min=5.1km az=96.0*

*IDC **21** 21:18:27.5±5.7, 29°.92S×64°.55W, h32km±41km, mb3.8/9, mb1 4.0/12, mb1mx3.8/29, mbtmp4.0/12, ML3.9/3, MS3.1/2, Ms1 3.1/2, ms1mx2.9/20, Error ellipse: s-maj=24.0km s-min=20.8km az=98.0*

*SJA **21** 21:18:27±1.8, 29°.90S±0°.07×64°.58W±0°.06, h40km±5km, Error ellipse: s-maj=9.7km s-min=6.8km az=187.0*

ISC 21 21:18:27.9±0.5**, 29°.85S**±0°.05×**64°.49W**±0°.06**, h35**km**, n111, σ1^{s}33**/112**, mb4.6**/17**, 2D, Santiago del Estero Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TCA	Tanti	1.49	184	*i* P	Pn	21 18 54.1	+1.8
TCA				*e*S	Sn	21 19 12.1	+1.6
TCA				IAML		21 20 20.5	
	comp=Z,0.2nm,0.4s						
CYA	Choya	1.81	320	*i* P	Pn	21 18 57.0	+0.4
CYA				⇓*e*S	Sn	21 19 21.6	+3.2
CYA				IAML		21 19 24.0	
	comp=Z,1μm,0.4s						
APLL	PUNTA DE LOS L	1.85	252	*i* P	Pn	21 18 56.0	-1.2
ACLC	CERRO LA CRUZ	2.19	280	*i* P	Pn	21 19 01.0	-0.9
ACLC				IAML		21 19 36.2	
	comp=Z,730nm,0.4s						
AHML	Horco Molle	3.14	346	*i* P	Pn	21 19 16.0	+1.1
AHML				IAML		21 20 17.9	
	comp=Z,438nm,0.6s						
VCA	Vinchina	3.43	288	*i* P	Pn	21 19 20.0	+1.0
VCA				*e*S	Sn	21 20 08.0	+9.5
VCA				IAML		21 20 19.0	
	comp=Z,607nm,0.9s						
FSA	Cafayete	3.95	340	*i* P	Pn	21 19 28.0	+1.8
ZON	Zonda	3.99	244		Pn	21 19 26.6	0.0
ZON	Zonda	3.99	244	*i* P	Pn	21 19 27.0	+0.4
ZON				IAML		21 20 38.3	
	comp=Z,337nm,0.7s						
ACCO	Cerro Coronel	4.03	258	*i* P	Pn	21 19 28.0	+0.6
ACCO				IAML		21 20 32.5	
	comp=Z,223nm,1.2s						
ACDV	Cuesta del Vie	4.03	264	*i* P	Pn	21 19 28.0	+0.7
ACDV				IAML		21 20 47.9	
	comp=Z,187nm,0.8s						
AROD	Rodeo	4.33	265	*i* P	Pn	21 19 33.0	+1.4
RTLS	Leoncito	4.57	244	*i* P	Pn	21 19 36.2	+1.4
RTLS				IAML		21 20 50.4	
	comp=Z,103nm,1.3s						
ASAL	Salagasta	4.62	233	*i* P	Pn	21 19 36.0	+0.7
ASAL				IAML		21 20 59.4	
	comp=Z,224nm,0.6s						
AUSP	Uspallata	4.83	239	*i* P	Pn	21 19 39.0	+0.7
ARCO	CERRO ARCO	4.83	231	*i* P	Pn	21 19 39.0	+0.7
ARCO				IAML		21 21 04.4	
	comp=Z,380nm,0.5s						
AAGR	Agrelo	4.92	228	*i* P	Pn	21 19 40.0	+0.6
AAGR				IAML		21 21 25.1	
	comp=Z,157nm,1.0s						
AC02	Maricunga	5.07	305	Pn	Pn	21 19 43.3	+1.4
AC02	Maricunga	5.07	305	*i* P	Pn	21 19 43.2	+1.3
AC02				IAML		21 21 11.6	
	comp=Z,25nm,0.6s						
SLA	San Lorenzo	5.18	350	*i* P	Pn	21 19 46.0	+2.8
SLA				IAML		21 21 24.4	
	comp=Z,197nm,0.8s						
CO03	El Pedregal	5.45	258		Pn	21 19 47.4	+0.7
CO03	El Pedregal	5.45	258	*i* P	Pn	21 19 48.0	+1.3
CO03				IAML		21 21 25.9	
	comp=Z,159nm,0.7s						
LCO	Las Campanas	5.48	277	Pn	Pn	21 19 48.1	+0.8
LCO	Las Campanas	5.48	277	*i* P	Pn	21 19 48.0	+0.7
LCO				IAML		21 21 26.3	
	comp=Z,467nm,1.5s						
GO04	Tololo Observa	5.48	265		Pn	21 19 48.3	+0.9
GO04	Tololo Observa	5.48	265	*i* P	Pn	21 19 48.0	+0.7
GO03	Copiap	5.52	293	Pn	Pn	21 19 48.0	+0.3
GO03	Copiap	5.52	293	*i* P	Pn	21 19 49.0	+1.3
AZAP	Zapla	5.62	355	*i* P	Pn	21 19 52.0	+2.8
AZAP				IAML		21 21 46.8	
	comp=Z,409nm,0.7s						
CO05	La Serena	5.86	268		Pn	21 19 51.7	-0.6
ASTB	Santa Barbara	5.87	0	*i* P	Pn	21 19 55.3	+2.6
ASTB				IAML		21 21 50.8	
	comp=Z,13nm,0.4s						
VA03	San Esteban	5.95	239		Pn	21 19 55.5	+1.9
VA03	San Esteban	5.95	239	*i* P	Pn	21 19 55.0	+1.4
VA03				IAML		21 21 48.8	
	comp=Z,159nm,1.0s						
RFA	San Rafael	5.95	213	*i* P	Pn	21 19 53.0	-0.6
RFA				IAML		21 21 42.8	
	comp=Z,180nm,0.4s						
AC04	Llanos de Chal	5.99	284	Pn	Pn	21 19 53.2	-0.9
AC04	Llanos de Chal	5.99	284	*i* P	Pn	21 19 54.8	+0.7
AC04				IAML		21 21 37.5	
	comp=Z,55nm,1.0s						
ALOL	LOMAS DE OLMED	6.02	4	*i* P	Pn	21 19 56.0	+1.4
PEL	Peldehue	6.23	237		Pn	21 19 58.7	+1.3
PEL	Peldehue	6.23	237	*i* P	Pn	21 19 57.2	-0.2
CO06	Fray Jorge	6.24	261		Pn	21 19 56.0	-1.4
ROC1	El Roble	6.39	239	*i* P	Pn	21 19 60.0	+0.1
MT05	Renca	6.39	235		Pn	21 20 00.6	+0.9
MT05	Renca	6.39	235	*i* P	Pn	21 19 60.0	+0.3
MT05				IAML		21 21 59.7	
	comp=Z,103nm,1.2s						
MT02	Curacav	6.62	237		Pn	21 20 02.1	-0.5
MT02	Curacav	6.62	237	*i* P	Pn	21 20 02.7	+0.1
MT02				IAML		21 22 22.5	
	comp=Z,133nm,0.8s						
MT09	Talagante	6.78	233		Pn	21 20 04.9	-0.2
ITQB	Itaqui	6.84	90	Pn	Pn	21 20 07.8	+2.1
MT01	Popeta	7.01	233		Pn	21 20 06.9	-1.2
MT01	Popeta	7.01	233	*i* P	Pn	21 20 08.3	+0.3
MT01				IAML		21 22 12.4	
	comp=Z,63nm,0.7s						
VA05	Santo Domingo	7.16	236		Pn	21 20 08.7	-1.4
BO01	Tunca	7.20	229		Pn	21 20 10.4	-0.3
BO01	Tunca	7.20	229	*i* P	Pn	21 20 11.0	+0.3
CPUP	Villa Florida	7.23	63	Pn	Pn	21 20 11.3	+0.3
	comp=Z,1.1nm,0.3s,baz=248,slow=12,SNR=13						
CPUP				Sn	Sn	21 21 35.3	+3.4
	comp=Z,4.9nm,0.3s,baz=202,slow=19,SNR=1.2						
CPUP				Lg	Lg	21 22 14.1	
	comp=Z,8.6nm,0.3s,baz=323,slow=20,SNR=3.7						
CPUP				LR	LR	21 23 23.9	
	comp=Z,217nm,18.9s,baz=222,slow=40						
CPUP	Villa Florida	7.23	63	*i* P	Pn	21 20 13.0	+1.9
BO02	Sierra Bellavi	7.26	226		Pn	21 20 12.8	+1.2
PB14	IPOC Station P	7.40	313	Pn	Pn	21 20 14.6	+0.9
PB15	IPOC Station P	7.97	325	*i* P	Pn	21 20 24.0	+2.5
GO05	Huala	8.13	229	Pn	Pn	21 20 21.2	-2.2
LVC	Limon Verde	8.22	330	LR	LR	21 24 04.8	
	comp=Z,64nm,18.5s,baz=185,slow=41						
ML02	Panimavida	8.29	223	Pn	Pn	21 20 26.6	+0.9
PB06	IPOC Station P	8.45	326	Pn	Pn	21 20 29.9	+1.9
TRQA	Tornquist	8.45	166	Pn	Pn	21 20 28.4	+0.6
PB04	IPOC Station P	9.04	324	Pn	Pn	21 20 36.2	+0.1
PB09	IPOC Station P	9.09	331	Pn	Pn	21 20 38.7	+2.0
PB07	IPOC Station P	9.43	328	Pn	Pn	21 20 41.4	-0.2
PLTB	Pedras Altas	9.55	104	Pn	Pn	21 20 43.6	+0.6
PB01	IPOC Station P	9.86	332	Pn	Pn	21 20 49.2	+1.9
PB08	IPOC Station P	10.54	335	Pn	Pn	21 20 58.7	+1.7
PB08	IPOC Station P	10.54	335	*i* P	Pn	21 20 56.0	-0.9
LC01	Cunco	10.89	212	Pn	Pn	21 20 59.0	-2.3
ITAB	Concordia	11.17	80	Pn	Pn	21 21 05.3	+0.1
PLCA	Paso Flores	11.93	203	Pn	Pn	21 21 13.4	-2.1
	comp=Z,0.1nm,0.3s,baz=7.1,slow=16,SNR=2.8						
PLCA				Sn	Sn	21 23 12.3	-15
	comp=Z,0.2nm,0.3s,baz=13,slow=18,SNR=1.3						
PLCA				Lg	Lg	21 24 38.0	
	comp=Z,0.3nm,0.3s,baz=24,slow=19,SNR=2.9						
PB16	IPOC Station P	12.34	337	Pn	Pn	21 21 22.1	+0.4
SIV	San Ignacio	14.14	14	Pn	Pn	21 21 47.1	+1.3
	comp=Z,0.7nm,0.3s,baz=188,slow=11,SNR=11						
SIV				Sn	Sn	21 24 15.6	-6.0
	comp=Z,0.2nm,0.3s,baz=218,slow=19,SNR=1.8						
SIV				Lg	Lg	21 25 52.9	
	comp=Z,0.3nm,0.3s,baz=252,slow=20,SNR=1.6						
VILB	Vilhena	17.27	14		P	21 22 28.9	+1.2
BDFB	Brasilia	20.72	51	P	Pn	21 23 07.6	-0.4
	comp=Z,4.4nm,0.7s,baz=230,slow=6.2,SNR=5.5						
BDFB	Brasilia	20.72	51	P	Pn	21 23 07.7	-0.3
VNA3	Neumayer Olymp	50.92	160	P	P	21 27 25.9	+0.7
VNA2	Neumayer--Watz	51.48	159	P	P	21 27 29.8	+0.4
	baz=284,slow=7.6						
SNAA	Sanae	53.11	160	P	P	21 27 41.5	-0.1
SNAA	Sanae	53.11	160	P	P	21 27 41.6	-0.1
	comp=Z,0.7nm,0.5s,baz=266,slow=10,SNR=15						
SNAA	Sanae	53.11	160	P	P	21 27 41.8	+0.2
QSPA	South Pole Qui	60.38	180	P	P	21 28 34.1	+0.7
QSPA				IAmb	IAmb	21 28 44.0	
	comp=Z,2.9nm,0.7s						
W57A	Gilead	66.28	346	P	P	21 29 12.6	+0.1
W57A				IAmb	IAmb	21 29 28.9	
	comp=Z,12nm,1.2s						
Y49A	Blount Mountai	66.67	340	P	P	21 29 14.8	-0.2
Y49A				IAmb	IAmb	21 29 15.2	
	comp=Z,6.6nm,0.8s						
SYO	Syowa Base	67.31	158	⇓*e*P	P	21 29 15.8	-2.9
DBIC	Dimbokro	67.72	68	P	P	21 29 22.9	+0.7
	comp=Z,3.4nm,1.0s,baz=246,slow=5.3,SNR=2.0						
DBIC	Dimbokro	67.72	68	P	P	21 29 22.3	+0.1
DBIC				IAmb	IAmb	21 29 29.0	
	comp=Z,12nm,1.3s						
S54A	Dingess, Beckl	69.11	346	P	P	21 29 30.5	+0.2
S54A				IAmb	IAmb	21 29 39.9	
	comp=Z,4.7nm,0.8s						
WVT	Waverly	69.20	340	P	P	21 29 30.5	-0.4
WVT				IAmb	IAmb	21 29 30.8	
	comp=Z,4.1nm,0.8s						
TXAR	Lajitas Array	69.71	324	P	P	21 29 34.4	+0.1
	comp=Z,0.5nm,0.7s,baz=153,slow=10,SNR=1.7						
PBMO	Poplar Bluff	70.60	338	P	P	21 29 39.3	-0.2
FVM	French Village	71.70	339	P	P	21 29 45.6	-0.6
CCM	Cathedral Cave	72.03	338	P	P	21 29 48.1	0.0
CCM				IAmb	IAmb	21 29 48.5	
	comp=Z,6.6nm,0.7s						
P40A	Paris	73.63	338	P	P	21 29 57.6	0.0
P40A				IAmb	IAmb	21 30 12.5	
	comp=Z,17nm,1.4s						
319A	Douglas	74.29	321	P	P	21 30 02.2	+0.5
319A				IAmb	IAmb	21 30 03.7	
	comp=Z,5.3nm,0.7s						
BOSA	Boshof	76.16	115	P	P	21 30 12.5	-0.3
	comp=Z,2.1nm,0.6s,baz=207,slow=6.8,SNR=5.2						
BOSA	Boshof	76.16	115	P	P	21 30 12.7	-0.1
I42A	Draeger Farm,	76.71	342	P	P	21 30 15.0	-0.2
TORD	Torodi Ar. Bea	76.71	66	P	P	21 30 15.6	-0.3
	comp=Z,2.0nm,0.8s,baz=261,slow=5.6,SNR=9.5						
TORD	Torodi Ar. Bea	76.71	66	P	P	21 30 15.9	0.0
ECSD	EROS Data Cent	78.92	337	P	P	21 30 27.4	-0.1
ECSD				IAmb	IAmb	21 30 28.1	
	comp=Z,4.5nm,0.8s						
PDAR	Pinedale Array	83.29	328	P	P	21 30 51.5	+0.4
	comp=Z,0.5nm,0.6s,baz=126,slow=6.7,SNR=5.9						
PDAR	Pinedale Array	83.29	328	P	P	21 30 51.3	+0.2
ULM	Lac du Bonnet	84.46	340	P	P	21 30 56.4	-0.2
	comp=Z,1.8nm,0.4s,baz=158,slow=7.6,SNR=2.9						
NVAR	Mina Array Bea	84.47	320	P	P	21 30 57.4	+0.2
	comp=Z,0.1nm,0.4s,baz=145,slow=3.3,SNR=2.8						
ASAR	Alice Springs	123.94	200	PKP	PKPdf	21 37 22.7	-0.3
	comp=Z,0.3nm,0.5s,baz=151,slow=2.1,SNR=2.6						
WRA	Warramunga Arr	127.28	202	PKP	PKPdf	21 37 29.2	-0.2
	comp=Z,0.3nm,0.5s,baz=172,slow=1.8,SNR=8.0						
WRA	Warramunga Arr	127.28	202		PKPdf	21 37 29.0	-0.4
ZALV	Zalesovo Beam	147.25	34	PKPbc	PKPbc	21 38 07.3	+0.2
	comp=Z,0.8nm,0.3s,baz=289,slow=4.5,SNR=7.6						
MKAR	Makanchi Array	149.22	47	PKPbc	PKPbc	21 38 12.1	-0.5
	comp=Z,0.7nm,0.8s,baz=300,slow=2.4,SNR=3.9						

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*NEIC **21** 21:27:21.0±0.9, 51°.5N±0°.1×179°.07E±0°.08, h67km±6km, Error ellipse: s-maj=18.5km s-min=6.3km az=192.0*

AEIC 21 21:27:20.6±1.3**, 51°.5N**±0°.1×**179°.09E**±0°.08**, h60**km±6km**, ML3.2**/32**, mb4.2**/24(NEIC)**, Error ellipse: s-maj=16.3km s-min=6.3km az=194.0, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AMKA	Amchitka	0.18	135		Pn	21 27 30.2	+0.3
AMKA					Sn	21 27 37.8	+1.1
CESW	Semis' Southwe	0.49	36		Pn	21 27 33.1	+0.6
CETU	Semis' Tuman	0.52	28		Pn	21 27 33.5	+0.7
LSSE	Little Sitkin	0.54	323		Pn	21 27 33.6	+0.6
CERB	Semis' Cerberu	0.54	38		Sn	21 27 43.1	+1.1
CERAA	Semis' Rag'd T	0.54	42		Pn	21 27 33.6	+0.6
LSPA	Little Sitkin	0.56	325		Pn	21 27 33.8	+0.6
LSPA					Sn	21 27 43.8	+1.5
LSSA	Little Sitkin	0.57	321		Pn	21 27 33.8	+0.5
CEAP	Semis' Anvil P	0.58	31		Pn	21 27 34.1	+0.6
LSNW	Little Sitkin	0.59	323		Pn	21 27 33.8	+0.3
LSNW					Sn	21 27 44.2	+1.3
GASW	Gareloi Southw	1.31	77		Pn	21 27 43.4	+0.7
GASW					Sn	21 28 00.5	+1.3
GAKI	Gareloi-Kavalg	1.31	87		Pn	21 27 43.4	+0.7
GANO	Gareloi North	1.35	76		Pn	21 27 43.8	+0.6
GANO					Sn	21 28 01.4	+1.2
GALAA	Gareloi Lava P	1.35	78		Pn	21 27 44.3	+1.0
GALAA					Sn	21 28 02.2	+1.9
TASE	Tanaga Southea	1.82	78		Pn	21 27 50.4	+0.9
TAFP	Tanaga Falls P	1.86	77		Pn	21 27 50.8	+0.7
TAFP					Sn	21 28 12.9	+0.4
TAFL	Tanaga Flats	1.89	81		Pn	21 27 51.5	+0.9
TAPA	Tanaga Point A	1.95	80		Pn	21 27 52.2	+0.8
KIMD	Kanaga Island	2.30	82		Pn	21 27 57.0	+0.9
KIKV	Kanaga Island	2.35	79		Pn	21 27 57.8	+0.9
KIWB	Kanaga Island	2.36	80		Pn	21 27 57.7	+0.8
KIWB					Sn	21 28 26.3	+1.5
ADK	Adak	2.65	80		Sn	21 28 32.0	+0.2
ADK	Adak	2.65	80		Pn	21 28 01.3	+0.4
GSTD	Great Sitkin T	3.01	78		Pn	21 28 06.4	+0.6
GSMY	Great Sitkin M	3.06	78		Pn	21 28 07.1	+0.6
GSTR	Great Sitkin T	3.07	77	Pn	Pn	21 28 07.0	+0.5
SMY	Shemya	3.31	294	Pn	Pn	21 28 10.6	+0.7
ATKA	Atka Island	4.22	78		Pn	21 28 22.7	+0.5
UNV	Unalaska Valle	9.06	69	Pn	Pn	21 29 28.6	+0.1
OHAK	Old Harbor	17.01	60	Pn	Pn	21 31 12.1	-2.0
BRLK	Bradley Lake	18.71	52	P	Pn	21 31 35.2	+0.3
J20K	Nowinta River	18.88	38	P	Pn	21 31 37.0	+0.1
J20K				IAmb	IAmb	21 31 48.6	
	comp=Z,10.0nm,1.5s						
PPLA	Purkeypile	19.09	42	P	Pn	21 31 39.0	-0.5
PPLA				IAmb	IAmb	21 32 06.2	
	comp=Z,25nm,1.4s						
IMAR	Indian Mountai	19.97	33	P	P	21 31 48.0	+0.4
H21K	Melozitna Rive	20.13	35	P	P	21 31 49.2	-0.1
KNK	Knik Glacier	20.27	48	P	P	21 31 50.8	0.0
KNK				IAmb	IAmb	21 32 08.8	
	comp=Z,29nm,1.4s						
SML	Sawmill	20.43	47	P	P	21 31 52.3	-0.3
SCM	Sheep Creek Mo	20.89	47	P	P	21 31 56.8	-0.9
KLU	Klutina	21.47	49	P	P	21 32 03.3	-0.5
KLU				IAmb	IAmb	21 32 24.9	
	comp=Z,11nm,1.1s						
M24K	Tolsona, Glenn	21.49	47	P	P	21 32 04.4	+0.4
CCB	Clear Creek Bu	21.57	40	P	P	21 32 04.3	-0.3
IL31		21.98	40	P	P	21 32 08.5	-0.6
ILAR	Eielson Array	21.98	40	P	P	21 32 09.1	0.0
H24K	Noodor Dome	22.01	37	P	P	21 32 09.6	+0.1
N25K	Chitina, Valde	22.12	49	P	P	21 32 10.8	0.0
N25K				IAmb	IAmb	21 32 38.5	
	comp=Z,19nm,1.2s						
GLB	Gilahina Butte	22.46	49	P	P	21 32 13.1	-1.3
GLB				IAmb	IAmb	21 32 31.6	
	comp=Z,20nm,1.3s						
VRDI	Verde Repeater	22.60	50	P	P	21 32 15.1	-0.9
TOLK	Toolik Lake Re	22.79	29	P	P	21 32 16.6	-1.2
SCRK	Sand Creek	22.93	43	P	P	21 32 16.5	-2.9
SCRK				IAmb	IAmb	21 32 34.0	
	comp=Z,5.6nm,1.4s						
L27K	Beaver Creek,	23.66	46	P	P	21 32 25.1	-1.2
L27K				IAmb	IAmb	21 32 47.2	
	comp=Z,7.8nm,1.4s						
BCAR	Beaver Creek A	23.68	46	P	P	21 32 25.6	-0.8
BMAR	Burnt Mountain	23.86	34	P	P	21 32 26.9	-1.2
DAWY	Dawson	24.92	44	P	P	21 32 38.3	+0.6
K05A	Summer Lake	40.72	78	P	P	21 34 55.3	-0.2
K05A				IAmb	IAmb	21 35 13.2	
	comp=Z,5.8nm,1.3s						
KURK	Kurchatov	57.97	312	P	P	21 37 05.5	-1.0
KURK				IAmb	IAmb	21 37 14.0	
	comp=Z,1.5nm,0.9s						
MK31	Makanchi Array	58.91	307	P	P	21 37 13.0	-0.1
MK31				IAmb	IAmb	21 37 33.1	
	comp=Z,3.5nm,1.4s						
TX31	Lajitas Ar. Si	59.93	80	P	P	21 37 19.9	-0.6
TX31				IAmb	IAmb	21 37 34.5	
	comp=Z,5.3nm,1.4s						
TXAR	Lajitas Array	59.93	80	P	P	21 37 19.5	-1.0

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*NEIC **21** 21:50:27.0±2.5, 7°.8N±0°.1×37°.50W±0°.07, h10km±1km, mb4.5/16, Error ellipse: s-maj=25.6km s-min=9.2km az=196.0*

*IDC **21** 21:50:28.5±0.7, 7°.43N×37°.38W, h0km, mb4.0/11, mb1 4.2/11, mb1mx3.9/27, mbtmp4.0/11, MS3.5/16, Ms1 3.5/16, ms1mx3.4/32, Error ellipse: s-maj=23.8km s-min=19.2km az=147.0*

ISC 21 21:50:28.0±0.5**, 7°.59N**±0°.07×**37°.60W**±0°.08**, h10**km**, n91, σ2^{s}10**/74**, mb4.2**/18**, MS3.6**/16**, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NBCL	Cascavel-CE	11.76	183	*e*P	Pn	21 53 17.0	+1.1
ROSB	Rosrio	12.29	212	*e*P	Pn	21 53 22.7	-0.5
NBPS	Pedro II - PI	12.51	198	*e*P	Pn	21 53 26.0	-0.3
NBPB	Pedra_Branca-C	13.20	189	*e*P	Pn	21 53 36.6	+1.0
NBPA	Parau_RN	13.26	178	*e*P	Pn	21 53 38.6	+2.1
NBPV	Pedro Velho	14.10	171	*e*P	P	21 53 51.2	-4.6
TMAB	Tom-Au,PA,Br	14.41	227	*e*P	Pn	21 53 50.7	-1.5
NBLV	Livramento - P	14.87	177	*e*P	P	21 54 01.1	-3.2
NBMA	Muriti-CE	14.90	185	*e*P	P	21 54 00.8	-3.9
SACV	Santiago Islan	15.55	61	Pn	Pn	21 54 01.9	-5.7
NBRF	Rio Formoso -	16.35	171	*e*P	P	21 54 20.7	-0.1
MCPB	Macapa, AP	16.44	242	*e*P	Pn	21 54 17.4	-1.6
NBAN	Anadia - AL	17.20	176	*e*P	P	21 54 31.4	+1.3
PRPB	Parauapebas	18.32	222	*e*P	Pn	21 54 41.4	-1.1
NBLA	Lagarto - SE	18.46	181	*e*P	P	21 54 46.9	+2.8
NBPN	Ponto Novo - B	18.50	188	*e*P	P	21 54 44.4	-0.2
MALB	Monte Alegre	19.09	241	*e*P	P	21 54 46.9	-4.2
SMTB	Santa Maria do	19.14	212	*e*P	P	21 54 51.2	-0.4
SDBA	SAO DESIDERIO	21.15	200	*e*P	P	21 55 13.6	0.0
GDU01	Guandu, BA	21.26	185	*e*P	P	21 55 16.8	+2.1
ITTB	Itaituba	21.65	237	*e*P	P	21 55 16.7	-2.2
PEXB	Peixe	22.27	209	*e*P	P	21 55 26.3	+0.7
CMC01	Camacan, BA	22.88	185	*e*P	P	21 55 34.1	+2.2
NPGB	Novo Progresso	22.92	231	*e*P	P	21 55 31.5	-0.9
BOAV	Boa Vista	23.41	258	*e*P	P	21 55 36.3	-1.2
BOAV	Boa Vista	23.41	258	P	P	21 55 35.9	-1.6
BOAV				IAmb	IAmb	21 55 38.2	
	comp=Z,14nm,1.0s						
JANB	Januaria	23.47	196	*e*P	P	21 55 37.6	-0.4
SNDB	Serra Nova Dou	23.73	215	*e*P	P	21 55 41.0	+0.4
PTGA	Pitinga	23.79	251	P	P	21 55 39.3	-2.0
MC01	Montes Claros	24.95	195	*e*P	P	21 55 53.6	+1.8
BDFB	Brasilia	25.28	204	P	P	21 55 55.5	+0.6
	comp=Z,12nm,0.8s,baz=50,slow=11,SNR=9.1						
BDFB				LR	LR	22 03 53.1	
	comp=Z,65nm,19.1s,baz=359,slow=32						
BDFB	Brasilia	25.28	204	P	P	21 55 54.8	-0.1
BDFB				IAmb	IAmb	21 55 59.4	
	comp=Z,13nm,0.9s						
MACA	Manacapuru-AM	25.39	246	*e*P	P	21 55 56.0	+0.1
MACA	Manacapuru-AM	25.39	246	P	P	21 55 54.7	-1.2
CLDB	Colider	25.78	225	*e*P	P	21 55 58.2	-1.2
SJMB	Sao Joao De Ma	26.37	188	*e*P	P	21 56 07.1	+2.5
DIAM	Diamantina, MG	26.41	193	*e*P	P	21 56 06.2	+1.0
BSFB	Barra de Sao F	26.45	187	*e*P	P	21 56 08.1	+2.7
RIB01	Linhares ES	26.88	186	*e*P	P	21 56 11.6	+2.4
PDRB	Porto dos Gac	26.95	225	*e*P	P	21 56 09.7	-0.3
ARAG	Araguaiana, MT	27.09	211	*e*P	P	21 56 12.2	+1.0
IPMB	Ipameri, GO	27.49	202	*e*P	P	21 56 15.8	+1.0
H10N3	ASCENSION HYDR	27.66	123	T	T	22 25 27.5	
	baz=303,slow=75,SNR=160						
H10N2	ASCENSION HYDR	27.67	123	T	T	22 25 27.8	
	baz=303,slow=75,SNR=160						
H10N1	ASCENSION HYDR	27.68	123	T	T	22 25 29.0	
	baz=303,slow=75,SNR=179						
H10S3	ASCENSION HYDR	28.15	125	T	T	22 26 04.7	
	baz=303,slow=74,SNR=189						
H10S2	ASCENSION HYDR	28.17	125	T	T	22 26 06.1	
	baz=277,slow=74,SNR=56						
ALF01	Guarapari-ES	28.20	186	*e*P	P	21 56 23.4	+2.4
SALV	Santo Antonio	29.43	217	*e*P	P	21 56 32.2	+0.1
DUB01	Friburgo-RJ	29.86	189	*e*P	P	21 56 36.8	+0.9
CELP	Cerrillos	30.07	293	P	P	21 56 36.0	-1.8
SAML	Samuel	30.33	238	P	P	21 56 38.3	-1.8
SAML				IAmb	IAmb	21 56 40.7	
	comp=Z,9.5nm,0.9s						
PTLB	Pontes e Lacer	31.30	223	*e*P	P	21 56 49.5	+0.9
PMOZ	Porto Moniz, M	31.44	34	*e*T	T	22 29 18.9	
FUL	Funchal	31.48	35	*e*T	T	22 29 20.1	
PMAR	Madeira	31.53	35	*e*T	T	22 29 23.8	
PCMB	Pacaembu	31.96	205	*e*P	P	21 56 55.0	+0.6
DBIC	Dimbokro	32.49	89	P	P	21 56 58.9	-0.3
	comp=Z,3.0nm,0.9s,baz=284,slow=12,SNR=2.2						
ETMB	Extrema	33.34	239	*e*P	P	21 57 05.8	-0.8
ETMB	Extrema	33.34	239	P	P	21 57 05.1	-1.5
ETMB				IAmb	IAmb	21 57 06.6	
	comp=Z,6.8nm,1.0s						
KOWA	Kowa	33.63	75	P	P	21 57 06.2	-3.0
KOWA				IAmb	IAmb	21 57 12.5	
	comp=Z,3.3nm,0.7s						
ROSC	El Rosal	36.60	268	LR	LR	22 11 32.3	
	comp=Z,114nm,21.3s,baz=84,slow=34						
ROSC	El Rosal	36.60	268	P	P	21 57 34.8	-0.5
ROSC				IAmb	IAmb	21 57 36.0	
	comp=Z,7.7nm,0.7s						
ITAB	Concordia	37.37	202	*e*P	P	21 57 42.2	+1.1
TORD	Torodi Ar. Bea	39.01	79	P	P	21 57 54.9	-0.3
	comp=Z,4.2nm,0.7s,baz=272,slow=9.1,SNR=20						
TORD				LR	LR	22 11 45.4	
	comp=Z,63nm,20.7s,baz=75,slow=33						

TORD	Torodi Ar. Bea	39.01	79	P	P	21 57 53.6	-1.6
OTAV	Otavalo	41.38	262	eP	P	21 58 14.9	-0.5
ATAH	Atahualpa	43.24	251	LR	LR	22 15 44.5	
	comp=Z,93nm,21.2s,baz=75,slow=35						
ESDC	Sonseca Array	43.91	38	P	P	21 58 38.8	+3.7
	comp=Z,2.2nm,1.1s,baz=236,slow=8.2,SNR=4.6						
ESDC				LR	LR	22 12 50.1	
	comp=Z,95nm,21.7s,baz=230,slow=31						
AC02	Maricunga	45.89	221	P	P	21 58 51.1	-0.5
AC02				IAmb	IAmb	21 58 52.3	
	comp=Z,7.1nm,1.0s						
KEST	Kesra	51.17	50	LR	LR	22 21 46.9	
	comp=Z,111nm,19.1s,baz=296,slow=37						
SCHQ	Schefferville	52.59	339	LR	LR	22 19 36.5	
	comp=Z,30nm,18.6s,baz=84,slow=33						
PLCA	Paso Flores	56.85	210	P	P	22 00 14.6	+1.5
	comp=Z,1.8nm,0.8s,baz=8.0,slow=9.8,SNR=3.8						
GERES	GERESS Array B	59.47	37	LR	LR	22 22 31.6	
	comp=Z,31nm,21.9s,baz=262,slow=32						
CLL	Collm	60.19	34	eP	P	22 00 32.0	-4.1
IDI	Anoyia	63.25	54	LR	LR	22 28 12.4	
	comp=Z,55nm,20.1s,baz=250,slow=36						
NOA	NORSAR Array B	64.38	24	LR	LR	22 27 32.8	
	comp=Z,24nm,18.0s,baz=240,slow=34						
TXAR	Lajitas Array	65.48	299	P	P	22 01 16.7	+4.7
	comp=Z,0.8nm,0.6s,baz=104,slow=7.5,SNR=5.6						
TX31	Lajitas Ar. Si	65.48	299	P	P	22 01 10.4	-1.5
MLR	Muntele Rosu	66.17	44	LR	LR	22 28 15.4	
	comp=Z,60nm,19.0s,baz=333,slow=34						
AKASG	Malin Array Be	69.55	39	LR	LR	22 29 27.9	
	comp=Z,24nm,21.9s,baz=35,slow=34						
BRTR	Keskin Array B	70.76	51	P	P	22 01 45.4	+0.4
	comp=Z,1.1nm,0.9s,baz=268,slow=3.7,SNR=5.0						
BRTR				LR	LR	22 32 50.2	
	comp=Z,32nm,21.3s,baz=268,slow=36						
FINES	FINESS Array B	70.95	27	P	P	22 01 48.1	+2.6
	comp=Z,2.0nm,0.9s,baz=225,slow=15,SNR=1.0						
FINES				LR	LR	22 29 43.0	
	comp=Z,40nm,20.2s,baz=194,slow=33						
PDAR	Pinedale Array	71.65	312	P	P	22 01 53.6	+3.2
	comp=Z,0.2nm,0.5s,baz=76,slow=16,SNR=2.1						
HWUT	Hardware Ranch	73.02	311	P	P	22 01 57.3	-1.2
YHL	Hebgen Lake	73.05	314	P	P	22 01 57.9	-1.0
YHL				IAmb	IAmb	22 02 09.5	
	comp=Z,4.0nm,1.1s						
ARCES	ARCESS Array B	73.70	19	LR	LR	22 29 55.4	
	comp=Z,27nm,20.6s,baz=235,slow=32						
NVAR	Mina Array Bea	78.06	308	P	P	22 02 31.1	+3.4
	comp=Z,0.5nm,0.8s,baz=92,slow=6.8,SNR=2.7						
ILAR	Eielson Array	91.25	336	P	P	22 03 34.8	+1.4
	comp=Z,0.6nm,1.1s,baz=57,slow=3.3,SNR=2.8						
ILAR				LR	LR	22 41 52.1	
	comp=Z,30nm,21.1s,baz=170,slow=34						
ASAR	Alice Springs	162.05	154	PKP	PKPdf	22 10 34.4	+3.7
	comp=Z,0.1nm,0.5s,baz=219,slow=5.3,SNR=1.6						
ASAR				PKPab	pPKPab	22 11 17.9	-0.8
	comp=Z,0.7nm,0.9s,baz=200,slow=5.2,SNR=6.1						
WRA	Warramunga Arr	165.44	148	PKPab	PKPab	22 11 34.4	+2.7
	comp=Z,0.4nm,0.8s,baz=192,slow=7.3,SNR=1.8						

DJA ***21*** *22:00:41.8±0.5, 2°N±3°×12°7E±°, h83^{km}±7^{km}, M4.2/11, mb4.4/7, mB4.9/4, MLv4.2/11, Mw(mB)4.2/4*

IDC ***21*** *22:00:42.8±8.5, 1°.59N×127°.23E, h134^{km}±78^{km}, mb3.4/5, mb1 3.7/6, mb1mx3.3/39, mbtmp3.9/6, MS3.4/1, Ms1 3.4/1, ms1mx2.4/27, Error ellipse: s-maj=64.1km s-min=18.8km az=57.0*

ISC 21 22:00:44.8±1.2**, 1°.4N**±0°.1×**127°.17E**±0°.08**, h150**^{km}**, n17, σ1**^{s}**.24**/20**, mb3.6**/5**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBMI	Labuha	2.08	171	P	Pn	22 01 20.6	-0.2
KMSI	Cibinong	3.29	255	P	Pn	22 01 35.4	-0.5
KMSI				S	Sn	22 02 14.9	-0.6
SANI	Sanana	3.65	199	P	Pn	22 01 39.2	-1.3
SANI				S	Sn	22 02 20.5	-3.2
GTOI	Gorontalo	4.23	259	P	Pn	22 01 48.0	-0.1
GTOI				S	Sn	22 02 37.6	+0.4
MRSI	Marisa	5.31	260	P	Pn	22 02 01.2	-1.1
	0.2nm27nm,0.6s						
APSI	Ampana	5.98	247	P	Pn	22 02 10.7	-0.6
	0.2nm869nm35nm,0.7s						
TTSI	Tana Toraja	8.58	239	P	Pn	22 02 45.1	-0.9
BNSI	Bone	9.12	231	P	Pn	22 02 53.0	-0.2
	616nm25nm,0.9s						
SPSI	Sidrap Palu	9.13	234	P	Pn	22 02 54.3	+1.0
	870nm73nm,0.6s						
BKSI	Bulukumba	9.72	226	P	Pn	22 03 02.9	+1.8
KAPI	Kappang	9.79	229	P	Pn	22 03 03.6	+1.6
	3.5nm,0.3s,baz=51,slow=8.7,SNR=20						
KAPI				S	Sn	22 04 51.3	+0.8
	1.0nm,0.3s,baz=66,slow=20,SNR=6.1						
WRA	Warramunga Arr	22.37	162	P	P	22 05 31.1	+0.3
	2.4nm,0.4s,baz=342,slow=11,SNR=28						
PMG	Port Moresby	22.64	119	LR	LR	22 16 19.0	
	comp=Z,85nm,19.5s,baz=84,slow=41						
ASAR	Alice Springs	25.79	166	P	P	22 06 02.5	+0.4
	0.4nm,0.3s,baz=348,slow=7.6,SNR=13						
STKA	Stephens Creek	35.83	159	P	P	22 07 31.0	+0.9
	4.0nm,0.6s,baz=334,slow=8.3,SNR=11						
MKAR	Makanchi Array	59.69	326	P	P	22 10 32.3	-1.2
	0.3nm,0.4s,baz=122,slow=8.8,SNR=9.0						
VNDA	Vanda	81.10	173	P	P	22 12 43.7	+0.9
	0.2nm,0.6s,baz=326,slow=6.7,SNR=1.1						

SJA ***21*** *22:12:30.2±1.2, 30°.54S×72°.27W, h15^{km}±7^{km}, ML4.5, MW4.3*

IDC ***21*** *22:12:31.7±0.7, 30°.62S×71°.75W, h0^{km}, mb4.3/10, mb1 4.3/14, mb1mx4.2/26, mbtmp4.2/14, ML3.9/4, MS3.4/5, Ms1 3.4/5, ms1mx3.2/20, Error ellipse: s-maj=27.8km s-min=15.9km az=101.0*

NEIC ***21*** *22:12:36.0±1.7, 30°.55S±0°.04×71°.83W±0°.07, h23^{km}±3^{km}, mb4.6/25, Mwr4.1/30, ML4.5(GUC), Error ellipse: s-maj=8.8km s-min=5.9km az=108.0*

NEIC ***21*** *22:12:35.7, 30°.56S×71°.83W, h31^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.44; $M_{\theta\theta}$0.18; $M_{\phi\phi}$-1.62; $M_{r\theta}$0.63; $M_{\theta\phi}$0.11; $M_{\phi r}$-0.59; Fault plane solution: $M_0$1.77000×10^{15} NP1:ϕ_s157.11000°, δ59.47000°, λ67.79000°. NP2:ϕ_s15.90000°, δ37.11000°, λ122.66000°. Principal axes: T 1.7765, Plg67.0000°, Azm23.0000°; N -0.0215, Plg19.0000°, Azm169.0000°; P -1.7550, Plg12.0000°, Azm263.0000°;*

GUC ***21*** *22:12:36.6±0.7, 30°.63S×71°.67W, h36^{km}±2^{km}, ML4.5*

ISC 21 22:12:31.0±0.7**, 30°.58S**±0°.02×**72°.11W**±0°.04**, h6**^{km}±4^{km}**, n149, σ2**^{s}**.25**/186**, mb4.6**/18**, 11C-8D, Fault plane solution: NP1:**ϕ_s7.26928°**,** δ26.83563°**,** λ122.91682°. **NP2:** ϕ_s151.30931°**,** δ67.73074°**,** λ74.62769°. **Principal axes:** T Plg64.0165°**,** Azm35.9780°**;** N Plg14.2006°**,** Azm157.2573°**;** P Plg21.2839°**,** Azm252.9146°**; Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.42	103	⇑iP	Pb	22 12 41.8	+0.9
CO06				i S	Sg	22 12 45.6	+0.9
CO06				IAML		22 12 45.8	
	comp=N,95µm,0.2s						
CO06	Fray Jorge	0.42	103		Pb	22 12 41.6	+0.7
CO06				Sg	Sg	22 12 45.4	+0.6
CO05	La Serena	1.00	49	⇓iP	Pg	22 12 51.4	+1.2
CO05				i S	Sb	22 13 02.2	-2.0
CO05				IAML		22 13 05.0	
	comp=N,25µm,0.3s						
CO05	La Serena	1.00	49		Pg	22 12 51.4	+1.2
CO05				Sn	Sb	22 13 02.8	-1.5
GO04	Tololo Observa	1.20	71	⇓iP	Pn	22 12 53.2	-1.4
GO04				i S	Sb	22 13 05.1	-5.2
GO04				IAML		22 13 12.5	
	comp=N,42µm,0.5s						
GO04	Tololo Observa	1.20	71		Pn	22 12 53.3	-1.4
CO03	El Pedregal	1.25	102	⇓iP	Pn	22 12 52.4	-2.8
CO03				i S	Sn	22 13 04.1	-8.4
CO03				i S	Sn	22 13 04.1	-8.4
CO03	El Pedregal	1.25	102		Pn	22 12 53.0	-2.1
LCO	Las Campanas	1.99	38	⇑iP	Pb	22 13 06.6	-1.1
LCO				eS	Sn	22 13 29.9	-0.9
LCO	Las Campanas	1.99	38		Pb	22 13 06.5	-1.3
LCO	Las Campanas	1.99	38	eP	Pb	22 13 06.0	-1.7
VA06	Catapilco	2.10	161	eP	Pb	22 13 08.8	-0.7
VA06				i S	Sn	22 13 33.8	+0.8
VA06				IAML		22 13 42.1	
	comp=E,6µm,0.5s						
AROD	Rodeo	2.32	80	eP	Pb	22 13 12.7	-0.8
AROD				eS	Sn	22 13 33.5	-5.5
VA01	Torpederas	2.47	171	Pn	Pb	22 13 14.2	-1.7
VA01	Torpederas	2.47	171	eP	Pb	22 13 13.5	-2.3
VA01				eP	Pb	22 13 14.1	-1.7
VA01				eP	Pg	22 13 17.0	-1.4
VA01				eS	Sb	22 13 45.0	-1.5
AC04	Llanos de Chal	2.53	21	eP	Pb	22 13 14.6	-2.3
AC04				eS	Sb	22 13 48.3	-0.1
AC04				IAML		22 13 59.0	
	comp=N,2µm,0.8s						
AC04	Llanos de Chal	2.53	21		Pb	22 13 14.6	-2.3
AC04	Llanos de Chal	2.53	21	eP	Pb	22 13 13.5	-3.4
AC04				eS	Sb	22 13 44.5	-3.8
AC04				IAML		22 13 55.8	
	comp=Z,1µm,0.7s						
VA03	San Esteban	2.55	149	⇑iP	Pn	22 13 14.8	+1.7
VA03				i S	Sn	22 13 43.8	-0.7
VA03				IAML		22 13 52.6	
	comp=E,5µm,0.2s						
VA03	San Esteban	2.55	149		Pb	22 13 15.1	-2.2
VA03	San Esteban	2.55	149	eP	Pn	22 13 15.0	+1.9
VA03				eS	Sn	22 13 43.5	-1.0
VA03				IAML		22 13 55.3	
	comp=Z,2µm,0.4s						
ROCH	El Roble	2.56	159	⇑iP	Pn	22 13 15.1	+1.7
ROCH				⇑iP	Pn	22 13 15.0	+1.7
ROCH				i S	Sn	22 13 45.5	+0.5
ROCH				i S	Sb	22 13 45.8	-3.6
ROCH				IAML		22 13 56.2	
	comp=E,2µm,0.5s						
ROCH				IAML		22 14 07.2	
	comp=N,3µm,0.4s						
ROC1	El Roble	2.57	159	eP	Pn	22 13 13.5	+0.1
ROC1				eP	Pb	22 13 15.0	-2.6
ROC1				eP	Pg	22 13 15.2	-5.1
ROC1				eS	Sb	22 13 50.0	+0.5
ACDV	Cuesta del Vie	2.62	82	eP	Pn	22 13 13.5	-0.5
ACDV				eP	Pb	22 13 17.0	-1.5
ACDV				eS	Sg	22 13 57.8	+2.6
ACDV				IAML		22 13 58.1	
	comp=Z,940nm,0.6s						
ACCO	Cerro Coronel	2.63	91	eP	Pb	22 13 17.0	-1.7
ACCO				eS	Sn	22 13 50.0	+3.3
RTLS	Leoncito	2.70	117	eP	Pn	22 13 13.5	-1.8
RTLS				eP	Pb	22 13 17.6	-2.4
RTLS				eS	Sn	22 13 52.4	+3.9
RTLS				IAML		22 13 58.8	
	comp=Z,3µm,0.6s						
MT02	Curacav	2.80	163	eP	Pb	22 13 18.9	-2.5
MT02				i S	Sn	22 13 51.1	+0.7
MT02	Curacav	2.80	163	Pn	Pn	22 13 17.9	+1.5
MT02	Curacav	2.80	163	eP	Pb	22 13 18.5	-2.9
MT02				IAML		22 14 03.8	
	comp=Z,921nm,0.6s						
PEL	Peldehue	2.83	155	⇑iP	Pn	22 13 18.8	+2.0
PEL				i S	Sn	22 13 51.3	0.0
PEL				IAML		22 14 04.6	
	comp=N,2µm,0.5s						
PEL	Peldehue	2.83	155		Pn	22 13 18.7	+1.8
PEL	Peldehue	2.83	155	eP	Pn	22 13 13.5	-3.4
PEL				eP	Pb	22 13 19.0	-3.0
PEL				eS	Sn	22 13 52.5	+1.2
AUSP	Uspallata	2.85	126	eP	Pb	22 13 20.3	-2.2
AUSP				eS	Sb	22 13 56.5	-1.2
MT05	Renca	3.04	158	eP	Pn	22 13 22.0	+2.2
MT05				i S	Sb	22 13 60.0	-3.0
MT05				IAML		22 14 08.9	
	comp=E,3µm,0.3s						
MT05	Renca	3.04	158		Pn	22 13 21.9	+2.2
MT05	Renca	3.04	158	eP	Pn	22 13 22.0	+2.2
MT05				IAML		22 14 13.2	
	comp=Z,2µm,0.9s						
VA05	Santo Domingo	3.10	172		Pn	22 13 22.6	+2.1
ZON	Zonda	3.10	109		Pn	22 13 22.0	+1.4
ZON	Zonda	3.10	109	eP	Pn	22 13 23.1	+2.5
ZON				eS	Sb	22 14 03.0	-1.7
ZON				IAML		22 14 16.9	
	comp=Z,787nm,0.8s						
RTCV	Cerro Valdivia	3.32	114	eP	Pn	22 13 26.0	+2.5
RTCV				eP	Pb	22 13 26.2	-4.1
RTCV				eS	Sn	22 14 08.5	+5.2
RTCV				eS	Sb	22 14 09.0	-1.9
MT09	Talagante	3.33	164	⇓iP	Pn	22 13 26.2	+2.5
MT09				i S	Sn	22 14 03.7	0.0
MT09				IAML		22 14 22.4	
	comp=E,1µm,0.7s						
MT09	Talagante	3.33	164		Pn	22 13 26.1	+2.3
MT01	Popeta	3.36	168	eP	Pn	22 13 26.2	+2.2
MT01				eS	Sb	22 14 13.6	+1.6
MT01				IAML		22 14 20.3	
	comp=E,691nm,0.5s						
MT01	Popeta	3.36	168		Pn	22 13 26.1	+2.0
MT01	Popeta	3.36	168	eP	Pn	22 13 26.0	+2.0
MT01				eP	Pb	22 13 26.3	-4.7
MT01				eS	Sb	22 14 09.0	-3.0
MT01				IAML		22 14 19.5	
	comp=Z,606nm,0.6s						
GO03	Copiap	3.40	29		Pn	22 13 26.2	+1.5
GO03	Copiap	3.40	29	eP	Pn	22 13 21.5	-3.2
GO03				eP	Pb	22 13 26.0	-5.7
GO03				eP	Pg	22 13 26.3	-10
GO03				eS	Sg	22 14 19.9	-0.3
ASAL	Salagasta	3.44	127	eP	Pn	22 13 13.5	-12
ASAL				eP	Pb	22 13 29.0	-3.5
ASAL				eS	Sb	22 14 14.1	-0.5
ASAL				IAML		22 14 30.2	
	comp=Z,713nm,1.0s						
ARCO	CERRO ARCO	3.53	131	eP	Pb	22 13 30.9	-3.0
ARCO				eS	Sb	22 14 22.8	+5.7
ARCO				IAML		22 14 23.3	
	comp=Z,730nm,0.5s						
AAGR	Agrelo	3.75	133	eP	Pn	22 13 33.0	+3.5
AAGR				eS	Sb	22 14 21.5	-2.0
VCA	Vinchina	3.86	63	⇑iP	Pn	22 13 35.0	+3.8
VCA				eS	Sn	22 14 19.7	+2.7
VCA	Vinchina	3.86	63	eP	Pn	22 13 35.0	+3.8
VCA				eS	Sb	22 14 23.0	-3.8
VCA				eS	Sn	22 14 24.5	+7.5
VCA				IAML		22 14 33.1	
	comp=Z,2µm,0.6s						
BO01	Tunca	3.90	167		Pn	22 13 33.6	+2.0
BO01	Tunca	3.90	167	eP	Pn	22 13 33.5	+2.0
BO01				eP	Pb	22 13 34.0	-6.2
BO01				eS	Sb	22 14 24.5	-3.2
BO01				IAML		22 14 43.5	
	comp=Z,304nm,0.8s						
BO02	Sierra Bellavi	4.35	165		Pn	22 13 40.2	+2.5
BO02	Sierra Bellavi	4.35	165	eP	Pn	22 13 40.7	+2.9
BO02				eS	Sn	22 14 32.5	+3.7
BO02				IAML		22 14 53.8	
	comp=Z,722nm,0.8s						
GO05	Huala	4.42	178	Pn	Pn	22 13 40.0	+1.2
GO05	Huala	4.42	178	eP	Pn	22 13 40.5	+1.8
AC02	Maricunga	4.56	36		Pn	22 13 42.8	+1.8
AC02	Maricunga	4.56	36	eS	Sn	22 14 39.0	+4.5
AC02				IAML		22 14 58.7	
	comp=Z,700nm,0.9s						
ACLC	CERRO LA CRUZ	4.62	77	IAML		22 15 11.8	
	comp=Z,433nm,0.9s						
APLL	PUNTA DE LOS L	4.82	89	eP	Pn	22 13 45.0	+0.7
CYA	Choya	5.90	70	⇑iP	Pn	22 13 59.9	+0.9
CYA				eS	Sn	22 15 07.9	+0.9
PB14	IPOC Station P	6.12	15	Pn	Pn	22 14 01.6	-0.7
H03N1	Juan Fernandez	6.44	242	T	T	22 21 06.3	
	baz=72,slow=72,SNR=3252						
H03N2	Juan Fernandez	6.46	242	T	T	22 21 07.0	
	baz=72,slow=72,SNR=3696						
H03N3	Juan Fernandez	6.46	242	T	T	22 21 05.6	
	baz=72,slow=72,SNR=3289						
VA04	Juan Fernndez	6.47	240	Pn	Pn	22 14 11.3	+4.6
H03S3	Juan Fernandez	6.61	239	T	T	22 21 27.9	
	baz=68,slow=79,SNR=4.2						
H03S1	Juan Fernandez	6.61	239	T	T	22 21 26.9	
	baz=68,slow=79,SNR=9.2						
H03S2	Juan Fernandez	6.62	239	T	T	22 21 13.9	
	baz=68,slow=79,SNR=6.4						
PB10	IPOC Station P	7.17	12	Pn	Pn	22 14 19.1	+2.6
PB15	IPOC Station P	7.71	18		Pn	22 14 24.5	+0.5
LC01	Cunco	8.30	179	Pn	Pn	22 14 33.6	+1.7
PB04	IPOC Station P	8.40	13	Pn	Pn	22 14 34.1	+0.6
LVC	Limon Verde	8.44	21	Pn	Pn	22 14 36.1	+1.9
	comp=Z,0.9nm,0.3s,baz=197,slow=14,SNR=8.8						
LVC				Sn	Sn	22 16 06.9	-3.1
	comp=Z,1.7nm,0.3s,baz=229,slow=20,SNR=1.6						
LVC				LR	LR	22 17 51.0	
	comp=Z,236nm,20.7s,baz=200,slow=38						
LVC	Limon Verde	8.44	21	Pn	Pn	22 14 34.1	-0.1
PB07	IPOC Station P	9.04	13	Pn	Pn	22 14 43.6	+1.4
PB09	IPOC Station P	9.12	17	Pn	Pn	22 14 43.9	+0.6
PB01	IPOC Station P	9.79	15	Pn	Pn	22 14 53.4	+1.0
PLCA	Paso Flores	10.21	173	Pn	Pn	22 14 59.0	+0.7
	comp=Z,0.2nm,0.3s,baz=359,slow=12,SNR=5.3						
PLCA				Sn	Sn	22 17 03.2	+10
	comp=Z,0.1nm,0.3s,baz=12,slow=19,SNR=2.0						
PLCA				LR	LR	22 18 50.1	
	comp=Z,175nm,18.6s,baz=358,slow=37						
PLCA	Paso Flores	10.21	173	Pn	Pn	22 14 59.4	+1.2
TRQA	Tornquist	11.21	134		Pn	22 15 11.8	0.0
ITQB	Itaqui	13.44	90	Pn	Pn	22 15 39.7	-2.6
CPUP	Villa Florida	13.67	76	Pn	Pn	22 15 43.5	-2.0
	comp=Z,0.3nm,0.3s,baz=49,slow=20,SNR=2.2						
CPUP				Sn	Sn	22 18 09.6	-8.3
	comp=Z,0.4nm,0.3s,baz=172,slow=19,SNR=1.6						
CPUP				LR	LR	22 21 40.9	
	comp=Z,134nm,20.7s,baz=252,slow=41						
PLTB	Pedras Altas	15.89	99	Pn	Pn	22 16 12.2	-3.1
SIV	San Ignacio	17.69	37	P	P	22 16 38.7	-0.4
	comp=Z,0.3nm,0.3s,baz=216,slow=12,SNR=25						
SIV				LR	LR	22 24 40.2	
	comp=Z,158nm,19.4s,baz=213,slow=42						
ITAB	Concordia	17.81	84	Pn	Pn	22 16 37.7	-1.9
ITAB				IAmb	IAmb	22 16 52.2	
	comp=Z,48nm,1.2s						
PTLB	Pontes e Lacer	19.19	41	P	Pn	22 16 55.3	-1.2
VILB	Vilhena	20.71	35	P	P	22 17 11.6	-0.6
VILB				IAmb	IAmb	22 17 16.4	
	comp=Z,19nm,0.8s						
ETMB	Extrema	21.38	16	P	P	22 17 20.4	+1.0
SAML	Samuel	23.08	23	P	P	22 17 38.4	+0.8
EFI	East Falkland	23.50	158	P	P	22 17 45.8	+4.3
EFI				IAmb	IAmb	22 17 48.2	
	comp=Z,23nm,0.9s						
USHA	Ushuaia	24.38	175	P	P	22 17 51.5	+1.6
	comp=Z,13nm,0.9s,baz=356,slow=9.7,SNR=7.3						
USHA				LR	LR	22 26 46.7	
	comp=Z,143nm,19.4s,baz=0.0,slow=35						
BDFB	Brasilia	26.61	61	P	P	22 18 09.6	-0.9
	comp=Z,5.5nm,0.7s,baz=248,slow=9.9,SNR=8.4						
BDFB	Brasilia	26.61	61	P	P	22 18 09.5	-0.9
BDFB				IAmb	IAmb	22 18 27.8	
	comp=Z,13nm,1.3s						
BOAV	Boa Vista	34.60	21	P	P	22 19 21.8	+0.8
BOAV				IAmb	IAmb	22 19 23.1	
	comp=Z,5.7nm,0.7s						
ZARC	Zaragoza, Cauc	37.94	356	P	P	22 19 51.3	+1.8
BAUV	El Baul	39.49	6	P	P	22 20 03.9	+1.4
BAUV				IAmb	IAmb	22 20 04.8	
	comp=Z,13nm,0.7s						
BIRV	Birongo	41.20	9	P	P	22 20 18.4	+1.7
BIRV				IAmb	IAmb	22 20 19.8	
	comp=Z,11nm,0.9s						
CRPR	Cabo Rojo, PR	48.54	6	P	P	22 21 16.5	+1.4
OBIP	Obispado Ponce	48.63	7	P	P	22 21 17.5	+1.8
CELP	Cerrillos	48.66	7	P	P	22 21 18.0	+2.0
VNA3	Neumayer Olymp	52.55	159	P	P	22 21 46.2	+1.3
VNA2	Neumayer--Watz	53.19	158	P	P	22 21 50.6	+1.0
	baz=288,slow=8.8						
SNAA	Sanae	54.78	159	P	P	22 22 02.0	+0.7
SNAA	Sanae	54.78	159	P	P	22 22 01.3	+0.1
	comp=Z,2.5nm,0.7s,baz=272,slow=8.8,SNR=25						
SNAA	Sanae	54.78	159	P	P	22 22 02.2	+1.0
SNAA				IAmb	IAmb	22 22 10.9	
	comp=Z,3.2nm,0.7s						
QSPA	South Pole Qui	59.65	180	P	P	22 22 38.2	+2.3
QSPA				IAmb	IAmb	22 22 40.5	
	comp=Z,7.3nm,1.2s						
VNDA	Vanda	67.44	191	P	P	22 23 30.0	+3.0
	comp=Z,0.5nm,0.7s,baz=126,slow=7.6,SNR=2.3						
VNDA	Vanda	67.44	191	P	P	22 23 29.8	+2.8
LIC	Lamto	73.78	72	eP	P	22 24 05.6	-1.0
	comp=Z,17nm,0.9s						
TIC	Toumodi	74.02	72	eP	P	22 24 07.6	-0.5
KIC	Kosan Boka	74.09	73	eP	P	22 24 07.2	-1.3
	comp=Z,21nm,1.0s						
DBIC	Dimbokro	74.17	72	P	P	22 24 08.8	-0.2
	comp=Z,4.9nm,0.6s,baz=218,slow=5.6,SNR=8.6						
DBIC	Dimbokro	74.17	72	P	P	22 24 09.0	+0.1
DBIC				IAmb	IAmb	22 24 21.8	
	comp=Z,12nm,1.0s						
LMN	Caledonia Moun	76.36	5	P	P	22 24 23.1	+2.4
MAW	Mawson	76.47	164	P	P	22 24 22.5	+1.3
	comp=Z,3.8nm,0.5s,baz=210,slow=6.4,SNR=8.2						
MAW	Mawson	76.47	164	P	P	22 24 22.8	+1.6
SUR	Sutherland	76.55	120	P	P	22 24 23.0	+0.3
KOWA	Kowa	79.30	66	P	P	22 24 37.8	0.0
KOWA				IAmb	IAmb	22 24 51.1	
	comp=Z,17nm,1.4s						
NVAR	Mina Array Bea	81.05	325	P	P	22 24 50.4	+3.3
	comp=Z,1.1nm,1.1s,baz=160,slow=5.4,SNR=3.7						
BOSA	Boshof	81.72	118	P	P	22 24 51.2	+0.2
	comp=Z,2.2nm,0.7s,baz=202,slow=4.8,SNR=1.7						
BOSA	Boshof	81.72	118	P	P	22 24 51.2	+0.2
BOSA				IAmb	IAmb	22 24 53.5	
	comp=Z,17nm,1.5s						
TORD	Torodi Ar. Bea	83.11	70	P	P	22 24 58.1	0.0
	comp=Z,1.9nm,0.7s,baz=269,slow=5.3,SNR=20						
TORD	Torodi Ar. Bea	83.11	70	P	P	22 24 58.2	+0.1
TORD				IAmb	IAmb	22 25 11.6	
	comp=Z,5.1nm,1.0s						
ULM	Lac du Bonnet	83.19	345	P	P	22 24 59.8	+2.1
	comp=Z,2.0nm,0.6s,baz=169,slow=5.2,SNR=3.1						
SRO	Srobarova	112.22	47	ePDIFF	Pdif	22 27 14.5	+3.3
VYHS	Vyhne	112.80	46	ePDIFF	Pdif	22 27 16.4	+2.7
ASAR	Alice Springs	120.57	208	PKP	PKiKP	22 31 24.3	-0.1
	comp=Z,0.3nm,0.9s,baz=152,slow=2.6,SNR=4.8						
ASAR	Alice Springs	120.57	208		PKiKP	22 31 24.6	+0.2
WRA	Warramunga Arr	123.69	210	PKP	PKiKP	22 31 31.2	+0.6
	comp=Z,0.7nm,0.6s,baz=165,slow=1.7,SNR=10						
WRA	Warramunga Arr	123.69	210	PKPdf	PKiKP	22 31 31.4	+0.8
H11S2	WAKE ISLAND Hy	125.69	272	T	T	00 50 17.8	
	baz=115,slow=74,SNR=98						
H11S1	WAKE ISLAND Hy	125.70	272	T	T	00 50 18.7	
	baz=115,slow=74,SNR=69						
H11S3	WAKE ISLAND Hy	125.70	272	T	T	00 50 19.3	
	baz=115,slow=74,SNR=84						
BVAR	Borovoye Array	144.76	40	PKP	PKiKP	22 32 09.0	-3.2
	comp=Z,2.6nm,0.6s,baz=318,slow=1.9,SNR=8.1						
KKAR	Karatay Array	147.84	57	PKPbc	PKPab	22 32 17.7	-1.7
TOLI2	Tolitoli	148.24	205	PKPbc	PKPab	22 32 19.9	-1.8
KURK	Kurchatov	150.34	39	PKPbc	PKPab	22 32 24.3	-4.9
AAK	Ala-Archa	150.80	56	PKPbc	PKiKP	22 32 25.7	+0.6
FRU1	Bishkek	150.86	56	PKPbc	PKiKP	22 32 26.2	+1.1
ZAA0	Zalesovo Array	151.32	29	PKPbc	PKiKP	22 32 26.4	+0.8
ZAA0				PKPab	sPKPab	22 32 35.3	+0.8
ZALV	Zalesovo Beam	151.32	29	PKPbc	PKiKP	22 32 26.6	+1.0
	comp=Z,10.0nm,0.7s,baz=291,slow=3.3,SNR=45						
ZALV				PKPab	pPKPab	22 32 35.0	+0.9
	comp=Z,10nm,0.7s,baz=300,slow=2.3,SNR=9.0						
ZALV	Zalesovo Beam	151.32	29	PKPbc	PKiKP	22 32 26.4	+0.8
ZALV				PKPab	sPKPab	22 32 35.3	+0.9
MKAR	Makanchi Array	154.45	43	PKPbc	PKiKP	22 32 33.6	+1.3
	comp=Z,0.8nm,0.8s,baz=271,slow=5.1,SNR=5.1						
MKAR				PKPab	PKPab	22 32 46.2	-0.5
	comp=Z,1.6nm,0.9s,baz=296,slow=2.4,SNR=6.7						
MKAR	Makanchi Array	154.45	43		PKiKP	22 32 33.5	+1.1
SONM	Songino Array	162.73	3	PKPab	PKPab	22 33 23.8	+1.3
	comp=Z,0.7nm,0.9s,baz=341,slow=7.8,SNR=3.6						
CMAR	Chiang Mai Arr	165.45	144	PKPab	PKPab	22 33 35.5	+0.4
	comp=Z,0.5nm,0.3s,baz=239,slow=4.9,SNR=1.7						

IDC ***21*** *22:16:53.8±0.8, 30°.67S×71°.69W, h0^{km}, mb4.1/8, mb1 4.2/11, mb1mx4.1/25, mbtmp4.0/11, ML3.5/3 Error ellipse: s-maj=33.5km s-min=18.3km az=97.0*

SJA ***21*** *22:16:53.0±2.0, 30°.57S×72°.11W, h10^{km}, ML4.2, MW4.1*

GUC ***21*** *22:16:58.3±0.7, 30°.64S×71°.64W, h38^{km}±4^{km}, ML4.3*

NEIC ***21*** *22:16:58.5±1.7, 30°.58S±0°.04×71°.79W±0°.08, h27^{km}±2^{km}, mb4.4/16, ML4.3(GUC), Error ellipse: s-maj=10.1km s-min=5.5km az=105.0*

ISC 21 22:16:53.6±0.9**, 30°.60S**±0°.02×**72°.00W**±0°.04**, h5**^{km}±5^{km}**, n111, σ2**^{s}**.06**/138**, mb4.3**/12**, 3C-3D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	**Fray Jorge**	**0.33**	**103**	⇑*i*P	**Pn**	**22 17 03.9**	**-1.2**
CO06				*i* S	**Sg**	**22 17 07.5**	**+3.3**
CO06				IAML		22 17 08.2	
	comp=E,67µm,0.5s						
CO06	**Fray Jorge**	**0.33**	**103**	Pg	**Pn**	**22 17 03.8**	**-1.2**
CO06				Sg	**Sg**	**22 17 07.5**	**+3.3**
CO05	**La Serena**	**0.95**	**44**	⇓*i*P	**Pn**	**22 17 13.4**	**-0.1**
CO05				*i* S	**Sg**	**22 17 24.6**	**+0.5**
CO05				IAML		22 17 26.9	
	comp=N,12µm,0.4s						
CO05	**La Serena**	**0.95**	**44**	Pn	**Pn**	**22 17 13.4**	**-0.1**
CO05				Sn	**Sg**	**22 17 24.4**	**+0.3**
GO04	**Tololo Observa**	**1.12**	**68**	⇓*i*P	**Pb**	**22 17 15.2**	**-0.4**
GO04				*i* S	**Sb**	**22 17 25.7**	**-5.0**
GO04				IAML		22 17 30.9	
	comp=E,41µm,0.4s						
GO04	**Tololo Observa**	**1.12**	**68**	Pn	**Pb**	**22 17 15.2**	**-0.4**
GO04	**Tololo Observa**	**1.12**	**68**	*e*P	**Pn**	**22 17 18.2**	**+2.0**
LCO	**Las Campanas**	**1.95**	**36**	⇑*i*P	**Pb**	**22 17 28.6**	**-1.1**
LCO	**Las Campanas**	**1.95**	**36**	Pn	**Pb**	**22 17 28.5**	**-1.1**
LCO	**Las Campanas**	**1.95**	**36**	*e*P	**Pb**	**22 17 29.0**	**-0.7**
VA06	**Catapilco**	**2.05**	**163**	*e*P	**Pb**	**22 17 30.2**	**-1.0**
AROD	**Rodeo**	**2.23**	**79**	*e*P	**Pb**	**22 17 33.8**	**-0.7**
VA01	**Torpederas**	**2.43**	**173**	Pn	**Pb**	**22 17 38.2**	**+0.4**
VA01	**Torpederas**	**2.43**	**173**	*e*P	**Pn**	**22 17 34.2**	**+0.3**
VA01				*e*P	**Pb**	**22 17 39.0**	**+1.2**
VA01				*e*S	**Sn**	**22 18 05.2**	**+1.1**
VA03	**San Esteban**	**2.49**	**151**	*e*P	**Pb**	**22 17 37.0**	**-1.8**
VA03				IAML		22 18 13.8	
	comp=E,2µm,0.3s						
VA03	**San Esteban**	**2.49**	**151**	Pn	**Pb**	**22 17 37.2**	**-1.6**
VA03	**San Esteban**	**2.49**	**151**	*e*P	**Pb**	**22 17 37.4**	**-1.4**
VA03				*e*S	**Sn**	**22 18 03.7**	**-1.9**
VA03				IAML		22 18 15.3	
	comp=Z,1µm,0.3s						
ROCH	**El Roble**	**2.51**	**161**	⇑*i*P	**Pn**	**22 17 37.1**	**+1.9**
ROCH				⇓*i*P	**Pn**	**22 17 37.1**	**+1.9**
ROCH				*e*S	**Sb**	**22 18 11.3**	**+0.8**
ROCH				IAML		22 18 20.2	
	comp=N,2µm,0.5s						
ROC1	**El Roble**	**2.51**	**161**	*e*P	**Pb**	**22 17 37.5**	**-1.9**
AC04	**Llanos de Chal**	**2.52**	**19**	Pn	**Pb**	**22 17 36.6**	**-2.7**
AC04	**Llanos de Chal**	**2.52**	**19**	*e*P	**Pb**	**22 17 36.7**	**-2.7**
AC04				*e*S	**Sn**	**22 18 06.7**	**+0.4**
AC04				IAML		22 18 17.6	
	comp=Z,639nm,0.8s						
ACDV	**Cuesta del Vie**	**2.53**	**81**	*e*P	**Pb**	**22 17 38.8**	**-0.7**
ACDV				*e*P	**Pn**	**22 17 39.0**	**+3.6**
ACDV				IAML		22 18 15.0	
	comp=Z,615nm,0.5s						
ACCO	**Cerro Coronel**	**2.53**	**90**	*e*P	**Pb**	**22 17 38.8**	**-0.9**
ACCO				*e*P	**Pn**	**22 17 39.0**	**+3.3**
RTLS	**Leoncito**	**2.61**	**118**	*e*P	**Pb**	**22 17 40.0**	**-1.0**
RTLS				IAML		22 18 21.1	
	comp=Z,2µm,0.9s						
MT02	**Curacav**	**2.75**	**165**	*e*P	**Pb**	**22 17 40.9**	**-2.4**
MT02				*e*S	**Sb**	**22 18 18.9**	**+1.6**
MT02				IAML		22 18 23.0	
	comp=E,597nm,0.6s						
MT02	**Curacav**	**2.75**	**165**	Pn	**Pn**	**22 17 40.2**	**+1.9**
MT02	**Curacav**	**2.75**	**165**	*e*P	**Pb**	**22 17 40.9**	**-2.4**
MT02				*e*S	**Sn**	**22 18 12.7**	**+0.7**
MT02				IAML		22 18 22.4	
	comp=Z,493nm,0.3s						
AUSP	**Uspallata**	**2.76**	**127**	*e*P	**Pb**	**22 17 42.1**	**-1.5**
PEL	**Peldehue**	**2.77**	**156**	*e*P	**Pb**	**22 17 41.1**	**-2.5**
PEL				*e*S	**Sn**	**22 18 15.2**	**+2.7**
MT05	**Renca**	**2.98**	**159**		**Pn**	**22 17 43.6**	**+2.0**
MT05	**Renca**	**2.98**	**159**	*e*P	**Pb**	**22 17 44.5**	**-2.8**
MT05				*e*S	**Sb**	**22 18 22.2**	**-1.8**
MT05				IAML		22 18 35.5	
	comp=Z,792nm,0.4s						
ZON	**Zonda**	**3.00**	**109**	Pn	**Pn**	**22 17 44.1**	**+2.2**
ZON	**Zonda**	**3.00**	**109**	*e*P	**Pn**	**22 17 45.0**	**+3.1**
ZON				*e*S	**Sb**	**22 18 23.7**	**-0.9**
ZON				IAML		22 18 37.4	
	comp=Z,443nm,0.5s						
VA05	**Santo Domingo**	**3.07**	**174**		**Pn**	**22 17 45.2**	**+2.5**
RTCV	**Cerro Valdivia**	**3.22**	**114**	*e*P	**Pn**	**22 17 43.7**	**-1.1**
RTCV				*e*P	**Pb**	**22 17 48.0**	**-3.3**
MT09	**Talagante**	**3.28**	**165**	*e*P	**Pn**	**22 17 48.1**	**+2.3**
MT09				*e*S	**Sb**	**22 18 30.1**	**-2.6**
MT09				IAML		22 18 43.7	
	comp=N,765nm,0.2s						
MT09	**Talagante**	**3.28**	**165**	Pn	**Pn**	**22 17 48.1**	**+2.3**
MT01	**Popeta**	**3.32**	**169**	*e*P	**Pb**	**22 17 49.5**	**-3.4**
MT01	**Popeta**	**3.32**	**169**	Pn	**Pn**	**22 17 47.9**	**+1.8**
MT01	**Popeta**	**3.32**	**169**	*e*P	**Pn**	**22 17 49.0**	**+2.9**
MT01				*e*S	**Sb**	**22 18 31.2**	**-2.3**
MT01				IAML		22 18 46.0	
	comp=Z,400nm,0.7s						
ASAL	**Salagasta**	**3.35**	**127**	*e*P	**Pb**	**22 17 50.7**	**-2.9**
ASAL				*e*S	**Sb**	**22 18 33.6**	**-1.1**
GO03	**Copiap**	**3.37**	**28**		**Pn**	**22 17 48.4**	**+1.5**
GO03	**Copiap**	**3.37**	**28**	*e*P	**Pn**	**22 17 48.7**	**+1.8**
GO03				*e*S	**Sb**	**22 18 31.2**	**-4.0**
ARCO	**CERRO ARCO**	**3.44**	**131**	*e*P	**Pb**	**22 17 53.0**	**-2.1**
ARCO				IAML		22 18 43.8	
	comp=Z,559nm,0.9s						
BO04	**La Punta**	**3.58**	**161**	*e*P	**Pn**	**22 17 52.1**	**+2.4**
BO04				*e*S	**Sb**	**22 18 37.6**	**-3.5**
BO04				IAML		22 18 50.4	
	comp=E,544nm,0.6s						
BO04				IAML		22 18 52.2	
AAGR	**Agrelo**	**3.67**	**133**	*e*P	**Pb**	**22 17 56.0**	**-2.9**
AAGR				*e*S	**Sb**	**22 18 43.7**	**0.0**
VCA	**Vinchina**	**3.79**	**62**	*e*P	**Pb**	**22 17 57.0**	**-4.1**
VCA				*e*S	**Sn**	**22 18 37.2**	**-0.6**
VCA				IAML		22 18 54.7	
	comp=Z,1µm,0.4s						
BO01	**Tunca**	**3.86**	**169**	Pn	**Pn**	**22 17 55.9**	**+2.4**
BO01	**Tunca**	**3.86**	**169**	*e*P	**Pn**	**22 17 56.6**	**+3.0**
BO01				*e*S	**Sb**	**22 18 46.7**	**-2.4**
BO01				IAML		22 18 58.3	
	comp=Z,231nm,0.7s						
BO02	**Sierra Bellavi**	**4.31**	**166**	Pn	**Pn**	**22 18 02.0**	**+2.3**
BO02	**Sierra Bellavi**	**4.31**	**166**	*e*P	**Pn**	**22 18 02.7**	**+2.9**
BO02				*e*S	**Sb**	**22 18 57.7**	**-4.3**
BO02				*e*S	Sn	22 19 01.2	+11
BO02				IAML		22 19 15.8	
	comp=Z,365nm,0.8s						
GO05	**Huala**	**4.40**	**179**	Pn	**Pn**	**22 18 01.9**	**+0.9**
GO05	**Huala**	**4.40**	**179**	*e*P	**Pn**	**22 18 03.5**	**+2.5**
GO05				*e*S	**Sb**	**22 19 07.2**	**+2.6**
AC02	**Maricunga**	**4.52**	**35**	Pn	**Pn**	**22 18 04.6**	**+1.5**
AC02	**Maricunga**	**4.52**	**35**	*e*P	**Pn**	**22 18 05.0**	**+1.9**
AC02				*e*S	**Sn**	**22 19 01.2**	**+4.9**
AC02				IAML		22 19 20.7	
	comp=Z,299nm,0.8s						
ACLC	**CERRO LA CRUZ**	**4.54**	**76**	*e*P	**Pn**	**22 18 05.0**	**+2.0**
ACLC				*e*P	Pb	22 18 05.4	-8.3
ACLC				*e*S	**Sn**	**22 18 59.0**	**+2.8**
ACLC				IAML		22 19 08.5	
	comp=Z,489nm,0.4s						
APLL	**PUNTA DE LOS L**	**4.73**	**89**	*e*P	**Pn**	**22 18 07.6**	**+2.0**
APLL				*e*S	**Sn**	**22 19 02.7**	**+1.8**
RFA	**San Rafael**	**5.12**	**145**	*e*P	**Pn**	**22 18 14.0**	**+3.0**
RFA				*e*S	**Sb**	**22 19 29.2**	**+3.8**
RFA				*e*S	**Sg**	**22 19 31.2**	**-6.7**
RFA				IAML		22 19 41.3	
	comp=Z,108nm,0.5s						
CYA	**Choya**	**5.82**	**70**	*e*P	**Pn**	**22 18 22.2**	**+1.7**
CYA				*e*S	**Sn**	**22 19 27.2**	**-0.4**
CYA				IAML		22 19 56.2	
	comp=Z,110nm,0.7s						
PB14	**IPOC Station P**	**6.12**	**14**	Pn	**Pn**	**22 18 24.4**	**-0.6**
H03N1	**Juan Fernandez**	**6.51**	**242**	T	T	22 25 31.1	
	baz=72,slow=72,SNR=176						
H03N2	**Juan Fernandez**	**6.53**	**243**	T	T	22 25 28.6	
	baz=72,slow=72,SNR=147						
H03N3	**Juan Fernandez**	**6.53**	**242**	T	T	22 25 25.8	
	baz=72,slow=72,SNR=159						
VA04	**Juan Fernndez**	**6.54**	**241**		Pn	22 18 33.4	+3.1
H03S3	**Juan Fernandez**	**6.68**	**239**	T	T	22 25 51.8	
	baz=58						
H03S1	**Juan Fernandez**	**6.68**	**239**	T	T	22 25 43.0	
	baz=58						
H03S2	**Juan Fernandez**	**6.69**	**239**	T	T	22 25 37.9	
	baz=58						
PB15	**IPOC Station P**	**7.70**	**18**	Pn	**Pn**	**22 18 46.8**	**+0.2**
LC01	**Cunco**	**8.28**	**179**	Pn	**Pn**	**22 18 55.1**	**+0.8**
PB04	**IPOC Station P**	**8.40**	**12**	Pn	**Pn**	**22 18 59.2**	**+3.1**
LVC	**Limon Verde**	**8.43**	**20**	Pn	**Pn**	**22 18 56.9**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=175,slow=11,SNR=0.9						
LVC	**Limon Verde**	**8.43**	**20**		**Pn**	**22 18 57.2**	**+0.6**
PLCA	**Paso Flores**	**10.18**	**174**	Pn	**Pn**	**22 19 19.9**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=326,slow=15,SNR=2.8						
TRQA	**Tornquist**	**11.13**	**135**	Pn	**Pn**	**22 19 34.2**	**+0.9**
SIV	**San Ignacio**	**17.65**	**37**	P	**P**	**22 21 00.9**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=228,slow=9.8,SNR=8.3						
ITAB	**Concordia**	**17.72**	**84**	Pn	**Pn**	**22 20 59.7**	**-1.4**
ITAB				IAmb	IAmb	22 21 20.2	
	comp=Z,24nm,1.0s						
PTLB	**Pontes e Lacer**	**19.15**	**41**	P	**Pn**	**22 21 18.1**	**-0.5**
ETMB	**Extrema**	**21.37**	**16**	P	**P**	**22 21 43.2**	**+1.3**
SAML	**Samuel**	**23.06**	**23**	P	**P**	**22 22 00.9**	**+0.9**
USHA	**Ushuaia**	**24.35**	**175**	P	**P**	**22 22 11.6**	**-0.6**
	comp=Z,3.6nm,0.6s,baz=31,slow=19,SNR=1.4						
BDFB	**Brasilia**	**26.54**	**61**	P	**P**	**22 22 31.0**	**-1.5**
	comp=Z,3.7nm,0.8s,baz=230,slow=14,SNR=4.2						
BDFB	**Brasilia**	**26.54**	**61**	P	**P**	**22 22 31.2**	**-1.3**
BOAV	**Boa Vista**	**34.59**	**21**	P	**P**	**22 23 42.8**	**-0.7**
BOAV				IAmb	IAmb	22 23 44.7	
	comp=Z,2.8nm,0.6s						
ZARC	**Zaragoza, Cauc**	**37.97**	**355**	P	**P**	**22 24 13.6**	**+1.2**
BAUV	**El Baul**	**39.50**	**6**	P	**P**	**22 24 25.7**	**+0.5**
BAUV				IAmb	IAmb	22 24 26.8	
	comp=Z,9.2nm,0.8s						
BIRV	**Birongo**	**41.21**	**9**	P	**P**	**22 24 39.8**	**+0.5**
BIRV				IAmb	IAmb	22 25 05.8	
	comp=Z,19nm,1.2s						
CELP	**Cerrillos**	**48.67**	**7**	P	**P**	**22 25 39.8**	**+1.0**
VNA2	**Neumayer--Watz**	**53.14**	**158**	P	**P**	**22 26 12.5**	**+0.6**
SNAA	**Sanae**	**54.72**	**159**	P	**P**	**22 26 24.1**	**+0.5**
SNAA	**Sanae**	**54.72**	**159**	P	**P**	**22 26 24.0**	**+0.5**
	comp=Z,1.7nm,0.8s,baz=276,slow=10.0,SNR=9.5						
SNAA	**Sanae**	**54.72**	**159**	P	**P**	**22 26 24.0**	**+0.5**
SNAA				IAmb	IAmb	22 26 43.9	
	comp=Z,7.8nm,1.5s						
QSPA	**South Pole Qui**	**59.63**	**180**	P	**P**	**22 27 00.1**	**+1.7**
QSPA				IAmb	IAmb	22 27 02.7	
	comp=Z,3.5nm,1.0s						
WVT	**Waverly**	**68.02**	**346**	P	**P**	**22 27 53.5**	**-0.2**
DBIC	**Dimbokro**	**74.09**	**72**	P	**P**	**22 28 30.7**	**-0.4**
	comp=Z,2.8nm,0.6s,baz=247,slow=5.9,SNR=5.1						
DBIC	**Dimbokro**	**74.09**	**72**	P	**P**	**22 28 30.6**	**-0.5**
MAW	**Mawson**	**76.42**	**164**	P	**P**	**22 28 44.6**	**+0.9**
	comp=Z,2.4nm,0.5s,baz=218,slow=6.6,SNR=9.6						
MAW	**Mawson**	**76.42**	**164**	P	**P**	**22 28 44.7**	**+1.1**
MAW				IAmb	IAmb	22 28 46.2	
	comp=Z,2.6nm,1.4s						
PDAR	**Pinedale Array**	**80.75**	**333**	P	**P**	**22 29 09.8**	**+1.7**
	comp=Z,0.4nm,0.9s,baz=151,slow=11,SNR=2.5						
NVAR	**Mina Array Bea**	**81.12**	**325**	P	**P**	**22 29 13.1**	**+3.0**
	comp=Z,0.3nm,0.6s,baz=174,slow=2.5,SNR=2.7						
TORD	**Torodi Ar. Bea**	**83.03**	**70**	P	**P**	**22 29 19.7**	**-0.8**
	comp=Z,0.9nm,0.7s,baz=239,slow=8.2,SNR=9.1						
TORD	**Torodi Ar. Bea**	**83.03**	**70**	P	**P**	**22 29 19.6**	**-0.8**
TORD				IAmb	IAmb	22 29 34.0	
	comp=Z,2.9nm,1.0s						
WRA	**Warramunga Arr**	**123.72**	**210**	PKP	**PKiKP**	**22 35 52.4**	**-0.9**
	comp=Z,0.5nm,0.8s,baz=156,slow=1.5,SNR=4.6						
WRA	**Warramunga Arr**	**123.72**	**210**		**PKiKP**	**22 35 52.8**	**-0.6**
H11S2	**WAKE ISLAND Hy**	**125.78**	**272**	T	T	00 54 41.0	
	baz=115,slow=75,SNR=27						
H11S1	**WAKE ISLAND Hy**	**125.79**	**272**	T	T	00 54 43.2	
	baz=115,slow=75,SNR=38						
H11S3	**WAKE ISLAND Hy**	**125.80**	**272**	T	T	00 54 43.0	
	baz=115,slow=75,SNR=33						
KKAR	**Karatay Array**	**147.78**	**57**	PKPbc	**PKiKP**	**22 36 39.3**	**-2.1**
TOLI2	**Tolitoli**	**148.26**	**205**	PKPbc	**PKiKP**	**22 36 42.0**	**-1.3**
ZAA0	**Zalesovo Array**	**151.29**	**29**	PKPbc	**PKiKP**	**22 36 48.7**	**+0.5**
ZALV	**Zalesovo Beam**	**151.29**	**29**	PKPbc	**PKiKP**	**22 36 48.3**	**+0.1**
	comp=Z,5.3nm,0.7s,baz=298,slow=3.3,SNR=21						
ZALV				PKPab	**sPKPab**	**22 36 57.5**	**+0.6**
	comp=Z,4.5nm,0.7s,baz=296,slow=1.7,SNR=8.7						
MKAR	**Makanchi Array**	**154.40**	**44**	PKPbc	**PKiKP**	**22 36 54.6**	**-0.3**
	comp=Z,0.5nm,0.8s,baz=291,slow=4.5,SNR=3.3						
MKAR				PKPab	**pPKPab**	**22 37 10.2**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=305,slow=3.0,SNR=2.7						

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*ISK **21** 22:24:01.8, 34°.49N×32°.97E, h12^{km}, ML3.0/15*
*DDA **21** 22:24:01.9, 34°.54N×32°.69E, h25^{km}±1^{km}, ML3.0*
*NIC **21** 22:24:05.0±0.0, 34°.67N×32°.96E, h1^{km}±31^{km}, Md3.0/4, Ml2.9/5*
*GII **21** 22:24:05.5±0.0, 34°.60N×32°.93E, h10^{km}, MD2.4/6, Mm2.8/3*
*HLW **21** 22:24:05.7, 34°.63N×32°.96E, h10^{km}±43^{km}, Ml3.1*
ISC 21 22:24:05.4±1.0**, 34°.63N**±0°.02×**32°.93E**±0°.03**, h13**^{km}±8^{km},
n73, σ**1^s.35**/108**, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASGA	**Asgata**	**0.31**	**58**	P	**Pg**	**22 24 11.4**	**-0.3**
ASGA				S	**Sg**	**22 24 16.2**	**+0.2**
ASGA				AML	AML	22 24 19.5	
	14nm,0.3s						
ASGA				AML	AML	22 24 19.5	
	14nm,0.3s						
ASGA				AML	AML	22 24 19.9	
	8.7nm,0.3s						
ASGA				AML	AML	22 24 19.9	
	8.7nm,0.3s						
ASGA				AMd		22 25 36.4	
ASGA				AMd		22 25 36.4	
NATA	**Nata**	**0.33**	**297**	P	**Pg**	**22 24 11.7**	**-0.5**
NATA				S	**Sb**	**22 24 19.0**	**+0.5**
NATA				AML	AML	22 24 20.2	
	11nm,0.6s						
NATA				AML	AML	22 24 20.2	
	11nm,0.6s						
NATA				AML	AML	22 24 22.9	
	15nm,0.6s						
NATA				AML	AML	22 24 22.9	
	15nm,0.6s						
NATA				AMd		22 25 44.2	
NATA				AMd		22 25 44.2	
CSS	**Mathiatis**	**0.47**	**44**	PG	**Pg**	**22 24 12.9**	**-1.8**
CSS				SG	**Sg**	**22 24 21.1**	**+0.1**
CSS	**Mathiatis**	**0.47**	**44**	P	**Pg**	**22 24 13.5**	**-1.2**
CSS				S	**Sb**	**22 24 22.0**	**-0.5**
CSS				AMd		22 25 23.8	
CSS				AMd		22 25 23.8	
CSS	**Mathiatis**	**0.47**	**44**	P	**Pg**	**22 24 14.2**	**-0.5**
LEF	**Lefka**	**0.49**	**356**	*i* P	**Pg**	**22 24 13.8**	**-1.4**
LEF				*i* S	**Sg**	**22 24 22.4**	**+0.7**
LEF				IAML		22 24 26.0	
	comp=N,637nm,1.1s						
LEF				IAML		22 24 28.0	
	comp=E,656nm,0.7s						
LEF	**Lefka**	**0.49**	**356**	PG	**Pg**	**22 24 14.3**	**-0.9**
LEF				SG	**Sb**	**22 24 23.6**	**+0.5**
AKIN	**Akıncılar- Kıb**	**0.59**	**48**	PG	**Pg**	**22 24 15.2**	**-1.7**
AKIN				SG	**Sg**	**22 24 24.7**	**0.0**
AKMS	**Akamas**	**0.63**	**309**	P	**Pg**	**22 24 16.9**	**-0.7**
AKMS				S	**Sb**	**22 24 28.6**	**+1.7**
AKMS				AML	AML	22 24 34.4	
	comp=E,2.5nm,0.4s						
AKMS				AML	AML	22 24 34.4	
	comp=E,2.5nm,0.4s						
AKMS				AML	AML	22 24 36.5	
	comp=E,2.0nm,0.3s						
AKMS				AML	AML	22 24 36.5	
	comp=E,2.0nm,0.3s						
AKMS				AMd		22 25 20.2	
AKMS				AMd		22 25 20.2	
ATHAL	**Athalassa**	**0.64**	**37**	P	**Pg**	**22 24 17.3**	**-0.7**
AKDN	**Akdeniz- Kıbrı**	**0.67**	**3**	PG	**Pg**	**22 24 17.7**	**-0.8**
AKDN				SG	**Sb**	**22 24 29.5**	**+1.3**
MVOU	**Mavrovouni**	**0.70**	**56**	P	**Pg**	**22 24 17.6**	**-1.3**
MVOU				S	**Sb**	**22 24 28.5**	**-0.4**
MVOU				AML	AML	22 24 34.1	
	comp=E,0.8nm,0.6s						
MVOU				AML	AML	22 24 34.1	
	comp=E,0.8nm,0.6s						
MVOU				AML	AML	22 24 37.2	
	comp=E,0.9nm,0.3s						
MVOU				AML	AML	22 24 37.2	
	comp=E,0.9nm,0.3s						
LFK	**Lefkose**	**0.82**	**37**	PG	**Pg**	**22 24 19.7**	**-1.6**
EREN	**Erenkoy**	**1.36**	**48**	*i* P	**Pb**	**22 24 30.7**	**0.0**
EREN				*i* S	**Sg**	**22 24 53.3**	**+4.0**
EREN	**Erenkoy**	**1.36**	**48**	PN	**Pn**	**22 24 29.2**	**-0.9**
TEKE	**Tekeli-Mersin**	**1.52**	**6**	PN	**Pn**	**22 24 31.5**	**-0.8**
AKKU	**Akkuyu-Mersin**	**1.61**	**18**	PN	**Pn**	**22 24 32.5**	**-1.1**
GULN	**MERSIN_Gulnar**	**1.63**	**18**	*i* P	**Pn**	**22 24 33.0**	**-0.9**
OSC2	**CSNet OBS 4**	**1.64**	**200**	P	**Pb**	**22 24 35.3**	**-0.2**
OSC2				S	**Sg**	**22 25 00.2**	**+2.0**
TISA	**Tisan-Mersin**	**1.65**	**22**	PN	**Pn**	**22 24 32.9**	**-1.2**
YESI	**Yesilovacik-Me**	**1.67**	**20**	PN	**Pn**	**22 24 33.3**	**-1.1**
GAZI	**Gazipasa**	**1.68**	**343**	*i* P	**Pn**	**22 24 33.8**	**-0.8**
GAZI	**Gazipasa**	**1.68**	**343**	PN	**Pn**	**22 24 33.6**	**-1.0**
KARG	**Kargicak-Mersi**	**1.70**	**22**	PN	**Pn**	**22 24 33.7**	**-1.1**
IKL	**Isikli**	**1.72**	**21**	PN	**Pn**	**22 24 33.9**	**-1.2**
BERE	**Bereket-Mersin**	**1.73**	**8**	PN	**Pn**	**22 24 34.5**	**-0.9**
TEVE	**Tevekalti-Mers**	**1.85**	**13**	PN	**Pn**	**22 24 36.0**	**-1.0**
KEBE	**Keben-Mersin**	**1.93**	**19**	PN	**Pn**	**22 24 37.0**	**-1.0**
ERMK	**Ermenek**	**2.01**	**360**	*i* P	**Pn**	**22 24 40.1**	**+0.9**
ERMK				*i* S	**Sb**	**22 25 07.0**	**-0.1**
KIZK	**Mersin**	**2.10**	**28**	*i* P	**Pn**	**22 24 41.5**	**+1.3**
KIZK	**Mersin**	**2.10**	**28**	PN	**Pn**	**22 24 39.5**	**-0.8**
HDMB	**Hadim**	**2.36**	**351**	PN	**Pn**	**22 24 43.6**	**-0.5**
HNTI	**Hanita**	**2.42**	**129**	Pn	**Pn**	**22 24 44.3**	**-0.4**
HNTI				Sn	**Sn**	**22 25 14.2**	**0.0**
KEPZ	**Antalya-Kepez**	**2.51**	**335**	*i* P	**Pn**	**22 24 45.9**	**-0.1**
KEPZ				*i* S	**Sn**	**22 25 18.0**	**+1.4**
KRMN	**Karaman**	**2.56**	**6**	PN	**Pn**	**22 24 46.2**	**-0.5**
MERS	**Mersin**	**2.58**	**30**	PN	**Pn**	**22 24 46.1**	**-0.9**
KKBE	**Karaman, Kazim**	**2.59**	**0**	*i* P	**Pn**	**22 24 49.0**	**+1.9**
KKBE				*i* S	**Sn**	**22 25 18.6**	**+0.1**
MMA0B	**Mount Meron ar**	**2.61**	**127**	Pn	**Pn**	**22 24 47.4**	**0.0**
MMA0B				Sn	**Sn**	**22 25 19.6**	**+0.6**
OFRI	**`Ofer**	**2.63**	**139**	Pn	**Pn**	**22 24 47.0**	**-0.6**
OFRI				Sn	**Sn**	**22 25 18.4**	**-1.1**
GEM	**Giv'at Ha'Em**	**2.67**	**121**	Pn	**Pn**	**22 24 48.1**	**-0.1**
GEM				Sn	**Sn**	**22 25 20.1**	**-0.3**
DED	**Mersin**	**2.78**	**33**	*i* P	**Pn**	**22 24 51.0**	**+1.3**
SEYD	**Seydisehir-KON**	**2.91**	**343**	PN	**Pn**	**22 24 51.4**	**-0.2**
KERG	**Konya-Eregli**	**2.95**	**19**	*i* P	**Pn**	**22 24 54.1**	**+2.1**
KERG				*i* S	**Sn**	**22 25 28.5**	**+1.1**
SLTI	**Sal'it**	**2.96**	**143**	Pn	**Pn**	**22 24 52.3**	**+0.2**
SLTI	**Sal'it**	**2.96**	**143**	P	**Pn**	**22 24 53.9**	**+1.8**
SEDI	**Konya, Seydise**	**2.98**	**342**	*i* P	**Pn**	**22 24 54.9**	**+2.4**
GULE	**Gulek**	**3.05**	**29**	*i* P	**Pn**	**22 24 55.6**	**+2.2**
GULE				*i* S	**Sn**	**22 25 32.8**	**+2.9**
HMDT	**Nahal Hemdat**	**3.21**	**137**	Pn	**Pn**	**22 24 55.9**	**+0.4**
HMDT				Sn	**Sn**	**22 25 34.0**	**+0.3**
KONT	**Konya--Tatoy**	**3.34**	**352**	*i* P	**Pn**	**22 24 58.7**	**+1.3**
AMAZ	**Amatzia**	**3.51**	**151**	Pn	**Pn**	**22 25 00.0**	**+0.4**
AMAZ				Sn	**Sn**	**22 25 41.3**	**+0.3**
DOGA	**KONYA_Doganhis**	**3.62**	**344**	*i* P	**Pn**	**22 25 03.4**	**+2.1**
DOGA				*i* S	**Sn**	**22 25 45.5**	**+1.6**
DSI	**Dead Sea**	**3.68**	**145**	Pn	**Pn**	**22 25 02.6**	**+0.7**
DSI	**Dead Sea**	**3.68**	**145**	P	**Pn**	**22 25 02.9**	**+1.0**
YTIR	**Yattir**	**3.74**	**150**	Pn	**Pn**	**22 25 03.3**	**+0.4**
YTIR				Sn	**Sn**	**22 25 46.6**	**-0.2**
YVAC	**Isparta, Yalva**	**3.88**	**340**	*i* P	**Pn**	**22 25 07.2**	**+2.3**
KZIT	**Kziot**	**3.91**	**161**	Pn	**Pn**	**22 25 05.1**	**-0.1**
KZIT				Sn	**Sn**	**22 25 51.5**	**+0.6**
DALY	**Dalyan (Mula)**	**4.11**	**303**	*i* P	**Pn**	**22 25 06.3**	**-1.5**
DALY				*i* S	**Sn**	**22 25 51.3**	**-4.5**
DALY				IAML		22 26 01.0	
	comp=E,56nm,2.5s						
DALY				IAML		22 26 16.0	
	comp=N,88nm,3.0s						
TAVA	**DENIZLI_Tavas**	**4.32**	**312**	*i* P	**Pn**	**22 25 10.5**	**-0.3**
TAVA				*i* S	**Sn**	**22 25 56.2**	**-4.9**
TAVA				IAML		22 26 53.0	
	comp=N,19nm,2.7s						
ZFRI	**Zfri**	**4.48**	**154**	Pn	**Pn**	**22 25 13.1**	**+0.1**
ZFRI				Sn	**Sn**	**22 26 04.6**	**-0.4**
ZFRI	**Zfri**	**4.48**	**154**	P	**Pn**	**22 25 13.4**	**+0.4**
PRNI	**Paran**	**4.61**	**157**	Pn	**Pn**	**22 25 15.3**	**+0.5**
PRNI				Sn	**Sn**	**22 26 08.1**	**-0.1**
KRMI	**Paran Flat**	**4.74**	**161**	Pn	**Pn**	**22 25 16.4**	**-0.3**
KRMI				Sn	**Sn**	**22 26 11.6**	**0.0**
SUZ	**Suez**	**4.77**	**181**	P	**Pn**	**22 25 17.7**	**+0.7**
	baz=182						
HRFI	**Mount Harif**	**4.91**	**158**	Pn	**Pn**	**22 25 18.6**	**-0.4**
HRFI				Sn	**Sn**	**22 26 15.8**	**+0.1**
MBRI	**Mt Berech**	**5.10**	**160**	Pn	**Pn**	**22 25 21.4**	**-0.2**
MBRI				Sn	**Sn**	**22 26 20.3**	**-0.2**
MBRI	**Mt Berech**	**5.10**	**160**	P	**Pn**	**22 25 22.3**	**+0.7**
EIL	**Elat**	**5.23**	**160**	Pn	**Pn**	**22 25 23.4**	**+0.1**
HBST	**Basata**	**5.61**	**164**	P	**Pn**	**22 25 30.2**	**+1.7**
	baz=163						
NUB	**Nuweibaa**	**5.77**	**165**	P	**Pn**	**22 25 31.5**	**+0.8**
	baz=165						
RYAN	**Fayoum**	**5.97**	**203**	P	**Pn**	**22 25 33.0**	**-0.5**
	baz=204						
RYAN				AMP		22 26 00.0	
	baz=204						
RYAN				S	**Sn**	**22 26 39.8**	**-1.9**
	baz=204						
HDHB	**Dhahab**	**6.06**	**166**	P	**Pn**	**22 25 35.3**	**+0.6**
	baz=166						
HKAT	**Jabal Katrina**	**6.15**	**171**	P	**Pn**	**22 25 36.4**	**+0.2**
	baz=171						
HKAT				AMP		22 26 00.0	
	baz=171						
HKAT				S	**Sn**	**22 26 42.1**	**-4.4**
	baz=171						
TR2	**Tor 2**	**6.26**	**174**	P	**Pn**	**22 25 38.1**	**+0.7**
	baz=173						

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*SOME **21** 22:28:43.7, 42°.25N×71°.30E, h10^{km}*
*KRNET **21** 22:28:44.0±0.1, 42°.27N×71°.32E, h12^{km}, mb2.4*
*NNC **21** 22:28:45.1±0.5, 42°.45N×71°.31E, h0^{km}, mb2.9, mpv2.7,*
Error ellipse: s-maj=3.5km s-min=2.0km az=11.0
ISC 21 22:28:43.9±1.1**, 42°.29N**±0°.04×**71°.30E**±0°.03**, h13**^{km}±15^{km},
n20, σ**1^s.18**/37**, 13C-13D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZA	**Taraz**	**0.60**	**2**	*e*P	**Pg**	**22 28 56.5**	**+0.8**
	29nm,0.1s						
DZA				*e*S	**Sg**	**22 29 03.9**	**+0.1**
	125nm,0.2s						
DZA	**Taraz**	**0.60**	**2**	P	**Pg**	**22 28 56.5**	**+0.8**
	29nm,0.1s						
DZA				S	**Sg**	**22 29 03.9**	**+0.1**
	125nm,0.2s						
DZA	**Taraz**	**0.60**	**2**	*e*P	**Pg**	**22 28 56.5**	**+0.8**
	baz=1.0						
DZA				*e*S	**Sg**	**22 29 03.9**	**+0.1**
	baz=1.0						
TRKS	**Terek-Say**	**0.77**	**189**	⇓*i*P	**Pb**	**22 28 59.6**	**+0.5**
	baz=88						
TRKS				⇓*i*S	**Sb**	**22 29 10.3**	**+0.8**
	baz=88						
MNAS	**Manas**	**0.91**	**77**	⇓*i*P	**Pg**	**22 29 01.4**	**-0.1**
	baz=75						
MNAS				⇓*i*S	**Sg**	**22 29 13.5**	**0.0**
	baz=75						
KK09	**Karatay Array**	**1.02**	**325**	⇑P	**Pg**	**22 29 02.7**	**-0.9**
	1.6nm,0.3s,baz=139,slow=16						
KK09				⇑S	**Sg**	**22 29 15.2**	**-1.8**
	3.0nm,0.3s,baz=138,slow=31						
MRKS	**Merke**	**1.49**	**72**	*e*P	**Pg**	**22 29 13.0**	**+0.4**
	3.2nm,0.2s						
MRKS				*e*S	**Sg**	**22 29 31.7**	**-0.3**
	5.4nm,0.2s						
MRKS	**Merke**	**1.49**	**72**	P	**Pg**	**22 29 13.0**	**+0.4**
	3.2nm,0.2s						
MRKS				S	**Sg**	**22 29 31.7**	**-0.3**
	5.4nm,0.2s						
AML	**Almayashu**	**1.78**	**94**	⇑*i*P	**Pb**	**22 29 16.8**	**+0.2**
	baz=94						
AML				⇑*i*S	**Sg**	**22 29 40.8**	**-0.5**
	baz=94						
EKS2	**Erkin-Say**	**1.87**	**78**	⇑*i*P	**Pb**	**22 29 18.6**	**+0.7**
	baz=77						
EKS2				⇑*i*S	**Sg**	**22 29 43.3**	**-0.7**
	baz=77						
OHH	**Osh**	**2.08**	**147**	⇑*i*P	**Pb**	**22 29 21.3**	**-0.2**
	baz=47						
OHH				⇑*i*S	**Sb**	**22 29 48.6**	**+1.2**
	baz=47						
BTK	**Batken**	**2.26**	**189**	⇓*i*P	**Pb**	**22 29 24.0**	**-0.5**
	baz=90						
BTK				⇓*i*S	**Sb**	**22 29 52.9**	**+0.6**
	baz=90						
UCH	**Uchtor**	**2.38**	**90**	⇓*e*P	**Pb**	**22 29 26.1**	**-0.8**
	baz=90						
UCH				⇓*i*S	**Sb**	**22 29 56.3**	**-0.1**
	baz=90						

AAK	Ala-Archa	2.39	80	⇓Pg	Pb	22 29 27.4	+0.6
	0.9nm,0.6s						
AAK				⇑Lg	Lg	22 30 00.8	
	2.5nm,0.5s						
AAK	Ala-Archa	2.39	80	⇓*i*P	Pb	22 29 26.1	-0.7
	baz=80						
AAK				⇓*i*S	Sb	22 29 56.3	+0.1
	baz=80						
USP	Ospenovka	2.55	66	⇑*i*P	Pb	22 29 28.6	-0.8
	baz=66						
USP				⇑*i*S	Sb	22 30 00.1	-0.6
	baz=66						
CHMS	Chumysh	2.64	73	⇑*i*P	Pb	22 29 29.7	-1.3
	baz=73						
CHMS				⇑*i*S	Sb	22 30 02.3	-1.1
	baz=73						
TKM2	Tokmak 2	3.23	77	⇓Pg	Pb	22 29 42.8	+1.6
	0.9nm,0.7s						
TKM2				⇓Lg	Lg	22 30 25.7	
	1.4nm,0.4s						
DGS	Degeres	3.43	72	*e*P	Pb	22 29 47.2	+2.7
	1.2nm,0.3s						
DGS				*e*S	Sg	22 30 30.4	-3.5
	2.4nm,0.5s						
DGS	Degeres	3.43	72	Pg	Pb	22 29 47.2	+2.7
	1.2nm,0.3s						
DGS				Lg	Lg	22 30 30.4	
	2.4nm,0.5s						

NEIC ***21*** *22:47:29.9±2.9, 37.°26N±0.°05×141.°1E±0.°1, h67^{km}±8^{km}, mb4.2/11, Error ellipse: s-maj=12.3km s-min=7.1km az=92.0*

JMA ***21*** *22:47:30.5, 37.°32N×140.°87E, h68^{km}±1^{km}, M3.7 Broadband fault plane solution: P waves. NP1: ϕ_s327.00000°, δ68.00000°, λ-19.00000°. NP2:ϕ_s64.00000°, δ72.00000°, λ-157.00000°. Principal axes: T Plg3.0000°, Azm195.0000°; N Plg61.0000°, Azm100.0000°; P Plg29.0000°, Azm286.0000°;*

JMA Felt I J1.

IDC ***21*** *22:47:33.6±2.5, 37.°72N×140.°47E, h66^{km}±21^{km}, mb3.5/5, mb1 3.6/7, mb1mx3.2/46, mbtmp3.8/7 Error ellipse: s-maj=34.3km s-min=17.2km az=106.0*

ISC 21 22:47:29.6±0.8**, 37.°29N**±0.°04×**141.°02E**±0.°06**, h66**^{km}±6^{km}**, n64, σ1^{s}32**/69**, mb4.0**/11**, 8C-4D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	Kawauchi	0.14	301	⇓P	Pn	22 47 40.4	+0.9
JFK				S	Sn	22 47 47.6	+0.9
ONAJ	Iwakimizuishiy	0.26	223	⇓P	Pn	22 47 41.1	+1.0
ONAJ				S	Sn	22 47 48.7	+0.9
JFFD	Fukushimafurud	0.42	241	⇑P	Pn	22 47 41.8	+0.5
JFFD				S	Sn	22 47 49.9	+0.1
JMST	Minamisoumatoc	0.44	346	⇑P	Pn	22 47 42.3	+0.8
JMST				S	Sn	22 47 50.9	+0.8
JFT	Otama	0.59	292	⇓P	Pn	22 47 43.1	+0.1
JFT				S	Sn	22 47 52.2	-0.6
JMM	Marumori	0.60	342	⇑P	Pn	22 47 43.6	+0.6
JMM				*e*S	Sn	22 47 53.3	+0.4
JMM	Marumori	0.60	342		Pn	22 47 43.6	+0.6
JMM				Sn	Sn	22 47 52.6	-0.3
JFY	Yanaizu	1.06	276	⇓P	Pn	22 47 48.0	-0.6
JFY				S	Sn	22 48 01.3	-1.5
JOU	Okura	1.11	345	⇑P	Pn	22 47 49.7	+0.4
JOU				S	Sn	22 48 04.7	+0.8
JIO	Ouri	1.19	12	⇑P	Pn	22 47 51.0	+0.7
JIO				S	Sn	22 48 06.2	+0.5
JYS	Shirataka	1.20	321	⇑P	Pn	22 47 50.5	+0.1
JYS				S	Sn	22 48 05.9	-0.1
JYT	Yasato	1.26	212	Pn	Pn	22 47 50.8	-0.4
JNS	Sasagawa	1.45	292	P	Pn	22 47 52.7	-1.1
JKT	Katashina	1.52	250	P	Pn	22 47 55.4	+0.7
JAG	Ashikaga	1.53	236	⇑P	Pn	22 47 54.9	+0.1
JYA	Atsumi	1.66	322	⇑P	Pn	22 47 56.8	+0.3
JSD	Sado	2.31	290		Pn	22 48 04.0	-1.4
MJAR	Matsushiro Arr	2.38	252	P	Pn	22 48 06.7	+0.5
	1.6nm,0.3s,baz=49,slow=11,SNR=63						
MJAR				S	Sn	22 48 39.6	+5.3
	2.2nm,0.3s,baz=57,slow=28,SNR=4.8						
MJAR	Matsushiro Arr	2.38	252		Pn	22 48 03.7	-2.6
MAJO	Matsushiro	2.38	252		Pn	22 48 07.1	+0.8
MAT	Matsushiro	2.38	252	P	Pn	22 48 07.0	+0.7
MAT				*e*S	Sn	22 48 36.6	+2.2
MJB9	Matsu-Tunnel	2.38	253	Pn	Pn	22 48 07.5	+1.2
JGF	Kuroka	3.41	241		Pn	22 48 21.9	+1.6
JTM	Tenmabayashi	3.49	1	Pn	Pn	22 48 23.2	+1.9
INU	Inuyama	3.77	240		Pn	22 48 27.0	+1.7
JHJ	Hachijo jima 2	4.29	194	P	Pn	22 48 32.7	+0.3
	30nm,0.3s,baz=38,slow=15,SNR=2.3						
JHJ				S	Sn	22 49 19.4	-1.7
	19nm,0.3s,baz=0.0,slow=20,SNR=2.0						
JHJ2	Mitsune	4.29	194	Pn	Pn	22 48 32.4	+0.1
JWT	Wachi	4.96	248	Pn	Pn	22 48 43.6	+2.0
ERM	Erimo	4.99	19	Pn	Pn	22 48 41.3	-0.6
JHS	Saijyo	6.79	253	Pn	Pn	22 49 08.7	+2.1
ASAJ	Asahikawa	6.92	9	P	Pn	22 49 07.5	-0.8
	1.6nm,0.3s,baz=212,slow=12,SNR=14						
ASAJ				S	Sn	22 50 22.8	-2.7
	0.3nm,0.3s,baz=156,slow=20,SNR=1.9						
JKA	Kamikawa-asahi	6.92	9		Pn	22 49 08.7	+0.4
USA0B	Ussuriysk Arra	9.72	318	Pn	Pn	22 49 48.4	+1.8
USRK	Ussuriysk Ar.	9.72	318	P	Pn	22 49 49.3	+2.8
	baz=140,slow=13,SNR=9.7						
USRK	Ussuriysk Ar.	9.72	318		Pn	22 49 48.2	+1.6
JCJ	Chichijima	10.22	174	Pn	Pn	22 49 52.2	-1.3
SONM	Songino Array	27.38	304	P	P	22 53 08.1	-0.7
	0.7nm,0.4s,baz=103,slow=9.6,SNR=6.3						
SONM	Songino Array	27.38	304	P	P	22 53 08.7	-0.1
H11N2	WAKE ISLAND Hy	28.55	121	T	T	23 23 31.9	
	baz=314,slow=75,SNR=35						
H11N1	WAKE ISLAND Hy	28.56	121	T	T	23 23 33.1	
	baz=314,slow=75,SNR=32						
H11N3	WAKE ISLAND Hy	28.57	121	T	T	23 23 32.1	
	baz=314,slow=75,SNR=17						
H11S1	WAKE ISLAND Hy	29.26	123	T	T	23 24 22.2	
	baz=315,slow=76,SNR=26						
H11S3	WAKE ISLAND Hy	29.26	123	T	T	23 24 21.2	
	baz=315,slow=76,SNR=18						
H11S2	WAKE ISLAND Hy	29.28	123	T	T	23 24 25.0	
	baz=315,slow=76,SNR=18						
ZAA0	Zalesovo Array	41.51	312	P	P	22 55 09.2	-0.9
ZAA0				IAmb	IAmb	22 55 10.0	
	comp=Z,1.7nm,0.7s						
ZALV	Zalesovo Beam	41.51	312	P	P	22 55 09.3	-0.7
	comp=Z,1.0nm,0.4s,baz=88,slow=9.0,SNR=5.9						
ZALV	Zalesovo Beam	41.51	312	P	P	22 55 09.5	-0.6
MK31	Makanchi Array	43.72	302	P	P	22 55 27.3	-0.9
MKAR	Makanchi Array	43.72	302	P	P	22 55 27.1	-1.0
	comp=Z,1.2nm,0.8s,baz=87,slow=9.8,SNR=8.9						
MKAR	Makanchi Array	43.72	302	P	P	22 55 27.4	-0.7
MAKZ	Makanchi	43.93	302	P	P	22 55 28.7	-1.1
MAKZ				IAmb	IAmb	22 55 40.7	
	comp=Z,3.3nm,1.2s						
KURK	Kurchatov	45.53	308	P	P	22 55 41.2	-1.2
KURK				IAmb	IAmb	22 55 43.6	
	comp=Z,3.1nm,0.9s						
KDJ	Kajisay	48.34	297	P	P	22 56 05.3	+0.6
BOOM	Boomskoye usch	49.12	297	P	P	22 56 11.9	+1.3
BOOM				IAmb	IAmb	22 56 22.3	
	comp=Z,7.1nm,1.1s						
KKAR	Karatay Array	52.72	300	P	P	22 56 38.3	+0.8
GAR	Garm	54.30	295	P	P	22 56 50.2	+0.9
GAR				IAmb	IAmb	22 57 02.5	
	comp=Z,2.3nm,0.7s						
CHGR	Chuyangaron	55.27	295	P	P	22 56 57.4	+1.1
WRA	Warramunga Arr	57.28	187	P	P	22 57 17.3	+6.8
	comp=Z,0.4nm,0.5s,baz=358,slow=7.7,SNR=6.1						
ABKAR	Akbulak array	57.53	310	P	P	22 57 11.2	-0.9
ABKAR	Akbulak array	57.53	310	P	P	22 57 12.3	+0.2
ABKAR				IAmb	IAmb	22 57 22.4	
	comp=Z,1.4nm,1.1s						
AKASG	Malin Array Be	73.90	322	P	P	22 58 56.5	-0.8
	comp=Z,0.7nm,0.4s,baz=48,slow=6.1,SNR=5.3						
H03N2	Juan Fernandez	147.36	95	T	T	01 52 09.1	
	baz=291,slow=76,SNR=4.1						
H03N3	Juan Fernandez	147.37	95	T	T	01 52 10.7	
	baz=291,slow=76,SNR=4.4						
H03N1	Juan Fernandez	147.38	95	T	T	01 52 10.3	
	baz=291,slow=76,SNR=4.3						

NOU ***21*** *23:02:28.0, 33.°98S×177.°35W, h42^{km}, mb5.1/44, South of Kermadec Islands*

IDC ***21*** *23:02:30.8±0.5, 33.°48S×178.°87W, h0^{km}, mb4.7/19, mb1 4.8/22, mb1mx4.5/45, mbtmp4.8/22, ML5.0/3, MS4.6/8, Ms1 4.6/8, ms1mx4.1/34, Error ellipse: s-maj=18.7km s-min=14.1km az=91.0*

NEIC ***21*** *23:02:32.0±1.6, 33.°63S±0.°07×178.°7W±0.°1, h10^{km}±1^{km}, mb4.9/33, Error ellipse: s-maj=17.6km s-min=11.8km az=109.0*

WEL ***21*** *23:02:33.3±0.8, 34°S±8°×17°9W±2°0, h33^{km}, M5.1/19, mB5.5/14, ML5.4/19, MLv5.2/19, Mw(mB)5.0/14, Error ellipse: s-maj=0.0km s-min=0.0km az=110.8*

BJI ***21*** *23:02:34.0±0.0, 33.°59S×178.°67W, h19^{km}, mB5.7/2, mb5.1/8, Ms5.1/3, Ms7 4.9/3*

GCMT ***21*** *23:02:36.0±0.4, 33.°73S±0.°03×178.°60W±0.°03, h21^{km}±1^{km}, MW5.0/67, Moment Tensor Solution. s25,c32; s67,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.42±.31; $M_{\theta\theta}$1.11±.20; $M_{\phi\phi}$-4.52±.21; $M_{r\theta}$0.59±.35; $M_{\theta\phi}$-0.62±.14; $M_{\phi r}$1.74±.31; Best double couple: $M_0$4.41600×10^{16} NP1:ϕ_s177.00000°, δ34.00000°, λ76.00000°. NP2: ϕ_s14.00000°, δ58.00000°, λ99.00000°. Principal axes: T 3.8600, Plg75.0000°, Azm311.0000°; N 1.1210, Plg8.0000°, Azm189.0000°; P -4.9720, Plg12.0000°, Azm97.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 21 23:02:35.8±0.4**, 33.°66S**±0.°04×**178.°65W**±0.°07**, h35**^{km}**, n233, σ1^{s}69**/241**, mb5.0**/52**, MS4.5**/11**, 2C-2D, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	4.43	8	P	Pn	23 03 35.8	-4.6
GLKZ				S	Sn	23 04 27.2	-3.6
RAO	Raoul Island	4.44	8	Pn	Pn	23 03 37.6	-3.0
	69nm,0.3s,baz=160,slow=23,SNR=2.1						
RAO				Sn	Sn	23 04 28.1	-3.0
	113nm,0.3s,baz=279,slow=23,SNR=2.4						
RAO	Raoul Island	4.44	8		Pn	23 03 38.1	-2.5
RIZ	Raoul Island	4.45	8	S	Sn	23 04 29.7	-1.5
MXZ	Matakaoa Point	4.62	212	P	Pn	23 03 42.3	-0.7
MXZ				S	Sn	23 04 34.9	-0.4
MXZ	Matakaoa Point	4.62	212		Pn	23 03 41.6	-1.4
WMGZ	Waiomatatini S	4.79	209	P	Pn	23 03 44.5	-0.8
WMGZ				S	Sn	23 04 38.5	-1.1
PKGZ	Pakihiroa	4.99	211	P	Pn	23 03 45.8	-2.4
PKGZ				S	Sn	23 04 43.0	-1.6
HAZ	Te Kaha	5.01	214	P	Pn	23 03 46.9	-1.5
HAZ				S	Sn	23 04 45.5	+0.4
PUZ	Puketiti	5.07	209	P	Pn	23 03 46.5	-2.7
PUZ				S	Sn	23 04 45.5	-1.1
RUGZ	Raukumara Rang	5.23	214	P	Pn	23 03 50.1	-1.5
RUGZ				S	Sn	23 04 50.0	-0.7
TWGZ	Tauwhareparae	5.27	210	P	Pn	23 03 51.3	-0.7
TWGZ				S	Sn	23 04 50.9	-0.7
URZ	Urewera	5.73	216	Pn	Pn	23 03 56.6	-1.8
	37nm,0.3s,baz=120,slow=24,SNR=152						
URZ				Sn	Sn	23 05 01.2	-1.7
	42nm,0.3s,baz=353,slow=17,SNR=8.7						
URZ	Urewera	5.73	216	P	Pn	23 03 56.0	-2.3
URZ				S	Sn	23 05 01.0	-1.9
URZ	Urewera	5.73	216		Pn	23 03 56.7	-1.6
URZ	Urewera	5.73	216	P	Pn	23 03 56.8	-1.6
RIGZ	Rimuhau	5.81	209	P	Pn	23 03 58.6	-0.8
RIGZ				S	Sn	23 05 03.1	-1.7
PRGZ	Paritu Road	5.95	207	P	Pn	23 03 58.6	-2.8
PRGZ				S	Sn	23 05 06.6	-1.7
SNGZ	Shannon Statio	6.05	211	P	Pn	23 04 01.8	-1.0
SNGZ				S	Sn	23 05 10.9	+0.1
MUGZ	Murupara	6.07	216	P	Pn	23 04 01.3	-1.7
MUGZ				S	Sn	23 05 09.5	-1.8
RTZ	Ruatahuna	6.08	214	P	Pn	23 04 01.7	-1.5
RTZ				S	Sn	23 05 08.1	-3.5
RRRZ	Republican Roa	6.10	219	P	Pn	23 04 03.4	0.0
KNZ	Kokohu	6.12	208	P	Pn	23 04 00.1	-3.5
KNZ				S	Sn	23 05 09.5	-2.9
MHGZ	Mahia Peninsul	6.14	206	P	Pn	23 04 01.1	-2.9
MHGZ				S	Sn	23 05 12.3	-0.8
HSRZ	Hossack Road	6.22	220	P	Pn	23 04 07.0	+2.0
HRRZ	Handcock Road	6.25	220	P	Pn	23 04 07.7	+2.1
RAHZ	Arahi	6.27	212	P	Pn	23 04 05.1	-0.7
RAHZ				S	Sn	23 05 14.4	-1.9
PRRZ	Plateau Road	6.28	218	P	Pn	23 04 05.1	-0.7
MTHZ	Maungataniwha	6.33	214	P	Pn	23 04 05.2	-1.4
WHHZ	Waihua	6.34	210	P	Pn	23 04 05.7	-1.0
ALRZ	Allen Road	6.35	218	P	Pn	23 04 06.1	-0.8
NMHZ	Naumai	6.55	213	P	Pn	23 04 08.2	-1.4
OUZ	Omahuta	6.59	254		Pn	23 04 10.7	+0.5
ARHZ	Aropaoanui	6.60	211	P	Pn	23 04 08.2	-2.0
BKZ	Black Stump Fm	6.75	214	P	Pn	23 04 10.0	-2.3
BKZ	Black Stump Fm	6.75	214	Pn	Pn	23 04 10.2	-2.2
BKZ	Black Stump Fm	6.75	214	P	Pn	23 04 10.1	-2.2
RATZ	Rangitukua	6.88	219	P	Pn	23 04 14.6	+0.5
MCHZ	McNeill Hill	6.88	212	P	Pn	23 04 12.6	-1.5
CKHZ	Cape Kidnapper	6.90	209	P	Pn	23 04 10.0	-4.4
RITZ	Rihia Road	6.91	218	P	Pn	23 04 13.4	-1.2
TMVZ	Te Maari	7.10	218	P	Pn	23 04 15.6	-1.6
KAHZ	Kahuranaki	7.10	209	P	Pn	23 04 12.8	-4.4
ETVZ	East Tongariro	7.11	218	P	Pn	23 04 15.7	-1.7
HIZ	Hauiti	7.15	226	P	Pn	23 04 18.3	+0.5
NNVZ	North Ngauruho	7.16	219	P	Pn	23 04 17.5	-0.5
KRHZ	Kereru	7.19	212	P	Pn	23 04 15.1	-3.2
NGZ	Ngauruhoe	7.19	218	P	Pn	23 04 17.6	-0.9
TWVZ	Taurewa	7.20	220	P	Pn	23 04 17.6	-1.0
BHHZ	Black Hill Sta	7.21	215	P	Pn	23 04 16.7	-2.0
WHVZ	Whangaehu Hut	7.28	218	P	Pn	23 04 19.7	-0.1
MOVZ	Moawhango	7.29	217	P	Pn	23 04 16.6	-3.2
WNVZ	Wahianoa	7.31	218	P	Pn	23 04 17.2	-2.9
TRVZ	Turoa	7.31	218	P	Pn	23 04 19.4	-0.8
PNHZ	Pukenui	7.48	212	P	Pn	23 04 18.9	-3.5
WPHZ	Waipukurau	7.50	210	P	Pn	23 04 20.1	-2.6
VRZ	Vera Road	7.61	222	P	Pn	23 04 22.8	-1.3
TSZ	Takapari Road	7.71	213	P	Pn	23 04 22.3	-3.2
WAZ	Wanganui	7.94	218	P	Pn	23 04 27.6	-1.1
TMWZ	Te Maipa	8.61	209	P	Pn	23 04 33.0	-4.8
TRWZ	Traveller	8.94	209	P	Pn	23 04 37.8	-4.5
PAWZ	Paruwai Farm	9.03	210	P	Pn	23 04 40.2	-3.4
DUWZ	D’Urville Isla	9.27	218	P	Pn	23 04 42.9	-4.0
TUWZ	Tuamarina	9.73	215	P	Pn	23 04 49.9	-3.3
KHZ	Kahutara	10.69	213	P	Pn	23 05 02.2	-4.0
DCZ	Deep Cove	16.06	219	P	P	23 06 21.0	-0.8
MSVF	Nonsavu	16.14	349	Pn	Pn	23 06 18.3	-1.7
	0.3nm,0.3s,baz=156,slow=9.6,SNR=5.2						
MSVF				LR	LR	23 11 26.5	
	comp=Z,2µm,20.8s,baz=171,slow=34						
MSVF	Nonsavu	16.14	349		Pn	23 06 17.8	-2.2
MSVF				IAmb	IAmb	23 06 46.4	
	comp=Z,96nm,1.5s						
PINNC	Pines Island,	16.46	308		Pn	23 06 23.1	-0.9
PINNC				IAmb	IAmb	23 06 30.8	
	comp=Z,90nm,1.2s						
PINNC	Pines Island,	16.46	308	P	P	23 06 29.0	+2.6
OUENC	Ouen Island, N	17.00	308		Pn	23 06 28.6	-2.2
OUENC				IAmb	IAmb	23 06 37.3	
	comp=Z,123nm,1.3s						
OUENC	Ouen Island, N	17.00	308	P	P	23 06 35.3	+2.9
YATNC	Mamie plateau,	17.21	308	P	P	23 06 37.9	+3.1
ONTNC	Ouen Toro	17.33	307	P	Pn	23 06 33.5	-1.5
ONTNC	Ouen Toro	17.33	307	P	P	23 06 40.2	+4.1
DZM	Mont Dzumac	17.50	307	P	P	23 06 40.4	+2.4
	comp=Z,0.3nm,0.3s,baz=116,slow=17,SNR=10						
DZM				LR	LR	23 12 14.8	
	comp=Z,4µm,18.6s,baz=120,slow=34						
DZM	Mont Dzumac	17.50	307	*e*P	P	23 06 40.2	+2.1
	comp=Z,145nm,1.1s						
DZM				*e*LR	LR	23 10 39.4	
	comp=Z,4µm,23.2s						
DZM	Mont Dzumac	17.50	307	P	Pn	23 06 36.5	-0.7
DZM				IAmb	IAmb	23 06 57.1	
	comp=Z,67nm,1.1s						
DZM	Mont Dzumac	17.50	307	P	P	23 06 40.9	+2.9
NOUC	Port Laguerre	17.57	307	P	P	23 06 41.9	+3.2
KOUNC	Koumac, New Ca	20.00	306	P	Pn	23 07 07.9	+0.7
AFI	Afiamalu	20.63	19	P	P	23 07 09.8	-2.5
	comp=Z,34nm,0.9s,baz=257,slow=22,SNR=1.9						
SANVU	Saraoutou	22.19	321	P	P	23 07 27.6	-1.4
SANVU				IAmb	IAmb	23 07 48.7	
	comp=Z,103nm,1.1s						
SANVU	Saraoutou	22.19	321	P	P	23 07 30.7	+1.7
ARMA	Armidale	25.36	269	P	P	23 07 59.3	-0.4
ARMA				IAmb	IAmb	23 08 18.7	
	comp=Z,31nm,1.2s						
CAN	Canberra	26.66	257	P	P	23 08 11.2	-0.2
CAN				IAmb	IAmb	23 08 17.4	
	comp=Z,57nm,1.5s						
CAN	Canberra	26.66	257	P	P	23 08 12.4	+1.0
YNG	Young	27.27	259	P	P	23 08 19.0	+2.1
	comp=Z,32nm,1.5s						
EIDS	Eidsvold	27.54	279	P	P	23 08 18.4	-0.8
EIDS				IAmb	IAmb	23 08 21.6	
	comp=Z,44nm,1.1s						
EIDS	Eidsvold	27.54	279	P	P	23 08 20.3	+1.0
	comp=Z,46nm,1.0s						
TBI	Tubuai	27.55	76	*e*LR	LR	23 15 14.4	
	comp=Z,887nm,29.8s						
RK1H	Rockhampton Ha	28.89	283	P	P	23 08 32.8	+1.5
	comp=Z,33nm,0.9s						
RMQ	Roma	29.02	276	P	P	23 08 34.2	+1.7
	comp=Z,64nm,1.0s						
TOO	Toolangi	29.30	252	P	P	23 08 34.2	-0.7
TOO				IAmb	IAmb	23 08 50.2	
	comp=Z,19nm,1.4s						
CMSA	Cobar Meteorol	30.03	264	P	P	23 08 42.2	+0.8
	comp=Z,17nm,1.6s						
PAE	Paea	30.52	66	*e*T	T	23 40 25.2	
	comp=Z,1.6nm,0.3s						
PPT2	Papeete2	30.57	66	*e*LR	LR	23 16 50.7	
	comp=Z,1µm,24.5s						
HNR	Honiara	31.13	316	LR	LR	23 19 23.4	
	comp=Z,456nm,21.3s,baz=171,slow=33						
QLP	Quilpie	32.74	272	P	P	23 09 05.7	+0.4
	comp=Z,69nm,1.3s						
STKA	Stephens Creek	33.34	262	P	P	23 09 09.3	-1.2
	comp=Z,6.7nm,1.0s,baz=100,slow=12,SNR=9.0						
STKA				LR	LR	23 22 11.8	
	comp=Z,2µm,18.1s,baz=72,slow=36						
STKA	Stephens Creek	33.34	262	P	P	23 09 10.4	-0.1
CTA	Charters Tower	33.93	284	P	P	23 09 17.2	+1.5
	comp=Z,45nm,1.3s						
CTAO	Charters Tower	33.93	284	P	P	23 09 15.2	-0.5
CTAO	Charters Tower	33.93	284	P	P	23 09 16.4	+0.7
HTT	Hallett	35.18	258	P	P	23 09 26.9	+0.4
	comp=Z,19nm,1.2s						
INKA	Innaminka	35.25	269	P	P	23 09 28.4	+1.4
	comp=Z,127nm,0.8s						
WHYH	Whyalla	36.37	259	P	P	23 09 37.6	+1.0
	comp=Z,14nm,0.9s						
MTSU	Mount Surprise	36.51	286	P	P	23 09 39.3	+1.3
	comp=Z,19nm,1.2s						
LCRK	Leigh Creek	36.51	263	P	P	23 09 37.5	-0.3
	comp=Z,49nm,1.1s						
BBOO	Buckleboo	37.66	258	P	P	23 09 46.8	-0.9
BBOO				IAmb	IAmb	23 09 47.9	
	comp=Z,31nm,1.2s						
BBOO	Buckleboo	37.66	258	P	P	23 09 47.6	0.0
	comp=Z,25nm,1.3s						
QIS	Mount Isa	39.13	279	P	P	23 10 00.1	0.0
	comp=Z,37nm,1.1s						
OOD	Oodnadatta	39.44	266	P	P	23 10 02.3	-0.3
	comp=Z,39nm,1.1s						
PMG	Port Moresby	39.62	300	P	P	23 10 01.1	-3.1
	comp=Z,6.3nm,0.3s,baz=124,slow=22,SNR=1.7						
PMG	Port Moresby	39.62	300	P	P	23 10 03.1	-1.1
PMG				IAmb	IAmb	23 10 19.1	
	comp=Z,36nm,1.2s						
PMG	Port Moresby	39.62	300	P	P	23 10 05.1	+0.9
PMG	Port Moresby	39.62	300	P	P	23 10 04.9	+0.7
COEN	Coen	39.76	290	P	P	23 10 05.4	+0.1
COEN				IAmb	IAmb	23 10 20.4	
	comp=Z,23nm,1.0s						
COEN	Coen	39.76	290	P	P	23 10 07.1	+1.8
RABL	Rabaul	39.98	311	P	P	23 10 06.4	-0.8
MULG	Mulgathing	39.99	262	P	P	23 10 06.5	-0.7
	comp=Z,31nm,1.3s						
AS31	Alice Springs	42.49	271	P	P	23 10 26.4	-1.5
ASAR	Alice Springs	42.49	271	P	P	23 10 26.6	-1.2
	comp=Z,13nm,0.8s,baz=112,slow=7.3,SNR=149						
ASAR				PcP	PcP	23 12 19.5	-0.7
	comp=Z,0.8nm,0.4s,baz=123,slow=3.8,SNR=1.1						
ASAR				S	S	23 16 46.2	-1.5
	comp=Z,2.0nm,1.0s,baz=112,slow=15,SNR=6.7						
ASAR				LR	LR	23 27 31.4	
	comp=Z,734nm,20.2s,baz=122,slow=36						
ASAR	Alice Springs	42.49	271	P	P	23 10 26.5	-1.3
TAOE	Nuku Hiva Isla	43.16	64	*e*LR	LR	23 22 25.7	
	comp=Z,408nm,23.4s						
WR0	Warramunga Arr	43.60	276	P	P	23 10 35.9	-0.9
WR0				IAmb	IAmb	23 10 36.6	
	comp=Z,26nm,1.0s						
WRAB	Tennant Creek	43.77	276	P	P	23 10 37.0	-1.2
WRA	Warramunga Arr	43.78	276	P	P	23 10 36.8	-1.4
	comp=Z,15nm,0.5s,baz=117,slow=7.3,SNR=151						
WRA				S	S	23 17 03.5	-3.1
	comp=Z,2.2nm,0.9s,baz=118,slow=14,SNR=7.2						
WRA				LR	LR	23 27 33.7	
	comp=Z,603nm,21.8s,baz=105,slow=34						
WRA	Warramunga Arr	43.78	276	P	P	23 10 36.3	-1.9
MANU	Manus Island	44.71	307	P	P	23 10 44.5	-1.2
MANU				IAmb	IAmb	23 10 59.0	
	comp=Z,19nm,1.1s						
FORT	Forrest	44.77	258	P	P	23 10 44.2	-1.8
FORT	Forrest	44.77	258	P	P	23 10 45.8	-0.2
	comp=Z,34nm,1.2s						
VNDA	Vanda	44.80	186	P	P	23 10 48.7	+3.0
	comp=Z,1.2nm,0.9s,baz=3.8,slow=6.0,SNR=5.9						
VNDA	Vanda	44.80	186	P	P	23 10 46.3	+0.6
WRKA	Warakurna	46.61	266	P	P	23 10 58.6	-2.1
JAY	Jayapura	48.99	300	P	P	23 11 16.9	-2.3
	comp=Z,33nm,1.1s,baz=160,slow=1.5,SNR=4.8						
JAY	Jayapura	48.99	300	P	P	23 11 20.2	+1.0
	comp=Z,20nm,1.2s						
KNRA	Kununurra	50.49	277	P	P	23 11 29.6	-0.9
KNRA	Kununurra	50.49	277	P	P	23 11 30.0	-0.6
FITZ	Fitzroy Crossi	51.89	273	P	P	23 11 39.6	-1.4
	comp=Z,12nm,0.7s,baz=142,slow=6.9,SNR=34						
CASY	Casey	52.02	209	P	P	23 11 41.4	+0.1
KLBR	Kellerberrin	52.84	254	P	P	23 11 46.4	-1.6
MEEK	Meekatharra	53.99	260	P	P	23 11 54.5	-2.0
PSA00	Pilbara Seismi	55.11	266	P	P	23 12 02.7	-1.9
PSA00				IAmb	IAmb	23 12 06.3	
	comp=Z,21nm,1.1s						
PSA00	Pilbara Seismi	55.11	266	P	P	23 12 02.9	-1.8
PSA00				IAmb	IAmb	23 12 04.9	
	comp=Z,3.7nm,0.9s						
MORW	Morawa	55.14	256	P	P	23 12 03.0	-1.8
MORW				IAmb	IAmb	23 12 04.1	
	comp=Z,27nm,1.2s						
MORW	Morawa	55.14	256	P	P	23 12 04.0	-0.8
QSPA	South Pole Qui	56.46	180	P	P	23 12 16.1	+2.2
	comp=Z,22nm,0.9s,baz=36,slow=2.9,SNR=35						
QSPA				LR	LR	23 33 54.5	
	comp=Z,607nm,19.7s,baz=229,slow=33						
QSPA	South Pole Qui	56.46	180	P	P	23 12 14.8	+0.9
SIJI	Sorong	57.09	294	P	P	23 12 16.8	-2.0
	comp=Z,4.1nm,0.5s,baz=48,slow=4.1,SNR=5.8						
SWI	Sorong	57.09	294	P	P	23 12 20.6	+1.7
	comp=Z,19nm,1.0s						
SOEI	Soe	57.34	281	P	P	23 12 18.9	-1.9
BATI	Baumata	57.59	280	P	P	23 12 21.8	-0.7
	comp=Z,17nm,0.6s,baz=359,slow=1.7,SNR=5.0						
GUMO	Guam	58.45	317	LR	LR	23 34 21.4	
	comp=Z,262nm,21.6s,baz=43,slow=33						
MMRI	Maumere	59.63	280	P	P	23 12 39.3	+2.7
	comp=Z,37nm,0.9s						
MMRI	Maumere	59.63	280	P	P	23 12 36.2	-0.4
SANI	Sanana	60.44	289	P	P	23 12 40.7	-1.5
	comp=Z,19nm,1.3s						
SANI	Sanana	60.44	289	P	P	23 12 40.0	-2.2
TWSI	Taliwang, Sumb	63.99	277	P	P	23 13 06.1	+0.2
	comp=Z,14nm,1.0s						
SPSI	Sidrap Palu	64.29	283	P	P	23 13 10.2	+2.3
	comp=Z,10nm,1.1s						
MAW	Mawson	69.07	201	P	P	23 13 38.8	+1.2
	comp=Z,12nm,1.0s,baz=115,slow=9.3,SNR=9.4						
MAW	Mawson	69.07	201	P	P	23 13 38.4	+0.9
LEM	Lembang	72.72	273	P	P	23 14 00.3	-0.5
	comp=Z,8.9nm,0.4s,baz=293,slow=23,SNR=1.9						
SYO	Syowa Base	73.82	193	⇑*e*P	P	23 14 06.3	+0.1
SYO	Syowa Base	73.82	193	⇓*e*pP	P	23 14 08.0	+1.8
SYO	Syowa Base	73.82	193	⇑*e*PcP	PcP	23 14 20.0	-1.6
SNAA	Sanae	74.92	179	P	P	23 14 13.9	+1.2
SNAA	Sanae	74.92	179	P	P	23 14 13.5	+0.8
	comp=Z,6.1nm,1.2s,baz=196,slow=8.6						
SNAA	Sanae	74.92	179	P	P	23 14 12.9	+0.2

SNAA				IAmb	IAmb	23 14 23.4	
	comp=Z,24nm,1.3s						
VNA3	**Neumayer Olymp**	**75.09**	**176**	P	**P**	**23 14 14.8**	**+1.1**
KSM	**Kuching**	**75.12**	**282**	P	**P**	**23 14 14.2**	**-0.5**
VNA2	**Neumayer--Watz**	**75.52**	**177**	P	**P**	**23 14 16.8**	**+0.8**
	baz=179,slow=5.2						
VNA1	**Neumayer--Stat**	**75.75**	**177**	P	**P**	**23 14 18.4**	**+1.0**
MJAR	**Matsushiro Arr**	**80.62**	**326**	P	**P**	**23 14 45.6**	**+0.9**
	comp=Z,3.4nm,0.9s,baz=175,slow=5.4,SNR=7.6						
KSRS	**Korea Array**	**86.48**	**320**	P	**P**	**23 15 15.9**	**+1.2**
	comp=Z,1.2nm,0.6s,baz=67,slow=19,SNR=3.1						
NJ2	**Nanjing**	**87.96**	**311**	*e*P	**P**	**23 15 25.0**	**+3.0**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
PEA0B	**Petropavlovsk-**	**88.83**	**346**	P	**P**	**23 15 24.9**	**-0.6**
PETK	**Petropavlovsk-**	**88.83**	**346**	P	**P**	**23 15 25.1**	**-0.5**
	comp=Z,20nm,1.1s,baz=116,slow=6.8,SNR=8.7						
PETK	**Petropavlovsk-**	**88.83**	**346**	P	**P**	**23 15 25.7**	**+0.1**
NVAR	**Mina Array Bea**	**91.00**	**43**	P	**P**	**23 15 37.8**	**+1.4**
	comp=Z,0.6nm,0.8s,baz=217,slow=8.7,SNR=5.0						
NVAR	**Mina Array Bea**	**91.00**	**43**	P	**P**	**23 15 36.6**	**+0.3**
CMAR	**Chiang Mai Arr**	**93.96**	**289**	P	**P**	**23 15 50.7**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=155,slow=3.2,SNR=4.2						
CMAR	**Chiang Mai Arr**	**93.96**	**289**	P	**P**	**23 15 50.3**	**0.0**
XAN	**Xi'an**	**95.64**	**307**	P	P	23 16 02.9	+5.2
XAN				S	**S**	**23 27 17.3**	**+4.9**
XAN				pmax	pmax		
	comp=Z,5.0nm,1.4s						
XAN				LR	LR		
	comp=Z,530nm,26.1s						
XAN				LR	LR		
	comp=Z,650nm,25.4s						
HHC	**Hu-ho-hao-te**	**98.10**	**314**	*e*P	**P**	**23 16 08.3**	**-0.4**
HHC				pmax	pmax		
	comp=Z,6.0nm,1.4s						
HHC				pmax	pmax		
	comp=Z,100nm,7.3s						
WMQ	**Urumqi**	**114.78**	**307**	*e*PKP	**PKiKP**	**23 21 13.9**	**+1.5**
WMQ				LR	LR		
	comp=Z,190nm,28.7s						
WMQ				LR	LR		
	comp=Z,280nm,29.1s						
WMQ				LR	LR		
	comp=Z,240nm,20.1s						
MK31	**Makanchi Array**	**119.42**	**309**	PKPdf	**PKPdf**	**23 21 20.5**	**-0.7**
MKAR	**Makanchi Array**	**119.42**	**309**	PKP	**PKPdf**	**23 21 21.1**	**-0.1**
	comp=Z,5.4nm,1.0s,baz=113,slow=2.8,SNR=19						
MKAR	**Makanchi Array**	**119.42**	**309**	PKPdf	**PKPdf**	**23 21 20.6**	**-0.6**
MAKZ	**Makanchi**	**119.62**	**309**	PKPdf	**PKPdf**	**23 21 20.6**	**-0.9**
ZALV	**Zalesovo Beam**	**120.07**	**317**	PKP	**PKPdf**	**23 21 21.9**	**-0.2**
	comp=Z,3.1nm,1.0s,baz=132,slow=2.2,SNR=6.3						
ZALV	**Zalesovo Beam**	**120.07**	**317**		**PKPdf**	**23 21 21.6**	**-0.5**
KSH	**Kashi**	**121.38**	**299**	PKP	**PKPdf**	**23 21 25.8**	**+0.5**
NRIK	**Noril'sk**	**122.37**	**335**	PKP	**PKPdf**	**23 21 25.8**	**-0.3**
	comp=Z,1.2nm,0.4s,baz=63,slow=4.5,SNR=4.5						
TKM2	**Tokmak 2**	**122.73**	**303**	P	**PKPdf**	**23 21 27.4**	**-0.5**
	SNR=9.1						
KURK	**Kurchatov**	**122.87**	**312**	PKPdf	**PKPdf**	**23 21 26.6**	**-1.0**
KBK	**Karagaybulak**	**123.11**	**302**	P	**PKPdf**	**23 21 28.6**	**0.0**
	SNR=6.6						
UCH	**Uchtor**	**123.29**	**302**	P	**PKPdf**	**23 21 29.8**	**+0.5**
	SNR=12						
CHMS	**Chumysh**	**123.35**	**303**	P	**PKPdf**	**23 21 28.5**	**-0.4**
	SNR=5.9						
AAK	**Ala-Archa**	**123.42**	**302**	PKP	**PKPdf**	**23 21 28.8**	**-0.4**
	comp=Z,5.3nm,0.9s,baz=113,slow=2.4,SNR=9.5						
AAK	**Ala-Archa**	**123.42**	**302**	P	**PKiKP**	**23 21 33.1**	**+3.7**
	SNR=7.4						
AAK	**Ala-Archa**	**123.42**	**302**	PKPdf	**PKPdf**	**23 21 28.3**	**-0.8**
USP	**Ospenovka**	**123.60**	**303**	P	**PKPdf**	**23 21 29.4**	**0.0**
	SNR=6.9						
AML	**Almayashu**	**123.84**	**301**	P	**PKPdf**	**23 21 30.4**	**+0.1**
	SNR=8.5						
EKS2	**Erkin-Say**	**123.94**	**302**	P	**PKPdf**	**23 21 30.4**	**+0.3**
	SNR=5.6						
KKAR	**Karatay Array**	**126.37**	**302**	PKPdf	**PKPdf**	**23 21 34.2**	**-0.4**
GEYT	**Alibeck**	**134.36**	**292**	PKP	**PKPdf**	**23 21 50.7**	**+0.7**
	comp=Z,4.5nm,0.8s,baz=31,slow=46,SNR=3.5						
ARU	**Arti**	**135.21**	**318**	PKP	**PKPdf**	**23 21 51.3**	**+0.4**
	comp=Z,1.5nm,0.6s,baz=116,slow=3.6,SNR=6.9						
AKTO	**Aktyubinsk**	**135.83**	**310**	PKP	**PKPdf**	**23 21 52.3**	**0.0**
	comp=Z,3.9nm,0.8s,baz=115,slow=4.7,SNR=9.4						
ARCES	**ARCESS Array B**	**141.64**	**347**	PKhKP	PKPpre	23 21 57.7	
	comp=Z,13nm,1.2s,baz=40,slow=2.9,SNR=6.0						
BELG	**Belogornoye**	**142.12**	**314**	PKhKP	PKPpre	23 22 01.0	
	comp=Z,21nm,1.1s,baz=224,slow=2.6,SNR=4.0						
KLMR	**Klimovskoe**	**143.33**	**330**	*e*PKPdf	PKPab	23 22 01.4	-0.1
KLMR				AMP		23 22 13.7	
	comp=Z,24nm,1.4s						
KLMR				*e*PP	**PP**	**23 25 15.0**	**-2.1**
KBZ	**Khabaz**	**146.36**	**300**	PKPbc	**PKPdf**	**23 22 12.0**	**+0.7**
	comp=Z,9.0nm,1.0s,baz=180,slow=7.0,SNR=9.2						
OBN	**Obninsk**	**147.46**	**322**	PKPbc	**PKPdf**	**23 22 12.9**	**+0.1**
	comp=Z,2.7nm,0.4s,baz=77,slow=3.6,SNR=12						
OBN	**Obninsk**	**147.46**	**322**		**PKPdf**	**23 22 13.8**	**+1.0**
FINES	**FINESS Array B**	**147.98**	**338**	PKPbc	**PKPbc**	**23 22 16.1**	**-0.4**
	comp=Z,19nm,0.8s,baz=39,slow=4.2,SNR=90						
FINES	**FINESS Array B**	**147.98**	**338**		**PKPdf**	**23 22 15.1**	**+1.7**
NB2	**NORSAR Subarra**	**151.87**	**350**	PKP	**PKPbc**	**23 22 25.8**	**-0.4**
	comp=Z,25nm,1.2s,baz=16,slow=4.1						
NOA	**NORSAR Array B**	**151.87**	**350**	PKPbc	**PKPbc**	**23 22 25.9**	**-0.2**
	comp=Z,9.2nm,0.9s,baz=13,slow=4.1,SNR=19						
LIC	**Lamto**	**152.06**	**166**	*e*P	**PKPbc**	**23 22 28.0**	**0.0**
	comp=Z,32nm,0.7s						
KIC	**Kosan Boka**	**152.25**	**167**	*e*P	**PKPbc**	**23 22 27.3**	**-1.1**
	comp=Z,24nm,1.0s						
NACGM	**Naroch**	**152.30**	**328**	*i* PKP	**PKPbc**	**23 22 27.3**	**+0.1**
TIC	**Toumodi**	**152.47**	**166**	*e*P	**PKPbc**	**23 22 29.1**	**+0.2**
DBIC	**Dimbokro**	**152.53**	**167**	PKPbc	**PKiKP**	**23 22 30.3**	**+1.0**
	comp=Z,3.3nm,0.7s,baz=129,slow=2.2,SNR=2.2						
AKASG	**Malin Array Be**	**153.46**	**318**	PKPbc	**PKPbc**	**23 22 30.1**	**+0.1**
	comp=Z,8.1nm,0.7s,baz=73,slow=2.7,SNR=35						
AKASG	**Malin Array Be**	**153.46**	**318**		**PKPbc**	**23 22 29.5**	**-0.4**
BRTR	**Keskin Array B**	**153.51**	**293**	PKPbc	**PKPbc**	**23 22 30.2**	**-0.4**
	comp=Z,13nm,1.1s,baz=141,slow=2.7,SNR=29						
KOLS	**Kolonicke sedl**	**158.20**	**321**	*e*PKP	**PKPdf**	**23 22 31.0**	**+2.3**
LANS	**Liptovska Anna**	**159.49**	**324**	*e*PKP	**PKPdf**	**23 22 34.4**	**+4.2**
TORD	**Torodi Ar. Bea**	**159.58**	**181**	PKPab	**PKPab**	**23 23 09.5**	**+0.2**
	comp=Z,6.4nm,1.1s,baz=174,slow=4.8,SNR=4.3						
CLL	**Collm**	**160.43**	**338**	*e*PKPab	**PKPab**	**23 23 12.0**	**-0.2**
GERES	**GERESS Array B**	**162.25**	**332**	PKPab	**PKPab**	**23 23 19.5**	**-1.0**
	comp=Z,2.4nm,1.1s,baz=97,slow=4.1,SNR=4.9						
WLF	**Walferdange**	**163.62**	**349**	*d*PKPdf	**PKPdf**	**23 22 36.8**	**+2.4**

*EAF **21** 23:04:57.1±1.0,21°.15S×32°.53E,h10^{km},MD3.5*

BUL 21 23:04:55.3±1.2**,21°.31S×32°.64E,h10**^{km}**,MD3.7, Mozambique**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOPA	**Mopani**	**2.48**	**207**	*e*P	Pb	23 05 39.0	-1.1
MOPA				*e*S	Sb	23 06 09.1	-1.6
MOPA	**Mopani**	**2.48**	**207**	*e*P	Pb	23 05 39.0	-1.1
MOPA				*e*S	Sb	23 06 09.1	-1.6
MSNA	**Messina**	**2.64**	**246**	*e*P	Pn	23 05 38.3	+0.3
MSNA				*e*S	Sn	23 06 09.4	-0.8
MSNA	**Messina**	**2.64**	**246**	*e*P	Pn	23 05 38.3	+0.3
MSNA				*e*S	Sn	23 06 09.4	-0.8
MATP	**Matopo**	**3.97**	**282**	*e*P	Pn	23 05 55.7	-0.8
MATP				*e*S	Sn	23 06 39.5	-3.6
MATP	**Matopo**	**3.97**	**282**	*e*P	Pn	23 05 55.7	-0.8
MATP				*e*S	Sn	23 06 39.5	-3.6

*SJA **21** 23:05:18.1±0.7,30°.52S×72°.00W,h9^{km},ML5.8,MW5.4*

*BJI **21** 23:05:25.1±0.0,30°.45S×72°.09W,h10^{km},mB5.8/40, Ms5.8/48,Ms7 5.7/49*

*IDC **21** 23:05:25.7±0.3,30°.59S×71°.56W,h0^{km},mb5.4/25, mb1 5.4/30,mb1mx5.3/37,mbtmp5.3/30,ML4.8/5,MS5.5/17, Ms1 5.5/17,ms1mx5.3/22,Error ellipse: s-maj=16.4km s-min=10.0km az=80.0*

*GUC **21** 23:05:28.8±0.7,30°.61S×71°.79W,h35^{km}±2^{km},MW6.0*

*NEIC **21** 23:05:29.1,30°.56S×71°.88W,h27^{km},Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$3.74; M$_{θθ}$-0.69; M$_{φφ}$-3.05; M$_{rθ}$0.66; M$_{θφ}$-0.24; M$_{φr}$-1.81; Fault plane solution: M$_{0}$3.95000×10^{17} NP1:φ$_{s}$174.65000°, δ59.36000°,λ80.54000°. NP2:φ$_{s}$12.77000°,δ31.93000°, λ105.51000°. Principal axes: T 4.2868, Plg74.0000°, Azm60.0000°; N -0.7853, Plg8.0000°, Azm180.0000°; P -3.5014, Plg14.0000°, Azm272.0000°;*

*NEIC **21** 23:05:29.1,30°.56S×71°.88W,h27^{km},Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$2.17; M$_{θθ}$0.45; M$_{φφ}$-2.62; M$_{rθ}$0.81; M$_{θφ}$-0.27; M$_{φr}$-1.34; Fault plane solution: M$_{0}$2.90000×10^{17} NP1:φ$_{s}$165.09000°, δ62.17000°,λ67.90000°. NP2:φ$_{s}$26.11000°,δ34.98000°, λ125.48000°. Principal axes: T 2.8296, Plg65.0000°, Azm35.0000°; N 0.1447, Plg19.0000°, Azm176.0000°; P -2.9743, Plg14.0000°, Azm271.0000°;*

*NEIC **21** 23:05:30.6±1.9,30°.58S±0°.04×71°.77W±0°.07,h27^{km}±1^{km}, mb5.6/200,Ms_20 5.5/239,Mwb5.7/53,Mwr5.6/42,Mww5.8, Mwc5.8(GCMT),Mwr6.0(GUC) Error ellipse: s-maj=10.3km s-min=7.1km az=280.0*

*VAO **21** 23:05:30.3±0.3,30°.65S×71°.50W,h28^{km},mb5.6*

*MOS **21** 23:05:30.3±1.1,30°.55S×71°.56W,h36^{km},mb5.6/13, MS5.4/32,Error ellipse: s-maj=11.9km s-min=6.1km az=99.6*

*GCMT **21** 23:05:33.6±0.1,30°.66S±0°.01×71°.98W±0°.01,h33^{km}, MW5.8/141,Moment Tensor Solution. s141,c263; s139,c368; Duration: 1^{s}9 Moment tensor: Scale 10^{17} Nm; M$_{rr}$4.82±.05; M$_{θθ}$0.32±.04; M$_{φφ}$-5.14±.04; M$_{rθ}$0.80±.06; M$_{θφ}$0.20±.03; M$_{φr}$-3.46±.08; Best double couple: M$_{0}$6.12200×10^{17} NP1:φ$_{s}$5.00000°,δ28.00000°, λ102.00000°. NP2:φ$_{s}$171.00000°,δ63.00000°,λ84.00000°. Principal axes: T 5.9910, Plg72.0000°, Azm67.0000°; N 0.2630, Plg6.0000°, Azm174.0000°; P -6.2530, Plg18.0000°, Azm266.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **21** 23:05:34,30°.68S×71°.65W,h30^{km},Moment Tensor Solution. Duration: 8^{s}0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$4.83; M$_{θθ}$0.63; M$_{φφ}$-5.46; M$_{rθ}$0.54; M$_{θφ}$-0.09; M$_{φr}$-3.13; Fault plane solution: M$_{0}$6.07000×10^{17} NP1:φ$_{s}$8.00000°, δ30.00000°,λ101.00000°. NP2:φ$_{s}$175.00000°,δ61.00000°, λ83.00000°. Principal axes: T 5.7656, Plg73.0000°, Azm69.0000°; N 0.5697, Plg6.0000°, Azm178.0000°; P -6.3353, Plg16.0000°, Azm270.0000°;*

*NEIC **21** 23:05:34,30°.69S×72°.05W,h32^{km},Moment Tensor Solution. Duration: 3^{s}8 Moment tensor: Scale 10^{17}Nm; M$_{rr}$4.24; M$_{θθ}$0.57; M$_{φφ}$-4.82; M$_{rθ}$0.88; M$_{θφ}$0.01; M$_{φr}$-3.64; Fault plane solution: M$_{0}$5.90000×10^{17} NP1:φ$_{s}$11.00000°, δ26.00000°,λ108.00000°. NP2:φ$_{s}$171.00000°,δ65.00000°, λ81.00000°. Principal axes: T 5.6575, Plg69.0000°, Azm64.0000°; N 0.4549, Plg8.0000°, Azm174.0000°; P -6.1124, Plg20.0000°, Azm267.0000°;*

ISC 21 23:05:29.7±0.5**,30°.58S**±0°.02×**71°.60W**±0°.03**,h26**^{km}±2^{km}**, n1018,**σ1^{s}56/986**,mb5.6**/135**,MS5.5**/170**,33C-17D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	**0.10**	**200**	⇑*i*P	**Pb**	**23 05 34.4**	**-0.1**
CO06				*i* S	**Sb**	**23 05 38.2**	**+0.4**
CO06	**Fray Jorge**	**0.10**	**200**	Pg	**Pb**	**23 05 34.7**	**+0.2**
CO06				Sg	**Sb**	**23 05 38.2**	**+0.4**
CO05	**La Serena**	**0.73**	**25**	⇑*i*P	**Pn**	**23 05 44.5**	**+0.2**
CO05				*i* S	**Sn**	**23 05 56.1**	**+1.5**
CO05	**La Serena**	**0.73**	**25**		**Pb**	**23 05 44.1**	**+0.3**
GO04	**Tololo Observa**	**0.80**	**60**	⇑*i*P	**Pn**	**23 05 46.4**	**+0.9**
GO04				*i* S	**Sn**	**23 05 59.4**	**+2.7**
GO04	**Tololo Observa**	**0.80**	**60**		**Pn**	**23 05 46.2**	**+0.8**
GO04	**Tololo Observa**	**0.80**	**60**	*e*P	Pb	23 05 39.0	-6.1
LCO	**Las Campanas**	**1.75**	**27**	P	**Pn**	**23 05 59.7**	**+1.1**
LCO	**Las Campanas**	**1.75**	**27**	*e*P	**Pn**	**23 05 59.9**	**+1.3**
LCO	**Las Campanas**	**1.75**	**27**		**Pn**	**23 05 59.7**	**+1.1**
LCO	**Las Campanas**	**1.75**	**27**	*e*P	Pn	23 05 53.0	-5.6
LCO				IAML		23 06 33.4	
	comp=Z,204μm,0.8s						
AROD	**Rodeo**	**1.88**	**78**	*e*P	**Pn**	**23 05 58.0**	**-2.4**
VA06	**Catapilco**	**1.99**	**173**	⇑*i*P	**Pn**	**23 06 01.4**	**-0.1**
VA06				*i* S	**Sn**	**23 06 27.5**	**+1.9**
ACDV	**Cuesta del Vie**	**2.18**	**80**	*e*P	**Pn**	**23 06 03.0**	**-1.4**
ACDV				IAML		23 06 51.2	
	comp=Z,32μm,0.9s						
ACCO	**Cerro Coronel**	**2.18**	**91**	*e*P	**Pn**	**23 06 03.0**	**-1.6**
ACCO				*e*P	**Pn**	**23 06 03.6**	**-0.9**
RTLS	**Leoncito**	**2.31**	**122**	*e*P	**Pn**	**23 06 04.0**	**-2.3**
RTLS				IAML		23 06 52.5	
	comp=Z,34μm,0.9s						
VA03	**San Esteban**	**2.35**	**158**	⇑*i*P	**Pn**	**23 06 07.9**	**+1.3**
VA03				*i* S	**Sb**	**23 06 37.5**	**-2.5**
VA03	**San Esteban**	**2.35**	**158**		**Pn**	**23 06 07.8**	**+1.2**
VA03	**San Esteban**	**2.35**	**158**	*e*P	**Pn**	**23 06 02.0**	**-4.6**
VA03				IAML		23 06 46.3	
	comp=Z,49μm,1.6s						
AC04	**Llanos de Chal**	**2.41**	**11**	*e*P	**Pn**	**23 06 07.5**	**+0.1**
AC04				*e*S	**Sn**	**23 06 38.5**	**+2.4**
AC04	**Llanos de Chal**	**2.41**	**11**		**Pn**	**23 06 07.2**	**-0.2**
VA01	**Torpederas**	**2.43**	**181**		**Pn**	**23 06 06.3**	**-1.3**
ROCH	**El Roble**	**2.43**	**168**	⇑*i*P	**Pn**	**23 06 08.5**	**+0.6**
ROCH				⇑*i*P	**Pn**	**23 06 08.5**	**+0.6**
ROCH				*i* S	**Sn**	**23 06 38.8**	**+1.9**
ROCH				*i* S	**Sn**	**23 06 38.9**	**+1.9**
ROC1	**El Roble**	**2.44**	**168**	*e*P	Pn	23 06 01.0	-7.0
AUSP	**Uspallata**	**2.50**	**131**	*e*P	**Pn**	**23 06 06.4**	**-2.4**
PEL	**Peldehue**	**2.67**	**163**	P	**Pn**	**23 06 11.8**	**+0.8**
PEL	**Peldehue**	**2.67**	**163**	⇑*i*P	**Pn**	**23 06 11.9**	**+0.9**
PEL				*i* S	**Sn**	**23 06 45.5**	**+3.0**
PEL	**Peldehue**	**2.67**	**163**		**Pn**	**23 06 11.8**	**+0.8**
PEL	**Peldehue**	**2.67**	**163**	*e*P	**Pn**	**23 06 08.0**	**-3.0**
ZON	**Zonda**	**2.68**	**112**	P	**Pb**	**23 06 15.7**	**-1.3**
ZON	**Zonda**	**2.68**	**112**		**Pb**	**23 06 15.7**	**-1.3**
ZON	**Zonda**	**2.68**	**112**	*e*P	**Pn**	**23 06 10.0**	**-1.2**
ZON				IAML		23 07 10.6	
	comp=Z,30μm,0.8s						
MT02	**Curacav**	**2.70**	**172**	*e*P	**Pn**	**23 06 11.8**	**+0.5**
MT02				*e*S	**Sn**	**23 06 44.3**	**+1.2**
MT02	**Curacav**	**2.70**	**172**		**Pn**	**23 06 11.2**	**-0.1**
MT02	**Curacav**	**2.70**	**172**	*e*P	Pn	23 06 05.0	-6.3
MT02				IAML		23 07 00.3	
	comp=Z,23μm,1.2s						
MT05	**Renca**	**2.89**	**166**	*e*P	**Pn**	**23 06 15.8**	**+1.7**
MT05				*e*S	**Sn**	**23 06 49.5**	**+1.4**
MT05	**Renca**	**2.89**	**166**		**Pn**	**23 06 14.6**	**+0.5**
MT05	**Renca**	**2.89**	**166**	*e*P	**Pn**	**23 06 10.0**	**-4.1**
MT05				IAML		23 07 02.8	
	comp=Z,38μm,0.9s						
VA05	**Santo Domingo**	**3.06**	**180**	*e*P	**Pn**	**23 06 15.5**	**-0.9**
VA05				*e*S	**Sn**	**23 06 52.4**	**+0.2**
VA05	**Santo Domingo**	**3.06**	**180**		**Pn**	**23 06 15.3**	**-1.1**
ASAL	**Salagasta**	**3.09**	**131**	*e*P	**Pn**	**23 06 15.1**	**-1.8**
ASAL				IAML		23 07 40.9	
	comp=Z,2μm,1.3s						
ARCO	**CERRO ARCO**	**3.20**	**135**	*e*P	**Pn**	**23 06 17.0**	**-1.4**
ARCO				IAML		23 07 16.7	
	comp=Z,36μm,0.7s						
GO03	**Copiap**	**3.21**	**22**	*e*P	**Pn**	**23 06 19.7**	**+1.2**
GO03				*e*S	**Sb**	**23 07 02.3**	**-2.4**
GO03	**Copiap**	**3.21**	**22**		**Pn**	**23 06 19.3**	**+0.8**
GO03	**Copiap**	**3.21**	**22**	*e*P	Pn	23 06 13.0	-5.4
MT09	**Talagante**	**3.23**	**171**	*e*P	**Pn**	**23 06 19.4**	**+0.7**
MT09				*e*S	**Sn**	**23 06 57.4**	**+1.0**
MT09	**Talagante**	**3.23**	**171**		**Pn**	**23 06 19.1**	**+0.3**
MT01	**Popeta**	**3.28**	**175**	*e*P	**Pn**	**23 06 19.7**	**+0.3**
MT01				*e*S	**Sb**	**23 07 03.0**	**-3.8**
MT01	**Popeta**	**3.28**	**175**		**Pn**	**23 06 18.6**	**-0.8**
MT01	**Popeta**	**3.28**	**175**	*e*P	Pn	23 06 13.0	-6.4
MT01				IAML		23 07 13.5	
	comp=Z,14μm,1.1s						
AAGR	**Agrelo**	**3.43**	**137**	*e*P	**Pn**	**23 06 21.0**	**-0.5**
AAGR				IAML		23 09 03.8	
	comp=Z,3μm,1.7s						
LMEL	**Las Melosas**	**3.46**	**160**	⇑*i*P	**Pn**	**23 06 23.7**	**+1.7**
LMEL				*i* S	**Sn**	**23 07 03.8**	**+1.6**
VCA	**Vinchina**	**3.48**	**59**	*e*P	**Pb**	**23 06 28.3**	**-2.3**
VCA				*e*S	**Sb**	**23 07 14.1**	**+1.5**
VCA	**Vinchina**	**3.48**	**59**	*e*P	**Pn**	**23 06 21.0**	**-1.2**
VCA				IAML		23 07 26.8	
	comp=Z,35μm,0.7s						
BO04	**La Punta**	**3.50**	**166**	*e*P	**Pn**	**23 06 23.4**	**+1.0**
BO01	**Tunca**	**3.82**	**174**		**Pn**	**23 06 26.7**	**-0.1**
BO01	**Tunca**	**3.82**	**174**	*e*P	Pn	23 06 22.0	-4.8
BO01				*e*S	**Sb**	**23 07 27.4**	**+5.2**
ACLC	**CERRO LA CRUZ**	**4.19**	**75**	*e*P	**Pn**	**23 06 29.0**	**-3.0**
ACLC				*e*P	**Pn**	**23 06 29.4**	**-2.6**
ACLC				IAML		23 07 50.5	
	comp=Z,22μm,1.5s						
BO02	**Sierra Bellavi**	**4.25**	**171**		**Pn**	**23 06 33.4**	**+0.6**
BO02	**Sierra Bellavi**	**4.25**	**171**	*e*P	Pn	23 06 28.0	-4.8
AC02	**Maricunga**	**4.32**	**31**	Pn	**Pn**	**23 06 35.9**	**+1.8**
AC02	**Maricunga**	**4.32**	**31**	*e*P	Pn	23 06 29.0	-5.1
AC02				IAML		23 07 53.2	
	comp=Z,13μm,0.8s						
APLL	**PUNTA DE LOS L**	**4.38**	**89**	*e*P	**Pn**	**23 06 32.0**	**-2.5**
APLL				IAML		23 07 57.5	
	comp=Z,33μm,1.4s						
GO05	**Huala**	**4.42**	**184**		**Pn**	**23 06 33.2**	**-1.9**
RFA	**San Rafael**	**4.94**	**149**	*e*P	**Pn**	**23 06 41.0**	**-1.2**
RFA				IAML		23 08 15.8	
	comp=Z,8μm,1.5s						
ML02	**Panimavida**	**5.17**	**178**		**Pn**	**23 06 44.1**	**-1.1**
CYA	**Choya**	**5.48**	**69**	*e*P	**Pn**	**23 06 46.0**	**-3.7**
CYA				IAML		23 08 36.9	
	comp=Z,6μm,2.5s						
PB14	**IPOC Station P**	**6.03**	**10**	Pn	**Pn**	**23 06 54.8**	**-2.6**
PB14	**IPOC Station P**	**6.03**	**10**	*e*P	**Pn**	**23 06 55.0**	**-2.4**
H03N1	**Juan Fernandez**	**6.83**	**243**	Pn	**Pn**	**23 07 04.1**	**-3.8**
	baz=116,slow=19,SNR=8084						
H03N1				T	T	23 13 58.7	
	baz=72,slow=72,SNR=7581						
H03N3	**Juan Fernandez**	**6.85**	**243**	Pn	**Pn**	**23 07 04.8**	**-3.3**
	baz=116,slow=19,SNR=7075						
H03N3				T	T	23 13 58.3	
	baz=72,slow=72,SNR=5649						
H03N2	**Juan Fernandez**	**6.85**	**244**	Pn	**Pn**	**23 07 04.8**	**-3.3**
	baz=116,slow=19,SNR=6636						
H03N2				T	T	23 14 00.5	
	baz=72,slow=72,SNR=4726						
VA04	**Juan Fernndez**	**6.85**	**242**	⇑*i*P	**Pn**	**23 07 04.6**	**-3.8**
VA04				*e*S	Sn	23 08 15.9	-10
VA04	**Juan Fernndez**	**6.85**	**242**	Pn	**Pn**	**23 07 04.3**	**-4.1**
H03S3	**Juan Fernandez**	**6.99**	**241**	Pn	**Pn**	**23 07 05.4**	**-4.7**
	baz=39,slow=18,SNR=689						
H03S1	**Juan Fernandez**	**6.99**	**240**	Pn	Pn	23 07 05.2	-4.9
	baz=39,slow=18,SNR=671						
H03S2	**Juan Fernandez**	**7.01**	**241**	Pn	Pn	23 07 05.4	-4.9
	baz=39,slow=18,SNR=918						
PB10	**IPOC Station P**	**7.10**	**8**	Pn	**Pn**	**23 07 09.2**	**-2.7**
PB10	**IPOC Station P**	**7.10**	**8**	*e*P	**Pn**	**23 07 09.0**	**-2.9**
PB15	**IPOC Station P**	**7.59**	**15**		**Pn**	**23 07 17.0**	**-1.8**
PB15	**IPOC Station P**	**7.59**	**15**	*e*P	**Pn**	**23 07 17.0**	**-1.8**
PB05	**IPOC Station P**	**7.80**	**10**	*e*P	**Pn**	**23 07 18.0**	**-3.6**
PB06	**IPOC Station P**	**8.05**	**13**		**Pn**	**23 07 22.7**	**-2.4**
PB06	**IPOC Station P**	**8.05**	**13**	*e*P	**Pn**	**23 07 23.0**	**-2.1**
LC01	**Cunco**	**8.30**	**182**	Pn	**Pn**	**23 07 26.3**	**-2.0**
LVC	**Limon Verde**	**8.30**	**17**	Pn	**Pn**	**23 07 26.4**	**-2.2**
	comp=Z,3.0nm,0.3s,baz=181,slow=7.6,SNR=25						
LVC				Sn	**Sn**	**23 09 02.4**	**+0.7**
	comp=Z,19nm,0.3s,baz=141,slow=20,SNR=1.1						
LVC				Lg	Lg	23 09 32.4	
	comp=Z,36nm,0.3s,baz=356,slow=15,SNR=6.3						
LVC				LR	LR	23 10 45.8	
	comp=Z,37μm,21.6s,baz=211,slow=39						
LVC	**Limon Verde**	**8.30**	**17**	*e*P	**Pn**	**23 07 30.7**	**+2.1**
LVC	**Limon Verde**	**8.30**	**17**	Pn	**Pn**	**23 07 26.3**	**-2.4**
PB04	**IPOC Station P**	**8.32**	**9**		**Pn**	**23 07 27.6**	**-1.2**
PB03	**IPOC Station P**	**8.66**	**11**	*e*P	**Pn**	**23 07 31.0**	**-2.4**
PB07	**IPOC Station P**	**8.95**	**10**		**Pn**	**23 07 35.1**	**-2.3**
PB09	**IPOC Station P**	**9.00**	**14**		**Pn**	**23 07 36.4**	**-1.7**
PB09	**IPOC Station P**	**9.00**	**14**	*e*P	**Pn**	**23 07 36.0**	**-2.1**
LR03	**Panguipulli**	**9.05**	**184**		**Pn**	**23 07 36.5**	**-2.0**
PB01	**IPOC Station P**	**9.69**	**12**	*e*P	**Pn**	**23 07 43.0**	**-4.5**
PLCA	**Paso Flores**	**10.16**	**175**	Pn	**Pn**	**23 07 53.8**	**-0.1**
	comp=Z,3.1nm,0.3s,baz=345,slow=11,SNR=47						
PLCA				Lg	Lg	23 10 28.1	
	comp=Z,1.8nm,0.3s,baz=323,slow=10,SNR=3.1						
PLCA				LR	LR	23 12 15.6	
	comp=Z,22μm,19.6s,baz=352,slow=40						
PLCA	**Paso Flores**	**10.16**	**175**	*e*P	**Pn**	**23 07 53.4**	**-0.5**
PLCA	**Paso Flores**	**10.16**	**175**		**Pn**	**23 07 53.5**	**-0.4**
LL04	**Puerto Octay**	**10.32**	**183**	Pn	**Pn**	**23 07 53.9**	**-2.1**
LL03	**Petrohue**	**10.55**	**183**		**Pn**	**23 07 57.4**	**-1.8**
PB08	**IPOC Station P**	**10.63**	**13**		**Pn**	**23 07 59.3**	**-1.3**
TRQA	**Tornquist**	**10.89**	**136**	P	**Pn**	**23 08 04.5**	**+0.6**
TRQA	**Tornquist**	**10.89**	**136**	*e*P	**Pn**	**23 08 02.7**	**-1.1**
TRQA	**Tornquist**	**10.89**	**136**		**Pn**	**23 08 04.5**	**+0.6**
LL05	**Los Muermos**	**10.90**	**187**		**Pn**	**23 08 01.5**	**-2.5**
LL01	**San Ignacio de**	**11.79**	**183**		**Pn**	**23 08 13.6**	**-2.4**
PB12	**IPOC Station P**	**11.97**	**6**	Pn	**Pn**	**23 08 17.0**	**-1.7**
LPA	**La Plata**	**12.28**	**114**	SN	**Sn**	**23 10 40.6**	**+1.7**
LPA				sS		23 10 57.6	
LPA				SSS	SSS	23 11 11.3	
LPA				SS	**SbSb**	**23 11 44.3**	**+13**
LPA				SCS	**ScS**	**23 21 12.0**	**+0.6**
LPA				PKIKP	**PKiKP**	**23 22 05.4**	**+3.5**
LPA				SKIKP		23 25 26.0	
LPA				PKIKS		23 25 31.9	
LPA				SKIKS		23 33 30.6	
LL07	**Hotel Espejo d**	**12.32**	**186**	Pn	**Pn**	**23 08 23.0**	**-0.2**
PB16	**IPOC Station P**	**12.34**	**9**		**Pn**	**23 08 22.8**	**-1.5**
LL02	**Futaleuf**	**12.59**	**181**		**Pn**	**23 08 26.4**	**-0.5**
GO07	**Milladeo Hill,**	**12.62**	**187**		**Pn**	**23 08 24.5**	**-2.8**
ITQB	**Itaqui**	**12.99**	**90**	*e*P	**Pn**	**23 08 32.2**	**-0.3**
ITQB	**Itaqui**	**12.99**	**90**	Pn	**Pn**	**23 08 32.5**	**-0.1**
CPUP	**Villa Florida**	**13.25**	**75**	Pn	**Pn**	**23 08 35.0**	**-1.1**
	comp=Z,3.2nm,0.3s,baz=252,slow=12,SNR=28						
CPUP				Sn	**Sn**	**23 11 01.0**	**-1.5**
	comp=Z,3.5nm,0.3s,baz=234,slow=12,SNR=3.1						
CPUP				Lg	Lg	23 12 08.5	
	comp=Z,7.9nm,0.3s,baz=347,slow=20,SNR=1.7						
CPUP				LR	LR	23 14 07.5	
	comp=Z,26μm,21.6s,baz=254,slow=40						
CPUP	**Villa Florida**	**13.25**	**75**	P	**Pn**	**23 08 35.7**	**-0.4**
CPUP	**Villa Florida**	**13.25**	**75**	*e*P	**Pn**	**23 08 36.0**	**-0.1**
CPUP	**Villa Florida**	**13.25**	**75**	Pn	**Pn**	**23 08 35.6**	**-0.4**
LPAZ	**La Paz**	**14.58**	**13**	*e*P	**Pn**	**23 08 54.3**	**-0.6**
COYC	**Coyhaique**	**14.97**	**181**	Pn	**Pn**	**23 08 59.0**	**-0.4**
PLTB	**Pedras Altas**	**15.45**	**99**	*e*P	**Pn**	**23 09 03.5**	**-2.3**
PLTB	**Pedras Altas**	**15.45**	**99**	Pn	**Pn**	**23 09 03.7**	**-2.2**
CPSB	**Cacapava Do Su**	**15.66**	**94**	*e*P	**Pn**	**23 09 07.3**	**-1.2**
ITAB	**Concordia**	**17.37**	**84**	*e*P	**Pn**	**23 09 30.5**	**+0.3**
ITAB	**Concordia**	**17.37**	**84**	Pn	**Pn**	**23 09 30.0**	**-0.2**
SIV	**San Ignacio**	**17.43**	**36**	P	**Pn**	**23 09 30.1**	**-1.0**
	comp=Z,3.8nm,0.3s,baz=216,slow=12,SNR=102						
AQDB	**Aquidauana**	**17.51**	**59**	*e*P	**Pn**	**23 09 31.4**	**-0.5**
AQDB	**Aquidauana**	**17.51**	**59**	Pn	**Pn**	**23 09 31.2**	**-0.8**
CNLB	**Canela**	**18.02**	**91**	*e*P	**Pn**	**23 09 37.1**	**-1.3**
PTGB	**Pitanga**	**18.26**	**76**	*e*P	**P**	**23 09 41.9**	**+0.6**
TRCB	**Terra Rica**	**18.62**	**70**	*e*P	**P**	**23 09 45.1**	**-0.1**
TRCB	**Terra Rica**	**18.62**	**70**	P	**Pn**	**23 09 46.0**	**+0.3**
TRCB				IAmb	IAmb	23 10 01.9	
	comp=Z,328nm,0.9s						
PTLB	**Pontes e Lacer**	**18.91**	**40**	*e*P	**P**	**23 09 47.5**	**-0.8**
PTLB	**Pontes e Lacer**	**18.91**	**40**		**Pn**	**23 09 49.1**	**-0.1**
PTLB				IAmb	IAmb	23 10 02.7	
	comp=Z,289nm,1.1s						
NNA	**Nana**	**19.13**	**344**	P	**P**	**23 09 49.6**	**-1.3**
	comp=Z,0.8nm,0.3s,baz=171,slow=12,SNR=1.9						
NNA				LR	LR	23 15 44.2	
	comp=Z,7μm,19.4s,baz=171,slow=32						
TER01	**Tubaro-SC**	**19.65**	**90**	*e*P	**P**	**23 09 56.5**	**0.0**
PP1B	**Ponte de Pedra**	**19.97**	**53**	*e*P	**P**	**23 10 00.1**	**+0.1**
PCMB	**Pacaembu**	**20.31**	**69**	*e*P	**P**	**23 10 03.3**	**-0.4**
VILB	**Vilhena**	**20.46**	**33**	*e*P	**P**	**23 10 05.4**	**0.0**
VILB	**Vilhena**	**20.46**	**33**	P	**P**	**23 10 05.6**	**+0.2**
VILB				IAmb	IAmb	23 10 23.4	
	comp=Z,353nm,0.8s						
TIJ01	**Guaruva-PR**	**20.62**	**81**	*e*P	**P**	**23 10 05.4**	**-1.8**
SALV	**Santo Antonio**	**20.63**	**48**	*e*P	**P**	**23 10 07.5**	**+0.3**
GO09	**Cerro Castillo**	**20.68**	**181**	P	**P**	**23 10 08.6**	**+1.1**
MG05	**Puerto Natales**	**21.09**	**182**	P	**P**	**23 10 11.8**	**0.0**
MG05				IAmb	IAmb	23 10 25.1	
	comp=Z,361nm,1.1s						
ETMB	**Extrema**	**21.26**	**15**	P	**P**	**23 10 14.5**	**+0.5**
ETMB				IAmb	IAmb	23 10 32.3	
	comp=Z,176nm,0.8s						
ITRB	**Iturama**	**22.03**	**65**	*e*P	**P**	**23 10 22.1**	**-0.2**
MG02	**Cerro Sombrero**	**22.25**	**176**	P	**P**	**23 10 25.1**	**+0.8**
MG04	**Isla Riesco**	**22.26**	**180**	P	**P**	**23 10 24.6**	**+0.3**
PET01	**Itanhaem-SP**	**22.46**	**80**	*e*P	**P**	**23 10 28.1**	**+1.3**
GO10	**Punta Arenas**	**22.56**	**179**	P	**P**	**23 10 27.7**	**+0.1**
CZSB	**Cruzeiro do Su**	**22.76**	**357**	*e*P	**P**	**23 10 31.9**	**+1.9**
CZSB	**Cruzeiro do Su**	**22.76**	**357**	P	**P**	**23 10 30.5**	**+0.4**
SAML	**Samuel**	**22.91**	**22**	P	**P**	**23 10 31.2**	**-0.5**
SAML				pmax	pmax		
	comp=Z,5μm,1.5s						
SAML	**Samuel**	**22.91**	**22**	P	**P**	**23 10 31.2**	**-0.5**
VAO	**Valinhos**	**23.22**	**77**	*e*P	**P**	**23 10 34.3**	**-0.5**
EFI	**East Falkland**	**23.33**	**158**	⇑*i*P	**P**	**23 10 35.3**	**-0.3**
EFI				pmax	pmax		
	comp=Z,145nm,1.1s						

EFI				MLR	MLR		
	comp=Z,12µm,16.0s						
EFI	East Falkland	23.33	158	P	P	23 10 35.2	-0.4
EFI				IAmb	IAmb	23 10 51.0	
	comp=Z,232nm,0.8s						
EFI	East Falkland	23.33	158	IAMs_20	IAMs_20	23 20 29.9	
	comp=Z,10µm,18.0s						
ARAG	Araguaiana, MT	23.40	55	eP	P	23 10 35.8	-0.8
ATAH	Atahualpa	24.18	343	P	P	23 10 44.9	+0.4
	comp=Z,7.6nm,0.6s,baz=162,slow=5.9,SNR=11						
ATAH				S	S	23 15 13.3	+12
	comp=Z,5.9nm,0.7s,baz=230,slow=18,SNR=1.3						
ATAH				LR	LR	23 18 50.0	
	comp=Z,5µm,18.9s,baz=173,slow=33						
PARB	Paraibuna	24.22	79	eP	P	23 10 44.5	+0.1
USHA	Ushuaia	24.34	176	P	P	23 10 45.6	+0.5
	comp=Z,118nm,0.8s,baz=357,slow=6.7,SNR=47						
USHA				LR	LR	23 21 04.9	
	comp=Z,14µm,18.0s,baz=357,slow=39						
CLDB	Colider	24.50	40	eP	P	23 10 46.2	-0.7
MG01	Puerto William	24.50	174	P	P	23 10 46.9	+0.4
MG01				IAmb	IAmb	23 11 14.4	
	comp=Z,188nm,0.8s						
IPMB	Ipameri, GO	24.67	65	eP	P	23 10 47.7	-0.8
MAN01	Angra dos Reis	25.80	79	eP	P	23 10 58.5	-0.3
BSCB	Bom Sucesso	25.91	75	eP	P	23 10 57.9	-2.0
BDFB	Brasilia	26.22	61	P	P	23 11 02.9	+0.2
	comp=Z,117nm,0.7s,baz=232,slow=9.4,SNR=154						
BDFB				LR	LR	23 22 32.3	
	comp=Z,29µm,18.4s,baz=232,slow=39						
BDFB	Brasilia	26.22	61	P	P	23 11 02.5	-0.2
BDFB				IAmb	IAmb	23 11 15.5	
	comp=Z,247nm,1.0s						
TBTG	Tabatinga, AM	26.30	4	eP	P	23 11 05.4	+2.2
TBTG	Tabatinga, AM	26.30	4	eP	P	23 11 04.9	+1.6
TBTG	Tabatinga, AM	26.30	4	P	P	23 11 03.3	+0.1
SNDB	Serra Nova Dou	26.39	50	eP	P	23 11 04.3	+0.2
VAS01	Vassouras-RJ	26.48	79	eP	P	23 11 03.8	-1.0
DUB01	Friburgo-RJ	27.46	79	eP	P	23 11 13.8	+0.1
NPGB	Novo Progresso	27.93	36	eP	P	23 11 17.1	-0.8
DIAM	Diamantina, MG	28.13	71	eP	P	23 11 21.0	+1.1
CAM01	Campos-RJ	28.18	79	eP	P	23 11 20.1	+0.1
PEXB	Peixe	28.34	55	eP	P	23 11 21.9	+0.3
MC01	Montes Claros	28.76	68	eP	P	23 11 25.2	-0.2
MACA	Manacapuru-AM	29.16	23	eP	P	23 11 29.0	+0.2
MACA	Manacapuru-AM	29.16	23	P	P	23 11 28.4	-0.4
MACA				IAmb	IAmb	23 11 43.2	
	comp=Z,99nm,0.9s						
JANB	Januaria	29.41	64	eP	P	23 11 31.1	0.0
ALF01	Guarapari-ES	29.47	78	eP	P	23 11 31.7	+0.1
SJMB	Sao Joao De Ma	29.97	74	eP	P	23 11 35.9	-0.1
ITTB	Itaituba	30.07	33	eP	P	23 11 36.2	-0.7
BSFB	Barra de Sao F	30.19	74	eP	P	23 11 38.3	+0.3
RIB01	Linhares ES	30.34	76	eP	P	23 11 41.0	+1.7
SDBA	SAO DESIDERIO	30.59	60	eP	P	23 11 42.5	+0.8
PTLC	Puerto Leguiza	30.74	354	eP	P	23 11 41.5	-1.3
SMTB	Santa Maria do	31.13	51	eP	P	23 11 46.6	+0.3
NAN01	Guarapari, ES	31.27	73	eP	P	23 11 47.8	+0.3
OTAV	Otavalo	31.34	347	ceP	P	23 11 51.2	+2.6
OTAV				pmax	pmax		
	comp=Z,63nm,2.5s						
OTAV	Otavalo	31.34	347	eP	P	23 11 51.1	+2.6
OTAV	Otavalo	31.34	347	eP	P	23 11 50.8	+2.2
OTAV	Otavalo	31.34	347	P	P	23 11 48.2	-0.3
CUSE	Cuicocha Este	31.39	347	eP	P	23 11 53.5	+4.5
PAC1	Pacto, Paraso	31.43	346	eP	P	23 11 51.1	+2.0
PAC1				eP	pP	23 11 53.5	-3.4
PTGA	Pitinga	31.68	23	P	P	23 11 51.1	+0.1
PTGA				IAmb	IAmb	23 12 05.2	
	comp=Z,61nm,1.0s						
PTGA				IAMs_20	IAMs_20	23 26 43.7	
	comp=Z,12µm,19.0s						
TULM	Tulcn-Chalpat	31.68	348	eP	P	23 11 53.5	+1.9
PRPB	Parauapebas	31.76	45	eP	P	23 11 52.0	+0.2
GCUF	Volcan Galeras	32.10	349	eP	P	23 11 58.3	+3.0
GUA01	Guaratinga, BA	32.17	72	eP	P	23 11 55.9	+0.5
MACC	Macarena, Meta	32.62	356	eP	P	23 11 58.3	-1.0
GARC	Garzon, Huila	32.80	353	eP	P	23 12 03.1	+2.0
SOTA	Rioblanco	32.88	351	eP	P	23 12 05.5	+3.3
MALB	Monte Alegre	32.96	33	eP	P	23 12 02.1	-0.2
PCON	Cinco Dias	33.05	351	eP	P	23 12 00.7	-2.9
CMC01	Camacan, BA	33.05	70	eP	P	23 12 03.3	+0.2
RPN	Rapa Nui	33.13	266	IAMs_20	IAMs_20	23 21 33.2	
	comp=Z,7µm,20.0s						
BETC	Betania	33.28	353	eP	P	23 12 08.0	+2.8
NBIT	Itapeh - BA	33.35	69	eP	P	23 12 06.3	+0.5
GDU01	Guandu, BA	33.91	67	eP	P	23 12 09.9	-0.8
PRAC	Prado	34.25	354	eP	P	23 12 12.8	-0.8
BOAV	Boa Vista	34.45	20	eP	P	23 12 15.2	-0.1
BOAV	Boa Vista	34.45	20	P	P	23 12 15.2	-0.1
BOAV				IAmb	IAmb	23 12 17.4	
	comp=Z,67nm,0.8s						
ORTC	Ortega, Tolima	34.48	354	eP	P	23 12 17.6	+2.0
PMSA	Palmer Station	34.53	174	P	P	23 12 15.8	+0.3
	comp=Z,33nm,0.9s,baz=8.7,slow=7.1,SNR=10						
PMSA				LR	LR	23 26 13.3	
	comp=Z,9µm,19.7s,baz=345,slow=36						
PMSA	Palmer Station	34.53	174	eP	P	23 12 17.3	+1.9
PMSA	Palmer Station	34.53	174	P	P	23 12 16.1	+0.6
PMSA				IAmb	IAmb	23 12 27.1	
	comp=Z,73nm,1.1s						
PMSA	Palmer Station	34.53	174	IAMs_20	IAMs_20	23 26 01.9	
	comp=Z,9µm,19.0s						
HOPE	Hope Point	34.54	143	eP	P	23 12 16.6	+1.0
HOPE	Hope Point	34.54	143	P	P	23 12 16.2	+0.6
HOPE				IAmb	IAmb	23 12 30.2	
	comp=Z,77nm,1.1s						
HOPE	Hope Point	34.54	143	IAMs_20	IAMs_20	23 25 56.1	
	comp=Z,9µm,20.0s						
PTGC	Puerto Gaitan,	34.59	359	eP	P	23 12 15.2	-1.3
PAYG	Puerto Ayora	34.64	326	IAMs_20	IAMs_20	23 23 24.0	
	comp=Z,8µm,18.0s						
NBPN	Ponto Novo - B	35.14	63	eP	P	23 12 21.2	-0.1
ROSC	El Rosal	35.32	355	P	P	23 12 23.5	+0.4
	comp=Z,34nm,0.7s,baz=210,slow=22,SNR=3.0						
ROSC	El Rosal	35.32	355	eP	P	23 12 27.2	+4.0
MCPB	Macapa, AP	35.33	35	eP	P	23 12 23.0	+0.1
TMAB	Tom-Au,PA,Br	35.81	43	eP	P	23 12 28.1	+1.1
NORC	Norcasia	36.08	354	eP	P	23 12 29.6	+0.3
SPBC	San Pablo de B	36.11	356	eP	P	23 12 27.2	-2.4
CBOC	Ciudad Bolivar	36.49	353	eP	P	23 12 34.4	+1.5
HELC	Santa Helena	36.76	353	eP	P	23 12 36.8	+1.3
TAMC	Tame, Arauca	36.81	360	eP	P	23 12 36.8	+1.3
NBLA	Lagarto - SE	36.92	65	eP	P	23 12 35.8	-0.7
BARC	Barichara	36.99	357	eP	P	23 12 36.8	-0.5
ELOV	Elorza	37.42	3	eP	P	23 12 39.2	-1.5
PAMC	Pamplona, Colo	37.72	358	eP	P	23 12 39.2	-4.6
ZARC	Zaragoza, Cauc	37.99	355	eP	P	23 12 41.6	-3.9
ZARC	Zaragoza, Cauc	37.99	355	P	P	23 12 45.4	-0.1
ZARC				IAmb	IAmb	23 12 48.7	
	comp=Z,39nm,0.7s						
UREC	San Jos de Ur	38.30	354	eP	P	23 12 48.8	+0.7
NBMA	Muriti-CE	38.45	60	eP	P	23 12 50.0	+0.5
NBPS	Pedro II - PI	38.55	53	eP	P	23 12 49.7	-0.7
OCAC	Ocana	38.63	357	eP	P	23 12 48.8	-2.3
OCAC	Ocana	38.63	357	P	P	23 12 50.0	-1.1
SOCV	Socops	38.65	1	eP	P	23 12 48.8	-2.3
NBAN	Anadia - AL	38.90	65	eP	P	23 12 53.2	0.0
NBPB	Pedra_Branca-C	39.06	57	eP	P	23 12 54.7	+0.1
SMLC	San Martn de	39.23	356	eP	P	23 12 51.2	-4.7
SDV	Santo Domingo	39.25	2	P	P	23 12 56.2	-0.1
	comp=Z,54nm,0.8s,baz=197,slow=6.0,SNR=16						
SDV	Santo Domingo	39.25	2	eP	P	23 12 56.5	+0.2
SDV	Santo Domingo	39.25	2	P	P	23 12 55.9	-0.4
SDV	Santo Domingo	39.25	2	IAMs_20	IAMs_20	23 31 15.6	
	comp=Z,8µm,18.0s						
MOTC	Monteria, Cord	39.33	354	eP	P	23 12 58.5	+1.7
MOTC	Monteria, Cord	39.33	354	P	P	23 12 57.3	+0.5
BAUV	El Baul	39.45	6	eP	P	23 12 56.9	-0.9
BAUV	El Baul	39.45	6	eS	S	23 18 53.1	-5.0
NBLV	Livramento - P	39.84	62	eP	P	23 13 00.1	-1.1
NBMO	Morrinhos-CE	40.30	54	eP	P	23 13 05.8	+0.9
BCIP	Isla Barro Col	40.31	347	P	P	23 13 05.5	+0.6
BCIP				pmax	pmax		
	comp=Z,40nm,0.8s						
BCIP				MLR	MLR		
	comp=Z,2µm,21.0s						
BCIP	Isla Barro Col	40.31	347	P	P	23 13 05.5	+0.6
SJCC	San Jacinto, C	40.39	355	eP	P	23 13 05.7	0.0
SJCC	San Jacinto, C	40.39	355	P	P	23 13 06.3	+0.7
SJCC				IAmb	IAmb	23 13 20.3	
	comp=Z,113nm,1.1s						
NBRF	Rio Formoso -	40.40	65	eP	P	23 13 04.6	-1.1
NBPA	Parau_RN	40.74	60	eP	P	23 13 09.1	+0.5
NBCL	Cascavel-CE	40.90	57	eP	P	23 13 09.9	+0.1
PCRV	Puerto La Cruz	41.07	10	P	P	23 13 11.6	+0.3
	comp=Z,16nm,0.8s,baz=274,slow=2.2,SNR=2.7						
SRBA	San Rafael, Bu	41.17	342	P	P	23 13 12.8	+0.6
SRBA				IAmb	IAmb	23 13 24.2	
	comp=Z,135nm,1.8s						
NBPV	Pedro Velho	41.68	62	eP	P	23 13 16.8	+0.5
RIMA	Rio Macho	41.81	342	P	P	23 13 18.9	+1.4
CVTR	Volcan Turrial	42.03	342	P	P	23 13 19.1	-0.4
URIC	Uribia, Colomb	42.04	359	eP	P	23 13 12.9	-6.2
URIC	Uribia, Colomb	42.04	359	P	P	23 13 17.4	-1.7
TRN	Trinidad (W)	42.15	15	eP	P	23 13 20.1	+0.1
HATO	Hato, Curacao	42.59	4	IAMs_20	IAMs_20	23 32 59.3	
	comp=Z,5µm,20.0s						
JTS	Las Juntas de	42.62	340	ceP	P	23 13 25.4	+1.5
JTS				pmax	pmax		
	comp=Z,9.0nm,0.8s						
JTS				MLR	MLR		
	comp=Z,3µm,20.0s						
TOSP	Speyside	42.98	16	eP	P	23 13 26.4	-0.3
TOSP	Speyside	42.98	16	P	P	23 13 26.7	0.0
GRGR	Grenville	43.53	14	eP	P	23 13 31.1	-0.1
GRGR	Grenville	43.53	14	P	P	23 13 30.8	-0.5
GRGR				IAMs_20	IAMs_20	23 35 07.0	
	comp=Z,5µm,19.0s						
GCMP	Grenada, Carri	43.92	14	eP	P	23 13 32.4	-2.0
SVB	Belmont	44.72	14	eP	P	23 13 40.7	-0.1
BBGH	Gun Hill	44.99	17	eP	P	23 13 53.9	+11
BBGH	Gun Hill	44.99	17	IAMs_20	IAMs_20	23 34 51.8	
	comp=Z,6µm,22.0s						
MCLT	Moule a Chique	45.22	15	eP	P	23 13 42.5	-2.2
MCLT	Moule a Chique	45.22	15	P	P	23 13 43.5	-1.1
MCLT				IAmb	IAmb	23 13 44.7	
	comp=Z,99nm,0.8s						
SLBI	Saint Lucia, B	45.51	15	eP	P	23 13 46.0	-1.0
MPOM	Morne Pois Mar	45.95	15	eP	P	23 13 49.0	-1.4
MPOM	Morne Pois Mar	45.95	15	P	P	23 13 49.8	-0.6
BIM	Bigot	45.97	14	eP	P	23 13 49.9	-0.8
BIM	Bigot	45.97	14	P	P	23 13 50.3	-0.4
FDF	Fort de France	46.16	14	P	P	23 13 51.1	-1.1
FDF				pmax	pmax		
	comp=Z,97nm,0.7s						
FDF				MLR	MLR		
	comp=Z,6µm,20.0s						
FDF	Fort de France	46.16	14	eP	P	23 13 51.1	-1.1
FDF	Fort de France	46.16	14	P	P	23 13 51.1	-1.1
FDF				IAMs_20	IAMs_20	23 36 48.7	
	comp=Z,6µm,20.0s						
SVN	Savane Anatole	46.27	14	IAMs_20	IAMs_20	23 36 51.3	
	comp=Z,6µm,20.0s						
MDN	Morne-Daniel	46.68	14	eP	P	23 13 56.1	-0.1
DSLB	Salisbury	46.79	14	eP	P	23 13 55.5	-1.6
TDBA	Terre de Bas,	47.15	13	eP	P	23 14 00.3	+0.4
MAGL	Barre de l'ile	47.32	14	eP	P	23 14 00.6	-0.5
CBE	Ff, Capester	47.37	13	eP	P	23 14 04.5	+2.9
MLPR	Magueyes Islan	48.47	6	P	P	23 14 10.0	-0.1
CRPR	Cabo Rojo, PR	48.50	6	P	P	23 14 10.3	0.0
SEUS	St. Eustatius	48.51	11	eP	P	23 14 07.8	-2.6
SEUS	St. Eustatius	48.51	11	IAMs_20	IAMs_20	23 36 05.7	
	comp=Z,5µm,22.0s						
OBIP	Obispado Ponce	48.58	6	P	P	23 14 10.7	-0.2
SABA	Saba	48.59	11	eP	P	23 14 10.6	-0.5
SABA	Saba	48.59	11	P	P	23 14 10.7	-0.3
CELP	Cerrillos	48.62	6	P	P	23 14 11.3	0.0
PDPR	Patillas Dam,	48.62	7	P	P	23 14 10.4	-0.8
SJG	San Juan	48.70	7	P	P	23 14 11.5	-0.3
SJG				pmax	pmax		
	comp=Z,118nm,1.0s						
SJG				MLR	MLR		
	comp=Z,3µm,20.0s						
SJG	San Juan	48.70	7	P	P	23 14 11.5	-0.3
SJG				IAMs_20	IAMs_20	23 36 27.3	
	comp=Z,3µm,20.0s						
PRSN	Puerto Rico Se	48.71	6	P	P	23 14 11.8	0.0
SDD	Santo Domingo	48.78	2	P	P	23 14 12.9	+0.4
AOPR	Arecibo Observ	48.87	6	P	P	23 14 12.9	-0.3
CBYP	Canovanas	48.89	7	P	P	23 14 13.1	-0.3
ANWB	Willy Bob	48.89	12	eP	P	23 14 11.4	-1.9
ANWB	Willy Bob	48.89	12	IAMs_20	IAMs_20	23 36 27.9	
	comp=Z,5µm,20.0s						
GCPR	Guaynabo City	48.90	7	P	P	23 14 12.5	-0.9
CUPR	Culebra, Puert	48.99	8	P	P	23 14 13.7	-0.3
CUPR				IAmb	IAmb	23 14 14.4	
	comp=Z,35nm,0.7s						
SMRT	St. Maarten	49.04	11	eP	P	23 14 12.3	-2.2
SMRT	St. Maarten	49.04	11	P	P	23 14 13.4	-1.1
SMRT				IAmb	IAmb	23 14 14.6	
	comp=Z,55nm,0.9s						
SMRT				IAMs_20	IAMs_20	23 36 10.8	
	comp=Z,4µm,21.0s						
DR12	Loma Pena Alta	49.13	3	P	P	23 14 14.8	-0.4
SDDR	Presa de Saban	49.28	0	IAMs_20	IAMs_20	23 36 50.3	
	comp=Z,5µm,19.0s						
SC01	Santiago de lo	49.73	1	P	P	23 14 19.9	+0.2
GTBY	Guantanamo Bay	50.33	356	P	P	23 14 24.6	+0.3
GTBY				IAmb	IAmb	23 14 27.0	
	comp=Z,53nm,0.8s						
GRTK	Grand Turk	51.80	1	IAMs_20	IAMs_20	23 38 29.0	
	comp=Z,4µm,20.0s						
VNA3	Neumayer Olymp	52.39	159	P	P	23 14 40.1	+0.9
VNA1	Neumayer--Stat	52.68	158	P	P	23 14 41.9	+0.6
VNA2	Neumayer--Watz	53.02	158	P	P	23 14 44.3	+0.4
	baz=292,slow=8.2						
SOR	Soroa	54.19	347	P	P	23 14 52.8	-0.1
SOR	Soroa	54.19	347	P	P	23 14 52.8	-0.1
SNAA	Sanae	54.61	159	P	P	23 14 55.4	-0.1
SNAA	Sanae	54.61	159	P	P	23 14 55.5	-0.1
	comp=Z,55nm,0.8s,baz=284,slow=6.5,SNR=5.3						
SNAA	Sanae	54.61	159	P	P	23 14 55.6	0.0
SNAA				pmax	pmax		
	comp=Z,104nm,0.9s						
SNAA				MLR	MLR		
	comp=Z,4µm,22.0s						
SNAA	Sanae	54.61	159	P	P	23 14 55.6	0.0
SNAA				IAMs_20	IAMs_20	23 35 42.7	
	comp=Z,4µm,22.0s						
ASCN	Ascension	57.88	80	P	P	23 15 20.3	+0.7
QSPA	South Pole Qui	59.64	180	P	P	23 15 31.4	+0.1
	comp=Z,80nm,0.9s,baz=164,slow=1.2,SNR=57						
QSPA	South Pole Qui	59.64	180	P	P	23 15 31.6	+0.3
656A	Willston	60.52	349	P	P	23 15 37.4	-0.1
SHEL	Horse Pasture	61.46	92	P	P	23 15 45.7	+1.3
SHEL				pmax	pmax		
	comp=Z,136nm,0.9s						
SHEL	Horse Pasture	61.46	92	P	P	23 15 45.6	+1.3
553A	Crawfordville	61.66	347	P	P	23 15 46.0	+0.9
H06S1	SOCORRO T	61.95	317	T	T	00 23 07.8	
	SNR=20						
H06E1	SOCORRO T-PHAS	61.97	317	T	T	00 23 05.8	
	SNR=34						
352A	Blakely	63.01	347	P	P	23 15 54.2	+0.1
352A				IAmb	IAmb	23 16 03.6	
	comp=Z,74nm,1.1s						
BRAL	Brewton	63.14	345	S	S	23 24 24.9	+0.3
	baz=165						
154A	Montrose	63.79	349	P	P	23 15 59.2	-0.1
154A				IAmb	IAmb	23 16 22.4	
	comp=Z,68nm,0.9s						
346A	Big Creek Wild	63.92	343	P	P	23 16 00.5	+0.3
346A				IAmb	IAmb	23 16 17.8	
	comp=Z,58nm,0.8s						
833A	Chaparral WMA,	64.30	333	P	P	23 16 05.1	+2.3
	baz=154,SNR=14						
833A				S	S	23 24 40.3	+1.1
	baz=154						
HKT	Hockley	64.47	337	deP	P	23 16 05.2	+1.5
HKT				pmax	pmax		
	comp=Z,47nm,2.3s						
HKT				MLR	MLR		
	comp=Z,923nm,18.0s						
GOGA	Godfrey	64.63	349	P	P	23 16 04.5	-0.3
GOGA				pmax	pmax		
	comp=Z,26nm,1.1s						
GOGA				MLR	MLR		
	comp=Z,1µm,20.0s						
GOGA	Godfrey	64.63	349	P	P	23 16 04.6	-0.3
	baz=169						
GOGA				S	S	23 24 41.2	-1.8
	baz=169						
GOGA	Godfrey	64.63	349	P	P	23 16 04.5	-0.3
SACV	Santiago Islan	64.67	53	IAMs_20	IAMs_20	23 45 12.8	
	comp=Z,3µm,18.0s						
Z51A	Franklin	64.84	347	P	P	23 16 06.3	+0.1
VBMS	Vicksburg	64.98	342	P	P	23 16 08.9	+1.8
	baz=162						
JSC	Jenkinsville	65.16	351	P	P	23 16 08.2	0.0
JSC				pmax	pmax		
	comp=Z,27nm,1.1s						
JSC	Jenkinsville	65.16	351	P	P	23 16 08.2	0.0
SLBS	Sierra La Lagu	65.30	321	P	P	23 16 09.3	-0.2
Z47A	Carrollton	65.32	345	P	P	23 16 09.5	+0.2
Z47A				IAmb	IAmb	23 16 19.0	
	comp=Z,36nm,0.8s						
BIRD	Birdtown, Kers	65.42	352	P	P	23 16 10.0	+0.1
BIRD				IAmb	IAmb	23 16 19.6	
	comp=Z,61nm,1.5s						
NATX	Nacogdoches	65.75	339	P	P	23 16 14.3	+2.1
	baz=158						
NATX	Nacogdoches	65.75	339	P	P	23 16 13.5	+1.4
HPIG		65.82	327	P	P	23 16 13.4	+0.4
HPIG				IAmb	IAmb	23 16 26.9	
	comp=Z,30nm,1.0s						
435B	Jarrell	65.84	336	P	P	23 16 14.5	+1.7
	baz=156						
W57A	Gilead	65.86	352	P	P	23 16 13.1	+0.3
X51A	Calhoun	66.00	348	P	P	23 16 13.6	0.0
X51A				IAmb	IAmb	23 16 25.8	
	comp=Z,62nm,0.9s						
KMSC	Kings Mountain	66.02	351	P	P	23 16 13.9	+0.1
	baz=171						
FPAL	Fort Paine	66.11	347	P	P	23 16 14.7	+0.2
JCT	Junction City	66.39	334	P	P	23 16 17.2	+0.9
JCT				pmax	pmax		
	comp=Z,96nm,1.3s						
JCT				MLR	MLR		
	comp=Z,700nm,20.0s						
JCT	Junction City	66.39	334	P	P	23 16 17.9	+1.6
	baz=154,SNR=11						
JCT				S	S	23 25 06.0	+1.3
	baz=154						
JCT	Junction City	66.39	334	P	P	23 16 17.2	+0.9
JCT				IAmb	IAmb	23 16 28.7	
	comp=Z,96nm,1.3s						
Z41A	Richland Creek	66.59	341	P	P	23 16 19.7	+2.3
	baz=160						
CPCT	Cooper Cave	66.80	349	P	P	23 16 18.7	-0.1
CPCT				IAmb	IAmb	23 16 28.5	
	comp=Z,60nm,1.2s						
TKL	Tuckaleechee C	66.88	349	P	P	23 16 19.0	-0.3
TKL				pmax	pmax		
	comp=Z,55nm,1.2s						
TKL	Tuckaleechee C	66.88	349	P	P	23 16 19.0	-0.3
TKL				IAmb	IAmb	23 16 28.7	
	comp=Z,54nm,1.1s						
WHTX	Lake Whitney,	66.89	336	S	S	23 25 11.2	+0.5
	baz=156						
TXAR	Lajitas Array	66.96	330	P	P	23 16 20.8	+0.8
	comp=Z,11nm,0.9s,baz=150,slow=8.1,SNR=38						
TXAR				LR	LR	23 41 30.6	
	comp=Z,3µm,18.1s,baz=0.0,slow=32						
TXAR				PKP2bc		23 44 55.6	
	comp=Z,0.5nm,0.7s,baz=320,slow=4.9,SNR=4.2						
TXAR	Lajitas Array	66.96	330	P	P	23 16 20.5	+0.5
TX32	Lajitas Array	66.96	330	P	P	23 16 20.8	+0.7
PLAL	Pickwick Lake	67.04	345	P	P	23 16 20.2	-0.1
PLAL				IAmb	IAmb	23 16 29.7	
	comp=Z,41nm,1.1s						
U56A	King	67.09	352	P	P	23 16 20.7	+0.1
TAOE	Nuku Hiva Isla	67.10	273	eS	S	23 25 20.7	+6.4
	comp=Z,1µm,26.0s						
TAOE	Nuku Hiva Isla	67.10	273	eLR	LR	23 36 41.9	
	comp=Z,3µm,22.9s,baz=132						
T59A	Double "B" Far	67.43	355	P	P	23 16 23.2	+0.4
T59A				IAmb	IAmb	23 16 33.1	
	comp=Z,91nm,1.2s						
VNDA	Vanda	67.52	191	P	P	23 16 23.6	+0.6
	comp=Z,5.2nm,0.8s,baz=143,slow=5.3,SNR=24						
VNDA				LR	LR	23 43 13.6	
	comp=Z,764nm,19.6s,baz=138,slow=34						
VNDA				PKPPKP	P'P'df	23 44 44.9	-7.5
	comp=Z,2.7nm,0.8s,baz=287,slow=3.1,SNR=12						
VNDA				PKP2bc		23 44 52.7	
	comp=Z,4.2nm,1.0s,baz=288,slow=2.1,SNR=7.7						
VNDA	Vanda	67.52	191	P	P	23 16 23.5	+0.6
T57A	Hurt	67.61	353	P	P	23 16 24.1	+0.2
T57A				IAmb	IAmb	23 16 33.8	
	comp=Z,53nm,1.4s						
TZTN	Tazewell	67.71	350	P	P	23 16 33.5	+9.0
	baz=169						
TZTN	Tazewell	67.71	350	P	P	23 16 24.7	+0.1
TZTN				IAmb	IAmb	23 16 58.2	
	comp=Z,36nm,1.1s						
TZTN				IAMs_20	IAMs_20	23 50 00.7	
	comp=Z,2µm,21.0s						
CLTN	Cedars of Leba	67.75	347	P	P	23 16 25.2	+0.4
CLTN				IAmb	IAmb	23 16 36.4	
	comp=Z,42nm,1.0s						
BLA	Blacksburg	67.95	352	P	P	23 16 26.4	+0.3
BLA				pmax	pmax		
	comp=Z,29nm,1.1s						
BLA				MLR	MLR		
	comp=Z,900nm,19.0s						
BLA	Blacksburg	67.95	352	P	P	23 16 26.8	+0.7
	baz=172						
BLA	Blacksburg	67.95	352	P	P	23 16 26.4	+0.3
MIAR	Mount Ida	68.02	341	P	P	23 16 26.8	+0.3
MIAR				pmax	pmax		
	comp=Z,54nm,1.4s						
MIAR	Mount Ida	68.02	341	P	P	23 16 27.4	+0.9
	baz=160,SNR=10						
MIAR				S	S	23 25 24.9	+0.8
	baz=160						
MIAR	Mount Ida	68.02	341	P	P	23 16 26.8	+0.3
MIAR				IAmb	IAmb	23 16 38.4	
	comp=Z,54nm,1.4s						
WVT	Waverly	68.09	346	P	P	23 16 27.1	+0.2
WVT				pmax	pmax		
	comp=Z,184nm,1.6s						
WVT	Waverly	68.09	346	P	P	23 16 27.3	+0.4
	baz=165						
WVT	Waverly	68.09	346	P	P	23 16 27.1	+0.2
JSRW	J. Sargeant Re	68.18	355	P	P	23 16 28.1	+0.7
W41B	Gary Mavity, V	68.24	342	P	P	23 16 28.5	+0.7
	baz=161,SNR=11						
W41B				S	S	23 25 26.8	+0.1
	baz=161						
ABTX	Abilene, Hawle	68.25	335	P	P	23 16 29.6	+1.6
	baz=154,SNR=13						
ABTX				S	S	23 25 27.9	+0.9
	baz=154						
WHAR	Wooly Hollow	68.36	342	P	P	23 16 29.3	+0.7
WHAR				IAmb	IAmb	23 16 38.6	
	comp=Z,108nm,1.7s						
GNAR	Gosnell	68.42	344	P	P	23 16 29.5	+0.5
R58B	Mineral	68.44	355	P	P	23 16 30.0	+0.9
TBI	Tubuai	68.52	255	eS	S	23 25 37.4	+6.5
	comp=Z,2µm,28.2s						
TBI	Tubuai	68.52	255	eLR	LR	23 37 18.8	
	comp=Z,4µm,25.2s,baz=109						
TBI	Tubuai	68.52	255	eT	T	00 31 02.4	
	comp=Z,66nm,0.2s						
X37A	Clayton	68.59	339	P	P	23 16 30.3	+0.2
X37A				IAmb	IAmb	23 18 09.8	
	comp=Z,61nm,1.4s						
S54A	Dingess, Beckl	68.63	352	P	P	23 16 30.0	-0.4
CBN	Corbin Frederi	68.64	355	P	P	23 16 31.4	+1.1
CBN				IAmb	IAmb	23 16 46.3	
	comp=Z,112nm,1.8s						
W39A	Magazine	68.68	341	P	P	23 16 32.1	+1.4
	baz=160,SNR=40						
W39A				S	S	23 25 33.3	+1.3
	baz=160						
FCAR	Ozark Folk Cen	68.88	342	P	P	23 16 32.0	+0.1
SYO	Syowa Base	68.90	159	⇑iP	P	23 16 31.0	-0.7
SYO	Syowa Base	68.90	159	⇓epP	pP	23 16 38.5	-1.6
SYO	Syowa Base	68.90	159	⇓esP	sP	23 16 40.6	-2.6
R55A	Marlinton	68.97	353	P	P	23 16 33.2	+0.7
R55A				IAmb	IAmb	23 16 42.9	
	comp=Z,70nm,1.2s						
MBO	M'Bour	68.99	58	P	P	23 16 34.1	+1.1
PBMO	Poplar Bluff	69.30	344	P	P	23 16 34.8	+0.4
PBMO				IAmb	IAmb	23 17 28.3	
	comp=Z,68nm,1.1s						
U40A	Yellville	69.51	342	P	P	23 16 36.8	+1.0
	baz=161,SNR=24						
U40A				S	S	23 25 40.6	-1.3
	baz=161						
MEH	Mehetia	69.72	261	eT	T	00 32 34.9	
	comp=Z,77nm,0.3s						

MNTX	Cornudas Mount	69.74	330	P	P	23 16 37.2	-0.2
	baz=150,SNR=16						
MNTX	Cornudas Mount	69.74	330	P	P	23 16 37.2	-0.2
MNTX				IAMs_20	IAMs_20	23 42 41.4	
	comp=Z,4µm,20.0s						
Q54A	Coxs Mills	69.74	352	P	P	23 16 37.3	+0.2
WCI	Wyandotte Cave	69.82	348	P	P	23 16 37.4	-0.3
WCI				pmax	pmax		
	comp=Z,26nm,0.9s						
WCI				MLR	MLR		
	comp=Z,2µm,20.0s						
WCI	Wyandotte Cave	69.82	348	P	P	23 16 37.9	+0.3
	baz=167						
WCI	Wyandotte Cave	69.82	348	P	P	23 16 37.4	-0.3
WCI				IAmb	IAmb	23 16 48.5	
	comp=Z,26nm,0.8s						
WMOK	Wichita Mounta	69.84	336	P	P	23 16 38.2	+0.3
	baz=155,SNR=12						
WMOK				S	S	23 25 46.4	+0.6
	baz=155						
SIUC	Southern Illin	69.91	345	P	P	23 16 38.5	+0.3
SIUC				IAmb	IAmb	23 16 40.3	
	comp=Z,69nm,0.9s						
TUL1	Leonard	69.94	339	P	P	23 16 39.4	+0.9
	baz=158,SNR=20						
P57A	Homestead Farm	69.97	355	P	P	23 16 39.5	+1.0
P57A				IAmb	IAmb	23 16 49.4	
	comp=Z,45nm,1.1s						
P60A	Greenville	70.14	357	P	P	23 16 40.9	+1.4
	baz=176						
P60A	Greenville	70.14	357	P	P	23 16 40.4	+0.8
P60A				IAmb	IAmb	23 17 02.0	
	comp=Z,33nm,1.1s						
WUPA	West Chester U	70.26	357	P	P	23 16 41.4	+1.2
EPT	El Paso	70.30	329	IAMs_20	IAMs_20	23 42 57.1	
	comp=Z,4µm,20.0s						
MCWV	Mont Chateau	70.30	353	P	P	23 16 41.5	+0.9
	baz=173						
MCWV	Mont Chateau	70.30	353	P	P	23 16 41.2	+0.6
MCWV				IAmb	IAmb	23 16 58.7	
	comp=Z,25nm,0.8s						
MCWV				IAMs_20	IAMs_20	23 51 43.6	
	comp=Z,2µm,21.0s						
MVL	Millersville	70.36	356	P	P	23 16 42.0	+1.0
MVL				IAmb	IAmb	23 16 57.1	
	comp=Z,35nm,1.2s						
FVM	French Village	70.45	344	P	P	23 16 41.8	+0.3
FVM				pmax	pmax		
	comp=Z,61nm,0.9s						
FVM	French Village	70.45	344	P	P	23 16 41.8	+0.3
FVM				IAmb	IAmb	23 17 22.7	
	comp=Z,61nm,0.9s						
P52A	Corning	70.54	351	P	P	23 16 42.2	+0.2
	baz=171						
PAGS	Pennsylvania G	70.61	356	P	P	23 16 43.4	+1.0
MSTX	Muleshoe	70.63	333	P	P	23 16 43.8	+0.9
	baz=152,SNR=14						
CCM	Cathedral Cave	70.71	344	P	P	23 16 43.6	+0.5
CCM				pmax	pmax		
	comp=Z,63nm,1.0s						
CCM	Cathedral Cave	70.71	344	P	P	23 16 43.7	+0.6
	baz=162						
CCM				S	S	23 25 55.1	-0.6
	baz=162						
CCM	Cathedral Cave	70.71	344	P	P	23 16 43.5	+0.5
CCM				IAmb	IAmb	23 16 45.4	
	comp=Z,63nm,0.9s						
O56A	Blue Knob Stat	70.79	354	P	P	23 16 44.4	+0.8
	baz=174						
P49A	Miami Univ. Ec	70.82	349	P	P	23 16 43.5	-0.3
	baz=168						
S39A	Bolivar	70.89	342	P	P	23 16 44.6	+0.4
S39A				IAmb	IAmb	23 16 56.0	
	comp=Z,56nm,1.1s						
TIAR	Tiarei	70.95	260	*e*T	T	00 34 07.2	
BRNJ	Basking Ridge	70.96	358	P	P	23 16 45.5	+0.9
BRNJ				IAmb	IAmb	23 17 01.2	
	comp=Z,54nm,1.0s						
O52A	Adamsville	70.98	352	P	P	23 16 45.0	+0.3
AMTX	Amarillo	71.02	334	P	P	23 16 46.5	+1.3
	baz=153						
AMTX	Amarillo	71.02	334	P	P	23 16 45.7	+0.5
SLM	Saint Louis	71.02	345	P	P	23 16 45.1	+0.1
SLM				pmax	pmax		
	comp=Z,62nm,0.9s						
SLM	Saint Louis	71.02	345	P	P	23 16 45.1	+0.1
SLM				IAmb	IAmb	23 16 47.1	
	comp=Z,62nm,0.8s						
O53A	New Philadelph	71.04	352	P	P	23 16 46.4	+1.3
	baz=171						
O53A	New Philadelph	71.04	352	P	P	23 16 45.2	+0.2
SSPA	Standing Stone	71.10	355	P	P	23 16 45.9	+0.5
	baz=174						
SSPA	Standing Stone	71.10	355	P	P	23 16 45.7	+0.3
SSPA				IAmb	IAmb	23 16 55.9	
	comp=Z,83nm,1.4s						
PAE	Paea	71.10	260	*e*T	T	00 34 14.5	
	comp=Z,1.4nm,0.2s						
PPT2	Papeete2	71.13	260	*e*S	S	23 26 08.3	+6.5
	comp=Z,3µm,28.5s						
PPT2	Papeete2	71.13	260	*e*LR	LR	23 38 33.9	
	comp=Z,4µm,23.8s,baz=118						
PPT2	Papeete2	71.13	260	*e*T	T	00 34 14.2	
	comp=Z,4.5nm,0.3s						
PPT	Papeete	71.14	260	LR	LR	23 39 36.8	
	comp=Z,2µm,21.1s,baz=125,slow=29						
ACSO	Alum Creek Sta	71.25	351	P	P	23 16 46.7	+0.4
	baz=170,SNR=5.1						
ACSO	Alum Creek Sta	71.25	351	P	P	23 16 46.5	+0.2
ACSO				IAmb	IAmb	23 16 56.4	
	comp=Z,44nm,0.8s						
N59A	State Game Lan	71.25	357	P	P	23 16 48.1	+1.8
	baz=176,SNR=6.3						
N59A				S	S	23 26 04.0	+2.1
	baz=176						
N59A	State Game Lan	71.25	357	IAMs_20	IAMs_20	23 49 57.8	
	comp=Z,2µm,20.0s						
319A	Douglas	71.25	326	P	P	23 16 47.1	+0.4
319A				IAmb	IAmb	23 17 15.9	
	comp=Z,37nm,1.0s						
P46A	Rosedale	71.34	347	P	P	23 16 46.8	-0.1
P46A				IAmb	IAmb	23 16 48.8	
	comp=Z,51nm,0.8s						
121A	Cookes Peak, D	71.52	328	P	P	23 16 50.4	+2.0
	baz=148,SNR=19						
121A	Cookes Peak, D	71.52	328	P	P	23 16 49.3	+0.9
121A				IAmb	IAmb	23 17 07.2	
	comp=Z,44nm,1.1s						
N54A	Moraine State	71.61	353	P	P	23 16 49.3	+0.8
	baz=173						
M65A	Busby, Falmout	71.79	1	IAMs_20	IAMs_20	23 54 04.5	
	comp=Z,2µm,20.0s						
P43A	Skaggs, Pawnee	71.83	346	P	P	23 16 50.0	+0.2
P43A				IAmb	IAmb	23 16 51.7	
	comp=Z,52nm,0.8s						
KAN16	Harper SW Stat	71.86	338	P	P	23 16 51.2	+1.1
KAN16				IAmb	IAmb	23 16 52.7	
	comp=Z,66nm,0.9s						
KSPA	Keystone Colle	71.89	357	P	P	23 16 51.4	+1.3
KSPA				IAmb	IAmb	23 18 12.0	
	comp=Z,91nm,1.8s						
N49A	Columbus Grove	72.09	350	P	P	23 16 51.5	+0.1
M54A	Oil Creek Stat	72.12	354	P	P	23 16 52.1	+0.5
	baz=173						
BRYW	Bryant College	72.14	0	P	P	23 16 52.7	+1.0
BRYW				IAmb	IAmb	23 17 07.8	
	comp=Z,83nm,1.1s						
Y22D	IRIS PASSCAL I	72.44	330	IAMs_20	IAMs_20	23 44 46.9	
	comp=Z,4µm,19.0s						
L59A	Walton	72.48	357	P	P	23 16 55.0	+1.2
L59A				IAmb	IAmb	23 17 10.3	
	comp=Z,55nm,1.0s						
BINY	Binghamton	72.54	357	P	P	23 16 55.3	+1.2
	baz=176						
BINY	Binghamton	72.54	357	IAMs_20	IAMs_20	23 51 26.9	
	comp=Z,2µm,19.0s						
L56A	Greenwood	72.57	355	P	P	23 16 54.4	+0.1
L56A				IAmb	IAmb	23 17 17.0	
	comp=Z,74nm,1.1s						
WES	Weston	72.61	0	IAMs_20	IAMs_20	23 54 49.1	
	comp=Z,2µm,19.0s						
HDIL	Hopedale	72.66	346	P	P	23 16 54.8	+0.1
	baz=164						
L61B	Northampton	72.68	359	P	P	23 16 55.4	+0.6
	baz=179						
HRV	Adam Dziewonsk	72.73	0	P	P	23 16 56.6	+1.5
HRV				pmax	pmax		
	comp=Z,53nm,1.2s						
HRV				MLR	MLR		
	comp=Z,2µm,19.0s						
HRV	Adam Dziewonsk	72.73	0	P	P	23 16 56.7	+1.5
	baz=180						
HRV	Adam Dziewonsk	72.73	0	P	P	23 16 56.5	+1.5
HRV				IAmb	IAmb	23 17 11.3	
	comp=Z,53nm,1.1s						
HRV	Adam Dziewonsk	72.73	0	IAMs_20	IAMs_20	23 54 26.3	
	comp=Z,2µm,19.0s						
TUC	Tucson	72.74	326	P	P	23 16 56.4	+0.8
TUC				pmax	pmax		
	comp=Z,22nm,1.5s						
TUC				MLR	MLR		
	comp=Z,2µm,19.0s						
TUC	Tucson	72.74	326	P	P	23 16 57.0	+1.5
	baz=146						
TUC	Tucson	72.74	326	P	P	23 16 56.4	+0.8
TUC	Tucson	72.74	326	IAMs_20	IAMs_20	23 44 25.6	
	comp=Z,2µm,19.0s						
ANMO	Albuquerque	72.98	331⇓	*e*P	P	23 16 58.2	+1.1
ANMO				pmax	pmax		
	comp=Z,46nm,2.9s						
ANMO	Albuquerque	72.98	331	P	P	23 16 58.6	+1.5
	baz=149						
ANMO				S	S	23 26 25.0	+2.5
	baz=149						
ANMO	Albuquerque	72.98	331	P	P	23 16 57.8	+0.7
ANMO	Albuquerque	72.98	331	IAMs_20	IAMs_20	23 44 29.3	
	comp=Z,3µm,20.0s						
KSU1	Kansas State U	73.14	340	P	P	23 16 57.6	-0.1
KSU1				IAmb	IAmb	23 17 06.2	
	comp=Z,31nm,0.8s						
MMNY	Mt. Morris Dam	73.19	355	P	P	23 16 58.7	+0.8
MMNY				IAmb	IAmb	23 17 13.3	
	comp=Z,50nm,1.0s						
LIC	Lamto	73.36	72	*e*P	P	23 16 59.5	-0.1
	comp=Z,727nm,1.2s						
214A	Organ Pipe Nat	73.45	324	P	P	23 17 01.6	+1.8
	baz=144,SNR=9.7						
TIC	Toumodi	73.60	72	*e*P	P	23 17 00.9	-0.1
ACCN	Adirondack Com	73.63	358	P	P	23 17 01.2	+0.8
ACCN				IAmb	IAmb	23 17 16.4	
	comp=Z,88nm,1.5s						
KIC	Kosan Boka	73.67	72	*e*P	P	23 17 01.3	-0.1
	comp=Z,595nm,1.0s						
DBIC	Dimbokro	73.75	72	P	P	23 17 02.0	+0.2
	comp=Z,115nm,0.8s,baz=233,slow=5.5,SNR=126						
DBIC				LR	LR	23 47 07.6	
	comp=Z,7µm,19.4s,baz=242,slow=34						
DBIC	Dimbokro	73.75	72	P	P	23 17 02.1	+0.2
DBIC				pmax	pmax		
	comp=Z,350nm,1.0s						
DBIC	Dimbokro	73.75	72	P	P	23 17 02.1	+0.2
CBKS	Cedar Bluff	73.86	337	P	P	23 17 01.8	-0.1
CBKS				pmax	pmax		
	comp=Z,55nm,1.1s						
CBKS				MLR	MLR		
	comp=Z,700nm,19.0s						
CBKS	Cedar Bluff	73.86	337	P	P	23 17 02.9	+1.0
	baz=155,SNR=6.2						
CBKS	Cedar Bluff	73.86	337	P	P	23 17 01.8	-0.1
CBKS				IAmb	IAmb	23 17 13.1	
	comp=Z,55nm,1.1s						
T25A	Trinidad	74.05	333	P	P	23 17 05.3	+2.0
	baz=151,SNR=20						
T25A	Trinidad	74.05	333	P	P	23 17 04.0	+0.6
T25A				IAmb	IAmb	23 17 19.5	
	comp=Z,46nm,1.0s						
I63A	Otisfield	74.28	1	P	P	23 17 05.9	+1.7
I63A				IAmb	IAmb	23 17 21.9	
	comp=Z,70nm,1.1s						
LBNH	Lisbon	74.46	360	P	P	23 17 07.1	+1.8
	baz=180						
W18A	Petrified Fore	74.57	328	P	P	23 17 08.2	+1.9
	baz=147,SNR=6.4						
W18A	Petrified Fore	74.57	328	P	P	23 17 07.3	+0.9
W18A				IAmb	IAmb	23 17 19.5	
	comp=Z,47nm,1.2s						
SCIA	State Center	74.84	343	P	P	23 17 08.6	+1.1
	baz=161,SNR=5.6						
SCIA				S	S	23 26 41.8	-0.8
	baz=161						
LONY	Lake Ozonia	74.89	358	P	P	23 17 08.9	+1.1
	baz=178						
LONY	Lake Ozonia	74.89	358	P	P	23 17 08.8	+1.1
LONY				IAmb	IAmb	23 17 24.0	
	comp=Z,39nm,1.0s						
SDCO	Great Sand Dun	75.00	333	P	P	23 17 10.4	+1.5
	baz=150,SNR=21						
SDCO				S	S	23 26 47.5	+2.2
	baz=150						
SDCO	Great Sand Dun	75.00	333	P	P	23 17 10.1	+1.1
SDCO				IAmb	IAmb	23 17 19.8	
	comp=Z,114nm,1.9s						
SDCO				IAMs_20	IAMs_20	23 46 49.8	
	comp=Z,2µm,19.0s						
KSCO	Kaye Shedlock'	75.03	335	P	P	23 17 10.8	+1.9
	baz=153						
JFWS	Jewell Farm	75.12	346	P	P	23 17 09.5	+0.3
	baz=164						
JFWS	Jewell Farm	75.12	346	IAMs_20	IAMs_20	23 55 47.6	
	comp=Z,2µm,21.0s						
HAL	Halifax	75.22	6	P	P	23 17 11.1	+1.5
HAL				pmax	pmax		
	comp=Z,51nm,0.8s						
HAL	Halifax	75.22	6	P	P	23 17 11.1	+1.5
HAL				IAmb	IAmb	23 17 13.0	
	comp=Z,51nm,0.8s						
PLVO	Plevna	75.43	356	P	P	23 17 11.3	+0.4
PLVO				IAmb	IAmb	23 17 26.4	
	comp=Z,45nm,1.1s						
G62A	West of Eustis	75.45	1	P	P	23 17 12.2	+1.2
G62A				IAmb	IAmb	23 17 22.8	
	comp=Z,57nm,1.0s						
GGN	Saint George	75.47	3	P	P	23 17 12.4	+1.4
GGN				IAmb	IAmb	23 17 27.2	
	comp=Z,80nm,1.3s						
G65A	Princeton	75.51	3	P	P	23 17 13.0	+1.7
G65A				IAmb	IAmb	23 18 10.5	
	comp=Z,184nm,1.9s						
PKME	Peaks-Kenny Pk	75.52	2	P	P	23 17 13.1	+1.8
	baz=182						
S22A	4UR Ranch, Cre	75.53	332	P	P	23 17 13.5	+1.5
	baz=149,SNR=17						
WUAZ	Wupatki	75.65	327	P	P	23 17 14.5	+2.0
	baz=146,SNR=22						
WUAZ				S	S	23 26 56.8	+4.6
	baz=146						
WUAZ	Wupatki	75.65	327	IAMs_20	IAMs_20	23 45 11.7	
	comp=Z,2µm,22.0s						
IKP	In-Ko-Pah, Jac	75.70	322	P	P	23 17 14.4	+1.6
	baz=142						
BGNE	Belgrade	75.72	340	P	P	23 17 13.5	+0.8
	baz=157,SNR=5.7						
SWSC	Sam W. Stewart	75.77	323	P	P	23 17 14.3	+1.2
	baz=142						
MVCO	Mesa Verde	75.78	330	P	P	23 17 14.9	+1.5
	baz=148,SNR=25						
MVCO				S	S	23 26 56.9	+3.1
	baz=148						
MVCO	Mesa Verde	75.78	330	P	P	23 17 14.5	+1.1
MVCO				IAMs_20	IAMs_20	23 46 29.2	
	comp=Z,2µm,20.0s						
Q24A	Divide	75.92	334	P	P	23 17 15.8	+1.5
	baz=151,SNR=25						
GLMI	Grayling	75.98	350	IAMs_20	IAMs_20	23 55 38.7	
	comp=Z,2µm,20.0s						
MONP2	Monument Peak	76.06	322	P	P	23 17 16.4	+1.4
	baz=142						
F62A	Pittston Farm,	76.13	1	P	P	23 17 16.1	+1.2
F64A	Sherman	76.14	2	P	P	23 17 16.2	+1.3
F64A				IAmb	IAmb	23 17 42.0	
	comp=Z,178nm,1.9s						
BC3	Big Chuckawall	76.15	323	P	P	23 17 16.9	+1.5
	baz=142,SNR=11						
SUR	Sutherland	76.16	119	P	P	23 17 16.6	+0.8
	comp=Z,127nm,0.8s,baz=233,slow=5.8,SNR=49						
SUR	Sutherland	76.16	119	P	P	23 17 16.8	+0.9
SUR				IAMs_20	IAMs_20	23 48 44.3	
	comp=Z,3µm,20.0s						
GBN	Guysborough	76.19	7	P	P	23 17 16.8	+1.7
GBN				IAmb	IAmb	23 17 30.9	
	comp=Z,65nm,1.1s						
MAW	Mawson	76.34	164	P	P	23 17 16.0	+0.1
	comp=Z,100nm,0.8s,baz=220,slow=6.9,SNR=112						
MAW				PKPPKP	P'P'df	23 44 34.8	-2.0
	comp=Z,1.5nm,0.7s,baz=298,slow=15,SNR=4.2						
MAW				LR	LR	23 49 44.0	
	comp=Z,4µm,21.8s,baz=230,slow=35						
MAW	Mawson	76.34	164	P	P	23 17 15.8	-0.1
IRM	Iron Mountain	76.39	324	P	P	23 17 18.1	+1.4
	baz=143,SNR=7.7						
109C	Camp Elliot, M	76.41	322	IAMs_20	IAMs_20	23 45 44.8	
	comp=Z,1µm,20.0s						
TRQ	Mont Tremblant	76.49	358	P	P	23 17 17.5	+0.5
TRQ				IAmb	IAmb	23 17 32.8	
	comp=Z,46nm,1.0s						
PFO	Pinyon Flats O	76.63	323	*ce*P	P	23 17 20.5	+2.3
PFO	Pinyon Flats O	76.63	323	P	P	23 17 19.9	+1.7
	baz=142,SNR=12						
PFO	Pinyon Flats O	76.63	323	IAMs_20	IAMs_20	23 44 25.5	
	comp=Z,2µm,20.0s						
BELC	Belle Mtn. Jos	76.70	323	P	P	23 17 20.0	+1.5
	baz=142,SNR=7.4						
ISCO	Idaho Springs	76.83	334	P	P	23 17 20.4	+1.1
ISCO				pmax	pmax		
	comp=Z,26nm,0.9s						
ISCO				MLR	MLR		
	comp=Z,2µm,20.0s						
ISCO	Idaho Springs	76.83	334	P	P	23 17 21.0	+1.7
	baz=151,SNR=11						
ISCO	Idaho Springs	76.83	334	P	P	23 17 20.4	+1.1
ISCO				IAMs_20	IAMs_20	23 47 38.1	
	comp=Z,1µm,20.0s						
PQI	Presque Isle	76.96	3	P	P	23 17 20.6	+1.1
PQI				IAmb	IAmb	23 17 35.5	
	comp=Z,72nm,1.3s						
MURC	Murrieta	77.01	322	P	P	23 17 21.9	+1.7
	baz=141						
GMRC	Granite Mounta	77.14	324	P	P	23 17 22.8	+1.7
	baz=142,SNR=16						
D62A	Allapoint, All	77.34	2	P	P	23 17 22.7	+1.1
D62A				IAmb	IAmb	23 17 33.1	
	comp=Z,71nm,1.0s						
ECSD	EROS Data Cent	77.42	342	P	P	23 17 22.5	+0.3
	baz=158,SNR=52						
HEC	Hector,Ludlow	77.52	324	P	P	23 17 25.3	+2.3
	baz=142,SNR=11						
BATG	Bathurst New B	77.66	4	P	P	23 17 24.5	+1.0
BATG				IAmb	IAmb	23 17 34.5	
	comp=Z,61nm,1.0s						
LCMT	Little Creek M	77.74	327	P	P	23 17 25.6	+1.3
BFSC	Mount Baldy Ra	77.75	322	P	P	23 17 25.7	+1.3
	baz=141,SNR=13						
TUQ	Turquoise Moun	77.79	324	P	P	23 17 26.5	+1.9
	baz=142,SNR=13						
WIN	Windhoek	77.80	109	P	P	23 17 26.2	+0.9
WIN				pmax	pmax		
	comp=Z,75nm,1.0s						
WIN	Windhoek	77.80	109	P	P	23 17 26.2	+0.9
WIN				IAmb	IAmb	23 17 27.2	
	comp=Z,75nm,1.0s						
E43A	Lone Tree Farm	77.86	349	P	P	23 17 24.9	+0.4
E43A				IAmb	IAmb	23 17 41.2	
	comp=Z,54nm,1.2s						
N23A	Red Feather La	77.90	334	P	P	23 17 27.1	+1.8
	baz=150,SNR=7.2						
MTPU	Mount Pierson	78.09	328	P	P	23 17 27.6	+1.1
GSC	Goldstone, Bar	78.13	324	P	P	23 17 28.2	+1.7
	baz=142,SNR=13						
O20A	White River Ci	78.14	332	P	P	23 17 28.3	+1.7
	baz=148						
SHPR	Sheep Range	78.25	325	P	P	23 17 27.9	+0.7
SHOC	Shoshone, Teco	78.33	324	P	P	23 17 29.2	+1.8
	baz=142						
EDW2	Edwards Air Fo	78.42	323	P	P	23 17 29.1	+1.1
	baz=141,SNR=19						
VLDQ	Val d'Or	78.51	356	P	P	23 17 29.0	+0.9
SCZ2	Santa Cruz Isl	78.62	321	P	P	23 17 30.8	+1.6
	baz=139						
P17A	Butcher Ranch,	78.63	330	P	P	23 17 30.0	+0.8
QSM	Queen of Sheba	78.68	324	P	P	23 17 30.3	+0.9
LRMC	Laurel Mtn Rad	78.72	323	P	P	23 17 31.1	+1.3
	baz=141,SNR=15						
SUSD	Miller	78.73	340	S	S	23 27 25.4	+0.3
	baz=156						
KOWA	Kowa	78.89	66	P	P	23 17 31.3	+0.3
FURC	Furnace Creek,	79.07	324	P	P	23 17 33.2	+1.8
	baz=142,SNR=17						
MPMC	Manual Prospec	79.07	324	P	P	23 17 32.3	+0.6
	baz=141,SNR=15						
RWWY	Rawlins	79.07	334	IAMs_20	IAMs_20	23 48 50.5	
	comp=Z,2µm,20.0s						
ISA	Isabella, Lake	79.27	323	P	P	23 17 34.2	+1.5
ISA				pmax	pmax		
	comp=Z,29nm,1.0s						
ISA	Isabella, Lake	79.27	323	P	P	23 17 34.4	+1.7
	baz=140,SNR=23						
ISA				S	S	23 27 35.2	+3.8
	baz=140						
ISA	Isabella, Lake	79.27	323	P	P	23 17 34.2	+1.5
PKM	Mcpherson Peak	79.39	321	P	P	23 17 34.8	+1.3
	baz=139,SNR=14						
K22A	Casper	79.64	335	P	P	23 17 36.3	+1.6
	baz=150,SNR=12						
K22A				S	S	23 27 38.1	+3.0
	baz=150						
K22A	Casper	79.64	335	P	P	23 17 36.0	+1.3
K22A				IAmb	IAmb	23 17 47.6	
	comp=Z,60nm,1.1s						
CWC	Cottonwood Cre	79.66	324	P	P	23 17 35.8	+0.9
	baz=141						
VES	Vestal, Richgr	79.72	323	P	P	23 17 36.4	+1.3
	baz=140,SNR=14						
TSUM	Tsumeb	79.80	106	P	P	23 17 36.7	+0.5
	comp=Z,48nm,0.9s,baz=229,slow=5.8,SNR=27						
TSUM	Tsumeb	79.80	106	P	P	23 17 37.3	+1.2
TSUM				IAmb	IAmb	23 17 51.1	
	comp=Z,71nm,0.8s						
TSUM	Tsumeb	79.80	106	IAMs_20	IAMs_20	23 48 39.6	
	comp=Z,3µm,20.0s						
SMMC	Simmler	79.81	322	P	P	23 17 37.6	+2.0
	baz=139,SNR=11						
R11A	Troy Canyon, C	79.92	326	P	P	23 17 37.9	+1.6
	baz=143,SNR=28						
R11A				S	S	23 27 41.5	+3.1
	baz=143						
RSSD	Black Hills	80.04	337	P	P	23 17 37.6	+0.7
RSSD	Black Hills	80.04	337	P	P	23 17 38.2	+1.3
	baz=152						
RSSD	Black Hills	80.04	337	P	P	23 17 37.6	+0.7
DUG	Dugway, Tooele	80.13	329	P	P	23 17 38.5	+1.2
DUG				pmax	pmax		
	comp=Z,22nm,0.9s						
DUG				MLR	MLR		
	comp=Z,3µm,19.0s						
DUG	Dugway, Tooele	80.13	329	P	P	23 17 38.7	+1.3
	baz=145,SNR=23						
DUG	Dugway, Tooele	80.13	329	P	P	23 17 38.5	+1.2
DUG				IAMs_20	IAMs_20	23 49 44.4	
	comp=Z,3µm,19.0s						
EYMN	Ely	80.19	347	P	P	23 17 38.0	+0.7
	baz=163,SNR=5.5						
TIN	Tinemaha, Big	80.21	324	P	P	23 17 39.8	+1.9
	baz=141,SNR=6.2						
DRLN	Deer Lake	80.47	9	P	P	23 17 39.8	+1.0
DRLN				IAmb	IAmb	23 17 54.5	
	comp=Z,63nm,1.0s						
HWUT	Hardware Ranch	80.75	331	IAMs_20	IAMs_20	23 50 01.9	
	comp=Z,3µm,19.0s						
BW06	Boulder Array	80.90	333	P	P	23 17 41.8	+0.3
	baz=148,SNR=7.6						
BW06				S	S	23 27 49.0	+0.5
	baz=148						
BW06	Boulder Array	80.90	333	IAMs_20	IAMs_20	23 49 59.9	
	comp=Z,2µm,20.0s						
PD31	Pinedale Array	80.90	333	P	P	23 17 42.0	+0.5
PDAR	Pinedale Array	80.90	333	P	P	23 17 42.0	+0.5
	comp=Z,7.4nm,0.7s,baz=138,slow=7.2,SNR=23						
PDAR	Pinedale Array	80.90	333	P	P	23 17 41.5	0.0
MLAC	Mammoth, Mammo	80.96	324	P	P	23 17 43.7	+1.7
	baz=140						
NVAR	Mina Array Bea	81.31	325	P	P	23 17 44.7	+0.9
	comp=Z,11nm,0.8s,baz=156,slow=6.1,SNR=52						
NVAR	Mina Array Bea	81.31	325	P	P	23 17 44.3	+0.4
BOSA	Boshof	81.33	118	P	P	23 17 44.7	+0.4
	comp=Z,58nm,0.8s,baz=237,slow=4.4,SNR=71						
BOSA				LR	LR	23 49 42.9	
	comp=Z,3µm,19.9s,baz=245,slow=33						
BOSA	Boshof	81.33	118	P	P	23 17 44.7	+0.4
BOSA				pmax	pmax		
	comp=Z,71nm,0.9s						

BOSA	Boshof	81.33	118	P	P	23 17 44.7	+0.4
BOSA				IAmb	IAmb	23 17 46.2	
	comp=Z,71nm,0.9s						
PMOZ	Porto Moniz, M	81.40	44	eLR	LR	23 44 57.5	
	comp=Z,2µm,18.0s						
AGMN	Agassiz Nation	81.48	344	P	P	23 17 44.1	0.0
	baz=159,SNR=31						
AGMN	Agassiz Nation	81.48	344	IAMs_20	IAMs_20	23 59 07.8	
	comp=Z,1µm,20.0s						
AHID	Auburn Hatcher	81.52	332	IAMs_20	IAMs_20	23 50 20.2	
	comp=Z,2µm,20.0s						
RYN	Ryan	81.57	325	P	P	23 17 45.7	+0.6
ELK	Elko	81.66	328	P	P	23 17 46.2	+0.5
ELK				pmax	pmax		
	comp=Z,27nm,0.9s						
ELK				MLR	MLR		
	comp=Z,2µm,20.0s						
ELK	Elko	81.66	328	P	P	23 17 46.2	+0.5
ELK				IAMs_20	IAMs_20	23 49 18.9	
	comp=Z,2µm,20.0s						
ECR	Eagle Creek	81.87	332	P	P	23 17 47.0	+0.4
REDW	Red Top Meadow	81.91	332	IAMs_20	IAMs_20	23 50 18.7	
	comp=Z,2µm,21.0s						
SNOW	Snow King Moun	81.96	332	IAMs_20	IAMs_20	23 50 21.8	
	comp=Z,2µm,21.0s						
LOHW	Long Hollow	82.02	333	IAMs_20	IAMs_20	23 50 35.7	
	comp=Z,2µm,20.0s						
MDND	Maddock	82.03	341	P	P	23 17 47.3	+0.2
	baz=156,SNR=20						
MOOW	Moose Ponds	82.19	332	IAMs_20	IAMs_20	23 50 41.2	
	comp=Z,2µm,20.0s						
FLWY	Flagg Ranch	82.45	333	IAMs_20	IAMs_20	23 50 51.1	
	comp=Z,2µm,21.0s						
VCNR	Virginia City	82.65	324	P	P	23 17 51.8	+1.0
TORD	Torodi Ar. Bea	82.70	70	P	P	23 17 51.1	-0.3
	comp=Z,38nm,0.8s,baz=257,slow=3.4,SNR=216						
TORD				LR	LR	23 52 51.7	
	comp=Z,7µm,19.1s,baz=240,slow=34						
TORD	Torodi Ar. Bea	82.70	70	P	P	23 17 51.5	+0.1
LKWY	Lake	82.74	333	IAMs_20	IAMs_20	23 53 48.7	
	comp=Z,2µm,18.0s						
RLMT	Red Lodge	82.78	334	P	P	23 17 52.0	+0.7
	baz=148,SNR=8.9						
RLMT	Red Lodge	82.78	334	IAMs_20	IAMs_20	23 52 14.7	
	comp=Z,2µm,21.0s						
LAO	LASA Array	83.03	337	P	P	23 17 53.3	+0.8
	baz=151,SNR=5.2						
ULM	Lac du Bonnet	83.31	345	P	P	23 17 53.9	+0.2
	comp=Z,43nm,0.8s,baz=146,slow=3.3,SNR=48						
LBTB	Lobatse	83.40	115	P	P	23 17 55.4	+0.3
	comp=Z,70nm,0.8s,baz=242,slow=5.0,SNR=52						
LBTB	Lobatse	83.40	115	P	P	23 17 55.6	+0.5
LBTB				pmax	pmax		
	comp=Z,103nm,1.0s						
LBTB	Lobatse	83.40	115	P	P	23 17 55.6	+0.5
CASY	Casey	83.43	181	P	P	23 17 54.5	+0.2
CASY	Casey	83.43	181	IAMs_20	IAMs_20	23 57 36.4	
	comp=Z,3µm,20.0s						
HLID	Hailey	83.56	330	P	P	23 17 56.3	+0.9
	baz=144,SNR=42						
HLID	Hailey	83.56	330	IAMs_20	IAMs_20	23 50 37.2	
	comp=Z,2µm,21.0s						
BCYI	Bear Canyon	83.74	331	P	P	23 17 57.5	+1.2
DGMT	Dagmar	83.94	339	P	P	23 17 57.6	+0.6
	baz=152,SNR=21						
MFID	Camas Ranch	84.06	329	IAMs_20	IAMs_20	23 51 39.3	
	comp=Z,3µm,19.0s						
BOZ	Bozeman (W)	84.08	333	P	P	23 17 58.5	+0.5
	baz=146						
BOZ	Bozeman (W)	84.08	333	IAMs_20	IAMs_20	23 51 55.2	
	comp=Z,1µm,20.0s						
HOPS	Hopland Field	84.19	322	IAMs_20	IAMs_20	23 47 55.5	
	comp=Z,2µm,21.0s						
O03E	Paynes Creek	84.49	324	P	P	23 18 00.5	+0.4
	baz=138						
WVOR	Wild Horse Val	84.56	327	IAMs_20	IAMs_20	23 52 14.7	
	comp=Z,2µm,19.0s						
LRM	Limekiln Ridge	84.59	333	P	P	23 18 01.5	+0.8
O02D	Mt. Diablo Mer	84.91	323	P	P	23 18 02.9	+0.7
	baz=138						
SCHQ	Schefferville	85.17	3	P	P	23 18 03.6	+0.6
	comp=Z,31nm,1.0s,baz=174,slow=5.5,SNR=13						
SCHQ				LR	LR	00 00 20.2	
	comp=Z,438nm,18.1s,baz=190,slow=39						
SCHQ	Schefferville	85.17	3	P	P	23 18 03.5	+0.5
PLWZ	Palliser	85.39	224	P	P	23 18 05.8	+0.9
EGMT	Eagleton	85.41	335	P	P	23 18 05.0	+0.4
	baz=148						
EGMT	Eagleton	85.41	335	IAMs_20	IAMs_20	00 01 58.5	
	comp=Z,1µm,19.0s						
N02D	Trinity Center	85.45	324	P	P	23 18 05.4	+0.5
	baz=138,SNR=7.7						
PLID	Pearl Lake	85.46	330	IAMs_20	IAMs_20	23 52 48.4	
	comp=Z,2µm,20.0s						
MQZ	McQueen’s Vall	85.59	221	IAMs_20	IAMs_20	23 48 36.6	
	comp=Z,2µm,18.0s						
M04C	Macdoel	85.62	325	P	P	23 18 06.6	+0.8
	baz=139,SNR=17						
M02C	Callahan	85.84	324	P	P	23 18 07.7	+0.9
	baz=138,SNR=7.4						
BMO	Blue Mountains	85.84	329	IAMs_20	IAMs_20	23 53 22.6	
	comp=Z,2µm,18.0s						
MSO	Missoula	86.01	332	P	P	23 18 08.6	+1.0
	baz=145						
MSO	Missoula	86.01	332	IAMs_20	IAMs_20	23 53 29.1	
	comp=Z,2µm,19.0s						
BKZ	Black Stump Fm	86.08	226	P	P	23 18 09.2	+0.9
BKZ				IAmb	IAmb	23 19 07.1	
	comp=Z,92nm,1.8s						
L04D	Klamath Falls	86.17	325	P	P	23 18 08.9	+0.4
	baz=138,SNR=7.6						
URZ	Urewera	86.23	227	IAMs_20	IAMs_20	23 46 50.8	
	comp=Z,3µm,22.0s						
I07A	Izee	86.24	328	P	P	23 18 09.6	+0.8
J05D	Fort Rock, OR	86.45	326	P	P	23 18 10.9	+1.1
	baz=139,SNR=11						
J05D				S	S	23 28 47.1	+2.8
	baz=139						
RPZ	Rata Peaks	86.48	220	P	P	23 18 11.1	+1.0
THZ	Tophouse	86.66	223	P	P	23 18 11.6	+0.5
THZ				IAmb	IAmb	23 18 13.3	
	comp=Z,46nm,1.0s						
L02E	Cave Junction	86.78	324	P	P	23 18 12.4	+1.0
	baz=137,SNR=7.9						
L02E				S	S	23 28 48.4	+1.1
	baz=137						
J04D	Umpqua Nationa	86.84	326	P	P	23 18 13.0	+1.1
	baz=138,SNR=5.7						
JTMT	Jette	86.89	333	P	P	23 18 12.2	+0.3
JTMT				IAmb	IAmb	23 18 15.4	
	comp=Z,20nm,0.7s						
K02D	Willamette Mer	87.20	324	P	P	23 18 14.8	+1.3
	baz=137,SNR=14						
K02D				S	S	23 28 52.0	+0.5
	baz=137						
I05D	Terrebonne, OR	87.29	327	P	P	23 18 15.2	+1.4
	baz=139,SNR=11						
I04A	Tendick Farm,	87.40	326	P	P	23 18 14.9	+0.5
	baz=138,SNR=6.3						
I03D	Drain, OR	87.78	325	P	P	23 18 17.2	+1.1
	baz=138						
G05D	Wamic, OR	87.96	327	P	P	23 18 18.5	+1.5
	baz=139,SNR=7.9						
HAWA	Hanford	88.02	329	P	P	23 18 17.5	+0.3
HAWA				IAMs_20	IAMs_20	23 53 54.3	
	comp=Z,2µm,20.0s						
RAO	Raoul Island	88.03	237	IAMs_20	IAMs_20	23 47 19.0	
	comp=Z,2µm,22.0s						
H04D	Lebanon	88.09	326	P	P	23 18 18.2	+0.6
	baz=138						
COR	Corvallis	88.41	326	P	P	23 18 19.9	+0.9
COR				pmax	pmax		
	comp=Z,34nm,1.0s						
COR				MLR	MLR		
	comp=Z,900nm,19.0s						
COR	Corvallis	88.41	326	P	P	23 18 19.9	+0.9
COR				IAmb	IAmb	23 18 22.2	
	comp=Z,34nm,1.0s						
NEW	Newport	88.45	332	P	P	23 18 19.0	-0.3
	baz=142						
NEW	Newport	88.45	332	IAMs_20	IAMs_20	23 54 37.7	
	comp=Z,3µm,19.0s						
F05D	White Salmon	88.51	328	P	P	23 18 20.3	+0.8
	baz=139						
FFC	Flin Flon	88.90	343	P	P	23 18 21.4	+0.3
FFC				pmax	pmax		
	comp=Z,17nm,1.0s						
FFC	Flin Flon	88.90	343	P	P	23 18 21.4	+0.3
FFC	Flin Flon	88.90	343	IAMs_20	IAMs_20	00 03 02.0	
	comp=Z,2µm,22.0s						
MORF	Marmelete	89.59	45	eP	P	23 18 27.1	+2.2
MORF				IAMs_20	IAMs_20	23 59 05.5	
	comp=Z,4µm,18.9s						
MORF	Marmelete	89.59	45	eP	P	23 18 27.0	+2.2
PTEO	Sao Teotonio	89.69	45	eP	P	23 18 27.1	+1.8
	comp=Z,100nm,1.4s						
PBDV	Barranco-do-Ve	89.99	46	eP	P	23 18 28.1	+1.4
	comp=Z,107nm,1.6s						
PNCL	Nicolau / Gran	90.17	45	eP	P	23 18 28.9	+1.4
LIS	Lisbon	90.19	44	eP	P	23 18 29.6	+2.0
LIS				IAMs_20	IAMs_20	23 58 58.3	
	comp=Z,3µm,13.3s						
LIS	Lisbon	90.19	44	eP	P	23 18 29.5	+2.0
MESJ	Messejana	90.19	45	eP	P	23 18 29.9	+2.3
MESJ				IAMs_20	IAMs_20	23 59 48.8	
	comp=Z,3µm,14.4s						
MESJ	Messejana	90.19	45	eP	P	23 18 29.9	+2.3
PVAQ	Vaqueiros	90.22	46	eS	S	23 29 19.7	-0.3
PVAQ	Vaqueiros	90.22	46	eLQ	LQ	23 44 57.8	
PVAQ				eLR	LR	23 50 05.8	
	comp=Z,4µm,18.0s						
OUZ	Omahuta	90.32	228	IAMs_20	IAMs_20	23 49 54.9	
	comp=Z,2µm,20.0s						
LSZ	Lusaka	90.51	108	P	P	23 18 30.5	+0.6
	comp=Z,13nm,0.9s,baz=227,slow=2.6,SNR=17						
LSZ	Lusaka	90.51	108	P	P	23 18 31.5	+1.6
LSZ				pmax	pmax		
	comp=Z,38nm,1.0s						
LSZ				MLR	MLR		
	comp=Z,3µm,19.0s						
LSZ	Lusaka	90.51	108	P	P	23 18 31.5	+1.6
LSZ				IAmb	IAmb	23 18 46.3	
	comp=Z,38nm,1.0s						
LSZ	Lusaka	90.51	108	IAMs_20	IAMs_20	23 56 05.3	
	comp=Z,3µm,19.0s						
B05A	Bryant	90.58	329	P	P	23 18 29.2	+0.1
	baz=138						
NLWA	Neilton Lookou	90.74	327	IAMs_20	IAMs_20	23 53 27.1	
	comp=Z,2µm,22.0s						
FCC	Fort Churchill	90.96	348	P	P	23 18 30.9	+0.3
FCC				pmax	pmax		
	comp=Z,60nm,1.0s						
FCC	Fort Churchill	90.96	348	P	P	23 18 30.9	+0.3
PMTG	Montargil	90.97	44	eP	P	23 18 30.9	-0.3
	comp=Z,48nm,1.6s						
PESTR	Estremoz	91.22	45	eP	P	23 18 33.8	+1.4
	comp=Z,51nm,1.4s						
PCAS	Casmilo, Conde	91.43	43	eP	P	23 18 32.4	-0.9
	comp=Z,89nm,1.7s						
PMRV	Marv??o	91.70	44	eLQ	LQ	23 43 10.9	
PMRV				eLR	LR	23 49 34.6	
	comp=Z,2µm,18.0s						
PCBR	Castelo Branco	91.90	44	epP	pP	23 18 45.1	+0.9
PCBR				A	A	23 18 49.1	
	comp=Z,45nm,1.4s						
MTE	Manteigas	92.22	43	eLQ	LQ	23 44 36.9	
MTE				eLR	LR	23 51 14.7	
	comp=Z,5µm,20.0s						
PGAV	Gavieira, Arco	92.78	42	eLR	LR	23 50 45.9	
	comp=Z,3µm,18.0s						
MVO	Moncorvo	93.00	43	eLQ	LQ	23 42 54.5	
MVO				eLR	LR	23 49 10.4	
	comp=Z,5µm,20.0s						
ESDC	Sonseca Array	93.94	46	P	P	23 18 44.9	-0.1
	comp=Z,2.9nm,0.9s,baz=250,slow=4.8,SNR=9.3						
ESDC				LR	LR	00 01 28.7	
	comp=Z,3µm,18.1s,baz=240,slow=36						
ESDC	Sonseca Array	93.94	46	P	P	23 18 45.4	+0.4
YKA	Yellowknife Ar	98.95	341	P	P	23 19 06.6	-0.5
	comp=Z,1.3nm,0.5s,baz=261,slow=5.5,SNR=13						
VOI	Vohitsoka	101.13	124	IAMs_20	IAMs_20	00 02 59.3	
	comp=Z,1µm,19.0s						
DZM	Mont Dzumac	103.55	234	ePS	PS	23 32 57.3	+2.3
	comp=Z,613nm,27.8s						
DZM				eSS	SS	23 38 35.5	+7.6
	comp=Z,825nm,25.8s						
DZM	Mont Dzumac	103.55	234	eLR	LR	23 53 32.5	
	comp=Z,4µm,24.1s						
ECH	Echery	105.30	43	IAMs_20	IAMs_20	00 11 30.0	
	comp=Z,2µm,18.0s						
BFO	Black Forest	106.05	43	IAMs_20	IAMs_20	00 04 46.7	
	comp=Z,1µm,21.0s						
LODK	Lodwar	106.33	96	IAMs_20	IAMs_20	00 06 31.4	
	comp=Z,2µm,19.0s						
STU	Stuttgart	106.76	43	IAMs_20	IAMs_20	00 09 02.6	
	comp=Z,2µm,19.0s						
TULEG	Thule	106.88	1	IAMs_20	IAMs_20	00 10 29.2	
	comp=Z,2µm,20.0s						
GRFO	Grafenberg	108.36	43	IAMs_20	IAMs_20	00 06 38.8	
	comp=Z,2µm,20.0s						
GRA1	Grafenberg Arr	108.36	43	IAMs_20	IAMs_20	00 06 27.9	
	comp=Z,2µm,22.0s						
INK	Inuvik	108.61	340	Pdiff	Pdif	23 19 50.0	+0.1
	comp=Z,1.9nm,1.0s,baz=189,slow=6.9,SNR=4.5						
INK				PKKPbc	PKKPbc	23 35 04.5	-2.0
	comp=Z,0.9nm,0.8s,baz=339,slow=9.2,SNR=3.1						
INK				PKKP	PKKPab	23 35 16.1	+1.0
	comp=Z,2.6nm,0.9s,baz=318,slow=11,SNR=6.4						
A36M	Sachs Harbour	108.79	345	IAMs_20	IAMs_20	00 10 25.9	
	comp=Z,1µm,20.0s						
GERES	GERESS Array B	109.47	44	PKiKP	PKiKP	23 23 57.6	+0.1
	comp=Z,2.8nm,0.9s,baz=202,slow=1.4,SNR=11						
KHC	Kasperske Hory	109.52	44	ePKP	PKiKP	23 23 57.2	-0.3
KHC				ex	x	23 25 32.0	
KHC				AMS	AMS	00 12 40.0	
	comp=Z,2µm,17.7s						
CLL	Collm	110.07	42	ePdif	Pdif	23 19 59.0	+2.2
CLL				ePKiKP	PKiKP	23 23 58.0	-0.4
CLL				ePP	PP	23 24 32.0	-0.5
CLL				esSKSac	sSKSac	23 30 51.0	+1.9
CLL				esSdiff	sSdif	23 32 23.0	-0.2
CLL				ePS	PS	23 34 02.0	+0.3
CLL				ePPS	PPS	23 35 12.0	
CLL				eSS	SS	23 40 00.0	+3.3
CLL				eSSS	SSS	23 44 24.0	
CLL				LmH		00 11 00.0	
	comp=N,1µm,18.8s						
CLL				LmH		00 11 00.0	
	comp=E,2µm,18.1s						
CLL				LmV		00 12 00.0	
	comp=Z,3µm,18.0s						
CLL	Collm	110.07	42	eP	Pdif	23 19 59.0	+2.2
CLL				e		23 23 58.0	
CLL				e		23 24 32.0	
CLL				MLR	MLR		
	comp=Z,3µm,18.0s						
STKA	Stephens Creek	110.36	210	PKKP		23 35 18.3	
	comp=Z,3.3nm,0.8s,baz=346,slow=6.9,SNR=4.5						
BRG	Berggiesshubel	110.44	42	⇓Pif		23 20 11.0	
BRG	Berggiesshubel	110.44	42	PP	PP	23 24 36.0	+0.8
BRG	Berggiesshubel	110.44	42	PS	PS	23 33 58.0	-7.1
ILAR	Eielson Array	111.32	334	Pdiff	Pdif	23 20 01.6	-0.5
	comp=Z,0.7nm,1.0s,baz=151,slow=4.1,SNR=4.7						
ILAR				PKiKP	PKiKP	23 24 00.5	+0.1
	comp=Z,1.4nm,0.9s,baz=235,slow=0.5,SNR=10						
ILAR				PKKPbc	PKKPbc	23 34 54.9	-2.8
	comp=Z,0.3nm,0.8s,baz=339,slow=4.8,SNR=2.4						
VRAC	Vranov	111.40	45	⇓P	PKiKP	23 24 00.8	-0.2
FYU	Fort Yukon	111.52	336	IAMs_20	IAMs_20	00 10 27.8	
	comp=Z,1µm,18.0s						
RGN	Rugen	111.53	39	IAMs_20	IAMs_20	00 09 45.2	
	comp=Z,2µm,21.0s						
CHVC	Chvalec	111.56	43	ePKP	PKiKP	23 24 02.8	+1.5
CHVC				AMS	AMS	00 12 50.0	
	comp=Z,2µm,18.9s						
CCB	Clear Creek Bu	111.62	333	IAMs_20	IAMs_20	00 10 27.3	
	comp=Z,1µm,20.0s						
DPC	Dobruska-Polom	111.63	44	ePKP	PKiKP	23 24 01.6	+0.2
DPC				AMS	AMS	00 08 50.0	
	comp=Z,2µm,22.4s						
DPC	Dobruska-Polom	111.63	44	ePKIKP	PKiKP	23 24 01.6	+0.2
DPC				MLR	MLR		
	comp=Z,2µm,22.4s						
OSTC	Ostas	111.65	43	ePKP	PKiKP	23 24 02.3	+0.9
OSTC				AMS	AMS	00 13 00.0	
	comp=Z,2µm,17.9s						
KONO	Kongsberg	111.66	33	IAMs_20	IAMs_20	00 14 13.0	
	comp=Z,1µm,19.0s						
POKR	Poker Plat Res	111.68	334	IAMs_20	IAMs_20	00 10 36.0	
	comp=Z,2µm,18.0s						
COLA	College	111.73	333	IAMs_20	IAMs_20	00 10 28.5	
	comp=Z,1µm,19.0s						
TCOL	CIGO, UAF Yank	111.74	333	IAMs_20	IAMs_20	00 10 27.5	
	comp=Z,1µm,19.0s						
KRLC	Kraliky	111.81	44	ePKP	PKiKP	23 24 02.5	+0.7
KRLC				AMS	AMS	00 10 20.0	
	comp=Z,1µm,22.5s						
KRLC	Kraliky	111.81	44	ePKIKP	PKiKP	23 24 02.5	+0.7
KRLC				MLR	MLR		
	comp=Z,1µm,22.5s						
MDM	Murphy Dome	111.92	333	IAMs_20	IAMs_20	00 09 23.3	
	comp=Z,1µm,19.0s						
MORC	Moravsky Berou	112.15	44	⇓P	PKiKP	23 24 02.9	+0.4
H24K	Noodor Dome	112.16	334	IAMs_20	IAMs_20	00 09 42.7	
	comp=Z,2µm,18.0s						
SANT	Santorini	112.61	60	IAMs_20	IAMs_20	00 14 27.0	
	comp=Z,1µm,19.0s						
N19K	Bonanza Creek	112.89	328	IAMs_20	IAMs_20	00 21 43.8	
	comp=Z,1µm,20.0s						
MLY	Manley	112.92	333	IAMs_20	IAMs_20	00 09 53.8	
	comp=Z,2µm,20.0s						
BZS	Buzias	113.24	50	⇑P	PKiKP	23 24 04.9	+0.3
I21K	Tanana	113.46	333	IAMs_20	IAMs_20	00 09 32.1	
	comp=Z,1µm,20.0s						
HERR	Herculane	113.51	51	⇓P	PKiKP	23 24 03.6	-1.5
TOLK	Toolik Lake Re	113.91	337	P	PKiKP	23 24 05.9	+0.7
	baz=113						
H21K	Melozitna Rive	113.96	333	P	PKiKP	23 24 05.7	+0.3
	baz=111						
H21K	Melozitna Rive	113.96	333	IAMs_20	IAMs_20	00 10 45.2	
	comp=Z,1µm,20.0s						
DRGR		114.35	49	⇑P	PKPdf	23 24 06.3	-0.5
LOT	Lotru	114.61	50	⇑P	PKiKP	23 24 12.5	+5.1
TRPA	Tarpa	114.68	47	⇑P	PKPdf	23 24 06.6	-0.6
UZH	Uzhgorod	114.69	47	ePKIKP	PKiKP	23 24 12.0	+4.8
UZH				e		23 24 20.4	
CBBR	Cluj-Babes-Bol	114.89	49	⇓P	PKiKP	23 24 10.8	+3.1
HUMR	Humele	115.12	52	⇑P	PKiKP	23 24 08.4	+0.1
ARR	Arges	115.15	51	⇑P	PKiKP	23 24 08.7	+0.3
KWP	Kalwaria Pacla	115.26	46	PKIKP	PKiKP	23 24 08.7	+0.3
KWP				MLR	MLR		
	comp=Z,17µm,22.0s						
KWP	Kalwaria Pacla	115.26	46		PKiKP	23 24 08.7	+0.3
RAZG	Razgrad	115.85	53	⇓P	PKPdf	23 24 06.1	-3.6
BUR08	Bucovina Ar. S	116.23	48		PKiKP	23 24 10.6	+0.2
BURAR	Bucovina Array	116.23	48	⇑P	PKPdf	23 24 10.0	-0.4
LEHL	Lehliu	116.35	52	⇑P	PKiKP	23 24 12.1	+1.5
PLOR	Plostina	116.65	51	⇓P	PKPdf	23 24 08.1	-3.1
VRI	Vrincioaia	116.71	51	⇑P	PKPdf	23 24 10.2	-1.1
SUW	Suwalki	116.81	41	PKIKP	PKPdf	23 24 10.8	-0.3
SUW				MLR	MLR		
	comp=Z,2µm,20.0s						
SUW	Suwalki	116.81	41	PKPdf	PKPdf	23 24 10.8	-0.3
ISP	Isparta	116.91	60	IAMs_20	IAMs_20	00 16 12.8	
	comp=Z,2µm,21.0s						
A21K	Barrow	117.08	339	P	PKiKP	23 24 12.0	+0.8
	baz=105						
A21K	Barrow	117.08	339	PKPdf	PKiKP	23 24 11.8	+0.6
A21K				IAMs_20	IAMs_20	00 20 55.6	
	comp=Z,955nm,18.0s						
CFR	Carcaliu	117.45	52	⇑P	PKPdf	23 24 12.5	-0.1
CSS	Mathiatis	118.12	64	IAMs_20	IAMs_20	00 17 23.3	
	comp=Z,1µm,21.0s						
MILM	Milestii Mici	118.39	50	⇑P	PKPdf	23 24 14.2	-0.2
SORM	Soroca	118.41	49	⇑P	PKPdf	23 24 13.4	-1.0
RDOG	Red Dog Mine	118.46	335	IAMs_20	IAMs_20	00 15 18.2	
	comp=Z,830nm,20.0s						
NACGM	Naroch	119.07	41	i PKP	PKiKP	23 24 15.7	+0.2
ANTO	Ankara	119.22	59	IAMs_20	IAMs_20	00 19 17.9	
	comp=Z,2µm,19.0s						
AKASG	Malin Array Be	119.58	46	PKP	PKPdf	23 24 15.7	-0.9
	comp=Z,9.1nm,0.8s,baz=264,slow=2.7,SNR=20						
AKBB	Malin Array Si	119.58	46	PKIKP	PKPdf	23 24 15.9	-0.7
AKBB	Malin Array Si	119.58	46	PKPdf	PKPdf	23 24 15.9	-0.7
MNK	Minsk	119.61	41	i PKIKP	PKPdf	23 24 14.8	-1.7
MNK				i		23 25 38.4	
MNK				i		23 31 11.4	
MNK				i SP	SP	23 35 17.8	-6.9
MNK				i PS	PS	23 35 28.1	-0.5
MNK				i SS	SS	23 42 03.5	+1.5
MNK				pmax	pmax		
	comp=Z,38nm,1.0s						
MNK				pmax	pmax		
	comp=E,3.0nm,1.0s						
MNK				pmax	pmax		
	comp=N,16nm,1.0s						
MNK				MLR	MLR		
	comp=Z,2µm,20.0s						
MNK				MLR	MLR		
	comp=E,235nm,20.0s						
MNK				MLR	MLR		
	comp=N,1µm,20.0s						
MNK	Minsk	119.61	41	i PKP	PKPdf	23 24 14.8	-1.7
	comp=E,3.0nm,1.1s						
MNK				i PKP	PKPdf	23 24 14.8	-1.7
	comp=N,16nm,1.0s						
MNK				i PKP	PKPdf	23 24 14.8	-1.7
	comp=Z,38nm,1.1s,baz=258						
MNK				i PP	PP	23 25 38.5	-1.3
MNK				i PPP	PPP	23 27 56.8	
MNK				i SKS	SKSac	23 31 11.5	+0.8
MNK				i SKKS	SKSdf	23 32 00.7	+34
MNK				i PS	PS	23 35 28.1	-0.5
MNK				i SS	SS	23 42 03.5	+1.6
MNK				i SSS	SSS	23 44 26.8	
MNK				i LR	LR	00 10 49.1	
MNK				i LRM	MLR	00 16 41.5	
	comp=Z,2µm,20.0s						
MNK				i LRM	MLR	00 16 45.6	
	comp=E,235nm,20.1s						
MNK				i LRM	MLR	00 17 35.9	
	comp=N,1µm,20.4s						
VSU	Vasula	119.76	37	d iPKIKP	PKiKP	23 24 17.3	+0.6
VSU				MLR	MLR		
	comp=Z,7µm,19.0s						
BRTR	Keskin Array B	119.81	59	PKP	PKiKP	23 24 17.7	0.0
	comp=Z,2.9nm,0.8s,baz=184,slow=2.0,SNR=5.6						
BRTR				PP	PP	23 25 47.2	+5.5
	comp=Z,4.3nm,1.0s,baz=214,slow=7.7,SNR=5.0						
BRTR	Keskin Array B	119.81	59		PKPdf	23 24 17.4	-0.2
ARCES	ARCESS Array B	120.76	24	PKP	PKPdf	23 24 18.1	-0.2
	comp=Z,3.9nm,1.0s,baz=250,slow=1.8,SNR=1.5						
AS31	Alice Springs	120.77	207	PKPdf	PKPdf	23 24 18.3	-1.7
ASAR	Alice Springs	120.77	207	PKP	PKPdf	23 24 18.0	-1.9
	comp=Z,4.0nm,0.7s,baz=135,slow=1.9,SNR=47						
ASAR				PKKPbc	PKKPbc	23 34 23.4	-0.4
	comp=Z,2.6nm,0.7s,baz=343,slow=3.4,SNR=13						
ASAR				SKKPbc	SKKPbc	23 37 58.6	-9.0
	comp=Z,0.2nm,0.3s,baz=343,slow=2.8,SNR=3.3						
ASAR	Alice Springs	120.77	207	PKPdf	PKPdf	23 24 17.7	-2.2
APA	Apatity	123.58	26	⇓iPKIKP	PKPdf	23 24 22.9	-0.9
APA				i		23 26 04.0	
APA				i		23 31 34.0	
APA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
APA				MLR	MLR		
	comp=Z,1µm,16.0s						
ANN	Anapa	123.76	54	ePKIKP	PKPdf	23 24 19.8	-5.0
WB2	Warramunga Arr	123.91	210	PKPdf	PKPdf	23 24 24.2	-1.8
WRA	Warramunga Arr	123.91	210	PKP	PKPdf	23 24 24.2	-1.8
	comp=Z,12nm,0.6s,baz=167,slow=1.5,SNR=106						
WRA				PKKPbc	PKKPbc	23 34 11.9	+0.3
	comp=Z,2.2nm,0.7s,baz=343,slow=4.1,SNR=7.6						
WRA				SKKPbc	SKKPbc	23 37 39.1	-18
	comp=Z,1.3nm,0.9s,baz=345,slow=5.7,SNR=5.0						
WRA	Warramunga Arr	123.91	210	PKPdf	PKPdf	23 24 24.1	-1.9
WRAB	Tennant Creek	123.92	210	i PKIKP	PKPdf	23 24 24.6	-1.4
WRAB	Tennant Creek	123.92	210	IAMs_20	IAMs_20	00 09 07.0	
	comp=Z,1µm,20.0s						
WB0	Warramunga Arr	124.05	210	PKPdf	PKPdf	23 24 24.7	-1.6
RAYN	Ar Rayn	124.16	81	IAMs_20	IAMs_20	00 22 33.3	
	comp=Z,1µm,19.0s						
OBN	Obninsk	124.67	42	PKP	PKPdf	23 24 25.5	-0.7
	comp=Z,4.0nm,0.8s,baz=329,slow=4.9,SNR=4.6						
OBN	Obninsk	124.67	42	⇑iPKIKP	PKPdf	23 24 26.0	-0.2
OBN				e		23 26 11.1	
OBN				ePPP	PPP	23 28 58.3	
OBN				pmax	pmax		
	comp=Z,30nm,1.1s						
OBN				MLR	MLR		
	comp=Z,2µm,20.0s						
OBN	Obninsk	124.67	42	PKPdf	PKPdf	23 24 26.0	-0.2
MOS	Moscow	125.32	41	i PKIKP	PKPdf	23 24 25.6	-1.8
MOS				e		23 24 35.2	
MOS				pmax	pmax		
	comp=Z,30nm,0.9s						
H11S2	WAKE ISLAND Hy	126.13	271	T	T	01 43 11.8	
	baz=115,slow=74,SNR=2085						

H11S1	**WAKE ISLAND Hy**	**126.14**	**271**	T	T	01 43 13.4	
	baz=115,slow=74,SNR=2496						
H11S3	**WAKE ISLAND Hy**	**126.15**	**271**	T	T	01 43 13.8	
	baz=115,slow=74,SNR=1793						
KLMR	**Klimovskoe**	**126.41**	**35**	*e*PKIKP	**PKPdf**	**23 24 27.9**	**-1.4**
KLMR				*e*		23 26 27.6	
KLMR				pmax	pmax		
	comp=Z,42nm,1.3s						
KLMR	**Klimovskoe**	**126.41**	**35**	*e*PKPdf	**PKPdf**	**23 24 28.0**	**-1.4**
KLMR				AMP		23 24 41.0	
	comp=Z,42nm,1.3s						
KLMR				*e*PP	**PP**	**23 26 27.7**	**+2.3**
KLMR				LQ	LQ	00 11 16.3	
KLMR				LQ	LQ	00 11 16.3	
KLMR				LR	LR	00 17 41.9	
H11N3	**WAKE ISLAND Hy**	**126.46**	**273**	T	T	01 43 40.0	
	baz=116,slow=75,SNR=130						
H11N1	**WAKE ISLAND Hy**	**126.47**	**273**	T	T	01 43 40.7	
	baz=116,slow=75,SNR=48						
H11N2	**WAKE ISLAND Hy**	**126.47**	**273**	T	T	01 43 39.0	
	baz=116,slow=75,SNR=237						
PSA00	**Pilbara Seismi**	**126.99**	**193**	PKPdf	**PKPdf**	**23 24 30.4**	**-1.5**
PSA00	**Pilbara Seismi**	**126.99**	**193**	PKPdf	**PKPdf**	**23 24 30.8**	**-1.1**
KIV	**Kislovodsk**	**127.32**	**56**	*i* PKIKP	**PKPdf**	**23 24 31.8**	**0.0**
KIV				*e*		23 26 32.3	
KIV				*e*PS	**PS**	**23 36 38.0**	**+0.4**
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,557nm,23.0s						
MBWA	**Marble Bar**	**127.42**	**193**	IAMs_20	IAMs_20	00 21 13.3	
	comp=Z,1µm,20.0s						
KBZ	**Khabaz**	**127.44**	**56**	PKP	**PKiKP**	**23 24 32.7**	**+0.3**
	comp=Z,5.2nm,0.9s,baz=138,slow=5.9,SNR=4.0						
GOF	**Gofitskoye**	**127.73**	**55**⇑	*e*PKIKP	**PKPdf**	**23 24 31.4**	**-1.0**
GOF				pmax	pmax		
	comp=Z,19nm,0.9s						
GNI	**Garni**	**128.20**	**61**⇓	*i*PKIKP	**PKPdf**	**23 24 34.0**	**+0.3**
GNI	**Garni**	**128.20**	**61**	IAMs_20	IAMs_20	00 24 19.9	
	comp=Z,878nm,20.0s						
FITZ	**Fitzroy Crossi**	**128.84**	**201**	PKP	**PKPdf**	**23 24 34.9**	**-0.5**
PRGR	**Permogore**	**129.29**	**33**	*e*PKIKP	**PKiKP**	**23 24 35.4**	**-0.1**
PRGR				pmax	pmax		
	comp=Z,12nm,0.6s						
BILL	**Bilibino**	**129.91**	**335**	PKPdf	**PKPdf**	**23 24 35.3**	**-0.6**
BILL				IAMs_20	IAMs_20	00 23 15.9	
	comp=Z,736nm,19.0s						
BELG	**Belogornoye**	**131.15**	**45**	PKP	**PKPdf**	**23 24 37.5**	**-1.1**
	comp=Z,32nm,0.8s,baz=127,slow=2.2,SNR=8.9						
BELG	**Belogornoye**	**131.15**	**45***c*	*i*PKIKP	**PKiKP**	**23 24 40.1**	**+0.5**
BELG				MLR	MLR		
	comp=Z,369nm,20.0s						
KIRV	**Kirov**	**131.60**	**37**	PKP	**PKiKP**	**23 24 39.9**	**-0.4**
	comp=Z,12nm,0.8s,baz=99,slow=5.9,SNR=4.9						
KIRV	**Kirov**	**131.60**	**37**⇓	*i*PKIKP	**PKiKP**	**23 24 40.9**	**+0.6**
BATI	**Baumata**	**136.87**	**202**	PKP	**PKPdf**	**23 24 50.5**	**-0.2**
	comp=Z,10.0nm,0.5s,baz=298,slow=19,SNR=3.9						
ARU	**Arti**	**136.88**	**38**	PKP	**PKPdf**	**23 24 49.7**	**+0.4**
	comp=Z,5.9nm,0.8s,baz=356,slow=1.7,SNR=19						
ARU	**Arti**	**136.88**	**38**	*i* PKIKP	**PKPdf**	**23 24 50.1**	**+0.8**
ARU						23 27 32.3	
ARU				MLR	MLR		
	comp=Z,2µm,20.0s						
ARU	**Arti**	**136.88**	**38**	PKPdf	**PKPdf**	**23 24 49.7**	**+0.4**
SEY	**Seymchan**	**137.23**	**332**	PKP	**PKiKP**	**23 24 50.9**	**-0.7**
	comp=Z,27nm,0.9s,baz=118,slow=2.9,SNR=26						
TIXI	**Tiksi**	**137.40**	**351**	PKP	**PKPdf**	**23 24 49.9**	**+0.1**
	comp=Z,15nm,0.7s,baz=360,slow=2.5,SNR=6.4						
TIXI	**Tiksi**	**137.40**	**351**	PKIKP	**PKPdf**	**23 24 49.9**	**+0.1**
TIXI				MLR	MLR		
	comp=Z,600nm,21.0s						
TIXI	**Tiksi**	**137.40**	**351**		**PKPdf**	**23 24 49.9**	**+0.1**
AKTO	**Aktyubinsk**	**137.80**	**47**	PKhKP	PKPpre	23 24 44.3	
	comp=Z,4.7nm,0.9s,baz=297,slow=5.4,SNR=5.5						
SVE	**Sverdlovsk**	**137.87**	**37**	*i* PKIKP	**PKPdf**	**23 24 51.9**	**+0.8**
SVE				pmax	pmax		
	comp=Z,18nm,1.5s						
SVE				MLR	MLR		
	comp=Z,2µm,19.0s						
PETK	**Petropavlovsk-**	**137.99**	**317**	PKP	**PKPdf**	**23 24 52.1**	**+0.7**
	comp=Z,7.2nm,0.8s,baz=108,slow=4.8,SNR=6.5						
PETK	**Petropavlovsk-**	**137.99**	**317**		**PKPdf**	**23 24 52.0**	**+0.5**
GEYT	**Alibeck**	**138.21**	**66**	PKP	**PKPdf**	**23 24 51.0**	**-1.4**
	comp=Z,4.5nm,0.7s,baz=62,slow=3.5,SNR=4.5						
ABKAR	**Akbulak array**	**139.21**	**49**	PKPdf	**PKPdf**	**23 24 54.7**	**+0.8**
ABKAR	**Akbulak array**	**139.21**	**49**		**PKPdf**	**23 24 54.4**	**+0.6**
NRIK	**Noril'sk**	**139.41**	**11**	PKP	**PKPdf**	**23 24 52.3**	**-1.3**
	comp=Z,4.9nm,0.8s,baz=147,slow=0.5,SNR=5.4						
NRIK	**Noril'sk**	**139.41**	**11**⇓	*e*PKIKP	**PKPdf**	**23 24 54.7**	**+1.1**
NRIK				MLR	MLR		
	comp=Z,660nm,19.0s						
NRIK	**Noril'sk**	**139.41**	**11**	PKPdf	**PKPdf**	**23 24 53.3**	**-0.3**
MA2	**Magadan**	**139.47**	**328**	PKP	**PKPdf**	**23 24 53.9**	**-0.1**
	comp=Z,9.4nm,0.7s,baz=168,slow=9.0,SNR=4.4						
MA2	**Magadan**	**139.47**	**328**	PKIKP	**PKPdf**	**23 24 54.7**	**+0.7**
MA2	**Magadan**	**139.47**	**328**		**PKPdf**	**23 24 54.7**	**+0.7**
MA2				IAMs_20	IAMs_20	00 30 12.5	
	comp=Z,914nm,22.0s						
FAKI	**Fak Fak**	**139.65**	**219**	IAMs_20	IAMs_20	00 18 22.5	
	comp=Z,1µm,21.0s						
SIJI	**Sorong**	**141.90**	**219**	PKhKP	PKPpre	23 24 53.7	
	comp=Z,18nm,0.8s,baz=58,slow=1.6,SNR=6.2						
KAPI	**Kappang**	**142.97**	**199**	PKhKP	PKPpre	23 24 57.1	
	comp=Z,7.5nm,0.7s,baz=148,slow=5.0,SNR=6.4						
KAPI	**Kappang**	**142.97**	**199**	PKIKP	**PKPdf**	**23 24 58.8**	**-2.9**
KAPI	**Kappang**	**142.97**	**199**	PKPdf	**PKPdf**	**23 24 58.8**	**-2.9**
KAPI	**Kappang**	**142.97**	**199**	IAMs_20	IAMs_20	00 22 23.0	
	comp=Z,973nm,22.0s						
SANI	**Sanana**	**143.47**	**210**	PKP	PKPab	23 24 57.6	-1.2
KASI	**Kota Agung**	**143.90**	**173**	PKP	PKPab	23 24 59.4	-1.0
BRVK	**Borovoye**	**144.40**	**40***d*	*e*PKIKP	**PKPdf**	**23 25 02.8**	**-0.2**
BRVK				MLR	MLR		
	comp=Z,2µm,20.0s						
BRVK	**Borovoye**	**144.40**	**40**	PKPdf	**PKPdf**	**23 25 02.3**	**-0.7**
KLSI		**144.75**	**174**	PKP	**PKPab**	**23 25 01.9**	**-1.7**
MDSI	**Maura Dua**	**144.90**	**173**	PKP	**PKPab**	**23 25 02.1**	**-2.0**
PALK	**Pallekele**	**145.20**	**126**	PKIKP	**PKPbc**	**23 25 05.1**	**-0.2**
PALK	**Pallekele**	**145.20**	**126**		**PKPbc**	**23 25 05.0**	**-0.2**
PALK	**Pallekele**	**145.20**	**126**	IAMs_20	IAMs_20	00 32 51.6	
	comp=Z,1µm,19.0s						
KSI	**Kapahiang**	**145.51**	**170**	PKP	**PKPbc**	**23 25 05.8**	**-0.4**
YAK	**Yakutsk**	**145.62**	**342**	PKPbc	**PKPab**	**23 25 05.6**	**+0.2**
	comp=Z,195nm,0.9s,baz=225,slow=0.3,SNR=60						
YAK	**Yakutsk**	**145.62**	**342***c*	*i*PKP2	**PKPdf**	**23 25 04.4**	**-0.4**
YAK				*e*		23 28 34.4	
YAK				*e*SS	SS	23 47 09.9	-6.5
YAK				pmax	pmax		
	comp=Z,266nm,0.9s						
YAK				pmax	pmax		
	comp=E,20nm,1.0s						
YAK				pmax	pmax		
	comp=N,24nm,1.0s						
YAK				pmax	pmax		
	comp=Z,174nm,2.5s						
YAK				pmax	pmax		
	comp=E,53nm,1.7s						
YAK				pmax	pmax		
	comp=N,159nm,2.6s						
YAK	**Yakutsk**	**145.62**	**342**	PKPdf	**PKPdf**	**23 25 04.7**	**-0.1**
YAK				IAMs_20	IAMs_20	00 32 47.1	
	comp=Z,826nm,21.0s						
MASI	**Maura Aman, Be**	**145.95**	**169**	PKP	**PKPdf**	**23 25 05.3**	**-1.7**
POO	**Poona**	**146.49**	**103**	*e*P	**PKPdf**	**23 25 06.5**	**-1.2**
KBL	**Kabul**	**146.74**	**73**	PKIKP	**PKPdf**	**23 25 07.8**	**-0.1**
KBL	**Kabul**	**146.74**	**73**	PKPdf	**PKPdf**	**23 25 07.8**	**-0.1**
TPI	**Tanjungpandan**	**146.84**	**179**	PKP	**PKPdf**	**23 25 08.7**	**+0.3**
CHGR	**Chuyangaron**	**146.91**	**65**	PKPdf	**PKPdf**	**23 25 08.4**	**+0.6**
BRZS	**Berezniki**	**146.99**	**44**	*i* PKIKP	**PKPdf**	**23 25 06.5**	**-1.1**
GTOI	**Gorontalo**	**147.14**	**208**	PKP	**PKPdf**	**23 25 08.5**	**-0.4**
PPBI	**Pangkal Pinang**	**147.37**	**176**	PKP	**PKPdf**	**23 25 09.6**	**+0.3**
MRSI	**Marisa**	**147.41**	**206**	PKP	**PKPdf**	**23 25 08.7**	**-0.7**
KKAR	**Karatay Array**	**147.47**	**57**	PKIKP	**PKPdf**	**23 25 08.5**	**-0.1**
KKAR						23 25 11.8	
KKAR	**Karatay Array**	**147.47**	**57**	PKPdf	**PKPdf**	**23 25 08.5**	**-0.1**
KKAR				PKPbc	**PKPbc**	**23 25 11.8**	**+0.6**
NKL	**Nikolayevsk**	**147.49**	**323**	*i* PKHKP	**PKPdf**	**23 25 03.7**	**-4.5**
PDSI	**Padang**	**147.78**	**165**	PKP	**PKPbc**	**23 25 12.1**	**-0.7**
GAR	**Garm**	**147.80**	**64**	PKPdf	**PKPdf**	**23 25 09.8**	**+0.4**
GAR				PKPbc	**PKPbc**	**23 25 13.2**	**+0.8**
BTK	**Batken**	**148.11**	**62**	PKIKP	**PKPdf**	**23 25 09.6**	**-0.2**
BTK	**Batken**	**148.11**	**62**		**PKPdf**	**23 25 09.6**	**-0.2**
TOLI2	**Tolitoli**	**148.42**	**204**	PKPdf	**PKPdf**	**23 25 10.2**	**-0.8**
TOLI2				PKPbc	**PKPbc**	**23 25 13.6**	**-0.9**
TOLI2				IAMs_20	IAMs_20	00 29 18.4	
	comp=Z,834nm,22.0s						
DSRI	**Dabo**	**148.90**	**173**	PKP	**PKPdf**	**23 25 10.7**	**-1.1**
DRK	**Karamyk**	**148.91**	**63**		**PKiKP**	**23 25 16.3**	**-0.5**
YSS	**Yuzh-Sakhalins**	**148.93**	**311**		**PKPbc**	**23 25 14.5**	**-0.3**
BKNI	**Bangkinang**	**149.11**	**166**	IAMs_20	IAMs_20	00 26 44.4	
	comp=Z,790nm,22.0s						
GSI	**Gunungsitoli**	**149.12**	**159**	PKP	**PKPdf**	**23 25 13.0**	**+0.8**
BTLS	**Baital**	**149.52**	**52**	*e*PKIKP	**PKPdf**	**23 25 10.8**	**-1.0**
SBSI	**Sibolga**	**149.75**	**161**	PKP	**PKPdf**	**23 25 12.4**	**-0.8**
HYB	**Hyderabad**	**149.85**	**109**	*i* PKP	**PKPbc**	**23 25 17.0**	**-1.0**
EKS2	**Erkin-Say**	**149.91**	**57**	P	**PKiKP**	**23 25 18.7**	**+0.2**
	SNR=32						
AML	**Almayashu**	**149.96**	**58**	P	**PKiKP**	**23 25 19.0**	**0.0**
	SNR=21						
KURK	**Kurchatov**	**150.07**	**39**	PKIKP	**PKiKP**	**23 25 18.3**	**-0.1**
KURK	**Kurchatov**	**150.07**	**39**	PKPdf	**PKPdf**	**23 25 12.7**	**+0.2**
KURK				PKPbc	**PKiKP**	**23 25 18.2**	**-0.1**
NIL	**Nilore**	**150.16**	**75**	PKIKP	**PKPbc**	**23 25 18.0**	**-0.3**
NIL	**Nilore**	**150.16**	**75**	PKPdf	**PKPdf**	**23 25 12.8**	**-0.4**
NIL					**PKPbc**	**23 25 18.0**	**-0.3**
USP	**Ospenovka**	**150.29**	**55**	P	**PKiKP**	**23 25 19.2**	**0.0**
	SNR=37						
AAK	**Ala-Archa**	**150.44**	**57**	P	**PKiKP**	**23 25 20.1**	**+0.4**
	SNR=43						
AAK	**Ala-Archa**	**150.44**	**57**	PKIKP	**PKPdf**	**23 25 13.6**	**0.0**
AAK						23 25 20.0	
AAK	**Ala-Archa**	**150.44**	**57**	PKPdf	**PKPdf**	**23 25 13.6**	**0.0**
AAK				PKPbc	**PKiKP**	**23 25 20.0**	**+0.4**
CHMS	**Chumysh**	**150.54**	**56**	P	**PKiKP**	**23 25 19.7**	**0.0**
	SNR=29						
UCH	**Uchtor**	**150.54**	**57**	P	**PKPdf**	**23 25 15.4**	**+1.2**
	SNR=17						
KBK	**Karagaybulak**	**150.76**	**56**	P	**PKiKP**	**23 25 20.7**	**+0.4**
	SNR=27						
KSM	**Kuching**	**150.99**	**184**	PKPdf	**PKPdf**	**23 25 14.2**	**-0.9**
KSM				IAMs_20	IAMs_20	00 31 37.8	
	comp=Z,1µm,20.0s						
MYKOM	**Kota Tinggi**	**151.04**	**171**		**PKPbc**	**23 25 19.8**	**-1.1**
ZAA0	**Zalesovo Array**	**151.11**	**29**	PKPdf	**PKPdf**	**23 25 13.7**	**-0.3**
ZAA0				PKPbc	**PKiKP**	**23 25 20.2**	**-0.2**
ZALV	**Zalesovo Beam**	**151.11**	**29**	PKP	**PKPdf**	**23 25 14.0**	**0.0**
	comp=Z,11nm,0.8s,baz=286,slow=2.6,SNR=26						
ZALV				PKPbc	**PKPbc**	**23 25 19.9**	**+0.1**
	comp=Z,189nm,0.8s,baz=304,slow=2.2,SNR=187						
ZALV	**Zalesovo Beam**	**151.11**	**29**	PKIKP	**PKiKP**	**23 25 20.4**	**0.0**
ZALV	**Zalesovo Beam**	**151.11**	**29**	PKPdf	**PKPdf**	**23 25 13.4**	**-0.6**
ZALV				PKPbc	**PKiKP**	**23 25 20.4**	**0.0**
TKM2	**Tokmak 2**	**151.16**	**56**	P	**PKPdf**	**23 25 15.1**	**+0.3**
	SNR=5.2						
BOOM	**Boomskoye usch**	**151.51**	**56**	PKIKP	**PKiKP**	**23 25 22.4**	**+0.5**
BOOM	**Boomskoye usch**	**151.51**	**56**	PKPdf	**PKPdf**	**23 25 14.2**	**-1.0**
BOOM					**PKiKP**	**23 25 22.4**	**+0.5**
SBUM	**Sibu**	**151.79**	**188**	PKPdf	**PKPdf**	**23 25 15.7**	**-0.6**
SBUM					**PKPbc**	**23 25 21.6**	**-1.0**
SBUM				IAMs_20	IAMs_20	00 33 40.8	
	comp=Z,840nm,20.0s						
ULHL	**Ulahol**	**151.79**	**57**	P	**PKiKP**	**23 25 23.3**	**+0.8**
	SNR=7.8						
KSH	**Kashi**	**152.12**	**62**	PKPbc	**PKPdf**	**23 25 16.4**	**+0.2**
KSH				PP	**PP**	**23 29 02.9**	**-2.0**
KSH				SKKS		23 35 52.9	
KSH				SS	**SS**	**23 48 29.3**	**-2.5**
KSH				AMB	AMB		
	comp=Z,850nm,6.0s						
KSH				LR	LR		
	comp=Z,690nm,19.8s						
KSH				LR	LR		
	comp=Z,2µm,20.6s						
KSH				LR	LR		
	comp=Z,2µm,21.3s						
ARXS	**Arharly**	**152.34**	**52**	*e*PKIKP	**PKPdf**	**23 25 16.2**	**-0.1**
KDJ	**Kajisay**	**152.49**	**57**	PKIKP	**PKiKP**	**23 25 23.9**	**0.0**
KDJ	**Kajisay**	**152.49**	**57**		**PKiKP**	**23 25 23.9**	**0.0**
BOD	**Bodaibo**	**152.50**	**354**	*e*PKIKP	**PKPbc**	**23 25 22.3**	**-0.6**
BOD				pmax	pmax		
	comp=Z,80nm,1.0s						
TARG	**Taragay, Kyrgy**	**153.04**	**57**		**PKPbc**	**23 25 25.2**	**0.0**
IPM	**Ipoh**	**153.12**	**164**		**PKPbc**	**23 25 24.4**	**-1.3**
KPKS	**Kokpek**	**153.17**	**53**	*i* PKIKP	**PKPdf**	**23 25 16.3**	**-1.3**
PRZ	**Przheval'sk**	**153.27**	**55**	PKIKP	**PKiKP**	**23 25 26.5**	**+1.0**
PRZ						23 25 38.9	
PRZ	**Przheval'sk**	**153.27**	**55**		**PKiKP**	**23 25 26.5**	**+1.0**
PRZ				PKPab	**sPKPbc**	**23 25 38.9**	**+1.6**
UZB	**Uzynbulak**	**153.50**	**54**	*e*PKIKP	**PKPdf**	**23 25 16.3**	**-1.8**
KULM	**Kulim**	**153.80**	**162**	PKPab	**PKPab**	**23 25 39.1**	**-0.8**
KULM				IAMs_20	IAMs_20	00 32 59.3	
	comp=Z,1µm,20.0s						
SHLS	**Shalkode**	**153.81**	**53**	*e*PKIKP	**PKPdf**	**23 25 18.4**	**-0.1**
MAKZ	**Makanchi**	**153.95**	**44**	PKIKP	**PKiKP**	**23 25 26.6**	**0.0**
MAKZ	**Makanchi**	**153.95**	**44**	PKPdf	**PKPdf**	**23 25 18.2**	**-0.3**
MAKZ				PKPbc	**PKiKP**	**23 25 26.6**	**0.0**
MK31	**Makanchi Array**	**154.14**	**44**	PKIKP	**PKPdf**	**23 25 18.4**	**-0.4**
MK31						23 25 27.1	
MK31	**Makanchi Array**	**154.14**	**44**	PKPdf	**PKPdf**	**23 25 18.4**	**-0.4**
MK31				PKPbc	**PKiKP**	**23 25 27.1**	**+0.1**
MKAR	**Makanchi Array**	**154.14**	**44**	PKP	**PKPdf**	**23 25 18.4**	**-0.4**
	comp=Z,3.6nm,0.9s,baz=305,slow=0.9,SNR=16						
MKAR				PKPbc	**PKiKP**	**23 25 27.0**	**0.0**
	comp=Z,20nm,0.8s,baz=247,slow=0.9,SNR=24						
MKAR				PKPab	**sPKPbc**	**23 25 39.8**	**+0.9**
	comp=Z,20nm,0.8s,baz=327,slow=2.1,SNR=11						
MKAR	**Makanchi Array**	**154.14**	**44**	PKPdf	**PKPdf**	**23 25 18.2**	**-0.6**
MKAR				PKPbc	**PKiKP**	**23 25 27.1**	**+0.1**
MJAR	**Matsushiro Arr**	**154.52**	**291**	PKPab	**PKPab**	**23 25 43.6**	**+0.9**
	comp=Z,14nm,0.8s,baz=63,slow=0.3,SNR=6.8						
MAJO	**Matsushiro**	**154.52**	**291**	IAMs_20	IAMs_20	00 21 24.4	
	comp=Z,648nm,20.0s						
INU	**Inuyama**	**155.57**	**289**	IAMs_20	IAMs_20	00 34 03.9	
	comp=Z,729nm,20.0s						
SRIT	**Nakonsritamara**	**156.63**	**158**		**PKPab**	**23 25 51.7**	**-0.3**
PYUN	**Piuthan**	**157.72**	**90**	*e*P	**PKPdf**	**23 25 23.5**	**-0.8**
KOLN	**Koldanda**	**158.17**	**91**	*e*P	**PKPdf**	**23 25 23.9**	**-1.0**
DANN	**Dangsing**	**158.44**	**90**	*e*P	**PKPdf**	**23 25 24.4**	**-0.9**
WMQ	**Urumqi**	**158.94**	**45**	PKP	**PKPdf**	**23 25 24.3**	**-0.8**
WMQ				PKPab	**PKPab**	**23 26 02.6**	**+1.1**
WMQ				PP	**PP**	**23 29 48.1**	**+5.8**
WMQ				AMB	AMB		
	comp=Z,380nm,11.5s						
WMQ				LR	LR		
	comp=Z,1µm,20.3s						
WMQ				LR	LR		
	comp=Z,1µm,15.3s						
WMQ				LR	LR		
	comp=Z,1µm,15.3s						
GKN	**Gorkha**	**159.12**	**91**	*e*P	**PKPdf**	**23 25 24.8**	**-1.2**
DMN	**Daman**	**159.43**	**92**	*e*P	**PKPdf**	**23 25 25.1**	**-1.4**
HIA	**Hailar**	**159.46**	**338**	IAMs_20	IAMs_20	00 48 08.8	
	comp=Z,898nm,22.0s						
KKN	**Kakani**	**159.63**	**92**	*e*P	**PKPdf**	**23 25 25.5**	**-1.1**
PKIN	**Phulchoki**	**159.68**	**93**	*e*P	**PKPdf**	**23 25 25.4**	**-1.4**
PKI	**Pulchoki**	**159.69**	**93**	*e*P	**PKPdf**	**23 25 25.7**	**-1.1**
ZAK	**Zakamensk**	**159.85**	**10**	*e*PKP2	PKPab	23 25 56.0	-9.1
ZAK				pmax	pmax		
	comp=Z,28nm,1.3s						
GUN	**Gumba**	**160.17**	**92**	*e*P	**PKPdf**	**23 25 25.5**	**-1.9**
JIRN	**Jiri**	**160.38**	**93**	*e*P	**PKPdf**	**23 25 25.6**	**-2.1**
RAMN	**Ramite**	**160.55**	**95**	*e*P	**PKPdf**	**23 25 27.4**	**-0.3**
CN2	**Changchun**	**161.12**	**319**	*e*PKP	**PKPdf**	**23 25 27.1**	**-0.4**
CN2				PP	**PP**	**23 29 56.3**	**+2.5**
CN2				AMB	AMB		
	comp=Z,400nm,10.3s						
CN2				LR	LR		
	comp=Z,600nm,20.0s						
CN2				LR	LR		
	comp=Z,600nm,20.0s						
CN2				LR	LR		
	comp=Z,800nm,21.3s						
ODAN	**Odare**	**161.21**	**96**	*e*P	**PKPdf**	**23 25 26.9**	**-1.5**
TAPN	**Taplejung**	**161.61**	**95**	*e*P	**PKPdf**	**23 25 28.1**	**-0.8**
KSRS	**Korea Array**	**162.44**	**298**	PKP	**PKPdf**	**23 25 28.8**	**-0.2**
	comp=Z,2.9nm,0.7s,baz=182,slow=1.4,SNR=5.4						
KSRS				PKPab	**PKPab**	**23 26 18.5**	**+1.6**
	comp=Z,1.7nm,0.9s,baz=116,slow=8.3,SNR=1.8						
KSAR	**Wonju Array Be**	**162.47**	**298**	PKIKP	**PKPdf**	**23 25 28.3**	**-0.8**
KSAR	**Wonju Array Be**	**162.47**	**298**		**PKPdf**	**23 25 28.3**	**-0.8**
SONM	**Songino Array**	**162.70**	**5**	PKP	**PKPdf**	**23 25 28.9**	**-0.3**
	comp=Z,3.8nm,1.0s,baz=154,slow=1.2,SNR=12						
SONM	**Songino Array**	**162.70**	**5**		**PKPdf**	**23 25 29.1**	**-0.1**
SNY	**Shenyang**	**163.42**	**317**	⇑PKP	**PKPdf**	**23 25 28.8**	**-1.0**
SNY				PP	**PP**	**23 30 06.4**	**+0.3**
SNY				AMB	AMB		
	comp=Z,510nm,5.0s						
SNY				LR	LR		
	comp=Z,690nm,19.7s						
SNY				LR	LR		
	comp=Z,900nm,18.5s						
SNY				LR	LR		
	comp=Z,2µm,19.4s						
LSA	**Lhasa**	**165.04**	**89**	PKP	**PKPdf**	**23 25 32.0**	**-0.3**
LSA				LR	LR		
	comp=Z,3µm,29.2s						
LSA				LR	LR		
	comp=Z,2µm,25.6s						
LSA				LR	LR		
	comp=Z,5µm,29.9s						
LSA	**Lhasa**	**165.04**	**89**	PKP2	**PKPab**	**23 26 29.3**	**+0.1**
LSA						00 25 32.0	
LSA	**Lhasa**	**165.04**	**89**	PKPdf	**PKPdf**	**23 25 31.9**	**-0.3**
LSA					**PKPab**	**23 26 29.3**	**+0.1**
CMAR	**Chiang Mai Arr**	**165.18**	**142**	PKP	**PKPdf**	**23 25 32.0**	**-0.1**
	comp=Z,2.5nm,0.3s,baz=255,slow=2.6,SNR=10						
CMAR				PKPab	**PKPab**	**23 26 28.4**	**-0.9**
	comp=Z,17nm,0.9s,baz=231,slow=5.9,SNR=26						
CMAR	**Chiang Mai Arr**	**165.18**	**142**		**PKPdf**	**23 25 31.2**	**-0.9**
CMAR				PKPab	**PKPab**	**23 26 28.5**	**-0.7**
CHTO	**Chiang Mai**	**165.48**	**142**	PKP2	**PKPab**	**23 26 29.7**	**-0.8**
CHTO	**Chiang Mai**	**165.48**	**142**	PKPab	**PKPab**	**23 26 29.7**	**-0.8**
QIZ	**Qiongzhong**	**168.42**	**187**	PKP	**PKPdf**	**23 25 33.0**	**-1.6**
QIZ				PP	**PP**	**23 30 33.9**	**+2.8**
QIZ				LR	LR		
	comp=Z,840nm,19.6s						
QIZ				LR	LR		
	comp=Z,680nm,20.6s						
QIZ				LR	LR		
	comp=Z,860nm,21.6s						
GTA	**Gaotai**	**168.73**	**36**	*e*PKP	**PKPdf**	**23 25 34.4**	**+0.1**
GTA				PKPab	**PKPab**	**23 26 43.8**	**-0.8**
GTA				PP	**PP**	**23 30 32.5**	**-1.1**
GTA				SKKS		23 37 15.8	
GTA				AMB	AMB		
	comp=Z,570nm,6.2s						
GTA				LR	LR		
	comp=Z,820nm,20.7s						
GTA				LR	LR		
	comp=Z,610nm,21.4s						
GTA				LR	LR		
	comp=Z,1µm,24.4s						
SSE	**Sheshan**	**169.00**	**276**	PKP	**PKPdf**	**23 25 37.6**	**+3.0**
SSE				AMB	AMB		
	comp=Z,130nm,4.6s						
SSE				LR	LR		
	comp=Z,410nm,18.4s						
SSE				LR	LR		
	comp=Z,230nm,19.5s						
QZH	**Quanzhou**	**169.37**	**241**	*i* PKP	**PKPdf**	**23 25 32.0**	**-3.0**
QZH				PP	**PP**	**23 30 35.8**	**-1.6**
QZH				SKKS		23 37 22.1	
QZH				SS	**SS**	**23 51 26.6**	**-5.8**
QZH				LR	LR		
	comp=Z,700nm,16.1s						
QZH				LR	LR		
	comp=Z,430nm,15.2s						
QZH				LR	LR		
	comp=Z,730nm,18.9s						
HHC	**Hu-ho-hao-te**	**169.44**	**347**	*e*PKP	**PKPdf**	**23 25 33.8**	**-0.9**
HHC				SKS	**SKSdf**	**23 32 28.0**	**-8.6**
HHC				SKKS	**SKKSac**	**23 37 26.4**	**+3.9**
HHC				SS	**SS**	**23 51 25.5**	**-5.3**
HHC				LR	LR		
	comp=Z,1µm,19.8s						
HHC				LR	LR		
	comp=Z,2µm,19.6s						
HHC				LR	LR		
	comp=Z,2µm,21.0s						
SLVN	**Son La**	**169.94**	**155**	PKPab	**PKPab**	**23 26 50.0**	**-0.2**
NJ2	**Nanjing**	**170.94**	**282**	*e*PKP	**PKPdf**	**23 25 36.3**	**+0.6**
KMI	**Kunming**	**172.60**	**136**	PKP	**PKPdf**	**23 25 36.0**	**-1.0**
LZH	**Lanzhou**	**173.32**	**34**	PKP	**PKPdf**	**23 25 35.6**	**-1.3**
LZH				SKKS		23 37 43.9	
LZH				AMB	AMB		
	comp=Z,760nm,4.9s						
LZH				LR	LR		
	comp=Z,510nm,16.8s						
LZH				LR	LR		
	comp=Z,1µm,17.6s						
LZH				LR	LR		
	comp=Z,770nm,20.1s						
GYA	**Guiyang**	**175.62**	**159**	⇑PKP	**PKPdf**	**23 25 36.6**	**-1.2**
GYA				PKPab	**PKPab**	**23 27 13.4**	**-1.9**
GYA				PP	**PP**	**23 31 05.8**	**-1.2**
GYA				SKKS		23 37 53.5	
GYA				SS	**SS**	**23 52 29.3**	**-2.0**
GYA				AMB	AMB		
	comp=Z,640nm,13.7s						
GYA				LR	LR		
	comp=Z,910nm,17.4s						
CD2	**Chengdu**	**175.99**	**84**	PKP	**PKPdf**	**23 25 37.8**	**+0.1**
CD2				SKKS		23 37 58.1	
CD2				SS	**SS**	**23 52 35.0**	**-3.0**
CD2				AMB	AMB		
	comp=Z,2µm,12.9s						
CD2				LR	LR		
	comp=Z,1µm,20.1s						
CD2				LR	LR		
	comp=Z,750nm,20.1s						
CD2				LR	LR		
	comp=Z,2µm,18.7s						
XAN	**Xi'an**	**176.53**	**353**	PKP	**PKPdf**	**23 25 36.5**	**-1.2**
XAN				PKPab	**PKPab**	**23 27 16.3**	**-2.8**
XAN				PP	**PP**	**23 31 09.8**	**-1.3**
XAN				SKKS		23 37 58.0	
XAN				SS	**SS**	**23 52 35.6**	**-3.8**
XAN				AMB	AMB		
	comp=Z,1µm,11.2s						
XAN				LR	LR		
	comp=Z,1µm,22.6s						
XAN				LR	LR		
	comp=Z,440nm,20.6s						
XAN				LR	LR		
	comp=Z,1µm,17.9s						
ENH	**Enshi**	**179.01**	**252**		**PKPdf**	**23 25 37.5**	**-0.6**

GEN ***21*** *23:06:11, 44°.61N×10°.15E, h23^{km}±1^{km}, ML2.1*
LDG ***21*** *23:06:12.3±0.1, 44°.63N×10°.10E, h24^{km}, Ml2.3/13, Error ellipse: s-maj=1.7km s-min=1.3km az=63.0*
ROM ***21*** *23:06:12.7±0.1, 44°.619N±0°.009×10°.14E±0°.01, h24^{km}±1^{km}, ML2.6/7, Error ellipse: s-maj=1.1km s-min=0.8km az=140.0*
ISC 21 23:06:12.3±0.9**, 44°.59N**±0°.02×**10°.10E**±0°.02**, h26**^{km}±5^{km}**, n53,** σ**2^{s}05**/95**, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRAM	**Graiana**	**0.10**	**192**	P	**Pb**	**23 06 17.2**	**0.0**
GRAM				S	**Sb**	**23 06 20.8**	**+0.4**
GRAM	**Graiana**	**0.10**	**192**	P	**Pb**	**23 06 17.2**	**0.0**
GRAM				S	**Sb**	**23 06 21.1**	**+0.7**
NEVI	**Neviano degli**	**0.16**	**92**	P	**Pb**	**23 06 17.2**	**-0.4**
NEVI				S	**Sb**	**23 06 21.7**	**+0.5**
PRMA	**PARMA**	**0.23**	**42**	P	**Pb**	**23 06 17.7**	**-0.8**
PRMA				S	**Sb**	**23 06 22.9**	**+0.2**
EQUI	**Equi**	**0.42**	**174**	P	**Pb**	**23 06 21.5**	**+0.2**
EQUI				S	**Sn**	**23 06 28.7**	**-1.0**
SARO	**Sassorosso**	**0.46**	**151**	P	**Pb**	**23 06 22.1**	**+0.2**
SARO				S	**Sn**	**23 06 29.8**	**-1.0**
SARO	**Sassorosso**	**0.46**	**151**	P	**Pb**	**23 06 22.1**	**+0.2**
SARO				S	**Sn**	**23 06 29.7**	**-1.0**
SARO				AML	AML		
	comp=N,249µm,0.7s						
SARO				AML	AML		
	comp=E,160µm,0.3s						
VLC	**Villacollemand**	**0.48**	**154**	AML	AML		
	comp=E,296µm,1.6s						
VLC				AML	AML		
	comp=N,656µm,0.7s						
VLC				AML	AML		
	comp=N,647µm,0.7s						
VLC				AML	AML		
	comp=E,322µm,0.7s						
MSSA	**Maissana**	**0.50**	**237**	P	**Pn**	**23 06 23.6**	**-0.1**
MSSA				S	**Sn**	**23 06 32.0**	**+0.4**
GORR	**Gorreto**	**0.57**	**272**	P	**Pn**	**23 06 24.8**	**0.0**
GORR				S	**Sn**	**23 06 35.1**	**+1.7**
CARD	**Cardoso**	**0.63**	**154**	P	**Pn**	**23 06 25.6**	**+0.1**
CARD				S	**Sn**	**23 06 34.8**	**+0.1**
CARD	**Cardoso**	**0.63**	**154**	P	**Pn**	**23 06 25.0**	**-0.5**
CARD				S	**Sn**	**23 06 35.0**	**+0.3**

MDI	Monti di Nese	1.22	347	P	Pb	23 06 35.3	+0.5
MDI				S	Sb	23 06 50.4	+0.3
MAGA	Magasa	1.25	17	P	Pn	23 06 34.6	+0.5
MAGA				S	Sb	23 06 51.7	+0.9
MAGA				AML	AML		
	comp=N,282µm,0.3s						
MAGA				AML	AML		
	comp=E,458µm,0.8s						
ROVR	Rover Verones	1.26	33	P	Pn	23 06 34.7	+0.3
ROVR				S	Sb	23 06 51.2	-0.2
ROVR				AML	AML		
	comp=E,256µm,0.4s						
ROVR				AML	AML		
	comp=E,106µm,0.3s						
ROVR				AML	AML		
	comp=N,586µm,0.3s						
ROVR				AML	AML		
	comp=N,234µm,0.3s						
TEOL	Teolo	1.36	55	P	Pb	23 06 36.6	-0.4
TEOL				S	Sb	23 06 53.8	-0.2
TEOL				AML	AML		
	comp=N,290µm,1.0s						
TEOL				AML	AML		
	comp=E,364µm,0.4s						
MABI	Malga Bissina	1.50	11	P	Pn	23 06 38.1	+0.5
MABI				S	Sb	23 06 57.4	-0.8
DOSS	Dosso del Somm	1.50	30	P	Pn	23 06 37.8	0.0
DOSS				S	Sb	23 06 58.4	0.0
DOSS				AML	AML		
	comp=E,158µm,0.5s						
DOSS				AML	AML		
	comp=N,112µm,0.5s						
CTI	Castel Tesino	1.82	36	P	Pn	23 06 42.4	+0.3
CTI				S	Sn	23 07 04.6	+0.1
CTI				AML	AML		
	comp=N,93µm,1.4s						
CTI				AML	AML		
	comp=E,90µm,1.3s						
SBF	Sospel	2.04	250	eP	Pn	23 06 46.8	+1.7
SBF				eSg	Sb	23 07 17.4	+3.6
	comp=E,16nm,0.5s						
MCIV	Monte Civitell	2.14	147	S	Sb	23 07 16.0	-0.6
PGF	Pioggiola	2.19	202	eP	Pn	23 06 48.4	+1.3
PGF				eSn	Sn	23 07 10.9	-2.5
	comp=E,3.4nm,0.3s						
MAON	Monte Argentar	2.29	160	S	Sb	23 07 20.0	-0.7
MBDF	Montbardon	2.38	274	ePn	Pn	23 06 48.0	-1.7
MBDF	Montbardon	2.38	274	ePg	Pb	23 06 56.9	+2.4
MBDF				eSg	Sb	23 07 27.1	+3.7
	comp=E,2.2nm,0.4s						
FETA	Feichten	2.47	10	ePn	Pb	23 06 55.1	-1.0
	comp=E,0.3nm,0.2s						
FETA				eSn	Sn	23 07 22.8	+2.3
	comp=E,2.6nm,0.5s						
LPG	La Plagne	2.54	292	eP	Pn	23 06 52.6	+0.5
LPL	La Plagne	2.56	292	ePn	Pn	23 06 50.3	-2.0
LPL				eSg	Sb	23 07 33.0	+4.3
	comp=E,0.8nm,0.3s						
FRF	La Foret Royal	2.69	249	eP	Pn	23 06 55.9	+2.0
FRF				eSn	Sn	23 07 22.3	-3.3
	comp=E,2.4nm,0.3s						
DAVA	Damuels	2.70	357	ePn	Pb	23 06 57.6	-2.4
	comp=E,2.0nm,0.3s						
DAVA				eSn	Sn	23 07 28.1	+1.9
	comp=E,1.0nm,0.2s						
ABTA	Abfaltersbach	2.74	37	ePn	Pn	23 06 56.7	+2.0
	comp=E,2.1nm,0.4s						
ABTA				Sn	Sn	23 07 29.5	+2.4
	comp=E,3.7nm,0.4s						
SQTA	Sankt Quirin	2.74	16	ePn	Pn	23 06 57.3	+2.6
	comp=E,1.7nm,0.2s						
SQTA				eSn	Sn	23 07 29.4	+2.3
	comp=E,3.7nm,0.4s						
MOTA	Moosalm	2.84	14	ePn	Pn	23 06 58.9	+2.7
	comp=E,0.6nm,0.1s						
MOTA				eSn	Sn	23 07 31.8	+2.1
	comp=E,1.8nm,0.3s						
WTTA	Wattenberg	2.88	21	ePn	Pn	23 06 58.7	+2.0
	comp=E,1.9nm,0.2s						
WTTA				Sn	Sn	23 07 32.1	+1.5
	comp=E,2.6nm,0.3s						
WATA	Walderalm	2.94	20	ePn	Pn	23 06 59.7	+2.3
	comp=E,1.2nm,0.2s						
WATA				eSn	Sn	23 07 33.3	+1.4
	comp=E,2.4nm,0.3s						
RETA	Reutte	2.94	9	ePn	Pn	23 06 58.6	+1.3
	comp=E,0.5nm,0.2s						
RETA				eSn	Sn	23 07 33.3	+1.5
	comp=E,1.9nm,0.3s						
ORIF	Oris-en-Rattie	3.02	278	ePn	Pn	23 06 56.8	-1.7
ORIF	Oris-en-Rattie	3.02	278	eP	Pn	23 06 59.9	+1.4
ORIF				eSn	Sn	23 07 29.9	-4.0
	comp=E,0.9nm,0.2s						
RABC	Rab	3.35	86	ePn	Pn	23 07 02.6	-0.3
NVLJ	Novalja	3.41	89	ePn	Pn	23 07 04.8	+1.0
NVLJ				Sn	Sn	23 07 41.8	-1.6
CABF	La Chapelle	3.46	307	eP	Pn	23 07 05.8	+1.2
CABF				eSn	Sn	23 07 40.2	-4.6
	comp=E,0.7nm,0.3s						
DUGI	Dugi Otok	3.61	98	ePn	Pn	23 07 07.2	+0.6
DUGI				Sn	Sn	23 07 45.5	-2.9
HINF	Hinteralfeld	3.94	326	ePn	Pn	23 07 08.4	-2.6
HINF	Hinteralfeld	3.94	326	eP	Pn	23 07 12.4	+1.4
HINF				eSn	Sn	23 07 51.2	-5.2
	comp=E,1.0nm,0.2s						
MORI	Morici	4.10	98	ePn	Pn	23 07 14.1	+0.9
MORI				Sn	Sn	23 07 58.7	-1.5
ZIRJ	Zirje	4.10	101	ePn	Pn	23 07 13.6	+0.3
ZIRJ				Sn	Sn	23 07 58.0	-2.4
CDF	Champ du Feu	4.29	334	ePn	Pn	23 07 13.6	-2.4
CDF	Champ du Feu	4.29	334	eP	Pn	23 07 17.4	+1.4
CDF				eSn	Sn	23 07 59.7	-5.5
	comp=E,0.8nm,0.3s						
HAU	Haudompre	4.29	324	ePn	Pn	23 07 13.9	-2.0
HAU	Haudompre	4.29	324	eP	Pn	23 07 17.2	+1.3
HAU				eSn	Sn	23 07 59.8	-5.3
	comp=E,2.3nm,0.3s						
MOA	Molln	4.36	40	ePn	Pn	23 07 18.4	+1.5
	comp=E,0.2nm,0.1s						
MOA				i Sn	Sn	23 08 06.2	-0.7
	comp=E,1.0nm,0.3s						
LOR	Lormes	5.11	304	eP	Pn	23 07 29.1	+2.0
	baz=121						
LOR				eSn	Sn	23 08 19.3	-6.0
	comp=E,0.9nm,0.4s						
RICI	Ricice	5.19	100	ePn	Pn	23 07 30.0	+1.8
RICI				Sn	Sn	23 08 27.2	0.0

SJA 21 23:17:21.0, 30°.52S×72°.04W, h10^{km}, ML4.4, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO04	Tololo Observa	1.13	72	i P	Pg	23 17 40.0	-2.7
LCO	Las Campanas	1.90	38	i P	Pn	23 17 53.0	-0.8
AROD	Rodeo	2.25	82	i P	Pn	23 17 58.0	-0.6
AC04	Llanos de Chal	2.46	20	i P	Pn	23 18 01.0	-0.1
ACDV	Cuesta del Vie	2.55	83	i P	Pn	23 18 03.0	+0.4
ACCO	Cerro Coronel	2.57	92	i P	Pn	23 18 03.0	0.0
VA03	San Esteban	2.57	151	i P	Pn	23 18 02.0	-0.8
RTLS	Leoncito	2.67	119	i P	Pn	23 18 04.0	-0.4
AUSP	Uspallata	2.83	127	i P	Pn	23 18 06.0	-0.6
MT02	Curacav	2.84	165	i P	Pn	23 18 06.0	-0.4
PEL	Peldehue	2.86	157	i P	Pn	23 18 06.0	-0.7
ZON	Zonda	3.06	110	i P	Pn	23 18 11.0	+1.5
MT05	Renca	3.07	159	i P	Pn	23 18 11.0	+1.4
RTCV	Cerro Valdivia	3.28	115	i P	Pn	23 18 13.0	+0.4
GO03	Copiap	3.32	29	i P	Pn	23 18 14.0	+1.0
MT01	Popeta	3.40	169	i P	Pn	23 18 15.0	+0.9
ASAL	Salagasta	3.43	128	i P	Pn	23 18 15.0	+0.4
ARCO	CERRO ARCO	3.52	132	i P	Pn	23 18 17.0	+1.1
AAGR	Agrelo	3.74	134	i P	Pn	23 18 20.0	+1.0
VCA	Vinchina	3.78	63	i P	Pn	23 18 21.0	+1.5
BO01	Tunca	3.94	168	i P	Pn	23 18 22.0	+0.4
BO02	Sierra Bellavi	4.39	166	i P	Pn	23 18 29.0	+1.2
AC02	Maricunga	4.47	36	i P	Pn	23 18 30.0	+0.7
GO05	Huala	4.48	179	i P	Pn	23 18 27.0	-2.0
ACLC	CERRO LA CRUZ	4.55	77	i P	Pn	23 18 30.0	-0.1
APLL	PUNTA DE LOS L	4.76	90	i P	Pn	23 18 32.0	-0.9
RFA	San Rafael	5.20	146	i P	Pn	23 18 38.0	-0.9
CYA	Choya	5.82	71	i P	Pn	23 18 46.0	-1.4

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*BJI **21** 23:20:23.5±0.0, 36°.44N×140°.89E, h59^{km}, mB4.9/21, mb4.9/51, Ms4.3/22, Ms7 4.1/24*

*MOS **21** 23:20:25.2±0.9, 36°.52N×140°.68E, h46^{km}, mb5.4/26, Error ellipse: s-maj=6.7km s-min=4.1km az=108.6*

*NEIC **21** 23:20:26.8±1.5, 36°.45N±0°.04×140°.74E±0°.07, h44^{km}±4^{km}, mb5.0/193, Mwr4.7/24, Error ellipse: s-maj=9.0km s-min=4.8km az=122.0*

*JMA **21** 23:20:26.9±0.1, 36°.43N×140°.69E, h52^{km}±1^{km}, M4.8 Broadband fault plane solution: P waves. NP1: ϕ_s212.00000°, δ28.00000°, λ95.00000°. NP2: ϕ_s26.00000°, δ62.00000°, λ87.00000°. Principal axes: T Plg73.0000°, Azm289.0000°; N Plg3.0000°, Azm27.0000°; P Plg17.0000°, Azm118.0000°;*

JMA Felt IV J1.

*NIED **21** 23:20:27.0, 36°.43N×140°.69E, h52^{km}, MW4.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.07; M$_{\theta\theta}$-0.09; M$_{\phi\phi}$-0.98; M$_{r\theta}$0.48; M$_{\theta\phi}$-0.10; M$_{\phi r}$1.14; Fault plane solution: M$_0$1.62000×10^{16} NP1: ϕ_s19.00000°, δ70.00000°, λ98.00000°. NP2: ϕ_s177.00000°, δ21.00000°, λ70.00000°.*

*NEIC **21** 23:20:27.1, 36°.44N×140°.75E, h47^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.74; M$_{\theta\theta}$-0.17; M$_{\phi\phi}$-0.56; M$_{r\theta}$0.36; M$_{\theta\phi}$-0.32; M$_{\phi r}$0.86; Fault plane solution: M$_0$1.19000×10^{16} NP1: ϕ_s214.92000°, δ19.56000°, λ100.20000°. NP2: ϕ_s24.11000°, δ70.76000°, λ86.40000°. Principal axes: T 1.1858, Plg64.0000°, Azm288.0000°; N 0.0029, Plg3.0000°, Azm25.0000°; P -1.1887, Plg26.0000°, Azm117.0000°;*

*IDC **21** 23:20:27.1±1.6, 36°.44N×140°.66E, h52^{km}±14^{km}, mb4.6/30, mb1 4.7/33, mb1mx4.6/45, mbtmp4.9/33, ML4.3/3, MS3.8/7, Ms1 3.8/7, ms1mx3.6/43 Error ellipse: s-maj=13.5km s-min=8.7km az=92.0*

*BGR **21** 23:20:29.2±0.0, 37°.50N×141°.50E, h33^{km}, mb5.4*

ISC 21 23:20:26.3±0.5, 36°.43N±0°.03×140°.72E±0°.04, h48^{km}±4^{km}, n723, σ1^{s}24/749, mb5.0/200, MS4.0/11, 89C-68D, Fault plane solution: NP1: ϕ_s138.73508°, δ27.23815°, λ17.78870°. NP2: ϕ_s32.81327°, δ81.96212°, λ116.11228°. Principal axes: T Plg46.6831°, Azm329.7915°; N Plg25.8367°, Azm208.8925°; P Plg31.9936°, Azm101.2851°; Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHYU	Hitachinakayam	0.14	231	⇑P	Pn	23 20 35.2	+1.1
JHYU				S	Sn	23 20 40.7	+1.2
JHO	Hitachi	0.22	326	⇑P	Pn	23 20 35.5	+0.9
JHO				S	Sn	23 20 41.4	+0.9
JYT	Yasato	0.47	245	⇓P	Pn	23 20 37.8	+0.7
JYT				eS	Sn	23 20 45.3	+0.5
JYT	Yasato	0.47	245		Pn	23 20 37.9	+0.8
JYT				Sn	Sn	23 20 45.3	+0.5
JIHU	Itakohorinouch	0.49	199	⇑P	Pn	23 20 38.3	+1.0
ONAJ	Iwakimizuishiy	0.68	5	⇓P	Pn	23 20 40.0	+0.3
ONAJ				S	Sn	23 20 49.3	-0.1
JSMT	Sammumatsuo	0.81	196	⇑P	Pn	23 20 42.7	+1.2
JFK	Kawauchi	0.94	7	⇓P	Pn	23 20 43.2	-0.1
JFK				S	Sn	23 20 55.1	-0.6
JAG	Ashikaga	1.02	270	⇓P	Pn	23 20 44.9	+0.6
JFT	Otama	1.13	344	⇓P	Pn	23 20 46.5	+0.7
JFT				S	Sn	23 21 01.0	+0.8
JKT	Katashina	1.23	286	⇓P	Pn	23 20 48.0	+0.7
JFY	Yanaizu	1.27	320	⇓P	Pn	23 20 48.6	+0.9
JFY				S	Sn	23 21 02.2	-1.5
JMM	Marumori	1.44	2	⇓P	Pn	23 20 50.6	+0.7
JMM				S	Sn	23 21 07.8	+0.2
JMM	Marumori	1.44	2		Pn	23 20 50.6	+0.7
JMM				Sn	Sn	23 21 07.7	0.0
MJAR	Matsushiro Arr	2.03	274	P	Pn	23 20 58.5	+0.4
	45nm,0.3s,baz=106,slow=10.0,SNR=627						
MJAR				S	Sn	23 21 13.6	-8.6
	51nm,0.3s,baz=86,slow=17,SNR=14						
MJAR				LR	LR	23 21 55.9	
	comp=Z,3µm,21.8s,baz=95,slow=46						
MJAR	Matsushiro Arr	2.03	274	P	Pn	23 20 58.6	+0.5
MJAR	Matsushiro Arr	2.03	274	Pn	Pn	23 20 58.6	+0.5
MAJO	Matsushiro	2.03	274	P	Pn	23 20 59.3	+1.2
MAJO	Matsushiro	2.03	274	Pn	Pn	23 20 59.2	+1.2
MAJO	Matsushiro	2.03	274	P	Pn	23 21 00.0	+1.9
MAT	Matsushiro	2.03	274	P	Pn	23 20 58.9	+0.8
MAT				S	Sn	23 21 24.2	+1.9
MJB9	Matsu-Tunnel	2.03	274		Pn	23 20 59.5	+1.3
JSD	Sado	2.54	310	Pn	Pn	23 21 05.7	+0.6
JSG	Sagara	2.71	231		Pn	23 21 09.1	+1.7
JGF	Kuroka	2.85	254		Pn	23 21 11.8	+2.5
INU	Inuyama	3.20	251	Pn	Pn	23 21 16.1	+2.0
INU	Inuyama	3.20	251	P	Pn	23 21 16.6	+2.6
JHJ	Hachijo jima 2	3.39	193	P	Pn	23 21 17.3	+0.6
	148nm,0.3s,baz=53,slow=22,SNR=14						
JHJ				S	Sn	23 21 57.1	+1.4
	450nm,0.3s,baz=78,slow=22,SNR=14						
JHJ2	Mitsune	3.39	193		Pn	23 21 17.8	+1.1
JHJ2	Mitsune	3.39	193	P	Pn	23 21 18.2	+1.5
JTM	Tenmabayashi	4.36	3		Pn	23 21 32.0	+2.0
JWT	Wachi	4.47	257	Pn	Pn	23 21 33.6	+2.1
ERM	Erimo	5.89	18	P	Pn	23 21 50.5	-0.5
ERM	Erimo	5.89	18		Pn	23 21 50.5	-0.5
ERM	Erimo	5.89	18	P	Pn	23 21 50.6	-0.4
JMN	Monobe	6.22	246	Pn	Pn	23 21 57.2	+1.6
JHS	Saijyo	6.35	259	Pn	Pn	23 22 00.1	+2.7
JEW	Eniwo	6.43	5		Pn	23 21 58.0	-0.4
JKA	Kamikawa-asahi	7.81	10	Pn	Pn	23 22 15.8	-1.5
ASAJ	Asahikawa	7.81	10	P	Pn	23 22 16.4	-0.9
	6.8nm,0.3s,baz=214,slow=11,SNR=31						
ASAJ				S	Sn	23 23 40.5	-3.9
	5.6nm,0.3s,baz=304,slow=32,SNR=7.1						
ASAJ				LR	LR	23 25 23.7	
	comp=Z,251nm,20.6s,baz=312,slow=38						
ASAJ	Asahikawa	7.81	10	P	Pn	23 22 16.4	-0.9
GLVR	Golovnino	8.17	25	P	Pn	23 22 21.8	-0.4
GLVR				S	Sn	23 23 48.4	-4.8
GRPR	Tuman	8.48	26	eP	Pn	23 22 26.0	-0.5
GRPR				eS	Sn	23 23 53.2	-7.6
GRPR				pmax	pmax		
	comp=N,78nm,0.4s						
GRPR				pmax	pmax		
	comp=E,74nm,0.4s						
GRPR				pmax	pmax		
	comp=Z,91nm,0.4s						
YUK	Yuzh-Kuril'sk	8.55	26	⇑eP	Pn	23 22 27.0	-0.4
JNU	Nakatsue	8.74	251		Pn	23 22 30.5	+0.3
TEY	Ternei	9.15	341	⇓eP	Pn	23 22 37.3	+1.7
TEY				pmax	pmax		
	comp=N,10.0nm,0.9s						
TEY				pmax	pmax		
	comp=Z,10.0nm,1.2s						
TEY				pmax	pmax		
	comp=E,10.0nm,0.9s						
JCJ	Chichijima	9.39	172	P	Pn	23 22 35.9	-3.1
	comp=E,62nm,0.3s,baz=287,slow=23,SNR=52						
JCJ				S	Sn	23 24 12.4	-11
	comp=E,40nm,0.3s,baz=283,slow=22,SNR=3.1						
JCJ	Chichijima	9.39	172	P	Pn	23 22 35.7	-3.3
VLA	Vladivostok	9.53	317	i P	Pn	23 22 44.4	+3.5
JSU	Suzuyama	9.84	243		Pn	23 22 46.4	+1.2
USA0B	Ussuriysk Arra	10.23	322	P	Pn	23 22 52.3	+1.9
USA0B	Ussuriysk Arra	10.23	322		Pn	23 22 52.3	+1.9
USRK	Ussuriysk Ar.	10.23	322	P	Pn	23 22 53.8	+3.4
	baz=123,slow=10,SNR=27						
USRK				LR	LR	23 26 33.1	
	comp=E,758nm,20.0s,baz=141,slow=36						
USRK	Ussuriysk Ar.	10.23	322	P	Pn	23 22 52.6	+2.2
USRK	Ussuriysk Ar.	10.23	322		Pn	23 22 52.6	+2.2
KSRS	Korea Array	10.30	280	P	Pn	23 22 56.0	+4.6
	comp=E,1.2nm,0.3s,baz=95,slow=14,SNR=47						
KSRS				LR	LR	23 26 40.6	
	comp=E,715nm,19.8s,baz=39,slow=36						
KSAR	Wonju Array Be	10.33	279	P	Pn	23 22 54.1	+2.3
KSAR	Wonju Array Be	10.33	279		Pn	23 22 54.1	+2.3
KS19	Wonju Array Si	10.34	280		Pn	23 22 55.1	+3.1
YSS	Yuzh-Sakhalins	10.63	8	⇑iP	Pn	23 22 54.7	-1.1
YSS				pmax	pmax		
	comp=Z,23nm,0.7s						
YSS	Yuzh-Sakhalins	10.63	8	Pn	Pn	23 22 54.5	-1.3
INCN	Inchon	11.32	280	P	Pn	23 23 06.5	+1.1
MDJ	Mudanjiang	11.77	317	P	Pn	23 23 14.0	+2.6
MDJ				sP		23 23 28.0	
MDJ				S	Sn	23 25 22.6	+1.4
MDJ				sS		23 25 37.1	
MDJ				pmax	pmax		
	comp=Z,40nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,170nm,6.3s						
MDJ				LR	LR		
	comp=Z,430nm,24.3s						
MDJ				LR	LR		
	comp=Z,400nm,23.5s						
MDJ				LR	LR		
	comp=Z,740nm,24.7s						
CN2	Changchun	13.80	307	eP	Pn	23 23 42.1	+2.9
CN2				eS	Sn	23 26 14.3	+3.4
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,300nm,20.0s						
CN2				LR	LR		
	comp=Z,300nm,20.0s						
CN2				LR	LR		
	comp=Z,200nm,21.0s						
JOW	Kunigami	14.27	231	P	P	23 23 48.8	-2.9
	comp=Z,0.3nm,0.3s,baz=50,slow=22,SNR=1.9						
JOW	Kunigami	14.27	231	Pn	Pn	23 23 47.5	+1.9
KLR	Kul'dur	14.37	336	P	Pn	23 23 45.8	-1.0
	comp=Z,0.4nm,0.3s,baz=141,slow=9.3,SNR=11						
KLR				LR	LR	23 29 13.5	
	comp=Z,337nm,19.6s,baz=154,slow=37						
KLR	Kul'dur	14.37	336	P	Pn	23 23 45.8	-1.0
NJ2	Nanjing	18.59	263	eP	Pn	23 24 41.8	+1.6
NJ2				pmax	pmax		
	comp=Z,19nm,0.6s						
TIA	Tai'an	19.01	276	PKP	P	23 24 43.1	-1.0
TIA				PP		23 30 33.1	
BJI	Beijing	19.60	288	P	P	23 24 50.1	-0.4
BJI				pP	pP	23 24 59.8	-1.8
BJI				pmax	pmax		
	comp=Z,33nm,0.6s						
BJT	Baijiatuau	19.60	288	P	P	23 24 50.0	-0.6
BJT				pmax	pmax		
	comp=Z,20nm,0.6s						
BJT	Baijiatuau	19.60	288	P	P	23 24 50.0	-0.6
ZEA	Zeya	19.69	336	eP	P	23 24 49.0	-2.3
ZEA				pmax	pmax		
	comp=E,10.0nm,0.6s						
ZEA				pmax	pmax		
	comp=N,20nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,50nm,0.8s						
HIA	Hailar	19.95	317	P	P	23 24 53.1	-1.1
HIA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HIA	Hailar	19.95	317	P	P	23 24 53.1	-1.1
YHNB	Yeheng	20.33	240	P	P	23 24 57.0	-1.6
YHNB				IAmb	IAmb	23 25 19.8	
	comp=Z,110nm,1.7s						
PET	Petropavlovsk	20.82	32	⇑eP	P	23 25 04.7	+1.1
PET				pmax	pmax		
	comp=Z,127nm,1.5s						
SSLB	Suanglung	21.19	239	P	P	23 25 06.4	-1.5
YULB	Yu-li	21.22	238	P	P	23 25 07.0	-1.1
TWG	Pinlang	21.75	237	P	P	23 25 13.1	-0.7
TWG				IAmb	IAmb	23 25 21.7	
	comp=Z,103nm,1.4s						
TIY	Taiyuan	22.58	282	eP	P	23 25 24.0	+1.3
TIY				PP		23 27 00.0	
TIY				S	S	23 29 21.1	-5.8
TIY				pmax	pmax		
	comp=Z,140nm,0.5s						
TIY				pmax	pmax		
	comp=Z,250nm,4.1s						
TIY				LR	LR		
	comp=N,210nm,5.2s						
TIY				LR	LR		
	comp=E,340nm,14.9s						
TIY				LR	LR		
	comp=Z,400nm,16.7s						
WHN	Wuhan	22.73	263	⇓P	P	23 25 22.5	-1.7
WHN				S	S	23 29 24.4	-5.0
WHN				pmax	pmax		
	comp=Z,48nm,1.0s						
WHN				LR	LR		
	comp=Z,2µm,25.3s						
HHC	Hu-ho-hao-te	23.15	290	eP	P	23 25 26.3	-2.3
HHC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,91nm,4.4s						
HHC				LR	LR		
	comp=Z,190nm,12.9s						
HHC				LR	LR		
	comp=Z,300nm,15.7s						
HHC				LR	LR		
	comp=Z,370nm,13.7s						
MA2	Magadan	24.06	13	P	P	23 25 37.0	+0.1
	comp=Z,14nm,0.7s,baz=185,slow=11,SNR=7.0						
MA2				LR	LR	23 34 49.8	
	comp=Z,140nm,19.9s,baz=169,slow=36						
MA2	Magadan	24.06	13	P	P	23 25 37.0	+0.1
MA2	Magadan	24.06	13	P	P	23 25 36.9	+0.1
XAN	Xi'an	26.03	274	⇓P	P	23 25 54.3	-0.7
XAN				pP	pP	23 26 08.5	+1.1
XAN				sP	sP	23 26 16.3	+3.2
XAN				PcP	PcP	23 29 22.5	+0.4
XAN				S	S	23 30 21.1	-1.5
XAN				SS	SnSn	23 31 30.3	+6.9
XAN				pmax	pmax		
	comp=Z,31nm,0.6s						
XAN				LR	LR		
	comp=Z,280nm,13.1s						
XAN				LR	LR		
	comp=Z,380nm,13.1s						
XAN				LR	LR		
	comp=Z,660nm,17.9s						
YAK	Yakutsk	26.54	348	⇑eP	P	23 25 59.2	-0.1
YAK				pmax	pmax		
	comp=Z,61nm,0.8s						
ENH	Enshi	26.73	266	P	P	23 26 00.7	-0.7
ENH				IAmb	IAmb	23 26 01.7	
	comp=Z,49nm,0.7s						
ULN	Ulaanbaatar	27.24	305	ceP	P	23 26 05.7	-0.3
ULN				pmax	pmax		
	comp=Z,17nm,0.8s						
ULN	Ulaanbaatar	27.24	305	P	P	23 26 06.5	+0.6
ULN				P	P	23 26 06.5	+0.6
ULN	Ulaanbaatar	27.24	305	P	P	23 26 05.5	-0.5
ULN				IAmb	IAmb	23 26 21.3	
	comp=Z,58nm,1.0s						
SEY	Seymchan	27.49	12	P	P	23 26 08.6	+0.8
	comp=Z,18nm,0.8s,baz=200,slow=11,SNR=4.9						
SEY				LR	LR	23 37 43.9	
	comp=Z,230nm,19.2s,baz=208,slow=38						
SEY	Seymchan	27.49	12	P	P	23 26 08.6	+0.8
SONM	Songino Array	27.67	305	P	P	23 26 09.4	-0.4
	comp=Z,16nm,0.7s,baz=107,slow=9.0,SNR=38						
SONM				PcP	PcP	23 29 26.3	+0.5
	comp=Z,1.9nm,0.6s,baz=106,slow=1.5,SNR=3.5						
SONM	Songino Array	27.67	305	P	P	23 26 09.4	-0.4
SONM				pmax	pmax		
	comp=Z,26nm,1.1s						
SONM	Songino Array	27.67	305	P	P	23 26 09.4	-0.4
H11N2	WAKE ISLAND Hy	28.33	119	T	T	23 56 16.5	
	baz=312,slow=75,SNR=137						
H11N1	WAKE ISLAND Hy	28.34	119	T	T	23 56 18.3	
	baz=312,slow=75,SNR=252						
H11N3	WAKE ISLAND Hy	28.35	119	T	T	23 56 17.9	
	baz=312,slow=75,SNR=196						
H11S1	WAKE ISLAND Hy	29.01	121	T	T	23 57 09.1	
	baz=314,slow=76,SNR=779						
H11S3	WAKE ISLAND Hy	29.01	121	T	T	23 57 08.7	
	baz=314,slow=76,SNR=436						
H11S2	WAKE ISLAND Hy	29.03	121	T	T	23 57 05.2	
	baz=314,slow=76,SNR=552						
LZH	Lanzhou	29.63	280	eP	P	23 26 25.3	-2.0
LZH				pP	pP	23 26 36.4	-3.4
LZH				PcP	PcP	23 29 29.3	-1.7
LZH				pmax	pmax		
	comp=Z,19nm,1.3s						
GYA	Guiyang	30.57	261	⇓iP	P	23 26 34.9	-0.8
GYA				pP	pP	23 26 46.8	-1.4
GYA				pmax	pmax		
	comp=Z,33nm,1.1s						
CD2	Chengdu	31.12	271	eP	P	23 26 40.0	-0.4
GTA	Gaotai	32.22	288	eP	P	23 26 50.0	-0.1
GTA				PcP	PcP	23 29 38.4	+0.7

GTA				pmax	pmax		
	comp=Z,11nm,0.9s						
GTA				LR	LR		
	comp=Z,220nm,16.0s						
GTA				LR	LR		
	comp=Z,290nm,16.7s						
GTA				LR	LR		
	comp=Z,250nm,14.9s						
DAV	Davao City (W)	32.33	209	P	P	23 26 48.7	-2.4
KMI	Kunming	34.32	262	⇑P	P	23 27 08.9	+0.2
KMI				pP	pP	23 27 20.1	-1.2
KMI				pmax	pmax		
	comp=Z,17nm,1.1s						
KMI				LR	LR		
	comp=Z,370nm,20.8s						
KMI				LR	LR		
	comp=Z,340nm,20.3s						
KMI				LR	LR		
	comp=Z,520nm,24.9s						
BILL	Bilibino	34.76	17	⇑eP	P	23 27 11.6	-0.1
BILL				e		23 28 30.3	
BILL				eSS	SS	23 34 49.5	-21
BILL				pmax	pmax		
	comp=Z,18nm,1.8s						
TIXI	Tiksi	35.83	354	P	P	23 27 20.7	-0.1
	comp=Z,8.9nm,0.5s,baz=148,slow=7.4,SNR=4.4						
TIXI	Tiksi	35.83	354	P	P	23 27 20.7	-0.1
TIXI	Tiksi	35.83	354	P	P	23 27 20.5	-0.3
TIXI				IAmb	IAmb	23 27 22.1	
	comp=Z,12nm,0.6s						
UBPT	Khong Chiam	37.77	245	P	P	23 27 38.0	+0.1
UBPT				IAmb	IAmb	23 27 52.9	
	comp=Z,35nm,1.5s						
FAKI	Fak Fak	39.94	193	P	P	23 27 56.5	+0.5
FAKI				IAmb	IAmb	23 28 14.9	
	comp=Z,23nm,0.9s						
DGZ	Jazzator, Alta	40.30	306	c iP	P	23 27 59.8	+0.9
DGZ				pmax	pmax		
	comp=Z,60nm,0.8s						
CHTO	Chiang Mai	40.60	256	P	P	23 28 00.9	-0.7
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CHTO	Chiang Mai	40.60	256	P	P	23 27 57.1	-4.5
CHTO	Chiang Mai	40.60	256	P	P	23 28 00.9	-0.7
WMQ	Urumqi	40.62	297	eP	P	23 28 02.8	+1.2
WMQ				pmax	pmax		
	comp=Z,43nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,170nm,3.7s						
WMQ				LR	LR		
	comp=Z,130nm,18.9s						
WMQ				LR	LR		
	comp=Z,18nm,21.7s						
WMQ				LR	LR		
	comp=Z,240nm,20.3s						
CMAR	Chiang Mai Arr	40.81	255	P	P	23 28 03.5	+0.2
	comp=Z,2.5nm,0.6s,baz=47,slow=7.8,SNR=4.1						
CMAR				PcP	PcP	23 30 05.0	+1.3
	comp=Z,1.6nm,0.4s,baz=21,slow=4.0,SNR=4.8						
CMAR	Chiang Mai Arr	40.81	255	P	P	23 28 03.5	+0.2
CMAR						23 30 05.0	
LSA	Lhasa	41.71	276	P	P	23 28 11.2	+0.1
LSA				pmax	pmax		
	comp=Z,32nm,1.3s						
LSA	Lhasa	41.71	276	P	P	23 28 11.2	+0.1
LSA				IAmb	IAmb	23 28 31.5	
	comp=Z,32nm,1.3s						
ZAA0	Zalesovo Array	41.91	313	P	P	23 28 12.1	+0.1
ZAA0				IAmb	IAmb	23 28 12.7	
	comp=Z,26nm,0.8s						
ZALV	Zalesovo Beam	41.91	313	P	P	23 28 12.0	+0.1
	comp=Z,25nm,0.8s,baz=97,slow=6.9,SNR=15						
ZALV				PcP	PcP	23 30 06.5	-0.1
	comp=Z,3.2nm,0.6s,baz=111,slow=4.2,SNR=3.1						
ZALV				LR	LR	23 45 49.1	
	comp=Z,152nm,21.2s,baz=74,slow=36						
ZALV	Zalesovo Beam	41.91	313	P	P	23 28 12.0	+0.1
ZALV						23 30 06.5	
ZALV	Zalesovo Beam	41.91	313	P	P	23 28 12.4	+0.5
SHL	Shillong	42.84	270	P	P	23 28 20.2	+0.1
SHL				pmax	pmax		
	comp=Z,19nm,1.0s						
SHL	Shillong	42.84	270	P	P	23 28 17.4	-2.7
SHL	Shillong	42.84	270	P	P	23 28 20.2	+0.1
NRIK	Noril'sk	43.59	336	P	P	23 28 25.2	0.0
	comp=Z,10nm,0.6s,baz=125,slow=8.9,SNR=7.2						
NRIK	Noril'sk	43.59	336	P	P	23 28 25.3	0.0
NRIK	Noril'sk	43.59	336	P	P	23 28 25.0	-0.2
NRIK				IAmb	IAmb	23 28 26.0	
	comp=Z,36nm,1.4s						
MK31	Makanchi Array	43.97	303	P	P	23 28 29.3	+0.6
MK31				pmax	pmax		
	comp=Z,18nm,0.8s						
MK31	Makanchi Array	43.97	303	P	P	23 28 29.3	+0.6
MK31				IAmb	IAmb	23 28 30.4	
	comp=Z,18nm,0.8s						
MKAR	Makanchi Array	43.97	303	P	P	23 28 29.6	+0.9
	comp=Z,19nm,0.7s,baz=81,slow=10,SNR=15						
MKAR	Makanchi Array	43.97	303	P	P	23 28 29.7	+0.9
MKAR	Makanchi Array	43.97	303	P	P	23 28 29.2	+0.5
MAKZ	Makanchi	44.18	303	P	P	23 28 31.3	+0.9
MAKZ				pmax	pmax		
	comp=Z,21nm,0.9s						
MAKZ	Makanchi	44.18	303	P	P	23 28 31.3	+0.9
MAKZ				IAmb	IAmb	23 28 32.2	
	comp=Z,20nm,0.8s						
KSM	Kuching	44.73	226	P	P	23 28 35.3	+0.3
KSM				IAmb	IAmb	23 28 36.9	
	comp=Z,14nm,0.8s						
TAPN	Taplejung	45.43	274	eP	P	23 28 41.0	+0.1
	comp=Z,22nm,0.5s						
KAPI	Kappang	45.66	210	P	P	23 28 36.9	-5.5
KAPI				P	P	23 28 36.9	-5.5
KURK	Kurchatov	45.87	308	deP	P	23 28 43.6	-0.1
KURK				pmax	pmax		
	comp=Z,40nm,1.0s						
KURK	Kurchatov	45.87	308	P	P	23 28 44.2	+0.5
KURK	Kurchatov	45.87	308	P	P	23 28 43.3	-0.4
KURK				IAmb	IAmb	23 28 46.2	
	comp=Z,32nm,0.8s						
ODAN	Odare	45.90	274	eP	P	23 28 44.4	-0.1
	comp=Z,22nm,0.6s						
SVW2	Sparrevohn	46.34	37	P	P	23 28 49.3	+2.0
SVW2				IAmb	IAmb	23 28 51.0	
	comp=Z,17nm,1.1s						
RAMN	Ramite	46.49	274	eP	P	23 28 49.4	+0.2
	comp=Z,72nm,0.6s						
JIRN	Jiri	46.52	275	eP	P	23 28 50.0	+0.4
	comp=Z,115nm,0.8s						
GUN	Gumba	46.66	276	eP	P	23 28 50.9	+0.2
	comp=Z,135nm,0.9s						
L19K	White Mountain	46.73	36	P	P	23 28 52.4	+2.1
	baz=268						
L19K	White Mountain	46.73	36	P	P	23 28 51.8	+1.5
L19K				IAmb	IAmb	23 28 53.6	
	comp=Z,16nm,1.2s						
K20K	Telida	47.14	34	P	P	23 28 55.7	+2.2
	baz=267,SNR=7.4						
K20K	Telida	47.14	34	P	P	23 28 55.6	+2.1
K20K				IAmb	IAmb	23 28 56.6	
	comp=Z,16nm,0.7s						
J20K	Nowinta River	47.15	33	P	P	23 28 55.5	+2.0
	baz=266,SNR=6.3						
J20K	Nowinta River	47.15	33	P	P	23 28 55.1	+1.6
J20K				IAmb	IAmb	23 28 56.5	
	comp=Z,14nm,0.8s						
PKI	Pulchoki	47.19	276	eP	P	23 28 54.5	-0.2
	comp=Z,62nm,0.9s						
PKIN	Phulchoki	47.19	276	eP	P	23 28 54.5	-0.2
	comp=Z,34nm,0.6s						
KKN	Kakani	47.20	276	eP	P	23 28 54.7	0.0
	comp=Z,73nm,0.9s						
A21K	Barrow	47.23	23	P	P	23 28 55.4	+1.4
	baz=257,SNR=10						
A21K	Barrow	47.23	23	P	P	23 28 55.0	+1.0
A21K				IAmb	IAmb	23 28 56.3	
	comp=Z,25nm,0.7s						
Q19K	Cape Douglas,	47.31	40	P	P	23 28 55.4	+0.5
DMN	Daman	47.41	276	eP	P	23 28 56.5	+0.1
	comp=Z,47nm,0.7s						
IMAR	Indian Mountai	47.45	30	P	P	23 28 57.1	+1.3
PRZ	Przheval'sk	47.55	297	P	P	23 28 58.3	+1.1
PRZ				pmax	pmax		
	comp=Z,57nm,1.1s						
PRZ	Przheval'sk	47.55	297	P	P	23 28 58.3	+1.1
GKN	Gorkha	47.62	277	eP	P	23 28 58.1	+0.2
	comp=Z,224nm,1.0s						
H21K	Melozitna Rive	47.82	31	P	P	23 29 00.4	+1.7
	baz=266						
H21K	Melozitna Rive	47.82	31	P	P	23 29 00.2	+1.5
H21K				IAmb	IAmb	23 29 01.4	
	comp=Z,10.0nm,0.8s						
KULM	Kulim	48.03	240	P	P	23 29 01.2	+0.2
I21K	Tanana	48.13	32	P	P	23 29 03.0	+1.9
	baz=268						
I21K	Tanana	48.13	32	P	P	23 29 03.0	+1.9
I21K				IAmb	IAmb	23 29 04.2	
	comp=Z,11nm,1.1s						
TARG	Taragay, Kyrgy	48.17	297	P	P	23 29 03.1	+0.8
DANN	Dangsing	48.18	277	eP	P	23 29 02.8	+0.4
	comp=Z,210nm,0.8s						
IPM	Ipoh	48.35	238	P	P	23 29 02.9	-0.5
IPM				IAmb	IAmb	23 29 04.2	
	comp=Z,23nm,1.1s						
SOEI	Soe	48.48	202	P	P	23 29 04.3	-0.1
KDJ	Kajisay	48.52	297	P	P	23 29 04.4	-0.3
KDJ				pmax	pmax		
	comp=Z,29nm,1.2s						
KDJ	Kajisay	48.52	297	P	P	23 29 04.4	-0.3
KDJ				IAmb	IAmb	23 29 20.6	
	comp=Z,29nm,1.1s						
KOLN	Koldanda	48.55	277	eP	P	23 29 05.4	+0.3
	comp=Z,65nm,0.9s						
MLY	Manley	48.66	32	P	P	23 29 07.4	+2.1
	baz=269,SNR=10.0						
MLY	Manley	48.66	32	P	P	23 29 06.3	+1.1
MLY				IAmb	IAmb	23 29 08.1	
	comp=Z,12nm,0.7s						
PYUN	Piuthan	48.90	278	eP	P	23 29 08.1	+0.3
COLD	Coldfoot	48.95	29	P	P	23 29 09.1	+1.7
	baz=267						
I23K	Minto, Yukon-K	49.24	32	P	P	23 29 11.5	+1.9
	baz=270						
I23K	Minto, Yukon-K	49.24	32	P	P	23 29 11.0	+1.4
I23K				IAmb	IAmb	23 29 12.8	
	comp=Z,34nm,1.8s						
TOLK	Toolik Lake Re	49.26	27	P	P	23 29 11.5	+1.7
	baz=267,SNR=6.7						
TOLK	Toolik Lake Re	49.26	27	P	P	23 29 10.9	+1.1
TOLK				IAmb	IAmb	23 29 12.9	
	comp=Z,10nm,0.9s						
BOOM	Boomskoye usch	49.30	298	P	P	23 29 11.0	+0.3
BOOM				pmax	pmax		
	comp=Z,12nm,0.8s						
BOOM	Boomskoye usch	49.30	298	P	P	23 29 11.0	+0.3
BOOM				IAmb	IAmb	23 29 14.0	
	comp=Z,12nm,0.8s						
NEA2	Nenana	49.37	32	P	P	23 29 12.3	+1.7
	baz=271,SNR=6.9						
NEA2	Nenana	49.37	32	P	P	23 29 11.9	+1.2
NEA2				IAmb	IAmb	23 29 13.4	
	comp=Z,19nm,1.0s						
MCK	McKinley	49.44	33	P	P	23 29 12.4	+1.1
	baz=272						
RND	Reindeer	49.49	34	P	P	23 29 12.4	+0.7
RND				pmax	pmax		
	comp=Z,18nm,1.0s						
RND	Reindeer	49.49	34	P	P	23 29 12.4	+0.7
RND				IAmb	IAmb	23 29 13.5	
	comp=Z,18nm,1.0s						
PBA	Port Blair	49.64	253	P	P	23 29 09.8	-3.5
PBA	Port Blair	49.64	253	P	P	23 29 13.3	0.0
MDM	Murphy Dome	49.72	32	P	P	23 29 14.4	+1.0
MTN	Manton Dam	49.83	192	P	P	23 29 15.1	+0.5
MTN				IAmb	IAmb	23 29 17.8	
	comp=Z,29nm,1.2s						
H24K	Noodor Dome	49.86	31	P	P	23 29 16.5	+2.2
	baz=271						
TCOL	CIGO, UAF Yank	49.88	32	P	P	23 29 16.5	+2.0
	baz=272						
COLA	College	49.88	32	d iP	P	23 29 16.2	+1.7
COLA				pmax	pmax		
	comp=Z,11nm,0.8s						
COLA	College	49.88	32	P	P	23 29 15.8	+1.3
COLA				IAmb	IAmb	23 29 18.0	
	comp=Z,21nm,0.8s						
POKR	Poker Plat Res	50.06	32	P	P	23 29 18.2	+2.3
	baz=272,SNR=12						
COEN	Coen	50.17	177	P	P	23 29 18.1	+0.9
COEN				IAmb	IAmb	23 29 45.7	
	comp=Z,12nm,0.9s						
AAK	Ala-Archa	50.29	299	P	P	23 29 18.9	+0.7
AAK				pmax	pmax		
	comp=Z,24nm,1.4s						
AAK	Ala-Archa	50.29	299	P	P	23 29 19.1	+0.9
AAK	Ala-Archa	50.29	299	P	P	23 29 18.9	+0.7
AAK				IAmb	IAmb	23 29 27.7	
	comp=Z,24nm,1.4s						
HDA	Harding Lake	50.29	33	P	P	23 29 18.6	+0.9
	baz=273,SNR=8.6						
IL31		50.30	32	P	P	23 29 18.6	+0.9
IL31				IAmb	IAmb	23 29 19.8	
	comp=Z,18nm,0.8s						
ILAR	Eielson Array	50.30	32	P	P	23 29 18.4	+0.7
	comp=Z,16nm,0.7s,baz=270,slow=6.4,SNR=126						
ILAR	Eielson Array	50.30	32	P	P	23 29 18.4	+0.7
ILAR	Eielson Array	50.30	32	P	P	23 29 18.2	+0.5
BRVK	Borovoye	50.63	313	P	P	23 29 21.0	+0.7
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BRVK	Borovoye	50.63	313	P	P	23 29 22.3	+2.0
BRVK	Borovoye	50.63	313	P	P	23 29 21.0	+0.7
BRVK				IAmb	IAmb	23 29 25.8	
	comp=Z,8.8nm,0.7s						
FYU	Fort Yukon	50.91	30	P	P	23 29 23.6	+1.4
FYU				IAmb	IAmb	23 29 28.2	
	comp=Z,8.7nm,0.8s						
AML	Almayashu	51.00	298	P	P	23 29 24.5	+0.7
BMAR	Burnt Mountain	51.13	29	P	P	23 29 25.9	+2.0
BKNI	Bangkinang	51.39	235	P	P	23 29 27.1	+0.6
PMBI	Palembang	51.53	228	P	P	23 29 28.1	+0.6
SCRK	Sand Creek	51.62	33	P	P	23 29 28.6	+0.9
	baz=276,SNR=10						
SCRK	Sand Creek	51.62	33	P	P	23 29 28.6	+0.9
SCRK				IAmb	IAmb	23 29 29.6	
	comp=Z,16nm,0.8s						
VRDI	Verde Repeater	52.19	36	P	P	23 29 33.4	+1.2
M26K	Nabesna, AK	52.24	35	P	P	23 29 34.3	+2.0
	baz=278						
M26K	Nabesna, AK	52.24	35	P	P	23 29 33.9	+1.5
M26K				IAmb	IAmb	23 29 35.3	
	comp=Z,29nm,1.4s						
UGM	Wanagama	52.44	219	P	P	23 29 34.1	-0.2
L27K	Beaver Creek,	52.69	34	P	P	23 29 37.9	+2.3
	baz=278,SNR=5.7						
L27K	Beaver Creek,	52.69	34	P	P	23 29 37.4	+1.8
L27K				IAmb	IAmb	23 29 38.7	
	comp=Z,25nm,1.2s						
BCAR	Beaver Creek A	52.70	34	P	P	23 29 37.3	+1.5
EGAK	Eagle	52.75	32	P	P	23 29 36.8	+0.8
	baz=277						
M27K	Edge Creek, AK	52.77	35	P	P	23 29 38.2	+1.8
	baz=279						
KKAR	Karatay Array	52.95	300	P	P	23 29 37.9	0.0
KKAR	Karatay Array	52.95	300	P	P	23 29 37.9	0.0
GSI	Gunungsitoli	53.01	239	P	P	23 29 38.8	+0.2
DRK	Karamyk	53.21	296	P	P	23 29 40.5	+0.3
DRK				IAmb	IAmb	23 29 41.3	
	comp=Z,20nm,0.7s						
BTK	Batken	53.72	297	P	P	23 29 43.1	-0.5
BTK				pmax	pmax		
	comp=Z,14nm,1.0s						
BTK	Batken	53.72	297	P	P	23 29 43.1	-0.5
BTK				IAmb	IAmb	23 30 07.4	
	comp=Z,14nm,1.0s						
NIL	Nilore	54.28	288	P	P	23 29 48.0	+0.3
NIL				pmax	pmax		
	comp=Z,17nm,1.0s						
NIL	Nilore	54.28	288	P	P	23 29 48.0	+0.3
NIL				IAmb	IAmb	23 30 11.9	
	comp=Z,17nm,0.9s						
GAR	Garm	54.46	296	P	P	23 29 49.0	-0.1
YUK4	Talbot Arm	54.46	36	P	P	23 29 51.0	+2.2
	baz=282						
M30M	Minto, Yukon	55.05	34	P	P	23 29 55.3	+2.4
	baz=283						
HYT	Haines Junctio	55.11	36	P	P	23 29 56.1	+2.6
	baz=283						
HYT	Haines Junctio	55.11	36	P	P	23 29 55.2	+1.7
HYT				IAmb	IAmb	23 30 33.4	
	comp=Z,48nm,1.7s						
INK	Inuvik	55.17	27	P	P	23 29 55.1	+1.5
	comp=Z,15nm,0.7s,baz=298,slow=6.6,SNR=58						
INK	Inuvik	55.17	27	P	P	23 29 55.1	+1.5
INK	Inuvik	55.17	27	P	P	23 29 54.9	+1.3
	baz=282,SNR=14						
INK	Inuvik	55.17	27	P	P	23 29 54.8	+1.2
INK				IAmb	IAmb	23 29 55.8	
	comp=Z,15nm,0.8s						
SVE	Sverdlovsk	55.23	319	eP	P	23 29 54.9	+0.7
SVE				pmax	pmax		
	comp=Z,31nm,0.9s						
CHGR	Chuyangaron	55.42	296	P	P	23 29 56.3	+0.3
WB0	Warramunga Arr	56.21	187	P	P	23 30 01.4	-0.2
WB0				IAmb	IAmb	23 30 02.2	
	comp=Z,17nm,0.8s						
M31M	Drury Creek, Y	56.23	34	P	P	23 30 03.2	+2.0
	baz=285						
WR0	Warramunga Arr	56.38	187	P	P	23 30 02.4	-0.4
WR0				IAmb	IAmb	23 30 03.5	
	comp=Z,17nm,0.8s						
WRA	Warramunga Arr	56.39	187	P	P	23 30 02.6	-0.2
	comp=Z,15nm,0.8s,baz=4.0,slow=7.3,SNR=30						
WRA	Warramunga Arr	56.39	187	P	P	23 30 02.6	-0.2
WRA	Warramunga Arr	56.39	187	P	P	23 30 01.8	-1.0
WHY	Whitehorse	56.40	36	P	P	23 30 04.7	+2.1
	baz=286						
ARU	Arti	56.45	319	c iP	P	23 30 02.6	-0.3
ARU				*PP	pP	23 30 14.2	-2.1
ARU						23 32 10.0	
ARU				S	S	23 37 53.8	+3.6
ARU				SS	SS	23 41 39.6	+2.3
ARU				pmax	pmax		
	comp=Z,44nm,1.0s						
ARU	Arti	56.45	319	P	P	23 30 02.7	-0.2
FARO	Faro, Yukon	56.69	34	P	P	23 30 06.4	+1.8
	baz=286						
A36M	Sachs Harbour	57.03	22	P	P	23 30 08.5	+1.8
	baz=286,SNR=20						
A36M	Sachs Harbour	57.03	22	P	P	23 30 08.1	+1.3
KBL	Kabul	57.11	291	P	P	23 30 07.7	-0.6
KBL				pmax	pmax		
	comp=Z,12nm,1.0s						
KBL	Kabul	57.11	291	P	P	23 30 07.7	-0.6
KBL				IAmb	IAmb	23 30 08.7	
	comp=Z,12nm,0.9s						
SANVU	Saraoutou	57.34	149	P	P	23 30 10.2	+0.6
MMPY	Sheldon Lake,	57.51	33	P	P	23 30 12.7	+2.3
	baz=287						
ABKAR	Akbulak array	57.91	310	P	P	23 30 13.0	-0.3
ABKAR	Akbulak array	57.91	310	P	P	23 30 13.2	-0.1
DLBC	Dease Lake	59.44	38	P	P	23 30 25.3	+1.3
DLBC				IAmb	IAmb	23 30 27.5	
	comp=Z,12nm,1.1s						
AS31	Alice Springs	60.12	187	P	P	23 30 29.1	+0.3
ASAR	Alice Springs	60.12	187	P	P	23 30 28.9	0.0
	comp=Z,7.4nm,0.8s,baz=12,slow=5.9,SNR=39						
ASAR	Alice Springs	60.12	187	P	P	23 30 28.9	0.0
ASAR	Alice Springs	60.12	187	P	P	23 30 28.6	-0.3
KIRV	Kirov	60.40	323	P	P	23 30 30.6	+0.2
	comp=Z,64nm,0.6s,baz=71,slow=2.9,SNR=16						
KIRV	Kirov	60.40	323	P	P	23 30 30.6	+0.2
MBWA	Marble Bar	60.62	203	P	P	23 30 28.9	-3.3
EUNU	Eureka	60.87	8	P	P	23 30 33.6	+0.2
PSA00	Pilbara Seismi	60.97	202	P	P	23 30 34.5	-0.1
PSA00	Pilbara Seismi	60.97	202	P	P	23 30 34.7	+0.1
PSA00				IAmb	IAmb	23 30 56.4	
	comp=Z,13nm,1.0s						
PRGR	Permogore	60.97	327	eP	P	23 30 33.3	-0.9
PRGR				pmax	pmax		
	comp=Z,14nm,1.4s						
SPA0	Spitsbergen Ar	61.01	349	eP	P	23 30 34.9	+0.6
SPB2	Spitsbergen Ar	61.01	349	P	P	23 30 34.6	+0.3
SPITS	Spitsbergen Ar	61.01	349	P	P	23 30 34.6	+0.3
	comp=Z,12nm,0.8s,baz=74,slow=9.6,SNR=9.0						
SPITS	Spitsbergen Ar	61.01	349	P	P	23 30 34.6	+0.3
SPITS				pmax	pmax		
	comp=Z,128nm,1.8s						
KBS	Kingsbay	61.16	350	P	P	23 30 36.2	+0.9
KBS				pmax	pmax		
	comp=Z,129nm,1.7s						
KBS	Kingsbay	61.16	350	P	P	23 30 36.2	+0.9
NOR	Nord	61.62	356	⇑iP	P	23 30 38.4	0.0
NOR				IAmb	IAmb	23 30 39.3	
	comp=Z,8.8nm,1.0s						
PALK	Pallekele	61.70	257	P	P	23 30 40.1	+0.2
PALK				pmax	pmax		
	comp=Z,16nm,1.0s						
PALK	Pallekele	61.70	257	P	P	23 30 38.8	-1.1
PALK	Pallekele	61.70	257	P	P	23 30 40.1	+0.2
PALK				IAmb	IAmb	23 30 40.9	
	comp=Z,16nm,0.9s						
EIDS	Eidsvold	62.24	169	P	P	23 30 43.7	+0.6
EIDS				IAmb	IAmb	23 31 00.2	
	comp=Z,21nm,1.8s						
HRA	Herat	62.25	294	P	P	23 30 43.9	+0.3
LVZ	Lovozero	62.43	336	P	P	23 30 43.7	-0.4
LVZ				pmax	pmax		
	comp=Z,79nm,1.5s						
LVZ	Lovozero	62.43	336	P	P	23 30 43.6	-0.4
RES	Resolute Bay	63.32	14	P	P	23 30 49.6	-0.2
	comp=Z,9.3nm,0.8s,baz=69,slow=9.3,SNR=7.1						
RES	Resolute Bay	63.32	14	P	P	23 30 49.6	-0.2
RES				pmax	pmax		
	comp=Z,15nm,1.1s						
RES	Resolute Bay	63.32	14	P	P	23 30 49.6	-0.2
RES				IAmb	IAmb	23 30 50.9	
	comp=Z,15nm,1.1s						
HOLB	Holberg	63.54	45	P	P	23 30 52.4	+0.8
COCO	West Island	63.62	229	P	P	23 30 50.2	-2.3
GEYT	Alibeck	63.64	299	P	P	23 30 53.1	+0.5
	comp=Z,10nm,0.8s,baz=72,slow=9.4,SNR=7.1						
GYA0B	ALIBECK ARRAY	63.64	299	P	P	23 30 53.1	+0.6
GYA0B				IAmb	IAmb	23 30 53.8	
	comp=Z,10nm,0.8s						
KEV	Kevo	63.81	339	P	P	23 30 53.3	+0.2
KEV				pmax	pmax		
	comp=Z,90nm,1.6s						
KEV	Kevo	63.81	339	P	P	23 30 53.2	+0.2
BELG	Belogornoye	63.86	317	c iP	P	23 30 53.5	-0.2
BELG				pmax	pmax		
	comp=Z,12nm,1.0s						
KLMR	Klimovskoe	63.97	328	eP	P	23 30 52.9	-1.3
KLMR				e		23 33 12.7	
KLMR				pmax	pmax		
	comp=Z,29nm,0.9s						
KLMR	Klimovskoe	63.97	328	eP	P	23 30 53.0	-1.3
KLMR				AMP		23 30 54.9	
	comp=Z,29nm,0.9s						
KLMR				ePP	PP	23 33 12.8	-2.1
HAMF	Hammerfest	64.20	341	eP	P	23 30 54.8	-0.9
ARA0	ARCESS Array S	64.37	339	eP	P	23 30 57.2	+0.5
ARCES	ARCESS Array B	64.37	339	P	P	23 30 57.0	+0.2
	comp=Z,13nm,0.7s,baz=54,slow=8.2,SNR=48						
ARCES	ARCESS Array B	64.37	339	P	P	23 30 57.0	+0.2
ARCES				pmax	pmax		
	comp=Z,76nm,1.6s						
ARCES	ARCESS Array B	64.37	339	P	P	23 30 57.0	+0.2
YKA	Yellowknife Ar	64.61	30	P	P	23 30 59.2	+0.8
	comp=Z,1.6nm,0.7s,baz=61,slow=9.4,SNR=7.1						
YKA	Yellowknife Ar	64.61	30	ceP	P	23 30 59.7	+1.3
YKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
JETT	Jettan, Norway	65.76	341	eP	P	23 31 06.8	+0.9
TRO	Tromso	66.11	341	eP	P	23 31 08.1	+0.1
DAG	Danmarks Havn	66.33	355	i	P	23 31 03.1	-6.2
DAG				i P	P	23 31 08.4	-0.9
DAG				IAmb	IAmb	23 31 09.3	
	comp=Z,7.3nm,0.7s						
CLRS	Cowichan Lake	66.68	46	P	P	23 31 13.0	+1.0
CLRS				IAmb	IAmb	23 31 49.7	
	comp=Z,20nm,1.5s						
ARMA	Armidale	67.28	170	P	P	23 31 17.6	+1.6
ARMA				IAmb	IAmb	23 31 23.4	
	comp=Z,50nm,1.8s						
MOS	Moscow	67.40	323	eP	P	23 31 14.9	-1.5
MOS				e		23 31 43.0	
MOS				pmax	pmax		
	comp=Z,49nm,1.0s						
MOS				pmax	pmax		
	comp=Z,100nm,1.3s						
NLWA	Neilton Lookou	67.53	47	P	P	23 31 18.9	+1.4
NLWA				IAmb	IAmb	23 31 40.2	
	comp=Z,13nm,1.1s						
VRH	Novokhopyorsk	67.66	318	eP	P	23 31 16.5	-1.6

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VRH                                  pmax    pmax
      comp=Z,40nm,0.8s
FORT  Forrest           67.90 192    P       P         23 31 20.3 +0.6
D03D  Eldon             67.92  47    P       P         23 31 22.3 +2.4
      baz=300
STKA  Stephens Creek    67.95 179    P       P         23 31 20.2 +0.2
      comp=Z,3.0nm,0.5s,baz=338,slow=9.0,SNR=7.8
STKA                                 LR      LR        00 00 18.5
      comp=Z,2µm,21.4s,baz=157,slow=35
STKA  Stephens Creek    67.95 179    P       P         23 31 20.3 +0.2
STKA                                 pmax    pmax
      comp=Z,1.0nm,1.0s
STKA  Stephens Creek    67.95 179    P       P         23 31 20.3 +0.3
RADR  Rader Ridge       68.06  48    P       P         23 31 22.5 +1.6
RADR                                 IAmb    IAmb      23 31 23.4
      comp=Z,26nm,1.1s
OBN   Obninsk           68.25 323c iP      P         23 31 21.4 -0.3
OBN                                e                   23 33 49.0
OBN                                  pmax    pmax
      comp=Z,60nm,1.7s
OBN   Obninsk           68.25 323    P       P         23 31 21.3 -0.4
STEI  Steigen           68.25 341   eP       P         23 31 21.7 +0.1
LPSR  Galich'ya Gora    68.41 320   eP       P         23 31 21.8 -1.0
LPSR                                 pmax    pmax
      comp=Z,50nm,0.8s
LOF   Lofoten           68.56 341   eP       P         23 31 23.4 -0.1
FAUS  Fauske            68.63 340   eP       P         23 31 24.0  0.0
DBG   Daneborg          68.81 355   i P      P         23 31 23.8 -1.2
BBOO  Buckleboo         69.02 184    P       P         23 31 27.2 +0.5
BBOO                                 IAmb    IAmb      23 31 27.9
      comp=Z,15nm,0.9s
VSR   Storozhevoye      69.02 319   eP       P         23 31 25.6 -1.1
VSR                                  pmax    pmax
      comp=Z,50nm,1.0s
FIA1  FINESS Array S    69.09 332    P       P         23 31 26.8 -0.1
FINES FINESS Array B    69.09 332    P       P         23 31 26.8 -0.1
      comp=Z,34nm,0.8s,baz=56,slow=7.4,SNR=46
FINES FINESS Array B    69.09 332    P       P         23 31 27.0 +0.1
FINES FINESS Array B    69.09 332    P       P         23 31 26.9 +0.1
MORW  Morawa            69.16 203    P       P         23 31 27.8 +0.2
MORW                                 IAmb    IAmb      23 31 28.0
      comp=Z,39nm,1.6s
B08A  Colville Reser    69.66  44    P       P         23 31 31.5 +0.7
I03D  Drain, OR         69.72  50    P       P         23 31 33.3 +2.1
      baz=301
MOR8  Moi Rana          69.74 340   eP       P         23 31 29.8 -1.1
KONS  Konsvik           69.86 340   eP       P         23 31 32.4 +0.8
KBO   Bosley Butte      69.94  52    P       P         23 31 34.2 +1.5
KBO                                  IAmb    IAmb      23 32 09.5
      comp=Z,48nm,1.5s
STOK  Stokkvaagen       70.01 340   eP       P         23 31 33.2 +0.8
K02D  Willamette Mer    70.04  51    P       P         23 31 34.5 +1.3
      baz=301
GOF   Gofitskoye        70.08 312⇑eP       P         23 31 33.2 -0.1
GOF                                  pmax    pmax
      comp=Z,32nm,0.7s
I04A  Tendick Farm,     70.25  50    P       P         23 31 35.9 +1.5
      baz=302
JLN   Jalan Bani Buh    70.45 283    P       P         23 31 35.8 -0.1
WSAR  Wadi Sarin        70.49 285    P       P         23 31 35.7 -0.5
WBK   Wadi Bani Khal    70.56 284    P       P         23 31 36.6  0.0
      SNR=5.9
D08A  Wollman Farm,     70.59  45    P       P         23 31 37.3 +0.9
VSU   Vasula            70.69 329   eP       P         23 31 36.7 -0.1
VSU   Vasula            70.69 329ceP       P         23 31 36.6 -0.2
VSU                                  pmax    pmax
      comp=Z,98nm,0.8s
BIDO  Bidbid            70.73 285    P       P         23 31 38.0 +0.3
ZEI   Tsey              70.75 309   eP       P         23 31 36.3 -1.4
ZEI                                  pmax    pmax
      comp=Z,4.0nm,1.0s
JCC   Jacoby Creek,     70.79  53    P       P         23 31 39.5 +1.8
JCC                                  IAmb    IAmb      23 31 47.0
      comp=Z,36nm,1.3s
BANOM Banah             70.87 288    P       P         23 31 39.1 +0.5
KBZ   Khabaz            70.87 311    P       P         23 31 38.5 +0.3
      comp=Z,18nm,0.9s,baz=29,slow=2.9,SNR=26
KBZ   Khabaz            70.87 311    P       P         23 31 38.5 +0.3
KIV   Kislovodsk        70.88 311   ⇓P       P         23 31 38.5 +0.1
KIV   Kislovodsk        70.88 311   eP       P         23 31 38.4  0.0
KIV                                  pmax    pmax
      comp=Z,50nm,1.1s
KIV   Kislovodsk        70.88 311    P       P         23 31 38.9 +0.5
KIV   Kislovodsk        70.88 311    P       P         23 31 38.2 -0.2
NEW   Newport           70.95  44    P       P         23 31 39.6 +0.9
NEW                                  pmax    pmax
      comp=Z,5.0nm,0.8s
NEW   Newport           70.95  44    P       P         23 31 39.8 +1.1
      baz=304,SNR=6.4
NEW   Newport           70.95  44    P       P         23 31 39.5 +0.9
SMDO  Samad             71.03 285    P       P         23 31 39.5 -0.1
SMDO                                 P       P         23 31 39.8 +0.2
ONI   Oni               71.14 309    P       P         23 31 40.4 +0.5
ONI                                  pmax    pmax
      comp=Z,14nm,1.0s
ONI   Oni               71.14 309    P       P         23 31 40.4 +0.5
ONI                                  IAmb    IAmb      23 31 41.6
      comp=Z,14nm,1.0s
L04D  Klamath Falls     71.15  51    P       P         23 31 41.9 +1.8
      baz=302
PINE  Pine Mountain     71.15  49    P       P         23 31 41.7 +1.5
PINE                                 IAmb    IAmb      23 31 43.1
      comp=Z,10nm,0.8s
YBH   Yreka Blue Hor    71.15  52    P       P         23 31 41.4 +1.4
YBH                                  pmax    pmax
      comp=Z,4.0nm,1.0s
YBH   Yreka Blue Hor    71.15  52    P       P         23 31 41.4 +1.4
MDH   Madha             71.20 288    P       P         23 31 40.5  0.0
M02C  Callahan          71.24  52    P       P         23 31 42.3 +1.7
      baz=302
J05D  Fort Rock, OR     71.25  50    P       P         23 31 42.4 +1.7
      baz=303
MASF  Masafi            71.27 288    P       P         23 31 41.1 +0.1
SUMG  Summit            71.29 360    P       P         23 31 41.9 +1.2
SUMG                                 pmax    pmax
      comp=Z,21nm,0.9s
SUMG  Summit            71.29 360⇑iP       P         23 31 41.7 +1.0
SUMG                                 IAmb    IAmb      23 31 42.5
      comp=Z,20nm,0.9s
SUMG  Summit            71.29 360    P       P         23 31 41.9 +1.2
SUMG                                 IAmb    IAmb      23 31 42.8
      comp=Z,21nm,0.9s
HOQ   Hoqain            71.33 286    P       P         23 31 41.4 +0.1
JMDO  Jabal Madar       71.36 284    P       P         23 31 41.5  0.0
      SNR=6.9
UOSS  Minazif           71.46 288    P       P         23 31 42.3 +0.3
UOSS  Minazif           71.46 288    P       P         23 31 42.7 +0.6
UOSS                                 IAmb    IAmb      23 31 43.0
      comp=Z,16nm,0.8s
N02D  Trinity Center    71.56  52    P       P         23 31 44.3 +1.7
      baz=302
HATD  Hatta, Dubai      71.58 288    P       P         23 31 43.7 +0.9
      SNR=5.9
GNI   Garni             71.62 307deP       P         23 31 44.1 +1.1
GNI                                  pmax    pmax
      comp=Z,28nm,1.3s
GNI   Garni             71.62 307    P       P         23 31 44.0 +1.0
GNI   Garni             71.62 307    P       P         23 31 43.1 +0.1
GNI                                  IAmb    IAmb      23 31 49.7
      comp=Z,16nm,0.8s
SOHO  SOHO              71.64 287    P       P         23 31 43.3 +0.2
NSS   Namsos            71.65 339   eP       P         23 31 42.3 -0.2
MTSE  Matsula           71.71 331   eP       P         23 31 43.3 +0.4
ASHO  Ashiyiah          71.71 287    P       P         23 31 43.9 +0.2
K05A  Summer Lake       71.76  50    P       P         23 31 45.6 +1.8
BSY   Bisya             71.86 285    P       P         23 31 44.6 +0.1
KAAM  Kaadhehdhoo       71.90 257    P       P         23 31 43.8 -0.9
O02D  Mt. Diablo Mer    71.94  53    P       P         23 31 46.2 +1.4
      baz=303
FAQ   Al Faqa, Dubai    72.04 288    P       P         23 31 45.5 -0.1
ARQ   Araqi             72.07 286    P       P         23 31 46.3 +0.5
F10A  Beach Ranch, E    72.16  46    P       P         23 31 47.4 +1.3
ALNE  Al Ain            72.28 287    P       P         23 31 47.0  0.0
ASUD  Al Ashush, Dub    72.31 288    P       P         23 31 47.7 +0.6
NWAO  Narrogin (SRO)    72.41 201    P       P         23 31 45.1 -2.2
KARS  Kars              72.43 308    P       P         23 31 48.6 +0.8
KARS                                 pmax    pmax
      comp=Z,39nm,0.8s
KARS  Kars              72.43 308    P       P         23 31 48.6 +0.8
O03E  Paynes Creek      72.50  53    P       P         23 31 48.7 +0.5
      baz=303
SCO   Scoresbysund      72.66 354    P       P         23 31 49.3 +0.9
SCO                                  pmax    pmax
      comp=Z,9.0nm,0.9s
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SCO   Scoresbysund      72.66 354   i P      P         23 31 48.4  0.0
SCO                                  IAmb    IAmb      23 31 49.7
      comp=Z,8.9nm,0.9s
SCO   Scoresbysund      72.66 354    P       P         23 31 49.3 +0.9
BMO   Blue Mountains    72.75  47    P       P         23 31 50.7 +1.1
BMO                                  pmax    pmax
      comp=Z,6.0nm,0.9s
BMO   Blue Mountains    72.75  47    P       P         23 31 50.7 +1.1
ISAL  Salakas           72.78 327   eP       P         23 31 50.1 +0.7
JTMT  Jette             72.81  43    P       P         23 31 50.6 +0.7
JTMT                                 IAmb    IAmb      23 31 52.3
      comp=Z,12nm,1.0s
NACGM Naroch            72.92 326   i P      P         23 31 50.9 +0.6
TBLU  Trondheim         73.12 339   eP       P         23 31 50.9 -0.4
UPP   Uppsala           73.25 334   eP       P         23 31 51.7 -0.4
PLID  Pearl Lake        73.38  46    P       P         23 31 53.9 +0.5
MSO   Missoula          73.54  44    P       P         23 31 55.1 +0.9
      baz=306
PABE  Paberze           73.76 328   eP       P         23 31 55.1  0.0
PABE  Paberze           73.76 328    P       P         23 31 55.6 +0.5
GURO  Guroymak-BITLI    74.25 306    P       P         23 31 59.1 +0.6
GURO                                 IAmb    IAmb      23 32 00.4
      comp=Z,19nm,0.7s
PBUR  Paburge           74.27 329   eP       P         23 31 57.8 -0.3
NC405 NORSAR Array S    74.31 337    P       P         23 31 57.5 -0.8
DOMB  Dombas            74.41 339   eP       P         23 31 59.4 +0.5
MOL   Molde             74.43 339   eP       P         23 31 59.3 +0.4
AKASG Malin Array Be    74.43 322    P       P         23 31 58.8 -0.4
      comp=Z,25nm,0.8s,baz=49,slow=6.2,SNR=104
AKASG Malin Array Be    74.43 322    P       P         23 31 58.9 -0.3
AKASG                                pmax    pmax
      comp=Z,13nm,1.0s
AKASG Malin Array Be    74.43 322    P       P         23 31 58.9 -0.3
AKASG                                IAmb    IAmb      23 32 00.1
      comp=Z,13nm,1.0s
AKBB  Malin Array Si    74.43 322    P       P         23 31 58.9 -0.3
AKBB                                 pmax    pmax
      comp=Z,30nm,0.8s
AKBB  Malin Array Si    74.43 322    P       P         23 31 58.9 -0.3
AKBB                                 IAmb    IAmb      23 31 59.8
      comp=Z,30nm,0.8s
FFC   Flin Flon         74.51  32    P       P         23 32 00.1 +0.5
FFC                                  pmax    pmax
      comp=Z,13nm,0.9s
FFC   Flin Flon         74.51  32    P       P         23 32 00.1 +0.5
FFC                                  IAmb    IAmb      23 32 01.1
      comp=Z,13nm,0.9s
NB2   NORSAR Subarra    74.53 337    P       P         23 31 59.4 -0.2
      comp=Z,27nm,0.8s,baz=40,slow=6.2
NOA   NORSAR Array B    74.53 337    P       P         23 31 59.6  0.0
      comp=Z,22nm,0.8s,baz=39,slow=5.8,SNR=83
NOA   NORSAR Array B    74.53 337    P       P         23 31 59.7  0.0
SIRT  Sirnak            74.57 305    P       P         23 32 00.5 +0.1
NC602 NORSAR Array S    74.66 337   eP       P         23 31 60.0 -0.4
HRY   Holter Researc    74.77  43    P       P         23 32 02.7 +1.3
FCC   Fort Churchill    74.79  26    P       P         23 32 01.7 +0.6
FCC                                  pmax    pmax
      comp=Z,40nm,1.3s
FCC   Fort Churchill    74.79  26    P       P         23 32 01.7 +0.6
FCC                                  IAmb    IAmb      23 32 07.9
      comp=Z,40nm,1.3s
ICESG Greenland Ices    74.79   0   i P      P         23 32 01.4  0.0
ICESG                                IAmb    IAmb      23 32 03.2
      comp=Z,16nm,1.1s
AKN   Aaknes            74.90 339   eP       P         23 32 02.5 +0.9
LRM   Limekiln Ridge    74.97  44    P       P         23 32 03.5 +0.8
EGMT  Eagleton          75.09  41    P       P         23 32 04.3 +1.1
      baz=308
SUW   Suwalki           75.10 327   eP       P         23 32 02.1 -0.8
DLMT  Dillon            75.16  44    P       P         23 32 04.8 +1.1
DLMT                                 IAmb    IAmb      23 32 05.9
      comp=Z,12nm,0.6s
HLID  Hailey            75.19  47    P       P         23 32 05.0 +1.1
      baz=306
SAKB  Bahrain           75.21 291    P       P         23 32 04.7 +0.6
UMR   Umm Al-Rimmam     75.33 296   eP       P         23 32 03.4 -1.3
TRNA  Turayna           75.39 290    P       P         23 32 05.4 +0.3
SLWR  Sila              75.39 289    P       P         23 32 05.3 +0.1
MIB   Mutribah          75.46 296   eP       P         23 32 03.9 -1.6
OSL   Oslo              75.53 337   eP       P         23 32 06.0 +0.7
RYN   Ryan              75.54  53    P       P         23 32 07.0 +1.0
KBD   Kabd              75.55 296   eP       P         23 32 04.1 -1.9
BOZ   Bozeman (W)       75.56  44    P       P         23 32 07.4 +1.4
      baz=308,SNR=6.9
KVN   Kaiserville       75.57  52    P       P         23 32 07.6 +1.4
KVN                                  pmax    pmax
      comp=Z,7.0nm,0.7s
KVN   Kaiserville       75.57  52    P       P         23 32 07.5 +1.4
QRN   Al-Qurain         75.63 295   eP       P         23 32 05.0 -1.5
SKAR  Skarslia          75.70 338   eP       P         23 32 07.2 +0.8
NVAR  Mina Array Bea    75.80  53    P       P         23 32 09.1 +1.6
      comp=Z,4.3nm,0.7s,baz=290,slow=5.4,SNR=42
NVAR  Mina Array Bea    75.80  53    P       P         23 32 08.5 +0.9
RDF   Al-Radifah        75.80 295   eP       P         23 32 05.2 -2.2
KONO  Kongsberg         76.12 337    P       P         23 32 08.6 -0.1
KONO                                 pmax    pmax
      comp=Z,35nm,1.3s
KONO  Kongsberg         76.12 337   eP       P         23 32 08.8 +0.1
KONO  Kongsberg         76.12 337    P       P         23 32 08.6 -0.1
KONO                                 IAmb    IAmb      23 32 44.8
      comp=Z,35nm,1.3s
ELK   Elko              76.36  49    P       P         23 32 11.9 +1.1
ELK                                  pmax    pmax
      comp=Z,4.0nm,0.8s
ELK   Elko              76.36  49    P       P         23 32 11.9 +1.1
DMTO  DMTO              76.38 282    P       P         23 32 10.6 -0.3
YHH   Holmes Hill       76.49  44    P       P         23 32 12.4 +0.9
SORM  Soroca            76.50 320   ⇑P       P         23 32 10.7 -0.4
DOK   Doka              76.52 283    P       P         23 32 11.3 -0.4
      SNR=6.0
SFJD  Kangerlussuaq     76.53   5   i P      P         23 32 10.0 -0.9
SFJD                                 IAmb    IAmb      23 32 12.4
      comp=Z,15nm,1.0s
PURM  Purcari           76.73 318   ⇓P       P         23 32 12.4  0.0
ASK   Askoy             76.78 339   eP       P         23 32 13.3 +0.9
BER   Bergen            76.82 339   eP       P         23 32 13.6 +0.9
ODD1  Odda              76.82 338   eP       P         23 32 13.4 +0.6
H17A  Grant Village     76.89  44    P       P         23 32 17.0 +3.3
      baz=308
KIS   Kishinev          76.99 319   eP       P         23 32 13.0 -0.9
KIS                                  pmax    pmax
      comp=Z,160nm,3.7s
MILM  Milestii Mici     77.05 319   ⇑P       P         23 32 13.4 -0.8
MILM  Milestii Mici     77.05 319   eP       P         23 32 13.0 -1.2
MILM                                 pmax    pmax
      comp=Z,120nm,2.0s
RBK   Rabkut            77.09 282    P       P         23 32 14.5 -0.5
CWC   Cottonwood Cre    77.09  54    P       P         23 32 16.0 +1.1
      baz=306
RLMT  Red Lodge         77.16  43    P       P         23 32 16.5 +1.4
      baz=309
RLMT  Red Lodge         77.16  43    P       P         23 32 16.1 +0.9
WHFO  Wadi Hawf         77.19 283    P       P         23 32 14.8 -0.8
      SNR=9.6
HVU   Hansel Valley     77.23  47    P       P         23 32 16.6 +1.1
HVU                                  pmax    pmax
      comp=Z,6.0nm,0.7s
HVU   Hansel Valley     77.23  47    P       P         23 32 16.6 +1.1
BZK   Bozkurt           77.24 313    P       P         23 32 16.0 +0.6
DY2G  Dye2              77.28   3   i P      P         23 32 15.3 -0.2
DY2G                                 IAmb    IAmb      23 32 17.1
      comp=Z,18nm,0.9s
IAS   Iasi              77.52 320   ⇓P       P         23 32 17.3 +0.5
LVV   L'vov             77.54 324   eP       P         23 32 17.4 +0.5
R11A  Troy Canyon, C    77.57  51    P       P         23 32 18.8 +1.2
      baz=307,SNR=7.4
R11A  Troy Canyon, C    77.57  51    P       P         23 32 18.4 +0.8
MPMC  Manual Prospec    77.70  54    P       P         23 32 19.1 +0.8
      baz=306
ABTO  Aybut             77.89 283    P       P         23 32 18.9 -0.6
      SNR=7.5
BNN   Bunyan            78.01 310    P       P         23 32 20.3 +0.4
HWUT  Hardware Ranch    78.05  47    P       P         23 32 20.9 +0.7
EDW2  Edwards Air Fo    78.06  55    P       P         23 32 21.6 +1.4
      baz=306
PRAR  RASCA             78.10 321   ⇑P       P         23 32 19.1 -1.0
VLDR  Vladesti          78.13 319   ⇑P       P         23 32 20.6 +0.4
TLCR                    78.16 318   ⇓P       P         23 32 20.3 -0.1
GAZ   Gaziantep         78.16 307    P       P         23 32 20.8 +0.1
GAZ                                  IAmb    IAmb      23 32 21.8
      comp=Z,20nm,0.8s
GWY   Greenwater Val    78.16  54    P       P         23 32 21.3 +0.4
QSM   Queen of Sheba    78.16  54    P       P         23 32 21.4 +0.7
DUG   Dugway, Tooele    78.17  49    P       P         23 32 22.0 +1.2
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DUG                                  pmax    pmax
      comp=Z,7.0nm,0.9s
DUG   Dugway, Tooele    78.17  49    P       P         23 32 22.3 +1.5
      baz=308,SNR=7.8
DUG   Dugway, Tooele    78.17  49    P       P         23 32 22.0 +1.2
KWP   Kalwaria Pacla    78.30 324   eP       P         23 32 21.9 +0.8
KWP   Kalwaria Pacla    78.30 324    P       P         23 32 22.0 +0.8
KWP                                  pmax    pmax
      comp=Z,364nm,0.9s
KWP   Kalwaria Pacla    78.30 324    P       P         23 32 22.0 +0.9
TATR  Tatarca           78.30 319   ⇑P       P         23 32 21.5 +0.3
BUR08 Bucovina Ar. S    78.43 321    P       P         23 32 22.4 +0.3
BUR08                                IAmb    IAmb      23 32 23.4
      comp=Z,13nm,0.9s
BURAR Bucovina Array    78.44 321   ⇓P       P         23 32 22.3 +0.2
BURAR Bucovina Array    78.44 321    P       P         23 32 22.5 +0.4
BURAR                                IAmb    IAmb      23 32 23.3
      comp=Z,14nm,0.8s
TESR  Tescani           78.44 320   ⇓P       P         23 32 20.9 -1.0
BW06  Boulder Array     78.49  45    P       P         23 32 23.2 +0.6
      baz=309,SNR=6.0
PD31  Pinedale Array    78.49  45    P       P         23 32 23.4 +0.7
PDAR  Pinedale Array    78.49  45    P       P         23 32 23.3 +0.7
      comp=Z,3.1nm,0.6s,baz=261,slow=2.2,SNR=37
PDAR  Pinedale Array    78.49  45    P       P         23 32 23.0 +0.4
CFR   Carcaliu          78.53 318   ⇑P       P         23 32 22.3 -0.1
TPGR  Topolog           78.58 318   ⇓P       P         23 32 22.9 +0.1
ODBI  Odobesti          78.72 319   ⇓P       P         23 32 25.3 +1.8
NLU   North Lily Min    78.77  48    P       P         23 32 24.8 +0.7
VRI   Vrincioaia        78.83 319   ⇓P       P         23 32 24.7 +0.6
BR131 Keskin Array S    78.83 311    P       P         23 32 24.5  0.0
BR131                                pmax    pmax
      comp=Z,13nm,0.9s
BR131 Keskin Array S    78.83 311    P       P         23 32 24.9 +0.4
      SNR=7.5
BR131 Keskin Array S    78.83 311    P       P         23 32 24.5  0.0
BR131                                IAmb    IAmb      23 32 26.2
      comp=Z,13nm,0.9s
BRTR  Keskin Array B    78.83 311    P       P         23 32 24.6 +0.2
      comp=Z,8.3nm,0.9s,baz=105,slow=4.4,SNR=28
BRTR  Keskin Array B    78.83 311   i P      P         23 32 24.7 +0.2
BRTR                                 pmax    pmax
      comp=Z,9.0nm,1.0s
TIRR  Tirgusor          78.85 318   ⇓P       P         23 32 24.0 -0.2
PLOR  Plostina          78.88 319   ⇓P       P         23 32 26.4 +1.9
SHPR  Sheep Range       78.95  53    P       P         23 32 25.7 +0.6
HARR  Harsova           78.96 318   ⇑P       P         23 32 25.0 +0.2
KOLS  Kolonicke sedl    78.98 324   eP       P         23 32 25.6 +0.7
KOLS                                 pmax    pmax
      comp=Z,20nm,1.0s
KOLS  Kolonicke sedl    78.98 324   eP       P         23 32 25.6 +0.7
TLBR  Topalu            78.99 318   ⇑P       P         23 32 25.0  0.0
MPU   Maple Canyon      78.99  48    P       P         23 32 26.6 +1.2
OZUR                    79.16 320   ⇑P       P         23 32 27.1 +1.0
UZH   Uzhgorod          79.18 324⇓eP       P         23 32 26.3 +0.3
UZH                                 e                  23 32 30.3
UZH                                 e                  23 32 40.0
ARCR  ARCALIA           79.23 321   ⇓P       P         23 32 27.6 +1.3
OJC   Ojcow             79.23 326   eP       P         23 32 26.8 +0.5
OJC   Ojcow             79.23 326    P       P         23 32 26.7 +0.5
OJC                                  pmax    pmax
      comp=Z,33nm,1.1s
OJC   Ojcow             79.23 326    P       P         23 32 26.7 +0.4
OJC                                  IAmb    IAmb      23 32 27.7
      comp=Z,33nm,1.1s
NUUK  Nuuk              79.24   6   i P      P         23 32 26.2 +0.2
NUUK                                 IAmb    IAmb      23 32 28.2
      comp=Z,18nm,0.8s
ANTO  Ankara            79.26 312    P       P         23 32 27.2 +0.5
ANTO                                 pmax    pmax
      comp=Z,14nm,0.8s
ANTO  Ankara            79.26 312    P       P         23 32 27.2 +0.5
ANTO                                 IAmb    IAmb      23 32 28.0
      comp=Z,14nm,0.8s
BMR   Baia Mare         79.26 322   ⇑P       P         23 32 27.5 +1.1
BR231 Keskin MP Arra    79.28 312    P       P         23 32 27.4 +0.6
BR231                                IAmb    IAmb      23 32 27.8
      comp=Z,44nm,1.6s
PGOR  Pogoanele         79.32 319   ⇓P       P         23 32 27.8 +1.0
CRVS  Cervenica-Dubn    79.39 324   eP       P         23 32 27.8 +0.6
CRVS                                 pmax    pmax
      comp=Z,19nm,1.0s
CRVS  Cervenica-Dubn    79.39 324   eP       P         23 32 27.8 +0.6
TRPA  Tarpa             79.41 323   ⇑P       P         23 32 28.0 +0.8
MLR   Muntele Rosu      79.49 319   ⇑P       P         23 32 28.1 +0.2
GMRC  Granite Mounta    79.66  54    P       P         23 32 30.3 +1.2
      baz=307
SECR                    79.72 319   ⇓P       P         23 32 30.0 +1.0
CBBR  Cluj-Babes-Bol    79.85 322   ⇑P       P         23 32 31.1 +1.4
CJR   Cluj-Napoca       79.86 322   ⇑P       P         23 32 30.8 +1.0
MESR  Meseseni          79.89 322   ⇑P       P         23 32 30.8 +1.0
LANS  Liptovska Anna    80.14 325   eP       P         23 32 32.4 +1.1
LANS                                 pmax    pmax
      comp=Z,11nm,1.3s
LANS  Liptovska Anna    80.14 325   eP       P         23 32 32.4 +1.1
OKC   Ostrava-Krasne    80.25 326⇑eP       P         23 32 32.5 +0.8
OKC   Ostrava-Krasne    80.25 326   eP       P         23 32 32.5 +0.8
ARR   Arges             80.25 320   ⇓P       P         23 32 33.0 +1.0
SOCY  Socotra           80.28 278    P       P         23 32 31.0 -1.6
SOCY  Socotra           80.28 278    P       P         23 32 30.8 -1.8
SOCY                                 IAmb    IAmb      23 32 34.1
      comp=Z,32nm,1.1s
ULM   Lac du Bonnet     80.31  33    P       P         23 32 31.9 -0.2
      comp=Z,3.2nm,0.7s,baz=306,slow=8.0,SNR=6.1
ULM   Lac du Bonnet     80.31  33    P       P         23 32 32.6 +0.5
ULM                                  pmax    pmax
      comp=Z,6.0nm,0.9s
ULM   Lac du Bonnet     80.31  33    P       P         23 32 32.6 +0.5
KSP   Ksiaz             80.32 328   eP       P         23 32 32.6 +0.5
RAYN  Ar Rayn           80.37 292    P       P         23 32 33.0  0.0
RAYN                                 pmax    pmax
      comp=Z,15nm,0.9s
RAYN  Ar Rayn           80.37 292    P       P         23 32 33.0  0.0
RAYN  Ar Rayn           80.37 292    P       P         23 32 33.0  0.0
RAYN                                 IAmb    IAmb      23 32 34.1
      comp=Z,15nm,0.9s
MORC  Moravsky Berou    80.56 327   ⇓P       P         23 32 34.0 +0.5
MORC  Moravsky Berou    80.56 327    P       P         23 32 34.0 +0.5
MORC                                 pmax    pmax
      comp=Z,10.0nm,0.8s
MORC  Moravsky Berou    80.56 327   eP       P         23 32 33.8 +0.3
MORC  Moravsky Berou    80.56 327    P       P         23 32 34.0 +0.5
MORC                                 IAmb    IAmb      23 32 34.5
      comp=Z,10.0nm,0.8s
OSTC  Ostas             80.57 328⇑eP       P         23 32 34.2 +0.7
CHVC  Chvalec           80.61 328⇑iP       P         23 32 34.3 +0.6
RSSD  Black Hills       80.65  41    P       P         23 32 34.7 +0.4
RSSD                                 pmax    pmax
      comp=Z,3.0nm,0.6s
RSSD  Black Hills       80.65  41    P       P         23 32 35.0 +0.6
      baz=312
RSSD  Black Hills       80.65  41    P       P         23 32 34.7 +0.4
DPC   Dobruska-Polom    80.67 328⇑iP       P         23 32 34.8 +0.7
DPC   Dobruska-Polom    80.67 328⇑iP       P         23 32 34.8 +0.7
KRLC  Kraliky           80.68 327⇑iP       P         23 32 34.5 +0.4
KRLC  Kraliky           80.68 327⇑iP       P         23 32 34.5 +0.4
UPC   Upice             80.69 328⇑eP       P         23 32 34.9 +0.8
UPC   Upice             80.69 328   eP       P         23 32 34.9 +0.8
U15A  North Rim         80.82  51    P       P         23 32 36.0 +0.5
PSZ   Piszkesteto       80.82 324   ⇓P       P         23 32 34.9 -0.1
PSZ   Piszkesteto       80.82 324    P       P         23 32 35.5 +0.5
PSZ                                  pmax    pmax
      comp=Z,21nm,1.0s
PSZ   Piszkesteto       80.82 324    P       P         23 32 35.5 +0.5
PSZ                                  IAmb    IAmb      23 32 36.7
      comp=Z,21nm,1.0s
VYHS  Vyhne             80.91 325   eP       P         23 32 35.1 -0.2
VYHS                                 pmax    pmax
      comp=Z,13nm,1.2s
VYHS  Vyhne             80.91 325   eP       P         23 32 35.1 -0.2
O20A  White River Ci    80.93  46    P       P         23 32 36.9 +1.1
      baz=310,SNR=6.0
PDMCI Parker Dam,Lak    80.95  54    P       P         23 32 37.2 +1.4
      baz=308
JAVC  Velka Javorina    81.17 326   eP       P         23 32 38.0 +1.2
GZR   Gura Zlata        81.19 321   ⇓P       P         23 32 37.2 +0.3
PVCC  Panska Ves        81.29 329⇑eP       P         23 32 38.1 +0.8
PVCC  Panska Ves        81.29 329   eP       P         23 32 38.1 +0.8
BRG   Berggiesshubel    81.29 329   i P      P         23 32 37.8 +0.5
BRG                                  Amp               23 32 38.6
      comp=Z,11nm,0.9s
BRG   Berggiesshubel    81.29 329    P       P         23 32 49.6  +12
BRG                                  Amp               23 32 53.5
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	comp=Z,5.9nm,1.0s						
VRAC	Vranov	81.32	327	⇑P	P	23 32 38.4	+0.9
VRAC	Vranov	81.32	327	eP	P	23 32 37.9	+0.4
CLL	Collm	81.34	330	i P	P	23 32 37.5	0.0
	comp=Z,32nm,1.0s						
CLL				i sP	sP	23 32 56.7	-0.2
CLL	Collm	81.34	330	i P	P	23 32 37.5	0.0
CLL				i		23 32 56.7	
CLL				pmax	pmax		
	comp=Z,32nm,1.0s						
CLL	Collm	81.34	330	P	P	23 32 37.6	0.0
CLL				IAmb	IAmb	23 32 38.5	
	comp=Z,25nm,0.8s						
SMOL	Smolenice	81.53	326	eP	P	23 32 39.7	+1.0
SMOL				pmax	pmax		
	comp=Z,9.0nm,1.1s						
SMOL	Smolenice	81.53	326	eP	P	23 32 39.7	+1.0
KRUC	Moravsky	81.59	327	eP	P	23 32 39.2	+0.3
BZS	Buzias	81.62	322	⇓P	P	23 32 38.7	-0.4
PRA	Prague	81.69	328	⇑eP	P	23 32 40.2	+0.8
PRA	Prague	81.69	328	eP	P	23 32 40.2	+0.8
MODS	Modra-Piesok	81.71	326	eP	P	23 32 39.6	0.0
MODS				pmax	pmax		
	comp=Z,16nm,1.1s						
MODS	Modra-Piesok	81.71	326	eP	P	23 32 39.6	0.0
PRU	Pruhonice	81.71	328	⇑iP	P	23 32 39.9	+0.4
PRU				esP	sP	23 32 59.0	+0.1
PRU	Pruhonice	81.71	328	⇑iP	P	23 32 39.9	+0.4
PRU				e		23 32 59.0	
N23A	Red Feather La	81.75	45	P	P	23 32 41.7	+1.4
	baz=312						
ZST	Bratislava	81.92	326	eP	P	23 32 41.0	+0.4
ZST	Bratislava	81.92	326	eP	P	23 32 41.0	+0.4
WUAZ	Wupatki	81.97	52	P	P	23 32 43.1	+1.6
	baz=309						
WUAZ	Wupatki	81.97	52	P	P	23 32 42.2	+0.8
CSS	Mathiatis	81.99	308	P	P	23 32 41.4	0.0
CSS				IAmb	IAmb	23 32 53.8	
	comp=Z,16nm,1.0s						
MDVR	Moldovita	82.15	321	⇓P	P	23 32 42.1	+0.1
NKC	Novy Kostel	82.39	329	⇑eP	P	23 32 43.5	+0.3
NKC	Novy Kostel	82.39	329	eP	P	23 32 43.5	+0.3
NRS	Narsarsuaq	82.63	3	i P	P	23 32 44.5	+0.4
MVCO	Mesa Verde	82.67	49	P	P	23 32 46.3	+1.2
	baz=311,SNR=5.8						
ISCO	Idaho Springs	82.67	45	P	P	23 32 46.6	+1.4
	baz=312						
CONA	Conrad Observa	82.67	326	eP	P	23 32 44.8	0.0
	comp=Z,19nm,1.3s						
CKRC	Cesky Krumlov	82.69	328	⇑iP	P	23 32 44.9	+0.2
CKRC				ex	x	23 33 03.5	
KHC	Kasperske Hory	82.77	328	⇑iP	P	23 32 45.5	+0.4
KHC	Kasperske Hory	82.77	328	⇑iP	P	23 32 45.5	+0.4
FRGS	Fruska Gora	82.84	322	⇑P	P	23 32 45.8	+0.3
VTS	Vitosha	82.87	319	⇓P	P	23 32 47.0	+1.0
VTS	Vitosha	82.87	319	P	P	23 32 46.8	+0.9
VTS				pmax	pmax		
	comp=Z,8.0nm,0.9s						
VTS	Vitosha	82.87	319	P	P	23 32 46.8	+0.9
GEC2	GERESS Array S	82.93	328	P	P	23 32 45.9	-0.1
GEC2				IAmb	IAmb	23 32 46.5	
	comp=Z,6.4nm,0.7s						
GERES	GERESS Array B	82.93	328	P	P	23 32 46.1	0.0
	comp=Z,3.9nm,0.5s,baz=42,slow=6.3,SNR=41						
GERES	GERESS Array B	82.93	328	P	P	23 32 46.1	0.0
ELL	Elmali	82.99	311	P	P	23 32 46.8	+0.2
ELL				pmax	pmax		
	comp=Z,52nm,1.1s						
ELL	Elmali	82.99	311	P	P	23 32 46.8	+0.2
GRA1	Grafenberg Arr	83.31	330	P	P	23 32 48.5	+0.6
GRF	Grafenberg Arr	83.31	330	P	P	23 32 48.5	+0.6
GRF	Grafenberg Arr	83.31	330	eP	P	23 32 48.3	+0.4
	comp=Z,22nm,0.9s,baz=42,slow=4.4						
GRFO	Grafenberg	83.31	330	P	P	23 32 48.4	+0.5
GRFO				pmax	pmax		
	comp=Z,25nm,0.8s						
GRFO	Grafenberg	83.31	330	P	P	23 32 48.4	+0.5
GRFO				IAmb	IAmb	23 32 49.5	
	comp=Z,25nm,0.8s						
S22A	4UR Ranch, Cre	83.32	48	P	P	23 32 50.5	+1.9
	baz=312						
ARSA	Arzberg	83.33	326	eP	P	23 32 48.1	0.0
	comp=Z,5.7nm,1.0s						
MOA	Molln	83.44	327	eP	P	23 32 49.4	+0.8
	comp=Z,12nm,1.1s						
DIVS	Divibare	83.51	321	P	P	23 32 49.3	+0.2
DIVS				IAmb	IAmb	23 33 10.3	
	comp=Z,39nm,1.5s						
EYMN	Ely	83.94	32	P	P	23 32 51.3	+0.1
EYMN				IAmb	IAmb	23 32 56.8	
	comp=Z,30nm,1.6s						
SOKA	Soboth	83.98	326	eP	P	23 32 51.5	0.0
	comp=Z,17nm,1.0s,SNR=8.1						
SDCO	Great Sand Dun	84.11	47	P	P	23 32 53.9	+1.3
	baz=312,SNR=5.1						
SDCO	Great Sand Dun	84.11	47	P	P	23 32 53.4	+0.8
TUC	Tucson	84.38	54	P	P	23 32 55.1	+1.3
	baz=310						
BTNL	Ternell	84.57	333	dP	P	23 32 52.8	-1.5
	comp=Z,9.8nm,1.0s						
MEM	Membach	84.60	333	dP	P	23 32 53.6	-0.8
	comp=Z,8.5nm,0.8s						
MYKA	Terra Mystica	84.65	326	eP	P	23 32 54.0	-0.8
	comp=Z,6.4nm,0.6s						
ECSD	EROS Data Cent	84.73	38	P	P	23 32 55.6	+0.3
	baz=317						
ECSD	EROS Data Cent	84.73	38	P	P	23 32 55.5	+0.3
ZOU	Zoufplan	85.00	327	P	P	23 32 55.5	-1.3
ZOU				IAmb	IAmb	23 33 01.3	
	comp=Z,26nm,1.2s						
BCLA	Clavier	85.01	333	dP	P	23 32 56.3	-0.2
ABTA	Abfaltersbach	85.05	327	eP	P	23 32 56.5	-0.4
	comp=Z,13nm,1.4s						
PDG	Podgorica	85.08	321	P	P	23 32 56.8	-0.2
T25A	Trinidad	85.16	47	P	P	23 32 59.2	+1.4
	baz=313,SNR=8.2						
T25A	Trinidad	85.16	47	P	P	23 32 58.6	+0.8
T25A				IAmb	IAmb	23 32 59.8	
	comp=Z,10nm,0.8s						
RETA	Reutte	85.23	329	eP	P	23 32 57.3	-0.4
	comp=Z,12nm,0.9s,SNR=7.4						
SQTA	Sankt Quirin	85.25	328	i P	P	23 32 57.8	-0.1
	comp=Z,11nm,1.1s						
BMRD	Maredsous	85.30	333	dP	P	23 32 57.3	-0.7
	comp=Z,10nm,1.0s						
SNF	Seneffe	85.30	334	dP	P	23 32 58.0	0.0
	comp=Z,11nm,0.7s						
WLF	Walferdange	85.32	332	dP	P	23 32 58.5	+0.4
STAL	STALIGIAL	85.34	327	P	P	23 32 56.9	-1.4
ANMO	Albuquerque	85.40	49	⇓eP	P	23 33 00.5	+1.4
ANMO	Albuquerque	85.40	49	P	P	23 33 00.4	+1.4
	baz=312						
ANMO	Albuquerque	85.40	49	P	P	23 32 59.3	+0.3
BFO	Black Forest	85.56	330	P	P	23 32 59.3	0.0
BFO	Black Forest	85.56	330	P	P	23 32 59.3	0.0
LENM	Lemitar	85.60	50	P	P	23 33 00.4	+0.4
FETA	Feichten	85.61	328	eP	P	23 32 59.5	-0.3
	comp=Z,7.5nm,1.0s						
DAVA	Damuels	85.76	329	eP	P	23 33 00.3	-0.2
	comp=Z,16nm,0.9s						
BNM	Barren Site	85.83	50	P	P	23 33 01.8	+0.6
CTI	Castel Tesino	85.97	327	P	P	23 33 00.8	-0.7
CTI	Castel Tesino	85.97	327	P	P	23 33 00.8	-0.7
ECH	Echery	86.11	331	P	P	23 33 02.0	-0.1
ECH	Echery	86.11	331	P	P	23 33 02.0	-0.1
ECH				IAmb	IAmb	23 33 02.7	
	comp=Z,20nm,1.0s						
121A	Cookes Peak, D	86.17	52	P	P	23 33 04.4	+1.6
	baz=311						
N35A	Tabor	87.33	39	P	P	23 33 08.2	0.0
NRCA	Norcia	87.80	324	P	P	23 33 10.3	-0.2
OSSC	Osservatorio P	88.12	326	P	P	23 33 11.6	-0.3
KSU1	Kansas State U	88.13	41	P	P	23 33 12.3	+0.3
	baz=317						
BNI	Bardonecchia	88.88	329	P	P	23 33 15.6	+0.1
BNI	Bardonecchia	88.88	329	P	P	23 33 15.6	+0.1
VLDQ	Val d'Or	89.20	24	P	P	23 33 16.4	-0.4
VLDQ				IAmb	IAmb	23 33 17.2	
	comp=Z,8.1nm,0.7s						
TUL1	Leonard	90.92	43	P	P	23 33 25.8	+0.7
	baz=318						
TX31	Lajitas Ar. Si	90.93	52	P	P	23 33 26.0	+0.6
TX31				IAmb	IAmb	23 33 27.5	
	comp=Z,7.5nm,0.8s						
TXAR	Lajitas Array	90.93	52	P	P	23 33 25.7	+0.3
	comp=Z,2.5nm,0.7s,baz=301,slow=3.2,SNR=16						
TXAR	Lajitas Array	90.93	52	P	P	23 33 25.1	-0.3
TXAR	Lajitas Array	90.93	52	P	P	23 33 25.1	-0.3
U40A	Yellville	92.16	41	P	P	23 33 30.9	+0.1
	baz=320,SNR=5.2						
MIAR	Mount Ida	93.14	42	P	P	23 33 36.3	+1.0
	baz=319						
ESDC	Sonseca Array	97.58	333	P	P	23 33 55.5	-0.1
	comp=Z,1.0nm,0.8s,baz=18,slow=4.6,SNR=3.4						
VNDA	Vanda	114.42	175	PKP	PKiKP	23 38 59.6	+0.1
	comp=Z,0.5nm,0.7s,baz=278,slow=13,SNR=2.1						
VNDA	Vanda	114.42	175	PKIKP	PKiKP	23 38 59.6	+0.1
TORD	Torodi Ar. Bea	117.36	314	PKP	PKPdf	23 39 06.4	-0.7
	comp=Z,1.2nm,0.6s,baz=28,slow=1.2,SNR=17						
BOSA	Boshof	125.91	259	PKP	PKPdf	23 39 23.1	-0.2
	comp=Z,3.1nm,0.9s,baz=80,slow=1.3,SNR=4.0						
BOSA	Boshof	125.91	259	PKIKP	PKPdf	23 39 23.2	0.0
BOSA	Boshof	125.91	259		PKPdf	23 39 23.2	0.0
QSPA	South Pole Qui	126.17	180		PKiKP	23 39 22.9	0.0
DBIC	Dimbokro	126.34	316	PKP	PKPdf	23 39 24.0	-0.4
	comp=Z,2.8nm,0.6s,baz=37,slow=4.2,SNR=5.0						
DBIC	Dimbokro	126.34	316	PKIKP	PKPdf	23 39 24.0	-0.4
VNA2	Neumayer--Watz	141.58	196	PKPdf	PKPdf	23 39 51.9	+0.8
VNA3	Neumayer Olymp	141.84	195	PKPdf	PKPdf	23 39 51.2	-0.3
H03N2	Juan Fernandez	147.51	97	T	T	02 25 18.1	
	baz=291,slow=76,SNR=185						
H03N3	Juan Fernandez	147.52	97	T	T	02 25 19.2	
	baz=291,slow=76,SNR=150						
H03N1	Juan Fernandez	147.53	97	T	T	02 25 16.7	
	baz=291,slow=76,SNR=193						
PB16	IPOC Station P	147.86	64		PKiKP	23 40 09.0	-0.1

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*IDC **21** 23:20:25.2±0.8, 33°.49S×178°.75W, $h0^{km}$, mb4.5/7, mb1 4.6/8, mb1mx4.1/32, mbtmp4.6/8, ML4.8/1, MS4.2/3, Ms1 4.2/3, ms1mx3.7/34 Error ellipse: s-maj=28.8km s-min=20.1km az=78.0*

*NEIC **21** 23:20:27.9±1.3, 33°.9S±0°.1×178°.8W±0°.2, $h10^{km}\pm 1^{km}$, mb4.7/19, Error ellipse: s-maj=25.3km s-min=16.2km az=117.0*

*WEL **21** 23:20:28.5±0.8, 33°S±14°×17°9W±3°6, $h33^{km}$, M4.9/10, mB5.4/4, ML5.2/11, MLv5.0/10, Mw(mB)4.8/4, Error ellipse: s-maj=0.1km s-min=0.0km az=111.0*

ISC 21 23:20:31.4±0.6**, 33°.77S**±0°.06×**178°.8W**±0°.1**, $h35^{km}$, n71, $\sigma 1^{s}38$**/82**, mb4.8**/18**, MS4.4**/5**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.46	211	P	Pn	23 21 36.2	-0.3
MXZ				S	Sn	23 22 28.9	+1.7
GLKZ	Green Lake	4.56	9	P	Pn	23 21 30.8	-7.0
GLKZ				S	Sn	23 22 19.5	-10
WMGZ	Waiomatatini S	4.64	209	P	Pn	23 21 40.4	+1.5
WMGZ				S	Sn	23 22 31.4	-0.1
PKGZ	Pakihiroa	4.84	211	P	Pn	23 21 40.8	-0.9
PKGZ				S	Sn	23 22 37.1	+0.6
HAZ	Te Kaha	4.86	214	P	Pn	23 21 42.2	+0.2
HAZ				S	Sn	23 22 39.2	+2.3
PUZ	Puketiti	4.92	208	P	Pn	23 21 41.3	-1.4
PUZ				S	Sn	23 22 40.9	+2.4
RUGZ	Raukumara Rang	5.08	214	P	Pn	23 21 44.8	-0.3
RUGZ				S	Sn	23 22 42.6	+0.1
TWGZ	Tauwhareparae	5.12	210	P	Pn	23 21 46.9	+1.4
TWGZ				S	Sn	23 22 44.5	+0.9
CNGZ	Carnagh Statio	5.30	207	P	Pn	23 21 47.9	0.0
CNGZ				S	Sn	23 22 50.7	+2.9
TKGZ	Te Karaka	5.40	209	P	Pn	23 21 50.2	+0.9
TKGZ				S	Sn	23 22 51.2	+0.9
MWZ	Matawai	5.45	212	P	Pn	23 21 48.6	-1.5
MWZ				S	Sn	23 22 52.5	+1.0
OPRZ	Ohinepanea	5.56	222	P	Pn	23 21 52.2	+0.7
URZ	Urewera	5.58	215	Pn	Pn	23 21 51.7	-0.1
	26nm,0.3s,baz=345,slow=3.1,SNR=45						
URZ				Sn	Sn	23 22 56.6	+1.9
	19nm,0.3s,baz=166,slow=19,SNR=6.4						
URZ	Urewera	5.58	215	Pn	Pn	23 21 49.9	-2.0
RIGZ	Rimuhau	5.66	209	P	Pn	23 21 53.4	+0.4
RIGZ				S	Sn	23 22 57.5	+0.7
BKZ	Black Stump Fm	6.59	214	Pn	Pn	23 22 03.4	-2.4
OUENC	Ouen Island, N	16.98	308		Pn	23 24 27.1	+0.9
OUENC				IAmb	IAmb	23 24 32.1	
	comp=Z,48nm,1.3s						
DZM	Mont Dzumac	17.48	308	P	Pn	23 24 32.7	+0.2
	comp=Z,0.1nm,0.3s,baz=167,slow=23,SNR=2.1						
DZM	Mont Dzumac	17.48	308	P	P	23 24 34.2	+0.7
DZM				IAmb	IAmb	23 24 53.0	
	comp=Z,16nm,1.0s						
EIDS	Eidsvold	27.45	280	P	P	23 26 14.7	+0.6
EIDS				IAmb	IAmb	23 26 16.9	
	comp=Z,19nm,1.0s						
STKA	Stephens Creek	33.22	262	P	P	23 27 04.4	-0.6
	comp=Z,2.0nm,0.7s,baz=145,slow=18,SNR=2.6						
STKA				LR	LR	23 40 24.9	
	comp=Z,634nm,18.1s,baz=52,slow=36						
STKA	Stephens Creek	33.22	262	P	P	23 27 05.3	+0.3
CTAO	Charters Tower	33.85	285	P	P	23 27 10.7	0.0
CTAO				IAmb	IAmb	23 27 12.5	
	comp=Z,25nm,1.2s						
BBOO	Buckleboo	37.54	259	P	P	23 27 40.8	-1.4
BBOO				IAmb	IAmb	23 27 42.8	
	comp=Z,12nm,1.1s						
COEN	Coen	39.70	290	P	P	23 28 00.2	-0.3
COEN				IAmb	IAmb	23 28 02.3	
	comp=Z,19nm,1.1s						
AS31	Alice Springs	42.39	271	P	P	23 28 21.6	-1.0
ASAR	Alice Springs	42.39	271	P	P	23 28 21.5	-1.1
	comp=Z,5.1nm,0.6s,baz=109,slow=7.1,SNR=46						
ASAR				PcP	PcP	23 30 13.9	-1.5
	comp=Z,0.6nm,0.5s,baz=122,slow=4.1,SNR=4.8						
ASAR				LR	LR	23 45 35.9	
	comp=Z,272nm,18.8s,baz=103,slow=36						
ASAR	Alice Springs	42.39	271	P	P	23 28 21.3	-1.3
WR0	Warramunga Arr	43.51	276	P	P	23 28 30.7	-1.0
WR0				IAmb	IAmb	23 28 33.0	
	comp=Z,12nm,1.0s						
WRA	Warramunga Arr	43.68	276	P	P	23 28 32.2	-0.8
	comp=Z,6.9nm,0.4s,baz=117,slow=7.6,SNR=78						
WRA				LR	LR	23 45 39.8	
	comp=Z,204nm,20.3s,baz=110,slow=35						
WRA	Warramunga Arr	43.68	276	P	P	23 28 32.2	-0.8
FORT	Forrest	44.64	259	P	P	23 28 38.6	-2.0
FORT				IAmb	IAmb	23 28 44.5	
	comp=Z,18nm,1.0s						
VNDA	Vanda	44.68	186	P	P	23 28 41.9	+1.6
	comp=Z,0.3nm,0.7s,baz=121,slow=15,SNR=1.4						
VNDA	Vanda	44.68	186	P	P	23 28 40.9	+0.6
KNRA	Kununurra	50.40	278	P	P	23 29 24.1	-1.3
CASY	Casey	51.87	209	P	P	23 29 34.1	-1.7
MORW	Morawa	55.01	256	P	P	23 29 57.7	-1.8
QSPA	South Pole Qui	56.35	180	P	P	23 30 10.3	+1.7
	comp=Z,13nm,1.0s,baz=59,slow=1.0,SNR=17						
QSPA	South Pole Qui	56.35	180	P	P	23 30 07.5	-1.2
QSPA				IAmb	IAmb	23 30 22.1	
	comp=Z,14nm,0.9s						
MAW	Mawson	68.93	201	P	P	23 31 33.3	+1.0
	comp=Z,6.8nm,1.1s,baz=114,slow=8.6,SNR=6.0						
MAW	Mawson	68.93	201	P	P	23 31 32.0	-0.3
MAW				IAmb	IAmb	23 31 39.0	
	comp=Z,2.0nm,1.1s						
SNAA	Sanae	74.81	179	P	P	23 32 07.2	-0.5
SNAA	Sanae	74.81	179	P	P	23 32 08.8	+1.1
	comp=Z,0.6nm,0.5s,baz=148,slow=6.7,SNR=10						
SNAA	Sanae	74.81	179	P	P	23 32 07.8	+0.2
SNAA				IAmb	IAmb	23 32 18.3	
	comp=Z,7.8nm,1.0s						
VNA3	Neumayer Olymp	74.99	176	P	P	23 32 08.1	-0.5
VNA2	Neumayer--Watz	75.42	177	P	P	23 32 11.1	0.0
VNA1	Neumayer--Stat	75.65	177	P	P	23 32 11.8	-0.5
NJ2	Nanjing	87.95	311	eP	P	23 33 20.1	+2.6
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
PEA0B	Petropavlovsk-	88.91	346	P	P	23 33 22.4	+0.9
PETK	Petropavlovsk-	88.91	346	P	P	23 33 20.3	-1.2
	comp=Z,5.9nm,1.0s,baz=119,slow=6.7,SNR=7.9						
PETK	Petropavlovsk-	88.91	346	P	P	23 33 22.7	+1.2
CN2	Changchun	92.43	323	eP	P	23 33 42.9	+4.7
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN	Xi'an	95.63	307	P	P	23 33 54.3	+1.1
XAN				sP	pwP	23 34 10.1	+1.1
XAN				pmax	pmax		
	comp=Z,7.0nm,2.1s						
XAN				LR	LR		
	comp=N,260nm,21.3s						
XAN				LR	LR		
	comp=Z,410nm,27.5s						
HHC	Hu-ho-hao-te	98.10	314	eP	P	23 34 04.1	-0.2
HHC	Hu-ho-hao-te	98.10	314	S	S	23 45 30.0	+1.2
HHC	Hu-ho-hao-te	98.10	314	SS	SS	23 52 12.3	-0.4
HHC				pmax	pmax		
	comp=Z,8.0nm,1.4s						
HHC				pmax	pmax		
	comp=Z,190nm,7.5s						
HHC				LR	LR		
	comp=N,330nm,17.3s						
HHC				LR	LR		
	comp=E,300nm,18.4s						
HHC				LR	LR		
	comp=Z,400nm,20.2s						
WMQ	Urumqi	114.77	307	eP	PKiKP	23 39 09.0	+1.0
MKAR	Makanchi Array	119.40	309	PKP	PKPdf	23 39 15.5	-1.2
	comp=Z,3.4nm,1.1s,baz=219,slow=1.2,SNR=7.7						
ZALV	Zalesovo Beam	120.08	317	PKP	PKPdf	23 39 17.5	-0.2
	comp=Z,0.5nm,0.5s,baz=90,slow=2.9,SNR=2.3						
ARCES	ARCESS Array B	141.72	346	PKP	PKPdf	23 39 54.7	-3.3
	comp=Z,3.1nm,1.1s,baz=42,slow=8.6,SNR=1.1						
KBZ	Khabaz	146.32	300	PKPbc	PKPdf	23 40 07.0	+0.2
	comp=Z,2.5nm,1.0s,baz=275,slow=14,SNR=1.5						
FINES	FINESS Array B	148.04	338	PKPbc	PKPdf	23 40 10.9	+1.8
	comp=Z,5.1nm,0.4s,baz=42,slow=3.9,SNR=64						
FINES	FINESS Array B	148.04	338		PKPdf	23 40 10.2	+1.0
NB2	NORSAR Subarra	151.96	350	PKP	PKPbc	23 40 21.3	-0.7
	comp=Z,0.8nm,0.6s,baz=18,slow=2.6						
NOA	NORSAR Array B	151.96	350	PKPbc	PKPbc	23 40 20.0	-2.0
	comp=Z,5.1nm,1.1s,baz=15,slow=4.1,SNR=6.7						
NACGM	Naroch	152.34	328	i PKP	PKPbc	23 40 22.8	-0.1
BRTR	Keskin Array B	153.45	292	PKPbc	PKPbc	23 40 25.4	-0.7
	comp=Z,5.6nm,1.0s,baz=129,slow=3.3,SNR=14						
BRTR	Keskin Array B	153.45	292		PKPbc	23 40 24.1	-2.0
AKASG	Malin Array Be	153.47	318	PKPbc	PKPbc	23 40 24.0	-1.5
	comp=Z,3.2nm,0.8s,baz=74,slow=2.7,SNR=12						
AKASG	Malin Array Be	153.47	318		PKPbc	23 40 24.7	-0.8
TORD	Torodi Ar. Bea	159.46	181	PKPab	PKPab	23 41 03.5	-1.0
	comp=Z,1.7nm,0.9s,baz=170,slow=4.0,SNR=6.6						

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*BJI **21** 23:43:13.1±0.0, 20°.42N×110°.36E, $h9^{km}$, mB4.6/7, mb4.3/17, ML4.4/5, Ms3.9/7, Ms7 3.7/5*

*NEIC **21** 23:43:15.8±1.3, 20°.31N±0°.05×110°.20E±0°.09, $h15^{km}\pm 5^{km}$, mb4.2/14, Error ellipse: s-maj=12.7km s-min=7.7km az=100.0*

*IDC **21** 23:43:16.8±0.9, 20°.52N×109°.58E, $h0^{km}$, mb3.9/8, mb1 4.1/8, mb1mx3.7/43, mbtmp4.0/8, MS4.3/3, Ms1 4.3/3, ms1mx3.5/56, Error ellipse: s-maj=47.4km s-min=16.1km az=66.0*

ISC 21 23:43:14.8±0.6**, 20°.25N**±0°.05×**110°.22E**±0°.07**, $h10^{km}$, n56, $\sigma 1^{s}23$**/50**, mb4.3**/21**, MS4.5**/3**, 3C-1D, Southeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QIZ	Qiongzhong	1.26	196	Pg	Pn	23 43 38.3	-0.2
QIZ				Sg	Sb	23 43 53.4	-1.6
QIZ				smax	smax		
	comp=N,3μm,0.8s						
QIZ				smax	smax		
	comp=E,4μm,0.8s						
QIZ	Qiongzhong	1.26	196	Pn	Pn	23 43 38.2	-0.2
MCO	Taipa Grande	3.63	59	P	Pn	23 44 10.0	-1.1
SLVN	Son La	6.00	281		Pn	23 44 43.5	-0.2
UBPT	Khong Chiam	6.70	223		Pn	23 44 53.7	+0.5
GYA	Guiyang	6.99	333	⇓Pn	Pn	23 44 55.4	-2.0
GYA				Sn	Sn	23 46 17.5	+0.5
GYA				smax	smax		
	comp=N,190nm,1.0s						
GYA				smax	smax		
	comp=E,190nm,1.1s						
KMI	Kunming	8.44	306	⇑P	Pn	23 45 17.3	0.0
KMI				pmax	pmax		
	comp=Z,15nm,0.7s						
KMI				LR	LR		
	comp=E,300nm,6.3s						
KMI				LR	LR		
	comp=Z,210nm,7.6s						
ENH	Enshi	10.00	356	Pn	Pn	23 45 36.7	-1.9
TPUB	Ta-pu	10.14	71	Pn	Pn	23 45 40.4	-0.1
SSLB	Suanglung	10.56	69	Pn	Pn	23 45 46.0	-0.3
YULB	Yu-li	10.76	71	Pn	Pn	23 45 50.3	+1.3
CMAR	Chiang Mai Arr	10.79	262	Pn	Pn	23 45 52.8	+3.4
	0.2nm,0.3s,baz=77,slow=11,SNR=1.7						
WHN	Wuhan	10.91	19	⇑P	Pn	23 45 57.9	+6.9
WHN				S	Sn	23 47 56.3	+3.2
WHN				LR	LR		
	comp=N,1μm,5.7s						
WHN				LR	LR		
	comp=E,1μm,6.1s						
WHN				LR	LR		
	comp=Z,700nm,6.2s						
XAN	Xi'an	13.79	355	P	Pn	23 46 28.8	-1.6
XAN				pP	P	23 46 37.0	-1.9
XAN				S	Sn	23 49 03.1	-0.5
XAN				pmax	pmax		
	comp=Z,7.0nm,1.2s						
XAN				LR	LR		
	comp=Z,280nm,8.8s						
XAN				LR	LR		
	comp=Z,370nm,18.6s						
SHL	Shillong	17.70	291		Pn	23 47 21.8	+0.2
SHL				IAmb	IAmb	23 47 24.2	
	comp=Z,8.6nm,0.8s						
LSA	Lhasa	19.66	302		P	23 47 44.2	-0.2
PSI	Prapat	20.55	214	P	Pn	23 47 56.5	+0.6
	comp=Z,4.3nm,0.8s,baz=12,slow=9.2,SNR=6.7						
RPSI	Rantau Prapat	20.64	214	P	Pn	23 47 56.5	-0.3
GTA	Gaotai	21.09	337	⇑P	P	23 48 00.4	+0.9
GTA				pP	sP	23 48 04.3	+0.6
GTA				sP	pP	23 48 07.5	+5.1
GTA				pmax	pmax		
	comp=Z,7.0nm,1.3s						
TAPN	Taplejung	21.75	293	eP	P	23 48 07.8	+0.9
ODAN	Odare	21.92	292	eP	P	23 48 10.0	+1.4
RAMN	Ramite	22.63	292	eP	P	23 48 17.0	+0.7
JIRN	Jiri	23.14	293	eP	P	23 48 22.3	+0.6
	comp=Z,26nm,1.3s						
GUN	Gumba	23.46	294	eP	P	23 48 25.0	0.0
	comp=Z,45nm,1.2s						
PKI	Pulchoki	23.80	293	eP	P	23 48 27.5	-0.7
	comp=Z,44nm,1.4s						
PKIN	Phulchoki	23.81	293	eP	P	23 48 27.8	-0.5
	comp=Z,16nm,1.0s						
KKN	Kakani	23.95	293	eP	P	23 48 29.6	0.0
DANN	Dangsing	25.39	294	eP	P	23 48 42.1	-0.7
	comp=Z,32nm,0.8s						
KOLN	Koldanda	25.41	292	eP	P	23 48 42.4	-0.4
	comp=Z,17nm,0.8s						
PYUN	Piuthan	26.00	293	eP	P	23 48 48.0	-0.2
	comp=Z,28nm,1.0s						
KAPI	Kappang	26.80	159	LR	LR	00 01 00.1	
	comp=Z,109nm,18.7s,baz=100,slow=39						
SONM	Songino Array	27.69	354	P	P	23 49 02.9	-0.2
	comp=Z,0.2nm,0.3s,baz=167,slow=13,SNR=2.0						
WMQ	Urumqi	30.10	326	eP	P	23 49 28.3	+3.8
MKAR	Makanchi Array	34.92	326	P	P	23 50 06.2	-0.5
	comp=Z,0.3nm,0.6s,baz=129,slow=9.6,SNR=2.6						
MKAR	Makanchi Array	34.92	326	P	P	23 50 06.9	+0.2
NIL	Nilore	35.36	300	P	P	23 50 09.8	-0.8
AAK	Ala-Archa	37.37	315	P	P	23 50 27.4	-0.5
AAK				IAmb	IAmb	23 50 41.8	
	comp=Z,3.6nm,1.2s						
DRK	Karamyk	38.07	309	P	P	23 50 33.6	-0.4
DRK				IAmb	IAmb	23 50 35.1	
	comp=Z,3.5nm,0.8s						
ZAA0	Zalesovo Array	38.84	336	P	P	23 50 38.6	-1.2
ZAA0				IAmb	IAmb	23 50 50.5	
	comp=Z,2.9nm,0.8s						
ZALV	Zalesovo Beam	38.84	336	P	P	23 50 39.0	-0.9
	comp=Z,2.2nm,0.7s,baz=133,slow=6.9,SNR=8.8						
ZALV	Zalesovo Beam	38.84	336	P	P	23 50 38.6	-1.2
GAR	Garm	39.02	307	P	P	23 50 40.8	-1.0
GAR				IAmb	IAmb	23 50 42.3	
	comp=Z,12nm,1.3s						
KURBB	Kurchatov Arra	39.27	328	P	P	23 50 42.7	-0.9
	comp=Z,0.8nm,0.4s,baz=139,slow=8.8,SNR=6.6						
KURK	Kurchatov	39.29	328	P	P	23 50 42.7	-1.0
KURK	Kurchatov	39.29	328	IAmb	IAmb	23 50 45.1	
	comp=Z,3.1nm,1.0s						
CHGR	Chuyangaron	39.79	307	P	P	23 50 47.2	-1.0

CHGR				IAmb	IAmb	23 50 48.6	
	comp=Z,7.8nm,0.7s						
KKAR	Karatay Array	40.24	314	P	P	23 50 51.2	-0.6
WB0	Warramunga Arr	46.28	148	P	P	23 51 39.1	-1.7
WRA	Warramunga Arr	46.41	148	P	P	23 51 49.0	+7.3
	comp=Z,5.6nm,0.8s,baz=333,slow=8.8,SNR=43						
WRA	Warramunga Arr	46.41	148	P	P	23 51 42.3	+0.5
PETK	Petropavlovsk-	48.92	36	LR	LR	00 13 39.2	
	comp=Z,607nm,21.8s,baz=74,slow=37						
ABKAR	Akbulak array	49.23	318	P	P	23 52 03.1	-0.2
ASAR	Alice Springs	49.38	151	P	P	23 52 12.4	+7.7
	comp=Z,1.3nm,0.8s,baz=330,slow=7.0,SNR=14						
ASAR	Alice Springs	49.38	151	P	P	23 52 05.6	+0.8
GNI	Garni	58.69	305	LR	LR	00 24 03.5	
	comp=Z,834nm,19.6s,baz=273,slow=42						
STKA	Stephens Creek	59.92	149	P	P	23 53 29.2	+8.1
	comp=Z,2.5nm,0.8s,baz=345,slow=5.6,SNR=5.8						

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*NEIC **21** 23:48:34.9±1.3, 52°.82N±0°.02×166°.67W±0°.05, h11^{km}±6^{km}, Error ellipse: s-maj=4.8km s-min=1.9km az=56.0*

AEIC 21 23:48:34.9±1.8**, 52°.71N**±0°.09×**166°.57W**±0°.07**, h26**^{km}±8^{km}**, ML3.2**/32**, mb3.9**/4(NEIC)**, Error ellipse: s-maj=13.2km s-min=5.4km az=161.0, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKFG	Magazine Ridge	1.07	311		Pn	23 48 53.0	-1.1
OKFG					Sb	23 49 08.8	+0.5
MREP	Makushin Rep't	1.10	355		Pn	23 48 54.4	-0.3
OKTU	Okmok Mt. Tuli	1.11	308		Pn	23 48 53.9	-1.0
MAPS	Pakushin South	1.12	349		Pn	23 48 54.5	-0.4
MAPS					Sb	23 49 10.0	+0.2
UNV	Unalaska Valle	1.14	2		Pn	23 48 54.5	-0.6
OKSO	Okmok South	1.16	305		Pn	23 48 54.2	-1.2
OKSO					Sb	23 49 10.8	0.0
OKSP	Okmok Steeple	1.17	298		Pn	23 48 55.3	-0.3
MNAT	Makushin Natee	1.18	357		Pn	23 48 55.4	-0.3
MNAT					Sb	23 49 11.3	-0.1
OKNC	Okmok New Cone	1.20	309		Pn	23 48 56.1	+0.2
OKCE	Okmok Cone E	1.20	307		Pn	23 48 55.3	-0.7
MSW	Makushin Switc	1.21	354		Pn	23 48 55.7	-0.4
MTBL	Makushin Table	1.26	357		Pn	23 48 56.9	0.0
NIKH	Nikolski High	1.41	282		Pn	23 48 58.7	-0.2
AKMO	Akutan Morgan	1.42	13		Pn	23 48 59.4	+0.3
AKBBA	Akutan Broad B	1.44	15		Pn	23 48 59.5	+0.2
AKRB	Akutan Reef Bi	1.45	12		Pn	23 48 59.9	+0.4
AKLV	Akutan Long Va	1.50	14		Pn	23 49 00.3	+0.2
AKSA	Akutan Strait	1.52	20		Pn	23 49 00.1	-0.3
WESP	Westdahl Peak	2.10	31		Pn	23 49 09.2	+0.8
WESP					Sn	23 49 34.5	+0.8
WECS	Westdahl Cape	2.11	30		Pn	23 49 09.3	+0.8
WECS					Sn	23 49 35.2	+1.2
WESE	West Dahl East	2.12	33		Pn	23 49 09.4	+0.7
SSLN	Shishaldin Nor	2.60	35		Pn	23 49 15.3	0.0
FALS	False Pass	2.85	40	Pn	Pn	23 49 19.8	+1.1
ATKA	Atka Island	4.69	267		Pn	23 49 45.9	+2.0
GSTD	Great Sitkin T	5.90	267		Pn	23 50 02.6	+2.0
ADK	Adak	6.26	266		Pn	23 50 06.7	+1.2
KIWB	Kanaga Island	6.55	267	Pn	Pn	23 50 10.7	+1.2
AMKA	Amchitka	8.81	267	Pn	Pn	23 50 41.5	+1.1
KLU	Klutina	14.20	44	Pn	Pn	23 51 52.6	-1.5
GLB	Gilahina Butte	15.08	46	Pn	Pn	23 52 07.5	+1.5
SCRK	Sand Creek	16.25	37		P	23 52 22.9	-1.2
M27K	Edge Creek, AK	16.29	44		P	23 52 24.0	-0.6
M27K				IAmb	IAmb	23 52 30.4	
	comp=Z,20nm,1.4s						
BMAR	Burnt Mountain	18.22	28	P	P	23 52 46.6	+0.9
INK	Inuvik	22.13	33	P	P	23 53 28.2	+0.2
INK				IAmb	IAmb	23 53 45.9	
	comp=Z,3.7nm,1.4s						

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*IDC **21** 23:57:45.0±1.2, 33°.73S×178°.70W, h0^{km}, mb4.5/4, mb1 4.7/5, mb1mx4.0/41, mbtmp4.6/5, ML4.6/1, Error ellipse: s-maj=41.3km s-min=27.1km az=138.0*

*WEL **21** 23:57:48.8±0.7, 34°S±7°×17°9W±1°7, h33^{km}, M4.7/18, mB5.2/12, ML5.0/24, MLv4.8/18, Mw(mB)4.6/12, Error ellipse: s-maj=0.0km s-min=0.0km az=112.4*

*NEIC **21** 23:57:49.1±1.0, 33°.69S±0°.06×179°.0W±0°.2, h10^{km}±2^{km}, mb4.4/13, Error ellipse: s-maj=26.8km s-min=9.8km az=82.0*

ISC 21 23:57:51.2±0.7**, 33°.67S**±0°.06×**178°.7W**±0°.1**, h41**^{km}**, n66,** σ**1^s.81**/85**, mb4.5**/10**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	4.45	9	P	Pn	23 58 55.4	-0.7
GLKZ				S	Sn	23 59 40.6	-6.0
MXZ	Matakaoa Point	4.59	211	P	Pn	23 58 56.3	-1.8
MXZ				S	Sn	23 59 47.8	-2.4
MXZ	Matakaoa Point	4.59	211	Pn	Pn	23 58 56.3	-1.8
WMGZ	Waiomatatini S	4.76	209	P	Pn	23 58 58.9	-1.6
WMGZ				S	Sn	23 59 54.5	+0.1
PKGZ	Pakihiroa	4.96	211	P	Pn	23 59 01.1	-2.2
PKGZ				S	Sn	23 59 56.7	-2.7
HAZ	Te Kaha	4.99	214	P	Pn	23 59 02.8	-0.8
HAZ				S	Sn	00 00 01.2	+1.3
PUZ	Puketiti	5.04	209	P	Pn	23 59 01.5	-2.8
PUZ				S	Sn	23 59 58.0	-3.3
RUGZ	Raukumara Rang	5.21	214	P	Pn	23 59 04.7	-1.9
RUGZ				S	Sn	00 00 05.8	+0.3
TWGZ	Tauwhareparae	5.25	210	P	Pn	23 59 06.9	-0.3
TWGZ				S	Sn	00 00 05.6	-0.8
CNGZ	Carnagh Statio	5.42	207	P	Pn	23 59 07.0	-2.5
CNGZ				S	Sn	00 00 11.6	+1.0
KUZ	Kuaotunu	5.51	235	P	Pn	23 59 11.8	+1.0
TKGZ	Te Karaka	5.52	210	P	Pn	23 59 10.4	-0.5
MWZ	Matawai	5.57	212	P	Pn	23 59 08.7	-3.0
MWZ				S	Sn	00 00 13.9	-0.5
OPRZ	Ohinepanea	5.69	222	P	Pn	23 59 13.0	-0.1
URZ	Urewera	5.71	215	Pn	Pn	23 59 11.5	-1.9
	19nm,0.3s,baz=300,slow=22,SNR=82						
URZ				Sn	Sn	00 00 15.9	-1.7
	15nm,0.3s,baz=144,slow=20,SNR=7.2						
URZ	Urewera	5.71	215	P	Pn	23 59 11.4	-2.0
URZ				S	Sn	00 00 15.3	-2.3
URZ	Urewera	5.71	215		Pn	23 59 11.9	-1.5
EDRZ	Edgecumbe	5.78	219	P	Pn	23 59 14.3	-0.1
RIGZ	Rimuhau	5.79	209	P	Pn	23 59 13.6	-1.0
RIGZ				S	Sn	00 00 17.5	-2.2
PRGZ	Paritu Road	5.93	207	P	Pn	23 59 13.9	-2.6
PRGZ				S	Sn	00 00 19.8	-3.4
SNGZ	Shannon Statio	6.03	211	P	Pn	23 59 16.9	-0.9
SNGZ				S	Sn	00 00 24.1	-1.5
MUGZ	Murupara	6.04	216	P	Pn	23 59 12.7	-5.4
MUGZ				S	Sn	00 00 22.3	-3.7
KNZ	Kokohu	6.09	208	P	Pn	23 59 15.2	-3.5
MHGZ	Mahia Peninsul	6.12	206	P	Pn	23 59 16.2	-2.9
MHGZ				S	Sn	00 00 25.4	-2.5
RAHZ	Arahi	6.25	212	P	Pn	23 59 19.8	-1.1
RAHZ				S	Sn	00 00 28.7	-2.3
MTHZ	Maungataniwha	6.31	214	P	Pn	23 59 20.2	-1.5
MTHZ				S	Sn	00 00 30.2	-2.3
WHHZ	Waihua	6.32	210	P	Pn	23 59 21.0	-0.8
WHHZ				S	Sn	00 00 31.3	-1.4
ALRZ	Allen Road	6.33	218	P	Pn	23 59 20.5	-1.4
NMHZ	Naumai	6.52	213	P	Pn	23 59 23.4	-1.3
ARHZ	Aropaoanui	6.58	211	P	Pn	23 59 23.7	-1.7
BKZ	Black Stump Fm	6.72	214	P	Pn	23 59 25.3	-2.1
MCHZ	McNeill Hill	6.86	212	P	Pn	23 59 27.5	-1.7
CKHZ	Cape Kidnapper	6.88	208	P	Pn	23 59 26.7	-2.7
RITZ	Rihia Road	6.89	218	P	Pn	23 59 27.5	-2.2
DZM	Mont Dzumac	17.48	308	P	P	00 01 54.8	+1.9
DZM				IAmb	IAmb	00 02 07.3	
	comp=Z,18nm,1.3s						
EIDS	Eidsvold	27.51	279	P	P	00 03 33.9	0.0
EIDS				IAmb	IAmb	00 03 35.5	
	comp=Z,5.3nm,1.0s						
CTAO	Charters Tower	33.90	285	P	P	00 04 29.9	-0.5
COEN	Coen	39.73	290	P	P	00 05 19.7	-0.3
COEN				IAmb	IAmb	00 05 34.3	
	comp=Z,17nm,1.4s						
AS31	Alice Springs	42.46	271	P	P	00 05 41.4	-1.0
ASAR	Alice Springs	42.46	271	P	P	00 05 41.9	-0.6
	comp=Z,2.6nm,0.6s,baz=110,slow=7.2,SNR=36						
ASAR	Alice Springs	42.46	271	P	P	00 05 41.6	-0.8
WR0	Warramunga Arr	43.57	276	P	P	00 05 50.7	-0.7
WR0				IAmb	IAmb	00 06 02.8	
	comp=Z,6.7nm,1.2s						
WRA	Warramunga Arr	43.75	276	P	P	00 05 52.2	-0.7
	comp=Z,4.9nm,0.4s,baz=118,slow=7.5,SNR=44						
WRA	Warramunga Arr	43.75	276	P	P	00 05 52.3	-0.5
WB0	Warramunga Arr	43.79	276	P	P	00 05 52.4	-0.8
WB0				IAmb	IAmb	00 05 52.9	
	comp=Z,8.0nm,0.5s						
VNDA	Vanda	44.79	186	P	P	00 06 03.2	+2.8
VNDA				IAmb	IAmb	00 06 13.3	
	comp=Z,4.7nm,1.5s						
KNRA	Kununurra	50.46	277	P	P	00 06 44.5	-0.7
FITZ	Fitzroy Crossi	51.86	273	P	P	00 06 54.6	-1.0
	comp=Z,2.3nm,0.6s,baz=153,slow=9.9,SNR=4.0						
CASY	Casey	51.99	209	P	P	00 06 56.3	+0.3
QSPA	South Pole Qui	56.45	180	P	P	00 07 30.2	+1.6
QSPA				IAmb	IAmb	00 07 44.1	
	comp=Z,5.5nm,0.8s						
MAW	Mawson	69.05	201	P	P	00 08 55.1	+2.9
SNAA	Sanae	74.91	179	P	P	00 09 27.1	-0.3
VNA3	Neumayer Olymp	75.09	176	P	P	00 09 28.5	+0.2
VNA2	Neumayer--Watz	75.51	177	P	P	00 09 31.3	+0.5
	baz=175,slow=4.5						
VNA1	Neumayer--Stat	75.75	177	P	P	00 09 32.4	+0.3
PETK	Petropavlovsk-	88.83	346	P	P	00 10 41.5	+1.1
	comp=Z,4.8nm,0.9s,baz=138,slow=12,SNR=3.6						
MKAR	Makanchi Array	119.40	309	PKP	PKPdf	00 16 35.3	-0.6
	comp=Z,0.5nm,0.7s,baz=165,slow=1.3,SNR=4.6						
MKAR	Makanchi Array	119.40	309		PKPdf	00 16 35.5	-0.3
ZALV	Zalesovo Beam	120.06	317	PKP	PKPdf	00 16 36.9	0.0
	comp=Z,0.4nm,0.4s,baz=337,slow=3.3,SNR=2.5						
FINES	FINESS Array B	147.98	338	PKPbc	PKPbc	00 17 31.2	-0.1
	comp=Z,1.8nm,0.4s,baz=45,slow=4.5,SNR=31						
NOA	NORSAR Array B	151.88	350	PKPbc	PKPbc	00 17 40.5	-0.4
	comp=Z,0.9nm,0.6s,baz=14,slow=4.1,SNR=3.6						
AKASG	Malin Array Be	153.45	318	PKPbc	PKPbc	00 17 44.8	+0.2
	comp=Z,0.3nm,0.3s,baz=68,slow=1.7,SNR=5.3						
AKASG	Malin Array Be	153.45	318		PKiKP	00 17 45.2	+0.4
BRTR	Keskin Array B	153.48	293	PKPbc	PKPbc	00 17 45.2	-0.1
	comp=Z,1.0nm,0.8s,baz=139,slow=4.0,SNR=5.4						
BRTR	Keskin Array B	153.48	293		PKiKP	00 17 45.8	+0.4
TORD	Torodi Ar. Bea	159.56	181	PKPab	PKPab	00 18 23.5	-0.6
	comp=Z,0.6nm,0.9s,baz=174,slow=1.5,SNR=1.3						

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*INET **21** 23:58:32.9, 9°.16N×83°.92W, h24^{km}, ML4.1*

*UCR **21** 23:58:33.0±1.3, 8°.92N×83°.83W, h5^{km}, MW4.9, mb4.3(NEIC)*

*NEIC **21** 23:58:34.2±1.9, 8°.96N±0°.04×83°.81W±0°.04, h15^{km}±4^{km}, mb4.5/51, Mwr4.3/26, Error ellipse: s-maj=5.5km s-min=5.2km az=85.0*

*NEIC **21** 23:58:34.5, 8°.97N×83°.80W, h18^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}2.17; $M_{\theta\theta}$-1.68; $M_{\phi\phi}$-0.49; $M_{r\theta}$1.88; $M_{\theta\phi}$1.45; $M_{\phi r}$-0.73; Fault plane solution: $M_0$3.17000×10^{15} NP1:ϕ_s315.80000°, δ26.27000°, λ109.14000°. NP2:ϕ_s114.64000°, δ65.28000°, λ80.81000°. Principal axes: T 2.9420, Plg68.0000°, Azm7.0000°; N 0.4217, Plg8.0000°, Azm119.0000°; P -3.3637, Plg20.0000°, Azm212.0000°;*

*IDC **21** 23:58:36.1±4.7, 9°.16N×83°.75W, h33^{km}±37^{km}, mb3.9/15, mb1 4.1/20, mb1mx4.0/44, mbtmp4.2/20, ML3.5/5, MS3.9/1, Ms1 3.9/1, ms1mx3.2/36 Error ellipse: s-maj=23.8km s-min=13.4km az=52.0*

ISC 21 23:58:34.3±0.5**, 8°.96N**±0°.04×**83°.83W**±0°.04**, h22**^{km}±3^{km}**, n138,** σ**0^s.99**/152**, mb4.4**/31**, 3D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDDO	Dominical	0.30	353	⇓*i*P	Pb	23 58 40.6	-0.5
EDDO				*e*S	Sb	23 58 45.9	+0.2
EDPN	Palmar Norte	0.37	89	⇓*i*P	Pb	23 58 41.2	-0.9
EDPN				*e*S	Sb	23 58 47.5	0.0
PEZE	Perez Zeledon,	0.45	19	*e*P	Pb	23 58 43.1	-0.6
PEZE				*e*S	Sn	23 58 52.0	-1.1
PEZE	Perez Zeledon,	0.45	19	Pg	Pb	23 58 43.0	-0.6
PEZE				Sg	Sb	23 58 50.0	0.0
SRBA	San Rafael, Bu	0.54	59		Pb	23 58 44.2	-1.0
EDBA	Buenos Aires	0.58	69	⇓*i*P	Pb	23 58 44.4	-1.6
DRK0	Durika	0.65	62	Pg	Pb	23 58 46.1	-1.1
DRK0				Sg	Sb	23 58 55.8	-0.2
POTG	Potrero Grande	0.71	82	*e*P	Pb	23 58 47.0	-1.1
POTG				*e*S	Sb	23 58 57.5	+0.1
LCR2	La Lucha 2	0.80	348	*e*P	Pb	23 58 48.7	-1.0
LCR2				*e*S	Sn	23 59 00.7	-1.1
RIMA	Rio Macho	0.81	358	*e*P	Pb	23 58 48.8	-1.0
RIMA				*e*S	Sn	23 59 00.7	-1.3
RIMA	Rio Macho	0.81	358		Pb	23 58 48.8	-1.0
RIMA				Sg	Sb	23 58 58.3	-2.1
EDSV	San Vito	0.86	99	*e*P	Pb	23 58 48.9	-1.7
EDSV				*e*S	Sn	23 59 03.2	0.0
RAFA	San Farael, Vo	1.00	1	*e*P	Pb	23 58 52.6	-0.5
CDITO	Canoas	1.02	112		Pb	23 58 51.2	-2.1
CVTR	Volcan Turrial	1.06	4		Pn	23 58 53.7	-0.6
HDC	Heredia	1.08	345	*e*P	Pb	23 58 53.6	-0.7
HDC	Heredia	1.08	345		Pb	23 58 53.5	-0.8
BRU2	Volcan	1.14	98		Pn	23 58 53.7	-1.4
BATAN	Batan	1.22	21		Pb	23 58 56.5	-0.2
SRA1	San Ramn	1.29	330	*e*P	Pb	23 58 57.1	-1.0
LAFE	Finca La Fe, P	1.36	309	*e*P	Pn	23 58 57.3	-0.7
CAO2	Cobano, Puntar	1.46	300		Pn	23 58 57.7	-1.7
FORC	Fortuna	1.71	331	*i* P	Pb	23 59 04.0	-1.1
FORC				*i* S	Sb	23 59 28.3	+2.0
CASO	Castillo	1.72	329	*i* P	Pb	23 59 03.9	-1.4
JTS	Las Juntas de	1.73	320	*e*P	Pn	23 59 02.8	-0.4
JTS	Las Juntas de	1.73	320		Pn	23 59 02.7	-0.4
ARE1	Arenal 1	1.73	330	*e*P	Pb	23 59 04.9	-0.6
COVE	Coope Vega, Sa	1.84	342	*e*P	Pb	23 59 05.9	-1.5
COVE	Coope Vega, Sa	1.84	342	Pn	Pb	23 59 05.8	-1.5
DUNO	Dulce Nombre,	1.98	304	Pn	Pn	23 59 07.2	+0.6
ACAL	Aguas Claras	2.05	325	*i* P	Pn	23 59 08.4	+0.8
ACAL				*i* S	Sb	23 59 36.0	0.0
ORTG	Ortega, Santa	2.13	311		Pn	23 59 08.0	-0.7
CUI	Cuipilapa	2.14	322	*i* P	Pn	23 59 09.4	+0.5
SAJU	San Juanillo,	2.16	301	*e*P	Pn	23 59 09.7	+0.6
HORNC	Hornillas	2.19	323	*i* P	Pn	23 59 09.9	+0.3
LIM1	Limonal	2.23	321	*i* P	Pn	23 59 10.3	+0.2
LAPC	Finca la Perla	2.40	319	*i* P	Pn	23 59 12.2	-0.1
BUAI	Buenos Aires	2.42	322	*i* P	Pn	23 59 13.2	+0.6
HZTE	Horizontes, Gu	2.47	315	*e*P	Pn	23 59 14.4	+1.2
HZTE	Horizontes, Gu	2.47	315		Pn	23 59 14.1	+0.8
ESPN	Las Esperanzas	3.25	352		Pn	23 59 25.0	+0.9
ACON	Acoyapa	3.27	336	Pn	Pn	23 59 25.2	+0.8
BOAB	BOACO BROADBAN	3.91	333	Pn	Pn	23 59 33.9	+0.7
BCIP	Isla Barro Col	3.95	87	Pn	Pn	23 59 33.9	+0.2
CNGN	Cerro Negro	4.51	322	Pn	Pn	23 59 42.5	+1.0
PRVC	Isla de Provid	5.01	29		Pn	23 59 49.4	+1.1
TGUH	Tegucigalpa,Un	6.09	327	Pn	Pn	00 00 03.4	+0.2
CAP2	Capurgana	6.40	92	Pn	Pn	00 00 08.1	+0.7
MTO3	Montecristo	7.66	315	Pn	Pn	00 00 25.6	+0.8
MOTC	Monteria, Cord	8.07	91		Pn	00 00 31.8	+1.5
SJCC	San Jacinto, C	8.59	83	Pn	Pn	00 00 38.2	+0.7
ZARC	Zaragoza, Cauc	9.00	99	Pn	Pn	00 00 44.2	+1.1
ROSC	El Rosal	10.29	113	Pn	Pn	00 01 02.7	+1.6
	0.9nm,0.3s,baz=206,slow=23,SNR=1.3						
ROSC	El Rosal	10.29	113		Pn	00 01 02.6	+1.5
OCAC	Ocana	10.42	93	Pn	Pn	00 01 04.6	+1.9
URIC	Uribia, Colomb	11.96	76	Pn	Pn	00 01 24.2	+0.5
SDV	Santo Domingo	13.04	89	Pn	Pn	00 01 37.9	-0.7
	1.4nm,0.3s,baz=15,slow=4.5,SNR=1.6						
SDV	Santo Domingo	13.04	89	Pn	Pn	00 01 38.6	+0.1
CMIG	Matias Romero	13.46	308	Pn	Pn	00 01 44.6	+0.5
	1.7nm,0.3s,baz=140,slow=8.7,SNR=14						
GTBY	Guantanamo Bay	13.79	37	Pn	Pn	00 01 50.6	+2.1
BAUV	El Baul	15.60	89	Pn	Pn	00 02 12.4	-0.6
BAUV				IAmb	IAmb	00 02 34.9	
	comp=Z,24nm,1.1s						
SDDR	Presa de Saban	15.72	49	Pn	Pn	00 02 16.2	+1.6
SDDR				IAmb	IAmb	00 02 23.4	
	comp=Z,34nm,1.1s						
TLIG	Tlapa	16.69	302	P	P	00 02 28.9	-0.4
TLIG				IAmb	IAmb	00 02 39.9	
	comp=Z,13nm,0.5s						
ATAH	Atahualpa	16.88	161	P	P	00 02 33.2	+1.5
	comp=Z,0.2nm,0.3s,baz=313,slow=18,SNR=2.1						
ATAH				LR	LR	00 08 30.4	
	comp=Z,398nm,18.9s,baz=21,slow=35						
DR12	Loma Pena Alta	17.08	54		P	00 02 32.9	-0.7
BIRV	Birongo	17.38	84		Pn	00 02 36.1	+0.4
CELP	Cerrillos	19.05	60	P	P	00 02 55.4	+0.1
CELP				IAmb	IAmb	00 03 23.6	
	comp=Z,24nm,1.1s						
SJG	San Juan	19.43	60	P	P	00 02 59.4	-0.1
	comp=Z,0.9nm,0.3s,baz=18,slow=16,SNR=2.5						
CBYP	Canovanas	19.75	60	P	P	00 03 03.7	+0.7
CBYP				IAmb	IAmb	00 03 30.9	
	comp=Z,30nm,0.9s						
656A	Willston	20.34	3	P	Pn	00 03 10.3	-1.1
656A				IAmb	IAmb	00 03 38.0	
	comp=Z,36nm,1.1s						
NNA	Nana	21.93	161	P	P	00 03 28.0	+1.4
	comp=Z,6.6nm,0.3s,baz=232,slow=9.6,SNR=2.2						
344A	Westbrook Farm	23.29	345	P	P	00 03 41.7	+1.1
152A	Waverly Hall	23.61	358	P	P	00 03 45.2	+1.4
152A				IAmb	IAmb	00 03 47.6	
	comp=Z,13nm,1.0s						
NHSC	New Hope	24.27	7	P	P	00 03 50.1	+0.1
GOGA	Godfrey	24.34	1	P	P	00 03 51.3	+0.6
GOGA				IAmb	IAmb	00 04 15.9	
	comp=Z,22nm,1.4s						
Y52A	Lilburn	24.79	360	P	P	00 03 55.5	+0.8
Y52A				IAmb	IAmb	00 03 58.6	
	comp=Z,13nm,0.9s						
HODGE	Hodges	25.20	3	P	P	00 03 59.2	+0.8
HODGE				IAmb	IAmb	00 04 02.5	
	comp=Z,7.4nm,0.9s						
435B	Jarrell	25.23	331	P	P	00 03 59.5	+0.7
ETMB	Extrema	25.60	136	P	P	00 04 01.9	-0.3
ETMB				IAmb	IAmb	00 04 09.6	
	comp=Z,6.6nm,0.9s						
PTGA	Pitinga	25.65	111	P	P	00 04 03.6	+0.8
	comp=Z,2.2nm,0.5s,baz=320,slow=20,SNR=6.7						
PTGA	Pitinga	25.65	111	P	P	00 04 03.1	+0.4
PTGA				IAmb	IAmb	00 04 04.0	
	comp=Z,12nm,1.4s						
MACA	Manacapuru-AM	26.02	117	P	P	00 04 05.7	-0.5
MACA				IAmb	IAmb	00 04 24.7	
	comp=Z,15nm,0.8s						
W57A	Gilead	26.31	7	P	P	00 04 08.8	+0.3
W57A				IAmb	IAmb	00 04 20.4	
	comp=Z,16nm,1.4s						
CPCT	Cooper Cave	26.38	359	P	P	00 04 09.7	+0.6
MIAR	Mount Ida	27.00	342	P	P	00 04 14.9	+0.2
SAML	Samuel	27.19	130	P	P	00 04 16.9	+0.2
WVT	Waverly	27.30	353	P	P	00 04 16.8	-0.6
WVT				IAmb	IAmb	00 04 25.7	
	comp=Z,12nm,1.5s						
TXAR	Lajitas Array	27.52	320	P	P	00 04 19.4	-0.2
	comp=Z,0.3nm,0.5s,baz=152,slow=15,SNR=2.5						
T42A	Van Buren	28.71	348	P	P	00 04 28.7	-1.4
T42A				IAmb	IAmb	00 04 29.4	
	comp=Z,4.4nm,0.6s						
WMOK	Wichita Mounta	29.09	334	P	P	00 04 34.1	+0.6
MGMO	Mountain Grove	29.10	346	P	P	00 04 32.5	-1.0
MGMO				IAmb	IAmb	00 04 41.1	
	comp=Z,18nm,1.5s						
CCM	Cathedral Cave	29.73	348	P	P	00 04 38.4	-0.7
CCM				IAmb	IAmb	00 04 40.2	
	comp=Z,7.1nm,0.7s						
Q51A	Peebles	29.94	1	P	P	00 04 41.4	+0.5
X16A	Lo Mia Camp, P	35.83	319	P	P	00 05 34.5	+1.8
SRU	San Rafael Swe	38.38	326	P	P	00 05 54.2	-0.1
SRU				IAmb	IAmb	00 05 58.4	
	comp=Z,8.0nm,1.4s						
PFO	Pinyon Flats O	38.78	314	P	P	00 05 58.5	+0.9
E62A	Clayton Lake	39.48	16	P	P	00 06 04.0	+0.9
E62A				IAmb	IAmb	00 06 19.3	
	comp=Z,9.7nm,1.2s						
LMN	Caledonia Moun	40.23	21	P	P	00 06 10.1	+0.6
SPR3	Spring Creek 3	40.52	322	P	P	00 06 11.9	-0.3
PDAR	Pinedale Array	40.53	331	P	P	00 06 10.5	-1.7
	comp=Z,0.4nm,0.8s,baz=130,slow=11,SNR=3.5						
PDAR				PcP	PcP	00 08 14.6	+0.1
	comp=Z,0.6nm,0.9s,baz=128,slow=5.1,SNR=2.8						
HWUT	Hardware Ranch	40.70	328	P	P	00 06 13.1	-0.6
BATG	Bathurst New B	41.07	18	P	P	00 06 17.5	+1.1
REDW	Red Top Meadow	41.61	330	P	P	00 06 20.5	-0.6
ULM	Lac du Bonnet	42.37	349	P	P	00 06 24.8	-2.1
	comp=Z,3.1nm,0.6s,baz=120,slow=9.3,SNR=4.4						
ULM	Lac du Bonnet	42.37	349	P	P	00 06 26.0	-0.8
ULM				IAmb	IAmb	00 06 36.1	
	comp=Z,4.6nm,0.8s						
NV11	Mina Array Sit	42.56	319	P	P	00 06 29.0	+0.2
NVAR	Mina Array Bea	42.66	319	P	P	00 06 30.7	+1.0
	comp=Z,2.3nm,0.6s,baz=126,slow=7.1,SNR=22						
NVAR				PcP	PcP	00 08 22.9	+1.4
	comp=Z,0.7nm,0.7s,baz=120,slow=4.2,SNR=4.4						
NVAR	Mina Array Bea	42.66	319	P	P	00 06 30.0	+0.3
LHV	Little Huntoon	42.69	319	P	P	00 06 31.0	+1.4
BDFB	Brasilia	43.08	124	P	P	00 06 34.1	+0.9
	comp=Z,1.1nm,0.4s,baz=261,slow=9.3,SNR=3.2						
BDFB	Brasilia	43.08	124	P	P	00 06 34.2	+0.9
BDFB				IAmb	IAmb	00 06 42.9	
	comp=Z,9.1nm,1.2s						
WVOR	Wild Horse Val	45.21	323	P	P	00 06 49.8	-0.2
WVOR				IAmb	IAmb	00 06 50.5	
	comp=Z,5.1nm,0.7s						
DRLN	Deer Lake	45.81	24	P	P	00 06 54.7	+0.1
ITQB	Itaqui	46.48	147	P	P	00 07 00.6	+0.5
SCHQ	Schefferville	47.72	13	P	P	00 07 06.2	-3.1
	comp=Z,3.8nm,0.6s,baz=224,slow=7.1,SNR=8.5						
PLCA	Paso Flores	50.94	167	P	P	00 07 34.5	+0.3
	comp=Z,2.8nm,0.8s,baz=335,slow=10,SNR=7.0						
PLCA	Paso Flores	50.94	167	P	P	00 07 34.3	+0.1
PLCA				IAmb	IAmb	00 07 39.8	
	comp=Z,5.6nm,1.0s						
YKA	Yellowknife Ar	57.92	344	P	P	00 08 21.6	-3.0
	comp=Z,1.2nm,0.6s,baz=220,slow=4.0,SNR=5.8						
YKA	Yellowknife Ar	57.92	344	P	P	00 08 24.6	0.0
RES	Resolute Bay	66.00	357	P	P	00 09 17.4	-1.3
	comp=Z,2.1nm,0.6s,baz=172,slow=11,SNR=9.6						
A36M	Sachs Harbour	67.82	347	P	P	00 09 29.5	-0.9
BCAR	Beaver Creek A	67.89	335	P	P	00 09 30.9	-0.1
IL31		70.64	336	P	P	00 09 47.7	-0.2
IL31				IAmb	IAmb	00 09 49.8	
	comp=Z,7.0nm,1.4s						
ILAR	Eielson Array	70.64	336	P	P	00 09 47.5	-0.4
	comp=Z,1.2nm,0.8s,baz=117,slow=4.4,SNR=23						
ILAR	Eielson Array	70.64	336	P	P	00 09 47.9	-0.1
BMAR	Burnt Mountain	70.79	339	P	P	00 09 49.1	+0.2
IMAR	Indian Mountai	73.74	336	P	P	00 10 06.4	-0.1
ESDC	Sonseca Array	76.56	51	P	P	00 10 23.4	0.0
	comp=Z,2.1nm,0.8s,baz=282,slow=5.9,SNR=9.4						
ESBB	Sonseca Array	76.56	51	P	P	00 10 23.7	+0.3
EKA	Eskdalemuir Ar	77.38	35	P	P	00 10 26.9	-0.7
	comp=Z,3.6nm,1.0s,baz=267,slow=4.2,SNR=4.5						
KOWA	Kowa	78.01	77	P	P	00 10 34.0	+2.2
KOWA				IAmb	IAmb	00 10 40.2	
	comp=Z,4.8nm,1.2s						
TORD	Torodi Ar. Bea	83.68	78	P	P	00 11 01.6	-0.5
	comp=Z,0.4nm,0.9s,baz=328,slow=5.1,SNR=2.4						
TORD	Torodi Ar. Bea	83.68	78	P	P	00 11 01.8	-0.3
TORD				IAmb	IAmb	00 11 07.1	
	comp=Z,4.0nm,1.5s						
ADK	Adak	84.79	322	P	P	00 11 07.5	+0.5
QSPA	South Pole Qui	98.94	180	P	P	00 12 12.8	-0.1
ASAR	Alice Springs	141.09	243	PKhKP	PKPpre	00 17 56.9	
	comp=Z,0.2nm,0.4s,baz=113,slow=3.4,SNR=5.7						
ASAR				PKP	PKPdf	00 18 04.2	+0.3
	comp=Z,0.5nm,0.6s,baz=104,slow=2.9,SNR=5.3						
WRA	Warramunga Arr	141.55	249	PKhKP	PKPpre	00 17 59.1	
	comp=Z,0.8nm,0.8s,baz=101,slow=3.0,SNR=6.6						
WRA				PKP	PKPdf	00 18 04.7	-0.1
	comp=Z,0.9nm,0.8s,baz=98,slow=3.1,SNR=5.8						
CMAR	Chiang Mai Arr	152.62	354	PKPbc	PKPbc	00 18 29.1	-1.1
	comp=Z,0.6nm,0.4s,baz=19,slow=3.8,SNR=4.1						
CMAR				PKPab	pPKPbc	00 18 38.1	+0.5
	comp=Z,1.5nm,0.6s,baz=325,slow=3.7,SNR=9.7						

IDC 22 00:00:20.8±3.7**, 5°.26S**×**150°.63E, h313**^{km}±33^{km}**, mb3.4**/3**, mb1 3.6**/4**, mb1mx3.0**/40**, mbtmp4.0**/4**, Error ellipse: s-maj=132.9km s-min=29.7km az=125.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	5.37	220	P	Pn	00 01 43.1	0.0
	5.3nm,0.3s,baz=12,slow=9.3,SNR=6.2						
WRA	Warramunga Arr	21.55	226	P	P	00 04 45.8	-0.1
	6.6nm,0.4s,baz=51,slow=9.9,SNR=101						
ASAR	Alice Springs	24.39	220	P	P	00 05 11.8	+0.1
	1.2nm,0.4s,baz=52,slow=8.5,SNR=46						
ILAR	Eielson Array	83.40	22	P	P	00 12 12.8	-0.2
	0.3nm,0.6s,baz=252,slow=5.1,SNR=4.3						

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*IDC **22** 00:05:26.6±0.7, 77°.38N×17°.46E, h0^{km}, mb3.5/4, mb1 3.7/8, mb1mx3.4/58, mbtmp3.6/8, ML3.0/4, Error*

ellipse: s-maj=32.9km s-min=7.5km az=73.0
*NAO **22** 00:05:27.8±0.9, 77.°36N×18.°44E, h21km±9km, ML4.0*
*IEPN **22** 00:05:28.4, 77.°42N×18.°64E, h10km*
*BER **22** 00:05:30.2±1.8, 77.°40N×18.°43E, h23km±7km, ML3.7, MW3.5, ML4.0(NAO), Confirmed Earthquake*
*DNK **22** 00:05:33.1±1.8, 77.°88N×19.°49E, h30km±17km, ML1.6*
ISC 22 00:05:28.8±1.0**, 77.°39N**±0.°03×**18.°45E**±0.°03**, h31**km±10km**,**
n58, σ2.s39/91**, mb3.3**/3**, 2C-1D, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HSPB	**Hornsund (broa**	**0.76**	**240**	Pg	**Pb**	**00 05 42.8**	**-0.7**
HSPB				Lg	Lg	00 05 51.6	
HSPB	**Hornsund (broa**	**0.76**	**240**	*e*P	**Pb**	**00 05 42.7**	**-0.7**
HSPB				*e*S	**Sb**	**00 05 52.2**	**-1.2**
HSPB				IAML		00 05 56.0	
	comp=Z,2µm,0.3s						
HSPB	**Hornsund (broa**	**0.76**	**240**	⇓*i*P	**Pb**	**00 05 42.7**	**-0.7**
HSPB				*e*S	**Sb**	**00 05 52.0**	**-1.5**
SPA0	**Spitsbergen Ar**	**0.91**	**332**	Pn	**Pb**	**00 05 45.1**	**-1.0**
	baz=149,slow=22						
SPA0				Pg	**Pn**	**00 05 46.1**	**+0.6**
SPA0				Lg	Lg	00 05 57.2	
	baz=144,slow=37						
SPA0	**Spitsbergen Ar**	**0.91**	**332**	Pn	**Pb**	**00 05 45.1**	**-1.0**
	baz=149,slow=22						
SPA0				Pg	**Pn**	**00 05 46.1**	**+0.6**
SPA0				Sg	**Sb**	**00 05 57.2**	**-0.5**
	baz=144,slow=37						
SPA0	**Spitsbergen Ar**	**0.91**	**332**	⇑*i*P	**Pb**	**00 05 45.0**	**-1.0**
SPA0				*i* S	**Sb**	**00 05 57.2**	**-0.5**
SPITS	**Spitsbergen Ar**	**0.91**	**332**	Pn	**Pb**	**00 05 45.0**	**-1.0**
	baz=148,slow=19,SNR=4690						
SPITS				Sn	**Sn**	**00 05 58.0**	**+0.5**
	baz=146,slow=36,SNR=11						
BRBA	**Barentsburg A**	**1.13**	**309**	Pn	**Pb**	**00 05 49.5**	**-0.2**
BRBA				Lg	Lg	00 06 03.8	
BRBA	**Barentsburg A**	**1.13**	**309**	*e*P	**Pb**	**00 05 49.4**	**-0.3**
BRBA				*e*Pg	**Pn**	**00 05 50.5**	**+2.1**
BRBA				*e*S	**Sn**	**00 06 03.7**	**+0.9**
BRBA				*e*Sg	**Sb**	**00 06 04.9**	**+0.9**
BRBA				IAML		00 06 07.0	
	comp=Z,4µm,0.4s						
HOPEN	**Hopen**	**1.73**	**117**	Pn	**Pn**	**00 05 57.1**	**+0.4**
HOPEN				Pg	**Pb**	**00 06 00.3**	**+0.4**
HOPEN				Sn	**Sn**	**00 06 17.5**	**-0.2**
HOPEN				Lg	Lg	00 06 22.4	
HOPEN	**Hopen**	**1.73**	**117**	*e*P	**Pn**	**00 05 57.3**	**+0.5**
HOPEN				*e*Pg	**Pb**	**00 06 00.7**	**+0.8**
HOPEN				*e*Sg	**Sb**	**00 06 22.1**	**+0.9**
HOPEN				IAML		00 06 26.2	
	comp=Z,1µm,0.2s						
HOPEN	**Hopen**	**1.73**	**117**	*e*P	**Pn**	**00 05 57.2**	**+0.4**
HOPEN				*e*S	**Sn**	**00 06 17.2**	**-0.5**
KBS	**Kingsbay**	**2.04**	**322**	Pn	**Pn**	**00 06 01.3**	**+0.3**
KBS				Pg	**Pb**	**00 06 04.8**	**-0.4**
KBS				Lg	Lg	00 06 30.8	
KBS	**Kingsbay**	**2.04**	**322**	*i* P	**Pn**	**00 06 01.3**	**+0.3**
KBS				*i* Sg	**Sb**	**00 06 31.5**	**+1.4**
KBS	**Kingsbay**	**2.04**	**322**	*e*P	**Pn**	**00 06 01.2**	**+0.3**
KBS				*e*Pg	**Pb**	**00 06 05.2**	**0.0**
KBS				*e*Sg	**Sb**	**00 06 30.5**	**+0.3**
KBS				IAML		00 06 32.9	
	comp=Z,2µm,0.4s						
KBS				IAML		00 06 33.0	
	comp=Z,2µm,0.3s						
KBS	**Kingsbay**	**2.04**	**322**	⇑*i*P	**Pn**	**00 06 01.1**	**+0.1**
KBS				*i* S	**Sn**	**00 06 26.3**	**+0.9**
BJO1	**Bjornoya**	**2.91**	**177**	Pn	**Pn**	**00 06 13.2**	**+0.4**
BJO1				Pg	**Pb**	**00 06 20.5**	**+0.7**
BJO1				Lg	Lg	00 06 59.5	
BJO1	**Bjornoya**	**2.91**	**177**	*e*P	**Pn**	**00 06 13.3**	**+0.4**
BJO1				*e*Pg	**Pb**	**00 06 20.6**	**+0.7**
BJO1				*e*Sg	**Sb**	**00 06 57.5**	**+2.6**
BJO1				IAML		00 07 02.9	
	comp=Z,481nm,0.4s						
BJO1	**Bjornoya**	**2.91**	**177**	*e*P	**Pb**	**00 06 20.6**	**+0.7**
BJO1				*e*S	**Sb**	**00 06 55.6**	**+0.7**
ZFI	**Zemlya Franca-**	**6.43**	**44**	*e*P	**Pn**	**00 07 00.7**	**-0.5**
ZFI				*e*S	**Sn**	**00 08 08.4**	**-5.0**
	comp=Z,43nm,2.0s						
HAMF	**Hammerfest**	**6.93**	**165**	Pn	**Pn**	**00 07 07.1**	**-1.0**
HAMF				Sn	**Sn**	**00 08 17.7**	**-8.1**
HAMF	**Hammerfest**	**6.93**	**165**	*e*P	**Pn**	**00 07 07.0**	**-1.1**
HAMF				*e*S	Sn	00 08 17.5	-8.3
NOR	**Nord**	**7.53**	**320**	Pn	**Pn**	**00 07 16.7**	**+0.5**
NOR	**Nord**	**7.53**	**320**	*e*P	**Pn**	**00 07 16.9**	**+0.7**
NOR	**Nord**	**7.53**	**320**	Pn	**Pn**	**00 07 16.7**	**+0.5**
TRO	**Tromso**	**7.80**	**179**	*e*P	**Pn**	**00 07 19.5**	**-0.5**
TRO				*e*S	Sn	00 08 37.3	-10
JETT	**Jettan, Norway**	**7.90**	**175**	Pn	**Pn**	**00 07 21.3**	**-0.1**
JETT				Sn	**Sn**	**00 08 44.6**	**-4.9**
KEV	**Kevo**	**8.04**	**158**	*e*P	**Pn**	**00 07 20.3**	**-2.9**
ARA0	**ARCESS Array S**	**8.14**	**162**	Pn	**Pn**	**00 07 23.4**	**-1.2**
	baz=354,slow=14						
ARA0				Sn	**Sn**	**00 08 48.2**	**-7.2**
	baz=2.7,slow=22						
ARA0	**ARCESS Array S**	**8.14**	**162**	Pn	**Pn**	**00 07 23.4**	**-1.2**
	baz=354,slow=14						
ARA0				Sn	**Sn**	**00 08 48.2**	**-7.2**
	baz=2.7,slow=22						
ARCES	**ARCESS Array B**	**8.14**	**162**	Pn	**Pn**	**00 07 23.8**	**-0.8**
	baz=350,slow=12,SNR=58						
ARCES				Sn	Sn	00 08 46.4	-9.1
	baz=358,slow=15,SNR=1.9						
DAG	**Danmarks Havn**	**8.23**	**284**	*e*	**Pn**	**00 07 28.8**	**+3.0**
	baz=69,slow=16						
DAG				*i* P	**Pn**	**00 07 29.6**	**+3.7**
DAG				*i* S	**Sn**	**00 08 55.6**	**-1.9**
DAG				IAML		00 08 58.9	
	comp=Z,1.4nm,0.5s						
KIF	**Kilpisjarvi**	**8.46**	**174**	Pn	**Pn**	**00 07 28.4**	**-0.5**
KIF				Sn	**Sn**	**00 08 56.1**	**-7.1**
KIF	**Kilpisjarvi**	**8.46**	**174**	*e*P	**Pn**	**00 07 27.8**	**-1.2**
HEF	**Hetta**	**9.15**	**168**	*e*P	**Pn**	**00 07 37.6**	**-0.9**
LOF	**Lofoten**	**9.42**	**191**	*e*P	**Pn**	**00 07 41.4**	**-0.7**
STEI	**Steigen**	**9.56**	**187**	*e*P	**Pn**	**00 07 44.5**	**+0.5**
DBG	**Daneborg**	**9.79**	**271**	*i* P	**Pn**	**00 07 51.6**	**+4.4**
DBG	**Daneborg**	**9.79**	**271**	*e*P	**Pn**	**00 07 50.2**	**+3.0**
SALU	**Saltoluokta**	**10.06**	**180**	*e*P	**Pn**	**00 07 50.3**	**-0.7**
FAUS	**Fauske**	**10.11**	**187**	*e*P	**Pn**	**00 07 52.5**	**+1.0**
APA0	**Apatity Array**	**10.71**	**149**	Pn	**Pn**	**00 07 57.1**	**-2.6**
	baz=346,slow=14						
APA0	**Apatity Array**	**10.71**	**149**	Pn	**Pn**	**00 07 57.1**	**-2.6**
	baz=346,slow=14						
KONS	**Konsvik**	**11.06**	**191**	*e*	**Pn**	**00 08 08.6**	**+4.0**
SLVR	**Solovky**	**13.50**	**147**	*e*P	**Pn**	**00 08 35.0**	**-2.8**
	comp=Z,41nm,1.5s						
SLVR				*i* S	Sn	00 10 57.3	-9.2
LSH	**Leshukonskoye**	**15.08**	**131**	*e*P	**Pn**	**00 08 54.7**	**-4.6**
	comp=Z,46nm,2.3s						
LSH				*e*S	Sn	00 11 32.9	-12
FIA0	**FINESS Array S**	**16.22**	**167**	P	**Pn**	**00 09 10.6**	**-3.4**
	baz=0.1,slow=12						
FIA0	**FINESS Array S**	**16.22**	**167**	P	**Pn**	**00 09 10.6**	**-3.4**
	baz=0.1,slow=12						
FINES	**FINESS Array B**	**16.22**	**167**	Pn	**Pn**	**00 09 10.5**	**-3.4**
	comp=Z,0.2nm,0.3s,baz=352,slow=9.8,SNR=7.8						
FINES				Sn	Sn	00 12 00.7	-12
	comp=Z,0.3nm,0.3s,baz=7.8,slow=20,SNR=1.9						
NOA	**NORSAR Array B**	**16.60**	**192**	Pn	**Pn**	**00 09 18.5**	**-0.5**
	comp=Z,0.0nm,0.3s,baz=5.6,slow=14,SNR=1.2						
HFS	**Hagfors**	**17.41**	**188**	P	**P**	**00 09 32.0**	**+1.9**
	comp=Z,0.1nm,0.3s,baz=34,slow=11,SNR=2.1						
KLMR	**Klimovskoe**	**18.00**	**145**	*e*P	**P**	**00 09 37.1**	**+0.6**
	comp=Z,26nm,2.4s						
KLMR				*e*S	Sn	00 12 44.3	-11
KLMR	**Klimovskoe**	**18.00**	**145**	*e*P	**P**	**00 09 37.1**	**+0.6**
KLMR				*e*P	**P**	**00 09 37.1**	**+0.6**
KLMR				*e*P	**P**	**00 09 37.1**	**+0.6**
KLMR				AMP		00 09 47.5	
	comp=Z,26nm,2.4s						
KLMR				*e*S	Sn	00 12 44.3	-11
KLMR				*e*S	Sn	00 12 44.3	-11
KLMR				*e*S	Sn	00 12 44.3	-11
PRGR	**Permogore**	**18.11**	**135**	P	**Pn**	**00 09 37.3**	**-0.2**
PRGR				S	Sn	00 12 44.4	-14
NRIK	**Noril'sk**	**19.97**	**76**	P	**Pn**	**00 10 02.0**	**+2.1**
	comp=Z,0.7nm,0.4s,baz=314,slow=7.6,SNR=3.6						
AKASG	**Malin Array Be**	**27.11**	**165**	P	**P**	**00 11 12.5**	**+4.1**
	comp=Z,0.2nm,0.3s,baz=354,slow=10,SNR=2.2						
ILAR	**Eielson Array**	**37.78**	**350**	P	**P**	**00 12 43.6**	**+2.2**
	comp=Z,0.6nm,0.6s,baz=359,slow=6.8,SNR=13						
MKAR	**Makanchi Array**	**39.16**	**102**	P	P	00 12 58.8	+5.6
	comp=Z,0.5nm,0.8s,baz=352,slow=7.4,SNR=2.4						

NNC 22 00:06:02.6±13.0**, 37.°59N×71.°96E, h0**km**, mb3.8, mpv3.4,**
3C-2D, Error ellipse: s-maj=116.9km s-min=104.1km
az=42.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**5.40**	**20**	⇓P	Pn	00 07 24.8	+0.2
	3.3nm,0.8s						
AAK				⇓S	Sn	00 08 30.0	+2.4
	1.3nm,0.6s						
KK02	**Karatay Array**	**5.62**	**349**	⇑P	Pn	00 07 28.0	+0.6
	2.0nm,0.6s,baz=155,slow=11						
KK02				⇑S	Sn	00 08 32.6	0.0
	7.1nm,0.8s						
TKM2	**Tokmak 2**	**6.01**	**26**	⇑P	Pn	00 07 31.6	-1.3
	5.0nm,0.7s						

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*IDC **22** 00:18:37.3±0.8, 32.°85N×47.°69E, h0km, mb3.8/21, mb1 3.9/28, mb1mx3.9/61, mbtmp3.9/28, ML3.7/8, Error ellipse: s-maj=18.1km s-min=12.5km az=169.0*
*MOS **22** 00:18:38.4±1.1, 32.°77N×47.°64E, h22km, mb4.6/14, Error ellipse: s-maj=8.6km s-min=5.8km az=95.5*
*NEIC **22** 00:18:39.1±1.8, 32.°73N±0.°05×47.°66E±0.°07, h10km±1km, mb4.2/30, mb_Lg3.7(TEH), Error ellipse: s-maj=10.1km s-min=7.7km az=239.0*
*TEH **22** 00:18:39.2, 32.°87N×47.°77E, h8km, ML3.7*
*THR **22** 00:18:41.4±0.3, 32.°84N×47.°90E, h18km±3km, ML3.5*
*ISN **22** 00:18:42.2±3.5, 32.°81N×47.°50E, h11km±24km, ML3.8*
ISC 22 00:18:38.9±0.3**, 32.°72N**±0.°03×**47.°65E**±0.°03**, h15**km**, n234,**
σ1.s81/250**, mb4.1**/48**, 25C-1D, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DHL1	**Dehloran**	**0.31**	**264**	*e*Pg	**Pn**	**00 18 48.1**	**-0.8**
DHL1				*e*Sg	**Sn**	**00 18 55.3**	**+0.1**
IKFM	**Kafar-mosalman**	**0.82**	**12**	*e*Pg	**Pg**	**00 18 52.9**	**-2.0**
IKFM				*e*		00 19 06.7	
	comp=Z,83µm,0.5s						
IKFM	**Kafar-mosalman**	**0.82**	**12**	Pg	**Pg**	**00 18 52.9**	**-2.0**
IDOB	**Doab**	**1.16**	**22**	*e*Pg	**Pb**	**00 18 58.8**	**-1.9**
IDOB	**Doab**	**1.16**	**22**	Pg	**Pb**	**00 18 58.8**	**-1.9**
AHWZ	**Ahwaz**	**1.62**	**148**	*e*Pg	**Pg**	**00 19 12.2**	**+2.2**
AHWZ	**Ahwaz**	**1.62**	**148**	Pg	**Pg**	**00 19 12.2**	**+2.2**
KCHF	**Cheshme Sefid,**	**1.64**	**342**	*e*		00 19 33.2	
	comp=Z,21µm,0.6s						
KCHF				*e*Pg	**Pb**	**00 19 08.8**	**-0.1**
KCHF	**Cheshme Sefid,**	**1.64**	**342**		**Pb**	**00 19 08.8**	**-0.1**
HSAM	**Samen**	**1.69**	**28**	*e*Pg	**Pb**	**00 19 09.2**	**-0.7**
HSAM	**Samen**	**1.69**	**28**		**Pb**	**00 19 09.1**	**-0.8**
KER	**Kermanshah**	**1.72**	**346**	*e*Pg	**Pb**	**00 19 10.1**	**-0.2**
AMIS	**Naft Sefid**	**1.74**	**127**	*e*Pg	**Pg**	**00 19 12.7**	**+0.4**
IBZA	**Bozab**	**1.76**	**6**	*e*Pn	**Pb**	**00 19 10.1**	**-0.9**
IBZA	**Bozab**	**1.76**	**6**	Pn	**Pb**	**00 19 10.0**	**-0.9**
IGHG	**Ghaleghazi**	**1.84**	**331**	*e*Pg	**Pb**	**00 19 12.4**	**0.0**
IGHG	**Ghaleghazi**	**1.84**	**331**	Pg	**Pb**	**00 19 12.4**	**0.0**
NSR	**Nassriya**	**2.13**	**217**	*e*Pg	**Pn**	**00 19 11.0**	**-2.9**
	baz=47						
NSR				*e*Sg	**Sn**	**00 19 35.0**	**-5.1**
NSR				AML	AML	00 19 43.6	
	comp=E,2µm,0.6s						
IALM	**Almabolaq**	**2.18**	**11**	*e*Pn	**Pb**	**00 19 16.7**	**-1.5**
KHMZ	**Khomeyn**	**2.19**	**62**	*e*Pg	**Pb**	**00 19 17.2**	**-1.1**
KHMZ	**Khomeyn**	**2.19**	**62**	*e*Pg	**Pb**	**00 19 17.2**	**-1.1**
IDHR	**Dehrash**	**2.24**	**332**	*e*Pn	**Pb**	**00 19 17.7**	**-1.5**
IDHR	**Dehrash**	**2.24**	**332**	Pn	**Pb**	**00 19 17.7**	**-1.5**
ILIN	**Lien**	**2.27**	**346**	*e*Pn	**Pb**	**00 19 17.8**	**-2.0**
ILIN	**Lien**	**2.27**	**346**	Pn	**Pb**	**00 19 17.7**	**-2.0**
HAGD	**Aghdareh**	**2.44**	**30**	*e*Pn	**Pb**	**00 19 20.1**	**-2.5**
HAGD				*e*		00 19 57.4	
	comp=Z,5µm,0.5s						
HAGD	**Aghdareh**	**2.44**	**30**	Pn	**Pb**	**00 19 20.1**	**-2.5**
ASAO	**Ashtian**	**2.70**	**47**	*e*Pn	**Pn**	**00 19 23.0**	**+1.1**
ASAO				*e*Sg	**Sb**	**00 19 58.7**	**-1.3**
ASAO				IAML		00 20 11.7	
	comp=E,136nm,0.7s						
ASAO				IAML		00 20 12.9	
	comp=N,163nm,0.6s						
ASAO	**Ashtian**	**2.70**	**47**	*e*Pn	**Pn**	**00 19 23.0**	**+1.1**
IPIR	**Pirpir**	**2.73**	**90**	*e*Pn	**Pb**	**00 19 25.1**	**-2.6**
IPIR				*e*		00 20 08.0	
	comp=Z,3µm,0.6s						
SHK1	**Shahrekord**	**2.76**	**97**	*e*Pn	**Pn**	**00 19 24.5**	**+1.7**
BHD	**Baghdad**	**2.80**	**282**	*e*Pn	**Pb**	**00 19 26.0**	**-2.6**
BHD				*e*Sn	**Sb**	**00 20 02.0**	**-0.7**
BHD				AML	AML	00 20 04.8	
	comp=E,366nm,0.4s						
MIB	**Mutribah**	**2.92**	**185**	*e*P	**Pb**	**00 19 29.2**	**-1.3**
UMR	**Umm Al-Rimmam**	**3.15**	**179**	*e*P	**Pb**	**00 19 32.1**	**-2.5**
IBRJ	**Brojen**	**3.16**	**104**	*e*Pn	**Pn**	**00 19 30.1**	**+1.7**
IRAZ	**Razeghan**	**3.28**	**35**	*e*Pn	**Pn**	**00 19 32.2**	**+2.2**
QAMS	**Qamsar**	**3.30**	**71**	*e*Pn	**Pn**	**00 19 32.5**	**+2.2**
IKLH	**Kolahrood**	**3.36**	**79**	*e*Pn	**Pn**	**00 19 33.2**	**+2.2**
IKLH				*e*		00 20 25.0	
	comp=Z,1µm,0.4s						
QABG	**Abgarm-Qazvin**	**3.39**	**28**	*e*Pn	**Pn**	**00 19 32.4**	**+1.0**
GHVR	**GHOM**	**3.52**	**59**	*e*Pn	**Pn**	**00 19 35.4**	**+2.3**
GHVR				IAML		00 20 28.0	
	comp=E,74nm,0.5s						
GHVR				IAML		00 20 36.1	
	comp=N,65nm,0.7s						
GHVR	**GHOM**	**3.52**	**59**	*e*Pn	**Pn**	**00 19 35.4**	**+2.3**
KBD	**Kabd**	**3.53**	**179**	*e*P	**Pn**	**00 19 37.2**	**+4.1**
IQOM	**Qom**	**3.55**	**52**	*e*Pn	**Pn**	**00 19 34.8**	**+1.1**
IGAR	**Gharneh**	**3.72**	**94**	*e*Pn	**Pn**	**00 19 37.5**	**+1.5**
IGAR				*e*		00 20 49.7	
	comp=Z,1µm,0.9s						
KLNJ	**Kolanjah**	**3.76**	**116**	*e*Pn	**Pn**	**00 19 39.5**	**+2.8**
RDF	**Al-Radifah**	**3.78**	**181**	*e*P	**Pn**	**00 19 41.0**	**+4.4**
IMHD	**Mahdasht**	**3.88**	**39**	*e*Pn	**Pn**	**00 19 39.0**	**+1.0**
IZEF	**Zefreh**	**3.95**	**86**	*e*Pn	**Pn**	**00 19 40.6**	**+1.5**
KRSH	**Karshahi**	**3.96**	**70**	*e*Pn	**Pn**	**00 19 40.9**	**+1.7**
QRN	**Al-Qurain**	**3.96**	**177**	*e*P	**Pn**	**00 19 43.2**	**+4.1**
QSDN	**Sirdan**	**3.98**	**18**	*e*Pn	**Pn**	**00 19 41.8**	**+2.2**
ZNJK	**Zanjan**	**4.04**	**12**	*e*Pn	**Pn**	**00 19 42.5**	**+2.1**
ZNJK	**Zanjan**	**4.04**	**12**	*e*Pn	**Pn**	**00 19 42.5**	**+2.1**
IHSB	**Hasanabad**	**4.05**	**47**	*e*Pn	**Pn**	**00 19 41.8**	**+1.3**
QCNT	**Qazvin**	**4.06**	**28**	*e*Pn	**Pn**	**00 19 40.9**	**+0.3**
IVRN	**Varamin**	**4.08**	**55**	*e*Pn	**Pn**	**00 19 42.0**	**+1.1**
IRAM	**Ramesheh**	**4.11**	**101**	*e*Pn	**Pn**	**00 19 42.6**	**+1.3**
ISFB	**Sefidab**	**4.17**	**66**	*e*Pn	**Pn**	**00 19 43.3**	**+1.3**
IGZV	**Ghazvin**	**4.23**	**29**	*e*Pn	**Pn**	**00 19 44.8**	**+1.8**
CHTH	**Charan**	**4.29**	**41**	*e*Pn	**Pn**	**00 19 45.1**	**+1.2**
CHTH	**Charan**	**4.29**	**41**	*e*Pn	**Pn**	**00 19 45.1**	**+1.2**
MAHB	**Mahabad**	**4.35**	**339**	*e*Pn	**Pn**	**00 19 46.6**	**+2.1**
NASN	**Na'in**	**4.35**	**88**	*e*Pn	**Pn**	**00 19 46.3**	**+1.6**
NASN	**Na'in**	**4.35**	**88**	*e*Pn	**Pn**	**00 19 46.3**	**+1.6**
JIR1	**Jirandeh**	**4.36**	**23**	*e*Pn	**Pn**	**00 19 46.2**	**+1.5**
QALM	**Alamut, Qazvin**	**4.46**	**33**	*e*Pn	**Pn**	**00 19 47.0**	**+0.9**
DAMV	**Damavand**	**4.61**	**50**	*e*Pn	**Pn**	**00 19 49.4**	**+1.1**
DAMV				IAML		00 21 05.6	
	comp=N,80nm,0.9s						
DAMV	**Damavand**	**4.61**	**50**	*e*Pn	**Pn**	**00 19 49.4**	**+1.1**
IDMV	**Damavand**	**4.62**	**51**	*e*Pn	**Pn**	**00 19 49.6**	**+1.2**
AHBU	**AHRAM**	**4.96**	**140**	*e*Pn	**Pn**	**00 19 56.7**	**+3.9**
ISRB	**Sarab**	**5.10**	**0**	*e*Pn	**Pn**	**00 19 56.7**	**+1.8**
ANAR	**Anarak**	**5.13**	**83**	*e*Pn	**Pn**	**00 19 56.4**	**+1.1**
IAZR	**Azarshahr**	**5.14**	**345**	*e*Pn	**Pn**	**00 19 57.5**	**+2.0**
IFIR	**Firoozkooh**	**5.14**	**54**	*e*Pn	**Pn**	**00 19 56.3**	**+0.8**
ISAD	**Sadrabad**	**5.17**	**97**	*e*Pn	**Pn**	**00 19 57.6**	**+1.6**
IPRN	**Peran**	**5.23**	**46**	*e*Pn	**Pn**	**00 19 58.1**	**+1.4**
IHRS	**Heris**	**5.61**	**355**	*e*Pn	**Pn**	**00 20 03.0**	**+1.0**
ICHK	**Chekchek**	**5.73**	**93**	*e*Pn	**Pn**	**00 20 04.3**	**+0.7**
AHAR	**Ahar**	**5.78**	**355**	*e*Pn	**Pn**	**00 20 06.6**	**+2.4**
ISHB	**Shabestar**	**5.80**	**344**	*e*Pn	**Pn**	**00 20 06.5**	**+2.0**
YZKH	**Yazd**	**5.87**	**91**	*e*Pn	**Pn**	**00 20 07.1**	**+1.6**
YZKH	**Yazd**	**5.87**	**91**	*e*Pn	**Pn**	**00 20 07.1**	**+1.6**
IMEH	**Mehriz**	**6.06**	**101**	*e*Pn	**Pn**	**00 20 09.1**	**+1.0**
IGLO	**Ghaloghah**	**6.34**	**52**	*e*Pn	**Pn**	**00 20 13.1**	**+1.1**
SIRT	**Sirnak**	**6.40**	**320**	Pn	**Pn**	**00 20 13.4**	**+0.6**
GURO	**Guroymak-BITLI**	**7.40**	**323**	Pn	**Pn**	**00 20 27.4**	**+1.0**
TNSJ	**Nastanj**	**7.60**	**78**	*e*Pn	**Pn**	**00 20 30.2**	**+1.0**
TPRV	**Parvadeh(Tabas**	**7.61**	**85**	*e*Pn	**Pn**	**00 20 30.5**	**+1.2**
SHRO	**Shahrood**	**7.65**	**62**	*e*Pn	**Pn**	**00 20 31.2**	**+1.4**
SHRO	**Shahrood**	**7.65**	**62**	*e*Pn	**Pn**	**00 20 31.2**	**+1.4**
GNI	**Garni**	**7.78**	**343**	Pn	Pn	00 20 38.9	+7.2
	comp=N,0.1nm,0.3s,baz=90,slow=20,SNR=1.9						
GNI				Lg	Lg	00 22 46.6	
	comp=N,0.2nm,0.3s,baz=198,slow=20,SNR=1.2						
TKDS	**Koohdasht(Taba**	**7.99**	**81**	*e*Pn	**Pn**	**00 20 34.9**	**+0.3**
ASF	**Jabal al Asfar**	**9.10**	**269**	Pn	**Pn**	**00 20 50.8**	**+1.0**
	comp=N,0.9nm,0.3s,baz=65,slow=4.9,SNR=11						
ASF				Sn	**Sn**	**00 22 27.8**	**-4.3**
	comp=N,0.3nm,0.3s,baz=108,slow=12,SNR=1.4						
ASF				Lg	Lg	00 23 31.5	
	comp=N,0.4nm,0.3s,baz=106,slow=23,SNR=2.0						
RAYN	**Ar Rayn**	**9.35**	**192**	Pn	**Pn**	**00 20 54.0**	**+0.8**
RAYN	**Ar Rayn**	**9.35**	**192**	P	**Pn**	**00 20 54.0**	**+0.8**
RAYN	**Ar Rayn**	**9.35**	**192**	Pn	**Pn**	**00 20 54.0**	**+0.8**
ISFR	**Sfrayin**	**9.54**	**60**	*e*Pn	**Pn**	**00 20 57.0**	**+1.1**
BANOM	**Banah**	**10.14**	**130**	Pn	**Pn**	**00 21 03.5**	**-0.4**
BANOM				Sn	**Sn**	**00 22 51.0**	**-6.4**
MMAI	**Mount Meron Ar**	**10.30**	**275**	Pn	**Pn**	**00 21 07.2**	**+1.0**
	comp=N,0.3nm,0.3s,baz=84,slow=15,SNR=1.7						
MMAI				Sn	**Sn**	**00 23 00.5**	**-1.0**
	comp=N,0.4nm,0.3s,baz=74,slow=21,SNR=1.2						
MMAI				Lg	Lg	00 24 12.8	
	comp=N,0.6nm,0.3s,baz=107,slow=40,SNR=2.1						
UOSS	**Minazif**	**10.78**	**134**	Pn	**Pn**	**00 21 14.7**	**+2.0**
UOSS	**Minazif**	**10.78**	**134**	Pn	**Pn**	**00 21 13.8**	**+1.1**
HATD	**Hatta, Dubai**	**10.82**	**134**	Pn	**Pn**	**00 21 14.3**	**+1.0**
ASHO	**Ashiyiah**	**10.88**	**135**	Pn	**Pn**	**00 21 13.9**	**-0.3**
ASHO				Sn	**Sn**	**00 23 08.9**	**-6.9**
NEY	**Neytrino**	**11.21**	**341**	⇑*e*P	**Pn**	**00 21 17.5**	**-1.2**
EIL	**Elat**	**11.29**	**258**	Pn	**Pn**	**00 21 20.1**	**+0.5**
	comp=N,0.3nm,0.3s,baz=16,slow=9.3,SNR=1.7						
EIL				Lg	Lg	00 24 44.6	
	comp=N,0.3nm,0.3s,baz=72,slow=15,SNR=2.1						
KIV	**Kislovodsk**	**11.88**	**342**	*e*P	**Pn**	**00 21 29.4**	**+1.7**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BRTR	**Keskin Array B**	**13.29**	**306**	Pn	**Pn**	**00 21 51.6**	**+4.6**
	comp=Z,0.1nm,0.3s,baz=129,slow=13,SNR=4.3						
WSAR	**Wadi Sarin**	**13.53**	**131**	Pn	**Pn**	**00 21 49.6**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=328,slow=14,SNR=6.4						
WSAR				Sn	**Sn**	**00 24 15.7**	**-4.8**
	comp=Z,0.1nm,0.3s,baz=260,slow=17,SNR=2.4						
ELL	**Elmali**	**15.13**	**290**	P	**P**	**00 22 17.0**	**-0.3**
ELL				pmax	pmax		
	comp=Z,75nm,1.2s						
ELL	**Elmali**	**15.13**	**290**		**P**	**00 22 17.0**	**-0.3**
KBL	**Kabul**	**17.91**	**78**	P	**P**	**00 22 48.7**	**+0.5**
KBL				pmax	pmax		
	comp=Z,7.0nm,1.2s						
KBL	**Kabul**	**17.91**	**78**	P	**P**	**00 22 48.7**	**+0.5**
ABKAR	**Akbulak array**	**18.91**	**26**		**P**	**00 22 58.6**	**-0.2**
ABKAR	**Akbulak array**	**18.91**	**26**	P	**P**	**00 22 58.4**	**-0.5**
IDI	**Anoyia**	**19.04**	**284**	P	**Pn**	**00 23 01.7**	**+0.5**
	comp=Z,0.8nm,0.3s,baz=112,slow=9.2,SNR=7.3						
VORD	**Divnogorie**	**19.25**	**344**	*e*P	**Pn**	**00 23 04.4**	**+0.9**
VORD				pmax	pmax		
	comp=Z,10.0nm,0.7s						
AKTO	**Aktyubinsk**	**19.30**	**20**	P	**Pn**	**00 23 03.5**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=199,slow=11,SNR=7.6						
GAR	**Garm**	**19.39**	**65**	P	**Pn**	**00 23 05.8**	**+0.3**
GAR				IAmb	IAmb	00 23 10.2	
	comp=Z,8.2nm,0.8s						
VSR	**Storozhevoye**	**19.51**	**344**	*e*P	**P**	**00 23 05.3**	**-0.1**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BELG	**Belogornoye**	**19.67**	**360**	P	**Pn**	**00 23 07.7**	**-0.8**
	comp=Z,0.9nm,0.3s,baz=92,slow=13,SNR=2.1						
BTK	**Batken**	**20.01**	**62**	P	**Pn**	**00 23 13.0**	**+0.2**
BTK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BTK	**Batken**	**20.01**	**62**	P	**Pn**	**00 23 13.0**	**+0.2**
DRK	**Karamyk**	**20.62**	**64**	P	**P**	**00 23 17.9**	**0.0**
KKAR	**Karatay Array**	**20.75**	**53**	P	**P**	**00 23 18.7**	**-0.3**
KKAR	**Karatay Array**	**20.75**	**53**	P	**P**	**00 23 18.7**	**-0.3**
VRI	**Vrincioaia**	**20.77**	**315**	⇑P	Pn	00 23 23.3	+1.7
PLOR	**Plostina**	**20.81**	**315**	⇑P	Pn	00 23 21.3	-0.8
LPSR	**Galich'ya Gora**	**20.85**	**345**	*e*P	**P**	**00 23 18.9**	**-1.1**
LPSR				pmax	pmax		
	comp=Z,30nm,0.7s						
MLR	**Muntele Rosu**	**21.05**	**314**	⇑P	**P**	**00 23 26.6**	**+4.2**
MLR	**Muntele Rosu**	**21.05**	**314**	P	**P**	**00 23 24.0**	**+1.7**
	comp=Z,2.4nm,0.5s,baz=133,slow=3.7,SNR=6.8						
MLR	**Muntele Rosu**	**21.05**	**314**		**P**	**00 23 23.8**	**+1.4**
MLR				IAmb	IAmb	00 23 30.2	
	comp=Z,7.6nm,0.8s						
COVR	**Voineasa-Covas**	**21.07**	**315**	⇑P	**P**	**00 23 27.8**	**+5.3**
TESR	**Tescani**	**21.16**	**317**	⇑P	**P**	**00 23 24.0**	**+0.6**
SORM	**Soroca**	**21.20**	**322**	⇑P	**P**	**00 23 25.5**	**+1.8**
NIL	**Nilore**	**21.44**	**80**	P	**P**	**00 23 26.3**	**-0.2**
NIL				pmax	pmax		
	comp=Z,13nm,1.0s						
NIL	**Nilore**	**21.44**	**80**	P	**P**	**00 23 26.3**	**-0.2**
NIL				IAmb	IAmb	00 23 29.8	
	comp=Z,13nm,1.0s						
ITM	**Ithomi**	**21.52**	**289**	P	**P**	**00 23 27.5**	**+0.2**
VOIR		**21.57**	**313**	⇑P	**P**	**00 23 29.8**	**+1.9**
DOPR	**Dopca**	**21.62**	**314**	⇑P	**P**	**00 23 29.4**	**+1.0**
ARR	**Arges**	**21.80**	**312**	⇑P	**P**	**00 23 32.2**	**+1.9**
PRAR	**RASCA**	**21.88**	**318**	⇑P	**P**	**00 23 31.1**	**+0.1**
BLKB	**Belogradchik**	**22.37**	**306**	⇑P	**P**	**00 23 39.3**	**+2.9**
AKASG	**Malin Array Be**	**22.52**	**328**	P	**P**	**00 23 37.0**	**-0.9**
	comp=Z,0.3nm,0.2s,baz=136,slow=9.3,SNR=7.9						
AKASG	**Malin Array Be**	**22.52**	**328**	P	**P**	**00 23 37.0**	**-0.9**
BURAR	**Bucovina Array**	**22.59**	**318**	⇑P	**P**	**00 23 40.7**	**+1.9**
BURAR	**Bucovina Array**	**22.59**	**318**	P	**P**	**00 23 39.1**	**+0.3**
BUR08	**Bucovina Ar. S**	**22.61**	**318**	P	**P**	**00 23 40.1**	**+1.0**
BUR08				IAmb	IAmb	00 23 54.4	
	comp=Z,4.4nm,0.9s						
GZR	**Gura Zlata**	**22.99**	**311**	⇑P	**P**	**00 23 43.2**	**+0.2**
HERR	**Herculane**	**23.01**	**309**	⇑P	**P**	**00 23 44.1**	**+0.9**
AAK	**Ala-Archa**	**23.36**	**57**	P	**P**	**00 23 48.4**	**+1.5**
	comp=Z,0.4nm,0.4s,baz=233,slow=15,SNR=1.7						
AAK	**Ala-Archa**	**23.36**	**57**	⇑*e*P	**P**	**00 23 49.3**	**+2.4**
AAK				pmax	pmax		
	comp=Z,15nm,2.1s						
MDVR	**Moldovita**	**23.44**	**308**	⇑P	**P**	**00 23 47.8**	**+0.3**
DRGR		**23.64**	**314**	⇑P	**P**	**00 23 51.1**	**+1.6**
OBN	**Obninsk**	**23.71**	**344**	⇓*e*P	**P**	**00 23 50.2**	**+0.2**
OBN				*e*		00 24 17.8	
OBN				pmax	pmax		
	comp=Z,34nm,2.1s						
KSH	**Kashi**	**23.81**	**65**	P	**P**	**00 23 48.4**	**-2.9**
KSH				pP	pP	00 23 53.1	-2.8
KSH				sP	sP	00 23 55.1	-2.8
KSH				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BZS	**Buzias**	**23.82**	**310**	⇑P	**P**	**00 23 50.9**	**-0.3**
SIRR	**Siria**	**24.06**	**312**	⇑P	P	00 23 40.2	-13
BOOM	**Boomskoye usch**	**24.35**	**58**	P	**P**	**00 23 57.5**	**+1.1**
BOOM				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BOOM	**Boomskoye usch**	**24.35**	**58**	P	**P**	**00 23 57.5**	**+1.1**
BOOM				IAmb	IAmb	00 23 58.9	
	comp=Z,6.1nm,1.1s						
TRPA	**Tarpa**	**24.39**	**317**	⇑P	**P**	**00 23 57.7**	**+1.2**
ARU	**Arti**	**24.89**	**14**	P	**P**	**00 24 00.7**	**-0.2**
	comp=Z,0.7nm,0.4s,baz=204,slow=11,SNR=4.2						
ARU	**Arti**	**24.89**	**14**	*c i*P	**P**	**00 24 02.0**	**+1.1**
ARU						00 24 32.2	
ARU				S	**S**	**00 28 27.1**	**+3.8**
ARU				SS	**SnSn**	**00 29 13.1**	**+1.9**
ARU				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ARU	**Arti**	**24.89**	**14**	P	**P**	**00 24 00.9**	**0.0**
ARU				IAmb	IAmb	00 24 02.8	
	comp=Z,6.4nm,1.0s						
KOLS	**Kolonicke sedl**	**24.95**	**318**	*e*P	**P**	**00 24 06.1**	**+4.5**
KOLS	**Kolonicke sedl**	**24.95**	**318**	*e*P	**P**	**00 24 06.1**	**+4.5**
KWP	**Kalwaria Pacla**	**25.08**	**320**	P	**P**	**00 24 03.6**	**+0.9**
KWP				pmax	pmax		
	comp=Z,56nm,0.8s						
KWP	**Kalwaria Pacla**	**25.08**	**320**	P	**P**	**00 24 03.6**	**+0.9**
CRVS	**Cervenica-Dubn**	**25.40**	**317**	*e*P	**P**	**00 24 11.4**	**+5.8**
CRVS	**Cervenica-Dubn**	**25.40**	**317**	*e*P	**P**	**00 24 11.4**	**+5.8**
TARG	**Taragay, Kyrgy**	**25.54**	**61**	P	**P**	**00 24 07.9**	**+0.5**
TARG				IAmb	IAmb	00 24 09.3	
	comp=Z,3.5nm,0.8s						
PSZ	**Piszkesteto**	**25.86**	**314**	⇑P	**P**	**00 24 12.1**	**+2.2**
PSZ	**Piszkesteto**	**25.86**	**314**	P	**P**	**00 24 10.5**	**+0.6**
PSZ				pmax	pmax		
	comp=Z,12nm,1.2s						
PSZ	**Piszkesteto**	**25.86**	**314**	P	**P**	**00 24 10.5**	**+0.6**
PSZ				IAmb	IAmb	00 24 14.1	
	comp=Z,12nm,1.2s						
MNK	**Minsk**	**25.89**	**333**	*i* P	**P**	**00 24 08.3**	**-1.6**
MNK				*i* PPP	PPP	00 24 52.8	

MNK				i		00 27 37.7	
MNK				i S	**S**	**00 28 38.8**	**-0.4**
MNK				i SS	**SnSn**	**00 29 35.7**	**+0.1**
MNK				pmax	pmax		
	comp=N,2.0nm,0.8s						
MNK				pmax	pmax		
	comp=E,1.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MNK				MLR	MLR		
	comp=N,144nm,16.0s						
MNK				MLR	MLR		
	comp=E,29nm,16.0s						
MNK				MLR	MLR		
	comp=Z,249nm,16.0s						
MNK	**Minsk**	**25.89**	**333**	i P	**P**	**00 24 08.3**	**-1.6**
	comp=E,1.0nm,0.8s						
MNK				i P	**P**	**00 24 08.3**	**-1.6**
	comp=N,2.0nm,0.8s						
MNK				i P	**P**	**00 24 08.3**	**-1.6**
	comp=Z,4.0nm,0.8s,baz=139						
MNK				i PP	**PnPn**	**00 24 44.5**	**-2.7**
MNK				i PPP	PPP	00 24 52.8	
MNK				i PcP	**PcP**	**00 27 37.7**	**-0.8**
MNK				i S	**S**	**00 28 38.8**	**-0.4**
MNK				i SS	**SnSn**	**00 29 35.7**	**+0.1**
MNK				i SSS	SSS	00 29 49.5	
MNK				i LQ	LQ	00 31 25.3	
MNK				i LR	LR	00 33 04.9	
MNK				i LRM	MLR	00 35 07.8	
	comp=E,29nm,16.0s						
MNK				i LRM	MLR	00 35 07.8	
	comp=N,144nm,16.0s						
MNK				i LRM	MLR	00 35 07.8	
	comp=Z,249nm,16.0s						
KIRV	**Kirov**	**25.90**	**2**	P	**P**	**00 24 09.9**	**-0.1**
	comp=Z,9.8nm,0.6s,baz=115,slow=6.6,SNR=5.4						
KIRV	**Kirov**	**25.90**	**2**	⇑eP	**P**	**00 24 11.5**	**+1.5**
BRVK	**Borovoye**	**26.04**	**32**	⇑eP	**P**	**00 24 11.2**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BVAR	**Borovoye Array**	**26.06**	**32**	P	**P**	**00 24 10.6**	**-1.0**
	comp=Z,1.9nm,0.7s,baz=218,slow=19,SNR=12						
OJC	**Ojcow**	**27.00**	**319**	P	**P**	**00 24 21.4**	**+1.4**
OJC				pmax	pmax		
	comp=Z,8.0nm,1.1s						
OJC	**Ojcow**	**27.00**	**319**	P	**P**	**00 24 21.4**	**+1.4**
OJC				IAmb	IAmb	00 24 28.0	
	comp=Z,8.3nm,1.1s						
KURBB	**Kurchatov Arra**	**28.89**	**43**	P	**P**	**00 24 37.3**	**+0.3**
	comp=Z,0.5nm,0.2s,baz=246,slow=9.3,SNR=4.1						
KURK	**Kurchatov**	**28.99**	**42**	P	**P**	**00 24 37.3**	**-0.5**
MOA	**Molln**	**29.34**	**311**	eP	**P**	**00 24 41.4**	**+0.4**
	comp=Z,2.0nm,0.8s						
MK31	**Makanchi Array**	**29.85**	**52**	P	**P**	**00 24 46.3**	**+0.8**
MK31				pmax	pmax		
	comp=Z,4.0nm,1.4s						
MK31	**Makanchi Array**	**29.85**	**52**	P	**P**	**00 24 46.3**	**+0.8**
MK31				IAmb	IAmb	00 24 55.0	
	comp=Z,3.6nm,1.4s						
MKAR	**Makanchi Array**	**29.85**	**52**	P	**P**	**00 24 45.3**	**-0.2**
	comp=Z,1.1nm,0.8s,baz=251,slow=7.6,SNR=7.4						
MKAR	**Makanchi Array**	**29.85**	**52**	i P	**P**	**00 24 46.4**	**+0.9**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MKAR	**Makanchi Array**	**29.85**	**52**	P	**P**	**00 24 46.1**	**+0.6**
GERES	**GERESS Array B**	**30.03**	**313**	P	**P**	**00 24 46.7**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=120,slow=6.9,SNR=2.2						
GERES	**GERESS Array B**	**30.03**	**313**	P	**P**	**00 24 47.0**	**-0.2**
GERES	**GERESS Array B**	**30.03**	**313**	P	**P**	**00 24 47.0**	**-0.2**
CTI	**Castel Tesino**	**30.57**	**306**	P	**P**	**00 24 53.1**	**+1.1**
CTI				pmax	pmax		
	comp=Z,12nm,1.1s						
CTI	**Castel Tesino**	**30.57**	**306**	P	**P**	**00 24 53.1**	**+1.1**
WTTA	**Wattenberg**	**30.88**	**309**	eP	**P**	**00 24 55.8**	**+1.1**
	comp=Z,2.0nm,0.5s						
WATA	**Walderalm**	**30.93**	**309**	eP	**P**	**00 24 56.0**	**+0.8**
	comp=Z,2.1nm,0.7s						
VLC	**Villacollemand**	**31.09**	**302**	P	**P**	**00 24 57.3**	**+0.8**
SQTA	**Sankt Quirin**	**31.15**	**308**	eP	**P**	**00 24 57.4**	**+0.3**
	comp=Z,3.2nm,0.7s						
MOTA	**Moosalm**	**31.25**	**309**	eP	**P**	**00 24 58.1**	**+0.1**
	comp=Z,1.2nm,0.6s						
DAVOX	**Davos/Dischmat**	**31.93**	**307**	P	**P**	**00 25 04.2**	**+0.2**
	comp=Z,1.2nm,0.6s,baz=144,slow=19,SNR=1.2						
FINES	**FINESS Array B**	**31.96**	**341**	P	**P**	**00 25 03.1**	**-0.8**
	comp=Z,4.7nm,0.9s,baz=143,slow=9.0,SNR=8.6						
FINES	**FINESS Array B**	**31.96**	**341**	i P	**P**	**00 25 03.9**	**0.0**
FINES				pmax	pmax		
	comp=Z,5.0nm,0.9s						
FINES	**FINESS Array B**	**31.96**	**341**	P	**P**	**00 25 03.5**	**-0.3**
DAVA	**Damuels**	**32.04**	**308**	eP	**P**	**00 25 04.9**	**0.0**
	comp=Z,4.4nm,0.8s						
WMQ	**Urumqi**	**33.04**	**59**	eP	**P**	**00 25 16.0**	**+2.3**
WMQ				sP	sP	00 25 24.6	+4.2
WMQ				pmax	pmax		
	comp=Z,19nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,140nm,3.9s						
WMQ				LR	LR		
	comp=N,1µm,17.7s						
WMQ				LR	LR		
	comp=E,1µm,19.3s						
WMQ				LR	LR		
	comp=Z,1µm,20.9s						
ZALV	**Zalesovo Beam**	**33.80**	**40**	P	**P**	**00 25 18.6**	**-1.5**
	comp=Z,0.6nm,0.2s,baz=258,slow=7.4,SNR=5.0						
ZALV	**Zalesovo Beam**	**33.80**	**40**	P	**P**	**00 25 19.2**	**-0.9**
ZALV	**Zalesovo Beam**	**33.80**	**40**	P	**P**	**00 25 19.2**	**-0.9**
BNI	**Bardonecchia**	**33.84**	**303**	P	**P**	**00 25 21.1**	**+0.4**
BNI				pmax	pmax		
	comp=Z,11nm,0.6s						
BNI	**Bardonecchia**	**33.84**	**303**	P	**P**	**00 25 21.1**	**+0.4**
KMBO	**Kilima Mbogo**	**35.06**	**198**	P	**P**	**00 25 35.0**	**+3.4**
	comp=Z,1.2nm,0.6s,baz=29,slow=4.5,SNR=3.5						
KMBO	**Kilima Mbogo**	**35.06**	**198**	P	**P**	**00 25 31.4**	**-0.3**
KMBO				IAmb	IAmb	00 25 42.4	
	comp=Z,5.0nm,1.1s						
HFS	**Hagfors**	**35.35**	**331**	P	**P**	**00 25 32.9**	**-0.5**
	comp=Z,4.0nm,0.8s,baz=145,slow=7.8,SNR=8.4						
NOA	**NORSAR Array B**	**36.87**	**331**	P	**P**	**00 25 45.5**	**-1.0**
	comp=Z,1.1nm,0.8s,baz=129,slow=9.3,SNR=2.4						
ARCES	**ARCESS Array B**	**38.91**	**348**	P	**P**	**00 26 03.1**	**-0.4**
	comp=Z,3.0nm,0.9s,baz=108,slow=4.0,SNR=8.3						
ARCES	**ARCESS Array B**	**38.91**	**348**	P	**P**	**00 26 03.2**	**-0.3**
ARCES				pmax	pmax		
	comp=Z,16nm,1.4s						
ARCES	**ARCESS Array B**	**38.91**	**348**	P	**P**	**00 26 03.2**	**-0.3**
ARCES				IAmb	IAmb	00 26 17.1	
	comp=Z,16nm,1.4s						
SHL	**Shillong**	**39.07**	**89**	P	**P**	**00 26 05.3**	**-0.3**
SHL				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SHL	**Shillong**	**39.07**	**89**	P	**P**	**00 26 05.2**	**-0.3**
SHL				IAmb	IAmb	00 26 32.9	
	comp=Z,3.3nm,0.7s						
CART	**Cartagena**	**39.72**	**291**	P	**P**	**00 26 13.6**	**+2.9**
ESDC	**Sonseca Array**	**41.75**	**295**	P	**P**	**00 26 27.8**	**+0.3**
	comp=Z,1.2nm,0.9s,baz=70,slow=8.7,SNR=8.8						
EKA	**Eskdalemuir Ar**	**41.77**	**318**	P	**P**	**00 26 27.4**	**0.0**
	comp=Z,0.8nm,0.6s,baz=115,slow=7.8,SNR=3.9						
TORD	**Torodi Ar. Bea**	**46.17**	**256**	P	**P**	**00 27 03.8**	**+0.6**
	comp=Z,0.5nm,0.8s,baz=68,slow=7.7,SNR=6.1						
TORD	**Torodi Ar. Bea**	**46.17**	**256**	P	**P**	**00 27 02.8**	**-0.4**
SONM	**Songino Array**	**46.20**	**53**	P	**P**	**00 27 03.8**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=296,slow=11,SNR=2.8						
CMAR	**Chiang Mai Arr**	**47.96**	**94**	P	**P**	**00 27 16.8**	**-0.4**
	comp=Z,2.2nm,0.3s,baz=294,slow=8.8,SNR=2.1						
HHC	**Hu-ho-hao-te**	**50.83**	**62**	eP	**P**	**00 27 41.8**	**+2.9**
HHC				pmax	pmax		
	comp=Z,6.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,78nm,4.8s						
SUMG	**Summit**	**57.98**	**339**	P	**P**	**00 28 31.8**	**+1.0**
SUMG				pmax	pmax		
	comp=Z,9.0nm,1.2s						
SUMG	**Summit**	**57.98**	**339**	P	**P**	**00 28 31.8**	**+1.0**
SSE	**Sheshan**	**61.23**	**70**	P	**P**	**00 28 51.0**	**-2.3**
SSE				S	**S**	**00 37 11.6**	**-1.2**
SSE				pmax	pmax		
	comp=Z,17nm,0.6s						
SSE				pmax	pmax		
	comp=Z,38nm,3.5s						
SSE				LR	LR		
	comp=N,420nm,20.6s						
SSE				LR	LR		
	comp=E,360nm,18.6s						
BMAR	**Burnt Mountain**	**79.74**	**5**	P	**P**	**00 30 46.6**	**+0.7**
IMAR	**Indian Mountai**	**80.24**	**9**	P	**P**	**00 30 48.7**	**+0.3**
H21K	**Melozitna Rive**	**80.67**	**8**	P	**P**	**00 30 51.4**	**+0.5**
H21K				IAmb	IAmb	00 30 52.8	
	comp=Z,5.7nm,1.4s						
ILAR	**Eielson Array**	**82.17**	**6**	P	**P**	**00 30 58.2**	**-0.6**
	comp=Z,0.2nm,0.7s,baz=324,slow=4.5,SNR=1.9						

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*IDC **22** 00:24:50.8±1.0, 38°.46N×20°.50E, h0^{km}, mb3.7/6, mb1 3.7/14, mb1mx3.5/59, mbtmp3.6/14, ML3.1/7, Error ellipse: s-maj=18.5km s-min=15.4km az=164.0*

*ATH **22** 00:24:52.4, 38°.47N×20°.45E, h13^{km}±1^{km}, ML3.5/9, Error ellipse: s-maj=2.3km s-min=0.6km az=288.0*

*THE **22** 00:24:52.5, 38°.46N×20°.45E, h11^{km}±2^{km}, ML3.6/6, Error ellipse: s-maj=2.1km s-min=0.4km az=111.0*

ISC 22 00:24:52.4±0.7**, 38°.46N**±0°.02×**20°.46E**±0°.03**, h14**^{km}±4^{km}**, n74,** σ**1^{s}54**/107**, mb3.6**/6**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FSK	**Fiskardo**	**0.08**	**92**	P	**Pg**	**00 24 54.6**	**-0.7**
FSK				S	**Sg**	**00 24 56.5**	**-0.8**
	54µm,0.6s						
FSK	**Fiskardo**	**0.08**	**92**	P	**Pg**	**00 24 54.6**	**-0.7**
FSK				S	**Sg**	**00 24 56.4**	**-0.9**
FSK				AML	AML	00 24 56.5	
FSK				AML	AML	00 24 58.8	
	comp=N,97317µm,0.8s						
KEF4	**Livadi, Kephal**	**0.21**	**188**	P	**Pg**	**00 24 56.7**	**-0.3**
KEF4				S	**Sg**	**00 25 00.7**	**+0.5**
KEF4	**Livadi, Kephal**	**0.21**	**188**	P	**Pg**	**00 24 56.7**	**-0.3**
KEF4				S	**Sg**	**00 25 00.7**	**+0.5**
EVGI	**Lefkada island**	**0.22**	**44**	P	**Pg**	**00 24 57.0**	**-0.2**
EVGI				S	**Sg**	**00 25 01.2**	**+0.6**
	comp=N,32µm,0.4s						
EVGI	**Lefkada island**	**0.22**	**44**	P	**Pg**	**00 24 57.1**	**-0.2**
EVGI				S	**Sg**	**00 25 01.1**	**+0.5**
DMLN	**Damoulianata-K**	**0.23**	**197**	P	**Pg**	**00 24 57.2**	**-0.3**
DMLN				S	**Sg**	**00 25 01.5**	**+0.5**
DMLN	**Damoulianata-K**	**0.23**	**197**	P	**Pg**	**00 24 57.1**	**-0.3**
DMLN				S	**Sg**	**00 25 01.3**	**+0.3**
DRAG	**Dragano-Lefkad**	**0.24**	**22**	P	**Pg**	**00 24 57.4**	**-0.2**
DRAG				S	**Sg**	**00 25 01.6**	**+0.5**
	comp=N,85µm,0.3s						
DRAG	**Dragano-Lefkad**	**0.24**	**22**	P	**Pg**	**00 24 57.2**	**-0.4**
DRAG				S	**Sg**	**00 25 01.5**	**+0.4**
LXRA	**Lixouri, Kepha**	**0.26**	**184**	P	**Pg**	**00 24 57.8**	**-0.2**
LXRA				S	**Sb**	**00 25 02.6**	**-0.6**
KEF3	**Kipouria, Keph**	**0.27**	**199**	P	**Pg**	**00 24 57.4**	**-0.8**
KEF3				S	**Sg**	**00 25 01.7**	**-0.4**
KEF3	**Kipouria, Keph**	**0.27**	**199**	P	**Pg**	**00 24 57.4**	**-0.8**
KEF3				S	**Sg**	**00 25 01.6**	**-0.4**
VLS	**Valsamata**	**0.30**	**161**	P	**Pg**	**00 24 58.1**	**-0.5**
VLS	**Valsamata**	**0.30**	**161**	P	**Pg**	**00 24 58.2**	**-0.5**
VLS				S	**Sg**	**00 25 03.1**	**+0.2**
VLS				AML	AML	00 25 05.7	
	comp=N,27728µm,0.7s						
VLS				AML	AML	00 25 06.4	
	comp=E,31310µm,0.5s						
NYDR	**Nydri-Lefkada**	**0.31**	**36**	P	**Pg**	**00 24 58.5**	**-0.4**
NYDR				S	**Sg**	**00 25 04.0**	**+0.8**
	comp=E,13µm,0.5s						
NYDR	**Nydri-Lefkada**	**0.31**	**36**	P	**Pg**	**00 24 58.5**	**-0.4**
NYDR				S	**Sg**	**00 25 03.7**	**+0.5**
LKD2	**Lefkada island**	**0.36**	**25**	P	**Pg**	**00 24 59.3**	**-0.5**
LKD2				S	**Sb**	**00 25 05.8**	**-0.3**
	comp=E,7µm,0.5s						
LKD2	**Lefkada island**	**0.36**	**25**	P	**Pg**	**00 24 59.2**	**-0.5**
LKD2				S	**Sg**	**00 25 04.7**	**-0.1**
LKD2				AML	AML	00 25 08.4	
	comp=N,13196µm,0.6s						
LKD2				AML	AML	00 25 11.4	
	comp=E,15941µm,0.5s						
PSDA	**Pessada-Kefalo**	**0.36**	**165**	P	**Pg**	**00 24 59.1**	**-0.5**
PSDA				S	**Sg**	**00 25 05.3**	**+0.6**
PSDA	**Pessada-Kefalo**	**0.36**	**165**	P	**Pg**	**00 24 59.2**	**-0.5**
PSDA				S	**Sg**	**00 25 05.3**	**+0.6**
TSLK	**Tsoukalades, L**	**0.39**	**23**	P	**Pg**	**00 25 00.0**	**-0.3**
TSLK				S	**Sb**	**00 25 07.0**	**0.0**
	comp=E,12µm,0.7s						
TSLK	**Tsoukalades, L**	**0.39**	**23**	P	**Pg**	**00 25 00.0**	**-0.3**
TSLK				S	**Sb**	**00 25 06.7**	**-0.3**
TSLK				AML	AML	00 25 08.9	
	comp=E,22217µm,0.6s						
TSLK				AML	AML	00 25 11.3	
	comp=N,24990µm,0.9s						
LTHK	**Lithakia**	**0.81**	**158**	P	**Pg**	**00 25 06.7**	**-1.4**
LTHK				AML	AML	00 25 24.9	
	comp=N,10051µm,0.8s						
LTHK				AML	AML	00 25 29.8	
	comp=E,9449µm,0.8s						
PVO	**Paravola**	**0.85**	**79**	P	**Pg**	**00 25 08.7**	**-0.1**
PVO	**Paravola**	**0.85**	**79**	P	**Pg**	**00 25 08.6**	**-0.1**
PVO				AML	AML	00 25 30.1	
	comp=E,5286µm,0.3s						
PVO				AML	AML	00 25 31.8	
	comp=N,5837µm,0.9s						
RLS	**Riolos of Patr**	**0.89**	**117**	P	**Pg**	**00 25 09.7**	**+0.1**
RLS	**Riolos of Patr**	**0.89**	**117**	P	**Pg**	**00 25 09.1**	**-0.4**
RLS				AML	AML	00 25 27.3	
	comp=N,3855µm,0.6s						
RLS				AML	AML	00 25 33.4	
	comp=E,3949µm,0.6s						
DRO	**Drossia**	**1.11**	**117**	P	**Pg**	**00 25 13.8**	**+0.1**
EVR	**Evrytania**	**1.15**	**66**	P	**Pb**	**00 25 13.7**	**-0.3**
EVR				AML	AML	00 25 39.6	
	comp=E,2411µm,1.4s						
EVR				AML	AML	00 25 41.8	
	comp=N,1723µm,0.7s						
ANX	**Ano Chora**	**1.15**	**83**	P	**Pb**	**00 25 14.2**	**+0.1**
THL	**Klokotos Trika**	**1.64**	**47**	P	**Pb**	**00 25 22.9**	**+0.6**
THL				AML	AML	00 25 54.0	
	comp=N,1774µm,0.6s						
THL				AML	AML	00 25 54.8	
	comp=E,2318µm,0.8s						
DBRK	**Dubrovnik**	**4.56**	**338**	ePn	**Pn**	**00 25 59.7**	**-1.1**
DBRK				Sn	**Sn**	**00 26 51.0**	**-2.6**
IDI	**Anoyia**	**4.76**	**130**	Pn	**Pn**	**00 26 05.0**	**+1.3**
	comp=E,0.4nm,0.3s,baz=228,slow=11,SNR=6.9						
IDI				Sn	**Sn**	**00 26 58.7**	**0.0**
	comp=E,1.9nm,0.3s,baz=41,slow=15,SNR=1.9						
STON	**Ston**	**4.88**	**335**	ePn	**Pn**	**00 26 04.1**	**-1.2**
VAE	**Valguarnera**	**4.88**	**260**	Pn	**Pn**	**00 26 08.4**	**+3.1**
	comp=E,0.5nm,0.3s,baz=171,slow=20,SNR=2.0						
VAE				Sn	**Sn**	**00 27 07.2**	**+5.5**
	comp=E,1.1nm,0.3s,baz=24,slow=19,SNR=1.9						
MAKA	**Makarska**	**5.48**	**333**	ePn	**Pn**	**00 26 10.9**	**-2.6**
HVAR	**Hvar**	**5.61**	**328**	ePn	**Pn**	**00 26 14.4**	**-0.8**
RICI	**Ricice**	**5.62**	**334**	ePn	**Pn**	**00 26 14.2**	**-1.3**
KIJV	**Kijevo**	**6.33**	**332**	ePn	**Pn**	**00 26 24.8**	**-0.4**
ZIRJ	**Zirje**	**6.34**	**326**	ePn	**Pn**	**00 26 24.3**	**-0.9**
MORI	**Morici**	**6.48**	**328**	ePn	**Pn**	**00 26 27.0**	**-0.3**
DUGI	**Dugi Otok**	**6.86**	**325**	ePn	**Pn**	**00 26 32.5**	**0.0**
DUGI				Sn	**Sn**	**00 27 46.4**	**-4.0**
UDBI	**Udbina**	**7.01**	**331**	ePn	**Pn**	**00 26 34.8**	**+0.2**
PLIT	**Plitvice**	**7.36**	**332**	ePn	**Pn**	**00 26 39.5**	**+0.1**
PLIT				Sn	**Sn**	**00 27 59.4**	**-3.4**
NVLJ	**Novalja**	**7.40**	**327**	ePn	**Pn**	**00 26 40.0**	**+0.1**
RABC	**Rab**	**7.59**	**328**	ePn	**Pn**	**00 26 42.8**	**+0.4**
MOSL	**Moslavina**	**7.66**	**340**	ePn	**Pn**	**00 26 41.6**	**-1.9**
OZLJ	**Ozalj**	**8.05**	**334**	ePn	**Pn**	**00 26 48.4**	**-0.4**
MLR	**Muntele Rosu**	**8.12**	**28**	Pn	**Pn**	**00 26 53.5**	**+3.6**
	baz=194,slow=20,SNR=2.1						
BRJN	**Brijuni**	**8.16**	**324**	ePn	**Pn**	**00 26 49.8**	**-0.5**
RIY	**Rijeka**	**8.18**	**329**	ePn	**Pn**	**00 26 50.3**	**-0.2**
KALN	**Kalnik**	**8.22**	**340**	ePn	**Pn**	**00 26 49.6**	**-1.5**
SOKA	**Soboth**	**9.13**	**336**	ePn	**Pn**	**00 27 02.7**	**-1.0**
	comp=E,1.0nm,0.3s						
SOKA				eSn	**Sn**	**00 28 41.4**	**-4.9**
	comp=E,1.6nm,0.6s						
OBKA	**Obir**	**9.15**	**333**	ePn	**Pn**	**00 27 03.9**	**0.0**
	comp=E,0.8nm,0.2s						
KEST	**Kesra**	**9.29**	**256**	Pn	**Pn**	**00 27 06.2**	**+0.3**
	comp=E,0.1nm,0.3s,baz=118,slow=12,SNR=2.7						
ABTA	**Abfaltersbach**	**10.14**	**327**	ePn	**Pn**	**00 27 19.5**	**+2.0**
	comp=E,1.6nm,0.5s						
ABTA				eSn	**Sn**	**00 29 07.0**	**-4.0**
	comp=E,2.8nm,0.7s						
BRTR	**Keskin Array B**	**10.32**	**79**	Pn	**Pn**	**00 27 24.2**	**+4.1**
	comp=E,0.1nm,0.3s,baz=280,slow=16,SNR=1.4						
MOA	**Molln**	**10.41**	**336**	ePn	**Pn**	**00 27 20.8**	**-0.4**
	comp=E,1.2nm,0.5s						
WTTA	**Wattenberg**	**10.92**	**327**	ePn	**Pn**	**00 27 29.7**	**+1.4**
	comp=E,0.8nm,0.3s						
WATA	**Walderalm**	**11.00**	**327**	ePn	**Pn**	**00 27 29.3**	**0.0**
	comp=E,0.6nm,0.2s						
SQTA	**Sankt Quirin**	**11.07**	**325**	ePn	**Pn**	**00 27 30.5**	**+0.2**
	comp=E,1.6nm,0.5s						
MOTA	**Moosalm**	**11.21**	**325**	ePn	**Pn**	**00 27 32.8**	**+0.5**
	comp=E,1.2nm,0.4s						
MOTA				eSn	**Sn**	**00 29 37.3**	**-0.1**
	comp=E,1.5nm,0.5s						
DAVOX	**Davos/Dischmat**	**11.39**	**320**	Pn	**Pn**	**00 27 38.3**	**+3.6**
	comp=E,0.2nm,0.3s,baz=213,slow=16,SNR=1.8						
DAVOX				Sn	**Sn**	**00 29 39.1**	**-2.6**
	comp=E,0.3nm,0.3s,baz=239,slow=8.2,SNR=2.3						
GERES	**GERESS Array B**	**11.47**	**337**	Pn	**Pn**	**00 27 35.6**	**-0.1**
	comp=E,0.1nm,0.3s,baz=158,slow=14,SNR=2.1						
GERES				Sn	**Sn**	**00 29 39.2**	**-4.4**
	comp=E,0.1nm,0.3s,baz=152,slow=26,SNR=1.4						
RETA	**Reutte**	**11.47**	**325**	ePn	**Pn**	**00 27 38.0**	**+2.3**
	comp=E,0.9nm,0.4s						
MMAI	**Mount Meron Ar**	**13.29**	**110**	Pn	**Pn**	**00 27 59.3**	**-1.4**
	comp=E,0.1nm,0.3s,baz=297,slow=17,SNR=1.6						
MMAI				Sn	**Sn**	**00 30 25.9**	**-2.4**
	comp=E,0.3nm,0.3s,baz=272,slow=19,SNR=1.4						
ESDC	**Sonseca Array**	**18.99**	**281**	P	**Pn**	**00 29 15.3**	**+1.1**
	comp=E,0.0nm,0.3s,baz=78,slow=7.7,SNR=3.6						
HFS	**Hagfors**	**22.11**	**351**	P	**P**	**00 29 48.8**	**+1.8**
	comp=E,1.9nm,0.8s,baz=150,slow=12,SNR=1.4						
FINES	**FINESS Array B**	**23.27**	**7**	P	**P**	**00 29 58.8**	**-0.4**
	comp=E,4.8nm,0.9s,baz=167,slow=18,SNR=7.7						
TORD	**Torodi Ar. Bea**	**30.22**	**219**	P	**P**	**00 31 02.8**	**+0.2**
	comp=E,0.7nm,0.7s,baz=36,slow=8.7,SNR=4.7						
KURBB	**Kurchatov Arra**	**42.10**	**54**	P	**P**	**00 32 44.2**	**+0.5**
	comp=E,0.2nm,0.5s,baz=289,slow=9.4,SNR=2.4						
MKAR	**Makanchi Array**	**45.19**	**59**	P	**P**	**00 33 08.1**	**-0.6**
	comp=E,0.4nm,0.6s,baz=281,slow=7.2,SNR=8.2						
ZALV	**Zalesovo Beam**	**45.54**	**48**	P	**P**	**00 33 11.6**	**+0.3**
	comp=E,2.0nm,0.5s,baz=273,slow=8.8,SNR=8.7						

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*IDC **22** 00:37:09.0±0.6, 43°.16N×146°.15E, h0^{km}, mb4.4/24, mb1 4.5/28, mb1mx4.5/45, mbtmp4.4/28, ML3.1/3, MS4.0/7, Ms1 4.0/7, ms1mx3.5/57, Error ellipse: s-maj=15.7km s-min=12.7km az=136.0*

*MOS **22** 00:37:09.5±0.9, 42°.86N×146°.27E, h23^{km}, mb5.1/48, Error ellipse: s-maj=6.5km s-min=4.3km az=119.5*

*BJI **22** 00:37:09.2±0.0, 42°.86N×146°.46E, h29^{km}, mB5.2/20, mb4.9/64, Ms4.6/20, Ms7 4.5/19*

*NIED **22** 00:37:12.6, 42°.91N×146°.27E, h43^{km}, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}7.87; $M_{\theta\theta}$-4.45; $M_{\phi\phi}$-3.42; $M_{r\theta}$1.51; $M_{\theta\phi}$-4.17; $M_{\phi r}$3.93; Fault plane solution: $M_0$9.05000×10^{15} NP1:ϕ_s36.00000°, δ59.00000°, λ77.00000°. NP2:ϕ_s241.00000°, δ34.00000°, λ111.00000°.*

*JMA **22** 00:37:12.5±0.1, 42°.91N×146°.27E, h43^{km}±2^{km}, M4.7*

JMA Felt II J1.

*NEIC **22** 00:37:13.4±1.6, 42°.88N±0°.07×146°.3E±0°.1, h33^{km}±5^{km}, mb4.9/116, Error ellipse: s-maj=12.6km s-min=9.6km az=125.0*

*SKHL **22** 00:37:13.2±0.2, 42°.90N×146°.40E, h53^{km}±4^{km}, mb5.1/12*

ISC 22 00:37:14.0±0.4**, 42°.96N**±0°.04×**146°.22E**±0°.05**, h39**^{km}±3^{km}**, n466,** σ**1^{s}05**/490**, mb4.9**/148**, MS4.4**/11**, 52C-18D, Off southeast coast of Hokkaido**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.54**	**319**	⇓P	**Pn**	**00 37 24.7**	**-0.5**
NEM2				eS	**Sn**	**00 37 33.3**	**+0.2**
NMR	**Nemuro--Hokkai**	**0.55**	**319**	⇓iPN	**Pn**	**00 37 24.7**	**-0.6**
NMR				eS	**Sn**	**00 37 32.7**	**-0.6**
NMR	**Nemuro--Hokkai**	**0.55**	**319**	i P	**Pn**	**00 37 24.0**	**-1.3**
NMR				eS	**Sn**	**00 37 32.0**	**-1.3**
JKHN	**Kushirohamanak**	**0.79**	**279**	⇓P	**Pn**	**00 37 28.0**	**-0.6**
JKHN				eS	**Sn**	**00 37 39.2**	**+0.1**
AKK	**Akkeshi**	**1.01**	**274**	eP	**Pn**	**00 37 31.3**	**-0.3**
AKK				eS	**Sn**	**00 37 44.9**	**+0.2**
GRPR	**Tuman**	**1.08**	**343**	⇓iPN	**Pn**	**00 37 32.1**	**-0.6**
GRPR				eS	**Sn**	**00 37 46.4**	**0.0**
GRPR				pmax	pmax		
	comp=Z,3µm,0.3s						
GRPR				smax	smax		
	comp=N,18µm,0.4s						
GRPR				smax	smax		
	comp=E,15µm,0.5s						
GRPR	**Tuman**	**1.08**	**343**	i P	**Pn**	**00 37 32.0**	**-0.6**
GRPR				AMB	AMB	00 37 32.0	
	comp=E,3µm,0.3s						
GRPR				eS	**Sn**	**00 37 46.0**	**-0.4**
GRPR				A	A	00 37 47.0	
	comp=E,18µm,0.5s						
GRPR				A	A	00 37 47.0	
	comp=E,15µm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.11**	**346**	ePN	**Pn**	**00 37 32.8**	**-0.1**
YUK				eS	**Sn**	**00 37 47.2**	**+0.2**
YUK				pmax	pmax		
	comp=N,1µm,0.2s						
YUK				pmax	pmax		
	comp=E,2µm,0.2s						
YUK				pmax	pmax		
	comp=Z,3µm,0.2s						
YUK				smax	smax		
	comp=N,13µm,0.4s						
YUK				smax	smax		
	comp=E,34µm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.11**	**346**	eP	**Pn**	**00 37 32.0**	**-0.9**
YUK				AMB	AMB	00 37 35.0	
	comp=E,3µm,0.4s						
YUK				eS	**Sn**	**00 37 46.3**	**-0.7**
YUK				A	A	00 37 48.0	
	comp=E,13µm,0.5s						
YUK				A	A	00 37 48.0	
	comp=E,34µm,0.5s						
JAK	**Akkeshi**	**1.12**	**272**	⇑P	**Pn**	**00 37 32.6**	**-0.5**
JAK				eS	**Sn**	**00 37 47.7**	**+0.4**
JNSB	**Nemuroshibetsu**	**1.21**	**313**	⇓P	**Pn**	**00 37 34.1**	**-0.2**
JNSB				eS	**Sn**	**00 37 50.3**	**+0.9**
JNK	**Nakash**	**1.26**	**300**	⇓P	**Pn**	**00 37 34.9**	**-0.2**
JNK				eS	**Sn**	**00 37 50.8**	**-0.1**
JRA	**Rausu**	**1.27**	**321**	⇓P	**Pn**	**00 37 35.1**	**0.0**
JRA				eS	**Sn**	**00 37 51.3**	**+0.4**
RUSJ	**Misakicho**	**1.35**	**329**	⇓iPN	**Pn**	**00 37 36.7**	**+0.5**
RUSJ				eS	**Sn**	**00 37 54.3**	**+1.4**
JOB	**Onbets**	**1.75**	**269**	⇑P	**Pn**	**00 37 41.4**	**-0.4**
JOB				eS	**Sn**	**00 38 02.9**	**0.0**
JAR	**Ashorobuto**	**1.83**	**282**	⇑P	**Pn**	**00 37 42.8**	**0.0**
JAR				eS	**Sn**	**00 38 04.7**	**0.0**
JTKR	**Abashiri--Toko**	**1.96**	**302**	⇓P	**Pn**	**00 37 45.7**	**+1.0**
JTKR				eS	**Sn**	**00 38 10.0**	**+1.9**
JCH	**Churui**	**2.13**	**262**	⇑P	**Pn**	**00 37 46.4**	**-0.6**
JCH				eS	**Sn**	**00 38 12.2**	**0.0**
ERM	**Erimo**	**2.46**	**248**	cePN	**Pn**	**00 37 52.6**	**+1.2**
ERM				pmax	pmax		
	comp=Z,633nm,1.3s						
ERM	**Erimo**	**2.46**	**248**	Pn	**Pn**	**00 37 52.4**	**+0.9**
KUR	**Kuril'sk**	**2.56**	**27**	ePN	**Pn**	**00 37 54.0**	**+1.1**
KUR				eS	**Sn**	**00 38 24.1**	**+1.2**
KUR				pmax	pmax		
	comp=Z,412nm,0.5s						
KUR				smax	smax		
	comp=E,1µm,0.6s						
KUR				smax	smax		
	comp=N,735nm,0.3s						
KUR	**Kuril'sk**	**2.56**	**27**	eP	**Pn**	**00 37 53.1**	**+0.2**
KUR				AMB	AMB	00 38 04.0	
	comp=N,412nm,0.5s						
KUR				i S	**Sn**	**00 38 23.1**	**+0.2**
KUR				A	A	00 38 33.0	
	comp=N,1µm,0.6s						
KUR				A	A	00 38 33.0	
	comp=N,967nm,0.6s						
JKA	**Kamikawa-asahi**	**2.88**	**295**	eP	**Pn**	**00 37 58.9**	**+1.7**
JKA	**Kamikawa-asahi**	**2.88**	**295**	Pn	**Pn**	**00 37 58.9**	**+1.7**
ASAJ	**Asahikawa**	**2.88**	**295**	Pn	**Pn**	**00 37 59.0**	**+1.7**
	comp=N,112nm,0.3s,baz=113,slow=11,SNR=322						
ASAJ				LR	LR	00 38 34.0	
	comp=N,556nm,18.2s,baz=178,slow=31						
ASAJ				Sn	**Sn**	**00 38 36.0**	**+5.4**
	comp=N,116nm,0.3s,baz=198,slow=20,SNR=4.1						
JEW	**Eniwo**	**3.51**	**270**	Pn	**Pn**	**00 38 06.7**	**+0.8**
JTM	**Tenmabayashi**	**4.42**	**242**	Pn	**Pn**	**00 38 17.9**	**-0.5**
YSS	**Yuzh-Sakhalins**	**4.69**	**330**	⇑iPN	**Pn**	**00 38 23.7**	**+1.6**

YSS				pmax	pmax		
	comp=Z,80nm,0.5s						
YSS				MLR	MLR		
	comp=Z,3µm,18.0s						
YSS				MLR	MLR		
	comp=N,2µm,15.0s						
YSS	Yuzh-Sakhalins	4.69	330	*i* P	Pn	00 38 25.6	+3.4
YSS				AMB	AMB	00 38 31.8	
	comp=N,80nm,0.4s						
YSS				*e*S	Sn	00 39 18.5	+3.2
YSS	Yuzh-Sakhalins	4.69	330	Pn	Pn	00 38 23.7	+1.6
JMM	Marumori	6.56	221		Pn	00 38 44.5	-3.3
TEY	Ternei	7.24	290	⇑*e*PN	Pn	00 38 59.1	+2.0
TEY				pmax	pmax		
	comp=E,10.0nm,0.9s						
TEY				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TEY	Ternei	7.24	290	*e*P	Pn	00 38 59.1	+2.0
TEY				AMB	AMB	00 39 00.0	
	comp=Z,10.0nm,0.9s						
JSD	Sado	7.80	234	Pn	Pn	00 39 02.8	-2.2
JYT	Yasato	8.17	217	Pn	Pn	00 39 07.4	-2.6
TYV	Tymovskoe	8.28	344	*e*P	Pn	00 39 14.4	+3.1
TYV				AMB	AMB	00 39 19.2	
	comp=Z,10.0nm,0.6s						
MJAR	Matsushiro Arr	8.89	227	Pn	Pn	00 39 18.3	-1.6
	comp=Z,0.2nm,0.3s,baz=30,slow=15,SNR=7.5						
MJAR	Matsushiro Arr	8.89	227		Pn	00 39 17.9	-2.0
MAJO	Matsushiro	8.89	227	*de*PN	Pn	00 39 18.4	-1.5
MAJO	Matsushiro	8.89	227	Pn	Pn	00 39 18.2	-1.6
MAT	Matsushiro	8.89	227	P	Pn	00 39 18.5	-1.4
MAT				*e*S	Sn	00 40 57.4	-1.3
JGF	Kuroka	10.05	226		Pn	00 39 35.0	-0.8
GRNR	Gornyy	10.29	323	⇑*i*PN	Pn	00 39 45.2	+6.3
GRNR				*e*S	Sn	00 41 46.1	+13
GRNR				pmax	pmax		
	comp=E,7.0nm,0.6s						
GRNR				pmax	pmax		
	comp=N,7.0nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GRNR				smax	smax		
	comp=N,4.0nm,0.8s						
GRNR				MLR	MLR		
	comp=E,430nm,14.0s						
GRNR				MLR	MLR		
	comp=N,320nm,17.0s						
GRNR				MLR	MLR		
	comp=Z,620nm,15.0s						
GRNR	Gornyy	10.29	323	*e*P	Pn	00 39 41.5	+2.6
GRNR				AMB	AMB	00 39 46.1	
	comp=Z,10.0nm,0.7s						
USA0B	Ussuriysk Arra	10.40	282	PN	Pn	00 39 41.4	+0.9
USA0B	Ussuriysk Arra	10.40	282		Pn	00 39 41.4	+0.9
USRK	Ussuriysk Ar.	10.40	282	Pn	Pn	00 39 41.5	+1.0
	baz=82,slow=14,SNR=5.8						
USRK	Ussuriysk Ar.	10.40	282	PN	Pn	00 39 41.7	+1.2
USRK	Ussuriysk Ar.	10.40	282	Pn	Pn	00 39 41.7	+1.2
INU	Inuyama	10.43	226	Pn	Pn	00 39 40.1	-0.7
VLA	Vladivostok	10.50	276	⇓*e*PN	Pn	00 39 42.6	+0.8
VLA	Vladivostok	10.50	276	*e*P	Pn	00 39 42.6	+0.8
OKH	Okha	10.82	349	*e*P	Pn	00 39 50.9	+4.8
OKH				AMB	AMB	00 39 59.6	
	comp=Z,170nm,0.5s						
NKL	Nikolayevsk	10.85	342	*e*P	Pn	00 39 49.8	+3.3
NKL				AMB	AMB	00 39 58.9	
	comp=Z,160nm,0.9s						
JHJ2	Mitsune	11.05	209	Pn	Pn	00 39 46.0	-3.3
MSHR	Mys Shultsa	11.09	273	⇑*e*PN	Pn	00 39 49.8	0.0
PAU	Pauzhetka	11.14	37	*e*P	Pn	00 39 54.2	+3.7
PAU				AMB	AMB	00 39 58.6	
	comp=Z,120nm,0.6s						
PAU				*e*S	Sn	00 41 52.4	-1.2
JWT	Wachi	11.37	231	Pn	Pn	00 39 52.7	-1.0
KLR	Kul'dur	11.84	307	Pn	Pn	00 40 03.2	+3.2
	comp=Z,0.4nm,0.3s,baz=114,slow=15,SNR=21						
KLR				LR	LR	00 43 38.2	
	comp=Z,278nm,20.3s,baz=129,slow=33						
KLR	Kul'dur	11.84	307	⇑*e*PN	Pn	00 40 00.4	+0.4
KLR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KLR	Kul'dur	11.84	307	*i* P	Pn	00 40 00.4	+0.4
MDJ	Mudanjiang	12.14	284	P	Pn	00 40 05.4	+1.2
MDJ				pmax	pmax		
	comp=Z,27nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,240nm,5.3s						
PEA0B	Petropavlovsk-	12.71	33	PN	Pn	00 40 12.6	+0.6
PEA0B	Petropavlovsk-	12.71	33	Pn	Pn	00 40 12.6	+0.6
PETK	Petropavlovsk-	12.71	33	Pn	Pn	00 40 10.9	-1.1
	comp=Z,0.3nm,0.3s,baz=216,slow=7.1,SNR=4.4						
PETK				LR	LR	00 45 42.4	
	comp=Z,544nm,18.7s,baz=143,slow=41						
PETK	Petropavlovsk-	12.71	33	PN	Pn	00 40 11.5	-0.5
PETK	Petropavlovsk-	12.71	33	Pn	Pn	00 40 11.5	-0.5
JHS	Saijyo	12.92	236	Pn	Pn	00 40 15.6	+0.7
JMN	Monobe	13.36	230	Pn	Pn	00 40 18.6	-2.3
KSRS	Korea Array	15.02	255	Pn	Pn	00 40 43.6	+0.3
	comp=Z,0.2nm,0.3s,baz=66,slow=13,SNR=7.6						
CN2	Changchun	15.13	280	*e*P	Pn	00 40 43.6	-1.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CN2				LR	LR		
	comp=Z,900nm,18.0s						
CN2				LR	LR		
	comp=Z,600nm,18.0s						
CN2				LR	LR		
	comp=Z,800nm,19.0s						
TJN	Taejon	15.92	252	⇑*e*P	Pn	00 40 54.0	-1.1
ZEA	Zeya	16.54	317	*e*P	P	00 41 05.2	+0.3
ZEA				pmax	pmax		
	comp=N,10.0nm,0.7s						
ZEA				pmax	pmax		
	comp=E,10.0nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.0s						
ZEA	Zeya	16.54	317	*e*P	Pn	00 41 01.8	-0.9
ZEA				AMB	AMB	00 41 19.8	
	comp=Z,20nm,0.8s						
MA2	Magadan	16.88	8	Pn	Pn	00 41 05.0	-1.9
	comp=Z,0.5nm,0.3s,baz=142,slow=20,SNR=1.6						
MA2	Magadan	16.88	8	P	Pn	00 41 06.6	-0.3
MA2				pmax	pmax		
	comp=Z,72nm,1.4s						
MA2	Magadan	16.88	8	*e*P	Pn	00 41 06.6	-0.3
MA2	Magadan	16.88	8	Pn	Pn	00 41 06.6	-0.3
DL2	Dalian	19.00	266	P	Pn	00 41 34.8	+1.7
DL2				pmax	pmax		
	comp=Z,45nm,1.0s						
HIA	Hailar	19.35	298	P	P	00 41 34.1	-1.9
HIA				pmax	pmax		
	comp=Z,11nm,0.8s						
HIA	Hailar	19.35	298	P	P	00 41 34.1	-1.9
SEY	Seymchan	20.33	8	P	P	00 41 43.4	-3.1
	comp=Z,7.1nm,0.9s,baz=168,slow=7.7,SNR=5.2						
YAK	Yakutsk	21.47	338	P	P	00 41 57.8	-0.9
	comp=Z,3.1nm,0.3s,baz=154,slow=2.8,SNR=1.8						
YAK	Yakutsk	21.47	338	⇑*e*P	P	00 41 59.0	+0.3
YAK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
YAK	Yakutsk	21.47	338	*e*P	P	00 41 59.0	+0.3
YAK	Yakutsk	21.47	338	P	P	00 41 58.5	-0.2
YAK				IAmb	IAmb	00 42 15.2	
	comp=Z,22nm,0.7s						
BJI	Beijing	22.64	273	P	P	00 42 10.4	-1.0
BJI				S	S	00 46 18.3	+1.7
BJI				pmax	pmax		
	comp=Z,43nm,0.8s						
BJI				LR	LR		
	comp=Z,1µm,18.3s						
BJI				LR	LR		
	comp=Z,430nm,18.3s						
BJI				LR	LR		
	comp=Z,1µm,19.2s						
BJT	Baijiatuau	22.65	273	P	P	00 42 10.2	-1.4
BJT				pmax	pmax		
	comp=Z,35nm,1.0s						
BJT	Baijiatuau	22.65	273	P	P	00 42 10.2	-1.4
BJT				IAmb	IAmb	00 42 11.1	
	comp=Z,35nm,1.0s						
TIA	Tai'an	23.34	263	⇑P	P	00 42 17.8	-0.9
TIA				pmax	pmax		
	comp=Z,30nm,0.8s						
NJ2	Nanjing	24.18	252	*e*P	P	00 42 26.5	-0.1
NJ2				pmax	pmax		
	comp=Z,44nm,0.8s						
NJ2				LR	LR		
	comp=Z,440nm,13.3s						
NJ2				LR	LR		
	comp=Z,690nm,11.4s						
NJ2				LR	LR		
	comp=Z,1µm,19.4s						
HHC	Hu-ho-hao-te	25.77	277	*e*P	P	00 42 43.0	+1.9
HHC				sP	sP	00 42 56.1	-0.5
HHC				pmax	pmax		
	comp=Z,37nm,0.9s						
HHC				pmax	pmax		
	comp=Z,230nm,4.4s						
HHC				LR	LR		
	comp=Z,1µm,17.8s						
HHC				LR	LR		
	comp=Z,2µm,18.0s						
HHC				LR	LR		
	comp=Z,2µm,18.0s						
BTO	Baotou	26.97	277	*e*P	P	00 42 52.3	+0.4
ULN	Ulaanbaatar	27.72	294	*c i*P	P	00 42 58.7	+0.1
ULN				pmax	pmax		
	comp=Z,27nm,1.0s						
ULN	Ulaanbaatar	27.72	294	*e*P	P	00 42 58.7	+0.1
ULN	Ulaanbaatar	27.72	294	P	P	00 42 58.5	-0.1
ULN				IAmb	IAmb	00 42 59.8	
	comp=Z,21nm,0.8s						
SONM	Songino Array	28.16	294	P	P	00 43 02.9	+0.3
	comp=Z,32nm,0.8s,baz=88,slow=8.5,SNR=153						
SONM	Songino Array	28.16	294	P	P	00 43 02.8	+0.2
SONM				IAmb	IAmb	00 43 03.8	
	comp=Z,33nm,0.8s						
WHN	Wuhan	28.21	255	⇓P	P	00 43 05.8	+2.9
H11N2	WAKE ISLAND Hy	28.97	137	T	T	01 14 16.1	
	baz=328,slow=75,SNR=4003						
H11N1	WAKE ISLAND Hy	28.98	137	T	T	01 14 19.1	
	baz=328,slow=75,SNR=3104						
H11N3	WAKE ISLAND Hy	28.98	137	T	T	01 14 17.4	
	baz=328,slow=75,SNR=2285						
H11S1	WAKE ISLAND Hy	29.91	138	T	T	01 15 09.6	
	baz=329,slow=75,SNR=6730						
H11S3	WAKE ISLAND Hy	29.91	138	T	T	01 15 07.3	
	baz=329,slow=75,SNR=5130						
H11S2	WAKE ISLAND Hy	29.92	138	T	T	01 15 10.8	
	baz=329,slow=75,SNR=3528						
ZAK	Zakamensk	30.04	299	*e*P	P	00 43 18.6	-0.5
ZAK				pmax	pmax		
	comp=Z,11nm,1.3s						
ZAK	Zakamensk	30.04	299	*e*P	P	00 43 18.6	-0.5
XAN	Xi'an	30.32	266	P	P	00 43 21.1	-0.6
XAN				pP	pP	00 43 31.8	-0.4
XAN				sP	sP	00 43 36.4	-0.7
XAN				PcS	PcS	00 50 04.9	0.0
XAN				pmax	pmax		
	comp=Z,34nm,0.9s						
XAN				LR	LR		
	comp=Z,640nm,19.2s						
XAN				LR	LR		
	comp=Z,800nm,17.9s						
XAN				LR	LR		
	comp=Z,1µm,17.9s						
ENH	Enshi	31.84	259	P	P	00 43 34.9	-0.2
ENH				IAmb	IAmb	00 43 36.4	
	comp=Z,15nm,0.8s						
LZH	Lanzhou	33.13	273	*e*P	P	00 43 46.9	+0.4
LZH				pP	pP	00 43 57.1	+0.1
LZH				sP	sP	00 44 00.3	-1.6
LZH				pmax	pmax		
	comp=Z,56nm,1.1s						
GTA	Gaotai	34.76	280	*e*P	P	00 44 01.0	+0.4
GTA				pP	pP	00 44 10.3	-0.6
GTA				sP	sP	00 44 15.5	-0.7
GTA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CD2	Chengdu	35.65	265	*e*P	P	00 44 07.0	-1.3
J20K	Nowinta River	39.38	37	P	P	00 44 40.3	+1.0
J20K				IAmb	IAmb	00 44 51.1	
	comp=Z,9.1nm,0.8s						
NRIK	Noril'sk	39.62	332	P	P	00 44 39.6	-1.6
	comp=Z,1.0nm,0.4s,baz=180,slow=14,SNR=3.0						
NRIK	Noril'sk	39.62	332	P	P	00 44 40.6	-0.6
NRIK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
NRIK	Noril'sk	39.62	332	P	P	00 44 40.6	-0.6
IMAR	Indian Mountai	39.68	34	P	P	00 44 42.5	+0.7
KMI	Kunming	39.69	258	⇑P	P	00 44 43.1	+0.5
KMI				sP	sP	00 44 59.8	+1.8
KMI				pmax	pmax		
	comp=Z,12nm,0.8s						
KMI				LR	LR		
	comp=Z,460nm,18.5s						
KMI				LR	LR		
	comp=Z,440nm,17.5s						
KMI				LR	LR		
	comp=Z,650nm,19.6s						
H21K	Melozitna Rive	40.04	34	P	P	00 44 45.8	+1.0
DAV	Davao City (W)	40.10	213	P	P	00 44 47.9	+2.1
	comp=Z,68nm,0.3s,baz=53,slow=20,SNR=1.2						
PPLA	Purkeypile	40.22	39	P	P	00 44 47.9	+1.4
PPLA				IAmb	IAmb	00 44 49.2	
	comp=Z,26nm,1.5s						
DGZ	Jazzator, Alta	40.23	301	⇑*e*P	P	00 44 47.4	+0.6
DGZ				pmax	pmax		
	comp=Z,13nm,1.2s						
I21K	Tanana	40.36	35	P	P	00 44 48.7	+1.3
ZAA0	Zalesovo Array	40.94	308	P	P	00 44 52.4	+0.1
ZALV	Zalesovo Beam	40.94	308	P	P	00 44 51.5	-0.8
	comp=Z,2.3nm,0.6s,baz=95,slow=9.5,SNR=16						
ZALV				PcP	PcP	00 46 52.3	+0.2
	comp=Z,6.0nm,0.7s,baz=86,slow=2.8,SNR=14						
ZALV	Zalesovo Beam	40.94	308	P	P	00 44 52.4	+0.1
COLD	Coldfoot	41.18	32	P	P	00 44 54.7	+0.5
I23K	Minto, Yukon-K	41.47	35	P	P	00 44 57.4	+0.9
TOLK	Toolik Lake Re	41.51	30	P	P	00 44 57.1	+0.2
NEA2	Nenana	41.59	36	P	P	00 44 58.1	+0.5
NEA2				IAmb	IAmb	00 45 15.7	
	comp=Z,10nm,0.8s						
WMQ	Urumqi	41.76	292	*e*P	P	00 44 59.8	+0.5
WMQ				pP	pP	00 45 09.9	-0.2
WMQ				pmax	pmax		
	comp=Z,33nm,1.1s						
KNK	Knik Glacier	42.03	41	P	P	00 45 02.6	+1.3
KNK				IAmb	IAmb	00 45 04.5	
	comp=Z,42nm,1.4s						
H24K	Noodor Dome	42.08	34	P	P	00 45 02.8	+1.1
COLA	College	42.11	36	⇑*e*P	P	00 45 02.2	+0.4
COLA				pmax	pmax		
	comp=Z,11nm,1.2s						
POKR	Poker Plat Res	42.28	35	P	P	00 45 04.3	+1.1
POKR				IAmb	IAmb	00 45 21.7	
	comp=Z,17nm,0.9s						
IL31		42.53	36	P	P	00 45 06.4	+1.2
ILAR	Eielson Array	42.53	36	P	P	00 45 05.2	0.0
	comp=Z,3.6nm,0.8s,baz=259,slow=5.2,SNR=28						
ILAR	Eielson Array	42.53	36	P	P	00 45 06.1	+0.9
ILAR	Eielson Array	42.53	36	P	P	00 45 06.1	+0.9
FYU	Fort Yukon	43.14	33	P	P	00 45 11.7	+1.6
FYU				IAmb	IAmb	00 45 12.6	
	comp=Z,19nm,0.8s						
BMAR	Burnt Mountain	43.36	32	P	P	00 45 13.0	+1.0
SCRK	Sand Creek	43.84	37	P	P	00 45 15.9	-0.1
MK31	Makanchi Array	44.35	298	P	P	00 45 20.5	+0.3
MK31				pmax	pmax		
	comp=Z,25nm,0.8s						
MK31	Makanchi Array	44.35	298	P	P	00 45 20.4	+0.3
MK31				IAmb	IAmb	00 45 21.2	
	comp=Z,25nm,0.8s						
MKAR	Makanchi Array	44.36	298	P	P	00 45 20.3	+0.1
	comp=Z,22nm,0.7s,baz=80,slow=8.9,SNR=153						
MAKZ	Makanchi	44.55	298	P	P	00 45 21.9	+0.1
MAKZ				pmax	pmax		
	comp=Z,28nm,0.9s						
MAKZ	Makanchi	44.55	298	P	P	00 45 21.9	+0.1
L27K	Beaver Creek,	44.92	38	P	P	00 45 25.2	+0.7
BCAR	Beaver Creek A	44.94	38	P	P	00 45 25.7	+1.0
EGAK	Eagle	44.97	35	P	P	00 45 25.2	+0.4
EGAK				IAmb	IAmb	00 45 46.6	
	comp=Z,22nm,1.5s						
KURK	Kurchatov	45.41	304	P	P	00 45 28.4	-0.1
KURK				pmax	pmax		
	comp=Z,13nm,0.6s						
KURK	Kurchatov	45.41	304	*e*P	P	00 45 28.4	-0.1
KURK	Kurchatov	45.41	304	P	P	00 45 28.4	-0.1
KURK				IAmb	IAmb	00 45 39.3	
	comp=Z,12nm,0.6s						
KURBB	Kurchatov Arra	45.50	304	P	P	00 45 28.8	-0.4
LSA	Lhasa	45.54	272	P	P	00 45 30.3	0.0
LSA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
LSA	Lhasa	45.54	272	*e*P	P	00 45 30.3	0.0
LSA	Lhasa	45.54	272	P	P	00 45 30.3	0.0
DAWY	Dawson	45.84	36	P	P	00 45 31.8	0.0
CHTO	Chiang Mai	46.41	254	P	P	00 45 36.8	0.0
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CHTO	Chiang Mai	46.41	254	P	P	00 45 36.8	0.0
CMAR	Chiang Mai Arr	46.65	254	P	P	00 45 39.6	+1.0
	comp=Z,1.0nm,0.4s,baz=41,slow=7.9,SNR=7.1						
CMAR	Chiang Mai Arr	46.65	254	P	P	00 45 38.7	0.0
HYT	Haines Junctio	47.37	40	P	P	00 45 43.2	-0.7
HYT				IAmb	IAmb	00 45 46.8	
	comp=Z,20nm,1.0s						
INK	Inuvik	47.43	30	P	P	00 45 44.0	0.0
	comp=Z,9.9nm,0.8s,baz=301,slow=7.1,SNR=36						
INK	Inuvik	47.43	30	P	P	00 45 44.4	+0.4
INK				pmax	pmax		
	comp=Z,12nm,0.9s						
INK	Inuvik	47.43	30	P	P	00 45 44.4	+0.4
INK				IAmb	IAmb	00 45 45.6	
	comp=Z,12nm,0.9s						
PDGK	Podgornoye	47.48	295	P	P	00 45 43.8	-1.2
SHLS	Shalkode	47.56	294	*e*P	P	00 45 43.4	-2.3
KPKS	Kokpek	47.96	295	*e*P	P	00 45 48.9	+0.2
SANI	Sanana	48.37	208	P	P	00 45 56.7	+4.7
	comp=Z,17nm,1.1s						
PRZ	Przheval'sk	48.55	294	P	P	00 45 53.8	+0.4
PRZ				pmax	pmax		
	comp=Z,15nm,0.7s						
PRZ	Przheval'sk	48.55	294	P	P	00 45 53.8	+0.4
BRZS	Berezniki	49.25	305	*e*P	P	00 45 58.3	-0.1
TARG	Taragay, Kyrgy	49.28	293	P	P	00 45 59.7	+0.5
TARG				IAmb	IAmb	00 46 17.3	
	comp=Z,8.0nm,0.7s						
TAPN	Taplejung	49.35	272	*e*P	P	00 46 00.1	+0.3
	comp=Z,16nm,0.7s						
A36M	Sachs Harbour	49.37	24	P	P	00 45 59.2	+0.3
A36M				IAmb	IAmb	00 46 00.1	
	comp=Z,5.7nm,0.8s						
KDJ	Kajisay	49.52	294	P	P	00 46 00.0	-0.8
KDJ				pmax	pmax		
	comp=Z,16nm,1.0s						
KDJ	Kajisay	49.52	294	P	P	00 46 00.0	-0.8
KDJ				IAmb	IAmb	00 46 02.2	
	comp=Z,16nm,0.9s						
BRVK	Borovoye	49.53	310	P	P	00 46 00.9	+0.4
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BRVK	Borovoye	49.53	310	*e*P	P	00 46 00.9	+0.4
BRVK	Borovoye	49.53	310	P	P	00 46 00.9	+0.4
OTUK	Ortayu	50.12	303	P	P	00 46 04.2	-0.8
BOOM	Boomskoye usch	50.20	295	P	P	00 46 06.4	+0.5
BOOM				pmax	pmax		
	comp=Z,28nm,0.7s						
BOOM	Boomskoye usch	50.20	295	P	P	00 46 06.4	+0.5
TKM2	Tokmak 2	50.24	296	P	P	00 46 06.8	+0.5
	SNR=28						
TKM2	Tokmak 2	50.24	296	P	P	00 46 06.4	+0.2
JIRN	Jiri	50.30	273	*e*P	P	00 46 07.4	+0.3
BTLS	Baital	50.34	299	*e*P	P	00 46 06.4	-0.4
GUN	Gumba	50.38	273	*e*P	P	00 46 07.8	+0.1
	comp=Z,27nm,0.5s						
RAMN	Ramite	50.40	272	*e*P	P	00 46 08.1	+0.4
	comp=Z,13nm,0.4s						
KBK	Karagaybulak	50.78	296	P	P	00 46 10.9	+0.6
	SNR=22						
USP	Ospenovka	50.81	296	P	P	00 46 10.7	+0.3
	SNR=11						
KKN	Kakani	50.89	274	*e*P	P	00 46 11.5	+0.1
	comp=Z,20nm,0.8s						
PKI	Pulchoki	50.92	273	*e*P	P	00 46 11.5	-0.2
	comp=Z,11nm,0.6s						
FRU1	Bishkek	50.92	296	P	P	00 46 11.0	-0.3
FRU1				pmax	pmax		
	comp=Z,12nm,0.7s						
FRU1	Bishkek	50.92	296	P	P	00 46 11.0	-0.3
FRU1				IAmb	IAmb	00 46 12.2	
	comp=Z,12nm,0.7s						
PKIN	Phulchoki	50.92	273	*e*P	P	00 46 11.4	-0.3
	comp=Z,12nm,0.6s						
AAK	Ala-Archa	51.09	296	P	P	00 46 12.9	+0.3
	SNR=10						
AAK	Ala-Archa	51.09	296	P	P	00 46 12.4	-0.2
AAK				pmax	pmax		
	comp=Z,7.0nm,0.6s						
AAK	Ala-Archa	51.09	296	*e*P	P	00 46 12.4	-0.2
AAK	Ala-Archa	51.09	296	P	P	00 46 12.4	-0.2
AAK				IAmb	IAmb	00 46 13.3	
	comp=Z,6.5nm,0.6s						
DMN	Daman	51.12	273	*e*P	P	00 46 13.3	+0.2
GKN	Gorkha	51.24	274	*e*P	P	00 46 14.1	+0.2
	comp=Z,16nm,0.5s						
KSH	Kashi	51.52	292	P	P	00 46 19.8	+4.0
KSH				pP	sP	00 46 29.8	-2.0
KSH				sP	pP	00 46 33.0	+6.0
KSH				pmax	pmax		
	comp=Z,14nm,0.8s						
EKS2	Erkin-Say	51.55	296	P	P	00 46 16.5	+0.4
	SNR=11						
DANN	Dangsing	51.69	275	*e*P	P	00 46 18.0	+0.5
	comp=Z,127nm,0.9s						
AML	Almayashu	51.85	296	P	P	00 46 19.3	+0.7
	SNR=9.3						
KOLN	Koldanda	52.13	275	*e*P	P	00 46 21.0	+0.4
	comp=Z,58nm,1.0s						
PYUN	Piuthan	52.39	275	*e*P	P	00 46 22.9	+0.3
	comp=Z,83nm,0.9s						
SVE	Sverdlovsk	53.25	317	*e*P	P	00 46 28.5	+0.2
SVE				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SVE	Sverdlovsk	53.25	317	*e*P	P	00 46 28.5	+0.2
KKAR	Karatay Array	53.49	298	P	P	00 46 30.2	0.0
KKAR	Karatay Array	53.49	298	P	P	00 46 30.2	0.0
EUNU	Eureka	53.76	10	P	P	00 46 30.5	-1.2
EUNU				IAmb	IAmb	00 46 32.1	
	comp=Z,15nm,0.7s						
DRK	Karamyk	54.37	293	P	P	00 46 36.6	-0.5
DRK				IAmb	IAmb	00 46 53.0	
	comp=Z,8.3nm,0.7s						
ARU	Arti	54.46	317	*c i*P	P	00 46 36.4	-0.7
ARU						00 48 34.7	
ARU				S	S	00 54 14.7	+1.9
ARU				SS	SS	00 57 51.2	-3.7
ARU				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ARU	Arti	54.46	317	*e*P	P	00 46 36.4	-0.7
ARU	Arti	54.46	317	P	P	00 46 36.6	-0.5
ARU				IAmb	IAmb	00 46 37.9	
	comp=Z,10nm,0.7s						
BTK	Batken	54.74	295	P	P	00 46 39.1	-0.4
BTK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BTK	Batken	54.74	295	P	P	00 46 39.1	-0.4
BTK				IAmb	IAmb	00 47 02.7	
	comp=Z,7.3nm,0.8s						
KULM	Kulim	54.98	240	P	P	00 46 41.7	+0.3
KULM				IAmb	IAmb	00 46 43.4	
	comp=Z,9.9nm,0.8s						
GAR	Garm	55.61	294	P	P	00 46 45.4	-0.4
RES	Resolute Bay	55.92	16	P	P	00 46 47.0	-0.3
RES				pmax	pmax		
	comp=Z,26nm,0.8s						
RES	Resolute Bay	55.92	16	P	P	00 46 47.0	-0.3
NIL	Nilore	56.37	287	P	P	00 46 51.4	+0.2
NIL				pmax	pmax		
	comp=Z,21nm,0.7s						
NIL	Nilore	56.37	287	P	P	00 46 51.4	+0.2
CHGR	Chuyangaron	56.56	294	P	P	00 46 52.4	-0.2
YKA	Yellowknife Ar	56.84	33	P	P	00 46 53.9	-0.1
	comp=Z,1.8nm,0.9s,baz=306,slow=5.3,SNR=4.6						
AB31	Akbulak array	57.03	309	P	P	00 46 54.8	-0.8
ABKAR	Akbulak array	57.03	309	P	P	00 46 55.5	-0.1
ABKAR	Akbulak array	57.03	309	P	P	00 46 55.5	-0.1
ABKAR				IAmb	IAmb	00 46 56.6	
	comp=Z,38nm,1.2s						
AKTO	Aktyubinsk	57.54	311	LR	LR	01 13 42.0	
	comp=Z,202nm,18.7s,baz=76,slow=38						
KIRV	Kirov	57.80	322	*ce*P	P	00 47 00.1	-0.8
PRGR	Permogore	57.85	326	*e*P	P	00 47 00.0	-1.2
PRGR				pmax	pmax		
	comp=Z,13nm,0.9s						

KBL	**Kabul**	**58.82**	**290**	P	**P**	**00 47 07.7**	**-1.0**
KBL				pmax	pmax		
	comp=Z,13nm,0.8s						
KBL	**Kabul**	**58.82**	**290**	P	**P**	**00 47 07.7**	**-1.0**
KBL				IAmb	IAmb	00 47 19.2	
	comp=Z,12nm,0.8s						
KEV	**Kevo**	**59.22**	**339**	P	**P**	**00 47 10.3**	**-0.3**
KEV				pmax	pmax		
	comp=Z,18nm,0.9s						
KEV	**Kevo**	**59.22**	**339**	P	**P**	**00 47 10.3**	**-0.3**
ARCES	**ARCESS Array B**	**59.75**	**340**	P	**P**	**00 47 13.0**	**-1.3**
	comp=Z,3.7nm,0.8s,baz=34,slow=8.8,SNR=7.3						
ARCES	**ARCESS Array B**	**59.75**	**340**	P	**P**	**00 47 13.5**	**-0.8**
ARCES				pmax	pmax		
	comp=Z,11nm,1.2s						
ARCES	**ARCESS Array B**	**59.75**	**340**	P	**P**	**00 47 13.5**	**-0.8**
ARCES				IAmb	IAmb	00 47 37.6	
	comp=Z,11nm,1.1s						
DAG	**Danmarks Havn**	**60.16**	**356**	*i* P	**P**	**00 47 15.6**	**-1.3**
DAG				IAmb	IAmb	00 47 16.4	
	comp=Z,1.6nm,1.3s						
KLMR	**Klimovskoe**	**60.74**	**327**	*e*P	**P**	**00 47 19.6**	**-1.5**
KLMR				pmax	pmax		
	comp=Z,18nm,0.9s						
KLMR	**Klimovskoe**	**60.74**	**327**	*e*P	**P**	**00 47 19.7**	**-1.4**
KLMR				AMP		00 47 21.5	
	comp=Z,18nm,0.9s						
TRO	**Tromso**	**61.30**	**341**	*e*P	**P**	**00 47 24.6**	**-0.2**
BELG	**Belogornoye**	**62.01**	**317***c*	*i*P	**P**	**00 47 29.6**	**-0.2**
BELG				pmax	pmax		
	comp=Z,11nm,0.9s						
DBG	**Daneborg**	**62.67**	**356**	*i* P	**P**	**00 47 31.5**	**-2.4**
DBG				IAmb	IAmb	00 47 33.4	
	comp=Z,1.9nm,0.7s						
WB0	**Warramunga Arr**	**63.36**	**192**	P	**P**	**00 47 38.5**	**-0.6**
WB0				IAmb	IAmb	00 47 49.3	
	comp=Z,8.4nm,1.2s						
STEI	**Steigen**	**63.47**	**341**	*e*P	**P**	**00 47 39.6**	**+0.3**
WRA	**Warramunga Arr**	**63.54**	**192**	P	**P**	**00 47 43.9**	**+3.6**
	comp=Z,1.9nm,1.0s,baz=10,slow=6.5,SNR=6.3						
HRA	**Herat**	**63.55**	**293**	P	**P**	**00 47 40.7**	**0.0**
HRA				IAmb	IAmb	00 47 52.3	
	comp=Z,8.5nm,0.7s						
LOF	**Lofoten**	**63.70**	**342**	*e*P	**P**	**00 47 40.9**	**+0.1**
E09A	**Wood Farm, Sta**	**63.81**	**50**	P	**P**	**00 47 43.1**	**+1.1**
FAUS	**Fauske**	**63.89**	**341**	*e*P	**P**	**00 47 41.9**	**-0.2**
GEYT	**Alibeck**	**64.22**	**299**	P	**P**	**00 47 44.6**	**-0.2**
	comp=Z,6.4nm,0.7s,baz=86,slow=7.9,SNR=6.6						
GYA0B	**ALIBECK ARRAY**	**64.22**	**299**	P	**P**	**00 47 45.0**	**+0.1**
GYA0B				IAmb	IAmb	00 47 50.7	
	comp=Z,7.9nm,0.8s						
K05A	**Summer Lake**	**64.42**	**55**	P	**P**	**00 47 46.1**	**-0.2**
K05A				IAmb	IAmb	00 47 54.2	
	comp=Z,9.2nm,1.1s						
WALA	**Waterton Lakes**	**64.62**	**46**	P	**P**	**00 47 47.8**	**+0.5**
WALA				IAmb	IAmb	00 47 51.2	
	comp=Z,6.3nm,0.9s						
SUMG	**Summit**	**64.72**	**2**	P	**P**	**00 47 48.3**	**+0.3**
SUMG				pmax	pmax		
	comp=Z,31nm,1.0s						
SUMG	**Summit**	**64.72**	**2**	*i* P	**P**	**00 47 48.1**	**+0.1**
SUMG				IAmb	IAmb	00 47 49.5	
	comp=Z,23nm,0.8s						
SUMG	**Summit**	**64.72**	**2**	P	**P**	**00 47 48.3**	**+0.3**
MOR8	**Moi Rana**	**65.06**	**340**	*e*P	**P**	**00 47 48.2**	**-1.6**
KONS	**Konsvik**	**65.11**	**341**	*e*P	**P**	**00 47 50.7**	**+0.7**
FIA1	**FINESS Array S**	**65.27**	**333**	P	**P**	**00 47 50.8**	**-0.4**
FINES	**FINESS Array B**	**65.27**	**333**	P	**P**	**00 47 50.8**	**-0.4**
	comp=Z,35nm,0.6s,baz=45,slow=7.8,SNR=231						
OBN	**Obninsk**	**65.55**	**324***d*	*e*P	**P**	**00 47 52.4**	**-0.7**
OBN				*e*		00 50 18.1	
OBN				*e*S	**S**	**00 56 36.8**	**+1.7**
OBN				pmax	pmax		
	comp=Z,31nm,1.3s						
OBN	**Obninsk**	**65.55**	**324**	*e*P	**P**	**00 47 52.4**	**-0.7**
OBN	**Obninsk**	**65.55**	**324**	P	**P**	**00 47 52.5**	**-0.5**
VRH	**Novokhopyorsk**	**65.66**	**318**	*e*P	**P**	**00 47 53.0**	**-0.9**
VRH				pmax	pmax		
	comp=Z,50nm,0.7s						
PLID	**Pearl Lake**	**65.87**	**50**	P	**P**	**00 47 55.3**	**-0.3**
PLID				IAmb	IAmb	00 47 57.1	
	comp=Z,6.6nm,1.1s						
LPSR	**Galich'ya Gora**	**66.11**	**320**	*e*P	**P**	**00 47 56.1**	**-0.7**
LPSR				pmax	pmax		
	comp=Z,40nm,0.8s						
VSR	**Storozhevoye**	**66.89**	**319**	*e*P	**P**	**00 48 01.4**	**-0.4**
VSR				pmax	pmax		
	comp=Z,40nm,0.6s						
VORD	**Divnogorie**	**66.99**	**319**	*e*P	**P**	**00 48 01.8**	**-0.6**
VORD				pmax	pmax		
	comp=Z,30nm,0.8s						
NSS	**Namsos**	**67.00**	**340**	*e*P	**P**	**00 48 01.6**	**-0.7**
VSU	**Vasula**	**67.19**	**330**	*e*P	**P**	**00 48 03.8**	**+0.3**
VSU	**Vasula**	**67.19**	**330***c*	*e*P	**P**	**00 48 03.3**	**-0.2**
VSU				pmax	pmax		
	comp=Z,57nm,0.8s						
ASAR	**Alice Springs**	**67.26**	**192**	P	**P**	**00 48 05.7**	**+1.3**
	comp=Z,0.4nm,0.5s,baz=12,slow=5.5,SNR=8.8						
ASAR	**Alice Springs**	**67.26**	**192**	P	**P**	**00 48 04.8**	**+0.5**
MTSE	**Matsula**	**68.04**	**332**	*e*P	**P**	**00 48 09.2**	**+0.3**
ICESG	**Greenland Ices**	**68.19**	**2**	*i* P	**P**	**00 48 10.4**	**+0.2**
ICESG				IAmb	IAmb	00 48 11.6	
	comp=Z,28nm,1.0s						
AAL	**Aland**	**68.21**	**334**	*e*P	**P**	**00 48 10.4**	**+0.5**
KVN	**Kaiserville**	**68.32**	**56**	P	**P**	**00 48 11.9**	**+0.7**
KVN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KVN	**Kaiserville**	**68.32**	**56**	P	**P**	**00 48 11.9**	**+0.7**
KVN				IAmb	IAmb	00 48 13.2	
	comp=Z,5.1nm,0.9s						
LHV	**Little Huntoon**	**68.56**	**57**	P	**P**	**00 48 13.8**	**+1.3**
LHV				IAmb	IAmb	00 48 31.3	
	comp=Z,8.8nm,1.1s						
NVAR	**Mina Array Bea**	**68.58**	**57**	P	**P**	**00 48 14.1**	**+1.2**
	comp=Z,2.3nm,0.7s,baz=286,slow=6.5,SNR=24						
NVAR	**Mina Array Bea**	**68.58**	**57**	P	**P**	**00 48 13.9**	**+1.0**
GOF	**Gofitskoye**	**68.88**	**312**	⇑*i*P	**P**	**00 48 14.9**	**+0.5**
GOF				pmax	pmax		
	comp=Z,66nm,0.9s						
UPP	**Uppsala**	**69.20**	**335**	*e*P	**P**	**00 48 16.3**	**+0.2**
TPH	**Tonopah**	**69.46**	**57**	P	**P**	**00 48 19.2**	**+0.8**
TPH				pmax	pmax		
	comp=Z,36nm,1.3s						
TPH	**Tonopah**	**69.46**	**57**	P	**P**	**00 48 19.2**	**+0.8**
ISAL	**Salakas**	**69.53**	**328**	*e*P	**P**	**00 48 18.9**	**+0.8**
MNK	**Minsk**	**69.62**	**327**	*i* P	**P**	**00 48 17.6**	**-1.2**
MNK				*i*		00 48 38.1	
MNK				*i*		00 50 52.4	
MNK				*i* PPP	PPP	00 52 33.7	
MNK				*i* S	**S**	**00 57 23.2**	**-0.7**
MNK				pmax	pmax		
	comp=E,2.0nm,1.0s						
MNK				pmax	pmax		
	comp=Z,58nm,1.0s						
MNK				pmax	pmax		
	comp=N,17nm,1.0s						
MNK				MLR	MLR		
	comp=N,121nm,19.0s						
MNK				MLR	MLR		
	comp=E,11nm,19.0s						
MNK				MLR	MLR		
	comp=Z,194nm,19.0s						
MNK	**Minsk**	**69.62**	**327**	*i* P	**P**	**00 48 17.6**	**-1.2**
	comp=E,2.0nm,1.0s						
MNK				*i* P	**P**	**00 48 17.6**	**-1.2**
	comp=N,17nm,1.0s						
MNK				*i* P	**P**	**00 48 17.6**	**-1.2**
	comp=Z,58nm,1.0s,baz=44						
MNK				*i* PcP	**sP**	**00 48 38.2**	**+3.2**
MNK				*i* PP	**PP**	**00 50 52.4**	**+0.1**
MNK				*i* PPP	PPP	00 52 33.8	
MNK				*i* S	**S**	**00 57 23.2**	**-0.7**
MNK				*i* SS	SS	01 01 37.2	-14
MNK				*i* SSS	SSS	01 05 11.1	
MNK				*i* LQ	LQ	01 11 40.9	
MNK				*i* LR	LR	01 15 46.5	
MNK				*i* LRM	MLR	01 21 25.6	
	comp=N,121nm,19.0s						
MNK				*i* LRM	MLR	01 21 33.6	
	comp=E,11nm,19.0s						
MNK				*i* LRM	MLR	01 21 33.6	
	comp=Z,194nm,19.0s						
NACGM	**Naroch**	**69.76**	**328**	*i* P	**P**	**00 48 20.1**	**+0.5**
KIV	**Kislovodsk**	**69.78**	**312**	⇑P	**P**	**00 48 21.6**	**+1.5**
KIV	**Kislovodsk**	**69.78**	**312**	*e*P	**P**	**00 48 21.5**	**+1.4**
KIV				pmax	pmax		
	comp=Z,35nm,1.1s						
KIV	**Kislovodsk**	**69.78**	**312**	*e*P	**P**	**00 48 21.5**	**+1.4**
KIV	**Kislovodsk**	**69.78**	**312**	P	**P**	**00 48 20.4**	**+0.3**
DOMB	**Dombas**	**69.81**	**340**	*e*P	**P**	**00 48 19.8**	**-0.1**
KBZ	**Khabaz**	**69.81**	**311**	P	**P**	**00 48 21.0**	**+0.9**
	comp=Z,15nm,0.8s,baz=27,slow=2.8,SNR=24						
KBZ				LR	LR	01 24 12.2	
	comp=Z,206nm,18.2s,baz=60,slow=40						
KBZ	**Khabaz**	**69.81**	**311***c*	*e*P	**P**	**00 48 21.1**	**+0.9**
KBZ				pmax	pmax		
	comp=Z,17nm,0.9s						
ZEI	**Tsey**	**69.86**	**310**	*e*P	**P**	**00 48 20.0**	**-0.8**
ZEI				pmax	pmax		
	comp=Z,4.0nm,1.0s						
NC303	**NORSAR Array S**	**69.90**	**339**	P	**P**	**00 48 20.3**	**-0.1**
NB2	**NORSAR Subarra**	**70.09**	**339**	P	**P**	**00 48 21.6**	**-0.1**
	comp=Z,7.5nm,0.7s,baz=33,slow=6.5						
NOA	**NORSAR Array B**	**70.09**	**339**	P	**P**	**00 48 20.5**	**-1.2**
	comp=Z,12nm,0.8s,baz=34,slow=6.1,SNR=42						
ONI	**Oni**	**70.24**	**310**	P	**P**	**00 48 23.9**	**+1.0**
ONI				pmax	pmax		
	comp=Z,12nm,0.9s						
ONI	**Oni**	**70.24**	**310**	P	**P**	**00 48 23.9**	**+1.0**
ONI				IAmb	IAmb	00 48 25.7	
	comp=Z,12nm,0.9s						
NC602	**NORSAR Array S**	**70.26**	**338**	*e*P	**P**	**00 48 22.3**	**-0.3**
PABE	**Paberze**	**70.40**	**329**	*e*P	**P**	**00 48 23.9**	**+0.4**
PABE	**Paberze**	**70.40**	**329**	P	**P**	**00 48 23.7**	**+0.1**
DY2G	**Dye2**	**70.48**	**5**	*i* P	**P**	**00 48 22.9**	**-1.3**
DY2G				IAmb	IAmb	00 48 24.0	
	comp=Z,5.1nm,0.8s						
DUG	**Dugway, Tooele**	**70.76**	**53**	P	**P**	**00 48 26.9**	**+0.7**
DUG				pmax	pmax		
	comp=Z,4.0nm,1.0s						
DUG	**Dugway, Tooele**	**70.76**	**53**	P	**P**	**00 48 26.9**	**+0.7**
PD31	**Pinedale Array**	**70.94**	**49**	P	**P**	**00 48 27.6**	**+0.2**
PDAR	**Pinedale Array**	**70.94**	**49**	P	**P**	**00 48 28.1**	**+0.6**
	comp=Z,2.7nm,0.9s,baz=245,slow=3.1,SNR=8.3						
PDAR	**Pinedale Array**	**70.94**	**49**	P	**P**	**00 48 27.8**	**+0.4**
AKH	**Akhalkalaki**	**70.99**	**309**	⇑P	**P**	**00 48 28.1**	**+0.5**
GWY	**Greenwater Val**	**71.00**	**58**	P	**P**	**00 48 28.2**	**+0.4**
GNI	**Garni**	**71.09**	**307**	P	**P**	**00 48 29.8**	**+1.6**
GNI				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GNI	**Garni**	**71.09**	**307**	P	**P**	**00 48 29.8**	**+1.6**
GNI				IAmb	IAmb	00 48 54.6	
	comp=Z,8.4nm,0.8s						
OSL	**Oslo**	**71.15**	**338**	*e*P	**P**	**00 48 28.2**	**+0.2**
SKAR	**Skarslia**	**71.16**	**340**	*e*P	**P**	**00 48 28.5**	**+0.3**
NLU	**North Lily Min**	**71.35**	**53**	P	**P**	**00 48 30.5**	**+0.6**
KONO	**Kongsberg**	**71.70**	**338**	*e*P	**P**	**00 48 32.0**	**+0.6**
AKASG	**Malin Array Be**	**71.81**	**323**	P	**P**	**00 48 31.9**	**-0.2**
	comp=Z,15nm,0.7s,baz=41,slow=6.1,SNR=100						
AKASG	**Malin Array Be**	**71.81**	**323**	P	**P**	**00 48 32.0**	**-0.2**
AKASG	**Malin Array Be**	**71.81**	**323**	P	**P**	**00 48 31.8**	**-0.4**
AKBB	**Malin Array Si**	**71.81**	**323**	P	**P**	**00 48 32.1**	**-0.1**
AKBB				pmax	pmax		
	comp=Z,23nm,0.8s						
AKBB	**Malin Array Si**	**71.81**	**323**	P	**P**	**00 48 32.1**	**-0.1**
SUW	**Suwalki**	**71.83**	**329**	*e*P	**P**	**00 48 32.2**	**0.0**
SUW	**Suwalki**	**71.83**	**329**	P	**P**	**00 48 31.8**	**-0.4**
SUW				pmax	pmax		
	comp=Z,27nm,1.0s						
SUW	**Suwalki**	**71.83**	**329**	P	**P**	**00 48 31.8**	**-0.4**
ASK	**Askoy**	**72.11**	**341**	*e*P	**P**	**00 48 34.8**	**+1.1**
CCUT	**Cedar City**	**72.15**	**55**	P	**P**	**00 48 35.2**	**+0.5**
ODD1	**Odda**	**72.25**	**340**	*e*P	**P**	**00 48 35.7**	**+1.0**
RDMU	**Red Mountain**	**72.38**	**51**	P	**P**	**00 48 36.8**	**+0.7**
RDMU				IAmb	IAmb	00 48 38.0	
	comp=Z,7.3nm,0.9s						
LCMT	**Little Creek M**	**72.57**	**56**	P	**P**	**00 48 37.5**	**+0.3**
UOSS	**Minazif**	**73.47**	**289**	P	**P**	**00 48 42.4**	**-0.1**
UOSS				IAmb	IAmb	00 48 56.1	
	comp=Z,16nm,0.9s						
U15A	**North Rim**	**73.53**	**56**	P	**P**	**00 48 43.5**	**+0.4**
GURO	**Guroymak-BITLI**	**73.72**	**308**	P	**P**	**00 48 45.1**	**+1.1**
GURO				IAmb	IAmb	00 48 46.3	
	comp=Z,11nm,0.8s						
SORM	**Soroca**	**74.08**	**322**	⇑P	**P**	**00 48 45.3**	**-0.3**
SIRT	**Sirnak**	**74.19**	**307**	P	**P**	**00 48 47.2**	**+0.5**
LVV	**L'vov**	**74.69**	**325**	*e*P	**P**	**00 48 49.4**	**+0.2**
MILM	**Milestii Mici**	**74.77**	**321**	⇑P	**P**	**00 48 49.1**	**-0.6**
IAS	**Iasi**	**75.14**	**322**	⇑P	**P**	**00 48 52.5**	**+0.6**
X16A	**Lo Mia Camp, P**	**75.38**	**57**	P	**P**	**00 48 54.5**	**+0.8**
KWP	**Kalwaria Pacla**	**75.39**	**326**	P	**P**	**00 48 54.0**	**+0.8**
KWP				pmax	pmax		
	comp=Z,296nm,0.9s						
KWP	**Kalwaria Pacla**	**75.39**	**326**	P	**P**	**00 48 54.0**	**+0.8**
PRAR	**RASCA**	**75.61**	**323**	⇑P	**P**	**00 48 55.0**	**+0.4**
BUR08	**Bucovina Ar. S**	**75.85**	**323**	P	**P**	**00 48 56.4**	**+0.3**
BUR08				IAmb	IAmb	00 48 57.5	
	comp=Z,11nm,0.8s						
BURAR	**Bucovina Array**	**75.87**	**323**	⇑P	**P**	**00 48 56.6**	**+0.5**
BURAR	**Bucovina Array**	**75.87**	**323**	P	**P**	**00 48 56.6**	**+0.5**
BURAR				IAmb	IAmb	00 48 57.9	
	comp=Z,16nm,0.8s						
VLDR	**Vladesti**	**75.91**	**321**	⇓P	**P**	**00 48 57.1**	**+0.8**
TESR	**Tescani**	**76.06**	**322**	⇑P	**P**	**00 48 57.5**	**+0.3**
OJC	**Ojcow**	**76.09**	**328**	P	**P**	**00 48 57.6**	**+0.3**
OJC				pmax	pmax		
	comp=Z,17nm,0.9s						
OJC	**Ojcow**	**76.09**	**328**	P	**P**	**00 48 57.6**	**+0.3**
OJC				IAmb	IAmb	00 48 58.9	
	comp=Z,17nm,0.9s						
KOLS	**Kolonicke sedl**	**76.11**	**326**	*e*P	**P**	**00 49 01.5**	**+4.1**
KOLS	**Kolonicke sedl**	**76.11**	**326**	*e*P	**P**	**00 49 01.5**	**+4.1**
UZH	**Uzhgorod**	**76.34**	**325**	*e*P	**P**	**00 48 59.8**	**+1.2**
UZH				*e*		00 49 04.4	
UZH				*e*		00 49 09.1	
ODBI	**Odobesti**	**76.44**	**321**	⇑P	**P**	**00 49 01.4**	**+2.1**
CRVS	**Cervenica-Dubn**	**76.47**	**326**	*e*P	**P**	**00 48 59.0**	**-0.4**
CRVS				pmax	pmax		
	comp=Z,12nm,1.1s						
CRVS	**Cervenica-Dubn**	**76.47**	**326**	*e*P	**P**	**00 48 59.0**	**-0.4**
TPGR	**Topolog**	**76.48**	**320**	⇑P	**P**	**00 48 59.0**	**-0.5**
VRI	**Vrincioaia**	**76.52**	**321**	⇑P	**P**	**00 48 60.0**	**+0.2**
BMR	**Baia Mare**	**76.57**	**324**	⇑P	**P**	**00 49 00.6**	**+0.6**
TRPA	**Tarpa**	**76.62**	**325**	⇑P	**P**	**00 49 01.3**	**+1.0**
ARCR	**ARCALIA**	**76.65**	**323**	⇑P	**P**	**00 49 01.7**	**+1.3**
OZUR		**76.77**	**322**	⇑P	**P**	**00 49 02.2**	**+1.0**
HARR	**Harsova**	**76.84**	**320**	⇓P	**P**	**00 49 00.7**	**-0.8**
BNN	**Bunyan**	**77.02**	**311**	P	**P**	**00 49 03.5**	**+0.6**
LANS	**Liptovska Anna**	**77.07**	**327**	*e*P	**P**	**00 49 04.6**	**+1.7**
LANS				pmax	pmax		
	comp=Z,5.0nm,0.8s						
LANS	**Liptovska Anna**	**77.07**	**327**	*e*P	**P**	**00 49 04.6**	**+1.7**
OSTC	**Ostas**	**77.18**	**330**	*e*P	**P**	**00 49 02.5**	**-0.9**
OSTC				*e*x	x	00 49 11.5	
CHVC	**Chvalec**	**77.21**	**330**	*e*P	**P**	**00 49 04.1**	**+0.5**
CHVC				*e*x	x	00 49 14.5	
CBBR	**Cluj-Babes-Bol**	**77.25**	**324**	⇑P	**P**	**00 49 05.5**	**+1.7**
UPC	**Upice**	**77.30**	**330**	*e*P	**P**	**00 49 04.5**	**+0.5**
UPC	**Upice**	**77.30**	**330**	*e*P	**P**	**00 49 04.5**	**+0.5**
DPC	**Dobruska-Polom**	**77.31**	**330**	*e*P	**P**	**00 49 04.3**	**+0.1**
DPC	**Dobruska-Polom**	**77.31**	**330**	*e*P	**P**	**00 49 04.3**	**+0.1**
MORC	**Moravsky Berou**	**77.32**	**329**	⇑P	**P**	**00 49 05.0**	**+0.7**
MORC	**Moravsky Berou**	**77.32**	**329**	P	**P**	**00 49 04.6**	**+0.4**
MORC	**Moravsky Berou**	**77.32**	**329**	*e*P	**P**	**00 49 04.9**	**+0.7**
MORC	**Moravsky Berou**	**77.32**	**329**	P	**P**	**00 49 04.6**	**+0.4**
MORC				IAmb	IAmb	00 49 06.0	
	comp=Z,8.9nm,1.0s						
KRLC	**Kraliky**	**77.36**	**329**	*e*P	**P**	**00 49 04.6**	**+0.1**
KRLC	**Kraliky**	**77.36**	**329**	*e*P	**P**	**00 49 04.6**	**+0.1**
DRGR		**77.59**	**324**	⇑P	**P**	**00 49 04.9**	**-0.9**
BR131	**Keskin Array S**	**77.60**	**313**	P	**P**	**00 49 06.2**	**+0.1**
BR131				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BR131	**Keskin Array S**	**77.60**	**313**	P	**P**	**00 49 06.2**	**+0.1**
BRTR	**Keskin Array B**	**77.60**	**313**	P	**P**	**00 49 06.2**	**+0.1**
	comp=Z,2.5nm,0.7s,baz=81,slow=3.4,SNR=17						
VOIR		**77.61**	**322**	⇑P	**P**	**00 49 07.2**	**+1.2**
CLL	**Collm**	**77.70**	**332**	⇑*i*P	**P**	**00 49 05.9**	**-0.4**
	comp=Z,17nm,1.1s						
CLL				*i* pP	**PcP**	**00 49 16.5**	**+0.2**
CLL				LmV		01 27 00.0	
	comp=Z,200nm,19.5s						
CLL	**Collm**	**77.70**	**332**	⇑*i*P	**P**	**00 49 05.9**	**-0.4**
CLL				*i* *PP	**PcP**	**00 49 16.5**	**+0.2**
CLL				pmax	pmax		
	comp=Z,17nm,1.1s						
CLL	**Collm**	**77.70**	**332**	P	**P**	**00 49 06.1**	**-0.1**
CLL				IAmb	IAmb	00 49 07.0	
	comp=Z,11nm,0.9s						
PVCC	**Panska Ves**	**77.80**	**331**	*e*P	**P**	**00 49 07.8**	**+1.0**
PVCC	**Panska Ves**	**77.80**	**331**	*e*P	**P**	**00 49 07.8**	**+1.0**
ARR	**Arges**	**77.85**	**322**	⇑P	**P**	**00 49 08.6**	**+1.3**
VYHS	**Vyhne**	**77.85**	**327**	*e*P	**P**	**00 49 08.2**	**+1.0**
VYHS				pmax	pmax		
	comp=Z,4.0nm,1.0s						
VYHS	**Vyhne**	**77.85**	**327**	*e*P	**P**	**00 49 08.2**	**+1.0**
PSZ	**Piszkesteto**	**77.89**	**326**	⇑P	**P**	**00 49 08.2**	**+0.8**
JAVC	**Velka Javorina**	**78.01**	**328**	*e*P	**P**	**00 49 09.9**	**+1.8**
VRAC	**Vranov**	**78.06**	**329**	⇑P	**P**	**00 49 09.0**	**+0.7**
VRAC	**Vranov**	**78.06**	**329**	*e*P	**P**	**00 49 09.2**	**+0.9**
PRU	**Pruhonice**	**78.26**	**331**	*e*P	**P**	**00 49 08.6**	**-0.8**
PRU				*e*x	x	00 49 15.4	
PRU	**Pruhonice**	**78.26**	**331**	*e*P	**P**	**00 49 08.6**	**-0.8**
PRU				*e*		00 49 15.4	
KRUC	**Moravsky**	**78.34**	**329**	*e*P	**P**	**00 49 10.6**	**+0.8**
COPA	**Copaceanca**	**78.53**	**321**	⇑P	**P**	**00 49 10.9**	**-0.1**
MODS	**Modra-Piesok**	**78.56**	**328**	*e*P	**P**	**00 49 11.5**	**+0.4**
MODS				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MODS	**Modra-Piesok**	**78.56**	**328**	*e*P	**P**	**00 49 11.5**	**+0.4**
SCHQ	**Schefferville**	**78.59**	**19**	P	**P**	**00 49 11.1**	**0.0**
	comp=Z,4.7nm,0.9s,baz=329,slow=12,SNR=2.7						
GZR	**Gura Zlata**	**78.66**	**323**	⇑P	**P**	**00 49 11.7**	**-0.1**
ESK	**Eskdalemuir**	**78.71**	**343**	P	**P**	**00 49 11.8**	**0.0**
ESK				pmax	pmax		
	comp=Z,76nm,1.5s						
ESK	**Eskdalemuir**	**78.71**	**343**	P	**P**	**00 49 11.8**	**0.0**
NKC	**Novy Kostel**	**78.80**	**332**	*e*P	P	00 49 20.6	+8.2
BZS	**Buzias**	**78.99**	**324**	⇑P	**P**	**00 49 13.5**	**0.0**
HERR	**Herculane**	**79.22**	**323**	⇓P	**P**	**00 49 14.7**	**-0.1**
CKRC	**Cesky Krumlov**	**79.31**	**330**	*e*P	**P**	**00 49 15.0**	**-0.3**
KHC	**Kasperske Hory**	**79.32**	**331**	*e*P	**P**	**00 49 14.6**	**-0.7**
KHC				*e*pP	**pP**	**00 49 26.5**	**-0.2**
KHC	**Kasperske Hory**	**79.32**	**331**	*e*P	**P**	**00 49 14.6**	**-0.7**
KHC				*e*		00 49 26.5	
CONA	**Conrad Observa**	**79.47**	**329**	*e*P	**P**	**00 49 16.8**	**+0.6**
	comp=Z,1.7nm,0.6s						
GERES	**GERESS Array B**	**79.52**	**330**	P	**P**	**00 49 15.8**	**-0.6**
	comp=Z,1.0nm,0.7s,baz=38,slow=5.2,SNR=9.2						
GERES				LR	LR	01 27 11.8	
	comp=Z,214nm,18.6s,baz=70,slow=38						
GERES	**GERESS Array B**	**79.52**	**330**	P	**P**	**00 49 15.5**	**-1.0**
MDVR	**Moldovita**	**79.60**	**323**	⇓P	**P**	**00 49 16.6**	**-0.3**
FRGS	**Fruska Gora**	**80.12**	**325**	⇑P	**P**	**00 49 19.0**	**-0.7**
BOVS	**Bovan**	**80.51**	**323**	⇑P	**P**	**00 49 20.9**	**-0.9**
VTS	**Vitosha**	**80.62**	**321**	⇓P	**P**	**00 49 23.6**	**+1.0**
VTS	**Vitosha**	**80.62**	**321**	P	**P**	**00 49 22.7**	**+0.1**
VTS				pmax	pmax		
	comp=Z,12nm,0.9s						
VTS	**Vitosha**	**80.62**	**321**	P	**P**	**00 49 22.7**	**+0.1**
VTS				IAmb	IAmb	00 49 24.5	
	comp=Z,12nm,0.9s						
SOKA	**Soboth**	**80.82**	**328**	*e*P	**P**	**00 49 24.2**	**+0.7**
	comp=Z,3.8nm,0.9s						
DIVS	**Divibare**	**80.89**	**324**	P	**P**	**00 49 23.7**	**-0.2**
DIVS				IAmb	IAmb	00 49 28.1	
	comp=Z,20nm,1.4s						
CSS	**Mathiatis**	**81.21**	**310**	P	**P**	**00 49 26.0**	**+0.3**
CSS				IAmb	IAmb	00 49 26.8	
	comp=Z,8.8nm,0.7s						
WTTA	**Wattenberg**	**81.59**	**331**	*e*P	**P**	**00 49 28.3**	**+0.6**
	comp=Z,2.4nm,0.5s						
RAYN	**Ar Rayn**	**81.71**	**294**	P	**P**	**00 49 28.5**	**-0.1**
RAYN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
RAYN	**Ar Rayn**	**81.71**	**294**	P	**P**	**00 49 28.5**	**-0.1**
MOTA	**Moosalm**	**81.72**	**331**	*i* P	**P**	**00 49 28.4**	**+0.1**
	comp=Z,1.9nm,0.5s						
RETA	**Reutte**	**81.72**	**331**	*e*P	**P**	**00 49 28.6**	**+0.4**
	comp=Z,0.8nm,0.5s						
SQTA	**Sankt Quirin**	**81.78**	**331**	*i* P	**P**	**00 49 29.1**	**+0.4**
	comp=Z,3.2nm,0.7s						
STAL	**STALIGIAL**	**82.05**	**329**	P	**P**	**00 49 28.8**	**-1.2**
STAL				IAmb	IAmb	00 49 30.9	
	comp=Z,24nm,1.2s						
FETA	**Feichten**	**82.13**	**331**	*e*P	**P**	**00 49 30.7**	**+0.2**
	comp=Z,3.2nm,0.9s						
DAVA	**Damuels**	**82.20**	**332**	*e*P	**P**	**00 49 29.0**	**-1.9**
	comp=Z,1.9nm,0.6s						
PDG	**Podgorica**	**82.55**	**323**	P	**P**	**00 49 32.6**	**0.0**
TX31	**Lajitas Ar. Si**	**83.65**	**56**	P	**P**	**00 49 38.8**	**+0.1**
TX31				IAmb	IAmb	00 49 40.5	
	comp=Z,10nm,0.9s						
TXAR	**Lajitas Array**	**83.65**	**56**	P	**P**	**00 49 38.8**	**+0.1**
	comp=Z,2.0nm,0.8s,baz=277,slow=2.9,SNR=12						
TXAR	**Lajitas Array**	**83.65**	**56**	P	**P**	**00 49 38.9**	**+0.2**
TXAR	**Lajitas Array**	**83.65**	**56**	P	**P**	**00 49 38.9**	**+0.2**
PPT	**Papeete**	**84.20**	**120**	LR	LR	01 20 06.9	
	comp=Z,86nm,20.8s,baz=346,slow=31						
MIAR	**Mount Ida**	**85.50**	**46**	P	**P**	**00 49 47.9**	**+0.1**
MIAR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MIAR	**Mount Ida**	**85.50**	**46**	P	**P**	**00 49 47.9**	**+0.1**
MIAR				IAmb	IAmb	00 49 48.7	
	comp=Z,5.5nm,0.8s						
ITM	**Ithomi**	**85.52**	**319**	P	**P**	**00 49 47.2**	**-0.6**
WHAR	**Wooly Hollow**	**85.59**	**44**	P	**P**	**00 49 48.5**	**+0.3**
WHAR				IAmb	IAmb	00 49 49.1	
	comp=Z,6.8nm,0.8s						
T50A	**Nancy**	**87.83**	**39**	P	**P**	**00 49 59.9**	**+0.8**
T50A				IAmb	IAmb	00 50 00.3	
	comp=Z,6.5nm,0.8s						
TZTN	**Tazewell**	**88.81**	**38**	P	**P**	**00 50 04.2**	**+0.4**
TKL	**Tuckaleechee C**	**89.44**	**39**	P	**P**	**00 50 06.9**	**+0.2**
TKL				pmax	pmax		
	comp=Z,13nm,1.3s						
TKL	**Tuckaleechee C**	**89.44**	**39**	P	**P**	**00 50 06.9**	**+0.2**
TKL				IAmb	IAmb	00 50 20.2	
	comp=Z,13nm,1.2s						
ESDC	**Sonseca Array**	**93.43**	**337**	P	**P**	**00 50 24.3**	**-0.9**
	comp=Z,1.5nm,0.9s,baz=5.2,slow=3.7,SNR=8.4						
TORD	**Torodi Ar. Bea**	**115.40**	**321**	PKP	**PKiKP**	**00 55 50.8**	**-1.0**
	comp=Z,0.3nm,0.5s,baz=359,slow=2.8,SNR=1.9						
H03N2	**Juan Fernandez**	**143.64**	**90**	T	T	03 37 41.3	
	baz=301,slow=77,SNR=7.4						
H03N3	**Juan Fernandez**	**143.65**	**90**	T	T	03 37 28.4	
	baz=301,slow=77,SNR=9.0						
H03N1	**Juan Fernandez**	**143.66**	**90**	T	T	03 37 46.2	
	baz=301,slow=77,SNR=8.4						
SNAA	**Sanae**	**147.50**	**198**	PKPbc	**PKPbc**	**00 56 53.0**	**+0.5**
VNA2	**Neumayer--Watz**	**149.03**	**196**	PKPbc	**PKPbc**	**00 56 56.4**	**0.0**
	baz=95,slow=1.3						
VNA3	**Neumayer Olymp**	**149.23**	**195**	PKPbc	**PKPbc**	**00 56 56.4**	**-0.5**
VNA1	**Neumayer--Stat**	**149.43**	**196**	PKPbc	**PKPbc**	**00 56 57.6**	**+0.2**
BDFB	**Brasilia**	**150.17**	**28**	PKPbc	**PKPbc**	**00 57 01.3**	**+0.3**
	comp=Z,0.9nm,0.3s,baz=320,slow=2.5,SNR=4.3						
PLCA	**Paso Flores**	**152.65**	**98**	PKPbc	**PKiKP**	**00 57 06.4**	**+0.2**
	comp=Z,1.8nm,0.9s,baz=243,slow=2.3,SNR=3.9						
PLCA	**Paso Flores**	**152.65**	**98**	PKIKP	**PKiKP**	**00 57 06.1**	**-0.1**
PLCA	**Paso Flores**	**152.65**	**98**		**PKiKP**	**00 57 06.1**	**-0.1**

TUL ***22*** *00:42:23.4±0.9, 36°.88N±0°.02×98°.34W±0°.04, h2*^{km}*±7*^{km}*, ML2.5, mb_Lg2.0/8(NEIC), Error ellipse: s-maj=5.3km s-min=2.4km az=71.0*

NEIC 22 00:42:24.8±1.0**, 36°.87N**±0°.02×**98°.26W**±0°.06**, h11**^{km}±7^{km}**, Error ellipse: s-maj=6.7km s-min=3.1km az=72.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK032	**Salt Plains WL**	**0.08**	**148**	Pg	Pg	00 42 26.5	-0.7
OK032				Sg	Sg	00 42 28.6	-0.4
KAN14	**Manchester OK**	**0.26**	**71**	Pg	Pg	00 42 30.1	0.0
KAN10	**Anthony SW Sta**	**0.28**	**28**	Pg	Pg	00 42 30.2	-0.4
KAN10				Sg	Sg	00 42 34.8	+0.3
GC02	**Grant County #**	**0.33**	**94**	Pg	Pg	00 42 31.4	0.0
KAN16	**Harper SW Stat**	**0.39**	**24**	Pg	Pg	00 42 32.0	-0.5
KAN16				Sg	Sg	00 42 37.9	+0.3
KAN05	**Bluff City Nor**	**0.39**	**53**		Pg	00 42 32.6	0.0
KAN05				Sg	Sb	00 42 38.9	-0.9
KAN08	**Anthony NE Sta**	**0.42**	**33**	Pg	Pg	00 42 32.8	-0.4
CROK	**Carrier**	**0.43**	**148**	Pg	Pg	00 42 32.8	-0.5
KAN17	**Caldwell West**	**0.43**	**67**	Pg	Pg	00 42 33.2	-0.1
KAN01	**Argonia South**	**0.49**	**55**		Pg	00 42 34.4	0.0
KAN06	**Argonia West S**	**0.49**	**41**		Pg	00 42 34.3	-0.2
KAN09	**Caldwell North**	**0.58**	**63**	Pg	Pg	00 42 36.0	-0.1
KAN13	**South Haven SW**	**0.65**	**77**	Pg	Pg	00 42 37.1	-0.2
U32A	**Winter Ranch,**	**0.77**	**231**	Pg	Pg	00 42 37.5	-2.2
BLOK	**Blackwell**	**0.85**	**97**	Pg	Pg	00 42 40.6	-0.5

OK029	**Liberty Lake**	1.26	148	Pn	Pn	00 42 47.5	-0.8
BCOK	**Bluff Creek, N**	1.32	156	Pn	Pn	00 42 48.1	-1.1
T35A	**Sooner Cattle**	1.41	88	Pn	Pn	00 42 50.6	+0.3
QUOK	**Quay**	1.44	119	Pn	Pn	00 42 51.0	+0.3
OK031	**S. Brethren Rd**	1.47	128	Pn	Pn	00 42 51.3	+0.1
OK025	**Westminster Rd**	1.49	150	Pn	Pn	00 42 51.4	-0.1
OK025				IAmb_Lg		00 43 10.5	
	comp=Z,4.9nm,0.8s						
OK030	**Cody Creek RV**	1.52	128		Pn	00 42 52.0	0.0
R32A	**Long Quarter,**	1.59	347		Pn	00 42 52.6	-0.3
FNO	**Franklin**	1.76	156	Pn	Pn	00 42 55.5	+0.3
FNO				IAmb_Lg		00 43 20.6	
	comp=Z,12nm,1.2s						
WMOK	**Wichita Mounta**	2.17	191		Pn	00 43 00.8	-0.1
WMOK				IAmb_Lg		00 43 31.8	
	comp=Z,5.5nm,1.1s						
TUL1	**Leonard**	2.21	115	Pn	Pn	00 43 02.7	+1.2
CBKS	**Cedar Bluff**	2.26	329	Pn	Pn	00 43 02.5	+0.3
CBKS				IAmb_Lg		00 43 39.9	
	comp=Z,8.0nm,0.9s						
X34A	**Smith Ranch, M**	2.29	171		Pn	00 43 03.6	+1.0
U38A	**Gravette**	3.15	97		Pn	00 43 14.6	+0.3
X37A	**Clayton**	3.27	133	Pn	Pn	00 43 16.9	+0.8
HHAR	**Hobbs**	3.53	98		Pn	00 43 20.4	+0.8
W39A	**Magazine**	4.00	113	Pn	Pn	00 43 27.4	+1.4
S39A	**Bolivar**	4.02	77		Pn	00 43 26.0	-0.4
MIAR	**Mount Ida**	4.46	120	Pn	Pn	00 43 33.2	+0.8
P38A	**Dawn**	4.63	52	Pn	Pn	00 43 35.6	+1.0
X40A	**Basin Creek Fa**	5.02	117	Pn	Pn	00 43 40.5	+0.5
WHAR	**Wooly Hollow**	5.09	106	Pn	Pn	00 43 41.5	+0.4

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*IDC **22** 00:46:41.0±5.5, 21°.89S×178°.63W, h563^{km}±36^{km}, mb3.4/4, mb1 3.6/5, mb1mx3.1/34, mbtmp4.4/5, Error ellipse: s-maj=106.8km s-min=30.4km az=136.0*

*NEIC **22** 00:46:42.3±1.3, 21°.9S±0°.2×178°.8W±0°.1, h556^{km}±13^{km}, mb4.2/16, Error ellipse: s-maj=28.1km s-min=14.6km az=165.0*

ISC 22 00:46:39.3±1.3**, 21°.9S**±0°.2×**178°.5W**±0°.2**, h550**^{km}**, n29, σ0^{s}.94**/31**, mb4.1**/12**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	5.28	321	P	P	00 48 13.4	+1.6
	6.8nm,0.3s,baz=174,slow=3.7,SNR=29						
BKZ	**Black Stump Fm**	17.73	193	P	P	00 50 15.9	+1.3
EIDS	**Eidsvold**	28.07	257	P	P	00 51 47.4	+0.3
EIDS				IAmb	IAmb	00 51 52.7	
	comp=Z,5.1nm,1.1s						
ARMA	**Armidale**	28.07	246	P	P	00 51 48.4	+1.2
CTAO	**Charters Tower**	32.93	267	P	P	00 52 28.5	-0.5
CTAO				IAmb	IAmb	00 52 45.2	
	comp=Z,9.8nm,1.2s						
TOO	**Toolangi**	34.72	235	P	P	00 52 44.7	+0.9
STKA	**Stephens Creek**	36.79	246	P	P	00 53 01.1	+0.2
	comp=Z,1.0nm,0.4s,baz=94,slow=11,SNR=7.7						
STKA	**Stephens Creek**	36.79	246	P	P	00 53 01.5	+0.5
COEN	**Coen**	37.25	276	P	P	00 53 04.3	-0.6
BBOO	**Buckleboo**	41.53	245	P	P	00 53 39.0	-0.1
BBOO				IAmb	IAmb	00 53 45.8	
	comp=Z,16nm,1.4s						
AS31	**Alice Springs**	43.78	258	P	P	00 53 56.9	0.0
ASAR	**Alice Springs**	43.78	258	P	P	00 53 56.5	-0.4
	comp=Z,5.7nm,0.8s,baz=98,slow=7.9,SNR=67						
ASAR				PcP	PcP	00 55 31.2	-0.2
	comp=Z,0.5nm,0.6s,baz=112,slow=3.9,SNR=4.8						
WR0	**Warramunga Arr**	43.79	264	P	P	00 53 55.7	-1.3
WR0				IAmb	IAmb	00 53 57.5	
	comp=Z,2.7nm,0.7s						
WB0	**Warramunga Arr**	43.97	264	P	P	00 53 57.4	-1.0
WB0				IAmb	IAmb	00 53 58.1	
	comp=Z,5.3nm,0.6s						
WB2	**Warramunga Arr**	43.97	264	P	P	00 53 57.2	-1.2
WB2				IAmb	IAmb	00 53 57.9	
	comp=Z,5.2nm,0.8s						
WRA	**Warramunga Arr**	43.98	264	P	P	00 53 57.2	-1.3
	comp=Z,3.3nm,0.7s,baz=98,slow=6.6,SNR=32						
WRA	**Warramunga Arr**	43.98	264	P	P	00 53 57.7	-0.8
KNRA	**Kununurra**	50.14	268	P	P	00 54 44.1	-0.7
KNRA				IAmb	IAmb	00 54 44.7	
	comp=Z,7.4nm,0.7s						
PSA00	**Pilbara Seismi**	56.93	258	P	P	00 55 31.6	-1.2
MORW	**Morawa**	58.89	248	P	P	00 55 46.1	+0.1
MORW				IAmb	IAmb	00 56 09.4	
	comp=Z,17nm,1.2s						
CMAR	**Chiang Mai Arr**	90.16	290	P	P	00 58 43.2	+1.5
	comp=Z,0.6nm,0.4s,baz=133,slow=3.5,SNR=6.2						
CMAR	**Chiang Mai Arr**	90.16	290	P	P	00 58 42.6	+0.9
AKASG	**Malin Array Be**	144.01	330	PKP	PKPdf	01 05 11.2	-1.1
	comp=Z,1.1nm,0.4s,baz=46,slow=5.0,SNR=9.2						
AKASG	**Malin Array Be**	144.01	330		PKPdf	01 05 11.3	-0.9
BRTR	**Keskin Array B**	147.43	310	PKPbc	PKPbc	01 05 20.9	-1.2
	comp=Z,0.6nm,0.6s,baz=120,slow=2.3,SNR=4.4						
BRTR	**Keskin Array B**	147.43	310		PKPbc	01 05 21.6	-0.4
BRTR				PKPab	PKPab	01 05 26.9	+0.9
KWP	**Kalwaria Pacla**	147.66	334	PKPbc	PKiKP	01 05 22.7	-0.9
CSS	**Mathiatis**	149.29	302	PKPbc	PKiKP	01 05 26.8	-0.7
GERES	**GERESS Array B**	151.42	343	PKPbc	PKiKP	01 05 31.6	+0.1

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*JMA **22** 00:56:33.3, 24°.01N×122°.09E, h31^{km}±2^{km}, M2.0*

*TAP **22** 00:56:33.8, 24°.03N×122°.06E, h32^{km}, ML2.5, C*

ISC 22 00:56:33.6±1.0**, 24°.03N**±0°.03×**122°.08E**±0°.02**, h31**^{km}±11^{km}**, n40, σ0^{s}.46**/78**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	0.42	312	*e*P	Pn	00 56 43.5	-0.1
	baz=314						
HWA	**Hwalien**	0.44	264	P	Pn	00 56 43.7	-0.1
	baz=262						
HWA				S	Sn	00 56 50.8	+0.1
	baz=262						
TWD	**Chiawan**	0.45	277	*i* P	Pn	00 56 43.5	-0.3
	baz=276						
TWD				*i* S	Sn	00 56 50.9	0.0
	baz=276						
NACB	**Ninganchiao**	0.47	288	P	Pb	00 56 43.8	+0.2
	baz=288						
NACB				S	Sn	00 56 51.2	-0.3
	baz=288						
TEYL	**Yanliau Villag**	0.47	250	P	Pn	00 56 44.5	+0.3
	baz=253						
TEYL				*e*S	Sn	00 56 53.5	+2.1
	baz=253						
EWUT	**Wuta**	0.50	327	P	Pn	00 56 44.4	-0.2
	baz=328						
EWUT				S	Sn	00 56 52.5	+0.3
	baz=328						
ENA	**Nanau**	0.51	322	P	Pn	00 56 44.6	-0.1
	baz=324						
ENA				S	Sn	00 56 52.7	+0.3
	baz=324						
ETM	**Tongmen**	0.54	264	P	Pn	00 56 45.0	-0.2
	baz=262						
ETM				S	Sn	00 56 53.0	-0.2
	baz=262						
ETLH	**Xiulin Townshi**	0.58	288	P	Pb	00 56 45.4	0.0
	baz=288						
ETLH				S	Sn	00 56 54.3	+0.1
	baz=288						
TEGC	**Jichi Village**	0.59	238	P	Pn	00 56 45.9	+0.1
	baz=235						
TEGC				S	Sn	00 56 55.2	+0.9
	baz=235						
TWC	**Suao**	0.62	340	*i* P	Pn	00 56 46.5	+0.2
	baz=342						
TWC				*e*S	Sb	00 56 54.3	-0.2
	baz=342						
ESL	**Shilin**	0.63	250	*i* P	Pb	00 56 46.1	-0.1
	baz=248						
ESL				S	Sn	00 56 55.6	+0.2
	baz=248						
NDS	**Dongshan**	0.69	331	P	Pn	00 56 47.2	-0.1
	baz=332						
NDS				S	Sn	00 56 57.1	+0.2
	baz=332						
WHF	**Hehuan Shan**	0.76	279	*i* P	Pn	00 56 48.2	-0.4
	baz=278						
WHF				*e*S	Sn	00 56 59.8	+0.6
	baz=278						
NNS	**Nan Shan**	0.77	303	*i* P	Pb	00 56 48.6	0.0
	baz=303						
NNS				S	Sn	00 56 59.0	0.0
	baz=303						
ENTT	**Nioudou**	0.77	323	P	Pn	00 56 48.1	-0.2
	baz=323						
ENTT				S	Sn	00 56 58.9	0.0
	baz=323						
FUSS	**Fushou**	0.80	286	*i* P	Pb	00 56 49.1	-0.1
	baz=286						
FUSS				*i* S	Sb	00 56 59.4	-0.3
	baz=286						
HGSD	**Ruisui**	0.80	229	P	Pn	00 56 48.7	-0.1
	baz=227						
HGSD				S	Sb	00 57 00.2	+0.5
	baz=227						
CHGB	**Renai**	0.83	272	P	Pb	00 56 49.6	-0.1
	baz=272						
CHGB				S	Sb	00 57 00.7	0.0
	baz=272						
OWD	**Renai**	0.83	265	*i* P	Pb	00 56 49.6	-0.1
	baz=264						
OWD				S	Sb	00 57 00.6	0.0
	baz=264						
TWT	**Tachien**	0.86	285	P	Pb	00 56 50.6	+0.4
	baz=284						
TWT				S	Sb	00 57 01.9	+0.6
	baz=284						
EHY	**Hungye**	0.87	233	P	Pb	00 56 49.8	-0.4
	baz=231						
EHY				S	Sb	00 57 01.5	0.0
	baz=231						
TDCB	**Techi**	0.87	285	P	Pb	00 56 50.1	-0.3
	baz=284						
TDCB				S	Sn	00 57 01.5	-0.1
	baz=284						
JYNG	**Yonagunijimaku**	0.90	62	P	Pn	00 56 49.6	-0.4
JYNG				*e*S	Sn	00 57 01.9	0.0
YHNB	**Yeheng**	0.91	315	P	Pn	00 56 50.4	+0.1
	baz=315						
YHNB				S	Sb	00 57 02.8	0.0
	baz=315						
ECBN	**Changbin**	0.91	219	P	Pb	00 56 50.9	-0.1
	baz=218						
ECBN				S	Sb	00 57 02.9	+0.1
	baz=218						
NWLT	**Wulai**	0.92	325	P	Pn	00 56 50.3	-0.1
	baz=325						
NWLT				S	Sn	00 57 02.5	0.0
	baz=325						
NSK	**Sanguang**	0.92	315	P	Pn	00 56 50.6	0.0
	baz=315						
NSK				S	Sn	00 57 02.4	-0.3
	baz=315						
YOJ	**Yonaguni jima**	0.95	63	P	Pn	00 56 51.2	+0.3
	baz=63						
YOJ				S	Sb	00 57 04.6	+0.7
	baz=63						
YOJ	**Yonaguni jima**	0.95	63	P	Pn	00 56 50.6	-0.2
YOJ				*e*S	Sn	00 57 02.9	-0.5
YULB	**Yu-li**	0.96	229	P	Pn	00 56 50.6	-0.4
	baz=227						
YULB				S	Sn	00 57 03.4	-0.1
	baz=227						
TIPB	**Shuangxi**	0.97	346	*i* P	Pb	00 56 52.1	+0.2
	baz=347						
TIPB				*i* S	Sb	00 57 04.6	+0.1
	baz=347						
EYUL	**Yuli**	0.97	226	P	Pb	00 56 51.4	-0.6
	baz=224						
EYUL				S	Sb	00 57 04.2	-0.3
	baz=224						
TWF1	**Yuli**	0.98	227	P	Pn	00 56 51.3	0.0
	baz=225						
TWF1				S	Sb	00 57 04.4	-0.4
	baz=225						
WPL	**Puli Township**	1.03	269	P	Pb	00 56 52.7	-0.2
	baz=269						
WPL				S	Sb	00 57 05.5	-0.5
	baz=269						
IRIF	**Iriomote-Funau**	1.54	78	P	Pn	00 56 59.0	+0.1
IRIF				*e*S	Sn	00 57 18.4	+0.6
HATJ	**Hateruma jima**	1.58	89	P	Pn	00 56 59.6	+0.2
JKRS	**Kuro-shima**	1.77	83	P	Pn	00 57 03.1	+1.0
JKRS				*e*S	Sn	00 57 24.6	+1.0
JIJ	**Ishigaki jima**	1.91	79	P	Pn	00 57 03.9	-0.1
JIJ				*e*S	Sn	00 57 26.2	-0.9
JISG	**Ishigakijimahi**	2.11	74	P	Pn	00 57 06.5	-0.3
JISG				*e*S	Sn	00 57 30.5	-1.4

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*IDC **22** 00:57:21.7±3.3, 6°.49S×148°.95E, h0^{km}, mb3.4/2, mb1 3.6/4, mb1mx3.4/41, mbtmp3.4/4, ML2.7/2, Error ellipse: s-maj=103.0km s-min=34.2km az=113.0*

ISC 22 00:57:27.2±4.7**, 6°.5S**±0°.4×**149°.0E**±0°.9**, h53**^{km}**, n5, σ0^{s}.38**/6**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	3.42	212	Pn	Pn	00 58 18.0	-0.1
	5.9nm,0.3s,baz=53,slow=6.4,SNR=5.3						
PMG				Sn	Sn	00 58 57.5	0.0
	17nm,0.3s,baz=354,slow=19,SNR=15						
WRA	**Warramunga Arr**	19.53	225	P	P	01 01 51.1	+0.6
	0.1nm,0.3s,baz=52,slow=11,SNR=5.0						
ASAR	**Alice Springs**	22.41	219	P	P	01 02 21.6	0.0
	0.6nm,0.6s,baz=57,slow=8.9,SNR=10						
FITZ	**Fitzroy Crossi**	25.53	241	P	P	01 02 50.9	-0.2
	0.8nm,0.4s,baz=90,slow=7.8						
TORD	**Torodi Ar. Bea**	147.12	284	PKPbc	PKPab	01 17 07.3	+0.1
	0.7nm,0.5s,baz=55,slow=3.2,SNR=13						

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*IDC **22** 00:58:00.3±0.6, 31°.66N×141°.80E, h0^{km}, mb4.2/24, mb1 4.3/29, mb1mx4.2/56, mbtmp4.2/29, ML3.6/5, MS3.7/1, Ms1 3.7/1, ms1mx3.0/44, Error ellipse: s-maj=17.7km s-min=14.0km az=68.0*

*MOS **22** 00:58:02.3±1.1, 31°.74N×141°.79E, h23^{km}, mb4.8/21, Error ellipse: s-maj=13.8km s-min=6.2km az=116.8*

*NIED **22** 00:58:03.2, 31°.95N×141°.85E, h9^{km}, MW4.3, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M$_{rr}$3.35; M$_{\theta\theta}$-0.14; M$_{\phi\phi}$-3.22; M$_{r\theta}$-0.91; M$_{\theta\phi}$-0.72; M$_{\phi r}$0.25; Fault plane solution: M$_0$3.49000×10^{15} NP1: φ$_s$358.00000°, δ47.00000°, λ70.00000°. NP2: φ$_s$207.00000°, δ46.00000°, λ111.00000°.*

*NEIC **22** 00:58:03.1±0.9, 31°.78N±0°.08×141°.75E±0°.06, h10^{km}±1^{km}, mb4.7/39 Error ellipse: s-maj=14.5km s-min=6.4km az=205.0*

*JMA **22** 00:58:03.2±0.3, 31°.95N×141°.85E, h9^{km}, M4.3*

ISC 22 00:58:05.3±0.5**, 31°.81N**±0°.06×**141°.78E**±0°.07**, h29**^{km}**, n156, σ1^{s}.22**/162**, mb4.5**/56**, 8C-6D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHCJ	**Hachijojimakas**	2.10	307	P	Pn	00 58 38.8	+0.3
JHJ2	**Mitsune**	2.11	309	P	Pn	00 58 38.9	+0.3
JHJ2				S	Sn	00 59 05.0	+1.2
JHJ2	**Mitsune**	2.11	309	Pn	Pn	00 58 38.4	-0.2
JHJ	**Hachijo jima 2**	2.14	308	Pn	Pn	00 58 38.2	-0.8
	55nm,0.3s,baz=209,slow=19,SNR=1.8						
JHJ				Sn	Sn	00 59 05.7	+1.1
	76nm,0.3s,baz=90,slow=19,SNR=2.6						
BSO1	**Boso 1**	2.92	347	P	Pn	00 58 49.4	+0.2
BSO3	**Boso 3**	3.17	341	P	Pn	00 58 53.1	+0.2
JOD2	**Odawara 2**	4.12	328	P	Pn	00 59 07.1	+0.9
JHU	**Hanno**	4.54	333	P	Pn	00 59 11.6	-0.4
JYT	**Yasato**	4.60	344	P	Pn	00 59 13.7	+0.9
JYT	**Yasato**	4.60	344		Pn	00 59 13.7	+0.9
JRY	**Ryogami san**	4.83	331	P	Pn	00 59 17.2	+1.1
JRY				S	Sn	01 00 13.3	+2.2
JHO	**Hitachi**	4.89	348	P	Pn	00 59 16.2	-0.7
JAG	**Ashikaga**	4.99	338	P	Pn	00 59 18.9	+0.6
JAG				*e*S	Sn	01 00 15.1	+0.1
JGF	**Kuroka**	5.28	317	Pn	Pn	00 59 23.4	+1.1
INU	**Inuyama**	5.32	313	Pn	Pn	00 59 23.6	+0.9
MJAR	**Matsushiro Arr**	5.57	329	Pn	Pn	00 59 27.0	+0.8
	0.5nm,0.3s,baz=149,slow=10,SNR=27						
MJAR				Sn	Sn	01 00 27.8	-1.5
	baz=175,slow=8.2,SNR=1.7						
MJAR	**Matsushiro Arr**	5.57	329	Pn	Pn	00 59 26.9	+0.7
MAJO	**Matsushiro**	5.58	329	P	Pn	00 59 27.6	+1.3
MAJO	**Matsushiro**	5.58	329	Pn	Pn	00 59 27.6	+1.3
MAT	**Matsushiro**	5.58	329	P	Pn	00 59 27.5	+1.2
MAT				*e*S	Sn	01 00 30.4	+1.0
JMM	**Marumori**	6.10	353		Pn	00 59 32.8	-0.6
JWT	**Wachi**	6.35	305	Pn	Pn	00 59 38.1	+1.2
JSD	**Sado**	6.85	336	Pn	Pn	00 59 44.0	+0.2
JMN	**Monobe**	6.93	288	Pn	Pn	00 59 44.6	-0.2
JTM	**Tenmabayashi**	8.98	357	Pn	Pn	01 00 13.1	+0.1
ERM	**Erimo**	10.25	6	⇑*e*P	Pn	01 00 29.8	-0.5
ERM	**Erimo**	10.25	6	Pn	Pn	01 00 29.4	-0.9
ASAJ	**Asahikawa**	12.30	3	Pn	Pn	01 00 58.1	-0.3
	1.1nm,0.3s,baz=203,slow=11,SNR=5.1						
ASAJ				Sn	Sn	01 03 07.9	-6.7
	0.6nm,0.3s,baz=116,slow=22,SNR=1.4						
JKA	**Kamikawa-asahi**	12.30	3		Pn	01 00 57.2	-1.2
KSRS	**Korea Array**	12.72	300	Pn	Pn	01 01 05.0	+0.9
	0.1nm,0.3s,baz=105,slow=14,SNR=2.3						
KSRS				LR	LR	01 05 25.3	
	comp=Z,301nm,19.7s,baz=300,slow=35						
USRK	**Ussuriysk Ar.**	14.57	331	Pn	Pn	01 01 26.0	-3.3
	baz=122,slow=13,SNR=2.5						
MDJ	**Mudanjiang**	15.95	327	P	Pn	01 01 48.8	+1.2
MDJ				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,380nm,4.8s						
KLR	**Kul'dur**	18.97	339	P	P	01 02 23.3	-0.9
	comp=Z,0.1nm,0.3s,baz=141,slow=8.6,SNR=7.1						
NACB	**Ninganchiao**	19.36	252	P	P	01 02 28.6	0.0
NACB				IAmb	IAmb	01 02 55.0	
	comp=Z,54nm,1.4s						
NJ2	**Nanjing**	19.46	277	*e*P	P	01 02 28.5	-1.1
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
SSLB	**Suanglung**	20.06	252		P	01 02 35.6	-0.7
SSLB				IAmb	IAmb	01 02 37.7	
	comp=Z,66nm,1.4s						
BJI	**Beijing**	22.25	299	P	P	01 02 58.3	-1.4
BJI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
HIA	**Hailar**	24.04	323	P	P	01 03 17.1	-0.6
HIA				pmax	pmax		
	comp=Z,16nm,0.9s						
HIA	**Hailar**	24.04	323	P	P	01 03 17.1	-0.6
HIA				IAmb	IAmb	01 03 20.4	
	comp=Z,16nm,0.9s						
ZEA	**Zeya**	24.28	339	*e*P	P	01 03 21.3	+1.4
ZEA				pmax	pmax		
	comp=E,10.0nm,0.9s						
ZEA				pmax	pmax		
	comp=N,40nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,70nm,0.8s						
H11N2	**WAKE ISLAND Hy**	25.55	112	T	T	01 30 07.2	
	baz=308						
H11N1	**WAKE ISLAND Hy**	25.55	112	T	T	01 30 02.2	
	baz=308						
H11N3	**WAKE ISLAND Hy**	25.57	112	T	T	01 30 09.4	
	baz=308						
HHC	**Hu-ho-hao-te**	25.86	299	*e*P	P	01 03 33.6	-0.9
HHC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,210nm,4.0s						
HHC				LR	LR		
	comp=N,280nm,13.1s						
HHC				LR	LR		
	comp=E,330nm,13.0s						
HHC				LR	LR		
	comp=Z,450nm,14.3s						
XAN	**Xi'an**	27.61	284	P	P	01 03 48.6	-1.6
XAN				pP	pwP	01 04 03.3	-0.9
XAN				sP	sP	01 04 10.0	+10
XAN				pmax	pmax		
	comp=Z,8.0nm,1.2s						
MA2	**Magadan**	28.42	10	⇓*e*P	P	01 03 53.4	-3.7
MA2				pmax	pmax		
	comp=Z,34nm,1.7s						
ULN	**Ulaanbaatar**	30.80	311	*de*P	P	01 04 20.2	+1.7
ULN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ULN	**Ulaanbaatar**	30.80	311	P	P	01 04 17.8	-0.7
ULN				IAmb	IAmb	01 04 23.1	
	comp=Z,10nm,1.2s						
SONM	**Songino Array**	31.21	311	P	P	01 04 24.3	+2.2
	comp=Z,3.3nm,1.0s,baz=123,slow=9.0,SNR=14						
SONM	**Songino Array**	31.21	311	P	P	01 04 21.7	-0.5
YAK	**Yakutsk**	31.24	349	*ce*P	P	01 04 22.7	+0.8
YAK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
CD2	**Chengdu**	32.38	279	*e*P	P	01 04 31.0	-1.4
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BILL	**Bilibino**	38.97	14	⇑*e*P	P	01 05 32.6	+4.1
BILL				pmax	pmax		
	comp=Z,3.0nm,1.1s						
CMAR	**Chiang Mai Arr**	40.74	261	P	P	01 05 42.3	-1.5
	comp=Z,1.3nm,0.6s,baz=49,slow=7.8,SNR=6.5						
WMQ	**Urumqi**	43.66	302	*e*P	P	01 06 09.1	+1.7
WMQ				pP	pP	01 06 14.3	-0.3
WMQ				pmax	pmax		
	comp=Z,14nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,290nm,4.1s						
DGZ	**Jazzator, Alta**	43.85	310	*c i*P	P	01 06 10.0	+1.0
DGZ				pmax	pmax		
	comp=Z,20nm,1.0s						
COEN	**Coen**	45.52	178	P	P	01 06 23.0	+0.6
ZAA0	**Zalesovo Array**	45.78	316	P	P	01 06 24.1	0.0
ZALV	**Zalesovo Beam**	45.78	316	P	P	01 06 24.4	+0.3
	comp=Z,2.3nm,0.9s,baz=101,slow=6.2,SNR=9.3						
ZALV				PcP	PcP	01 08 00.9	-0.3
	comp=Z,0.2nm,0.4s,baz=104,slow=4.6,SNR=2.1						
ZALV	**Zalesovo Beam**	45.78	316	P	P	01 06 24.0	0.0
MK31	**Makanchi Array**	47.31	306	*ce*P	P	01 06 36.5	+0.3
MK31	**Makanchi Array**	47.31	306	P	P	01 06 36.0	-0.2
MK31				IAmb	IAmb	01 06 40.2	
	comp=Z,3.8nm,0.8s						
MKAR	**Makanchi Array**	47.31	306	P	P	01 06 36.6	+0.5
	comp=Z,4.2nm,0.9s,baz=91,slow=8.3,SNR=14						
MKAR	**Makanchi Array**	47.31	306	P	P	01 06 36.8	+0.6
MKAR	**Makanchi Array**	47.31	306	P	P	01 06 36.8	+0.6
MAKZ	**Makanchi**	47.52	306	P	P	01 06 38.2	+0.4
MAKZ				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MAKZ	**Makanchi**	47.52	306	P	P	01 06 38.2	+0.4
MAKZ				IAmb	IAmb	01 06 39.5	
	comp=Z,6.7nm,1.1s						
NRIK	**Noril'sk**	48.16	337	P	P	01 06 42.7	+0.3
	comp=Z,5.2nm,1.0s,baz=108,slow=8.7,SNR=8.7						
NRIK	**Noril'sk**	48.16	337	*de*P	P	01 06 43.0	+0.6
NRIK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
NRIK	**Noril'sk**	48.16	337	P	P	01 06 42.8	+0.3
NRIK				IAmb	IAmb	01 06 44.3	
	comp=Z,6.5nm,1.0s						
KURK	**Kurchatov**	49.52	312	P	P	01 06 53.5	+0.4
KURK	**Kurchatov**	49.52	312	P	P	01 06 52.8	-0.2
KURBB	**Kurchatov Arra**	49.58	312	P	P	01 06 53.5	-0.1
	comp=Z,14nm,1.1s,baz=87,slow=7.6,SNR=52						
J20K	**Nowinta River**	50.61	31	P	P	01 07 02.7	+1.5
J20K				IAmb	IAmb	01 07 31.0	
	comp=Z,11nm,1.4s						
IMAR	**Indian Mountai**	51.04	28	P	P	01 07 05.3	+0.9
H21K	**Melozitna Rive**	51.38	29	P	P	01 07 07.8	+0.8
WB0	**Warramunga Arr**	51.77	189	P	P	01 07 09.1	-1.2
WRAB	**Tennant Creek**	51.94	189	*d i*P	P	01 07 10.5	-1.1
WRAB				pmax	pmax		
	comp=Z,15nm,1.0s						
WRA	**Warramunga Arr**	51.95	189	P	P	01 07 09.8	-1.8
	comp=Z,8.0nm,0.8s,baz=6.1,slow=7.3,SNR=28						
WRA	**Warramunga Arr**	51.95	189	P	P	01 07 09.9	-1.8
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WRA	**Warramunga Arr**	51.95	189	P	P	01 07 09.9	-1.8
FITZ	**Fitzroy Crossi**	51.98	200	P	P	01 07 09.8	-2.1
	comp=Z,0.8nm,0.6s,baz=343,slow=19,SNR=1.6						
KSH	**Kashi**	52.97	298	P	P	01 07 23.3	+4.0
KSH				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MDM	**Murphy Dome**	53.23	30	P	P	01 07 21.9	+1.2
MDM				IAmb	IAmb	01 07 35.1	
	comp=Z,13nm,1.3s						
AAK	**Ala-Archa**	53.38	302	P	P	01 07 22.8	+0.4
	comp=Z,1.6nm,0.7s,baz=115,slow=2.6,SNR=6.3						
ILAR	**Eielson Array**	53.79	30	P	P	01 07 24.8	0.0
	comp=Z,2.9nm,1.1s,baz=263,slow=6.6,SNR=9.9						
ILAR	**Eielson Array**	53.79	30	P	P	01 07 25.4	+0.5
ILAR	**Eielson Array**	53.79	30	P	P	01 07 25.4	+0.5
BVAR	**Borovoye Array**	54.40	315	P	P	01 07 29.6	+0.2
	comp=Z,3.1nm,0.9s,baz=163,slow=11,SNR=7.6						

BRVK	**Borovoye**	54.46	315	*de*P	P	01 07 30.5	+0.6
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BRVK	**Borovoye**	54.46	315	P	P	01 07 30.2	+0.3
BMAR	**Burnt Mountain**	54.80	27	P	P	01 07 34.0	+1.8
AS31	**Alice Springs**	55.67	189	P	P	01 07 38.9	0.0
ASAR	**Alice Springs**	55.67	189	P	P	01 07 37.6	-1.3
	comp=Z,2.1nm,0.7s,baz=8.7,slow=5.7,SNR=17						
ASAR	**Alice Springs**	55.67	189	P	P	01 07 38.2	-0.7
ASAR	**Alice Springs**	55.67	189	P	P	01 07 38.2	-0.7
KKAR	**Karatay Array**	56.13	303	P	P	01 07 42.5	+0.4
KKAR	**Karatay Array**	56.13	303	P	P	01 07 42.5	+0.4
NIL	**Nilore**	56.69	292	P	P	01 07 45.9	-0.3
NIL				pmax	pmax		
	comp=Z,8.0nm,0.7s						
NIL	**Nilore**	56.69	292	P	P	01 07 45.9	-0.3
GAR	**Garm**	57.34	299	P	P	01 07 51.1	+0.2
GAR				IAmb	IAmb	01 07 59.5	
	comp=Z,13nm,1.2s						
CHGR	**Chuyangaron**	58.31	299	P	P	01 07 58.0	+0.3
INK	**Inuvik**	58.92	26	P	P	01 08 01.6	+0.3
	comp=Z,0.6nm,0.6s,baz=257,slow=9.0,SNR=2.2						
INK	**Inuvik**	58.92	26	P	P	01 08 02.0	+0.7
INK				pmax	pmax		
	comp=Z,5.0nm,1.4s						
INK	**Inuvik**	58.92	26	P	P	01 08 02.0	+0.7
KBL	**Kabul**	59.70	294	P	P	01 08 07.5	0.0
KBL				pmax	pmax		
	comp=Z,7.0nm,1.3s						
KBL	**Kabul**	59.70	294	P	P	01 08 07.5	0.0
KBL				IAmb	IAmb	01 08 28.1	
	comp=Z,6.8nm,1.2s						
ARU	**Arti**	60.53	321	P	P	01 08 13.0	+0.5
	comp=Z,0.5nm,0.5s,baz=63,slow=2.7,SNR=4.9						
ARU	**Arti**	60.53	321	*c i*P	P	01 08 11.8	-0.8
ARU						01 10 23.0	
ARU				S	S	01 16 27.2	+1.0
ARU				SS	SS	01 20 21.0	-3.0
ARU				pmax	pmax		
	comp=Z,9.0nm,1.2s						
ARU	**Arti**	60.53	321	P	P	01 08 13.2	+0.6
ARU				IAmb	IAmb	01 08 13.9	
	comp=Z,5.8nm,1.0s						
ABKAR	**Akbulak array**	61.61	313	P	P	01 08 20.3	+0.3
ABKAR	**Akbulak array**	61.61	313	P	P	01 08 20.4	+0.3
ABKAR				IAmb	IAmb	01 08 21.3	
	comp=Z,6.1nm,1.1s						
AKTO	**Aktyubinsk**	62.46	314	P	P	01 08 25.7	0.0
	comp=Z,3.6nm,0.9s,baz=89,slow=11,SNR=8.4						
FORT	**Forrest**	63.59	193	P	P	01 08 32.7	-0.6
XMAS	**Kiritimati**	64.28	105	P	P	01 08 38.0	-0.2
KIRV	**Kirov**	64.63	325	⇓*e*P	P	01 08 40.2	+0.3
HRA	**Herat**	64.99	296	P	P	01 08 42.8	-0.1
HRA				IAmb	IAmb	01 08 45.0	
	comp=Z,7.5nm,1.1s						
PRGR	**Permogore**	65.34	329	*e*P	P	01 08 38.2	-6.2
PRGR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GEYT	**Alibeck**	66.71	301	P	P	01 08 54.8	+1.0
	comp=Z,3.0nm,0.7s,baz=100,slow=7.7,SNR=3.2						
FINES	**FINESS Array B**	73.59	333	P	P	01 09 35.7	+0.3
	comp=Z,9.1nm,1.1s,baz=90,slow=3.8,SNR=5.6						
FINES	**FINESS Array B**	73.59	333	*i* P	P	01 09 38.5	+3.1
FINES				pmax	pmax		
	comp=Z,9.0nm,1.1s						
FINES	**FINESS Array B**	73.59	333	P	P	01 09 36.0	+0.6
K05A	**Summer Lake**	74.06	49	P	P	01 09 40.0	+1.2
K05A				IAmb	IAmb	01 09 57.3	
	comp=Z,12nm,1.4s						
KBZ	**Khabaz**	74.58	312	P	P	01 09 41.4	0.0
	comp=Z,2.9nm,0.9s,baz=28,slow=7.0,SNR=3.2						
KIV	**Kislovodsk**	74.60	312	*e*P	P	01 09 40.1	-1.6
KIV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
NVAR	**Mina Array Bea**	77.91	52	P	P	01 10 01.2	+0.4
	comp=Z,0.5nm,0.6s,baz=289,slow=6.1,SNR=7.1						
NVAR	**Mina Array Bea**	77.91	52	P	P	01 10 01.0	+0.2
AKASG	**Malin Array Be**	78.63	323	P	P	01 10 03.5	-0.8
	comp=Z,0.3nm,0.3s,baz=52,slow=5.9,SNR=7.8						
AKBB	**Malin Array Si**	78.63	323	⇑*e*P	P	01 10 05.0	+0.7
NB2	**NORSAR Subarra**	79.12	338	P	P	01 10 06.6	-0.2
	comp=Z,4.2nm,1.0s,baz=43,slow=5.6						
NOA	**NORSAR Array B**	79.12	338	P	P	01 10 06.4	-0.4
	comp=Z,1.8nm,0.9s,baz=42,slow=5.4,SNR=5.5						
DUG	**Dugway, Tooele**	80.56	48	P	P	01 10 15.1	-0.1
DUG				pmax	pmax		
	comp=Z,9.0nm,1.5s						
DUG	**Dugway, Tooele**	80.56	48	P	P	01 10 15.1	-0.1
DUG				IAmb	IAmb	01 10 30.8	
	comp=Z,9.0nm,1.4s						
PDAR	**Pinedale Array**	81.13	45	P	P	01 10 18.8	+0.5
	comp=Z,0.4nm,0.3s,baz=352,slow=3.3,SNR=3.6						
RDMU	**Red Mountain**	82.39	47	P	P	01 10 25.8	+0.9
RDMU				IAmb	IAmb	01 10 41.6	
	comp=Z,4.6nm,1.0s						
BR131	**Keskin Array S**	82.56	312	P	P	01 10 26.3	+0.5
BR131				pmax	pmax		
	comp=Z,14nm,1.3s						
BR131	**Keskin Array S**	82.56	312	P	P	01 10 26.3	+0.5
BRTR	**Keskin Array B**	82.56	312	P	P	01 10 26.7	+0.9
	comp=Z,2.4nm,1.0s,baz=90,slow=3.7,SNR=8.1						
BRTR	**Keskin Array B**	82.56	312	*ce*P	P	01 10 27.0	+1.2
BRTR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BRTR	**Keskin Array B**	82.56	312	P	P	01 10 26.2	+0.4
BUR08	**Bucovina Ar. S**	82.60	322	P	P	01 10 26.3	+0.5
BUR08				IAmb	IAmb	01 10 27.6	
	comp=Z,4.5nm,1.2s						
BURAR	**Bucovina Array**	82.61	322	P	P	01 10 26.6	+0.8
SRU	**San Rafael Swe**	82.63	48	P	P	01 10 26.7	+0.5
SRU				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SRU	**San Rafael Swe**	82.63	48	P	P	01 10 26.7	+0.5
SRU				IAmb	IAmb	01 10 43.2	
	comp=Z,3.6nm,0.8s						
RAYN	**Ar Rayn**	82.95	293	P	P	01 10 28.5	+0.5
RAYN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
RAYN	**Ar Rayn**	82.95	293	P	P	01 10 28.5	+0.5
RAYN				IAmb	IAmb	01 10 30.0	
	comp=Z,4.1nm,0.7s						
KRLC	**Kraliky**	85.04	328	*e*P	P	01 10 38.7	+0.6
KRLC	**Kraliky**	85.04	328	*e*P	P	01 10 38.7	+0.6
DPC	**Dobruska-Polom**	85.05	328	*e*P	P	01 10 39.0	+0.9
DPC	**Dobruska-Polom**	85.05	328	*e*P	P	01 10 39.0	+0.9
CLL	**Collm**	85.78	331	*i* P	P	01 10 41.7	0.0
CLL	**Collm**	85.78	331	*i* P	P	01 10 41.7	0.0
CKRC	**Cesky Krumlov**	87.06	328	*e*P	P	01 10 49.9	+1.8
KHC	**Kasperske Hory**	87.16	329	*e*P	P	01 10 48.8	+0.2
KHC	**Kasperske Hory**	87.16	329	*e*P	P	01 10 48.8	+0.2
TXAR	**Lajitas Array**	93.05	53	P	P	01 11 17.8	+1.1
	comp=Z,1.0nm,0.7s,baz=320,slow=3.3,SNR=4.7						

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*JMA **22** 01:13:12.9±0.2, 31°.87N×142°.28E, h50^{km}, M3.6*
*IDC **22** 01:13:13.8±3.5, 31°.40N×141°.03E, h0^{km}, mb3.5/5, mb1 3.6/7, mb1mx3.4/56, mbtmp3.5/7, ML3.1/2, Error ellipse: s-maj=142.2km s-min=17.3km az=70.0*
ISC 22 01:13:13.6±1.8**, 31°.85N**±0°.09×**142°.4E**±0°.3**, h35^{km}, n14,** σ**1^{s}.32**/17**, mb3.4**/5**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	2.57	300	Pn	Pn	01 13 49.7	-3.0
	15nm,0.3s,baz=93,slow=19,SNR=1.8						
BSO4	**Boso 4**	3.59	331	*e*S	Sn	01 14 46.4	-1.3
CBIJ	**Chichi jima**	4.74	183	P	Pn	01 14 23.6	+1.1
JCJ	**Chichijima**	4.74	183	Pn	Pn	01 14 23.7	+1.1
	4.8nm,0.3s,baz=274,slow=24,SNR=1.3						
JCJ				Sn	Sn	01 15 14.2	-2.1
	9.5nm,0.3s,baz=287,slow=20,SNR=5.1						
JHU	**Hanno**	4.77	328	P	Pn	01 14 23.4	+0.4
JHU				*e*S	Sn	01 15 16.6	-0.5
JHO	**Hitachi**	4.99	343	P	Pn	01 14 26.3	+0.3
JHO				*e*S	Sn	01 15 20.9	-1.6
JRY	**Ryogami san**	5.09	326	P	Pn	01 14 27.7	+0.4
JAG	**Ashikaga**	5.19	332	P	Pn	01 14 29.2	+0.5
MJAR	**Matsushiro Arr**	5.84	324	Pn	Pn	01 14 38.0	+0.3
	0.1nm,0.3s,baz=151,slow=12,SNR=6.8						
SONM	**Songino Array**	31.60	311	P	P	01 19 34.6	+1.6
	0.3nm,0.5s,baz=104,slow=9.2,SNR=2.3						
MKAR	**Makanchi Array**	47.72	306	P	P	01 21 47.0	+0.1
	0.2nm,0.5s,baz=90,slow=8.8,SNR=4.2						
KURBB	**Kurchatov Arra**	49.96	312	P	P	01 22 03.3	-0.6
	0.5nm,0.5s,baz=86,slow=7.5,SNR=4.1						
WRA	**Warramunga Arr**	52.08	190	P	P	01 22 20.5	+0.4
	1.4nm,0.9s,baz=5.0,slow=7.3,SNR=7.1						
ASAR	**Alice Springs**	55.80	189	P	P	01 22 48.1	+0.9
	0.3nm,0.7s,baz=0.8,slow=6.5,SNR=2.3						

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*IDC **22** 01:19:35.6±5.3, 37°.52N×71°.01E, h85^{km}±35^{km}, mb3.2/1, mb1 3.5/6, mb1mx3.1/52, mbtmp3.7/6, Error ellipse: s-maj=69.7km s-min=18.9km az=152.0*
*NNC **22** 01:19:43.5±3.6, 37°.92N×71°.45E, h181^{km}±48^{km}, mb2.6, mpv3.5, Error ellipse: s-maj=38.8km s-min=17.4km az=21.0*
ISC 22 01:19:35.9±1.8**, 37°.5N**±0°.1×**71°.07E**±0°.09**, h100^{km}, n20,** σ**1^{s}.63**/25**, 3C-5D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	5.08	23	P	Pn	01 20 51.3	+1.2
	SNR=15						
UCH	**Uchtor**	5.45	28	P	Pn	01 20 54.7	-0.4
	SNR=5.4						
EKS2	**Erkin-Say**	5.59	21	P	Pn	01 20 59.5	+2.8
	SNR=13						
KK02	**Karatay Array**	5.65	356	⇓P	Pn	01 20 59.9	+2.5
	0.9nm,0.3s						
KK02				⇑S	Sn	01 22 02.3	+1.4
	6.6nm,0.7s						
AAK	**Ala-Archa**	5.80	26	P	Pn	01 21 00.5	+1.0
	2.6nm,0.3s,baz=202,slow=8.2,SNR=42						
AAK				S	Sn	01 22 03.8	-0.9
	0.7nm,0.3s,baz=163,slow=19,SNR=7.1						
AAK	**Ala-Archa**	5.80	26	P	Pn	01 21 01.1	+1.6
	SNR=11						
AAK	**Ala-Archa**	5.80	26	⇑P	Pn	01 21 00.9	+1.4
	3.6nm,0.3s						
AAK				⇓S	Sn	01 22 01.5	-3.2
	3.3nm,0.4s						
CHMS	**Chumysh**	6.21	26	P	Pn	01 21 06.2	+1.2
	SNR=11						
USP	**Ospenovka**	6.36	23	P	Pn	01 21 07.8	+0.8
	SNR=5.6						
TKM2	**Tokmak 2**	6.46	31	P	Pn	01 21 09.3	+0.7
	SNR=8.3						
TKM2	**Tokmak 2**	6.46	31	⇓P	Pn	01 21 09.1	+0.5
	7.7nm,1.0s						
MDOK	**Medeo**	7.30	37	⇓P	Pn	01 21 20.9	+1.0
	3.1nm,0.6s						
GEYT	**Alibeck**	10.27	277	P	Pn	01 21 60.0	-0.3
	0.8nm,0.3s,baz=90,slow=13,SNR=3.0						
GEYT				S	Sn	01 23 50.9	-2.6
	0.7nm,0.3s,baz=95,slow=29,SNR=2.0						
MK31	**Makanchi Array**	12.49	38	⇓P	Pn	01 22 28.8	-1.2
	0.9nm,0.6s,baz=215,slow=34,SNR=12						
MKAR	**Makanchi Array**	12.49	38	P	Pn	01 22 28.8	-1.2
	0.3nm,0.3s,baz=224,slow=15,SNR=16						
KURBB	**Kurchatov Arra**	14.20	20	P	Pn	01 22 52.8	+0.6
	0.0nm,0.3s,baz=204,slow=12,SNR=2.3						
AB31	**Akbulak array**	14.27	329	P	Pn	01 22 54.0	+0.8
	0.2nm,0.3s,baz=136,slow=15,SNR=24						
AB31				S	Sn	01 25 27.6	-2.7
	0.5nm,0.4s,baz=154,slow=21,SNR=4.9						
AKTO	**Aktyubinsk**	15.98	328	⇑P	P	01 23 17.2	+0.9
	1.1nm,0.8s						
ZALV	**Zalesovo Beam**	19.02	26	P	P	01 23 49.2	-0.4
	0.5nm,0.3s,baz=212,slow=10,SNR=11						
NOA	**NORSAR Array B**	43.65	322	P	P	01 27 31.4	+1.2
	0.7nm,0.9s,baz=116,slow=8.2,SNR=1.7						

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*PRU **22** 01:21:33.8±0.0, 42°.93N×17°.98E, h0^{km}*
*IDC **22** 01:21:34.1±1.6, 43°.04N×18°.20E, h0^{km}, mb3.4/1, mb1 3.8/6, mb1mx3.4/44, mbtmp3.7/6, ML3.0/5, Error ellipse: s-maj=35.1km s-min=15.3km az=78.0*
*KRSZO **22** 01:21:34.9±0.8, 43°.02N×17°.96E, h5^{km}±7^{km}, ML3.7/12, Error ellipse: s-maj=3.1km s-min=2.2km az=7.0*
*BEO **22** 01:21:35.9±0.3, 42°.97N×17°.93E, h9^{km}±2^{km}, ML3.2/8*
*RHSSO **22** 01:21:35.7±0.2, 42°.98N×17°.97E, h5^{km}±2^{km}, ML3.4/17*
*PDG **22** 01:21:35.0±0.3, 43°.00N×17°.99E, h11^{km}, MD3.5/8, ML3.4/8, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
ISC 22 01:21:35.5±1.0**, 43°.00N**±0°.02×**17°.99E**±0°.01**, h6^{km}**±8^{km}**, n141,** σ**1^{s}.33**/217**, 28C-16D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STON	**Ston**	0.25	239	*e*Pg	Pg	01 21 40.1	-0.3
STON				*e*Sg	Sg	01 21 44.1	+0.5
STON	**Ston**	0.25	239	⇑*i*Pg	Pg	01 21 39.8	-0.6
STON				*e*Sg	Sg	01 21 43.7	+0.1
STON	**Ston**	0.25	239	*e*Pg	Pg	01 21 39.8	-0.6
STON				Sg	Sg	01 21 44.0	+0.3
DBRK	**Dubrovnik**	0.35	161	*e*Pg	Pg	01 21 41.9	-0.4
DBRK				Sg	Sg	01 21 47.5	+0.5
TREB	**Trebinje**	0.39	137	*e*Pg	Pg	01 21 42.4	-0.7
TREB				*e*Sg	Sg	01 21 49.2	+1.1
TREB	**Trebinje**	0.39	137	⇑*i*Pg	Pg	01 21 42.2	-0.9
TREB				*e*Sg	Sg	01 21 48.8	+0.7
HCY	**Herceg Novi**	0.67	146	*e*Pg	Pg	01 21 47.1	-1.2
HCY				*e*Sg	Sg	01 21 57.0	0.0
HCY	**Herceg Novi**	0.67	146	⇑*i*Pg	Pg	01 21 47.3	-1.0
HCY				*i* Sg	Sg	01 21 57.9	+0.9
UPM	**Unac-Piva**	0.70	73	*e*Pg	Pg	01 21 48.2	-0.8
UPM				*e*Sg	Sg	01 21 59.4	+1.2
UPM	**Unac-Piva**	0.70	73	⇑*i*Pg	Pg	01 21 47.9	-1.1
UPM				*i* Sg	Sg	01 21 59.1	+0.9
NKME	**Niksic**	0.75	108	⇓*i*Pg	Pg	01 21 48.7	-1.2
NKME				*i* Sg	Sg	01 22 00.4	+0.8
NKY	**Niksic**	0.76	104	⇓*i*Pg	Pg	01 21 49.1	-1.1
NKY				*i* Sg	Sg	01 22 01.0	+0.9
MAKA	**Makarska**	0.77	292	*e*Pg	Pg	01 21 48.8	-1.4
MAKA				Sg	Sg	01 22 00.9	+0.8
RICI	**Ricice**	0.80	309	*e*Pg	Pg	01 21 49.7	-1.1
CEME	**Cevo**	0.82	123	⇑*i*Pg	Pg	01 21 50.1	-1.2
CEME				*i* Sg	Sb	01 22 03.1	-0.5
LSTV	**Lastovo**	0.84	254	*e*Pg	Pg	01 21 49.9	-1.7
LSTV				Sg	Sg	01 22 02.3	-0.2
PDG	**Podgorica**	1.09	121	⇑P	Pg	01 21 56.2	-0.3
PDG				⇓S	Sn	01 22 13.2	+0.3
PDG	**Podgorica**	1.09	121	*e*Pg	Pg	01 21 56.0	-0.5
PDG				*e*Sg	Sn	01 22 13.5	+0.6
PDG	**Podgorica**	1.09	121	⇓*i*Pg	Pg	01 21 55.3	-1.2
PDG				*e*Sg	Sg	01 22 11.3	+0.6
TTG	**Podgorica**	1.09	121	⇓*i*Pg	Pg	01 21 55.3	-1.2
TTG				*i* Sg	Sb	01 22 12.3	+0.9
HVAR	**Hvar**	1.14	279	*e*Pg	Pg	01 21 55.5	-2.0
RUDO	**Rudo**	1.18	58	*e*Pg	Pg	01 21 56.8	-1.4
RUDO				*e*Sg	Sg	01 22 13.3	-0.3
DRME	**Dracevica, Mon**	1.20	132	⇓*i*Pg	Pg	01 21 57.2	-1.3
DRME				*e*Sg	Sb	01 22 14.6	+0.1
DRME	**Dracevica, Mon**	1.20	132	⇑*i*Pg	Pg	01 21 57.1	-1.4
DRME				*i* Sg	Sn	01 22 16.0	+0.5
HAPS	**Han Pijesak,Bl**	1.29	32	*e*Pg	Pn	01 21 59.5	-0.8
HAPS				*e*Sg	Sg	01 22 18.1	+1.0
BBLS	**Lazići**	1.35	50	*e*Pg	Pg	01 22 02.6	+1.2
BBLS				*e*Sg	Sn	01 22 21.0	+1.7
BBLS	**Lazići**	1.35	50	*e*Pg	Pn	01 22 00.4	-0.6
BBLS				*e*Sg	Sg	01 22 19.8	+1.0
BBLS	**Lazići**	1.35	50	Pb	Pn	01 22 01.3	+0.3
	comp=Z,7.2nm,SNR=6.1						
ULC	**Ulcinj**	1.39	138	⇓*i*Pg	Pn	01 22 00.6	-1.0
ULC				*i* Sg	Sn	01 22 22.1	+1.8
SJES	**Sjenica**	1.48	79	*e*Pg	Pb	01 22 03.9	+0.4
SJES				*e*Sg	Sg	01 22 24.1	+1.1
KIJV	**Kijevo**	1.53	312	*e*Pn	Pn	01 22 03.4	-0.1
MGRS	**Mrkonjic Grad**	1.56	335	*e*Pn	Pn	01 22 04.1	+0.2
MGRS				*e*Sn	Sn	01 22 24.9	+0.4
IVAS	**Ivanjica**	1.68	69	*e*Pn	Pn	01 22 06.4	+0.8
DOB	**Doboj**	1.73	3	*e*Pn	Pn	01 22 05.6	-0.7
DOB				*e*Sn	Sn	01 22 28.4	-0.3
DIVS	**Divibare**	1.82	52	*e*Pn	Pn	01 22 08.0	+0.4
DIVS	**Divibare**	1.82	52	*e*Pn	Pn	01 22 07.5	-0.1
DIVS				*e*Sn	Sn	01 22 32.3	+1.2
DIVS	**Divibare**	1.82	52	Pg	Pb	01 22 09.7	+0.3
	comp=Z,331nm,0.8s,SNR=11						
ZIRJ	**Zirje**	1.83	292	*e*Pn	Pn	01 22 07.9	+0.4
BLY	**Banja Luka**	1.84	342	*e*Pn	Pn	01 22 08.9	+1.2
BLY	**Banja Luka**	1.84	342	*e*Pn	Pn	01 22 08.6	+0.9
BLY				*e*Sn	Sn	01 22 32.6	+1.2
BLY	**Banja Luka**	1.84	342	Pn	Pb	01 22 09.6	0.0
	comp=Z,126nm,0.6s,SNR=5.1						
MORI	**Morici**	1.87	298	*e*Pn	Pn	01 22 08.3	+0.2
TEKS	**Tekeris**	1.91	35	*e*Pn	Pn	01 22 09.8	+1.1
TEKS				*e*Sn	Sn	01 22 33.7	+0.6
BLJ	**Bijeljina**	2.01	27	*e*Pn	Pn	01 22 09.9	-0.1
BLJ				*e*Sn	Sn	01 22 34.8	-0.6
TRUS	**Trudelj**	2.14	54	*e*Pn	Pn	01 22 12.3	+0.5
MRAK	**Mrakovica**	2.16	339	*e*Pn	Pn	01 22 12.7	+0.5
MRAK				*e*Sn	Sn	01 22 39.4	+0.1
TIR	**Tirane**	2.16	139	⇓P	Pn	01 22 12.2	+0.1
TIR				⇓S	Sb	01 22 43.2	+1.0
TIR	**Tirane**	2.16	139	*e*Pn	Pn	01 22 12.1	0.0
GRUS	**Gruza**	2.18	65	*e*Pn	Pn	01 22 13.0	+0.7
PRIJ	**Prijedor**	2.18	335	*e*Pn	Pn	01 22 13.3	+0.9
PRIJ				*e*Sn	Sn	01 22 40.3	+0.6
UDBI	**Udbina**	2.22	314	*e*Pn	Pb	01 22 14.9	-1.2
SELS	**Selova**	2.30	83	*e*Pn	Pn	01 22 14.6	+0.5
DUGI	**Dugi Otok**	2.35	296	*e*Pn	Pn	01 22 15.0	+0.3
FRGS	**Fruska Gora**	2.52	31	⇑P	Pn	01 22 16.5	-0.7
FRGS				⇓S	Sn	01 22 46.2	-2.0
FRGS	**Fruska Gora**	2.52	31	*e*Pn	Pn	01 22 16.7	-0.5
FRGS	**Fruska Gora**	2.52	31	*e*Pn	Pn	01 22 17.1	-0.1
FRGS				*e*Sn	Sn	01 22 48.6	+0.3
MATE	**Matera**	2.54	203	⇓P	Pb	01 22 20.6	-0.9
PLIT	**Plitvice**	2.54	319	*e*Pn	Pn	01 22 19.2	+1.9
BEO	**Beograd**	2.55	44	Pg	Pb	01 22 22.6	+0.9
	comp=Z,104nm,0.6s,SNR=4.2						
NVLJ	**Novalja**	2.75	306	*e*Pn	Pn	01 22 20.9	+0.8
MOSL	**Moslavina**	2.76	342	*e*Pn	Pn	01 22 20.4	+0.1
BOVS	**Bovan**	2.79	76	⇑P	Pn	01 22 20.5	-0.2
BOVS				⇑S	Sn	01 22 55.1	+0.5
BOVS	**Bovan**	2.79	76	*e*Pn	Pn	01 22 20.5	-0.2
BARS	**Barje**	2.82	92	*e*Pn	Pb	01 22 24.6	-1.7
BARS	**Barje**	2.82	92	*e*Pg	Pb	01 22 26.6	+0.3
BARS				*e*Sg	Sg	01 23 05.6	-0.4
PRVS	**Prvonek**	3.05	98	*e*Pn	Pn	01 22 25.2	+0.8
KOVH	**Kovagotottos**	3.09	1	*e*PN	Pn	01 22 24.6	-0.3
KOVH				*e*PG	Pb	01 22 32.8	+1.9
KOVH				*e*SN	Sn	01 23 02.0	-0.1
KOVH				*e*SG	Sg	01 23 14.3	-0.4
KOVH	**Kovagotottos**	3.09	1	Pn	Pn	01 22 24.6	-0.3
	comp=Z,0.2nm,SNR=2.8						
KOVH				Pg	Pb	01 22 32.8	+1.9
KOVH				Sn	Sn	01 23 02.0	-0.1
KOVH				Lg	Lg	01 23 14.3	
ZAG	**Zagreb**	3.17	334	*e*Pn	Pn	01 22 26.0	0.0
ZAG				*e*Sn	Sn	01 23 03.9	-0.2
OZLJ	**Ozalj**	3.18	326	*e*Pn	Pn	01 22 27.7	+1.6
ZAGS	**Zajecar**	3.20	74	*e*Pn	Pn	01 22 26.4	0.0
MDVR	**Moldovita**	3.23	55	⇑P	Pn	01 22 26.8	0.0
MDVR				⇑S	Sn	01 23 03.7	-2.0
PTJ	**Puntijarka**	3.25	334	*e*Pn	Pn	01 22 27.5	+0.4
MORH	**Mrgy, Hungar**	3.25	8	*e*Pn	Pn	01 22 27.8	+0.8
MORH				*e*Sn	Sn	01 23 05.4	-0.6
BANR	**Banloc**	3.29	42	Pg	Pg	01 22 48.6	+10
KALN	**Kalnik**	3.32	341	*e*Pn	Pn	01 22 28.1	0.0
BOSS	**Bosilegrad**	3.35	97	*e*Pn	Pn	01 22 29.5	+1.1
CRES	**Cresnjev**	3.36	328	*e*Pn	Pn	01 22 29.1	+0.5
CRES				*e*Sn	Sn	01 23 08.7	-0.1
GBRS	**Gornja Briga**	3.41	319	*i* Pn	Pn	01 22 30.8	+1.5
GBRS				IAML		01 23 40.2	
	comp=Z,1µm,2.9s						
ZAPS	**Zavoj**	3.41	84	*e*Pn	Pn	01 22 30.7	+1.4
RIY	**Rijeka**	3.43	314	*e*Pn	Pn	01 22 30.1	+0.6
RIY				*e*Sn	Sn	01 23 09.3	-1.2
LOBO	**Lobor**	3.44	337	*e*Pn	Pn	01 22 30.1	+0.4
BRJN	**Brijuni**	3.60	303	*e*Pn	Pn	01 22 31.0	-1.0
KOGS	**Kog**	3.66	341	*i* Pn	Pn	01 22 33.1	+0.4
KOGS	**Kog**	3.66	341	Pg	Pn	01 22 33.6	+0.9
	comp=Z,234nm,2.1s,SNR=2.2						
BZS	**Buzias**	3.69	44	⇑P	Pn	01 22 32.9	-0.3
BZS				⇑S	Sn	01 23 17.1	+0.1
BZS	**Buzias**	3.69	44	*e*Pn	Pn	01 22 33.5	+0.3
BZS	**Buzias**	3.69	44	Pb	Pb	01 22 38.0	-3.1
	comp=Z,27nm,0.6s,SNR=5.2						
HERR	**Herculane**	3.71	58	⇓P	Pn	01 22 33.5	+0.1
HERR				⇑S	Sn	01 23 16.1	-1.3
CEY	**Cerknica**	3.74	318	*e*Pn	Pn	01 22 34.3	+0.4
CEY				*e*Sn	Sn	01 23 17.5	-0.8
VTS	**Vitosha**	3.88	94	⇑P	Pn	01 22 36.4	+0.5
VTS				⇑S	Sn	01 23 22.1	+0.2
VTS	**Vitosha**	3.88	94	*e*Pn	Pn	01 22 36.9	+1.0
GROS	**Grobnik**	3.89	334	*i* Pn	Pn	01 22 36.6	+0.7
TIH	**Tihany**	3.90	359	*e*PN	Pn	01 22 35.9	-0.1
TIH				*e*SN	Sn	01 23 22.7	+0.6
TIH	**Tihany**	3.90	359	Pn	Pn	01 22 35.9	-0.1
	comp=Z,0.6nm,SNR=4.9						
TIH				Pg	Pg	01 22 56.9	+6.6
TIH				Sn	Sn	01 23 22.7	+0.6
PERS	**Pernice**	4.17	332	*i* Pn	Pn	01 22 40.6	+0.8
PERS				*i* Sn	Sn	01 23 29.1	+0.3
MPLH	**Magyarpolny**	4.18	356	*e*PN	Pn	01 22 40.4	+0.5
MPLH	**Magyarpolny**	4.18	356	*e*P	Pn	01 22 41.1	+1.2
MPLH	**Magyarpolny**	4.18	356	Pn	Pn	01 22 40.4	+0.5
	comp=Z,0.1nm,SNR=2.9						
MPLH				Pg	Pb	01 22 41.1	-8.4
	comp=Z,23nm,0.8s,SNR=3.6						
SIRR	**Siria**	4.19	37	⇑P	Pn	01 22 38.9	-1.1
SIRR				⇓S	Sn	01 23 26.9	-2.4
SIRR	**Siria**	4.19	37	Pg	Pg	01 22 55.2	-0.6
GZR	**Gura Zlata**	4.19	54	⇑P	Pn	01 22 40.1	0.0
GZR				⇑S	Sn	01 23 27.9	-1.5
GZR	**Gura Zlata**	4.19	54	Pg	Pn	01 22 41.8	+1.7
	comp=Z,18nm,0.6s,SNR=3.4						
SOKA	**Soboth**	4.24	331	*i* Pn	Pn	01 22 41.5	+0.8
	comp=Z,2.6nm,0.2s						
SOKA				*e*Sn	Sn	01 23 30.0	-0.5
	comp=Z,10nm,0.5s						
OBKA	**Obir**	4.28	326	*e*Pn	Pn	01 22 42.9	+1.6
	comp=Z,1.7nm,0.3s						
BUD	**Budapest**	4.54	9	*e*P	Pn	01 22 48.3	+3.5
BUD	**Budapest**	4.54	9	Pn	Pn	01 22 48.3	+3.5
	comp=Z,16nm,0.6s,SNR=3.5						
ARSA	**Arzberg**	4.59	339	*e*Pn	Pn	01 22 46.4	+0.8
	comp=Z,24nm,0.3s						
ARSA				*e*Sn	Sn	01 23 38.4	-0.9
	comp=Z,7.1nm,0.4s						
ARSA	**Arzberg**	4.59	339	Pn	Pn	01 22 46.5	+0.9
	comp=Z,44nm,0.8s,SNR=5.2						
SRO	**Srobarova**	4.82	3	*e*PN	Pn	01 22 51.1	+2.5
SRO				*e*SN	Sn	01 23 43.3	-1.4
SRO				*e*LG	Lg	01 23 53.7	
DRGR		5.06	40	⇑P	Pn	01 22 52.2	+0.2
DRGR				⇓S	Sn	01 23 49.9	-1.0
PSZ	**Piszkesteto**	5.10	15	⇑P	Pn	01 22 52.0	-0.5
PSZ				⇑S	Sn	01 23 51.0	-0.7
CONA	**Conrad Observa**	5.15	344	*i* Pn	Pn	01 22 54.3	+1.0
	comp=Z,2.7nm,0.3s						
CONA				*e*Sn	Sn	01 23 52.3	-0.8
	comp=Z,5.5nm,0.4s						
ZST	**Bratislava**	5.23	353	*e*PN	Pn	01 22 55.2	+0.9
ZST				*e*SN	Sn	01 23 52.7	-2.3
HUMR	**Humele**	5.29	71	⇑P	Pn	01 22 54.5	-0.6
ARR	**Arges**	5.33	61	⇑P	Pn	01 22 56.7	+1.0
ARR				⇓S	Sn	01 23 56.4	-1.1
MODS	**Modra-Piesok**	5.40	355	*e*PN	Pn	01 22 55.6	-1.0
MODS				*e*SN	Sn	01 23 57.4	-1.7
ABTA	**Abfaltersbach**	5.40	316	*e*Pn	Pn	01 22 59.0	+2.3
	comp=Z,1.4nm,0.3s						
MOA	**Molln**	5.51	333	*e*Pn	Pn	01 22 59.7	+1.6
	comp=Z,3.4nm,0.2s						
MOA				*e*Sn	Sn	01 24 02.0	+0.1
	comp=Z,15nm,0.5s						
VYHS	**Vyhne**	5.53	6	*e*PN	Pn	01 22 59.1	+0.7
VYHS				*e*SN	Sn	01 23 59.2	-3.0
VYHS				*e*LG	Lg	01 24 03.8	
VOIR		5.63	62	⇑P	Pn	01 23 00.6	+0.7
VOIR				⇑S	Sn	01 24 03.9	-1.0
WTTA	**Wattenberg**	6.19	316	*e*Pn	Pn	01 23 10.2	+2.5
	comp=Z,1.2nm,0.2s						
LANS	**Liptovska Anna**	6.24	9	*e*PG	Pn	01 23 00.8	-7.4
WATA	**Walderalm**	6.27	316	*e*Pn	Pn	01 23 10.9	+2.2
	comp=Z,2.7nm,0.4s						
WATA				*e*Sn	Sn	01 24 28.4	+7.7
	comp=Z,2.8nm,0.4s						
CKRC	**Cesky Krumlov**	6.36	337	*e*PN	Pn	01 23 10.1	+0.3
CKRC				*e*SN	Sn	01 24 20.1	-2.7
SQTA	**Sankt Quirin**	6.39	314	*e*Pn	Pn	01 23 12.0	+1.7
	comp=Z,1.6nm,0.3s						
MOTA	**Moosalm**	6.52	314	*e*Pn	Pn	01 23 13.2	+1.0
	comp=Z,7.4nm,0.6s						
MOTA				*e*Sn	Sn	01 24 32.0	+5.0
	comp=Z,9.0nm,0.9s						
FETA	**Feichten**	6.53	311	*e*Pn	Pn	01 23 16.0	+3.7

	comp=Z,2.6nm,0.7s						
GERES	GERESS Array B	6.56	334	Pn	Pn	01 23 13.6	+0.9
	comp=Z,0.8nm,0.3s,baz=154,slow=14,SNR=20						
GERES				Sn	Sn	01 24 26.8	-1.1
	comp=Z,1.1nm,0.3s,baz=148,slow=25,SNR=9.7						
MORC	Moravsky Berou	6.79	358	⇑P	Pn	01 23 15.5	-0.2
MORC				⇓S	Sn	01 24 33.2	-0.1
RETA	Reutte	6.79	314	ePn	Pn	01 23 16.5	+0.7
	comp=Z,0.6nm,0.3s						
OKC	Ostrava-Krasne	6.84	1	eSN	Sn	01 24 33.2	-1.3
KHC	Kasperske Hory	6.86	335	ePN	Pn	01 23 17.2	+0.6
KHC				eSN	Sn	01 24 33.3	-1.7
KRLC	Kraliky	7.13	354	ePN	Pn	01 23 19.9	-0.5
KRLC				eSN	Sn	01 24 39.3	-2.4
DAVA	Damuels	7.16	310	ePn	Pn	01 23 24.4	+3.5
	comp=Z,1.4nm,0.3s						
DPC	Dobruska-Polom	7.44	352	eSN	Sn	01 24 46.9	-2.5
IDI	Anoyia	9.38	143	Pn	Pn	01 23 48.0	-3.3
	comp=Z,0.2nm,0.3s,baz=63,slow=23,SNR=1.6						
IDI				Sn	Sn	01 25 27.5	-10
	comp=Z,0.4nm,0.3s,baz=285,slow=15,SNR=1.7						
KEST	Kesra	9.87	226	Pn	Pn	01 23 59.8	+1.8
	comp=Z,0.1nm,0.3s,baz=0.0,slow=13,SNR=2.1						
NOA	NORSAR Array B	18.52	350	P	P	01 25 52.5	0.0
	comp=Z,0.0nm,0.3s,baz=153,slow=8.0,SNR=2.2						
FINES	FINESS Array B	19.10	12	P	P	01 25 58.0	-0.7
	comp=Z,0.1nm,0.3s,baz=172,slow=11,SNR=4.8						
TORD	Torodi Ar. Bea	32.91	210	P	P	01 28 10.8	+0.2
	comp=Z,0.6nm,1.0s,baz=12,slow=9.3,SNR=2.3						

VIE 22 01:22:00.8±0.2**, 47°.48N**×**15°.42E, h6^{km}, ml0.6**/2**, Error ellipse: s-maj=2.2km s-min=1.3km az=46.0 4 km SW of Kindberg, Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARSA	Arzberg	0.24	163	ePg	Pg	01 22 05.7	+0.1
	5.8nm,0.0s						
ARSA				eSg	Sg	01 22 08.8	0.0
	1.4nm,0.1s						

*ATH **22** 01:30:45.0, 38°.46N×20°.47E, h16^{km}±2^{km}, ML2.9/3, Error ellipse: s-maj=3.7km s-min=0.7km az=109.0*

*THE **22** 01:30:45.3, 38°.46N×20°.44E, h12^{km}±2^{km}, ML3.3/6, Error ellipse: s-maj=2.1km s-min=0.4km az=111.0*

ISC 22 01:30:44.6±0.9**, 38°.47N**±0°.02×**20°.43E**±0°.05**, h16^{km}**±6^{km}**, n35, σ0^{s}.75**/57**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FSK	Fiskardo	0.11	93	P	Pg	01 30 47.7	-0.4
FSK				S	Sg	01 30 49.5	-0.9
	18µm,0.1s						
FSK	Fiskardo	0.11	93	P	Pg	01 30 47.7	-0.4
FSK				S	Sg	01 30 49.5	-0.9
FSK				AML	AML	01 30 49.7	
	comp=N,19463µm,0.2s						
FSK				AML	AML	01 30 50.0	
	comp=E,52225µm,0.1s						
KEF4	Livadi, Kephal	0.21	180	P	Pg	01 30 49.6	+0.2
KEF4				S	Sb	01 30 53.5	0.0
KEF4	Livadi, Kephal	0.21	180	P	Pg	01 30 49.6	+0.2
KEF4				S	Sb	01 30 53.6	0.0
DMLN	Damoulianata-K	0.23	190	P	Pg	01 30 50.1	+0.3
DMLN				S	Sg	01 30 53.8	+0.5
	comp=E,11µm,0.4s						
DMLN	Damoulianata-K	0.23	190	P	Pg	01 30 50.1	+0.3
DMLN				S	Sg	01 30 53.9	+0.5
EVGI	Lefkada island	0.24	49	P	Pg	01 30 50.0	0.0
EVGI	Lefkada island	0.24	49	P	Pg	01 30 50.0	0.0
EVGI				S	Sg	01 30 53.9	+0.3
DRAG	Dragano-Lefkad	0.25	28	P	Pg	01 30 50.0	-0.1
DRAG				S	Sg	01 30 54.6	+0.7
	comp=E,19µm,0.2s						
DRAG	Dragano-Lefkad	0.25	28	P	Pg	01 30 50.1	-0.1
DRAG				S	Sg	01 30 54.6	+0.7
LXRA	Lixouri, Kepha	0.27	178	P	Pg	01 30 50.7	+0.4
LXRA				S	Sb	01 30 55.5	+0.3
KEF3	Kipouria, Keph	0.27	193	P	Pg	01 30 50.2	-0.2
KEF3				S	Sg	01 30 54.7	+0.3
	comp=E,15µm,0.4s						
KEF3	Kipouria, Keph	0.27	193	P	Pg	01 30 50.3	-0.1
KEF3				S	Sg	01 30 54.6	+0.3
VLS	Valsamata	0.32	156	P	Pg	01 30 51.1	-0.1
VLS				S	Sg	01 30 56.3	+0.5
VLS	Valsamata	0.32	156	P	Pg	01 30 51.1	-0.1
VLS				S	Sg	01 30 56.2	+0.5
VLS				AML	AML	01 30 56.8	
	comp=E,6591µm,0.1s						
VLS				AML	AML	01 30 59.3	
	comp=N,5417µm,0.2s						
NYDR	Nydri-Lefkada	0.33	41	P	Pg	01 30 51.4	0.0
NYDR				S	Sg	01 30 56.9	+0.8
	comp=N,4µm,0.3s						
NYDR	Nydri-Lefkada	0.33	41	P	Pg	01 30 51.4	0.0
NYDR				S	Sg	01 30 56.8	+0.6
LKD2	Lefkada island	0.37	29	P	Pg	01 30 52.4	+0.2
LKD2				S	Sb	01 30 58.8	+0.4
LKD2	Lefkada island	0.37	29	P	Pg	01 30 52.1	-0.1
LKD2				S	Sg	01 30 58.2	+0.7
LKD2				AML	AML	01 30 58.8	
	comp=N,3058µm,0.3s						
LKD2				AML	AML	01 30 59.0	
	comp=E,3553µm,0.3s						
PSDA	Pessada-Kefalo	0.37	160	P	Pg	01 30 52.2	0.0
PSDA				S	Sb	01 30 58.4	+0.1
PSDA	Pessada-Kefalo	0.37	160	P	Pg	01 30 52.2	0.0
TSLK	Tsoukalades, L	0.40	27	P	Pg	01 30 53.0	+0.2
TSLK				S	Sb	01 30 59.8	+0.6
	comp=E,3µm,0.2s						
TSLK	Tsoukalades, L	0.40	27	P	Pg	01 30 53.0	+0.2
PVO	Paravola	0.88	80	P	Pg	01 31 01.6	0.0
MAKA	Makarska	5.46	333	ePn	Pn	01 32 05.9	+0.7
HVAR	Hvar	5.59	329	ePn	Pn	01 32 07.7	+0.7
RICI	Ricice	5.61	335	ePn	Pn	01 32 07.8	+0.5
KIJV	Kijevo	6.31	333	ePn	Pn	01 32 17.7	+0.8
ZIRJ	Zirje	6.32	327	ePn	Pn	01 32 17.1	+0.1
MORI	Morici	6.46	328	ePn	Pn	01 32 19.9	+1.0
DUGI	Dugi Otok	6.84	325	ePn	Pn	01 32 25.1	+0.9
UDBI	Udbina	6.99	331	ePn	Pn	01 32 27.8	+1.4
UDBI				Sn	Sn	01 33 44.5	-1.0
PLIT	Plitvice	7.35	332	ePn	Pn	01 32 31.7	+0.5
NVLJ	Novalja	7.38	327	ePn	Pn	01 32 32.1	+0.5
NVLJ				Sn	Sn	01 33 51.0	-3.9
OZLJ	Ozalj	8.04	334	ePn	Pn	01 32 41.0	+0.4

*IDC **22** 01:34:37.1±1.7, 6°.70S×129°.70E, h136^{km}±20^{km}, mb3.5/1, mb1 3.5/6, mb1mx3.2/29, mbtmp4.0/6, Error ellipse: s-maj=28.4km s-min=13.8km az=111.0*

ISC 22 01:34:36.7±0.9**, 6°.85S**±0°.06×**129°.9E**±0°.1**, h150^{km}, n6, σ2^{s}.58**/11**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	6.10	13	P	Pn	01 36 05.5	+0.8
	3.3nm,0.3s,baz=152,slow=15,SNR=8.9						
SIJI				S	Sn	01 37 10.4	-3.2
	1.5nm,0.3s,baz=167,slow=23,SNR=2.3						
BATI	Baumata	6.99	241	P	Pn	01 36 17.3	+0.6
	1.5nm,0.3s,baz=44,slow=15,SNR=1.2						
BATI				S	Sn	01 37 33.5	-1.6
	4.2nm,0.3s,baz=82,slow=22,SNR=3.6						
FITZ	Fitzroy Crossi	11.92	200	P	Pn	01 37 22.9	+1.0
	0.4nm,0.3s,baz=29,slow=11,SNR=29						
FITZ				S	Sn	01 39 31.0	-2.8
	0.4nm,0.3s,baz=38,slow=18,SNR=7.8						
WRA	Warramunga Arr	13.72	162	P	Pn	01 37 46.9	+1.7
	0.2nm,0.3s,baz=334,slow=13,SNR=9.6						
WRA				S	Sn	01 40 13.8	-3.4
	0.6nm,0.3s,baz=331,slow=22,SNR=8.9						
ASAR	Alice Springs	17.17	167	P	Pn	01 38 31.6	+3.9
	0.6nm,0.3s,baz=344,slow=10,SNR=43						
ASAR				S	S	01 41 37.8	-0.6
	0.2nm,0.3s,baz=355,slow=29,SNR=4.5						
MKAR	Makanchi Array	68.03	327	P	P	01 45 20.5	+0.6
	0.6nm,0.4s,baz=117,slow=8.1,SNR=12						

*SJA **22** 02:09:27.0, 31°.17S×71°.82W, h10^{km}, ML4.2*

*GUC **22** 02:09:29.4±0.8, 31°.22S×71°.38W, h46^{km}±6^{km}, ML3.0*

ISC 22 02:09:27.0±3.3**, 31°.22S**±0°.02×**71°.59W**±0°.07**, h10^{km}**±24^{km}**, n36, σ1^{s}.31**/47**, 6C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.55	356	⇑eP	Pn	02 09 41.6	+0.8
CO06				eS	Sn	02 09 50.3	+0.2
CO06				IAML		02 09 53.6	
	comp=E,1µm,0.1s						
GO04	Tololo Observa	1.25	33	⇑eP	Pn	02 09 50.5	-0.2
GO04				eS	Sb	02 10 05.5	-1.5
GO04				IAML		02 10 08.7	
	comp=N,1µm,0.1s						
GO04	Tololo Observa	1.25	33	i P	Pn	02 09 50.0	-0.7
CO05	La Serena	1.33	13	⇑eP	Pn	02 09 52.5	+0.8
CO05				eS	Sb	02 10 09.6	+0.4
CO05				IAML		02 10 18.1	
	comp=N,318nm,0.2s						
VA06	Catapilco	1.36	170	eP	Pn	02 09 52.3	+0.3
VA06				eS	Sb	02 10 09.6	-0.3
VA06				IAML		02 10 15.4	
	comp=E,490nm,0.5s						
VA03	San Esteban	1.77	150	eP	Pn	02 09 58.0	+0.2
VA03				eS	Sn	02 10 19.4	-1.0
VA03				IAML		02 10 25.5	
	comp=N,242nm,0.4s						
VA03				IAML		02 10 26.4	
	comp=E,268nm,0.4s						
VA03	San Esteban	1.77	150	i P	Pn	02 09 58.0	+0.2
ROCH	El Roble	1.81	165	eP	Pn	02 09 59.1	+0.7
ROCH				⇑eP	Pn	02 09 59.1	+0.7
ROCH				⇓eS	Sn	02 10 21.1	-0.5
ROCH				eS	Sb	02 10 21.6	-1.6
ROCH				IAML		02 10 25.3	
	comp=N,288nm,0.4s						
ROCH				IAML		02 10 25.9	
	comp=N,201nm,0.5s						
ROC1	El Roble	1.81	165	i P	Pn	02 09 59.0	+0.5
RTLS	Leoncito	2.04	107	i P	Pn	02 10 03.0	+1.4
PEL	Peldehue	2.06	159	eP	Pn	02 10 02.7	+1.0
PEL				eS	Sn	02 10 26.7	-0.9
PEL				IAML		02 10 31.9	
	comp=E,169nm,0.3s						
PEL	Peldehue	2.06	159	i P	Pb	02 10 05.0	+0.4
MT02	Curacav	2.06	170	⇑eP	Pn	02 10 02.2	+0.5
MT02				eS	Sn	02 10 28.0	+0.4
MT02	Curacav	2.06	170	i P	Pn	02 10 03.0	+1.2
AROD	Rodeo	2.10	60	i P	Pb	02 10 05.0	-0.4
AUSP	Uspallata	2.12	119	i P	Pb	02 10 05.0	-0.7
ACCO	Cerro Coronel	2.26	74	i P	Pb	02 10 07.0	-1.1
MT05	Renca	2.28	162	i P	Pb	02 10 08.0	-0.3
LCO	Las Campanas	2.33	19	⇑eP	Pn	02 10 06.0	+0.3
LCO				eS	Sn	02 10 33.8	-0.7
LCO	Las Campanas	2.33	19	i P	Pn	02 10 07.0	+1.3
ZON	Zonda	2.51	98	i P	Pb	02 10 12.0	-0.2
MT01	Popeta	2.65	174	i P	Pn	02 10 11.0	+1.2
RTCV	Cerro Valdivia	2.68	105	i P	Pb	02 10 14.0	-1.1
ASAL	Salagasta	2.71	121	i P	Pb	02 10 14.0	-1.6
ARCO	CERRO ARCO	2.77	126	i P	Pb	02 10 17.0	+0.3
AAGR	Agrelo	2.99	129	i P	Pb	02 10 19.0	-1.4
AC04	Llanos de Chal	3.04	9	i P	Pn	02 10 16.0	+0.8
BO01	Tunca	3.19	173	i P	Pn	02 10 18.0	+0.8
BO02	Sierra Bellavi	3.62	169	i P	Pn	02 10 26.0	+2.7
GO05	Huala	3.79	184	i P	Pn	02 10 25.0	-0.5
VCA	Vinchina	3.84	51	eP	Pn	02 10 29.8	+3.5
ACLC	CERRO LA CRUZ	4.39	67	i P	Pn	02 10 35.0	+1.1
RFA	San Rafael	4.40	144	i P	Pn	02 10 38.0	+4.0
APLL	PUNTA DE LOS L	4.43	81	i P	Pn	02 10 36.0	+1.7
AC02	Maricunga	4.87	27	i P	Pn	02 10 43.0	+2.2
CYA	Choya	5.74	63	i P	Pn	02 10 53.0	+0.7

*JMA **22** 02:31:21.6±0.4, 31°.19N×128°.68E, h16^{km}±4^{km}, M3.8*

*NIED **22** 02:31:21.6, 31°.19N×128°.68E, h16^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.63; $M_{\theta\theta}$-1.62; $M_{\phi\phi}$2.25; $M_{r\theta}$-1.55; $M_{\theta\phi}$2.32; $M_{\phi r}$-0.21; Fault plane solution: $M_0$3.45000×10^{14} NP1:ϕ_s67.00000°, δ80.00000°, λ-28.00000°. NP2:ϕ_s162.00000°, δ62.00000°, λ-169.00000°.*

ISC 22 02:31:23.4±2.6**, 31°.17N**±0°.09×**128°.7E**±0°.1**, h35^{km}, n9, σ0^{s}.95**/10**, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	1.00	60	P	Pn	02 31 39.9	-1.2
JSJ				S	Sn	02 31 53.0	-1.0
JKC	Kuchinoerabu	1.47	118	P	Pn	02 31 47.5	+0.1
JFU	Fukue jima 2	1.48	2	P	Pn	02 31 47.7	+0.1
JSU	Suzuyama	1.54	77	P	Pn	02 31 48.9	+0.5
JYAK	Yakushimahirau	1.82	120	P	Pn	02 31 52.0	-0.2
JTN	Tanegashima 3	2.03	104	P	Pn	02 31 55.6	+0.5
JMTN	Minamitane	2.04	112	P	Pn	02 31 55.8	+0.4
JTZ	Takazaki	2.17	70	P	Pn	02 31 58.3	+1.3
JIU3	Izumi3	2.26	52	P	Pn	02 31 59.6	+1.2

SJA 22 02:33:43.0, 25°.14S×68°.37W, h10^{km}, ML4.1, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AC02	Maricunga	1.82	202	i P	Pn	02 34 15.0	+0.1
PB15	IPOC Station P	2.17	332	i P	Pn	02 34 20.0	+0.6
PB15				eS	Sn	02 34 39.3	-7.2
LVC	Limon Verde	2.57	349	i P	Pn	02 34 24.0	-1.0
LVC				eS	Sn	02 34 50.9	-5.6
PB06	IPOC Station P	2.66	335	i P	Pn	02 34 26.0	-0.1
PB06				eS	Sn	02 34 53.7	-4.8
PB05	IPOC Station P	2.83	323	i P	Pn	02 34 27.0	-1.4
PB09	IPOC Station P	3.42	346	i P	Pn	02 34 36.0	-0.6
RTLS	Leoncito	6.68	187	i P	Pn	02 35 20.0	-1.6
ASAL	Salagasta	7.43	183	i P	Pn	02 35 31.0	-0.7

*IDC **22** 02:39:43.9±1.0, 38°.59N×20°.55E, h0^{km}, mb3.7/9, mb1 3.8/17, mb1mx3.6/45, mbtmp3.7/17, ML3.5/6, MS2.9/8, Ms1 3.0/8, ms1mx2.7/45, Error ellipse: s-maj=19.0km s-min=16.4km az=58.0*

*BEO **22** 02:39:44.9±3.2, 38°.15N×20°.07E, h41^{km}±2^{km}, ML3.8/10*

*ATH **22** 02:39:45.6, 38°.46N×20°.47E, h12^{km}±1^{km}, ML3.7/17, Error ellipse: s-maj=1.9km s-min=0.7km az=294.0*

ISC 22 02:39:45.3±0.7**, 38°.48N**±0°.02×**20°.45E**±0°.03**, h14^{km}**±5^{km}**, n87, σ1^{s}.60**/109**, mb3.8**/9**, MS2.7**/5**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FSK	Fiskardo	0.09	103	P	Pg	02 39 47.6	-0.7
FSK				S	Sg	02 39 49.6	-0.8
FSK				AML	AML	02 39 50.1	
FSK				AML	AML	02 39 50.1	
	comp=N,96529µm,0.3s						
EVGI	Lefkada island	0.21	49	P	Pg	02 39 50.1	-0.1
EVGI				S	Sg	02 39 54.2	+0.9
KEF4	Livadi, Kephal	0.22	185	P	Pg	02 39 49.6	-0.6
KEF4				S	Sg	02 39 53.4	-0.2
DRAG	Dragano-Lefkad	0.23	26	P	Pg	02 39 49.8	-0.5
DRAG				S	Sg	02 39 54.8	+1.1
DMLN	Damoulianata-K	0.25	194	P	Pg	02 39 50.1	-0.6
DMLN				S	Sg	02 39 54.5	+0.2
LXRA	Lixouri, Kepha	0.28	182	P	Pg	02 39 50.6	-0.6
LXRA				S	Sb	02 39 55.5	-1.1
KEF3	Kipouria, Keph	0.29	196	P	Pg	02 39 50.4	-1.0
KEF3				S	Sg	02 39 54.7	-0.8
VLS	Valsamata	0.32	160	P	Pg	02 39 51.1	-0.8
VLS				S	Sb	02 39 56.4	-1.5
VLS				AML	AML	02 39 59.0	
	comp=E,29116µm,0.2s						
VLS				AML	AML	02 39 59.6	
	comp=N,39237µm,0.3s						
PSDA	Pessada-Kefalo	0.38	164	P	Pg	02 39 52.2	-0.8
PSDA				S	Sb	02 39 58.4	-1.2
VTN	Vitineika	0.81	134	P	Pb	02 40 00.8	-0.3
LTHK	Lithakia	0.83	158	P	Pg	02 39 59.8	-1.6
LTHK				AML	AML	02 40 18.8	
	comp=N,12774µm,0.7s						
LTHK				AML	AML	02 40 19.6	
	comp=E,11242µm,0.5s						
PVO	Paravola	0.85	81	P	Pb	02 40 01.8	-0.2
PVO				AML	AML	02 40 22.1	
	comp=N,8854µm,0.6s						
PVO				AML	AML	02 40 22.7	
	comp=E,7625µm,0.5s						
IGT	Igoumenitsa	1.05	355	P	Pb	02 40 04.8	-0.6
IGT				AML	AML	02 40 25.5	
	comp=E,2886µm,0.7s						
IGT				AML	AML	02 40 26.4	
	comp=N,1937µm,0.5s						
DRO	Drossia	1.12	118	P	Pb	02 40 06.0	-0.6
DRO				AML	AML	02 40 29.1	
	comp=E,16438µm,0.6s						
DRO				AML	AML	02 40 37.8	
	comp=N,8141µm,0.9s						
EFP	Efpalio	1.15	92	P	Pb	02 40 06.1	-0.8
EFP				AML	AML	02 40 29.7	
	comp=E,28079µm,0.7s						
EFP				AML	AML	02 40 30.0	
	comp=N,8754µm,0.8s						
ANX	Ano Chora	1.16	84	P	Pn	02 40 06.8	-0.4
ANX				AML	AML	02 40 30.9	
	comp=E,9704µm,0.7s						
ANX				AML	AML	02 40 32.6	
	comp=N,9625µm,0.6s						
JAN	Janina	1.22	15	P	Pg	02 40 09.0	+0.2
JAN				AML	AML	02 40 29.5	
	comp=E,3958µm,0.6s						
JAN				AML	AML	02 40 35.9	
	comp=N,3002µm,0.7s						
LAKA	Lakka	1.23	101	P	Pn	02 40 07.3	-0.8
LAKA				AML	AML	02 40 31.4	
	comp=N,24639µm,0.8s						
LAKA				AML	AML	02 40 32.0	
	comp=E,21243µm,0.7s						
SERG	Sergoula	1.26	93	P	Pn	02 40 08.2	-0.4
SERG				AML	AML	02 40 32.5	
	comp=E,13411µm,1.0s						
SERG				AML	AML	02 40 34.4	
	comp=N,6337µm,0.5s						
TRIZ	Trizonia	1.28	95	P	Pn	02 40 08.4	-0.4
KASA	Kassiopi	1.33	343	P	Pg	02 40 11.0	+0.2
MAKR	Makrakomi, Fth	1.42	67	P	Pg	02 40 12.0	-0.6
MAKR				AML	AML	02 40 38.7	
	comp=E,2419µm,1.2s						
MAKR				AML	AML	02 40 51.2	
	comp=N,2527µm,1.5s						
AGG	Agios Georgios	1.57	69	P	Pb	02 40 13.8	-0.3
AGG				AML	AML	02 40 46.5	
	comp=N,2046µm,0.7s						
AGG				AML	AML	02 40 50.5	
	comp=E,2475µm,1.0s						
GUR	Goura	1.59	109	P	Pn	02 40 13.0	-0.1
THL	Klokotos Trika	1.63	48	P	Pg	02 40 15.8	-0.8
ITM	Ithomi	1.75	138	P	Pb	02 40 17.1	-0.1
ITM				AML	AML	02 40 54.5	
	comp=E,1687µm,1.1s						
ITM				AML	AML	02 40 59.0	
	comp=N,2099µm,1.2s						
THAL	Thalero	1.80	104	P	Pb	02 40 17.9	-0.2
THAL				AML	AML	02 41 00.6	
	comp=N,4729µm,1.0s						
THAL				AML	AML	02 41 08.5	
	comp=E,5553µm,0.8s						
LKR	Lokris	2.01	84	P	Pb	02 40 21.3	-0.3
LKR				AML	AML	02 41 01.9	
	comp=N,832µm,0.5s						
LKR				AML	AML	02 41 03.7	
	comp=E,856µm,0.8s						
LTK	Loutraki	2.03	102	P	Pb	02 40 21.9	-0.1
KZN	Kozani	2.09	29	P	Pb	02 40 23.0	-0.1
VIL2	Platees	2.23	96	P	Pb	02 40 24.9	-0.6
VIL2				AML	AML	02 41 09.1	
	comp=N,1153µm,0.9s						
VIL2				AML	AML	02 41 15.8	
	comp=E,1583µm,0.7s						
OHR	Ohrid	2.64	6	ePn	Pb	02 40 30.4	-2.1
OHR				eSn	Sb	02 41 04.3	-0.5
OHR	Ohrid	2.64	6	ePn	Pb	02 40 32.1	-0.3
TIR	Tirane	2.90	351	ePn	Pn	02 40 33.4	+2.3
VAY	Valandovo	3.27	29	ePn	Pb	02 40 40.1	-3.1
VAY				eSn	Sb	02 41 19.9	-3.0
VAY	Valandovo	3.27	29	ePn	Pb	02 40 45.3	+2.2
PDG	Podgorica	4.05	347	ePn	Pn	02 40 47.8	+1.0
PRVS	Prvonek	4.21	17	ePn	Pn	02 40 52.1	+3.0
BARS	Barje	4.45	13	ePn	Pn	02 40 54.5	+2.1
TREB	Trebinje	4.52	340	ePn	Pn	02 40 53.2	-0.2
DBRK	Dubrovnik	4.54	338	ePn	Pn	02 40 53.8	+0.2
SELS	Selova	4.76	6	ePn	Pn	02 40 59.5	+2.8
IDI	Anoyia	4.78	130	Pn	Pn	02 40 57.7	+0.8
	comp=E,0.2nm,0.3s,baz=322,slow=16,SNR=1.5						
IDI				Sn	Sn	02 41 53.3	+1.1
	comp=E,3.2nm,0.3s,baz=138,slow=19,SNR=7.1						
SJES	Sjenica	4.79	356	ePn	Pn	02 40 58.5	+1.4
STON	Ston	4.86	335	ePn	Pn	02 40 57.6	-0.4
STON	Ston	4.86	335	ePn	Pn	02 40 57.3	-0.6
STON				Sn	Sn	02 41 50.4	-3.6
VAE	Valguarnera	4.87	260	Pn	Pn	02 41 01.6	+3.3
	comp=E,0.5nm,0.3s,baz=28,slow=16,SNR=1.5						
VAE				Sn	Sn	02 41 57.9	+3.4
	comp=E,3.5nm,0.3s,baz=114,slow=20,SNR=6.0						
LSTV	Lastovo	5.07	329	ePn	Pn	02 40 59.5	-1.3
IVAS	Ivanjica	5.10	358	ePn	Pn	02 41 02.2	+0.9
GRUS	Gruza	5.41	2	ePn	Pn	02 41 06.0	+0.5
MAKA	Makarska	5.46	333	ePn	Pn	02 41 06.0	-0.2
ZAGS	Zajecar	5.50	14	ePn	Pn	02 41 08.0	+1.3
HVAR	Hvar	5.59	328	ePn	Pn	02 41 08.4	+0.4
RICI	Ricice	5.60	334	ePn	Pn	02 41 07.8	-0.4
DIVS	Divibare	5.62	357	ePn	Pn	02 41 08.5	-0.1
KUBS	Kucevo	6.00	8	ePn	Pn	02 41 15.0	+1.4
KIJV	Kijevo	6.30	332	ePn	Pn	02 41 17.8	0.0
ZIRJ	Zirje	6.32	326	ePn	Pn	02 41 17.2	-0.8
MORI	Morici	6.46	328	ePn	Pn	02 41 20.1	+0.1
MORI				Sn	Sn	02 42 31.5	-1.9
UDBI	Udbina	6.99	331	ePn	Pn	02 41 27.7	+0.4
NVLJ	Novalja	7.38	327	ePn	Pn	02 41 33.0	+0.5
OBKA	Obir	9.13	333	ePn	Pn	02 41 57.7	+1.1
	comp=E,0.5nm,0.2s						
OBKA				Sn	Sn	02 43 36.5	-2.7
	comp=E,9.0nm,0.6s						
KEST	Kesra	9.28	256	Pn	Pn	02 42 01.5	+2.7
	comp=E,0.2nm,0.3s,baz=25,slow=14,SNR=2.1						
KEST				Sn	Sn	02 43 41.4	-1.7
	comp=E,0.1nm,0.3s,baz=290,slow=16,SNR=1.5						
ARSA	Arzberg	9.48	339	ePn	Pn	02 42 05.1	+3.7
	comp=E,2.8nm,0.8s						
ABTA	Abfaltersbach	10.12	327	ePn	Pn	02 42 11.3	+1.1
	comp=E,2.6nm,0.5s						
ABTA				eSn	Sn	02 44 00.5	-3.0
	comp=E,4.6nm,0.7s						
BRTR	Keskin Array B	10.33	79	LR	LR	02 47 18.5	
	comp=E,48nm,20.2s,baz=276,slow=44						
MOA	Molln	10.39	336	ePn	Pn	02 42 13.8	-0.1
	comp=E,1.0nm,0.3s						
WTTA	Wattenberg	10.89	326	ePn	Pn	02 42 22.4	+1.4
	comp=E,0.5nm,0.3s						
WTTA				eSn	Sn	02 44 17.5	-5.2
	comp=E,6.1nm,0.7s						
WATA	Walderalm	10.98	327	ePn	Pn	02 42 22.2	+0.2
	comp=E,1.8nm,0.5s						
WATA				eSn	Sn	02 44 23.2	-1.4
	comp=E,1.9nm,0.3s						
VRAC	Vranov	11.17	347	Pn	Pn	02 42 23.6	-0.9
	comp=E,0.3nm,0.3s,baz=192,slow=16,SNR=4.9						
VRAC				LR	LR	02 47 56.0	
	comp=E,70nm,18.9s,baz=174,slow=44						
MOTA	Moosalm	11.19	325	ePn	Pn	02 42 26.0	+1.0
	comp=E,3.5nm,0.6s						
MOTA				eSn	Sn	02 44 28.8	-1.1
	comp=E,4.5nm,0.6s						
DAVOX	Davos/Dischmat	11.37	320	Pn	Pn	02 42 27.9	+0.5
	comp=E,0.1nm,0.3s,baz=142,slow=18,SNR=1.8						
DAVOX				Sn	Sn	02 44 30.2	-4.0
	comp=E,0.2nm,0.3s,baz=34,slow=15,SNR=2.0						
DAVOX				LR	LR	02 49 10.1	
	comp=E,43nm,19.0s,baz=90,slow=50						
GERES	GERESS Array B	11.45	337	Pn	Pn	02 42 27.8	-0.6
	comp=E,0.2nm,0.3s,baz=151,slow=14,SNR=2.8						
GERES				Sn	Sn	02 44 30.0	-6.1
	comp=E,0.2nm,0.3s,baz=146,slow=21,SNR=3.2						
RETA	Reutte	11.45	325	ePn	Pn	02 42 29.8	+1.4
	comp=E,0.8nm,0.5s						
RETA				eSn	Sn	02 44 34.8	-1.4
	comp=E,2.8nm,0.6s						
KHC	Kasperske Hory	11.74	337	ePN	Pn	02 42 30.3	-2.1
EIL	Elat	14.87	122	Pn	Pn	02 43 16.4	+1.2
	comp=E,0.1nm,0.3s,baz=315,slow=1.4,SNR=1.6						
EIL				Sn	Sn	02 45 48.1	-12
	comp=E,0.2nm,0.3s,baz=230,slow=20,SNR=2.0						
ESDC	Sonseca Array	18.98	281	P	Pn	02 44 08.3	+1.2

	comp=E,0.0nm,0.3s,baz=73,slow=11,SNR=1.7						
HFS	Hagfors	22.09	351	P	P	02 44 39.9	0.0
	comp=E,2.7nm,0.7s,baz=146,slow=10,SNR=5.9						
HFS				LR	LR	02 53 46.0	
	comp=E,30nm,18.4s,baz=237,slow=38						
EKA	Eskdalemuir Ar	23.15	324	P	P	02 44 51.7	+0.7
	comp=E,1.7nm,0.9s,baz=119,slow=15,SNR=2.0						
FINES	FINESS Array B	23.25	7	P	P	02 44 52.4	+0.4
	comp=E,7.5nm,1.0s,baz=183,slow=11,SNR=4.7						
FINES				LR	LR	02 53 48.2	
	comp=E,33nm,21.8s,baz=255,slow=36						
NOA	NORSAR Array B	23.31	349	P	P	02 44 52.8	+0.1
	comp=E,0.4nm,0.6s,baz=154,slow=11,SNR=2.0						
NOA				LR	LR	02 55 45.2	
	comp=E,26nm,18.5s,baz=170,slow=41						
TORD	Torodi Ar. Bea	30.23	218	P	P	02 45 56.1	+0.4
	comp=E,0.7nm,1.0s,baz=24,slow=9.2,SNR=3.6						
ARCES	ARCESS Array B	31.23	3	P	P	02 46 03.4	-0.7
	comp=E,1.3nm,0.8s,baz=190,slow=9.1,SNR=1.3						
ARCES				LR	LR	02 58 27.0	
	comp=E,17nm,19.3s,baz=285,slow=36						
MKAR	Makanchi Array	45.19	59	P	P	02 48 01.6	-0.1
	comp=E,0.4nm,0.5s,baz=274,slow=7.5,SNR=4.7						
ZALV	Zalesovo Beam	45.53	48	P	P	02 48 03.7	-0.5
	comp=E,0.9nm,0.5s,baz=271,slow=9.0,SNR=5.9						
CMAR	Chiang Mai Arr	69.90	82	LR	LR	03 26 24.9	
	comp=E,32nm,19.3s,baz=186,slow=40						
YKA	Yellowknife Ar	73.09	340	P	P	02 51 15.7	+1.0
	comp=E,1.4nm,0.9s,baz=40,slow=6.7,SNR=2.0						

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*IDC **22** 02:43:58.8±2.2, 6°.29S×151°.40E, h0^{km}, mb3.5/3, mb1 3.9/4, mb1mx3.5/34, mbtmp3.6/4, ML2.0/1, MS3.6/1, Ms1 3.6/1, ms1mx2.6/27, Error ellipse: s-maj=134.5km s-min=27.6km az=129.0*

ISC 22 02:44:05.1±2.4**, 6°.1S**±0°.9×**151°.0E**±0°.9**, h35**^{km}**, n6,** σ**1**^{s}**.51**/6**, mb3.5**/3**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	5.05	229	Pn	Pn	02 45 20.2	+1.9
	3.2nm,0.3s,baz=50,slow=17,SNR=6.2						
PMG				Sn	Sn	02 46 14.2	-1.3
	6.0nm,0.3s,baz=175,slow=21,SNR=3.1						
WRA	Warramunga Arr	21.27	228	P	P	02 48 47.7	-0.9
	1.0nm,0.5s,baz=54,slow=11,SNR=5.6						
ASAR	Alice Springs	24.02	221	P	P	02 49 16.1	-0.8
	0.6nm,0.5s,baz=60,slow=8.7,SNR=13						
URZ	Urewera	39.85	147	LR	LR	03 06 20.7	
	comp=Z,76nm,18.5s,baz=211,slow=34						
ILAR	Eielson Array	84.00	22	P	P	02 56 31.3	-0.2
	0.5nm,0.8s,baz=249,slow=4.7,SNR=4.1						
TORD	Torodi Ar. Bea	148.95	285	PKPbc	PKPbc	03 03 50.4	0.0
	0.3nm,0.6s,baz=91,slow=2.5,SNR=1.4						

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*IDC **22** 02:57:49.0±0.6, 8°.63S×157°.67E, h0^{km}, mb4.3/15, mb1 4.5/17, mb1mx4.4/35, mbtmp4.3/17, ML3.9/2, MS3.6/9, Ms1 3.6/9, ms1mx3.3/32, Error ellipse: s-maj=17.0km s-min=16.4km az=131.0*

*NEIC **22** 02:57:53.2±1.3, 8°.8S±0°.1×157°.78E±0°.02, h29^{km}±5^{km}, mb4.9/43, Error ellipse: s-maj=18.7km s-min=2.9km az=186.0*

ISC 22 02:57:50.0±0.4**, 8°.81S**±0°.09×**157°.71E**±0°.06**, h10**^{km}**, n88,** σ**1**^{s}**.36**/74**, mb4.9**/46**, MS3.5**/7**, 9C-7D, Fault plane solution: NP1:**ϕ_s226.56696°**,** δ39.43593°**,** λ8.17390°. **NP2:**ϕ_s130.23666°**,** δ84.81835°**,** λ129.14920°. **Principal axes:** T Plg37.5884°, Azm74.5262°**;** N Plg38.9588°, Azm306.0316°**;** P Plg28.8333°, Azm189.5993°**;**

Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	2.29	106	Pn	Pn	02 58 28.4	+0.6
	98nm,0.3s,baz=250,slow=4.4,SNR=13						
HNR				Sn	Sb	02 59 00.3	+0.5
	380nm,0.3s,baz=178,slow=7.8,SNR=7.2						
HNR				LR	LR	02 59 25.4	
	comp=Z,1μm,20.6s,baz=254,slow=40						
HNR	Honiara	2.29	106		Pn	02 58 28.6	+0.7
PMG	Port Moresby	10.44	266	LR	LR	03 04 12.1	
	comp=Z,763nm,18.6s,baz=124,slow=37						
PMG	Port Moresby	10.44	266	Pn	Pn	03 00 23.0	+3.1
SANVU	Saraoutou	11.38	126	Pn	Pn	03 00 32.4	-0.3
COEN	Coen	15.14	249	Pn	P	03 01 26.6	-2.7
DZM	Mont Dzumac	15.63	148	Pn	P	03 01 32.7	-2.1
	0.2nm,0.3s,baz=8.5,slow=12,SNR=6.2						
DZM				LR	LR	03 06 09.3	
	comp=Z,233nm,21.8s,baz=288,slow=32						
DZM	Mont Dzumac	15.63	148	*e*P	Pn	03 01 32.0	+1.4
	64nm,1.3s						
DZM				*e*LR	LR	03 05 04.8	
	comp=Z,357nm,25.9s						
DZM	Mont Dzumac	15.63	148	Pn	Pn	03 01 30.1	-0.5
ONTNC	Ouen Toro	15.83	149	Pn	Pn	03 01 31.6	-1.5
WR0	Warramunga Arr	24.99	241	P	P	03 03 14.1	-0.1
WR0				IAmb	IAmb	03 03 17.0	
	comp=Z,24nm,0.9s						
WB0	Warramunga Arr	25.05	242	P	P	03 03 14.7	0.0
WB0				IAmb	IAmb	03 03 16.2	
	comp=Z,22nm,0.8s						
WRAB	Tennant Creek	25.15	241	P	P	03 03 15.2	-0.4
WRAB				IAmb	IAmb	03 03 17.1	
	comp=Z,26nm,0.8s						
WB2	Warramunga Arr	25.15	241	P	P	03 03 15.8	+0.2
WB2				IAmb	IAmb	03 03 17.2	
	comp=Z,22nm,0.7s						
WRA	Warramunga Arr	25.16	241	P	P	03 03 16.2	+0.5
	comp=Z,21nm,0.7s,baz=67,slow=9.2,SNR=129						
WRA				LR	LR	03 13 00.0	
	comp=Z,149nm,18.9s,baz=75,slow=36						
GUMO	Guam	25.65	330	LR	LR	03 11 51.6	
	comp=Z,67nm,21.2s,baz=128,slow=33						
ASAR	Alice Springs	27.15	234	P	P	03 03 33.5	-0.1
	comp=Z,2.7nm,0.8s,baz=66,slow=8.8,SNR=27						
ASAR				PcP	PcP	03 06 54.9	+0.5
	comp=Z,0.4nm,0.7s,baz=64,slow=4.3,SNR=2.8						
ASAR	Alice Springs	27.15	234	P	P	03 03 32.3	-1.4
STKA	Stephens Creek	27.40	211	P	P	03 03 37.8	+1.9
	comp=Z,5.2nm,0.7s,baz=34,slow=14,SNR=15						
STKA	Stephens Creek	27.40	211	P	P	03 03 36.7	+0.9
KNRA	Kununurra	29.08	254	P	P	03 03 51.0	+0.1
KNRA				IAmb	IAmb	03 03 52.5	
	comp=Z,18nm,0.8s						
BBOO	Buckleboo	31.17	217	P	P	03 04 09.3	0.0
SANI	Sanana	32.27	280	P	P	03 04 25.1	+5.9
FITZ	Fitzroy Crossi	32.48	250	P	P	03 04 20.9	-0.1
	comp=Z,2.2nm,0.6s,baz=87,slow=12,SNR=3.9						
EDFI	Ende, Flores	35.59	267	P	P	03 04 45.0	-3.2
	comp=Z,12nm,1.4s						
KAPI	Kappang	37.86	273	P	P	03 05 07.9	+0.5
	comp=Z,5.9nm,0.8s,baz=142,slow=8.2,SNR=5.5						
KAPI	Kappang	37.86	273	P	P	03 05 07.4	0.0
KAPI				IAmb	IAmb	03 05 08.8	
	comp=Z,16nm,1.1s						
TOLI2	Tolitoli	38.10	283	P	P	03 05 08.1	-1.3
PSA00	Pilbara Seismi	38.57	246	P	P	03 05 12.6	-0.8
PSA00				IAmb	IAmb	03 05 14.3	
	comp=Z,14nm,1.1s						
JAGI	Jajag, Banyuwa	43.05	267	P	P	03 05 47.8	-2.6
MTKI	Muara Teweh, K	43.33	278	P	P	03 06 04.8	+12
PCJI	Pacitan	46.01	267	P	P	03 06 10.6	-3.4
	comp=Z,74nm,0.9s						
JMN	Monobe	47.98	333	P	P	03 06 28.3	-0.9
INU	Inuyama	48.08	337	P	P	03 06 29.2	-0.6
INU				IAmb	IAmb	03 06 30.3	
	comp=Z,18nm,1.0s						
KSM	Kuching	48.33	280	P	P	03 06 31.7	-0.5
KSM				IAmb	IAmb	03 06 33.2	
	comp=Z,11nm,0.9s						
MJAR	Matsushiro Arr	48.70	339	P	P	03 06 32.8	-1.9
	comp=Z,6.2nm,1.2s,baz=166,slow=9.3,SNR=5.1						
TPI	Tanjungpandan	50.13	274	P	P	03 06 47.9	+1.9
PPT	Papeete	51.91	105	LR	LR	03 26 01.3	
	comp=Z,45nm,18.4s,baz=245,slow=32						
PPT2	Papeete2	51.91	105	*e*LR	LR	03 22 06.8	
	comp=Z,78nm,22.2s						
MDSI	Maura Dua	53.31	271	P	P	03 07 09.4	-0.4
KSRS	Korea Array	53.81	331	P	P	03 07 12.4	-0.5
	comp=Z,3.6nm,0.9s,baz=142,slow=6.6,SNR=6.4						
KSAR	Wonju Array Be	53.82	331	P	P	03 07 13.2	+0.1
ASAJ	Asahikawa	54.43	347	LR	LR	03 29 35.6	
	comp=Z,102nm,19.4s,baz=119,slow=35						
NJ2	Nanjing	55.03	319	*e*P	P	03 07 24.4	+2.4
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
USRK	Ussuriysk Ar.	57.68	338	P	P	03 07 39.7	-0.9
	comp=Z,4.8nm,0.9s,baz=152,slow=6.5,SNR=5.7						
USRK	Ussuriysk Ar.	57.68	338	P	P	03 07 40.6	0.0
MNSI	Mandailing Nat	58.69	276	P	P	03 07 46.3	-2.0
	comp=Z,3μmcomp=Z,57nm,0.5s						
KMI	Kunming	63.26	304	⇑P	P	03 08 20.8	+1.3
KMI				pP	sP	03 08 25.8	+2.1
KMI				pmax	pmax		
	comp=Z,12nm,0.8s						
CM31	Chiang Mai Arr	63.99	295	P	P	03 08 24.4	+0.3
CM31				IAmb	IAmb	03 08 25.8	
	comp=Z,9.1nm,0.8s						
CMAR	Chiang Mai Arr	63.99	295	P	P	03 08 24.9	+0.7
	comp=Z,5.5nm,0.8s,baz=119,slow=5.2,SNR=20						
CHTO	Chiang Mai	64.11	296	P	P	03 08 24.5	-0.4
CHTO				IAmb	IAmb	03 08 26.3	
	comp=Z,10nm,1.1s						
HHC	Hu-ho-hao-te	65.15	323	*e*P	P	03 08 32.5	+1.1
HHC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,100nm,5.2s						
LZH	Lanzhou	67.49	315	*e*P	P	03 08 46.4	-0.2
LZH				pP	sP	03 08 55.1	+4.2
LZH				sP	pP	03 08 58.5	+8.7
LZH				pmax	pmax		
	comp=Z,23nm,1.0s						
VNDA	Vanda	68.72	179	P	P	03 08 57.0	+3.6
	comp=Z,0.4nm,0.8s,baz=330,slow=7.5,SNR=1.7						
VNDA				LR	LR	03 34 36.1	
	comp=Z,55nm,19.3s,baz=341,slow=32						
GTA	Gaotai	71.90	316	*e*P	P	03 09 14.4	+0.7
GTA				pP	sP	03 09 22.8	+4.8
GTA				sP	PcP	03 09 26.8	-5.7
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ULN	Ulaanbaatar	71.98	327	P	P	03 09 14.2	+0.2
SONM	Songino Array	72.32	326	P	P	03 09 16.2	+0.2
	comp=Z,2.2nm,0.9s,baz=137,slow=6.0,SNR=10.0						
SONM	Songino Array	72.32	326	P	P	03 09 16.0	-0.1
SHL	Shillong	72.53	300	P	P	03 09 17.7	-0.2
L19K	White Mountain	79.67	21	IAmb	IAmb	03 09 59.5	
	comp=Z,17nm,0.9s						
TTA	Tatalina	79.79	20	P	P	03 09 58.4	+0.1
K20K	Telida	80.73	20	IAmb	IAmb	03 10 04.7	
	comp=Z,9.3nm,0.9s						
J20K	Nowinta River	81.26	19	P	P	03 10 06.2	+0.3
J20K				IAmb	IAmb	03 10 07.5	
	comp=Z,9.7nm,0.8s						
WMQ	Urumqi	81.98	317	*e*P	P	03 10 12.1	+1.7
TRF	Thorofare Moun	82.10	21	IAmb	IAmb	03 10 11.9	
	comp=Z,12nm,0.8s						
IMAR	Indian Mountai	82.59	18	P	P	03 10 13.1	+0.1
I21K	Tanana	82.62	19	IAmb	IAmb	03 10 14.4	
	comp=Z,10.0nm,0.8s						
MLY	Manley	82.93	20	IAmb	IAmb	03 10 15.5	
	comp=Z,6.5nm,0.8s						
NEA2	Nenana	83.22	20	IAmb	IAmb	03 10 16.3	
	comp=Z,11nm,0.9s						
CCB	Clear Creek Bu	83.69	21	IAmb	IAmb	03 10 18.5	
	comp=Z,6.7nm,0.9s						
MDM	Murphy Dome	83.73	20	IAmb	IAmb	03 10 18.9	
	comp=Z,7.0nm,1.0s						
COLA	College	83.81	20	P	P	03 10 18.1	-1.1
IL31		84.09	21	P	P	03 10 19.4	-1.2
IL31				IAmb	IAmb	03 10 21.1	
	comp=Z,6.2nm,0.9s						
ILAR	Eielson Array	84.09	21	P	P	03 10 19.6	-1.2
	comp=Z,4.1nm,0.9s,baz=256,slow=4.7,SNR=26						
SCRK	Sand Creek	84.69	22	IAmb	IAmb	03 10 25.1	
	comp=Z,15nm,1.2s						
BCAR	Beaver Creek A	85.06	23	P	P	03 10 26.4	+0.7
MKAR	Makanchi Array	86.54	318	P	P	03 10 32.8	-0.6
	comp=Z,1.2nm,0.6s,baz=99,slow=5.5,SNR=12						
ZALV	Zalesovo Beam	87.19	326	P	P	03 10 33.5	-2.9
	comp=Z,0.3nm,0.4s,baz=124,slow=4.9,SNR=2.4						
ZALV				LR	LR	03 48 10.8	
	comp=Z,15nm,22.0s,baz=46,slow=35						
NVAR	Mina Array Bea	90.74	51	P	P	03 10 54.6	+0.8
	comp=Z,1.5nm,0.9s,baz=242,slow=7.6,SNR=7.7						
KVN	Kaiserville	91.01	51	P	P	03 10 55.1	+0.1
DRK	Karamyk	92.40	309	P	P	03 11 01.5	0.0
SPR3	Spring Creek 3	93.89	51	P	P	03 11 07.3	-1.2
SPR3				IAmb	IAmb	03 11 13.2	
	comp=Z,5.0nm,1.3s						
PDAR	Pinedale Array	97.91	48	P	P	03 11 26.9	+0.3
	comp=Z,0.1nm,0.4s,baz=237,slow=3.0,SNR=1.9						
MEM	Membach	132.21	336	*d*PKPdf	PKPdf	03 17 02.2	-2.0
BCLA	Clavier	132.64	336	*d*PKPdf	PKPdf	03 17 03.7	-1.4
BDFB	Brasilia	144.79	134	PKP	PKPdf	03 17 29.2	+0.8
	comp=Z,2.3nm,0.6s,baz=210,slow=2.8,SNR=4.1						
BDFB	Brasilia	144.79	134		PKPab	03 17 25.8	-1.4
TORD	Torodi Ar. Bea	156.07	283	PKPab	PKPab	03 18 13.1	-0.1
	comp=Z,1.4nm,1.1s,baz=78,slow=4.5,SNR=4.4						

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*IDC **22** 02:57:56.8±2.1, 0°.73N×127°.10E, h0^{km}, mb3.7/3, mb1 4.0/3, mb1mx3.5/35, mbtmp3.7/3, MS4.0/2, Ms1 4.0/2, ms1mx2.6/50 Error ellipse: s-maj=166.4km s-min=25.4km az=66.0*

*DJA **22** 02:57:58.0±0.3, 1°N±2°×12°7E±°, h10^{km}, M3.3/6, MLv3.3/6*

ISC 22 02:57:58.3±1.8**, 0°.9N**±0°.1×**127°.3E**±0°.2**, h11**^{km}±9^{km}**, n8,** σ**1**^{s}**.15**/9**, mb3.8**/3**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.18	154	P	Pg	02 58 01.7	-0.6
TNTI				S	Sg	02 58 05.9	+0.8
LBMI	Labuha	1.58	172	P	Pn	02 58 26.8	+0.5
LBMI				S	Sb	02 58 48.6	+1.1
SANI	Sanana	3.24	204	P	Pn	02 58 48.5	-0.6
KMSI	Cibinong	3.33	264	P	Pn	02 58 50.6	+0.3
WRA	Warramunga Arr	21.87	162	P	P	03 02 50.1	-1.3
	1.8nm,0.6s,baz=340,slow=11,SNR=14						
ASAR	Alice Springs	25.29	166	P	P	03 03 23.8	-1.2
	1.6nm,0.7s,baz=344,slow=9.4,SNR=20						
ASAR				LR	LR	03 15 24.7	
	comp=Z,82nm,18.7s,baz=201,slow=42						
MKAR	Makanchi Array	60.16	326	P	P	03 08 06.9	+0.7
	0.6nm,0.8s,baz=117,slow=8.3,SNR=6.0						
KIRV	Kirov	82.89	329	LR	LR	03 49 53.1	
	comp=Z,324nm,21.8s,baz=257,slow=38						

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*IDC **22** 03:01:23.2±1.6, 30°.50S×71°.89W, h0^{km}, mb3.9/3, mb1 3.9/5, mb1mx3.7/17, mbtmp3.8/5, ML3.5/2, Error ellipse: s-maj=59.5km s-min=31.5km az=123.0*

*NEIC **22** 03:01:26.9±2.1, 30°.57S±0°.05×71°.93W±0°.09, h23^{km}±11^{km}, mb4.4/1, ML4.0(GUC), Error ellipse: s-maj=11.4km s-min=7.0km az=103.0*

*GUC **22** 03:01:28.5±0.6, 30°.66S×71°.60W, h40^{km}±2^{km}, ML4.0*

ISC 22 03:01:27.0±1.3**, 30°.60S**±0°.04×**71°.88W**±0°.09**, h27**^{km}±8^{km}**, n50,** σ**1**^{s}**.36**/56**, mb3.9**/3**, 7C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.23	109	⇑*i*P	Pb	03 01 34.1	+0.9
CO06				*e*S	Sb	03 01 37.2	-0.2
CO06				IAML		03 01 38.3	
	comp=E,72μm,0.2s						
CO06	Fray Jorge	0.23	109		Pb	03 01 34.0	+0.9
CO05	La Serena	0.88	40	⇓*i*P	Pb	03 01 43.7	+0.1
CO05				*i* S	Sb	03 01 54.9	-0.1
CO05				IAML		03 01 59.1	
	comp=E,6μm,0.3s						
CO05	La Serena	0.88	40		Pb	03 01 43.6	0.0
GO04	Tololo Observa	1.03	66	⇓*i*P	Pn	03 01 45.3	-0.5
GO04				*e*S	Sb	03 01 56.0	-3.5
GO04				IAML		03 02 00.8	
	comp=N,11μm,0.4s						
GO04	Tololo Observa	1.03	66		Pn	03 01 45.3	-0.5
LCO	Las Campanas	1.89	33	⇑*e*P	Pn	03 01 58.9	+1.2
LCO				*e*S	Sn	03 02 22.3	+1.5
LCO	Las Campanas	1.89	33		Pn	03 01 58.7	+0.9
VA06	Catapilco	2.02	166	*e*P	Pn	03 02 00.0	+0.8
VA06				*e*S	Sn	03 02 24.8	+1.2
VA06				IAML		03 02 32.6	
	comp=N,1μm,0.4s						
VA01	Torpederas	2.42	175		Pn	03 02 05.4	+0.5
VA03	San Esteban	2.44	153	⇑*e*P	Pn	03 02 06.7	+1.5
VA03				*e*S	Sn	03 02 33.7	-0.5
VA03	San Esteban	2.44	153		Pn	03 02 05.9	+0.7
ROCH	El Roble	2.48	163	⇑*e*P	Pn	03 02 06.9	+1.1
ROCH				⇑*i*P	Pn	03 02 06.9	+1.1
ROCH				*e*S	Sn	03 02 35.9	+0.6
ROCH				*e*S	Sb	03 02 36.2	-5.0
ROCH				IAML		03 02 48.9	
	comp=N,759nm,0.4s						
ROCH				IAML		03 02 49.0	
	comp=N,880nm,0.4s						
AC04	Llanos de Chal	2.49	17		Pn	03 02 06.5	+0.8
MT02	Curacav	2.73	167	*e*P	Pn	03 02 09.9	+0.9
MT02				*e*S	Sn	03 02 41.4	+0.2
MT02	Curacav	2.73	167		Pn	03 02 10.8	+1.8
PEL	Peldehue	2.73	158	⇑*e*P	Pn	03 02 10.6	+1.5
PEL				*e*S	Sn	03 02 41.7	+0.4
PEL				IAML		03 02 54.3	
	comp=E,754nm,0.3s						
PEL	Peldehue	2.73	158		Pn	03 02 09.7	+0.6
ZON	Zonda	2.91	110		Pn	03 02 13.8	+2.3
MT05	Renca	2.95	161	*e*P	Pn	03 02 13.6	+1.4
MT05				*e*S	Sn	03 02 47.2	+0.5
MT05				IAML		03 03 04.4	
	comp=E,695nm,0.3s						
MT05	Renca	2.95	161		Pn	03 02 12.8	+0.6
VA05	Santo Domingo	3.06	176		Pn	03 02 13.5	0.0
MT09	Talagante	3.26	167	⇑*e*P	Pn	03 02 17.9	+1.4
MT09				*e*S	Sn	03 02 53.7	-0.7
MT09				IAML		03 03 11.5	
	comp=N,308nm,0.6s						
MT09	Talagante	3.26	167		Pn	03 02 17.6	+1.1
MT01	Popeta	3.30	171		Pn	03 02 17.1	+0.2
GO03	Copiap	3.32	26		Pn	03 02 17.9	+0.6
BO01	Tunca	3.84	170		Pn	03 02 26.9	+2.6
BO02	Sierra Bellavi	4.28	168		Pn	03 02 33.0	+2.6
GO05	Huala	4.40	180	Pn	Pn	03 02 30.9	-1.2
AC02	Maricunga	4.46	33		Pn	03 02 34.2	+0.8
PB14	IPOC Station P	6.09	13	Pn	Pn	03 02 54.6	-1.0
H03N1	Juan Fernandez	6.61	243	T	T	03 09 59.1	
	baz=71,slow=72,SNR=3815						
H03N2	Juan Fernandez	6.62	243	T	T	03 09 59.3	
	baz=71,slow=72,SNR=4328						
H03N3	Juan Fernandez	6.62	243	T	T	03 09 58.0	
	baz=71,slow=72,SNR=4079						
VA04	Juan Fernndez	6.63	241		Pn	03 03 04.2	+1.6
LC01	Cunco	8.28	180	Pn	Pn	03 03 24.6	-0.7
LVC	Limon Verde	8.39	19	Pn	Pn	03 03 27.5	+0.3
PB01	IPOC Station P	9.76	13	Pn	Pn	03 03 45.5	-0.1
PLCA	Paso Flores	10.17	174	Pn	Pn	03 03 52.2	+1.0
	comp=N,0.1nm,0.3s,baz=327,slow=14,SNR=2.2						
TA02	Huaiquique	10.41	9	Pn	Pn	03 03 53.1	-1.4
CPUP	Villa Florida	13.49	75	Pn	Pn	03 04 35.9	-0.7
	comp=N,0.1nm,0.3s,baz=243,slow=14,SNR=0.8						
BDFB	Brasilia	26.44	61	P	P	03 07 01.6	-0.4
	comp=N,1.8nm,0.7s,baz=230,slow=12,SNR=3.1						
BDFB	Brasilia	26.44	61	IAmb	IAmb	03 07 21.5	
	comp=Z,15nm,1.4s						
MAW	Mawson	76.40	164	P	P	03 13 14.7	+1.2
	comp=Z,0.6nm,0.5s,baz=220,slow=7.9,SNR=1.5						
TORD	Torodi Ar. Bea	82.94	70	P	P	03 13 50.1	+0.3
	comp=Z,0.3nm,0.5s,baz=247,slow=4.3,SNR=10						
WRA	Warramunga Arr	123.78	210	PKP	PKPdf	03 20 23.0	0.0
	comp=Z,0.2nm,0.6s,baz=173,slow=1.3,SNR=4.9						
H11S2	WAKE ISLAND Hy	125.88	272	T	T	05 39 13.0	
	baz=115,slow=74,SNR=112						
H11S1	WAKE ISLAND Hy	125.89	272	T	T	05 39 13.9	
	baz=115,slow=74,SNR=110						
H11S3	WAKE ISLAND Hy	125.90	272	T	T	05 39 14.3	
	baz=115,slow=74,SNR=122						
ZALV	Zalesovo Beam	151.24	29	PKPbc	PKiKP	03 21 18.5	+0.6
	comp=Z,1.1nm,0.3s,baz=309,slow=4.7,SNR=4.5						

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*THR **22** 03:11:07.2±0.4, 26°.73N×52°.80E, h16^{km}±9^{km}, ML3.3*

*IDC **22** 03:11:08.3±3.0, 26°.93N×52°.79E, h0^{km}, mb3.7/5, mb1 3.9/5, mb1mx3.5/41, mbtmp3.8/5, Error ellipse: s-maj=64.4km s-min=32.8km az=148.0*

*TEH **22** 03:11:11.1, 26°.95N×52°.91E, h12^{km}, ML3.7*

*OMAN **22** 03:11:14.9±1.4, 26°.41N×52°.75E, h15^{km}, mb4.7/2, ml3.2/4, ms2.0/1, Error ellipse: s-maj=16.9km s-min=9.2km az=164.0*

*DSN **22** 03:11:14.6±1.5, 25°.99N×59°.76E, h10^{km}, ML3.0/5, Error ellipse: s-maj=25.2km s-min=11.9km az=168.0*

ISC 22 03:11:13.2±0.7**, 26°.87N**±0°.06×**52°.71E**±0°.05**, h35**^{km}**, n49,** σ**1**^{s}**.49**/63**, mb3.9**/4**, Persian Gulf**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAR1	LAR	1.68	61	*e*Pg	Pn	03 11 39.5	-0.7
LAR1				*e*Sg	Sn	03 12 00.0	-0.6
LAR1				*e*		03 12 10.2	
	comp=Z,20μm,0.4s						
JHRM	Jahrom	1.80	25	*e*Pn	Pn	03 11 41.2	-0.7
JHRM				*e*		03 12 15.3	
	comp=Z,22μm,0.5s						
BANOM	Banah	3.36	105	P	Pn	03 12 03.1	-0.1
BANOM				S	Sn	03 12 42.8	+1.0
BANOM	Banah	3.36	105	*e*Pn	Pn	03 12 03.3	+0.1
BANOM	Banah	3.36	105	P	Pn	03 12 03.0	-0.2
	SNR=7.5						
BANOM				S	Sn	03 12 42.3	+0.4
MASF	Masafi	3.44	115	P	Pn	03 12 05.4	+1.0
MASF				S	Sn	03 12 45.8	+1.8
MSFE	Esma-Masafi	3.45	115	P	Pn	03 12 05.2	+0.7
MSFE				S	Sn	03 12 45.6	+1.5
MDH	Madha	3.59	115	P	Pn	03 12 06.5	+0.2
MDH	Madha	3.59	115	*e*Pn	Pn	03 12 06.0	-0.3
UOSS	Minazif	3.69	121	P	Pn	03 12 07.8	+0.1
UOSS	Minazif	3.69	121	*e*Pn	Pn	03 12 08.3	+0.6
UOSS	Minazif	3.69	121	P	Pn	03 12 08.1	+0.4
UOSS				S	Sn	03 12 51.1	+1.1
HATD	Hatta, Dubai	3.70	123	P	Pn	03 12 09.1	+1.2
HATD				S	Sn	03 12 52.0	+1.8
HATD	Hatta, Dubai	3.70	123	P	Pn	03 12 09.3	+1.5
HATD				S	Sn	03 12 51.9	+1.7
ASHO	Ashiyiah	3.72	125	P	Pn	03 12 10.1	+1.9
ASHO				S	Sn	03 12 53.2	+2.3
ASHO	Ashiyiah	3.72	125	P	Pn	03 12 10.0	+1.7
	SNR=9.2						
ASHO				S	Sn	03 12 53.4	+2.5
KLNJ	Kolanjah	4.24	347	*e*Pn	Pn	03 12 17.2	+1.6
NGRK	Negar Kerman	4.50	51	*e*Pn	Pn	03 12 18.7	-0.5
NGRK				*e*		03 12 32.1	
	comp=Z,252nm,0.2s						
KRBR	Kerman	4.73	48	*e*Pn	Pn	03 12 20.6	-1.7
KRBR				IAML		03 13 30.8	
	comp=E,19nm,0.2s						
KRBR				IAML		03 13 50.5	
	comp=N,18nm,0.5s						
TVBK	TV Kerman	4.73	48	*e*Pn	Pn	03 12 21.4	-1.0
TVBK				*e*		03 12 34.1	
	comp=Z,501nm,0.3s						
IMEH	Mehriz	4.80	20	*e*Pn	Pn	03 12 22.6	-0.7
KHGB	Koh Gabri	4.81	43	*e*Pn	Pn	03 12 22.8	-0.6
KHGB				*e*		03 13 28.5	
	comp=Z,240nm,0.9s						
IRAM	Ramesheh	4.93	357	*e*Pn	Pn	03 12 25.4	+0.4
ISAD	Sadrabad	5.10	9	*e*Pn	Pn	03 12 26.9	-0.5
CHMN	Cheshme madani	5.20	54	*e*Pn	Pn	03 12 28.7	-0.1
CHMN				*e*		03 12 32.5	
	comp=Z,931nm,0.4s						
ICHK	Chekchek	5.56	15	*e*Pn	Pn	03 12 32.6	-1.0
KBAM	BAM	5.56	65	*e*Pn	Pn	03 12 33.3	-0.2
KBAM				*e*		03 12 36.2	
	comp=Z,470nm,0.3s						
BSY	Bisya	5.79	134	P	Pn	03 12 38.1	+1.4
BSY				S	Sn	03 13 42.8	+1.0
IZEF	Zefreh	6.01	357	*e*Pn	Pn	03 12 39.8	-0.1
SMDO	Samad	6.16	127	P	Pn	03 12 42.1	+0.3
SMDO				S	Sn	03 13 49.9	-1.1
TPRV	Parvadeh(Tabas	7.04	28	*e*Pn	Pn	03 12 52.8	-1.1
CHBR	Chabahar	7.10	99	*e*Pn	Pn	03 12 51.3	-3.3
WBK	Wadi Bani Khal	7.10	125	P	Pn	03 12 56.0	+1.4
	SNR=6.9						
KHMZ	Khomeyn	7.25	342	*e*Pn	Pn	03 12 57.1	+0.3
RAYN	Ar Rayn	7.33	245	P	Pn	03 12 59.4	+1.6
RAYN				S	Sn	03 14 18.4	-1.4
ISFB	Sefidab	7.47	357	*e*Pn	Pn	03 12 57.8	-1.9
BSRN	Basiran	7.56	46	*e*Pn	Pn	03 13 00.1	-0.9
ZHSF	Zahedan	7.62	67	*e*Pn	Pn	03 12 59.5	-2.4
JLN	Jalan Bani Buh	7.70	126	P	Pn	03 13 02.5	-0.4
TKDS	Koohdasht(Taba	7.73	29	*e*Pn	Pn	03 13 00.8	-2.5
TNSJ	Nastanj	7.83	25	*e*Pn	Pn	03 13 02.8	-1.9

ASAO	Ashtian	7.99	344	*e*Pn	Pn	03 13 07.3	+0.3
SRVN	Saravan	8.65	84	*e*Pn	Pn	03 13 15.7	-0.3
DMTO	DMTO	9.34	167	P	Pn	03 13 26.2	+0.8
DMTO				S	Sn	03 15 02.9	-6.3
BRTR	Keskin Array B	20.40	314	P	P	03 15 47.4	+0.1
	comp=Z,0.4nm,0.5s,baz=141,slow=12,SNR=2.2						
ZALV	Zalesovo Beam	35.92	32	P	P	03 18 09.4	-0.5
	comp=Z,1.4nm,0.5s,baz=248,slow=7.8,SNR=7.1						
FINES	FINESS Array B	38.93	340	P	P	03 18 34.7	-0.6
	comp=Z,1.1nm,0.5s,baz=140,slow=11,SNR=9.8						
NOA	NORSAR Array B	44.08	332	P	P	03 19 18.3	+0.6
	comp=Z,0.6nm,0.6s,baz=119,slow=8.0,SNR=2.2						
TORD	Torodi Ar. Bea	49.53	264	P	P	03 20 01.7	+0.9
	comp=Z,1.1nm,0.8s,baz=57,slow=7.7,SNR=6.2						

DNK ***22*** *03:29:03.9±0.5, 67°.19N×20°.66E, h0^{km}, ML2.8(UPP), Suspected explosion*
HEL ***22*** *03:29:04.2±0.0, 67°.20N×20°.72E, h1^{km}, ML2.3, ML2.7(UPP), Confirmed Induced event*
NAO ***22*** *03:29:04.0±0.8, 67°.17N×20°.95E, ML2.6*
IDC ***22*** *03:29:04.2±0.8, 67°.13N×21°.00E, h0^{km}, mb1 3.3/5, mb1mx3.1/56, mbtmp3.3/5, ML2.6/5, Error ellipse: s-maj=14.6km s-min=7.3km az=108.0*
BER ***22*** *03:29:05.0±3.1, 67°.08N×20°.84E, h1^{km}, ML2.1, ML2.6(NAO), Confirmed Induced event*
ISC 22 03:29:03.2±0.7**, 67°.19N**±0°.02×**20°.65E**±0°.02**, h0^{km}, n69, σ1°.34**/102**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RATU	Laukkuluspa	0.76	328	P	Pg	03 29 17.8	+0.1
RATU				S	Sg	03 29 27.7	+0.1
RATU	Laukkuluspa	0.76	328	*i* P	Pg	03 29 17.8	+0.1
RATU				*i* S	Sg	03 29 27.7	+0.1
KUA	Kurravaara	0.78	351	*i* P	Pg	03 29 18.0	-0.2
KUA				*i* S	Sg	03 29 29.1	+0.8
SALU	Saltoluokta	0.86	284	P	Pg	03 29 19.8	+0.2
SALU	Saltoluokta	0.86	284	*i* P	Pg	03 29 19.8	+0.2
ERTU	Ertsjaerv	0.88	136	P	Pg	03 29 19.9	-0.2
ERTU	Ertsjaerv	0.88	136	*e*P	Pg	03 29 19.3	-0.7
ERTU				*e*S	Sg	03 29 30.7	-0.7
NIKU	Nikkaluokta	0.92	318	P	Pg	03 29 20.9	0.0
NIKU	Nikkaluokta	0.92	318	*e*P	Pg	03 29 20.9	0.0
PAJU	Pajala	0.98	99	P	Pg	03 29 21.7	-0.2
PAJU	Pajala	0.98	99	*e*P	Pg	03 29 21.4	-0.5
PAJU				*e*S	Sg	03 29 34.7	+0.1
LANU	Lannavaara	1.01	30	P	Pg	03 29 22.2	-0.3
LANU	Lannavaara	1.01	30	*e*P	Pg	03 29 21.9	-0.6
HARU	Harads	1.04	173	P	Pg	03 29 22.6	-0.4
HARU	Harads	1.04	173	*e*P	Pg	03 29 22.6	-0.4
KOVU	Salmi	1.06	350	P	Pg	03 29 23.1	-0.4
KOVU	Salmi	1.06	350	*e*P	Pg	03 29 23.1	-0.4
KLF	Kolari	1.29	86	*e*P	Pg	03 29 27.0	-0.9
KLF				*e*SB	Sg	03 29 44.5	-0.1
HEF	Hetta	1.68	42	Pn	Pn	03 29 34.0	+0.2
HEF				Sn	Sn	03 29 55.7	-0.3
HEF	Hetta	1.68	42	*e*P	Pn	03 29 33.3	-0.5
HEF				*e*S	Sn	03 29 55.2	-0.7
HEF	Hetta	1.68	42	*e*PG	Pn	03 29 33.6	-0.2
HEF				MSG		03 29 54.4	
	comp=Z,18nm,0.2s						
HEF				*e*SN	Sn	03 29 56.0	0.0
KALU	Kalix	1.72	140	P	Pn	03 29 34.7	+0.4
KALU	Kalix	1.72	140	*e*P	Pn	03 29 34.5	+0.2
KALU				*e*SN	Sg	03 29 58.3	0.0
SJUU	Sjulsmark	1.73	167	P	Pn	03 29 34.9	+0.5
SJUU	Sjulsmark	1.73	167	*e*P	Pn	03 29 34.9	+0.5
KIF	Kilpisjarvi	1.83	2	Pn	Pb	03 29 37.1	-0.3
KIF				Sn	Sg	03 30 02.5	+0.7
KIF	Kilpisjarvi	1.83	2	*e*P	Pn	03 29 36.6	+0.8
KIF	Kilpisjarvi	1.83	2	*e*P	Pn	03 29 36.7	+0.8
KIF				MSG		03 29 58.8	
	comp=Z,30nm,0.2s						
KIF				*e*S	Sb	03 30 00.8	-0.1
TOF	Tornio	1.84	126	*e*PN	Pn	03 29 36.6	+0.6
TOF				MSG		03 29 59.1	
	comp=Z,33nm,0.2s						
TOF				*e*SN	Sb	03 30 01.2	+0.1
FAUS	Fauske	2.09	278	*e*P	Pn	03 29 40.7	+1.2
FAUS				IAML		03 30 11.2	
	comp=Z,36nm,0.7s						
RNF	Rovaniemi	2.19	103	*e*PB	Pn	03 29 41.8	+0.9
RNF				*e*SG	Sb	03 30 11.1	-0.3
STEI	Steigen	2.21	292	*e*P	Pn	03 29 40.7	-0.4
STEI				IAML		03 30 15.4	
	comp=Z,18nm,0.6s						
SGF	Sodankyl	2.29	81	*e*PB	Pn	03 29 43.4	+1.1
SGF				*e*SG	Sb	03 30 14.7	+0.5
JETT	Jettan, Norway	2.38	358	Pn	Pn	03 29 44.6	+1.1
JETT				Sn	Sb	03 30 15.7	-1.1
BURU	Burvik	2.63	173	*e*P	Pn	03 29 48.1	+1.2
BURU				*e*S	Sn	03 30 19.5	+0.1
MOR8	Moi Rana	2.67	250	*e*P	Pn	03 29 46.9	-0.6
MOR8				IAML		03 30 23.7	
	comp=Z,16nm,0.5s						
NBB30	Finnes	2.72	269	*e*P	Pn	03 29 48.0	0.0
NBB30				IAML		03 30 32.8	
	comp=Z,21nm,0.3s						
ARA0	ARCESS Array S	2.97	35	Pn	Pn	03 29 52.2	+0.7
	baz=210,slow=16						
ARA0				Sn	Sn	03 30 28.5	+0.8
	baz=215,slow=22						
ARA0	ARCESS Array S	2.97	35	Pn	Pn	03 29 52.2	+0.7
	baz=210,slow=16						
ARA0				Sn	Sn	03 30 28.5	+0.8
	baz=215,slow=22						
ARA0	ARCESS Array S	2.97	35	*e*P	Pn	03 29 52.2	+0.7
ARA0				*e*S	Sn	03 30 26.7	-1.0
ARCES	ARCESS Array B	2.97	35	Pn	Pn	03 29 52.0	+0.5
	baz=217,slow=13,SNR=130						
ARCES				Sn	Sn	03 30 28.4	+0.6
	baz=217,slow=26,SNR=11						
OBF4	Vikkela, Lumij	3.00	141	*e*P	Pn	03 29 52.9	+1.0
OBF4				*e*S	Sn	03 30 28.3	-0.2
OUL	Oulu	3.00	132	*e*P	Pn	03 29 53.0	+1.0
OUL				*e*S	Sn	03 30 29.6	+1.1
OBF0	Syolatti, Pyha	3.08	150	*e*P	Pn	03 29 54.0	+1.0
NBB40	Tonnes	3.10	261	*e*P	Pn	03 29 53.8	+0.5
NBB40				IAML		03 30 53.6	
	comp=Z,11nm,0.4s						
OUF	Merijarvi	3.29	147	*e*P	Pn	03 29 57.0	+1.0
KEV	Kevo	3.48	39	*e*P	Pn	03 29 59.2	+0.6
KEV				*e*S	Sn	03 30 40.6	+0.2
VRF	Varrio	3.49	77	*e*P	Pn	03 29 59.3	+0.6
MSF	Maaselka	3.59	107	*e*P	Pn	03 30 00.8	+0.7
MSF				*e*SG	Sb	03 30 53.8	+2.2
KU6	Riekki	3.86	103	*e*P	Pn	03 30 04.5	+0.7
HUSU	Husum	3.91	190	*e*P	Pn	03 30 05.7	+1.3
HUSU				*e*S	Sn	03 30 51.2	+0.3
VAF	Ylistaro	4.25	167	*e*P	Pn	03 30 10.3	+1.3
APA0	Apatity Array	4.78	79	Pn	Pn	03 30 15.7	-0.7
	baz=260,slow=12						
APA0				Sn	Sn	03 31 09.9	-2.5
	baz=276,slow=22						
APA0				Lg	Lg	03 31 30.8	
	baz=276,slow=22						
APA0	Apatity Array	4.78	79	Pn	Pn	03 30 15.7	-0.7
	baz=260,slow=12						
APA0				Sn	Sn	03 31 09.9	-2.5
	baz=276,slow=22						
APA0				Sg	Sb	03 31 30.8	+5.1
	baz=276,slow=22						
FIA0	FINESS Array S	6.23	155	Pn	Pn	03 30 37.5	+1.2
	baz=346,slow=16						
FIA0				Sn	Sn	03 31 46.8	-1.3
	baz=348,slow=28						
FIA0				Lg	Lg	03 32 14.4	
	baz=350,slow=28						
FIA0	FINESS Array S	6.23	155	Sg	Sb	03 32 14.4	+7.1
	baz=350,slow=28						
FINES	FINESS Array B	6.23	155	Pn	Pn	03 30 36.7	+0.5
	comp=Z,0.5nm,0.3s,baz=348,slow=13,SNR=23						
FINES				Sn	Sn	03 31 45.6	-2.4
	comp=Z,0.5nm,0.3s,baz=346,slow=22,SNR=6.1						
FINES				Lg	Lg	03 32 14.6	
	comp=Z,0.4nm,0.3s,baz=343,slow=28,SNR=4.0						
NB2	NORSAR Subarra	7.42	218	Pn	Pn	03 30 53.5	+0.8
	baz=36,slow=14						
NB2	NORSAR Subarra	7.42	218	Pn	Pn	03 30 53.5	+0.8
	baz=36,slow=14						
NOA	NORSAR Array B	7.42	218	Pn	Pn	03 30 52.2	-0.4
	comp=Z,0.0nm,0.3s,baz=28,slow=11,SNR=5.3						
NOA				Sn	Sn	03 32 12.5	-4.9
	comp=Z,0.0nm,0.3s,baz=37,slow=21,SNR=4.2						
NOA				Lg	Lg	03 32 56.7	
	comp=Z,0.1nm,0.3s,baz=44,slow=25,SNR=3.4						
NRA0	NORESS Array S	7.61	216	Pn	Pn	03 30 54.9	-0.3
	baz=25,slow=14						
NRA0	NORESS Array S	7.61	216	Pn	Pn	03 30 54.9	-0.3
	baz=25,slow=14						
HFS	Hagfors	7.72	207	Pn	Pn	03 30 56.2	-0.6
	comp=Z,0.4nm,0.3s,baz=21,slow=14,SNR=10						
HFS				Sn	Sn	03 32 21.8	-3.0
	comp=Z,0.4nm,0.3s,baz=28,slow=20,SNR=6.4						
HFS				Lg	Lg	03 33 04.0	
	comp=Z,0.3nm,0.3s,baz=17,slow=30,SNR=2.6						
HFS	Hagfors	7.72	207	Pn	Pn	03 30 56.2	-0.6
	baz=31,slow=14						
HFS	Hagfors	7.72	207	Pn	Pn	03 30 56.2	-0.6
	baz=31,slow=14						
KLMR	Klimovskoe	10.39	119	P	Pn	03 31 31.2	-2.1
KLMR				*e*S	Sn	03 33 20.6	-10
KLMR				*e*S	Sn	03 33 20.6	-10
KLMR				*e*S	Sn	03 33 20.6	-10
SPA0	Spitsbergen Ar	11.12	355	Pn	Pn	03 31 41.9	-1.3
SPA0	Spitsbergen Ar	11.12	355	Pn	Pn	03 31 41.9	-1.3
SPITS	Spitsbergen Ar	11.12	355	Pn	Pn	03 31 43.1	-0.1
	baz=173,slow=14,SNR=1.4						

NOU ***22*** *03:31:14.0, 15°.36S×173°.47W, h0^{km}, MLv4.8/4, Tonga Islands*
IDC ***22*** *03:31:15.3±1.1, 15°.06S×173°.63W, h0^{km}, mb3.8/7, mb1 4.1/8, mb1mx3.8/39, mbtmp3.8/8, ML4.3/1, Error ellipse: s-maj=66.6km s-min=19.2km az=149.0*
NEIC ***22*** *03:31:17.2±1.8, 15°.2S±0°.1×173°.3W±0°.1, h10^{km}±1^{km}, mb4.2/4, Error ellipse: s-maj=26.2km s-min=14.3km az=297.0*
ISC 22 03:31:19.4±0.8**, 15°.2S**±0°.1×**173°.3W**±0°.1**, h30^{km}, n22, σ1°.79**/16**, mb4.0**/10**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	1.91	49	Pn	Pn	03 31 50.6	+0.5
	97nm,0.3s,baz=196,slow=2.3,SNR=74						
AFI				Sn	Sn	03 32 09.9	-3.3
	219nm,0.3s,baz=272,slow=21,SNR=14						
NIUE	Niue	5.03	141	Pn	Pn	03 32 32.8	-0.1
H11S2	WAKE ISLAND Hy	38.83	329	T	T	04 19 28.2	
	baz=146,slow=75,SNR=20						
H11S3	WAKE ISLAND Hy	38.85	329	T	T	04 19 30.1	
	baz=146,slow=75,SNR=20						
H11S1	WAKE ISLAND Hy	38.85	329	T	T	04 19 31.4	
	baz=146,slow=75,SNR=4.3						
H11N3	WAKE ISLAND Hy	39.78	330	T	T	04 20 36.5	
	baz=147,slow=76,SNR=3.7						
H11N1	WAKE ISLAND Hy	39.78	330	T	T	04 20 37.8	
	baz=147,slow=76,SNR=2.7						
H11N2	WAKE ISLAND Hy	39.79	330	T	T	04 20 39.4	
	baz=147,slow=76,SNR=2.7						
WR0	Warramunga Arr	49.83	257	P	P	03 40 09.4	-0.7
WR0				IAmb	IAmb	03 40 10.8	
	comp=Z,4.4nm,1.4s						
WB0	Warramunga Arr	49.98	257	P	P	03 40 10.9	-0.4
WB0				IAmb	IAmb	03 40 11.8	
	comp=Z,2.8nm,1.1s						
WRA	Warramunga Arr	50.02	257	P	P	03 40 09.6	-2.0
	comp=Z,0.3nm,0.3s,baz=90,slow=6.8,SNR=15						
AS31	Alice Springs	50.30	252	P	P	03 40 11.8	-1.9
ASAR	Alice Springs	50.30	252	P	P	03 40 11.4	-2.3
	comp=Z,2.4nm,0.6s,baz=85,slow=8.2,SNR=50						
NVAR	Mina Array Bea	74.08	42	P	P	03 42 55.1	+2.0
	comp=Z,0.4nm,0.7s,baz=226,slow=7.2,SNR=4.1						
TX31	Lajitas Ar. Si	80.38	56	P	P	03 43 26.8	-1.7
TXAR	Lajitas Array	80.38	56	P	P	03 43 31.0	+2.5
	comp=Z,0.5nm,0.9s,baz=203,slow=6.7,SNR=3.5						
TXAR	Lajitas Array	80.38	56	P	P	03 43 29.0	+0.5
PDAR	Pinedale Array	82.01	42	P	P	03 43 38.8	+1.7
	comp=Z,0.7nm,0.9s,baz=237,slow=3.0,SNR=4.5						
ILAR	Eielson Array	82.20	11	P	P	03 43 37.5	+0.4
	comp=Z,0.2nm,0.6s,baz=232,slow=6.7,SNR=5.6						
MAW	Mawson	88.05	199	P	P	03 44 07.1	+0.5
	comp=Z,1.0nm,0.6s,baz=100,slow=6.1,SNR=2.0						
GTA	Gaotai	97.14	309	*e*P	Pdif	03 44 57.8	+8.4
GTA				pP	sP	03 45 02.0	+0.4
GTA				sP	pwP	03 45 05.3	+4.6
GTA				pmax	pmax		
	comp=Z,7.0nm,1.2s						
BRTR	Keskin Array B	146.06	321	PKPbc	PKPdf	03 50 55.6	-0.5
	comp=Z,1.0nm,0.8s,baz=360,slow=1.7,SNR=3.2						

TAP 22 03:34:06.5, 24°.27N×121°.69E, h6^{km}, ML1.7, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EHP	Heping Village	0.07	48	*e*P	Pg	03 34 08.9	+0.7
	baz=54						
ETL	Fush Village	0.12	209	*e*P	Pg	03 34 09.9	+0.8
	baz=208						
ETL				*e*S	Sg	03 34 12.5	+1.7
	baz=208						
NACB	Ninganchiao	0.12	223	P	Pg	03 34 09.9	+0.8
	baz=222						
NACB				S	Sg	03 34 12.4	+1.5
	baz=222						
ENA	Nanau	0.17	17	*e*P	Pg	03 34 10.8	+0.8
	baz=19						
ENA				*e*S	Sg	03 34 14.2	+1.9
	baz=19						
ETLH	Xiulin Townshi	0.20	253	P	Pg	03 34 11.4	+0.9
	baz=252						
ETLH				S	Sg	03 34 14.9	+1.8
	baz=252						
EWUT	Wuta	0.20	25	*e*P	Pg	03 34 11.4	+0.9
	baz=25						
EWUT				*e*S	Sg	03 34 14.7	+1.5
	baz=25						
TWD	Chiawan	0.20	204	*e*P	Pg	03 34 11.6	+1.1
	baz=201						
TWD				S	Sg	03 34 15.1	+1.8
	baz=201						
HWA	Hwalien	0.30	194	*e*P	Pb	03 34 13.6	-0.7
	baz=192						
NNS	Nan Shan	0.33	301	*e*P	Pb	03 34 14.5	-0.5
	baz=301						
ETM	Tongmen	0.35	211	*e*P	Pb	03 34 14.6	-0.6
	baz=210						
NDS	Dongshan	0.37	4	P	Pb	03 34 14.9	-0.6
	baz=4.0						
WHF	Hehuan Shan	0.40	253	*e*P	Pg	03 34 15.4	+0.9
	baz=252						
WHF				S	Sb	03 34 22.1	-0.8
	baz=252						
FUSS	Fushou	0.40	268	*e*P	Pb	03 34 15.8	-0.5
	baz=267						
FUSS				S	Sb	03 34 22.3	-0.5
	baz=267						
TDCB	Techi	0.48	269	*e*P	Pb	03 34 17.3	-0.2
	baz=268						
YHNB	Yeheng	0.49	325	P	Pb	03 34 17.4	-0.2
	baz=324						
ESL	Shilin	0.51	207	*e*P	Pb	03 34 17.6	-0.2
	baz=206						
ESL				*e*S	Sb	03 34 25.5	0.0
	baz=206						
NSK	Sanguang	0.51	324	*e*P	Pb	03 34 17.6	-0.3
	baz=324						
CHGB	Renai	0.51	247	P	Pb	03 34 17.8	-0.3
	baz=246						
CHGB				*e*S	Sb	03 34 25.7	-0.1
	baz=246						
NWLT	Wulai	0.54	342	*e*P	Pb	03 34 18.4	0.0
	baz=341						
NWLT				*e*S	Sb	03 34 26.6	+0.2
	baz=341						

JMA 22 03:34:09.2±0.1**, 24°.26N×123°.73E, h19^{km}**±1^{km}**, M1.3, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IRIF	Iriomote-Funau	0.07	0	P	Pg	03 34 12.8	0.0
IRIF				S	Sg	03 34 15.4	+0.2
HATJ	Hateruma jima	0.21	161	P	Pg	03 34 14.3	-0.1
HATJ				S	Sg	03 34 17.8	-0.2
JKRS	Kuro-shima	0.26	95	P	Pg	03 34 15.1	0.0
JKRS				S	Sg	03 34 19.3	+0.2
JIJ	Ishigaki jima	0.39	75	P	Pg	03 34 17.1	-0.3
JIJ				S	Sg	03 34 22.4	-0.5
JISG	Ishigakijimahi	0.62	58	P	Pg	03 34 21.5	-0.1
JISG				*e*S	Sg	03 34 30.2	+0.3

BJI ***22*** *03:36:47.8±0.0, 5°.18N×125°.41E, h224^{km}, mB4.8/16, mb4.4/40*
NEIC ***22*** *03:36:48.7±2.1, 5°.33N±0°.06×125°.38E±0°.05, h199^{km}±6^{km}, mb4.8/87, Error ellipse: s-maj=9.6km s-min=6.0km az=144.0*
IDC ***22*** *03:36:48.6±0.6, 5°.37N×125°.38E, h209^{km}±4^{km}, mb4.2/36, mb1 4.3/39, mb1mx4.1/60, mbtmp4.8/39, Error ellipse: s-maj=9.7km s-min=6.4km az=73.0*
MAN ***22*** *03:36:49.6, 5°.43N×125°.54E, h196^{km}, mb5.1, ML4.0, MS4.1*
DJA ***22*** *03:36:50.2±0.3, 5°N±3°×12°6E±°, h184^{km}±3^{km}, M4.6/27, mB5.1/18, mb4.9/27, MLv5.0/11, Mw(mB)4.4/18*
KLM ***22*** *03:36:50, 5°.39N×125°.62E, h222^{km}, mb5.1*
ISC 22 03:36:47.7±0.3**, 5°.28N**±0°.04×**125°.44E**±0°.05**, h200^{km}, n254, σ1°.49**/260**, mb4.8**/118**, 36C-45D, Fault plane solution: NP1:**φs170.78958°**,**δ83.43670°**,**λ9.35518°. **NP2:** φs79.71079°**,**δ80.70668°**,**λ173.34901°. **Principal axes:** T Plg11.2455°, Azm35.4439°**;** N Plg78.5889°, Azm205.5426°**;** P Plg1.9121°, Azm305.0636°**; Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	1.58	177	P	Pn	03 37 23.4	+1.2
SGSI				S	Sn	03 37 45.5	-3.6
DAV	Davao City (W)	1.79	5	P	Pn	03 37 24.9	+0.8
	166nm,0.3s,baz=145,slow=0.7,SNR=13						
DAV				S	Sn	03 37 53.2	+0.6
	1µm,0.3s,baz=298,slow=21,SNR=7.6						
DAV	Davao City (W)	1.79	5	Pn	Pn	03 37 24.5	+0.4
DAV	Davao City (W)	1.79	5	P	Pn	03 37 25.9	+1.8
TNTI	Ternate	4.87	157		Pn	03 38 00.9	+0.4
KMSI	Cibinong	4.89	197	P	Pn	03 38 01.4	+0.6
GTOI	Gorontalo	5.21	208	P	Pn	03 38 06.2	+1.4
	0.3nm980nm79nm,0.8s						
MRSI	Marisa	5.91	216	P	Pn	03 38 17.5	+3.7
	0.7nm3µm138nm,0.5s						
TOLI2	Tolitoli	6.22	228	Pn	Pn	03 38 19.5	+1.6
TOLI2	Tolitoli	6.22	228	P	Pn	03 38 20.1	+2.2
	52nm,1.1s						
LBMI	Labuha	6.23	161	P	Pn	03 38 17.2	-0.8
	2.3nm3µm98nm,0.9s						
LBMI				S	Sn	03 39 26.8	-2.7
	2.3nm3µm98nm,0.9s						
LUWI	Luwuk	6.82	203	Pn	Pn	03 38 27.7	+2.1
APSI	Ampana	7.22	212	P	Pn	03 38 34.1	+3.3
	0.3nm1µm94nm,1.0s						
SANI	Sanana	7.30	176	P	Pn	03 38 29.7	-2.1
	3.4nm14µm451nm,0.6s						
SANI	Sanana	7.30	176	P	Pn	03 38 29.8	-2.1
	408nm,0.7s						
SWI	Sorong	8.43	136	P	Pn	03 38 56.3	+10
SIJI	Sorong	8.44	136	P	Pn	03 38 46.9	+0.1
	5.5nm,0.3s,baz=232,slow=22,SNR=9.1						
SIJI				S	Sn	03 40 17.3	-4.4
	1.4nm,0.3s,baz=246,slow=22,SNR=1.4						
SPMM	Sapulut	8.96	267	P	Pn	03 38 57.0	+3.5
KKM	Kota Kinabalu	9.21	275	P	Pn	03 38 59.7	+2.8
	123nm,1.0s						
MSAI	Masohi	9.25	158	P	Pn	03 38 57.7	+0.4
AAI	Ambon	9.32	163	P	Pn	03 38 58.7	+0.5
TTSI	Tana Toraja	9.99	214	P	Pn	03 39 10.5	+3.6
	1µm113nm,1.2s						
SMKI	Samarinda	9.99	236	P	Pn	03 39 12.3	+5.4
	507nm,0.9s						
FAKI	Fak Fak	10.61	140	P	Pn	03 39 17.6	+2.7
	45nm,1.1s						
SPSI	Sidrap Palu	10.79	212	P	P	03 39 20.6	-3.3
BNSI	Bone	10.99	209	P	P	03 39 23.6	-2.5
	2µm245nm,0.6s						
KAPI	Kappang	11.69	209	P	Pn	03 39 31.0	+2.2
	3.1nm,0.3s,baz=41,slow=7.8,SNR=20						
KAPI	Kappang	11.69	209	Pn	Pn	03 39 30.7	+1.9
BKSI	Bulukumba	11.79	207	P	P	03 39 32.5	-2.5
	38nm,0.8s						
MTKI	Muara Teweh, K	12.21	240	P	P	03 39 38.5	-1.2
KBKI	Kotabaru	12.58	228	P	Pn	03 39 41.8	+1.8
	2µm158nm,0.8s						
SBUM	Sibu	13.48	258	P	P	03 39 55.0	+1.1
SBUM	Sibu	13.48	258		P	03 39 52.8	-1.0
BBKI	Banjar Baru	13.69	231	P	P	03 39 57.3	+1.1
	140nm,0.9s						
MMRI	Maumere	14.18	193	P	P	03 40 04.8	+3.1
	185nm,0.8s						
MMRI	Maumere	14.18	193		P	03 40 02.7	+1.1
STKI	Sintang	14.87	250	P	P	03 40 12.1	+2.8
	14µm61nm,0.6s						
SMPI	Sarmi	15.10	118	P	P	03 40 14.5	+2.7
	90nm,1.2s						
BATI	Baumata	15.48	187	P	P	03 40 18.4	+2.3
	24nm,0.3s,baz=26,slow=1.6,SNR=23						
BATI				S	Sn	03 43 09.1	-0.6
	2.5nm,0.3s,baz=74,slow=19,SNR=5.8						
BATI	Baumata	15.48	187	P	P	03 40 18.6	+2.5
	83nm,0.7s						
KSM	Kuching	15.56	256	P	P	03 40 20.0	+3.0
KSM	Kuching	15.56	256	P	P	03 40 19.1	+2.1
KSM	Kuching	15.56	256	P	P	03 40 19.1	+2.1
	113nm,1.1s						
PBKI	Pangkalan Bun	15.87	240	P	Pn	03 40 23.8	+3.1
PLAI	Plampang	15.96	209	P	Pn	03 40 23.5	+1.8
	1µm92nm,0.7s						
PLAI	Plampang	15.96	209	P	Pn	03 40 23.0	+1.3
	91nm,0.8s						
TWSI	Taliwang, Sumb	16.33	212	P	Pn	03 40 27.1	+1.0
	575nm57nm,0.6s						
JAY	Jayapura	17.10	117	P	Pn	03 40 36.2	+0.8
	15nm,0.3s,baz=274,slow=4.8,SNR=44						
JAY	Jayapura	17.10	117	P	Pn	03 40 36.1	+0.7
	1µm162nm,0.8s						
IGBI	Denpasar	17.36	216	P	Pn	03 40 41.7	+3.4
	136nm,0.6s						
JAGI	Jajag, Banyuwa	17.70	220	P	Pn	03 40 43.5	+1.2
	100nm,0.7s						
JAGI				S	Pn	03 40 44.0	+1.7
	100nm,0.7s						
JAGI	Jajag, Banyuwa	17.70	220	P	P	03 40 40.1	-0.3
GMJI	Gumukmas	18.01	222	P	P	03 40 39.5	-4.2
	98nm,0.7s						
DRS	Darwin Rock St	18.41	163	P	Pn	03 40 49.7	-1.0
	99nm,0.6s						
TPUB	Ta-pu	18.51	346	P	P	03 40 49.0	-0.2
TPUB				IAmb	IAmb	03 40 55.0	
	comp=Z,39nm,0.7s						
TPUB	Ta-pu	18.51	346	P	P	03 40 47.9	-1.3
	comp=Z,57nm,1.2s						
MTN	Manton Dam	18.87	163	P	P	03 40 53.2	+0.1
MTN	Manton Dam	18.87	163	P	P	03 40 54.1	+1.0
	comp=Z,68nm,0.6s						
SSLB	Suanglung	18.90	347	P	P	03 40 53.1	-0.4
SSLB				IAmb	IAmb	03 40 55.7	
	comp=Z,24nm,0.6s						
SSLB	Suanglung	18.90	347	P	P	03 40 54.3	+0.9
	comp=Z,36nm,0.7s						
KDU	Kakadu	19.17	159	P	P	03 40 57.0	+0.7
	comp=Z,220nm,0.6s						
TPI	Tanjungpandan	19.47	246	P	Pn	03 41 01.6	-1.7
	comp=Z,940nmcomp=Z,136nm,1.1s						
PCJI	Pacitan	19.53	227	P	Pn	03 41 03.4	-0.5
YHNB	Yeheng	19.67	349	P	P	03 41 00.4	-1.3
	comp=Z,36nm,0.9s						
GUMO	Guam	20.86	65	P	P	03 41 16.1	+1.8
	comp=Z,68nm,0.4s,baz=202,slow=20,SNR=4.9						
GUMO	Guam	20.86	65	P	P	03 41 14.5	+0.1
	comp=Z,254nm,1.4s						
KNRA	Kununurra	21.08	171	P	P	03 41 17.8	+1.2
KNRA	Kununurra	21.08	171	P	P	03 41 16.8	+0.2
	comp=Z,81nm,0.8s						
LEM	Lembang	21.47	236	P	P	03 41 23.9	+3.0
	comp=Z,125nm,0.8s,baz=75,slow=12,SNR=10						
JOW	Kunigami	21.61	7	P	P	03 41 22.5	+0.4
	comp=Z,26nm,0.6s,baz=198,slow=9.8,SNR=5.5						
JOW	Kunigami	21.61	7	P	P	03 41 22.5	+0.4
JOW				IAmb	IAmb	03 41 23.7	
	comp=Z,32nm,0.7s						
MYKOM	Kota Tinggi	21.82	262	P	P	03 41 27.0	+2.7
MYKOM	Kota Tinggi	21.82	262	P	P	03 41 25.5	+1.2
UBPT	Khong Chiam	21.99	298	P	P	03 41 25.7	-0.3

ANA2	**Anatahan**	**22.72**	**59**	P	**P**	**03 41 33.8**	**+1.1**
JRMM	**Jerantut**	**22.93**	**268**	P	**P**	**03 41 36.0**	**+1.4**
MANU	**Manus Island**	**23.08**	**108**	P	**P**	**03 41 37.7**	**+1.7**
FITZ	**Fitzroy Crossi**	**23.23**	**180**	P	**P**	**03 41 38.0**	**+0.8**
	comp=Z,13nm,0.5s,baz=4.9,slow=8.1,SNR=12						
IPM	**Ipoh**	**24.33**	**269**	P	**P**	**03 41 49.0**	**+1.6**
IPM	**Ipoh**	**24.33**	**269**	P	**P**	**03 41 47.7**	**+0.2**
IPM	**Ipoh**	**24.33**	**269**	P	**P**	**03 41 48.5**	**+1.1**
	comp=Z,70nm,0.8s						
KULM	**Kulim**	**24.68**	**271**	P	**P**	**03 41 52.0**	**+1.4**
KULM	**Kulim**	**24.68**	**271**	P	**P**	**03 41 51.2**	**+0.7**
BKNI	**Bangkinang**	**24.85**	**259**	P	**P**	**03 41 53.0**	**+0.9**
SRIT	**Nakonsritamara**	**25.85**	**279**	P	**P**	**03 42 01.3**	**+0.2**
COEN	**Coen**	**25.98**	**138**	P	**P**	**03 42 02.7**	**+0.4**
COEN				IAmb	IAmb	03 42 04.5	
	comp=Z,13nm,0.8s						
COEN	**Coen**	**25.98**	**138**	P	**P**	**03 42 02.6**	**+0.3**
	comp=Z,26nm,1.4s						
PMG	**Port Moresby**	**26.11**	**124**	P	**P**	**03 42 03.7**	**+0.4**
	comp=Z,30nm,0.7s,baz=305,slow=7.5,SNR=10						
PMG	**Port Moresby**	**26.11**	**124**	P	**P**	**03 42 03.8**	**+0.4**
WRAB	**Tennant Creek**	**26.54**	**161**	P	**P**	**03 42 07.4**	**+0.2**
WRAB				IAmb	IAmb	03 42 08.2	
	comp=Z,22nm,0.7s						
WRA	**Warramunga Arr**	**26.55**	**161**	P	**P**	**03 42 07.2**	**-0.1**
	comp=Z,9.8nm,0.4s,baz=329,slow=11,SNR=115						
WRA				S	**S**	**03 46 23.2**	**-3.7**
	comp=Z,4.7nm,0.9s,baz=337,slow=16,SNR=6.4						
WRA				ScP	**ScP**	**03 48 46.7**	**-1.0**
	comp=Z,4.5nm,0.8s,baz=339,slow=3.1,SNR=7.6						
WB2	**Warramunga Arr**	**26.55**	**161**	IAmb	IAmb	03 42 08.3	
	comp=Z,22nm,0.7s						
PSI	**Prapat**	**26.56**	**266**	P	**P**	**03 42 08.1**	**+0.5**
	comp=Z,28nm,0.7s,baz=90,slow=5.1,SNR=30						
PSI				ScP	**ScP**	**03 48 46.4**	**-1.7**
	comp=Z,5.8nm,0.8s,baz=143,slow=5.0,SNR=6.4						
WR0	**Warramunga Arr**	**26.63**	**161**	P	**P**	**03 42 08.0**	**+0.1**
WR0				IAmb	IAmb	03 42 09.0	
	comp=Z,26nm,1.3s						
JCJ	**Chichijima**	**26.94**	**35**	P	**P**	**03 42 09.7**	**-1.0**
	comp=Z,82nm,0.5s,baz=194,slow=3.2,SNR=18						
PSA00	**Pilbara Seismi**	**27.24**	**191**	P	**P**	**03 42 13.8**	**+0.4**
NJ2	**Nanjing**	**27.34**	**348**	*e*P	**P**	**03 42 16.1**	**+1.9**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
GSI	**Gunungsitoli**	**28.09**	**263**	P	**P**	**03 42 20.2**	**-0.8**
RABL	**Rabaul**	**28.30**	**109**	P	**P**	**03 42 24.5**	**+1.5**
CM31	**Chiang Mai Arr**	**28.99**	**299**	P	**P**	**03 42 29.5**	**+0.5**
CM31				IAmb	IAmb	03 42 34.4	
	comp=Z,11nm,0.8s						
CMAR	**Chiang Mai Arr**	**28.99**	**299**	P	**P**	**03 42 29.9**	**+0.9**
	comp=Z,6.1nm,0.7s,baz=113,slow=7.1,SNR=16						
CMAR				pP	**pwP**	**03 43 13.7**	**+1.5**
	comp=Z,1.1nm,0.3s,baz=102,slow=8.4,SNR=1.7						
CMAR				ScP	**ScP**	**03 48 54.3**	**-1.0**
	comp=Z,1.6nm,0.3s,baz=139,slow=1.6,SNR=19						
CMAR	**Chiang Mai Arr**	**28.99**	**299**	P	**P**	**03 42 29.0**	**0.0**
CHTO	**Chiang Mai**	**29.13**	**300**	P	**P**	**03 42 30.2**	**0.0**
CHTO				IAmb	IAmb	03 42 35.3	
	comp=Z,10nm,0.7s						
QIS	**Mount Isa**	**29.20**	**152**	P	**P**	**03 42 31.3**	**+0.4**
	comp=Z,15nm,0.6s						
KMI	**Kunming**	**29.38**	**315**	⇑P	**P**	**03 42 34.3**	**+1.7**
KMI				pmax	pmax		
	comp=Z,12nm,0.5s						
GIRL	**Giralia**	**29.83**	**201**	P	**P**	**03 42 37.7**	**+1.4**
	comp=Z,147nm,1.2s						
AS31	**Alice Springs**	**29.93**	**164**	P	**P**	**03 42 37.9**	**+0.6**
ASAR	**Alice Springs**	**29.93**	**164**	P	**P**	**03 42 38.0**	**+0.8**
	comp=Z,8.5nm,0.3s,baz=341,slow=6.9,SNR=233						
ASAR				PcP	**PcP**	**03 45 35.1**	**+0.1**
	comp=Z,2.2nm,0.3s,baz=344,slow=2.5,SNR=5.5						
ASAR				S	**S**	**03 47 18.2**	**-1.7**
	comp=Z,3.4nm,0.9s,baz=356,slow=24,SNR=8.1						
ASAR				ScP	**ScP**	**03 48 57.2**	**-1.0**
	comp=Z,10nm,0.8s,baz=345,slow=2.8,SNR=28						
WRKA	**Warakurna**	**30.26**	**175**	P	**P**	**03 42 41.8**	**+1.7**
	comp=Z,6.0nm,0.6s						
JWT	**Wachi**	**31.25**	**16**	P	**P**	**03 42 49.0**	**+0.4**
JWT				IAmb	IAmb	03 42 51.4	
	comp=Z,14nm,0.7s						
INU	**Inuyama**	**31.78**	**18**	P	**P**	**03 42 52.7**	**-0.5**
INU				IAmb	IAmb	03 42 54.3	
	comp=Z,22nm,0.6s						
KSRS	**Korea Array**	**32.11**	**4**	P	**P**	**03 42 57.0**	**+0.9**
	comp=Z,3.7nm,0.6s,baz=178,slow=9.8,SNR=17						
MEEK	**Meekatharra**	**32.41**	**191**	P	**P**	**03 42 58.7**	**-0.2**
	comp=Z,29nm,0.6s						
XAN	**Xi'an**	**32.47**	**334**	⇓P	**P**	**03 42 58.8**	**-0.6**
XAN				ScP	**ScP**	**03 49 04.3**	**-2.3**
XAN				pmax	pmax		
	comp=Z,17nm,0.9s						
CTAO	**Charters Tower**	**32.47**	**142**	P	**P**	**03 43 00.8**	**+1.3**
CTAO				IAmb	IAmb	03 43 02.2	
	comp=Z,21nm,0.9s						
CTAO	**Charters Tower**	**32.47**	**142**	P	**P**	**03 43 00.8**	**+1.3**
	comp=Z,29nm,1.0s						
CD2	**Chengdu**	**32.64**	**324**	*e*P	**P**	**03 43 01.3**	**+0.3**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
MAJO	**Matsushiro**	**33.25**	**19**	P	**P**	**03 43 04.9**	**-1.2**
MAT	**Matsushiro**	**33.25**	**19**	P	**P**	**03 43 05.0**	**-1.1**
MJAR	**Matsushiro Arr**	**33.25**	**19**	P	**P**	**03 43 04.9**	**-1.2**
	comp=Z,9.5nm,0.8s,baz=187,slow=9.7,SNR=24						
MJAR				ScP	**ScP**	**03 49 07.8**	**-1.4**
	comp=Z,3.3nm,0.9s,baz=179,slow=4.2,SNR=6.6						
OOD	**Oodnadatta**	**34.34**	**164**	P	**P**	**03 43 15.9**	**+0.4**
	comp=Z,81nm,0.5s						
MORW	**Morawa**	**35.32**	**194**	P	**P**	**03 43 24.2**	**+0.3**
MORW				IAmb	IAmb	03 43 24.9	
	comp=Z,16nm,0.6s						
MORW	**Morawa**	**35.32**	**194**	P	**P**	**03 43 24.0**	**0.0**
	comp=Z,26nm,1.1s						
BJI	**Beijing**	**35.60**	**348**	P	**P**	**03 43 26.5**	**+0.3**
BJI				pmax	pmax		
	comp=Z,7.0nm,0.6s						
FORT	**Forrest**	**35.94**	**176**	P	**P**	**03 43 30.1**	**+0.9**
FORT				IAmb	IAmb	03 43 33.6	
	comp=Z,28nm,0.7s						
FORT	**Forrest**	**35.94**	**176**	P	**P**	**03 43 29.5**	**+0.3**
	comp=Z,40nm,0.7s						
INKA	**Innaminka**	**36.00**	**157**	P	**P**	**03 43 31.0**	**+1.3**
	comp=Z,82nm,0.6s						
MULG	**Mulgathing**	**36.31**	**167**	P	**P**	**03 43 33.0**	**+0.7**
	comp=Z,17nm,0.7s						
LZH	**Lanzhou**	**36.53**	**330**	*e*P	P	03 43 40.8	+6.5
LZH				pP	pP	03 44 19.4	+3.3
LZH				sP	sP	03 44 45.3	+6.3
LZH				pmax	pmax		
	comp=Z,30nm,1.0s						
QLP	**Quilpie**	**36.53**	**151**	P	**P**	**03 43 34.3**	**0.0**
	comp=Z,26nm,0.7s						
BLDU	**Ballidu**	**36.65**	**193**	P	**P**	**03 43 35.0**	**-0.2**
	comp=Z,28nm,0.8s						
KLBR	**Kellerberrin**	**37.39**	**191**	P	**P**	**03 43 41.5**	**+0.1**
	comp=Z,65nm,0.6s						
HHC	**Hu-ho-hao-te**	**37.54**	**343**	*e*P	**P**	**03 43 43.4**	**+0.7**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,140nm,4.8s						
RK1H	**Rockhampton Ha**	**37.55**	**140**	P	**P**	**03 43 43.7**	**+0.8**
	comp=Z,20nm,0.8s						
LCRK	**Leigh Creek**	**37.57**	**162**	P	**P**	**03 43 43.7**	**+0.7**
	comp=Z,62nm,0.8s						
SHL	**Shillong**	**37.93**	**306**	P	**P**	**03 43 45.4**	**-0.9**
SHL				IAmb	IAmb	03 43 47.5	
	comp=Z,32nm,0.7s						
MUN	**Mundaring**	**38.08**	**193**	P	**P**	**03 43 47.4**	**+0.2**
	comp=Z,27nm,0.7s						
NWAO	**Narrogin (SRO)**	**38.78**	**191**	P	**P**	**03 43 53.5**	**+0.5**
	comp=Z,35nm,1.0s						
USRK	**Ussuriysk Ar.**	**39.19**	**7**	P	**P**	**03 43 56.4**	**+0.1**
	comp=Z,4.4nm,0.5s,baz=189,slow=7.7,SNR=14						
USRK	**Ussuriysk Ar.**	**39.19**	**7**	P	**P**	**03 43 56.2**	**-0.1**
BBOO	**Buckleboo**	**39.20**	**166**	P	**P**	**03 43 57.4**	**+0.9**
BBOO	**Buckleboo**	**39.20**	**166**	P	**P**	**03 43 57.2**	**+0.7**
	comp=Z,122nm,0.6s						
MDJ	**Mudanjiang**	**39.35**	**5**	P	**P**	**03 43 58.4**	**+0.8**
MDJ				pmax	pmax		
	comp=Z,19nm,0.6s						
MDJ				pmax	pmax		
	comp=Z,290nm,3.9s						
EIDS	**Eidsvold**	**39.36**	**142**	P	**P**	**03 43 58.3**	**+0.4**
EIDS				IAmb	IAmb	03 43 59.1	
	comp=Z,18nm,0.8s						
EIDS	**Eidsvold**	**39.36**	**142**	P	**P**	**03 43 59.0**	**+1.1**
	comp=Z,31nm,0.8s						
WHYH	**Whyalla**	**39.80**	**164**	P	**P**	**03 44 02.6**	**+1.1**
	comp=Z,59nm,0.7s						
STKA	**Stephens Creek**	**40.03**	**158**	P	**P**	**03 44 04.5**	**+1.1**
	comp=Z,19nm,0.7s,baz=337,slow=8.1,SNR=47						
STKA				ScP	**ScP**	**03 49 33.0**	**-1.4**
	comp=Z,2.8nm,0.7s,baz=11,slow=5.2,SNR=3.8						
STKA				S	**S**	**03 49 51.0**	**-3.0**
	comp=Z,2.2nm,0.8s,baz=282,slow=24,SNR=6.5						
STKA	**Stephens Creek**	**40.03**	**158**	P	**P**	**03 44 04.4**	**+1.1**
HTT	**Hallett**	**40.56**	**163**	P	**P**	**03 44 09.1**	**+1.3**
	comp=Z,32nm,0.9s						
CMSA	**Cobar Meteorol**	**41.40**	**153**	P	**P**	**03 44 15.5**	**+1.0**
	comp=Z,23nm,0.6s						
TAPN	**Taplejung**	**42.07**	**306**	*e*P	**P**	**03 44 20.3**	**-0.2**
	comp=Z,21nm,0.5s						
ODAN	**Odare**	**42.13**	**305**	*e*P	**P**	**03 44 20.7**	**-0.2**
	comp=Z,36nm,0.6s						
H11N1	**WAKE ISLAND Hy**	**42.80**	**67**	T	T	04 31 05.3	
	baz=255,slow=75,SNR=6.9						
H11N2	**WAKE ISLAND Hy**	**42.81**	**67**	T	T	04 31 07.5	
	baz=255,slow=75,SNR=4.2						
RAMN	**Ramite**	**42.81**	**305**	*e*P	**P**	**03 44 26.5**	**+0.1**
	comp=Z,20nm,0.5s						
H11N3	**WAKE ISLAND Hy**	**42.81**	**67**	T	T	04 31 06.7	
	baz=255,slow=75,SNR=7.9						
JIRN	**Jiri**	**43.43**	**305**	*e*P	**P**	**03 44 31.4**	**-0.1**
	comp=Z,36nm,0.6s						
ARMA	**Armidale**	**43.46**	**146**	P	**P**	**03 44 32.8**	**+1.5**
ARMA				IAmb	IAmb	03 44 33.9	
	comp=Z,29nm,0.8s						
ARMA	**Armidale**	**43.46**	**146**	P	**P**	**03 44 32.6**	**+1.3**
	comp=Z,42nm,1.0s						
GUN	**Gumba**	**43.78**	**305**	*e*P	**P**	**03 44 33.9**	**-0.4**
	comp=Z,62nm,0.7s						
PKI	**Pulchoki**	**44.03**	**305**	*e*P	**P**	**03 44 35.4**	**-0.8**
	comp=Z,11nm,0.6s						
PKIN	**Phulchoki**	**44.04**	**305**	*e*P	**P**	**03 44 35.5**	**-0.8**
	comp=Z,12nm,0.5s						
KKN	**Kakani**	**44.22**	**305**	*e*P	**P**	**03 44 36.7**	**-0.9**
	comp=Z,15nm,0.5s						
DMN	**Daman**	**44.29**	**305**	*e*P	**P**	**03 44 37.7**	**-0.5**
	comp=Z,30nm,0.8s						
PALK	**Pallekele**	**44.50**	**275**	P	**P**	**03 44 39.6**	**-0.2**
	comp=Z,3.1nm,0.5s,baz=57,slow=1.7,SNR=2.0						
ARPS	**Mount Arapiles**	**44.55**	**161**	P	**P**	**03 44 41.0**	**+1.2**
	comp=Z,76nm,0.6s						
GKN	**Gorkha**	**44.83**	**305**	*e*P	**P**	**03 44 41.5**	**-0.8**
YNG	**Young**	**44.94**	**153**	P	**P**	**03 44 44.7**	**+1.8**
	comp=Z,33nm,1.3s						
MGCD	**Mangrove Creek**	**45.36**	**149**	P	**P**	**03 44 48.6**	**+2.4**
	comp=Z,18nm,0.7s						
SONM	**Songino Array**	**45.43**	**342**	P	**P**	**03 44 46.5**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=156,slow=7.0,SNR=5.1						
SONM				ScP	**ScP**	**03 49 53.8**	**-2.4**
	comp=Z,1.8nm,0.7s,baz=158,slow=4.2,SNR=7.8						
KOLN	**Koldanda**	**45.59**	**304**	*e*P	**P**	**03 44 48.0**	**-0.4**
	comp=Z,62nm,0.5s						
DANN	**Dangsing**	**45.67**	**305**	*e*P	**P**	**03 44 48.7**	**-0.5**
	comp=Z,81nm,0.5s						
CAN	**Canberra**	**46.06**	**153**	P	**P**	**03 44 53.8**	**+2.0**
CAN				IAmb	IAmb	03 44 55.1	
	comp=Z,26nm,0.7s						
CAN	**Canberra**	**46.06**	**153**	P	**P**	**03 44 53.8**	**+2.1**
	comp=Z,69nm,1.2s						
SANVU	**Saraoutou**	**46.21**	**117**	P	**P**	**03 44 54.9**	**+1.8**
SANVU				IAmb	IAmb	03 44 55.6	
	comp=Z,35nm,0.8s						
PYUN	**Piuthan**	**46.21**	**304**	*e*P	**P**	**03 44 53.2**	**-0.1**
	comp=Z,71nm,0.7s						
CNB	**Canberra Magne**	**46.23**	**153**	P	**P**	**03 44 55.1**	**+2.1**
	comp=Z,26nm,1.0s						
TOO	**Toolangi**	**46.54**	**158**	P	**P**	**03 44 57.1**	**+1.6**
TOO				IAmb	IAmb	03 44 58.5	
	comp=Z,15nm,0.6s						
TOO	**Toolangi**	**46.54**	**158**	P	**P**	**03 44 57.5**	**+2.1**
	comp=Z,31nm,1.1s						
DZM	**Mont Dzumac**	**48.48**	**126**	P	**P**	**03 45 11.8**	**+1.2**
	comp=Z,17nm,0.7s,baz=278,slow=7.1,SNR=20						
DZM	**Mont Dzumac**	**48.48**	**126**	P	**P**	**03 45 11.3**	**+0.7**
DZM				IAmb	IAmb	03 45 12.9	
	comp=Z,20nm,0.7s						
WMQ	**Urumqi**	**50.73**	**325**	*e*P	**P**	**03 45 27.9**	**+0.6**
WMQ				pP	pP	03 46 13.1	+1.5
WMQ				pmax	pmax		
	comp=Z,12nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,99nm,4.3s						
PETK	**Petropavlovsk-**	**54.51**	**23**	P	**P**	**03 45 54.8**	**0.0**
	comp=Z,8.1nm,0.6s,baz=194,slow=3.7,SNR=27						
MK31	**Makanchi Array**	**55.56**	**325**	P	**P**	**03 46 01.9**	**-0.5**
MKAR	**Makanchi Array**	**55.56**	**325**	P	**P**	**03 46 01.9**	**-0.5**
	comp=Z,9.1nm,0.6s,baz=119,slow=7.5,SNR=91						
MKAR				ScP	**ScP**	**03 50 36.1**	**-3.4**
	comp=Z,2.2nm,0.7s,baz=114,slow=5.1,SNR=6.5						
MKAR	**Makanchi Array**	**55.56**	**325**	P	**P**	**03 46 01.7**	**-0.7**
NIL	**Nilore**	**55.97**	**307**	P	**P**	**03 46 05.3**	**-0.2**
NIL				IAmb	IAmb	03 46 06.4	
	comp=Z,14nm,1.0s						
KSH	**Kashi**	**56.05**	**315**	P	**P**	**03 46 07.3**	**+1.2**
KSH				pmax	pmax		
	comp=Z,6.0nm,0.8s						
AAK	**Ala-Archa**	**58.35**	**318**	P	**P**	**03 46 22.1**	**-0.2**
	comp=Z,2.5nm,0.7s,baz=162,slow=4.8,SNR=7.4						
AAK	**Ala-Archa**	**58.35**	**318**	IAmb	IAmb	03 46 23.8	
	comp=Z,2.5nm,0.7s						
ZALV	**Zalesovo Beam**	**58.63**	**333**	P	**P**	**03 46 21.9**	**-1.8**
	comp=Z,2.1nm,0.4s,baz=123,slow=6.2,SNR=11						
KBL	**Kabul**	**59.56**	**307**	P	**P**	**03 46 30.0**	**-0.8**
KBL				IAmb	IAmb	03 46 31.0	
	comp=Z,13nm,0.7s						
KURK	**Kurchatov**	**59.75**	**328**	P	**P**	**03 46 30.5**	**-1.0**
GAR	**Garm**	**59.93**	**312**	P	**P**	**03 46 32.3**	**-0.8**
GAR				IAmb	IAmb	03 46 33.4	
	comp=Z,33nm,0.9s						
KKAR	**Karatay Array**	**61.23**	**317**	P	**P**	**03 46 40.9**	**-0.8**
BKZ	**Black Stump Fm**	**64.59**	**138**	P	**P**	**03 47 04.6**	**+0.7**
HRA	**Herat**	**64.99**	**305**	P	**P**	**03 47 05.9**	**-0.9**
BVAR	**Borovoye Array**	**65.33**	**327**	P	**P**	**03 47 07.4**	**-0.9**
	comp=Z,1.9nm,0.4s,baz=186,slow=13,SNR=7.9						
BRVK	**Borovoye**	**65.40**	**327**	P	**P**	**03 47 07.6**	**-1.2**
BRVK				IAmb	IAmb	03 47 09.5	
	comp=Z,8.0nm,0.7s						
NRIK	**Noril'sk**	**68.63**	**346**	P	**P**	**03 47 28.3**	**-0.5**
	comp=Z,2.6nm,0.5s,baz=103,slow=7.5,SNR=2.5						
GEYT	**Alibeck**	**68.93**	**309**	P	**P**	**03 47 31.0**	**-0.3**
	comp=Z,7.9nm,0.8s,baz=158,slow=5.8,SNR=7.0						
ABKAR	**Akbulak array**	**70.14**	**321**	P	**P**	**03 47 37.0**	**-1.4**
ARU	**Arti**	**72.95**	**328**	P	**P**	**03 47 53.4**	**-1.7**
KIRV	**Kirov**	**78.24**	**329**	P	**P**	**03 48 23.4**	**-1.7**
	comp=Z,17nm,0.7s,baz=31,slow=3.0,SNR=4.3						
BELG	**Belogornoye**	**78.40**	**322**	P	**P**	**03 48 24.9**	**-1.2**
	comp=Z,28nm,0.8s,baz=186,slow=1.2,SNR=7.2						
RAYN	**Ar Rayn**	**78.69**	**293**	P	**P**	**03 48 27.3**	**-1.1**
L19K	**White Mountain**	**80.55**	**28**	P	**P**	**03 48 38.5**	**+0.9**
L19K				IAmb	IAmb	03 48 39.8	
	comp=Z,14nm,0.8s						
KBZ	**Khabaz**	**80.99**	**313**	P	**P**	**03 48 39.7**	**-0.5**
	comp=Z,1.6nm,0.6s,baz=165,slow=4.5,SNR=4.6						
J20K	**Nowinta River**	**81.10**	**26**	P	**P**	**03 48 41.4**	**+1.0**
J20K				IAmb	IAmb	03 48 42.8	
	comp=Z,11nm,0.9s						
A21K	**Barrow**	**81.17**	**19**	IAmb	IAmb	03 48 42.4	
	comp=Z,15nm,0.6s						
VOI	**Vohitsoka**	**81.48**	**247**	P	**P**	**03 48 42.8**	**-0.6**
VOI				IAmb	IAmb	03 48 44.1	
	comp=Z,24nm,0.7s						
I21K	**Tanana**	**82.12**	**25**	IAmb	IAmb	03 48 48.1	
	comp=Z,28nm,1.3s						
BPAW	**Bear Paw Mtn.**	**82.47**	**26**	P	**P**	**03 48 47.8**	**+0.2**
BPAW				IAmb	IAmb	03 48 49.3	
	comp=Z,26nm,0.9s						
MLY	**Manley**	**82.64**	**25**	IAmb	IAmb	03 48 50.4	
	comp=Z,17nm,0.9s						
TRF	**Thorofare Moun**	**82.75**	**27**	IAmb	IAmb	03 48 50.8	
	comp=Z,29nm,1.4s						
COLD	**Coldfoot**	**82.98**	**23**	P	**P**	**03 48 51.1**	**+1.0**
COLD				IAmb	IAmb	03 48 52.6	
	comp=Z,9.1nm,0.6s						
NEA2	**Nenana**	**83.33**	**26**	IAmb	IAmb	03 48 54.2	
	comp=Z,12nm,0.8s						
RND	**Reindeer**	**83.39**	**27**	IAmb	IAmb	03 48 53.0	
	comp=Z,18nm,0.6s						
KLMR	**Klimovskoe**	**83.43**	**331**	*e*P	**P**	**03 48 50.5**	**-2.0**
KLMR				AMP		03 48 51.6	
	comp=Z,16nm,0.8s						
CCB	**Clear Creek Bu**	**83.88**	**26**	IAmb	IAmb	03 48 55.3	
	comp=Z,14nm,1.1s						
HDA	**Harding Lake**	**84.25**	**26**	IAmb	IAmb	03 48 57.2	
	comp=Z,12nm,0.8s						
ILAR	**Eielson Array**	**84.27**	**25**	P	**P**	**03 48 55.6**	**-1.1**
	comp=Z,3.1nm,0.5s,baz=254,slow=4.7,SNR=81						
ILAR				pP	**pP**	**03 49 45.9**	**+0.3**
	comp=Z,1.2nm,0.8s,baz=254,slow=5.0,SNR=2.4						
ILAR	**Eielson Array**	**84.27**	**25**	P	**P**	**03 48 56.3**	**-0.4**
MAW	**Mawson**	**84.75**	**200**	P	**P**	**03 48 59.9**	**+0.9**
	comp=Z,3.5nm,0.7s,baz=54,slow=4.0,SNR=21						
MAW	**Mawson**	**84.75**	**200**	P	**P**	**03 48 59.9**	**+0.9**
OBN	**Obninsk**	**85.06**	**325**	P	**P**	**03 48 59.1**	**-1.7**
	comp=Z,1.7nm,0.5s,baz=108,slow=6.9,SNR=4.5						
OBN	**Obninsk**	**85.06**	**325**	IAmb	IAmb	03 49 00.7	
	comp=Z,12nm,0.7s						
ASF	**Jabal al Asfar**	**85.99**	**302**	P	**P**	**03 49 05.6**	**-0.5**
	comp=Z,1.8nm,0.7s,baz=101,slow=15,SNR=2.2						
BCAR	**Beaver Creek A**	**86.60**	**27**	P	**P**	**03 49 09.2**	**+0.9**
KIBK	**Kibwezi**	**87.61**	**267**	P	**P**	**03 49 13.9**	**-0.3**
BRTR	**Keskin Array B**	**88.05**	**310**	P	**P**	**03 49 13.2**	**-2.7**
	comp=Z,1.1nm,0.4s,baz=126,slow=3.4,SNR=20						
BRTR	**Keskin Array B**	**88.05**	**310**	P	**P**	**03 49 15.3**	**-0.6**
KMBO	**Kilima Mbogo**	**88.29**	**269**	P	**P**	**03 49 17.6**	**0.0**
	comp=Z,4.0nm,0.8s,baz=68,slow=9.0,SNR=6.3						
KMBO	**Kilima Mbogo**	**88.29**	**269**	P	**P**	**03 49 18.1**	**+0.4**
ARCES	**ARCESS Array B**	**88.56**	**340**	P	**P**	**03 49 15.5**	**-2.0**
	comp=Z,6.0nm,0.8s,baz=86,slow=5.9,SNR=15						
ARCES	**ARCESS Array B**	**88.56**	**340**	IAmb	IAmb	03 49 15.9	
	comp=Z,33nm,1.4s						
FINES	**FINESS Array B**	**89.87**	**332**	P	**P**	**03 49 21.5**	**-2.2**
	comp=Z,1.5nm,0.4s,baz=55,slow=4.1,SNR=21						
AKASG	**Malin Array Be**	**89.89**	**321**	P	**P**	**03 49 21.5**	**-2.5**
	comp=Z,0.6nm,0.5s,baz=72,slow=4.8,SNR=4.5						
BURAR	**Bucovina Array**	**93.00**	**318**	P	**P**	**03 49 37.9**	**-0.7**
SYO	**Syowa Base**	**93.39**	**201**	⇑*e*P	**P**	**03 49 42.4**	**+2.7**
HFS	**Hagfors**	**96.06**	**332**	P	**P**	**03 49 50.7**	**-1.4**
	comp=Z,2.8nm,0.8s,baz=112,slow=6.4,SNR=6.3						
NB2	**NORSAR Subarra**	**96.84**	**333**	P	**P**	**03 49 52.8**	**-3.0**
	comp=Z,0.7nm,0.7s,baz=64,slow=4.6						
NOA	**NORSAR Array B**	**96.84**	**333**	P	**P**	**03 49 53.4**	**-2.4**
	comp=Z,0.9nm,0.7s,baz=66,slow=4.5,SNR=4.9						
LSZ	**Lusaka**	**98.35**	**255**	P	**P**	**03 50 02.5**	**-1.1**
	comp=Z,1.9nm,0.2s,baz=121,slow=5.9,SNR=3.2						
LSZ	**Lusaka**	**98.35**	**255**	IAmb	IAmb	03 50 03.7	
	comp=Z,2.3nm,0.6s						
NVAR	**Mina Array Bea**	**106.83**	**47**	Pdiff	**Pdif**	**03 50 43.0**	**+2.0**
	comp=Z,0.2nm,0.5s,baz=311,slow=4.7,SNR=3.5						
NVAR				PKKPbc	**PKKPbc**	**04 06 09.2**	**-0.7**
	comp=Z,0.4nm,0.6s,baz=119,slow=5.0,SNR=4.2						
TORD	**Torodi Ar. Bea**	**121.21**	**289**	PKP	**PKPdf**	**03 55 16.6**	**-1.3**
	comp=Z,1.6nm,0.6s,baz=45,slow=1.9,SNR=10						
TORD				SKP		03 58 32.0	
	comp=Z,1.6nm,0.8s,baz=52,slow=2.5,SNR=5.7						
TORD				PKKPbc	**PKKPab**	**04 05 21.6**	**-0.2**
	comp=Z,0.8nm,0.8s,baz=276,slow=2.8,SNR=5.7						
TXAR	**Lajitas Array**	**121.65**	**51**	PKP	**PKiKP**	**03 55 19.1**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=55,slow=0.4,SNR=7.5						
TXAR				PKKPbc	**PKKPbc**	**04 05 18.9**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=108,slow=5.8,SNR=4.5						
DBIC	**Dimbokro**	**128.99**	**283**	PKP	**PKPdf**	**03 55 32.3**	**-0.4**
	comp=Z,4.4nm,1.0s,baz=121,slow=5.9,SNR=2.1						
DBIC				SKPbc	SKPbc	03 58 32.0	
	comp=Z,5.4nm,0.6s,baz=75,slow=4.2,SNR=10						
PLCA	**Paso Flores**	**141.89**	**160**	PKP	**PKPdf**	**03 55 56.7**	**+0.5**
	comp=Z,1.6nm,0.7s,baz=290,slow=1.5,SNR=6.2						
PLCA				SKPbc	**SKPbc**	**03 59 14.2**	**-0.6**
	comp=Z,2.8nm,0.9s,baz=260,slow=4.6,SNR=4.1						
BOAB	**BOACO BROADBAN**	**144.42**	**60**	PKPdf	**PKPdf**	**03 56 00.9**	**-0.2**
ACON	**Acoyapa**	**145.07**	**60**	PKPbc	**PKPab**	**03 56 02.8**	**+0.4**
ORTG	**Ortega, Santa**	**145.53**	**63**	PKPbc	**PKPab**	**03 56 05.2**	**+1.0**
JTS	**Las Juntas de**	**146.01**	**63**	PKPbc	**PKPbc**	**03 56 05.4**	**+0.3**

IDC ***22*** *03:47:56.4±1.3, 42.°84N×18.°32E, h0^{km}, mb3.4/3,*
mb1 3.7/10, mb1mx3.5/40, mbtmp3.6/10, ML3.4/7, MS3.1/1,
Ms1 3.1/1, ms1mx2.1/39 Error ellipse: s-maj=25.8km
s-min=14.7km az=69.0
RHSSO ***22*** *03:47:59.9±0.2, 42.°98N×17.°97E, h4^{km}±2^{km}, ML3.6/17*
BEO ***22*** *03:47:59.7±0.3, 43.°02N×17.°95E, h5^{km}±2^{km}, ML3.4/17*
LDG ***22*** *03:47:59.8±0.1, 42.°92N×18.°02E, h3^{km}, Ml3.4/18, Error*
ellipse: s-maj=3.7km s-min=2.0km az=14.0
PDG ***22*** *03:47:59.1±0.6, 42.°97N×17.°97E, h14^{km}, MD3.6/7,*
ML3.2/10, Error ellipse: s-maj=0.7km s-min=0.8km az=0.0
PRU ***22*** *03:48:01.5±0.0, 43.°00N×17.°86E, h1^{km}*
ISC 22 03:47:59.0±0.6**, 42.°98N**±0.°02×**17.°95E**±0.°02**, h17**^{km}±4^{km}**,**
n189, σ2.^{s}31/281**, mb3.4**/3**, 28C-17D, Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STON	**Ston**	**0.21**	**239**	*e*Pg	**Pg**	**03 48 04.2**	**+0.1**
STON				*e*Sg	**Sg**	**03 48 08.5**	**+1.0**
STON	**Ston**	**0.21**	**239**	*e*Pg	**Pg**	**03 48 04.0**	**-0.1**
STON				*e*Sg	**Sg**	**03 48 07.9**	**+0.4**
STON	**Ston**	**0.21**	**239**	*e*Pg	**Pg**	**03 48 03.9**	**-0.1**
STON				Sg	**Sg**	**03 48 08.1**	**+0.6**
DBRK	**Dubrovnik**	**0.35**	**155**	*e*Pg	**Pg**	**03 48 06.0**	**-0.3**
DBRK				Sg	**Sg**	**03 48 11.5**	**+0.3**
TREB	**Trebinje**	**0.40**	**132**	*e*Pg	**Pg**	**03 48 06.5**	**-0.7**
TREB				*e*Sg	**Sg**	**03 48 12.8**	**+0.1**
TREB	**Trebinje**	**0.40**	**132**	*e*Pg	**Pg**	**03 48 06.3**	**-0.9**
TREB				*e*Sg	**Sg**	**03 48 12.5**	**-0.2**
HCY	**Herceg Novi**	**0.67**	**143**	*e*Pg	**Pg**	**03 48 11.3**	**-1.0**
HCY				*e*Sg	**Sb**	**03 48 21.8**	**+0.6**
HCY	**Herceg Novi**	**0.67**	**143**	⇑*i*Pg	**Pg**	**03 48 11.2**	**-1.0**
HCY				*i* Sg	**Sg**	**03 48 21.6**	**+0.5**
UPM	**Unac-Piva**	**0.73**	**72**	*e*Pg	**Pg**	**03 48 12.2**	**-1.3**
UPM				*e*Sg	**Sb**	**03 48 23.7**	**+0.4**
UPM	**Unac-Piva**	**0.73**	**72**	⇓*i*Pg	**Pg**	**03 48 12.6**	**-0.9**
UPM				*i* Sg	**Sb**	**03 48 24.0**	**+0.7**
MAKA	**Makarska**	**0.74**	**294**	*e*Pg	**Pg**	**03 48 12.8**	**-0.8**
MAKA				Sg	**Sg**	**03 48 24.5**	**+1.0**
NKME	**Niksic**	**0.77**	**106**	⇑*i*Pg	**Pg**	**03 48 12.7**	**-1.4**
NKME				*i* Sg	**Sb**	**03 48 25.2**	**+1.1**
RICI	**Ricice**	**0.79**	**311**	*e*Pg	**Pg**	**03 48 13.6**	**-0.8**
NKY	**Niksic**	**0.79**	**102**	⇑*i*Pg	**Pg**	**03 48 13.6**	**-0.8**
NKY				*i* Sg	**Sb**	**03 48 25.9**	**+1.2**
LSTV	**Lastovo**	**0.81**	**255**	*e*Pg	**Pg**	**03 48 13.6**	**-1.1**
CEME	**Cevo**	**0.84**	**121**	⇓*i*Pg	**Pg**	**03 48 14.2**	**-1.2**
CEME				*i* Sg	**Sb**	**03 48 27.2**	**+1.1**
PDG	**Podgorica**	**1.11**	**119**	⇑P	**Pg**	**03 48 19.6**	**-1.0**
PDG				⇑S	**Sn**	**03 48 35.8**	**+1.2**
PDG	**Podgorica**	**1.11**	**119**	*e*Pg	**Pg**	**03 48 19.8**	**-0.7**
PDG				*e*Sg	**Sn**	**03 48 36.4**	**+1.9**
PDG	**Podgorica**	**1.11**	**119**	*e*Pg	**Pg**	**03 48 19.5**	**-1.0**
PDG				*e*Sg	**Sb**	**03 48 35.3**	**+1.4**
PLE	**Pljevlja**	**1.11**	**71**	⇑*i*Pg	**Pg**	**03 48 19.5**	**-1.0**
PLE				*i* Sg	**Sn**	**03 48 36.4**	**+1.6**
TTG	**Podgorica**	**1.11**	**119**	⇓*i*Pg	**Pg**	**03 48 19.3**	**-1.2**
TTG				*i* Sg	**Sn**	**03 48 36.5**	**+1.9**
HVAR	**Hvar**	**1.12**	**281**	*e*Pg	**Pg**	**03 48 19.4**	**-1.3**
DRME	**Dracevica, Mon**	**1.21**	**131**	*e*Pg	**Pg**	**03 48 21.7**	**-0.7**
DRME				*e*Sg	**Sb**	**03 48 38.2**	**+1.4**
DRME	**Dracevica, Mon**	**1.21**	**131**	⇓*i*Pg	**Pg**	**03 48 21.2**	**-1.2**
DRME				*i* Sg	**Sn**	**03 48 40.3**	**+3.2**
RUDO	**Rudo**	**1.22**	**58**	*e*Pg	**Pg**	**03 48 20.9**	**-1.6**
RUDO				*e*Sg	**Sb**	**03 48 37.5**	**+0.5**
HAPS	**Han Pijesak,Bl**	**1.32**	**33**	*e*Pg	**Pg**	**03 48 23.7**	**-0.9**
HAPS				*e*Sg	**Sn**	**03 48 41.9**	**+1.9**
BBLS	**Lazići**	**1.38**	**50**	*e*Pg	**Pn**	**03 48 24.6**	**+1.1**
BBLS				*e*Sg	**Sn**	**03 48 44.1**	**+2.6**
BBLS	**Lazići**	**1.38**	**50**	*e*Pg	**Pn**	**03 48 24.7**	**+1.2**
BBLS				*e*Sg	**Sn**	**03 48 44.0**	**+2.6**
ULC	**Ulcinj**	**1.40**	**136**	⇓*i*Pg	**Pn**	**03 48 24.1**	**+0.3**
ULC				*i* Sg	**Sn**	**03 48 45.6**	**+3.8**
IVA	**Berane**	**1.43**	**94**	⇓*i*Pg	**Pn**	**03 48 25.2**	**+0.9**
IVA				*i* Sg	**Sn**	**03 48 46.7**	**+4.0**
SJES	**Sjenica**	**1.51**	**79**	*e*Pg	**Pg**	**03 48 27.5**	**-0.6**
SJES				*e*Sg	**Sg**	**03 48 48.0**	**+0.2**
KIJV	**Kijevo**	**1.52**	**313**	*e*Pg	**Pn**	**03 48 26.3**	**+0.9**
PVY	**Plav**	**1.53**	**104**	⇑*i*Pg	**Pn**	**03 48 26.9**	**+1.3**
PVY				*i* Sg	**Sg**	**03 48 48.7**	**+0.3**
MGRS	**Mrkonjic Grad**	**1.56**	**337**	*e*Pn	**Pn**	**03 48 27.9**	**+1.8**
MGRS				*e*Sn	**Sg**	**03 48 49.2**	**-0.3**
IVAS	**Ivanjica**	**1.71**	**69**	*e*Pg	**Pn**	**03 48 29.7**	**+1.6**
IVAS				*e*Sg	**Sg**	**03 48 52.7**	**-1.6**
DOB	**Doboj**	**1.75**	**4**	*e*Pn	**Pb**	**03 48 31.1**	**+0.4**
DOB				*e*Sn	**Sb**	**03 48 54.0**	**+1.6**
ZIRJ	**Zirje**	**1.81**	**293**	*e*Pn	**Pn**	**03 48 31.4**	**+2.1**
BLY	**Banja Luka**	**1.85**	**343**	*e*Pg	**Pb**	**03 48 33.2**	**+0.8**
BLY				*e*Sg	**Sg**	**03 48 58.9**	**+0.3**
BLY	**Banja Luka**	**1.85**	**343**	*e*Pn	**Pb**	**03 48 32.6**	**+0.2**

BLY				eSn	Sb	03 48 56.6	+1.4
MORI	Morici	1.86	299	ePn	Pn	03 48 32.6	+2.6
DIVS	Divibare	1.86	52	ePg	Pn	03 48 31.8	+1.7
DIVS				eSg	Sg	03 48 59.2	+0.3
DIVS	Divibare	1.86	52	ePn	Pn	03 48 31.8	+1.7
DIVS				eSn	Sb	03 48 56.7	+1.2
TEKS	Tekeris	1.94	36	ePg	Pn	03 48 32.3	+1.1
TEKS	Tekeris	1.94	36	ePn	Pb	03 48 33.9	0.0
TEKS				eSn	Sb	03 48 58.4	+0.6
BLJ	Bijeljina	2.04	27	ePn	Pn	03 48 33.7	+1.2
BLJ				eSn	Sn	03 48 59.5	+2.0
TIR	Tirane	2.17	138	⇑P	Pn	03 48 35.6	+1.3
TIR				⇓S	Sn	03 49 03.1	+2.4
TIR	Tirane	2.17	138	ePn	Pn	03 48 37.2	+2.9
TRUS	Trudelj	2.17	54	ePn	Pn	03 48 35.9	+1.5
PRIJ	Prijedor	2.18	336	ePn	Pn	03 48 37.2	+2.7
PRIJ				eSn	Sn	03 49 04.6	+3.5
GRUS	Gruza	2.21	65	ePn	Pn	03 48 36.5	+1.6
UDBI	Udbina	2.21	315	ePn	Pb	03 48 38.8	+0.3
DUGI	Dugi Otok	2.33	297	ePn	Pn	03 48 39.1	+2.5
SELS	Selova	2.33	83	ePn	Pn	03 48 38.5	+1.9
MATE	Matera	2.51	202	⇓P	Pn	03 48 39.6	+0.6
PLIT	Plitvice	2.53	319	ePn	Pn	03 48 42.5	+3.1
FRGS	Fruska Gora	2.56	31	⇓P	Pn	03 48 40.3	+0.6
FRGS	Fruska Gora	2.56	31	ePn	Pn	03 48 40.3	+0.6
FRGS	Fruska Gora	2.56	31	ePn	Pn	03 48 41.6	+2.0
FRGS				eSn	Sn	03 49 13.5	+3.2
NVLJ	Novalja	2.73	306	ePn	Pn	03 48 44.6	+2.5
MOSL	Moslavina	2.77	342	ePn	Pn	03 48 44.4	+1.8
SKO	Skopje	2.77	110	ePn	Pn	03 48 45.3	+2.6
BOVS	Bovan	2.82	75	⇑P	Pn	03 48 44.6	+1.3
BOVS				⇓S	Sn	03 49 19.2	+2.4
BOVS	Bovan	2.82	75	ePn	Pn	03 48 44.6	+1.3
OHR	Ohrid	2.83	130	ePn	Pn	03 48 46.6	+3.2
OHR	Ohrid	2.83	130	ePn	Pg	03 48 55.3	+2.1
BARS	Barje	2.85	92	ePn	Pn	03 48 46.2	+2.6
BARS	Barje	2.85	92	ePn	Pb	03 48 48.4	-0.9
RABC	Rab	2.89	309	ePn	Pn	03 48 46.7	+2.5
PRVS	Prvonek	3.08	97	ePn	Pn	03 48 49.3	+2.5
KOVH	Kovagotottos	3.11	2	ePN	Pn	03 48 48.8	+1.6
KOVH	Kovagotottos	3.11	2	eP	Pb	03 48 55.4	+1.6
KOVH	Kovagotottos	3.11	2	eSN	Sg	03 49 39.0	+0.2
ZAG	Zagreb	3.17	334	ePn	Pn	03 48 51.0	+2.9
ZAG				eSn	Sn	03 49 28.3	+2.8
ZAG	Zagreb	3.17	334	ePn	Pn	03 48 50.9	+2.8
OZLJ	Ozalj	3.18	327	ePn	Pn	03 48 51.4	+3.2
BOJS	Bojanci	3.18	323	i Pn	Pn	03 48 51.4	+3.2
BOJS				i Sn	Sn	03 49 31.4	+5.8
ZAGS	Zajecar	3.23	74	ePn	Pn	03 48 50.4	+1.5
PTJ	Puntijarka	3.25	335	ePn	Pn	03 48 51.4	+2.1
MDVR	Moldovita	3.26	55	⇑P	Pn	03 48 50.6	+1.2
MDVR				⇑S	Sn	03 49 29.1	+1.3
MORH	Mrgy, Hungar	3.27	8	eSn	Sn	03 49 30.1	+2.2
KALN	Kalnik	3.32	342	ePn	Pn	03 48 52.1	+1.8
GCIS	Gornji Cirnik	3.33	331	i Pn	Pn	03 48 53.0	+2.8
GCIS				i Sn	Sn	03 49 33.7	+4.4
CRES	Cresnjev	3.36	329	ePn	Pn	03 48 53.4	+2.7
CRES				eSn	Sn	03 49 32.9	+2.8
BOSS	Bosilegrad	3.37	97	ePn	Pn	03 48 53.7	+2.8
AQU	L'Aquila	3.41	261	ePn	Pn	03 48 53.8	+2.4
AQU				eSn	Sn	03 49 33.5	+2.0
RIY	Rijeka	3.42	314	ePn	Pn	03 48 54.5	+3.0
RIY				eSn	Sn	03 49 34.7	+3.1
SMRN	Sveta Marina	3.42	308	ePn	Pn	03 48 53.7	+2.2
ZAPS	Zavoj	3.44	84	ePn	Pn	03 48 54.8	+3.0
LOBO	Lobor	3.44	338	ePn	Pn	03 48 54.2	+2.3
BLKB	Belogradchik	3.51	78	⇑S	Sn	03 49 35.6	+1.8
BRJN	Brijuni	3.59	304	ePn	Pn	03 48 56.0	+2.2
VISS	Visnje	3.59	323	i Pn	Pn	03 48 57.4	+3.5
VISS				i Sn	Sn	03 49 41.5	+5.5
DOBS	Dobrina	3.63	332	i Pn	Pn	03 48 57.5	+3.1
KOGS	Kog	3.67	341	i Pn	Pn	03 48 57.2	+2.3
BZS	Buzias	3.72	44	⇓P	Pn	03 48 56.8	+1.2
BZS				⇑S	Sn	03 49 40.6	+1.5
BZS	Buzias	3.72	44	ePn	Pn	03 48 56.9	+1.2
CEY	Cerknica	3.74	319	ePn	Pn	03 48 58.8	+2.9
CEY				eSn	Sn	03 49 42.3	+2.8
HERR	Herculane	3.74	58	⇑P	Pn	03 48 57.7	+1.8
HERR				⇑S	Sn	03 49 39.5	-0.1
VAY	Valandovo	3.82	114	ePn	Pn	03 48 59.4	+2.5
VAY	Valandovo	3.82	114	ePn	Pn	03 48 59.1	+2.2
GROS	Grobnik	3.89	334	i Pn	Pn	03 49 00.5	+2.4
GROS				eSn	Sn	03 49 45.5	+2.2
TIP	Timpagrande	3.91	194	⇓P	Pn	03 48 58.7	+0.4
VTS	Vitosha	3.91	94	⇑P	Pn	03 48 59.2	+0.9
VTS				⇑S	Sn	03 49 46.6	+2.8
VTS	Vitosha	3.91	94	ePn	Pn	03 49 00.3	+1.9
TIH	Tihany	3.92	359	ePN	Pn	03 49 00.0	+1.7
LJU	Ljubljana	3.92	323	ePn	Pn	03 49 01.1	+2.7
LJU				eSn	Sn	03 49 46.7	+2.8
PERS	Pernice	4.17	332	i Pn	Pn	03 49 04.8	+2.9
MPLH	Magyarpolny	4.20	356	ePN	Pn	03 49 04.3	+2.1
MPLH	Magyarpolny	4.20	356	eP	Pn	03 49 07.5	+5.4
MPLH	Magyarpolny	4.20	356	eSN	Sn	03 49 51.3	+0.6
SIRR	Siria	4.22	38	⇑P	Pn	03 49 03.2	+0.7
SIRR				⇑S	Sn	03 49 52.2	+0.8
GZR	Gura Zlata	4.23	54	⇓P	Pn	03 49 03.7	+1.0
SOKA	Soboth	4.24	332	ePn	Pn	03 49 05.6	+2.7
	4.9nm,0.3s,SNR=6.0						
SOKA				eSn	Sn	03 49 54.8	+2.9
	15nm,0.4s						
OBKA	Obir	4.28	327	i Pn	Pn	03 49 07.0	+3.6
	2.6nm,0.2s						
CSKK	Cskako	4.39	3	ePN	Pn	03 49 06.8	+2.0
CSKK	Cskako	4.39	3	eP	Pb	03 49 12.0	-3.6
CSKK	Cskako	4.39	3	eSN	Sn	03 49 58.7	+3.3
BUD	Budapest	4.56	9	ePN	Pn	03 49 08.5	+1.3
BUD	Budapest	4.56	9	eP	Pn	03 49 12.4	+5.2
ARSA	Arzberg	4.60	339	i Pn	Pn	03 49 10.5	+2.7
	21nm,0.4s,SNR=28						
ARSA				eSn	Sn	03 50 03.1	+2.3
	9.0nm,0.5s						
MYKA	Terra Mystica	4.76	321	ePn	Pn	03 49 12.5	+2.4
	0.7nm,0.1s						
MYKA				eSn	Sn	03 50 10.7	+5.9
	8.0nm,0.5s						
SRO	Srobarova	4.84	3	ePN	Pn	03 49 14.1	+3.1
SRO				eSN	Sn	03 50 11.0	+4.5
LOT	Lotru	4.86	58	⇑P	Pn	03 49 12.0	+0.7
LOT				⇑S	Sn	03 50 08.3	+1.1
DRGR		5.09	40	⇑P	Pn	03 49 15.9	+1.3
DRGR				⇑S	Sn	03 50 14.4	+1.4
PSZ	Piszkesteto	5.12	15	⇓P	Pn	03 49 15.1	+0.2
PSZ				⇓S	Sn	03 50 15.4	+1.7
CONA	Conrad Observa	5.16	344	ePn	Pn	03 49 18.4	+3.0
	3.9nm,0.3s,SNR=11						
CONA				eSn	Sn	03 50 16.3	+1.7
	4.4nm,0.3s						
ZST	Bratislava	5.25	354	ePN	Pn	03 49 18.5	+1.9
ZST				eSN	Sn	03 50 15.7	-0.9
ARR	Arges	5.37	61	⇑P	Pn	03 49 19.1	+0.8
ARR				⇑S	Sn	03 50 21.5	+1.8
ABTA	Abfaltersbach	5.39	316	i Pn	Pn	03 49 21.0	+2.3
	0.5nm,0.1s						
MODS	Modra-Piesok	5.41	355	ePN	Pn	03 49 20.3	+1.4
MODS				eSN	Sn	03 50 21.7	+1.0
CJR	Cluj-Napoca	5.48	45	⇓P	Pn	03 49 20.3	+0.4
MOA	Molln	5.51	333	i Pn	Pn	03 49 23.9	+3.6
	7.2nm,0.2s,SNR=22						
MOA				eSn	Sn	03 50 26.2	+2.9
	19nm,0.4s						
VYHS	Vyhne	5.55	6	ePN	Pn	03 49 23.0	+2.3
VYHS				eSN	Sn	03 50 25.9	+1.9
VOIR		5.66	62	⇑S	Sn	03 50 27.9	+0.9
JAVC	Velka Javorina	5.88	358	ePN	Pn	03 49 28.5	+3.1
JAVC				eSN	Sn	03 50 33.7	+1.4
TRPA	Tarpa	6.07	30	⇑P	Pn	03 49 29.1	+1.2
KRUC	Moravsky	6.18	350	ePN	Pn	03 49 30.7	+1.4
KRUC				eSN	Sn	03 50 38.2	-1.3
WTTA	Wattenberg	6.18	316	ePn	Pn	03 49 32.7	+3.0
	2.6nm,0.3s,SNR=5.3						
WATA	Walderalm	6.26	316	i Pn	Pn	03 49 34.6	+3.9
	4.5nm,0.2s						
WATA				eSn	Sn	03 50 48.5	+6.6
	2.9nm,0.2s						
CKRC	Cesky Krumlov	6.37	338	ePN	Pn	03 49 35.1	+3.1
CKRC				eSN	Sn	03 50 44.7	+0.5
SQTA	Sankt Quirin	6.38	314	i Pn	Pn	03 49 36.0	+3.8
	1.4nm,0.2s						
VRAC	Vranov	6.40	352	⇑P	Pn	03 49 33.4	+1.0
VRAC	Vranov	6.40	352	Pn	Pn	03 49 36.2	+3.8
	0.3nm,0.3s,baz=181,slow=11,SNR=5.0						
VRAC				Sn	Sn	03 50 50.0	+5.0
	0.4nm,0.3s,baz=264,slow=19,SNR=4.6						
VRAC	Vranov	6.40	352	ePN	Pn	03 49 35.7	+3.3
VRAC				eSN	Sn	03 50 44.2	-0.8
CRVS	Cervenica-Dubn	6.41	21	ePN	Pn	03 49 34.7	+2.2
MOTA	Moosalm	6.51	314	ePn	Pn	03 49 36.6	+2.5
	5.3nm,0.4s						
MOTA				Sn	Sn	03 50 54.5	+6.5
	14nm,0.6s						
FETA	Feichten	6.52	311	ePn	Pn	03 49 37.0	+2.8
	1.8nm,0.4s						
GERES	GERESS Array B	6.57	335	Pn	Pn	03 49 37.9	+3.1
	1.1nm,0.3s,baz=155,slow=14,SNR=38						
GERES				Sn	Sn	03 50 50.7	+1.4
	1.7nm,0.3s,baz=147,slow=24,SNR=8.8						
RETA	Reutte	6.78	314	ePn	Pn	03 49 40.3	+2.5
	0.8nm,0.2s						
MORC	Moravsky Berou	6.80	358	⇓P	Pn	03 49 38.1	+0.1
MORC	Moravsky Berou	6.80	358	ePN	Pn	03 49 41.1	+3.1
MORC				eSN	Sn	03 50 53.7	-1.3
KHC	Kasperske Hory	6.86	335	ePN	Pn	03 49 41.1	+2.3
KHC				eSN	Sn	03 50 57.3	+0.9
DAVOX	Davos/Dischmat	6.87	306	Pn	Pn	03 49 43.0	+3.8
	0.7nm,0.3s,baz=124,slow=18,SNR=9.3						
DAVOX				Sn	Sn	03 51 01.2	+4.2
	0.7nm,0.3s,baz=144,slow=19,SNR=4.1						
KRLC	Kraliky	7.14	354	ePN	Pn	03 49 46.0	+3.4
KRLC				eSN	Sn	03 51 04.8	+1.5
DAVA	Damuels	7.14	310	ePn	Pn	03 49 46.0	+3.2
	1.4nm,0.2s						
PRU	Pruhonice	7.39	343	ePN	Pn	03 49 49.9	+3.9
DPC	Dobruska-Polom	7.45	352	ePN	Pn	03 49 50.3	+3.4
DPC				eSN	Sn	03 51 11.3	+0.3
OSTC	Ostas	7.67	352	ePN	Pn	03 49 52.8	+2.9
SBF	Sospel	7.71	280	ePn	Pn	03 49 51.3	+0.9
SBF				eSn	Sn	03 51 14.8	-2.5
	3.0nm,0.2s						
NKC	Novy Kostel	8.18	334	ePN	Pn	03 49 59.1	+2.2
NKC				eSN	Sn	03 51 28.8	0.0
MBDF	Montbardon	8.27	286	ePn	Pn	03 49 58.6	+0.4
MBDF	Montbardon	8.27	286	eP	Pn	03 50 05.4	+7.2
FRF	La Foret Royal	8.27	278	ePn	Pn	03 49 59.8	+1.7
FRF				eSn	Sn	03 51 29.4	-1.6
	1.4nm,0.4s						
LPG	La Plagne	8.42	291	ePn	Pn	03 49 59.9	-0.6
LPG				eSn	Sn	03 51 31.2	-4.0
	6.8nm,0.4s						
LPL	La Plagne	8.44	291	ePn	Pn	03 50 02.0	+1.3
LPL				eSn	Sn	03 51 32.0	-3.6
	5.8nm,0.5s						
ORIF	Oris-en-Rattie	8.92	287	ePn	Pn	03 50 09.2	+2.1
ORIF				eSn	Sn	03 51 44.0	-3.2
	2.3nm,0.4s						
HINF	Hinteralfeld	9.18	306	ePn	Pn	03 50 12.8	+2.2
HINF				eSn	Sn	03 51 49.8	-3.6
	3.5nm,0.5s						
CABF	La Chapelle	9.18	297	ePn	Pn	03 50 12.4	+1.8
CABF				eSn	Sn	03 51 50.8	-2.7
	2.1nm,0.4s						
CDF	Champ du Feu	9.23	310	ePn	Pn	03 50 12.3	+1.0
CDF				eSn	Sn	03 51 50.0	-4.7
	0.5nm,0.3s						
IDI	Anoyia	9.38	143	Pn	Pn	03 50 11.2	-2.2
	0.2nm,0.3s,baz=337,slow=15,SNR=1.5						
IDI				Sn	Sn	03 51 50.5	-8.1
	0.4nm,0.3s,baz=348,slow=23,SNR=1.7						
HAU	Haudompre	9.57	306	ePn	Pn	03 50 17.3	+1.4
HAU				eSn	Sn	03 52 00.0	-2.9
	3.5nm,0.4s						
VIVF	Saint-Julien-l	9.76	286	ePn	Pn	03 50 18.7	+0.1
VIVF				eSn	Sn	03 52 04.5	-3.3
	0.7nm,0.3s						
PAGF	Fort de Pagny	10.19	307	eP	Pn	03 50 31.3	+6.9
SFTF	Sexfontaines	10.44	304	eP	Pn	03 50 34.4	+6.5
	baz=123						
SAVF	Savonnieres en	10.57	307	eP	Pn	03 50 35.0	+5.4
	baz=130						
SMF	Signal de Mont	10.67	295	ePn	Pn	03 50 31.8	+0.8
SMF	Signal de Mont	10.67	295	eP	Pn	03 50 37.1	+6.1
SMF				eSn	Sn	03 52 25.7	-4.3
	1.6nm,0.3s						
LOR	Lormes	10.84	298	ePn	Pn	03 50 34.1	+0.8
	baz=113						
LOR				eSn	Sn	03 52 28.9	-5.1
	4.7nm,0.5s						
SSF	Saint Saulge	11.00	297	ePn	Pn	03 50 37.0	+1.5
SSF				eSn	Sn	03 52 33.6	-4.5
	1.0nm,0.3s						
AVF	Avril sur Loir	11.03	295	ePn	Pn	03 50 36.4	+0.5
AVF				eSn	Sn	03 52 35.0	-3.8
	0.7nm,0.3s						
BGF	Bois d'Agland	11.31	294	ePn	Pn	03 50 40.8	+1.0
BGF				eSn	Sn	03 52 41.8	-3.9
	2.5nm,0.3s						
TCF	Toulx Ste Croi	11.69	292	ePn	Pn	03 50 45.3	+0.3
TCF				eSn	Sn	03 52 50.0	-5.0
	0.3nm,0.2s						
HFS	Hagfors	17.37	353	P	P	03 52 04.2	+2.5
	0.1nm,0.3s,baz=158,slow=12,SNR=2.1						
EKA	Eskdalemuir Ar	18.43	319	P	P	03 52 15.0	+1.7
	baz=115,slow=9.1,SNR=3.7						
FINES	FINESS Array B	19.12	12	P	P	03 52 22.0	+1.2
	0.1nm,0.3s,baz=217,slow=10,SNR=1.6						
KIRV	Kirov	24.97	40	LR	LR	04 03 36.4	
	comp=Z,49nm,20.6s,baz=58,slow=38						
TORD	Torodi Ar. Bea	32.88	210	P	P	03 54 32.4	+0.3
	0.3nm,0.7s,baz=21,slow=9.4,SNR=1.8						
MKAR	Makanchi Array	44.61	62	P	P	03 56 08.7	-1.5
	0.4nm,0.8s,baz=283,slow=7.3,SNR=1.4						
SONM	Songino Array	58.98	52	P	P	03 57 55.6	-1.9
	0.5nm,0.6s,baz=284,slow=7.5,SNR=3.6						

MAN 22 03:54:48.0, 9°.80N×124°.06E, h11^{km}, mb3.7, ML2.5, MS2.0, Mindanao

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DJA 22 04:12:35.4±0.6**, 2°N**±3°×**12°7E**±°**, h98^{km}**±8^{km}**, M3.9**/8**, mB5.9**/1**, MLv3.9**/8**, Mw(mB)5.5**/1**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	2.42	318	P	Pn	04 13 13.5	+0.1
SGSI				S	Sn	04 13 42.6	+0.1
LBMI	Labuha	2.53	172	P	Pn	04 13 15.2	+0.4
SANI	Sanana	4.07	197	P	Pn	04 13 33.7	-1.9
SANI				S	Sn	04 14 17.0	-5.2
GTOI	Gorontalo	4.32	253	P	Pn	04 13 40.9	+2.0

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*IDC **22** 04:20:50.5±2.4, 60°.55S×47°.13W, h0^{km}, mb3.6/1, mb1 3.6/1, mb1mx2.9/17, mbtmp3.6/1, Error ellipse: s-maj=144.9km s-min=76.0km az=2.0*

ISC 22 04:20:48.7±2.1**, 60°.5S**±0°.3×**49°.1W**±0°.6**, h10^{km}, n11, σ0^{s}.76**/7**, Scotia Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA3	Neumayer Olymp	18.94	141	P	P	04 25 08.3	-1.1
VNA1	Neumayer--Stat	19.26	139	P	P	04 25 13.4	+0.5
VNA2	Neumayer--Watz	19.59	139	P	P	04 25 17.4	+0.8
SNAA	Sanae	21.16	141	P	P	04 25 33.3	-0.3
H10N3	ASCENSION HYDR	58.58	41	T	T	05 33 52.9	
	baz=199,slow=75,SNR=7.1						
H10N1	ASCENSION HYDR	58.58	41	T	T	05 33 49.9	
	baz=199,slow=75,SNR=6.3						
H10N2	ASCENSION HYDR	58.59	41	T	T	05 33 50.1	
	baz=199,slow=75,SNR=6.6						
TORD	Torodi Ar. Bea	83.78	49	P	P	04 33 17.7	-0.2
	0.4nm,0.7s,baz=204,slow=4.5,SNR=1.7						
ARCES	ARCESS Array B	140.11	32	PKhKP	PKPpre	04 40 08.3	
	1.8nm,0.9s,baz=241,slow=1.9,SNR=1.0						
ILAR	Eielson Array	144.47	313	PKPbc	PKiKP	04 40 27.2	0.0
	1.0nm,0.7s,baz=150,slow=1.4,SNR=11						
MKAR	Makanchi Array	148.90	94	PKPbc	PKPbc	04 40 35.8	+0.3
	0.5nm,0.6s,baz=225,slow=1.7,SNR=5.2						

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*TUL **22** 04:57:51.2±1.3, 36°.66N±0°.04×98°.47W±0°.01, h8^{km}±5^{km}, ML2.7, mb_Lg2.5/27(NEIC), Error ellipse: s-maj=6.0km s-min=1.4km az=177.0*

NEIC 22 04:57:51.1±1.2**, 36°.66N**±0°.02×**98°.49W**±0°.04**, h5^{km}**±6^{km}**, Error ellipse: s-maj=4.9km s-min=3.2km az=107.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK032	Salt Plains WL	0.27	57	Pg	Pg	04 57 56.5	+0.2
CROK	Carrier	0.44	110	Pg	Pg	04 57 59.4	-0.1
U32A	Winter Ranch,	0.49	236	Pg	Pg	04 58 01.2	+0.7
KAN14	Manchester OK	0.52	55	Pg	Pg	04 58 01.1	0.0
GC02	Grant County #	0.54	69	Pg	Pg	04 58 01.3	-0.2
KAN10	Anthony SW Sta	0.56	34	Pg	Pg	04 58 01.9	0.0
KAN16	Harper SW Stat	0.66	31	Pg	Pg	04 58 03.5	-0.4
KAN05	Bluff City Nor	0.67	48	Pg	Pg	04 58 03.0	-0.9
KAN17	Caldwell West	0.70	56	Pg	Pg	04 58 04.5	0.0
KAN01	Argonia South	0.77	50	Pg	Pg	04 58 05.1	-0.7
KAN06	Argonia West S	0.78	41		Pg	04 58 05.6	-0.4
KAN09	Caldwell North	0.85	56	Pg	Pg	04 58 07.1	-0.2
KAN13	South Haven SW	0.89	66	Pg	Pg	04 58 07.7	-0.4
BLOK	Blackwell	1.03	84	Pg	Pg	04 58 10.2	-0.7
BCOK	Bluff Creek, N	1.23	144		Pg	04 58 14.3	-0.3
OK025	Westminster Rd	1.43	139		Pn	04 58 16.8	-0.8
OKCFA	Oklahoma City	1.50	145	Pn	Pn	04 58 18.2	-0.4
OK031	S. Brethren Rd	1.51	117		Pn	04 58 18.6	-0.1
OKCSW	OKLAHOMA CITY	1.51	145	Pn	Pn	04 58 18.9	+0.1
QUOK	Quay	1.52	108		Pn	04 58 19.1	+0.2
OK030	Cody Creek RV	1.56	117		Pn	04 58 19.4	-0.1
T35A	Sooner Cattle	1.61	80		Pn	04 58 19.8	-0.4
FNO	Franklin	1.66	147		Pn	04 58 21.1	+0.4
R32A	Long Quarter,	1.77	354	Pn	Pn	04 58 23.1	+0.7
WMOK	Wichita Mounta	1.93	187	Pn	Pn	04 58 24.8	+0.3
X34A	Smith Ranch, M	2.12	165		Pn	04 58 27.5	+0.3
TUL1	Leonard	2.31	108		Pn	04 58 30.2	+0.5
CBKS	Cedar Bluff	2.37	336	Pn	Pn	04 58 31.1	+0.5
KSU1	Kansas State U	2.86	31	Pn	Pn	04 58 36.8	-0.5
LOOK	Love County	2.87	158	Pn	Pn	04 58 37.4	0.0
AMTX	Amarillo	3.14	237	IAmb_Lg		04 59 38.6	
	comp=Z,19nm,0.8s						
X37A	Clayton	3.27	128	Pn	Pn	04 58 43.6	+0.6
U38A	Gravette	3.31	93	Pn	Pn	04 58 44.0	+0.4
U38A				IAmb_Lg		04 59 36.6	
	comp=Z,12nm,0.7s						
Z35A	Perchaven, San	3.47	163	Pn	Pn	04 58 46.2	+0.5
KSCO	Kaye Shedlock'	4.03	307	Pn	Pn	04 58 54.0	+0.5
KSCO					LR	04 59 59.4	
KSCO				IAmb_Lg		05 00 00.3	
	comp=Z,13nm,0.7s						
W39A	Magazine	4.09	110	Pn	Pn	04 58 53.6	-0.6
W39A				IAmb_Lg		05 00 06.8	
	comp=Z,11nm,0.7s						
ABTX	Abilene, Hawle	4.13	194	Pn	Pn	04 58 54.7	-0.1
S39A	Bolivar	4.26	74	Pn	Pn	04 58 54.8	-1.7
MSTX	Muleshoe	4.41	234	IAmb_Lg		05 00 19.4	
	comp=Z,8.9nm,1.0s						
MIAR	Mount Ida	4.53	116	Pn	Pn	04 59 00.9	+0.7
MIAR				IAmb_Lg		05 00 23.3	
	comp=Z,7.9nm,1.0s						
U40A	Yellville	4.55	92	Pn	Pn	04 58 59.6	-0.9
U40A				IAmb_Lg		05 00 18.7	
	comp=Z,8.4nm,0.7s						
T25A	Trinidad	4.77	278	Pn	Pn	04 59 03.1	-0.6
T25A				IAmb_Lg		05 00 26.3	
	comp=Z,13nm,1.1s						
P38A	Dawn	4.91	51	Pn	Pn	04 59 05.1	-0.3
MGMO	Mountain Grove	5.01	82	IAmb_Lg		05 00 34.3	
	comp=Z,9.2nm,0.9s						
X40A	Basin Creek Fa	5.09	113	Pn	Pn	04 59 07.1	-0.9
OGNE	Ogallala	5.10	328	Pn	Pn	04 59 07.8	-0.3
OGNE					LR	05 00 35.3	
FCAR	Ozark Folk Cen	5.20	97	Pn	Pn	04 59 09.4	-0.1
WHAR	Wooly Hollow	5.21	103	Pn	Pn	04 59 10.1	+0.4
WHAR				IAmb_Lg		05 00 43.3	
	comp=Z,9.0nm,0.9s						
L34A	Svendsen Farm,	5.55	17	IAmb_Lg		05 00 54.3	
	comp=Z,12nm,0.8s						
P40A	Paris	5.83	59	Pn	Pn	04 59 16.0	-2.2
T42A	Van Buren	5.95	84	IAmb_Lg		05 01 05.7	
	comp=Z,7.6nm,1.1s						
PBMO	Poplar Bluff	6.48	87	IAmb_Lg		05 01 15.7	
	comp=Z,6.1nm,0.8s						
FVM	French Village	6.56	76	IAmb_Lg		05 01 19.8	
	comp=Z,12nm,0.9s						

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*NIED **22** 05:05:26.6, 30°.33N×138°.91E, h461^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.83; $M_{\theta\theta}$2.82; $M_{\phi\phi}$-1.99; $M_{r\theta}$3.57; $M_{\theta\phi}$1.09; $M_{\phi r}$-1.99; Fault plane solution: $M_0$4.92000×10^{15} NP1: ϕ_s297.00000°, δ84.00000°, λ-58.00000°. NP2: ϕ_s36.00000°, δ32.00000°, λ-169.00000°.*

*JMA **22** 05:05:26.6±0.2, 30°.33N×138°.91E, h461^{km}±3^{km}, M4.2*

*MOS **22** 05:05:27.2±0.9, 30°.32N×138°.51E, h434^{km}, mb4.2/21, Error ellipse: s-maj=11.7km s-min=5.9km az=103.5*

*IDC **22** 05:05:28.1±0.5, 30°.38N×138°.58E, h427^{km}±5^{km}, mb3.6/22, mb1 3.8/31, mb1mx3.7/47, mbtmp4.5/31, Error ellipse: s-maj=11.7km s-min=7.1km az=95.0*

*NEIC **22** 05:05:29.6±1.5, 30°.33N±0°.09×138°.6E±0°.1, h440^{km}±7^{km}, mb4.3/83, Error ellipse: s-maj=15.0km s-min=12.3km az=100.0*

ISC 22 05:05:28.8±0.3**, 30°.34N**±0°.04×**138°.64E**±0°.06**, h440^{km}, n250, σ1^{s}.24**/275**, mb4.3**/106**, 9C-8D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHCJ	Hachijojimakas	2.90	20	P	P	05 06 34.0	-0.1
JHCJ				S	S	05 07 25.7	-1.6
JHJ	Hachijo jima 2	2.94	19	P	P	05 06 32.0	-2.4
	269nm,0.3s,baz=66,slow=22,SNR=27						
JHJ				S	S	05 07 24.3	-3.5
	217nm,0.3s,baz=41,slow=23,SNR=7.7						
JHJ2	Mitsune	2.94	20	P	P	05 06 34.1	-0.3
JHJ2				eS	S	05 07 26.6	-1.3
JHJ2	Mitsune	2.94	20		P	05 06 34.3	-0.1
JHJ2				S	S	05 07 27.4	-0.5
JMKN	Mikurajimanish	3.63	13	P	P	05 06 38.8	-1.1
TTO1	TONANKAI O.B.S	3.63	335	P	P	05 06 41.6	+2.0
JTNC	Tanabenakahech	4.32	324	P	P	05 06 47.1	+1.1
JTNC				eS	S	05 07 49.2	+0.1
JIE	Ise	4.36	338	P	P	05 06 48.0	+1.6
CBIJ	Chichi jima	4.49	135	P	P	05 06 45.6	-2.2
CBIJ				S	S	05 07 47.6	-4.5
JCJ	Chichijima	4.49	135	P	P	05 06 46.2	-1.6
	61nm,0.3s,baz=342,slow=4.0,SNR=34						
JCJ				S	S	05 07 48.0	-4.1
	96nm,0.3s,baz=109,slow=24,SNR=26						
JCJ	Chichijima	4.49	135	P	P	05 06 46.5	-1.3
BSO1	Boso 1	4.73	24	P	P	05 06 48.9	-0.4
BSO1				S	S	05 07 53.2	-1.9
JOD2	Odawara 2	4.92	4	P	P	05 06 51.0	-0.8
JOD2				eS	S	05 07 57.7	-1.8
INU	Inuyama	5.18	345	P	P	05 06 55.5	+1.3
JMN	Monobe	5.27	311		P	05 06 56.9	+1.6
JGF	Kuroka	5.35	349	P	P	05 06 57.0	+1.0
JTO	Tosashimizu	5.58	298	P	P	05 06 59.6	+1.3
JWT	Wachi	5.63	332		P	05 07 00.5	+1.7
JRY	Ryogami san	5.66	2	P	P	05 06 58.7	-0.4
JRY				eS	S	05 08 10.5	-2.6
JYT	Yasato	6.01	12	P	P	05 07 01.8	-0.9
MJAR	Matsushiro Arr	6.19	357	P	P	05 07 03.0	-1.6
	2.0nm,0.3s,baz=171,slow=12,SNR=76						
MJAR				S	S	05 08 20.4	-2.7
	0.8nm,0.3s,baz=182,slow=29,SNR=5.0						
MJAR	Matsushiro Arr	6.19	357		P	05 07 03.3	-1.3
MAJO	Matsushiro	6.20	357	c iP	P	05 07 03.9	-0.7
MAJO	Matsushiro	6.20	357		P	05 07 04.0	-0.6
MAT	Matsushiro	6.20	357	P	P	05 07 04.0	-0.6
MAT				S	S	05 08 19.6	-3.5
MJB9	Matsu-Tunnel	6.20	357	P	P	05 07 04.3	-0.4
JHS	Saijyo	6.58	316	P	P	05 07 09.9	+1.1
JHS	Saijyo	6.58	316		P	05 07 10.1	+1.4
JSU	Suzuyama	7.13	281	P	P	05 07 16.2	+1.6
JNU	Nakatsue	7.17	295	P	P	05 07 15.3	+0.2
	2.5nm,0.3s,baz=105,slow=2.7,SNR=10.0						
JNU	Nakatsue	7.17	295	P	P	05 07 16.7	+1.6
JSD	Sado	7.68	358		P	05 07 19.1	-1.4
JMM	Marumori	7.71	13	P	P	05 07 20.6	-0.2
JSJ	Shimokoshiki	7.78	282	P	P	05 07 22.3	+0.7
JMK	Ichinoseki	8.85	13	P	P	05 07 33.2	+0.1
JOW	Kunigami	9.76	252	P	P	05 07 43.0	-0.3
	7.4nm,0.3s,baz=57,slow=6.9,SNR=14						
JTM	Tenmabayashi	10.61	10	P	P	05 07 53.5	+1.1
JOT	Ohata	11.19	9	P	P	05 07 59.3	+0.6
KSRS	Korea Array	11.38	311	P	P	05 08 01.2	+0.4

	1.3nm,0.3s,baz=124,slow=10,SNR=22						
JKB	Kayabe	11.68	9	P	P	05 08 04.8	+0.8
JOSM	Okushiri--Mats	11.74	3	P	P	05 08 04.8	+0.2
ERM	Erimo	12.20	16	P	P	05 08 11.3	+1.6
ERM	Erimo	12.20	16	P	P	05 08 11.3	+1.6
JEW	Eniwo	12.68	9	P	P	05 08 16.6	+1.7
JCH	Churui	12.82	16	P	P	05 08 17.6	+1.2
JHR	Hokuryu	13.60	10	P	P	05 08 26.6	+1.7
VLA	Vladivostok	13.85	339	*de*P	P	05 08 27.8	+0.3
ASAJ	Asahikawa	14.10	12	P	P	05 08 31.4	+1.2
	4.4nm,0.3s,baz=234,slow=9.8,SNR=23						
ASAJ	Asahikawa	14.10	12	P	P	05 08 32.2	+1.9
JKA	Kamikawa-asahi	14.10	12	P	P	05 08 32.2	+1.9
USA0B	Ussuriysk Arra	14.80	341	P	P	05 08 38.4	+0.6
USA0B	Ussuriysk Arra	14.80	341	P	P	05 08 38.4	+0.6
USRK	Ussuriysk Ar.	14.80	341	P	P	05 08 38.0	+0.2
	baz=155,slow=8.5,SNR=75						
USRK	Ussuriysk Ar.	14.80	341	P	P	05 08 38.2	+0.4
USRK	Ussuriysk Ar.	14.80	341	P	P	05 08 38.2	+0.4
YHNB	Yeheng	16.32	254	P	P	05 08 53.2	-1.1
YSS	Yuzh-Sakhalins	16.89	10	⇑*e*P	P	05 09 00.5	+0.6
YSS				pmax	pmax		
	comp=Z,30nm,0.7s						
CN2	Changchun	17.04	326	*e*P	P	05 09 01.8	+0.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
QZH	Quanzhou	18.55	258	*e*P	P	05 09 13.8	-3.6
KLR	Kul'dur	19.58	346	P	P	05 09 27.3	+0.7
	comp=Z,3.0nm,0.3s,baz=160,slow=8.6,SNR=91						
WHN	Wuhan	20.94	277	⇑P	P	05 09 39.4	+0.1
SKR	Severo-Kuril's	24.16	28	⇓*e*P	P	05 10 04.6	-3.5
HHC	Hu-ho-hao-te	24.30	303	*e*P	P	05 10 09.5	-0.1
HHC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,86nm,4.4s						
ZEA	Zeya	24.80	344	*e*P	P	05 10 14.3	+0.6
ENH	Enshi	25.14	277	P	P	05 10 16.3	-0.9
XAN	Xi'an	25.38	286	⇓P	P	05 10 18.5	-0.7
XAN				pmax	pmax		
	comp=Z,57nm,0.8s						
XAN				pmax	pmax		
	comp=Z,130nm,5.9s						
LZH	Lanzhou	29.57	290	*e*P	P	05 10 55.9	-0.3
LZH				pP	PP	05 12 14.4	0.0
LZH				sP	sP	05 13 03.4	0.0
LZH				pmax	pmax		
	comp=Z,60nm,1.0s						
ULN	Ulaanbaatar	29.83	315	P	P	05 10 59.0	+0.6
ULN				pmax	pmax		
	comp=Z,14nm,1.9s						
ULN	Ulaanbaatar	29.83	315	P	P	05 10 59.0	+0.6
ULN				IAmb	IAmb	05 11 44.8	
	comp=Z,14nm,1.9s						
SONM	Songino Array	30.23	314	P	P	05 11 01.5	-0.2
	comp=Z,0.7nm,0.5s,baz=120,slow=8.9,SNR=5.8						
SONM				ScP	ScP	05 16 49.4	0.0
	comp=Z,0.5nm,0.5s,baz=86,slow=1.2,SNR=4.1						
SONM	Songino Array	30.23	314	P	P	05 11 02.3	+0.5
MA2	Magadan	30.36	12	P	P	05 11 03.6	+1.0
	comp=Z,36nm,0.8s,baz=195,slow=10,SNR=15						
MA2	Magadan	30.36	12	P	P	05 11 04.1	+1.5
MA2				pmax	pmax		
	comp=Z,49nm,0.9s						
MA2	Magadan	30.36	12	P	P	05 11 04.0	+1.5
YAK	Yakutsk	32.23	352	*de*P	P	05 11 18.6	-0.1
YAK				pmax	pmax		
	comp=Z,12nm,0.8s						
SLVN	Son La	32.42	262	P	P	05 11 21.8	+0.9
SLVN				IAmb	IAmb	05 11 22.3	
	comp=Z,19nm,0.7s						
GTA	Gaotai	32.90	297	⇑P	P	05 11 24.8	-0.1
GTA				pmax	pmax		
	comp=Z,12nm,1.0s						
GTOI	Gorontalo	33.07	210	P	P	05 11 23.5	-2.9
	comp=Z,13nm,1.1s						
FAKI	Fak Fak	33.63	192	P	P	05 11 32.2	+1.0
TOLI2	Tolitoli	33.66	214	P	P	05 11 31.4	0.0
TOLI2				IAmb	IAmb	05 11 32.2	
	comp=Z,10nm,0.8s						
MRSI	Marisa	33.68	211	P	P	05 11 33.1	+1.5
	comp=Z,49nm,1.1s						
SEY	Seymchan	33.79	11	P	P	05 11 32.2	+0.3
	comp=Z,11nm,0.9s,baz=201,slow=6.3,SNR=18						
UBPT	Khong Chiam	33.90	251	P	P	05 11 34.2	+0.7
UBPT				IAmb	IAmb	05 11 34.6	
	comp=Z,46nm,1.4s						
SANI	Sanana	34.40	203	P	P	05 11 37.1	-0.6
	comp=Z,33nm,0.8s						
APSI	Ampana	35.04	211	P	P	05 11 42.7	-0.4
	comp=Z,849nmcomp=Z,63nm,0.7s						
SBUM	Sibu	37.36	227	P	P	05 12 02.5	+0.1
SBUM				IAmb	IAmb	05 12 03.9	
	comp=Z,7.0nm,0.9s						
CHTO	Chiang Mai	37.70	262	P	P	05 12 05.9	+0.6
CHTO				pmax	pmax		
	comp=Z,28nm,0.7s						
CHTO	Chiang Mai	37.70	262	P	P	05 12 05.9	+0.6
CMAR	Chiang Mai Arr	37.86	261	P	P	05 12 06.7	+0.2
	comp=Z,6.8nm,0.6s,baz=56,slow=6.8,SNR=34						
CMAR	Chiang Mai Arr	37.86	261	*i* P	P	05 12 07.0	+0.5
CMAR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BNSI	Bone	38.83	210	P	P	05 12 15.4	+0.9
	comp=Z,491nmcomp=Z,36nm,0.9s						
KSM	Kuching	39.33	228	P	P	05 12 18.8	+0.2
KSM				IAmb	IAmb	05 12 20.7	
	comp=Z,25nm,1.0s						
KAPI	Kappang	39.54	210	P	P	05 12 21.1	+0.9
	comp=Z,4.3nm,0.2s,baz=22,slow=6.3,SNR=4.1						
KAPI	Kappang	39.54	210	P	P	05 12 21.1	+0.9
KAPI				pmax	pmax		
	comp=Z,22nm,1.2s						
KAPI	Kappang	39.54	210	P	P	05 12 21.1	+0.9
KAPI				IAmb	IAmb	05 12 22.7	
	comp=Z,22nm,1.2s						
BBKI	Banjar Baru	40.59	218	P	P	05 12 28.6	-0.1
LSA	Lhasa	40.88	282	P	P	05 12 31.7	+0.1
LSA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
LSA	Lhasa	40.88	282	P	P	05 12 31.6	+0.1
BILL	Bilibino	41.08	15	*c i*P	P	05 12 33.3	+1.3
BILL				pmax	pmax		
	comp=Z,31nm,1.7s						
BILL	Bilibino	41.08	15	P	P	05 12 33.4	+1.4
BILL				IAmb	IAmb	05 12 34.1	
	comp=Z,19nm,1.0s						
SHL	Shillong	41.35	275	P	P	05 12 34.3	-0.7
SHL				pmax	pmax		
	comp=Z,7.0nm,0.7s						
SHL	Shillong	41.35	275	P	P	05 12 34.3	-0.7
SHL				IAmb	IAmb	05 12 35.3	
	comp=Z,6.6nm,0.7s						
TIXI	Tiksi	41.70	355	P	P	05 12 36.6	-0.2
	comp=Z,6.2nm,0.4s,baz=127,slow=21,SNR=2.2						
EDFI	Ende, Flores	42.14	205	P	P	05 12 40.3	-0.9
	comp=Z,13nm,0.6s						
WMQ	Urumqi	42.18	303	*e*P	P	05 12 42.1	+0.9
WMQ				pmax	pmax		
	comp=Z,18nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,120nm,3.9s						
SOEI	Soe	42.19	201	P	P	05 12 41.8	+0.1
SOEI				IAmb	IAmb	05 12 59.9	
	comp=Z,23nm,1.0s						
SRIT	Nakonsritamara	42.38	248	P	P	05 12 43.4	+0.3
DGZ	Jazzator, Alta	42.78	312	⇓*e*P	P	05 12 46.2	+0.2
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MTN	Manton Dam	43.54	191	P	P	05 12 52.3	+0.2
MTN				IAmb	IAmb	05 12 53.4	
	comp=Z,30nm,1.4s						
KULM	Kulim	43.57	243	P	P	05 12 52.7	+0.2
KULM				IAmb	IAmb	05 12 53.8	
	comp=Z,17nm,0.7s						
IPM	Ipoh	43.80	242	P	P	05 12 54.2	-0.1
WBSI	Waikabubak, Su	43.85	208	P	P	05 12 54.6	0.0
	comp=Z,32nm,1.0s						
TPI	Tanjungpandan	44.25	227	P	P	05 12 58.8	+1.0
TAPN	Taplejung	44.41	279	*e*P	P	05 12 59.4	+0.1
ODAN	Odare	44.82	279	*e*P	P	05 13 02.3	-0.1
	comp=Z,31nm,0.8s						
ZAA0	Zalesovo Array	45.00	318	P	P	05 13 02.7	-0.3
ZALV	Zalesovo Beam	45.00	318	P	P	05 13 01.5	-1.5
	comp=Z,0.9nm,0.5s,baz=101,slow=7.7,SNR=5.6						
ZALV				PcP	PcP	05 14 34.8	-0.3
	comp=Z,1.0nm,0.6s,baz=106,slow=4.7,SNR=4.1						
ZALV				ScP	ScP	05 17 43.8	-1.2
	comp=Z,0.2nm,0.3s,baz=100,slow=3.2,SNR=3.9						
ZALV	Zalesovo Beam	45.00	318	P	P	05 13 02.9	-0.2
RAMN	Ramite	45.47	279	*e*P	P	05 13 07.3	-0.1
	comp=Z,16nm,0.5s						
JIRN	Jiri	45.62	280	*e*P	P	05 13 08.9	+0.2
GUN	Gumba	45.81	281	*e*P	P	05 13 10.4	+0.3
	comp=Z,61nm,0.8s						
MK31	Makanchi Array	46.02	307	⇓*e*P	P	05 13 10.6	-0.5
MKAR	Makanchi Array	46.02	307	P	P	05 13 10.8	-0.3
	comp=Z,3.3nm,0.8s,baz=91,slow=9.6,SNR=19						
MKAR				PcP	PcP	05 14 38.9	-0.1
	comp=Z,1.4nm,0.8s,baz=85,slow=4.8,SNR=4.6						
MKAR				ScP	ScP	05 17 48.9	-0.6
	comp=Z,1.0nm,0.9s,baz=84,slow=5.1,SNR=2.6						
MKAR	Makanchi Array	46.02	307	P	P	05 13 11.0	-0.1
PKI	Pulchoki	46.31	280	*e*P	P	05 13 13.3	-0.6
	comp=Z,25nm,1.0s						
PKIN	Phulchoki	46.32	280	*e*P	P	05 13 13.5	-0.4
	comp=Z,21nm,1.0s						
KKN	Kakani	46.35	281	*e*P	P	05 13 14.1	-0.1
	comp=Z,36nm,0.9s						
DMN	Daman	46.55	281	*e*P	P	05 13 15.4	-0.3
	comp=Z,31nm,1.0s						
UGM	Wanagama	46.64	220	P	P	05 13 16.2	0.0
KNRA	Kununurra	46.73	193	P	P	05 13 17.5	+0.7
KNRA				IAmb	IAmb	05 13 18.4	
	comp=Z,12nm,0.7s						
GKN	Gorkha	46.84	281	*e*P	P	05 13 17.7	-0.1
	comp=Z,40nm,1.0s						
KPJI	Karang Pucung	47.07	222	P	P	05 13 19.5	+0.1
	comp=Z,48nm,1.1s						
DANN	Dangsing	47.48	282	*e*P	P	05 13 22.6	-0.2
	comp=Z,76nm,1.0s						
KLSI		47.60	229	P	P	05 13 23.7	+0.2
	comp=Z,30nm,0.8s						
KOLN	Koldanda	47.79	281	*e*P	P	05 13 25.0	0.0
	comp=Z,70nm,0.9s						
MDSI	Maura Dua	47.81	230	P	P	05 13 24.7	-0.3
	comp=Z,41nm,1.0s						
MASI	Maura Aman, Be	48.13	233	P	P	05 13 28.3	+0.8
	comp=Z,151nm,0.8s						
PYUN	Piuthan	48.21	282	*e*P	P	05 13 28.4	+0.2
	comp=Z,135nm,1.0s						
GSI	Gunungsitoli	48.47	241	P	P	05 13 30.0	0.0
GSI	Gunungsitoli	48.47	241	P	P	05 13 30.4	+0.4
KURK	Kurchatov	48.50	313	*c i*P	P	05 13 29.4	-0.3
KURK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
KURK	Kurchatov	48.50	313	P	P	05 13 29.5	-0.3
WB0	Warramunga Arr	49.99	185	P	P	05 13 41.6	+0.4
WB0				IAmb	IAmb	05 13 42.2	
	comp=Z,7.7nm,0.7s						
WRAB	Tennant Creek	50.16	185	*de*P	P	05 13 42.3	-0.1
WRAB				*i* *PP	pP	05 15 07.7	-0.1
WRAB				pmax	pmax		
	comp=Z,5.0nm,0.7s						
WB2	Warramunga Arr	50.16	185	P	P	05 13 42.8	+0.3
WB2				IAmb	IAmb	05 13 43.6	
	comp=Z,6.0nm,0.7s						
WRA	Warramunga Arr	50.16	185	P	P	05 13 42.5	+0.1
	comp=Z,4.6nm,0.5s,baz=1.5,slow=7.7,SNR=100						
WRA				pP	pP	05 15 08.2	+0.2
	comp=Z,2.2nm,0.9s,baz=4.6,slow=8.2,SNR=5.9						
WRA				S	S	05 20 13.6	-6.9
	comp=Z,0.4nm,0.9s,baz=5.0,slow=14,SNR=2.5						
WRA	Warramunga Arr	50.16	185	P	P	05 13 42.1	-0.4
WR0	Warramunga Arr	50.17	185	P	P	05 13 42.8	+0.3
WR0				IAmb	IAmb	05 13 43.6	
	comp=Z,6.9nm,0.7s						
BOOM	Boomskoye usch	50.84	302	P	P	05 13 47.6	+0.2
BOOM				pmax	pmax		
	comp=Z,15nm,1.4s						
BOOM	Boomskoye usch	50.84	302	P	P	05 13 47.6	+0.2
BOOM				IAmb	IAmb	05 15 12.1	
	comp=Z,15nm,1.4s						
KSH	Kashi	51.27	298	P	P	05 13 53.6	+3.0
KSH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
AAK	Ala-Archa	51.87	302	P	P	05 13 54.9	-0.1
AAK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AAK	Ala-Archa	51.87	302	P	P	05 13 54.9	-0.1
M19K	Big River Lodg	52.92	33	P	P	05 14 03.8	+1.8
M19K				IAmb	IAmb	05 16 04.8	
	comp=Z,55nm,1.9s						
K20K	Telida	53.19	31	P	P	05 14 06.4	+2.5
K20K				IAmb	IAmb	05 14 07.1	
	comp=Z,12nm,0.8s						
J20K	Nowinta River	53.24	30	P	P	05 14 06.7	+2.5
J20K				IAmb	IAmb	05 14 07.3	
	comp=Z,12nm,0.8s						
A21K	Barrow	53.51	21	P	P	05 14 07.5	+1.5
A21K				IAmb	IAmb	05 14 08.5	
	comp=Z,11nm,0.9s						
IMAR	Indian Mountai	53.60	28	P	P	05 14 08.0	+1.1
BRVK	Borovoye	53.62	316	P	P	05 14 07.1	0.0
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BRVK	Borovoye	53.62	316	P	P	05 14 07.1	0.0
AS31	Alice Springs	53.89	185	P	P	05 14 10.3	+0.9
ASAR	Alice Springs	53.89	185	P	P	05 14 10.0	+0.5
	comp=Z,1.8nm,0.4s,baz=17,slow=12,SNR=48						
ASAR				S	S	05 21 12.4	+1.8
	comp=Z,0.1nm,0.4s,baz=5.2,slow=11,SNR=2.2						
ASAR	Alice Springs	53.89	185	P	P	05 14 09.9	+0.5
H21K	Melozitna Rive	53.95	28	P	P	05 14 11.4	+2.1
I21K	Tanana	54.26	29	P	P	05 14 12.7	+1.2
KKAR	Karatay Array	54.68	304	P	P	05 14 14.8	-0.1
KKAR	Karatay Array	54.68	304	P	P	05 14 14.8	-0.1
PSA00	Pilbara Seismi	54.69	202	P	P	05 14 15.4	+0.4
NIL	Nilore	54.72	292	P	P	05 14 15.2	-0.2
NIL				pmax	pmax		
	comp=Z,9.0nm,0.7s						
NIL	Nilore	54.72	292	P	P	05 14 15.2	-0.2
NIL				IAmb	IAmb	05 14 16.6	
	comp=Z,9.0nm,0.7s						
MLY	Manley	54.77	29	P	P	05 14 16.8	+1.6
GAR	Garm	55.68	299		P	05 14 21.7	-0.4
GAR				IAmb	IAmb	05 14 22.8	
	comp=Z,9.7nm,0.6s						
KNK	Knik Glacier	55.74	34	P	P	05 14 23.6	+1.6
KNK				IAmb	IAmb	05 14 25.0	
	comp=Z,42nm,1.4s						
COLA	College	55.99	30	⇑*e*P	P	05 14 24.2	+0.5
COLA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ILAR	Eielson Array	56.41	30	P	P	05 14 26.9	+0.3
	comp=Z,1.3nm,0.8s,baz=281,slow=5.1,SNR=13						
ILAR	Eielson Array	56.41	30	P	P	05 14 26.7	+0.2
CHGR	Chuyangaron	56.64	299		P	05 14 28.5	-0.2
SCRK	Sand Creek	57.69	31	P	P	05 14 36.4	+0.8
SCRK				IAmb	IAmb	05 14 37.4	
	comp=Z,6.4nm,0.6s						
KBL	Kabul	57.83	294	P	P	05 14 36.0	-1.2
KBL				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KBL	Kabul	57.83	294	P	P	05 14 36.0	-1.2
KBL				IAmb	IAmb	05 14 37.1	
	comp=Z,5.4nm,0.6s						
BCAR	Beaver Creek A	58.75	32	P	P	05 14 43.7	+0.9
ARU	Arti	59.95	321	*c i*P	P	05 14 48.8	-2.1
ARU						05 17 02.7	
ARU				S	S	05 22 24.9	-3.1
ARU				SS	SS	05 26 29.1	-4.0
ARU				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ARU	Arti	59.95	321	P	P	05 14 50.3	-0.6
ABKAR	Akbulak array	60.61	312	P	P	05 14 54.7	-0.6
ABKAR	Akbulak array	60.61	312	P	P	05 14 54.9	-0.5
ABKAR				IAmb	IAmb	05 14 55.9	
	comp=Z,7.8nm,0.8s						
INK	Inuvik	61.40	25	P	P	05 15 00.9	+0.7
	comp=Z,1.8nm,0.6s,baz=295,slow=6.6,SNR=12						
INK				pP	pP	05 16 29.1	-2.3
	comp=Z,1.0nm,0.9s,baz=299,slow=6.1,SNR=2.3						
INK	Inuvik	61.40	25	P	P	05 15 00.7	+0.5
INK				IAmb	IAmb	05 15 23.3	
	comp=Z,15nm,1.7s						
FORT	Forrest	61.61	190	P	P	05 15 02.7	+0.6
FORT				IAmb	IAmb	05 15 04.0	
	comp=Z,15nm,0.7s						
STKA	Stephens Creek	61.94	177	P	P	05 15 05.2	+1.0
	comp=Z,3.5nm,0.6s,baz=349,slow=7.9,SNR=10.0						
STKA	Stephens Creek	61.94	177	P	P	05 15 04.7	+0.4
HRA	Herat	63.21	296	P	P	05 15 13.3	+0.3
A36M	Sachs Harbour	63.32	20	P	P	05 15 14.2	+1.5
A36M				IAmb	IAmb	05 15 15.0	
	comp=Z,10nm,0.8s						
LHI	Lord Howe Isla	64.51	161	P	P	05 15 21.5	+0.7
EUNU	Eureka	67.12	8		P	05 15 37.9	+1.2
EUNU				IAmb	IAmb	05 15 38.4	
	comp=Z,4.0nm,0.7s						
KEV	Kevo	68.88	340	P	P	05 15 48.4	+0.8
KEV				pmax	pmax		
	comp=Z,124nm,1.7s						
KEV	Kevo	68.88	340	P	P	05 15 48.4	+0.8
ARCES	ARCESS Array B	69.45	340	P	P	05 15 51.6	+0.6
	comp=Z,2.9nm,0.5s,baz=68,slow=8.8,SNR=41						
ARCES	ARCESS Array B	69.45	340	P	P	05 15 51.7	+0.6
ARCES				pmax	pmax		
	comp=Z,114nm,2.0s						
ARCES	ARCESS Array B	69.45	340	P	P	05 15 51.7	+0.6
RES	Resolute Bay	69.63	13	P	P	05 15 53.1	+1.1
RES				pmax	pmax		
	comp=Z,8.0nm,1.4s						
RES	Resolute Bay	69.63	13	P	P	05 15 53.1	+1.1
RES				IAmb	IAmb	05 16 07.3	
	comp=Z,7.6nm,1.4s						
YKA	Yellowknife Ar	70.76	28	P	P	05 15 59.7	+0.7
	comp=Z,1.6nm,0.8s,baz=302,slow=4.9,SNR=5.1						
KBZ	Khabaz	73.53	311	P	P	05 16 14.8	-0.6
	comp=Z,4.8nm,0.8s,baz=104,slow=5.2,SNR=7.2						
KBZ	Khabaz	73.53	311	*de*P	P	05 16 15.9	+0.4
KBZ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KIV	Kislovodsk	73.57	312	*e*P	P	05 16 15.6	-0.3
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
FIA1	FINESS Array S	73.65	332	P	P	05 16 15.7	-0.2
FINES	FINESS Array B	73.66	332	P	P	05 16 15.4	-0.5
	comp=Z,2.2nm,0.4s,baz=67,slow=5.4,SNR=34						
FINES	FINESS Array B	73.66	332	P	P	05 16 16.1	+0.2
FINES	FINESS Array B	73.66	332	P	P	05 16 16.1	+0.2
B08A	Colville Reser	75.26	42	P	P	05 16 26.5	+1.1
B08A				IAmb	IAmb	05 16 28.2	
	comp=Z,4.2nm,0.9s						
SOC	Sochi	75.65	312	*e*P	P	05 16 25.7	-1.8
SOC				*e*		05 19 30.7	
SOC				*e*PPP	PPP	05 21 14.1	
SOC				*e*S	S	05 25 30.7	-1.4
SOC				*e*SSS	SSS	05 33 58.0	
SOC				pmax	pmax		
	comp=Z,46nm,0.9s						
D08A	Wollman Farm,	76.14	43	P	P	05 16 31.7	+1.4
D08A				IAmb	IAmb	05 16 32.7	
	comp=Z,3.9nm,0.8s						
C09A	Chrisman Ranch	76.16	43	P	P	05 16 30.9	+0.6
K05A	Summer Lake	77.05	48	P	P	05 16 37.6	+2.0
K05A				IAmb	IAmb	05 17 45.3	
	comp=Z,33nm,2.0s						
SUMG	Summit	77.34	359	P	P	05 16 38.1	+1.3
SUMG				pmax	pmax		
	comp=Z,36nm,2.0s						
SUMG	Summit	77.34	359	P	P	05 16 38.1	+1.3
SUMG				IAmb	IAmb	05 18 44.4	
	comp=Z,36nm,2.0s						
BKZ	Black Stump Fm	77.61	151	P	P	05 16 39.3	+1.0
AKASG	Malin Array Be	78.16	322	P	P	05 16 40.6	-0.6
	comp=Z,0.9nm,0.5s,baz=54,slow=5.4,SNR=7.6						
AKASG	Malin Array Be	78.16	322	P	P	05 16 41.3	+0.2
AKASG				pmax	pmax		
	comp=Z,3.0nm,1.3s						
AKASG	Malin Array Be	78.16	322	P	P	05 16 41.3	+0.2
NC405	NORSAR Array S	79.21	337	P	P	05 16 45.9	-0.7
NB201	NORSAR Array S	79.40	337	P	P	05 16 47.7	+0.1
NB2	NORSAR Subarra	79.43	337	P	P	05 16 47.5	-0.4
	comp=Z,4.3nm,1.1s,baz=45,slow=5.3						
NOA	NORSAR Array B	79.43	337	P	P	05 16 47.2	-0.6
	comp=Z,0.6nm,0.5s,baz=54,slow=6.7,SNR=7.8						
NVAR	Mina Array Bea	80.92	51	P	P	05 16 57.7	+1.3
	comp=Z,0.9nm,0.9s,baz=271,slow=5.7,SNR=6.5						
NVAR				pP	pP	05 18 32.4	-1.3
	comp=Z,0.4nm,0.8s,baz=286,slow=6.5,SNR=2.1						
NVAR	Mina Array Bea	80.92	51	P	P	05 16 57.2	+0.8
RAYN	Ar Rayn	81.02	292	P	P	05 16 56.7	-0.2
RAYN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
RAYN	Ar Rayn	81.02	292	P	P	05 16 56.7	-0.2
RAYN				IAmb	IAmb	05 16 58.0	
	comp=Z,7.4nm,1.1s						
BR131	Keskin Array S	81.52	311	P	P	05 16 59.5	+0.1
BR131				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BR131	Keskin Array S	81.52	311	P	P	05 16 59.5	+0.1
BR131				IAmb	IAmb	05 17 00.8	
	comp=Z,7.4nm,0.9s						
BRTR	Keskin Array B	81.53	311	P	P	05 16 59.2	-0.2
	comp=Z,3.3nm,0.8s,baz=89,slow=4.8,SNR=16						
BRTR	Keskin Array B	81.53	311	*i* P	P	05 16 59.9	+0.5
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BRTR	Keskin Array B	81.53	311	P	P	05 16 59.5	+0.1
TPH	Tonopah	81.83	51	P	P	05 17 01.5	+0.4
TPH				pmax	pmax		
	comp=Z,44nm,1.4s						
TPH	Tonopah	81.83	51	P	P	05 17 01.5	+0.4
YHL	Hebgen Lake	81.88	42	P	P	05 17 01.6	+0.2
YHL				IAmb	IAmb	05 17 04.2	
	comp=Z,7.2nm,1.2s						
BURAR	Bucovina Array	82.09	321	P	P	05 17 02.5	+0.4
HVU	Hansel Valley	82.67	46	P	P	05 17 06.6	+1.3
HVU				pmax	pmax		
	comp=Z,4.0nm,1.0s						
HVU	Hansel Valley	82.67	46	P	P	05 17 06.5	+1.3
QSM	Queen of Sheba	83.20	52	P	P	05 17 08.6	+0.8
QSM				IAmb	IAmb	05 17 10.2	
	comp=Z,6.2nm,1.1s						
HWUT	Hardware Ranch	83.52	45	P	P	05 17 11.1	+1.5
HWUT				IAmb	IAmb	05 17 12.9	
	comp=Z,5.4nm,0.9s						
DUG	Dugway, Tooele	83.54	47	P	P	05 17 10.7	+1.1
DUG				pmax	pmax		
	comp=Z,4.0nm,1.1s						
DUG	Dugway, Tooele	83.54	47	P	P	05 17 10.7	+1.1
DUG				IAmb	IAmb	05 17 12.3	
	comp=Z,4.4nm,1.1s						
PDAR	Pinedale Array	84.05	43	P	P	05 17 12.2	0.0
	comp=Z,0.7nm,0.7s,baz=316,slow=3.8,SNR=4.7						
PDAR	Pinedale Array	84.05	43	P	P	05 17 12.8	+0.6
WLF	Walferdange	89.85	331	P	P	05 17 39.9	+0.6
WLF				pmax	pmax		
	comp=Z,25nm,1.2s						
WLF	Walferdange	89.85	331	P	P	05 17 39.9	+0.6
ANMO	Albuquerque	90.71	48	⇑*i*P	P	05 17 42.0	-1.9
ANMO				pmax	pmax		
	comp=Z,6.0nm,2.3s						
TXAR	Lajitas Array	96.08	51	pP	pP	05 19 47.2	-1.4
	comp=Z,0.6nm,0.7s,baz=345,slow=3.1,SNR=2.6						
TORD	Torodi Ar. Bea	120.11	310	PKP	PKPdf	05 23 29.2	-0.1
	comp=Z,0.2nm,0.5s,baz=86,slow=1.8,SNR=1.3						

TAP 22 05:08:54.5,23°.55N×121°.44E,h12^{km},ML0.9,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HGSD	Ruisui	0.06	197	P	Pg	05 08 57.7	+0.7
	baz=196						
HGSD				S	Sg	05 08 59.7	+0.9
	baz=196						
EGFH	Guangfu	0.12	352	P	Pb	05 08 58.3	-0.4
	baz=352						
EGFH				S	Sg	05 09 01.5	+1.6
	baz=352						
EHY	Hungye	0.12	247	*i* P	Pg	05 08 58.1	+0.4
	baz=244						
EHY				*i* S	Sg	05 09 00.5	+0.5
	baz=244						
TEGC	Jichi Village	0.18	30	P	Pg	05 08 59.1	+0.5
	baz=31						
TEGC				S	Sg	05 09 02.4	+1.0
	baz=31						
YULB	Yu-li	0.21	220	P	Pg	05 08 59.7	+0.6
	baz=220						
YULB				*e*S	Sg	05 09 04.2	+2.0
	baz=220						
YULB	Yu-li	0.21	220	P	Pb	05 08 60.0	-0.3
EYUL	Yuli	0.23	209	P	Pb	05 09 00.5	-0.2

	baz=209						
EYUL				S	Sg	05 09 04.4	+1.6
	baz=209						
TWF1	Yuli	0.24	214	*i* P	Pb	05 09 00.5	-0.3
	baz=212						
TWF1				S	Sg	05 09 04.5	+1.4
	baz=212						
ESL	Shilin	0.26	358	P	Pb	05 09 00.8	-0.4
	baz=359						

NOU 22 05:16:42.4, 19.°17S×167.°57E, h0^{km}, MLv3.5/7, Vanuatu Islands Region, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTV	Rentapao	1.59	31	P	Pn	05 17 11.5	-0.3
LIFNC	LIFOU	1.63	191	P	Pn	05 17 12.8	+0.4
YATNC	Mamie plateau,	2.94	192	P	Pn	05 17 27.7	-2.8
DZM	Mont Dzumac	3.07	200	P	Pn	05 17 32.2	-0.1
NOUC	Port Laguerre	3.15	202	P	Pn	05 17 34.6	+1.3

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*JMA **22** 05:16:52.8±0.1, 23.°66N×122.°03E, h31^{km}±5^{km}, M3.9*
*NIED **22** 05:16:52.8, 23.°66N×122.°03E, h31^{km}, MW3.7, Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M_{rr}2.66; $M_{\theta\theta}$0.02; $M_{\phi\phi}$-2.67; $M_{r\theta}$0.40; $M_{\theta\phi}$0.17; $M_{\phi r}$2.53; Fault plane solution: $M_0$3.70000×10^{14} NP1:ϕ_s5.00000°, δ67.00000°, λ97.00000°. NP2:ϕ_s168.00000°, δ24.00000°, λ74.00000°.*
*TAP **22** 05:16:53.8, 23.°68N×122.°01E, h38^{km}, ML4.2, B*
ISC 22 05:16:51.4±1.1**, 23.°64N**±0.°02×**122.°04E**±0.°02**, h18^{km}**±5^{km}**, n169, σ0.s62**/276**, 7C-47D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TEGC	Jichi Village	0.46	279	P	Pn	05 17 03.1	0.0
	baz=274						
TEGC				*e*S	Sn	05 17 10.7	-0.2
	baz=274						
TEYL	Yanliau Villag	0.47	300	⇓*i*P	Pn	05 17 03.2	0.0
	baz=304						
TEYL				*i* S	Sn	05 17 10.2	-0.8
	baz=304						
HWA	Hwalien	0.52	311	*i* P	Pn	05 17 03.7	-0.3
	baz=306						
HWA				*e*S	Sn	05 17 11.2	-1.2
	baz=306						
EGFH	Guangfu	0.56	273	⇓P	Pn	05 17 04.5	0.0
	baz=269						
EGFH				*e*S	Sn	05 17 12.9	-0.5
	baz=269						
ESL	Shilin	0.58	288	⇑*i*P	Pn	05 17 04.2	-0.6
	baz=279						
ESL				S	Sb	05 17 11.8	+0.8
	baz=279						
HGSD	Ruisui	0.58	256	⇓*i*P	Pn	05 17 04.7	-0.1
	baz=251						
HGSD				*i* S	Sn	05 17 12.8	-1.1
	baz=251						
ETM	Tongmen	0.60	303	⇓*i*P	Pn	05 17 04.4	-0.6
	baz=301						
ETM				S	Sb	05 17 12.7	+1.3
	baz=301						
TWD	Chiawan	0.60	317	⇓*i*P	Pn	05 17 04.4	-0.6
	baz=317						
TWD				*i* S	Sb	05 17 12.0	+0.6
	baz=317						
ECBN	Changbin	0.63	240	⇓*i*P	Pn	05 17 05.7	+0.3
	baz=226						
ECBN				S	Sn	05 17 14.5	-0.5
	baz=226						
ETL	Fush Village	0.65	324	*e*P	Pn	05 17 05.0	-0.7
	baz=318						
ETL				*e*S	Sb	05 17 13.6	+0.8
	baz=318						
EHY	Hungye	0.67	259	⇓*i*P	Pn	05 17 06.3	+0.2
	baz=268						
EHY				*i* S	Sn	05 17 15.7	-0.4
	baz=268						
NACB	Ninganchiao	0.67	323	⇓*i*P	Pg	05 17 05.3	+0.6
	baz=318						
NACB				*i* S	Sg	05 17 13.7	0.0
	baz=318						
EYUL	Yuli	0.72	247	⇓*i*P	Pn	05 17 07.3	+0.6
	baz=235						
EYUL				*e*S	Sn	05 17 17.2	-0.1
	baz=235						
YULB	Yu-li	0.72	251	⇓*i*P	Pn	05 17 07.0	+0.3
	baz=260						
YULB				S	Sn	05 17 16.9	-0.4
	baz=260						
EHP	Heping Village	0.72	338	*e*P	Pn	05 17 06.4	-0.4
	baz=339						
TWF1	Yuli	0.74	248	⇓*i*P	Pn	05 17 07.2	+0.2
	baz=237						
TWF1				*e*S	Sn	05 17 17.6	-0.2
	baz=237						
ETLH	Xiulin Townshi	0.76	318	⇓P	Pn	05 17 06.9	-0.5
	baz=317						
ETLH				*e*S	Sg	05 17 17.0	+0.4
	baz=317						
FULB	Fuli	0.81	238	⇓P	Pn	05 17 07.9	-0.1
	baz=224						
FULB				S	Sg	05 17 18.7	+0.6
	baz=224						
CHKT	Chengkung	0.82	229	⇓*i*P	Pn	05 17 07.9	-0.2
	baz=218						
CHKT				S	Sg	05 17 18.0	-0.2
	baz=218						
VWDT	VWDT	0.83	278	⇓*i*P	Pn	05 17 08.6	+0.4
	baz=275						
VWDT				S	Sn	05 17 19.8	-0.2
	baz=275						
ENA	Nanau	0.83	341	⇑P	Pn	05 17 08.1	-0.2
	baz=335						
ENA				S	Sg	05 17 18.9	+0.1
	baz=335						
EWUT	Wuta	0.84	344	P	Pn	05 17 08.3	-0.1
	baz=337						
EWUT				S	Sg	05 17 19.3	+0.4
	baz=337						
OWD	Renai	0.85	292	P	Pn	05 17 08.7	0.0
	baz=290						
OWD				S	Sg	05 17 19.5	+0.1
	baz=290						
WHF	Hehuan Shan	0.87	306	⇓*i*P	Pg	05 17 08.7	+0.2
	baz=304						
WHF				S	Sg	05 17 19.9	-0.2
	baz=304						
CHGB	Renai	0.90	298	⇓*i*P	Pn	05 17 09.4	+0.1
	baz=296						
CHGB				*i* S	Sb	05 17 20.6	+0.2
	baz=296						
ECS	Chishang	0.93	235	*i* P	Pn	05 17 10.1	+0.6
	baz=224						
ECS				S	Sn	05 17 23.0	+0.6
	baz=224						
EDH	Donghe	0.94	226	⇓*e*P	Pn	05 17 09.8	0.0
	baz=216						
EDH				*e*S	Sb	05 17 21.7	+0.3
	baz=216						
FUSS	Fushou	0.95	310	⇓*i*P	Pn	05 17 10.2	+0.2
	baz=309						
FUSS				*i* S	Sb	05 17 22.0	+0.1
	baz=309						
TWC	Suao	0.98	350	⇑*i*P	Pg	05 17 10.7	+0.1
	baz=351						
TWC				S	Sg	05 17 23.1	-0.4
	baz=351						
TWT	Tachien	1.00	308	⇓P	Pg	05 17 11.3	+0.4
	baz=306						
TWT				S	Sb	05 17 23.2	-0.1
	baz=306						
NNS	Nan Shan	1.01	323	P	Pn	05 17 10.8	0.0
	baz=323						
NNS				S	Sb	05 17 23.3	0.0
	baz=323						
SSLB	Suanglung	1.01	279	⇓*i*P	Pg	05 17 11.0	0.0
	baz=276						
SSLB				S	Sb	05 17 23.6	+0.3
	baz=276						
SSLB	Suanglung	1.01	279	P	Pg	05 17 10.9	-0.1
YUS	Yu-Shan	1.01	262	⇓*e*P	Pn	05 17 11.8	+0.7
	baz=259						
YUS				*e*S	Sg	05 17 24.4	0.0
	baz=259						
TDCB	Techi	1.01	307	⇓*i*P	Pg	05 17 11.3	+0.1
	baz=306						
TDCB				S	Sb	05 17 23.2	-0.4
	baz=306						
NDS	Dongshan	1.04	343	*e*P	Pg	05 17 11.4	-0.1
	baz=338						
NDS				*e*S	Sb	05 17 24.1	0.0
	baz=338						
ELDTW	Lidau	1.04	245	⇓*i*P	Pg	05 17 11.4	-0.2
	baz=242						
WPL	Puli Township	1.06	291	⇓P	Pg	05 17 12.0	0.0
	baz=289						
SMLT	Sun Moon Lake	1.07	283	P	Pg	05 17 12.3	0.0
	baz=288						
SMLT				S	Sn	05 17 25.9	-0.3
	baz=288						
NDT	Datong Townshi	1.07	334	P	Pg	05 17 12.0	-0.3
	baz=334						
NDT				*e*S	Sb	05 17 25.4	+0.1
	baz=334						
ENTT	Nioudou	1.09	337	⇓*e*P	Pg	05 17 12.3	-0.2
	baz=328						
DPDB	Guoxing	1.09	291	*e*P	Pg	05 17 12.7	0.0
	baz=290						
DPDB				*e*S	Sn	05 17 26.7	+0.1
	baz=290						
LDUT	Ludao	1.09	209	*e*P	Pb	05 17 11.6	-0.2
	baz=206						
LDUT				*e*S	Sb	05 17 25.0	-0.7
	baz=206						
LONT	Longtian	1.11	229	P	Pn	05 17 12.4	+0.4
	baz=239						
LONT				*e*S	Sb	05 17 25.9	-0.2
	baz=239						
WCS	Beigang Elemen	1.11	292	⇓*i*P	Pg	05 17 13.0	0.0
	baz=290						
TYC	Yuchr	1.12	284	⇓*i*P	Pg	05 17 12.9	-0.1
	baz=282						
TWE	Neicheng	1.13	343	P	Pb	05 17 12.8	+0.3
	baz=344						
TWE				*e*S	Sn	05 17 27.3	-0.1
	baz=344						
ALS	Alishan	1.14	264	⇓*i*P	Pg	05 17 14.1	+0.5
	baz=261						
ALS				S	Sg	05 17 28.4	-0.2
	baz=261						
ILA	Ilan	1.16	347	*e*P	Pg	05 17 13.5	-0.3
	baz=348						
ILA				*e*S	Sg	05 17 28.7	-0.3
	baz=348						
JYNG	Yonagunijimaku	1.16	45	P	Pg	05 17 13.6	-0.3
JYNG				S	Sb	05 17 27.7	+0.1
WHP	Taichung City	1.19	303	P	Pg	05 17 14.2	-0.2
	baz=309						
WHP				*e*S	Sn	05 17 28.9	0.0
	baz=309						
YHNB	Yeheng	1.19	330	⇓*i*P	Pb	05 17 13.7	+0.1
	baz=329						
YHNB				*i* S	Sb	05 17 27.8	-1.0
	baz=329						
YHNB	Yeheng	1.19	330	P	Pb	05 17 13.8	+0.2
TWGBT	Beinan	1.20	227	⇓*i*P	Pn	05 17 13.4	+0.1
	baz=236						
TWGBT				S	Sb	05 17 28.4	-0.5
	baz=236						
TTN	Taitung	1.20	223	*e*P	Pg	05 17 14.3	-0.4
	baz=212						
EGS		1.21	355	P	Pg	05 17 14.6	-0.1
	baz=8.0						
EGS				*e*S	Sb	05 17 28.9	-0.1
	baz=8.0						
NSK	Sanguang	1.21	329	P	Pb	05 17 13.9	+0.1
	baz=329						
NSK				S	Sb	05 17 27.8	-1.3
	baz=329						
YOJ	Yonaguni jima	1.21	47	⇓*i*P	Pb	05 17 14.2	+0.5
	baz=49						
YOJ				*e*S	Sb	05 17 29.0	0.0
	baz=49						
YOJ	Yonaguni jima	1.21	47	P	Pb	05 17 14.3	+0.5
YOJ				*e*S	Sb	05 17 29.2	+0.1
YOJ	Yonaguni jima	1.21	47	P	Pg	05 17 14.3	-0.5
WJS	Zhushan	1.22	279	⇓P	Pg	05 17 15.5	+0.6
	baz=276						
NTC	Toucheng	1.23	351	*e*P	Pb	05 17 14.5	+0.4
	baz=5.0						
NTC				*e*S	Sg	05 17 30.8	-0.4
	baz=5.0						
NWLT	Wulai	1.24	337	*e*P	Pb	05 17 14.6	+0.4
	baz=326						
NWLT				*e*S	Sb	05 17 29.5	-0.4
	baz=326						
CHN5	Tsauling	1.25	268	⇓*i*P	Pg	05 17 15.9	+0.3
	baz=266						
CHN5				*i* S	Sg	05 17 31.8	-0.1
	baz=266						
STYH	Taoyuan	1.25	248	⇓P	Pg	05 17 15.1	-0.4
	baz=238						
WNT	Mingjian	1.27	281	⇓*i*P	Pg	05 17 16.2	+0.3
	baz=279						
STYT	Tauyuan	1.27	248	⇓*i*P	Pg	05 17 15.5	-0.5
	baz=240						
STYT				S	Sn	05 17 31.1	+0.2
	baz=240						
WNT1	Nantou City	1.27	282	P	Pg	05 17 16.4	+0.3
	baz=281						
WNT1				*e*S	Sg	05 17 34.0	+1.3
	baz=281						
WWF	Wufeng	1.29	288	*e*P	Pg	05 17 16.9	+0.6
	baz=287						
WWF				*e*S	Sg	05 17 34.7	+1.4
	baz=287						
TPUB	Ta-pu	1.34	256	⇓*i*P	Pg	05 17 17.2	-0.1
	baz=246						
TPUB				S	Sb	05 17 33.6	+0.9
	baz=246						
TPUB	Ta-pu	1.34	256	P	Pg	05 17 17.1	-0.1
TIPB	Shuangxi	1.34	352	⇑*i*P	Pb	05 17 16.4	+0.3
	baz=4.0						
TIPB				S	Sn	05 17 32.7	-0.1
	baz=4.0						
TCU	Taichung	1.35	292	*e*P	Pg	05 17 17.7	+0.3
	baz=291						
TCU				*e*S	Sg	05 17 35.2	+0.1
	baz=291						
WGK	Gukeng	1.36	272	*e*P	Pg	05 17 17.2	-0.3
	baz=270						
WGK				*e*S	Sb	05 17 34.0	+0.8
	baz=270						
TWQ1	Liyutan	1.36	302	⇓*i*P	Pg	05 17 17.6	0.0
	baz=301						
TWQ1				*e*S	Sb	05 17 33.8	+0.4
	baz=301						
WTP	Ta-pu	1.37	254	⇓*i*P	Pg	05 17 17.5	-0.3
	baz=251						
WTP				*e*S	Sg	05 17 35.4	-0.2
	baz=251						
TWB1	Santiao Chiao	1.37	358	*e*P	Pb	05 17 16.3	-0.2
	baz=359						
TWB1				*e*S	Sn	05 17 32.3	-1.0
	baz=359						
NSTT	Nanjuang	1.37	316	⇓*i*P	Pg	05 17 17.3	-0.6
	baz=316						
NSTT				S	Sn	05 17 33.4	0.0
	baz=316						
LIOB	Emei	1.37	317	P	Pg	05 17 17.6	-0.4
	baz=324						
WYL	Yuanlin Townsh	1.38	284	*e*P	Pg	05 17 17.3	-0.7
	baz=282						
WDLH	Douliu	1.38	272	*e*P	Pg	05 17 17.8	-0.2
	baz=270						
NJD	Zhudong	1.40	322	P	Pg	05 17 18.3	-0.1
	baz=321						
NJD				*e*S	Sb	05 17 35.5	+0.9
	baz=321						
TWA	Mucha	1.40	343	P	Pb	05 17 17.6	+0.5
	baz=331						
TWA				S	Sn	05 17 34.1	0.0
	baz=331						
NHDH	Xindian Distri	1.40	341	P	Pb	05 17 17.5	+0.5
	baz=329						
NHDH				*e*S	Sn	05 17 34.1	0.0
	baz=329						
NSY	Sanyi	1.40	304	*e*P	Pg	05 17 18.2	-0.3
	baz=303						
NSY				*e*S	Sb	05 17 35.4	+0.7
	baz=303						
TATO	Taipei	1.43	339	⇑P	Pb	05 17 17.6	+0.1
	baz=340						
TATO				S	Sn	05 17 34.5	-0.2
	baz=340						
WCHH	Zhanghua	1.43	288	*e*P	Pg	05 17 18.9	-0.1
	baz=286						
SLGT	Liugui	1.43	244	*e*P	Pg	05 17 18.3	-0.8
	baz=242						
ECL	Taimali	1.44	224	*e*P	Pn	05 17 16.7	+0.2
	baz=231						
CHN2	Minshiung	1.44	266	*e*P	Pg	05 17 19.4	+0.2
	baz=264						
CHN2				*e*S	Sg	05 17 37.3	-0.6
	baz=264						
NWF	Wu-fen Shan	1.45	351	⇑*i*P	Pb	05 17 18.1	+0.2
	baz=351						
NWF				*e*S	Sn	05 17 35.0	-0.4
	baz=351						
SGST	Jiashian	1.45	248	*e*P	Pb	05 17 18.0	+0.2
	baz=237						
SGST				*e*S	Sb	05 17 36.5	+0.6
	baz=237						
WFSB	Wu-fen Shan	1.45	351	⇑*i*P	Pb	05 17 18.1	+0.3
	baz=351						
WFSB				S	Sn	05 17 35.1	-0.2
	baz=351						
NMLH	Miaoli	1.45	308	*e*P	Pg	05 17 19.0	-0.4
	baz=307						
CHN1	Nanshi	1.46	252	⇓*i*P	Pg	05 17 19.3	-0.2
	baz=250						
CHN1				*e*S	Sg	05 17 38.2	-0.4
	baz=250						
BACT	New Taipei Cit	1.46	338	*e*P	Pb	05 17 18.0	-0.1
	baz=338						
WDJ	Dajia District	1.46	299	*e*P	Pg	05 17 18.9	-0.7
	baz=298						
WDJ				*e*S	Sg	05 17 37.5	-1.2
	baz=298						
HSN1	Hsinchu	1.47	321	*e*P	Pb	05 17 18.8	+0.6
	baz=320						
TWK	Hsinying	1.47	256	⇓*i*P	Pg	05 17 19.1	-0.7
	baz=253						
TWK				S	Sg	05 17 38.0	-1.0
	baz=253						
TAP1	Taipei	1.47	341	*e*P	Pg	05 17 19.3	-0.6
	baz=341						
SNST	Tainan City	1.48	254	*e*P	Pg	05 17 19.2	-0.6
	baz=252						
TAP	Taipei	1.48	341	*e*P	Pg	05 17 19.4	-0.5
	baz=341						
CHY	Chiayi	1.49	265	*e*P	Pg	05 17 19.5	-0.6
	baz=263						
CHY				*e*S	Sg	05 17 39.1	-0.4
	baz=263						
NJN	Zhunan	1.49	315	*e*P	Pb	05 17 19.3	+0.7
	baz=298						
SBCB	Hsinchu	1.50	320	*e*P	Pb	05 17 19.3	+0.6
	baz=320						
SBCB				*e*S	Sb	05 17 38.4	+0.9
	baz=320						
WTK	Tuku	1.51	272	*e*P	Pb	05 17 19.6	+0.6
	baz=270						
WTK				*e*S	Sg	05 17 39.9	-0.4
	baz=270						
HSN	Hsinchu	1.52	320	*e*P	Pb	05 17 19.3	+0.3
	baz=321						
HSN				*e*S	Sb	05 17 38.4	+0.5
	baz=321						
NTY	Taoyuan	1.52	334	*e*P	Pb	05 17 18.9	-0.1
	baz=334						
NCUH	Zhongli	1.54	330	*e*P	Pb	05 17 19.3	-0.1
	baz=329						
NCUH				*e*S	Sb	05 17 38.2	-0.4
	baz=329						
NCU	National Centr	1.54	330	*e*P	Pb	05 17 19.6	+0.2
	baz=330						
NCU				*e*S	Sb	05 17 38.6	0.0
	baz=330						
WRL	Guolierlin Hig	1.54	280	*e*P	Pg	05 17 20.6	-0.6
	baz=278						
YM01	YM01	1.56	344	P	Pb	05 17 19.6	-0.3
	baz=330						
YM01				S	Sn	05 17 38.2	0.0
	baz=330						
TWS1	Kuangyinshan	1.56	339	*e*P	Pb	05 17 19.6	-0.3
	baz=339						
TWS1				*e*S	Sn	05 17 38.5	+0.4
	baz=339						
SSD	Sandimen	1.57	236	*e*P	Pb	05 17 19.3	-0.6
	baz=227						
TSMG	Majia	1.58	234	*e*P	Pb	05 17 20.0	-0.2
	baz=226						
YM08	YM08	1.60	345	*e*P	Pb	05 17 19.7	-0.7
	baz=330						
SCST	Cishan	1.61	243	*e*P	Pg	05 17 22.0	-0.4
	baz=241						
NTST	Danshui	1.61	341	*e*P	Pb	05 17 20.2	-0.4
	baz=341						
WTCT	Ta-ch'eng	1.63	278	*e*P	Pb	05 17 21.4	+0.5
	baz=277						
WTCT				*e*S	Sg	05 17 42.7	-1.2
	baz=277						
CHN3	Shinhua	1.64	250	*e*P	Pb	05 17 21.4	+0.3
	baz=249						
NHW	Xinwu Township	1.64	327	*e*P	Pb	05 17 20.4	-0.7
	baz=339						
ICHU	Yijhu	1.64	261	*e*P	Pb	05 17 21.7	+0.6
	baz=259						
ICHU				*e*S	Sb	05 17 42.6	+1.2
	baz=259						
MASBT	Mashibuluo	1.65	232	*e*P	Pb	05 17 20.5	-0.8
	baz=228						
MASBT				*e*S	Sb	05 17 41.8	+0.1
	baz=228						
TAW	Tawu	1.65	220	*e*P	Pb	05 17 20.5	-0.9
	baz=226						
LAY	Lan-yu	1.65	196	*e*P	Pn	05 17 19.7	+0.2
	baz=186						
EAST	Anshuo	1.66	222	*e*P	Pn	05 17 19.9	+0.2
	baz=220						
WSF	Szhu	1.67	270	*e*P	Pb	05 17 21.6	0.0
	baz=256						
HATJ	Hateruma jima	1.67	75	P	Pn	05 17 20.6	+0.8
HATJ				S	Sn	05 17 40.6	-0.1
WMLT	Mailiao	1.67	276	*e*P	Pb	05 17 21.8	+0.1
	baz=274						
TWY	Chenhua	1.68	346	*e*P	Pn	05 17 20.6	+0.7
	baz=347						
SSHA	Shanhua	1.69	253	*e*P	Pg	05 17 22.9	-1.0
	baz=251						
SGLT	Jiouru	1.69	238	*e*P	Pg	05 17 23.9	0.0
	baz=236						
TWM1	Shoushan	1.69	242	*e*P	Pg	05 17 23.4	-0.6
	baz=240						
IRIF	Iriomote-Funau	1.69	65	P	Pn	05 17 21.0	+0.9
IRIF				*e*S	Sn	05 17 42.2	+0.8
CHN8	Yiju	1.70	261	*e*P	Pb	05 17 22.2	0.0
	baz=259						
CHN8				*e*S	Sb	05 17 43.9	+0.6
	baz=259						
TSPT	Pingtung City	1.71	236	*e*P	Pg	05 17 23.7	-0.6
	baz=235						
SCLT	Jiali	1.76	255	*e*P	Pb	05 17 22.9	-0.2
	baz=253						
SCLT				*e*S	Sb	05 17 45.5	+0.7
	baz=253						
SSPT	Xinbi	1.78	230	*e*P	Pb	05 17 23.5	+0.1
	baz=225						
SCZT	Fangliau	1.81	226	*e*P	Pb	05 17 23.5	-0.6
	baz=221						
SCZT				*e*S	Sb	05 17 47.5	+1.0
	baz=221						
SLIU	Shizi	1.82	219	*e*P	Pn	05 17 22.1	+0.3
	baz=218						
JKRS	Kuro-shima	1.90	71	P	Pn	05 17 24.0	+1.1
JKRS				S	Sn	05 17 47.4	+1.0
PCYT	Pengchaiyu	1.98	1	*e*P	Pn	05 17 24.6	+0.5
	baz=1.0						
WLCH	Liuqiu	2.00	230	*e*P	Pg	05 17 29.3	-0.5
	baz=243						
TWP	Hsiaoliuchiu	2.01	231	*e*P	Pn	05 17 25.6	+1.1
	baz=243						
HEN	Hengchun	2.02	217	*e*P	Pn	05 17 25.6	+1.1
	baz=208						
TSEB	Hengchuen, Pin	2.02	212	*e*P	Pn	05 17 25.0	+0.4
	baz=211						
TWKBT	Hengchun	2.03	214	*e*P	Pn	05 17 25.7	+0.9
	baz=213						
TWKBT				*e*S	Sn	05 17 49.6	-0.1

	baz=213						
TWK1	Hengchun	2.03	214	*e*P	Pn	05 17 25.9	+1.2
	baz=213						
TWK1				*e*S	Sn	05 17 49.4	-0.3
	baz=213						
JIJ	Ishigaki jima	2.06	69	P	Pn	05 17 25.4	+0.3
JIJ				S	Sn	05 17 49.7	-0.6
PHUB	P'eng-hu	2.27	267	P	Pn	05 17 29.5	+1.5
	baz=255						
PHUB				S	Sn	05 17 55.4	-0.1
	baz=255						
PNG	Penghu	2.28	269	⇓*i*P	Pn	05 17 29.7	+1.5
	baz=257						
PNG				*e*S	Sn	05 17 56.0	+0.3
	baz=257						
JISG	Ishigakijimahi	2.28	65	P	Pn	05 17 28.5	+0.3
JISG				S	Sn	05 17 54.1	-1.7
VCHM	Qimei	2.44	260	P	Pn	05 17 31.5	+1.2
	baz=259						
VCHM				S	Sn	05 17 59.2	-0.5
	baz=259						
JTJ	Tarama	2.63	67	P	Pn	05 17 33.5	+0.5
JTJ				*e*S	Sn	05 18 03.8	-0.6
PTMZ	Houxiangcun	3.01	298	⇓P	Pn	05 17 38.5	+0.4
	baz=297						
PTMZ				*e*S	Sn	05 18 11.1	-2.7
	baz=297						
JIRB	Irabujima	3.10	67	P	Pn	05 17 40.7	+1.3
JIRB				*e*S	Sn	05 18 14.0	-2.0
MATB	Ma-tsu	3.14	323	*e*P	Pn	05 17 40.3	+0.2
	baz=333						
MSUT	Lienchiang	3.17	323	*e*P	Pn	05 17 40.7	+0.3
	baz=333						
JMJ	Miyako jima 2	3.19	68	*e*P	Pn	05 17 41.3	+0.6
	baz=68						
JMJ				*e*S	Sn	05 18 17.6	-0.8
	baz=68						
JMJ	Miyako jima 2	3.19	68	P	Pn	05 17 41.9	+1.2
JIKM	Ikemajima	3.20	66	P	Pn	05 17 41.7	+0.9
JIKM				*e*S	Sn	05 18 17.4	-1.0
JMJ2	Miyako jima3	3.20	69	P	Pn	05 17 41.8	+1.0
JMJ2				S	Sn	05 18 18.7	+0.2
KNM	Kinmen	3.39	284	P	Pn	05 17 45.9	+2.5
	baz=282						
KNMB	Chin-men Tao	3.44	285	⇓P	Pn	05 17 44.8	+0.7
	baz=283						
KNMB				*e*S	Sn	05 18 22.2	-2.2
	baz=283						
LYJJ	Jianjiangzhen	3.56	325	*e*P	Pn	05 17 45.9	+0.1
	baz=334						
XPSS	Dashiqiu	3.68	333	*e*P	Pn	05 17 47.5	0.0
	baz=332						
AXDP	Jialang	3.92	290	⇓*e*P	Pn	05 17 50.9	+0.2
	baz=287						
ZPLA	Ao Xicun	3.94	275	P	Pn	05 17 52.2	+1.2
	baz=284						
JOW	Kunigami	6.48	59	*e*P	Pn	05 18 25.5	-0.5
	baz=71						

ISN ***22*** *05:34:47.7±1.1, 32°.68N×47°.67E, h19^{km}±6^{km}, ML3.1*
TEH ***22*** *05:34:49.9, 32°.67N×47°.76E, h9^{km}, ML3.4*
THR ***22*** *05:34:51.0±0.3, 32°.54N×47°.85E, h18^{km}±10^{km}, ML3.2*
ISC 22 05:34:48.0±0.8**, 32°.48N**±0°.03×**47°.47E**±0°.03**, h10^{km}, n49,** σ**1^{s}.74**/57**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DHL1	Dehloran	0.26	321	*e*Pg	Pn	05 34 57.7	-0.2
DHL1				*e*Sg	Sb	05 35 04.6	+5.4
IKFM	Kafar-mosalman	1.08	17	*e*		05 35 26.5	
	comp=Z,10µm,0.3s						
IKFM				*e*Pg	Pb	05 35 05.8	-3.1
IDOB	Doab	1.43	24	*e*Pg	Pn	05 35 12.0	-2.2
IBDR	Badra	1.44	296	*e*Pg	Pb	05 35 15.0	0.0
IBDR				*e*Sg	Sg	05 35 35.0	+0.6
IBDR				AML	AML	05 35 46.3	
	comp=N,311nm,0.6s						
IBDR				AML	AML	05 35 57.5	
	comp=E,227nm,0.5s						
AHWZ	Ahwaz	1.52	139	*e*Pg	Pg	05 35 19.9	+2.7
BMDN	Meydan	1.64	43	*e*Pg	Pn	05 35 15.8	-1.3
BMDN				*e*Sg	Sn	05 35 35.7	-2.7
BMDN				*e*		05 35 39.0	
	comp=Z,6µm,0.3s						
AMIS	Naft Sefid	1.74	117	*e*Sg	Sg	05 35 44.7	+0.6
KCHF	Cheshme Sefid,	1.82	349	*e*Pn	Pb	05 35 22.3	+0.7
NSR	Nassriya	1.86	218	*e*Pn	Pn	05 35 17.0	-2.9
NSR				*e*Sn	Sn	05 35 39.0	-4.4
NSR				AML	AML	05 35 48.4	
	comp=E,321nm,0.8s						
HSAM	Samen	1.97	28	*e*Pg	Pn	05 35 22.4	+0.7
HSAM				*e*		05 35 50.0	
	comp=Z,3µm,0.6s						
IGHG	Ghaleghazi	1.99	338	*e*Pg	Pg	05 35 25.9	-0.3
IGHG				*e*		05 36 14.3	
	comp=Z,3µm,0.9s						
IBZA	Bozab	2.01	9	*e*Pn	Pb	05 35 24.1	-0.7
IDHR	Dehrash	2.39	338	*e*Pn	Pb	05 35 30.5	-0.8
IDHR				*e*		05 36 10.4	
	comp=Z,3µm,0.5s						
KHMZ	Khomeyn	2.43	58	*e*Pn	Pn	05 35 28.1	0.0
IALM	Almabolaq	2.44	14	*e*Pn	Pb	05 35 30.3	-1.9
ILIN	Lien	2.47	350	*e*Pn	Pb	05 35 31.0	-1.6
ILIN				*e*		05 35 36.5	
	comp=Z,1µm,0.3s						
MIB	Mutribah	2.67	182	*e*P	Pb	05 35 37.5	+1.5
HAGD	Aghdareh	2.71	30	*e*Pn	Pn	05 35 32.9	+0.9
HAGD				*e*		05 36 10.4	
	comp=Z,2µm,0.5s						
BHD	Baghdad	2.72	288	*e*Pn	Pn	05 35 34.0	+2.3
BHD				*e*Sn	Sb	05 36 08.0	-2.1
SHK1	Shahrekord	2.89	92	*e*Pn	Pn	05 35 34.7	+0.3
SHK1				*e*		05 36 30.5	
	comp=Z,1µm,0.6s						
IPIR	Pirpir	2.89	85	*e*Pn	Pn	05 35 35.2	+0.7
IPIR				*e*		05 36 24.3	
	comp=Z,1µm,0.6s						
ASAO	Ashtian	2.96	45	*e*Pn	Pn	05 35 35.9	+0.5
ASAO				*e*Sg	Sb	05 36 15.7	-1.8
ASAO				IAML		05 36 23.2	
	comp=N,86nm,0.8s						
ASAO				IAML		05 36 28.9	
	comp=E,72nm,0.6s						
IBRJ	Brojen	3.26	99	*e*Pn	Pn	05 35 40.2	+0.7
IBRJ				*e*		05 35 40.6	
	comp=Z,1µm,0.3s						
QAMS	Qamsar	3.52	68	*e*Pn	Pn	05 35 44.1	+1.0
IKLH	Kolahrood	3.55	75	*e*Pn	Pn	05 35 44.3	+0.8
IKLH				*e*		05 36 42.9	
	comp=Z,1µm,0.5s						
IRAZ	Razeghan	3.56	34	*e*Pn	Pn	05 35 44.0	+0.5
IRAZ				*e*		05 35 48.1	
	comp=Z,1µm,0.5s						
QABG	Abgarm-Qazvin	3.66	28	*e*Pn	Pn	05 35 45.2	+0.2
QRN	Al-Qurain	3.75	174	*e*P	Pb	05 35 52.1	-2.2
GHVR	GHOM	3.76	57	*e*Pn	Pn	05 35 45.9	-0.4
GHVR				IAML		05 36 37.8	
	comp=E,47nm,0.4s						
GHVR				IAML		05 36 52.0	
	comp=N,33nm,0.4s						
KLNJ	Kolanjah	3.81	112	*e*Pn	Pn	05 35 48.6	+1.6
KLNJ				*e*		05 37 12.7	
	comp=Z,687nm,0.7s						
IQOM	Qom	3.81	51	*e*Pn	Pn	05 35 46.9	-0.2
IGAR	Gharneh	3.86	90	*e*Pn	Pn	05 35 48.3	+0.6
IGAR				*e*		05 36 01.6	
	comp=Z,570nm,0.2s						
IKRK	Kirkuk	3.90	319	*e*Pn	Pn	05 35 49.0	+0.9
IKRK				*e*Sn	Sn	05 36 32.0	-2.0
IZEF	Zefreh	4.12	83	*e*Pn	Pn	05 35 52.0	+0.8
IZEF				*e*		05 35 53.5	
	comp=Z,402nm,0.2s						
IMHD	Mahdasht	4.15	39	*e*Pn	Pn	05 35 51.5	-0.1
KRSH	Karshahi	4.18	68	*e*Pn	Pn	05 35 52.4	+0.4
IRAM	Ramesheh	4.22	98	*e*Pn	Pn	05 35 52.8	+0.2
ZNJK	Zanjan	4.29	13	*e*Pn	Pn	05 35 56.2	+2.6
ZNJK				*e*Sg	Sb	05 37 00.8	+5.1
IVRN	Varamin	4.34	54	*e*Pn	Pn	05 35 53.9	-0.2
ISFB	Sefidab	4.40	64	*e*Pn	Pn	05 35 54.9	-0.1
IGZV	Ghazvin	4.51	29	*e*Pn	Pn	05 35 58.0	+1.4
NASN	Na'in	4.51	85	*e*Pn	Pn	05 35 56.5	-0.3
NASN				IAML		05 37 09.9	
	comp=E,34nm,0.9s						
CHTH	Charan	4.56	41	*e*Pn	Pn	05 35 58.0	+0.6
QALM	Alamut, Qazvin	4.73	33	*e*Pn	Pn	05 35 59.4	-0.3
DAMV	Damavand	4.88	49	*e*Pn	Pn	05 36 02.3	+0.6
DAMV				IAML		05 37 28.1	
	comp=E,12nm,0.6s						
DAMV				IAML		05 37 30.0	
	comp=N,10nm,0.6s						
IDMV	Damavand	4.88	50	*e*Pn	Pn	05 36 02.2	+0.4
IFIR	Firoozkooh	5.40	53	*e*Pn	Pn	05 36 08.9	+0.1
YZKH	Yazd	6.02	89	*e*P	Pn	05 36 17.3	+0.1
IMEH	Mehriz	6.17	98	*e*Pn	Pn	05 36 19.5	+0.1

NIED ***22*** *05:40:35.0, 31°.38N×128°.67E, h11^{km}, MW3.6, Moment Tensor Solution.   s3   Moment tensor: Scale 10^{14}Nm; M_{rr}-0.20; $M_{\theta\theta}$1.34; $M_{\phi\phi}$-1.14; $M_{r\theta}$-0.35; $M_{\theta\phi}$1.91; $M_{\phi r}$-0.61; Fault plane solution: $M_0$2.38000×10^{14} NP1: ϕ_s197.00000°, δ89.00000°, λ164.00000°.   NP2: ϕ_s287.00000°, δ74.00000°, λ1.00000°.*
JMA 22 05:40:34.9±0.4**, 31°.38N**×**128°.67E, h11^{km}**±3^{km}**, M3.5, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	Shimokoshiki	0.94	71	P	Pg	05 40 52.2	-0.8
JSJ				*e*S	Sg	05 41 05.0	-0.3
JFU	Fukue jima 2	1.27	3	P	Pb	05 40 58.8	-0.1
JFU				*e*S	Sn	05 41 15.6	-0.1
JSU	Suzuyama	1.53	85	P	Pb	05 41 02.8	-0.5
JNN	Nakanoshima	1.85	146	P	Pn	05 41 06.9	+0.3
JYAK	Yakushimahirau	1.95	125	P	Pn	05 41 07.2	-0.7
JTN	Tanegashima 3	2.11	109	P	Pn	05 41 10.4	+0.2
JTZ	Takazaki	2.13	75	P	Pn	05 41 11.3	+0.9
JMTN	Minamitane	2.15	116	P	Pn	05 41 11.7	+1.0

IDC 22 05:43:57.8±5.8**, 15°.46S**×**173°.32W, h0^{km}, mb4.0**/2**, mb1 4.2**/3**, mb1mx3.6**/42**, mbtmp4.0**/3**, ML4.0**/1**, MS3.2**/4**, Ms1 3.2**/4**, ms1mx2.8**/30**, Error ellipse: s-maj=304.4km s-min=27.3km az=144.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	2.14	44	Pn	Pn	05 44 34.7	-0.2
	50nm,0.3s,baz=40,slow=3.2,SNR=6.1						
AFI				Sn	Sn	05 44 53.9	-8.3
	165nm,0.3s,baz=332,slow=22,SNR=13						
AFI				LR	LR	05 45 08.8	
	comp=Z,98nm,18.0s,baz=60,slow=33						
MSVF	Nonsavu	8.58	254	LR	LR	05 49 14.8	
	comp=Z,125nm,19.4s,baz=141,slow=37						
DZM	Mont Dzumac	20.25	248	LR	LR	05 55 22.4	
	comp=Z,82nm,18.1s,baz=34,slow=34						
H11S2	WAKE ISLAND Hy	39.05	329	T	T	06 32 13.9	
	baz=146,slow=75,SNR=5.7						
H11S3	WAKE ISLAND Hy	39.06	329	T	T	06 32 14.9	
	baz=146,slow=75,SNR=6.4						
H11S1	WAKE ISLAND Hy	39.07	329	T	T	06 32 15.3	
	baz=146,slow=75,SNR=4.1						
H11N3	WAKE ISLAND Hy	40.00	330	T	T	06 33 21.7	
	baz=146						
H11N1	WAKE ISLAND Hy	40.01	330	T	T	06 33 31.1	
	baz=146						
H11N2	WAKE ISLAND Hy	40.02	330	T	T	06 33 23.3	
	baz=146						
STKA	Stephens Creek	44.08	240	LR	LR	06 08 22.0	
	comp=Z,125nm,18.7s,baz=204,slow=33						
WRA	Warramunga Arr	49.91	257	P	P	05 52 53.2	-0.5
	0.2nm,0.3s,baz=94,slow=7.5,SNR=11						
ASAR	Alice Springs	50.17	252	P	P	05 52 55.8	+0.2
	2.6nm,0.6s,baz=86,slow=8.2,SNR=47						
BRTR	Keskin Array B	146.25	321	PKPbc	PKPdf	06 03 40.1	+0.4
	0.7nm,0.9s,baz=66,slow=3.5,SNR=2.1						

IDC ***22*** *05:57:35.5±0.6, 30°.35S×71°.73W, h0^{km}, mb4.3/10, mb1 4.3/14, mb1mx4.1/37, mbtmp4.2/14, ML4.0/4, MS3.5/7, Ms1 3.5/7, ms1mx3.2/24, Error ellipse: s-maj=24.4km s-min=14.3km az=114.0*
VAO ***22*** *05:57:36.9±0.6, 30°.35S×71°.95W, h10^{km}, mb4.4*
NEIC ***22*** *05:57:37.4±2.0, 30°.37S±0°.05×71°.96W±0°.04, h10^{km}±1^{km}, mb4.7/19, ML4.8(GUC), Error ellipse: s-maj=8.3km s-min=6.3km az=163.0*
SJA ***22*** *05:57:37.0, 30°.35S×72°.15W, h10^{km}, ML4.7*
GUC ***22*** *05:57:39.2±0.8, 30°.41S×71°.71W, h38^{km}±2^{km}, ML4.8*
ISC 22 05:57:35.4±1.4**, 30°.35S**±0°.03×**72°.02W**±0°.04**, h4^{km}**±8^{km}**, n155,** σ**1^{s}.80**/179**, mb4.6**/15**, 10C-1D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	Fray Jorge	0.46	134	⇑*e*P	Pb	05 57 47.4	+1.4
CO06				*e*S	Sg	05 57 51.8	+1.6
CO06				IAML		05 57 52.6	
	comp=E,94µm,0.2s						
CO06	Fray Jorge	0.46	134		Pb	05 57 47.4	+1.4
CO06				Sg	Sg	05 57 51.9	+1.7
CO05	La Serena	0.80	58	⇓*i*P	Pb	05 57 53.0	+1.1
CO05				*e*S	Sg	05 58 00.5	-0.7
CO05				IAML		05 58 03.2	
	comp=E,53µm,0.3s						
CO05	La Serena	0.80	58		Pb	05 57 52.9	+1.1
CO05					Sg	05 58 01.3	+0.1
GO04	Tololo Observa	1.07	81	*e*P	Pg	05 57 55.6	-0.3
GO04				*e*S	Sg	05 58 06.3	-3.4
GO04				IAML		05 58 08.0	
	comp=N,128µm,0.4s						
GO04	Tololo Observa	1.07	81		Pg	05 57 55.7	-0.3
GO04				Sn	Sg	05 58 06.8	-3.0
CO03	El Pedregal	1.24	113		Pb	05 57 57.8	-1.6
LCO	Las Campanas	1.76	41	⇑*e*P	Pn	05 58 07.3	+0.5
LCO				*e*S	Sn	05 58 29.4	-0.4
LCO	Las Campanas	1.76	41	Pn	Pn	05 58 08.8	+1.9
LCO	Las Campanas	1.76	41	*i* P	Pn	05 58 08.0	+1.1
AROD	Rodeo	2.21	86	*i* P	Pn	05 58 14.0	+0.9
VA06	Catapilco	2.29	165	⇑*e*P	Pn	05 58 14.9	+1.1
VA06				*i* S	Sn	05 58 40.7	-1.7
VA06				IAML		05 58 52.5	
	comp=N,7µm,0.5s						
AC04	Llanos de Chal	2.29	21	⇑*e*P	Pn	05 58 16.2	+2.3
AC04				*e*S	Sn	05 58 43.6	+1.0
AC04	Llanos de Chal	2.29	21	Pn	Pn	05 58 16.3	+2.3
AC04	Llanos de Chal	2.29	21	*i* P	Pn	05 58 16.0	+2.0
ACDV	Cuesta del Vie	2.52	87	*i* P	Pb	05 58 20.0	-1.2
ACCO	Cerro Coronel	2.56	96	*i* P	Pn	05 58 20.0	+2.1
VA01	Torpederas	2.68	173	⇑*e*P	Pn	05 58 20.2	+0.9
VA01				*e*S	Sn	05 58 49.4	-2.8
VA01	Torpederas	2.68	173		Pn	05 58 20.1	+0.9
VA03	San Esteban	2.71	153	⇑*e*P	Pn	05 58 21.2	+1.4
VA03				*e*S	Sn	05 58 50.9	-2.2
VA03				IAML		05 58 59.1	
	comp=E,6µm,0.6s						
VA03	San Esteban	2.71	153		Pn	05 58 21.6	+1.8
VA03	San Esteban	2.71	153	*i* P	Pn	05 58 21.0	+1.2
RTLS	Leoncito	2.74	122	*i* P	Pn	05 58 23.0	+2.6
ROCH	El Roble	2.75	162	⇑*i*P	Pn	05 58 21.6	+1.2
ROCH				⇑*e*P	Pn	05 58 21.6	+1.2
ROCH				*e*S	Sn	05 58 52.6	-1.6
ROCH				*e*S	Sb	05 58 52.7	-6.6
ROCH				IAML		05 59 02.5	
	comp=E,4µm,0.5s						
ROCH				IAML		05 59 02.6	
	comp=E,5µm,0.6s						
ROC1	El Roble	2.75	162	*i* P	Pn	05 58 21.0	+0.5
AUSP	Uspallata	2.92	130	*i* P	Pn	05 58 25.0	+2.1
MT02	Curacav	2.99	166	*e*P	Pn	05 58 24.2	+0.6
MT02				*e*S	Sn	05 58 58.7	-1.2
MT02	Curacav	2.99	166	Pn	Pn	05 58 25.3	+1.7
MT02	Curacav	2.99	166	*i* P	Pn	05 58 24.0	+0.4
PEL	Peldehue	3.00	158	⇑*i*P	Pn	05 58 25.3	+1.6
PEL				*e*S	Sn	05 58 58.8	-1.4
PEL				IAML		05 59 10.4	
	comp=E,2µm,0.4s						
PEL	Peldehue	3.00	158		Pn	05 58 25.1	+1.2
PEL	Peldehue	3.00	158	*i* P	Pn	05 58 25.0	+1.2
ZON	Zonda	3.11	113	*i* P	Pn	05 58 27.0	+1.8
GO03	Copiap	3.16	30	Pn	Pn	05 58 28.1	+2.1
GO03	Copiap	3.16	30	*i* P	Pn	05 58 28.0	+2.0
MT05	Renca	3.22	161	⇑*e*P	Pn	05 58 28.2	+1.4
MT05				*e*S	Sn	05 59 04.2	-1.4
MT05				IAML		05 59 17.8	
	comp=E,4µm,0.3s						
MT05	Renca	3.22	161		Pn	05 58 28.1	+1.4
MT05	Renca	3.22	161	*i* P	Pn	05 58 28.0	+1.3
VA05	Santo Domingo	3.31	174		Pn	05 58 28.6	+0.7
RTCV	Cerro Valdivia	3.34	118	*i* P	Pn	05 58 31.0	+2.6
ASAL	Salagasta	3.52	130	*i* P	Pn	05 58 34.0	+3.1
MT09	Talagante	3.52	166		Pn	05 58 32.7	+1.7
MT01	Popeta	3.56	170		Pn	05 58 32.7	+1.3
MT01	Popeta	3.56	170	*i* P	Pn	05 58 32.0	+0.6
ARCO	CERRO ARCO	3.62	134	*i* P	Pn	05 58 36.0	+3.7
VCA	Vinchina	3.69	65	*i* P	Pn	05 58 37.0	+3.7
AAGR	Agrelo	3.85	136	*i* P	Pn	05 58 39.0	+3.6
AVFE	Valle Fertil	3.95	96	*i* P	Pn	05 58 38.0	+1.2
BO01	Tunca	4.10	169		Pn	05 58 39.7	+0.9
BO01	Tunca	4.10	169	*i* P	Pn	05 58 40.0	+1.2
AC02	Maricunga	4.33	37	Pn	Pn	05 58 44.6	+2.2
AC02	Maricunga	4.33	37	*i* P	Pn	05 58 45.0	+2.6
ACLC	CERRO LA CRUZ	4.50	79	*i* P	Pn	05 58 46.0	+1.6
BO02	Sierra Bellavi	4.55	167		Pn	05 58 46.4	+1.4
BO02	Sierra Bellavi	4.55	167	*i* P	Pn	05 58 46.0	+1.0
GO05	Huala	4.64	179	Pn	Pn	05 58 46.7	+0.4
GO05	Huala	4.64	179	*i* P	Pn	05 58 46.0	-0.3
ACHE	Chepes	4.68	101	*i* P	Pn	05 58 48.0	+1.1
APLL	PUNTA DE LOS L	4.75	92	*i* P	Pn	05 58 49.0	+1.3
RFA	San Rafael	5.33	147	*i* P	Pn	05 58 57.0	+1.3
ML02	Panimavida	5.42	175	Pn	Pn	05 58 57.8	+0.9
CYA	Choya	5.75	72	*i* P	Pn	05 59 02.0	+0.5
PB14	IPOC Station P	5.88	14	Pn	Pn	05 59 04.8	+1.2
H03N1	Juan Fernandez	6.62	241	Pn	Pn	05 59 16.4	+3.2
	baz=117,slow=19,SNR=630						
H03N1				Sn	Sn	06 00 25.2	-3.7
	baz=76,slow=25,SNR=8.9						
H03N1				T	T	06 06 20.7	
	baz=70,slow=72,SNR=3452						
H03N2	Juan Fernandez	6.63	241	Pn	Pn	05 59 16.4	+3.1
	baz=117,slow=19,SNR=438						
H03N2				Sn	Sn	06 00 24.9	-4.4
	baz=76,slow=25,SNR=14						
H03N2				T	T	06 06 18.3	
	baz=70,slow=72,SNR=3072						
H03N3	Juan Fernandez	6.64	240	Pn	Pn	05 59 19.3	+5.9
	baz=117,slow=19,SNR=843						
H03N3				Sn	Sn	06 00 26.2	-3.2
	baz=76,slow=25,SNR=12						
H03N3				T	T	06 06 16.2	
	baz=70,slow=72,SNR=2539						
VA04	Juan Fernndez	6.65	239		Pn	05 59 15.7	+1.8
H03S3	Juan Fernandez	6.79	238	Pn	Pn	05 59 17.7	+2.2
	baz=39,slow=18,SNR=43						
H03S3				Sn	Sn	06 00 30.7	-2.6
	baz=274,slow=73,SNR=9.2						
H03S3				T	T	06 06 29.6	
	baz=60,slow=74						
H03S1	Juan Fernandez	6.80	237	Pn	Pn	05 59 17.5	+1.9
	baz=39,slow=18,SNR=45						
H03S1				Sn	Sn	06 00 27.1	-6.3
	baz=274,slow=73,SNR=7.0						
H03S1				T	T	06 06 32.1	
	baz=60,slow=74						
H03S2	Juan Fernandez	6.81	238	Pn	Pn	05 59 17.3	+1.5
	baz=39,slow=18,SNR=40						
H03S2				Sn	Sn	06 00 29.1	-4.5
	baz=274,slow=73,SNR=4.2						
H03S2				T	T	06 06 25.4	
	baz=60,slow=74						
AHML	Horco Molle	6.87	60	*i* P	Pn	05 59 18.0	+1.1
PB10	IPOC Station P	6.94	11	Pn	Pn	05 59 17.4	-0.4
PB15	IPOC Station P	7.47	18		Pn	05 59 27.0	+1.7
PB15	IPOC Station P	7.47	18	*i* P	Pn	05 59 27.0	+1.7
PB05	IPOC Station P	7.64	13	*i* P	Pn	05 59 27.0	-0.6
PB06	IPOC Station P	7.92	17	Pn	Pn	05 59 32.2	+0.7
PB06	IPOC Station P	7.92	17	*i* P	Pn	05 59 33.0	+1.5
PB04	IPOC Station P	8.16	12	*i* P	Pn	05 59 34.0	-0.8
LVC	Limon Verde	8.20	21	Pn	Pn	05 59 35.7	+0.3
	comp=E,0.7nm,0.3s,baz=138,slow=5.8,SNR=10						
LVC				Sn	Sn	06 01 03.3	-5.4
	comp=E,3.6nm,0.3s,baz=347,slow=22,SNR=1.8						
LVC				LR	LR	06 02 37.6	
	comp=E,321nm,18.9s,baz=213,slow=37						
LC01	Cunco	8.52	179		Pn	05 59 39.8	+0.2
AZAP	Zapla	8.69	47	*i* P	Pn	05 59 46.0	+3.9
PB09	IPOC Station P	8.88	17	*i* P	Pn	05 59 47.0	+2.4
LR03	Panguipulli	9.26	182		Pn	05 59 49.7	+0.1
PLCA	Paso Flores	10.43	174	Pn	Pn	06 00 06.8	+1.1
	comp=E,0.3nm,0.3s,baz=344,slow=12,SNR=9.8						
PLCA				LR	LR	06 04 33.0	
	comp=E,260nm,19.5s,baz=354,slow=40						
TRQA	Tornquist	11.31	135	Pn	Pn	06 00 17.8	0.0
ITQB	Itaqui	13.36	91	*e*P	Pn	06 00 46.2	+0.4
ITQB	Itaqui	13.36	91		Pn	06 00 45.5	-0.3
CPUP	Villa Florida	13.54	76	Pn	Pn	06 00 45.9	-2.4
	comp=E,0.2nm,0.3s,baz=297,slow=8.0,SNR=1.4						
CPUP				Sn	Sn	06 03 13.7	-5.6
	comp=E,0.3nm,0.3s,baz=293,slow=5.7,SNR=2.0						
CPUP				Lg	Lg	06 04 24.4	
	comp=E,0.2nm,0.3s,baz=354,slow=20,SNR=1.9						
CPUP				LR	LR	06 06 14.8	
	comp=E,132nm,21.4s,baz=249,slow=39						
CPUP	Villa Florida	13.54	76	*e*P	Pn	06 00 47.8	-0.5
CPUP				*e*S	Sn	06 03 19.3	+0.1
CPUP	Villa Florida	13.54	76	Pn	Pn	06 00 48.9	+0.7
SIV	San Ignacio	17.46	37	P	Pn	06 01 37.9	-2.0
	comp=E,0.6nm,0.3s,baz=211,slow=11,SNR=23						
SIV				LR	LR	06 09 37.7	
	comp=E,257nm,20.7s,baz=204,slow=42						
NNA	Nana	18.82	345	LR	LR	06 07 28.7	
	comp=E,111nm,21.0s,baz=180,slow=31						
PTLB	Pontes e Lacer	18.97	41	*e*P	P	06 01 58.4	+0.7
PTLB	Pontes e Lacer	18.97	41		P	06 01 57.5	-0.3
PP1B	Ponte de Pedra	20.13	55	*e*P	P	06 02 10.5	+0.1
VILB	Vilhena	20.48	35	*e*P	P	06 02 14.6	+0.4
VILB	Vilhena	20.48	35	P	P	06 02 13.8	-0.5
VILB				IAmb	IAmb	06 02 31.0	
	comp=Z,16nm,1.0s						
SALV	Santo Antonio	20.75	50	*e*P	P	06 02 16.9	-0.3
ETMB	Extrema	21.14	16	P	P	06 02 22.4	+1.0
ITRB	Iturama	22.27	67	*e*P	P	06 02 33.7	+0.1
SAML	Samuel	22.84	23	P	P	06 02 40.3	+0.7
SAML				IAmb	IAmb	06 02 55.0	
	comp=Z,82nm,1.0s						
PARB	Paraibuna	24.53	80	*e*P	P	06 02 56.4	+0.2
CLDB	Colider	24.56	41	*e*P	P	06 02 57.1	+0.7
USHA	Ushuaia	24.60	175	P	P	06 02 57.5	+1.2
	comp=Z,5.2nm,0.6s,baz=16,slow=10,SNR=5.7						
USHA				LR	LR	06 13 20.4	
	comp=Z,174nm,19.5s,baz=353,slow=38						
BDFB	Brasilia	26.43	62	P	P	06 03 12.2	-1.3
	comp=Z,5.0nm,0.6s,baz=237,slow=8.4,SNR=13						
BDFB	Brasilia	26.43	62	P	P	06 03 12.6	-0.8
SNDB	Serra Nova Dou	26.52	51	*e*P	P	06 03 14.9	+0.8
ITTB	Itaituba	30.07	34	*e*P	P	06 03 45.3	-0.5
SMTB	Santa Maria do	31.27	52	*e*P	P	06 03 56.5	0.0
PRPB	Parauapebas	31.85	45	*e*P	P	06 04 01.6	0.0
BOAV	Boa Vista	34.37	21	*e*P	P	06 04 24.2	+0.7
MCPB	Macapa, AP	35.35	36	*e*P	P	06 04 32.2	+0.1
NBPN	Ponto Novo - B	35.36	64	*e*P	P	06 04 32.0	-0.2
NBLA	Lagarto - SE	37.16	66	*e*P	P	06 04 47.0	-0.5
ROSB	Rosrio	37.98	49	*e*P	P	06 04 55.0	+0.6
LGNH	Logne	48.59	359	P	P	06 06 19.1	-0.9
EMPR	Esperanza - Ma	48.83	7	P	P	06 06 21.1	-0.8
VNA3	Neumayer Olymp	52.73	159	P	P	06 06 51.2	+0.4
VNA1	Neumayer--Stat	53.03	158	P	P	06 06 53.7	+0.7
VNA2	Neumayer--Watz	53.37	158	P	P	06 06 56.0	+0.5
	baz=288,slow=8.5						
SNAA	Sanae	54.96	159	P	P	06 07 07.4	+0.2
SNAA	Sanae	54.96	159	P	P	06 07 07.3	+0.2
	comp=Z,2.8nm,0.6s,baz=275,slow=8.5,SNR=50						
SNAA	Sanae	54.96	159	P	P	06 07 06.9	-0.3
SNAA				IAmb	IAmb	06 07 07.9	
	comp=Z,4.5nm,0.7s						
QSPA	South Pole Qui	59.87	180	P	P	06 07 43.2	+1.2
	comp=Z,4.2nm,0.8s,baz=176,slow=1.1,SNR=14						
QSPA	South Pole Qui	59.87	180	P	P	06 07 43.4	+1.4
QSPA				IAmb	IAmb	06 07 44.5	
	comp=Z,7.0nm,0.9s						
CPCT	Cooper Cave	66.50	349	P	P	06 08 26.3	+0.2
CPCT				IAmb	IAmb	06 08 52.4	
	comp=Z,4.1nm,1.1s						
WHTX	Lake Whitney,	66.53	337	P	P	06 08 27.0	+0.6
WHTX				IAmb	IAmb	06 08 38.8	
	comp=Z,7.9nm,1.1s						
TXAR	Lajitas Array	66.58	330	P	P	06 08 29.4	+2.6
	comp=Z,0.4nm,0.6s,baz=147,slow=5.4,SNR=4.3						
TX32	Lajitas Array	66.58	330	P	P	06 08 27.7	+0.9
TX32				IAmb	IAmb	06 08 55.5	

	comp=Z,2.7nm,1.0s						
VNDA	Vanda	67.67	191	P	P	06 08 34.7	+1.6
	comp=Z,0.4nm,0.5s,baz=123,slow=7.3,SNR=3.8						
R40A	Maddies Statio	70.86	343	P	P	06 08 53.0	-0.2
R40A				IAmb	IAmb	06 09 06.2	
	comp=Z,13nm,1.1s						
DBIC	Dimbokro	74.02	72	P	P	06 09 12.3	-0.3
	comp=Z,3.9nm,0.5s,baz=232,slow=4.3,SNR=11						
DBIC	Dimbokro	74.02	72	P	P	06 09 12.3	-0.3
DBIC				IAmb	IAmb	06 09 16.6	
	comp=Z,26nm,1.4s						
TRQ	Mont Tremblant	76.25	358	P	P	06 09 25.2	+0.4
MAW	Mawson	76.66	164	P	P	06 09 27.7	+0.7
	comp=Z,2.7nm,0.4s,baz=219,slow=7.3,SNR=26						
MAW	Mawson	76.66	164	P	P	06 09 27.9	+0.9
KOWA	Kowa	79.13	66	P	P	06 09 41.5	-0.1
	comp=Z,2.7nm,0.5s,baz=244,slow=5.8,SNR=12						
KOWA	Kowa	79.13	66	P	P	06 09 41.6	+0.1
KOWA				IAmb	IAmb	06 09 41.9	
	comp=Z,3.9nm,0.7s						
TORD	Torodi Ar. Bea	82.96	70	P	P	06 10 01.4	-0.6
	comp=Z,2.1nm,0.7s,baz=277,slow=5.0,SNR=15						
TORD	Torodi Ar. Bea	82.96	70	P	P	06 10 02.0	0.0
TORD				IAmb	IAmb	06 10 02.5	
	comp=Z,6.9nm,1.4s						
DLMT	Dillon	83.90	333	P	P	06 10 06.7	+0.3
ESDC	Sonseca Array	94.04	46	LR	LR	06 50 55.9	
	comp=Z,34nm,20.6s,baz=185,slow=34						
AKASG	Malin Array Be	119.68	46	PKP	PKPdf	06 16 25.4	-0.7
	comp=Z,0.8nm,0.6s,baz=258,slow=2.4,SNR=8.1						
ASAR	Alice Springs	120.81	208	PKP	PKPdf	06 16 28.7	-0.7
	comp=Z,0.3nm,0.5s,baz=121,slow=1.4,SNR=5.7						
WRA	Warramunga Arr	123.93	210	PKP	PKPdf	06 16 35.5	0.0
	comp=Z,0.5nm,0.5s,baz=160,slow=1.7,SNR=14						
H11S2	WAKE ISLAND Hy	125.76	272	T	T	08 35 22.7	
	baz=114,slow=75,SNR=393						
H11S1	WAKE ISLAND Hy	125.77	272	T	T	08 35 20.4	
	baz=114,slow=75,SNR=479						
H11S3	WAKE ISLAND Hy	125.78	272	T	T	08 35 20.8	
	baz=114,slow=75,SNR=372						
ARU	Arti	136.93	38	PKP	PKPdf	06 16 58.2	-0.6
	comp=Z,0.8nm,0.4s,baz=299,slow=8.9,SNR=3.5						
KURBB	Kurchatov Arra	150.12	39	PKPbc	PKPbc	06 17 27.2	+0.2
	comp=Z,3.6nm,0.5s,baz=304,slow=3.1,SNR=25						
KURK	Kurchatov	150.12	39		PKPbc	06 17 26.1	-0.9
ZALV	Zalesovo Beam	151.08	29	PKP	PKPdf	06 17 24.1	+0.7
	comp=Z,1.1nm,0.6s,baz=268,slow=2.1,SNR=5.2						
ZALV				PKPbc	PKPbc	06 17 30.4	+1.2
	comp=Z,13nm,0.5s,baz=308,slow=3.3,SNR=56						
ZALV	Zalesovo Beam	151.08	29		PKPdf	06 17 24.9	+1.6
ZALV				PKPbc	PKiKP	06 17 30.8	+1.1
KSH	Kashi	152.33	62	PKPbc	PKPdf	06 17 29.8	+3.9
MKAR	Makanchi Array	154.23	43	PKP	PKPdf	06 17 28.1	-0.2
	comp=Z,0.4nm,0.6s,baz=323,slow=2.2,SNR=2.2						
MKAR				PKPbc	PKPbc	06 17 36.7	+0.2
	comp=Z,1.2nm,0.6s,baz=308,slow=2.0,SNR=6.8						
MKAR				PKPab	PKPab	06 17 50.1	-0.3
	comp=Z,1.4nm,0.9s,baz=293,slow=3.4,SNR=4.4						

IDC 22 06:01:05.5±4.3**,6°.85S×149°.23E,h0^{km},mb2.8**/1**, mb1 3.2**/2**,mb1mx3.0**/33**,mbtmp2.9**/2**,ML3.0**/1**,Error ellipse: s-maj=156.7km s-min=53.5km az=116.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	19.45	227	P	P	06 05 32.8	-1.1
	0.0nm,0.3s,baz=53,slow=10,SNR=2.0						
ASAR	Alice Springs	22.28	220	P	P	06 06 05.1	+0.6
	0.2nm,0.5s,baz=52,slow=9.7,SNR=5.6						
TORD	Torodi Ar. Bea	147.45	284	PKPbc	PKPbc	06 20 51.8	-0.7
	0.5nm,0.9s,baz=73,slow=3.8,SNR=2.1						

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*PGC **22** 06:02:39.4±0.0,51°.44N×131°.36W,h10^{km},mb4.1, MLSn3.8/31,Mw4.5,204km Sse of Sandspit, Bc Haida Gwaii Region*

*IDC **22** 06:02:40.3±0.9,51°.56N×131°.05W,h0^{km},mb3.7/8, mb1 3.9/17,mb1mx3.7/60,mbtmp3.6/17,ML3.5/8,MS3.6/33, Ms1 3.6/33,ms1mx3.5/45,Error ellipse: s-maj=15.6km s-min=10.8km az=47.0*

*NEIC **22** 06:02:42.5,51°.44N×131°.36W,h5^{km},Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.38; $M_{\theta\theta}$-1.77; $M_{\phi\phi}$2.94; $M_{r\theta}$-3.92; $M_{\theta\phi}$5.04; $M_{\phi r}$-0.25; Fault plane solution: $M_0$6.80000×10^{15} NP1:ϕ_s76.00000°, δ84.00000°,λ-35.00000°. NP2:ϕ_s170.00000°,δ55.00000°, λ-173.00000°. Principal axes: T 6.7124, Plg20.0000°, Azm128.0000°; N 0.2395, Plg55.0000°, Azm248.0000°; P -6.9520, Plg28.0000°, Azm27.0000°;*

*NEIC **22** 06:02:42.4±2.1,51°.65N±0°.08×131°.1W±0°.1,h10^{km}±1^{km} Error ellipse: s-maj=17.3km s-min=9.1km az=230.0*

ISC 22 06:02:41.3±1.5**,51°.58N**±0°.04×**131°.20W**±0°.04**,h9^{km}**±9^{km}**, n306,**σ1^{s}**85**/298**,mb3.9**/14**,MS3.6**/25**,Queen Charlotte Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HG4B	Hotspring	0.71	360		Pg	06 02 55.0	0.0
HG4B				IAML		06 03 12.8	
	comp=E,7μm,0.7s						
HG4B	Hotspring	0.71	360	P	Pg	06 02 55.1	0.0
HG4B				S	Sb	06 03 05.6	-0.3
BNB	Barry Inlet	1.05	341	P	Pg	06 02 60.0	-1.5
BNB				S	Sg	06 03 12.9	-2.3
HG1B	Mitchell Dam	1.47	337	Pn	Pn	06 03 05.6	-2.4
HG1B				Sn	Sn	06 03 23.1	-4.3
MOBC	Moresby Island	1.64	343	Pn	Pn	06 03 08.4	-1.9
MOBC				Sn	Sn	06 03 28.4	-3.2
DIB	Dawson Inlet,	1.80	335		Pn	06 03 11.0	-1.5
DIB				IAML		06 03 55.1	
	comp=E,901nm,0.7s						
DIB				IAML		06 03 55.5	
	comp=N,1μm,0.8s						
DIB	Dawson Inlet,	1.80	335	Pn	Pn	06 03 10.1	-2.5
DIB				Sn	Sn	06 03 31.8	-3.7
H02S1	DAWSON INLET T	1.80	335	Pn	Pn	06 03 10.1	-2.5
	SNR=8775						
H02S1				Sn	Sn	06 03 31.6	-4.0
H02N1	VAN INLET T-PH	1.86	334	Pn	Pn	06 03 11.5	-2.1
	SNR=3150						
H02N1				Sn	Sn	06 03 32.8	-4.5
VIB	Van Inlet	1.86	334	Pn	Pn	06 03 10.9	-2.6
VIB				Sn	Sn	06 03 33.0	-4.3
BNKB	Banks Island	1.92	24	Pn	Pn	06 03 13.1	-1.1
BNAB	Bonilla	1.94	10	Pn	Pn	06 03 13.3	-1.2
BNAB				Sn	Sn	06 03 37.4	-1.7
BBB	Bella Bella	2.00	71	Pn	Pn	06 03 13.0	-2.3
	comp=N,6.0nm,0.3s,baz=270,slow=6.4,SNR=48						
BBB				Sn	Sn	06 03 37.1	-3.4
	comp=N,47nm,0.3s,baz=147,slow=23,SNR=9.8						
BBB				LR	LR	06 03 37.6	
	comp=N,131nm,19.6s,baz=254,slow=30						
BBB	Bella Bella	2.00	71		Pn	06 03 13.3	-2.1
BBB				IAML		06 04 01.2	
	comp=N,870nm,1.2s						
BBB	Bella Bella	2.00	71	Pn	Pn	06 03 13.2	-2.1
BBB				Sn	Sn	06 03 39.0	-1.5
HOLB	Holberg	2.15	115		Pn	06 03 14.1	-3.3
HOLB	Holberg	2.15	115	Pn	Pn	06 03 13.5	-3.8
HOLB				Sn	Sn	06 03 39.7	-4.5
BUTB	Butedale	2.24	47	Pn	Pn	06 03 17.4	-1.3
BUTB				Sg	Sg	06 03 54.8	+1.6
HWKB	Hawksbury Isla	2.37	31	Pn	Pn	06 03 19.1	-1.3
GRNB	Grenville Isla	2.39	18		Pn	06 03 19.8	-0.9
GRNB				IAML		06 04 10.7	
	comp=E,638nm,1.0s						
GRNB	Grenville Isla	2.39	18	Pn	Pn	06 03 20.1	-0.6
GRNB				Sn	Sn	06 03 48.0	-2.1
PHC	Port Hardy	2.53	109	Pn	Pn	06 03 18.3	-4.2
BPBC	Brooks Peninsu	2.60	122	Pn	Pn	06 03 19.2	-4.3
PACB	Port Alice, BC	2.61	115	Pn	Pn	06 03 20.0	-3.6
PACB				Sn	Sn	06 03 50.2	-5.2
MAYB	Maynard	2.80	113	Pn	Pn	06 03 23.4	-3.1
MAYB				Sn	Sn	06 03 57.0	-3.5
RUBB	Prince Rupert	2.81	11		Pn	06 03 25.5	-0.9
RUBB				IAML		06 04 33.8	
	comp=N,441nm,1.2s						
RUBB	Prince Rupert	2.81	11	Pn	Pn	06 03 25.9	-0.5
RUBB				Sn	Sn	06 03 58.0	-2.3
TLCB	Telegraph Cove	2.94	109	Pn	Pn	06 03 26.0	-2.2
TLCB				IAML		06 04 30.6	
	comp=N,265nm,1.0s						
TLCB	Telegraph Cove	2.94	109	Pn	Pn	06 03 25.3	-2.9
KITB	Kitimat	2.94	31	Pn	Pn	06 03 27.4	-0.8
EDB	Eliza Dome	3.10	122	Pn	Pn	06 03 26.9	-3.5
EDB				Sn	Sn	06 04 02.6	-5.1
WOSB	Woss	3.26	114	Pn	Pn	06 03 29.9	-2.8
NCRB	Newcastle Ridg	3.46	108	Pn	Pn	06 03 33.0	-2.4
ETB	Estevan Point	3.71	125	Pn	Pn	06 03 35.5	-3.2
GDR	Gold River	3.75	117	Pn	Pn	06 03 35.9	-3.4
SPLB	Strathcona Par	3.91	113	Pn	Pn	06 03 40.3	-1.2
CBB	Campbell River	4.01	110	Pn	Pn	06 03 41.8	-1.1
CBB				IAML		06 05 00.8	
	comp=N,163nm,1.1s						
CBB	Campbell River	4.01	110	Pn	Pn	06 03 40.6	-2.3
CBB				Sn	Sn	06 04 26.1	-3.9
CRAG	Craig	4.06	344		Pn	06 03 44.0	+0.4
CRAG				IAML		06 05 19.1	
	comp=N,150nm,2.0s						
TOFB	Tofino	4.17	124	Pn	Pn	06 03 41.6	-3.5
BTB	Buttle Lake	4.19	118	Pn	Pn	06 03 42.5	-3.0
B012	Ucluelet	4.50	124	Pn	Pn	06 03 46.2	-3.4
OZB	Mount Ozzard	4.50	123		Pn	06 03 46.5	-3.2
OZB				IAML		06 05 05.9	
	comp=N,88nm,1.1s						
OZB	Mount Ozzard	4.50	123	Pn	Pn	06 03 46.5	-3.2
UBRB	Upper Baezaeko	4.56	71	Pn	Pn	06 03 50.8	+0.1
TXB	Texada	4.70	111	Pn	Pn	06 03 50.9	-1.4
B928	Bamfield	4.77	123	Pn	Pn	06 03 50.8	-2.4
BFSB	Bamfield	4.77	123	Pn	Pn	06 03 51.0	-2.2
WRAK	Wrangell Islan	4.89	352	P	Pn	06 03 55.6	+0.6
	baz=170						
WRAK	Wrangell Islan	4.89	352		Pn	06 03 55.6	+0.6
MGB	Mount Grey	4.91	119	Pn	Pn	06 03 52.7	-2.6
FSB	Fort Saint Jam	5.06	52	Pn	Pn	06 03 57.0	-0.3
SHB	Sechelt	5.07	110	Pn	Pn	06 03 55.6	-1.9
PFB	Port Renfrew	5.29	122	Pn	Pn	06 03 59.3	-1.2
CLRS	Cowichan Lake	5.31	119	Pn	Pn	06 04 01.2	+0.4
CLRS				IAML		06 05 21.8	
	comp=N,57nm,1.2s						
CLRS				IAML		06 05 43.3	
	comp=E,38nm,2.5s						
WPB	Watts Point	5.44	108	Pn	Pn	06 03 59.9	-2.6
BIB	Bowen Island	5.49	110	Pn	Pn	06 04 01.3	-1.9
C03A	Quillayute Air	5.63	128		Pn	06 04 05.2	+0.1
PGC	Sidney	5.78	117		Pn	06 04 08.6	+1.4
LLLB	Lillooet	5.95	96	Pn	Pn	06 04 09.2	-0.4
LLLB	Lillooet	5.95	96	Pn	Pn	06 04 07.9	-1.6
B04A	Port Angeles	6.10	122	Pn	Pn	06 04 12.7	+1.1
A04D	Lummi Island	6.16	114	P	Pn	06 04 15.6	+3.1
	baz=302						
NLWA	Neilton Lookou	6.35	128		Pn	06 04 14.9	-0.2
WISH	Wishkah	6.59	130	Pn	Pn	06 04 17.9	-0.4
B05A	Bryant	6.75	116	P	Pn	06 04 20.1	-0.4
	baz=304						
DLBC	Dease Lake	6.90	5	Pn	Pn	06 04 23.7	+1.0
	comp=E,1.6nm,0.3s,baz=203,slow=15,SNR=11						
DLBC				Lg	Lg	06 06 14.4	
	comp=E,1.2nm,0.3s,baz=156,slow=19,SNR=3.1						
DLBC	Dease Lake	6.90	5		Pn	06 04 22.0	-0.7
DLBC	Dease Lake	6.90	5	Pn	Pn	06 04 22.9	+0.3
BMBC	Bull Mountain	6.98	47	Pn	Pn	06 04 24.1	+0.3
RADR	Rader Ridge	7.09	134	Pn	Pn	06 04 25.6	+0.3
E03A	Lebam	7.11	132	Pn	Pn	06 04 25.2	-0.2
BESE	Bessie Mountai	7.32	345	Pn	Pn	06 04 26.1	-2.3
PNT	Penticton	7.73	103	Pn	Pn	06 04 32.9	-1.1
NBC5	NorthernBC 5	7.74	36	Pn	Pn	06 04 35.3	+1.2
LON	Longmire	7.82	125		Pn	06 04 35.3	0.0
MNB	Mounoet Dainar	7.96	81	Pn	Pn	06 04 37.3	0.0
HEBO	Mount Hebo	8.07	139	Pn	Pn	06 04 37.6	-1.1
F04A	Amboy	8.10	131	Pn	Pn	06 04 39.1	+0.2
LTY	Liberty	8.11	118		Pn	06 04 38.9	-0.4
G03D	McMinnville, O	8.27	137	P	Pn	06 04 42.1	+0.7
	baz=324						
B08A	Colville Reser	8.30	108	Pn	Pn	06 04 43.2	+1.4
FNBB	Fort Nelson	8.68	29	Pn	Pn	06 04 47.8	+0.7
P33M	Teslin, Yukon	8.70	355	P	Pn	06 04 49.4	+2.1
	baz=173						
H04D	Lebanon	9.05	138	P	Pn	06 04 53.7	+1.6
	baz=325						
G05D	Wamic, OR	9.13	130	P	Pn	06 04 55.0	+1.9
	baz=318						
BUCK	Buck Mountain	9.21	140	Pn	Pn	06 04 56.8	+2.3
WHY	Whitehorse	9.33	349	Pn	Pn	06 04 56.6	+0.7
WHY	Whitehorse	9.33	349	Pn	Pn	06 04 57.4	+1.5
NEW	Newport	9.66	105	Pn	Pn	06 05 01.1	+0.5
	comp=E,0.1nm,0.3s,baz=288,slow=13,SNR=1.9						
NEW				Sn	Sn	06 06 36.9	-12
	comp=E,0.0nm,0.3s,baz=241,slow=13,SNR=1.6						
NEW				Lg	Lg	06 07 28.6	
	comp=E,0.1nm,0.3s,baz=7.4,slow=23,SNR=1.5						
NEW				LR	LR	06 09 06.5	
	comp=E,152nm,21.0s,baz=290,slow=40						
I04A	Tendick Farm,	9.78	139	P	Pn	06 05 05.0	+2.9
	baz=327						
DBO	Dodson Butte	10.03	144	Pn	Pn	06 05 07.8	+2.2
K02D	Willamette Mer	10.26	147	P	Pn	06 05 11.9	+3.2
	baz=334						
G08A	Pilot Rock	10.28	123	Pn	Pn	06 05 10.1	+1.1
PINE	Pine Mountain	10.41	134		Pn	06 05 12.4	+1.5
HUMO	Hull Mountain	10.58	145	Pn	Pn	06 05 15.8	+2.7
YAH	Yahtse	10.59	330	Pn	Pn	06 05 13.0	-0.2
J05D	Fort Rock, OR	10.69	137	P	Pn	06 05 16.4	+1.7
	baz=325						
L02E	Cave Junction	10.76	148	P	Pn	06 05 20.0	+4.5
	baz=335						
F10A	Beach Ranch, E	10.79	116		Pn	06 05 16.6	+0.6
I07A	Izee	10.86	129	Pn	Pn	06 05 17.7	+0.8
CTGM	Chitina Glacie	10.95	333	Pn	Pn	06 05 17.9	-0.2
K05A	Summer Lake	11.29	138		Pn	06 05 25.3	+2.4
YBH	Yreka Blue Hor	11.44	146	Pn	Pn	06 05 25.2	+0.4
	comp=E,0.0nm,0.3s,baz=311,slow=14,SNR=2.4						
YBH				LR	LR	06 09 08.4	
	comp=E,531nm,19.1s,baz=331,slow=34						
BMO	Blue Mountains	11.44	121		Pn	06 05 26.4	+1.5
M04C	Macdoel	11.71	143	P	Pn	06 05 31.4	+2.8
	baz=331						
J08A	Circle Bar Ran	11.89	129		Pn	06 05 32.0	+0.9
PLID	Pearl Lake	12.01	117		Pn	06 05 34.1	+1.4
N02D	Trinity Center	12.12	148	P	Pn	06 05 37.9	+3.8
	baz=335,SNR=9.6						
MOD	Modoc Plateau	12.21	138		Pn	06 05 37.5	+1.9
MSO	Missoula	12.24	106	P	Pn	06 05 38.0	+2.2
	baz=300						
WDC	Whiskeytown Da	12.53	148		Pn	06 05 42.1	+2.4
O02D	Mt. Diablo Mer	12.81	150	P	Pn	06 05 46.5	+2.9
	baz=336						
LRM	Limekiln Ridge	13.64	108	Pn	Pn	06 05 55.7	+0.7
ORV	Oroville	13.80	147		Pn	06 05 57.7	+0.7
DLMT	Dillon	13.80	110		Pn	06 05 58.1	+0.9
HLID	Hailey	13.86	119	P	Pn	06 05 59.0	+1.0
	baz=312,SNR=6.4						
HLID	Hailey	13.86	119	Pn	Pn	06 05 58.4	+0.4
BCYI	Bear Canyon	13.95	114	Pn	Pn	06 05 58.0	-1.3
MCMT	McKenzie Canyo	13.96	112		Pn	06 05 58.8	-0.6
YKA	Yellowknife Ar	14.13	33	Pn	Pn	06 05 59.0	-2.3
	comp=E,0.2nm,0.3s,baz=217,slow=11,SNR=8.2						
YKA				LR	LR	06 11 46.9	
	comp=E,470nm,18.3s,baz=0.0,slow=39						
BOZ	Bozeman (W)	14.25	107	P	Pn	06 06 02.1	-1.2
	baz=302						
EGMT	Eagleton	14.29	96		Pn	06 06 04.2	+0.5
PAHR	Pah Rah Range	14.44	141		Pn	06 06 07.5	+1.6
VCNR	Virginia City	14.69	142		Pn	06 06 11.1	+1.7
BMN	Battle Mountai	14.76	134		Pn	06 06 11.0	+0.8
QLMT	Earthquake Lak	14.78	109		Pn	06 06 10.9	+0.2
PNTR	Pine Nut	14.89	143		Pn	06 06 13.5	+1.3
YHL	Hebgen Lake	14.92	109		Pn	06 06 12.1	-0.5
SPU	Mount Spurr	14.96	318	Pn	Pn	06 06 10.8	-1.9
YERR	Yerington	15.12	142		Pn	06 06 17.4	+2.2
YHH	Holmes Hill	15.15	109		Pn	06 06 15.9	+0.2
YHH				IAmb	IAmb	06 06 24.8	
	comp=Z,9.0nm,1.0s						
YMR	Madison River	15.15	109		Pn	06 06 14.9	-0.6
HDA	Harding Lake	15.26	333	P	P	06 06 24.5	+2.8
	baz=140						
HDA	Harding Lake	15.26	333		Pn	06 06 17.5	+0.7
MCK	McKinley	15.36	329	P	P	06 06 25.7	+2.9
	baz=134						
MCK	McKinley	15.36	329		Pn	06 06 18.3	+0.2
YUF	Upper Falls	15.39	108	Pn	Pn	06 06 19.7	+0.8
YUF				IAmb	IAmb	06 06 44.3	
	comp=Z,12nm,1.2s						
ELK	Elko	15.44	128	Pn	Pn	06 06 20.3	+0.8
	comp=Z,0.1nm,0.3s,baz=336,slow=7.1,SNR=3.3						
ELK				LR	LR	06 11 48.8	
	comp=Z,315nm,22.0s,baz=328,slow=36						
IL31		15.53	334		Pn	06 06 20.2	+0.1
ILAR	Eielson Array	15.53	334	Pn	Pn	06 06 22.5	+2.3
	comp=Z,0.1nm,0.3s,baz=147,slow=11,SNR=11						
ILAR				LR	LR	06 12 02.6	
	comp=Z,410nm,19.1s,baz=156,slow=36						
ILAR	Eielson Array	15.53	334		Pn	06 06 20.7	+0.4
H17A	Grant Village	15.53	109	P	P	06 06 24.1	-1.0
	baz=306						
H17A	Grant Village	15.53	109		Pn	06 06 19.9	-0.8
H17A				IAmb	IAmb	06 06 25.8	
	comp=Z,19nm,1.4s						
TRF	Thorofare Moun	15.62	327		Pn	06 06 20.9	-0.6
FLWY	Flagg Ranch	15.64	111		Pn	06 06 21.5	-0.5
FLWY				IAmb	IAmb	06 06 45.3	
	comp=Z,18nm,1.2s						
CCB	Clear Creek Bu	15.69	333		Pn	06 06 23.4	+1.1
CCB				IAmb	IAmb	06 06 35.5	
	comp=Z,18nm,1.1s						
RYN	Ryan	15.71	141		Pn	06 06 24.7	+1.8
RYN				IAmb	IAmb	06 06 35.3	
	comp=Z,12nm,1.0s						
FXWY	Fox Creek	15.72	112		Pn	06 06 23.8	+0.7
FXWY				IAmb	IAmb	06 06 31.9	
	comp=Z,12nm,0.9s						
MOOW	Moose Ponds	15.81	112		Pn	06 06 25.5	+1.3
MOOW				IAmb	IAmb	06 06 33.0	
	comp=Z,9.5nm,0.9s						
N19K	Bonanza Creek	15.83	315	P	P	06 06 29.9	+1.8
	baz=115						
N19K	Bonanza Creek	15.83	315		Pn	06 06 26.2	+2.0
COLA	College	15.87	333		Pn	06 06 25.9	+1.3
COLA				IAmb	IAmb	06 06 38.0	
	comp=Z,13nm,0.8s						
RLMT	Red Lodge	15.91	105	P	P	06 06 31.7	+2.4
	baz=302						
POKR	Poker Plat Res	15.94	334	P	P	06 06 32.4	+3.1
	baz=140						
HVU	Hansel Valley	15.96	121		Pn	06 06 26.1	0.0
NVAR	Mina Array Bea	15.97	140	Pn	Pn	06 06 25.0	-1.3
	comp=Z,0.0nm,0.3s,baz=313,slow=11,SNR=9.9						
NVAR				LR	LR	06 12 14.8	
	comp=Z,356nm,18.6s,baz=330,slow=36						
NVAR	Mina Array Bea	15.97	140		Pn	06 06 27.4	+1.1
LOHW	Long Hollow	15.98	112	P	Pn	06 06 27.2	+0.8
LOHW				IAmb	IAmb	06 06 47.3	
	comp=Z,11nm,1.1s						
SNOW	Snow King Moun	15.98	113		Pn	06 06 26.3	-0.2
SNOW				IAmb	IAmb	06 06 50.3	
	comp=Z,18nm,1.2s						
REDW	Red Top Meadow	15.99	113		Pn	06 06 26.6	+0.1
REDW				IAmb	IAmb	06 06 35.2	
	comp=Z,18nm,1.1s						
NEA2	Nenana	16.02	331	P	P	06 06 32.7	+2.6
	baz=136,SNR=15						
NEA2	Nenana	16.02	331		Pn	06 06 27.9	+1.4
NV11	Mina Array Sit	16.02	140		Pn	06 06 27.6	+0.6
MDM	Murphy Dome	16.04	333		Pn	06 06 27.6	+0.7
MDM				IAmb	IAmb	06 06 36.4	
	comp=Z,23nm,1.3s						
LHV	Little Huntoon	16.04	141		Pn	06 06 27.9	+0.9
LHV				IAmb	IAmb	06 06 39.2	
	comp=Z,19nm,1.3s						
AHID	Auburn Hatcher	16.22	115	Pn	Pn	06 06 29.2	-0.3
MDPB	Devils Postpil	16.37	144		Pn	06 06 33.0	+1.5
I23K	Minto, Yukon-K	16.50	332	P	P	06 06 35.3	-0.2
	baz=136						
CHUM	Lake Minchumin	16.59	326	P	Pn	06 06 35.7	+1.8
	baz=128						
L19K	White Mountain	16.62	319	P	Pn	06 06 36.5	+2.3
	baz=118						
L19K	White Mountain	16.62	319		Pn	06 06 34.8	+0.6
L19K				IAmb	IAmb	06 06 45.3	
	comp=Z,9.5nm,0.9s						
H24K	Noodor Dome	16.62	336	P	P	06 06 38.0	+1.2
	baz=141						
TPH	Tonopah	16.71	138		Pn	06 06 37.4	+1.7
INK	Inuvik	16.82	357	Pn	Pn	06 06 36.6	-0.1
	comp=Z,0.0nm,0.3s,baz=356,slow=19,SNR=1.6						
INK				LR	LR	06 12 39.0	
	comp=Z,182nm,19.1s,baz=163,slow=36						
INK	Inuvik	16.82	357	P	P	06 06 41.0	+2.1
	baz=175						
INK	Inuvik	16.82	357	Pn	P	06 06 38.6	-0.2
MLY	Manley	16.83	331	P	P	06 06 41.2	+2.1
	baz=134						
MLY	Manley	16.83	331	P	Pn	06 06 37.4	+0.4
MLY				IAmb	IAmb	06 06 45.0	
	comp=Z,31nm,1.5s						
K20K	Telida	16.92	323	P	Pn	06 06 39.5	+1.4
	baz=123						
K20K	Telida	16.92	323		Pn	06 06 37.1	-1.0
K20K				IAmb	IAmb	06 06 50.2	
	comp=Z,17nm,0.9s						
LAO	LASA Array	17.02	97	Pn	Pn	06 06 37.3	-2.2
LAO				IAmb	IAmb	06 06 51.3	
	comp=Z,16nm,1.2s						
DUG	Dugway, Tooele	17.07	125	P	P	06 06 42.7	+0.6
	baz=318						
DUG	Dugway, Tooele	17.07	125	P	Pn	06 06 41.0	+0.7
BW06	Boulder Array	17.10	113	P	P	06 06 43.2	+0.8
	baz=309,SNR=8.9						
BW06	Boulder Array	17.10	113	P	Pn	06 06 41.4	+0.7
BW06				IAmb	IAmb	06 06 47.6	
	comp=Z,9.2nm,0.9s						
PD31	Pinedale Array	17.10	113	P	Pn	06 06 40.6	-0.1
PDAR	Pinedale Array	17.10	113	Pn	Pn	06 06 41.8	+1.1
	comp=Z,0.1nm,0.3s,baz=304,slow=8.1,SNR=27						
PDAR				LR	LR	06 13 52.7	
	comp=Z,97nm,20.3s,baz=314,slow=40						
PDAR	Pinedale Array	17.10	113	P	Pn	06 06 41.4	+0.7
R11A	Troy Canyon, C	17.19	134	P	Pn	06 06 42.7	+1.0
	baz=326,SNR=6.2						
BMAR	Burnt Mountain	17.21	342	P	Pn	06 06 42.0	+0.3
SPR3	Spring Creek 3	17.24	130	P	Pn	06 06 43.3	+0.7
SPR3				IAmb	IAmb	06 06 47.8	
	comp=Z,18nm,1.5s						
LCH	Last Change Ra	17.26	141	P	Pn	06 06 44.1	+1.4
I21K	Tanana	17.32	330	P	Pn	06 06 44.7	+1.7
	baz=132						
I21K	Tanana	17.32	330	P	Pn	06 06 44.6	+1.6
I21K				IAmb	IAmb	06 06 53.9	
	comp=Z,20nm,0.9s						
J20K	Nowinta River	17.41	325	P	Pn	06 06 45.4	+1.2
	baz=125						
J20K	Nowinta River	17.41	325	P	Pn	06 06 44.8	+0.6
J20K				IAmb	IAmb	06 06 52.2	
	comp=Z,16nm,1.0s						
TTA	Tatalina	17.45	320	P	Pn	06 06 43.9	-0.9
	baz=119						
TTA	Tatalina	17.45	320	P	Pn	06 06 44.1	-0.6
NLU	North Lily Min	17.63	124	P	Pn	06 06 47.4	+0.1
FFC	Flin Flon	17.74	68	P	Pn	06 06 47.7	-0.7
FFC				IAmb	IAmb	06 07 15.5	
	comp=Z,14nm,1.1s						
CWC	Cottonwood Cre	17.79	143	P	P	06 06 51.0	+0.9
	baz=333						
PSUT	Pine Spring	17.84	130	P	Pn	06 06 49.5	-0.3
H21K	Melozitna Rive	17.89	330	P	Pn	06 06 51.1	+0.9
	baz=131						
H21K	Melozitna Rive	17.89	330	P	Pn	06 06 51.5	+1.3
PRN	Pahroc Range	18.20	135	P	Pn	06 06 55.2	+0.9
PRN				IAmb	IAmb	06 06 59.2	
	comp=Z,14nm,1.2s						
FURC	Furnace Creek,	18.24	140	P	P	06 06 57.0	+2.3
	baz=331,SNR=10						
COLD	Coldfoot	18.29	336	P	Pn	06 06 53.2	-1.8
COLD				IAmb	IAmb	06 07 06.3	
	comp=Z,14nm,1.4s						
ISA	Isabella, Lake	18.34	145	P	P	06 06 58.2	+2.3
	baz=335						
ISA	Isabella, Lake	18.34	145	P	Pn	06 06 57.0	+1.1
MPMC	Manual Prospec	18.35	142	P	P	06 06 58.8	+2.5
	baz=332,SNR=9.0						
IMAR	Indian Mountai	18.40	330	P	Pn	06 06 57.1	+0.8
GWY	Greenwater Val	18.56	140	P	Pn	06 07 00.1	+1.4
MVU	Marysvale	18.66	127	P	Pn	06 07 01.3	+1.3
MSU	Marysvale	18.67	127	P	Pn	06 07 00.7	+0.7
QSM	Queen of Sheba	18.67	141	P	P	06 07 00.4	+0.9
QSM				IAmb	IAmb	06 07 09.8	
	comp=Z,9.5nm,1.0s						
GCSA	Galena City Sc	18.71	325	P	Pn	06 07 02.5	+2.4
	baz=122						
LRMC	Laurel Mtn Rad	18.79	144	P	Pn	06 07 03.2	+1.8

	baz=334						
P18A	Preston Nutter	18.84	121	P	Pn	06 07 02.6	+0.5
CCUT	Cedar City	18.86	131	P	P	06 07 02.5	+0.7
Q16A	Castle Valley	18.87	124	P	P	06 07 02.5	+0.5
SHPR	Sheep Range	18.91	137	P	P	06 07 03.4	+1.1
K22A	Casper	18.94	108	P	P	06 07 03.2	+0.6
K22A				IAmb	IAmb	06 07 19.2	
	comp=Z,11nm,1.0s						
SZCU	Shurtz Canyon	18.95	131	P	P	06 07 03.9	+1.1
SHOC	Shoshone, Teco	18.96	140	P	Pn	06 07 04.6	+1.1
	baz=331						
MTPU	Mount Pierson	19.03	128	P	P	06 07 04.9	+1.0
SRU	San Rafael Swe	19.07	123	P	P	06 07 04.9	+0.9
SRU				IAmb	IAmb	06 07 20.1	
	comp=Z,11nm,1.2s						
TOLK	Toolik Lake Re	19.26	340	P	Pn	06 07 10.0	+3.3
	baz=143						
GSC	Goldstone, Bar	19.28	142	P	Pn	06 07 09.6	+2.3
	baz=332,SNR=6.7						
GSC	Goldstone, Bar	19.28	142	P	Pn	06 07 07.9	+0.6
GSC				IAmb	IAmb	06 07 11.9	
	comp=Z,17nm,1.4s						
LCMT	Little Creek M	19.35	132	P	P	06 07 07.1	0.0
LCMT				IAmb	IAmb	06 07 12.2	
	comp=Z,16nm,1.3s						
O20A	White River Ci	19.57	117	P	P	06 07 09.2	-0.4
O20A				IAmb	IAmb	06 07 29.4	
	comp=Z,16nm,1.2s						
RSSD	Black Hills	19.61	102	P	P	06 07 10.0	-0.1
BFSC	Mount Baldy Ra	19.91	145	P	Pn	06 07 18.4	+3.5
	baz=335						
GMRC	Granite Mounta	20.18	140	P	Pn	06 07 19.2	+1.1
	baz=332,SNR=6.9						
U15A	North Rim	20.27	131	P	P	06 07 15.9	-1.4
U15A				IAmb	IAmb	06 07 21.6	
	comp=Z,9.7nm,1.0s						
E28A	Huff	20.51	92	P	P	06 07 20.0	+0.4
BELC	Belle Mtn. Jos	20.74	142	P	P	06 07 23.8	+1.6
	baz=333						
PFO	Pinyon Flats O	20.91	144	P	P	06 07 24.9	+0.8
	comp=Z,2.2nm,1.0s,baz=315,slow=11,SNR=1.2						
PFO				LR	LR	06 15 16.0	
	comp=Z,121nm,20.5s,baz=320,slow=36						
PFO	Pinyon Flats O	20.91	144	P	Pn	06 07 29.5	+2.8
	baz=334						
PFO	Pinyon Flats O	20.91	144		P	06 07 25.1	+1.0
PFO				IAmb	IAmb	06 07 34.7	
	comp=Z,7.0nm,1.0s						
IRM	Iron Mountain	20.93	140	P	P	06 07 25.9	+1.6
	baz=332						
PDMCI	Parker Dam,Lak	21.22	138	P	P	06 07 28.9	+1.6
	baz=330						
BC3	Big Chuckawall	21.25	141	P	P	06 07 33.0	+5.2
	baz=333						
UNV	Unalaska Valle	21.38	290	P	P	06 07 29.3	+0.5
WUAZ	Wupatki	21.44	131	P	P	06 07 31.1	+1.3
	baz=325,SNR=10						
WUAZ	Wupatki	21.44	131	P	P	06 07 30.3	+0.5
MVCO	Mesa Verde	21.54	123	P	P	06 07 31.8	+0.8
	baz=320						
MVCO	Mesa Verde	21.54	123	P	P	06 07 29.0	-2.0
MVCO				IAmb	IAmb	06 07 37.6	
	comp=Z,13nm,1.1s						
MONP2	Monument Peak	21.57	144	P	P	06 07 33.0	+1.7
	baz=335						
Y14A	Wickenburg	22.02	136	P	P	06 07 37.1	+1.2
GLA	Glamis	22.03	141	P	P	06 07 36.4	+0.3
GLA				IAmb	IAmb	06 07 45.9	
	comp=Z,9.1nm,0.8s						
S22A	4UR Ranch, Cre	22.04	119	P	P	06 07 38.9	+2.5
	baz=317						
ULM	Lac du Bonnet	22.18	79	P	P	06 07 38.4	+0.9
	comp=Z,3.3nm,0.8s,baz=281,slow=5.2,SNR=2.6						
ULM				LR	LR	06 15 05.6	
	comp=Z,169nm,21.9s,baz=275,slow=34						
X16A	Lo Mia Camp, P	22.31	133	P	P	06 07 38.1	-1.2
X16A				IAmb	IAmb	06 07 48.9	
	comp=Z,8.5nm,1.1s						
W18A	Petrified Fore	22.55	129	P	P	06 07 43.6	+1.8
	baz=324						
W18A	Petrified Fore	22.55	129	P	P	06 07 42.8	+1.0
OGNE	Ogallala	22.65	107	P	P	06 07 41.9	-0.8
X18A	Snowflake	22.92	130	P	P	06 07 46.3	+0.7
X18A				IAmb	IAmb	06 07 54.9	
	comp=E,4.5nm,0.9s						
214A	Organ Pipe Nat	23.80	138	P	P	06 07 55.3	+0.9
214A				IAmb	IAmb	06 08 08.1	
	comp=Z,9.1nm,1.2s						
ANMO	Albuquerque	24.34	123	LR	LR	06 17 15.9	
	comp=Z,127nm,20.5s,baz=314,slow=36						
ANMO	Albuquerque	24.34	123	P	P	06 08 00.1	+0.5
ANMO				IAmb	IAmb	06 08 03.3	
	comp=Z,4.3nm,1.0s						
TUC	Tucson	24.38	134	P	P	06 08 00.9	+1.1
	baz=329						
TUC	Tucson	24.38	134	P	P	06 07 59.2	-0.5
TUC				IAmb	IAmb	06 08 08.0	
	comp=Z,6.3nm,0.9s						
LENM	Lemitar	24.68	125	P	P	06 08 02.1	-0.6
BNM	Barren Site	24.87	125	P	P	06 08 03.9	-0.5
121A	Cookes Peak, D	25.59	129	P	P	06 08 13.7	+2.8
	baz=325,SNR=6.1						
121A	Cookes Peak, D	25.59	129	P	P	06 08 11.7	+0.8
EYMN	Ely	25.68	82	P	P	06 08 12.7	+1.3
	baz=293,SNR=6.9						
EYMN	Ely	25.68	82	P	P	06 08 12.1	+0.7
N35A	Tabor	26.58	100	P	P	06 08 21.1	+1.4
RES	Resolute Bay	27.50	20	LR	LR	06 18 45.5	
	comp=Z,142nm,19.9s,baz=231,slow=35						
WMOK	Wichita Mounta	28.71	113	P	P	06 08 41.6	+2.9
	baz=316						
TXAR	Lajitas Array	30.23	127	P	P	06 08 51.0	-1.3
	comp=Z,1.1nm,0.9s,baz=302,slow=8.4,SNR=4.0						
TXAR				LR	LR	06 20 33.6	
	comp=Z,118nm,19.8s,baz=0.0,slow=36						
SCHQ	Schefferville	37.48	59	LR	LR	06 25 49.0	
	comp=Z,207nm,20.9s,baz=332,slow=37						
PETK	Petropavlovsk-	41.82	301	P	P	06 10 31.6	+0.6
	comp=Z,1.9nm,0.8s,baz=61,slow=12,SNR=2.0						
PETK				LR	LR	06 26 57.0	
	comp=Z,70nm,19.1s,baz=82,slow=35						
JMIC	Jan Mayen	51.11	21	LR	LR	06 34 10.3	
	comp=Z,35nm,18.1s,baz=256,slow=37						
H11N2	WAKE ISLAND Hy	57.38	261	T	T	07 14 44.5	
	baz=40,slow=76,SNR=34						
H11N3	WAKE ISLAND Hy	57.38	261	T	T	07 14 54.5	
	baz=40,slow=76,SNR=44						
H11N1	WAKE ISLAND Hy	57.40	261	T	T	07 14 54.1	
	baz=40,slow=76,SNR=36						
ARCES	ARCESS Array B	58.00	9	LR	LR	06 38 16.1	
	comp=Z,31nm,20.5s,baz=20,slow=37						
H11S1	WAKE ISLAND Hy	58.43	260	T	T	07 16 29.7	
	baz=47,slow=74						
H11S2	WAKE ISLAND Hy	58.44	260	T	T	07 16 44.0	
	baz=47						
H11S3	WAKE ISLAND Hy	58.44	260	T	T	07 16 30.3	
	baz=47,slow=74						
USRK	Ussuriysk Ar.	60.68	305	LR	LR	06 40 04.4	
	comp=Z,45nm,18.1s,baz=66,slow=37						
MJAR	Matsushiro Arr	62.74	295	LR	LR	06 35 58.9	
	comp=Z,16nm,21.2s,baz=75,slow=32						
NOA	NORSAR Array B	63.77	19	LR	LR	06 39 33.8	
	comp=Z,44nm,21.4s,baz=345,slow=35						
HFS	Hagfors	65.10	19	LR	LR	06 40 59.9	
	comp=Z,77nm,19.7s,baz=358,slow=35						
FINES	FINESS Array B	65.87	12	LR	LR	06 42 55.6	
	comp=Z,43nm,18.6s,baz=302,slow=37						
ROSC	El Rosal	66.09	114	LR	LR	06 46 02.4	
	comp=Z,33nm,19.2s,baz=11,slow=39						
KSRS	Korea Array	67.70	302	LR	LR	06 44 16.2	
	comp=Z,22nm,18.4s,baz=42,slow=37						
SONM	Songino Array	69.38	323	LR	LR	06 44 57.0	
	comp=Z,89nm,18.6s,baz=40,slow=36						
ZALV	Zalesovo Beam	70.61	338	LR	LR	06 47 08.2	
	comp=Z,44nm,19.6s,baz=33,slow=38						
HHC	Hu-ho-hao-te	72.99	315	*e*P	P	06 14 09.1	-2.2
HHC				pmax	pmax		
	comp=Z,7.0nm,1.2s						
HHC				pmax	pmax		
	comp=Z,81nm,6.5s						
KURBB	Kurchatov Arra	75.09	341	P	P	06 14 23.8	+0.6
	comp=Z,0.2nm,0.3s,baz=21,slow=5.9,SNR=4.4						
GERES	GERESS Array B	75.56	23	P	P	06 14 27.0	+0.9
	comp=Z,0.3nm,0.5s,baz=333,slow=8.1,SNR=2.8						
GERES				LR	LR	06 48 49.2	
	comp=Z,29nm,18.7s,baz=273,slow=37						
VRAC	Vranov	75.80	21	LR	LR	06 47 28.2	
	comp=Z,40nm,21.2s,baz=334,slow=36						
AKASG	Malin Array Be	76.75	13	P	P	06 14 32.1	-0.5
	comp=Z,0.6nm,0.7s,baz=344,slow=5.3,SNR=3.3						
AKASG				LR	LR	06 48 27.8	
	comp=Z,21nm,19.4s,baz=20,slow=36						
MKAR	Makanchi Array	77.86	337	P	P	06 14 39.7	+0.7
	comp=Z,0.8nm,0.9s,baz=40,slow=6.2,SNR=2.7						
MKAR				LR	LR	06 53 55.7	
	comp=Z,54nm,18.7s,baz=2.0,slow=40						
BRTR	Keskin Array B	88.11	12	LR	LR	06 56 33.4	
	comp=Z,21nm,20.2s,baz=330,slow=37						
GEYT	Alibeck	90.49	353	LR	LR	07 00 11.2	
	comp=Z,21nm,20.0s,baz=305,slow=38						
CMAR	Chiang Mai Arr	97.68	313	LR	LR	07 02 26.8	
	comp=Z,24nm,19.3s,baz=65,slow=37						
VNA3	Neumayer Olymp	147.67	149	PKPdf	PKPdf	06 22 24.1	+2.2
VNA1	Neumayer--Stat	148.19	148	PKPdf	PKPdf	06 22 24.4	+1.7
VNA2	Neumayer--Watz	148.45	149	PKPdf	PKPbc	06 22 26.5	-0.2
	baz=292,slow=2.0						
SNAA	Sanae	149.75	150	PKPbc	PKPbc	06 22 31.6	+1.6

*TUL **22** 06:03:56.7±0.8, 36°.95N±0°.01×98°.11W±0°.03, h5^{km}±1^{km}, ML2.6, mb_Lg2.4/21(NEIC), Error ellipse: s-maj=3.7km s-min=2.4km az=74.0*

NEIC 22 06:03:57.3±0.8**, 36°.93N**±0°.01×**98°.10W**±0°.02**, h6**^{km}±5^{km}**, Error ellipse: s-maj=2.1km s-min=1.8km az=150.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN14	Manchester OK	0.12	75	Pg	Pg	06 03 59.5	-0.3
KAN14				Sg	Sg	06 04 01.3	-0.2
OK032	Salt Plains WL	0.15	215	Pg	Pg	06 04 00.8	+0.5
OK032				Sg	Sg	06 04 03.5	+1.1
KAN10	Anthony SW Sta	0.20	2	Pg	Pg	06 04 01.1	-0.1
KAN10				Sg	Sg	06 04 04.0	+0.1
GC02	Grant County #	0.21	111	Pg	Pg	06 04 01.4	0.0
GC02				Sg	Sg	06 04 04.4	+0.2
KAN05	Bluff City Nor	0.26	45		Pg	06 04 02.1	-0.3
KAN17	Caldwell West	0.30	66	Pg	Pg	06 04 02.8	-0.2
KAN16	Harper SW Stat	0.30	6	Pg	Pg	06 04 03.0	-0.2
KAN16				Sg	Sg	06 04 07.5	+0.4
KAN08	Anthony NE Sta	0.32	19		Pg	06 04 03.3	-0.2
KAN08				Sg	Sg	06 04 07.6	-0.1
KAN01	Argonia South	0.36	50		Pg	06 04 04.1	-0.2
KAN01				Sg	Sg	06 04 08.8	-0.2
KAN06	Argonia West S	0.38	31		Pg	06 04 04.3	-0.3
KAN06				Sg	Sg	06 04 09.4	-0.2
KAN12	Harper NE Stat	0.38	13	Pg	Pg	06 04 04.5	-0.2
CROK	Carrier	0.43	167	Pg	Pg	06 04 05.9	+0.3
KAN09	Caldwell North	0.44	61	Pg	Pg	06 04 05.5	-0.3
KAN13	South Haven SW	0.51	80	Pg	Pg	06 04 06.7	-0.3
BLOK	Blackwell	0.73	103	Pg	Pg	06 04 10.9	-0.5
OK029	Liberty Lake	1.24	155		Pg	06 04 20.3	-0.8
BCOK	Bluff Creek, N	1.33	162		Pn	06 04 21.7	-0.6
QUOK	Quay	1.35	123	Pn	Pn	06 04 22.3	-0.4
OK031	S. Brethren Rd	1.41	133	Pn	Pn	06 04 22.9	-0.5
OK030	Cody Creek RV	1.46	133		Pn	06 04 24.1	0.0
OK025	Westminster Rd	1.48	155		Pb	06 04 24.8	-0.3
R32A	Long Quarter,	1.57	342	Pn	Pn	06 04 26.0	+0.3
OKCFA	Oklahoma City	1.60	160	Pn	Pn	06 04 26.6	+0.5
OKCSW	OKLAHOMA CITY	1.61	160	Pn	Pb	06 04 26.9	-0.5
FNO	Franklin	1.76	161	Pn	Pn	06 04 28.9	+0.6
TUL1	Leonard	2.12	118		Pn	06 04 33.8	+0.6
WMOK	Wichita Mounta	2.25	194		Pn	06 04 36.1	+1.0
WMOK				IAmb_Lg		06 05 10.2	
	comp=Z,15nm,1.0s						
CBKS	Cedar Bluff	2.29	326	Pn	Pn	06 04 36.4	+0.8
X34A	Smith Ranch, M	2.33	174		Pn	06 04 37.4	+1.3
X34A				IAmb_Lg		06 05 11.8	
	comp=Z,12nm,0.8s						
KSU1	Kansas State U	2.47	28	Pn	Pn	06 04 38.0	0.0
KSU1				IAmb_Lg		06 05 14.8	
	comp=Z,22nm,0.8s						
LOOK	Love County	3.02	165	IAmb_Lg		06 05 36.0	
	comp=Z,11nm,1.0s						
X37A	Clayton	3.22	136		Pn	06 04 48.9	+0.6
W39A	Magazine	3.90	115	IAmb_Lg		06 06 07.3	
	comp=Z,13nm,0.7s						
KSCO	Kaye Shedlock’	4.14	302	IAmb_Lg		06 06 14.2	
	comp=Z,8.0nm,0.7s						
U40A	Yellville	4.26	96	IAmb_Lg		06 06 21.1	
	comp=Z,7.4nm,0.8s						
BGNE	Belgrade	4.48	360	IAmb_Lg		06 06 27.4	
	comp=Z,13nm,0.9s						
P38A	Dawn	4.50	52	IAmb_Lg		06 06 19.4	
	comp=Z,12nm,1.1s						
WHAR	Wooly Hollow	4.98	107	IAmb_Lg		06 06 48.5	
	comp=Z,6.7nm,0.8s						
JCT	Junction City	6.58	193	IAmb_Lg		06 07 39.9	
	comp=Z,5.1nm,0.8s						

*TAP **22** 06:12:01.9, 24°.13N×122°.51E, h46^{km}±1^{km}, ML3.1, D*

*JMA **22** 06:12:02.3±0.1, 24°.28N×122°.49E, h50^{km}±3^{km}, M2.2*

ISC 22 06:12:02.3±1.0**, 24°.12N**±0°.03×**122°.51E**±0°.02**, h32**^{km}±10^{km}**, n34, σ0^{s}.72**/64**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.52	50	P	Pb	06 12 12.6	-0.5
JYNG				S	Sb	06 12 20.5	-0.1
YOJ	Yonaguni jima	0.57	53	*i* P	Pb	06 12 14.3	+0.3
	baz=53						
YOJ				*i* S	Sb	06 12 23.0	+0.9
	baz=53						
YOJ	Yonaguni jima	0.57	53	P	Pb	06 12 13.9	-0.1
YOJ				S	Sb	06 12 21.7	-0.3
EHP	Heping Village	0.72	285	*e*P	Pb	06 12 17.2	+0.7
	baz=284						
EWUT	Wuta	0.74	296	*e*P	Pb	06 12 17.3	+0.6
	baz=295						
EWUT				*e*S	Sb	06 12 26.9	+0.3
	baz=295						
ENA	Nanau	0.76	294	*i* P	Pb	06 12 16.9	-0.3
	baz=293						
ENA				*i* S	Sb	06 12 27.7	+0.5
	baz=293						
TWC	Suao	0.77	309	P	Pb	06 12 17.1	-0.2
	baz=308						
TWC				S	Sb	06 12 27.6	0.0
	baz=308						
TWD	Chiawan	0.83	268	*i* P	Pb	06 12 18.7	+0.4
	baz=266						
TWD				S	Sb	06 12 29.3	+0.1
	baz=266						
NACB	Ninganchiao	0.83	274	P	Pb	06 12 18.1	-0.3
	baz=272						
NACB				*i* S	Sb	06 12 29.7	+0.4
	baz=272						
NDS	Dongshan	0.89	306	P	Pb	06 12 19.0	-0.2
	baz=304						
NDS				S	Sb	06 12 30.7	0.0
	baz=304						
ETM	Tongmen	0.94	261	*e*P	Pb	06 12 20.6	+0.6
	baz=259						
ETM				*e*S	Sb	06 12 31.7	-0.5
	baz=259						
ETLH	Xiulin Townshi	0.94	276	P	Pb	06 12 19.4	-0.8
	baz=274						
ETLH				*e*S	Sb	06 12 31.7	-0.6
	baz=274						
NTC	Toucheng	0.96	320	P	Pb	06 12 19.4	-1.0
	baz=319						
NTC				S	Sb	06 12 32.4	-0.4
	baz=319						
TWE	Neicheng	0.97	308	*e*P	Pn	06 12 21.0	+1.3
	baz=307						
TWE				*e*S	Sb	06 12 34.1	+0.9
	baz=307						
TWB1	Santiao Chiao	1.00	332	P	Pn	06 12 20.0	-0.2
	baz=331						
TWB1				*e*S	Sb	06 12 32.7	-1.4
	baz=331						
ESL	Shilin	1.03	253	P	Pn	06 12 21.0	+0.6
	baz=251						
ESL				S	Sb	06 12 34.1	-0.7
	baz=251						
NDT	Datong Townshi	1.03	298	*e*P	Pn	06 12 22.2	+1.7
	baz=297						
NDT				*i* S	Sb	06 12 34.8	+0.1
	baz=297						
TIPB	Shuangxi	1.05	324	*i* P	Pn	06 12 21.0	+0.1
	baz=323						
TIPB				*e*S	Sb	06 12 33.8	-1.7
	baz=323						
EGFH	Guangfu	1.08	246	P	Pn	06 12 22.3	+1.1
	baz=245						
EGFH				S	Sb	06 12 35.7	-0.6
	baz=245						
NWLT	Wulai	1.13	306	*i* P	Pn	06 12 22.7	+0.8
	baz=305						
NWLT				*e*S	Sb	06 12 37.3	-0.3
	baz=305						
IRIF	Iriomote-Funau	1.14	79	P	Pn	06 12 22.4	+0.4
IRIF				S	Sb	06 12 37.2	-0.7
NWF	Wu-fen Shan	1.16	325	*i* P	Pn	06 12 22.3	0.0
	baz=324						
NWF				S	Sn	06 12 36.7	-0.3
	baz=324						
WFSB	Wu-fen Shan	1.16	325	P	Pn	06 12 22.2	0.0
	baz=324						
WFSB				S	Sn	06 12 36.8	-0.2
	baz=324						
HGSD	Ruisui	1.17	238	P	Pn	06 12 23.4	+0.9
	baz=237						
HGSD				*e*S	Sn	06 12 37.3	0.0
	baz=237						
HATJ	Hateruma jima	1.19	93	P	Pn	06 12 22.0	-0.7
ECBN	Changbin	1.25	231	*i* P	Pn	06 12 23.9	+0.3
	baz=230						
ECBN				*i* S	Sn	06 12 39.5	+0.1
	baz=230						
JKRS	Kuro-shima	1.38	85	P	Pn	06 12 26.3	+1.0
JKRS				S	Sn	06 12 44.0	+1.6
CHKT	Chengkung	1.46	226	S	Sn	06 12 43.9	-0.5
	baz=225						
JIJ	Ishigaki jima	1.51	80	P	Pn	06 12 27.5	+0.4
JIJ				S	Sn	06 12 45.3	-0.5
EDH	Donghe	1.59	224	P	Pn	06 12 28.9	+0.8
	baz=223						
EDH				*e*S	Sn	06 12 46.2	-1.4
	baz=223						
JISG	Ishigakijimahi	1.71	74	P	Pn	06 12 30.1	+0.3
JISG				S	Sn	06 12 50.9	+0.3
LDUT	Ludao	1.73	214	P	Pn	06 12 29.9	-0.1
	baz=213						
LDUT				*e*S	Sn	06 12 49.5	-1.4
	baz=213						
JTJ	Tarama	2.07	75	P	Pn	06 12 35.4	+0.6
JTJ				*e*S	Sn	06 12 59.6	+0.1
LAY	Lan-yu	2.25	203	P	Pn	06 12 37.5	+0.2
	baz=202						

*SOME **22** 06:13:31.9, 43°.57N×81°.48E, h15^{km}*

*NNC **22** 06:13:33.9±1.5, 43°.60N×81°.35E, h0^{km}, mb2.1, mpv2.8, Error ellipse: s-maj=22.6km s-min=9.0km az=168.0*

ISC 22 06:13:29.9±1.7**, 43°.5N**±0°.2×**81°.61E**±0°.05**, h5**^{km}±14^{km}**, n9, σ0^{s}.54**/16**, 1C-1D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen	0.92	268	*e*P	Pg	06 13 47.5	0.0
	3.1nm,0.2s						
KTMS				*e*S	Sg	06 13 58.7	-0.7
	2.0nm,0.2s						
KTMS	Ketmen	0.92	268	P	Pg	06 13 47.5	0.0
	3.1nm,0.2s						
KTMS				S	Sg	06 13 58.7	-0.7
	2.0nm,0.2s						
PDGK	Podgornoye	1.55	265	P	Pb	06 13 59.6	+0.4
	0.7nm,0.2s						
PDGK				S	Sb	06 14 19.6	+0.3
	2.7nm,0.3s						
PDGK	Podgornoye	1.55	265	⇓P	Pg	06 14 00.0	+0.4
	2.4nm,0.8s						
PDGK				⇑S	Sn	06 14 18.0	-1.0
	3.7nm,0.5s						
UZB	Uzynbulak	1.92	261	*e*P	Pb	06 14 05.7	+0.2
	3.7nm,0.2s						
UZB				*e*S	Sb	06 14 30.1	+0.3
	2.6nm,0.3s						
UZB	Uzynbulak	1.92	261	P	Pb	06 14 05.7	+0.2
	3.7nm,0.2s						
UZB				S	Sb	06 14 30.1	+0.3
	2.6nm,0.3s						
KPKS	Kokpek	2.13	271	*e*P	Pb	06 14 09.5	+0.5
	1.9nm,0.1s						
KPKS				*e*S	Sb	06 14 36.7	+0.9
	3.9nm,0.2s						
BLB	Baldybastay	2.35	286	Pg	Pb	06 14 13.0	+0.2
	3.4nm,0.2s						
BLB				Lg	Lg	06 14 42.5	
	1.9nm,0.1s						
WMQ	Urumqi	4.43	84	*e*P	Pb	06 14 48.3	+0.1

PGC 22 06:14:20.7±1.9**, 51°.45N**×**131°.35W, h10**^{km}**, MLSn3.0**/16**, Mw3.6**/16**, 203km Sse of Sandspit, Bc Haida Gwaii Region, Queen Charlotte Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HG4B	Hotspring	0.85	6	P	Pg	06 14 36.3	-0.9
HG4B				S	Sg	06 14 46.8	-1.5
BNB	Barry Inlet	1.16	348	P	Pb	06 14 41.3	-1.6
BNB				S	Sb	06 14 54.8	-3.2
HG1B	Mitchell Dam	1.57	342	Sn	Sn	06 15 04.4	-4.5
MOBC	Moresby Island	1.75	348	Pn	Pn	06 14 49.7	-1.4
MOBC				Sn	Sn	06 15 08.9	-4.5
DIB	Dawson Inlet,	1.89	339	Pn	Pn	06 14 51.3	-1.8
VIB	Van Inlet	1.95	338	Pn	Pn	06 14 52.7	-1.3
VIB				Sn	Sn	06 15 14.7	-3.9
BNKB	Banks Island	2.09	25	Pn	Pn	06 14 54.4	-1.4
BNKB				Sn	Sn	06 15 17.8	-4.0
BNAB	Bonilla	2.10	12	Pn	Pn	06 14 55.0	-0.9
BBB	Bella Bella	2.14	68	Pn	Pn	06 14 55.2	-1.2
BBB				Sn	Sn	06 15 19.5	-3.5
HOLB	Holberg	2.18	110	Pn	Pn	06 14 55.1	-2.0
HOLB				Sn	Sn	06 15 20.6	-3.6
BUTB	Butedale	2.40	46	Pn	Pn	06 14 59.1	-1.1
GRNB	Grenville Isla	2.55	19	Pn	Pn	06 15 01.3	-0.8
GRNB				Sn	Sn	06 15 29.6	-3.6
PHC	Port Hardy	2.58	105	Pn	Pn	06 15 00.5	-2.0
PHC				Sn	Sn	06 15 29.4	-4.4
BPBC	Brooks Peninsu	2.61	118	Pn	Pn	06 15 00.9	-2.0
PACB	Port Alice, BC	2.64	111	Pn	Pn	06 15 01.9	-1.4
PACB				Sn	Sn	06 15 32.2	-3.1
MAYB	Maynard	2.84	110	Pn	Pn	06 15 04.7	-1.5
MAYB				Sn	Sn	06 15 37.9	-2.7
RUBB	Prince Rupert	2.96	12	Pn	Pn	06 15 07.1	-0.6
TLCB	Telegraph Cove	2.99	106	Pn	Pn	06 15 06.9	-1.2
KITB	Kitimat	3.11	31	Pn	Pn	06 15 08.8	-1.0
EDB	Eliza Dome	3.12	119	Sn	Sn	06 15 42.7	-4.4
WOSB	Woss	3.29	111	Pn	Pn	06 15 11.4	-0.9
WOSB				Sn	Sn	06 15 49.4	-2.2
NCRB	Newcastle Ridg	3.51	105	Pn	Pn	06 15 13.7	-1.6
GDR	Gold River	3.77	114	Pn	Pn	06 15 16.6	-2.3
UBRB	Upper Baezaeko	4.70	69	Pn	Pn	06 15 29.7	-2.1
TXB	Texada	4.74	109	Pn	Pn	06 15 29.9	-2.3

ZUR 22 06:32:50.2±3.1**, 46°.40N**×**11°.11E, h46**^{km}±29^{km}**, MLh2.4**/7**, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOSI	Kohlern	0.20	70	Pg	Pn	06 32 58.0	-0.3
	1.9nm,SNR=17						
KOSI				Pg	Pn	06 32 58.0	-0.3

ZUR 22 06:33:23.8, 46°.68N×**8°.50E, h6**^{km}±2^{km}**, MLh0.5**/8**, 4C-6D, Error ellipse: s-maj=3.9km s-min=0.8km az=37.0, Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NALPS	Val Nalps	0.19	115	Pg	Pg	06 33 28.2	+0.6
NALPS				Pg	Pg	06 33 28.2	+0.6
	0.1nm,SNR=30						
NALPS				Sg	Sg	06 33 30.9	+0.7
BNALP	Bannalp	0.20	345	⇓Pg	Pg	06 33 28.3	+0.4
BNALP				⇓Pg	Pg	06 33 28.3	+0.4
	SNR=14						
BNALP				Sg	Sg	06 33 31.2	+0.6
BNALP	Bannalp	0.20	345	Pg	Pg	06 33 28.3	+0.4
	0.1nm,SNR=1.3						

BNALP				Pg	Pg	06 33 28.3	+0.4
FUSIO	**Fusio**	**0.25**	**153**	⇓Pg	Pg	06 33 29.0	+0.3
FUSIO				⇓Pg	Pg	06 33 29.0	+0.3
	SNR=2.7						
HASLI	**Hasliberg/Brie**	**0.25**	**289**	⇑Pg	Pg	06 33 29.2	+0.4
HASLI				⇑Pg	Pg	06 33 29.2	+0.4
	0.1nm,SNR=25						
HASLI				Sg	Sg	06 33 32.7	+0.5
HASLI	**Hasliberg/Brie**	**0.25**	**289**	Pg	Pg	06 33 29.2	+0.4
HASLI				Pg	Pg	06 33 29.2	+0.4
	0.1nm,SNR=1.6						
FIESA	**Fiescheralp**	**0.36**	**228**	⇑Pg	Pg	06 33 31.1	+0.2
	SNR=5.2						
FIESA				⇑Pg	Pg	06 33 31.1	+0.2
FIESA				Sg	Sg	06 33 35.9	+0.3
FIESA	**Fiescheralp**	**0.36**	**228**	Pg	Pg	06 33 31.1	+0.2
FIESA				Pg	Pg	06 33 31.1	+0.2
	0.2nm,SNR=1.7						
PANIX	**Pigniu (Panix)**	**0.45**	**70**	⇓Pg	Pg	06 33 32.6	+0.1
	SNR=4.2						
PANIX				⇓Pg	Pg	06 33 32.6	+0.1

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*PGC **22** 06:43:38.1±1.0, 51°.45N×131°.27W, h10^{km}, mb4.0, MLSn3.6/29, Mw4.6, 203km Sse of Sandspit, Bc Haida Gwaii Region*

*IDC **22** 06:43:41.2±1.3, 51°.66N×130°.83W, h0^{km}, mb3.8/4, mb1 3.9/12, mb1mx3.6/56, mbtmp3.7/12, ML3.5/7, MS3.7/31, Ms1 3.7/31, ms1mx3.6/48, Error ellipse: s-maj=17.8km s-min=12.2km az=65.0*

*NEIC **22** 06:43:42.6, 51°.45N×131°.27W, h5^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.08; M$_{\theta\theta}$-3.28; M$_{\phi\phi}$3.69; M$_{r\theta}$-5.42; M$_{\theta\phi}$4.62; M$_{\phi r}$-2.12; Fault plane solution: M$_0$8.20000×10^{15} NP1:φ$_s$253.00000°, δ87.00000°, λ45.00000°. NP2:φ$_s$160.00000°, δ45.00000°, λ176.00000°. Principal axes: T 8.2933, Plg33.0000°, Azm126.0000°; N -0.1517, Plg45.0000°, Azm256.0000°; P -8.1416, Plg28.0000°, Azm17.0000°;*

*NEIC **22** 06:43:42.5±2.0, 51°.67N±0°.07×131°.1W±0°.2, h10^{km}±2^{km} Error ellipse: s-maj=19.1km s-min=6.2km az=236.0*

ISC 22 06:43:39.4±1.6**, 51°.57N**±0°.04×**131°.14W**±0°.05**, h2**^{km}±10^{km}**, n212, σ2**^{s}**25**/199**, mb4.1**/7**, MS3.7**/23**, Queen Charlotte Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HG4B	**Hotspring**	**0.73**	**357**	Pg	**Pg**	**06 43 53.3**	**0.0**
HG4B				IAML		06 44 11.3	
	comp=N,3μm,1.1s						
HG4B				IAML		06 44 14.0	
	comp=E,3μm,1.1s						
HG4B	**Hotspring**	**0.73**	**357**	P	**Pg**	**06 43 53.4**	**0.0**
HG4B				S	**Sg**	**06 44 03.5**	**+0.8**
BNB	**Barry Inlet**	**1.08**	**340**	P	**Pg**	**06 43 58.2**	**-1.8**
BNB				S	**Sg**	**06 44 12.3**	**-1.6**
HG1B	**Mitchell Dam**	**1.50**	**336**	Pn	**Pn**	**06 44 04.2**	**-3.1**
HG1B				Sn	**Sn**	**06 44 21.8**	**-5.6**
MOBC	**Moresby Island**	**1.66**	**342**	Pn	**Pn**	**06 44 07.2**	**-2.4**
MOBC				Sn	**Sn**	**06 44 27.3**	**-4.2**
DIB	**Dawson Inlet,**	**1.83**	**334**		**Pn**	**06 44 10.3**	**-1.5**
DIB				IAML		06 44 52.5	
	comp=N,540nm,0.7s						
DIB	**Dawson Inlet,**	**1.83**	**334**	Pn	**Pn**	**06 44 08.7**	**-3.1**
VIB	**Van Inlet**	**1.89**	**334**	Pn	**Pn**	**06 44 09.9**	**-2.9**
VIB				Sn	**Sn**	**06 44 31.7**	**-5.5**
BNKB	**Banks Island**	**1.92**	**23**	Pn	**Pn**	**06 44 11.4**	**-1.8**
BNKB				Sn	**Sn**	**06 44 35.1**	**-2.7**
BNAB	**Bonilla**	**1.95**	**9**	Pn	**Pn**	**06 44 11.8**	**-1.7**
BNAB				Sn	**Sn**	**06 44 35.8**	**-2.7**
BBB	**Bella Bella**	**1.97**	**71**	Pn	**Pn**	**06 44 11.7**	**-2.2**
	comp=N,4.0nm,0.3s,baz=257,slow=14,SNR=40						
BBB				Sn	**Sn**	**06 44 35.3**	**-3.8**
	comp=N,19nm,0.3s,baz=153,slow=21,SNR=8.0						
BBB				LR	LR	06 44 46.3	
	comp=N,173nm,19.7s,baz=255,slow=37						
BBB	**Bella Bella**	**1.97**	**71**		**Pn**	**06 44 12.6**	**-1.2**
BBB				IAML		06 44 59.7	
	comp=N,466nm,1.3s						
BBB	**Bella Bella**	**1.97**	**71**	Pn	**Pn**	**06 44 11.6**	**-2.2**
BBB				Sn	**Sn**	**06 44 36.2**	**-3.0**
HOLB	**Holberg**	**2.11**	**115**		**Pn**	**06 44 12.3**	**-3.5**
HOLB	**Holberg**	**2.11**	**115**	Pn	**Pn**	**06 44 12.0**	**-3.8**
HOLB				Sn	**Sn**	**06 44 37.3**	**-5.3**
BUTB	**Butedale**	**2.22**	**47**	Pn	**Pn**	**06 44 16.1**	**-1.2**
HWKB	**Hawksbury Isla**	**2.37**	**30**	Pn	**Pn**	**06 44 17.5**	**-1.8**
HWKB				Sn	**Sn**	**06 44 45.3**	**-3.6**
GRNB	**Grenville Isla**	**2.39**	**17**		**Pn**	**06 44 18.9**	**-0.7**
GRNB				IAML		06 45 08.5	
	comp=E,417nm,1.3s						
GRNB	**Grenville Isla**	**2.39**	**17**	Pn	**Pn**	**06 44 18.3**	**-1.3**
GRNB				Sn	**Sn**	**06 44 46.2**	**-3.3**
PHC	**Port Hardy**	**2.49**	**109**	Pn	**Pn**	**06 44 17.0**	**-3.9**
PHC				Sn	**Sn**	**06 44 46.2**	**-5.6**
BPBC	**Brooks Peninsu**	**2.56**	**122**	Pn	Pn	06 44 17.7	-4.2
PACB	**Port Alice, BC**	**2.57**	**115**	Pn	**Pn**	**06 44 18.5**	**-3.5**
PACB				Sn	**Sn**	**06 44 49.9**	**-3.9**
MAYB	**Maynard**	**2.77**	**113**	Pn	**Pn**	**06 44 21.2**	**-3.7**
MAYB				Sn	**Sn**	**06 44 53.8**	**-5.1**
RUBB	**Prince Rupert**	**2.81**	**11**		**Pn**	**06 44 24.6**	**-0.7**
RUBB				IAML		06 45 28.0	
	comp=N,299nm,0.9s						
RUBB	**Prince Rupert**	**2.81**	**11**	Pn	**Pn**	**06 44 23.4**	**-2.0**
RUBB				Sn	**Sn**	**06 44 57.0**	**-2.9**
TLCB	**Telegraph Cove**	**2.90**	**109**		**Pn**	**06 44 24.4**	**-2.2**
TLCB	**Telegraph Cove**	**2.90**	**109**	Pn	**Pn**	**06 44 23.4**	**-3.2**
KITB	**Kitimat**	**2.94**	**30**	Pn	**Pn**	**06 44 25.9**	**-1.1**
EDB	**Eliza Dome**	**3.07**	**122**	Pn	**Pn**	**06 44 25.1**	**-3.7**
WOSB	**Woss**	**3.22**	**114**	Pn	**Pn**	**06 44 28.2**	**-2.8**
NCRB	**Newcastle Ridg**	**3.42**	**108**	Pn	**Pn**	**06 44 31.5**	**-2.3**
ETB	**Estevan Point**	**3.67**	**125**	Pn	**Pn**	**06 44 33.8**	**-3.3**
GDR	**Gold River**	**3.71**	**117**	Pn	**Pn**	**06 44 34.6**	**-3.0**
CBB	**Campbell River**	**3.97**	**111**	Pn	**Pn**	**06 44 40.0**	**-1.3**
CBB				IAML		06 46 04.6	
	comp=E,78nm,2.0s						
CBB				IAML		06 46 11.7	
	comp=N,69nm,2.8s						
CBB	**Campbell River**	**3.97**	**111**	Pn	**Pn**	**06 44 39.4**	**-1.9**
CBB				Sn	**Sn**	**06 45 24.2**	**-4.3**
CRAG	**Craig**	**4.08**	**344**		**Pn**	**06 44 42.2**	**-0.6**
TOFB	**Tofino**	**4.13**	**124**	Pn	**Pn**	**06 44 41.4**	**-2.0**
BTB	**Buttle Lake**	**4.16**	**118**	Pn	**Pn**	**06 44 40.8**	**-3.2**
B012	**Ucluelet**	**4.46**	**124**	Pn	**Pn**	**06 44 46.7**	**-1.3**
OZB	**Mount Ozzard**	**4.46**	**124**		**Pn**	**06 44 45.8**	**-2.3**
OZB				IAML		06 45 42.9	
	comp=N,45nm,1.4s						
OZB				IAML		06 46 59.9	
	comp=E,51nm,1.7s						
OZB	**Mount Ozzard**	**4.46**	**124**	Pn	**Pn**	**06 44 45.3**	**-2.9**
UBRB	**Upper Baezaeko**	**4.54**	**70**	Pn	**Pn**	**06 44 49.0**	**-0.1**
UBRB				Sg	**Sg**	**06 46 02.7**	**-2.3**
TXB	**Texada**	**4.66**	**111**	Pn	**Pn**	**06 44 48.8**	**-2.0**
BFSB	**Bamfield**	**4.73**	**123**	Pn	**Pn**	**06 44 50.1**	**-1.6**
MGB	**Mount Grey**	**4.87**	**119**	Pn	**Pn**	**06 44 51.4**	**-2.4**
MGB				Sn	**Sn**	**06 45 46.0**	**-4.7**
WRAK	**Wrangell Islan**	**4.91**	**352**	Pn	**Pn**	**06 44 53.7**	**-0.5**
SHB	**Sechelt**	**5.03**	**110**	Pn	**Pn**	**06 44 53.7**	**-2.2**
FSB	**Fort Saint Jam**	**5.04**	**52**	Pn	**Pn**	**06 44 55.6**	**-0.4**
CLRS	**Cowichan Lake**	**5.28**	**119**		**Pn**	**06 45 01.4**	**+2.2**
CLRS				IAML		06 46 28.6	
	comp=E,29nm,2.5s						
CLRS				IAML		06 47 07.3	
	comp=N,38nm,1.9s						
WPB	**Watts Point**	**5.40**	**108**	Pn	**Pn**	**06 44 59.9**	**-1.0**
LLLB	**Lillooet**	**5.91**	**96**	Pn	**Pn**	**06 45 09.5**	**+1.5**
LLLB	**Lillooet**	**5.91**	**96**	Pn	**Pn**	**06 45 07.0**	**-1.0**
NLWA	**Neilton Lookou**	**6.32**	**129**	Pn	**Pn**	**06 45 13.2**	**-0.4**
MBW	**Mount Baker**	**6.56**	**112**	Pn	**Pn**	**06 45 18.6**	**+1.6**
DLBC	**Dease Lake**	**6.91**	**5**	Pn	**Pn**	**06 45 22.8**	**+1.0**
	comp=N,0.9nm,0.3s,baz=193,slow=18,SNR=6.3						
DLBC				Lg	Lg	06 47 12.1	
	comp=N,0.4nm,0.3s,baz=170,slow=15,SNR=2.3						
DLBC				LR	LR	06 47 53.0	
	comp=N,387nm,19.1s,baz=287,slow=37						
DLBC	**Dease Lake**	**6.91**	**5**	Pn	**Pn**	**06 45 23.4**	**+1.7**
DLBC	**Dease Lake**	**6.91**	**5**	Pn	**Pn**	**06 45 21.5**	**-0.2**
BMBC	**Bull Mountain**	**6.97**	**46**	Pn	**Pn**	**06 45 23.1**	**+0.6**
JIS	**Juneau Island**	**6.98**	**346**	Pn	**Pn**	**06 45 22.3**	**-0.2**
RADR	**Rader Ridge**	**7.06**	**134**	Pn	**Pn**	**06 45 25.8**	**+2.0**
D05A	**Enumclaw**	**7.41**	**123**	Pn	**Pn**	**06 45 31.2**	**+2.7**
PNT	**Penticton**	**7.70**	**103**	Pn	**Pn**	**06 45 32.5**	**0.0**
NBC5	**NorthernBC 5**	**7.73**	**36**	Pn	**Pn**	**06 45 33.7**	**+0.7**
LON	**Longmire**	**7.79**	**125**		**Pn**	**06 45 35.6**	**+1.8**
LTY	**Liberty**	**8.07**	**118**		**Pn**	**06 45 37.8**	**+0.1**
B08A	**Colville Reser**	**8.26**	**108**		**Pn**	**06 45 42.9**	**+2.6**
HOOD	**Mount Hood Mea**	**8.87**	**131**		**Pn**	**06 45 50.9**	**+2.2**
E07A	**Sunnyside**	**8.94**	**120**	Pn	**Pn**	**06 45 52.0**	**+2.5**
HAWA	**Hanford**	**9.22**	**120**	Pn	**Pn**	**06 45 56.5**	**+3.2**
F07A	**Phinny Hill Vi**	**9.33**	**123**	Pn	**Pn**	**06 45 58.4**	**+3.5**
WHY	**Whitehorse**	**9.35**	**349**	Pn	**Pn**	**06 45 55.8**	**+0.7**
WHY	**Whitehorse**	**9.35**	**349**	Pn	**Pn**	**06 45 53.0**	**-2.1**
NEW	**Newport**	**9.63**	**105**	Pn	**Pn**	**06 45 59.5**	**+0.6**
	comp=N,0.1nm,0.3s,baz=93,slow=20,SNR=1.4						
NEW				Lg	Lg	06 48 34.4	
	comp=N,0.0nm,0.3s,baz=68,slow=21,SNR=2.3						
NEW				LR	LR	06 49 30.7	
	comp=N,604nm,18.3s,baz=291,slow=37						
E09A	**Wood Farm, Sta**	**9.91**	**116**	Pn	**Pn**	**06 46 04.8**	**+2.0**
G08A	**Pilot Rock**	**10.24**	**123**	Pn	**Pn**	**06 46 09.2**	**+1.8**
PINE	**Pine Mountain**	**10.38**	**135**	Pn	**Pn**	**06 46 11.9**	**+2.6**
KBO	**Bosley Butte**	**10.48**	**151**	Pn	**Pn**	**06 46 13.9**	**+3.2**
HUMO	**Hull Mountain**	**10.55**	**145**	Pn	**Pn**	**06 46 13.5**	**+1.9**
F10A	**Beach Ranch, E**	**10.75**	**116**		**Pn**	**06 46 16.2**	**+1.9**
K05A	**Summer Lake**	**11.26**	**138**	Pn	**Pn**	**06 46 23.8**	**+2.4**
BMO	**Blue Mountains**	**11.41**	**121**	Pn	**Pn**	**06 46 25.1**	**+1.7**
YBH	**Yreka Blue Hor**	**11.41**	**146**	Pn	**Pn**	**06 46 26.3**	**+2.9**
	comp=N,0.0nm,0.3s,baz=289,slow=12,SNR=2.7						
YBH				LR	LR	06 50 06.5	
	comp=N,518nm,18.4s,baz=328,slow=34						
J08A	**Circle Bar Ran**	**11.86**	**129**		**Pn**	**06 46 31.8**	**+2.3**
PLID	**Pearl Lake**	**11.97**	**117**	Pn	**Pn**	**06 46 34.4**	**+3.2**
MOD	**Modoc Plateau**	**12.18**	**138**		**Pn**	**06 46 36.3**	**+2.3**
MSO	**Missoula**	**12.20**	**106**		**Pn**	**06 46 36.5**	**+2.2**
HIN	**Hinchinbrook I**	**12.31**	**322**	Pn	**Pn**	**06 46 36.2**	**+0.7**
WDC	**Whiskeytown Da**	**12.50**	**148**		**Pn**	**06 46 41.5**	**+3.4**
MFID	**Camas Ranch**	**13.16**	**122**	Pn	**Pn**	**06 46 47.7**	**+0.4**
DLMT	**Dillon**	**13.76**	**110**		**Pn**	**06 46 57.9**	**+2.3**
HLID	**Hailey**	**13.82**	**119**		**Pn**	**06 46 57.6**	**+1.2**
BCYI	**Bear Canyon**	**13.91**	**115**	Pn	**Pn**	**06 47 00.9**	**+3.3**
DOT	**Dot Lake**	**13.91**	**335**	Pn	**Pn**	**06 46 56.8**	**-0.6**
MCMT	**McKenzie Canyo**	**13.92**	**112**	Pn	**Pn**	**06 47 01.0**	**+3.2**
EGMT	**Eagleton**	**14.25**	**96**		**Pn**	**06 47 03.3**	**+1.2**
PAHR	**Pah Rah Range**	**14.41**	**141**		**Pn**	**06 47 07.3**	**+2.9**
MPK	**Martis Peak**	**14.52**	**143**		**Pn**	**06 47 07.1**	**+1.0**
VCNR	**Virginia City**	**14.66**	**142**		**Pn**	**06 47 11.6**	**+3.6**
BMN	**Battle Mountai**	**14.72**	**134**		**Pn**	**06 47 11.3**	**+2.6**
QLMT	**Earthquake Lak**	**14.75**	**109**	Pn	**Pn**	**06 47 11.7**	**+2.6**
YERR	**Yerington**	**15.09**	**142**		**Pn**	**06 47 16.3**	**+2.6**
YHH	**Holmes Hill**	**15.11**	**109**		**Pn**	**06 47 16.3**	**+2.2**
YHH				IAmb	IAmb	06 47 23.4	
	comp=Z,7.3nm,1.0s						
YMR	**Madison River**	**15.11**	**109**		**Pn**	**06 47 15.9**	**+1.9**
YMR				IAmb	IAmb	06 47 23.6	
	comp=Z,9.8nm,0.9s						
YNR	**Norris Junctio**	**15.25**	**109**		**P**	**06 47 19.2**	**-1.8**
YNR				IAmb	IAmb	06 47 37.7	
	comp=Z,8.7nm,1.1s						
ELK	**Elko**	**15.41**	**128**	Pn	**Pn**	**06 47 20.5**	**+2.5**
	comp=Z,0.1nm,0.3s,baz=322,slow=12,SNR=3.2						
ELK				LR	LR	06 53 20.4	
	comp=Z,345nm,19.3s,baz=324,slow=38						
H17A	**Grant Village**	**15.49**	**110**		**Pn**	**06 47 21.3**	**+2.1**
H17A				IAmb	IAmb	06 47 34.3	
	comp=Z,10nm,1.2s						
ILAR	**Eielson Array**	**15.55**	**334**	Pn	**P**	**06 47 22.9**	**-1.1**
	comp=Z,0.0nm,0.3s,baz=146,slow=8.3,SNR=17						
ILAR				LR	LR	06 53 11.2	
	comp=Z,360nm,18.4s,baz=146,slow=37						
FLWY	**Flagg Ranch**	**15.60**	**111**		**Pn**	**06 47 22.9**	**+2.4**
FLWY				IAmb	IAmb	06 47 31.2	
	comp=Z,9.6nm,1.1s						
RYN	**Ryan**	**15.68**	**141**		**Pn**	**06 47 23.0**	**+1.5**
RYN				IAmb	IAmb	06 47 36.7	
	comp=Z,11nm,1.1s						
FXWY	**Fox Creek**	**15.68**	**113**		**P**	**06 47 24.7**	**-1.0**
FXWY				IAmb	IAmb	06 47 30.6	
	comp=Z,8.8nm,0.9s						
MOOW	**Moose Ponds**	**15.78**	**112**		**P**	**06 47 26.1**	**-0.8**
MOOW				IAmb	IAmb	06 47 34.6	
	comp=Z,8.8nm,0.9s						
TPAW	**Teton Pass**	**15.81**	**113**		**P**	**06 47 26.1**	**-1.2**
TPAW				IAmb	IAmb	06 47 32.3	
	comp=Z,17nm,1.0s						
RLMT	**Red Lodge**	**15.88**	**105**		**P**	**06 47 26.6**	**-1.3**
HVU	**Hansel Valley**	**15.92**	**121**		**P**	**06 47 27.3**	**-1.1**
NVAR	**Mina Array Bea**	**15.94**	**141**	Pn	**Pn**	**06 47 26.4**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=326,slow=12,SNR=11						
NVAR				LR	LR	06 54 02.5	
	comp=Z,310nm,18.4s,baz=334,slow=39						
NVAR	**Mina Array Bea**	**15.94**	**141**		**Pn**	**06 47 26.8**	**+1.9**
LOHW	**Long Hollow**	**15.94**	**112**		**P**	**06 47 28.1**	**-0.5**
LOHW				IAmb	IAmb	06 47 45.8	
	comp=Z,9.8nm,1.1s						
SNOW	**Snow King Moun**	**15.94**	**113**		**P**	**06 47 28.2**	**-0.5**
SNOW				IAmb	IAmb	06 47 34.0	
	comp=Z,15nm,1.1s						
REDW	**Red Top Meadow**	**15.95**	**113**		**P**	**06 47 27.7**	**-1.0**
REDW				IAmb	IAmb	06 47 46.0	
	comp=Z,20nm,1.1s						
POKR	**Poker Plat Res**	**15.97**	**334**		**P**	**06 47 27.0**	**-1.6**
POKR				IAmb	IAmb	06 47 38.6	
	comp=Z,11nm,1.0s						
NV11	**Mina Array Sit**	**15.99**	**140**		**Pn**	**06 47 26.3**	**+0.8**
LHV	**Little Huntoon**	**16.01**	**141**		**Pn**	**06 47 28.3**	**+2.7**
LHV				IAmb	IAmb	06 47 37.9	
	comp=Z,12nm,1.1s						
NEA2	**Nenana**	**16.04**	**331**		**Pn**	**06 47 27.1**	**+1.3**
AHID	**Auburn Hatcher**	**16.18**	**115**	P	**P**	**06 47 31.3**	**0.0**
MDPB	**Devils Postpil**	**16.34**	**144**		**P**	**06 47 32.8**	**-0.3**
TPH	**Tonopah**	**16.68**	**139**		**Pn**	**06 47 35.7**	**+1.3**
INK	**Inuvik**	**16.83**	**357**	Pn	**P**	**06 47 37.8**	**-0.3**
	comp=Z,0.0nm,0.3s,baz=99,slow=9.1,SNR=2.3						
INK				LR	LR	06 54 42.9	
	comp=Z,242nm,18.4s,baz=172,slow=40						
K20K	**Telida**	**16.95**	**323**		**Pn**	**06 47 37.9**	**+0.5**
K20K				IAmb	IAmb	06 47 45.9	
	comp=Z,16nm,1.3s						
DUG	**Dugway, Tooele**	**17.04**	**125**	P	**P**	**06 47 42.2**	**+1.5**
BW06	**Boulder Array**	**17.06**	**113**	P	**P**	**06 47 42.2**	**+1.2**
BW06				IAmb	IAmb	06 47 46.2	
	comp=Z,8.8nm,1.0s						
PD31	**Pinedale Array**	**17.06**	**113**	P	**P**	**06 47 41.7**	**+0.6**
PDAR	**Pinedale Array**	**17.06**	**113**	Pn	**P**	**06 47 41.8**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=316,slow=10,SNR=14						
PDAR				LR	LR	06 54 09.2	
	comp=Z,245nm,18.4s,baz=316,slow=37						
PDAR	**Pinedale Array**	**17.06**	**113**	P	**P**	**06 47 42.0**	**+0.9**
R11A	**Troy Canyon, C**	**17.15**	**134**	P	**P**	**06 47 42.9**	**+0.9**
LCH	**Last Change Ra**	**17.23**	**141**	P	**P**	**06 47 43.7**	**+0.8**
CTU	**Camp Tracy**	**17.23**	**122**	P	**Pn**	**06 47 41.8**	**+0.5**
I21K	**Tanana**	**17.35**	**330**	P	**Pn**	**06 47 42.3**	**-0.1**
I21K				IAmb	IAmb	06 47 50.7	
	comp=Z,21nm,1.4s						
H21K	**Melozitna Rive**	**17.92**	**330**	P	**P**	**06 47 50.3**	**+0.1**
H21K				IAmb	IAmb	06 47 56.0	
	comp=Z,26nm,1.4s						
PRN	**Pahroc Range**	**18.17**	**135**	P	**P**	**06 47 53.9**	**+0.7**
PRN				IAmb	IAmb	06 47 58.6	
	comp=Z,13nm,1.4s						
ISA	**Isabella, Lake**	**18.31**	**145**	P	**Pn**	**06 47 54.6**	**0.0**
ISA				IAmb	IAmb	06 48 04.4	
	comp=Z,13nm,1.4s						
IMAR	**Indian Mountai**	**18.43**	**330**	P	**Pn**	**06 47 57.7**	**+1.9**
GWY	**Greenwater Val**	**18.53**	**140**	P	**Pn**	**06 47 59.8**	**+2.5**
MVU	**Marysvale**	**18.62**	**127**	P	**Pn**	**06 48 01.2**	**+2.7**
MSU	**Marysvale**	**18.64**	**127**	P	**Pn**	**06 48 00.5**	**+1.9**
QSM	**Queen of Sheba**	**18.64**	**141**	P	**Pn**	**06 48 00.4**	**+1.9**
QSM				IAmb	IAmb	06 48 07.9	
	comp=Z,17nm,1.5s						
CCUT	**Cedar City**	**18.82**	**131**	P	**Pn**	**06 48 01.8**	**+0.9**
MTPU	**Mount Pierson**	**19.00**	**128**	P	**Pn**	**06 48 04.8**	**+1.6**
MTPU				IAmb	IAmb	06 48 12.9	
	comp=Z,12nm,1.5s						
SRU	**San Rafael Swe**	**19.03**	**123**	P	**Pn**	**06 48 05.2**	**+1.8**
RWWY	**Rawlins**	**19.09**	**112**	P	**Pn**	**06 48 05.2**	**+0.9**
RWWY				IAmb	IAmb	06 48 33.3	
	comp=Z,14nm,1.2s						
GSC	**Goldstone, Bar**	**19.25**	**142**	P	**Pn**	**06 48 07.5**	**+1.5**
GSC				IAmb	IAmb	06 48 29.1	
	comp=Z,14nm,1.5s						
LCMT	**Little Creek M**	**19.31**	**132**	P	**Pn**	**06 48 08.2**	**+1.4**
LCMT				IAmb	IAmb	06 48 21.9	
	comp=Z,11nm,1.3s						
U15A	**North Rim**	**20.23**	**131**	P	Pn	06 48 18.1	+0.3
U15A				IAmb	IAmb	06 48 23.9	
	comp=Z,9.7nm,1.0s						
W13A	**Hualapai Mount**	**20.61**	**136**	P	Pn	06 48 22.1	-0.1
W13A				IAmb	IAmb	06 48 32.2	
	comp=Z,8.1nm,1.1s						
A36M	**Sachs Harbour**	**20.66**	**5**	P	**P**	**06 48 20.2**	**+0.2**
A36M				IAmb	IAmb	06 48 32.4	
	comp=Z,6.5nm,0.9s						
PFO	**Pinyon Flats O**	**20.88**	**144**	P	Pn	06 48 26.1	+0.8
	comp=Z,4.3nm,1.0s,baz=328,slow=6.8,SNR=3.9						
PFO	**Pinyon Flats O**	**20.88**	**144**	P	**P**	**06 48 24.1**	**+1.3**
PFO				IAmb	IAmb	06 48 29.5	
	comp=Z,11nm,1.2s						
WUAZ	**Wupatki**	**21.40**	**131**	P	**P**	**06 48 30.7**	**+2.2**
MVCO	**Mesa Verde**	**21.51**	**123**	P	**P**	**06 48 31.2**	**+1.4**
Y14A	**Wickenburg**	**21.98**	**136**	P	**P**	**06 48 36.3**	**+1.7**
Y14A				IAmb	IAmb	06 48 41.3	
	comp=Z,16nm,1.5s						
GLA	**Glamis**	**22.00**	**141**	P	**P**	**06 48 37.1**	**+2.3**
ULM	**Lac du Bonnet**	**22.15**	**79**	P	**P**	**06 48 36.8**	**+0.5**
	comp=Z,4.2nm,0.9s,baz=302,slow=9.5,SNR=3.2						
ULM				LR	LR	06 56 11.9	
	comp=Z,152nm,18.8s,baz=288,slow=34						
ULM	**Lac du Bonnet**	**22.15**	**79**	IAmb	IAmb	06 48 40.1	
	comp=Z,9.6nm,1.2s						
X16A	**Lo Mia Camp, P**	**22.27**	**133**	P	**P**	**06 48 40.6**	**+2.7**
X16A				IAmb	IAmb	06 48 48.7	
	comp=Z,10nm,1.3s						
W18A	**Petrified Fore**	**22.51**	**129**	P	**P**	**06 48 42.1**	**+1.7**
SUSD	**Miller**	**22.55**	**96**	P	**P**	**06 48 41.5**	**+0.9**
SDCO	**Great Sand Dun**	**22.73**	**117**	P	**P**	**06 48 44.2**	**+1.3**
F33A	**5 Mile Ranch,**	**23.54**	**90**	P	**P**	**06 48 52.7**	**+1.8**
ANMO	**Albuquerque**	**24.30**	**124**	P	**P**	**06 48 59.2**	**+0.8**
	comp=Z,1.5nm,0.8s,baz=311,slow=13,SNR=5.9						
ANMO	**Albuquerque**	**24.30**	**124**	P	**P**	**06 48 59.0**	**+0.7**
ANMO				IAmb	IAmb	06 49 01.9	
	comp=Z,3.2nm,1.1s						
LENM	**Lemitar**	**24.64**	**126**	P	**P**	**06 49 04.2**	**+2.8**
BNM	**Barren Site**	**24.83**	**125**	P	**P**	**06 49 05.4**	**+2.2**
121A	**Cookes Peak, D**	**25.55**	**129**	P	**P**	**06 49 11.1**	**+1.4**
EYMN	**Ely**	**25.64**	**82**	P	**P**	**06 49 12.0**	**+1.8**
319A	**Douglas**	**25.81**	**133**	P	**P**	**06 49 13.8**	**+1.9**
RES	**Resolute Bay**	**27.50**	**20**	LR	LR	07 01 09.7	
	comp=Z,221nm,18.4s,baz=238,slow=38						
WMOK	**Wichita Mounta**	**28.67**	**113**	P	**P**	**06 49 39.9**	**+2.4**
WMOK				IAmb	IAmb	06 49 44.4	
	comp=Z,5.0nm,1.1s						
OK029	**Liberty Lake**	**28.70**	**110**	P	**P**	**06 49 40.1**	**+2.4**
TX31	**Lajitas Ar. Si**	**30.19**	**127**	P	**P**	**06 49 53.9**	**+2.7**
TXAR	**Lajitas Array**	**30.19**	**127**	P	**P**	**06 49 52.3**	**+1.1**
	comp=Z,1.7nm,1.1s,baz=324,slow=5.9,SNR=7.5						
TXAR				LR	LR	07 02 36.8	
	comp=Z,147nm,18.4s,baz=0.0,slow=38						
TXAR	**Lajitas Array**	**30.19**	**127**	P	**P**	**06 49 53.7**	**+2.6**
SCHQ	**Schefferville**	**37.45**	**59**	LR	LR	07 06 47.4	
	comp=Z,227nm,21.1s,baz=88,slow=37						
SEY	**Seymchan**	**40.40**	**317**	LR	LR	07 08 00.4	
	comp=Z,61nm,18.2s,baz=60,slow=36						
PETK	**Petropavlovsk-**	**41.85**	**301**	LR	LR	07 06 56.6	
	comp=Z,94nm,18.6s,baz=74,slow=33						
MA2	**Magadan**	**42.43**	**312**	LR	LR	07 08 22.7	
	comp=Z,100nm,21.1s,baz=58,slow=35						
YAK	**Yakutsk**	**50.05**	**323**	LR	LR	07 14 27.4	
	comp=Z,104nm,18.3s,baz=89,slow=37						
ASAJ	**Asahikawa**	**55.16**	**299**	LR	LR	07 13 42.7	
	comp=Z,25nm,21.6s,baz=241,slow=33						
KLR	**Kul'dur**	**57.36**	**309**	LR	LR	07 17 33.0	
	comp=Z,67nm,20.2s,baz=48,slow=35						
H11N2	**WAKE ISLAND Hy**	**57.41**	**261**	T	T	07 56 28.2	
	baz=40,slow=76,SNR=49						
H11N3	**WAKE ISLAND Hy**	**57.42**	**261**	T	T	07 56 28.4	
	baz=40,slow=76,SNR=49						
H11N1	**WAKE ISLAND Hy**	**57.43**	**261**	T	T	07 56 29.4	
	baz=40,slow=76,SNR=40						
ARCES	**ARCESS Array B**	**58.00**	**9**	LR	LR	07 19 23.9	
	comp=Z,52nm,19.2s,baz=30,slow=37						
H11S1	**WAKE ISLAND Hy**	**58.46**	**260**	T	T	07 57 21.5	
	baz=48,slow=75,SNR=9.6						
H11S2	**WAKE ISLAND Hy**	**58.47**	**260**	T	T	07 57 22.5	
	baz=48,slow=75,SNR=10						
H11S3	**WAKE ISLAND Hy**	**58.48**	**260**	T	T	07 56 55.1	
	baz=48,slow=75,SNR=8.2						
USRK	**Ussuriysk Ar.**	**60.72**	**305**	LR	LR	07 20 13.5	
	comp=Z,30nm,19.3s,baz=36,slow=36						
NOA	**NORSAR Array B**	**63.77**	**19**	LR	LR	07 22 55.6	
	comp=Z,49nm,19.0s,baz=340,slow=37						
FINES	**FINESS Array B**	**65.88**	**12**	LR	LR	07 23 54.3	
	comp=Z,60nm,18.1s,baz=322,slow=37						
KSRS	**Korea Array**	**67.73**	**302**	LR	LR	07 21 24.8	
	comp=Z,16nm,21.2s,baz=46,slow=33						
SONM	**Songino Array**	**69.41**	**323**	LR	LR	07 25 55.8	
	comp=Z,102nm,18.8s,baz=22,slow=36						
ZALV	**Zalesovo Beam**	**70.64**	**338**	LR	LR	07 28 17.3	
	comp=Z,62nm,18.0s,baz=20,slow=38						
HHC	**Hu-ho-hao-te**	**73.03**	**315**	*e*P	**P**	**06 55 10.5**	**-0.2**
HHC				pmax	pmax		
	comp=Z,9.0nm,1.3s						
HHC				pmax	pmax		
	comp=Z,130nm,5.7s						
GUMO	**Guam**	**75.76**	**274**	LR	LR	07 22 25.5	
	comp=Z,40nm,21.7s,baz=111,slow=31						
AKASG	**Malin Array Be**	**76.75**	**13**	LR	LR	07 29 47.5	
	comp=Z,30nm,18.1s,baz=280,slow=36						
MKAR	**Makanchi Array**	**77.89**	**337**	LR	LR	07 34 55.5	
	comp=Z,53nm,19.2s,baz=14,slow=40						
AKTO	**Aktyubinsk**	**78.08**	**354**	LR	LR	07 36 02.9	
	comp=Z,25nm,18.5s,baz=39,slow=40						
WMQ	**Urumqi**	**79.21**	**332**	*e*P	**P**	**06 55 49.3**	**+3.5**
KEST	**Kesra**	**86.42**	**31**	LR	LR	07 35 29.2	
	comp=Z,74nm,18.9s,baz=266,slow=36						
CMAR	**Chiang Mai Arr**	**97.72**	**313**	LR	LR	07 43 47.3	
	comp=Z,28nm,18.7s,baz=305,slow=37						
VNA3	**Neumayer Olymp**	**147.64**	**149**	PKPdf	**PKPbc**	**07 03 24.2**	**+0.3**
VNA1	**Neumayer--Stat**	**148.16**	**148**	PKPdf	**PKPbc**	**07 03 24.2**	**-1.0**
VNA2	**Neumayer--Watz**	**148.42**	**149**	PKPdf	**PKPbc**	**07 03 25.5**	**-0.5**
SNAA	**Sanae**	**149.72**	**150**	PKPdf	**PKPbc**	**07 03 27.9**	**-1.4**

PGC 22 06:45:28.7±2.8**, 51°.47N**×**131°.28W, h10**^{km}**, MLSn3.3**/1**, Mw3.9**/1**, 201km Sse of Sandspit, Bc Haida Gwaii Region, Queen Charlotte Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HG4B	**Hotspring**	**0.83**	**4**	P	Pg	06 45 43.7	-0.9
HG4B				S	Sg	06 45 53.6	-1.9
BNB	**Barry Inlet**	**1.15**	**346**	P	Pb	06 45 48.7	-1.9
BNB				S	Sb	06 46 02.8	-2.8
VIB	**Van Inlet**	**1.95**	**337**	Pn	Pn	06 46 00.6	-1.2
VIB				Sn	Sn	06 46 22.0	-4.4
BNKB	**Banks Island**	**2.05**	**24**	Pn	Pn	06 46 01.5	-1.7
BBB	**Bella Bella**	**2.09**	**69**	Pn	Pn	06 46 02.2	-1.5
BBB				Sn	Sn	06 46 27.0	-2.8
HOLB	**Holberg**	**2.15**	**111**	Pn	Pn	06 46 02.5	-2.1
BUTB	**Butedale**	**2.36**	**46**	Pn	Pn	06 46 06.7	-0.8
GRNB	**Grenville Isla**	**2.52**	**18**	Pn	Pn	06 46 08.4	-1.3
GRNB				Sn	Sn	06 46 38.1	-2.2
PHC	**Port Hardy**	**2.54**	**106**	Pn	Pn	06 46 08.1	-1.9
PACB	**Port Alice, BC**	**2.61**	**112**	Pn	Pn	06 46 10.2	-0.6
MAYB	**Maynard**	**2.81**	**111**	Pn	Pn	06 46 12.5	-1.3
MAYB				Sn	Sn	06 46 43.6	-4.1
RUBB	**Prince Rupert**	**2.93**	**12**	Pn	Pn	06 46 14.5	-0.7
TLCB	**Telegraph Cove**	**2.96**	**106**	Pn	Pn	06 46 15.0	-0.6
WOSB	**Woss**	**3.26**	**112**	Pn	Pn	06 46 20.2	+0.3

PGC 22 06:48:08.5±2.6**, 51°.45N**×**131°.33W, h10**^{km}**, MLSn3.0**/13**, Mw3.6**/13**, 203km Sse of Sandspit, Bc Haida Gwaii Region, Queen Charlotte Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HG4B	**Hotspring**	**0.85**	**5**	P	Pg	06 48 23.9	-1.0
HG4B				S	Sg	06 48 34.4	-1.6
BNB	**Barry Inlet**	**1.16**	**347**	P	Pb	06 48 28.9	-1.8
BNB				S	Sb	06 48 43.2	-2.7
HG1B	**Mitchell Dam**	**1.57**	**342**	Sn	Sn	06 48 52.0	-4.8
MOBC	**Moresby Island**	**1.75**	**347**	Pn	Pn	06 48 37.4	-1.5
MOBC				Sn	Sn	06 48 57.2	-4.0
DIB	**Dawson Inlet,**	**1.90**	**339**	Pn	Pn	06 48 39.2	-1.6
VIB	**Van Inlet**	**1.96**	**338**	Pn	Pn	06 48 40.1	-1.7
VIB				Sn	Sn	06 49 02.2	-4.2
BNKB	**Banks Island**	**2.08**	**24**	Pn	Pn	06 48 42.0	-1.4
BNAB	**Bonilla**	**2.09**	**11**	Pn	Pn	06 48 42.2	-1.3
BBB	**Bella Bella**	**2.13**	**68**	Pn	Pn	06 48 42.2	-1.8
BBB				Sn	Sn	06 49 07.4	-3.1

HOLB	**Holberg**	2.17	111	Pn	Pn	06 48 43.0	-1.8
HOLB				Sn	Sn	06 49 07.8	-3.9
BUTB	**Butedale**	2.39	46	Pn	Pn	06 48 46.4	-1.4
HWKB	**Hawksbury Isla**	2.53	31	Pn	Pn	06 48 48.3	-1.4
GRNB	**Grenville Isla**	2.55	19	Pn	Pn	06 48 48.7	-1.1
GRNB				Sn	Sn	06 49 17.7	-3.2
PHC	**Port Hardy**	2.57	105	Pn	Pn	06 48 48.1	-2.0
PHC				Sn	Sn	06 49 16.9	-4.5
PACB	**Port Alice, BC**	2.63	111	Pn	Pn	06 48 49.7	-1.2
PACB				Sn	Sn	06 49 18.7	-4.1
MAYB	**Maynard**	2.83	110	Pn	Pn	06 48 52.7	-1.2
MAYB				Sn	Sn	06 49 24.8	-3.3
RUBB	**Prince Rupert**	2.96	12	Pn	Pn	06 48 54.8	-0.6
TLCB	**Telegraph Cove**	2.98	106	Pn	Pn	06 48 54.4	-1.3
KITB	**Kitimat**	3.10	31	Pn	Pn	06 48 55.9	-1.5
EDB	**Eliza Dome**	3.11	119	Pn	Pn	06 48 55.9	-1.6
EDB				Sn	Sn	06 49 29.9	-4.8
WOSB	**Woss**	3.28	111	Pn	Pn	06 48 59.1	-0.9
GDR	**Gold River**	3.76	114	Pn	Pn	06 49 04.9	-1.6
SPLB	**Strathcona Par**	3.93	111	Pn	Pn	06 49 07.8	-1.1
UBRB	**Upper Baezaeko**	4.69	69	Pn	Pn	06 49 19.2	-0.2
TXB	**Texada**	4.73	109	Pn	Pn	06 49 18.6	-1.3

PGC 22 06:59:13.7±1.9,**51°.42N**×**131°.38W**,**h10^{km}**,**MLSn3.3**/23, **Mw3.9**/23,**205km Sse of Sandspit, Bc Haida Gwaii Region,Queen Charlotte Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HG4B	**Hotspring**	0.88	7	P	Pg	06 59 29.1	-1.6
HG4B				S	Sg	06 59 39.4	-2.8
BNB	**Barry Inlet**	1.18	349	P	Pb	06 59 34.0	-2.2
BNB				S	Sb	06 59 48.5	-3.1
MOBC	**Moresby Island**	1.77	348	Pn	Pn	06 59 43.3	-1.1
DIB	**Dawson Inlet,**	1.91	340	Pn	Pn	06 59 44.4	-1.8
VIB	**Van Inlet**	1.97	339	Pn	Pn	06 59 45.5	-1.7
BNKB	**Banks Island**	2.12	25	Pn	Pn	06 59 47.2	-1.9
BNKB				Sn	Sn	07 00 10.8	-4.8
BNAB	**Bonilla**	2.13	12	Pn	Pn	06 59 47.7	-1.5
BBB	**Bella Bella**	2.17	68	Pn	Pn	06 59 47.8	-2.1
BBB				Sn	Sn	07 00 14.2	-2.6
HOLB	**Holberg**	2.20	110	Pn	Pn	06 59 48.2	-2.0
BUTB	**Butedale**	2.44	46	Pn	Pn	06 59 52.1	-1.5
GRNB	**Grenville Isla**	2.58	19	Pn	Pn	06 59 54.1	-1.4
GRNB				Sn	Sn	07 00 23.2	-3.7
PHC	**Port Hardy**	2.59	104	Pn	Pn	06 59 53.1	-2.5
PHC				Sn	Sn	07 00 23.8	-3.3
PACB	**Port Alice, BC**	2.65	110	Pn	Pn	06 59 54.9	-1.5
PACB				Sn	Sn	07 00 26.0	-2.5
MAYB	**Maynard**	2.85	109	Pn	Pn	06 59 57.4	-2.0
RUBB	**Prince Rupert**	2.99	13	Pn	Pn	07 00 00.1	-1.0
TLCB	**Telegraph Cove**	3.00	105	Pn	Pn	06 59 59.7	-1.5
EDB	**Eliza Dome**	3.12	118	Pn	Pn	07 00 01.6	-1.3
KITB	**Kitimat**	3.14	31	Pn	Pn	07 00 01.3	-1.8
WOSB	**Woss**	3.30	111	Pn	Pn	07 00 04.3	-1.1
NCRB	**Newcastle Ridg**	3.52	105	Pn	Pn	07 00 07.5	-1.0
ETB	**Estevan Point**	3.71	122	Pn	Pn	07 00 09.7	-1.3
GDR	**Gold River**	3.78	114	Pn	Pn	07 00 11.7	-0.2
CBB	**Campbell River**	4.07	108	Pn	Pn	07 00 14.8	-1.1
BTB	**Buttle Lake**	4.22	115	Pn	Pn	07 00 17.3	-0.9
OZB	**Mount Ozzard**	4.51	121	Pn	Pn	07 00 20.9	-1.2
UBRB	**Upper Baezaeko**	4.73	69	Pn	Pn	07 00 24.7	-0.4
UBRB				Sg	Sg	07 01 41.1	-4.3
TXB	**Texada**	4.75	109	Pn	Pn	07 00 24.6	-0.7
MGB	**Mount Grey**	4.93	117	Pn	Pn	07 00 27.0	-0.9
SHB	**Sechelt**	5.13	108	Pn	Pn	07 00 30.3	-0.3
FSB	**Fort Saint Jam**	5.25	52	Pn	Pn	07 00 31.3	-0.9

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*IDC **22** 07:03:24.9±1.6,31°.45N×128°.37E,h0^{km},mb3.4/2, mb1 3.6/5,mb1mx3.4/45,mbtmp3.5/5,ML3.1/2,MS3.0/5, Ms1 3.0/5,ms1mx2.7/41,Error ellipse: s-maj=40.1km s-min=18.3km az=104.0*

*JMA **22** 07:03:26.3±0.4,31°.38N×128°.81E,h11^{km}±3^{km},M3.7*

*NIED **22** 07:03:26.4,31°.38N×128°.81E,h11^{km},MW3.9,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.28; $M_{\theta\theta}$5.87; $M_{\phi\phi}$-5.59; $M_{r\theta}$4.16; $M_{\theta\phi}$3.43; $M_{\phi r}$-2.15; Fault plane solution: $M_0$8.15000×10^{14} NP1: ϕ_s299.00000°,δ89.00000°,λ-35.00000°. NP2:ϕ_s29.00000°, δ55.00000°,λ-179.00000°.*

ISC 22 07:03:26.0±1.3,**31°.35N**±0°.06×**128°.77E**±0°.07,**h10^{km}**,**n18**, σ**1^{s}.36**/16,**MS2.8**/3,**Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	**Shimokoshiki**	0.87	68	P	Pg	07 03 41.6	-1.1
JSJ				*e*S	Sg	07 03 52.6	-1.5
JFU	**Fukue jima 2**	1.30	359	P	Pn	07 03 49.7	-0.5
JSU	**Suzuyama**	1.45	83	P	Pn	07 03 52.1	-0.1
JNN	**Nakanoshima**	1.78	147	P	Pn	07 03 56.2	-0.6
JYAK	**Yakushimahirau**	1.86	126	P	Pn	07 03 56.6	-1.3
JTN	**Tanegashima 3**	2.02	110	P	Pn	07 03 59.7	-0.4
JTZ	**Takazaki**	2.05	74	P	Pn	07 04 00.6	+0.1
JMTN	**Minamitane**	2.06	117	P	Pn	07 04 00.4	-0.3
JIU3	**Izumi3**	2.11	55	P	Pn	07 04 01.5	+0.2
JNU	**Nakatsue**	2.51	45	Pn	Pb	07 04 11.2	0.0
	6.2nm,0.3s,baz=196,slow=0.7,SNR=26						
JNU				Sn	Sb	07 04 42.9	+0.8
	6.1nm,0.3s,baz=206,slow=6.1,SNR=4.8						
JOW	**Kunigami**	4.52	186	LR	LR	07 06 23.9	
	comp=Z,131nm,21.1s,baz=168,slow=39						
KSRS	**Korea Array**	6.13	354	Pn	Pn	07 04 55.2	-1.3
	0.3nm,0.3s,baz=172,slow=14,SNR=4.2						
KSRS				Lg	Lg	07 06 32.6	
	0.4nm,0.3s,baz=172,slow=30,SNR=2.8						
KSRS				LR	LR	07 07 22.4	
	comp=Z,131nm,21.4s,baz=178,slow=40						
MJAR	**Matsushiro Arr**	9.39	54	Pn	Pn	07 05 45.0	+3.6
	baz=241,slow=13,SNR=2.1						
CMAR	**Chiang Mai Arr**	29.84	252	LR	LR	07 21 10.1	
	comp=Z,26nm,21.9s,baz=158,slow=36						
MA2	**Magadan**	31.85	21	LR	LR	07 23 35.1	
	comp=Z,54nm,19.3s,baz=48,slow=38						
KAPI	**Kappang**	37.17	195	LR	LR	07 28 37.5	
	comp=Z,13nm,18.9s,baz=124,slow=41						
WRA	**Warramunga Arr**	51.28	173	P	P	07 12 30.9	+0.7
	0.4nm,0.8s,baz=359,slow=7.9,SNR=2.6						
ASAR	**Alice Springs**	54.93	174	P	P	07 12 58.6	+1.5
	0.4nm,0.6s,baz=3.4,slow=14,SNR=12						

PGC 22 07:05:14.6±0.7,**51°.44N**×**131°.33W**,**h10^{km}**,**MLSn3.2**/23, **Mw3.8**/23,**204km Sse of Sandspit, Bc Haida Gwaii Region,Queen Charlotte Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HG4B	**Hotspring**	0.86	5	P	Pg	07 05 30.2	-1.0
HG4B				S	Sg	07 05 40.8	-1.6
BNB	**Barry Inlet**	1.17	347	P	Pb	07 05 35.2	-1.7
BNB				S	Sb	07 05 49.0	-3.2
HG1B	**Mitchell Dam**	1.58	342	Sn	Sn	07 05 58.9	-4.2
MOBC	**Moresby Island**	1.75	347	Pn	Pn	07 05 43.8	-1.3
MOBC				Sn	Sn	07 06 04.0	-3.6
DIB	**Dawson Inlet,**	1.90	339	Pn	Pn	07 05 45.5	-1.7
DIB				Sn	Sn	07 06 06.7	-4.4
VIB	**Van Inlet**	1.96	338	Pn	Pn	07 05 46.4	-1.7
VIB				Sn	Sn	07 06 08.5	-4.3
BNKB	**Banks Island**	2.09	24	Pn	Pn	07 05 48.3	-1.4
BNKB				Sn	Sn	07 06 11.1	-4.7
BNAB	**Bonilla**	2.10	11	Pn	Pn	07 05 48.7	-1.1
BNAB				Sn	Sn	07 06 12.4	-3.6
BBB	**Bella Bella**	2.13	68	Pn	Pn	07 05 48.4	-1.9
BBB				Sn	Sn	07 06 13.2	-3.5
HOLB	**Holberg**	2.17	110	Pn	Pn	07 05 48.8	-2.0
HOLB				Sn	Sn	07 06 13.6	-4.2
BUTB	**Butedale**	2.40	46	Pn	Pn	07 05 52.8	-1.2
HWKB	**Hawksbury Isla**	2.54	31	Pn	Pn	07 05 54.8	-1.2
GRNB	**Grenville Isla**	2.56	19	Pn	Pn	07 05 55.2	-0.9
GRNB				Sn	Sn	07 06 23.4	-3.9
PHC	**Port Hardy**	2.56	105	Pn	Pn	07 05 53.8	-2.4
PACB	**Port Alice, BC**	2.63	111	Pn	Pn	07 05 55.8	-1.2
PACB				Sn	Sn	07 06 25.0	-3.9
MAYB	**Maynard**	2.83	110	Pn	Pn	07 05 58.4	-1.6
RUBB	**Prince Rupert**	2.97	12	Pn	Pn	07 06 00.9	-0.8
TLCB	**Telegraph Cove**	2.98	106	Pn	Pn	07 06 00.7	-1.2
EDB	**Eliza Dome**	3.10	119	Pn	Pn	07 06 02.5	-1.1
KITB	**Kitimat**	3.11	31	Pn	Pn	07 06 02.6	-1.1
WOSB	**Woss**	3.28	111	Pn	Pn	07 06 05.1	-1.0
GDR	**Gold River**	3.76	114	Pn	Pn	07 06 11.8	-0.8
CBB	**Campbell River**	4.04	108	Pn	Pn	07 06 15.6	-0.9
CBB				Sn	Sn	07 07 00.9	-3.0
BTB	**Buttle Lake**	4.20	116	Pn	Pn	07 06 17.3	-1.6
OZB	**Mount Ozzard**	4.49	121	Pn	Pn	07 06 21.6	-1.2
UBRB	**Upper Baezaeko**	4.69	69	Pn	Pn	07 06 25.8	+0.3
TXB	**Texada**	4.73	109	Pn	Pn	07 06 25.6	-0.4
MGB	**Mount Grey**	4.91	117	Pn	Pn	07 06 27.6	-1.0
SHB	**Sechelt**	5.10	108	Pn	Pn	07 06 30.6	-0.5
FSB	**Fort Saint Jam**	5.21	52	Pn	Pn	07 06 32.5	-0.2

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*NEIC **22** 07:13:12.3±1.2,59°.13N±0°.04×152°.25W±0°.05,h65^{km}±5^{km}, Error ellipse: s-maj=6.2km s-min=2.6km az=154.0*

*AEIC **22** 07:13:12±1.2,59°.13N±0°.02×152°.27W±0°.05,h61^{km}±5^{km}, ML3.6,ML3.8/109(NEIC),Error ellipse: s-maj=4.0km s-min=3.1km az=93.0*

*IDC **22** 07:13:13.4±2.9,59°.30N×152°.42W,h73^{km}±27^{km},mb3.5/15, mb1 3.7/19,mb1mx3.5/57,mbtmp3.8/19,MS3.4/1, Ms1 3.4/1,ms1mx2.5/35,Error ellipse: s-maj=24.6km s-min=14.1km az=16.0*

ISC 22 07:13:11.8±0.7,**59°.13N**±0°.05×**152°.22W**±0°.03,**h65^{km}**±6^{km}, **n252**,σ**1^{s}.01**/267,**mb3.8**/16,**Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOM	**Homer**	0.60	29	P	Pn	07 13 25.8	+0.6
	baz=211						
HOM				S	Sn	07 13 36.2	+1.1
	baz=211						
HOM	**Homer**	0.60	29		Pn	07 13 25.8	+0.6
HOM					Sn	07 13 35.3	+0.2
AU22	**Augustine Moun**	0.63	292		Pn	07 13 25.7	+0.1
AU22					Sn	07 13 35.7	+0.1
CNPM	**China Poot**	0.64	52		Pn	07 13 26.3	+0.6
CNPM					Sn	07 13 36.3	+0.4
CNPM				IAML		07 13 38.0	
	comp=N,4μm,0.3s						
AUQ	**Augustine Qik’**	0.65	290		Pn	07 13 26.1	+0.3
AUQ					Sn	07 13 36.7	+0.5
AGU	**Augustine-Summ**	0.66	290		Pn	07 13 26.3	+0.2
AUL	**Augustine Lava**	0.67	292		Pn	07 13 26.4	+0.3
AUL					Sn	07 13 36.5	0.0
AUW	**Augustine West**	0.69	291		Pn	07 13 26.5	+0.3
OPT	**Oil Point**	0.73	315	P	Pn	07 13 26.9	+0.1
	baz=136						
OPT	**Oil Point**	0.73	315		Pn	07 13 26.9	+0.1
P19K	**Oil Pt**	0.73	315	P	Pn	07 13 27.0	+0.2
	baz=136						
P19K				S	Sn	07 13 38.2	+0.4
	baz=136						
P19K	**Oil Pt**	0.73	315		Pn	07 13 26.7	-0.1
Q19K	**Cape Douglas,**	0.77	255	P	Pn	07 13 27.2	0.0
	baz=74						
Q19K				S	Sn	07 13 38.2	-0.3
	baz=74						
Q19K	**Cape Douglas,**	0.77	255		Pn	07 13 27.2	0.0
Q19K					Sn	07 13 37.9	-0.6
Q19K				IAML		07 13 38.8	
	comp=N,6μm,0.5s						
Q19K				IAML		07 13 39.7	
	comp=E,5μm,0.6s						
BRLK	**Bradley Lake**	0.93	47		Pn	07 13 29.0	-0.2
BRLK				IAML		07 13 44.3	
	comp=E,3μm,0.2s						
BRLK				IAML		07 13 44.6	
	comp=N,3μm,0.3s						
ILS	**Iliamna Low So**	0.93	333		Pn	07 13 29.4	+0.1
ILS					Sn	07 13 42.0	-0.2
BRSE	**Bradley Lake S**	0.97	50	P	Pn	07 13 30.2	+0.6
	baz=232						
BRSE	**Bradley Lake S**	0.97	50		Pn	07 13 30.2	+0.6
ILSW	**Iliamna Southw**	0.97	331		Pn	07 13 29.7	-0.1
ILSW					Sn	07 13 42.6	-0.6
O20K	**Slope Mountain**	0.97	348	P	Pn	07 13 30.2	+0.5
	baz=169						
O20K	**Slope Mountain**	0.97	348		Pn	07 13 30.2	+0.5
IVE	**Iliamna Volcan**	0.97	336		Pn	07 13 29.8	-0.1
RED	**Redoubt Volcan**	1.32	348		Pn	07 13 34.5	+0.3
RDSO	**Redoubt South**	1.35	349		Pn	07 13 35.1	+0.3
RSO	**Redoubt South**	1.36	349		Pn	07 13 35.3	+0.4
RDWB	**Redoubt West**	1.39	347		Pn	07 13 35.6	+0.3
NCT	**North Crescent**	1.48	346		Pn	07 13 37.0	+0.6
DFR	**Drift River**	1.48	351		Pn	07 13 36.9	+0.5
DFR					Sn	07 13 55.4	+0.4
O19K	**Port Alsworth**	1.51	316	P	Pn	07 13 36.7	+0.1
	baz=135						
O19K	**Port Alsworth**	1.51	316		Pn	07 13 36.5	-0.1
P18K	**Big Mountain,**	1.57	281	P	Pn	07 13 36.9	-0.6
	baz=99						
P18K	**Big Mountain,**	1.57	281		Pn	07 13 36.8	-0.7
SLKM	**Skilak Lake**	1.71	35		Pn	07 13 39.8	+0.4
SEW	**Seward**	1.71	54	P	Pn	07 13 39.5	+0.2
	baz=237						
SEW	**Seward**	1.71	54		Pn	07 13 39.3	0.0
CAPN	**Captain Cook N**	1.72	18	P	Pn	07 13 41.6	+2.1
	baz=199						
CAPN	**Captain Cook N**	1.72	18		Pn	07 13 41.9	+2.3
KABU	**Katmai Buttres**	1.82	243		Pn	07 13 41.6	+0.7
O22K	**Cooper Landing**	1.85	42	P	Pn	07 13 41.9	+0.7
	baz=224						
O22K	**Cooper Landing**	1.85	42		Pn	07 13 41.7	+0.5
OHAK	**Old Harbor**	2.00	197	P	Pn	07 13 43.3	0.0
	baz=15						
OHAK	**Old Harbor**	2.00	197		Pn	07 13 43.1	-0.1
N19K	**Bonanza Creek**	2.03	327	P	Pn	07 13 44.2	+0.4
	baz=146						
N19K	**Bonanza Creek**	2.03	327		Pn	07 13 44.0	+0.1
SPU	**Mount Spurr**	2.06	2		Pn	07 13 45.0	+1.0
SPCR	**Spurr Chakacha**	2.07	0	P	Pn	07 13 45.7	+1.4
	baz=181						
SPCR	**Spurr Chakacha**	2.07	0		Pn	07 13 45.7	+1.4
SPCN	**Chakachatna No**	2.10	0		Pn	07 13 46.1	+1.4
SPBG	**Spurr Blockage**	2.13	358		Pn	07 13 46.5	+1.4
SPCG	**Spurr Capps Gl**	2.17	3		Pn	07 13 47.0	+1.4
FIS	**Fire Island**	2.25	26		Pn	07 13 48.4	+1.7
FIS				IAML		07 14 22.8	
	comp=E,548nm,0.4s						
FIS				IAML		07 14 38.2	
	comp=N,806nm,0.6s						
RC01	**Rabbit Creek A**	2.32	31	P	Pn	07 13 48.6	+0.9
	baz=214						
RC01	**Rabbit Creek A**	2.32	31		Pn	07 13 48.5	+0.9
RC01				IAML		07 14 23.6	
	comp=E,358nm,0.5s						
STLK	**Strandline Lak**	2.38	4		Pn	07 13 50.1	+1.6
SVW2	**Sparrevohn**	2.59	321		Pn	07 13 51.1	-0.2
SVW2				IAML		07 14 36.4	
	comp=E,265nm,0.5s						
SVW2				IAML		07 14 43.6	
	comp=N,288nm,0.6s						
PWL	**Port Wells**	2.61	47	P	Pn	07 13 51.9	+0.3
	baz=230						
PWL	**Port Wells**	2.61	47		Pn	07 13 51.8	+0.3
PWL				IAML		07 14 22.7	
	comp=E,356nm,0.3s						
PWL				IAML		07 14 37.0	
	comp=N,347nm,0.4s						
SII	**Sitkinak Islan**	2.79	203	P	Pn	07 13 53.9	-0.1
	baz=21						
SII	**Sitkinak Islan**	2.79	203		Pn	07 13 53.6	-0.4
SII				IAML		07 14 44.3	
	comp=E,322nm,0.9s						
M22K	**Willow**	2.83	21	P	Pn	07 13 55.7	+1.3
	baz=203						
M22K	**Willow**	2.83	21		Pn	07 13 55.7	+1.3
PMR	**Palmer**	2.90	31	P	Pn	07 13 56.0	+0.5
	baz=214						
PMR	**Palmer**	2.90	31		Pn	07 13 55.8	+0.3
KNK	**Knik Glacier**	2.96	38	P	Pn	07 13 56.7	+0.4
	baz=221						
KNK	**Knik Glacier**	2.96	38		Pn	07 13 56.7	+0.4
KNK				IAML		07 14 46.5	
	comp=N,262nm,0.6s						
KNK				IAML		07 14 46.6	
	comp=E,344nm,0.7s						
M19K	**Big River Lodg**	2.98	340	P	Pn	07 13 57.5	+0.9
	baz=158						
M19K	**Big River Lodg**	2.98	340		Pn	07 13 57.5	+0.9
GHO	**Glory Hole Cre**	3.11	30		Pn	07 13 58.9	+0.4
GHO				IAML		07 14 53.6	
	comp=N,200nm,0.7s						
GLI	**Glacier Island**	3.11	54	P	Pn	07 13 57.9	-0.5
	baz=238						
GLI	**Glacier Island**	3.11	54		Pn	07 13 57.8	-0.6
HIN	**Hinchinbrook I**	3.16	64		Pn	07 13 58.2	-0.8
HIN				IAML		07 14 55.8	
	comp=N,222nm,1.3s						
HIN				IAML		07 15 06.2	
	comp=E,173nm,1.6s						
SML	**Sawmill**	3.30	34	P	Pn	07 14 01.5	+0.5
	baz=218						
SML	**Sawmill**	3.30	34		Pn	07 14 01.5	+0.5
SML				IAML		07 14 52.0	
	comp=N,162nm,0.8s						
FID	**Port Fidalgo**	3.31	58		Pn	07 14 00.3	-0.8
FID				IAML		07 14 52.8	
	comp=N,146nm,1.0s						
FID				IAML		07 14 57.1	
	comp=E,136nm,0.9s						
L19K	**White Mountain**	3.32	338	P	Pn	07 14 02.1	+0.8
	baz=156						
L19K	**White Mountain**	3.32	338		Pn	07 14 02.2	+0.8
JPK	**Jack Peak**	3.41	53		Pn	07 14 02.5	0.0
CUT	**Chulitna**	3.42	15	P	Pn	07 14 03.9	+1.4
	baz=198						
CUT	**Chulitna**	3.42	15		Pn	07 14 03.9	+1.4
L20K	**Farewell, AK**	3.45	347	P	Pn	07 14 04.1	+1.1
	baz=166						
L20K	**Farewell, AK**	3.45	347		Pn	07 14 04.1	+1.1
EYAK	**Cordova Ski Ar**	3.56	64	P	Pn	07 14 04.3	-0.1
	baz=249						
EYAK	**Cordova Ski Ar**	3.56	64		Pn	07 14 04.4	0.0
SCM	**Sheep Creek Mo**	3.63	40	P	Pn	07 14 06.5	+1.0
	baz=224						
SCM	**Sheep Creek Mo**	3.63	40		Pn	07 14 06.6	+1.0
SCM				IAML		07 15 08.7	
	comp=N,134nm,1.0s						
SCM				IAML		07 15 11.5	
	comp=E,150nm,0.9s						
PPLA	**Purkeypile**	3.77	0	P	Pn	07 14 08.9	+1.4
	baz=181						
PPLA	**Purkeypile**	3.77	0		Pn	07 14 09.2	+1.6
DIV	**Divide**	3.79	55		Pn	07 14 07.9	+0.1
CHIR	**Chirikof Islan**	3.80	210	P	Pn	07 14 07.1	-0.7
	baz=27						
CHIR	**Chirikof Islan**	3.80	210		Pn	07 14 07.2	-0.5
CHIR				IAML		07 14 58.3	
	comp=N,148nm,2.4s						
CHIR				IAML		07 15 14.1	
	comp=E,150nm,2.4s						
ANNE	**Aniakchak Nort**	3.82	237		Pn	07 14 08.8	+0.7
KLU	**Klutina**	3.92	50	P	Pn	07 14 10.0	+0.5
	baz=236						
KLU	**Klutina**	3.92	50		Pn	07 14 10.1	+0.5
KLU				IAML		07 14 55.4	
	comp=E,83nm,0.3s						
RAGM	**Ragged Mountai**	4.02	69		Pn	07 14 11.5	+0.7
RAGM				IAML		07 15 25.0	
	comp=E,161nm,1.6s						
RAGM				IAML		07 15 30.4	
	comp=N,198nm,1.4s						
GOAT	**Goat Mountain**	4.05	66		Pn	07 14 11.5	+0.3
KAIM	**Kayak Island**	4.05	75	P	Pn	07 14 12.3	+1.1
	baz=262						
KAIM	**Kayak Island**	4.05	75		Pn	07 14 12.5	+1.4
WAT7	**Susitna Watana**	4.06	22		Pn	07 14 11.6	+0.2
WAT6	**Susitna Watana**	4.09	30	P	Pn	07 14 12.7	+0.8
	baz=215						
WAT6	**Susitna Watana**	4.09	30		Pn	07 14 12.7	+0.8
WAT1	**Susitna Watana**	4.12	24	P	Pn	07 14 13.0	+0.9
	baz=208						
WAT1	**Susitna Watana**	4.12	24		Pn	07 14 13.0	+0.9
HMT	**Hamilton**	4.20	70		Pn	07 14 14.1	+0.8
HMT				IAML		07 15 29.3	
	comp=E,167nm,2.4s						
HMT				IAML		07 16 12.0	
	comp=N,114nm,3.0s						
M24K	**Tolsona, Glenn**	4.21	42	P	Pn	07 14 14.3	+0.8
	baz=228						
M24K	**Tolsona, Glenn**	4.21	42		Pn	07 14 14.6	+1.1
M24K				IAML		07 15 27.7	
	comp=N,102nm,1.5s						
M24K				IAML		07 15 38.4	
	comp=E,122nm,1.2s						
TT01	**Tatalina**	4.21	336		Pn	07 14 14.1	+0.7
PS12	**TAPS Pump St12**	4.23	53		Pn	07 14 14.2	+0.6
TTA	**Tatalina**	4.23	336	P	Pn	07 14 14.3	+0.6
	baz=153						
TTA	**Tatalina**	4.23	336		Pn	07 14 14.5	+0.7
BMRM	**Bremner River**	4.24	61	P	Pn	07 14 13.7	-0.1
	baz=248						
BMRM	**Bremner River**	4.24	61		Pn	07 14 13.6	-0.2
BMRM				IAML		07 15 23.9	
	comp=N,64nm,1.0s						
NICHA	**Nichawak Mount**	4.33	72		Pn	07 14 15.7	+0.7
K20K	**Telida**	4.33	349	P	Pn	07 14 15.8	+0.8
	baz=168						
K20K	**Telida**	4.33	349		Pn	07 14 16.3	+1.3
SUCK	**Suckling Hills**	4.39	74		Pn	07 14 16.4	+0.5
TRF	**Thorofare Moun**	4.43	11	P	Pn	07 14 17.2	+0.7
	baz=193						
TRF	**Thorofare Moun**	4.43	11		Pn	07 14 17.3	+0.7
TRF				IAML		07 15 17.2	
	comp=E,103nm,0.8s						
TRF				IAML		07 15 17.3	
	comp=N,102nm,0.5s						
PS11	**TAPS Pump St11**	4.45	45		Pn	07 14 17.4	+0.8
KTH	**Kantishna Hill**	4.48	7		Pn	07 14 18.6	+1.5
KTH				IAML		07 15 41.9	
	comp=N,104nm,1.0s						
KTH				IAML		07 15 48.7	
	comp=E,95nm,1.3s						
BERG	**Berg Lake**	4.49	70		Pn	07 14 17.7	+0.5
BERG				IAML		07 15 11.0	
	comp=N,114nm,0.7s						
BERG				IAML		07 15 11.2	
	comp=E,140nm,1.1s						
N25K	**Chitina, Valde**	4.52	54	P	Pn	07 14 18.0	+0.3
	baz=240						
N25K	**Chitina, Valde**	4.52	54		Pn	07 14 18.1	+0.4
RND	**Reindeer**	4.58	19		Pn	07 14 19.5	+1.0
RND				IAML		07 15 11.9	
	comp=E,97nm,0.3s						
RND				IAML		07 15 35.3	
	comp=N,56nm,0.9s						
DHY	**Denali Highway**	4.60	29	P	Pn	07 14 19.9	+1.0
	baz=213						
DHY	**Denali Highway**	4.60	29		Pn	07 14 19.8	+1.0
DHY				IAML		07 15 14.3	
	comp=E,55nm,0.6s						
DHY				IAML		07 15 15.4	
	comp=N,64nm,0.4s						
KHIT	**Khitrov Hills**	4.72	70		Pn	07 14 20.7	+0.3
HARP	**HAARP**	4.76	44	P	Pn	07 14 22.0	+1.1
	baz=230						
HARP	**HAARP**	4.76	44		Pn	07 14 22.0	+1.1
GLB	**Gilahina Butte**	4.78	57		Pn	07 14 21.4	+0.2
CRQM	**Cirque**	4.85	67		Pn	07 14 22.5	+0.3
CRQM				IAML		07 15 19.7	
	comp=N,64nm,1.3s						
CRQM				IAML		07 16 52.7	
	comp=E,52nm,4.0s						
VRDI	**Verde Repeater**	4.85	61		Pn	07 14 22.3	-0.1
CRQE	**Cirque**	4.87	67	P	Pn	07 14 22.6	+0.1
	baz=254						
SNH	**Sunshine Point**	4.87	74	Pn	Pn	07 14 23.1	+0.6
MCK	**McKinley**	4.88	17	P	Pn	07 14 23.4	+0.9
	baz=201						
MCK	**McKinley**	4.88	17		Pn	07 14 23.9	+1.4
MCK				IAML		07 15 19.0	
	comp=E,66nm,0.4s						
WAX	**Waxell Ridge**	4.91	70		Pn	07 14 23.6	+0.6
TGL	**Tana Glacier**	4.99	67	Pn	Pn	07 14 24.5	+0.3
TGL				IAML		07 15 29.5	
	comp=N,43nm,3.2s						
TGL				IAML		07 17 04.3	
	comp=E,52nm,4.8s						
BPAW	**Bear Paw Mtn.**	5.02	6	P	Pn	07 14 25.0	+0.6
	baz=188						
BPAW	**Bear Paw Mtn.**	5.02	6		Pn	07 14 24.5	0.0
BPAW				IAML		07 15 32.0	
	comp=E,36nm,0.8s						
PAX	**Paxson**	5.05	38	P	Pn	07 14 25.5	+0.6
	baz=224						
PAX	**Paxson**	5.05	38		Pn	07 14 25.9	+0.9
MCARA	**McCarthy VSAT**	5.10	60	Pn	Pn	07 14 26.1	+0.5
MCARA				IAML		07 15 27.9	
	comp=E,50nm,0.5s						
MCARA				IAML		07 16 12.9	

	comp=N,47nm,3.1s						
J20K	Nowinta River	5.14	351	P	Pn	07 14 26.9	+0.8
	baz=169						
J20K	Nowinta River	5.14	351		Pn	07 14 27.0	+0.9
J20K				IAML		07 16 06.5	
	comp=N,37nm,1.6s						
J20K				IAML		07 16 11.6	
	comp=E,34nm,1.6s						
ISLE	Juniper Island	5.19	69		Pn	07 14 28.1	+1.2
ISLE				IAML		07 15 26.8	
	comp=E,80nm,0.7s						
BWN	Browne	5.22	13		Pn	07 14 28.6	+1.4
KIAG	Kiagna River	5.26	66		Pn	07 14 28.6	+0.7
PTPK	Patty Peak	5.29	63		Pn	07 14 28.7	+0.4
BAGL	Bagley Icefiel	5.29	71		Pn	07 14 29.3	+1.2
BALM	Baldy	5.30	65		Pn	07 14 28.4	+0.1
MESA	MESA	5.31	74	P	Pn	07 14 29.5	+0.9
	baz=263						
MESA	MESA	5.31	74		Pn	07 14 29.9	+1.3
YAH	Yahtse	5.44	72		Pn	07 14 30.6	+0.3
GRNC	Granite Creek	5.50	69		Pn	07 14 32.5	+1.3
M26K	Nabesna, AK	5.58	50	P	Pn	07 14 33.0	+0.8
	baz=238						
M26K	Nabesna, AK	5.58	50		Pn	07 14 33.6	+1.4
BARN	Barnard Glacie	5.62	65		Pn	07 14 34.5	+1.6
RKAV	Rock Avalanche	5.62	73		Pn	07 14 34.2	+1.3
NEA2	Nenana	5.68	14	P	Pn	07 14 33.7	+0.3
	baz=197						
NEA2	Nenana	5.68	14		Pn	07 14 34.1	+0.7
WRH	Wood River Hil	5.70	18		Pn	07 14 34.7	+1.0
TABL	Table Mountain	5.74	72		Pn	07 14 35.9	+1.3
CTG	Chitna Glacier	5.75	67	P	Pn	07 14 35.9	+1.4
	baz=256						
CTGM	Chitina Glacie	5.75	67		Pn	07 14 36.8	+2.2
L26K	Log Cabin Wild	5.81	44	P	Pn	07 14 35.9	+0.7
	baz=232						
RIDG	Independent Ri	5.82	34	P	Pn	07 14 36.4	+1.0
	baz=221						
RIDG	Independent Ri	5.82	34		Pn	07 14 36.9	+1.5
HDA	Harding Lake	5.85	23	P	Pn	07 14 36.9	+1.1
	baz=208						
HDA	Harding Lake	5.85	23		Pn	07 14 36.9	+1.1
SDPT	Sand Point	5.87	233	Pn	Pn	07 14 34.4	-1.6
LOGN	Logan Glacier	5.88	68		Pn	07 14 37.3	+1.0
CCB	Clear Creek Bu	5.91	19		Pn	07 14 37.0	+0.4
MLY	Manley	5.96	6	P	Pn	07 14 38.1	+0.8
	baz=188						
MLY	Manley	5.96	6		Pn	07 14 38.3	+1.0
DOT	Dot Lake	5.99	37	Pn	Pn	07 14 38.9	+1.3
I21K	Tanana	6.07	1	P	Pn	07 14 39.8	+1.1
	baz=181						
I21K	Tanana	6.07	1		Pn	07 14 40.6	+1.9
TCOL	CIGO, UAF Yank	6.11	18	P	Pn	07 14 40.4	+1.0
	baz=202						
TCOL	CIGO, UAF Yank	6.11	18		Pn	07 14 40.1	+0.7
COLA	College	6.12	18	Pn	Pn	07 14 39.8	+0.5
MDM	Murphy Dome	6.14	16		Pn	07 14 40.7	+1.0
PCA	Pinnacle	6.15	76		Pn	07 14 41.5	+1.6
PINM	Pinnacle	6.15	76	P	Pn	07 14 40.8	+0.9
	baz=266						
I23K	Minto, Yukon-K	6.18	11	P	Pn	07 14 41.2	+0.9
	baz=194						
I23K	Minto, Yukon-K	6.18	11		Pn	07 14 41.0	+0.7
IL31		6.19	22		Pn	07 14 41.4	+1.1
ILAR	Eielson Array	6.19	22	P	Pn	07 14 41.0	+0.7
	comp=E,3.3nm,0.3s,baz=206,slow=14,SNR=49						
ILAR				S	Sn	07 15 44.7	-4.9
	comp=E,4.6nm,0.3s,baz=207,slow=24,SNR=8.7						
YUK2	White River	6.22	60		Pn	07 14 42.2	+1.2
SCRK	Sand Creek	6.25	35	P	Pn	07 14 41.2	-0.1
	baz=223						
SCRK	Sand Creek	6.25	35		Pn	07 14 41.8	+0.5
YUK3	Moose Creek	6.39	61	P	Pn	07 14 44.6	+1.2
	baz=251						
YUK3	Moose Creek	6.39	61		Pn	07 14 44.6	+1.2
L27K	Beaver Creek,	6.39	48	Pn	Pn	07 14 44.3	+1.1
POKR	Poker Plat Res	6.41	18	P	Pn	07 14 43.8	+0.4
	baz=203						
POKR	Poker Plat Res	6.41	18		Pn	07 14 44.5	+1.1
BC03		6.41	48		Pn	07 14 44.1	+0.7
BCAR	Beaver Creek A	6.41	48	Pn	Pn	07 14 44.9	+1.5
BCPM	Bancas Point	6.45	77	Pn	Pn	07 14 44.7	+0.7
H21K	Melozitna Rive	6.55	358		Pn	07 14 46.4	+1.0
PNL	Peninsula	6.57	80	P	Pn	07 14 46.3	+0.7
	baz=271						
PNL	Peninsula	6.57	80		Pn	07 14 46.3	+0.7
YUK8	Steele Glacier	6.57	66		Pn	07 14 47.3	+1.4
J26L	Joseph Creek	6.76	34	P	Pn	07 14 49.0	+0.7
	baz=221						
J26L	Joseph Creek	6.76	34		Pn	07 14 49.0	+0.7
IM03		6.91	355		Pn	07 14 50.9	+0.7
IMAR	Indian Mountai	6.91	355	Pn	Pn	07 14 51.7	+1.4
H24K	Noodor Dome	7.02	15	P	Pn	07 14 52.3	+0.5
	baz=199						
H24K	Noodor Dome	7.02	15		Pn	07 14 52.3	+0.5
YUK5	Granite Creek	7.44	68		Pn	07 14 58.5	+0.8
EGAK	Eagle	7.69	38	P	Pn	07 15 00.2	-0.6
	baz=228						
EGAK	Eagle	7.69	38	Pn	Pn	07 15 01.6	+0.8
DAWY	Dawson	7.86	46	Pn	Pn	07 15 05.0	+1.8
FYU	Fort Yukon	8.11	20		Pn	07 15 07.0	+0.4
COLD	Coldfoot	8.18	6	P	Pn	07 15 07.1	-0.4
	baz=188						
COLD	Coldfoot	8.18	6		Pn	07 15 08.9	+1.4
ANM	Nome	8.26	317	Pn	Pn	07 15 10.1	+1.5
M30M	Minto, Yukon	8.28	59	P	Pn	07 15 08.8	-0.1
	baz=252						
M30M	Minto, Yukon	8.28	59		Pn	07 15 08.8	-0.1
WHY	Whitehorse	8.85	73	P	Pn	07 15 15.6	-1.2
	baz=268						
WHY	Whitehorse	8.85	73	Pn	Pn	07 15 18.1	+1.3
BM03	Burnt Mountain	8.99	19		Pn	07 15 18.2	-0.5
BMAR	Burnt Mountain	9.00	19	Pn	Pn	07 15 18.9	+0.1
JIS	Juneau Island	9.32	88	Pn	Pn	07 15 23.3	+0.1
UNV	Unalaska Valle	9.51	242	P	Pn	07 15 24.4	-1.3
	baz=50						
TOLK	Toolik Lake Re	9.62	6	Pn	Pn	07 15 29.5	+2.3
TNA	Tin City	9.71	318	Pn	Pn	07 15 29.5	+1.0
DLBC	Dease Lake	11.52	84	P	Pn	07 15 54.1	+0.8
	comp=E,0.2nm,0.3s,baz=257,slow=5.7,SNR=2.1						
DLBC				S	Sn	07 17 54.7	-5.5
	comp=E,0.1nm,0.3s,baz=102,slow=7.2,SNR=2.7						
INK	Inuvik	12.31	34	P	Pn	07 16 04.5	+0.7
	comp=E,0.1nm,0.3s,baz=218,slow=15,SNR=4.6						
A21K	Barrow	12.37	353	Pn	Pn	07 16 04.0	-0.7
GRNB	Grenville Isla	13.36	104	Pn	Pn	07 16 17.4	-0.8
ADK	Adak	15.58	253	Pn	Pn	07 16 48.2	+1.1
A36M	Sachs Harbour	16.81	29	Pn	Pn	07 17 02.9	+0.5
YKA	Yellowknife Ar	18.46	63	P	Pn	07 17 23.4	+0.7
	comp=E,0.1nm,0.3s,baz=272,slow=10.0,SNR=7.8						
YKA	Yellowknife Ar	18.46	63	P	P	07 17 22.6	+0.7
NEW	Newport	23.17	102	P	P	07 18 15.2	+2.7
	comp=E,1.0nm,0.7s,baz=342,slow=13,SNR=2.8						
SEY	Seymchan	26.38	302	P	P	07 18 40.8	-0.7
	comp=E,0.8nm,0.5s,baz=332,slow=15,SNR=1.5						
PETK	Petropavlovsk-	27.99	280	P	P	07 18 55.5	-0.5
	comp=E,1.2nm,0.5s,baz=74,slow=13,SNR=12						
MA2	Magadan	28.31	296	P	P	07 18 58.5	-0.2
	comp=E,28nm,1.2s,baz=159,slow=22,SNR=2.6						
ELK	Elko	29.54	112	P	P	07 19 13.3	+3.1
	comp=E,0.9nm,0.7s,baz=323,slow=9.2,SNR=4.4						
KLR	Kul'dur	43.23	292	P	P	07 21 04.9	-1.1
	comp=E,1.5nm,0.7s,baz=45,slow=7.1,SNR=3.7						
TXAR	Lajitas Array	44.30	110	P	P	07 21 16.8	+1.8
	comp=E,0.4nm,0.8s,baz=343,slow=3.9,SNR=4.5						
ARCES	ARCESS Array B	51.62	1	P	P	07 22 10.4	-0.4
	comp=E,1.5nm,0.5s,baz=4.0,slow=6.0,SNR=13						
ARCES	ARCESS Array B	51.62	1	P	P	07 22 10.8	-0.1
KSRS	Korea Array	53.77	284	P	P	07 22 27.8	+0.7
	comp=E,1.4nm,0.6s,baz=35,slow=6.6,SNR=4.2						
SONM	Songino Array	55.63	307	P	P	07 22 40.4	-0.2
	comp=E,0.7nm,0.5s,baz=41,slow=5.8,SNR=4.6						
SONM				PcP	PcP	07 23 39.0	-0.4
	comp=E,0.7nm,0.5s,baz=70,slow=2.2,SNR=4.5						
SONM				LR	LR	07 47 22.7	
	comp=E,30nm,19.1s,baz=29,slow=37						
ZALV	Zalesovo Beam	58.31	324	P	P	07 22 58.3	-1.0
	comp=E,0.5nm,0.4s,baz=28,slow=6.5,SNR=2.4						
FINES	FINESS Array B	59.75	1	P	P	07 23 08.6	-0.5
	comp=E,4.2nm,0.9s,baz=318,slow=2.6,SNR=6.5						
KURBB	Kurchatov Arra	63.08	326	P	P	07 23 31.4	-0.3
	comp=E,0.3nm,0.4s,baz=29,slow=6.6,SNR=2.3						
MKAR	Makanchi Array	65.36	322	P	P	07 23 46.4	-0.4
	comp=E,0.3nm,0.5s,baz=30,slow=8.1,SNR=4.2						
AKASG	Malin Array Be	70.52	359	P	P	07 24 18.6	-0.4
	comp=E,0.5nm,0.3s,baz=6.4,slow=7.0,SNR=7.8						
GERES	GERESS Array B	71.77	10	P	P	07 24 27.3	+0.6
	comp=E,0.5nm,0.8s,baz=340,slow=2.6,SNR=2.9						
BOSA	Boshof	149.44	4	PKPbc	PKPbc	07 32 51.8	-1.2
	comp=E,2.0nm,0.8s,baz=99,slow=7.0,SNR=1.5						

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*IDC **22** 07:18:05.0±4.1, 38°.11N×74°.54E, h0^{km}, mb3.8/4, mb1 3.8/5, mb1mx3.5/39, mbtmp3.7/5, Error ellipse: s-maj=86.6km s-min=33.7km az=136.0*

*SOME **22** 07:18:20.6, 39°.27N×74°.62E, h10^{km}*

*NNC **22** 07:18:22.9±1.1, 39°.33N×74°.56E, h13^{km}±11^{km}, mb4.0, mpv3.7, Error ellipse: s-maj=8.0km s-min=5.6km az=170.0*

ISC 22 07:18:11.5±1.3, 38°.70N±0°.08×74°.17E±0°.05, h10^{km}, n47, σ2^{s}.35/61, mb3.9/4, 2C-3D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	3.45	354	P	Pg	07 19 19.4	+1.8
	SNR=20						
UCH	Uchtor	3.54	4	P	Pg	07 19 18.9	-0.4
	SNR=9.6						
AAK	Ala-Archa	3.95	4	P	Pb	07 19 24.4	+3.2
	SNR=10						
AAK	Ala-Archa	3.95	4	⇓Pg	Pb	07 19 23.6	+2.3
	12nm,0.8s						
AAK				⇓Lg	Lg	07 20 09.4	
	36nm,1.1s						
EKS2	Erkin-Say	3.97	356	P	Pg	07 19 27.1	-0.5
	SNR=9.5						
KBK	Karagaybulak	4.00	8	P	Pb	07 19 24.7	+2.5
	SNR=8.9						
MRKS	Merke	4.11	350	*e*P	Pg	07 19 28.4	-1.8
	7.6nm,0.3s						
MRKS				*e*S	Sb	07 20 16.9	+3.2
	26nm,0.5s						
MRKS	Merke	4.11	350	Pg	Pg	07 19 28.4	-1.8
	7.6nm,0.3s						
MRKS				Lg	Lg	07 20 16.9	
	26nm,0.5s						
TKM2	Tokmak 2	4.36	14	P	Pb	07 19 27.6	-0.8
	SNR=14						
TKM2	Tokmak 2	4.36	14	⇓Pg	Pb	07 19 27.6	-0.8
	5.4nm,0.5s						
TKM2				⇑Lg	Lg	07 20 19.9	
	25nm,0.8s						
KST	Kastek	4.55	17	*e*P	Pb	07 19 33.0	+1.4
	9.3nm,0.6s						
KST				*e*S	Sb	07 20 24.7	-1.8
	14nm,0.3s						
KST	Kastek	4.55	17	Pg	Pb	07 19 33.0	+1.4
	9.3nm,0.6s						
KST				Lg	Lg	07 20 24.7	
	14nm,0.3s						
DGS	Degeres	4.70	14	*e*P	Pb	07 19 36.0	+1.9
	16nm,0.5s						
DGS				*e*S	Sb	07 20 29.9	-0.9
	9.2nm,0.7s						
DGS	Degeres	4.70	14	Pg	Pb	07 19 36.0	+1.9
	16nm,0.5s						
DGS				Lg	Lg	07 20 29.9	
	9.2nm,0.7s						
DZA	Taraz	4.71	334	*e*P	Pg	07 19 41.7	0.0
	44nm,0.1s						
DZA				*e*S	Sg	07 20 39.9	-2.9
	213nm,0.3s						
DZA	Taraz	4.71	334	Pg	Pg	07 19 41.7	0.0
	44nm,0.1s						
DZA				Lg	Lg	07 20 39.9	
	213nm,0.3s						
MTBS	Maitube	4.75	20	*e*P	Pb	07 19 36.4	+1.5
	6.4nm,0.5s						
MTBS				*e*S	Sb	07 20 30.8	-1.4
	5.3nm,0.4s						
MTBS	Maitube	4.75	20	Pg	Pb	07 19 36.4	+1.5
	6.4nm,0.5s						
MTBS				Lg	Lg	07 20 30.8	
	5.3nm,0.4s						
TNSS	Tian-Shan	4.82	25	*e*P	Pb	07 19 38.0	+1.6
	4.7nm,0.2s						
TNSS				*e*S	Sb	07 20 33.2	-1.4
	5.5nm,0.4s						
TNSS	Tian-Shan	4.82	25	Pg	Pb	07 19 38.0	+1.6
	4.7nm,0.2s						
TNSS				Lg	Lg	07 20 33.2	
	5.5nm,0.4s						
MDOK	Medeo	4.97	25	*e*P	Pb	07 19 40.9	+2.2
	6.1nm,0.9s						
MDOK				*e*S	Sb	07 20 38.9	+0.4
	8.4nm,0.8s						
MDOK	Medeo	4.97	25	Pg	Pb	07 19 40.9	+2.2
	6.1nm,0.9s						
MDOK				Lg	Lg	07 20 38.9	
	8.4nm,0.8s						
KOTS	Kotyrbulak	5.05	25	*e*P	Pb	07 19 42.1	+2.0
	4.7nm,0.4s						
KOTS				*e*S	Sb	07 20 40.6	-0.4
	26nm,0.5s						
KOTS	Kotyrbulak	5.05	25	Pg	Pb	07 19 42.1	+2.0
	4.7nm,0.4s						
KOTS				Lg	Lg	07 20 40.6	
	26nm,0.5s						
KTBS	Karatobe	5.36	20	*e*P	Pb	07 19 48.1	+2.9
	3.6nm,0.3s						
KTBS				*e*S	Sb	07 20 51.1	+1.4
	7.6nm,0.4s						
KTBS	Karatobe	5.36	20	Pg	Pb	07 19 48.2	+2.9
	3.6nm,0.3s						
KTBS				Lg	Lg	07 20 51.1	
	7.6nm,0.4s						
SATY	Saty	5.42	35	*e*P	Pb	07 19 49.5	+3.2
	5.4nm,0.5s						
SATY				*e*S	Sb	07 20 53.1	+1.8
	14nm,0.5s						
SATY	Saty	5.42	35	Pg	Pb	07 19 49.5	+3.2
	5.4nm,0.5s						
SATY				Lg	Lg	07 20 53.2	
	14nm,0.5s						
KUU	Kurty	5.45	17	*e*P	Pb	07 19 49.4	+2.7
	2.8nm,0.4s						
KUU				*e*S	Sb	07 20 52.9	+0.8
	5.0nm,0.3s						
KUU	Kurty	5.45	17	Pg	Pb	07 19 49.4	+2.7
	2.8nm,0.4s						
KUU				Lg	Lg	07 20 52.9	
	5.0nm,0.3s						
KURS	Kuram	5.66	31	*e*P	Pb	07 19 53.0	+2.5
	5.8nm,0.5s						
KURS				*e*S	Sb	07 20 59.3	+0.9
	7.4nm,0.9s						
KURS	Kuram	5.66	31	Pg	Pb	07 19 53.0	+2.5
	5.8nm,0.5s						
KURS				Lg	Lg	07 20 59.3	
	7.4nm,0.9s						
UZB	Uzynbulak	5.77	38	*e*P	Pb	07 19 55.6	+3.2
	5.9nm,0.4s						
UZB				*e*S	Sb	07 21 03.7	+2.1
	11nm,0.7s						
UZB	Uzynbulak	5.77	38	Pg	Pb	07 19 55.6	+3.2
	5.9nm,0.4s						
UZB				Lg	Lg	07 21 03.7	
	11nm,0.7s						
KPKS	Kokpek	5.86	34	*e*P	Pb	07 19 56.4	+2.5
	5.0nm,0.6s						
KPKS				*e*S	Sb	07 21 04.8	+0.7
	15nm,0.6s						
SHLS	Shalkode	6.00	40	*e*P	Pg	07 20 04.2	-2.1
	6.7nm,0.3s						
SHLS				*e*S	Sg	07 21 18.7	-5.3
	18nm,0.5s						
SHLS	Shalkode	6.00	40	Pg	Pg	07 20 04.2	-2.1
	6.7nm,0.3s						
SHLS				Lg	Lg	07 21 18.7	
	18nm,0.5s						
PDGK	Podgornoye	6.13	39	Pg	Pb	07 20 03.0	+4.5
	1.4nm,0.4s						
PDGK				Lg	Lg	07 21 16.5	
	3.8nm,0.8s						
PDGK	Podgornoye	6.13	39	⇑Pn	Pn	07 19 43.8	+1.5
	2.2nm,0.5s						
ARXS	Arharly	6.16	25	*e*P	Pb	07 20 03.9	+5.0
	3.5nm,0.5s						
ARXS				*e*S	Sb	07 21 18.2	+5.5
	7.6nm,0.5s						
ARXS	Arharly	6.16	25	Pg	Pb	07 20 03.9	+5.0
	3.5nm,0.5s						
ARXS				Lg	Lg	07 21 18.2	
	7.6nm,0.5s						
BLB	Baldybastay	6.30	30	Pg	Pb	07 20 05.6	+4.4
	8.3nm,0.3s						
BLB				Lg	Lg	07 21 21.0	
	9.2nm,0.5s						
MKAR	Makanchi Array	10.05	34	Pn	Pn	07 20 36.9	+1.0
	baz=207,slow=16,SNR=1.7						
FINES	FINESS Array B	37.14	324	P	P	07 25 23.1	+1.1
	2.3nm,0.9s,baz=98,slow=10.0,SNR=4.1						
ARCES	ARCESS Array B	40.13	336	P	P	07 25 46.5	-0.5
	1.4nm,0.6s,baz=102,slow=8.4,SNR=9.1						
NOA	NORSAR Array B	44.19	322	P	P	07 26 20.5	+0.2
	0.4nm,0.5s,baz=92,slow=7.7,SNR=2.5						
TORD	Torodi Ar. Bea	68.26	270	P	P	07 29 09.8	-3.0
	0.6nm,0.6s,baz=44,slow=5.1,SNR=5.2						

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*ISN **22** 07:22:35.2±0.7, 32°.64N×47°.76E, h14^{km}±4^{km}, ML3.1*

*TEH **22** 07:22:35.2, 32°.68N×47°.77E, h8^{km}, ML3.2*

ISC 22 07:22:36.4±1.1, 32°.65N±0°.05×47°.73E±0°.04, h10^{km}, n33, σ1^{s}.03/36, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DHL1	Dehloran	0.38	274	*e*Pg	Pg	07 22 43.2	-0.7
DHL1				*e*Sg	Sb	07 22 50.6	-0.5
IKFM	Kafar-mosalman	0.87	7	*e*Pg	Pg	07 22 51.3	-2.0
IDOB	Doab	1.19	18	*e*Pg	Pn	07 22 57.9	-1.5
BMDN	Meydan	1.37	42	*e*Pg	Pn	07 23 01.5	-0.3
IBDR	Badra	1.58	287	*e*Pg	Pn	07 23 04.0	-0.4
IBDR				*e*Sg	Sb	07 23 26.0	+0.3
AMIS	Naft Sefid	1.65	126	*e*		07 23 34.1	
	comp=Z,4µm,0.3s						
AMIS				*e*Pg	Pn	07 23 06.0	+0.5
KCHF	Cheshme Sefid,	1.72	341	*e*		07 23 39.1	
	comp=Z,4µm,0.4s						
KCHF				*e*Pg	Pn	07 23 07.6	+1.1
HSAM	Samen	1.72	25	*e*		07 23 34.7	
	comp=Z,2µm,0.4s						
HSAM				*e*Pn	Pn	07 23 08.0	+1.4
KER	Kermanshah	1.80	344	*e*Pn	Pn	07 23 08.3	+0.7
IBZA	Bozab	1.81	3	*e*Pn	Pn	07 23 09.6	+1.6
IGHG	Ghaleghazi	1.93	330	*e*Pn	Pn	07 23 10.2	+0.7
IGHG				*e*		07 23 46.6	
	comp=Z,2µm,0.6s						
NSR	Nassriya	2.12	220	*e*Pg	Pn	07 23 06.0	-5.9
NSR				*e*Sg	Sn	07 23 28.0	-10
NSR				AML	AML	07 23 42.8	
	comp=E,267nm,1.1s						
IALM	Almabolaq	2.23	9	*e*Pn	Pn	07 23 14.7	+1.0
IDHR	Dehrash	2.33	332	*e*Pn	Pn	07 23 15.8	+0.9
IDHR				*e*		07 23 53.4	
	comp=Z,2µm,0.4s						
ILIN	Lien	2.35	344	*e*Pn	Pn	07 23 16.3	+1.0
ILIN				*e*		07 23 22.1	
	comp=Z,952nm,0.3s						
HAGD	Aghdareh	2.46	28	*e*Pn	Pn	07 23 18.5	+1.7
HAGD				*e*		07 23 56.1	
	comp=Z,1µm,0.4s						
IPIR	Pirpir	2.67	88	*e*Pn	Pn	07 23 21.4	+1.7
IPIR				*e*		07 23 31.3	
	comp=Z,582nm,0.4s						
SHK1	Shahrekord	2.69	96	*e*Pn	Pn	07 23 20.6	+0.7
SHK1				*e*		07 23 21.0	
	comp=Z,546nm,0.3s						
BHD	Baghdad	2.88	283	*e*Pn	Pn	07 23 23.0	+0.7
BHD				*e*Sn	Sn	07 23 58.0	+1.0
IBRJ	Brojen	3.08	103	*e*Pn	Pn	07 23 25.6	+0.2
IRAZ	Razeghan	3.30	33	*e*Pn	Pn	07 23 29.7	+1.4
IKLH	Kolahrood	3.30	77	*e*Pn	Pn	07 23 29.3	+0.9
IKLH				*e*		07 24 28.5	
	comp=Z,429nm,0.5s						
QABG	Abgarm-Qazvin	3.41	26	*e*Pn	Pn	07 23 30.8	+0.9
IQOM	Qom	3.54	51	*e*Pn	Pn	07 23 32.6	+0.9
IGAR	Gharneh	3.65	93	*e*Pn	Pn	07 23 33.8	+0.6
IGAR				*e*		07 23 48.1	
	comp=Z,268nm,0.3s						
KLNJ	Kolanjah	3.68	115	*e*Pn	Pn	07 23 33.9	+0.3
KLNJ				*e*		07 24 53.2	
	comp=Z,362nm,0.8s						
IZEF	Zefreh	3.88	85	*e*Pn	Pn	07 23 37.9	+1.5
IKRK	Kirkuk	3.93	315	*e*Pn	Pn	07 23 37.5	+0.8
IKRK				*e*Sn	Sn	07 24 23.0	+0.1
IRAM	Ramesheh	4.03	101	*e*Pn	Pn	07 23 38.2	-0.2
IVRN	Varamin	4.07	54	*e*Pn	Pn	07 23 40.0	+1.2
ISFB	Sefidab	4.13	65	*e*Pn	Pn	07 23 40.4	+0.7
ANAR	Anarak	5.08	82	*e*Pn	Pn	07 23 53.5	+0.8
IFIR	Firoozkooh	5.12	53	*e*Pn	Pn	07 23 54.1	+0.7

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*IDC **22** 07:27:14.7±1.0, 50°.05N×78°.76E, h0^{km}, mb1 2.9/2, mb1mx2.8/37, mbtmp2.9/2, ML2.5/2, Error ellipse: s-maj=17.7km s-min=6.1km az=66.0*

*NNC **22** 07:27:14.0±0.3, 50°.02N×78°.70E, h0^{km}, mb3.0, mpv2.4, Error ellipse: s-maj=6.6km s-min=1.5km az=73.0, Suspected Mining explosion.*

ISC 22 07:27:14.6±1.0, 50°.02N±0°.05×78°.68E±0°.09, h0^{km}, n18, σ0^{s}.78/30, 23C-4D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR07	Kurchatov Arra	0.57	350	⇑P	Pg	07 27 25.0	-0.6
KUR07				⇑S	Sg	07 27 33.8	+0.8
KUR06	Kurchatov Arra	0.59	350	⇑P	Pg	07 27 25.4	-0.5
KUR06				⇓S	Sg	07 27 34.3	+0.6
KUR14	Kurchatov Arra	0.60	355	⇑P	Pg	07 27 25.3	-0.8
KUR14				⇑S	Sg	07 27 34.3	+0.4
KUR15	Kurchatov Arra	0.61	353	⇑P	Pg	07 27 25.5	-0.7
KUR15				⇑S	Sg	07 27 34.4	+0.4
KURBB	Kurchatov Arra	0.61	351	Pg	Pg	07 27 25.9	-0.5
	2.3nm,0.3s,baz=165,slow=17,SNR=93						
KURBB				Lg	Lg	07 27 35.2	
	2.6nm,0.3s,baz=184,slow=30,SNR=23						
KURBB	Kurchatov Arra	0.61	351	⇑P	Pg	07 27 25.7	-0.6
KURBB				⇑S	Sg	07 27 34.8	+0.5
	46nm,0.5s						
KUR16	Kurchatov Arra	0.62	349	⇑P	Pg	07 27 25.9	-0.6
KUR16				⇑S	Sg	07 27 34.9	+0.4
KUR17	Kurchatov Arra	0.63	348	⇑P	Pg	07 27 26.0	-0.6
KUR17				⇑S	Sg	07 27 35.1	+0.3
KUR05	Kurchatov Arra	0.63	352	⇓P	Pg	07 27 26.1	-0.6
KUR05				⇑S	Sg	07 27 35.0	+0.1
KUR04	Kurchatov Arra	0.65	352	⇑P	Pg	07 27 26.5	-0.6
KUR04				⇑S	Sg	07 27 35.7	+0.2
KURK	Kurchatov	0.70	357	⇑P	Pg	07 27 27.0	-0.9
KURK				⇑S	Sg	07 27 37.2	+0.2
	7.7nm,0.4s						
MAKZ	Makanchi	3.89	144	⇑Pn	Pn	07 28 15.3	-0.3
	0.6nm,0.4s						
MAKZ				⇓Lg	Lg	07 29 17.3	
	4.9nm,0.5s						
MK31	Makanchi Array	4.02	142	⇑Pn	Pn	07 28 18.0	+0.6
	0.1nm,0.1s,baz=276,slow=6.4,SNR=41						
MK31				⇑Pg	Pb	07 28 26.2	0.0
	0.1nm,0.1s						
MK31				⇑Sn	Sn	07 29 06.4	+1.1
	0.8nm,0.3s						
MK31				Lg	Lg	07 29 21.6	
	2.9nm,0.4s,baz=330,slow=27,SNR=12						
MKAR	Makanchi Array	4.02	142	Pn	Pn	07 28 18.1	+0.6
	0.3nm,0.3s,baz=321,slow=10,SNR=73						
MKAR				Pg	Pb	07 28 24.1	-2.2
	0.5nm,0.3s,baz=324,slow=14,SNR=12						
MKAR				Sn	Sn	07 29 07.0	+1.7
	0.5nm,0.3s,baz=326,slow=22,SNR=2.8						
MKAR				Lg	Lg	07 29 20.0	
	2.0nm,0.3s,baz=332,slow=26,SNR=12						
OTUK	Ortayu	4.53	249	⇓Pn	Pn	07 28 24.6	+0.2
OTUK				⇑Lg	Lg	07 29 38.3	
	2.7nm,0.5s						
I46RU	ZALESOVO INFRA	5.46	42	*i*		08 00 10.0	
	baz=222,slow=335,SNR=1.8						
ZALV	Zalesovo Beam	5.46	42	Pn	Pn	07 28 37.6	+0.5
	0.7nm,0.3s,baz=229,slow=13,SNR=8.5						
ZALV				Lg	Lg	07 30 05.9	
	0.3nm,0.3s,baz=227,slow=29,SNR=1.9						
AAK	Ala-Archa	7.93	203	Lg	Lg	07 31 26.3	
	0.1nm,0.3s,baz=248,slow=20,SNR=4.0						

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*IDC **22** 07:27:15.6±5.5, 48°.13N×153°.75E, h89^{km}±59^{km}, mb3.3/6, mb1 3.4/7, mb1mx3.2/46, mbtmp3.6/7, ML2.2/1, Error*

ellipse: s-maj=78.3km s-min=27.6km az=82.0

ISC 22 07:27:16.6±1.4**, 48°.2N**±0°.2×**153°.9E**±0°.3**, h100**^{km}**, n16, σ0ˢ.53**/7**, mb3.4**/6**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	5.52	25	P	Pn	07 28 36.0	-0.2
	0.4nm,0.3s,baz=183,slow=12,SNR=8.9						
PETK				S	Sn	07 29 49.1	+11
	baz=194,slow=23,SNR=1.2						
H11N2	WAKE ISLAND Hy	30.26	155	T	T	08 05 25.5	
	baz=343,slow=74						
H11N1	WAKE ISLAND Hy	30.28	155	T	T	08 05 36.1	
	baz=343,slow=74						
H11N3	WAKE ISLAND Hy	30.28	155	T	T	08 05 28.9	
	baz=343						
H11S1	WAKE ISLAND Hy	31.37	156	T	T	08 06 49.9	
	baz=343,slow=76,SNR=47						
H11S3	WAKE ISLAND Hy	31.38	156	T	T	08 06 39.8	
	baz=343,slow=76,SNR=61						
H11S2	WAKE ISLAND Hy	31.39	156	T	T	08 06 32.9	
	baz=343,slow=76,SNR=49						
MKAR	Makanchi Array	46.76	297	P	P	07 35 35.2	-0.3
	0.3nm,0.6s,baz=75,slow=7.9,SNR=2.5						
FINES	FINESS Array B	62.98	335	P	P	07 37 32.0	-0.1
	1.6nm,0.7s,baz=46,slow=6.0,SNR=4.5						
WRA	Warramunga Arr	70.01	200	P	P	07 38 16.8	-0.5
	0.2nm,0.7s,baz=16,slow=6.4,SNR=1.4						
ASAR	Alice Springs	73.71	199	P	P	07 38 39.8	+0.4
	0.3nm,1.0s,baz=18,slow=6.3,SNR=1.7						
GERES	GERESS Array B	77.41	334	P	P	07 39 01.2	+0.7
	0.3nm,0.3s,baz=23,slow=6.4,SNR=2.6						
BRTR	Keskin Array B	77.71	317	P	P	07 39 02.4	0.0
	1.3nm,1.0s,baz=53,slow=6.0,SNR=4.8						
H03N2	Juan Fernandez	138.23	89	T	T	10 20 01.0	
	baz=309						
H03N1	Juan Fernandez	138.25	89	T	T	10 20 01.5	
	baz=309						
H03N3	Juan Fernandez	138.25	89	T	T	10 20 01.2	
	baz=309						

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*NEIC **22** 07:27:44.0±0.7, 15°.90S±0°.08×172°.9W±0°.1, h10^{km}±1^{km}, mb4.3/10, Error ellipse: s-maj=17.8km s-min=12.4km az=292.0*

*IDC **22** 07:27:52.1±12.0, 15°.47S×173°.17W, h75^{km}±121^{km}, mb3.7/5, mb1 3.9/5, mb1mx3.5/28, mbtmp4.0/5, ML6.5/1, MS3.1/2, Ms1 3.1/2, ms1mx2.7/36, Error ellipse: s-maj=64.0km s-min=29.4km az=153.0*

ISC 22 07:27:45.5±0.8**, 15°.84S**±0°.09×**172°.8W**±0°.1**, h26**^{km}**, n23, σ1ˢ.38**/19**, mb4.2**/9**, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	4.24	140	Pn	Pn	07 28 48.8	+0.3
NIUE				Sn	Sn	07 29 34.7	-2.5
KNTN	Kanton	13.03	5	Pn	Pn	07 30 49.6	+0.5
RAO	Raoul Island	14.14	198	P	P	07 31 12.2	+0.6
	201nm,0.3s,baz=22,slow=19,SNR=6.4						
PPT	Papeete	22.33	98	LR	LR	07 40 21.5	
	comp=Z,16nm,18.7s,baz=250,slow=33						
URZ	Urewera	24.02	200	P	P	07 33 02.1	+3.7
	14nm,0.8s,baz=122,slow=23,SNR=10						
CAN	Canberra	39.20	233	P	P	07 35 11.0	-0.7
H11S2	WAKE ISLAND Hy	39.63	329	T	T	08 16 43.1	
	baz=146						
H11S3	WAKE ISLAND Hy	39.64	329	T	T	08 16 42.7	
	baz=146						
H11S1	WAKE ISLAND Hy	39.64	329	T	T	08 16 40.9	
	baz=146						
STKA	Stephens Creek	44.30	240	P	P	07 35 53.9	+0.5
	1.1nm,0.6s,baz=67,slow=7.7,SNR=3.1						
BBOO	Buckleboo	49.07	240	P	P	07 36 30.2	-0.6
WR0	Warramunga Arr	50.09	257	P	P	07 36 37.9	-0.8
WR0				IAmb	IAmb	07 37 02.6	
	comp=Z,6.8nm,1.5s						
WB0	Warramunga Arr	50.24	257	P	P	07 36 39.7	-0.2
WB0				IAmb	IAmb	07 37 05.0	
	comp=Z,2.4nm,1.1s						
WB2	Warramunga Arr	50.27	257	P	P	07 36 38.8	-1.3
WB2				IAmb	IAmb	07 36 51.3	
	comp=Z,5.8nm,1.4s						
WRA	Warramunga Arr	50.28	257	P	P	07 36 39.0	-1.2
	comp=Z,0.3nm,0.5s,baz=95,slow=7.5,SNR=3.2						
WRA	Warramunga Arr	50.28	257	P	P	07 36 39.7	-0.5
AS31	Alice Springs	50.50	252	P	P	07 36 41.3	-0.5
ASAR	Alice Springs	50.50	252	P	P	07 36 41.4	-0.4
	comp=Z,1.5nm,0.5s,baz=87,slow=8.0,SNR=49						
SAUI	Saumlaki	55.09	271	P	P	07 37 14.6	-1.3
SIJI	Sorong	57.08	279	LR	LR	08 01 00.7	
	comp=Z,47nm,18.2s,baz=216,slow=35						
KAPI	Kappang	66.94	271	P	P	07 38 35.1	-1.2
QSPA	South Pole Qui	74.20	180	P	P	07 39 20.6	+0.7
QSPA				IAmb	IAmb	07 39 24.6	
	comp=Z,4.7nm,1.4s						
NVAR	Mina Array Bea	74.29	42	P	P	07 39 21.4	+0.4
	comp=Z,0.7nm,0.7s,baz=236,slow=9.7,SNR=5.6						

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*IDC **22** 07:32:46.5±1.8, 28°.57S×177°.86W, h0^{km}, mb3.7/3, mb1 3.9/3, mb1mx3.5/20, mbtmp3.7/3, Error ellipse: s-maj=43.1km s-min=16.6km az=79.0*

ISC 22 07:32:46.1±1.9**, 28°.5S**±0°.1×**177°.6W**±0°.3**, h10**^{km}**, n9, σ0ˢ.77**/8**, mb3.7**/3**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.81	198	Pn	Pn	07 33 03.6	0.0
	413nm,0.3s,baz=53,slow=21,SNR=22						
RAO				Sn	Sn	07 33 15.8	0.0
	505nm,0.3s,baz=36,slow=10.0,SNR=9.9						
STKA	Stephens Creek	35.26	254	P	P	07 39 40.6	-0.5
	0.7nm,0.6s,baz=128,slow=12,SNR=3.2						
ASAR	Alice Springs	43.56	265	P	P	07 40 50.8	+0.3
	0.8nm,0.7s,baz=101,slow=7.7,SNR=13						
WRA	Warramunga Arr	44.38	270	P	P	07 40 57.6	+0.6
	0.6nm,0.5s,baz=110,slow=7.6,SNR=17						
H03S2	Juan Fernandez	81.26	124	T	T	09 14 28.3	
	baz=238						
H03S1	Juan Fernandez	81.27	124	T	T	09 14 31.7	
	baz=238						
H03S3	Juan Fernandez	81.28	124	T	T	09 14 28.0	
	baz=238						
FINES	FINESS Array B	143.44	341	PKP	PKPdf	07 52 20.0	-0.2
	3.6nm,0.9s,baz=57,slow=7.5,SNR=7.0						
AKASG	Malin Array Be	149.94	325	PKPbc	PKiKP	07 52 38.2	+0.9
	0.5nm,0.5s,baz=56,slow=3.6,SNR=4.9						
AKASG				PKPab	pPKPab	07 52 43.7	-1.2
	0.6nm,0.5s,baz=50,slow=3.3,SNR=6.3						

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*IDC **22** 07:45:28.6±0.6, 58°.89S×25°.68W, h0^{km}, mb4.4/11, mb1 4.5/12, mb1mx4.1/23, mbtmp4.4/12, ML4.7/1, MS3.7/9, Ms1 3.6/9, ms1mx3.4/21, Error ellipse: s-maj=24.0km s-min=16.2km az=73.0*

*NEIC **22** 07:45:35.0±1.5, 58°.94S±0°.06×25°.6W±0°.2, h35^{km}±1^{km}, mb4.8/34, Error ellipse: s-maj=20.0km s-min=6.1km az=241.0*

ISC 22 07:45:34.1±0.4**, 58°.99S**±0°.07×**25°.49W**±0°.08**, h35**^{km}**, n70, σ1ˢ.29**/64**, mb4.7**/24**, MS3.6**/8**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	7.67	303		Pn	07 47 26.0	+2.9
VNA1	Neumayer--Stat	13.73	155	P	Pn	07 48 47.2	+1.4
VNA1				S	Sn	07 51 11.1	-5.7
VNA3	Neumayer Olymp	13.91	158	P	Pn	07 48 49.4	+1.0
VNA3				S	Sn	07 51 08.9	-12
VNA2	Neumayer--Watz	14.13	155	P	Pn	07 48 51.9	+0.6
	baz=313,slow=14						
VNA2				S	Sn	07 51 17.3	-9.2
SNAA	Sanae	15.69	153	P	Pn	07 49 13.8	+1.6
SNAA				S	Sn	07 51 52.2	-12
SNAA	Sanae	15.69	153	Pn	Pn	07 49 13.7	+1.6
	2.7nm,0.3s,baz=315,slow=14,SNR=97						
SNAA				Sn	Sn	07 51 54.5	-10
	0.2nm,0.3s,baz=306,slow=14,SNR=2.7						
SNAA				LR	LR	07 54 01.6	
	comp=Z,212nm,21.6s,baz=356,slow=32						
SNAA	Sanae	15.69	153		Pn	07 49 13.9	+1.8
PMSA	Palmer Station	18.83	236	P	Pn	07 49 51.2	+0.1
EFI	East Falkland	19.76	277	P	Pn	07 50 01.4	-0.9
EFI				IAmb	IAmb	07 50 07.8	
	comp=Z,27nm,0.9s						
USHA	Ushuaia	23.50	261	LR	LR	07 57 20.4	
	comp=Z,116nm,21.8s,baz=90,slow=30						
QSPA	South Pole Qui	31.25	180	P	P	07 51 50.6	+0.5
	comp=Z,7.4nm,1.0s,baz=186,slow=2.6,SNR=24						
QSPA	South Pole Qui	31.25	180	P	P	07 51 51.6	+1.5
QSPA				IAmb	IAmb	07 51 52.5	
	comp=Z,12nm,1.1s						
TRQA	Tornquist	31.37	296	P	P	07 51 51.0	-0.3
TRQA				IAmb	IAmb	07 52 08.9	
	comp=Z,15nm,1.1s						
PLTB	Pedras Altas	33.16	313	P	P	07 52 07.3	+0.4
PLTB				IAmb	IAmb	07 52 13.3	
	comp=Z,16nm,1.4s						
PLCA	Paso Flores	33.48	283	P	P	07 52 08.6	-1.2
	comp=Z,4.4nm,0.9s,baz=143,slow=6.2,SNR=9.0						
PLCA				LR	LR	08 06 31.1	
	comp=Z,86nm,18.1s,baz=144,slow=38						
PLCA	Paso Flores	33.48	283	P	P	07 52 10.1	+0.3
LC01	Cunco	35.54	284	P	P	07 52 27.1	-0.4
LC01				IAmb	IAmb	07 52 29.8	
	comp=Z,18nm,1.3s						
MAW	Mawson	37.26	141	P	P	07 52 42.8	+1.1
	comp=Z,5.4nm,0.9s,baz=246,slow=10,SNR=7.8						
MAW				LR	LR	08 05 49.7	
	comp=Z,132nm,21.1s,baz=242,slow=33						
MAW	Mawson	37.26	141	P	P	07 52 43.0	+1.3
BO02	Sierra Bellavi	38.21	289	P	P	07 52 50.9	+0.6
BO02				IAmb	IAmb	07 53 03.6	
	comp=Z,7.8nm,0.9s						
GO05	Huala	38.60	288	P	P	07 52 52.3	-1.2
GO05				IAmb	IAmb	07 52 55.4	
	comp=Z,21nm,1.1s						
BO01	Tunca	38.68	289	P	P	07 52 52.6	-1.5
BO01				IAmb	IAmb	07 53 11.0	
	comp=Z,18nm,1.1s						
MT09	Talagante	39.13	290	P	P	07 52 57.3	-0.8
MT01	Popeta	39.19	289	P	P	07 52 57.5	-0.9
MT01				IAmb	IAmb	07 53 00.1	
	comp=Z,13nm,0.9s						
CPUP	Villa Florida	39.45	312	P	P	07 52 59.8	-0.8
	comp=Z,2.1nm,0.9s,baz=175,slow=12,SNR=1.9						
PEL	Peldehue	39.50	291	P	P	07 53 01.8	+0.8
VA05	Santo Domingo	39.53	289	P	P	07 53 01.8	+0.5
MT02	Curacav	39.62	290	P	P	07 53 02.4	+0.4
MT02				IAmb	IAmb	07 53 04.7	
	comp=Z,24nm,0.8s						
VA03	San Esteban	39.74	291	P	P	07 53 03.5	+0.4
VA03				IAmb	IAmb	07 53 21.4	
	comp=Z,30nm,1.0s						
SUR	Sutherland	40.66	70	P	P	07 53 11.0	+0.2
SUR				IAmb	IAmb	07 53 17.2	
	comp=Z,40nm,1.4s						
CO05	La Serena	42.42	293	P	P	07 53 25.1	0.0
VNDA	Vanda	43.67	182	P	P	07 53 36.3	+1.7
	comp=Z,4.1nm,0.8s,baz=185,slow=6.8,SNR=25						
VNDA				LR	LR	08 10 34.8	
	comp=Z,75nm,18.7s,baz=166,slow=34						
VNDA	Vanda	43.67	182	P	P	07 53 36.3	+1.7
CRZF	Crozet Islands	45.87	110	P	P	07 53 52.7	+0.2
BOSA	Boshof	45.92	71	P	P	07 53 53.3	0.0
	comp=Z,2.4nm,0.7s,baz=212,slow=15,SNR=1.6						
BOSA				LR	LR	08 10 33.1	
	comp=Z,48nm,19.2s,baz=188,slow=33						
BDFB	Brasilia	46.37	329	P	P	07 53 55.5	-1.3
	comp=Z,2.7nm,0.8s,baz=149,slow=6.7,SNR=3.0						
BDFB	Brasilia	46.37	329	P	P	07 53 56.7	-0.1
BDFB				IAmb	IAmb	07 54 09.1	
	comp=Z,9.2nm,1.5s						
PB07	IPOC Station P	48.79	300	P	P	07 54 15.0	-0.7
LBTB	Lobatse	49.09	69	P	P	07 54 18.5	+0.6
LBTB				IAmb	IAmb	07 54 19.8	
	comp=Z,22nm,1.4s						
SIV	San Ignacio	50.26	313	LR	LR	08 15 41.4	
	comp=Z,48nm,18.0s,baz=111,slow=36						
H10S2	ASCENSION HYDR	50.60	14	T	T	08 49 00.8	
	baz=187,slow=74,SNR=11						
H10S3	ASCENSION HYDR	50.60	14	T	T	08 49 01.4	
	baz=33,slow=74,SNR=14						
CASY	Casey	50.83	159	P	P	07 54 31.8	+1.4
CASY				IAmb	IAmb	07 54 32.8	
	comp=Z,12nm,1.0s						
H10N1	ASCENSION HYDR	51.72	14	T	T	08 50 26.7	
	baz=181,slow=70,SNR=9.4						
H10N3	ASCENSION HYDR	51.72	14	T	T	08 50 25.8	
	baz=181,slow=70,SNR=17						
H10N2	ASCENSION HYDR	51.73	14	T	T	08 50 23.4	
	baz=181,slow=70,SNR=14						
SAML	Samuel	57.52	314	P	P	07 55 18.5	-1.2
ETMB	Extrema	57.88	311	P	P	07 55 21.7	-0.5
LSZ	Lusaka	58.67	66	P	P	07 55 27.8	-0.2
LSZ				IAmb	IAmb	07 55 29.8	
	comp=Z,4.4nm,0.8s						
NNA	Nana	60.46	299	P	P	07 55 39.4	-0.8
DBIC	Dimbokro	67.50	22	P	P	07 56 26.5	+0.2
	comp=Z,2.7nm,0.5s,baz=198,slow=6.0,SNR=6.3						
DBIC	Dimbokro	67.50	22	P	P	07 56 27.2	+0.9
DBIC				IAmb	IAmb	07 56 38.4	
	comp=Z,17nm,1.5s						
TORD	Torodi Ar. Bea	75.21	27	P	P	07 57 13.5	+0.7
	comp=Z,5.8nm,0.6s,baz=200,slow=6.0,SNR=42						
TORD	Torodi Ar. Bea	75.21	27	P	P	07 57 13.8	+1.1
TORD				IAmb	IAmb	07 57 16.0	
	comp=Z,4.0nm,0.6s						
SNET	Serv Nac Est T	88.77	299	P	P	07 58 23.6	-0.4
STKA	Stephens Creek	88.84	169	P	P	07 58 24.6	+0.3
	comp=Z,2.0nm,0.8s,baz=156,slow=1.0,SNR=4.2						
STKA	Stephens Creek	88.84	169	P	P	07 58 24.6	+0.3
RAR	Rarotonga	91.69	222	LR	LR	08 28 52.0	
	comp=Z,91nm,21.2s,baz=230,slow=28						
ASAR	Alice Springs	95.91	161	P	P	07 58 56.0	-1.1
	comp=Z,1.3nm,0.8s,baz=181,slow=4.1,SNR=18						
ASAR				PP	PP	08 02 50.0	+1.6
	comp=Z,0.8nm,1.0s,baz=194,slow=7.7,SNR=4.5						
ASAR				LR	LR	08 39 08.6	
	comp=Z,62nm,20.9s,baz=178,slow=34						
FINES	FINESS Array B	126.56	28	PKP	PKPdf	08 04 31.3	-0.5
	comp=Z,2.6nm,0.9s,baz=327,slow=3.2,SNR=6.7						
ARCES	ARCESS Array B	133.33	22	PKP	PKPdf	08 04 43.7	-0.7
	comp=Z,4.2nm,1.0s,baz=208,slow=1.7,SNR=4.0						
YKA	Yellowknife Ar	138.94	315	PKP	PKPdf	08 04 54.2	-0.8
	comp=Z,0.9nm,0.7s,baz=117,slow=3.3,SNR=6.1						
ZALV	Zalesovo Beam	142.78	66	PKP	PKPdf	08 05 00.4	-1.8
	comp=Z,1.0nm,0.6s,baz=219,slow=3.7,SNR=3.2						
A36M	Sachs Harbour	147.18	326		PKPbc	08 05 10.6	-1.0
INK	Inuvik	148.63	317	PKPbc	PKPbc	08 05 14.3	-1.2
	comp=Z,1.5nm,0.6s,baz=20,slow=3.4,SNR=16						
INK	Inuvik	148.63	317		PKPbc	08 05 13.5	-2.0
SONM	Songino Array	149.90	90	PKPbc	PKPbc	08 05 18.7	-0.9
	comp=Z,2.6nm,0.7s,baz=216,slow=3.7,SNR=16						
SONM	Songino Array	149.90	90		PKiKP	08 05 19.8	-0.7
ILAR	Eielson Array	152.69	307	PKPbc	PKPbc	08 05 24.1	-1.2
	comp=Z,0.7nm,0.6s,baz=143,slow=3.9,SNR=10						
ILAR	Eielson Array	152.69	307	PKPdf	PKPdf	08 05 18.6	+0.4

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*IDC **22** 07:59:49.3±0.7, 31°.13S×72°.73W, h0^{km}, mb4.0/6, mb1 4.2/9, mb1mx4.0/33, mbtmp4.0/9, ML4.0/3, MS3.2/3, Ms1 3.2/3, ms1mx2.9/20, Error ellipse: s-maj=25.3km s-min=20.0km az=101.0*

*NEIC **22** 07:59:50.0±1.9, 31°.13S±0°.04×72°.77W±0°.03, h10^{km}±1^{km}, mb4.6/21, ML3.7(GUC), Error ellipse: s-maj=7.5km s-min=4.4km az=184.0*

*GUC **22** 07:59:54.0±0.9, 31°.23S×72°.31W, h38^{km}±4^{km}, ML3.7*

*VAO **22** 08:00:33.8±1.4, 28°.80S×71°.09W, h199^{km}±11^{km}, mb4.1*

ISC 22 07:59:48.8±1.2**, 31°.21S**±0°.03×**72°.81W**±0°.03**, h6**^{km}±7^{km}**, n108, σ2ˢ.27**/118**, mb4.4**/12**, 3C, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	1.14	62	*e*P	Pb	08 00 09.2	-1.7
CO06				*e*S	Sb	08 00 20.2	-5.8
CO06	Fray Jorge	1.14	62		Pb	08 00 10.0	-0.9
CO06				Sn	Sb	08 00 23.3	-2.7
CO03	El Pedregal	1.86	79		Pn	08 00 21.1	-0.2
CO03				Sn	Sn	08 00 42.6	-2.5
VA06	Catapilco	1.86	137⇑	*e*P	Pn	08 00 20.7	-0.6
VA06				*e*S	Sn	08 00 40.7	-4.3
VA06				IAML		08 00 44.2	
	comp=E,2μm,0.4s						
CO05	La Serena	1.87	47	*e*P	Pn	08 00 20.4	-0.8
CO05				*e*S	Sn	08 00 42.0	-3.2
CO05				IAML		08 00 43.2	
	comp=N,683nm,0.2s						
CO05	La Serena	1.87	47		Pn	08 00 20.5	-0.8
CO05				Sn	Sn	08 00 41.7	-3.5
GO04	Tololo Observa	2.02	60	*e*P	Pn	08 00 23.0	-0.6
GO04				*e*S	Sn	08 00 44.7	-4.5
GO04	Tololo Observa	2.02	60		Pn	08 00 23.3	-0.3
VA01	Torpederas	2.06	152	Pn	Pn	08 00 24.4	+0.5
ROCH	El Roble	2.33	139⇑	*e*P	Pn	08 00 27.9	+0.2
ROCH				*e*P	Pn	08 00 28.0	+0.2
ROCH				*e*S	Sn	08 00 53.2	-3.6
ROCH				*e*S	Sb	08 00 54.1	-6.3
ROCH				IAML		08 00 57.8	
	comp=N,826nm,0.7s						
ROCH				IAML		08 01 00.4	
	comp=E,777nm,0.5s						
VA03	San Esteban	2.47	129	*e*P	Pn	08 00 30.2	+0.6
VA03				*e*S	Sn	08 00 55.4	-4.7
VA03				IAML		08 01 01.3	
	comp=N,752nm,0.5s						
VA03	San Esteban	2.47	129		Pn	08 00 30.7	+1.1
MT02	Curacav	2.49	146	*e*P	Pn	08 00 30.3	+0.5
MT02				*e*S	Sn	08 00 57.5	-3.0
MT02				IAML		08 01 00.5	
	comp=N,252nm,0.7s						
MT02	Curacav	2.49	146	Pn	Pn	08 00 30.7	+0.9
PEL	Peldehue	2.64	137		Pn	08 00 32.6	+0.7
VA05	Santo Domingo	2.64	158	*e*P	Pn	08 00 32.2	+0.3
VA05				*e*S	Sn	08 01 02.6	-1.6
VA05				IAML		08 01 03.8	
	comp=N,826nm,0.3s						
VA05	Santo Domingo	2.64	158		Pn	08 00 32.5	+0.6
MT05	Renca	2.79	142⇑	*e*P	Pn	08 00 35.0	+0.9
MT05				*e*S	Sn	08 01 04.6	-3.6
MT05				IAML		08 01 12.3	
	comp=E,558nm,0.4s						
MT05	Renca	2.79	142		Pn	08 00 35.3	+1.2
LCO	Las Campanas	2.85	40	*e*P	Pn	08 00 34.6	-0.5
LCO				*e*S	Sn	08 01 07.2	-2.7
LCO	Las Campanas	2.85	40	Pn	Pn	08 00 34.9	-0.2
MT01	Popeta	2.96	154	*e*P	Pn	08 00 36.8	+0.6
MT01				*e*S	Sn	08 01 09.7	-2.4
MT01				IAML		08 01 12.6	
	comp=E,226nm,0.2s						
MT01	Popeta	2.96	154		Pn	08 00 36.9	+0.6
MT09	Talagante	2.99	149		Pn	08 00 38.3	+1.5
AC04	Llanos de Chal	3.35	27	Pn	Pn	08 00 40.7	-1.0
BO01	Tunca	3.49	156		Pn	08 00 44.4	+0.8
GO05	Huala	3.86	169	Pn	Pn	08 00 49.5	+0.8
BO02	Sierra Bellavi	3.96	155		Pn	08 00 51.6	+1.5
GO03	Copiap	4.25	33	Pn	Pn	08 00 53.8	-0.3
ML02	Panimavida	4.69	166	Pn	Pn	08 01 01.6	+1.5
AC02	Maricunga	5.42	37	Pn	Pn	08 01 10.9	+0.3
H03N1	Juan Fernandez	5.62	245	Pn	Pn	08 01 14.1	+1.4
	baz=117,slow=18,SNR=55						
H03N1				Sn	Sn	08 02 12.5	-4.9
	baz=140,slow=79,SNR=4.2						
H03N1				T	T	08 07 00.0	
	baz=72,slow=71,SNR=39						
H03N3	Juan Fernandez	5.64	245	Pn	Pn	08 01 14.5	+1.6
	baz=117,slow=18,SNR=62						
H03N3				Sn	Sn	08 02 12.2	-5.6
	baz=140,slow=79,SNR=4.0						
H03N3				T	T	08 07 05.6	
	baz=72,slow=71,SNR=60						
VA04	Juan Fernndez	5.64	243	Pn	Pn	08 01 13.8	+0.7
H03N2	Juan Fernandez	5.64	245	Pn	Pn	08 01 14.5	+1.6
	baz=117,slow=18,SNR=31						
H03N2				Sn	Sn	08 02 12.0	-5.8
	baz=140,slow=79,SNR=2.0						
H03N2				T	T	08 07 13.6	
	baz=72,slow=71,SNR=56						
H03S3	Juan Fernandez	5.77	242	Pn	Pn	08 01 15.0	+0.3
	baz=346,slow=72,SNR=5.1						
H03S3				Sn	Sn	08 02 16.1	-5.1
	baz=314						
H03S1	Juan Fernandez	5.78	241	Pn	Pn	08 01 15.9	+1.1
	baz=346,slow=72,SNR=4.6						
H03S1				Sn	Sn	08 02 15.4	-5.9
	baz=314						
H03S2	Juan Fernandez	5.79	242	Pn	Pn	08 01 16.3	+1.3
	baz=346,slow=72,SNR=4.9						
H03S2				Sn	Sn	08 02 16.0	-5.6
	baz=314						
LC01	Cunco	7.71	175	Pn	Pn	08 01 42.5	+0.9
LR03	Panguipulli	8.41	178		Pn	08 01 52.8	+1.6
PB15	IPOC Station P	8.51	21	Pn	Pn	08 01 51.0	-1.7
LVC	Limon Verde	9.24	23	Pn	Pn	08 02 00.6	-2.4
	comp=E,0.6nm,0.3s,baz=282,slow=8.7,SNR=2.1						
LVC				Sn	Sn	08 03 35.1	-12
	comp=E,0.1nm,0.3s,baz=252,slow=13,SNR=1.6						
LVC	Limon Verde	9.24	23	*e*P	Pn	08 02 07.6	+4.6
PLCA	Paso Flores	9.68	170	Pn	Pn	08 02 10.4	+1.8
	comp=E,0.4nm,0.3s,baz=328,slow=10,SNR=16						
PLCA	Paso Flores	9.68	170	Pn	Pn	08 02 10.6	+1.9
PB07	IPOC Station P	9.80	16	Pn	Pn	08 02 08.4	-2.1
PB09	IPOC Station P	9.90	20	Pn	Pn	08 02 11.8	-0.1
LL05	Los Muermos	10.19	183	Pn	Pn	08 02 17.1	+1.6
TRQA	Tornquist	11.23	130	Pn	Pn	08 02 29.7	-0.1
PB11	IPOC Station P	11.75	15	Pn	Pn	08 02 32.9	-4.2
CPUP	Villa Florida	14.42	74	LR	LR	08 09 15.0	
	comp=E,147nm,18.8s,baz=228,slow=40						
PLTB	Pedras Altas	16.40	97	*e*P	P	08 04 00.9	+19
SIV	San Ignacio	18.56	38	P	Pn	08 04 06.4	-0.1
	comp=E,1.0nm,0.3s,baz=213,slow=9.6,SNR=95						
AQDB	Aquidauana	18.72	59	*e*P	Pn	08 04 09.7	+1.1
AQDB	Aquidauana	18.72	59	P	Pn	08 04 09.6	+1.1
PTGB	Pitanga	19.42	76	*e*P	Pn	08 04 25.2	+8.2
NNA	Nana	19.49	348	LR	LR	08 10 10.0	
	comp=E,50nm,19.6s,baz=179,slow=32						
PTLB	Pontes e Lacer	20.06	42	*e*P	P	08 04 23.0	+0.2
PTLB	Pontes e Lacer	20.06	42		Pn	08 04 23.6	-1.0
PP1B	Ponte de Pedra	21.18	54	*e*P	P	08 04 36.0	+1.1
VILB	Vilhena	21.57	35	P	P	08 04 37.5	-1.6
VILB				IAmb	IAmb	08 04 59.9	
	comp=Z,12nm,0.9s						
MG04	Isla Riesco	21.65	178	P	P	08 04 40.6	+0.9
SALV	Santo Antonio	21.83	50	*e*P	P	08 04 40.6	-1.3
GO10	Punta Arenas	21.97	177	P	P	08 04 43.1	-0.1
FRTB	Fartura	22.07	75	*e*P	P	08 04 52.6	+8.0
ETMB	Extrema	22.15	17		P	08 04 43.2	-2.2
CZSB	Cruzeiro do Su	23.36	0	*e*P	P	08 05 00.9	+2.8
CZSB	Cruzeiro do Su	23.36	0	P	P	08 04 58.0	-0.1
CZSB				IAmb	IAmb	08 05 07.3	
	comp=Z,21nm,0.9s						
PET01	Itanhaem-SP	23.59	79	*e*P	P	08 05 09.1	+8.7
USHA	Ushuaia	23.82	174	LR	LR	08 15 20.0	
	comp=Z,49nm,18.2s,baz=126,slow=39						
SAML	Samuel	23.90	24	P	P	08 05 04.5	+1.2
BB19B	Bebedouro	23.98	71	*e*P	P	08 05 11.4	+7.2
VAO	Valinhos	24.37	77	*e*P	P	08 05 16.3	+8.4
PDRB	Porto dos Gac	24.52	41	*e*P	P	08 05 09.8	+0.6
ARAG	Araguaiana, MT	24.61	56	*e*P	P	08 05 11.6	+1.6
PARB	Paraibuna	25.36	79	*e*P	P	08 05 26.5	+10
CLDB	Colider	25.65	42	*e*P	P	08 05 21.4	+2.0
IPMB	Ipameri, GO	25.88	65	*e*P	P	08 05 26.3	+4.7
MAN01	Angra dos Reis	26.95	79	*e*P	P	08 05 38.6	+7.4
TBTG	Tabatinga, AM	27.02	6	P	P	08 05 31.8	+0.1
BDFB	Brasilia	27.43	61	P	P	08 05 36.4	+0.8
	comp=Z,3.5nm,0.7s,baz=221,slow=8.8,SNR=6.9						
BDFB	Brasilia	27.43	61	P	P	08 05 34.9	-0.7
BDFB				IAmb	IAmb	08 05 47.1	
	comp=Z,10nm,0.9s						
SNDB	Serra Nova Dou	27.59	51	*e*P	P	08 05 39.5	+2.6
VAS01	Vassouras-RJ	27.63	78	*e*P	P	08 05 44.9	+7.7
NPGB	Novo Progresso	29.06	38	*e*P	P	08 05 50.4	+0.4
MACA	Manacapuru-AM	30.15	25	P	P	08 05 59.8	+0.1
MACA				IAmb	IAmb	08 06 17.4	
	comp=Z,12nm,1.5s						
PMSA	Palmer Station	34.03	173	P	P	08 06 33.9	+0.7
BOAV	Boa Vista	35.41	22	P	P	08 06 45.3	-0.4
HDC	Heredia	42.39	343	P	P	08 07 45.0	+0.7
ACON	Acoyapa	44.54	343	P	P	08 08 01.4	0.0
ACON				IAmb	IAmb	08 08 14.8	
	comp=Z,19nm,1.3s						
OBIP	Obispado Ponce	49.33	8	P	P	08 08 38.8	-0.1
SJG	San Juan	49.45	8	P	P	08 08 38.6	-1.2
SNAA	Sanae	54.41	159	P	P	08 09 18.4	+2.1
	comp=Z,3.6nm,0.7s,baz=275,slow=8.5,SNR=18						
SNAA	Sanae	54.41	159	P	P	08 09 16.6	+0.3
SNAA				IAmb	IAmb	08 09 20.5	
	comp=Z,4.2nm,0.7s						
QSPA	South Pole Qui	59.02	180	P	P	08 09 52.1	+2.9
QSPA				IAmb	IAmb	08 09 54.4	
	comp=Z,5.1nm,0.8s						
TX31	Lajitas Ar. Si	66.99	331	P	P	08 10 42.5	0.0

TX32	Lajitas Array	66.99	331	P	P	08 10 41.9	-0.6
TX32				IAmb	IAmb	08 11 07.3	
	comp=Z,3.3nm,1.3s						
TXAR	Lajitas Array	66.99	331	P	P	08 10 44.6	+2.1
	comp=Z,1.5nm,0.8s,baz=159,slow=8.4,SNR=11						
TXAR	Lajitas Array	66.99	331	P	P	08 10 42.2	-0.4
PDAR	Pinedale Array	80.98	334	P	P	08 12 06.5	+2.1
	comp=Z,0.3nm,0.7s,baz=134,slow=7.7,SNR=2.1						
NVAR	Mina Array Bea	81.22	325	P	P	08 12 06.0	+0.3
	comp=Z,0.3nm,0.7s,baz=136,slow=7.1,SNR=2.0						
TORD	Torodi Ar. Bea	83.89	71	P	P	08 12 20.4	+0.6
	comp=Z,1.0nm,0.8s,baz=276,slow=5.6,SNR=5.0						
TORD	Torodi Ar. Bea	83.89	71	P	P	08 12 19.4	-0.5
ASAR	Alice Springs	119.73	208	PKP	PKiKP	08 18 41.5	+1.0
	comp=Z,0.4nm,0.8s,baz=132,slow=1.4,SNR=5.9						
WRA	Warramunga Arr	122.85	211	PKP	PKiKP	08 18 47.9	+1.3
	comp=Z,0.5nm,0.6s,baz=154,slow=1.7,SNR=5.1						
ZALV	Zalesovo Beam	152.16	29	PKPbc	PKiKP	08 19 46.3	+1.3
	comp=Z,4.1nm,0.8s,baz=294,slow=3.3,SNR=17						
ZALV				PKPab	pPKPab	08 19 55.4	+0.6
	comp=Z,2.5nm,0.7s,baz=295,slow=3.4,SNR=6.7						
ZALV	Zalesovo Beam	152.16	29	PKPdf	PKPdf	08 19 37.0	-1.0
ZALV					pPKPab	08 19 55.0	+0.2
MKAR	Makanchi Array	155.31	44	PKPbc	PKPdf	08 19 52.7	+10
	comp=Z,0.3nm,0.7s,baz=298,slow=3.1,SNR=2.1						

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*NEIC **22** 08:11:15.8±2.3, 16°.85N±0°.04×96°.41W±0°.03, h49^{km}±4^{km}, mb5.0/448, Md5.0/133(MEX), Error ellipse: s-maj=6.2km s-min=4.5km az=170.0*

*MOS **22** 08:11:15.8±0.9, 16°.98N×96°.19W, h68^{km}, mb5.3/16, Error ellipse: s-maj=11.4km s-min=5.6km az=112.4*

*GCMT **22** 08:11:16.8±0.4, 17°.12N±0°.02×96°.41W±0°.03, h48^{km}±1^{km}, MW4.9/59, Moment Tensor Solution. s41,c47; s59,c75; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.62±.15; $M_{\theta\theta}$0.69±.11; $M_{\phi\phi}$1.93±.10; $M_{r\theta}$0.16±.08; $M_{\theta\phi}$-1.57±.07; $M_{\phi r}$0.43±.07; Best double couple: $M_0$2.85200×10^{16} NP1:ϕ_s317.00000°, δ43.00000°, λ-104.00000°. NP2: ϕ_s155.00000°, δ48.00000°, λ-78.00000°. Principal axes: T 3.0100, Plg3.0000°, Azm236.0000°; N -0.3190, Plg9.0000°, Azm327.0000°; P -2.6940, Plg80.0000°, Azm130.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **22** 08:11:16.6±0.5, 16°.82N×96°.31W, h66^{km}±3^{km}, mb4.3/20, mb1 4.5/21, mb1mx4.3/29, mbtmp4.6/21, MS3.7/11, Ms1 3.7/11, ms1mx3.5/25 Error ellipse: s-maj=12.3km s-min=7.1km az=8.0*

*MEX **22** 08:11:17.1±0.9, 16°.80N×96°.42W, h58^{km}±5^{km}, MD5.0*

*GCG **22** 08:11:19.8±3.1, 17°.70N×95°.68W, h22^{km}±999^{km}, MD5.1*

*SNET **22** 08:11:22.4±1.1, 18°.10N×94°.77W, h15^{km}±999^{km}, ML5.1*

*UCR **22** 08:12:46.3±1.8, 14°.07N×90°.09W, h20^{km}±999^{km}*

ISC 22 08:11:15.5±0.3, **16°.76N**±0°.03×**96°.43W**±0°.03, **h60**^{km}±3^{km}, **h60**^{km}**:pP-P, n752,** σ1^s**.99**/683, **mb5.0**/197, **MS3.9**/16, **95C-111D, Fault plane solution: NP1:**ϕ_s331.00140°, δ34.93658°, λ-68.70773°. **NP2:**ϕ_s125.57488°, δ57.75240°, λ-104.23369°. **Principal axes:** T Plg11.6761°, Azm225.8011°; N Plg12.0023°, Azm133.2830°; P Plg73.1316°, Azm358.7649°; **Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OXBJ	Oaxaca	0.42	318		Pn	08 11 26.5	-0.4
OXBJ					Sn	08 11 33.6	-1.5
OXBJ	Oaxaca	0.42	318	⇓iP	Pn	08 11 26.5	-0.4
OXBJ				iS	Sn	08 11 33.6	-1.5
VHO	Vista Hermosa	0.43	317	⇓iP	Pn	08 11 26.6	-0.3
VHO				iS	Sn	08 11 34.3	-1.0
PEIG	Puerto Escondi	1.02	223	⇑iP	Pn	08 11 33.8	0.0
PEIG				iS	Sn	08 11 48.4	+0.9
HUIG	Huatulco	1.03	163		Pn	08 11 34.9	+1.0
HUIG					Sn	08 11 48.9	+1.3
HUIG	Huatulco	1.03	163	⇑iP	Pn	08 11 34.9	+1.0
HUIG				iS	Sn	08 11 48.9	+1.3
YOIG	Yosondua	1.08	276	⇑iP	Pn	08 11 34.7	-0.1
YOIG				iS	Sn	08 11 48.2	-0.9
PANG	Puerto Angel	1.08	182		Pn	08 11 34.9	+0.2
PANG					Sn	08 11 49.4	+0.5
PANG	Puerto Angel	1.08	182	⇑iP	Pn	08 11 34.9	+0.2
PANG				iS	Sn	08 11 49.4	+0.5
TOIG	Toxpalan	1.47	336	⇓iP	Pn	08 11 39.6	-0.2
TOIG				iS	Sn	08 11 56.6	-1.5
CMIG	Matias Romero	1.52	77	P	Pn	08 11 39.9	-0.5
	749nm,0.3s,baz=266,slow=11,SNR=7572						
CMIG				S	Sn	08 11 57.7	-1.4
	896nm,0.3s,baz=318,slow=19,SNR=9.9						
CMIG				LR	LR	08 12 27.6	
	comp=Z,2µm,18.5s,baz=220,slow=51						
CMIG	Matias Romero	1.52	77		Pn	08 11 40.1	-0.3
CMIG					Sn	08 11 57.3	-1.9
CMIG	Matias Romero	1.52	77	⇑iP	Pn	08 11 40.1	-0.3
CMIG				iS	Sn	08 11 57.3	-1.9
PNIG	Pinotepa	1.67	258		Pn	08 11 41.5	-1.0
PNIG					Sn	08 11 58.4	-4.6
PNIG	Pinotepa	1.67	258	⇑iP	Pn	08 11 41.5	-1.0
PNIG				iS	Sn	08 11 58.4	-4.6
HLIG	Huajuapan de L	1.69	309	⇑iP	Pn	08 11 43.0	0.0
HLIG				iS	Sn	08 12 02.8	-1.0
TPIG	Tehuac#an	1.88	332		Pn	08 11 46.2	+0.7
TPIG					Sn	08 12 11.5	+3.2
TPIG	Tehuac#an	1.88	332	⇑iP	Pn	08 11 46.2	+0.7
TPIG				iS	Sn	08 12 11.5	+3.2
FTIG	Fresnillo de T	1.99	305	⇑iP	Pn	08 11 47.1	+0.1
FTIG				iS	Sn	08 12 05.7	-5.2
MGIG	Malinaltepec	2.16	283	⇑iP	Pn	08 11 49.6	+0.2
MGIG				iS	Sn	08 12 07.2	-8.0
TLIG	Tlapa	2.20	292		Pn	08 11 49.9	+0.1
TLIG	Tlapa	2.20	292		Sn	08 12 06.3	-10
TLIG	Tlapa	2.20	292	⇑iP	Pn	08 11 50.1	+0.3
TLIG				iS	Sn	08 12 06.3	-10
HMTT	Tlapaneco	2.29	297		Pn	08 11 51.8	+0.8
HMTT					Sn	08 12 17.1	-1.0
HMTT	Tlapaneco	2.29	297	⇓iP	Pn	08 11 51.8	+0.8
HMTT				iS	Sn	08 12 17.1	-1.0
TUIG	Tuzandepetl	2.30	56		Pn	08 11 50.6	-0.4
TUIG					Sn	08 12 15.8	-2.4
TUIG	Tuzandepetl	2.30	56	⇑iP	Pn	08 11 50.6	-0.4
TUIG				iS	Sn	08 12 15.8	-2.4
DAIG	Los Arroyos	3.10	275		Pn	08 12 01.2	-0.8
DAIG					Sn	08 12 32.3	-5.6
DAIG	Los Arroyos	3.10	275	⇑iP	Pn	08 12 01.2	-0.8
DAIG				iS	Sn	08 12 32.3	-5.6
PPM	Popocatepetl	3.11	318	⇑iP	Pn	08 12 04.2	+1.6
PPM				iS	Sn	08 12 37.6	-1.2
TGIG		3.17	89		Pn	08 12 03.0	0.0
TGIG					Sn	08 12 33.6	-6.0
TGIG		3.17	89	⇑iP	Pn	08 12 03.0	0.0
TGIG				iS	Sn	08 12 33.6	-6.0
TGBT	Tuxtla Gutierr	3.20	89		Pn	08 12 05.0	+1.7
TGBT					Sn	08 12 32.2	-8.0
TGBT	Tuxtla Gutierr	3.20	89	eP	Pn	08 12 05.0	+1.7
TGBT				eS	Sn	08 12 32.2	-8.0
PCIG		3.25	108		Pn	08 12 05.6	+1.5
PCIG					Sn	08 12 41.7	0.0
PCIG		3.25	108	⇑iP	Pn	08 12 05.6	+1.5
PCIG				iS	Sn	08 12 41.7	0.0
AMVM	AMECAMECA	3.26	317		Pn	08 12 06.2	+1.7
AMVM					Sn	08 12 39.6	-2.6
AMVM	AMECAMECA	3.26	317	⇑eP	Pn	08 12 06.2	+1.7
AMVM				iS	Sn	08 12 39.6	-2.6
MEIG	Mezcala	3.26	291		Pn	08 12 05.0	+0.7
MEIG					Sn	08 12 44.4	+2.4
MEIG	Mezcala	3.26	291	⇑iP	Pn	08 12 05.0	+0.7
MEIG				iS	Sn	08 12 44.4	+2.4
YAIG	Yautepec	3.27	310		Pn	08 12 05.2	+0.7
YAIG					Sn	08 12 49.5	+7.2
YAIG	Yautepec	3.27	310	⇑iP	Pn	08 12 05.2	+0.7
YAIG				iS	Sn	08 12 49.5	+7.2
ACP2	Acapulco	3.31	273		Pn	08 12 03.6	-1.4
ACP2					Sn	08 12 40.6	-2.6
ACP2	Acapulco	3.31	273	⇓iP	Pn	08 12 03.6	-1.4
ACP2				iS	Sn	08 12 40.6	-2.6
MAVM	Malinalco, Edo	3.65	307		Pn	08 12 11.0	+1.2
MAVM	Malinalco, Edo	3.65	307	⇑iP	Pn	08 12 11.0	+1.2
UNM	Universidad Na	3.66	315	P	Pn	08 12 11.7	+1.8
UNM	Universidad Na	3.66	315		Pn	08 12 11.7	+1.8
CAIG	El Cayaco	3.69	275		Pn	08 12 09.2	-0.9
CAIG					Sn	08 12 46.1	-6.2
CAIG	El Cayaco	3.69	275	⇑iP	Pn	08 12 09.2	-0.9
CAIG				iS	Sn	08 12 46.1	-6.2
CVM	Colonia del Va	3.70	315	iS	Pn	08 12 10.5	+0.3
CVM				iS	Sn	08 12 56.9	+4.4
CCIG	Comitan	4.14	96		Pn	08 12 17.3	+0.9
CCIG	Comitan	4.14	96		Sn	08 13 03.5	-0.3
CCIG	Comitan	4.14	96	⇑iP	Pn	08 12 17.4	+0.9
CCIG				iS	Sn	08 13 03.5	-0.3
DEIG	Demacu	4.31	325	⇑iP	Pn	08 12 26.9	+8.1
DEIG				iS	Sn	08 13 05.6	-2.3
THIG		4.41	114		Pn	08 12 22.2	+2.3
THIG					Sn	08 13 10.2	+0.2
THIG		4.41	114	⇑iP	Pn	08 12 22.2	+2.3
THIG				iS	Sn	08 13 10.2	+0.2
ACIG	Acambay	4.59	315	⇑iP	Pn	08 12 25.8	+3.2
ACIG				iS	Sn	08 13 06.8	-7.9
ACIG				iS	Sn	08 13 15.1	+0.5
ZIIG	Zihuatanejo	4.89	281		Pn	08 12 26.6	0.0
ZIIG	Zihuatanejo	4.89	281	⇑iP	Pn	08 12 26.6	0.0
HUEH	Huehuetenango	4.95	106	eP	Pn	08 12 26.8	-0.8
HUEH				eS	Sn	08 13 15.8	-7.8
HUEH	Huehuetenango	4.95	106		Pn	08 12 29.7	+2.1
RTAL	Retalhuleu	5.07	115	eP	Pn	08 12 31.8	+2.8
RTAL	Retalhuleu	5.07	115		Pn	08 12 31.0	+2.0
STG3	Santiaguito 3,	5.10	113	eP	Pn	08 12 33.1	+3.5
UON	La Union	5.29	284	eP	Pn	08 12 32.0	+0.1
UON				iS	Sn	08 13 24.5	-7.0
MOIG	Morelia	5.38	303	Pn	Pn	08 12 35.4	+1.9
MOIG	Morelia	5.38	303		Sn	08 13 35.1	+1.0
MOIG	Morelia	5.38	303	iP	Pn	08 12 35.7	+2.2
MOIG				iS	Sn	08 13 35.1	+1.0
JRQG	Juriquilla Cam	5.47	316	eP	Pn	08 12 42.4	+7.7
JRQG				eS	Sn	08 13 55.7	+19
FUG	Fuego 3	5.85	112	eP	Pn	08 12 44.0	+4.2
FUG				eS	Sn	08 13 48.8	+3.1
URUA	Uruapan	5.99	297		Pn	08 12 43.5	+1.7
URUA					Sn	08 13 45.7	-3.4
URUA	Uruapan	5.99	297	iP	Pn	08 12 43.5	+1.7
URUA				iS	Sn	08 13 45.7	-3.4
RPIG	Rio Verde	6.11	327	⇓iP	Pn	08 12 47.3	+4.0
RPIG				iS	Sn	08 13 48.3	-3.6
NBG	Las Nubes	6.24	109	eP	Pn	08 12 49.5	+4.2
PETF	Flores	6.29	88		Pn	08 12 45.2	-0.4
MRL	Marmol	6.70	103	eP	Pn	08 12 52.3	+0.7
MRL				eS	Sn	08 14 05.0	-1.6
MMIG	Aquila	6.77	284		Pn	08 12 52.5	+0.2
MMIG					Sn	08 14 09.0	+0.9
MMIG	Aquila	6.77	284	⇑iP	Pn	08 12 52.5	+0.2
MMIG				iS	Sn	08 14 09.0	+0.9
ESQI	Esquipulas	7.17	107		Pn	08 12 58.8	+1.0
CEVE	Cerro Verde	7.18	113	eP	Pn	08 12 59.4	+1.3
CEVE				eS	Sn	08 14 15.4	-3.1
CEVE				IAML		08 14 36.1	
	comp=Z,479nm,0.3s						
MTO3	Montecristo	7.20	108		Pn	08 12 58.2	-0.2
COIG	Colima	7.32	290	⇑iP	Pn	08 13 01.9	+2.0
COIG				iS	Sn	08 14 19.1	-2.6
EZ5V		7.34	293		Pn	08 13 03.3	+2.9
EZ5V					Sn	08 14 26.2	+3.8
EZ5V		7.34	293	⇑iP	Pn	08 13 03.3	+2.9
EZ5V				iS	Sn	08 14 26.2	+3.8
CEDA	San Andres	7.39	112	IAML		08 15 00.9	
	comp=Z,414nm,0.3s						
JAYA	Jayaque - finc	7.41	114	eP	Pn	08 13 00.9	-0.3
R15V		7.58	290		Pn	08 13 05.3	+1.8
R15V		7.58	290	⇑iP	Pn	08 13 05.3	+1.8
R15V				iS	Sn	08 14 22.3	-5.7
SNET	Serv Nac Est T	7.59	113		Pn	08 13 05.4	+1.8
AAIG	Aguscalientes	7.64	314	eP	Pn	08 13 06.5	+2.0
AAIG				eS	Sn	08 14 36.3	+6.4
LFRS	El Faro	7.76	113	eP	Pn	08 13 06.8	+0.8
COEG	Centro de Oper	7.92	112	IAML		08 13 19.1	
	comp=Z,201nm,0.5s						
COEB	Comit de Eme	8.28	112	eP	Pn	08 13 13.2	+0.1
ZAIG	Zacatecas	8.32	317		Pn	08 13 16.2	+2.5
ZAIG					Sn	08 14 47.6	+1.2
ZAIG	Zacatecas	8.32	317	⇓iP	Pn	08 13 16.2	+2.5
ZAIG				iS	Sn	08 14 47.6	+1.2
CJM	Chamela	8.63	290	⇑iP	Pn	08 13 16.9	-0.9
CJM				⇑iP	Pn	08 13 16.9	-0.9
LCND	La Caada	8.93	111	eP	Pn	08 13 20.1	-1.8
TGUH	Tegucigalpa,Un	9.23	106	Pn	Pn	08 13 27.0	+0.9
CNGN	Cerro Negro	10.32	113		Pn	08 13 41.7	+0.7
BOAB	BOACO BROADBAN	11.26	111	Pn	Pn	08 13 56.0	+2.3
PDIG	Papasquiaro	11.75	316	iP	Pn	08 14 06.1	+5.5
PDIG				iS	Sn	08 16 09.7	-0.6
833A	Chaparral WMA,	11.83	347	P	Pn	08 14 01.9	+0.3
	baz=165,SNR=5.3						
ACON	Acoyapa	11.89	112		Pn	08 14 03.0	+0.6
735A	Kenedy	12.11	354	Pn	Pn	08 14 04.9	-0.4
HZTE	Horizontes, Gu	12.11	118	eP	Pn	08 14 08.4	+3.0
HZTE	Horizontes, Gu	12.11	118		Pn	08 14 08.2	+2.7
SAJU	San Juanillo,	12.36	121	eP	Pn	08 14 11.9	+3.1
ORTG	Ortega, Santa	12.41	119		Pn	08 14 11.7	+2.2
DUNO	Dulce Nombre,	12.53	121		Pn	08 14 13.4	+2.2
ESPN	Las Esperanzas	12.59	110		Pn	08 14 12.3	+0.4
INDI	Punta indio, G	12.64	121	eP	Pn	08 14 15.7	+3.1
JTS	Las Juntas de	12.87	118	eP	Pn	08 14 17.6	+1.8
JTS	Las Juntas de	12.87	118	P	Pn	08 14 17.2	+1.4
JTS	Las Juntas de	12.87	118		Pn	08 14 17.2	+1.4
ARE1	Arenal 1	12.98	117	eP	Pn	08 14 19.3	+1.9
CEDE	Laguna Cedeo	12.98	117	eP	Pn	08 14 19.3	+1.9
CAO2	Cobano, Puntar	13.06	121		Pn	08 14 19.7	+1.3
COVE	Coope Vega, Sa	13.13	116	eP	Pn	08 14 20.3	+1.0
COVE	Coope Vega, Sa	13.13	116		Pn	08 14 20.1	+0.8
HKT	Hockley	13.15	2	P	Pn	08 14 18.4	-1.0
HKT	Hockley	13.15	2	Pn	Pn	08 14 18.4	-1.0
LAFE	Finca La Fe, P	13.16	120	eP	Pn	08 14 21.7	+2.0
HPIG		13.27	321		Pn	08 14 22.5	+1.2
SRA1	San Ramn	13.38	118	eP	Pn	08 14 25.1	+2.3
HDC	Heredia	13.73	118		Pn	08 14 28.3	+0.8
LCR2	La Lucha 2	13.95	118	eP	Pn	08 14 32.2	+1.6
SOR	Soroa	13.98	62	P	Pn	08 14 27.5	-3.3
SOR	Soroa	13.98	62	Pn	Pn	08 14 27.5	-3.3
435B	Jarrell	14.00	356	P	Pn	08 14 31.5	+0.5
	baz=175,SNR=7.7						
435B	Jarrell	14.00	356		Pn	08 14 30.4	-0.6
JCT	Junction City	14.01	348	P	Pn	08 14 29.8	-1.3
JCT	Junction City	14.01	348	P	Pn	08 14 32.5	+1.4
	baz=166						
JCT	Junction City	14.01	348	Pn	Pn	08 14 29.8	-1.3
CVTR	Volcan Turrial	14.02	117		Pn	08 14 32.6	+0.9
RIMA	Rio Macho	14.06	118	eP	Pn	08 14 33.9	+1.8
RIMA	Rio Macho	14.06	118		Pn	08 14 33.5	+1.5
TX31	Lajitas Ar. Si	14.18	333		Pn	08 14 34.1	+0.7
TX32	Lajitas Array	14.18	333	Pn	Pn	08 14 33.5	+0.1
TXAR	Lajitas Array	14.18	333	P	Pn	08 14 34.7	+1.3
	comp=Z,0.1nm,0.3s,baz=150,slow=12,SNR=19						
TXAR				LR	LR	08 21 07.3	
	comp=Z,87nm,18.7s,baz=0.0,slow=42						
TXAR	Lajitas Array	14.18	333	P	Pn	08 14 34.1	+0.7
TXAR	Lajitas Array	14.18	333	Pn	Pn	08 14 34.1	+0.7
441A	DeRidder	14.24	11		Pn	08 14 32.1	-2.0
BATAN	Batan	14.31	116	Pn	Pn	08 14 35.9	+0.7
PEZE	Perez Zeledon,	14.41	119	eP	Pn	08 14 38.7	+2.1
PEZE	Perez Zeledon,	14.41	119		Pn	08 14 37.6	+1.0
SLBS	Sierra La Lagu	14.43	301	P	Pn	08 14 37.7	+0.9
SRBA	San Rafael, Bu	14.76	119	eP	Pn	08 14 41.7	+0.6
SRBA	San Rafael, Bu	14.76	119		Pn	08 14 42.0	+0.9
DRK0	Durika	14.84	118		Pn	08 14 42.1	-0.1
EDBA	Buenos Aires	14.87	119	eP	Pn	08 14 43.8	+1.4
NATX	Nacogdoches	15.03	6	P	Pn	08 14 41.7	-2.6
	baz=186,SNR=7.8						
NATX	Nacogdoches	15.03	6	Pn	Pn	08 14 42.3	-2.0
342A	Flagon Creek P	15.03	14	Pn	Pn	08 14 43.0	-1.3
POTG	Potrero Grande	15.06	119	eP	P	08 14 47.0	-1.9
237A	Washetta, Mont	15.19	2		Pn	08 14 46.4	-0.1
237A				IAmb	IAmb	08 14 50.8	
	comp=Z,85nm,0.7s						
WHTX	Lake Whitney,	15.20	357	P	Pn	08 14 46.2	-0.4
	baz=176						
WHTX	Lake Whitney,	15.20	357	Pn	Pn	08 14 45.5	-1.1
WHTX				IAmb	IAmb	08 15 14.9	
	comp=Z,72nm,0.8s						
CDITO	Canoas	15.52	120	P	Pn	08 14 52.2	+1.4
344A	Westbrook Farm	15.52	18	Pn	Pn	08 14 48.9	-1.8
344A				IAmb	IAmb	08 15 12.1	
	comp=Z,78nm,0.8s						
BRU2	Volcan	15.55	119	P	P	08 14 53.1	-1.5
BRU2				IAmb	IAmb	08 15 02.7	
	comp=Z,56nm,0.7s						
LCCY	Blossom Villag	15.80	77	Pn	Pn	08 14 53.6	-0.6
346A	Big Creek Wild	15.89	22		Pn	08 14 54.1	-1.3
346A				IAmb	IAmb	08 15 15.9	
	comp=Z,158nm,0.9s						
ABTX	Abilene, Hawle	16.07	350	Pn	Pn	08 14 57.3	-0.3
ABTX				IAmb	IAmb	08 15 15.9	
	comp=Z,61nm,0.8s						
VBMS	Vicksburg	16.30	18	P	Pn	08 14 59.4	-1.2
	baz=200,SNR=5.5						
VBMS	Vicksburg	16.30	18		Pn	08 14 58.3	-2.3
VBMS				IAmb	IAmb	08 15 03.7	
	comp=Z,103nm,0.8s						
143A	Socs Landing,	16.52	15		Pn	08 15 01.4	-1.8
143A				IAmb	IAmb	08 15 24.0	
	comp=Z,236nm,1.4s						
Z35A	Perchaven, San	16.52	358	P	Pn	08 15 01.9	-1.5
Z35A				IAmb	IAmb	08 15 24.2	
	comp=Z,108nm,0.8s						
BRAL	Brewton	16.70	29	P	Pn	08 15 03.7	-1.8
	baz=213						
Z41A	Richland Creek	16.75	11	P	Pn	08 15 05.3	-0.9
	baz=192,SNR=41						
MNTX	Cornudas Mount	16.96	333	P	P	08 15 10.5	+0.5
	baz=149						
MNTX	Cornudas Mount	16.96	333	P	P	08 15 10.3	+0.3
WLAR	White Oak Lake	17.12	9	IAmb	IAmb	08 15 13.2	
	comp=Z,254nm,1.2s						
146A	Union	17.16	22	IAmb	IAmb	08 15 32.7	
	comp=Z,78nm,0.8s						
553A	Crawfordville	17.30	37	IAmb	IAmb	08 15 15.5	
	comp=Z,102nm,0.9s						
X34A	Smith Ranch, M	17.82	356	P	Pn	08 15 18.5	-0.8
X34A				IAmb	IAmb	08 15 46.6	
	comp=Z,180nm,1.0s						
DWPF	Disney Wildern	17.86	48	P	P	08 15 18.7	-1.2
	baz=234						
DWPF	Disney Wildern	17.86	48	P	P	08 15 18.4	-1.6
DWPF				IAmb	IAmb	08 15 23.0	
	comp=Z,81nm,0.8s						
656A	Willston	17.89	43	IAmb	IAmb	08 15 22.7	
	comp=Z,72nm,0.7s						
MIAR	Mount Ida	17.90	8	P	P	08 15 18.8	-1.5
MIAR				pmax	pmax		
	comp=Z,101nm,0.9s						
MIAR	Mount Ida	17.90	8	P	P	08 15 20.3	0.0
	baz=188,SNR=5.4						
MIAR	Mount Ida	17.90	8	P	P	08 15 18.8	-1.5
MIAR				IAmb	IAmb	08 15 43.7	
	comp=Z,101nm,0.8s						
352A	Blakely	18.01	33	IAmb	IAmb	08 15 25.2	
	comp=Z,92nm,0.8s						
Z47A	Carrollton	18.03	23	P	P	08 15 21.3	-0.4
Z47A				IAmb	IAmb	08 15 28.8	
	comp=Z,82nm,0.7s						
WMOK	Wichita Mounta	18.03	354	P	P	08 15 20.3	-1.5
WMOK				pmax	pmax		
	comp=Z,53nm,1.3s						
WMOK	Wichita Mounta	18.03	354	P	P	08 15 20.3	-1.5
	baz=172,SNR=6.5						
WMOK	Wichita Mounta	18.03	354	P	P	08 15 20.3	-1.5
MSTX	Muleshoe	18.07	343	P	P	08 15 21.9	-0.4
	baz=159						
MSTX	Muleshoe	18.07	343	P	P	08 15 21.8	-0.5
MTDJ	Mount Denham	18.08	83	P	P	08 15 22.2	-0.3
MTDJ				IAmb	IAmb	08 15 36.2	
	comp=Z,76nm,0.8s						
HSIG		18.09	315	P	P	08 15 22.1	-0.3
Y45A	Yeager Farm, C	18.13	19	IAmb	IAmb	08 15 27.8	
	comp=Z,113nm,0.9s						
FNO	Franklin	18.45	357	P	P	08 15 24.8	-1.5
W39A	Magazine	18.52	7	P	Pn	08 15 28.0	+0.2
	baz=188						
W39A	Magazine	18.52	7	P	P	08 15 25.6	-1.4
W39A				IAmb	IAmb	08 15 41.7	
	comp=Z,106nm,0.7s						
OKCSW	OKLAHOMA CITY	18.60	357	P	P	08 15 27.1	-0.8
OKCFA	Oklahoma City	18.61	357	P	P	08 15 27.2	-0.8
OKCFA				IAmb	IAmb	08 15 28.3	
	comp=Z,58nm,0.7s						
AMTX	Amarillo	18.66	346	P	P	08 15 28.8	+0.1
	baz=164						
AMTX	Amarillo	18.66	346	P	P	08 15 27.5	-1.2
AMTX				IAmb	IAmb	08 15 45.6	
	comp=Z,54nm,0.7s						
TIGA	Tifton	18.71	36	P	P	08 15 26.6	-2.6
	baz=221,SNR=12						
OK025	Westminster Rd	18.77	358		P	08 15 28.9	-1.0
OK025				IAmb	IAmb	08 15 32.6	
	comp=Z,60nm,0.8s						
121A	Cookes Peak, D	18.77	329	P	Pn	08 15 32.1	+1.0
	baz=144,SNR=23						
121A	Cookes Peak, D	18.77	329	IAmb	IAmb	08 15 59.2	
	comp=Z,81nm,0.9s						
BCOK	Bluff Creek, N	18.86	357	IAmb	IAmb	08 15 32.1	
	comp=Z,132nm,0.7s						
OK029	Liberty Lake	18.99	357	IAmb	IAmb	08 15 55.7	
	comp=Z,75nm,0.9s						
152A	Waverly Hall	19.06	32	IAmb	IAmb	08 15 40.5	
	comp=Z,58nm,0.8s						
TUL1	Leonard	19.09	2	P	P	08 15 32.6	-0.7
	baz=181,SNR=41						
OK030	Cody Creek RV	19.10	359	IAmb	IAmb	08 15 56.2	
	comp=Z,224nm,1.4s						
OK031	S. Brethren Rd	19.12	359	IAmb	IAmb	08 15 56.5	
	comp=Z,255nm,1.4s						
QUOK	Quay	19.34	359	IAmb	IAmb	08 15 59.6	
	comp=Z,97nm,0.8s						
Z51A	Franklin	19.36	30	IAmb	IAmb	08 15 35.7	
	comp=Z,74nm,0.7s						
W45A	Hickory Valley	19.43	18	P	P	08 15 35.6	-1.5
W45A				IAmb	IAmb	08 15 38.4	
	comp=Z,158nm,1.1s						
FCAR	Ozark Folk Cen	19.44	11	P	P	08 15 36.5	-0.6
X48A	Hartselle	19.53	24	P	P	08 15 36.8	-1.3
X48A				IAmb	IAmb	08 15 37.8	
	comp=Z,94nm,0.7s						
LPAR	Lepanto	19.55	15	P	P	08 15 37.4	-0.9
PLAL	Pickwick Lake	19.63	21	IAmb	IAmb	08 15 44.0	
	comp=Z,61nm,0.5s						
U32A	Winter Ranch,	19.68	354	P	P	08 15 40.0	+0.1
U32A				IAmb	IAmb	08 16 05.0	
	comp=Z,51nm,0.9s						
U38A	Gravette	19.69	5	P	P	08 15 39.1	-0.8
U38A				IAmb	IAmb	08 16 02.5	
	comp=Z,80nm,0.8s						
U40A	Yellville	19.78	9	P	P	08 15 40.4	-0.5
	baz=190,SNR=21						
U40A	Yellville	19.78	9	P	P	08 15 40.4	-0.5
LCAR	Lake Charles	19.80	13	P	P	08 15 40.0	-1.1
LCAR				IAmb	IAmb	08 15 40.5	
	comp=Z,87nm,0.7s						
BLOK	Blackwell	19.94	358	IAmb	IAmb	08 15 44.2	
	comp=Z,109nm,0.7s						
PEBM	Pemiscott Bayo	20.14	16	IAmb	IAmb	08 16 11.2	
	comp=Z,147nm,1.1s						
FPAL	Fort Paine	20.19	27	IAmb	IAmb	08 15 47.9	
	comp=Z,62nm,0.5s						
KAN13	South Haven SW	20.20	358	IAmb	IAmb	08 16 09.6	
	comp=Z,87nm,1.0s						
ANMO	Albuquerque	20.22	336	P	P	08 15 46.3	+0.5
	comp=Z,4.5nm,0.7s,baz=147,slow=11,SNR=13						
ANMO	Albuquerque	20.22	336	ceP	P	08 15 46.7	+0.9
ANMO				pmax	pmax		
	comp=Z,11nm,0.8s						
ANMO	Albuquerque	20.22	336	P	Pn	08 15 47.1	-1.1
	baz=151						
ANMO	Albuquerque	20.22	336	P	P	08 15 45.7	-0.1
TUC	Tucson	20.22	323	P	P	08 15 46.5	+0.7
TUC				pmax	pmax		
	comp=Z,17nm,0.8s						
TUC	Tucson	20.22	323	P	Pn	08 15 47.7	-0.5
	baz=136						
TUC	Tucson	20.22	323	P	P	08 15 46.5	+0.7
KAN17	Caldwell West	20.25	357	IAmb	IAmb	08 16 13.3	
	comp=Z,46nm,0.6s						
GOGA	Godfrey	20.29	33	P	P	08 15 44.1	-2.3
	baz=218,SNR=33						
GOGA	Godfrey	20.29	33	IAmb	IAmb	08 15 56.0	
	comp=Z,86nm,0.8s						
KAN05	Bluff City Nor	20.32	357	IAmb	IAmb	08 16 14.3	
	comp=Z,65nm,0.6s						
KAN09	Caldwell North	20.33	357	IAmb	IAmb	08 16 08.3	
	comp=Z,72nm,0.8s						
Y52A	Lilburn	20.34	31	IAmb	IAmb	08 15 46.1	
	comp=Z,110nm,0.8s						
KAN01	Argonia South	20.35	357	IAmb	IAmb	08 16 09.6	

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       comp=Z,54nm,0.6s
KAN08  Anthony NE Sta    20.44 356  P      P      08 15 46.8 -1.2
KAN06  Argonia West S    20.45 357  IAmb   IAmb   08 15 50.8
       comp=Z,53nm,0.7s
PVMO   Portageville      20.47  16  P      P      08 15 47.1 -1.2
X51A   Calhoun           20.55  28  IAmb   IAmb   08 15 47.8
       comp=Z,43nm,0.5s
SWET   Sewanee           20.64  25  IAmb   IAmb   08 15 49.4
       comp=Z,67nm,0.6s
PBMO   Poplar Bluff      20.64  14  IAmb   IAmb   08 15 50.6
       comp=Z,132nm,1.0s
MGMO   Mountain Grove    20.65   9  IAmb   IAmb   08 15 53.3
       comp=Z,87nm,0.8s
WVT    Waverly           20.76  20  P      P      08 15 48.7 -2.7
WVT                                 pmax   pmax
       comp=Z,121nm,0.7s
WVT    Waverly           20.76  20  P      P      08 15 48.9 -2.5
       baz=204
WVT    Waverly           20.76  20  P      P      08 15 48.7 -2.7
W50A   Signal Mountai    20.88  26  IAmb   IAmb   08 15 57.4
       comp=Z,36nm,0.6s
S39A   Bolivar           21.04   7  P      P      08 15 53.5 -0.9
214A   Organ Pipe Nat    21.21 318  P      P      08 15 58.6 +2.2
       baz=131,SNR=15
214A   Organ Pipe Nat    21.21 318  P      P      08 15 57.7 +1.2
CLTN   Cedars of Leba    21.25  23  IAmb   IAmb   08 15 58.7
       comp=Z,54nm,0.6s
CPCT   Cooper Cave       21.43  27  IAmb   IAmb   08 15 59.4
       comp=Z,52nm,0.6s
X18A   Snowflake         21.45 328  P      P      08 16 01.1 +2.0
HODGE  Hodges            21.55  34  IAmb   IAmb   08 16 11.7
       comp=Z,70nm,0.9s
R32A   Long Quarter,     21.68 355  IAmb   IAmb   08 16 04.9
       comp=Z,56nm,0.7s
CCM    Cathedral Cave    21.70  11  P      P      08 15 59.8 -1.8
       baz=193
MOTC   Monteria, Cord    21.73 109  eP     P      08 16 02.3 +0.2
SJCC   San Jacinto, C    21.76 106  eP     P      08 16 04.0 +1.6
R40A   Maddies Statio    21.76   9  IAmb   IAmb   08 16 06.0
       comp=Z,69nm,0.7s
BG3    Lake Jocassee     21.80  31  IAmb   IAmb   08 16 03.0
       comp=Z,39nm,0.7s
W18A   Petrified Fore    21.81 329  P      P      08 16 04.2 +1.2
       baz=143
SIUC   Southern Illin    21.82  16  IAmb   IAmb   08 16 03.7
       comp=Z,80nm,0.7s
NHSC   New Hope          21.91  39  P      P      08 16 01.5 -2.3
       baz=226
TKL    Tuckaleechee C    21.94  29  P      P      08 16 01.1 -3.1
       comp=Z,34nm,0.5s,baz=192,slow=11,SNR=41
TKL    Tuckaleechee C    21.94  29  IAmb   IAmb   08 16 05.8
       comp=Z,42nm,0.7s
JSC    Jenkinsville      22.13  35  IAmb   IAmb   08 16 18.9
       comp=Z,36nm,0.7s
CBKS   Cedar Bluff       22.17 353  P      P      08 16 06.2 -0.4
       baz=171
CBKS   Cedar Bluff       22.17 353  IAmb   IAmb   08 16 34.8
       comp=Z,63nm,0.7s
V52A   Sevierville       22.18  29  IAmb   IAmb   08 16 07.4
       comp=Z,38nm,0.7s
PAULI  Pauline           22.24  33  IAmb   IAmb   08 16 09.7
       comp=Z,39nm,0.6s
KSU1   Kansas State U    22.26 360  P      P      08 16 06.1 -1.5
       baz=179,SNR=8.3
KSU1   Kansas State U    22.26 360  IAmb   IAmb   08 16 24.1
       comp=Z,80nm,0.9s
UREC   San Jos de Ur     22.27 111  eP     P      08 16 09.3 +1.3
113A   Mohawk Valley,    22.36 319  P      P      08 16 08.5 -0.1
Y57A   Sumter            22.43  37  IAmb   IAmb   08 16 31.9
       comp=Z,32nm,0.7s
SLM    Saint Louis       22.46  13  P      P      08 16 07.4 -2.3
SLM                                 pmax   pmax
       comp=Z,42nm,0.6s
SLM    Saint Louis       22.46  13  P      P      08 16 07.4 -2.3
SLM                                 IAmb   IAmb   08 16 12.9
       comp=Z,42nm,0.6s
ARGC   Ariguani, Magd    22.63 105  eP     P      08 16 13.8 +2.0
T50A   Nancy             22.64  25  IAmb   IAmb   08 16 11.9
       comp=Z,50nm,0.8s
CBOC   Ciudad Bolivar    22.73 116  eP     P      08 16 16.8 +3.9
KMSC   Kings Mountain    22.74  34  P      P      08 16 09.9 -2.8
       baz=220,SNR=20
KMSC   Kings Mountain    22.74  34  IAmb   IAmb   08 16 11.5
       comp=Z,70nm,1.1s
TZTN   Tazewell          22.78  28  P      P      08 16 10.1 -3.1
       baz=213,SNR=17
TZTN   Tazewell          22.78  28  IAmb   IAmb   08 16 12.9
       comp=Z,53nm,0.8s
KSCO   Kaye Shedlock’    22.83 347  P      P      08 16 17.1 +3.3
       baz=164
KSCO   Kaye Shedlock’    22.83 347  P      P      08 16 14.4 +0.6
S22A   4UR Ranch, Cre    22.83 338  P      P      08 16 14.8 +0.8
       baz=153
BIRD   Birdtown, Kers    22.84  36  IAmb   IAmb   08 16 12.2
       comp=Z,36nm,0.7s
JAKH   Jacmel            22.85  83  P      P      08 16 12.1 -1.9
P38A   Dawn              22.93   6  IAmb   IAmb   08 16 14.5
       comp=Z,71nm,0.9s
WUAZ   Wupatki           22.95 327  P      P      08 16 16.6 +1.5
       baz=140,SNR=38
WUAZ   Wupatki           22.95 327  IAmb   IAmb   08 16 32.9
       comp=Z,60nm,0.9s
HELC   Santa Helena      22.99 115  eP     P      08 16 18.2 +2.3
ZARC   Zaragoza, Cauc    22.99 111  eP     P      08 16 16.2 +0.7
PLMC   San Jos del P     22.99 119  eP     P      08 16 17.7 +2.2
MVCO   Mesa Verde        23.00 335  P      P      08 16 16.2 +0.6
       baz=149,SNR=25
P40A   Paris             23.01   9  IAmb   IAmb   08 16 14.8
       comp=Z,81nm,0.8s
WCI    Wyandotte Cave    23.17  21  P      P      08 16 14.7 -2.3
WCI                                 pmax   pmax
       comp=Z,361nm,0.9s
WCI    Wyandotte Cave    23.17  21  P      P      08 16 14.8 -2.3
       baz=205
WCI    Wyandotte Cave    23.17  21  P      P      08 16 14.7 -2.3
SMLC   San Martn de      23.17 107  eP     P      08 16 17.3  0.0
GLA    Glamis            23.22 318  P      P      08 16 18.9 +1.3
GLA                                 pmax   pmax
       comp=Z,43nm,1.2s
GLA    Glamis            23.22 318  P      P      08 16 19.0 +1.5
       baz=129
GLA    Glamis            23.22 318  P      P      08 16 18.9 +1.3
V55A   Taylorsville      23.35  33  P      P      08 16 16.1 -2.6
X58A   Rowland           23.42  38  IAmb   IAmb   08 16 39.5
       comp=Z,58nm,0.8s
YOTC   Yotoco, Valle     23.44 121  eP     P      08 16 21.9 +2.0
P43A   Skaggs, Pawnee    23.58  13  IAmb   IAmb   08 16 19.7
       comp=Z,49nm,0.8s
PDMCI  Parker Dam,Lak    23.62 321  P      P      08 16 23.1 +1.9
       baz=133,SNR=9.2
R49A   Shelbyville       23.62  23  IAmb   IAmb   08 16 22.1
       comp=Z,68nm,0.8s
S51A   Beattyville       23.68  26  IAmb   IAmb   08 16 20.3
       comp=Z,69nm,0.8s
SWSC   Sam W. Stewart    23.79 316  P      P      08 16 23.8 +1.1
       baz=128
IKP    In-Ko-Pah, Jac    23.81 315  P      P      08 16 24.9 +1.8
       baz=126
NORC   Norcasia          23.86 115  eP     P      08 16 27.0 +3.2
R50A   Paris             23.93  24  IAmb   IAmb   08 16 24.2
       comp=Z,62nm,0.8s
BC3    Big Chuckawall    24.00 318  P      P      08 16 26.8 +1.9
       baz=129,SNR=9.6
OCAC   Ocana             24.07 108  eP     P      08 16 27.0 +1.2
U15A   North Rim         24.12 327  IAmb   IAmb   08 16 44.0
       comp=Z,43nm,1.3s
IRM    Iron Mountain     24.14 319  P      P      08 16 27.9 +1.9
       baz=131,SNR=23
CUSE   Cuicocha Este     24.14 131  eP     P      08 16 28.8 +2.1
OTAV   Otavalo           24.15 131  P      P      08 16 29.8 +3.0
OTAV                                pmax   pmax
       comp=Z,16nm,1.0s
OTAV   Otavalo           24.15 131  eP     P      08 16 29.2 +2.4
OTAV   Otavalo           24.15 131  eP     P      08 16 28.9 +2.1
OTAV   Otavalo           24.15 131  P      P      08 16 29.8 +3.0
MONP2  Monument Peak     24.17 315  P      P      08 16 28.5 +2.0
       baz=126,SNR=5.1
NEE2   Needles Airpor    24.22 321  P      P      08 16 29.9 +3.1
       baz=133,SNR=5.1
GCUF   Volcan Galeras    24.31 127  eP     P      08 16 31.9 +3.5
SOTA   Rioblanco         24.31 125  eP     P      08 16 30.5 +2.2
ISCO   Idaho Springs     24.31 343  IAmb   IAmb   08 16 45.7
       comp=Z,34nm,0.9s
TULM   Tulcn-Chalpat     24.31 129  eP     P      08 16 31.5 +3.2
PCON   Cinco Dias        24.36 124  eP     P      08 16 31.0 +2.1
ORTC   Ortega, Tolima    24.40 119  eP     P      08 16 32.3 +3.7
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MARP   Paez Belalcaza    24.41 122  eP     P      08 16 31.4 +2.4
HDIL   Hopedale          24.51  13  P      P      08 16 27.9 -1.4
       baz=196
HDIL   Hopedale          24.51  13  IAmb   IAmb   08 16 54.1
       comp=Z,112nm,1.4s
SPBC   San Pablo de B    24.52 114  eP     P      08 16 31.2 +1.5
BELC   Belle Mtn. Jos    24.57 318  P      P      08 16 33.2 +3.0
       baz=129,SNR=11
OGNE   Ogallala          24.59 350  P      P      08 16 33.4 +3.3
       baz=167
OGNE   Ogallala          24.59 350  IAmb   IAmb   08 16 58.0
       comp=Z,56nm,0.7s
PFO    Pinyon Flats O    24.63 317  P      P      08 16 32.2 +1.6
       comp=Z,14nm,1.0s,baz=112,slow=6.5,SNR=19
PFO    Pinyon Flats O    24.63 317  P      P      08 16 30.2 -0.4
PFO                                 pmax   pmax
       comp=Z,15nm,1.0s
PFO    Pinyon Flats O    24.63 317  P      P      08 16 32.2 +1.6
       baz=128,SNR=11
PFO    Pinyon Flats O    24.63 317  P      P      08 16 30.2 -0.4
ROSC   El Rosal          24.70 116  eP     P      08 16 35.8 +4.1
CNNC   Cliffs of the     24.75  38  P      P      08 16 29.3 -2.2
       baz=227,SNR=6.7
BLA    Blacksburg        24.80  32  P      P      08 16 29.9 -2.2
       baz=219,SNR=23
S54A   Dingess, Beckl    24.83  29  IAmb   IAmb   08 16 31.6
       comp=Z,79nm,1.4s
GMRC   Granite Mounta    24.87 320  P      P      08 16 34.4 +1.6
       baz=131,SNR=13
BARC   Barichara         24.87 111  eP     P      08 16 35.4 +2.2
P49A   Miami Univ. Ec    24.89  22  P      P      08 16 30.5 -2.3
       baz=207,SNR=73
SFIN   Lafayette         24.89  17  P      P      08 16 31.3 -1.5
       baz=201,SNR=18
BETC   Betania           24.92 122  eP     P      08 16 36.3 +2.9
PAMC   Pamplona, Colo    24.99 109  eP     P      08 16 36.3 +1.8
MURC   Murrieta          25.11 316  P      P      08 16 36.9 +2.0
       baz=126
SCIA   State Center      25.22   6  P      P      08 16 35.3 -0.4
       baz=187
T57A   Hurt              25.24  34  IAmb   IAmb   08 16 36.0
       comp=Z,79nm,0.9s
RUSC   La Rusia          25.27 113  eP     P      08 16 38.9 +1.9
MTPU   Mount Pierson     25.33 330  P      P      08 16 38.2 +1.0
MTPU                                IAmb   IAmb   08 17 06.9
       comp=Z,44nm,0.8s
BBRC   Big Bear Solar    25.33 317  P      P      08 16 39.0 +1.8
       baz=128
Q52A   Bidwell           25.36  26  IAmb   IAmb   08 16 38.1
       comp=Z,58nm,0.8s
SZCU   Shurtz Canyon     25.43 328  P      P      08 16 38.6 +0.6
SRU    San Rafael Swe    25.45 334  P      P      08 16 38.8 +0.7
SRU                                 pmax   pmax
       comp=Z,13nm,0.7s
SRU    San Rafael Swe    25.45 334  P      P      08 16 38.8 +0.7
O20A   White River Ci    25.46 339  P      P      08 16 39.6 +1.5
       baz=152
TUQ    Turquoise Moun    25.46 321  P      P      08 16 40.0 +1.8
       baz=132,SNR=6.8
Q16A   Castle Valley     25.57 333  IAmb   IAmb   08 16 59.5
       comp=Z,25nm,0.7s
U59A   Littleton         25.58  37  IAmb   IAmb   08 17 05.5
       comp=Z,44nm,1.4s
M44A   Midewin, Midew    25.59  15  IAmb   IAmb   08 16 39.6
       comp=Z,64nm,1.1s
MSU    Marysvale         25.70 331  P      P      08 16 40.7 +0.3
MSU    Marysvale         25.70 331  P      P      08 16 40.7 +0.3
MVU    Marysvale         25.71 331  P      P      08 16 40.0 -0.5
MVU                                 IAmb   IAmb   08 17 11.1
       comp=Z,90nm,1.2s
P18A   Preston Nutter    25.77 335  IAmb   IAmb   08 17 00.2
       comp=Z,59nm,1.0s
BFSC   Mount Baldy Ra    25.80 316  P      P      08 16 42.9 +1.6
       baz=127,SNR=7.4
CIS    Catalina Islan    25.82 314  P      P      08 16 43.3 +1.9
       baz=124
L42A   Oliver, Polo      25.82  12  IAmb   IAmb   08 16 42.2
       comp=Z,77nm,0.8s
P17A   Butcher Ranch,    25.85 334  IAmb   IAmb   08 17 00.7
       comp=Z,35nm,1.1s
K31A   O'Neill           25.86 356  P      P      08 16 42.1 +0.6
GSC    Goldstone, Bar    25.92 319  P      P      08 16 43.1 +0.8
GSC                                 pmax   pmax
       comp=Z,14nm,1.1s
GSC    Goldstone, Bar    25.92 319  P      P      08 16 43.5 +1.3
       baz=130
GSC    Goldstone, Bar    25.92 319  P      P      08 16 43.0 +0.8
S57A   Dark Hollow, R    25.97  33  IAmb   IAmb   08 16 41.5
       comp=Z,60nm,1.1s
P52A   Corning           25.98  26  P      P      08 16 40.5 -2.1
       baz=212,SNR=28
SHOC   Shoshone, Teco    25.98 321  P      P      08 16 44.6 +1.9
       baz=132
ACSO   Alum Creek Sta    26.14  24  P      P      08 16 42.2 -1.9
       baz=210,SNR=18
TAMC   Tame, Arauca      26.19 110  eP     P      08 16 46.9 +2.1
DECC   Green Verdugo     26.26 316  P      P      08 16 48.0 +2.7
       baz=126
N49A   Columbus Grove    26.31  21  IAmb   IAmb   08 16 44.3
       comp=Z,50nm,0.7s
SDV    Santo Domingo     26.32 104  P      P      08 16 47.0 +0.9
       comp=Z,44nm,0.7s,baz=298,slow=3.9,SNR=26
SDV    Santo Domingo     26.32 104  eP     P      08 16 47.4 +1.2
SDV    Santo Domingo     26.32 104  P      P      08 16 47.1 +0.9
SDV                                 IAmb   IAmb   08 16 49.0
       comp=Z,49nm,0.8s
EDW2   Edwards Air Fo    26.41 317  P      P      08 16 48.1 +1.4
       baz=127
GWY    Greenwater Val    26.41 321  P      P      08 16 47.9 +1.1
MACC   Macarena, Meta    26.53 121  eP     P      08 16 48.6 +0.7
LRMC   Laurel Mtn Rad    26.58 319  P      P      08 16 50.0 +1.7
       baz=129,SNR=6.6
JFWS   Jewell Farm       26.60  10  P      P      08 16 47.0 -1.3
       baz=193,SNR=21
MPU    Maple Canyon      26.68 333  P      P      08 16 49.1 -0.1
R58B   Mineral           26.69  34  P      P      08 16 46.4 -2.7
R58B                                IAmb   IAmb   08 16 47.8
       comp=Z,37nm,1.2s
FURC   Furnace Creek,    26.71 321  P      P      08 16 51.5 +2.2
       baz=132
T60A   Surry             26.74  37  P      P      08 16 46.8 -2.7
T60A                                IAmb   IAmb   08 17 05.4
       comp=Z,58nm,0.9s
K43A   Burlington        26.77  13  IAmb   IAmb   08 16 49.5
       comp=Z,65nm,0.9s
NLU    North Lily Min    26.82 333  P      P      08 16 51.7 +1.2
MPMC   Manual Prospec    26.83 320  P      P      08 16 51.9 +1.3
       baz=130,SNR=7.9
Q56A   Snyder Ridge,     26.83  31  IAmb   IAmb   08 16 49.6
       comp=Z,32nm,0.7s
O53A   New Philadelph    26.88  26  P      P      08 16 48.9 -1.9
       baz=214,SNR=11
ECSD   EROS Data Cent    26.89 360  P      P      08 16 51.3 +0.4
       baz=179
PTGC   Puerto Gaitan,    26.90 115  eP     P      08 16 54.8 +3.6
PTLC   Puerto Leguiza    26.94 126  eP     P      08 16 56.1 +4.5
N51A   Ashland           26.97  24  IAmb   IAmb   08 16 54.8
       comp=Z,54nm,0.9s
MCWV   Mont Chateau      27.00  29  P      P      08 16 50.2 -1.7
       baz=217,SNR=10
MCWV   Mont Chateau      27.00  29  IAmb   IAmb   08 16 51.7
       comp=Z,45nm,0.8s
ARVC   Arvin             27.11 317  P      P      08 16 55.0 +2.1
       baz=126
CBN    Corbin Frederi    27.14  34  P      P      08 16 51.0 -2.1
       baz=223
O54A   Avella            27.18  28  IAmb   IAmb   08 16 53.3
       comp=Z,46nm,0.9s
CTU    Camp Tracy        27.29 334  P      P      08 16 54.4 -0.3
I37A   Lemond, Waseca    27.29   5  IAmb   IAmb   08 17 09.2
       comp=Z,38nm,0.7s
R11A   Troy Canyon, C    27.30 326  P      P      08 16 56.5 +1.7
       baz=136,SNR=10
DUG    Dugway, Tooele    27.35 332  P      P      08 16 55.8 +0.7
DUG                                 pmax   pmax
       comp=Z,7.0nm,0.9s
DUG    Dugway, Tooele    27.35 332  P      P      08 16 56.5 +1.4
       baz=144
DUG    Dugway, Tooele    27.35 332  P      P      08 16 55.8 +0.7
CWC    Cottonwood Cre    27.44 320  P      P      08 16 57.4 +1.3
       baz=130
TCUT   Toone Canyon      27.51 335  P      P      08 16 57.1 +0.4
TCUT                                IAmb   IAmb   08 17 23.8
       comp=Z,63nm,1.1s
PKM    Mcpherson Peak    27.62 315  P      P      08 16 59.4 +1.7
       baz=124
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SUSD   Miller            27.68 356  P      P      08 16 57.4 -0.5
SUSD                                IAmb   IAmb   08 17 26.3
       comp=Z,44nm,0.9s
VES    Vestal, Richgr    27.70 318  P      P      08 17 00.2 +2.1
       baz=127,SNR=8.6
AAM    Ann Arbor         27.71  21  P      P      08 16 56.2 -1.9
       baz=207,SNR=6.7
P57A   Homestead Farm    27.76  32  IAmb   IAmb   08 16 57.6
       comp=Z,70nm,1.4s
I42A   Draeger Farm,     27.79  12  IAmb   IAmb   08 16 58.2
       comp=Z,25nm,0.7s
SMMC   Simmler           27.99 316  P      P      08 17 02.9 +2.1
       baz=125
N54A   Moraine State     27.99  27  P      P      08 16 59.2 -1.6
       baz=215,SNR=5.1
N54A   Moraine State     27.99  27  IAmb   IAmb   08 17 03.6
       comp=Z,26nm,0.7s
TPH    Tonopah           28.02 323  IAmb   IAmb   08 17 19.1
       comp=Z,61nm,1.4s
BGU    Big Grassy Mou    28.03 333  P      P      08 17 02.3 +1.0
O56A   Blue Knob Stat    28.09  30  P      P      08 17 00.4 -1.3
       baz=218,SNR=6.3
O56A   Blue Knob Stat    28.09  30  IAmb   IAmb   08 17 02.4
       comp=Z,79nm,1.5s
M53A   WI Miller and     28.09  26  P      P      08 17 00.1 -1.5
       baz=213
BW06   Boulder Array     28.25 339  P      P      08 17 03.5 +0.2
       baz=152
PDAR   Pinedale Array    28.25 339  P      P      08 17 03.5 +0.2
       comp=Z,1.4nm,0.7s,baz=139,slow=9.2,SNR=9.7
PDAR                                LR     LR     08 29 33.6
       comp=Z,103nm,20.9s,baz=160,slow=39
SPMN   Marine on St.     28.55   5  P      P      08 17 05.1 -0.5
       baz=187,SNR=14
SPMN   Marine on St.     28.55   5  IAmb   IAmb   08 17 08.7
       comp=Z,45nm,0.7s
M54A   Oil Creek Stat    28.58  27  P      P      08 17 04.3 -1.7
       baz=215,SNR=5.8
M54A   Oil Creek Stat    28.58  27  IAmb   IAmb   08 17 05.9
       comp=Z,67nm,1.0s
SSPA   Standing Stone    28.70  30  P      P      08 17 04.9 -2.1
       baz=219
SSPA   Standing Stone    28.70  30  P      P      08 17 05.0 -2.0
SSPA                                IAmb   IAmb   08 17 10.2
       comp=Z,39nm,1.2s
BAUV   El Baul           28.71 102  P      P      08 17 07.4  0.0
BAUV                                IAmb   IAmb   08 17 10.3
       comp=Z,36nm,0.8s
AHID   Auburn Hatcher    28.79 337  P      P      08 17 06.9 -1.1
MDPB   Devils Postpil    28.82 321  P      P      08 17 09.8 +1.4
LHV    Little Huntoon    28.88 322  P      P      08 17 09.9 +1.4
NVAR   Mina Array Bea    28.88 323  P      P      08 17 10.9 +2.0
       comp=Z,8.7nm,0.9s,baz=143,slow=9.3,SNR=49
NVAR                                PcP    PcP    08 20 17.9 +0.8
       comp=Z,3.1nm,0.8s,baz=157,slow=2.7,SNR=6.3
NVAR                                LR     LR     08 29 56.3
       comp=Z,295nm,19.5s,baz=146,slow=39
SJG    San Juan          28.90  83  P      P      08 17 07.2 -1.8
       comp=Z,13nm,0.6s,baz=260,slow=7.5,SNR=7.8
SJG    San Juan          28.90  83  P      P      08 17 07.2 -1.8
SJG                                 pmax   pmax
       comp=Z,31nm,1.3s
SJG    San Juan          28.90  83  IAmb   IAmb   08 17 07.4
       comp=Z,31nm,1.2s
ELK    Elko              28.92 330  P      P      08 17 10.4 +1.1
       comp=Z,2.4nm,0.8s,baz=158,slow=8.3,SNR=9.1
ELK                                 PcP    PcP    08 20 18.2 +1.0
       comp=Z,3.0nm,0.9s,baz=20,slow=0.3,SNR=5.1
M55A   Ridgway           28.95  28  IAmb   IAmb   08 17 09.4
       comp=Z,102nm,1.4s
RYN    Ryan              29.14 323  P      P      08 17 10.7 -0.5
REDW   Red Top Meadow    29.22 338  P      P      08 17 12.4 +0.5
REDW                                IAmb   IAmb   08 17 29.5
       comp=Z,32nm,1.2s
P60A   Greenville        29.23  34  P      P      08 17 09.3 -2.4
       baz=224
SNOW   Snow King Moun    29.27 338  IAmb   IAmb   08 17 39.3
       comp=Z,26nm,0.8s
TPAW   Teton Pass        29.37 338  IAmb   IAmb   08 17 31.0
       comp=Z,26nm,1.1s
M57A   Sunshine Farm,    29.61  30  IAmb   IAmb   08 17 14.2
       comp=Z,36nm,1.4s
BMN    Battle Mountai    29.68 327  P      P      08 17 16.1 +0.2
BMN                                 pmax   pmax
       comp=Z,11nm,1.1s
BMN    Battle Mountai    29.68 327  P      P      08 17 16.1 +0.2
ATAH   Atahualpa         29.69 142  P      P      08 17 19.2 +2.7
       comp=Z,26nm,0.8s,baz=340,slow=6.6,SNR=18
GLMI   Grayling          29.70  17  P      P      08 17 14.5 -1.3
       baz=203,SNR=6.4
YERR   Yerington         29.80 323  P      P      08 17 18.0 +1.0
CMB    Columbia Colle    29.87 320  P      P      08 17 17.0 -0.5
CMB                                 pmax   pmax
       comp=Z,7.0nm,1.2s
CMB    Columbia Colle    29.87 320  P      P      08 17 17.0 -0.5
COWI   Conover           29.88  10  IAmb   IAmb   08 17 17.2
       comp=Z,20nm,0.7s
E28A   Huff              29.94 354  P      P      08 17 18.8 +0.7
E28A                                IAmb   IAmb   08 17 34.1
       comp=Z,26nm,0.9s
N59A   State Game Lan    29.97  32  P      P      08 17 16.2 -2.0
       baz=222
L56A   Greenwood         30.02  29  P      P      08 17 16.6 -2.1
L56A                                IAmb   IAmb   08 17 18.7
       comp=Z,29nm,0.9s
E38A   The Farm, Brul    30.04   7  IAmb   IAmb   08 17 21.2
       comp=Z,42nm,0.9s
RLMT   Red Lodge         30.27 342  P      P      08 17 21.6 +0.5
       baz=155,SNR=14
EMB    Emerald Bay       30.30 322  P      P      08 17 21.7 +0.3
EMB                                 IAmb   IAmb   08 17 41.1
       comp=Z,44nm,1.4s
RUBR   Rubicon Trail     30.38 322  P      P      08 17 22.5 +0.3
RUBR                                IAmb   IAmb   08 17 43.5
       comp=Z,24nm,0.9s
BRNJ   Basking Ridge     30.43  34  IAmb   IAmb   08 17 23.0
       comp=Z,22nm,0.8s
MPK    Martis Peak       30.46 322  P      P      08 17 23.9 +0.9
E43A   Lone Tree Farm    30.56  13  IAmb   IAmb   08 17 24.8
       comp=Z,39nm,1.1s
HLID   Hailey            30.78 334  P      P      08 17 27.0 +1.4
       baz=144,SNR=7.7
BINY   Binghamton        30.82  30  P      P      08 17 23.6 -2.2
       baz=221,SNR=5.7
BINY   Binghamton        30.82  30  IAmb   IAmb   08 17 26.6
       comp=Z,42nm,1.2s
TRNY   Table Rock, Ra    30.94  34  IAmb   IAmb   08 17 25.4
       comp=Z,61nm,1.4s
PAL    Palisades         31.01  34  P      P      08 17 24.6 -2.8
       baz=225
MDND   Maddock           31.12 356  P      P      08 17 29.7 +1.4
       baz=174,SNR=5.8
L59A   Walton            31.27  31  IAmb   IAmb   08 17 29.6
       comp=Z,22nm,0.7s
EYMN   Ely               31.37   6  P      P      08 17 30.1 -0.4
       baz=189,SNR=7.6
EYMN   Ely               31.37   6  IAmb   IAmb   08 17 32.3
       comp=Z,20nm,0.7s
BOZ    Bozeman (W)       31.45 339  P      P      08 17 32.3 +0.9
       baz=151,SNR=5.4
AGMN   Agassiz Nation    31.46   1  P      P      08 17 31.5 +0.2
       baz=181,SNR=8.3
DLMT   Dillon            31.58 338  IAmb   IAmb   08 17 34.8
       comp=Z,15nm,0.8s
B35A   Bob, Littlefor    31.60   3  IAmb   IAmb   08 17 47.9
       comp=Z,19nm,0.8s
KSCT   Kent School, K    31.74  34  IAmb   IAmb   08 17 36.6
       comp=Z,17nm,0.8s
DELO   Deloro Mine       31.90  26  IAmb   IAmb   08 17 34.5
       comp=Z,45nm,1.0s
J58A   Remsen            32.03  30  IAmb   IAmb   08 17 35.8
       comp=Z,32nm,1.1s
O03E   Paynes Creek      32.15 322  P      P      08 17 38.8 +1.2
       baz=129
J08A   Circle Bar Ran    32.47 329  IAmb   IAmb   08 18 10.5
       comp=Z,16nm,0.8s
PLVO   Plevna            32.55  26  IAmb   IAmb   08 17 40.2
       comp=Z,22nm,0.7s
L61B   Northampton       32.68  34  P      P      08 17 39.8 -2.2
       baz=226
QUA2   Belchertown       32.73  34  IAmb   IAmb   08 17 44.5
       comp=Z,21nm,0.9s
ACCN   Adirondack Com    32.84  31  P      P      08 17 41.8 -1.7
ACCN                                IAmb   IAmb   08 17 42.7
       comp=Z,18nm,0.6s
NCB    Newcomb           33.00  30  P      P      08 17 43.1 -1.8
NCB                                 IAmb   IAmb   08 17 44.5
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	comp=Z,24nm,0.6s						
EGMT	Eagleton	33.05	344	P	P	08 17 45.9	+0.5
	baz=156						
LONY	Lake Ozonia	33.32	29	P	P	08 17 45.9	-1.8
	baz=220,SNR=7.5						
MSO	Missoula	33.32	338	P	P	08 17 47.8	+0.1
	baz=148,SNR=7.6						
J61A	Chester	33.37	32	IAmb	IAmb	08 17 47.9	
	comp=Z,15nm,0.7s						
ULM	Lac du Bonnet	33.41	1	P	P	08 17 47.6	-0.8
	comp=Z,6.5nm,0.6s,baz=193,slow=8.1,SNR=8.6						
ULM	Lac du Bonnet	33.41	1	IAmb	IAmb	08 18 12.0	
	comp=Z,21nm,1.0s						
TBTG	Tabatinga, AM	33.46	126	eP	P	08 17 49.9	+0.6
YBH	Yreka Blue Hor	33.59	323	P	P	08 17 49.8	-0.4
YBH				pmax	pmax		
	comp=Z,4.0nm,1.0s						
YBH	Yreka Blue Hor	33.59	323	P	P	08 17 49.8	-0.4
KHMM	Horse Mountain	33.66	321	IAmb	IAmb	08 18 09.5	
	comp=Z,15nm,0.9s						
HNH	Hanover	33.77	32	IAmb	IAmb	08 17 51.2	
	comp=Z,18nm,0.6s						
CZSB	Cruzeiro do Su	33.80	134	eP	P	08 17 54.5	+2.3
CZSB	Cruzeiro do Su	33.80	134	P	P	08 17 53.4	+1.3
F10A	Beach Ranch, E	33.91	334	IAmb	IAmb	08 18 14.1	
	comp=Z,15nm,0.8s						
FRNY	Flat Rock	33.95	30	IAmb	IAmb	08 17 54.8	
	comp=Z,24nm,1.1s						
VT1	Waterbury	33.98	31	IAmb	IAmb	08 17 52.7	
	comp=Z,13nm,0.7s						
JTMT	Jette	34.22	338	IAmb	IAmb	08 17 59.7	
	comp=Z,10.0nm,0.8s						
LBNH	Lisbon	34.33	32	P	P	08 17 55.0	-1.4
	baz=225						
LBNH	Lisbon	34.33	32	IAmb	IAmb	08 17 56.4	
	comp=Z,17nm,0.7s						
I62A	Tamworth	34.38	33	IAmb	IAmb	08 17 56.1	
	comp=Z,39nm,1.1s						
NNA	Nana	34.50	145	ceP	P	08 18 01.0	+2.7
NNA				pmax	pmax		
	comp=Z,51nm,1.3s						
VLDQ	Val d'Or	34.93	22	IAmb	IAmb	08 18 01.1	
	comp=Z,16nm,0.9s						
H62A	Milan	34.96	32	IAmb	IAmb	08 18 00.1	
	comp=Z,52nm,1.4s						
I03D	Drain, OR	35.23	325	P	P	08 18 05.1	+0.9
	baz=131						
H04D	Lebanon	35.46	327	P	P	08 18 06.2	+0.1
	baz=133						
HOOD	Mount Hood Mea	35.46	329	IAmb	IAmb	08 18 36.9	
	comp=Z,23nm,0.8s						
NEW	Newport	35.71	336	P	P	08 18 08.7	+0.4
	baz=144						
F05D	White Salmon	35.77	330	P	P	08 18 10.6	+1.8
	baz=136,SNR=5.1						
G03D	McMinnville, O	36.20	327	P	P	08 18 13.4	+0.9
	baz=133						
F04A	Amboy	36.27	329	P	P	08 18 13.2	+0.1
F04A				IAmb	IAmb	08 18 39.1	
	comp=Z,18nm,1.2s						
PKME	Peaks-Kenny Pk	36.39	33	P	P	08 18 12.5	-1.6
	baz=227						
PKME	Peaks-Kenny Pk	36.39	33	IAmb	IAmb	08 18 14.9	
	comp=Z,20nm,0.8s						
F62A	Pittston Farm,	36.48	32	IAmb	IAmb	08 18 14.6	
	comp=Z,44nm,1.2s						
E62A	Clayton Lake	37.20	31	IAmb	IAmb	08 18 20.5	
	comp=Z,32nm,1.1s						
E03A	Lebam	37.27	329	IAmb	IAmb	08 18 40.6	
	comp=Z,22nm,0.9s						
F64A	Sherman	37.28	33	IAmb	IAmb	08 18 20.9	
	comp=Z,29nm,1.1s						
D03D	Eldon	37.73	330	P	P	08 18 25.9	+0.4
	baz=135						
NLWA	Neilton Lookou	38.01	329	IAmb	IAmb	08 18 47.3	
	comp=Z,30nm,1.2s						
BOAV	Boa Vista	38.07	108	eP	P	08 18 28.5	-0.2
BOAV	Boa Vista	38.07	108	P	P	08 18 27.8	-1.0
FFC	Flin Flon	38.14	355	eP	P	08 18 30.1	+1.3
EDM	Edmonton	38.73	344	IAmb	IAmb	08 19 02.2	
	comp=Z,19nm,0.7s						
LMN	Caledonia Moun	39.19	35	IAmb	IAmb	08 18 38.5	
	comp=Z,13nm,0.7s						
BATG	Bathurst New B	39.40	33	IAmb	IAmb	08 18 39.8	
	comp=Z,47nm,1.0s						
LLLB	Lillooet	39.47	334	IAmb	IAmb	08 19 06.3	
	comp=Z,21nm,1.1s						
ETMB	Extrema	39.88	129	eP	P	08 18 44.3	+0.5
ETMB	Extrema	39.88	129	P	P	08 18 43.9	+0.1
ETMB				IAmb	IAmb	08 18 45.3	
	comp=Z,26nm,1.3s						
PTGA	Pitinga	39.93	112	P	P	08 18 44.4	+0.1
PTGA				IAmb	IAmb	08 18 45.8	
	comp=Z,36nm,1.5s						
MACA	Manacapuru-AM	40.47	116	eP	P	08 18 48.7	-0.1
MACA	Manacapuru-AM	40.47	116	P	P	08 18 48.5	-0.3
MACA				IAmb	IAmb	08 18 49.5	
	comp=Z,49nm,1.3s						
SAML	Samuel	41.64	125	P	P	08 18 57.5	-0.8
SAML				pmax	pmax		
	comp=Z,343nm,0.8s						
SAML	Samuel	41.64	125	P	P	08 18 57.5	-0.8
LPAZ	La Paz	43.09	138	eP	P	08 19 12.3	+1.5
SCHQ	Schefferville	44.30	24	P	P	08 19 18.1	-1.2
	comp=Z,39nm,0.8s,baz=232,slow=8.0,SNR=45						
SCHQ				LR	LR	08 39 57.1	
	comp=Z,56nm,19.5s,baz=248,slow=39						
SCHQ	Schefferville	44.30	24	P	P	08 19 18.2	-1.2
SCHQ				IAmb	IAmb	08 19 19.5	
	comp=Z,41nm,0.8s						
TA01	Diego Aracena	45.16	144	P	P	08 19 28.2	+1.7
TA01				IAmb	IAmb	08 19 29.1	
	comp=Z,34nm,0.9s						
DRLN	Deer Lake	45.19	35	P	P	08 19 24.4	-2.0
DRLN				IAmb	IAmb	08 19 27.3	
	comp=Z,24nm,0.9s						
ITTB	Itaituba	45.36	114	eP	P	08 19 27.4	-0.9
PB08	IPOC Station P	45.41	143	P	P	08 19 29.7	+0.7
PB08				IAmb	IAmb	08 19 31.7	
	comp=Z,16nm,1.1s						
MALB	Monte Alegre	45.52	110	eP	P	08 19 29.9	+0.3
VILB	Vilhena	46.40	127	eP	P	08 19 36.7	+0.2
VILB	Vilhena	46.40	127	IAmb	IAmb	08 20 05.6	
	comp=Z,27nm,0.8s						
MCPB	Macapa, AP	46.92	107	eP	P	08 19 40.5	-0.1
NPGB	Novo Progresso	47.00	117	eP	P	08 19 40.0	-1.2
YKA	Yellowknife Ar	47.44	349	P	P	08 19 42.8	-1.1
	comp=Z,2.4nm,0.7s,baz=148,slow=8.1,SNR=7.4						
LVC	Limon Verde	47.50	145	eP	P	08 19 47.4	+2.1
LVC	Limon Verde	47.50	145	eP	P	08 19 46.6	+1.3
PDRB	Porto dos Gac	48.32	123	eP	P	08 19 50.2	-1.2
CLDB	Colider	48.66	122	eP	P	08 19 52.9	-1.1
PTLB	Pontes e Lacer	48.76	129	eP	P	08 19 54.7	0.0
PTLB	Pontes e Lacer	48.76	129	IAmb	IAmb	08 19 55.7	
	comp=Z,17nm,1.0s						
AC02	Maricunga	50.80	148	P	P	08 20 12.9	+2.3
AC02				IAmb	IAmb	08 20 13.9	
	comp=Z,21nm,0.8s						
TMAB	Tom-Au,PA,Br	51.34	107	eP	P	08 20 14.5	+0.1
PRPB	Parauapebas	51.41	112	eP	P	08 20 15.1	+0.2
SALV	Santo Antonio	51.64	127	eP	P	08 20 16.5	0.0
LCO	Las Campanas	51.85	151	P	P	08 20 20.2	+2.0
LCO				pmax	pmax		
	comp=Z,23nm,0.8s						
LCO	Las Campanas	51.85	151	P	P	08 20 20.2	+2.0
LCO				IAmb	IAmb	08 20 20.7	
	comp=Z,23nm,0.8s						
H03N2	Juan Fernandez	52.63	162	T	T	09 17 09.5	
	baz=338,slow=77,SNR=10.0						
H03N1	Juan Fernandez	52.64	162	T	T	09 17 10.3	
	baz=338,slow=77,SNR=13						
H03N3	Juan Fernandez	52.65	162	T	T	09 17 07.0	
	baz=338,slow=77,SNR=11						
SNDB	Serra Nova Dou	52.96	120	eP	P	08 20 26.7	+0.3
PP1B	Ponte de Pedra	53.29	128	eP	P	08 20 29.1	+0.3
AQDB	Aquidauana	54.47	131	eP	P	08 20 37.3	0.0
AQDB	Aquidauana	54.47	131	IAmb	IAmb	08 20 37.8	
	comp=Z,11nm,0.8s						
ARAG	Araguaiana, MT	54.56	124	eP	P	08 20 38.5	+0.4
SMTB	Santa Maria do	54.60	114	eP	P	08 20 38.7	+0.3
ROSB	Rosrio	55.20	106	eP	P	08 20 42.7	0.0
PEXB	Peixe	55.55	118	eP	P	08 20 45.4	+0.1
MT09	Talagante	55.80	154	IAmb	IAmb	08 20 48.4	
	comp=Z,10nm,0.7s						
L27K	Beaver Creek,	55.84	337	P	P	08 20 47.8	+1.2
	baz=124						
M26K	Nabesna, AK	55.92	336	P	P	08 20 48.5	+1.2
	baz=123						
EPYK	Eagle Plains	56.17	342	P	P	08 20 49.0	+0.1
	baz=132						
BO01	Tunca	56.29	155	IAmb	IAmb	08 20 52.4	
	comp=Z,18nm,1.1s						
EGAK	Eagle	56.60	339	P	P	08 20 52.0	+0.1
	baz=126						
EGAK	Eagle	56.60	339	IAmb	IAmb	08 21 10.3	
	comp=Z,13nm,0.8s						
INK	Inuvik	56.63	344	P	P	08 20 52.0	-0.1
	baz=136,SNR=15						
INK	Inuvik	56.63	344	IAmb	IAmb	08 21 10.3	
	comp=Z,20nm,0.9s						
BO02	Sierra Bellavi	56.76	155	IAmb	IAmb	08 20 55.4	
	comp=Z,8.4nm,0.8s						
SCRK	Sand Creek	57.16	337	P	P	08 20 57.4	+1.3
	baz=122,SNR=7.8						
SCRK	Sand Creek	57.16	337	P	P	08 20 57.2	+1.1
SCRK				IAmb	IAmb	08 21 15.9	
	comp=Z,11nm,0.9s						
PAX	Paxson	57.19	336	P	P	08 20 57.1	+0.8
	baz=120						
PAX	Paxson	57.19	336	IAmb	IAmb	08 21 15.3	
	comp=Z,14nm,0.8s						
CPUP	Villa Florida	57.26	138	P	P	08 20 55.6	-1.5
	comp=Z,10nm,1.0s,baz=331,slow=7.2,SNR=7.4						
CPUP				LR	LR	08 45 29.8	
	comp=Z,46nm,21.9s,baz=347,slow=36						
CPUP	Villa Florida	57.26	138	IAmb	IAmb	08 20 57.6	
	comp=Z,17nm,1.1s						
ML02	Panimavida	57.35	156	IAmb	IAmb	08 20 59.6	
	comp=Z,19nm,0.8s						
BDFB	Brasilia	57.59	121	P	P	08 21 00.4	+0.5
	comp=Z,13nm,0.8s,baz=295,slow=8.0,SNR=19						
BDFB	Brasilia	57.59	121	IAmb	IAmb	08 21 01.0	
	comp=Z,15nm,0.8s						
A36M	Sachs Harbour	57.76	350	P	P	08 20 59.5	-0.5
	baz=147,SNR=11						
A36M	Sachs Harbour	57.76	350	IAmb	IAmb	08 21 26.6	
	comp=Z,18nm,0.8s						
WAT6	Susitna Watana	57.91	335	P	P	08 21 02.1	+0.7
	baz=118						
RES	Resolute Bay	57.95	0	P	P	08 21 00.8	-0.5
RES				pmax	pmax		
	comp=Z,5.0nm,0.9s						
RES	Resolute Bay	57.95	0	P	P	08 21 00.8	-0.5
NBPS	Pedro II - PI	58.24	106	eP	P	08 21 05.2	+0.7
HDA	Harding Lake	58.49	337	P	P	08 21 05.6	+0.3
	baz=120,SNR=6.2						
HDA	Harding Lake	58.49	337	IAmb	IAmb	08 21 24.3	
	comp=Z,14nm,1.0s						
SDBA	SAO DESIDERIO	58.59	116	eP	P	08 21 07.0	+0.3
IL31		58.65	337	IAmb	IAmb	08 21 35.1	
	comp=Z,18nm,1.1s						
ILAR	Eielson Array	58.65	337	P	P	08 21 06.3	0.0
	comp=Z,8.4nm,1.0s,baz=128,slow=4.9,SNR=39						
ILAR				pP	pP	08 21 24.2	+1.2
	comp=Z,5.9nm,0.9s,baz=123,slow=5.1,SNR=10						
IPMB	Ipameri, GO	58.69	124	eP	P	08 21 06.6	-0.8
CUT	Chulitna	58.88	334	P	P	08 21 08.9	+0.9
	baz=115						
MCK	McKinley	58.93	336	P	P	08 21 08.8	+0.4
	baz=117						
MCK	McKinley	58.93	336	IAmb	IAmb	08 21 27.3	
	comp=Z,16nm,0.9s						
POKR	Poker Plat Res	59.02	337	P	P	08 21 09.2	+0.2
	baz=120						
POKR	Poker Plat Res	59.02	337	IAmb	IAmb	08 21 37.0	
	comp=Z,14nm,1.1s						
COLA	College	59.06	337	P	P	08 21 09.5	+0.3
COLA				pmax	pmax		
	comp=Z,17nm,0.9s						
COLA	College	59.06	337	P	P	08 21 09.5	+0.3
COLA				IAmb	IAmb	08 21 10.6	
	comp=Z,17nm,0.9s						
TCOL	CIGO, UAF Yank	59.06	337	P	P	08 21 09.6	+0.4
	baz=119						
TCOL	CIGO, UAF Yank	59.06	337	P	P	08 21 09.3	+0.1
TCOL				IAmb	IAmb	08 21 10.6	
	comp=Z,16nm,0.8s						
NBMO	Morrinhos-CE	59.13	104	eP	P	08 21 09.8	-0.7
BMAR	Burnt Mountain	59.27	340	P	P	08 21 11.2	+0.6
TRF	Thorofare Moun	59.35	335	P	P	08 21 11.7	+0.3
	baz=116						
NEA2	Nenana	59.38	337	P	P	08 21 12.7	+1.2
	baz=118						
DY2G	Dye2	59.42	21	i	P	08 21 07.1	-4.8
H24K	Noodor Dome	59.54	338	P	P	08 21 12.7	+0.1
	baz=119						
H24K	Noodor Dome	59.54	338	IAmb	IAmb	08 21 13.9	
	comp=Z,19nm,1.1s						
I23K	Minto, Yukon-K	59.75	337	P	P	08 21 14.3	+0.4
	baz=118,SNR=15						
BPAW	Bear Paw Mtn.	59.91	336	P	P	08 21 15.6	+0.5
	baz=115						
LC01	Cunco	59.94	158	P	P	08 21 16.2	+0.6
MLY	Manley	60.22	337	P	P	08 21 17.6	+0.3
	baz=116						
CHUM	Lake Minchumin	60.35	335	P	P	08 21 18.3	+0.2
	baz=114						
JANB	Januaria	60.37	119	eP	P	08 21 19.6	+0.6
L20K	Farewell, AK	60.45	333	P	P	08 21 18.9	+0.1
	baz=112,SNR=7.6						
M19K	Big River Lodg	60.46	333	P	P	08 21 19.5	+0.6
	baz=111						
I21K	Tanana	60.76	336	P	P	08 21 20.9	0.0
	baz=115,SNR=9.9						
I21K	Tanana	60.76	336	IAmb	IAmb	08 21 22.0	
	comp=Z,16nm,1.1s						
L19K	White Mountain	60.77	333	P	P	08 21 21.2	+0.2
	baz=110						
K20K	Telida	60.86	334	P	P	08 21 21.5	-0.1
	baz=112						
K20K	Telida	60.86	334	IAmb	IAmb	08 21 40.1	
	comp=Z,10nm,0.7s						
COLD	Coldfoot	61.03	339	P	P	08 21 23.7	+1.0
	baz=118,SNR=5.2						
COLD	Coldfoot	61.03	339	IAmb	IAmb	08 21 24.6	
	comp=Z,9.8nm,1.1s						
J20K	Nowinta River	61.20	335	P	P	08 21 23.8	-0.1
	baz=112,SNR=9.9						
J20K	Nowinta River	61.20	335	P	P	08 21 24.1	+0.2
J20K				IAmb	IAmb	08 21 24.8	
	comp=Z,25nm,1.1s						
H21K	Melozitna Rive	61.27	337	P	P	08 21 23.9	-0.5
	baz=114						
H21K	Melozitna Rive	61.27	337	P	P	08 21 24.1	-0.3
H21K				IAmb	IAmb	08 21 25.0	
	comp=Z,13nm,1.0s						
MC01	Montes Claros	61.49	120	eP	P	08 21 27.1	+0.4
TOLK	Toolik Lake Re	61.50	341	P	P	08 21 26.2	+0.2
	baz=119,SNR=6.0						
TOLK	Toolik Lake Re	61.50	341	P	P	08 21 26.5	+0.6
TOLK				IAmb	IAmb	08 21 27.3	
	comp=Z,12nm,1.1s						
TTA	Tatalina	61.53	333	P	P	08 21 25.8	-0.4
TTA				pmax	pmax		
	comp=Z,15nm,1.1s						
TTA	Tatalina	61.53	333	P	P	08 21 25.8	-0.4
	baz=110,SNR=5.0						
TTA	Tatalina	61.53	333	P	P	08 21 25.8	-0.4
TTA				IAmb	IAmb	08 21 45.0	
	comp=Z,15nm,1.1s						
LL04	Puerto Octay	61.55	159	IAmb	IAmb	08 21 28.1	
	comp=Z,18nm,1.2s						
NBPN	Ponto Novo - B	61.99	112	eP	P	08 21 30.3	+0.3
PLCA	Paso Flores	62.04	158	P	P	08 21 31.1	+1.2
	comp=Z,24nm,0.9s,baz=327,slow=7.7,SNR=69						
PLCA				LR	LR	08 44 16.0	
	comp=Z,43nm,18.0s,baz=336,slow=32						
PLCA	Paso Flores	62.04	158	P	P	08 21 31.1	+1.2
PLCA				pmax	pmax		
	comp=Z,27nm,0.9s						
PLCA	Paso Flores	62.04	158	eP	P	08 21 31.1	+1.2
PLCA	Paso Flores	62.04	158	P	P	08 21 31.1	+1.2
VAO	Valinhos	62.45	128	eP	P	08 21 33.5	+0.5
PPT2	Papeete2	62.48	239	eLR	LR	08 40 11.2	
	comp=Z,210nm,27.2s						
DIAM	Diamantina, MG	62.52	122	eP	P	08 21 34.1	+0.5
LL01	San Ignacio de	62.87	160	P	P	08 21 36.1	+0.9
LL01				IAmb	IAmb	08 21 37.4	
	comp=Z,25nm,1.2s						
ICESG	Greenland Ices	62.88	20	i P	P	08 21 34.9	-0.6
ICESG				IAmb	IAmb	08 21 38.1	
	comp=Z,24nm,0.8s						
ICESG				i		08 21 52.0	
PLTB	Pedras Altas	63.35	140	eP	P	08 21 39.5	+0.7
PLTB	Pedras Altas	63.35	140	P	P	08 21 38.6	-0.1
TRQA	Tornquist	63.40	150	P	P	08 21 40.1	+1.2
TRQA				pmax	pmax		
	comp=Z,15nm,0.8s						
TRQA	Tornquist	63.40	150	P	P	08 21 40.1	+1.2
TRQA				IAmb	IAmb	08 21 40.3	
	comp=Z,15nm,0.8s						
EUNU	Eureka	63.50	2	P	P	08 21 39.2	+0.1
EUNU				IAmb	IAmb	08 21 58.1	
	comp=Z,9.1nm,0.8s						
LL02	Futaleuf	63.78	160	P	P	08 21 42.6	+1.3
CMC01	Camacan, BA	64.58	117	eP	P	08 21 47.7	+0.7
NEEM	North Greenlan	64.73	10	⇓iP	P	08 21 47.2	-0.3
NEEM				IAmb	IAmb	08 21 50.7	
	comp=Z,32nm,0.9s						
SUMG	Summit	64.77	16	P	P	08 21 48.0	+0.1
SUMG				pmax	pmax		
	comp=Z,7.0nm,0.7s						
SUMG	Summit	64.77	16	i P	P	08 21 49.6	+1.7
SUMG				IAmb	IAmb	08 21 51.8	
	comp=Z,7.4nm,0.8s						
SUMG				i		08 22 04.6	
SUMG	Summit	64.77	16	P	P	08 21 48.0	+0.1
SUMG				IAmb	IAmb	08 21 52.0	
	comp=Z,7.1nm,0.7s						
A21K	Barrow	64.87	342	P	P	08 21 48.1	+0.1
	baz=113,SNR=8.4						
A21K	Barrow	64.87	342	P	P	08 21 48.4	+0.3
A21K				IAmb	IAmb	08 21 49.1	
	comp=Z,22nm,0.9s						
BSFB	Barra de Sao F	65.10	121	eP	P	08 21 51.3	+0.9
TBI	Tubuai	65.38	234	eLR	LR	08 41 34.0	
	comp=Z,200nm,26.8s						
COYC	Coyhaique	65.85	161	P	P	08 21 55.8	+1.2
COYC				IAmb	IAmb	08 21 57.1	
	comp=Z,21nm,0.9s						
DBG	Daneborg	70.25	16	i P	P	08 22 21.0	-0.9
DBG				IAmb	IAmb	08 22 25.7	
	comp=Z,2.6nm,0.7s						
DBG				i		08 22 39.1	
DAG	Danmarks Havn	71.00	14	i P	P	08 22 25.3	-1.2
DAG				IAmb	IAmb	08 22 29.1	
	comp=Z,15nm,1.1s						
DAG				i		08 22 42.5	
NOR	Nord	72.03	9	eP	P	08 22 32.2	-0.4
BILL	Bilibino	77.31	338	ceP	P	08 23 03.8	+0.4
BILL				i		08 23 22.8	
BILL				e		08 25 57.5	
BILL				pmax	pmax		
	comp=Z,12nm,1.0s						
BILL	Bilibino	77.31	338	P	P	08 23 03.1	-0.2
BILL				IAmb	IAmb	08 23 04.8	
	comp=Z,11nm,1.0s						
ESDC	Sonseca Array	81.35	51	P	P	08 23 25.6	-0.4
	comp=Z,6.7nm,0.9s,baz=296,slow=5.6,SNR=16						
ESDC				pP	pP	08 23 44.8	+1.5
	comp=Z,2.9nm,0.8s,baz=298,slow=3.8,SNR=3.6						
ESDC	Sonseca Array	81.35	51	P	P	08 23 26.1	0.0
KONO	Kongsberg	83.54	29	ceP	P	08 23 37.2	+0.3
KONO				pmax	pmax		
	comp=Z,27nm,1.7s						
NB2	NORSAR Subarra	83.74	28	P	P	08 23 37.8	-0.2
	comp=Z,2.0nm,0.7s,baz=296,slow=5.1						
NOA	NORSAR Array B	83.74	28	P	P	08 23 38.6	+0.6
	comp=Z,5.3nm,0.9s,baz=297,slow=5.0,SNR=13						
NOA				pP	pP	08 23 56.6	+1.2
	comp=Z,5.7nm,0.9s,baz=293,slow=5.3,SNR=6.5						
DOU	Dourbes	84.19	39	dP	P	08 23 39.7	-0.7
BMRD	Maredsous	84.23	39	dP	P	08 23 40.2	-0.4
BMRD				dPcP	PcP	08 23 43.7	-0.6
SEY	Seymchan	84.47	335	LR	LR	09 02 44.3	
	comp=Z,130nm,18.2s,baz=187,slow=37						
ARCES	ARCESS Array B	84.84	17	P	P	08 23 42.9	-0.5
	comp=Z,3.1nm,0.8s,baz=290,slow=3.5,SNR=7.6						
ARCES				pP	pP	08 24 03.1	+2.3
	comp=Z,8.5nm,0.9s,baz=343,slow=3.8,SNR=4.4						
WLF	Walferdange	85.28	40	dP	P	08 23 46.4	+0.4
TIXI	Tiksi	86.66	347	LR	LR	09 07 24.2	
	comp=Z,64nm,18.4s,baz=216,slow=39						
TIXI	Tiksi	86.66	347	i P	P	08 23 51.2	-1.1
TIXI				pmax	pmax		
	comp=Z,18nm,1.7s						
KOWA	Kowa	88.15	76	P	P	08 24 00.6	0.0
KOWA				IAmb	IAmb	08 24 30.0	
	comp=Z,9.4nm,0.9s						
FINES	FINESS Array B	89.78	24	P	P	08 24 05.8	-1.5
	comp=Z,4.0nm,0.9s,baz=336,slow=3.0,SNR=2.3						
FINES	FINESS Array B	89.78	24	i P	P	08 24 12.1	+4.8
FINES				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GERES	GERESS Array B	90.16	38	P	P	08 24 08.2	-1.3
	comp=Z,2.0nm,0.9s,baz=317,slow=5.7,SNR=10						
GERES				pP	pP	08 24 26.9	-0.1
	comp=Z,1.6nm,1.0s,baz=308,slow=4.9,SNR=3.9						
GERES				PP	PP	08 27 40.3	-2.9
	comp=Z,0.6nm,0.7s,baz=308,slow=6.6,SNR=3.6						
GERES				LR	LR	09 05 32.7	
	comp=Z,30nm,18.4s,baz=281,slow=36						
VSU	Vasula	91.82	26	i P	P	08 24 19.9	+3.1
VSU				pmax	pmax		
	comp=Z,36nm,1.2s						
KEST	Kesra	92.60	52	LR	LR	09 04 05.3	
	comp=Z,44nm,19.1s,baz=275,slow=34						
YAK	Yakutsk	93.47	340	ceP	P	08 24 24.7	+0.3
YAK				pmax	pmax		
	comp=Z,18nm,1.1s						
TORD	Torodi Ar. Bea	93.85	75	P	P	08 24 25.3	-1.8
	comp=Z,1.1nm,0.7s,baz=290,slow=4.6,SNR=6.6						
MNK	Minsk	94.72	29	i P	P	08 24 30.4	+0.1
MNK				i *PP	pP	08 24 48.4	+0.6
MNK				i *SP	sP	08 24 54.3	-0.3
MNK				i		08 28 18.1	
MNK				i PPP	PPP	08 30 21.9	
MNK				i S	SKSac	08 34 59.9	-0.7
MNK				i *SS	SKKSac	08 35 30.4	+7.7
MNK				i SP	SP	08 36 54.0	-0.1
MNK				i PS	PS	08 37 02.3	+0.2
MNK				i SS	SS	08 42 10.9	+8.4
MNK				i SSS	SSS	08 45 47.1	
MNK				pmax	pmax		
	comp=N,12nm,0.8s						
MNK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MNK				pmax	pmax		
	comp=E,1.0nm,0.8s						
MNK				MLR	MLR		
	comp=N,127nm,19.0s						
MNK				MLR	MLR		
	comp=E,11nm,19.0s						
MNK				MLR	MLR		
	comp=Z,68nm,19.0s						
MNK	Minsk	94.72	29	i P	P	08 24 30.5	+0.2
	comp=E,1.0nm,0.8s						
MNK				i P	P	08 24 30.5	+0.2
	comp=N,12nm,0.8s						
MNK				i P	P	08 24 30.5	+0.2
	comp=Z,10.0nm,0.8s,baz=307						
MNK				i pP	pP	08 24 48.5	+0.6
MNK				i sP	sP	08 24 54.3	-0.2
MNK				i PP	PP	08 28 18.1	-0.5
MNK				i PPP	PPP	08 30 21.9	
MNK				i S	SKSac	08 34 60.0	-0.7
MNK				i sS	SKKSac	08 35 30.5	+7.8
MNK				i PS	PS	08 37 02.3	+0.3
MNK				i SS	SS	08 42 10.9	+8.4
MNK				i SSS	SSS	08 45 47.1	
MNK				i LR	LR	09 02 36.5	
MNK				i LRM	MLR	09 08 43.2	
	comp=N,127nm,19.3s						
MNK				i LRM	MLR	09 08 45.8	
	comp=E,11nm,19.3s						
MNK				i LRM	MLR	09 08 45.8	
	comp=Z,68nm,19.3s						
AKASG	Malin Array Be	97.70	31	PP	PP	08 28 35.5	-6.2
	comp=Z,2.1nm,0.9s,baz=312,slow=6.7,SNR=4.5						
AKASG				LR	LR	09 12 07.5	
	comp=Z,18nm,18.1s,baz=325,slow=37						
OBN	Obninsk	98.10	25	eP	P	08 24 44.5	-1.1
OBN				eSS	SS	08 42 53.3	+3.3
OBN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
OBN				MLR	MLR		
	comp=Z,37nm,18.0s						
DZM	Mont Dzumac	102.55	251	eLR	LR	08 58 43.7	

	comp=Z,78nm,25.4s						
ULN	Ulaanbaatar	112.33	343	i PKIKP	PKiKP	08 29 44.1	-0.9
MKAR	Makanchi Array	116.74	1	PKP	PKPdf	08 29 51.9	-1.5
	comp=Z,1.2nm,0.7s,baz=357,slow=1.7,SNR=9.6						
MKAR				pPKP	pPKPdf	08 30 10.6	-0.9
	comp=Z,0.7nm,0.7s,baz=325,slow=1.9,SNR=4.3						
HHC	Hu-ho-hao-te	117.07	336	eP	PKPdf	08 29 48.0	-6.3
WMQ	Urumqi	119.60	357	eP	PKiKP	08 30 00.1	+1.0
WMQ				pmax	pmax		
	comp=Z,90nm,4.1s						
AAK	Ala-Archa	120.31	8	i PKIKP	PKPdf	08 29 59.9	-0.6
NJ2	Nanjing	120.85	325	eP	PKiKP	08 30 01.8	+0.1
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
SYO	Syowa Base	121.04	163	⇓ePdiff	Pdif	08 26 23.8	-3.4
SYO	Syowa Base	121.04	163	⇑epPdiff	pPdif	08 26 41.0	-3.6
KSH	Kashi	123.57	7	PKP	PKPdf	08 30 04.0	-2.8
XAN	Xi'an	124.01	335	PKP	PKPdf	08 30 06.8	-0.9
XAN				sPKP		08 30 21.3	
BOSA	Boshof	125.38	113	PKP	PKPdf	08 30 10.3	-0.1
	comp=Z,11nm,0.9s,baz=271,slow=2.5,SNR=7.8						
BOSA				pPKP	pPKPdf	08 30 28.8	+0.2
	comp=Z,5.1nm,0.8s,baz=270,slow=5.2,SNR=3.1						
STKA	Stephens Creek	125.61	243	PKP	PKiKP	08 30 11.1	0.0
	comp=Z,8.6nm,0.7s,baz=90,slow=2.0,SNR=20						
STKA				pPKP	pPKPdf	08 30 29.4	+0.6
	comp=Z,4.8nm,0.8s,baz=68,slow=4.4,SNR=4.6						
STKA	Stephens Creek	125.61	243	PKIKP	PKiKP	08 30 11.2	+0.1
STKA	Stephens Creek	125.61	243	PKPdf	PKiKP	08 30 11.2	+0.1
MAW	Mawson	127.45	170	PKP	PKiKP	08 30 13.9	+0.3
	comp=Z,5.6nm,0.9s,baz=193,slow=1.8,SNR=11						
MAW				pPKP	pPKPdf	08 30 32.1	+1.1
	comp=Z,2.1nm,0.7s,baz=49,slow=0.4,SNR=3.1						
MAW	Mawson	127.45	170	PKIKP	PKiKP	08 30 14.1	+0.5
MAW	Mawson	127.45	170	PKPdf	PKiKP	08 30 14.1	+0.5
CD2	Chengdu	128.79	338	PKP	PKPdf	08 30 16.0	-0.9
WB0	Warramunga Arr	131.79	258	PKPdf	PKPdf	08 30 23.3	+0.6
WB2	Warramunga Arr	131.84	258	PKPdf	PKPdf	08 30 23.3	+0.4
WRAB	Tennant Creek	131.84	258c	iPKIKP	PKPdf	08 30 22.8	-0.1
WRAB				pmax	pmax		
	comp=Z,11nm,1.0s						
WRA	Warramunga Arr	131.85	258	PKP	PKPdf	08 30 23.1	+0.2
	comp=Z,5.8nm,0.7s,baz=86,slow=2.4,SNR=40						
WRA				pPKP	pPKPdf	08 30 41.9	+0.9
	comp=Z,4.5nm,1.0s,baz=80,slow=2.3,SNR=6.1						
WRA	Warramunga Arr	131.85	258c	iPKIKP	PKiKP	08 30 23.7	-0.2
WRA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
WRA	Warramunga Arr	131.85	258	PKPdf	PKPdf	08 30 23.3	+0.4
ASAR	Alice Springs	132.46	253	PKP	PKPdf	08 30 24.1	0.0
	comp=Z,2.3nm,0.6s,baz=82,slow=2.0,SNR=35						
ASAR				pPKP	pPKPdf	08 30 42.2	0.0
	comp=Z,1.7nm,0.8s,baz=92,slow=1.2,SNR=6.1						
ASAR	Alice Springs	132.46	253	PKIKP	PKPdf	08 30 22.3	-1.7
ASAR	Alice Springs	132.46	253	PKPdf	PKPdf	08 30 22.3	-1.7
CMAR	Chiang Mai Arr	141.88	336	PKP	PKPdf	08 30 41.7	+0.2
	comp=Z,1.2nm,0.3s,baz=348,slow=4.2,SNR=5.0						
CMAR				pPKP	pPKPdf	08 30 59.8	+0.2
	comp=Z,1.4nm,0.5s,baz=335,slow=2.1,SNR=1.5						
PSA00	Pilbara Seismi	145.46	256	PKPdf	PKPdf	08 30 47.4	-0.2
PSA00	Pilbara Seismi	145.46	256	PKPdf	PKPdf	08 30 47.7	+0.1
HYB	Hyderabad	145.69	9	i PKP	PKPdf	08 30 47.0	-1.2
KSM	Kuching	148.00	302		PKPbc	08 30 55.9	+0.6

ANF ***22*** *08:12:32.3±0.5, 36°.63N×98°.44W, h5^{km}±4^{km}, ML3.2/7 Error ellipse: s-maj=3.1km s-min=1.9km az=73.0*

NEIC ***22*** *08:12:32.3±0.9, 36°.65N±0°.02×98°.46W±0°.02, h11^{km}±6^{km}, Error ellipse: s-maj=2.6km s-min=2.1km az=139.0*

TUL ***22*** *08:12:32.1±0.7, 36°.66N±0°.01×98°.46W±0°.02, h7^{km}±6^{km}, ML3.0, mb_Lg2.8/29(NEIC), Error ellipse: s-maj=2.5km s-min=1.7km az=108.0*

ISC 22 08:12:32.2±1.0, **36°.65N**±0°.02×**98°.45W**±0°.02, **h9**^{km}±9^{km}, **n50**, σ**0^{s}52**/55, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK032	Salt Plains WL	0.25	51	Pg	Pg	08 12 37.3	+0.1
OK032				Sg	Sg	08 12 40.9	+0.4
CROK	Carrier	0.40	111	Pg	Pg	08 12 40.3	+0.3
CROK				Sg	Sg	08 12 46.1	+0.9
KAN14	Manchester OK	0.50	51	Pg	Pg	08 12 41.8	0.0
GC02	Grant County #	0.51	66	Pg	Pg	08 12 42.2	+0.1
GC02				Sg	Sg	08 12 49.5	+0.6
U32A	Winter Ranch,	0.52	239		Pg	08 12 42.1	-0.2
U32A				Sg	Sg	08 12 49.5	+0.4
U32A	Winter Ranch,	0.52	239	P	Pg	08 12 42.1	-0.2
	baz=58						
U32A				S	Sg	08 12 49.6	+0.5
	baz=58						
KAN10	Anthony SW Sta	0.55	31	Pg	Pg	08 12 42.8	-0.1
KAN10				Sg	Sg	08 12 50.4	+0.2
KAN05	Bluff City Nor	0.65	45		Pg	08 12 44.7	0.0
KAN05				Sg	Sg	08 12 53.5	+0.2
KAN16	Harper SW Stat	0.65	28	Pg	Pg	08 12 44.6	-0.2
KAN16				Sg	Sg	08 12 53.5	+0.2
KAN17	Caldwell West	0.68	54	Pg	Pg	08 12 45.0	-0.2
KAN17				Sg	Sg	08 12 54.3	+0.2
KAN08	Anthony NE Sta	0.69	33	Pg	Pg	08 12 45.4	-0.2
KAN08				Sg	Sg	08 12 54.8	+0.2
KAN12	Harper NE Stat	0.74	29	Pg	Pg	08 12 46.3	-0.2
KAN12				Sg	Sg	08 12 56.3	+0.1
KAN01	Argonia South	0.75	47		Pg	08 12 46.4	-0.2
KAN01				Sg	Sg	08 12 56.5	+0.2
KAN06	Argonia West S	0.76	38	Pg	Pg	08 12 46.8	-0.1
KAN09	Caldwell North	0.82	53	Pg	Pg	08 12 47.7	-0.4
KAN13	South Haven SW	0.86	65	Pg	Pg	08 12 48.3	-0.4
BLOK	Blackwell	1.00	83	Pg	Pg	08 12 50.9	-0.4
OK029	Liberty Lake	1.17	136	Pg	Pb	08 12 54.0	-0.6
BCOK	Bluff Creek, N	1.20	145		Pn	08 12 54.3	-0.8
OK025	Westminster Rd	1.39	140		Pn	08 12 57.7	-0.1
OKCFA	Oklahoma City	1.47	146		Pn	08 12 59.0	+0.1
OKCFA	Oklahoma City	1.47	146	P	Pn	08 12 59.0	+0.1
	baz=327						
OKCFA				S	Sg	08 13 19.1	-0.3
	baz=327						
OK031	S. Brethren Rd	1.47	118		Pb	08 12 59.4	-0.4
QUOK	Quay	1.48	108		Pn	08 12 59.4	+0.3
OKCSW	OKLAHOMA CITY	1.48	146		Pn	08 12 59.2	+0.1
OK030	Cody Creek RV	1.52	118		Pn	08 13 00.0	+0.4
T35A	Sooner Cattle	1.58	80		Pn	08 13 00.8	+0.4
T35B	Sooner Cattle	1.58	80	P	Pb	08 13 01.0	-0.5
	baz=261						
T35B				S	Sg	08 13 22.4	-0.5
	baz=261						
FNO	Franklin	1.63	148		Pn	08 13 01.5	+0.4
R32A	Long Quarter,	1.78	353		Pb	08 13 04.2	-1.0
R32A	Long Quarter,	1.78	353	P	Pb	08 13 04.1	-1.0
	baz=173						
R32A				S	Sb	08 13 28.2	+0.6
	baz=173						
WMOK	Wichita Mounta	1.93	188		Pn	08 13 05.7	+0.5
WMOK	Wichita Mounta	1.93	188	P	Pn	08 13 06.0	+0.8
	baz=7.8						
X34A	Smith Ranch, M	2.10	166	IAmb_Lg		08 13 39.8	
	comp=Z,52nm,0.7s						
TUL1	Leonard	2.27	108		Pn	08 13 10.2	+0.3
TUL1				IAmb_Lg		08 13 46.8	
	comp=Z,39nm,1.0s						
TUL1	Leonard	2.27	108	P	Pn	08 13 10.2	+0.3
	baz=290						
TUL1				S	Sb	08 13 40.2	-1.3
	baz=290						
CBKS	Cedar Bluff	2.39	335		Pn	08 13 11.3	-0.4
CBKS				IAmb_Lg		08 13 53.7	
	comp=Z,35nm,0.7s						
KSU1	Kansas State U	2.85	30	S	Sn	08 13 54.1	+1.8
	baz=211						
AMTX	Amarillo	3.17	237	Pn	Pn	08 13 22.5	+0.1
AMTX				IAmb_Lg		08 14 17.6	
	comp=Z,25nm,0.9s						
X37A	Clayton	3.24	128	IAmb_Lg		08 14 19.5	
	comp=Z,26nm,0.8s						
W39A	Magazine	4.05	110	IAmb_Lg		08 14 47.1	
	comp=Z,23nm,0.8s						
KSCO	Kaye Shedlock'	4.07	307	IAmb_Lg		08 14 42.5	
	comp=Z,17nm,0.7s						
S39A	Bolivar	4.22	74	P	Pn	08 13 37.0	+0.2
	baz=257						
Z38A	Mt. Pleasant	4.42	139	IAmb_Lg		08 15 03.2	
	comp=Z,26nm,0.9s						
MIAR	Mount Ida	4.49	116	IAmb_Lg		08 15 05.8	
	comp=Z,18nm,1.1s						
U40A	Yellville	4.51	92	IAmb_Lg		08 14 57.0	
	comp=Z,16nm,0.8s						
BGNE	Belgrade	4.76	3	IAmb_Lg		08 15 10.4	
	comp=Z,25nm,0.9s						
T25A	Trinidad	4.81	278	IAmb_Lg		08 15 08.6	
	comp=Z,27nm,0.9s						
X40A	Basin Creek Fa	5.06	114	IAmb_Lg		08 15 23.7	
	comp=Z,22nm,0.9s						
N38A	Joes South For	5.81	43	IAmb_Lg		08 15 40.5	
	comp=Z,24nm,0.7s						

NNC ***22*** *08:42:25.4±1.2, 38°.42N×56°.80E, h0^{km}, mb3.6, Error ellipse: s-maj=16.3km s-min=4.5km az=52.0*

TEH ***22*** *08:42:29.3, 38°.30N×57°.04E, h10^{km}, ML3.0*

ISC 22 08:42:28.6±0.9, **38°.42N**±0°.06×**57°.05E**±0°.05, **h10**^{km}, **n17**, σ**1^{s}26**/20, **3C-2D, Iran-Turkmenistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GYA0B	ALIBECK ARRAY	0.97	120	⇑P	Pg	08 42 47.1	-0.2
GYA0B				⇓S	Sn	08 43 03.2	+1.0
ISFR	Sfrayin	1.56	151	ePg	Pg	08 42 57.6	-0.9
ISFR				e		08 43 01.5	
	comp=Z,3µm,0.2s						
IEMG	Emamgholi	1.62	128	ePn	Pb	08 42 57.9	-0.8
IEMG				e		08 42 60.0	
	comp=Z,3µm,0.2s						
IMND	Minoodasht	1.75	229	ePn	Pb	08 42 59.6	-1.1
SBZV	Sabzevar	2.08	167	ePn	Pb	08 43 05.7	-0.8
IAKL	Akhelmad	2.27	143	e		08 43 42.9	
	comp=Z,636nm,0.5s						
IAKL				ePn	Pb	08 43 09.1	-0.7
IPAY	Payeh	2.50	141	ePn	Pb	08 43 12.3	-1.5
IPAY				e		08 43 53.8	
	comp=Z,564nm,0.3s						
IKRD	Kardeh	2.56	129	ePn	Pb	08 43 14.1	-0.6
IMYA	Miami	3.20	130	ePn	Pn	08 43 21.1	+2.0
IGLO	Ghaloghah	3.20	234	ePn	Pn	08 43 21.1	+2.0
IFIR	Firoozkooh	4.42	232	ePn	Pn	08 43 37.9	+2.0
TNSJ	Nastanj	4.46	185	ePn	Pn	08 43 37.8	+1.4
TNSJ				e		08 45 09.9	
	comp=Z,108nm,0.6s						
TKDS	Koohdasht(Taba	4.80	179	ePn	Pn	08 43 41.3	+0.3
AFRZ	Afriz	5.24	162	ePn	Pn	08 43 48.7	+1.7
TPRV	Parvadeh(Tabas	5.39	183	ePn	Pn	08 43 50.2	+1.1
AB31	Akbulak array	11.03	10	Pn	Pn	08 45 05.5	-0.8
	comp=Z,0.2nm,0.4s,baz=210,slow=13,SNR=14						
AB31				⇑Sn	Sn	08 47 10.0	+0.3
	comp=Z,1.5nm,0.8s,baz=193,slow=22,SNR=8.9						
AKTO	Aktyubinsk	12.03	3	⇓Pn	Pn	08 45 19.1	-0.9
	comp=Z,2.0nm,0.9s						
AKTO				⇑Sn	Sn	08 47 34.2	0.0
	comp=Z,2.2nm,1.0s						

MOS ***22*** *08:47:00.8±1.3, 42°.61N×145°.63E, h20^{km}, mb5.0/25, Error ellipse: s-maj=8.4km s-min=4.9km az=102.3*

BJI ***22*** *08:47:03.1±0.0, 42°.81N×145°.58E, h33^{km}, mB4.9/23, mb4.6/52, Ms4.0/7, Ms7 3.9/9*

JMA ***22*** *08:47:04.9±0.1, 42°.75N×145°.54E, h43^{km}±2^{km}, M4.5 JMA Felt I J1.*

SKHL ***22*** *08:47:04.6±0.6, 42°.70N×145°.70E, h50^{km}±7^{km}, mb5.0/7*

NIED ***22*** *08:47:05.0, 42°.75N×145°.54E, h43^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$2.72; M$_{\theta\theta}$-1.08; M$_{\phi\phi}$-1.64; M$_{r\theta}$0.78; M$_{\theta\phi}$-1.84; M$_{\phi r}$2.35; Fault plane solution: M$_{0}$3.88000×10^{15} NP1:φ$_{s}$26.00000°, δ66.00000°, λ75.00000°. NP2:φ$_{s}$238.00000°, δ28.00000°, λ119.00000°.*

NEIC ***22*** *08:47:05.1±1.6, 42°.71N±0°.07×145°.6E±0°.1, h33^{km}±5^{km}, mb4.8/53 Error ellipse: s-maj=12.7km s-min=9.7km az=117.0*

IDC ***22*** *08:47:09.3±2.4, 42°.80N×145°.46E, h66^{km}±20^{km}, mb4.0/21, mb1 4.2/26, mb1mx4.1/44, mbtmp4.3/26, MS3.5/16, Ms1 3.6/16, ms1mx3.3/40, Error ellipse: s-maj=16.5km s-min=13.4km az=149.0*

ISC 22 08:47:05.5±0.5, **42°.73N**±0°.05×**145°.59E**±0°.04, **h37**^{km}±1^{km}, **n266**, σ**1^{s}15**/281, **mb4.8**/82, **MS3.8**/16, **11C-11D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKHN	Kushirohamanak	0.47	318	⇓P	Pn	08 47 15.0	-0.6
JKHN				eS	Sn	08 47 22.2	-0.5
NEM2	Nemuro 2	0.64	10	⇓P	Pn	08 47 17.4	-0.8
NEM2				eS	Sn	08 47 26.3	-0.8
NMR	Nemuro--Hokkai	0.65	9	⇓iPN	Pn	08 47 17.5	-0.7
NMR				eS	Sn	08 47 26.8	-0.3
NMR	Nemuro--Hokkai	0.65	9	i P	Pn	08 47 17.0	-1.2
NMR				eS	Sn	08 47 26.0	-1.1
JAK	Akkeshi	0.71	292	⇓P	Pn	08 47 18.1	-0.8
JAK				eS	Sn	08 47 26.9	-1.7
GLVR	Golovnino	1.01	357	ePN	Pn	08 47 22.6	-0.4
GLVR				eS	Sn	08 47 35.8	-0.1
GLVR				pmax	pmax		
	comp=Z,1µm,0.1s						
GLVR				smax	smax		
	comp=N,13µm,0.3s						
GLVR				smax	smax		
	comp=E,15µm,0.3s						
GLVR	Golovnino	1.01	357	eP	Pn	08 47 22.0	-1.0
GLVR				AMB	AMB	08 47 26.0	
	comp=E,1µm,0.4s						
GLVR				eS	Sn	08 47 35.0	-0.9
GLVR				A	A	08 47 40.0	
	comp=E,13µm,0.3s						
GLVR				A	A	08 47 40.0	
	comp=E,15µm,0.3s						
JNK	Nakash	1.06	324	⇓P	Pn	08 47 23.0	-0.8
JRA	Rausu	1.25	344	⇓P	Pn	08 47 26.1	-0.3
JRA				eS	Sn	08 47 41.9	-0.1
GRPR	Tuman	1.27	6	ePN	Pn	08 47 25.8	-0.8
GRPR				eS	Sn	08 47 41.6	-0.8
GRPR				pmax	pmax		
	comp=Z,2µm,0.3s						
GRPR				smax	smax		
	comp=N,11µm,0.3s						
GRPR				smax	smax		
	comp=E,7µm,0.3s						
GRPR	Tuman	1.27	6	eP	Pn	08 47 25.0	-1.6
GRPR				AMB	AMB	08 47 29.0	
	comp=E,2µm,0.3s						
GRPR				eS	Sn	08 47 41.0	-1.4
GRPR				A	A	08 47 44.0	
	comp=E,11µm,0.3s						
GRPR				A	A	08 47 44.0	
	comp=E,7µm,0.3s						
JOB	Onbets	1.30	278	⇓P	Pn	08 47 26.3	-0.7
YUK	Yuzh-Kuril'sk	1.32	9	⇑iPN	Pn	08 47 27.4	+0.1
YUK				eS	Sn	08 47 44.0	+0.4
YUK				pmax	pmax		
	comp=E,654nm,0.2s						
YUK				pmax	pmax		
	comp=Z,2µm,0.2s						
YUK				pmax	pmax		
	comp=N,280nm,0.1s						
YUK				smax	smax		
	comp=E,6µm,0.6s						
YUK				smax	smax		
	comp=N,6µm,0.3s						
YUK	Yuzh-Kuril'sk	1.32	9	i P	Pn	08 47 26.8	-0.5
YUK				AMB	AMB	08 47 31.0	
	comp=N,2µm,0.2s						
YUK				eS	Sn	08 47 43.1	-0.5
YUK				A	A	08 47 47.0	
	comp=N,6µm,0.4s						
YUK				A	A	08 47 47.0	
	comp=N,6µm,0.4s						
RUSJ	Misakicho	1.40	350	⇑iPN	Pn	08 47 28.8	+0.5
RUSJ				i S	Sn	08 47 46.5	+1.0
JAR	Ashorobuto	1.45	294	⇓P	Pn	08 47 28.4	-0.7
JCH	Churui	1.65	267	P	Pn	08 47 31.0	-0.8
JTKR	Abashiri--Toko	1.74	316	⇓P	Pn	08 47 33.3	+0.2
JTKR				eS	Sn	08 47 54.7	+0.7
JTHR	Tokachihiroo	1.75	256	⇑P	Pn	08 47 33.9	+0.7
ERM	Erimo	1.94	249	PN	Pn	08 47 37.4	+1.6
ERM	Erimo	1.94	249		Pn	08 47 37.4	+1.6
JEM	Erimo	1.94	249		Pn	08 47 37.1	+1.3
JKA	Kamikawa-asahi	2.58	303	eP	Pn	08 47 46.1	+1.5
JKA	Kamikawa-asahi	2.58	303		Pn	08 47 46.1	+1.5
ASAJ	Asahikawa	2.58	303	P	Pn	08 47 46.1	+1.4
	comp=N,36nm,0.3s,baz=147,slow=8.2,SNR=310						
ASAJ				S	Sn	08 48 19.3	+4.5
	comp=N,88nm,0.3s,baz=4.7,slow=29,SNR=4.3						
ASAJ				LR	LR	08 49 03.5	
	comp=N,1µm,18.1s,baz=160,slow=46						
KUR	Kuril'sk	2.99	33	ePN	Pn	08 47 52.9	+2.6
KUR				eS	Sn	08 48 28.7	+3.8
KUR				pmax	pmax		
	comp=Z,210nm,0.5s						
KUR				smax	smax		
	comp=N,294nm,0.4s						
KUR				smax	smax		
	comp=E,454nm,0.4s						
KUR	Kuril'sk	2.99	33	eP	Pn	08 47 49.7	-0.6
KUR				AMB	AMB	08 48 04.0	
	comp=E,210nm,0.5s						
KUR				eS	Sn	08 48 23.7	-1.2
KUR				A	A	08 48 36.0	
	comp=E,294nm,0.4s						
KUR				A	A	08 48 36.0	
	comp=E,454nm,0.4s						
JEW	Eniwo	3.05	273		Pn	08 47 52.7	+1.6
JTM	Tenmabayashi	3.90	242	Pn	Pn	08 48 02.7	-0.1
YSS	Yuzh-Sakhalins	4.68	335	ePN	Pn	08 48 14.0	+0.6
YSS				pmax	pmax		
	comp=Z,30nm,1.3s						
YSS				MLR	MLR		
	comp=Z,2µm,14.0s						
YSS				MLR	MLR		
	comp=N,700nm,17.0s						
YSS				MLR	MLR		
	comp=E,700nm,12.0s						
YSS	Yuzh-Sakhalins	4.68	335	i P	Pn	08 48 14.2	+0.8
YSS				AMB	AMB	08 48 20.2	
	comp=E,40nm,1.0s						
YSS				eS	Sn	08 49 06.3	-0.1
YSS	Yuzh-Sakhalins	4.68	335	Pn	Pn	08 48 12.5	-0.9
JMM	Marumori	6.09	219		Pn	08 48 30.0	-2.8
JSD	Sado	7.30	232	Pn	Pn	08 48 48.5	-1.0
JYT	Yasato	7.72	214	Pn	Pn	08 48 52.9	-2.3
TYV	Tymovskoe	8.38	347	eP	Pn	08 49 06.5	+2.3
TYV				AMB	AMB	08 49 09.6	
	comp=E,30nm,0.7s						
MJAR	Matsushiro Arr	8.40	225	P	Pn	08 49 03.7	-0.9
	comp=E,0.5nm,0.3s,baz=29,slow=14,SNR=44						
MJAR				S	Sn	08 50 45.1	+6.9
	comp=E,0.2nm,0.3s,baz=44,slow=16,SNR=4.3						
MJAR				LR	LR	08 52 44.2	
	comp=E,156nm,21.2s,baz=25,slow=40						
MJAR	Matsushiro Arr	8.40	225	PN	Pn	08 49 02.8	-1.8
MJAR	Matsushiro Arr	8.40	225	Pn	Pn	08 49 02.8	-1.8
MAJO	Matsushiro	8.40	225	i PN	Pn	08 49 05.7	+1.1
MAJO	Matsushiro	8.40	225	Pn	Pn	08 49 03.1	-1.5
MAT	Matsushiro	8.40	225	P	Pn	08 49 03.5	-1.1
MAT				eS	Sn	08 50 37.4	-0.8
JGF	Kuroka	9.56	225		Pn	08 49 20.1	-0.5
INU	Inuyama	9.94	225	Pn	Pn	08 49 24.9	-0.6
USRK	Ussuriysk Ar.	10.00	283	P	Pn	08 49 28.6	+2.2
	baz=86,slow=14,SNR=6.4						
USRK				LR	LR	08 53 10.4	
	comp=E,210nm,20.7s,baz=70,slow=36						
MSHR	Mys Shultsa	10.63	274	i PN	Pn	08 49 36.9	+1.8
JWT	Wachi	10.86	230	Pn	Pn	08 49 38.0	-0.4
KLR	Kul'dur	11.61	309	P	Pn	08 49 52.5	+4.1
	comp=E,0.3nm,0.3s,baz=112,slow=16,SNR=33						
KLR				LR	LR	08 54 39.8	
	comp=E,420nm,19.7s,baz=120,slow=39						
KLR	Kul'dur	11.61	309	i PN	Pn	08 49 53.4	+5.0
KLR	Kul'dur	11.61	309	eP	Pn	08 49 51.4	+3.0
MDJ	Mudanjiang	11.74	285	P	Pn	08 49 49.6	-0.6
MDJ				pmax	pmax		
	comp=E,8.0nm,0.9s						
MDJ				pmax	pmax		
	comp=E,140nm,4.4s						
PETK	Petropavlovsk-	13.16	34	LR	LR	08 55 32.1	
	comp=E,165nm,19.8s,baz=173,slow=38						
KSRS	Korea Array	14.51	255	P	P	08 50 30.9	-3.1
	comp=E,0.4nm,0.3s,baz=64,slow=14,SNR=6.0						
KSRS				LR	LR	08 56 06.4	
	comp=E,288nm,18.8s,baz=55,slow=37						
KSRS	Korea Array	14.51	255	P	P	08 50 31.0	-3.1
CN2	Changchun	14.71	281	eP	Pn	08 50 30.1	-0.7
CN2				pmax	pmax		
	comp=E,10.0nm,0.9s						
CN2				LR	LR		
	comp=E,100nm,14.0s						
CN2				LR	LR		
	comp=E,200nm,14.0s						
CN2				LR	LR		
	comp=E,300nm,18.0s						
JCJ	Chichijima	15.85	191	P	P	08 50 49.7	+0.7
	comp=E,4.6nm,0.3s,baz=350,slow=13,SNR=2.1						
JCJ				LR	LR	08 56 12.2	
	comp=E,38nm,22.0s,baz=322,slow=34						
ZEA	Zeya	16.39	319	eP	P	08 50 54.9	0.0
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.4s						
ZEA				MLR	MLR		
	comp=E,200nm,16.0s						
ZEA				MLR	MLR		
	comp=N,200nm,15.0s						
ZEA				MLR	MLR		
	comp=Z,200nm,15.0s						
ZEA	Zeya	16.39	319	i P	Pn	08 50 51.5	-1.0
ZEA				AMB	AMB	08 51 01.5	
	comp=Z,10.0nm,1.0s						
SEY	Seymchan	20.62	9	P	Pn	08 51 43.0	-0.7
	comp=Z,3.6nm,0.9s,baz=186,slow=13,SNR=5.2						
YAK	Yakutsk	21.52	339	LR	LR	09 00 44.3	
	comp=Z,91nm,20.0s,baz=90,slow=38						
YAK	Yakutsk	21.52	339	i P	P	08 51 49.6	-1.2
YAK				pmax	pmax		
	comp=Z,9.0nm,0.5s						
YAK	Yakutsk	21.52	339	eP	P	08 51 49.6	-1.2
YAK	Yakutsk	21.52	339	P	P	08 51 49.8	-1.0
YAK				IAmb	IAmb	08 52 02.4	
	comp=Z,20nm,0.5s						
BJI	Beijing	22.18	273	P	P	08 51 57.3	-0.9
BJI				pmax	pmax		
	comp=Z,23nm,1.0s						
BJT	Baijiatuau	22.20	273	P	P	08 51 57.4	-1.0
BJT				pmax	pmax		
	comp=Z,28nm,1.2s						
BJT	Baijiatuau	22.20	273	P	P	08 51 57.4	-1.0
NJ2	Nanjing	23.67	252	eP	P	08 52 13.1	-0.4
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HHC	Hu-ho-hao-te	25.34	277	eP	P	08 52 28.3	-0.6
HHC				pmax	pmax		
	comp=Z,17nm,0.9s						
HHC				pmax	pmax		
	comp=Z,87nm,4.2s						
HHC				LR	LR		
	comp=Z,150nm,11.7s						
HHC				LR	LR		
	comp=Z,120nm,12.8s						
HHC				LR	LR		
	comp=Z,190nm,10.8s						
ULN	Ulaanbaatar	27.39	294	P	P	08 52 46.9	-0.4
ULN				pmax	pmax		
	comp=Z,11nm,0.9s						
ULN	Ulaanbaatar	27.39	294	eP	P	08 52 46.9	-0.4
ULN	Ulaanbaatar	27.39	294	P	P	08 52 46.9	-0.4
BILL	Bilibino	27.66	17	⇑eP	P	08 52 50.7	+1.4
BILL				pmax	pmax		
	comp=Z,11nm,1.7s						
BILL	Bilibino	27.66	17	eP	P	08 52 50.7	+1.4
SONM	Songino Array	27.83	294	P	P	08 52 51.5	+0.3
	comp=Z,26nm,0.8s,baz=81,slow=8.3,SNR=140						
SONM				LR	LR	09 04 53.3	
	comp=Z,154nm,19.8s,baz=110,slow=38						
SONM	Songino Array	27.83	294	P	P	08 52 51.2	-0.1
SONM				IAmb	IAmb	08 52 52.1	
	comp=Z,22nm,0.7s						
H11N2	WAKE ISLAND Hy	29.13	135	T	T	09 23 56.8	
	baz=328,slow=75,SNR=690						
H11N1	WAKE ISLAND Hy	29.14	135	T	T	09 23 57.2	
	baz=328,slow=75,SNR=893						
H11N3	WAKE ISLAND Hy	29.15	135	T	T	09 23 57.4	
	baz=328,slow=75,SNR=813						
XAN	Xi'an	29.83	265	⇑P	P	08 53 09.0	-0.1
XAN				pP	pP	08 53 19.8	+0.5
XAN				sP	sP	08 53 25.3	+1.7
XAN				pmax	pmax		
	comp=Z,12nm,1.0s						
H11S1	WAKE ISLAND Hy	30.05	137	T	T	09 25 09.3	

	baz=328,slow=76,SNR=2295						
H11S3	**WAKE ISLAND Hy**	**30.06**	**137**	T	T	09 25 09.2	
	baz=328,slow=76,SNR=1160						
H11S2	**WAKE ISLAND Hy**	**30.07**	**137**	T	T	09 25 13.3	
	baz=328,slow=76,SNR=1040						
ENH	**Enshi**	**31.34**	**259**	P	**P**	**08 53 21.1**	**-1.2**
ENH				IAmb	IAmb	08 53 26.0	
	comp=Z,10nm,0.8s						
LZH	**Lanzhou**	**32.67**	**272**	*e*P	**P**	**08 53 34.5**	**+0.3**
LZH				pP	pP	08 53 43.4	-0.9
LZH				sP	sP	08 53 48.6	-0.5
LZH				pmax	pmax		
	comp=Z,26nm,1.1s						
MIDW	**Midway**	**33.17**	**104**	P	**P**	**08 53 37.5**	**-0.9**
CD2	**Chengdu**	**35.17**	**264**	*e*P	**P**	**08 53 56.3**	**+0.5**
KMI	**Kunming**	**39.18**	**257**	⇑P	**P**	**08 54 30.6**	**+0.5**
KMI				sP	sP	08 54 44.3	-0.4
KMI				pmax	pmax		
	comp=Z,15nm,0.5s						
J20K	**Nowinta River**	**39.84**	**36**	P	**P**	**08 54 36.2**	**+1.4**
J20K				IAmb	IAmb	08 54 49.5	
	comp=Z,47nm,2.0s						
DGZ	**Jazzator, Alta**	**39.95**	**301**	⇑*i*P	**P**	**08 54 37.1**	**+1.0**
DGZ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
A21K	**Barrow**	**39.95**	**25**	P	**P**	**08 54 35.9**	**+0.3**
IMAR	**Indian Mountai**	**40.12**	**34**	P	**P**	**08 54 37.7**	**+0.5**
H21K	**Melozitna Rive**	**40.49**	**34**	P	**P**	**08 54 41.1**	**+0.9**
H21K				IAmb	IAmb	08 55 13.3	
	comp=Z,30nm,2.0s						
ZAA0	**Zalesovo Array**	**40.71**	**308**	P	**P**	**08 54 41.7**	**-0.5**
ZALV	**Zalesovo Beam**	**40.71**	**308**	P	**P**	**08 54 41.7**	**-0.4**
	comp=Z,6.7nm,0.8s,baz=87,slow=8.8,SNR=20						
ZALV				PcP	**PcP**	**08 56 43.4**	**+0.3**
	comp=Z,3.2nm,0.6s,baz=65,slow=2.4,SNR=9.0						
ZALV				LR	LR	09 12 42.7	
	comp=Z,124nm,19.5s,baz=56,slow=38						
ZALV	**Zalesovo Beam**	**40.71**	**308**	P	**P**	**08 54 41.4**	**-0.7**
I21K	**Tanana**	**40.81**	**35**	P	**P**	**08 54 44.6**	**+1.8**
I21K				IAmb	IAmb	08 55 48.9	
	comp=Z,23nm,1.8s						
WMQ	**Urumqi**	**41.41**	**292**	*e*P	**P**	**08 54 48.8**	**+0.6**
WMQ				LR	LR		
	comp=Z,110nm,19.9s						
RND	**Reindeer**	**42.19**	**38**	P	**P**	**08 54 55.0**	**+0.8**
RND				pmax	pmax		
	comp=Z,45nm,1.8s						
RND	**Reindeer**	**42.19**	**38**	P	**P**	**08 54 55.0**	**+0.8**
RND				IAmb	IAmb	08 55 53.1	
	comp=Z,46nm,1.8s						
SML	**Sawmill**	**42.53**	**40**	P	**P**	**08 54 56.7**	**-0.3**
SML				IAmb	IAmb	08 55 56.6	
	comp=Z,37nm,1.4s						
COLA	**College**	**42.56**	**35**	*i* P	**P**	**08 54 54.7**	**-2.4**
COLA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
IL31		**42.98**	**36**	P	**P**	**08 55 01.2**	**+0.7**
ILAR	**Eielson Array**	**42.98**	**36**	P	**P**	**08 55 01.1**	**+0.5**
	comp=Z,1.7nm,0.8s,baz=282,slow=9.2,SNR=21						
KLU	**Klutina**	**43.71**	**40**	P	**P**	**08 55 06.8**	**+0.2**
KLU				IAmb	IAmb	08 55 58.7	
	comp=Z,28nm,1.4s						
BMAR	**Burnt Mountain**	**43.80**	**32**	P	**P**	**08 55 08.9**	**+1.7**
MK31	**Makanchi Array**	**44.05**	**298**	P	**P**	**08 55 09.6**	**+0.1**
MK31				pmax	pmax		
	comp=Z,12nm,0.8s						
MK31	**Makanchi Array**	**44.05**	**298**	P	**P**	**08 55 09.6**	**+0.1**
MK31				IAmb	IAmb	08 55 10.2	
	comp=Z,12nm,0.8s						
MKAR	**Makanchi Array**	**44.05**	**298**	P	**P**	**08 55 09.3**	**-0.1**
	comp=Z,18nm,0.9s,baz=83,slow=10,SNR=89						
MKAR				PcP	**PcP**	**08 56 54.4**	**0.0**
	comp=Z,0.7nm,0.7s,baz=61,slow=6.8,SNR=2.0						
MKAR	**Makanchi Array**	**44.05**	**298**	P	**P**	**08 55 09.6**	**+0.1**
MAKZ	**Makanchi**	**44.25**	**298**	P	**P**	**08 55 11.2**	**+0.1**
MAKZ				pmax	pmax		
	comp=Z,17nm,1.0s						
MAKZ	**Makanchi**	**44.25**	**298**	P	**P**	**08 55 11.2**	**+0.1**
MAKZ				IAmb	IAmb	08 55 11.8	
	comp=Z,17nm,0.9s						
SCRK	**Sand Creek**	**44.30**	**37**	P	**P**	**08 55 11.7**	**+0.3**
KURK	**Kurchatov**	**45.16**	**304**	*ce*P	**P**	**08 55 17.1**	**-1.1**
KURK				pmax	pmax		
	comp=Z,14nm,0.8s						
KURK	**Kurchatov**	**45.16**	**304**	*e*P	**P**	**08 55 17.1**	**-1.1**
KURK	**Kurchatov**	**45.16**	**304**	P	**P**	**08 55 18.2**	**0.0**
KURK				IAmb	IAmb	08 55 18.8	
	comp=Z,19nm,1.1s						
L27K	**Beaver Creek,**	**45.38**	**38**	P	**P**	**08 55 21.4**	**+1.5**
BCAR	**Beaver Creek A**	**45.40**	**38**	P	**P**	**08 55 21.4**	**+1.4**
CMAR	**Chiang Mai Arr**	**46.14**	**253**	P	**P**	**08 55 27.5**	**+1.2**
	comp=Z,1.7nm,0.4s,baz=42,slow=7.0,SNR=7.7						
CMAR				LR	LR	09 16 33.4	
	comp=Z,85nm,18.6s,baz=90,slow=38						
INK	**Inuvik**	**47.85**	**30**	P	**P**	**08 55 40.0**	**+1.0**
	comp=Z,1.5nm,0.5s,baz=278,slow=4.8,SNR=18						
INK	**Inuvik**	**47.85**	**30**	P	**P**	**08 55 39.7**	**+0.6**
BRVK	**Borovoye**	**49.32**	**310**	P	**P**	**08 55 50.7**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,10.0nm,1.2s						
BRVK	**Borovoye**	**49.32**	**310**	*e*P	**P**	**08 55 50.7**	**+0.2**
BRVK	**Borovoye**	**49.32**	**310**	P	**P**	**08 55 50.7**	**+0.2**
BRVK				IAmb	IAmb	08 55 51.5	
	comp=Z,10.0nm,1.1s						
A36M	**Sachs Harbour**	**49.77**	**24**	P	**P**	**08 55 54.5**	**+0.9**
A36M				IAmb	IAmb	08 55 55.6	
	comp=Z,6.5nm,1.0s						
JIRN	**Jiri**	**49.84**	**273**	*e*P	**P**	**08 55 55.4**	**+0.1**
	comp=Z,9.4nm,0.7s						
BOOM	**Boomskoye usch**	**49.87**	**295**	P	**P**	**08 55 55.1**	**0.0**
BOOM				pmax	pmax		
	comp=Z,53nm,1.7s						
BOOM	**Boomskoye usch**	**49.87**	**295**	P	**P**	**08 55 55.1**	**0.0**
GUN	**Gumba**	**49.93**	**273**	*e*P	**P**	**08 55 55.9**	**-0.1**
	comp=Z,24nm,0.5s						
RAMN	**Ramite**	**49.94**	**272**	*e*P	**P**	**08 55 55.7**	**-0.2**
	comp=Z,16nm,0.6s						
KKN	**Kakani**	**50.44**	**273**	*e*P	**P**	**08 55 59.7**	**0.0**
PKI	**Pulchoki**	**50.47**	**273**	*e*P	**P**	**08 56 00.0**	**0.0**
DMN	**Daman**	**50.67**	**273**	*e*P	**P**	**08 56 01.4**	**0.0**
AAK	**Ala-Archa**	**50.77**	**296**	P	**P**	**08 56 01.8**	**-0.1**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AAK	**Ala-Archa**	**50.77**	**296**	*e*P	**P**	**08 56 01.8**	**-0.1**
AAK	**Ala-Archa**	**50.77**	**296**	P	**P**	**08 56 01.8**	**-0.1**
KSH	**Kashi**	**51.17**	**291**	P	P	08 56 08.4	+3.5
KSH				pP	sP	08 56 18.5	-1.8
KSH				sP	pP	08 56 22.3	+6.7
KSH				pmax	pmax		
	comp=Z,6.0nm,0.7s						
DANN	**Dangsing**	**51.25**	**275**	*e*P	**P**	**08 56 06.2**	**+0.4**
	comp=Z,64nm,0.8s						
KOLN	**Koldanda**	**51.69**	**274**	*e*P	**P**	**08 56 09.2**	**+0.2**
	comp=Z,14nm,0.5s						
KKAR	**Karatay Array**	**53.18**	**298**	P	**P**	**08 56 19.5**	**-0.2**
KKAR	**Karatay Array**	**53.18**	**298**	P	**P**	**08 56 19.5**	**-0.2**
EUNU	**Eureka**	**54.06**	**10**	P	**P**	**08 56 25.4**	**-0.2**
EUNU				IAmb	IAmb	08 56 26.0	
	comp=Z,7.6nm,0.7s						
ARU	**Arti**	**54.31**	**317**	*c i*P	**P**	**08 56 26.6**	**-1.1**
ARU				S	**S**	**09 04 01.9**	**-0.7**
ARU				SS	**SS**	**09 07 40.8**	**-3.5**
ARU				pmax	pmax		
	comp=Z,7.0nm,0.7s						
ARU	**Arti**	**54.31**	**317**	*e*P	**P**	**08 56 26.6**	**-1.1**
ARU	**Arti**	**54.31**	**317**	P	**P**	**08 56 27.1**	**-0.6**
ARU				IAmb	IAmb	08 56 28.1	
	comp=Z,17nm,1.3s						
BTK	**Batken**	**54.41**	**294**	P	**P**	**08 56 28.7**	**-0.1**
BTK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BTK	**Batken**	**54.41**	**294**	P	**P**	**08 56 28.7**	**-0.1**
GAR	**Garm**	**55.27**	**294**	P	**P**	**08 56 34.7**	**-0.4**
GAR				IAmb	IAmb	08 56 35.7	
	comp=Z,11nm,0.8s						
SPA0	**Spitsbergen Ar**	**55.56**	**349**	*e*P	**P**	**08 56 35.9**	**-0.5**
NIL	**Nilore**	**55.99**	**286**	P	**P**	**08 56 40.4**	**+0.2**
NIL				pmax	pmax		
	comp=Z,15nm,0.7s						
NIL	**Nilore**	**55.99**	**286**	P	**P**	**08 56 40.4**	**+0.2**
CHGR	**Chuyangaron**	**56.22**	**294**	P	**P**	**08 56 41.5**	**-0.4**
RES	**Resolute Bay**	**56.27**	**16**	P	**P**	**08 56 41.7**	**+0.2**
RES				pmax	pmax		
	comp=Z,10.0nm,0.9s						
RES	**Resolute Bay**	**56.27**	**16**	P	**P**	**08 56 41.7**	**+0.2**
RES				IAmb	IAmb	08 56 42.6	
	comp=Z,9.6nm,0.8s						
ABKAR	**Akbulak array**	**56.81**	**309**	P	**P**	**08 56 45.5**	**-0.3**
YKA	**Yellowknife Ar**	**57.28**	**33**	P	**P**	**08 56 49.9**	**+1.0**
	comp=Z,0.8nm,0.8s,baz=309,slow=6.5,SNR=3.0						
KIRV	**Kirov**	**57.69**	**322**	*ce*P	**P**	**08 56 50.8**	**-1.0**
PRGR	**Permogore**	**57.78**	**326**	*e*P	**P**	**08 56 51.4**	**-1.0**
PRGR				pmax	pmax		
	comp=Z,11nm,0.6s						
KBL	**Kabul**	**58.46**	**290**	P	**P**	**08 56 55.9**	**-1.9**
KBL				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KBL	**Kabul**	**58.46**	**290**	P	**P**	**08 56 55.9**	**-1.9**
KBL				IAmb	IAmb	08 56 57.5	
	comp=Z,8.7nm,0.7s						
KEV	**Kevo**	**59.26**	**339**	P	**P**	**08 57 02.1**	**-0.5**
KEV				pmax	pmax		
	comp=Z,58nm,1.5s						
KEV	**Kevo**	**59.26**	**339**	P	**P**	**08 57 02.1**	**-0.5**
HAMF	**Hammerfest**	**59.50**	**341**	*e*P	**P**	**08 57 04.0**	**-0.1**
NEEM	**North Greenlan**	**59.65**	**4**	*i* P	**P**	**08 57 05.0**	**-0.6**
NEEM				IAmb	IAmb	08 57 06.0	
	comp=Z,16nm,1.0s						
ARA0	**ARCESS Array S**	**59.80**	**339**	*e*P	**P**	**08 57 06.4**	**+0.1**
ARCES	**ARCESS Array B**	**59.80**	**339**	P	**P**	**08 57 06.1**	**-0.3**
	comp=Z,3.9nm,0.7s,baz=42,slow=7.6,SNR=17						
ARCES	**ARCESS Array B**	**59.80**	**339**	P	**P**	**08 57 06.0**	**-0.3**
KLMR	**Klimovskoe**	**60.68**	**327**	*e*P	**P**	**08 57 11.0**	**-1.4**
KLMR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KLMR	**Klimovskoe**	**60.68**	**327**	*e*P	**P**	**08 57 11.0**	**-1.4**
KLMR				AMP		08 57 12.2	
	comp=Z,4.0nm,0.7s						
JETT	**Jettan, Norway**	**61.06**	**341**	*e*P	**P**	**08 57 15.1**	**+0.1**
TRO	**Tromso**	**61.36**	**341**	*e*P	**P**	**08 57 16.9**	**0.0**
BELG	**Belogornoye**	**61.85**	**317**	*i* P	**P**	**08 57 20.9**	**+0.4**
BELG				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HRA	**Herat**	**63.21**	**293**	P	**P**	**08 57 30.1**	**-0.1**
HRA				IAmb	IAmb	08 57 31.2	
	comp=Z,7.6nm,0.9s						
WRA	**Warramunga Arr**	**63.22**	**192**	P	**P**	**08 57 30.4**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=8.2,slow=7.0,SNR=2.7						
STEI	**Steigen**	**63.53**	**341**	*e*P	**P**	**08 57 31.7**	**+0.3**
GEYT	**Alibeck**	**63.92**	**298**	P	**P**	**08 57 34.2**	**-0.4**
	comp=Z,6.8nm,0.8s,baz=55,slow=13,SNR=6.5						
GEYT	**Alibeck**	**63.92**	**298**	P	**P**	**08 57 34.6**	**0.0**
GEYT				IAmb	IAmb	08 57 35.5	
	comp=Z,8.1nm,1.0s						
GYA0B	**ALIBECK ARRAY**	**63.92**	**298**	P	**P**	**08 57 34.7**	**+0.1**
GYA0B				IAmb	IAmb	08 57 35.4	
	comp=Z,10nm,1.0s						
FAUS	**Fauske**	**63.95**	**341**	*e*P	**P**	**08 57 34.2**	**0.0**
SUMG	**Summit**	**64.96**	**1**	P	**P**	**08 57 41.5**	**+0.3**
SUMG				pmax	pmax		
	comp=Z,13nm,1.0s						
SUMG	**Summit**	**64.96**	**1**	*i* P	**P**	**08 57 41.7**	**+0.4**
SUMG				IAmb	IAmb	08 57 42.9	
	comp=Z,13nm,1.0s						
SUMG	**Summit**	**64.96**	**1**	P	**P**	**08 57 41.5**	**+0.3**
MOR8	**Moi Rana**	**65.11**	**340**	*e*P	**P**	**08 57 40.5**	**-1.3**
FIA1	**FINESS Array S**	**65.26**	**333**	P	**P**	**08 57 42.6**	**-0.2**
FINES	**FINESS Array B**	**65.26**	**333**	P	**P**	**08 57 42.6**	**-0.2**
	comp=Z,14nm,0.5s,baz=45,slow=7.6,SNR=137						
FINES				LR	LR	09 28 57.4	
	comp=Z,55nm,18.5s,baz=54,slow=38						
OBN	**Obninsk**	**65.45**	**323**	⇓*e*P	**P**	**08 57 44.0**	**-0.2**
OBN				*i*		08 57 54.7	
OBN				*e*		09 00 08.2	
OBN				pmax	pmax		
	comp=Z,14nm,0.9s						
OBN				MLR	MLR		
	comp=Z,66nm,15.0s						
OBN	**Obninsk**	**65.45**	**323**	*e*P	**P**	**08 57 44.0**	**-0.2**
OBN	**Obninsk**	**65.45**	**323**	P	**P**	**08 57 43.9**	**-0.3**
VRH	**Novokhopyorsk**	**65.52**	**318**	*e*P	**P**	**08 57 43.3**	**-1.4**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LPSR	**Galich'ya Gora**	**65.99**	**320**	*e*P	**P**	**08 57 47.1**	**-0.6**
LPSR				pmax	pmax		
	comp=Z,20nm,0.9s						
SCO	**Scoresbysund**	**66.73**	**355**	*i* P	**P**	**08 57 50.5**	**-1.7**
SCO				IAmb	IAmb	08 57 53.1	
	comp=Z,7.1nm,1.1s						
VSR	**Storozhevoye**	**66.76**	**319**	*e*P	**P**	**08 57 50.6**	**-2.0**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ASAR	**Alice Springs**	**66.94**	**192**	P	**P**	**08 57 54.6**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=5.5,slow=6.1,SNR=8.5						
NSS	**Namsos**	**67.06**	**340**	*e*P	**P**	**08 57 53.8**	**-0.5**
VSU	**Vasula**	**67.15**	**330**	*i* P	**P**	**08 57 54.7**	**-0.3**
VSU				pmax	pmax		
	comp=Z,36nm,0.7s						
MTSE	**Matsula**	**68.02**	**331**	*e*P	**P**	**08 58 00.9**	**+0.4**
ICESG	**Greenland Ices**	**68.43**	**2**	*e*P	**P**	**08 58 02.7**	**-0.6**
ICESG				IAmb	IAmb	08 58 04.3	
	comp=Z,5.7nm,0.9s						
TBLU	**Trondheim**	**68.54**	**340**	*e*P	**P**	**08 58 02.7**	**-1.0**
NVAR	**Mina Array Bea**	**69.09**	**57**	P	**P**	**08 58 09.4**	**+1.6**
	comp=Z,1.0nm,0.7s,baz=292,slow=6.7,SNR=9.2						
NVAR	**Mina Array Bea**	**69.09**	**57**	P	**P**	**08 58 08.7**	**+0.9**
UPP	**Uppsala**	**69.21**	**335**	*e*P	**P**	**08 58 07.8**	**-0.1**
ISAL	**Salakas**	**69.47**	**328**	*e*P	**P**	**08 58 10.1**	**+0.5**
MNK	**Minsk**	**69.55**	**327**	*i* P	**P**	**08 58 09.6**	**-0.5**
MNK				*i*		08 58 33.3	
MNK				*i*		09 00 43.4	
MNK				*i* PPP	PPP	09 02 24.1	
MNK				*i* S	**S**	**09 07 15.9**	**+0.9**
MNK				*i* SS	**SS**	**09 11 45.0**	**+2.9**
MNK				pmax	pmax		
	comp=N,9.0nm,0.8s						
MNK				pmax	pmax		
	comp=E,3.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,26nm,0.8s						
MNK				MLR	MLR		
	comp=N,123nm,18.0s						
MNK				MLR	MLR		
	comp=E,10.0nm,18.0s						
MNK				MLR	MLR		
	comp=Z,74nm,18.0s						
MNK	**Minsk**	**69.55**	**327**	*i* P	**P**	**08 58 09.6**	**-0.4**
	comp=E,3.0nm,0.8s						
MNK				*i* P	**P**	**08 58 09.6**	**-0.4**
	comp=N,9.0nm,0.8s						
MNK				*i* P	**P**	**08 58 09.6**	**-0.4**
	comp=Z,26nm,0.8s,baz=44						
MNK				*i* PcP	**PcP**	**08 58 33.3**	**+0.3**
MNK				*i* PP	**PP**	**09 00 43.5**	**0.0**
MNK				*i* PPP	PPP	09 02 24.2	
MNK				*i* S	**S**	**09 07 15.9**	**+0.9**
MNK				*i* SS	**SS**	**09 11 45.0**	**+2.9**
MNK				*i* SSS	SSS	09 15 03.0	
MNK				*i* LQ	LQ	09 22 14.3	
MNK				*i* LR	LR	09 26 11.7	
MNK				*i* LRM	MLR	09 31 19.5	
	comp=E,10.0nm,18.2s						
MNK				*i* LRM	MLR	09 31 19.5	
	comp=N,123nm,18.2s						
MNK				*i* LRM	MLR	09 31 29.6	
	comp=Z,74nm,18.2s						
KIV	**Kislovodsk**	**69.58**	**311**	*e*P	**P**	**08 58 11.6**	**+1.0**
KIV				pmax	pmax		
	comp=Z,15nm,1.0s						
KIV				MLR	MLR		
	comp=Z,48nm,17.0s						
KIV	**Kislovodsk**	**69.58**	**311**	*e*P	**P**	**08 58 11.6**	**+1.0**
KBZ	**Khabaz**	**69.61**	**311**	P	**P**	**08 58 11.7**	**+1.0**
	comp=Z,6.3nm,0.8s,baz=157,slow=1.6,SNR=8.3						
KBZ				LR	LR	09 32 11.9	
	comp=Z,62nm,20.2s,baz=26,slow=39						
NACGM	**Naroch**	**69.70**	**327**	*i* P	**P**	**08 58 11.2**	**+0.2**
DOMB	**Dombas**	**69.86**	**340**	*e*P	**P**	**08 58 11.9**	**-0.1**
NC204	**NORSAR Array S**	**70.06**	**339**	P	**P**	**08 58 13.2**	**0.0**
NB2	**NORSAR Subarra**	**70.13**	**338**	P	**P**	**08 58 13.3**	**-0.3**
	comp=Z,4.0nm,0.6s,baz=32,slow=6.9						
NOA	**NORSAR Array B**	**70.13**	**338**	P	**P**	**08 58 13.6**	**-0.1**
	comp=Z,4.7nm,0.7s,baz=35,slow=6.1,SNR=18						
NOA				LR	LR	09 32 50.4	
	comp=Z,37nm,19.4s,baz=30,slow=39						
NC602	**NORSAR Array S**	**70.30**	**338**	*e*P	**P**	**08 58 13.7**	**-0.9**
PABE	**Paberze**	**70.35**	**329**	*e*P	**P**	**08 58 15.3**	**+0.4**
OSL	**Oslo**	**71.19**	**338**	*e*P	**P**	**08 58 20.3**	**+0.3**
PDAR	**Pinedale Array**	**71.44**	**49**	P	**P**	**08 58 22.9**	**+0.7**
	comp=Z,0.9nm,0.7s,baz=257,slow=1.4,SNR=12						
PDAR	**Pinedale Array**	**71.44**	**49**	P	**P**	**08 58 22.2**	**+0.1**
AKASG	**Malin Array Be**	**71.72**	**323**	P	**P**	**08 58 22.9**	**-0.4**
	comp=Z,2.4nm,0.4s,baz=43,slow=6.0,SNR=27						
AKASG	**Malin Array Be**	**71.72**	**323**	P	**P**	**08 58 23.0**	**-0.4**
AKASG	**Malin Array Be**	**71.72**	**323**	P	**P**	**08 58 22.9**	**-0.4**
AKBB	**Malin Array Si**	**71.72**	**323**	*ce*P	**P**	**08 58 22.8**	**-0.6**
AKBB	**Malin Array Si**	**71.72**	**323**	P	**P**	**08 58 22.7**	**-0.6**
AKBB				IAmb	IAmb	08 58 23.8	
	comp=Z,6.9nm,0.8s						
KONO	**Kongsberg**	**71.74**	**338**	*e*P	**P**	**08 58 23.5**	**+0.2**
ASK	**Askoy**	**72.17**	**341**	*e*P	**P**	**08 58 26.1**	**+0.2**
BER	**Bergen**	**72.22**	**341**	*e*P	**P**	**08 58 26.6**	**+0.4**
GURO	**Guroymak-BITLI**	**73.49**	**307**	P	**P**	**08 58 35.0**	**+0.7**
GURO				IAmb	IAmb	08 58 36.5	
	comp=Z,7.5nm,0.9s						
KWP	**Kalwaria Pacla**	**75.31**	**326**	P	**P**	**08 58 44.7**	**+0.2**
KWP				pmax	pmax		
	comp=Z,94nm,0.5s						
KWP	**Kalwaria Pacla**	**75.31**	**326**	P	**P**	**08 58 44.7**	**+0.2**
BUR08	**Bucovina Ar. S**	**75.76**	**323**	P	**P**	**08 58 47.1**	**-0.1**
BUR08				IAmb	IAmb	08 59 54.1	
	comp=Z,20nm,1.6s						
BURAR	**Bucovina Array**	**75.77**	**323**	P	**P**	**08 58 47.1**	**-0.2**
OJC	**Ojcow**	**76.03**	**328**	P	**P**	**08 58 48.0**	**-0.6**
OJC				pmax	pmax		
	comp=Z,12nm,1.2s						
OJC	**Ojcow**	**76.03**	**328**	P	**P**	**08 58 48.0**	**-0.6**
OJC				IAmb	IAmb	08 58 50.1	
	comp=Z,12nm,1.2s						
CRVS	**Cervenica-Dubn**	**76.39**	**326**	*e*P	**P**	**08 58 51.4**	**+0.7**
CRVS	**Cervenica-Dubn**	**76.39**	**326**	*e*P	**P**	**08 58 51.4**	**+0.7**
LANS	**Liptovska Anna**	**77.01**	**327**	*e*P	**P**	**08 58 55.9**	**+1.7**
LANS				pmax	pmax		
	comp=Z,2.0nm,0.8s						
LANS	**Liptovska Anna**	**77.01**	**327**	*e*P	**P**	**08 58 55.9**	**+1.7**
DPC	**Dobruska-Polom**	**77.27**	**329**	*e*P	**P**	**08 58 56.3**	**+0.6**
DPC	**Dobruska-Polom**	**77.27**	**329**	*e*P	**P**	**08 58 56.3**	**+0.6**
KRLC	**Kraliky**	**77.32**	**329**	*e*P	**P**	**08 58 55.7**	**-0.3**
KRLC	**Kraliky**	**77.32**	**329**	*e*P	**P**	**08 58 55.7**	**-0.3**
BRTR	**Keskin Array B**	**77.41**	**313**	P	**P**	**08 58 57.1**	**+0.4**
	comp=Z,1.9nm,0.7s,baz=78,slow=3.8,SNR=7.7						
BRTR				LR	LR	09 37 37.7	
	comp=Z,32nm,19.5s,baz=7.5,slow=39						
CLL	**Collm**	**77.68**	**332**	*i* P	**P**	**08 58 57.6**	**-0.3**
CLL				*e*pP	**pP**	**08 59 09.0**	**+0.2**
CLL	**Collm**	**77.68**	**332**	*i* P	**P**	**08 58 57.6**	**-0.3**
CLL				*e**PP	**pP**	**08 59 09.0**	**+0.2**
VYHS	**Vyhne**	**77.79**	**327**	*e*P	**P**	**08 59 01.0**	**+2.4**
VYHS	**Vyhne**	**77.79**	**327**	*e*P	**P**	**08 59 01.0**	**+2.4**
PRU	**Pruhonice**	**78.22**	**330**	*e*P	**P**	**08 59 01.3**	**+0.4**
PRU	**Pruhonice**	**78.22**	**330**	*e*P	**P**	**08 59 01.3**	**+0.4**
SCHQ	**Schefferville**	**78.95**	**18**	LR	LR	09 36 48.7	
	comp=Z,24nm,18.4s,baz=96,slow=38						
CKRC	**Cesky Krumlov**	**79.28**	**330**	*e*P	**P**	**08 59 06.5**	**-0.3**
KHC	**Kasperske Hory**	**79.29**	**330**	*e*P	**P**	**08 59 07.1**	**+0.3**
KHC				*e*sP	**sP**	**08 59 24.5**	**+1.9**
KHC	**Kasperske Hory**	**79.29**	**330**	*e*P	**P**	**08 59 07.1**	**+0.3**
GERES	**GERESS Array B**	**79.48**	**330**	P	**P**	**08 59 07.9**	**0.0**
	comp=Z,0.5nm,0.4s,baz=32,slow=5.2,SNR=8.4						
BMRD	**Maredsous**	**81.23**	**336**	*d*P	**P**	**08 59 16.2**	**-1.0**
PMOR	**Pomariorio Ree**	**83.70**	**117**	*e*T	T	10 31 50.7	
	comp=Z,13nm,0.2s						
TXAR	**Lajitas Array**	**84.17**	**55**	P	**P**	**08 59 34.0**	**+1.0**
	comp=Z,0.9nm,0.7s,baz=297,slow=3.5,SNR=11						
TXAR	**Lajitas Array**	**84.17**	**55**	P	**P**	**08 59 34.0**	**+1.0**
TXAR	**Lajitas Array**	**84.17**	**55**	P	**P**	**08 59 33.8**	**+0.8**
PPT2	**Papeete2**	**84.50**	**120**	*e*LR	LR	09 26 17.8	
	comp=Z,66nm,22.2s						
PPT2	**Papeete2**	**84.50**	**120**	*e*T	T	10 32 51.0	
	comp=Z,2.8nm,0.4s						
DRLN	**Deer Lake**	**86.17**	**15**	P	**P**	**08 59 40.6**	**-2.0**
TBI	**Tubuai**	**88.84**	**124**	*e*T	T	10 38 15.0	
	comp=Z,4.3nm,0.3s						
H03N2	**Juan Fernandez**	**144.10**	**90**	T	T	11 47 43.3	
	baz=316,slow=76,SNR=18						
H03N3	**Juan Fernandez**	**144.12**	**90**	T	T	11 47 44.3	
H03N1	**Juan Fernandez**	**144.12**	**90**	T	T	11 47 44.6	
	baz=306,slow=76,SNR=19						
SNAA	**Sanae**	**147.14**	**198**	PKPdf	**PKPbc**	**09 06 42.7**	**-0.6**
VNA2	**Neumayer--Watz**	**148.69**	**197**	PKPdf	**PKPbc**	**09 06 44.5**	**-2.8**
VNA3	**Neumayer Olymp**	**148.90**	**195**	PKPdf	**PKPdf**	**09 06 44.5**	**+0.7**

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*IDC **22** 09:41:27.3±0.6, 33.°49S×179.°45W, h0^{km}, mb4.3/11, mb1 4.5/15, mb1mx4.3/32, mbtmp4.4/15, ML4.7/3, MS4.3/3, Ms1 4.3/3, ms1mx3.7/25, Error ellipse: s-maj=19.0km s-min=15.5km az=95.0*

*WEL **22** 09:41:30.1±0.7, 34°S±6°×17°9W±1°5, h33^{km}, M5.2/18, mB5.6/13, ML5.5/18, MLv5.5/18, Mw(mB)5.2/13, Error ellipse: s-maj=0.0km s-min=0.0km az=112.0*

*NEIC **22** 09:41:32.3±1.5, 33.°56S±0.°07×179.°2W±0.°2, h29^{km}±3^{km}, mb4.6/21, Error ellipse: s-maj=19.2km s-min=9.7km az=101.0*

*NOU **22** 09:41:49.0, 34.°63S×179.°62E, h201^{km}, mb4.3/9, South of Kermadec Islands*

ISC 22 09:41:33.4±0.3**, 33.°74S**±0.°03**×179.°05W**±0.°06**, h48^{km}, n181, σ1ˢ86**/173**, mb4.6**/23**, MS4.3**/6**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.38**	**209**	P	**Pn**	**09 42 37.5**	**+0.2**
MXZ				S	**Sn**	**09 43 25.8**	**-1.2**
MXZ	**Matakaoa Point**	**4.38**	**209**		**Pn**	**09 42 38.2**	**+0.9**
WMGZ	**Waiomatatini S**	**4.56**	**206**	P	**Pn**	**09 42 39.4**	**-0.4**
WMGZ				S	**Sn**	**09 43 32.8**	**+1.3**
GLKZ	**Green Lake**	**4.57**	**12**	P	Pn	09 42 34.2	-5.8
GLKZ				S	**Sn**	**09 43 26.2**	**-5.6**
RAO	**Raoul Island**	**4.58**	**12**	Pn	**Pn**	**09 42 37.6**	**-2.5**
	59nm,0.3s,baz=165,slow=19,SNR=2.6						
RAO				Sn	**Sn**	**09 43 27.6**	**-4.5**
	89nm,0.3s,baz=96,slow=23,SNR=2.0						
RAO	**Raoul Island**	**4.58**	**12**		**Pn**	**09 42 37.2**	**-3.0**
RIZ	**Raoul Island**	**4.58**	**12**	P	**Pn**	**09 42 35.8**	**-4.4**
PKGZ	**Pakihiroa**	**4.75**	**209**	P	**Pn**	**09 42 41.7**	**-0.8**
PKGZ				S	**Sn**	**09 43 36.7**	**+0.4**
HAZ	**Te Kaha**	**4.76**	**212**	P	**Pn**	**09 42 42.2**	**-0.3**
HAZ				S	**Sn**	**09 43 39.8**	**+3.4**
PUZ	**Puketiti**	**4.84**	**206**	P	**Pn**	**09 42 43.1**	**-0.6**
PUZ				S	**Sn**	**09 43 37.3**	**-1.2**
RUGZ	**Raukumara Rang**	**4.98**	**211**	P	**Pn**	**09 42 44.9**	**-0.8**
RUGZ				S	**Sn**	**09 43 39.2**	**-2.9**
TWGZ	**Tauwhareparae**	**5.04**	**208**	P	**Pn**	**09 42 45.7**	**-0.8**
TWGZ				S	**Sn**	**09 43 44.3**	**+0.9**
GRZ	**Great Barrier**	**5.16**	**239**	P	**Pn**	**09 42 48.9**	**+0.9**
MYRZ	**Mayor Island**	**5.22**	**226**	P	Pn	09 42 53.9	+5.0
KUZ	**Kuaotunu**	**5.22**	**234**	P	**Pn**	**09 42 49.9**	**+0.9**
WHRZ	**Whale Island**	**5.22**	**217**	P	**Pn**	**09 42 50.9**	**+2.0**
WHRZ				S	**Sn**	**09 43 50.0**	**+2.1**
CNGZ	**Carnagh Statio**	**5.23**	**204**	P	**Pn**	**09 42 49.3**	**+0.3**
CNGZ				S	**Sn**	**09 43 49.4**	**+1.5**
TKGZ	**Te Karaka**	**5.32**	**207**	P	**Pn**	**09 42 49.1**	**-1.1**
TKGZ				S	**Sn**	**09 43 49.4**	**-0.8**
MWZ	**Matawai**	**5.36**	**210**	P	**Pn**	**09 42 50.1**	**-0.7**
MWZ				S	**Sn**	**09 43 51.7**	**+0.6**
OPRZ	**Ohinepanea**	**5.43**	**220**	P	**Pn**	**09 42 52.2**	**+0.4**
OPRZ				S	**Sn**	**09 43 53.8**	**+0.8**
URZ	**Urewera**	**5.48**	**214**	Pn	**Pn**	**09 42 50.9**	**-1.4**
	10nm,0.3s,baz=277,slow=5.4,SNR=66						
URZ				Sn	**Sn**	**09 43 53.5**	**-0.5**
	39nm,0.3s,baz=310,slow=19,SNR=4.0						
URZ				LR	LR	09 44 10.3	
	comp=Z,135nm,19.8s,baz=31,slow=30						
URZ	**Urewera**	**5.48**	**214**	P	**Pn**	**09 42 51.0**	**-1.4**
URZ	**Urewera**	**5.48**	**214**	P	**Pn**	**09 42 52.8**	**+0.4**
TGRZ	**Tauranga**	**5.51**	**222**	P	**Pn**	**09 42 54.8**	**+2.0**
RIGZ	**Rimuhau**	**5.58**	**207**	P	**Pn**	**09 42 52.8**	**-1.1**
RIGZ				S	**Sn**	**09 43 55.7**	**-1.0**
OMRZ	**Omania**	**5.72**	**219**	P	**Pn**	**09 42 59.4**	**+3.5**
KARZ	**Kaharoa**	**5.73**	**220**	P	**Pn**	**09 42 57.4**	**+1.5**
PRGZ	**Paritu Road**	**5.73**	**205**	P	**Pn**	**09 42 54.8**	**-1.1**
PRGZ				S	**Sn**	**09 43 59.5**	**-0.9**
TARZ	**Mount Tarawera**	**5.75**	**218**	P	**Pn**	**09 42 58.7**	**+2.4**
KMRZ	**Kaimai**	**5.77**	**223**	P	**Pn**	**09 43 00.7**	**+4.2**
MUGZ	**Murupara**	**5.81**	**214**	P	**Pn**	**09 42 55.1**	**-1.9**
SNGZ	**Shannon Statio**	**5.81**	**209**	P	**Pn**	**09 42 56.6**	**-0.5**
SNGZ				S	**Sn**	**09 44 02.7**	**+0.3**
RRRZ	**Republican Roa**	**5.83**	**217**	P	**Pn**	**09 42 56.5**	**-0.7**
RTZ	**Ruatahuna**	**5.83**	**212**	P	**Pn**	**09 42 56.7**	**-0.5**
RTZ				S	**Sn**	**09 44 02.1**	**-0.7**
UTU	**Utuhina**	**5.87**	**220**	P	Pn	09 43 03.8	+6.0

KNZ	Kokohu	5.89	206	P	Pn	09 42 56.6	-1.6
MHGZ	Mahia Peninsul	5.93	204	P	Pn	09 42 56.8	-1.8
HSRZ	Hossack Road	5.94	219	P	Pn	09 43 01.8	+3.0
TOZ	Tahuroa Road	5.96	227	P	Pn	09 43 00.1	+1.2
HRRZ	Handcock Road	5.98	218	P	Pn	09 43 04.1	+4.7
PRRZ	Plateau Road	6.01	217	P	Pn	09 43 00.0	+0.3
RAHZ	Arahi	6.03	210	P	Pn	09 43 00.3	+0.2
MTHZ	Maungataniwha	6.08	212	P	Pn	09 43 00.6	-0.2
ALRZ	Allen Road	6.08	216	P	Pn	09 43 01.1	+0.3
WHHZ	Waihua	6.11	208	P	Pn	09 43 00.8	-0.3
OUZ	Omahuta	6.25	254	P	Pn	09 43 03.2	+0.2
MRHZ	Matea Rd	6.26	214	P	Pn	09 43 01.7	-1.5
KUTZ	Kaahu Road	6.30	220	P	Pn	09 43 05.4	+1.7
NMHZ	Naumai	6.30	211	P	Pn	09 43 03.3	-0.5
TLZ	Tolley Road	6.34	222	P	Pn	09 43 06.8	+2.6
ARHZ	Aropaoanui	6.36	209	P	Pn	09 43 02.9	-1.7
BKZ	Black Stump Fm	6.50	212	P	Pn	09 43 04.4	-2.1
BKZ	Black Stump Fm	6.50	212	P	Pn	09 43 05.3	-1.1
WATZ	Wairara	6.50	219	P	Pn	09 43 08.1	+1.5
RATZ	Rangitukua	6.60	218	P	Pn	09 43 08.1	+0.2
MCHZ	McNeill Hill	6.64	210	P	Pn	09 43 08.0	-0.4
CKHZ	Cape Kidnapper	6.67	207	P	Pn	09 43 07.3	-1.5
TMVZ	Te Maari	6.83	217	P	Pn	09 43 10.4	-0.7
NTVZ	North Tongarir	6.83	217	P	Pn	09 43 11.3	+0.2
HIZ	Hauiti	6.85	224	P	Pn	09 43 13.0	+1.7
KAHZ	Kahuranaki	6.87	207	P	Pn	09 43 08.6	-2.9
NNVZ	North Ngauruho	6.88	217	P	Pn	09 43 13.1	+1.3
WTVZ	West Tongariro	6.88	217	P	Pn	09 43 12.2	+0.4
NGZ	Ngauruhoe	6.92	217	P	Pn	09 43 12.3	-0.1
KRHZ	Kereru	6.94	211	P	Pn	09 43 11.9	-0.6
BHHZ	Black Hill Sta	6.95	213	P	Pn	09 43 11.6	-1.1
TUVZ	Tukino	6.97	216	P	Pn	09 43 13.1	+0.1
FWVZ	Far West T-bar	7.01	217	P	Pn	09 43 13.7	+0.1
MOVZ	Moawhango	7.03	215	P	Pn	09 43 12.8	-1.0
WNVZ	Wahianoa	7.04	216	P	Pn	09 43 14.6	+0.6
TRVZ	Turoa	7.05	217	P	Pn	09 43 14.0	-0.1
PXZ	Pawanui	7.08	206	P	Pn	09 43 11.3	-3.1
PKVZ	Pokaka	7.14	218	P	Pn	09 43 15.0	-0.2
PNHZ	Pukenui	7.24	210	P	Pn	09 43 14.1	-2.5
WPHZ	Waipukurau	7.27	208	P	Pn	09 43 14.9	-2.1
VRZ	Vera Road	7.33	221	P	Pn	09 43 17.1	-0.7
PRHZ	Porangahau	7.37	207	P	Pn	09 43 15.4	-3.0
TSZ	Takapari Road	7.46	211	P	Pn	09 43 16.4	-3.3
DVHZ	Dannevirke	7.58	209	P	Pn	09 43 19.1	-2.1
ANWZ	Angora Road	7.60	207	P	Pn	09 43 19.8	-1.6
WAZ	Wanganui	7.67	217	P	Pn	09 43 21.6	-0.9
NEZ	North Egmont	7.80	223	P	Pn	09 43 27.4	+3.1
KHEZ	Kahui Hut	7.86	223	P	Pn	09 43 31.2	+6.0
PRWZ	Pori Road	7.87	209	P	Pn	09 43 23.3	-2.0
BFZ	Birch Farm	7.88	207	P	Pn	09 43 21.9	-3.4
TIWZ	Tintock	8.10	208	P	Pn	09 43 25.2	-3.2
MRZ	Mangatainoka R	8.12	210	P	Pn	09 43 24.7	-4.0
HOWZ	Holdsworth Sta	8.35	210	P	Pn	09 43 27.6	-4.2
TMWZ	Te Maipa	8.38	207	P	Pn	09 43 28.1	-4.1
OGWZ	Otaki Gorge	8.43	211	P	Pn	09 43 28.6	-4.3
MTW	Mount Morrison	8.57	209	P	Pn	09 43 31.2	-3.7
TRWZ	Traveller	8.71	207	P	Pn	09 43 33.4	-3.3
PAWZ	Paruwai Farm	8.79	208	P	Pn	09 43 34.3	-3.6
MSWZ	Moikau Station	8.89	209	P	Pn	09 43 35.4	-3.8
PLWZ	Palliser	9.02	208	P	Pn	09 43 36.7	-4.3
QRZ	Quartz Range	9.74	221	P	Pn	09 43 46.7	-4.2
ODZ	Otahua Downs	13.80	212	P	Pn	09 44 39.6	-6.7
MSVF	Nonsavu	16.15	350	Pn	Pn	09 45 13.6	-3.7
	0.1nm,0.3s,baz=180,slow=20,SNR=2.2						
OUENC	Ouen Island, N	16.78	309	P	P	09 45 28.8	+2.1
YATNC	Mamie plateau,	17.00	310	P	P	09 45 31.0	+1.8
DZM	Mont Dzumac	17.29	309	Pn	Pn	09 45 25.9	-5.6
	0.1nm,0.3s,baz=146,slow=11,SNR=3.2						
DZM				LR	LR	09 50 50.0	
	comp=Z,1µm,19.2s,baz=80,slow=33						
DZM	Mont Dzumac	17.29	309	*e*P	P	09 45 32.6	+0.2
	82nm,1.3s						
DZM				*e*LR	LR	09 49 30.0	
	comp=Z,2µm,25.1s						
DZM	Mont Dzumac	17.29	309		P	09 45 31.3	-1.0
DZM				IAmb	IAmb	09 45 36.4	
	comp=Z,47nm,1.3s						
DZM	Mont Dzumac	17.29	309	P	P	09 45 33.7	+1.3
NOUC	Port Laguerre	17.36	308	P	P	09 45 36.2	+3.2
SANVU	Saraoutou	22.05	322	P	P	09 46 21.4	-2.7
SANVU				IAmb	IAmb	09 46 47.8	
	comp=Z,34nm,0.9s						
EIDS	Eidsvold	27.22	280	P	P	09 47 12.8	-0.1
TBI	Tubuai	27.89	76	*e*LR	LR	09 54 24.0	
	comp=Z,939nm,28.0s,baz=238						
TBI	Tubuai	27.89	76	*e*T	T	10 16 28.4	
	comp=Z,26nm,0.3s						
TOO	Toolangi	28.96	252	P	P	09 47 28.6	+0.3
TOO				IAmb	IAmb	09 47 36.5	
	comp=Z,8.8nm,1.1s						
PAE	Paea	30.86	66	*e*T	T	10 19 48.7	
	comp=Z,5.2nm,0.2s						
PPT2	Papeete2	30.91	66	*e*LR	LR	09 55 47.2	
	comp=Z,931nm,26.8s,baz=226						
PPT2	Papeete2	30.91	66	*e*T	T	10 19 57.4	
	comp=Z,7.9nm,0.3s						
HNR	Honiara	30.96	317	P	P	09 47 40.7	-5.4
	comp=Z,98nm,0.5s,baz=203,slow=8.2,SNR=5.1						
MEH	Mehetia	31.90	68	*e*T	T	10 21 21.2	
	comp=Z,19nm,0.3s						
STKA	Stephens Creek	33.00	262	P	P	09 48 03.2	-0.7
	comp=Z,1.2nm,0.6s,baz=115,slow=14,SNR=2.2						
STKA				LR	LR	09 59 57.3	
	comp=Z,632nm,20.1s,baz=67,slow=34						
CTAO	Charters Tower	33.62	285	P	P	09 48 08.7	-0.8
VAH	Vaihoa	33.82	65	*e*T	T	10 23 41.4	
	comp=Z,17nm,0.2s						
COEN	Coen	39.47	291	P	P	09 48 59.3	-0.1
COEN				IAmb	IAmb	09 49 22.5	
	comp=Z,10nm,1.1s						
AS31	Alice Springs	42.16	271	P	P	09 49 21.0	-0.4
ASAR	Alice Springs	42.16	271	P	P	09 49 18.4	-3.0
	comp=Z,1.5nm,0.3s,baz=111,slow=7.4,SNR=18						
ASAR	Alice Springs	42.16	271	P	P	09 49 21.0	-0.4
WR0	Warramunga Arr	43.28	276	P	P	09 49 28.8	-1.7
WB2	Warramunga Arr	43.44	276	P	P	09 49 30.6	-1.3
WB2				IAmb	IAmb	09 49 50.5	
	comp=Z,6.1nm,0.8s						
WRA	Warramunga Arr	43.45	276	P	P	09 49 29.0	-3.0
	comp=Z,3.0nm,0.5s,baz=116,slow=7.4,SNR=20						
WRA	Warramunga Arr	43.45	276	P	P	09 49 30.0	-1.9
WB0	Warramunga Arr	43.49	277	P	P	09 49 31.2	-1.1
WB0				IAmb	IAmb	09 49 34.7	
	comp=Z,15nm,1.4s						
TAOE	Nuku Hiva Isla	43.50	64	*e*LR	LR	10 01 34.8	
	comp=Z,404nm,24.1s						
FORT	Forrest	44.42	259	P	P	09 49 40.2	+0.6
VNDA	Vanda	44.69	186	P	P	09 49 44.5	+3.5
	comp=Z,0.5nm,0.8s,baz=42,slow=6.9,SNR=3.9						
VNDA	Vanda	44.69	186	P	P	09 49 43.8	+2.8
KNRA	Kununurra	50.17	278	P	P	09 50 23.2	-1.2
FITZ	Fitzroy Crossi	51.55	273	P	P	09 50 33.4	-1.5
	comp=Z,2.5nm,0.6s,baz=133,slow=5.7,SNR=17						
CASY	Casey	51.78	209	P	P	09 50 37.1	+1.3
CASY				IAmb	IAmb	09 50 53.8	
	comp=Z,6.8nm,1.1s						
QSPA	South Pole Qui	56.38	180	P	P	09 51 12.2	+2.7
	comp=Z,8.7nm,1.0s,baz=33,slow=5.4,SNR=16						
QSPA	South Pole Qui	56.38	180	P	P	09 51 11.9	+2.3
MAW	Mawson	68.88	201	P	P	09 52 32.8	+0.2
	comp=Z,3.8nm,1.0s,baz=120,slow=8.3,SNR=5.0						
MAW	Mawson	68.88	201	P	P	09 52 33.8	+1.3
MAW				IAmb	IAmb	09 52 47.9	
	comp=Z,3.7nm,1.4s						
SNAA	Sanae	74.84	179	P	P	09 53 09.3	+0.9
VNA3	Neumayer Olymp	75.04	176	P	P	09 53 10.6	+1.1
VNA2	Neumayer--Watz	75.46	177	P	P	09 53 13.4	+1.5
	baz=178,slow=5.5						
VNA1	Neumayer--Stat	75.69	177	P	P	09 53 14.8	+1.6
H03S2	Juan Fernandez	79.37	124	T	T	11 21 55.7	
	baz=235,slow=74,SNR=22						
H03S1	Juan Fernandez	79.38	124	T	T	11 21 57.3	
	baz=235,slow=74,SNR=18						
H03S3	Juan Fernandez	79.38	124	T	T	11 22 09.9	
	baz=235,slow=74,SNR=22						
H03N3	Juan Fernandez	79.58	123	T	T	11 22 12.6	
	baz=239,slow=72,SNR=93						
H03N2	Juan Fernandez	79.58	123	T	T	11 22 11.8	
	baz=239,slow=72,SNR=25						
H03N1	Juan Fernandez	79.59	123	T	T	11 22 11.6	
	baz=239,slow=72,SNR=123						
PLCA	Paso Flores	80.88	133	P	P	09 53 45.6	+3.1
	comp=Z,7.0nm,1.2s,baz=250,slow=4.1,SNR=6.4						
PLCA	Paso Flores	80.88	133	P	P	09 53 44.8	+2.2
PLCA				IAmb	IAmb	09 53 46.5	
	comp=Z,12nm,1.2s						
LC01	Cunco	81.15	131	P	P	09 53 44.7	+0.8
LC01				IAmb	IAmb	09 53 47.3	
	comp=Z,11nm,1.1s						
NJ2	Nanjing	87.76	311	*e*P	P	09 54 18.6	+1.4
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
PETK	Petropavlovsk-	88.83	346	P	P	09 54 21.6	-0.1
	comp=Z,5.9nm,0.9s,baz=173,slow=13,SNR=4.7						
ISA	Isabella, Lake	89.29	45	P	P	09 54 26.1	+1.7
CMB	Columbia Colle	89.83	42	P	P	09 54 27.8	+0.9
CMB				IAmb	IAmb	09 54 29.1	
	comp=Z,5.5nm,1.1s						
NVAR	Mina Array Bea	91.28	43	P	P	09 54 34.9	+1.0
	comp=Z,2.4nm,1.0s,baz=221,slow=7.4,SNR=12						
NVAR	Mina Array Bea	91.28	43	P	P	09 54 34.0	+0.1
TXAR	Lajitas Array	94.92	58	P	P	09 54 52.2	+1.5
	comp=Z,0.4nm,0.9s,baz=224,slow=7.0,SNR=4.5						
HHC	Hu-ho-hao-te	97.92	314	*e*P	Pdif	09 55 05.4	+1.3
HHC				pmax	pmax		
	comp=Z,11nm,1.4s						
HHC				pmax	pmax		
	comp=Z,82nm,6.9s						
CPUP	Villa Florida	98.58	129	LR	LR	10 31 35.6	
	comp=Z,130nm,21.8s,baz=222,slow=30						
LZH	Lanzhou	100.00	307	*e*P	Pdif	09 55 19.0	+5.5
LZH				pP	sP	09 55 31.3	-0.1
LZH				sP	pwP	09 55 36.5	+5.1
LZH				pmax	pmax		
	comp=Z,17nm,1.0s						
WMQ	Urumqi	114.57	307	*e*P	PKiKP	10 00 09.3	+1.3
WMQ				LR	LR		
	comp=Z,150nm,19.1s						
MKAR	Makanchi Array	119.20	309	PKP	PKiKP	10 00 16.8	-0.1
	comp=Z,0.2nm,0.5s,baz=79,slow=2.0,SNR=3.9						
MKAR	Makanchi Array	119.20	309		PKPdf	10 00 16.2	-0.6
ZALV	Zalesovo Beam	119.91	317	PKP	PKiKP	10 00 18.1	+0.2
	comp=Z,0.5nm,0.4s,baz=180,slow=0.6,SNR=2.1						
ZALV	Zalesovo Beam	119.91	317		PKiKP	10 00 19.1	+1.2
ARCES	ARCESS Array B	141.64	346	PKP	PKPdf	10 00 57.6	-0.8
	comp=Z,2.3nm,0.8s,baz=349,slow=2.5,SNR=4.2						
ARCES	ARCESS Array B	141.64	346		PKPdf	10 00 58.1	-0.3
KBZ	Khabaz	146.11	300	PKPbc	PKPab	10 01 09.1	+0.5
	comp=Z,4.7nm,1.1s,baz=67,slow=1.9,SNR=3.9						
FINES	FINESS Array B	147.93	337	PKPbc	PKPbc	10 01 11.5	-1.0
	comp=Z,4.8nm,0.7s,baz=54,slow=3.0,SNR=14						
NB2	NORSAR Subarra	151.89	349	PKP	PKPbc	10 01 20.9	-1.4
	comp=Z,1.0nm,0.6s,baz=18,slow=2.6						
NOA	NORSAR Array B	151.89	349	PKPbc	PKiKP	10 01 22.5	-0.1
	comp=Z,1.4nm,0.8s,baz=35,slow=1.8,SNR=6.7						
LIC	Lamto	152.06	167	*e*PKP1	PKiKP	10 01 24.3	-0.1
	comp=Z,23nm,0.7s						
NACGM	Naroch	152.19	327	*i* PKP	PKiKP	10 01 22.8	-0.5
KIC	Kosan Boka	152.25	168	*e*PKP1	PKiKP	10 01 24.7	-0.1
	comp=Z,14nm,0.9s						
TIC	Toumodi	152.47	167	*e*PKP1	PKiKP	10 01 25.8	+0.6
BRTR	Keskin Array B	153.23	292	PKPbc	PKPbc	10 01 24.5	-1.6
	comp=Z,0.6nm,0.5s,baz=172,slow=3.2,SNR=3.9						
AKASG	Malin Array Be	153.30	318	PKPbc	PKiKP	10 01 25.6	-0.1
	comp=Z,1.6nm,0.6s,baz=78,slow=2.4,SNR=6.6						
AKASG	Malin Array Be	153.30	318	PKPdf	PKPdf	10 01 16.9	-1.1
AKASG					PKiKP	10 01 25.3	-0.4
TORD	Torodi Ar. Bea	159.49	182	PKP	PKPdf	10 01 30.4	+3.1
	comp=Z,0.4nm,0.5s,baz=205,slow=0.1,SNR=2.9						
TORD				PKPab	PKPab	10 02 05.7	+0.6
	comp=Z,3.3nm,1.0s,baz=177,slow=3.4,SNR=8.0						
TORD	Torodi Ar. Bea	159.49	182	PKPdf	PKPdf	10 01 26.9	-0.3
TORD					PKPab	10 02 04.8	-0.3

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*IDC **22** 09:41:25.4±1.0, 2°.24N×126°.83E, h0^{km}, mb3.9/8, mb1 4.1/9, mb1mx3.8/41, mbtmp4.0/9, ML3.9/1, Error ellipse: s-maj=63.9km s-min=17.2km az=68.0*

*DJA **22** 09:41:32.4±1.0, 2°N±5°×12°7E±°, h40^{km}±50^{km}, M3.7/6, MLv3.7/6*

*NEIC **22** 09:41:33.2±1.7, 2°.2N±0°.1×127°.0E±0°.1, h52^{km}±7^{km}, mb4.1/16, Error ellipse: s-maj=18.9km s-min=11.2km az=221.0*

ISC 22 09:41:33.6±0.6**, 2°.22N**±0°.09×**127°.08E**±0°.09**, h63^{km}, n34, σ0^s.94**/35**, mb4.1**/13**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.47	169	Pn	Pn	09 41 57.0	-1.0
LBMI	Labuha	2.87	172	P	Pn	09 42 17.6	+0.5
GTOI	Gorontalo	4.36	249	P	Pn	09 42 40.0	+2.5
SIJI	Sorong	5.19	126	Pn	Pn	09 42 49.1	+0.3
	3.5nm,0.3s,baz=161,slow=21,SNR=7.1						
SIJI				Sn	Sn	09 43 48.6	+1.2
	0.6nm,0.3s,baz=263,slow=23,SNR=1.3						
TOLI2	Tolitoli	6.39	260	Pn	Pn	09 43 03.3	-1.9
KNRA	Kununurra	17.86	175		P	09 45 37.5	-0.3
FITZ	Fitzroy Crossi	20.24	184	P	P	09 46 04.1	+0.3
	1.5nm,0.7s,baz=353,slow=14,SNR=3.2						
WB0	Warramunga Arr	23.00	162	P	P	09 46 33.0	-0.4
WB0				IAmb	IAmb	09 46 34.5	
	comp=Z,6.1nm,0.6s						
WRA	Warramunga Arr	23.15	162	P	P	09 46 34.0	-0.8
	comp=Z,3.6nm,0.5s,baz=343,slow=11,SNR=31						
WRA	Warramunga Arr	23.15	162	P	P	09 46 33.8	-1.0
WB2	Warramunga Arr	23.15	162	P	P	09 46 33.9	-1.0
WB2				IAmb	IAmb	09 46 51.0	
	comp=Z,6.0nm,1.2s						
WR0	Warramunga Arr	23.23	162	P	P	09 46 35.1	-0.5
WR0				IAmb	IAmb	09 46 42.1	
	comp=Z,8.0nm,1.3s						
PSA00	Pilbara Seismi	24.68	196	P	P	09 46 48.9	0.0
PSA00				IAmb	IAmb	09 47 16.1	
	comp=Z,7.9nm,1.0s						
PSA00	Pilbara Seismi	24.68	196	P	P	09 46 49.1	+0.3
PSA00				IAmb	IAmb	09 46 51.1	
	comp=Z,3.9nm,1.4s						
AS31	Alice Springs	26.57	166	P	P	09 47 06.2	+0.2
ASAR	Alice Springs	26.58	166	P	P	09 47 05.9	-0.2
	comp=Z,0.5nm,0.4s,baz=344,slow=7.6,SNR=22						
ASAR	Alice Springs	26.58	166	P	P	09 47 05.4	-0.7
BBOO	Buckleboo	35.86	167	P	P	09 48 28.5	+0.9
STKA	Stephens Creek	36.60	159	P	P	09 48 34.2	+0.3
	comp=Z,6.4nm,0.7s,baz=337,slow=7.5,SNR=15						
STKA	Stephens Creek	36.60	159	P	P	09 48 34.0	+0.1
STKA				IAmb	IAmb	09 48 35.5	
	comp=Z,1.4nm,0.8s						
ARMA	Armidale	40.02	146	P	P	09 49 03.4	+0.6
SONM	Songino Array	48.83	342	P	P	09 50 12.0	-0.8
	comp=Z,0.4nm,0.7s,baz=164,slow=5.7,SNR=2.7						
MK31	Makanchi Array	58.99	326	P	P	09 51 26.6	-0.3
MK31				IAmb	IAmb	09 51 51.6	
	comp=Z,1.9nm,1.3s						
MKAR	Makanchi Array	58.99	326	P	P	09 51 26.4	-0.4
	comp=Z,0.5nm,0.5s,baz=116,slow=7.9,SNR=6.9						
MKAR	Makanchi Array	58.99	326	P	P	09 51 25.9	-0.9
LBZ	Lake Benmore	60.25	146	P	P	09 51 36.0	+0.5
KURK	Kurchatov	63.19	328	P	P	09 51 54.7	-0.5
KURK				IAmb	IAmb	09 52 08.9	
	comp=Z,6.1nm,1.4s						
ABKAR	Akbulak array	73.53	321	P	P	09 52 59.9	+0.1
VNDA	Vanda	81.90	173	P	P	09 53 46.2	+0.4
	comp=Z,0.8nm,0.8s,baz=334,slow=6.1,SNR=2.8						
VNDA	Vanda	81.90	173	P	P	09 53 46.6	+0.8
VNDA				IAmb	IAmb	09 54 04.7	
	comp=Z,2.8nm,1.4s						
IMAR	Indian Mountai	83.57	24	P	P	09 53 56.6	+1.9
BMAR	Burnt Mountain	87.32	23	P	P	09 54 13.8	+0.3
ARCES	ARCESS Array B	91.97	340	P	P	09 54 34.0	-1.1
	comp=Z,2.5nm,0.8s,baz=70,slow=4.0,SNR=4.4						
QSPA	South Pole Qui	92.14	180	P	P	09 54 34.7	-1.3

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*IDC **22** 09:47:12.6±0.7, 15°.50S×177°.88W, h0^{km}, mb4.3/10, mb1 4.5/12, mb1mx4.3/29, mbtmp4.2/12, ML5.2/1, MS4.3/21, Ms1 4.3/21, ms1mx4.2/30, Error ellipse: s-maj=36.1km s-min=16.5km az=141.0*

*NEIC **22** 09:47:17.1±1.8, 15°.44S±0°.08×177°.8W±0°.1, h10^{km}±1^{km}, mb4.8/25, Error ellipse: s-maj=24.3km s-min=5.8km az=120.0*

*GCMT **22** 09:47:18.1±0.2, 15°.47S±0°.01×177°.72W±0°.01, h12^{km}, MW5.0/110, Moment Tensor Solution. s37,c40; s110,c177; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.12±.09; M$_{\theta\theta}$-2.44±.09; M$_{\phi\phi}$2.56±.07; M$_{r\theta}$0.29±.24; M$_{\theta\phi}$2.79±.07; M$_{\phi r}$0.91±.21; Best double couple: M$_0$3.85700×10^{16} NP1:φ$_s$70.00000°, δ80.00000°, λ8.00000°. NP2:φ$_s$338.00000°, δ82.00000°, λ170.00000°. Principal axes: T 4.0250, Plg13.0000°, Azm294.0000°; N -0.3380, Plg77.0000°, Azm122.0000°; P -3.6890, Plg2.0000°, Azm24.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 09:47:15.2±0.4**, 15°.51S**±0°.09×**177°.71W**±0°.09**, h10^{km}, n99, σ1^s.74**/69**, mb4.7**/25**, MS4.3**/22**, 1C, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.62	241	Pn	Pn	09 48 21.7	-3.5
	4.1nm,0.3s,baz=153,slow=12,SNR=16						
MSVF				Sn	Sn	09 49 09.0	-10
	0.7nm,0.3s,baz=237,slow=23,SNR=2.4						
MSVF	Nonsavu	4.62	241	Pn	Pn	09 48 22.4	-2.8
AFI	Afiamalu	5.96	75	Pn	Pn	09 48 40.9	-2.6
	1.7nm,0.3s,baz=149,slow=18,SNR=2.5						
AFI				LR	LR	09 50 31.3	
	comp=Z,693nm,18.4s,baz=244,slow=32						
RAO	Raoul Island	13.68	181	LR	LR	09 54 38.7	
	comp=Z,1µm,21.7s,baz=7.0,slow=33						
KNTN	Kanton	13.97	26	Pn	Pn	09 50 31.7	-1.6
DZM	Mont Dzumac	16.35	244	Pn	Pn	09 51 02.7	-2.3
	0.1nm,0.3s,baz=151,slow=19,SNR=1.7						
DZM	Mont Dzumac	16.35	244	*e*P	Pn	09 51 05.2	+0.2
	63nm,1.4s						
DZM				*e*LR	LR	09 54 59.5	
	comp=Z,975nm,23.4s						
RAR	Rarotonga	17.94	111	LR	LR	09 56 42.7	
	comp=Z,750nm,19.5s,baz=278,slow=32						
OUZ	Omahuta	21.12	200	P	P	09 52 00.8	+0.8
OUZ				IAmb	IAmb	09 52 20.6	
	comp=Z,85nm,1.4s						
HNR	Honiara	22.62	283	LR	LR	09 59 37.2	
	comp=Z,4µm,19.6s,baz=136,slow=33						
URZ	Urewera	23.11	190	LR	LR	09 59 47.1	
	comp=Z,1µm,18.4s,baz=31,slow=33						
QRZ	Quartz Range	26.61	197	P	P	09 52 54.1	+0.3
PAE	Paea	27.04	99	*e*T	T	10 19 39.5	
	comp=Z,5.2nm,0.2s						
PPT	Papeete	27.04	98	LR	LR	10 01 30.3	
	comp=Z,436nm,18.6s,baz=258,slow=32						
PPT2	Papeete2	27.04	98	*e*LQ	LQ	09 58 31.3	
	comp=Z,931nm,29.5s						
PPT2				*e*LR	LR	09 59 45.7	
	comp=Z,2µm,26.2s,baz=264						
PPT2	Papeete2	27.04	98	*e*T	T	10 19 42.1	
	comp=Z,7.9nm,0.3s						
TBI	Tubuai	27.72	111	*e*LQ	LQ	09 59 01.1	
	comp=Z,403nm,28.2s						
TBI				*e*LR	LR	10 00 11.7	
	comp=Z,2µm,28.8s,baz=289						
TBI	Tubuai	27.72	111	*e*T	T	10 21 46.8	
	comp=Z,5.6nm,0.3s						
MEH	Mehetia	28.48	99	*e*T	T	10 21 28.4	
	comp=Z,19nm,0.3s						
VAH	Vaihoa	29.00	94	*e*T	T	10 23 29.5	
	comp=Z,17nm,0.2s						
ARMA	Armidale	31.76	237	P	P	09 53 42.0	+2.2
ARMA				IAmb	IAmb	09 53 42.9	
	comp=Z,14nm,1.1s						
CTAO	Charters Tower	34.56	257	P	P	09 54 04.5	+0.1
CTAO				IAmb	IAmb	09 54 07.4	
	comp=Z,17nm,0.8s						
PMG	Port Moresby	34.80	276	LR	LR	10 04 48.7	
	comp=Z,576nm,21.9s,baz=104,slow=30						
TAOE	Nuku Hiva Isla	37.27	84	*e*LR	LR	10 04 24.1	
	comp=Z,783nm,27.5s						
COEN	Coen	37.82	267	P	P	09 54 32.9	+0.6
COEN				IAmb	IAmb	09 54 35.8	
	comp=Z,16nm,1.1s						
TOO	Toolangi	39.22	229	P	P	09 54 45.5	+1.7
TOO				IAmb	IAmb	09 55 02.8	
	comp=Z,28nm,1.2s						
STKA	Stephens Creek	40.40	239	P	P	09 54 53.0	-0.6
	comp=Z,2.9nm,0.8s,baz=48,slow=9.2,SNR=4.3						
STKA	Stephens Creek	40.40	239	P	P	09 54 55.5	+1.8
JAY	Jayapura	42.95	283	LR	LR	10 10 59.8	
	comp=Z,419nm,21.9s,baz=108,slow=33						
BBOO	Buckleboo	45.17	239	P	P	09 55 32.8	+0.4
BBOO				IAmb	IAmb	09 55 39.6	
	comp=Z,10nm,1.1s						
WR0	Warramunga Arr	45.58	257	P	P	09 55 36.1	+0.3
WR0				IAmb	IAmb	09 55 47.1	
	comp=Z,13nm,1.4s						
WB0	Warramunga Arr	45.72	257	P	P	09 55 37.1	+0.2
WB0				IAmb	IAmb	09 55 51.3	
	comp=Z,15nm,1.4s						
WB2	Warramunga Arr	45.76	257	P	P	09 55 37.4	+0.2
WRA	Warramunga Arr	45.77	257	P	P	09 55 35.2	-2.1
	comp=Z,2.9nm,1.0s,baz=90,slow=8.1,SNR=8.8						
WRA				LR	LR	10 14 42.8	
	comp=Z,271nm,18.3s,baz=95,slow=36						
AS31	Alice Springs	46.12	252	P	P	09 55 37.7	-2.4
ASAR	Alice Springs	46.12	252	P	P	09 55 36.3	-3.8
	comp=Z,10.0nm,0.7s,baz=85,slow=8.4,SNR=36						
ASAR				LR	LR	10 13 03.5	
	comp=Z,424nm,20.4s,baz=104,slow=34						
ASAR	Alice Springs	46.12	252	P	P	09 55 40.2	+0.2
MTN	Manton Dam	49.58	266	P	P	09 56 07.5	+0.6
KNRA	Kununurra	51.43	262	P	P	09 56 20.1	-0.8
KNRA				IAmb	IAmb	09 56 33.0	
	comp=Z,27nm,1.5s						
FORT	Forrest	51.66	243	P	P	09 56 22.6	+0.1
FORT				IAmb	IAmb	09 56 24.0	
	comp=Z,16nm,0.8s						
SOEI	Soe	56.77	268	P	P	09 57 00.1	0.0
JCJ	Chichijima	57.52	317	LR	LR	10 17 23.3	
	comp=Z,2µm,20.8s,baz=56,slow=32						
PSA00	Pilbara Seismi	59.18	254	P	P	09 57 17.0	+0.2
PSA00				IAmb	IAmb	09 57 30.7	
	comp=Z,8.3nm,1.1s						
DAV	Davao City (W)	60.48	288	LR	LR	10 22 14.6	
	comp=Z,192nm,18.4s,baz=126,slow=35						
NWAO	Narrogin (SRO)	60.94	241	P	P	09 57 29.4	+0.7
VNDA	Vanda	62.87	185	P	P	09 57 40.1	-0.9
	comp=Z,4.2nm,1.2s,baz=14,slow=6.1,SNR=8.5						
VNDA				LR	LR	10 20 16.9	
	comp=Z,137nm,20.2s,baz=20,slow=32						
VNDA	Vanda	62.87	185	P	P	09 57 43.2	+2.3
VNDA				IAmb	IAmb	09 58 06.6	
	comp=Z,9.8nm,1.4s						
MJAR	Matsushiro Arr	66.41	322	LR	LR	10 21 44.2	
	comp=Z,99nm,22.0s,baz=145,slow=31						
CASY	Casey	68.58	204	P	P	09 58 19.7	+1.8
PETK	Petropavlovsk-	71.55	345	P	P	09 58 37.3	+1.1
KSAR	Wonju Array Be	73.40	318	P	P	09 58 48.1	+0.6
QSPA	South Pole Qui	74.53	180	P	P	09 58 53.6	-0.4
QSPA				IAmb	IAmb	09 59 09.0	
	comp=Z,9.3nm,1.1s						
MDPB	Devils Postpil	76.30	44	P	P	09 59 08.0	+3.2
NVAR	Mina Array Bea	77.24	44	P	P	09 59 10.4	+0.4
	comp=Z,2.2nm,0.8s,baz=228,slow=8.3,SNR=13						
NV11	Mina Array Sit	77.34	44	P	P	09 59 11.3	+0.8
LENM	Lemitar	83.39	52	P	P	09 59 45.9	+2.7
ILAR	Eielson Array	83.42	13	P	P	09 59 40.5	-1.8
	comp=Z,4.0nm,1.2s,baz=230,slow=5.2,SNR=12						
ILAR				LR	LR	10 29 08.5	
	comp=Z,160nm,21.8s,baz=218,slow=30						
TX31	Lajitas Ar. Si	84.16	58	P	P	09 59 48.6	+1.5
TXAR	Lajitas Array	84.16	58	P	P	09 59 46.6	-0.5
	comp=Z,2.2nm,1.0s,baz=225,slow=6.4,SNR=14						
TXAR	Lajitas Array	84.16	58	P	P	09 59 49.0	+1.9
EGAK	Eagle	84.74	15	P	P	09 59 47.4	-1.6
PDAR	Pinedale Array	85.16	43	P	P	09 59 51.7	-0.3
	comp=Z,1.9nm,1.0s,baz=216,slow=4.8,SNR=9.8						
XAN	Xi'an	85.35	307	P	P	10 00 04.8	+12
XAN				pP	pwP	10 00 10.3	+12
XAN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HHC	Hu-ho-hao-te	86.09	314	*e*P	P	09 59 57.3	+0.8
HHC				pmax	pmax		
	comp=Z,18nm,1.4s						
HHC				pmax	pmax		
	comp=Z,180nm,7.1s						
HHC				LR	LR		
	comp=N,160nm,18.9s						
HHC				LR	LR		
	comp=E,210nm,17.6s						
HHC				LR	LR		
	comp=Z,270nm,16.5s						
BMAR	Burnt Mountain	86.19	12	P	P	09 59 55.6	-0.8
MAW	Mawson	86.33	200	P	P	09 59 55.7	-1.4
	comp=Z,1.9nm,0.8s,baz=110,slow=6.6,SNR=4.0						

MAW				LR	LR	10 35 28.2	
	comp=Z,252nm,20.2s,baz=64,slow=34						
MAW	Mawson	86.33	200	P	P	09 59 58.5	+1.4
YAK	Yakutsk	87.62	338	LR	LR	10 33 59.6	
	comp=Z,72nm,21.1s,baz=89,slow=32						
H03S2	Juan Fernandez	88.58	125	T	T	11 38 03.3	
	baz=250,slow=75,SNR=20						
H03S1	Juan Fernandez	88.60	125	T	T	11 38 03.3	
	baz=250,slow=75,SNR=24						
H03S3	Juan Fernandez	88.60	125	T	T	11 37 59.6	
	baz=250,slow=75,SNR=18						
H03N2	Juan Fernandez	88.70	124	T	T	11 37 59.2	
	baz=257,slow=73,SNR=8.6						
H03N3	Juan Fernandez	88.70	124	T	T	11 38 05.4	
	baz=257,slow=73,SNR=7.1						
H03N1	Juan Fernandez	88.71	124	T	T	11 38 08.2	
	baz=257,slow=73,SNR=4.5						
LZH	Lanzhou	89.97	307	eP	P	10 00 13.8	-1.5
LZH				pP	PcP	10 00 17.4	+0.9
LZH				sP	pwP	10 00 20.0	-0.4
LZH				pmax	pmax		
	comp=Z,22nm,1.0s						
SYO	Syowa Base	91.62	193	⇑eP	P	10 00 24.2	+2.0
YKA	Yellowknife Ar	91.89	24	LR	LR	10 35 23.6	
	comp=Z,475nm,20.4s,baz=0.0,slow=31						
SONM	Songino Array	92.18	319	P	P	10 00 25.6	+0.4
	comp=Z,0.4nm,0.6s,baz=117,slow=5.4,SNR=2.6						
SONM				LR	LR	10 38 02.6	
	comp=Z,80nm,20.4s,baz=145,slow=33						
PLCA	Paso Flores	92.49	133	LR	LR	10 33 22.9	
	comp=Z,71nm,21.1s,baz=224,slow=30						
SNAA	Sanae	92.96	178	P	P	10 00 26.0	-2.4
VNA3	Neumayer Olymp	93.07	176	P	P	10 00 28.1	-0.8
VNA2	Neumayer--Watz	93.52	177	P	P	10 00 29.5	-1.5
	baz=184,slow=3.1						
VNA1	Neumayer--Stat	93.74	176	P	P	10 00 30.2	-1.7
ULM	Lac du Bonnet	96.66	40	LR	LR	10 37 19.0	
	comp=Z,267nm,21.0s,baz=274,slow=31						
NACGM	Naroch	136.36	340	i PKP	PKiKP	10 06 40.3	+1.6
BRTR	Keskin Array B	143.53	318	PKP	PKPbc	10 06 48.1	+0.2
	comp=Z,1.5nm,0.9s,baz=64,slow=2.9,SNR=4.6						
BRTR	Keskin Array B	143.53	318		PKPdf	10 06 50.1	-0.6
KRUC	Moravsky	144.60	344	ePKIKP	PKiKP	10 06 58.1	+2.3
GRF	Grafenberg Arr	145.14	350	ePKP	PKPbc	10 06 52.4	-0.1
	baz=15,slow=3.0						
GRF				eL	L	11 09 37.5	
	comp=Z,123nm,19.8s						
KHC	Kasperske Hory	145.22	347	ePKP	PKPbc	10 06 52.0	-0.8
CKRC	Cesky Krumlov	145.35	346	ePKP	PKPbc	10 06 51.1	-2.1
GERES	GERESS Array B	145.47	347	PKPbc	PKPdf	10 06 51.6	-2.1
	comp=Z,1.1nm,0.9s,baz=144,slow=5.0,SNR=4.4						
GERES	GERESS Array B	145.47	347		PKPdf	10 06 52.3	-1.4
CONA	Conrad Observa	145.79	344	eP	PKPbc	10 06 54.8	+0.1
	comp=Z,8.8nm,1.3s						
MOA	Molln	146.27	345	P	PKiKP	10 07 01.6	+2.3
	comp=Z,11nm,1.4s						
WATA	Walderalm	147.35	348	P	PKiKP	10 07 05.2	+3.5
	comp=Z,11nm,1.8s						
SQTA	Sankt Quirin	147.53	349	eP	PKPab	10 07 04.1	+2.3
	comp=Z,18nm,2.1s						
DAVA	Damuels	147.70	350	P	PKPab	10 07 06.6	+4.0
	comp=Z,16nm,1.8s						
TORD	Torodi Ar. Bea	177.58	166	PKP	PKPdf	10 07 25.0	-1.9
	comp=Z,0.6nm,0.8s,baz=254,slow=2.6,SNR=3.3						
TORD				PKPab	PKPab	10 09 11.3	-1.2
	comp=Z,0.7nm,0.9s,baz=207,slow=2.9,SNR=3.4						

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*IDC **22** 10:01:24.9±1.4, 14.°97N×147.°03E, h0^{km}, mb4.1/10, mb1 4.2/11, mb1mx3.9/46, mbtmp4.2/11, ML4.3/1, MS3.3/2, Ms1 3.4/2, ms1mx2.8/36, Error ellipse: s-maj=35.8km s-min=18.7km az=117.0*

*NEIC **22** 10:01:29.6±1.0, 14.°79N±0.°09×147.°14E±0.°10, h36^{km}±8^{km}, mb4.3/6, Error ellipse: s-maj=14.3km s-min=12.2km az=65.0*

ISC 22 10:01:28.6±0.7**, 14.°85N**±0.°08×**147.°17E**±0.°09**, h32**^{km}**, n29, σ0^{s}.91**/27**, mb4.3**/14**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANA2	Anatahan	2.04	317	Pn	Pn	10 02 01.3	+0.5
GUMO	Guam	2.56	241	Pn	Pn	10 02 07.3	-0.5
	59nm,0.3s,baz=66,slow=2.8,SNR=21						
GUMO				LR	LR	10 02 34.8	
	comp=Z,142nm,21.1s,baz=262,slow=28						
GUMO				Sn	Sn	10 02 37.8	-0.1
	34nm,0.3s,baz=18,slow=23,SNR=5.7						
GUMO	Guam	2.56	241		Pn	10 02 07.6	-0.2
PATS	Pohnpei	13.53	125	Pn	Pn	10 04 37.7	-0.7
H11S3	WAKE ISLAND Hy	19.05	76	T	T	10 25 23.2	
	baz=266,SNR=4.0						
H11S1	WAKE ISLAND Hy	19.06	76	T	T	10 25 32.6	
	baz=266						
H11S2	WAKE ISLAND Hy	19.06	76	T	T	10 25 30.7	
	baz=266						
JOW	Kunigami	21.27	307	P	P	10 06 11.9	-0.5
	4.7nm,0.3s,baz=120,slow=19,SNR=5.6						
JOW	Kunigami	21.27	307	P	P	10 06 12.4	0.0
SIJI	Sorong	22.17	227	P	P	10 06 22.3	+0.2
	5.3nm,0.5s,baz=36,slow=12,SNR=6.0						
KLR	Kul'dur	36.54	343	P	P	10 08 29.9	-1.3
	1.1nm,0.4s,baz=142,slow=9.2,SNR=4.3						
WRA	Warramunga Arr	36.80	200	P	P	10 08 35.4	+1.7
	2.8nm,0.7s,baz=29,slow=7.1,SNR=1.7						
SONM	Songino Array	47.03	323	P	P	10 09 57.2	0.0
	0.9nm,0.7s,baz=120,slow=5.8,SNR=5.9						
SONM	Songino Array	47.03	323	P	P	10 09 57.4	+0.3
ZALV	Zalesovo Beam	61.92	324	P	P	10 11 44.8	-0.3
	0.5nm,0.5s,baz=91,slow=7.2,SNR=2.4						
MK31	Makanchi Array	62.16	315	P	P	10 11 47.2	+0.4
MK31				IAmb	IAmb	10 11 50.5	
	comp=Z,1.2nm,0.6s						
MKAR	Makanchi Array	62.16	315	P	P	10 11 47.2	+0.4
	comp=Z,0.9nm,0.3s,baz=88,slow=8.4,SNR=19						
MKAR	Makanchi Array	62.16	315	P	P	10 11 47.0	+0.2
MAKZ	Makanchi	62.37	315	P	P	10 11 48.2	0.0
MAKZ				IAmb	IAmb	10 11 49.6	
	comp=Z,2.9nm,0.8s						
KURK	Kurchatov	65.08	319	P	P	10 12 05.7	-0.3
KURK				IAmb	IAmb	10 12 18.3	
	comp=Z,3.2nm,0.8s						
ILAR	Eielson Array	66.48	25	P	P	10 12 16.4	+1.6
	comp=Z,0.3nm,0.4s,baz=261,slow=6.2,SNR=6.7						
ILAR	Eielson Array	66.48	25	P	P	10 12 15.5	+0.7
TOLK	Toolik Lake Re	66.65	21	P	P	10 12 15.9	0.0
TOLK				IAmb	IAmb	10 12 27.8	
	comp=Z,3.7nm,1.4s						
BMAR	Burnt Mountain	68.09	23	P	P	10 12 26.3	+1.3
KKAR	Karatay Array	70.32	311	P	P	10 12 40.1	+0.9
ABKAR	Akbulak array	77.11	318	P	P	10 13 18.8	-0.1
ARCES	ARCESS Array B	86.57	343	P	P	10 14 08.6	+0.2
	comp=Z,5.5nm,1.1s,baz=89,slow=8.4,SNR=7.1						
ARCES				LR	LR	10 56 04.0	
	comp=Z,79nm,21.9s,baz=320,slow=38						
FINES	FINESS Array B	90.95	336	P	P	10 14 28.2	-1.0
	comp=Z,2.5nm,0.9s,baz=113,slow=5.0,SNR=4.5						
FINES	FINESS Array B	90.95	336	P	P	10 14 26.6	-2.6

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*IDC **22** 10:02:12.7±1.6, 5.°36S×151.°50E, h78^{km}±13^{km}, mb4.0/11, mb1 4.2/13, mb1mx4.0/32, mbtmp4.4/13, MS3.7/3, Ms1 3.7/3, ms1mx3.2/30, Error ellipse: s-maj=15.9km s-min=10.4km az=125.0*

*DJA **22** 10:02:12.9±0.5, 5°S±4°×15°2E±°, h87^{km}±6^{km}, M4.9/14, mB5.1/5, mb4.8/14, MLv5.2/2, Mw(mB)4.4/5*

*NEIC **22** 10:02:12.3±1.3, 5.°31S±0.°09×151.°6E±0.°1, h70^{km}±7^{km}, mb4.6/31, Error ellipse: s-maj=19.1km s-min=10.3km az=118.0*

ISC 22 10:02:10.8±0.5**, 5.°32S**±0.°06×**151.°53E**±0.°07**, h57**^{km}**, n69, σ1^{s}.27**/74**, mb4.5**/32**, MS4.2**/5**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	1.29	30		Pn	10 02 34.1	+1.4
RABL	Rabaul	1.29	30	P	Pn	10 02 34.7	+2.0
PMG	Port Moresby	5.94	227	P	Pn	10 03 38.6	+2.4
	15nm,0.3s,baz=24,slow=7.4,SNR=24						
PMG				S	Sn	10 04 45.1	+2.2
	72nm,0.3s,baz=72,slow=23,SNR=18						
PMG	Port Moresby	5.94	227	Pn	Pn	10 03 39.4	+3.2
PMG	Port Moresby	5.94	227	P	Pn	10 03 39.6	+3.3
PMG	Port Moresby	5.94	227	P	Pn	10 03 39.5	+3.3
HNR	Honiara	9.30	117	P	Pn	10 04 23.9	+1.6
	11nm,0.3s,baz=199,slow=9.7,SNR=3.0						
HNR				LR	LR	10 08 25.7	
	comp=Z,310nm,19.1s,baz=288,slow=40						
COEN	Coen	11.89	223	Pn	Pn	10 04 58.7	+1.0
CTAO	Charters Tower	15.55	199	P	P	10 05 49.7	-0.2
FAKI	Fak Fak	19.37	276	P	Pn	10 06 33.4	-0.3
FAKI				IAmb	IAmb	10 06 37.5	
	comp=Z,53nm,1.5s						
EIDS	Eidsvold	19.94	181	P	P	10 06 39.0	+0.8
SIJI	Sorong	20.70	282	P	P	10 06 47.4	+0.7
	comp=Z,19nm,0.8s,baz=87,slow=5.7,SNR=8.0						
SWI	Sorong	20.71	282	P	Pn	10 06 53.4	+3.9
MTN	Manton Dam	21.47	248		P	10 06 54.7	-0.1
MTN				IAmb	IAmb	10 06 56.7	
	comp=Z,49nm,1.0s						
WB0	Warramunga Arr	22.01	228	P	P	10 07 00.3	-0.3
WB0				IAmb	IAmb	10 07 03.3	
	comp=Z,59nm,0.8s						
WR0	Warramunga Arr	22.02	227		P	10 07 00.5	-0.2
DZM	Mont Dzumac	22.04	140	P	P	10 07 00.6	-0.4
	comp=Z,6.2nm,0.9s,baz=190,slow=11,SNR=6.7						
DZM				LR	LR	10 14 34.3	
	comp=Z,312nm,18.1s,baz=224,slow=34						
DZM	Mont Dzumac	22.04	140	P	P	10 07 01.2	+0.3
DZM				IAmb	IAmb	10 07 26.0	
	comp=Z,20nm,1.2s						
WRAB	Tennant Creek	22.14	227	P	P	10 07 01.7	-0.3
WB2	Warramunga Arr	22.15	227		P	10 07 01.8	-0.2
WRA	Warramunga Arr	22.16	227	P	P	10 07 01.8	-0.4
	comp=Z,90nm,0.8s,baz=52,slow=9.9,SNR=144						
WRA				S	S	10 11 01.0	-2.1
	comp=Z,5.3nm,1.2s,baz=53,slow=18,SNR=9.0						
WRA				ScP	ScP	10 14 29.4	-1.0
	comp=Z,2.0nm,0.9s,baz=52,slow=3.1,SNR=4.9						
WRA	Warramunga Arr	22.16	227		P	10 07 00.3	-1.8
KNRA	Kununurra	24.60	244	P	P	10 07 26.1	+0.1
AS31	Alice Springs	24.92	221		P	10 07 29.0	+0.2
AS31				IAmb	IAmb	10 07 31.8	
	comp=Z,29nm,0.8s						
ASAR	Alice Springs	24.92	221	P	P	10 07 28.8	0.0
	comp=Z,96nm,0.6s,baz=56,slow=8.5,SNR=521						
ASAR				S	S	10 11 45.0	-3.4
	comp=Z,0.3nm,0.6s,baz=44,slow=15,SNR=1.8						
ASAR				ScP	ScP	10 14 37.2	-0.6
	comp=Z,0.8nm,0.7s,baz=48,slow=3.4,SNR=4.5						
ARMA	Armidale	24.97	180	P	P	10 07 28.7	-0.5
ARMA				IAmb	IAmb	10 07 57.2	
	comp=Z,14nm,1.2s						
STKA	Stephens Creek	28.01	198	P	P	10 07 56.0	-0.5
	comp=Z,1.8nm,0.6s,baz=5.9,slow=13,SNR=4.9						
STKA				LR	LR	10 18 45.3	
	comp=Z,122nm,20.7s,baz=28,slow=36						
STKA	Stephens Creek	28.01	198	P	P	10 07 55.5	-1.0
FITZ	Fitzroy Crossi	28.30	241	P	P	10 07 58.9	-0.4
	comp=Z,38nm,0.6s,baz=50,slow=7.6,SNR=165						
EDFI	Ende, Flores	29.80	262	P	P	10 08 11.4	-1.4
	comp=Z,7.0nm,0.6s						
BBOO	Buckleboo	30.92	206	P	P	10 08 20.9	-1.5
BBOO				IAmb	IAmb	10 08 22.1	
	comp=Z,8.7nm,0.8s						
FORT	Forrest	33.59	218		P	10 08 45.2	-0.5
PSA00	Pilbara Seismi	34.67	239	P	P	10 08 54.9	-0.4
PSA00				IAmb	IAmb	10 08 55.6	
	comp=Z,29nm,1.1s						
PSA00	Pilbara Seismi	34.67	239	P	P	10 08 55.1	-0.2
PSA00				IAmb	IAmb	10 08 55.6	
	comp=Z,14nm,1.1s						
TAU	Tasmania Unive	37.62	185	P	P	10 09 20.7	+0.6
GIRL	Giralia	39.91	241	P	P	10 09 39.1	-0.5
MORW	Morawa	41.03	231	P	P	10 09 48.4	-0.5
MORW				IAmb	IAmb	10 09 48.9	
	comp=Z,18nm,1.1s						
QIZ	Qiongzhong	47.65	302	P	P	10 10 41.8	0.0
QIZ				S	S	10 17 35.8	+2.0
QIZ				LR	LR		
	comp=N,200nm,21.6s						
QIZ				LR	LR		
	comp=E,210nm,21.6s						
QIZ				LR	LR		
	comp=Z,280nm,20.6s						
NJ2	Nanjing	48.46	322	eP	P	10 10 48.3	+0.4
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
XAN	Xi'an	56.13	317	P	P	10 11 45.1	+0.3
XAN				pP	pP	10 12 00.9	+0.7
XAN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
CMAR	Chiang Mai Arr	56.95	296	P	P	10 11 51.4	+0.5
	comp=Z,3.4nm,0.8s,baz=116,slow=5.4,SNR=2.4						
HHC	Hu-ho-hao-te	58.74	325	eP	P	10 12 04.3	+1.2
HHC				pmax	pmax		
	comp=Z,6.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,58nm,5.6s						
HHC				LR	LR		
	comp=N,140nm,17.1s						
HHC				LR	LR		
	comp=E,180nm,18.1s						
HHC				LR	LR		
	comp=Z,230nm,16.5s						
LZH	Lanzhou	60.73	317	eP	P	10 12 17.3	+0.4
LZH				pP	sP	10 12 36.3	-2.7
LZH				sP	pP	10 12 44.6	+12
LZH				pmax	pmax		
	comp=Z,23nm,1.0s						
GTA	Gaotai	65.18	318	eP	P	10 12 47.3	+0.9
GTA				pP	pP	10 13 02.5	+0.3
GTA				sP	sP	10 13 09.6	+1.0
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SHL	Shillong	65.48	301	P	P	10 12 48.4	-0.4
SHL				IAmb	IAmb	10 12 49.4	
	comp=Z,11nm,1.1s						
SONM	Songino Array	66.09	329	P	P	10 12 52.3	+0.1
	comp=Z,3.1nm,0.7s,baz=144,slow=4.9,SNR=19						
SONM	Songino Array	66.09	329	P	P	10 12 52.1	-0.1
SONM				IAmb	IAmb	10 12 54.2	
	comp=Z,3.4nm,0.7s						
VNDA	Vanda	72.36	178	P	P	10 13 30.1	-0.2
	comp=Z,1.6nm,0.8s,baz=328,slow=6.8,SNR=16						
VNDA	Vanda	72.36	178	P	P	10 13 30.9	+0.6
WMQ	Urumqi	75.27	318	eP	P	10 13 49.1	+1.1
WMQ				LR	LR		
	comp=Z,150nm,19.9s						
MK31	Makanchi Array	79.89	319	P	P	10 14 13.3	-0.3
MKAR	Makanchi Array	79.89	319	P	P	10 14 13.1	-0.6
	comp=Z,2.3nm,0.9s,baz=108,slow=5.9,SNR=8.5						
MKAR	Makanchi Array	79.89	319	P	P	10 14 12.4	-1.2
MAKZ	Makanchi	80.09	319	P	P	10 14 13.7	-1.1
MAKZ				IAmb	IAmb	10 14 15.1	
	comp=Z,4.0nm,1.0s						
ZAA0	Zalesovo Array	80.88	327	P	P	10 14 17.4	-1.3
ZAA0				IAmb	IAmb	10 14 18.4	
	comp=Z,2.9nm,0.6s						
ZALV	Zalesovo Beam	80.88	327	P	P	10 14 17.2	-1.6
	comp=Z,2.1nm,0.5s,baz=119,slow=5.2,SNR=12						
ZALV	Zalesovo Beam	80.88	327	P	P	10 14 17.0	-1.7
ILAR	Eielson Array	83.12	22	P	P	10 14 29.7	-0.6
	comp=Z,0.9nm,0.6s,baz=246,slow=5.0,SNR=16						
KURK	Kurchatov	83.40	322	P	P	10 14 30.9	-1.1
KURK				IAmb	IAmb	10 14 32.5	
	comp=Z,5.0nm,1.1s						
MAW	Mawson	84.60	203	P	P	10 14 37.2	-0.6
	comp=Z,1.8nm,0.9s,baz=130,slow=7.1,SNR=7.1						
MAW	Mawson	84.60	203	P	P	10 14 37.4	-0.4
QSPA	South Pole Qui	84.64	180	P	P	10 14 38.2	-0.1
QSPA				IAmb	IAmb	10 14 38.8	
	comp=Z,3.6nm,0.8s						
BMAR	Burnt Mountain	85.17	20		P	10 14 41.1	+0.4
DAWY	Dawson	85.78	24	P	P	10 14 45.8	+2.0
DAWY				IAmb	IAmb	10 15 09.9	
	comp=Z,9.9nm,1.5s						
NVAR	Mina Array Bea	93.40	52	P	P	10 15 18.9	-1.6
	comp=Z,1.3nm,0.9s,baz=250,slow=6.2,SNR=6.3						
GERES	GERESS Array B	123.82	328	PKP	PKPdf	10 21 01.7	-1.0
	comp=Z,1.2nm,0.6s,baz=95,slow=2.1,SNR=11						
GERES	GERESS Array B	123.82	328		PKPdf	10 21 01.9	-0.8
TORD	Torodi Ar. Bea	149.25	287	PKPbc	PKPbc	10 21 53.0	-1.3
	comp=Z,12nm,0.7s,baz=74,slow=3.5,SNR=60						
BDFB	Brasilia	151.57	137	PKPbc	PKPbc	10 21 59.4	-0.5
	comp=Z,3.4nm,0.6s,baz=211,slow=5.9,SNR=6.4						

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*NEIC **22** 10:09:14.3±1.6, 18.°30N±0.°04×66.°65W±0.°02, h28^{km}±5^{km}, Error ellipse: s-maj=6.2km s-min=3.2km az=192.0*

*OSPL **22** 10:09:14.5±0.3, 18.°31N×66.°58W, h5^{km}±4^{km}, ML3.9*

*RSPR **22** 10:09:15.6, 18.°30N×66.°65W, h21^{km}, MD3.8/4*

ISC 22 10:09:14.4±0.8**, 18.°31N**±0.°03×**66.°65W**±0.°02**, h29**^{km}±5^{km}**, n74, σ0^{s}.80**/78**, 10C-7D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AOPR	Arecibo Observ	0.11	287	⇑eP	Pb	10 09 19.4	-0.4
AOPR	Arecibo Observ	0.11	287	eS	Sb	10 09 22.6	-0.7
AOPR	Arecibo Observ	0.11	287	Pg	Pb	10 09 19.3	-0.4
AOPR				Sg	Sb	10 09 22.9	-0.5
EMPR	Esperanza - Ma	0.20	34	⇑eP	Pb	10 09 20.6	+0.2
EMPR	Esperanza - Ma	0.20	34	eS	Sb	10 09 24.7	+0.1
EMPR	Esperanza - Ma	0.20	34		Pb	10 09 20.7	+0.2
EMPR				Sg	Sb	10 09 25.0	+0.4
CELP	Cerrillos	0.25	165	⇑iP	Pb	10 09 20.9	-0.3
CELP	Cerrillos	0.25	165	eS	Sb	10 09 25.1	-0.5
CELP	Cerrillos	0.25	165		Pb	10 09 20.8	-0.3
CELP				Sg	Sb	10 09 25.3	-0.3
OBIP	Obispado Ponce	0.27	172	⇓eP	Pb	10 09 21.0	-0.4
OBIP	Obispado Ponce	0.27	172	eS	Sb	10 09 25.8	-0.4
OBIP	Obispado Ponce	0.27	172		Pb	10 09 21.2	-0.2
OBIP				Sg	Sb	10 09 25.7	-0.5
OBIP				IAML		10 09 26.3	
	comp=N,31μm,0.2s						
GBPR	Guanica, Bosqu	0.40	214	⇑eP	Pb	10 09 23.3	0.0
GBPR	Guanica, Bosqu	0.40	214	eS	Sb	10 09 29.4	+0.1
LSP	Las Mesas	0.44	252	⇑iP	Pb	10 09 23.8	-0.1
AGPR	Aguadilla, PR	0.47	289	⇑eP	Pb	10 09 23.9	-0.5
AGPR	Aguadilla, PR	0.47	289	eS	Sb	10 09 31.1	0.0
AGPR	Aguadilla, PR	0.47	289		Pb	10 09 24.0	-0.4
AGPR				Sg	Sb	10 09 30.5	-0.6
AGPR				IAML		10 09 31.5	
	comp=N,35μm,0.3s						
AGPR	Aguadilla, PR	0.47	289	i P	Pb	10 09 23.9	-0.4
AGPR				eS	Sb	10 09 30.9	-0.1
AGPR				IAML		10 09 31.8	
	comp=Z,7μm,0.3s						
PRSN	Puerto Rico Se	0.48	259	⇓eP	Pb	10 09 24.3	-0.3
PRSN	Puerto Rico Se	0.48	259	eS	Sb	10 09 31.3	-0.1
PRSN	Puerto Rico Se	0.48	259		Pb	10 09 24.2	-0.3
PRSN				Sg	Sb	10 09 30.9	-0.5
SJG	San Juan	0.51	113		Pb	10 09 24.6	-0.4
SJG	San Juan	0.51	113	IAML		10 09 33.4	
	comp=Z,19μm,0.3s						
SJG				IAML		10 09 33.6	
	comp=Z,20μm,0.5s						
MLPR	Magueyes Islan	0.51	228	⇓eP	Pb	10 09 24.6	-0.4
MLPR	Magueyes Islan	0.51	228	eS	Sb	10 09 31.9	-0.4
MLPR	Magueyes Islan	0.51	228	Pg	Pb	10 09 24.6	-0.4
MLPR				IAML		10 09 32.1	
	comp=E,10μm,0.7s						
MLPR				IAML		10 09 33.2	
	comp=N,8μm,0.3s						
GCPR	Guaynabo City	0.53	90	⇓eP	Pb	10 09 25.1	-0.3
GCPR	Guaynabo City	0.53	90	eS	Sb	10 09 32.6	-0.2
GCPR	Guaynabo City	0.53	90		Pb	10 09 25.1	-0.3
GCPR					Sb	10 09 32.6	-0.2
GCPR	Guaynabo City	0.53	90	IAML		10 09 33.5	
	comp=N,12μm,0.5s						
GCPR				IAML		10 09 34.6	
	comp=E,9μm,0.2s						
CRPR	Cabo Rojo, PR	0.54	235	⇓iP	Pb	10 09 25.1	-0.4
CRPR	Cabo Rojo, PR	0.54	235	eS	Sb	10 09 32.4	-0.5
CRPR	Cabo Rojo, PR	0.54	235	Pg	Pb	10 09 25.0	-0.4
CRPR	Cabo Rojo, PR	0.54	235		Sb	10 09 32.4	-0.5
CRPR	Cabo Rojo, PR	0.54	235	i P	Pb	10 09 25.1	-0.4
CRPR				IAML		10 09 33.3	
	comp=Z,7μm,0.2s						
IGPR	InterUniversit	0.62	124	⇑eP	Pb	10 09 26.1	-0.7
IGPR	InterUniversit	0.62	124	eS	Sb	10 09 34.6	-0.5
IGPR	InterUniversit	0.62	124		Sb	10 09 34.6	-0.5
PDPR	Patillas Dam,	0.66	116	⇑eP	Pb	10 09 26.7	-0.8
PDPR	Patillas Dam,	0.66	116	eS	Sb	10 09 35.6	-0.7
PDPR	Patillas Dam,	0.66	116		Pb	10 09 26.7	-0.8
PDPR					Sb	10 09 35.6	-0.7
CBYP	Canovanas	0.75	93	⇓eP	Pb	10 09 28.5	-0.5
CBYP	Canovanas	0.75	93	eS	Sb	10 09 38.5	-0.4
CBYP	Canovanas	0.75	93		Pb	10 09 28.5	-0.5
CBYP	Canovanas	0.75	93		Sb	10 09 38.5	-0.4
CBYP	Canovanas	0.75	93	IAML		10 09 40.9	
	comp=E,61μm,0.2s						
CBYP				IAML		10 09 40.9	
	comp=N,32μm,0.2s						
IDE	Isla Desecheo	0.79	275	⇑eP	Pb	10 09 29.1	-0.6
CUPR	Culebra, Puert	1.29	90	⇓eP	Pn	10 09 36.1	-0.4
CUPR	Culebra, Puert	1.29	90	eS	Sn	10 09 53.3	+0.4
CUPR	Culebra, Puert	1.29	90		Sn	10 09 53.3	+0.4
CUPR	Culebra, Puert	1.29	90		Pn	10 09 36.4	-0.1
CUPR	Culebra, Puert	1.29	90	IAML		10 09 58.0	
	comp=N,2μm,0.3s						
CUPR				IAML		10 10 00.5	
	comp=E,2μm,0.7s						
STVI	Saint Thomas	1.61	88	⇑eP	Pn	10 09 40.6	-0.2
STVI	Saint Thomas	1.61	88	eS	Sn	10 10 01.1	+0.5
STVI	Saint Thomas	1.61	88	Pn	Pn	10 09 40.7	-0.2
STVI	Saint Thomas	1.61	88		Sn	10 10 01.1	+0.5
STVI	Saint Thomas	1.61	88	IAML		10 10 07.8	
	comp=N,2μm,0.3s						
CDVI	St. Croix	1.87	107	⇑eP	Pn	10 09 45.4	+0.8
CDVI	St. Croix	1.87	107		Pn	10 09 45.6	+1.1
TBVI	Tortola	1.93	87	⇑eP	Pn	10 09 45.6	+0.3
TBVI	Tortola	1.93	87	eS	Sn	10 10 08.9	+0.3
DR12	Loma Pena Alta	2.64	281		Pn	10 09 56.4	+1.2
SDD	Santo Domingo	3.11	273	Pn	Pn	10 10 02.2	+0.8
SDD				IAML		10 10 57.0	
	comp=N,547nm,0.9s						
SDD				IAML		10 10 57.6	
	comp=E,586nm,1.1s						
SC01	Santiago de lo	4.02	287		Pn	10 10 16.1	+2.0
SC01				IAML		10 11 22.4	
	comp=E,643nm,0.8s						
LOBA2	Hotel Casa Bon	4.24	268	i P	Pn	10 10 18.6	+1.6
SDDR	Presa de Saban	4.45	279		Pn	10 10 19.9	-0.1
SDDR				IAML		10 11 28.4	
	comp=E,340nm,0.7s						
SDDR				IAML		10 11 30.9	
	comp=E,299nm,0.9s						
GRTK	Grand Turk	5.29	308	Pn	Pn	10 10 31.0	-0.5
GRTK				IAML		10 11 41.5	
	comp=E,173nm,0.2s						
GRTK				IAML		10 13 42.5	
	comp=E,242nm,0.1s						
SVN	Savane Anatole	6.28	123	Pn	Pn	10 10 46.7	+1.4
FDF	Fort de France	6.36	123	Pn	Pn	10 10 50.5	+4.2
BIM	Bigot	6.55	124	Pn	Pn	10 10 50.2	+1.4
MPOM	Morne Pois Mar	6.75	124	Pn	Pn	10 10 53.0	+1.4
BIRV	Birongo	7.80	177	Pn	Pn	10 11 07.0	+0.9
BBSR	BB Station	14.11	7	Pn	Pn	10 12 31.1	-1.2

WEL 22 10:16:26.8±1.3**, 39°S**±8°×**17°4E**±°**, h6**^{km}±4^{km}**, M1.9**/4**, ML2.7**/8**, MLv1.9**/4**, Error ellipse: s-maj=0.0km s-min=0.0km az=149.9, Off west coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PKE	Pukeiti	0.10	153	P	Pg	10 16 29.3	+0.3
PKE	Pukeiti	0.10	153	P	Pg	10 16 29.2	+0.2
KHEZ	Kahui Hut	0.20	161	P	Pg	10 16 31.3	+0.5
KHEZ				S	Sg	10 16 35.0	+1.6
KHEZ	Kahui Hut	0.20	161	P	Pg	10 16 31.3	+0.5
KHEZ				S	Sg	10 16 35.0	+1.6
NEZ	North Egmont	0.20	142	P	Pg	10 16 31.3	+0.3
NEZ	North Egmont	0.20	142	P	Pg	10 16 31.3	+0.3
MHEZ	Mangahewa	0.31	84	P	Pg	10 16 33.5	+0.7
MHEZ				S	Sg	10 16 38.2	+1.3
MHEZ	Mangahewa	0.31	84	P	Pg	10 16 32.3	-0.5
MHEZ				S	Sg	10 16 38.2	+1.4
NMEZ	Namu Road	0.31	188	P	Pg	10 16 33.4	+0.5
NMEZ				S	Sb	10 16 39.0	-1.0
VRZ	Vera Road	0.64	92	P	Pg	10 16 39.2	0.0
VRZ				S	Sb	10 16 49.6	-0.2
HIZ	Hauiti	0.94	51	P	Pg	10 16 43.9	-0.9
HIZ				S	Sg	10 16 57.1	+0.2
WAZ	Wanganui	1.04	129	P	Pg	10 16 46.4	-0.4
PKVZ	Pokaka	1.11	100	P	Pg	10 16 47.2	-1.0
PKVZ				S	Sg	10 17 02.7	0.0
MTVZ	Mangateitei	1.23	103	S	Sb	10 17 06.5	-0.2
TRVZ	Turoa	1.27	99	P	Pg	10 16 50.0	-1.2
TRVZ				S	Sg	10 17 07.6	-0.1
NGZ	Ngauruhoe	1.30	93	P	Pn	10 16 51.5	-0.2
NGZ				S	Sb	10 17 08.8	0.0
NNVZ	North Ngauruho	1.31	92	P	Pn	10 16 50.8	-1.1

NNVZ				S	Sb	10 17 09.1	0.0
NNVZ	**North Ngauruho**	1.31	92	P	Pn	10 16 51.0	-0.9
NNVZ				S	Sg	10 17 08.9	0.0
WNVZ	**Wahianoa**	1.31	100	P	Pn	10 16 51.1	-0.8
WNVZ				S	Sg	10 17 08.4	-0.6
TUVZ	**Tukino**	1.35	97	P	Pg	10 16 54.3	+1.6
TUVZ				S	Sg	10 17 10.1	-0.1
NTVZ	**North Tongarir**	1.36	90	P	Pn	10 16 51.3	-1.2
NTVZ				S	Sb	10 17 09.8	-0.7
NTVZ	**North Tongarir**	1.36	90	P	Pn	10 16 51.4	-1.1
NTVZ				S	Sb	10 17 09.8	-0.7
TMVZ	**Te Maari**	1.38	91	P	Pn	10 16 52.0	-0.7
TMVZ				S	Sb	10 17 09.9	-1.2
ETVZ	**East Tongariro**	1.38	92	P	Pn	10 16 52.2	-0.7
ETVZ				S	Sb	10 17 10.2	-1.0
MOVZ	**Moawhango**	1.45	102	P	Pn	10 16 52.7	-0.9
MOVZ				S	Sb	10 17 11.7	-1.2
RATZ	**Rangitukua**	1.46	81	P	Pn	10 16 53.3	-0.4
RATZ				S	Sb	10 17 12.5	-0.7
TLZ	**Tolley Road**	1.48	59	S	Sn	10 17 13.2	-0.5
BHHZ	**Black Hill Sta**	1.70	104	P	Pn	10 16 57.1	0.0
TSZ	**Takapari Road**	1.83	122	P	Pb	10 16 60.0	-0.9
PNHZ	**Pukenui**	1.93	115	P	Pb	10 17 01.9	-0.6
MRZ	**Mangatainoka R**	2.00	141	P	Pb	10 17 02.5	-1.2
DVHZ	**Dannevirke**	2.09	125	P	Pb	10 17 05.6	+0.4
MTHZ	**Maungataniwha**	2.28	84	P	Pg	10 17 17.4	+6.8
WIAZ	**Waiheke Island**	2.50	23	P	Pn	10 17 06.7	-1.3

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*JMA **22** 10:21:24.6±0.2, 37°.23N×135°.10E, h366km±3km, M3.0*
*IDC **22** 10:21:25.6±1.5, 37°.36N×135°.23E, h352km±14km, mb2.8/3, mb1 3.0/7, mb1mx2.7/40, mbtmp3.5/7, Error ellipse: s-maj=32.6km s-min=19.5km az=168.0*
ISC 22 10:21:24.5±1.0**, 37°.22N**±0°.09×**135°.24E**±0°.09**, h372**km**, n20,** σ**1^{s}.73**/23**, mb3.0**/3**, Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSZ	**Suzu**	1.71	82	P	**Pn**	**10 22 16.4**	**+0.4**
JOI	**OKI**	1.85	241	P	**Pn**	**10 22 16.1**	**-0.8**
JWT	**Wachi**	1.94	176	P	**Pn**	**10 22 17.3**	**-0.3**
JWT				S	**S**	**10 22 58.3**	**-1.9**
MAT	**Matsushiro**	2.47	105	P	**Pn**	**10 22 21.4**	**+0.1**
MAT				*e*S	**S**	**10 23 04.8**	**-2.2**
MAT	**Matsushiro**	2.47	105	P	**Pn**	**10 22 21.9**	**+0.6**
MJAR	**Matsushiro Arr**	2.47	105	P	**Pn**	**10 22 21.3**	**0.0**
	0.5nm,0.3s,baz=277,slow=7.8,SNR=60						
JSD	**Sado**	2.53	70	P	**Pn**	**10 22 22.3**	**+0.7**
JHS	**Saijyo**	2.81	218	P	**Pn**	**10 22 23.0**	**-1.1**
JIE	**Ise**	3.06	157	P	**Pn**	**10 22 26.7**	**+0.5**
JRY	**Ryogami san**	3.18	111	P	**Pn**	**10 22 28.2**	**+1.0**
JOD2	**Odawara 2**	3.67	121	P	**Pn**	**10 22 32.0**	**+0.3**
JTO	**Tosashimizu**	4.79	205	P	**Pn**	**10 22 42.6**	**-0.4**
JMK	**Ichinoseki**	5.02	68	P	**Pn**	**10 22 46.5**	**+1.2**
KSRS	**Korea Array**	5.84	274	P	**Pn**	**10 22 54.3**	**+0.1**
	0.3nm,0.3s,baz=93,slow=12,SNR=8.4						
JOT	**Ohata**	6.13	46	P	**Pn**	**10 22 59.2**	**+1.8**
USRK	**Ussuriysk Ar.**	7.40	342	P	**Pn**	**10 23 12.7**	**+0.8**
	baz=148,slow=9.7,SNR=4.6						
ASAJ	**Asahikawa**	8.87	37	P	**Pn**	**10 23 29.9**	**+0.9**
	1.5nm,0.3s,baz=231,slow=13,SNR=16						
ASAJ				S	**S**	**10 25 05.4**	**-5.7**
	1.1nm,0.3s,baz=51,slow=27,SNR=8.3						
SONM	**Songino Array**	23.63	306	P	**P**	**10 26 04.5**	**+0.7**
	0.4nm,0.5s,baz=105,slow=9.4,SNR=2.8						
ILAR	**Eielson Array**	51.97	32	P	**P**	**10 29 58.5**	**+2.0**
	0.4nm,0.6s,baz=264,slow=5.8,SNR=8.9						
INK	**Inuvik**	56.44	26	P	**P**	**10 30 30.3**	**+2.0**
	0.7nm,0.5s,baz=293,slow=6.8,SNR=5.4						

NNC 22 10:22:20.5±6.1**, 37°.11N**×**70°.92E, h0**km**, mb3.7, mpv3.3, 2C-2D, Error ellipse: s-maj=48.2km s-min=43.4km az=18.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK02	**Karatay Array**	5.99	357	⇓P	Pn	10 23 51.3	+0.8
	2.6nm,0.3s,baz=178,slow=13						
KK02				⇑S	Sn	10 25 01.8	+1.9
	2.2nm,0.5s,baz=180,slow=24						
AAK	**Ala-Archa**	6.17	25	P	Pn	10 23 52.9	-0.1
	0.9nm,0.5s						
AAK				⇑S	Sn	10 25 04.3	0.0
	4.4nm,0.9s						
TKM2	**Tokmak 2**	6.82	30	⇓P	Pn	10 24 01.7	-0.3
	1.0nm,0.6s						

KRSC 22 10:25:50.9±2.1**, 50°.66N**×**157°.45E, h119**km±22km**, ML4.0, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	0.85	272	*e*P	Pn	10 26 12.6	+1.3
SKR				*e*S	Sn	10 26 27.3	+0.5
PAU	**Pauzhetka**	0.90	334	*e*P	Pn	10 26 13.4	+1.5
PAU				*e*S	Sn	10 26 29.2	+1.5
KDTR	**Khodutka, Kamc**	1.22	19	*e*P	Pn	10 26 17.9	+2.9
KDTR				*e*S	Sn	10 26 36.2	+2.9
MIPR	**Malaya Ipel'ka**	1.68	345	*i* P	Pn	10 26 20.7	+0.4
ASAK	**Asacha**	1.75	9	*e*P	Pn	10 26 23.6	+2.3
MTVR	**Mutnovka**	1.88	14	*e*P	Pn	10 26 25.2	+2.2
MTVR				*e*S	Sn	10 26 49.5	+2.1
RUS	**Russkaya**	1.90	20	*e*P	Pn	10 26 25.2	+2.3
RUS				*e*S	Sn	10 26 49.3	+1.8
GRL	**Gorelyy**	1.94	11	*e*P	Pn	10 26 26.1	+2.5
GRL				*e*S	Sn	10 26 51.6	+3.1
APC	**Apacha**	2.28	356	*e*P	Pn	10 26 28.1	+0.4
PET	**Petropavlovsk**	2.48	17	*e*P	Pn	10 26 32.0	+1.7
PET				*e*S	Sn	10 27 00.7	0.0
DALK	**Dalny**	2.51	18	*e*P	Pn	10 26 32.9	+2.2
DALK				*e*S	Sn	10 27 02.5	+1.2
UGLR	**Uglovaya**	2.69	18	*e*P	Pn	10 26 36.0	+2.8
AVH	**Avacha**	2.73	16	*e*P	Pn	10 26 36.5	+2.9
KOK	**Koryaka**	2.74	15	*e*P	Pn	10 26 36.6	+2.8
SMAR	**Somma**	2.74	17	*i* P	Pn	10 26 36.6	+2.7
KRER	**Koryakskii**	2.77	16	*e*P	Pn	10 26 36.8	+2.5
SDLR	**Sedlovina**	2.77	18	*e*P	Pn	10 26 36.4	+2.2
SDLR				*e*S	Sn	10 27 07.9	+0.4
NLC	**Nalytchevo**	2.78	24	*e*S	Sn	10 27 07.8	+0.4
SPN	**Mys Shipunski**	2.92	32	*e*P	Pn	10 26 38.8	+2.8
SPN				*e*S	Sn	10 27 11.9	+1.1
GNL	**Ganaly**	3.06	6	*e*P	Pn	10 26 38.8	+0.9
MKZ	**Mys Kozlova**	4.69	32	*e*P	Pn	10 27 01.0	+1.4
MKZ				*e*S	Sn	10 27 52.2	-0.8
TUMD	**Tumrok D**	4.89	20	*e*P	Pn	10 27 04.0	+1.7
TUMR	**Tumrok**	4.91	18	*e*P	Pn	10 27 06.1	+3.5
KMNR	**Kamenistaya**	5.37	17	*e*P	Pn	10 27 11.1	+2.3
KBTR	**Krutoberegovo**	6.42	28	*e*P	Pn	10 27 25.3	+2.5
BKI	**Bering**	6.87	45	*e*S	Sn	10 28 42.5	-3.1

IDC 22 11:26:32.1±2.0**, 0°.95N**×**126°.44E, h0**km**, mb3.7**/4**, mb1 3.9**/4**, mb1mx3.5**/33**, mbtmp3.7**/4**, MS3.3**/3**, Ms1 3.3**/3**, ms1mx2.6**/40**, Error ellipse: s-maj=161.1km s-min=26.9km az=65.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	22.15	55	LR	LR	11 38 14.9	
	comp=Z,92nm,22.0s,baz=159,slow=32						
WRA	**Warramunga Arr**	22.16	160	P	P	11 31 29.3	-0.5
	3.4nm,0.7s,baz=338,slow=11,SNR=13						
ASAR	**Alice Springs**	25.52	164	P	P	11 32 03.1	+0.5
	0.3nm,0.3s,baz=344,slow=9.7,SNR=13						
STKA	**Stephens Creek**	35.66	158	P	P	11 33 31.8	-0.3
	1.4nm,0.8s,baz=333,slow=14,SNR=2.2						
MKAR	**Makanchi Array**	59.68	326	P	P	11 36 38.3	-0.1
	0.2nm,0.3s,baz=133,slow=7.8,SNR=2.9						
KVAR	**Kislovodsk Arr**	84.83	314	LR	LR	12 21 52.5	
	comp=Z,22nm,19.7s,baz=88,slow=39						
OBN	**Obninsk**	89.16	325	LR	LR	12 23 06.8	
	comp=Z,12nm,21.6s,baz=180,slow=38						

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*MOS **22** 11:26:58.4±1.0, 50°.54N×153°.52E, h302km, mb3.7/4, Error ellipse: s-maj=12.8km s-min=6.2km az=58.3*
*NEIC **22** 11:26:59.3±1.3, 50°.7N±0°.1×153°.2E±0°.1, h274km±9km, mb4.0/18, Error ellipse: s-maj=22.9km s-min=4.6km az=158.0*
*KRSC **22** 11:26:59.2±1.8, 50°.13N×154°.56E, h305km±20km, ML4.2*
*IDC **22** 11:26:59.8±1.4, 50°.69N×153°.22E, h281km±14km, mb3.3/17, mb1 3.4/22, mb1mx3.3/45, mbtmp4.0/22, Error ellipse: s-maj=17.5km s-min=10.9km az=148.0*
ISC 22 11:26:59.7±0.5**, 50°.48N**±0°.08×**153°.64E**±0°.07**, h300**km**, n110,** σ**2^{s}.07**/125**, mb3.7**/28**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	1.59	82	*e*PN	**Pn**	**11 27 41.2**	**-2.2**
SKR				*e*S	**S**	**11 28 16.8**	**-1.4**
SKR				pmax	pmax		
	comp=Z,1µm,0.5s						
SKR				smax	smax		
	comp=N,172nm,0.8s						
SKR				smax	smax		
	comp=E,151nm,0.6s						
SKR	**Severo-Kuril's**	1.59	82	*e*P	**Pn**	**11 27 40.7**	**-2.7**
PAU	**Pauzhetka**	2.24	62	PN	**Pn**	**11 27 46.3**	**-2.0**
PAU	**Pauzhetka**	2.24	62	*e*P	**Pn**	**11 27 46.3**	**-2.0**
MIPR	**Malaya Ipel'ka**	2.66	46	PN	**Pn**	**11 27 50.9**	**-1.2**
MIPR	**Malaya Ipel'ka**	2.66	46	*i* P	**Pn**	**11 27 50.9**	**-1.2**
KDTR	**Khodutka, Kamc**	3.10	63	PN	**Pn**	**11 27 54.3**	**-2.0**
KDTR	**Khodutka, Kamc**	3.10	63	*e*P	**Pn**	**11 27 54.3**	**-2.0**
KDTR				*e*S	**S**	**11 28 35.7**	**-5.8**
ASAK	**Asacha**	3.28	53	PN	**Pn**	**11 27 57.1**	**-1.1**
ASAK	**Asacha**	3.28	53	*e*P	**Pn**	**11 27 57.1**	**-1.1**
APC	**Apacha**	3.29	40	PN	**Pn**	**11 27 57.3**	**-0.9**
APC	**Apacha**	3.29	40	*e*P	**Pn**	**11 27 57.3**	**-0.9**
GRL	**Gorelyy**	3.46	51	PN	**Pn**	**11 28 01.1**	**+0.9**
GRL	**Gorelyy**	3.46	51	*e*P	**Pn**	**11 28 01.1**	**+0.9**
MTVR	**Mutnovka**	3.48	53	PN	**Pn**	**11 27 59.1**	**-1.3**
MTVR	**Mutnovka**	3.48	53	*e*P	**Pn**	**11 27 59.1**	**-1.3**
RUS	**Russkaya**	3.62	55	PN	**Pn**	**11 28 01.2**	**-0.5**
RUS				S	**S**	**11 28 47.6**	**-3.7**
RUS	**Russkaya**	3.62	55	*e*P	**Pn**	**11 28 01.2**	**-0.5**
RUS				*e*S	**S**	**11 28 47.6**	**-3.7**
PEA0B	**Petropavlovsk-**	3.65	42	PN	**Pn**	**11 28 01.1**	**-0.9**
PEA0B	**Petropavlovsk-**	3.65	42	Pn	**Pn**	**11 28 01.1**	**-0.9**
PETK	**Petropavlovsk-**	3.65	42	P	**Pn**	**11 28 00.6**	**-1.4**
	comp=E,1.3nm,0.3s,baz=227,slow=7.4,SNR=23						
PETK	**Petropavlovsk-**	3.65	42	PN	**Pn**	**11 28 00.9**	**-1.1**
PETK	**Petropavlovsk-**	3.65	42		**Pn**	**11 28 00.9**	**-1.1**
PET	**Petropavlovsk**	4.03	49	PN	**Pn**	**11 28 06.1**	**+0.1**
PET				S	**S**	**11 28 56.8**	**-2.4**
PET	**Petropavlovsk**	4.03	49	*e*P	**Pn**	**11 28 06.1**	**+0.1**
PET				*e*S	**S**	**11 28 56.8**	**-2.4**
PET	**Petropavlovsk**	4.03	49	Pn	**Pn**	**11 28 05.3**	**-0.8**
DALK	**Dalny**	4.08	49	PN	**Pn**	**11 28 06.1**	**-0.5**
DALK				S	**S**	**11 28 56.6**	**-3.7**
DALK	**Dalny**	4.08	49	*e*P	**Pn**	**11 28 06.1**	**-0.5**
DALK				*e*S	**S**	**11 28 56.6**	**-3.7**
GNL	**Ganaly**	4.17	38	*e*P	**Pn**	**11 28 07.2**	**-0.6**
KOK	**Koryaka**	4.19	46	PN	**Pn**	**11 28 08.7**	**+0.7**
KOK	**Koryaka**	4.19	46	*e*P	**Pn**	**11 28 08.7**	**+0.7**
AVH	**Avacha**	4.22	47	PN	**Pn**	**11 28 08.8**	**+0.5**
AVH	**Avacha**	4.22	47	*e*P	**Pn**	**11 28 08.8**	**+0.5**
UGLR	**Uglovaya**	4.22	48	PN	**Pn**	**11 28 08.6**	**+0.2**
UGLR	**Uglovaya**	4.22	48	*e*P	**Pn**	**11 28 08.6**	**+0.2**
SMAR	**Somma**	4.24	47	PN	**Pn**	**11 28 09.0**	**+0.3**
SMAR	**Somma**	4.24	47	*e*P	**Pn**	**11 28 09.0**	**+0.3**
KRER	**Koryakskii**	4.25	46	PN	**Pn**	**11 28 09.2**	**+0.5**
KRER	**Koryakskii**	4.25	46	*e*P	**Pn**	**11 28 09.2**	**+0.5**
SDLR	**Sedlovina**	4.29	47	PN	**Pn**	**11 28 09.2**	**0.0**
SDLR	**Sedlovina**	4.29	47	*e*P	**Pn**	**11 28 09.2**	**0.0**
NLC	**Nalytchevo**	4.45	50	PN	**Pn**	**11 28 08.9**	**-1.9**
NLC	**Nalytchevo**	4.45	50	*e*P	**Pn**	**11 28 08.9**	**-1.9**
SPN	**Mys Shipunski**	4.75	54	PN	**Pn**	**11 28 12.7**	**-1.5**
SPN	**Mys Shipunski**	4.75	54	*e*P	**Pn**	**11 28 12.7**	**-1.5**
SPN				*e*S	**S**	**11 29 06.9**	**-7.2**
TUMR	**Tumrok**	6.22	37	PN	**Pn**	**11 28 32.7**	**+1.1**
TUMR	**Tumrok**	6.22	37	*e*P	**Pn**	**11 28 32.7**	**+1.1**
TUMD	**Tumrok D**	6.26	38	*e*P	**Pn**	**11 28 32.0**	**0.0**
MKZ	**Mys Kozlova**	6.41	47	PN	**Pn**	**11 28 32.3**	**-1.4**
MKZ				S	**S**	**11 29 43.3**	**-6.3**
MKZ	**Mys Kozlova**	6.41	47	*e*P	**Pn**	**11 28 32.3**	**-1.4**
MKZ				*e*S	**S**	**11 29 43.3**	**-6.3**
KBTR	**Krutoberegovo**	7.94	40	PN	**Pn**	**11 28 52.7**	**+0.4**
KBTR				S	**S**	**11 30 18.7**	**-5.0**
KBTR	**Krutoberegovo**	7.94	40	*e*P	**Pn**	**11 28 52.7**	**+0.4**
KBTR				*e*S	**S**	**11 30 18.7**	**-5.0**
JKA	**Kamikawa-asahi**	9.83	234		**Pn**	**11 29 14.3**	**-1.4**
ASAJ	**Asahikawa**	9.83	234	P	**Pn**	**11 29 14.7**	**-1.0**
	comp=E,1.2nm,0.3s,baz=63,slow=12,SNR=12						
ERM	**Erimo**	11.14	225	PN	**Pn**	**11 29 27.6**	**-4.1**
ERM	**Erimo**	11.14	225	Pn	**Pn**	**11 29 27.6**	**-4.1**
KLR	**Kul'dur**	14.17	273	P	**P**	**11 30 08.0**	**+0.5**
	comp=E,0.3nm,0.3s,baz=71,slow=12,SNR=8.1						
USRK	**Ussuriysk Ar.**	15.94	255	P	**P**	**11 30 25.4**	**-1.4**
	baz=68,slow=7.7,SNR=4.1						
YAK	**Yakutsk**	17.51	320	P	**P**	**11 30 41.6**	**-2.1**
	comp=E,0.1nm,0.3s,baz=278,slow=1.8,SNR=4.9						
YAK	**Yakutsk**	17.51	320	P	**P**	**11 30 40.2**	**-3.5**
MJAR	**Matsushiro Arr**	17.82	224	P	**P**	**11 30 49.1**	**+1.7**
	comp=E,0.3nm,0.3s,baz=23,slow=11,SNR=21						
INU	**Inuyama**	19.34	225	P	**P**	**11 31 04.6**	**+1.0**
KSRS	**Korea Array**	22.49	245	P	**P**	**11 31 34.8**	**+0.8**
	comp=E,1.7nm,0.7s,baz=52,slow=9.2,SNR=5.2						
SONM	**Songino Array**	30.61	284	P	**P**	**11 32 45.3**	**-1.1**
	comp=E,0.5nm,0.4s,baz=69,slow=7.7,SNR=6.2						
SONM	**Songino Array**	30.61	284	P	**P**	**11 32 44.8**	**-1.6**
SONM				IAmb	IAmb	11 32 46.0	
	comp=Z,2.9nm,1.4s						
TOLK	**Toolik Lake Re**	32.44	35	P	**P**	**11 33 03.7**	**+1.8**
TOLK				IAmb	IAmb	11 33 13.9	
	comp=Z,6.2nm,1.4s						
BMAR	**Burnt Mountain**	34.28	37	P	**P**	**11 33 21.0**	**+3.3**
INK	**Inuvik**	38.35	35	P	**P**	**11 33 54.2**	**+2.4**
	comp=Z,0.6nm,0.4s,baz=294,slow=7.6,SNR=6.5						
INK	**Inuvik**	38.35	35	P	**P**	**11 33 53.9**	**+2.1**
INK				IAmb	IAmb	11 34 19.1	
	comp=Z,6.2nm,1.4s						
ZALV	**Zalesovo Beam**	40.81	302	P	**P**	**11 34 11.1**	**-1.0**
	comp=Z,1.7nm,0.4s,baz=63,slow=7.7,SNR=9.5						
ZALV	**Zalesovo Beam**	40.81	302	P	**P**	**11 34 10.7**	**-1.5**
EUNU	**Eureka**	45.41	12	P	**P**	**11 34 49.6**	**+1.2**
MK31	**Makanchi Array**	45.63	294	P	**P**	**11 34 49.8**	**-0.8**
MK31				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MK31	**Makanchi Array**	45.63	294	P	**P**	**11 34 49.8**	**-0.8**
MKAR	**Makanchi Array**	45.63	294	P	**P**	**11 34 49.7**	**-0.9**
	comp=Z,2.9nm,0.8s,baz=60,slow=7.9,SNR=24						
MKAR				ScP	**ScP**	**11 39 48.5**	**+1.8**
	comp=Z,0.1nm,0.6s,baz=50,slow=2.3,SNR=1.7						
KURK	**Kurchatov**	45.67	301	P	**P**	**11 34 50.0**	**-0.8**
KURK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KURK	**Kurchatov**	45.67	301	P	**P**	**11 34 50.0**	**-0.8**
KURK				IAmb	IAmb	11 34 50.9	
	comp=Z,7.6nm,0.7s						
MAKZ	**Makanchi**	45.80	295	P	**P**	**11 34 50.2**	**-1.8**
MAKZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MAKZ	**Makanchi**	45.80	295	P	**P**	**11 34 50.2**	**-1.8**
RES	**Resolute Bay**	47.20	20	P	**P**	**11 35 03.4**	**+1.2**
	comp=Z,0.7nm,0.3s,baz=317,slow=5.1,SNR=7.6						
RES	**Resolute Bay**	47.20	20	P	**P**	**11 35 03.0**	**+0.8**
BRVK	**Borovoye**	48.86	307	P	**P**	**11 35 13.6**	**-1.6**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BRVK	**Borovoye**	48.86	307	P	**P**	**11 35 13.6**	**-1.6**
BRVK				IAmb	IAmb	11 35 15.5	
	comp=Z,4.1nm,0.7s						
ARU	**Arti**	52.54	316	P	**P**	**11 35 42.6**	**+0.2**
ARU				IAmb	IAmb	11 35 42.8	
	comp=Z,6.7nm,1.0s						
ARCES	**ARCESS Array B**	54.46	340	P	**P**	**11 35 55.4**	**-0.7**
	comp=Z,3.8nm,1.0s,baz=30,slow=9.6,SNR=1.8						
KKAR	**Karatay Array**	54.57	297	P	**P**	**11 35 57.1**	**-0.2**
KKAR	**Karatay Array**	54.57	297	P	**P**	**11 35 57.1**	**-0.2**
ABKAR	**Akbulak array**	56.35	308	P	**P**	**11 36 09.5**	**-0.2**
ABKAR				IAmb	IAmb	11 36 10.1	
	comp=Z,3.6nm,0.5s						
ABKAR	**Akbulak array**	56.35	308	P	**P**	**11 36 09.9**	**+0.2**
NVAR	**Mina Array Bea**	60.45	64	P	**P**	**11 36 41.8**	**+3.5**
	comp=Z,0.2nm,0.6s,baz=280,slow=5.4,SNR=2.2						
FINES	**FINESS Array B**	60.83	334	P	**P**	**11 36 39.6**	**-0.5**
	comp=Z,1.8nm,0.6s,baz=44,slow=9.6,SNR=13						
FINES	**FINESS Array B**	60.83	334	P	**P**	**11 36 40.0**	**-0.2**
FINES	**FINESS Array B**	60.83	334	P	**P**	**11 36 40.0**	**-0.2**
KBL	**Kabul**	61.06	290	P	**P**	**11 36 42.3**	**-0.2**
KBL				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KBL	**Kabul**	61.06	290	P	**P**	**11 36 42.3**	**-0.2**
NOA	**NORSAR Array B**	64.82	341	P	**P**	**11 37 05.7**	**-0.7**
	comp=Z,0.4nm,0.7s,baz=29,slow=6.9,SNR=2.0						
ECSD	**EROS Data Cent**	68.07	47	P	**P**	**11 37 29.9**	**+2.8**
ECSD				IAmb	IAmb	11 37 40.3	
	comp=Z,6.2nm,1.5s						
KBZ	**Khabaz**	68.54	313	P	**P**	**11 37 30.6**	**+0.6**
	comp=Z,2.9nm,0.8s,baz=294,slow=13,SNR=3.6						
AKASG	**Malin Array Be**	68.65	326	P	**P**	**11 37 30.1**	**-0.5**
	comp=Z,1.1nm,0.4s,baz=33,slow=6.5,SNR=9.7						
SCHQ	**Schefferville**	69.74	24	P	**P**	**11 37 38.2**	**+1.0**
	comp=Z,4.8nm,1.0s,baz=350,slow=5.0,SNR=5.5						
SCHQ	**Schefferville**	69.74	24	P	**P**	**11 37 38.4**	**+1.2**
BUR08	**Bucovina Ar. S**	72.66	326	P	**P**	**11 37 54.3**	**-0.5**
BUR08				IAmb	IAmb	11 37 59.6	
	comp=Z,5.1nm,1.4s						
BURAR	**Bucovina Array**	72.68	326	P	**P**	**11 37 55.5**	**+0.6**
BURAR				IAmb	IAmb	11 37 56.4	
	comp=Z,1.2nm,0.7s						
GERES	**GERESS Array B**	75.26	334	P	**P**	**11 38 10.7**	**+0.9**
	comp=Z,0.4nm,0.4s,baz=42,slow=5.1,SNR=8.4						
GERES	**GERESS Array B**	75.26	334	P	**P**	**11 38 09.9**	**+0.2**
TXAR	**Lajitas Array**	75.38	62	P	**P**	**11 38 13.8**	**+3.0**
	comp=Z,0.3nm,0.5s,baz=297,slow=4.6,SNR=7.7						
TXAR				pP	**pP**	**11 39 17.8**	**-1.5**
	comp=Z,0.3nm,0.8s,baz=289,slow=3.8,SNR=3.0						
TXAR	**Lajitas Array**	75.38	62	P	**P**	**11 38 14.0**	**+3.2**
TXAR	**Lajitas Array**	75.38	62	P	**P**	**11 38 14.0**	**+3.2**
ASAR	**Alice Springs**	75.86	199	P	**P**	**11 38 14.6**	**+1.4**
	comp=Z,0.1nm,0.5s,baz=11,slow=4.6,SNR=1.2						
BRTR	**Keskin Array B**	75.92	316	P	**P**	**11 38 14.4**	**+0.7**
	comp=Z,0.7nm,0.7s,baz=98,slow=3.5,SNR=3.6						

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*SOME **22** 11:30:26.9, 40°.73N×77°.65E, h10km*
*NNC **22** 11:30:27.8±1.0, 40°.79N×77°.70E, h0km, mb3.1, mpv2.8, Error ellipse: s-maj=6.7km s-min=4.8km az=171.0*
*KRNET **22** 11:30:28.3±0.1, 42°.17N×78°.91E, h13km, mb2.2*
ISC 22 11:30:28.8±2.8**, 40°.9N**±0°.1×**77°.68E**±0°.05**, h6**km±13km**, n28,** σ**0^{s}.99**/42**, 11C-3D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TARG	**Taragay, Kyrgy**	0.88	6	⇑*e*P	**Pg**	**11 30 46.2**	**+0.6**
	baz=42						
TARG				⇑*i*S	**Sb**	**11 30 59.1**	**+0.2**
	baz=42						
KDJ	**Kajisay**	1.33	344	⇓*i*P	**Pn**	**11 30 52.1**	**-2.0**
	baz=69						
KDJ				⇓*i*S	**Sb**	**11 31 09.6**	**-2.0**
	baz=69						
BOOM	**Boomskoye usch**	2.09	322	⇑*i*P	**Pb**	**11 31 07.4**	**+0.2**
	baz=79						
BOOM				⇑*i*S	**Sg**	**11 31 35.7**	**-0.3**
	baz=79						
TNSS	**Tian-Shan**	2.25	346	*e*P	**Pb**	**11 31 10.6**	**+0.5**
	2.0nm,0.2s						
TNSS				*e*S	**Sg**	**11 31 41.9**	**+0.9**
	2.1nm,0.2s						
TNSS	**Tian-Shan**	2.25	346	Pg	**Pb**	**11 31 10.5**	**+0.5**
	2.0nm,0.2s						
TNSS				Lg	Lg	11 31 41.9	
	2.1nm,0.2s						
SATY	**Saty**	2.27	13	*e*P	**Pg**	**11 31 11.4**	**-0.8**
	1.4nm,0.1s						
SATY				*e*S	**Sg**	**11 31 43.5**	**+1.9**
	3.9nm,0.1s						
SATY	**Saty**	2.27	13	Pg	**Pg**	**11 31 11.4**	**-0.8**
	1.4nm,0.1s						
SATY				Lg	Lg	11 31 43.5	
	3.9nm,0.1s						
MDOK	**Medeo**	2.35	349	*e*P	**Pb**	**11 31 11.9**	**+0.2**
	1.9nm,0.3s						
MDOK				*e*S	**Sg**	**11 31 44.4**	**0.0**
	2.1nm,0.3s						
MDOK	**Medeo**	2.35	349	Pg	**Pb**	**11 31 10.8**	**-0.9**
	3.2nm,0.8s						
MDOK				Lg	Lg	11 31 44.3	
	3.3nm,0.5s						
MDOK	**Medeo**	2.35	349	Pg	**Pb**	**11 31 12.0**	**+0.2**
	1.9nm,0.3s						
MDOK				Lg	Lg	11 31 44.4	
	2.1nm,0.3s						
KOTS	**Kotyrbulak**	2.42	350	*e*P	**Pb**	**11 31 13.2**	**+0.5**
	2.0nm,0.4s						
KOTS				*e*S	**Sg**	**11 31 46.5**	**+0.2**
	14nm,0.3s						
KOTS	**Kotyrbulak**	2.42	350	Pg	**Pb**	**11 31 13.2**	**+0.5**
	2.0nm,0.4s						
KOTS				Lg	Lg	11 31 46.5	
	14nm,0.3s						
MTBS	**Maitube**	2.46	338	*e*P	**Pb**	**11 31 14.2**	**+0.8**
	1.4nm,0.2s						
MTBS				*e*S	**Sg**	**11 31 48.4**	**+0.7**
	4.7nm,0.4s						
MTBS	**Maitube**	2.46	338	Pg	**Pb**	**11 31 14.2**	**+0.8**
	1.4nm,0.2s						
MTBS				Lg	Lg	11 31 48.4	
	4.7nm,0.4s						
UZB	**Uzynbulak**	2.50	23	*e*P	**Pb**	**11 31 14.8**	**+0.7**
	2.5nm,0.2s						
UZB				*e*S	**Sg**	**11 31 49.1**	**+0.2**
	4.1nm,0.5s						
UZB	**Uzynbulak**	2.50	23	Pg	**Pb**	**11 31 14.8**	**+0.7**
	2.5nm,0.2s						
UZB				Lg	Lg	11 31 49.2	
	4.1nm,0.5s						
KST	**Kastek**	2.54	330	*e*P	**Pg**	**11 31 16.5**	**-0.8**
	1.9nm,0.2s						
KST				*e*S	**Sg**	**11 31 51.9**	**+1.7**
	2.1nm,0.5s						
TKM2	**Tokmak 2**	2.59	324	⇑Pg	**Pb**	**11 31 16.7**	**+1.0**
	1.6nm,0.6s						
TKM2				⇑Lg	Lg	11 31 53.5	
	4.0nm,0.9s						
TKM2	**Tokmak 2**	2.59	324	⇑*i*P	**Pn**	**11 31 12.4**	**+1.0**
	baz=88						
TKM2				⇑*i*S	**Sn**	**11 31 44.4**	**+1.1**
	baz=88						
PDGK	**Podgornoye**	2.81	28	Pg	**Pb**	**11 31 19.9**	**+0.3**
	1.3nm,0.5s						
PDGK				Lg	Lg	11 31 58.1	
	5.2nm,0.7s						
PDGK	**Podgornoye**	2.81	28	⇑Pg	**Pb**	**11 31 19.7**	**+0.1**
	1.5nm,0.4s						
PDGK				⇑Lg	Lg	11 31 58.5	
	12nm,0.8s						
KTBS	**Karatobe**	2.95	346	*e*P	**Pb**	**11 31 22.6**	**+0.8**
	1.6nm,0.4s						
KTBS				*e*S	**Sg**	**11 32 02.9**	**-0.6**
	6.8nm,0.4s						
KTBS	**Karatobe**	2.95	346	Pg	**Pb**	**11 31 22.6**	**+0.8**
	1.6nm,0.4s						
KTBS				Lg	Lg	11 32 02.9	
	6.8nm,0.4s						
AAK	**Ala-Archa**	2.98	308	⇓Pg	**Pb**	**11 31 22.5**	**+0.2**
	1.8nm,0.7s						
AAK				⇑Lg	Lg	11 32 03.8	
	3.7nm,0.8s						
KUU	**Kurty**	3.19	342	*e*P	**Pb**	**11 31 27.3**	**+1.3**
	0.7nm,0.2s						
KUU				*e*S	**Sg**	**11 32 10.6**	**-0.8**
	1.7nm,0.2s						
KUU	**Kurty**	3.19	342	Pg	**Pb**	**11 31 27.3**	**+1.3**
	0.7nm,0.2s						
KUU				Lg	Lg	11 32 10.6	
	1.7nm,0.2s						
ARXS	**Arharly**	3.36	2	*e*P	**Pb**	**11 31 30.1**	**+1.3**
	0.8nm,0.2s						
ARXS				*e*S	**Sg**	**11 32 15.2**	**-1.4**
	5.8nm,0.4s						
ARXS	**Arharly**	3.36	2	Pg	**Pb**	**11 31 30.1**	**+1.3**
	0.8nm,0.2s						
ARXS				Lg	Lg	11 32 15.2	
	5.8nm,0.4s						

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*JMA **22** 11:31:13.6±0.1, 30°.81N×141°.38E, h46km, M3.9*
*IDC **22** 11:31:17.1±2.2, 30°.41N×140°.73E, h90km±21km, mb3.2/5, mb1 3.4/7, mb1mx3.2/36, mbtmp3.5/7, Error ellipse: s-maj=42.5km s-min=15.5km az=81.0*
ISC 22 11:31:13.8±0.8**, 30°.71N**±0°.07×**141°.1E**±0°.2**, h50**km**, n21,** σ**2^{s}.54**/16**, mb3.5**/5**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHCJ	**Hachijojimakas**	2.60	336	*e*S	**Sn**	**11 32 25.3**	**+1.6**
CBIJ	**Chichi jima**	3.73	165	P	**Pn**	**11 32 10.8**	**+2.0**

CBIJ				eS	Sn	11 32 53.4	+1.9
JCJ	Chichijima	3.73	165	P	Pn	11 32 10.9	+2.0
	5.8nm,0.3s,baz=164,slow=22,SNR=12						
JCJ				S	Sn	11 32 50.6	-0.8
	2.8nm,0.3s,baz=286,slow=21,SNR=1.8						
JHU	Hanno	5.35	344	eS	Sn	11 33 30.6	-0.7
JYT	Yasato	5.55	353	eS	Sn	11 33 37.5	+1.1
JAG	Ashikaga	5.86	347	P	Pn	11 32 40.4	+2.3
JHO	Hitachi	5.90	356	eS	Sn	11 33 44.0	-1.0
MJAR	Matsushiro Arr	6.29	338	P	Pn	11 32 50.0	+6.0
	0.1nm,0.3s,baz=160,slow=14,SNR=9.0						
JFK	Kawauchi	6.64	359	eS	Sn	11 33 59.2	-4.0
JMK	Ichinoseki	8.23	1	eS	Sn	11 34 38.1	-3.9
H11N2	WAKE ISLAND Hy	25.73	109	T	T	12 04 20.5	
	baz=300,slow=75,SNR=7.3						
H11N1	WAKE ISLAND Hy	25.73	109	T	T	12 04 20.8	
	baz=300,slow=75,SNR=5.5						
H11N3	WAKE ISLAND Hy	25.74	109	T	T	12 04 21.8	
	baz=300,slow=75,SNR=8.3						
H11S3	WAKE ISLAND Hy	26.20	112	T	T	12 04 57.0	
	baz=302						
H11S1	WAKE ISLAND Hy	26.20	112	T	T	12 04 57.9	
	baz=302						
H11S2	WAKE ISLAND Hy	26.21	112	T	T	12 04 58.5	
	baz=302						
WRA	Warramunga Arr	50.77	188	P	P	11 40 05.4	-3.6
	0.2nm,0.3s,baz=7.0,slow=8.6,SNR=7.6						
ASAR	Alice Springs	54.50	188	P	P	11 40 33.6	-2.9
	0.1nm,0.5s,baz=358,slow=4.5,SNR=8.0						
ILAR	Eielson Array	55.04	30	P	P	11 40 41.0	+0.9
	0.4nm,0.7s,baz=269,slow=7.1,SNR=3.1						
AKASG	Malin Array Be	79.15	323	P	P	11 43 11.4	-1.7
	0.2nm,0.3s,baz=54,slow=6.0,SNR=2.1						
TXAR	Lajitas Array	94.20	52	P	P	11 44 29.9	+2.1
	0.3nm,0.8s,baz=296,slow=2.9,SNR=3.6						

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*EAF **22** 12:09:43.9±1.5, 22°.45S×29°.36E, h0^{km}±13^{km}, MD3.6*
BUL 22 12:09:42.4±1.1**, 22°.68S×29°.39E, h20**^{km}±10^{km}**, MD3.6, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSNA	Messina	0.67	60	eP	Pb	12 09 55.3	-0.2
MSNA				eS	Sb	12 10 03.1	-1.4
MSNA	Messina	0.67	60	eP	Pb	12 09 55.3	-0.2
MSNA				eS	Sb	12 10 03.1	-1.4
MOPA	Mopani	2.02	115	eP	Pb	12 10 20.2	+1.7
MOPA				eS	Sb	12 10 48.3	+5.0
MOPA	Mopani	2.02	115	eP	Pb	12 10 20.2	+1.7
MOPA				eS	Sb	12 10 48.3	+5.0
MATP	Matopo	2.40	339	eP	Pn	12 10 19.9	-0.7
MATP				eS	Sn	12 10 48.7	-0.7
MATP	Matopo	2.40	339	eP	Pn	12 10 19.9	-0.7
MATP				eS	Sn	12 10 48.7	-0.7

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*NNC **22** 12:23:29.5±1.9, 37°.90N×71°.74E, h210^{km}±28^{km}, mb2.7, mpv4.0, Error ellipse: s-maj=19.8km s-min=10.1km az=9.0*
ISC 22 12:23:21.8±1.4**, 37°.43N**±0°.09×**71°.8E**±0°.1**, h200**^{km}**, n17, σ1^{s}86**/21**, 2C-3D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	4.92	17	P	Pn	12 24 37.1	+1.7
	SNR=46						
EKS2	Erkin-Say	5.44	16	P	Pn	12 24 44.2	+2.3
	SNR=44						
AAK	Ala-Archa	5.60	21	P	Pn	12 24 46.4	+2.4
	SNR=25						
AAK	Ala-Archa	5.60	21	P	Pn	12 24 46.4	+2.4
	7.9nm,0.3s						
AAK				S	Sn	12 25 47.7	-1.2
	33nm,0.6s						
KK02	Karatay Array	5.75	351	⇓P	Pn	12 24 48.3	+2.5
	19nm,0.5s,baz=169,slow=12						
KK02				⇑S	Sn	12 25 50.2	-2.1
	15nm,0.4s,baz=171,slow=22						
ULHL	Ulahol	5.90	34	P	Pn	12 24 49.2	+1.3
	SNR=8.0						
CHMS	Chumysh	6.00	21	P	Pn	12 24 51.0	+2.0
	SNR=9.3						
USP	Ospenovka	6.18	19	P	Pn	12 24 53.1	+1.7
	SNR=15						
TKM2	Tokmak 2	6.21	27	⇓P	Pn	12 24 54.1	+2.3
	6.4nm,0.7s						
TKM2				⇓S	Sn	12 26 02.8	-0.3
	12nm,1.1s						
MK31	Makanchi Array	12.16	36	P	P	12 26 12.0	-1.1
	1.3nm,1.0s,baz=214,slow=14,SNR=3.6						
KOLN	Koldanda	13.83	131	eP	Pn	12 26 28.4	-1.5
GKN	Gorkha	14.31	127	eP	Pn	12 26 34.7	-1.0
	7.8nm,0.3s						
AB31	Akbulak array	14.61	328	⇑P	P	12 26 41.6	+1.4
	0.2nm,0.3s,baz=42,slow=24,SNR=13						
AB31				S	S	12 29 18.5	-2.8
	1.2nm,0.5s,baz=152,slow=23,SNR=7.9						
PKI	Pulchoki	15.10	127	eP	Pn	12 26 44.7	-0.9
GUN	Gumba	15.17	125	eP	Pn	12 26 46.0	-0.5
JIRN	Jiri	15.54	125	eP	Pn	12 26 50.5	-0.5
RAMN	Ramite	16.29	126	eP	Pn	12 27 01.1	+1.2

WEL 22 12:25:59.4±1.2**, 39°S**±8°×**17°4E**±°**, h6**^{km}±4^{km}**, M2.6**/4**, ML3.0**/7**, MLv2.6**/4**, Error ellipse: s-maj=0.0km s-min=0.0km az=149.3, Off west coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PKE	Pukeiti	0.07	172	P	Pg	12 25 53.9	-7.2
PKE				S	Sg	12 26 00.9	-1.4
NBEZ	Newall Road No	0.16	210	P	Pg	12 25 54.8	-8.0
NBEZ				S	Sg	12 26 06.2	+1.2
NBEZ	Newall Road No	0.16	210	P	Pg	12 25 54.8	-7.9
NBEZ				S	Sg	12 26 06.3	+1.4
KHEZ	Kahui Hut	0.17	170	P	Pg	12 25 55.3	-7.6
KHEZ				S	Sg	12 26 06.7	+1.5
KHEZ	Kahui Hut	0.17	170	P	Pg	12 25 55.4	-7.4
KHEZ				S	Sg	12 26 06.6	+1.4
NEZ	North Egmont	0.17	147	P	Pg	12 25 55.2	-7.7
NEZ				S	Sg	12 26 03.3	-2.0
NEZ	North Egmont	0.17	147	P	Pg	12 25 55.2	-7.7
DREZ	Durham Road	0.19	110	P	Pg	12 25 55.7	-7.4
DREZ				S	Sg	12 26 07.9	+2.3
DREZ	Durham Road	0.19	110	P	Pg	12 25 55.9	-7.2
DREZ				S	Sg	12 26 08.0	+2.4
PREZ	Palmer Road	0.26	146	P	Pg	12 25 57.3	-7.2
PREZ				S	Sg	12 26 04.9	-3.0
MHEZ	Mangahewa	0.28	80	P	Pg	12 26 02.8	-1.9
MHEZ				S	Sg	12 26 09.9	+1.5
MHEZ	Mangahewa	0.28	80	P	Pg	12 25 56.4	-8.4
MHEZ				S	Sg	12 26 09.8	+1.4
NMEZ	Namu Road	0.30	195	P	Pg	12 26 02.9	-2.3
NMEZ				S	Sg	12 26 10.6	+1.5
HIZ	Hauiti	0.92	49	P	Pg	12 26 15.6	-1.4
HIZ				S	Sg	12 26 28.8	-0.2
WAZ	Wanganui	1.00	129	P	Pg	12 26 10.7	-7.9
WAZ				P	Pb	12 26 18.1	-1.0
WAZ				S	Sn	12 26 34.3	-0.2
MTVZ	Mangateitei	1.19	103	P	Pg	12 26 21.4	-0.8
MTVZ				S	Sb	12 26 38.0	0.0
FWVZ	Far West T-bar	1.23	96	P	Pg	12 26 22.1	-1.0
FWVZ				S	Sg	12 26 39.1	+0.1
TRVZ	Turoa	1.23	99	P	Pg	12 26 21.6	-1.4
TRVZ				S	Sb	12 26 39.9	+0.5
DRZ	Dome Shelter	1.24	97	P	Sg	12 26 40.4	+1.0
WTVZ	West Tongariro	1.26	90	P	Sg	12 26 39.9	+0.1
WHVZ	Whangaehu Hut	1.26	98	P	Pn	12 26 24.7	+0.9
WHVZ				S	Sg	12 26 40.1	+0.1
NGZ	Ngauruhoe	1.27	93	P	Pg	12 26 23.0	-0.6
NGZ				S	Sb	12 26 40.4	+0.1
NNVZ	North Ngauruho	1.28	91	P	Pg	12 26 22.4	-1.4
NNVZ				S	Sb	12 26 40.7	+0.1
WNVZ	Wahianoa	1.28	100	P	Pg	12 26 22.7	-1.2
WNVZ				S	Sg	12 26 40.3	-0.1
WNVZ	Wahianoa	1.28	100	P	Pg	12 26 22.7	-1.1
WNVZ				P	Sg	12 26 39.9	-0.5
SNVZ	South Ngauruho	1.30	93	P	Pn	12 26 22.7	-1.4
SNVZ				S	Sg	12 26 41.0	0.0
KRVZ	Karewarewa	1.30	89	P	Pn	12 26 23.0	-1.1
KRVZ				S	Sg	12 26 40.8	-0.2
NTVZ	North Tongarir	1.32	89	P	Pn	12 26 23.1	-1.4
NTVZ				S	Sg	12 26 41.4	-0.5
NTVZ	North Tongarir	1.32	89	P	Pn	12 26 23.6	-0.8
NTVZ				S	Sg	12 26 41.2	-0.7
TMVZ	Te Maari	1.34	90	P	Pn	12 26 23.7	-1.1
TMVZ				S	Sb	12 26 41.8	-0.7
KATZ	Kakaramea	1.35	84	P	Sg	12 26 42.6	-0.1
RATZ	Rangitukua	1.42	80	P	Pn	12 26 25.2	-0.6
RATZ				S	Sb	12 26 44.5	-0.2
TLZ	Tolley Road	1.46	57	P	Pn	12 26 24.7	-1.6
TLZ				S	Sn	12 26 43.9	-1.8
DUWZ	D'Urville Isla	1.67	181	P	Sg	12 26 49.4	-3.7
TSZ	Takapari Road	1.79	122	P	Pn	12 26 31.5	+0.6
OGWZ	Otaki Gorge	1.92	152	P	Pn	12 26 33.5	+0.9
HRRZ	Handcock Road	1.95	69	P	Sg	12 26 51.2	-11
WHHZ	Waihua	2.54	90	P	Pg	12 26 53.5	+5.5
WCZ	Waipu Caves	3.19	5	P	Sg	12 27 24.0	-18

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*IDC **22** 12:47:28.9±3.8, 12°.71S×166°.68E, h78^{km}±31^{km}, mb3.5/5, mb1 3.8/7, mb1mx3.5/30, mbtmp4.0/7, MS3.0/2, Ms1 3.0/2, ms1mx2.6/27, Error ellipse: s-maj=33.4km s-min=25.8km az=59.0*
ISC 22 12:47:25.9±1.2**, 12°.68S**±0°.10×**166°.8E**±0°.1**, h50**^{km}**, n7, σ1^{s}79**/10**, mb3.8**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	7.50	295	P	Pn	12 49 13.4	+0.6
	45nm,0.3s,baz=176,slow=7.3,SNR=17						
HNR				S	Sn	12 50 37.2	+0.8
	5.8nm,0.3s,baz=150,slow=12,SNR=1.0						
HNR				LR	LR	12 51 38.4	
	comp=Z,106nm,19.8s,baz=197,slow=34						
DZM	Mont Dzumac	9.35	182	P	Pn	12 49 41.2	+3.0
	0.6nm,0.3s,baz=78,slow=19,SNR=1.8						
DZM				S	Sn	12 51 19.8	-2.2
	baz=12,slow=20,SNR=1.9						
DZM				LR	LR	12 52 38.4	
	comp=Z,90nm,18.7s,baz=149,slow=33						
WRA	Warramunga Arr	31.98	253	P	P	12 53 45.7	-1.9
	0.4nm,0.5s,baz=85,slow=8.5,SNR=2.7						
ASAR	Alice Springs	33.06	246	P	P	12 53 55.5	-1.7
	1.0nm,0.7s,baz=68,slow=9.8,SNR=15						
CMAR	Chiang Mai Arr	73.74	294	P	P	12 58 55.5	+0.2
	0.6nm,0.3s,baz=120,slow=4.4,SNR=4.9						
ILAR	Eielson Array	84.72	18	P	P	12 59 53.6	-0.6
	0.2nm,0.6s,baz=235,slow=4.8,SNR=5.7						
MKAR	Makanchi Array	95.44	317	P	P	13 00 44.8	-0.5
	0.4nm,0.6s,baz=85,slow=7.3,SNR=6.3						
MKAR				pP	pP	13 00 60.0	+0.5
	0.5nm,0.7s,baz=106,slow=5.6,SNR=5.6						

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*VAO **22** 12:48:33.9±0.4, 33°.05S×73°.64W, h10^{km}, mb4.4*
*IDC **22** 12:48:54.9±0.9, 30°.89S×71°.46W, h0^{km}, mb4.3/7, mb1 4.3/10, mb1mx4.2/26, mbtmp4.2/10, ML3.5/4, MS3.0/3, Ms1 3.0/3, ms1mx2.8/18, Error ellipse: s-maj=27.7km s-min=22.2km az=95.0*
*SJA **22** 12:48:59.0, 30°.75S×71°.67W, h10^{km}, ML4.4*
*GUC **22** 12:49:00.0±0.7, 30°.68S×71°.68W, h68^{km}±3^{km}, ML4.4*
*NEIC **22** 12:49:02.3±2.1, 30°.73S±0°.05×71°.44W±0°.05, h54^{km}±6^{km}, mb4.3/9, ML4.4(GUC), Error ellipse: s-maj=8.8km s-min=3.1km az=224.0*
ISC 22 12:49:01.4±0.7**, 30°.72S**±0°.04×**71°.71W**±0°.06**, h65**^{km}±7^{km}**, n149, σ1^{s}94**/132**, mb4.4**/10**, 1C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.08	58	i S	Sn	12 49 18.5	+0.5
CO06				IAML		12 49 19.7	
	comp=E,64µm,0.3s						
CO06	Fray Jorge	0.08	58		Pn	12 49 09.2	-1.8
CO05	La Serena	0.89	27	i S	Sn	12 49 32.9	+2.1
CO05				IAML		12 49 39.2	
	comp=E,11µm,0.3s						
CO05	La Serena	0.89	27		Pn	12 49 17.7	-0.6
GO04	Tololo Observa	0.95	56	i S	Sn	12 49 33.1	+0.5
GO04	Tololo Observa	0.95	56		Pn	12 49 17.0	-2.3
GO04	Tololo Observa	0.95	56	i P	Pn	12 49 17.0	-2.3
VA06	Catapilco	1.87	169	eP	Pn	12 49 30.4	-0.8
VA06				i S	Sn	12 49 55.5	+1.6
VA06				IAML		12 50 13.6	
	comp=E,4µm,0.3s						
LCO	Las Campanas	1.91	28	i S	Sn	12 49 56.4	+1.1
LCO	Las Campanas	1.91	28	i P	Pn	12 49 32.0	0.0
AROD	Rodeo	2.01	75	i P	Pn	12 49 33.0	-0.4
VA03	San Esteban	2.27	154	i S	Sn	12 50 05.8	+2.1
VA03				IAML		12 50 15.9	
	comp=E,3µm,0.6s						
VA03	San Esteban	2.27	154	Pn	Pn	12 49 36.7	0.0
VA03	San Esteban	2.27	154	i P	Pn	12 49 36.0	-0.7
ACCO	Cerro Coronel	2.28	87	i P	Pn	12 49 37.0	-0.1
ACDV	Cuesta del Vie	2.30	77	i P	Pn	12 49 38.0	+0.8
VA01	Torpederas	2.30	179		Pn	12 49 38.3	+1.3
ROCH	El Roble	2.33	165	i S	Sn	12 50 07.6	+2.3
ROC1	El Roble	2.33	165	i P	Pn	12 49 37.0	-0.7
RTLS	Leoncito	2.33	118	i P	Pn	12 49 37.0	-0.7
AUSP	Uspallata	2.49	128	i P	Pn	12 49 39.0	-0.9
AC04	Llanos de Chal	2.56	13		Pn	12 49 40.8	+0.2
AC04	Llanos de Chal	2.56	13	i P	Pn	12 49 41.0	+0.4
PEL	Peldehue	2.57	160	i S	Sn	12 50 13.4	+2.4
PEL				IAML		12 50 18.8	
	comp=E,1µm,0.2s						
PEL	Peldehue	2.57	160	Pn	Pn	12 49 41.2	+0.4
PEL	Peldehue	2.57	160	i P	Pn	12 49 42.0	+1.2
MT02	Curacav	2.58	169	eP	Pn	12 49 40.9	+0.1
MT02				eS	Sn	12 50 15.4	+4.2
MT02				IAML		12 50 23.1	
	comp=E,720nm,0.4s						
MT02	Curacav	2.58	169		Pn	12 49 41.0	+0.1
MT02	Curacav	2.58	169	i P	Pn	12 49 40.0	-0.9
ZON	Zonda	2.73	108	i P	Pn	12 49 43.0	+0.1
MT05	Renca	2.79	163	eP	Pn	12 49 44.0	+0.2
MT05				eS	Sn	12 50 19.1	+2.7
MT05				IAML		12 50 26.8	
	comp=E,3µm,0.3s						
MT05	Renca	2.79	163	i P	Pn	12 49 44.0	+0.2
FCH	Farellones	2.87	156	eP	Pn	12 49 45.9	+0.8
FCH				eS	Sn	12 50 21.3	+2.6
FCH				IAML		12 50 31.9	
	comp=E,1µm,0.1s						
RTCV	Cerro Valdivia	2.94	114	i P	Pn	12 49 46.0	+0.1
ASAL	Salagasta	3.08	128	i P	Pn	12 49 48.0	+0.2
MT01	Popeta	3.16	173	i P	Pn	12 49 48.0	-0.8
ARCO	CERRO ARCO	3.18	133	i P	Pn	12 49 51.0	+1.9
GO03	Copiap	3.37	23	i P	Pn	12 49 54.0	+2.3
LMEL	Las Melosas	3.37	158	i S	Sn	12 50 32.7	+2.0
BO04	La Punta	3.40	164	⇑iP	Pn	12 49 51.6	-0.4
BO04				eS	Sn	12 50 34.0	+3.0
BO04				IAML		12 50 48.8	
	comp=E,673nm,0.5s						
AAGR	Agrelo	3.41	135	i P	Pn	12 49 53.0	+0.8
VCA	Vinchina	3.63	58	i P	Pn	12 49 57.0	+1.7
AVFE	Valle Fertil	3.67	90	i P	Pn	12 49 54.0	-1.7
BO01	Tunca	3.70	172		Pn	12 49 56.3	+0.1
BO01	Tunca	3.70	172	i P	Pn	12 49 56.0	-0.2
BO02	Sierra Bellavi	4.14	169	i P	Pn	12 50 02.0	-0.2
GO05	Huala	4.29	182	i P	Pn	12 50 03.0	-1.2
ACLC	CERRO LA CRUZ	4.32	74	i P	Pn	12 50 04.0	-0.8
ACHE	Chepes	4.36	97	i P	Pn	12 50 04.0	-1.3
AC02	Maricunga	4.48	31		Pn	12 50 07.1	-0.1
AC02	Maricunga	4.48	31	i P	Pn	12 50 08.0	+0.7
APLL	PUNTA DE LOS L	4.48	87	i P	Pn	12 50 06.0	-0.9
RFA	San Rafael	4.88	147	i P	Pn	12 50 11.0	-1.3
ML02	Panimavida	5.04	177		Pn	12 50 15.9	+1.5
CYA	Choya	5.62	68	i P	Pn	12 50 21.0	-1.5
H03N1	Juan Fernandez	6.69	244	Pn	Pn	12 50 38.7	+1.9
H03N1				T	T	12 57 35.1	
	baz=71,slow=72,SNR=1999						
H03N3	Juan Fernandez	6.70	244	Pn	Pn	12 50 38.6	+1.7
H03N3				T	T	12 57 51.7	
	baz=71,slow=72,SNR=2210						
H03N2	Juan Fernandez	6.70	244	Pn	Pn	12 50 38.8	+1.9
	SNR=128						
H03N2				T	T	12 57 35.7	
	baz=71,slow=72,SNR=1767						
FSA	Cafayete	6.82	49	i P	Pn	12 50 40.0	+1.0
AHML	Horco Molle	6.83	57	i P	Pn	12 50 39.0	0.0
H03S3	Juan Fernandez	6.84	241	Pn	Pn	12 50 40.2	+1.4
	baz=33,slow=19,SNR=8.9						
H03S3				T	T	12 57 55.7	
	baz=73,slow=78,SNR=8.4						
H03S1	Juan Fernandez	6.84	241	Pn	Pn	12 50 39.4	+0.6
	baz=33,slow=19,SNR=9.6						
H03S1				T	T	12 57 55.1	
	baz=73,slow=78,SNR=9.8						
H03S2	Juan Fernandez	6.86	241	Pn	Pn	12 50 39.5	+0.5
	baz=33,slow=19,SNR=11						
H03S2				T	T	12 57 56.8	
	baz=73,slow=78,SNR=7.3						
PB15	IPOC Station P	7.74	15		Pn	12 50 51.2	-0.4
LC01	Cunco	8.16	181		Pn	12 50 57.2	+0.1
LVC	Limon Verde	8.45	18	Pn	Pn	12 51 01.0	-0.5
	comp=E,0.6nm,0.3s,baz=230,slow=6.6,SNR=2.0						
LVC				Sn	Sn	12 52 37.5	+1.9
	comp=E,1.9nm,0.3s,baz=148,slow=20,SNR=1.8						
LVC				LR	LR	12 54 58.0	
	comp=E,46nm,20.1s,baz=227,slow=42						
LVC	Limon Verde	8.45	18	eP	Pn	12 51 14.4	+13
LVC	Limon Verde	8.45	18		Pn	12 51 00.7	-0.8
PLCA	Paso Flores	10.04	175	Pn	Pn	12 51 17.3	-5.5
	comp=E,0.0nm,0.3s,baz=19,slow=17,SNR=1.0						
PLCA				LR	LR	12 55 00.8	
	comp=E,97nm,19.6s,baz=347,slow=37						
PLCA	Paso Flores	10.04	175	Pn	Pn	12 51 23.4	+0.5
LL04	Puerto Octay	10.19	183	Pn	Pn	12 51 26.2	+1.4
TA01	Diego Aracena	10.20	8	Pn	Pn	12 51 24.7	-0.4
TRQA	Tornquist	10.87	135		Pn	12 51 32.1	-2.1
ITQB	Itaqui	13.09	89	Pn	Pn	12 52 01.2	-3.3
CPUP	Villa Florida	13.38	74	Pn	Pn	12 52 05.2	-3.1
	comp=E,0.2nm,0.3s,baz=203,slow=14,SNR=1.9						
CPUP				LR	LR	12 57 43.8	
	comp=E,97nm,18.7s,baz=235,slow=40						
CPUP	Villa Florida	13.38	74	eP	P	12 52 14.9	-0.7
CPUP	Villa Florida	13.38	74	Pn	Pn	12 52 05.4	-2.9
LPAZ	La Paz	14.73	14	eP	P	12 52 37.5	+6.1
PLTB	Pedras Altas	15.53	99	eP	Pn	12 52 31.1	-5.3
PLTB	Pedras Altas	15.53	99	Pn	Pn	12 52 34.7	-1.7
PLTB				IAmb	IAmb	12 52 54.7	
	comp=Z,24nm,1.4s						
CPSB	Cacapava Do Su	15.75	94	eP	Pn	12 52 37.1	-2.1
SIV	San Ignacio	17.59	36	P	P	12 53 03.0	+0.5
	comp=Z,0.5nm,0.3s,baz=232,slow=11,SNR=7.5						
AQDB	Aquidauana	17.66	58	eP	P	12 53 10.1	+7.0
CNLB	Canela	18.12	91	eP	P	12 53 04.7	-3.6
PTGB	Pitanga	18.38	76	eP	Pn	12 53 13.7	+1.8
TRCB	Terra Rica	18.76	70	eP	Pn	12 53 19.7	+3.3
PTLB	Pontes e Lacer	19.07	40	P	Pn	12 53 20.2	+0.2
TER01	Tubaro-SC	19.75	89	eP	P	12 53 22.9	-3.2
PCMB	Pacaembu	20.45	69	eP	Pn	12 53 37.2	+0.8
VILB	Vilhena	20.63	34	P	Pn	12 53 36.6	-1.9
VILB				IAmb	IAmb	12 54 01.4	
	comp=Z,20nm,1.1s						
TIJ01	Guaruva-PR	20.74	81	eP	Pn	12 53 37.2	-2.7
ETMB	Extrema	21.41	15	eP	P	12 53 46.9	+2.9
CZSB	Cruzeiro do Su	22.89	357	eP	P	12 53 59.3	-0.4
BB19B	Bebedouro	22.92	71	eP	P	12 53 59.6	-0.6
RCLB	Rio Claro- Sao	23.12	75	eP	P	12 54 01.4	-0.7
VAO	Valinhos	23.34	77	eP	P	12 54 02.6	-1.6
ARAG	Araguaiana, MT	23.56	55	eP	P	12 54 08.7	+2.6
CLDB	Colider	24.66	40	eP	P	12 54 20.8	+4.6
IPMB	Ipameri, GO	24.82	65	eP	P	12 54 19.0	+1.3
MAN01	Angra dos Reis	25.93	79	eP	P	12 54 23.7	-4.0
BSCB	Bom Sucesso	26.04	75	eP	P	12 54 27.8	-1.0
BDFB	Brasilia	26.37	61	P	P	12 54 31.8	0.0
	comp=Z,8.8nm,0.8s,baz=254,slow=21,SNR=7.0						
BDFB	Brasilia	26.37	61	P	P	12 54 31.6	-0.2
BDFB				IAmb	IAmb	12 54 35.8	
	comp=Z,7.3nm,0.8s						
SNDB	Serra Nova Dou	26.55	50	eP	P	12 54 37.3	+4.0
VAS01	Vassouras-RJ	26.60	78	eP	P	12 54 31.4	-2.4
DUB01	Friburgo-RJ	27.59	79	eP	P	12 54 38.0	-4.6
NPGB	Novo Progresso	28.10	36	eP	P	12 54 52.0	+4.8
DIAM	Diamantina, MG	28.26	71	eP	P	12 54 48.7	-0.1
PEXB	Peixe	28.49	55	eP	P	12 54 53.7	+3.0
MACA	Manacapuru-AM	29.32	23	eP	P	12 55 02.9	+4.9
JANB	Januaria	29.55	64	eP	P	12 55 01.6	+1.4
SMTB	Santa Maria do	31.29	51	eP	P	12 55 18.0	+2.5
OTAV	Otavalo	31.44	347	P	P	12 55 20.1	+2.9
BOAV	Boa Vista	34.61	20	eP	P	12 55 48.3	+3.9
NBPN	Ponto Novo - B	35.28	63	eP	P	12 55 50.3	0.0
MCPB	Macapa, AP	35.49	35	eP	P	12 55 55.6	+3.6
NBMA	Muriti-CE	38.60	60	eP	P	12 56 19.9	+1.5
NBPS	Pedro II - PI	38.71	53	eP	P	12 56 21.1	+1.7
NBPA	Parau_RN	40.89	60	eP	P	12 56 37.6	+0.3
VNA3	Neumayer Olymp	52.30	159	P	P	12 58 07.8	+1.8
VNA2	Neumayer--Watz	52.94	158	P	P	12 58 11.7	+1.1
	baz=290,slow=8.1						
SNAA	Sanae	54.53	159	P	P	12 58 23.7	+1.4
SNAA	Sanae	54.53	159	P	P	12 58 23.9	+1.6
SNAA				IAmb	IAmb	12 58 28.0	
	comp=Z,4.2nm,0.9s						
QSPA	South Pole Qui	59.51	180	P	P	12 58 53.9	-3.8
TXAR	Lajitas Array	67.03	330	P	P	12 59 51.9	+4.2
	comp=Z,0.9nm,0.8s,baz=134,slow=7.2,SNR=4.7						
TXAR	Lajitas Array	67.03	330	P	P	12 59 52.2	+4.5
LIC	Lamto	73.49	72	eP	P	13 00 31.5	+4.0
	comp=Z,37nm,1.2s						
TIC	Toumodi	73.73	72	eP	P	13 00 32.9	+4.0
KIC	Kosan Boka	73.80	72	eP	P	13 00 33.4	+4.1
	comp=Z,12nm,0.8s						
DBIC	Dimbokro	73.88	72	P	P	13 00 31.1	+1.3
	comp=Z,5.7nm,0.5s,baz=232,slow=6.3,SNR=15						
DBIC	Dimbokro	73.88	72	P	P	13 00 30.9	+1.2
MAW	Mawson	76.24	164	P	P	13 00 44.2	+1.8
	comp=Z,2.3nm,0.8s,baz=204,slow=6.7,SNR=6.7						
NVAR	Mina Array Bea	81.36	325	P	P	13 01 15.3	+4.2
	comp=Z,0.5nm,0.8s,baz=127,slow=7.0,SNR=2.3						
TORD	Torodi Ar. Bea	82.83	70	P	P	13 01 20.9	+1.8
	comp=Z,2.1nm,0.7s,baz=277,slow=6.3,SNR=8.9						
TORD	Torodi Ar. Bea	82.83	70	P	P	13 01 21.0	+1.9
TORD				IAmb	IAmb	13 01 42.4	
	comp=Z,3.4nm,1.1s						
ULM	Lac du Bonnet	83.41	345	P	P	13 01 24.6	+3.4
	comp=Z,4.9nm,0.9s,baz=198,slow=7.2,SNR=2.9						
H11S2	WAKE ISLAND Hy	126.03	271	T	T	15 26 51.8	
	baz=114,slow=75,SNR=62						
H11S1	WAKE ISLAND Hy	126.05	271	T	T	15 26 50.0	
	baz=114,slow=75,SNR=111						
H11S3	WAKE ISLAND Hy	126.05	271	T	T	15 26 50.4	
	baz=114,slow=75,SNR=89						
H11N3	WAKE ISLAND Hy	126.36	273	T	T	15 27 16.0	
	baz=110,slow=74,SNR=11						
H11N1	WAKE ISLAND Hy	126.38	273	T	T	15 27 22.3	
	baz=110						
H11N2	WAKE ISLAND Hy	126.38	273	T	T	15 27 17.2	
	baz=110,slow=74,SNR=9.8						
BVAR	Borovoye Array	144.64	40	PKP	PKiKP	13 08 31.8	-2.1
	comp=Z,1.5nm,0.6s,baz=265,slow=10,SNR=5.0						
KURBB	Kurchatov Arra	150.23	40	PKPbc	PKPab	13 08 46.7	-4.3
	comp=Z,1.1nm,0.7s,baz=289,slow=2.7,SNR=5.0						
KURK	Kurchatov	150.23	39	PKPdf	PKPdf	13 08 35.1	-4.4
KURK					PKiKP	13 08 43.6	-1.8
ZALV	Zalesovo Beam	151.27	29	PKPbc	PKiKP	13 08 49.3	+1.8
	comp=Z,5.0nm,0.7s,baz=298,slow=3.2,SNR=7.4						
ZALV	Zalesovo Beam	151.27	29	PKPdf	PKPdf	13 08 37.5	-3.4
ZALV					PKiKP	13 08 48.9	+1.4
MKAR	Makanchi Array	154.31	44	PKPbc	PKiKP	13 08 56.2	+2.1
	comp=Z,0.4nm,0.7s,baz=340,slow=7.7,SNR=4.0						
MKAR	Makanchi Array	154.31	44	PKPdf	PKPdf	13 08 41.7	-4.0
MKAR					PKiKP	13 08 52.3	-1.8

WEL 22 13:04:55.8, 39°S±2°×**17°4E**±°**, h7**^{km}±2^{km}**, M2.0**/9**, ML2.4**/12**, MLv2.0**/9**, Error ellipse: s-maj=0.0km s-min=0.0km az=103.0, Off west coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PKE	Pukeiti	0.06	166	P	Pg	13 04 58.2	+0.6
PKE				S	Sg	13 04 58.8	-0.1
PKE	Pukeiti	0.06	166	P	Pg	13 04 58.2	+0.6
NBEZ	Newall Road No	0.15	210	P	Pg	13 04 59.7	+0.7
NBEZ				S	Sg	13 05 03.5	+2.3
NBEZ	Newall Road No	0.15	210	P	Pg	13 04 59.8	+0.7
NBEZ				S	Sg	13 05 03.6	+2.3
KHEZ	Kahui Hut	0.17	167	P	Pg	13 05 00.2	+1.0
KHEZ				S	Sg	13 05 04.1	+2.5
KHEZ	Kahui Hut	0.17	167	P	Pg	13 05 00.3	+1.0
KHEZ				S	Sg	13 05 04.0	+2.4
NEZ	North Egmont	0.17	144	P	Pg	13 05 00.2	+0.8
NEZ	North Egmont	0.17	144	P	Pg	13 05 00.2	+0.8
DREZ	Durham Road	0.19	107	P	Pg	13 05 00.8	+1.1
DREZ				S	Sg	13 05 05.0	+2.8
DREZ	Durham Road	0.19	107	P	Pg	13 05 00.8	+1.1
DREZ				S	Sg	13 05 05.1	+2.8
PREZ	Palmer Road	0.26	144	P	Pb	13 05 02.0	-0.9

PREZ	Palmer Road	0.26	144	P	Pb	13 05 01.9	-1.0
MHEZ	Mangahewa	0.28	78	P	Pb	13 05 02.4	-0.9
MHEZ				S	Sb	13 05 07.5	-0.8
MHEZ	Mangahewa	0.28	78	P	Pb	13 05 02.4	-0.9
MHEZ				S	Sb	13 05 07.4	-0.8
NMEZ	Namu Road	0.29	194	P	Pb	13 05 04.0	+0.7
NMEZ				S	Sb	13 05 08.0	-0.4
VRZ	Vera Road	0.62	89	P	Pg	13 05 08.2	+0.5
HIZ	Hauiti	0.93	49	P	Pg	13 05 12.8	-0.9
HIZ				S	Sg	13 05 25.9	+0.1
WAZ	Wanganui	1.00	129	P	Pg	13 05 15.3	+0.2
PKVZ	Pokaka	1.08	99	P	Pg	13 05 16.3	-0.4
MTVZ	Mangateitei	1.19	103	P	Pg	13 05 10.7	-8.1
FWVZ	Far West T-bar	1.24	96	P	Pb	13 05 19.7	0.0
FWVZ				S	Sn	13 05 36.8	-0.1
TRVZ	Turoa	1.24	98	P	Pg	13 05 19.1	-0.6
WTVZ	West Tongariro	1.26	90	P	Pn	13 05 19.6	-0.4
WTVZ				S	Sn	13 05 37.3	0.0
WHVZ	Whangaehu Hut	1.27	97	P	Sn	13 05 37.6	0.0
NGZ	Ngauruhoe	1.27	92	P	Pn	13 05 20.2	0.0
NGZ				S	Sn	13 05 37.7	+0.1
NNVZ	North Ngauruho	1.28	90	P	Pn	13 05 19.7	-0.7
NNVZ				S	Sn	13 05 38.1	+0.2
WNVZ	Wahianoa	1.28	99	P	Pn	13 05 20.2	-0.2
WNVZ				S	Sb	13 05 37.5	+0.3
NTVZ	North Tongarir	1.33	89	P	Sg	13 05 38.6	0.0
ETVZ	East Tongariro	1.36	91	P	Pb	13 05 21.5	-0.1
ETVZ				S	Sb	13 05 39.1	-0.2
MOVZ	Moawhango	1.41	102	P	Pn	13 05 21.8	-0.3
MOVZ				S	Sb	13 05 40.6	-0.3
RATZ	Rangitukua	1.43	80	P	Pn	13 05 22.3	0.0
RATZ				S	Sn	13 05 41.4	0.0
TLZ	Tolley Road	1.47	57	P	Pn	13 05 21.9	-0.9
RITZ	Rihia Road	1.48	85	P	Pn	13 05 16.1	-6.8
BHHZ	Black Hill Sta	1.67	103	P	Pb	13 05 26.9	0.0
DUWZ	D'Urville Isla	1.67	181	P	Pb	13 05 26.5	-0.4
DUWZ				S	Sg	13 05 49.0	-0.5
PNHZ	Pukenui	1.90	115	P	Pb	13 05 30.8	0.0
OGWZ	Otaki Gorge	1.92	152	P	Pb	13 05 30.8	-0.4

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*IDC **22** 13:07:19.0±4.1, 13°.12N×87°.34W, h0^{km}, mb3.7/2, mb1 4.0/2, mb1mx3.3/22, mbtmp3.7/2, Error ellipse: s-maj=106.6km s-min=70.6km az=65.0*

*SNET **22** 13:07:46.2±1.2, 13°.71N×88°.44W, h184^{km}±5^{km}, ML3.3*

ISC 22 13:07:44.8±1.1, **13°.6N**±0°.2×**88°.44W**±0°.09, **h198**^{km}±7^{km}, **n21**, σ**0^{s}.82**/29, **El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COEB	Comit de Eme	0.10	241	eP	Pn	13 08 10.8	-0.2
COEB				IAML		13 08 12.4	
	comp=Z,380nm,0.5s						
PACA	Pacayal	0.14	123	eP	Pn	13 08 11.8	+0.7
SCLA	Alcaldia de Sa	0.32	299	eP	Pn	13 08 11.8	+0.6
SCLA				eS	S	13 08 32.0	+0.4
COEG	Centro de Oper	0.43	280	eP	Pn	13 08 11.7	+0.1
COEG				IAML		13 08 13.6	
	comp=Z,304nm,0.3s						
PAVA	Las Pavas	0.51	289	eS	S	13 08 31.8	-1.0
SJTE	Alcalda de S	0.55	277	eP	Pn	13 08 12.2	+0.2
SJTE				IAML		13 08 12.5	
	comp=Z,389nm,0.4s						
SJTE				eS	S	13 08 32.7	-0.3
LCND	La Caada	0.59	114	eP	Pn	13 08 12.2	0.0
LCND				eS	S	13 08 32.5	-0.6
LFRS	El Faro	0.61	277	i P	Pn	13 08 12.5	+0.1
LBRS	Las Brisas	0.61	288	eP	Pn	13 08 12.9	+0.6
CNCH	Conchagua	0.65	114	eP	Pn	13 08 12.6	+0.1
CNCH				eS	S	13 08 34.1	+0.2
LFU	La Fuente	0.68	287	eP	Pn	13 08 13.1	+0.4
TACO	Tacachico	0.98	296	eP	Pn	13 08 14.7	+0.4
TACO				eS	S	13 08 36.2	-0.9
JAYA	Jayaque - finc	0.98	276	eP	Pn	13 08 14.4	-0.1
JAYA				IAML		13 08 16.1	
	comp=Z,267nm,0.4s						
JAYA				eS	S	13 08 37.1	-0.2
CEVE	Cerro Verde	1.18	284	eP	Pn	13 08 16.2	+0.2
CEVE				eS	S	13 08 40.8	+0.7
CEVE				IAML		13 08 47.2	
	comp=Z,320nm,0.3s						
MTO3	Montecristo	1.23	314	eP	Pn	13 08 17.1	+0.7
MTO3				eS	S	13 08 39.0	-1.8
TGUH	Tegucigalpa,Un	1.25	66	eP	Pn	13 08 16.6	+0.2
ESQI	Esquipulas	1.33	319	eP	Pn	13 08 16.5	-0.6
TXAR	Lajitas Array	21.12	320	P	P	13 12 16.5	+2.2
	comp=Z,0.5nm,0.5s,baz=137,slow=9.5,SNR=12						
ULM	Lac du Bonnet	37.10	352	P	P	13 14 36.0	-0.1
	comp=Z,1.9nm,0.5s,baz=156,slow=7.9,SNR=1.7						
WRA	Warramunga Arr	138.63	255	PKP	PKiKP	13 26 49.4	-0.8
	comp=Z,0.2nm,0.4s,baz=90,slow=2.4,SNR=5.0						
ASAR	Alice Springs	138.76	250	PKP	PKiKP	13 26 48.8	-1.6
	comp=Z,0.3nm,0.8s,baz=98,slow=2.5,SNR=2.7						

MAN 22 13:09:51.9, 8°.11N×125°.08E, h22^{km}, mb4.4, ML3.2, MS2.9, Mindanao

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WEL 22 13:10:48.0±1.4, **34°S**±31°×**17°9W**±3°3, **h207**^{km}±49^{km}, **M3.7**/2, **ML4.2**/7, **MLv3.7**/2, **Error ellipse: s-maj=0.1km s-min=0.0km az=132.5, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	4.31	206	P	Pn	13 11 53.5	-0.2
WMGZ				S	S	13 12 46.8	+1.6
PKGZ	Pakihiroa	4.50	209	P	Pn	13 11 55.9	-0.2
PKGZ				S	S	13 12 48.2	-1.4
HAZ	Te Kaha	4.51	212	P	Pn	13 11 56.1	-0.1
HAZ				S	S	13 12 52.7	+3.0
PUZ	Puketiti	4.59	206	P	Pn	13 11 56.8	-0.5
PUZ				S	S	13 12 51.3	-0.3
RUGZ	Raukumara Rang	4.73	212	P	Pn	13 11 59.3	+0.2
RUGZ				S	S	13 12 54.7	-0.3
TWGZ	Tauwhareparae	4.78	208	P	Pn	13 11 59.8	0.0
TWGZ				S	S	13 12 57.9	+1.7
CNGZ	Carnagh Statio	4.97	204	P	Pn	13 12 02.9	+0.8
MWZ	Matawai	5.10	210	P	Pn	13 12 03.8	0.0
MWZ				S	S	13 13 03.9	+0.5
URZ	Urewera	5.22	214	P	Pn	13 12 04.7	-0.6
URZ				S	S	13 13 06.2	+0.1
MTHZ	Maungataniwha	5.83	212	P	Pn	13 12 13.2	+0.1
MTHZ				S	S	13 13 21.4	+1.0

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*TAP **22** 13:16:18.5, 23°.97N×122°.39E, h20^{km}, ML2.7, D*

*JMA **22** 13:16:18.0±0.2, 23°.96N×122°.37E, h15^{km}±4^{km}, M2.2*

ISC 22 13:16:17.2±1.0, **23°.98N**±0°.02×**122°.37E**±0°.02, **h18**^{km}±8^{km}, **n84**, σ**0^{s}.59**/114, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	Heping Village	0.67	300	eP	Pn	13 16 31.3	-0.5
	baz=299						
JYNG	Yonagunijimaku	0.71	48	P	Pn	13 16 31.7	-0.6
JYNG				S	Sg	13 16 40.8	+0.3
ETL	Fush Village	0.71	285	eP	Pn	13 16 32.4	0.0
	baz=284						
EWUT	Wuta	0.71	311	eP	Pn	13 16 31.8	-0.7
	baz=310						
EWUT				S	Sn	13 16 42.3	-0.7
	baz=310						
TWD	Chiawan	0.72	278	eP	Pn	13 16 32.4	-0.1
	baz=278						
TWD				eS	Sn	13 16 42.3	-0.8
	baz=278						
ENA	Nanau	0.73	308	eP	Pn	13 16 32.1	-0.6
	baz=307						
NACB	Ninganchiao	0.74	286	eP	Pn	13 16 32.4	-0.4
	baz=285						
NACB				S	Sn	13 16 42.8	-0.7
	baz=285						
YOJ	Yonaguni jima	0.76	50	i P	Pn	13 16 32.9	-0.2
	baz=48						
YOJ				S	Sg	13 16 42.3	+0.1
	baz=48						
YOJ	Yonaguni jima	0.76	50	P	Pn	13 16 32.8	-0.2
YOJ				S	Sg	13 16 42.2	+0.1
TWC	Suao	0.79	323	eP	Pg	13 16 32.6	-0.1
	baz=322						
ETM	Tongmen	0.80	269	eP	Pn	13 16 33.4	-0.2
	baz=269						
ETLH	Xiulin Townshi	0.84	286	eP	Pn	13 16 34.1	-0.2
	baz=285						
ETLH				S	Sn	13 16 45.9	-0.5
	baz=285						
ESL	Shilin	0.87	260	P	Pn	13 16 34.8	+0.2
	baz=259						
ESL				S	Sn	13 16 46.5	-0.5
	baz=259						
NDS	Dongshan	0.89	318	eP	Pn	13 16 34.6	-0.2
	baz=316						
NDS				eS	Sn	13 16 46.5	-0.8
	baz=316						
EGFH	Guangfu	0.92	251	eP	Pg	13 16 35.7	+0.7
	baz=251						
EGFH				eS	Sn	13 16 48.2	+0.3
	baz=251						
EGS		0.95	335	eP	Pg	13 16 36.4	+0.7
	baz=334						
TWE	Neicheng	0.98	319	eP	Pg	13 16 36.6	+0.4
	baz=318						
TWE				S	Sn	13 16 49.3	-0.3
	baz=318						
ENTT	Nioudou	0.99	312	eP	Pg	13 16 36.8	+0.4
	baz=311						
HGSD	Ruisui	0.99	241	eP	Pg	13 16 36.3	-0.2
	baz=241						
NDT	Datong Townshi	1.00	309	P	Pg	13 16 37.0	+0.4
	baz=308						
NDT				eS	Sg	13 16 49.6	-0.2
	baz=308						
NTC	Toucheng	1.00	331	eP	Pg	13 16 37.3	+0.7
	baz=329						
NNS	Nan Shan	1.02	297	P	Pg	13 16 37.2	+0.2
	baz=296						
NNS				eS	Sg	13 16 50.9	+0.4
	baz=296						
WHF	Hehuan Shan	1.02	280	P	Pg	13 16 37.3	+0.1
	baz=279						
WHF				S	Sn	13 16 50.9	-0.4
	baz=279						
FUSS	Fushou	1.06	285	P	Pg	13 16 38.0	+0.1
	baz=284						
FUSS				S	Sg	13 16 52.4	+0.5
	baz=284						
EHY	Hungye	1.07	244	eP	Pg	13 16 38.2	+0.3
	baz=244						
EHY				S	Sg	13 16 52.1	+0.2
	baz=244						
TWB1	Santiao Chiao	1.08	341	eP	Pg	13 16 37.7	-0.5
	baz=340						
OWD	Renai	1.09	269	eP	Pg	13 16 38.8	+0.3
	baz=269						
CHGB	Renai	1.10	275	P	Pg	13 16 38.4	-0.1
	baz=274						
CHGB				eS	Sg	13 16 53.4	+0.4
	baz=274						
TIPB	Shuangxi	1.11	333	P	Pg	13 16 38.5	-0.2
	baz=332						
TIPB				eS	Sg	13 16 52.9	-0.3
	baz=332						
NWLT	Wulai	1.12	315	P	Pg	13 16 39.0	0.0
	baz=314						
TWT	Tachien	1.13	284	eP	Pg	13 16 39.8	+0.8
	baz=283						
YHNB	Yeheng	1.14	307	P	Pg	13 16 39.1	-0.2
	baz=306						
TDCB	Techi	1.14	284	P	Pg	13 16 39.4	0.0
	baz=283						
TDCB				eS	Sg	13 16 54.1	-0.2
	baz=283						
YULB	Yu-li	1.14	240	eP	Pg	13 16 39.4	+0.1
	baz=240						
EYUL	Yuli	1.15	237	P	Pg	13 16 39.4	-0.1
	baz=237						
NSK	Sanguang	1.16	307	P	Pg	13 16 39.3	-0.3
	baz=306						
TWF1	Yuli	1.17	238	eP	Pg	13 16 39.3	-0.5
	baz=238						
NWF	Wu-fen Shan	1.22	334	eP	Pb	13 16 40.0	+0.2
	baz=333						
WFSB	Wu-fen Shan	1.22	334	eP	Pb	13 16 40.0	+0.3
	baz=333						
TWA	Mucha	1.23	324	eP	Pg	13 16 40.7	-0.3
	baz=323						
NHDH	Xindian Distri	1.25	322	eP	Pg	13 16 41.3	0.0
	baz=321						
FULB	Fuli	1.26	232	eP	Pg	13 16 40.8	-0.7
	baz=232						
TATO	Taipei	1.28	321	P	Pg	13 16 41.4	-0.5
	baz=320						
IRIF	Iriomote-Funau	1.29	74	P	Pg	13 16 42.3	+0.2
IRIF				eS	Sg	13 16 58.6	-0.4
SSLB	Suanglung	1.31	262	eP	Pg	13 16 42.0	-0.5
	baz=262						
SSLB				eS	Sb	13 16 58.4	+0.5
	baz=262						
DPDB	Guoxing	1.32	273	eP	Pg	13 16 42.1	-0.6
	baz=272						
WHP	Taichung City	1.34	283	eP	Pg	13 16 42.6	-0.4
	baz=282						
WCS	Beigang Elemen	1.34	274	P	Pg	13 16 42.4	-0.6
	baz=273						
SMLT	Sun Moon Lake	1.35	266	eP	Pg	13 16 42.5	-0.7
	baz=266						
YM01	YM01	1.37	328	eP	Pb	13 16 42.6	+0.2
	baz=327						
TYC	Yuchr	1.39	267	eP	Pb	13 16 43.0	+0.4
	baz=267						
EDH	Donghe	1.40	225	eP	Pb	13 16 42.8	0.0
	baz=225						
YM08	YM08	1.40	330	eP	Pb	13 16 43.1	+0.2
	baz=328						
LIOB	Emei	1.41	299	eP	Pg	13 16 44.0	-0.3
	baz=298						
NSTT	Nanjuang	1.41	298	eP	Pg	13 16 43.9	-0.5
	baz=297						
NSTT				eS	Sg	13 17 01.6	-1.2
	baz=297						
ELDTW	Lidau	1.47	238	P	Pb	13 16 43.9	-0.2
	baz=238						
ELDTW				eS	Sn	13 17 01.6	-0.1
	baz=238						
TWQ1	Liyutan	1.51	285	eP	Pg	13 16 45.3	-0.9
	baz=284						
ALS	Alishan	1.51	252	eP	Pb	13 16 45.0	+0.1
	baz=252						
ALS				eS	Sb	13 17 03.7	-0.1
	baz=252						
WJS	Zhushan	1.51	264	eP	Pg	13 16 46.0	-0.4
	baz=264						
JKRS	Kuro-shima	1.52	80	P	Pg	13 16 46.2	-0.3
JKRS				S	Sg	13 17 05.5	-0.8
NSY	Sanyi	1.53	287	eP	Pg	13 16 45.8	-0.9
	baz=286						
LDUT	Ludao	1.54	213	eP	Pn	13 16 43.6	-0.2
	baz=213						
CHN5	Tsauling	1.60	257	eP	Pg	13 16 47.4	-0.5
	baz=256						
TWGBT	Beinan	1.66	226	eP	Pb	13 16 46.8	-0.4
	baz=226						
TWG	Pinlang	1.66	226	eP	Pb	13 16 46.7	-0.5
	baz=226						
JIJ	Ishigaki jima	1.66	76	P	Pb	13 16 47.6	+0.3
JIJ				eS	Sb	13 17 08.9	+0.9
STYH	Taoyuan	1.67	242	eP	Pb	13 16 47.0	-0.5
	baz=241						
STYH				eS	Sb	13 17 07.8	-0.4
	baz=241						
STYT	Tauyuan	1.69	242	eP	Pb	13 16 47.2	-0.6
	baz=241						
TPUB	Ta-pu	1.73	248	eP	Pb	13 16 48.7	+0.1
	baz=247						
WTP	Ta-pu	1.77	246	eP	Pb	13 16 49.3	+0.2
	baz=245						
WRL	Guolierlin Hig	1.83	268	eP	Pb	13 16 49.9	-0.2
	baz=267						
SLGT	Liugui	1.86	239	eP	Pb	13 16 50.6	-0.1
	baz=238						
CHN1	Nanshi	1.87	245	eP	Pb	13 16 50.8	0.0
	baz=245						
TWK	Hsinying	1.87	248	eP	Pb	13 16 50.6	-0.2
	baz=247						
SGST	Jiashian	1.87	242	eP	Pb	13 16 50.7	-0.1
	baz=241						
JISG	Ishigakijimahi	1.87	71	P	Pn	13 16 49.1	+0.8
JISG				eS	Sb	13 17 13.6	-0.3
ECL	Taimali	1.89	224	eP	Pb	13 16 49.9	-1.4
	baz=223						
SSD	Sandimen	2.01	233	eP	Pb	13 16 52.8	-0.5
	baz=232						
TSMG	Majia	2.03	232	eP	Pb	13 16 53.1	-0.4
	baz=231						
MASBT	Mashibuluo	2.10	230	eP	Pb	13 16 53.5	-1.3
	baz=230						
SCZT	Fangliau	2.27	226	eP	Pb	13 16 56.6	-1.0
	baz=225						
SLIU	Shizi	2.27	220	eP	Pn	13 16 55.4	+1.5
	baz=219						
PHUB	P'eng-hu	2.61	260	eP	Pn	13 17 00.5	+2.0
	baz=259						
PHUB				eS	Sn	13 17 30.7	+1.0
	baz=259						
PNG	Penghu	2.61	262	eP	Pn	13 17 00.6	+2.1
	baz=261						
PNG				eS	Sn	13 17 31.1	+1.3
	baz=261						

IDC 22 13:16:21.0±2.3, **1°.11N×126°.73E, h0**^{km}, **mb3.2**/3, **mb1 3.4**/3, **mb1mx3.3**/22, **mbtmp3.2**/3, **Error ellipse: s-maj=184.8km s-min=28.3km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.21	161	P	P	13 21 18.3	-1.0
	0.8nm,0.6s,baz=339,slow=11,SNR=7.2						
ASAR	Alice Springs	25.59	165	P	P	13 21 52.9	+0.7
	0.1nm,0.4s,baz=344,slow=11,SNR=7.2						
MKAR	Makanchi Array	59.71	326	P	P	13 26 27.4	-0.1
	0.2nm,0.5s,baz=127,slow=9.3,SNR=1.9						

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*IDC **22** 13:30:27.3±1.7, 0°.94N×127°.38E, h0^{km}, mb3.5/3, mb1 3.7/4, mb1mx3.4/29, mbtmp3.5/4, ML3.0/1, MS2.9/2, Ms1 2.9/2, ms1mx2.4/25, Error ellipse: s-maj=65.4km s-min=27.3km az=60.0*

*DJA **22** 13:30:28.9±0.4, 1°N±2°×12°8E±°, h10^{km}, M3.2/7, MLv3.2/7*

ISC 22 13:30:29.0±1.3, **1°.03N**±0°.08×**127°.55E**±0°.08, **h10**^{km}, **n10**, σ**0^{s}.63**/10, **mb3.6**/3, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.32	215	P	Pg	13 30 35.2	-0.2
TNTI				S	Sg	13 30 39.6	-0.1
LBMI	Labuha	1.66	182	P	Pn	13 30 58.9	+0.7
LBMI				S	Sb	13 31 21.1	+0.4
SANI	Sanana	3.44	207	P	Pn	13 31 22.9	+0.2
KMSI	Cibinong	3.60	263	P	Pn	13 31 25.7	+0.8
SIJI	Sorong	4.17	117	Pn	Pn	13 31 33.4	+0.6
	0.8nm,0.3s,baz=124,slow=23,SNR=2.8						
JAY	Jayapura	13.62	105	LR	LR	13 39 50.8	
	comp=Z,58nm,20.2s,baz=350,slow=41						
WRA	Warramunga Arr	21.88	163	P	P	13 35 22.0	-0.4
	0.7nm,0.5s,baz=341,slow=11,SNR=6.2						
ASAR	Alice Springs	25.32	166	P	P	13 35 55.2	-0.9
	1.3nm,0.8s,baz=343,slow=11,SNR=14						
PSI	Prapat	28.66	274	LR	LR	13 47 36.8	
	comp=Z,21nm,20.0s,baz=150,slow=36						
MKAR	Makanchi Array	60.23	326	P	P	13 40 37.3	-0.3
	0.3nm,0.6s,baz=122,slow=6.1,SNR=2.3						

TUN 22 13:55:28.3, 34°.73N×10°.80E, h10^{km}, MD3.7, Tunisia

IDC 22 13:58:04.4±5.9, **16°.34S×175°.05E, h0**^{km}, **mb4.0**/4, **mb1 4.2**/5, **mb1mx3.8**/25, **mbtmp4.1**/5, **ML3.7**/1, **Error ellipse: s-maj=106.7km s-min=39.3km az=43.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	9.92	234	Pn	Pn	14 00 28.3	-0.1
	0.6nm,0.3s,baz=100,slow=17,SNR=15						
URZ	Urewera	21.91	176	P	P	14 02 59.1	-0.1
	5.1nm,0.4s,baz=300,slow=23,SNR=11						
STKA	Stephens Creek	34.05	237	P	P	14 04 51.0	+0.5
	1.2nm,0.6s,baz=49,slow=9.3,SNR=3.6						
WRA	Warramunga Arr	38.78	258	P	P	14 05 30.8	-0.3
	0.2nm,0.3s,baz=96,slow=7.8,SNR=5.4						
ASAR	Alice Springs	39.23	253	P	P	14 05 34.5	-0.3
	2.3nm,0.4s,baz=80,slow=8.9,SNR=120						

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*NEIC **22** 14:05:59.2±1.0, 58°.03N±0°.03×154°.08W±0°.05, h74^{km}±8^{km}, Error ellipse: s-maj=5.0km s-min=4.4km az=193.0*

*AEIC **22** 14:06:00±1.5, 58°.04N±0°.03×154°.13W±0°.07, h66^{km}±7^{km}, ML3.6, ML3.8/67(NEIC), Error ellipse: s-maj=5.5km s-min=4.8km az=100.0*

ISC 22 14:05:58.9±0.9, **58°.03N**±0°.04×**154°.10W**±0°.04, **h75**^{km}±11^{km}, **n266**, σ**0^{s}.63**/262, **Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KABU	Katmai Buttres	0.68	292		Pn	14 06 13.6	-0.4
KABU					Sn	14 06 25.0	-0.1
OHAK	Old Harbor	0.92	151	P	Pn	14 06 17.0	+0.4
	baz=331						
OHAK				S	Sn	14 06 29.7	-0.1
	baz=331						
OHAK	Old Harbor	0.92	151		Pn	14 06 17.0	+0.4
OHAK					Sn	14 06 29.7	-0.1
Q19K	Cape Douglas,	0.94	14	P	Pn	14 06 16.7	-0.3
	baz=196						
Q19K				S	Sn	14 06 30.3	0.0
	baz=196						
Q19K	Cape Douglas,	0.94	14		Pn	14 06 16.7	-0.3
Q19K					Sn	14 06 30.3	0.0
Q19K	Cape Douglas,	0.94	14	IAML		14 06 37.8	
	comp=N,3µm,0.7s						
Q19K				IAML		14 06 39.8	
	comp=E,3µm,1.3s						
PLWL	Peulik Whale M	1.20	272		Pn	14 06 20.2	+0.1
PLK3	Peulik 3	1.21	255		Pn	14 06 20.5	+0.2
PLK3					Sn	14 06 36.7	+0.4
PLK2	Peulik 2	1.22	258		Pn	14 06 20.7	+0.3
PLK1	Peulik 1	1.36	262		Pn	14 06 22.5	+0.3
AUQ	Augustine Qik'	1.38	15		Pn	14 06 22.9	+0.4
AGU	Augustine-Summ	1.38	14		Pn	14 06 23.0	+0.4
AUW	Augustine West	1.39	13		Pn	14 06 23.1	+0.5
AU22	Augustine Moun	1.40	16		Pn	14 06 23.2	+0.5
AU22					Sn	14 06 41.4	+0.8
AUL	Augustine Lava	1.40	14		Pn	14 06 23.1	+0.4
SII	Sitkinak Islan	1.47	182	P	Pn	14 06 24.1	+0.4
	baz=1.0						
SII	Sitkinak Islan	1.47	182		Pn	14 06 24.1	+0.4
PLK5	Peulik 5	1.48	270		Pn	14 06 23.9	+0.2
P18K	Big Mountain,	1.49	337	P	Pn	14 06 23.4	-0.5
	baz=157						
P18K				S	Sn	14 06 41.2	-1.6
	baz=157						
P18K	Big Mountain,	1.49	337		Pn	14 06 23.4	-0.5
P18K					Sn	14 06 41.2	-1.6
P18K	Big Mountain,	1.49	337	IAML		14 06 41.6	
	comp=E,842nm,0.5s						
PLBL	Peulik Blue Cr	1.49	258		Pn	14 06 24.3	+0.3
OPT	Oil Point	1.69	15	P	Pn	14 06 27.1	+0.5
	baz=196						
OPT	Oil Point	1.69	15		Pn	14 06 27.1	+0.5
P19K	Oil Pt	1.69	15	P	Pn	14 06 27.1	+0.5
	baz=196						
P19K	Oil Pt	1.69	15		Pn	14 06 27.1	+0.5
P19K	Oil Pt	1.69	15	IAML		14 06 57.3	
	comp=N,696nm,0.5s						
P19K				IAML		14 07 00.7	
	comp=E,798nm,0.9s						
O18K	Koktuh Hills	1.92	343	P	Pn	14 06 29.4	-0.2
	baz=163						
O18K	Koktuh Hills	1.92	343		Pn	14 06 29.4	-0.2
O18K	Koktuh Hills	1.92	343	IAML		14 06 53.3	
	comp=N,455nm,0.8s						
ILS	Iliamna Low So	2.01	15		Pn	14 06 31.3	+0.4
ILSW	Iliamna Southw	2.02	14		Pn	14 06 31.4	+0.3
ILSW					Sn	14 06 55.3	-0.3
IVE	Iliamna Volcan	2.07	15		Pn	14 06 32.0	+0.3
IVE					Sn	14 06 56.5	-0.2
HOM	Homer	2.08	37	P	Pn	14 06 32.5	+0.9
	baz=220						
HOM				S	Sn	14 06 57.4	+0.8
	baz=220						

HOM	Homer	2.08	37		Pn	14 06 32.5	+0.9
HOM					Sn	14 06 57.4	+0.8
HOM	Homer	2.08	37	IAML		14 07 05.3	
	comp=N,1µm,0.4s						
CNPM	China Poot	2.12	44		Pn	14 06 32.6	+0.4
CNPM					Sn	14 06 57.6	0.0
CNPM	China Poot	2.12	44	IAML		14 07 05.6	
	comp=N,469nm,0.5s						
CNPM				IAML		14 07 07.1	
	comp=E,494nm,0.7s						
ILIM	Iliamna	2.14	15		Pn	14 06 33.2	+0.6
O20K	Slope Mountain	2.20	20	P	Pn	14 06 34.3	+1.0
	baz=201						
O20K	Slope Mountain	2.20	20		Pn	14 06 34.3	+1.0
CHIR	Chirikof Islan	2.36	201	P	Pn	14 06 35.7	+0.2
	baz=20						
CHIR	Chirikof Islan	2.36	201		Pn	14 06 35.7	+0.2
CHIR	Chirikof Islan	2.36	201	IAML		14 07 17.0	
	comp=E,376nm,0.8s						
CHIR				IAML		14 07 20.9	
	comp=N,424nm,0.8s						
BRLK	Bradley Lake	2.41	42		Pn	14 06 36.0	-0.1
BRLK					Sn	14 07 03.0	-1.7
BRLK	Bradley Lake	2.41	42	IAML		14 07 03.4	
	comp=E,472nm,0.4s						
BRLK				IAML		14 07 03.4	
	comp=N,596nm,0.6s						
ANNE	Aniakchak Nort	2.42	244		Pn	14 06 36.7	+0.4
BRSE	Bradley Lake S	2.45	44	P	Pn	14 06 36.7	0.0
	baz=227						
BRSE	Bradley Lake S	2.45	44		Pn	14 06 36.7	0.0
RED	Redoubt Volcan	2.50	15		Pn	14 06 38.0	+0.6
RDSO	Redoubt South	2.53	15		Pn	14 06 38.5	+0.6
RSO	Redoubt South	2.54	15		Pn	14 06 38.4	+0.3
RDWB	Redoubt West	2.55	14		Pn	14 06 38.8	+0.6
ANPB	Aniakchak Plen	2.58	243		Pn	14 06 39.2	+0.8
NCT	North Crescent	2.61	13		Pn	14 06 39.7	+0.7
DFR	Drift River	2.67	15		Pn	14 06 40.7	+0.9
CHGN	Chignik	2.92	236	P	Pn	14 06 43.5	+0.6
	baz=51						
CHGN	Chignik	2.92	236		Pn	14 06 43.5	+0.6
CHGN	Chignik	2.92	236	IAML		14 07 23.9	
	comp=E,380nm,0.4s						
CHGN				IAML		14 07 26.5	
	comp=N,294nm,0.6s						
CAPN	Captain Cook N	3.13	27	Pn	Pn	14 06 48.0	+2.1
SVW2	Sparrevohn	3.17	347		Pn	14 06 46.6	+0.2
SEW	Seward	3.18	47	P	Pn	14 06 45.7	-0.7
	baz=231						
SEW	Seward	3.18	47		Pn	14 06 45.7	-0.7
SLKM	Skilak Lake	3.19	37		Pn	14 06 46.5	-0.2
VNHG	Veniaminof 1	3.30	239		Pn	14 06 49.5	+1.2
VNSG	Veniaminof 6	3.32	237		Pn	14 06 49.6	+1.1
SPCR	Spurr Chakacha	3.33	16	P	Pn	14 06 49.3	+0.8
	baz=198						
SPCR	Spurr Chakacha	3.33	16		Pn	14 06 49.3	+0.8
SPU	Mount Spurr	3.33	17		Pn	14 06 49.0	+0.4
O22K	Cooper Landing	3.33	41	P	Pn	14 06 48.4	-0.1
	baz=225						
O22K	Cooper Landing	3.33	41		Pn	14 06 48.4	-0.1
SPBG	Spurr Blockage	3.36	14		Pn	14 06 50.1	+1.0
SPCG	Spurr Capps Gl	3.44	17		Pn	14 06 50.8	+0.6
STLK	Strandline Lak	3.67	17		Pn	14 06 54.0	+0.8
FIS	Fire Island	3.70	31		Pn	14 06 54.6	+1.0
RC01	Rabbit Creek A	3.79	34	P	Pn	14 06 55.0	+0.2
	baz=218						
RC01	Rabbit Creek A	3.79	34		Pn	14 06 55.0	+0.2
RC01	Rabbit Creek A	3.79	34	IAML		14 07 37.9	
	comp=E,164nm,0.3s						
RC01				IAML		14 07 39.8	
	comp=N,156nm,0.3s						
M19K	Big River Lodg	3.89	358	P	Pn	14 06 56.6	+0.4
	baz=178						
M19K	Big River Lodg	3.89	358		Pn	14 06 56.6	+0.4
PWL	Port Wells	4.09	44	P	Pn	14 06 58.5	-0.4
	baz=229						
PWL	Port Wells	4.09	44		Pn	14 06 58.5	-0.4
PWL	Port Wells	4.09	44	IAML		14 07 42.5	
	comp=N,196nm,0.3s						
PWL				IAML		14 07 43.6	
	comp=E,144nm,0.5s						
L19K	White Mountain	4.19	355	P	Pn	14 07 00.8	+0.6
	baz=175						
L19K	White Mountain	4.19	355		Pn	14 07 00.8	+0.6
M22K	Willow	4.24	26	P	Pn	14 07 01.1	+0.2
	baz=210						
M22K	Willow	4.24	26		Pn	14 07 01.1	+0.2
Q23K	Middleton Isla	4.28	68	P	Pn	14 07 01.3	-0.1
	baz=254						
Q23K	Middleton Isla	4.28	68		Pn	14 07 01.3	-0.1
MID	Middleton Isla	4.28	68		Pn	14 07 01.4	-0.1
PMR	Palmer	4.37	33	P	Pn	14 07 02.5	-0.2
	baz=218						
PMR	Palmer	4.37	33		Pn	14 07 02.5	-0.2
SDPT	Sand Point	4.42	235	P	Pn	14 07 03.4	0.0
	baz=50						
SDPT	Sand Point	4.42	235		Pn	14 07 03.4	0.0
SDPT	Sand Point	4.42	235	IAML		14 08 11.5	
	comp=E,128nm,1.2s						
SDPT				IAML		14 08 11.7	
	comp=N,114nm,0.7s						
KNK	Knik Glacier	4.44	38	P	Pn	14 07 03.2	-0.4
	baz=223						
KNK	Knik Glacier	4.44	38		Pn	14 07 03.2	-0.4
KNK	Knik Glacier	4.44	38	IAML		14 07 51.0	
	comp=N,76nm,0.6s						
KNK				IAML		14 08 11.4	
	comp=E,95nm,0.7s						
L20K	Farewell, AK	4.47	1	P	Pn	14 07 04.8	+0.7
	baz=182						
L20K	Farewell, AK	4.47	1		Pn	14 07 04.8	+0.7
HIN	Hinchinbrook I	4.57	55		Pn	14 07 05.3	-0.1
HIN	Hinchinbrook I	4.57	55	IAML		14 07 55.4	
	comp=E,138nm,0.9s						
GHO	Glory Hole Cre	4.57	33		Pn	14 07 05.2	-0.4
GHO	Glory Hole Cre	4.57	33	IAML		14 07 55.9	
	comp=E,117nm,0.6s						
GHO				IAML		14 08 09.7	
	comp=N,129nm,0.7s						
GLI	Glacier Island	4.58	48	P	Pn	14 07 04.4	-1.1
	baz=235						
GLI	Glacier Island	4.58	48		Pn	14 07 04.4	-1.1
GLI	Glacier Island	4.58	48	IAML		14 07 52.9	
	comp=N,69nm,0.8s						
GLI				IAML		14 07 53.5	
	comp=E,92nm,0.4s						
FID	Port Fidalgo	4.75	52		Pn	14 07 06.6	-1.4
FID	Port Fidalgo	4.75	52	IAML		14 08 00.1	
	comp=N,120nm,0.4s						
FID				IAML		14 08 01.2	
	comp=E,57nm,0.4s						
SML	Sawmill	4.77	35	P	Pn	14 07 08.2	-0.1
	baz=220						
SML	Sawmill	4.77	35		Pn	14 07 08.2	-0.1
SML	Sawmill	4.77	35	IAML		14 08 14.8	
	comp=N,78nm,0.9s						
SML				IAML		14 08 26.2	
	comp=E,56nm,0.9s						
CUT	Chulitna	4.79	22	P	Pn	14 07 08.9	+0.5
	baz=205						
CUT	Chulitna	4.79	22		Pn	14 07 08.9	+0.5
CUT	Chulitna	4.79	22	IAML		14 08 08.2	
	comp=E,110nm,0.5s						
CUT				IAML		14 08 10.5	
	comp=N,90nm,0.4s						
JPK	Jack Peak	4.88	48		Pn	14 07 09.2	-0.5
EYAK	Cordova Ski Ar	4.97	56	P	Pn	14 07 10.3	-0.6
	baz=243						
EYAK	Cordova Ski Ar	4.97	56		Pn	14 07 10.3	-0.6
PPLA	Purkeypile	4.98	10	P	Pn	14 07 12.0	+0.9
	baz=192						
PPLA	Purkeypile	4.98	10		Pn	14 07 12.0	+0.9
TT01	Tatalina	4.99	350		Pn	14 07 11.5	+0.3
TTA	Tatalina	5.01	350	P	Pn	14 07 11.8	+0.3
	baz=168						
TTA	Tatalina	5.01	350		Pn	14 07 11.8	+0.3
SCM	Sheep Creek Mo	5.11	39	P	Pn	14 07 12.9	0.0
	baz=225						
SCM	Sheep Creek Mo	5.11	39		Pn	14 07 12.9	0.0
SCM	Sheep Creek Mo	5.11	39	IAML		14 08 09.2	
	comp=N,64nm,0.2s						
DIV	Divide	5.25	50		Pn	14 07 14.3	-0.5
K20K	Telida	5.35	0	P	Pn	14 07 16.7	+0.6
	baz=180						
K20K	Telida	5.35	0		Pn	14 07 16.7	+0.6
KAIM	Kayak Island	5.36	65	P	Pn	14 07 16.6	+0.4
	baz=254						
KAIM	Kayak Island	5.36	65		Pn	14 07 16.6	+0.4
RAGM	Ragged Mountai	5.39	60		Pn	14 07 16.7	0.0
KLU	Klutina	5.40	46	P	Pn	14 07 16.8	0.0
	baz=234						
KLU	Klutina	5.40	46		Pn	14 07 16.8	0.0
GOAT	Goat Mountain	5.44	58		Pn	14 07 17.3	-0.1
WAT7	Susitna Watana	5.48	26		Pn	14 07 18.0	+0.1
WAT1	Susitna Watana	5.54	27	P	Pn	14 07 18.7	0.0
	baz=212						
WAT1	Susitna Watana	5.54	27		Pn	14 07 18.7	0.0
WAT6	Susitna Watana	5.55	32	P	Pn	14 07 18.7	-0.3
	baz=218						
WAT6	Susitna Watana	5.55	32		Pn	14 07 18.8	-0.3
HMT	Hamilton	5.56	61		Pn	14 07 19.1	+0.1
BMRM	Bremner River	5.66	55	P	Pn	14 07 19.7	-0.7
	baz=243						
BMRM	Bremner River	5.66	55		Pn	14 07 19.7	-0.7
NICHA	Nichawak Mount	5.67	63		Pn	14 07 20.6	+0.1
PS12	TAPS Pump St12	5.69	49		Pn	14 07 20.5	-0.3
M24K	Tolsona, Glenn	5.70	41	Pn	Pn	14 07 21.1	+0.2
SUCK	Suckling Hills	5.71	65		Pn	14 07 21.4	+0.5
TRF	Thorofare Moun	5.75	17	P	Pn	14 07 22.0	+0.3
	baz=201						
TRF	Thorofare Moun	5.75	17		Pn	14 07 22.0	+0.3
KTH	Kantishna Hill	5.76	14		Pn	14 07 21.9	+0.2
BERG	Berg Lake	5.84	62		Pn	14 07 22.6	-0.2
PS11	TAPS Pump St11	5.93	43		Pn	14 07 25.0	+1.1
CHUM	Lake Minchumin	5.94	8	P	Pn	14 07 24.4	+0.2
	baz=189						
CHUM	Lake Minchumin	5.94	8		Pn	14 07 24.4	+0.2
RND	Reindeer	5.98	23		Pn	14 07 24.5	-0.2
N25K	Chitina, Valde	5.99	49	P	Pn	14 07 24.6	-0.3
	baz=238						
N25K	Chitina, Valde	5.99	49		Pn	14 07 24.6	-0.3
GRIN	Grindle Hills	5.99	63		Pn	14 07 25.1	+0.3
DHY	Denali Highway	6.05	30	P	Pn	14 07 25.8	0.0
	baz=216						
DHY	Denali Highway	6.05	30		Pn	14 07 25.8	0.0
KHIT	Khitrov Hills	6.07	62		Pn	14 07 25.9	-0.1
J20K	Nowinta River	6.17	360	P	Pn	14 07 27.9	+0.6
	baz=180						
J20K	Nowinta River	6.17	360		Pn	14 07 27.9	+0.6
SNH	Sunshine Point	6.19	65		Pn	14 07 27.9	+0.3
GLB	Gilahina Butte	6.22	52		Pn	14 07 27.7	-0.4
CRQM	Cirque	6.23	59		Pn	14 07 28.0	-0.3
HARP	HAARP	6.25	42	P	Pn	14 07 28.1	-0.2
	baz=230						
HARP	HAARP	6.25	42		Pn	14 07 28.1	-0.2
CRQE	Cirque	6.25	59	P	Pn	14 07 28.0	-0.5
	baz=249						
MCK	McKinley	6.25	22	P	Pn	14 07 28.6	+0.2
	baz=206						
MCK	McKinley	6.25	22		Pn	14 07 28.6	+0.2
WAX	Waxell Ridge	6.26	62		Pn	14 07 28.4	-0.1
BPAW	Bear Paw Mtn.	6.28	13	P	Pn	14 07 29.0	+0.2
	baz=196						
BPAW	Bear Paw Mtn.	6.28	13		Pn	14 07 29.0	+0.2
VRDI	Verde Repeater	6.28	55		Pn	14 07 28.4	-0.6
TGL	Tana Glacier	6.37	60		Pn	14 07 29.8	-0.3
MCARA	McCarthy VSAT	6.53	54	Pn	Pn	14 07 32.2	0.0
PAX	Paxson	6.53	37	P	Pn	14 07 32.5	+0.2
	baz=225						
PAX	Paxson	6.53	37		Pn	14 07 32.5	+0.2
ISLE	Juniper Island	6.55	62		Pn	14 07 32.5	-0.1
BWN	Browne	6.56	18	Pn	Pn	14 07 33.1	+0.5
MESA	MESA	6.62	66	P	Pn	14 07 33.7	+0.1
	baz=256						
MESA	MESA	6.62	66		Pn	14 07 33.7	+0.1
BAGL	Bagley Icefiel	6.63	63		Pn	14 07 34.0	+0.5
KIAG	Kiagna River	6.65	59		Pn	14 07 34.1	+0.1
BALM	Baldy	6.69	58		Pn	14 07 34.1	-0.4
PTPK	Patty Peak	6.70	57		Pn	14 07 34.2	-0.4
YAH	Yahtse	6.76	65		Pn	14 07 35.9	+0.3
GRNC	Granite Creek	6.86	62		Pn	14 07 37.1	+0.1
GCSA	Galena City Sc	6.87	350	P	Pn	14 07 37.5	+0.7
	baz=168						
GCSA	Galena City Sc	6.87	350		Pn	14 07 37.5	+0.7
RKAV	Rock Avalanche	6.94	65		Pn	14 07 38.6	+0.6
CHX	Chaix Hills	7.00	68		Pn	14 07 39.1	+0.4
BARN	Barnard Glacie	7.01	59		Pn	14 07 39.0	+0.1
NEA2	Nenana	7.02	18	P	Pn	14 07 37.7	-1.1
	baz=203						
NEA2	Nenana	7.02	18		Pn	14 07 37.7	-1.1
M26K	Nabesna, AK	7.05	47	P	Pn	14 07 39.5	+0.2
	baz=237						
M26K	Nabesna, AK	7.05	47		Pn	14 07 39.5	+0.2
TABL	Table Mountain	7.07	65		Pn	14 07 40.1	+0.3
CTG	Chitna Glacier	7.13	60	P	Pn	14 07 40.8	+0.3
	baz=251						
CTGM	Chitina Glacie	7.13	60		Pn	14 07 40.8	+0.3
SAMH	Samovar Hills	7.18	67		Pn	14 07 41.8	+0.7
MLY	Manley	7.21	11	P	Pn	14 07 41.3	-0.1
	baz=194						
MLY	Manley	7.21	11		Pn	14 07 41.3	-0.1
LOGN	Logan Glacier	7.24	62		Pn	14 07 42.1	0.0
I21K	Tanana	7.25	7	P	Pn	14 07 42.0	+0.1
	baz=189						
I21K	Tanana	7.25	7		Pn	14 07 42.0	+0.1
HDA	Harding Lake	7.27	25		Pn	14 07 41.3	-0.9
RIDG	Independent Ri	7.29	34	P	Pn	14 07 42.0	-0.5
	baz=222						
RIDG	Independent Ri	7.29	34		Pn	14 07 42.0	-0.5
L26K	Log Cabin Wild	7.29	42		Pn	14 07 42.0	-0.6
CCB	Clear Creek Bu	7.29	22		Pn	14 07 41.1	-1.5
PCA	Pinnacle	7.43	68		Pn	14 07 44.6	0.0
PINM	Pinnacle	7.43	68	P	Pn	14 07 44.6	0.0
	baz=260						
DOT	Dot Lake	7.46	37	Pn	Pn	14 07 45.6	+0.7
TCOL	CIGO, UAF Yank	7.49	21		Pn	14 07 44.0	-1.2
COLA	College	7.49	21	Pn	Pn	14 07 43.9	-1.4
I23K	Minto, Yukon-K	7.49	16	P	Pn	14 07 44.5	-0.7
	baz=200						
I23K	Minto, Yukon-K	7.49	16		Pn	14 07 44.5	-0.7
MDM	Murphy Dome	7.50	19	Pn	Pn	14 07 44.7	-0.7
IL31		7.59	24		Pn	14 07 45.5	-1.2
ILAR	Eielson Array	7.59	24	Pn	Pn	14 07 45.5	-1.2
H21K	Melozitna Rive	7.68	4	P	Pn	14 07 48.0	0.0
	baz=185						
H21K	Melozitna Rive	7.68	4		Pn	14 07 48.0	0.0
BCPM	Bancas Point	7.71	69		Pn	14 07 48.3	-0.1
SCRK	Sand Creek	7.72	35	P	Pn	14 07 48.3	-0.3
	baz=224						
SCRK	Sand Creek	7.72	35		Pn	14 07 47.9	-0.7
POKR	Poker Plat Res	7.79	21	P	Pn	14 07 48.2	-1.2
	baz=207						
POKR	Poker Plat Res	7.79	21		Pn	14 07 48.2	-1.2
PNL	Peninsula	7.80	72	P	Pn	14 07 49.5	0.0
	baz=264						
PNL	Peninsula	7.80	72		Pn	14 07 49.5	0.0
YUK3	Moose Creek	7.81	56	P	Pn	14 07 50.2	+0.3
	baz=247						
YUK3	Moose Creek	7.81	56		Pn	14 07 50.2	+0.3
J25K	Salcha River,	7.82	29	P	Pn	14 07 49.3	-0.6
	baz=216						
J25K	Salcha River,	7.82	29		Pn	14 07 49.3	-0.6
L27K	Beaver Creek,	7.87	45	P	Pn	14 07 50.3	-0.2
	baz=236						
L27K	Beaver Creek,	7.87	45		Pn	14 07 50.3	-0.2
BC03		7.89	45		Pn	14 07 50.8	+0.1
BCAR	Beaver Creek A	7.89	45	Pn	Pn	14 07 50.9	+0.1
YUK8	Steele Glacier	7.96	60		Pn	14 07 53.0	+1.1
IM03		7.99	1		Pn	14 07 52.6	+0.6
IMAR	Indian Mountai	7.99	1	Pn	Pn	14 07 52.2	+0.1
UNV	Unalaska Valle	8.13	244	P	Pn	14 07 53.7	-0.2
	baz=54						
UNV	Unalaska Valle	8.13	244		Pn	14 07 53.7	-0.2
H24K	Noodor Dome	8.36	18		Pn	14 07 57.0	-0.2
YUK4	Talbot Arm	8.49	60	P	Pn	14 07 59.9	+0.8
	baz=254						
ANM	Nome	8.50	325	Pn	Pn	14 08 00.3	+1.3
YUK7	Dusty Glacier	8.54	66		Pn	14 08 00.0	+0.2
YUK5	Granite Creek	8.80	62		Pn	14 08 03.9	+0.6
HYT	Haines Junctio	8.90	65	Pn	Pn	14 08 06.0	+1.3
EGAK	Eagle	9.17	37	Pn	Pn	14 08 08.3	+0.1
DAWY	Dawson	9.34	43	P	Pn	14 08 11.0	+0.5
	baz=236						
DAWY	Dawson	9.34	43		Pn	14 08 10.7	+0.2
SKAG	Skagway	9.86	74	Pn	Pn	14 08 18.2	+0.7
BESE	Bessie Mountai	10.14	79	Pn	Pn	14 08 23.0	+1.5
WHY	Whitehorse	10.15	67	P	Pn	14 08 21.3	-0.5
	baz=264						
WHY	Whitehorse	10.15	67		Pn	14 08 22.1	+0.4
BM03	Burnt Mountain	10.37	21		Pn	14 08 23.1	-1.5
BMAR	Burnt Mountain	10.38	21	Pn	Pn	14 08 23.0	-1.7
TOLK	Toolik Lake Re	10.84	9	Pn	Pn	14 08 30.0	-1.0
CRAG	Craig	11.78	94	Pn	Pn	14 08 43.6	-0.2
DLBC	Dease Lake	12.67	78	Pn	Pn	14 08 56.9	+0.9
MOBC	Moresby Island	13.41	102	Pn	Pn	14 09 04.9	-0.9
INK	Inuvik	13.78	33	Pn	Pn	14 09 10.8	+0.3
INK				P	P	14 09 18.4	+1.9
A36M	Sachs Harbour	18.26	29	P	Pn	14 10 06.1	-0.5
YKA	Yellowknife Ar	19.86	60	P	Pn	14 10 23.6	-2.1

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*TUL **22** 14:07:18.1±1.3, 36°.33N±0°.01×96°.79W±0°.01, h2^{km}±7^{km}, ML2.8, mb_Lg2.6/29(NEIC), Error ellipse: s-maj=2.2km s-min=1.2km az=212.0*

NEIC 22 14:07:18.3±0.8**, 36°.34N**±0°.02×**96°.81W**±0°.02**, h9**^{km}±4^{km}**, Error ellipse: s-maj=2.8km s-min=2.1km az=70.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QUOK	Quay	0.19	155	Pg	Pg	14 07 22.1	-0.1
QUOK				Sg	Sg	14 07 24.5	-0.4
OK031	S. Brethren Rd	0.39	184	Pg	Pg	14 07 25.9	0.0
OK031				Sg	Sg	14 07 31.0	0.0
OK030	Cody Creek RV	0.41	178		Pg	14 07 26.3	0.0
OK030				Sg	Sg	14 07 31.7	-0.1
BLOK	Blackwell	0.53	322	Pg	Pg	14 07 29.1	+0.4
T35A	Sooner Cattle	0.62	22		Pg	14 07 30.4	+0.1
T35A				Sg	Sg	14 07 38.6	+0.1
OK029	Liberty Lake	0.76	224	Pg	Pg	14 07 32.9	+0.1
KAN13	South Haven SW	0.86	321	Pg	Pg	14 07 34.9	+0.1
KAN13				Sg	Sg	14 07 45.7	-0.4
OK025	Westminster Rd	0.87	210	Pg	Pg	14 07 34.5	-0.6
TUL1	Leonard	0.93	117	Pg	Pg	14 07 35.5	-0.6
BCOK	Bluff Creek, N	0.94	224	Pg	Pg	14 07 36.4	0.0
BCOK				Sg	Sg	14 07 48.9	+0.2
CROK	Carrier	0.96	280	Pg	Pg	14 07 36.8	0.0
GC02	Grant County #	0.99	301	Pg	Pb	14 07 37.5	-0.1
KAN09	Caldwell North	1.03	321		Pb	14 07 38.3	0.0
KAN09				Sg	Sg	14 07 51.0	-0.4
KAN17	Caldwell West	1.04	313	Pg	Pg	14 07 38.2	-0.1
OKCFA	Oklahoma City	1.06	210	Pg	Pg	14 07 38.2	-0.5
OKCSW	OKLAHOMA CITY	1.06	209	Pg	Pg	14 07 38.5	-0.3
KAN01	Argonia South	1.12	317		Pg	14 07 39.5	-0.2
KAN14	Manchester OK	1.12	304	Pg	Pg	14 07 39.4	-0.3
KAN05	Bluff City Nor	1.15	312		Pb	14 07 40.2	-0.1
FNO	Franklin	1.18	204	Pg	Pb	14 07 40.1	-0.8
OK032	Salt Plains WL	1.22	293	Pg	Pb	14 07 41.6	+0.1
KAN06	Argonia West S	1.24	317		Pn	14 07 41.8	0.0
KAN08	Anthony NE Sta	1.29	314		Pn	14 07 42.3	-0.1
KAN10	Anthony SW Sta	1.30	307		Pb	14 07 42.8	0.0
KAN16	Harper SW Stat	1.34	312	Pn	Pb	14 07 43.6	0.0
KAN12	Harper NE Stat	1.35	315	Pn	Pb	14 07 43.7	-0.1
U38A	Gravette	1.96	86		Pn	14 07 51.3	-0.3
X37A	Clayton	2.10	146	IAmb_Lg		14 08 29.5	
	comp=Z,20nm,1.1s						
HHAR	Hobbs	2.31	91	Pn	Pn	14 07 56.5	-0.1
LOOK	Love County	2.36	188	Pn	Pn	14 07 57.2	0.0
LOOK				IAmb_Lg		14 08 38.0	
	comp=Z,20nm,0.7s						
KSU1	Kansas State U	2.76	3	Pn	Pn	14 08 01.2	-1.5
Z35A	Perchaven, San	3.02	187	Pn	Pn	14 08 05.8	-0.5
S39A	Bolivar	3.10	63	Pn	Pn	14 08 07.7	+0.4
S39A				IAmb_Lg		14 09 03.4	
	comp=Z,19nm,0.9s						
MIAR	Mount Ida	3.19	123	Pn	Pn	14 08 08.3	-0.2
U40A	Yellville	3.19	89		Pn	14 08 08.1	-0.5
CBKS	Cedar Bluff	3.39	318	IAmb_Lg		14 09 14.8	
	comp=Z,13nm,0.8s						
Z38A	Mt. Pleasant	3.42	153	Pn	Pn	14 08 11.8	+0.1
Z38A				IAmb_Lg		14 09 09.3	
	comp=Z,11nm,0.9s						
MGMO	Mountain Grove	3.73	76	Pn	Pn	14 08 17.1	+1.1
MGMO				IAmb_Lg		14 09 20.2	
	comp=Z,19nm,0.9s						
X40A	Basin Creek Fa	3.73	119	Pn	Pn	14 08 16.8	+0.8
X40A				IAmb_Lg		14 09 20.5	
	comp=Z,12nm,0.8s						
FCAR	Ozark Folk Cen	3.82	95	Pn	Pn	14 08 16.1	-1.1
FCAR				IAmb_Lg		14 09 19.2	
	comp=Z,14nm,1.0s						
WHAR	Wooly Hollow	3.82	105	Pn	Pn	14 08 18.0	+0.8
WHAR				IAmb_Lg		14 09 19.9	
	comp=Z,15nm,1.0s						
WLAR	White Oak Lake	4.02	130	IAmb_Lg		14 09 29.4	
	comp=Z,12nm,0.8s						
R40A	Maddies Statio	4.11	60	Pn	Pn	14 08 21.7	+0.5
237A	Washetta, Mont	4.41	169	Pn	Pn	14 08 26.0	+0.7
LCAR	Lake Charles	4.58	92	Pn	Pn	14 08 28.9	+1.2
N35A	Tabor	4.61	11	Pn	Pn	14 08 29.0	+1.0
T42A	Van Buren	4.64	80	Pn	Pn	14 08 29.4	+0.8
CCM	Cathedral Cave	4.76	67	IAmb_Lg		14 09 51.9	
	comp=Z,8.0nm,0.8s						
P40A	Paris	4.93	48	IAmb_Lg		14 09 51.7	
	comp=Z,13nm,0.8s						
PBMO	Poplar Bluff	5.15	83	IAmb_Lg		14 09 57.5	
	comp=Z,11nm,1.0s						
L34A	Svendsen Farm,	5.63	3	IAmb_Lg		14 10 28.0	
	comp=Z,12nm,0.8s						
T25A	Trinidad	6.16	280	IAmb_Lg		14 10 42.0	
	comp=Z,8.8nm,1.0s						

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*IDC **22** 14:13:38.7±2.7, 20°.18S×177°.74W, h512^{km}±24^{km}, mb3.1/8, mb1 3.4/9, mb1mx3.2/20, mbtmp4.0/9, Error ellipse: s-maj=46.5km s-min=18.6km az=143.0*

ISC 22 14:13:36.9±0.8**, 20°.1S**±0°.2×**177°.4W**±0°.1**, h500**^{km}**, n15,** σ**1^{s}.70**/17**, mb3.5**/8**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAVE	Taveuni	4.13	325	P	P	14 14 57.4	+0.9
	112nm,1.7s						
DGTI	Dogotuki	4.66	324	P	P	14 15 02.2	+1.2
MSVF	Nonsavu	4.90	298	P	P	14 15 04.1	+0.9
	14nm,0.3s,baz=261,slow=22,SNR=55						
AFI	Afiamalu	8.19	42	P	P	14 15 34.7	-0.8
	3.0nm,0.3s,baz=208,slow=6.7,SNR=6.3						
AFI				S	S	14 17 08.8	-3.9
	6.0nm,0.3s,baz=213,slow=23,SNR=5.8						
STKA	Stephens Creek	38.45	244	P	P	14 20 14.2	-1.1
	1.2nm,0.7s,baz=75,slow=12,SNR=4.8						
ASAR	Alice Springs	45.14	256	P	P	14 21 06.8	-1.7
	2.4nm,0.6s,baz=100,slow=7.7,SNR=62						
ASAR				PcP	PcP	14 22 38.2	-0.3
	1.0nm,0.5s,baz=105,slow=4.1,SNR=9.6						
WRA	Warramunga Arr	45.20	262	P	P	14 21 06.4	-2.5
	0.5nm,0.3s,baz=96,slow=7.8,SNR=13						
WRA				PcP	PcP	14 22 38.4	-0.4
	0.7nm,0.8s,baz=92,slow=3.4,SNR=1.5						
MAW	Mawson	82.11	200	P	P	14 25 03.9	-0.3
	0.5nm,0.5s,baz=179,slow=5.2,SNR=2.0						
TXAR	Lajitas Array	86.39	57	P	P	14 25 28.4	+2.2
	0.4nm,0.8s,baz=224,slow=5.2,SNR=5.0						
ILAR	Eielson Array	87.82	13	P	P	14 25 32.4	+0.5
	0.6nm,0.5s,baz=218,slow=5.5,SNR=16						
PDAR	Pinedale Array	88.31	43	P	P	14 25 37.2	+2.1
	0.3nm,0.5s,baz=235,slow=3.2,SNR=2.9						
CMAR	Chiang Mai Arr	90.50	289	P	P	14 25 46.3	+0.8
	1.3nm,0.8s,baz=123,slow=3.2,SNR=7.3						
AKASG	Malin Array Be	142.94	332	PKhKP	PKPpre	14 32 10.1	
	1.0nm,0.3s,baz=46,slow=4.8,SNR=16						
BRTR	Keskin Array B	146.98	313	PKPbc	PKPbc	14 32 23.4	0.0
	0.9nm,0.5s,baz=130,slow=5.3,SNR=5.5						
GERES	GERESS Array B	149.97	345	PKPbc	PKPbc	14 32 30.5	0.0
	1.2nm,0.8s,baz=64,slow=3.1,SNR=8.2						

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*JMA **22** 14:18:08.1±0.1, 23°.88N×121°.54E, h18^{km}±3^{km}, M2.8*

*IASPEI **22** 14:18:09.2±0.9, 23°.92N±0°.01×121°.50E±0°.02, h19^{km}±2^{km}, Error ellipse: s-maj=2.8km s-min=1.7km az=111.7, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*TAP **22** 14:18:09.2, 23°.93N×121°.47E, h19^{km}, ML3.8, B*

ISC 22 14:18:09.1±0.9**, 23°.91N**±0°.01×**121°.50E**±0°.02**, h19**^{km}±2^{km}**, n114,** σ**0^{s}.68**/191**, 12C-13D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETM	**Tongmen** baz=34	0.05	355	⇑iP	Pg	14 18 12.8	+0.2
ETM	baz=34			iS	Sg	14 18 15.1	0.0
TEYL	**Yanliau Villag** baz=101	0.10	117	⇓iP	Pg	14 18 13.7	+0.7
TEYL	baz=101			S	Sg	14 18 17.1	+1.5
ESL	**Shilin** baz=191	0.12	211	⇓iP	Pg	14 18 13.2	+0.1
ESL	baz=191			iS	Sg	14 18 15.8	0.0
HWA	**Hwalien** baz=71	0.12	57	⇓iP	Pg	14 18 14.0	+0.8
HWA	baz=71			eS	Sg	14 18 17.6	+1.7
TWD	**Chiawan** baz=34	0.19	28	⇓iP	Pg	14 18 14.2	+0.2
TWD	baz=34			S	Sg	14 18 17.6	+0.3
TEGC	**Jichi Village** baz=161	0.21	169	P	Pg	14 18 15.1	+0.8
EGFH	**Guangfu** baz=188	0.25	195	⇓P	Pb	14 18 14.8	-0.1
EGFH	baz=188			S	Sg	14 18 19.2	+0.2
ETL	**Fush Village** baz=32	0.27	25	eP	Pg	14 18 15.2	-0.1
ETL	baz=32			S	Sb	14 18 19.2	-0.1
NACB	**Ninganchiao** baz=26	0.27	19	⇑iP	Pg	14 18 15.2	-0.2
NACB	baz=26			S	Sb	14 18 19.3	-0.2
ETLH	**Xiulin Townshi** baz=3.0	0.29	357	⇑iP	Pg	14 18 15.5	-0.2
ETLH	baz=3.0			S	Sg	14 18 19.2	-1.0
OWD	**Renai** baz=281	0.30	278	⇑iP	Pg	14 18 15.5	-0.3
OWD	baz=281			S	Sg	14 18 19.5	-0.9
WHF	**Hehuan Shan** baz=316	0.31	317	⇑iP	Pg	14 18 15.7	-0.6
WHF	baz=316			S	Sg	14 18 20.3	-0.9
CHGB	**Renai** baz=301	0.33	296	⇑iP	Pg	14 18 16.2	-0.2
CHGB	baz=301			S	Sg	14 18 20.8	-0.6
VWDT	**VWDT** baz=235	0.36	244	⇑iP	Pg	14 18 16.9	+0.1
VWDT	baz=235			eS	Sg	14 18 21.8	-0.3
FUSS	**Fushou** baz=328	0.41	325	⇓iP	Pg	14 18 17.6	-0.2
FUSS	baz=328			S	Sg	14 18 23.1	-0.4
HGSD	**Ruisui** baz=190	0.42	189	eP	Pg	14 18 17.8	-0.1
HGSD	baz=190			eS	Sb	14 18 24.8	+0.7
EHY	**Hungye** baz=190	0.44	202	⇓iP	Pg	14 18 17.2	-0.9
EHY	baz=190			eS	Sg	14 18 23.7	-0.5
TWT	**Tachien** baz=313	0.45	319	P	Pg	14 18 18.3	-0.1
TWT	baz=313			S	Sg	14 18 24.2	-0.4
TDCB	**Techi** baz=314	0.46	317	⇓iP	Pg	14 18 18.4	-0.2
TDCB	baz=314			eS	Sg	14 18 24.0	-1.0
WPL	**Puli Township** baz=280	0.50	281	P	Pg	14 18 18.9	-0.5
SSLB	**Suanglung** baz=259	0.51	256	⇑iP	Pg	14 18 19.0	-0.5
SSLB	baz=259			eS	Sg	14 18 25.1	-1.4
DPDB	**Guoxing** baz=283	0.54	283	eP	Pb	14 18 19.5	-0.4
DPDB	baz=283			eS	Sg	14 18 26.7	-0.6
NNS	**Nan Shan** baz=360	0.54	348	⇓iP	Pb	14 18 19.8	-0.1
NNS	baz=360			eS	Sg	14 18 26.6	-0.7
SMLT	**Sun Moon Lake** baz=271	0.55	267	⇑iP	Pb	14 18 19.8	-0.3
SMLT	baz=271			eS	Sb	14 18 26.7	-0.9
YULB	**Yu-li** baz=190	0.55	200	eP	Pb	14 18 18.8	-1.3
YULB	baz=190			eS	Sb	14 18 27.4	-0.1
WCS	**Beigang Elemen** baz=285	0.56	285	⇓P	Pb	14 18 19.8	-0.3
WCS	baz=285			eS	Sb	14 18 26.4	-1.2
ENA	**Nanau** baz=28	0.56	23	eP	Pb	14 18 19.8	-0.4
ENA	baz=28			eS	Sb	14 18 27.5	-0.3
TYC	**Yuchr** baz=273	0.59	269	eP	Pb	14 18 20.2	-0.4
TYC	baz=273			eS	Sb	14 18 27.2	-1.3
EWUT	**Wuta** baz=29	0.59	26	⇑P	Pb	14 18 20.4	-0.3
EWUT	baz=29			eS	Sb	14 18 27.7	-0.9
EYUL	**Yuli** baz=198	0.59	196	P	Pb	14 18 20.7	0.0
EYUL	baz=198			eS	Sg	14 18 29.1	+0.3
TWF1	**Yuli** baz=194	0.59	198	P	Pb	14 18 20.4	-0.3
WHP	**Taichung City** baz=301	0.62	306	⇓iP	Pb	14 18 21.2	-0.1
WHP	baz=301			eS	Sb	14 18 29.1	-0.5
NDT	**Datong Townshi** baz=4.0	0.69	1	P	Pb	14 18 22.6	+0.2
NDT	baz=4.0			eS	Sb	14 18 31.1	-0.4
WJS	**Zhushan** baz=264	0.71	263	P	Pg	14 18 23.6	+0.5
WJS	baz=264			eS	Sn	14 18 34.2	-0.3
ENTT	**Nioudou** baz=8.0	0.72	5	P	Pb	14 18 22.6	-0.5
ENTT	baz=8.0			eS	Sb	14 18 32.1	-0.6
FULB	**Fuli** baz=201	0.74	195	eP	Pb	14 18 23.1	-0.2
FULB	baz=201			eS	Sn	14 18 35.3	+0.1
NDS	**Dongshan** baz=26	0.74	15	eP	Pb	14 18 22.9	-0.6
NDS	baz=26			S	Sb	14 18 32.9	-0.3
WNT	**Mingjian** baz=266	0.75	267	P	Pg	14 18 24.1	+0.3
WNT	baz=266			eS	Sg	14 18 34.9	+1.2
ALS	**Alishan** baz=227	0.75	238	⇑iP	Pb	14 18 23.8	0.0
ALS	baz=227			eS	Sb	14 18 33.3	-0.4
YHNB	**Yeheng** baz=346	0.76	352	P	Pb	14 18 23.6	-0.2
YHNB	baz=346			eS	Sb	14 18 33.2	-0.6
TWC	**Suao** baz=28	0.76	25	eP	Pb	14 18 23.1	-0.7
TWC	baz=28			eS	Sb	14 18 33.4	-0.3
TCU	**Taichung** baz=287	0.79	287	eP	Pg	14 18 25.0	+0.5
TCU	baz=287			eS	Sn	14 18 36.8	+0.4
TWQ1	**Liyutan** baz=314	0.79	303	⇓iP	Pb	14 18 24.7	+0.5
TWQ1	baz=314			eS	Sb	14 18 35.1	+0.6
CHN5	**Tsauling** baz=246	0.81	247	P	Pg	14 18 25.6	+0.5
CHN5	baz=246			eS	Sn	14 18 37.3	+0.1
TWE	**Neicheng** baz=14	0.82	11	eP	Pb	14 18 24.1	-0.6
TWE	baz=14			eS	Sb	14 18 34.7	-0.6
CHKT	**Chengkung** baz=185	0.82	189	eP	Pb	14 18 23.6	-1.1
CHKT	baz=185			eS	Sb	14 18 35.7	+0.3
ELDTW	**Lidau** baz=215	0.85	212	P	Pb	14 18 23.9	-1.4
ELDTW	baz=215			eS	Sb	14 18 35.6	-0.6
NSTT	**Nanjuang** baz=321	0.85	328	⇓iP	Pb	14 18 25.4	+0.2
NSTT	baz=321			eS	Sb	14 18 35.7	-0.4
LIOB	**Emei** baz=322	0.85	329	iP	Pb	14 18 25.6	+0.4
LIOB	baz=322			eS	Sb	14 18 35.9	-0.4
NWLT	**Wulai** baz=3.0	0.86	0	eP	Pb	14 18 25.1	-0.3
NWLT	baz=3.0			eS	Sb	14 18 35.5	-1.0
WCHH	**Zhanghua** baz=281	0.88	281	P	Pb	14 18 26.2	+0.6
WCHH	baz=281			eS	Sg	14 18 38.3	+0.5
ILA	**Ilan** baz=19	0.88	15	eP	Pb	14 18 25.2	-0.5
NMLH	**Miaoli** baz=324	0.90	314	eP	Pg	14 18 26.9	+0.3
NMLH	baz=324			eS	Sb	14 18 38.1	+0.5
WDJ	**Dajia District** baz=300	0.90	299	P	Pn	14 18 27.1	+0.4
WDJ	baz=300			S	Sn	14 18 39.7	+0.6
WDLH	**Douliu** baz=255	0.91	256	P	Pg	14 18 26.9	+0.1
WDLH	baz=255			eS	Sg	14 18 39.4	+0.6
EDH	**Donghe** baz=188	0.95	191	eP	Pb	14 18 25.3	-1.7
EDH	baz=188			eS	Sb	14 18 39.1	-0.1
NTC	**Toucheng** baz=20	0.98	18	eP	Pn	14 18 28.1	+0.2
NTC	baz=20			eS	Sn	14 18 41.5	+0.3
STYH	**Taoyuan** baz=216	0.99	222	eP	Pb	14 18 27.7	+0.1
STYH	baz=216			eS	Sb	14 18 40.9	+0.5
TPUB	**Ta-pu** baz=220	1.00	233	⇑iP	Pn	14 18 28.5	+0.3
TPUB	baz=220			eS	Sg	14 18 42.6	+0.7
HSN	**Hsinchu** baz=325	1.01	332	eP	Pg	14 18 29.1	+0.4
EGS	baz=27	1.01	23	eP	Pn	14 18 28.6	+0.4
CHN2	**Minshiung** baz=259	1.01	248	P	Pg	14 18 30.0	+1.2
CHN2	baz=259			eS	Sg	14 18 44.4	+2.2
WRL	**Guolierlin Hig** baz=269	1.03	270	eP	Pb	14 18 28.5	+0.3
WRL	baz=269			eS	Sb	14 18 41.6	+0.3
WTK	**Tuku** baz=255	1.04	258	eP	Pb	14 18 28.6	+0.1
NHDH	**Xindian Distri** baz=3.0	1.04	1	eP	Pb	14 18 28.7	+0.1
NHDH	baz=3.0			eS	Sn	14 18 42.9	+0.2
WTP	**Ta-pu** baz=218	1.05	231	P	Pn	14 18 29.3	+0.5
WTP	baz=218			eS	Sg	14 18 43.6	+0.3
LONT	**Longtian** baz=183	1.06	199	eP	Pb	14 18 28.5	-0.3
TWA	**Mucha** baz=7.0	1.06	4	eP	Pb	14 18 28.7	-0.3
TWA	baz=7.0			eS	Sn	14 18 43.6	+0.3
CHY	**Chiayi** baz=257	1.07	247	P	Pn	14 18 29.6	+0.6
CHY	baz=257			eS	Sg	14 18 45.0	+1.1
NCUH	**Zhongli** baz=347	1.09	345	eP	Pg	14 18 30.4	+0.1
NCUH	baz=347			eS	Sg	14 18 46.2	+1.7
NCU	**National Centr** baz=348	1.09	345	eP	Pn	14 18 30.0	+0.7
NCU	baz=348			eS	Sg	14 18 46.4	+1.8
TIPB	**Shuangxi** baz=18	1.09	16	eP	Pn	14 18 29.7	+0.3
TIPB	baz=18			eS	Sb	14 18 43.9	+0.6
WTCT	**Ta-ch'eng** baz=267	1.11	268	eP	Pg	14 18 30.9	+0.2
WTCT	baz=267			eS	Sg	14 18 45.5	+0.1
TAP	**Taipei** baz=8.0	1.12	0	eP	Pn	14 18 29.9	+0.2
TAP	baz=8.0			eS	Sg	14 18 46.5	+1.0
TWK	**Hsinying** baz=231	1.13	235	eP	Pg	14 18 31.0	0.0
SNST	**Tainan City** baz=231	1.15	233	eP	Pb	14 18 31.1	+0.7
SNST	baz=231			eS	Sg	14 18 46.9	+0.4
TWG	**Pinlang** baz=183	1.16	200	eP	Pn	14 18 29.8	-0.5
TWGBT	**Beinan** baz=183	1.16	199	eP	Pn	14 18 27.6	-2.7
TWB1	**Santiao Chiao** baz=16	1.18	22	eP	Pn	14 18 29.9	-0.6
NWF	**Wu-fen Shan** baz=26	1.18	13	eP	Pn	14 18 30.3	-0.4
SGST	**Jiashian** baz=210	1.18	226	eP	Pn	14 18 30.5	-0.1
SGST	baz=210			eS	Sg	14 18 47.6	+0.1
TWS1	**Kuangyinshan** baz=15	1.18	356	eP	Pb	14 18 31.7	+0.8
WSF	**Szhu** baz=256	1.20	257	eP	Pn	14 18 31.1	+0.3
WSF	baz=256			eS	Sn	14 18 47.4	+0.8
SLGT	**Liugui** baz=217	1.21	221	eP	Pb	14 18 31.5	+0.2
YM01	**YM01** baz=5.0	1.23	3	P	Pb	14 18 32.0	+0.2
YM01	baz=5.0			eS	Sg	14 18 49.0	-0.1
LDUT	**Ludao** baz=178	1.23	181	eP	Pn	14 18 29.2	-2.1
ICHU	**Yijhu** baz=240	1.25	244	eP	Pn	14 18 32.0	+0.5
NTST	**Danshui** baz=12	1.25	358	eP	Pn	14 18 31.3	-0.2
NTST	baz=12			S	Sg	14 18 50.1	+0.5
ANP	**Anpu** baz=24	1.27	1	eP	Pn	14 18 31.8	0.0
CHN8	**Yiju** baz=240	1.31	245	eP	Pn	14 18 32.6	+0.3
TWY	**Chenhua** baz=8.0	1.36	4	eP	Pb	14 18 34.1	+0.2
ECL	**Taimali** baz=184	1.40	201	eP	Pn	14 18 33.7	+0.1
SCLT	**Jiali** baz=234	1.41	239	eP	Pg	14 18 35.9	-0.3
SSD	**Sandimen** baz=211	1.41	215	eP	Pn	14 18 34.1	+0.4
JYNG	**Yonagunijimaku**	1.43	68	P	Pn	14 18 33.8	-0.1
JYNG				S	Sn	14 18 52.6	+0.4
TSMG	**Majia** baz=220	1.44	213	eP	Pn	14 18 34.2	+0.1
TWM1	**Shoushan** baz=218	1.47	223	eP	Pg	14 18 38.2	+0.8
YOJ	**Yonaguni jima** baz=69	1.48	68	eP	Pn	14 18 34.1	-0.6
YOJ	**Yonaguni jima**	1.48	68	P	Pn	14 18 34.7	-0.1
YOJ				eS	Sn	14 18 53.8	+0.2
EAST	**Anshuo** baz=187	1.64	202	eP	Pn	14 18 37.4	+0.5
SCZT	**Fangliau** baz=198	1.73	208	eP	Pb	14 18 39.7	-0.7
SLIU	**Shizi** baz=185	1.81	201	eP	Pb	14 18 42.1	+0.5
PHUB	**P'eng-hu** baz=252	1.81	258	eP	Pn	14 18 39.1	-0.1
PNG	**Penghu** baz=254	1.81	259	eP	Pn	14 18 39.3	0.0
VCHM	**Qimei** baz=243	2.02	250	eP	Pn	14 18 42.6	+0.5
IRIF	**Iriomote-Funau**	2.08	78	P	Pn	14 18 42.8	-0.2
IRIF				S	Sn	14 19 08.9	+0.6
HATJ	**Hateruma jima**	2.12	86	eS	Sn	14 19 09.5	+0.3
JKRS	**Kuro-shima**	2.32	82	P	Pn	14 18 46.9	+0.7
JKRS				eS	Sn	14 19 14.7	+0.5
PTMZ	**Houxiangcun** baz=299	2.44	298	eP	Pn	14 18 46.7	-1.2
JIJ	**Ishigaki jima**	2.46	79	P	Pn	14 18 47.9	-0.2
JIJ				eS	Sn	14 19 16.2	-1.4
MATB	**Ma-tsu** baz=336	2.63	328	eP	Pn	14 18 49.4	-1.2
JISG	**Ishigakijimahi**	2.65	75	P	Pn	14 18 50.7	-0.1
JISG				eS	Sn	14 19 21.2	-1.3
LYJJ	**Jianjiangzhen** baz=338	3.06	329	eP	Pn	14 18 55.6	-0.9
ZPLA	**Ao Xicun** baz=265	3.43	271	eP	Pn	14 19 00.8	-0.7

NOU 22 14:22:11.3, 13°.10S×167°.19E, h0^{km}, MLv5.0/12, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	2.33	180	P	Pn	14 22 49.8	-1.2
DVP	**Devils Point**	4.70	168	P	Pn	14 23 23.6	+0.1
KOUNC	**Koumac, New Ca**	7.91	200	P	Pn	14 24 07.3	-0.4
YATNC	**Mamie plateau,**	8.91	182	P	Pn	14 24 21.0	-0.5
DZM	**Mont Dzumac**	8.95	184	P	Pn	14 24 21.6	-0.4
NOUC	**Port Laguerre**	8.99	185	P	Pn	14 24 23.1	+0.6
ONTNC	**Ouen Toro**	9.18	184	P	Pn	14 24 25.5	+0.4
PINNC	**Pines Island,**	9.46	179	P	Pn	14 24 29.4	+0.4

IDC ***22*** *14:35:42.5±4.2, 14°.46N×90°.44W, h0^{km}, mb3.6/3, mb1 3.8/5, mb1mx3.4/48, mbtmp3.5/5, ML3.7/2, MS2.2/1, Ms1 2.2/1, ms1mx2.1/27, Error ellipse: s-maj=137.8km s-min=52.7km az=27.0*

GCG ***22*** *14:35:44.9±0.3, 13°.60N×91°.84W, h5^{km}±85^{km}, MD3.8*

SNET ***22*** *14:35:53.9±0.6, 14°.26N×91°.28W, h6^{km}±3^{km}, ML3.4*

MEX ***22*** *14:35:54.6±2.0, 15°.03N×93°.37W, h60^{km}±395^{km}, MD3.8*

ISC 22 14:35:48.4±2.0, **13°.88N**±0°.09×**91°.59W**±0°.06, **h6**^{km}±11^{km}, **n24**, σ1^{s}.**96**/30, **mb3.7**/3, **1D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTAL	**Retalhuleu**	0.65	351	eP	Pg	14 36 03.9	+3.0
RTAL				eS	Sb	14 36 11.3	0.0
STG3	**Santiaguito 3,**	0.82	2	eP	Pb	14 36 06.4	+1.2
FUG	**Fuego 3**	0.92	52	⇓eP	Pn	14 36 08.7	+0.7
PCG	**Pacaya**	1.08	62	eP	Pn	14 36 11.5	+1.2
THIG		1.21	328	iP	Pg	14 36 11.3	-0.3
THIG				eS	Sg	14 36 25.2	-2.1
NBG	**Las Nubes**	1.40	60	eP	Pn	14 36 16.4	+1.7
NBG				eS	Sn	14 36 34.8	+1.2
RTR	**El Retiro**	1.89	89	eP	Pn	14 36 23.2	+1.8
CEVE	**Cerro Verde**	1.91	91	eP	Pn	14 36 23.7	+2.0
CEVE				eS	Sg	14 36 47.6	-2.4
CEVE	comp=Z,2µm,0.5s			IAML		14 36 50.4	
SNJE	**San Jose**	1.93	90	eP	Pn	14 36 23.7	+1.8
SNJE				eS	Sg	14 36 47.1	-3.4
UNIC	**Universidad Ca**	1.99	87	eP	Pn	14 36 23.7	+1.0
UNIC				eS	Sb	14 36 47.4	-2.7
UNIC	comp=Z,136nm,0.3s			IAML		14 36 55.2	
JAYA	**Jayaque - finc**	2.10	96	eP	Pn	14 36 26.1	+1.9
JAYA				eS	Sn	14 36 50.9	+0.2
JAYA	comp=Z,975nm,0.2s			IAML		14 36 55.5	
TACO	**Tacachico**	2.18	87	eP	Pn	14 36 26.1	+1.0
TACO				eS	Sb	14 36 52.3	-3.2
TACO	comp=Z,106nm,0.5s			IAML		14 37 00.2	
LALI	**Alcalda de L**	2.24	100	eP	Pn	14 36 28.7	+2.6
ESQI	**Esquipulas**	2.29	73	eP	Pn	14 36 26.7	0.0
PCIG		2.40	319	eS	Sn	14 36 44.2	-14
LFRS	**El Faro**	2.47	96	eP	Pn	14 36 31.7	+2.3
LFRS				eS	Sn	14 37 00.7	+0.8
PAVA	**Las Pavas**	2.59	93	eP	Pn	14 36 32.8	+1.9
PAVA	comp=Z,181nm,0.4s			IAML		14 37 10.6	
COEG	**Centro de Oper**	2.65	95	eP	Pn	14 36 34.1	+2.4
COEG				eS	Sn	14 37 05.0	+0.8
COEG	comp=Z,263nm,0.4s			IAML		14 37 16.5	
CMIG	**Matias Romero** comp=Z,3.0nm,0.3s,baz=144,slow=5.7,SNR=1.4	4.50	316	Pn	Pn	14 36 57.6	+0.5
CMIG	comp=Z,2.1nm,0.3s,baz=221,slow=19,SNR=2.7			Sn	Sn	14 37 48.4	-1.4
CMIG	comp=Z,30nm,21.1s,baz=356,slow=40			LR	LR	14 39 05.8	
TXAR	**Lajitas Array** comp=Z,0.1nm,0.3s,baz=129,slow=12,SNR=4.3	19.01	326	P	P	14 40 09.7	-1.5
NVAR	**Mina Array Bea** comp=Z,0.8nm,0.7s,baz=148,slow=8.6,SNR=3.4	34.01	321	P	P	14 42 30.9	-2.5
INK	**Inuvik** comp=Z,0.5nm,0.7s,baz=121,slow=6.5,SNR=1.6	60.66	343	P	P	14 45 53.4	-6.6
ILAR	**Eielson Array** comp=Z,0.3nm,0.7s,baz=126,slow=5.1,SNR=4.7	63.10	337	P	P	14 46 10.6	-5.9
CMAR	**Chiang Mai Arr** comp=Z,1.4nm,0.6s,baz=331,slow=3.6,SNR=12	146.23	342	PKPbc	PKPdf	14 55 24.6	-5.1

IDC ***22*** *14:38:13.2±0.6, 15°.31S×72°.19W, h86^{km}±4^{km}, mb4.2/14, mb1 4.4/19, mb1mx4.2/40, mbtmp4.5/19, MS3.2/3, Ms1 3.2/3, ms1mx2.9/21, Error ellipse: s-maj=17.5km s-min=12.2km az=49.0*

ARE ***22*** *14:38:14±2.0, 15°.52S±0°.07×72°.48W±0°.09, h115^{km}±5^{km}, Error ellipse: s-maj=13.3km s-min=9.5km az=63.0*

NEIC ***22*** *14:38:15.6±1.5, 15°.40S±0°.06×72°.24W±0°.09, h110^{km}±2^{km}, mb4.9/154, ML4.7(ARE), Error ellipse: s-maj=12.3km s-min=8.5km az=84.0*

VAO ***22*** *14:38:16.5±0.4, 15°.40S×72°.11W, h109^{km}, mb4.8*

ISC 22 14:38:14.0±0.3, **15°.42S**±0°.05×**72°.29W**±0°.06, **h100**^{km}, **n302**, σ1^{s}.**24**/300, **mb4.9**/80, **1C, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AP01	**Chacalluta**	3.48	148		Pn	14 39 08.1	+1.9
PB12	**IPOC Station P**	3.69	150	Pn	Pn	14 39 09.8	+0.7
PB11	**IPOC Station P**	5.00	150	Pn	Pn	14 39 26.4	-0.5
TA02	**Huaiquique**	5.25	157		Pn	14 39 29.9	-0.3
TA01	**Diego Aracena**	5.50	159	Pn	Pn	14 39 32.7	-0.8
PB08	**IPOC Station P**	5.57	148		Pn	14 39 34.5	-0.3
NNA	**Nana** 34nm,0.3s,baz=129,slow=11,SNR=98	5.59	307	P	Pn	14 39 35.1	+0.3
NNA	50nm,0.3s,baz=48,slow=20,SNR=12			S	Sn	14 40 33.6	-4.2
NNA	**Nana**	5.59	307	Pn	Pn	14 39 34.3	-0.5
PB01	**IPOC Station P**	6.20	155		Pn	14 39 42.2	-0.9
PB07	**IPOC Station P**	6.68	160		Pn	14 39 48.8	-1.0
PB09	**IPOC Station P**	6.97	156		Pn	14 39 53.9	+0.2
PB04	**IPOC Station P**	7.17	164		Pn	14 39 54.5	-1.9
CZSB	**Cruzeiro do Su**	7.65	357	Pn	Pn	14 40 00.8	-2.0
PB06	**IPOC Station P**	7.69	161		Pn	14 40 01.4	-2.1
LVC	**Limon Verde** 4.5nm,0.3s,baz=359,slow=9.3,SNR=16	7.84	156	P	Pn	14 40 05.7	+0.1
LVC	7.3nm,0.3s,baz=170,slow=13,SNR=16			S	Sn	14 41 29.4	-3.5
LVC	comp=Z,126nm,21.9s,baz=349,slow=38			LR	LR	14 43 10.2	
LVC	**Limon Verde**	7.84	156	eP	Pn	14 40 05.8	+0.2
LVC	**Limon Verde**	7.84	156	Pn	Pn	14 40 05.5	-0.2

ETMB	Extrema	8.13	48	*e*P	Pn	14 40 10.1	+0.7
ETMB	Extrema	8.13	48	Pn	Pn	14 40 09.7	+0.4
PB15	IPOC Station P	8.20	162		Pn	14 40 08.6	-1.8
PB10	IPOC Station P	8.22	169	Pn	Pn	14 40 08.4	-2.1
PB14	IPOC Station P	9.33	169	Pn	Pn	14 40 23.3	-2.7
ATAH	Atahualpa	10.18	323	P	Pn	14 40 39.6	+2.1
	0.6nm,0.3s,baz=158,slow=5.4,SNR=2.7						
ATAH				S	Sn	14 42 26.3	-3.8
	1.3nm,0.3s,baz=261,slow=8.0,SNR=5.3						
SIV	San Ignacio	10.81	95	P	Pn	14 40 45.8	-0.1
	2.8nm,0.3s,baz=276,slow=10,SNR=82						
SAML	Samuel	10.97	55	Pn	Pn	14 40 45.4	-2.6
AC02	Maricunga	11.74	166	Pn	Pn	14 40 57.1	-1.6
VILB	Vilhena	11.97	80	*e*P	Pn	14 41 01.1	-0.4
VILB	Vilhena	11.97	80	Pn	Pn	14 40 59.4	-2.1
GO03	Copiap	12.27	171	Pn	Pn	14 41 02.7	-2.6
PTLB	Pontes e Lacer	12.68	92	*e*P	Pn	14 41 10.8	0.0
PTLB	Pontes e Lacer	12.68	92	Pn	Pn	14 41 07.9	-2.9
AC04	Llanos de Chal	12.78	175	Pn	Pn	14 41 08.7	-3.3
CO05	La Serena	14.47	176	Pn	Pn	14 41 34.8	+0.8
GO04	Tololo Observa	14.75	175		Pn	14 41 37.9	+0.1
CO06	Fray Jorge	15.20	178		Pn	14 41 43.3	0.0
CO03	El Pedregal	15.42	175		Pn	14 41 46.2	0.0
PDRB	Porto dos Gac	15.59	78	*e*P	Pn	14 41 47.4	-1.0
PTLC	Puerto Leguiza	15.68	351	*e*P	Pn	14 41 43.4	-6.1
SALV	Santo Antonio	15.99	94	*e*P	Pn	14 41 53.5	+0.2
ZON	Zonda	16.39	169		P	14 41 58.5	-0.7
AQDB	Aquidauana	16.56	110	*e*P	P	14 42 00.6	-0.6
AQDB	Aquidauana	16.56	110		Pn	14 41 59.7	-0.6
CLDB	Colider	16.68	76	*e*P	P	14 42 02.8	+0.3
MACA	Manacapuru-AM	16.70	44	*e*P	Pn	14 42 02.1	0.0
MACA	Manacapuru-AM	16.70	44	Pn	Pn	14 42 00.8	-1.3
MACA				IAmb	IAmb	14 42 04.5	
	comp=Z,54nm,0.6s						
OTAV	Otavalo	16.70	338	*e*P	P	14 42 06.5	+3.2
PP1B	Ponte de Pedra	16.83	100	*e*P	P	14 42 04.0	-0.2
GCUF	Volcan Galeras	17.27	343	*e*P	Pn	14 42 12.3	+2.7
VA03	San Esteban	17.34	175	P	Pn	14 42 10.6	+0.7
VA01	Torpederas	17.54	178	P	Pn	14 42 12.3	+0.2
VA01				IAmb	IAmb	14 42 13.6	
	comp=Z,49nm,1.0s						
CPUP	Villa Florida	17.68	130	P	Pn	14 42 14.1	+0.1
	comp=Z,0.5nm,0.3s,baz=318,slow=12,SNR=8.5						
CPUP	Villa Florida	17.68	130	*e*P	P	14 42 13.3	-0.1
CPUP	Villa Florida	17.68	130		Pn	14 42 13.6	-0.4
PEL	Peldehue	17.71	176	P	Pn	14 42 13.9	-0.4
MT02	Curacav	17.80	177	P	P	14 42 14.1	-0.6
SOTA	Rioblanco	17.95	346	*e*P	Pn	14 42 20.6	+2.8
PCON	Cinco Dias	18.09	347	*e*P	Pn	14 42 21.9	+2.4
VA05	Santo Domingo	18.17	178	P	Pn	14 42 19.8	0.0
VA05				IAmb	IAmb	14 42 21.5	
	comp=Z,67nm,0.9s						
MT09	Talagante	18.32	177	P	P	14 42 20.0	-0.5
MT09				IAmb	IAmb	14 42 23.7	
	comp=Z,47nm,0.9s						
MT01	Popeta	18.39	177	P	P	14 42 21.5	+0.3
MT01				IAmb	IAmb	14 42 24.7	
	comp=Z,59nm,1.3s						
NPGB	Novo Progresso	18.56	65	*e*P	P	14 42 23.5	+0.3
H03N1	Juan Fernandez	18.92	197	T	T	15 01 16.5	
	baz=18,slow=74,SNR=1401						
BO01	Tunca	18.93	177	P	P	14 42 27.1	+0.1
H03N2	Juan Fernandez	18.93	197	T	T	15 00 57.4	
	baz=18,slow=74,SNR=1538						
H03N3	Juan Fernandez	18.94	197	T	T	15 01 12.5	
	baz=18,slow=74,SNR=1098						
PTGA	Pitinga	19.00	41	P	P	14 42 28.0	0.0
	comp=Z,1.2nm,0.3s,baz=270,slow=23,SNR=5.5						
PTGA	Pitinga	19.00	41	P	P	14 42 28.0	0.0
VA04	Juan Fernndez	19.09	197	P	P	14 42 29.5	+0.7
VA04				IAmb	IAmb	14 42 32.3	
	comp=Z,52nm,0.8s						
PRAC	Prado	19.18	352	*e*P	Pn	14 42 31.6	-0.3
BO02	Sierra Bellavi	19.34	176	P	P	14 42 31.9	+0.2
BO02				IAmb	IAmb	14 42 35.4	
	comp=Z,40nm,0.8s						
ORTC	Ortega, Tolima	19.42	351	*e*P	Pn	14 42 37.1	+2.3
GO05	Huala	19.52	179	P	P	14 42 33.7	+0.2
ITTB	Itaituba	19.64	58	*e*P	P	14 42 35.2	+0.3
ARAG	Araguaiana, MT	19.73	94	*e*P	P	14 42 36.0	0.0
TRCB	Terra Rica	19.96	115	*e*P	P	14 42 39.3	+0.9
TRCB	Terra Rica	19.96	115	P	P	14 42 38.1	-0.3
TRCB				IAmb	IAmb	14 42 43.1	
	comp=Z,68nm,0.9s						
ANIL	Santa Ana	20.02	351	*e*P	Pn	14 42 44.0	+2.0
ROSC	El Rosal	20.23	354	LR	LR	14 51 50.6	
	comp=Z,116nm,18.5s,baz=246,slow=41						
ITQB	Itaqui	20.23	137	*e*P	Pn	14 42 42.5	-1.6
ML02	Panimavida	20.28	178	P	P	14 42 42.1	+0.4
PLMC	San Jos del P	20.57	349	*e*P	P	14 42 46.7	+1.6
SNDB	Serra Nova Dou	20.68	83	*e*P	P	14 42 46.1	-0.1
PCMB	Pacaembu	20.86	110	*e*P	P	14 42 48.7	+0.6
NORC	Norcasia	21.00	353	*e*P	P	14 42 48.1	-1.5
PTGB	Pitanga	21.11	119	*e*P	P	14 42 51.0	+0.2
BOAV	Boa Vista	21.18	34	*e*P	P	14 42 51.6	+0.1
BOAV	Boa Vista	21.18	34	P	P	14 42 51.4	-0.2
BOAV				IAmb	IAmb	14 42 55.4	
	comp=Z,31nm,0.9s						
ITRB	Iturama	21.33	105	*e*P	P	14 42 54.0	+0.8
CBOC	Ciudad Bolivar	21.46	350	*e*P	P	14 42 59.1	+4.4
HELC	Santa Helena	21.71	351	*e*P	P	14 42 57.8	+0.2
MALB	Monte Alegre	22.31	55	*e*P	P	14 43 02.6	-0.9
FRTB	Fartura	22.82	114	*e*P	P	14 43 08.0	-0.7
CPSB	Cacapava Do Su	22.84	134	*e*P	P	14 43 08.8	0.0
ZARC	Zaragoza, Cauc	22.90	353	*e*P	P	14 43 10.2	+0.6
IPMB	Ipameri, GO	23.20	100	*e*P	P	14 43 12.2	-0.3
UREC	San Jos de Ur	23.24	352	*e*P	P	14 43 11.5	-1.2
BB19B	Bebedouro	23.24	108	*e*P	P	14 43 12.7	-0.1
BDFB	Brasilia	23.39	94	P	P	14 43 13.5	-0.8
	comp=Z,17nm,0.8s,baz=258,slow=12,SNR=23						
BDFB	Brasilia	23.39	94	P	P	14 43 14.0	-0.2
LC01	Cunco	23.39	179	P	P	14 43 14.4	+0.4
LC01				IAmb	IAmb	14 43 16.4	
	comp=Z,29nm,0.8s						
PEXB	Peixe	23.52	85	*e*P	P	14 43 14.9	-0.6
PLTB	Pedras Altas	23.56	137	*e*P	P	14 43 15.2	-0.3
PLTB	Pedras Altas	23.56	137	P	P	14 43 15.8	+0.2
PLTB				IAmb	IAmb	14 43 21.9	
	comp=Z,19nm,0.6s						
PRPB	Parauapebas	23.89	70	*e*P	P	14 43 17.9	-0.7
TIJ01	Guaruva-PR	23.91	118	*e*P	P	14 43 19.7	+0.7
CNLB	Canela	24.11	129	*e*P	P	14 43 21.0	+0.4
SMLC	San Martn de	24.12	356	*e*P	P	14 43 18.4	-2.3
SDV	Santo Domingo	24.20	4	P	P	14 43 21.8	+0.2
	comp=Z,6.1nm,0.3s,baz=210,slow=9.7,SNR=7.9						
SDV	Santo Domingo	24.20	4	*e*P	P	14 43 22.5	+0.8
SDV	Santo Domingo	24.20	4	P	P	14 43 21.0	-0.6
SDV				IAmb	IAmb	14 43 29.2	
	comp=Z,38nm,1.1s						
TRQA	Tornquist	24.32	160	P	P	14 43 22.4	0.0
RCLB	Rio Claro- Sao	24.41	110	*e*P	P	14 43 24.2	+0.8
MCPB	Macapa, AP	24.96	55	*e*P	P	14 43 29.3	+0.9
SMTB	Santa Maria do	24.99	78	*e*P	P	14 43 29.1	+0.3
VAO	Valinhos	25.05	111	*e*P	P	14 43 30.2	+0.9
PET01	Itanhaem-SP	25.09	115	*e*P	P	14 43 29.4	-0.1
PLCA	Paso Flores	25.27	177	P	P	14 43 32.4	+1.3
	comp=Z,34nm,0.8s,baz=354,slow=11,SNR=79						
PLCA	Paso Flores	25.27	177	*e*P	P	14 43 32.5	+1.5
PLCA	Paso Flores	25.27	177	P	P	14 43 31.8	+0.8
PLCA				IAmb	IAmb	14 43 35.0	
	comp=Z,35nm,0.8s						
SJCC	San Jacinto, C	25.31	353	*e*P	P	14 43 32.2	+0.6
LL04	Puerto Octay	25.40	180	P	P	14 43 32.6	+0.5
LL04				IAmb	IAmb	14 43 33.6	
	comp=Z,25nm,0.9s						
PARB	Paraibuna	26.33	112	*e*P	P	14 43 40.6	-0.2
BSCB	Bom Sucesso	26.70	106	*e*P	P	14 43 44.4	+0.2
SDBA	SAO DESIDERIO	26.74	87	*e*P	P	14 43 43.6	-0.9
JANB	Januaria	26.99	93	*e*P	P	14 43 46.3	-0.4
TMAB	Tom-Au,PA,Br	27.14	64	*e*P	P	14 43 47.7	-0.4
MC01	Montes Claros	27.26	97	*e*P	P	14 43 48.9	-0.3
DIAM	Diamantina, MG	27.52	100	*e*P	P	14 43 51.6	0.0
VAS01	Vassouras-RJ	28.11	108	*e*P	P	14 43 57.4	+0.8
DUB01	Friburgo-RJ	29.06	108	*e*P	P	14 44 04.6	-0.6
CAM01	Campos-RJ	29.68	107	*e*P	P	14 44 12.4	+1.8
COYC	Coyhaique	30.06	180	P	P	14 44 13.9	+0.3
COYC				IAmb	IAmb	14 44 15.1	
	comp=Z,20nm,0.7s						
BSFB	Barra de Sao F	30.22	101	*e*P	P	14 44 15.8	+0.5
ROSB	Rosrio	30.40	69	*e*P	P	14 44 16.9	-0.1
RIB01	Linhares ES	30.66	102	*e*P	P	14 44 18.6	-0.6
GUA01	Guaratinga, BA	31.23	97	*e*P	P	14 44 24.6	+0.3
NBPN	Ponto Novo - B	31.56	86	*e*P	P	14 44 26.5	-0.8
CMC01	Camacan, BA	31.58	94	*e*P	P	14 44 27.7	+0.3
GDU01	Guandu, BA	31.69	91	*e*P	P	14 44 28.3	-0.1
NBIT	Itapeh - BA	31.70	94	*e*P	P	14 44 28.9	+0.5
NBPB	Pedra_Branca-C	33.57	77	*e*P	P	14 44 45.0	+0.1
NBMA	Muriti-CE	33.78	80	*e*P	P	14 44 46.3	-0.4
PDPR	Patillas Dam,	33.79	11	P	P	14 44 45.6	-1.0
PDPR				IAmb	IAmb	14 44 49.5	
	comp=Z,42nm,1.5s						
NBLA	Lagarto - SE	33.85	87	*e*P	P	14 44 45.8	-1.4
NBAN	Anadia - AL	35.58	85	*e*P	P	14 45 01.5	-0.7
152A	Waverly Hall	49.27	346	P	P	14 46 52.5	-0.2
152A				IAmb	IAmb	14 46 54.1	
	comp=Z,17nm,0.9s						
GOGA	Godfrey	49.71	348	P	P	14 46 56.1	+0.1
W57A	Gilead	50.82	352	P	P	14 47 04.8	+0.4
KMSC	Kings Mountain	51.01	350	P	P	14 47 06.3	+0.6
KMSC				IAmb	IAmb	14 47 08.2	
	comp=Z,33nm,1.5s						
FPAL	Fort Paine	51.27	346	P	P	14 47 07.2	-0.6
FPAL				IAmb	IAmb	14 47 29.7	
	comp=Z,18nm,1.4s						
X48A	Hartselle	51.54	344	P	P	14 47 09.4	-0.3
X48A				IAmb	IAmb	14 47 10.3	
	comp=Z,7.5nm,0.9s						
V53A	Saluda	51.77	349	P	P	14 47 10.7	-0.9
V53A				IAmb	IAmb	14 47 12.3	
	comp=Z,17nm,1.1s						
W50A	Signal Mountai	51.83	346	P	P	14 47 11.3	-0.7
W50A				IAmb	IAmb	14 47 17.8	
	comp=Z,10nm,1.1s						
CPCT	Cooper Cave	51.90	347	P	P	14 47 12.3	-0.1
CPCT				IAmb	IAmb	14 47 39.0	
	comp=Z,10nm,1.3s						
SWET	Sewanee	51.99	346	P	P	14 47 12.9	-0.2
SWET				IAmb	IAmb	14 47 21.5	
	comp=Z,12nm,1.3s						
V52A	Sevierville	52.09	348	P	P	14 47 13.5	-0.4
V52A				IAmb	IAmb	14 47 14.7	
	comp=Z,14nm,1.0s						
V51A	Loudon	52.20	348	P	P	14 47 14.3	-0.4
V51A				IAmb	IAmb	14 47 21.3	
	comp=Z,17nm,1.4s						
T59A	Double "B" Far	52.34	355	P	P	14 47 16.3	+0.7
V48A	Smith Brothers	52.71	345	P	P	14 47 18.1	-0.3
TZTN	Tazewell	52.76	349	P	P	14 47 18.3	-0.5
TZTN				IAmb	IAmb	14 47 33.3	
	comp=Z,27nm,1.4s						
U49A	Red Boiling Sp	53.20	346	P	P	14 47 21.3	-0.6
S57A	Dark Hollow, R	53.26	353	P	P	14 47 23.3	+0.9
S57A				IAmb	IAmb	14 47 24.1	
	comp=Z,9.8nm,0.8s						
WVT	Waverly	53.33	344	P	P	14 47 21.9	-1.0
R58B	Mineral	53.35	354	P	P	14 47 24.2	+1.1
R58B				IAmb	IAmb	14 47 25.7	
	comp=Z,22nm,1.2s						
T50A	Nancy	53.48	348	P	P	14 47 23.3	-0.8
T50A				IAmb	IAmb	14 47 24.4	
	comp=Z,9.5nm,0.8s						
MIAR	Mount Ida	53.65	338	P	P	14 47 24.9	-0.4
TX31	Lajitas Ar. Si	53.83	326	P	P	14 47 27.0	+0.1
TX31				IAmb	IAmb	14 47 47.2	
	comp=Z,12nm,1.5s						
TX32	Lajitas Array	53.83	326	P	P	14 47 27.1	+0.2
TXAR	Lajitas Array	53.83	326	P	P	14 47 27.3	+0.4
	comp=Z,0.5nm,0.5s,baz=154,slow=9.0,SNR=11						
TXAR				pP	pP	14 47 49.1	-3.5
	comp=Z,0.3nm,0.7s,baz=159,slow=8.0,SNR=2.5						
TXAR				sP	sP	14 47 58.6	-5.7
	comp=Z,0.5nm,0.6s,baz=149,slow=5.8,SNR=4.0						
TXAR	Lajitas Array	53.83	326	P	P	14 47 26.7	-0.1
S51A	Beattyville	53.83	349	P	P	14 47 26.1	-0.5
S51A				IAmb	IAmb	14 47 41.3	
	comp=Z,15nm,1.2s						
R55A	Marlinton	53.92	352	P	P	14 47 28.3	+1.0
R55A				IAmb	IAmb	14 47 47.0	
	comp=Z,16nm,1.2s						
R53A	Hurricane	54.22	351	P	P	14 47 29.3	-0.1
R53A				IAmb	IAmb	14 47 29.4	
	comp=Z,28nm,1.4s						
LCAR	Lake Charles	54.23	341	P	P	14 47 29.2	-0.3
W39A	Magazine	54.31	338	P	P	14 47 31.4	+1.3
X37A	Clayton	54.36	337	P	P	14 47 32.0	+1.5
X37A				IAmb	IAmb	14 47 50.9	
	comp=Z,16nm,1.4s						
FCAR	Ozark Folk Cen	54.37	340	P	P	14 47 30.8	+0.2
ABTX	Abilene, Hawle	54.47	332	P	P	14 47 32.4	+1.1
ABTX				IAmb	IAmb	14 47 32.8	
	comp=Z,5.3nm,0.7s						
Q56A	Snyder Ridge,	54.55	353	P	P	14 47 32.8	+1.0
PBMO	Poplar Bluff	54.66	342	P	P	14 47 32.1	-0.5
PBMO				IAmb	IAmb	14 47 32.9	
	comp=Z,9.2nm,0.9s						
Q54A	Coxs Mills	54.70	352	P	P	14 47 33.1	+0.2
Q54A				IAmb	IAmb	14 47 47.6	
	comp=Z,12nm,1.3s						
WCI	Wyandotte Cave	54.95	347	P	P	14 47 33.6	-1.1
WCI				IAmb	IAmb	14 47 35.0	
	comp=Z,14nm,0.9s						
U40A	Yellville	55.04	340	P	P	14 47 34.9	-0.5
U40A				IAmb	IAmb	14 47 36.0	
	comp=Z,6.7nm,0.8s						
T42A	Van Buren	55.09	342	P	P	14 47 35.0	-0.7
WUPA	West Chester U	55.15	357	P	P	14 47 37.0	+1.0
WUPA				IAmb	IAmb	14 47 54.1	
	comp=Z,13nm,1.2s						
S44A	Carbondale	55.18	344	P	P	14 47 35.7	-0.6
SIUC	Southern Illin	55.19	344	P	P	14 47 36.2	-0.2
MCWV	Mont Chateau	55.24	353	P	P	14 47 36.6	-0.1
MVL	Millersville	55.26	356	P	P	14 47 37.3	+0.4
MVL				IAmb	IAmb	14 47 48.6	
	comp=Z,20nm,1.2s						
P53A	Whipple	55.27	351	P	P	14 47 37.0	+0.1
HHAR	Hobbs	55.34	339	P	P	14 47 37.2	-0.4
HHAR				IAmb	IAmb	14 47 38.4	
	comp=Z,14nm,1.3s						
P52A	Corning	55.53	351	P	P	14 47 38.3	-0.5
P52A				IAmb	IAmb	14 47 39.2	
	comp=Z,9.7nm,0.8s						
MGMO	Mountain Grove	55.57	341	P	P	14 47 38.8	-0.5
MGMO				IAmb	IAmb	14 47 39.8	
	comp=Z,7.3nm,0.8s						
O56A	Blue Knob Stat	55.70	354	P	P	14 47 41.3	+1.2
O56A				IAmb	IAmb	14 47 42.0	
	comp=Z,13nm,0.9s						
O54A	Avella	55.82	353	P	P	14 47 41.4	+0.5
O54A				IAmb	IAmb	14 47 44.5	
	comp=Z,22nm,1.2s						
BRNJ	Basking Ridge	55.85	358	P	P	14 47 41.6	+0.6
O52A	Adamsville	55.95	351	P	P	14 47 41.3	-0.5
O52A				IAmb	IAmb	14 47 42.4	
	comp=Z,16nm,0.9s						
SSPA	Standing Stone	56.01	355	P	P	14 47 42.8	+0.6
ACSO	Alum Creek Sta	56.25	350	P	P	14 47 43.4	-0.6
ACSO				IAmb	IAmb	14 47 44.8	
	comp=Z,19nm,1.1s						
S39A	Bolivar	56.41	340	P	P	14 47 44.6	-0.5
S39A				IAmb	IAmb	14 47 45.7	
	comp=Z,7.6nm,0.8s						
O49A	Covington	56.44	349	P	P	14 47 44.4	-1.0
O49A				IAmb	IAmb	14 47 45.4	
	comp=Z,15nm,1.1s						
R40A	Maddies Statio	56.62	341	P	P	14 47 45.6	-1.0
R40A				IAmb	IAmb	14 47 46.8	
	comp=Z,5.3nm,0.7s						
M57A	Sunshine Farm,	56.64	356	P	P	14 47 47.9	+1.2
M55A	Ridgway	56.91	354	P	P	14 47 49.4	+0.7
M55A				IAmb	IAmb	14 47 49.8	
	comp=Z,14nm,0.8s						
M54A	Oil Creek Stat	57.04	353	P	P	14 47 50.0	+0.4
BRYW	Bryant College	57.05	1	P	P	14 47 50.0	+0.4
N49A	Columbus Grove	57.13	349	P	P	14 47 49.7	-0.4
N49A				IAmb	IAmb	14 47 50.4	
	comp=Z,17nm,1.0s						
L59A	Walton	57.37	358	P	P	14 47 52.6	+0.7
L59A				IAmb	IAmb	14 47 53.7	
	comp=Z,15nm,0.9s						
N47A	Urbana	57.37	348	P	P	14 47 50.8	-1.1
QUA2	Belchertown	57.40	360	P	P	14 47 52.8	+0.8
L56A	Greenwood	57.47	355	P	P	14 47 53.1	+0.5
L56A				IAmb	IAmb	14 47 60.0	
	comp=Z,22nm,1.2s						
HRV	Adam Dziewonsk	57.64	1	P	P	14 47 54.4	+0.7
P40A	Paris	57.69	342	P	P	14 47 53.4	-0.7
P40A				IAmb	IAmb	14 47 54.3	
	comp=Z,5.7nm,0.8s						
K62A	Royalston	57.79	0	P	P	14 47 55.9	+1.1
K62A				IAmb	IAmb	14 47 56.1	
	comp=Z,14nm,1.0s						
WVNY	West Valley, N	57.83	354	P	P	14 47 54.8	-0.2
K57A	Scipio Center	57.99	356	P	P	14 47 57.0	+0.9
MMNY	Mt. Morris Dam	58.09	355	P	P	14 47 57.4	+0.5
L48A	N Adams	58.16	349	P	P	14 47 56.1	-1.3
J61A	Chester	58.47	360	P	P	14 48 00.3	+0.8
ANMO	Albuquerque	59.67	328	P	P	14 48 09.4	+1.2
	comp=Z,0.6nm,0.5s,baz=174,slow=6.1,SNR=4.2						
K43A	Burlington	59.69	346	P	P	14 48 06.9	-1.0
SADO	Sadowa	60.22	354	P	P	14 48 11.2	-0.3
PLVO	Plevna	60.32	356	P	P	14 48 12.0	-0.2
G62A	West of Eustis	60.36	1	P	P	14 48 13.4	+0.9
PKME	Peaks-Kenny Pk	60.45	2	P	P	14 48 13.7	+0.7
G65A	Princeton	60.48	4	P	P	14 48 13.8	+0.6
F63A	Nahmakanta, Br	60.90	3	P	P	14 48 16.5	+0.4
F63A				IAmb	IAmb	14 48 20.9	
	comp=Z,17nm,1.2s						
F64A	Sherman	61.09	3	P	P	14 48 17.9	+0.5
SDCO	Great Sand Dun	61.40	330	P	P	14 48 20.6	+0.6
W18A	Petrified Fore	61.55	325	P	P	14 48 21.0	0.0
SFX	San Felipe	61.69	319	P	P	14 48 22.0	+0.2
SFX				IAmb	IAmb	14 48 22.6	
	comp=Z,15nm,0.9s						
E62A	Clayton Lake	61.80	2	P	P	14 48 23.2	+1.0
E62A				IAmb	IAmb	14 48 36.6	
	comp=Z,18nm,1.4s						
PQI	Presque Isle	61.92	3	P	P	14 48 23.1	+0.1
PQI				IAmb	IAmb	14 48 24.6	
	comp=Z,14nm,1.0s						
D62A	Allapoint, All	62.27	2	P	P	14 48 26.1	+0.8
E46A	Sault Ste Mari	62.44	351	P	P	14 48 25.8	-0.7
E46A				IAmb	IAmb	14 48 31.7	
	comp=Z,13nm,1.0s						
BATG	Bathurst New B	62.65	5	P	P	14 48 28.4	+0.5
BATG				IAmb	IAmb	14 48 53.9	
	comp=Z,26nm,1.2s						
LMQ	La Malbaie	62.70	1	P	P	14 48 28.6	+0.4
LMQ				IAmb	IAmb	14 48 31.9	
	comp=Z,9.1nm,1.0s						
E43A	Lone Tree Farm	62.92	349	P	P	14 48 29.0	-0.6
ECSD	EROS Data Cent	62.93	340	P	P	14 48 29.4	-0.3
ECSD				IAmb	IAmb	14 48 30.7	
	comp=Z,12nm,1.2s						
COWI	Conover	63.09	347	P	P	14 48 30.6	-0.2
COWI				IAmb	IAmb	14 48 36.9	
	comp=Z,34nm,1.4s						
D41A	Chassel	63.88	348	P	P	14 48 36.1	+0.1
F36A	Milaca	63.94	344	P	P	14 48 36.3	-0.1
F36A				IAmb	IAmb	14 48 37.2	
	comp=Z,8.4nm,0.9s						
MTPU	Mount Pierson	65.03	326	P	P	14 48 45.0	+0.9
EYMN	Ely	65.37	346	P	P	14 48 44.9	-0.7
DRLN	Deer Lake	65.70	11	P	P	14 48 47.3	-0.4
SNCC	San Nicolas Is	66.13	318	P	P	14 48 50.6	-0.2
PSUT	Pine Spring	66.29	325	P	P	14 48 53.6	+1.6
B35A	Bob, Littlefor	66.30	345	P	P	14 48 51.0	-0.6
E28A	Huff	66.80	339	P	P	14 48 55.8	+1.0
AGMN	Agassiz Nation	66.82	343	P	P	14 48 54.2	-0.7
AGMN				IAmb	IAmb	14 48 56.1	
	comp=Z,10nm,0.8s						
VNA3	Neumayer Olymp	66.83	162	P	P	14 48 56.4	+1.6
VNA1	Neumayer--Stat	67.06	161	P	P	14 48 58.3	+2.2
R11A	Troy Canyon, C	67.13	324	P	P	14 48 58.6	+1.3
PDAR	Pinedale Array	67.27	331	P	P	14 48 57.4	-0.8
	comp=Z,0.4nm,0.7s,baz=134,slow=6.4,SNR=4.2						
PDAR				sP	PcP	14 49 30.1	+4.8
	comp=Z,0.4nm,0.6s,baz=131,slow=6.8,SNR=3.4						
VNA2	Neumayer--Watz	67.42	161	P	P	14 48 59.3	+0.9
	baz=291,slow=8.4						
SPUT	South Promonto	67.57	328	P	P	14 49 00.8	+0.8
ULM	Lac du Bonnet	68.60	344	P	P	14 49 05.0	-1.0
	comp=Z,4.8nm,0.5s,baz=160,slow=6.0,SNR=6.2						
ULM	Lac du Bonnet	68.60	344	P	P	14 49 04.1	-1.9
NVAR	Mina Array Bea	68.74	323	P	P	14 49 09.1	+1.6
	comp=Z,0.2nm,0.5s,baz=147,slow=6.9,SNR=4.3						
NVAR				pP	PcP	14 49 29.9	-1.7
	comp=Z,0.1nm,0.3s,baz=141,slow=7.5,SNR=2.3						
SNAA	Sanae	69.04	162	P	P	14 49 09.8	+1.2
SNAA	Sanae	69.04	162	P	P	14 49 09.5	+0.9
SNAA				IAmb	IAmb	14 49 10.6	
	comp=Z,9.2nm,0.8s						
YERR	Yerington	69.66	323	P	P	14 49 14.8	+1.7
LIC	Lamto	69.99	77	*e*P	P	14 49 13.6	-1.8
	comp=Z,55nm,1.0s						
TIC	Toumodi	70.13	77	*e*P	P	14 49 14.9	-1.4
PAHR	Pah Rah Range	70.22	323	P	P	14 49 17.8	+1.3
DBIC	Dimbokro	70.29	77	P	P	14 49 16.6	-0.7
	comp=Z,14nm,0.7s,baz=252,slow=5.6,SNR=17						
DBIC				LR	LR	15 18 44.1	
	comp=Z,15nm,18.8s,baz=176,slow=35						
DBIC	Dimbokro	70.29	77	P	P	14 49 16.5	-0.7
DBIC				IAmb	IAmb	14 49 17.2	
	comp=Z,16nm,0.8s						
KIC	Kosan Boka	70.30	77	*e*P	P	14 49 16.2	-1.1
	comp=Z,51nm,0.7s						
MFID	Camas Ranch	70.82	328	P	P	14 49 20.6	+0.6
I07A	Izee	73.20	326	P	P	14 49 35.3	+1.1
KOWA	Kowa	73.73	70	P	P	14 49 37.1	-0.6
KOWA				IAmb	IAmb	14 49 38.0	
	comp=Z,11nm,0.7s						
HUMO	Hull Mountain	74.15	324	P	P	14 49 39.9	+0.3
QSPA	South Pole Qui	74.74	180	P	P	14 49 44.0	+1.1
EDM	Edmonton	76.93	336	P	P	14 49 55.0	-0.3
NLWA	Neilton Lookou	77.68	327	P	P	14 50 01.2	+1.5
NLWA				IAmb	IAmb	14 50 17.3	
	comp=Z,20nm,1.4s						
TORD	Torodi Ar. Bea	78.49	73	P	P	14 50 04.3	-0.4
	comp=Z,24nm,0.7s,baz=261,slow=5.5,SNR=117						
TORD	Torodi Ar. Bea	78.49	73	P	P	14 50 04.1	-0.7
TORD				IAmb	IAmb	14 50 05.5	
	comp=Z,25nm,0.8s						
IVI	Ivigtut	78.75	12	P	P	14 50 05.6	+0.5
VNDA	Vanda	82.25	190	P	P	14 50 25.7	+1.9
	comp=Z,3.8nm,1.0s,baz=135,slow=3.8,SNR=15						
VNDA	Vanda	82.25	190	P	P	14 50 25.9	+2.1
SYO	Syowa Base	83.29	160	⇑*e*P	P	14 50 28.8	-0.5
ESDC	Sonseca Array	83.86	46	P	P	14 50 33.6	+0.8
	comp=Z,5.6nm,0.9s,baz=261,slow=5.2,SNR=18						
YKA	Yellowknife Ar	84.42	342	P	P	14 50 35.0	0.0
	comp=Z,2.6nm,0.7s,baz=127,slow=6.4,SNR=11						
YKA				sP	pP	14 51 06.5	+3.9
	comp=Z,2.5nm,0.9s,baz=128,slow=6.3,SNR=3.5						
SUMG	Summit	90.60	10	P	P	14 51 06.1	+1.0
SUMG				IAmb	IAmb	14 51 07.2	
	comp=Z,8.7nm,0.9s						
A36M	Sachs Harbour	94.03	346	P	P	14 51 20.2	-0.1
A36M				IAmb	IAmb	14 51 21.2	
	comp=Z,4.8nm,0.8s						
GERES	GERESS Array B	98.84	42	P	P	14 51 42.9	0.0
	comp=Z,0.2nm,0.3s,baz=208,slow=5.3,SNR=3.8						
H11S2	WAKE ISLAND Hy	123.70	282	T	T	17 13 19.0	
	baz=98,slow=74,SNR=2.6						
H11S1	WAKE ISLAND Hy	123.70	282	T	T	17 12 52.4	
	baz=98,slow=74,SNR=3.5						
H11S3	WAKE ISLAND Hy	123.71	282	T	T	17 12 56.1	
	baz=98,slow=74,SNR=3.0						
AKTO	Aktyubinsk	127.02	38	PKP	PKiKP	14 57 07.6	+0.8
	comp=Z,1.2nm,0.7s,baz=306,slow=5.0,SNR=5.3						
ASAR	Alice Springs	133.48	214	PKP	PKPdf	14 57 19.7	+0.2
	comp=Z,0.5nm,0.6s,baz=122,slow=1.7,SNR=13						
WRA	Warramunga Arr	136.18	218	PKP	PKiKP	14 57 26.5	+0.2
	comp=Z,0.6nm,0.3s,baz=131,slow=1.7,SNR=11						
ZALV	Zalesovo Beam	137.58	20	PKP	PKiKP	14 57 27.2	-0.8
	comp=Z,2.9nm,0.7s,baz=313,slow=3.0,SNR=12						
ZALV	Zalesovo Beam	137.58	20		PKPdf	14 57 26.2	+0.1
KURBB	Kurchatov Arra	137.73	28	PKP	PKiKP	14 57 27.6	-0.8
	comp=Z,0.1nm,0.3s,baz=305,slow=2.5,SNR=4.3						
MKAR	Makanchi Array	142.23	29	PKhKP	PKPpre	14 57 31.3	
	comp=Z,0.6nm,0.6s,baz=308,slow=2.8,SNR=8.5						
MKAR	Makanchi Array	142.23	29	PKPpre	PKPpre	14 57 30.8	
KSH	Kashi	143.31	43	PKP	PKPdf	14 57 36.1	-1.0
MJAR	Matsushiro Arr	145.68	314	PKPbc	PKPdf	14 57 41.1	-0.1
	comp=Z,1.1nm,0.7s,baz=108,slow=7.1,SNR=5.7						
KSRS	Korea Array	151.67	325	PKPbc	PKiKP	14 57 58.4	+0.9
	comp=Z,1.8nm,0.7s,baz=15,slow=2.4,SNR=4.6						
KSRS				PKPab	PKPab	14 58 04.5	-1.6
	comp=Z,1.0nm,0.6s,baz=18,slow=4.5,SNR=2.2						
CMAR	Chiang Mai Arr	171.08	69	PKPab	PKPab	14 59 31.7	+0.4
	comp=Z,1.9nm,0.9s,baz=280,slow=6.1,SNR=9.5						
CMAR	Chiang Mai Arr	171.08	69		PKPab	14 59 30.7	-0.6

IDC ***22*** *14:52:44.7±1.1, 0°.94N×127°.34E, h0^{km}, mb4.1/5, mb1 4.1/7, mb1mx3.7/44, mbtmp4.0/7, ML3.4/2, MS3.0/6, Ms1 3.0/6, ms1mx2.7/36, Error ellipse: s-maj=52.8km s-min=18.5km az=64.0*
NEIC ***22*** *14:52:46.4±0.6, 1°.00N±0°.05×127°.4E±0°.1, h10^{km}±1^{km}, mb4.2/13, Error ellipse: s-maj=21.2km s-min=8.2km az=275.0*
DJA ***22*** *14:52:47.8±0.3, 1°N±2°×12°7E±°, h10^{km}, M3.9/11, mb4.1/2, MLv3.8/11*
ISC 22 14:52:45.3±0.7**, 1°.04N**±0°.05×**127°.33E**±0°.06**, h10**^{km}**, n39, σ1^{s}.35**/37**, mb4.2**/12**, MS2.8**/4**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.27**	**172**	P	**Pg**	**14 52 51.5**	**+0.8**
TNTI				S	**Sg**	**14 52 55.4**	**+1.0**
TNTI	**Ternate**	**0.27**	**172**	Pg	**Pg**	**14 52 49.6**	**-1.1**
TNTI				Sg	**Sg**	**14 52 54.4**	**0.0**
LBMI	**Labuha**	**1.67**	**174**	P	**Pb**	**14 53 15.4**	**-0.8**
LBMI				S	**Sg**	**14 53 38.6**	**-0.6**
SANI	**Sanana**	**3.35**	**204**	P	**Pn**	**14 53 39.7**	**+2.0**
KMSI	**Cibinong**	**3.38**	**262**	P	**Pb**	**14 53 43.5**	**-1.8**
GTOI	**Gorontalo**	**4.34**	**265**	P	**Pb**	**14 53 58.0**	**-3.6**
SWI	**Sorong**	**4.36**	**116**	P	**Pn**	**14 53 52.4**	**+0.8**
SIJI	**Sorong**	**4.37**	**116**	Pn	**Pn**	**14 53 51.4**	**-0.4**
	1.7nm,0.3s,baz=101,slow=16,SNR=14						
SIJI				Sn	**Sn**	**14 54 40.1**	**-2.7**
	1.1nm,0.3s,baz=323,slow=22,SNR=1.3						
SIJI				LR	LR	14 55 44.9	
	comp=Z,363nm,18.0s,baz=312,slow=42						
MRSI	**Marisa**	**5.42**	**264**	P	**Pb**	**14 54 17.2**	**-2.9**
APSI	**Ampana**	**6.00**	**251**	P	Pn	14 54 19.9	+5.7
FAKI	**Fak Fak**	**6.30**	**129**	P	**Pn**	**14 54 18.9**	**+0.6**
FAKI	**Fak Fak**	**6.30**	**129**	Pn	**Pn**	**14 54 19.1**	**+0.8**
BATI	**Baumata**	**11.75**	**198**	LR	LR	15 00 19.1	
	comp=Z,79nm,21.3s,baz=32,slow=39						
KNRA	**Kununurra**	**16.67**	**175**	Pn	**Pn**	**14 56 38.2**	**-1.0**
UGM	**Wanagama**	**18.97**	**242**	P	**Pn**	**14 57 09.9**	**+2.2**
FITZ	**Fitzroy Crossi**	**19.09**	**185**	P	**P**	**14 57 07.6**	**-0.6**
	0.1nm,0.3s,baz=17,slow=11,SNR=3.0						
GUMO	**Guam**	**21.38**	**54**	LR	LR	15 04 33.7	
	comp=Z,27nm,19.4s,baz=228,slow=33						
WB0	**Warramunga Arr**	**21.81**	**162**	P	**P**	**14 57 37.6**	**-0.1**
WB0				IAmb	IAmb	14 57 49.5	
	comp=Z,5.5nm,0.8s						
WRAB	**Tennant Creek**	**21.95**	**162**	P	**P**	**14 57 39.0**	**-0.2**
WRAB				IAmb	IAmb	14 57 40.5	
	comp=Z,7.1nm,0.7s						
WRA	**Warramunga Arr**	**21.95**	**162**	P	**P**	**14 57 39.6**	**+0.3**
	comp=Z,6.3nm,0.6s,baz=341,slow=11,SNR=40						
WRA	**Warramunga Arr**	**21.95**	**162**	P	**P**	**14 57 38.8**	**-0.5**
WB2	**Warramunga Arr**	**21.96**	**162**	P	**P**	**14 57 38.9**	**-0.5**
WB2				IAmb	IAmb	14 57 40.6	
	comp=Z,8.0nm,0.7s						
WR0	**Warramunga Arr**	**22.03**	**162**	P	**P**	**14 57 40.0**	**-0.3**
WR0				IAmb	IAmb	14 57 50.2	
	comp=Z,8.9nm,1.1s						
PMG	**Port Moresby**	**22.31**	**118**	LR	LR	15 09 29.9	
	comp=Z,88nm,19.9s,baz=24,slow=45						
AS31	**Alice Springs**	**25.37**	**166**	P	**P**	**14 58 12.6**	**-0.3**
AS31				IAmb	IAmb	14 58 19.9	
	comp=Z,2.1nm,0.7s						
ASAR	**Alice Springs**	**25.38**	**166**	P	**P**	**14 58 12.7**	**-0.2**
	comp=Z,3.7nm,0.6s,baz=348,slow=8.2,SNR=51						
ASAR	**Alice Springs**	**25.38**	**166**	P	**P**	**14 58 12.2**	**-0.7**
JCJ	**Chichijima**	**29.58**	**28**	LR	LR	15 07 59.6	
	comp=Z,38nm,21.1s,baz=82,slow=31						
CMAR	**Chiang Mai Arr**	**32.80**	**304**	LR	LR	15 12 39.2	
	comp=Z,9.1nm,21.6s,baz=75,slow=36						
BBOO	**Buckleboo**	**34.66**	**167**	P	**P**	**14 59 34.8**	**-0.3**
STKA	**Stephens Creek**	**35.42**	**159**	P	**P**	**14 59 41.9**	**+0.2**
	comp=Z,2.4nm,0.7s,baz=335,slow=9.7,SNR=8.0						
JEW	**Eniwo**	**43.50**	**15**	P	**P**	**15 00 49.8**	**+0.9**
MK31	**Makanchi Array**	**60.10**	**326**	P	**P**	**15 02 54.2**	**+1.4**
MK31				IAmb	IAmb	15 03 02.5	
	comp=Z,1.8nm,1.0s						
MKAR	**Makanchi Array**	**60.10**	**326**	P	**P**	**15 02 54.1**	**+1.3**
	comp=Z,0.4nm,0.5s,baz=115,slow=8.1,SNR=6.2						
MKAR	**Makanchi Array**	**60.10**	**326**	P	**P**	**15 02 53.7**	**+0.8**
KURBB	**Kurchatov Arra**	**64.32**	**328**	P	**P**	**15 03 23.0**	**+1.9**
	comp=Z,0.5nm,0.2s,baz=128,slow=6.0,SNR=4.6						
KURK	**Kurchatov**	**64.32**	**328**	P	**P**	**15 03 22.1**	**+1.1**
KURK				IAmb	IAmb	15 03 43.1	
	comp=Z,3.1nm,0.9s						
KKAR	**Karatay Array**	**65.60**	**318**	P	**P**	**15 03 30.9**	**+1.3**
KIWB	**Kanaga Island**	**68.58**	**33**	P	**P**	**15 03 47.6**	**-0.7**

IDC ***22*** *14:53:38.8±1.1, 40°.00N×106°.54E, h0^{km}, mb3.6/8, mb1 3.7/10, mb1mx3.5/61, mbtmp3.6/10, ML3.6/2, MS3.1/3, Ms1 3.1/3, ms1mx2.6/42, Error ellipse: s-maj=27.1km s-min=18.2km az=77.0*
ISC 22 14:53:40.4±0.5**, 39°.91N**±0°.04×**106°.47E**±0°.03**, h16**^{km}**, n29, σ1^{s}.92**/39**, mb3.7**/11**, 1C, Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTO	**Baotou**	**2.81**	**74**	*e*Pg	**Pn**	**14 54 24.1**	**-0.6**
BTO				Sg	**Sb**	**14 55 02.1**	**-2.2**
BTO				smax	smax		
	comp=E,5μm,0.3s						
HHC	**Hu-ho-hao-te**	**4.00**	**75**	*e*Pn	**Pn**	**14 54 41.5**	**+0.3**
HHC				Pg	**Pb**	**14 54 49.0**	**-1.6**
HHC				Sg	**Sb**	**14 55 40.5**	**+1.7**
HHC				smax	smax		
	comp=N,1μm,0.4s						
HHC				smax	smax		
	comp=E,2μm,0.4s						
LZH	**Lanzhou**	**4.34**	**209**	Pn	**Pb**	**14 54 56.1**	**-0.3**
LZH				Pg	**Pg**	**14 55 05.0**	**+1.5**
LZH				Sn	**Sb**	**14 55 45.5**	**-3.1**
LZH				Sg	**Sg**	**14 55 59.6**	**-0.2**
LZH				smax	smax		
	comp=N,500nm,0.9s						
LZH				smax	smax		
	comp=E,800nm,0.9s						
LZH				LR	LR		
	comp=E,1μm,5.4s						
LZH				LR	LR		
	comp=Z,720nm,8.3s						
TIY	**Taiyuan**	**5.15**	**113**	Pn	**Pb**	**14 55 13.1**	**+3.0**
TIY				Pg	**Pg**	**14 55 16.8**	**-2.1**
TIY				Sn	**Sn**	**14 55 56.3**	**+0.3**
TIY				Sg	**Sb**	**14 56 14.8**	**+3.1**
TIY				smax	smax		
	comp=N,610nm,0.8s						
TIY				smax	smax		
	comp=E,550nm,0.9s						
GTA	**Gaotai**	**5.16**	**267**	⇑Pn	**Pn**	**14 55 00.0**	**+2.9**
GTA				Pg	**Pg**	**14 55 17.3**	**-1.9**
GTA				Sn	**Sn**	**14 55 56.0**	**-0.4**
GTA				Sg	**Sg**	**14 56 25.1**	**-0.9**
GTA				smax	smax		
	comp=N,230nm,1.0s						
GTA				smax	smax		
	comp=E,200nm,0.9s						
GTA				LR	LR		
	comp=N,450nm,6.9s						
GTA				LR	LR		
	comp=E,330nm,8.4s						
GTA				LR	LR		
	comp=Z,240nm,11.3s						
XAN	**Xi'an**	**6.17**	**161**	Pn	**Pn**	**14 55 12.4**	**+1.4**
XAN				Pg	**Pg**	**14 55 38.8**	**+0.2**
XAN				Sn	**Sn**	**14 56 16.9**	**-4.4**
XAN				Sg	**Sg**	**14 56 53.3**	**-5.3**
XAN				smax	smax		
	comp=N,110nm,0.6s						
XAN				smax	smax		
	comp=E,73nm,0.8s						
XAN				LR	LR		
	comp=E,490nm,15.1s						
BJI	**Beijing**	**7.46**	**86**	Pg	Pb	14 55 53.8	+4.5
BJI				Sg	Sb	14 57 27.4	+9.5
BJI				smax	smax		
	comp=N,170nm,0.8s						
BJI				smax	smax		
	comp=E,32nm,0.7s						
SONM	**Songino Array**	**7.93**	**360**	Pn	**Pn**	**14 55 35.3**	**+0.3**
	comp=E,1.7nm,0.3s,baz=180,slow=14,SNR=66						
SONM				Sn	**Sn**	**14 57 03.2**	**-1.2**
	comp=E,3.1nm,0.3s,baz=182,slow=27,SNR=4.5						
SONM				Lg	Lg	14 57 48.5	
	comp=E,3.8nm,0.3s,baz=191,slow=28,SNR=8.5						
KSRS	**Korea Array**	**16.93**	**91**	LR	LR	15 05 07.3	
	comp=E,55nm,19.7s,baz=289,slow=41						
MKAR	**Makanchi Array**	**18.84**	**299**	P	**P**	**14 57 59.0**	**-0.5**
	comp=E,0.1nm,0.3s,baz=97,slow=14,SNR=5.4						
TAPN	**Taplejung**	**19.97**	**237**	*e*P	**Pn**	**14 58 14.7**	**+0.7**
KLR	**Kul'dur**	**20.20**	**54**	LR	LR	15 06 53.1	
	comp=E,87nm,18.1s,baz=248,slow=40						
ODAN	**Odare**	**20.52**	**236**	*e*P	Pn	14 58 20.3	-0.1
JIRN	**Jiri**	**20.76**	**240**	*e*P	Pn	14 58 23.0	-0.4
	comp=E,14nm,0.6s						
GUN	**Gumba**	**20.81**	**241**	*e*P	Pn	14 58 22.9	-1.0
	comp=E,35nm,0.7s						
PKI	**Pulchoki**	**21.34**	**241**	*e*P	**P**	**14 58 28.5**	**+1.3**
	comp=E,9.4nm,0.5s						
PKIN	**Phulchoki**	**21.35**	**241**	*e*P	**P**	**14 58 28.7**	**+1.5**
	comp=E,7.1nm,0.5s						
DMN	**Daman**	**21.52**	**242**	*e*P	**P**	**14 58 30.7**	**+1.7**
	comp=E,13nm,0.7s						
DANN	**Dangsing**	**21.99**	**245**	*e*P	**P**	**14 58 34.1**	**0.0**
KURBB	**Kurchatov Arra**	**22.26**	**308**	P	**P**	**14 58 37.0**	**+0.5**
	comp=E,2.6nm,0.9s,baz=105,slow=13,SNR=9.1						
CMAR	**Chiang Mai Arr**	**22.34**	**199**	P	**P**	**14 58 40.8**	**+3.2**
	comp=E,0.3nm,0.4s,baz=17,slow=7.6,SNR=2.0						
KOLN	**Koldanda**	**22.45**	**244**	*e*P	**P**	**14 58 39.3**	**+0.3**
PYUN	**Piuthan**	**22.68**	**246**	*e*P	**P**	**14 58 41.3**	**-0.1**
BVAR	**Borovoye Array**	**27.78**	**310**	P	**P**	**14 59 29.3**	**+0.9**
	comp=E,0.8nm,0.5s,baz=156,slow=11,SNR=6.0						
ARU	**Arti**	**35.14**	**314**	P	**P**	**15 00 33.5**	**+0.5**
	comp=E,0.6nm,0.4s,baz=139,slow=1.6,SNR=4.6						
BRTR	**Keskin Array B**	**54.42**	**295**	P	**P**	**15 03 07.9**	**+1.0**
	comp=E,0.5nm,0.8s,baz=99,slow=8.9,SNR=3.6						
BRTR				LR	LR	15 30 43.1	
	comp=E,13nm,20.1s,baz=292,slow=41						
ILAR	**Eielson Array**	**61.12**	**28**	P	**P**	**15 03 54.6**	**+1.2**
	comp=E,0.3nm,0.7s,baz=302,slow=6.6,SNR=2.7						
ASAR	**Alice Springs**	**68.23**	**153**	P	**P**	**15 04 41.0**	**+0.8**
	comp=E,0.2nm,0.6s,baz=340,slow=6.4,SNR=5.0						
YKA	**Yellowknife Ar**	**72.74**	**19**	P	**P**	**15 05 07.2**	**-0.1**
	comp=E,1.3nm,0.8s,baz=334,slow=4.2,SNR=5.3						

ISU ***22*** *14:54:50, 40°.34N×73°.20E, h5^{km}*
SOME ***22*** *14:54:51.3, 40°.52N×73°.20E, h0^{km}*
KRNET ***22*** *14:54:51.2±0.1, 40°.31N×73°.17E, h17^{km}, mb3.1*
NNC ***22*** *14:54:53.9±1.3, 40°.48N×73°.27E, h0^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=10.4km s-min=5.9km az=168.0*
KNET ***22*** *14:54:54.3±0.6, 40°.48N×73°.44E, h12^{km}±4^{km}, ml2.6, Error ellipse: s-maj=9.2km s-min=5.6km az=98.0*
ISC 22 14:54:51.3±1.1**, 40°.38N**±0°.03×**73°.23E**±0°.02**, h1**^{km}±10^{km}**, n52, σ1^{s}.88**/88**, 28C-15D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	**Osh**	**0.37**	**294**	*e*P	**Pg**	**14 54 58.0**	**-0.4**
OHH				*e*S	**Sg**	**14 55 04.0**	**+0.8**
OHH	**Osh**	**0.37**	**294**	⇑*i*P	**Pg**	**14 54 58.8**	**+0.4**
	baz=5.0						
OHH				⇑*i*S	**Sg**	**14 55 03.7**	**+0.5**
	baz=5.0						
SFK	**Sufi-Kurgan**	**0.42**	**150**	*e*P	**Pg**	**14 54 59.0**	**-0.4**
SFK				*e*S	**Sg**	**14 55 04.0**	**-0.7**
SFK	**Sufi-Kurgan**	**0.42**	**150**	⇑*e*P	**Pg**	**14 54 58.9**	**-0.4**
	baz=40						
SFK				⇑*e*S	**Sg**	**14 55 04.5**	**-0.2**
	baz=40						
SALK	**Salom-Alik**	**0.67**	**41**	⇑*e*P	**Pb**	**14 55 05.9**	**0.0**
	baz=41						
SALK				⇑*e*S	**Sb**	**14 55 15.3**	**-0.5**
	baz=41						
FRG	**Fergana**	**1.10**	**270**	*e*P	**Pb**	**14 55 11.0**	**-2.2**
FRG				*e*S	**Sb**	**14 55 28.0**	**-0.1**
DRK	**Karamyk**	**1.42**	**231**	⇑*i*P	Pn	14 55 16.2	-2.2
	baz=32						
DRK				⇑*i*S	**Sn**	**14 55 34.1**	**-3.7**
	baz=32						
AML	**Almayashu**	**1.79**	**11**	⇓P	**Pb**	**14 55 24.9**	**-0.1**
	65nm,0.2s,SNR=76						
AML				⇑S	**Sg**	**14 55 49.5**	**+0.7**
	90nm,0.2s						
AML	**Almayashu**	**1.79**	**11**	⇓*i*P	**Pb**	**14 55 24.9**	**-0.1**
	baz=12						
AML				⇓*i*S	**Sg**	**14 55 49.9**	**+1.2**
	baz=12						
BTK	**Batken**	**1.88**	**261**	*e*P	**Pn**	**14 55 25.0**	**+0.5**
BTK				*e*S	**Sn**	**14 55 51.0**	**+2.2**
BTK	**Batken**	**1.88**	**261**	⇑*i*P	**Pn**	**14 55 24.3**	**-0.2**
	baz=63						
BTK				⇑*i*S	**Sn**	**14 55 48.6**	**-0.2**
	baz=63						
TRKS	**Terek-Say**	**1.96**	**307**	⇑*i*P	**Pn**	**14 55 25.5**	**-0.2**
	baz=8.0						
TRKS				⇑*i*S	**Sn**	**14 55 50.7**	**-0.3**
	baz=8.0						
UCH	**Uchtor**	**2.09**	**27**	⇓P	**Pb**	**14 55 30.0**	**-0.2**
	6.8nm,0.3s,SNR=7.7						
UCH				⇓S	**Sg**	**14 55 57.9**	**-0.5**
	24nm,0.3s						
UCH	**Uchtor**	**2.09**	**27**	⇑*i*P	**Pb**	**14 55 29.8**	**-0.4**
	baz=27						
UCH				⇑*i*S	**Sg**	**14 55 57.5**	**-0.9**
	baz=27						
MNAS	**Manas**	**2.18**	**346**	⇑*e*P	**Pn**	**14 55 30.3**	**+1.5**
	baz=47						
MNAS				⇑*i*S	**Sb**	**14 55 58.5**	**-0.6**
	baz=47						
EKS2	**Erkin-Say**	**2.32**	**10**	⇓P	**Pb**	**14 55 33.5**	**-0.4**
	3.4nm,0.2s,SNR=17						
EKS2				⇑S	**Sg**	**14 56 04.7**	**-1.2**
	5.4nm,0.2s						
EKS2	**Erkin-Say**	**2.32**	**10**	⇓*i*P	**Pb**	**14 55 32.5**	**-1.5**
	baz=11						
EKS2				⇓*i*S	**Sb**	**14 56 02.4**	**-0.7**
	baz=11						
MRKS	**Merke**	**2.37**	**360**	*e*P	**Pb**	**14 55 34.6**	**-0.2**
	14nm,0.3s						
MRKS				*e*S	**Sg**	**14 56 06.9**	**-0.4**
	38nm,0.2s						
MRKS	**Merke**	**2.37**	**360**	Pg	**Pb**	**14 55 34.6**	**-0.2**
	14nm,0.3s						
MRKS				Lg	Lg	14 56 06.9	
	38nm,0.2s						
AAK	**Ala-Archa**	**2.45**	**22**	⇓P	**Pb**	**14 55 35.0**	**-1.1**
	13nm,0.4s,SNR=10						
AAK				⇓S	**Sb**	**14 56 06.3**	**-0.6**
	18nm,0.2s						
AAK	**Ala-Archa**	**2.45**	**22**	⇑Pn	**Pb**	**14 55 35.1**	**-1.1**
	6.6nm,0.4s						
AAK				⇑Sn	**Sb**	**14 56 06.2**	**-0.8**
	32nm,0.7s						
AAK	**Ala-Archa**	**2.45**	**22**	⇑*i*P	**Pb**	**14 55 34.6**	**-1.6**
	baz=23						
AAK				⇑*i*S	**Sb**	**14 56 05.7**	**-1.2**
	baz=23						
KBK	**Karagaybulak**	**2.62**	**29**	⇓P	**Pb**	**14 55 38.2**	**-0.9**
	3.9nm,0.2s						
KBK	**Karagaybulak**	**2.62**	**29**	⇑*i*P	**Pn**	**14 55 37.0**	**+2.2**
	baz=29						
KBK				⇑*i*S	**Sb**	**14 56 09.6**	**-2.2**
	baz=29						
CHMG	**Chimgan**	**2.71**	**297**	*e*P	**Pb**	**14 55 42.0**	**+1.5**
CHMG				*e*S	**Sb**	**14 56 16.0**	**+1.7**
USP	**Ospenovka**	**3.04**	**18**	⇓*i*P	**Pn**	**14 55 42.6**	**+2.1**
	baz=18						
USP				⇓*i*S	**Sb**	**14 56 19.7**	**-4.1**
	baz=18						
TKM2	**Tokmak 2**	**3.10**	**34**	⇑Pg	**Pb**	**14 55 48.5**	**+1.2**
	1.6nm,0.3s						
TKM2				⇑Lg	Lg	14 56 29.2	
	9.4nm,0.6s						
TKM2	**Tokmak 2**	**3.10**	**34**	⇑*i*P	**Pn**	**14 55 43.5**	**+2.0**
	baz=34						
TKM2				⇑*i*S	**Sb**	**14 56 21.4**	**-4.3**
	baz=34						
KST	**Kastek**	**3.36**	**37**	*e*P	**Pb**	**14 55 53.2**	**+1.6**
	3.2nm,0.4s						
KST				*e*S	**Sg**	**14 56 38.7**	**-0.5**
	7.5nm,0.6s						
KST	**Kastek**	**3.36**	**37**	Pg	**Pb**	**14 55 53.2**	**+1.6**
	3.2nm,0.4s						
KST				Lg	Lg	14 56 38.7	
	7.5nm,0.6s						
KK02	**Karatay Array**	**3.40**	**324**	Pn	**Pn**	**14 55 47.2**	**+1.8**
	baz=136,slow=12						
KK02				⇓Pg	**Pb**	**14 55 53.6**	**+1.3**
	3.0nm,0.6s,baz=138,slow=17						
KK02				⇓Lg	Lg	14 56 37.7	
	7.5nm,0.6s,baz=138,slow=29						
DGS	**Degeres**	**3.44**	**33**	*e*P	**Pb**	**14 55 54.3**	**+1.3**
	5.8nm,0.6s						
DGS				*e*S	**Sg**	**14 56 40.7**	**-0.9**
	8.5nm,0.5s						
DGS	**Degeres**	**3.44**	**33**	Pg	**Pb**	**14 55 54.3**	**+1.3**
	5.8nm,0.6s						
DGS				Lg	Lg	14 56 40.7	
	8.5nm,0.5s						
MTBS	**Maitube**	**3.65**	**40**	*e*P	**Pb**	**14 55 58.6**	**+2.1**
	1.1nm,0.3s						
MTBS				*e*S	**Sg**	**14 56 47.8**	**-0.6**
	9.4nm,0.3s						
MTBS	**Maitube**	**3.65**	**40**	Pg	**Pb**	**14 55 58.6**	**+2.1**
	1.1nm,0.3s						
MTBS				Lg	Lg	14 56 47.8	
	9.4nm,0.3s						
TNSS	**Tian-Shan**	**3.85**	**45**	*e*P	**Pb**	**14 56 01.9**	**+1.7**
	2.6nm,0.4s						
TNSS				*e*S	**Sg**	**14 56 53.4**	**-1.5**
	8.8nm,0.5s						
TNSS	**Tian-Shan**	**3.85**	**45**	Pg	**Pb**	**14 56 01.9**	**+1.7**
	2.6nm,0.4s						
TNSS				Lg	Lg	14 56 53.4	
	8.8nm,0.5s						
MDOK	**Medeo**	**3.99**	**44**	*e*P	**Pb**	**14 56 04.5**	**+2.1**
	2.2nm,0.3s						
MDOK				*e*S	**Sg**	**14 56 57.9**	**-1.5**
	16nm,0.6s						
MDOK	**Medeo**	**3.99**	**44**	Pg	**Pb**	**14 56 04.5**	**+2.1**
	2.2nm,0.3s						
MDOK				Lg	Lg	14 56 57.9	
	16nm,0.6s						
KOTS	**Kotyrbulak**	**4.07**	**44**	*e*P	**Pb**	**14 56 06.6**	**+2.8**
	2.6nm,0.5s						
KOTS				*e*S	**Sg**	**14 57 01.7**	**-0.3**
	29nm,0.7s						
KOTS	**Kotyrbulak**	**4.07**	**44**	Pg	**Pb**	**14 56 06.6**	**+2.8**
	2.6nm,0.5s						
KOTS				Lg	Lg	14 57 01.7	
	29nm,0.7s						
KTBS	**Karatobe**	**4.21**	**36**	*e*P	**Pb**	**14 56 08.6**	**+2.5**
	1.1nm,0.5s						
KTBS				*e*S	**Sg**	**14 57 05.0**	**-1.5**
	7.6nm,0.5s						
KTBS	**Karatobe**	**4.21**	**36**	Pg	**Pb**	**14 56 08.6**	**+2.5**
	1.1nm,0.5s						
KTBS				Lg	Lg	14 57 05.0	
	7.6nm,0.5s						
BTLS	**Baital**	**4.70**	**7**	*e*P	**Pb**	**14 56 16.4**	**+2.0**
	0.7nm,0.4s						
BTLS				*e*S	**Sg**	**14 57 18.2**	**-4.0**
	2.2nm,0.3s						
BTLS	**Baital**	**4.70**	**7**	Pg	**Pb**	**14 56 16.4**	**+2.0**
	0.7nm,0.4s						
BTLS				Lg	Lg	14 57 18.2	
	2.2nm,0.3s						
SATY	**Saty**	**4.71**	**54**	*e*P	**Pb**	**14 56 17.3**	**+2.7**
	1.2nm,0.2s						
SATY				*e*S	**Sg**	**14 57 19.9**	**-2.7**
	5.4nm,0.7s						
SATY	**Saty**	**4.71**	**54**	Pg	**Pb**	**14 56 17.3**	**+2.7**
	1.2nm,0.2s						
SATY				Lg	Lg	14 57 19.9	
	5.4nm,0.7s						
ARXS	**Arharly**	**5.13**	**40**	*e*P	**Pb**	**14 56 24.6**	**+2.8**
	0.9nm,0.3s						
ARXS				*e*S	**Sg**	**14 57 32.3**	**-3.7**
	4.3nm,0.5s						
ARXS	**Arharly**	**5.13**	**40**	Pg	**Pb**	**14 56 24.6**	**+2.8**
	0.9nm,0.3s						
ARXS				Lg	Lg	14 57 32.3	
	4.3nm,0.5s						
UZB	**Uzynbulak**	**5.14**	**56**	*e*P	**Pb**	**14 56 25.2**	**+3.1**
	2.7nm,0.2s						
UZB				*e*S	**Sg**	**14 57 33.2**	**-3.1**
	4.9nm,0.5s						
UZB	**Uzynbulak**	**5.14**	**56**	Pg	**Pb**	**14 56 25.2**	**+3.1**
	2.7nm,0.2s						
UZB				Lg	Lg	14 57 33.2	
	4.9nm,0.5s						
PDGK	**Podgornoye**	**5.53**	**56**	Pg	**Pb**	**14 56 32.5**	**+3.9**
	0.2nm,0.4s						
PDGK				Lg	Lg	14 57 45.6	
	1.3nm,1.0s						

IDC ***22*** *15:03:30.1±2.2, 5°.39S×147°.04E, h212^{km}±19^{km}, mb2.9/3, mb1 3.1/6, mb1mx2.9/35, mbtmp3.5/6, Error ellipse: s-maj=30.2km s-min=22.0km az=88.0*
ISC 22 15:03:29.0±1.5**, 5°.3S**±0°.1×**147°.1E**±0°.2**, h195**^{km}**, n6, σ1^{s}.84**/7**, mb3.2**/3**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.09**	**179**	P	**Pn**	**15 04 33.9**	**+2.1**
	2.6nm,0.3s,baz=360,slow=3.2,SNR=9.8						
PMG				S	**Sn**	**15 05 20.3**	**-0.9**
	4.1nm,0.3s,baz=39,slow=23,SNR=2.5						
JAY	**Jayapura**	**6.96**	**293**	P	**Pn**	**15 05 09.9**	**+1.1**
	0.9nm,0.3s,baz=102,slow=23,SNR=1.5						
WRA	**Warramunga Arr**	**19.15**	**219**	P	**P**	**15 07 36.5**	**-1.3**
	0.2nm,0.3s,baz=44,slow=11,SNR=6.5						
ASAR	**Alice Springs**	**22.27**	**214**	P	**P**	**15 08 09.4**	**-0.9**
	0.6nm,0.7s,baz=43,slow=7.7,SNR=10						
FITZ	**Fitzroy Crossi**	**24.54**	**237**	P	**P**	**15 08 28.9**	**-2.0**
	0.7nm,0.5s,baz=53,slow=9.3,SNR=12						
ILAR	**Eielson Array**	**84.78**	**23**	P	**P**	**15 15 40.4**	**-0.6**
	0.2nm,0.7s,baz=255,slow=5.1,SNR=4.1						

ISK ***22*** *15:13:57.5, 39°.49N×25°.42E, h9^{km}, ML2.6/11*
ATH ***22*** *15:13:58.9, 39°.50N×25°.45E, h12^{km}±8^{km}, ML2.3/2, Error ellipse: s-maj=9.0km s-min=1.3km az=213.0*
ISC 22 15:13:58.3±1.1**, 39°.49N**±0°.03×**25°.43E**±0°.03**, h11**^{km}±10^{km}**, n18, σ0^{s}.35**/27**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EFSA	**Agios Efstrati**	**0.34**	**279**	P	**Pb**	**15 14 06.4**	**+0.1**
EFSA				S	**Sb**	**15 14 11.3**	**-0.5**
SIGR	**SIGRI**	**0.43**	**130**	P	**Pg**	**15 14 06.6**	**-0.2**
SIGR				S	**Sg**	**15 14 12.4**	**0.0**
SIGR				AML	AML	15 14 13.2	
	comp=E,608μm,0.3s						
SIGR				AML	AML	15 14 13.4	
	comp=N,1776μm,0.5s						
SIGR	**SIGRI**	**0.43**	**130**	PG	**Pg**	**15 14 06.5**	**-0.2**
SIGR				SG	**Sg**	**15 14 13.0**	**+0.5**
LIA	**Limnos Island**	**0.45**	**335**	P	**Pg**	**15 14 07.4**	**+0.2**
LIA				S	**Sg**	**15 14 13.6**	**+0.4**
BOZC	**Bozcaada**	**0.60**	**53**	PG	**Pg**	**15 14 09.6**	**-0.3**
BOZC				SG	**Sb**	**15 14 18.5**	**-0.7**
PRK	**Paraskevi**	**0.70**	**110**	P	**Pb**	**15 14 12.5**	**+0.1**
PRK				S	**Sb**	**15 14 22.1**	**+0.1**
PRK				AML	AML	15 14 24.4	
	comp=N,601μm,0.5s						
PRK				AML	AML	15 14 26.1	
	comp=E,560μm,0.4s						
EZN	**Ezine**	**0.77**	**64**	PG	**Pg**	**15 14 12.9**	**-0.3**
EZN				SG	**Sb**	**15 14 24.1**	**0.0**
GADA	**Gvkgeada**	**0.79**	**27**	PG	**Pg**	**15 14 13.3**	**-0.3**
GADA				SG	**Sb**	**15 14 24.7**	**0.0**
SMTH	**Samothraki Isl**	**0.99**	**5**	P	**Pb**	**15 14 17.2**	**-0.1**
CHOS	**Chios island**	**1.20**	**156**	PN	**Pb**	**15 14 20.8**	**-0.3**
CHOS				SN	**Sn**	**15 14 37.9**	**+0.5**
GELI	**Tayfur-Gelibol**	**1.22**	**41**	PN	**Pn**	**15 14 21.0**	**-0.1**
OUR	**Ouranopolis**	**1.40**	**308**	PN	**Pn**	**15 14 23.5**	**-0.1**
ERIK	**Erikli-Kesan**	**1.45**	**35**	PN	**Pn**	**15 14 24.4**	**+0.1**
URLA	**Izmir**	**1.45**	**141**	PN	**Pn**	**15 14 24.3**	**-0.1**
ALN	**Alexandroupoli**	**1.49**	**18**	P	**Pn**	**15 14 24.6**	**-0.3**
ALN	**Alexandroupoli**	**1.49**	**18**	PN	**Pn**	**15 14 24.8**	**-0.1**
KRBG	**Karabiga-Canak**	**1.70**	**57**	PN	**Pn**	**15 14 27.8**	**0.0**
MAR3	**Marsite Statio**	**1.90**	**48**	PN	**Pn**	**15 14 31.4**	**+0.8**

IDC 22 15:26:49.4±2.3**, 0°.47N**×**127°.30E, h0**^{km}**, mb3.0**/3**, mb1 3.3**/3**, mb1mx2.9**/34**, mbtmp3.1**/3**, MS3.4**/1**, Ms1 3.4**/1**, ms1mx2.4**/18**, Error ellipse: s-maj=171.6km s-min=29.2km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LEM	**Lembang**	**20.94**	**249**	LR	LR	15 39 54.1	
	comp=Z,98nm,18.0s,baz=317,slow=38						
WRA	**Warramunga Arr**	**21.43**	**162**	P	P	15 31 38.8	-0.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	0.4nm,0.6s,baz=341,slow=11,SNR=4.7						
ASAR	Alice Springs	24.83	165	P	P	15 32 13.9	+0.3
	0.2nm,0.6s,baz=351,slow=15,SNR=5.8						
MKAR	Makanchi Array	60.55	326	P	P	15 37 01.7	-0.1
	0.1nm,0.4s,baz=110,slow=8.6,SNR=2.0						

IDC ***22*** *15:34:06.4±0.6, 53°.57S×140°.90E, h0^{km}, mb4.5/14, mb1 4.6/14, mb1mx4.3/35, mbtmp4.5/14, MS4.2/23, Ms1 4.2/23, ms1mx4.2/31, Error ellipse: s-maj=28.9km s-min=13.9km az=80.0*

NEIC ***22*** *15:34:07.9±1.3, 53°.66S±0°.08×140°.5E±0°.2, h10^{km}±1^{km}, mb5.0/33, Error ellipse: s-maj=17.0km s-min=13.2km az=107.0*

GCMT ***22*** *15:34:08.9±0.2, 53°.61S±0°.01×140°.73E±0°.02, h18^{km}±1^{km}, MW5.1/106, Moment Tensor Solution. s44,c56; s106,c166; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.84±.16; $M_{\theta\theta}$1.43±.13; $M_{\phi\phi}$-0.58±.15; $M_{r\theta}$-0.48±.31; $M_{\theta\phi}$-4.79±.11; $M_{\phi r}$0.05±.30; Best double couple: $M_0$4.91800×10^{16} NP1:ϕ_s354.00000°, δ84.00000°, λ0.00000°. NP2:ϕ_s84.00000°, δ90.00000°, λ-174.00000°. Principal axes: T 5.3450, Plg4.0000°, Azm219.0000°; N -0.8500, Plg84.0000°, Azm87.0000°; P -4.4910, Plg4.0000°, Azm309.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 15:34:08.3±0.3**, 53°.66S**±0°.06×**140°.45E**±0°.08**, h10**^{km}**, n182, σ1**^{s}.**25**/157**, mb5.0**/55**, MS4.3**/28**, 2D, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MCQ	Macquarie Isla	10.91	102	Pn	Pn	15 36 45.7	+1.4
TAU	Tasmania Unive	11.69	26	Pn	Pn	15 36 54.8	-0.2
GLAD	Gladstone	13.67	25	P	Pn	15 37 24.3	+2.2
	61nm,1.4s						
BRAT	Ballarat	16.29	10	P	Pn	15 37 57.1	+0.1
	36nm,1.1s						
TOO	Toolangi	16.47	14	P	P	15 38 01.9	-0.1
	baz=16,SNR=11						
TOO	Toolangi	16.47	14	Pn	Pn	15 37 58.3	-1.0
TOO				IAmb	IAmb	15 38 08.0	
	comp=Z,181nm,1.2s						
TOO	Toolangi	16.47	14	P	P	15 38 01.6	-0.4
	comp=Z,136nm,1.2s						
ARPS	Mount Arapiles	16.92	4	P	Pn	15 38 04.4	-0.7
	baz=17,SNR=7.2						
ARPS	Mount Arapiles	16.92	4	P	Pn	15 38 05.1	+0.1
	comp=Z,72nm,1.3s						
CAN	Canberra	19.30	22		Pn	15 38 33.5	-0.8
CAN				IAmb	IAmb	15 38 41.8	
	comp=Z,130nm,1.2s						
CAN	Canberra	19.30	22	P	Pn	15 38 36.1	+1.8
CASY	Casey	19.33	218		Pn	15 38 34.5	+0.1
CNB	Canberra Magne	19.39	22	P	Pn	15 38 37.8	+2.4
	comp=Z,54nm,1.3s						
YNG	Young	20.16	19	P	Pn	15 38 43.7	-0.8
	baz=20,SNR=5.4						
YNG	Young	20.16	19	P	Pn	15 38 46.0	+1.5
	comp=Z,42nm,1.6s						
HTT	Hallett	20.25	356	P	P	15 38 44.3	+0.6
	baz=20,SNR=14						
HTT	Hallett	20.25	356	P	Pn	15 38 44.7	-1.0
	comp=Z,77nm,1.0s						
WKZ	Wanaka	20.52	76	P	P	15 38 44.9	-1.7
WKZ				IAmb	IAmb	15 38 59.5	
	comp=Z,69nm,1.3s						
WHYH	Whyalla	20.72	353	P	Pn	15 38 49.9	-1.2
	comp=Z,92nm,1.0s						
BBOO	Buckleboo	21.08	350	P	P	15 38 52.7	+0.1
	baz=21,SNR=9.0						
BBOO	Buckleboo	21.08	350	P	P	15 38 52.3	-0.3
BBOO				IAmb	IAmb	15 39 05.0	
	comp=Z,78nm,1.2s						
SYDH	Sydney Hard Ro	21.20	24	P	P	15 38 58.1	+4.3
	comp=Z,31nm,1.6s						
LBZ	Lake Benmore	21.45	76	P	P	15 38 54.9	-1.7
LBZ				IAmb	IAmb	15 39 09.0	
	comp=Z,69nm,1.4s						
STKA	Stephens Creek	21.79	3	P	P	15 38 59.9	-0.3
	comp=Z,29nm,0.8s,baz=171,slow=14,SNR=51						
STKA				LR	LR	15 45 48.5	
	comp=Z,770nm,20.5s,baz=180,slow=32						
STKA	Stephens Creek	21.79	3	P	P	15 38 59.8	-0.5
RPZ	Rata Peaks	22.36	76	P	P	15 39 04.8	-1.5
RPZ				IAmb	IAmb	15 39 11.9	
	comp=Z,90nm,1.3s						
CMSA	Cobar Meteorol	22.43	12	P	P	15 39 06.9	-0.2
	baz=22,SNR=30						
CMSA	Cobar Meteorol	22.43	12	P	P	15 39 07.6	+0.5
	comp=Z,114nm,1.0s						
LCRK	Leigh Creek	23.26	355	P	P	15 39 15.7	0.0
	comp=Z,75nm,1.2s						
MQZ	McQueen's Vall	23.29	78	P	P	15 39 15.3	-0.7
MQZ				IAmb	IAmb	15 39 30.0	
	comp=Z,83nm,1.5s						
MULG	Mulgathing	23.82	346	P	P	15 39 20.8	-0.5
	comp=Z,89nm,1.2s						
FORT	Forrest	24.57	334	P	P	15 39 27.5	-0.7
	baz=24,SNR=7.2						
FORT	Forrest	24.57	334	P	P	15 39 28.4	+0.2
FORT	Forrest	24.57	334	P	P	15 39 28.5	+0.3
	comp=Z,219nm,0.8s						
ARMA	Armidale	24.61	24	P	P	15 39 27.9	-0.8
	baz=25,SNR=7.8						
ARMA	Armidale	24.61	24	P	P	15 39 27.6	-1.1
ARMA				IAmb	IAmb	15 39 34.6	
	comp=Z,33nm,1.1s						
ARMA	Armidale	24.61	24	P	P	15 39 30.7	+2.0
	comp=Z,32nm,1.0s						
VNDA	Vanda	25.19	169	P	P	15 39 32.9	-0.5
	comp=Z,2.1nm,0.7s,baz=326,slow=9.0,SNR=27						
VNDA				LR	LR	15 48 19.5	
	comp=Z,600nm,18.2s,baz=334,slow=34						
VNDA	Vanda	25.19	169	P	P	15 39 32.7	-0.7
INKA	Innaminka	25.90	1	P	P	15 39 41.1	+0.9
	comp=Z,185nm,1.1s						
H01W1	Cape Leeuwin H	26.33	305	T	T	16 07 19.5	
	baz=142,slow=76,SNR=36						
H01W2	Cape Leeuwin H	26.34	305	T	T	16 07 20.1	
	baz=142,slow=76,SNR=36						
H01W3	Cape Leeuwin H	26.35	305	T	T	16 07 19.4	
	baz=142,slow=76,SNR=38						
QLP	Quilpie	27.20	7	P	P	15 39 52.8	+0.9
	baz=27,SNR=9.4						
QLP	Quilpie	27.20	7	P	P	15 39 52.4	+0.4
	comp=Z,72nm,1.1s						
RMQ	Roma	27.84	16	P	P	15 39 57.3	-0.5
	baz=28,SNR=43						
EIDS	Eidsvold	29.36	20	P	P	15 40 11.1	-0.2
	baz=29,SNR=5.9						
EIDS	Eidsvold	29.36	20	P	P	15 40 10.4	-0.8
EIDS				IAmb	IAmb	15 40 16.6	
	comp=Z,21nm,0.9s						
URZ	Urewera	29.38	73	P	P	15 40 07.5	-3.8
	comp=Z,19nm,1.0s,baz=120,slow=23,SNR=3.0						
URZ				LR	LR	15 50 07.2	
	comp=Z,982nm,21.8s,baz=211,slow=33						
URZ	Urewera	29.38	73	P	P	15 40 08.3	-3.1
WRKA	Warakurna	30.00	338	P	P	15 40 15.9	-1.2
	baz=30,SNR=13						
WRKA	Warakurna	30.00	338	P	P	15 40 17.8	+0.7
	comp=Z,27nm,1.0s						
ASAR	Alice Springs	30.36	348	P	P	15 40 18.9	-1.3
	comp=Z,5.4nm,0.7s,baz=165,slow=9.8,SNR=85						
ASAR				PcP	PcP	15 43 19.2	-0.8
	comp=Z,0.5nm,0.7s,baz=183,slow=1.7,SNR=2.9						
ASAR				LR	LR	15 51 45.0	
	comp=Z,363nm,18.6s,baz=172,slow=35						
ASAR	Alice Springs	30.36	348	P	P	15 40 18.8	-1.4
AS31	Alice Springs	30.36	348	P	P	15 40 18.9	-1.4
QIS	Mount Isa	33.05	359	P	P	15 40 42.7	-1.2
	baz=33,SNR=8.0						
QIS	Mount Isa	33.05	359	P	P	15 40 44.0	+0.1
	comp=Z,22nm,1.2s						
WR0	Warramunga Arr	33.95	350	P	P	15 40 49.8	-1.9
WR0				IAmb	IAmb	15 40 56.8	
	comp=Z,23nm,0.9s						
WB2	Warramunga Arr	33.98	350	P	P	15 40 50.0	-1.9
WRA	Warramunga Arr	33.99	350	P	P	15 40 50.3	-1.7
	comp=Z,11nm,0.7s,baz=173,slow=7.9,SNR=49						
WRA				PcP	PcP	15 43 29.3	-0.6
	comp=Z,1.6nm,0.9s,baz=173,slow=2.4,SNR=3.6						
WRA				LR	LR	15 53 13.5	
	comp=Z,231nm,19.9s,baz=145,slow=34						
WRA	Warramunga Arr	33.99	350	P	P	15 40 50.0	-2.1
WRAB	Tennant Creek	33.99	350	P	P	15 40 49.8	-2.2
WB0	Warramunga Arr	34.15	350	P	P	15 40 51.1	-2.3
MTSU	Mount Surprise	35.59	6	P	P	15 41 06.5	+0.7
	baz=36,SNR=7.7						
MTSU	Mount Surprise	35.59	6	P	P	15 41 08.1	+2.3
	comp=Z,13nm,1.1s						
PSA00	Pilbara Seismi	35.68	326	P	P	15 41 06.2	-0.4
PSA00				IAmb	IAmb	15 41 23.4	
	comp=Z,30nm,1.5s						
QSPA	South Pole Qui	36.45	180	P	P	15 41 13.1	+0.1
	comp=Z,2.2nm,0.7s,baz=252,slow=1.1,SNR=9.2						
QSPA	South Pole Qui	36.45	180	P	P	15 41 12.2	-0.9
DZM	Mont Dzumac	37.21	42	*e*S	S	15 47 07.9	+1.3
	comp=Z,182nm,27.1s						
DZM				*e*LR	LR	15 51 30.4	
	comp=Z,2µm,26.1s						
FITZ	Fitzroy Crossi	37.31	336	P	P	15 41 20.0	-0.5
	comp=Z,6.3nm,0.8s,baz=186,slow=7.9,SNR=16						
FITZ				LR	LR	15 55 06.0	
	comp=Z,533nm,21.9s,baz=173,slow=34						
MAW	Mawson	37.69	218	P	P	15 41 24.6	+1.4
	comp=Z,1.5nm,0.9s,baz=132,slow=19,SNR=3.0						
MAW				LR	LR	15 55 39.7	
	comp=Z,1µm,19.4s,baz=84,slow=34						
MAW	Mawson	37.69	218	P	P	15 41 24.6	+1.4
KNRA	Kununurra	39.00	342	P	P	15 41 33.8	-0.9
	baz=39,SNR=4.1						
KNRA	Kununurra	39.00	342	P	P	15 41 33.7	-1.1
KNRA				IAmb	IAmb	15 41 40.5	
	comp=Z,33nm,1.0s						
KDU	Kakadu	41.36	348	P	P	15 41 53.3	-1.1
	baz=41,SNR=6.0						
KDU	Kakadu	41.36	348	P	P	15 41 55.4	+1.0
	comp=Z,32nm,1.1s						
MTN	Manton Dam	41.39	346	P	P	15 41 53.4	-1.2
	baz=41,SNR=5.5						
MTN	Manton Dam	41.39	346	P	P	15 41 53.5	-1.0
MTN				IAmb	IAmb	15 42 00.2	
	comp=Z,29nm,0.9s						
PMG	Port Moresby	44.47	9	LR	LR	15 59 26.0	
	comp=Z,473nm,20.1s,baz=188,slow=34						
SYO	Syowa Base	44.83	210	⇓*e*P	P	15 42 21.1	-0.7
BATI	Baumata	45.38	336	P	P	15 42 26.1	-0.8
	comp=Z,11nm,0.3s,baz=86,slow=19,SNR=1.3						
BATI				LR	LR	16 02 13.7	
	comp=Z,475nm,18.3s,baz=190,slow=37						
BATI	Baumata	45.38	336	P	P	15 42 27.7	+0.8
	comp=Z,43nm,1.1s						
MSVF	Nonsavu	46.16	54	LR	LR	15 57 36.3	
	comp=Z,643nm,20.6s,baz=180,slow=31						
HNR	Honiara	46.82	27	LR	LR	15 59 27.7	
	comp=Z,341nm,19.8s,baz=180,slow=33						
MMRI	Maumere	47.24	335	P	P	15 42 41.4	-0.1
	comp=Z,78nm,0.9s						
MMRI	Maumere	47.24	335	P	P	15 42 40.6	-0.9
BKSI	Bulukumba	50.97	334	P	P	15 43 11.0	+1.0
	comp=Z,19nm,1.1s						
FAKI	Fak Fak	51.03	349	P	P	15 43 08.6	-1.8
	comp=Z,23nm,1.0s						
FAKI	Fak Fak	51.03	349	P	P	15 43 09.9	-0.5
FAKI				IAmb	IAmb	15 43 16.9	
	comp=Z,23nm,1.0s						
KAPI	Kappang	51.36	333	P	P	15 43 13.1	+0.2
	comp=Z,2.9nm,0.5s,baz=240,slow=10,SNR=1.7						
SNAA	Sanae	52.31	194	P	P	15 43 19.6	+0.1
SNAA	Sanae	52.31	194	P	P	15 43 18.7	-0.8
SNAA				IAmb	IAmb	15 43 39.2	
	comp=Z,13nm,1.2s						
SPSI	Sidrap Palu	52.36	334	P	P	15 43 21.2	+0.8
	comp=Z,30nm,1.0s						
SANI	Sanana	52.81	342	P	P	15 43 23.8	+0.1
	comp=Z,15nm,1.0s						
SWI	Sorong	53.17	348	P	P	15 43 26.0	-0.4
TTSI	Tana Toraja	53.23	334	P	P	15 43 27.6	+0.8
	comp=Z,6µmcomp=Z,14nm,1.6s						
VNA3	Neumayer Olymp	53.59	192	P	P	15 43 27.1	-1.8
VNA2	Neumayer--Watz	53.61	193	P	P	15 43 31.3	+2.3
LEM	Lembang	53.74	318	P	P	15 43 31.9	+1.1
	comp=Z,8.9nm,0.5s,baz=191,slow=12,SNR=4.4						
LEM				LR	LR	16 03 40.4	
	comp=Z,197nm,21.2s,baz=176,slow=33						
VNA1	Neumayer--Stat	53.97	192	P	P	15 43 31.1	-0.5
BBKI	Banjar Baru	54.27	328	P	P	15 43 35.3	+0.8
	comp=Z,26nm,1.4s						
AFI	Afiamalu	54.53	62	LR	LR	16 02 30.6	
	comp=Z,273nm,21.1s,baz=184,slow=31						
APSI	Ampana	54.83	337	P	P	15 43 39.3	+0.8
	comp=Z,16nm,1.1s						
RAR	Rarotonga	55.35	79	LR	LR	16 02 36.8	
	comp=Z,116nm,19.6s,baz=242,slow=31						
GTOI	Gorontalo	56.02	339	P	P	15 43 48.9	+1.8
	comp=Z,14nm,0.9s						
MRSI	Marisa	56.10	338	P	P	15 43 48.4	+0.7
	comp=Z,14nm,0.6s						
MPSI	Mapaga	56.46	335	P	P	15 43 50.5	+0.3
	comp=Z,10nm,0.9s						
TOLI2	Tolitoli	56.99	336	P	P	15 43 53.0	-1.0
MDSI	Maura Dua	57.26	315	P	P	15 43 55.6	-0.3
	comp=Z,8.4nm,1.2s						
TBI	Tubuai	59.80	89	*e*LR	LR	16 01 55.9	
	comp=Z,300nm,25.5s						
KSM	Kuching	60.40	325	P	P	15 44 17.1	-0.6
KSM				IAmb	IAmb	15 44 25.1	
	comp=Z,9.5nm,0.8s						
MNSI	Mandailing Nat	63.97	313	P	P	15 44 42.3	+0.7
PPT2	Papeete2	64.17	85	*e*S	S	15 53 24.0	+3.7
	comp=Z,64nm,28.2s						
PPT2				*e*LQ	LQ	16 00 54.0	
	comp=Z,930nm,29.2s						
PPT2				*e*LR	LR	16 03 44.1	
	comp=Z,365nm,31.2s						
PPT	Papeete	64.18	85	LR	LR	16 06 43.8	
	comp=Z,96nm,20.2s,baz=230,slow=31						
PSI	Prapat	66.05	314	LR	LR	16 09 33.4	
	comp=Z,102nm,21.4s,baz=134,slow=32						
KULM	Kulim	67.56	316	P	P	15 45 03.8	-1.0
TAOE	Nuku Hiva Isla	76.64	87	*e*LR	LR	16 09 14.9	
	comp=Z,295nm,33.8s						
SUR	Sutherland	79.67	228	LR	LR	16 14 47.8	
	comp=Z,322nm,20.6s,baz=148,slow=30						
CMAR	Chiang Mai Arr	80.20	320	P	P	15 46 19.1	+0.4
	comp=Z,1.4nm,1.0s,baz=176,slow=4.9,SNR=9.8						
CMAR				LR	LR	16 19 56.8	
	comp=Z,119nm,20.2s,baz=194,slow=34						
CHTO	Chiang Mai	80.53	320	P	P	15 46 20.2	-0.3
BOSA	Boshof	80.78	234	LR	LR	16 14 54.3	
	comp=Z,303nm,21.5s,baz=176,slow=30						
PLCA	Paso Flores	82.26	157	P	P	15 46 29.4	-0.3
	comp=Z,1.0nm,0.7s,baz=220,slow=8.7,SNR=2.8						
PLCA				LR	LR	16 16 26.6	
	comp=Z,74nm,20.1s,baz=193,slow=31						
KMI	Kunming	84.98	326	⇓P	P	15 46 45.8	+2.0
KMI				pP	PcP	15 46 47.4	+0.4
KMI				sP	pwP	15 46 49.8	-0.4
KMI				pmax	pmax		
	comp=Z,8.0nm,0.6s						
H03S2	Juan Fernandez	86.42	148	T	T	17 23 19.8	
	baz=199						
H03S1	Juan Fernandez	86.42	148	T	T	17 23 22.8	
	baz=199						
H03S3	Juan Fernandez	86.43	148	T	T	17 23 18.0	
	baz=199						
NJ2	Nanjing	87.39	342	*e*P	P	15 46 56.9	+1.7
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
MJAR	Matsushiro Arr	89.86	358	P	P	15 47 06.3	-0.4
	comp=Z,5.2nm,1.2s,baz=179,slow=6.3,SNR=5.1						
MJAR	Matsushiro Arr	89.86	358	P	P	15 47 06.4	-0.4
MJAR				IAmb	IAmb	15 47 08.7	
	comp=Z,7.6nm,1.4s						
CD2	Chengdu	90.04	329	*e*P	P	15 47 09.0	+1.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KSRS	Korea Array	91.39	350	LR	LR	16 27 46.9	
	comp=Z,72nm,21.0s,baz=164,slow=35						
XAN	Xi'an	91.52	334	P	P	15 47 14.1	-0.5
XAN				pP	pwP	15 47 28.3	+7.3
XAN				sP	sP	15 47 32.8	+15
XAN				pmax	pmax		
	comp=Z,6.0nm,1.5s						
KMBO	Kilima Mbogo	96.90	259	LR	LR	16 22 58.2	
	comp=Z,154nm,20.4s,baz=94,slow=30						
HHC	Hu-ho-hao-te	97.37	338	*e*P	Pdif	15 47 41.6	+0.2
HHC	Hu-ho-hao-te	97.37	338	SS	SS	16 05 37.5	-7.2
HHC				pmax	pmax		
	comp=Z,8.0nm,1.3s						
HHC				pmax	pmax		
	comp=Z,170nm,6.3s						
HHC				LR	LR		
	comp=N,360nm,21.1s						
HHC				LR	LR		
	comp=E,150nm,18.9s						
HHC				LR	LR		
	comp=Z,160nm,18.3s						
USRK	Ussuriysk Ar.	97.76	354	LR	LR	16 31 13.9	
	comp=Z,34nm,18.4s,baz=167,slow=35						
MDJ	Mudanjiang	98.34	352	P	Pdif	15 47 47.3	+1.8
MDJ				pmax	pmax		
	comp=Z,5.0nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,250nm,4.8s						
NVAR	Mina Array Bea	126.06	72	PKP	PKPdf	15 53 10.3	0.0
	comp=Z,1.3nm,0.9s,baz=201,slow=5.7,SNR=7.4						
TORD	Torodi Ar. Bea	128.13	235	PKP	PKiKP	15 53 15.3	0.0
	comp=Z,0.8nm,0.9s,baz=112,slow=1.6,SNR=3.2						
PSUT	Pine Spring	128.67	75		PKPdf	15 53 14.3	-1.0
ILAR	Eielson Array	130.55	33	PKP	PKiKP	15 53 18.4	-0.2
	comp=Z,0.4nm,0.7s,baz=243,slow=2.7,SNR=3.6						
INK	Inuvik	136.94	33	PKP	PKPdf	15 53 28.7	-0.9
	comp=Z,1.2nm,1.0s,baz=191,slow=5.2,SNR=2.3						
YKA	Yellowknife Ar	141.54	46	PKP	PKPdf	15 53 36.0	-2.1
	comp=Z,1.1nm,0.8s,baz=196,slow=1.1,SNR=2.3						
MODS	Modra-Piesok	144.69	285	*e*PKP	PKPdf	15 53 44.8	+0.6
V52A	Sevierville	144.69	102		PKPab	15 53 42.6	-0.8
JAVC	Velka Javorina	144.71	286	*e*PKP	PKPdf	15 53 44.0	-0.3
WCI	Wyandotte Cave	144.73	97		PKPab	15 53 42.4	-1.0
T50A	Nancy	144.78	100		PKPab	15 53 43.1	-0.6
V53A	Saluda	145.03	103		PKPbc	15 53 44.3	-0.4
L42A	Oliver, Polo	145.11	89		PKPbc	15 53 43.4	-1.3
SOKA	Soboth	145.11	281	*e*P	PKPdf	15 53 45.3	+0.2
	comp=Z,20nm,1.4s						
ARSA	Arzberg	145.13	282	*e*P	PKPdf	15 53 45.5	+0.5
	comp=Z,19nm,1.1s						
MORC	Moravsky Berou	145.23	287	*e*PKP	PKPbc	15 53 44.5	-0.4
CONA	Conrad Observa	145.28	284	*e*P	PKPdf	15 53 45.7	+0.3
	comp=Z,12nm,1.3s						
JFWS	Jewell Farm	145.30	87		PKPbc	15 53 44.3	-1.0
FINES	FINESS Array B	145.36	310	PKPbc	PKPbc	15 53 44.5	-0.4
	comp=Z,0.7nm,0.7s,baz=134,slow=6.0,SNR=1.0						
KRUC	Moravsky	145.54	286	*e*PKP	PKPdf	15 53 45.6	0.0
VRAC	Vranov	145.55	286	*e*PKP	PKPbc	15 53 45.8	-0.1
KRLC	Kraliky	145.81	287	*e*PKP	PKPab	15 53 48.2	+1.0
S51A	Beattyville	145.93	100	PKPbc	PKPdf	15 53 46.5	-0.1
DPC	Dobruska-Polom	146.20	288	*e*PKP	PKPdf	15 53 45.9	-0.9
KBA	Koelnbreinsper	146.31	281	*e*P	PKPab	15 53 50.3	+1.0
	comp=Z,6.6nm,0.7s						
OSTC	Ostas	146.35	288	*e*PKP	PKPab	15 53 48.8	-0.4
OSTC				*e*x	x	15 53 57.0	
CKRC	Cesky Krumlov	146.62	284	*e*PKP	PKiKP	15 53 57.0	+5.1
ABTA	Abfaltersbach	146.62	280	*e*P	PKPab	15 53 50.1	-0.4
	comp=Z,12nm,1.4s						
GERES	GERESS Array B	146.99	284	PKPbc	PKPdf	15 53 49.2	+1.0
	comp=Z,2.6nm,0.9s,baz=143,slow=3.3,SNR=13						
KHC	Kasperske Hory	147.19	284	*e*PKP	PKPbc	15 53 51.1	+0.3
KHC				*e*x	x	15 53 58.4	
ARCES	ARCESS Array B	147.20	324	PKPbc	PKPdf	15 53 48.5	+0.7
	comp=Z,1.5nm,0.6s,baz=66,slow=4.1,SNR=8.1						
WTTA	Wattenberg	147.40	280	*e*P	PKPab	15 53 52.9	-0.7
	comp=Z,24nm,1.3s						
SQTA	Sankt Quirin	147.63	280	*e*P	PKPbc	15 53 52.6	+0.5
	comp=Z,13nm,1.4s						
COWI	Conover	147.74	83		PKPbc	15 53 51.9	-0.5
MOTA	Moosalm	147.76	280	*e*P	PKPbc	15 53 53.3	+0.8
	comp=Z,12nm,1.3s						
BRG	Berggiesshubel	147.79	287	*e*PKP	PKPab	15 53 55.0	+0.2
BRG				Amp		15 53 57.5	
	comp=Z,10nm,1.3s						
BRG	Berggiesshubel	147.79	287	P	PKPab	15 54 06.6	+12
BRG				Amp		15 54 07.6	
	comp=Z,8.2nm,1.0s						
FETA	Feichten	147.81	279	*e*P	PKPbc	15 53 52.8	+0.1
	comp=Z,14nm,1.3s						
RETA	Reutte	148.03	280	*e*P	PKPab	15 53 57.2	+1.2
	comp=Z,9.4nm,1.2s						
DAVA	Damuels	148.44	279	*e*P	PKPab	15 53 58.9	+1.1
	comp=Z,13nm,1.3s						
CLL	Collm	148.51	287	*e*PKPbc	PKPbc	15 53 53.0	-1.2
	comp=Z,6.0nm,1.2s						
CLL				*e*PP	PP	15 57 27.0	+2.5
GRF	Grafenberg Arr	148.82	284	*e*PKP	PKPbc	15 53 55.0	-0.1
	baz=117,slow=2.7						
RES	Resolute Bay	149.84	26	PKPbc	PKPbc	15 53 55.9	-1.0
	comp=Z,6.9nm,0.8s,baz=223,slow=2.9,SNR=11						
RES	Resolute Bay	149.84	26		PKiKP	15 53 57.2	-0.5
ESDC	Sonseca Array	152.19	254	PKPbc	PKiKP	15 54 04.8	+1.0
	comp=Z,2.1nm,1.1s,baz=75,slow=1.4,SNR=3.9						

IDC 22 15:41:02.3±2.3**, 0°.88N×127°.32E, h0**^{km}**, mb3.2**/3**, mb1 3.4**/3**, mb1mx3.0**/43**, mbtmp3.2**/3**, Error ellipse: s-maj=178.2km s-min=28.7km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.80	162	P	P	15 45 56.9	+0.6
	0.6nm,0.6s,baz=341,slow=11,SNR=4.6						
ASAR	Alice Springs	25.22	166	P	P	15 46 29.7	-0.4
	0.4nm,0.6s,baz=345,slow=9.0,SNR=8.9						
MKAR	Makanchi Array	60.23	326	P	P	15 51 12.4	0.0
	0.1nm,0.5s,baz=112,slow=6.5,SNR=1.2						

IDC 22 15:43:15.3±1.6**, 53°.57S×140°.77E, h0**^{km}**, mb3.6**/5**, mb1 3.8**/5**, mb1mx3.5**/33**, mbtmp3.6**/5**, Error ellipse: s-maj=131.2km s-min=25.6km az=80.0, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	21.69	2	P	P	15 48 08.2	+0.7
	1.8nm,0.7s,baz=171,slow=12,SNR=3.5						
VNDA	Vanda	25.25	169	P	P	15 48 42.5	+0.1
	0.3nm,0.7s,baz=325,slow=6.2,SNR=1.5						
ASAR	Alice Springs	30.31	347	P	P	15 49 28.1	-0.2
	0.5nm,0.7s,baz=165,slow=10.0,SNR=11						
WRA	Warramunga Arr	33.93	349	P	P	15 49 59.5	-0.6
	0.6nm,0.7s,baz=174,slow=7.6,SNR=9.2						
FITZ	Fitzroy Crossi	37.30	336	P	P	15 50 29.2	+0.3
	1.6nm,0.9s,baz=149,slow=12,SNR=2.5						

IDC ***22*** *15:43:55.6±2.8, 54°.82N×151°.25W, h0^{km}, mb3.8/3, mb1 3.9/6, mb1mx3.4/58, mbtmp3.7/6, ML3.6/3, Error ellipse: s-maj=63.1km s-min=27.3km az=154.0*

NEIC ***22*** *15:43:59.5±1.5, 55°.49N±0°.07×151°.32W±0°.09, h8^{km}±5^{km}, mb3.8/4, ML3.9/31, ML3.7(AEIC), Error ellipse: s-maj=10.1km s-min=7.0km az=156.0*

AEIC ***22*** *15:44:04±1.3, 55°.45N±0°.09×151°.3W±0°.1, h12^{km}±6^{km}, Error ellipse: s-maj=12.6km s-min=8.4km az=175.0*

ISC 22 15:44:02.6±0.9**, 55°.55N**±0°.07×**151°.24W**±0°.05**, h35**^{km}**, n244, σ1**^{s}.**14**/244**, mb3.8**/4**, South of Alaska**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SII	Sitkinak Islan	1.94	303	P	Pn	15 44 32.3	-0.7
	baz=123						
SII				S	Sn	15 44 54.7	-1.3
	baz=123						
SII	Sitkinak Islan	1.94	303		Pn	15 44 32.3	-0.7
SII					Sn	15 44 54.7	-1.3
SII	Sitkinak Islan	1.94	303	IAML		15 44 55.2	
	comp=E,684nm,0.5s						
OHAK	Old Harbor	2.02	327	P	Pn	15 44 33.8	-0.3
	baz=147						
OHAK				S	Sn	15 44 56.7	-1.5
	baz=147						
OHAK	Old Harbor	2.02	327		Pn	15 44 33.8	-0.3
OHAK					Sn	15 44 56.6	-1.5
OHAK	Old Harbor	2.02	327	IAML		15 44 57.1	
	comp=E,409nm,0.6s						
CHIR	Chirikof Islan	2.50	278	P	Pn	15 44 39.3	-1.3
	baz=97						
CHIR				S	Sn	15 45 07.7	-2.1
	baz=97						
CHIR	Chirikof Islan	2.50	278		Pn	15 44 39.3	-1.3
CHIR					Sn	15 45 07.7	-2.1
PLK3	Peulik 3	3.51	310		Pn	15 44 55.1	+0.5
KABU	Katmai Buttres	3.51	323		Pn	15 44 55.4	+0.7
KABU					Sn	15 45 35.2	+0.3
ANCK	Angle Creek	3.53	320		Pn	15 44 55.5	+0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PLK2	Peulik 2	3.58	310		Pn	15 44 56.3	+0.8
Q19K	Cape Douglas,	3.63	340	P	Pn	15 44 57.3	+1.1
	baz=159						
Q19K				S	Sn	15 45 38.1	+0.3
	baz=159						
Q19K	Cape Douglas,	3.63	340		Pn	15 44 57.3	+1.1
Q19K					Sn	15 45 38.1	+0.3
Q19K	Cape Douglas,	3.63	340	IAML		15 45 42.2	
	comp=N,406nm,1.3s						
Q19K				IAML		15 45 45.9	
	comp=E,404nm,0.8s						
PLK1	Peulik 1	3.72	309		Pn	15 44 58.1	+0.7
PLK5	Peulik 5	3.95	311		Pn	15 45 01.4	+0.7
CNPM	China Poot	3.98	0		Pn	15 45 01.1	-0.1
CNPM	China Poot	3.98	0	IAML		15 45 48.3	
	comp=E,80nm,0.3s						
AUQ	Augustine Qik'	3.99	344		Pn	15 45 01.9	+0.7
AU22	Augustine Moun	3.99	344		Pn	15 45 01.9	+0.7
AGU	Augustine-Summ	4.00	344		Pn	15 45 02.6	+1.2
AUL	Augustine Lava	4.02	344		Pn	15 45 02.8	+1.2
AUL					Sn	15 45 47.4	+0.1
CHGN	Chignik	4.11	283	P	Pn	15 45 02.1	-0.6
	baz=99						
CHGN	Chignik	4.11	283		Pn	15 45 02.1	-0.6
CHGN	Chignik	4.11	283	IAML		15 45 51.2	
	comp=E,128nm,0.1s						
CHGN				IAML		15 45 52.3	
	comp=N,108nm,0.1s						
HOM	Homer	4.12	357	Pn	Pn	15 45 03.5	+0.6
HOM				IAML		15 45 58.4	
	comp=E,253nm,1.3s						
ANPB	Aniakchak Plen	4.13	291		Pn	15 45 02.8	-0.3
BRSE	Bradley Lake S	4.21	3	P	Pn	15 45 03.9	-0.3
	baz=184						
BRSE				S	Sn	15 45 52.0	-0.1
	baz=184						
BRSE	Bradley Lake S	4.21	3		Pn	15 45 03.9	-0.3
BRSE					Sn	15 45 52.0	-0.1
BRLK	Bradley Lake	4.23	2		Pn	15 45 03.9	-0.6
BRLK	Bradley Lake	4.23	2	IAML		15 45 52.0	
	comp=E,57nm,0.2s						
OPT	Oil Point	4.25	346	P	Pn	15 45 06.0	+1.3
	baz=165						
OPT	Oil Point	4.25	346		Pn	15 45 06.0	+1.3
P19K	Oil Pt	4.25	346	P	Pn	15 45 06.0	+1.2
	baz=165						
P19K	Oil Pt	4.25	346		Pn	15 45 06.0	+1.2
P18K	Big Mountain,	4.41	332	P	Pn	15 45 07.3	+0.4
	baz=150						
P18K				S	Sn	15 45 54.9	-2.1
	baz=150						
P18K	Big Mountain,	4.41	332		Pn	15 45 07.3	+0.4
P18K					Sn	15 45 54.9	-2.1
VNSG	Veniaminof 6	4.46	281		Pn	15 45 07.6	-0.1
VNHG	Veniaminof 1	4.51	282		Pn	15 45 08.4	0.0
ILS	Iliamna Low So	4.52	348		Pn	15 45 09.5	+0.9
ILSW	Iliamna Southw	4.56	348		Pn	15 45 09.5	+0.4
IVE	Iliamna Volcan	4.58	349		Pn	15 45 09.8	+0.5
O20K	Slope Mountain	4.60	351	P	Pn	15 45 10.8	+1.1
	baz=171						
O20K	Slope Mountain	4.60	351		Pn	15 45 10.8	+1.1
SEW	Seward	4.66	11	P	Pn	15 45 09.5	-0.8
	baz=193						
SEW	Seward	4.66	11		Pn	15 45 09.5	-0.8
Q23K	Middleton Isla	4.70	32	S	Sn	15 46 01.2	-2.8
	baz=216						
Q23K	Middleton Isla	4.70	32		Sn	15 46 01.2	-2.8
Q23K	Middleton Isla	4.70	32	Pn	Pn	15 45 10.5	-0.3
MID	Middleton Isla	4.70	32		Pn	15 45 10.0	-0.8
O18K	Koktuh Hills	4.81	335	P	Pn	15 45 12.8	+0.3
	baz=153						
O18K	Koktuh Hills	4.81	335		Pn	15 45 12.8	+0.3
O18K	Koktuh Hills	4.81	335	IAML		15 46 07.3	
	comp=N,81nm,1.1s						
O18K				IAML		15 46 09.2	
	comp=E,51nm,0.8s						
CHNA	Chernabura Isl	4.84	265	P	Pn	15 45 11.3	-1.5
	baz=79						
CNBA	Chernabura Isl	4.84	265		Pn	15 45 11.3	-1.5
CNBA	Chernabura Isl	4.84	265	IAML		15 46 00.9	
	comp=N,65nm,3.8s						
CNBA				IAML		15 46 29.2	
	comp=E,54nm,3.1s						
RED	Redoubt Volcan	4.95	351		Pn	15 45 14.3	-0.1
RSO	Redoubt South	4.99	351		Pn	15 45 15.5	+0.5
SLKM	Skilak Lake	5.00	6		Pn	15 45 14.1	-0.9
O22K	Cooper Landing	5.01	9	P	Pn	15 45 15.8	+0.7
	baz=190						
O22K	Cooper Landing	5.01	9		Pn	15 45 15.8	+0.7
O22K	Cooper Landing	5.01	9	IAML		15 46 15.4	
	comp=E,92nm,0.4s						
O22K				IAML		15 46 23.5	
	comp=N,107nm,1.0s						
RDWB	Redoubt West	5.02	351		Pn	15 45 15.9	+0.4
DFR	Drift River	5.11	352		Pn	15 45 17.5	+0.8
SDPT	Sand Point	5.26	272	P	Pn	15 45 17.6	-1.0
	baz=85						
SDPT	Sand Point	5.26	272		Pn	15 45 17.6	-1.0
SDPT	Sand Point	5.26	272	IAML		15 47 02.5	
	comp=E,91nm,2.3s						
SDPT				IAML		15 47 16.5	
	comp=N,123nm,2.6s						
HIN	Hinchinbrook I	5.47	25		Pn	15 45 21.5	0.0
PWL	Port Wells	5.54	15	P	Pn	15 45 21.8	-0.6
	baz=197						
PWL	Port Wells	5.54	15		Pn	15 45 21.8	-0.6
RC01	Rabbit Creek A	5.61	7	P	Pn	15 45 22.9	-0.5
	baz=189						
RC01	Rabbit Creek A	5.61	7		Pn	15 45 22.9	-0.5
SPU	Mount Spurr	5.66	356	Pn	Pn	15 45 24.5	+0.3
CKL	Chakachamna La	5.69	355		Pn	15 45 24.6	0.0
KAIM	Kayak Island	5.71	37	P	Pn	15 45 25.5	+0.8
	baz=222						
KAIM	Kayak Island	5.71	37		Pn	15 45 25.5	+0.8
GLI	Glacier Island	5.77	21	P	Pn	15 45 25.8	+0.2
	baz=204						
GLI	Glacier Island	5.77	21		Pn	15 45 25.8	+0.2
FID	Port Fidalgo	5.79	24		Pn	15 45 25.0	-0.8
EYAK	Cordova Ski Ar	5.79	28	P	Pn	15 45 26.4	+0.5
	baz=212						
EYAK	Cordova Ski Ar	5.79	28		Pn	15 45 26.4	+0.5
RAGM	Ragged Mountai	5.97	33	Pn	Pn	15 45 28.6	+0.1
SVW2	Sparrevohn	6.01	339		Pn	15 45 29.0	+0.1
SUCK	Suckling Hills	6.03	38		Pn	15 45 30.2	+1.0
PS4A	Pavlof South-4	6.05	272		Pn	15 45 28.3	-1.1
KNK	Knik Glacier	6.05	13	P	Pn	15 45 30.0	+0.4
	baz=195						
KNK	Knik Glacier	6.05	13		Pn	15 45 30.0	+0.4
HMT	Hamilton	6.06	35		Pn	15 45 30.5	+0.9
HAG	Hague Volcano	6.08	272		Pn	15 45 29.5	-0.4
NICHA	Nichawak Mount	6.09	37		Pn	15 45 31.0	+1.1
GOAT	Goat Mountain	6.11	32		Pn	15 45 31.1	+0.7
PN7A	Pavlof North-7	6.12	273		Pn	15 45 29.3	-1.1
PMR	Palmer	6.16	9	Pn	Pn	15 45 31.7	+0.8
BERG	Berg Lake	6.29	36		Pn	15 45 33.5	+0.7
DT1	Dutton Round H	6.32	270		Pn	15 45 32.4	-0.8
GRIN	Grindle Hills	6.34	38		Pn	15 45 34.2	+0.7
GHO	Glory Hole Cre	6.35	10		Pn	15 45 33.8	+0.2
SNH	Sunshine Point	6.45	41		Pn	15 45 35.4	+0.5
SML	Sawmill	6.45	12	P	Pn	15 45 35.5	+0.5
	baz=195						
SML	Sawmill	6.45	12		Pn	15 45 35.5	+0.5
BMRM	Bremner River	6.46	30	P	Pn	15 45 35.7	+0.6
	baz=215						
BMRM	Bremner River	6.46	30		Pn	15 45 35.7	+0.6
KHIT	Khitrov Hills	6.48	38		Pn	15 45 35.9	+0.5
KLU	Klutina	6.57	23	P	Pn	15 45 37.3	+0.7
	baz=207						
KLU	Klutina	6.57	23		Pn	15 45 37.3	+0.7
M19K	Big River Lodg	6.58	347	P	Pn	15 45 37.0	+0.3
	baz=165						
M19K	Big River Lodg	6.58	347		Pn	15 45 37.0	+0.3
SCM	Sheep Creek Mo	6.62	16	P	Pn	15 45 38.0	+0.7
	baz=200						
SCM	Sheep Creek Mo	6.62	16		Pn	15 45 38.0	+0.7
WAX	Waxell Ridge	6.63	39		Pn	15 45 38.3	+0.9
CRQM	Cirque	6.75	36	Pn	Pn	15 45 40.3	+1.1
MESA	MESA	6.78	43	P	Pn	15 45 40.5	+0.8
	baz=230						
MESA	MESA	6.78	43		Pn	15 45 40.4	+0.7
TGL	Tana Glacier	6.85	37		Pn	15 45 41.4	+0.9
L19K	White Mountain	6.91	346	P	Pn	15 45 41.0	-0.2
	baz=163						
L19K	White Mountain	6.91	346		Pn	15 45 41.0	-0.2
ISLE	Juniper Island	6.92	39	Pn	Pn	15 45 42.0	+0.5
BAGL	Bagley Icefiel	6.93	41		Pn	15 45 42.4	+0.9
YAH	Yahtse	6.98	42		Pn	15 45 43.1	+0.7
N25K	Chitina, Valde	6.99	27	P	Pn	15 45 43.1	+0.7
	baz=212						
N25K	Chitina, Valde	6.99	27		Pn	15 45 43.1	+0.7
VRDI	Verde Repeater	7.00	33		Pn	15 45 43.5	+0.7
FALS	False Pass	7.01	269	P	Pn	15 45 41.8	-0.8
	baz=80						
FALS	False Pass	7.01	269		Pn	15 45 41.8	-0.8
CHX	Chaix Hills	7.04	46		Pn	15 45 44.0	+0.8
GLB	Gilahina Butte	7.07	30	Pn	Pn	15 45 44.3	+0.8
M24K	Tolsona, Glenn	7.08	20	Pn	Pn	15 45 44.1	+0.5
L20K	Farewell, AK	7.08	350	P	Pn	15 45 44.0	+0.4
	baz=168						
L20K	Farewell, AK	7.08	350		Pn	15 45 44.0	+0.4
RKAV	Rock Avalanche	7.09	44		Pn	15 45 45.0	+1.1
KIAG	Kiagna River	7.13	37		Pn	15 45 45.0	+0.5
ISLZ	Isanotski Laza	7.20	269		Pn	15 45 44.4	-0.8
BALM	Baldy	7.22	37		Pn	15 45 46.6	+1.0
SAMH	Samovar Hills	7.22	46		Pn	15 45 46.9	+1.3
MCARA	McCarthy VSAT	7.26	33	Pn	Pn	15 45 47.5	+1.5
TABL	Table Mountain	7.26	43		Pn	15 45 47.0	+0.7
PTPK	Patty Peak	7.29	36		Pn	15 45 47.8	+1.2
SSLS	Shishaldin Sou	7.37	269		Pn	15 45 46.9	-0.6
PPLA	Purkeypile	7.38	357	Pn	Pn	15 45 49.0	+1.2
PCA	Pinnacle	7.42	48		Pn	15 45 49.2	+0.9
PINM	Pinnacle	7.42	48	P	Pn	15 45 49.2	+0.9
	baz=236						
SSBA	Shishaldin	7.42	269		Pn	15 45 47.7	-0.7
BARN	Barnard Glacie	7.47	38	Pn	Pn	15 45 49.9	+0.7
CTG	Chitna Glacier	7.52	40	P	Pn	15 45 50.6	+0.8
	baz=228						
CTGM	Chitina Glacie	7.53	40		Pn	15 45 50.6	+0.8
HARP	HAARP	7.55	22	P	Pn	15 45 51.1	+1.1
	baz=207						
HARP	HAARP	7.55	22		Pn	15 45 51.1	+1.1
LOGN	Logan Glacier	7.56	41		Pn	15 45 51.1	+0.9
PNL	Peninsula	7.58	52	P	Pn	15 45 51.9	+1.5
	baz=242						
PNL	Peninsula	7.58	52		Pn	15 45 51.9	+1.5
BCPM	Bancas Point	7.61	50		Pn	15 45 52.1	+1.3
WESE	West Dahl East	7.75	267		Pn	15 45 52.5	-0.3
TT01	Tatalina	7.77	344		Pn	15 45 52.6	-0.4
TTA	Tatalina	7.79	344	Pn	Pn	15 45 52.7	-0.7
DHY	Denali Highway	7.80	13	P	Pn	15 45 53.5	0.0
	baz=196						
DHY	Denali Highway	7.80	13		Pn	15 45 53.5	0.0
WESP	Westdahl Peak	7.82	268		Pn	15 45 53.0	-0.9
TRF	Thorofare Moun	7.94	3	Pn	Pn	15 45 56.6	+1.2
K20K	Telida	7.96	351	P	Pn	15 45 56.0	+0.4
	baz=169						
K20K	Telida	7.96	351		Pn	15 45 56.0	+0.4
RND	Reindeer	7.97	8	Pn	Pn	15 45 55.6	-0.2
PAX	Paxson	8.00	19	Pn	Pn	15 45 57.1	+0.9
KTH	Kantishna Hill	8.03	1	Pn	Pn	15 45 54.8	-1.9
M26K	Nabesna, AK	8.07	28	Pn	Pn	15 45 55.3	-2.0
YUK8	Steele Glacier	8.31	42		Pn	15 46 02.9	+2.2
MENT	Mentasta	8.34	24	Pn	Pn	15 46 02.7	+1.8
M27K	Edge Creek, AK	8.36	31	P	Pn	15 46 02.3	+1.1
	baz=219						
M27K	Edge Creek, AK	8.36	31		Pn	15 46 02.3	+1.1
AKSA	Akutan Strait	8.46	266		Pn	15 46 01.7	-0.8
AKSA	Akutan Strait	8.46	266		Pn	15 46 02.2	-0.3
AKUT	Akutan	8.51	266	Pn	Pn	15 46 00.9	-2.2
YUK7	Dusty Glacier	8.55	49		Pn	15 46 05.2	+1.4
BPAW	Bear Paw Mtn.	8.57	1	Pn	Pn	15 46 01.6	-2.5
AKLV	Akutan Long Va	8.61	267		Pn	15 46 03.0	-1.5
YUK6	Outpost Mounta	8.67	46	P	Pn	15 46 07.5	+2.0
	baz=237						
YUK6	Outpost Mounta	8.67	46		Pn	15 46 07.5	+2.0
J20K	Nowitna River	8.77	352	P	Pn	15 46 07.3	+0.6
	baz=169						
J20K	Nowitna River	8.77	352		Pn	15 46 07.3	+0.6
YUK4	Talbot Arm	8.78	44	P	Pn	15 46 10.5	+3.4
	baz=234						
RIDG	Independent Ri	8.82	19	P	Pn	15 46 08.4	+1.0
	baz=204						
RIDG	Independent Ri	8.82	19		Pn	15 46 08.4	+1.0
DOT	Dot Lake	8.89	21	Pn	Pn	15 46 09.2	+0.8
L27K	Beaver Creek,	8.93	29	Pn	Pn	15 46 09.9	+1.0
BC03		8.94	29		Pn	15 46 09.3	+0.3
BCAR	Beaver Creek A	8.94	29	Pn	Pn	15 46 10.5	+1.4
SIT	Sitka	8.98	74	P	Pn	15 46 08.5	-1.0
	baz=266						
SIT	Sitka	8.98	74		Pn	15 46 08.5	-1.0
YUK5	Granite Creek	8.98	46		Pn	15 46 11.6	+1.9
UNV	Unalaska Valle	9.01	265	P	Pn	15 46 08.5	-1.4
	baz=74						
UNV	Unalaska Valle	9.01	265		Pn	15 46 08.5	-1.4
MTBL	Makushin Table	9.07	266		Pn	15 46 09.2	-1.7
MNAT	Makushin Natee	9.10	266		Pn	15 46 09.8	-1.4
NEA2	Nenana	9.13	6	Pn	Pn	15 46 12.7	+1.0
HDA	Harding Lake	9.14	12	Pn	Pn	15 46 11.9	+0.1
MSW	Makushin Switc	9.14	266		Pn	15 46 10.2	-1.7
MREP	Makushin Rep't	9.15	265		Pn	15 46 10.3	-1.7
MAPS	Pakushin South	9.26	266		Pn	15 46 11.8	-1.7
CCB	Clear Creek Bu	9.28	9	Pn	Pn	15 46 14.9	+1.2
SKAG	Skagway	9.41	59	Pn	Pn	15 46 16.6	+1.2
BESE	Bessie Mountai	9.42	65		Pn	15 46 15.8	+0.1
IL31		9.50	11		Pn	15 46 17.1	+0.5
ILAR	Eielson Array	9.50	11	Pn	Pn	15 46 17.8	+1.2
	comp=N,0.1nm,0.3s,baz=196,slow=13,SNR=7.4						
ILAR				Sn	Sn	15 47 54.9	-7.1
	comp=N,0.3nm,0.3s,baz=188,slow=13,SNR=4.6						
ILAR	Eielson Array	9.50	11		Pn	15 46 17.0	+0.4
MLY	Manley	9.51	1	Pn	Pn	15 46 17.9	+0.9
MDM	Murphy Dome	9.55	8	Pn	Pn	15 46 17.6	+0.1
JIS	Juneau Island	9.61	67		Pn	15 46 17.9	-0.3
I21K	Tanana	9.67	358	P	Pn	15 46 19.6	+0.7
	baz=178						
I21K	Tanana	9.67	358		Pn	15 46 19.6	+0.7
I23K	Minto, Yukon-K	9.67	5	Pn	Pn	15 46 18.7	-0.3
WHY	Whitehorse	10.04	53	P	Pn	15 46 25.2	+1.0
	baz=246						
WHY	Whitehorse	10.04	53		Pn	15 46 25.2	+1.0
H21K	Melozitna Rive	10.17	356	Pn	Pn	15 46 26.1	+0.3
M30M	Minto, Yukon	10.22	41	P	Pn	15 46 27.5	+0.9
	baz=233						
M30M	Minto, Yukon	10.22	41		Pn	15 46 27.5	+0.9
CRAG	Craig	10.28	83	Pn	Pn	15 46 26.1	-1.3
DAWY	Dawson	10.39	30	Pn	Pn	15 46 30.5	+1.5
H24K	Noodor Dome	10.45	8	Pn	Pn	15 46 31.1	+1.4
EGAK	Eagle	10.51	24	Pn	Pn	15 46 32.2	+1.7
IM03		10.54	354		Pn	15 46 30.8	0.0
IMAR	Indian Mountai	10.54	354	Pn	Pn	15 46 31.3	+0.4
WRAK	Wrangell Islan	10.62	78	Pn	Pn	15 46 32.2	+0.1
P33M	Teslin, Yukon	10.85	57	P	Pn	15 46 35.3	+0.1
	baz=252						
P33M	Teslin, Yukon	10.85	57		Pn	15 46 35.3	+0.1
ANM	Nome	11.44	328	Pn	Pn	15 46 44.5	+1.4
MOBC	Moresby Island	11.50	94	Pn	Pn	15 46 43.5	-0.6
DLBC	Dease Lake	11.91	67	Pn	Pn	15 46 51.2	+1.5
	comp=N,0.4nm,0.3s,baz=263,slow=6.5,SNR=21						
DLBC				Sn	Sn	15 48 59.3	-1.9
	comp=N,0.1nm,0.3s,baz=292,slow=14,SNR=1.6						
BMAR	Burnt Mountain	12.32	12	Pn	Pn	15 46 55.9	+0.6
GRNB	Grenville Isla	12.42	89	Pn	Pn	15 46 56.2	-0.5
INK	Inuvik	15.17	26	Pn	P	15 47 40.6	+2.1
	comp=N,0.1nm,0.3s,baz=205,slow=8.5,SNR=6.5						
INK	Inuvik	15.17	26	Pn	Pn	15 47 34.6	+0.7
A36M	Sachs Harbour	19.79	24	P	Pn	15 48 31.0	0.0
A36M				IAmb	IAmb	15 48 51.2	
	comp=Z,3.4nm,0.9s						
PETK	Petropavlovsk-	29.33	287	P	P	15 50 02.9	+1.3
	comp=Z,2.7nm,0.9s,baz=71,slow=11,SNR=1.8						
H11N2	WAKE ISLAND Hy	47.56	238	T	T	16 43 59.7	
	baz=35,slow=74,SNR=3.9						
H11N3	WAKE ISLAND Hy	47.57	238	T	T	16 43 59.8	
	baz=35,slow=74,SNR=3.6						
H11N1	WAKE ISLAND Hy	47.58	238	T	T	16 43 59.1	
	baz=35						
H11S1	WAKE ISLAND Hy	48.70	238	T	T	16 45 42.4	
	baz=29,slow=74,SNR=7.1						
H11S2	WAKE ISLAND Hy	48.72	238	T	T	16 45 42.0	
	baz=29						
H11S3	WAKE ISLAND Hy	48.72	238	T	T	16 45 40.1	
	baz=29,slow=74,SNR=3.8						
MK31	Makanchi Array	68.54	324	P	P	15 55 02.6	+1.4
MKAR	Makanchi Array	68.54	324	P	P	15 55 03.0	+1.8
	comp=Z,0.2nm,0.5s,baz=32,slow=5.3,SNR=7.0						
MKAR	Makanchi Array	68.54	324	P	P	15 55 02.6	+1.4
MAKZ	Makanchi	68.63	324	P	P	15 55 03.6	+1.9
MAKZ				IAmb	IAmb	15 55 14.6	
	comp=Z,0.9nm,0.8s						
CMAR	Chiang Mai Arr	85.64	296	P	P	15 56 36.9	-0.7
	comp=Z,0.4nm,0.6s,baz=25,slow=5.5,SNR=4.2						

IDC ***22*** *15:53:41.3±2.9, 32°.99S×178°.39W, h0^{km}, mb3.8/3, mb1 4.0/4, mb1mx3.6/34, mbtmp3.8/4, ML3.5/1, MS3.7/2, Ms1 3.8/2, ms1mx3.0/29, Error ellipse: s-maj=67.0km s-min=35.9km az=119.0*

NEIC ***22*** *15:53:45.1±0.7, 33°.1S±0°.1×178°.7W±0°.2, h10^{km}±2^{km}, mb4.1/8, Error ellipse: s-maj=33.6km s-min=22.5km az=117.0*

ISC 22 15:53:47.6±1.4**, 33°.0S**±0°.1×**178°.7W**±0°.2**, h32**^{km}**, n18, σ0^{s}.80**/16**, mb4.0**/6**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	6.25	212	Pn	Pn	15 55 17.5	0.0
	0.9nm,0.3s,baz=300,slow=23,SNR=6.4						
URZ				Sn	Sn	15 56 29.2	+1.4
	0.7nm,0.3s,baz=304,slow=22,SNR=1.5						
BKZ	Black Stump Fm	7.27	211	Pn	Pn	15 55 29.7	-1.9
DCZ	Deep Cove	16.55	217		Pn	15 57 37.0	-0.1
DCZ				IAmb	IAmb	15 58 04.4	
	comp=Z,16nm,1.0s						
ASAR	Alice Springs	42.48	270	P	P	16 01 39.8	-0.1
	comp=Z,0.3nm,0.5s,baz=112,slow=7.5,SNR=11						
ASAR	Alice Springs	42.48	270	P	P	16 01 39.3	-0.6
WR0	Warramunga Arr	43.53	275	P	P	16 01 48.2	-0.2
WR0				IAmb	IAmb	16 01 49.3	
	comp=Z,4.0nm,1.2s						
WB2	Warramunga Arr	43.69	275	P	P	16 01 49.4	-0.3
WB2				IAmb	IAmb	16 02 08.5	
	comp=Z,4.6nm,1.2s						
WRAB	Tennant Creek	43.70	275	P	P	16 01 49.8	0.0
WRA	Warramunga Arr	43.70	275	P	P	16 01 49.8	-0.1
	comp=Z,0.9nm,0.4s,baz=115,slow=7.6,SNR=23						
WRA	Warramunga Arr	43.70	275	IAmb	IAmb	16 01 58.4	
	comp=Z,0.4nm,1.4s						
WB0	Warramunga Arr	43.74	276	P	P	16 01 49.8	-0.3
WB0				IAmb	IAmb	16 01 50.6	
	comp=Z,2.0nm,0.7s						
FITZ	Fitzroy Crossi	51.84	272	P	P	16 02 54.2	+1.2
	comp=Z,2.1nm,0.9s,baz=136,slow=6.6,SNR=3.4						
QSPA	South Pole Qui	57.09	180	P	P	16 03 30.7	+0.1
GUMO	Guam	57.98	317	LR	LR	16 28 04.7	
	comp=Z,27nm,18.3s,baz=80,slow=36						
SNAA	Sanae	75.55	179	P	P	16 05 28.6	0.0
NVAR	Mina Array Bea	90.54	43	LR	LR	16 42 46.1	
	comp=Z,71nm,18.1s,baz=266,slow=33						
FINES	FINESS Array B	147.39	338	PKPbc	PKPdf	16 13 25.4	+0.6
	comp=Z,1.9nm,0.7s,baz=24,slow=3.8,SNR=9.9						
FINES	FINESS Array B	147.39	338	PKPdf	PKPdf	16 13 25.2	+0.5

JMA ***22*** *15:59:08.5±0.1, 24°.14N×122°.77E, h54^{km}±3^{km}, M2.6*

TAP ***22*** *15:59:08.8, 24°.13N×122°.79E, h46^{km}, ML3.2, C*

ISC 22 15:59:09.3±2.1**, 24°.08N**±0°.03×**122°.80E**±0°.02**, h39**^{km}±8^{km}**, n100, σ1^{s}.27**/192**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.39	20	P	Pn	15 59 18.5	0.0
JYNG				S	Sn	15 59 25.6	+0.5
YOJ	Yonaguni jima	0.43	27	P	Pn	15 59 18.8	-0.1
	baz=26						
YOJ				S	Sn	15 59 26.2	+0.3
	baz=26						
YOJ	Yonaguni jima	0.43	27	P	Pn	15 59 18.9	-0.1
YOJ				S	Sn	15 59 26.1	+0.3
IRIF	Iriomote-Funau	0.89	73	P	Pn	15 59 25.0	-0.3
IRIF				*e*S	Sn	15 59 37.1	+0.1
HATJ	Hateruma jima	0.92	91	P	Pn	15 59 26.4	+0.6
HATJ				*e*S	Sn	15 59 39.2	+1.4
EWUT	Wuta	1.00	292	*i* P	Pn	15 59 26.2	-0.5
	baz=289						
EWUT				S	Sn	15 59 39.9	+0.3
	baz=289						
ENA	Nanau	1.02	290	*i* P	Pn	15 59 26.7	-0.5
	baz=287						
ENA				S	Sn	15 59 40.6	+0.3
	baz=287						
ETL	Fush Village	1.07	274	P	Pn	15 59 27.6	-0.3
	baz=258						
ETL				S	Sn	15 59 41.3	-0.3
	baz=258						
TWD	Chiawan	1.10	270	*i* P	Pn	15 59 27.4	-0.8
	baz=267						
TWD				*i* S	Sn	15 59 41.2	-0.9
	baz=267						
NACB	Ninganchiao	1.10	275	P	Pn	15 59 27.8	-0.4
	baz=260						
NACB				*e*S	Sn	15 59 40.1	-2.1
	baz=260						
TEYL	Yanliau Villag	1.12	259	P	Pn	15 59 28.3	-0.1
	baz=248						
TEYL				S	Sn	15 59 42.9	+0.3
	baz=248						
JKRS	Kuro-shima	1.12	82	P	Pn	15 59 28.8	+0.4
JKRS				*e*S	Sn	15 59 43.9	+1.3
NDS	Dongshan	1.13	299	P	Pn	15 59 28.7	+0.1
	baz=297						
NDS				S	Sn	15 59 43.4	+0.5
	baz=297						
ETM	Tongmen	1.20	265	P	Pn	15 59 29.0	-0.6
	baz=255						
ETLH	Xiulin Townshi	1.21	276	P	Pn	15 59 29.4	-0.4
	baz=273						
ETLH				*e*S	Sn	15 59 44.0	-1.0
	baz=273						
TWE	Neicheng	1.21	302	*i* P	Pn	15 59 29.9	+0.2
	baz=310						
ENTT	Nioudou	1.25	297	P	Pn	15 59 30.7	+0.4
	baz=282						
ENTT				S	Sn	15 59 46.1	+0.1
	baz=282						
TIPB	Shuangxi	1.25	315	*i* P	Pn	15 59 29.9	-0.4
	baz=313						
TIPB				S	Sn	15 59 44.9	-1.1
	baz=313						
JIJ	Ishigaki jima	1.26	77	P	Pn	15 59 29.9	-0.5
JIJ				S	Sn	15 59 45.5	-0.7
ESL	Shilin	1.27	258	*i* P	Pn	15 59 29.9	-0.7
	baz=255						
ESL				S	Sn	15 59 45.8	-0.7
	baz=255						
NDT	Datong Townshi	1.28	294	P	Pn	15 59 30.9	+0.2
	baz=281						
NDT				S	Sn	15 59 46.6	-0.1
	baz=281						
EGFH	Guangfu	1.32	252	*i* P	Pn	15 59 30.7	-0.5
	baz=249						
EGFH				S	Sn	15 59 47.1	-0.5
	baz=249						
NNS	Nan Shan	1.35	286	*i* P	Pn	15 59 31.6	-0.1
	baz=283						
NNS				S	Sn	15 59 48.0	-0.5
	baz=283						
NWF	Wu-fen Shan	1.35	317	*i* P	Pn	15 59 31.2	-0.5
	baz=315						
WFSB	Wu-fen Shan	1.35	317	P	Pn	15 59 31.3	-0.4
	baz=315						
WFSB				S	Sn	15 59 47.2	-1.1
	baz=315						
NWLT	Wulai	1.37	301	P	Pn	15 59 32.4	+0.5
	baz=310						
NWLT				S	Sn	15 59 49.0	+0.2
	baz=310						
HGSD	Ruisui	1.39	245	P	Pn	15 59 31.5	-0.7
	baz=242						
HGSD				S	Sn	15 59 48.1	-1.1
	baz=242						
WHF	Hehuan Shan	1.40	273	*i* P	Pn	15 59 32.4	-0.4
	baz=270						
WHF				*i* S	Sn	15 59 49.4	-0.8
	baz=270						
YHNB	Yeheng	1.42	295	P	Pn	15 59 33.0	+0.3
	baz=280						
YHNB				S	Sn	15 59 50.1	-0.1
	baz=280						
FUSS	Fushou	1.43	277	*i* P	Pn	15 59 32.8	-0.1
	baz=263						
FUSS				*i* S	Sn	15 59 50.0	-0.6
	baz=263						
NSK	Sanguang	1.44	295	*i* P	Pn	15 59 33.1	+0.2

	baz=280						
NSK				S	Sn	15 59 50.5	-0.1
	baz=280						
ECBN	Changbin	1.45	239	P	Pn	15 59 32.2	-0.8
	baz=225						
ECBN				S	Sn	15 59 49.9	-0.8
	baz=225						
NHDH	Xindian Distri	1.45	307	P	Pn	15 59 32.8	-0.2
	baz=318						
NHDH				S	Sn	15 59 50.9	+0.1
	baz=318						
EHY	Hungye	1.47	247	*i* P	Pn	15 59 32.8	-0.5
	baz=257						
EHY				*e*S	Sn	15 59 50.3	-0.9
	baz=257						
JISG	Ishigakijimahi	1.47	70	P	Pn	15 59 32.6	-0.7
JISG				S	Sn	15 59 50.4	-0.9
CHGB	Renai	1.48	270	P	Pn	15 59 33.6	0.0
	baz=267						
CHGB				S	Sn	15 59 51.6	-0.3
	baz=267						
OWD	Renai	1.49	265	*i* P	Pn	15 59 33.6	0.0
	baz=263						
OWD				S	Sn	15 59 51.0	-0.9
	baz=263						
TATO	Taipei	1.49	307	P	Pn	15 59 33.3	-0.2
	baz=317						
TATO				S	Sn	15 59 51.7	0.0
	baz=317						
TDCB	Techi	1.50	277	P	Pn	15 59 34.0	+0.1
	baz=263						
TDCB				S	Sn	15 59 51.7	-0.7
	baz=263						
YULB	Yu-li	1.54	244	P	Pn	15 59 34.0	-0.2
	baz=255						
YULB				S	Sn	15 59 52.4	-0.5
	baz=255						
EYUL	Yuli	1.54	242	P	Pn	15 59 34.1	-0.1
	baz=239						
EYUL				S	Sn	15 59 52.6	-0.4
	baz=239						
VWDT	VWDT	1.55	258	P	Pn	15 59 34.9	+0.5
	baz=256						
TWF1	Yuli	1.55	242	*i* P	Pn	15 59 34.3	-0.1
	baz=231						
TWF1				*i* S	Sn	15 59 52.9	-0.5
	baz=231						
TWS1	Kuangyinshan	1.61	309	*i* P	Pn	15 59 35.0	-0.2
	baz=307						
TWS1				S	Sn	15 59 54.8	0.0
	baz=307						
FULB	Fuli	1.63	238	*i* P	Pn	15 59 34.8	-0.8
	baz=226						
FULB				S	Sn	15 59 54.8	-0.6
	baz=226						
CHKT	Chengkung	1.64	234	*e*P	Pn	15 59 33.5	-2.0
	baz=222						
CHKT				S	Sn	15 59 53.5	-1.9
	baz=222						
WPL	Puli Township	1.68	268	P	Pn	15 59 36.7	+0.5
	baz=265						
WPL				S	Sn	15 59 56.5	-0.1
	baz=265						
WHP	Taichung City	1.70	277	P	Pn	15 59 37.3	+0.8
	baz=265						
WHP				S	Sn	15 59 57.0	-0.1
	baz=265						
SSLB	Suanglung	1.71	261	P	Pn	15 59 37.0	+0.4
	baz=258						
SSLB				S	Sn	15 59 56.8	-0.5
	baz=258						
LIOB	Emei	1.72	289	*i* P	Pn	15 59 37.7	+1.0
	baz=287						
LIOB				S	Sn	15 59 58.5	+1.0
	baz=287						
WCS	Beigang Elemen	1.72	270	P	Pn	15 59 37.3	+0.5
	baz=267						
WCS				*e*S	Sn	15 59 59.0	+1.5
	baz=267						
NSTT	Nanjuang	1.73	289	P	Pn	15 59 37.7	+0.9
	baz=287						
NSTT				S	Sn	15 59 58.9	+1.3
	baz=287						
SMLT	Sun Moon Lake	1.75	264	*i* P	Pn	15 59 37.8	+0.6
	baz=261						
SMLT				*e*S	Sn	15 59 59.5	+1.2
	baz=261						
ECS	Chishang	1.75	236	P	Pn	15 59 37.1	-0.1
	baz=225						
ECS				S	Sn	15 59 59.2	+1.0
	baz=225						
EDH	Donghe	1.76	231	P	Pn	15 59 36.3	-0.9
	baz=222						
EDH				S	Sn	15 59 56.6	-1.8
	baz=222						
TYC	Yuchr	1.78	265	*i* P	Pn	15 59 38.1	+0.5
	baz=262						
TYC				*e*S	Sn	15 59 59.8	+0.8
	baz=262						
JTJ	Tarama	1.82	72	P	Pn	15 59 37.9	-0.3
LDUT	Ludao	1.86	221	P	Pn	15 59 37.4	-1.2
	baz=219						
LDUT				*e*S	Sn	15 59 57.8	-3.0
	baz=219						
ELDTW	Lidau	1.86	242	*i* P	Pn	15 59 38.3	-0.4
	baz=239						
ELDTW				S	Sn	16 00 00.0	-1.0
	baz=239						
TWQ1	Liyutan	1.87	279	*i* P	Pn	15 59 40.2	+1.4
	baz=276						
TWQ1				S	Sn	16 00 03.0	+1.9
	baz=276						
NMLH	Miaoli	1.89	284	P	Pn	15 59 40.1	+1.1
	baz=282						
NMLH				S	Sn	16 00 02.8	+1.2
	baz=282						
ALS	Alishan	1.91	253	P	Pn	15 59 40.6	+1.0
	baz=250						
ALS				S	Sn	16 00 03.3	+0.7
	baz=250						
WJS	Zhushan	1.91	263	P	Pn	15 59 41.1	+1.8
	baz=260						
WJS				S	Sn	16 00 04.3	+2.1
	baz=260						
WWF	Wufeng	1.92	269	P	Pn	15 59 41.5	+2.1
	baz=267						
WWF				S	Sn	16 00 05.3	+3.0
	baz=267						
LONT	Longtian	1.93	233	P	Pn	15 59 39.3	-0.3
	baz=224						
LONT				S	Sn	16 00 02.5	-0.1
	baz=224						
TCU	Taichung	1.94	272	P	Pn	15 59 41.4	+1.7
	baz=270						
TCU				S	Sn	16 00 04.5	+1.7
	baz=270						
WNT	Mingjian	1.94	264	P	Pn	15 59 41.7	+1.9
	baz=262						
WNT				S	Sn	16 00 05.2	+2.3
	baz=262						
WDJ	Dajia District	1.99	278	P	Pn	15 59 41.4	+1.1
	baz=276						
WDJ				*e*S	Sn	16 00 03.7	-0.3
	baz=276						
CHN5	Tsauling	2.00	256	*i* P	Pn	15 59 42.4	+1.8
	baz=254						
CHN5				*e*S	Sn	16 00 07.0	+2.5
	baz=254						
TWGBT	Beinan	2.02	232	P	Pn	15 59 40.4	-0.4
	baz=241						
TWGBT				*e*S	Sn	16 00 04.2	-0.6
	baz=241						
TWG	Pinlang	2.02	232	*i* P	Pn	15 59 40.3	-0.6
	baz=241						
TWG				*e*S	Sn	16 00 03.3	-1.5
	baz=241						
STYH	Taoyuan	2.06	244	P	Pn	15 59 42.0	+0.5
	baz=235						
STYH				S	Sn	16 00 07.0	+1.1
	baz=235						
STYT	Tauyuan	2.08	244	*i* P	Pn	15 59 42.9	+1.1
	baz=235						
STYT				S	Sn	16 00 06.7	+0.2
	baz=235						
WGK	Gukeng	2.08	260	*i* P	Pn	15 59 43.4	+1.7
	baz=257						
WGK				S	Sn	16 00 09.2	+2.8
	baz=257						
WDLH	Douliu	2.10	260	P	Pn	15 59 43.6	+1.6
	baz=257						
WDLH				*e*S	Sn	16 00 10.1	+3.1
	baz=257						
TPUB	Ta-pu	2.13	249	P	Pn	15 59 44.2	+1.7
	baz=255						
TPUB				*e*S	Sn	16 00 10.6	+2.9
	baz=255						
WTP	Ta-pu	2.17	248	*i* P	Pn	15 59 44.5	+1.6
	baz=245						
WTP				S	Sn	16 00 10.5	+1.9
	baz=245						
WRL	Guolierlin Hig	2.22	266	P	Pn	15 59 45.1	+1.5
	baz=274						
WRL				S	Sn	16 00 11.4	+1.6
	baz=274						
WTK	Tuku	2.24	260	P	Pn	15 59 45.7	+1.9
	baz=258						
WTK				S	Sn	16 00 13.1	+2.9
	baz=258						
CHY	Chiayi	2.25	256	P	Pn	15 59 45.5	+1.5
	baz=253						
CHY				S	Sn	16 00 12.7	+2.2
	baz=253						
SLGT	Liugui	2.25	242	P	Pn	15 59 45.5	+1.4
	baz=232						
SLGT				*e*S	Sn	16 00 13.3	+2.7
	baz=232						
SGST	Jiashian	2.26	244	P	Pn	15 59 45.2	+1.1
	baz=235						
SGST				S	Sn	16 00 13.3	+2.4
	baz=235						
CHN1	Nanshi	2.26	247	*i* P	Pn	15 59 46.1	+1.9
	baz=244						
CHN1				*e*S	Sn	16 00 14.2	+3.3
	baz=244						
TWK	Hsinying	2.27	249	P	Pn	15 59 46.5	+2.2
	baz=246						
TWK				S	Sn	16 00 13.2	+2.2
	baz=246						
SNST	Tainan City	2.28	248	*e*P	Pn	15 59 47.0	+2.6
	baz=245						
SNST				S	Sn	16 00 14.0	+2.8
	baz=245						
JIRB	Irabujima	2.29	71	P	Pn	15 59 44.8	+0.2
JIRB				*e*S	Sn	16 00 11.5	0.0
JIKM	Ikemajima	2.39	69	P	Pn	15 59 46.0	+0.1
JIKM				*e*S	Sn	16 00 13.8	-0.1
JMJ	Miyako jima 2	2.39	72	P	Pn	15 59 46.3	+0.4
	baz=73						
JMJ				S	Sn	16 00 14.7	+0.7
	baz=73						
SSD	Sandimen	2.39	237	*e*P	Pn	15 59 48.4	+2.4
	baz=230						
SSD				*e*S	Sn	16 00 16.5	+2.4
	baz=230						
JMJ2	Miyako jima3	2.40	74	P	Pn	15 59 46.2	+0.1
TSMG	Majia	2.40	236	P	Pn	15 59 47.5	+1.3
	baz=229						
TSMG				*e*S	Sn	16 00 16.1	+1.7
	baz=229						
EAST	Anshuo	2.46	227	*i* P	Pn	15 59 46.7	-0.3
	baz=231						
EAST				S	Sn	16 00 15.3	-0.6
	baz=231						
MASBT	Mashibuluo	2.47	234	P	Pn	15 59 47.5	+0.5
	baz=224						
MASBT				S	Sn	16 00 15.8	-0.2
	baz=224						
JOGS	Gusukube	2.47	74	P	Pn	15 59 47.3	+0.2
SLIU	Shizi	2.61	225	P	Pn	15 59 48.8	-0.2
	baz=222						
SLIU				*e*S	Sn	16 00 18.1	-1.5
	baz=222						
SCZT	Fangliau	2.63	230	P	Pn	15 59 49.6	+0.4
	baz=222						
SCZT				S	Sn	16 00 19.4	-0.4
	baz=222						
PHUB	P'eng-hu	3.01	260	P	Pn	15 59 55.3	+0.9
	baz=270						
PHUB				S	Sn	16 00 29.6	+0.4
	baz=270						
PTMZ	Houxiangcun	3.48	287	*e*P	Pn	16 00 00.1	-0.8
	baz=285						
PTMZ				*e*S	Sn	16 00 36.2	-4.7
	baz=285						
KNMB	Chin-men Tao	4.04	276	*e*P	Pn	16 00 07.7	-0.9
	baz=265						
KNMB				*e*S	Sn	16 00 51.8	-2.9
	baz=265						
AXDP	Jialang	4.47	281	*e*P	Pn	16 00 13.4	-1.1
	baz=279						

IDC ***22*** *16:16:04.3±0.8, 53°.52S×140°.63E, h0^{km}, mb4.0/8, mb1 4.2/8, mb1mx3.9/32, mbtmp4.1/8, MS3.9/18, Ms1 3.9/18, ms1mx3.7/30, Error ellipse: s-maj=50.3km s-min=15.7km az=84.0*

NEIC ***22*** *16:16:05.8±1.1, 53°.5S±0°.1×141°.1E±0°.3, h10^{km}±1^{km}, mb4.6/15, Error ellipse: s-maj=28.0km s-min=18.8km az=87.0*

ISC 22 16:16:06.2±0.7**, 53°.56S**±0°.08×**140°.9E**±0°.2**, h10**^{km}**, n76, σ1**^{s}**.11**/53**, mb4.6**/16**, MS3.9**/21**, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CASY	Casey	19.59	218	P	Pn	16 20 34.9	-0.4
CASY				IAmb	IAmb	16 20 38.0	
	comp=Z,16nm,1.1s						
STKA	Stephens Creek	21.68	2	P	P	16 20 57.9	+1.0
	comp=Z,9.7nm,0.8s,baz=177,slow=11,SNR=17						
STKA				LR	LR	16 28 17.2	
	comp=Z,487nm,18.4s,baz=188,slow=34						
STKA	Stephens Creek	21.68	2	P	P	16 20 55.8	-1.0
FORT	Forrest	24.60	333	P	P	16 21 26.5	+0.1
VNDA	Vanda	25.24	170	P	P	16 21 31.9	+0.2
	comp=Z,1.7nm,0.8s,baz=330,slow=8.2,SNR=11						
VNDA				LR	LR	16 30 50.6	
	comp=Z,389nm,18.9s,baz=334,slow=35						
VNDA	Vanda	25.24	170	P	P	16 21 31.4	-0.4
VNDA				IAmb	IAmb	16 21 48.4	
	comp=Z,7.4nm,1.0s						
H01W1	Cape Leeuwin H	26.51	304	T	T	16 49 24.5	
	baz=143,slow=76,SNR=11						
H01W2	Cape Leeuwin H	26.52	304	T	T	16 49 26.9	
	baz=143,slow=76,SNR=15						
H01W3	Cape Leeuwin H	26.53	304	T	T	16 49 26.1	
	baz=143,slow=76,SNR=11						
ASAR	Alice Springs	30.32	347	P	P	16 22 16.9	-0.8
	comp=Z,2.4nm,0.7s,baz=164,slow=9.9,SNR=43						
ASAR				LR	LR	16 32 49.5	
	comp=Z,206nm,21.5s,baz=172,slow=33						
ASAR	Alice Springs	30.32	347	P	P	16 22 18.1	+0.4
AS31	Alice Springs	30.32	347	P	P	16 22 17.0	-0.7
AS31				IAmb	IAmb	16 22 24.5	
	comp=Z,1.5nm,0.7s						
WR0	Warramunga Arr	33.90	349	P	P	16 22 47.9	-1.1
WR0				IAmb	IAmb	16 22 55.9	
	comp=Z,18nm,1.4s						
WB2	Warramunga Arr	33.94	349	P	P	16 22 48.0	-1.4
WRA	Warramunga Arr	33.94	349	P	P	16 22 47.9	-1.5
	comp=Z,3.3nm,0.8s,baz=173,slow=7.8,SNR=25						
WRA				LR	LR	16 35 04.8	
	comp=Z,189nm,20.4s,baz=185,slow=34						
WRA	Warramunga Arr	33.94	349	P	P	16 22 47.9	-1.5
WRAB	Tennant Creek	33.95	349	P	P	16 22 48.1	-1.4
WB0	Warramunga Arr	34.10	349	P	P	16 22 49.5	-1.4
WB0				IAmb	IAmb	16 22 57.4	
	comp=Z,6.0nm,0.8s						
QSPA	South Pole Qui	36.55	180	P	P	16 23 12.1	+0.4
	comp=Z,9.1nm,0.9s,baz=316,slow=3.4,SNR=12						
QSPA	South Pole Qui	36.55	180	P	P	16 23 12.2	+0.4
QSPA				IAmb	IAmb	16 23 19.9	
	comp=Z,17nm,1.2s						
DZM	Mont Dzumac	36.94	42	*e*LR	LR	16 33 27.4	
	comp=Z,469nm,26.6s						
FITZ	Fitzroy Crossi	37.33	336	LR	LR	16 37 45.2	
	comp=Z,137nm,19.9s,baz=91,slow=35						
MAW	Mawson	37.95	218	P	P	16 23 22.5	-0.8
	comp=Z,1.5nm,0.9s,baz=107,slow=11,SNR=3.0						
MAW				LR	LR	16 37 57.1	
	comp=Z,251nm,18.9s,baz=82,slow=35						
MAW	Mawson	37.95	218	P	P	16 23 23.6	+0.4
PMG	Port Moresby	44.32	9	LR	LR	16 40 51.1	
	comp=Z,235nm,21.6s,baz=206,slow=34						
BATI	Baumata	45.40	336	LR	LR	16 43 24.9	
	comp=Z,227nm,18.9s,baz=192,slow=36						
SOEI	Soe	45.69	337	P	P	16 24 28.3	+1.0
	comp=Z,17nm,2.8s						
MSVF	Nonsavu	45.87	53	LR	LR	16 38 24.9	
	comp=Z,139nm,21.1s,baz=93,slow=29						
WBSI	Waikabubak, Su	47.10	330	P	P	16 24 39.6	+1.4
JAY	Jayapura	50.88	360	LR	LR	16 46 49.3	
	comp=Z,181nm,20.5s,baz=145,slow=36						
SNAA	Sanae	52.48	194	P	P	16 25 18.8	+0.2
SNAA	Sanae	52.48	194	P	P	16 25 18.5	-0.1
SNAA				IAmb	IAmb	16 25 25.6	
	comp=Z,10nm,1.3s						
VNA3	Neumayer Olymp	53.75	191	P	P	16 25 27.6	-0.4
VNA2	Neumayer--Watz	53.77	192	P	P	16 25 27.6	-0.5
	baz=136,slow=6.5						
LEM	Lembang	53.85	318	LR	LR	16 44 04.3	
	comp=Z,68nm,19.9s,baz=176,slow=31						
VNA1	Neumayer--Stat	54.14	192	P	P	16 25 29.5	-1.2
TOLI2	Tolitoli	57.01	336	P	P	16 25 51.4	-0.5
TOLI2				IAmb	IAmb	16 26 00.5	
	comp=Z,12nm,1.1s						
TBI	Tubuai	59.52	89	*e*LR	LR	16 43 44.5	
	comp=Z,150nm,27.0s						
PPT2	Papeete2	63.87	84	*e*LQ	LQ	16 42 52.5	
	comp=Z,280nm,27.0s						
PPT2				*e*LR	LR	16 45 45.9	
	comp=Z,48nm,23.2s						
PPT	Papeete	63.89	84	LR	LR	16 50 16.7	
	comp=Z,36nm,18.4s,baz=246,slow=32						
H08S2	Diego Garcia H	71.13	283	T	T	17 45 01.9	
	baz=142						
H08S1	Diego Carcia H	71.14	283	T	T	17 45 00.3	
	baz=142						
H08S3	Diego Garcia H	71.15	283	T	T	17 45 01.5	
	baz=142						
PALK	Pallekele	78.87	299	LR	LR	16 55 41.0	
	comp=Z,83nm,19.0s,baz=251,slow=30						
CMAR	Chiang Mai Arr	80.31	320	P	P	16 28 16.1	-1.1
	comp=Z,0.4nm,0.7s,baz=174,slow=5.8,SNR=5.2						
CMAR				LR	LR	17 01 36.7	
	comp=Z,36nm,20.6s,baz=186,slow=34						
CMAR	Chiang Mai Arr	80.31	320	P	P	16 28 17.3	+0.2
BOSA	Boshof	81.08	233	LR	LR	16 58 29.9	
	comp=Z,59nm,19.4s,baz=184,slow=31						
PLCA	Paso Flores	82.24	156	P	P	16 28 28.0	+0.6
	comp=Z,4.4nm,1.1s,baz=212,slow=9.5,SNR=4.6						
PLCA	Paso Flores	82.24	156	IAmb	IAmb	16 28 34.1	
	comp=Z,7.9nm,1.1s						
NJ2	Nanjing	87.39	341	*e*P	P	16 28 54.8	+1.8
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
MJAR	Matsushiro Arr	89.76	358	LR	LR	17 07 16.9	
	comp=Z,24nm,21.0s,baz=175,slow=34						
KSRS	Korea Array	91.34	350	LR	LR	17 09 56.4	
	comp=Z,36nm,20.1s,baz=168,slow=35						
KMBO	Kilima Mbogo	97.20	258	LR	LR	17 06 01.9	
	comp=Z,37nm,19.4s,baz=90,slow=31						
HHC	Hu-ho-hao-te	97.38	338	*e*P	Pdif	16 29 41.1	+1.8
HHC				pmax	pmax		
	comp=Z,9.0nm,1.3s						
HHC				pmax	pmax		
	comp=Z,150nm,6.1s						
NVAR	Mina Array Bea	125.75	72	PKP	PKPdf	16 35 06.3	-1.3
	comp=Z,0.4nm,0.8s,baz=222,slow=1.2,SNR=2.3						
JAVC	Velka Javorina	144.95	286	*e*PKP	PKPbc	16 35 42.1	+0.2
SOKA	Soboth	145.37	281	*i* P	PKPbc	16 35 43.1	-0.2
	comp=Z,15nm,1.6s						
ARSA	Arzberg	145.38	282	*e*P	PKPbc	16 35 43.0	-0.3
	comp=Z,18nm,1.4s						
MORC	Moravsky Berou	145.47	287	*e*PKP	PKPdf	16 35 43.1	-0.3
FINES	FINESS Array B	145.52	310	PKPbc	PKPdf	16 35 41.2	-1.8
	comp=Z,4.5nm,1.1s,baz=103,slow=4.4,SNR=1.6						
CONA	Conrad Observa	145.53	283	*e*P	PKPdf	16 35 43.0	-0.6
	comp=Z,3.2nm,0.9s						
KRUC	Moravsky	145.79	285	*e*PKP	PKPdf	16 35 43.9	0.0
VRAC	Vranov	145.79	286	*e*PKP	PKPdf	16 35 44.0	0.0
DPC	Dobruska-Polom	146.44	287	*e*PKP	PKPdf	16 35 45.3	+0.2
OSTC	Ostas	146.59	288	*e*PKP	PKPbc	16 35 46.3	-0.6
CKRC	Cesky Krumlov	146.87	284	*e*PKP	PKiKP	16 35 54.5	+4.2
ABTA	Abfaltersbach	146.89	280	*e*P	PKPab	16 35 49.3	0.0
	comp=Z,7.7nm,1.2s						
GERES	GERESS Array B	147.24	284	PKPbc	PKPbc	16 35 47.8	-1.1
	comp=Z,1.2nm,0.9s,baz=123,slow=4.8,SNR=7.3						
ARCES	ARCESS Array B	147.28	324	PKPbc	PKPdf	16 35 46.3	+0.5
	comp=Z,1.3nm,0.7s,baz=97,slow=3.7,SNR=1.5						
KHC	Kasperske Hory	147.44	284	*e*PKP	PKPbc	16 35 50.0	+0.7
KHC				*e*pPKP	sPKPab	16 35 57.0	+2.4
WTTA	Wattenberg	147.66	280	*e*P	PKPdf	16 35 48.6	+1.2
	comp=Z,13nm,1.7s						
WATA	Walderalm	147.74	280	*e*P	PKPbc	16 35 49.2	-1.2
	comp=Z,6.8nm,1.2s						
SQTA	Sankt Quirin	147.90	279	*e*P	PKiKP	16 35 52.4	-0.2
	comp=Z,9.4nm,1.0s						
MOTA	Moosalm	148.02	280	*e*P	PKPbc	16 35 50.3	-0.8
	comp=Z,7.4nm,1.1s						
FETA	Feichten	148.08	279	*e*P	PKiKP	16 35 52.7	-0.4
	comp=Z,8.6nm,1.4s						
ESDC	Sonseca Array	152.50	254	PKPbc	PKPbc	16 36 01.3	-0.8
	comp=Z,1.6nm,1.1s,baz=116,slow=1.8,SNR=4.4						

IDC 22 16:26:29.5±4.4**, 29°.88S**×**179°.12W, h0**^{km}**, mb3.8**/2**, mb1 4.1**/2**, mb1mx3.3**/33**, mbtmp3.8**/2**, Error ellipse: s-maj=220.7km s-min=72.1km az=167.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ASAR	Alice Springs	42.17	267	P	P	16 34 23.4	-0.7
	0.4nm,0.4s,baz=105,slow=7.2,SNR=14						
WRA	Warramunga Arr	43.11	272	P	P	16 34 32.2	+0.4
	1.1nm,0.4s,baz=112,slow=7.8,SNR=34						
BRTR	Keskin Array B	151.50	299	PKPbc	PKPbc	16 46 25.5	-0.2
	0.5nm,0.8s,baz=90,slow=5.8,SNR=2.0						

IDC ***22*** *16:33:16.2±0.6, 0°.86N×127°.54E, h0^{km}, mb4.1/17, mb1 4.2/19, mb1mx3.9/54, mbtmp4.1/19, ML3.3/2, MS3.1/3, Ms1 3.0/3, ms1mx2.6/35, Error ellipse: s-maj=25.1km s-min=12.8km az=66.0*

DJA ***22*** *16:33:17.5±0.2, 1°N±2°×12°7E±°, h10^{km}, M4.1/12, mb4.3/6, mB4.3/1, MLv4.0/12, Mw(mB)3.4/1*

NEIC ***22*** *16:33:18.3±1.1, 0°.91N±0°.07×127°.40E±0°.03, h15^{km}±5^{km}, mb4.6/18, Error ellipse: s-maj=9.7km s-min=4.2km az=166.0*

ISC 22 16:33:18.7±0.8**, 0°.87N**±0°.05×**127°.38E**±0°.06**, h17**^{km}±5^{km}**, n69, σ1**^{s}**.29**/71**, mb4.4**/35**, MS3.5**/3**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
TNTI	Ternate	0.09	190	P	Pg	16 33 21.9	-0.3
TNTI				S	Sg	16 33 25.2	+0.6
TNTI	Ternate	0.09	190		Pg	16 33 21.9	-0.3
TNTI					Sg	16 33 24.6	0.0
LBMI	Labuha	1.50	175	P	Pb	16 33 45.8	-0.3
LBMI				S	Sg	16 34 09.4	+2.3
SANI	Sanana	3.21	206	P	Pn	16 34 08.5	+0.1
SANI				S	Sn	16 34 48.7	+2.4
KMSI	Cibinong	3.41	265	P	Pn	16 34 10.8	-0.3
SWI	Sorong	4.24	114	P	Pn	16 34 22.1	-0.4
SIJI	Sorong	4.25	114	Pn	Pn	16 34 21.9	-0.8
	1.7nm,0.3s,baz=166,slow=20,SNR=14						
SIJI				Sn	Sn	16 35 11.9	0.0
	0.7nm,0.3s,baz=356,slow=22,SNR=1.4						
SIJI				LR	LR	16 36 15.8	
	comp=Z,299nm,20.5s,baz=337,slow=44						
GTOI	Gorontalo	4.38	267	P	Pn	16 34 26.0	+1.6
LUWI	Luwuk	4.98	248	Pn	Pn	16 34 32.7	0.0
APSI	Ampana	6.00	253	P	Pn	16 34 46.8	+0.1
	0.1nm29nm,0.8s						
FAKI	Fak Fak	6.15	128	P	Pn	16 34 48.8	0.0
	0.1nm16nm,0.8s						
FAKI	Fak Fak	6.15	128	Pn	Pn	16 34 49.9	+1.1
TOLI2	Tolitoli	6.60	272	Pn	Pn	16 34 55.6	+0.6
MPSI	Mapaga	7.50	266	P	Pn	16 35 07.6	+0.2
	0.0nm9.0nm,1.3s						
TTSI	Tana Toraja	8.50	243	P	Pn	16 35 21.2	+0.1
	28nm,0.8s						
BNSI	Bone	8.96	234	P	Pn	16 35 27.5	+0.2
	21nm,0.8s						
SPSI	Sidrap Palu	8.99	238	P	Pn	16 35 28.8	+0.9
KAPI	Kappang	9.60	232	Pn	Pn	16 35 37.8	+1.6
	0.3nm,0.3s,baz=79,slow=10,SNR=1.7						
KAPI				Sn	Sn	16 37 23.7	-0.1
	0.3nm,0.3s,baz=98,slow=17,SNR=2.1						

SBUM	**Sibu**	15.24	276	Pn	Pn	16 36 53.9	+0.6
WB0	**Warramunga Arr**	21.63	162	P	P	16 38 07.8	-0.4
WB0				IAmb	IAmb	16 38 17.6	
	comp=Z,38nm,1.5s						
WRAB	**Tennant Creek**	21.77	162	P	P	16 38 09.0	-0.7
WRAB				IAmb	IAmb	16 38 19.1	
	comp=Z,16nm,1.0s						
WRA	**Warramunga Arr**	21.77	162	P	P	16 38 09.8	+0.1
	comp=Z,7.0nm,0.8s,baz=339,slow=11,SNR=41						
WRA	**Warramunga Arr**	21.77	162	P	P	16 38 09.3	-0.5
WB2	**Warramunga Arr**	21.78	162	P	P	16 38 09.8	-0.1
WB2				IAmb	IAmb	16 38 19.2	
	comp=Z,18nm,1.0s						
WR0	**Warramunga Arr**	21.85	162	P	P	16 38 10.6	-0.1
WR0				IAmb	IAmb	16 38 19.2	
	comp=Z,22nm,1.4s						
AS31	**Alice Springs**	25.19	166	P	P	16 38 42.6	-1.0
ASAR	**Alice Springs**	25.20	166	P	P	16 38 43.3	-0.3
	comp=Z,8.1nm,0.9s,baz=338,slow=7.1,SNR=41						
ASAR	**Alice Springs**	25.20	166	P	P	16 38 42.7	-0.8
JCJ	**Chichijima**	29.70	27	LR	LR	16 48 07.3	
	comp=Z,11nm,20.6s,baz=130,slow=30						
NJ2	**Nanjing**	32.05	346	*e*P	P	16 39 47.1	+2.5
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
CMAR	**Chiang Mai Arr**	32.94	304	P	P	16 39 54.0	+1.4
	comp=Z,1.4nm,0.9s,baz=115,slow=5.9,SNR=8.3						
BBOO	**Buckleboo**	34.48	167	P	P	16 40 05.6	-0.2
BBOO				IAmb	IAmb	16 40 27.5	
	comp=Z,15nm,1.1s						
STKA	**Stephens Creek**	35.24	159	P	P	16 40 11.5	-0.9
	comp=Z,3.2nm,0.7s,baz=323,slow=8.6,SNR=7.5						
STKA	**Stephens Creek**	35.24	159	P	P	16 40 12.1	-0.3
JGF	**Kuroka**	35.78	14	P	P	16 40 17.3	+0.2
JGF				IAmb	IAmb	16 40 36.3	
	comp=Z,20nm,1.4s						
KSRS	**Korea Array**	36.41	1	P	P	16 40 22.7	+0.4
	comp=Z,0.9nm,0.6s,baz=172,slow=9.1,SNR=2.2						
MJAR	**Matsushiro Arr**	36.89	15	P	P	16 40 25.1	-1.3
	comp=Z,2.9nm,0.8s,baz=188,slow=9.0,SNR=7.4						
MJAR	**Matsushiro Arr**	36.89	15	IAmb	IAmb	16 40 34.1	
	comp=Z,4.9nm,1.3s						
XAN	**Xi'an**	37.26	334	P	P	16 40 32.1	+2.4
XAN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CD2	**Chengdu**	37.34	325	*e*P	P	16 40 30.0	-0.5
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
LZH	**Lanzhou**	41.30	331	*e*P	P	16 41 07.1	+3.5
LZH				pP	sP	16 41 11.6	+0.5
LZH				sP	pP	16 41 14.0	+5.1
LZH				pmax	pmax		
	comp=Z,18nm,1.0s						
HHC	**Hu-ho-hao-te**	42.31	342	*e*P	P	16 41 11.8	+0.1
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,110nm,4.8s						
HHC				LR	LR		
	comp=N,520nm,16.5s						
HHC				LR	LR		
	comp=E,370nm,17.8s						
HHC				LR	LR		
	comp=Z,130nm,15.6s						
GTA	**Gaotai**	45.88	330	*e*P	P	16 41 40.8	+0.4
GTA				pP	sP	16 41 48.1	+0.1
GTA				sP	pP	16 41 51.5	+5.7
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
PALK	**Pallekele**	46.97	279	P	P	16 41 46.2	-3.0
SONM	**Songino Array**	50.20	342	P	P	16 42 13.5	-0.2
	comp=Z,0.5nm,0.8s,baz=171,slow=7.9,SNR=2.2						
DGAR	**Diego Garcia**	55.40	260	P	P	16 42 48.8	-3.7
WMQ	**Urumqi**	55.44	326	*e*P	P	16 42 54.3	+1.9
WMQ				pP	sP	16 42 59.8	-0.3
WMQ				sP	pP	16 43 03.8	+5.9
WMQ				pmax	pmax		
	comp=Z,19nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,130nm,4.5s						
PETK	**Petropavlovsk-**	57.84	21	P	P	16 43 09.6	+0.3
	comp=Z,2.8nm,0.8s,baz=206,slow=9.6,SNR=1.9						
LBZ	**Lake Benmore**	58.97	145	P	P	16 43 17.1	-0.2
MK31	**Makanchi Array**	60.27	326	P	P	16 43 25.4	-0.9
MK31				IAmb	IAmb	16 43 32.4	
	comp=Z,2.9nm,0.8s						
MKAR	**Makanchi Array**	60.27	326	P	P	16 43 26.1	-0.2
	comp=Z,1.5nm,0.6s,baz=121,slow=8.3,SNR=12						
MKAR	**Makanchi Array**	60.27	326	P	P	16 43 25.8	-0.5
MAKZ	**Makanchi**	60.46	326	P	P	16 43 26.8	-0.7
MAKZ				IAmb	IAmb	16 43 33.5	
	comp=Z,4.7nm,0.9s						
KSH	**Kashi**	60.53	316	P	P	16 43 33.3	+5.0
KSH				pmax	pmax		
	comp=Z,7.0nm,1.0s						
AAK	**Ala-Archa**	62.91	319	P	P	16 43 45.8	+1.4
	comp=Z,1.6nm,0.7s,baz=90,slow=14,SNR=2.2						
ZALV	**Zalesovo Beam**	63.42	333	P	P	16 43 49.3	+2.0
	comp=Z,0.4nm,0.3s,baz=100,slow=6.2,SNR=4.5						
ZALV	**Zalesovo Beam**	63.42	333	P	P	16 43 47.2	-0.1
GAR	**Garm**	64.34	313	P	P	16 43 52.8	-1.1
KURBB	**Kurchatov Arra**	64.49	328	P	P	16 43 53.6	-0.8
	comp=Z,1.0nm,0.4s,baz=126,slow=5.8,SNR=2.0						
KURK	**Kurchatov**	64.50	328	P	P	16 43 53.7	-0.7
KURK				IAmb	IAmb	16 44 00.0	
	comp=Z,13nm,1.1s						
KKAR	**Karatay Array**	65.77	318	P	P	16 44 01.2	-1.7
BVAR	**Borovoye Array**	70.06	327	P	P	16 44 27.9	-1.8
	comp=Z,1.1nm,0.8s,baz=141,slow=9.6,SNR=4.1						
GEYT	**Alibeck**	73.19	309	P	P	16 44 51.2	+2.3
	comp=Z,2.9nm,0.7s,baz=31,slow=7.2,SNR=4.4						
ABKAR	**Akbulak array**	74.77	321	P	P	16 44 56.0	-1.9
AKTO	**Aktyubinsk**	76.30	322	P	P	16 45 08.8	+2.2
	comp=Z,1.1nm,0.6s,baz=83,slow=9.2,SNR=5.3						
ARU	**Arti**	77.69	328	P	P	16 45 15.3	+1.0
	comp=Z,0.6nm,0.5s,baz=306,slow=21,SNR=1.2						
VNDA	**Vanda**	80.52	173	P	P	16 45 28.5	-0.9
	comp=Z,0.8nm,0.8s,baz=329,slow=6.4,SNR=3.8						
KBZ	**Khabaz**	85.41	314	LR	LR	17 28 48.7	
	comp=Z,21nm,20.6s,baz=80,slow=39						
QSPA	**South Pole Qui**	90.79	180	P	P	16 46 20.8	0.0
	comp=Z,2.2nm,1.2s,baz=275,slow=3.8,SNR=2.5						

IDC 22 16:33:35.9±1.6**, 53°.54S**×**140°.96E, h0**^{km}**, mb3.5**/5**, mb1 3.7**/5**, mb1mx3.4**/36**, mbtmp3.5**/5**, Error ellipse: s-maj=132.2km s-min=25.8km az=79.0, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	21.66	1	P	P	16 38 29.2	+1.3
	1.1nm,0.6s,baz=166,slow=16,SNR=2.2						
VNDA	**Vanda**	25.25	170	P	P	16 39 03.2	+0.1
	0.2nm,0.7s,baz=321,slow=11,SNR=1.2						
ASAR	**Alice Springs**	30.31	347	P	P	16 39 48.9	0.0
	0.5nm,0.5s,baz=163,slow=9.4,SNR=5.5						
WRA	**Warramunga Arr**	33.93	349	P	P	16 40 19.8	-0.8
	0.4nm,0.5s,baz=172,slow=7.6,SNR=5.4						
FITZ	**Fitzroy Crossi**	37.33	336	P	P	16 40 49.7	-0.1
	1.2nm,0.9s,baz=167,slow=10,SNR=1.7						

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*IDC **22** 16:36:52.4±0.9, 0°.99N×127°.69E, h0^{km}, mb3.9/9, mb1 4.0/10, mb1mx3.7/50, mbtmp3.9/10, ML2.9/1, Error ellipse: s-maj=40.9km s-min=15.1km az=67.0*

*NEIC **22** 16:36:54.4±0.8, 0°.92N±0°.06×127°.52E±0°.06, h10^{km}±1^{km}, mb4.1/13, Error ellipse: s-maj=11.4km s-min=7.6km az=310.0*

ISC 22 16:36:53.5±0.6**, 0°.93N**±0°.08×**127°.61E**±0°.06**, h10**^{km}**, n27,** σ**1^s.02**/29**, mb4.0**/16**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	0.29	237	Pg	Pg	16 36 58.5	-1.0
TNTI				Sg	Sg	16 37 01.7	-1.7
SIJI	**Sorong**	4.07	116	Pn	Pn	16 37 54.5	-1.3
	0.7nm,0.3s,baz=188,slow=22,SNR=2.5						
SIJI				Sn	Sn	16 38 45.2	+1.6
	0.5nm,0.3s,baz=342,slow=20,SNR=1.1						
LUWI	**Luwuk**	5.22	248	Pn	Pn	16 38 13.5	+1.7
TOLI2	**Tolitoli**	6.83	272		Pn	16 38 34.3	+0.5
SBUM	**Sibu**	15.46	276	Pn	Pn	16 40 29.8	-2.1
WB0	**Warramunga Arr**	21.62	162	P	P	16 41 45.0	+1.0
WB0				IAmb	IAmb	16 42 03.9	
	comp=Z,8.6nm,1.2s						
WRAB	**Tennant Creek**	21.77	163	P	P	16 41 46.5	+1.0
WRAB				IAmb	IAmb	16 41 47.8	
	comp=Z,5.7nm,0.8s						
WRA	**Warramunga Arr**	21.77	163	P	P	16 41 46.6	+1.0
	comp=Z,3.4nm,0.7s,baz=340,slow=11,SNR=21						
WRA	**Warramunga Arr**	21.77	163	P	P	16 41 45.9	+0.3
WB2	**Warramunga Arr**	21.77	163	P	P	16 41 46.2	+0.6
WB2				IAmb	IAmb	16 41 47.9	
	comp=Z,6.1nm,0.8s						
WR0	**Warramunga Arr**	21.85	162	P	P	16 41 46.8	+0.4
WR0				IAmb	IAmb	16 41 52.5	
	comp=Z,16nm,1.4s						
AS31	**Alice Springs**	25.20	166	P	P	16 42 19.9	+0.3
AS31				IAmb	IAmb	16 42 32.1	
	comp=Z,2.5nm,1.2s						
ASAR	**Alice Springs**	25.21	166	P	P	16 42 20.2	+0.6
	comp=Z,3.6nm,0.8s,baz=347,slow=12,SNR=19						
ASAR	**Alice Springs**	25.21	166	P	P	16 42 19.7	+0.1
BBOO	**Buckleboo**	34.50	167	P	P	16 43 42.1	+0.2
STKA	**Stephens Creek**	35.22	159	P	P	16 43 48.8	+0.7
	comp=Z,1.8nm,0.6s,baz=319,slow=8.5,SNR=4.5						
KSRS	**Korea Array**	36.34	0	P	P	16 43 58.1	+0.4
	comp=Z,0.7nm,0.6s,baz=180,slow=10,SNR=1.3						
MJAR	**Matsushiro Arr**	36.77	14	P	P	16 44 00.6	-0.8
	comp=Z,1.7nm,0.7s,baz=189,slow=8.2,SNR=2.1						
SONM	**Songino Array**	50.21	341	P	P	16 45 49.8	0.0
	comp=Z,0.4nm,0.9s,baz=146,slow=7.6,SNR=1.7						
NIL	**Nilore**	60.34	309	P	P	16 47 02.7	-0.3
MK31	**Makanchi Array**	60.34	326	P	P	16 47 02.8	0.0
MK31				IAmb	IAmb	16 47 08.6	
	comp=Z,2.4nm,0.9s						
MKAR	**Makanchi Array**	60.34	326	P	P	16 47 02.6	-0.2
	comp=Z,1.2nm,0.7s,baz=115,slow=7.8,SNR=7.7						
MAKZ	**Makanchi**	60.53	326	P	P	16 47 03.8	-0.2
MAKZ				IAmb	IAmb	16 47 09.8	
	comp=Z,3.9nm,1.0s						
ZALV	**Zalesovo Beam**	63.47	333	P	P	16 47 25.8	+2.2
	comp=Z,0.4nm,0.4s,baz=122,slow=5.2,SNR=2.5						
KURBB	**Kurchatov Arra**	64.56	328	P	P	16 47 30.4	-0.4
	comp=Z,0.8nm,0.4s,baz=124,slow=6.3,SNR=2.6						
KURK	**Kurchatov**	64.56	328	P	P	16 47 30.0	-0.9
ABKAR	**Akbulak array**	74.86	321	P	P	16 48 34.2	-0.1

IDC 22 16:42:38.7±1.7**, 53°.61S**×**140°.58E, h0**^{km}**, mb3.3**/3**, mb1 3.6**/3**, mb1mx3.4**/19**, mbtmp3.3**/3**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.7**/12**, Error ellipse: s-maj=666.4km s-min=28.1km az=79.0, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	**Vanda**	25.22	169	P	P	16 48 05.7	0.0
	0.2nm,0.6s,baz=321,slow=6.5,SNR=1.6						
ASAR	**Alice Springs**	30.32	348	P	P	16 48 51.8	-0.1
	0.4nm,1.1s,baz=163,slow=8.7,SNR=4.5						
ASAR				LR	LR	16 58 52.8	
	comp=Z,56nm,19.2s,baz=86,slow=32						
WRA	**Warramunga Arr**	33.95	349	P	P	16 49 23.7	0.0
	0.2nm,0.6s,baz=185,slow=7.7,SNR=5.1						

RSNC 22 16:44:25.1±1.5**, 7°.09N**×**76°.27W, h0**^{km}±6^{km}**, ML3.1, Mw3.6, 1C-2D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UREC	**San Jos de Ur**	0.98	48	*e*P	Pg	16 44 42.8	-1.2
UREC				*e*S	Sg	16 44 57.4	+0.7
UREC				*i*		16 45 04.1	
	comp=Z,452nm,0.2s						
HELC	**Santa Helena**	1.15	141	⇓*i*P	Pg	16 44 45.4	-1.8
HELC				*e*S	Sg	16 45 01.9	-0.3
HELC				*i*		16 45 09.8	
	comp=Z,161nm,0.5s						
CBOC	**Ciudad Bolivar**	1.24	168	⇓*i*P	Pg	16 44 47.7	-1.2
CBOC				*e*S	Sg	16 45 05.1	+0.1
CBOC				*i*		16 45 20.1	
	comp=Z,280nm,0.7s						
ZARC	**Zaragoza, Cauc**	1.45	74	*e*P	Pn	16 44 50.3	-2.3
ZARC				*e*S	Sg	16 45 10.2	-1.7
ZARC				*i*		16 45 10.9	
	comp=Z,308nm,0.4s						
PTAC	**Punta Ardita,**	1.53	272	*e*P	Pn	16 44 52.2	-1.6
PTAC				*e*S	Sn	16 45 13.5	-0.9
PTAC				*i*		16 45 16.2	
	comp=Z,87nm,0.2s						
LCBC	**Los crdobas,**	1.76	357	*e*P	Pn	16 44 55.0	-1.9
LCBC				*e*S	Sn	16 45 19.1	-1.0
LCBC				*i*		16 45 33.7	
	comp=Z,63nm,0.4s						
NORC	**Norcasia**	2.05	137	⇑*i*P	Pn	16 45 00.9	-0.1
NORC				*e*S	Sn	16 45 27.8	+0.5
NORC				*i*		16 45 31.3	
	comp=Z,159nm,0.4s						
PLMC	**San Jos del P**	2.17	180	*e*P	Pn	16 45 00.9	-1.6
PLMC				*e*S	Sn	16 45 31.2	+1.0
PLMC				*i*		16 45 42.0	
	comp=Z,122nm,0.5s						
BRRC	**Barranca, Sant**	2.53	89	*e*P	Pn	16 45 07.0	-0.6
BRRC				*e*S	Sn	16 45 39.6	+0.4
BRRC				*i*		16 45 47.8	
	comp=Z,52nm,0.6s						
SPBC	**San Pablo de B**	2.60	123	*e*P	Pn	16 45 07.5	-1.1
SPBC				*e*S	Sb	16 45 43.9	-1.5
SPBC				*i*		16 45 47.9	
	comp=Z,66nm,0.4s						
ROSC	**El Rosal**	2.95	139	*e*P	Pb	16 45 17.1	-1.8
ROSC				*e*S	Sb	16 45 56.1	+0.4
ROSC				*i*		16 46 06.0	
	comp=Z,43nm,0.5s						
YOTC	**Yotoco, Valle**	3.08	181	*e*P	Pn	16 45 13.7	-1.5
BARC	**Barichara**	3.10	99	*e*P	Pn	16 45 15.8	+0.3
BARC				*e*S	Sn	16 45 54.5	+1.1
BARC				*i*		16 46 00.1	
	comp=Z,504nm,1.1s						
OCAC	**Ocana**	3.14	68	*e*S	Sn	16 45 53.1	-1.1
OCAC				*i*		16 46 08.1	
	comp=Z,114nm,0.5s						
ORTC	**Ortega, Tolima**	3.31	162	*e*P	Pn	16 45 20.9	+2.6
ORTC				*e*S	Sb	16 46 05.2	-0.6
ORTC				*i*		16 46 31.4	
	comp=Z,25nm,0.7s						
RUSC	**La Rusia**	3.38	110	*e*P	Pn	16 45 20.8	+1.2
RUSC				*e*S	Sn	16 46 03.6	+3.0
RUSC				*i*		16 46 17.1	
	comp=Z,40nm,0.7s						
PAMC	**Pamplona, Colo**	3.55	86	*e*P	Pn	16 45 21.5	-0.4
PAMC				*e*S	Sn	16 46 06.7	+1.9
PRAC	**Prado**	3.62	158	*e*P	Pn	16 45 25.8	+3.3
PRAC				*e*S	Sb	16 46 13.3	-1.3
PCON	**Cinco Dias**	4.73	182	*e*P	Pn	16 45 43.3	+5.1
PCON				*e*S	Sb	16 46 41.8	-5.2
SOTA	**Rioblanco**	4.93	184	*e*P	Pn	16 45 44.5	+3.5
SOCV	**Socops**	5.49	77	*e*P	Pn	16 45 48.1	-0.2

IDC 22 16:53:27.4±1.5**, 53°.50S**×**140°.86E, h0**^{km}**, mb3.5**/4**, mb1 3.7**/4**, mb1mx3.6**/19**, mbtmp3.5**/4**, MS3.5**/1**, Ms1 3.5**/1**, ms1mx2.8**/17**, Error ellipse: s-maj=189.1km s-min=23.8km az=81.0, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	21.62	2	P	P	16 58 19.9	+1.0
	2.2nm,0.9s,baz=166,slow=9.3,SNR=3.8						
VNDA	**Vanda**	25.30	169	P	P	16 58 55.1	+0.1
	0.9nm,0.9s,baz=334,slow=7.9,SNR=5.9						
ASAR	**Alice Springs**	30.25	347	P	P	16 59 39.8	-0.1
	0.4nm,0.6s,baz=166,slow=10.0,SNR=13						
WRA	**Warramunga Arr**	33.87	349	P	P	17 00 11.1	-0.5
	0.5nm,0.7s,baz=171,slow=7.8,SNR=6.0						
SIJI	**Sorong**	53.05	348	LR	LR	17 23 56.0	
	comp=Z,47nm,19.2s,baz=111,slow=34						

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*IDC **22** 17:07:07.2±1.3, 25°.26N×124°.84E, h0^{km}, mb3.7/3, mb1 3.8/5, mb1mx3.4/40, mbtmp3.6/5, ML3.1/2, Error ellipse: s-maj=35.3km s-min=26.3km az=86.0*

*JMA **22** 17:07:16.4±0.1, 25°.57N×125°.18E, h86^{km}±4^{km}, M3.3*

ISC 22 17:07:16.6±1.0**, 25°.5N**±0°.2×**125°.25E**±0°.10**, h91**^{km}±18^{km}**, n18,** σ**0^s.69**/29**, mb3.9**/3**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKM	**Ikemajima**	0.59	180	P	Pn	17 07 32.2	0.0
JIKM				S	Sn	17 07 43.9	+0.1
JIRB	**Irabujima**	0.69	186	P	Pn	17 07 32.9	-0.2
JIRB				S	Sn	17 07 44.8	-0.6
JOGS	**Gusukube**	0.76	169	P	Pn	17 07 34.2	+0.3
JOGS				S	Sn	17 07 47.0	+0.3
JMJ2	**Miyako jima3**	0.77	175	P	Pn	17 07 34.2	+0.2
JMJ2				S	Sn	17 07 47.1	+0.2
JTJ	**Tarama**	1.00	210	P	Pn	17 07 36.3	-0.1
JTJ				S	Sn	17 07 50.9	-0.3
JISG	**Ishigakijimahi**	1.26	223	P	Pn	17 07 39.4	0.0
JISG				S	Sn	17 07 55.9	-0.7
JIJ	**Ishigaki jima**	1.52	222	P	Pn	17 07 42.3	-0.4
JIJ				S	Sn	17 08 00.8	-1.7
JKE	**Kume jima 2**	1.60	59	P	Pn	17 07 43.8	+0.1
JKRS	**Kuro-shima**	1.70	222	P	Pn	17 07 44.7	-0.3
JKRS				S	Sn	17 08 06.1	-0.4
IRIF	**Iriomote-Funau**	1.81	230	P	Pn	17 07 46.3	-0.1
IRIF				*e*S	Sn	17 08 08.9	-0.2
HATJ	**Hateruma jima**	1.96	222	P	Pn	17 07 47.8	-0.5
HATJ				*e*S	Sn	17 08 11.9	-0.6
JAGN	**Aguni-jima**	2.09	59	P	Pn	17 07 50.3	+0.3
JAGN				S	Sn	17 08 15.3	-0.2
YOJ	**Yonaguni jima**	2.29	243	P	Pn	17 07 53.2	+0.6
YOJ				S	Sn	17 08 20.0	-0.2
JOW	**Kunigami**	3.02	64	Pn	Pn	17 08 02.3	-0.2
	5.8nm,0.3s,baz=164,slow=26,SNR=17						
JOW				Sn	Sn	17 08 35.4	-2.3
	14nm,0.3s,baz=128,slow=25,SNR=8.5						
MJAR	**Matsushiro Arr**	15.61	42	Pn	P	17 10 54.6	+0.9
	0.0nm,0.3s,baz=223,slow=9.7,SNR=4.3						
MKAR	**Makanchi Array**	40.04	313	P	P	17 14 43.0	+0.3
	0.2nm,0.4s,baz=104,slow=9.4,SNR=4.3						
WRA	**Warramunga Arr**	46.04	168	P	P	17 15 31.2	-0.1
	0.9nm,0.5s,baz=349,slow=8.7,SNR=10						
ASAR	**Alice Springs**	49.60	170	P	P	17 15 59.1	+0.3
	0.7nm,0.4s,baz=353,slow=7.0,SNR=60						

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*MOS **22** 17:10:35.8±1.4, 45°.11N×150°.29E, h67^{km}, mb4.4/1, Error ellipse: s-maj=13.7km s-min=10.3km az=150.7*

*SKHL **22** 17:10:37.9±0.3, 44°.80N×150°.10E, h104^{km}±9^{km}, mb4.6/4, msha5.9/4*

*JMA **22** 17:10:38.0±0.6, 45°.07N×150°.11E, h30^{km}, M4.4*

*IDC **22** 17:10:39.1±0.8, 45°.15N×150°.21E, h82^{km}±8^{km}, mb3.4/13, mb1 3.5/16, mb1mx3.4/43, mbtmp3.7/16, Error ellipse: s-maj=24.3km s-min=16.3km az=157.0*

ISC 22 17:10:39.1±0.7**, 44°.79N**±0°.06×**150°.16E**±0°.07**, h100**^{km}**, n59,** σ**2^s.23**/72**, mb3.6**/12**, 1C, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	1.68	286*c*	*i*PN	Pn	17 11 05.7	-1.8
KUR				*i* S	Sn	17 11 26.5	-2.7
KUR				pmax	pmax		
	comp=N,251nm,0.2s						
KUR				pmax	pmax		
	comp=Z,497nm,0.2s						
KUR				pmax	pmax		
	comp=E,174nm,0.1s						
KUR				smax	smax		
	comp=N,4µm,0.2s						
KUR				smax	smax		
	comp=E,909nm,0.2s						
KUR	**Kuril'sk**	1.68	286	*i* P	Pn	17 11 05.4	-2.1
KUR				AMB	AMB	17 11 06.0	
	comp=E,410nm,0.3s						
KUR				*i* S	Sn	17 11 25.8	-3.4
KUR				A	A	17 11 28.0	
	comp=E,4µm,0.4s						
KUR				A	A	17 11 28.0	
	comp=E,1µm,0.4s						
YUK	**Yuzh-Kuril'sk**	3.17	258	*e*PN	Pn	17 11 27.6	+0.6
YUK				*e*S	Sn	17 12 04.5	+0.5
YUK				pmax	pmax		
	comp=Z,139nm,0.2s						
YUK				smax	smax		
	comp=N,370nm,0.6s						
YUK				smax	smax		
	comp=E,316nm,0.6s						
YUK	**Yuzh-Kuril'sk**	3.17	258	*e*P	Pn	17 11 26.6	-0.4
YUK				AMB	AMB	17 11 29.9	
	comp=E,139nm,0.7s						
YUK				*e*S	Sn	17 12 03.1	-0.9
YUK				A	A	17 12 06.9	
	comp=E,370nm,0.6s						
YUK				A	A	17 12 06.9	
	comp=E,420nm,0.6s						
GRPR	**Tuman**	3.24	257	*e*PN	Pn	17 11 27.5	-0.5
GRPR				*e*S	Sn	17 12 04.3	-1.5
GRPR				smax	smax		
	comp=E,264nm,0.3s						
GRPR				smax	smax		
	comp=N,385nm,0.4s						
GRPR	**Tuman**	3.24	257	*e*P	Pn	17 11 27.0	-1.0
GRPR				*e*S	Sn	17 12 04.0	-1.8
GRPR				A	A	17 12 06.0	
	comp=N,385nm,0.4s						
GRPR				A	A	17 12 06.0	
	comp=N,264nm,0.4s						
NEM2	**Nemuro 2**	3.48	247	P	Pn	17 11 30.2	-1.0
NEM2				*e*S	Sn	17 12 09.1	-2.5
GLVR	**Golovnino**	3.49	254	*e*PN	Pn	17 11 31.4	+0.1
GLVR				*e*S	Sn	17 12 11.2	-0.6
GLVR				smax	smax		
	comp=N,456nm,0.2s						
GLVR				smax	smax		
	comp=E,321nm,0.2s						
GLVR	**Golovnino**	3.49	254	*e*P	Pn	17 11 31.0	-0.3
GLVR				*e*S	Sn	17 12 11.0	-0.8
GLVR				A	A	17 12 14.0	
	comp=E,456nm,0.2s						
GLVR				A	A	17 12 14.0	
	comp=E,321nm,0.2s						
NMR	**Nemuro--Hokkai**	3.49	248	*e*PN	Pn	17 11 30.5	-0.8
NMR				*e*S	Sn	17 12 09.6	-2.2
NMR	**Nemuro--Hokkai**	3.49	248	*e*P	Pn	17 11 30.0	-1.3
NMR				*e*S	Sn	17 12 09.0	-2.8
RUSJ	**Misakicho**	3.58	261	*e*PN	Pn	17 11 33.5	+1.0
RUSJ				*e*S	Sn	17 12 14.8	+0.9
JRA	**Rausu**	3.71	259	P	Pn	17 11 35.3	+1.1
JRA				*e*S	Sn	17 12 18.0	+1.0
JNK	**Nakash**	4.09	255	P	Pn	17 11 39.9	+0.5
JNK				*e*S	Sn	17 12 25.8	-0.5
JAK	**Akkeshi**	4.33	247	P	Pn	17 11 41.8	-0.9
JAR	**Ashorobuto**	4.84	254	P	Pn	17 11 50.6	+1.1
JAR				*e*S	Sn	17 12 44.8	+0.4
JMP	**Maruseppu**	4.93	263	P	Pn	17 11 52.2	+1.4
JOB	**Onbets**	4.95	250	P	Pn	17 11 50.9	-0.1
JOB				*e*S	Sn	17 12 45.8	-1.1
JCH	**Churui**	5.38	249	*e*S	Sn	17 12 55.2	-2.4
JKA	**Kamikawa-asahi**	5.45	266	*e*P	Pn	17 11 59.8	+2.0
ASAJ	**Asahikawa**	5.45	266	P	Pn	17 11 59.8	+1.9
	comp=E,0.7nm,0.3s,baz=139,slow=19,SNR=8.6						
YSS	**Yuzh-Sakhalins**	5.60	295	*e*P	Pn	17 12 00.5	+0.6
YSS				AMB	AMB	17 12 03.0	
	comp=E,18nm,0.7s						
JEM	**Erimo**	5.80	244	P	Pn	17 12 04.4	+1.8
JNBK	**Urakawa-nobuka**	5.94	248	P	Pn	17 12 03.8	-0.6
JNB	**Noboribetsu**	7.01	254	P	Pn	17 12 20.2	+1.2
JNB				*e*S	Sn	17 13 36.0	-1.1
JKB	**Kayabe**	7.25	250	P	Pn	17 12 22.3	0.0
JKB				*e*S	Sn	17 13 39.2	-3.9
JANG	**Nango**	7.75	238	*e*S	Sn	17 13 49.6	-5.6
JTM	**Tenmabayashi**	7.79	242	P	Pn	17 12 29.2	-0.4
JTM				*e*S	Sn	17 13 51.2	-4.9
JTH	**Tanohata**	7.82	235	*e*S	Sn	17 13 49.7	-7.2
TYV	**Tymovskoe**	7.90	323	*e*P	Pn	17 12 30.4	-0.6
TYV				AMB	AMB	17 12 34.2	
	comp=E,7.0nm,0.8s						
OFUJ	**Ofunato**	8.51	231	*e*S	Sn	17 14 08.8	-5.0
JIO	**Ouri**	9.14	229	*e*S	Sn	17 14 23.7	-5.2
PETK	**Petropavlovsk-**	9.69	28	P	Pn	17 12 52.5	-2.9
	comp=E,0.1nm,0.3s,baz=184,slow=17,SNR=1.6						
USRK	**Ussuriysk Ar.**	12.99	274	P	Pn	17 13 42.2	+2.6
	baz=80,slow=11,SNR=1.3						
YAK	**Yakutsk**	20.98	333	P	P	17 15 12.0	-1.9
	comp=E,3.8nm,0.4s,baz=142,slow=2.0,SNR=10						
YAK	**Yakutsk**	20.98	333	P	P	17 15 12.0	-1.9
YAK	**Yakutsk**	20.98	333	*e*P	P	17 15 12.0	-1.9
H11N2	**WAKE ISLAND Hy**	28.60	145	T	T	17 47 19.0	
	baz=335,slow=76,SNR=74						
H11N1	**WAKE ISLAND Hy**	28.61	145	T	T	17 47 24.2	

	baz=335,slow=76,SNR=77						
H11N3	WAKE ISLAND Hy	28.62	145	T	T	17 47 24.5	
	baz=335,slow=76,SNR=76						
H11S1	WAKE ISLAND Hy	29.63	147	T	T	17 48 40.4	
	baz=336,slow=76,SNR=121						
H11S3	WAKE ISLAND Hy	29.63	147	T	T	17 48 40.5	
	baz=336,slow=76,SNR=64						
H11S2	WAKE ISLAND Hy	29.64	147	T	T	17 48 41.7	
	baz=336,slow=76,SNR=60						
SONM	Songino Array	30.08	292	P	P	17 16 39.4	+0.6
	comp=E,0.4nm,0.6s,baz=69,slow=7.9,SNR=2.7						
ILAR	Eielson Array	39.37	37	P	P	17 17 56.5	-1.8
	comp=E,0.3nm,0.5s,baz=265,slow=8.0,SNR=10						
ZALV	Zalesovo Beam	42.10	307	P	P	17 18 19.5	-1.3
	comp=E,0.4nm,0.4s,baz=53,slow=5.6,SNR=2.1						
INK	Inuvik	44.41	31	P	P	17 18 39.8	+0.6
	comp=E,0.9nm,0.5s,baz=311,slow=11,SNR=7.6						
MKAR	Makanchi Array	46.01	298	P	P	17 18 53.5	+1.3
	comp=E,0.7nm,0.5s,baz=74,slow=7.9,SNR=4.8						
FINES	FINESS Array B	64.91	334	P	P	17 21 06.9	-0.4
	comp=E,1.0nm,0.5s,baz=37,slow=9.4,SNR=12						
NB2	NORSAR Subarra	69.39	340	P	P	17 21 35.8	+0.1
	comp=Z,0.4nm,0.5s,baz=43,slow=6.9						
NOA	NORSAR Array B	69.39	340	P	P	17 21 35.7	0.0
	comp=Z,0.7nm,0.5s,baz=40,slow=7.4,SNR=6.0						
ASAR	Alice Springs	69.72	196	P	P	17 21 42.2	+4.1
	comp=Z,0.1nm,0.6s,baz=17,slow=6.3,SNR=0.9						
ASAR				pP	PcP	17 22 02.6	+2.5
	comp=Z,0.1nm,0.5s,baz=10,slow=6.7,SNR=1.5						
ASAR				sP	sP	17 22 14.4	+2.9
	comp=Z,0.2nm,0.7s,baz=3.6,slow=9.7,SNR=2.1						
KBZ	Khabaz	70.70	313	P	P	17 21 45.3	+1.4
	comp=Z,2.2nm,0.8s,baz=6.0,slow=6.5,SNR=2.7						
AKASG	Malin Array Be	72.00	325	P	P	17 21 51.4	-0.1
	comp=Z,1.2nm,0.4s,baz=36,slow=7.0,SNR=4.6						
GERES	GERESS Array B	79.27	332	P	P	17 22 34.3	+1.1
	comp=Z,0.3nm,0.5s,baz=70,slow=6.5,SNR=2.6						
TXAR	Lajitas Array	80.27	58	P	P	17 22 40.3	+1.3
	comp=Z,0.1nm,0.4s,baz=294,slow=5.0,SNR=4.5						
TXAR				pP	pP	17 23 00.2	-3.2
	comp=Z,0.2nm,0.7s,baz=310,slow=6.0,SNR=2.0						
H03N2	Juan Fernandez	140.81	91	T	T	20 07 21.0	
	baz=306,slow=77,SNR=5.0						
H03N3	Juan Fernandez	140.82	91	T	T	20 07 21.4	
	baz=306,slow=77,SNR=5.3						
H03N1	Juan Fernandez	140.82	91	T	T	20 07 25.3	
	baz=306,slow=77,SNR=4.2						

IDC 22 17:20:39.3±1.5**,0°.95N**×**127°.33E,h0**^{km}**,mb3.6**/3**, mb1 3.8**/4**,mb1mx3.5**/30**,mbtmp3.6**/4**,ML2.9**/1**,Error ellipse: s-maj=64.6km s-min=24.7km az=60.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	4.33	115	Pn	Pn	17 21 45.8	-0.7
	0.7nm,0.3s,baz=319,slow=20,SNR=2.7						
WRA	Warramunga Arr	21.87	162	P	P	17 25 34.0	+0.1
	1.6nm,0.6s,baz=340,slow=11,SNR=10						
ASAR	Alice Springs	25.29	166	P	P	17 26 07.8	+0.1
	1.5nm,0.7s,baz=343,slow=9.8,SNR=25						
MKAR	Makanchi Array	60.17	326	P	P	17 30 49.0	0.0
	0.5nm,0.7s,baz=116,slow=8.5,SNR=5.6						

IDC 22 17:20:58.2±1.7**,0°.95N**×**127°.38E,h0**^{km}**,mb3.8**/3**, mb1 4.0**/4**,mb1mx3.5**/30**,mbtmp3.7**/4**,ML3.0**/1**,Error ellipse: s-maj=65.0km s-min=27.5km az=59.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	4.29	115	Pn	Pn	17 22 04.5	-0.3
	0.8nm,0.3s,baz=341,slow=23,SNR=4.1						
WRA	Warramunga Arr	21.85	162	P	P	17 25 52.4	-0.3
	3.0nm,0.6s,baz=340,slow=11,SNR=11						
ASAR	Alice Springs	25.27	166	P	P	17 26 26.8	+0.3
	2.4nm,0.6s,baz=344,slow=11,SNR=4.4						
MKAR	Makanchi Array	60.20	326	P	P	17 31 08.1	-0.1
	0.4nm,0.7s,baz=124,slow=8.5,SNR=2.8						

*TRN **22** 17:24:50.4, 11°.09N×62°.05W, h86^{km}, MD3.5*
*FUNV **22** 17:24:51.6, 11°.05N×62°.06W, h30^{km}, MW3.5*
ISC 22 17:24:48.8±1.3**,11°.07N**±0°.03×**62°.07W**±0°.04**, h100**^{km}±11^{km}**,n31,**σ**1^{s}.32**/50**,1C,Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRN	Trinidad (W)	0.78	122	⇑*i*P	Pn	17 25 07.5	+0.5
TRN				*e*S	Sn	17 25 18.9	-1.7
TPP	Pointe-a-Pierr	0.97	141	*e*P	Pn	17 25 09.8	+1.0
GRFF	Grenada Fort F	1.03	19	*e*P	Pn	17 25 09.8	+0.3
GRFF				*e*S	Sn	17 25 23.6	-1.6
GRGR	Grenville	1.13	21	*e*P	Pn	17 25 11.2	+0.5
GRGR				*e*S	Sn	17 25 26.4	-0.9
TBH	Brigand Hill	1.15	120	*e*P	Pn	17 25 11.7	+0.9
TBH				*e*S	Sn	17 25 28.1	+0.5
CRUV	Carupano	1.21	251	*e*P	Pn	17 25 12.4	+0.9
CRUV				*e*S	Sn	17 25 27.9	-0.8
GRHS	Sauteurs	1.22	20	*e*P	Pn	17 25 13.2	+1.5
GRHS				*e*S	Sn	17 25 28.5	-0.5
GRSS	Sisters	1.30	20	*e*P	Pn	17 25 14.6	+2.0
GRSS				*e*S	Sn	17 25 30.3	-0.4
TOSP	Speyside	1.53	81	*e*P	Pn	17 25 15.8	+0.4
TOSP				*e*S	Sn	17 25 34.6	-0.9
GCMP	Grenada, Carri	1.54	24	*e*P	Pn	17 25 16.3	+0.7
GCMP				*e*S	Sn	17 25 35.5	-0.4
SVOC	Richmond Hill,	2.23	22	*e*P	Pn	17 25 24.4	0.0
SVB	Belmont	2.33	20	*e*P	Pn	17 25 26.8	+1.1
SVB				*e*S	Sn	17 25 53.1	-0.9
SVV	Soufriere Volc	2.39	20	*e*P	Pn	17 25 28.4	+1.9
SSV	Crater Summit	2.40	21	*e*P	Pn	17 25 28.0	+1.3
PCRV	Puerto La Cruz	2.67	251	*e*P	Pn	17 25 32.1	+1.8
PCRV				*e*S	Sn	17 26 01.0	-1.1
MCLT	Moule a Chique	2.85	23	*e*P	Pn	17 25 33.1	+0.6
MCLT				*e*S	Sn	17 26 05.3	-0.9
RIOV	Rio Grande	2.99	175	*e*P	Pn	17 25 36.3	+1.8
RIOV				*e*S	Sn	17 26 08.7	-1.0
SLBI	Saint Lucia, B	3.12	20	*e*P	Pn	17 25 37.8	+1.5
SLBI				*e*S	Sn	17 26 12.1	-0.7
PRGV	PARIAGUAN	3.42	228	*e*P	Pn	17 25 41.8	+1.6
PRGV				*e*S	Sn	17 26 19.5	-0.4
MPOM	Morne Pois Mar	3.56	19	*e*P	Pn	17 25 43.7	+1.7
MPOM				*e*S	Sn	17 26 22.3	-0.9
BIM	Bigot	3.56	16	*e*P	Pn	17 25 43.4	+1.2
BIM				*e*S	Sn	17 26 21.6	-1.8
ILAM	Ilet Lapin Mar	3.86	17	*e*P	Pn	17 25 47.4	+1.2
BIRV	Birongo	4.17	262	*e*P	Pn	17 25 51.9	+1.7
BIRV				*e*S	Sn	17 26 36.3	-1.6
MERV	Las Mercedes	4.53	247	*e*P	Pn	17 25 56.2	+1.0
MERV				*e*S	Sn	17 26 45.8	-1.1
LUEV	Luepa	5.23	173	*e*P	Pn	17 26 04.7	-0.2
BENV	Beln	5.54	259	*e*P	Pn	17 26 10.1	+1.0
CACV	CAICARA DEL OR	5.62	232	*e*P	Pn	17 26 06.1	-3.9
BAUV	El Baul	6.25	251	*e*P	Pn	17 26 19.6	+1.1
BAUV	El Baul	6.25	251	*e*S	Sn	17 27 27.2	-1.4
BAUV	El Baul	6.25	251	*e*P	Pn	17 26 19.0	+0.5
BAUV				*e*S	Sn	17 27 24.6	-4.0
PAYV	Puerto Ayacuch	7.88	225	*e*P	Pn	17 26 41.6	+0.9

IDC 22 17:31:26.4±1.7**,0°.82N**×**127°.27E,h0**^{km}**,mb3.4**/4**, mb1 3.6**/5**,mb1mx3.3**/32**,mbtmp3.4**/5**,ML2.8**/1**,Error ellipse: s-maj=62.0km s-min=26.6km az=60.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	4.34	113	Pn	Pn	17 32 34.0	+0.3
	0.5nm,0.3s,baz=184,slow=18,SNR=4.5						
WRA	Warramunga Arr	21.77	162	P	P	17 36 20.6	+0.7
	0.8nm,0.6s,baz=341,slow=11,SNR=6.1						
ASAR	Alice Springs	25.18	166	P	P	17 36 53.9	+0.1
	0.7nm,0.7s,baz=345,slow=8.7,SNR=13						
STKA	Stephens Creek	35.24	159	P	P	17 38 21.9	-0.9
	1.4nm,0.7s,baz=312,slow=11,SNR=3.0						
MKAR	Makanchi Array	60.24	326	P	P	17 41 36.6	0.0
	0.1nm,0.4s,baz=116,slow=6.6,SNR=1.9						

*IDC **22** 17:37:57.8±1.2, 53°.60S×140°.99E, h0^{km}, mb3.8/6, mb1 4.0/6, mb1mx3.7/27, mbtmp3.8/6, MS3.6/4, Ms1 3.5/4, ms1mx3.2/19, Error ellipse: s-maj=105.9km s-min=17.2km az=85.0*
ISC 22 17:37:59.4±1.1**,53°.6S**±0°.1×**140°.7E**±0°.7**,h10**^{km}**,n13,** σ**0^{s}.51**/7**,mb3.9**/6**,MS3.7**/4**,West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	21.74	2	P	P	17 42 51.1	+0.4
	4.1nm,0.8s,baz=184,slow=12,SNR=8.1						
VNDA	Vanda	25.20	169	P	P	17 43 24.6	-0.1
	2.0nm,0.8s,baz=324,slow=10,SNR=6.2						
H01W1	Cape Leeuwin H	26.44	304	T	T	18 11 12.9	
	baz=143,slow=75,SNR=8.4						
H01W2	Cape Leeuwin H	26.44	304	T	T	18 11 14.3	
	baz=143,slow=75,SNR=8.3						
H01W3	Cape Leeuwin H	26.45	304	T	T	18 11 14.1	
	baz=143,slow=75,SNR=7.8						
ASAR	Alice Springs	30.35	348	P	P	17 44 11.4	+0.2
	0.6nm,0.6s,baz=165,slow=10,SNR=16						
WRA	Warramunga Arr	33.97	349	P	P	17 44 42.5	-0.5
	1.7nm,0.7s,baz=170,slow=7.5,SNR=17						
WRA				LR	LR	17 57 53.8	
	comp=Z,30nm,19.3s,baz=65,slow=35						
QSPA	South Pole Qui	36.49	180	P	P	17 45 04.2	-0.3
	2.4nm,0.9s,baz=314,slow=5.8,SNR=5.9						
DZM	Mont Dzumac	37.07	42	LR	LR	17 57 32.0	
	comp=Z,105nm,20.1s,baz=203,slow=32						
MAW	Mawson	37.82	218	LR	LR	17 59 30.5	
	comp=Z,111nm,18.6s,baz=62,slow=34						
SNAA	Sanae	52.39	194	P	P	17 47 11.7	+0.6
	1.6nm,1.1s,baz=146,slow=12,SNR=3.0						
AFI	Afiamalu	54.37	62	LR	LR	18 06 45.2	
	comp=Z,74nm,20.0s,baz=59,slow=32						
GERES	GERESS Array B	147.13	284	PKPbc	PKPbc	17 57 41.3	-0.5
	0.4nm,0.7s,baz=127,slow=2.6,SNR=1.8						

SJA 22 17:39:56.0,23°.31S×**68°.79W,h70**^{km}**,ML4.0,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB15	IPOC Station P	0.63	279	*i* P	Pn	17 40 12.0	+1.6
LVC	Limon Verde	0.70	351	*i* P	Pn	17 40 11.0	-0.4
PB06	IPOC Station P	0.94	310	*i* P	Pn	17 40 15.0	+1.1
PB05	IPOC Station P	1.38	289	*i* P	Pn	17 40 20.0	+0.5
PB03	IPOC Station P	1.54	324	*i* P	Pn	17 40 22.0	+0.3
PB09	IPOC Station P	1.56	344	*i* P	Pn	17 40 21.0	-1.0
PB04	IPOC Station P	1.59	308	*i* P	Pn	17 40 23.0	+0.7
PB10	IPOC Station P	1.63	263	*i* P	Pn	17 40 21.0	-1.7
PB07	IPOC Station P	1.87	327	*i* P	Pn	17 40 25.0	-1.1
PB02	IPOC Station P	2.23	332	*i* P	Pn	17 40 29.0	-1.9
AC04	Llanos de Chal	5.29	202	*i* P	Pn	17 41 12.0	-0.5

*IDC **22** 17:51:15.9±1.6, 20°.17S×178°.05W, h505^{km}±16^{km}, mb2.9/8, mb1 3.4/11, mb1mx3.2/22, mbtmp4.0/11, Error ellipse: s-maj=23.2km s-min=16.3km az=135.0*
ISC 22 17:51:15.3±0.7**,20°.2S**±0°.1×**178°.0W**±0°.1**,h500**^{km}**,n15,** σ**0^{s}.84**/16**,mb3.4**/8**,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.46	303	P	P	17 52 38.5	+0.8
	12nm,0.3s,baz=136,slow=3.0,SNR=41						
AFI	Afiamalu	8.63	45	P	P	17 53 18.7	+0.3
	4.0nm,0.3s,baz=46,slow=16,SNR=4.3						
AFI				S	S	17 54 47.8	-12
	4.9nm,0.3s,baz=29,slow=22,SNR=5.9						
URZ	Urewera	18.50	192	P	P	17 55 01.8	+1.7
	4.8nm,0.3s,baz=298,slow=20,SNR=19						
ASAR	Alice Springs	44.59	256	P	P	17 58 42.1	-0.5
	1.8nm,0.6s,baz=88,slow=8.6,SNR=66						
ASAR				PcP	PcP	18 00 14.9	-0.1
	1.1nm,0.5s,baz=104,slow=3.8,SNR=12						
WRA	Warramunga Arr	44.64	262	P	P	17 58 42.2	-0.8
	0.6nm,0.3s,baz=97,slow=7.5,SNR=48						
WRA				PcP	PcP	18 00 14.9	-0.3
	0.4nm,0.5s,baz=99,slow=3.3,SNR=2.6						
VNDA	Vanda	58.22	185	P	P	18 00 19.7	-0.9
	0.4nm,0.8s,baz=13,slow=4.9,SNR=2.4						
MJAR	Matsushiro Arr	69.96	324	P	P	18 01 36.0	0.0
	1.4nm,0.8s,baz=129,slow=6.7,SNR=4.3						
TXAR	Lajitas Array	86.89	57	P	P	18 03 07.3	+0.3
	0.2nm,0.6s,baz=207,slow=7.0,SNR=4.1						
ILAR	Eielson Array	88.01	13	P	P	18 03 10.3	-1.0
	0.5nm,0.8s,baz=221,slow=5.9,SNR=6.7						
PDAR	Pinedale Array	88.74	43	P	P	18 03 15.8	+0.3
	0.1nm,0.4s,baz=176,slow=4.1,SNR=1.9						
CMAR	Chiang Mai Arr	90.01	290	P	P	18 03 22.8	+1.1
	0.5nm,0.8s,baz=137,slow=2.9,SNR=4.6						
MKAR	Makanchi Array	110.98	314	PKiKP	PKiKP	18 08 50.2	-1.2
	0.4nm,0.6s,baz=134,slow=0.9,SNR=5.6						
AKASG	Malin Array Be	142.74	331	PKhKP	PKPpre	18 09 47.6	
	1.9nm,0.6s,baz=46,slow=4.7,SNR=12						
BRTR	Keskin Array B	146.63	313	PKPbc	PKPbc	18 10 00.5	-0.4
	1.0nm,0.5s,baz=143,slow=5.6,SNR=6.9						
GERES	GERESS Array B	149.90	344	PKPbc	PKPbc	18 10 08.9	+0.1
	0.7nm,0.6s,baz=20,slow=4.3,SNR=7.6						

*SOME **22** 18:15:59.3, 36°.32N×71°.27E, h10^{km}, MS4.7*
*NNC **22** 18:16:02.4±2.2, 36°.50N×70°.99E, h108^{km}±25^{km}, mb5.6, mpv6.0, Error ellipse: s-maj=20.7km s-min=11.3km az=163.0*
*MOS **22** 18:16:03.1±0.9, 36°.42N×71°.64E, h101^{km}, mb5.8/43, MS5.0/25, Error ellipse: s-maj=4.3km s-min=3.1km az=90.1*
*BJI **22** 18:16:03.7±0.0, 36°.51N×71°.75E, h85^{km}, mB5.7/55, mb5.7/75, Ms5.3/77, Ms7 5.0/73*
*IDC **22** 18:16:04.8±0.7, 36°.37N×71°.58E, h108^{km}±6^{km}, mb5.2/44, mb1 5.3/49, mb1mx5.2/51, mbtmp5.6/49, MS4.8/28, Ms1 4.8/28, ms1mx4.6/48, Error ellipse: s-maj=8.2km s-min=6.9km az=14.0*
*NEIC **22** 18:16:04.7±2.6, 36°.43N±0°.06×71°.42E±0°.07, h102^{km}±1^{km}, mb5.8/255, Mwb5.8/55, Mww5.7, Mwc5.8(GCMT), Error ellipse: s-maj=10.3km s-min=9.3km az=76.0*
*NEIC **22** 18:16:04.5, 36°.46N×71°.44E, h102^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}4.92; $M_{\theta\theta}$0.46; $M_{\phi\phi}$-5.38; $M_{r\theta}$-1.25; $M_{\theta\phi}$-1.26; $M_{\phi r}$-0.66; Fault plane solution: $M_0$5.50000×10^{17} NP1:ϕ_s204.64000°, δ51.31000°, λ107.21000°. NP2:ϕ_s358.28000°, δ41.79000°, λ69.73000°. Principal axes: T 5.2544, Plg76.0000°, Azm173.0000°; N 0.4657, Plg13.0000°, Azm14.0000°; P -5.7201, Plg5.0000°, Azm283.0000°;*
*GCMT **22** 18:16:05.7±0.1, 36°.45N±0°.01×71°.32E±0°.01, h110^{km}, MW5.8/149, Moment Tensor Solution. s149,c287; s145,c340; Duration: 1^{s}.9 Moment tensor: Scale 10^{17} Nm; M_{rr}4.66±.05; $M_{\theta\theta}$0.40±.06; $M_{\phi\phi}$-5.06±.05; $M_{r\theta}$-1.50±.04; $M_{\theta\phi}$-1.86±.06; $M_{\phi r}$-1.08±.05; Best double couple: $M_0$5.50100×10^{17} NP1:ϕ_s2.00000°, δ39.00000°, λ67.00000°. NP2:ϕ_s211.00000°, δ55.00000°, λ108.00000°. Principal axes: T 5.1580, Plg73.0000°, Azm170.0000°; N 0.6850, Plg14.0000°, Azm21.0000°; P -5.8440, Plg8.0000°, Azm288.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **22** 18:16:06, 36°.43N×71°.35E, h106^{km}, Moment Tensor Solution. Duration: 3^{s}.8 Moment tensor: Scale 10^{17}Nm; M_{rr}4.55; $M_{\theta\theta}$0.62; $M_{\phi\phi}$-5.18; $M_{r\theta}$-1.59; $M_{\theta\phi}$-1.94; $M_{\phi r}$-1.05; Fault plane solution: $M_0$5.60000×10^{17} NP1: ϕ_s359.00000°, δ40.00000°, λ63.00000°. NP2: ϕ_s213.00000°, δ55.00000°, λ111.00000°. Principal axes: T 5.1274, Plg71.0000°, Azm173.0000°; N 0.8479, Plg17.0000°, Azm21.0000°; P -5.9753, Plg8.0000°, Azm288.0000°;*
*BGR **22** 18:16:06.1±0.0, 36°.56N×71°.49E, h102^{km}±5^{km}, mb6.2*
*NEIC **22** 18:16:06, 36°.54N×71°.44E, h110^{km}, Moment Tensor Solution. Duration: 4^{s}.0 Moment tensor: Scale 10^{17}Nm; M_{rr}3.95; $M_{\theta\theta}$-0.47; $M_{\phi\phi}$-3.48; $M_{r\theta}$-0.56; $M_{\theta\phi}$-1.18; $M_{\phi r}$-0.55; Fault plane solution: $M_0$3.99000×10^{17} NP1: ϕ_s14.00000°, δ40.00000°, λ83.00000°. NP2:ϕ_s204.00000°, δ50.00000°, λ96.00000°. Principal axes: T 4.0403, Plg83.0000°, Azm152.0000°; N -0.0937, Plg5.0000°, Azm20.0000°; P -3.9466, Plg5.0000°, Azm290.0000°;*
ISC 22 18:16:03.8±0.2**,36°.44N**±0°.02×**71°.50E**±0°.02**,h96**^{km}±1^{km}**, h96**^{km}**:pP-P,n1451,**σ**1^{s}.74**/1687**,mb5.8**/422**,356C-171D, Fault plane solution: NP1:**ϕ_s177.64900°**,**δ46.42768°, λ85.29730°. **NP2:**ϕ_s4.45491°**,**δ43.77469°**,**λ94.92539°. **Principal axes:** T Plg86.3440°**,** Azm22.2604°**;** N Plg3.4053°**,** Azm180.8943°**;** P Plg1.3288°**,** Azm270.9733°**;**
Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	Cherat	2.64	173	P	Pn	18 16 45.8	+1.1
CEP				S	Sn	18 17 19.0	+2.9
GAR	Garm	2.72	340		Pn	18 16 46.4	+0.6
KBL	Kabul	2.76	227	PN	Pn	18 16 47.2	+0.7
KBL	Kabul	2.76	227	P	Pn	18 16 47.4	+0.9
	SNR=1676						
KBL	Kabul	2.76	227	Pn	Pn	18 16 47.2	+0.7
CHGR	Chuyangaron	2.89	321	Pn	Pn	18 16 47.6	-0.5
DRK	Karamyk	3.04	4		Pn	18 16 52.1	+1.8
CHCP	Chirah Chowk	3.13	152	P	Pn	18 16 53.0	+1.7
CHCP				S	Sn	18 17 31.0	+3.1
NIL	Nilore	3.14	152	PN	Pn	18 16 53.0	+1.7
NIL	Nilore	3.14	152	P	Pn	18 16 53.3	+2.1
NIL	Nilore	3.14	152		Pn	18 16 53.0	+1.7
THW	Thamme Wali	3.65	177	P	Pn	18 16 58.1	-0.1
BTK	Batken	3.65	352	PN	Pn	18 17 00.1	+1.9
BTK	Batken	3.65	352		Pn	18 17 00.1	+1.9
SARP	Sargodha	4.62	168	P	Pn	18 17 10.5	-0.7
KSH	Kashi	4.68	48	P	Pn	18 17 07.9	-4.3
KSH				S	Sn	18 17 54.8	-10
KSH				smax	smax		
	comp=N,63µm,0.5s						
KSH				smax	smax		
	comp=E,50µm,0.6s						
KSH				LR	LR		
	comp=N,76µm,4.6s						
KSH				LR	LR		
	comp=E,70µm,5.0s						
KSH				LR	LR		
	comp=Z,35µm,9.6s						
TAS	Tashkent	5.17	341	PN	Pn	18 17 19.0	+0.3
TAS	Tashkent	5.17	341	Pn	Pn	18 17 19.0	+0.3
DHRM	DHARAMSHALA	5.77	135	*e*P	Pn	18 17 26.8	-0.3
DHRM				*e*S	Sn	18 18 28.7	-3.3
AML	Almayashu	5.93	16	P	Pn	18 17 30.1	+0.8
	SNR=2838						
AML	Almayashu	5.93	16	*i* P	Pn	18 17 30.5	+1.1
	SNR=1783						
AML	Almayashu	5.93	16	P	Pn	18 17 30.5	+1.1
CHM	Chimkent	6.05	347	*e*P	Pn	18 17 31.9	+1.3
	379nm,0.4s						
CHM				*e*S	Sn	18 18 36.0	-2.4
	5µm,0.4s						
MRKS	Merke	6.43	11	*e*P	Pn	18 17 37.3	+1.3
	1µm,0.8s						
MRKS				*e*S	Sn	18 18 46.3	-1.6
	2µm,0.5s						
DZA	Taraz	6.44	359	*e*P	Pn	18 17 36.9	+0.9
	4µm,0.7s						
DZA				*e*S	Sn	18 18 45.6	-2.4
	8µm,0.8s						
DZA	Taraz	6.44	359	*e*P	Pn	18 17 36.4	+0.4
	baz=359						
DZA				*e*S	Sn	18 18 46.1	-1.9
	baz=359						
DZA	Taraz	6.44	359	*e*PN	Pn	18 17 36.4	+0.4
EKS2	Erkin-Say	6.45	15	P	Pn	18 17 37.4	+1.1
	SNR=495						
BHK	Bhakra	6.47	139	*e*x	Pn	18 17 32.0	-4.4
BHK				*e*x	x	18 18 35.2	
AAK	Ala-Archa	6.60	20	P	Pn	18 17 39.9	+1.6
	208nm,0.3s,baz=192,slow=7.1,SNR=1222						
AAK				S	Sn	18 18 51.7	-0.5
	115nm,0.3s,baz=145,slow=23,SNR=11						
AAK				LR	LR	18 19 46.8	
	comp=Z,4µm,18.2s,baz=224,slow=33						
AAK	Ala-Archa	6.60	20	P	Pn	18 17 39.6	+1.3
	SNR=968						
AAK	Ala-Archa	6.60	20	*i* P	Pn	18 17 39.8	+1.5
	SNR=548						
AAK	Ala-Archa	6.60	20	PN	Pn	18 17 39.8	+1.5
AAK	Ala-Archa	6.60	20	S	Sn	18 18 52.4	+0.2
AAK	Ala-Archa	6.60	20	⇓P	Pn	18 17 39.8	+1.5
	961nm,0.8s						
AAK				S	Sn	18 18 53.3	+1.1
	4µm,0.8s						
AAK	Ala-Archa	6.60	20		Pn	18 17 39.6	+1.3
KK02	Karatay Array	6.69	354	⇓P	Pn	18 17 38.8	-0.7
	398nm,0.3s						
KK02				⇓S	Sn	18 18 51.4	-2.8
	1µm,0.6s						
KKAR	Karatay Array	6.69	354	PN	Pn	18 17 39.4	0.0
KKAR	Karatay Array	6.69	354		Pn	18 17 39.4	0.0
BRLS	Borolday	6.70	349	*e*P	Pn	18 17 36.3	-3.3
	240nm,0.8s						
BRLS				*e*S	Sn	18 18 45.2	-9.2
	2µm,1.1s						
BRLS	Borolday	6.70	349	*i* P	Pn	18 17 36.1	-3.5
	baz=348						
BRLS				*e*S	Sn	18 18 48.2	-6.1
	baz=348						
BRLS	Borolday	6.70	349	*i* PN	Pn	18 17 36.0	-3.5
KBK	Karagaybulak	6.75	22	P	Pn	18 17 41.8	+1.5
	SNR=117						
FRU1	Bishkek	6.80	20	PN	Pn	18 17 43.0	+2.1
FRU1	Bishkek	6.80	20		Pn	18 17 43.0	+2.1
ULHL	Ulahol	6.86	31	P	Pn	18 17 42.7	+0.8
	SNR=121						
BOOM	Boomskoye usch	6.94	28	PN	Pn	18 17 43.9	+0.9
BOOM	Boomskoye usch	6.94	28		Pn	18 17 43.9	+0.9
CHMS	Chumysh	7.01	20	P	Pn	18 17 44.8	+1.0
	SNR=920						
SMLA	Simla	7.09	137	*e*P	Pn	18 17 44.1	-0.8
SMLA				*e*S	Sn	18 18 58.5	-5.5
KDJ	Kajisay	7.18	36	PN	Pn	18 17 47.7	+1.5
KDJ	Kajisay	7.18	36	Pn	Pn	18 17 47.7	+1.5
USP	Ospenovka	7.19	18	P	Pn	18 17 47.3	+1.0
	SNR=496						
TKM2	Tokmak 2	7.20	25	P	Pn	18 17 47.2	+0.8
	SNR=472						
TKM2	Tokmak 2	7.20	25	PN	Pn	18 17 47.6	+1.1
TKM2	Tokmak 2	7.20	25	⇑P	Pn	18 17 47.6	+1.1
	802nm,0.8s						
TKM2				⇑S	Sn	18 19 09.8	+3.1
	714nm,0.6s						
TARG	Taragay, Kyrgy	7.20	41		Pn	18 17 47.2	+0.5
TNSS	Tian-Shan	7.80	31	*e*P	Pn	18 17 54.8	-0.1
	baz=32						
HRA	Herat	7.83	258		Pn	18 17 53.0	-2.2
AAA	Alma-Ata	7.93	30	*e*P	Pn	18 17 57.1	+0.8
	416nm,0.6s,baz=31						
AAA				*e*S	Sn	18 19 21.6	-2.9
	baz=31						
AAA	Alma-Ata	7.93	30	*e*PN	Pn	18 17 57.1	+0.8
AAA				pmax	pmax		
	comp=Z,416nm,0.6s						
MDOK	Medeo	7.95	31	*e*P	Pn	18 17 57.0	+0.3
	baz=31						
MDOK	Medeo	7.95	31	*e*PN	Pn	18 17 56.9	+0.3
MDOK	Medeo	7.95	31	⇑P	Pn	18 17 57.0	+0.3
	comp=Z,447nm,0.8s						
KNDC	Almaty	7.96	30	PN	Pn	18 17 57.9	+1.2
KNDC	Almaty	7.96	30	⇓P	Pn	18 17 58.0	+1.2
	comp=Z,1µm,0.7s						
PRZ	Przheval'sk	8.05	39	PN	Pn	18 17 58.4	+0.4
PRZ	Przheval'sk	8.05	39		Pn	18 17 58.4	+0.4
KUU	Kurty	8.31	25	*e*P	Pn	18 18 00.7	-0.8
	comp=Z,196nm,0.8s,baz=26						
KUU	Kurty	8.31	25	*e*PN	Pn	18 18 00.6	-0.8
KUU				pmax	pmax		
	comp=Z,196nm,0.8s						
SATY	Saty	8.48	37	*e*P	Pn	18 18 03.7	-0.2
	baz=37						
SATY				*e*S	Sn	18 19 37.8	0.0
	baz=37						
SATY	Saty	8.48	37	*e*PN	Pn	18 18 03.6	-0.2
CHKK	Chushkaly	8.51	28	*e*P	Pn	18 18 03.9	-0.2
	baz=28						
BTLS	Baital	8.80	12	*e*P	Pn	18 18 07.9	-0.2
	comp=Z,63nm,0.7s,baz=12						
BTLS	Baital	8.80	12	*e*PN	Pn	18 18 07.8	-0.2
BTLS				pmax	pmax		
	comp=Z,63nm,0.7s						
UZB	Uzynbulak	8.85	39	*e*P	Pn	18 18 08.8	-0.1
	comp=Z,77nm,0.7s,baz=39						
UZB	Uzynbulak	8.85	39	*e*PN	Pn	18 18 08.7	-0.1
UZB				pmax	pmax		

	comp=Z,77nm,0.7s						
KPKS	Kokpek	8.92	36	eP	Pn	18 18 09.8	0.0
	comp=Z,120nm,0.6s,baz=37						
KPKS	Kokpek	8.92	36	ePN	Pn	18 18 09.8	0.0
KPKS				pmax	pmax		
	comp=Z,120nm,0.6s						
SHLS	Shalkode	9.08	40	eP	Pn	18 18 14.5	+2.5
	comp=Z,55nm,0.5s,baz=42						
SHLS	Shalkode	9.08	40	eP	Pn	18 18 14.4	+2.5
SHLS				pmax	pmax		
	comp=Z,55nm,0.5s						
NDI	New Delhi	9.12	146	ex	Pn	18 18 08.0	-4.5
NDI				ex	x	18 19 45.0	
ARXS	Arharly	9.14	30	eP	Pn	18 18 12.5	-0.2
PDGK	Podgornoye	9.21	39	P	Pn	18 18 12.7	-1.1
PDGK	Podgornoye	9.21	39	⇑P	Pn	18 18 13.0	-0.8
	comp=Z,652nm,1.1s						
TDK	Taldyqorghan	10.02	29	eP	Pn	18 18 23.8	-0.9
	comp=Z,231nm,0.9s,baz=30						
TDK	Taldyqorghan	10.02	29	eP	Pn	18 18 23.8	-0.9
TDK				pmax	pmax		
	comp=Z,231nm,0.9s						
GEYT	Alibeck	10.78	282	P	Pn	18 18 30.6	-4.5
	comp=Z,136nm,0.3s,baz=115,slow=10,SNR=434						
GEYT				S	Sn	18 20 26.0	-7.8
	comp=Z,202nm,0.3s,baz=103,slow=24,SNR=7.8						
GEYT				LR	LR	18 24 05.0	
	comp=Z,10µm,19.5s,baz=160,slow=44						
GYA0	ALIBECK ARRAY	10.78	282	P	Pn	18 18 30.0	-5.1
GYA0B	ALIBECK ARRAY	10.78	282	⇑P	Pn	18 18 27.5	-7.6
GYA0B				⇑S	Sn	18 20 21.9	-12
GYA0B	ALIBECK ARRAY	10.78	282		Pn	18 18 30.7	-4.4
PYUN	Piuthan	12.79	127	eP	Pn	18 18 57.4	-4.8
MAKZ	Makanchi	12.97	34	P	Pn	18 19 03.0	-1.3
MAKZ	Makanchi	12.97	34	⇓P	Pn	18 19 02.7	-1.6
	comp=Z,387nm,1.0s						
MAKZ	Makanchi	12.97	34		Pn	18 19 03.0	-1.3
MK31	Makanchi Array	13.10	35	P	Pn	18 19 05.0	-1.0
MK31	Makanchi Array	13.10	35	⇓P	Pn	18 19 04.4	-1.7
	comp=Z,383nm,1.1s,baz=213,slow=14,SNR=902						
MK31	Makanchi Array	13.10	35		Pn	18 19 05.0	-1.0
MKAR	Makanchi Array	13.10	35	P	Pn	18 19 05.6	-0.4
	comp=Z,7.3nm,0.3s,baz=222,slow=12,SNR=255						
MKAR				LR	LR	18 24 43.3	
	comp=Z,7µm,20.7s,baz=212,slow=40						
MKAR	Makanchi Array	13.10	35		Pn	18 19 04.0	-2.0
DANN	Dangsing	13.12	124	eP	Pn	18 19 01.7	-5.0
KOLN	Koldanda	13.40	127	eP	Pn	18 19 05.4	-4.9
BRZS	Berezniki	13.56	3	eP	Pn	18 19 09.7	-2.3
	comp=Z,84nm,0.8s,baz=3.3						
BRZS	Berezniki	13.56	3	eP	Pn	18 19 09.6	-2.3
BRZS				pmax	pmax		
	comp=Z,85nm,0.8s						
GKN	Gorkha	13.93	123	eP	Pn	18 19 11.9	-5.2
BHPL	Bhopal	14.12	157	eP	Pn	18 19 16.2	-3.3
BHPL				IAmb	IAmb	18 19 25.6	
	comp=Z,501nm,0.7s						
BHPL				ix	x	18 19 45.2	
WMQ	Urumqi	14.40	54	eP	Pn	18 19 20.9	-2.1
WMQ				pP	P	18 19 37.9	+11
WMQ				sP		18 19 47.6	
WMQ				S	Sn	18 21 56.3	-5.2
WMQ				sS	S	18 22 17.1	+2.0
WMQ				pmax	pmax		
	comp=Z,390nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,2µm,3.7s						
WMQ				LR	LR		
	comp=Z,10µm,6.7s						
WMQ				LR	LR		
	comp=Z,5µm,11.5s						
WMQ				LR	LR		
	comp=Z,4µm,24.7s						
DMN	Daman	14.50	124	eP	Pn	18 19 19.5	-5.1
KKN	Kakani	14.51	123	eP	Pn	18 19 19.0	-5.6
PKIN	Phulchoki	14.72	123	eP	Pn	18 19 21.9	-5.5
PKI	Pulchoki	14.73	123	eP	Pn	18 19 22.0	-5.6
ZSN	Zaisan	14.80	38	eP	Pn	18 19 26.7	-1.3
	baz=38						
ZSN	Zaisan	14.80	38	eP	Pn	18 19 26.7	-1.3
GUN	Gumba	14.84	121	eP	Pn	18 19 23.3	-5.7
KURBB	Kurchatov Arra	15.05	17	P	Pn	18 19 27.7	-3.4
	comp=Z,0.7nm,0.3s,baz=212,slow=12,SNR=95						
KURBB	Kurchatov Arra	15.05	17	P	P	18 19 33.0	-1.1
KURBB	Kurchatov Arra	15.05	17	⇓P	Pn	18 19 29.2	-1.9
	comp=Z,546nm,0.8s						
KURK	Kurchatov	15.16	18	iP	Pn	18 19 30.4	-2.1
KURK	Kurchatov	15.16	18	P	Pn	18 19 30.7	-1.8
KURK				P	Pn	18 19 30.7	-1.8
KURK	Kurchatov	15.16	18	Pn	Pn	18 19 29.5	-3.0
JIRN	Jiri	15.21	121	eP	Pn	18 19 28.7	-5.0
SEM	Semipalatinsk	15.32	22	eP	Pn	18 19 32.9	-1.9
	baz=22						
SEM	Semipalatinsk	15.32	22	eP	Pn	18 19 32.9	-1.9
AB31	Akbulak array	15.33	330	P	Pn	18 19 31.6	-3.1
AB31	Akbulak array	15.33	330	⇓P	Pn	18 19 30.8	-3.9
	comp=Z,160nm,0.6s,baz=138,slow=12,SNR=3935						
AB31				⇓S	Sn	18 22 14.7	-9.1
	comp=Z,423nm,0.7s,baz=143,slow=24,SNR=8.9						
ABKAR	Akbulak array	15.33	330		Pn	18 19 31.5	-3.2
ABKAR	Akbulak array	15.33	330		Pn	18 19 31.7	-3.0
ABKAR				IAmb	IAmb	18 20 14.0	
	comp=Z,928nm,1.4s						
RAMN	Ramite	15.94	122	eP	Pn	18 19 37.7	-5.1
	comp=Z,654nm,0.3s						
TAPN	Taplejung	16.46	119	eP	Pn	18 19 44.7	-4.6
	comp=Z,771nm,0.4s						
TAPN				eS	Sn	18 22 38.3	-14
ODAN	Odare	16.54	121	eP	Pn	18 19 45.3	-4.9
	comp=Z,847nm,0.5s						
BVAR	Borovoye Array	16.60	358	P	Pn	18 19 48.0	-2.4
	comp=Z,7.1nm,0.3s,baz=195,slow=17,SNR=94						
BRVK	Borovoye	16.63	357	P	Pn	18 19 49.7	-1.2
BRVK				pmax	pmax		
	comp=Z,659nm,1.0s						
BRVK	Borovoye	16.63	357	P	Pn	18 19 49.6	-1.3
BRVK				P	Pn	18 19 49.6	-1.3
BRVK				S	Sn	18 22 54.1	-1.1
BRVK				S	Sn	18 22 54.1	-1.1
BRVK	Borovoye	16.63	357	⇑P	Pn	18 19 48.4	-2.5
	comp=Z,711nm,1.0s						
BRVK	Borovoye	16.63	357		Pn	18 19 49.7	-1.2
BRVK				IAmb	IAmb	18 20 22.5	
	comp=Z,659nm,1.0s						
BANOM	Banah	16.69	235	iP	Pn	18 19 51.3	-0.5
	SNR=104						
BANOM	Banah	16.69	235	P	P	18 19 53.1	+0.5
	SNR=54						
BANOM				S	Sn	18 22 57.7	+0.8
SHME	Shamm	16.71	236	iP	Pn	18 19 51.3	-0.7
	SNR=80						
SHME	Shamm	16.71	236	P	P	18 19 54.1	+1.4
	SNR=32						
SHME				P	P	18 19 54.1	+1.4
	SNR=32						
SHME				S	Sn	18 22 57.6	+0.2
SHME				S	Sn	18 22 57.6	+0.2
AKTO	Aktyubinsk	17.03	329	P	Pn	18 19 55.2	-0.6
	comp=Z,59nm,0.3s,baz=137,slow=13,SNR=304						
AKTO				S	Sn	18 22 54.2	-11
	comp=Z,24nm,0.3s,baz=1.3,slow=20,SNR=5.9						
AKTO				LR	LR	18 26 55.5	
	comp=Z,6µm,21.8s,baz=145,slow=38						
AKTO	Aktyubinsk	17.03	329	P	Pn	18 19 53.9	-1.9
AKTO				S	Sn	18 22 55.4	-9.4
AKTO	Aktyubinsk	17.03	329	⇑P	Pn	18 19 53.3	-2.5
	comp=Z,1µm,0.9s						
AKTO				⇑S	Sn	18 22 55.4	-9.4
	comp=Z,970nm,1.3s						
MDH	Madha	17.12	234	iP	Pn	18 19 55.5	-1.5
	SNR=28						
MDH	Madha	17.12	234	P	Pn	18 19 57.0	0.0
	SNR=16						
MASF	Masafi	17.16	234	P	P	18 19 59.7	+2.0
	SNR=48						
MSFE	Esma-Masafi	17.16	234	iP	Pn	18 19 57.5	-0.1
	SNR=45						
WSAR	Wadi Sarin	17.23	224	P	Pn	18 19 58.0	-0.5
	comp=Z,6.5nm,0.3s,baz=64,slow=7.5,SNR=82						
WSAR	Wadi Sarin	17.23	224	P	P	18 19 59.5	+0.9
	SNR=18						
BIDO	Bidbid	17.30	226	P	P	18 20 00.0	+0.8
	SNR=14						
BIDO				S	S	18 23 15.1	+0.8
UMQ	Umm Al-Quwin	17.38	236	iP	Pn	18 20 00.3	0.0
	SNR=11						
UMQ	Umm Al-Quwin	17.38	236	P	Pn	18 20 00.9	+0.6
	SNR=13						
UMQ				P	Pn	18 20 00.9	+0.6
	SNR=13						
UMQ				S	Sn	18 23 13.5	-0.1
UMQ				S	Sn	18 23 13.5	-0.1
UOSS	Minazif	17.42	233	iP	P	18 19 58.3	-2.4
	SNR=26						
UOSS	Minazif	17.42	233	P	P	18 19 59.4	-1.3
UOSS	Minazif	17.42	233	P	P	18 19 59.6	-1.0
UOSS				IAmb	IAmb	18 20 43.8	
	comp=Z,882nm,1.4s						
HATD	Hatta, Dubai	17.55	233	iP	P	18 20 00.2	-1.8
	SNR=30						
HATD	Hatta, Dubai	17.55	233	P	Pn	18 20 04.0	+1.6
	SNR=38						
HATD				S	Sn	18 23 18.3	+0.5
WBK	Wadi Bani Khal	17.55	222	P	Pn	18 20 04.0	+1.6
	SNR=18						
WBK				P	Pn	18 20 04.0	+1.6
	SNR=18						
WBK				S	Sn	18 23 18.3	+0.5
WBK				S	Sn	18 23 18.3	+0.5
DGZ	Jazzator, Alta	17.58	36c	iP	P	18 20 01.7	-0.7
JLN	Jalan Bani Buh	17.70	220	P	Pn	18 20 04.4	+0.3
	SNR=34						
JLN				S	S	18 23 24.2	+1.9
ASHO	Ashiyiah	17.70	233	iP	Pn	18 20 04.3	+0.1
	SNR=241						
ASHO	Ashiyiah	17.70	233	P	Pn	18 20 05.7	+1.5
	SNR=47						
SMDO	Samad	17.70	225	P	Pn	18 20 05.0	+0.7
	SNR=27						
HOQ	Hoqain	17.73	228	P	Pn	18 20 07.0	+2.5
	SNR=21						
NAZ	Nazwa, Dubai	17.75	234	iP	Pn	18 20 04.5	-0.2
	SNR=54						
NAZ	Nazwa, Dubai	17.75	234	P	Pn	18 20 06.0	+1.3
	SNR=50						
NAZ				P	Pn	18 20 06.0	+1.3
	SNR=50						
LSA	Lhasa	17.77	107	P	P	18 20 03.6	-1.3
LSA				pmax	pmax		
	comp=Z,560nm,0.8s						
LSA	Lhasa	17.77	107	P	P	18 20 01.1	-3.9
LSA				pmax	pmax		
	comp=Z,308nm,0.7s						
LSA	Lhasa	17.77	107	P	P	18 20 01.1	-3.9
LSA				IAmb	IAmb	18 20 12.1	
	comp=Z,308nm,0.7s						
SOHO	SOHO	17.79	231	iP	P	18 20 02.6	-2.1
	SNR=35						
SOHO	SOHO	17.79	231	P	P	18 20 03.4	-1.3
SOHO				P	P	18 20 03.4	-1.3
FAQ	Al Faqa, Dubai	17.96	234	iP	P	18 20 06.2	-0.3
	SNR=47						
FAQ	Al Faqa, Dubai	17.96	234	P	Pn	18 20 09.0	+1.7
	SNR=6.1						
FAQ				P	Pn	18 20 09.0	+1.7
	SNR=6.1						
POO	Poona	17.97	173	⇑iP	P	18 20 05.3	-1.3
POO				ix	x	18 20 36.0	
POO				iS	S	18 23 23.0	-4.8
ASUD	Al Ashush, Dub	18.21	234	iP	P	18 20 09.5	+0.2
	SNR=61						
ASUD	Al Ashush, Dub	18.21	234	P	Pn	18 20 12.1	+1.8
	SNR=15						
JMDO	Jabal Madar	18.22	223	P	Pn	18 20 12.0	+1.6
	SNR=48						
JMDO				P	Pn	18 20 12.0	+1.6
	SNR=48						
ALNE	Al Ain	18.34	232	iP	P	18 20 11.0	+0.2
	SNR=132						
ALNE	Al Ain	18.34	232	P	Pn	18 20 11.5	-0.4
	SNR=62						
ALNE				P	Pn	18 20 11.5	-0.4
	SNR=62						
BSY	Bisya	18.44	226	P	Pn	18 20 14.0	+1.0
	SNR=59						
BSY				P	Pn	18 20 14.0	+1.0
	SNR=59						
AJN	Ajban	18.48	235	iP	Pn	18 20 12.9	-0.6
	SNR=27						
AJN	Ajban	18.48	235	P	Pn	18 20 12.9	-0.6
	SNR=31						
AJN				P	Pn	18 20 12.9	-0.6
	SNR=31						
AKT	Akhty	19.14	292	iP	Pn	18 20 20.3	-0.9
MAK	Makhachkala	19.54	297	eP	P	18 20 20.2	-3.4
MAK				eS	S	18 23 54.4	-4.7
MAK				pmax	pmax		
	comp=Z,2µm,1.6s						
MAK				MLR	MLR		
	comp=Z,8µm,10.0s						
JRN	Qarnain Island	19.68	240	P	P	18 20 23.6	-1.7
	SNR=14						
MZWR	Madinat Zayed	19.77	235	P	P	18 20 25.7	-0.5
MZWR				P	P	18 20 25.7	-0.5
ZAA0	Zalesovo Array	19.80	24	⇓P	P	18 20 26.0	-0.4
	comp=Z,238nm,1.1s						
ZAA0	Zalesovo Array	19.80	24	P	P	18 20 25.9	-0.5
ZALV	Zalesovo Beam	19.80	24	P	P	18 20 26.2	-0.1
	comp=Z,148nm,0.3s,baz=220,slow=11,SNR=1595						
ZALV	Zalesovo Beam	19.80	24	P	P	18 20 26.1	-0.3
HYB	Hyderabad	19.95	160	iP	P	18 20 27.0	-1.3
	comp=Z,720nm,1.0s						
HYB				esP	sP	18 21 05.0	+5.4
HYB				eS	Sn	18 24 13.0	-2.5
HYB	Hyderabad	19.95	160	⇑iP	P	18 20 28.3	-0.1
HYB				IAmb	IAmb	18 20 29.4	
	comp=Z,233nm,0.8s						
KHOR	Al-Khor Airpor	20.20	243	P	P	18 20 30.0	-0.9
GHWR	Ruwais	20.30	237	P	P	18 20 31.5	-0.5
SHMA	Al-Shehemyia	20.46	245	P	P	18 20 32.4	-1.3
SHL	Shillong	20.52	116	P	P	18 20 34.1	-0.5
SHL				pmax	pmax		
	comp=Z,430nm,0.7s						
SHL	Shillong	20.52	116	eP	P	18 20 34.0	-0.5
SHL				IAmb	IAmb	18 20 36.4	
	comp=Z,354nm,0.8s						
SHL				ix	x	18 21 07.9	
SHL	Shillong	20.52	116	P	P	18 20 34.9	+0.4
	SNR=174						
SHL	Shillong	20.52	116	P	P	18 20 34.1	-0.5
SHL				IAmb	IAmb	18 20 36.2	
	comp=Z,430nm,0.7s						
GROC	Groznyy	20.82	297	eP	Pn	18 20 39.8	-0.9
GROC				e*SP	sP	18 21 11.8	+2.9
GROC				eS	Sn	18 24 30.6	-5.1
GROC				e		18 24 42.3	
GROC				e*SS	sS	18 25 01.7	+4.6
GROC				pmax	pmax		
	comp=Z,1µm,0.8s						
TRNA	Turayna	20.96	242	P	P	18 20 37.4	-1.7
GOA	Goa	20.97	174	eP	P	18 20 39.8	+0.6
GOA				IAmb	IAmb	18 20 41.6	
	comp=Z,135nm,0.4s						
GOA				ix	x	18 21 13.1	
SLWR	Sila	21.05	240	⇓P	P	18 20 38.8	-1.2
UMR	Umm Al-Rimmam	21.07	258	eP	P	18 20 40.1	-0.2
KBD	Kabd	21.25	257	eP	P	18 20 41.4	-0.8
MIB	Mutribah	21.26	259	eP	P	18 20 42.1	-0.2
QRN	Al-Qurain	21.27	256	eP	P	18 20 41.5	-0.9
GNI	Garni	21.30	288	P	P	18 20 44.7	+1.9
	comp=Z,518nm,0.8s,baz=85,slow=2.2,SNR=216						
GNI	Garni	21.30	288	P	P	18 20 45.6	+2.8
GNI	Garni	21.30	288c	iP	P	18 20 45.7	+2.9
GNI				pmax	pmax		
	comp=Z,4µm,1.4s						
GNI	Garni	21.30	288	P	P	18 20 45.5	+2.8
GNI				P	P	18 20 45.5	+2.8
RDF	Al-Radifah	21.48	256	eP	P	18 20 44.1	-0.4
SVE	Sverdlovsk	21.66	344c	iP	P	18 20 46.7	+0.4
SVE				eS	S	18 24 38.1	-2.3
SVE				pmax	pmax		
	comp=Z,765nm,1.3s						
SVE				MLR	MLR		
	comp=Z,4µm,9.0s						
ARU	Arti	21.82	340	P	P	18 20 48.4	+0.4
	comp=Z,55nm,0.5s,baz=154,slow=6.4,SNR=106						
ARU	Arti	21.82	340d	iP	P	18 20 48.3	+0.4
ARU						18 21 17.8	
ARU				S	S	18 24 43.3	-0.1
ARU				SS	SnSn	18 25 21.0	+4.0
ARU				pmax	pmax		
	comp=Z,547nm,1.0s						
ARU	Arti	21.82	340	P	P	18 20 48.5	+0.6
ARU				IAmb	IAmb	18 21 23.9	
	comp=Z,732nm,1.0s						
ZEI	Tsey	22.13	295	eP	P	18 20 52.1	+0.5
ZEI				pmax	pmax		
	comp=Z,95nm,0.8s						
AKH	Akhalkalaki	22.30	291	⇑P	P	18 20 56.3	+2.9
NCK	Nalchik	22.45	297d	iP	P	18 20 56.0	+1.2
NCK				pmax	pmax		
	comp=Z,1µm,1.0s						
NCK				MLR	MLR		
	comp=Z,4µm,18.0s						
GTA	Gaotai	22.49	74	P	P	18 20 56.0	+0.6
GTA				pP	pP	18 21 17.6	+2.2
GTA				sP	sP	18 21 28.3	+0.5
GTA				S	S	18 24 57.3	+1.8
GTA				pmax	pmax		
	comp=Z,630nm,0.7s						
GTA				pmax	pmax		
	comp=Z,2µm,5.4s						
GTA				LR	LR		
	comp=Z,3µm,12.7s						
GTA				LR	LR		
	comp=Z,2µm,14.5s						
GTA				LR	LR		
	comp=Z,2µm,16.0s						
KBZ	Khabaz	22.99	297	P	P	18 21 00.5	+0.3
	comp=Z,120nm,0.8s,baz=116,slow=4.2,SNR=258						
KBZ				LR	LR	18 32 35.4	
	comp=Z,5µm,18.4s,baz=69,slow=43						
KBZ	Khabaz	22.99	297d	iP	P	18 21 00.8	+0.7
KBZ				pmax	pmax		
	comp=Z,237nm,1.0s						
NEY	Neytrino	23.05	296d	iP	P	18 21 04.0	+3.0
NEY				pmax	pmax		
	comp=Z,127nm,1.2s						
SHAO	Shalim	23.09	222	iP	P	18 21 02.0	+0.6
	SNR=51						
SHAO	Shalim	23.09	222	P	P	18 21 01.8	+0.4
	SNR=9.4						
SHAO				P	P	18 21 01.8	+0.4
	SNR=9.4						
GOF	Gofitskoye	23.12	301	⇓iP	P	18 21 03.4	+1.9
GOF				eS	S	18 25 08.1	+2.9
GOF				pmax	pmax		
	comp=Z,2µm,1.5s						
GOF				smax	smax		
	comp=N,2µm,1.9s						
GOF				smax	smax		
	comp=E,12µm,3.7s						
SHA1	Shidzhatmaz	23.16	297d	iP	P	18 21 03.0	+0.9
KVAR	Kislovodsk Arr	23.17	298	S	S	18 25 17.8	+12
	comp=E,141nm,0.8s,baz=171,slow=11,SNR=3.9						
KVAR				LR	LR	18 32 26.9	
	comp=E,4µm,18.5s,baz=220,slow=42						
KIV	Kislovodsk	23.17	298	⇑P	P	18 21 03.6	+1.5
KIV	Kislovodsk	23.17	298	iP	P	18 21 03.4	+1.3
	SNR=73						
KIV	Kislovodsk	23.17	298	eP	P	18 21 03.2	+1.1
KIV				eS	S	18 25 08.3	+2.1
KIV				pmax	pmax		
	comp=Z,316nm,3.5s						
KIV				pmax	pmax		
	comp=Z,285nm,1.0s						
KIV				MLR	MLR		
	comp=N,5µm,14.0s						
KIV	Kislovodsk	23.17	298	P	P	18 21 03.4	+1.3
KIV	Kislovodsk	23.17	298	P	P	18 21 02.0	-0.1
BELG	Belogornoye	23.19	321	P	P	18 21 02.5	+0.6
	comp=N,647nm,0.9s,baz=355,slow=1.6,SNR=106						
BELG				S	S	18 25 18.2	+12
	comp=N,266nm,0.7s,baz=142,slow=6.5,SNR=4.4						
DOK	Doka	23.44	225	P	P	18 21 05.0	+0.4
	SNR=40						
DOK				P	P	18 21 05.0	+0.4
	SNR=40						
CHVG	Ch'k'valeri	23.45	295	⇑P	P	18 21 07.5	+3.0
BCA	Borcka	23.71	291	⇓P	P	18 21 08.4	+1.5
DMTO	DMTO	23.71	222	P	P	18 21 07.4	+0.3
	SNR=5.5						
DMTO				P	P	18 21 07.4	+0.3
	SNR=5.5						
WHFO	Wadi Hawf	24.20	225	P	P	18 21 11.3	-0.2
	SNR=22						
WHFO				P	P	18 21 11.3	-0.2
	SNR=22						
RBK	Rabkut	24.29	224	P	P	18 21 12.3	0.0
	SNR=25						
RBK				P	P	18 21 12.3	0.0
	SNR=25						
ABTO	Aybut	24.92	225	P	P	18 21 18.2	+0.1
	SNR=52						
KTUT	Trabzon	25.10	290	⇑P	P	18 21 22.4	+3.0
SOC	Sochi	25.26	296	eP	P	18 21 21.1	+0.2
SOC				e*PP	pP	18 21 42.8	-0.2
SOC				e*SP	sP	18 21 54.0	-1.1
SOC				e		18 22 00.9	
SOC				eS	S	18 25 41.0	+1.5
SOC				e*SS	sS	18 26 18.6	-0.3
SOC				pmax	pmax		
	comp=Z,244nm,0.8s						
SOC				MLR	MLR		
	comp=Z,3µm,17.0s						
VRH	Novokhopyorsk	25.84	314	eP	P	18 21 26.9	+0.9
VRH				e*PP	pP	18 21 49.2	+1.3
VRH				eS	S	18 25 49.2	+0.8
VRH				pmax	pmax		
	comp=Z,210nm,0.8s						
VRH				smax	smax		
	comp=E,3µm,8.7s						
VRH				MLR	MLR		
	comp=Z,5µm,20.0s						
RAYN	Ar Rayn	25.85	247	iP	P	18 21 25.3	-1.1
	SNR=171						
RAYN	Ar Rayn	25.85	247	P	P	18 21 25.4	-1.1
RAYN				pmax	pmax		
	comp=Z,596nm,1.4s						
RAYN	Ar Rayn	25.85	247	P	P	18 21 25.4	-1.1
RAYN				IAmb	IAmb	18 22 03.2	
	comp=Z,596nm,1.4s						
LZH	Lanzhou	26.02	81	eP	P	18 21 30.4	+2.4
LZH				sP	pP	18 21 54.5	+3.8
LZH				eS	S	18 25 56.1	+4.2
LZH				pmax	pmax		
	comp=Z,240nm,1.1s						
LZH				pmax	pmax		
	comp=Z,1µm,4.8s						
KIRV	Kirov	26.47	334	P	P	18 21 33.0	+1.4
	comp=Z,336nm,0.7s,baz=130,slow=1.5,SNR=88						
KIRV	Kirov	26.47	334	P	P	18 21 33.0	+1.4
ZAK	Zakamensk	26.72	49	eP	P	18 21 35.0	+0.9
ZAK				pmax	pmax		
	comp=Z,95nm,1.3s						
ANN	Anapa	27.02	299	eP	P	18 21 37.1	+0.4
ANN				e*PP	pP	18 21 59.3	+0.6
ANN				e		18 22 12.3	
ANN				eS	S	18 26 09.0	+1.9
ANN				e*SS	sS	18 26 46.6	-0.2
ANN				eSS	SnSn	18 27 30.2	+6.6
ANN				pmax	pmax		
	comp=Z,816nm,1.8s						
ANN				MLR	MLR		
	comp=Z,6µm,15.0s						
ANN				MLR	MLR		
	comp=E,8µm,20.0s						
ANN				MLR	MLR		
	comp=N,6µm,21.0s						
VORD	Divnogorie	27.18	312	eP	P	18 21 39.4	+1.4
VORD				e*PP	pP	18 22 02.1	+2.0
VORD				eS	S	18 26 09.1	-0.4
VORD				pmax	pmax		
	comp=Z,90nm,1.1s						
VORD				smax	smax		
	comp=E,5µm,11.6s						
CD2	Chengdu	27.33	92	P	P	18 21 41.4	+1.7
CD2				pP	pP	18 22 02.1	+0.1
CD2				sP	sP	18 22 15.6	+2.1
CD2				S	S	18 26 15.8	+3.4
CD2				pmax	pmax		
	comp=E,190nm,0.7s						
CD2				pmax	pmax		
	comp=E,440nm,3.2s						
CD2				LR	LR		
	comp=E,4µm,9.6s						

CD2				LR	LR		
	comp=E,4µm,8.0s						
CD2				LR	LR		
	comp=E,7µm,10.0s						
VSR	Storozhevoye	27.34	313	eP	P	18 21 40.3	+0.8
VSR				e*PP	pP	18 22 02.1	+0.6
VSR				eS	S	18 26 10.1	-2.0
VSR				pmax	pmax		
	comp=Z,110nm,0.6s						
VSR				smax	smax		
	comp=E,2µm,11.6s						
VSR				MLR	MLR		
	comp=Z,3µm,13.0s						
GAZ	Gaziantep	27.38	282	P	P	18 21 41.2	+1.1
GAZ				IAmb	IAmb	18 22 21.1	
	comp=Z,219nm,1.3s						
VORR	Voronezh	27.47	314	eP	P	18 21 42.0	+1.3
VORR				pmax	pmax		
	comp=Z,500nm,2.0s						
IRK	Irkutsk	27.95	45	eP	P	18 21 45.3	+0.3
IRK				pmax	pmax		
	comp=Z,274nm,2.7s						
LPSR	Galich'ya Gora	27.98	316	eP	P	18 21 46.4	+1.3
LPSR				e*PP	pP	18 22 10.7	+3.1
LPSR				eS	S	18 26 19.6	-2.5
LPSR				pmax	pmax		
	comp=Z,250nm,0.8s						
LPSR				smax	smax		
	comp=E,2µm,9.6s						
LPSR				MLR	MLR		
	comp=Z,3µm,14.0s						
SONM	Songino Array	28.03	55	P	P	18 21 47.1	+1.2
	comp=Z,56nm,0.8s,baz=261,slow=8.5,SNR=226						
SONM				LR	LR	18 34 48.9	
	comp=Z,3µm,18.5s,baz=290,slow=40						
SONM	Songino Array	28.03	55	P	P	18 21 46.8	+0.9
TRD	Trivandrum	28.25	169	⇑iP	P	18 21 48.2	+0.3
ULN	Ulaanbaatar	28.48	55	c iP	P	18 21 51.2	+1.4
ULN				pmax	pmax		
	comp=Z,130nm,1.1s						
ULN	Ulaanbaatar	28.48	55	P	P	18 21 51.3	+1.4
ULN	Ulaanbaatar	28.48	55	P	P	18 21 51.0	+1.1
DIKM	Dikmen	28.48	292	⇑P	P	18 21 52.0	+2.2
ASF	Jabal al Asfar	28.81	272	P	P	18 21 54.2	+1.4
	comp=Z,18nm,1.2s,baz=104,slow=1.7,SNR=15						
ASF				LR	LR	18 35 35.2	
	comp=Z,3µm,18.9s,baz=70,slow=40						
SOCY	Socotra	28.85	218	P	P	18 21 51.2	-2.1
KMI	Kunming	28.99	104	⇑P	P	18 21 55.5	+0.8
KMI				pP	pP	18 22 16.8	-0.4
KMI				sP	sP	18 22 30.3	+1.7
KMI				PP	PnPn	18 22 51.3	-0.1
KMI				S	S	18 26 38.8	-0.2
KMI				SS	SnSn	18 28 16.0	+3.7
KMI				pmax	pmax		
	comp=Z,33nm,0.7s						
KMI				pmax	pmax		
	comp=Z,380nm,4.9s						
KMI				LR	LR		
	comp=Z,1µm,19.0s						
KMI				LR	LR		
	comp=Z,1µm,23.4s						
KMI				LR	LR		
	comp=Z,3µm,30.2s						
BZK	Bozkurt	29.41	292	⇑P	P	18 21 59.8	+1.8
BZK	Bozkurt	29.41	292	P	P	18 21 58.9	+0.9
BZK				PcP	PcP	18 25 01.6	0.0
MMAI	Mount Meron Ar	29.76	274	P	P	18 22 02.5	+1.2
	comp=Z,5.9nm,0.5s,baz=64,slow=9.6,SNR=10						
MMAI				PcP	PcP	18 25 02.9	+0.1
	comp=Z,7.1nm,0.5s,baz=67,slow=7.3,SNR=9.4						
MMAI				ScP	ScP	18 28 34.2	-1.9
	comp=Z,8.1nm,0.8s,baz=67,slow=4.8,SNR=4.3						
MMAI				LR	LR	18 36 15.1	
	comp=Z,2µm,18.5s,baz=40,slow=41						
BR131	Keskin Array S	29.84	288	P	P	18 22 02.7	+0.8
BR131				pmax	pmax		
	comp=Z,225nm,1.3s						
BR131	Keskin Array S	29.84	288	P	P	18 22 03.3	+1.3
	SNR=16						
BR131	Keskin Array S	29.84	288	P	P	18 22 02.7	+0.7
BR131				IAmb	IAmb	18 22 29.1	
	comp=Z,226nm,1.3s						
BRTR	Keskin Array B	29.84	288	P	P	18 22 02.8	+0.8
	comp=Z,29nm,0.6s,baz=105,slow=8.8,SNR=137						
BRTR	Keskin Array B	29.84	288	P	P	18 22 03.5	+1.5
BRTR						18 25 02.8	
BRTR	Keskin Array B	29.84	288	P	P	18 22 03.5	+1.5
BRTR				PcP	PcP	18 25 02.8	-0.2
CHTO	Chiang Mai	29.84	119	P	P	18 22 02.4	+0.4
CHTO				pmax	pmax		
	comp=Z,149nm,1.3s						
CHTO	Chiang Mai	29.84	119	P	P	18 22 02.4	+0.4
CHTO				IAmb	IAmb	18 22 47.5	
	comp=Z,149nm,1.2s						
CHTO	Chiang Mai	29.84	119	P	P	18 22 02.1	+0.1
PRGR	Permogore	29.99	335	eP	P	18 22 03.9	+1.0
PRGR				e*SP	sP	18 22 36.3	-0.6
PRGR				pmax	pmax		
	comp=Z,79nm,0.6s						
CM31	Chiang Mai Arr	30.07	119	P	P	18 22 04.8	+0.7
	SNR=38						
CM31	Chiang Mai Arr	30.07	119	P	P	18 22 03.7	-0.4
CM31				IAmb	IAmb	18 23 04.9	
	comp=Z,165nm,1.1s						
CMAR	Chiang Mai Arr	30.07	119	P	P	18 22 04.8	+0.7
	comp=Z,52nm,0.8s,baz=302,slow=8.4,SNR=248						
CMAR	Chiang Mai Arr	30.07	119	P	P	18 22 03.5	-0.6
DGPR	DIGLIPUR	30.11	135	eP	P	18 22 06.1	+1.7
DGPR				IAmb	IAmb	18 22 08.1	
	comp=Z,293nm,0.9s						
DGPR				i pP	pP	18 22 32.2	+5.2
PALK	Pallekele	30.23	162	P	P	18 22 06.2	+0.7
	comp=Z,108nm,0.9s,baz=81,slow=10,SNR=52						
PALK	Pallekele	30.23	162	P	P	18 22 06.0	+0.5
PALK				P	P	18 22 06.0	+0.5
PALK	Pallekele	30.23	162	P	P	18 22 05.9	+0.5
PALK				IAmb	IAmb	18 22 07.3	
	comp=Z,116nm,0.9s						
OBN	Obninsk	30.24	319	P	P	18 22 06.6	+1.4
	comp=Z,95nm,0.5s,baz=36,slow=0.9,SNR=53						
OBN	Obninsk	30.24	319	c iP	P	18 22 06.2	+1.0
OBN				i		18 22 40.3	
OBN				i S	S	18 26 59.7	+2.1
OBN				i SS	SnSn	18 28 41.1	-0.6
OBN				pmax	pmax		
	comp=Z,164nm,0.7s						
OBN				MLR	MLR		
	comp=Z,4µm,17.0s						
OBN	Obninsk	30.24	319	P	P	18 22 06.5	+1.4
BTO	Baotou	30.25	70	eP	P	18 22 06.3	+0.7
BTO				S	S	18 26 58.8	+0.4
BTO				LR	LR		
	comp=Z,10µm,6.9s						
BTO				LR	LR		
	comp=Z,9µm,7.6s						
XAN	Xi'an	30.53	83	P	P	18 22 08.8	+0.7
XAN				pP	pP	18 22 32.8	+1.8
XAN				sP	sP	18 22 42.9	+0.3
XAN				S	S	18 26 57.6	-5.2
XAN				sS	sS	18 27 38.1	-4.5
XAN				SS	ScP	18 28 44.8	+6.3
XAN				ScS	ScS	18 32 36.9	+1.9
XAN				pmax	pmax		
	comp=Z,100nm,1.0s						
XAN				pmax	pmax		
	comp=Z,670nm,4.9s						
XAN				LR	LR		
	comp=Z,3µm,15.1s						
XAN				LR	LR		
	comp=Z,3µm,21.3s						
LEF	Lefka	31.21	279	⇑P	P	18 22 16.2	+2.2
EIL	Elat	31.24	268	P	P	18 22 15.2	+0.9
	comp=Z,84nm,1.1s,baz=100,slow=3.3,SNR=26						
PBA	Port Blair	31.24	137	eP	P	18 22 15.8	+1.4
PBA	Port Blair	31.24	137	P	P	18 22 12.9	-1.5
HHC	Hu-ho-hao-te	31.40	70	i P	P	18 22 18.0	+2.3
HHC				sP	sP	18 22 51.4	+0.7
HHC				S	S	18 27 20.0	+3.7
HHC				pmax	pmax		
	comp=Z,160nm,0.8s						
HHC				pmax	pmax		
	comp=Z,890nm,4.1s						
HHC				LR	LR		
	comp=Z,3µm,14.8s						
HHC				LR	LR		
	comp=Z,2µm,12.1s						
HHC				LR	LR		
	comp=Z,2µm,12.2s						
GYA	Guiyang	31.45	98	⇑P	P	18 22 17.5	+1.1
GYA				pP	pP	18 22 41.8	+2.8
GYA				sP	sP	18 22 53.3	+2.8
GYA				S	S	18 27 17.8	+0.4
GYA				sS	sS	18 27 53.6	-3.7
GYA				pmax	pmax		
	comp=Z,34nm,0.8s						
GYA				pmax	pmax		
	comp=Z,520nm,4.0s						
KLMR	Klimovskoe	31.73	330	c iP	P	18 22 18.9	+0.8
KLMR				e*PP	pP	18 22 42.3	+1.6
KLMR				e*SP	sP	18 22 52.5	+0.2
KLMR				e		18 23 25.6	
KLMR				eS	S	18 27 22.1	+1.4
KLMR				pmax	pmax		
	comp=Z,174nm,0.8s						
KLMR	Klimovskoe	31.73	330	⇑iP	P	18 22 19.0	+0.8
KLMR				⇑iP	P	18 22 19.0	+0.8
KLMR				i P	P	18 22 19.0	+0.8
KLMR				AMP		18 22 22.5	
	comp=Z,174nm,0.8s						
KLMR				epP	pP	18 22 42.3	+1.6
KLMR				esP	sP	18 22 52.5	+0.2
KLMR				ePP	PnPn	18 23 25.7	-0.2
KLMR				eS	S	18 27 22.1	+1.4
KLMR				eS	S	18 27 22.1	+1.4
KLMR				LQ	LQ	18 32 59.0	
KLMR				LQ	LQ	18 32 59.0	
KLMR				LR	LR	18 35 07.6	
SLVN	Son La	31.94	109	P	P	18 22 22.5	+1.9
SLVN				IAmb	IAmb	18 22 59.3	
	comp=Z,366nm,1.7s						
ENH	Enshi	32.17	90	P	P	18 22 22.9	+0.4
ENH				IAmb	IAmb	18 22 26.1	
	comp=Z,204nm,1.0s						
PURM	Purcari	32.44	301	⇑P	P	18 22 26.6	+2.0
TIY	Taiyuan	32.50	75	⇑P	P	18 22 27.3	+2.0
TIY				pP	pP	18 22 47.4	-1.1
TIY				sP	sP	18 22 52.6	-7.5
TIY				PP	PP	18 23 40.3	-0.1
TIY				S	S	18 27 36.1	+2.7
TIY				sS	sS	18 28 06.9	-6.5
TIY				pmax	pmax		
	comp=Z,140nm,0.8s						
TIY				pmax	pmax		
	comp=Z,480nm,4.9s						
TIY				LR	LR		
	comp=Z,1µm,10.1s						
TIY				LR	LR		
	comp=Z,1µm,8.4s						
TIY				LR	LR		
	comp=Z,2µm,16.1s						
JURR	Jurilovca	33.10	298	⇑P	P	18 22 32.5	+2.1
TLCR		33.14	299	⇑P	P	18 22 32.6	+1.9
KIS	Kishinev	33.19	302	⇑iP	P	18 22 32.0	+0.9
	comp=Z,600nm,2.0s						
KIS				epP	pP	18 22 54.0	+0.3
KIS				⇓isP	sP	18 23 05.0	-0.1
KIS				eS	S	18 27 46.0	+2.3
	comp=Z,800nm,2.8s						
KIS				esS	sS	18 28 20.0	-3.7
KIS				eLR	LR	18 38 41.0	
	comp=Z,700nm,14.0s						
KIS	Kishinev	33.19	302	⇑P	P	18 22 32.9	+1.8
MILM	Milestii Mici	33.19	302	⇑P	P	18 22 32.9	+1.8
ELL	Elmali	33.21	283	P	P	18 22 32.1	+0.5
ELL				pmax	pmax		
	comp=Z,632nm,0.9s						
ELL	Elmali	33.21	283	P	P	18 22 32.1	+0.5
EFOR	EFORIE	33.29	297	⇑P	P	18 22 34.4	+2.4
AKASG	Malin Array Be	33.30	309	P	P	18 22 32.6	+0.6
	comp=Z,109nm,0.5s,baz=88,slow=7.8,SNR=730						
AKASG				LR	LR	18 39 19.0	
	comp=Z,2µm,19.5s,baz=100,slow=42						
MANR	Mangalia	33.33	296	⇑P	P	18 22 35.4	+3.0
CIT	Chita	33.38	49	eP	P	18 22 33.4	+0.6
CIT				e		18 22 56.4	
CIT				e		18 23 13.5	
CIT				e		18 23 48.0	
CIT				pmax	pmax		
	comp=Z,407nm,1.8s						
TPGR	Topolog	33.42	298	⇓P	P	18 22 34.8	+1.5
MFTR	Murfatlar	33.44	297	⇑P	P	18 22 36.3	+3.0
TIRR	Tirgusor	33.44	297	⇑P	P	18 22 35.8	+2.5
TIRR	Tirgusor	33.44	297	P	P	18 22 34.1	+0.8
TIRR				pmax	pmax		
	comp=Z,217nm,1.1s						
TIRR	Tirgusor	33.44	297	P	P	18 22 34.1	+0.8
TIRR				IAmb	IAmb	18 23 41.6	
	comp=Z,217nm,1.1s						
SORM	Soroca	33.57	304	⇓P	P	18 22 35.3	+0.9
CFR	Carcaliu	33.62	299	⇑P	P	18 22 35.7	+0.8
VLDR	Vladesti	33.66	300	⇑P	P	18 22 37.0	+1.8
TATR	Tatarca	33.68	299	⇑P	P	18 22 38.4	+3.0
TLBR	Topalu	33.69	298	⇓P	P	18 22 38.1	+2.5
SCTR	Scanteiesti	33.72	300	⇓P	P	18 22 38.1	+2.3
HARR	Harsova	33.77	298	⇑P	P	18 22 38.5	+2.3
VARL	Varlezi	33.82	300	⇓P	P	18 22 39.0	+2.4
SCHL	Schela	33.84	299	⇑P	P	18 22 39.9	+3.2
VASR	Vaslui	33.88	301	⇑P	P	18 22 39.3	+2.2
SLCR	Slobozia Conac	33.88	299	⇑P	P	18 22 40.1	+3.0
IZVR	Izvoarele	33.88	299	⇑P	P	18 22 39.9	+2.8
ICOR	Ion Corvin	33.88	297	⇑P	P	18 22 40.3	+3.1
TUDR		33.95	299	⇓P	P	18 22 39.4	+1.7
BIR	Birlad	33.98	301	⇑P	P	18 22 40.8	+2.8
IAS	Iasi	34.05	302	⇑P	P	18 22 40.7	+2.1
AMRR	Amara	34.20	298	⇓P	P	18 22 42.0	+2.0
RASA	Rasa	34.35	297	⇓P	P	18 22 44.0	+2.8
ODBI	Odobesti	34.38	300	⇑P	P	18 22 44.9	+3.5
PGOR	Pogoanele	34.44	298	⇑P	P	18 22 44.5	+2.5
LEHL	Lehliu	34.57	297	⇑P	P	18 22 46.4	+3.3
VRI	Vrincioaia	34.61	300	⇑P	P	18 22 46.3	+2.8
BISRR	Bisoca	34.62	299	⇑P	P	18 22 46.9	+3.2
PLOR	Plostina	34.66	300	⇑P	P	18 22 46.2	+2.2
TESR	Tescani	34.66	301	⇓P	P	18 22 45.5	+1.6
ISR	Istrita	34.75	299	⇑P	P	18 22 48.8	+4.0
MNK	Minsk	34.83	315	i P	P	18 22 44.8	-0.4
MNK				i *PP	pP	18 23 07.0	-0.9
MNK				i *SP	sP	18 23 19.3	0.0
MNK				i		18 24 05.0	
MNK				i		18 25 14.9	
MNK				i S	S	18 28 09.5	+0.7
MNK				i *SS	sS	18 28 49.5	+0.6
MNK				pmax	pmax		
	comp=E,27nm,1.0s						
MNK				pmax	pmax		
	comp=Z,173nm,1.0s						
MNK				pmax	pmax		
	comp=N,36nm,1.0s						
MNK				MLR	MLR		
	comp=N,2µm,19.0s						
MNK				MLR	MLR		
	comp=Z,5µm,19.0s						
MNK				MLR	MLR		
	comp=E,770nm,19.0s						
MNK	Minsk	34.83	315	i P	P	18 22 44.9	-0.3
	comp=E,27nm,1.0s						
MNK				i P	P	18 22 44.9	-0.3
	comp=N,36nm,1.0s						
MNK				i P	P	18 22 44.9	-0.3
	comp=Z,173nm,1.0s,baz=103						
MNK				i pP	pP	18 23 07.1	-0.8
MNK				i sP	sP	18 23 19.4	+0.1
MNK				i PP	PnPn	18 24 05.0	+0.4
MNK				i S	S	18 28 09.6	+0.8
MNK				i sS	sS	18 28 49.5	+0.6
MNK				i SS	SS	18 30 41.0	-2.5
MNK				i LR	LR	18 35 47.3	
MNK				i LRM	MLR	18 38 44.9	
	comp=E,770nm,19.3s						
MNK				i LRM	MLR	18 38 46.1	
	comp=N,2µm,19.3s						
MNK				i LRM	MLR	18 38 47.4	
	comp=Z,5µm,19.3s						
RAZG	Razgrad	34.85	296	⇓P	P	18 22 47.3	+1.7
NEHR	Nehoiu	34.92	299	⇑P	P	18 22 49.4	+3.2
PRAR	RASCA	34.96	303	⇓P	P	18 22 48.0	+1.4
SULR		34.97	298	⇑P	P	18 22 49.6	+3.1
COVR	Voineasa-Covas	34.97	300	⇑P	P	18 22 48.8	+2.1
BJI	Beijing	34.99	70	P	P	18 22 48.5	+1.7
BJI				pP	pP	18 23 07.9	-2.3
BJI				sP	sP	18 23 20.0	-1.9
BJI				PcP	PcP	18 25 17.3	+0.3
BJI				S	S	18 28 09.5	-2.2
BJI				sS	sS	18 28 48.8	-3.1
BJI				pmax	pmax		
	comp=Z,150nm,0.6s						
BJI				pmax	pmax		
	comp=Z,880nm,4.4s						
BJI				LR	LR		
	comp=Z,2µm,18.3s						
BJI				LR	LR		
	comp=Z,2µm,17.3s						
BJI				LR	LR		
	comp=Z,2µm,21.6s						
SECR		35.09	299	⇑P	P	18 22 49.8	+2.2
PLAR	PLOIESTI	35.12	298	⇑P	P	18 22 50.6	+2.7
BOD	Bodaibo	35.14	39	eP	P	18 22 48.2	+0.4
BOD				pmax	pmax		
	comp=Z,126nm,1.6s						
BUC1	Bucharest	35.15	297	⇑P	P	18 22 51.0	+3.0
MLR	Muntele Rosu	35.16	299	⇑P	P	18 22 51.0	+2.6
MLR	Muntele Rosu	35.16	299	P	P	18 22 50.8	+2.4
	comp=Z,277nm,0.8s,baz=116,slow=2.2,SNR=216						
PUL	Pulkovo	35.19	325	eP	P	18 22 49.8	+1.5
PUL	Pulkovo	35.19	325	c iP	P	18 22 50.2	+1.9
PUL				pmax	pmax		
	comp=Z,332nm,0.9s						
SGRR	Singureni	35.19	297	⇓P	P	18 22 51.6	+3.1
OZUR		35.26	300	⇑P	P	18 22 51.6	+2.5
NACGM	Naroch	35.54	316	i P	P	18 22 53.2	+1.9
DOPR	Dopca	35.54	300	⇑P	P	18 22 53.4	+1.9
BURAR	Bucovina Array	35.66	303	⇑P	P	18 22 53.9	+1.3
BURAR	Bucovina Array	35.66	303	IAmb	IAmb	18 22 56.2	
	comp=Z,136nm,1.1s						
BUR08	Bucovina Ar. S	35.67	303	IAmb	IAmb	18 22 56.6	
	comp=Z,133nm,1.2s						
COPA	Copaceanca	35.74	297	⇑P	P	18 22 54.8	+1.6
MTUR	Matau	35.79	299	⇓P	P	18 22 56.2	+2.5
VOIR		35.79	299	⇓P	P	18 22 55.3	+1.6
ATD	Arta Tunnel	35.81	233	P	P	18 22 55.0	+0.9
	comp=Z,18nm,1.1s,baz=14,slow=8.6,SNR=7.3						
ATD	Arta Tunnel	35.81	233	P	P	18 22 54.8	+0.7
	SNR=6.1						
STFAR	Stefanesti-Arg	35.88	298	⇑P	P	18 22 56.7	+2.3
HUMR	Humele	35.89	298	⇑P	P	18 22 56.5	+2.1
WHN	Wuhan	35.99	87	⇑iP	P	18 22 57.4	+1.9
WHN				pP	pP	18 23 20.9	+2.4
WHN				sP	sP	18 23 32.3	+2.4
WHN				PP	PnPn	18 24 21.5	+2.3
WHN				S	S	18 28 29.9	+2.7
WHN				pmax	pmax		
	comp=Z,240nm,0.8s						
WHN				pmax	pmax		
	comp=Z,1µm,2.6s						
WHN				LR	LR		
	comp=Z,4µm,9.6s						
WHN				LR	LR		
	comp=Z,1µm,8.8s						
WHN				LR	LR		
	comp=Z,8µm,26.1s						
ISAL	Salakas	36.05	317	eP	P	18 22 57.4	+1.7
ARR	Arges	36.09	299	⇑P	P	18 22 57.8	+1.6
MDB	Medias	36.24	300	⇑P	P	18 23 00.6	+3.2
ARCR	ARCALIA	36.24	302	⇑P	P	18 22 59.9	+2.4
VLAD	Vladila	36.34	297	⇓P	P	18 23 01.0	+2.7
VSU	Vasula	36.48	321	eP	P	18 23 00.8	+1.5
VSU	Vasula	36.48	321	c iP	P	18 23 00.6	+1.3
VSU				pmax	pmax		
	comp=Z,617nm,0.8s						
TIA	Tai'an	36.49	76	⇑P	P	18 23 00.9	+1.2
TIA				sP	sP	18 23 36.8	+1.7
TIA				S	S	18 28 37.8	+3.1
TIA				pmax	pmax		
	comp=Z,140nm,1.0s						
TIA				LR	LR		
	comp=Z,2µm,16.1s						
TIA				LR	LR		
	comp=Z,820nm,10.2s						
TIA				LR	LR		
	comp=Z,1µm,12.8s						
LVV	L'vov	36.52	307	eP	P	18 23 01.0	+1.2
LVV				e*PP	pP	18 23 26.8	+4.4
LVV				e		18 24 27.6	
LVV				eS	S	18 28 33.7	-1.1
LVV				pmax	pmax		
	comp=Z,1µm,1.5s						
LVV				MLR	MLR		
	comp=E,2µm,17.0s						
LVV				MLR	MLR		
	comp=N,700nm,18.0s						
LVV				MLR	MLR		
	comp=Z,3µm,17.0s						
APE	Apeiranthos	36.56	285	⇑P	P	18 23 01.9	+1.5
LOT	Lotru	36.69	299	⇑P	P	18 23 03.5	+2.1
CJR	Cluj-Napoca	36.76	301	⇑P	P	18 23 04.0	+2.1
CBBR	Cluj-Babes-Bol	36.80	302	⇓P	P	18 23 05.5	+3.3
BMR	Baia Mare	36.82	303	⇑P	P	18 23 05.5	+3.2
TEND	Ethiopian Broa	36.83	236	eP	P	18 23 02.8	0.0
UBPT	Khong Chiam	36.84	116	IAmb	IAmb	18 23 04.7	
	comp=Z,113nm,0.9s						
BAIL	Bailesti	37.10	297	⇓P	P	18 23 06.4	+1.7
SRE	Strehaia	37.14	298	⇑P	P	18 23 06.5	+1.4
MESR	Meseseni	37.20	302	⇑P	P	18 23 08.6	+3.0
PABE	Paberze	37.24	316	eP	P	18 23 07.5	+1.7
DEV	Deva	37.28	300	⇓P	P	18 23 08.6	+2.4
VTS	Vitosha	37.32	295	⇑P	P	18 23 09.9	+3.1
PUNG	Punghina	37.37	297	⇑P	P	18 23 09.7	+2.7
KWP	Kalwaria Pacla	37.37	306	eP	P	18 23 08.7	+1.7
KWP				ePP	PP	18 24 34.5	+0.7
KWP				eS	S	18 28 51.9	+4.1
KWP				eL	L	18 34 58.7	
	comp=Z,3µm,44.1s						
DRGR		37.37	302	⇑P	P	18 23 09.1	+2.0
GZR	Gura Zlata	37.39	299	⇑P	P	18 23 08.1	+0.8
SUW	Suwalki	37.45	314	eP	P	18 23 08.5	+1.0
SUW				eS	S	18 28 50.7	+1.9
SUW				eL	L	18 40 12.9	
	comp=Z,3µm,22.3s						
SUW	Suwalki	37.45	314	eP	P	18 23 08.8	+1.3
TRPA	Tarpa	37.46	304	⇑P	P	18 23 09.6	+1.9
TRPA	Tarpa	37.46	304	eP	P	18 23 09.6	+1.9
UZH	Uzhgorod	37.62	305	eP	P	18 23 08.6	-0.5
UZH				e		18 23 30.4	
UZH				eS	S	18 28 50.6	-1.0
UZH				e		18 31 28.8	
UZH				e		18 32 02.6	
UZH				MLR	MLR		
	comp=N,200nm,17.0s						
UZH				MLR	MLR		
	comp=E,450nm,17.0s						
UZH				MLR	MLR		
	comp=Z,300nm,17.0s						
KOLS	Kolonicke sedl	37.64	305	eP	P	18 23 11.8	+2.5
KOLS				pmax	pmax		
	comp=Z,198nm,1.2s						
KOLS	Kolonicke sedl	37.64	305	eP	P	18 23 11.8	+2.5
KOLS				ePP	PnPn	18 24 38.9	0.0
LVZ	Lovozero	37.66	338	c eP	P	18 23 11.2	+2.0
LVZ				pmax	pmax		
	comp=Z,263nm,1.7s						
LVZ	Lovozero	37.66	338	P	P	18 23 08.2	-1.0
HERR	Herculane	37.69	298	⇑P	P	18 23 11.6	+1.9
FIA1	FINESS Array S	37.76	326	P	P	18 23 11.1	+1.1
FIA1				IAmb	IAmb	18 23 14.8	
	comp=Z,154nm,0.9s						
FIA1				PcP	PcP	18 25 24.6	-0.2
FINES	FINESS Array B	37.76	326	P	P	18 23 10.9	+0.9
	comp=Z,95nm,0.5s,baz=120,slow=9.2,SNR=595						
FINES				LR	LR	18 39 38.8	
	comp=Z,4µm,19.9s,baz=109,slow=37						
FINES	FINESS Array B	37.76	326	P	P	18 23 10.6	+0.6
QIZ	Qiongzhong	37.81	107	P	P	18 23 12.1	+1.1
QIZ				pP	pP	18 23 33.0	-1.1
QIZ				sP	sP	18 23 44.0	-1.4
QIZ				S	S	18 28 52.6	-2.5
QIZ				PcS	PcS	18 29 13.3	-1.6
QIZ				pmax	pmax		
	comp=Z,420nm,8.0s						
QIZ				LR	LR		
	comp=Z,770nm,12.3s						
QIZ				LR	LR		
	comp=Z,1µm,17.2s						

QIZ				LR	LR		
	comp=Z,1µm,19.6s						
APA	Apatity	37.84	337	⇓*i*P	P	18 23 10.4	-0.3
APA				*i*		18 23 47.0	
APA				*i* S	S	18 28 53.0	-1.4
APA				pmax	pmax		
	comp=Z,26nm,1.0s						
APA				MLR	MLR		
	comp=Z,8µm,12.0s						
VAY	Valandovo	38.00	293	*e*P	P	18 23 14.4	+2.1
MTSE	Matsula	38.02	321	*e*P	P	18 23 13.5	+1.3
SIRR	Siria	38.12	301	⇑P	P	18 23 15.4	+2.1
CRVS	Cervenica-Dubn	38.17	305	*e*P	P	18 23 16.2	+2.4
CRVS				pmax	pmax		
	comp=Z,347nm,1.8s						
CRVS	Cervenica-Dubn	38.17	305	*e*P	P	18 23 16.2	+2.4
CRVS				*e*PP	PnPn	18 24 44.5	-0.8
BZS	Buzias	38.19	300	⇑P	P	18 23 15.4	+1.5
MDVR	Moldovita	38.19	298	⇑P	P	18 23 15.5	+1.5
STIP	Stip	38.22	293	*i* P	P	18 23 13.6	-0.7
DESE	Dese	38.24	237	*e*P	P	18 23 16.4	+1.4
BOVS	Bovan	38.31	297	⇑P	P	18 23 15.7	+0.7
STHS	Stebnicka Huta	38.32	306	*e*P	P	18 23 16.1	+1.1
STHS				*e*		18 24 48.9	
STHS	Stebnicka Huta	38.32	306	*e*P	P	18 23 16.1	+1.1
STHS				*e*PP	PnPn	18 24 48.9	+1.9
TIM	Timisoara	38.46	300	⇓P	P	18 23 18.3	+2.2
PBUR	Paburge	38.46	317	*e*P	P	18 23 17.4	+1.4
BANR	Banloc	38.55	299	⇓P	P	18 23 18.8	+1.9
SLIT	Slitere, Latvi	38.56	319	*e*P	P	18 23 18.1	+1.3
AGG	Agios Georgios	38.60	289	P	P	18 23 17.4	-0.1
AGG				pmax	pmax		
	comp=Z,164nm,1.4s						
AGG	Agios Georgios	38.60	289	P	P	18 23 17.4	-0.1
AGG				IAmb	IAmb	18 24 28.7	
	comp=Z,164nm,1.4s						
BEL	Belsk	38.68	310	*e*P	P	18 23 19.4	+1.4
BEL				*e*PP	PP	18 24 47.2	-0.9
BEL				*e*L	L	18 35 40.1	
	comp=Z,3µm,47.2s						
SKO	Skopje	38.73	294	*i* P	P	18 23 20.1	+1.6
AMBH	Ambrzfalva	38.76	301	⇑P	P	18 23 21.1	+2.4
AMBH	Ambrzfalva	38.76	301	*e*P	P	18 23 21.6	+2.9
KECS	Kecovo	38.83	304	*e*P	P	18 23 22.3	+3.1
KECS				pmax	pmax		
	comp=Z,26nm,0.8s						
KECS	Kecovo	38.83	304	*e*P	P	18 23 22.3	+3.1
LHMI	Lhok Sumawe	38.86	137	P	P	18 23 20.7	+0.9
NIE	Niedzica	38.94	306	*e*P	P	18 23 23.1	+2.9
NIE				*e*PP	PnPn	18 24 54.3	-0.1
NIE				*e*S	S	18 29 19.9	+8.4
NIE				*e*L	L	18 35 50.9	
	comp=Z,1µm,37.9s						
FNA	Florina	38.98	292	P	P	18 23 21.0	+0.4
FNA				pmax	pmax		
	comp=Z,53nm,0.7s						
FNA	Florina	38.98	292	P	P	18 23 21.0	+0.4
BSZH	Besenyszg	39.02	303	⇑P	P	18 23 23.5	+2.7
BSZH	Besenyszg	39.02	303	*e*P	P	18 23 23.7	+2.9
NJ2	Nanjing	39.08	82	⇑*i*P	P	18 23 22.9	+1.4
NJ2				pP	pP	18 23 45.9	+0.7
NJ2				sP	sP	18 23 56.8	0.0
NJ2				PP	PnPn	18 24 57.3	+1.0
NJ2				PcP	PcP	18 25 31.8	+2.3
NJ2				S	S	18 29 15.8	+1.9
NJ2				SS	SS	18 32 04.3	-5.5
NJ2				pmax	pmax		
	comp=Z,130nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,1µm,4.3s						
NJ2				LR	LR		
	comp=Z,2µm,12.9s						
NJ2				LR	LR		
	comp=Z,1µm,15.9s						
NJ2				LR	LR		
	comp=Z,2µm,15.9s						
PSZ	Piszkesteto	39.24	304	⇑P	P	18 23 24.5	+1.7
PSZ	Piszkesteto	39.24	304	*e*P	P	18 23 24.3	+1.5
PSZ	Piszkesteto	39.24	304	P	P	18 23 23.8	+1.0
PSZ				pmax	pmax		
	comp=Z,782nm,2.0s						
PSZ	Piszkesteto	39.24	304	P	P	18 23 23.8	+1.0
OJC	Ojcow	39.26	307	*e*P	P	18 23 24.0	+1.2
OJC				*e*PP	PP	18 24 54.9	+0.4
OJC				*e*S	S	18 29 18.1	+1.9
OJC				*e*L	L	18 36 02.3	
	comp=Z,2µm,34.5s						
OJC	Ojcow	39.26	307	P	P	18 23 23.4	+0.6
OJC				pmax	pmax		
	comp=Z,456nm,1.3s						
OJC	Ojcow	39.26	307	P	P	18 23 23.4	+0.6
ANKE	Ethiopia-Afar	39.29	235	*e*P	P	18 23 25.3	+1.5
DL2	Dalian	39.35	71	⇓*i*P	P	18 23 25.4	+1.7
DL2				sP	sP	18 24 00.3	+1.4
DL2				PcP	PcP	18 25 33.3	+3.0
DL2				S	S	18 29 20.8	+3.0
DL2				pmax	pmax		
	comp=Z,510nm,5.7s						
DL2				LR	LR		
	comp=Z,2µm,16.8s						
DL2				LR	LR		
	comp=Z,590nm,16.2s						
DL2				LR	LR		
	comp=Z,1µm,27.5s						
OHR	Ohrid	39.35	293	*i* P	P	18 23 22.1	-1.7
MLSI	Meulaboh, Aceh	39.37	139	P	P	18 23 22.1	-1.9
	comp=Z,7µmcomp=Z,750nm,0.8s						
LANS	Liptovska Anna	39.48	306	*e*P	P	18 23 27.6	+2.9
LANS				pmax	pmax		
	comp=Z,97nm,1.7s						
LANS	Liptovska Anna	39.48	306	*e*P	P	18 23 27.6	+2.9
DIVS	Divibare	39.49	298	*e*P	P	18 23 26.0	+1.1
DIVS	Divibare	39.49	298	P	P	18 23 26.5	+1.6
DIVS				IAmb	IAmb	18 23 52.9	
	comp=Z,209nm,1.1s						
FRGS	Fruska Gora	39.50	299	⇑P	P	18 23 26.8	+1.9
FRGS	Fruska Gora	39.50	299	⇑*i*P	P	18 23 25.9	+1.0
TEKS	Tekeris	39.77	298	*e*P	P	18 23 28.2	+1.1
BUD	Budapest	39.85	303	*e*P	P	18 23 30.0	+2.3
VYHS	Vyhne	39.92	304	*e*P	P	18 23 31.3	+3.0
VYHS				pmax	pmax		
	comp=Z,247nm,1.4s						
VYHS	Vyhne	39.92	304	*e*P	P	18 23 31.3	+3.0
BBLS	Lazići	39.94	297	*e*P	P	18 23 30.2	+1.6
RUDO	Rudo	40.00	297	*e*P	P	18 23 29.7	+0.7
MORH	Mrgy, Hungar	40.21	301	⇓P	P	18 23 32.1	+1.4
MORH	Mrgy, Hungar	40.21	301	*e*P	P	18 23 31.4	+0.7
MORH	Mrgy, Hungar	40.21	301	*e*P	P	18 23 31.8	+1.1
HAPS	Han Pijesak,BI	40.24	298	*e*P	P	18 23 32.1	+1.0
SNY	Shenyang	40.24	66	⇑P	P	18 23 31.8	+0.8
SNY				S	S	18 29 32.3	+1.3
SNY				pmax	pmax		
	comp=Z,220nm,0.7s						
SNY				LR	LR		
	comp=Z,1µm,9.6s						
SNY				LR	LR		
	comp=Z,2µm,11.4s						
SNY				LR	LR		
	comp=Z,2µm,19.8s						
AAL	Aland	40.26	323	*e*P	P	18 23 32.2	+1.3
PDG	Podgorica	40.26	295	⇑P	P	18 23 32.3	+1.1
PDG	Podgorica	40.26	295	*e*P	P	18 23 30.5	-0.7
PDG	Podgorica	40.26	295	P	P	18 23 32.0	+0.8
PDG				IAmb	IAmb	18 24 08.2	
	comp=Z,124nm,1.2s						
RAC	Raciborz	40.29	307	*e*P	P	18 23 33.0	+1.7
RAC				*e*PP	pP	18 23 53.4	-1.1
RAC				LMZ	LR	18 43 27.7	
	comp=Z,1.8nm,17.7s						
RAC	Raciborz	40.29	307	*e*P	P	18 23 33.0	+1.7
RAC				*e**PP	pP	18 23 53.4	-1.1
RAC				MLR	MLR		
	comp=Z,2µm,17.7s						
SRO	Srobarova	40.31	303	*e*P	P	18 23 35.6	+4.1
SRO				pmax	pmax		
	comp=Z,376nm,1.1s						
SRO	Srobarova	40.31	303	*e*P	P	18 23 35.5	+4.1
OKC	Ostrava-Krasne	40.33	307	*e*P	P	18 23 33.5	+1.9
OKC				*e*S	S	18 29 29.1	-3.1
OKC				AMS	AMS	18 43 20.0	
	comp=Z,2µm,15.4s						
OKC	Ostrava-Krasne	40.33	307	*e*P	P	18 23 33.5	+1.9
OKC				*e*S	S	18 29 29.1	-3.1
OKC				MLR	MLR		
	comp=Z,2µm,15.4s						
OKC				MLR	MLR		
	comp=E,2µm,15.3s						
AAE	Adis Abeba	40.34	236	*e*P	P	18 23 33.1	+0.6
DRME	Dracevica, Mon	40.35	295	*e*P	P	18 23 32.1	+0.1
CSKK	Cskako	40.38	303	*e*P	P	18 23 33.8	+1.7
UPM	Unac-Piva	40.40	296	*e*P	P	18 23 34.8	+2.3
KOVH	Kovagotottos	40.60	301	*e*P	P	18 23 34.4	+0.4
TPTI		40.63	138	P	P	18 23 32.9	-1.5
	comp=E,2µmcomp=E,96nm,1.1s						
TIH	Tihany	40.66	302	*e*P	P	18 23 36.5	+2.1
JAVC	Velka Javorina	40.68	305	*e*P	P	18 23 36.8	+2.2
JAVC				*e*PP	PP	18 25 14.4	+4.4
JAVC				*e*S	S	18 29 42.3	+4.8
MORC	Moravsky Berou	40.72	307	⇑P	P	18 23 36.4	+1.5
MORC	Moravsky Berou	40.72	307	P	P	18 23 36.4	+1.5
MORC				pmax	pmax		
	comp=Z,272nm,1.3s						
MORC	Moravsky Berou	40.72	307	*e*P	P	18 23 36.3	+1.3
MORC				*e*sP	pP	18 24 02.1	+3.9
MORC				*e*PP	PnPn	18 25 14.0	-1.3
MORC				*e*S	S	18 29 40.4	+2.3
MORC	Moravsky Berou	40.72	307	P	P	18 23 36.4	+1.5
MORC				IAmb	IAmb	18 23 39.1	
	comp=Z,272nm,1.2s						
SMOL	Smolenice	40.86	305	*e*P	P	18 23 37.8	+1.8
SMOL				pmax	pmax		
	comp=Z,48nm,1.1s						
SMOL	Smolenice	40.86	305	*e*P	P	18 23 37.8	+1.8
TREB	Trebinje	40.88	296	*e*P	P	18 23 36.2	0.0
MPLH	Magyarpolny	40.88	303	*e*P	P	18 23 37.6	+1.4
SNSI	Sinabang, Aceh	40.90	140	P	P	18 23 38.0	+1.3
	comp=Z,25µmcomp=Z,2µm,0.7s						
GKP	Gorka Klasztor	40.91	312	*e*P	P	18 23 37.6	+1.2
GKP				*e*PP	PnPn	18 25 16.6	-0.7
GKP				*e*S	S	18 29 42.3	+1.6
GKP				*e*L	L	18 43 21.9	
	comp=Z,4µm,18.7s						
GKP	Gorka Klasztor	40.91	312	*e*P	P	18 23 37.9	+1.6
KULM	Kulim	40.94	132	P	P	18 23 38.0	+1.0
KULM	Kulim	40.94	132	P	P	18 23 37.5	+0.6
KULM				IAmb	IAmb	18 23 38.5	
	comp=Z,96nm,1.0s						
MODS	Modra-Piesok	40.97	304	*e*P	P	18 23 38.7	+1.8
MODS				pmax	pmax		
	comp=Z,250nm,1.6s						
MODS	Modra-Piesok	40.97	304	*e*P	P	18 23 38.7	+1.8
EGYH	Egyhazaskeszo	41.00	303	*e*P	P	18 23 38.5	+1.3
KEV	Kevo	41.00	338	P	P	18 23 37.5	+0.6
KEV				pmax	pmax		
	comp=Z,120nm,1.0s						
KEV	Kevo	41.00	338	P	P	18 23 37.5	+0.6
KEV				IAmb	IAmb	18 24 14.1	
	comp=Z,120nm,1.0s						
DBRK	Dubrovnik	41.03	296	*i* P	P	18 23 39.5	+2.0
ZST	Bratislava	41.09	304	*e*P	P	18 23 40.8	+2.8
ZST				pmax	pmax		
	comp=Z,481nm,1.5s						
ZST	Bratislava	41.09	304	*e*P	P	18 23 40.8	+2.8
TSI	Tuntungan	41.18	136	P	P	18 23 37.9	-1.1
	comp=Z,3µmcomp=Z,184nm,0.8s						
KRLC	Kraliky	41.20	307	*e*P	P	18 23 40.2	+1.3
KRLC				*e*S	S	18 29 43.9	-1.4
KRLC				AMS	AMS	18 43 50.0	
	comp=Z,2µm,15.6s						
KRLC	Kraliky	41.20	307	*e*P	P	18 23 40.2	+1.3
KRLC				*e*S	S	18 29 43.9	-1.4
KRLC				MLR	MLR		
	comp=Z,2µm,15.6s						
CN2	Changchun	41.27	63	*e*P	P	18 23 41.3	+1.8
CN2				*e*S	S	18 29 49.1	+2.8
CN2				pmax	pmax		
	comp=Z,50nm,1.0s						
CN2				pmax	pmax		
	comp=Z,500nm,3.0s						
CN2				LR	LR		
	comp=Z,2µm,15.0s						
CN2				LR	LR		
	comp=Z,1µm,15.0s						
CN2				LR	LR		
	comp=Z,2µm,15.0s						
SSE	Sheshan	41.28	82	P	P	18 23 39.5	-0.2
SSE				S	S	18 29 47.4	+0.7
SSE				pmax	pmax		
	comp=Z,12nm,0.7s						
SSE				pmax	pmax		
	comp=Z,470nm,3.5s						
STON	Ston	41.32	296	*e*P	P	18 23 40.8	+0.9
STON	Ston	41.32	296	*i* P	P	18 23 39.7	-0.2
ARA0	ARCESS Array S	41.35	337	*e*P	P	18 23 41.0	+1.3
ARCES	ARCESS Array B	41.35	337	P	P	18 23 41.1	+1.3
	comp=Z,65nm,0.6s,baz=112,slow=9.1,SNR=404						
ARCES				LR	LR	18 41 55.3	
	comp=Z,7µm,18.8s,baz=125,slow=37						
ARCES	ARCESS Array B	41.35	337	P	P	18 23 40.9	+1.1
VRAC	Vranov	41.36	306	⇓P	P	18 23 42.2	+2.0
VRAC	Vranov	41.36	306	P	P	18 23 41.8	+1.6
	comp=Z,115nm,0.9s,baz=89,slow=8.4,SNR=129						
VRAC	Vranov	41.36	306	*e*P	P	18 23 41.8	+1.6
VRAC				*e*sP	pP	18 24 07.0	+3.5
VRAC				*e*PP	PnPn	18 25 23.4	+0.7
VRAC				*e*S	S	18 29 51.8	+4.3
UPP	Uppsala	41.37	322	*e*P	P	18 23 41.3	+1.3
BLY	Banja Luka	41.40	299	*e*P	P	18 23 41.7	+1.2
DPC	Dobruska-Polom	41.49	307	*e*P	P	18 23 42.8	+1.6
DPC				*e*S	S	18 29 49.6	+0.1
DPC				AMS	AMS	18 44 00.0	
	comp=Z,2µm,19.0s						
DPC	Dobruska-Polom	41.49	307	*e*P	P	18 23 42.8	+1.6
DPC				*e*S	S	18 29 49.6	+0.1
DPC				MLR	MLR		
	comp=Z,2µm,19.0s						
KSP	Ksiaz	41.49	308	*e*P	P	18 23 42.6	+1.4
KSP				*e*PP	PnPn	18 25 21.9	-2.2
KSP				*e*S	S	18 29 52.0	+2.6
KSP				*e*L	L	18 37 14.7	
	comp=Z,3µm,42.0s						
SOP	Sopron	41.50	303	*e*P	P	18 23 42.5	+1.2
KRUC	Moravsky	41.51	305	*e*P	P	18 23 42.5	+1.2
KRUC				*e*sP	pP	18 24 07.7	+3.4
KRUC				*e*PP	PnPn	18 25 24.6	+0.2
KRUC				*e*S	S	18 29 52.7	+3.0
MGRS	Mrkonjic Grad	41.52	298	*e*P	P	18 23 43.9	+2.4
OSTC	Ostas	41.55	308	*e*P	P	18 23 43.0	+1.3
OSTC				*e*S	S	18 29 46.1	-4.2
OSTC				AMS	AMS	18 44 00.0	
	comp=Z,2µm,14.5s						
MOSL	Moslavina	41.59	300	*i* P	P	18 23 42.5	+0.5
RICI	Ricice	41.63	297	*i* P	P	18 23 43.2	+0.8
UPC	Upice	41.68	308	*e*P	P	18 23 44.3	+1.6
UPC				*e*S	S	18 29 49.2	-3.0
UPC				AMS	AMS	18 44 10.0	
	comp=Z,3µm,16.2s						
UPC	Upice	41.68	308	*e*P	P	18 23 44.3	+1.6
UPC				*e*S	S	18 29 49.2	-3.0
UPC				MLR	MLR		
	comp=Z,3µm,16.2s						
QZH	Quanzhou	41.72	92	P	P	18 23 40.8	-2.5
QZH				sP	sP	18 24 15.0	-3.7
QZH				S	S	18 29 49.4	-3.9
QZH				pmax	pmax		
	comp=Z,61nm,0.6s						
QZH				pmax	pmax		
	comp=Z,470nm,4.9s						
QZH				LR	LR		
	comp=Z,740nm,10.9s						
QZH				LR	LR		
	comp=Z,710nm,6.8s						
QZH				LR	LR		
	comp=Z,1µm,15.2s						
KALN	Kalnik	41.73	301	*i* P	P	18 23 43.4	+0.1
MAKA	Makarska	41.74	297	*i* P	P	18 23 43.4	+0.1
IPM	Ipoh	41.81	133	P	P	18 23 44.0	-0.2
IPM	Ipoh	41.81	133	P	P	18 23 43.9	-0.2
IPM				IAmb	IAmb	18 23 45.2	
	comp=Z,195nm,0.9s						
IPM	Ipoh	41.81	133	P	P	18 23 44.2	+0.1
ZEA	Zeya	41.81	47	*e*P	P	18 23 45.1	+1.4
ZEA				*e**PP	pP	18 24 09.4	+2.0
ZEA				*e**SP	sP	18 24 24.3	+5.5
ZEA				*e*		18 25 59.3	
ZEA				*e*S	S	18 29 57.7	+3.7
ZEA				*e*		18 30 40.0	
ZEA				pmax	pmax		
	comp=E,100nm,5.3s						
ZEA				pmax	pmax		
	comp=N,100nm,6.6s						
ZEA				pmax	pmax		
	comp=Z,200nm,5.0s						
ZEA				smax	smax		
	comp=E,500nm,7.2s						
ZEA				MLR	MLR		
	comp=E,500nm,17.0s						
ZEA				MLR	MLR		
	comp=Z,500nm,16.0s						
KOGS	Kog	41.84	302	*e*P	P	18 23 45.0	+1.0
LSTV	Lastovo	41.92	296	*i* P	P	18 23 44.0	-0.8
CONA	Conrad Observa	41.95	304	*e*P	P	18 23 46.1	+1.1
	comp=Z,240nm,1.1s,SNR=98						
PSI	Prapat	41.96	137	P	P	18 23 45.1	-0.4
	comp=Z,90nm,0.7s,baz=331,slow=9.0,SNR=67						
PSI				LR	LR	18 42 29.5	
	comp=Z,454nm,18.9s,baz=314,slow=38						
LOBO	Lobor	41.99	301	*i* P	P	18 23 45.0	-0.3
TREC	Trest	42.08	306	*e*P	P	18 23 47.7	+1.6
TREC				*e*S	S	18 29 48.9	-9.3
TREC				AMS	AMS	18 44 50.0	
	comp=Z,2µm,13.3s						
TREC	Trest	42.08	306	*e*P	P	18 23 47.7	+1.6
TREC				MLR	MLR		
	comp=Z,2µm,13.3s						
ZAG	Zagreb	42.09	301	*e*P	P	18 23 47.0	+0.9
PTJ	Puntijarka	42.10	301	P	P	18 23 46.5	+0.2
HVAR	Hvar	42.17	297	*i* P	P	18 23 47.0	+0.2
ARSA	Arzberg	42.24	303	*e*P	P	18 23 48.1	+0.8
	comp=Z,72nm,1.1s,SNR=34						
BSD	Bornholm Skovb	42.34	315	*i* P	P	18 23 48.0	0.0
BSD				IAmb	IAmb	18 23 51.5	
	comp=Z,113nm,0.7s						
HAMF	Hammerfest	42.43	339	*e*P	P	18 23 50.1	+1.6
UDBI	Udbina	42.44	299	*i* P	P	18 23 49.4	+0.3
CRES	Cresnjev	42.46	301	⇑*i*P	P	18 23 49.9	+0.7
CRES	Cresnjev	42.46	301	*e*P	P	18 23 50.1	+0.9
CRES				*e*pP	pP	18 24 14.2	+1.9
CRES				*i* sP	sP	18 24 24.6	+1.0
PLIT	Plitvice	42.48	299	*i* P	P	18 23 49.7	+0.3
OZLJ	Ozalj	42.48	300	*i* P	P	18 23 49.9	+0.6
GSI	Gunungsitoli	42.48	139	P	P	18 23 50.5	+0.9
	comp=Z,7µmcomp=Z,14µmcomp=Z,1µm,0.8s						
GSI	Gunungsitoli	42.48	139	P	P	18 23 49.9	+0.3
GSI	Gunungsitoli	42.48	139	P	P	18 23 51.0	+1.4
MORI	Morici	42.58	298	*i* P	P	18 23 50.2	+0.1
DILA	Dilla	42.59	234	*e*P	P	18 23 53.3	+2.7
PVCC	Panska Ves	42.60	308	*e*P	P	18 23 52.3	+2.1
PVCC				*e*S	S	18 30 06.4	+0.7
PVCC				AMS	AMS	18 44 40.0	
	comp=Z,2µm,15.2s						
PVCC	Panska Ves	42.60	308	*e*P	P	18 23 52.3	+2.1
PVCC				*e*S	S	18 30 06.4	+0.7
PVCC				MLR	MLR		
	comp=Z,2µm,15.2s						
SOKA	Soboth	42.64	302	*i* P	P	18 23 51.7	+1.0
	comp=Z,336nm,1.7s,SNR=60						
PRU	Pruhonice	42.65	307	*e*P	P	18 23 51.5	+0.9
PRU				*e*S	S	18 30 01.8	-4.7
PRU				AMS	AMS	18 44 40.0	
	comp=Z,3µm,16.9s						
PRU	Pruhonice	42.65	307	*e*P	P	18 23 51.5	+0.9
PRU				*e*S	S	18 30 01.8	-4.7
PRU				MLR	MLR		
	comp=Z,3µm,16.9s						
ZIRJ	Zirje	42.67	298	*i* P	P	18 23 51.7	+0.9
PRA	Prague	42.71	307	*e*P	P	18 23 53.9	+2.8
PRA				*e*S	S	18 30 05.7	-1.7
PRA				AMS	AMS	18 44 50.0	
	comp=Z,2µm,15.7s						
PRA	Prague	42.71	307	*e*P	P	18 23 53.9	+2.8
PRA				*e*S	S	18 30 05.7	-1.7
PRA				MLR	MLR		
	comp=Z,2µm,15.7s						
LNIZ	Loecknitz	42.73	312	*e*P	P	18 23 51.6	+0.5
	comp=Z,1µm,1.9s,baz=85,slow=7.9						
YPDB	Yeonpyeongdo	42.78	72	P	P	18 23 53.0	+1.1
	SNR=9.7						
TIP	Timpagrande	42.78	291	⇑P	P	18 23 53.1	+1.1
TIP	Timpagrande	42.78	291	P	P	18 23 52.1	+0.2
TIP				IAmb	IAmb	18 24 29.7	
	comp=Z,244nm,1.6s						
CKRC	Cesky Krumlov	42.90	305	*e*P	P	18 23 53.4	+0.8
CKRC				*e*S	S	18 30 11.0	+0.8
SGRT	San Giovanni R	42.96	295	P	P	18 23 53.3	0.0
JETT	Jettan, Norway	42.97	336	*e*P	P	18 23 54.5	+1.5
BRG	Berggiesshubel	42.98	308	*e*P	P	18 23 54.3	+1.1
	comp=Z,481nm,1.6s,baz=85,slow=7.9						
BRG	Berggiesshubel	42.98	308	*e*P	P	18 23 54.7	+1.5
BRG				Amp		18 23 57.2	
	comp=Z,233nm,1.1s						
BRG				pP	pP	18 24 18.8	+2.2
BRG				Amp		18 24 19.9	
	comp=Z,56nm,0.9s						
BRG				sP	sP	18 24 29.4	+1.5
BRG				Amp		18 24 30.9	
	comp=Z,129nm,1.0s						
BRG	Berggiesshubel	42.98	308	S	S	18 30 15.0	+3.8
BRG	Berggiesshubel	42.98	308	SS	SS	18 33 35.0	+8.8
BRG				Amp		18 45 16.0	
	comp=N,0.8nm,11.3s						
BRG				Amp		18 45 25.0	
	comp=Z,2.0nm,14.5s						
BRG				Amp		18 45 28.0	
	comp=E,1.5nm,15.2s						
DEL	Delary	42.98	317	*i* P	P	18 23 54.0	+0.8
RUE	Ruedersdorf	43.01	311	*e*P	P	18 23 54.6	+1.2
RUE	Ruedersdorf	43.01	311	*e*P	P	18 23 53.9	+0.6
	comp=E,676nm,1.6s,baz=85,slow=7.9						
MOA	Molln	43.02	304	*e*P	P	18 23 54.5	+0.8
	comp=E,271nm,1.7s,SNR=61						
DUGI	Dugi Otok	43.02	298	*i* P	P	18 23 52.0	-1.7
NVLJ	Novalja	43.06	299	*i* P	P	18 23 53.2	-0.7
LJU	Ljubljana	43.07	301	⇑*i*P	P	18 23 55.1	+1.0
LJU	Ljubljana	43.07	301	*e*P	P	18 23 55.4	+1.3
LJU				*e*S	S	18 30 14.6	+1.8
LJU				*e*SS	ScS	18 33 41.6	-3.0
RABC	Rab	43.09	299	*i* P	P	18 23 54.2	0.0
GBAS	Gorenja Brezov	43.15	301	*e*sP	sP	18 24 30.1	+0.9
JRMM	Jerantut	43.15	131	P	P	18 23 55.0	0.0
CEY	Cerknica	43.19	301	⇑*i*P	P	18 23 55.7	+0.7
RIY	Rijeka	43.21	300	*e*P	P	18 23 55.5	+0.3
RGN	Rugen	43.25	314	*e*P	P	18 23 57.5	+2.1
RGN	Rugen	43.25	314	*e*P	P	18 23 56.5	+1.2
	comp=E,3µm,1.7s,baz=85,slow=7.9						
RGN	Rugen	43.25	314	P	P	18 23 56.4	+1.0
GEC2	GERESS Array S	43.29	305	*e*P	P	18 23 56.9	+1.0
	comp=E,163nm,1.5s,baz=85,slow=7.9						
GEC2				*e*pP	pP	18 24 21.9	+2.5
GEC2	GERESS Array S	43.29	305	P	P	18 23 57.4	+1.4
GEC2				IAmb	IAmb	18 23 59.9	
	comp=Z,248nm,1.7s						
GERES	GERESS Array B	43.29	305	P	P	18 23 56.4	+0.5
	comp=Z,14nm,0.6s,baz=84,slow=7.2,SNR=93						
GERES				PP	PcP	18 25 44.9	+1.7
	comp=Z,26nm,1.0s,baz=91,slow=7.7,SNR=4.0						
GERES	GERESS Array B	43.29	305	P	P	18 23 56.6	+0.7
GERES	GERESS Array B	43.29	305	P	P	18 23 56.6	+0.7
KSGAH	Ganghwa	43.32	71	P	P	18 23 57.0	+0.9
	SNR=56						
FBE	Freiberg	43.34	308	*e*P	P	18 23 57.4	+1.3
	comp=Z,565nm,1.5s,baz=85,slow=7.9						
KHC	Kasperske Hory	43.34	306	*e*P	P	18 23 58.0	+1.7
KHC				*e*sP	sP	18 24 31.5	+0.5
KHC				*e*PP	PP	18 25 38.5	-0.1
KHC				*e*x	x	18 26 00.0	
KHC				*e*S	S	18 30 15.8	-1.0
KHC				AMS	AMS	18 45 30.0	
	comp=Z,2µm,15.3s						
KHC	Kasperske Hory	43.34	306	*e*P	P	18 23 58.0	+1.7
KHC				*e*		18 24 31.5	
KHC				*e*		18 25 38.5	
KHC				*e*S	S	18 30 15.8	-1.0
KHC				MLR	MLR		
	comp=Z,2µm,15.3s						
HFS	Hagfors	43.36	322	P	P	18 23 56.8	+0.7
	comp=Z,228nm,0.4s,baz=98,slow=11,SNR=942						
HUK2	Heuksan-myeon	43.44	76	P	P	18 23 60.0	+2.8
	SNR=6.2						
OYDB	Oeyeondo	43.45	73	P	P	18 23 59.0	+1.8

	SNR=10						
TRO	Tromso	43.48	336	*e*P	P	18 23 58.5	+1.5
SMRN	Sveta Marina	43.49	300	*i* P	P	18 23 57.1	-0.3
KSMUS	Musan	43.51	71	P	P	18 23 58.9	+1.3
	SNR=25						
INCN	Inchon	43.52	71	P	P	18 23 58.8	+1.0
CLL	Collm	43.54	309	*i* P	P	18 23 58.8	+1.0
	comp=Z,339nm,1.6s						
CLL				*e*pP	pP	18 24 24.0	+2.8
CLL				*i* sP	sP	18 24 33.2	+0.8
CLL				*e*PP	PP	18 25 41.0	+0.4
CLL				*e*PPlp		18 25 49.0	
CLL				*e*sPP		18 26 14.0	
CLL				*e*PPP	PPP	18 26 21.0	
CLL				*e*S	S	18 30 22.0	+2.6
CLL				*e*sS	sS	18 30 58.0	-2.6
CLL				*e*		18 32 14.0	
CLL				*e*SS	SS	18 33 40.0	+2.8
CLL				*e*sSS		18 34 13.0	
CLL				*e*SSS	SSS	18 34 24.0	
CLL				Lm	MLR	18 44 00.0	
	comp=Z,2µm,19.4s						
CLL	Collm	43.54	309	*i* P	P	18 23 58.8	+1.0
CLL				*i* *SP	sP	18 24 33.2	+0.8
CLL				*e*S	S	18 30 22.0	+2.6
CLL				pmax	pmax		
	comp=Z,339nm,1.6s						
CLL	Collm	43.54	309	*e*P	P	18 23 58.3	+0.6
	comp=Z,339nm,1.6s,baz=85,slow=7.9						
CLL	Collm	43.54	309	P	P	18 23 59.2	+1.5
MSEY	Mahe Island	43.56	204	*i* P	P	18 23 58.9	+0.5
	SNR=9.4						
MSEY	Mahe Island	43.56	204	P	P	18 23 58.0	-0.3
MSEY				pmax	pmax		
	comp=Z,135nm,1.0s						
MSEY	Mahe Island	43.56	204	P	P	18 23 58.0	-0.3
MSEY				IAmb	IAmb	18 24 01.4	
	comp=Z,135nm,0.9s						
CADS	Cadrg	43.59	302	*e*P	P	18 23 59.0	+0.7
CADS				*e*pP	pP	18 24 23.1	+1.6
CADS				*e*sP	sP	18 24 33.4	+0.6
CADS				*e*S	S	18 30 21.5	+1.1
YNCB	YEONCHEON	43.59	71	P	P	18 23 59.7	+1.3
	SNR=25						
MYKA	Terra Mystica	43.60	302	*e*P	P	18 23 58.7	+0.3
	comp=Z,55nm,1.0s,SNR=22						
ANMD	Anmado	43.68	75	P	P	18 24 01.0	+1.9
	SNR=8.8						
KSDDC	Dongducheon	43.73	71	P	P	18 24 01.4	+1.9
	SNR=16						
KBA	Koelnbreinsper	43.74	303	*e*P	P	18 24 00.4	+0.7
	comp=Z,58nm,1.0s,SNR=14						
KSSEO	Seoul	43.74	71	P	P	18 24 00.6	+1.1
	SNR=20						
KSSEO	Seoul	43.74	71	P	P	18 24 01.0	+1.5
	SNR=20						
KSSOD	Songwoldong	43.75	71	P	P	18 24 00.8	+1.2
	SNR=14						
COP	Copenhagen	43.77	315	*i* P	P	18 24 01.2	+1.8
COP				IAmb	IAmb	18 24 02.9	
	comp=Z,1µm,0.7s						
YAK	Yakutsk	43.78	35	P	P	18 23 59.4	0.0
	comp=Z,68nm,0.7s,baz=231,slow=1.3,SNR=62						
YAK	Yakutsk	43.78	35*c*	*i*P	P	18 23 58.5	-1.0
YAK				*e*S	S	18 30 20.3	-2.3
YAK				*e**SS	sS	18 31 02.9	-0.8
YAK				*e*SS	SS	18 33 36.5	-4.9
YAK				pmax	pmax		
	comp=Z,111nm,0.8s						
YAK				pmax	pmax		
	comp=N,12nm,0.8s						
YAK				pmax	pmax		
	comp=E,28nm,1.0s						
YAK				smax	smax		
	comp=N,200nm,2.2s						
YAK				smax	smax		
	comp=E,169nm,2.0s						
YAK	Yakutsk	43.78	35	P	P	18 23 59.1	-0.3
BRJN	Brijuni	43.79	300	*i* P	P	18 23 59.9	+0.1
WET	Wettzell	43.80	306	*e*P	P	18 24 00.9	+1.0
	comp=E,194nm,1.7s,baz=85,slow=7.9						
WET				*e*sP	sP	18 24 35.8	+1.1
KSSWO	Suwon	43.84	72	P	P	18 24 01.7	+1.4
	SNR=21						
MNYD	Munyeodo	43.85	74	P	P	18 24 02.0	+1.5
	SNR=12						
TANN	Tannenbergstha	43.95	308	*e*P	P	18 24 02.2	+1.1
	comp=E,285nm,1.5s,baz=85,slow=7.9						
TANN				*e*sP	sP	18 24 37.6	+1.7
NKC	Novy Kostel	43.97	308	*e*P	P	18 24 02.7	+1.4
NKC				*e*S	S	18 30 16.6	-9.3
NKC				AMS	AMS	18 45 30.0	
	comp=E,3µm,14.9s						
NKC	Novy Kostel	43.97	308	*e*P	P	18 24 02.7	+1.4
NKC				*e*S	S	18 30 16.6	-9.3
NKC				MLR	MLR		
	comp=Z,3µm,14.9s						
PAOL	Paolisi	43.98	294	P	P	18 24 01.2	-0.3
PAOL				IAmb	IAmb	18 24 29.3	
	comp=Z,312nm,1.5s						
MNSI	Mandailing Nat	43.98	137	P	P	18 24 01.6	-0.1
	comp=Z,6µmcomp=Z,574nm,0.8s						
SMKB	Mukjeong-gil	43.99	74	P	P	18 24 03.0	+1.4
	SNR=16						
WERN	Wernitzgruen	44.02	308	*e*P	P	18 24 02.9	+1.3
	comp=Z,309nm,1.7s,baz=85,slow=7.9						
WERN				*e*sP	sP	18 24 37.7	+1.4
PYTK	Pyeongtaek	44.03	72	P	P	18 24 02.8	+1.0
	SNR=18						
GUNZ	Gunzen	44.04	308	*e*P	P	18 24 02.9	+1.1
	comp=Z,401nm,1.7s,baz=85,slow=7.9						
GUNZ				*e*sP	sP	18 24 38.2	+1.7
FAUS	Fauske	44.04	332	*e*P	P	18 24 02.8	+1.3
WERD	Werda	44.05	308	*e*P	P	18 24 02.9	+1.0
	comp=Z,346nm,1.6s,baz=85,slow=7.9						
MOR8	Moi Rana	44.06	331	*e*P	P	18 24 02.1	+0.4
ZOU	Zoufplan	44.06	302	P	P	18 24 03.1	+0.8
ZOU				IAmb	IAmb	18 24 05.7	
	comp=Z,279nm,1.5s						
MDJ	Mudanjiang	44.08	61	P	P	18 24 03.0	+0.8
MDJ				pP	pP	18 24 23.4	-2.9
MDJ				S	S	18 30 26.8	-0.6
MDJ				pmax	pmax		
	comp=Z,77nm,1.6s						
MDJ				pmax	pmax		
	comp=Z,350nm,6.0s						
MDJ				LR	LR		
	comp=Z,3µm,12.1s						
MDJ				LR	LR		
	comp=Z,470nm,5.9s						
MDJ				LR	LR		
	comp=Z,2µm,15.7s						
GAPB	Gapyeong	44.08	71	P	P	18 24 04.0	+1.7
	SNR=14						
YHNB	Yeheng	44.09	91	P	P	18 24 04.3	+1.8
YHNB				IAmb	IAmb	18 24 06.6	
	comp=Z,122nm,0.8s						
BUYB	Buyeo	44.09	73	P	P	18 24 03.2	+0.8
	SNR=21						
GOCB	Gochang-gun	44.12	74	P	P	18 24 05.0	+2.4
	SNR=5.5						
GOCB	Gochang-gun	44.12	74	P	P	18 24 04.0	+1.4
	SNR=8.1						
TPUB	Ta-pu	44.13	93	P	P	18 24 04.7	+1.8
TPUB				IAmb	IAmb	18 24 44.4	
	comp=Z,168nm,1.2s						
PLN	Plauen	44.14	308	*e*P	P	18 24 03.6	+1.1
	comp=Z,227nm,1.4s,baz=85,slow=7.9						
SSLB	Suanglung	44.16	92	P	P	18 24 05.8	+2.7
ROTZ	Rotzenmuhle	44.17	307	*e*P	P	18 24 04.5	+1.6
	comp=Z,116nm,1.5s,baz=85,slow=7.9						
ROTZ				*e*sP	sP	18 24 39.8	+2.2
KSICN	Icheon	44.17	71	P	P	18 24 05.3	+2.3
	SNR=8.5						
KSJDO	Jindo	44.18	76	P	P	18 24 04.0	+0.9
	SNR=13						
KOJ2	Gongju-si	44.20	73	P	P	18 24 05.0	+1.7
	SNR=18						
STEI	Steigen	44.20	333	*e*P	P	18 24 04.2	+1.4
MANZ	Manzenberg	44.22	307	*e*P	P	18 24 04.7	+1.5
	comp=Z,77nm,1.5s,baz=85,slow=7.9						
NBB08	Skaug oppvekst	44.28	332	*e*P	P	18 24 05.0	+1.6
STAL	STALIGIAL	44.29	302	P	P	18 24 03.9	0.0
STAL				IAmb	IAmb	18 24 06.9	
	comp=Z,231nm,1.2s						
NBB28	Valnes	44.30	332	*e*P	P	18 24 05.1	+1.5
NEUB	Neuenburg	44.32	309	*e*P	P	18 24 04.7	+0.8
	comp=Z,588nm,1.5s,baz=85,slow=7.9						
CJD	Chujado	44.33	76	P	P	18 24 07.0	+2.6
	SNR=5.7						
KSJEU	Jeongeup	44.34	74	P	P	18 24 04.8	+0.4
	SNR=18						
KSCHC	Chuncheon	44.34	71	P	P	18 24 05.4	+1.0
	SNR=31						
ABTA	Abfaltersbach	44.35	303	*e*P	P	18 24 04.1	-0.3
	comp=Z,97nm,1.5s,SNR=18						
HANB	Haenam	44.35	75	P	P	18 24 06.0	+1.5
	SNR=9.2						
TJN	Taejon	44.40	73*c*	*e*P	P	18 24 05.1	+0.3
TJN	Taejon	44.40	73	P	P	18 24 05.5	+0.7
NBB17	Glomfjord B¥r	44.40	331	*e*P	P	18 24 05.8	+1.5
EMSB	Eumseong	44.42	72	P	P	18 24 06.0	+1.0
	SNR=25						
NBB05	Inndyr	44.43	332	*e*P	P	18 24 06.3	+1.7
NC405	NORSAR Array S	44.43	323	P	P	18 24 03.4	-1.4
KS19	Wonju Array Si	44.46	71	P	P	18 24 06.4	+1.1
KS19				IAmb	IAmb	18 24 08.9	
	comp=Z,208nm,1.1s						
MOX	Moxa	44.47	308	*e*P	P	18 24 06.3	+1.2
	comp=Z,291nm,1.4s,baz=85,slow=7.9						
KSJEO	Jeonju	44.48	73	P	P	18 24 06.0	+0.5
	SNR=22						
NC602	NORSAR Array S	44.48	323	*e*P	P	18 24 05.7	+0.5
NC602	NORSAR Array S	44.48	323	P	P	18 24 03.9	-1.3
KSAR	Wonju Array Be	44.49	71	P	P	18 24 06.5	+1.0
KSAR	Wonju Array Be	44.49	71	P	P	18 24 06.5	+1.0
KSKWJ	Gwangju	44.49	74	P	P	18 24 06.7	+1.2
	SNR=16						
KSKWJ	Gwangju	44.49	74	P	P	18 24 07.0	+1.4
	SNR=13						
KSKWJ	Gwangju	44.49	74	P	P	18 24 07.0	+1.4
	SNR=16						
HALB	Hallimjungang-	44.51	77	P	P	18 24 08.1	+2.4
	SNR=11						
KSIJA	INJE	44.51	70	P	P	18 24 06.8	+1.2
	SNR=20						
KSIJA	INJE	44.51	70	P	P	18 24 07.6	+2.0
	SNR=6.0						
WAN2	Wando-Q330s	44.51	76	P	P	18 24 08.0	+2.3
	SNR=9.6						
KSRS	Korea Array	44.52	71	P	P	18 24 06.2	+0.5
	comp=Z,83nm,0.7s,baz=276,slow=6.6,SNR=177						
NBB30	Finnes	44.52	332	*e*P	P	18 24 06.8	+1.4
AQU	L'Aquila	44.53	296	*e*P	P	18 24 07.6	+1.7
SUCA	Sunchang	44.53	74	P	P	18 24 07.0	+1.1
	SNR=12						
SEHB	SEOHWA	44.54	70	P	P	18 24 07.0	+1.1
	SNR=24						
FLTG	Flechtingen	44.57	311	*e*P	P	18 24 06.2	+0.3
	comp=Z,1µm,1.7s,baz=85,slow=7.9						
NBB13	Alf Garage	44.60	331	*e*P	P	18 24 07.5	+1.5
NC303	NORSAR Array S	44.61	323	P	P	18 24 07.2	+1.0
YULB	Yu-li	44.62	93	P	P	18 24 08.8	+2.1
YULB				IAmb	IAmb	18 24 11.4	
	comp=Z,174nm,0.9s						
KSWJU	Wonju	44.63	71	P	P	18 24 08.0	+1.3
	SNR=68						
NRCA	Norcia	44.64	297	P	P	18 24 07.0	+0.3
NRCA				IAmb	IAmb	18 24 55.0	
	comp=Z,198nm,1.3s						
KONS	Konsvik	44.66	331	*e*P	P	18 24 08.1	+1.6
STOK	Stokkvaagen	44.66	331	*e*P	P	18 24 07.7	+1.3
NB2	NORSAR Subarra	44.67	323	P	P	18 24 06.9	+0.2
	comp=Z,117nm,0.5s,baz=97,slow=7.9						
NOA	NORSAR Array B	44.67	323	P	P	18 24 06.3	-0.3
	comp=Z,67nm,0.4s,baz=96,slow=7.7,SNR=780						
NOA				LR	LR	18 45 56.8	
	comp=Z,2µm,19.9s,baz=105,slow=40						
KSBON	Boeun	44.70	72	P	P	18 24 07.8	+0.5
	SNR=19						
NBB40	Tonnes	44.70	331	*e*P	P	18 24 07.8	+1.0
NAWB	Namwon	44.72	74	P	P	18 24 09.0	+1.6
	SNR=14						
KSCHJ	Chungju	44.72	72	P	P	18 24 08.2	+0.8
	SNR=32						
KSSKC	Sokcho	44.73	70	P	P	18 24 09.4	+2.0
	SNR=17						
OKCB	Cheongsan-myeo	44.74	73	P	P	18 24 09.0	+1.5
	SNR=12						
NSS	Namsos	44.76	328	*e*P	P	18 24 08.2	+0.9
BOSB	Boseong-gun	44.79	75	P	P	18 24 09.0	+1.1
	SNR=36						
JECH	Jecheon	44.81	71	P	P	18 24 10.0	+1.9
	SNR=11						
JECH	Jecheon	44.81	71	P	P	18 24 09.1	+1.1
	SNR=45						
GRA1	Grafenberg Arr	44.82	307	P	P	18 24 09.6	+1.6
GRF	Grafenberg Arr	44.82	307	P	P	18 24 09.6	+1.6
GRF				pmax	pmax		
	comp=Z,881nm,1.6s						
GRF	Grafenberg Arr	44.82	307	*e*P	P	18 24 09.8	+1.8
	comp=Z,734nm,1.6s,baz=85,slow=7.9						
GRF				*e*pP	pP	18 24 34.8	+3.2
GRF				*e*sP	sP	18 24 44.9	+2.1
GRFO	Grafenberg	44.82	307	P	P	18 24 09.1	+1.1
GRFO				pmax	pmax		
	comp=Z,936nm,1.7s						
GRFO	Grafenberg	44.82	307	P	P	18 24 09.1	+1.1
OSL	Oslo	44.83	321	*e*P	P	18 24 08.8	+0.9
KLR	Kul'dur	44.85	54	P	P	18 24 08.4	+0.2
	comp=Z,26nm,0.6s,baz=282,slow=7.7,SNR=59						
KLR	Kul'dur	44.85	54*c*	*i*P	P	18 24 09.0	+0.8
KLR				pmax	pmax		
	comp=Z,138nm,1.5s						
KSMGY	Mungyeong	44.85	72	P	P	18 24 10.0	+1.5
	SNR=6.8						
KSMGY	Mungyeong	44.85	72	P	P	18 24 09.2	+0.8
	SNR=21						
WTTA	Wattenberg	44.87	303	*e*P	P	18 24 08.4	-0.2
	comp=Z,132nm,1.2s,SNR=40						
LOF	Lofoten	44.88	333	*e*P	P	18 24 08.9	+0.7
KOHB	KOHEUNG	44.88	75	P	P	18 24 10.5	+1.8
	SNR=9.0						
WATA	Walderalm	44.90	303	*e*P	P	18 24 08.3	-0.5
	comp=Z,125nm,1.0s,SNR=36						
KSCPR	CHUPUNGNYEONG	44.92	73	P	P	18 24 09.5	+0.5
	SNR=17						
ASSE	Asse, Remlinge	44.93	310	*e*P	P	18 24 09.6	+0.9
	comp=Z,404nm,2.1s,baz=85,slow=7.9						
HAMB	Hamyang	44.96	74	P	P	18 24 11.0	+1.7
	SNR=29						
MURB	Monte Urbino	44.97	298	P	P	18 24 11.2	+1.9
FUR	Furstenfeldbru	44.98	305	*e*P	P	18 24 10.4	+1.1
	comp=Z,763nm,1.6s,baz=85,slow=7.9						
KSYOW	Yeongwol	45.00	71	P	P	18 24 11.5	+1.9
	SNR=10						
OVD	Ostervraa, Den	45.01	318⇑	*i*P	P	18 24 10.8	+1.4
OVD				IAmb	IAmb	18 24 11.9	
	comp=Z,475nm,0.6s						
KSDGY	Daegwallycong	45.02	70	P	P	18 24 11.1	+1.3
	SNR=36						
KSDGY	Daegwallycong	45.02	70	P	P	18 24 12.0	+2.1
	SNR=9.1						
BSEG	Bad Segeberg	45.03	313	*e*P	P	18 24 10.8	+1.3
	comp=Z,553nm,1.4s,baz=85,slow=7.9						
KSJMJ	Jumunjin	45.03	70	P	P	18 24 12.1	+2.3
	SNR=17						
CTI	Castel Tesino	45.05	302	P	P	18 24 10.6	+0.6
CTI				pmax	pmax		
	comp=Z,82nm,0.7s						
CTI	Castel Tesino	45.05	302	P	P	18 24 10.6	+0.6
CTI				IAmb	IAmb	18 24 12.6	
	comp=Z,82nm,0.7s						
CLZ	Clausthal	45.14	310	*e*P	P	18 24 11.5	+1.0
	comp=Z,454nm,1.5s,baz=85,slow=7.9						
CLZ				*e*sP	sP	18 24 46.9	+1.7
HOPEN	Hopen	45.15	346	*e*P	P	18 24 11.5	+1.3
SQTA	Sankt Quirin	45.16	303	*e*P	P	18 24 10.4	-0.5
	comp=Z,156nm,1.3s,SNR=32						
TEOL	Teolo	45.16	301	P	P	18 24 12.1	+1.3
TEOL				IAmb	IAmb	18 24 49.9	
	comp=Z,196nm,0.9s						
BKNI	Bangkinang	45.18	136	P	P	18 24 11.3	+0.1
	comp=Z,4µmcomp=Z,10µmcomp=Z,1µm,0.8s						
MOTA	Moosalm	45.21	304	*e*P	P	18 24 10.9	-0.4
	comp=Z,83nm,0.9s,SNR=30						
NRDL	Niedersach Rie	45.25	311	*e*P	P	18 24 12.6	+1.4
	comp=Z,549nm,1.5s,baz=85,slow=7.9						
KSGWL	Sabuk	45.27	71	P	P	18 24 13.0	+1.3
	SNR=15						
KSNAH	Namhae	45.33	75	P	P	18 24 12.8	+0.6
	SNR=14						
TBLU	Trondheim	45.33	326	*e*P	P	18 24 13.0	+1.2
YNDB	Yeoundo	45.35	75	P	P	18 24 14.0	+1.6
	SNR=26						
YNDB	Yeoundo	45.35	75	P	P	18 24 14.0	+1.6
	SNR=20						
KONO	Kongsberg	45.38	321	P	P	18 24 12.9	+0.6
KONO				pmax	pmax		
	comp=Z,254nm,1.2s						
KONO	Kongsberg	45.38	321	*e*P	P	18 24 12.8	+0.5
KONO	Kongsberg	45.38	321	P	P	18 24 12.8	+0.5
KONO				IAmb	IAmb	18 24 14.5	
	comp=Z,254nm,1.2s						
GTTG	Gottingen	45.42	310	*e*P	P	18 24 13.7	+1.1
	comp=Z,750nm,1.4s,baz=85,slow=7.9						
GTTG				*e*sP	sP	18 24 49.5	+2.0
RETA	Reutte	45.42	304	*e*P	P	18 24 13.0	+0.1
	comp=Z,78nm,1.1s,SNR=19						
CHYB	Chungyang	45.42	71	P	P	18 24 14.0	+1.0
	SNR=14						
EUSB	Uiseong	45.43	72	P	P	18 24 14.0	+1.1
	SNR=24						
KSEUS	ULSEONG	45.43	72	P	P	18 24 13.8	+0.9
	SNR=25						
KSEUS	ULSEONG	45.43	72	P	P	18 24 01.4	-12
	SNR=5.5						
BJO1	Bjornoya	45.44	343	*e*P	P	18 24 14.1	+1.5
EURB	Uiryeong-eup	45.44	74	P	P	18 24 14.0	+0.9
	SNR=7.6						
UBBA	Unterbreizbach	45.47	309	*e*P	P	18 24 14.0	+1.1
	comp=Z,161nm,1.1s,baz=85,slow=7.9						
SKMB	Sankelmark Bun	45.50	314	*e*P	P	18 24 14.9	+1.6
	comp=Z,1µm,1.4s,baz=85,slow=7.9						
SISI	Saibi	45.50	140	P	P	18 24 14.5	+0.8
	comp=Z,4µmcomp=Z,341nm,0.9s						
FETA	Feichten	45.52	303	*e*P	P	18 24 13.1	-0.6
	comp=Z,45nm,0.7s,SNR=36						
GOET	G??ttrup	45.55	317	*i* P	P	18 24 15.2	+1.6
GOET				IAmb	IAmb	18 24 17.9	
	comp=Z,252nm,0.9s						
MUD	Monsted U'grnd	45.59	317⇑	*i*P	P	18 24 15.8	+1.9
MUD				IAmb	IAmb	18 24 18.2	
	comp=Z,231nm,1.2s						
KSADO	Andong	45.61	72	P	P	18 24 16.0	+1.6
	SNR=33						
MYKOM	Kota Tinggi	45.63	132	P	P	18 24 16.0	+1.2
MYKOM	Kota Tinggi	45.63	132	P	P	18 24 15.6	+0.8
MYKOM				IAmb	IAmb	18 24 17.8	
	comp=Z,140nm,0.7s						
YKDB	Yokjido	45.66	75	P	P	18 24 17.0	+2.1
	SNR=6.2						
TIXI	Tiksi	45.67	22	P	P	18 24 14.1	-0.4
	comp=Z,74nm,0.3s,baz=275,slow=4.0,SNR=120						
TIXI	Tiksi	45.67	22*c*	*i*P	P	18 24 14.4	0.0
TIXI				pmax	pmax		
	comp=Z,96nm,0.7s						
TIXI	Tiksi	45.67	22	P	P	18 24 14.0	-0.4
TIXI				IAmb	IAmb	18 24 41.6	
	comp=Z,123nm,0.9s						
RETH	Rethem/Aller,	45.68	311	*e*P	P	18 24 15.8	+1.1
	baz=85,slow=7.9						
CORL	Corleone	45.74	290	P	P	18 24 15.6	+0.1
CORL				IAmb	IAmb	18 25 04.6	
	comp=Z,355nm,1.6s						
YOCB	Yeongcheon	45.75	73	P	P	18 24 16.4	+0.9
	SNR=7.5						
KSDAG	Daegu	45.77	73	P	P	18 24 17.0	+1.3
	SNR=12						
KSDAG	Daegu	45.77	73	P	P	18 24 16.2	+0.5
	SNR=9.0						
DOMB	Dombas	45.77	324	*e*P	P	18 24 17.0	+1.6
UBR	Ueberruh	45.82	304	*e*P	P	18 24 16.5	+0.5
	comp=Z,729nm,2.0s,baz=85,slow=7.9						
UBR				*e*pP	pP	18 24 41.1	+1.4
UBR				*e*sP	sP	18 24 50.9	0.0
OSSC	Osservatorio P	45.83	298	P	P	18 24 16.7	+0.7
USA0B	Ussuriysk Arra	45.84	61	P	P	18 24 14.3	-1.8
USA0B				pmax	pmax		
	comp=Z,30nm,0.9s						
USA0B	Ussuriysk Arra	45.84	61	P	P	18 24 14.3	-1.8
USRK	Ussuriysk Ar.	45.84	61	P	P	18 24 15.8	-0.3
	comp=Z,16nm,0.6s,baz=264,slow=8.8,SNR=29						
USRK				PP	PP	18 26 09.6	+4.4
	comp=Z,6.8nm,0.8s,baz=261,slow=7.5,SNR=5.2						
USRK				LR	LR	18 44 45.9	
	comp=Z,1µm,19.7s,baz=265,slow=38						
USRK	Ussuriysk Ar.	45.84	61	P	P	18 24 16.6	+0.5
USRK	Ussuriysk Ar.	45.84	61	P	P	18 24 16.6	+0.5
KSULJ	Uljin	45.87	72	P	P	18 24 18.4	+1.9
	SNR=7.2						
PDSI	Padang	45.89	138	P	P	18 24 16.2	-0.6
	comp=Z,3µmcomp=Z,5µmcomp=Z,340nm,0.8s						
HOMB	Homborsund	45.92	319	*i* P	P	18 24 16.0	-0.5
HOMB	Homborsund	45.92	319	*e*P	P	18 24 17.5	+1.0
VLA	Vladivostok	46.00	62*c*	*i*P	P	18 24 18.1	+0.7
VLA				pmax	pmax		
	comp=Z,144nm,0.8s						
MILB	Miltenberg	46.04	307	*e*P	P	18 24 18.6	+1.0
	comp=Z,678nm,1.9s,baz=85,slow=7.9						
DAVA	Damuels	46.04	304	*e*P	P	18 24 17.8	-0.1
	comp=Z,82nm,0.5s,SNR=60						
SKAR	Skarslia	46.07	322	*e*P	P	18 24 19.2	+1.5
STU	Stuttgart	46.26	306	*e*P	P	18 24 20.3	+1.0
	comp=Z,8µm,3.4s,baz=85,slow=7.9						
KASTN	Kahler Asten	46.42	309	*e*P	P	18 24 21.5	+0.9
	comp=Z,153nm,1.6s,baz=85,slow=7.9						
HLG	Helgoland	46.44	313	*e*P	P	18 24 21.7	+1.1
	comp=Z,2µm,2.1s,baz=85,slow=7.9						
MOL	Molde	46.51	325	*e*P	P	18 24 22.6	+1.5
TNS	Taunus Mts	46.53	308	*e*P	P	18 24 22.4	+0.9
	comp=Z,221nm,1.5s,baz=85,slow=7.9						
TUE	Stuetta	46.55	303	P	P	18 24 22.1	+0.2
TUE				IAmb	IAmb	18 24 57.9	
	comp=Z,126nm,1.2s						
JTU	Tsushima	46.57	74	P	P	18 24 20.9	-1.0
JTU				IAmb	IAmb	18 24 24.7	
	comp=Z,77nm,0.8s						
SNART	Snartemo	46.61	319	*i* P	P	18 24 22.0	+0.1
SNART	Snartemo	46.61	319	*e*P	P	18 24 23.2	+1.3
IBBN	Ibbenburen	46.70	311	*e*P	P	18 24 23.6	+0.9
	comp=Z,795nm,1.5s,baz=85,slow=7.9						
AKN	Aaknes	46.75	324	*e*P	P	18 24 24.6	+1.6
LODK	Lodwar	46.76	234	P	P	18 24 24.8	+1.1
	SNR=34						
MSSA	Maissana	46.87	300	P	P	18 24 24.3	0.0
MSSA				IAmb	IAmb	18 24 51.7	
	comp=Z,94nm,0.8s						
ODD1	Odda	46.89	321	*e*P	P	18 24 25.5	+1.4
BFO	Black Forest	46.90	305	P	P	18 24 24.8	+0.5
BFO				pmax	pmax		
	comp=Z,61nm,0.9s						
BFO	Black Forest	46.90	305	*e*P	P	18 24 24.7	+0.3
	comp=Z,131nm,1.4s,baz=85,slow=7.9						
BFO	Black Forest	46.90	305	P	P	18 24 24.8	+0.5
BUG	Bochum--Univer	47.10	310	*e*P	P	18 24 26.7	+0.9
	comp=Z,420nm,1.5s,baz=85,slow=7.9						
HYA	Hoyanger	47.11	323	*e*P	P	18 24 27.3	+1.5
JMJ	Miyako jima 2	47.18	89	P	P	18 24 29.6	+2.8
PPSI	Pulau Pagai	47.20	139	P	P	18 24 28.6	+1.6
	comp=Z,12µmcomp=Z,708nm,1.1s						
HSPB	Hornsund (broa	47.29	345	*e*P	P	18 24 28.6	+1.7
AHRW	Bad Neuenahr-A	47.35	309	*e*P	P	18 24 28.9	+1.1
	comp=Z,663nm,2.0s,baz=85,slow=7.9						
AHRW				*e*pP	pP	18 24 53.7	+2.2
AHRW				*e*sP	sP	18 25 04.1	+1.5
BER	Bergen	47.53	322	*e*P	P	18 24 30.0	+1.0
ASK	Askoy	47.60	322	*e*P	P	18 24 30.9	+1.3
KMY	Karmoy	47.61	320	*e*P	P	18 24 30.8	+1.2
GRNR	Gornyy	47.63	51⇑	*i*P	P	18 24 31.2	+1.2
GRNR				*e*S	S	18 31 21.6	+3.4
GRNR				pmax	pmax		
	comp=E,20nm,0.7s						
GRNR				pmax	pmax		
	comp=N,2.0nm,0.6s						
GRNR				pmax	pmax		
	comp=Z,30nm,0.7s						
GRNR				smax	smax		
	comp=E,4.0nm,0.8s						
GRNR				MLR	MLR		
	comp=N,490nm,13.0s						
GRNR				MLR	MLR		
	comp=E,820nm,13.0s						
GRNR				MLR	MLR		
	comp=Z,1µm,13.0s						
SPB2	Spitsbergen Ar	47.63	347	P	P	18 24 31.4	+1.7
SPB2				IAmb	IAmb	18 25 17.2	

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            comp=Z,151nm,1.0s
SPA0  Spitsbergen Ar   47.64 347  eP     P      18 24 30.9 +1.2
SPITS Spitsbergen Ar   47.64 347   P     P      18 24 31.3 +1.6
            comp=Z,43nm,0.6s,baz=116,slow=11,SNR=76
FOO   Floro            47.66 324  eP     P      18 24 31.2 +1.2
ECH   Echery           47.69 305   P     P      18 24 31.3 +0.8
ECH                                pmax  pmax
            comp=Z,250nm,1.8s
ECH   Echery           47.69 305   P     P      18 24 31.2 +0.8
ECH                                IAmb  IAmb   18 24 34.4
            comp=Z,250nm,1.8s
SUE   Sulen            47.80 323  eP     P      18 24 32.1 +0.9
DSRI  Dabo             47.88 133   P     P      18 24 32.9 +0.6
            comp=Z,2µmcomp=Z,3µmcomp=Z,178nm,1.2s
BTNL  Ternell          47.94 309  dP     P      18 24 33.7 +1.3
            comp=Z,73nm,0.9s
SENIN Lac Senin/Sane   47.96 303   P     P      18 24 32.9 +0.1
SENIN                              IAmb  IAmb   18 24 35.8
            comp=Z,139nm,1.1s
MEM   Membach          48.01 309  dP     P      18 24 33.6 +0.7
            comp=Z,69nm,1.0s
WLF   Walferdange      48.08 307  dP     P      18 24 35.6 +2.2
WLF                               dpP    pP     18 24 58.9 +1.7
WLF   Walferdange      48.08 307   P     P      18 24 35.3 +1.8
WLF                                pmax  pmax
            comp=Z,219nm,0.9s
WLF   Walferdange      48.08 307  eP     P      18 24 34.6 +1.2
            comp=Z,337nm,1.1s,baz=85,slow=7.9
WLF   Walferdange      48.08 307   P     P      18 24 35.3 +1.8
BEBN  Eben Emael       48.19 309  dP     P      18 24 36.3 +2.0
JNU   Nakatsue         48.21  76   P     P      18 24 35.7 +0.9
JNU   Nakatsue         48.21  76   P     P      18 24 36.7 +1.9
JMBI  JAMBI            48.26 135   P     P      18 24 35.8 +0.6
            comp=Z,3µmcomp=Z,120nm,0.8s
BCLA  Clavier          48.49 309  dP     P      18 24 38.1 +1.5
            comp=Z,29nm,1.2s
RCHB  Rochefort        48.58 308  dP     P      18 24 38.7 +1.4
            comp=Z,45nm,0.7s
BGES  Gesves           48.63 309  dP     P      18 24 38.8 +1.1
            comp=Z,35nm,1.0s
JOW   Kunigami         48.67  84   P     P      18 24 38.9 +0.5
JOW                                IAmb  IAmb   18 24 40.5
            comp=Z,91nm,0.7s
JOW   Kunigami         48.67  84   P     P      18 24 39.1 +0.8
MASI  Maura Aman, Be   48.71 137   P     P      18 24 38.3 -0.4
            comp=Z,11µmcomp=Z,894nm,1.1s
KBS   Kingsbay         48.76 347ceP      P      18 24 40.9 +2.7
KBS                                pmax  pmax
            comp=Z,463nm,2.5s
KBS   Kingsbay         48.76 347 i P     P      18 24 40.5 +2.3
KBS   Kingsbay         48.76 347  eP     P      18 24 40.1 +1.8
KBS   Kingsbay         48.76 347   P     P      18 24 39.4 +1.2
KBS                                IAmb  IAmb   18 24 42.3
            comp=Z,146nm,0.9s
BMRD  Maredsous        48.85 309  dP     P      18 24 40.8 +1.5
            comp=Z,99nm,1.2s
TEY   Ternei           48.87  59⇑eP      P      18 24 39.4 -0.2
TEY                               e             18 31 30.2
TEY                                pmax  pmax
            comp=E,30nm,0.8s
TEY                                pmax  pmax
            comp=Z,50nm,0.9s
TEY                                pmax  pmax
            comp=N,100nm,3.6s
TEY                                pmax  pmax
            comp=E,100nm,5.0s
DOU   Dourbes          48.99 308  dP     P      18 24 41.5 +1.1
            comp=Z,76nm,1.5s
UCC   Uccle            49.02 309  dP     P      18 24 42.3 +1.7
            comp=Z,16nm,0.7s
UCC                               dpP    pP     18 25 02.4 -2.0
UCC                               dsP    sP     18 25 13.1 -2.4
KMBO  Kilima Mbogo     49.09 228   P     P      18 24 42.4 +0.4
            comp=Z,19nm,0.5s,baz=33,slow=11,SNR=71
KMBO  Kilima Mbogo     49.09 228 i P     P      18 24 42.9 +1.0
            SNR=55
KMBO  Kilima Mbogo     49.09 228 i P     P      18 24 43.5 +1.6
KMBO                               pmax  pmax
            comp=Z,19nm,0.5s
KMBO  Kilima Mbogo     49.09 228   P     P      18 24 42.9 +1.0
KMBO                               IAmb  IAmb   18 24 45.8
            comp=Z,182nm,1.8s
SNF   Seneffe          49.11 309  dP     P      18 24 42.1 +0.8
            comp=Z,102nm,1.2s
JHS   Saijyo           49.28  72   P     P      18 24 43.0 +0.1
KSI   Kapahiang        49.33 137   P     P      18 24 43.3 -0.2
            comp=Z,12µmcomp=Z,737nm,0.8s
KEST  Kesra            49.44 289   P     P      18 24 44.3 +0.1
            comp=Z,18nm,0.6s,baz=18,slow=2.3,SNR=29
KIBK  Kibwezi          49.59 226   P     P      18 24 46.7 +1.2
            SNR=42
NKL   Nikolayevsk      49.85  47  eP     P      18 24 45.7 -1.2
NKL                               eS     S      18 31 48.6 -0.6
NKL                                pmax  pmax
            comp=N,7.0nm,0.7s
NKL                                pmax  pmax
            comp=E,9.0nm,0.9s
NKL                                pmax  pmax
            comp=Z,201nm,0.9s
NKL                                MLR   MLR
            comp=E,226nm,16.0s
NKL                                MLR   MLR
            comp=N,253nm,18.0s
NKL                                MLR   MLR
            comp=Z,610nm,13.0s
KSM   Kuching          49.97 125   P     P      18 24 49.0 +0.7
KSM   Kuching          49.97 125   P     P      18 24 50.0 +1.7
LHSI  Lahat            49.99 136   P     P      18 24 46.5 -1.9
            comp=Z,2µmcomp=Z,87nm,0.9s
MNAI  Manna            50.12 137   P     P      18 24 48.8 -0.6
MNAI  Manna            50.12 137   P     P      18 24 48.8 -0.6
JMN   Monobe           50.32  74   P     P      18 24 52.5 +1.6
SBUM  Sibu             50.53 122   P     P      18 24 54.0 +1.5
SBUM  Sibu             50.53 122   P     P      18 24 53.9 +1.5
SBUM                               IAmb  IAmb   18 24 56.2
            comp=Z,107nm,0.9s
LRW   Lerwick          50.79 322  eP     P      18 24 54.8 +0.9
LRW                                IAmb  IAmb   18 24 56.0
            comp=Z,236nm,1.1s
ELMS  Elmsett, Ipswi   50.84 311  eP     P      18 24 54.9 +0.5
MDSI  Maura Dua        50.90 136   P     P      18 24 52.3 -2.9
            comp=Z,1µmcomp=Z,688nmcomp=Z,28nm,1.0s
WACR  West Acre        50.94 312  eP     P      18 24 56.0 +0.9
WACR                               IAmb  IAmb   18 24 57.9
            comp=Z,572nm,0.9s
LWLI  Liwa             51.27 137   P     P      18 24 56.4 -1.7
            comp=Z,4µmcomp=Z,213nm,0.9s
KLSI                   51.37 136   P     P      18 24 55.9 -2.9
            comp=Z,1µmcomp=Z,59nm,0.7s
TYV   Tymovskoe        51.49  50  eP     P      18 25 01.4 +2.1
TYV                                pmax  pmax
            comp=Z,1µm,4.1s
TYV                                pmax  pmax
            comp=Z,33nm,0.9s
TPI   Tanjungpandan    51.53 131   P     P      18 25 00.5 +0.5
            comp=Z,3µmcomp=Z,89nm,1.0s
UGL   Uglegorsk        51.53  52  eP     P      18 25 00.7 +1.1
UGL                               eS     S      18 32 14.2 +1.6
UGL                                pmax  pmax
            comp=Z,130nm,1.0s
UGL                                smax  smax
            comp=N,1µm,4.0s
UGL                                smax  smax
            comp=E,1µm,4.0s
KLI   Kotabumi         51.59 136   P     P      18 24 57.7 -2.7
            comp=E,2µmcomp=E,92nm,0.6s
STKI  Sintang          51.79 125   P     P      18 25 03.4 +1.5
            comp=E,146nm,1.1s
SPMM  Sapulut          51.91 117   P     P      18 25 05.0 +2.1
KASI  Kota Agung       51.93 136   P     P      18 25 00.4 -2.5
            comp=E,2µmcomp=E,174nm,0.8s
HPK   Haverah Park     52.02 314  eP     P      18 25 03.9 +0.8
HPK                                IAmb  IAmb   18 25 05.8
            comp=Z,1µm,1.9s
EDMD  Edmundbyers      52.03 315⇑eP      P      18 25 03.9 +0.6
EDMD                               IAmb  IAmb   18 25 05.9
            comp=Z,320nm,1.2s
JSD   Sado             52.11  67   P     P      18 25 02.8 -1.3
INU   Inuyama          52.13  70   P     P      18 25 04.9 +0.7
INU                                IAmb  IAmb   18 25 07.2
            comp=Z,138nm,0.9s
INU   Inuyama          52.13  70   P     P      18 25 05.5 +1.2
BLSI  Bandar Lampung   52.22 136   P     P      18 25 02.6 -2.5
            comp=Z,1µmcomp=Z,79nm,1.3s
MCD   Coleburn Disti   52.23 319⇑eP      P      18 25 05.6 +1.0
EDU   Dundee           52.29 318  eP     P      18 25 05.2 +0.1
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EBL   Broad Law        52.45 317⇑eP      P      18 25 06.7 +0.4
EDI   Edinburgh        52.50 317  eP     P      18 25 07.5 +0.8
YSS   Yuzh-Sakhalins   52.52  55  eP     P      18 25 07.5 +0.5
YSS                               e*SP   sP     18 25 44.1 +1.1
YSS                               eS     S      18 32 25.8 -0.5
YSS                                pmax  pmax
            comp=Z,800nm,4.1s
YSS                                pmax  pmax
            comp=Z,120nm,0.9s
YSS                                MLR   MLR
            comp=Z,2µm,18.0s
YSS   Yuzh-Sakhalins   52.52  55   P     P      18 25 09.0 +2.0
MAJO  Matsushiro       52.59  69 i P     P      18 25 08.0 +0.3
MAJO                               pmax  pmax
            comp=Z,128nm,0.8s
MAJO  Matsushiro       52.59  69   P     P      18 25 07.8  0.0
MAJO  Matsushiro       52.59  69   P     P      18 25 08.5 +0.8
MAT   Matsushiro       52.59  69   P     P      18 25 07.3 -0.4
MAT                                S     S      18 32 29.6 +2.0
MJAR  Matsushiro Arr   52.60  69   P     P      18 25 07.7  0.0
            comp=Z,78nm,0.8s,baz=289,slow=8.3,SNR=147
MJAR                               LR    LR     18 48 08.3
            comp=Z,316nm,21.0s,baz=280,slow=37
MJAR  Matsushiro Arr   52.60  69   P     P      18 25 07.3 -0.4
MJAR                               IAmb  IAmb   18 25 09.9
            comp=Z,105nm,0.9s
SWN1  Swindon          52.66 311  eP     P      18 25 09.2 +1.2
SWN1                               IAmb  IAmb   18 25 10.9
            comp=Z,391nm,0.8s
KESW  Keswick, Cumbr   52.73 315  eP     P      18 25 09.4 +1.0
KESW                               IAmb  IAmb   18 25 11.2
            comp=Z,904nm,1.7s
JMIC  Jan Mayen        52.80 336   P     P      18 25 10.5 +1.8
            comp=Z,35nm,0.7s,baz=238,slow=4.4,SNR=5.5
JMIC  Jan Mayen        52.80 336  eP     P      18 25 09.9 +1.3
MBAR  Mbarara          52.81 235ceP      P      18 25 09.8 +0.1
MBAR  Mbarara          52.81 235   P     P      18 25 09.8 +0.1
STRD  Stroud           52.82 312  eP     P      18 25 09.2 +0.1
STRD                               IAmb  IAmb   18 25 11.3
            comp=Z,150nm,0.8s
JEW   Eniwo            52.84  60   P     P      18 25 09.6 +0.2
MDO   Dochfour         52.84 319⇑eP      P      18 25 09.7 +0.5
INVG  Invergeldie, C   52.87 318  eP     P      18 25 09.7 +0.2
INVG                               IAmb  IAmb   18 25 11.1
            comp=Z,283nm,1.5s
KOND  Kondoa           52.98 227 i P     P      18 25 10.3 -0.7
KOND                              e             18 25 13.6
            baz=37,slow=8.6
HLM1  Long Mynd        53.07 313  eP     P      18 25 11.6 +0.6
HLM1                               IAmb  IAmb   18 25 13.6
            comp=Z,304nm,1.5s
FOEL  Foel Wylfa       53.17 313  eP     P      18 25 12.9 +1.2
FOEL                               IAmb  IAmb   18 25 14.6
            comp=Z,1µm,2.1s
NEWG  New Galloway     53.25 316  eP     P      18 25 13.0 +0.8
NEWG                               IAmb  IAmb   18 25 14.2
            comp=Z,839nm,1.7s
MCH1  Michaelchurch    53.27 312⇑eP      P      18 25 12.8 +0.5
MCH1                               IAmb  IAmb   18 25 14.8
            comp=Z,327nm,0.9s
KAC   Achnashellach    53.33 319  eP     P      18 25 13.3 +0.5
KPL   Plockton         53.55 319  eP     P      18 25 15.0 +0.6
KPL                                IAmb  IAmb   18 25 16.0
            comp=Z,695nm,1.7s
GAL1  Galloway         53.58 316  eP     P      18 25 14.6  0.0
GAL1                               IAmb  IAmb   18 25 16.5
            comp=Z,350nm,1.6s
IOMK  Kirk Michael     53.64 315  eP     P      18 25 15.6 +0.5
IOMK                               IAmb  IAmb   18 25 17.9
            comp=Z,1µm,1.5s
LAWE  Loch Awe, Argy   53.65 318  eP     P      18 25 15.6 +0.5
LAWE                               IAmb  IAmb   18 25 17.9
            comp=Z,1µm,1.8s
SBV   Sambava          53.65 206   P     P      18 25 16.6 +1.1
YLL   Llanberis        53.68 314  eP     P      18 25 15.9 +0.5
WIM   Isle of Man      53.73 315⇑eP      P      18 25 16.2 +0.5
WLF1  Llynfaes         53.78 314  eP     P      18 25 17.1 +1.0
WLF1                               IAmb  IAmb   18 25 18.8
            comp=Z,2µm,2.2s
WPS   Cemaes, Angles   53.81 314  eP     P      18 25 17.8 +1.6
WPS                                IAmb  IAmb   18 25 19.0
            comp=Z,438nm,1.7s
YRC   Rhoscolyn        53.89 314⇑eP      P      18 25 17.5 +0.6
NOR   Nord             53.93 350 i       P      18 25 09.6 -7.2
NOR                             ⇑iP      P      18 25 18.0 +1.2
NOR                              i P     P      18 25 18.6 +1.7
NOR                                IAmb  IAmb   18 25 20.3
            comp=Z,247nm,1.7s
NOR                                IAmb  IAmb   18 25 49.9
            comp=N,7.3nm,0.7s
PBKI  Pangkalan Bun    54.00 127   P     P      18 25 18.6 +0.4
            comp=N,5µmcomp=N,310nm,0.8s
LEWI  Lewis, Hebride   54.01 320  eP     P      18 25 19.6 +1.9
DBJI  Dramaga          54.04 135   P     P      18 25 15.7 -2.8
            comp=N,2µmcomp=N,33nm,1.1s
MA2   Magadan          54.16  38 i P     P      18 25 18.8  0.0
MA2                                pmax  pmax
            comp=Z,42nm,1.2s
MA2   Magadan          54.16  38   P     P      18 25 19.4 +0.6
JYT   Yasato           54.20  68   P     P      18 25 19.1 -0.3
DYA   Yadsworthy       54.24 310⇑eP      P      18 25 20.1 +0.6
DYA                                IAmb  IAmb   18 25 21.7
            comp=Z,328nm,1.5s
ERM   Erimo            54.30  61   P     P      18 25 21.8 +1.7
RSBS  Rosebush, Pemb   54.32 312  eP     P      18 25 19.7 -0.4
RSBS                               IAmb  IAmb   18 25 22.0
            comp=Z,104nm,0.6s
LEM   Lembang          54.76 134   LR    LR     18 51 07.8
            comp=Z,296nm,19.0s,baz=320,slow=38
MTKI  Muara Teweh, K   54.82 123   P     P      18 25 24.5 +0.4
            comp=Z,2µmcomp=Z,2µmcomp=Z,136nm,0.8s
DAG   Danmarks Havn    54.90 344⇑iP      P      18 25 24.8 +0.9
DAG                                IAmb  IAmb   18 25 26.5
            comp=Z,63nm,0.9s
DAG                               i             18 25 49.1
DSB   Dublin           54.94 314   P     P      18 25 24.9 +0.5
DSB                                IAmb  IAmb   18 25 26.8
            comp=Z,62nm,1.0s
JHJ   Hachijo jima 2   55.11  72   LR    LR     18 51 19.4
            comp=Z,542nm,20.2s,baz=278,slow=38
CCA1  Carnmenellis     55.11 310  eP     P      18 25 25.5 -0.3
CCA1                               IAmb  IAmb   18 25 28.1
            comp=Z,180nm,0.9s
YUK   Yuzh-Kuril'sk    55.49  57  eP     P      18 25 26.9 -1.7
YUK                               e             18 26 25.7
YUK                               e             18 27 31.4
YUK                               ePPP   PPP    18 28 45.6
YUK                               eS     S      18 33 03.7 -2.6
YUK                               e             18 35 06.2
YUK                               eSS    SS     18 36 50.9 -1.1
YUK                                pmax  pmax
            comp=Z,581nm,1.3s
YUK                                pmax  pmax
            comp=Z,410nm,1.4s
YUK                                pmax  pmax
            comp=E,296nm,1.3s
YUK                                pmax  pmax
            comp=N,183nm,0.7s
DBG   Daneborg         55.77 341 i P     P      18 25 31.7 +1.5
DBG                                IAmb  IAmb   18 25 34.0
            comp=Z,93nm,1.1s
KPJI  Karang Pucung    55.93 133   P     P      18 25 29.7 -2.4
            comp=Z,1µmcomp=Z,39nm,0.7s
UWJI  Ujung Watu       56.42 131   P     P      18 25 37.3 +1.8
            comp=Z,12µmcomp=Z,533nm,1.0s
BBKI  Banjar Baru      56.64 125   P     P      18 25 38.1 +1.0
            comp=Z,5µmcomp=Z,284nm,1.0s
SCO   Scoresbysund     57.27 336 i P     P      18 25 42.8 +2.0
SCO                                IAmb  IAmb   18 25 44.4
            comp=Z,130nm,1.4s
UGM   Wanagama         57.34 132   P     P      18 25 40.3 -1.8
MPSI  Mapaga           57.40 117   P     P      18 25 44.0 +1.5
            comp=Z,3µmcomp=Z,5µmcomp=Z,272nm,1.3s
KBKI  Kotabaru         57.40 124   P     P      18 25 44.1 +1.6
            comp=Z,3µmcomp=Z,280nm,1.3s
NGJI  Ngawi            57.47 131   P     P      18 25 44.0 +1.0
            comp=Z,582nmcomp=Z,54nm,0.8s
TOLI2 Tolitoli         57.50 116   P     P      18 25 44.2 +1.0
ESBB  Sonseca Array    57.84 298   P     P      18 25 45.6 +0.2
ESBB                               IAmb  IAmb   18 26 12.6
            comp=Z,81nm,0.9s
ESDC  Sonseca Array    57.84 298   P     P      18 25 45.6 +0.2
            comp=Z,25nm,0.8s,baz=56,slow=7.3,SNR=71
ESDC                               LR    LR     18 55 34.6
            comp=Z,446nm,19.6s,baz=340,slow=41
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ESDC  Sonseca Array    57.84 298   P     P      18 25 45.4  0.0
ESDC                               IAmb  IAmb   18 26 12.5
            comp=Z,60nm,1.1s
BILL  Bilibino         58.48  26d iP     P      18 25 49.9 +0.6
BILL                              i             18 26 17.4
BILL                              e             18 28 06.5
BILL                              eS     S      18 33 51.1 +6.2
BILL                              eSS    SS     18 37 32.7 -5.3
BILL                               pmax  pmax
            comp=Z,187nm,2.1s
BILL                               MLR   MLR
            comp=Z,409nm,17.0s
BILL  Bilibino         58.48  26   P     P      18 25 50.0 +0.6
BILL                               IAmb  IAmb   18 25 51.9
            comp=Z,64nm,0.9s
MRSI  Marisa           58.77 116   P     P      18 25 53.2 +1.1
            comp=Z,3µmcomp=Z,7µmcomp=Z,708nm,0.8s
PBRG  Braganca         58.96 301  eP     P      18 25 54.8 +1.6
            comp=Z,90nm,1.6s
BLJI  Banyuglugur      59.08 129   P     P      18 25 53.8 -0.4
            comp=Z,2µmcomp=Z,88nm,1.5s
RER   Riviere de l'E   59.20 197   P     P      18 25 55.6 +0.7
GMJI  Gumukmas         59.40 130   P     P      18 25 55.3 -1.0
            comp=Z,85nm,0.9s
MVO   Moncorvo         59.41 301  eP     P      18 25 57.8 +1.5
            comp=Z,120nm,1.7s
MVO                               epP    pP     18 26 19.7 -1.2
MVO                               eS     S      18 34 01.4 +3.5
MVO   Moncorvo         59.41 301  eLR    LR     18 45 10.2
            comp=Z,567nm,20.0s
APSI  Ampana           59.51 117   P     P      18 25 58.2 +1.0
            comp=Z,4µmcomp=Z,346nm,1.5s
ABJI  Asem Bagus       59.52 129   P     P      18 25 57.2  0.0
            comp=Z,3µmcomp=Z,3µmcomp=Z,135nm,1.3s
TTSI  Tana Toraja      59.72 120   P     P      18 25 58.8 +0.2
            comp=Z,2µmcomp=Z,4µmcomp=Z,261nm,0.9s
PEA0B Petropavlovsk-   59.73  44   P     P      18 25 57.6 -0.6
PEA0B                              pmax  pmax
            comp=Z,95nm,1.4s
PEA0B Petropavlovsk-   59.73  44   P     P      18 25 57.6 -0.6
PEA0B                              IAmb  IAmb   18 27 12.4
            comp=Z,95nm,1.4s
PETK  Petropavlovsk-   59.73  44   P     P      18 25 56.8 -1.4
            comp=Z,11nm,0.7s,baz=338,slow=3.2,SNR=24
PETK                               LR    LR     18 55 04.0
            comp=Z,755nm,18.0s,baz=292,slow=39
PVRL  Vila Real        59.84 301  eP     P      18 26 00.7 +1.5
            comp=Z,131nm,1.7s
PVRL                              epP    pP     18 26 26.1 +2.2
POLO  Lamas de Olo     59.86 301  eP     P      18 26 00.6 +1.2
            comp=Z,58nm,1.6s
POLO                              epP    pP     18 26 25.7 +1.6
PCAB  Cabril           59.88 302  eP     P      18 26 02.8 +3.3
            comp=Z,189nm,1.3s
PCAB                              epP    pP     18 26 26.9 +2.7
PGAV  Gavieira, Arco   59.95 302  eP     P      18 26 01.7 +1.7
            comp=Z,252nm,1.5s
PGAV                              epP    pP     18 26 26.9 +2.2
PGAV                              eS     S      18 34 08.3 +3.5
PGAV  Gavieira, Arco   59.95 302  eLR    LR     18 45 49.8
            comp=Z,553nm,18.0s
JAGI  Jajag, Banyuwa   59.99 129   P     P      18 25 58.1 -2.3
MTE   Manteigas        60.08 300  eP     P      18 26 01.6 +0.7
            comp=Z,238nm,1.4s
MTE                               epP    pP     18 26 24.4 -1.1
MTE                               eS     S      18 34 10.8 +4.3
MTE   Manteigas        60.08 300  eLR    LR     18 45 59.2
            comp=Z,412nm,22.0s
PVIS  Viseu            60.19 301  eP     P      18 26 03.2 +1.6
            comp=Z,197nm,1.6s
PVIS                              epP    pP     18 26 28.5 +2.2
KMSI  Cibinong         60.20 114   P     P      18 26 02.4 +0.5
            comp=Z,4µmcomp=Z,373nm,0.8s
PCBR  Castelo Branco   60.26 299  eP     P      18 26 02.6 +0.6
            comp=Z,112nm,1.7s
PCBR                              epP    pP     18 26 28.6 +1.7
PET   Petropavlovsk    60.29  44  eP     P      18 26 01.2 -0.8
PET                               e*PP   pP     18 26 28.5 +1.3
PET                               e             18 26 39.2
PET                               e             18 28 16.7
PET                               eS     S      18 34 04.7 -3.9
PET                                pmax  pmax
            comp=Z,61nm,1.1s
PET                                pmax  pmax
            comp=Z,300nm,15.0s
PET                                pmax  pmax
            comp=Z,200nm,15.4s
PET                                MLR   MLR
            comp=Z,2µm,17.0s
PET   Petropavlovsk    60.29  44   P     P      18 26 01.5 -0.5
SPSI  Sidrap Palu      60.34 121   P     P      18 26 03.0 +0.2
            comp=Z,2µmcomp=Z,2µmcomp=Z,183nm,0.8s
SRBI  Singaraja        60.36 128   P     P      18 26 02.2 -0.8
            comp=Z,2µmcomp=Z,3µmcomp=Z,140nm,0.9s
PMRV  Marv??o          60.37 299  eP     P      18 26 04.1 +1.3
            comp=Z,154nm,1.7s
PMRV                              epP    pP     18 26 29.2 +1.5
PMRV  Marv??o          60.37 299  ePP    PP     18 28 16.6  0.0
PMRV                              eS     S      18 34 13.4 +3.3
PMRV  Marv??o          60.37 299  eLR    LR     18 44 41.9
            comp=Z,407nm,20.0s
LUWI  Luwuk            60.41 116   P     P      18 26 03.0 -0.4
PBAR  Barrancos        60.64 298  eP     P      18 26 05.3 +0.6
            comp=Z,152nm,1.3s
PBAR                              epP    pP     18 26 29.4 -0.2
PESTR Estremoz         60.74 299  eP     P      18 26 06.1 +0.7
            comp=Z,93nm,1.3s
PESTR                             epP    pP     18 26 32.1 +1.8
PESTR Estremoz         60.74 299   P     P      18 26 05.7 +0.3
COI   Coimbra          60.76 300  eP     P      18 26 07.5 +2.1
            comp=Z,233nm,1.6s
COI                               epP    pP     18 26 29.3 -0.8
DNP   Denpasar         60.81 129   P     P      18 26 04.6 -1.4
            comp=Z,198nm,0.9s
IGBI  Denpasar         60.88 129   P     P      18 26 05.0 -1.5
            comp=Z,1µmcomp=Z,82nm,0.8s
BNSI  Bone             60.88 121   P     P      18 26 06.1 -0.4
            comp=Z,3µmcomp=Z,2µmcomp=Z,113nm,1.0s
PCAS  Casmilo, Conde   60.88 300  eP     P      18 26 08.3 +2.0
            comp=Z,142nm,1.6s
PCAS                              epP    pP     18 26 32.8 +1.8
KAPI  Kappang          61.08 122   P     P      18 26 07.3 -0.6
KAPI                               pmax  pmax
            comp=Z,114nm,0.9s
KAPI  Kappang          61.08 122   P     P      18 26 07.3 -0.6
KAPI                               IAmb  IAmb   18 26 10.5
            comp=Z,114nm,0.8s
PMTG  Montargil        61.11 299  eP     P      18 26 07.4 -0.4
            comp=Z,92nm,1.7s
PMTG                              epP    pP     18 26 34.0 +1.3
NEEM  North Greenlan   61.17 348 i P     P      18 26 08.6 +0.6
NEEM                               IAmb  IAmb   18 26 12.5
            comp=Z,84nm,0.8s
NEEM                              i             18 26 33.6
EVO   Evora            61.18 298  eP     P      18 26 08.5 +0.2
            comp=Z,140nm,1.8s
EVO                               epP    pP     18 26 35.3 +2.0
SUMG  Summit           61.24 341 i       P      18 26 04.2 -4.5
SUMG                            ⇑iP      P      18 26 10.1 +1.4
SUMG                             i P     P      18 26 11.4 +2.8
SUMG                               IAmb  IAmb   18 26 13.1
            comp=N,17nm,0.9s
SUMG                               IAmb  IAmb   18 26 13.9
            comp=Z,154nm,0.9s
SUMG                              i             18 26 34.8
PBEJ  Beja             61.29 298  eP     P      18 26 09.6 +0.5
            comp=Z,109nm,1.8s
PBEJ                              epP    pP     18 26 35.9 +1.9
PSBE  So Bento         61.32 300  eP     P      18 26 09.8 +0.5
            comp=Z,268nm,1.4s
PSBE                              epP    pP     18 26 36.6 +2.4
PVAQ  Vaqueiros        61.45 297  eP     P      18 26 10.5 +0.3
            comp=Z,154nm,1.3s
PVAQ                              epP    pP     18 26 37.0 +1.9
PVAQ                              eS     S      18 34 26.4 +2.4
PVAQ  Vaqueiros        61.45 297  eLR    LR     18 46 21.8
            comp=Z,579nm,18.0s
PVAQ  Vaqueiros        61.45 297   P     P      18 26 08.9 -1.3
PVAQ                               IAmb  IAmb   18 26 38.2
            comp=Z,74nm,1.0s
BKSI  Bulukumba        61.56 122   P     P      18 26 10.9 -0.2
            comp=Z,3µmcomp=Z,145nm,0.8s
PCVE  Castro Verde     61.59 297  eP     P      18 26 12.2 +1.1
            comp=Z,119nm,2.0s
PCVE                              epP    pP     18 26 37.4 +1.4
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MESJ	**Messejana**	**61.63**	**298**	*e*P	**P**	**18 26 12.4**	**+1.1**
MESJ				*e*S	**S**	**18 34 27.8**	**+1.7**
MESJ				IAMs_20	IAMs_20	18 43 23.5	
	comp=N,779nm,11.4s						
MESJ	**Messejana**	**61.63**	**298**	*e*P	**P**	**18 26 10.8**	**-0.5**
	comp=N,77nm,1.0s						
MESJ				*e*pP	**pP**	**18 26 38.3**	**+2.0**
MESJ	**Messejana**	**61.63**	**298**	*e*P	**P**	**18 26 12.4**	**+1.1**
MESJ				*e*S	**S**	**18 34 27.8**	**+1.7**
PBDV	**Barranco-do-Ve**	**61.68**	**297**	*e*P	**P**	**18 26 12.8**	**+1.1**
	comp=N,181nm,1.6s						
PBDV				*e*pP	**pP**	**18 26 38.8**	**+2.1**
PNCL	**Nicolau / Gran**	**61.73**	**298**	*e*P	**P**	**18 26 12.1**	**+0.1**
	comp=N,147nm,1.9s						
PNCL				*e*pP	**pP**	**18 26 39.2**	**+2.2**
PMAFR	**Mafra**	**61.90**	**299**	*e*P	**P**	**18 26 14.5**	**+1.3**
	comp=N,282nm,1.2s						
PMAFR				*e*pP	**pP**	**18 26 39.9**	**+1.8**
LIS	**Lisbon**	**61.91**	**299**	*e*S	**S**	**18 34 31.2**	**+1.6**
TWSI	**Taliwang, Sumb**	**61.92**	**127**	P	**P**	**18 26 10.8**	**-2.7**
	comp=N,1µmcomp=N,507nmcomp=N,28nm,0.7s						
PTEO	**Sao Teotonio**	**62.12**	**298**	*e*P	**P**	**18 26 15.4**	**+0.8**
	comp=N,196nm,1.8s						
PTEO				*e*pP	**pP**	**18 26 41.7**	**+2.1**
MORF	**Marmelete**	**62.17**	**297**	*e*P	**P**	**18 26 16.1**	**+1.0**
MORF				*e*S	**S**	**18 34 34.7**	**+1.6**
MORF				IAMs_20	IAMs_20	18 58 08.0	
	comp=Z,1µm,11.3s						
MORF	**Marmelete**	**62.17**	**297**	*e*pP	**pP**	**18 26 40.1**	**+0.1**
MORF				A	A	18 26 44.9	
	comp=Z,94nm,1.7s						
MORF	**Marmelete**	**62.17**	**297**	*e*P	**P**	**18 26 16.0**	**+1.0**
MORF				*e*S	**S**	**18 34 34.6**	**+1.6**
PFVI	**Vila Bisbo**	**62.37**	**297**	*e*pP	**pP**	**18 26 43.1**	**+1.8**
PFVI				A	A	18 26 58.2	
	comp=Z,209nm,1.6s						
BSSI	**Bau Bau, Buton**	**62.40**	**122**	P	**P**	**18 26 16.2**	**-0.5**
	comp=Z,2µmcomp=Z,5µmcomp=Z,344nm,0.9s						
VOI	**Vohitsoka**	**62.56**	**206**	P	**P**	**18 26 18.4**	**+0.7**
VOI	**Vohitsoka**	**62.56**	**206**	P	**P**	**18 26 18.4**	**+0.7**
PLAI	**Plampang**	**62.57**	**126**	P	**P**	**18 26 14.9**	**-2.9**
	comp=Z,1µmcomp=Z,102nm,0.9s						
TNTI	**Ternate**	**62.59**	**111**	P	**P**	**18 26 17.4**	**-0.7**
EUNU	**Eureka**	**63.09**	**356**	P	**P**	**18 26 21.1**	**+0.6**
ICESG	**Greenland Ices**	**63.41**	**338**	⇑*i*P	**P**	**18 26 24.6**	**+1.5**
ICESG				IAmb	IAmb	18 26 26.1	
	comp=Z,554nm,1.4s						
ICESG				*i*		18 26 49.2	
SANI	**Sanana**	**63.44**	**115**	P	**P**	**18 26 23.6**	**-0.1**
	comp=Z,4µmcomp=Z,6µmcomp=Z,322nm,1.8s						
SANI	**Sanana**	**63.44**	**115**	P	**P**	**18 26 23.3**	**-0.4**
LBMI	**Labuha**	**63.62**	**112**	P	**P**	**18 26 25.1**	**+0.3**
	comp=Z,2µmcomp=Z,4µmcomp=Z,264nm,1.4s						
WBSI	**Waikabubak, Su**	**64.23**	**126**	P	**P**	**18 26 26.2**	**-2.6**
	comp=Z,5µmcomp=Z,338nm,0.7s						
TULEG	**Thule**	**64.56**	**350**	⇑*i*P	**P**	**18 26 30.6**	**+0.5**
TULEG				*i*		18 26 54.9	
ANGG	**Ammassalik, Gr**	**64.64**	**334**	⇑*i*P	**P**	**18 26 31.7**	**+1.0**
ANGG				IAmb	IAmb	18 26 33.3	
	comp=Z,482nm,1.4s						
EDFI	**Ende, Flores**	**65.11**	**123**	P	**P**	**18 26 31.3**	**-3.3**
	comp=Z,1µmcomp=Z,111nm,0.8s						
UPNV	**Upernavik**	**65.29**	**345**	⇑*i*P	**P**	**18 26 35.9**	**+1.0**
UPNV				IAmb	IAmb	18 26 37.5	
	comp=Z,136nm,1.0s						
MMRI	**Maumere**	**65.39**	**123**	P	**P**	**18 26 34.5**	**-1.8**
	comp=Z,4µmcomp=Z,365nm,0.8s						
MMRI	**Maumere**	**65.39**	**123**	P	**P**	**18 26 34.7**	**-1.6**
BASI	**Baing, Sumba**	**65.44**	**125**	P	**P**	**18 26 35.2**	**-1.4**
	comp=Z,9µmcomp=Z,964nm,1.3s						
LSZ	**Lusaka**	**65.71**	**227**	P	**P**	**18 26 38.5**	**0.0**
LSZ				pmax	pmax		
	comp=Z,363nm,1.6s						
LSZ	**Lusaka**	**65.71**	**227**	P	**P**	**18 26 38.5**	**0.0**
TORD	**Torodi Ar. Bea**	**66.12**	**269**	P	**P**	**18 26 39.4**	**-1.7**
	comp=Z,59nm,0.5s,baz=47,slow=5.7,SNR=654						
TORD				LR	LR	18 57 55.3	
	comp=Z,400nm,21.7s,baz=30,slow=38						
TORD	**Torodi Ar. Bea**	**66.12**	**269**	P	**P**	**18 26 38.8**	**-2.3**
TORD				IAmb	IAmb	18 27 17.3	
	comp=Z,91nm,0.8s						
AAI	**Ambon**	**66.17**	**114**	P	**P**	**18 26 41.0**	**-0.3**
	comp=Z,3µmcomp=Z,203nm,1.8s						
MSAI	**Masohi**	**66.48**	**113**	P	**P**	**18 26 43.9**	**+0.6**
	comp=Z,36nm,0.7s						
ILULI	**Ilulissat**	**66.59**	**341**	⇑*i*P	**P**	**18 26 44.4**	**+1.2**
ILULI				IAmb	IAmb	18 26 46.3	
	comp=Z,355nm,1.1s						
ILULI				*i*		18 27 09.3	
SWI	**Sorong**	**66.59**	**110**	P	**P**	**18 26 44.3**	**+0.2**
	comp=Z,5µmcomp=Z,326nm,1.1s						
DY2G	**Dye2**	**66.99**	**337**	⇑*i*P	**P**	**18 26 47.6**	**+1.5**
DY2G				IAmb	IAmb	18 26 49.5	
	comp=Z,386nm,1.0s						
DY2G				*i*		18 27 12.4	
A21K	**Barrow**	**67.26**	**15**	P	**P**	**18 26 47.9**	**+0.4**
	baz=320						
BATI	**Baumata**	**67.49**	**123**	P	**P**	**18 26 48.7**	**-1.1**
	comp=Z,4µmcomp=Z,392nm,0.7s						
SOEI	**Soe**	**67.58**	**122**	P	**P**	**18 26 49.4**	**-1.1**
SOEI	**Soe**	**67.58**	**122**	P	**P**	**18 26 49.9**	**-0.5**
SFJD	**Kangerlussuaq**	**67.95**	**339**	P	**P**	**18 26 52.2**	**+0.3**
SFJD				pmax	pmax		
	comp=Z,149nm,1.1s						
SFJD	**Kangerlussuaq**	**67.95**	**339**	*i* P	**P**	**18 26 51.5**	**-0.4**
SFJD				IAmb	IAmb	18 26 53.9	
	comp=Z,94nm,1.1s						
SFJD	**Kangerlussuaq**	**67.95**	**339**	P	**P**	**18 26 52.2**	**+0.3**
SFJD				IAmb	IAmb	18 26 54.8	
	comp=Z,148nm,1.1s						
BNDI	**Bandanaira**	**67.98**	**114**	P	**P**	**18 26 52.5**	**-0.3**
RDOG	**Red Dog Mine**	**68.18**	**19**	P	P	18 26 59.4	+6.0
	baz=315						
GAMB	**Gambell**	**68.38**	**25**	P	**P**	**18 26 55.5**	**+1.0**
	baz=309						
GAMB	**Gambell**	**68.38**	**25**	P	**P**	**18 26 55.0**	**+0.4**
TNA	**Tin City**	**68.46**	**23**	P	**P**	**18 26 55.5**	**+0.4**
	baz=312,SNR=5.1						
TNA	**Tin City**	**68.46**	**23**	P	**P**	**18 26 55.4**	**+0.4**
FAKI	**Fak Fak**	**68.68**	**111**	P	**P**	**18 26 57.6**	**+0.4**
	comp=Z,4µmcomp=Z,168nm,1.0s						
FAKI	**Fak Fak**	**68.68**	**111**	P	**P**	**18 26 57.6**	**+0.4**
FAKI	**Fak Fak**	**68.68**	**111**	P	**P**	**18 26 57.6**	**+0.4**
RES	**Resolute Bay**	**68.78**	**356**	P	**P**	**18 26 57.4**	**+0.5**
RES				pmax	pmax		
	comp=Z,75nm,1.5s						
RES	**Resolute Bay**	**68.78**	**356**	P	**P**	**18 26 57.4**	**+0.5**
MATP	**Matopo**	**69.64**	**223**	*i* P	**P**	**18 27 03.4**	**+0.3**
MATP	**Matopo**	**69.64**	**223**	*i* P	**P**	**18 27 03.4**	**+0.3**
ANM	**Nome**	**69.93**	**23**	P	**P**	**18 27 04.9**	**+0.7**
ANM				pmax	pmax		
	comp=Z,76nm,0.9s						
ANM	**Nome**	**69.93**	**23**	P	**P**	**18 27 05.2**	**+1.0**
	baz=314,SNR=17						
ANM	**Nome**	**69.93**	**23**	P	**P**	**18 27 04.9**	**+0.7**
KOWA	**Kowa**	**69.98**	**273**	P	**P**	**18 27 03.5**	**-1.8**
NRS	**Narsarsuaq**	**70.11**	**333**	*i* P	**P**	**18 27 07.0**	**+1.7**
NRS				IAmb	IAmb	18 27 08.7	
	comp=Z,145nm,1.0s						
NUUK	**Nuuk**	**70.23**	**337**	*i* P	**P**	**18 27 07.1**	**+1.2**
NUUK				IAmb	IAmb	18 27 08.7	
	comp=Z,245nm,1.3s						
MSNA	**Messina**	**70.39**	**221**	*i* P	**P**	**18 27 07.3**	**-0.2**
MSNA	**Messina**	**70.39**	**221**	*i* P	**P**	**18 27 07.3**	**-0.2**
BAKI	**Biak**	**70.52**	**107**	P	**P**	**18 27 11.5**	**+3.0**
	comp=Z,4µmcomp=Z,240nm,1.5s						
MOPA	**Mopani**	**70.64**	**219**	*i* P	**P**	**18 27 09.3**	**+0.2**
MOPA	**Mopani**	**70.64**	**219**	*i* P	**P**	**18 27 09.3**	**+0.2**
TOLK	**Toolik Lake Re**	**70.87**	**15**	P	**P**	**18 27 10.3**	**+0.4**
	baz=326,SNR=118						
TOLK	**Toolik Lake Re**	**70.87**	**15**	P	**P**	**18 27 10.4**	**+0.4**
TOLK				IAmb	IAmb	18 27 50.8	
	comp=Z,148nm,0.8s						
SRPI	**Serui, Papua**	**71.05**	**107**	P	**P**	**18 27 12.8**	**+1.1**
	comp=Z,2µmcomp=Z,113nm,1.5s						
IVI	**Ivigtut**	**71.08**	**334**	*i* P	**P**	**18 27 12.2**	**+1.0**
A36M	**Sachs Harbour**	**71.22**	**5**	P	**P**	**18 27 12.3**	**+0.5**
	baz=346,SNR=89						
A36M	**Sachs Harbour**	**71.22**	**5**	P	**P**	**18 27 12.7**	**+0.9**
A36M				IAmb	IAmb	18 27 40.2	
	comp=Z,110nm,0.8s						
GIRL	**Giralia**	**71.29**	**139**		**P**	**18 27 13.7**	**+0.8**
GIRL	**Giralia**	**71.29**	**139**	P	**P**	**18 27 13.1**	**+0.2**
COLD	**Coldfoot**	**71.91**	**16**	P	**P**	**18 27 16.3**	**+0.1**
	baz=326,SNR=50						
COLD	**Coldfoot**	**71.91**	**16**		**P**	**18 27 16.3**	**+0.1**
COLD				IAmb	IAmb	18 27 18.9	
	comp=Z,94nm,1.0s						
IMAR	**Indian Mountai**	**72.10**	**18**	P	**P**	**18 27 17.0**	**-0.3**
GCSA	**Galena City Sc**	**72.27**	**20**	P	**P**	**18 27 18.7**	**+0.5**
	baz=321,SNR=26						
H21K	**Melozitna Rive**	**72.60**	**18**	P	**P**	**18 27 20.3**	**0.0**
	baz=324						
H21K	**Melozitna Rive**	**72.60**	**18**	P	**P**	**18 27 20.2**	**0.0**
BMAR	**Burnt Mountain**	**72.90**	**14**	P	**P**	**18 27 21.9**	**-0.2**
SMPI	**Sarmi**	**73.03**	**106**	P	**P**	**18 27 26.2**	**+2.6**
	comp=Z,3µmcomp=Z,158nm,1.6s						
I21K	**Tanana**	**73.19**	**18**	P	**P**	**18 27 23.9**	**+0.2**
	baz=325,SNR=28						
I21K	**Tanana**	**73.19**	**18**	P	**P**	**18 27 23.8**	**+0.1**
MBWA	**Marble Bar**	**73.19**	**133**	P	**P**	**18 27 24.5**	**+0.2**
J20K	**Nowinta River**	**73.45**	**19**	P	**P**	**18 27 25.6**	**+0.3**
	baz=323,SNR=54						
J20K	**Nowinta River**	**73.45**	**19**	P	**P**	**18 27 25.1**	**-0.1**
J20K				IAmb	IAmb	18 27 27.5	
	comp=Z,108nm,0.9s						
FYU	**Fort Yukon**	**73.52**	**14**	P	**P**	**18 27 25.7**	**+0.1**
FYU				IAmb	IAmb	18 27 28.5	
	comp=Z,198nm,1.2s						
PSA00	**Pilbara Seismi**	**73.58**	**134**	P	**P**	**18 27 25.8**	**-0.8**
PSA00				IAmb	IAmb	18 27 55.1	
	comp=Z,229nm,1.2s						
PSA00	**Pilbara Seismi**	**73.58**	**134**	P	**P**	**18 27 26.1**	**-0.4**
PSA00				IAmb	IAmb	18 27 55.1	
	comp=Z,144nm,1.3s						
PSA00	**Pilbara Seismi**	**73.58**	**134**	P	**P**	**18 27 25.8**	**-0.8**
H24K	**Noodor Dome**	**73.59**	**16**	P	**P**	**18 27 26.6**	**+0.5**
	baz=328						
H24K	**Noodor Dome**	**73.59**	**16**	P	**P**	**18 27 26.7**	**+0.5**
MLY	**Manley**	**73.61**	**17**	P	**P**	**18 27 26.5**	**+0.2**
	baz=326						
MLY	**Manley**	**73.61**	**17**	P	**P**	**18 27 26.2**	**-0.1**
I23K	**Minto, Yukon-K**	**73.84**	**17**	P	**P**	**18 27 27.7**	**+0.2**
	baz=327,SNR=59						
I23K	**Minto, Yukon-K**	**73.84**	**17**	P	**P**	**18 27 26.9**	**-0.7**
I23K				IAmb	IAmb	18 27 30.4	
	comp=Z,97nm,1.1s						
INK	**Inuvik**	**73.89**	**9**	P	**P**	**18 27 27.9**	**+0.1**
INK				pmax	pmax		
	comp=Z,262nm,1.3s						
INK	**Inuvik**	**73.89**	**9**	P	**P**	**18 27 28.0**	**+0.3**
	baz=339,SNR=132						
INK	**Inuvik**	**73.89**	**9**	P	**P**	**18 27 27.9**	**+0.1**
INK				IAmb	IAmb	18 27 30.0	
	comp=Z,262nm,1.3s						
TTA	**Tatalina**	**73.93**	**21**	P	**P**	**18 27 28.5**	**+0.3**
TTA				pmax	pmax		
	comp=Z,77nm,1.2s						
TTA	**Tatalina**	**73.93**	**21**	P	**P**	**18 27 28.5**	**+0.3**
	baz=322,SNR=19						
TTA	**Tatalina**	**73.93**	**21**	P	**P**	**18 27 28.5**	**+0.3**
DRS	**Darwin Rock St**	**74.07**	**119**	P	**P**	**18 27 29.1**	**-0.5**
K20K	**Telida**	**74.13**	**20**	P	**P**	**18 27 29.5**	**+0.2**
	baz=323,SNR=62						
K20K	**Telida**	**74.13**	**20**	P	**P**	**18 27 29.5**	**+0.2**
K20K				IAmb	IAmb	18 27 31.5	
	comp=Z,165nm,1.1s						
CHUM	**Lake Minchumin**	**74.17**	**19**	P	**P**	**18 27 29.6**	**+0.2**
	baz=325						
MDM	**Murphy Dome**	**74.26**	**16**	P	**P**	**18 27 30.1**	**+0.1**
MDM				IAmb	IAmb	18 28 13.8	
	comp=Z,110nm,1.0s						
POKR	**Poker Plat Res**	**74.30**	**16**	P	**P**	**18 27 30.7**	**+0.4**
	baz=328,SNR=43						
BPAW	**Bear Paw Mtn.**	**74.32**	**18**	P	**P**	**18 27 30.2**	**-0.2**
	baz=326,SNR=36						
BPAW	**Bear Paw Mtn.**	**74.32**	**18**	P	**P**	**18 27 29.8**	**-0.6**
PRP	**Porcupine Dome**	**74.37**	**15**	P	**P**	**18 27 31.4**	**+0.6**
	baz=330						
NEA2	**Nenana**	**74.37**	**17**	P	**P**	**18 27 30.4**	**-0.3**
	baz=327,SNR=97						
TCOL	**CIGO, UAF Yank**	**74.42**	**16**	P	**P**	**18 27 31.2**	**+0.4**
	baz=328,SNR=36						
MTN	**Manton Dam**	**74.52**	**119**	P	**P**	**18 27 31.6**	**-0.5**
MTN				IAmb	IAmb	18 28 01.6	
	comp=Z,122nm,1.1s						
MTN	**Manton Dam**	**74.52**	**119**	P	**P**	**18 27 31.5**	**-0.7**
CAST	**Castle Rocks**	**74.60**	**19**	P	**P**	**18 27 34.0**	**+1.9**
	baz=325						
CCB	**Clear Creek Bu**	**74.62**	**16**	P	**P**	**18 27 31.6**	**-0.4**
CCB				IAmb	IAmb	18 27 33.3	
	comp=Z,264nm,2.0s						
BWN	**Browne**	**74.63**	**17**	P	**P**	**18 27 32.6**	**+0.4**
BWN				IAmb	IAmb	18 27 34.6	
	comp=Z,177nm,0.9s						
IL31		**74.72**	**16**	P	**P**	**18 27 32.0**	**-0.6**
ILAR	**Eielson Array**	**74.72**	**16**	P	**P**	**18 27 31.8**	**-0.9**
	comp=Z,40nm,0.9s,baz=332,slow=3.6,SNR=118						
ILAR				LR	LR	19 03 56.0	
	comp=Z,416nm,18.7s,baz=334,slow=38						
KTH	**Kantishna Hill**	**74.79**	**18**	P	**P**	**18 27 32.9**	**-0.3**
KTH				IAmb	IAmb	18 27 35.4	
	comp=Z,120nm,0.9s						
L19K	**White Mountain**	**74.86**	**21**	P	**P**	**18 27 34.1**	**+0.5**
	baz=323,SNR=17						
L19K	**White Mountain**	**74.86**	**21**	P	**P**	**18 27 33.6**	**+0.1**
KNRA	**Kununurra**	**74.86**	**123**	P	**P**	**18 27 34.1**	**0.0**
KNRA	**Kununurra**	**74.86**	**123**	P	**P**	**18 27 33.6**	**-0.5**
L20K	**Farewell, AK**	**74.89**	**20**	P	**P**	**18 27 33.9**	**+0.2**
	baz=324,SNR=34						
LBTB	**Lobatse**	**74.91**	**222**	P	**P**	**18 27 34.6**	**+0.2**
LBTB				pmax	pmax		
	comp=Z,776nm,1.7s						
LBTB	**Lobatse**	**74.91**	**222**	P	**P**	**18 27 34.6**	**+0.2**
JAY	**Jayapura**	**74.92**	**105**	P	**P**	**18 27 37.3**	**+2.7**
	comp=Z,893nmcomp=Z,51nm,1.5s						
PPLA	**Purkeypile**	**75.01**	**19**	P	**P**	**18 27 34.4**	**-0.2**
	baz=325						
PPLA	**Purkeypile**	**75.01**	**19**	P	**P**	**18 27 34.3**	**-0.2**
PPLA				IAmb	IAmb	18 27 36.0	
	comp=Z,80nm,0.7s						
HDA	**Harding Lake**	**75.02**	**16**	P	**P**	**18 27 33.4**	**-1.0**
	baz=329,SNR=28						
HDA	**Harding Lake**	**75.02**	**16**	P	**P**	**18 27 33.5**	**-0.8**
TRF	**Thorofare Moun**	**75.04**	**18**	P	**P**	**18 27 34.0**	**-0.7**
	baz=326						
TRF	**Thorofare Moun**	**75.04**	**18**	P	**P**	**18 27 34.4**	**-0.3**
DBIC	**Dimbokro**	**75.10**	**267**	P	**P**	**18 27 33.9**	**-1.8**
	comp=Z,16nm,0.5s,baz=47,slow=5.9,SNR=58						
DBIC				LR	LR	19 04 15.2	
	comp=Z,442nm,18.7s,baz=69,slow=38						
DBIC	**Dimbokro**	**75.10**	**267**	P	**P**	**18 27 33.6**	**-2.0**
MCK	**McKinley**	**75.13**	**17**	P	**P**	**18 27 34.4**	**-0.7**
MCK				pmax	pmax		
	comp=Z,104nm,1.2s						
MCK	**McKinley**	**75.13**	**17**	P	**P**	**18 27 34.3**	**-0.7**
	baz=327,SNR=37						
MCK	**McKinley**	**75.13**	**17**	P	**P**	**18 27 34.4**	**-0.7**
KIC	**Kosan Boka**	**75.19**	**267**	*e*PKIKP	**P**	**18 27 34.3**	**-1.9**
	comp=Z,54nm,0.6s						
J25K	**Salcha River,**	**75.19**	**16**	P	**P**	**18 27 34.8**	**-0.7**
	baz=330,SNR=53						
TSUM	**Tsumeb**	**75.20**	**232**	P	**P**	**18 27 35.7**	**-0.5**
TSUM				IAmb	IAmb	18 27 37.7	
	comp=Z,273nm,1.6s						
M19K	**Big River Lodg**	**75.21**	**21**	P	**P**	**18 27 35.9**	**+0.4**
	baz=323						
M19K	**Big River Lodg**	**75.21**	**21**	P	**P**	**18 27 35.8**	**+0.2**
M19K				IAmb	IAmb	18 27 38.0	
	comp=Z,164nm,1.8s						
EPYK	**Eagle Plains**	**75.23**	**11**	P	**P**	**18 27 35.3**	**-0.4**
	baz=337,SNR=30						
EPYK	**Eagle Plains**	**75.23**	**11**	P	**P**	**18 27 35.2**	**-0.5**
EPYK				IAmb	IAmb	18 27 37.4	
	comp=Z,200nm,1.6s						
TIC	**Toumodi**	**75.25**	**267**	*e*PKIKP	**P**	**18 27 34.6**	**-1.9**
KDU	**Kakadu**	**75.36**	**118**	P	**P**	**18 27 36.3**	**-0.7**
RND	**Reindeer**	**75.43**	**18**	P	**P**	**18 27 35.9**	**-0.9**
RND				pmax	pmax		
	comp=Z,115nm,1.2s						
RND	**Reindeer**	**75.43**	**18**	P	**P**	**18 27 35.9**	**-0.9**
RND				IAmb	IAmb	18 27 37.6	
	comp=Z,115nm,1.2s						
LIC	**Lamto**	**75.50**	**267**	*e*PKIKP	**P**	**18 27 34.5**	**-3.4**
	comp=Z,91nm,0.7s						
J26L	**Joseph Creek**	**75.67**	**15**	P	**P**	**18 27 38.0**	**-0.3**
	baz=332,SNR=57						
I29M	**Ogilvie Camp,**	**75.90**	**12**	P	**P**	**18 27 39.4**	**0.0**
	baz=336,SNR=9.4						
EGAK	**Eagle**	**75.90**	**14**	P	**P**	**18 27 39.9**	**+0.5**
	baz=333,SNR=27						
EGAK	**Eagle**	**75.90**	**14**	P	**P**	**18 27 38.1**	**-1.3**
CUT	**Chulitna**	**75.91**	**19**	P	**P**	**18 27 38.8**	**-0.7**
	baz=326,SNR=11						
WAT1	**Susitna Watana**	**75.99**	**18**	P	**P**	**18 27 39.0**	**-1.1**
	baz=328						
SCRK	**Sand Creek**	**76.04**	**15**	P	**P**	**18 27 40.4**	**0.0**
	baz=331,SNR=48						
SCRK	**Sand Creek**	**76.04**	**15**	P	**P**	**18 27 40.2**	**-0.2**
DHY	**Denali Highway**	**76.06**	**17**	P	**P**	**18 27 40.1**	**-0.4**
	baz=329						
DHY	**Denali Highway**	**76.06**	**17**	P	**P**	**18 27 40.0**	**-0.6**
DHY				IAmb	IAmb	18 27 41.9	
	comp=Z,78nm,0.7s						
RIDG	**Independent Ri**	**76.06**	**16**	P	**P**	**18 27 39.7**	**-0.7**
	baz=331,SNR=24						
SPCR	**Spurr Chakacha**	**76.39**	**20**	P	**P**	**18 27 42.4**	**0.0**
	baz=325,SNR=7.6						
WAT6	**Susitna Watana**	**76.40**	**18**	P	**P**	**18 27 41.9**	**-0.6**
	baz=328,SNR=30						
M22K	**Willow**	**76.50**	**19**	P	**P**	**18 27 42.3**	**-0.5**
	baz=327,SNR=9.5						
PAX	**Paxson**	**76.60**	**16**	P	**P**	**18 27 43.2**	**-0.3**
	baz=330,SNR=48						
PAX	**Paxson**	**76.60**	**16**	IAmb	IAmb	18 27 45.0	
	comp=Z,84nm,0.9s						
O19K	**Port Alsworth**	**76.61**	**22**	P	**P**	**18 27 43.9**	**+0.5**
	baz=324						
J29M	**Klondike Camp**	**76.74**	**13**	P	**P**	**18 27 44.4**	**+0.1**
	baz=336,SNR=12						
GHO	**Glory Hole Cre**	**76.79**	**18**	IAmb	IAmb	18 27 46.2	
	comp=Z,117nm,0.9s						
RSO	**Redoubt South**	**76.84**	**21**	P	**P**	**18 27 44.6**	**-0.5**
MEEK	**Meekatharra**	**76.85**	**138**	P	**P**	**18 27 44.6**	**-0.7**
DAWY	**Dawson**	**76.88**	**13**	P	**P**	**18 27 45.0**	**-0.1**
	baz=335,SNR=44						
PMR	**Palmer**	**76.89**	**19**	P	**P**	**18 27 44.8**	**-0.2**
	baz=328,SNR=14						
SML	**Sawmill**	**76.91**	**18**	P	**P**	**18 27 45.1**	**-0.2**
	baz=328,SNR=30						
P18K	**Big Mountain,**	**76.98**	**22**	P	**P**	**18 27 46.0**	**+0.4**
	baz=323,SNR=5.9						
P18K	**Big Mountain,**	**76.98**	**22**	IAmb	IAmb	18 27 47.8	
	comp=Z,105nm,0.9s						
L26K	**Log Cabin Wild**	**77.02**	**16**	P	**P**	**18 27 46.2**	**+0.4**
	baz=332,SNR=27						
UNV	**Unalaska Valle**	**77.10**	**31**	P	**P**	**18 27 44.7**	**-1.6**
	baz=316						
SCM	**Sheep Creek Mo**	**77.14**	**18**	P	**P**	**18 27 46.4**	**-0.2**
	baz=329,SNR=22						
SCM	**Sheep Creek Mo**	**77.14**	**18**	IAmb	IAmb	18 27 48.1	
	comp=Z,126nm,1.0s						
RC01	**Rabbit Creek A**	**77.16**	**19**	P	**P**	**18 27 46.1**	**-0.4**
	baz=327,SNR=14						
HARP	**HAARP**	**77.17**	**17**	P	**P**	**18 27 47.4**	**+0.7**
	baz=330,SNR=45						
M24K	**Tolsona, Glenn**	**77.18**	**17**	P	**P**	**18 27 47.5**	**+0.7**
	baz=330,SNR=25						
KNK	**Knik Glacier**	**77.22**	**18**	P	**P**	**18 27 46.9**	**0.0**
	baz=328,SNR=17						
KNK	**Knik Glacier**	**77.22**	**18**	IAmb	IAmb	18 28 32.8	
	comp=Z,116nm,1.0s						
L27K	**Beaver Creek,**	**77.31**	**15**	P	**P**	**18 27 48.0**	**+0.5**
	baz=333,SNR=36						
P19K	**Oil Pt**	**77.37**	**21**	P	**P**	**18 27 47.6**	**-0.2**
	baz=324,SNR=5.8						
MORW	**Morawa**	**77.45**	**141**	IAmb	IAmb	18 27 48.7	
	comp=Z,89nm,0.7s						
MORW	**Morawa**	**77.45**	**141**	P	**P**	**18 27 47.2**	**-1.4**
FALS	**False Pass**	**77.61**	**29**	P	**P**	**18 27 48.9**	**-0.2**
	baz=318						
M26K	**Nabesna, AK**	**77.65**	**16**	P	**P**	**18 27 49.7**	**+0.3**
	baz=332,SNR=17						
O22K	**Cooper Landing**	**77.67**	**20**	P	**P**	**18 27 49.0**	**-0.4**
	baz=327						
O22K	**Cooper Landing**	**77.67**	**20**	IAmb	IAmb	18 28 42.5	
	comp=Z,228nm,1.3s						
PWL	**Port Wells**	**77.72**	**19**	P	**P**	**18 27 49.4**	**-0.4**
	baz=328,SNR=6.5						
KLU	**Klutina**	**77.78**	**17**	P	**P**	**18 27 50.4**	**+0.3**
	baz=330,SNR=16						
Q19K	**Cape Douglas,**	**77.83**	**22**	P	**P**	**18 27 49.9**	**-0.5**
	baz=324						
M27K	**Edge Creek, AK**	**77.93**	**15**	P	**P**	**18 27 51.8**	**+0.8**
	baz=333,SNR=45						
M27K	**Edge Creek, AK**	**77.93**	**15**	IAmb	IAmb	18 27 54.1	
	comp=Z,158nm,1.1s						
BOSA	**Boshof**	**77.97**	**220**	P	**P**	**18 27 51.0**	**-0.6**
	comp=Z,60nm,0.5s,baz=29,slow=4.4,SNR=323						
BOSA				LR	LR	19 01 33.3	
	comp=Z,291nm,21.8s,baz=42,slow=35						
BOSA	**Boshof**	**77.97**	**220**	IAmb	IAmb	18 27 52.0	
	comp=Z,93nm,0.7s						
N25K	**Chitina, Valde**	**77.99**	**17**	P	**P**	**18 27 51.5**	**+0.2**
	baz=331,SNR=10						
N25K	**Chitina, Valde**	**77.99**	**17**	IAmb	IAmb	18 27 53.5	
	comp=Z,285nm,1.8s						
BRSE	**Bradley Lake S**	**78.01**	**20**	P	**P**	**18 27 50.6**	**-0.7**
	baz=326,SNR=6.1						
GLI	**Glacier Island**	**78.02**	**18**	P	**P**	**18 27 51.0**	**-0.4**
	baz=329						
GLI	**Glacier Island**	**78.02**	**18**	IAmb	IAmb	18 27 52.8	
	comp=Z,82nm,0.9s						
SEW	**Seward**	**78.06**	**20**	P	**P**	**18 27 51.3**	**-0.3**
	baz=327,SNR=5.4						
SEW	**Seward**	**78.06**	**20**	IAmb	IAmb	18 27 52.8	
	comp=Z,224nm,1.8s						
FID	**Port Fidalgo**	**78.28**	**18**	IAmb	IAmb	18 27 54.6	
	comp=Z,402nm,1.9s						
MCARA	**McCarthy VSAT**	**78.55**	**16**	P	**P**	**18 27 55.0**	**+0.7**
	baz=332,SNR=9.6						
BMRM	**Bremner River**	**78.55**	**17**	P	**P**	**18 27 54.7**	**+0.3**
	baz=331,SNR=9.1						
BMRM	**Bremner River**	**78.55**	**17**	IAmb	IAmb	18 28 35.7	
	comp=Z,103nm,1.1s						
EYAK	**Cordova Ski Ar**	**78.64**	**18**	P	**P**	**18 27 55.0**	**+0.3**
	baz=330,SNR=7.2						
EYAK	**Cordova Ski Ar**	**78.64**	**18**	IAmb	IAmb	18 28 36.2	
	comp=Z,88nm,1.0s						
M30M	**Minto, Yukon**	**78.72**	**13**	P	**P**	**18 27 55.4**	**+0.1**
	baz=337,SNR=14						
YUK3	**Moose Creek**	**78.75**	**15**	P	**P**	**18 27 55.9**	**+0.2**
	baz=334						
RAGM	**Ragged Mountai**	**79.04**	**17**	IAmb	IAmb	18 27 59.4	
	comp=Z,114nm,1.2s						
BLDU	**Ballidu**	**79.04**	**141**	P	**P**	**18 27 55.5**	**-1.8**
CRQM	**Cirque**	**79.08**	**17**	IAmb	IAmb	18 28 02.6	
	comp=Z,92nm,0.9s						
CHNA	**Chernabura Isl**	**79.08**	**27**	P	**P**	**18 27 56.7**	**-0.5**
	baz=320						
CRQE	**Cirque**	**79.09**	**16**	P	**P**	**18 27 57.5**	**+0.1**
	baz=332,SNR=9.8						
CNBA	**Chernabura Isl**	**79.09**	**27**	IAmb	IAmb	18 27 58.7	
	comp=Z,115nm,0.8s						
BERG	**Berg Lake**	**79.27**	**17**	IAmb	IAmb	18 28 01.2	
	comp=Z,179nm,0.9s						
CTG	**Chitna Glacier**	**79.29**	**16**	P	**P**	**18 27 58.9**	**+0.4**
	baz=334,SNR=17						
CTGM	**Chitina Glacie**	**79.29**	**16**	IAmb	IAmb	18 28 00.8	
	comp=Z,116nm,1.0s						
OHAK	**Old Harbor**	**79.34**	**23**	P	**P**	**18 27 58.9**	**+0.3**
	baz=325						
WAX	**Waxell Ridge**	**79.41**	**17**	IAmb	IAmb	18 28 02.4	
	comp=Z,69nm,0.8s						
M31M	**Drury Creek, Y**	**79.49**	**12**	P	**P**	**18 27 60.0**	**+0.5**
	baz=339,SNR=26						
YUK4	**Talbot Arm**	**79.51**	**14**	P	**P**	**18 27 59.8**	**+0.1**
	baz=336,SNR=32						
MMPY	**Sheldon Lake,**	**79.59**	**10**	P	**P**	**18 28 00.7**	**+0.7**
	baz=342,SNR=20						
FARO	**Faro, Yukon**	**79.64**	**12**	P	**P**	**18 28 00.5**	**+0.2**
	baz=340,SNR=23						
YAH	**Yahtse**	**79.74**	**16**	IAmb	IAmb	18 28 03.4	
	comp=Z,98nm,0.7s						
MESA	**MESA**	**79.86**	**16**	P	**P**	**18 28 02.3**	**+0.6**
	baz=333						
MESA	**MESA**	**79.86**	**16**	IAmb	IAmb	18 28 04.1	
	comp=Z,85nm,0.7s						
MUN	**Mundaring**	**79.90**	**143**	P	**P**	**18 28 00.3**	**-1.6**
N31M	**Braeburn, Yuko**	**79.92**	**13**	P	**P**	**18 28 02.1**	**+0.3**
	baz=338,SNR=21						
YUK6	**Outpost Mounta**	**79.93**	**14**	P	**P**	**18 28 02.6**	**+0.5**
	baz=336,SNR=8.3						
WRGLY	**Wrigley**	**79.95**	**7**	P	**P**	**18 28 02.8**	**+1.0**
	baz=348,SNR=51						
HYT	**Haines Junctio**	**80.21**	**14**	P	**P**	**18 28 04.3**	**+0.8**
	baz=337,SNR=40						
HYT	**Haines Junctio**	**80.21**	**14**	IAmb	IAmb	18 28 06.0	
	comp=Z,109nm,0.9s						

PCA	Pinnacle	80.31	16	IAmb	IAmb	18 28 06.3	
	comp=Z,145nm,0.8s						
PINM	Pinnacle	80.31	16	P	P	18 28 04.7	+0.7
	baz=335,SNR=11						
KLBR	Kellerberrin	80.36	141	P	P	18 28 02.7	-1.7
BCPM	Bancas Point	80.57	15	IAmb	IAmb	18 28 07.6	
	comp=Z,121nm,1.0s						
WHY	Whitehorse	80.85	13	P	P	18 28 06.4	-0.5
	baz=339,SNR=14						
PNL	Peninsula	80.88	15	P	P	18 28 07.4	+0.5
	baz=335						
TGTN	Hyland Airport	81.06	9	P	P	18 28 09.1	+1.3
	baz=344,SNR=29						
NWAO	Narrogin (SRO)	81.18	142	P	P	18 28 08.0	-0.7
WRKA	Warakurna	81.28	130	P	P	18 28 08.4	-1.1
YKA	Yellowknife Ar	81.28	3	P	P	18 28 08.8	-0.2
	comp=Z,75nm,0.8s,baz=2.9,slow=5.1,SNR=175						
YKA				pP	pP	18 28 35.7	+0.7
	comp=Z,28nm,0.7s,baz=8.8,slow=5.1,SNR=3.9						
YKA				LR	LR	19 08 25.8	
	comp=Z,336nm,19.7s,baz=0.0,slow=39						
WB0	Warramunga Arr	81.53	122	IAmb	IAmb	18 28 39.1	
	comp=Z,361nm,1.8s						
WRA	Warramunga Arr	81.62	122	P	P	18 28 10.2	-1.2
	comp=Z,26nm,0.7s,baz=321,slow=5.0,SNR=336						
WRA				pP	pP	18 28 38.0	0.0
	comp=Z,50nm,0.8s,baz=320,slow=4.9,SNR=7.5						
WRA				PKKPbc	PKKPbc	18 46 43.2	+0.2
	comp=Z,0.8nm,0.4s,baz=121,slow=2.2,SNR=21						
WRA				PKPPKP	P'P'df	18 54 51.9	+4.2
	comp=Z,0.9nm,0.9s,baz=144,slow=2.0,SNR=6.3						
WRAB	Tennant Creek	81.62	122	P	P	18 28 09.4	-1.9
WRAB				pmax	pmax		
	comp=Z,131nm,1.1s						
WRAB	Tennant Creek	81.62	122	P	P	18 28 09.4	-1.9
WRAB				IAmb	IAmb	18 28 39.6	
	comp=Z,131nm,1.1s						
WRAB	Tennant Creek	81.62	122	P	P	18 28 10.6	-0.8
WB2	Warramunga Arr	81.63	122	IAmb	IAmb	18 28 39.6	
	comp=Z,83nm,0.7s						
P33M	Teslin, Yukon	81.63	12	P	P	18 28 11.0	0.0
	baz=340,SNR=47						
SKAG	Skagway	81.89	13	P	P	18 28 13.1	+0.9
	baz=338,SNR=9.0						
SCHQ	Schefferville	82.31	337	P	P	18 28 14.8	+0.3
	comp=Z,40nm,0.8s,baz=13,slow=3.5,SNR=35						
SCHQ				LR	LR	19 04 05.1	
	comp=Z,1µm,21.4s,baz=42,slow=35						
SCHQ	Schefferville	82.31	337	IAmb	IAmb	18 28 16.7	
	comp=Z,202nm,1.4s						
WTLY	Watson Lake, Y	82.34	10	P	P	18 28 15.1	+0.4
	baz=344						
JIS	Juneau Island	83.17	13	IAmb	IAmb	18 29 00.4	
	comp=Z,98nm,1.2s						
SUR	Sutherland	83.28	221	P	P	18 28 19.7	-0.2
DLBC	Dease Lake	83.77	11	IAmb	IAmb	18 28 24.5	
	comp=Z,120nm,1.2s						
ASAR	Alice Springs	83.89	125	P	P	18 28 21.8	-1.3
	comp=Z,22nm,0.6s,baz=310,slow=5.2,SNR=594						
ASAR				pP	pP	18 28 49.8	-0.1
	comp=Z,24nm,0.9s,baz=321,slow=5.2,SNR=5.1						
ASAR				PKKPbc	PKKPbc	18 46 37.5	-0.4
	comp=Z,0.5nm,0.5s,baz=129,slow=2.1,SNR=11						
ASAR				PKPPKP	P'P'df	18 54 45.3	+2.0
	comp=Z,0.7nm,0.9s,baz=124,slow=2.9,SNR=5.5						
COEN	Coen	84.01	112	IAmb	IAmb	18 28 52.0	
	comp=Z,110nm,1.4s						
COEN	Coen	84.01	112	P	P	18 28 22.6	-1.2
PMG	Port Moresby	84.20	106	P	P	18 28 24.4	-0.4
PMG				pmax	pmax		
	comp=Z,147nm,1.3s						
PMG	Port Moresby	84.20	106	P	P	18 28 24.4	-0.4
PMG				IAmb	IAmb	18 28 53.4	
	comp=Z,147nm,1.3s						
PMG	Port Moresby	84.20	106	P	P	18 28 24.6	-0.2
PMG	Port Moresby	84.20	106	P	P	18 28 24.6	-0.2
WRAK	Wrangell Islan	85.30	13	P	P	18 28 30.2	+0.5
	baz=341						
FORT	Forrest	85.34	134	P	P	18 28 29.6	-0.5
FORT	Forrest	85.34	134	P	P	18 28 29.0	-1.1
PAF	Port-aux-Franc	85.43	181	P	P	18 28 30.7	+0.7
PAF				pmax	pmax		
	comp=Z,601nm,1.8s						
PAF	Port-aux-Franc	85.43	181	P	P	18 28 30.7	+0.7
QIS	Mount Isa	85.68	119	P	P	18 28 30.7	-1.4
MTSU	Mount Surprise	87.50	115	P	P	18 28 39.9	-1.1
OOD	Oodnadatta	87.90	127	P	P	18 28 40.9	-1.8
MULG	Mulgathing	88.58	130	P	P	18 28 44.0	-1.9
FFC	Flin Flon	89.02	356	P	P	18 28 48.0	+0.3
FFC				pmax	pmax		
	comp=Z,99nm,1.1s						
FFC	Flin Flon	89.02	356	P	P	18 28 48.0	+0.3
FFC				IAmb	IAmb	18 28 49.7	
	comp=Z,99nm,1.1s						
CTAO	Charters Tower	90.15	115	P	P	18 28 52.0	-1.4
CTAO				pmax	pmax		
	comp=Z,111nm,1.3s						
CTAO	Charters Tower	90.15	115	P	P	18 28 52.0	-1.4
CTAO				IAmb	IAmb	18 29 21.7	
	comp=Z,111nm,1.2s						
CTAO	Charters Tower	90.15	115	P	P	18 28 52.7	-0.8
INKA	Innaminka	91.18	124	P	P	18 28 57.1	-0.9
LCRK	Leigh Creek	91.31	127	P	P	18 28 56.8	-1.8
VLDQ	Val d'Or	91.37	340	P	P	18 28 59.2	+0.4
BBOO	Buckleboo	91.56	130	P	P	18 28 57.7	-2.0
BBOO	Buckleboo	91.56	130	P	P	18 28 58.2	-1.5
TLCB	Telegraph Cove	91.88	12	P	P	18 29 01.5	+0.4
TLCB				IAmb	IAmb	18 29 03.3	
	comp=Z,39nm,0.9s						
QLP	Quilpie	92.80	121	P	P	18 29 04.5	-1.1
ULM	Lac du Bonnet	92.96	352	P	P	18 29 05.7	-0.4
	comp=Z,28nm,1.0s,baz=11,slow=5.3,SNR=16						
ULM				LR	LR	19 12 57.3	
	comp=Z,737nm,21.3s,baz=20,slow=37						
ULM	Lac du Bonnet	92.96	352	IAmb	IAmb	18 29 07.4	
	comp=Z,47nm,1.1s						
OZB	Mount Ozzard	93.64	11	P	P	18 29 09.1	-0.2
OZB				IAmb	IAmb	18 29 14.4	
	comp=Z,56nm,1.1s						
LONY	Lake Ozonia	93.66	336	P	P	18 29 10.1	+0.7
	baz=27						
LONY	Lake Ozonia	93.66	336	P	P	18 29 09.2	-0.2
LONY				IAmb	IAmb	18 29 15.0	
	comp=Z,86nm,1.4s						
HTT	Hallett	93.75	129	P	P	18 29 08.4	-1.5
A04D	Lummi Island	94.27	9	P	P	18 29 12.2	+0.2
	baz=349						
STKA	Stephens Creek	94.43	127	P	P	18 29 11.7	-1.3
	comp=Z,5.5nm,0.5s,baz=332,slow=3.8,SNR=25						
STKA				LR	LR	19 19 52.9	
	comp=Z,139nm,18.4s,baz=294,slow=41						
EYMN	Ely	94.62	349	P	P	18 29 14.0	+0.3
	baz=14,SNR=11						
EYMN	Ely	94.62	349	P	P	18 29 12.3	-1.4
EYMN				IAmb	IAmb	18 29 18.2	
	comp=Z,50nm,1.1s						
E46A	Sault Ste Mari	94.74	343	P	P	18 29 14.0	-0.3
B05A	Bryant	94.80	9	P	P	18 29 14.8	+0.3
	baz=349,SNR=8.2						
AGMN	Agassiz Nation	94.88	352	P	P	18 29 15.1	+0.1
	baz=10,SNR=14						
L61B	Northampton	94.94	334	P	P	18 29 16.8	+1.4
	baz=28						
B08A	Colville Reser	95.02	7	IAmb	IAmb	18 29 17.4	
	comp=Z,73nm,1.6s						
NEW	Newport	95.32	6	P	P	18 29 15.9	-1.1
NEW				pmax	pmax		
	comp=Z,20nm,1.0s						
NEW	Newport	95.32	6	P	P	18 29 17.0	0.0
	baz=353,SNR=18						
NEW	Newport	95.32	6	P	P	18 29 15.9	-1.1
DGMT	Dagmar	95.37	357	P	P	18 29 18.4	+1.2
	baz=3.5						
D03D	Eldon	95.38	10	P	P	18 29 19.2	+2.0
	baz=348,SNR=5.5						
EGMT	Eagleton	95.90	1	P	P	18 29 20.3	+0.6
	baz=359,SNR=13						
JTMT	Jette	96.02	4	P	P	18 29 18.3	-2.1
JTMT				IAmb	IAmb	18 29 22.3	
	comp=Z,46nm,1.5s						
GLMI	Grayling	96.27	343	P	P	18 29 22.3	+1.0
	baz=19						
E04D	Cinebar	96.41	10	P	P	18 29 22.5	+0.6
	baz=349						
CMSA	Cobar Meteorol	96.91	124	P	P	18 29 22.8	-1.4
MSO	Missoula	96.96	4	P	P	18 29 25.3	+0.8
	baz=356,SNR=9.4						
LAO	LASA Array	97.22	358	P	Pdif	18 29 27.3	+1.6
	baz=1.9,SNR=5.4						
M57A	Sunshine Farm,	97.43	337	P	P	18 29 25.3	-1.4
M57A				IAmb	IAmb	18 29 31.7	
	comp=Z,67nm,1.5s						
BOZ	Bozeman (W)	98.29	2	P	Pdif	18 29 31.7	+1.0
	baz=358,SNR=7.5						
PLID	Pearl Lake	98.56	5	P	P	18 29 31.0	-1.0
RLMT	Red Lodge	98.81	1	Pdiff	Pdif	18 29 34.0	+1.0
	baz=359,SNR=12						
O56A	Blue Knob Stat	98.85	337	Pdiff	Pdif	18 29 36.1	+3.0
	baz=24						
JFWS	Jewell Farm	99.28	347	Pdiff	Pdif	18 29 36.3	+1.4
	baz=15						
ECSD	EROS Data Cent	99.47	351	Pdiff	Pdif	18 29 36.6	+0.8
	baz=9.7						
H17A	Grant Village	99.51	2	Pdiff	Pdif	18 29 39.7	+3.5
	baz=358						
RSSD	Black Hills	99.71	357	Pdiff	Pdif	18 29 38.8	+1.7
	baz=3.7						
J05D	Fort Rock, OR	99.80	9	Pdiff	Pdif	18 29 38.6	+1.2
	baz=350						
MCWV	Mont Chateau	99.80	338	Pdiff	Pdif	18 29 37.9	+0.6
	baz=23						
HLID	Hailey	100.19	4	Pdiff	Pdif	18 29 40.0	+0.9
	baz=355						
L04D	Klamath Falls	100.70	10	Pdiff	Pdif	18 29 42.9	+1.5
	baz=349						
BW06	Boulder Array	101.16	1	Pdiff	Pdif	18 29 44.0	+0.4
	baz=359						
PDAR	Pinedale Array	101.16	1	P	Pdif	18 29 43.9	+0.3
	comp=Z,2.0nm,0.8s,baz=42,slow=2.9,SNR=14						
PDAR				PKiKP	PKiKP	18 34 06.0	-1.9
	comp=Z,0.9nm,0.5s,baz=41,slow=2.3,SNR=11						
PDAR				PKKPbc	PKKPbc	18 45 53.4	+0.1
	comp=Z,0.2nm,0.4s,baz=127,slow=5.5,SNR=4.3						
PDAR	Pinedale Array	101.16	1		PKiKP	18 34 05.8	-2.1
M04C	Macdoel	101.20	10	Pdiff	Pdif	18 29 45.5	+1.9
	baz=349						
M02C	Callahan	101.43	11	Pdiff	Pdif	18 29 46.8	+2.2
	baz=348						
DUG	Dugway, Tooele	103.63	3	Pdiff	Pdif	18 29 56.4	+1.9
	baz=356						
O20A	White River Ci	103.79	360	Pdiff	Pdif	18 29 57.4	+2.1
	baz=0.3						
MAW	Mawson	103.94	183	Pdiff	Pdif	18 29 56.5	+1.9
	comp=Z,2.3nm,0.6s,baz=20,slow=5.5,SNR=12						
NVAR	Mina Array Bea	104.95	8	Pdiff	Pdif	18 30 02.3	+1.8
	comp=Z,1.6nm,0.8s,baz=4.0,slow=4.2,SNR=8.6						
NVAR				PKiKP	PKiKP	18 34 14.8	-0.1
	comp=Z,1.3nm,0.7s,baz=358,slow=3.1,SNR=5.4						
NVAR				PKKPbc	PKKPbc	18 45 40.9	-1.2
	comp=Z,0.8nm,0.7s,baz=190,slow=6.0,SNR=4.6						
R11A	Troy Canyon, C	105.29	6	Pdiff	Pdif	18 30 02.6	+0.6
	baz=354						
DZM	Mont Dzumac	106.58	105	*e*LR	LR	19 05 28.0	
	comp=Z,764nm,35.1s						
SYO	Syowa Base	107.76	192⇑	*e*pPdiff	pPdif	18 30 42.0	+3.4
SYO	Syowa Base	107.76	192⇑	*e*sPdiff	sPdif	18 30 51.8	+2.5
MNTX	Cornudas Mount	112.15	357	PKiKP	PKiKP	18 34 27.8	-0.5
	baz=2.8						
TXAR	Lajitas Array	114.41	355	PKP	PKiKP	18 34 32.2	-0.6
	comp=Z,1.2nm,0.5s,baz=60,slow=1.2,SNR=20						
TXAR				PKKPbc	PKKPbc	18 45 10.7	-0.8
	comp=Z,0.5nm,0.6s,baz=179,slow=6.8,SNR=7.2						
SNAA	Sanae	119.49	200	PKKPbc	PKKPbc	18 44 52.4	-2.1
SNAA	Sanae	119.49	200	PKPdf	PKPdf	18 34 39.5	-1.5
SNAA	Sanae	119.49	200	PKIKP	PKPdf	18 34 39.3	-1.8
SNAA	Sanae	119.49	200		PKPdf	18 34 39.3	-1.8
MC01	Montes Claros	120.06	271	*e*P	PKiKP	18 34 44.6	+0.7
VNA2	Neumayer--Watz	120.50	202	PKKPbc	PKKPbc	18 44 48.3	-2.3
VNA2	Neumayer--Watz	120.50	202	PKPdf	PKPdf	18 34 41.5	-1.4
VNA1	Neumayer--Stat	120.66	202	PKPdf	PKPdf	18 34 42.1	-1.1
DIAM	Diamantina, MG	120.69	269	*e*P	PKiKP	18 34 45.2	0.0
CAM01	Campos-RJ	120.88	265	*e*P	PKiKP	18 34 45.7	+0.5
BOAV	Boa Vista	120.98	300	*e*P	PKPdf	18 34 45.5	-0.1
VNA3	Neumayer Olymp	121.31	202	PKKPbc	PKKPbc	18 44 46.0	-1.6
VNA3	Neumayer Olymp	121.31	202	PKPdf	PKPdf	18 34 42.7	-1.8
DUB01	Friburgo-RJ	121.59	265	*e*P	PKPdf	18 34 46.5	0.0
SDV	Santo Domingo	122.57	314	PKP	PKPdf	18 34 47.6	-1.3
	comp=Z,4.9nm,0.3s,baz=58,slow=4.9,SNR=3.0						
BDFB	Brasilia	122.77	274	PKP	PKPdf	18 34 47.3	-1.7
	comp=Z,2.6nm,0.5s,baz=157,slow=2.5,SNR=7.7						
BDFB				PKKPbc	PKKPab	18 44 43.5	+1.1
	comp=Z,4.6nm,0.9s,baz=233,slow=4.0,SNR=4.7						
PTGA	Pitinga	122.78	297	PKP	PKPdf	18 34 47.9	-1.2
	comp=Z,4.8nm,0.4s,baz=327,slow=22,SNR=9.0						
PTGA	Pitinga	122.78	297		PKPdf	18 34 48.6	-0.5
SMLC	San Martn de	124.58	317	*e*P	PKPdf	18 34 50.6	-1.9
CMIG	Matias Romero	125.22	344	PKP	PKPdf	18 34 52.3	-1.4
	comp=Z,3.4nm,0.7s,baz=9.3,slow=3.0						
VNDA	Vanda	125.34	165	PKP	PKPdf	18 34 50.3	-1.7
	comp=Z,1.8nm,0.6s,baz=294,slow=4.1,SNR=24						
VNDA				PP	PP	18 36 47.0	+2.8
	comp=Z,4.0nm,1.1s,baz=289,slow=5.4,SNR=4.0						
VNDA	Vanda	125.34	165	PKIKP	PKPdf	18 34 50.6	-1.5
VNDA	Vanda	125.34	165	PKPdf	PKPdf	18 34 50.6	-1.5
MOTC	Monteria, Cord	125.45	319	*e*P	PKPdf	18 34 52.8	-1.4
QSPA	South Pole Qui	126.24	180	PKPdf	PKPdf	18 34 52.8	-1.4
BCIP	Isla Barro Col	127.23	324	*e*P	PKPdf	18 34 53.9	-3.7
NORC	Norcasia	127.68	316	*e*P	PKPdf	18 34 55.1	-3.4
ROSC	El Rosal	127.96	315	PKP	PKPdf	18 34 58.1	-1.4
	comp=Z,19nm,0.6s,baz=316,slow=2.7,SNR=6.7						
ROSC	El Rosal	127.96	315	*e*P	PKPdf	18 34 57.7	-1.8
ANIL	Santa Ana	128.86	316	*e*P	PKPdf	18 34 59.7	-1.4
PRAC	Prado	129.20	315	*e*P	PKPdf	18 34 59.7	-1.7
YOTC	Yotoco, Valle	129.81	316	*e*P	PKPdf	18 35 00.9	-1.8
TRCB	Terra Rica	130.20	270	*e*P	PKiKP	18 35 04.1	+0.2
PCON	Cinco Dias	131.20	315	*e*P	PKPdf	18 35 03.8	-2.1
SOTA	Rioblanco	131.47	315	*e*P	PKPdf	18 35 03.4	-2.9
PTLC	Puerto Leguiza	132.00	312	*e*P	PKPdf	18 35 02.2	-4.5
GCUF	Volcan Galeras	132.63	315	*e*P	PKPdf	18 35 06.8	-1.8
SIV	San Ignacio	133.36	283	PKP	PKPdf	18 35 07.4	-1.7
	comp=Z,2.5nm,0.5s,baz=100,slow=2.2,SNR=15						
ETMB	Extrema	133.48	294	*e*P	PKPdf	18 35 09.4	0.0
OTAV	Otavalo	134.07	316	*e*P	PKPdf	18 35 09.8	-1.4
OTAV	Otavalo	134.07	316	*e*P	PKPdf	18 35 11.7	+0.5
CPUP	Villa Florida	135.62	268	PKP	PKPdf	18 35 11.4	-1.7
	comp=Z,7.2nm,0.5s,baz=30,slow=2.0,SNR=20						
LPAZ	La Paz	139.01	288	*e*P	PKPdf	18 35 20.4	+0.1
PPT2	Papeete2	139.24	74	*e*LR	LR	19 20 34.4	
	comp=Z,993nm,30.8s						
TAOE	Nuku Hiva Isla	140.24	54	*e*LR	LR	19 21 01.3	
	comp=Z,451nm,28.8s						
TBI	Tubuai	142.44	81	*e*LR	LR	19 22 03.1	
	comp=Z,404nm,32.2s						
NNA	Nana	142.53	302	PKP	PKPdf	18 35 23.2	-2.8
	comp=Z,12nm,0.7s,baz=296,slow=4.2,SNR=4.5						
LVC	Limon Verde	143.16	281	PKhKP	PKPpre	18 35 22.7	
	comp=Z,18nm,0.8s,baz=16,slow=1.4,SNR=14						
TRQA	Tornquist	143.23	253	PKIKP	PKPab	18 35 22.9	+0.3
TRQA	Tornquist	143.23	253		PKPab	18 35 22.9	+0.4
PB07	IPOC Station P	143.47	283		PKPab	18 35 24.3	+0.2
PB15	IPOC Station P	143.91	280		PKPab	18 35 25.5	-0.4
PB04	IPOC Station P	144.00	282		PKPab	18 35 25.6	-0.5
PB10	IPOC Station P	144.92	281		PKPbc	18 35 28.3	-1.1
AC02	Maricunga	145.34	275		PKPdf	18 35 30.6	-0.7
PB14	IPOC Station P	145.35	279		PKPdf	18 35 29.7	-1.4
USHA	Ushuaia	147.08	223	PKPbc	PKPdf	18 35 33.7	+1.1
	comp=Z,25nm,0.5s,baz=120,slow=4.6,SNR=23						
VA03	San Esteban	148.68	265		PKPbc	18 35 39.2	-0.8
BO02	Sierra Bellavi	149.42	262		PKPbc	18 35 41.0	-0.7
PLCA	Paso Flores	150.19	250	PKP	PKPdf	18 35 36.8	-1.4
	comp=Z,5.6nm,1.1s,baz=7.3,slow=1.6,SNR=3.4						
PLCA				PKPbc	PKPbc	18 35 42.3	-1.1
	comp=Z,16nm,0.6s,baz=48,slow=1.7,SNR=58						
PLCA	Paso Flores	150.19	250		PKPbc	18 35 42.7	-0.7
GO09	Cerro Castillo	150.36	229		PKPbc	18 35 42.5	-0.8

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*GCG **22** 18:17:17.2±1.2, 14°.03N×94°.20W, h35^{km}±999^{km}, MD4.4*
*MEX **22** 18:17:24.7±0.9, 13°.58N×93°.19W, h10^{km}, MD4.4*
*IDC **22** 18:17:28.6±1.6, 14°.52N×92°.57W, h0^{km}, mb4.0/6, mb1 4.3/8, mb1mx4.0/41, mbtmp4.0/8, ML4.0/2, MS2.5/1, Ms1 2.5/1, ms1mx2.4/32, Error ellipse: s-maj=83.1km s-min=20.9km az=51.0*
ISC 22 18:17:28.5±1.1, **14°.08N**±0°.10×**93°.20W**±0°.05, **h10^{km}, n16,** σ**1^{s}.56**/17, **mb4.0**/6, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		1.22	48	*e*P	Pb	18 17 49.4	-2.4
THIG				*i* S	Sg	18 18 07.8	-0.2
STG3	Santiaguito 3,	1.70	68	*e*P	Pn	18 17 58.1	-0.4
FUG	Fuego 3	2.32	81	*e*P	Pn	18 18 06.5	-0.4
NBG	Las Nubes	2.81	79	*e*P	Pn	18 18 15.3	+1.5
HUIG	Huatulco	3.27	301	*e*P	Pn	18 18 18.9	-1.1
HUIG				*e*S	Sn	18 18 48.9	-10
CMIG	Matias Romero	3.40	332	Pn	Pn	18 18 21.6	-0.1
	24nm,0.3s,baz=162,slow=13,SNR=174						
CMIG				Sn	Sn	18 19 04.9	+2.7
	48nm,0.3s,baz=270,slow=8.9,SNR=7.5						
CMIG				LR	LR	18 19 16.0	
	comp=Z,71nm,21.7s,baz=226,slow=32						
MRL	Marmol	3.55	73	*e*S	Sb	18 19 16.4	+1.6
H06E1	SOCORRO T-PHAS	17.63	288	T	T	18 39 33.9	
	SNR=8.4						
TXAR	Lajitas Array	18.01	329	P	P	18 21 41.0	+1.3
	0.1nm,0.3s,baz=151,slow=11,SNR=16						
ANMO	Albuquerque	23.97	332	P	P	18 22 43.1	-0.4
	1.8nm,0.7s,baz=134,slow=12,SNR=7.9						
PDAR	Pinedale Array	31.88	337	P	P	18 23 55.1	+0.9
	0.8nm,0.8s,baz=126,slow=7.5,SNR=5.8						
NVAR	Mina Array Bea	32.88	322	P	P	18 24 05.3	+2.2
	2.6nm,0.7s,baz=134,slow=8.7,SNR=21						
ULM	Lac du Bonnet	36.14	357	P	P	18 24 28.1	-2.7
	4.4nm,0.7s,baz=161,slow=3.4,SNR=3.4						
SIV	San Ignacio	43.60	132	P	P	18 25 33.3	0.0
	1.0nm,0.8s,baz=304,slow=8.2,SNR=5.0						
YKA	Yellowknife Ar	50.69	347	P	P	18 26 28.0	+0.1
	4.7nm,0.7s,baz=148,slow=8.1,SNR=16						
CMAR	Chiang Mai Arr	145.52	339	PKPbc	PKPbc	18 37 08.3	+0.3
	2.7nm,0.7s,baz=335,slow=3.3,SNR=17						

IDC 22 18:39:27.8±2.5, **0°.30N**×**127°.60E, h0^{km}, mb3.1**/3, **mb1 3.3**/3, **mb1mx3.2**/33, **mbtmp3.1**/3, **Error ellipse: s-maj=195.4km s-min=29.8km az=67.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	21.17	162	P	P	18 44 15.9	+1.1
	0.3nm,0.7s,baz=341,slow=12,SNR=2.4						
ASAR	Alice Springs	24.59	166	P	P	18 44 49.2	-0.7
	0.3nm,0.7s,baz=345,slow=9.5,SNR=4.8						
MKAR	Makanchi Array	60.86	326	P	P	18 49 42.2	0.0
	0.3nm,0.6s,baz=108,slow=7.8,SNR=2.8						

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*NOU **22** 18:52:28.8, 20°.11S×177°.47W, h558^{km}, mb4.6/58, Fiji Islands Region*
*IDC **22** 18:52:29.4±1.4, 20°.06S×177°.74W, h540^{km}±14^{km}, mb3.8/13, mb1 4.0/17, mb1mx3.8/27, mbtmp4.6/17, Error ellipse: s-maj=22.9km s-min=11.9km az=144.0*
*NEIC **22** 18:52:30±1.1, 20°.1S±0°.1×177°.74W±0°.09, h547^{km}±9^{km}, mb4.6/36, Error ellipse: s-maj=19.8km s-min=11.1km az=191.0*
ISC 22 18:52:29.4±0.5, **20°.07S**±0°.09×**177°.64W**±0°.07, **h550^{km}, n167,** σ**1^{s}.06**/171, **mb4.6**/84, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DGTI	Dogotuki	4.51	326	P	P	18 53 55.9	+0.5
MSVF	Nonsavu	4.70	299	P	P	18 53 57.2	+0.3
	9.1nm,0.3s,baz=160,slow=5.4,SNR=29						
MSVF	Nonsavu	4.70	299	P	P	18 53 58.0	+1.0
MSVF	Nonsavu	4.70	299	P	P	18 53 58.1	+1.1
NIUE	Niue	7.34	84	P	P	18 54 20.9	+0.3
NIUE	Niue	7.34	84	P	P	18 54 20.3	-0.4
AFI	Afiamalu	8.30	43	P	P	18 54 30.0	-0.4
	9.2nm,0.3s,baz=192,slow=4.8,SNR=5.5						
AFI				S	S	18 56 02.8	-6.7
	16nm,0.3s,baz=44,slow=22,SNR=10						
MARNC	Mare, Loyalty	13.48	262	P	P	18 55 22.2	-1.0
MARNC	Mare, Loyalty	13.48	262	P	P	18 55 24.5	+1.2
DVP	Devils Point	13.62	278	P	P	18 55 26.6	+1.8
	153µm,1.1s						
PINNC	Pines Island,	14.13	257	P	P	18 55 29.2	-0.8
PINNC	Pines Island,	14.13	257	P	P	18 55 30.4	+0.5
DZM	Mont Dzumac	14.99	260	P	P	18 55 38.2	-0.8
	2.1nm,0.3s,baz=114,slow=18,SNR=50						
DZM	Mont Dzumac	14.99	260	P	P	18 55 40.0	+1.0
DZM	Mont Dzumac	14.99	260	P	P	18 55 40.4	+1.4
NOUC	Port Laguerre	15.12	259	P	P	18 55 41.9	+1.7
SANVU	Saraoutou	15.15	285	P	P	18 55 41.4	+0.8
KOUNC	Koumac, New Ca	16.96	265	P	P	18 55 58.4	+0.5
URZ	Urewera	18.69	193	P	P	18 56 12.2	-1.1
	2.1nm,0.3s,baz=306,slow=23,SNR=7.5						
URZ	Urewera	18.69	193	P	P	18 56 11.5	-1.9
QRZ	Quartz Range	22.32	200	P	P	18 56 45.9	-0.4
QRZ				IAmb	IAmb	18 56 46.9	
	comp=Z,29nm,0.9s						
QRZ	Quartz Range	22.32	200	P	P	18 56 45.2	-1.1
KHZ	Kahutara	23.49	197	P	P	18 56 56.2	-0.4
ODZ	Otahua Downs	26.73	199	P	P	18 57 24.5	-0.7
EIDS	Eidsvold	29.29	254	P	P	18 57 46.8	-1.1
EIDS				IAmb	IAmb	18 57 48.4	
	comp=Z,12nm,0.7s						
EIDS	Eidsvold	29.29	254	P	P	18 57 47.9	0.0
	comp=Z,22nm,1.3s						
ARMA	Armidale	29.56	243	P	P	18 57 50.7	+0.4
ARMA				IAmb	IAmb	18 57 51.9	
	comp=Z,14nm,0.9s						
ARMA	Armidale	29.56	243	P	P	18 57 50.5	+0.2
	comp=Z,20nm,1.3s						
RMQ	Roma	31.46	252	P	P	18 58 07.2	+0.7
	comp=Z,20nm,0.8s						
CNB	Canberra Magne	32.75	235	P	P	18 58 17.7	+0.3
	comp=Z,42nm,2.5s						
CTA	Charters Tower	33.87	264	P	P	18 58 27.0	0.0
	comp=Z,24nm,0.4s,baz=93,slow=13,SNR=8.7						
CTAO	Charters Tower	33.87	264	P	P	18 58 26.7	-0.4
CTAO	Charters Tower	33.87	264	P	P	18 58 27.2	+0.2
CMSA	Cobar Meteorol	34.78	243	P	P	18 58 34.1	-0.3
	comp=Z,21nm,1.0s						
QLP	Quilpie	35.51	252	P	P	18 58 40.0	-0.6
	comp=Z,58nm,0.9s						
PMG	Port Moresby	35.58	282	P	P	18 58 40.6	-0.7
PMG	Port Moresby	35.58	282	P	P	18 58 42.2	+0.9
PMG	Port Moresby	35.58	282	P	P	18 58 42.3	+0.9
MTSU	Mount Surprise	35.95	267	P	P	18 58 43.7	-0.7
	comp=Z,34nm,0.7s						
TOO	Toolangi	36.42	233	P	P	18 58 48.4	+0.4
	comp=Z,12nm,1.9s						
COEN	Coen	37.90	273	P	P	18 58 59.5	-0.9
COEN	Coen	37.90	273	P	P	18 59 00.0	-0.4
	comp=Z,48nm,1.0s						
STKA	Stephens Creek	38.28	244	P	P	18 59 03.6	+0.4
	comp=Z,7.8nm,0.6s,baz=94,slow=10,SNR=32						
STKA	Stephens Creek	38.28	244	P	P	18 59 03.5	+0.3
INKA	Innaminka	38.66	250	P	P	18 59 07.2	+0.8
	comp=Z,41nm,1.2s						
QIS	Mount Isa	40.02	262	P	P	18 59 16.5	-0.9
	comp=Z,9.6nm,1.0s						
HTT	Hallett	40.73	242	P	P	18 59 22.5	-0.4
	comp=Z,17nm,0.9s						
LCRK	Leigh Creek	41.02	246	P	P	18 59 24.7	-0.5
	comp=Z,48nm,1.0s						
BBOO	Buckleboo	43.04	243	P	P	18 59 40.6	-0.5
BBOO				IAmb	IAmb	18 59 41.4	
	comp=Z,26nm,0.6s						
BBOO	Buckleboo	43.04	243	P	P	18 59 40.2	-0.9
	comp=Z,36nm,1.0s						
OOD	Oodnadatta	43.14	250	P	P	18 59 42.0	0.0
	comp=Z,51nm,0.9s						
JAY	Jayapura	44.23	288	P	P	18 59 51.1	+0.4
	comp=Z,48nm,1.1s						
MULG	Mulgathing	44.60	247	P	P	18 59 52.1	-1.1
	comp=Z,62nm,0.8s						
WR0	Warramunga Arr	44.81	262	P	P	18 59 53.9	-1.0
WR0				IAmb	IAmb	18 59 55.7	
	comp=Z,27nm,1.1s						
AS31	Alice Springs	44.95	256	P	P	18 59 55.6	-0.5
AS31				IAmb	IAmb	18 59 57.0	
	comp=Z,15nm,1.1s						
ASAR	Alice Springs	44.95	256	P	P	18 59 55.6	-0.4
	comp=Z,38nm,0.8s,baz=91,slow=7.9,SNR=395						
ASAR				PcP	PcP	19 01 25.9	+0.3
	comp=Z,2.3nm,0.7s,baz=99,slow=4.8,SNR=5.1						
ASAR				ScP	ScP	19 04 28.4	+2.6
	comp=Z,1.0nm,0.8s,baz=107,slow=3.5,SNR=6.1						
ASAR				S	S	19 05 52.5	-2.1
	comp=Z,1.1nm,0.7s,baz=90,slow=17,SNR=6.6						
WB0	Warramunga Arr	44.98	262	P	P	18 59 55.2	-1.1
WB2	Warramunga Arr	44.99	262	P	P	18 59 55.0	-1.3
WRAB	Tennant Creek	44.99	262	P	P	18 59 55.5	-0.9
WRAB				IAmb	IAmb	18 59 56.9	
	comp=Z,23nm,0.9s						

WRAB	Tennant Creek	44.99	262	P	P	18 59 55.7	-0.7
WRA	Warramunga Arr	45.00	262	P	P	18 59 55.4	-1.0
	comp=Z,20nm,0.6s,baz=97,slow=8.2,SNR=500						
WRA				S	S	19 05 53.0	-2.4
	comp=Z,1.1nm,0.8s,baz=98,slow=13,SNR=5.1						
WRA	Warramunga Arr	45.00	262	P	P	18 59 54.2	-2.2
KDU	Kakadu	48.28	271	P	P	19 00 20.0	-1.2
SRPI	Serui, Papua	48.53	286	P	P	19 00 22.2	-0.9
	comp=Z,11nm,0.4s						
MTN	Manton Dam	49.50	270	P	P	19 00 29.4	-0.8
MTN				IAmb	IAmb	19 00 30.5	
	comp=Z,29nm,0.7s						
MTN	Manton Dam	49.50	270	P	P	19 00 29.1	-1.2
FORT	Forrest	49.78	246	P	P	19 00 31.4	-0.7
FORT	Forrest	49.78	246	P	P	19 00 31.0	-1.1
	comp=Z,76nm,0.7s						
DRS	Darwin Rock St	49.83	270	P	P	19 00 32.0	-0.7
WRKA	Warakurna	49.91	254	P	P	19 00 32.0	-1.2
	comp=Z,58nm,0.7s						
KNRA	Kununurra	51.03	266	P	P	19 00 41.0	-0.4
KNRA				IAmb	IAmb	19 00 41.8	
	comp=Z,24nm,1.0s						
KNRA	Kununurra	51.03	266	P	P	19 00 40.4	-1.0
FAKI	Fak Fak	51.74	283	P	P	19 00 47.2	+0.6
SWI	Sorong	53.47	284	P	P	19 00 58.9	0.0
	comp=Z,56nm,0.9s						
AAI	Ambon	55.18	280	P	P	19 01 11.5	+0.5
	comp=Z,14nm,1.2s						
SOEI	Soe	56.83	271	P	P	19 01 23.7	+1.2
	comp=Z,98nm,0.9s						
SOEI	Soe	56.83	271	P	P	19 01 23.8	+1.2
SOEI	Soe	56.83	271	P	P	19 01 23.4	+0.9
LBMI	Labuha	56.99	283	P	P	19 01 23.0	-0.5
	comp=Z,18nm,1.3s						
BATI	Baumata	57.26	271	P	P	19 01 25.9	+0.5
	comp=Z,22nm,0.7s						
TNTI	Ternate	57.68	284	P	P	19 01 27.9	-0.3
	comp=Z,28nm,1.0s						
SANI	Sanana	57.84	281	P	P	19 01 29.3	+0.1
	comp=Z,24nm,1.1s						
PSA00	Pilbara Seismi	58.10	257	P	P	19 01 30.3	-0.6
PSA00				IAmb	IAmb	19 01 31.0	
	comp=Z,25nm,0.8s						
PSA00	Pilbara Seismi	58.10	257	P	P	19 01 30.0	-0.9
MBWA	Marble Bar	58.28	257	P	P	19 01 31.8	-0.3
MEEK	Meekatharra	58.38	251	P	P	19 01 31.4	-1.4
MMRI	Maumere	59.08	272	P	P	19 01 37.3	-0.3
	comp=Z,43nm,0.7s						
MMRI	Maumere	59.08	272	P	P	19 01 36.8	-0.8
MMRI				IAmb	IAmb	19 01 37.7	
	comp=Z,24nm,0.8s						
MMRI	Maumere	59.08	272	P	P	19 01 38.3	+0.7
BLDU	Ballidu	59.54	246	P	P	19 01 39.5	-0.9
EDFI	Ende, Flores	59.56	272	P	P	19 01 40.2	-0.7
	comp=Z,18nm,0.9s						
MUN	Mundaring	59.82	244	P	P	19 01 42.3	0.0
MORW	Morawa	60.30	247	P	P	19 01 44.3	-1.2
MORW	Morawa	60.30	247	P	P	19 01 44.9	-0.7
KMSI	Cibinong	60.70	282	P	P	19 01 48.3	-0.1
	comp=Z,27nm,1.0s						
LUWI	Luwuk	61.19	280	P	P	19 01 50.8	-0.8
	comp=Z,1µmcomp=Z,29nm,1.1s						
WBSI	Waikabubak, Su	61.45	270	P	P	19 01 51.8	-1.5
	comp=Z,38nm,1.0s						
GTOI	Gorontalo	61.62	282	P	P	19 01 56.1	+1.7
	comp=Z,8.6nm,0.9s						
BKSI	Bulukumba	62.14	275	P	P	19 01 57.7	0.0
	comp=Z,9.2nm,1.1s						
APSI	Ampana	62.28	280	P	P	19 01 58.6	-0.1
	comp=Z,18nm,1.1s						
BNSI	Bone	62.46	276	P	P	19 02 00.1	+0.2
	comp=Z,16nm,1.2s						
MRSI	Marisa	62.54	281	P	P	19 02 00.1	-0.2
	comp=Z,12nm,0.9s						
TTSI	Tana Toraja	63.20	277	P	P	19 02 04.2	-0.4
	comp=Z,7.8nm,0.8s						
PLAI	Plampang	63.21	270	P	P	19 02 04.2	-0.5
	comp=Z,60nm,0.9s						
TOLI2	Tolitoli	63.85	282	P	P	19 02 08.2	-0.6
TOLI2				IAmb	IAmb	19 02 09.2	
	comp=Z,13nm,0.8s						
TWSI	Taliwang, Sumb	64.08	270	P	P	19 02 09.6	-0.6
	comp=Z,29nm,0.8s						
MPSI	Mapaga	64.37	280	P	P	19 02 11.7	-0.4
	comp=Z,33nm,0.7s						
SRBI	Singaraja	65.85	270	P	P	19 02 20.8	-0.6
	comp=Z,31nm,0.9s						
JAGI	Jajag, Banyuwa	66.73	269	P	P	19 02 25.7	-1.1
	comp=Z,26nm,0.8s						
JAGI	Jajag, Banyuwa	66.73	269	P	P	19 02 25.0	-1.8
JAGI				IAmb	IAmb	19 02 26.2	
	comp=Z,18nm,0.7s						
BLJI	Banyuglugur	67.48	270	P	P	19 02 31.2	-0.2
BBKI	Banjar Baru	67.72	275	P	P	19 02 33.4	+0.5
	comp=Z,10nm,1.3s						
MTKI	Muara Teweh, K	68.55	277	P	P	19 02 38.1	+0.2
PCJI	Pacitan	69.61	269	P	P	19 02 44.4	+0.1
	comp=Z,106nm,0.8s						
KKM	Kota Kinabalu	69.98	285	P	P	19 02 46.6	0.0
QSPA	South Pole Qui	69.99	180	P	P	19 02 47.4	+1.6
MJAR	Matsushiro Arr	70.07	323	P	P	19 02 45.9	-0.7
	comp=Z,6.4nm,0.7s,baz=153,slow=6.3,SNR=26						
MJAR	Matsushiro Arr	70.07	323	P	P	19 02 46.4	-0.2
MAT	Matsushiro	70.07	323	P	P	19 02 46.4	-0.2
UGM	Wanagama	70.31	269	P	P	19 02 48.4	-0.1
	comp=Z,102nm,2.2s						
UGM	Wanagama	70.31	269	P	P	19 02 48.2	-0.3
UGM	Wanagama	70.31	269	P	P	19 02 48.6	+0.1
PBKI	Pangkalan Bun	70.95	274	P	P	19 02 52.5	+0.3
	comp=Z,49nm,1.0s						
KPJI	Karang Pucung	71.99	269	P	P	19 02 58.1	-0.2
	comp=Z,22nm,1.1s						
STKI	Sintang	72.10	277	P	P	19 02 59.8	+0.9
	comp=Z,1µmcomp=Z,12nm,0.9s						
LEM	Lembang	73.39	269	P	P	19 03 06.9	+0.3
	comp=Z,35nm,0.9s						
KSM	Kuching	73.69	278	P	P	19 03 07.7	-0.4
KSM				IAmb	IAmb	19 03 09.5	
	comp=Z,17nm,0.7s						
CNJI	Cibinong	73.69	268	P	P	19 03 08.0	-0.1
	comp=Z,40nm,1.2s						
SSLB	Suanglung	74.03	303	P	P	19 03 08.6	-1.2
SSLB				IAmb	IAmb	19 03 09.6	
	comp=Z,14nm,0.7s						
SSLB	Suanglung	74.03	303	P	P	19 03 09.4	-0.4
TPUB	Ta-pu	74.03	303	P	P	19 03 08.7	-1.1
TPUB	Ta-pu	74.03	303	P	P	19 03 09.8	0.0
YHNB	Yeheng	74.15	304	P	P	19 03 10.7	+0.2
YHNB				IAmb	IAmb	19 03 11.6	
	comp=Z,16nm,0.8s						
DBJI	Dramaga	74.29	269	P	P	19 03 11.1	-0.4
PETK	Petropavlovsk-	75.95	345	P	P	19 03 21.0	+1.2
	comp=Z,3.0nm,0.8s,baz=106,slow=4.7,SNR=2.2						
KASI	Kota Agung	76.74	269	P	P	19 03 24.7	-0.4
	comp=Z,48nm,1.1s						
MDSI	Maura Dua	77.39	270	P	P	19 03 27.3	-1.3
	comp=Z,12nm,1.0s						
DSRI	Dabo	78.36	274	P	P	19 03 34.2	+0.3
	comp=Z,2.9nm,0.9s						
USRK	Ussuriysk Ar.	78.81	326	P	P	19 03 36.9	+1.4
	comp=Z,5.7nm,0.8s,baz=57,slow=7.0,SNR=6.1						
USRK	Ussuriysk Ar.	78.81	326	P	P	19 03 35.4	-0.1
YBH	Yreka Blue Hor	79.75	38	P	P	19 03 41.3	+0.6
NJ2	Nanjing	79.87	309	*e*P	P	19 03 43.8	+2.4
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NVAR	Mina Array Bea	80.48	43	P	P	19 03 46.5	+1.7
	comp=Z,3.1nm,0.9s,baz=226,slow=8.8,SNR=16						
NVAR	Mina Array Bea	80.48	43	P	P	19 03 45.8	+1.0
CN2	Changchun	82.17	322	*e*P	P	19 03 52.1	-0.9
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WVOR	Wild Horse Val	82.59	40	P	P	19 03 56.6	+1.3
I07A	Izee	83.04	38	P	P	19 03 58.8	+1.3
UBPT	Khong Chiam	83.32	289	P	P	19 04 00.0	+0.7
UBPT				IAmb	IAmb	19 04 00.7	
	comp=Z,9.1nm,1.1s						
G08A	Pilot Rock	84.07	37	P	P	19 04 03.3	+0.7
TX31	Lajitas Ar. Si	86.54	57	P	P	19 04 16.8	+2.0
TX31				IAmb	IAmb	19 04 17.2	
	comp=Z,8.0nm,0.8s						
TXAR	Lajitas Array	86.54	57	P	P	19 04 17.0	+2.1
	comp=Z,2.5nm,0.8s,baz=218,slow=6.7,SNR=27						
ILAR	Eielson Array	87.83	13	P	P	19 04 19.6	-0.4
	comp=Z,0.9nm,0.7s,baz=220,slow=5.8,SNR=13						
XAN	Xi'an	88.15	307	P	P	19 04 23.1	+0.9
XAN				pmax	pmax		
	comp=Z,11nm,0.9s						
PDAR	Pinedale Array	88.42	43	P	P	19 04 24.5	+1.0
	comp=Z,1.0nm,0.6s,baz=210,slow=3.1,SNR=11						
VNA3	Neumayer Olymp	88.54	176	P	P	19 04 23.5	+0.2
VNA2	Neumayer--Watz	88.99	177	P	P	19 04 25.5	+0.1
	baz=191,slow=3.7						
HHC	Hu-ho-hao-te	89.30	314	*e*P	P	19 04 28.9	+1.4
HHC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,97nm,5.9s						
HHC				LR	LR		
	comp=N,220nm,17.5s						
HHC				LR	LR		
	comp=E,280nm,17.1s						
HHC				LR	LR		
	comp=Z,130nm,17.8s						
CMAR	Chiang Mai Arr	90.29	289	P	P	19 04 34.0	+1.6
	comp=Z,3.2nm,1.0s,baz=117,slow=3.1,SNR=20						
SONM	Songino Array	95.66	319	P	P	19 04 56.5	+0.1
	comp=Z,0.4nm,0.7s,baz=105,slow=3.5,SNR=2.8						
MKAR	Makanchi Array	111.15	314	PKiKP	PKiKP	19 10 00.2	-0.6
	comp=Z,0.2nm,0.6s,baz=189,slow=0.3,SNR=2.1						
ARCES	ARCESS Array B	128.56	350	PKP	PKPdf	19 10 32.4	-1.1
	comp=Z,2.2nm,0.8s,baz=0.0,slow=5.2,SNR=3.5						
FINES	FINESS Array B	135.46	344	PKP	PKiKP	19 10 47.8	-0.5
	comp=Z,2.6nm,0.9s,baz=114,slow=4.6,SNR=4.6						
AKASG	Malin Array Be	142.80	332	PKhKP	PKPpre	19 10 56.9	
	comp=Z,2.9nm,0.5s,baz=45,slow=4.7,SNR=24						
MBAR	Mbarara	145.43	237	PKPbc	PKPab	19 11 08.7	-0.1
	comp=Z,2.7nm,0.2s,baz=126,slow=6.4,SNR=6.5						
BRTR	Keskin Array B	146.80	313	PKPbc	PKPbc	19 11 10.4	-0.1
	comp=Z,1.7nm,0.7s,baz=135,slow=4.7,SNR=9.8						
CLL	Collm	147.72	347	*i* PKPbc	PKPbc	19 11 12.9	+0.6
GERES	GERESS Array B	149.88	345	PKPbc	PKPbc	19 11 17.8	0.0
	comp=Z,1.2nm,0.8s,baz=105,slow=3.0,SNR=5.3						

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*TIR **22** 19:02:20.8, 42°.16N×19°.70E, h5^{km}, Md2.4*

*PDG **22** 19:02:21.0±0.1, 42°.16N×19°.72E, h18^{km}, MD2.7/1, ML2.4/11, Error ellipse: s-maj=0.0km s-min=0.1km az=0.0*

*RHSSO **22** 19:02:21.3±0.7, 42°.18N×19°.77E, h10^{km}±2^{km}, ML2.5/7*

*BEO **22** 19:02:22.9±0.2, 42°.21N×19°.68E, h15^{km}±3^{km}, ML2.3/9*

ISC 22 19:02:21.1±1.0**, 42°.19N**±0°.02×**19°.75E**±0°.02**, h10**^{km}±9^{km}**, n66,** σ1^s**12**/103**, 8C-7D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BCI	Bajram Curri	0.30	53	P	Pb	19 02 28.6	+0.1
	baz=52						
BCI				S	Sb	19 02 35.2	+1.7
	baz=52						
BCI				AMP			
	comp=E,8.7nm,0.4s,baz=52						
DRME	Dracevica, Mon	0.42	270	⇓*i*Pg	Pg	19 02 29.1	-0.2
DRME				*e*Sg	Sg	19 02 35.8	+0.9
DRME	Dracevica, Mon	0.42	270	⇓*i*Pg	Pg	19 02 29.0	-0.2
DRME				*e*Sg	Sg	19 02 35.8	+0.9
PVY	Plav	0.43	21	*e*Pg	Pb	19 02 30.2	-0.7
PVY				*i* Sg	Sb	19 02 37.9	+0.3
ULC	Ulcinj	0.44	239	*e*Pg	Pg	19 02 29.1	-0.5
ULC				*i* Sg	Sg	19 02 36.0	+0.6
PDG	Podgorica	0.44	304	⇑P	Pb	19 02 30.1	-0.8
PDG				⇓S	Sb	19 02 37.4	-0.2
PDG	Podgorica	0.44	304	*e*Pg	Pg	19 02 30.0	+0.3
PDG				*e*Sg	Sb	19 02 37.5	-0.1
PDG	Podgorica	0.44	304	⇓*i*Pg	Pg	19 02 29.9	+0.3
PDG				*e*Sg	Sb	19 02 37.2	-0.4
TTG	Podgorica	0.44	304	⇑*i*Pg	Pg	19 02 29.6	-0.1
TTG				*i* Sg	Sb	19 02 37.0	-0.6
TTG	Podgorica	0.44	304	P	Pg	19 02 30.0	+0.3
	baz=310						
TTG				S	Sb	19 02 37.5	-0.1
	baz=310						
BUM	Brajici-Budva	0.65	280	*e*Pg	Pg	19 02 32.9	-0.7
BUM				*e*Sg	Sb	19 02 43.4	-0.2
KOME	Kolasin	0.68	345	*e*Pg	Pb	19 02 34.6	-0.6
KOME				*e*Sg	Sb	19 02 45.8	+1.1
CEME	Cevo	0.71	300	*e*Pg	Pg	19 02 34.4	-0.4
CEME				*e*Sg	Sb	19 02 45.7	+0.2
PHP	Peshkopia	0.72	134	P	Pb	19 02 34.8	-1.0
	baz=130						
PHP				S	Sb	19 02 47.2	+1.5
	baz=130						
PHP				AMP			
	comp=N,0.4nm,0.3s,baz=130						
NKME	Niksic	0.83	315	*e*Pg	Pg	19 02 36.9	-0.1
NKME				*e*Sg	Sb	19 02 49.8	+1.0
NKY	Niksic	0.84	318	*e*Pg	Pg	19 02 37.0	-0.2
NKY				*i* Sg	Sb	19 02 50.5	+1.3
TIR	Tirane	0.84	174	⇑S	Sg	19 02 47.3	-1.0
TIR	Tirane	0.84	174	*e*Pg	Pn	19 02 38.5	-0.5
TIR				*e*Sg	Sb	19 02 49.9	+0.7
TIR	Tirane	0.84	174	P	Pg	19 02 36.3	-1.0
	baz=171						
TIR				S	Sn	19 02 52.5	+1.1
	baz=171						
TIR				AMP			
	comp=E,0.3nm,0.3s,baz=171						
HCY	Herceg Novi	0.97	286	*e*Pg	Pg	19 02 39.1	-0.6
HCY				*e*Sg	Sg	19 02 52.5	+0.3
HCY	Herceg Novi	0.97	286	*e*Pg	Pg	19 02 39.0	-0.6
HCY				*e*Sg	Sb	19 02 53.9	+1.1
SJES	Sjenica	1.08	9	*e*Pg	Pn	19 02 43.7	+1.2
TREB	Trebinje	1.16	297	*e*Pg	Pn	19 02 44.0	+0.6
TREB	Trebinje	1.16	297	*e*Pg	Pg	19 02 42.8	-0.6
TREB				*e*Sg	Sb	19 02 59.0	+0.6
PLE	Pljevlja	1.17	347	*e*Pg	Pb	19 02 43.3	-0.2
PLE				*e*Sg	Sn	19 03 02.0	+2.2
UPM	Unac-Piva	1.19	329	*e*Pg	Pg	19 02 43.6	-0.4
UPM				*e*Sg	Sb	19 02 59.8	+0.4
UPM	Unac-Piva	1.19	329	⇑*i*Pg	Pg	19 02 43.5	-0.4
UPM				*i* Sg	Sn	19 03 02.3	+2.0
DBRK	Dubrovnik	1.28	293	*e*Pn	Pg	19 02 44.5	-1.1
DBRK				Sg	Sn	19 03 03.4	+1.2
OHR	Ohrid	1.33	143	*e*Pg	Pb	19 02 48.9	+2.7
OHR				*e*Sg	Sn	19 03 07.5	+3.9
RUDO	Rudo	1.46	349	⇓*i*Pg	Pb	19 02 48.2	-0.1
RUDO				*e*Sg	Sn	19 03 07.4	+0.8
BARS	Barje	1.65	67	*e*Pn	Pg	19 02 51.7	-1.0
BARS	Barje	1.65	67	*e*Pn	Pg	19 03 03.9	+11
BARS				*e*Sg	Sg	19 03 15.9	+1.8
STON	Ston	1.66	295	*e*Pg	Pn	19 02 50.6	+0.3
STON				*e*Sg	Sg	19 03 14.5	0.0
STON	Ston	1.66	295	*e*Pn	Pn	19 02 50.5	+0.3
STON				*e*Sn	Sn	19 03 12.1	+0.5
STON	Ston	1.66	295	*e*Pn	Pn	19 02 50.2	0.0
STON				Sn	Sn	19 03 11.5	-0.1
BBLS	Lazići	1.70	352	*e*Pg	Pg	19 02 53.0	-0.6
BBLS				*e*Sg	Sg	19 03 15.9	+0.3
BBLS	Lazići	1.70	352	*e*Pn	Pn	19 02 50.9	+0.1
BBLS				*e*Sn	Sn	19 03 13.1	+0.5
GRUS	Gruza	1.84	22	*e*Pn	Pn	19 02 53.2	+0.5
DIVS	Divibare	1.92	5	*e*Pn	Pn	19 02 54.3	+0.4
DIVS	Divibare	1.92	5	*e*Pn	Pn	19 02 53.7	-0.2
DIVS				*e*Sn	Sn	19 03 18.2	+0.1
HAPS	Han Pijesak,BI	1.98	343	*e*Pn	Pn	19 02 55.3	+0.5
HAPS				*e*Sn	Sn	19 03 20.4	+0.6
BOVS	Bovan	2.04	44	*e*Pn	Pb	19 02 57.1	-1.1
BOSS	Bosilegrad	2.05	80	*e*Pn	Pb	19 02 57.3	-1.0
LSTV	Lastovo	2.19	286	*e*Pn	Pn	19 02 56.6	-1.0
MAKA	Makarska	2.29	300	*e*Pn	Pn	19 02 59.6	+0.7
RICI	Ricice	2.33	305	*e*Pn	Pn	19 03 00.1	+0.7
ZAPS	Zavoj	2.38	62	*e*Pn	Pb	19 03 02.7	-1.4
BLKB	Belogradchik	2.58	55	⇑S	Sn	19 03 34.9	+0.4
HVAR	Hvar	2.63	293	*e*Pn	Pn	19 03 03.2	-0.4
MATE	Matera	2.76	237	⇓S	Sn	19 03 33.9	-4.7
MDVR	Moldovita	2.96	28	⇑P	Pn	19 03 06.3	-1.9
FRGS	Fruska Gora	2.97	1	*e*Pn	Pn	19 03 08.2	-0.1
FRGS				*e*Sn	Sn	19 03 44.3	+0.3
ZIRJ	Zirje	3.35	297	*e*Pn	Pn	19 03 13.5	0.0
MORI	Morici	3.41	301	*e*Pn	Pn	19 03 14.8	+0.6
BZS	Buzias	3.68	21	⇓P	Pn	19 03 15.1	-2.9
BZS				⇑S	Sn	19 03 59.1	-2.4
UDBI	Udbina	3.73	310	*e*Pn	Pn	19 03 20.1	+1.4
DUGI	Dugi Otok	3.88	299	*e*Pn	Pn	19 03 20.8	0.0
GZR	Gura Zlata	3.88	33	⇑P	Pn	19 03 19.0	-1.8
PLIT	Plitvice	4.03	313	*e*Pn	Pn	19 03 24.5	+1.7
MOSL	Moslavina	4.05	329	*e*Pn	Pn	19 03 24.2	+1.0
MORH	Mrgy, Hungar	4.10	349	*e*Pn	Pn	19 03 23.9	+0.1
MORH				*e*Sn	Sn	19 04 11.2	-0.7
NVLJ	Novalja	4.28	305	*e*Pn	Pn	19 03 25.7	-0.5
RABC	Rab	4.43	307	*e*Pn	Pn	19 03 28.3	0.0
CRES	Cresnjev	4.78	321	*e*Pn	Pn	19 03 33.5	+0.4
BRJN	Brijuni	5.14	304	*e*Pn	Pn	19 03 37.2	-0.8
CEY	Cerknica	5.23	315	*e*Pn	Pn	19 03 39.9	+0.6

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*IDC **22** 19:11:54.3±5.9, 36°.37N×71°.43E, h71^{km}±34^{km}, mb3.3/3, mb1 3.4/9, mb1mx3.1/61, mbtmp3.7/9, ML3.4/6, Error ellipse: s-maj=72.8km s-min=24.0km az=148.0*

*NNC **22** 19:11:59.3±3.3, 36°.68N×71°.13E, h112^{km}±52^{km}, mb3.1, mpv3.7, Error ellipse: s-maj=28.7km s-min=20.5km az=37.0*

ISC 22 19:11:59.2±1.7**, 36°.7N**±0°.1×**71°.05E**±0°.09**, h100**^{km}**, n16,** σ1^s**63**/20**, mb3.4**/3**, 4C-3D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK02	Karatay Array	6.42	356	⇓P	Pn	19 13 32.0	+0.9
	2.2nm,0.3s						
KK03	Karatay Array	6.42	356	⇑S	Sn	19 14 44.9	+1.9
	5.7nm,0.6s						
AAK	Ala-Archa	6.51	23	P	Pn	19 13 31.7	-0.8
	1.6nm,0.3s,baz=205,slow=7.7,SNR=29						
AAK				S	Sn	19 14 44.9	-0.4
	0.8nm,0.3s,baz=122,slow=20,SNR=9.6						
AAK	Ala-Archa	6.51	23	P	Pn	19 13 32.0	-0.5
	3.4nm,0.5s						
AAK				⇑S	Sn	19 14 45.3	0.0
	6.8nm,0.6s						
TKM2	Tokmak 2	7.14	28	⇑P	Pn	19 13 40.5	-0.6
	3.5nm,0.6s						
GEYT	Alibeck	10.38	281	P	Pn	19 14 23.9	-1.0
	0.4nm,0.3s,baz=139,slow=11,SNR=11						
GEYT				S	Sn	19 16 16.4	-2.9
	0.7nm,0.3s,baz=123,slow=21,SNR=2.3						
MK31	Makanchi Array	13.12	36	P	Pn	19 15 01.3	-0.2
	0.3nm,0.6s,baz=214,slow=8.6,SNR=4.8						
MKAR	Makanchi Array	13.12	36	P	Pn	19 14 58.5	-3.0
	0.0nm,0.3s,baz=213,slow=15,SNR=2.3						
KURBB	Kurchatov Arra	14.93	19	P	Pn	19 15 25.5	+0.7
	0.0nm,0.3s,baz=206,slow=10,SNR=3.8						
AB31	Akbulak array	14.94	331	⇑P	Pn	19 15 25.0	0.0
	0.4nm,0.3s,baz=146,slow=14,SNR=30						
AB31				⇓S	Sn	19 18 07.5	-2.1
	1.2nm,0.6s,baz=155,slow=23,SNR=3.7						
AKTO	Aktyubinsk	16.64	330	P	P	19 15 48.5	+1.6
	0.6nm,0.3s,baz=148,slow=9.0,SNR=6.5						
AKTO	Aktyubinsk	16.64	330	⇓P	Pn	19 15 46.7	+0.6
	2.6nm,0.9s						
ZALV	Zalesovo Beam	19.73	25	P	P	19 16 18.6	-2.1
	0.9nm,0.3s,baz=217,slow=10,SNR=11						
AKASG	Malin Array Be	32.86	309	P	P	19 18 25.4	+2.3
	0.3nm,0.4s,baz=88,slow=7.7,SNR=5.7						
FINES	FINESS Array B	37.35	326	P	P	19 19 03.3	+1.7
	2.4nm,0.9s,baz=117,slow=11,SNR=3.6						
NOA	NORSAR Array B	44.25	323	P	P	19 19 59.3	+0.9
	0.5nm,0.8s,baz=113,slow=7.8,SNR=1.1						

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*TUL **22** 19:29:37.3±0.5, 36°.67N±0°.02×98°.46W±0°.04, h8^{km}±6^{km}, ML2.5, mb_Lg2.0/12(NEIC), Error ellipse: s-maj=5.0km s-min=2.7km az=80.0*

NEIC 22 19:29:37.2±0.8**, 36°.65N**±0°.02×**98°.47W**±0°.04**, h9**^{km}±7^{km}**, Error ellipse: s-maj=5.2km s-min=2.7km az=83.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK032	Salt Plains WL	0.26	53	Pg	Pg	19 29 42.5	0.0
OK032				Sg	Sg	19 29 45.9	-0.2
CROK	Carrier	0.42	109	Pg	Pg	19 29 45.6	+0.2
CROK				Sg	Sg	19 29 50.8	-0.1
U32A	Winter Ranch,	0.50	238	Pg	Pb	19 29 47.6	-0.5
GC02	Grant County #	0.54	67	Pg	Pg	19 29 47.5	-0.1
GC02				Sg	Sg	19 29 54.8	+0.2
KAN10	Anthony SW Sta	0.57	32	Pg	Pg	19 29 47.8	-0.3
KAN16	Harper SW Stat	0.67	29	Pg	Pg	19 29 49.6	-0.4
KAN05	Bluff City Nor	0.67	46	Pg	Pg	19 29 49.8	-0.3
KAN17	Caldwell West	0.69	55	Pg	Pg	19 29 50.3	-0.3
KAN08	Anthony NE Sta	0.71	35	Pg	Pg	19 29 50.5	-0.3
KAN06	Argonia West S	0.78	39	Pg	Pg	19 29 51.9	-0.3
KAN09	Caldwell North	0.84	54	Pg	Pg	19 29 53.0	-0.4
BLOK	Blackwell	1.02	83	Pg	Pg	19 29 56.2	-0.6
OK029	Liberty Lake	1.18	135		Pb	19 29 59.5	-0.2
BCOK	Bluff Creek, N	1.21	144		Pg	19 30 00.3	-0.1
BCOK				IAmb_Lg		19 30 15.9	
	comp=Z,6.5nm,0.8s						
OK025	Westminster Rd	1.41	139	Pn	Pn	19 30 02.9	0.0
OK031	S. Brethren Rd	1.49	117	Pn	Pb	19 30 05.0	0.0
OK031				IAmb_Lg		19 30 23.4	
	comp=Z,4.8nm,0.8s						
QUOK	Quay	1.50	108		Pn	19 30 04.6	+0.4
OK030	Cody Creek RV	1.54	117	Pn	Pb	19 30 05.5	-0.4
T35A	Sooner Cattle	1.60	80		Pn	19 30 06.1	+0.5
FNO	Franklin	1.64	148	Pn	Pn	19 30 06.6	+0.5
FNO				IAmb_Lg		19 30 32.0	
	comp=Z,14nm,0.9s						
R32A	Long Quarter,	1.78	354		Pn	19 30 08.3	+0.1
WMOK	Wichita Mounta	1.92	188	Pn	Pn	19 30 10.6	+0.6
X34A	Smith Ranch, M	2.11	165	Pn	Pn	19 30 12.3	-0.3
TUL1	Leonard	2.29	108	IAmb_Lg		19 30 48.8	
	comp=Z,15nm,1.0s						
CBKS	Cedar Bluff	2.38	336	IAmb_Lg		19 30 53.0	
	comp=Z,14nm,0.8s						

IDC 22 19:34:02.6±1.7**, 53°.45S**×**141°.50E, h0**^{km}**, mb3.5**/3**, mb1 3.8**/3**, mb1mx3.3**/24**, mbtmp3.5**/3**, Error ellipse: s-maj=320.4km s-min=26.5km az=78.0, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	Vanda	25.28	170	P	P	19 39 30.1	0.0
	0.9nm,0.9s,baz=322,slow=8.0,SNR=3.7						
ASAR	Alice Springs	30.29	346	P	P	19 40 15.7	+0.2
	0.3nm,0.5s,baz=168,slow=10,SNR=11						
WRA	Warramunga Arr	33.90	348	P	P	19 40 46.8	-0.3
	0.4nm,0.5s,baz=172,slow=7.7,SNR=10						

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*NEIC **22** 19:54:55.9±1.8, 18°.05S±0°.08×69°.4W±0°.1, h126^{km}±11^{km}, mb4.4/11, ML4.2(GUC), Error ellipse: s-maj=18.4km s-min=11.7km az=104.0*

*IDC **22** 19:54:57.0±1.1, 18°.06S×69°.03W, h129^{km}±8^{km}, mb3.9/7, mb1 4.0/9, mb1mx3.7/25, mbtmp4.4/9, Error ellipse: s-maj=9.5km s-min=5.3km az=82.0*

*VAO **22** 19:54:56.4±0.4, 18°.01S×69°.18W, h120^{km}, mb4.3*

*GUC **22** 19:54:57.5±0.6, 18°.23S×69°.57W, h147^{km}±4^{km}, ML4.2*

ISC 22 19:54:55.8±0.6**, 18°.11S**±0°.04×**69°.27W**±0°.07**, h124**^{km}±7^{km}**, n110,** σ1^s**25**/123**, mb4.2**/8**, 3C-3D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB16	IPOC Station P	0.31	225		Pn	19 55 14.8	+0.8
AP01	Chacalluta	1.05	256	⇑*i*P	Pn	19 55 19.2	+0.7
AP01				*i* S	Sn	19 55 36.4	+0.6
AP01				IAML		19 55 37.4	
	comp=E,9µm,0.3s						
AP01	Chacalluta	1.05	256		Pn	19 55 18.5	0.0
PB12	IPOC Station P	1.12	243	⇑*i*P	Pn	19 55 19.6	+0.3
PB12				*i* S	Sn	19 55 37.4	+0.1
PB12				IAML		19 55 42.1	
	comp=N,2µm,0.1s						
PB12	IPOC Station P	1.12	243	Pn	Pn	19 55 19.5	+0.1
PB11	IPOC Station P	1.68	192	*e*P	Pn	19 55 26.8	+1.1
PB11				*i* S	Sn	19 55 49.3	+0.8
PB11				IAML		19 55 53.0	
	comp=E,2µm,0.3s						
PB08	IPOC Station P	2.02	177	*e*P	Pn	19 55 31.9	+1.8
PB08				*i* S	Sn	19 55 57.8	+1.6
PB08	IPOC Station P	2.02	177		Pn	19 55 31.7	+1.7
TA02	Huaiquique	2.29	201		Pn	19 55 34.0	+1.0
TA01	Diego Aracena	2.58	199	*e*P	Pn	19 55 37.0	+0.2
TA01				*i* S	Sn	19 56 05.2	-3.2
TA01				IAML		19 56 16.5	
	comp=N,926nm,0.8s						
TA01	Diego Aracena	2.58	199	Pn	Pn	19 55 38.2	+1.5
PB01	IPOC Station P	2.92	184	*e*P	Pn	19 55 41.9	+0.7
PB01				*i* S	Sn	19 56 15.4	-0.9
PB01				IAML		19 56 18.4	

	comp=N,574nm,0.3s						
PB01	IPOC Station P	2.92	184		Pn	19 55 42.1	+0.9
PB02	IPOC Station P	3.24	190	eP	Pn	19 55 45.8	+0.3
PB02				i S	Sn	19 56 21.6	-2.2
PB02				IAML		19 56 32.2	
	comp=N,882nm,0.7s						
PB07	IPOC Station P	3.64	189	⇑iP	Pn	19 55 51.7	+1.0
PB07				eS	Sn	19 56 31.5	-1.8
PB07	IPOC Station P	3.64	189		Pn	19 55 51.1	+0.3
PB09	IPOC Station P	3.66	180	eP	Pn	19 55 52.7	+1.6
PB09				eS	Sn	19 56 25.5	-8.4
PB09	IPOC Station P	3.66	180		Pn	19 55 52.5	+1.5
PB03	IPOC Station P	3.94	186	⇓iP	Pn	19 55 55.3	+0.6
PB03				eS	Sn	19 56 37.5	-3.0
PB04	IPOC Station P	4.28	191	eP	Pn	19 55 59.1	-0.2
PB04				eS	Sn	19 56 45.1	-3.4
PB04	IPOC Station P	4.28	191		Pn	19 55 59.2	0.0
LVC	Limon Verde	4.49	176	⇓iP	Pn	19 56 03.4	+1.2
LVC				eS	Sn	19 56 52.2	-1.6
LVC	Limon Verde	4.49	176	eP	Pn	19 56 04.0	+1.8
LVC	Limon Verde	4.49	176	Pn	Pn	19 56 03.9	+1.6
PB06	IPOC Station P	4.58	183	⇓iP	Pn	19 56 03.2	0.0
PB06				eS	Sn	19 56 51.4	-4.3
PB06	IPOC Station P	4.58	183		Pn	19 56 03.4	+0.1
PB05	IPOC Station P	4.79	190	eP	Pn	19 56 05.4	-0.7
PB05				i S	Sn	19 56 56.6	-4.2
PB15	IPOC Station P	5.07	182	i P	Pn	19 56 09.9	+0.1
PB15				eS	Sn	19 57 05.3	-2.4
PB15	IPOC Station P	5.07	182		Pn	19 56 10.1	+0.1
PB10	IPOC Station P	5.50	192	Pn	Pn	19 56 13.2	-2.4
PB14	IPOC Station P	6.56	189	Pn	Pn	19 56 28.2	-1.9
SIV	San Ignacio	8.12	76	P	Pn	19 56 49.5	-1.5
	comp=N,6.1nm,0.3s,baz=266,slow=12,SNR=6.0						
AC02	Maricunga	8.68	179	Pn	Pn	19 56 57.7	-1.2
ETMB	Extrema	8.77	20	eP	Pn	19 56 58.6	-1.0
ETMB	Extrema	8.77	20	Pn	Pn	19 56 58.7	-1.0
PTLB	Pontes e Lacer	10.06	76	eP	Pn	19 57 16.7	-0.3
PTLB	Pontes e Lacer	10.06	76	Pn	Pn	19 57 17.5	+0.4
VILB	Vilhena	10.14	61	eP	Pn	19 57 17.1	-1.1
VILB	Vilhena	10.14	61	Pn	Pn	19 57 17.2	-1.0
CZSB	Cruzeiro do Su	10.85	342	eP	Pn	19 57 26.1	-1.6
SAML	Samuel	10.86	34	Pn	Pn	19 57 25.9	-2.0
CO03	El Pedregal	12.73	186		Pn	19 57 48.6	-3.9
AQDB	Aquidauana	13.03	103	eP	Pn	19 57 56.2	-0.1
SALV	Santo Antonio	13.17	82	eP	Pn	19 57 57.3	-0.9
PP1B	Ponte de Pedra	13.71	90	eP	Pn	19 58 03.5	-1.7
PDRB	Porto dos Gac	13.73	64	eP	Pn	19 58 05.0	-0.4
TBTG	Tabatinga, AM	13.86	357	eP	Pn	19 58 07.4	+0.4
VA03	San Esteban	14.63	184	P	Pn	19 58 16.6	-0.3
CLDB	Colider	14.89	63	eP	Pn	19 58 19.2	-1.0
MT09	Talagante	15.67	185	P	Pn	19 58 29.7	-0.2
MT09				IAmb	IAmb	19 58 33.9	
	comp=Z,15nm,0.8s						
MT01	Popeta	15.79	186	P	Pn	19 58 31.2	+0.1
MT01				IAmb	IAmb	19 58 35.9	
	comp=Z,44nm,1.3s						
BO01	Tunca	16.29	185	P	Pn	19 58 37.3	-0.1
BO01				IAmb	IAmb	19 58 41.6	
	comp=Z,11nm,0.8s						
ITQB	Itaqui	16.30	137	eP	P	19 58 38.5	+0.4
BO02	Sierra Bellavi	16.67	184	P	Pn	19 58 43.0	+0.9
BO02				IAmb	IAmb	19 58 46.4	
	comp=Z,16nm,0.9s						
MACA	Manacapuru-AM	17.08	31	eP	P	19 58 46.4	-0.5
PTGB	Pitanga	17.31	115	eP	Pn	19 58 51.5	+1.5
NPGB	Novo Progresso	17.46	53	eP	Pn	19 58 51.8	0.0
ITRB	Iturama	17.97	98	eP	Pn	19 58 57.3	-0.6
SNDB	Serra Nova Dou	18.40	73	eP	Pn	19 59 01.8	-1.1
CPSB	Cacapava Do Su	18.90	133	eP	P	19 59 07.7	+0.9
ITTB	Itaituba	19.03	46	eP	P	19 59 07.3	-1.0
PTGA	Pitinga	19.55	29	P	P	19 59 13.0	-0.9
	comp=Z,4.6nm,0.3s,baz=323,slow=23,SNR=29						
PTGA	Pitinga	19.55	29	P	P	19 59 13.0	-0.9
PTGA				IAmb	IAmb	19 59 13.3	
	comp=Z,14nm,0.4s						
IPMB	Ipameri, GO	20.03	93	eP	P	19 59 19.0	-0.2
BDFB	Brasilia	20.49	86	P	P	19 59 22.5	-1.7
	comp=Z,5.3nm,0.4s,baz=257,slow=9.2,SNR=12						
BDFB	Brasilia	20.49	86	P	P	19 59 23.6	-0.6
RCLB	Rio Claro- Sao	20.84	105	eP	P	19 59 27.0	-0.8
TRQA	Tornquist	20.87	164	P	P	19 59 28.4	+0.5
TRQA				IAmb	IAmb	19 59 29.4	
	comp=Z,18nm,0.8s						
PEXB	Peixe	21.10	76	eP	P	19 59 30.3	-0.4
MALB	Monte Alegre	21.86	44	eP	P	19 59 38.2	-0.6
BOAV	Boa Vista	22.13	24	eP	P	19 59 42.0	+0.5
PRPB	Parauapebas	22.39	60	eP	P	19 59 42.6	-1.6
PLCA	Paso Flores	22.57	183	P	P	19 59 46.7	+0.9
	comp=Z,3.6nm,0.7s,baz=3.5,slow=14,SNR=7.2						
PLCA	Paso Flores	22.57	183	eP	P	19 59 47.7	+1.9
PLCA	Paso Flores	22.57	183	P	P	19 59 46.7	+0.9
PARB	Paraibuna	22.71	107	eP	P	19 59 47.1	-0.2
SMTB	Santa Maria do	22.98	69	eP	P	19 59 50.1	+0.2
BSCB	Bom Sucesso	23.26	101	eP	P	19 59 52.2	-0.4
JANB	Januaria	24.11	86	eP	P	19 59 59.4	-0.9
SDBA	SAO DESIDERIO	24.17	80	eP	P	20 00 01.0	+0.1
MC01	Montes Claros	24.21	91	eP	P	20 00 01.0	-0.2
DIAM	Diamantina, MG	24.32	94	eP	P	20 00 02.4	+0.2
LL01	San Ignacio de	24.33	186	P	P	20 00 03.6	+1.7
MCPB	Macapa, AP	24.45	46	eP	P	20 00 02.4	-0.8
DUB01	Friburgo-RJ	25.55	103	eP	P	20 00 14.4	+1.0
SJMB	Sao Joao De Ma	26.65	96	eP	P	20 00 23.6	+0.4
BSFB	Barra de Sao F	26.96	96	eP	P	20 00 26.2	+0.2
RIB01	Linhares ES	27.37	97	eP	P	20 00 29.6	0.0
GUA01	Guaratinga, BA	28.16	91	eP	P	20 00 36.9	+0.3
CMC01	Camacan, BA	28.61	89	eP	P	20 00 41.0	+0.4
NBIT	Itapeh - BA	28.77	88	eP	P	20 00 42.5	+0.5
GDU01	Guandu, BA	28.87	86	eP	P	20 00 43.1	+0.1
NBPN	Ponto Novo - B	29.03	80	eP	P	20 00 44.6	+0.2
NBLA	Lagarto - SE	31.25	81	eP	P	20 01 03.4	-0.6
NBMA	Muriti-CE	31.56	74	eP	P	20 01 07.0	+0.2
NBAN	Anadia - AL	33.07	80	eP	P	20 01 20.0	0.0
SNAA	Sanae	65.58	161	P	P	20 05 26.3	+0.4
	comp=Z,2.5nm,0.8s,baz=281,slow=5.2,SNR=4.3						
SNAA	Sanae	65.58	161	P	P	20 05 26.4	+0.4
LIC	Lamto	67.82	75	eP	P	20 05 39.5	-1.5
	comp=Z,40nm,1.6s						
TIC	Toumodi	67.98	75	eP	P	20 05 41.2	-0.9
KIC	Kosan Boka	68.13	75	eP	P	20 05 41.9	-1.1
	comp=Z,16nm,0.5s						
DBIC	Dimbokro	68.14	75	P	P	20 05 42.5	-0.6
	comp=Z,7.3nm,0.6s,baz=254,slow=6.0,SNR=15						
TORD	Torodi Ar. Bea	76.57	71	P	P	20 06 32.3	-0.8
	comp=Z,8.5nm,1.0s,baz=255,slow=5.2,SNR=34						
TORD	Torodi Ar. Bea	76.57	71	P	P	20 06 32.5	-0.6
TORD				IAmb	IAmb	20 06 34.4	
	comp=Z,3.2nm,0.9s						
VNDA	Vanda	80.11	190	P	P	20 06 53.4	+1.9
	comp=Z,0.4nm,0.7s,baz=114,slow=3.2,SNR=3.7						
MAW	Mawson	87.66	163	P	P	20 07 31.3	+1.4
	comp=Z,1.1nm,0.6s,baz=238,slow=9.5,SNR=2.3						
ASAR	Alice Springs	132.71	209	PKP	PKPdf	20 13 56.9	0.0
	comp=Z,0.2nm,0.6s,baz=131,slow=2.6,SNR=5.3						
WRA	Warramunga Arr	135.65	213	PKP	PKPdf	20 14 02.9	+0.5
	comp=Z,0.6nm,0.8s,baz=146,slow=1.6,SNR=3.4						
ZALV	Zalesovo Beam	139.02	23	PKP	PKPdf	20 14 08.3	+0.8
	comp=Z,0.7nm,0.6s,baz=222,slow=1.9,SNR=2.4						
SONM	Songino Array	150.15	6	PKPbc	PKPbc	20 14 33.2	+0.9
	comp=Z,0.5nm,0.4s,baz=298,slow=1.4,SNR=6.3						

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*IDC **22** 19:57:41.7±0.6, 40°.87N×122°.44E, h0^{km}, mb3.8/15,*
mb1 4.0/19, mb1mx3.8/44, mbtmp3.8/19, ML2.7/3, MS3.4/15,
Ms1 3.4/15, ms1mx3.1/56, Error ellipse: s-maj=18.8km
s-min=11.3km az=40.0

*BJI **22** 19:57:43.0±0.0, 40°.83N×122°.46E, h9^{km}, mB4.3/7,*
mb4.2/14, ML4.6/17, Ms4.0/16, Ms7 3.9/15

*KMA **22** 19:57:45.9, 40°.68N×122°.47E, h15^{km}*

ISC 22 19:57:43.9±0.5**, 40°.88N**±0°.03×**122°.39E**±0°.04**, h10**^{km}**, n77,**
σ**1^{s}66**/84**, mb4.1**/23**, MS3.3**/12**, 2C-2D, Northeastern**
China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNY	Shenyang	1.30	43	Pn	Pn	19 58 07.0	-1.1
SNY				⇑Pg	Pb	19 58 08.0	-0.4
SNY				Sg	Sn	19 58 26.0	+0.5
SNY				smax	smax		
	comp=N,5µm,0.5s						
SNY				smax	smax		
	comp=E,4µm,0.5s						
DL2	Dalian	2.06	197	Pn	Pn	19 58 16.8	-1.7
DL2				Pg	Pb	19 58 20.1	-1.3
DL2				Sg	Sb	19 58 45.8	-1.2
DL2				smax	smax		
	comp=N,6µm,0.5s						
DL2				smax	smax		
	comp=E,7µm,0.8s						
KSBAR	Backryungdo	3.41	147	P	Pn	19 58 35.6	-1.6
	SNR=133						
DACB	Daecheong-do R	3.53	149	P	Pn	19 58 37.2	-1.7
	SNR=88						
DACB				S	Sb	19 59 29.8	+0.4
CN2	Changchun	3.69	37	Pn	Pn	19 58 41.9	+0.9
CN2				Pg	Pb	19 58 51.3	+2.0
CN2				smax	smax		
	comp=N,570nm,0.7s						
CN2				smax	smax		
	comp=E,640nm,0.7s						
CN2	Changchun	3.69	37	Pn	Pn	19 58 41.0	0.0
CN2				Pg	Pb	19 58 51.2	+2.0
CN2				Sn	Sb	19 59 30.3	-3.7
CN2				Sg	Sg	19 59 39.7	-2.8
CN2				smax	smax		
	comp=E,570nm,0.7s						
CN2				smax	smax		
	comp=E,640nm,0.7s						
YPDB	Yeonpyeongdo	4.16	141	P	Pn	19 58 45.4	-2.0
	SNR=82						
KSGAH	Ganghwa	4.46	134	P	Pn	19 58 49.8	-1.8
	SNR=74						
KSMUS	Musan	4.51	130	P	Pn	19 58 51.4	-0.9
	SNR=11						
KSDEI	Deokjeokdo	4.63	140	P	Pn	19 58 52.6	-1.3
	SNR=15						
BJI	Beijing	4.82	262	Pn	Pn	19 58 56.3	-0.2
BJI				P*	Pb	19 59 06.5	-1.9
BJI				Pg	Pg	19 59 14.3	-1.9
BJI				Sn	Sn	19 59 53.8	+1.5
BJI				Sg	Sg	20 00 17.8	-0.7
BJI				smax	smax		
	comp=N,1µm,0.8s						
BJI				smax	smax		
	comp=E,1µm,0.8s						
KSSWO	Suwon	5.07	134	P	Pn	19 58 58.8	-1.1
	SNR=12						
KSSES	Seosan	5.17	141	P	Pn	19 58 60.0	-1.4
	SNR=8.7						
KSCHC	Chuncheon	5.22	125	P	Pn	19 59 01.1	-0.9
	SNR=14						
SEHB	SEOHWA	5.22	118	P	Pn	19 59 03.6	+1.5
	SNR=11						
OYDB	Oeyeondo	5.47	147	P	Pn	19 59 04.0	-1.4
	SNR=18						
KSRS	Korea Array	5.49	127	Pn	Pn	19 59 04.0	-1.7
	comp=E,6.6nm,0.3s,baz=312,slow=14,SNR=40						
KSRS				Pg	Pb	19 59 21.6	+1.7
	comp=E,13nm,0.3s,baz=322,slow=18,SNR=21						
KSRS				Lg	Lg	20 00 32.1	
	comp=E,12nm,0.3s,baz=312,slow=17,SNR=4.9						
KSCEA	Cheonan	5.55	135	P	Pn	19 59 05.3	-1.3
	SNR=12						
KSWJU	Wonju	5.60	126	P	Pn	19 59 06.0	-1.3
	SNR=23						
JECH	Jecheon	5.85	128	P	Pn	19 59 10.0	-0.7
	SNR=14						
KSCHJ	Chungju	5.91	131	P	Pn	19 59 10.8	-0.7
	SNR=16						
OKCB	Cheongsan-myeo	6.20	135	P	Pn	19 59 14.0	-1.4
	SNR=10						
TIA	Tai'an	6.23	223	ePn	Pn	19 59 14.0	-1.9
TIA				Sn	Sn	20 00 25.4	-1.7
TIA				LR	LR		
	comp=E,520nm,6.0s						
TIA				LR	LR		
	comp=E,480nm,4.8s						
TIA				LR	LR		
	comp=E,290nm,7.0s						
CHYB	Chungyang	6.43	126	P	Pn	19 59 18.0	-0.6
	SNR=26						
GOCB	Gochang-gun	6.44	148	P	Pn	19 59 17.8	-0.9
	SNR=24						
KSKWJ	Gwangju	6.77	146	P	Pn	19 59 22.1	-1.2
	SNR=49						
KSKWJ	Gwangju	6.77	146	P	Pn	19 59 22.0	-1.2
	SNR=51						
BOSB	Boseong-gun	7.20	147	P	Pn	19 59 29.0	-0.2
	SNR=23						
USRK	Ussuriysk Ar.	7.82	62	Pn	Pn	19 59 37.4	-0.3
	baz=275,slow=12,SNR=10						
USRK				Pg	Pb	20 00 04.7	+5.2
	baz=249,slow=16,SNR=20						
USRK				Lg	Lg	20 01 47.4	
	baz=243,slow=23,SNR=14						
USRK				LR	LR	20 02 43.6	
	comp=E,107nm,20.4s,baz=239,slow=39						
HHC	Hu-ho-hao-te	8.21	273	ePn	Pn	19 59 44.6	+1.5
HHC				Pg	Pg	20 00 15.5	-5.5
HHC				Sn	Sn	20 01 17.1	+1.1
HHC				Sg	Sb	20 01 50.8	+6.8
HHC				smax	smax		
	comp=N,250nm,0.8s						
HHC				smax	smax		
	comp=E,380nm,1.1s						
NJ2	Nanjing	9.26	199	eP	Pn	20 00 04.6	+7.1
NJ2				S	Sn	20 01 52.1	+10
NJ2				pmax	pmax		
	comp=E,5.0nm,0.5s						
NJ2				LR	LR		
	comp=E,500nm,6.4s						
NJ2				LR	LR		
	comp=E,340nm,5.4s						
JNU	Nakatsue	10.29	136	Lg	Lg	20 03 04.8	
	comp=E,0.6nm,0.3s,baz=184,slow=17,SNR=4.0						
KLR	Kul'dur	10.64	35	Lg	Lg	20 03 15.2	
	comp=E,0.7nm,0.3s,baz=316,slow=12,SNR=4.1						
KLR				LR	LR	20 04 03.0	
	comp=E,118nm,18.6s,baz=247,slow=36						
WHN	Wuhan	12.20	215	⇑P	Pn	20 00 38.4	+0.6
WHN				S	Sn	20 02 55.9	+2.0
WHN				LR	LR		
	comp=E,1µm,7.5s						
WHN				LR	LR		
	comp=E,820nm,6.0s						
WHN				LR	LR		
	comp=E,1µm,6.2s						
XAN	Xi'an	12.69	242	P	Pn	20 00 57.6	+13
XAN				LR	LR		
	comp=N,510nm,17.9s						
XAN				LR	LR		
	comp=E,620nm,17.9s						
XAN				LR	LR		
	comp=Z,360nm,19.2s						
MJAR	Matsushiro Arr	13.09	104	Pn	Pn	20 00 50.7	+0.8
	comp=Z,0.0nm,0.3s,baz=291,slow=8.9,SNR=3.0						
SONM	Songino Array	13.38	307	Pn	Pn	20 00 54.1	+0.2
	comp=Z,0.1nm,0.3s,baz=131,slow=12,SNR=6.8						
SONM				Lg	Lg	20 04 45.9	
	comp=Z,0.3nm,0.3s,baz=104,slow=28,SNR=2.8						
SONM				LR	LR	20 06 51.6	
	comp=Z,158nm,18.8s,baz=62,slow=41						
ASAJ	Asahikawa	15.25	71	LR	LR	20 06 36.9	
	comp=Z,99nm,18.8s,baz=280,slow=35						
LZH	Lanzhou	15.29	258	eP	P	20 01 28.1	+3.3
LZH				sP	sP	20 01 36.8	+7.9
LZH				pmax	pmax		
	comp=Z,21nm,1.1s						
LZH				LR	LR		
	comp=N,970nm,7.9s						
LZH				LR	LR		
	comp=E,690nm,11.4s						
LZH				LR	LR		
	comp=Z,370nm,11.9s						
GTA	Gaotai	17.32	273	eP	P	20 01 47.5	+0.2
GTA				pP	sP	20 01 55.9	+4.5
GTA				sP	pP	20 02 00.3	+10
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,74nm,5.0s						
GTA				LR	LR		
	comp=N,640nm,12.4s						
GTA				LR	LR		
	comp=E,270nm,13.5s						
GTA				LR	LR		
	comp=Z,180nm,10.9s						
CD2	Chengdu	18.05	242	eP	Pn	20 01 55.0	+0.1
CD2				S	Sn	20 05 14.0	-2.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				LR	LR		
	comp=N,480nm,13.2s						
CD2				LR	LR		
	comp=E,410nm,15.7s						
CD2				LR	LR		
	comp=Z,260nm,8.2s						
GYA	Guiyang	19.41	227	⇓P	Pn	20 02 12.3	+0.8
GYA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
GYA	Guiyang	19.41	227	⇓P	Pn	20 02 12.2	+0.8
GYA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
JCJ	Chichijima	21.34	124	LR	LR	20 10 11.6	
	comp=Z,67nm,18.4s,baz=90,slow=35						
YAK	Yakutsk	21.63	9	LR	LR	20 10 54.0	
	comp=Z,59nm,21.6s,baz=94,slow=37						
QIZ	Qiongzhong	24.29	210	P	P	20 03 01.3	-0.2
QIZ				S	S	20 07 23.5	+3.1
QIZ				pmax	pmax		
	comp=Z,27nm,1.5s						
QIZ				LR	LR		
	comp=Z,290nm,17.7s						
QIZ				LR	LR		
	comp=Z,220nm,12.7s						
WMQ	Urumqi	25.70	288	eP	P	20 03 15.5	+1.3
PETK	Petropavlovsk-	26.72	51	LR	LR	20 15 39.4	
	comp=Z,78nm,18.2s,baz=270,slow=40						
ZALV	Zalesovo Beam	28.22	310	P	P	20 03 36.3	-0.4
	comp=Z,0.7nm,0.6s,baz=128,slow=9.6,SNR=4.2						
ZALV				LR	LR	20 16 19.6	
	comp=Z,47nm,18.3s,baz=125,slow=40						
SEY	Seymchan	28.34	29	LR	LR	20 14 06.4	
	comp=Z,52nm,18.3s,baz=214,slow=35						
MKAR	Makanchi Array	29.29	295	P	P	20 03 45.5	-0.8
	comp=Z,0.5nm,0.8s,baz=106,slow=6.6,SNR=5.4						
CMAR	Chiang Mai Arr	30.07	229	LR	LR	20 17 20.3	
	comp=Z,65nm,20.4s,baz=36,slow=39						
KURBB	Kurchatov Arra	31.70	303	P	P	20 04 07.7	+0.2
	comp=Z,0.7nm,0.5s,baz=90,slow=9.3,SNR=9.3						
JIRN	Jiri	32.46	257	eP	P	20 04 18.0	+3.2
	comp=Z,6.8nm,0.7s						
GUN	Gumba	32.55	258	eP	P	20 04 18.7	+3.1
	comp=Z,14nm,0.7s						
KKN	Kakani	33.06	258	eP	P	20 04 23.3	+3.3
	comp=Z,7.4nm,0.7s						
PKI	Pulchoki	33.09	258	eP	P	20 04 23.2	+2.9
	comp=Z,8.5nm,0.6s						
PKIN	Phulchoki	33.09	258	eP	P	20 04 23.1	+2.8
	comp=Z,6.3nm,0.5s						
DMN	Daman	33.29	258	eP	P	20 04 25.5	+3.5
	comp=Z,8.9nm,0.6s						
GKN	Gorkha	33.43	259	eP	P	20 04 25.6	+2.5
DANN	Dangsing	33.90	261	eP	P	20 04 29.3	+2.0
PYUN	Piuthan	34.61	261	eP	P	20 04 36.4	+3.0
	comp=Z,10nm,0.7s						
BVAR	Borovoye Array	36.72	307	P	P	20 04 51.9	+0.9
	comp=Z,0.6nm,0.6s,baz=174,slow=14,SNR=3.0						
ARU	Arti	43.29	313	P	P	20 05 46.0	+0.5
	comp=Z,0.9nm,0.7s,baz=104,slow=19,SNR=3.5						
ILAR	Eielson Array	54.20	32	P	P	20 07 08.4	-0.7
	comp=Z,0.5nm,0.8s,baz=279,slow=6.0,SNR=5.4						
ARCES	ARCESS Array B	54.67	335	P	P	20 07 11.2	-1.3
	comp=Z,2.9nm,0.8s,baz=62,slow=14,SNR=3.9						
ARCES				LR	LR	20 33 28.4	
	comp=Z,44nm,19.2s,baz=75,slow=39						
KBZ	Khabaz	56.68	301	LR	LR	20 34 28.0	
	comp=Z,64nm,18.6s,baz=72,slow=39						
INK	Inuvik	57.54	25	P	P	20 07 32.2	-0.8
	comp=Z,0.7nm,0.6s,baz=23,slow=2.7,SNR=4.0						
FINES	FINESS Array B	57.88	326	P	P	20 07 35.4	-0.2
	comp=Z,2.3nm,0.5s,baz=72,slow=6.4,SNR=25						
FINES				LR	LR	20 34 53.9	
	comp=Z,52nm,19.1s,baz=306,slow=38						
WRA	Warramunga Arr	61.52	167	P	P	20 08 01.0	-0.1
	comp=Z,0.7nm,0.5s,baz=352,slow=7.7,SNR=7.9						
AKASG	Malin Array Be	61.54	314	P	P	20 07 60.0	-1.0
	comp=Z,0.5nm,0.6s,baz=54,slow=7.2,SNR=2.7						
NB2	NORSAR Subarra	64.14	330	P	P	20 08 17.3	-0.8
	comp=Z,2.7nm,0.8s,baz=79,slow=5.9						
NOA	NORSAR Array B	64.14	330	P	P	20 08 16.9	-1.2
	comp=Z,2.0nm,0.7s,baz=54,slow=6.7,SNR=7.9						
NOA				LR	LR	20 36 52.2	
	comp=Z,23nm,19.0s,baz=25,slow=37						
BRTR	Keskin Array B	64.68	301	P	P	20 08 21.0	-1.1
	comp=Z,0.6nm,0.7s,baz=59,slow=5.6,SNR=2.8						
ASAR	Alice Springs	65.10	168	P	P	20 08 22.9	-1.9
	comp=Z,0.4nm,0.5s,baz=349,slow=6.1,SNR=13						
YKA	Yellowknife Ar	67.31	25	LR	LR	20 41 34.8	
	comp=Z,44nm,19.2s,baz=0.0,slow=39						
STKA	Stephens Creek	74.54	163	P	P	20 09 22.8	+0.1
	comp=Z,0.4nm,0.3s,baz=358,slow=5.1,SNR=4.6						

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*NEIC **22** 20:05:36.9±2.4, 24°.19S±0°.06×66°.97W±0°.10, h174^{km}±6^{km},*
mb4.6/30, Md4.3(SJA), ML4.9(GUC), Error ellipse:
s-maj=12.6km s-min=9.0km az=82.0

*SJA **22** 20:05:37±3.3, 24°.19S±0°.05×67°.04W±0°.09, h192^{km}±5^{km},*
Error ellipse: s-maj=0.0km s-min=0.0km az=190.0

*IDC **22** 20:05:37.2±1.0, 24°.08S×66°.86W, h176^{km}±8^{km}, mb4.0/16,*
mb1 4.2/21, mb1mx4.0/37, mbtmp4.5/21, MS3.1/1,
Ms1 3.1/1, ms1mx2.6/22, Error ellipse: s-maj=15.0km
s-min=10.7km az=37.0

*GUC **22** 20:05:38.9±0.6, 24°.12S×67°.43W, h230^{km}±7^{km}, ML4.9*

*VAO **22** 20:05:38.9±0.3, 24°.12S×66°.93W, h199^{km}, mb4.2*

ISC 22 20:05:37.2±0.6**, 24°.19S**±0°.03×**67°.07W**±0°.03**, h184**^{km}±6^{km}**,**
n219, σ**1^{s}16**/242**, mb4.5**/27**, 12C-3D, Chile-Argentina**
border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLA	San Lorenzo	1.53	111	⇓iP	Pn	20 06 11.4	+1.5
SLA				i S	Sn	20 06 36.9	+1.6
SLA	San Lorenzo	1.53	111	i P	Pn	20 06 11.0	+1.1
SLA				i S	Sn	20 06 35.4	+0.1
HJA	Humahuaca	1.81	58	i P	Pn	20 06 14.4	+1.5
HJA				i S	Sn	20 06 41.6	+1.0
AZAP	Zapla	1.83	92	i P	Pn	20 06 14.2	+1.1
AZAP				i S	Sn	20 06 41.2	+0.4
FSA	Cafayete	2.16	153	i P	Pn	20 06 17.3	+0.9
FSA				i S	Sn	20 06 46.5	-0.6
LVC	Limon Verde	2.30	313	P	Pn	20 06 20.0	+1.7
	260nm,0.3s,baz=165,slow=7.4,SNR=626						
LVC				S	Sn	20 06 50.9	+0.8
	350nm,0.3s,baz=15,slow=23,SNR=44						
LVC				LR	LR	20 07 21.7	
	comp=Z,386nm,19.8s,baz=164,slow=44						
LVC	Limon Verde	2.30	313	⇑iP	Pn	20 06 20.0	+1.7
LVC				i S	Sn	20 06 51.3	+1.2
LVC	Limon Verde	2.30	313	eP	Pn	20 06 20.0	+1.7
LVC	Limon Verde	2.30	313	Pn	Pn	20 06 20.2	+1.9
LVC	Limon Verde	2.30	313	i P	Pn	20 06 20.0	+1.7
LVC				IAML		20 06 53.8	
	comp=Z,628nm,0.5s						
PB15	IPOC Station P	2.40	293	⇑iP	Pn	20 06 20.9	+1.7
PB15				i S	Sn	20 06 52.8	+0.9
PB15	IPOC Station P	2.40	293		Pn	20 06 21.1	+1.8
PB15	IPOC Station P	2.40	293	i P	Pn	20 06 21.0	+1.8
ASTB	Santa Barbara	2.41	85	i P	Pn	20 06 20.1	+0.9
ASTB				i S	Sn	20 06 51.5	-0.4
YJA	Yavi	2.46	36	i P	Pn	20 06 21.8	+1.6
PB06	IPOC Station P	2.73	302	⇑iP	Pn	20 06 24.4	+1.4
PB06				i S	Sn	20 06 58.4	-0.1
PB06				IAML		20 07 01.0	
	comp=N,6µm,0.6s						
PB06	IPOC Station P	2.73	302		Pn	20 06 24.6	+1.6
AHML	Horco Molle	3.03	149	⇑iP	Pn	20 06 27.1	+0.7
AHML				i S	Sn	20 07 04.2	-0.6
AHML	Horco Molle	3.03	149	i P	Pn	20 06 27.1	+0.7
AHML				i S	Sn	20 07 04.7	-0.2
PB14	IPOC Station P	3.07	261	eP	Pn	20 06 27.8	+0.6
PB14				i S	Sn	20 07 05.3	-0.7
PB14				IAML		20 07 07.8	
	comp=E,722nm,0.3s						
PB14	IPOC Station P	3.07	261	Pn	Pn	20 06 28.1	+0.9
PB14	IPOC Station P	3.07	261	i P	Pn	20 06 28.0	+0.8
PB14				IAML		20 07 08.3	
	comp=Z,1µm,0.2s						
PB09	IPOC Station P	3.11	320	⇑iP	Pn	20 06 29.1	+1.6
PB09				i S	Sn	20 07 07.2	+0.5
PB09				IAML		20 07 14.8	
	comp=E,1µm,0.3s						
PB09	IPOC Station P	3.11	320		Pn	20 06 29.4	+1.8
PB09	IPOC Station P	3.11	320	i P	Pn	20 06 29.0	+1.5

PB09				*i* S	Sn	20 07 07.5	+0.7
PB05	**IPOC Station P**	3.16	294	⇑*i*P	Pn	20 06 29.0	+0.8
PB05				*i* S	Sn	20 07 06.4	-1.5
PB05				IAML		20 07 11.2	
	comp=N,2µm,0.5s						
PB05	**IPOC Station P**	3.16	294	*i* P	Pn	20 06 29.0	+0.8
AC02	**Maricunga**	3.23	215	⇓*i*P	Pn	20 06 30.4	+1.2
AC02				*i* S	Sn	20 07 11.5	+1.5
AC02				IAML		20 07 18.1	
	comp=N,431nm,0.2s						
AC02	**Maricunga**	3.23	215	Pn	Pn	20 06 30.6	+1.3
AC02	**Maricunga**	3.23	215	*i* P	Pn	20 06 30.6	+1.3
PB10	**IPOC Station P**	3.26	281	*e*P	Pn	20 06 30.0	+0.8
PB10				*i* S	Sn	20 07 07.8	-1.9
PB10				IAML		20 07 13.2	
	comp=N,2µm,0.4s						
PB10	**IPOC Station P**	3.26	281	Pn	Pn	20 06 30.5	+1.4
PB10	**IPOC Station P**	3.26	281	*i* P	Pn	20 06 30.3	+1.1
PB03	**IPOC Station P**	3.26	310	⇑*i*P	Pn	20 06 30.3	+0.9
PB03				*i* S	Sn	20 07 08.9	-1.1
PB03				IAML		20 07 12.1	
	comp=E,2µm,0.5s						
PB03	**IPOC Station P**	3.26	310	*i* P	Pn	20 06 30.3	+0.9
PB04	**IPOC Station P**	3.38	302	⇑*i*P	Pn	20 06 31.6	+0.7
PB04				*i* S	Sn	20 07 11.3	-1.4
PB04	**IPOC Station P**	3.38	302		Pn	20 06 31.7	+0.9
PB04	**IPOC Station P**	3.38	302	*i* P	Pn	20 06 31.6	+0.7
PB07	**IPOC Station P**	3.56	313	⇑*i*P	Pn	20 06 33.7	+0.5
PB07				*i* S	Sn	20 07 15.8	-1.1
PB07	**IPOC Station P**	3.56	313		Pn	20 06 34.0	+0.8
PB07	**IPOC Station P**	3.56	313	*i* P	Pn	20 06 34.0	+0.8
PB01	**IPOC Station P**	3.84	324	⇑*i*P	Pn	20 06 36.9	+0.3
PB01				*i* S	Sn	20 07 22.1	-0.9
PB01	**IPOC Station P**	3.84	324		Pn	20 06 37.0	+0.4
PB01	**IPOC Station P**	3.84	324	*i* P	Pn	20 06 37.2	+0.6
PB01				IAML		20 07 26.2	
	comp=Z,459nm,0.2s						
PB02	**IPOC Station P**	3.86	317	⇑*i*P	Pn	20 06 37.2	+0.3
PB02				*i* S	Sn	20 07 21.8	-1.7
PB02	**IPOC Station P**	3.86	317	*i* P	Pn	20 06 37.4	+0.5
CYA	**Choya**	4.39	165	*i* P	Pn	20 06 44.1	+0.7
GO03	**Copiap**	4.43	219	⇓*i*P	Pn	20 06 43.3	-0.7
GO03				*i* S	Sn	20 07 34.4	-2.0
GO03	**Copiap**	4.43	219	Pn	Pn	20 06 43.5	-0.5
PB08	**IPOC Station P**	4.46	334	⇑*i*P	Pn	20 06 45.7	+0.9
PB08				*i* S	Sn	20 07 38.2	+0.6
PB08	**IPOC Station P**	4.46	334	Pn	Pn	20 06 45.7	+0.9
PB08	**IPOC Station P**	4.46	334	*i* P	Pn	20 06 45.4	+0.7
PB08				IAML		20 07 39.2	
	comp=Z,254nm,0.5s						
TA01	**Diego Aracena**	4.61	321	Pn	Pn	20 06 46.2	-0.1
VCA	**Vinchina**	4.64	192	*i* P	Pn	20 06 48.6	+1.8
VCA				IAML		20 07 52.2	
	comp=Z,97nm,0.9s						
TA02	**Huaiquique**	4.82	323		Pn	20 06 48.3	-0.6
TA02	**Huaiquique**	4.82	323	*i* P	Pn	20 06 49.4	+0.5
PB11	**IPOC Station P**	5.01	331	Pn	Pn	20 06 51.2	-0.4
ACLC	**CERRO LA CRUZ**	5.22	179	*i* P	Pn	20 06 54.0	-0.2
ACLC				IAML		20 07 55.5	
	comp=Z,126nm,0.4s						
AC04	**Llanos de Chal**	5.38	221	Pn	Pn	20 06 54.8	-1.4
LCO	**Las Campanas**	5.80	213	Pn	Pn	20 07 00.4	-1.5
PB16	**IPOC Station P**	6.25	338		Pn	20 07 08.0	-0.2
PB12	**IPOC Station P**	6.32	331		Pn	20 07 06.8	-1.8
PB12	**IPOC Station P**	6.32	331	*i* P	Pn	20 07 07.0	-1.6
PB12				IAML		20 08 18.8	
	comp=Z,110nm,1.2s						
AROD	**Rodeo**	6.33	199	*i* P	Pn	20 07 10.0	+1.1
AVFE	**Valle Fertil**	6.46	183	*i* P	Pn	20 07 10.0	-0.3
AVFE				IAML		20 08 25.5	
	comp=Z,55nm,0.4s						
AP01	**Chacalluta**	6.54	332	Pn	Pn	20 07 11.5	+0.2
AP01	**Chacalluta**	6.54	332	*i* P	Pn	20 07 13.0	+1.6
ACCO	**Cerro Coronel**	6.62	195	*i* P	Pn	20 07 13.0	+0.4
ACCO				IAML		20 08 32.6	
	comp=Z,64nm,0.6s						
CO05	**La Serena**	6.81	212	Pn	Pn	20 07 13.9	-0.9
GO04	**Tololo Observa**	6.82	208		Pn	20 07 13.6	-1.7
ACHE	**Chepes**	6.96	177	*i* P	Pn	20 07 16.0	-0.9
CO03	**El Pedregal**	7.36	205		Pn	20 07 20.2	-2.0
CO03	**El Pedregal**	7.36	205	*i* P	Pn	20 07 21.0	-1.2
CO06	**Fray Jorge**	7.63	211	Pn	Pn	20 07 24.2	-1.4
LPAZ	**La Paz**	7.92	353	*e*P	Pn	20 07 30.6	+0.5
LPAZ	**La Paz**	7.92	353	Pn	Pn	20 07 30.8	+0.7
AUSP	**Uspallata**	8.26	194	*i* P	Pn	20 07 35.0	+0.8
ASAL	**Salagasta**	8.52	190	*i* P	Pn	20 07 36.0	-1.3
ARCO	**CERRO ARCO**	8.78	190	*i* P	Pn	20 07 41.0	+0.2
AAGR	**Agrelo**	9.00	189	*i* P	Pn	20 07 43.0	-0.7
CPUP	**Villa Florida**	9.07	106	P	Pn	20 07 43.0	-1.7
	comp=Z,0.3nm,0.3s,baz=294,slow=12,SNR=9.4						
CPUP	**Villa Florida**	9.07	106	*e*P	Pn	20 07 43.9	-0.8
CPUP	**Villa Florida**	9.07	106	Pn	Pn	20 07 43.8	-0.8
VA03	**San Esteban**	9.08	199		Pn	20 07 43.9	-0.8
VA03	**San Esteban**	9.08	199	*i* P	Pn	20 07 44.9	+0.2
MT02	**Curacav**	9.72	201	Pn	Pn	20 07 49.4	-3.6
SIV	**San Ignacio**	9.91	36	P	Pn	20 07 53.3	-2.4
	comp=Z,5.0nm,0.3s,baz=241,slow=9.8,SNR=92						
SIV				S	Sn	20 09 32.2	-14
	baz=224,slow=15,SNR=10						
MT09	**Talagante**	10.15	199		Pn	20 07 55.7	-3.1
MT01	**Popeta**	10.31	200	Pn	Pn	20 07 58.0	-2.8
BO01	**Tunca**	10.76	198		Pn	20 08 03.8	-2.7
BO02	**Sierra Bellavi**	11.05	196		Pn	20 08 09.4	-0.9
PTLB	**Pontes e Lacer**	11.46	42	*e*P	Pn	20 08 14.2	-1.4
GO05	**Huala**	11.58	200	Pn	Pn	20 08 16.5	-0.7
VILB	**Vilhena**	12.93	31	*e*P	Pn	20 08 35.4	+0.9
VILB	**Vilhena**	12.93	31		Pn	20 08 36.2	+1.7
PP1B	**Ponte de Pedra**	13.14	62	*e*P	Pn	20 08 35.2	-1.9
SALV	**Santo Antonio**	13.49	54	*e*P	Pn	20 08 40.3	-1.3
CPSB	**Cacapava Do Su**	13.61	120	*e*P	Pn	20 08 41.8	-1.1
PTGB	**Pitanga**	13.68	95	*e*P	Pn	20 08 44.5	+0.6
PLTB	**Pedras Altas**	14.09	125		Pn	20 08 46.8	-2.0
ETMB	**Extrema**	14.31	3	*e*P	Pn	20 08 50.6	-1.2
ETMB	**Extrema**	14.31	3		P	20 08 55.0	+1.3
TRQA	**Tornquist**	14.49	164	*e*P	P	20 08 55.2	-0.3
TRQA	**Tornquist**	14.49	164	Pn	Pn	20 08 51.8	-2.1
PCMB	**Pacaembu**	14.80	83	*e*P	Pn	20 08 57.3	-0.5
LC01	**Cunco**	15.22	194		Pn	20 09 02.5	-0.3
CNLB	**Canela**	15.36	113	*e*P	Pn	20 09 03.5	-1.1
SAML	**Samuel**	15.60	14		Pn	20 09 07.3	-0.3
PDRB	**Porto dos Gac**	15.90	40	*e*P	Pn	20 09 09.2	-2.0
TIJ01	**Guaruva-PR**	16.45	98	*e*P	P	20 09 16.0	-1.4
ARAG	**Araguaiana, MT**	16.63	62	*e*P	Pn	20 09 20.2	+0.1
TER01	**Tubaro-SC**	16.65	109	*e*P	P	20 09 19.0	-0.4
PLCA	**Paso Flores**	16.76	189	P	Pn	20 09 21.2	-0.3
	comp=Z,0.7nm,0.3s,baz=350,slow=8.6,SNR=12						
PLCA	**Paso Flores**	16.76	189	*e*P	Pn	20 09 21.5	+0.1
PLCA	**Paso Flores**	16.76	189	P	Pn	20 09 21.1	-0.3
PLCA				IAmb	IAmb	20 09 29.0	
	comp=Z,11nm,0.8s						
CLDB	**Colider**	17.04	41	*e*P	P	20 09 22.5	-1.3
CZSB	**Cruzeiro do Su**	17.23	341	*e*P	Pn	20 09 27.8	+0.6
LL04	**Puerto Octay**	17.27	194	P	P	20 09 26.3	+0.3
LL04				IAmb	IAmb	20 09 29.5	
	comp=Z,21nm,0.8s						
BB19B	**Bebedouro**	17.40	83	*e*P	P	20 09 27.6	-0.1
RCLB	**Rio Claro- Sao**	18.04	88	*e*P	P	20 09 34.9	+0.2
PET01	**Itanhaem-SP**	18.06	94	*e*P	P	20 09 34.7	-0.1
VAO	**Valinhos**	18.47	90	*e*P	P	20 09 39.0	-0.4
IPMB	**Ipameri, GO**	18.64	74	*e*P	P	20 09 41.1	-0.2
LL01	**San Ignacio de**	18.68	192	P	P	20 09 40.6	-0.8
LL01				IAmb	IAmb	20 09 42.9	
	comp=Z,40nm,1.1s						
SNDB	**Serra Nova Dou**	19.27	54	*e*P	P	20 09 47.1	-1.0
GO07	**Milladeo Hill,**	19.65	194	P	P	20 09 51.5	-0.3
PARB	**Paraibuna**	19.65	92	*e*P	P	20 09 51.8	-0.4
BDFB	**Brasilia**	19.82	68	P	P	20 09 52.9	-1.1
	comp=Z,1.6nm,0.3s,baz=240,slow=11,SNR=60						
BDFB	**Brasilia**	19.82	68	P	P	20 09 53.4	-0.7
TBTG	**Tabatinga, AM**	20.07	352	*e*P	P	20 09 58.4	+1.8
NPGB	**Novo Progresso**	20.41	35	*e*P	P	20 09 57.8	-2.5
BSCB	**Bom Sucesso**	20.83	86	*e*P	P	20 10 03.9	-0.9
MAN01	**Angra dos Reis**	21.23	91	*e*P	P	20 10 08.0	-1.0
PEXB	**Peixe**	21.48	59	*e*P	P	20 10 10.2	-1.4
MACA	**Manacapuru-AM**	21.79	17	*e*P	P	20 10 13.6	-1.2
VAS01	**Vassouras-RJ**	21.79	90	*e*P	P	20 10 13.8	-1.0
ITTB	**Itaituba**	22.53	31	*e*P	P	20 10 19.7	-2.2
DIAM	**Diamantina, MG**	22.57	79	*e*P	P	20 10 21.4	-1.1
DUB01	**Friburgo-RJ**	22.80	90	*e*P	P	20 10 23.8	-0.6
MC01	**Montes Claros**	22.89	75	*e*P	P	20 10 24.6	-0.7
JANB	**Januaria**	23.25	71	*e*P	P	20 10 27.1	-1.4
SDBA	**SAO DESIDERIO**	24.05	65	*e*P	P	20 10 34.6	-1.2
SMTB	**Santa Maria do**	24.05	54	*e*P	P	20 10 35.0	-0.7
PTGA	**Pitinga**	24.31	17	P	P	20 10 36.1	-1.9
	comp=Z,1.9nm,0.3s,baz=192,slow=10.0,SNR=7.0						
PRPB	**Parauapebas**	24.40	46	*e*P	P	20 10 38.4	-0.5
ALF01	**Guarapari-ES**	24.60	87	*e*P	P	20 10 40.2	-0.5
SJMB	**Sao Joao De Ma**	24.69	82	*e*P	P	20 10 40.6	-0.9
BSFB	**Barra de Sao F**	24.96	83	*e*P	P	20 10 42.9	-1.0
RIB01	**Linhares ES**	25.23	84	*e*P	P	20 10 45.1	-1.3
MALB	**Monte Alegre**	25.43	31	*e*P	P	20 10 48.0	-0.1
GUA01	**Guaratinga, BA**	26.62	79	*e*P	P	20 10 57.3	-1.6
OTAV	**Otavalo**	26.67	334	*e*P	P	20 10 59.3	-0.5
BOAV	**Boa Vista**	27.18	14	*e*P	P	20 11 03.7	-0.1
BOAV	**Boa Vista**	27.18	14	P	P	20 11 02.8	-1.0
CMC01	**Camacan, BA**	27.33	76	*e*P	P	20 11 04.3	-0.9
NBIT	**Itapeh - BA**	27.58	76	*e*P	P	20 11 07.3	-0.1
MG05	**Puerto Natales**	27.77	187	P	P	20 11 08.5	-0.1
MG05				IAmb	IAmb	20 11 12.6	
	comp=Z,11nm,0.8s						
GDU01	**Guandu, BA**	27.96	73	*e*P	P	20 11 09.5	-1.4
NBPN	**Ponto Novo - B**	28.79	67	*e*P	P	20 11 16.8	-1.4
ROSB	**Rosrio**	30.64	50	*e*P	P	20 11 32.7	-1.8
NBLA	**Lagarto - SE**	30.76	70	*e*P	P	20 11 34.2	-1.4
NBPS	**Pedro II - PI**	31.57	55	*e*P	P	20 11 42.2	-0.6
NBMA	**Muriti-CE**	31.86	63	*e*P	P	20 11 44.2	-1.0
NBPB	**Pedra_Branca-C**	32.27	59	*e*P	P	20 11 47.5	-1.4
NBAN	**Anadia - AL**	32.71	69	*e*P	P	20 11 51.2	-1.5
BAUV	**El Baul**	32.94	358	P	P	20 11 52.6	-1.9
BAUV				IAmb	IAmb	20 11 54.6	
	comp=Z,20nm,0.9s						
NBLV	**Livramento - P**	33.37	65	*e*P	P	20 11 57.5	-1.0
NBPA	**Parau_RN**	34.12	62	*e*P	P	20 12 04.5	-0.3
NBPV	**Pedro Velho**	35.24	65	*e*P	P	20 12 13.9	-0.5
HOPE	**Hope Point**	37.72	151	P	P	20 12 35.1	+0.2
MLPR	**Magueyes Islan**	41.90	0	P	P	20 13 10.5	+0.8
MLPR				IAmb	IAmb	20 13 25.6	
	comp=Z,10nm,0.8s						
OBIP	**Obispado Ponce**	41.97	1	P	P	20 13 08.8	-1.4
OBIP				IAmb	IAmb	20 13 10.4	
	comp=Z,19nm,0.8s						
CELP	**Cerrillos**	42.01	1	P	P	20 13 09.4	-1.2
CELP				IAmb	IAmb	20 13 15.3	
	comp=Z,29nm,1.1s						
MTO3	**Montecristo**	44.10	328	P	P	20 13 28.1	+0.4
VNA3	**Neumayer Olymp**	57.00	161	P	P	20 15 04.1	+0.8
VNA1	**Neumayer--Stat**	57.20	160	P	P	20 15 05.7	+1.1
VNA2	**Neumayer--Watz**	57.57	160	P	P	20 15 08.0	+0.7
	baz=286,slow=7.8						
SNAA	**Sanae**	59.20	161	P	P	20 15 19.0	+0.4
SNAA	**Sanae**	59.20	161	P	P	20 15 19.1	+0.5
SNAA				IAmb	IAmb	20 15 19.7	
	comp=Z,8.8nm,0.7s						
TKL	**Tuckaleechee C**	61.58	345	P	P	20 15 34.9	-0.2
	comp=Z,5.2nm,0.8s,baz=165,slow=10,SNR=4.5						
TKL	**Tuckaleechee C**	61.58	345	P	P	20 15 34.7	-0.4
TKL				IAmb	IAmb	20 15 35.8	
	comp=Z,9.5nm,1.1s						
SWET	**Sewanee**	61.72	343	P	P	20 15 36.3	+0.2
WVT	**Waverly**	63.12	341	P	P	20 15 45.2	-0.1
TXAR	**Lajitas Array**	63.79	325	P	P	20 15 50.8	+0.9
	comp=Z,1.6nm,0.8s,baz=145,slow=8.7,SNR=14						
TXAR	**Lajitas Array**	63.79	325	P	P	20 15 51.0	+1.1
TX31	**Lajitas Ar. Si**	63.79	325	P	P	20 15 50.8	+0.9
TX31				IAmb	IAmb	20 15 51.8	
	comp=Z,5.6nm,0.8s						
CCM	**Cathedral Cave**	65.94	339	P	P	20 16 04.2	+0.7
CCM				IAmb	IAmb	20 16 04.6	
	comp=Z,12nm,0.8s						
QSPA	**South Pole Qui**	66.02	180	P	P	20 16 05.0	+1.0
QSPA				IAmb	IAmb	20 16 05.6	
	comp=Z,7.6nm,0.7s						
SADO	**Sadowa**	69.50	351	P	P	20 16 26.1	+0.5
	comp=Z,14nm,1.2s,baz=177,slow=1.9,SNR=5.6						
ANMO	**Albuquerque**	69.66	326	P	P	20 16 28.8	+1.7
	comp=Z,5.0nm,0.9s,baz=144,slow=5.6,SNR=8.8						
PFO	**Pinyon Flats O**	74.24	319	P	P	20 16 56.1	+1.8
	comp=Z,3.9nm,1.1s,baz=277,slow=1.1,SNR=4.3						
VNDA	**Vanda**	74.51	190	P	P	20 16 56.7	+1.7
	comp=Z,1.4nm,0.9s,baz=151,slow=7.0,SNR=6.8						
TORD	**Torodi Ar. Bea**	76.70	69	P	P	20 17 08.1	-0.4
	comp=Z,2.7nm,0.6s,baz=268,slow=5.1,SNR=24						
TORD	**Torodi Ar. Bea**	76.70	69	P	P	20 17 08.3	-0.2
SPR3	**Spring Creek 3**	76.84	324	P	P	20 17 10.7	+1.5
ULM	**Lac du Bonnet**	78.38	342	P	P	20 17 16.6	-0.4
	comp=Z,7.6nm,0.8s,baz=318,slow=1.6,SNR=5.0						
ELK	**Elko**	78.58	325	P	P	20 17 20.2	+1.5
	comp=Z,3.2nm,0.9s,baz=127,slow=1.6,SNR=7.4						
NVAR	**Mina Array Bea**	78.64	321	P	P	20 17 20.8	+1.8
	comp=Z,1.9nm,0.9s,baz=154,slow=6.6,SNR=10						
BOSA	**Boshof**	80.71	117	P	P	20 17 30.8	+0.4
	comp=Z,4.7nm,0.5s,baz=259,slow=3.8,SNR=27						
BOSA	**Boshof**	80.71	117	P	P	20 17 30.7	+0.2
BOSA				IAmb	IAmb	20 17 31.3	
	comp=Z,7.0nm,0.7s						
MAW	**Mawson**	81.28	163	P	P	20 17 33.5	+1.0
	comp=Z,8.1nm,0.9s,baz=197,slow=6.0,SNR=14						
MAW	**Mawson**	81.28	163	P	P	20 17 33.6	+1.2
LBTB	**Lobatse**	82.37	114	P	P	20 17 39.5	+0.3
LBTB				IAmb	IAmb	20 17 40.5	
	comp=Z,7.7nm,0.6s						
K05A	**Summer Lake**	83.00	323	P	P	20 17 43.9	+1.9
K05A				IAmb	IAmb	20 17 45.0	
	comp=Z,8.2nm,0.9s						
YBH	**Yreka Blue Hor**	83.36	322	P	P	20 17 43.9	+0.2
	comp=Z,2.4nm,1.0s,baz=157,slow=9.9,SNR=4.5						
ESDC	**Sonseca Array**	86.58	44	P	P	20 17 60.0	+0.2
	comp=Z,1.9nm,0.9s,baz=220,slow=5.0,SNR=5.2						
YKA	**Yellowknife Ar**	94.28	340	P	P	20 18 35.7	+0.7
	comp=Z,2.1nm,0.9s,baz=126,slow=5.9,SNR=5.0						
ASAR	**Alice Springs**	128.26	205	PKP	PKiKP	20 24 23.0	-0.1
	comp=Z,1.1nm,0.7s,baz=144,slow=2.0,SNR=11						
WRA	**Warramunga Arr**	131.43	207	PKP	PKPdf	20 24 29.1	+0.5
	comp=Z,0.9nm,0.5s,baz=158,slow=1.7,SNR=13						
KURBB	**Kurchatov Arra**	142.57	36	PKP	PKPdf	20 24 48.4	+0.4
	comp=Z,0.7nm,0.7s,baz=303,slow=2.7,SNR=4.9						
AAK	**Ala-Archa**	143.40	50	PKP	PKPbc	20 24 48.7	+1.0
	comp=Z,1.0nm,0.6s,baz=0.0,slow=0.0,SNR=4.0						
ZALV	**Zalesovo Beam**	143.59	28	PKP	PKPbc	20 24 48.4	+0.8
	comp=Z,3.9nm,0.6s,baz=308,slow=3.6,SNR=22						
MAKZ	**Makanchi**	146.52	40	PKPbc	PKPab	20 24 57.7	-0.5
MK31	**Makanchi Array**	146.71	40	PKPbc	PKPab	20 24 58.3	-0.6
MKAR	**Makanchi Array**	146.71	40	PKPbc	PKPdf	20 24 56.4	+1.0
	comp=Z,5.0nm,0.6s,baz=318,slow=2.0,SNR=59						
MKAR	**Makanchi Array**	146.71	40		PKPab	20 24 58.4	-0.6
KLR	**Kul'dur**	150.96	334	PKPbc	PKiKP	20 25 08.7	+0.1
	comp=Z,2.7nm,0.6s,baz=44,slow=3.0,SNR=8.6						
MJAR	**Matsushiro Arr**	155.03	305	PKPab	PKPab	20 25 35.3	+1.5
	comp=Z,2.5nm,0.9s,baz=48,slow=2.3,SNR=5.6						
SONM	**Songino Array**	155.83	11	PKPab	PKPab	20 25 37.6	+0.8
	comp=Z,0.6nm,0.8s,baz=304,slow=3.5,SNR=4.1						

KRNET 22 20:08:21.3±0.1**, 42°.33N×78°.35E, h5**^{km}**, mb1.7, 8C-2D,**
Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	0.16	14	⇑*i*P	Pg	20 08 24.8	+0.1
	baz=12						
PRZ				⇑*i*S	Sg	20 08 27.8	+0.9
	baz=12						
ANVS	**Anan'yevo**	0.68	313	⇑*e*P	Pg	20 08 34.7	+0.3
	baz=13						
ANVS				⇑*i*S	Sg	20 08 43.9	+0.6
	baz=13						
TARG	**Taragay, Kyrgy**	0.72	214	⇑*i*P	Pg	20 08 35.5	+0.3
	baz=15						
TARG				⇑*i*S	Sg	20 08 44.9	+0.3
	baz=15						
KDJ	**Kajisay**	0.89	258	⇑*i*P	Pg	20 08 37.8	-0.6
	baz=57						
KDJ				⇑*i*S	Sg	20 08 50.3	+0.4
	baz=57						
TKM2	**Tokmak 2**	2.12	287	⇓*i*P	Pb	20 08 59.6	-0.7
	baz=87						
TKM2				⇓*i*S	Sb	20 09 26.6	-0.4
	baz=87						

SOME 22 20:08:32.6, 42°.32N×81°.00E, h10^{km}**,**
Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	**Ketmen**	1.23	337	*e*P	Pg	20 08 56.1	-0.1
KTMS				*e*S	Sn	20 09 12.9	+0.3
SHLS	**Shalkode**	1.41	307	*e*P	Pn	20 08 54.4	-4.1
	1.6nm,0.2s						
SHLS				*e*S	Sn	20 09 10.3	-6.9
	6.1nm,0.4s						
UZB	**Uzynbulak**	1.68	300	*e*P	Pb	20 09 04.0	+0.3
	1.4nm,0.2s						
UZB				*e*S	Sg	20 09 26.6	0.0
	3.5nm,0.3s						
SATY	**Saty**	2.05	292	*e*P	Pb	20 09 10.6	+0.5
	1.5nm,0.2s						
SATY				*e*S	Sg	20 09 37.8	-0.7
	3.2nm,0.2s						
KPKS	**Kokpek**	2.05	305	*e*P	Pb	20 09 10.6	+0.6
	3.8nm,0.2s						
KPKS				*e*S	Sg	20 09 37.8	-0.8
	2.2nm,0.5s						

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*NEIC **22** 20:13:24.1±1.3, 43°.77N±0°.06×105°.27W±0°.04, h0^{km}±1^{km}, ML3.5/44, Error ellipse: s-maj=9.6km s-min=5.3km az=169.0*

*IDC **22** 20:13:25.1±0.8, 44°.20N×105°.70W, h0^{km}, mb1 3.6/4, mb1mx3.2/49, mbtmp3.3/4, ML3.3/4, Error ellipse: s-maj=39.4km s-min=3.0km az=144.0*

ISC 22 20:13:23.6±1.2**, 43°.75N**±0°.06×**105°.29W**±0°.07**, h0**^{km}**, n39,**
σ**0^{s}.77**/37**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	**Black Hills**	0.98	67		Pg	20 13 42.1	-0.2
K22A	**Casper**	1.42	220		Pn	20 13 49.5	-1.4
K22A				IAML		20 14 14.9	
	comp=E,512nm,0.3s						
K22A				IAML		20 14 15.8	
	comp=N,428nm,0.3s						
RWWY	**Rawlins**	2.50	215		Pn	20 14 07.2	+1.4
RWWY				IAML		20 14 58.6	
	comp=N,197nm,1.2s						
RWWY				IAML		20 15 05.3	
	comp=N,261nm,0.8s						
LAO	**LASA Array**	3.01	348		Pn	20 14 13.5	+0.8
RLMT	**Red Lodge**	3.16	297	Pn	Pn	20 14 14.8	-0.1
RLMT				IAML		20 15 24.5	
	comp=N,72nm,1.7s						
RLMT				IAML		20 15 32.8	
	comp=N,82nm,1.4s						
BW06	**Boulder Array**	3.27	254		Pn	20 14 16.6	+0.2
BW06				IAML		20 15 29.9	
	comp=N,66nm,0.8s						
PD31	**Pinedale Array**	3.27	254	Pn	Pn	20 14 16.5	+0.1
PDAR	**Pinedale Array**	3.27	254	Pn	Pn	20 14 16.3	-0.1
	comp=N,3.3nm,0.3s,baz=69,slow=16,SNR=49						
PDAR				Lg	Lg	20 15 03.6	
	comp=N,18nm,0.3s,baz=67,slow=32,SNR=4.5						
PDAR	**Pinedale Array**	3.27	254	Pn	Pn	20 14 16.2	-0.2
YMP	**Mirror Lake Pl**	3.64	287	Pn	Pn	20 14 21.8	+0.4
YMP				IAML		20 15 37.7	
	comp=N,102nm,1.0s						
YMP				IAML		20 15 38.9	
	comp=E,114nm,1.0s						
OGNE	**Ogallala**	3.70	138		Pn	20 14 23.5	+1.4
GCMT	**Greycliff**	3.73	305	Pn	Pn	20 14 22.8	+0.2
LOHW	**Long Hollow**	3.86	270	Pn	Pn	20 14 25.3	+0.8
FLWY	**Flagg Ranch**	3.92	277	Pn	Pn	20 14 25.3	0.0
FLWY				IAML		20 15 57.9	
	comp=E,79nm,1.4s						
ISCO	**Idaho Springs**	3.96	184		Pn	20 14 26.7	+0.9
MOOW	**Moose Ponds**	3.96	272	Pn	Pn	20 14 26.3	+0.5
REDW	**Red Top Meadow**	4.06	266	Pn	Pn	20 14 27.9	+0.7
REDW				IAML		20 15 56.2	
	comp=E,94nm,1.4s						
REDW				IAML		20 16 00.5	
	comp=E,90nm,2.1s						
TPAW	**Teton Pass**	4.12	268		Pn	20 14 29.1	+1.0
TPAW				IAML		20 16 01.9	
	comp=E,70nm,1.1s						
TPAW				IAML		20 16 02.3	
	comp=E,39nm,1.0s						
YHH	**Holmes Hill**	4.13	286	Pn	Pn	20 14 29.8	+1.6
YHH				IAML		20 16 11.1	
	comp=N,34nm,1.0s						
FXWY	**Fox Creek**	4.16	270	Pn	Pn	20 14 29.4	+0.7
FXWY				IAML		20 16 16.8	
	comp=N,33nm,1.2s						
YMR	**Madison River**	4.18	285	Pn	Pn	20 14 29.6	+0.7
YMR				IAML		20 16 01.2	
	comp=E,47nm,1.3s						
YMR				IAML		20 16 06.5	
	comp=N,88nm,1.0s						
O20A	**White River Ci**	4.23	212	Pn	Pn	20 14 28.6	-1.0
O20A				IAML		20 16 05.9	
	comp=E,77nm,1.0s						
YHL	**Hebgen Lake**	4.37	287		Pn	20 14 31.1	-0.4
YHL				IAML		20 16 09.5	
	comp=N,52nm,1.8s						
BOZ	**Bozeman (W)**	4.89	294	Pn	Pn	20 14 39.7	+1.2
BOZ				IAML		20 16 12.9	
	comp=N,33nm,2.1s						
BOZ				IAML		20 16 29.1	
	comp=N,18nm,2.0s						
HWUT	**Hardware Ranch**	5.10	247		Pn	20 14 40.7	-0.8
KSCO	**Kaye Shedlock'**	5.14	156	Pn	Pn	20 14 42.3	+0.3
HRY	**Holter Researc**	5.49	305		Pn	20 14 46.5	-0.2
LRM	**Limekiln Ridge**	5.50	295	Pn	Pn	20 14 47.1	0.0
P18A	**Preston Nutter**	5.54	224		Pn	20 14 48.2	+0.5
SPUT	**South Promonto**	5.83	248	Pn	Pn	20 14 52.5	+1.1
P17A	**Butcher Ranch,**	5.91	226		Pn	20 14 53.2	+0.6
SRU	**San Rafael Swe**	6.08	222		Pn	20 14 54.7	-0.2
TMUT	**Trail Mountain**	6.29	227		Pn	20 14 58.5	+0.6
DUG	**Dugway, Tooele**	6.64	240		Pn	20 15 02.5	-0.1
ELK	**Elko**	7.97	251	Pn	Pn	20 15 21.2	+0.3
	comp=N,0.4nm,0.3s,baz=53,slow=9.8,SNR=6.3						
I10CA	**LAC DU BONNET**	9.03	41	*i*		21 08 10.0	
	baz=219,slow=323,SNR=5.7						
ULM	**Lac du Bonnet**	9.14	41	Pn	Pn	20 15 35.6	-1.1
	comp=N,1.2nm,0.3s,baz=229,slow=12,SNR=11						
ULM				Lg	Lg	20 18 14.0	
	comp=N,0.3nm,0.3s,baz=160,slow=22,SNR=2.2						
NVAR	**Mina Array Bea**	11.16	246	Pn	Pn	20 16 04.9	+0.2
	comp=N,0.1nm,0.3s,baz=48,slow=16,SNR=1.9						
TXAR	**Lajitas Array**	14.45	174	Lg	Lg	20 21 20.2	
	comp=N,0.0nm,0.3s,baz=356,slow=32,SNR=5.9						

KRSC 22 20:19:52.7±2.1**, 49°.36N×156°.78E, h6**^{km}±37^{km}**, ML4.1,**
Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	1.39	342	*e*P	Pn	20 20 17.3	-1.2
SKR				*e*S	Sb	20 20 35.1	-1.8
PAU	**Pauzhetka**	2.11	1	*e*P	Pb	20 20 29.9	-1.3
PAU				*e*S	Sb	20 20 56.5	-1.1
KDTR	**Khodutka, Kamc**	2.58	18	*e*P	Pb	20 20 38.3	-1.1
KDTR				*e*S	Sb	20 21 10.8	-0.5
ASAK	**Asacha**	3.11	13	*e*P	Pb	20 20 46.0	-2.3
MTVR	**Mutnovka**	3.25	15	*e*S	Sb	20 21 27.5	-3.1
GRL	**Gorelyy**	3.30	14	*e*P	Pn	20 20 47.6	+2.7
DALK	**Dalny**	3.88	18	P	Pn	20 20 56.9	+4.2
DALK				*e*S	Sb	20 21 44.0	-4.5
UGLR	**Uglovaya**	4.06	18	*e*P	Pn	20 20 59.4	+4.1
AVH	**Avacha**	4.10	17	P	Pb	20 21 00.8	-4.4
SDLR	**Sedlovina**	4.14	18	*e*P	Pn	20 21 00.0	+3.6
GNL	**Ganaly**	4.40	9	*e*P	Pn	20 21 04.5	+4.5
MKZ	**Mys Kozlova**	6.03	29	*e*P	Pn	20 21 25.1	+2.8

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*NNC **22** 20:25:39.3±0.7, 43°.21N×78°.72E, h2^{km}±5^{km}, mb2.7, mpv2.2, Error ellipse: s-maj=4.2km s-min=2.1km az=170.0*

*SOME **22** 20:25:39.6, 43°.20N×78°.70E, h10^{km}*

ISC 22 20:25:39.7±1.2**, 43°.22N**±0°.04×**78°.70E**±0°.03**, h8**^{km}±18^{km}**,**
n8, σ**0^{s}.24**/15**, 1C-3D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KPKS	**Kokpek**	0.24	358	*e*P	Pg	20 25 44.5	-0.1
	4.4nm,0.1s						
KPKS				*e*S	Sg	20 25 48.0	+0.1
	25nm,0.1s						
UZB	**Uzynbulak**	0.25	108	*e*P	Pg	20 25 44.7	0.0
	3.4nm,0.1s						
UZB				*e*S	Sg	20 25 48.4	+0.2
	17nm,0.1s						
UZB	**Uzynbulak**	0.25	108	P	Pg	20 25 44.7	0.0
	3.4nm,0.1s						

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
UZB				S	Sg	20 25 48.3	+0.2
	17nm,0.1s						
SATY	Saty	0.27	232	*e*P	Pg	20 25 44.8	-0.3
	10nm,0.1s						
SATY				*e*S	Sg	20 25 48.7	0.0
	25nm,0.2s						
SATY	Saty	0.27	232	P	Pg	20 25 44.8	-0.3
	10nm,0.1s						
SATY				S	Sg	20 25 48.7	0.0
	25nm,0.2s						
PDGK	Podgornoye	0.59	79	P	Pg	20 25 50.7	-0.3
	0.4nm,0.2s						
PDGK				S	Sg	20 25 58.7	-0.1
	1.7nm,0.2s						
PDGK	Podgornoye	0.59	79	⇓P	Pg	20 25 50.8	-0.3
	2.0nm,0.8s						
PDGK				⇓S	Sg	20 25 58.5	-0.3
	2.7nm,0.8s						
TKM2	Tokmak 2	2.29	263	⇓Pg	Pb	20 26 21.6	+0.2
	2.0nm,1.1s						
TKM2				⇑Lg	Lg	20 26 52.5	
	1.5nm,0.8s						

BEO ***22*** *20:26:22.8±6.7, 36˚.92N×20˚.72E, h164km±8km, ML3.3/3*
THE ***22*** *20:26:40.4, 38˚.70N×20˚.60E, h5km±1km, ML3.3/10, Error ellipse: s-maj=1.1km s-min=0.4km az=296.0*
ATH ***22*** *20:26:40.3, 38˚.70N×20˚.61E, h7km±1km, ML3.1/18, Error ellipse: s-maj=1.3km s-min=0.6km az=299.0*
ISC 22 20:26:39.9±0.8**, 38˚.70N**±0˚.02×**20˚.60E**±0˚.02**, h7**km±4km**,**
n76, σ0ˢ.67/101**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRAG	Dragano-Lefkad	0.02	238	P	Pg	20 26 41.3	0.0
DRAG				S	Sg	20 26 42.1	-0.1
	246µm,0.3s						
DRAG	Dragano-Lefkad	0.02	238	P	Pg	20 26 41.3	0.0
DRAG				S	Sg	20 26 42.1	-0.1
NYDR	Nydri-Lefkada	0.08	77	P	Pg	20 26 42.0	+0.1
NYDR				S	Sg	20 26 43.4	+0.1
	35µm,0.3s						
NYDR	Nydri-Lefkada	0.08	77	P	Pg	20 26 42.1	+0.1
NYDR				S	Sg	20 26 43.5	+0.1
EVGI	Lefkada island	0.09	148	P	Pg	20 26 42.5	+0.5
EVGI				S	Sg	20 26 44.2	+0.7
EVGI	Lefkada island	0.09	148	P	Pg	20 26 42.6	+0.5
EVGI				S	Sg	20 26 43.9	+0.5
LKD2	Lefkada island	0.10	27	P	Pg	20 26 42.5	+0.2
LKD2				S	Sg	20 26 44.2	+0.2
	19µm,0.2s						
LKD2	Lefkada island	0.10	27	P	Pg	20 26 42.5	+0.2
LKD2				S	Sg	20 26 44.2	+0.2
LKD2				AML	AML	20 26 44.9	
	comp=N,38950µm,0.1s						
LKD2				AML	AML	20 26 45.9	
	comp=E,41408µm,0.4s						
TSLK	Tsoukalades, L	0.14	19	P	Pg	20 26 43.4	+0.6
TSLK				S	Sg	20 26 45.5	+0.7
	comp=E,26µm,0.3s						
TSLK	Tsoukalades, L	0.14	19	P	Pg	20 26 43.2	+0.4
TSLK				S	Sg	20 26 45.1	+0.3
TSLK				AML	AML	20 26 46.9	
	comp=E,51180µm,0.3s						
TSLK				AML	AML	20 26 48.3	
	comp=N,53837µm,0.3s						
FSK	Fiskardo	0.24	187	P	Pg	20 26 45.5	+0.9
FSK				S	Sg	20 26 49.0	+1.2
	comp=N,10µm,0.3s						
FSK	Fiskardo	0.24	187	P	Pg	20 26 45.5	+0.9
FSK				S	Sg	20 26 49.1	+1.3
FSK				AML	AML	20 26 50.4	
	comp=E,22108µm,0.4s						
FSK				AML	AML	20 26 50.6	
	comp=N,17769µm,0.4s						
KEF4	Livadi, Kephal	0.46	197	P	Pg	20 26 49.1	+0.4
KEF4				S	Sb	20 26 56.6	-0.6
	comp=N,20µm,0.4s						
KEF4	Livadi, Kephal	0.46	197	P	Pg	20 26 49.1	+0.4
KEF4				S	Sg	20 26 55.7	+1.0
DMLN	Damoulianata-K	0.49	201	P	Pg	20 26 49.7	+0.3
DMLN				S	Sb	20 26 57.5	-0.7
	comp=N,3µm,0.4s						
DMLN	Damoulianata-K	0.49	201	P	Pg	20 26 49.4	+0.1
DMLN				S	Sg	20 26 57.0	+1.2
LXRA	Lixouri, Kepha	0.51	194	P	Pg	20 26 49.8	+0.1
VLS	Valsamata	0.52	181	P	Pg	20 26 49.9	0.0
VLS				S	Sb	20 26 58.3	-0.7
	comp=N,2µm,0.3s						
VLS	Valsamata	0.52	181	P	Pg	20 26 49.9	0.0
VLS				S	Sg	20 26 57.6	+0.9
VLS				AML	AML	20 26 59.3	
	comp=E,3963µm,0.3s						
VLS				AML	AML	20 26 59.9	
	comp=N,5541µm,0.4s						
KEF3	Kipouria, Keph	0.53	202	P	Pg	20 26 49.9	-0.2
KEF3				S	Sb	20 26 58.3	-1.0
	comp=N,5µm,0.4s						
KEF3	Kipouria, Keph	0.53	202	P	Pg	20 26 49.7	-0.4
KEF3				S	Sg	20 26 57.7	+0.7
PSDA	Pessada-Kefalo	0.58	181	P	Pg	20 26 51.1	0.0
PSDA	Pessada-Kefalo	0.58	181	P	Pg	20 26 51.2	0.0
PSDA				S	Sg	20 26 59.2	+0.6
PVO	Paravola	0.73	96	P	Pb	20 26 54.9	-0.1
PVO				S	Sb	20 27 05.8	+0.6
	comp=N,2µm,0.6s						
PVO	Paravola	0.73	96	P	Pg	20 26 54.4	+0.5
PVO				AML	AML	20 27 08.1	
	comp=N,4298µm,0.6s						
PVO				AML	AML	20 27 08.8	
	comp=E,4218µm,0.6s						
IGT	Igoumenitsa	0.86	346	P	Pg	20 26 56.3	-0.2
IGT	Igoumenitsa	0.86	346	P	Pg	20 26 56.1	-0.3
IGT				AML	AML	20 27 14.8	
	comp=N,2913µm,0.5s						
IGT				AML	AML	20 27 15.1	
	comp=E,2688µm,0.5s						
VTN	Vitineika	0.91	149	P	Pg	20 26 57.6	+0.3
RLS	Riolos of Patr	0.93	133	P	Pg	20 26 57.6	-0.2
RLS	Riolos of Patr	0.93	133	P	Pg	20 26 57.6	-0.2
RLS				AML	AML	20 27 20.9	
	comp=N,2158µm,0.9s						
RLS				AML	AML	20 27 20.9	
	comp=E,2642µm,0.6s						
EVR	Evrytania	0.97	76	P	Pg	20 26 58.7	+0.1
EVR	Evrytania	0.97	76	P	Pg	20 26 58.4	-0.2
EVR				AML	AML	20 27 24.7	
	comp=E,992µm,0.7s						
EVR				AML	AML	20 27 31.3	
	comp=N,708µm,0.8s						
JAN	Janina	0.98	12	P	Pb	20 26 59.1	-0.1
LTHK	Lithakia	1.00	169	P	Pg	20 26 58.4	-0.7
ANX	Ano Chora	1.04	95	P	Pg	20 26 59.6	-0.3
ANX	Ano Chora	1.04	95	P	Pg	20 26 59.7	-0.3
ANX				AML	AML	20 27 23.9	
	comp=N,2939µm,0.5s						
ANX				AML	AML	20 27 26.7	
	comp=E,2510µm,0.6s						
EFP	Efpalio	1.06	104	P	Pg	20 26 59.8	-0.5
EFP	Efpalio	1.06	104	P	Pg	20 26 59.6	-0.6
EFP				AML	AML	20 27 23.1	
	comp=N,2124µm,0.6s						
EFP				AML	AML	20 27 23.5	
	comp=E,2147µm,0.4s						
DRO	Drossia	1.15	130	P	Pg	20 27 01.3	-0.6
DRO	Drossia	1.15	130	P	Pg	20 27 01.2	-0.7
DRO				AML	AML	20 27 27.5	
	comp=E,3583µm,0.3s						
DRO				AML	AML	20 27 29.7	
	comp=N,2546µm,0.4s						
LAKA	Lakka	1.18	112	P	Pg	20 27 01.8	-0.7
LAKA	Lakka	1.18	112	P	Pg	20 27 01.4	-1.0
LAKA				AML	AML	20 27 27.5	
	comp=N,4208µm,0.5s						
LAKA				AML	AML	20 27 30.1	
	comp=E,3253µm,0.5s						
SERG	Sergoula	1.18	103	P	Pg	20 27 02.0	-0.5
SERG	Sergoula	1.18	103	P	Pg	20 27 01.7	-0.8
SERG				AML	AML	20 27 27.8	
	comp=E,1368µm,0.3s						
SERG				AML	AML	20 27 31.3	
	comp=N,1903µm,0.8s						
KEK	Kerkira	1.19	329	P	Pg	20 27 02.8	0.0
KEK				AML	AML	20 27 34.2	
	comp=E,913µm,0.7s						
KEK				AML	AML	20 27 34.4	
	comp=N,736µm,0.7s						
MAKR	Makrakomi, Fth	1.24	75	P	Pn	20 27 03.7	+0.1
ALIK	Aliki, Aigiali	1.27	110	P	Pn	20 27 03.5	-0.5
KLV	Kalavryta, Ach	1.38	118	P	Pn	20 27 04.8	-0.9
KLV	Kalavryta, Ach	1.38	118	P	Pn	20 27 04.8	-0.9
KLV				AML	AML	20 27 37.7	
	comp=N,628µm,0.6s						
KLV				AML	AML	20 27 46.4	
	comp=E,429µm,0.6s						
AGG	Agios Georgios	1.39	76	P	Pb	20 27 06.2	0.0
AGG	Agios Georgios	1.39	76	P	Pn	20 27 06.1	+0.3
AGG				AML	AML	20 27 36.7	
	comp=N,910µm,0.7s						
AGG				AML	AML	20 27 36.8	
	comp=E,797µm,0.5s						
THL	Klokotos Trika	1.40	51	P	Pb	20 27 06.6	+0.2
THL	Klokotos Trika	1.40	51	P	Pb	20 27 06.6	+0.2
THL				AML	AML	20 27 32.8	
	comp=E,974µm,0.5s						
THL				AML	AML	20 27 34.9	
	comp=N,781µm,0.8s						
GUR	Goura	1.57	118	P	Pn	20 27 08.0	-0.3
GUR				AML	AML	20 27 38.1	
	comp=E,1208µm,0.5s						
GUR				AML	AML	20 27 44.5	
	comp=N,1463µm,0.6s						
ITM	Ithomi	1.84	145	P	Pb	20 27 13.5	-0.4
OHR	Ohrid	2.42	4	*e*Pn	Pn	20 27 21.2	+1.3
OHR				*e*Sn	Sn	20 27 51.1	+1.3
OHR	Ohrid	2.42	4	*i* Pn	Pn	20 27 20.3	+0.4
TIR	Tirane	2.71	348	*e*Pn	Pn	20 27 25.1	+1.3
TIR				*e*Sn	Sn	20 27 57.8	+1.0
STIP	Stip	3.23	22	*i* Pn	Pb	20 27 36.1	-1.5
PDG	Podgorica	3.87	345	*e*Pn	Pn	20 27 41.2	+1.4
PDG				*e*Sn	Sn	20 28 25.8	+0.4
BARS	Barje	4.22	12	*e*Pn	Pn	20 27 45.3	+0.7
TREB	Trebinje	4.37	338	*e*Pn	Pn	20 27 45.6	-1.0
DBRK	Dubrovnik	4.38	336	*e*Pn	Pn	20 27 46.0	-0.8
SELS	Selova	4.54	5	*e*Pn	Pn	20 27 48.9	-0.1
STON	Ston	4.72	333	*e*Pn	Pn	20 27 50.7	-0.7
STON	Ston	4.72	333	*e*Pn	Pn	20 27 50.2	-1.2
LSTV	Lastovo	4.95	327	*e*Pn	Pn	20 27 53.8	-0.8
MAKA	Makarska	5.33	331	*e*Pn	Pn	20 27 58.9	-0.9
DIVS	Divibare	5.42	355	*e*Pn	Pn	20 28 01.4	+0.3
RICI	Ricice	5.46	332	*e*Pn	Pn	20 28 00.4	-1.3
HVAR	Hvar	5.47	326	*e*Pn	Pn	20 28 01.2	-0.6
ZIRJ	Zirje	6.21	325	*e*Pn	Pn	20 28 10.7	-1.2
MORI	Morici	6.34	326	*e*Pn	Pn	20 28 13.4	-0.3
DUGI	Dugi Otok	6.74	324	*e*Pn	Pn	20 28 18.9	-0.3
UDBI	Udbina	6.86	330	*e*Pn	Pn	20 28 21.2	+0.3
NVLJ	Novalja	7.26	326	*e*Pn	Pn	20 28 25.2	-1.2

DJA 22 20:33:37.1±0.4**, 7˚S**±3˚×**10˚6E**±˚**, h10**km**, M3.5**/9**, MLv3.5**/9**,**
Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBJI	Serang	1.22	19	P	Pn	20 33 59.6	-0.6
SBJI				S	Sb	20 34 15.6	-0.4
DBJI	Dramaga	1.23	54	P	Pn	20 33 59.5	-1.0
DBJI				S	Sb	20 34 15.1	-1.5
CNJI	Cibinong	1.38	91	P	Pn	20 34 01.1	-1.3
CBJI	Citeko	1.40	52	P	Pn	20 34 01.0	-1.6
CBJI				S	Sn	20 34 20.5	-0.6
LEM	Lembang	1.92	77	P	Pb	20 34 11.4	-0.9
KASI	Kota Agung	2.14	325	P	Pn	20 34 12.1	-0.8
CMJI	Cimerak	2.73	101	P	Pn	20 34 20.6	-0.4
KLSI		2.76	339	P	Pn	20 34 22.1	+0.6
LWLI	Liwa	2.80	323	P	Pn	20 34 22.3	+0.2
KPJI	Karang Pucung	3.17	91	P	Pn	20 34 27.6	+0.6
MDSI	Maura Dua	3.18	331	P	Pn	20 34 27.5	+0.3

MAN ***22*** *20:38:11.0, 19˚.28N×119˚.88E, h95km, mb4.0, ML2.8, MS2.4*
IDC 22 20:38:10.3±3.5**, 18˚.85N**×**119˚.62E, h0**km**, mb3.6**/4**, mb1 3.8**/4**, mb1mx3.4**/43**, mbtmp3.6**/4**, Error ellipse: s-maj=391.5km s-min=21.0km az=61.0, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	41.17	159	P	P	20 45 56.3	-0.4
	0.8nm,0.8s,baz=337,slow=9.6,SNR=6.5						
MKAR	Makanchi Array	41.35	321	P	P	20 45 58.1	+0.2
	0.5nm,0.8s,baz=123,slow=10,SNR=8.9						
ASAR	Alice Springs	44.50	161	P	P	20 46 23.9	+0.2
	0.5nm,0.5s,baz=340,slow=6.7,SNR=10						
KURBB	Kurchatov Arra	45.40	324	P	P	20 46 30.1	-0.5
	0.9nm,0.7s,baz=125,slow=8.0,SNR=7.5						

MOS ***22*** *20:38:30.9±1.6, 8˚.48N×71˚.57W, h12km, mb5.2/12, Error ellipse: s-maj=8.6km s-min=6.5km az=103.8*
IDC ***22*** *20:38:30.1±0.4, 8˚.49N×71˚.47W, h0km, mb4.7/30, mb1 4.9/34, mb1mx4.8/38, mbtmp4.7/34, ML5.1/4, MS4.2/27, Ms1 4.2/27, ms1mx4.1/41, Error ellipse: s-maj=10.0km s-min=8.6km az=169.0*
NEIC ***22*** *20:38:31.4±2.1, 8˚.52N±0˚.05×71˚.39W±0˚.06, h10km±1km, mb5.1/155, Mwr5.1(CAR), Error ellipse: s-maj=11.0km s-min=7.3km az=308.0*
VAO ***22*** *20:38:32.9±0.4, 8˚.70N×71˚.46W, h28km, mb5.0*
FUNV ***22*** *20:38:33.4, 8˚.49N×71˚.41W, h5km, MW5.1*
CAR ***22*** *20:38:33.5±2.1, 8˚.48N±0˚.06×71˚.42W±0˚.05, h5km±4km, Error ellipse: s-maj=9.2km s-min=5.2km az=147.0*
GCMT ***22*** *20:38:34.5±0.2, 8˚.49N±0˚.01×71˚.43W±0˚.01, h24km±1km, MW5.1/107, Moment Tensor Solution. s44,c56; s107,c160; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-0.40±.20; Mθθ5.49±.17; Mφφ-5.09±.19; Mrθ-0.56±.22; Mθφ-1.99±.15; Mφr0.02±.27; Best double couple: M0 5.67700×10¹⁶ NP1:φs325.00000°, δ86.00000°, λ3.00000°. NP2:φs235.00000°, δ87.00000°, λ176.00000°. Principal axes: T 5.9010, Plg5.0000°, Azm190.0000°; N -0.4490, Plg85.0000°, Azm21.0000°; P -5.4530, Plg1.0000°, Azm280.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
BGR ***22*** *20:38:35.3±0.0, 8˚.08N×70˚.82W, h10km, mb4.7*
ISC 22 20:38:30.9±0.7**, 8˚.52N**±0˚.02×**71˚.40W**±0˚.02**, h5**km±4km**, n656, σ1ˢ.61**/673**, mb5.1**/149**, MS4.3**/25**, 59C-71D, Fault plane solution: NP1:**φs147.73760°**,** δ88.51440°**,** λ7.70823°. **NP2:**φs57.53654°**,** δ82.29438°**,** λ178.50085°. **Principal axes:** T Plg6.4966°, Azm12.8882°**;** N Plg82.1508°, Azm158.5809°**;** P Plg4.3862°, Azm282.3877°**; Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.59	114	⇓*i*P	Pb	20 38 43.4	-0.4
SOCV				*e*S	Sb	20 38 52.2	-0.3
SOCV	Socops	0.59	114	⇓*i*P	Pb	20 38 43.4	-0.4
SOCV				*e*S	Sb	20 38 52.0	-0.4
SDV	Santo Domingo	0.84	65	Pg	Pb	20 38 48.6	+0.4
	3µm,0.3s,baz=240,slow=16,SNR=1844						
SDV				Lg	Lg	20 38 59.8	
	3µm,0.3s,baz=324,slow=7.0,SNR=9.3						
SDV	Santo Domingo	0.84	65	⇓*i*P	Pb	20 38 48.6	+0.4
SDV				*e*S	Sb	20 38 60.0	+0.1
SDV	Santo Domingo	0.84	65	*e*P	Pn	20 38 48.8	-0.9
SDV				*e*S	Sb	20 39 00.4	+0.5
SDV	Santo Domingo	0.84	65		Pb	20 38 48.5	+0.3
SDV				Sn	Sb	20 39 00.1	+0.3
CAPV	Capacho	1.11	234	⇑*i*P	Pg	20 38 52.0	-0.3
CAPV				*e*S	Sn	20 39 09.7	+0.4
PAMC	Pamplona, Colo	1.74	228	*e*P	Pb	20 39 03.6	-0.1
PAMC				*e*S	Sg	20 39 27.7	+0.7
MCQV	Machiques	1.89	324	⇓*i*P	Pb	20 39 05.2	-0.7
MCQV				*e*S	Sb	20 39 30.2	+0.5
OCAC	Ocana	1.92	262	*e*P	Pn	20 39 04.5	+0.1
OCAC				*e*S	Sn	20 39 29.9	+0.9
TAMC	Tame, Arauca	2.11	191	⇑*e*P	Pb	20 39 08.8	-0.9
TAMC				*e*S	Sb	20 39 37.6	+1.3
LL6C	La Loma 6 Bece	2.20	303	*e*P	Pb	20 39 10.0	-1.3
LL6C				*e*S	Sn	20 39 34.2	-1.7
LL1C	La Loma 1 Cana	2.36	296	*e*P	Pn	20 39 12.0	+1.7
LL1C				*e*S	Sb	20 39 44.3	+1.0
DABV	Dabajuro	2.50	18	⇑*e*P	Pb	20 39 14.4	-2.0
LL5C	La Loma 5 El P	2.59	298	*e*P	Pn	20 39 12.0	-1.6
LL5C				*e*S	Sb	20 39 48.3	-1.9
BARC	Barichara	2.61	223	*e*P	Pb	20 39 16.3	-2.0
BARC				*e*S	Sb	20 39 52.1	+1.4
SIQV	Siquisique	2.63	37	⇑*e*P	Pb	20 39 16.6	-2.1
SIQV				*e*S	Sn	20 39 47.5	+1.0
SMLC	San Martn de	2.65	276	⇓*i*P	Pn	20 39 14.6	+0.1
SMLC				*e*S	Sb	20 39 51.4	-0.5
BRRC	Barranca, Sant	2.69	239	*e*P	Pn	20 39 16.5	+1.7
BRRC				*e*S	Sb	20 39 55.4	+2.6
RUSC	La Rusia	3.10	213	*e*P	Pn	20 39 22.6	+1.6
RUSC				*e*S	Sg	20 40 09.0	-1.7
ARGC	Ariguani, Magd	3.11	296	⇓*i*P	Pn	20 39 21.2	+0.6
ARGC				*e*S	Sb	20 40 07.9	+3.0
URIC	Uribia, Colomb	3.21	350	*e*P	Pn	20 39 20.7	-1.3
URIC				*e*S	Sn	20 40 00.1	-0.7
BAUV	El Baul	3.35	83	*e*P	Pn	20 39 25.7	+1.7
BAUV	El Baul	3.35	83	*e*	Pg	20 39 34.9	-0.3
BAUV				*e*S	Sn	20 40 05.7	+1.5
BAUV	El Baul	3.35	83	⇓*e*P	Pn	20 39 25.7	+1.7
BAUV				*e*S	Sn	20 40 03.7	-0.4
ZARC	Zaragoza, Cauc	3.57	254	*i* P	Pn	20 39 27.6	+0.6
ZARC				*e*S	Sn	20 40 08.9	-0.8
JACV	Jacura	3.59	45	*e*P	Pn	20 39 29.3	+1.9
MONV	Montecano	3.69	22	⇑*i*P	Pn	20 39 29.9	+1.2
MONV				*e*S	Sn	20 40 12.3	-0.3
SMRC	Santa Marta, M	3.82	314	*e*P	Pn	20 39 29.5	-1.0
SMRC				*e*S	Sn	20 40 12.6	-3.2
SPBC	San Pablo de B	3.89	223	*e*P	Pn	20 39 33.2	+1.6
SPBC				*e*S	Sg	20 40 36.7	+0.5
SJCC	San Jacinto, C	3.97	290	*i* P	Pn	20 39 34.4	+1.8
SJCC				*e*S	Sn	20 40 23.4	+3.8
TURV	Turiamo	4.00	61	*e*P	Pn	20 39 34.2	+1.3
BENV	Beln	4.02	69	*e*P	Pn	20 39 35.1	+1.9
UREC	San Jos de Ur	4.16	260	⇓*i*P	Pn	20 39 36.4	+1.2
UREC				*e*S	Sn	20 40 25.8	+1.6
MOTC	Monteria, Cord	4.22	274	⇓*i*P	Pn	20 39 37.5	+1.5
MOTC				*e*S	Sn	20 40 27.6	+1.8
HATO	Hato, Curacao	4.36	33		Pn	20 39 39.1	+1.3
PTGC	Puerto Gaitan,	4.36	190	*e*P	Pn	20 39 38.1	+0.3
PTGC				*e*S	Sb	20 40 43.6	+2.7
NORC	Norcasia	4.53	230	*e*P	Pn	20 39 44.3	+4.1
NORC				*e*S	Sn	20 40 34.7	+1.4
ROSC	El Rosal	4.67	219	Pn	Pn	20 39 45.2	+2.8
	208nm,0.3s,baz=128,slow=1.4,SNR=377						
ROSC				Lg	Lg	20 41 01.4	
	124nm,0.3s,baz=2.1,slow=22,SNR=5.7						
ROSC				LR	LR	20 41 38.1	
	comp=Z,7µm,19.9s,baz=18,slow=41						
ROSC	El Rosal	4.67	219	P	Pn	20 39 44.5	+2.0
ROSC	El Rosal	4.67	219	*e*P	Pn	20 39 44.3	+1.8
ROSC				*e*S	Sn	20 40 39.8	+2.6
ROSC	El Rosal	4.67	219	Pn	Pn	20 39 44.5	+2.0
HELC	Santa Helena	4.70	241	*e*P	Pn	20 39 45.2	+2.2
HELC				*e*S	Sb	20 40 50.1	-1.2
PAYV	Puerto Ayacuch	4.83	129	*e*P	Pn	20 39 45.5	+1.2
CARV	Caracas	4.83	66	*e*P	Pn	20 39 45.7	+1.2
CACV	CAICARA DEL OR	4.91	101	⇓*i*P	Pb	20 39 54.3	-3.1
LCBC	Los crdobas,	4.92	274	*e*P	Pn	20 39 44.3	-1.3
MERV	Las Mercedes	5.10	81	⇓*i*P	Pn	20 39 49.7	+1.7
MERV				*e*S	Sn	20 40 45.6	-1.6
CBOC	Ciudad Bolivar	5.28	240	*e*P	Pn	20 39 53.9	+3.2
CBOC				*e*S	Sb	20 41 04.1	-3.7
BIRV	Birongo	5.42	69	⇓*e*P	Pn	20 39 53.9	+1.4
BIRV				*e*S	Sn	20 40 52.8	-2.6
ANIL	Santa Ana	5.64	225	*e*P	Pn	20 39 57.3	+1.5
ANIL				*e*S	Sn	20 41 02.6	+1.4
PRAC	Prado	5.90	216	*e*P	Pn	20 40 00.4	+1.3
PRAC				*e*S	Sn	20 41 07.4	+0.1
ORTC	Ortega, Tolima	5.97	220	*e*P	Pn	20 40 00.4	+0.4
ORTC				*e*S	Sn	20 41 09.0	+0.1
PLMC	San Jos del P	6.03	234	*e*P	Pn	20 40 04.5	+3.5
PLMC				*e*S	Sn	20 41 11.0	+0.4
PTAC	Punta Ardita,	6.49	258	*e*P	Pn	20 40 08.2	+1.0
PTAC				*e*S	Sn	20 41 18.9	-2.8
YOTC	Yotoco, Valle	6.67	228	*e*P	Pn	20 40 11.1	+1.3
YOTC				*e*S	Sn	20 41 31.6	+5.4
PRGV	PARIAGUAN	6.68	87	⇓*i*P	Pn	20 40 10.6	+0.7
MACC	Macarena, Meta	6.79	201	*e*P	Pn	20 40 08.5	-2.8
PCRV	Puerto La Cruz	6.88	76	Pn	Pn	20 40 15.1	+2.6
	29nm,0.3s,baz=327,slow=3.7,SNR=144						
PCRV				LR	LR	20 43 50.8	
	comp=Z,6µm,18.4s,slow=46						
PCRV	Puerto La Cruz	6.88	76	⇓*e*P	Pn	20 40 13.8	+1.3
PIZC	Pizarro, Choco	6.89	240	*e*P	Pn	20 40 14.5	+1.8
PIZC				*e*S	Sn	20 41 34.0	+2.4
BETC	Betania	7.06	215	*i* P	Pn	20 40 15.5	+0.4
MARP	Paez Belalcaza	7.24	219	*e*P	Pn	20 40 18.6	+0.9
MARP				*e*S	Sn	20 41 39.2	-1.2
GARC	Garzon, Huila	7.50	213	*e*P	Pn	20 40 21.7	+0.5
PCON	Cinco Dias	7.91	219	*e*P	Pn	20 40 32.7	+5.5
CRUV	Carupano	8.33	74	*e*P	Pn	20 40 33.3	+0.8
BCIP	Isla Barro Col	8.36	275	P	Pn	20 40 31.6	-1.3
BCIP	Isla Barro Col	8.36	275		Pn	20 40 31.6	-1.3
PTLC	Puerto Leguiza	8.96	202	*e*P	Pn	20 40 40.7	-0.4
PTLC				*e*S	Sn	20 42 41.7	+19
RIOV	Rio Grande	9.50	92	⇓*e*P	Pn	20 40 48.1	-0.4
TPP	Pointe-a-Pierr	9.98	79	*e*P	Pn	20 40 57.5	+2.4
LGNH	Logne	10.00	353		Pn	20 40 55.4	+0.1
TRN	Trinidad (W)	10.08	77	*e*P	Pn	20 40 56.5	0.0
GRFF	Grenada Fort F	10.13	69	*e*P	Pn	20 41 04.4	+7.2
LUEV	Luepa	10.22	104	⇓*e*P	Pn	20 40 58.2	-0.3
GRGR	Grenville	10.24	69	Pn	Pn	20 40 59.2	+0.6
MLPR	Magueyes Islan	10.30	24		Pn	20 40 57.3	-2.1
CRPR	Cabo Rojo, PR	10.31	23		Pn	20 40 57.9	-1.7
TBH	Brigand Hill	10.38	78	*e*P	Pn	20 41 02.6	+2.0
DR12	Loma Pena Alta	10.39	11		Pn	20 40 59.1	-1.7
SDDR	Presa de Saban	10.40	1		Pn	20 41 02.3	+1.5
PRSN	Puerto Rico Se	10.49	23		Pn	20 41 00.9	-1.1
OBIP	Obispado Ponce	10.55	26		Pn	20 41 02.1	-0.7
GCMP	Grenada, Carri	10.57	67	*e*P	Pn	20 41 04.1	+0.9
CELP	Cerrillos	10.59	26		Pn	20 41 01.4	-2.0
CMJ	Castle Mountai	10.71	334	*i* P	Pn	20 41 14.9	+10
AGPR	Aguadilla, PR	10.73	22		Pn	20 41 04.4	-1.0
AOPR	Arecibo Observ	10.76	24		Pn	20 41 04.7	-1.1
HOJ	Hope	10.76	332	*i* P	Pn	20 41 08.8	+3.0
HOJ				*i* S	Sn	20 43 00.8	-6.0
PDPR	Patillas Dam,	10.79	28		Pn	20 41 04.4	-1.8
SJG	San Juan	10.81	28	Pn	Pn	20 41 05.6	-0.9
	54nm,0.3s,baz=201,slow=13,SNR=56						
SJG				Sn	Sn	20 43 02.6	-5.3
	9.3nm,0.3s,baz=11,slow=16,SNR=5.3						
SJG				LR	LR	20 45 33.9	
	comp=Z,2µm,20.9s,baz=208,slow=39						
SJG	San Juan	10.81	28	*e*P	Pn	20 41 02.9	-3.6
SJG				*e*S	Sn	20 42 59.9	-8.1
SJG	San Juan	10.81	28		Pn	20 41 05.1	-1.4
GWJ	Greenwich	10.81	332	*i* P	Pn	20 41 08.7	+2.0
OTAV	Otavalo	10.82	221	*ce*P	Pn	20 41 08.5	+1.5
OTAV				pmax	pmax		
	comp=Z,111nm,1.7s						
OTAV	Otavalo	10.82	221	*e*P	Pn	20 41 08.6	+1.5
OTAV	Otavalo	10.82	221	Pn	Pn	20 41 08.3	+1.2
STH	Stony Hill	10.86	332	*i* P	Pn	20 41 12.5	+5.3
STH				*i* S	Sn	20 43 06.4	-2.6
EMPR	Esperanza - Ma	10.97	25		Pn	20 41 07.1	-1.5
GCPR	Guaynabo City	11.02	27		Pn	20 41 08.3	-1.0
SVB	Belmont	11.03	64	*e*P	Pn	20 41 09.9	+0.4
SVB	Belmont	11.03	64		Pn	20 41 09.9	+0.4
TOSP	Speyside	11.05	75	*e*P	Pn	20 41 09.3	-0.5
SVV	Soufriere Volc	11.08	64	*e*P	Pn	20 41 12.2	+2.1
CBYP	Canovanas	11.09	29		Pn	20 41 09.0	-1.4
SSV	Crater Summit	11.10	64	*e*P	Pn	20 41 12.2	+1.6
CDVI	St. Croix	11.22	34	Pn	Pn	20 41 12.5	+0.5
MTDJ	Mount Denham	11.34	329	Pn	Pn	20 41 13.3	-0.5
CUPR	Culebra, Puert	11.40	31	Pn	Pn	20 41 13.0	-1.5
MCLT	Moule a Chique	11.48	62	*e*P	Pn	20 41 14.7	-1.0
SLBI	Saint Lucia, B	11.59	61	*e*P	Pn	20 41 16.5	-0.7
STVI	Saint Thomas	11.61	32	Pn	Pn	20 41 16.7	-0.7
BIM	Bigot	11.74	59	*e*P	Pn	20 41 19.3	0.0
BIM	Bigot	11.74	59		Pn	20 41 17.5	-1.8
FDF	Fort de France	11.78	57	P	Pn	20 41 19.4	-0.4
FDF	Fort de France	11.78	57	*e*P	Pn	20 41 19.4	-0.4
FDF	Fort de France	11.78	57		Pn	20 41 19.4	-0.4
SRBA	San Rafael, Bu	11.84	274		Pn	20 41 20.9	+0.3
MPOM	Morne Pois Mar	11.89	59	*e*P	Pn	20 41 21.9	+0.7
MPOM	Morne Pois Mar	11.89	59	Pn	Pn	20 41 21.5	+0.3
GTBY	Guantanamo Bay	11.89	343	Pn	Pn	20 41 21.5	+0.2
BATAN	Batan	11.92	278		Pn	20 41 20.7	-1.0

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DSLB  Salisbury          11.94  54 eP    Pn    20 41 21.5 -0.4
CBE   Ff, Capester       12.15  51 eP    Pn    20 41 23.2 -1.7
PEZE  Perez Zeledon,     12.16 275  Pn   Pn    20 41 24.7 -0.3
BOAV  Boa Vista          12.42 119       Pn    20 41 27.8 -0.7
ANBD  Bethesda, Anti     12.65  47 eP    Pn    20 41 31.7 +0.1
TBTG  Tabatinga, AM      12.71 173       Pn    20 41 31.2 -1.4
COVE  Coope Vega, Sa     13.00 281  Pn   Pn    20 41 34.9 -1.6
ESPN  Las Esperanzas     13.20 287       Pn    20 41 37.2 -2.0
JTS   Las Juntas de      13.48 279ceP    Pn    20 41 43.9 +0.8
JTS   Las Juntas de      13.48 279  Pn   Pn    20 41 42.7 -0.4
LCCY  Blossom Villag     13.91 324  Pn   Pn    20 41 48.0 -0.8
ACON  Acoyapa            13.98 285  Pn   Pn    20 41 47.4 -2.4
ORTG  Ortega, Santa      13.99 279       Pn    20 41 49.9 -0.1
BOAB  BOACO BROADBAN14.56 287  Pn   Pn    20 41 55.4 -2.4
PTGA  Pitinga            14.64 128  Pn   Pn    20 41 58.0 -0.9
      comp=Z,6.5nm,0.3s,baz=304,slow=14,SNR=86
PTGA                            Sn   Sn    20 44 31.9  -10
      comp=Z,9.0nm,0.3s,baz=30,slow=17,SNR=7.0
PTGA                            Lg   Lg    20 46 17.1
      comp=Z,58nm,0.3s,baz=235,slow=21,SNR=11
PTGA                            LR   LR    20 48 29.2
      comp=Z,735nm,18.5s,baz=307,slow=41
PTGA  Pitinga            14.64 128       Pn    20 41 56.3 -2.7
MACA  Manacapuru-AM      15.78 137  Pn   Pn    20 42 11.7 -2.4
CZSB  Cruzeiro do Su     16.20 185  Pn   Pn    20 42 18.0 -1.5
ATAH  Atahualpa          17.05 204  Pn   Pn    20 42 29.6 -1.0
      comp=Z,1.8nm,0.3s,baz=45,slow=9.4,SNR=12
ATAH                            LR   LR    20 50 12.4
      comp=Z,2µm,18.4s,baz=355,slow=41
ETMB  Extrema            18.94 164 eP    P     20 42 51.5 -1.4
ETMB  Extrema            18.94 164  P    P     20 42 52.0 -1.0
ETMB                            IAmb IAmb  20 43 02.0
      comp=Z,228nm,1.5s
SAML  Samuel             19.19 155  P    P     20 42 54.4 -1.3
SAML                            pmax pmax
      comp=Z,49nm,0.8s
SAML  Samuel             19.19 155  P    P     20 42 54.4 -1.3
APG   El Apazote         19.73 291  LR   LR    20 51 58.0
      comp=Z,810nm,20.4s,baz=110,slow=41
MALB  Monte Alegre       19.95 120 eP    P     20 43 04.6 +0.5
ITTB  Itaituba           20.20 129 eP    Pn    20 43 08.9 +0.2
NNA   Nana               21.08 195  P    P     20 43 16.1 -0.3
      comp=Z,43nm,0.9s,baz=352,slow=12,SNR=8.0
NNA                             LR   LR    20 52 50.8
      comp=Z,1µm,18.2s,baz=360,slow=41
MCPB  Macapa, AP         21.20 114 eP    P     20 43 16.7 -1.0
NPGB  Novo Progresso     22.25 134 eP    P     20 43 29.7 +0.7
VILB  Vilhena            24.06 152 eP    P     20 43 48.3 +0.8
CMIG  Matias Romero      24.41 293  P    P     20 43 50.1 -0.5
      comp=Z,10nm,1.0s,baz=69,slow=4.4,SNR=4.6
CMIG                            LR   LR    20 54 09.9
      comp=Z,798nm,21.8s,baz=102,slow=39
CLDB  Colider            24.75 141 eP    P     20 43 52.6 -1.1
PDRB  Porto dos Gac      24.76 144 eP    P     20 43 53.8  0.0
TIGA  Tifton             25.47 335  P    P     20 44 05.0 +5.0
      baz=151
TMAB  Tom-Au,PA,Br       25.63 114 eP    P     20 44 01.7  0.0
PRPB  Parauapebas        26.01 123 eP    P     20 44 05.3 +0.1
Y60A  Bolivia            26.12 347  P    P     20 44 02.9 -3.1
SIV   San Ignacio        26.42 157  P    P     20 44 09.9 +1.1
      comp=Z,85nm,1.2s,baz=341,slow=8.6,SNR=90
SIV                             LR   LR    20 55 07.3
      comp=Z,2µm,19.2s,baz=346,slow=38
PTLB  Pontes e Lacer     26.74 153 eP    P     20 44 11.6  0.0
PB16  IPOC Station P     26.75 176  P    P     20 44 08.5 -3.9
PB16                            IAmb IAmb  20 44 15.5
      comp=Z,46nm,0.9s
PB12  IPOC Station P     26.99 178  P    P     20 44 11.7 -2.2
PB12                            IAmb IAmb  20 44 38.8
      comp=Z,32nm,0.8s
GOGA  Godfrey            27.16 337  P    P     20 44 19.3 +4.0
      baz=153
PB11  IPOC Station P     28.16 177  P    P     20 44 22.7 -1.9
SNDB  Serra Nova Dou     28.54 135 eP    P     20 44 29.3 +1.5
Y49A  Blount Mountai     28.76 333  P    P     20 44 29.4 -0.3
Y49A                            IAmb IAmb  20 44 36.5
      comp=Z,31nm,0.9s
SALV  Santo Antonio      28.82 147 eP    P     20 44 31.0 +0.6
TA01  Diego Aracena      28.93 178  P    P     20 44 29.0 -2.3
TKL   Tuckaleechee C     29.28 339  P    P     20 44 35.4 +1.2
      comp=Z,8.2nm,0.7s,baz=168,slow=11,SNR=10
TKL   Tuckaleechee C     29.28 339  P    P     20 44 33.7 -0.5
TKL                             IAmb IAmb  20 45 35.3
      comp=Z,42nm,1.4s
PB01  IPOC Station P     29.44 176  P    P     20 44 34.0 -1.9
PB01                            IAmb IAmb  20 44 40.1
      comp=Z,32nm,0.8s
ROSB  Rosrio             29.47 112 eP    P     20 44 36.0 -0.1
BLA   Blacksburg         29.71 345  P    P     20 44 42.3 +4.2
      baz=162
PB07  IPOC Station P     30.10 177  P    P     20 44 39.8 -2.0
PB09  IPOC Station P     30.20 176  P    P     20 44 41.2 -1.5
PB09                            IAmb IAmb  20 44 48.9
      comp=Z,54nm,1.0s
V48A  Smith Brothers     30.54 335  P    P     20 44 45.2 -0.2
V48A                            IAmb IAmb  20 44 53.0
      comp=Z,54nm,1.2s
PP1B  Ponte de Pedra     30.66 148 eP    P     20 44 47.4 +0.8
PB04  IPOC Station P     30.69 178  P    P     20 44 45.9 -1.1
PEXB  Peixe              30.78 131 eP    P     20 44 49.1 +1.3
ARAG  Araguaiana, MT     30.92 141 eP    P     20 44 49.9 +1.0
LVC   Limon Verde        31.04 176  P    P     20 44 49.2 -1.1
      comp=Z,10nm,0.7s,baz=314,slow=3.6,SNR=10
LVC   Limon Verde        31.04 176ceP    P     20 44 51.0 +0.7
LVC                             pmax pmax
      comp=Z,13nm,0.8s
LVC   Limon Verde        31.04 176 eP    P     20 44 49.7 -0.6
LVC   Limon Verde        31.04 176  P    P     20 44 47.8 -2.5
LVC                             IAmb IAmb  20 45 24.0
      comp=Z,23nm,0.9s
HKT   Hockley            31.27 316ceP    P     20 44 53.0 +1.2
HKT                             pmax pmax
      comp=Z,48nm,1.7s
HKT   Hockley            31.27 316  P    P     20 44 51.3 -0.6
HKT                             IAmb IAmb  20 44 53.9
      comp=Z,26nm,1.0s
WVT   Waverly            31.30 334  P    P     20 44 52.1  0.0
WVT                             pmax pmax
      comp=Z,29nm,0.9s
WVT   Waverly            31.30 334  P    P     20 44 52.8 +0.7
      baz=148
WVT   Waverly            31.30 334  P    P     20 44 52.1  0.0
WVT                             IAmb IAmb  20 44 58.4
      comp=Z,29nm,0.9s
Q54A  Coxs Mills         31.49 346  P    P     20 44 52.4 -1.3
Z41A  Richland Creek     31.57 324  P    P     20 44 55.4 +0.9
      baz=136
NATX  Nacogdoches        31.66 320  P    P     20 44 56.3 +1.0
      baz=132
NATX  Nacogdoches        31.66 320  P    P     20 44 52.9 -2.5
MCWV  Mont Chateau       31.91 348  P    P     20 45 02.1 +4.7
      baz=164
WLAR  White Oak Lake     32.06 324  P    P     20 44 58.2 -0.6
O56A  Blue Knob Stat     32.25 350  P    P     20 45 04.8 +4.3
      baz=167
P52A  Corning            32.43 344  P    P     20 45 05.5 +3.5
      baz=160
WCI   Wyandotte Cave     32.48 338  P    P     20 45 05.2 +2.7
      baz=152
X40A  Basin Creek Fa     32.49 326  P    P     20 45 03.1 +0.6
      baz=138,SNR=7.8
N59A  State Game Lan     32.49 354  P    P     20 45 06.3 +3.8
      baz=172
O54A  Avella             32.53 347  P    P     20 45 02.0 -0.8
W41B  Gary Mavity, V     32.68 327  P    P     20 45 04.7 +0.5
      baz=139,SNR=10
AQDB  Aquidauana         32.70 152 eP    P     20 45 05.5 +1.0
AQDB  Aquidauana         32.70 152  P    P     20 45 01.9 -2.5
O53A  New Philadelph     32.78 346  P    P     20 45 07.0 +1.9
      baz=162
WHAR  Wooly Hollow       32.79 327  P    P     20 45 01.9 -3.3
WHAR                            IAmb IAmb  20 45 06.7
      comp=Z,30nm,0.8s
LCAR  Lake Charles       32.81 330  P    P     20 45 01.8 -3.5
LCAR                            IAmb IAmb  20 45 11.5
      comp=Z,27nm,1.0s
Z38A  Mt. Pleasant       32.87 322  P    P     20 45 04.2 -1.7
833A  Chaparral WMA,     32.91 310  P    P     20 45 05.2 -1.2
      baz=121,SNR=5.7
MIAR  Mount Ida          32.95 325  P    P     20 45 04.4 -2.2
MIAR                            pmax pmax
      comp=Z,23nm,1.0s
MIAR  Mount Ida          32.95 325  P    P     20 45 06.6  0.0
      baz=137,SNR=9.2
MIAR  Mount Ida          32.95 325  P    P     20 45 04.4 -2.2
MIAR                            IAmb IAmb  20 45 24.4
      comp=Z,23nm,0.9s
PB14  IPOC Station P     32.96 178  P    P     20 45 03.9 -3.2
435B  Jarrell            32.98 316  P    P     20 45 07.8 +0.8
      baz=127,SNR=9.2
P49A  Miami Univ. Ec     33.10 341  P    P     20 45 11.8 +3.9
      baz=155
FCAR  Ozark Folk Cen     33.16 328  P    P     20 45 07.2 -1.2
FCAR                            IAmb IAmb  20 45 14.2
      comp=Z,21nm,0.9s
N54A  Moraine State      33.19 348  P    P     20 45 11.1 +2.5
      baz=164
ACSO  Alum Creek Sta     33.22 344  P    P     20 45 12.6 +3.6
      baz=159
BDFB  Brasilia           33.36 136  P    P     20 45 11.7 +1.2
      comp=Z,8.0nm,0.6s,baz=302,slow=11,SNR=12
W39A  Magazine           33.54 326  P    P     20 45 12.5 +0.7
      baz=137,SNR=14
W39A  Magazine           33.54 326  P    P     20 45 11.1 -0.6
SDBA  SAO DESIDERIO      33.56 128 eP    P     20 45 13.5 +1.4
WHTX  Lake Whitney,      33.62 318  P    P     20 45 12.9 +0.4
      baz=128,SNR=7.4
M54A  Oil Creek Stat     33.66 349  P    P     20 45 15.7 +3.0
      baz=165
N51A  Ashland            33.70 345  P    P     20 45 12.9 -0.2
N51A                            IAmb IAmb  20 46 16.2
      comp=Z,36nm,0.9s
BINY  Binghamton         33.78 354  P    P     20 45 18.1 +4.3
      baz=172
U40A  Yellville          33.90 328  P    P     20 45 15.4 +0.5
      baz=140,SNR=33
U40A  Yellville          33.90 328  P    P     20 45 14.2 -0.7
FVM   French Village     33.99 333  P    P     20 45 15.0 -0.6
FVM                             pmax pmax
      comp=Z,49nm,0.9s
FVM   French Village     33.99 333  P    P     20 45 15.0 -0.6
Z35A  Perchaven, San     34.34 320  P    P     20 45 17.1 -1.6
JCT   Junction City      34.37 313  P    P     20 45 19.2 +0.1
      baz=124
CCM   Cathedral Cave     34.43 332  P    P     20 45 20.0 +0.5
      baz=144
NBPB  Pedra_Branca-C     34.67 113 eP    P     20 45 20.6 -1.3
J58A  Remsen             34.87 355  P    P     20 45 21.7 -1.5
J58A                            IAmb IAmb  20 45 38.8
      comp=Z,25nm,0.9s
ITRB  Iturama            34.88 144 eP    P     20 45 25.1 +1.6
IPMB  Ipameri, GO        34.90 139 eP    P     20 45 22.8 -1.0
S39A  Bolivar            35.16 329  P    P     20 45 24.0 -1.8
S39A                            IAmb IAmb  20 45 31.9
      comp=Z,20nm,0.8s
TUL1  Leonard            35.19 324  P    P     20 45 25.8 -0.3
      baz=135,SNR=6.9
AC02  Maricunga          35.22 176  P    P     20 45 25.1 -1.8
AC02                            IAmb IAmb  20 45 44.8
      comp=Z,31nm,1.3s
W35A  Tecumseh           35.30 322  P    P     20 45 24.7 -2.4
ABTX  Abilene, Hawle     35.48 317  P    P     20 45 28.8 +0.2
      baz=126,SNR=16
ABTX  Abilene, Hawle     35.48 317  P    P     20 45 26.0 -2.7
LBNH  Lisbon             35.58 359  P    P     20 45 30.5 +1.2
      baz=179
JANB  Januaria           35.64 131 eP    P     20 45 29.8 -0.4
HDIL  Hopedale           35.66 336  P    P     20 45 30.5 +0.5
      baz=149
OK030 Cody Creek RV      35.78 323  P    P     20 45 30.0 -1.1
OK031 S. Brethren Rd     35.83 323  P    P     20 45 29.5 -2.1
PCMB  Pacaembu           35.88 147 eP    P     20 45 33.4 +1.3
P40A  Paris              35.99 332  P    P     20 45 31.0 -1.9
P40A                            IAmb IAmb  20 45 38.3
      comp=Z,25nm,0.9s
NBMA  Muriti-CE          36.16 115 eP    P     20 45 34.3 -0.4
WMOK  Wichita Mounta     36.21 320  P    P     20 45 33.2 -1.7
WMOK                            pmax pmax
      comp=Z,25nm,0.9s
WMOK  Wichita Mounta     36.21 320  P    P     20 45 34.1 -0.8
      baz=130,SNR=23
WMOK  Wichita Mounta     36.21 320  P    P     20 45 33.2 -1.7
WMOK                            IAmb IAmb  20 45 35.1
      comp=Z,25nm,0.8s
T35A  Sooner Cattle      36.31 325       P     20 45 34.1 -1.6
NBPN  Ponto Novo - B     36.53 121 eP    P     20 45 38.8 +0.9
G62A  West of Eustis     36.57   1  P    P     20 45 37.4 -0.3
G62A                            IAmb IAmb  20 45 54.9
      comp=Z,61nm,1.4s
BLOK  Blackwell          36.60 324       P     20 45 37.8 -0.4
TXAR  Lajitas Array      36.67 309  P    P     20 45 38.8 -0.2
      comp=Z,5.6nm,0.7s,baz=128,slow=8.8,SNR=67
TXAR                            LR   LR    21 04 29.5
      comp=Z,70nm,18.6s,baz=0.0,slow=43
TXAR  Lajitas Array      36.67 309  P    P     20 45 38.5 -0.5
TX31  Lajitas Ar. Si     36.67 309  P    P     20 45 38.6 -0.4
TX32  Lajitas Array      36.67 309  P    P     20 45 38.6 -0.4
SADO  Sadowa             36.73 351  P    P     20 45 39.5 +0.4
      comp=Z,15nm,0.8s,baz=208,slow=3.3,SNR=11
SADO  Sadowa             36.73 351  P    P     20 45 39.0 -0.1
SADO                            IAmb IAmb  20 46 49.6
      comp=Z,29nm,1.1s
KAN13 South Haven SW     36.93 324  P    P     20 45 40.7 -0.3
KAN13                           IAmb IAmb  20 45 46.2
      comp=Z,26nm,0.7s
MC01  Montes Claros      36.97 133 eP    P     20 45 41.1 -0.5
BB19B Bebedouro          37.01 143 eP    P     20 45 42.0 +0.2
NBPA  Parau_RN           37.01 111 eP    P     20 45 41.6 -0.3
GC02  Grant County #     37.04 324  P    P     20 45 41.2 -0.8
KAN01 Argonia South      37.19 324  P    P     20 45 41.2 -2.0
OK032 Salt Plains WL     37.22 323       P     20 45 42.1 -1.3
OK032                           IAmb IAmb  20 45 43.8
      comp=Z,32nm,0.7s
CPUP  Villa Florida      37.24 159  P    P     20 45 42.6 -1.0
      comp=Z,4.8nm,0.9s,baz=331,slow=7.0,SNR=4.8
CPUP                            LR   LR    21 02 08.6
      comp=Z,869nm,20.1s,baz=340,slow=38
CPUP  Villa Florida      37.24 159 eP    P     20 45 42.3 -1.4
CPUP  Villa Florida      37.24 159  P    P     20 45 41.9 -1.8
LCO   Las Campanas       37.32 179  P    P     20 45 44.0 -0.6
LCO                             pmax pmax
      comp=Z,22nm,0.8s
LCO   Las Campanas       37.32 179  P    P     20 45 44.0 -0.6
N38A  Joes South For     37.54 332  P    P     20 45 45.6 -0.5
N38A                            IAmb IAmb  20 45 51.9
      comp=Z,62nm,1.4s
NBLV  Livramento - P     37.82 114 eP    P     20 45 48.6 -0.2
KSU1  Kansas State U     37.92 327  P    P     20 45 48.8 -0.6
      baz=137,SNR=9.1
JFWS  Jewell Farm        38.04 337  P    P     20 45 51.1 +0.8
      baz=149,SNR=11
PTGB  Pitanga            38.04 151 eP    P     20 45 50.1 -0.4
AMTX  Amarillo           38.18 318  P    P     20 45 51.7  0.0
      baz=126
DIAM  Diamantina, MG     38.20 134 eP    P     20 45 51.6 -0.5
MSTX  Muleshoe           38.40 316  P    P     20 45 53.2 -0.3
      baz=124,SNR=18
SCIA  State Center       38.42 333  P    P     20 45 53.7 +0.1
      baz=144
GO04  Tololo Observa     38.48 179  P    P     20 45 52.6 -1.8
GO04                            IAmb IAmb  20 46 00.7
      comp=Z,35nm,0.6s
GDU01 Guandu, BA         38.55 125 eP    P     20 45 55.4 +0.4
RCLB  Rio Claro- Sao     38.64 143 eP    P     20 45 56.8 +1.2
NBLA  Lagarto - SE       38.66 120 eP    P     20 45 54.9 -0.9
MNTX  Cornudas Mount     39.09 311  P    P     20 45 59.4 +0.1
      baz=119,SNR=41
MNTX  Cornudas Mount     39.09 311  P    P     20 45 58.7 -0.7
CO03  El Pedregal        39.14 179  P    P     20 45 58.9 -0.9
BSCB  Bom Sucesso        39.31 139 eP    P     20 46 00.5 -0.8
NBIT  Itapeh - BA        39.34 126 eP    P     20 46 02.5 +1.1
NBAN  Anadia - AL        39.37 117 eP    P     20 46 00.2 -1.6
VAO   Valinhos           39.42 143 eP    P     20 46 02.5 +0.3
CBKS  Cedar Bluff        39.46 324  P    P     20 46 02.1 -0.3
      baz=132
CMC01 Camacan, BA        39.51 127 eP    P     20 46 03.1 +0.1
SLBS  Sierra La Lagu     39.82 297  P    P     20 46 03.9 -1.7
NBRF  Rio Formoso -      39.98 114 eP    P     20 46 05.5 -1.4
GUA01 Guaratinga, BA     39.99 129 eP    P     20 46 07.2 +0.3
TIJ01 Guaruva-PR         40.09 148 eP    P     20 46 06.5 -1.2
ITAB  Concordia          40.15 153 eP    P     20 46 07.4 -0.7
PET01 Itanhaem-SP        40.23 145 eP    P     20 46 08.8 +0.1
SJMB  Sao Joao De Ma     40.25 132 eP    P     20 46 08.7 -0.4
PARB  Paraibuna          40.48 142 eP    P     20 46 11.3 +0.3
NAN01 Guarapari, ES      40.50 130 eP    P     20 46 11.9 +0.7
ITQB  Itaqui             40.55 160 eP    P     20 46 09.3 -2.0
ITQB  Itaqui             40.55 160  P    P     20 46 08.1 -3.2
ITQB                            IAmb IAmb  20 46 53.3
      comp=Z,39nm,1.0s
BSFB  Barra de Sao F     40.58 132 eP    P     20 46 10.1 -1.7
SPMN  Marine on St.      40.98 337  P    P     20 46 15.3 +0.6
      baz=147
VA03  San Esteban        41.06 179  P    P     20 46 12.9 -2.8
VA03                            IAmb IAmb  20 46 27.7
      comp=Z,28nm,0.8s
VAS01 Vassouras-RJ       41.09 139 eP    P     20 46 14.7 -1.3
RIB01 Linhares ES        41.22 132 eP    P     20 46 16.6 -0.4
121A  Cookes Peak, D     41.28 311  P    P     20 46 19.0 +1.3
      baz=117,SNR=10
T25A  Trinidad           41.29 319  P    P     20 46 19.1 +1.3
      baz=125,SNR=29
T25A  Trinidad           41.29 319  P    P     20 46 17.2 -0.6
T25A                            IAmb IAmb  20 46 24.6
      comp=Z,81nm,1.4s
VA01  Torpederas         41.31 180  P    P     20 46 14.8 -2.7
ECSD  EROS Data Cent     41.40 332  P    P     20 46 17.9 -0.4
      baz=140
ANMO  Albuquerque        41.49 315  P    P     20 46 18.7 -0.6
      comp=Z,2.9nm,0.7s,baz=120,slow=12,SNR=8.2
ANMO  Albuquerque        41.49 315ceP    P     20 46 20.2 +0.8
ANMO                            pmax pmax
      comp=Z,9.0nm,1.0s
ANMO  Albuquerque        41.49 315  P    P     20 46 19.8 +0.4
      baz=121
ANMO  Albuquerque        41.49 315  P    P     20 46 18.2 -1.1
ALF01 Guarapari-ES       41.81 134 eP    P     20 46 21.2 -0.7
CAM01 Campos-RJ          41.97 136 eP    P     20 46 22.2 -0.9
MT09  Talagante          42.07 179  IAmb IAmb  20 46 29.5
      comp=Z,20nm,0.7s
SDCO  Great Sand Dun     42.35 319  P    P     20 46 27.6 +1.1
      baz=125,SNR=34
CPSB  Cacapava Do Su     42.38 157 eP    P     20 46 25.8 -0.5
BO01  Tunca              42.68 180  IAmb IAmb  20 46 34.4
      comp=Z,28nm,0.9s
EYMN  Ely                42.82 340  P    P     20 46 31.2 +1.4
      baz=150
EYMN  Ely                42.82 340  P    P     20 46 29.7 -0.1
EYMN                            IAmb IAmb  20 46 36.9
      comp=Z,22nm,0.7s
Q24A  Divide             42.83 320  P    P     20 46 30.7 +0.3
      baz=126,SNR=6.8
SUSD  Miller             43.04 331  P    P     20 46 31.2 -0.5
      baz=138
BO02  Sierra Bellavi     43.08 179  IAmb IAmb  20 46 33.3
      comp=Z,41nm,0.8s
S22A  4UR Ranch, Cre     43.23 318  P    P     20 46 34.9 +1.3
      baz=123,SNR=23
GO05  Huala              43.30 181  IAmb IAmb  20 46 39.2
      comp=Z,25nm,0.8s
TUC   Tucson             43.47 309  P    P     20 46 34.5 -0.9
TUC                             pmax pmax
      comp=Z,16nm,1.1s
TUC   Tucson             43.47 309  P    P     20 46 35.6 +0.2
      baz=114
TUC   Tucson             43.47 309  P    P     20 46 34.5 -0.9
PLTB  Pedras Altas       43.52 158 eP    P     20 46 35.9 +0.2
ISCO  Idaho Springs      43.61 321  P    P     20 46 37.7 +0.9
      baz=126,SNR=30
ISCO  Idaho Springs      43.61 321  IAmb IAmb  20 46 43.1
      comp=Z,59nm,1.5s
W18A  Petrified Fore     43.92 313  P    P     20 46 39.9 +0.8
      baz=118,SNR=14
MVCO  Mesa Verde         44.07 316  P    P     20 46 40.9 +0.5
      baz=121,SNR=10
N23A  Red Feather La     44.47 322  P    P     20 46 44.2 +0.7
      baz=127,SNR=13
AGMN  Agassiz Nation     44.70 337  P    P     20 46 45.1 +0.2
      baz=144
214A  Organ Pipe Nat     44.92 307  P    P     20 46 47.3 +0.3
      baz=112,SNR=5.9
214A  Organ Pipe Nat     44.92 307  P    P     20 46 46.8 -0.1
WUAZ  Wupatki            45.29 312  P    P     20 46 50.9 +0.9
      baz=117,SNR=21
RSSD  Black Hills        45.41 327  P    P     20 46 51.1 +0.2
      baz=132
O20A  White River Ci     45.46 320  P    P     20 46 52.5 +1.2
      baz=124,SNR=9.5
Y14A  Wickenburg         45.84 310  P    P     20 46 52.6 -1.7
K22A  Casper             45.87 324  P    P     20 46 54.8 +0.2
      baz=128,SNR=8.2
MDND  Maddock            45.90 334  P    P     20 46 54.6 +0.1
      baz=140
ULM   Lac du Bonnet      46.30 338  P    P     20 46 57.2 -0.4
      comp=Z,34nm,1.0s,baz=143,slow=8.1,SNR=12
ULM                             LR   LR    21 06 54.1
      comp=Z,398nm,20.3s,baz=144,slow=37
ULM   Lac du Bonnet      46.30 338  P    P     20 46 56.0 -1.6
SCHQ  Schefferville      46.33   4  P    P     20 46 58.0 +0.3
      comp=Z,8.5nm,0.7s,baz=182,slow=5.8,SNR=11
SCHQ                            LR   LR    21 05 49.2
      comp=Z,345nm,20.4s,baz=222,slow=35
SCHQ  Schefferville      46.33   4  P    P     20 46 57.1 -0.6
SCHQ                            IAmb IAmb  20 47 11.4
      comp=Z,18nm,0.8s
GLA   Glamis             46.90 308  P    P     20 47 00.2 -2.5
GLA                             pmax pmax
      comp=Z,22nm,1.0s
GLA   Glamis             46.90 308  P    P     20 47 03.0 +0.3
      baz=112
GLA   Glamis             46.90 308  P    P     20 47 00.2 -2.5
GLA                             IAmb IAmb  20 47 23.5
      comp=Z,22nm,1.0s
IRM   Iron Mountain      47.56 309  P    P     20 47 08.1 +0.4
      baz=112,SNR=11
BC3   Big Chuckawall     47.61 308  P    P     20 47 08.3  0.0
      baz=112
SWSC  Sam W. Stewart     47.63 307  P    P     20 47 08.3  0.0
      baz=111
BW06  Boulder Array      47.75 322  P    P     20 47 09.7 +0.4
      baz=124,SNR=36
PDAR  Pinedale Array     47.75 322  P    P     20 47 09.6 +0.3
      comp=Z,15nm,0.6s,baz=126,slow=10,SNR=116
PDAR                            LR   LR    21 10 13.7
      comp=Z,135nm,18.1s,baz=130,slow=40
NLU   North Lily Min     47.87 318  P    P     20 47 10.1 -0.2
NLU                             IAmb IAmb  20 47 11.5
      comp=Z,10nm,0.7s
MONP2 Monument Peak      48.10 307  P    P     20 47 12.2  0.0
      baz=110
BELC  Belle Mtn. Jos     48.16 308  P    P     20 47 12.9 +0.4
      baz=111,SNR=11
GMRC  Granite Mounta     48.19 310  P    P     20 47 12.8 +0.1
      baz=112,SNR=6.3
HWUT  Hardware Ranch     48.38 320  IAmb IAmb  20 47 24.0
      comp=Z,11nm,0.7s
PFO   Pinyon Flats O     48.38 308  LR   LR    21 12 40.7
      comp=Z,140nm,18.1s,baz=148,slow=42
PFO   Pinyon Flats O     48.38 308ceP    P     20 47 14.9 +0.7
PFO   Pinyon Flats O     48.38 308  P    P     20 47 14.4 +0.2
      baz=111
PSUT  Pine Spring        48.42 315  IAmb IAmb  20 47 25.1
      comp=Z,15nm,0.9s
DGMT  Dagmar             48.45 331  P    P     20 47 15.5 +1.0
      baz=134,SNR=12
DUG   Dugway, Tooele     48.48 317  P    P     20 47 15.9 +1.0
      baz=119,SNR=10
TUQ   Turquoise Moun     48.63 310  P    P     20 47 16.5 +0.3
      baz=112,SNR=8.0
HEC   Hector,Ludlow      48.72 309  P    P     20 47 17.5 +0.8
      baz=112
LOHW  Long Hollow        48.86 322  IAmb IAmb  20 47 19.5
      comp=Z,24nm,0.8s
REDW  Red Top Meadow     48.87 322  IAmb IAmb  20 47 24.7
      comp=Z,26nm,0.8s
RLMT  Red Lodge          48.94 325  P    P     20 47 18.9 +0.4
      baz=126,SNR=15
RLMT  Red Lodge          48.94 325  IAmb IAmb  20 47 22.4
      comp=Z,34nm,1.4s
MURC  Murrieta           48.95 308  P    P     20 47 18.6 +0.1
      baz=110
SPR3  Spring Creek 3     48.96 315  IAmb IAmb  20 47 20.4
      comp=Z,30nm,1.6s
BGU   Big Grassy Mou     48.98 318  IAmb IAmb  20 47 20.1
      comp=Z,18nm,0.7s
TPAW  Teton Pass         49.00 322  IAmb IAmb  20 47 31.3
      comp=Z,14nm,0.8s
PLCA  Paso Flores        49.02 179  P    P     20 47 18.1 -0.7
      comp=Z,41nm,0.8s,baz=358,slow=8.7,SNR=96
PLCA                            LR   LR    21 07 49.4
      comp=Z,286nm,18.9s,baz=354,slow=36
PLCA  Paso Flores        49.02 179  P    P     20 47 18.1 -0.7
PLCA                            pmax pmax
      comp=Z,40nm,0.8s
PLCA  Paso Flores        49.02 179 eP    P     20 47 18.0 -0.9
PLCA  Paso Flores        49.02 179  P    P     20 47 18.1 -0.7
MOOW  Moose Ponds        49.02 323  IAmb IAmb  20 47 20.5
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	comp=Z,15nm,0.9s						
SHOC	Shoshone, Teco	49.08	311	P	P	20 47 19.9	+0.5
	baz=113						
FLWY	Flagg Ranch	49.18	323	IAmb	IAmb	20 47 45.2	
	comp=Z,18nm,0.9s						
GSC	Goldstone, Bar	49.25	310	P	P	20 47 21.2	+0.3
	baz=112,SNR=16						
H17A	Grant Village	49.28	323	P	P	20 47 21.8	+0.6
	baz=125						
R11A	Troy Canyon, C	49.56	314	P	P	20 47 23.8	+0.5
	baz=115,SNR=16						
FURC	Furnace Creek,	49.73	311	P	P	20 47 25.3	+1.0
	baz=113						
LRMC	Laurel Mtn Rad	49.98	310	P	P	20 47 26.7	+0.2
	baz=111,SNR=6.6						
EDW2	Edwards Air Fo	50.01	309	P	P	20 47 26.7	0.0
	baz=110,SNR=8.1						
MPMC	Manual Prospec	50.05	310	P	P	20 47 27.1	0.0
	baz=112,SNR=7.5						
ELK	Elko	50.37	317	LR	LR	21 11 29.0	
	comp=Z,175nm,19.6s,baz=139,slow=39						
BOZ	Bozeman (W)	50.58	324	P	P	20 47 31.7	+0.8
	baz=124,SNR=16						
CWC	Cottonwood Cre	50.63	311	P	P	20 47 31.7	+0.3
	baz=112						
ISA	Isabella, Lake	50.65	310	P	P	20 47 31.9	+0.4
	baz=111						
ARVC	Arvin	50.74	309	P	P	20 47 32.4	+0.3
	baz=110						
MCMT	McKenzie Canyo	50.88	323	P	P	20 47 33.1	-0.1
EGMT	Eagleton	50.96	328	P	P	20 47 34.3	+0.7
	baz=128,SNR=14						
EGMT	Eagleton	50.96	328	IAmb	IAmb	20 47 38.3	
	comp=Z,30nm,1.0s						
DLMT	Dillon	51.01	323	IAmb	IAmb	20 47 41.3	
	comp=Z,33nm,1.2s						
VES	Vestal, Richgr	51.18	310	P	P	20 47 36.2	+0.9
	baz=110,SNR=12						
HLID	Hailey	51.18	320	P	P	20 47 36.1	+0.7
	baz=120,SNR=24						
LL02	Futaleuf	51.47	180	P	P	20 47 36.0	-1.3
NVAR	Mina Array Bea	51.54	313	P	P	20 47 38.6	+0.3
	comp=Z,4.5nm,0.6s,baz=117,slow=7.0,SNR=58						
NVAR				LR	LR	21 12 01.2	
	comp=Z,140nm,21.4s,baz=103,slow=39						
LHV	Little Huntoon	51.62	313	P	P	20 47 38.9	+0.3
FFC	Flin Flon	52.13	338	P	P	20 47 42.0	-0.1
FFC				pmax	pmax		
	comp=Z,21nm,1.3s						
FFC	Flin Flon	52.13	338	P	P	20 47 42.0	-0.1
MSO	Missoula	52.59	324	P	P	20 47 46.2	+0.4
	baz=123,SNR=6.7						
PNTR	Pine Nut	52.73	313	IAmb	IAmb	20 47 55.3	
	comp=Z,18nm,0.7s						
MPK	Martis Peak	53.12	313	P	P	20 47 50.4	+0.3
MPK				IAmb	IAmb	20 47 52.8	
	comp=Z,44nm,1.3s						
JTMT	Jette	53.29	325	IAmb	IAmb	20 47 55.9	
	comp=Z,26nm,0.9s						
COYC	Coyhaique	53.85	181	P	P	20 47 54.5	-0.4
COYC				IAmb	IAmb	20 48 01.3	
	comp=Z,28nm,0.8s						
F10A	Beach Ranch, E	54.11	322	IAmb	IAmb	20 48 02.4	
	comp=Z,19nm,0.7s						
O03E	Paynes Creek	54.76	314	P	P	20 48 01.4	-0.4
	baz=111,SNR=7.9						
G08A	Pilot Rock	54.87	320	IAmb	IAmb	20 48 03.8	
	comp=Z,17nm,0.9s						
NEW	Newport	55.18	324	P	P	20 48 04.6	-0.2
	comp=Z,16nm,0.9s,baz=135,slow=6.1,SNR=20						
NEW				LR	LR	21 14 25.7	
	comp=Z,225nm,18.4s,baz=105,slow=39						
NEW	Newport	55.18	324	P	P	20 48 04.5	-0.2
	baz=120,SNR=22						
NEW	Newport	55.18	324	IAmb	IAmb	20 48 10.0	
	comp=Z,22nm,1.0s						
M04C	Macdoel	55.33	315	P	P	20 48 06.3	+0.3
	baz=112						
O02D	Mt. Diablo Mer	55.42	313	P	P	20 48 05.1	-1.5
	baz=110						
J05D	Fort Rock, OR	55.49	317	P	P	20 48 07.8	+0.6
	baz=114,SNR=12						
PINE	Pine Mountain	55.50	318	P	P	20 48 06.8	-0.5
PINE				IAmb	IAmb	20 48 09.0	
	comp=Z,23nm,0.9s						
N02D	Trinity Center	55.64	314	P	P	20 48 06.5	-1.6
	baz=111						
L04D	Klamath Falls	55.81	316	P	P	20 48 09.5	0.0
	baz=112,SNR=10						
M02C	Callahan	55.89	315	P	P	20 48 08.8	-1.1
	baz=111						
YBH	Yreka Blue Hor	55.91	315	P	P	20 48 08.9	-1.3
	comp=Z,4.5nm,0.9s,baz=79,slow=3.9,SNR=15						
YBH				LR	LR	21 14 45.3	
	comp=Z,192nm,21.9s,baz=158,slow=39						
I05D	Terrebonne, OR	55.99	319	P	P	20 48 11.6	+1.0
	baz=114						
J04D	Umpqua Nationa	56.06	317	P	P	20 48 11.7	+0.3
	baz=113,SNR=6.2						
G05D	Wamic, OR	56.35	320	P	P	20 48 14.4	+1.4
	baz=115						
I04A	Tendick Farm,	56.48	318	P	P	20 48 13.9	-0.2
	baz=113						
B08A	Colville Reser	56.52	324	IAmb	IAmb	20 48 18.3	
	comp=Z,25nm,0.8s						
F05D	White Salmon	56.71	320	P	P	20 48 17.1	+1.4
	baz=115						
K02D	Willamette Mer	56.92	316	P	P	20 48 17.2	-0.2
	baz=111						
H04D	Lebanon	56.98	318	P	P	20 48 18.3	+0.7
	baz=113						
I03D	Drain, OR	57.07	317	P	P	20 48 18.6	+0.4
	baz=112						
KBO	Bosley Butte	57.14	315	P	P	20 48 19.5	+0.7
KBO				IAmb	IAmb	20 48 23.6	
	comp=Z,28nm,0.9s						
J01E	Myrtle Point	57.27	316	P	P	20 48 20.4	+0.8
	baz=111						
LON	Longmire	57.29	321	P	P	20 48 19.1	-0.7
LON				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LON	Longmire	57.29	321	P	P	20 48 19.1	-0.7
D03D	Eldon	58.41	321	P	P	20 48 27.7	+0.1
	baz=114						
NLWA	Neilton Lookou	58.84	321	P	P	20 48 29.9	-0.7
NLWA				IAmb	IAmb	20 48 32.5	
	comp=Z,30nm,1.1s						
DY2G	Dye2	60.38	11	*i* P	P	20 48 40.7	-0.4
DY2G				IAmb	IAmb	20 48 51.4	
	comp=Z,13nm,0.7s						
DY2G				IAmb	IAmb	20 48 52.2	
	comp=Z,18nm,0.8s						
EFI	East Falkland	61.05	171	*i* P	P	20 48 46.9	+1.4
EFI				pmax	pmax		
	comp=Z,44nm,1.1s						
YKA	Yellowknife Ar	62.28	339	P	P	20 48 53.1	-0.7
	comp=Z,4.2nm,0.5s,baz=224,slow=6.0,SNR=20						
YKA				LR	LR	21 16 33.0	
	comp=Z,238nm,19.9s,baz=0.0,slow=37						
YKA	Yellowknife Ar	62.28	339	P	P	20 48 53.3	-0.5
YKA	Yellowknife Ar	62.28	339	P	P	20 48 53.3	-0.5
PTEO	Sao Teotonio	63.24	52	*e*P	P	20 48 59.4	-1.3
MORF	Marmelete	63.26	53	*e*P	P	20 49 05.9	+5.0
PNCL	Nicolau / Gran	63.50	52	*e*P	P	20 49 04.0	+1.7
	comp=Z,76nm,1.9s						
MESJ	Messejana	63.69	52	*e*P	P	20 49 05.0	+1.4
PCVE	Castro Verde	63.79	52	*e*P	P	20 49 09.0	+4.7
PBDV	Barranco-do-Ve	63.81	53	*e*P	P	20 49 04.5	0.0
PCAS	Casmilo, Conde	63.88	50	*e*P	P	20 49 04.8	-0.1
	comp=Z,96nm,1.8s						
PMTG	Montargil	63.91	51	*e*P	P	20 49 05.7	+0.7
ICESG	Greenland Ices	63.94	12	*i* P	P	20 49 03.9	-1.2
ICESG				IAmb	IAmb	20 49 14.6	
	comp=Z,21nm,0.9s						
ICESG				IAmb	IAmb	20 49 14.7	
	comp=Z,21nm,0.9s						
EVO	Evora	63.97	51	*e*P	P	20 49 08.3	+2.8
	comp=Z,40nm,1.3s						
COI	Coimbra	63.98	49	*e*P	P	20 49 08.7	+3.2
	comp=Z,99nm,1.4s						
PBEJ	Beja	64.00	52	*e*P	P	20 49 06.9	+1.2
	comp=Z,33nm,1.6s						
PESTR	Estremoz	64.36	51	*e*P	P	20 49 08.5	+0.5
PGAV	Gavieira, Arco	64.44	48	*e*P	P	20 49 12.9	+4.3
PVIS	Viseu	64.47	49	*e*P	P	20 49 07.8	-1.0
	comp=Z,60nm,2.1s						
PCBR	Castelo Branco	64.61	50	*e*P	P	20 49 14.3	+4.6
PBAR	Barrancos	64.67	52	*e*P	P	20 49 13.8	+3.8
	comp=Z,31nm,1.6s						
POLO	Lamas de Olo	64.67	48	*e*P	P	20 49 10.5	+0.4
	comp=Z,37nm,1.6s						
PVRL	Vila Real	64.71	48	*e*P	P	20 49 14.3	+4.0
MVO	Moncorvo	65.19	49	*e*P	P	20 49 14.3	+0.8
	comp=Z,42nm,1.0s						
TIC	Toumodi	65.76	87	*e*P	P	20 49 19.4	+1.8
LIC	Lamto	65.80	87	*e*P	P	20 49 16.6	-1.2
	comp=Z,30nm,1.0s						
DBIC	Dimbokro	65.92	86	P	P	20 49 18.2	-0.3
	comp=Z,2.9nm,0.4s,baz=304,slow=3.0,SNR=14						
DBIC				LR	LR	21 16 38.9	
	comp=Z,84nm,20.4s,baz=274,slow=35						
DBIC	Dimbokro	65.92	86	P	P	20 49 17.7	-0.9
DBIC				IAmb	IAmb	20 49 33.8	
	comp=Z,19nm,1.3s						
WRGLY	Wrigley	66.00	337	P	P	20 49 18.5	+0.3
	baz=121						
KIC	Kosan Boka	66.07	87	*e*P	P	20 49 18.6	-0.9
	comp=Z,13nm,0.5s						
KOWA	Kowa	66.11	78	P	P	20 49 19.4	-0.4
KOWA				IAmb	IAmb	20 49 26.9	
	comp=Z,10nm,0.7s						
DLBC	Dease Lake	66.67	331	P	P	20 49 22.7	0.0
DLBC				IAmb	IAmb	20 49 28.0	
	comp=Z,19nm,1.0s						
SUMG	Summit	67.02	10	P	P	20 49 25.3	+0.2
SUMG				pmax	pmax		
	comp=Z,28nm,0.8s						
SUMG	Summit	67.02	10	*i* P	P	20 49 25.3	+0.2
SUMG				IAmb	IAmb	20 49 36.7	
	comp=Z,17nm,0.7s						
SUMG				IAmb	IAmb	20 49 36.9	
	comp=Z,32nm,0.9s						
SUMG	Summit	67.02	10	P	P	20 49 25.3	+0.2
TGTN	Hyland Airport	67.15	334	P	P	20 49 26.7	+1.0
	baz=116						
ESDC	Sonseca Array	67.26	51	P	P	20 49 26.9	+0.1
	comp=Z,5.1nm,0.8s,baz=266,slow=6.0,SNR=18						
ESDC				LR	LR	21 14 00.5	
	comp=Z,125nm,21.9s,baz=275,slow=32						
ESDC	Sonseca Array	67.26	51	P	P	20 49 26.0	-0.8
ESDC				IAmb	IAmb	20 49 33.8	
	comp=Z,17nm,1.4s						
RES	Resolute Bay	67.48	353	P	P	20 49 27.1	-0.3
	comp=Z,1.4nm,0.5s,baz=197,slow=8.5,SNR=4.7						
TULEG	Thule	68.00	1	*i* P	P	20 49 30.7	0.0
TULEG				IAmb	IAmb	20 49 41.1	
	comp=Z,16nm,0.9s						
P33M	Teslin, Yukon	68.66	332	P	P	20 49 36.8	+1.5
	baz=111						
NEEM	North Greenlan	69.72	5	*i* P	P	20 49 41.7	-0.1
NEEM				IAmb	IAmb	20 49 48.9	
	comp=Z,18nm,0.8s						
M31M	Drury Creek, Y	70.08	334	P	P	20 49 44.7	+0.7
	baz=110						
N31M	Braeburn, Yuko	70.46	333	P	P	20 49 47.5	+1.2
	baz=109						
A36M	Sachs Harbour	71.25	345	P	P	20 49 50.4	-0.4
	baz=122,SNR=11						
M30M	Minto, Yukon	71.26	334	P	P	20 49 51.7	+0.5
	baz=108,SNR=15						
TORD	Torodi Ar. Bea	71.73	79	P	P	20 49 54.0	-0.8
	comp=Z,2.7nm,0.5s,baz=284,slow=6.3,SNR=17						
TORD				LR	LR	21 21 20.1	
	comp=Z,114nm,20.1s,baz=230,slow=36						
YUK4	Talbot Arm	71.73	332	P	P	20 49 55.4	+1.1
	baz=106						
DBG	Daneborg	71.92	13	*i* P	P	20 49 55.6	+0.8
DBG				IAmb	IAmb	20 50 05.5	
	comp=Z,4.7nm,1.0s						
DBG				IAmb	IAmb	20 50 05.7	
	comp=Z,9.4nm,1.0s						
INK	Inuvik	72.02	340	P	P	20 49 55.3	-0.2
	baz=113						
INK	Inuvik	72.02	340	IAmb	IAmb	20 50 19.7	
	comp=Z,15nm,0.9s						
EPYK	Eagle Plains	72.47	337	P	P	20 49 58.7	+0.4
	baz=110						
EPYK	Eagle Plains	72.47	337	IAmb	IAmb	20 50 21.1	
	comp=Z,30nm,1.3s						
YUK3	Moose Creek	72.69	332	P	P	20 50 01.2	+1.2
	baz=105						
DAWY	Dawson	72.83	335	P	P	20 50 01.0	+0.4
	baz=106						
PMSA	Palmer Station	73.30	177	*e*P	P	20 50 03.2	+0.1
PMSA	Palmer Station	73.30	177	P	P	20 50 03.1	+0.1
M27K	Edge Creek, AK	73.48	333	P	P	20 50 04.1	-0.4
	baz=104						
BCAR	Beaver Creek A	73.60	333	P	P	20 50 04.4	-0.8
L27K	Beaver Creek,	73.62	333	P	P	20 50 06.3	+1.1
	baz=104						
DAG	Danmarks Havn	73.67	11	*e*P	P	20 50 04.7	-0.5
DAG				IAmb	IAmb	20 50 14.6	
	comp=Z,7.9nm,0.7s						
DAG				IAmb	IAmb	20 50 14.9	
	comp=Z,8.3nm,0.7s						
EGAK	Eagle	73.76	335	P	P	20 50 06.8	+0.9
	baz=105						
MCARA	McCarthy VSAT	73.79	332	P	P	20 50 07.8	+1.6
	baz=102						
M26K	Nabesna, AK	73.99	333	P	P	20 50 08.6	+1.1
	baz=102						
L26K	Log Cabin Wild	74.29	333	P	P	20 50 10.0	+0.9
	baz=102,SNR=13						
L26K	Log Cabin Wild	74.29	333	IAmb	IAmb	20 50 23.9	
	comp=Z,16nm,0.8s						
BMRM	Bremner River	74.46	331	P	P	20 50 09.9	-0.2
	baz=101						
N25K	Chitina, Valde	74.57	332	P	P	20 50 11.9	+1.0
	baz=101						
J26L	Joseph Creek	74.70	335	P	P	20 50 11.6	0.0
	baz=102						
DOT	Dot Lake	74.73	334	IAmb	IAmb	20 50 30.8	
	comp=Z,17nm,1.0s						
SCRK	Sand Creek	74.77	334	P	P	20 50 12.8	+0.8
	baz=102,SNR=11						
SCRK	Sand Creek	74.77	334	P	P	20 50 11.9	-0.1
RIDG	Independent Ri	75.09	334	P	P	20 50 14.7	+0.9
	baz=101						
KLU	Klutina	75.18	331	P	P	20 50 15.1	+0.7
	baz=100						
PAX	Paxson	75.22	333	P	P	20 50 15.1	+0.5
	baz=100,SNR=9.5						
M24K	Tolsona, Glenn	75.40	332	P	P	20 50 15.6	0.0
	baz=100						
J25K	Salcha River,	75.49	335	P	P	20 50 16.3	+0.2
	baz=101						
BMAR	Burnt Mountain	75.74	338		pP	20 50 20.6	+0.9
SCM	Sheep Creek Mo	75.89	332	P	P	20 50 17.6	-0.8
	baz=98						
SENIN	Lac Senin/Sane	76.09	44	P	P	20 50 20.1	0.0
SENIN				IAmb	IAmb	20 50 26.2	
	comp=Z,26nm,1.4s						
DHY	Denali Highway	76.10	333	P	P	20 50 20.4	+0.7
	baz=99						
HDA	Harding Lake	76.12	334	P	P	20 50 19.4	-0.2
	baz=99						
ILAR	Eielson Array	76.16	335	P	P	20 50 19.4	-0.4
	comp=Z,2.8nm,0.8s,baz=108,slow=4.6,SNR=20						
WAT6	Susitna Watana	76.19	332	P	P	20 50 20.8	+0.6
	baz=98						
SML	Sawmill	76.36	332	P	P	20 50 22.0	+0.9
	baz=98						
COLA	College	76.58	335	*i* P	P	20 50 25.0	+2.9
COLA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
WAT1	Susitna Watana	76.60	333	P	P	20 50 22.4	0.0
	baz=98						
NOR	Nord	76.72	7	*i* P	P	20 50 23.1	+0.3
NOR				IAmb	IAmb	20 50 36.7	
	comp=Z,15nm,1.1s						
H24K	Noodor Dome	76.74	336	P	P	20 50 23.4	+0.2
	baz=99						
MCK	McKinley	76.89	334	P	P	20 50 24.5	+0.5
	baz=97						
NEA2	Nenana	77.06	334	P	P	20 50 25.2	+0.3
	baz=98,SNR=14						
NEA2	Nenana	77.06	334	IAmb	IAmb	20 50 43.3	
	comp=Z,14nm,0.8s						
I23K	Minto, Yukon-K	77.25	335	P	P	20 50 26.3	+0.4
	baz=97						
STU	Stuttgart	77.45	42	IAmb	IAmb	20 50 33.0	
	comp=Z,17nm,0.9s						
TRF	Thorofare Moun	77.45	333	P	P	20 50 28.2	+0.8
	baz=96						
TUE	Stuetta	77.51	44	P	P	20 50 27.2	-0.9
TUE				IAmb	IAmb	20 50 33.7	
	comp=Z,16nm,0.9s						
KEST	Kesra	77.58	55	P	P	20 50 30.8	+2.2
	comp=Z,6.7nm,0.9s,baz=185,slow=3.4,SNR=5.1						
TOLK	Toolik Lake Re	77.80	338	P	P	20 50 29.4	+0.3
	baz=98						
MLY	Manley	77.82	335	P	P	20 50 29.4	+0.1
	baz=96						
BPAW	Bear Paw Mtn.	77.83	334	P	P	20 50 29.7	+0.4
	baz=96,SNR=15						
DAVA	Damuels	77.88	43	*e*P	P	20 50 30.6	+0.6
	comp=Z,22nm,1.3s						
KONO	Kongsberg	78.15	31	*i* P	P	20 50 34.4	+3.4
PPLA	Purkeypile	78.26	332	P	P	20 50 32.2	+0.4
	baz=94						
PPLA	Purkeypile	78.26	332	IAmb	IAmb	20 50 51.2	
	comp=Z,20nm,1.0s						
I21K	Tanana	78.36	335	P	P	20 50 32.4	+0.2
	baz=95,SNR=8.2						
I21K	Tanana	78.36	335	IAmb	IAmb	20 50 38.3	
	comp=Z,26nm,1.1s						
CHUM	Lake Minchumin	78.39	334	P	P	20 50 32.6	+0.3
	baz=94						
FETA	Feichten	78.46	44	*e*P	P	20 50 33.7	+0.4
	comp=Z,21nm,0.9s						
MOTA	Moosalm	78.72	43	*i* P	P	20 50 34.7	0.0
	comp=Z,7.4nm,0.8s						
H21K	Melozitna Rive	78.74	335	P	P	20 50 34.5	+0.2
	baz=94						
GRF	Grafenberg Arr	78.79	41	*e*P	P	20 50 38.0	+3.2
	comp=Z,12nm,1.5s,baz=264,slow=5.9						
SQTA	Sankt Quirin	78.79	44	*i* P	P	20 50 34.8	-0.3
	comp=Z,11nm,0.9s						
NB2	NORSAR Subarra	79.02	29	P	P	20 50 36.3	+0.4
	comp=Z,6.4nm,0.8s,baz=268,slow=5.6						
NOA	NORSAR Array B	79.02	29	P	P	20 50 36.7	+0.8
	comp=Z,3.4nm,0.7s,baz=267,slow=5.7,SNR=11						
NOA				LR	LR	21 21 40.9	
	comp=Z,95nm,21.8s,baz=75,slow=33						
WATA	Walderalm	79.04	43	*e*P	P	20 50 38.2	+1.8
	comp=Z,4.2nm,0.6s						
WTTA	Wattenberg	79.08	44	*e*P	P	20 50 36.8	+0.1
	comp=Z,2.6nm,0.5s						
K20K	Telida	79.14	333	P	P	20 50 37.4	+0.8
	baz=93						
J20K	Nowinta River	79.22	334	P	P	20 50 36.6	-0.3
	baz=93						
J20K	Nowinta River	79.22	334	P	P	20 50 37.4	+0.5
J20K				IAmb	IAmb	20 50 54.7	
	comp=Z,30nm,1.2s						
NKC	Novy Kostel	79.58	40	*e*P	P	20 50 43.2	+4.0
NKC	Novy Kostel	79.58	40	*e*P	P	20 50 43.2	+4.0
ABTA	Abfaltersbach	79.69	44	*e*P	P	20 50 40.4	+0.5
	comp=Z,18nm,1.1s						
CLL	Collm	79.91	39	*e*P	P	20 50 41.0	+0.1
	comp=Z,10.0nm,1.1s						
CLL				Lm	MLR	21 26 00.0	
	comp=Z,200nm,21.7s						
CLL	Collm	79.91	39	*e*P	P	20 50 41.0	+0.1
CLL				pmax	pmax		
	comp=Z,10.0nm,1.1s						
TTA	Tatalina	80.01	332	P	P	20 50 41.2	-0.1
TTA				pmax	pmax		
	comp=Z,20nm,1.4s						
TTA	Tatalina	80.01	332	P	P	20 50 41.6	+0.3
	baz=91						
TTA	Tatalina	80.01	332	P	P	20 50 41.2	-0.1
KHC	Kasperske Hory	80.34	42	*e*P	P	20 50 42.5	-0.8
KHC				*e*x	x	20 50 54.5	
KHC	Kasperske Hory	80.34	42	*e*P	P	20 50 42.5	-0.8
GERES	GERESS Array B	80.43	42	P	P	20 50 43.8	-0.1
	comp=Z,7.0nm,1.0s,baz=267,slow=2.7,SNR=12						
GERES	GERESS Array B	80.43	42	P	P	20 50 42.7	-1.2
MYKA	Terra Mystica	80.47	44	*e*P	P	20 50 44.4	+0.2
	comp=Z,3.6nm,0.6s						
BRG	Berggiesshubel	80.52	40	*e*P	P	20 50 46.8	+2.6
BRG				Amp		20 50 50.3	
	comp=Z,6.6nm,1.0s						
CKRC	Cesky Krumlov	80.83	42	*e*P	P	20 50 49.7	+3.7
MOA	Molln	80.84	43	*e*P	P	20 50 48.8	+2.7
	comp=Z,9.2nm,1.4s						
PRU	Pruhonice	80.93	41	*e*P	P	20 50 47.0	+0.6
PRU	Pruhonice	80.93	41	*e*P	P	20 50 47.0	+0.6
PPT	Papeete	81.42	251	LR	LR	21 18 44.6	
	comp=Z,189nm,21.8s,baz=12,slow=30						
SOKA	Soboth	81.42	44	*e*P	P	20 50 52.1	+2.8
	comp=Z,4.2nm,1.1s						
TREC	Trest	81.58	41	*e*P	P	20 50 50.0	+0.1
TREC	Trest	81.58	41	*e*P	P	20 50 50.0	+0.1
ARSA	Arzberg	81.72	43	*e*P	P	20 50 50.9	+0.1
	comp=Z,3.7nm,0.7s						
CONA	Conrad Observa	81.91	43	*e*P	P	20 50 52.4	+0.6
	comp=Z,11nm,1.6s						
OSTC	Ostas	81.97	40	*e*P	P	20 50 52.0	0.0
DPC	Dobruska-Polom	82.06	40	*e*P	P	20 50 52.1	-0.4
DPC	Dobruska-Polom	82.06	40	*e*P	P	20 50 52.1	-0.4
KRUC	Moravsky	82.19	42	*e*P	P	20 50 53.6	+0.5
KRUC				*e*pP	pP	20 50 56.6	+1.2
VRAC	Vranov	82.30	41	*e*P	P	20 50 54.3	+0.6
VRAC				*e*pP	pP	20 50 57.1	+1.1
KRLC	Kraliky	82.37	41	*e*P	P	20 50 54.9	+0.8
KRLC	Kraliky	82.37	41	*e*P	P	20 50 54.9	+0.8
MODS	Modra-Piesok	82.82	42	*e*P	P	20 51 00.7	+4.2
MODS				pmax	pmax		
	comp=Z,15nm,0.9s						
MODS	Modra-Piesok	82.82	42	*e*P	P	20 51 00.7	+4.2
MORC	Moravsky Berou	82.88	41	*e*P	P	20 50 56.9	+0.1
MORC				*e*pP	PcP	20 51 00.8	-0.8
VYHS	Vyhne	83.85	42	*e*P	P	20 51 04.2	+2.5
VYHS	Vyhne	83.85	42	*e*P	P	20 51 04.2	+2.5
LANS	Liptovska Anna	84.19	41	*e*P	P	20 51 05.2	+1.7
LANS				pmax	pmax		
	comp=Z,2.0nm,0.9s						
LANS	Liptovska Anna	84.19	41	*e*P	P	20 51 05.2	+1.7
ARCES	ARCESS Array B	84.49	21	P	P	20 51 06.2	+1.6
	comp=Z,6.7nm,1.0s,baz=270,slow=2.4,SNR=10						
CRVS	Cervenica-Dubn	85.52	41	*e*P	P	20 51 11.6	+1.4
CRVS	Cervenica-Dubn	85.52	41	*e*P	P	20 51 11.6	+1.4
FINES	FINESS Array B	86.14	29	P	P	20 51 13.5	+0.6
	comp=Z,1.6nm,0.4s,baz=104,slow=0.8,SNR=9.8						
VSU	Vasula	87.04	31	*i* P	P	20 51 20.4	+3.0
VSU				pmax	pmax		
	comp=Z,69nm,1.2s						
NACGM	Naroch	87.77	35	*i* P	P	20 51 25.1	+4.0
MNK	Minsk	88.48	35	*i* P	P	20 51 26.5	+2.1
MNK				*i*		20 54 54.9	
MNK				*i* PPP	PPP	20 56 48.5	
MNK				*i* S	SKSac	21 01 55.2	+1.1
MNK				*i* PS	PS	21 03 19.8	+5.4
MNK				*i* SS	SS	21 08 06.1	+5.6
MNK				*i* SSS	SSS	21 11 40.7	
MNK				pmax	pmax		
	comp=E,1.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,3.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,21nm,0.9s						
MNK				MLR	MLR		
	comp=E,56nm,19.0s						
MNK				MLR	MLR		
	comp=N,1µm,19.0s						
MNK				MLR	MLR		
	comp=Z,199nm,19.0s						
MNK	Minsk	88.48	35	*i* P	P	20 51 26.5	+2.1
	comp=E,1.0nm,0.9s						
MNK				*i* P	P	20 51 26.5	+2.1
	comp=N,3.0nm,0.9s						
MNK				*i* P	P	20 51 26.5	+2.1
	comp=Z,21nm,0.9s,baz=282						
MNK				*i* PP	PP	20 54 54.9	+2.9
MNK				*i* PPP	PPP	20 56 48.6	
MNK				*i* S	SKSac	21 01 55.2	+1.1
MNK				*i* PS	PS	21 03 19.8	+5.4
MNK				*i* SS	SS	21 08 06.1	+5.6
MNK				*i* SSS	SSS	21 11 40.7	
MNK				*i* LQ	LQ	21 18 40.2	
MNK				*i* LR	LR	21 24 57.3	
MNK				*i* LRM	MLR	21 31 19.2	
	comp=E,56nm,19.2s						
MNK				*i* LRM	MLR	21 31 25.6	
	comp=N,1µm,19.2s						
MNK				*i* LRM	MLR	21 31 25.6	
	comp=Z,199nm,19.2s						
VNA3	Neumayer Olymp	89.30	163	P	P	20 51 28.3	+0.5

VNA1	Neumayer--Stat	89.42	163	P	P	20 51 28.3	0.0
VNA2	Neumayer--Watz	89.80	163	P	P	20 51 30.2	0.0
	baz=310,slow=6.3						
AKASG	Malin Array Be	90.13	39	P	P	20 51 32.2	0.0
	comp=Z,2.8nm,0.8s,baz=262,slow=4.6,SNR=8.0						
AKBB	Malin Array Si	90.13	39	i P	P	20 51 34.8	+2.6
SNAA	Sanae	91.45	163	P	P	20 51 38.3	+0.3
SNAA	Sanae	91.45	163	i P	P	20 51 37.2	-0.7
SNAA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
RAR	Rarotonga	91.53	249	LR	LR	21 24 18.0	
	comp=Z,102nm,20.6s,baz=118,slow=30						
KLMR	Klimovskoe	92.55	27	eP	P	20 51 43.5	+0.3
KLMR				pmax	pmax		
	comp=Z,13nm,1.4s						
KLMR	Klimovskoe	92.55	27	eP	P	20 51 43.5	+0.3
KLMR				AMP		20 51 45.3	
	comp=Z,13nm,1.4s						
OBN	Obninsk	93.14	33	eP	P	20 51 49.9	+3.8
OBN				e		20 51 57.2	
OBN				e		20 55 31.4	
OBN				eSS	SS	21 09 07.8	+0.2
OBN				pmax	pmax		
	comp=Z,6.0nm,0.5s						
BILL	Bilibino	93.58	341	eP	P	20 51 50.9	+3.0
BILL				e		20 55 33.9	
BILL				pmax	pmax		
	comp=Z,7.0nm,1.0s						
PRGR	Permogore	94.89	25	eP	P	20 51 56.0	+2.0
PRGR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BRTR	Keskin Array B	95.98	48	P	P	20 51 58.6	-1.0
	comp=Z,1.0nm,1.0s,baz=340,slow=6.6,SNR=3.8						
QSPA	South Pole Qui	98.53	180	P	P	20 52 09.2	-1.3
ZALV	Zalesovo Beam	114.60	15	PKP	PKPdf	20 57 12.5	+0.2
	comp=Z,0.4nm,0.3s,baz=327,slow=0.1,SNR=4.4						
MKAR	Makanchi Array	120.15	21	PKP	PKPdf	20 57 22.4	-0.9
	comp=Z,0.4nm,0.5s,baz=307,slow=2.6,SNR=4.0						
MDJ	Mudanjiang	123.81	342	PKP	PKPdf	20 57 29.0	-1.3
SONM	Songino Array	123.86	2	PKP	PKPdf	20 57 30.2	-0.3
	comp=Z,0.3nm,0.5s,baz=335,slow=6.5,SNR=2.4						
WMQ	Urumqi	124.56	18	ePKP	PKPdf	20 57 30.0	-1.9
HHC	Hu-ho-hao-te	130.80	357	ePKP	PKPdf	20 57 39.9	-4.0
HHC				LR	LR		
	comp=Z,370nm,23.5s						
HHC				LR	LR		
	comp=Z,310nm,18.6s						
GTA	Gaotai	131.62	9	ePKP	PKiKP	20 57 47.0	+0.4
GTA				PP	PP	21 00 08.4	+5.0
XAN	Xi'an	137.67	360	P	PKiKP	20 58 03.9	+5.0
XAN				sP	sPKPdf	20 58 15.3	+15
XAN				pmax	pmax		
	comp=Z,5.0nm,1.2s						
NJ2	Nanjing	138.48	347	ePKP	PKPdf	20 57 56.4	-2.0
CD2	Chengdu	140.52	7	PKP	PKPdf	20 57 59.0	-3.2
STKA	Stephens Creek	141.55	228	PKP	PKPdf	20 58 03.0	-0.9
	comp=Z,3.0nm,0.9s,baz=284,slow=5.9,SNR=3.0						
GYA	Guiyang	145.18	3	i PKPbc	PKPdf	20 58 10.8	+0.1
KMI	Kunming	146.07	10	PKPbc	PKPdf	20 58 11.8	-0.6
ASAR	Alice Springs	151.48	235	PKP	PKPdf	20 58 20.4	-0.5
	comp=Z,1.9nm,0.9s,baz=110,slow=1.7,SNR=8.1						
ASAR				PKPbc	PKPbc	20 58 26.8	-0.3
	comp=Z,14nm,0.7s,baz=117,slow=2.6,SNR=43						
ASAR	Alice Springs	151.48	235		PKPbc	20 58 25.7	-1.4
CMAR	Chiang Mai Arr	151.55	20	PKP	PKPdf	20 58 22.4	+1.3
	comp=Z,0.6nm,0.4s,baz=306,slow=3.0,SNR=9.3						
CMAR				PKPbc	PKiKP	20 58 28.4	+0.7
	comp=Z,3.7nm,0.7s,baz=319,slow=2.1,SNR=12						
WR0	Warramunga Arr	152.45	243		PKPbc	20 58 28.0	-1.2
WB2	Warramunga Arr	152.62	243		PKPbc	20 58 29.1	-0.6
WRAB	Tennant Creek	152.63	243c	i PKIKP	PKPbc	20 58 27.7	-2.0
WRAB				pmax	pmax		
	comp=Z,15nm,0.6s						
WRAB	Tennant Creek	152.63	243		PKPbc	20 58 28.9	-0.8
WRA	Warramunga Arr	152.63	243	PKP	PKPdf	20 58 22.8	+0.1
	comp=Z,5.0nm,1.1s,baz=108,slow=1.8,SNR=12						
WRA				PKPbc	sPKPdf	20 58 28.2	+2.3
	comp=Z,19nm,0.8s,baz=109,slow=2.4,SNR=37						
WRA	Warramunga Arr	152.63	243		PKPbc	20 58 29.0	-0.7
WB0	Warramunga Arr	152.65	243		PKPbc	20 58 29.0	-0.7

MAN 22 20:41:43.7, 18°.62N×120°.83E, h22^{km}, mb4.3, ML3.1, MS2.8, Luzon

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MAN 22 20:45:48.7, 10°.02N×122°.20E, h24^{km}, mb4.3, ML3.1, MS2.8, Panay

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*IDC **22** 21:02:40.5±0.5, 37°.97N×100°.38E, h0^{km}, mb4.7/26, mb1 4.8/30, mb1mx4.6/52, mbtmp4.7/30, ML4.2/4, MS4.6/40, Ms1 4.6/40, ms1mx4.5/48, Error ellipse: s-maj=14.2km s-min=10.7km az=28.0*

*MOS **22** 21:02:41.3±1.0, 37°.98N×100°.36E, h15^{km}, mb5.2/30, MS4.9/19, Error ellipse: s-maj=6.4km s-min=4.3km az=121.4*

*BJI **22** 21:02:41.4±0.0, 38°.01N×100°.39E, h10^{km}, mB5.1/35, mb4.8/47, ML5.0/20, Ms5.3/73, Ms7 5.2/65*

*NEIC **22** 21:02:43.1±1.8, 37°.99N±0°.04×100°.35E±0°.09, h13^{km}±3^{km}, mb5.1/178, Error ellipse: s-maj=11.1km s-min=3.6km az=66.0*

*GCMT **22** 21:02:44.1±0.1, 37°.99N±0°.01×100°.56E±0°.01, h21^{km}, MW5.2/123, Moment Tensor Solution. s64,c88; s123,c222; Duration: 1^{s}0 Moment tensor: Scale 10^{16} Nm; M_{rr}2.99±.17; $M_{\theta\theta}$2.43±.13; $M_{\phi\phi}$-5.42±.15; $M_{r\theta}$0.64±.25; $M_{\theta\phi}$5.81±.12; $M_{\phi r}$3.44±.28; Best double couple: $M_0$8.02200×10^{16} NP1:ϕ_s109.00000°, δ57.00000°, λ15.00000°. NP2:ϕ_s11.00000°, δ77.00000°, λ147.00000°. Principal axes: T 6.9030, Plg32.0000°, Azm326.0000°; N 2.2380, Plg55.0000°, Azm173.0000°; P -9.1410, Plg13.0000°, Azm64.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **22** 21:02:57.9±0.0, 39°.35N×98°.63E, h16^{km}, mb5.3*

ISC 22 21:02:42.5±0.6**, 37°.98N**±0°.03×**100°.41E**±0°.03**, h12**^{km}±3^{km}**, n592,** σ**1^{s}63**/572**, mb5.0**/185**, MS4.8**/65**, 58C-23D, Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GTA	Gaotai	1.50	342	⇑Pg	Pn	21 03 08.3	-1.1
GTA				Sg	Sg	21 03 30.7	-0.1
GTA				smax	smax		
	comp=N,9μm,0.9s						
GTA				smax	smax		
	comp=E,22μm,1.0s						
LZH	Lanzhou	3.34	124	Pn	Pn	21 03 36.0	+1.3
LZH				Pg	Pb	21 03 41.6	-0.2
LZH				Sn	Sb	21 04 19.3	-3.1
LZH				Sg	Sg	21 04 25.1	-4.7
LZH				smax	smax		
	comp=N,10μm,1.0s						
LZH				smax	smax		
	comp=E,6μm,0.9s						
LZH				LR	LR		
	comp=N,102μm,6.0s						
LZH				LR	LR		
	comp=E,114μm,7.1s						
LZH				LR	LR		
	comp=Z,112μm,7.3s						
BTO	Baotou	7.90	68	P	Pn	21 04 37.2	-0.1
BTO				smax	smax		
	comp=N,2μm,1.0s						
BTO				smax	smax		
	comp=E,1μm,1.0s						
XAN	Xi'an	7.94	117	P	Pn	21 04 36.0	-1.9
XAN				S	Sn	21 06 03.2	-4.5
XAN				smax	smax		
	comp=N,450nm,1.6s						
XAN				smax	smax		
	comp=E,380nm,2.5s						
XAN				LR	LR		
	comp=N,32μm,12.0s						
XAN				LR	LR		
	comp=E,18μm,12.4s						
XAN				LR	LR		
	comp=Z,21μm,14.1s						
HHC	Hu-ho-hao-te	9.10	68	eP	Pn	21 04 53.7	0.0
HHC				S	Sn	21 06 31.5	-4.6
HHC				pmax	pmax		
	comp=Z,94nm,0.8s						
HHC				pmax	pmax		
	comp=Z,290nm,5.3s						
HHC				LR	LR		
	comp=N,7μm,8.5s						
HHC				LR	LR		
	comp=E,10μm,11.3s						
HHC				LR	LR		
	comp=Z,12μm,12.4s						
TIY	Taiyuan	9.52	88	P	Pn	21 04 59.4	-0.1
TIY				S	Sn	21 06 46.7	+0.3
TIY				smax	smax		
	comp=N,650nm,1.1s						
TIY				smax	smax		
	comp=E,500nm,1.2s						
ENH	Enshi	10.76	133		Pn	21 05 16.1	-0.3
SONM	Songino Array	10.78	22	Pn	Pn	21 05 17.0	+0.3
	8.4nm,0.3s,baz=202,slow=14,SNR=238						
SONM				Lg	Lg	21 08 24.1	
	5.8nm,0.3s,baz=215,slow=30,SNR=5.9						
SONM				LR	LR	21 09 47.7	
	comp=Z,2μm,20.0s,baz=204,slow=40						
SONM	Songino Array	10.78	22	P	Pn	21 05 17.0	+0.3
SONM	Songino Array	10.78	22	Pn	Pn	21 05 16.3	-0.5
ULN	Ulaanbaatar	11.01	24	ceP	Pn	21 05 19.9	0.0
ULN				pmax	pmax		
	comp=Z,100nm,1.0s						
ULN	Ulaanbaatar	11.01	24	Pn	Pn	21 05 19.4	-0.5
WMQ	Urumqi	11.24	305	eP	Pn	21 05 23.3	+0.2
WMQ				sP		21 05 32.3	
WMQ				S	Sn	21 07 30.1	+1.4
WMQ				sS		21 07 36.0	
WMQ				SS		21 07 46.3	
WMQ				pmax	pmax		
	comp=Z,92nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,340nm,4.3s						
WMQ				LR	LR		
	comp=Z,11μm,10.9s						
WMQ				LR	LR		
	comp=Z,5μm,14.9s						
LSA	Lhasa	11.29	226	P	Pn	21 05 22.9	-1.2
LSA	Lhasa	11.29	226		Pn	21 05 22.9	-1.2
BJT	Baijiatuau	12.43	76	P	Pn	21 05 38.0	-1.3
BJT	Baijiatuau	12.43	76		Pn	21 05 38.0	-1.3
BJI	Beijing	12.44	76	P	Pn	21 05 39.8	+0.5
BJI				S	Sn	21 07 57.9	+0.1
BJI				pmax	pmax		
	comp=Z,15nm,1.5s						
BJI				LR	LR		
	comp=Z,13μm,16.1s						
BJI				LR	LR		
	comp=Z,3μm,14.6s						
BJI				LR	LR		
	comp=Z,12μm,12.3s						
ZAK	Zakamensk	12.56	8	eP	Pn	21 05 40.3	-0.8
ZAK				pmax	pmax		
	comp=Z,50nm,1.3s						
GYA	Guiyang	12.65	154	⇑iP	Pn	21 05 44.7	+2.3
GYA				S	Sn	21 08 07.0	+3.7
GYA				pmax	pmax		
	comp=Z,110nm,0.9s						
GYA				LR	LR		
	comp=Z,11μm,10.9s						
GYA				LR	LR		
	comp=Z,14μm,11.9s						
KMI	Kunming	12.97	171	⇓P	Pn	21 05 46.6	-0.4
KMI				pP	P	21 05 53.6	-4.0
KMI				sP		21 05 55.4	
KMI				PP	PnPn	21 06 00.8	+5.9
KMI				S	Sn	21 08 11.7	+0.3
KMI				SS	SnSn	21 08 30.9	+7.1
KMI				pmax	pmax		
	comp=Z,18nm,1.4s						
KMI				pmax	pmax		
	comp=Z,170nm,3.5s						
KMI				LR	LR		
	comp=Z,6μm,11.6s						
KMI				LR	LR		
	comp=Z,8μm,12.7s						
KMI				LR	LR		
	comp=Z,6μm,13.2s						
TIA	Tai'an	13.46	92	eP	Pn	21 05 52.1	-1.3
TIA				pmax	pmax		
	comp=Z,36nm,1.6s						
TIA				LR	LR		
	comp=Z,8μm,9.6s						
TIA				LR	LR		
	comp=Z,11μm,13.5s						
WHN	Wuhan	13.70	119	⇑P	Pn	21 05 59.7	+3.0
WHN				sP	P	21 06 05.8	+0.4
WHN				S	Sn	21 08 32.7	+3.9
WHN				LR	LR		
	comp=Z,15μm,8.6s						
WHN				LR	LR		
	comp=Z,20μm,14.8s						
WHN				LR	LR		
	comp=Z,21μm,18.7s						
SHL	Shillong	14.34	213	P	Pn	21 06 00.7	-4.8
SHL	Shillong	14.34	213	Pn	Pn	21 06 00.7	-4.9
IRK	Irkutsk	14.51	10	eP	Pn	21 06 09.7	+2.0
IRK				pmax	pmax		
	comp=Z,180nm,2.0s						
DGZ	Jazzator, Alta	14.97	326	i P	Pn	21 06 15.6	+1.6
TAPN	Taplejung	15.04	229	eP	Pn	21 06 12.3	-3.0
ODAN	Odare	15.60	228	eP	Pn	21 06 19.3	-3.2
JIRN	Jiri	15.76	233	eP	Pn	21 06 22.0	-2.7
GUN	Gumba	15.78	235	eP	Pn	21 06 21.9	-3.1
MK31	Makanchi Array	15.99	309	i P	Pn	21 06 26.5	-0.8
MK31	Makanchi Array	15.99	309		Pn	21 06 25.6	-1.7
MKAR	Makanchi Array	15.99	309	Pn	Pn	21 06 22.6	-4.7
	comp=Z,0.7nm,0.3s,baz=119,slow=13,SNR=54						
MKAR				Lg	Lg	21 11 13.6	
	comp=Z,0.2nm,0.3s,baz=111,slow=26,SNR=4.0						
MKAR				LR	LR	21 13 38.4	
	comp=Z,2μm,19.2s,baz=108,slow=41						
MKAR	Makanchi Array	15.99	309	i P	Pn	21 06 25.8	-1.5
MKAR				pmax	pmax		
	comp=Z,15nm,1.0s						
MKAR	Makanchi Array	15.99	309		Pn	21 06 24.7	-2.6
RAMN	Ramite	16.00	231	eP	Pn	21 06 24.8	-3.0
MAKZ	Makanchi	16.19	309	P	Pn	21 06 28.3	-1.5
MAKZ				pmax	pmax		
	comp=Z,41nm,1.1s						
MAKZ	Makanchi	16.19	309		Pn	21 06 28.3	-1.5
NJ2	Nanjing	16.22	106	⇑iP	P	21 06 34.2	+0.8
NJ2				pP	pP	21 06 38.4	+0.7
NJ2				sP	sP	21 06 41.8	+2.1
NJ2				S	Sn	21 09 32.8	+2.7
NJ2				sS	S	21 09 41.3	-1.8
NJ2				pmax	pmax		
	comp=Z,21nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,300nm,3.5s						
NJ2				LR	LR		
	comp=Z,20μm,13.0s						
NJ2				LR	LR		
	comp=Z,7μm,13.5s						
NJ2				LR	LR		
	comp=Z,16μm,11.8s						
KKN	Kakani	16.25	236	eP	Pn	21 06 27.9	-3.0
PKI	Pulchoki	16.32	235	eP	Pn	21 06 28.4	-3.5
PKIN	Phulchoki	16.32	235	eP	Pn	21 06 28.5	-3.4
DMN	Daman	16.49	236	eP	Pn	21 06 31.4	-2.6
GKN	Gorkha	16.54	238	eP	Pn	21 06 31.5	-3.0
DL2	Dalian	16.65	80	P	Pn	21 06 34.8	-0.9
DL2				pmax	pmax		
	comp=Z,72nm,1.5s						
DL2				pmax	pmax		
	comp=Z,630nm,3.9s						
DL2				LR	LR		
	comp=Z,6μm,12.0s						
DL2				LR	LR		
	comp=Z,3μm,14.1s						
DL2				LR	LR		
	comp=Z,3μm,10.3s						
CIT	Chita	16.79	29	eP	Pn	21 06 38.2	+0.7
CIT				e		21 09 38.8	
CIT				pmax	pmax		
	comp=Z,86nm,1.8s						
SLVN	Son La	16.87	169		Pn	21 06 38.4	-0.2
DANN	Dangsing	16.91	240	eP	Pn	21 06 35.5	-3.8
PRZ	Przheval'sk	17.38	292	P	Pn	21 06 43.2	-1.9
PRZ				pmax	pmax		
	comp=Z,138nm,1.0s						
PRZ	Przheval'sk	17.38	292	Pn	Pn	21 06 43.2	-1.9
PRZ				IAmb	IAmb	21 06 50.4	
	comp=Z,138nm,1.0s						
KOLN	Koldanda	17.38	239	eP	Pn	21 06 41.4	-3.8
PYUN	Piuthan	17.59	241	eP	Pn	21 06 43.7	-4.1
TARG	Taragay, Kyrgy	17.74	289	Pn	Pn	21 06 48.0	-1.8
HIA	Hailar	17.92	45	P	Pn	21 06 51.5	0.0
HIA				pmax	pmax		
	comp=Z,26nm,1.1s						
HIA	Hailar	17.92	45		Pn	21 06 51.5	0.0
SNY	Shenyang	18.17	71	⇑P	P	21 06 55.7	+0.8
SNY				S	S	21 10 23.8	+1.0
SNY				pmax	pmax		
	comp=Z,21nm,0.6s						
SNY				pmax	pmax		
	comp=Z,470nm,4.6s						
SNY				LR	LR		
	comp=Z,2μm,14.4s						
SNY				LR	LR		
	comp=Z,5μm,11.9s						
SNY				LR	LR		
	comp=Z,6μm,11.9s						
KDJ	Kajisay	18.24	290	P	Pn	21 06 54.2	-1.5
KDJ				pmax	pmax		
	comp=Z,90nm,1.0s						
KDJ	Kajisay	18.24	290		Pn	21 06 54.2	-1.5
KDJ				IAmb	IAmb	21 07 03.9	
	comp=Z,90nm,0.9s						
KSH	Kashi	19.11	282	P	Pn	21 07 09.4	+3.2
KSH				pP	sP	21 07 13.5	+1.7
KSH				sP	pP	21 07 16.3	+6.6
KSH				S	S	21 10 41.3	-0.7
KSH				SS	SnSn	21 11 06.9	+13
KSH				pmax	pmax		
	comp=Z,66nm,1.2s						
KSH				pmax	pmax		
	comp=Z,1μm,5.6s						
KSH				LR	LR		
	comp=Z,7μm,13.7s						
KSH				LR	LR		
	comp=Z,8μm,12.7s						
KSH				LR	LR		
	comp=Z,8μm,13.7s						
CHTO	Chiang Mai	19.14	184	P	P	21 07 06.1	+0.4
CHTO	Chiang Mai	19.14	184		P	21 07 05.4	-0.3
CHTO	Chiang Mai	19.14	184		P	21 07 06.1	+0.4
CHTO				IAmb	IAmb	21 07 31.1	
	comp=Z,42nm,1.1s						
BOOM	Boomskoye usch	19.19	291	P	P	21 07 05.3	-1.0
BOOM				pmax	pmax		
	comp=Z,70nm,1.1s						
BOOM	Boomskoye usch	19.19	291	P	P	21 07 05.3	-1.0
ZAA0	Zalesovo Array	19.22	331		P	21 07 05.8	-0.6
ZALV	Zalesovo Beam	19.22	331	P	P	21 07 05.3	-1.0
	comp=Z,2.2nm,0.3s,baz=138,slow=10.0,SNR=36						
ZALV				Lg	Lg	21 12 54.0	
	comp=Z,0.0nm,0.3s,baz=132,slow=26,SNR=7.5						
ZALV				LR	LR	21 14 37.1	
	comp=Z,2μm,21.9s,baz=142,slow=37						
ZALV	Zalesovo Beam	19.22	331	i P	P	21 07 06.0	-0.4
ZALV				pmax	pmax		
	comp=Z,13nm,0.6s						
ZALV	Zalesovo Beam	19.22	331	P	P	21 07 05.5	-0.8
TKM2	Tokmak 2	19.49	292	P	Pn	21 07 11.1	+0.2
	SNR=96						
CM31	Chiang Mai Arr	19.50	184	P	P	21 07 09.3	-0.3
CMAR	Chiang Mai Arr	19.50	184	P	P	21 07 09.5	-0.1
	comp=Z,0.1nm,0.3s,baz=355,slow=9.4,SNR=42						
CMAR				PcP	PcP	21 11 30.1	-0.2
	comp=Z,0.0nm,0.3s,baz=310,slow=3.1,SNR=7.2						
CMAR				LR	LR	21 15 27.2	
	comp=Z,2μm,21.7s,baz=36,slow=39						
CMAR	Chiang Mai Arr	19.50	184	P	P	21 07 09.3	-0.3
CMAR					PcP	21 11 28.5	-1.8
CN2	Changchun	19.77	65	eP	P	21 07 12.4	0.0
CN2				sP	sP	21 07 19.1	+0.3
CN2				S	S	21 10 49.2	-5.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CN2				pmax	pmax		
	comp=Z,300nm,3.0s						
CN2				LR	LR		
	comp=Z,2μm,10.0s						
CN2				LR	LR		
	comp=Z,5μm,10.0s						
CN2				LR	LR		
	comp=Z,5μm,13.0s						
KBK	Karagaybulak	19.94	292	P	Pn	21 07 15.9	-0.2
	SNR=80						
KURK	Kurchatov	20.02	316	ceP	P	21 07 15.0	-0.2
KURK				pmax	pmax		
	comp=Z,232nm,1.7s						
KURK	Kurchatov	20.02	316		P	21 07 14.9	-0.2
KURK				IAmb	IAmb	21 07 17.6	
	comp=Z,151nm,1.1s						
KURBB	Kurchatov Arra	20.03	316	P	P	21 07 14.8	-0.4
	comp=Z,109nm,1.0s,baz=121,slow=11,SNR=221						
KURBB				PcP	PcP	21 11 31.2	+0.6
	comp=Z,1.5nm,0.5s,baz=128,slow=1.5,SNR=4.8						
CHMS	Chumysh	20.11	293	P	Pn	21 07 18.5	+0.5
	SNR=32						
FRU1	Bishkek	20.18	292	IAmb	IAmb	21 07 22.0	
	comp=Z,107nm,1.2s						
QZH	Quanzhou	20.19	125	P	P	21 07 14.8	-2.3
QZH				S	S	21 10 59.9	-3.7
QZH				pmax	pmax		
	comp=Z,110nm,1.6s						
QZH				pmax	pmax		
	comp=Z,690nm,2.8s						
QZH				LR	LR		
	comp=Z,4μm,12.6s						
QZH				LR	LR		
	comp=Z,5μm,10.9s						
QZH				LR	LR		
	comp=Z,7μm,12.0s						
UCH	Uchtor	20.23	290	P	Pn	21 07 20.7	+0.8
	SNR=8.2						
AAK	Ala-Archa	20.27	291	P	P	21 07 18.5	+0.5
	comp=Z,54nm,0.9s,baz=112,slow=6.1,SNR=127						
AAK				LR	LR	21 14 52.6	
	comp=Z,5μm,19.2s,baz=85,slow=36						
AAK	Ala-Archa	20.27	291	P	Pn	21 07 19.2	-0.8
	SNR=48						
AAK	Ala-Archa	20.27	291	i P	Pn	21 07 19.3	-0.7
	SNR=51						
AAK	Ala-Archa	20.27	291	ceP	Pn	21 07 19.6	-0.4
AAK				pmax	pmax		
	comp=Z,576nm,2.5s						
AAK	Ala-Archa	20.27	291		P	21 07 16.8	-1.3
AAK				IAmb	IAmb	21 07 21.2	
	comp=Z,63nm,0.9s						
USP	Ospenovka	20.32	293	P	Pn	21 07 21.1	+0.6
	SNR=12						
KNMB	Chin-men Tao	20.40	126	P	P	21 07 20.4	+1.0
KNMB				IAmb	IAmb	21 07 28.0	
	comp=Z,153nm,1.4s						
QIZ	Qiongzhong	20.60	154	P	P	21 07 22.4	+0.8
QIZ				S	S	21 11 12.5	+0.7
QIZ				LR	LR		
	comp=Z,7μm,10.2s						
QIZ				LR	LR		
	comp=Z,4μm,11.8s						
QIZ				LR	LR		
	comp=Z,8μm,11.4s						
QIZ	Qiongzhong	20.60	154	IAmb	IAmb	21 07 51.0	
	comp=Z,94nm,1.4s						
EKS2	Erkin-Say	20.80	291	P	Pn	21 07 26.2	0.0
	SNR=6.5						
AML	Almayashu	20.83	290	P	Pn	21 07 27.1	+0.2
	SNR=19						
AML	Almayashu	20.83	290	i P	Pn	21 07 25.9	-0.9
	SNR=76						
TJN	Taejon	21.52	86	ceP	P	21 07 32.7	+1.3
KS19	Wonju Array Si	21.70	83	P	P	21 07 34.0	+0.7
KS19				IAmb	IAmb	21 07 41.9	
	comp=Z,91nm,1.4s						
KSAR	Wonju Array Be	21.72	83	P	P	21 07 33.5	-0.1
KSAR	Wonju Array Be	21.72	83	P	P	21 07 33.5	-0.1
KSRS	Korea Array	21.75	83	P	P	21 07 33.1	-0.7
	comp=Z,15nm,0.9s,baz=283,slow=9.7,SNR=31						
KSRS				LR	LR	21 16 38.2	
	comp=Z,2μm,19.6s,baz=275,slow=38						
BOD	Bodaibo	21.76	20	eP	P	21 07 34.6	+0.8
BOD				pmax	pmax		
	comp=Z,53nm,1.6s						
DRK	Karamyk	22.33	283	P	P	21 07 40.5	+0.1

DRK				IAmb	IAmb	21 07 52.4	
	comp=Z,73nm,1.4s						
NIL	**Nilore**	**22.41**	**267**	P	**P**	**21 07 39.7**	**-1.3**
NIL				pmax	pmax		
	comp=Z,42nm,0.8s						
NIL	**Nilore**	**22.41**	**267**	P	**P**	**21 07 39.7**	**-1.3**
NIL				IAmb	IAmb	21 07 56.9	
	comp=Z,42nm,0.8s						
SSLB	**Suanglung**	**22.54**	**123**	P	**P**	**21 07 43.4**	**+0.9**
NACB	**Ninganchiao**	**22.71**	**121**	P	**P**	**21 07 45.3**	**+1.1**
NACB				IAmb	IAmb	21 07 58.7	
	comp=Z,82nm,1.5s						
BTK	**Batken**	**23.04**	**284**	IAmb	IAmb	21 08 11.0	
	comp=Z,66nm,1.2s						
YULB	**Yu-li**	**23.04**	**123**	P	**P**	**21 07 46.9**	**-0.9**
YULB				IAmb	IAmb	21 07 53.3	
	comp=Z,82nm,1.5s						
UBPT	**Khong Chiam**	**23.05**	**167**	P	**P**	**21 07 48.1**	**+0.2**
KKAR	**Karatay Array**	**23.22**	**292**	P	**P**	**21 07 48.7**	**-0.8**
KKAR	**Karatay Array**	**23.22**	**292**	P	**P**	**21 07 48.7**	**-0.8**
TWG	**Pinlang**	**23.29**	**125**	P	**P**	**21 07 51.5**	**+1.2**
JTU	**Tsushima**	**23.59**	**90**	P	**P**	**21 07 54.3**	**+1.2**
JTU				IAmb	IAmb	21 08 13.7	
	comp=Z,113nm,1.5s						
MSHR	**Mys Shultsa**	**23.83**	**69**	*ce*P	**P**	**21 07 58.1**	**+2.7**
MSHR				pmax	pmax		
	comp=Z,46nm,1.0s						
TAS	**Tashkent**	**24.12**	**288**	P	**P**	**21 07 57.8**	**-0.4**
TAS				pmax	pmax		
	comp=Z,42nm,1.0s						
TAS	**Tashkent**	**24.12**	**288**	P	**P**	**21 07 57.8**	**-0.4**
TAS				IAmb	IAmb	21 08 25.7	
	comp=Z,42nm,1.0s						
ZEA	**Zeya**	**24.24**	**41**	*e*P	**P**	**21 08 01.2**	**+2.1**
ZEA				*e*S	**S**	**21 12 13.3**	**-4.0**
ZEA				pmax	pmax		
	comp=Z,20nm,1.1s						
ZEA				smax	smax		
	comp=E,1µm,15.2s						
ZEA				smax	smax		
	comp=N,1µm,14.4s						
ZEA				MLR	MLR		
	comp=E,2µm,11.0s						
ZEA				MLR	MLR		
	comp=N,1µm,7.0s						
ZEA				MLR	MLR		
	comp=Z,2µm,10.0s						
USA0B	**Ussuriysk Arra**	**24.50**	**65**	P	**P**	**21 08 02.7**	**+1.1**
USA0B				pmax	pmax		
	comp=Z,39nm,1.5s						
USA0B	**Ussuriysk Arra**	**24.50**	**65**	P	**P**	**21 08 02.7**	**+1.1**
USRK	**Ussuriysk Ar.**	**24.50**	**65**	P	**P**	**21 08 02.1**	**+0.5**
	comp=Z,3.6nm,0.8s,baz=255,slow=7.3,SNR=6.1						
USRK				LR	LR	21 18 56.7	
	comp=Z,1µm,19.8s,baz=262,slow=40						
USRK	**Ussuriysk Ar.**	**24.50**	**65**	P	**P**	**21 08 03.0**	**+1.4**
USRK	**Ussuriysk Ar.**	**24.50**	**65**	P	**P**	**21 08 03.0**	**+1.4**
KLR	**Kul'dur**	**25.15**	**53**	P	**P**	**21 08 09.0**	**+1.6**
	comp=Z,7.6nm,0.8s,baz=260,slow=8.9,SNR=15						
KLR				LR	LR	21 19 34.1	
	comp=Z,981nm,22.0s,baz=305,slow=40						
JNU	**Nakatsue**	**25.20**	**92**	LR	LR	21 17 57.1	
	comp=Z,2µm,21.1s,baz=288,slow=36						
KBL	**Kabul**	**25.46**	**272**	P	**P**	**21 08 10.5**	**-0.2**
KBL				pmax	pmax		
	comp=Z,33nm,0.9s						
KBL	**Kabul**	**25.46**	**272**	P	**P**	**21 08 10.5**	**-0.2**
KBL				IAmb	IAmb	21 08 36.3	
	comp=Z,33nm,0.9s						
BVAR	**Borovoye Array**	**25.62**	**316**	P	**P**	**21 08 10.6**	**-1.0**
	comp=Z,29nm,1.1s,baz=165,slow=12,SNR=34						
BRVK	**Borovoye**	**25.69**	**316**	*ce*P	**P**	**21 08 12.8**	**+0.5**
BRVK				pmax	pmax		
	comp=Z,29nm,1.0s						
BRVK	**Borovoye**	**25.69**	**316**	P	**P**	**21 08 12.1**	**-0.2**
JOW	**Kunigami**	**25.93**	**107**	LR	LR	21 19 08.0	
	comp=Z,2µm,21.2s,baz=286,slow=38						
MJAR	**Matsushiro Arr**	**29.99**	**81**	P	**P**	**21 08 49.6**	**-1.4**
	comp=Z,2.2nm,0.8s,baz=298,slow=6.3,SNR=4.6						
MJAR				LR	LR	21 20 52.6	
	comp=Z,572nm,19.0s,baz=285,slow=36						
YAK	**Yakutsk**	**30.07**	**27**	LR	LR	21 21 21.1	
	comp=Z,586nm,19.0s,baz=252,slow=37						
HRA	**Herat**	**30.87**	**275**	P	**P**	**21 08 58.5**	**-0.5**
ABKAR	**Akbulak array**	**31.03**	**304**	IAmb	IAmb	21 09 02.0	
	comp=Z,18nm,1.0s						
JHJ	**Hachijo jima 2**	**32.23**	**87**	LR	LR	21 22 56.6	
	comp=Z,913nm,18.3s,baz=278,slow=38						
SVE	**Sverdlovsk**	**32.24**	**319**	*e*P	**P**	**21 09 10.6**	**+0.1**
SVE				pmax	pmax		
	comp=Z,41nm,1.3s						
SVE				MLR	MLR		
	comp=Z,2µm,16.0s						
GEYT	**Alibeck**	**33.14**	**283**	P	**P**	**21 09 19.0**	**+0.3**
	comp=Z,22nm,0.9s,baz=104,slow=4.1,SNR=27						
GEYT				LR	LR	21 25 40.2	
	comp=Z,2µm,18.0s,baz=60,slow=42						
GEYT	**Alibeck**	**33.14**	**283**	P	**P**	**21 09 19.3**	**+0.6**
GEYT				IAmb	IAmb	21 09 21.7	
	comp=Z,22nm,0.9s						
ARU	**Arti**	**33.22**	**317**	*d i*P	**P**	**21 09 19.4**	**+0.3**
ARU						21 10 25.9	
ARU				S	**S**	**21 14 40.6**	**+2.0**
ARU				SS	**SnSn**	**21 16 40.5**	**+2.4**
ARU				pmax	pmax		
	comp=Z,67nm,1.0s						
ARU				MLR	MLR		
	comp=Z,2µm,20.0s						
ARU	**Arti**	**33.22**	**317**	P	**P**	**21 09 18.6**	**-0.5**
PSI	**Prapat**	**35.04**	**183**	LR	LR	21 24 17.3	
	comp=Z,938nm,19.9s,baz=338,slow=37						
SBSI	**Sibolga**	**36.28**	**183**	P	**P**	**21 09 46.5**	**+0.5**
	comp=Z,5.6nm,0.7s						
JCJ	**Chichijima**	**36.58**	**95**	LR	LR	21 24 12.3	
	comp=Z,553nm,20.3s,baz=313,slow=35						
GSI	**Gunungsitoli**	**36.59**	**185**	P	**P**	**21 09 47.7**	**-0.9**
	comp=Z,25nm,1.7s						
TIXI	**Tiksi**	**36.74**	**15**	P	**P**	**21 09 48.8**	**-0.5**
	comp=Z,9.5nm,0.7s,baz=205,slow=3.2,SNR=23						
TIXI	**Tiksi**	**36.74**	**15**	*ce*P	**P**	**21 09 49.5**	**+0.2**
TIXI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
TIXI	**Tiksi**	**36.74**	**15**	P	**P**	**21 09 49.0**	**-0.3**
SBUM	**Sibu**	**36.99**	**160**	P	**P**	**21 09 55.0**	**+3.0**
SBUM	**Sibu**	**36.99**	**160**	P	**P**	**21 09 53.4**	**+1.5**
DSRI	**Dabo**	**38.47**	**173**	P	**P**	**21 10 06.6**	**+2.1**
	comp=Z,9.7nm,1.0s						
DSRI	**Dabo**	**38.47**	**173**	P	**P**	**21 10 04.9**	**+0.4**
	comp=Z,9.7nm,1.0s						
KIRV	**Kirov**	**38.50**	**319**	*ce*P	**P**	**21 10 04.7**	**+0.4**
SHME	**Shamm**	**39.04**	**265**	P	**P**	**21 10 09.6**	**+0.3**
SISI	**Saibi**	**39.13**	**182**	P	**P**	**21 10 11.6**	**+1.6**
	comp=Z,19nm,2.4s						
SISI	**Saibi**	**39.13**	**182**	P	**P**	**21 10 11.0**	**+0.9**
	comp=Z,18nm,2.4s						
MDH	**Madha**	**39.28**	**264**	P	**P**	**21 10 11.4**	**+0.1**
MSFE	**Esma-Masafi**	**39.36**	**265**	P	**P**	**21 10 11.3**	**-0.7**
UOSS	**Minazif**	**39.53**	**264**	P	**P**	**21 10 14.0**	**+0.6**
HATD	**Hatta, Dubai**	**39.65**	**264**	P	**P**	**21 10 13.0**	**-1.4**
SOHO	**SOHO**	**39.68**	**263**	P	**P**	**21 10 12.0**	**-2.7**
SEY	**Seymchan**	**39.86**	**34**	LR	LR	21 27 27.2	
	comp=Z,986nm,18.1s,baz=258,slow=37						
MAK	**Makhachkala**	**40.00**	**294**	*e*P	**P**	**21 10 12.5**	**-4.6**
MAK				*e*S	**S**	**21 16 15.2**	**-7.1**
MAK				pmax	pmax		
	comp=Z,269nm,1.2s						
MAK				MLR	MLR		
	comp=Z,2µm,12.0s						
FAQ	**Al Faqa, Dubai**	**40.11**	**264**	P	**P**	**21 10 21.9**	**+3.7**
PPBI	**Pangkal Pinang**	**40.30**	**171**	P	**P**	**21 10 23.1**	**+3.4**
PPBI	**Pangkal Pinang**	**40.30**	**171**	P	**P**	**21 10 20.9**	**+1.2**
ALNE	**Al Ain**	**40.34**	**263**	P	**P**	**21 10 22.0**	**+1.9**
PRGR	**Permogore**	**40.88**	**323**	*e*P	**P**	**21 10 23.1**	**-1.0**
PRGR				pmax	pmax		
	comp=Z,50nm,1.2s						
MASI	**Maura Aman, Be**	**40.95**	**177**	P	**P**	**21 10 28.0**	**+2.8**
	comp=Z,42nm,1.0s						
MTKI	**Muara Teweh, K**	**40.98**	**158**	P	**P**	**21 10 26.8**	**+1.4**
MTKI	**Muara Teweh, K**	**40.98**	**158**	P	**P**	**21 10 25.2**	**-0.2**
TPI	**Tanjungpandan**	**41.09**	**169**	P	**P**	**21 10 28.3**	**+2.0**
GROC	**Groznyy**	**41.18**	**295**	*e*P	**P**	**21 10 27.5**	**+0.7**
GROC				*e*		21 12 02.2	
GROC				pmax	pmax		
	comp=Z,71nm,0.8s						
TOLI2	**Tolitoli**	**41.20**	**148**	P	**P**	**21 10 27.7**	**+0.5**
KSI	**Kapahiang**	**41.48**	**177**	P	**P**	**21 10 32.2**	**+2.7**
	comp=Z,38nm,1.4s						
MPSI	**Mapaga**	**41.54**	**150**	P	**P**	**21 10 28.7**	**-1.3**
	comp=Z,6.1nm,1.4s						
PETK	**Petropavlovsk-**	**41.72**	**50**	P	**P**	**21 10 32.7**	**+1.5**
	comp=Z,4.3nm,0.8s,baz=241,slow=8.3,SNR=4.5						
PETK				LR	LR	21 29 35.4	
	comp=Z,604nm,18.4s,baz=257,slow=39						
PET	**Petropavlovsk**	**42.30**	**50**	*e*P	P	21 10 45.4	+10
PET				*e*S	**S**	**21 17 03.7**	**+7.4**
MDSI	**Maura Dua**	**42.40**	**174**	P	**P**	**21 10 38.1**	**+1.1**
	comp=Z,5.4nm,1.3s						
GTOI	**Gorontalo**	**42.59**	**145**	P	**P**	**21 10 39.1**	**+0.5**
	comp=Z,341nmcomp=Z,22nm,1.4s						
ZEI	**Tsey**	**42.62**	**295**	*e*P	**P**	**21 10 35.6**	**-3.3**
ZEI				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GNI	**Garni**	**42.67**	**291**	P	**P**	**21 10 42.0**	**+2.6**
GNI	**Garni**	**42.67**	**291**	*ce*P	**P**	**21 10 42.1**	**+2.8**
GNI				pmax	pmax		
	comp=Z,50nm,1.3s						
GNI	**Garni**	**42.67**	**291**	P	**P**	**21 10 40.9**	**+1.5**
GNI				IAmb	IAmb	21 10 48.2	
	comp=Z,42nm,1.1s						
VRH	**Novokhopyorsk**	**42.71**	**308**	*e*P	**P**	**21 10 38.3**	**-0.9**
VRH				pmax	pmax		
	comp=Z,60nm,1.3s						
GOF	**Gofitskoye**	**42.74**	**298**	⇓*i*P	**P**	**21 10 40.6**	**+1.0**
GOF				pmax	pmax		
	comp=Z,95nm,0.9s						
LWLI	**Liwa**	**42.92**	**175**	P	**P**	**21 10 42.3**	**+1.0**
	comp=Z,1µmcomp=Z,32nm,0.8s						
KBZ	**Khabaz**	**43.13**	**297**	P	**P**	**21 10 42.9**	**+0.3**
	comp=Z,21nm,1.1s,baz=81,slow=4.2,SNR=13						
KBZ				LR	LR	21 31 59.8	
	comp=Z,1µm,18.2s,baz=79,slow=41						
KBZ	**Khabaz**	**43.13**	**297**	*ce*P	**P**	**21 10 44.0**	**+1.3**
KIV	**Kislovodsk**	**43.23**	**297**	⇑P	**P**	**21 10 45.3**	**+1.6**
KIV	**Kislovodsk**	**43.23**	**297**	*i* P	**P**	**21 10 45.3**	**+1.6**
	SNR=18						
KIV	**Kislovodsk**	**43.23**	**297**	*e*P	**P**	**21 10 45.5**	**+1.9**
KIV				*e*		21 12 26.1	
KIV				*e*S	**S**	**21 17 12.4**	**+2.0**
KIV				pmax	pmax		
	comp=Z,33nm,1.0s						
KIV				MLR	MLR		
	comp=Z,913nm,16.0s						
KIV	**Kislovodsk**	**43.23**	**297**	P	**P**	**21 10 43.9**	**+0.3**
KIV				IAmb	IAmb	21 10 46.9	
	comp=Z,34nm,1.0s						
AKH	**Akhalkalaki**	**43.26**	**293**	⇑P	**P**	**21 10 45.5**	**+1.4**
NEY	**Neytrino**	**43.36**	**296**	*i* P	**P**	**21 10 46.1**	**+1.3**
NEY				pmax	pmax		
	comp=Z,12nm,1.1s						
APSI	**Ampana**	**43.39**	**148**	P	**P**	**21 10 47.1**	**+2.1**
	comp=Z,32nm,1.2s						
KLMR	**Klimovskoe**	**43.73**	**322**	*e*P	**P**	**21 10 45.6**	**-1.7**
KLMR				*e*		21 12 32.6	
KLMR				pmax	pmax		
	comp=Z,59nm,0.7s						
KLMR				MLR	MLR		
	comp=Z,912nm,10.0s						
KLMR	**Klimovskoe**	**43.73**	**322**	*e*P	**P**	**21 10 45.7**	**-1.6**
KLMR				AMP		21 10 49.1	
	comp=Z,59nm,0.7s						
KLMR				*e*PcP	**PcP**	**21 12 32.7**	**-1.3**
KLMR				LQ	LQ	21 25 51.1	
KLMR				LQ	LQ	21 25 51.1	
KLMR				LR	LR	21 29 06.8	
KLMR				AMP		21 30 12.2	
	comp=Z,912nm,10.2s						
KARS	**Kars**	**43.77**	**292**	P	**P**	**21 10 49.3**	**+1.2**
KARS				pmax	pmax		
	comp=Z,161nm,1.1s						
KARS	**Kars**	**43.77**	**292**	P	**P**	**21 10 49.3**	**+1.2**
LPSR	**Galich'ya Gora**	**44.29**	**310**	*e*P	**P**	**21 10 51.2**	**-0.7**
LPSR				pmax	pmax		
	comp=Z,60nm,1.0s						
VSR	**Storozhevoye**	**44.31**	**308**	*e*P	**P**	**21 10 51.6**	**-0.5**
VSR				pmax	pmax		
	comp=Z,60nm,1.0s						
TNTI	**Ternate**	**44.57**	**140**	P	**P**	**21 10 56.5**	**+2.0**
	comp=Z,17nm,1.9s						
TNTI	**Ternate**	**44.57**	**140**	P	**P**	**21 10 54.8**	**+0.3**
TNTI				IAmb	IAmb	21 10 59.5	
	comp=Z,30nm,1.3s						
BCA	**Borcka**	**44.60**	**294**	⇓P	**P**	**21 10 55.2**	**+0.6**
TTSI	**Tana Toraja**	**44.61**	**152**	P	**P**	**21 10 55.8**	**+0.9**
	comp=Z,634nmcomp=Z,39nm,1.5s						
TTSI	**Tana Toraja**	**44.61**	**152**	P	**P**	**21 10 56.8**	**+1.9**
	comp=Z,634nmcomp=Z,39nm,1.5s						
LEM	**Lembang**	**45.08**	**170**	LR	LR	21 29 59.4	
	comp=Z,954nm,19.4s,baz=328,slow=36						
GURO	**Guroymak-BITLI**	**45.15**	**290**	P	**P**	**21 11 00.2**	**+1.0**
GURO				IAmb	IAmb	21 11 02.6	
	comp=Z,35nm,1.1s						
SIRT	**Sirnak**	**45.18**	**288**	P	**P**	**21 10 59.8**	**+0.4**
SOC	**Sochi**	**45.40**	**297**	*e*P	**P**	**21 11 00.6**	**-0.3**
SOC				*e*		21 12 43.6	
SOC				*e*S	**S**	**21 17 42.3**	**+0.5**
SOC				*e*SS	**SS**	**21 21 01.8**	**-3.0**
SOC				*e*SSS	SSS	21 21 58.6	
SOC				pmax	pmax		
	comp=Z,32nm,0.9s						
SOC				MLR	MLR		
	comp=Z,874nm,14.0s						
OBN	**Obninsk**	**45.43**	**314**	⇑P	**P**	**21 11 01.0**	**0.0**
OBN	**Obninsk**	**45.43**	**314**	⇓*i*P	**P**	**21 11 00.7**	**-0.2**
OBN				*i*		21 12 40.6	
OBN				*e*		21 17 41.3	
OBN				*i* S	**S**	**21 17 44.7**	**+2.9**
OBN				pmax	pmax		
	comp=Z,37nm,1.1s						
OBN				MLR	MLR		
	comp=Z,1µm,17.0s						
OBN	**Obninsk**	**45.43**	**314**	P	**P**	**21 10 59.5**	**-1.4**
SPSI	**Sidrap Palu**	**45.44**	**152**	P	**P**	**21 11 02.9**	**+1.4**
	comp=Z,819nmcomp=Z,54nm,1.5s						
KPJI	**Karang Pucung**	**45.78**	**168**	P	**P**	**21 11 04.8**	**+0.7**
	comp=Z,62nm,0.8s						
LBMI	**Labuha**	**45.84**	**141**	P	**P**	**21 11 05.6**	**+0.9**
	comp=Z,969nmcomp=Z,23nm,1.1s						
BNSI	**Bone**	**45.97**	**152**	P	**P**	**21 11 06.8**	**+1.2**
	comp=Z,14nm,1.1s						
BNSI	**Bone**	**45.97**	**152**	P	**P**	**21 11 06.6**	**+1.0**
	comp=Z,14nm,1.1s						
GUMO	**Guam**	**46.25**	**109**	LR	LR	21 30 09.5	
	comp=Z,462nm,20.1s,baz=310,slow=36						
SANI	**Sanana**	**46.33**	**143**	P	**P**	**21 11 08.9**	**+0.4**
	comp=Z,21nm,0.7s						
SANI	**Sanana**	**46.33**	**143**	P	**P**	**21 11 08.3**	**-0.2**
KAPI	**Kappang**	**46.41**	**153**	P	**P**	**21 11 09.6**	**+0.5**
KAPI				pmax	pmax		
	comp=Z,33nm,1.1s						
KAPI	**Kappang**	**46.41**	**153**	P	**P**	**21 11 09.6**	**+0.5**
KAPI				IAmb	IAmb	21 11 13.9	
	comp=Z,33nm,1.1s						
BILL	**Bilibino**	**46.42**	**28**	⇑*i*P	**P**	**21 11 10.5**	**+1.9**
BILL				*e*		21 12 59.5	
BILL				*e*S	**S**	**21 17 56.1**	**+0.3**
BILL				pmax	pmax		
	comp=Z,21nm,2.5s						
BILL				MLR	MLR		
	comp=Z,797nm,17.0s						
BILL	**Bilibino**	**46.42**	**28**	P	**P**	**21 11 08.6**	**0.0**
APA	**Apatity**	**46.81**	**331**	⇓*i*P	**P**	**21 11 07.5**	**-4.2**
APA				pmax	pmax		
	comp=Z,15nm,1.2s						
SRBI	**Singaraja**	**47.87**	**160**	P	**P**	**21 11 19.7**	**-0.8**
	comp=Z,27nm,1.8s						
SRBI	**Singaraja**	**47.87**	**160**	P	P	21 11 29.9	+9.4
PUL	**Pulkovo**	**48.33**	**320**	*ce*P	**P**	**21 11 25.1**	**+1.5**
PUL				pmax	pmax		
	comp=Z,115nm,1.0s						
RAYN	**Ar Rayn**	**48.68**	**269**	*i* P	**P**	**21 11 26.2**	**-0.7**
	SNR=8.6						
RAYN	**Ar Rayn**	**48.68**	**269**	P	**P**	**21 11 25.1**	**-1.8**
RAYN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
RAYN	**Ar Rayn**	**48.68**	**269**	P	**P**	**21 11 25.1**	**-1.8**
DIKM	**Dikmen**	**49.11**	**296**	⇑P	**P**	**21 11 31.2**	**+1.4**
GAZ	**Gaziantep**	**49.21**	**290**	P	**P**	**21 11 30.6**	**-0.1**
GAZ				IAmb	IAmb	21 11 32.6	
	comp=Z,24nm,1.0s						
BNN	**Bunyan**	**49.62**	**292**	P	**P**	**21 11 34.2**	**+0.2**
ARA0	**ARCESS Array S**	**49.75**	**334**	*e*P	**P**	**21 11 35.0**	**+0.6**
ARCES	**ARCESS Array B**	**49.75**	**334**	P	**P**	**21 11 34.1**	**-0.2**
	comp=Z,5.6nm,0.5s,baz=86,slow=8.0,SNR=37						
ARCES				LR	LR	21 34 00.5	
	comp=Z,575nm,21.2s,baz=115,slow=38						
ARCES	**ARCESS Array B**	**49.75**	**334**	P	**P**	**21 11 34.7**	**+0.3**
ARCES				pmax	pmax		
	comp=Z,49nm,1.4s						
ARCES	**ARCESS Array B**	**49.75**	**334**	P	**P**	**21 11 34.7**	**+0.3**
FIA1	**FINESS Array S**	**50.20**	**323**	P	**P**	**21 11 37.6**	**-0.3**
FINES	**FINESS Array B**	**50.21**	**323**	P	**P**	**21 11 37.4**	**-0.5**
	comp=Z,22nm,0.6s,baz=84,slow=7.9,SNR=128						
FINES				LR	LR	21 34 25.4	
	comp=Z,988nm,18.9s,baz=72,slow=38						
FINES	**FINESS Array B**	**50.21**	**323**	P	**P**	**21 11 37.9**	**0.0**
FINES	**FINESS Array B**	**50.21**	**323**	P	**P**	**21 11 37.9**	**0.0**
FAKI	**Fak Fak**	**50.25**	**137**	P	**P**	**21 11 39.5**	**+0.7**
	comp=Z,14nm,1.2s						
FAKI	**Fak Fak**	**50.25**	**137**	P	**P**	**21 11 38.4**	**-0.4**
FAKI				IAmb	IAmb	21 11 43.3	
	comp=Z,21nm,1.3s						
HAMF	**Hammerfest**	**50.33**	**335**	*e*P	**P**	**21 11 38.5**	**-0.2**
VSU	**Vasula**	**50.35**	**319**	*e*P	**P**	**21 11 39.9**	**+0.9**
VSU	**Vasula**	**50.35**	**319**	⇑*e*P	**P**	**21 11 38.7**	**-0.3**
VSU				pmax	pmax		
	comp=Z,45nm,0.6s						
MNK	**Minsk**	**50.49**	**314**	*i* P	**P**	**21 11 39.6**	**-0.6**
MNK				*i*		21 12 58.2	
MNK				*i*		21 13 34.3	
MNK				*i* PPP	PPP	21 14 30.4	
MNK				*i* S	**S**	**21 18 53.4**	**-0.2**
MNK				*i* SSS	SSS	21 23 54.0	
MNK				pmax	pmax		
	comp=E,3.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,20nm,0.9s						
MNK				pmax	pmax		
	comp=N,5.0nm,0.9s						
MNK				MLR	MLR		
	comp=E,8.0nm,9.0s						
MNK				MLR	MLR		
	comp=Z,272nm,18.0s						
MNK				MLR	MLR		
	comp=N,313nm,18.0s						
MNK	**Minsk**	**50.49**	**314**	*i* P	**P**	**21 11 39.7**	**-0.5**
	comp=E,3.0nm,0.9s						
MNK				*i* P	**P**	**21 11 39.7**	**-0.5**
	comp=N,5.0nm,0.9s						
MNK				*i* P	**P**	**21 11 39.7**	**-0.5**
	comp=Z,20nm,0.9s,baz=78						
MNK				*i* PcP	**PcP**	**21 12 58.2**	**+0.1**
MNK				*i* PP	**PP**	**21 13 34.4**	**-1.2**
MNK				*i* PPP	PPP	21 14 30.5	
MNK				*i* S	**S**	**21 18 53.4**	**-0.2**
MNK				*i* SS	**SS**	**21 22 31.7**	**+4.7**
MNK				*i* SSS	SSS	21 23 54.1	
MNK				*i* LQ	LQ	21 29 50.3	
MNK				*i* LR	LR	21 32 54.0	
MNK				*i* LRM	MLR	21 35 24.1	
	comp=E,8.0nm,9.0s						
MNK				*i* LRM	MLR	21 35 24.1	
	comp=N,313nm,18.1s						
MNK				*i* LRM	MLR	21 35 24.1	
	comp=Z,272nm,18.1s						
EDFI	**Ende, Flores**	**50.56**	**152**	P	**P**	**21 11 41.9**	**+0.7**
	comp=Z,5.6nm,0.9s						
AKASG	**Malin Array Be**	**50.58**	**309**	P	**P**	**21 11 40.2**	**-0.6**
	comp=Z,17nm,0.9s,baz=68,slow=7.5,SNR=34						
AKASG				LR	LR	21 33 57.4	
	comp=Z,1µm,20.3s,baz=80,slow=37						
AKASG	**Malin Array Be**	**50.58**	**309**	IAmb	IAmb	21 11 42.3	
	comp=Z,26nm,1.0s						
AKBB	**Malin Array Si**	**50.58**	**309**	*i* P	**P**	**21 11 40.3**	**-0.6**
AKBB	**Malin Array Si**	**50.58**	**309**	IAmb	IAmb	21 11 42.3	
	comp=Z,22nm,1.0s						
WBSI	**Waikabubak, Su**	**50.59**	**155**	P	**P**	**21 11 41.1**	**-0.3**
	comp=Z,52nm,0.8s						
MMRI	**Maumere**	**50.66**	**152**	P	**P**	**21 11 42.8**	**+0.9**
	comp=Z,34nm,1.6s						
MMRI	**Maumere**	**50.66**	**152**	P	**P**	**21 11 42.0**	**+0.1**
BR131	**Keskin Array S**	**50.91**	**294**	IAmb	IAmb	21 11 45.9	
	comp=Z,37nm,1.1s						
BRTR	**Keskin Array B**	**50.91**	**294**	P	**P**	**21 11 44.1**	**+0.3**
	comp=Z,11nm,0.9s,baz=100,slow=6.5,SNR=47						
BRTR				LR	LR	21 36 57.4	
	comp=Z,729nm,19.3s,baz=68,slow=40						
NACGM	**Naroch**	**51.02**	**315**	*i* P	**P**	**21 11 44.9**	**+0.7**
ISAL	**Salakas**	**51.24**	**315**	*e*P	**P**	**21 11 47.3**	**+1.4**
PURM	**Purcari**	**51.31**	**303**	⇑P	**P**	**21 11 46.8**	**+0.4**
ANTO	**Ankara**	**51.47**	**295**	P	**P**	**21 11 47.8**	**-0.1**
ANTO				pmax	pmax		
	comp=Z,42nm,1.3s						
ANTO	**Ankara**	**51.47**	**295**	P	**P**	**21 11 47.8**	**-0.1**
ANTO				IAmb	IAmb	21 11 51.1	
	comp=Z,42nm,1.2s						
JETT	**Jettan, Norway**	**51.54**	**334**	*e*P	**P**	**21 11 49.7**	**+1.8**
MTSE	**Matsula**	**51.80**	**320**	*e*P	**P**	**21 11 51.1**	**+1.3**
SORM	**Soroca**	**51.82**	**306**	⇑P	**P**	**21 11 49.3**	**-0.9**
KIS	**Kishinev**	**51.86**	**304**	*e*P	**P**	**21 11 51.0**	**+0.5**
KIS				*e*L	L	21 32 18.0	
KIS				*e*LR	LR	21 34 08.0	
	comp=Z,400nm,12.0s						
SPA0	**Spitsbergen Ar**	**51.93**	**345**	*e*P	**P**	**21 11 51.3**	**+0.6**
TRO	**Tromso**	**52.04**	**334**	*e*P	**P**	**21 11 52.1**	**+0.5**
MDUB	**Mudurnu**	**52.40**	**296**	P	**P**	**21 11 55.2**	**+0.4**
PABE	**Paberze**	**52.45**	**316**	*e*P	**P**	**21 11 55.5**	**+0.7**
SOEI	**Soe**	**52.47**	**150**	P	**P**	**21 11 55.2**	**-0.3**
SOEI				IAmb	IAmb	21 12 18.6	
	comp=Z,40nm,1.3s						
IAS	**Iasi**	**52.61**	**305**	⇑P	**P**	**21 11 57.4**	**+1.2**
BATI	**Baumata**	**52.65**	**151**	P	**P**	**21 11 56.2**	**-0.5**
	comp=Z,17nm,1.1s						
VLDR	**Vladesti**	**52.70**	**303**	⇓P	**P**	**21 11 57.5**	**+0.6**
TPGR	**Topolog**	**52.80**	**302**	⇓P	**P**	**21 11 57.4**	**-0.2**
SCTR	**Scanteiesti**	**52.81**	**303**	⇓P	**P**	**21 11 59.2**	**+1.5**
SLIT	**Slitere, Latvi**	**52.83**	**319**	*e*P	**P**	**21 11 58.0**	**+0.5**
CFR	**Carcaliu**	**52.88**	**302**	⇑P	**P**	**21 11 57.8**	**-0.4**
LEF	**Lefka**	**53.22**	**289**	⇑P	**P**	**21 12 01.1**	**+0.3**
SUW	**Suwalki**	**53.28**	**314**	*e*P	**P**	**21 12 01.8**	**+0.9**
SUW	**Suwalki**	**53.28**	**314**	*e*P	**P**	**21 12 01.6**	**+0.6**
AAL	**Aland**	**53.37**	**322**	*e*P	**P**	**21 12 02.6**	**+1.0**
TESR	**Tescani**	**53.43**	**304**	⇓P	**P**	**21 12 02.4**	**+0.2**
PBUR	**Paburge**	**53.43**	**317**	*e*P	**P**	**21 12 03.2**	**+1.1**
ICOR	**Ion Corvin**	**53.47**	**301**	⇑P	**P**	**21 12 03.0**	**+0.5**
VRI	**Vrincioaia**	**53.59**	**304**	⇑P	**P**	**21 12 03.0**	**-0.4**
PLOR	**Plostina**	**53.64**	**304**	⇑P	**P**	**21 12 04.9**	**+1.0**
STEI	**Steigen**	**53.66**	**332**	*e*P	**P**	**21 12 03.5**	**0.0**
FAUS	**Fauske**	**53.76**	**331**	*e*P	**P**	**21 12 04.1**	**-0.2**
COVR	**Voineasa-Covas**	**53.94**	**304**	⇑P	**P**	**21 12 06.8**	**+0.8**
ISR	**Istrita**	**53.96**	**303**	⇑P	**P**	**21 12 07.6**	**+1.4**
BURAR	**Bucovina Array**	**53.99**	**306**	⇑P	**P**	**21 12 05.5**	**-0.9**
BUR08	**Bucovina Ar. S**	**53.99**	**306**	IAmb	IAmb	21 12 13.7	
	comp=Z,21nm,1.3s						
LVV	**L'vov**	**54.02**	**309**	*e*P	**P**	**21 12 06.7**	**+0.2**
LVV				*e*PPP	PPP	21 14 13.7	
LVV				*e*S	**S**	**21 19 38.4**	**-3.8**
LVV				*e*SS	**ScS**	**21 21 55.9**	**+0.3**
LVV				pmax	pmax		
	comp=Z,80nm,1.4s						
NEHR	**Nehoiu**	**54.02**	**303**	⇑P	**P**	**21 12 08.1**	**+1.5**
OZUR		**54.13**	**304**	⇓P	**P**	**21 12 08.6**	**+1.2**
MLR	**Muntele Rosu**	**54.23**	**303**	⇑P	**P**	**21 12 09.5**	**+1.3**
MLR	**Muntele Rosu**	**54.23**	**303**	P	**P**	**21 12 07.5**	**-0.8**
MLR				pmax	pmax		
	comp=Z,12nm,0.9s						
MLR	**Muntele Rosu**	**54.23**	**303**	P	**P**	**21 12 07.5**	**-0.8**
MLR				IAmb	IAmb	21 12 18.0	
	comp=Z,12nm,0.9s						
LOF	**Lofoten**	**54.24**	**333**	*e*P	**P**	**21 12 07.4**	**-0.3**
MOR8	**Moi Rana**	**54.37**	**330**	*e*P	**P**	**21 12 08.2**	**-0.6**
DOPR	**Dopca**	**54.43**	**304**	⇑P	**P**	**21 12 10.9**	**+1.3**
UPP	**Uppsala**	**54.60**	**322**	*e*P	**P**	**21 12 11.3**	**+0.8**
ARCR	**ARCALIA**	**54.72**	**306**	⇓P	**P**	**21 12 13.2**	**+1.6**
KONS	**Konsvik**	**54.80**	**331**	*e*P	**P**	**21 12 12.5**	**+0.6**
VOIR		**54.84**	**304**	⇓P	**P**	**21 12 14.1**	**+1.5**
STOK	**Stokkvaagen**	**54.88**	**330**	*e*P	**P**	**21 12 12.7**	**+0.3**
KWP	**Kalwaria Pacla**	**54.90**	**309**	*e*P	**P**	**21 12 14.3**	**+1.4**
BMR	**Baia Mare**	**55.06**	**307**	⇑P	**P**	**21 12 15.6**	**+1.5**
BALB	**Balikesir**	**55.07**	**296**	P	**P**	**21 12 13.6**	**-0.7**
BALB				IAmb	IAmb	21 12 16.1	
	comp=Z,26nm,0.9s						
HUMR	**Humele**	**55.21**	**303**	⇑P	**P**	**21 12 15.5**	**+0.3**
CJR	**Cluj-Napoca**	**55.33**	**305**	⇑P	**P**	**21 12 18.2**	**+2.1**
KOLS	**Kolonicke sedl**	**55.40**	**308**	*e*P	**P**	**21 12 17.8**	**+1.3**

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KOLS                              pmax  pmax
      comp=Z,14nm,1.0s
KOLS  Kolonicke sedl    55.40 308 eP    P     21 12 17.8 +1.3
UZH   Uzhgorod          55.49 308 eP    P     21 12 17.6 +0.5
UZH                               e           21 12 21.0
UZH                               e           21 12 24.4
UZH                               e           21 14 15.8
UZH                               eS    S     21 19 57.6 -4.3
UZH                               MLR   MLR
      comp=N,270nm,18.0s
UZH                               MLR   MLR
      comp=E,160nm,18.0s
UZH                               MLR   MLR
      comp=Z,100nm,18.0s
TRPA  Tarpa             55.51 307 ⇑P    P     21 12 17.4 +0.1
TRPA  Tarpa             55.51 307 eP    P     21 12 17.4 +0.1
LOT   Lotru             55.68 304 ⇑P    P     21 12 19.4 +0.7
NSS   Namsos            55.81 328 eP    P     21 12 19.4 +0.2
DRGR                    55.88 306 ⇑P    P     21 12 21.1 +1.1
CRVS  Cervenica-Dubn    55.91 309 eP    P     21 12 20.9 +0.7
CRVS                              pmax  pmax
      comp=Z,15nm,1.3s
CRVS  Cervenica-Dubn    55.91 309 eP    P     21 12 20.9 +0.7
GZR   Gura Zlata        56.35 304 ⇑P    P     21 12 24.4 +1.0
NOR   Nord              56.41 351 i P   P     21 12 22.5 -0.7
NOR                               IAmb  IAmb  21 12 24.6
      comp=Z,31nm,1.3s
NIE   Niedzica          56.44 309 eP    P     21 12 26.1 +2.1
OJC   Ojcow             56.46 311 eP    P     21 12 24.8 +0.7
SIRR  Siria             56.74 306 ⇑P    P     21 12 27.3 +1.1
HERR  Herculane         56.78 304 ⇑P    P     21 12 27.1 +0.7
NC405 NORSAR Array S    57.01 325 IAmb  IAmb  21 12 31.3
      comp=Z,26nm,0.9s
BZS   Buzias            57.02 305 ⇑P    P     21 12 28.1  0.0
LANS  Liptovska Anna    57.05 309 eP    P     21 12 32.3 +4.0
LANS                              pmax  pmax
      comp=Z,3.0nm,1.0s
LANS  Liptovska Anna    57.05 309 eP    P     21 12 32.3 +4.0
VTS   Vitosha           57.11 301 ⇑P    P     21 12 27.8 -1.2
VTS   Vitosha           57.11 301 IAmb  IAmb  21 12 31.7
      comp=Z,34nm,1.1s
NC602 NORSAR Array S    57.22 324 eP    P     21 12 29.7 +0.5
NC602 NORSAR Array S    57.22 324 P     P     21 12 29.0 -0.3
BSZH  Besenyszg         57.24 307 eP    P     21 12 31.1 +1.5
PSZ   Piszkesteto       57.24 308 ⇑P    P     21 12 29.5 -0.3
PSZ   Piszkesteto       57.24 308 eP    P     21 12 29.5 -0.3
PSZ   Piszkesteto       57.24 308 P     P     21 12 30.4 +0.6
PSZ                               pmax  pmax
      comp=Z,30nm,1.3s
PSZ   Piszkesteto       57.24 308 P     P     21 12 30.4 +0.6
PSZ                               IAmb  IAmb  21 12 32.3
      comp=Z,30nm,1.3s
NB2   NORSAR Subarra    57.26 325 P     P     21 12 28.0 -1.6
      comp=Z,41nm,1.4s,baz=71,slow=7.4
NOA   NORSAR Array B    57.26 325 P     P     21 12 28.3 -1.4
      comp=Z,10nm,1.1s,baz=77,slow=7.9,SNR=28
NOA                               LR    LR    21 38 54.7
      comp=Z,821nm,18.1s,baz=80,slow=38
MDVR  Moldovita         57.28 304 ⇑P    P     21 12 30.8 +0.7
BSD   Bornholm Skovb    57.50 317 eP    P     21 12 30.6 -0.7
OKC   Ostrava-Krasne    57.59 311 eP    P     21 12 33.4 +1.3
OKC                               AMS   AMS   21 37 50.0
      comp=Z,1µm,27.4s
OKC   Ostrava-Krasne    57.59 311 eP    P     21 12 33.4 +1.3
OKC                               MLR   MLR
      comp=Z,1µm,27.4s
VYHS  Vyhne             57.68 309 eP    P     21 12 33.9 +1.1
VYHS                              pmax  pmax
      comp=Z,40nm,1.3s
VYHS  Vyhne             57.68 309 eP    P     21 12 33.9 +1.1
BOVS  Bovan             57.73 303 ⇑P    P     21 12 33.6 +0.4
DOMB  Dombas            57.87 326 eP    P     21 12 34.3 +0.4
OSL   Oslo              57.88 324 eP    P     21 12 34.1 +0.2
MORC  Moravsky Berou    57.98 311 ⇑P    P     21 12 35.0 +0.1
MORC  Moravsky Berou    57.98 311 eP    P     21 12 35.6 +0.7
MORC  Moravsky Berou    57.98 311 IAmb  IAmb  21 12 37.2
      comp=Z,22nm,0.9s
JAVC  Velka Javorina    58.25 310 eP    P     21 12 38.8 +2.0
KSP   Ksiaz             58.31 312 eP    P     21 12 38.1 +1.0
KRLC  Kraliky           58.32 311 eP    P     21 12 37.4 +0.2
KRLC                              AMS   AMS   21 38 20.0
      comp=Z,1µm,17.4s
KRLC  Kraliky           58.32 311 eP    P     21 12 37.4 +0.2
KRLC                              MLR   MLR
      comp=Z,1µm,17.4s
FRGS  Fruska Gora       58.37 305 ⇑P    P     21 12 38.1 +0.4
A21K  Barrow            58.46  22 P     P     21 12 38.5 +0.7
A21K                              IAmb  IAmb  21 12 59.5
      comp=Z,29nm,1.5s
OSTC  Ostas             58.47 312 eP    P     21 12 39.0 +0.8
OSTC                              AMS   AMS   21 39 20.0
      comp=Z,900nm,11.8s
DPC   Dobruska-Polom    58.48 312 eP    P     21 12 38.7 +0.3
DPC                               AMS   AMS   21 38 30.0
      comp=Z,1µm,14.3s
DPC   Dobruska-Polom    58.48 312 eP    P     21 12 38.7 +0.3
DPC                               MLR   MLR
      comp=Z,1µm,14.3s
KONO  Kongsberg         58.51 323ceP    P     21 12 40.3 +1.9
KONO                              pmax  pmax
      comp=Z,28nm,1.7s
KONO  Kongsberg         58.51 323 eP    P     21 12 38.5 +0.1
SMOL  Smolenice         58.53 309 eP    P     21 12 41.0 +2.3
SMOL                              pmax  pmax
      comp=Z,18nm,1.4s
SMOL  Smolenice         58.53 309 eP    P     21 12 41.0 +2.3
UPC   Upice             58.60 312 eP    P     21 12 39.4 +0.2
UPC                               AMS   AMS   21 39 30.0
      comp=Z,900nm,17.1s
UPC   Upice             58.60 312 eP    P     21 12 39.4 +0.2
UPC                               MLR   MLR
      comp=Z,900nm,17.1s
MODS  Modra-Piesok      58.68 309 eP    P     21 12 41.0 +1.2
MODS                              pmax  pmax
      comp=Z,29nm,1.3s
MODS  Modra-Piesok      58.68 309 eP    P     21 12 41.0 +1.2
MORH  Mrgy, Hungar      58.69 306 ⇑P    P     21 12 40.3 +0.5
MORH  Mrgy, Hungar      58.69 306 eP    P     21 12 39.4 -0.4
SKAR  Skarslia          58.72 325 eP    P     21 12 40.5 +0.7
VRAC  Vranov            58.73 310 ⇑P    P     21 12 39.9 -0.2
VRAC  Vranov            58.73 310 eP    P     21 12 41.2 +1.1
KRUC  Moravsky          58.95 310 eP    P     21 12 42.7 +1.1
MPLH  Magyarpolny       59.00 308 eP    P     21 12 42.2 +0.1
KOVH  Kovagotottos      59.09 306 eP    P     21 12 42.4 -0.3
TREC  Trest             59.40 311 eP    P     21 12 45.5 +0.8
TREC                              AMS   AMS   21 39 00.0
      comp=Z,1µm,14.4s
TREC  Trest             59.40 311 eP    P     21 12 45.5 +0.8
TREC                              MLR   MLR
      comp=Z,1µm,14.4s
SOP   Sopron            59.40 309 eP    P     21 12 45.3 +0.6
PVCC  Panska Ves        59.44 312 eP    P     21 12 46.1 +1.1
PVCC                              AMS   AMS   21 40 00.0
      comp=Z,800nm,16.3s
PVCC  Panska Ves        59.44 312 eP    P     21 12 46.1 +1.1
PVCC                              MLR   MLR
      comp=Z,800nm,16.3s
DAG   Danmarks Havn     59.47 346 i P   P     21 12 42.6 -2.2
MSEY  Mahe Island       59.47 235 P     P     21 12 45.0 -0.6
HOMB  Homborsund        59.57 322 eP    P     21 12 46.8 +1.1
KBN   Korca             59.61 300 P     P     21 12 43.2 -3.2
KBN                               pmax  pmax
      comp=Z,42nm,1.3s
KBN   Korca             59.61 300 P     P     21 12 43.2 -3.2
KNRA  Kununurra         59.65 148 P     P     21 12 46.4 -0.3
BRG   Berggiesshubel    59.67 313 i P   P     21 12 47.3 +0.8
BRG                               Amp         21 12 48.7
      comp=Z,20nm,1.0s
BRG   Berggiesshubel    59.67 313 P     P     21 12 51.3 +4.7
BRG                               Amp         21 12 52.7
      comp=Z,15nm,1.1s
BRG                               Amp         21 22 30.0
      comp=Z,0.2nm,20.9s
BRG                               Amp         21 39 13.0
      comp=N,0.4nm,19.5s
BRG                               Amp         21 39 24.0
      comp=E,0.7nm,15.3s
BRG                               Amp         21 39 27.0
      comp=Z,0.9nm,16.1s
PRU   Pruhonice         59.68 312 eP    P     21 12 47.5 +0.9
PRU                               AMS   AMS   21 38 50.0
      comp=Z,1µm,15.6s
PRU   Pruhonice         59.68 312 eP    P     21 12 47.5 +0.9
PRU                               MLR   MLR
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      comp=Z,1µm,15.6s
PRA   Prague            59.71 312 eP    P     21 12 47.7 +0.9
PRA                               AMS   AMS   21 39 00.0
      comp=Z,1µm,16.2s
PRA   Prague            59.71 312 eP    P     21 12 47.7 +0.9
PRA                               MLR   MLR
      comp=Z,1µm,16.2s
CONA  Conrad Observa    59.73 309 eP    P     21 12 47.5 +0.4
      comp=Z,23nm,1.2s,SNR=8.8
MUD   Monsted U'grnd    59.98 320 i P   P     21 12 50.2 +1.7
MUD                               IAmb  IAmb  21 12 50.7
      comp=Z,32nm,1.0s
CLL   Collm             60.03 314 i P   P     21 12 49.2 +0.2
      comp=Z,27nm,1.1s
CLL                               i pP  pP    21 12 53.1 -0.7
      comp=Z,19nm,1.1s
CLL                               e           21 13 30.0
CLL                               ePP   PP    21 15 03.0 +1.9
CLL   Collm             60.03 314 i P   P     21 12 49.2 +0.2
CLL                               i           21 12 53.1
CLL                               pmax  pmax
      comp=Z,27nm,1.1s
CLL   Collm             60.03 314 IAmb  IAmb  21 12 50.8
      comp=Z,20nm,1.0s
SNART Snartemo          60.17 323 eP    P     21 12 50.8 +1.0
ARSA  Arzberg           60.22 309 eP    P     21 12 51.1 +0.6
      comp=Z,9.5nm,0.9s
CKRC  Cesky Krumlov     60.30 311 eP    P     21 12 51.9 +0.9
KHC   Kasperske Hory    60.60 311 eP    P     21 12 53.9 +0.8
KHC                               AMS   AMS   21 39 50.0
      comp=Z,1µm,16.0s
KHC   Kasperske Hory    60.60 311 eP    P     21 12 53.9 +0.8
KHC                               MLR   MLR
      comp=Z,1µm,16.0s
GEC2  GERESS Array S    60.65 311 IAmb  IAmb  21 12 55.6
      comp=Z,17nm,1.1s
GERES GERESS Array B    60.65 311 P     P     21 12 53.0 -0.5
      comp=Z,7.8nm,0.9s,baz=75,slow=5.7,SNR=24
GERES                             LR    LR    21 40 20.4
      comp=Z,1µm,18.8s,baz=84,slow=37
GERES GERESS Array B    60.65 311 P     P     21 12 53.0 -0.5
MOA   Molln             60.74 310 eP    P     21 12 54.5 +0.6
      comp=Z,17nm,1.2s,SNR=6.2
SOKA  Soboth            60.77 308 eP    P     21 12 54.4 +0.1
      comp=Z,29nm,1.2s,SNR=13
NKC   Novy Kostel       60.80 313 eP    P     21 12 55.9 +1.6
NKC                               AMS   AMS   21 40 50.0
      comp=Z,1µm,17.3s
NKC   Novy Kostel       60.80 313 eP    P     21 12 55.9 +1.6
NKC                               MLR   MLR
      comp=Z,1µm,17.3s
DBG   Daneborg          61.30 345 eP    P     21 12 56.3 -1.0
DBG                               IAmb  IAmb  21 12 59.1
      comp=Z,14nm,1.4s
GCSA  Galena City Sc    61.38  28 P     P     21 12 59.1 +1.2
      baz=299
GRA1  Grafenberg Arr    61.75 313 P     P     21 13 01.0 +0.2
GRF   Grafenberg Arr    61.75 313 P     P     21 13 01.0 +0.2
GRF                               pmax  pmax
      comp=Z,53nm,1.1s
GRF   Grafenberg Arr    61.75 313 eP    P     21 13 01.1 +0.3
      comp=Z,34nm,1.1s,baz=66,slow=6.0
GRF                               epP   pP    21 13 05.6  0.0
GRFO  Grafenberg        61.75 313 P     P     21 13 01.6 +0.8
GRFO                              pmax  pmax
      comp=Z,52nm,1.1s
GRFO  Grafenberg        61.75 313 P     P     21 13 01.6 +0.8
TOLK  Toolik Lake Re    61.89  23 P     P     21 13 02.4 +0.9
      baz=303
IMAR  Indian Mountai    61.91  27 P     P     21 13 01.5 -0.1
PSA00 Pilbara Seismi    62.00 159 P     P     21 13 03.2 +0.7
PSA00                             IAmb  IAmb  21 13 07.2
      comp=Z,16nm,1.4s
EUNU  Eureka            62.15   1 P     P     21 13 04.0 +0.9
EUNU                              IAmb  IAmb  21 13 27.4
      comp=Z,14nm,1.4s
ABTA  Abfaltersbach     62.30 309 eP    P     21 13 03.5 -1.0
      comp=Z,18nm,1.2s
H21K  Melozitna Rive    62.41  27 P     P     21 13 06.2 +1.2
      baz=302
H21K  Melozitna Rive    62.41  27 IAmb  IAmb  21 13 07.0
      comp=Z,9.6nm,0.8s
COLD  Coldfoot          62.46  24 P     P     21 13 06.8 +1.6
      baz=303
COLD  Coldfoot          62.46  24 P     P     21 13 06.4 +1.2
COLD                              IAmb  IAmb  21 13 14.0
      comp=Z,8.7nm,1.0s
WTTA  Wattenberg        62.59 310 eP    P     21 13 06.0 -0.6
      comp=Z,34nm,1.1s,SNR=12
WATA  Walderalm         62.60 310 eP    P     21 13 06.3 -0.4
      comp=Z,38nm,1.2s,SNR=9.8
J20K  Nowinta River     62.69  28 P     P     21 13 08.2 +1.4
      baz=301
J20K  Nowinta River     62.69  28 IAmb  IAmb  21 13 09.1
      comp=Z,6.3nm,0.7s
SQTA  Sankt Quirin      62.87 310 eP    P     21 13 08.6 +0.1
      comp=Z,33nm,1.1s,SNR=9.6
MOTA  Moosalm           62.88 310 eP    P     21 13 08.2 -0.3
      comp=Z,34nm,1.0s,SNR=9.4
I21K  Tanana            62.95  27 IAmb  IAmb  21 13 31.3
      comp=Z,9.1nm,1.0s
RETA  Reutte            63.02 310 eP    P     21 13 09.2 -0.2
      comp=Z,9.0nm,1.3s
CTI   Castel Tesino     63.15 309 IAmb  IAmb  21 13 11.3
      comp=Z,18nm,1.2s
K20K  Telida            63.15  29 P     P     21 13 11.6 +1.7
      baz=302
K20K  Telida            63.15  29 P     P     21 13 11.0 +1.1
K20K                              IAmb  IAmb  21 13 11.6
      comp=Z,17nm,1.5s
FETA  Feichten          63.26 310 eP    P     21 13 11.0  0.0
      comp=Z,18nm,1.1s,SNR=8.8
STU   Stuttgart         63.35 312 P     P     21 13 11.6 +0.1
STU                               pmax  pmax
      comp=Z,26nm,1.2s
STU   Stuttgart         63.35 312 P     P     21 13 11.6 +0.1
STU                               IAmb  IAmb  21 13 19.9
      comp=Z,26nm,1.2s
L19K  White Mountain    63.45  30 P     P     21 13 13.7 +1.8
      baz=301
L19K  White Mountain    63.45  30 P     P     21 13 12.9 +1.0
L19K                              IAmb  IAmb  21 13 16.7
      comp=Z,11nm,1.1s
MLY   Manley            63.48  27 P     P     21 13 13.6 +1.5
      baz=303
MLY   Manley            63.48  27 IAmb  IAmb  21 13 14.2
      comp=Z,8.3nm,1.0s
NEEM  North Greenlan    63.50 353 i P   P     21 13 12.9 +0.5
NEEM                              IAmb  IAmb  21 13 14.8
      comp=Z,25nm,0.7s
CHUM  Lake Minchumin    63.53  28 P     P     21 13 14.1 +1.8
      baz=303
DAVA  Damuels           63.64 311 eP    P     21 13 16.6 +3.0
      comp=Z,11nm,1.1s
NRCA  Norcia            63.73 305 P     P     21 13 13.5 -0.7
NRCA                              IAmb  IAmb  21 13 19.8
      comp=Z,20nm,1.0s
AQU   L'Aquila          63.77 304 P     P     21 13 14.3 -0.1
AQU                               pmax  pmax
      comp=Z,33nm,1.1s
AQU   L'Aquila          63.77 304 P     P     21 13 14.3 -0.1
I23K  Minto, Yukon-K    63.90  26 P     P     21 13 16.6 +1.8
      baz=304
BPAW  Bear Paw Mtn.     63.90  28 P     P     21 13 16.1 +1.2
      baz=304
MURB  Monte Urbino      63.91 306 P     P     21 13 14.4 -0.9
BFO   Black Forest      64.07 312 P     P     21 13 16.3 +0.1
BFO                               pmax  pmax
      comp=Z,20nm,1.1s
BFO   Black Forest      64.07 312 P     P     21 13 16.3 +0.1
BFO                               IAmb  IAmb  21 13 17.9
      comp=Z,20nm,1.1s
PPLA  Purkeypile        64.12  29 P     P     21 13 17.8 +1.4
      baz=303
BMAR  Burnt Mountain    64.13  23 P     P     21 13 17.0 +0.7
KTH   Kantishna Hill    64.23  28 IAmb  IAmb  21 13 21.2
      comp=Z,17nm,1.0s
BTNL  Ternell           64.24 315 dP    P     21 13 17.5 +0.2
      comp=Z,8.4nm,1.2s
MEM   Membach           64.30 315 dP    P     21 13 18.2 +0.6
      comp=Z,8.2nm,1.0s
NEA2  Nenana            64.32  27 P     P     21 13 19.0 +1.4
      baz=305
NEA2  Nenana            64.32  27 IAmb  IAmb  21 13 22.5
      comp=Z,20nm,1.4s
BHOU  Houvegnez         64.42 315 dP    P     21 13 18.6 +0.1
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      comp=Z,7.7nm,1.4s
TCOL  CIGO, UAF Yank    64.58  26 P     P     21 13 18.6 -0.6
TCOL                              IAmb  IAmb  21 13 21.0
      comp=Z,11nm,0.8s
COLA  College           64.58  26 i P   P     21 13 19.5 +0.3
COLA                              pmax  pmax
      comp=Z,10.0nm,1.0s
COLA  College           64.58  26 P     P     21 13 20.3 +1.0
      baz=306
COLA  College           64.58  26 P     P     21 13 17.9 -1.3
COLA                              IAmb  IAmb  21 13 21.1
      comp=Z,12nm,0.8s
POKR  Poker Plat Res    64.58  26 P     P     21 13 19.1 -0.2
PRMA  PARMA             64.58 308 P     P     21 13 19.8 +0.2
WLF   Walferdange       64.67 314 dP    P     21 13 20.7 +0.6
      comp=Z,18nm,1.2s
WLF   Walferdange       64.67 314 P     P     21 13 20.0 -0.1
WLF                               pmax  pmax
      comp=Z,46nm,1.2s
WLF   Walferdange       64.67 314 P     P     21 13 20.0 -0.1
BCLA  Clavier           64.78 315 dP    P     21 13 20.6 -0.2
      comp=Z,13nm,1.2s
ECH   Echery            64.81 312 IAmb  IAmb  21 13 22.7
      comp=Z,15nm,1.1s
MCK   McKinley          64.86  27 P     P     21 13 23.0 +1.9
      baz=305
BGES  Gesves            64.92 315 dP    P     21 13 22.9 +1.1
      comp=Z,6.6nm,0.0s
RCHB  Rochefort         64.95 315 dP    P     21 13 23.0 +1.1
      comp=Z,8.8nm,1.3s
ILAR  Eielson Array     64.97  26 P     P     21 13 21.1 -0.8
      comp=Z,4.3nm,0.9s,baz=291,slow=5.6,SNR=36
ILAR                              LR    LR    21 44 57.6
      comp=Z,560nm,18.3s,baz=324,slow=39
RND   Reindeer          65.08  28 P     P     21 13 23.0 +0.4
RND                               pmax  pmax
      comp=Z,5.0nm,0.7s
RND   Reindeer          65.08  28 P     P     21 13 23.0 +0.4
CUT   Chulitna          65.13  29 P     P     21 13 24.1 +1.2
      baz=305
CUT   Chulitna          65.13  29 P     P     21 13 22.8 -0.1
BMRD  Maredsous         65.14 315 dP    P     21 13 23.6 +0.5
SNF   Seneffe           65.30 316 dP    P     21 13 24.7 +0.6
      comp=Z,13nm,1.1s
DOU   Dourbes           65.33 315 dP    P     21 13 25.1 +0.7
      comp=Z,8.4nm,1.2s
COEN  Coen              65.40 134 P     P     21 13 25.2  0.0
COEN                              IAmb  IAmb  21 13 30.0
      comp=Z,13nm,0.8s
WAT1  Susitna Watana    65.53  28 P     P     21 13 26.1 +0.5
      baz=306
SENIN Lac Senin/Sane    65.64 311 P     P     21 13 26.2 -0.5
SENIN                             IAmb  IAmb  21 13 33.8
      comp=Z,22nm,1.1s
WB0   Warramunga Arr    65.73 145 IAmb  IAmb  21 13 31.4
      comp=Z,14nm,1.0s
A36M  Sachs Harbour     65.76  14 P     P     21 13 28.4 +1.7
      baz=322
A36M  Sachs Harbour     65.76  14 P     P     21 13 27.1 +0.4
A36M                              IAmb  IAmb  21 13 40.0
      comp=Z,20nm,0.9s
DHY   Denali Highway    65.82  28 P     P     21 13 27.9 +0.4
      baz=307
DHY   Denali Highway    65.82  28 P     P     21 13 27.4 -0.2
DHY                               IAmb  IAmb  21 13 31.2
      comp=Z,16nm,1.4s
WRA   Warramunga Arr    65.86 145 P     P     21 13 27.1 -1.0
      comp=Z,6.7nm,0.7s,baz=344,slow=6.7,SNR=62
WB2   Warramunga Arr    65.86 145 IAmb  IAmb  21 13 29.7
      comp=Z,14nm,0.8s
WR0   Warramunga Arr    65.97 145 P     P     21 13 28.0 -0.8
WR0                               IAmb  IAmb  21 13 33.6
      comp=Z,14nm,1.1s
WAT6  Susitna Watana    65.98  28 P     P     21 13 29.7 +1.1
      baz=307
PMR   Palmer            66.04  29 P     P     21 13 29.2 +0.4
      baz=306
SUMG  Summit            66.10 347 P     P     21 13 29.7 +0.2
SUMG                              pmax  pmax
      comp=Z,12nm,1.0s
SUMG  Summit            66.10 347 i P   P     21 13 29.2 -0.3
SUMG                              IAmb  IAmb  21 13 31.2
      comp=Z,11nm,0.9s
SUMG  Summit            66.10 347 P     P     21 13 29.7 +0.2
SUMG                              IAmb  IAmb  21 13 30.9
      comp=Z,12nm,1.0s
SML   Sawmill           66.22  29 P     P     21 13 30.8 +0.8
      baz=306
J26L  Joseph Creek      66.27  25 P     P     21 13 30.9 +0.6
      baz=309
RIDG  Independent Ri    66.31  26 P     P     21 13 30.6 +0.1
      baz=308
RIDG  Independent Ri    66.31  26 IAmb  IAmb  21 13 31.3
      comp=Z,14nm,0.9s
KNK   Knik Glacier      66.40  29 P     P     21 13 32.5 +1.3
      baz=307
KNK   Knik Glacier      66.40  29 IAmb  IAmb  21 13 35.2
      comp=Z,11nm,0.8s
SCRK  Sand Creek        66.46  26 P     P     21 13 31.9 +0.3
      baz=309
PAX   Paxson            66.57  27 P     P     21 13 33.0 +0.7
      baz=308
SCM   Sheep Creek Mo    66.58  29 P     P     21 13 32.3 -0.1
SCM                               pmax  pmax
      comp=Z,24nm,0.9s
SCM   Sheep Creek Mo    66.58  29 P     P     21 13 33.8 +1.5
      baz=307
SCM   Sheep Creek Mo    66.58  29 P     P     21 13 32.3 -0.1
INK   Inuvik            66.67  19 P     P     21 13 33.7 +1.0
      baz=316
INK   Inuvik            66.67  19 IAmb  IAmb  21 13 58.1
      comp=Z,13nm,1.4s
BNI   Bardonecchia      66.68 310 IAmb  IAmb  21 13 58.3
      comp=Z,25nm,1.3s
M24K  Tolsona, Glenn    66.85  28 P     P     21 13 35.9 +1.8
      baz=308
HARP  HAARP             67.04  27 P     P     21 13 37.1 +1.9
      baz=309
KLU   Klutina           67.32  28 P     P     21 13 38.5 +1.4
      baz=308
DIV   Divide            67.61  29 IAmb  IAmb  21 13 40.6
      comp=Z,14nm,0.8s
N25K  Chitina, Valde    67.75  28 P     P     21 13 41.3 +1.5
      baz=309
N25K  Chitina, Valde    67.75  28 IAmb  IAmb  21 13 44.4
      comp=Z,11nm,0.7s
L27K  Beaver Creek,     67.79  26 P     P     21 13 41.5 +1.5
      baz=311
M26K  Nabesna, AK       67.81  27 P     P     21 13 41.7 +1.5
      baz=310
M26K  Nabesna, AK       67.81  27 IAmb  IAmb  21 13 46.0
      comp=Z,6.2nm,0.6s
ASAR  Alice Springs     68.93 147 P     P     21 13 47.0 -0.4
      comp=Z,5.9nm,0.9s,baz=340,slow=6.9,SNR=57
ASAR                              LR    LR    21 46 05.8
      comp=Z,176nm,21.6s,baz=326,slow=38
ASAR  Alice Springs     68.93 147 P     P     21 13 47.8 +0.3
ASAR  Alice Springs     68.93 147 P     P     21 13 47.8 +0.3
ICESG Greenland Ices    69.23 346 eP    P     21 13 49.0 -0.3
ICESG                             IAmb  IAmb  21 13 50.4
      comp=Z,32nm,1.3s
KMBO  Kilima Mbogo      69.83 252 P     P     21 13 53.5 -0.1
      comp=Z,6.7nm,0.9s,baz=39,slow=10.0,SNR=14
KMBO                              LR    LR    21 43 50.2
      comp=Z,448nm,21.7s,baz=86,slow=35
KMBO  Kilima Mbogo      69.83 252 i P   P     21 13 53.8 +0.2
      SNR=7.7
KMBO  Kilima Mbogo      69.83 252 i P   P     21 13 54.5 +0.9
KMBO                              pmax  pmax
      comp=Z,7.0nm,0.9s
KMBO  Kilima Mbogo      69.83 252 P     P     21 13 51.0 -2.6
KMBO                              IAmb  IAmb  21 13 55.4
      comp=Z,16nm,1.2s
KEST  Kesra             69.85 300 LR    LR    21 51 09.7
      comp=Z,217nm,18.7s,baz=354,slow=42
KIBK  Kibwezi           70.04 250 P     P     21 13 53.2 -1.4
KIBK                              IAmb  IAmb  21 13 56.5
      comp=Z,15nm,1.3s
HYT   Haines Junctio    70.82  26 P     P     21 14 00.7 +1.9
      baz=315
SFJD  Kangerlussuaq     73.03 349 P     P     21 14 12.3 +0.5
SFJD                              pmax  pmax
      comp=Z,19nm,0.7s
SFJD  Kangerlussuaq     73.03 349 P     P     21 14 12.3 +0.5
MBAR  Mbarara           74.45 257ceP    P     21 14 22.0 +0.8
MBAR  Mbarara           74.45 257 P     P     21 14 19.2 -2.0
YKA   Yellowknife Ar    75.98  16 P     P     21 14 29.6 +0.5
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	comp=Z,0.7nm,0.4s,baz=338,slow=5.5,SNR=5.4						
YKA				LR	LR	21 52 10.2	
	comp=Z,189nm,18.4s,baz=0.0,slow=39						
ESDC	Sonseca Array	76.21	310	P	P	21 14 30.6	-0.2
	comp=Z,7.6nm,1.0s,baz=44,slow=6.0,SNR=18						
ESDC				LR	LR	21 49 57.9	
	comp=Z,491nm,22.0s,baz=25,slow=37						
ESDC	Sonseca Array	76.21	310	IAmb	IAmb	21 14 32.9	
	comp=Z,14nm,1.2s						
VOI	Vohitsoka	78.00	230	P	P	21 14 41.5	+0.4
VOI				IAmb	IAmb	21 14 43.3	
	comp=Z,20nm,1.1s						
VOI	Vohitsoka	78.00	230	P	P	21 14 43.0	+1.9
STKA	Stephens Creek	79.41	145	P	P	21 14 49.4	+0.9
	comp=Z,3.6nm,0.8s,baz=312,slow=12,SNR=6.0						
LSZ	Lusaka	85.85	247	P	P	21 15 23.5	+1.0
LSZ				pmax	pmax		
	comp=Z,29nm,1.4s						
LSZ	Lusaka	85.85	247	P	P	21 15 23.5	+1.0
LSZ				IAmb	IAmb	21 15 24.5	
	comp=Z,29nm,1.4s						
DZM	Mont Dzumac	86.06	122	*e*LR	LR	21 42 45.8	
	comp=Z,418nm,26.1s						
SCHQ	Schefferville	86.90	353	P	P	21 15 26.2	-0.9
	comp=Z,5.8nm,0.8s,baz=322,slow=2.7,SNR=4.1						
SCHQ				LR	LR	21 56 34.1	
	comp=Z,406nm,18.4s,baz=10,slow=37						
B08A	Colville Reser	87.05	25	P	P	21 15 26.9	-1.1
C09A	Chrisman Ranch	87.89	25	IAmb	IAmb	21 15 34.6	
	comp=Z,7.7nm,1.1s						
TORD	Torodi Ar. Bea	88.74	286	P	P	21 15 35.6	-0.9
	comp=Z,6.8nm,1.0s,baz=40,slow=2.6,SNR=28						
TORD				LR	LR	22 03 03.0	
	comp=Z,227nm,18.1s,baz=60,slow=41						
TORD	Torodi Ar. Bea	88.74	286	IAmb	IAmb	21 15 37.8	
	comp=Z,14nm,1.1s						
JTMT	Jette	89.21	23	IAmb	IAmb	21 15 53.6	
	comp=Z,8.8nm,1.1s						
F10A	Beach Ranch, E	89.84	25	IAmb	IAmb	21 15 48.7	
	comp=Z,6.7nm,0.8s						
EGMT	Eagleton	90.25	20	P	P	21 15 43.9	+0.8
	baz=337						
PINE	Pine Mountain	90.40	29	P	P	21 15 43.1	-1.0
J05D	Fort Rock, OR	90.72	29	P	P	21 15 46.9	+1.4
	baz=328						
ULM	Lac du Bonnet	90.98	10	LR	LR	22 00 02.4	
	comp=Z,409nm,19.5s,baz=332,slow=38						
PLID	Pearl Lake	91.03	25	IAmb	IAmb	21 15 48.2	
	comp=Z,7.4nm,1.1s						
K05A	Summer Lake	91.32	29	IAmb	IAmb	21 15 51.6	
	comp=Z,22nm,1.4s						
J08A	Circle Bar Ran	91.68	27	IAmb	IAmb	21 16 00.4	
	comp=Z,8.6nm,1.1s						
KOWA	Kowa	92.19	290	P	P	21 15 52.0	-0.5
KOWA				IAmb	IAmb	21 15 53.6	
	comp=Z,10nm,0.9s						
PDAR	Pinedale Array	95.13	22	LR	LR	22 03 17.5	
	comp=Z,166nm,18.8s,baz=338,slow=38						
NVAR	Mina Array Bea	96.02	30	LR	LR	22 01 22.1	
	comp=Z,224nm,20.0s,baz=306,slow=37						
BOSA	Boshof	96.54	239	LR	LR	21 57 46.5	
	comp=Z,335nm,21.4s,baz=26,slow=34						
DBIC	Dimbokro	97.81	285	LR	LR	22 05 10.3	
	comp=Z,276nm,21.9s,baz=66,slow=38						
SYO	Syowa Base	115.65	200	⇑*e*Pdiff	Pdif	21 17 37.4	+1.2
SYO	Syowa Base	115.65	200	⇑*e*X	Pdif	21 17 40.0	+3.8
PPT2	Papeete2	116.23	92	*e*LR	LR	21 56 39.6	
	comp=Z,181nm,21.8s						
TAOE	Nuku Hiva Isla	118.53	78	*e*LR	LR	21 57 45.7	
	comp=Z,286nm,27.3s						
TBI	Tubuai	119.44	98	*e*LR	LR	21 58 13.3	
	comp=Z,163nm,25.2s						
VNDA	Vanda	121.07	167	PKP	PKPdf	21 21 33.1	-0.7
	comp=Z,1.1nm,0.8s,baz=290,slow=4.0,SNR=7.6						
QSPA	South Pole Qui	127.75	180	PKPdf	PKPdf	21 21 45.6	-1.3
SNAA	Sanae	129.69	204	PKPdf	PKiKP	21 21 51.6	+0.3
VNA2	Neumayer--Watz	131.16	205	PKPdf	PKiKP	21 21 54.1	-0.1
	baz=40,slow=1.4						
VNA1	Neumayer--Stat	131.46	205	PKPdf	PKiKP	21 21 54.7	0.0
VNA3	Neumayer Olymp	131.89	204	PKPdf	PKiKP	21 21 55.7	0.0
BDFB	Brasilia	144.37	300	PKP	PKPab	21 22 17.0	-0.3
	comp=Z,23nm,1.0s,baz=53,slow=4.9,SNR=21						
BDFB	Brasilia	144.37	300	PKIKP	PKPbc	21 22 17.8	+0.2
BDFB	Brasilia	144.37	300	PKPdf	PKPbc	21 22 17.8	+0.2
SAML	Samuel	147.52	329	PKP2	PKPbc	21 22 26.1	-1.0
SAML	Samuel	147.52	329		PKPbc	21 22 26.1	-1.0
VILB	Vilhena	149.67	320	PKPdf	PKPdf	21 22 27.4	-0.7
PLCA	Paso Flores	172.48	246	PKP	PKPdf	21 22 52.4	+1.1
	comp=Z,2.2nm,1.1s,baz=97,slow=2.7,SNR=3.3						
PLCA	Paso Flores	172.48	246		PKPdf	21 22 49.5	-1.8

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*TUL **22** 21:32:58±0.5, 36°.71N±0°.02×98°.29W±0°.05, h6^{km}±7^{km}, ML2.7, mb_Lg2.1/5(NEIC), Error ellipse: s-maj=5.8km s-min=2.8km az=94.0*

NEIC 22 21:32:58.4±0.9, **36°.70N**±0°.02×**98°.29W**±0°.05, **h10**^{km}±7^{km}, **Error ellipse: s-maj=6.3km s-min=3.0km az=93.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK032	Salt Plains WL	0.12	32	Pg	Pg	21 33 00.9	-0.4
OK032				Sg	Sg	21 33 03.1	-0.4
CROK	Carrier	0.32	128	Pg	Pg	21 33 04.6	-0.1
CROK				Sg	Sg	21 33 09.3	+0.4
KAN14	Manchester OK	0.37	46	Pg	Pg	21 33 05.4	-0.3
KAN14				Sg	Sg	21 33 10.8	+0.2
GC02	Grant County #	0.38	66	Pg	Pg	21 33 05.7	-0.2
GC02				Sg	Sg	21 33 11.3	+0.4
KAN10	Anthony SW Sta	0.45	20	Pg	Pg	21 33 06.7	-0.5
KAN17	Caldwell West	0.55	51		Pg	21 33 08.6	-0.4
KAN16	Harper SW Stat	0.56	19		Pg	21 33 08.4	-0.8
U32A	Winter Ranch,	0.66	241	Pg	Pg	21 33 10.7	-0.4
KAN13	South Haven SW	0.72	64		Pg	21 33 11.9	-0.5
BLOK	Blackwell	0.87	86	Pg	Pg	21 33 14.5	-0.6
OK025	Westminster Rd	1.36	145	Pn	Pn	21 33 22.9	-0.5
QUOK	Quay	1.38	112	Pn	Pn	21 33 23.6	-0.1
OK031	S. Brethren Rd	1.39	122	Pn	Pn	21 33 23.8	0.0
OK030	Cody Creek RV	1.44	122		Pn	21 33 24.7	+0.2
T35A	Sooner Cattle	1.44	81	Pn	Pn	21 33 24.6	0.0
FNO	Franklin	1.61	153	Pn	Pn	21 33 27.0	+0.2
R32A	Long Quarter,	1.75	349	Pn	Pn	21 33 28.7	-0.1
WMOK	Wichita Mounta	2.00	192		Pn	21 33 32.3	+0.1
X34A	Smith Ranch, M	2.13	170	Pn	Pn	21 33 34.2	+0.2
TUL1	Leonard	2.17	111	Pn	Pn	21 33 34.8	+0.3
CBKS	Cedar Bluff	2.40	332	IAmb_Lg		21 34 12.4	
	comp=Z,8.1nm,0.9s						
KSU1	Kansas State U	2.74	29	Pn	Pn	21 33 42.4	0.0
U38A	Gravette	3.15	94	Pn	Pn	21 33 48.2	+0.1
X37A	Clayton	3.18	131	Pn	Pn	21 33 48.5	+0.1
AMTX	Amarillo	3.30	238	IAmb_Lg		21 34 47.8	
	comp=Z,6.5nm,0.7s						
U40A	Yellville	4.39	93		Sg	21 35 17.8	-1.6
MSTX	Muleshoe	4.56	235	IAmb_Lg		21 35 24.1	
	comp=Z,4.2nm,0.7s						

IDC 22 21:33:46.4±1.6, **6°.30S**×**129°.50E**, **h0**^{km}, **mb3.5**/1, **mb1 3.4**/3, **mb1mx3.3**/20, **mbtmp3.2**/3, **ML3.1**/2, **Error ellipse: s-maj=148.5km s-min=12.3km az=68.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.36	161	Pn	Pn	21 37 12.3	+1.2
	0.1nm,0.3s,baz=346,slow=12,SNR=2.0						
WRA				Sn	Sn	21 39 41.0	-10
	0.2nm,0.3s,baz=336,slow=22,SNR=6.6						
ASAR	Alice Springs	17.78	167	P	Pn	21 37 54.6	-0.9
	0.1nm,0.3s,baz=356,slow=12,SNR=4.3						
MKAR	Makanchi Array	67.37	327	P	P	21 44 43.6	+0.1
	0.2nm,0.4s,baz=116,slow=8.5,SNR=5.9						

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*TUL **22** 21:56:40.7±0.9, 36°.52N±0°.02×98°.62W±0°.03, h7^{km}±7^{km}, ML2.7, mb_Lg2.2/6(NEIC), Error ellipse: s-maj=4.3km s-min=2.1km az=136.0*

NEIC 22 21:56:41.0±0.9, **36°.50N**±0°.02×**98°.59W**±0°.02, **h8**^{km}±7^{km}, **Error ellipse: s-maj=2.8km s-min=2.1km az=157.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	Winter Ranch,	0.35	251	Pg	Pg	21 56 47.7	-0.2
U32A				Sg	Sg	21 56 52.8	+0.3
OK032	Salt Plains WL	0.43	45	Pg	Pg	21 56 49.1	-0.3
OK032				Sg	Sg	21 56 55.5	+0.4
CROK	Carrier	0.49	89	Pg	Pg	21 56 50.8	+0.3
KAN14	Manchester OK	0.68	48		Pg	21 56 53.9	-0.2
GC02	Grant County #	0.69	59	Pg	Pg	21 56 54.0	-0.3
KAN17	Caldwell West	0.86	50		Pg	21 56 57.0	-0.5
KAN12	Harper NE Stat	0.93	31	Pg	Pg	21 56 58.0	-0.8
KAN09	Caldwell North	1.01	50	Pg	Pg	21 56 59.7	-0.7
KAN13	South Haven SW	1.03	60		Pg	21 57 00.2	-0.7
BLOK	Blackwell	1.14	76	Pg	Pg	21 57 02.1	-0.7
OK029	Liberty Lake	1.16	127	Pg	Pg	21 57 02.5	-0.7
OK025	Westminster Rd	1.37	132	Pn	Pn	21 57 06.1	-0.3
OK031	S. Brethren Rd	1.52	110	Pn	Pn	21 57 08.7	+0.2
QUOK	Quay	1.56	101	Pn	Pn	21 57 09.3	+0.3
OK030	Cody Creek RV	1.57	111		Pn	21 57 09.1	0.0
FNO	Franklin	1.57	142	Pn	Pn	21 57 09.2	0.0
T35A	Sooner Cattle	1.72	75	Pn	Pn	21 57 11.2	-0.1
WMOK	Wichita Mounta	1.76	185		Pn	21 57 11.6	-0.2
R32A	Long Quarter,	1.93	357		Pn	21 57 14.2	+0.1
X34A	Smith Ranch, M	1.99	162	Pn	Pn	21 57 15.2	+0.3
TUL1	Leonard	2.34	104	Pn	Pn	21 57 19.7	-0.1
TUL1				IAmb_Lg		21 57 54.4	
	comp=Z,8.6nm,0.8s						
AMTX	Amarillo	2.98	238	IAmb_Lg		21 58 17.0	
	comp=Z,9.4nm,0.8s						
U38A	Gravette	3.39	90	Pn	Pn	21 57 34.7	+0.5
HHAR	Hobbs	3.76	92	Pn	Pn	21 57 40.3	+1.0
MSTX	Muleshoe	4.25	235	IAmb_Lg		21 59 02.3	
	comp=Z,3.7nm,0.7s						
T25A	Trinidad	4.71	280	IAmb_Lg		21 59 13.9	
	comp=Z,8.8nm,0.8s						

IDC 22 22:00:27.9±0.8, **26°.44N**×**143°.08E**, **h0**^{km}, **mb3.6**/3, **mb1 3.8**/3, **mb1mx3.3**/43, **mbtmp3.6**/3, **MS3.6**/2, **Ms1 3.6**/2, **ms1mx2.7**/46, **Error ellipse: s-maj=29.7km s-min=7.0km az=49.0, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	1.03	310	Pn	Pn	22 00 49.6	-0.1
	100nm,0.3s,baz=273,slow=23,SNR=82						
JCJ				Sn	Sn	22 01 06.8	+1.9
	245nm,0.3s,baz=278,slow=22,SNR=8.2						
WRA	Warramunga Arr	46.88	191	P	P	22 09 00.4	+0.4
	0.7nm,0.6s,baz=12,slow=8.4,SNR=5.5						
MKAR	Makanchi Array	51.51	310	P	P	22 09 35.1	-0.3
	0.1nm,0.5s,baz=78,slow=11,SNR=1.7						
AAK	Ala-Archa	57.29	305	LR	LR	22 35 51.3	
	comp=Z,39nm,19.2s,baz=124,slow=37						
PALK	Pallekele	62.09	264	LR	LR	22 33 26.6	
	comp=Z,75nm,21.8s,baz=65,slow=32						
FINES	FINESS Array B	78.89	334	P	P	22 12 34.3	+1.5
	0.7nm,0.6s,baz=55,slow=5.2,SNR=5.6						

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*IDC **22** 22:04:20.4±2.6, 8°.71S×67°.91E, h0^{km}, mb3.6/6, mb1 3.8/6, mb1mx3.5/54, mbtmp3.6/6, MS3.1/1, Ms1 3.1/1, ms1mx2.7/43, Error ellipse: s-maj=73.6km s-min=32.0km az=64.0*

ISC 22 22:04:21.4±1.9, **8°.8S**±0°.3×**67°.8E**±0°.2, **h10**^{km}, **n14**, σ**0^{s}.97**/10, **mb3.8**/6, **Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	4.75	77	Pn	Pn	22 05 32.8	0.0
	baz=279,slow=15,SNR=27						
H08S3	Diego Garcia H	4.76	77	Pn	Pn	22 05 32.9	-0.1
	baz=279,slow=15,SNR=128						
H08S2	Diego Garcia H	4.77	77	Pn	Pn	22 05 33.1	0.0
	baz=279,slow=15,SNR=47						
ATD	Arta Tunnel	31.97	309	LR	LR	22 21 06.4	
	comp=Z,34nm,19.5s,baz=30,slow=31						
CMAR	Chiang Mai Arr	40.92	49	P	P	22 12 04.8	+0.5
	1.1nm,0.5s,baz=245,slow=9.6,SNR=12						
H01W3	Cape Leeuwin H	49.67	129	T	T	23 06 45.7	
	baz=291,slow=75,SNR=4.9						
H01W2	Cape Leeuwin H	49.67	129	T	T	23 06 47.2	
	baz=291,slow=75,SNR=5.2						
H01W1	Cape Leeuwin H	49.69	129	T	T	23 06 48.2	
	baz=291,slow=75,SNR=5.3						
MKAR	Makanchi Array	56.78	12	P	P	22 14 04.5	-1.2
	0.3nm,0.7s,baz=199,slow=8.6,SNR=4.6						
ZALV	Zalesovo Beam	64.09	11	P	P	22 14 54.2	-1.3
	0.2nm,0.4s,baz=224,slow=4.0,SNR=1.7						
ASAR	Alice Springs	64.69	112	P	P	22 14 59.5	-0.7
	0.3nm,0.4s,baz=280,slow=6.2,SNR=4.7						
WRA	Warramunga Arr	65.07	108	P	P	22 15 02.6	0.0
	0.8nm,0.9s,baz=276,slow=5.8,SNR=4.4						
SONM	Songino Array	65.86	27	P	P	22 15 08.4	+1.0
	0.3nm,0.7s,baz=225,slow=5.5,SNR=2.8						
NVAR	Mina Array Bea	149.94	10	PKPbc	PKiKP	22 24 14.9	+1.2
	0.2nm,0.5s,baz=90,slow=1.8,SNR=4.0						

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*IDC **22** 22:07:19.6±1.3, 12°.98N×50°.72E, h0^{km}, mb3.6/5, mb1 3.8/6, mb1mx3.4/51, mbtmp3.6/6, ML3.7/1, MS3.2/4, Ms1 3.2/4, ms1mx2.8/48, Error ellipse: s-maj=44.3km s-min=28.5km az=165.0*

ISC 22 22:07:22.0±1.2, **13°.0N**±0°.3×**50°.7E**±0°.2, **h15**^{km}, **n10**, σ**0^{s}.72**/6, **mb3.7**/5, **MS3.1**/4, **Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATD	Arta Tunnel	7.82	260	Pn	Pn	22 09 15.6	+0.2
	1.0nm,0.3s,baz=96,slow=19,SNR=2.5						
GEYT	Alibeck	25.68	14	LR	LR	22 24 57.0	
	comp=Z,75nm,18.8s,baz=60,slow=41						
GNI	Garni	27.54	350	LR	LR	22 25 36.6	
	comp=Z,31nm,19.7s,baz=202,slow=40						
MKAR	Makanchi Array	42.87	32	P	P	22 15 20.6	+0.9
	0.4nm,0.8s,baz=230,slow=7.6,SNR=2.4						
TORD	Torodi Ar. Bea	47.68	276	P	P	22 15 58.1	-0.3
	0.4nm,0.7s,baz=99,slow=7.0,SNR=2.7						
ZALV	Zalesovo Beam	48.90	26	P	P	22 16 06.4	-0.7
	0.4nm,0.5s,baz=247,slow=7.4,SNR=1.7						
NOA	NORSAR Array B	55.84	338	LR	LR	22 44 11.0	
	comp=Z,9.1nm,19.7s,baz=210,slow=40						
KAPI	Kappang	70.86	100	LR	LR	22 48 11.4	
	comp=Z,32nm,18.1s,baz=89,slow=35						
WRA	Warramunga Arr	88.52	111	P	P	22 20 14.9	+0.2
	0.5nm,0.8s,baz=298,slow=3.4,SNR=4.5						
ASAR	Alice Springs	89.05	114	P	P	22 20 16.9	-0.3
	0.2nm,0.4s,baz=302,slow=3.8,SNR=4.3						

KRSC 22 22:12:50.9±1.4, **49°.08N**×**157°.12E**, **h7**^{km}±35^{km}, **ML3.7**, **East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.73	338	S	Sb	22 13 44.7	-0.3
PAU	Pauzhetka	2.40	355	S	Sb	22 14 02.6	-1.5
UGLR	Uglovaya	4.27	14	P	Pn	22 14 01.3	+4.9
KOK	Koryaka	4.33	12	P	Pn	22 14 02.0	+4.9
SDLR	Sedlovina	4.35	14	P	Pn	22 14 01.2	+3.8
MKZ	Mys Kozlova	6.18	26	P	Pn	22 14 27.1	+4.6

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*IDC **22** 22:13:48.0±1.1, 37°.93N×100°.75E, h0^{km}, mb3.6/5, mb1 3.8/7, mb1mx3.5/72, mbtmp3.7/7, ML3.6/3, Error ellipse: s-maj=34.1km s-min=19.1km az=68.0*

ISC 22 22:13:49.5±1.0, **38°.0N**±0°.1×**100°.5E**±0°.2, **h10**^{km}, **n8**, σ**1^{s}.53**/8, **mb3.6**/4, **Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	10.76	22	Pn	Pn	22 16 24.0	+0.2
	0.3nm,0.3s,baz=205,slow=14,SNR=15						
SONM				Lg	Lg	22 19 29.1	
	0.5nm,0.3s,baz=211,slow=31,SNR=7.1						
MKAR	Makanchi Array	16.09	309	Pn	Pn	22 17 33.2	-2.6
	0.0nm,0.3s,baz=117,slow=12,SNR=2.6						
CMAR	Chiang Mai Arr	19.48	185	P	P	22 18 17.4	+0.8
	0.4nm,0.3s,baz=1.1,slow=8.3,SNR=6.3						
KURBB	Kurchatov Arra	20.12	316	P	P	22 18 23.8	+0.4
	0.6nm,0.3s,baz=123,slow=12,SNR=5.1						
FINES	FINESS Array B	50.29	323	P	P	22 22 46.8	+1.0
	4.1nm,1.1s,baz=75,slow=8.1,SNR=6.3						
BRTR	Keskin Array B	51.02	294	P	P	22 22 52.8	+1.0
	0.5nm,0.8s,baz=87,slow=10,SNR=2.7						
WRA	Warramunga Arr	65.78	145	P	P	22 24 33.4	-1.4
	0.4nm,0.6s,baz=332,slow=3.6,SNR=2.4						
ASAR	Alice Springs	68.85	147	P	P	22 24 53.8	-0.5
	0.1nm,0.4s,baz=345,slow=6.4,SNR=5.8						

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*SJA **22** 22:16:51.3±0.6, 23°.60S×69°.15W, h127^{km}±4^{km}, ML5.0, MW4.7*

*NEIC **22** 22:16:52.8, 23°.61S×68°.92W, h110^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.95; M$_{\theta\theta}$0.17; M$_{\phi\phi}$1.77; M$_{r\theta}$-0.99; M$_{\theta\phi}$0.61; M$_{\phi r}$-2.38; Fault plane solution: M$_0$3.24000×10^{16} NP1:φ$_s$195.43000°, δ18.72000°, λ-96.03000°. NP2:φ$_s$21.79000°, δ71.39000°, λ-87.96000°. Principal axes: T 3.2586, Plg26.0000°, Azm110.0000°; N -0.0275, Plg2.0000°, Azm201.0000°; P -3.2310, Plg64.0000°, Azm295.0000°;*

*NEIC **22** 22:16:52.8±1.9, 23°.64S±0°.04×68°.91W±0°.06, h92^{km}±3^{km}, mb5.2/368, Mwr4.9/27, ML5.1(GUC) Error ellipse: s-maj=8.7km s-min=6.5km az=96.0*

*MOS **22** 22:16:52.7±1.4, 23°.56S×68°.93W, h100^{km}, mb5.5/19, Error ellipse: s-maj=14.9km s-min=6.5km az=106.9*

*VAO **22** 22:16:53.6±0.4, 23°.49S×68°.75W, h85^{km}, mb5.2*

*IDC **22** 22:16:54.5±0.3, 23°.50S×68°.84W, h106^{km}±2^{km}, mb4.5/29, mb1 4.6/33, mb1mx4.5/50, mbtmp4.8/33, MS3.7/10, Ms1 3.7/10, ms1mx3.4/26, Error ellipse: s-maj=11.7km s-min=6.6km az=71.0*

*GUC **22** 22:16:54.3±0.7, 23°.63S×69°.05W, h97^{km}±6^{km}, ML5.1*

*GCMT **22** 22:16:58.8±0.3, 23°.72S±0°.02×69°.26W±0°.02, h94^{km}±4^{km}, MW4.9/93, Moment Tensor Solution. s22,c22; s93,c120; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.67±.13; M$_{\theta\theta}$0.90±.14; M$_{\phi\phi}$0.77±.19; M$_{r\theta}$-0.48±.07; M$_{\theta\phi}$1.60±.13; M$_{\phi r}$-2.25±.09; Best double couple: M$_0$3.15100×10^{16} NP1:φ$_s$255.00000°, δ30.00000°, λ-39.00000°. NP2: φ$_s$20.00000°, δ72.00000°, λ-114.00000°. Principal axes: T 3.2460, Plg23.0000°, Azm128.0000°; N -0.1860, Plg23.0000°, Azm28.0000°; P -3.0560, Plg57.0000°, Azm258.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 22:16:53.1±0.3, **23°.65S**±0°.03×**68°.98W**±0°.03, **h98**^{km}±2^{km}, **n709**, σ**1^{s}.35**/663, **mb5.2**/206, **75C-153D**, **Fault plane solution: NP1:**φ$_s$0.82468°, δ71.91097°, λ-98.23759°. **NP2:**φ$_s$205.82256°, δ19.81913°, λ-66.31560°. **Principal axes:** T Plg26.4662°, Azm97.3230°; N Plg7.8278°, Azm3.3984°; P Plg62.2239°, Azm258.2682°; **Fault plane solution: NP1:**φ$_s$55.75030°, δ59.80287°, λ-85.94624°. **NP2:**φ$_s$227.73009°, δ30.44255°, λ-96.92611°. **Principal axes:** T Plg14.7123°, Azm142.7878°; N Plg3.5029°, Azm233.7088°; P Plg74.8580°, Azm336.7828°; **Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB15	IPOC Station P	0.62	314	⇑*i*P	Pn	22 17 10.6	+0.6
PB15	IPOC Station P	0.62	314		Pn	22 17 09.7	-0.2
PB15				Sn	Sn	22 17 23.1	+0.6
PB15	IPOC Station P	0.62	314	*e*P	Pn	22 17 10.6	+0.6
PB15				IAML		22 17 29.8	
	comp=Z,63µm,0.4s						
LVC	Limon Verde	1.03	4	P	Pn	22 17 14.9	+0.7
	comp=Z,1µm,0.3s,baz=175,slow=8.1,SNR=8903						
LVC				S	Sn	22 17 30.4	+0.4
	comp=Z,5µm,0.3s,baz=246,slow=22,SNR=60						
LVC	Limon Verde	1.03	4	*e*P	Pn	22 17 14.7	+0.5
LVC				*i* S	Sn	22 17 31.3	+1.3
LVC	Limon Verde	1.03	4	*e*P	Pn	22 17 14.9	+0.7
LVC				*e*S	Sn	22 17 31.5	+1.6
LVC				IAML		22 17 32.5	
	comp=Z,14µm,0.8s						
PB06	IPOC Station P	1.08	330	⇑*i*P	Pn	22 17 14.9	+0.4
PB06				*i* S	Sn	22 17 30.7	+0.1
PB06	IPOC Station P	1.08	330		Pn	22 17 14.1	-0.4
PB06				Sn	Sn	22 17 30.6	0.0
PB06	IPOC Station P	1.08	330	*e*P	Pn	22 17 14.9	+0.4
PB06				*e*S	Sn	22 17 31.6	+1.0
PB06				IAML		22 17 32.1	
	comp=Z,19µm,0.3s						
PB05	IPOC Station P	1.37	305	⇑*i*P	Pn	22 17 17.8	0.0
PB05				*i* S	Sn	22 17 35.8	-0.8
PB05	IPOC Station P	1.37	305	*e*P	Pn	22 17 17.0	-0.8
PB05				*e*S	Sn	22 17 36.2	-0.3
PB05				IAML		22 17 37.4	
	comp=Z,9µm,0.6s						
PB10	IPOC Station P	1.45	275	⇑*i*P	Pn	22 17 18.8	+0.2
PB10				*i* S	Sn	22 17 37.0	-1.0
PB10	IPOC Station P	1.45	275	Pn	Pn	22 17 18.4	-0.2
PB10				Sn	Sn	22 17 37.0	-1.0
PB10	IPOC Station P	1.45	275	*e*P	Pn	22 17 18.0	-0.6
PB10				*e*S	Sn	22 17 38.1	+0.1
PB14	IPOC Station P	1.62	233	⇑*i*P	Pn	22 17 21.4	+0.3
PB14				*i* S	Sn	22 17 42.0	-0.4
PB14	IPOC Station P	1.62	233		Pn	22 17 20.9	-0.2
PB14	IPOC Station P	1.62	233	*e*P	Pn	22 17 16.1	-5.0
PB14				*e*P	Pn	22 17 21.0	-0.1
PB14				*e*S	Sn	22 17 41.1	-1.2
PB14				IAML		22 17 43.2	
	comp=Z,13µm,0.6s						
PB04	IPOC Station P	1.69	320	⇑*i*P	Pn	22 17 21.6	-0.2
PB04				*i* S	Sn	22 17 42.7	-0.9
PB04				IAML		22 17 43.8	
	comp=N,31µm,0.4s						
PB04	IPOC Station P	1.69	320		Pn	22 17 20.6	-1.2
PB04	IPOC Station P	1.69	320	*e*P	Pn	22 17 16.1	-5.7
PB04				*e*P	Pn	22 17 21.0	-0.8
PB04				*e*S	Sn	22 17 42.9	-0.8
PB04				IAML		22 17 43.2	
	comp=Z,14µm,0.7s						
PB03	IPOC Station P	1.74	336	⇑*i*P	Pn	22 17 22.7	+0.2
PB03				*i* S	Sn	22 17 43.2	-1.5
PB03				IAML		22 17 45.3	
	comp=N,33µm,0.3s						
PB03	IPOC Station P	1.74	336	*e*P	Pn	22 17 22.0	-0.5
PB03				*e*S	Sn	22 17 44.6	-0.2
PB03				IAML		22 17 45.4	
	comp=Z,21µm,0.3s						
PB09	IPOC Station P	1.86	353	*e*P	Pn	22 17 25.1	+1.1
PB09				*i* S	Sn	22 17 47.7	+0.3
PB09				IAML		22 17 50.8	
	comp=E,26µm,0.7s						
PB09	IPOC Station P	1.86	353		Pn	22 17 24.3	+0.4
PB09	IPOC Station P	1.86	353	*e*P	Pn	22 17 25.0	+1.1
PB09				*e*S	Sn	22 17 49.7	+2.3
PB09				IAML		22 17 51.9	
	comp=Z,19µm,0.6s						
PB07	IPOC Station P	2.08	336	⇑*i*P	Pn	22 17 26.8	-0.1
PB07				*i* S	Sn	22 17 49.1	-3.5
PB07				IAML		22 17 52.4	
	comp=E,12µm,0.5s						
PB07	IPOC Station P	2.08	336		Pn	22 17 26.3	-0.5
PB07	IPOC Station P	2.08	336	*e*P	Pn	22 17 21.1	-5.8
PB07				*e*P	Pn	22 17 26.0	-0.9
PB07				*e*S	Sn	22 17 44.6	-8.1
PB07				*e*S	Sn	22 17 52.1	-0.6
PB07				IAML		22 17 56.3	
	comp=Z,11µm,0.4s						
PB01	IPOC Station P	2.63	350	⇑*i*P	Pn	22 17 33.8	-0.1
PB01				*i* S	Sn	22 17 59.3	-6.1
PB01				IAML		22 18 06.2	
	comp=E,7µm,0.4s						
PB01	IPOC Station P	2.63	350		Pn	22 17 33.9	-0.1
PB01	IPOC Station P	2.63	350	*e*P	Pn	22 17 34.0	0.0
PB01				*e*S	Sn	22 18 03.1	-2.3
PB01				IAML		22 18 03.9	
	comp=Z,5µm,0.4s						
AC02	Maricunga	3.18	182		Pn	22 17 43.1	+1.4
AC02	Maricunga	3.18	182	*e*P	Pn	22 17 38.1	-3.5
AC02				*e*P	Pn	22 17 43.0	+1.4
AC02				IAML		22 18 49.2	
	comp=Z,2µm,0.7s						
TA01	Diego Aracena	3.26	340		Pn	22 17 40.5	-1.8
TA01	Diego Aracena	3.26	340	*e*P	Pn	22 17 40.0	-2.3
TA01				IAML		22 18 51.0	
	comp=Z,3µm,1.0s						
HJA	Humahuaca	3.31	83	*e*P	Pn	22 17 47.0	+3.7
SLA	San Lorenzo	3.35	109	*e*P	Pn	22 17 47.1	+3.4
SLA				*e*S	Sn	22 18 25.1	+2.4
PB08	IPOC Station P	3.49	357	IAML		22 18 50.5	
	comp=E,3µm,0.4s						
PB08	IPOC Station P	3.49	357	Pn	Pn	22 17 45.2	-0.6
PB08	IPOC Station P	3.49	357	*e*P	Pn	22 17 45.0	-0.8

PB08				eS	Sn	22 18 26.6	+0.2
PB08				eS	Sn	22 18 43.1	+17
PB08				IAML		22 18 51.9	
	comp=Z,2µm,0.6s						
YJA	Yavi	3.52	66	eP	Pn	22 17 50.0	+3.9
YJA				eS	Sn	22 18 21.1	-6.0
TA02	Huaiquique	3.52	342		Pn	22 17 43.8	-2.0
TA02	Huaiquique	3.52	342	eP	Pn	22 17 45.0	-0.8
TA02				eS	Sn	22 18 07.6	-19
TA02				IAML		22 18 50.3	
	comp=Z,4µm,0.6s						
AZAP	Zapla	3.63	100	eP	Pn	22 17 50.0	+2.5
AZAP				IAML		22 18 38.6	
	comp=Z,947nm,0.8s						
FSA	Cafayete	3.67	133	eP	Pn	22 17 50.7	+2.8
PB11	IPOC Station P	3.92	351	eP	Pn	22 17 44.6	-6.7
PB11				eP	Pn	22 17 50.0	-1.3
PB11				eP	Pn	22 17 50.3	-1.0
PB11				eS	Sn	22 18 35.2	-1.2
PB11				IAML		22 19 02.6	
	comp=Z,3µm,0.6s						
GO03	Copiap	4.09	196	Pn	Pn	22 17 52.6	-0.9
GO03	Copiap	4.09	196	eP	Pn	22 17 53.0	-0.5
GO03				eS	Sn	22 18 53.6	+13
ASTB	Santa Barbara	4.16	95	eP	Pn	22 17 57.0	+2.5
AHML	Horco Molle	4.55	134	eP	Pn	22 18 02.0	+2.3
AHML				eP	Pn	22 18 02.5	+2.9
AHML				eS	Sn	22 18 51.1	-0.4
ALOL	LOMAS DE OLMED	4.59	93	eP	Pn	22 18 02.0	+1.8
ALOL				eP	Pn	22 18 02.5	+2.3
AC04	Llanos de Chal	4.91	202	Pn	Pn	22 18 02.3	-2.3
AC04	Llanos de Chal	4.91	202	eP	Pn	22 18 03.0	-1.6
AC04				IAML		22 19 42.8	
	comp=Z,947nm,0.8s						
VCA	Vinchina	5.12	172	eP	Pn	22 18 09.0	+1.5
VCA				eS	Sn	22 18 52.1	-13
VCA				IAML		22 18 57.7	
	comp=Z,921nm,1.4s						
PB12	IPOC Station P	5.16	346	Pn	Pn	22 18 05.1	-3.1
PB12	IPOC Station P	5.16	346	eP	Pn	22 18 05.0	-3.1
PB12				eP	Pn	22 18 05.3	-2.8
PB12				eS	Sn	22 19 02.1	-4.4
PB12				IAML		22 19 58.4	
	comp=Z,779nm,0.7s						
LCO	Las Campanas	5.56	196	P	Pn	22 18 11.4	-2.2
LCO	Las Campanas	5.56	196	Pn	Pn	22 18 11.4	-2.2
LCO	Las Campanas	5.56	196	eP	Pn	22 18 11.0	-2.6
CYA	Choya	5.57	150	eP	Pn	22 18 14.9	+1.5
ACLC	CERRO LA CRUZ	6.04	163	eP	Pn	22 18 20.5	+0.5
ACLC				eS	Sn	22 19 27.8	0.0
AROD	Rodeo	6.51	184	eP	Pn	22 18 27.0	+0.4
AROD				eS	Sn	22 19 43.4	+3.9
GO04	Tololo Observa	6.70	194	eP	Pn	22 18 16.1	-13
GO04				eP	Pn	22 18 27.0	-2.1
GO04				eS	Sn	22 19 40.7	-3.3
ACCO	Cerro Coronel	6.91	181	eP	Pn	22 18 32.2	+0.1
ACCO				eS	Sn	22 19 47.9	-1.5
APLL	PUNTA DE LOS L	7.07	162	eP	Pn	22 18 33.9	0.0
APLL				eS	Sn	22 19 50.3	-2.5
AVFE	Valle Fertil	7.12	169	eP	Pn	22 18 34.0	-0.6
AVFE				eP	Pn	22 18 34.2	-0.4
AVFE				eS	Sn	22 19 51.1	-2.9
CO03	El Pedregal	7.32	192	eP	Pn	22 18 35.0	-2.4
LPAZ	La Paz	7.37	6	eP	Pn	22 18 35.5	-3.0
ACHE	Chepes	7.76	165	eP	Pn	22 18 38.1	-5.4
ACHE				eP	Pn	22 18 43.0	-0.5
ACHE				eS	Sn	22 20 07.1	-2.7
RTLS	Leoncito	8.13	182	eP	Pn	22 18 47.0	-1.5
RTLS				eP	Pn	22 18 47.4	-1.1
RTLS				eS	Sn	22 20 15.6	-3.3
RTCV	Cerro Valdivia	8.19	177	eP	Pn	22 18 48.3	-0.9
RTCV				eS	Sn	22 20 15.5	-4.6
AUSP	Uspallata	8.55	182	eP	Pn	22 18 53.0	-1.3
ASAL	Salagasta	8.91	179	eP	Pn	22 18 58.0	-1.0
ASAL				eS	Sn	22 20 37.4	-0.3
ARCO	CERRO ARCO	9.16	180	eP	Pn	22 19 01.7	-0.7
ARCO				eS	Sn	22 20 43.1	-0.8
VA03	San Esteban	9.19	188	eP	Pn	22 19 00.0	-2.8
VA03				eS	Sn	22 20 41.3	-3.1
AAGR	Agrelo	9.40	179	eP	Pn	22 19 05.0	-0.7
AAGR				eS	Sn	22 20 46.5	-3.2
SIV	San Ignacio	10.65	46	P	Pn	22 19 19.5	-3.2
	comp=Z,6.4nm,0.3s,baz=235,slow=9.3,SNR=136						
SIV				S	Sn	22 21 12.2	-7.8
	comp=Z,8.6nm,0.3s,baz=335,slow=21,SNR=8.3						
SIV				LR	LR	22 23 13.7	
	comp=Z,204nm,19.0s,baz=266,slow=36						
CPUP	Villa Florida	10.90	107	P	Pn	22 19 24.7	-1.4
	comp=Z,1.3nm,0.3s,baz=285,slow=11,SNR=35						
CPUP				LR	LR	22 24 11.5	
	comp=Z,698nm,20.2s,baz=275,slow=40						
CPUP	Villa Florida	10.90	107	eP	Pn	22 19 24.4	-1.7
CPUP	Villa Florida	10.90	107	Pn	Pn	22 19 23.5	-2.6
ML02	Panimavida	12.26	189	Pn	Pn	22 19 44.9	+0.8
PTLB	Pontes e Lacer	12.35	50	eP	Pn	22 19 42.0	-3.5
PTLB	Pontes e Lacer	12.35	50	Pn	Pn	22 19 41.6	-3.9
ITQB	Itaqui	12.57	121	eP	Pn	22 19 47.1	-1.2
ITQB	Itaqui	12.57	121	Pn	Pn	22 19 47.1	-1.2
AQDB	Aquidauana	12.71	78	eP	Pn	22 19 48.4	-1.9
AQDB	Aquidauana	12.71	78	Pn	Pn	22 19 48.9	-1.4
VILB	Vilhena	13.51	40	eP	Pn	22 19 58.4	-2.4
VILB	Vilhena	13.51	40	Pn	Pn	22 19 58.4	-2.4
NNA	Nana	13.79	326	P	Pn	22 20 03.7	-0.8
	comp=Z,1.0nm,0.3s,baz=215,slow=14,SNR=2.1						
NNA	Nana	13.79	326	Pn	Pn	22 20 02.5	-2.0
ETMB	Extrema	14.01	11	Pn	Pn	22 20 03.4	-3.8
PP1B	Ponte de Pedra	14.51	68	eP	Pn	22 20 11.2	-2.5
SALV	Santo Antonio	14.68	61	eP	Pn	22 20 14.2	-1.8
TRCB	Terra Rica	15.06	90	eP	Pn	22 20 19.7	-0.9
TRCB	Terra Rica	15.06	90	P	Pn	22 20 18.4	-2.3
CPSB	Cacapava Do Su	15.39	119	eP	Pn	22 20 23.9	-0.9
LC01	Cunco	15.40	189	P	Pn	22 20 23.0	-1.9
PTGB	Pitanga	15.48	97	eP	Pn	22 20 25.9	-0.1
TRQA	Tornquist	15.56	159	P	Pn	22 20 26.0	-0.9
TRQA				pmax	pmax		
	comp=Z,144nm,0.8s						
TRQA	Tornquist	15.56	159		Pn	22 20 26.0	-0.9
TRQA				IAmb	IAmb	22 20 34.6	
	comp=Z,144nm,0.8s						
SAML	Samuel	15.63	22	P	Pn	22 20 28.3	+0.3
SAML				pmax	pmax		
	comp=Z,156nm,0.7s						
SAML	Samuel	15.63	22	P	Pn	22 20 28.2	+0.3
SAML				IAmb	IAmb	22 20 47.9	
	comp=Z,156nm,0.7s						
PLTB	Pedras Altas	15.83	124	eP	Pn	22 20 28.5	-1.8
PLTB	Pedras Altas	15.83	124		Pn	22 20 28.2	-2.1
PLTB				IAmb	IAmb	22 20 29.2	
	comp=Z,152nm,1.0s						
LR03	Panguipulli	16.19	189	P	P	22 20 35.9	-0.1
CZSB	Cruzeiro do Su	16.22	347	eP	Pn	22 20 34.8	-0.5
CZSB	Cruzeiro do Su	16.22	347	P	Pn	22 20 34.7	-0.6
CZSB				IAmb	IAmb	22 20 39.0	
	comp=Z,113nm,0.8s						
PCMB	Pacaembu	16.49	86	eP	Pn	22 20 37.2	-1.3
PDRB	Porto dos Gac	16.71	46	eP	Pn	22 20 38.8	-2.4
PLCA	Paso Flores	17.09	184	P	Pn	22 20 44.7	-1.1
	comp=Z,0.2nm,0.3s,baz=32,slow=13,SNR=7.3						
PLCA				LR	LR	22 29 07.1	
	comp=Z,256nm,18.5s,baz=24,slow=42						
PLCA	Paso Flores	17.09	184	P	Pn	22 20 44.9	-0.9
PLCA				pmax	pmax		
	comp=Z,22nm,1.4s						
PLCA	Paso Flores	17.09	184	P	Pn	22 20 44.9	-0.9
CNLB	Canela	17.18	113	eP	Pn	22 20 45.4	-1.7
LL04	Puerto Octay	17.45	189	P	P	22 20 48.4	-1.6
LL03	Petrohue	17.68	189	P	P	22 20 51.8	-0.6
ITRB	Iturama	17.75	81	eP	P	22 20 52.8	-0.6
FRTB	Fartura	17.82	93	eP	P	22 20 53.7	-0.5
CLDB	Colider	17.87	47	eP	P	22 20 53.6	-1.1
ARAG	Araguaiana, MT	17.98	67	eP	P	22 20 55.3	-0.7
LL05	Los Muermos	18.10	191	P	P	22 20 57.0	0.0
TIJ01	Guaruva-PR	18.26	99	eP	P	22 20 58.9	-0.2
TER01	Tubaro-SC	18.48	109	eP	Pn	22 21 01.4	-1.2
ATAH	Atahualpa	18.74	330	P	P	22 21 04.4	-0.3
	comp=Z,0.2nm,0.3s,baz=148,slow=10.0,SNR=2.8						
LL01	San Ignacio de	18.90	188	P	P	22 21 03.6	-2.2
BB19B	Bebedouro	19.09	86	eP	P	22 21 07.2	-1.0
TBTG	Tabatinga, AM	19.37	357	eP	P	22 21 11.7	+0.6
TBTG	Tabatinga, AM	19.37	357		P	22 21 11.7	+0.6
RCLB	Rio Claro- Sao	19.78	91	eP	P	22 21 13.8	-1.9
PET01	Itanhaem-SP	19.85	96	eP	P	22 21 16.0	-0.3
IPMB	Ipameri, GO	20.21	78	eP	P	22 21 18.8	-1.5
VAO	Valinhos	20.23	93	eP	P	22 21 18.6	-1.9
SNDB	Serra Nova Dou	20.43	58	eP	P	22 21 20.1	-2.5
NPGB	Novo Progresso	21.07	41	eP	P	22 21 26.8	-2.7
BDFB	Brasilia	21.28	72	P	P	22 21 29.9	-1.9
	comp=Z,96nm,0.7s,baz=244,slow=11,SNR=128						
BDFB	Brasilia	21.28	72	P	P	22 21 30.8	-1.0
BDFB				pmax	pmax		
	comp=Z,142nm,0.9s						
BDFB	Brasilia	21.28	72	P	P	22 21 30.8	-1.0
BDFB				IAmb	IAmb	22 21 33.0	
	comp=Z,142nm,0.9s						
PARB	Paraibuna	21.43	94	eP	P	22 21 33.3	0.0
MACA	Manacapuru-AM	21.89	23	eP	P	22 21 37.2	-1.0
MACA	Manacapuru-AM	21.89	23	P	P	22 21 37.1	-1.1
MACA				IAmb	IAmb	22 21 45.4	
	comp=Z,47nm,0.6s						
COYC	Coyhaique	22.02	186	P	P	22 21 38.4	-0.9
BSCB	Bom Sucesso	22.55	88	eP	P	22 21 43.0	-2.2
PEXB	Peixe	22.75	63	eP	P	22 21 46.3	-0.9
MAN01	Angra dos Reis	23.00	93	eP	P	22 21 50.0	+0.4
ITTB	Itaituba	23.04	36	eP	P	22 21 48.5	-1.5
VAS01	Vassouras-RJ	23.55	92	eP	P	22 21 54.8	0.0
DIAM	Diamantina, MG	24.21	82	eP	P	22 22 01.1	+0.3
PTGA	Pitinga	24.40	22	P	P	22 22 01.5	-0.9
	comp=Z,13nm,0.8s,baz=204,slow=11,SNR=22						
PTGA				LR	LR	22 32 27.1	
	comp=Z,216nm,18.4s,baz=358,slow=38						
PTGA	Pitinga	24.40	22	P	P	22 22 02.2	-0.2
MC01	Montes Claros	24.48	78	eP	P	22 22 03.0	-0.2
DUB01	Friburgo-RJ	24.56	92	eP	P	22 22 05.2	+1.3
SMTB	Santa Maria do	25.20	58	eP	P	22 22 09.2	-0.6
CAM01	Campos-RJ	25.25	91	eP	P	22 22 10.8	+0.6
PRPB	Parauapebas	25.34	50	eP	P	22 22 09.8	-1.2
SDBA	SAO DESIDERIO	25.44	68	eP	P	22 22 11.4	-0.6
OTAV	Otavalo	25.46	338	ceP	P	22 22 15.3	+2.8
OTAV				pmax	pmax		
	comp=Z,13nm,1.3s						
OTAV	Otavalo	25.46	338	eP	P	22 22 14.3	+1.8
OTAV	Otavalo	25.46	338	P	P	22 22 13.8	+1.2
MALB	Monte Alegre	25.94	35	eP	P	22 22 19.3	+3.0
GCUF	Volcan Galeras	26.03	341	eP	P	22 22 17.4	-0.3
ALF01	Guarapari-ES	26.33	89	eP	P	22 22 20.7	+0.8
SJMB	Sao Joao De Ma	26.36	85	eP	P	22 22 20.7	+0.5
BSFB	Barra de Sao F	26.64	85	eP	P	22 22 23.3	+0.6
SOTA	Rioblanco	26.68	343	eP	P	22 22 24.3	+0.8
PCON	Cinco Dias	26.81	343	eP	P	22 22 27.1	+2.3
RIB01	Linhares ES	26.93	86	eP	P	22 22 25.7	+0.4
BOAV	Boa Vista	27.16	19	eP	P	22 22 27.8	+0.5
BOAV	Boa Vista	27.16	19	P	P	22 22 27.2	-0.1
MARP	Paez Belalcaza	27.19	345	eP	P	22 22 27.1	-0.8
NAN01	Guarapari, ES	27.57	83	eP	P	22 22 30.8	-0.2
PRAC	Prado	27.80	347	eP	P	22 22 32.6	-0.4
PTGC	Puerto Gaitan,	27.85	353	eP	P	22 22 34.0	+0.6
ORTC	Ortega, Tolima	28.06	347	eP	P	22 22 35.4	0.0
GUA01	Guaratinga, BA	28.25	81	eP	P	22 22 36.7	-0.4
YOTC	Yotoco, Valle	28.39	344	eP	P	22 22 36.8	-1.6
MCPB	Macapa, AP	28.39	38	eP	P	22 22 37.7	-0.6
ROSC	El Rosal	28.79	349	P	P	22 22 42.6	+0.3
	comp=Z,7.4nm,0.6s,baz=109,slow=21,SNR=4.2						
ROSC	El Rosal	28.79	349	P	P	22 22 42.4	+0.1
CMC01	Camacan, BA	28.93	79	eP	P	22 22 43.2	+0.1
NBIT	Itapeh - BA	29.16	78	eP	P	22 22 45.6	+0.5
PLMC	San Jos del P	29.26	345	eP	P	22 22 46.5	+0.5
TMAB	Tom-Au,PA,Br	29.26	47	eP	P	22 22 45.7	-0.3
GDU01	Guandu, BA	29.50	76	eP	P	22 22 47.0	-1.2
SPBC	San Pablo de B	29.54	350	eP	P	22 22 47.9	-0.7
NORC	Norcasia	29.59	348	eP	P	22 22 47.9	-1.1
RUSC	La Rusia	29.63	352	eP	P	22 22 49.3	-0.5
CBOC	Ciudad Bolivar	30.12	346	eP	P	22 22 53.5	-0.4
NBPN	Ponto Novo - B	30.22	70	eP	P	22 22 54.9	+0.3
HELC	Santa Helena	30.34	347	eP	P	22 22 55.1	-0.8
ZARC	Zaragoza, Cauc	31.48	349	eP	P	22 23 03.2	-2.4
ROSB	Rosrio	31.68	53	eP	P	22 23 07.2	-0.2
UREC	San Jos de Ur	31.86	348	eP	P	22 23 07.3	-1.6
NBLA	Lagarto - SE	32.24	72	eP	P	22 23 10.8	-1.5
SDV	Santo Domingo	32.37	357	P	P	22 23 11.6	-2.0
	comp=Z,8.1nm,0.4s,baz=206,slow=6.9,SNR=6.2						
SDV	Santo Domingo	32.37	357	eP	P	22 23 12.3	-1.3
SDV	Santo Domingo	32.37	357	P	P	22 23 12.3	-1.3
SMLC	San Martn de	32.63	351	eP	P	22 23 12.9	-2.8
NBPS	Pedro II - PI	32.74	58	eP	P	22 23 15.8	-1.0
NBMA	Muriti-CE	33.20	66	eP	P	22 23 20.0	-0.7
NBPB	Pedra_Branca-C	33.54	62	eP	P	22 23 22.7	-1.0
SJCC	San Jacinto, C	33.88	349	eP	P	22 23 23.9	-2.7
NBAN	Anadia - AL	34.17	72	eP	P	22 23 27.5	-1.7
NBLV	Livramento - P	34.76	67	eP	P	22 23 34.0	-0.2
NBCL	Cascavel-CE	35.35	62	eP	P	22 23 37.6	-1.7
NBPA	Parau_RN	35.45	65	eP	P	22 23 39.6	-0.6
DRK0	Durika	35.56	335	P	P	22 23 41.8	+0.6
SRBA	San Rafael, Bu	35.57	335	P	P	22 23 42.2	+0.9
SRBA				IAmb	IAmb	22 23 44.5	
	comp=Z,45nm,1.1s						
NBRF	Rio Formoso -	35.64	71	eP	P	22 23 40.4	-1.4
RIMA	Rio Macho	36.26	335	P	P	22 23 46.3	-0.9
RIMA				IAmb	IAmb	22 23 49.9	
	comp=Z,24nm,0.9s						
RPN	Rapa Nui	36.51	256	LR	LR	22 36 12.9	
	comp=Z,51nm,18.9s,baz=75,slow=32						
NBPV	Pedro Velho	36.63	68	eP	P	22 23 50.5	+0.3
JTS	Las Juntas de	37.17	333	P	P	22 23 55.7	+1.0
JTS				pmax	pmax		
	comp=Z,19nm,1.3s						
JTS	Las Juntas de	37.17	333	P	P	22 23 55.7	+1.0
COVE	Coope Vega, Sa	37.34	334	P	P	22 23 56.8	+0.7
ORTG	Ortega, Santa	37.45	333	P	P	22 23 57.0	-0.1
ORTG				IAmb	IAmb	22 24 00.4	
	comp=Z,28nm,1.0s						
HZTE	Horizontes, Gu	37.82	333	P	P	22 24 00.9	+0.7
HOPE	Hope Point	39.05	150	P	P	22 24 10.7	+0.7
HOPE				pmax	pmax		
	comp=Z,43nm,1.1s						
HOPE	Hope Point	39.05	150	P	P	22 24 10.7	+0.7
HOPE				IAmb	IAmb	22 24 16.5	
	comp=Z,43nm,1.1s						
OBIP	Obispado Ponce	41.50	3	P	P	22 24 29.5	-1.1
OBIP				IAmb	IAmb	22 24 31.0	
	comp=Z,58nm,1.4s						
TGUH	Tegucigalpa,Un	41.52	333	P	P	22 24 31.5	+0.5
SJG	San Juan	41.60	4	P	P	22 24 29.0	-2.4
	comp=Z,7.3nm,0.7s,baz=128,slow=11,SNR=5.2						
SJG	San Juan	41.60	4	P	P	22 24 29.2	-2.2
SJG				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SJG	San Juan	41.60	4	P	P	22 24 29.2	-2.2
MTO3	Montecristo	42.74	330	P	P	22 24 41.7	+0.7
MTO3				IAmb	IAmb	22 24 43.1	
	comp=Z,23nm,0.9s						
APG	El Apazote	43.78	329	P	P	22 24 49.4	-0.1
	comp=Z,12nm,0.9s,baz=174,slow=8.6,SNR=12						
PETF	Flores	45.18	331	P	P	22 25 01.2	+0.9
PETF				IAmb	IAmb	22 25 02.1	
	comp=Z,38nm,0.8s						
CMIG	Matias Romero	47.74	326	P	P	22 25 19.8	-0.5
	comp=Z,11nm,0.9s,baz=177,slow=4.6,SNR=4.0						
SOR	Soroa	48.13	343	P	P	22 25 23.5	+0.3
SOR				pmax	pmax		
	comp=Z,39nm,1.1s						
SOR	Soroa	48.13	343	P	P	22 25 23.5	+0.3
SOR				IAmb	IAmb	22 25 24.1	
	comp=Z,39nm,1.1s						
TLIG	Tlapa	50.12	322	P	P	22 25 39.0	+0.4
TLIG				IAmb	IAmb	22 25 40.9	
	comp=Z,14nm,0.7s						
ZAIG	Zacatecas	56.52	322	P	P	22 26 26.2	+0.6
BRAL	Brewton	57.19	342	P	P	22 26 29.8	0.0
	baz=160						
VNA3	Neumayer Olymp	58.08	161	P	P	22 26 37.0	+1.3
VNA1	Neumayer--Stat	58.30	160	P	P	22 26 39.1	+2.0
GOGA	Godfrey	58.40	346	P	P	22 26 37.3	-0.9
	baz=164						
VNA2	Neumayer--Watz	58.66	160	P	P	22 26 40.7	+1.0
	baz=286,slow=7.8						
X58A	Rowland	58.71	350	P	P	22 26 41.2	+0.8
JSC	Jenkinsville	58.78	348	P	P	22 26 41.0	+0.1
JSC				pmax	pmax		
	comp=Z,54nm,1.5s						
JSC	Jenkinsville	58.78	348	P	P	22 26 41.0	+0.1
Y52A	Lilburn	58.97	345	P	P	22 26 41.8	-0.4
Y52A				IAmb	IAmb	22 26 42.5	
	comp=Z,22nm,1.1s						
BIRD	Birdtown, Kers	58.99	349	P	P	22 26 41.9	-0.4
342A	Flagon Creek P	59.10	337	P	P	22 26 43.8	+0.6
HKT	Hockley	59.20	333	ceP	P	22 26 45.0	+1.2
HKT				pmax	pmax		
	comp=Z,19nm,1.7s						
HKT	Hockley	59.20	333	P	P	22 26 44.1	+0.3
HKT				IAmb	IAmb	22 26 45.6	
	comp=Z,20nm,1.2s						
Z47A	Carrollton	59.39	341	P	P	22 26 44.6	-0.5
833A	Chaparral WMA,	59.40	329	P	P	22 26 46.1	+0.8
	baz=148,SNR=17						
Y49A	Blount Mountai	59.54	343	P	P	22 26 45.4	-0.8
Y49A				IAmb	IAmb	22 26 45.7	
	comp=Z,14nm,0.7s						
KMSC	Kings Mountain	59.63	348	P	P	22 26 46.8	+0.1
	baz=167						
KMSC	Kings Mountain	59.63	348	P	P	22 26 47.2	+0.5
X51A	Calhoun	59.82	345	P	P	22 26 48.3	+0.2
FPAL	Fort Paine	59.98	344	P	P	22 26 48.6	-0.6
FPAL				IAmb	IAmb	22 26 49.4	
	comp=Z,27nm,1.2s						
U59A	Littleton	60.25	352	P	P	22 26 51.5	+0.5
X48A	Hartselle	60.27	343	P	P	22 26 50.7	-0.4
SNAA	Sanae	60.28	161	P	P	22 26 51.8	+0.9
SNAA	Sanae	60.28	161	P	P	22 26 51.9	+0.9
	comp=Z,5.8nm,0.8s,baz=283,slow=6.7,SNR=28						
SNAA	Sanae	60.28	161	P	P	22 26 51.8	+0.9
V55A	Taylorsville	60.30	349	P	P	22 26 51.9	+0.6
NATX	Nacogdoches	60.32	335	P	P	22 26 52.3	+0.7
	baz=153						
V53A	Saluda	60.43	347	P	P	22 26 52.2	-0.1
V53A				IAmb	IAmb	22 26 53.0	
	comp=Z,22nm,1.0s						
Y45A	Yeager Farm, C	60.45	340	P	P	22 26 51.9	-0.4
W50A	Signal Mountai	60.54	345	P	P	22 26 52.6	-0.3
CPCT	Cooper Cave	60.59	345	P	P	22 26 53.2	-0.1
CPCT				IAmb	IAmb	22 26 53.7	
	comp=Z,23nm,0.9s						
TKL	Tuckaleechee C	60.62	346	P	P	22 26 52.9	-0.7
	comp=Z,19nm,0.8s,baz=167,slow=7.9,SNR=16						
TKL				pP	pP	22 27 18.4	-0.3
	comp=Z,12nm,0.8s,baz=172,slow=8.9,SNR=4.5						
TKL	Tuckaleechee C	60.62	346	P	P	22 26 53.1	-0.4
TKL				IAmb	IAmb	22 26 53.8	
	comp=Z,24nm,0.9s						
435B	Jarrell	60.67	332	P	P	22 26 54.1	+0.1
	baz=150						
435B	Jarrell	60.67	332	P	P	22 26 55.0	+1.0
435B				IAmb	IAmb	22 26 55.0	
	comp=Z,21nm,0.8s						
SWET	Sewanee	60.71	344	P	P	22 26 53.5	-0.6
V52A	Sevierville	60.76	346	P	P	22 26 54.0	-0.5
V51A	Loudon	60.89	346	P	P	22 26 54.8	-0.5
V51A				IAmb	IAmb	22 26 55.0	
	comp=Z,16nm,0.9s						
Z41A	Richland Creek	60.97	337	P	P	22 26 56.5	+0.6
	baz=155						
237A	Washetta, Mont	60.99	334	P	P	22 26 56.9	+0.8
U54A	Nelsons Funny	61.06	348	P	P	22 26 56.8	+0.3
T57A	Hurt	61.09	351	P	P	22 26 57.0	+0.3
T57A				IAmb	IAmb	22 26 57.4	
	comp=Z,31nm,0.9s						
JCT	Junction City	61.41	330	P	P	22 26 59.3	+0.3
JCT				pmax	pmax		
	comp=Z,53nm,0.8s						
JCT	Junction City	61.41	330	P	P	22 26 59.2	+0.3
	baz=148,SNR=20						
JCT	Junction City	61.41	330	P	P	22 26 59.3	+0.3
V48A	Smith Brothers	61.43	344	P	P	22 26 58.6	-0.3
WLAR	White Oak Lake	61.47	337	P	P	22 26 59.8	+0.5
HPIG		61.52	323	P	P	22 27 00.2	+0.2
HPIG				IAmb	IAmb	22 27 02.2	
	comp=Z,42nm,1.3s						
SLBS	Sierra La Lagu	61.61	317	P	P	22 27 01.4	+0.9
SLBS				IAmb	IAmb	22 27 03.0	
	comp=Z,19nm,0.8s						
CLTN	Cedars of Leba	61.64	344	P	P	22 26 60.0	-0.4
WHTX	Lake Whitney,	61.66	333	P	P	22 27 00.5	-0.1
	baz=150,SNR=8.1						
WHTX	Lake Whitney,	61.66	333	P	P	22 27 00.8	+0.2
WHTX				IAmb	IAmb	22 27 01.2	
	comp=Z,24nm,0.8s						
S57A	Dark Hollow, R	61.80	351	P	P	22 27 02.1	+0.7
S57A				IAmb	IAmb	22 27 02.4	
	comp=Z,27nm,0.9s						
U49A	Red Boiling Sp	61.90	345	P	P	22 27 01.2	-0.9
U49A				IAmb	IAmb	22 27 01.7	
	comp=Z,13nm,0.7s						
WVT	Waverly	62.07	343	P	P	22 27 02.2	-1.0
WVT				pmax	pmax		
	comp=Z,50nm,0.8s						
WVT	Waverly	62.07	343	P	P	22 27 02.1	-1.1
	baz=160						
WVT	Waverly	62.07	343	P	P	22 27 02.2	-1.0
X40A	Basin Creek Fa	62.10	338	P	P	22 27 03.1	-0.3
	baz=155						
X40A	Basin Creek Fa	62.10	338	P	P	22 27 03.1	-0.3
T50A	Nancy	62.17	346	P	P	22 27 03.5	-0.4
T50A				IAmb	IAmb	22 27 04.0	
	comp=Z,31nm,1.2s						
TXAR	Lajitas Array	62.35	326	P	P	22 27 05.8	+0.4
	comp=Z,6.2nm,0.6s,baz=148,slow=8.6,SNR=70						
TXAR				sP	PcP	22 27 43.2	-0.9
	comp=Z,5.4nm,0.8s,baz=144,slow=7.9,SNR=6.2						
TX31	Lajitas Ar. Si	62.35	326	P	P	22 27 06.1	+0.7
TX31				IAmb	IAmb	22 27 07.0	
	comp=Z,40nm,1.1s						
TX32	Lajitas Array	62.35	326	P	P	22 27 05.7	+0.2
MIAR	Mount Ida	62.41	337	P	P	22 27 05.6	0.0
MIAR				pmax	pmax		
	comp=Z,26nm,0.9s						
MIAR	Mount Ida	62.41	337	P	P	22 27 05.5	-0.1
	baz=155,SNR=17						
MIAR	Mount Ida	62.41	337	P	P	22 27 05.6	0.0
MIAR				IAmb	IAmb	22 27 06.3	
	comp=Z,26nm,0.8s						
W41B	Gary Mavity, V	62.52	339	P	P	22 27 05.9	-0.4
	baz=156,SNR=7.6						
WHAR	Wooly Hollow	62.64	339	P	P	22 27 07.0	0.0
WHAR				IAmb	IAmb	22 27 07.6	
	comp=Z,18nm,0.8s						
T47A	Sharon Grove	62.68	344	P	P	22 27 06.6	-0.7
Z35A	Perchaven, San	62.74	334	P	P	22 27 07.9	+0.1
LCAR	Lake Charles	62.98	340	P	P	22 27 07.9	-1.4
LCAR				IAmb	IAmb	22 27 09.5	
	comp=Z,19nm,0.7s						
W39A	Magazine	63.07	337	P	P	22 27 10.2	+0.3
	baz=155,SNR=12						
W39A	Magazine	63.07	337	P	P	22 27 10.2	+0.3
W39A				IAmb	IAmb	22 27 11.2	
	comp=Z,32nm,0.8s						
Q56A	Snyder Ridge,	63.09	351	P	P	22 27 10.2	+0.2
Q56A				IAmb	IAmb	22 27 11.8	
	comp=Z,32nm,0.8s						
X37A	Clayton	63.11	336		P	22 27 10.4	+0.2
T45A	Paducah	63.12	342	P	P	22 27 09.7	-0.6
FCAR	Ozark Folk Cen	63.13	339	P	P	22 27 09.6	-0.8
FCAR				IAmb	IAmb	22 27 10.5	
	comp=Z,32nm,1.3s						
ABTX	Abilene, Hawle	63.15	331	P	P	22 27 10.8	+0.2
	baz=148,SNR=18						
ABTX	Abilene, Hawle	63.15	331	P	P	22 27 10.9	+0.4
ABTX				IAmb	IAmb	22 27 11.7	
	comp=Z,42nm,1.0s						
LOOK	Love County	63.29	334		P	22 27 11.5	+0.1
P57A	Homestead Farm	63.37	352	P	P	22 27 12.2	+0.4
P57A				IAmb	IAmb	22 27 13.7	
	comp=Z,23nm,0.8s						
PBMO	Poplar Bluff	63.42	341	P	P	22 27 11.2	-0.9
P60A	Greenville	63.43	354	P	P	22 27 12.5	+0.3
	baz=173						
WUPA	West Chester U	63.55	354	P	P	22 27 13.4	+0.4
WCI	Wyandotte Cave	63.66	345	P	P	22 27 12.7	-1.0
WCI				pmax	pmax		
	comp=Z,31nm,0.8s						
WCI	Wyandotte Cave	63.66	345	P	P	22 27 12.6	-1.0
	baz=162						
WCI	Wyandotte Cave	63.66	345	P	P	22 27 12.7	-1.0
WCI				IAmb	IAmb	22 27 13.5	
	comp=Z,31nm,0.8s						
MVL	Millersville	63.69	354	P	P	22 27 14.1	+0.2
MVL				IAmb	IAmb	22 27 14.9	
	comp=Z,18nm,0.8s						
Q51A	Peebles	63.78	348	P	P	22 27 12.9	-1.6
MCWV	Mont Chateau	63.79	351	P	P	22 27 14.9	+0.3
	baz=169						
MCWV	Mont Chateau	63.79	351	P	P	22 27 14.0	-0.6

MCWV				IAmb	IAmb	22 27 15.8	
	comp=Z,37nm,0.8s						
U40A	Yellville	63.80	339	P	P	22 27 14.3	-0.4
	baz=156,SNR=18						
U40A	Yellville	63.80	339	P	P	22 27 13.9	-0.9
U40A				IAmb	IAmb	22 27 15.2	
	comp=Z,32nm,0.8s						
T42A	Van Buren	63.85	340	P	P	22 27 14.3	-0.7
S44A	Carbondale	63.92	342	P	P	22 27 14.8	-0.7
S44A				IAmb	IAmb	22 27 15.6	
	comp=Z,36nm,0.8s						
SIUC	Southern Illin	63.93	342	P	P	22 27 15.2	-0.4
SIUC				IAmb	IAmb	22 27 15.7	
	comp=Z,38nm,0.9s						
PAGS	Pennsylvania G	63.95	353	P	P	22 27 15.2	-0.4
PAGS				IAmb	IAmb	22 27 16.8	
	comp=Z,27nm,1.0s						
X34A	Smith Ranch, M	64.08	334	P	P	22 27 16.6	0.0
X34A				IAmb	IAmb	22 27 17.7	
	comp=Z,30nm,0.8s						
HHAR	Hobbs	64.10	338	P	P	22 27 16.4	-0.3
P52A	Corning	64.14	349	P	P	22 27 16.3	-0.6
	baz=167						
P51A	Williamsport	64.16	348	P	P	22 27 15.6	-1.4
P51A				IAmb	IAmb	22 27 17.0	
	comp=Z,43nm,1.4s						
O56A	Blue Knob Stat	64.21	352	P	P	22 27 18.0	+0.7
	baz=170,SNR=6.1						
O56A	Blue Knob Stat	64.21	352	P	P	22 27 16.5	-0.9
O56A				IAmb	IAmb	22 27 19.5	
	comp=Z,34nm,1.0s						
MGMO	Mountain Grove	64.33	339	P	P	22 27 17.7	-0.6
MGMO				IAmb	IAmb	22 27 18.7	
	comp=Z,25nm,0.8s						
U38A	Gravette	64.40	337	P	P	22 27 18.5	-0.2
U38A				IAmb	IAmb	22 27 19.1	
	comp=Z,17nm,0.7s						
TUL1	Leonard	64.44	336	P	P	22 27 18.5	-0.4
	baz=153,SNR=9.7						
TUL1	Leonard	64.44	336		P	22 27 18.6	-0.3
TUL1				IAmb	IAmb	22 27 19.7	
	comp=Z,36nm,0.9s						
SSPA	Standing Stone	64.49	352	P	P	22 27 19.2	+0.1
	baz=171						
FVM	French Village	64.53	341	P	P	22 27 19.3	-0.2
FVM				pmax	pmax		
	comp=Z,82nm,0.7s						
FVM	French Village	64.53	341	P	P	22 27 19.3	-0.2
N59A	State Game Lan	64.54	354	P	P	22 27 20.2	+0.7
	baz=173						
P49A	Miami Univ. Ec	64.55	347	P	P	22 27 18.3	-1.2
	baz=164						
P49A	Miami Univ. Ec	64.55	347	P	P	22 27 18.1	-1.4
P49A				IAmb	IAmb	22 27 18.8	
	comp=Z,20nm,0.8s						
N58A	Sunbury	64.56	354	P	P	22 27 19.7	+0.1
N58A				IAmb	IAmb	22 27 20.7	
	comp=Z,20nm,0.9s						
O53A	New Philadelph	64.58	350	P	P	22 27 19.3	-0.5
	baz=168						
WMOK	Wichita Mounta	64.59	333	P	P	22 27 19.3	-0.6
WMOK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
WMOK	Wichita Mounta	64.59	333	P	P	22 27 19.1	-0.8
	baz=150,SNR=7.5						
WMOK	Wichita Mounta	64.59	333	P	P	22 27 19.3	-0.6
BLO	Bloomington	64.61	345	P	P	22 27 19.0	-1.0
BLO				pmax	pmax		
	comp=Z,18nm,0.8s						
BLO	Bloomington	64.61	345	P	P	22 27 19.0	-1.0
BLO				IAmb	IAmb	22 27 19.2	
	comp=Z,18nm,0.8s						
OK025	Westminster Rd	64.74	335		P	22 27 20.3	-0.6
OK030	Cody Creek RV	64.83	335	P	P	22 27 21.2	-0.3
CCM	Cathedral Cave	64.84	341	P	P	22 27 21.1	-0.4
CCM				pmax	pmax		
	comp=Z,42nm,0.7s						
CCM	Cathedral Cave	64.84	341	P	P	22 27 21.0	-0.5
	baz=158						
CCM	Cathedral Cave	64.84	341	P	P	22 27 21.1	-0.4
OK031	S. Brethren Rd	64.87	335		P	22 27 21.5	-0.2
ACSO	Alum Creek Sta	64.88	348	P	P	22 27 21.0	-0.6
	baz=166,SNR=6.7						
ACSO	Alum Creek Sta	64.88	348	P	P	22 27 21.2	-0.5
OK029	Liberty Lake	64.97	335		P	22 27 21.7	-0.7
Q44A	Meyer Farm, Va	64.99	343	P	P	22 27 20.8	-1.6
Q44A				IAmb	IAmb	22 27 22.5	
	comp=Z,28nm,0.9s						
QUOK	Quay	65.01	335	P	P	22 27 22.1	-0.5
N54A	Moraine State	65.09	351	P	P	22 27 23.4	+0.4
	baz=169,SNR=6.8						
N54A	Moraine State	65.09	351	P	P	22 27 23.1	+0.1
N54A				IAmb	IAmb	22 27 23.8	
	comp=Z,24nm,0.7s						
M57A	Sunshine Farm,	65.09	353	P	P	22 27 23.1	+0.1
O49A	Covington	65.10	347	P	P	22 27 22.4	-0.7
O49A				IAmb	IAmb	22 27 23.1	
	comp=Z,31nm,1.1s						
MNTX	Cornudas Mount	65.13	326	P	P	22 27 23.4	-0.1
	baz=143,SNR=37						
MNTX	Cornudas Mount	65.13	326	P	P	22 27 23.5	0.0
MNTX				IAmb	IAmb	22 27 24.4	
	comp=Z,20nm,0.9s						
S39A	Bolivar	65.17	339	P	P	22 27 23.4	-0.2
P46A	Rosedale	65.20	345	P	P	22 27 22.2	-1.5
P46A				IAmb	IAmb	22 27 23.2	
	comp=Z,28nm,1.1s						
R40A	Maddies Statio	65.37	340	P	P	22 27 24.5	-0.4
R40A				IAmb	IAmb	22 27 25.4	
	comp=Z,36nm,0.9s						
M55A	Ridgway	65.42	352	P	P	22 27 25.5	+0.3
M55A				IAmb	IAmb	22 27 26.4	
	comp=Z,39nm,0.8s						
M54A	Oil Creek Stat	65.58	351	P	P	22 27 26.4	+0.2
	baz=169,SNR=6.3						
T35A	Sooner Cattle	65.59	336	P	P	22 27 26.0	-0.4
T35A				IAmb	IAmb	22 27 27.3	
	comp=Z,33nm,1.1s						
BLOK	Blackwell	65.72	335		P	22 27 27.4	+0.2
L59A	Walton	65.74	355	P	P	22 27 27.3	0.0
N49A	Columbus Grove	65.77	347	P	P	22 27 26.8	-0.6
CROK	Carrier	65.80	335		P	22 27 27.4	-0.3
P43A	Skaggs, Pawnee	65.82	343	P	P	22 27 26.9	-0.8
P43A				IAmb	IAmb	22 27 27.6	
	comp=Z,37nm,0.8s						
BINY	Binghamton	65.83	354	P	P	22 27 28.5	+0.7
	baz=173,SNR=6.0						
BINY	Binghamton	65.83	354	P	P	22 27 27.5	-0.3
L61B	Northampton	65.85	357	P	P	22 27 28.4	+0.5
	baz=176						
HRV	Adam Dziewonsk	65.86	358	P	P	22 27 28.7	+0.7
	baz=177						
AMTX	Amarillo	65.96	331	P	P	22 27 28.8	-0.1
	baz=147						
AMTX	Amarillo	65.96	331	P	P	22 27 29.0	+0.1
AMTX				IAmb	IAmb	22 27 29.8	
	comp=Z,30nm,1.2s						
KAN13	South Haven SW	66.04	335	P	P	22 27 29.0	-0.3
N47A	Urbana	66.05	346	P	P	22 27 27.3	-1.9
HSIG		66.13	320	IAmb	IAmb	22 27 32.6	
	comp=Z,55nm,1.2s						
OK032	Salt Plains WL	66.15	335	IAmb	IAmb	22 27 30.6	
	comp=Z,20nm,0.9s						
ERPA	Erie	66.22	351	P	P	22 27 29.5	-0.8
	baz=169						
WVNY	West Valley, N	66.32	352	IAmb	IAmb	22 27 32.3	
	comp=Z,35nm,0.8s						
QSPA	South Pole Qui	66.56	180	P	P	22 27 33.6	+1.2
QSPA				IAmb	IAmb	22 27 34.3	
	comp=Z,14nm,0.7s						
MMNY	Mt. Morris Dam	66.56	353	IAmb	IAmb	22 27 33.0	
	comp=Z,25nm,0.7s						
HDIL	Hopedale	66.61	343	P	P	22 27 31.7	-1.1
	baz=160						
HDIL	Hopedale	66.61	343	IAmb	IAmb	22 27 32.5	
	comp=Z,22nm,0.7s						
121A	Cookes Peak, D	67.03	325	P	P	22 27 37.7	+1.8
	baz=142,SNR=16						
121A	Cookes Peak, D	67.03	325	IAmb	IAmb	22 27 38.1	
	comp=Z,21nm,0.8s						
NCB	Newcomb	67.46	356	IAmb	IAmb	22 27 39.6	
	comp=Z,31nm,1.1s						
KSU1	Kansas State U	67.56	337	P	P	22 27 38.4	-0.5
	baz=153						
KSU1	Kansas State U	67.56	337	IAmb	IAmb	22 27 39.3	
	comp=Z,31nm,1.0s						
LBNH	Lisbon	67.61	358	P	P	22 27 40.4	+1.4
	baz=177						
LBNH	Lisbon	67.61	358	IAmb	IAmb	22 27 41.0	
	comp=Z,46nm,1.1s						
L42A	Oliver, Polo	68.07	344	IAmb	IAmb	22 27 41.8	
	comp=Z,17nm,0.8s						
LONY	Lake Ozonia	68.13	356	P	P	22 27 42.9	+0.6
	baz=174,SNR=6.8						
LONY	Lake Ozonia	68.13	356	IAmb	IAmb	22 27 43.8	
	comp=Z,27nm,0.9s						
ANMO	Albuquerque	68.26	327	P	P	22 27 44.7	+1.2
	comp=Z,24nm,0.9s,baz=143,slow=7.3,SNR=79						
ANMO				pP	PcP	22 28 10.9	+2.3
	comp=Z,5.8nm,0.8s,baz=152,slow=7.4,SNR=2.8						
ANMO	Albuquerque	68.26	327	P	P	22 27 44.8	+1.2
	baz=143						
ANMO	Albuquerque	68.26	327	P	P	22 27 44.9	+1.3
ANMO				IAmb	IAmb	22 27 45.9	
	comp=Z,28nm,0.9s						
FRNY	Flat Rock	68.28	356	IAmb	IAmb	22 27 44.9	
	comp=Z,39nm,0.8s						
TUC	Tucson	68.49	323	P	P	22 27 46.1	+1.2
TUC				pmax	pmax		
	comp=Z,35nm,1.1s						
TUC	Tucson	68.49	323	P	P	22 27 46.3	+1.4
	baz=139						
TUC	Tucson	68.49	323	P	P	22 27 46.1	+1.2
TUC				IAmb	IAmb	22 27 47.5	
	comp=Z,35nm,1.1s						
CBKS	Cedar Bluff	68.49	335	P	P	22 27 45.5	+0.8
	baz=150,SNR=8.7						
PKME	Peaks-Kenny Pk	68.58	360	P	P	22 27 46.0	+0.9
	baz=180						
SADO	Sadowa	68.71	352	P	P	22 27 45.6	-0.3
	comp=Z,18nm,0.6s,baz=196,slow=2.1,SNR=19						
SADO	Sadowa	68.71	352	IAmb	IAmb	22 27 46.6	
	comp=Z,40nm,1.1s						
SCIA	State Center	68.97	341	P	P	22 27 47.4	-0.2
	baz=156						
SCIA	State Center	68.97	341	IAmb	IAmb	22 27 48.7	
	comp=Z,33nm,0.8s						
T25A	Trinidad	69.06	330	P	P	22 27 49.5	+1.0
	baz=145,SNR=6.6						
T25A	Trinidad	69.06	330	IAmb	IAmb	22 27 50.8	
	comp=Z,33nm,1.2s						
LIC	Lamto	69.06	73	eP	P	22 27 48.3	-0.5
	comp=Z,86nm,1.3s						
JFWS	Jewell Farm	69.07	343	P	P	22 27 47.8	-0.3
	baz=159,SNR=13						
F64A	Sherman	69.18	0	P	P	22 27 49.6	+0.9
F64A				IAmb	IAmb	22 27 50.5	
	comp=Z,29nm,0.7s						
TIC	Toumodi	69.27	73	eP	P	22 27 49.9	-0.2
214A	Organ Pipe Nat	69.37	321	P	P	22 27 52.2	+1.8
	baz=137,SNR=16						
214A	Organ Pipe Nat	69.37	321	IAmb	IAmb	22 27 53.3	
	comp=Z,40nm,1.1s						
KIC	Kosan Boka	69.38	73	eP	P	22 27 50.4	-0.4
	comp=Z,78nm,0.9s						
DBIC	Dimbokro	69.42	73	P	P	22 27 51.4	+0.4
	comp=Z,8.2nm,0.7s,baz=230,slow=5.8,SNR=15						
DBIC				pP	pP	22 28 17.7	+1.0
	comp=Z,48nm,1.0s,baz=234,slow=4.8,SNR=13						
DBIC				LR	LR	22 55 33.8	
	comp=Z,32nm,21.4s,baz=202,slow=34						
DBIC	Dimbokro	69.42	73	P	P	22 27 50.9	-0.1
DBIC				IAmb	IAmb	22 27 58.1	
	comp=Z,17nm,0.7s						
GLMI	Grayling	69.62	348	P	P	22 27 51.6	0.0
	baz=165						
I42A	Draeger Farm,	69.65	345	IAmb	IAmb	22 27 52.2	
	comp=Z,33nm,0.8s						
TRQ	Mont Tremblant	69.72	356	IAmb	IAmb	22 27 53.3	
	comp=Z,40nm,0.9s						
KSCO	Kaye Shedlock'	69.83	333	P	P	22 27 54.2	+1.0
	baz=147						
H43A	Windswept, Lux	69.93	346	IAmb	IAmb	22 27 53.7	
	comp=Z,31nm,0.8s						
E62A	Clayton Lake	69.94	360	IAmb	IAmb	22 27 54.9	
	comp=Z,19nm,0.7s						
SDCO	Great Sand Dun	70.06	330	P	P	22 27 56.0	+1.2
	baz=145,SNR=37						
SDCO	Great Sand Dun	70.06	330	IAmb	IAmb	22 27 57.0	
	comp=Z,56nm,1.4s						
W18A	Petrified Fore	70.06	325	P	P	22 27 56.0	+1.3
	baz=141						
W18A	Petrified Fore	70.06	325	IAmb	IAmb	22 27 57.3	
	comp=Z,39nm,1.0s						
BGNE	Belgrade	70.15	337	P	P	22 27 55.2	+0.3
	baz=152,SNR=12						
X16A	Lo Mia Camp, P	70.43	324	IAmb	IAmb	22 27 59.8	
	comp=Z,30nm,1.1s						
S22A	4UR Ranch, Cre	70.68	329	P	P	22 27 59.7	+1.1
	baz=144,SNR=12						
Q24A	Divide	70.89	331	P	P	22 28 01.0	+1.2
	baz=145,SNR=13						
MVCO	Mesa Verde	71.06	328	P	P	22 28 02.1	+1.3
	baz=142,SNR=18						
MVCO	Mesa Verde	71.06	328	IAmb	IAmb	22 28 03.1	
	comp=Z,28nm,0.9s						
OGNE	Ogallala	71.22	334	P	P	22 28 02.3	+0.8
	baz=148						
OGNE	Ogallala	71.22	334	IAmb	IAmb	22 28 03.2	
	comp=Z,40nm,1.1s						
WUAZ	Wupatki	71.22	324	P	P	22 28 03.6	+1.9
	baz=139,SNR=26						
WUAZ	Wupatki	71.22	324	IAmb	IAmb	22 28 04.6	
	comp=Z,44nm,0.9s						
ECSD	EROS Data Cent	71.69	339	P	P	22 28 04.0	-0.1
	baz=154,SNR=14						
ECSD	EROS Data Cent	71.69	339	IAmb	IAmb	22 28 05.0	
	comp=Z,42nm,1.3s						
RMX	La Rumorosa	71.76	319	IAmb	IAmb	22 28 07.4	
	comp=Z,22nm,1.0s						
ISCO	Idaho Springs	71.78	331	P	P	22 28 06.3	+1.1
	baz=145,SNR=12						
COWI	Conover	71.79	345	IAmb	IAmb	22 28 05.4	
	comp=Z,35nm,1.3s						
IKP	In-Ko-Pah, Jac	71.81	319	P	P	22 28 07.2	+2.1
	baz=135,SNR=12						
VLDQ	Val d'Or	71.83	354	IAmb	IAmb	22 28 06.1	
	comp=Z,40nm,1.2s						
SWSC	Sam W. Stewart	71.83	320	P	P	22 28 07.0	+1.8
	baz=135						
PDMCI	Parker Dam,Lak	71.85	322	P	P	22 28 06.9	+1.6
	baz=137						
SMCO	Snowmass	71.89	330	IAmb	IAmb	22 28 08.5	
	comp=Z,25nm,1.0s						
BC3	Big Chuckawall	72.13	321	P	P	22 28 08.8	+1.6
	baz=136,SNR=20						
MONP2	Monument Peak	72.16	319	P	P	22 28 09.1	+1.6
	baz=135,SNR=11						
BAR	Barrett	72.17	319	IAmb	IAmb	22 28 09.8	
	comp=Z,23nm,1.0s						
IRM	Iron Mountain	72.31	321	P	P	22 28 09.9	+1.7
	baz=136,SNR=18						
U15A	North Rim	72.40	325	IAmb	IAmb	22 28 12.0	
	comp=Z,30nm,1.1s						
F36A	Milaca	72.69	342	IAmb	IAmb	22 28 10.4	
	comp=Z,33nm,0.9s						
TPFO	Pinon Flats	72.69	320	P	P	22 28 12.2	+1.7
	baz=135,SNR=10						
PFO	Pinyon Flats O	72.69	320	P	P	22 28 11.3	+0.8
	comp=Z,9.3nm,0.9s,baz=131,slow=7.1,SNR=13						
PFO	Pinyon Flats O	72.69	320	ceP	P	22 28 12.3	+1.8
PFO	Pinyon Flats O	72.69	320	P	P	22 28 12.1	+1.6
	baz=135,SNR=9.3						
PFO	Pinyon Flats O	72.69	320	P	P	22 28 11.8	+1.3
BELC	Belle Mtn. Jos	72.70	320	P	P	22 28 12.0	+1.5
	baz=136,SNR=11						
N23A	Red Feather La	72.82	332	P	P	22 28 12.3	+1.0
	baz=145,SNR=10						
E38A	The Farm, Brul	72.85	344	IAmb	IAmb	22 28 12.0	
	comp=Z,31nm,1.0s						
GMRC	Granite Mounta	73.06	321	P	P	22 28 14.5	+1.9
	baz=136,SNR=31						
MURC	Murrieta	73.12	319	P	P	22 28 14.5	+1.6
	baz=134,SNR=5.2						
O20A	White River Ci	73.24	330	P	P	22 28 15.1	+1.4
	baz=143,SNR=25						
O20A	White River Ci	73.24	330	IAmb	IAmb	22 28 16.1	
	comp=Z,44nm,0.9s						
F33A	5 Mile Ranch,	73.48	340	IAmb	IAmb	22 28 14.7	
	comp=Z,21nm,0.7s						
HEC	Hector,Ludlow	73.48	321	P	P	22 28 17.2	+2.2
	baz=135						
SCI2	San Clemente I	73.51	318	P	P	22 28 16.9	+1.7
	baz=133						
SRU	San Rafael Swe	73.53	327	IAmb	IAmb	22 28 17.5	
	comp=Z,32nm,0.8s						
TUQ	Turquoise Moun	73.68	322	P	P	22 28 17.9	+1.7
	baz=136,SNR=13						
Q16A	Castle Valley	73.71	327	IAmb	IAmb	22 28 19.2	
	comp=Z,23nm,1.0s						
P18A	Preston Nutter	73.80	328	IAmb	IAmb	22 28 19.6	
	comp=Z,30nm,0.9s						
CCUT	Cedar City	73.81	325	IAmb	IAmb	22 28 20.4	
	comp=Z,40nm,1.0s						
BFSC	Mount Baldy Ra	73.84	320	P	P	22 28 18.7	+1.4
	baz=134,SNR=14						
P17A	Butcher Ranch,	73.92	328	IAmb	IAmb	22 28 20.0	
	comp=Z,35nm,1.0s						
KOWA	Kowa	73.94	66	P	P	22 28 18.5	+0.4
	comp=Z,13nm,0.7s,baz=248,slow=6.2,SNR=40						
KOWA				pP	pP	22 28 45.1	+0.9
	comp=Z,22nm,0.6s,baz=229,slow=4.3,SNR=8.1						
KOWA	Kowa	73.94	66	P	P	22 28 18.3	+0.3
EYMN	Ely	74.08	344	P	P	22 28 17.5	-0.6
	baz=159,SNR=6.2						
EYMN	Ely	74.08	344	IAmb	IAmb	22 28 18.6	
	comp=Z,22nm,0.9s						
GSC	Goldstone, Bar	74.09	321	P	P	22 28 20.4	+1.8
	baz=135,SNR=18						
PASC	Pasadena Art C	74.11	319	IAmb	IAmb	22 28 21.4	
	comp=Z,28nm,1.1s						
RDMU	Red Mountain	74.21	329	IAmb	IAmb	22 28 21.4	
	comp=Z,20nm,0.9s						
DECC	Green Verdugo	74.25	319	P	P	22 28 21.5	+2.0
	baz=134						
EDW2	Edwards Air Fo	74.49	320	P	P	22 28 22.1	+1.2
	baz=134,SNR=15						
K22A	Casper	74.50	332	P	P	22 28 22.0	+1.1
	baz=145,SNR=8.2						
K22A	Casper	74.50	332	IAmb	IAmb	22 28 23.1	
	comp=Z,28nm,1.2s						
SYO	Syowa Base	74.53	159⇑	eX	P	22 28 23.7	+3.1
PRN	Pahroc Range	74.61	324	IAmb	IAmb	22 28 24.8	
	comp=Z,26nm,1.0s						
GWY	Greenwater Val	74.64	322	IAmb	IAmb	22 28 24.2	
	comp=Z,25nm,0.8s						
RSSD	Black Hills	74.69	335	P	P	22 28 23.3	+1.2
RSSD				pmax	pmax		
	comp=Z,19nm,0.8s						
RSSD	Black Hills	74.69	335	P	P	22 28 23.1	+1.0
	baz=147						
RSSD	Black Hills	74.69	335	P	P	22 28 23.3	+1.2
RSSD				IAmb	IAmb	22 28 23.9	
	comp=Z,19nm,0.8s						
LRMC	Laurel Mtn Rad	74.72	321	P	P	22 28 23.8	+1.5
	baz=135,SNR=7.3						
VNDA	Vanda	74.73	190	P	P	22 28 23.6	+1.9
	comp=Z,4.0nm,0.9s,baz=128,slow=4.4,SNR=18						
VNDA				pP	pP	22 28 50.4	+2.6
	comp=Z,4.8nm,0.8s,baz=152,slow=3.9,SNR=7.2						
VNDA	Vanda	74.73	190	P	P	22 28 23.2	+1.6
MPU	Maple Canyon	74.78	327	IAmb	IAmb	22 28 25.0	
	comp=Z,23nm,1.0s						
PSUT	Pine Spring	74.80	325	IAmb	IAmb	22 28 25.5	
	comp=Z,21nm,0.9s						
SCZ2	Santa Cruz Isl	74.87	318	P	P	22 28 24.7	+1.7
	baz=133,SNR=5.8						
FURC	Furnace Creek,	74.94	322	P	P	22 28 25.3	+1.9
	baz=135,SNR=14						
MPMC	Manual Prospec	75.01	321	P	P	22 28 25.4	+1.3
	baz=135,SNR=16						
B35A	Bob, Littlefor	75.03	343	IAmb	IAmb	22 28 24.2	
	comp=Z,24nm,0.9s						
JLU	Jordanelle	75.14	328	IAmb	IAmb	22 28 27.1	
	comp=Z,19nm,0.8s						
ISA	Isabella, Lake	75.31	320	P	P	22 28 27.4	+1.8
	baz=134,SNR=23						
ISA	Isabella, Lake	75.31	320	IAmb	IAmb	22 28 28.4	
	comp=Z,24nm,0.9s						
DUG	Dugway, Tooele	75.50	327	P	P	22 28 28.2	+1.5
	baz=139,SNR=28						
DUG	Dugway, Tooele	75.50	327	IAmb	IAmb	22 28 29.3	
	comp=Z,27nm,1.1s						
AGMN	Agassiz Nation	75.56	342	P	P	22 28 26.7	0.0
	baz=155,SNR=12						
AGMN	Agassiz Nation	75.56	342	IAmb	IAmb	22 28 27.5	
	comp=Z,29nm,0.9s						
PKM	Mcpherson Peak	75.58	319	P	P	22 28 29.0	+1.7
	baz=133,SNR=15						
R11A	Troy Canyon, C	75.58	324	P	P	22 28 29.1	+1.9
	baz=137,SNR=31						
R11A	Troy Canyon, C	75.58	324	IAmb	IAmb	22 28 30.3	
	comp=Z,34nm,1.4s						
CWC	Cottonwood Cre	75.62	321	P	P	22 28 29.1	+1.6
	baz=134						
VES	Vestal, Richgr	75.79	320	P	P	22 28 29.8	+1.5
	baz=134,SNR=5.1						
BW06	Boulder Array	75.93	330	P	P	22 28 29.6	+0.4
	baz=142,SNR=7.4						
PDAR	Pinedale Array	75.93	330	P	P	22 28 29.6	+0.4
	comp=Z,2.5nm,0.6s,baz=134,slow=7.3,SNR=17						
HWUT	Hardware Ranch	75.96	328	IAmb	IAmb	22 28 31.3	
	comp=Z,27nm,0.9s						
SMMC	Simmler	75.98	319	P	P	22 28 31.5	+2.1
	baz=133,SNR=16						
TIN	Tinemaha, Big	76.14	321	P	P	22 28 32.4	+2.0
	baz=134,SNR=8.0						
SPUT	South Promonto	76.17	328	IAmb	IAmb	22 28 32.6	
	comp=Z,28nm,0.8s						
MDND	Maddock	76.30	339	P	P	22 28 31.8	+0.8
	baz=151,SNR=14						
PAGB	Antelope Grade	76.41	319	IAmb	IAmb	22 28 34.7	
	comp=Z,35nm,1.2s						
AHID	Auburn Hatcher	76.64	329	IAmb	IAmb	22 28 35.1	
	comp=Z,42nm,0.8s						
HVU	Hansel Valley	76.68	328	IAmb	IAmb	22 28 35.3	
	comp=Z,20nm,0.9s						
MLAC	Mammoth, Mammo	76.88	321	P	P	22 28 36.4	+1.7
	baz=134						
REDW	Red Top Meadow	76.99	330	IAmb	IAmb	22 28 37.3	
	comp=Z,21nm,0.9s						
SNOW	Snow King Moun	77.02	330	IAmb	IAmb	22 28 37.6	
	comp=Z,24nm,0.8s						
PMPB	Monarch Peak	77.07	319	P	P	22 28 37.0	+1.5
LHV	Little Huntoon	77.13	322	IAmb	IAmb	22 28 38.8	
	comp=Z,41nm,1.5s						
TPAW	Teton Pass	77.13	330	IAmb	IAmb	22 28 38.3	
	comp=Z,21nm,0.8s						
NVAR	Mina Array Bea	77.14	322	P	P	22 28 37.5	+1.3
	comp=Z,7.0nm,0.9s,baz=160,slow=6.9,SNR=39						
NVAR				LR	LR	22 59 41.4	
	comp=Z,54nm,19.0s,baz=100,slow=33						
ELK	Elko	77.15	326	P	P	22 28 37.2	+1.1
	comp=Z,17nm,0.9s,baz=140,slow=2.7,SNR=44						
ELK				pP	pP	22 29 03.3	+1.0
	comp=Z,5.2nm,0.8s,baz=297,slow=3.2,SNR=3.5						
ULM	Lac du Bonnet	77.33	343	P	P	22 28 36.4	-0.3
	comp=Z,24nm,0.6s,baz=157,slow=6.4,SNR=28						
ULM				pP	pP	22 29 03.5	+0.6
	comp=Z,5.5nm,0.6s,baz=162,slow=7.2,SNR=2.8						
ULM	Lac du Bonnet	77.33	343	IAmb	IAmb	22 28 36.8	
	comp=Z,24nm,0.7s						
KVN	Kaiserville	77.46	323	IAmb	IAmb	22 28 40.0	
	comp=Z,27nm,1.1s						
FLWY	Flagg Ranch	77.48	331	IAmb	IAmb	22 28 40.5	
	comp=Z,41nm,0.9s						
RLMT	Red Lodge	77.67	332	P	P	22 28 40.1	+1.2
	baz=143,SNR=20						
RLMT	Red Lodge	77.67	332	IAmb	IAmb	22 28 40.6	
	comp=Z,17nm,0.7s						
H17A	Grant Village	77.67	331	P	P	22 28 40.4	+1.4
	baz=142						
LAO	LASA Array	77.69	335	P	P	22 28 39.6	+0.8
	baz=146,SNR=14						
LAO	LASA Array	77.69	335	IAmb	IAmb	22 28 40.6	
	comp=Z,38nm,1.0s						
YERR	Yerington	78.05	322	IAmb	IAmb	22 28 43.9	
	comp=Z,45nm,1.5s						
YMR	Madison River	78.06	331	IAmb	IAmb	22 28 44.1	
	comp=Z,37nm,1.0s						
YHH	Holmes Hill	78.10	331	IAmb	IAmb	22 28 44.3	
	comp=Z,51nm,1.2s						
TORD	Torodi Ar. Bea	78.15	70	P	P	22 28 42.0	+0.1
	comp=Z,12nm,0.7s,baz=257,slow=5.0,SNR=96						
TORD				pP	pP	22 29 09.2	+0.9
	comp=Z,30nm,0.8s,baz=257,slow=5.5,SNR=10						
TORD	Torodi Ar. Bea	78.15	70	P	P	22 28 42.0	+0.1
SCHQ	Schefferville	78.18	1	P	P	22 28 41.3	+0.1
	comp=Z,11nm,0.7s,baz=197,slow=2.5,SNR=9.8						
PNTR	Pine Nut	78.33	322	IAmb	IAmb	22 28 45.5	
	comp=Z,35nm,0.8s						
DGMT	Dagmar	78.41	337	P	P	22 28 43.7	+1.0

	baz=147,SNR=9.7						
PAHR	**Pah Rah Range**	**78.63**	**323**	IAmb	IAmb	22 28 47.0	
	comp=Z,45nm,0.9s						
MPK	**Martis Peak**	**78.71**	**322**	IAmb	IAmb	22 28 47.7	
	comp=Z,35nm,1.2s						
HLID	**Hailey**	**78.82**	**328**	P	**P**	**22 28 46.9**	**+1.7**
	baz=138,SNR=75						
HLID	**Hailey**	**78.82**	**328**	IAmb	IAmb	22 28 48.0	
	comp=Z,40nm,0.9s						
BOZ	**Bozeman (W)**	**79.07**	**331**	P	**P**	**22 28 47.5**	**+0.9**
	baz=141,SNR=7.1						
DLMT	**Dillon**	**79.33**	**330**	IAmb	IAmb	22 28 50.4	
	comp=Z,32nm,1.2s						
TSUM	**Tsumeb**	**79.50**	**106**	P	**P**	**22 28 49.5**	**0.0**
ORV	**Oroville**	**79.72**	**321**	IAmb	IAmb	22 28 52.6	
	comp=Z,42nm,1.1s						
EGMT	**Eagleton**	**80.18**	**334**	P	**P**	**22 28 53.0**	**+0.6**
	baz=143						
EGMT	**Eagleton**	**80.18**	**334**	IAmb	IAmb	22 28 54.0	
	comp=Z,25nm,1.1s						
O03E	**Paynes Creek**	**80.39**	**322**	P	**P**	**22 28 53.9**	**+0.2**
	baz=132,SNR=16						
MOD	**Modoc Plateau**	**80.65**	**324**	IAmb	IAmb	22 28 57.4	
	comp=Z,27nm,1.1s						
J08A	**Circle Bar Ran**	**80.70**	**326**	IAmb	IAmb	22 28 57.7	
	comp=Z,42nm,1.3s						
PLID	**Pearl Lake**	**80.71**	**328**	IAmb	IAmb	22 28 57.5	
	comp=Z,36nm,0.8s						
O02D	**Mt. Diablo Mer**	**80.87**	**321**	P	**P**	**22 28 56.6**	**+0.3**
	baz=132,SNR=12						
KCPM	**Cahto Peak**	**81.01**	**320**	IAmb	IAmb	22 28 59.9	
	comp=Z,40nm,1.2s						
MSO	**Missoula**	**81.05**	**331**	P	**P**	**22 28 58.2**	**+1.1**
	baz=139,SNR=6.6						
BMO	**Blue Mountains**	**81.18**	**327**	IAmb	IAmb	22 28 59.9	
	comp=Z,36nm,1.3s						
N02D	**Trinity Center**	**81.35**	**322**	P	**P**	**22 28 58.8**	**0.0**
	baz=132,SNR=14						
M04C	**Macdoel**	**81.41**	**323**	P	**P**	**22 29 00.1**	**+0.9**
	baz=132,SNR=19						
KMRM	**Mail Ridge**	**81.43**	**321**	IAmb	IAmb	22 29 01.9	
	comp=Z,42nm,1.4s						
K05A	**Summer Lake**	**81.53**	**324**	IAmb	IAmb	22 29 02.5	
	comp=Z,45nm,1.0s						
M02C	**Callahan**	**81.72**	**322**	P	**P**	**22 29 01.1**	**+0.4**
	baz=132,SNR=5.3						
YBH	**Yreka Blue Hor**	**81.86**	**322**	P	**P**	**22 29 01.2**	**-0.3**
	comp=Z,5.6nm,0.7s,baz=80,slow=2.5,SNR=29						
JTMT	**Jette**	**81.89**	**331**	IAmb	IAmb	22 29 03.6	
	comp=Z,23nm,1.0s						
F10A	**Beach Ranch, E**	**81.95**	**328**	IAmb	IAmb	22 29 05.2	
	comp=Z,28nm,1.3s						
L04D	**Klamath Falls**	**81.96**	**323**	P	**P**	**22 29 02.7**	**+0.6**
	baz=132,SNR=6.1						
JCC	**Jacoby Creek,**	**82.01**	**321**	IAmb	IAmb	22 29 10.4	
	comp=Z,33nm,1.3s						
J05D	**Fort Rock, OR**	**82.10**	**324**	P	**P**	**22 29 03.9**	**+1.2**
	baz=133,SNR=13						
PINE	**Pine Mountain**	**82.29**	**325**	IAmb	IAmb	22 29 06.3	
	comp=Z,39nm,0.9s						
MAW	**Mawson**	**82.30**	**163**	P	**P**	**22 29 04.4**	**+1.0**
	comp=Z,10nm,0.8s,baz=212,slow=6.5,SNR=28						
MAW				pP	**pP**	**22 29 31.5**	**+1.6**
	comp=Z,14nm,0.9s,baz=215,slow=6.0,SNR=7.8						
MAW				LR	LR	23 07 50.9	
	comp=Z,67nm,18.0s,baz=248,slow=37						
MAW	**Mawson**	**82.30**	**163**	P	**P**	**22 29 03.9**	**+0.6**
BOSA	**Boshof**	**82.51**	**118**	P	**P**	**22 29 05.9**	**+0.5**
	comp=Z,2.5nm,0.8s,baz=307,slow=7.3,SNR=2.9						
BOSA				pP	**pP**	**22 29 33.0**	**+1.1**
	comp=Z,4.0nm,0.6s,baz=251,slow=3.6,SNR=6.4						
BOSA	**Boshof**	**82.51**	**118**	P	**P**	**22 29 05.5**	**+0.1**
J04D	**Umpqua Nationa**	**82.54**	**324**	P	**P**	**22 29 06.0**	**+0.9**
	baz=132,SNR=6.2						
L02E	**Cave Junction**	**82.64**	**322**	P	**P**	**22 29 06.5**	**+1.0**
	baz=131,SNR=5.7						
WALA	**Waterton Lakes**	**82.72**	**332**	IAmb	IAmb	22 29 07.6	
	comp=Z,26nm,0.8s						
I05D	**Terrebonne, OR**	**82.87**	**325**	P	**P**	**22 29 08.1**	**+1.4**
	baz=133,SNR=17						
K02D	**Willamette Mer**	**83.03**	**323**	P	**P**	**22 29 08.7**	**+1.2**
	baz=131,SNR=7.6						
FFC	**Flin Flon**	**83.03**	**341**	P	**P**	**22 29 07.5**	**+0.4**
FFC				pmax	pmax		
	comp=Z,18nm,1.2s						
FFC	**Flin Flon**	**83.03**	**341**	P	**P**	**22 29 07.5**	**+0.4**
I04A	**Tendick Farm,**	**83.07**	**324**	P	**P**	**22 29 08.0**	**+0.3**
	baz=132						
HAWA	**Hanford**	**83.37**	**327**	IAmb	IAmb	22 29 10.6	
	comp=Z,14nm,0.8s						
G05D	**Wamic, OR**	**83.48**	**326**	P	**P**	**22 29 11.0**	**+1.3**
	baz=133,SNR=5.5						
J01E	**Myrtle Point**	**83.48**	**323**	P	**P**	**22 29 10.8**	**+1.0**
	baz=131						
I03D	**Drain, OR**	**83.52**	**324**	P	**P**	**22 29 10.9**	**+1.1**
	baz=132						
NEW	**Newport**	**83.56**	**330**	P	**P**	**22 29 09.7**	**-0.4**
	comp=Z,3.2nm,0.7s,baz=140,slow=4.9,SNR=8.3						
NEW	**Newport**	**83.56**	**330**	P	**P**	**22 29 10.0**	**-0.1**
	baz=137,SNR=5.3						
BUCK	**Buck Mountain**	**83.65**	**324**	IAmb	IAmb	22 29 12.4	
	comp=Z,32nm,0.9s						
HOOD	**Mount Hood Mea**	**83.70**	**326**	IAmb	IAmb	22 29 13.2	
	comp=Z,32nm,1.2s						
G03D	**McMinnville, O**	**84.47**	**325**	P	**P**	**22 29 17.0**	**+2.3**
	baz=132						
E04D	**Cinebar**	**85.01**	**326**	P	**P**	**22 29 17.6**	**+0.2**
	baz=132						
D05A	**Enumclaw**	**85.14**	**327**	IAmb	IAmb	22 29 19.4	
	comp=Z,27nm,1.0s						
B06A	**Marblemount**	**85.80**	**328**	IAmb	IAmb	22 29 22.0	
	comp=Z,20nm,0.7s						
B05A	**Bryant**	**85.92**	**328**	P	**P**	**22 29 21.6**	**-0.3**
	baz=133,SNR=5.3						
D03D	**Eldon**	**85.93**	**327**	P	**P**	**22 29 22.5**	**+0.6**
	baz=132						
NLWA	**Neilton Lookou**	**86.23**	**326**	IAmb	IAmb	22 29 25.3	
	comp=Z,15nm,0.9s						
B04A	**Port Angeles**	**86.49**	**327**	IAmb	IAmb	22 29 26.5	
	comp=Z,18nm,1.0s						
PGC	**Sidney**	**86.85**	**327**	IAmb	IAmb	22 29 28.0	
	comp=Z,28nm,0.9s						
FRB	**Frobisher Bay**	**87.10**	**0**	pP	pP	22 29 52.7	-1.3
	comp=Z,20nm,1.1s,baz=189,slow=6.8,SNR=3.2						
CLRS	**Cowichan Lake**	**87.30**	**327**	IAmb	IAmb	22 29 31.6	
	comp=Z,32nm,1.4s						
ESDC	**Sonseca Array**	**87.41**	**44**	P	**P**	**22 29 29.3**	**-0.1**
	comp=Z,1.1nm,1.0s,baz=234,slow=4.3,SNR=2.9						
ESDC				pP	**pP**	**22 29 56.4**	**+0.1**
	comp=Z,3.3nm,1.0s,baz=225,slow=5.6,SNR=6.4						
ESDC				LR	LR	23 08 44.3	
	comp=Z,15nm,18.0s,baz=265,slow=36						
LLLB	**Lillooet**	**87.42**	**329**	IAmb	IAmb	22 29 30.1	
	comp=Z,12nm,0.9s						
CBB	**Campbell River**	**88.70**	**328**	IAmb	IAmb	22 29 36.6	
	comp=Z,11nm,0.9s						
CASY	**Casey**	**90.36**	**180**	P	**P**	**22 29 43.7**	**+0.9**
CASY				IAmb	IAmb	22 29 45.5	
	comp=Z,14nm,0.8s						
YKA	**Yellowknife Ar**	**93.18**	**341**	P	**P**	**22 29 54.9**	**-0.8**
	comp=Z,9.7nm,0.8s,baz=129,slow=5.7,SNR=28						
YKA				pP	**pP**	**22 30 23.2**	**+0.7**
	comp=Z,9.0nm,0.8s,baz=129,slow=5.7,SNR=9.5						
YKA				sP	**sP**	**22 30 34.1**	**+0.9**
	comp=Z,6.9nm,0.7s,baz=130,slow=5.5,SNR=6.4						
DLBC	**Dease Lake**	**96.07**	**332**	P	**P**	**22 30 09.5**	**+0.3**
	comp=Z,9.3nm,0.9s,baz=143,slow=2.8,SNR=11						
DLBC	**Dease Lake**	**96.07**	**332**	IAmb	IAmb	22 30 10.9	
	comp=Z,8.6nm,0.8s						
DAVOX	**Davos/Dischmat**	**99.67**	**43**	LR	LR	23 13 46.5	
	comp=Z,37nm,19.5s,baz=252,slow=34						
INK	**Inuvik**	**102.93**	**340**	P	**Pdif**	**22 30 39.2**	**-0.3**
	comp=Z,2.4nm,1.0s,baz=131,slow=6.5,SNR=5.6						
ILAR	**Eielson Array**	**106.14**	**334**	Pdiff	**Pdif**	**22 30 53.0**	**-0.9**
	comp=Z,0.5nm,0.8s,baz=118,slow=1.3,SNR=5.3						
VSU	**Vasula**	**112.79**	**35**	*i* PKIKP	**PKiKP**	**22 35 20.0**	**+2.3**
AKASG	**Malin Array Be**	**113.02**	**43**	PKKPbc	PKKPbc	22 46 05.9	-0.7
	comp=Z,0.8nm,0.6s,baz=75,slow=3.9,SNR=4.4						
ARCES	**ARCESS Array B**	**113.49**	**22**	PKKPbc	PKKPbc	22 46 05.2	-0.5
	comp=Z,5.9nm,1.1s,baz=8.5,slow=2.5,SNR=4.6						
BRTR	**Keskin Array B**	**114.11**	**56**	PKiKP	PKPdf	22 35 20.4	-0.7
	comp=Z,0.9nm,0.9s,baz=215,slow=1.5,SNR=4.2						
OBN	**Obninsk**	**117.89**	**39**	*i* PKIKP	**PKPdf**	**22 35 27.0**	**-0.6**
OBN				*e*		22 36 42.3	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,36nm,18.0s						
KLMR	**Klimovskoe**	**119.36**	**32**	*e*PKIKP	**PKPdf**	**22 35 29.9**	**-0.4**
KLMR				pmax	pmax		
	comp=Z,21nm,1.4s						
KLMR	**Klimovskoe**	**119.36**	**32**	*e*PKPdf	**PKPdf**	**22 35 29.9**	**-0.4**
KLMR				AMP		22 35 31.5	
	comp=Z,21nm,1.4s						
KIV	**Kislovodsk**	**121.36**	**52**	*i* PKIKP	**PKPdf**	**22 35 34.8**	**-0.1**
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,20nm,22.0s						
KBZ	**Khabaz**	**121.50**	**52**	PKP	**PKPdf**	**22 35 35.1**	**+0.2**
	comp=Z,4.1nm,0.9s,baz=246,slow=1.4,SNR=6.2						
KBZ	**Khabaz**	**121.50**	**52**	*i* PKIKP	**PKiKP**	**22 35 35.5**	**+0.4**
BILL	**Bilibino**	**124.48**	**338**	*i* PKIKP	**PKPdf**	**22 35 40.7**	**+0.7**
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s						
AS31	**Alice Springs**	**127.98**	**207**	PKPdf	**PKPdf**	**22 35 48.5**	**+0.3**
ASAR	**Alice Springs**	**127.98**	**207**	PKP	**PKPdf**	**22 35 48.5**	**+0.3**
	comp=Z,7.6nm,0.8s,baz=146,slow=2.2,SNR=55						
ASAR				pPKP	**pPKPdf**	**22 36 16.1**	**0.0**
	comp=Z,4.0nm,0.9s,baz=147,slow=2.1,SNR=6.0						
ARU	**Arti**	**129.95**	**35**	*i* PKIKP	**PKiKP**	**22 35 52.2**	**+0.7**
ARU						22 38 01.6	
ARU	**Arti**	**129.95**	**35**		**PKiKP**	**22 35 51.9**	**+0.4**
TIXI	**Tiksi**	**130.90**	**353*c***	*i*PKIKP	**PKPdf**	**22 35 52.6**	**+0.5**
TIXI	**Tiksi**	**130.90**	**353**	PKPdf	**PKPdf**	**22 35 52.4**	**+0.2**
WR0	**Warramunga Arr**	**130.96**	**210**	PKPdf	**PKPdf**	**22 35 54.0**	**+0.1**
WRA	**Warramunga Arr**	**131.07**	**210**	PKhKP	PKPpre	22 35 48.2	
	comp=Z,3.6nm,0.8s,baz=156,slow=1.6,SNR=4.7						
WRA				PKP	**PKPdf**	**22 35 54.6**	**+0.5**
	comp=Z,6.2nm,0.8s,baz=157,slow=1.7,SNR=25						
WRA				pPKP	pPKPdf	22 36 23.2	+1.1
	comp=Z,3.3nm,0.8s,baz=158,slow=1.5,SNR=5.4						
WRA				SKPbc	**SKPbc**	**22 39 09.8**	**0.0**
	comp=Z,6.8nm,1.2s,baz=148,slow=3.9,SNR=6.9						
WRAB	**Tennant Creek**	**131.07**	**210*c***	*i*PKIKP	**PKiKP**	**22 35 55.3**	**+0.3**
WRAB				pmax	pmax		
	comp=Z,15nm,1.7s						
SEY	**Seymchan**	**132.03**	**336**	PKP	**PKPdf**	**22 35 54.7**	**+0.2**
	comp=Z,7.0nm,0.7s,baz=70,slow=3.8,SNR=13						
ABKAR	**Akbulak array**	**132.75**	**44**	PKPdf	**PKiKP**	**22 35 57.4**	**-0.1**
ABKAR	**Akbulak array**	**132.75**	**44**		**PKiKP**	**22 35 57.3**	**-0.1**
PSA00	**Pilbara Seismi**	**134.24**	**192**		**PKPdf**	**22 36 00.1**	**+0.1**
FITZ	**Fitzroy Crossi**	**136.12**	**200**	PKP	**PKPdf**	**22 36 04.2**	**+0.6**
	comp=Z,4.3nm,0.7s,baz=194,slow=6.9						
BRVK	**Borovoye**	**137.51**	**36*c***	*i*PKIKP	**PKiKP**	**22 36 07.0**	**0.0**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
BVAR	**Borovoye Array**	**137.58**	**36**	PKP	**PKPdf**	**22 36 04.8**	**-0.4**
	comp=Z,2.5nm,0.8s,baz=229,slow=11,SNR=11						
KURK	**Kurchatov**	**143.14**	**35**	PKIKP	PKPbc	22 36 12.8	+0.3
KURK						22 36 42.9	
KURBB	**Kurchatov Arra**	**143.15**	**35**	PKP	PKPbc	22 36 12.8	+0.3
	comp=Z,3.9nm,0.8s,baz=302,slow=3.3,SNR=22						
KURBB				pPKP	pPKPdf	22 36 42.9	-0.4
	comp=Z,1.5nm,0.6s,baz=306,slow=3.4,SNR=3.3						
ZALV	**Zalesovo Beam**	**143.91**	**26**	PKP	PKPbc	22 36 15.2	+0.7
	comp=Z,12nm,0.7s,baz=306,slow=3.5,SNR=52						
ZALV				pPKP	pPKPdf	22 36 44.9	+0.3
	comp=Z,11nm,0.8s,baz=309,slow=3.3,SNR=5.7						
AML	**Almayashu**	**144.00**	**50**	P	PKPbc	22 36 16.8	+1.0
	SNR=7.6						
BATI	**Baumata**	**144.15**	**202**	PKP	PKPbc	22 36 17.9	+1.4
	comp=Z,12nm,0.4s,baz=258,slow=4.3,SNR=4.4						
SOEI	**Soe**	**144.36**	**203**		**PKPdf**	**22 36 18.7**	**0.0**
AAK	**Ala-Archa**	**144.39**	**49**	PKP	**PKPdf**	**22 36 18.1**	**+0.2**
	comp=Z,8.6nm,0.6s,baz=264,slow=1.4,SNR=32						
AAK	**Ala-Archa**	**144.39**	**49**	P	**PKPdf**	**22 36 18.2**	**+0.2**
	SNR=11						
AAK	**Ala-Archa**	**144.39**	**49**	PKIKP	**PKPdf**	**22 36 18.6**	**+0.6**
AAK	**Ala-Archa**	**144.39**	**49**	PKPdf	**PKPdf**	**22 36 18.6**	**+0.6**
CHMS	**Chumysh**	**144.44**	**48**	P	**PKPdf**	**22 36 17.8**	**-0.1**
	SNR=9.2						
KBK	**Karagaybulak**	**144.69**	**49**	P	**PKPdf**	**22 36 19.3**	**+0.7**
	SNR=24						
TKM2	**Tokmak 2**	**145.04**	**48**	P	**PKPdf**	**22 36 20.0**	**+0.8**
	SNR=19						
NIL	**Nilore**	**145.56**	**65**	PKP2	**PKPdf**	**22 36 20.3**	**+0.2**
NIL	**Nilore**	**145.56**	**65**	PKPab	**PKPdf**	**22 36 20.2**	**+0.2**
YSS	**Yuzh-Sakhalins**	**145.57**	**320**	*e*PKP2	**PKPbc**	**22 36 20.6**	**+0.6**
YSS				pmax	pmax		
	comp=Z,60nm,0.9s						
BOD	**Bodaibo**	**145.79**	**357**	*e*PKP2	**PKPdf**	**22 36 20.2**	**+0.5**
BOD				pmax	pmax		
	comp=Z,55nm,1.6s						
KSH	**Kashi**	**146.46**	**54**	PKPbc	**PKPbc**	**22 36 23.0**	**-0.1**
KSH				pPKP	pPKPab	22 36 51.3	-0.2
KSH				sPKP		22 37 02.4	
ASAJ	**Asahikawa**	**147.07**	**316**	PKPbc	**PKPbc**	**22 36 24.3**	**-0.2**
	comp=Z,22nm,0.8s,baz=2.5,slow=3.8,SNR=9.0						
MAKZ	**Makanchi**	**147.20**	**38**	PKIKP	**PKPdf**	**22 36 23.5**	**+1.1**
MAKZ	**Makanchi**	**147.20**	**38**		**PKPdf**	**22 36 23.5**	**+1.1**
MKAR	**Makanchi Array**	**147.38**	**38**	PKPbc	**PKPdf**	**22 36 23.4**	**+0.6**
	comp=Z,15nm,0.8s,baz=330,slow=1.4,SNR=48						
MKAR				pPKPbc	**pPKPab**	**22 36 54.2**	**-0.6**
	comp=Z,27nm,0.8s,baz=320,slow=2.4,SNR=15						
MKAR	**Makanchi Array**	**147.38**	**38**		**PKPdf**	**22 36 23.7**	**+0.9**
ZEA	**Zeya**	**147.55**	**342**	*e*PKP2	**PKPbc**	**22 36 26.3**	**+0.8**
ZEA				pmax	pmax		
	comp=N,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.0s						
ERM	**Erimo**	**147.63**	**312*c***	*i*PKP2	**PKPab**	**22 36 31.3**	**+2.8**
ERM				pmax	pmax		
	comp=Z,93nm,1.3s						
JAGI	**Jajag, Banyuwa**	**147.93**	**186**	PKPbc	**PKPbc**	**22 36 27.9**	**+0.2**
SIJI	**Sorong**	**148.68**	**222**	PKPbc	**PKPbc**	**22 36 29.2**	**-0.5**
	comp=Z,32nm,0.8s,baz=359,slow=5.4,SNR=11						
HYB	**Hyderabad**	**149.02**	**95**	*i* PKP	PKPab	22 36 58.0	+23
LEM	**Lembang**	**149.53**	**173**	PKPbc	**PKiKP**	**22 36 33.3**	**+0.2**
	comp=Z,39nm,0.7s,baz=111,slow=16,SNR=8.7						
KLR	**Kul'dur**	**149.70**	**333**	PKPbc	**PKPbc**	**22 36 31.4**	**+0.2**
	comp=Z,6.4nm,0.6s,baz=51,slow=2.3,SNR=17						
KLR				pPKPbc	**pPKPbc**	**22 36 59.7**	**+0.7**
	comp=Z,4.6nm,0.7s,baz=22,slow=3.9,SNR=4.6						
KAPI	**Kappang**	**150.27**	**198**	PKPbc	**PKiKP**	**22 36 34.7**	**+0.3**
	comp=Z,7.1nm,0.5s,baz=203,slow=4.0,SNR=5.2						
KAPI	**Kappang**	**150.27**	**198**	PKIKP	**PKPbc**	**22 36 33.4**	**-0.2**
KAPI	**Kappang**	**150.27**	**198**		**PKPbc**	**22 36 33.4**	**-0.2**
WMQ	**Urumqi**	**152.22**	**38**	*e*P	**PKPdf**	**22 36 28.5**	**-2.1**
WMQ				pmax	pmax		
	comp=Z,110nm,3.9s						
ZAK	**Zakamensk**	**152.64**	**11**	*e*PKIKP	**PKPdf**	**22 36 31.3**	**+0.3**
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
USRK	**Ussuriysk Ar.**	**153.25**	**325**	PKPbc	**PKiKP**	**22 36 40.2**	**+0.6**
	comp=Z,6.1nm,0.9s,baz=39,slow=0.7,SNR=11						
MJAR	**Matsushiro Arr**	**153.29**	**305**	PKPbc	**PKPbc**	**22 36 40.1**	**+0.2**
	comp=Z,5.4nm,0.9s,baz=84,slow=2.0,SNR=8.9						
MJAR	**Matsushiro Arr**	**153.29**	**305**	PKIKP	**PKPbc**	**22 36 38.9**	**-1.0**
MJAR						22 36 53.1	
MJAR	**Matsushiro Arr**	**153.29**	**305**		**PKPbc**	**22 36 38.9**	**-1.0**
MJAR					**PKPab**	**22 36 53.1**	**+0.9**
MAT	**Matsushiro**	**153.29**	**305**	PKP	**PKPbc**	**22 36 40.2**	**+0.3**
SONM	**Songino Array**	**155.58**	**8**	PKP	**PKPdf**	**22 36 34.4**	**-0.9**
	comp=Z,0.8nm,0.7s,baz=5.7,slow=1.4,SNR=7.9						
SONM				PKPbc	PKPab	22 36 44.9	-17
	comp=Z,2.3nm,0.8s,baz=282,slow=1.9,SNR=5.8						
SONM				pPKP	**pPKPdf**	**22 37 02.7**	**-0.7**
	comp=Z,4.1nm,0.8s,baz=321,slow=4.3,SNR=9.7						
ULN	**Ulaanbaatar**	**155.63**	**6**	PKP2	**PKPab**	**22 37 03.1**	**+1.3**
ULN	**Ulaanbaatar**	**155.63**	**6**	PKPab	**PKPab**	**22 37 03.1**	**+1.3**
KSRS	**Korea Array**	**160.01**	**317**	PKP	**PKPdf**	**22 36 41.3**	**+0.5**
	comp=Z,4.5nm,0.9s,baz=203,slow=0.9,SNR=8.6						
KSRS				PKPab	**PKPab**	**22 37 21.0**	**+0.1**
	comp=Z,4.2nm,0.8s,baz=50,slow=4.5,SNR=7.0						
JNU	**Nakatsue**	**160.17**	**303**	PKPab	**PKPab**	**22 37 23.6**	**+1.8**
	comp=Z,12nm,0.5s,baz=321,slow=5.4,SNR=8.2						
GTA	**Gaotai**	**161.64**	**29**	*e*P	**PKPdf**	**22 36 42.0**	**-0.8**
GTA				pP	pPKPdf	22 37 02.6	-8.2
GTA				sP	sPKPdf	22 37 13.3	-8.0
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
HHC	**Hu-ho-hao-te**	**162.84**	**359**	*e*P	**PKPdf**	**22 36 39.9**	**-4.0**
HHC				LR	LR		
	comp=N,410nm,22.8s						
HHC				LR	LR		
	comp=E,200nm,19.1s						
HHC				LR	LR		
	comp=Z,130nm,22.3s						
CMAR	**Chiang Mai Arr**	**167.60**	**112**	PKP	**PKPdf**	**22 36 47.8**	**-0.6**
	comp=Z,1.1nm,0.3s,baz=230,slow=2.3,SNR=4.8						
CMAR	**Chiang Mai Arr**	**167.60**	**112**	PKIKP	**PKPdf**	**22 36 48.7**	**+0.3**
CMAR	**Chiang Mai Arr**	**167.60**	**112**		**PKPdf**	**22 36 48.7**	**+0.3**
NJ2	**Nanjing**	**169.13**	**322**	*e*P	**PKPdf**	**22 36 46.5**	**-2.5**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						

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*TUL **22** 22:18:03.1±0.7, 36°.84N±0°.02×97°.89W±0°.02, h5^{km}±6^{km}, ML2.8, mb_Lg2.3/12(NEIC) Error ellipse: s-maj=2.6km s-min=1.0km az=144.0*

NEIC 22 22:18:03.4±0.5**, 36°.82N**±0°.01×**97°.87W**±0°.01**, h5**^{km}±6^{km}**, Error ellipse: s-maj=2.6km s-min=0.9km az=143.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
GC02	**Grant County #**	**0.03**	**19**	Pg	Pg	22 18 04.3	-0.2
GC02				Sg	Sg	22 18 05.3	0.0
KAN14	**Manchester OK**	**0.15**	**332**		Pg	22 18 06.4	-0.1
KAN14				Sg	Sg	22 18 08.5	0.0
KAN17	**Caldwell West**	**0.24**	**21**		Pg	22 18 08.1	0.0
KAN17				Sg	Sg	22 18 11.5	+0.2
OK032	**Salt Plains WL**	**0.27**	**266**	Pg	Pg	22 18 08.6	-0.1
KAN05	**Bluff City Nor**	**0.29**	**0**		Pg	22 18 09.0	0.0
CROK	**Carrier**	**0.33**	**196**	Pg	Pg	22 18 10.2	+0.4
KAN01	**Argonia South**	**0.34**	**15**		Pg	22 18 10.1	0.0
KAN10	**Anthony SW Sta**	**0.35**	**329**	Pg	Pg	22 18 10.1	-0.2
KAN13	**South Haven SW**	**0.37**	**59**		Pg	22 18 10.8	+0.2
KAN09	**Caldwell North**	**0.37**	**33**		Pg	22 18 10.7	0.0
KAN08	**Anthony NE Sta**	**0.41**	**349**	Pg	Pg	22 18 11.2	-0.2
KAN06	**Argonia West S**	**0.42**	**1**		Pg	22 18 11.6	-0.1
KAN12	**Harper NE Stat**	**0.48**	**348**	Pg	Pg	22 18 12.5	-0.3
BLOK	**Blackwell**	**0.53**	**96**	Pg	Pg	22 18 13.9	+0.2
U32A	**Winter Ranch,**	**1.01**	**244**	Pg	Pg	22 18 22.4	-0.4
OK029	**Liberty Lake**	**1.08**	**162**	Pg	Pg	22 18 23.9	-0.2
T35A	**Sooner Cattle**	**1.09**	**85**	Pg	Pg	22 18 24.1	-0.3
QUOK	**Quay**	**1.14**	**124**	Pg	Pg	22 18 25.2	-0.1
OK031	**S. Brethren Rd**	**1.20**	**136**	Pg	Pg	22 18 26.1	-0.3
OK030	**Cody Creek RV**	**1.25**	**135**		Pg	22 18 27.0	-0.5
OK025	**Westminster Rd**	**1.31**	**161**		Pn	22 18 28.1	-0.4
OKCSW	**OKLAHOMA CITY**	**1.46**	**166**		Pn	22 18 30.4	0.0
R32A	**Long Quarter,**	**1.73**	**338**	Pn	Pn	22 18 33.9	-0.4
TUL1	**Leonard**	**1.91**	**118**	Pn	Pn	22 18 37.2	+0.6
WMOK	**Wichita Mounta**	**2.21**	**200**		Pn	22 18 41.0	+0.2
X34A	**Smith Ranch, M**	**2.22**	**179**	Pn	Pn	22 18 40.6	-0.3
X34A				IAmb_Lg		22 19 16.6	
	comp=Z,11nm,0.7s						
KSU1	**Kansas State U**	**2.48**	**23**	Pn	Pn	22 18 44.1	-0.4
KSU1				IAmb_Lg		22 19 26.8	
	comp=Z,13nm,0.9s						
U38A	**Gravette**	**2.83**	**97**	Pn	Pn	22 18 49.4	+0.1
X37A	**Clayton**	**3.02**	**137**	Pn	Pn	22 18 51.8	-0.1
X37A				IAmb_Lg		22 19 45.1	
	comp=Z,11nm,0.7s						
HHAR	**Hobbs**	**3.21**	**99**	IAmb_Lg		22 19 45.9	
	comp=Z,7.8nm,0.9s						
AMTX	**Amarillo**	**3.65**	**239**	IAmb_Lg		22 20 09.4	
	comp=Z,9.4nm,0.9s						
S39A	**Bolivar**	**3.73**	**75**	IAmb_Lg		22 20 04.2	
	comp=Z,5.5nm,0.7s						
MIAR	**Mount Ida**	**4.17**	**122**	Pn	Pn	22 19 08.0	+0.3

NEIC 22 22:21:10.4±0.9**, 36°.15N**±0°.01×**97°.019W**±0°.009**, h5**^{km}±7^{km}**, mb_Lg2.1**/3**, Error ellipse: s-maj=1.8km s-min=1.1km az=163.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
OK031	**S. Brethren Rd**	**0.25**	**144**	Pg	Pg	22 21 15.2	0.0
OK031				Sg	Sg	22 21 18.8	+0.3
QUOK	**Quay**	**0.25**	**86**	Pg	Pg	22 21 15.4	+0.1
QUOK				Sg	Sg	22 21 19.1	+0.4
OK030	**Cody Creek RV**	**0.30**	**140**	Pg	Pg	22 21 16.1	0.0
OK030				Sg	Sg	22 21 20.2	+0.2
OK029	**Liberty Lake**	**0.50**	**225**	Pg	Pg	22 21 20.0	0.0
OK029				Sg	Sg	22 21 27.0	+0.4
BLOK	**Blackwell**	**0.63**	**345**	Pg	Pg	22 21 22.3	-0.1
BLOK				Sg	Sg	22 21 31.1	+0.5
OK025	**Westminster Rd**	**0.63**	**204**	Pg	Pg	22 21 22.3	-0.1
OK025				Sg	Sg	22 21 31.0	+0.4
BCOK	**Bluff Creek, N**	**0.69**	**224**	Pg	Pg	22 21 23.0	-0.6
BCOK				Sg	Sg	22 21 32.9	+0.3
OKCFA	**Oklahoma City**	**0.82**	**206**	Pg	Pg	22 21 25.4	-0.7
OKCFA				Sg	Sg	22 21 36.9	+0.3
OKCSW	**OKLAHOMA CITY**	**0.82**	**205**	Pg	Pg	22 21 25.4	-0.7
OKCSW				Sg	Sg	22 21 36.9	+0.1
CROK	**Carrier**	**0.85**	**295**	Pg	Pg	22 21 26.5	-0.3
CROK				Sg	Sg	22 21 38.1	+0.3
T35A	**Sooner Cattle**	**0.86**	**28**	Pg	Pg	22 21 26.6	-0.4
T35A				Sg	Sg	22 21 37.9	-0.3
KAN13	**South Haven SW**	**0.93**	**337**	Pg	Pg	22 21 27.8	-0.5
KAN13				Sg	Sg	22 21 40.4	-0.1
FNO	**Franklin**	**0.95**	**199**	Pg	Pg	22 21 27.6	-0.9
FNO				Sg	Sg	22 21 40.9	+0.1
GC02	**Grant County #**	**0.97**	**316**	Pg	Pg	22 21 28.6	-0.4
TUL1	**Leonard**	**1.02**	**103**	Pg	Pg	22 21 29.0	-1.0
TUL1				Sg	Sg	22 21 42.8	-0.5
KAN17	**Caldwell West**	**1.07**	**326**	Pg	Pg	22 21 30.6	-0.4
KAN17				Sg	Sg	22 21 44.9	0.0
KAN09	**Caldwell North**	**1.09**	**334**	Pg	Pg	22 21 31.1	-0.2
KAN09				Sg	Sg	22 21 45.3	-0.2
KAN14	**Manchester OK**	**1.10**	**317**	Pg	Pg	22 21 31.2	-0.3
KAN14				Sg	Sg	22 21 45.6	-0.3
OK032	**Salt Plains WL**	**1.16**	**304**	Pg	Pg	22 21 32.0	-0.6
OK032				Sg	Sg	22 21 47.0	-0.6
KAN01	**Argonia South**	**1.16**	**329**	Pg	Pg	22 21 32.3	-0.3
KAN01				Sg	Sg	22 21 47.5	-0.3
U32A	**Winter Ranch,**	**1.62**	**279**		Pn	22 21 40.0	+0.3
X34A	**Smith Ranch, M**	**1.69**	**203**	Pn	Pn	22 21 41.0	+0.4
WMOK	**Wichita Mounta**	**2.02**	**226**	Pn	Pn	22 21 45.7	+0.6
WMOK				IAmb_Lg		22 22 17.3	
	comp=Z,4.7nm,0.8s						
X37A	**Clayton**	**2.06**	**139**	IAmb_Lg		22 22 20.8	
	comp=Z,19nm,0.9s						
U38A	**Gravette**	**2.15**	**82**	Pn	Pn	22 21 47.6	+0.7
HHAR	**Hobbs**	**2.49**	**86**	Pn	Pn	22 21 52.1	+0.4
KSU1	**Kansas State U**	**2.96**	**6**	IAmb_Lg		22 22 45.2	
	comp=Z,5.7nm,1.0s						
S39A	**Bolivar**	**3.34**	**62**	Pn	Pn	22 22 03.7	+0.5

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*IDC **22** 22:34:15.1±0.8, 3°.13N×125°.48E, h0^{km}, mb3.9/8, mb1 4.0/10, mb1mx3.7/49, mbtmp4.0/10, ML4.4/2, Error ellipse: s-maj=46.1km s-min=14.1km az=72.0*

*NEIC **22** 22:34:21.1±0.8, 3°.19N±0°.06×125°.8E±0°.1, h36^{km}±11^{km}, mb4.1/11, Error ellipse: s-maj=21.2km s-min=3.4km az=68.0*

*DJA **22** 22:34:22.5±0.9, 3°N±5°×12°6E±°, h24^{km}±12^{km}, M4.6/13, mb4.6/7, mB5.3/6, MLv4.5/13, Mw(mB)4.8/6*

ISC 22 22:34:20.9±0.6**, 3°.29N**±0°.05×**126°.04E**±0°.08**, h35**^{km}**, n45,** σ**2^{s}01**/45**, mb4.0**/12**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**0.64**	**307**	P	**Pn**	**22 34 36.7**	**+3.1**
SGSI				S	**Sn**	**22 34 47.1**	**+4.5**
TNTI	**Ternate**	**2.83**	**152**		**Pn**	**22 35 04.3**	**+0.6**
TNTI				Sn	**Sn**	**22 35 38.0**	**+1.4**
KMSI	**Cibinong**	**3.39**	**217**	P	Pn	22 35 16.1	+4.7
DAV	**Davao City (W)**	**3.78**	**353**	Pn	**Pn**	**22 35 17.8**	**+1.0**
	42nm,0.3s,baz=28,slow=9.7,SNR=2.2						
DAV				Sn	**Sn**	**22 36 03.7**	**+3.6**
	51nm,0.3s,baz=90,slow=20,SNR=5.0						
DAV	**Davao City (W)**	**3.78**	**353**	Pn	**Pn**	**22 35 17.5**	**+0.7**
DAV					**Sn**	**22 36 01.9**	**+1.8**
GTOI	**Gorontalo**	**4.02**	**229**	P	Pn	22 35 23.8	+3.8
LBMI	**Labuha**	**4.17**	**159**	P	**Pn**	**22 35 25.3**	**+3.2**
LBMI				S	**Sn**	**22 36 13.4**	**+3.8**
MRSI	**Marisa**	**4.96**	**236**	P	Pn	22 35 37.8	+4.8
	1.3nm6μm242nm,0.6s						
SANI	**Sanana**	**5.30**	**181**	P	**Pn**	**22 35 39.2**	**+1.5**
	0.3nm1μm19nm,0.6s						
SANI	**Sanana**	**5.30**	**181**	P	**Pn**	**22 35 41.2**	**+3.5**
TOLI2	**Tolitoli**	**5.68**	**248**	P	Pn	22 35 46.4	+3.5
APSI	**Ampana**	**6.06**	**227**	P	Pn	22 35 53.6	+5.5
	0.6nm2μm157nm,0.9s						
SIJI	**Sorong**	**6.66**	**128**	Pn	**Pn**	**22 35 58.4**	**+2.0**
	4.1nm,0.3s,baz=316,slow=17,SNR=3.7						
MPSI	**Mapaga**	**6.80**	**245**	P	Pn	22 36 01.3	+3.0
	0.1nm19nm,0.7s						
PCI	**Palu**	**7.47**	**236**	P	Pn	22 36 13.3	+5.8
FAKI	**Fak Fak**	**8.75**	**135**		**Pn**	**22 36 24.6**	**-0.5**

TTSI	**Tana Toraja**	**8.85**	**225**	P	Pn	22 36 30.1	+3.7
	3µm27nm,0.9s						
SPSI	**Sidrap Palu**	**9.55**	**221**	P	**Pn**	**22 36 37.5**	**+1.4**
KKM	**Kota Kinabalu**	**10.17**	**286**	P	Pn	22 36 51.7	+7.1
SBUM	**Sibu**	**13.83**	**267**	Pn	**Pn**	**22 37 30.8**	**-3.8**
MTN	**Manton Dam**	**16.81**	**163**	P	**Pn**	**22 38 13.2**	**-0.5**
MTN				IAmb	IAmb	22 38 16.7	
	comp=Z,11nm,0.8s						
MTN	**Manton Dam**	**16.81**	**163**	P	**Pn**	**22 38 12.9**	**-0.8**
	comp=Z,14nm,0.8s						
KNRA	**Kununurra**	**19.04**	**172**		**P**	**22 38 39.4**	**-0.8**
KNRA				IAmb	IAmb	22 38 41.6	
	comp=Z,23nm,1.2s						
KNRA	**Kununurra**	**19.04**	**172**	P	**Pn**	**22 38 40.9**	**-0.2**
	comp=Z,20nm,1.0s						
TPUB	**Ta-pu**	**20.57**	**346**	P	**P**	**22 38 57.5**	**+0.6**
	comp=Z,26nm,1.1s						
WB0	**Warramunga Arr**	**24.34**	**161**	P	**P**	**22 39 34.8**	**-0.9**
WB0				IAmb	IAmb	22 39 36.4	
	comp=Z,11nm,1.1s						
WRAB	**Tennant Creek**	**24.48**	**161**	P	**P**	**22 39 36.3**	**-0.7**
WRA	**Warramunga Arr**	**24.49**	**161**	P	**P**	**22 39 36.2**	**-0.8**
	comp=Z,3.4nm,0.5s,baz=335,slow=11,SNR=23						
WRA				S	**S**	**22 43 55.1**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=352,slow=22,SNR=4.0						
WRA	**Warramunga Arr**	**24.49**	**161**	P	**P**	**22 39 36.1**	**-0.8**
WB2	**Warramunga Arr**	**24.49**	**161**	P	**P**	**22 39 36.2**	**-0.8**
WR0	**Warramunga Arr**	**24.57**	**160**	P	**P**	**22 39 36.8**	**-1.0**
WR0				IAmb	IAmb	22 39 38.8	
	comp=Z,4.8nm,0.8s						
ASAR	**Alice Springs**	**27.87**	**164**	P	**P**	**22 40 07.5**	**-0.1**
	comp=Z,0.7nm,0.4s,baz=345,slow=11,SNR=14						
ASAR				S	**S**	**22 44 54.4**	**+5.5**
	comp=Z,1.1nm,0.7s,baz=350,slow=19,SNR=8.9						
ASAR	**Alice Springs**	**27.87**	**164**	P	**P**	**22 40 07.1**	**-0.5**
KSRS	**Korea Array**	**34.04**	**3**	P	**P**	**22 41 02.8**	**+1.0**
	comp=Z,1.7nm,0.5s,baz=182,slow=9.8,SNR=6.2						
STKA	**Stephens Creek**	**37.97**	**158**	P	**P**	**22 41 35.0**	**-0.5**
	comp=Z,1.5nm,0.5s,baz=341,slow=9.7,SNR=4.9						
STKA	**Stephens Creek**	**37.97**	**158**	P	**P**	**22 41 35.2**	**-0.3**
USRK	**Ussuriysk Ar.**	**41.08**	**7**	P	**P**	**22 42 02.2**	**+1.0**
	comp=Z,1.7nm,0.8s,baz=182,slow=8.7,SNR=3.3						
ARMA	**Armidale**	**41.49**	**146**	P	**P**	**22 42 04.7**	**-0.2**
SONM	**Songino Array**	**47.50**	**342**	P	**P**	**22 42 51.1**	**-1.6**
	comp=Z,0.4nm,0.8s,baz=144,slow=11,SNR=1.6						
SONM	**Songino Array**	**47.50**	**342**	P	**P**	**22 42 52.1**	**-0.6**
SONM				IAmb	IAmb	22 43 10.7	
	comp=Z,1.4nm,1.3s						
MK31	**Makanchi Array**	**57.52**	**326**	P	**P**	**22 44 05.5**	**-1.4**
MK31				IAmb	IAmb	22 44 22.1	
	comp=Z,1.8nm,1.5s						
MKAR	**Makanchi Array**	**57.52**	**326**	P	**P**	**22 44 04.5**	**-2.5**
	comp=Z,0.3nm,0.4s,baz=118,slow=7.8,SNR=14						
MKAR				PcP	**PcP**	**22 44 59.0**	**-1.1**
	comp=Z,1.0nm,0.6s,baz=120,slow=4.9,SNR=6.0						
MKAR	**Makanchi Array**	**57.52**	**326**	P	**P**	**22 44 05.8**	**-1.1**
MKAR				PcP	**PcP**	**22 44 58.2**	**-2.0**
KURBB	**Kurchatov Arra**	**61.74**	**328**	P	**P**	**22 44 34.6**	**-1.2**
	comp=Z,0.6nm,0.5s,baz=131,slow=6.5,SNR=10						
KURK	**Kurchatov**	**61.74**	**328**	P	**P**	**22 44 34.6**	**-1.2**
KURK				IAmb	IAmb	22 44 36.4	
	comp=Z,1.8nm,0.8s						

*IDC **22** 22:39:43.4±0.9, 26°.28N×142°.61E, h0^{km}, mb4.0/16, mb1 4.2/17, mb1mx3.9/48, mbtmp4.0/17, ML3.1/1, MS3.4/2, Ms1 3.3/2, ms1mx2.6/40, Error ellipse: s-maj=34.3km s-min=14.0km az=79.0*

*NEIC **22** 22:39:45.0±1.1, 26°.4N±0°.1×143°.0E±0°.1, h10^{km}±1^{km}, mb4.6/16, Error ellipse: s-maj=29.5km s-min=4.9km az=43.0*

ISC 22 22:39:48.1±0.7**, 26°.29N**±0°.09×**142°.8E**±0°.2**, h35**^{km}**, n48,** σ**1^{s}.15**/46**, mb4.3**/24**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**0.98**	**325**	Pn	**Pn**	**22 40 03.7**	**-1.6**
	231nm,0.3s,baz=107,slow=19,SNR=112						
JCJ				Sn	**Sn**	**22 40 19.7**	**+1.8**
	677nm,0.3s,baz=287,slow=20,SNR=12						
JCJ				LR	LR	22 40 27.9	
	comp=Z,326nm,21.5s,baz=88,slow=50						
JCJ	**Chichijima**	**0.98**	**325**		**Pn**	**22 40 03.4**	**-1.9**
JCJ				Sn	**Sn**	**22 40 20.0**	**+2.0**
MJAR	**Matsushiro Arr**	**10.94**	**340**	Pn	**Pn**	**22 42 21.0**	**-1.2**
	0.1nm,0.3s,baz=157,slow=12,SNR=8.7						
MJAR	**Matsushiro Arr**	**10.94**	**340**	Pn	**Pn**	**22 42 21.3**	**-0.9**
MAJO	**Matsushiro**	**10.95**	**340**	Pn	**Pn**	**22 42 22.1**	**-0.2**
JMM	**Marumori**	**11.66**	**352**	Pn	**Pn**	**22 42 30.2**	**-1.7**
JOW	**Kunigami**	**13.03**	**276**	LR	LR	22 47 00.9	
	comp=Z,122nm,21.9s,baz=143,slow=34						
H11N2	**WAKE ISLAND Hy**	**23.09**	**101**	T	T	23 08 36.9	
	baz=291,slow=74,SNR=3.5						
H11N1	**WAKE ISLAND Hy**	**23.09**	**101**	T	T	23 08 36.3	
	baz=291,slow=74,SNR=3.2						
H11N3	**WAKE ISLAND Hy**	**23.11**	**101**	T	T	23 08 35.5	
	baz=291,slow=74,SNR=5.3						
H11S3	**WAKE ISLAND Hy**	**23.37**	**104**	T	T	23 09 03.2	
	baz=286,slow=74,SNR=6.6						
H11S2	**WAKE ISLAND Hy**	**23.39**	**104**	T	T	23 09 06.2	
	baz=282,slow=74,SNR=5.1						
KLR	**Kul'dur**	**24.46**	**342**	P	**P**	**22 45 05.4**	**+1.8**
	2.2nm,0.6s,baz=143,slow=7.7,SNR=5.9						
ULN	**Ulaanbaatar**	**35.29**	**317**	P	**P**	**22 46 40.4**	**+0.6**
ULN				IAmb	IAmb	22 46 47.6	
	comp=Z,6.6nm,0.9s						
CMAR	**Chiang Mai Arr**	**41.16**	**268**	P	**P**	**22 47 28.1**	**-1.3**
	comp=Z,0.6nm,0.3s,baz=54,slow=9.1,SNR=5.0						
WB0	**Warramunga Arr**	**46.51**	**191**	P	**P**	**22 48 12.8**	**+0.7**
WB0				IAmb	IAmb	22 48 26.0	
	comp=Z,5.8nm,1.1s						
WR0	**Warramunga Arr**	**46.67**	**191**	P	**P**	**22 48 14.2**	**+0.7**
WR0				IAmb	IAmb	22 48 22.7	
	comp=Z,12nm,1.4s						
WB2	**Warramunga Arr**	**46.69**	**191**	P	**P**	**22 48 14.7**	**+1.1**
WB2				IAmb	IAmb	22 48 23.3	
	comp=Z,6.0nm,0.7s						
WRA	**Warramunga Arr**	**46.69**	**191**	P	**P**	**22 48 14.7**	**+1.1**
	comp=Z,1.3nm,0.4s,baz=11,slow=8.4,SNR=20						
WRA	**Warramunga Arr**	**46.69**	**191**	P	**P**	**22 48 14.8**	**+1.2**
FITZ	**Fitzroy Crossi**	**47.18**	**203**	P	**P**	**22 48 17.1**	**-0.3**
	comp=Z,2.5nm,0.9s,baz=17,slow=16,SNR=3.1						
ASAR	**Alice Springs**	**50.41**	**191**	P	**P**	**22 48 43.4**	**+1.2**
	comp=Z,0.2nm,0.5s,baz=16,slow=13,SNR=1.6						
ZALV	**Zalesovo Beam**	**50.46**	**319**	P	**P**	**22 48 42.2**	**0.0**
	comp=Z,0.3nm,0.3s,baz=93,slow=5.8,SNR=2.4						
ZALV				PcP	**PcP**	**22 49 57.9**	**-2.2**
	comp=Z,0.5nm,0.5s,baz=117,slow=5.2,SNR=3.6						
ZALV	**Zalesovo Beam**	**50.46**	**319**	P	**P**	**22 48 41.7**	**-0.5**
MK31	**Makanchi Array**	**51.42**	**310**	P	**P**	**22 48 49.1**	**-0.5**
MKAR	**Makanchi Array**	**51.42**	**310**	P	**P**	**22 48 48.6**	**-1.1**
	comp=Z,0.6nm,0.4s,baz=90,slow=9.3,SNR=15						
MKAR				PcP	**PcP**	**22 50 02.0**	**-1.8**
	comp=Z,0.4nm,0.6s,baz=82,slow=8.9,SNR=4.8						
MAKZ	**Makanchi**	**51.63**	**310**	P	**P**	**22 48 50.5**	**-0.7**
PSA00	**Pilbara Seismi**	**52.53**	**207**	P	**P**	**22 48 58.8**	**+0.7**
DZM	**Mont Dzumac**	**53.25**	**152**	P	**P**	**22 49 01.9**	**-1.6**
KURK	**Kurchatov**	**53.95**	**315**	P	**P**	**22 49 08.5**	**+0.3**
KURK				IAmb	IAmb	22 49 09.1	
	comp=Z,6.4nm,1.3s						
KURBB	**Kurchatov Arra**	**54.00**	**315**	P	**P**	**22 49 08.1**	**-0.5**
	comp=Z,0.9nm,0.4s,baz=92,slow=7.2,SNR=9.4						
PRZ	**Przheval'sk**	**54.32**	**305**	P	**P**	**22 49 13.0**	**+1.7**
BOOM	**Boomskoye usch**	**56.13**	**305**	P	**P**	**22 49 25.1**	**+0.7**
BRVK	**Borovoye**	**59.07**	**318**	P	**P**	**22 49 45.3**	**+0.7**
BRVK				IAmb	IAmb	22 49 46.0	
	comp=Z,1.9nm,0.6s						
ARU	**Arti**	**65.40**	**323**	P	**P**	**22 50 27.7**	**+0.8**
ABKAR	**Akbulak array**	**66.06**	**315**	P	**P**	**22 50 31.7**	**+0.4**
ABKAR				IAmb	IAmb	22 50 32.2	
	comp=Z,4.4nm,1.2s						
ARCES	**ARCESS Array B**	**74.48**	**341**	P	**P**	**22 51 22.3**	**-0.2**
	comp=Z,3.6nm,1.0s,baz=60,slow=7.7,SNR=1.9						
FINES	**FINESS Array B**	**78.91**	**334**	P	**P**	**22 51 48.9**	**+1.2**
	comp=Z,1.4nm,0.3s,baz=70,slow=5.0,SNR=29						
FINES	**FINESS Array B**	**78.91**	**334**	P	**P**	**22 51 48.2**	**+0.6**
KBZ	**Khabaz**	**78.97**	**313**	P	**P**	**22 51 49.2**	**+1.0**
	comp=Z,2.9nm,0.9s,baz=308,slow=4.5,SNR=3.8						
KBZ				LR	LR	23 29 53.9	
	comp=Z,28nm,19.0s,baz=350,slow=38						
NVAR	**Mina Array Bea**	**80.57**	**52**	P	**P**	**22 51 59.4**	**+2.0**
	comp=Z,0.3nm,0.6s,baz=304,slow=5.2,SNR=3.1						
AKASG	**Malin Array Be**	**83.59**	**324**	P	**P**	**22 52 11.8**	**-0.9**
	comp=Z,1.6nm,0.6s,baz=54,slow=5.8,SNR=8.0						
AKASG	**Malin Array Be**	**83.59**	**324**	P	**P**	**22 52 12.7**	**0.0**
NB2	**NORSAR Subarra**	**84.56**	**339**	P	**P**	**22 52 18.5**	**+1.0**
	comp=Z,4.6nm,1.2s,baz=45,slow=5.1						
NOA	**NORSAR Array B**	**84.56**	**339**	P	**P**	**22 52 17.3**	**-0.2**
	comp=Z,0.9nm,0.9s,baz=45,slow=5.1,SNR=2.5						
RAYN	**Ar Rayn**	**85.99**	**294**	P	**P**	**22 52 25.2**	**-0.1**
RAYN				IAmb	IAmb	22 52 27.2	
	comp=Z,4.0nm,0.9s						
BRTR	**Keskin Array B**	**86.96**	**313**	P	**P**	**22 52 29.9**	**-0.1**
	comp=Z,0.5nm,0.8s,baz=108,slow=4.7,SNR=2.7						
GERES	**GERESS Array B**	**92.48**	**329**	P	**P**	**22 52 55.9**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=22,slow=5.6,SNR=2.4						

*IDC **22** 22:46:20.2±6.7, 35°.99N×71°.47E, h77^{km}±19^{km}, mb3.3/3, mb1 3.4/5, mb1mx3.1/30, mbtmp3.7/5, MS3.2/2, Ms1 3.2/2, ms1mx2.5/38, Error ellipse: s-maj=100.6km s-min=8.8km az=153.0*

*NNC **22** 22:46:30.1±5.2, 36°.82N×71°.27E, h186^{km}±90^{km}, mb2.6, mpv3.5, Error ellipse: s-maj=53.2km s-min=30.3km az=24.0*

ISC 22 22:46:27.6±2.0**, 36°.7N**±0°.1×**71°.04E**±0°.10**, h100**^{km}**, n11,** σ**1^{s}.72**/14**, 4C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK02	**Karatay Array**	**6.43**	**357**	⇓P	**Pn**	**22 48 01.0**	**+1.2**
	1.9nm,0.3s,baz=179,slow=13						
KK02				⇑S	**Sn**	**22 49 14.0**	**+2.4**
	2.8nm,0.3s,baz=174,slow=20						
AAK	**Ala-Archa**	**6.52**	**23**	P	**Pn**	**22 48 01.0**	**-0.1**
	0.7nm,0.3s,baz=188,slow=2.6,SNR=11						
AAK				S	**Sn**	**22 49 13.1**	**-0.9**
	0.5nm,0.3s,baz=150,slow=23,SNR=7.2						
AAK	**Ala-Archa**	**6.52**	**23**	⇑P	**Pn**	**22 48 01.5**	**+0.4**
	2.3nm,0.6s						
AAK				⇓S	**Sn**	**22 49 13.7**	**-0.3**
	5.9nm,1.0s						
TKM2	**Tokmak 2**	**7.15**	**28**	⇑P	**Pn**	**22 48 09.2**	**-0.5**
	1.5nm,0.6s						
GEYT	**Alibeck**	**10.38**	**281**	P	**Pn**	**22 48 52.1**	**-1.3**
	0.5nm,0.3s,baz=85,slow=18,SNR=5.9						
GEYT				S	**Sn**	**22 50 47.0**	**-0.7**
	0.5nm,0.3s,baz=82,slow=32,SNR=2.4						
AB31	**Akbulak array**	**14.95**	**331**	⇑P	**Pn**	**22 49 53.4**	**-0.1**
	1.1nm,0.4s,baz=313,slow=76,SNR=30						
AB31				S	**Sn**	**22 52 35.0**	**-3.2**
	0.4nm,0.4s,baz=162,slow=22,SNR=3.2						
ZALV	**Zalesovo Beam**	**19.74**	**25**	P	**P**	**22 50 47.9**	**-1.3**
	1.3nm,0.4s,baz=216,slow=10,SNR=7.5						
FINES	**FINESS Array B**	**37.36**	**326**	P	**P**	**22 53 32.8**	**+2.7**
	2.3nm,1.0s,baz=125,slow=12,SNR=1.5						
GERES	**GERESS Array B**	**42.86**	**305**	LR	LR	23 14 54.8	
	comp=Z,21nm,18.4s,baz=276,slow=39						
HFS	**Hagfors**	**42.95**	**322**	LR	LR	23 12 48.0	
	comp=Z,34nm,18.8s,baz=255,slow=36						
NOA	**NORSAR Array B**	**44.26**	**323**	P	**P**	**22 54 28.5**	**+1.7**
	0.2nm,0.6s,baz=83,slow=7.9,SNR=1.0						

*IDC **22** 22:51:26.1±2.4, 13°.99N×93°.15W, h0^{km}, mb3.9/6, mb1 4.2/9, mb1mx3.8/41, mbtmp3.9/9, ML3.8/3, MS3.0/5, Ms1 3.0/5, ms1mx2.8/24, Error ellipse: s-maj=52.4km s-min=24.0km az=16.0*

*GCG **22** 22:51:30.2±0.5, 16°.02N×92°.58W, h50^{km}±999^{km}, MD4.2*

*NEIC **22** 22:51:31.1±1.5, 14°.37N±0°.09×93°.15W±0°.04, h19^{km}±7^{km}, mb4.2/11, Md4.1/12(MEX), Error ellipse: s-maj=13.4km s-min=5.8km az=183.0*

*MEX **22** 22:51:34.1±1.1, 14°.71N×93°.25W, h10^{km}, MD4.1*

ISC 22 22:51:24.9±1.8**, 13°.82N**±0°.10×**93°.01W**±0°.05**, h13**^{km}±11^{km}**, n43,** σ**1^{s}.75**/47**, mb4.2**/11**, MS3.4**/3**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		**1.30**	**34**		**Pb**	**22 51 49.1**	**-0.1**
THIG					**Sn**	**22 52 01.9**	**-4.1**
THIG		**1.30**	**34**	*e*P	**Pb**	**22 51 49.1**	**-0.1**
THIG				*e*S	**Sn**	**22 52 01.9**	**-4.1**
RTAL	**Retalhuleu**	**1.46**	**61**		**Pg**	**22 51 54.4**	**+1.5**
RTAL				Sn	**Sn**	**22 52 10.1**	**+0.2**
STG3	**Santiaguito 3,**	**1.66**	**58**	*e*P	**Pg**	**22 51 57.3**	**+0.6**
STG3				*e*S	**Sb**	**22 52 18.1**	**+1.9**
HUEH	**Huehuetenango**	**2.09**	**44**		**Pb**	**22 52 03.1**	**+0.3**
HUEH				Sn	**Sn**	**22 52 21.1**	**-4.6**
FUG	**Fuego 3**	**2.20**	**73**	*e*P	**Pg**	**22 52 06.2**	**-0.9**
FUG				*e*S	**Sg**	**22 52 34.6**	**-1.1**
PCG	**Pacaya**	**2.40**	**76**	*e*S	**Sg**	**22 52 41.8**	**-0.4**
APG	**El Apazote**	**2.74**	**64**	Pn	**Pb**	**22 52 13.3**	**-0.5**
	14nm,0.3s,baz=250,slow=6.2,SNR=51						
APG				Sn	**Sb**	**22 52 49.2**	**+1.9**
	21nm,0.3s,baz=300,slow=13,SNR=6.8						
APG				LR	LR	22 52 59.8	
	comp=Z,63nm,20.4s,baz=256,slow=34						
HUIG	**Huatulco**	**3.56**	**303**		**Pn**	**22 52 18.6**	**-1.3**
HUIG					Sn	22 52 51.0	-11
HUIG	**Huatulco**	**3.56**	**303**	*e*P	**Pn**	**22 52 18.6**	**-1.3**
HUIG				*e*S	Sn	22 52 51.0	-11
MTO3	**Montecristo**	**3.59**	**80**		**Pb**	**22 52 25.8**	**-2.6**
ESQI	**Esquipulas**	**3.64**	**78**		**Pb**	**22 52 27.4**	**-1.7**
CMIG	**Matias Romero**	**3.72**	**331**	Pn	**Pn**	**22 52 21.2**	**-0.8**
	11nm,0.3s,baz=156,slow=12,SNR=94						
CMIG				Sn	**Sn**	**22 53 03.5**	**-2.2**
	10nm,0.3s,baz=135,slow=16,SNR=5.7						
CMIG				LR	LR	22 53 16.7	
	comp=Z,50nm,21.1s,baz=338,slow=32						
PETF	**Flores**	**4.32**	**44**		**Pn**	**22 52 31.8**	**+1.5**
ORTG	**Ortega, Santa**	**8.15**	**114**		Pb	22 53 32.5	-13
RIMA	**Rio Macho**	**9.82**	**113**		Pn	22 53 55.4	+9.4
TXAR	**Lajitas Array**	**18.32**	**329**	P	**Pn**	**22 55 40.1**	**+1.2**
	0.1nm,0.3s,baz=150,slow=9.2,SNR=11						
TXAR	**Lajitas Array**	**18.32**	**329**	P	**P**	**22 55 38.1**	**-0.9**
TX31	**Lajitas Ar. Si**	**18.32**	**329**	P	**P**	**22 55 38.0**	**-1.0**
TX31				IAmb	IAmb	22 55 56.1	
	comp=Z,16nm,1.2s						
MIAR	**Mount Ida**	**20.64**	**359**	P	**P**	**22 56 02.8**	**-1.4**
MIAR				IAmb	IAmb	22 56 12.6	
	comp=Z,12nm,1.1s						
MNTX	**Cornudas Mount**	**21.10**	**330**	P	**P**	**22 56 09.1**	**-0.2**
121A	**Cookes Peak, D**	**23.00**	**327**	P	**P**	**22 56 27.2**	**-2.5**
121A				IAmb	IAmb	22 56 34.0	
	comp=Z,6.0nm,0.8s						
S39A	**Bolivar**	**23.77**	**359**	P	**P**	**22 56 36.9**	**-0.3**
S39A				IAmb	IAmb	22 56 37.9	
	comp=Z,9.1nm,0.9s						
ANMO	**Albuquerque**	**24.29**	**332**	P	**P**	**22 56 44.3**	**+2.0**
	comp=Z,1.2nm,0.7s,baz=142,slow=11,SNR=5.1						
ANMO	**Albuquerque**	**24.29**	**332**	P	**P**	**22 56 43.1**	**+0.9**
GLA	**Glamis**	**27.59**	**318**	P	**P**	**22 57 13.5**	**+1.6**
PDAR	**Pinedale Array**	**32.19**	**337**	P	**P**	**22 57 54.0**	**+1.2**
	comp=Z,0.2nm,0.5s,baz=144,slow=13,SNR=3.6						
PDAR	**Pinedale Array**	**32.19**	**337**	P	**P**	**22 57 52.7**	**-0.1**
REDW	**Red Top Meadow**	**33.19**	**336**	P	**P**	**22 58 01.3**	**-0.3**
REDW				IAmb	IAmb	22 58 07.8	
	comp=Z,4.8nm,1.0s						
NVAR	**Mina Array Bea**	**33.20**	**322**	P	**P**	**22 58 04.5**	**+2.8**
	comp=Z,1.4nm,0.7s,baz=136,slow=8.4,SNR=15						
SNOW	**Snow King Moun**	**33.24**	**336**	P	**P**	**22 58 01.2**	**-0.8**
TPAW	**Teton Pass**	**33.34**	**336**	P	**P**	**22 58 03.0**	**+0.1**
TPAW				IAmb	IAmb	22 58 12.7	
	comp=Z,4.9nm,1.2s						
MOOW	**Moose Ponds**	**33.48**	**336**	P	**P**	**22 58 03.8**	**-0.3**
MOOW				IAmb	IAmb	22 58 11.3	
	comp=Z,1.2nm,0.8s						
MCMT	**McKenzie Canyo**	**35.21**	**335**	P	**P**	**22 58 19.4**	**+0.2**
LRM	**Limekiln Ridge**	**35.88**	**337**	P	**P**	**22 58 25.5**	**+0.7**
SCHQ	**Schefferville**	**45.73**	**21**	LR	LR	23 19 16.3	
	comp=Z,72nm,18.8s,baz=94,slow=37						
YKA	**Yellowknife Ar**	**50.98**	**347**	P	**P**	**23 00 27.4**	**+1.4**
	comp=Z,2.2nm,0.7s,baz=142,slow=8.4,SNR=7.7						
YKA				LR	LR	23 25 56.6	
	comp=Z,37nm,19.8s,baz=0.0,slow=41						
YKA	**Yellowknife Ar**	**50.98**	**347**	P	**P**	**23 00 26.1**	**+0.1**
ILAR	**Eielson Array**	**62.62**	**337**	P	**P**	**23 01 50.0**	**+1.4**
	comp=Z,1.0nm,0.9s,baz=134,slow=5.3,SNR=9.0						
ILAR	**Eielson Array**	**62.62**	**337**	P	**P**	**23 01 51.3**	**+2.7**
NOA	**NORSAR Array B**	**84.77**	**28**	LR	LR	23 41 18.9	
	comp=Z,11nm,19.2s,baz=285,slow=35						
FINES	**FINESS Array B**	**91.08**	**25**	P	**P**	**23 04 30.0**	**+1.0**
	comp=Z,3.6nm,1.1s,baz=245,slow=5.8,SNR=3.9						
CMAR	**Chiang Mai Arr**	**145.83**	**340**	PKPbc	**PKiKP**	**23 11 07.3**	**-1.1**
	comp=Z,1.3nm,0.6s,baz=343,slow=3.1,SNR=7.5						

*ISK **22** 23:03:46.9, 38°.95N×24°.38E, h8^{km}, ML3.4/26*

*IDC **22** 23:03:47.5±1.0, 38°.89N×24°.51E, h0^{km}, mb3.5/6, mb1 3.6/9, mb1mx3.4/51, mbtmp3.5/9, ML3.1/3, Error ellipse: s-maj=25.8km s-min=18.7km az=159.0*

*THE **22** 23:03:47.9, 38°.96N×24°.38E, h12^{km}, ML3.4/14, Error ellipse: s-maj=0.9km s-min=0.4km az=110.0*

*DDA **22** 23:03:47.3, 39°.31N×24°.29E, h12^{km}±2^{km}, ML3.4*

*ATH **22** 23:03:48.1, 38°.94N×24°.38E, h13^{km}±1^{km}, ML3.3/18, Error ellipse: s-maj=1.4km s-min=0.8km az=72.0*

ISC 22 23:03:47.9±0.9**, 38°.95N**±0°.02×**24°.38E**±0°.02**, h9**^{km}±6^{km}**, n126,** σ**0^{s}.98**/164**, mb3.5**/6**, 5C-12D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKY	**Skiros Island**	**0.15**	**119**	P	**Pg**	**23 03 51.5**	**+0.2**
SKY				S	**Sg**	**23 03 53.8**	**+0.2**
	75µm,0.2s						
SKY	**Skiros Island**	**0.15**	**119**	P	**Pg**	**23 03 51.3**	**0.0**
SKY				S	**Sg**	**23 03 53.8**	**+0.2**
KYMI	**Kymi, Euboea I**	**0.39**	**214**	P	**Pg**	**23 03 55.6**	**+0.1**
KYMI				S	**Sb**	**23 04 01.5**	**-1.5**
	2µm,0.4s						
KYMI	**Kymi, Euboea I**	**0.39**	**214**	P	**Pg**	**23 03 55.6**	**+0.1**
KYMI				S	**Sg**	**23 04 00.9**	**+0.3**
KYMI				AML	AML	23 04 03.7	
	comp=N,4434µm,0.4s						
KYMI				AML	AML	23 04 06.3	
	comp=E,5588µm,0.3s						
ALNA	**Alonissos**	**0.44**	**296**	P	**Pb**	**23 03 56.9**	**-1.0**
ALNA				S	**Sb**	**23 04 03.1**	**-1.5**
EFSA	**Agios Efstrati**	**0.76**	**39**	P	**Pn**	**23 04 03.3**	**-1.4**
KARY	**Karystos**	**0.92**	**177**	P	**Pb**	**23 04 05.5**	**-0.6**
KARY				S	**Sn**	**23 04 18.7**	**-1.6**
KARY	**Karystos**	**0.92**	**177**	P	**Pb**	**23 04 05.4**	**-0.6**
KARY				S	**Sb**	**23 04 17.8**	**-0.6**
DION	**Dionisos Attik**	**0.94**	**202**	P	**Pb**	**23 04 05.7**	**-0.7**
DION				S	**Sb**	**23 04 19.0**	**0.0**
	comp=E,6µm,0.5s						
DION	**Dionisos Attik**	**0.94**	**202**	P	**Pg**	**23 04 05.3**	**-0.7**
DION				S	**Sb**	**23 04 18.4**	**-0.6**
DION				AML	AML	23 04 21.8	
	comp=N,7677µm,0.5s						
DION				AML	AML	23 04 23.9	
	comp=E,7174µm,0.6s						
NEO	**Neokhori**	**0.96**	**292**	P	**Pb**	**23 04 06.5**	**-0.4**
NEO				S	**Sb**	**23 04 19.4**	**-0.3**
	comp=E,3µm,0.4s						
NEO	**Neokhori**	**0.96**	**292**	P	**Pb**	**23 04 06.4**	**-0.4**
NEO				S	**Sb**	**23 04 19.4**	**-0.3**
NEO				AML	AML	23 04 22.8	
	comp=E,7267µm,0.4s						
NEO				AML	AML	23 04 23.0	
	comp=N,5186µm,0.3s						
PTL	**Penteli**	**0.99**	**204**	P	**Pg**	**23 04 06.4**	**-0.5**
PTL				S	**Sn**	**23 04 20.7**	**-1.3**
	comp=N,2µm,0.5s						
PTL	**Penteli**	**0.99**	**204**	P	**Pg**	**23 04 06.2**	**-0.7**
PTL				S	**Sg**	**23 04 19.5**	**-0.3**
PTL				AML	AML	23 04 22.7	
	comp=N,2972µm,0.4s						
PTL				AML	AML	23 04 27.6	
	comp=E,3392µm,0.7s						
XOR	**Xorichti**	**1.01**	**294**	P	**Pg**	**23 04 07.2**	**-0.2**
XOR				S	**Sb**	**23 04 20.4**	**-0.6**
	comp=E,3µm,0.3s						
XOR	**Xorichti**	**1.01**	**294**	P	**Pg**	**23 04 07.2**	**-0.2**
XOR				AML	AML	23 04 24.4	
	comp=N,6614µm,0.3s						
XOR				AML	AML	23 04 25.0	
	comp=E,3485µm,0.3s						
ATHU	**Athens Univers**	**1.09**	**205**	P	**Pb**	**23 04 08.0**	**-1.0**
ATHU				S	**Sn**	**23 04 23.7**	**-0.8**
	comp=E,605nm,0.6s						
ATHU	**Athens Univers**	**1.09**	**205**	P	**Pb**	**23 04 07.9**	**-1.0**
ATHU				S	**Sg**	**23 04 22.8**	**-0.2**
ATHU				AML	AML	23 04 28.4	
	comp=N,1520µm,0.6s						
ATHU				AML	AML	23 04 28.6	
	comp=E,827µm,0.6s						
ATH	**Athens Observa**	**1.11**	**208**	P	**Pb**	**23 04 08.1**	**-1.1**
ATH				S	**Sg**	**23 04 23.2**	**-0.4**
	comp=E,1µm,0.7s						
ATH	**Athens Observa**	**1.11**	**208**	P	**Pb**	**23 04 07.9**	**-1.3**
ATH				S	**Sb**	**23 04 23.1**	**-0.6**
ATH				AML	AML	23 04 29.7	
	comp=N,2270µm,0.6s						
ATH				AML	AML	23 04 33.2	
	comp=E,2357µm,0.8s						
PAIG	**Paliouri**	**1.11**	**331**	P	**Pn**	**23 04 08.8**	**-0.9**
PAIG	**Paliouri**	**1.11**	**331**	P	**Pn**	**23 04 08.8**	**-0.9**
PAIG				AML	AML	23 04 28.1	
	comp=E,1894µm,0.8s						
PAIG				AML	AML	23 04 28.7	
	comp=N,1714µm,0.3s						
LKR	**Lokris**	**1.12**	**255**	P	**Pb**	**23 04 08.6**	**-0.8**
LKR				S	**Sn**	**23 04 24.3**	**-0.9**
	comp=N,658nm,0.2s						
LKR	**Lokris**	**1.12**	**255**	P	**Pb**	**23 04 08.5**	**-0.8**
LKR				AML	AML	23 04 27.7	
	comp=N,1120µm,0.2s						
LKR				AML	AML	23 04 28.4	
	comp=E,1445µm,0.2s						
LIA	**Limnos Island**	**1.13**	**33**	P	**Pg**	**23 04 09.3**	**-0.4**
LIA				S	**Sg**	**23 04 23.9**	**-0.5**
	comp=E,2µm,0.4s						
LIA	**Limnos Island**	**1.13**	**33**	P	**Pn**	**23 04 09.1**	**-0.8**
LIA				AML	AML	23 04 26.3	
	comp=N,5525µm,0.4s						
LIA				AML	AML	23 04 26.3	
	comp=E,3992µm,0.5s						
VIL2	**Platees**	**1.14**	**230**	P	**Pb**	**23 04 08.8**	**-1.0**
VIL2				AML	AML	23 04 28.6	
	comp=N,3308µm,0.4s						
VIL2				AML	AML	23 04 36.2	
	comp=E,2992µm,0.6s						
VILL	**Villia**	**1.15**	**227**	P	**Pb**	**23 04 09.3**	**-0.6**
VILL				S	**Sn**	**23 04 25.1**	**-0.9**
	comp=E,2µm,0.5s						
SIGR	**SIGRI**	**1.18**	**77**	P	**Pb**	**23 04 09.9**	**-0.5**
SIGR				S	**Sn**	**23 04 26.3**	**-0.4**
	comp=E,2µm,0.5s						
SIGR	**SIGRI**	**1.18**	**77**	P	**Pb**	**23 04 09.9**	**-0.5**
SIGR				AML	AML	23 04 28.7	
	comp=E,4644µm,0.5s						
SIGR				AML	AML	23 04 29.9	
	comp=N,3758µm,0.6s						
SIGR	**SIGRI**	**1.18**	**77**	PN	**Pb**	**23 04 09.9**	**-0.5**
SIGR				SN	**Sn**	**23 04 26.8**	**+0.1**
VLY	**Voula,Athens**	**1.19**	**203**	P	**Pn**	**23 04 09.9**	**-0.8**
VLY				S	**Sb**	**23 04 25.6**	**-0.5**
	comp=N,2µm,0.7s						
VLY	**Voula,Athens**	**1.19**	**203**	P	**Pn**	**23 04 09.8**	**-0.8**
VLY				S	**Sb**	**23 04 25.6**	**-0.5**
VLY				AML	AML	23 04 27.7	
	comp=N,4157µm,0.5s						
VLY				AML	AML	23 04 32.3	
	comp=E,3327µm,0.8s						
OUR	**Ouranopolis**	**1.41**	**348**	P	**Pn**	**23 04 13.3**	**-0.4**
OUR	**Ouranopolis**	**1.41**	**348**	P	**Pn**	**23 04 13.3**	**-0.4**
OUR				AML	AML	23 04 33.6	
	comp=N,1090µm,0.3s						
OUR				AML	AML	23 04 36.9	
	comp=E,1101µm,0.3s						
OUR	**Ouranopolis**	**1.41**	**348**	PN	**Pn**	**23 04 13.4**	**-0.4**
OUR				SN	**Sg**	**23 04 32.6**	**-0.8**
CHOS	**Chios island**	**1.43**	**113**	P	**Pb**	**23 04 13.9**	**-0.9**
CHOS				S	**Sb**	**23 04 32.8**	**-0.3**
	comp=E,1µm,0.6s						
CHOS	**Chios island**	**1.43**	**113**	P	**Pb**	**23 04 13.8**	**-1.0**
CHOS				AML	AML	23 04 38.0	
	comp=N,2590µm,0.6s						
CHOS				AML	AML	23 04 38.0	
	comp=E,3148µm,0.7s						
CHOS	**Chios island**	**1.43**	**113**	PN	**Pn**	**23 04 13.5**	**-0.6**
CHOS				SN	**Sg**	**23 04 33.2**	**-0.7**
LTK	**Loutraki**	**1.45**	**230**	P	**Pn**	**23 04 13.8**	**-0.4**
LTK	**Loutraki**	**1.45**	**230**	P	**Pn**	**23 04 13.5**	**-0.7**
KOCA	**Canakkale, Ayv**	**1.47**	**68**	*i* P	**Pn**	**23 04 14.2**	**-0.5**
KOCA				*i* S	**Sn**	**23 04 31.5**	**-2.5**
KOCA				IAML		23 04 42.0	
	comp=E,505nm,0.5s						
PRK	**Paraskevi**	**1.50**	**78**	P	**Pn**	**23 04 14.4**	**-0.6**
PRK	**Paraskevi**	**1.50**	**78**	P	**Pb**	**23 04 15.3**	**-0.7**
PRK				AML	AML	23 04 41.4	
	comp=E,3127µm,0.9s						

PRK				AML	AML	23 04 41.4	
	comp=N,3086µm,1.1s						
BOZC	Bozcaada	1.57	55	i P	Pn	23 04 14.8	-1.2
BOZC				i S	Sn	23 04 32.0	-4.5
PLG	Polygyros	1.59	333	P	Pn	23 04 15.6	-0.7
PLG	Polygyros	1.59	333	P	Pn	23 04 15.5	-0.7
PLG				AML	AML	23 04 36.9	
	comp=E,463µm,0.5s						
PLG				AML	AML	23 04 51.4	
	comp=N,427µm,0.5s						
AGG	Agios Georgios	1.60	273	P	Pn	23 04 15.4	-1.0
AGG	Agios Georgios	1.60	273	P	Pb	23 04 16.9	-0.7
AGG				AML	AML	23 04 46.4	
	comp=E,548µm,0.9s						
AGG				AML	AML	23 04 51.2	
	comp=N,665µm,0.8s						
AGG	Agios Georgios	1.60	273	i P	Pb	23 04 17.4	-0.2
AGG				i S	Sg	23 04 38.3	-1.0
THAL	Thalero	1.63	236	P	Pn	23 04 15.8	-0.9
THAL	Thalero	1.63	236	P	Pn	23 04 16.6	-0.1
EPID	Epidavros	1.66	217	P	Pn	23 04 16.4	-0.8
GADA	Gvkgeada	1.71	43	P	Pn	23 04 17.7	-0.1
GADA	Gvkgeada	1.71	43	PN	Pn	23 04 17.4	-0.4
GADA				SN	Sb	23 04 39.7	-1.3
GOKA	anakkale-Gk	1.71	43	i P	Pg	23 04 21.5	+0.7
GOKA				i S	Sn	23 04 38.0	-1.8
EZN	Ezine	1.74	59	PN	Pn	23 04 18.1	-0.2
EZN				SN	Sb	23 04 41.0	-1.0
MAKR	Makrakomi, Fth	1.75	273	P	Pb	23 04 19.1	-1.1
AYVA	Ayvalik	1.83	78	i P	Pn	23 04 19.3	-0.3
URLA	Izmir	1.83	108	PN	Pn	23 04 19.4	-0.2
GUR	Goura	1.89	238	P	Pn	23 04 20.1	-0.4
HORT	Hortiatis	1.92	329	PN	Pn	23 04 20.6	-0.2
THL	Klokotos Trika	1.93	289	P	Pn	23 04 20.3	-0.6
KLV	Kalavryta, Ach	1.97	243	P	Pn	23 04 21.1	-0.4
DKL	Dikili	1.97	86	PN	Pn	23 04 21.4	-0.1
SOH	Sokhos	2.03	337	P	Pn	23 04 22.3	0.0
APE	Apeiranthos	2.09	154	P	Pn	23 04 22.2	-0.9
ZEDA	zmir-Bergama	2.10	89	i P	Pb	23 04 25.5	-0.7
ZEDA				i S	Sg	23 04 56.1	+0.5
BLCB	Balcova	2.16	104	PN	Pn	23 04 24.2	+0.1
BUHA	Balikesir, Bur	2.17	75	i P	Pg	23 04 28.9	-0.6
BUHA				i S	Sg	23 04 55.5	-2.1
GELI	Tayfur-Gelibol	2.17	48	PN	Pn	23 04 24.2	0.0
SRS	Serrai	2.24	345	P	Pn	23 04 24.9	-0.3
ENEZ	Enez	2.25	37	PN	Pn	23 04 25.3	+0.1
ALN	Alexandroupoli	2.33	33	i P	Pg	23 04 30.8	-1.7
ALN				i S	Sg	23 05 01.7	-1.0
ALN	Alexandroupoli	2.33	33	PN	Pn	23 04 26.5	+0.1
RDO	Rodhopi	2.37	22	PN	Pn	23 04 26.8	-0.1
ERIK	Erikli-Kesan	2.38	43	PN	Pn	23 04 27.2	+0.2
GCAM	G?zelcaml?	2.57	118	PN	Pn	23 04 29.6	-0.1
BALY	Balya	2.63	72	i P	Pg	23 04 38.4	0.0
BALY				i S	Sg	23 05 11.3	-1.2
KRBG	Karabiga-Canak	2.67	57	PN	Pn	23 04 31.0	-0.1
VAY	Valandovo	2.74	330	i Pn	Pn	23 04 32.1	+0.1
RKY	Sarkoy-Tekirda	2.77	50	PN	Pn	23 04 32.9	+0.5
UKOP	Uzunkopru-Edir	2.78	38	PN	Pn	23 04 32.8	+0.3
BALB	Balikesir	2.80	75	PN	Pn	23 04 33.2	+0.3
MAR6	Marsite Statio	2.83	51	PN	Pn	23 04 33.6	+0.3
MAR2	Marsite Statio	2.87	51	PN	Pn	23 04 33.9	+0.2
MAR3	Marsite Statio	2.87	51	PN	Pn	23 04 33.7	-0.1
MAR4	Marsite Statio	2.90	50	PN	Pn	23 04 34.9	+0.6
AYDB	Zeytinkoy-Aydi	2.94	109	PN	Pn	23 04 34.9	+0.1
FNA	Florina	2.95	309	i P	Pn	23 04 32.8	-2.2
MRMT	Marmara Adasi	2.98	55	PN	Pn	23 04 35.2	-0.2
PLD	Plovdiv	3.16	4	PN	Pn	23 04 38.1	+0.3
STIP	Stip	3.21	329	i Pn	Pn	23 04 38.6	+0.1
KCTX	Karacabey (Bur	3.34	66	PN	Pn	23 04 40.8	+0.5
CRLT	Corlu	3.37	49	PN	Pn	23 04 41.5	+0.8
KULA	Kula-Manisa	3.38	96	PN	Pn	23 04 41.6	+0.7
EDRB	Edirne	3.41	31	PN	Pn	23 04 41.9	+0.7
SIMA	Simav-Kutahya	3.59	86	PN	Pn	23 04 44.1	+0.3
IDI	Anoyia	3.68	173	Pn	Pn	23 04 44.8	-0.2
	comp=N,1.9nm,0.3s,baz=2.5,slow=14,SNR=14						
IDI				Sn	Sn	23 05 25.7	-2.9
	comp=N,1.3nm,0.3s,baz=313,slow=14,SNR=2.1						
VIZE	Kirklareli, Vi	3.73	44	i P	Pn	23 04 40.5	-5.2
VTS	Vitosha	3.76	347	⇓P	Pn	23 04 47.2	+1.0
HERR	Herculane	6.10	347	⇓P	Pn	23 05 17.4	-0.8
MDVR	Moldovita	6.15	342	⇓P	Pn	23 05 19.1	+0.1
ARR	Arges	6.41	2	⇓P	Pn	23 05 22.7	+0.1
VOIR		6.50	4	⇓P	Pn	23 05 24.0	+0.2
LOT	Lotru	6.51	356	⇓P	Pn	23 05 24.1	+0.2
GZR	Gura Zlata	6.54	350	⇓P	Pn	23 05 24.7	+0.4
NEHR	Nehoiu	6.62	12	⇓P	Pn	23 05 27.6	+2.2
MLR	Muntele Rosu	6.64	10	⇑P	Pn	23 05 27.3	+1.6
MLR	Muntele Rosu	6.64	10	Sn	Sn	23 06 39.8	-1.7
	baz=284,slow=24,SNR=1.0						
BZS	Buzias	6.97	344	⇑P	Pn	23 05 29.6	-0.5
DEV	Deva	7.01	352	⇓P	Pn	23 05 31.7	+1.0
COVR	Voineasa-Covas	7.02	11	⇑P	Pn	23 05 32.8	+1.9
DOPR	Dopca	7.05	6	⇓P	Pn	23 05 32.3	+1.1
PLOR	Plostina	7.10	13	⇑P	Pn	23 05 34.7	+2.8
VRI	Vrincioaia	7.12	13	⇓P	Pn	23 05 33.2	+0.9
BRTR	Keskin Array B	7.22	81	Pn	Pn	23 05 33.6	-0.2
	comp=N,0.2nm,0.3s,baz=249,slow=11,SNR=9.2						
TESR	Tescani	7.74	12	⇓P	Pn	23 05 41.9	+1.2
BURAR	Bucovina Array	8.68	4	⇑P	Pn	23 05 55.6	+1.9
MMAI	Mount Meron Ar	10.71	120	Pn	Pn	23 06 21.6	0.0
	comp=N,0.2nm,0.3s,baz=327,slow=10,SNR=2.7						
ESDC	Sonseca Array	21.91	281	P	P	23 08 42.7	+1.3
	comp=N,0.8nm,0.7s,baz=72,slow=11,SNR=6.8						
EKA	Eskdalemuir Ar	24.65	321	P	P	23 09 11.3	+2.7
	comp=N,0.5nm,0.6s,baz=106,slow=10,SNR=1.6						
TORD	Torodi Ar. Bea	32.62	224	P	P	23 10 20.6	+0.7
	comp=N,0.4nm,0.6s,baz=35,slow=9.1,SNR=4.6						
DBIC	Dimbokro	41.57	227	P	P	23 11 37.9	+1.8
	comp=N,2.0nm,0.7s,baz=20,slow=7.3,SNR=3.9						
MKAR	Makanchi Array	42.31	60	P	P	23 11 42.5	+0.6
	comp=N,0.3nm,0.7s,baz=285,slow=7.8,SNR=4.0						
ZALV	Zalesovo Beam	42.91	49	P	P	23 11 47.2	+0.6
	comp=N,0.8nm,0.6s,baz=264,slow=8.8,SNR=3.6						

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*JMA **22** 23:10:19.3±0.3, 30.°04N×138.°81E, h489^{km}±4^{km}, M4.4*

*NIED **22** 23:10:19.3, 30.°04N×138.°81E, h489^{km}, MW4.6, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-2.53; M$_{\theta\theta}$7.72; M$_{\phi\phi}$-5.19; M$_{r\theta}$-1.51; M$_{\theta\phi}$2.54; M$_{\phi r}$-6.56; Fault plane solution: M$_0$9.81000×10^{15} NP1:ϕ_s38.00000°, δ76.00000°, λ-139.00000°. NP2:ϕ_s297.00000°, δ50.00000°, λ-18.00000°.*

*IDC **22** 23:10:20.8±0.5, 30.°08N×138.°62E, h453^{km}±6^{km}, mb3.8/22, mb1 3.9/32, mb1mx3.7/53, mbtmp4.7/32 Error ellipse: s-maj=11.9km s-min=6.6km az=76.0*

*NEIC **22** 23:10:21.8±1.1, 30.°14N±0.°08×138.°6E±0.°1, h457^{km}±7^{km}, mb4.5/71, Error ellipse: s-maj=14.5km s-min=11.7km az=80.0*

ISC 22 23:10:20.2±0.4**, 30.°07N**±0.°05×**138.°58E**±0.°05**, h443**^{km}**,**
n215, σ1§33/233**, mb4.5**/90**, 15C-4D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ	Hachijo jima 2	3.21	18	P	P	23 11 31.4	+3.2
	88nm,0.3s,baz=69,slow=22,SNR=15						
JHJ				S	S	23 12 24.6	+1.1
	133nm,0.3s,baz=67,slow=21,SNR=7.7						
JHJ2	Mitsune	3.21	19	P	P	23 11 31.6	+3.4
JHJ2	Mitsune	3.21	19	P	P	23 11 30.6	+2.4
JHJ2					S	23 12 22.4	-1.1
TTO1	TONANKAI O.B.S	3.85	337	P	P	23 11 38.0	+4.8
CBIJ	Chichi jima	4.34	132	P	P	23 11 38.9	+0.9
CBIJ				eS	S	23 12 40.8	-0.5
JCJ	Chichijima	4.34	132	P	P	23 11 39.1	+1.0
	20nm,0.3s,baz=360,slow=18,SNR=24						
JCJ				S	S	23 12 40.2	-1.1
	126nm,0.3s,baz=295,slow=23,SNR=25						
JCJ	Chichijima	4.34	132	P	P	23 11 40.3	+2.2
JCJ				S	S	23 12 41.5	+0.2
JTNC	Tanabenakahech	4.51	327	P	P	23 11 43.3	+3.9
JIE	Ise	4.59	340	P	P	23 11 44.0	+3.8
JSG	Sagara	4.60	356	P	P	23 11 41.7	+1.4
BSO1	Boso 1	5.00	23	P	P	23 11 45.7	+2.3
BSO1				eS	S	23 12 51.7	+0.2
JOD2	Odawara 2	5.19	5	P	P	23 11 47.7	+1.7
JOD2				eS	S	23 12 57.4	+1.3
JMN	Monobe	5.41	314		P	23 11 51.4	+3.2
INU	Inuyama	5.42	346		P	23 11 51.2	+3.0
INU	Inuyama	5.42	346	P	P	23 11 51.6	+3.3
JGF	Kuroka	5.61	350	P	P	23 11 51.9	+1.7
JTO	Tosashimizu	5.67	301	P	P	23 11 54.6	+3.8
JTO				eS	S	23 13 07.7	+2.9
JWT	Wachi	5.85	334		P	23 11 54.2	+1.6
JRY	Ryogami san	5.93	3	P	P	23 11 55.2	+1.7
JRY				eS	S	23 13 09.9	+0.1
JYT	Yasato	6.29	12		P	23 11 57.2	+0.2
MJAR	Matsushiro Arr	6.46	357	P	P	23 11 58.9	0.0
	3.2nm,0.3s,baz=172,slow=11,SNR=132						
MJAR	Matsushiro Arr	6.46	357		P	23 11 57.8	-1.2
MAJO	Matsushiro	6.46	357	P	P	23 12 00.3	+1.4
MAJO	Matsushiro	6.46	357	P	P	23 12 00.0	+1.1
MAT	Matsushiro	6.46	357	P	P	23 12 00.1	+1.2
MAT				S	S	23 13 19.1	-0.7
MJB9	Matsu-Tunnel	6.46	357	P	P	23 11 59.9	+0.9
JHS	Saijyo	6.74	318	P	P	23 12 05.0	+3.0
JHS				eS	S	23 13 27.6	+2.4
JHS	Saijyo	6.74	318		P	23 12 04.5	+2.6
JSU	Suzuyama	7.14	284	P	P	23 12 07.5	+1.3
JNU	Nakatsue	7.24	297	P	P	23 12 08.8	+1.5
	2.1nm,0.3s,baz=353,slow=1.6,SNR=5.8						
JNU				S	S	23 13 37.1	+2.0
	0.1nm,0.3s,baz=203,slow=22,SNR=2.7						
JNU	Nakatsue	7.24	297	P	P	23 12 08.3	+0.9
JMZ	Minamidaito 2	7.77	239	P	P	23 12 15.5	+2.4
JSJ	Shimokoshiki	7.79	284	P	P	23 12 15.9	+2.7
JSD	Sado	7.95	358		P	23 12 15.0	+0.1
JMM	Marumori	7.99	13	P	P	23 12 16.3	+1.0
JAMN	Amaminishikomi	8.43	260	P	P	23 12 22.6	+2.4
JMK	Ichinoseki	9.12	13	P	P	23 12 29.5	+2.0
JOW	Kunigami	9.63	253	P	P	23 12 36.4	+3.0
	12nm,0.3s,baz=70,slow=7.2,SNR=25						
JOW	Kunigami	9.63	253	P	P	23 12 36.4	+3.0
JOW	Kunigami	9.63	253	P	P	23 12 35.2	+1.9
JOW	Kunigami	9.63	253	P	P	23 12 36.6	+3.3
JTM	Tenmabayashi	10.88	10	P	P	23 12 47.3	+0.6
JOT	Ohata	11.46	9	P	P	23 12 55.2	+2.1
KSRS	Korea Array	11.52	313	P	P	23 12 55.5	+1.8
	1.3nm,0.3s,baz=126,slow=11,SNR=25						
KSRS				S	S	23 15 02.1	+1.6
	baz=116,slow=23,SNR=9.0						
KSAR	Wonju Array Be	11.54	312	P	P	23 12 53.8	-0.2
KS19	Wonju Array Si	11.59	313	P	P	23 12 51.1	-3.4
JOSM	Okushiri--Mats	12.01	3	P	P	23 13 01.0	+2.0
ERM	Erimo	12.48	16	P	P	23 13 05.2	+1.1
JEW	Eniwo	12.95	9	P	P	23 13 09.7	+0.4
ASAJ	Asahikawa	14.38	12	P	P	23 13 26.8	+2.2
	2.5nm,0.3s,baz=212,slow=11,SNR=17						
JKA	Kamikawa-asahi	14.38	12	P	P	23 13 25.2	+0.6
YOJ	Yonaguni jima	14.93	252	P	P	23 13 30.6	-0.2
USA0B	Ussuriysk Arra	15.04	341	P	P	23 13 32.5	+0.7
USRK	Ussuriysk Ar.	15.04	341	P	P	23 13 33.0	+1.3
	baz=152,slow=11,SNR=178						
USRK	Ussuriysk Ar.	15.04	341	P	P	23 13 32.6	+0.9
MDJ	Mudanjiang	16.16	336	P	P	23 13 44.6	+0.9
MDJ				pmax	pmax		
	comp=Z,31nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,200nm,4.9s						
YULB	Yu-li	16.80	251	P	P	23 13 49.6	-1.2
SSLB	Suanglung	16.91	252	P	P	23 13 50.7	-1.2
NJ2	Nanjing	17.02	282	⇑iP	P	23 13 51.9	-1.0
NJ2				pmax	pmax		
	comp=Z,36nm,0.7s						
CN2	Changchun	17.23	326	eP	P	23 13 55.4	+0.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
TWG	Pinlang	17.25	249	P	P	23 13 54.7	-0.8
TPUB	Ta-pu	17.39	251	P	P	23 13 57.4	+0.4
GUMO	Guam	17.40	159	P	P	23 13 59.3	+2.1
	comp=Z,22nm,0.3s,baz=176,slow=6.1,SNR=4.4						
GUMO	Guam	17.40	159	IAmb	IAmb	23 14 00.9	
	comp=Z,222nm,0.8s						
KLR	Kul'dur	19.83	347	P	P	23 14 21.4	+1.2
	comp=Z,1.3nm,0.3s,baz=162,slow=8.4,SNR=48						
BJT	Baijiatuau	20.81	304	P	P	23 14 28.5	-0.8
BJT				IAmb	IAmb	23 14 30.5	
	comp=Z,29nm,1.3s						
BJI	Beijing	20.82	305	P	P	23 14 29.1	-0.2
BJI				pmax	pmax		
	comp=Z,19nm,1.1s						
WHN	Wuhan	20.92	277	⇓iP	P	23 14 30.6	+0.2
WHN				pmax	pmax		
	comp=Z,52nm,0.6s						
HHC	Hu-ho-hao-te	24.40	303	eP	P	23 15 00.9	-0.9
HHC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,100nm,5.1s						
ENH	Enshi	25.13	278	P	P	23 15 07.1	-1.2
XAN	Xi'an	25.41	287	⇓P	P	23 15 10.3	-0.4
XAN				pmax	pmax		
	comp=Z,55nm,0.9s						
GYA	Guiyang	28.29	271	⇑iP	P	23 15 36.5	+0.1
GYA				pP	pwP	23 16 56.0	-2.8
GYA				S	S	23 19 47.3	-3.2
GYA				pmax	pmax		
	comp=Z,85nm,0.8s						
LZH	Lanzhou	29.61	291	eP	P	23 15 47.8	-0.1
LZH				pP	pwP	23 17 09.8	-1.2
LZH				sP	sP	23 18 01.6	+5.7
LZH				pmax	pmax		
	comp=Z,36nm,1.0s						
ULN	Ulaanbaatar	29.99	315	P	P	23 15 50.9	-0.1
SONM	Songino Array	30.38	315	P	P	23 15 54.4	+0.1
	comp=Z,1.9nm,0.6s,baz=127,slow=8.9,SNR=16						
SONM				pP	pwP	23 17 17.0	+2.1
	comp=Z,1.5nm,1.1s,baz=120,slow=8.2,SNR=2.6						
SONM				PcP	PcP	23 18 40.3	-0.7
	comp=Z,0.9nm,0.7s,baz=124,slow=4.9,SNR=2.8						
SONM				ScP	ScP	23 21 38.5	-2.3
	comp=Z,0.6nm,0.6s,baz=137,slow=4.3,SNR=5.1						
SONM	Songino Array	30.38	315	P	P	23 15 53.5	-0.8
MA2	Magadan	30.64	12	P	P	23 15 56.6	+0.4
	comp=Z,5.0nm,0.6s,baz=202,slow=13,SNR=3.6						
MYLDM	Lahad Datu	31.18	221	P	P	23 16 01.9	+0.4
MYLDM				IAmb	IAmb	23 16 04.8	
	comp=Z,27nm,1.2s						
SWI	Sorong	31.55	194	P	P	23 16 05.5	+0.9
	comp=Z,30nm,0.8s						
SIJI	Sorong	31.55	194	P	P	23 16 04.5	-0.2
	comp=Z,14nm,0.7s,baz=4.3,slow=16,SNR=6.2						
KMI	Kunming	32.06	270	⇓P	P	23 16 09.4	+0.2
KMI				pmax	pmax		
	comp=Z,16nm,0.6s						
SLVN	Son La	32.34	263	P	P	23 16 11.9	+0.4
SLVN				IAmb	IAmb	23 16 13.0	
	comp=Z,29nm,0.7s						
GTA	Gaotai	32.98	297	⇓P	P	23 16 16.5	-0.3
GTA				pP	pwP	23 17 40.9	-0.3
GTA				sP	sP	23 18 28.3	+2.6
GTA				pmax	pmax		
	comp=Z,16nm,1.0s						
MANU	Manus Island	33.02	164	P	P	23 16 17.6	+0.4
MANU				IAmb	IAmb	23 16 19.6	
	comp=Z,13nm,1.0s						
FAKI	Fak Fak	33.36	192	P	P	23 16 20.6	+0.5
	comp=Z,20nm,0.8s						
FAKI	Fak Fak	33.36	192	P	P	23 16 21.1	+0.9
FAKI				IAmb	IAmb	23 16 22.4	
	comp=Z,15nm,0.8s						
TOLI2	Tolitoli	33.41	214	P	P	23 16 19.7	-0.9
UBPT	Khong Chiam	33.77	252	P	P	23 16 23.4	-0.2
UBPT				IAmb	IAmb	23 16 25.5	
	comp=Z,32nm,1.0s						
SEY	Seymchan	34.06	11	P	P	23 16 26.6	+1.1
	comp=Z,3.2nm,0.8s,baz=174,slow=9.3,SNR=4.3						
SANI	Sanana	34.13	203	P	P	23 16 26.1	-0.6
	comp=Z,25nm,0.7s						
MPSI	Mapaga	34.51	214	P	P	23 16 29.8	-0.1
	comp=Z,2.6nm,0.7s						
AAI	Ambon	35.01	198	P	P	23 16 34.6	+0.5
	comp=Z,50nm,0.6s						
SBUM	Sibu	37.14	227	P	P	23 16 52.0	+0.1
SBUM	Sibu	37.14	227	P	P	23 16 51.8	-0.1
SBUM				IAmb	IAmb	23 16 53.5	
	comp=Z,14nm,0.9s						
TTSI	Tana Toraja	37.50	212	P	P	23 16 55.7	+0.9
CHTO	Chiang Mai	37.61	262	P	P	23 16 55.1	-0.7
CM31	Chiang Mai Arr	37.77	261	P	P	23 16 57.0	0.0
CM31				IAmb	IAmb	23 16 58.2	
	comp=Z,17nm,0.8s						
CMAR	Chiang Mai Arr	37.77	261	P	P	23 16 57.4	+0.4
	comp=Z,10.0nm,0.7s,baz=62,slow=5.9,SNR=52						
CMAR	Chiang Mai Arr	37.77	261	P	P	23 16 57.2	+0.1
KSM	Kuching	39.11	229	P	P	23 17 10.0	+1.9
KSM	Kuching	39.11	229	P	P	23 17 09.0	+0.9
STKI	Sintang	39.45	226	P	P	23 17 12.4	+1.6
BBKI	Banjar Baru	40.35	218	P	P	23 17 18.8	+0.8
	comp=Z,18nm,0.6s						
SHL	Shillong	41.33	275	P	P	23 17 25.1	-1.0
SHL				IAmb	IAmb	23 17 27.0	
	comp=Z,18nm,0.8s						
MMRI	Maumere	41.57	205	P	P	23 17 27.9	+0.1
SRIT	Nakonsritamara	42.23	248	P	P	23 17 33.1	-0.1
SRIT				IAmb	IAmb	23 17 34.6	
	comp=Z,21nm,0.8s						
WMQ	Urumqi	42.28	303	eP	P	23 17 33.5	+0.2
WMQ				pmax	pmax		
	comp=Z,15nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,110nm,3.7s						
MTN	Manton Dam	43.27	191	P	P	23 17 41.5	+0.3
MTN				IAmb	IAmb	23 17 42.0	
	comp=Z,21nm,1.1s						
MYKOM	Kota Tinggi	43.32	236	P	P	23 17 42.2	+0.5
KULM	Kulim	43.41	243	IAmb	IAmb	23 17 43.8	
	comp=Z,20nm,0.8s						
IPM	Ipoh	43.63	242	P	P	23 17 44.0	-0.2
IPM	Ipoh	43.63	242	P	P	23 17 43.8	-0.4
IPM				IAmb	IAmb	23 17 44.9	
	comp=Z,26nm,0.7s						
TPI	Tanjungpandan	44.03	228	P	P	23 17 48.0	+0.7
SRBI	Singaraja	44.09	214	P	P	23 17 48.6	+0.9
	comp=Z,22nm,1.0s						
DSRI	Dabo	44.40	233	P	P	23 17 50.6	+0.4
TAPN	Taplejung	44.41	280	eP	P	23 17 50.4	0.0
	comp=Z,15nm,0.5s						
PPBI	Pangkal Pinang	44.58	230	P	P	23 17 52.0	+0.5
ODAN	Odare	44.82	279	eP	P	23 17 53.5	-0.1
	comp=Z,50nm,0.7s						
ZAA0	Zalesovo Array	45.17	318	P	P	23 17 55.0	-0.5
ZALV	Zalesovo Beam	45.17	318	P	P	23 17 54.9	-0.6
	comp=Z,5.7nm,0.8s,baz=95,slow=7.0,SNR=16						
ZALV				PcP	PcP	23 19 26.0	-0.9
	comp=Z,1.9nm,0.5s,baz=82,slow=3.2,SNR=7.9						
ZALV				ScP	ScP	23 22 33.4	-3.2
	comp=Z,1.4nm,0.6s,baz=119,slow=5.5,SNR=6.5						
ZALV	Zalesovo Beam	45.17	318		PcP	23 19 25.9	-0.9
RAMN	Ramite	45.47	279	eP	P	23 17 58.6	0.0
	comp=Z,41nm,0.5s						
JIRN	Jiri	45.62	281	eP	P	23 18 00.3	+0.4
	comp=Z,60nm,0.6s						
GUN	Gumba	45.81	281	eP	P	23 18 01.6	+0.2
	comp=Z,90nm,0.7s						
MK31	Makanchi Array	46.15	308	P	P	23 18 03.0	-0.3
MK31					PcP	23 19 30.2	-0.4
MKAR	Makanchi Array	46.15	308	P	P	23 18 02.9	-0.4
	comp=Z,3.8nm,0.7s,baz=92,slow=8.7,SNR=43						
MKAR				PcP	PcP	23 19 29.9	-0.7
	comp=Z,3.1nm,0.8s,baz=88,slow=6.6,SNR=8.8						
MKAR				ScP	ScP	23 22 38.7	-2.2
	comp=Z,1.1nm,0.6s,baz=87,slow=5.5,SNR=8.3						
PKI	Pulchoki	46.31	281	eP	P	23 18 04.7	-0.5
	comp=Z,39nm,1.1s						
PKIN	Phulchoki	46.32	281	eP	P	23 18 04.7	-0.4
	comp=Z,31nm,1.0s						
KKN	Kakani	46.36	281	eP	P	23 18 05.3	-0.1
	comp=Z,62nm,0.8s						
MAKZ	Makanchi	46.36	308	P	P	23 18 04.6	-0.3
MAKZ				IAmb	IAmb	23 18 05.9	
	comp=Z,24nm,1.6s						
DMN	Daman	46.55	281	eP	P	23 18 06.9	-0.1
	comp=Z,19nm,0.5s						
KPJI	Karang Pucung	46.84	222	P	P	23 18 08.9	0.0
GKN	Gorkha	46.84	281	eP	P	23 18 08.9	-0.1
MNSI	Mandailing Nat	47.12	239	P	P	23 18 10.7	-0.4
	comp=Z,21nm,0.8s						
LEM	Lembang	47.22	224	P	P	23 18 12.3	+0.4
	comp=Z,35nm,0.8s						
PPI	Padang Panjang	47.36	237	P	P	23 18 12.7	-0.2
	comp=Z,13nm,0.7s						
CMJI	Cimerak	47.48	222	P	P	23 18 13.3	-0.5
	comp=Z,30nm,2.1s						
DANN	Dangsing	47.49	282	eP	P	23 18 14.5	+0.4
	comp=Z,58nm,0.5s						
LHSI	Lahat	47.55	231	P	P	23 18 14.1	-0.2
	comp=Z,60nm,1.0s						
MDSI	Maura Dua	47.60	230	P	P	23 18 14.5	-0.2
	comp=Z,933nmcomp=Z,33nm,0.8s						
PDSI	Padang	47.62	237	P	P	23 18 14.3	-0.6
KOLN	Koldanda	47.79	282	eP	P	23 18 16.4	+0.1
	comp=Z,107nm,0.9s						
MASI	Maura Aman, Be	47.93	233	P	P	23 18 17.1	-0.1
	comp=Z,119nm,0.9s						
PYUN	Piuthan	48.21	282	eP	P	23 18 19.8	+0.3
	comp=Z,117nm,0.5s						
GSI	Gunungsitoli	48.30	241	P	P	23 18 20.0	0.0
	comp=Z,93nm,1.1s						
GSI	Gunungsitoli	48.30	241	P	P	23 18 19.8	-0.2
KURK	Kurchatov	48.65	313	P	P	23 18 21.4	-0.6
SISI	Saibi	48.91	238	P	P	23 18 24.0	-0.5
	comp=Z,14nm,0.8s						
PRZ	Przheval'sk	49.13	302	P	P	23 18 26.3	+0.2
PRZ				IAmb	IAmb	23 18 27.6	
	comp=Z,25nm,0.7s						
TARG	Taragay, Kyrgy	49.66	301	P	P	23 18 30.0	-0.2
TARG				IAmb	IAmb	23 18 31.7	
	comp=Z,12nm,1.0s						
WB0	Warramunga Arr	49.72	185	IAmb	IAmb	23 18 31.3	
	comp=Z,13nm,0.9s						
WB2	Warramunga Arr	49.89	185	P	P	23 18 31.9	+0.2
WB2				IAmb	IAmb	23 18 34.2	
	comp=Z,10nm,0.8s						
WRA	Warramunga Arr	49.89	185	P	P	23 18 31.9	+0.2
	comp=Z,6.6nm,0.3s,baz=1.0,slow=7.7,SNR=178						
WR0	Warramunga Arr	49.89	185	P	P	23 18 32.0	+0.3
WR0				IAmb	IAmb	23 18 32.7	
	comp=Z,11nm,0.8s						
BOOM	Boomskoye usch	50.94	302	P	P	23 18 39.0	-0.3
BOOM				IAmb	IAmb	23 18 41.1	
	comp=Z,35nm,1.6s						
KSH	Kashi	51.36	298	P	P	23 18 45.3	+2.8
KSH				pmax	pmax		
	comp=Z,14nm,0.7s						
FRU1	Bishkek	51.85	303	P	P	23 18 45.1	-0.8
FRU1				IAmb	IAmb	23 18 46.9	
	comp=Z,11nm,0.8s						
AAK	Ala-Archa	51.98	303	P	P	23 18 46.7	-0.3
AS31	Alice Springs	53.62	185	P	P	23 18 59.0	+0.3
ASAR	Alice Springs	53.62	185	P	P	23 18 59.0	+0.3
	comp=Z,3.8nm,0.6s,baz=16,slow=12,SNR=48						
ASAR				S	S	23 25 56.9	-1.1
	comp=Z,0.4nm,0.5s,baz=16,slow=14,SNR=5.1						
ASAR	Alice Springs	53.62	185	P	P	23 18 58.8	0.0
BRVK	Borovoye	53.77	316	P	P	23 18 59.0	-0.5
BRVK				IAmb	IAmb	23 19 00.0	
	comp=Z,8.5nm,0.7s						
H21K	Melozitna Rive	54.21	28	P	P	23 19 03.1	+0.7
DRK	Karamyk	54.53	299	P	P	23 19 05.2	-0.3
NIL	Nilore	54.77	292	P	P	23 19 06.6	-0.4
NIL				IAmb	IAmb	23 19 08.1	
	comp=Z,18nm,0.7s						
GAR	Garm	55.76	299	P	P	23 19 13.6	-0.4
GAR				IAmb	IAmb	23 19 14.5	
	comp=Z,24nm,0.9s						
ILAR	Eielson Array	56.66	30	P	P	23 19 19.9	+0.3
	comp=Z,0.4nm,0.6s,baz=254,slow=4.8,SNR=7.8						
ILAR	Eielson Array	56.66	30	P	P	23 19 19.5	-0.1
KBL	Kabul	57.89	294	P	P	23 19 28.1	-0.7
KBL				IAmb	IAmb	23 19 29.0	
	comp=Z,7.1nm,0.8s						
ARU	Arti	60.13	321	P	P	23 19 42.6	-0.6
	comp=Z,4.1nm,0.5s,baz=97,slow=2.6,SNR=26						
ARU	Arti	60.13	321	P	P	23 19 42.7	-0.6
ARU				IAmb	IAmb	23 19 43.4	
	comp=Z,13nm,0.6s						
ABKAR	Akbulak array	60.76	313	P	P	23 19 46.9	-0.7
ABKAR				IAmb	IAmb	23 19 47.8	
	comp=Z,9.4nm,0.6s						
ABKAR	Akbulak array	60.76	313	P	P	23 19 46.9	-0.7
INK	Inuvik	61.66	25	P	P	23 19 53.4	+0.3
	comp=Z,0.5nm,0.6s,baz=298,slow=2.5,SNR=4.2						
STKA	Stephens Creek	61.68	177	P	P	23 19 54.1	+0.4
	comp=Z,4.3nm,0.6s,baz=343,slow=9.5,SNR=12						
STKA	Stephens Creek	61.68	177	P	P	23 19 53.7	0.0
AKTO	Aktyubinsk	61.70	314	P	P	23 19 54.1	+0.3
	comp=Z,6.1nm,0.6s,baz=92,slow=8.3,SNR=20						
HRA	Herat	63.28	296	P	P	23 20 03.9	-0.7
HRA				IAmb	IAmb	23 20 05.4	
	comp=Z,7.5nm,0.9s						

KIRV	**Kirov**	**64.45**	**325**	P	**P**	**23 20 11.1**	**-0.2**
	comp=Z,11nm,0.5s,baz=154,slow=14,SNR=5.3						
GEYT	**Alibeck**	**65.25**	**301**	P	**P**	**23 20 16.4**	**-0.5**
	comp=Z,4.0nm,0.7s,baz=58,slow=17,SNR=5.6						
KLMR	**Klimovskoe**	**68.41**	**329**	*e*P	**P**	**23 20 31.8**	**-4.3**
KLMR				AMP		23 20 36.2	
	comp=Z,7.0nm,0.9s						
ARCES	**ARCESS Array B**	**69.68**	**340**	P	**P**	**23 20 43.5**	**-0.1**
	comp=Z,3.1nm,0.5s,baz=69,slow=8.6,SNR=23						
KBZ	**Khabaz**	**73.67**	**311**	P	**P**	**23 21 07.3**	**-0.1**
	comp=Z,9.4nm,0.7s,baz=86,slow=3.9,SNR=24						
KIV	**Kislovodsk**	**73.71**	**312**	⇑P	**P**	**23 21 08.0**	**+0.2**
KIV	**Kislovodsk**	**73.71**	**312**	P	**P**	**23 21 08.0**	**+0.2**
KIV				IAmb	IAmb	23 21 09.5	
	comp=Z,7.3nm,0.8s						
FINES	**FINESS Array B**	**73.87**	**332**	P	**P**	**23 21 07.7**	**-0.6**
	comp=Z,4.7nm,0.5s,baz=59,slow=5.8,SNR=47						
GURO	**Guroymak-BITLI**	**76.59**	**307**	P	**P**	**23 21 23.8**	**-0.4**
NACGM	**Naroch**	**77.23**	**327**	*i* P	**P**	**23 21 26.7**	**-0.5**
PABE	**Paberze**	**78.19**	**328**	P	**P**	**23 21 31.2**	**-1.1**
AKASG	**Malin Array Be**	**78.34**	**322**	P	**P**	**23 21 32.3**	**-1.0**
	comp=Z,2.5nm,0.6s,baz=54,slow=6.1,SNR=23						
AKBB	**Malin Array Si**	**78.34**	**322**	P	**P**	**23 21 32.5**	**-0.8**
AKBB				IAmb	IAmb	23 21 33.2	
	comp=Z,5.2nm,0.8s						
NB2	**NORSAR Subarra**	**79.66**	**337**	P	**P**	**23 21 38.7**	**-1.5**
	comp=Z,2.1nm,0.6s,baz=44,slow=5.3						
NOA	**NORSAR Array B**	**79.66**	**337**	P	**P**	**23 21 39.1**	**-1.1**
	comp=Z,2.9nm,0.6s,baz=44,slow=5.3,SNR=18						
RAYN	**Ar Rayn**	**81.08**	**292**	P	**P**	**23 21 48.2**	**-0.1**
RAYN				IAmb	IAmb	23 21 49.1	
	comp=Z,7.7nm,0.8s						
BR131	**Keskin Array S**	**81.66**	**311**	IAmb	IAmb	23 21 51.8	
	comp=Z,13nm,0.8s						
BRTR	**Keskin Array B**	**81.66**	**311**	P	**P**	**23 21 51.0**	**-0.2**
	comp=Z,7.7nm,0.8s,baz=98,slow=3.9,SNR=43						
BRTR				pP	**pwP**	**23 23 37.1**	**+3.3**
	comp=Z,2.3nm,1.2s,baz=101,slow=6.5,SNR=2.6						
VLDR	**Vladesti**	**81.70**	**319**	⇑P	**P**	**23 21 51.5**	**+0.3**
TESR	**Tescani**	**82.13**	**320**	⇑P	**P**	**23 21 53.2**	**-0.1**
BUR08	**Bucovina Ar. S**	**82.26**	**321**	P	**P**	**23 21 53.4**	**-0.7**
BUR08				IAmb	IAmb	23 21 54.7	
	comp=Z,6.6nm,0.7s						
BURAR	**Bucovina Array**	**82.27**	**321**	⇑P	**P**	**23 21 54.4**	**+0.2**
BURAR	**Bucovina Array**	**82.27**	**321**	P	**P**	**23 21 53.7**	**-0.5**
BURAR				IAmb	IAmb	23 21 55.1	
	comp=Z,11nm,0.7s						
VRI	**Vrincioaia**	**82.46**	**319**	⇑P	**P**	**23 21 55.1**	**0.0**
TLBR	**Topalu**	**82.47**	**318**	⇑P	**P**	**23 21 55.1**	**+0.1**
GRER		**82.60**	**319**	⇑P	**P**	**23 21 57.3**	**+1.5**
BISRR	**Bisoca**	**82.66**	**319**	⇑P	**P**	**23 21 57.1**	**+1.0**
MLR	**Muntele Rosu**	**83.13**	**319**	⇑P	**P**	**23 21 59.3**	**+0.8**
DOPR	**Dopca**	**83.16**	**320**	⇑P	**P**	**23 21 59.3**	**+0.7**
TRPA	**Tarpa**	**83.39**	**323**	⇑P	**P**	**23 21 59.8**	**+0.2**
ARR	**Arges**	**83.94**	**320**	⇑P	**P**	**23 22 02.9**	**+0.3**
PFO	**Pinyon Flats O**	**84.95**	**54**	P	**P**	**23 22 08.2**	**+0.3**
BZS	**Buzias**	**85.45**	**321**	⇑P	**P**	**23 22 07.9**	**-2.0**
GERES	**GERESS Array B**	**87.32**	**327**	P	**P**	**23 22 17.7**	**-1.1**
	comp=Z,0.8nm,0.6s,baz=57,slow=5.4,SNR=7.0						
KAN08	**Anthony NE Sta**	**94.65**	**42**	P	**P**	**23 22 52.8**	**0.0**
TXAR	**Lajitas Array**	**96.28**	**51**	pP	pP	23 24 46.6	+5.5
	comp=Z,0.3nm,0.7s,baz=298,slow=2.7,SNR=3.4						
TORD	**Torodi Ar. Bea**	**120.25**	**310**	PKP	**PKPdf**	**23 28 19.7**	**-1.0**
	comp=Z,0.5nm,0.6s,baz=50,slow=1.5,SNR=8.7						

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*IDC **22** 23:14:27.4±1.8, 26.°00N×142.°59E, h0^{km}, mb3.8/9, mb1 4.0/9, mb1mx3.7/42, mbtmp3.8/9, MS3.1/1, Ms1 3.1/1, ms1mx2.4/34, Error ellipse: s-maj=82.7km s-min=19.3km az=80.0*

ISC 22 23:14:32.4±1.7**, 26.°0N**±0.°2×**142.°7E**±0.°5**, h36^{km}, n17, σ1.^{s}18**/11**, mb3.9**/9**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**1.18**	**337**	Pn	**Pn**	**23 14 51.2**	**-1.2**
	40nm,0.3s,baz=292,slow=23,SNR=13						
JCJ				Sn	**Sn**	**23 15 08.4**	**+1.2**
	150nm,0.3s,baz=108,slow=23,SNR=9.8						
JCJ				LR	LR	23 15 16.7	
	comp=Z,128nm,21.8s,baz=147,slow=43						
KSRS	**Korea Array**	**16.95**	**316**	LR	LR	23 24 53.0	
	comp=Z,55nm,18.3s,baz=138,slow=37						
H11N2	**WAKE ISLAND Hy**	**23.14**	**101**	T	T	23 43 13.5	
	baz=291,slow=75,SNR=18						
H11N1	**WAKE ISLAND Hy**	**23.14**	**101**	T	T	23 43 19.5	
	baz=291,slow=75,SNR=15						
H11N3	**WAKE ISLAND Hy**	**23.16**	**101**	T	T	23 43 23.3	
	baz=291,slow=75,SNR=16						
H11S3	**WAKE ISLAND Hy**	**23.41**	**104**	T	T	23 43 38.4	
	baz=290						
H11S1	**WAKE ISLAND Hy**	**23.41**	**104**	T	T	23 43 39.0	
	baz=290						
H11S2	**WAKE ISLAND Hy**	**23.43**	**104**	T	T	23 43 41.6	
	baz=290						
KLR	**Kul'dur**	**24.70**	**343**	P	**P**	**23 19 50.2**	**+0.2**
	3.2nm,0.9s,baz=156,slow=9.7,SNR=5.5						
SONM	**Songino Array**	**35.81**	**317**	P	**P**	**23 21 28.7**	**+0.3**
	0.3nm,0.6s,baz=116,slow=9.8,SNR=2.1						
WRA	**Warramunga Arr**	**46.39**	**191**	P	**P**	**23 22 55.8**	**+0.4**
	1.5nm,0.5s,baz=10,slow=8.5,SNR=8.8						
ZALV	**Zalesovo Beam**	**50.61**	**320**	P	**P**	**23 23 26.8**	**-0.8**
	0.6nm,0.7s,baz=95,slow=9.0,SNR=2.2						
MKAR	**Makanchi Array**	**51.52**	**310**	P	**P**	**23 23 34.4**	**-0.2**
	0.3nm,0.6s,baz=88,slow=11,SNR=5.4						
ARCES	**ARCESS Array B**	**74.72**	**341**	P	**P**	**23 26 10.6**	**+2.5**
	2.1nm,0.8s,baz=74,slow=7.9,SNR=1.9						
FINES	**FINESS Array B**	**79.12**	**334**	P	**P**	**23 26 33.1**	**+0.1**
	2.1nm,0.6s,baz=68,slow=5.7,SNR=16						
AKASG	**Malin Array Be**	**83.76**	**324**	P	**P**	**23 26 57.0**	**-0.7**
	0.1nm,0.3s,baz=52,slow=5.2,SNR=2.4						
NOA	**NORSAR Array B**	**84.79**	**339**	P	**P**	**23 27 02.0**	**-0.8**
	0.7nm,0.9s,baz=44,slow=5.2,SNR=2.7						

IDC 22 23:26:10.6±8.7**, 49.°63N**×**114.°56W, h0^{km}, mb1 3.5**/1**, mb1mx2.8**/29**, mbtmp3.1**/1**, ML2.7**/1**, Error ellipse: s-maj=129.2km s-min=46.0km az=52.0, British Columbia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I56US	**NEWPORT INFRAS**	**2.17**	**232**	*i*		23 40 20.0	
	baz=49,slow=335,SNR=6.1						
I10CA	**LAC DU BONNET**	**11.97**	**80**	*i*		00 38 40.0	
	baz=267,slow=314,SNR=1.3						
YKA	**Yellowknife Ar**	**12.90**	**360**	Pn	Pn	23 29 10.7	-4.2
	0.1nm,0.3s,baz=178,slow=13,SNR=1.6						

NNC 22 23:54:06.7±8.8**, 36.°66N**×**71.°24E, h0^{km}, mb3.8, mpv3.5, 2C-2D, Error ellipse: s-maj=82.8km s-min=70.3km az=114.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK02	**Karatay Array**	**6.46**	**355**	⇑P	Pn	23 55 44.0	+1.0
	2.2nm,0.4s						
KK02				⇓S	Sn	23 56 59.2	+1.8
	1.3nm,0.6s						
AAK	**Ala-Archa**	**6.47**	**22**	⇑P	Pn	23 55 43.9	+0.5
	1.6nm,0.6s						
AAK				⇓S	Sn	23 56 57.8	-0.2
	2.1nm,0.8s						
AB31	**Akbulak array**	**15.04**	**330**	P	Pn	23 57 36.5	-3.8
	1.6nm,1.1s,baz=149,slow=12,SNR=7.8						

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*IDC **22** 23:55:18.3±31.0, 19.°97S×179.°24W, h0^{km}, mb3.9/4, mb1 4.0/4, mb1mx3.7/32, mbtmp3.9/4, MS3.0/1, Ms1 3.0/1, ms1mx2.5/32, Error ellipse: s-maj=584.7km s-min=142.9km az=87.0*

*NEIC **22** 23:56:26.7±0.8, 21.°7S±0.°2×178.°89E±0.°06, h565^{km}±8^{km}, mb4.4/14, Error ellipse: s-maj=26.4km s-min=8.1km az=184.0*

ISC 22 23:56:25.6±0.7**, 21.°8S**±0.°1×**178.°89E**±0.°08**, h550^{km}, n25, σ0.^{s}93**/24**, mb3.9**/9**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.08**	**349**	P	**P**	**23 57 49.2**	**+0.8**
MARNC	**Mare, Loyalty**	**10.11**	**270**	P	**P**	**23 58 46.7**	**+2.0**
NIUE	**Niue**	**10.82**	**78**	P	**P**	**23 58 52.1**	**0.0**
LIFNC	**LIFOU**	**10.91**	**273**	P	**P**	**23 58 53.7**	**+0.8**
OUENC	**Ouen Island, N**	**11.19**	**264**	P	**P**	**23 58 55.1**	**-0.7**
MXZ	**Matakaoa Point**	**15.75**	**182**	P	**P**	**23 59 42.9**	**+0.3**
HIZ	**Hauiti**	**17.05**	**191**	P	**P**	**23 59 55.8**	**+1.1**
HIZ				IAmb	IAmb	23 59 57.1	
	comp=Z,49nm,1.1s						
QRZ	**Quartz Range**	**19.75**	**194**	P	**P**	**00 00 20.1**	**+0.8**
QRZ				IAmb	IAmb	00 00 24.9	
	comp=Z,20nm,1.0s						
RAR	**Rarotonga**	**19.86**	**92**	P	**P**	**00 00 21.0**	**+0.4**
RAR				IAmb	IAmb	00 00 30.8	
	comp=Z,7.9nm,0.7s						
EIDS	**Eidsvold**	**25.72**	**257**	P	**P**	**00 01 12.3**	**-0.5**
EIDS				IAmb	IAmb	00 01 30.1	
	comp=Z,6.9nm,1.1s						
PYZ	**Puysegur Point**	**26.30**	**199**	P	**P**	**00 01 18.7**	**+1.0**
PPTF	**Pamatai, Papee**	**29.96**	**88**	P	**P**	**00 01 49.1**	**-1.0**
CTAO	**Charters Tower**	**30.50**	**267**	P	**P**	**00 01 54.3**	**-0.3**
CTAO				IAmb	IAmb	00 02 08.5	
	comp=Z,7.9nm,1.1s						
STKA	**Stephens Creek**	**34.62**	**245**	P	**P**	**00 02 28.6**	**-0.7**
	comp=Z,0.7nm,0.4s,baz=66,slow=10.0,SNR=4.2						
STKA	**Stephens Creek**	**34.62**	**245**	P	**P**	**00 02 28.9**	**-0.5**
WR0	**Warramunga Arr**	**41.38**	**264**	P	**P**	**00 03 23.8**	**-0.6**
WR0				IAmb	IAmb	00 03 43.7	
	comp=Z,3.8nm,1.1s						
ASAR	**Alice Springs**	**41.41**	**258**	P	**P**	**00 03 24.2**	**-0.5**
	comp=Z,1.2nm,0.6s,baz=97,slow=8.1,SNR=14						
WB0	**Warramunga Arr**	**41.55**	**264**	P	**P**	**00 03 25.2**	**-0.6**
WB0				IAmb	IAmb	00 03 25.5	
	comp=Z,4.6nm,0.9s						
WB2	**Warramunga Arr**	**41.55**	**264**	P	**P**	**00 03 25.2**	**-0.7**
WRA	**Warramunga Arr**	**41.56**	**264**	P	**P**	**00 03 24.0**	**-1.9**
	comp=Z,0.5nm,0.3s,baz=94,slow=7.8,SNR=12						
WRA	**Warramunga Arr**	**41.56**	**264**	P	**P**	**00 03 25.1**	**-0.8**
GUMO	**Guam**	**48.46**	**313**	LR	LR	00 20 20.2	
	comp=Z,16nm,21.2s,baz=193,slow=31						
FITZ	**Fitzroy Crossi**	**49.99**	**264**	P	**P**	**00 04 29.2**	**-0.8**
	comp=Z,1.4nm,1.0s,baz=100,slow=6.1,SNR=7.8						
FITZ	**Fitzroy Crossi**	**49.99**	**264**	P	**P**	**00 04 29.2**	**-0.8**
SOEI	**Soe**	**53.66**	**274**	P	**P**	**00 04 56.4**	**-0.2**
SOEI				IAmb	IAmb	00 05 03.4	
	comp=Z,19nm,0.4s						

DJA 23 00:01:09.2±0.5**, 0°S**±3°×**12°3E**±°**, h135^{km}**±5^{km}**, M3.7**/8**, mb3.9**/1**, MLv3.5**/8**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**0.86**	**36**	P	Pn	00 01 32.4	+1.0
KMSI				S	Sn	00 01 50.5	+2.3
LUWI	**Luwuk**	**1.15**	**218**	P	Pn	00 01 34.5	+0.5
LUWI				S	Sn	00 01 53.0	+0.2
MRSI	**Marisa**	**1.65**	**291**	P	Pn	00 01 39.1	-0.3
MRSI				S	Sn	00 02 00.6	-1.8
APSI	**Ampana**	**1.99**	**247**	P	Pn	00 01 44.1	+0.8
APSI				S	Sn	00 02 09.4	0.0
SANI	**Sanana**	**3.15**	**127**	P	Pn	00 01 56.3	-1.7
MPSI	**Mapaga**	**3.61**	**277**	P	Pn	00 02 04.8	+0.8
TTSI	**Tana Toraja**	**4.67**	**232**	P	Pn	00 02 19.9	+2.0
BNSI	**Bone**	**5.42**	**218**	P	Pn	00 02 29.5	+1.5
PBKI	**Pangkalan Bun**	**12.08**	**258**	P	P	00 04 06.1	+2.0
RGRI	**Rengat**	**21.15**	**269**	P	P	00 05 39.4	-4.4

IDC 23 00:13:49.8±2.3**, 2.°38N**×**126.°79E, h0^{km}, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.1**/26**, mbtmp3.4**/3**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.5**/17**, Error ellipse: s-maj=188.6km s-min=27.3km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.39**	**162**	P	P	00 18 59.9	-0.4
	0.7nm,0.6s,baz=341,slow=11,SNR=7.4						
PMG	**Port Moresby**	**23.43**	**120**	LR	LR	00 28 50.3	
	comp=Z,72nm,18.9s,baz=356,slow=38						
ASAR	**Alice Springs**	**26.80**	**165**	P	P	00 19 32.5	+0.7
	0.1nm,0.3s,baz=347,slow=11,SNR=2.8						
MKAR	**Makanchi Array**	**58.70**	**326**	P	P	00 23 49.0	-0.3
	0.2nm,0.3s,baz=121,slow=6.7,SNR=4.4						

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*IDC **23** 00:32:05.9±0.6, 38.°38N×90.°94E, h0^{km}, mb4.0/22, mb1 4.1/27, mb1mx4.0/59, mbtmp4.0/27, ML3.5/5, MS3.2/5, Ms1 3.2/5, ms1mx2.8/47, Error ellipse: s-maj=23.5km s-min=11.1km az=46.0*

*BJI **23** 00:32:06.5±0.0, 38.°47N×90.°86E, h9^{km}, mB4.5/2, mb4.6/8, ML4.1/13, Ms3.5/11, Ms7 3.4/9*

*MOS **23** 00:32:06.4±1.1, 38.°50N×90.°79E, h15^{km}, mb5.0/5, Error ellipse: s-maj=10.6km s-min=5.2km az=131.7*

*NEIC **23** 00:32:07.7±1.7, 38.°4N±0.°1×90.°9E±0.°1, h10^{km}±1^{km}, mb4.3/31, ML4.0(BJI), Error ellipse: s-maj=19.6km s-min=14.0km az=205.0*

ISC 23 00:32:07.6±0.6**, 38.°46N**±0.°07×**90.°86E**±0.°05**, h10^{km}, n113, σ1.^{s}37**/114**, mb4.3**/40**, MS3.3**/3**, 2C, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**5.87**	**337**	*e*Pn	**Pn**	**00 33 33.8**	**-0.9**
WMQ				Sn	**Sn**	**00 34 43.1**	**+1.1**
WMQ				smax	smax		
	comp=N,160nm,0.7s						
WMQ				smax	smax		
	comp=E,200nm,0.9s						
WMQ				LR	LR		
	comp=N,460nm,11.1s						
WMQ				LR	LR		
	comp=E,280nm,12.9s						
GTA	**Gaotai**	**7.05**	**79**	Pn	**Pn**	**00 33 54.8**	**+3.9**
GTA				Pg	Pb	00 34 15.3	+5.1
GTA				Sn	**Sn**	**00 35 11.8**	**+0.6**
GTA				Sg	Sg	00 35 44.5	-9.3
GTA				smax	smax		
	comp=N,55nm,1.0s						
GTA				smax	smax		
	comp=E,32nm,1.1s						
GTA				LR	LR		
	comp=N,240nm,7.6s						
GTA				LR	LR		
	comp=E,230nm,9.8s						
GTA				LR	LR		
	comp=Z,260nm,13.1s						
SHLS	**Shalkode**	**9.83**	**302**	*e*P	**Pn**	**00 34 25.9**	**-3.2**
UZB	**Uzynbulak**	**10.12**	**301**	*e*P	**Pn**	**00 34 36.7**	**+3.6**
PRZ	**Przheval'sk**	**10.31**	**297**	P	**Pn**	**00 34 37.5**	**+1.8**
PRZ	**Przheval'sk**	**10.31**	**297**	Pn	**Pn**	**00 34 37.5**	**+1.8**
MK31	**Makanchi Array**	**10.45**	**326**	P	**Pn**	**00 34 37.5**	**+0.1**
MK31	**Makanchi Array**	**10.45**	**326**	Pn	**Pn**	**00 34 37.5**	**+0.1**
MKAR	**Makanchi Array**	**10.45**	**326**	Pn	**Pn**	**00 34 37.5**	**0.0**
	2.5nm,0.3s,baz=130,slow=13,SNR=131						
MKAR				Sn	**Sn**	**00 36 31.2**	**-3.3**
	0.5nm,0.3s,baz=139,slow=23,SNR=9.1						
MKAR				Lg	Lg	00 37 34.3	
	baz=136,slow=32,SNR=2.0						
MKAR	**Makanchi Array**	**10.45**	**326**	Pn	**Pn**	**00 34 37.4**	**-0.1**
KPKS	**Kokpek**	**10.48**	**302**	*e*P	**Pn**	**00 34 36.8**	**-1.1**
TARG	**Taragay, Kyrgy**	**10.52**	**292**		**Pn**	**00 34 39.7**	**+0.9**
MAKZ	**Makanchi**	**10.60**	**325**	P	**Pn**	**00 34 39.0**	**-0.5**
MAKZ	**Makanchi**	**10.60**	**325**	Pn	**Pn**	**00 34 39.0**	**-0.5**
KDJ	**Kajisay**	**11.07**	**294**	P	**Pn**	**00 34 46.4**	**+0.3**
KDJ	**Kajisay**	**11.07**	**294**		**Pn**	**00 34 46.4**	**+0.3**
ARXS	**Arharly**	**11.36**	**305**	*e*P	**Pn**	**00 34 48.7**	**-1.2**
DGZ	**Jazzator, Alta**	**11.51**	**349**	*i* P	**Pn**	**00 34 53.2**	**+1.2**
KSH	**Kashi**	**11.64**	**280**	P	**Pn**	**00 34 58.3**	**+4.5**
KSH				pP		00 35 03.5	
KSH				sP		00 35 11.8	
KSH				S	**Sn**	**00 37 09.0**	**+5.1**
KSH				pmax	pmax		
	comp=Z,23nm,0.8s						
KSH				LR	LR		
	comp=N,270nm,12.5s						
KSH				LR	LR		
	comp=E,330nm,12.5s						
KSH				LR	LR		
	comp=Z,380nm,12.4s						
BOOM	**Boomskoye usch**	**12.05**	**294**	P	**Pn**	**00 34 58.9**	**-0.7**
BOOM	**Boomskoye usch**	**12.05**	**294**		**Pn**	**00 34 58.9**	**-0.7**
AAK	**Ala-Archa**	**13.12**	**294**	Pn	**Pn**	**00 35 13.6**	**-0.6**
	0.2nm,0.3s,baz=124,slow=9.3,SNR=8.7						
AAK				Lg	Lg	00 39 08.2	
	0.1nm,0.3s,baz=321,slow=17,SNR=1.3						
AAK				LR	LR	00 41 26.0	
	comp=Z,63nm,20.2s,baz=109,slow=42						
AAK	**Ala-Archa**	**13.12**	**294**	*e*P	**Pn**	**00 35 14.0**	**-0.2**
AAK	**Ala-Archa**	**13.12**	**294**	Pn	**Pn**	**00 35 13.8**	**-0.4**
SONM	**Songino Array**	**14.69**	**45**	Pn	**Pn**	**00 35 36.3**	**+0.8**
	0.5nm,0.3s,baz=234,slow=15,SNR=12						
SONM				Sn	Sn	00 38 08.2	-10
	0.1nm,0.3s,baz=224,slow=26,SNR=2.9						
SONM				Lg	Lg	00 39 29.1	
	0.2nm,0.3s,baz=254,slow=21,SNR=4.3						
SONM				LR	LR	00 41 20.4	
	comp=Z,84nm,18.2s,baz=168,slow=38						
SONM	**Songino Array**	**14.69**	**45**	P	**Pn**	**00 35 36.6**	**+1.1**
SONM	**Songino Array**	**14.69**	**45**	Pn	**Pn**	**00 35 36.6**	**+1.1**
DRK	**Karamyk**	**14.87**	**280**	P	**Pn**	**00 35 38.5**	**+0.5**
KURBB	**Kurchatov Arra**	**14.98**	**328**	Pn	**Pn**	**00 35 37.3**	**-2.0**
	0.2nm,0.3s,baz=141,slow=12,SNR=11						
KURBB				Sn	Sn	00 38 16.1	-9.1
	baz=130,slow=26,SNR=1.0						
KURBB				Lg	Lg	00 40 03.4	
	baz=134,slow=24,SNR=1.4						
KURK	**Kurchatov**	**15.01**	**329**	P	**Pn**	**00 35 37.3**	**-2.4**
KURK						00 38 16.1	
KURK	**Kurchatov**	**15.01**	**329**	Pn	**Pn**	**00 35 39.8**	**0.0**
KURK				IAmb	IAmb	00 35 51.8	
	comp=Z,9.2nm,0.8s						
NIL	**Nilore**	**15.02**	**257**	P	**Pn**	**00 35 40.3**	**+0.3**
NIL	**Nilore**	**15.02**	**257**	P	**Pn**	**00 35 40.3**	**+0.3**
ULN	**Ulaanbaatar**	**15.08**	**46**	P	**Pn**	**00 35 41.6**	**+0.8**
ULN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ULN	**Ulaanbaatar**	**15.08**	**46**		**Pn**	**00 35 41.6**	**+0.8**
BTK	**Batken**	**15.61**	**282**	P	**Pn**	**00 35 48.1**	**+0.4**
BTK				pmax	pmax		
	comp=Z,11nm,0.7s						
BTK	**Batken**	**15.61**	**282**	P	**Pn**	**00 35 48.1**	**+0.4**
BTK				IAmb	IAmb	00 36 03.3	
	comp=Z,11nm,0.7s						
ZALV	**Zalesovo Beam**	**16.04**	**347**	Pn	**Pn**	**00 35 51.9**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=167,slow=14,SNR=7.2						
GAR	**Garm**	**16.04**	**278**	Pn	**Pn**	**00 35 51.4**	**-2.0**
GAR				IAmb	IAmb	00 35 59.0	
	comp=Z,17nm,0.8s						
KKAR	**Karatay Array**	**16.09**	**293**	P	**Pn**	**00 35 52.9**	**-0.9**
KKAR	**Karatay Array**	**16.09**	**293**		**Pn**	**00 35 52.9**	**-0.9**
CHGR	**Chuyangaron**	**16.98**	**277**		**Pn**	**00 36 02.8**	**-2.5**
CHGR				IAmb	IAmb	00 36 15.8	
	comp=Z,24nm,0.8s						
BRZS	**Berezniki**	**17.34**	**317**	*e*P	**Pn**	**00 36 09.0**	**-0.7**
KBL	**Kabul**	**17.96**	**264**	P	**Pn**	**00 36 16.0**	**-1.7**
KBL				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KBL	**Kabul**	**17.96**	**264**	P	**Pn**	**00 36 16.0**	**-1.7**
BVAR	**Borovoye Array**	**20.30**	**322**	P	**P**	**00 36 43.8**	**+0.3**
	comp=Z,3.8nm,0.8s,baz=174,slow=15,SNR=16						
BRVK	**Borovoye**	**20.37**	**322**	*ce*P	**P**	**00 36 44.7**	**+0.5**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BRVK	**Borovoye**	**20.37**	**322**		**P**	**00 36 44.2**	**0.0**
SLVN	**Son La**	**20.43**	**143**	P	**P**	**00 36 43.3**	**-1.9**
CMAR	**Chiang Mai Arr**	**21.14**	**158**	P	**P**	**00 36 52.1**	**-0.6**
	comp=Z,1.6nm,0.5s,baz=335,slow=10,SNR=11						
ABKAR	**Akbulak array**	**24.60**	**306**	P	**P**	**00 37 28.3**	**+0.5**
ABKAR				IAmb	IAmb	00 37 35.6	
	comp=Z,5.4nm,1.0s						
ABKAR	**Akbulak array**	**24.60**	**306**	P	**P**	**00 37 28.5**	**+0.7**
GEYT	**Alibeck**	**25.67**	**279**	P	**P**	**00 37 39.3**	**+1.7**
	comp=Z,0.8nm,0.5s,baz=66,slow=24,SNR=1.5						
GEYT				LR	LR	00 48 42.6	
	comp=Z,35nm,21.6s,baz=35,slow=39						
AKTO	**Aktyubinsk**	**26.11**	**308**	P	**P**	**00 37 42.1**	**+0.6**
	comp=Z,5.9nm,0.9s,baz=133,slow=6.6,SNR=7.0						
SVE	**Sverdlovsk**	**27.09**	**323**	*e*P	**P**	**00 37 54.9**	**+4.7**
ARU	**Arti**	**27.91**	**321**	P	**P**	**00 37 59.2**	**+1.6**
	comp=Z,0.5nm,0.4s,baz=71,slow=4.1,SNR=3.1						
ARU	**Arti**	**27.91**	**321**	P	**P**	**00 37 56.5**	**-1.1**
KSRS	**Korea Array**	**29.12**	**80**	LR	LR	00 50 55.3	
	comp=Z,69nm,19.5s,baz=178,slow=39						
KBZ	**Khabaz**	**36.12**	**294**	P	**P**	**00 39 10.1**	**+0.4**
	comp=Z,2.0nm,0.9s,baz=115,slow=7.2,SNR=4.4						
JMZ	**Minamidaito 2**	**36.15**	**98**	P	**P**	**00 39 07.8**	**-2.3**
GURO	**Guroymak-BITLI**	**37.84**	**286**	P	**P**	**00 39 23.3**	**-1.3**
GURO				IAmb	IAmb	00 39 27.6	
	comp=Z,2.2nm,0.7s						
KLMR	**Klimovskoe**	**38.72**	**322**	*e*P	**P**	**00 39 30.9**	**-0.6**
KLMR				pmax	pmax		
	comp=Z,16nm,1.2s						
KLMR	**Klimovskoe**	**38.72**	**322**	*e*P	**P**	**00 39 31.0**	**-0.6**
KLMR				AMP		00 39 32.8	
	comp=Z,16nm,1.2s						
BR131	**Keskin Array S**	**43.77**	**290**	P	**P**	**00 40 12.6**	**-0.9**
BR131				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BR131	**Keskin Array S**	**43.77**	**290**	P	**P**	**00 40 12.6**	**-0.9**
BR131				IAmb	IAmb	00 40 19.4	
	comp=Z,4.3nm,0.8s						
BRTR	**Keskin Array B**	**43.77**	**290**	P	**P**	**00 40 14.2**	**+0.6**
	comp=Z,2.3nm,0.7s,baz=106,slow=7.6,SNR=18						
BRTR	**Keskin Array B**	**43.77**	**290**	P	**P**	**00 40 13.2**	**-0.4**
AKASG	**Malin Array Be**	**44.34**	**307**	P	**P**	**00 40 17.9**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=71,slow=7.7,SNR=4.2						
AKASG	**Malin Array Be**	**44.34**	**307**	*ce*P	**P**	**00 40 17.8**	**+0.1**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MMAI	**Mount Meron Ar**	**44.77**	**281**	P	**P**	**00 40 22.9**	**+1.4**
	comp=Z,2.5nm,0.9s,baz=76,slow=12,SNR=2.6						
FINES	**FINESS Array B**	**45.26**	**322**	P	**P**	**00 40 25.0**	**+0.1**
	comp=Z,1.2nm,0.6s,baz=93,slow=8.4,SNR=8.6						
FINES	**FINESS Array B**	**45.26**	**322**	P	**P**	**00 40 25.0**	**+0.1**
MDUB	**Mudurnu**	**45.33**	**292**	P	**P**	**00 40 26.3**	**+0.4**
ARCES	**ARCESS Array B**	**45.98**	**334**	P	**P**	**00 40 32.6**	**+2.1**
	comp=Z,5.4nm,1.0s,baz=87,slow=7.4,SNR=5.3						
ARCES				LR	LR	01 02 17.7	
	comp=Z,34nm,18.9s,baz=345,slow=39						
PABE	**Paberze**	**46.79**	**314**	P	**P**	**00 40 35.8**	**-1.2**
PABE				IAmb	IAmb	00 40 43.4	
	comp=Z,9.4nm,0.8s						
SUW	**Suwalki**	**47.47**	**312**	P	**P**	**00 40 42.1**	**-0.3**
SUW				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SUW	**Suwalki**	**47.47**	**312**	P	**P**	**00 40 42.1**	**-0.3**
BURAR	**Bucovina Array**	**47.53**	**303**	P	**P**	**00 40 43.1**	**0.0**
ELL	**Elmali**	**47.53**	**288**	P	**P**	**00 40 43.2**	**-0.1**
ELL				pmax	pmax		
	comp=Z,17nm,0.8s						
ELL	**Elmali**	**47.53**	**288**	P	**P**	**00 40 43.2**	**-0.1**
BUR08	**Bucovina Ar. S**	**47.54**	**303**	P	**P**	**00 40 42.7**	**-0.4**
BUR08				IAmb	IAmb	00 40 59.4	
	comp=Z,2.0nm,1.1s						
MLR	**Muntele Rosu**	**47.59**	**300**	P	**P**	**00 40 44.7**	**+1.1**
	comp=Z,3.6nm,0.6s,baz=85,slow=3.8,SNR=6.4						
BALB	**Balikesir**	**48.01**	**292**	P	**P**	**00 40 46.4**	**-0.4**
KWP	**Kalwaria Pacla**	**48.66**	**307**	P	**P**	**00 40 51.9**	**+0.2**
KWP				pmax	pmax		
	comp=Z,79nm,0.7s						
KWP	**Kalwaria Pacla**	**48.66**	**307**	P	**P**	**00 40 51.9**	**+0.2**
HFS	**Hagfors**	**51.43**	**321**	P	**P**	**00 41 12.7**	**+0.2**
	comp=Z,1.7nm,0.5s,baz=107,slow=10,SNR=6.2						
NB2	**NORSAR Subarra**	**52.43**	**323**	P	**P**	**00 41 19.7**	**-0.3**
	comp=Z,2.4nm,0.7s,baz=77,slow=7.9						
NOA	**NORSAR Array B**	**52.43**	**323**	P	**P**	**00 41 19.9**	**0.0**
	comp=Z,2.5nm,0.9s,baz=77,slow=7.4,SNR=4.2						
NOA	**NORSAR Array B**	**52.43**	**323**	P	**P**	**00 41 20.0**	**0.0**
CONA	**Conrad Observa**	**53.48**	**306**	*e*P	**P**	**00 41 28.3**	**+0.2**
	comp=Z,6.9nm,1.5s						
SOKA	**Soboth**	**54.44**	**305**	*e*P	**P**	**00 41 35.7**	**+0.6**
	comp=Z,4.5nm,1.1s						
GEC2	**GERESS Array S**	**54.53**	**308**	P	**P**	**00 41 35.9**	**+0.2**
GEC2				IAmb	IAmb	00 41 41.6	
	comp=Z,2.2nm,1.0s						
GERES	**GERESS Array B**	**54.53**	**308**	P	**P**	**00 41 35.5**	**-0.2**
	comp=Z,0.9nm,0.8s,baz=104,slow=5.6,SNR=4.1						
ABTA	**Abfaltersbach**	**56.03**	**306**	*e*P	**P**	**00 41 45.7**	**-0.8**
	comp=Z,3.9nm,1.2s						
WTTA	**Wattenberg**	**56.39**	**307**	*e*P	**P**	**00 41 49.0**	**-0.3**
	comp=Z,5.4nm,0.9s						
WATA	**Walderalm**	**56.40**	**307**	*e*P	**P**	**00 41 48.9**	**-0.4**
	comp=Z,7.8nm,1.5s						
SQTA	**Sankt Quirin**	**56.68**	**307**	*e*P	**P**	**00 41 51.4**	**+0.2**
	comp=Z,4.2nm,1.0s						
MOTA	**Moosalm**	**56.70**	**307**	*e*P	**P**	**00 41 51.1**	**-0.3**
	comp=Z,3.0nm,0.7s						
RETA	**Reutte**	**56.86**	**307**	*e*P	**P**	**00 41 52.9**	**+0.5**
	comp=Z,2.7nm,0.7s						
FETA	**Feichten**	**57.06**	**307**	*e*P	**P**	**00 41 54.2**	**+0.2**
	comp=Z,5.3nm,1.1s						
TEOL	**Teolo**	**57.11**	**304**	P	**P**	**00 41 53.7**	**-0.4**
TEOL				IAmb	IAmb	00 41 57.5	
	comp=Z,9.3nm,1.0s						

AQU	L'Aquila	57.17	301	P	P	00 41 53.2	-1.5
AQU				pmax	pmax		
	comp=Z,24nm,1.1s						
AQU	L'Aquila	57.17	301	P	P	00 41 53.2	-1.5
DAVOX	Davos/Dischmat	57.69	307	P	P	00 41 58.0	-0.4
	comp=Z,4.3nm,0.7s,baz=96,slow=6.3,SNR=9.8						
FITZ	Fitzroy Crossi	65.03	143	P	P	00 42 47.0	-1.1
	comp=Z,1.2nm,0.7s						
ILAR	Eielson Array	67.67	23	P	P	00 43 04.4	-0.1
	comp=Z,1.3nm,0.8s,baz=305,slow=5.3,SNR=14						
ESDC	Sonseca Array	69.95	305	P	P	00 43 18.9	-0.2
	comp=Z,1.9nm,0.8s,baz=44,slow=6.6,SNR=9.4						
ESDC	Sonseca Array	69.95	305	IAmb	IAmb	00 43 20.1	
	comp=Z,2.5nm,1.1s						
WRA	Warramunga Arr	70.98	137	P	P	00 43 24.9	-0.5
	comp=Z,0.7nm,0.6s,baz=328,slow=5.7,SNR=6.7						
WRA	Warramunga Arr	70.98	137	P	P	00 43 25.0	-0.5
ASAR	Alice Springs	73.81	139	P	P	00 43 42.1	-0.3
	comp=Z,1.1nm,0.7s,baz=328,slow=6.2,SNR=13						
TORD	Torodi Ar. Bea	81.31	280	P	P	00 44 23.6	-0.9
	comp=Z,1.0nm,0.9s,baz=48,slow=4.1,SNR=6.4						
TORD	Torodi Ar. Bea	81.31	280	IAmb	IAmb	00 44 24.9	
	comp=Z,1.7nm,1.1s						

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*IDC **23** 00:41:44.9±2.2, 55°.63S×26°.75W, h0^{km}, mb4.1/1, mb1 4.1/1, mb1mx2.9/19, mbtmp4.1/1, MS3.7/1, Ms1 3.5/1, ms1mx2.9/17, Error ellipse: s-maj=116.4km s-min=70.4km az=137.0*

ISC 23 00:41:45.7±1.9**, 55°.4S**±0°.2×**27°.7W**±0°.7**, h10^{km}, n8, σ1^{s}21**/7**,**
South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	17.48	158	P	P	00 45 49.7	-0.6
VNA3	Neumayer Olymp	17.67	161	P	P	00 45 51.2	-1.3
VNA2	Neumayer--Watz	17.87	158	P	P	00 45 54.6	-0.1
	baz=322,slow=13						
SNAA	Sanae	19.42	156	P	Pn	00 46 14.2	+1.3
BOSA	Boshof	46.11	77	LR	LR	01 06 33.6	
	comp=Z,76nm,19.4s,baz=190,slow=33						
TORD	Torodi Ar. Bea	72.66	30	P	P	00 53 13.6	+0.2
	1.4nm,0.7s,baz=201,slow=6.4,SNR=12						
ILAR	Eielson Array	149.49	313	PKPbc	PKiKP	01 01 35.3	+0.7
	0.5nm,0.7s,baz=129,slow=2.4,SNR=8.4						
SONM	Songino Array	150.97	86	PKPbc	PKiKP	01 01 37.1	-1.3
	0.2nm,0.4s,baz=207,slow=5.3,SNR=3.2						

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*IDC **23** 00:50:41.3±2.4, 6°.70S×132°.21E, h0^{km}, mb3.5/1, mb1 4.0/5, mb1mx3.5/37, mbtmp3.8/5, ML3.9/4, MS3.5/1, Ms1 3.5/1, ms1mx2.5/32, Error ellipse: s-maj=101.4km s-min=25.4km az=84.0*

ISC 23 00:50:39.2±1.0**, 6°.91S**±0°.06×**132°.0E**±0°.2**, h10^{km}, n11,**
σ4^{s}46/9**, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	3.97	4	P	Pn	00 51 43.1	+2.8
DRS	Darwin Rock St	5.59	191	P	Pb	00 52 15.3	-1.7
	10nm,0.5s						
KDU	Kakadu	5.76	175	P	Pb	00 52 14.3	-5.7
MTN	Manton Dam	5.96	188	P	Pb	00 52 17.8	-5.4
SIJI	Sorong	6.04	353	Pn	Pn	00 52 09.2	+0.5
	1.4nm,0.3s,baz=237,slow=23,SNR=1.5						
SIJI				Sn	Sn	00 53 09.9	-8.0
	5.6nm,0.3s,baz=234,slow=23,SNR=8.6						
KNRA	Kununurra	9.26	200	P	Pn	00 53 02.3	+9.3
	20nm,1.7s						
FITZ	Fitzroy Crossi	12.72	208	Pn	Pn	00 53 47.3	+7.0
	0.7nm,0.3s,baz=37,slow=11,SNR=55						
FITZ				Sn	Sn	00 56 02.6	+0.5
	0.9nm,0.3s,baz=208,slow=17,SNR=11						
WRA	Warramunga Arr	13.16	170	Pn	Pn	00 53 52.2	+5.8
	0.6nm,0.3s,baz=352,slow=13,SNR=18						
WRA				Sn	Sn	00 56 09.0	-4.0
	baz=354,slow=22,SNR=0.9						
ASAR	Alice Springs	16.77	174	Pn	P	00 54 39.8	+3.1
	0.4nm,0.3s,baz=347,slow=9.0,SNR=17						
ASAR				Sn	Sn	00 57 38.9	-1.9
	0.2nm,0.3s,baz=354,slow=28,SNR=2.0						
MJAR	Matsushiro Arr	43.61	7	LR	LR	01 17 09.3	
	comp=Z,49nm,18.1s,baz=220,slow=37						
MKAR	Makanchi Array	69.23	326	P	P	01 01 50.1	+3.7
	0.3nm,0.5s,baz=116,slow=7.5,SNR=6.0						

IDC 23 00:54:17.8±4.5**, 15°.23S**×**173°.07W, h0^{km}, mb4.5**/2**,**
mb1 4.7/2**, mb1mx3.5**/45**, mbtmp4.5**/2**, MS3.1**/2**, Ms1 3.1**/2**,**
ms1mx2.8/30**, Error ellipse: s-maj=234.0km**
s-min=24.8km az=144.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	1.81	44	Pn	Pn	00 54 49.2	-1.2
	53nm,0.3s,baz=229,slow=3.4,SNR=19						
AFI				Sn	Sn	00 55 08.8	-5.3
	103nm,0.3s,baz=355,slow=18,SNR=6.2						
AFI				LR	LR	00 55 38.1	
	comp=Z,360nm,19.3s,baz=210,slow=44						
DZM	Mont Dzumac	20.56	248	LR	LR	01 05 23.6	
	comp=Z,78nm,21.5s,baz=96,slow=32						
PPT	Papeete	22.66	99	LR	LR	01 05 49.0	
	comp=Z,45nm,20.5s,baz=230,slow=30						
WRA	Warramunga Arr	50.19	257	P	P	01 03 15.1	-0.8
	0.7nm,0.5s,baz=91,slow=6.9,SNR=12						
ASAR	Alice Springs	50.46	252	P	P	01 03 17.3	-0.6
	13nm,0.5s,baz=87,slow=7.9,SNR=53						
BRTR	Keskin Array B	146.22	321	PKPbc	PKPab	01 14 02.3	+0.9
	0.9nm,0.8s,baz=29,slow=3.1,SNR=5.1						

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*IDC **23** 00:58:27.6±1.3, 8°.56N×71°.21W, h0^{km}, mb3.3/3, mb1 3.7/4, mb1mx3.3/30, mbtmp3.5/4, ML2.9/1, Error ellipse: s-maj=35.5km s-min=21.6km az=126.0*

*FUNV **23** 00:58:31.2, 8°.47N×71°.45W, h5^{km}, MW3.7*

ISC 23 00:58:29.8±1.3**, 8°.53N**±0°.03×**71°.40W**±0°.02**, h10^{km}**±9^{km}**,**
n56, σ1^{s}95/93**, mb3.4**/3**, 1C-2D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.59	114	*e*P	Pg	00 58 41.5	+0.2
SOCV				*e*S	Sg	00 58 48.9	-0.2
SOCV	Socops	0.59	114	⇓*e*P	Pg	00 58 42.0	+0.7
SOCV				*e*S	Sb	00 58 50.8	+0.2
SDV	Santo Domingo	0.84	65	*e*P	Pb	00 58 47.1	+0.5
SDV				*e*S	Sb	00 58 59.0	+1.0
CAPV	Capacho	1.12	234	⇓*e*P	Pb	00 58 50.2	-1.1
CAPV				*e*S	Sb	00 59 05.1	-0.9
PAMC	Pamplona, Colo	1.75	228	*e*P	Pn	00 59 02.6	+2.0
PAMC				*e*S	Sn	00 59 24.6	+1.6
MCQV	Machiques	1.88	324	*e*P	Pn	00 59 02.9	+1.0
MCQV				*e*S	Sn	00 59 27.8	+2.0
OCAC	Ocana	1.92	262	*e*P	Pn	00 59 03.6	+1.0
OCAC				*e*S	Sn	00 59 27.1	+0.2
TAMC	Tame, Arauca	2.11	191	*e*P	Pn	00 59 06.9	+1.6
TAMC				*e*S	Sb	00 59 34.7	+0.2
LL6C	La Loma 6 Bece	2.20	303	*e*P	Pn	00 59 07.4	+1.0
LL6C				*e*S	Sn	00 59 34.7	+1.0
LL1C	La Loma 1 Cana	2.35	296	*e*P	Pn	00 59 09.9	+1.4
LL1C				*e*S	Sn	00 59 40.2	+2.8
ELOV	Elorza	2.43	128	*e*P	Pn	00 59 11.9	+2.3
ELOV				*e*S	Sb	00 59 43.4	-0.3
ELOV	Elorza	2.43	128	*e*P	Pn	00 59 11.4	+1.8
ELOV				*e*S	Sn	00 59 40.2	+0.8
DABV	Dabajuro	2.50	18	*e*P	Pn	00 59 12.7	+2.3
LL5C	La Loma 5 El P	2.59	298	*e*P	Pn	00 59 12.8	+1.1
LL5C				*e*S	Sn	00 59 43.6	+0.2
BARC	Barichara	2.61	223	*e*P	Pn	00 59 14.7	+2.5
BARC				*e*S	Sn	00 59 47.6	+3.5
BARC				*i*		00 59 54.6	
	comp=Z,497nm,0.4s						
SIQV	Siquisique	2.63	37	*e*P	Pn	00 59 15.0	+2.7
SMLC	San Martn de	2.65	276	*e*P	Pn	00 59 12.9	+0.3
SMLC				*e*S	Sb	00 59 50.2	+0.2
BRRC	Barranca, Sant	2.69	239	*e*P	Pn	00 59 14.9	+1.8
BRRC				*e*S	Sn	00 59 46.8	+1.1
BRRC				*i*		00 59 56.8	
	comp=Z,168nm,0.7s						
ARGC	Ariguani, Magd	3.10	295	*e*P	Pn	00 59 19.7	+0.9
ARGC				*e*S	Sn	00 59 54.6	-1.4
ARGC				*i*		01 00 08.2	
	comp=Z,132nm,0.2s						
RUSC	La Rusia	3.10	213	*e*P	Pn	00 59 20.9	+1.6
RUSC				*e*S	Sn	00 59 58.3	+1.7
BAUV	El Baul	3.35	83	*e*P	Pn	00 59 23.7	+1.6
BAUV				*e*S	Sn	01 00 03.5	+1.5
ZARC	Zaragoza, Cauc	3.57	254	*e*P	Pn	00 59 26.0	+0.7
ZARC				*e*S	Sn	01 00 03.9	-3.7
JACV	Jacura	3.59	45	*e*P	Pn	00 59 27.9	+2.4
MONV	Montecano	3.69	22	*e*P	Pn	00 59 28.6	+1.7
SMRC	Santa Marta, M	3.82	314	*e*P	Pn	00 59 26.9	-1.8
SMRC				*e*S	Sn	01 00 09.3	-4.4
SPBC	San Pablo de B	3.90	223	*e*P	Pn	00 59 31.4	+1.6
SPBC				*e*S	Sn	01 00 18.0	+2.3
SJCC	San Jacinto, C	3.97	290	*e*P	Pn	00 59 32.1	+1.3
SJCC				*e*S	Sn	01 00 19.9	+2.5
BENV	Beln	4.02	69	*e*P	Pn	00 59 33.5	+2.1
UREC	San Jos de Ur	4.16	260	*e*P	Pn	00 59 33.8	+0.4
MOTC	Monteria, Cord	4.22	274	*e*P	Pn	00 59 35.5	+1.3
MOTC				*e*S	Sn	01 00 25.7	+2.0
PTGC	Puerto Gaitan,	4.36	190	*e*P	Pn	00 59 37.2	+1.0
PTGC				*e*S	Sn	01 00 28.4	+1.4
NORC	Norcasia	4.53	230	*e*P	Pn	00 59 41.5	+3.0
NORC				*e*S	Sn	01 00 31.7	+0.4
PGA4	Puerto Gaitan	4.63	180	*e*P	Pg	00 59 58.1	-0.4
PGA4				*e*S	Sn	01 00 33.6	-0.2
ROSC	El Rosal	4.67	219	Pn	Pn	00 59 43.9	+3.1
	comp=Z,10nm,0.3s,baz=281,slow=21,SNR=11						
ROSC				Sn	Sn	01 00 38.8	+3.6
	comp=Z,8.4nm,0.3s,baz=137,slow=18,SNR=3.8						
ROSC				Lg	Lg	01 01 00.3	
	comp=Z,11nm,0.3s,baz=199,slow=24,SNR=4.4						
ROSC	El Rosal	4.67	219	*e*P	Pn	00 59 43.9	+3.1
ROSC				*e*S	Sn	01 00 39.0	+3.8
HELC	Santa Helena	4.71	241	*e*P	Pn	00 59 42.4	+1.2
HELC				*e*S	Sn	01 00 37.1	+1.0
PAYV	Puerto Ayacuch	4.83	129	⇑*e*P	Pn	00 59 43.7	+1.1
CACV	CAICARA DEL OR	4.91	101	*e*P	Pb	00 59 52.2	-3.6
VILC	Villavicencio,	4.94	208	*e*P	Pn	00 59 45.6	+1.4
VILC				*e*S	Sn	01 00 38.6	-2.9
MERV	Las Mercedes	5.09	81	*e*P	Pn	00 59 47.7	+1.5
CBOC	Ciudad Bolivar	5.28	240	*e*P	Pn	00 59 51.8	+2.8
BIRV	Birongo	5.42	69	*e*P	Pn	00 59 52.1	+1.5
ANIL	Santa Ana	5.65	225	*e*P	Pn	00 59 57.3	+3.3
ANIL				*e*S	Sn	01 00 54.8	-4.3
ANIL				*i*		01 01 14.9	
	comp=E,267nm,0.5s						
PRAC	Prado	5.90	216	*e*P	Pn	00 59 58.7	+1.3
PRAC				*e*S	Sn	01 01 04.1	-1.1
ORTC	Ortega, Tolima	5.97	220	*e*P	Pn	01 00 00.1	+1.8
ORTC				*e*S	Sn	01 01 06.3	-0.6
PLMC	San Jos del P	6.04	234	*e*P	Pn	01 00 01.7	+2.5
PLMC				*e*S	Sn	01 01 10.1	+1.6
GUVC	San Jose del G	6.07	192	*e*P	Pn	00 59 60.0	+0.4
GUVC				*e*S	Sn	01 01 06.5	-2.6
PRGV	PARIAGUAN	6.68	88	*e*P	Pn	01 00 08.5	+0.4
MACC	Macarena, Meta	6.79	201	*e*P	Pn	01 00 08.8	-0.8
MACC				*e*S	Sn	01 01 22.9	-4.1
PCRV	Puerto La Cruz	6.88	76	*e*P	Pn	01 00 12.3	+1.6
MARP	Paez Belalcaza	7.24	219	*e*P	Pn	01 00 17.4	+1.5
TXAR	Lajitas Array	36.67	309	P	P	01 05 37.2	+0.2
	comp=E,0.2nm,0.6s,baz=126,slow=9.2,SNR=2.1						
PDAR	Pinedale Array	47.75	322	P	P	01 07 07.9	+0.6
	comp=E,0.4nm,0.5s,baz=124,slow=9.8,SNR=6.6						
TORD	Torodi Ar. Bea	71.73	79	P	P	01 09 51.7	-1.1
	comp=E,0.2nm,0.7s,baz=297,slow=6.3,SNR=1.4						
ASAR	Alice Springs	151.48	235	PKPbc	PKPbc	01 18 23.9	-1.1
	comp=E,0.2nm,0.3s,baz=96,slow=1.9,SNR=1.8						
WRA	Warramunga Arr	152.64	243	PKPbc	PKPbc	01 18 26.7	-1.0
	comp=E,0.5nm,0.6s,baz=109,slow=2.2,SNR=2.3						

MAN 23 01:00:46.1, 10°.74N×125°.65E, h30^{km}, mb4.0, ML2.8,
MS2.4, Leyte

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*IDC **23** 01:06:00.3±0.8, 26°.32N×142°.62E, h0^{km}, mb4.1/16, mb1 4.3/18, mb1mx4.1/43, mbtmp4.0/18, ML3.1/2, MS3.4/11, Ms1 3.4/11, ms1mx3.1/46, Error ellipse: s-maj=24.7km s-min=16.2km az=66.0*

*JMA **23** 01:06:04.6, 26°.38N×142°.52E, h66^{km}±2^{km}, M3.8*

*NEIC **23** 01:06:05.2±1.3, 26°.36N±0°.10×142°.5E±0°.1, h23^{km}±6^{km}, mb4.5/29, Error ellipse: s-maj=19.0km s-min=13.8km az=88.0*

ISC 23 01:06:05.2±0.6**, 26°.31N**±0°.08×**142°.50E**±0°.09**, h31^{km}, n88,**
σ0^{s}91/85**, mb4.4**/30**, MS3.6**/9**, 1C, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHH2	Haha-jima-NKT2	0.43	318	P	Pn	01 06 16.1	+0.8
JHH2				S	Sn	01 06 24.5	+2.3
JCJ	Chichijima	0.83	340	Pn	Pn	01 06 20.2	-0.6
	383nm,0.3s,baz=276,slow=22,SNR=175						
JCJ				Sn	Sn	01 06 35.1	+3.0
	1µm,0.3s,baz=290,slow=22,SNR=13						
JCJ				LR	LR	01 06 44.7	
	comp=Z,660nm,19.6s,baz=162,slow=52						
JCJ	Chichijima	0.83	340	Pn	Pn	01 06 20.0	-0.9
CBIJ	Chichi jima	0.83	340	P	Pn	01 06 20.2	-0.6
CBIJ				S	Sn	01 06 31.7	-0.4
JHJ	Hachijo jima 2	7.18	341	LR	LR	01 10 30.0	
	comp=Z,126nm,19.3s,baz=310,slow=38						
JHU	Hanno	9.90	345	P	Pn	01 08 25.0	-0.4
JHO	Hitachi	10.40	351	P	Pn	01 08 31.4	-0.8
JAG	Ashikaga	10.41	346	P	Pn	01 08 30.9	-1.5
MJAR	Matsushiro Arr	10.84	341	Pn	Pn	01 08 37.4	-0.8
	0.2nm,0.3s,baz=159,slow=12,SNR=9.1						
MJAR	Matsushiro Arr	10.84	341		Pn	01 08 37.9	-0.3
MAJO	Matsushiro	10.84	341	Pn	Pn	01 08 38.1	-0.2
JMM	Marumori	11.61	353	Pn	Pn	01 08 46.9	-1.9
JSD	Sado	12.23	344	Pn	Pn	01 08 54.5	-2.8
JOW	Kunigami	12.74	276	Pn	Pn	01 09 01.2	-3.1
ERM	Erimo	15.68	2	Pn	Pn	01 09 43.5	-0.2
ERM				IAmb	IAmb	01 09 54.0	
	comp=Z,28nm,1.1s						
KSRS	Korea Array	16.61	316	Pn	P	01 09 58.5	+0.6
	comp=Z,0.1nm,0.3s,baz=124,slow=9.9,SNR=2.6						
USRK	Ussuriysk Ar.	19.77	337	P	P	01 10 33.1	+0.3
	baz=134,slow=7.9,SNR=4.9						
USRK				LR	LR	01 17 47.7	
	comp=Z,98nm,19.9s,baz=164,slow=36						
USRK	Ussuriysk Ar.	19.77	337	P	P	01 10 32.6	-0.1
CN2	Changchun	22.27	326	*e*P	P	01 10 59.3	-0.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
H11N2	WAKE ISLAND Hy	23.37	101	T	T	01 34 53.0	
	baz=289,slow=74						
H11N1	WAKE ISLAND Hy	23.37	101	T	T	01 34 54.7	
	baz=289						
H11N3	WAKE ISLAND Hy	23.39	101	T	T	01 34 59.5	
	baz=289,slow=74						
H11S3	WAKE ISLAND Hy	23.65	104	T	T	01 35 13.0	
	baz=298						
H11S1	WAKE ISLAND Hy	23.66	104	T	T	01 35 40.7	
	baz=298						
H11S2	WAKE ISLAND Hy	23.67	104	T	T	01 35 16.4	
	baz=298						
KLR	Kul'dur	24.36	343	LR	LR	01 20 25.8	
	comp=Z,51nm,20.8s,baz=174,slow=36						
XAN	Xi'an	29.93	293	⇑P	P	01 12 10.3	-0.3
XAN				pP	pP	01 12 18.5	-0.7
XAN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SONM	Songino Array	35.48	317	P	P	01 12 58.6	-0.5
	comp=Z,0.4nm,0.3s,baz=127,slow=8.5,SNR=9.3						
SONM	Songino Array	35.48	317	P	P	01 12 58.2	-0.8
SONM				PcP	PcP	01 15 28.9	+0.9
CMAR	Chiang Mai Arr	40.87	268	P	P	01 13 46.0	+1.3
	comp=Z,1.2nm,0.3s,baz=71,slow=6.3,SNR=5.0						
CMAR				LR	LR	01 30 42.7	
	comp=Z,28nm,18.6s,baz=162,slow=36						
WB0	Warramunga Arr	46.47	191	P	P	01 14 30.1	+0.5
WB0				IAmb	IAmb	01 14 43.1	
	comp=Z,12nm,1.4s						
WR0	Warramunga Arr	46.64	190	P	P	01 14 30.6	-0.2
WR0				IAmb	IAmb	01 14 57.2	
	comp=Z,5.6nm,1.1s						
WB2	Warramunga Arr	46.65	191	P	P	01 14 30.9	0.0
WRA	Warramunga Arr	46.65	191	P	P	01 14 31.4	+0.5
	comp=Z,1.6nm,0.5s,baz=11,slow=8.6,SNR=20						
WRA	Warramunga Arr	46.65	191	P	P	01 14 30.4	-0.6
ZAA0	Zalesovo Array	50.26	319	P	P	01 14 59.2	+0.8
ZAA0				PcP	PcP	01 16 17.4	+0.3
ZALV	Zalesovo Beam	50.26	319	P	P	01 14 57.8	-0.7
	comp=Z,0.9nm,0.3s,baz=102,slow=8.3,SNR=3.8						
ZALV	Zalesovo Beam	50.26	319	P	P	01 14 58.2	-0.3
ZALV				PcP	PcP	01 16 17.5	+0.4
MK31	Makanchi Array	51.19	310	P	P	01 15 05.2	-0.5
MKAR	Makanchi Array	51.19	310	P	P	01 15 05.2	-0.4
	comp=Z,1.1nm,0.4s,baz=88,slow=9.6,SNR=34						
MKAR	Makanchi Array	51.19	310	P	P	01 15 04.9	-0.7
MKAR				PcP	PcP	01 16 21.2	+0.5
MAKZ	Makanchi	51.41	310	P	P	01 15 07.1	-0.1
KURK	Kurchatov	53.73	315	P	P	01 15 23.8	-0.6
KURK				IAmb	IAmb	01 15 25.4	
	comp=Z,4.1nm,0.8s						
KURK				PcP	PcP	01 16 30.3	+0.2
K20K	Telida	54.94	30	P	P	01 15 34.0	+1.0
K20K				IAmb	IAmb	01 15 45.1	
	comp=Z,8.1nm,1.4s						
J20K	Nowinta River	55.07	29	P	P	01 15 34.6	+0.7
J20K				IAmb	IAmb	01 15 36.6	
	comp=Z,9.1nm,1.4s						
IMAR	Indian Mountai	55.62	26	P	P	01 15 38.5	+0.7
BOOM	Boomskoye usch	55.89	305	P	P	01 15 41.1	+0.8
BOOM				IAmb	IAmb	01 15 42.8	
	comp=Z,3.7nm,0.6s						
TRF	Thorofare Moun	56.63	30	P	P	01 15 44.6	-0.7
TRF				IAmb	IAmb	01 15 57.9	
	comp=Z,11nm,1.4s						
MLY	Manley	56.67	28	P	P	01 15 46.4	+1.0
AAK	Ala-Archa	56.93	305	P	P	01 15 48.3	+0.5
AAK				IAmb	IAmb	01 15 49.3	
	comp=Z,2.8nm,0.8s						
BRVK	Borovoye	58.87	318	P	P	01 16 01.8	+0.8
BRVK				IAmb	IAmb	01 16 03.2	
	comp=Z,3.5nm,0.8s						
BMAR	Burnt Mountain	59.44	25	P	P	01 16 06.5	+1.8
SCRK	Sand Creek	59.47	29	P	P	01 16 05.1	0.0
KKAR	Karatay Array	59.77	306	P	P	01 16 07.9	+0.5
GAR	Garm	60.64	302	P	P	01 16 13.7	+0.1
GAR				IAmb	IAmb	01 16 16.7	
	comp=Z,4.1nm,0.7s						
CHGR	Chuyangaron	61.59	301	P	P	01 16 20.4	+0.4
EPYK	Eagle Plains	62.52	27	P	P	01 16 25.5	-0.1
INK	Inuvik	63.62	24	P	P	01 16 32.1	-0.7
	comp=Z,0.6nm,0.6s,baz=310,slow=7.1,SNR=4.4						
INK	Inuvik	63.62	24	P	P	01 16 32.2	-0.7
INK				IAmb	IAmb	01 16 50.7	
	comp=Z,6.2nm,1.4s						
ARU	Arti	65.22	323	LR	LR	01 48 43.0	
	comp=Z,25nm,18.2s,baz=122,slow=39						
ARU	Arti	65.22	323	P	P	01 16 44.2	+0.7
ABKAR	Akbulak array	65.84	315	P	P	01 16 48.0	+0.4
AKTO	Aktyubinsk	66.79	316	LR	LR	01 46 16.6	
	comp=Z,40nm,18.0s,baz=33,slow=36						
ARCES	ARCESS Array B	74.37	341	P	P	01 17 39.8	+0.2
	comp=Z,1.6nm,0.6s,baz=70,slow=8.1,SNR=10						
ARCES				LR	LR	01 53 34.2	
	comp=Z,36nm,19.0s,baz=35,slow=38						
ARCES	ARCESS Array B	74.37	341	P	P	01 17 40.8	+1.1
ARCES				IAmb	IAmb	01 17 51.2	
	comp=Z,5.5nm,1.0s						
PINE	Pine Mountain	76.72	48	P	P	01 17 54.2	+0.4
PINE				IAmb	IAmb	01 18 04.1	
	comp=Z,5.4nm,1.4s						
KBZ	Khabaz	78.75	313	P	P	01 18 05.5	+0.7
	comp=Z,2.9nm,0.7s,baz=97,slow=4.2,SNR=8.0						
FIA1	FINESS Array S	78.77	334	P	P	01 18 05.3	+0.7
FINES	FINESS Array B	78.77	334	P	P	01 18 05.3	+0.7
	comp=Z,5.8nm,0.4s,baz=73,slow=5.0,SNR=100						
FINES	FINESS Array B	78.77	334	P	P	01 18 05.4	+0.8
NVAR	Mina Array Bea	80.78	52	P	P	01 18 16.0	-0.3
	comp=Z,0.5nm,0.7s,baz=295,slow=5.0,SNR=4.7						
NVAR	Mina Array Bea	80.78	52	P	P	01 18 16.5	+0.2
PABE	Paberze	83.19	330	P	P	01 18 28.3	+0.1
AKASG	Malin Array Be	83.41	324	P	P	01 18 29.0	-0.5
	comp=Z,1.7nm,0.5s,baz=54,slow=5.3,SNR=14						
AKASG	Malin Array Be	83.41	324	P	P	01 18 29.7	+0.2
AKBB	Malin Array Si	83.41	324	P	P	01 18 29.5	0.0
AKBB				IAmb	IAmb	01 18 41.5	
	comp=Z,6.6nm,1.4s						
NB2	NORSAR Subarra	84.44	338	P	P	01 18 33.9	-0.7
	comp=Z,1.3nm,1.0s,baz=51,slow=4.6						
NOA	NORSAR Array B	84.44	338	P	P	01 18 34.1	-0.5
	comp=Z,0.1nm,0.3s,baz=46,slow=4.8,SNR=5.3						
NOA				LR	LR	02 00 20.9	
	comp=Z,26nm,18.1s,baz=30,slow=39						
PDAR	Pinedale Array	84.57	45	P	P	01 18 35.9	-0.1
	comp=Z,0.1nm,0.4s,baz=316,slow=5.0,SNR=1.9						
PDAR	Pinedale Array	84.57	45	P	P	01 18 36.6	+0.7
RAYN	Ar Rayn	85.72	294	P	P	01 18 42.6	+0.8
BRTR	Keskin Array B	86.74	313	P	P	01 18 46.8	+0.2
	comp=Z,0.8nm,0.9s,baz=65,slow=3.3,SNR=3.9						
BRTR				LR	LR	02 01 16.6	
	comp=Z,25nm,19.5s,baz=43,slow=38						
BRTR	Keskin Array B	86.74	313	P	P	01 18 47.3	+0.6
GERES	GERESS Array B	92.33	329	P	P	01 19 11.8	-0.8
	comp=Z,0.6nm,0.5s,baz=46,slow=5.8,SNR=4.1						
GERES	GERESS Array B	92.33	329	P	P	01 19 12.3	-0.3
DAVOX	Davos/Dischmat	95.59	329	LR	LR	02 07 33.6	
	comp=Z,33nm,18.0s,baz=86,slow=39						
TXAR	Lajitas Array	95.85	53	P	P	01 19 29.0	-0.2
	comp=Z,0.1nm,0.8s,baz=294,slow=2.9,SNR=1.7						
TXAR				LR	LR	02 00 34.8	
	comp=Z,14nm,18.9s,baz=0.0,slow=34						
TORD	Torodi Ar. Bea	125.31	311	PKP	PKPdf	01 25 03.3	-0.4
	comp=Z,0.5nm,0.7s,baz=7.3,slow=1.9,SNR=4.6						

PGC 23 01:27:49.9±0.6**, 50°.56N**×**130°.31W, h10^{km}, MLSn2.8**/27**,**
Mw3.5/27**, 204km west of Pt. Hardy, Bc Vancouver**
Island, Canada Region, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOLB	Holberg	1.39	86	Pn	Pn	01 28 13.3	-2.1
HOLB				Sn	Sb	01 28 29.4	-4.3
BPBC	Brooks Peninsu	1.67	103	Pn	Pn	01 28 16.6	-2.7
PACB	Port Alice, BC	1.80	93	Pn	Pn	01 28 18.8	-2.2
PACB				Sn	Sn	01 28 39.0	-4.9
HG4B	Hotspring	1.82	343	Pn	Pn	01 28 19.1	-2.2
HG4B				Sn	Sn	01 28 40.6	-3.9
PHC	Port Hardy	1.84	84	Pn	Pn	01 28 19.8	-1.7
PHC				Sn	Sn	01 28 40.6	-4.1
MAYB	Maynard	2.01	93	Pn	Pn	01 28 22.1	-2.0
BBB	Bella Bella	2.13	39	Pn	Pn	01 28 24.2	-1.3
BBB				Sn	Sn	01 28 47.8	-4.2
EDB	Eliza Dome	2.16	107	Pn	Pn	01 28 23.7	-2.2
EDB				Sn	Sn	01 28 49.8	-3.0
BNB	Barry Inlet	2.21	337	Pn	Pn	01 28 24.9	-1.8
BNB				Sn	Sn	01 28 50.5	-3.7
TLCB	Telegraph Cove	2.22	89	Pn	Pn	01 28 25.3	-1.4
TLCB				Sn	Sn	01 28 50.9	-3.2
WOSB	Woss	2.43	98	Pn	Pn	01 28 28.2	-1.6
ETB	Estevan Point	2.71	114	Pn	Pn	01 28 32.0	-1.5
NCRB	Newcastle Ridg	2.72	92	Pn	Pn	01 28 32.2	-1.6
BUTB	Butedale	2.76	24	Pn	Pn	01 28 33.6	-0.6
BUTB				Sn	Sn	01 29 05.2	-2.5
MOBC	Moresby Island	2.79	339	Pn	Pn	01 28 33.1	-1.6
MOBC				Sn	Sn	01 29 06.1	-2.2
BNKB	Banks Island	2.79	5	Pn	Pn	01 28 33.3	-1.3
BNKB				Sn	Sn	01 29 04.8	-3.5
GDR	Gold River	2.86	104	Pn	Pn	01 28 33.7	-1.8
BNAB	Bonilla	2.95	356	Pn	Pn	01 28 35.3	-1.5
BNAB				Sn	Sn	01 29 09.4	-2.7
DIB	Dawson Inlet,	2.97	334	Pn	Pn	01 28 35.8	-1.2
VIB	Van Inlet	3.03	334	Pn	Pn	01 28 36.9	-1.1
SPLB	Strathcona Par	3.06	101	Pn	Pn	01 28 36.8	-1.5
HWKB	Hawksbury Isla	3.13	13	Pn	Pn	01 28 38.1	-1.2
HWKB				Sn	Sn	01 29 14.0	-2.7
TOFB	Tofino	3.18	115	Pn	Pn	01 28 38.1	-1.8
CBB	Campbell River	3.21	98	Pn	Pn	01 28 39.4	-1.1
CBB				Sn	Sn	01 29 15.0	-3.8
BTB	Buttle Lake	3.27	108	Pn	Pn	01 28 39.7	-1.8
GRNB	Grenville Isla	3.30	4	Pn	Pn	01 28 40.6	-1.0
GRNB				Sn	Sn	01 29 18.1	-2.8
MWAB	Mount Washingt	3.32	102	Pn	Pn	01 28 40.8	-1.2
OZB	Mount Ozzard	3.51	115	Pn	Pn	01 28 42.4	-2.1
KITB	Kitimat	3.67	16	Pn	Pn	01 28 45.9	-0.8
KITB				Sn	Sn	01 29 28.2	-1.8
RUBB	Prince Rupert	3.77	0	Pn	Pn	01 28 47.8	-0.3
RUBB				Sn	Sn	01 29 30.3	-2.2
BFSB	Bamfield	3.78	115	Pn	Pn	01 28 46.9	-1.2
B928	Bamfield	3.78	115	Pn	Pn	01 28 46.8	-1.3
TXB	Texada	3.88	101	Pn	Pn	01 28 48.6	-1.0
MGB	Mount Grey	3.96	111	Pn	Pn	01 28 48.8	-2.0
SHB	Sechelt	4.25	101	Pn	Pn	01 28 53.6	-1.2

PFB	Port Renfrew	4.31	115	Pn	Pn	01 28 54.0	-1.5
OCP	Olym-Cheeka Pk	4.34	119	Pn	Pn	01 28 55.1	-0.9
CLRS	Cowichan Lake	4.37	111	Pn	Pn	01 28 55.7	-0.6
UBRB	Upper Baezaeko	4.52	56	Pn	Pn	01 28 59.1	+0.7
UBRB				Sn	Sn	01 29 50.0	-1.1
WPB	Watts Point	4.66	98	Pn	Pn	01 28 59.9	-0.3
GOBB	Galiano Island	4.69	107	Pn	Pn	01 29 01.2	+0.5
OBC	Olympics--Boni	4.79	119	Pn	Pn	01 29 02.5	+0.2
B010	North Saanich	4.85	111	Pn	Pn	01 29 03.1	+0.2
PGC	Sidney	4.85	111	Pn	Pn	01 29 03.3	+0.4
OSD	Olympics--Snow	5.12	120	Pn	Pn	01 29 07.0	+0.1
HNBB	Haney	5.16	101	Pn	Pn	01 29 06.1	-1.0
MCW	Mount Constitu	5.21	108	Pn	Pn	01 29 08.7	+0.8
FSB	Fort Saint Jam	5.36	41	Pn	Pn	01 29 10.4	+0.5
LLLB	Lillooet	5.37	86	Pn	Pn	01 29 10.0	-0.1
VDB	Vedder Mountai	5.53	103	Pn	Pn	01 29 13.2	+0.9
A05A	Maple Falls	5.55	103	Pn	Pn	01 29 13.6	+1.1
HDW	Hoodsport	5.58	119	Pn	Pn	01 29 14.1	+1.0
MBW	Mount Baker	5.74	105	Pn	Pn	01 29 16.4	+1.1
CMW	Cultus Mountai	5.75	109	Pn	Pn	01 29 16.0	+0.6
JCW	Jim Creek	5.96	110	Pn	Pn	01 29 18.1	-0.1
RPW	Rockport	6.11	107	Pn	Pn	01 29 20.6	+0.4
GPW	Glacier Peak	6.47	109	Pn	Pn	01 29 25.9	+0.5
FMW	Mount Fremont	6.76	119	Pn	Pn	01 29 30.4	+1.0
B08A	Colville Reser	7.48	103	Pn	Pn	01 29 39.9	+0.8
DLBC	Dease Lake	7.90	1	Pn	Pn	01 29 45.3	+0.5
NBC5	NorthernBC 5	8.29	30	Pn	Pn	01 29 51.7	+1.5
NBC5				Sn	Sn	01 31 22.6	-1.3

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*IDC **23** 01:41:52.9±4.0, 36°.23N×70°.46E, h173km±27km, mb3.3/7, mb1 3.3/13, mb1mx3.1/50, mbtmp3.8/13, MS3.2/1, Ms1 3.2/1, ms1mx2.3/27, Error ellipse: s-maj=44.9km s-min=17.0km az=152.0*

*NNC **23** 01:42:02.2±7.0, 37°.05N×70°.01E, h173km±111km, mb3.2, mpv4.0, Error ellipse: s-maj=65.1km s-min=35.0km az=13.0*

ISC 23 01:41:56.6±0.6**, 36°.54N**±0°.06×**70°.34E**±0°.06**, h200**km**, n42, σ1s.64**/47**, mb3.6**/6**, 3C-4D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	3.00	154	P	Pn	01 42 47.5	+1.0
CEP				S	Sn	01 43 24.0	-1.3
CHCP	Chirah Chowk	3.74	139	P	Pn	01 42 56.0	+0.7
THW	Thamme Wali	3.91	162	P	Pn	01 42 57.4	0.0
AML	Almayashu	6.16	24	P	Pn	01 43 26.7	+0.5
	SNR=92						
KK07	Karatay Array	6.54	1	⇑P	Pn	01 43 31.2	+0.4
	4.3nm,0.5s,baz=182,slow=13						
KK07				⇓S	Sn	01 44 38.6	-6.9
	6.8nm,0.5s,baz=188,slow=23						
EKS2	Erkin-Say	6.66	22	P	Pn	01 43 33.6	+1.1
	SNR=22						
AAK	Ala-Archa	6.88	26	P	Pn	01 43 36.2	+0.9
	2.4nm,0.3s,baz=199,slow=6.7,SNR=31						
AAK				S	Sn	01 44 51.7	-1.9
	2.2nm,0.3s,baz=5.0,slow=21,SNR=18						
AAK	Ala-Archa	6.88	26	P	Pn	01 43 36.6	+1.3
	SNR=11						
AAK	Ala-Archa	6.88	26	⇓P	Pn	01 43 36.2	+0.9
	5.0nm,0.5s						
AAK				⇓S	Sn	01 44 52.0	-1.6
	33nm,0.6s						
KBK	Karagaybulak	7.06	29	P	Pn	01 43 39.7	+1.9
	SNR=5.8						
CHMS	Chumysh	7.29	26	P	Pn	01 43 41.7	+1.2
	SNR=5.9						
USP	Ospenovka	7.44	24	P	Pn	01 43 44.9	+2.4
	SNR=6.6						
TKM2	Tokmak 2	7.55	31	P	Pn	01 43 45.0	+0.9
	SNR=20						
TKM2	Tokmak 2	7.55	31	⇑P	Pn	01 43 44.6	+0.6
	9.5nm,0.5s						
TKM2				⇑S	Sn	01 45 07.5	-2.0
	13nm,0.8s						
GEYT	Alibeck	9.85	282	P	Pn	01 44 13.7	-0.2
	0.4nm,0.3s,baz=115,slow=9.7,SNR=2.0						
GEYT				S	Sn	01 46 01.6	-2.4
	0.3nm,0.3s,baz=41,slow=46,SNR=2.6						
MKAR	Makanchi Array	13.57	37	P	Pn	01 45 01.8	+0.7
	0.2nm,0.3s,baz=202,slow=9.0,SNR=13						
PYUN	Piuthan	13.60	125	*e*P	Pn	01 45 01.1	-0.7
	26nm,0.5s						
DANN	Dangsing	13.96	122	*e*P	Pn	01 45 06.1	-0.2
	24nm,0.7s						
KOLN	Koldanda	14.22	124	*e*P	Pn	01 45 08.5	-1.0
	4.5nm,0.3s						
GKN	Gorkha	14.78	121	*e*P	Pn	01 45 16.9	+0.6
	8.6nm,0.3s						
AB31	Akbulak array	14.80	332	P	Pn	01 45 15.9	-0.2
	1.3nm,0.3s,baz=147,slow=12,SNR=86						
KURBB	Kurchatov Arra	15.26	20	P	Pn	01 45 22.3	+0.6
	0.1nm,0.3s,baz=213,slow=9.1,SNR=8.7						
DMN	Daman	15.35	121	*e*P	Pn	01 45 22.2	-1.1
	18nm,0.6s						
KKN	Kakani	15.35	120	*e*P	Pn	01 45 22.5	-0.9
	17nm,0.4s						
PKIN	Phulchoki	15.57	121	*e*P	Pn	01 45 25.4	-0.6
	36nm,0.5s						
PKI	Pulchoki	15.58	121	*e*P	Pn	01 45 25.8	-0.4
	43nm,0.6s						
GUN	Gumba	15.70	119	*e*P	P	01 45 27.3	-0.3
	50nm,0.8s						
JIRN	Jiri	16.07	119	*e*P	P	01 45 31.6	-0.1
	46nm,0.6s						
BVAR	Borovoye Array	16.48	0	P	Pn	01 45 37.4	+1.0
	0.5nm,0.3s,baz=190,slow=16,SNR=6.1						
AKTO	Aktyubinsk	16.48	331	P	Pn	01 45 37.6	+1.0
	0.5nm,0.3s,baz=144,slow=9.4,SNR=22						
AKTO	Aktyubinsk	16.48	331	⇓P	Pn	01 45 36.7	+0.2
	10nm,0.9s						
RAMN	Ramite	16.79	120	*e*P	P	01 45 38.5	-1.0
	24nm,0.6s						
TAPN	Taplejung	17.34	117	*e*P	P	01 45 45.0	-0.5
	14nm,0.6s						
ODAN	Odare	17.40	119	*e*P	P	01 45 44.5	-1.7
ZALV	Zalesovo Beam	20.10	25	P	P	01 46 15.8	+1.0
	2.6nm,0.3s,baz=214,slow=10,SNR=21						
ARU	Arti	21.42	342	P	P	01 46 31.0	+2.3
	1.2nm,0.4s,baz=170,slow=9.2,SNR=4.7						
BRTR	Keskin Array B	28.92	288	P	P	01 47 39.1	+2.0
	0.4nm,0.6s,baz=90,slow=10.0,SNR=2.3						
FINES	FINESS Array B	37.15	326	P	P	01 48 48.7	+0.8
	2.3nm,0.8s,baz=111,slow=11,SNR=6.4						
ARCES	ARCESS Array B	40.90	338	P	P	01 49 19.7	+0.8
	1.8nm,0.6s,baz=111,slow=6.6,SNR=11						
NOA	NORSAR Array B	44.03	323	P	P	01 49 46.7	+2.6
	0.4nm,0.7s,baz=115,slow=8.1,SNR=1.9						
KMBO	Kilima Mbogo	48.47	227	LR	LR	02 11 39.0	
	comp=Z,26nm,18.6s,baz=68,slow=37						
TORD	Torodi Ar. Bea	65.19	268	P	P	01 52 14.7	-2.1
	0.8nm,1.0s,baz=56,slow=6.4,SNR=4.8						

KRSC 23 01:57:32.6±1.9**, 50°.28N**×**157°.22E, h40**km±22km**, ML4.0, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.81	300	*e*P	Pn	01 57 46.9	-0.6
SKR				*e*S	Sn	01 57 56.2	-2.2
PAU	Pauzhetka	1.21	348	*i* P	Pn	01 57 54.6	+1.5
PAU				*e*S	Sn	01 58 09.7	+1.4
KDTR	Khodutka, Kamc	1.62	19	*e*P	Pn	01 58 01.0	+2.3
KDTR				*e*S	Sn	01 58 21.2	+2.9
ASAK	Asacha	2.15	11	*e*P	Pn	01 58 09.0	+3.0
MTVR	Mutnovka	2.29	15	*e*P	Pn	01 58 11.1	+3.2
MTVR				*e*S	Sn	01 58 38.3	+3.4
RUS	Russkaya	2.30	20	*e*P	Pn	01 58 10.3	+2.3
RUS				*e*S	Sn	01 58 37.1	+2.0
GRL	Gorelyy	2.33	13	*e*P	Pn	01 58 11.8	+3.2
GRL				*e*S	Sn	01 58 39.7	+3.6
KRMR	Karymshinskiy	2.61	12	*e*P	Pn	01 58 15.9	+3.6
PET	Petropavlovsk	2.89	17	*e*P	Pn	01 58 19.4	+3.4
PET				*e*S	Sn	01 58 53.3	+3.8
UGLR	Uglovaya	3.10	18	*e*P	Pn	01 58 22.9	+3.9
AVH	Avacha	3.13	17	*e*P	Pn	01 58 24.1	+4.6
AVH				*e*S	Sn	01 59 01.4	+5.7
KOK	Koryaka	3.14	16	*e*P	Pn	01 58 24.2	+4.6
SMAR	Somma	3.14	18	*e*P	Pn	01 58 23.9	+4.1
KRER	Koryakskii	3.17	17	*e*P	Pn	01 58 24.2	+4.0
SDLR	Sedlovina	3.17	18	*e*P	Pn	01 58 23.1	+3.0
NLC	Nalytchevo	3.18	24	*e*P	Pn	01 58 22.2	+2.1
SPN	Mys Shipunski	3.32	31	*e*P	Pn	01 58 25.3	+3.4
SPN				*e*S	Sn	01 59 03.2	+3.1
GNL	Ganaly	3.45	7	*e*P	Pn	01 58 28.5	+4.6
KII	Karymskiy	4.00	19	*e*P	Pn	01 58 35.9	+4.5
MKZ	Mys Kozlova	5.09	31	*e*P	Pn	01 58 49.5	+3.2
TUMR	Tumrok	5.32	18	*e*P	Pn	01 58 54.9	+5.4
KMNR	Kamenistaya	5.78	17	*e*P	Pn	01 59 01.6	+5.8

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*NOU **23** 02:09:38.3, 17°.89S×177°.65W, h750km, MLv4.6/6, Fiji Islands Region*

*NEIC **23** 02:09:49.6±1.6, 18°.1S±0°.1×177°.8W±0°.1, h604km±10km, mb4.2/25, Error ellipse: s-maj=20.7km s-min=18.8km az=50.0*

*IDC **23** 02:09:51.8±1.2, 18°.03S×178°.11W, h619km±10km, mb3.2/9, mb1 3.5/11, mb1mx3.3/26, mbtmp4.3/11, Error ellipse: s-maj=27.9km s-min=14.1km az=150.0*

ISC 23 02:09:50.2±0.7**, 18°.2S**±0°.1×**177°.94W**±0°.08**, h610**km±8km**, n50, σ0s.97**/60**, mb4.2**/21**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAVE	Taveuni	2.38	307	P	P	02 11 07.6	+0.4
DGTI	Dogotuki	2.90	310	P	P	02 11 08.8	-1.0
MSVF	Nonsavu	3.84	276	P	P	02 11 15.5	0.0
	34nm,0.3s,baz=130,slow=5.3,SNR=161						
MSVF				S	S	02 12 26.6	+1.5
	baz=131,slow=21,SNR=6.4						
MSVF	Nonsavu	3.84	276	P	P	02 11 15.5	0.0
NIUE	Niue	7.65	98	P	P	02 11 44.8	-1.9
DZM	Mont Dzumac	15.17	253	P	P	02 12 59.7	0.0
	0.5nm,0.3s,baz=92,slow=22,SNR=4.0						
DZM	Mont Dzumac	15.17	253	P	P	02 13 00.1	+0.3
DZM				IAmb	IAmb	02 13 15.7	
	comp=Z,7.5nm,1.0s						
URZ	Urewera	20.48	191	P	P	02 13 45.8	-1.8
	comp=Z,4.0nm,0.5s,baz=302,slow=23,SNR=2.1						
URZ	Urewera	20.48	191	P	P	02 13 47.0	-0.6
URZ				IAmb	IAmb	02 13 52.1	
	comp=Z,7.6nm,0.9s						
THZ	Tophouse	24.78	197	P	P	02 14 25.7	-0.2
THZ				PcP	PcP	02 17 40.3	-0.3
FOZ	Fox Glacier	27.32	200	P	P	02 14 48.9	+0.9
EIDS	Eidsvold	29.60	251	P	P	02 15 08.4	+0.3
EIDS				IAmb	IAmb	02 15 12.2	
	comp=Z,6.2nm,1.1s						
CTAO	Charters Tower	33.85	261	P	P	02 15 44.1	-0.1
CTAO				IAmb	IAmb	02 15 44.6	
	comp=Z,6.9nm,0.8s						
CAN	Canberra	33.90	233	P	P	02 15 44.8	+0.3
CAN				IAmb	IAmb	02 15 45.6	
	comp=Z,5.8nm,0.7s						
CAN				PcP	PcP	02 18 04.5	-0.1
TOO	Toolangi	37.35	231	P	P	02 16 13.4	+0.6
TOO				IAmb	IAmb	02 16 14.6	
	comp=Z,11nm,0.9s						
COEN	Coen	37.56	271	P	P	02 16 14.9	+0.2
COEN				PcP	PcP	02 18 15.6	-0.4
STKA	Stephens Creek	38.90	242	P	P	02 16 26.0	+0.7
	comp=Z,5.1nm,0.5s,baz=89,slow=10.0,SNR=15						
STKA	Stephens Creek	38.90	242	P	P	02 16 26.2	+0.9
JAY	Jayapura	43.41	286	P	P	02 17 00.9	-0.2
	comp=Z,13nm,0.7s,baz=0.4,slow=24,SNR=14						
BBOO	Buckleboo	43.67	241	P	P	02 17 02.9	+0.1
BBOO				IAmb	IAmb	02 17 03.8	
	comp=Z,9.3nm,1.0s						
WR0	Warramunga Arr	44.84	260	P	P	02 17 11.7	-0.3
WB0	Warramunga Arr	44.99	260	P	P	02 17 12.5	-0.7
WB2	Warramunga Arr	45.01	260	P	P	02 17 12.6	-0.8
WB2				IAmb	IAmb	02 17 12.8	
	comp=Z,9.4nm,0.8s						
WRA	Warramunga Arr	45.03	260	P	P	02 17 12.7	-0.8
	comp=Z,5.6nm,0.6s,baz=96,slow=6.8,SNR=87						
WRA				PcP	PcP	02 18 41.1	+0.1
	comp=Z,0.5nm,0.5s,baz=118,slow=3.4,SNR=2.9						
WRA				S	S	02 23 05.2	-4.1
	comp=Z,1.2nm,1.0s,baz=84,slow=13,SNR=4.6						
WRA	Warramunga Arr	45.03	260	P	P	02 17 12.9	-0.5
WRA				PcP	PcP	02 18 41.4	+0.4
AS31	Alice Springs	45.15	254	P	P	02 17 14.3	-0.1
AS31				IAmb	IAmb	02 17 15.2	
	comp=Z,9.6nm,1.1s						
ASAR	Alice Springs	45.15	254	P	P	02 17 13.9	-0.4
	comp=Z,18nm,0.7s,baz=84,slow=8.6,SNR=170						
ASAR				PcP	PcP	02 18 41.6	+0.2
	comp=Z,0.8nm,0.4s,baz=106,slow=3.6,SNR=4.8						
ASAR				S	S	02 23 09.5	-1.5
	comp=Z,2.2nm,0.9s,baz=90,slow=15,SNR=14						
ASAR	Alice Springs	45.15	254	P	P	02 17 14.3	-0.1
ASAR				PcP	PcP	02 18 41.7	+0.3
FORT	Forrest	50.30	245	P	P	02 17 52.1	-0.4
SOEI	Soe	56.52	270	P	P	02 18 37.4	+0.7
PSA00	Pilbara Seismi	58.28	255	P	P	02 18 47.9	-0.4
VNDA	Vanda	60.22	185	P	P	02 19 02.4	+2.1
	comp=Z,0.3nm,0.6s,baz=14,slow=8.5,SNR=1.6						
VNDA	Vanda	60.22	185	P	P	02 19 02.1	+1.9
MORW	Morawa	60.79	246	P	P	02 19 04.3	-0.6
MORW				IAmb	IAmb	02 19 23.2	
	comp=Z,6.9nm,1.0s						
NVAR	Mina Array Bea	79.30	44	P	P	02 20 55.0	+0.8
	comp=Z,0.2nm,0.6s,baz=221,slow=4.8,SNR=2.6						
GHO	Glory Hole Cre	82.96	13	P	P	02 21 11.4	-0.7
GHO				IAmb	IAmb	02 21 30.2	
	comp=Z,7.7nm,1.2s						
K20K	Telida	83.38	11	P	P	02 21 13.8	-0.3
GLB	Gilahina Butte	83.90	16	P	P	02 21 16.3	-0.4
GLB				IAmb	IAmb	02 21 31.2	
	comp=Z,6.0nm,1.1s						
J20K	Nowinta River	84.13	10	P	P	02 21 18.1	+0.3
TRF	Thorofare Moun	84.17	12	P	P	02 21 17.1	-1.1
TRF				IAmb	IAmb	02 21 17.8	
	comp=Z,2.2nm,0.8s						
TXAR	Lajitas Array	85.76	57	P	P	02 21 27.3	+0.7
	comp=Z,0.3nm,0.8s,baz=242,slow=5.8,SNR=2.8						
ILAR	Eielson Array	86.04	13	P	P	02 21 25.7	-1.3
	comp=Z,0.4nm,0.7s,baz=222,slow=4.7,SNR=9.5						
ILAR	Eielson Array	86.04	13	P	P	02 21 26.9	-0.1
XAN	Xi'an	86.78	307	P	P	02 21 32.1	+0.9
XAN				pmax	pmax		
	comp=Z,10.0nm,1.6s						
CMAR	Chiang Mai Arr	89.39	290	P	P	02 21 44.9	+1.2
	comp=Z,1.4nm,0.3s,baz=120,slow=5.3,SNR=7.6						
MKAR	Makanchi Array	109.64	314	PKiKP	PKiKP	02 27 11.8	-0.9
	comp=Z,0.1nm,0.4s,baz=96,slow=2.3,SNR=1.3						
BRTR	Keskin Array B	145.29	315	PKPbc	PKPbc	02 28 21.2	-0.1
	comp=Z,1.0nm,0.5s,baz=120,slow=4.1,SNR=11						
CLL	Collm	145.82	348	*i* PKPbc	PKPbc	02 28 21.9	-0.3
	comp=Z,8.0nm,1.2s						
KHC	Kasperske Hory	147.74	346	*e*PKP	PKPbc	02 28 27.5	0.0
GERES	GERESS Array B	147.98	345	PKPbc	PKPbc	02 28 28.4	+0.2
	comp=Z,0.8nm,0.5s,baz=49,slow=4.1,SNR=8.3						

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*NEIC **23** 02:13:14.5±0.9, 18°.03S±0°.09×177°.9W±0°.2, h604km±9km, mb4.0/18, Error ellipse: s-maj=24.4km s-min=10.0km az=69.0*

*IDC **23** 02:13:16.2±1.9, 18°.04S×178°.14W, h621km±12km, mb3.1/5, mb1 3.4/7, mb1mx3.1/27, mbtmp4.2/7, Error ellipse: s-maj=64.3km s-min=16.8km az=150.0*

ISC 23 02:13:13.5±0.8**, 18°.1S**±0°.2×**178°.0W**±0°.1**, h590**km**, n36, σ1s.82**/40**, mb4.0**/15**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.81	275	P	P	02 14 40.0	+2.9
	21nm,0.3s,baz=133,slow=5.3,SNR=53						
MSVF				S	S	02 15 51.1	+6.0
	baz=153,slow=23,SNR=1.1						
MSVF	Nonsavu	3.81	275	P	P	02 14 39.9	+2.8
PINNC	Pines Island,	14.39	249	P	P	02 16 16.2	-0.1
DZM	Mont Dzumac	15.17	252	P	P	02 16 24.3	+0.6
	0.3nm,0.3s,baz=313,slow=23,SNR=1.7						
MLZ	Mavora Lakes	29.55	200	P	P	02 18 32.6	+0.8
CTAO	Charters Tower	33.83	261	P	P	02 19 08.6	+0.1
CTAO				IAmb	IAmb	02 19 09.1	
	comp=Z,6.1nm,0.8s						
TOO	Toolangi	37.37	231	P	P	02 19 38.3	+0.9
TOO				IAmb	IAmb	02 19 40.5	
	comp=Z,8.3nm,1.1s						
COEN	Coen	37.53	271	P	P	02 19 39.4	+0.4
STKA	Stephens Creek	38.91	241	P	P	02 19 49.5	-0.4
	comp=Z,2.6nm,0.5s,baz=110,slow=12,SNR=7.0						
STKA	Stephens Creek	38.91	241	P	P	02 19 50.5	+0.7
BBOO	Buckleboo	43.68	241	P	P	02 20 27.6	+0.1
BBOO				IAmb	IAmb	02 20 28.2	
	comp=Z,8.4nm,0.9s						
WR0	Warramunga Arr	44.82	260	P	P	02 20 36.0	-0.5
WR0				IAmb	IAmb	02 20 46.2	
	comp=Z,2.4nm,1.1s						
WB0	Warramunga Arr	44.98	260	P	P	02 20 37.2	-0.5
WB0				IAmb	IAmb	02 20 37.5	
	comp=Z,3.5nm,0.6s						
WB2	Warramunga Arr	45.00	260	P	P	02 20 37.3	-0.5
WB2				IAmb	IAmb	02 20 37.8	
	comp=Z,4.1nm,0.7s						
WRAB	Tennant Creek	45.00	260	P	P	02 20 37.6	-0.2
WRA	Warramunga Arr	45.01	260	P	P	02 20 37.4	-0.6
	comp=Z,2.2nm,0.5s,baz=96,slow=7.2,SNR=28						
WRA				PcP	PcP	02 22 04.9	-1.2
	comp=Z,1.5nm,1.2s,baz=120,slow=3.2,SNR=3.1						
WRA				S	S	02 26 27.9	-6.8
	comp=Z,0.6nm,0.8s,baz=91,slow=13,SNR=3.7						
WRA	Warramunga Arr	45.01	260	P	P	02 20 37.2	-0.7
AS31	Alice Springs	45.14	254	P	P	02 20 38.7	-0.2
AS31				IAmb	IAmb	02 20 39.7	
	comp=Z,2.6nm,0.6s						
ASAR	Alice Springs	45.15	254	P	P	02 20 38.6	-0.3
	comp=Z,8.6nm,0.6s,baz=85,slow=8.7,SNR=41						
ASAR				PcP	PcP	02 22 05.8	-0.8
	comp=Z,1.1nm,0.8s,baz=95,slow=4.7,SNR=2.9						
ASAR				S	S	02 26 34.0	-2.6
	comp=Z,1.3nm,0.9s,baz=88,slow=16,SNR=10						
KNRA	Kununurra	50.89	264	P	P	02 21 20.7	-0.9
KNRA				IAmb	IAmb	02 21 43.4	
	comp=Z,6.9nm,1.1s						
TPUB	Ta-pu	72.72	302	P	P	02 23 42.4	-0.7
GHO	Glory Hole Cre	82.90	13	P	P	02 24 36.1	-0.8
GHO				IAmb	IAmb	02 24 53.0	
	comp=Z,4.0nm,0.9s						
K20K	Telida	83.32	11	P	P	02 24 38.5	-0.3
J20K	Nowinta River	84.07	10	P	P	02 24 42.3	-0.2
TRF	Thorofare Moun	84.12	12	P	P	02 24 41.9	-1.1
TRF				IAmb	IAmb	02 24 43.6	
	comp=Z,3.8nm,1.0s						
TXAR	Lajitas Array	85.75	57	P	P	02 24 52.7	+1.1
	comp=Z,0.3nm,0.6s,baz=235,slow=3.2,SNR=2.5						
ILAR	Eielson Array	85.99	13	P	P	02 24 50.4	-1.4
	comp=Z,0.6nm,1.0s,baz=232,slow=4.4,SNR=3.9						
ILAR	Eielson Array	85.99	13	P	P	02 24 51.5	-0.2
BUR08	Bucovina Ar. S	144.97	332	PKPbc	PKPbc	02 31 44.8	-0.5
BURAR	Bucovina Array	144.99	332		PKPdf	02 31 43.2	-1.3
BR131	Keskin Array S	145.22	315	PKPbc	PKPbc	02 31 45.7	-0.6
BRTR	Keskin Array B	145.22	315	PKPbc	PKPbc	02 31 45.7	-0.6
	comp=Z,1.2nm,0.8s,baz=132,slow=3.2,SNR=6.7						
BRTR	Keskin Array B	145.22	315		PKPbc	02 31 46.1	-0.3
CLL	Collm	145.75	348	*i* PKPbc	PKPbc	02 31 47.0	-0.2
	comp=Z,4.0nm,0.8s						
GERES	GERESS Array B	147.91	345	PKPbc	PKPbc	02 31 51.8	-1.4
	comp=Z,0.5nm,0.6s,baz=70,slow=4.7,SNR=5.4						
GERES	GERESS Array B	147.91	345	PKPbc	PKPbc	02 31 53.0	-0.2

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*TUL **23** 02:19:21.1±1.4, 36°.841N±0°.010×97°.79W±0°.01, h0km±7km, ML2.6, mb_Lg2.3/13(NEIC), Error ellipse: s-maj=1.5km s-min=1.1km az=142.0*

NEIC 23 02:19:22.1±0.6**, 36°.809N**±0°.010×**97°.78W**±0°.01**, h5**km±6km**, Error ellipse: s-maj=1.6km s-min=1.5km az=115.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.07	305	Pg	Pg	02 19 23.8	-0.1
GC02				Sg	Sg	02 19 24.9	-0.1
KAN14	Manchester OK	0.21	316		Pg	02 19 26.1	-0.1
KAN14				Sg	Sg	02 19 28.9	-0.1
KAN17	Caldwell West	0.23	4		Pg	02 19 26.7	0.0
KAN17				Sg	Sg	02 19 29.9	+0.1
KAN05	Bluff City Nor	0.31	347		Pg	02 19 28.0	-0.1
KAN05				Sg	Sg	02 19 32.1	-0.1
KAN13	South Haven SW	0.32	50		Pg	02 19 28.5	+0.2
KAN13				Sg	Sg	02 19 32.9	+0.4
OK032	Salt Plains WL	0.34	269	Pg	Pg	02 19 28.9	+0.1
OK032				Sg	Sg	02 19 33.6	+0.3
CROK	Carrier	0.34	208	Pg	Pg	02 19 29.4	+0.6
CROK				Sg	Sg	02 19 34.6	+1.3
KAN01	Argonia South	0.34	3		Pg	02 19 28.7	-0.1
KAN01				Sg	Sg	02 19 33.2	-0.1
KAN09	Caldwell North	0.35	22	Pg	Pg	02 19 29.0	0.0
KAN09				Sg	Sg	02 19 33.6	0.0
KAN10	Anthony SW Sta	0.40	322	Pg	Pg	02 19 29.8	-0.1
KAN10				Sg	Sg	02 19 35.0	-0.2
KAN06	Argonia West S	0.44	352	Pg	Pg	02 19 30.6	-0.1
KAN06				Sg	Sg	02 19 36.2	-0.3
KAN08	Anthony NE Sta	0.44	340	Pg	Pg	02 19 30.4	-0.3
BLOK	Blackwell	0.46	96	Pg	Pg	02 19 31.2	+0.2
BLOK				Sg	Sg	02 19 37.9	+0.9
KAN16	Harper SW Stat	0.47	332		Pg	02 19 31.1	-0.2
KAN12	Harper NE Stat	0.52	341	Pg	Pg	02 19 31.9	-0.2
KAN12				Sg	Sg	02 19 38.9	0.0
T35A	Sooner Cattle	1.02	84	Pg	Pg	02 19 41.5	-0.3
T35A				Sg	Sg	02 19 55.3	+0.2
OK029	Liberty Lake	1.04	165	Pg	Pg	02 19 41.9	-0.3
OK029				Sg	Sb	02 19 56.3	-0.4
U32A	Winter Ranch,	1.07	247	Pg	Pg	02 19 42.0	-0.6
U32A				Sg	Sb	02 19 57.5	+0.1
QUOK	Quay	1.07	126	Pg	Pg	02 19 42.5	-0.2
QUOK				Sg	Sg	02 19 56.3	-0.4
OK031	S. Brethren Rd	1.15	138	Pg	Pg	02 19 44.0	-0.2
OK030	Cody Creek RV	1.19	137		Pg	02 19 44.9	-0.2
OK025	Westminster Rd	1.28	163		Pg	02 19 46.4	-0.3
OKCFA	Oklahoma City	1.42	169	Pn	Pn	02 19 48.8	+0.2
OKCSW	OKLAHOMA CITY	1.43	169	Pn	Pb	02 19 49.1	-0.2
FNO	Franklin	1.58	169	Pn	Pn	02 19 51.1	+0.3
TUL1	Leonard	1.84	119	IAmb_Lg		02 20 22.0	
	comp=Z,11nm,0.9s						
WMOK	Wichita Mounta	2.22	202	Pn	Pn	02 19 59.4	-0.3
WMOK				IAmb_Lg		02 20 33.7	
	comp=Z,7.1nm,0.7s						
CBKS	Cedar Bluff	2.53	323	Pn	Pn	02 20 05.2	+1.2
U38A	Gravette	2.76	97	IAmb_Lg		02 20 52.9	
	comp=Z,8.7nm,0.8s						
S39A	Bolivar	3.67	75	Pn	Pn	02 20 19.7	+0.2
AMTX	Amarillo	3.70	240	IAmb_Lg		02 21 25.1	
	comp=Z,11nm,1.3s						
U40A	Yellville	3.99	95	IAmb_Lg		02 21 32.0	
	comp=Z,10nm,0.8s						
KSCO	Kaye Shedlock'	4.42	301	IAmb_Lg		02 21 41.3	
	comp=Z,7.3nm,0.7s						
X40A	Basin Creek Fa	4.65	118	Pn	Pn	02 20 33.9	+0.8
FCAR	Ozark Folk Cen	4.66	100	IAmb_Lg		02 21 50.7	
	comp=Z,7.0nm,0.8s						
WHAR	Wooly Hollow	4.70	107	Pn	Pn	02 20 34.3	+0.5

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*FUNV **23** 02:30:30.7, 8°.47N×71°.41W, h4km, MW3.1*

ISC 23 02:30:30.1±1.2**, 8°.50N**±0°.03×**71°.42W**±0°.02**, h8**km±10km**, n31, σ1s.61**/54**, 1D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.59	111	*e*P	Pg	02 30 41.2	-0.4
SOCV				*e*S	Sg	02 30 49.4	0.0
SOCV	Socops	0.59	111	⇓*i*P	Pg	02 30 41.6	0.0
SOCV				*e*S	Sg	02 30 49.6	+0.2
SDV	Santo Domingo	0.86	64	*e*P	Pg	02 30 46.8	+0.1
SDV				*e*S	Sg	02 30 58.5	+0.5
CAPV	Capacho	1.09	235	*e*P	Pg	02 30 50.1	-1.0
CAPV				*e*S	Sb	02 31 06.3	+0.6
PAMC	Pamplona, Colo	1.71	228	*e*P	Pn	02 31 02.1	+1.5
PAMC				*e*S	Sg	02 31 25.3	0.0
MCQV	Machiques	1.90	324	*e*P	Pn	02 31 02.9	+0.1
MCQV				*e*S	Sn	02 31 27.8	+1.0
OCAC	Ocana	1.90	262	*e*P	Pn	02 31 03.5	+0.6
OCAC				*e*S	Sn	02 31 28.2	+1.1
TAMC	Tame, Arauca	2.08	190	*e*P	Pn	02 31 07.3	+2.0
TAMC				*e*S	Sg	02 31 36.0	-1.1
LL6C	La Loma 6 Bece	2.20	304	*e*P	Pn	02 31 06.8	-0.2
LL6C				*e*S	Sn	02 31 34.5	0.0
ELOV	Elorza	2.43	128	*e*P	Pn	02 31 09.8	-0.2
ELOV				*e*S	Sn	02 31 38.8	-1.1
BARC	Barichara	2.58	223	*e*P	Pb	02 31 17.8	+1.0
BARC				*e*S	Sb	02 31 49.5	+0.8
SMLC	San Martn de	2.64	277	*e*P	Pn	02 31 12.8	-0.2
SMLC				*e*S	Sb	02 31 49.6	-0.7
SIQV	Siquisique	2.66	36	*e*P	Pn	02 31 14.4	+1.1
SIQV				*e*S	Sn	02 31 45.0	-0.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BRRC	Barranca, Sant	2.66	239	eP	Pn	02 31 15.1	+1.8
BRRC				eS	Sn	02 31 48.2	+2.5
RUSC	La Rusia	3.07	213	eP	Pn	02 31 20.9	+1.5
RUSC				eS	Sn	02 31 58.6	+2.0
ARGC	Ariguani, Magd	3.10	296	eP	Pn	02 31 19.5	+0.2
ARGC				eS	Sn	02 31 54.3	-2.3
BAUV	El Baul	3.37	82	eP	Pn	02 31 23.8	+0.9
BAUV				eS	Sn	02 32 01.4	-1.8
ZARC	Zaragoza, Cauc	3.55	254	eP	Pn	02 31 26.0	+0.5
ZARC				eS	Sn	02 32 07.0	-0.7
MONV	Montecano	3.72	22	eP	Pn	02 31 28.0	+0.2
MONV				eS	Sn	02 32 11.1	-0.7
SPBC	San Pablo de B	3.87	223	eP	Pn	02 31 31.2	+1.2
SPBC				eS	Sn	02 32 15.0	-0.6
BENV	Beln	4.04	69	eP	Pn	02 31 32.3	0.0
UREC	San Jos de Ur	4.14	260	eP	Pn	02 31 34.5	+0.8
MOTC	Monteria, Cord	4.21	274	eP	Pn	02 31 35.7	+1.1
MOTC				eS	Sn	02 32 25.0	+1.1
PTGC	Puerto Gaitan,	4.33	190	eP	Pg	02 31 53.6	+0.5
PTGC				eS	Sg	02 32 44.9	-4.4
HELC	Santa Helena	4.68	241	eP	Pn	02 31 34.5	-6.9
HELC				eS	Sn	02 32 34.5	-1.5
PAYV	Puerto Ayacuch	4.83	129	eP	Pn	02 31 43.0	-0.1
CACV	CAICARA DEL OR	4.92	101	eP	Pb	02 31 51.7	-4.8
MERV	Las Mercedes	5.11	81	eP	Pn	02 31 47.3	+0.3
CBOC	Ciudad Bolivar	5.26	240	eP	Pn	02 31 51.8	+2.7
CBOC				eS	Sn	02 32 42.9	-7.2
BIRV	Birongo	5.44	68	eP	Pn	02 31 51.4	-0.1
PRAC	Prado	5.87	216	eP	Pn	02 31 56.9	-0.6
PRAC				eS	Sn	02 33 05.3	+0.2

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*KRNET **23** 02:32:17.8±0.1, 41°.20N×73°.73E, h14^{km}, mb3.1*

*NNC **23** 02:32:18.9±0.9, 41°.22N×73°.72E, h0^{km}, mb3.5, mpv3.3, Error ellipse: s-maj=8.2km s-min=3.4km az=165.0*

*SOME **23** 02:32:18.7, 41°.33N×73°.67E, h0^{km}*

*KNET **23** 02:32:20.8±0.3, 41°.33N×73°.81E, h8^{km}±2^{km}, ml2.4, Error ellipse: s-maj=2.7km s-min=2.0km az=79.0*

ISC 23 02:32:17.9±1.2**, 41°.17N**±0°.02×**73°.67E**±0°.02**, h2**^{km}±11^{km}**, n43, σ1^{s}15**/76**, 27C-26D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SALK	Salom-Alik	0.31	158	⇑eP	Pg	02 32 24.0	+0.1
	baz=67						
SALK				⇑eS	Sg	02 32 29.0	+1.1
	baz=67						
OHH	Osh	0.93	226	⇑iP	Pg	02 32 36.0	+0.3
	baz=27						
OHH				⇑iS	Sb	02 32 49.4	-0.2
	baz=27						
AML	Almayashu	0.96	1	⇓P	Pg	02 32 36.4	0.0
	45nm,0.1s,SNR=239						
AML				⇑S	Sg	02 32 49.0	+0.1
	80nm,0.2s						
AML	Almayashu	0.96	1	⇑iP	Pg	02 32 35.6	-0.8
	baz=58						
AML				⇑iS	Sg	02 32 48.6	-0.3
	baz=58						
SFK	Sufi-Kurgan	1.16	186	⇑eP	Pb	02 32 40.1	-0.7
	baz=88						
SFK				⇑eS	Sn	02 32 57.4	-0.5
	baz=88						
UCH	Uchtor	1.23	31	⇓P	Pn	02 32 40.8	-1.8
	9.2nm,0.1s,SNR=56						
UCH				⇓S	Sb	02 32 56.9	-1.9
	37nm,0.2s						
UCH	Uchtor	1.23	31	⇓iP	Pn	02 32 40.2	-2.4
	baz=29						
UCH				⇓iS	Sb	02 32 56.6	-2.2
	baz=29						
EKS2	Erkin-Say	1.50	3	⇑P	Pn	02 32 45.8	-0.1
	10nm,0.1s,SNR=5.9						
EKS2				⇓S	Sb	02 33 06.0	0.0
	12nm,0.2s						
MNAS	Manas	1.58	327	⇑iP	Pn	02 32 47.2	+0.1
	baz=25						
MNAS				⇑iS	Sb	02 33 08.7	+0.3
	baz=25						
AAK	Ala-Archa	1.59	23	⇓P	Pn	02 32 47.3	0.0
	11nm,0.2s,SNR=14						
AAK				⇓S	Sn	02 33 08.0	-0.6
	15nm,0.1s						
AAK	Ala-Archa	1.59	23	⇓Pg	Pn	02 32 47.3	0.0
	2.7nm,0.2s						
AAK				⇑Lg	Lg	02 33 07.8	
	8.3nm,0.3s						
AAK	Ala-Archa	1.59	23	⇓iP	Pn	02 32 46.5	-0.8
	baz=21						
AAK				⇓iS	Sn	02 33 07.6	-1.0
	baz=21						
MRKS	Merke	1.61	348	eP	Pb	02 32 48.3	-0.2
	22nm,0.3s						
MRKS				eS	Sb	02 33 09.8	+0.6
	83nm,0.2s						
MRKS	Merke	1.61	348	eP	Pb	02 32 48.3	-0.2
	baz=47						
MRKS				eS	Sb	02 33 09.9	+0.6
	baz=47						
KBK	Karagaybulak	1.77	32	⇓P	Pn	02 32 50.6	+0.9
	12nm,0.2s,SNR=12						
KBK				⇑S	Sb	02 33 14.0	+0.1
	61nm,0.2s						
KBK	Karagaybulak	1.77	32	⇑iP	Pn	02 32 49.7	0.0
	baz=32						
KBK				⇑iS	Sn	02 33 13.0	+0.1
	baz=32						
FRU1	Bishkek	1.79	23	⇑iP	Pn	02 32 50.7	+0.8
	baz=22						
FRU1				⇑iS	Sb	02 33 14.5	0.0
	baz=22						
TRKS	Terek-Say	1.94	282	⇓iP	Pb	02 32 53.5	-0.5
	baz=79						
TRKS				⇓iS	Sb	02 33 19.7	+1.0
	baz=79						
CHMS	Chumysh	2.00	23	⇑P	Pb	02 32 54.2	-0.8
	13nm,0.3s,SNR=9.7						
CHMS				⇑S	Sb	02 33 20.0	-0.4
	14nm,0.2s						
BOOM	Boomskoye usch	2.15	51	⇓iP	Pn	02 32 55.6	+0.6
	baz=51						
BOOM				⇓iS	Sb	02 33 23.4	-1.5
	baz=51						
USP	Ospenovka	2.19	16	⇓P	Pb	02 32 58.1	-0.2
	11nm,0.2s,SNR=36						
USP				⇓S	Sb	02 33 26.5	+0.7
	40nm,0.4s						
USP	Ospenovka	2.19	16	⇑iP	Pn	02 32 56.3	+0.9
	baz=15						
USP				⇑iS	Sb	02 33 24.3	-1.5
	baz=15						
DRK	Karamyk	2.21	221	⇓iP	Pb	02 32 57.9	-0.8
	baz=21						
DRK				⇓iS	Sb	02 33 27.5	+0.9
	baz=21						
ULHL	Ulahol	2.21	60	⇓P	Pb	02 32 58.2	-0.5
	3.7nm,0.1s,SNR=16						
ULHL				⇑S	Sb	02 33 27.5	+0.9
	15nm,0.3s						
TKM2	Tokmak 2	2.27	39	⇓P	Pb	02 32 59.1	-0.6
	20nm,0.3s,SNR=28						
TKM2				⇑S	Sb	02 33 28.3	0.0
	12nm,0.1s						
TKM2	Tokmak 2	2.27	39	⇓Pg	Pb	02 32 59.2	-0.5
	10nm,0.4s						
TKM2				⇑Lg	Lg	02 33 28.2	
	26nm,0.7s						
BTK	Batken	2.44	244	⇑iP	Pb	02 33 01.3	-1.2
	baz=44						
BTK				⇑iS	Sb	02 33 32.9	-0.1
	baz=44						
DGS	Degeres	2.60	36	eP	Pb	02 33 05.6	+0.3
	13nm,0.5s						
DGS				eS	Sb	02 33 38.9	+1.2
	30nm,0.5s						
DGS	Degeres	2.60	36	Pg	Pb	02 33 05.1	-0.2
	13nm,0.5s						
DGS				Lg	Lg	02 33 39.4	
	30nm,0.5s						
MTBS	Maitube	2.84	45	eP	Pb	02 33 09.6	+0.2
	6.3nm,0.3s						
MTBS				eS	Sb	02 33 46.2	+1.5
	30nm,0.5s						
KK07	Karatay Array	3.04	310	⇓Pg	Pb	02 33 13.7	+1.0
	1.5nm,0.2s,baz=130,slow=18						
KK07				⇓Lg	Lg	02 33 54.8	
	12nm,0.4s,baz=127,slow=28						
TNSS	Tian-Shan	3.07	51	eP	Pb	02 33 14.2	+0.6
	3.8nm,0.3s						
TNSS				eS	Sb	02 33 54.0	+2.4
	5.6nm,0.5s						
TNSS	Tian-Shan	3.07	51	Pg	Pb	02 33 14.2	+0.6
	4.4nm,0.3s						
TNSS				Lg	Lg	02 33 55.2	
	18nm,0.7s						
MDOK	Medeo	3.21	50	eP	Pb	02 33 16.1	+0.4
	3.0nm,0.4s						
MDOK				eS	Sb	02 33 57.2	+1.9
	7.7nm,0.6s						
KOTS	Kotyrbulak	3.29	50	eP	Pb	02 33 18.1	+1.1
	4.8nm,0.2s						
KOTS				eS	Sg	02 34 01.3	-2.2
	24nm,0.6s						
KOTS	Kotyrbulak	3.29	50	Pg	Pb	02 33 18.1	+1.1
	4.8nm,0.2s						
KOTS				Lg	Lg	02 34 01.3	
	24nm,0.6s						
KUU	Kurty	3.36	35	eP	Pb	02 33 18.8	+0.5
	4.1nm,0.3s						
KUU				eS	Sb	02 34 01.8	+2.1
	12nm,0.4s						
KTBS	Karatobe	3.38	40	eP	Pb	02 33 19.4	+0.8
	2.4nm,0.3s						
KTBS				eS	Sb	02 34 02.7	+2.5
	27nm,0.6s						
KTBS	Karatobe	3.38	40	Pg	Pb	02 33 19.4	+0.8
	2.4nm,0.3s						
KTBS				Lg	Lg	02 34 02.7	
	27nm,0.6s						
BRLS	Borolday	3.40	304	eP	Pb	02 33 21.3	+2.4
BRLS				eS	Sg	02 34 06.2	-1.1
BRLS	Borolday	3.40	304	Pg	Pb	02 33 21.3	+2.4
BRLS				Lg	Lg	02 34 06.2	
CHKK	Chushkaly	3.64	41	eP	Pb	02 33 24.0	+1.1
	1.5nm,0.3s						
CHKK				eS	Sb	02 34 10.7	+3.2
	11nm,0.4s						
PDGK	Podgornoye	4.83	62	⇓Lg	Lg	02 34 48.9	
	7.0nm,0.9s						

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*NEIC **23** 02:33:00.5±2.9, 54°.0N±0°.1×165°.0W±0°.1, h91^{km}±7^{km}, mb3.8/8, ML3.3/6, ML3.5(AEIC), Error ellipse: s-maj=16.8km s-min=5.0km az=152.0*

AEIC 23 02:33:01±4.3**, 54°.1N**±0°.1×**165°.1W**±0°.1**, h85**^{km}±6^{km}**, Error ellipse: s-maj=18.4km s-min=4.7km az=153.0, Fox Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKSA	Akutan Strait	0.37	279		Pn	02 33 16.0	+1.8
WESP	Westdahl Peak	0.46	26		Pn	02 33 16.4	+1.4
WECS	Westdahl Cape	0.48	21		Pn	02 33 16.6	+1.5
WESE	West Dahl East	0.49	36		Pn	02 33 16.7	+1.5
AKLV	Akutan Long Va	0.53	279		Pn	02 33 17.0	+1.6
AKMO	Akutan Morgan	0.55	272		Pn	02 33 17.2	+1.6
AKGG	Akutan Green G	0.55	283		Pn	02 33 17.2	+1.6
AKRB	Akutan Reef Bi	0.59	275		Pn	02 33 17.8	+1.8
UNV	Unalaska Valle	0.88	255		Pn	02 33 20.0	+1.2
UNV				Sn	Sn	02 33 33.4	+1.2
SSLS	Shishaldin Sou	0.89	44		Pn	02 33 20.6	+1.5
MTBL	Makushin Table	0.95	264		Pn	02 33 21.3	+1.5
MNAT	Makushin Natee	0.97	259		Pn	02 33 21.2	+1.3
MSW	Makushin Switc	1.02	261		Pn	02 33 21.7	+1.2
ISLZ	Isanotski Laza	1.03	50		Pn	02 33 22.2	+1.6
ISNN	Isanotski Nort	1.07	45		Pn	02 33 23.1	+2.0
MAPS	Pakushin South	1.14	257		Pn	02 33 23.5	+1.5
FALS	False Pass	1.24	50	Pn	Pn	02 33 22.9	-0.2
FALS				Sn	Sn	02 33 42.0	+2.2
OKTU	Okmok Mt. Tuli	1.90	250		Pn	02 33 33.5	+1.8
DT1	Dutton Round H	1.92	57		Pn	02 33 33.5	+1.6
SDPT	Sand Point	2.95	63		Pn	02 33 46.8	+1.1
SDPT				IAML		02 34 48.1	
	comp=E,96nm,2.1s						
CNBA	Chernabura Isl	3.29	75	Pn	Pn	02 33 50.9	+0.7
CNBA				IAML		02 35 49.8	
	comp=E,48nm,2.3s						
CHGN	Chignik	4.42	57		Pn	02 34 07.2	+1.7
CHGN				IAML		02 35 33.5	
	comp=N,32nm,2.8s						
CHGN				IAML		02 36 55.8	
	comp=E,36nm,2.0s						
CHIR	Chirikof Islan	5.72	68	Pn	Pn	02 34 23.2	0.0
OHAK	Old Harbor	7.37	60	Pn	Pn	02 34 45.1	-0.6
Q19K	Cape Douglas,	7.97	48	Pn	Pn	02 34 55.3	+1.3
SVW2	Sparrevohn	8.68	32	Pn	Pn	02 35 04.9	+1.3
N19K	Bonanza Creek	8.83	36	Pn	Pn	02 35 07.7	+1.9
CNPM	China Poot	9.34	49	Pn	Pn	02 35 11.8	-0.8
BRLK	Bradley Lake	9.61	48	Pn	Pn	02 35 14.9	-1.4
M19K	Big River Lodg	9.67	32	Pn	Pn	02 35 18.6	+1.6
L19K	White Mountain	9.74	29	Pn	Pn	02 35 19.3	+1.2
SPU	Mount Spurr	9.96	39	Pn	Pn	02 35 22.8	+1.8
TTA	Tatalina	10.05	24	Pn	Pn	02 35 23.3	+1.0
SEW	Seward	10.41	48	Pn	Pn	02 35 25.7	-1.4
RC01	Rabbit Creek A	10.80	43	Pn	Pn	02 35 31.7	-0.7
K20K	Telida	10.90	27	Pn	Pn	02 35 34.5	+0.7
KNK	Knik Glacier	11.49	44	Pn	Pn	02 35 39.9	-2.0
GHO	Glory Hole Cre	11.51	42	Pn	Pn	02 35 41.4	-0.7
J20K	Nowinta River	11.55	24	Pn	Pn	02 35 43.0	+0.4
SML	Sawmill	11.76	42	Pn	Pn	02 35 44.3	-1.2
HIN	Hinchinbrook I	11.86	50	Pn	Pn	02 35 44.8	-2.0
FID	Port Fidalgo	12.02	49	Pn	Pn	02 35 46.2	-2.7
SCM	Sheep Creek Mo	12.18	43	Pn	Pn	02 35 49.1	-2.0
EYAK	Cordova Ski Ar	12.26	50	Pn	Pn	02 35 50.0	-2.2
BPAW	Bear Paw Mtn.	12.35	30	Pn	Pn	02 35 54.5	+1.1
DIV	Divide	12.49	48	Pn	Pn	02 35 53.8	-1.6
RND	Reindeer	12.54	35	Pn	Pn	02 35 55.4	-0.6
KLU	Klutina	12.59	46	Pn	Pn	02 35 54.4	-2.3
RAGM	Ragged Mountai	12.69	52	Pn	Pn	02 35 56.7	-1.3
M24K	Tolsona, Glenn	12.79	43	Pn	Pn	02 35 57.8	-1.5
HMT	Hamilton	12.87	53	Pn	Pn	02 35 59.3	-1.1
I21K	Tanana	12.91	25	Pn	Pn	02 36 02.2	+1.3
BMRM	Bremner River	12.94	50	Pn	Pn	02 36 00.8	-0.6
H21K	Melozitna Rive	13.11	23	Pn	Pn	02 36 05.2	+1.6
BERG	Berg Lake	13.15	53	Pn	Pn	02 36 02.2	-1.9
N25K	Chitina, Valde	13.21	47	Pn	Pn	02 36 03.2	-1.7
GLB	Gilahina Butte	13.48	48	Pn	Pn	02 36 07.4	-1.2
PAX	Paxson	13.52	41	Pn	Pn	02 36 09.3	+0.3
CRQM	Cirque	13.53	52	Pn	Pn	02 36 07.6	-1.7
VRDI	Verde Repeater	13.56	49	Pn	Pn	02 36 08.2	-1.4
WAX	Waxell Ridge	13.57	53	Pn	Pn	02 36 08.2	-1.5
TGL	Tana Glacier	13.68	52	Pn	Pn	02 36 09.5	-1.6
MDM	Murphy Dome	13.79	31	Pn	Pn	02 36 12.5	0.0
MCARA	McCarthy VSAT	13.81	49	Pn	Pn	02 36 11.2	-1.6
ISLE	Juniper Island	13.86	53	Pn	Pn	02 36 11.8	-1.7
ILAR	Eielson Array	14.09	33	Pn	Pn	02 36 18.2	+1.8
RIDG	Independent Ri	14.17	39	Pn	Pn	02 36 16.4	-1.0
BARN	Barnard Glacie	14.32	51	Pn	Pn	02 36 19.1	-0.4
TABL	Table Mountain	14.38	54	Pn	Pn	02 36 20.1	-0.2
DOT	Dot Lake	14.42	40	P	P	02 36 22.8	-2.2
CTGM	Chitina Glacie	14.44	52	Pn	Pn	02 36 20.2	-0.8
H24K	Noodor Dome	14.53	29	Pn	Pn	02 36 22.4	+0.4
SCRK	Sand Creek	14.62	39	Pn	Pn	02 36 21.1	-2.2
M27K	Edge Creek, AK	14.69	46	Pn	Pn	02 36 23.9	-0.4
L27K	Beaver Creek,	15.01	44	Pn	Pn	02 36 26.0	-2.2
BCAR	Beaver Creek A	15.03	44	Pn	Pn	02 36 26.4	-2.1
EGAK	Eagle	16.09	39	P	P	02 36 43.5	0.0
EGAK				IAmb	IAmb	02 36 59.7	
	comp=Z,5.5nm,1.4s						
DAWY	Dawson	16.43	42	P	Pn	02 36 45.6	-0.5
BMAR	Burnt Mountain	16.59	28	P	Pn	02 36 47.6	-0.3
EPYK	Eagle Plains	18.48	37	P	P	02 37 08.6	-1.4
EPYK				IAmb	IAmb	02 37 23.3	
	comp=Z,8.0nm,1.4s						
RES	Resolute Bay	33.69	27	P	P	02 39 33.7	+0.4
RES				IAmb	IAmb	02 39 49.5	
	comp=Z,1.8nm,1.0s						
FCC	Fort Churchill	37.85	53	P	P	02 40 09.8	+0.8
MTPU	Mount Pierson	39.06	92	P	P	02 40 17.7	-2.2
MTPU				IAmb	IAmb	02 40 22.5	
	comp=Z,3.0nm,1.4s						
FINES	FINESS Array B	64.48	354	P	P	02 43 26.6	-1.3
ABKAR	Akbulak array	70.28	331	P	P	02 44 03.9	-0.8
COEN	Coen	80.76	231	P	P	02 45 05.3	+0.3

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*IDC **23** 02:53:59.1±1.0, 43°.62N×109°.74W, h0^{km}, mb1 3.4/4, mb1mx3.1/41, mbtmp3.1/4, ML2.5/4, Error ellipse: s-maj=9.5km s-min=6.4km az=70.0*

*NEIC **23** 02:54:01.2±1.4, 43°.57N±0°.01×109°.81W±0°.03, h2^{km}±7^{km}, ML3.0/56, ML3.2/22(BUT), Error ellipse: s-maj=2.8km s-min=2.0km az=67.0*

*BUT **23** 02:54:01.1±2.5, 43°.55N±0°.01×109°.79W±0°.02, h5^{km}±2^{km}, Error ellipse: s-maj=3.1km s-min=2.9km az=250.0*

ISC 23 02:54:00.8±1.2**, 43°.57N**±0°.02×**109°.80W**±0°.03**, h2**^{km}±14^{km}**, n86, σ1^{s}03**/97**, Wyoming**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YHR	Hawk`s Rest	0.57	339		Pg	02 54 12.4	+0.7
YHR					Sg	02 54 19.7	+0.6
LOHW	Long Hollow	0.58	274		Pg	02 54 12.1	+0.1
LOHW				Sg	Sg	02 54 19.5	0.0
LOHW				IAML		02 54 20.2	
	1µm,0.4s						
LOHW				IAML		02 54 22.2	
	1µm,0.4s						
SNOW	Snow King Moun	0.70	261		Pg	02 54 14.4	+0.2
SNOW				Sg	Sg	02 54 23.9	+0.6
SNOW				IAML		02 54 29.8	
	887nm,0.5s						
MOOW	Moose Ponds	0.71	285		Pg	02 54 14.2	-0.1
MOOW				Sg	Sg	02 54 23.0	-0.5
REDW	Red Top Meadow	0.79	255		Pg	02 54 16.0	0.0
REDW				IAML		02 54 33.3	
	701nm,0.5s						
REDW				IAML		02 54 33.7	
	702nm,0.6s						
FLWY	Flagg Ranch	0.82	308	Pg	Pg	02 54 16.7	+0.1
FLWY				Sg	Sg	02 54 27.4	+0.1
FLWY				IAML		02 54 27.9	
	297nm,0.8s						
FLWY				IAML		02 54 30.6	
	405nm,0.7s						
BW06	Boulder Array	0.83	167		Pg	02 54 16.6	0.0
BW06				Sg	Sg	02 54 27.1	-0.2
PD31	Pinedale Array	0.83	167		Pg	02 54 16.6	0.0
PD31				Sg	Sg	02 54 27.0	-0.3
PDAR	Pinedale Array	0.83	167	Pg	Pg	02 54 16.3	-0.3
	22nm,0.3s,baz=357,slow=18,SNR=175						
PDAR				Lg	Lg	02 54 27.1	
	75nm,0.3s,baz=358,slow=33,SNR=65						
PDAR	Pinedale Array	0.83	167	Pg	Pg	02 54 16.5	-0.1
TPAW	Teton Pass	0.84	265		Pg	02 54 16.8	-0.1
TPAW				IAML		02 54 30.8	
	348nm,0.4s						
TPAW				IAML		02 54 35.8	
	506nm,0.7s						
YMS	Mount Sheridan	0.87	323		Pb	02 54 18.9	+0.1
YTP	The Promontory	0.89	337		Pg	02 54 17.8	0.0
FXWY	Fox Creek	0.89	275	Pg	Pg	02 54 17.4	-0.4
FXWY				Sg	Sg	02 54 28.6	-0.8
FXWY				IAML		02 54 28.8	
	522nm,0.3s						
FXWY				IAML		02 54 31.7	
	309nm,0.4s						
H17A	Grant Village	0.99	326		Pg	02 54 19.8	0.0
H17A				Sg	Sg	02 54 32.5	-0.2
H17A				IAML		02 54 33.9	
	comp=N,527nm,0.3s						
H17A				IAML		02 54 34.7	
	comp=E,257nm,0.3s						
YPLA	Lake Butte	1.00	340		Pg	02 54 19.9	0.0
YPP	Pitchstone Pla	1.00	314		Pg	02 54 20.2	+0.1
YLT	Little Thumb C	1.03	327		Pg	02 54 20.9	+0.4
LKWY	Lake	1.08	337		Pg	02 54 21.6	+0.1
LKWY				Sg	Sg	02 54 35.1	-0.4
LKWY				IAML		02 54 36.0	
	comp=E,514nm,0.3s						
LKWY				IAML		02 54 38.3	
	comp=E,674nm,0.3s						
YPPC	Pelican Cone	1.11	345		Pb	02 54 23.5	+0.6
YFT	Old Faithful	1.15	320		Pn	02 54 24.4	+0.3
YPK	Parker Peak, Y	1.16	356		Pg	02 54 22.9	-0.1
MCID	Moose Creek	1.17	302		Pg	02 54 23.1	-0.1
YMP	Mirror Lake Pl	1.19	348		Pg	02 54 23.6	0.0
YMP				IAML		02 54 41.2	
	comp=N,305nm,0.4s						
YMP				IAML		02 54 46.4	
	comp=E,287nm,0.4s						
YML	Mary Lake	1.20	330		Pn	02 54 26.1	+1.4
YJC	Joseph's Coat	1.25	342		Pn	02 54 26.4	+1.0
AHID	Auburn Hatcher	1.25	230		Pg	02 54 24.1	-0.6
AHID				Sg	Sg	02 54 40.8	0.0
YUF	Upper Falls	1.25	336	Pg	Pg	02 54 25.2	+0.5
ECR	Eagle Creek	1.26	246		Pg	02 54 24.3	-0.5
YNR	Norris Junctio	1.30	331	Pg	Pg	02 54 26.1	+0.4
YPM	Purple Mountai	1.33	325		Pb	02 54 27.0	+0.4
YPSB	Soda Butte	1.33	349		Pg	02 54 25.7	-0.6
YMR	Madison River	1.38	323		Pg	02 54 27.0	-0.2
YMR				IAML		02 54 49.6	
	comp=N,181nm,0.8s						
YMR				IAML		02 54 50.2	
	comp=E,152nm,0.8s						
YPWB	West Boundary	1.39	318		Pn	02 54 27.5	+0.1
YHH	Holmes Hill	1.43	329	Pn	Pn	02 54 27.7	-0.3
YMC	Maple Creek	1.47	324		Pn	02 54 28.6	+0.2
YPDC	Denny Creek	1.54	318		Pn	02 54 29.9	+0.5
YMV	Mammoth Vault	1.54	336		Pn	02 54 30.0	+0.6
GCR	Grayling Creek	1.54	323		Pn	02 54 30.1	+0.7
YHB	Horse Butte	1.55	320		Pn	02 54 30.2	+0.7
RLMT	Red Lodge	1.59	14		Pn	02 54 30.2	0.0
RLMT				IAML		02 54 51.1	
	comp=E,262nm,0.3s						
CMI	Centennial Mou	1.62	307		Pn	02 54 30.5	-0.1
QLMT	Earthquake Lak	1.72	318		Pn	02 54 32.2	+0.3
EMI	Eightmile Cany	2.32	284		Pn	02 54 41.3	+1.3
ICI	Italian Canyon	2.39	290		Pn	02 54 43.2	+2.1
BOZ	Bozeman (W)	2.41	328	Pn	Pn	02 54 42.9	+1.6
TCUT	Toone Canyon	2.73	206	Pn	Pn	02 54 46.4	+0.6
HVU	Hansel Valley	2.83	232		Pn	02 54 47.5	+0.4
SPUT	South Promonto	2.99	222	Pn	Pn	02 54 49.9	+0.6
JLU	Jordanelle	3.21	203	Pn	Pn	02 54 52.8	+0.4
CTU	Camp Tracy	3.22	207	Pn	Pn	02 54 53.2	+0.7
HRY	Holter Researc	3.45	336	Pn	Pn	02 54 56.7	+1.2
BGU	Big Grassy Mou	3.57	223	Pn	Pn	02 54 57.8	+0.5
O20A	White River Ci	3.63	161	Pn	Pn	02 54 59.9	+1.8
MPU	Maple Canyon	3.81	202	Pn	Pn	02 55 00.8	+0.2
P18A	Preston Nutter	3.96	185	Pn	Pn	02 55 04.8	+2.1
NLU	North Lily Min	4.00	206	Pn	Pn	02 55 03.1	0.0
LAO	LASA Array	4.01	38	Pn	Pn	02 55 04.6	+1.4
DUG	Dugway, Tooele	4.06	215	Pn	Pn	02 55 04.7	+0.8
DUG				IAML		02 56 16.2	
	comp=E,18nm,1.0s						
DUG				IAML		02 56 17.1	
	comp=E,11nm,0.8s						
P17A	Butcher Ranch,	4.16	190	Pn	Pn	02 55 06.7	+1.4
RSSD	Black Hills	4.21	81	Pn	Pn	02 55 08.8	+2.7
MSO	Missoula	4.38	319	Pn	Pn	02 55 09.0	+0.7
MSO				IAML		02 56 20.5	
	comp=E,13nm,1.8s						
MSO				IAML		02 56 26.5	
	comp=E,13nm,2.3s						
TMUT	Trail Mountain	4.40	194	Pn	Pn	02 55 08.6	-0.2
EGMT	Eagleton	4.45	0	Pn	Pn	02 55 09.5	+0.2
SRU	San Rafael Swe	4.49	187	Pn	Pn	02 55 11.7	+1.8
PLID	Pearl Lake	4.70	291	Pn	Pn	02 55 14.8	+2.0
PLID				IAML		02 55 48.4	
	comp=E,7.7nm,4.8s						
PLID				IAML		02 56 36.9	
	comp=E,7.4nm,1.6s						
Q16A	Castle Valley	4.76	193	Pn	Pn	02 55 15.6	+1.8
SMCO	Snowmass	4.88	153	Pn	Pn	02 55 17.1	+1.6
ISCO	Idaho Springs	4.90	139	Pn	Pn	02 55 17.6	+1.9
ISCO				IAML		02 56 43.6	
	comp=E,18nm,0.9s						
ISCO				IAML		02 56 44.0	
	comp=E,15nm,1.1s						
ELK	Elko	4.93	237	Pn	Pn	02 55 17.0	+1.0
	comp=E,0.3nm,0.3s,baz=46,slow=12,SNR=5.7						
ELK				Lg	Lg	02 56 33.7	
	comp=E,0.1nm,0.3s,baz=167,slow=20,SNR=1.6						
ELK	Elko	4.93	237	Pn	Pn	02 55 17.4	+1.3
MSU	Marysvale	5.37	200	Pn	Pn	02 55 23.2	+1.2
MVU	Marysvale	5.38	201	Pn	Pn	02 55 23.0	+0.8
BMO	Blue Mountains	5.54	286	Pn	Pn	02 55 25.7	+1.4
MTPU	Mount Pierson	5.81	199	Pn	Pn	02 55 28.9	+0.6
PSUT	Pine Spring	5.89	213	Pn	Pn	02 55 30.2	+1.0
MVCO	Mesa Verde	6.43	171	Pn	Pn	02 55 37.8	+1.1
R11A	Troy Canyon, C	6.81	222	Pn	Pn	02 55 42.8	+1.0
NEW	Newport	6.93	315	Pn	Pn	02 55 42.5	-0.8

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=E,0.1nm,0.3s,baz=151,slow=19,SNR=1.9						
NEW				Lg	Lg	02 57 36.5	
	comp=E,0.3nm,0.3s,baz=90,slow=20,SNR=2.8						
NEW	**Newport**	6.93	315		Pn	02 55 43.9	+0.6
KVN	**Kaiserville**	7.71	237	Pn	Pn	02 55 54.8	+0.7
K05A	**Summer Lake**	8.15	268	Pn	Pn	02 56 01.4	+1.1
NVAR	**Mina Array Bea**	8.23	234	Pn	Pn	02 56 04.3	+3.1
	comp=E,0.1nm,0.3s,baz=60,slow=11,SNR=3.6						
NVAR				Pg	Pb	02 56 24.2	+0.2
	comp=E,0.1nm,0.3s,baz=50,slow=14,SNR=4.2						
NVAR				Lg	Lg	02 58 17.9	
	comp=E,0.1nm,0.3s,baz=56,slow=38,SNR=3.2						
ANMO	**Albuquerque**	9.00	162	Lg	Lg	02 58 36.0	
	comp=E,0.1nm,0.3s,baz=326,slow=17,SNR=2.1						
ECSD	**EROS Data Cent**	9.56	85	Pn	Pn	02 56 20.1	+0.7
ULM	**Lac du Bonnet**	11.62	50	Pn	Pn	02 56 43.2	-4.3
	comp=E,0.3nm,0.3s,baz=246,slow=12,SNR=2.5						
ULM				Lg	Lg	02 59 52.4	
	comp=E,0.3nm,0.3s,baz=162,slow=12,SNR=1.6						

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*UCR **23** 02:56:56.6±1.5, 8°.28N×82°.76W, h13^{km}±5^{km}, MW3.9*
*UPA **23** 02:56:57.0±0.5, 8°.30N×82°.85W, h22^{km}±1^{km}, MW3.9*
ISC 23 02:56:56.6±1.2, **8°.27N**±0°.05×**82°.85W**±0°.03, **h26**^{km}±6^{km}, **n22,** σ**0^{s}.58**/38, **3C-4D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBAR3	**San Bartolo, C**	0.06	324	⇑eP	Pb	02 57 01.1	-0.2
SBAR3				eS	Sb	02 57 04.1	-0.3
PTPM	**Petroterminale**	0.07	205	⇑iP	Pb	02 57 01.3	0.0
PTPM				eS	Sb	02 57 04.8	+0.4
LESP3	**La Esperanza,**	0.15	23	eP	Pb	02 57 01.3	-0.6
LESP3				eS	Sb	02 57 04.8	-0.6
CCOL	**Caracol de Cor**	0.18	318	eP	Pb	02 57 02.1	-0.1
CCOL				eS	Sb	02 57 07.1	+1.0
CDITO	**Canoas**	0.30	355	⇓iP	Pb	02 57 03.5	-0.3
CDITO				eS	Sb	02 57 08.4	-0.3
BAGA3	**Bagala, Chiriq**	0.37	58	eP	Pb	02 57 05.0	+0.1
BAGA3				eS	Sb	02 57 11.1	+0.6
LOMA3	**Las Lomas, Chi**	0.48	71	eP	Pb	02 57 06.3	-0.2
LOMA3				eS	Sb	02 57 13.8	+0.5
PIRO	**Carate, Puerto**	0.50	285	⇓iP	Pb	02 57 06.6	-0.3
PIRO				eS	Sb	02 57 14.3	+0.4
MLIR3	**Monte Lirio, C**	0.52	3	eP	Pb	02 57 07.6	+0.2
MLIR3				eS	Sb	02 57 14.9	+0.3
BRU2	**Volcan**	0.54	17	eP	Pb	02 57 07.5	-0.2
BRU2	**Volcan**	0.54	17	⇓iP	Pb	02 57 07.6	-0.2
BRU2				eS	Sb	02 57 15.9	+0.6
BCO2	**Palmira**	0.55	35	⇓iP	Pb	02 57 07.7	-0.2
BCO2				eS	Sb	02 57 16.3	+0.9
EDSV	**San Vito**	0.56	347	eP	Pb	02 57 07.9	-0.1
EDSV				eS	Sn	02 57 17.3	-0.3
LNBQ3	**Los Naranjos,**	0.66	38	⇑eP	Pb	02 57 09.0	-0.6
LNBQ3				eS	Sb	02 57 18.5	+0.1
POTG	**Potrero Grande**	0.82	341	eP	Pb	02 57 12.0	-0.3
EDPN	**Palmar Norte**	0.91	319	eP	Pb	02 57 13.4	-0.4
EDPN				eS	Sn	02 57 26.4	+0.3
EDBA	**Buenos Aires**	0.98	335	eP	Pn	02 57 13.9	-0.9
EDBA				eS	Sn	02 57 29.4	+1.6
REME3	**Remedios, Chir**	1.01	92	eP	Pn	02 57 14.4	-0.7
DRK0	**Durika**	1.06	338	eP	Pn	02 57 15.6	-0.4
DRK0	**Durika**	1.06	338	eP	Pn	02 57 15.6	-0.4
DRK0				eS	Sb	02 57 29.4	-0.7
PEZE	**Perez Zeledon,**	1.38	324	eP	Pn	02 57 21.3	+1.1
LCR2	**La Lucha 2**	1.86	322	eP	Pb	02 57 29.1	-0.9

IDC 23 03:06:59.0±4.1, **5°.36S**×**149°.87E, h0**^{km}**, mb3.0**/2, **mb1 3.4**/2, **mb1mx3.2**/35, **mbtmp3.1**/2, **Error ellipse: s-maj=141.8km s-min=53.6km az=114.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	20.94	225	P	Pn	03 11 45.4	-0.7
	0.3nm,0.3s,baz=50,slow=11,SNR=7.4						
ASAR	**Alice Springs**	23.83	219	P	P	03 12 12.4	-1.6
	0.2nm,0.3s,baz=51,slow=9.1,SNR=1.8						
TORD	**Torodi Ar. Bea**	147.68	286	PKPbc	PKPbc	03 26 45.9	-0.8
	0.3nm,0.9s,baz=53,slow=2.4,SNR=1.8						

IDC 23 03:15:20.2±1.4, **27°.86N**×**104°.52E, h0**^{km}**, mb3.4**/3, **mb1 3.6**/4, **mb1mx3.3**/48, **mbtmp3.4**/4, **MS3.5**/1, **Ms1 3.5**/1, **ms1mx2.6**/31, **Error ellipse: s-maj=91.5km s-min=24.3km az=64.0, Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	**Songino Array**	20.00	4	P	P	03 19 54.0	-0.5
	baz=184,slow=12,SNR=2.6						
MKAR	**Makanchi Array**	25.73	323	P	P	03 20 52.6	+0.2
	0.4nm,0.6s,baz=125,slow=9.0,SNR=5.1						
KAPI	**Kappang**	35.83	153	LR	LR	03 37 54.4	
	comp=Z,74nm,21.5s,baz=88,slow=38						
WRA	**Warramunga Arr**	55.59	145	P	P	03 24 57.5	-0.3
	0.3nm,0.5s,baz=330,slow=7.5,SNR=5.0						
ASAR	**Alice Springs**	58.54	148	P	P	03 25 18.9	+0.2
	0.3nm,0.5s,baz=328,slow=6.8,SNR=6.4						

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*THE **23** 03:17:56.5, 34°.97N×22°.85E, h11^{km}±1^{km}, ML3.4/3, Error ellipse: s-maj=1.2km s-min=0.6km az=3.0*
*DDA **23** 03:18:09.0, 35°.67N×23°.52E, h87^{km}±139^{km}, ML3.2*
ATH 23 03:17:58.4, 34°.99N×**23°.16E, h67**^{km}±5^{km}**, ML3.2**/9**, Error ellipse: s-maj=6.3km s-min=1.8km az=57.0, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNDR	**Palaiochora Ch**	0.49	60	P	Pn	03 18 09.4	-1.4
KNDR				S	Sn	03 18 19.8	-0.2
RODP	**Rodopos**	0.75	40	P	Pn	03 18 14.4	+0.7
RODP				S	Sn	03 18 27.8	+2.9
GVD	**Gavdhos**	0.77	101	P	Pn	03 18 15.5	+1.6
GVD				S	Sn	03 18 30.1	+4.7
	3μm,0.4s						
GVD	**Gavdhos**	0.77	101	P	Pn	03 18 15.3	+1.3
GVD				S	Sn	03 18 28.1	+2.6
GVD				AML	AML	03 18 31.8	
	comp=N,6046μm,0.4s						
GVD				AML	AML	03 18 35.4	
	comp=E,4906μm,0.4s						
IMMV	**Iera Moni Meta**	0.82	55	P	Pn	03 18 15.9	+1.4
IMMV				S	Sn	03 18 31.1	+4.7
	comp=E,2μm,0.6s						
IMMV	**Iera Moni Meta**	0.82	55	P	Pn	03 18 15.8	+1.4
IMMV				S	Sn	03 18 28.7	+2.3
IMMV				AML	AML	03 18 31.8	
	comp=N,3344μm,0.7s						
IMMV				AML	AML	03 18 34.5	
	comp=E,3547μm,0.6s						
ANKY	**Antikythira Is**	0.88	7	P	Pn	03 18 14.6	-0.7
ANKY				S	Sn	03 18 28.8	+1.1
	comp=E,2μm,0.6s						
ANKY	**Antikythira Is**	0.88	7	P	Pn	03 18 17.1	+1.8
ANKY				AML	AML	03 18 36.8	
	comp=N,3285μm,0.6s						
ANKY				AML	AML	03 18 39.4	
	comp=E,3008μm,0.6s						
VAM	**Vamos**	0.94	64	P	Pn	03 18 17.5	+1.5
VAM	**Vamos**	0.94	64	P	Pn	03 18 17.4	+1.4
VAM				AML	AML	03 18 34.6	
	comp=N,1879μm,0.7s						
VAM				AML	AML	03 18 35.1	
	comp=E,2108μm,0.6s						
PRNS	**Prines Rethymn**	1.16	71	P	Pn	03 18 20.2	+1.5
KTHA	**Kythira Island**	1.27	356	P	Pn	03 18 23.0	+2.8
KTHA				AML	AML	03 18 45.2	
	comp=E,1900μm,0.7s						
KTHA				AML	AML	03 18 47.9	
	comp=N,645μm,0.6s						
SIVA	**Sivas**	1.35	88	P	Pn	03 18 24.4	+3.1
SIVA				S	Sn	03 18 43.1	+4.7
SIVA				AML	AML	03 18 54.7	
	comp=N,1827μm,0.7s						
SIVA				AML	AML	03 18 58.4	
	comp=E,3284μm,0.8s						
IDI	**Anoyia**	1.45	78	P	Pn	03 18 25.5	+2.9
IDI				AML	AML	03 18 52.5	
	comp=E,332μm,0.6s						
IDI				AML	AML	03 18 53.4	
	comp=N,439μm,0.5s						
VLI	**Veliai**	1.73	354	P	Pn	03 18 30.1	+3.7
VLI				AML	AML	03 19 03.3	
	comp=E,866μm,0.8s						
VLI				AML	AML	03 19 15.7	
	comp=N,547μm,0.8s						
NPS	**Neapolis**	2.02	82	P	Pn	03 18 34.4	+4.1
NPS				AML	AML	03 19 27.9	
	comp=E,376μm,0.9s						
NPS				AML	AML	03 19 29.1	
	comp=N,395μm,1.1s						
APE	**Apeiranthos**	2.83	42	iP	Pn	03 18 42.2	+1.0
AGG	**Agios Georgios**	4.08	351	iP	Pn	03 19 02.2	+3.9
AGG				iS	Sn	03 19 46.0	+1.3
AGG				IAML		03 20 56.0	
	comp=N,33nm,2.9s						
MULA	**Mugla, Merkez-**	4.75	60	iP	Pn	03 19 10.9	+3.4
FNA	**Florina**	5.95	347	iP	Pn	03 19 25.1	+1.2
FNA				iS	Sn	03 20 27.6	-3.1
FNA				IAML		03 20 33.0	
	comp=E,26nm,0.3s						

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*FUNV **23** 03:21:58.7, 8°.45N×71°.41W, h5^{km}, MW3.2*
ISC 23 03:21:58.2±1.2, **8°.51N**±0°.03×**71°.36W**±0°.03, **h11**^{km}±10^{km}, **n36,** σ**1^{s}.36**/62, **1C-1D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	**Socops**	0.55	114	eP	Pg	03 22 09.5	+0.5
SOCV				eS	Sg	03 22 16.2	-0.1
SOCV	**Socops**	0.55	114	⇑iP	Pg	03 22 08.8	-0.1
SOCV				eS	Sg	03 22 17.3	+1.0
SDV	**Santo Domingo**	0.81	63	eP	Pg	03 22 14.2	+0.2
SDV				eS	Sg	03 22 25.5	+0.9
CAPV	**Capacho**	1.14	236	⇓eP	Pb	03 22 17.7	-2.4
CAPV				eS	Sb	03 22 33.9	-1.1
PAMC	**Pamplona, Colo**	1.76	229	eP	Pn	03 22 29.2	+0.1
PAMC				eS	Sb	03 22 53.0	-0.2
MCQV	**Machiques**	1.92	323	eP	Pn	03 22 31.4	+0.6
MCQV				eS	Sn	03 22 56.4	+1.4
OCAC	**Ocana**	1.96	262	eP	Pn	03 22 31.5	0.0
OCAC				eS	Sn	03 22 55.2	-0.9
TAMC	**Tame, Arauca**	2.10	192	eP	Pb	03 22 37.0	+0.5
TAMC				eS	Sn	03 23 00.5	+0.8
LL6C	**La Loma 6 Bece**	2.24	303	eP	Pn	03 22 34.9	-0.4
LL6C				eS	Sn	03 23 03.7	+0.7
ELOV	**Elorza**	2.39	129	eP	Pg	03 22 44.4	+0.3
ELOV				eS	Sb	03 23 11.0	+0.2
ELOV	**Elorza**	2.39	129	eP	Pn	03 22 38.5	+1.2
ELOV				eS	Sn	03 23 06.8	+0.1
SIQV	**Siquisique**	2.62	36	eP	Pn	03 22 42.1	+1.6
SIQV				eS	Sn	03 23 14.2	+1.8
BARC	**Barichara**	2.62	224	eS	Sb	03 23 18.9	+1.1
SMLC	**San Martn de**	2.69	276	eP	Pn	03 22 40.9	-0.6
SMLC				eS	Sn	03 23 17.1	+3.0
BRRC	**Barranca, Sant**	2.71	239	eP	Pn	03 22 43.3	+1.5
BRRC				eP	Pn	03 22 43.4	+1.5
BRRC				eS	Sb	03 23 18.2	-1.9
BRRC				eS	Sn	03 23 19.1	+4.5
RUSC	**La Rusia**	3.11	213	eP	Pn	03 22 48.8	+1.1
RUSC				eS	Sb	03 23 34.1	+2.0
ARGC	**Ariguani, Magd**	3.15	295	eP	Pn	03 22 47.2	-0.5
ARGC				eS	Sn	03 23 23.9	-1.4
BAUV	**El Baul**	3.31	82	eP	Pn	03 22 51.0	+0.9
BAUV				eS	Sn	03 23 29.9	+0.6
JACV	**Jacura**	3.58	44	eP	Pn	03 22 54.1	+0.4
ZARC	**Zaragoza, Cauc**	3.61	254	eP	Pn	03 22 53.8	-0.3
ZARC				eS	Sn	03 23 35.6	-1.1
MONV	**Montecano**	3.69	22	eP	Pn	03 22 56.4	+1.2
SPBC	**San Pablo de B**	3.91	224	eP	Pn	03 22 58.8	+0.4
BENV	**Beln**	3.99	68	eP	Pn	03 23 00.1	+0.7
UREC	**San Jos de Ur**	4.20	260	eP	Pn	03 23 03.8	+1.6
MOTC	**Monteria, Cord**	4.26	274	eP	Pn	03 23 03.8	+0.7
MOTC				eS	Sn	03 23 53.6	+0.8
PTGC	**Puerto Gaitan,**	4.35	190	eP	Pn	03 23 04.6	+0.3
PTGC				eS	Sn	03 23 54.7	-0.4
NORC	**Norcasia**	4.55	230	eP	Pn	03 23 09.7	+2.6
NORC				eS	Sn	03 23 59.5	-0.5
PGA4	**Puerto Gaitan**	4.62	181	eP	Pg	03 23 27.9	+1.1
PGA4				eS	Sn	03 24 00.4	-1.3
HELC	**Santa Helena**	4.73	241	eP	Pn	03 23 10.8	+0.9
HELC				eS	Sn	03 24 05.3	+0.4
PAYV	**Puerto Ayacuch**	4.79	130	eP	Pn	03 23 10.4	0.0
CACV	**CAICARA DEL OR**	4.87	101	eP	Pb	03 23 19.6	-4.0
MERV	**Las Mercedes**	5.06	81	eP	Pn	03 23 14.9	+0.8
BIRV	**Birongo**	5.39	68	eP	Pn	03 23 19.1	+0.5
GUVC	**San Jose del G**	6.06	192	eP	Pn	03 23 28.0	+0.2
GUVC				eS	Sn	03 24 35.5	-1.7
PRGV	**PARIAGUAN**	6.65	87	eP	Pn	03 23 35.0	-0.9
PCRV	**Puerto La Cruz**	6.84	75	eP	Pn	03 23 39.0	+0.4

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*NIED **23** 03:28:36.6, 38°.51N×144°.61E, h40^{km}, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-1.35; M$_{\theta\theta}$0.07; M$_{\phi\phi}$1.28; M$_{r\theta}$0.63; M$_{\theta\phi}$0.14; M$_{\phi r}$0.98; Fault plane solution: M$_{0}$1.76000×10^{14} NP1: φ$_{s}$202.00000°, δ66.00000°, λ-77.00000°. NP2: φ$_{s}$354.00000°, δ27.00000°, λ-116.00000°.*
JMA 23 03:28:36.6±0.2, **38°.51N**×**144°.61E, h40**^{km}**, M3.5, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	2.37	285	P	Pn	03 29 14.1	+1.2
OFUJ				eS	Sn	03 29 43.0	+2.3
MIYJ	**Miyakonagasawa**	2.42	297	P	Pn	03 29 14.5	+0.9
MIYJ				eS	Sn	03 29 43.3	+1.3
JKMT	**Kesennumamotoy**	2.47	278	P	Pn	03 29 15.7	+1.3
JKMT				S	Sn	03 29 45.3	+2.0
JIKH	**Ishinomakikobu**	2.48	266	P	Pn	03 29 15.9	+1.5
JIKH				S	Sn	03 29 44.3	+0.9
JMK	**Ichinoseki**	2.69	280	P	Pn	03 29 19.0	+1.7
JMK				S	Sn	03 29 51.0	+2.4
JOM	**Ohasama**	2.76	291	P	Pn	03 29 20.0	+1.7
JOM				eS	Sn	03 29 51.9	+1.5
JANG	**Nango**	3.03	309	P	Pn	03 29 23.8	+1.7
JANG				eS	Sn	03 29 59.2	+2.0
JYK	**Kaneyama**	3.35	278	P	Pn	03 29 28.5	+2.1
JYK				eS	Sn	03 30 08.2	+3.2
JFT	**Otama**	3.52	255	P	Pn	03 29 31.0	+2.3
JFT				S	Sn	03 30 11.2	+2.1
JOT	**Ohata**	3.96	317	P	Pn	03 29 37.5	+2.6
JCH	**Churui**	4.21	347	P	Pn	03 29 38.4	+0.2
JCH				eS	Sn	03 30 24.2	-1.9
JKB	**Kayabe**	4.34	322	P	Pn	03 29 42.1	+2.0
JKB				eS	Sn	03 30 29.5	+0.1
NEM2	**Nemuro 2**	4.93	10	P	Pn	03 29 45.9	-2.1
NEM2				eS	Sn	03 30 37.8	-5.9
JRY	**Ryogami san**	5.19	243	P	Pn	03 29 53.1	+1.4
JRY				eS	Sn	03 30 50.4	+0.1
JTKR	**Abashiri--Toko**	5.48	355	P	Pn	03 29 55.8	+0.1
JTKR				eS	Sn	03 30 55.4	-2.0
JOD2	**Odawara 2**	5.49	235	eS	Sn	03 30 56.2	-1.4

IDC 23 03:30:33.5±7.1, **49°.68S**×**123°.88E, h0**^{km}**, mb3.7**/3, **mb1 4.0**/3, **mb1mx3.7**/24, **mbtmp3.7**/3, **MS3.3**/5, **Ms1 3.3**/5, **ms1mx3.1**/14, **Error ellipse: s-maj=374.1km s-min=29.6km az=93.0, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W1	**Cape Leeuwin H**	16.41	331	T	T	03 52 02.6	
	baz=159,slow=79,SNR=32						
H01W2	**Cape Leeuwin H**	16.41	331	T	T	03 52 02.8	
	baz=159,slow=79,SNR=30						
H01W3	**Cape Leeuwin H**	16.43	331	T	T	03 52 03.5	
	baz=159,slow=79,SNR=31						
STKA	**Stephens Creek**	22.18	43	LR	LR	03 42 28.3	
	comp=Z,61nm,19.3s,baz=211,slow=32						
ASAR	**Alice Springs**	27.13	20	P	P	03 36 18.4	+0.2
	1.1nm,0.7s,baz=193,slow=9.1,SNR=8.5						
ASAR				LR	LR	03 45 39.5	
	comp=Z,58nm,21.1s,baz=200,slow=33						
WRA	**Warramunga Arr**	30.83	19	P	P	03 36 50.8	-0.3
	0.7nm,1.0s,baz=184,slow=10.0,SNR=2.7						
VNDA	**Vanda**	31.41	165	P	P	03 36 55.6	0.0
	0.7nm,0.6s,baz=310,slow=9.2,SNR=2.0						
VNDA				LR	LR	03 48 23.6	
	comp=Z,70nm,18.6s,baz=312,slow=34						
FITZ	**Fitzroy Crossi**	31.54	3	LR	LR	03 48 25.6	
	comp=Z,82nm,19.3s,baz=98,slow=34						
CMAR	**Chiang Mai Arr**	71.35	335	LR	LR	04 12 07.2	
	comp=Z,7.7nm,20.8s,baz=300,slow=35						

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*ATH **23** 03:41:46.5, 38°.54N×20°.54E, h14^{km}, ML2.7/9, Error ellipse: s-maj=1.7km s-min=0.6km az=288.0*
*THE **23** 03:41:46.5, 38°.52N×20°.58E, h12^{km}, ML3.0/10, Error ellipse: s-maj=0.8km s-min=0.2km az=287.0*
ISC 23 03:41:46.0±0.8, **38°.54N**±0°.02×**20°.54E**±0°.04, **h16**^{km}±5^{km}, **n42,** σ**0^{s}.67**/68, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FSK	**Fiskardo**	0.08	168	P	Pg	03 41 49.0	-0.3
FSK				S	Sg	03 41 50.8	-0.6
	26μm,0.2s						
FSK	**Fiskardo**	0.08	168	P	Pg	03 41 49.2	-0.1
FSK				S	Sg	03 41 51.0	-0.5
FSK				AML	AML	03 41 51.1	
	comp=N,50053μm,0.2s						
FSK				AML	AML	03 41 51.4	
	comp=E,55179μm,0.2s						
EVGI	**Lefkada island**	0.12	47	P	Pg	03 41 49.6	-0.2
EVGI				S	Sg	03 41 51.9	-0.4
	comp=E,10μm,0.2s						
EVGI	**Lefkada island**	0.12	47	P	Pg	03 41 49.7	-0.2
EVGI				S	Sg	03 41 52.0	-0.2
DRAG	**Dragano-Lefkad**	0.15	10	P	Pg	03 41 50.1	-0.1
DRAG				S	Sg	03 41 53.0	+0.1
	comp=E,20μm,0.3s						
DRAG	**Dragano-Lefkad**	0.15	10	P	Pg	03 41 50.0	-0.1
DRAG				S	Sg	03 41 53.0	+0.1
NYDR	**Nydri-Lefkada**	0.21	35	P	Pg	03 41 51.0	-0.1
NYDR				S	Sg	03 41 54.6	+0.2
	comp=E,4μm,0.4s						
NYDR	**Nydri-Lefkada**	0.21	35	P	Pg	03 41 50.9	-0.1
NYDR				S	Sg	03 41 54.7	+0.3
LKD2	**Lefkada island**	0.27	20	P	Pg	03 41 52.0	+0.1
LKD2				S	Sg	03 41 56.5	+0.5
	comp=E,1μm,0.5s						
LKD2	**Lefkada island**	0.27	20	P	Pg	03 41 52.0	+0.1
LKD2				S	Sg	03 41 56.0	+0.1
LKD2				AML	AML	03 41 57.5	
	comp=N,3032μm,0.6s						
LKD2				AML	AML	03 41 59.0	
	comp=E,2063μm,0.2s						
KEF4	**Livadi, Kephal**	0.29	198	P	Pg	03 41 52.4	+0.1
KEF4				S	Sg	03 41 56.8	+0.2
KEF4	**Livadi, Kephal**	0.29	198	P	Pg	03 41 52.5	+0.2
KEF4				S	Sg	03 41 57.3	+0.7
TSLK	**Tsoukalades, L**	0.30	17	P	Pg	03 41 52.6	+0.1
TSLK				S	Sg	03 41 57.4	+0.5
	comp=E,1μm,0.4s						
TSLK	**Tsoukalades, L**	0.30	17	P	Pg	03 41 52.8	+0.3
TSLK				S	Sg	03 41 57.3	+0.4
TSLK				AML	AML	03 42 00.7	
	comp=E,2530μm,0.4s						
TSLK				AML	AML	03 42 03.2	
	comp=N,2913μm,0.5s						
DMLN	**Damoulianata-K**	0.33	204	P	Pg	03 41 52.9	0.0
DMLN				S	Sg	03 41 58.1	+0.5
	comp=N,7μm,0.4s						
DMLN	**Damoulianata-K**	0.33	204	P	Pg	03 41 53.1	+0.1
DMLN				S	Sb	03 41 58.5	0.0
LXRA	**Lixouri, Kepha**	0.35	194	P	Pg	03 41 53.5	+0.3
LXRA				S	Sb	03 41 59.1	+0.1
VLS	**Valsamata**	0.36	174	P	Pg	03 41 53.5	0.0
VLS				S	Sg	03 41 58.7	+0.1
	comp=N,9μm,0.1s						
VLS	**Valsamata**	0.36	174	P	Pg	03 41 53.6	0.0
VLS				S	Sg	03 41 59.1	+0.5
VLS				AML	AML	03 41 59.9	
	comp=N,21829μm,0.4s						
VLS				AML	AML	03 41 60.0	
	comp=E,14794μm,0.1s						
KEF3	**Kipouria, Keph**	0.37	204	P	Pg	03 41 53.2	-0.4
KEF3				S	Sg	03 41 58.6	-0.2
PSDA	**Pessada-Kefalo**	0.42	175	P	Pg	03 41 54.6	0.0
PSDA				S	Sg	03 42 00.8	+0.4
	comp=E,895nm,0.2s						
PSDA	**Pessada-Kefalo**	0.42	175	P	Pg	03 41 54.7	0.0
PSDA				S	Sb	03 42 01.3	+0.1
PVO	**Paravola**	0.78	84	P	Pb	03 42 01.7	+0.5
PVO				AML	AML	03 42 21.5	
	comp=E,510μm,0.4s						
PVO				AML	AML	03 42 21.6	
	comp=N,575μm,0.4s						
LTHK	**Lithakia**	0.86	164	P	Pg	03 42 02.2	-0.5
LTHK				S	Sb	03 42 14.4	+0.6
	comp=N,820nm,0.3s						
LTHK	**Lithakia**	0.86	164	P	Pg	03 42 01.8	-0.9
LTHK				S	Sb	03 42 14.3	+0.6
LTHK				AML	AML	03 42 16.0	
	comp=E,1386μm,0.3s						
LTHK				AML	AML	03 42 16.1	
	comp=N,1891μm,0.3s						
RLS	**Riolos of Patr**	0.87	123	P	Pg	03 42 02.8	-0.2
IGT	**Igoumenitsa**	1.01	351	P	Pb	03 42 05.2	+0.1
EFP	**Efpalio**	1.08	95	P	Pb	03 42 06.1	-0.2
EFP				AML	AML	03 42 29.1	
	comp=N,345μm,0.5s						
EFP				AML	AML	03 42 29.3	
	comp=E,436μm,0.4s						
ANX	**Ano Chora**	1.08	87	P	Pb	03 42 06.3	-0.2
ANX				AML	AML	03 42 28.9	
	comp=N,512μm,0.6s						
ANX				AML	AML	03 42 31.6	
	comp=E,399μm,0.7s						
DRO	**Drossia**	1.09	122	P	Pb	03 42 06.7	+0.2
DRO				AML	AML	03 42 25.5	
	comp=E,927μm,0.7s						
DRO				AML	AML	03 42 25.9	
	comp=N,691μm,0.7s						
GUR	**Goura**	1.54	112	P	Pb	03 42 14.6	+0.4
DBRK	**Dubrovnik**	4.51	337	ePn	Pn	03 42 54.1	+0.4
DBRK				Sn	Sn	03 43 43.6	-2.1
STON	**Ston**	4.84	334	ePn	Pn	03 42 58.2	+0.1
STON				Sn	Sn	03 43 51.2	-2.5
LSTV	**Lastovo**	5.06	328	ePn	Pn	03 43 01.1	0.0
MAKA	**Makarska**	5.44	332	ePn	Pn	03 43 07.6	+1.2
HVAR	**Hvar**	5.58	328	ePn	Pn	03 43 09.1	+0.8
RICI	**Ricice**	5.58	334	ePn	Pn	03 43 09.2	+0.8
ZIRJ	**Zirje**	6.31	326	ePn	Pn	03 43 18.1	-0.2
MORI	**Morici**	6.45	327	ePn	Pn	03 43 21.5	+1.2
DUGI	**Dugi Otok**	6.84	325	ePn	Pn	03 43 25.9	+0.4
UDBI	**Udbina**	6.97	331	ePn	Pn	03 43 29.9	+2.4
NVLJ	**Novalja**	7.37	327	ePn	Pn	03 43 33.9	+1.1

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*NEIC **23** 04:13:55.9, 51°.37N×131°.47W, h5^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.30; M$_{\theta\theta}$-0.73; M$_{\phi\phi}$1.03; M$_{r\theta}$-1.42; M$_{\theta\phi}$1.49; M$_{\phi r}$-0.15; Fault plane solution: M$_{0}$2.30000×10^{16} NP1:φ$_{s}$76.00000°, δ90.00000°, λ-39.00000°. NP2:φ$_{s}$166.00000°, δ51.00000°, λ-180.00000°. Principal axes: T 2.0992, Plg27.0000°, Azm128.0000°; N 0.2631, Plg51.0000°, Azm256.0000°; P -2.3623, Plg27.0000°, Azm24.0000°;*
*PGC **23** 04:13:55.9±1.4, 51°.37N×131°.47W, h10^{km}, mb4.1, MLSn3.9/31, Mw4.8, 210km south of Sandspit, Bc Haida Gwaii Region*
*IDC **23** 04:13:57.0±1.0, 51°.56N×131°.11W, h0^{km}, mb3.6/6, mb1 3.8/13, mb1mx3.6/50, mbtmp3.6/13, ML3.5/7, MS4.1/33, Ms1 4.1/33, ms1mx4.0/40, Error ellipse: s-maj=17.4km s-min=10.1km az=53.0*
*NEIC **23** 04:13:57.4±2.5, 51°.50N±0°.06×131°.2W±0°.1, h15^{km}±5^{km}, Error ellipse: s-maj=11.9km s-min=4.1km az=46.0*
*GCMT **23** 04:14:01.9±0.3, 51°.44N±0°.01×131°.22W±0°.02, h16^{km}±1^{km}, MW4.9/109, Moment Tensor Solution. s23,c26; s109,c164; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.17±.09; M$_{\theta\theta}$-1.05±.08; M$_{\phi\phi}$0.87±.07; M$_{r\theta}$0.49±.23; M$_{\theta\phi}$2.44±.08; M$_{\phi r}$-1.87±.31; Best double couple: M$_{0}$3.25700×10^{16} NP1:φ$_{s}$259.00000°, δ54.00000°, λ1.00000°. NP2:φ$_{s}$168.00000°, δ89.00000°, λ144.00000°. Principal axes: T 3.1550, Plg26.0000°, Azm117.0000°; N 0.2050, Plg54.0000°, Azm347.0000°; P -3.3590, Plg24.0000°, Azm220.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 23 04:13:58.2±1.5, **51°.56N**±0°.05×**131°.12W**±0°.05, **h10**^{km}±9^{km}, **n318,** σ**1^{s}.87**/280, **mb3.8**/9, **MS4.1**/28, **1C, Queen Charlotte**

Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HG4B	Hotspring	0.74	356	Pg	Pg	04 14 12.1	-0.2
HG4B				IAML		04 14 31.1	
	comp=N,4µm,0.8s						
HG4B	Hotspring	0.74	356		Sg	04 14 23.4	+1.3
HG4B	Hotspring	0.74	356	P	Pg	04 14 12.2	-0.2
HG4B				S	Sg	04 14 23.4	+1.3
BNB	Barry Inlet	1.09	339		Sb	04 14 31.8	-1.8
BNB	Barry Inlet	1.09	339		Pb	04 14 16.7	-2.5
BNB	Barry Inlet	1.09	339	P	Pb	04 14 16.7	-2.5
BNB				S	Sb	04 14 31.8	-1.8
HG1B	Mitchell Dam	1.51	336	Sn	Sn	04 14 41.4	-3.7
MOBC	Moresby Island	1.67	342	Pn	Pn	04 14 26.3	-1.3
MOBC				IAML		04 15 10.5	
	comp=E,1µm,1.0s						
MOBC				IAML		04 15 15.9	
	comp=N,1µm,1.0s						
MOBC	Moresby Island	1.67	342	Pn	Pn	04 14 25.9	-1.6
MOBC				Sg	Sg	04 14 53.3	+1.4
MOBC	Moresby Island	1.67	342	Pn	Pn	04 14 25.9	-1.6
MOBC				Sg	Sg	04 14 53.3	+1.4
DIB	Dawson Inlet,	1.85	334	Pn	Pn	04 14 27.9	-2.0
DIB	Dawson Inlet,	1.85	334	Pn	Pn	04 14 27.2	-2.7
H02S1	DAWSON INLET T	1.85	334	Pn	Pn	04 14 27.9	-2.0
H02N1	VAN INLET T-PH	1.91	333	Pn	Pn	04 14 28.8	-2.0
H02N1				Sn	Sn	04 14 50.8	-4.1
	SNR=3571						
VIB	Van Inlet	1.91	333	Pn	Pn	04 14 28.4	-2.5
VIB				Sg	Sb	04 14 57.8	+0.7
BNKB	Banks Island	1.93	22	Pn	Pn	04 14 29.9	-1.0
BNKB	Banks Island	1.93	22	Pn	Pn	04 14 29.9	-1.0
BNAB	Bonilla	1.96	8	Pn	Pn	04 14 30.0	-1.4
BNAB	Bonilla	1.96	8	Pn	Pn	04 14 30.0	-1.4
BNAB				Sg	Sg	04 15 02.3	+1.1
BBB	Bella Bella	1.96	70	Pn	Pn	04 14 30.7	-0.8
	comp=N,7.2nm,0.3s,baz=265,slow=5.2,SNR=96						
BBB				Sn	Sn	04 14 55.3	-0.8
	comp=N,92nm,0.3s,baz=282,slow=11,SNR=4.8						
BBB				LR	LR	04 15 04.4	
	comp=N,302nm,19.0s,baz=255,slow=34						
BBB	Bella Bella	1.96	70		Pn	04 14 30.5	-1.0
BBB				IAML		04 15 07.6	
	comp=N,860nm,1.2s						
BBB				IAML		04 15 17.0	
	comp=E,547nm,1.1s						
BBB	Bella Bella	1.96	70	Pn	Pn	04 14 30.7	-0.8
BBB				Sn	Sb	04 14 58.0	-0.5
HOLB	Holberg	2.09	115	Pn	Pn	04 14 31.4	-1.9
HOLB	Holberg	2.09	115	Pn	Pn	04 14 31.0	-2.3
HOLB				Sn	Sn	04 14 57.0	-2.4
BUTB	Butedale	2.22	46	Pn	Pn	04 14 34.4	-0.7
BUTB	Butedale	2.22	46	Pn	Pn	04 14 34.4	-0.7
HWKB	Hawksbury Isla	2.37	30	Pn	Pn	04 14 36.5	-0.6
HWKB	Hawksbury Isla	2.37	30	Pn	Pn	04 14 36.5	-0.6
GRNB	Grenville Isla	2.40	17		Pn	04 14 37.5	0.0
GRNB				IAML		04 15 25.2	
	comp=E,658nm,1.7s						
GRNB	Grenville Isla	2.40	17	Pn	Pn	04 14 36.9	-0.6
GRNB	Grenville Isla	2.40	17	Pn	Pn	04 14 36.9	-0.6
PHC	Port Hardy	2.47	109	Pn	Pn	04 14 35.8	-2.6
BPBC	Brooks Peninsu	2.54	122	Pn	Pn	04 14 37.0	-2.5
PACB	Port Alice, BC	2.55	115	Pn	Pn	04 14 38.1	-1.4
PACB				Sn	Sn	04 15 07.8	-2.8
PACB	Port Alice, BC	2.55	115	Pn	Pn	04 14 38.1	-1.4
PACB				Sn	Sn	04 15 07.8	-2.8
NDB	Naden	2.65	336	Pn	Pn	04 14 38.8	-2.1
MAYB	Maynard	2.75	113	Pn	Pn	04 14 40.3	-2.1
MAYB	Maynard	2.75	113	Pn	Pn	04 14 40.3	-2.1
RUBB	Prince Rupert	2.82	10		Pn	04 14 43.3	+0.1
RUBB				IAML		04 15 57.0	
	comp=N,386nm,1.3s						
RUBB	Prince Rupert	2.82	10	Pn	Pn	04 14 43.0	-0.2
RUBB	Prince Rupert	2.82	10	Pn	Pn	04 14 43.0	-0.2
TLCB	Telegraph Cove	2.88	109	Pn	Pn	04 14 42.1	-2.0
TLCB	Telegraph Cove	2.88	109	Pn	Pn	04 14 42.1	-2.0
KITB	Kitimat	2.94	30	Pn	Pn	04 14 44.5	-0.4
KITB	Kitimat	2.94	30	Pn	Pn	04 14 44.5	-0.4
EDB	Eliza Dome	3.05	122	Pn	Pn	04 14 44.7	-1.6
WOSB	Woss	3.20	114	Pn	Pn	04 14 47.1	-1.5
WOSB	Woss	3.20	114	Pn	Pn	04 14 47.1	-1.5
NCRB	Newcastle Ridg	3.40	108	Pn	Pn	04 14 50.5	-0.8
NCRB	Newcastle Ridg	3.40	108	Pn	Pn	04 14 50.5	-0.8
ETB	Estevan Point	3.65	125	Pn	Pn	04 14 52.8	-1.8
GDR	Gold River	3.69	117	Pn	Pn	04 14 53.8	-1.4
SPLB	Strathcona Par	3.85	114	Pn	Pn	04 14 56.1	-1.3
SPLB	Strathcona Par	3.85	114	Pn	Pn	04 14 56.1	-1.3
CBB	Campbell River	3.95	110	Pn	Pn	04 14 58.6	-0.2
CBB				IAML		04 16 18.6	
	comp=N,115nm,1.8s						
CBB				IAML		04 16 23.9	
	comp=E,164nm,2.1s						
CBB	Campbell River	3.95	110	Pn	Pn	04 14 58.2	-0.6
CBB				Sn	Sn	04 15 43.4	-1.9
CRAG	Craig	4.10	344	P	Pn	04 15 03.0	+2.2
	baz=158						
CRAG	Craig	4.10	344	Pn	Pn	04 15 00.9	+0.2
CRAG				IAML		04 16 54.1	
	comp=N,165nm,2.8s						
TOFB	Tofino	4.11	124	Pn	Pn	04 14 59.5	-1.5
TOFB	Tofino	4.11	124	Pn	Pn	04 14 59.5	-1.5
BTB	Buttle Lake	4.14	118	Pn	Pn	04 14 59.7	-1.8
OZB	Mount Ozzard	4.45	124	Pn	Pn	04 15 03.9	-1.8
OZB				IAML		04 16 49.2	
	comp=N,81nm,1.6s						
OZB				IAML		04 17 01.1	
	comp=E,96nm,3.1s						
OZB	Mount Ozzard	4.45	124	Pn	Pn	04 15 04.1	-1.5
UBRB	Upper Baezaeko	4.53	70	Pn	Pn	04 15 07.9	+1.1
UBRB	Upper Baezaeko	4.53	70	Pn	Pn	04 15 07.9	+1.1
TXB	Texada	4.64	111	Pn	Pn	04 15 07.9	-0.4
B928	Bamfield	4.71	123	Pn	Pn	04 15 08.4	-0.8
B928	Bamfield	4.71	123	Pn	Pn	04 15 08.4	-0.8
MGB	Mount Grey	4.85	119	Pn	Pn	04 15 10.1	-1.1
WRAK	Wrangell Islan	4.93	352	P	Pn	04 15 13.2	+1.0
	baz=168						
WRAK	Wrangell Islan	4.93	352	Pn	Pn	04 15 12.8	+0.6
SHB	Sechelt	5.01	110	Pn	Pn	04 15 13.2	-0.3
FSB	Fort Saint Jam	5.03	52	Pn	Pn	04 15 14.4	+0.7
PFB	Port Renfrew	5.24	122	Pn	Pn	04 15 16.8	+0.3
WPB	Watts Point	5.38	108	Pn	Pn	04 15 17.1	-1.4
LLLB	Lillooet	5.90	96	Pn	Pn	04 15 26.9	+1.4
LLLB	Lillooet	5.90	96	Pn	Pn	04 15 24.7	-0.9
LLLB	Lillooet	5.90	96	Pn	Pn	04 15 24.7	-0.9
HNBB	Haney	5.91	109	Pn	Pn	04 15 26.4	+0.6
HNBB	Haney	5.91	109	Pn	Pn	04 15 26.4	+0.6
NLWA	Neilton Lookou	6.30	129	Pn	Pn	04 15 31.4	+0.3
VDB	Vedder Mountai	6.31	110	Pn	Pn	04 15 31.1	-0.1
MBW	Mount Baker	6.54	112	Pn	Pn	04 15 34.1	-0.4
D03D	Eldon	6.59	125	P	Pn	04 15 35.6	+0.6
	baz=313						
B05A	Bryant	6.69	116	P	Pn	04 15 37.9	+1.5
	baz=306						
DLBC	Dease Lake	6.92	5	Pn	Pn	04 15 40.6	+1.0
	comp=E,1.0nm,0.3s,baz=217,slow=9.7,SNR=24						
DLBC				Sn	Sn	04 17 01.7	+3.3
	baz=186,slow=20,SNR=1.2						
DLBC				Lg	Lg	04 17 37.5	
	comp=E,0.4nm,0.3s,baz=180,slow=20,SNR=3.0						
DLBC				LR	LR	04 18 22.0	
	comp=E,2µm,19.8s,baz=199,slow=38						
DLBC	Dease Lake	6.92	5	Pn	Pn	04 15 41.9	+2.2
DLBC	Dease Lake	6.92	5	Pn	Pn	04 15 40.7	+1.0
BMBC	Bull Mountain	6.96	46	Pn	Pn	04 15 40.1	-0.1
BMBC	Bull Mountain	6.96	46	Pn	Pn	04 15 40.1	-0.1
D04E	Lakebay	6.99	126	P	Pn	04 15 42.7	+2.3
	baz=315						
E03A	Lebam	7.05	132	Pn	Pn	04 15 40.8	-0.6
E04D	Cinebar	7.52	128	P	Pn	04 15 50.4	+2.6
	baz=317						
F04D	Rainier, OR	7.65	133	P	Pn	04 15 52.4	+2.7
	baz=321						
NBC5	NorthernBC 5	7.73	36	Pn	Pn	04 15 50.8	0.0
NBC5	NorthernBC 5	7.73	36	Pn	Pn	04 15 50.8	0.0
MNB	Mounoet Dainar	7.91	80	Pn	Pn	04 15 53.6	+0.2
LTY	Liberty	8.05	118	Pn	Pn	04 15 55.6	+0.4
SLEB	Sale Mountain	8.14	88	Pn	Pn	04 15 56.4	-0.1
SLEB	Sale Mountain	8.14	88	Pn	Pn	04 15 56.4	-0.1
G03D	McMinnville, O	8.22	138	P	Pn	04 16 00.2	+2.9
	baz=326						
B08A	Colville Reser	8.24	108	Pn	Pn	04 15 58.0	+0.2
F05D	White Salmon	8.54	128	P	Pn	04 16 04.1	+2.4
	baz=317						
FNBB	Fort Nelson	8.68	29	Pn	Pn	04 16 05.0	+1.3
FNBB	Fort Nelson	8.68	29	Pn	Pn	04 16 05.0	+1.3
P33M	Teslin, Yukon	8.73	354	P	Pn	04 16 04.8	+0.4
	baz=171						
H04D	Lebanon	9.00	138	P	Pn	04 16 11.3	+3.2
	baz=327						
G05D	Wamic, OR	9.07	130	P	Pn	04 16 12.4	+3.2
	baz=320						
D08A	Wollman Farm,	9.15	115	Pn	Pn	04 16 11.2	+1.0
WHY	Whitehorse	9.36	349	Pn	Pn	04 16 13.4	+0.3
I03D	Drain, OR	9.45	143	P	Pn	04 16 18.0	+3.8
	baz=331						
NEW	Newport	9.61	105	Pn	Pn	04 16 17.2	+0.7
	comp=E,0.1nm,0.3s,baz=42,slow=6.8,SNR=1.9						
NEW				Lg	Lg	04 18 50.7	
	comp=E,0.1nm,0.3s,baz=255,slow=16,SNR=2.2						
NEW				LR	LR	04 20 25.4	
	comp=E,528nm,21.2s,baz=292,slow=40						
NEW	Newport	9.61	105	P	Pn	04 16 17.2	+0.7
	baz=297						
I04A	Tendick Farm,	9.73	140	P	Pn	04 16 21.5	+3.4
	baz=328						
TGTN	Hyland Airport	10.12	8	P	Pn	04 16 23.9	+0.6
	baz=189						
TGTN	Hyland Airport	10.12	8	Pn	Pn	04 16 23.6	+0.2
K02D	Willamette Mer	10.21	147	P	Pn	04 16 29.3	+4.6
	baz=335						
N31M	Braeburn, Yuko	10.28	347	P	Pn	04 16 27.9	+2.4
	baz=162						
YUK5	Granite Creek	10.29	341	Pn	Pn	04 16 28.2	+2.3
YUK5	Granite Creek	10.29	341	Pn	Pn	04 16 28.2	+2.3
J04D	Umpqua Nationa	10.31	140	P	Pn	04 16 30.9	+4.7
	baz=329						
J05D	Fort Rock, OR	10.63	137	P	Pn	04 16 34.3	+3.6
	baz=326						
L02E	Cave Junction	10.71	148	P	Pn	04 16 35.1	+3.6
	baz=336,SNR=6.3						
I07A	Izee	10.80	129	Pn	Pn	04 16 31.2	-1.7
K04D	Chiloquin, OR	10.97	141	P	Pn	04 16 40.5	+5.3
	baz=330						
MMPY	Sheldon Lake,	11.09	360	P	Pn	04 16 37.0	+0.3
	baz=178						
L04D	Klamath Falls	11.11	144	P	Pn	04 16 40.5	+3.4
	baz=332						
TGL	Tana Glacier	11.28	329	Pn	Pn	04 16 38.6	-0.7
YBH	Yreka Blue Hor	11.39	146	Pn	Pn	04 16 42.4	+1.4
	comp=E,0.1nm,0.3s,baz=111,slow=2.4,SNR=7.5						
YBH				LR	LR	04 20 26.2	
	comp=E,2µm,18.0s,baz=329,slow=34						
M02C	Callahan	11.64	148	P	Pn	04 16 49.8	+5.4
	baz=335						
M04C	Macdoel	11.66	143	P	Pn	04 16 49.3	+4.7
	baz=332						
N02D	Trinity Center	12.07	148	P	Pn	04 16 54.4	+4.2
	baz=336,SNR=9.5						
MSO	Missoula	12.18	106	P	Pn	04 16 52.2	+0.4
	baz=300						
M27K	Edge Creek, AK	12.29	336	P	Pn	04 16 55.2	+2.0
	baz=145						
WRGLY	Wrigley	12.39	16	P	Pn	04 16 53.8	-0.6
	baz=202						
N25K	Chitina, Valde	12.48	329	P	Pn	04 16 59.5	+3.7
	baz=136						
O02D	Mt. Diablo Mer	12.76	150	P	P	04 17 05.5	-5.3
	baz=337,SNR=7.2						
O03E	Paynes Creek	12.98	147	P	P	04 17 06.7	-6.6
	baz=335						
LRM	Limekiln Ridge	13.58	108	Pn	Pn	04 17 09.3	-1.6
O22K	Cooper Landing	13.67	318	P	P	04 17 15.5	-5.2
	baz=121						
HLID	Hailey	13.80	119	P	Pn	04 17 15.2	+1.2
	baz=313,SNR=6.9						
YKA	Yellowknife Ar	14.12	33	Pn	Pn	04 17 17.2	-0.8
	comp=E,0.1nm,0.3s,baz=212,slow=13,SNR=6.9						
YKA				LR	LR	04 23 14.6	
	comp=E,1µm,21.1s,baz=0.0,slow=40						
SCRK	Sand Creek	14.18	336	P	Pn	04 17 21.5	+2.7
	baz=144						
EGMT	Eagleton	14.23	96	P	Pn	04 17 19.9	+0.2
	baz=293						
EGMT	Eagleton	14.23	96		P	04 17 27.2	0.0
EGAK	Eagle	14.25	342		P	04 17 25.8	-1.3
PAHR	Pah Rah Range	14.39	141		P	04 17 25.4	-3.6
DHY	Denali Highway	14.45	329	P	Pn	04 17 24.5	+1.9
	baz=134						
DHY	Denali Highway	14.45	329		P	04 17 26.8	-2.7
MPK	Martis Peak	14.50	143		P	04 17 26.8	-3.6
VCNR	Virginia City	14.64	142		P	04 17 29.3	-2.6
WAT1	Susitna Watana	14.66	327	P	P	04 17 28.1	-3.7
	baz=131						
BMN	Battle Mountai	14.70	134	P	P	04 17 29.0	-3.4
QLMT	Earthquake Lak	14.73	109		Pn	04 17 28.2	+1.6
J25K	Salcha River,	15.05	336	P	Pn	04 17 31.9	+1.2
	baz=142						
YERR	Yerington	15.07	142	P	P	04 17 34.0	-2.6
YERR				IAmb	IAmb	04 17 46.8	
	comp=Z,7.6nm,1.0s						
YHH	Holmes Hill	15.09	109	P	P	04 17 34.3	-2.6
YHH				IAmb	IAmb	04 17 52.5	
	comp=Z,11nm,1.0s						
YMR	Madison River	15.09	109	P	P	04 17 35.0	-1.9
EPYK	Eagle Plains	15.12	351	P	Pn	04 17 31.7	+0.1
	baz=165						
RND	Reindeer	15.16	328	P	P	04 17 35.6	-1.6
RND				IAmb	IAmb	04 17 50.9	
	comp=Z,14nm,1.1s						
YNR	Norris Junctio	15.23	109	P	P	04 17 39.3	+0.9
YNR				IAmb	IAmb	04 17 56.9	
	comp=Z,20nm,1.5s						
GCMT	Greycliff	15.27	104		P	04 17 36.3	-2.4
HDA	Harding Lake	15.31	333	P	P	04 17 36.7	-2.2
	baz=139						
ELK	Elko	15.39	128	Pn	P	04 17 36.6	-3.5
	comp=Z,0.1nm,0.3s,baz=314,slow=5.1,SNR=3.2						
ELK				LR	LR	04 23 40.9	
	comp=Z,1µm,19.3s,baz=322,slow=38						
ELK	Elko	15.39	128	P	P	04 17 36.5	-3.7
ELK				IAmb	IAmb	04 17 46.4	
	comp=Z,8.3nm,1.2s						
MCK	McKinley	15.41	329	P	P	04 17 38.9	-1.1
	baz=133						
H17A	Grant Village	15.48	110	P	Pn	04 17 37.3	+0.7
	baz=306						
H17A	Grant Village	15.48	110	P	P	04 17 40.5	-0.6
O19K	Port Alsworth	15.55	313	P	P	04 17 41.4	-0.2
	baz=112						
ILAR	Eielson Array	15.57	334	Pn	P	04 17 42.3	+0.5
	comp=Z,0.1nm,0.3s,baz=149,slow=10,SNR=22						
ILAR				LR	LR	04 23 21.0	
	comp=Z,1µm,18.8s,baz=148,slow=36						
FLWY	Flagg Ranch	15.59	111	P	P	04 17 40.7	-1.6
FLWY				IAmb	IAmb	04 17 59.6	
	comp=Z,20nm,1.2s						
RYN	Ryan	15.66	141	P	P	04 17 40.6	-2.5
FXWY	Fox Creek	15.66	113	P	P	04 17 40.2	-3.0
FXWY				IAmb	IAmb	04 18 02.1	
	comp=Z,12nm,0.9s						
TRF	Thorofare Moun	15.67	327	P	P	04 17 41.5	-1.5
	baz=129						
TRF	Thorofare Moun	15.67	327	P	P	04 17 41.4	-1.7
WRH	Wood River Hil	15.68	332		P	04 17 43.8	+0.8
WRH				IAmb	IAmb	04 17 56.1	
	comp=Z,21nm,1.0s						
MOOW	Moose Ponds	15.76	112	P	P	04 17 42.1	-2.1
TPAW	Teton Pass	15.79	113	P	P	04 17 44.9	+0.2
TPAW				IAmb	IAmb	04 18 00.9	
	comp=Z,21nm,1.0s						
RLMT	Red Lodge	15.86	105	P	P	04 17 42.8	-2.5
	baz=303						
RLMT	Red Lodge	15.86	105	P	P	04 17 45.2	-0.1
RLMT				IAmb	IAmb	04 18 05.5	
	comp=Z,18nm,1.4s						
HVU	Hansel Valley	15.90	121	P	P	04 17 43.6	-2.2
NVAR	Mina Array Bea	15.92	141	Pn	P	04 17 43.9	-2.1
	comp=Z,0.0nm,0.3s,baz=319,slow=11,SNR=12						
NVAR				LR	LR	04 24 22.0	
	comp=Z,888nm,19.2s,baz=331,slow=39						
NVAR	Mina Array Bea	15.92	141	P	P	04 17 45.1	-0.9
LOHW	Long Hollow	15.92	112	P	P	04 17 44.9	-1.1
SNOW	Snow King Moun	15.92	113	P	P	04 17 43.8	-2.3
SNOW				IAmb	IAmb	04 18 02.5	
	comp=Z,20nm,1.3s						
REDW	Red Top Meadow	15.93	113	P	P	04 17 44.7	-1.5
REDW				IAmb	IAmb	04 18 05.9	
	comp=Z,27nm,1.2s						
NV11	Mina Array Sit	15.97	140	P	P	04 17 44.0	-2.6
NV11				IAmb	IAmb	04 17 56.9	
	comp=Z,16nm,1.4s						
POKR	Poker Plat Res	15.99	334	P	P	04 17 44.7	-1.7
	baz=139						
POKR	Poker Plat Res	15.99	334	P	P	04 17 47.0	+0.6
POKR				IAmb	IAmb	04 18 00.5	
	comp=Z,13nm,1.1s						
LHV	Little Huntoon	15.99	141	P	P	04 17 44.1	-2.5
LHV				IAmb	IAmb	04 17 57.2	
	comp=Z,17nm,1.2s						
NEA2	Nenana	16.06	331	P	P	04 17 47.1	-0.2
	baz=135,SNR=9.1						
MDPB	Devils Postpil	16.32	144	P	Pn	04 17 46.0	-1.5
BPAW	Bear Paw Mtn.	16.33	328	P	P	04 17 50.6	+0.4
	baz=130						
M19K	Big River Lodg	16.34	318	P	P	04 17 51.0	+0.6
	baz=118						
L20K	Farewell, AK	16.42	321	P	P	04 17 51.5	+0.2
	baz=120						
I23K	Minto, Yukon-K	16.55	332	P	P	04 17 52.6	0.0
	baz=136						
CHUM	Lake Minchumin	16.64	326	P	P	04 17 54.4	+0.8
	baz=127						
TPH	Tonopah	16.66	139	P	P	04 17 52.1	-2.1
H24K	Noodor Dome	16.67	336	P	P	04 17 55.2	+1.3
	baz=140						
L19K	White Mountain	16.67	319	P	P	04 17 55.5	+1.5
	baz=118						
INK	Inuvik	16.84	357	Pn	Pn	04 17 53.6	-0.1
	comp=Z,0.0nm,0.3s,baz=257,slow=8.7,SNR=2.8						
INK				Lg	Lg	04 22 51.5	
	comp=Z,0.0nm,0.3s,baz=186,slow=17,SNR=2.3						
INK				LR	LR	04 25 02.1	
	comp=Z,850nm,19.8s,baz=171,slow=40						
INK	Inuvik	16.84	357	P	P	04 17 54.8	-1.0
	baz=174						
INK	Inuvik	16.84	357	Pn	P	04 17 54.1	-1.7
MLY	Manley	16.88	331	P	P	04 17 58.0	+1.7
	baz=133						
DUG	Dugway, Tooele	17.02	125	P	P	04 17 59.2	+1.1
	baz=319						
DUG	Dugway, Tooele	17.02	125	P	P	04 17 56.4	-1.7
BW06	Boulder Array	17.04	113	P	P	04 17 59.0	+0.5
	baz=310						
BW06	Boulder Array	17.04	113	P	P	04 17 58.4	-0.1
BW06				IAmb	IAmb	04 18 05.6	
	comp=Z,16nm,1.3s						
PD31	Pinedale Array	17.04	113	P	P	04 17 58.4	-0.1
PD31				IAmb	IAmb	04 18 05.6	
	comp=Z,15nm,1.3s						
PDAR	Pinedale Array	17.04	113	Pn	P	04 17 58.8	+0.3
	comp=Z,0.1nm,0.3s,baz=316,slow=10,SNR=16						
PDAR				LR	LR	04 25 10.7	
	comp=Z,501nm,18.6s,baz=312,slow=40						
PDAR	Pinedale Array	17.04	113	P	P	04 17 59.4	+1.0
R11A	Troy Canyon, C	17.13	134	P	P	04 18 01.0	+1.6
	baz=327,SNR=6.5						
SPR3	Spring Creek 3	17.19	130	P	P	04 17 59.6	-0.6
LCH	Last Change Ra	17.21	141	P	P	04 17 58.9	-1.4
I21K	Tanana	17.37	330	P	P	04 18 03.4	+1.8
	baz=131						
J20K	Nowinta River	17.46	325	P	P	04 18 05.0	+2.3
	baz=124						
TTA	Tatalina	17.50	320	P	P	04 18 05.1	+1.9
	baz=118						
TTA	Tatalina	17.50	320	P	Pn	04 18 00.5	-1.6
TTA				IAmb	IAmb	04 18 15.3	
	comp=Z,14nm,1.2s						
CWC	Cottonwood Cre	17.74	143	P	P	04 18 09.3	+3.1
	baz=334						
PSUT	Pine Spring	17.78	130	P	P	04 18 05.0	-1.7
VES	Vestal, Richgr	17.92	147	P	P	04 18 11.4	+3.5
	baz=336						
H21K	Melozitna Rive	17.94	330	P	P	04 18 10.2	+2.2
	baz=130						
FURC	Furnace Creek,	18.19	141	P	P	04 18 14.9	+4.0
	baz=332,SNR=9.4						
ISA	Isabella, Lake	18.29	145	P	P	04 18 16.5	+4.4
	baz=335						
MPMC	Manual Prospec	18.30	143	P	P	04 18 15.2	+2.8
	baz=333,SNR=12						
LRMC	Laurel Mtn Rad	18.74	144	P	Pn	04 18 22.0	+4.5
	baz=334						
K22A	Casper	18.89	108	P	Pn	04 18 20.4	+1.0
	baz=308						
SHOC	Shoshone, Teco	18.91	140	P	Pn	04 18 23.2	+3.7
	baz=332						
EDW2	Edwards Air Fo	19.16	145	P	Pn	04 18 26.0	+3.4
	baz=336						
GSC	Goldstone, Bar	19.23	142	P	Pn	04 18 25.7	+2.3
	baz=333,SNR=6.5						
TOLK	Toolik Lake Re	19.30	339	P	Pn	04 18 26.0	+2.1
	baz=142						
TUQ	Turquoise Moun	19.46	140	P	Pn	04 18 29.3	+3.1
	baz=332,SNR=16						
KNB	Kanab	19.48	131	P	P	04 18 24.3	-1.0
KNB				IAmb	IAmb	04 18 40.6	
	comp=Z,18nm,1.3s						
O20A	White River Ci	19.52	117	P	Pn	04 18 27.0	+0.1
	baz=314						
O20A	White River Ci	19.52	117	P	Pn	04 18 25.6	-1.4
RSSD	Black Hills	19.56	102	P	Pn	04 18 26.7	-0.8
	baz=303						
HEC	Hector,Ludlow	19.83	142	P	Pn	04 18 32.8	+2.3
	baz=333						
BFSC	Mount Baldy Ra	19.86	145	P	Pn	04 18 33.8	+2.8
	baz=336						
GMRC	Granite Mounta	20.13	140	P	Pn	04 18 35.7	+1.5
	baz=332,SNR=5.7						
BELC	Belle Mtn. Jos	20.69	142	P	Pn	04 18 41.7	+1.0
	baz=334						
PFO	Pinyon Flats O	20.86	144	P	Pn	04 18 43.3	+0.6
	comp=Z,1.1nm,0.7s,baz=317,slow=9.0,SNR=3.1						
PFO				LR	LR	04 27 12.7	
	comp=Z,417nm,20.1s,baz=319,slow=38						
PFO	Pinyon Flats O	20.86	144	P	Pn	04 18 45.0	+2.3
	baz=335						
TPFO	Pinon Flats	20.87	144	P	Pn	04 18 44.7	+1.9
	baz=335						
IRM	Iron Mountain	20.88	140	P	Pn	04 18 43.9	+1.0
	baz=332						
SMCO	Snowmass	20.88	117	P	Pn	04 18 41.6	-1.6
PDMCI	Parker Dam,Lak	21.17	138	P	P	04 18 46.9	+3.5
	baz=331						
BC3	Big Chuckawall	21.20	141	P	P	04 18 47.4	+3.5
	baz=333,SNR=7.1						
ISCO	Idaho Springs	21.23	114	P	P	04 18 45.9	+1.5
	baz=313						
WUAZ	Wupatki	21.38	131	P	P	04 18 48.4	+2.5
	baz=326						
WUAZ	Wupatki	21.38	131	P	P	04 18 45.1	-0.8
MVCO	Mesa Verde	21.49	123	P	P	04 18 48.8	+1.7
	baz=320						
MONP2	Monument Peak	21.52	144	P	P	04 18 51.2	+3.8
	baz=335						
SWSC	Sam W. Stewart	21.70	143	P	P	04 18 53.1	+4.0
	baz=334						
IKP	In-Ko-Pah, Jac	21.85	144	P	P	04 18 54.4	+3.6
	baz=335						
S22A	4UR Ranch, Cre	21.98	119	P	P	04 18 53.9	+1.4
	baz=318						
ULM	Lac du Bonnet	22.14	79	P	P	04 18 54.4	+0.7
	comp=Z,2.6nm,0.7s,baz=308,slow=11,SNR=4.1						
ULM				LR	LR	04 26 25.1	
	comp=Z,453nm,19.5s,baz=286,slow=34						
W18A	Petrified Fore	22.49	129	P	P	04 19 00.5	+2.7
	baz=324						
SDCO	Great Sand Dun	22.71	117	P	P	04 19 01.5	+1.2
	baz=316						
T25A	Trinidad	23.75	117	P	P	04 19 11.9	+1.1
	baz=317						
214A	Organ Pipe Nat	23.75	138	P	P	04 19 13.6	+3.0
	baz=332						
ANMO	Albuquerque	24.28	124	P	P	04 19 16.2	+0.5
	comp=Z,2.3nm,0.9s,baz=329,slow=6.3,SNR=8.0						
ANMO				LR	LR	04 29 08.1	
	comp=Z,363nm,20.2s,baz=313,slow=38						
ANMO	Albuquerque	24.28	124	P	P	04 19 18.2	+2.5
	baz=322						
TUC	Tucson	24.32	134	P	P	04 19 18.7	+2.7
	baz=329						
121A	Cookes Peak, D	25.53	129	P	P	04 19 30.1	+3.1
	baz=326						
EYMN	Ely	25.63	82	P	P	04 19 28.2	+0.6
	baz=293						

EYMN	Ely	25.63	82	P	P	04 19 29.3	+1.7
AMTX	Amarillo	26.91	117	P	P	04 19 41.3	+2.0
	baz=318						
AMTX	Amarillo	26.91	117	P	P	04 19 40.1	+0.7
MSTX	Muleshoe	26.99	120	P	P	04 19 41.7	+1.6
	baz=320						
MNTX	Cornudas Mount	27.40	126	P	P	04 19 46.7	+3.0
	baz=325						
RES	Resolute Bay	27.51	20	LR	LR	04 30 42.8	
	comp=Z,523nm,20.1s,baz=240,slow=37						
WMOK	Wichita Mounta	28.65	113	P	P	04 19 56.9	+2.0
	baz=317						
TX31	Lajitas Ar. Si	30.17	127	P	P	04 20 05.9	-2.5
TX32	Lajitas Array	30.17	127	P	P	04 20 06.8	-1.7
TX32				IAmb	IAmb	04 20 26.2	
	comp=Z,4.2nm,1.2s						
TXAR	Lajitas Array	30.17	127	P	P	04 20 07.4	-1.1
	comp=Z,0.1nm,0.4s,baz=334,slow=10.0,SNR=2.2						
TXAR				LR	LR	04 32 47.7	
	comp=Z,343nm,19.4s,baz=0.0,slow=38						
TXAR	Lajitas Array	30.17	127	P	P	04 20 05.6	-2.8
U40A	Yellville	31.04	104	P	P	04 20 17.5	+1.5
	baz=312						
SADO	Sadowa	34.69	80	LR	LR	04 34 45.6	
	comp=Z,223nm,18.8s,baz=345,slow=36						
N54A	Moraine State	36.21	86	P	P	04 21 00.1	-0.8
	baz=305						
PETK	Petropavlovsk-	41.87	301	LR	LR	04 36 20.8	
	comp=Z,234nm,21.6s,baz=71,slow=32						
KLR	Kul'dur	57.38	309	LR	LR	04 47 43.0	
	comp=Z,218nm,19.9s,baz=12,slow=35						
H11N2	WAKE ISLAND Hy	57.43	261	T	T	05 26 23.7	
	baz=40,slow=76,SNR=136						
H11N3	WAKE ISLAND Hy	57.43	261	T	T	05 26 29.3	
	baz=40,slow=76,SNR=160						
H11N1	WAKE ISLAND Hy	57.44	261	T	T	05 26 25.0	
	baz=40,slow=76,SNR=125						
ARCES	ARCESS Array B	58.01	9	LR	LR	04 49 54.5	
	comp=Z,150nm,19.8s,baz=300,slow=37						
H11S1	WAKE ISLAND Hy	58.47	260	T	T	05 28 05.2	
	baz=40,slow=75,SNR=19						
H11S2	WAKE ISLAND Hy	58.48	260	T	T	05 28 08.0	
	baz=40,slow=75,SNR=13						
H11S3	WAKE ISLAND Hy	58.49	260	T	T	05 28 06.3	
	baz=40,slow=75,SNR=9.9						
TAOE	Nuku Hiva Isla	60.67	190	*e*LR	LR	04 42 16.8	
	comp=Z,327nm,25.7s						
USRK	Ussuriysk Ar.	60.74	305	LR	LR	04 51 22.9	
	comp=Z,138nm,18.1s,baz=37,slow=37						
MJAR	Matsushiro Arr	62.80	295	LR	LR	04 47 19.0	
	comp=Z,68nm,21.5s,baz=155,slow=32						
NOA	NORSAR Array B	63.77	19	LR	LR	04 53 15.4	
	comp=Z,164nm,19.7s,baz=330,slow=37						
ROSC	El Rosal	66.04	114	LR	LR	04 57 32.2	
	comp=Z,65nm,19.6s,baz=323,slow=40						
KSRS	Korea Array	67.75	302	LR	LR	04 51 44.7	
	comp=Z,55nm,21.8s,baz=28,slow=34						
SONM	Songino Array	69.43	323	LR	LR	04 56 25.2	
	comp=Z,235nm,18.3s,baz=23,slow=37						
ZALV	Zalesovo Beam	70.65	338	LR	LR	04 58 45.7	
	comp=Z,124nm,19.0s,baz=14,slow=38						
PPT	Papeete	70.70	199	LR	LR	04 50 07.9	
	comp=Z,103nm,20.5s,baz=12,slow=31						
PPT2	Papeete2	70.72	199	*e*LR	LR	04 46 58.2	
	comp=Z,194nm,23.2s,baz=13						
HHC	Hu-ho-hao-te	73.05	315	*e*P	P	04 25 32.1	+3.9
HHC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,91nm,8.0s						
OBN	Obninsk	73.20	7	LR	LR	04 59 51.7	
	comp=Z,26nm,18.2s,baz=0.5,slow=38						
KURBB	Kurchatov Arra	75.13	341	P	P	04 25 40.6	+0.6
	comp=Z,0.4nm,0.8s,baz=9.5,slow=5.4,SNR=1.8						
TBI	Tubuai	76.31	197	*e*LR	LR	04 49 16.5	
	comp=Z,184nm,29.5s						
RAR	Rarotonga	76.69	207	LR	LR	04 52 48.0	
	comp=Z,178nm,19.0s,baz=12,slow=30						
AKASG	Malin Array Be	76.76	13	P	P	04 25 50.5	+1.2
	comp=Z,0.6nm,0.6s,baz=350,slow=5.1,SNR=2.6						
AKASG				LR	LR	04 59 03.6	
	comp=Z,119nm,21.7s,baz=340,slow=35						
MKAR	Makanchi Array	77.91	337	P	P	04 25 58.4	+2.5
	comp=Z,0.3nm,0.7s,baz=57,slow=4.6,SNR=3.8						
MKAR				LR	LR	05 05 14.7	
	comp=Z,168nm,18.7s,baz=17,slow=40						
WMQ	Urumqi	79.23	332	*e*P	P	04 26 08.8	+5.5
KBZ	Khabaz	84.95	4	LR	LR	05 09 41.1	
	comp=Z,63nm,18.4s,baz=358,slow=39						
KMI	Kunming	90.23	313	⇑P	P	04 27 02.3	+3.1
KMI				pP	pwP	04 27 08.9	+4.2
KMI				sP	sP	04 27 12.3	+9.5
KMI				pmax	pmax		
	comp=Z,8.0nm,0.6s						
GEYT	Alibeck	90.52	353	LR	LR	05 14 01.0	
	comp=Z,80nm,18.2s,baz=50,slow=40						
DZM	Mont Dzumac	91.37	235	*e*LR	LR	04 56 17.2	
	comp=Z,139nm,27.4s						
CMAR	Chiang Mai Arr	97.74	313	LR	LR	05 15 57.1	
	comp=Z,68nm,18.4s,baz=40,slow=38						
VNA3	Neumayer Olymp	147.62	149	PKPbc	PKPab	04 33 46.9	+3.4
VNA3	Neumayer Olymp	147.62	149	PKPdf	PKPab	04 33 42.2	-1.3
VNA1	Neumayer--Stat	148.15	148	PKPbc	PKPab	04 33 48.5	+2.9
VNA2	Neumayer--Watz	148.40	149	PKPbc	PKPab	04 33 47.5	+0.9
VNA2	Neumayer--Watz	148.40	149	PKPdf	PKPab	04 33 45.0	-1.6
SNAA	Sanae	149.70	151	PKPbc	PKPab	04 33 50.0	-2.0
SNAA	Sanae	149.70	151	PKPdf	PKPbc	04 33 44.5	-2.1

IDC ***23*** *04:18:39.9±3.0, 51°.34N×131°.77W, h0^{km}, mb1 3.5/5, mb1mx3.2/54, mbtmp3.2/5, ML3.4/3, Error ellipse: s-maj=47.9km s-min=19.9km az=49.0*

PGC ***23*** *04:18:43.2±2.0, 51°.49N×131°.21W, h10^{km}, MLSn3.1/12, Mw3.7/12, 200km Sse of Sandspit, Bc Haida Gwaii Region*

ISC 23 04:18:41.9±2.6**, 51°.51N**±0°.05×**131°.30W**±0°.06**, h13**^{km}±17^{km}**, n32,** σ1^s.**33**/40**, Queen Charlotte Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HG4B	Hotspring	0.79	5	P	Pb	04 18 57.8	+0.2
HG4B				S	Sb	04 19 08.2	+0.1
BNB	Barry Inlet	1.11	346	P	Pb	04 19 02.9	-0.1
BNB				S	Sb	04 19 17.3	0.0
MOBC	Moresby Island	1.69	346	Pn	Pn	04 19 10.7	-0.5
DIB	Dawson Inlet,	1.84	338	Pn	Pn	04 19 13.0	-0.2
H02S1	DAWSON INLET T	1.84	338	Pn	Pn	04 19 13.5	+0.3
H02S1				Sn	Sn	04 19 34.6	-1.8
H02N1	VAN INLET T-PH	1.91	337	Pn	Pn	04 19 14.7	+0.6
H02N1				Sn	Sn	04 19 35.8	-2.3
VIB	Van Inlet	1.91	337	Pn	Pn	04 19 14.9	+0.7
BNKB	Banks Island	2.02	25	Pn	Pn	04 19 15.4	-0.3
BNKB				Sg	Sg	04 19 45.0	-1.8
BNAB	Bonilla	2.03	11	Pn	Pn	04 19 15.2	-0.6
BBB	Bella Bella	2.09	70	Pn	Pb	04 19 19.9	+0.3
	8.0nm,0.3s,baz=258,slow=15,SNR=3.1						
BBB				Sn	Sn	04 19 43.6	+1.1
	24nm,0.3s,baz=165,slow=16,SNR=5.6						
BBB	Bella Bella	2.09	70	Pn	Pn	04 19 16.4	-0.3
BBB				Sn	Sn	04 19 38.5	-4.0
HOLB	Holberg	2.18	112	Pn	Pn	04 19 17.6	-0.3
BUTB	Butedale	2.34	47	Pn	Pn	04 19 20.7	+0.5
HWKB	Hawksbury Isla	2.47	31	Pn	Pn	04 19 21.8	-0.1
GRNB	Grenville Isla	2.48	19	Pn	Pn	04 19 22.5	+0.4
PHC	Port Hardy	2.57	107	Pn	Pn	04 19 22.8	-0.4
PACB	Port Alice, BC	2.64	113	Pn	Pn	04 19 23.1	-1.1
PACB				Sn	Sn	04 19 53.7	-2.3
MAYB	Maynard	2.84	111	Pn	Pn	04 19 26.2	-0.9
RUBB	Prince Rupert	2.90	12	Pn	Pn	04 19 28.4	+0.8
KITB	Kitimat	3.04	31	Pn	Pn	04 19 30.0	+0.3
WOSB	Woss	3.29	112	Pn	Pn	04 19 32.7	-0.5
NCRB	Newcastle Ridg	3.50	106	Pn	Pn	04 19 36.1	0.0
GDR	Gold River	3.77	115	Pn	Pn	04 19 39.7	0.0
BTB	Buttle Lake	4.22	117	Pn	Pn	04 19 46.8	+0.7
UBRB	Upper Baezaeko	4.65	70	Pn	Pn	04 19 53.6	+1.6
TXB	Texada	4.74	110	Pn	Pn	04 19 53.7	+0.7
FSB	Fort Saint Jam	5.16	52	Pn	Pn	04 20 00.6	+1.7
FSJB	Fort St James	5.16	52	Pn	Pn	04 20 00.4	+1.5
DLBC	Dease Lake	6.98	6	Pn	Pn	04 20 27.1	+3.2
	0.4nm,0.3s,baz=199,slow=18,SNR=0.7						
ILAR	Eielson Array	15.57	335	Pn	Pn	04 22 21.1	+0.3
	0.0nm,0.3s,baz=146,slow=9.7,SNR=1.9						
NVAR	Mina Array Bea	15.95	140	Pn	Pn	04 22 27.2	+1.0
	0.1nm,0.3s,baz=329,slow=12,SNR=1.8						
PDAR	Pinedale Array	17.13	112	P	P	04 22 44.7	+1.8
	baz=294,slow=8.8,SNR=1.7						

IDC ***23*** *04:27:15.5±3.6, 37°.16N×72°.31E, h202^{km}±25^{km}, mb3.3/10, mb1 3.5/16, mb1mx3.2/45, mbtmp4.0/16, MS3.5/2, Ms1 3.5/2, ms1mx2.6/30, Error ellipse: s-maj=40.7km s-min=15.8km az=152.0*

MOS ***23*** *04:27:17.5±0.8, 37°.44N×72°.22E, h221^{km}, mb4.0/4, Error ellipse: s-maj=13.6km s-min=5.6km az=83.9*

NEIC ***23*** *04:27:18.1±1.2, 37°.40N±0°.07×72°.17E±0°.08, h212^{km}±4^{km}, mb4.0/15, Error ellipse: s-maj=9.8km s-min=9.7km az=171.0*

NNC ***23*** *04:27:26.5±5.6, 38°.14N×72°.37E, h245^{km}±53^{km}, mb3.1, mpv4.5, Error ellipse: s-maj=59.4km s-min=30.0km az=2.0*

ISC 23 04:27:16.8±0.5**, 37°.40N**±0°.05×**72°.17E**±0°.05**, h200**^{km}**, n116,** σ1^s.**49**/125**, mb3.8**/19**, 9C-5D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	2.10	352	Pn	Pn	04 27 59.4	+2.8
GAR	Garm	2.17	318	Pn	Pn	04 27 59.4	+2.2
CHGR	Chuyangaron	2.69	299		Pn	04 28 04.7	+1.8
BTK	Batken	2.86	339	PN	Pn	04 28 07.8	+3.0
BTK	Batken	2.86	339		Pn	04 28 07.8	+3.0
CEP	Cherat	3.57	184	P	Pn	04 28 15.0	+1.5
KBL	Kabul	3.81	223	PN	Pn	04 28 18.3	+1.8
KBL	Kabul	3.81	223	Pn	Pn	04 28 18.3	+1.8
CHCP	Chirah Chowk	3.83	166	P	Pn	04 28 18.9	+2.3
NIL	Nilore	3.84	166	PN	Pn	04 28 18.9	+2.2
NIL	Nilore	3.84	166	Pn	Pn	04 28 18.9	+2.2
THW	Thamme Wali	4.60	185	P	Pn	04 28 27.2	+1.0
AML	Almayashu	4.87	13	P	Pn	04 28 31.4	+1.5
	SNR=276						
UCH	Uchtor	5.15	20	P	Pn	04 28 35.0	+1.5
	SNR=41						
EKS2	Erkin-Say	5.40	13	P	Pn	04 28 38.1	+1.7
	SNR=36						
SARP	Sargodha	5.48	176	P	Pn	04 28 37.4	+0.1
AAK	Ala-Archa	5.53	18	P	Pn	04 28 39.9	+1.9
	12nm,0.3s,baz=196,slow=8.4,SNR=177						
AAK				S	Sn	04 29 41.6	-0.7
	9.3nm,0.3s,baz=314,slow=23,SNR=15						
AAK	Ala-Archa	5.53	18	P	Pn	04 28 40.0	+1.9
	SNR=69						
AAK	Ala-Archa	5.53	18	PN	Pn	04 28 39.6	+1.6
AAK				S	Sn	04 29 41.8	-0.5
AAK	Ala-Archa	5.53	18	⇑P	Pn	04 28 39.7	+1.6
	37nm,0.5s						
AAK				⇓S	Sn	04 29 41.8	-0.5
	69nm,0.8s						
AAK	Ala-Archa	5.53	18	Pn	Pn	04 28 39.7	+1.7
KBK	Karagaybulak	5.67	21	P	Pn	04 28 41.7	+1.8
	SNR=22						
ULHL	Ulahol	5.77	32	P	Pn	04 28 42.3	+1.1
	SNR=11						
KK02	Karatay Array	5.84	348	⇑P	Pn	04 28 43.1	+1.2
	14nm,0.5s,baz=162,slow=11						
KK02				⇑S	Sn	04 29 44.9	-4.4
	84nm,0.8s,baz=179,slow=23						
KK31	Karatay Array	5.84	348	PN	Pn	04 28 43.1	+1.2
KKAR	Karatay Array	5.84	348	PN	Pn	04 28 43.0	+1.1
KKAR	Karatay Array	5.84	348	Pn	Pn	04 28 43.0	+1.1
BOOM	Boomskoye usch	5.85	28	PN	Pn	04 28 43.7	+1.5
BOOM	Boomskoye usch	5.85	28		Pn	04 28 43.7	+1.5
CHMS	Chumysh	5.94	19	P	Pn	04 28 44.6	+1.5
	SNR=7.0						
KDJ	Kajisay	6.10	38	PN	Pn	04 28 46.4	+0.9
KDJ	Kajisay	6.10	38	Pn	Pn	04 28 46.4	+0.9
TKM2	Tokmak 2	6.11	24	P	Pn	04 28 47.1	+1.6
	SNR=86						
TKM2	Tokmak 2	6.11	24	PN	Pn	04 28 46.9	+1.3
TKM2	Tokmak 2	6.11	24	⇑P	Pn	04 28 46.9	+1.3
	56nm,0.6s						
TKM2				⇑S	Sn	04 29 50.8	-5.1
	9.3nm,0.6s						
USP	Ospenovka	6.13	16	P	Pn	04 28 46.4	+0.8
	SNR=6.7						
DHRM	DHARAMSHALA	6.15	145	*e*P	Pn	04 28 47.0	+0.7
DHRM				*e*S	Sn	04 29 54.0	-3.0
DHRM				IAML		04 29 58.2	
	comp=E,271nm,0.3s						
DHRM				IAML		04 29 58.2	
	comp=N,280nm,0.5s						
MDOK	Medeo	6.86	31	PN	Pn	04 28 56.2	+1.0
MDOK	Medeo	6.86	31	⇓P	Pn	04 28 56.3	+1.0
	comp=N,32nm,0.6s						
MDOK				S	Sn	04 30 03.9	-10
	comp=N,7.1nm,0.6s						
SMLA	Simla	7.49	145	*e*P	Pn	04 29 03.7	+0.3
SMLA				*e*S	Sn	04 30 23.2	-5.1
SMLA				IAML		04 30 27.3	
	comp=N,103nm,0.3s						
SMLA				IAML		04 30 27.7	
	comp=E,96nm,0.7s						
HRA	Herat	8.60	253	Pn	Pn	04 29 18.9	+0.9
KUDL	Kundal	9.91	157	*e*P	Pn	04 29 33.6	-1.3
OTUK	Ortayu	10.84	1	P	Pn	04 29 46.4	-0.4
OTUK	Ortayu	10.84	1	⇓P	Pn	04 29 46.4	-0.4
	comp=E,3.7nm,0.8s						
GEYT	Alibeck	11.16	277	P	Pn	04 29 50.6	-0.3
	comp=E,0.7nm,0.3s,baz=132,slow=50,SNR=2.1						
GEYT				S	Sn	04 31 52.5	-2.8
	comp=E,1.5nm,0.3s,baz=345,slow=39,SNR=3.3						
GEYT				LR	LR	04 35 02.7	
	comp=E,56nm,18.2s,baz=215,slow=41						
MAKZ	Makanchi	11.88	35	P	Pn	04 29 59.6	-0.5
MAKZ	Makanchi	11.88	35	⇓P	Pn	04 29 59.6	-0.5
	comp=E,5.2nm,0.5s						
MAKZ	Makanchi	11.88	35		Pn	04 29 59.4	-0.7
MK31	Makanchi Array	12.02	35	P	Pn	04 30 01.8	0.0
MK31	Makanchi Array	12.02	35	Pn	Pn	04 30 01.8	0.0
MKAR	Makanchi Array	12.02	35	P	Pn	04 30 01.2	-0.5
	comp=E,0.4nm,0.3s,baz=224,slow=10,SNR=20						
MKAR	Makanchi Array	12.02	35	*ce*P	Pn	04 30 02.0	+0.2
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MKAR	Makanchi Array	12.02	35	Pn	Pn	04 30 01.5	-0.2
PYUN	Piuthan	12.98	132	*e*P	Pn	04 30 13.4	-0.9
	comp=Z,18nm,0.3s						
DANN	Dangsing	13.26	129	*e*P	Pn	04 30 17.5	-0.4
	comp=Z,7.5nm,0.3s						
KOLN	Koldanda	13.59	132	*e*P	Pn	04 30 21.7	-0.2
	comp=Z,6.0nm,0.3s						
KURBB	Kurchatov Arra	13.98	17	P	Pn	04 30 24.6	-1.7
	comp=Z,0.1nm,0.3s,baz=208,slow=10,SNR=5.5						
GKN	Gorkha	14.05	128	*e*P	Pn	04 30 29.7	+2.1
	comp=Z,34nm,0.4s						
KURK	Kurchatov	14.09	17	P	Pn	04 30 27.6	-0.1
KURK	Kurchatov	14.09	17	Pn	Pn	04 30 27.6	-0.1
DMN	Daman	14.62	128	*e*P	Pn	04 30 36.3	+1.6
	comp=Z,11nm,0.4s						
AB31	Akbulak array	14.80	327	P	Pn	04 30 36.9	+0.6
AB31	Akbulak array	14.80	327	⇑P	Pn	04 30 36.9	+0.6
	comp=Z,1.5nm,0.6s,baz=140,slow=13,SNR=36						
ABKAR	Akbulak array	14.80	327		Pn	04 30 37.0	+0.7
PKIN	Phulchoki	14.83	127	*e*P	Pn	04 30 38.8	+1.6
	comp=Z,5.9nm,0.3s						
PKI	Pulchoki	14.84	127	*e*P	Pn	04 30 39.2	+1.8
	comp=Z,6.9nm,0.4s						
GUN	Gumba	14.91	125	*e*P	P	04 30 40.5	+1.4
	comp=Z,8.7nm,0.3s						
JIRN	Jiri	15.28	125	*e*P	P	04 30 44.8	+1.6
	comp=Z,6.4nm,0.3s						
BVAR	Borovoye Array	15.68	356	P	P	04 30 46.8	-0.1
	comp=Z,1.4nm,0.3s,baz=135,slow=11,SNR=7.7						
BRVK	Borovoye	15.72	356	*i* P	P	04 30 46.7	-0.7
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BRVK	Borovoye	15.72	356	⇑P	P	04 30 46.6	-0.7
	comp=Z,4.1nm,0.8s						
RAMN	Ramite	16.03	126	*e*P	P	04 30 51.9	+0.5
	comp=Z,8.7nm,0.4s						
TAPN	Taplejung	16.49	123	*e*P	Pn	04 30 59.2	+1.9
	comp=Z,3.4nm,0.3s						
DGZ	Jazzator, Alta	16.50	37	*i* P	P	04 30 56.8	+0.6
DGZ				pmax	pmax		
	comp=Z,8.0nm,0.6s						
AKTO	Aktyubinsk	16.51	327	P	Pn	04 30 58.1	+1.0
	comp=Z,0.5nm,0.3s,baz=137,slow=9.2,SNR=10						
AKTO				S	S	04 33 54.8	-3.8
	comp=Z,0.1nm,0.3s,baz=352,slow=17,SNR=1.9						
AKTO	Aktyubinsk	16.51	327	⇑P	Pn	04 30 58.1	+1.0
	comp=Z,3.6nm,0.8s						
ODAN	Odare	16.61	125	*e*P	P	04 30 58.4	+0.7
	comp=Z,6.6nm,0.5s						
ZAA0	Zalesovo Array	18.72	24	⇓P	P	04 31 20.6	+0.5
	comp=Z,1.5nm,0.5s						
ZAA0	Zalesovo Array	18.72	24	P	P	04 31 20.6	+0.5
ZALV	Zalesovo Beam	18.72	24	P	P	04 31 20.8	+0.7
	comp=Z,5.2nm,0.3s,baz=221,slow=10,SNR=77						
ZALV	Zalesovo Beam	18.72	24	P	P	04 31 20.6	+0.5
BRTR	Keskin Array B	30.07	286	P	P	04 33 09.0	+1.6
	comp=Z,0.1nm,0.3s,baz=96,slow=9.6,SNR=5.2						
BRTR	Keskin Array B	30.07	286	P	P	04 33 09.0	+1.6
AKASG	Malin Array Be	33.13	308	P	P	04 33 34.1	+0.2
	comp=Z,0.4nm,0.4s,baz=107,slow=8.5,SNR=4.3						
ELL	Elmali	33.52	282	P	P	04 33 39.7	+2.1
ELL				pmax	pmax		
	comp=Z,33nm,1.2s						
ELL	Elmali	33.52	282	P	P	04 33 39.7	+2.1
FINES	FINESS Array B	37.28	325	P	P	04 34 09.5	+0.5
	comp=Z,1.5nm,1.0s,baz=123,slow=9.4,SNR=5.2						
ARCES	ARCESS Array B	40.68	337	P	P	04 34 38.0	+0.8
	comp=Z,0.5nm,0.4s,baz=115,slow=8.9,SNR=8.0						
ARCES	ARCESS Array B	40.68	337	P	P	04 34 38.1	+0.9
ARCES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ARCES	ARCESS Array B	40.68	337	P	P	04 34 38.1	+0.9
ARCES				IAmb	IAmb	04 35 05.6	
	comp=Z,3.1nm,1.0s						
CLL	Collm	43.37	308	*e*pP	pP	04 35 44.0	+1.0
CLL				LmV		04 59 00.0	
	comp=Z,200nm,18.4s						
CLL				LmV		09 40 00.0	
	comp=Z,100nm,18.1s						
NC303	NORSAR Array S	44.17	323	P	P	04 35 06.0	+0.6
NC303				IAmb	IAmb	04 35 20.1	
	comp=Z,9.3nm,1.1s						
NB2	NORSAR Subarra	44.24	322	P	P	04 35 06.1	+0.1
	comp=Z,0.5nm,0.5s,baz=94,slow=7.9						
NOA	NORSAR Array B	44.24	322	P	P	04 35 05.5	-0.5
	comp=Z,0.2nm,0.3s,baz=105,slow=6.9,SNR=5.8						
SENIN	Lac Senin/Sane	47.90	302	P	P	04 35 35.5	+0.6
SENIN				IAmb	IAmb	04 36 02.4	
	comp=Z,4.1nm,1.1s						
ESDC	Sonseca Array	57.87	298	P	P	04 36 47.9	+0.2
	comp=Z,0.4nm,0.5s,baz=54,slow=7.4,SNR=5.0						
TORD	Torodi Ar. Bea	66.67	269	P	P	04 37 45.2	-1.2
	comp=Z,1.8nm,0.4s,baz=48,slow=5.8,SNR=47						
TORD				LR	LR	05 13 19.6	
	comp=Z,153nm,18.6s,baz=330,slow=41						
TORD	Torodi Ar. Bea	66.67	269	P	P	04 37 45.2	-1.2
TOLK	Toolik Lake Re	69.82	15	P	P	04 38 05.4	+0.3
TOLK				IAmb	IAmb	04 38 06.2	
	comp=Z,2.4nm,0.9s						
KOWA	Kowa	70.45	274	P	P	04 38 09.3	-0.4
KOWA				IAmb	IAmb	04 38 10.2	
	comp=Z,3.8nm,0.8s						
IMAR	Indian Mountai	71.03	18	P	P	04 38 12.2	-0.2
BMAR	Burnt Mountain	71.85	14	P	P	04 38 18.1	+0.7
INK	Inuvik	72.87	10	P	P	04 38 23.4	+0.1
	comp=Z,0.5nm,0.4s,baz=348,slow=6.6,SNR=10						
INK	Inuvik	72.87	10	P	P	04 38 23.5	+0.3
INK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
INK	Inuvik	72.87	10	P	P	04 38 23.5	+0.3
K20K	Telida	73.06	20	P	P	04 38 24.9	+0.4
K20K				IAmb	IAmb	04 38 30.2	
	comp=Z,3.1nm,1.1s						
ILAR	Eielson Array	73.66	16	P	P	04 38 27.4	-0.6
	comp=Z,0.5nm,0.9s,baz=325,slow=7.7,SNR=4.7						
ILAR	Eielson Array	73.66	16	P	P	04 38 27.5	-0.5
ILAR	Eielson Array	73.66	16	P	P	04 38 27.5	-0.5
KTH	Kantishna Hill	73.72	19	P	P	04 38 28.2	-0.3
KTH				IAmb	IAmb	04 38 29.8	
	comp=Z,3.1nm,1.2s						
PPLA	Purkeypile	73.93	19	P	P	04 38 29.6	-0.2
PPLA				IAmb	IAmb	04 38 56.6	
	comp=Z,6.2nm,1.2s						
SCRK	Sand Creek	74.98	16	P	P	04 38 35.6	-0.2
SCM	Sheep Creek Mo	76.07	18	P	P	04 38 41.8	-0.1
SCM				pmax	pmax		
	comp=Z,7.0nm,1.2s						
SCM	Sheep Creek Mo	76.07	18	P	P	04 38 41.8	-0.1
SCM				IAmb	IAmb	04 39 04.1	
	comp=Z,7.0nm,1.2s						
FALS	False Pass	76.52	29	P	P	04 38 44.0	-0.4
YKA	Yellowknife Ar	80.31	3	P	P	04 39 04.8	-0.2
	comp=Z,0.4nm,0.4s,baz=337,slow=5.5,SNR=6.7						

IDC ***23*** *04:36:39.5±9.0, 3°.25N×123°.55E, h391^{km}±108^{km}, mb3.2/10, mb1 3.3/10, mb1mx3.0/38, mbtmp4.0/10, Error ellipse: s-maj=132.3km s-min=21.0km az=65.0*

ISC 23 04:36:40.3±0.9**, 3°.3N**±0°.4×**123°.6E**±0°.8**, h400**^{km}**, n10,** σ0^s.**85**/10**, mb3.6**/10**, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.36	156	P	P	04 41 32.6	-0.8
	0.9nm,0.4s,baz=332,slow=11,SNR=6.9						
ASAR	Alice Springs	28.59	160	P	P	04 42 01.7	-0.2
	0.2nm,0.3s,baz=343,slow=7.9,SNR=2.4						
STKA	Stephens Creek	38.91	155	P	P	04 43 30.1	+0.6
	0.6nm,0.4s,baz=338,slow=11,SNR=1.8						
SONM	Songino Array	46.81	344	P	P	04 44 32.4	+0.4
	0.3nm,0.5s,baz=178,slow=7.2,SNR=2.2						
MKAR	Makanchi Array	56.19	327	P	P	04 45 40.2	-0.2
	1.4nm,0.4s,baz=120,slow=7.9,SNR=26						
ZALV	Zalesovo Beam	59.62	335	P	P	04 46 02.4	-1.4
	0.5nm,0.5s,baz=108,slow=8.0,SNR=2.1						
KURBB	Kurchatov Arra	60.48	329	P	P	04 46 09.8	+0.3
	1.3nm,0.5s,baz=128,slow=6.7,SNR=9.2						
AKTO	Aktyubinsk	72.09	322	P	P	04 47 23.0	+0.6
	0.8nm,0.4s,baz=84,slow=9.2,SNR=2.2						
ARCES	ARCESS Array B	89.80	340	P	P	04 48 54.9	+0.5
	3.2nm,1.0s,baz=66,slow=4.4,SNR=1.7						
FINES	FINESS Array B	90.75	332	P	P	04 48 57.8	-1.1
	1.2nm,0.9s,baz=69,slow=7.6,SNR=1.4						

IDC ***23*** *04:37:44.3±1.0, 31°.57S×71°.71W, h0^{km}, mb4.1/5, mb1 4.1/9, mb1mx3.9/24, mbtmp4.0/9, ML3.9/4, MS3.4/7, Ms1 3.4/7, ms1mx3.2/21, Error ellipse: s-maj=28.4km s-min=24.5km az=128.0*

SJA ***23*** *04:37:45.3±1.0, 31°.58S×71°.98W, h14^{km}±8^{km}, ML4.3, MW4.2*

GUC ***23*** *04:37:48.0±0.8, 31°.54S×71°.85W, h36^{km}±2^{km}, ML4.3*

NEIC ***23*** *04:37:48.0±1.4, 31°.53S±0°.03×71°.92W±0°.04, h24^{km}±4^{km}, mb4.6/16, Mwr4.0/44, ML4.3(GUC), Error ellipse: s-maj=6.0km s-min=1.0km az=125.0*

NEIC ***23*** *04:37:48.1, 31°.53S×71°.97W, h26^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.21; $M_{\theta\theta}$0.08; $M_{\phi\phi}$-1.29; $M_{r\theta}$0.31; $M_{\theta\phi}$0.03; $M_{\phi r}$0.20; Fault plane solution: $M_0$1.31000×10^{15} NP1:ϕ_s12.84000°, δ51.16000°, λ108.41000°. NP2:ϕ_s164.88000°, δ42.35000°, λ68.58000°. Principal axes: T 1.3085, Plg75.0000°, Azm343.0000°; N -0.0038, Plg14.0000°, Azm181.0000°; P -1.3047, Plg5.0000°, Azm90.0000°;*

ISC 23 04:37:44.7±2.7**, 31°.53S**±0°.03×**72°.07W**±0°.05**, h8**^{km}±17^{km}**, n127,** σ1^s.**66**/149**, mb4.6**/12**, 6C-1D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.93	23	⇑*e*P	Pb	04 38 04.4	+1.3
CO06				*e*S	Sb	04 38 16.0	+0.4
CO06				IAML		04 38 18.9	
	comp=E,24μm,0.2s						
CO06	Fray Jorge	0.93	23		Pb	04 38 04.7	+1.6
CO06					Sb	04 38 16.6	+1.0
VA06	Catapilco	1.22	148	*e*P	Pn	04 38 08.0	0.0
VA06				*e*S	Sb	04 38 22.4	-1.4
VA06				IAML		04 38 24.1	
	comp=E,18μm,0.5s						
CO03	El Pedregal	1.37	60	*e*P	Pn	04 38 09.8	-0.4
CO03				*e*S	Sn	04 38 25.3	-3.1
CO03				IAML		04 38 30.5	
	comp=E,9μm,0.4s						
CO03	El Pedregal	1.37	60		Pn	04 38 09.7	-0.4
CO03				Sn	Sn	04 38 25.4	-3.1
CO03	El Pedregal	1.37	60	*i* P	Pn	04 38 09.8	-0.4
CO03				*e*S	Sn	04 38 25.6	-2.9
VA01	Torpederas	1.53	167	⇑*e*P	Pn	04 38 13.8	+1.5
VA01				*e*S	Sn	04 38 32.5	+0.2
VA01	Torpederas	1.53	167		Pn	04 38 13.2	+0.9
VA01				Sn	Sn	04 38 31.8	-0.5

VA01	Torpederas	1.53	167	*i* P	Pn	04 38 13.4	+1.1
ROCH	El Roble	1.69	148	⇑*e*P		04 38 15.3	
ROCH				⇑*e*P	Pn	04 38 15.2	+0.5
ROCH				*e*S	Sn	04 38 36.2	-0.5
ROCH				*e*S		04 38 36.5	
ROCH				IAML		04 38 41.6	
	comp=N,5µm,0.6s						
ROCH				IAML		04 38 43.9	
	comp=N,7µm,0.5s						
ROC1	El Roble	1.69	149	*i* P	Pn	04 38 15.7	+1.0
GO04	Tololo Observa	1.74	39	*e*P	Pn	04 38 16.2	+0.8
GO04				*i* S	Sn	04 38 38.0	+0.1
GO04	Tololo Observa	1.74	39		Pn	04 38 16.1	+0.7
GO04					Sn	04 38 38.8	+0.9
CO05	La Serena	1.76	24	*e*P	Pn	04 38 16.7	+1.2
CO05				*e*S	Sn	04 38 38.6	+0.6
CO05				IAML		04 38 46.3	
	comp=E,4µm,0.6s						
CO05	La Serena	1.76	24		Pn	04 38 16.7	+1.2
VA03	San Esteban	1.78	134	*e*P	Pn	04 38 16.4	+0.6
VA03				*e*S	Sn	04 38 37.6	-1.0
VA03				IAML		04 38 41.6	
	comp=E,10µm,0.3s						
VA03	San Esteban	1.78	134		Pn	04 38 16.5	+0.6
VA03				Sn	Sn	04 38 37.5	-1.1
VA03	San Esteban	1.78	134	*i* P	Pn	04 38 16.3	+0.5
VA03				*e*S	Sn	04 38 39.1	+0.5
MT02	Curacav	1.89	156	*e*P	Pn	04 38 18.7	+1.4
MT02				*e*S	Sn	04 38 42.1	+0.7
MT02				IAML		04 38 53.0	
	comp=N,1µm,0.3s						
MT02	Curacav	1.89	156		Pn	04 38 17.9	+0.6
MT02	Curacav	1.89	156	*i* P	Pn	04 38 18.0	+0.6
PEL	Peldehue	1.99	144	⇑*e*P	Pn	04 38 19.6	+0.9
PEL				*i* S	Sn	04 38 43.5	-0.3
PEL				IAML		04 38 51.5	
	comp=E,3µm,0.1s						
PEL	Peldehue	1.99	144		Pn	04 38 19.5	+0.9
PEL	Peldehue	1.99	144	*i* P	Pn	04 38 19.7	+0.9
VA05	Santo Domingo	2.15	170	*e*P	Pn	04 38 21.9	+1.0
VA05				*e*S	Sn	04 38 48.0	+0.2
VA05				IAML		04 38 59.5	
	comp=E,5µm,0.5s						
VA05	Santo Domingo	2.15	170	Pn	Pn	04 38 21.9	+1.0
MT05	Renca	2.17	149	⇑*e*P	Pn	04 38 22.4	+1.3
MT05				*i* S	Sn	04 38 47.9	-0.3
MT05				IAML		04 39 01.2	
	comp=E,4µm,0.3s						
MT05	Renca	2.17	149		Pn	04 38 22.0	+0.9
MT05	Renca	2.17	149	*i* P	Pn	04 38 22.0	+0.9
FCH	Farellones	2.34	140	*e*P	Pn	04 38 24.7	+1.0
FCH				*e*S	Sn	04 38 53.4	+0.6
FCH				IAML		04 39 01.1	
	comp=E,2µm,0.7s						
RTLS	Leoncito	2.38	97	*i* P	Pn	04 38 26.6	+2.4
RTLS				*e*S	Sn	04 38 56.3	+2.6
RTLS				IAML		04 39 01.3	
	comp=Z,562nm,0.4s						
AUSP	Uspallata	2.38	108	*i* P	Pn	04 38 26.9	+2.6
MT09	Talagante	2.41	158	*e*P	Pn	04 38 26.3	+1.7
MT09				*i* S	Sn	04 38 55.0	+0.5
MT09				IAML		04 39 05.9	
	comp=E,2µm,0.5s						
MT09	Talagante	2.41	158	Pn	Pn	04 38 26.1	+1.5
MT01	Popeta	2.42	164	*e*P	Pn	04 38 25.7	+1.0
MT01				*e*S	Sn	04 38 55.1	+0.6
MT01				IAML		04 39 13.5	
	comp=E,1µm,0.4s						
MT01	Popeta	2.42	164		Pn	04 38 25.6	+1.0
MT01	Popeta	2.42	164	*i* P	Pn	04 38 25.7	+1.0
AROD	Rodeo	2.61	59	*i* P	Pn	04 38 30.7	+3.2
ACCO	Cerro Coronel	2.74	71	*i* P	Pn	04 38 32.3	+3.0
ACCO				*e*S	Sb	04 39 07.5	-0.6
ACCO				IAML		04 39 10.9	
	comp=Z,1µm,1.2s						
LCO	Las Campanas	2.78	26	*e*P	Pn	04 38 30.8	+1.0
LCO				*e*S	Sn	04 39 04.3	+0.7
LCO	Las Campanas	2.78	26	Pn	Pn	04 38 30.7	+1.0
LMEL	Las Melosas	2.79	146	*e*P	Pn	04 38 31.2	+1.4
LMEL				*e*S	Sn	04 39 03.9	+0.2
LMEL				IAML		04 39 14.8	
	comp=E,2µm,0.4s						
ACDV	Cuesta del Vie	2.87	63	*i* P	Pn	04 38 34.2	+3.3
ACDV				*e*S	Sb	04 39 11.4	-0.3
ACDV				IAML		04 39 19.9	
	comp=Z,636nm,1.2s						
ASAL	Salagasta	2.94	112	*i* P	Pn	04 38 35.3	+3.5
ASAL				IAML		04 39 23.5	
	comp=Z,569nm,0.5s						
BO01	Tunca	2.97	164	Pn	Pn	04 38 33.2	+1.1
BO01	Tunca	2.97	164	*i* P	Pn	04 38 33.4	+1.3
RTCV	Cerro Valdivia	3.02	97	*i* P	Pn	04 38 36.1	+3.2
RTCV				IAML		04 39 23.5	
	comp=Z,252nm,0.8s						
AAGR	Agrelo	3.15	120	*i* P	Pn	04 38 38.7	+4.0
AAGR				*e*S	Sb	04 39 21.8	+2.2
AAGR				IAML		04 39 28.9	
	comp=Z,1µm,1.9s						
BO02	Sierra Bellavi	3.42	162	Pn	Pn	04 38 39.6	+1.1
BO02	Sierra Bellavi	3.42	162	*i* P	Pn	04 38 40.0	+1.5
BO02				*e*S	Sb	04 39 25.0	-2.4
AC04	Llanos de Chal	3.43	15	Pn	Pn	04 38 39.3	+0.9
AC04	Llanos de Chal	3.43	15	*i* P	Pn	04 38 39.0	+0.6
GO05	Huala	3.47	178	Pn	Pn	04 38 39.6	+0.6
GO05	Huala	3.47	178	⇓*i*P	Pn	04 38 39.7	+0.7
AVFE	Valle Fertil	4.05	79	*i* P	Pn	04 38 48.7	+1.7
AVFE				IAML		04 39 50.4	
	comp=Z,1µm,0.6s						
GO03	Copiap	4.24	23	Pn	Pn	04 38 50.3	+0.7
GO03	Copiap	4.24	23	*i* P	Pn	04 38 50.6	+1.0
GO03				*e*S	Sb	04 39 46.5	-4.3
ML02	Panimavida	4.25	173	Pn	Pn	04 38 50.8	+1.1
VCA	Vinchina	4.35	51	*i* P	Pn	04 38 55.0	+3.7
VCA				*e*S	Sb	04 39 50.9	-3.4
VCA				IAML		04 40 01.9	
	comp=Z,986nm,0.3s						
RFA	San Rafael	4.42	138	*i* P	Pn	04 38 54.3	+2.2
RFA				IAML		04 40 06.3	
	comp=Z,181nm,1.2s						
ACHE	Chepes	4.64	87	*i* P	Pn	04 38 57.0	+1.8
ACLC	CERRO LA CRUZ	4.89	66	*i* P	Pn	04 39 00.2	+1.6
ACLC				*e*S	Sn	04 39 57.2	+1.7
ACLC				IAML		04 40 05.0	
	comp=Z,873nm,1.2s						
APLL	PUNTA DE LOS L	4.89	78	*i* P	Pn	04 39 00.0	+1.4
APLL				*e*S	Sn	04 40 00.3	+4.9
APLL				IAML		04 40 05.3	
	comp=Z,292nm,0.6s						
AC02	Maricunga	5.34	29	Pn	Pn	04 39 05.9	+0.8
AC02	Maricunga	5.34	29	*i* P	Pn	04 39 06.0	+0.8
VA04	Juan Fernndez	6.08	248	Pn	Pn	04 39 17.4	+2.5
H03N1	Juan Fernandez	6.09	250	T	T	04 46 02.4	
	baz=79,slow=72,SNR=3978						
H03N3	Juan Fernandez	6.10	250	T	T	04 46 04.5	
	baz=79,slow=72,SNR=3092						
H03N2	Juan Fernandez	6.11	250	T	T	04 46 04.0	
	baz=79,slow=72,SNR=3679						
CYA	Choya	6.25	62	*i* P	Pn	04 39 18.7	+1.5
CYA				*e*S	Sn	04 40 32.1	+3.4
CYA				IAML		04 40 36.4	
	comp=Z,177nm,1.1s						
PB14	IPOC Station P	7.04	12	Pn	Pn	04 39 28.1	-0.2
LC01	Cunco	7.35	179	Pn	Pn	04 39 33.0	+0.7
AHML	Horco Molle	7.55	53	*i* P	Pn	04 39 36.2	+1.1
AHML				IAML		04 41 16.4	
	comp=Z,46nm,1.3s						
PB15	IPOC Station P	8.61	16	Pn	Pn	04 39 48.1	-1.6
PLCA	Paso Flores	9.26	173	Pn	Pn	04 39 59.2	+0.6
	comp=Z,0.6nm,0.3s,baz=334,slow=12,SNR=24						
PLCA				LR	LR	04 43 57.3	
	comp=Z,178nm,18.6s,baz=349,slow=41						
PLCA	Paso Flores	9.26	173	Pn	Pn	04 39 59.9	+1.3
PB04	IPOC Station P	9.32	11	Pn	Pn	04 39 58.8	-0.7
LVC	Limon Verde	9.32	18	Pn	Pn	04 39 57.3	-2.4
	comp=Z,0.6nm,0.3s,baz=122,slow=14,SNR=2.4						
LVC				Sn	Sn	04 41 46.9	+1.9
	comp=Z,1.3nm,0.3s,baz=142,slow=6.2,SNR=3.6						
LVC				LR	LR	04 43 42.0	
	comp=Z,220nm,19.8s,baz=214,slow=39						
LVC	Limon Verde	9.32	18	Pn	Pn	04 39 57.9	-1.8
LL05	Los Muermos	9.92	186	Pn	Pn	04 40 07.3	-0.2
TRQA	Tornquist	10.54	131	Pn	Pn	04 40 16.9	+0.9
ITQB	Itaqui	13.43	86	Pn	Pn	04 40 54.3	-1.3
CPUP	Villa Florida	13.90	72	Pn	Pn	04 41 00.7	-1.4
	comp=Z,0.1nm,0.3s,baz=339,slow=8.9,SNR=1.6						
CPUP				Sn	Sn	04 43 30.9	-5.7
	comp=Z,0.3nm,0.3s,baz=234,slow=11,SNR=2.9						
CPUP				LR	LR	04 46 35.3	
	comp=Z,134nm,18.6s,baz=246,slow=39						
CPUP	Villa Florida	13.90	72	Pn	Pn	04 41 00.4	-1.7
PLTB	Pedras Altas	15.73	96	Pn	Pn	04 41 23.2	-3.4
SIV	San Ignacio	18.43	35	P	P	04 41 59.9	-0.8
	comp=Z,0.3nm,0.3s,baz=208,slow=7.6,SNR=13						
SIV				LR	LR	04 49 38.7	
	comp=Z,67nm,19.5s,baz=144,slow=39						
PTLB	Pontes e Lacer	19.89	39		P	04 42 15.1	-1.5
NNA	Nana	19.95	346	LR	LR	04 48 45.5	
	comp=Z,63nm,20.0s,baz=187,slow=33						
VILB	Vilhena	21.48	33	P	P	04 42 33.0	-0.8
ETMB	Extrema	22.28	15	P	P	04 42 43.3	+0.9
USHA	Ushuaia	23.43	175	LR	LR	04 52 26.0	
	comp=Z,233nm,18.5s,baz=1.5,slow=38						
SAML	Samuel	23.94	22	P	P	04 42 59.4	0.0
BDFB	Brasilia	27.04	60	P	P	04 43 26.0	-1.7
	comp=Z,6.1nm,1.0s,baz=236,slow=6.7,SNR=8.5						
BDFB				LR	LR	04 55 41.4	
	comp=Z,175nm,21.1s,baz=326,slow=40						
BDFB	Brasilia	27.04	60	P	P	04 43 26.0	-1.7
BDFB				IAmb	IAmb	04 43 27.0	
	comp=Z,9.8nm,1.0s						
TBTG	Tabatinga, AM	27.28	5	P	P	04 43 30.9	+1.2
TBTG				IAmb	IAmb	04 43 32.1	
	comp=Z,15nm,0.8s						
BOAV	Boa Vista	35.48	20	P	P	04 44 41.5	-0.3
BOAV				IAmb	IAmb	04 44 42.7	
	comp=Z,3.5nm,0.9s						
VNA3	Neumayer Olymp	51.65	159	P	P	04 46 50.4	-1.1
VNA1	Neumayer--Stat	51.95	158	P	P	04 46 54.6	+0.9
VNA2	Neumayer--Watz	52.30	158	P	P	04 46 57.3	+1.0
	baz=291,slow=8.5						
SNAA	Sanae	53.88	159	P	P	04 47 09.0	+1.0
SNAA	Sanae	53.88	159	P	P	04 47 08.3	+0.2
SNAA				IAmb	IAmb	04 47 09.8	
	comp=Z,3.7nm,1.0s						
H06E1	SOCORRO T-PHAS	62.39	318	T	T	05 56 08.4	
	SNR=12						
TXAR	Lajitas Array	67.58	330	P	P	04 48 44.0	+2.1
	comp=Z,0.2nm,0.5s,baz=158,slow=6.7,SNR=3.8						
TXAR	Lajitas Array	67.58	330	P	P	04 48 43.9	+2.0
V52A	Sevierville	67.89	350	P	P	04 48 44.2	+0.6
V52A				IAmb	IAmb	04 48 59.3	
	comp=Z,12nm,1.4s						
LIC	Lamto	74.03	72	*e*P	P	04 49 20.5	-0.9
	comp=Z,9.0nm,0.7s						
TIC	Toumodi	74.28	72	*e*P	P	04 49 22.0	-0.9
KIC	Kosan Boka	74.34	72	*e*P	P	04 49 22.7	-0.5
	comp=Z,13nm,0.8s						
DBIC	Dimbokro	74.42	72	P	P	04 49 23.4	-0.3
	comp=Z,4.4nm,0.7s,baz=231,slow=5.1,SNR=7.9						
DBIC	Dimbokro	74.42	72	P	P	04 49 23.2	-0.5
DBIC				IAmb	IAmb	04 49 24.2	
	comp=Z,10nm,1.1s						
E62A	Clayton Lake	77.82	2	P	P	04 49 44.3	+2.0
D62A	Allapoint, All	78.30	2	P	P	04 49 46.2	+1.4
KOWA	Kowa	79.65	66	P	P	04 49 52.9	-0.1
KOWA				IAmb	IAmb	04 49 53.4	
	comp=Z,4.3nm,0.7s						
NVAR	Mina Array Bea	81.85	325	P	P	04 50 07.7	+3.1
	comp=Z,0.2nm,0.6s,baz=167,slow=7.0,SNR=4.1						
TORD	Torodi Ar. Bea	83.40	70	P	P	04 50 12.2	-0.7
	comp=Z,5.4nm,0.8s,baz=262,slow=4.7,SNR=31						
TORD	Torodi Ar. Bea	83.40	70	P	P	04 50 12.6	-0.3
TORD				IAmb	IAmb	04 50 13.5	
	comp=Z,4.6nm,0.8s						
WRA	Warramunga Arr	122.89	210	PKP	PKPdf	04 56 41.4	-0.7
	comp=Z,0.1nm,0.5s,baz=132,slow=1.2,SNR=1.6						
H11S2	WAKE ISLAND Hy	125.75	271	T	T	07 15 40.1	
	baz=116,slow=75,SNR=57						
H11S1	WAKE ISLAND Hy	125.76	271	T	T	07 15 37.2	
	baz=116,slow=75,SNR=64						
H11S3	WAKE ISLAND Hy	125.76	271	T	T	07 15 40.0	
	baz=116,slow=75,SNR=65						
H11N3	WAKE ISLAND Hy	126.10	272	T	T	07 16 08.5	
	baz=116,slow=76,SNR=20						
H11N1	WAKE ISLAND Hy	126.11	272	T	T	07 16 07.0	
	baz=116,slow=76,SNR=11						
H11N2	WAKE ISLAND Hy	126.11	272	T	T	07 16 07.2	
	baz=116,slow=76,SNR=37						
ZALV	Zalesovo Beam	152.13	30	PKPbc	PKPbc	04 57 41.0	+0.8
	comp=Z,8.4nm,0.4s,baz=299,slow=3.2,SNR=35						
ZALV	Zalesovo Beam	152.13	30		PKPbc	04 57 40.5	+0.3
MKAR	Makanchi Array	155.10	45	PKPbc	PKPbc	04 57 47.1	
	comp=Z,0.9nm,0.8s,baz=304,slow=2.6,SNR=6.6						
MKAR				PKPab	PKPab	04 58 03.0	+0.3
	comp=Z,0.8nm,0.8s,baz=292,slow=4.6,SNR=4.3						
MKAR	Makanchi Array	155.10	45		PKPbc	04 57 46.4	

MOS ***23*** *05:04:24.2±0.8, 42°.41N×142°.81E, h106^{km}, mb4.2/1, Error ellipse: s-maj=23.4km s-min=12.0km az=56.3*

SKHL ***23*** *05:04:28.1±0.4, 42°.70N×143°.10E, h111^{km}±9^{km}, mb5.0/5, msha5.7/4*

IDC ***23*** *05:04:28.4±4.8, 42°.70N×142°.86E, h115^{km}±26^{km}, mb3.4/7, mb1 3.6/7, mb1mx3.1/49, mbtmp3.8/7, Error ellipse: s-maj=55.1km s-min=24.1km az=176.0*

JMA ***23*** *05:04:28.2±0.1, 42°.70N×142°.99E, h98^{km}±2^{km}, M3.3*

JMA Felt I J1.

ISC 23 05:04:27.2±0.8**, 42°.63N**±0°.05×**142°.96E**±0°.03**, h108**^{km}±6^{km}**, n47, σ0^{s}.80**/64**, mb3.8**/7**, 1D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCH	Churui	0.29	92	P	Pn	05 04 42.5	-0.1
JCH				*e*S	Sn	05 04 53.2	-1.0
JNBK	Urakawa-nobuka	0.38	204	P	Pn	05 04 43.8	+0.8
JNBK				*e*S	Sn	05 04 55.8	+0.9
JTHR	Tokachihiroo	0.42	143	P	Pn	05 04 43.5	+0.3
JTHR				*e*S	Sn	05 04 54.8	-0.5
JBT2	Biratori 2	0.47	289	P	Pn	05 04 43.4	-0.1
JFR	Furan	0.60	333	P	Pn	05 04 44.1	-0.4
JEM	Erimo	0.62	167	P	Pn	05 04 45.7	+1.0
JOB	Onbets	0.70	66	P	Pn	05 04 45.6	+0.3
JOB				S	Sn	05 04 59.2	+0.3
JIAM	Iburiatsuma	0.77	270	P	Pn	05 04 47.1	+1.2
JIAM				*e*S	Sn	05 05 02.0	+2.0
JAR	Ashorobuto	0.90	41	P	Pn	05 04 47.0	-0.1
JAR				S	Sn	05 05 01.3	-0.8
JAB	Ashibetsu	1.03	329	P	Pn	05 04 48.2	-0.3
JEW	Eniwo	1.14	281	P	Pn	05 04 49.6	0.0
JEW				*e*S	Sn	05 05 06.3	-0.3
JKK2	Kamakawa 2	1.26	353	P	Pn	05 04 50.5	-0.5
JISS	Ishikarishitsu	1.31	300	P	Pn	05 04 51.5	0.0
JISS				S	Sn	05 05 09.7	-0.3
JAK	Akkeshi	1.33	73	P	Pn	05 04 51.6	-0.2
JAK				*e*S	Sn	05 05 09.8	-0.6
JMP	Maruseppu	1.41	12	P	Pn	05 04 52.9	+0.1
JMP				S	Sn	05 05 11.9	-0.4
AKK	Akkeshi	1.44	74	*e*P	Pn	05 04 52.9	-0.1
AKK				AMB	AMB	05 04 53.8	
	300nm,0.4s						
AKK				*e*S	Sn	05 05 11.8	-0.9
AKK				A	A	05 05 13.0	
	1µm,0.3s						
AKK				A	A	05 05 13.0	
	2µm,0.3s						
JHR	Hokuryu	1.44	321	P	Pn	05 04 53.1	0.0
JTKR	Abashiri--Toko	1.51	27	P	Pn	05 04 54.0	+0.1
JTKR				*e*S	Sn	05 05 13.8	-0.5
JKA	Kamikawa-asahi	1.51	350	*e*P	Pn	05 04 54.3	+0.3
ASAJ	Asahikawa	1.52	350	P	Pn	05 04 54.3	+0.3
	4.7nm,0.3s,baz=214,slow=10.0,SNR=11						
ASAJ				S	Sn	05 05 14.7	+0.3
	4.7nm,0.3s,baz=156,slow=10,SNR=11						
JKB	Kayabe	1.61	243	P	Pn	05 04 54.7	-0.4
JKB				S	Sn	05 05 14.9	-1.5
NMR	Nemuro--Hokkai	2.16	69	⇓*i*PN	Pn	05 05 01.6	-0.4
NMR				*e*S	Sn	05 05 27.2	-1.6
NMR	Nemuro--Hokkai	2.16	69	*i* P	Pn	05 05 01.0	-1.0
NMR				*e*S	Sn	05 05 27.0	-1.8
GLVR	Golovnino	2.18	58	*e*PN	Pn	05 05 02.9	+0.7
GLVR				*e*S	Sn	05 05 28.8	-0.3
GLVR				pmax	pmax		
	comp=N,48nm,0.1s						
GLVR				pmax	pmax		
	comp=E,16nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,405nm,0.1s						
GLVR				smax	smax		
	comp=N,318nm,0.2s						
GLVR				smax	smax		
	comp=E,536nm,0.3s						
GLVR	Golovnino	2.18	58	*e*P	Pn	05 05 02.0	-0.2
GLVR				AMB	AMB	05 05 03.0	
	comp=E,405nm,0.4s						
GLVR				*e*S	Sn	05 05 28.0	-1.1
GLVR				A	A	05 05 32.0	
	comp=E,318nm,0.3s						
GLVR				A	A	05 05 32.0	
	comp=E,536nm,0.3s						
RUSJ	Misakicho	2.23	48	*e*PN	Pn	05 05 04.2	+1.3
RUSJ				*e*S	Sn	05 05 32.1	+1.8
GRPR	Tuman	2.46	55	*e*PN	Pn	05 05 07.1	+1.1
GRPR				*e*S	Sn	05 05 36.4	+0.6
GRPR				pmax	pmax		
	comp=Z,238nm,0.2s						
GRPR				pmax	pmax		
	comp=N,102nm,0.1s						
GRPR				pmax	pmax		
	comp=E,118nm,0.1s						
GRPR				smax	smax		
	comp=N,349nm,0.4s						
GRPR				smax	smax		
	comp=E,217nm,0.3s						
GRPR	Tuman	2.46	55	*e*P	Pn	05 05 07.0	+1.1
GRPR				AMB	AMB	05 05 09.0	
	comp=E,238nm,0.4s						
GRPR				*e*S	Sn	05 05 36.0	+0.2
GRPR				A	A	05 05 39.0	
	comp=E,349nm,0.4s						
GRPR				A	A	05 05 39.0	
	comp=E,217nm,0.4s						
YUK	Yuzh-Kuril'sk	2.54	55	*e*PN	Pn	05 05 07.5	+0.5
YUK				*e*S	Sn	05 05 38.2	+0.6
YUK				pmax	pmax		
	comp=Z,415nm,0.2s						
YUK				pmax	pmax		
	comp=N,88nm,0.1s						
YUK				smax	smax		
	comp=N,292nm,0.4s						
YUK				smax	smax		
	comp=E,234nm,0.4s						
YUK	Yuzh-Kuril'sk	2.54	55	*e*P	Pn	05 05 07.0	0.0
YUK				AMB	AMB	05 05 09.0	
	comp=E,370nm,0.5s						
YUK				*e*S	Sn	05 05 38.0	+0.4
YUK				A	A	05 05 41.0	
	comp=E,340nm,0.3s						
YUK				A	A	05 05 41.0	
	comp=E,220nm,0.3s						
KUR	Kuril'sk	4.40	52	*e*P	Pn	05 05 33.5	+1.8
KUR				AMB	AMB	05 05 39.9	
	comp=E,90nm,0.9s						
H11N2	WAKE ISLAND Hy	30.47	131	T	T	05 42 13.2	
	baz=325,slow=75,SNR=19						
H11N1	WAKE ISLAND Hy	30.48	131	T	T	05 42 13.6	
	baz=325,slow=75,SNR=20						
H11N3	WAKE ISLAND Hy	30.48	131	T	T	05 42 14.7	
	baz=325,slow=75,SNR=18						
H11S1	WAKE ISLAND Hy	31.35	133	T	T	05 43 20.5	
	baz=333,slow=72,SNR=33						
H11S3	WAKE ISLAND Hy	31.35	133	T	T	05 43 17.7	
	baz=333,slow=72,SNR=19						
H11S2	WAKE ISLAND Hy	31.37	133	T	T	05 43 20.2	
	baz=333,slow=72,SNR=19						
MKAR	Makanchi Array	42.38	297	P	P	05 12 10.0	-0.7
	comp=E,0.4nm,0.7s,baz=83,slow=9.3,SNR=3.3						
MKAR	Makanchi Array	42.38	297	P	P	05 12 10.0	-0.7
MKAR	Makanchi Array	42.38	297	*e*P	P	05 12 10.0	-0.7
ILAR	Eielson Array	44.19	35	P	P	05 12 25.2	+0.3
	comp=E,1.0nm,0.9s,baz=271,slow=7.0,SNR=8.2						
BVAR	Borovoye Array	47.84	309	P	P	05 12 54.1	+0.4
	comp=E,1.0nm,0.4s,baz=173,slow=3.7,SNR=6.9						
INK	Inuvik	48.90	29	P	P	05 13 01.8	+0.2
	comp=E,0.5nm,0.4s,baz=298,slow=11,SNR=6.5						
FINES	FINESS Array B	64.45	332	P	P	05 14 51.0	-0.6
	comp=E,0.7nm,0.4s,baz=59,slow=6.6,SNR=12						
FINES	FINESS Array B	64.45	332	P	P	05 14 51.0	-0.6
HFS	Hagfors	69.49	336	P	P	05 15 23.1	-0.4
	comp=E,0.9nm,0.4s,baz=53,slow=7.6,SNR=10						
TXAR	Lajitas Array	85.80	53	P	P	05 16 55.4	+0.6
	comp=E,0.2nm,0.5s,baz=305,slow=3.2,SNR=3.0						

MAN 23 05:10:57.1, 13°.74N×120°.65E, h108^{km}, mb3.8, ML2.5, MS2.0, Mindoro

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NEIC ***23*** *05:16:24.1±2.4, 23°.90S±0°.06×67°.71W±0°.08, h117^{km}±5^{km}, mb4.8/77, Mwr4.8(GUC), Error ellipse: s-maj=10.5km s-min=7.9km az=78.0*

VAO ***23*** *05:16:24.2±0.3, 23°.79S×67°.67W, h121^{km}, mb5.0*

IDC ***23*** *05:16:25.4±1.0, 23°.75S×67°.60W, h128^{km}±7^{km}, mb4.1/12, mb1 4.2/17, mb1mx4.1/27, mbtmp4.5/17, MS3.3/2, Ms1 3.3/2, ms1mx2.9/20, Error ellipse: s-maj=16.4km s-min=10.9km az=30.0*

GUC ***23*** *05:16:25.9±0.7, 23°.75S×68°.06W, h153^{km}±7^{km}, ML4.8, MW4.8*

SJA ***23*** *05:16:25.4±0.4, 23°.87S×67°.87W, h132^{km}±9^{km}, ML4.1, MW4.0*

ISC 23 05:16:24.7±0.6**, 23°.86S**±0°.03×**67°.86W**±0°.03**, h130**^{km}±6^{km}**, n288, σ1^{s}.54**/313**, mb4.8**/50**, 2C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	Limon Verde	1.57	322	P	Pn	05 16 55.7	+1.7
	190nm,0.3s,baz=150,slow=8.5,SNR=1317						
LVC				S	Sn	05 17 18.4	+2.0
	1µm,0.3s,baz=353,slow=19,SNR=285						
LVC	Limon Verde	1.57	322	*e*P	Pn	05 16 55.3	+1.2
LVC				*e*S	Sn	05 17 17.7	+1.4
LVC	Limon Verde	1.57	322	Pn	Pn	05 16 55.9	+1.8
LVC				Sn	Sn	05 17 18.0	+1.6
LVC	Limon Verde	1.57	322	*i* P	Pn	05 16 55.8	+1.8
LVC				*e*S	Sn	05 17 18.3	+1.9
LVC				IAML		05 17 18.7	
	comp=Z,4µm,0.5s						
PB15	IPOC Station P	1.62	293	*e*P	Pn	05 16 55.9	+1.6
PB15				*e*S	Sn	05 17 18.7	+1.8
PB15	IPOC Station P	1.62	293		Pn	05 16 56.0	+1.6
PB15				Sn	Sn	05 17 18.3	+1.3
PB15	IPOC Station P	1.62	293	*i* P	Pn	05 16 56.1	+1.7
PB15				*e*S	Sn	05 17 18.5	+1.5
PB06	IPOC Station P	1.95	306	*e*P	Pn	05 16 59.5	+1.2
PB06				*e*S	Sn	05 17 25.0	+1.1
PB06				IAML		05 17 29.6	
	comp=N,7µm,0.5s						
PB06	IPOC Station P	1.95	306		Pn	05 16 59.5	+1.2
PB06				Sn	Sn	05 17 24.5	+0.6
PB06	IPOC Station P	1.95	306	*i* P	Pn	05 16 59.9	+1.6
SLA	San Lorenzo	2.31	112	*i* P	Pn	05 17 05.0	+2.3
SLA				*e*S	Sn	05 17 35.0	+3.1
SLA				IAML		05 17 36.6	
	comp=Z,253nm,1.3s						
HJA	Humahuaca	2.34	74	*i* P	Pn	05 17 05.8	+2.5
HJA				IAML		05 17 41.0	
	comp=Z,223nm,2.1s						
PB05	IPOC Station P	2.38	294	*e*P	Pn	05 17 04.2	+0.8
PB05				*e*S	Sn	05 17 33.3	+0.1
PB05	IPOC Station P	2.38	294	*i* P	Pn	05 17 04.3	+0.8
PB05				IAML		05 17 43.4	
	comp=Z,1µm,0.4s						
PB09	IPOC Station P	2.42	328	*e*P	Pn	05 17 05.8	+1.7
PB09				*e*S	Sn	05 17 35.2	+1.0
PB09				IAML		05 17 42.7	
	comp=N,3µm,0.3s						
PB09	IPOC Station P	2.42	328		Pn	05 17 06.0	+1.9
PB09	IPOC Station P	2.42	328	*i* P	Pn	05 17 06.0	+1.9
PB09				*e*S	Sn	05 17 36.1	+1.8
PB09				IAML		05 17 37.1	
	comp=Z,2µm,0.7s						
PB14	IPOC Station P	2.45	251	⇑*e*P	Pn	05 17 05.1	+0.5
PB14				*e*S	Sn	05 17 35.7	+0.5
PB14	IPOC Station P	2.45	251	Pn	Pn	05 17 04.9	+0.3
PB10	IPOC Station P	2.50	277	*e*P	Pn	05 17 05.7	+0.8
PB10				*e*S	Sn	05 17 35.7	0.0
PB10	IPOC Station P	2.50	277	Pn	Pn	05 17 05.9	+1.0
PB10	IPOC Station P	2.50	277	*i* P	Pn	05 17 06.0	+1.1
PB10				IAML		05 17 45.4	

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        comp=Z,699nm,0.5s
PB03  IPOC Station P      2.51 315 eP     Pn     05 17 06.2 +1.0
PB03                               eS     Sn     05 17 36.9 +0.6
PB03                                IAML         05 17 39.1
        comp=E,4µm,0.2s
PB03  IPOC Station P      2.51 315 i P    Pn     05 17 06.5 +1.3
PB03                               eS     Sn     05 17 36.2 -0.1
PB03                                IAML         05 17 38.0
        comp=Z,3µm,0.3s
AZAP  Zapla               2.58  99 i P    Pn     05 17 07.8 +1.7
AZAP                               eS     Sn     05 17 41.3 +3.3
AZAP                                IAML         05 18 00.0
        comp=Z,448nm,1.9s
PB04  IPOC Station P      2.60 305 eP     Pn     05 17 07.2 +0.8
PB04                               eS     Sn     05 17 38.1 -0.3
PB04                                IAML         05 17 39.9
        comp=E,5µm,0.3s
PB04  IPOC Station P      2.60 305        Pn     05 17 07.3 +1.0
PB04  IPOC Station P      2.60 305 i P    Pn     05 17 07.2 +0.8
PB04                               eS     Sn     05 17 38.3 -0.1
YJA   Yavi                2.73  53 i P    Pn     05 17 10.3 +2.0
FSA   Cafayete            2.82 143 i P    Pn     05 17 11.0 +1.8
PB07  IPOC Station P      2.83 318 eP     Pn     05 17 10.3 +1.0
PB07                               eS     Sn     05 17 42.9 -0.8
PB07                                IAML         05 17 43.8
        comp=E,4µm,0.4s
PB07  IPOC Station P      2.83 318  Pn    Pn     05 17 10.1 +0.8
ASTB  Santa Barbara       3.12  92 i P    Pn     05 17 14.0 +1.0
PB02  IPOC Station P      3.15 323⇑eP     Pn     05 17 13.9 +0.5
PB02                               eS     Sn     05 17 51.0  0.0
PB02  IPOC Station P      3.15 323 i P    Pn     05 17 13.9 +0.5
PB02                               eS     Sn     05 17 49.4 -1.6
PB01  IPOC Station P      3.18 331        Pn     05 17 14.2 +0.4
AC02  Maricunga           3.18 201 eP     Pn     05 17 16.1 +1.9
AC02                               eS     Sn     05 17 56.2 +3.9
AC02  Maricunga           3.18 201  Pn    Pn     05 17 16.1 +1.9
AC02  Maricunga           3.18 201 i P    Pn     05 17 16.2 +2.0
AC02                               eS     Sn     05 17 53.2 +0.8
ALOL  LOMAS DE OLMED      3.55  90 i P    Pn     05 17 19.4 +0.9
AHML  Horco Molle         3.70 142 i P    Pn     05 17 22.4 +1.8
AHML                                IAML         05 18 09.4
        comp=Z,72nm,1.1s
PB08  IPOC Station P      3.89 342⇓eP     Pn     05 17 24.3 +0.9
PB08                               eS     Sn     05 18 09.3 +0.5
PB08  IPOC Station P      3.89 342  Pn    Pn     05 17 24.1 +0.7
PB08  IPOC Station P      3.89 342 i P    Pn     05 17 24.3 +0.9
PB08                                IAML         05 18 15.8
        comp=Z,186nm,0.3s
TA01  Diego Aracena       3.92 326        Pn     05 17 22.5 -0.9
TA01  Diego Aracena       3.92 326 i P    Pn     05 17 22.3 -1.2
TA02  Huaiquique          4.14 329  Pn    Pn     05 17 25.6 -0.9
TA02  Huaiquique          4.14 329 i P    Pn     05 17 25.7 -0.7
GO03  Copiap              4.30 209 eP     Pn     05 17 28.1 -0.4
GO03                               eS     Sn     05 18 16.7 -1.3
GO03  Copiap              4.30 209  Pn    Pn     05 17 28.0 -0.4
GO03  Copiap              4.30 209 i P    Pn     05 17 28.0 -0.4
PB11  IPOC Station P      4.40 337 eP     Pn     05 17 28.9 -1.1
PB11                               i S    Sn     05 18 18.3 -2.4
PB11  IPOC Station P      4.40 337  Pn    Pn     05 17 29.0 -1.1
PB11  IPOC Station P      4.40 337 i P    Pn     05 17 29.0 -1.1
PB11                                IAML         05 18 57.9
        comp=Z,516nm,1.2s
VCA   Vinchina            4.87 184 i P    Pn     05 17 37.6 +1.4
VCA                                 IAML         05 18 47.1
        comp=Z,86nm,1.9s
CYA   Choya               4.93 158 i P    Pn     05 17 38.0 +1.2
CYA                                 IAML         05 18 53.5
        comp=Z,26nm,1.4s
AC04  Llanos de Chal      5.21 213 eP     Pn     05 17 38.4 -2.2
AC04                               eS     Sn     05 18 35.7 -4.0
AC04  Llanos de Chal      5.21 213  Pn    Pn     05 17 38.2 -2.4
AC04  Llanos de Chal      5.21 213 i P    Pn     05 17 38.7 -1.9
AC04                               eS     Sn     05 18 37.8 -2.0
ACLC  CERRO LA CRUZ       5.61 172 i P    Pn     05 17 46.0 -0.1
ACLC                                IAML         05 19 30.0
        comp=Z,22nm,0.7s
PB12  IPOC Station P      5.70 336  Pn    Pn     05 17 45.3 -2.1
PB12  IPOC Station P      5.70 336 i P    Pn     05 17 45.0 -2.4
PB12                                IAML         05 19 17.5
        comp=Z,166nm,0.6s
PB16  IPOC Station P      5.71 344        Pn     05 17 46.6 -1.3
PB16  IPOC Station P      5.71 344 i P    Pn     05 17 47.0 -0.9
PB16                                IAML         05 19 33.0
        comp=Z,122nm,0.8s
LCO   Las Campanas        5.73 206 i P    Pn     05 17 46.0 -1.9
ACDV  Cuesta del Vie      6.39 190 i P    Pn     05 17 57.0 +0.4
ACDV                                IAML         05 19 10.9
        comp=Z,48nm,0.6s
AROD  Rodeo               6.45 193 i P    Pn     05 17 58.0 +0.4
APLL  PUNTA DE LOS L      6.62 170 i P    Pn     05 17 59.0 -0.6
CO05  La Serena           6.75 206  Pn    Pn     05 17 58.0 -3.3
AVFE  Valle Fertil        6.79 177 i P    Pn     05 18 02.0 +0.1
AVFE                                IAML         05 19 22.4
        comp=Z,22nm,0.7s
ACCO  Cerro Coronel       6.79 189 i P    Pn     05 18 02.0 -0.2
ACCO                                IAML         05 19 21.0
        comp=Z,54nm,1.0s
GO04  Tololo Observa      6.82 202        Pn     05 18 00.1 -2.3
GO04  Tololo Observa      6.82 202 i P    Pn     05 18 00.0 -2.4
ACHE  Chepes              7.35 172 i P    Pn     05 18 09.0 -0.6
CO03  El Pedregal         7.40 199        Pn     05 18 07.6 -2.5
CO03  El Pedregal         7.40 199 i P    Pn     05 18 08.0 -2.1
CO06  Fray Jorge          7.58 206  Pn    Pn     05 18 08.6 -3.9
ZON   Zonda               7.70 185        Pn     05 18 13.0 -1.1
RTCV  Cerro Valdivia      8.00 184 i P    Pn     05 18 17.0 -1.2
RTCV                                IAML         05 19 55.1
        comp=Z,14nm,0.9s
RTLS  Leoncito            8.02 189 i P    Pn     05 18 17.0 -1.6
RTLS                                IAML         05 19 49.1
        comp=Z,17nm,0.7s
AUSP  Uspallata           8.45 189 i P    Pn     05 18 23.0 -1.4
ASAL  Salagasta           8.75 185 i P    Pn     05 18 27.0 -1.2
ASAL                                IAML         05 20 31.7
        comp=Z,13nm,0.8s
ARCO  CERRO ARCO          9.00 186  IAML         05 20 51.6
        comp=Z,19nm,1.6s
VA03  San Esteban         9.19 194  Pn    Pn     05 18 31.6 -2.6
MT02  Curacav             9.80 196  Pn    Pn     05 18 37.0 -5.4
MT05  Renca               9.83 194  Pn    Pn     05 18 40.3 -2.6
CPUP  Villa Florida       9.85 107  P     Pn     05 18 40.9 -2.2
        comp=Z,0.2nm,0.3s,baz=282,slow=10,SNR=5.5
CPUP                                LR    LR     05 22 37.1
        comp=Z,176nm,18.0s,baz=309,slow=38
CPUP  Villa Florida       9.85 107 eP     Pn     05 18 41.3 -1.8
CPUP  Villa Florida       9.85 107  Pn    Pn     05 18 41.1 -2.0
SIV   San Ignacio        10.09  40  P     Pn     05 18 43.1 -3.3
        comp=Z,18nm,0.3s,baz=226,slow=9.7,SNR=234
SIV                                 S     Sn     05 20 20.8  -17
        comp=Z,1.0nm,0.3s,baz=234,slow=16,SNR=4.5
MT09  Talagante          10.26 195  Pn    Pn     05 18 43.8 -4.8
MT01  Popeta             10.41 196  Pn    Pn     05 18 45.7 -4.8
BO01  Tunca              10.87 194  Pn    Pn     05 18 51.5 -5.1
ITQB  Itaqui             11.58 122 eP     Pn     05 19 02.9 -3.2
PTLB  Pontes e Lacer     11.72  46 eP     Pn     05 19 04.8 -3.1
PTLB  Pontes e Lacer     11.72  46  Pn    Pn     05 19 04.9 -3.1
AQDB  Aquidauana         11.75  76 eP     Pn     05 19 05.5 -2.9
AQDB  Aquidauana         11.75  76  Pn    Pn     05 19 07.0 -1.4
VILB  Vilhena            13.05  35 eP     Pn     05 19 23.3 -2.1
VILB  Vilhena            13.05  35  Pn    Pn     05 19 23.2 -2.1
PP1B  Ponte de Pedra     13.64  65 eP     Pn     05 19 29.6 -3.3
VA04  Juan Fernndez      13.69 222  Pn    Pn     05 19 31.4 -2.1
SALV  Santo Antonio      13.90  58 eP     Pn     05 19 34.6 -1.7
TRCB  Terra Rica         14.03  89 eP     Pn     05 19 36.2 -1.7
TRCB  Terra Rica         14.03  89  P     P      05 19 41.5 -0.1
ETMB  Extrema            14.05   7  Pn    Pn     05 19 35.2 -2.9
PTGB  Pitanga            14.43  97 eP     Pn     05 19 41.7 -1.3
NNA   Nana               14.57 323  P     Pn     05 19 46.6 +1.8
        comp=Z,1.3nm,0.3s,baz=125,slow=8.9,SNR=8.5
NNA   Nana               14.57 323  P     P      05 19 48.9 +1.2
ITAB  Concordia          14.59 107  Pn    Pn     05 19 44.0 -0.9
PLTB  Pedras Altas       14.86 125 eP     Pn     05 19 46.1 -2.2
PLTB  Pedras Altas       14.86 125  P     P      05 19 48.8 -1.9
TRQA  Tornquist          15.02 162  P     Pn     05 19 49.9 -0.4
LC01  Cunco              15.38 192  P     Pn     05 19 56.0 +1.3
PCMB  Pacaembu           15.47  85 eP     Pn     05 19 54.5 -1.6
SAML  Samuel             15.48  18  P     Pn     05 19 52.5 -3.7
PDRB  Porto dos Gac      16.13  43 eP     Pn     05 20 02.1 -2.1
CNLB  Canela             16.15 113 eP     Pn     05 20 03.0 -1.3
CZSB  Cruzeiro do Su     16.70 343 eP     Pn     05 20 10.7 -0.4
CZSB  Cruzeiro do Su     16.70 343  P     Pn     05 20 10.6 -0.4
CZSB                                IAmb  IAmb   05 20 12.8
        comp=Z,43nm,0.9s
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ITRB  Iturama            16.77  79 eP     Pn     05 20 09.8 -2.1
FRTB  Fartura            16.78  92 eP     Pn     05 20 09.4 -2.7
PLCA  Paso Flores        16.98 187  P     P      05 20 14.6 +0.5
        comp=Z,0.1nm,0.3s,baz=11,slow=14,SNR=8.6
PLCA                                LR    LR     05 26 44.7
        comp=Z,99nm,19.5s,baz=3.0,slow=36
PLCA  Paso Flores        16.98 187 eP     P      05 20 14.7 +0.5
PLCA  Paso Flores        16.98 187  P     P      05 20 14.7 +0.5
ARAG  Araguaiana, MT     17.13  65 eP     P      05 20 14.7 -1.2
TIJ01 Guaruva-PR         17.21  99 eP     P      05 20 14.6 -2.3
CLDB  Colider            17.28  44 eP     P      05 20 15.9 -1.7
LL04  Puerto Octay       17.43 192  P     P      05 20 17.9 -1.1
TER01 Tubaro-SC          17.44 109 eP     Pn     05 20 18.8 -1.2
BB19B Bebedouro          18.08  85 eP     P      05 20 25.6 -0.8
RCLB  Rio Claro- Sao     18.75  90 eP     P      05 20 31.6 -2.1
PET01 Itanhaem-SP        18.80  96 eP     P      05 20 33.3 -0.9
LL01  San Ignacio de     18.86 190  P     P      05 20 34.9 +0.3
LL01                                IAmb  IAmb   05 20 41.7
        comp=Z,18nm,0.8s
VAO   Valinhos           19.19  92 eP     P      05 20 37.5 -1.1
IPMB  Ipameri, GO        19.25  76 eP     P      05 20 38.2 -1.0
ATAH  Atahualpa          19.46 327  P     P      05 20 42.9 +1.1
        comp=Z,0.1nm,0.3s,baz=180,slow=4.0,SNR=3.3
LL02  Futaleuf           19.57 189  P     P      05 20 42.7 +0.4
TBTG  Tabatinga, AM      19.66 354 eP     P      05 20 43.4 -0.1
TBTG  Tabatinga, AM      19.66 354  P     P      05 20 44.0 +0.5
SNDB  Serra Nova Dou     19.67  56 eP     P      05 20 41.4 -2.3
BDFB  Brasilia           20.37  70  P     P      05 20 49.8 -1.5
        comp=Z,238nm,0.8s,baz=244,slow=11,SNR=368
BDFB  Brasilia           20.37  70  P     P      05 20 49.7 -1.6
PARB  Paraibuna          20.38  93 eP     P      05 20 49.6 -1.8
BSCB  Bom Sucesso        21.52  87 eP     P      05 21 02.2 -1.4
MACA  Manacapuru-AM      21.71  20 eP     P      05 21 03.8 -1.8
MACA  Manacapuru-AM      21.71  20  P     P      05 21 02.9 -2.7
MACA                                IAmb  IAmb   05 21 07.8
        comp=Z,48nm,0.5s
PEXB  Peixe              21.93  61 eP     P      05 21 05.1 -2.9
COYC  Coyhaique          21.94 188  P     P      05 21 07.8 +0.1
MAN01 Angra dos Reis     21.95  92 eP     P      05 21 06.3 -1.9
VAS01 Vassouras-RJ       22.51  91 eP     P      05 21 12.9 -0.8
ITTB  Itaituba           22.63  33 eP     P      05 21 12.1 -2.8
DIAM  Diamantina, MG     23.22  81 eP     P      05 21 19.3 -1.3
DUB01 Friburgo-RJ        23.52  91 eP     P      05 21 22.2 -1.0
JANB  Januaria           23.83  73 eP     P      05 21 25.1 -1.0
CAM01 Campos-RJ          24.22  90 eP     P      05 21 28.2 -1.3
PTGA  Pitinga            24.23  20  P     P      05 21 28.7 -0.9
        comp=Z,3.3nm,0.3s,baz=320,slow=22,SNR=14
PTGA  Pitinga            24.23  20  P     P      05 21 28.5 -1.0
PTGA                                IAmb  IAmb   05 21 29.7
        comp=Z,24nm,1.2s
SMTB  Santa Maria do     24.45  56 eP     P      05 21 29.1 -2.5
SDBA  SAO DESIDERIO      24.56  66 eP     P      05 21 30.8 -1.9
PRPB  Parauapebas        24.70  47 eP     P      05 21 32.4 -1.5
ALF01 Guarapari-ES       25.30  88 eP     P      05 21 37.2 -2.1
SJMB  Sao Joao De Ma     25.36  83 eP     P      05 21 37.7 -2.1
MALB  Monte Alegre       25.53  33 eP     P      05 21 39.6 -1.7
BSFB  Barra de Sao F     25.63  84 eP     P      05 21 40.1 -2.2
RIB01 Linhares ES        25.91  85 eP     P      05 21 43.1 -1.8
OTAV  Otavalo            26.07 335 eP     P      05 21 47.5 +0.7
OTAV  Otavalo            26.07 335  P     P      05 21 48.3 +1.6
MACC  Macarena, Meta     26.49 346 eP     P      05 21 48.3 -1.8
NAN01 Guarapari, ES      26.57  82 eP     P      05 21 48.7 -2.1
GCUF  Volcan Galeras     26.58 338 eP     P      05 21 52.9 +1.5
BOAV  Boa Vista          27.05  16 eP     P      05 21 55.2 +0.2
BOAV  Boa Vista          27.05  16  P     P      05 21 54.6 -0.5
GUA01 Guaratinga, BA     27.26  80 eP     P      05 21 55.7 -1.3
PCON  Cinco Dias         27.32 341 eP     P      05 22 00.6 +2.5
MCPB  Macapa, AP         27.93  36 eP     P      05 22 01.4 -1.5
CMC01 Camacan, BA        27.96  78 eP     P      05 22 01.5 -1.6
NBIT  Itapeh - BA        28.20  77 eP     P      05 22 04.4 -0.9
PRAC  Prado              28.25 345 eP     P      05 22 05.2 -0.6
VILC  Villavicencio,     28.37 348 eP     P      05 22 05.2 -1.8
ORTC  Ortega, Tolima     28.52 344 eP     P      05 22 07.7 -0.5
GDU01 Guandu, BA         28.55  74 eP     P      05 22 06.5 -2.0
YOTC  Yotoco, Valle      28.88 342 eP     P      05 22 09.7 -1.8
NBPN  Ponto Novo - B     29.33  69 eP     P      05 22 13.8 -1.5
RUSC  La Rusia           30.00 350 eP     P      05 22 17.1 -4.7
HELC  Santa Helena       30.79 345 eP     P      05 22 26.6 -1.9
NBLA  Lagarto - SE       31.33  71 eP     P      05 22 31.0 -2.0
NBPS  Pedro II - PI      31.98  57 eP     P      05 22 37.3 -1.5
NBMA  Muriti-CE          32.35  64 eP     P      05 22 40.0 -2.0
SDV   Santo Domingo      32.65 355 eP     P      05 22 44.3 -0.4
NBPB  Pedra_Branca-C     32.73  61 eP     P      05 22 44.9 -0.4
NBAN  Anadia - AL        33.27  70 eP     P      05 22 48.6 -1.4
NBCL  Cascavel-CE        34.55  60 eP     P      05 23 00.1 -0.9
NBPA  Parau_RN           34.61  64 eP     P      05 23 00.2 -1.3
NBRF  Rio Formoso -      34.73  70 eP     P      05 23 01.3 -1.3
NBPV  Pedro Velho        35.76  66 eP     P      05 23 11.1 -0.3
SRBA  San Rafael, Bu     36.21 333  P     P      05 23 17.3 +2.0
SRBA                                IAmb  IAmb   05 23 18.9
        comp=Z,18nm,0.9s
RIMA  Rio Macho          36.90 333  P     P      05 23 23.7 +2.5
RIMA                                IAmb  IAmb   05 23 24.3
        comp=Z,10nm,0.7s
COVE  Coope Vega, Sa     37.98 333  P     P      05 23 32.7 +2.6
ORTG  Ortega, Santa      38.11 331  P     P      05 23 33.5 +2.2
ORTG                                IAmb  IAmb   05 23 35.0
        comp=Z,19nm,0.8s
TGUH  Tegucigalpa,Un     42.19 331  P     P      05 24 06.2 +1.2
TGUH                                IAmb  IAmb   05 24 07.2
        comp=Z,22nm,0.9s
MTO3  Montecristo        43.45 329  P     P      05 24 16.4 +1.3
MTO3                                IAmb  IAmb   05 24 17.6
        comp=Z,13nm,0.7s
APG   El Apazote         44.50 328  P     P      05 24 25.6 +2.0
        comp=Z,8.5nm,0.7s,baz=113,slow=1.2,SNR=10
ZAIG  Zacatecas          57.32 321  P     P      05 26 01.2 +1.7
ZAIG                                IAmb  IAmb   05 26 03.0
        comp=Z,8.7nm,0.8s
VNA3  Neumayer Olymp     57.54 161  P     P      05 26 01.6 +1.4
RGRS  Roger Stewart      57.66 348  P     P      05 26 02.7 +1.3
VNA1  Neumayer--Stat     57.75 160  P     P      05 26 03.0 +1.5
VNA2  Neumayer--Watz     58.12 160  P     P      05 26 05.3 +1.1
        baz=289,slow=7.8
250A  Grady              58.24 342  P     P      05 26 06.0 +0.5
250A                                IAmb  IAmb   05 26 06.5
        comp=Z,12nm,0.8s
GOGA  Godfrey            58.86 345  P     P      05 26 09.2 -0.5
GOGA                                IAmb  IAmb   05 26 11.2
        comp=Z,27nm,1.3s
X58A  Rowland            59.10 349  P     P      05 26 12.4 +1.0
JSC   Jenkinsville       59.20 347  P     P      05 26 13.1 +1.0
JSC                                 IAmb  IAmb   05 26 13.3
        comp=Z,10nm,0.6s
BIRD  Birdtown, Kers     59.40 348  P     P      05 26 13.6 +0.2
Y52A  Lilburn            59.44 344  P     P      05 26 13.6 -0.1
Y52A                                IAmb  IAmb   05 26 14.8
        comp=Z,11nm,0.9s
342A  Flagon Creek P     59.71 336  P     P      05 26 16.7 +1.1
SNAA  Sanae              59.75 161  P     P      05 26 16.4 +0.9
SNAA  Sanae              59.75 161  P     P      05 26 16.2 +0.7
SNAA                                IAmb  IAmb   05 26 21.4
        comp=Z,4.0nm,1.1s
W57A  Gilead             59.80 349  P     P      05 26 16.8 +0.6
Z47A  Carrollton         59.92 340  P     P      05 26 16.7 -0.3
BG3   Lake Jocassee      60.25 346  P     P      05 26 19.7 +0.4
BG3                                 IAmb  IAmb   05 26 35.4
        comp=Z,13nm,1.2s
FPAL  Fort Paine         60.47 343  P     P      05 26 20.8  0.0
FPAL                                IAmb  IAmb   05 26 21.5
        comp=Z,11nm,0.9s
X48A  Hartselle          60.78 342  P     P      05 26 22.6 -0.3
V53A  Saluda             60.87 346  P     P      05 26 23.6 +0.1
V53A                                IAmb  IAmb   05 26 24.9
        comp=Z,8.7nm,0.8s
NATX  Nacogdoches        60.96 334  P     P      05 26 24.8 +0.7
NATX                                IAmb  IAmb   05 26 26.1
        comp=Z,15nm,0.7s
W50A  Signal Mountai     61.02 344  P     P      05 26 24.7 +0.2
W50A                                IAmb  IAmb   05 26 25.7
        comp=Z,19nm,0.8s
CPCT  Cooper Cave        61.06 344  P     P      05 26 25.2 +0.5
CPCT                                IAmb  IAmb   05 26 27.5
        comp=Z,18nm,1.2s
TKL   Tuckaleechee C     61.08 345  P     P      05 26 25.0 +0.2
TKL                                 IAmb  IAmb   05 26 26.1
        comp=Z,16nm,1.0s
SWET  Sewanee            61.20 343  P     P      05 26 25.7  0.0
V52A  Sevierville        61.21 345  P     P      05 26 25.5 -0.2
V52A                                IAmb  IAmb   05 26 26.7
        comp=Z,9.4nm,0.8s
WLAR  White Oak Lake     62.07 336  P     P      05 26 33.1 +1.6
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JCT   Junction City      62.11 329  P     P      05 26 32.6 +0.6
JCT                                 IAmb  IAmb   05 26 33.7
        comp=Z,12nm,0.8s
WVT   Waverly            62.58 342  P     P      05 26 34.2 -0.7
WVT                                 IAmb  IAmb   05 26 35.4
        comp=Z,17nm,0.8s
TXAR  Lajitas Array      63.11 325  P     P      05 26 39.7 +1.0
        comp=Z,1.7nm,0.7s,baz=151,slow=8.8,SNR=23
TXAR  Lajitas Array      63.11 325  P     P      05 26 39.0 +0.4
TX31  Lajitas Ar. Si     63.11 325  P     P      05 26 39.3 +0.6
TX31                                IAmb  IAmb   05 26 54.2
        comp=Z,16nm,1.3s
TX32  Lajitas Array      63.11 325  P     P      05 26 39.8 +1.1
T45A  Paducah            63.64 342  P     P      05 26 41.9  0.0
WCI   Wyandotte Cave     64.14 344  P     P      05 26 44.3 -0.8
WCI                                 IAmb  IAmb   05 26 45.4
        comp=Z,9.4nm,0.7s
CCM   Cathedral Cave     65.39 340  P     P      05 26 53.0 -0.2
QSPA  South Pole Qui     66.35 180  P     P      05 27 00.1 +0.8
LIC   Lamto              68.14  72 eP     P      05 27 10.5 -0.7
        comp=Z,50nm,1.0s
TIC   Toumodi            68.35  72 eP     P      05 27 11.9 -0.6
KIC   Kosan Boka         68.45  72 eP     P      05 27 12.6 -0.6
        comp=Z,40nm,0.7s
DBIC  Dimbokro           68.50  72  P     P      05 27 12.6 -0.9
        comp=Z,21nm,0.8s,baz=228,slow=6.3,SNR=21
DBIC  Dimbokro           68.50  72  P     P      05 27 12.3 -1.1
DBIC                                IAmb  IAmb   05 27 14.0
        comp=Z,21nm,0.8s
ANMO  Albuquerque        68.99 327  P     P      05 27 17.7 +1.4
ANMO                                IAmb  IAmb   05 27 19.2
        comp=Z,6.8nm,0.9s
TUC   Tucson             69.28 322  P     P      05 27 19.7 +1.7
TUC                                 IAmb  IAmb   05 27 21.1
        comp=Z,7.3nm,1.1s
BGNE  Belgrade           70.75 336  P     P      05 27 27.2 +0.5
SDCO  Great Sand Dun     70.76 329  P     P      05 27 29.0 +1.8
SMCO  Snowmass           72.60 329  P     P      05 27 40.3 +2.0
SMCO                                IAmb  IAmb   05 27 41.0
        comp=Z,6.2nm,0.7s
BAR   Barrett            73.00 318  P     P      05 27 42.0 +1.7
KOWA  Kowa               73.08  65  P     P      05 27 40.7 -0.5
SRU   San Rafael Swe     74.27 327  P     P      05 27 48.4 +0.5
SRU                                 IAmb  IAmb   05 27 50.5
        comp=Z,8.5nm,0.7s
CCUT  Cedar City         74.58 324  P     P      05 27 52.2 +2.5
CCUT                                IAmb  IAmb   05 27 53.5
        comp=Z,7.3nm,0.9s
VNDA  Vanda              74.71 190  P     P      05 27 52.4 +2.7
        comp=Z,0.4nm,0.6s,baz=63,slow=3.8,SNR=4.3
VNDA  Vanda              74.71 190  P     P      05 27 51.4 +1.8
RSSD  Black Hills        75.33 334  P     P      05 27 55.2 +1.4
ISA   Isabella, Lake     76.14 320  P     P      05 28 00.5 +2.0
PDAR  Pinedale Array     76.63 330  P     P      05 28 02.1 +0.9
        comp=Z,1.3nm,0.7s,baz=147,slow=8.5,SNR=7.7
BGU   Big Grassy Mou     76.90 327  P     P      05 28 03.9 +1.2
TORD  Torodi Ar. Bea     77.25  69  P     P      05 28 04.8 -0.3
        comp=Z,81nm,0.7s,baz=256,slow=5.5,SNR=500
TORD  Torodi Ar. Bea     77.25  69  P     P      05 28 04.7 -0.3
AHID  Auburn Hatcher     77.35 329  P     P      05 28 06.0 +0.8
AHID                                IAmb  IAmb   05 28 07.8
        comp=Z,9.4nm,0.8s
ULM   Lac du Bonnet      77.85 342  P     P      05 28 07.7 +0.1
        comp=Z,8.6nm,0.6s,baz=156,slow=5.6,SNR=12
NVAR  Mina Array Bea     77.94 322  P     P      05 28 10.2 +1.6
        comp=Z,1.1nm,0.8s,baz=158,slow=5.7,SNR=8.1
KVN   Kaiserville        78.25 322  P     P      05 28 12.2 +1.8
KVN                                 IAmb  IAmb   05 28 13.1
        comp=Z,6.0nm,0.9s
TSUM  Tsumeb             78.45 106  P     P      05 28 12.5 +0.7
TSUM                                IAmb  IAmb   05 28 13.5
        comp=Z,22nm,1.1s
HLID  Hailey             79.54 328  P     P      05 28 19.3 +2.0
HLID                                IAmb  IAmb   05 28 20.7
        comp=Z,10nm,0.9s
MCMT  McKenzie Canyo     79.74 329  P     P      05 28 20.6 +2.2
BOSA  Boshof             81.50 117  P     P      05 28 28.5 +0.4
        comp=Z,4.3nm,0.5s,baz=268,slow=4.0,SNR=19
MAW   Mawson             81.80 163  P     P      05 28 29.5 +0.7
        comp=Z,1.4nm,0.4s,baz=220,slow=5.1,SNR=7.7
MAW   Mawson             81.80 163  P     P      05 28 29.8 +1.1
BMO   Blue Mountains     81.91 327  P     P      05 28 31.0 +1.2
LBTB  Lobatse            83.16 114  P     P      05 28 36.8  0.0
LBTB                                IAmb  IAmb   05 28 37.9
        comp=Z,12nm,0.8s
LTY   Liberty            85.27 327  P     P      05 28 47.8 +1.0
LTY                                 IAmb  IAmb   05 28 48.8
        comp=Z,4.1nm,0.8s
ESDC  Sonseca Array      86.83  44  P     P      05 28 55.2 +0.6
        comp=Z,3.8nm,1.0s,baz=242,slow=4.9,SNR=9.8
ESDC  Sonseca Array      86.83  44  P     P      05 28 55.0 +0.4
YKA   Yellowknife Ar     93.72 340  P     P      05 29 27.2 +1.0
        comp=Z,1.2nm,0.6s,baz=125,slow=6.0,SNR=5.5
ASAR  Alice Springs     128.25 206  PKP   PKPdf  05 35 16.9 +0.4
        comp=Z,0.6nm,0.8s,baz=124,slow=1.7,SNR=3.2
WRA   Warramunga Arr    131.39 208  PKP   PKPdf  05 35 23.2 +0.8
        comp=Z,0.5nm,0.3s,baz=155,slow=1.9,SNR=7.6
WRA                                 SKPbc SKPbc  05 38 36.8 +1.1
        comp=Z,1.5nm,0.9s,baz=158,slow=4.4,SNR=12
ZALV  Zalesovo Beam     143.63  27  PKP   PKPbc  05 35 42.3 +0.7
        comp=Z,3.7nm,0.7s,baz=304,slow=4.4,SNR=14
ZALV                                SKPbc SKPbc  05 39 09.9 -0.5
        comp=Z,1.7nm,0.7s,baz=304,slow=3.3,SNR=4.6
ZALV  Zalesovo Beam     143.63  27  PKPdf PKPbc  05 35 41.9 +0.3
KSH   Kashi             145.75  54  PKPbc PKPab  05 35 49.3 -0.1
MKAR  Makanchi Array    146.91  39  PKPbc PKPbc  05 35 51.3 -0.5
        comp=Z,6.9nm,0.8s,baz=319,slow=0.6,SNR=42
MKAR  Makanchi Array    146.91  39  PKPdf PKPdf  05 35 50.2 +0.5
MJAR  Matsushiro Arr    154.26 305  PKPab PKPab  05 36 25.4 +1.2
        comp=Z,3.0nm,0.9s,baz=73,slow=2.3,SNR=4.6
SONM  Songino Array     155.63   9  PKPab PKPab  05 36 29.6 -0.1
        comp=Z,1.1nm,0.9s,baz=270,slow=1.4,SNR=3.8
SONM  Songino Array     155.63   9  PKPdf PKPdf  05 36 01.8 -1.3
SONM                                      PKPab  05 36 30.3 +0.5
```

IDC 23 05:25:00.8±1.4**, 12.°00N**×**140.°18E, h0km, mb3.3**/4**, mb1 3.5**/4**, mb1mx3.4**/33**, mbtmp3.3**/4**, MS3.5**/1**, Ms1 3.5**/1**, ms1mx2.6**/19**, Error ellipse: s-maj=71.3km s-min=27.5km az=93.0, Western Caroline Islands**

```
Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                    Op    ISC        h  m  s     ISC
PMG   Port Moresby       22.37 162  LR    LR     05 38 25.2
        comp=Z,120nm,18.3s,baz=13,slow=36
WRA   Warramunga Arr     32.26 190  P     P      05 31 31.3 -0.1
        0.4nm,0.6s,baz=3.8,slow=9.4,SNR=6.2
ASAR  Alice Springs      35.98 190  P     P      05 32 03.5 -0.1
        0.2nm,0.4s,baz=14,slow=12,SNR=2.3
MKAR  Makanchi Array     59.51 318  P     P      05 35 06.5 +0.5
        0.3nm,0.8s,baz=106,slow=9.2,SNR=1.9
ILAR  Eielson Array      71.96  26  P     P      05 36 25.6 -0.4
        0.3nm,0.9s,baz=251,slow=5.4,SNR=2.3
```

IDC ***23*** *05:50:14.5±2.1, 19.°21N×95.°05E, h0km, mb3.9/5, mb1 4.0/5, mb1mx3.5/53, mbtmp3.9/5, Error ellipse: s-maj=157.8km s-min=20.9km az=59.0*

ISC 23 05:50:18.1±1.3**, 19.°4N**±0.°3×**95.°5E**±0.°3**, h18km, n14,** σ**1.s05**/14**, mb3.9**/5**, Myanmar**

```
Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                    Op    ISC        h  m  s     ISC
RAMN  Ramite             11.10 314 eP     Pn     05 52 58.0 +1.7
        18nm,0.4s
JIRN  Jiri               11.84 316 eP     Pn     05 53 07.6 +1.1
        11nm,0.5s
GUN   Gumba              12.21 316 eP     Pn     05 53 12.6 +1.0
        16nm,0.6s
PKI   Pulchoki           12.31 313 eP     Pn     05 53 13.7 +0.8
        6.7nm,0.4s
PKIN  Phulchoki          12.32 313 eP     Pn     05 53 14.0 +1.0
        11nm,0.4s
GKN   Gorkha             13.11 313 eP     Pn     05 53 23.7  0.0
        13nm,0.4s
KOLN  Koldanda           13.71 310 eP     Pn     05 53 32.2 +0.3
DANN  Dangsing           13.94 312 eP     Pn     05 53 34.0 -1.1
        16nm,0.5s
PYUN  Piuthan            14.34 309 eP     Pn     05 53 39.4 -1.2
MKAR  Makanchi Array     29.39 341  P     P      05 56 19.4 -0.9
        1.4nm,0.6s,baz=153,slow=8.9,SNR=8.8
ZALV  Zalesovo Beam      35.45 349  P     P      05 57 12.8 -0.4
        0.8nm,0.4s,baz=179,slow=9.4,SNR=4.8
WRA   Warramunga Arr     54.58 134  P     P      05 59 45.0 -0.7
        0.7nm,0.7s,baz=304,slow=5.7,SNR=6.5
```

ASAR	Alice Springs	56.88	137	P	P	06 00 03.4	+1.1
	0.5nm,0.6s,baz=321,slow=7.2,SNR=7.2						
FINES	FINESS Array B	63.32	330	P	P	06 00 45.8	0.0
	1.2nm,0.7s,baz=113,slow=2.9,SNR=4.4						

---

*IDC **23** 05:51:00.7±1.1, 0°.21N×123°.23E, h0^{km}, mb3.8/5, mb1 4.0/6, mb1mx3.7/40, mbtmp3.9/6, ML4.3/1, Error ellipse: s-maj=104.9km s-min=18.4km az=67.0*

*DJA **23** 05:51:17.9±0.5, 0°S±4°×12°3E±°, h140^{km}±6^{km}, M4.1/10, MLv4.1/10*

ISC 23 05:51:17.6±0.8, **0°.14S**±0°.07×**123°.06E**±0°.06, **h162**^{km}, **n16**, σ**1s.53**/18, **mb3.6**/5, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTOI	Gorontalo	0.78	357	P	Pn	05 51 42.0	+0.1
GTOI				S	Sn	05 51 59.4	-1.2
LUWI	Luwuk	0.94	198	P	Pn	05 51 41.7	-1.3
LUWI				S	Sn	05 51 59.9	-2.7
KMSI	Cibinong	1.17	52	P	Pn	05 51 45.1	+0.2
MRSI	Marisa	1.27	299	P	Pn	05 51 44.6	-1.3
MRSI				S	Sn	05 52 04.4	-3.2
APSI	Ampana	1.60	242	P	Pn	05 51 48.6	-0.5
MPSI	Mapaga	3.19	279	P	Pn	05 52 08.1	+0.2
SANI	Sanana	3.49	123	P	Pn	05 52 09.9	-1.7
TTSI	Tana Toraja	4.33	228	P	Pn	05 52 23.0	+0.5
LBMI	Labuha	4.47	96	P	Pn	05 52 23.3	-1.0
MSAI	Masohi	6.68	119	P	Pn	05 53 06.6	+13
FITZ	Fitzroy Crossi	18.02	172	P	Pn	05 55 18.3	+0.3
	0.7nm,0.3s,baz=2.7,slow=9.0,SNR=25						
WRA	Warramunga Arr	22.57	151	P	P	05 56 05.3	+0.9
	1.8nm,0.5s,baz=330,slow=11,SNR=47						
ASAR	Alice Springs	25.65	157	P	P	05 56 34.3	+1.8
	0.6nm,0.6s,baz=344,slow=14,SNR=9.9						
STKA	Stephens Creek	36.11	153	P	P	05 58 06.0	+1.9
	1.6nm,0.4s,baz=319,slow=11,SNR=3.3						
SONM	Songino Array	49.94	345	P	P	05 59 54.9	-0.1
	1.1nm,0.7s,baz=157,slow=9.1,SNR=6.4						
MKAR	Makanchi Array	58.76	328	P	P	06 00 58.6	0.0
	0.3nm,0.4s,baz=123,slow=7.0,SNR=6.4						

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*IDC **23** 05:53:42.9±3.0, 52°.10N×171°.74E, h0^{km}, mb3.2/3, mb1 3.6/3, mb1mx3.2/44, mbtmp3.3/3, Error ellipse: s-maj=104.8km s-min=36.7km az=4.0*

*NEIC **23** 05:53:52.4±0.7, 52°.1N±0°.2×173°.3E±0°.4, h18^{km}±15^{km}, ML2.8/2, Error ellipse: s-maj=42.0km s-min=8.9km az=119.0*

ISC 23 05:53:52.8±2.4, **52°.1N**±0°.2×**173°.1E**±0°.2, **h24**^{km}, **n8**, σ**0s.95**/8, **mb3.1**/3, **Near Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMY	Shemya	0.83	45		Pn	05 54 08.4	-0.5
SMY					Sb	05 54 19.3	+0.1
SMY				IAML		05 54 26.3	
	comp=E,435nm,0.6s						
SMY				IAML		05 54 28.9	
	comp=N,296nm,0.8s						
KIWB	Kanaga Island	6.00	89	Pn	Pn	05 55 19.9	-0.1
IMAR	Indian Mountai	21.59	37	P	P	05 58 40.8	+0.4
ILAR	Eielson Array	23.94	43	P	P	05 59 04.2	-0.5
	comp=N,0.4nm,0.8s,baz=254,slow=7.8,SNR=2.3						
BMAR	Burnt Mountain	25.51	37	P	P	05 59 20.3	+1.4
BCAR	Beaver Creek A	25.93	48	P	P	05 59 24.1	+1.3
MKAR	Makanchi Array	55.53	304	P	P	06 03 14.5	-11
	comp=N,0.1nm,0.5s,baz=60,slow=8.8,SNR=1.4						
TXAR	Lajitas Array	63.41	76	P	P	06 04 19.8	-0.5
	comp=N,0.3nm,0.5s,baz=307,slow=5.1,SNR=9.4						

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*IDC **23** 06:39:36.4±2.9, 16°.30S×173°.87W, h48^{km}±28^{km}, mb3.8/9, mb1 4.1/9, mb1mx3.8/30, mbtmp4.0/9, ML5.0/1, Error ellipse: s-maj=33.2km s-min=15.3km az=133.0*

*NEIC **23** 06:39:37.0±1.0, 16°.3S±0°.1×173°.8W±0°.1, h51^{km}±5^{km}, mb4.5/12, Error ellipse: s-maj=20.6km s-min=15.7km az=57.0*

ISC 23 06:39:36.5±0.6, **16°.31S**±0°.08×**173°.8W**±0°.1, **h50**^{km}, **n31**, σ**0s.84**/32, **mb4.1**/13, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	3.08	39	P	Pn	06 40 24.1	+1.3
	196nm,0.3s,baz=66,slow=0.4,SNR=106						
AFI				S	Sn	06 40 56.4	-2.1
	212nm,0.3s,baz=74,slow=23,SNR=6.2						
NIUE	Niue	4.60	127		Pn	06 40 44.1	+0.6
OUZ	Omahuta	21.95	209	P	P	06 44 26.6	+0.6
OUZ				IAmb	IAmb	06 44 36.0	
	comp=Z,36nm,1.4s						
URZ	Urewera	23.28	198	P	P	06 44 38.2	-1.6
	comp=Z,18nm,0.5s,baz=303,slow=21,SNR=16						
URZ	Urewera	23.28	198	P	P	06 44 39.2	-0.6
URZ				IAmb	IAmb	06 44 42.9	
	comp=Z,18nm,0.7s						
STKA	Stephens Creek	43.26	241	P	P	06 47 33.6	+0.3
	comp=Z,1.7nm,0.7s,baz=78,slow=16,SNR=3.2						
WR0	Warramunga Arr	49.08	258	P	P	06 48 18.6	-0.7
WR0				IAmb	IAmb	06 48 22.9	
	comp=Z,5.3nm,1.4s						
WB0	Warramunga Arr	49.24	258	P	P	06 48 20.0	-0.5
WB0				IAmb	IAmb	06 48 29.7	
	comp=Z,6.1nm,1.4s						
WB2	Warramunga Arr	49.26	258	P	P	06 48 19.8	-0.9
WB2				IAmb	IAmb	06 48 26.7	
	comp=Z,8.4nm,1.4s						
WRA	Warramunga Arr	49.27	258	P	P	06 48 20.0	-0.7
	comp=Z,0.6nm,0.5s,baz=96,slow=6.8,SNR=16						
WRA	Warramunga Arr	49.27	258	P	P	06 48 20.1	-0.7
AS31	Alice Springs	49.47	253	P	P	06 48 20.7	-1.5
ASAR	Alice Springs	49.47	253	P	P	06 48 21.3	-1.0
	comp=Z,1.8nm,0.4s,baz=89,slow=7.8,SNR=41						
ASAR	Alice Springs	49.47	253	P	P	06 48 21.6	-0.7
MTN	Manton Dam	53.28	266	P	P	06 48 50.4	-0.5
VNDA	Vanda	62.44	186	P	P	06 49 55.0	+1.0
	comp=Z,1.0nm,0.8s,baz=14,slow=6.6,SNR=8.3						
VNDA	Vanda	62.44	186	P	P	06 49 54.3	+0.3
VNDA				IAmb	IAmb	06 50 02.6	
	comp=Z,2.6nm,1.1s						
PETK	Petropavlovsk-	73.38	343	P	P	06 51 04.0	+1.0
KRMB	Red Mountain	73.72	37	P	P	06 51 05.7	+0.3
NVAR	Mina Array Bea	75.26	42	P	P	06 51 14.6	0.0
	comp=Z,0.7nm,0.7s,baz=225,slow=10,SNR=8.0						
M19K	Big River Lodg	79.46	9	P	P	06 51 37.2	-0.1
GHO	Glory Hole Cre	80.29	12	P	P	06 51 41.9	0.0
TXAR	Lajitas Array	81.43	56	P	P	06 51 49.0	+0.3
	comp=Z,1.1nm,1.2s,baz=213,slow=2.8,SNR=3.7						
PDAR	Pinedale Array	83.19	42	P	P	06 51 57.5	-0.3
	comp=Z,1.0nm,0.6s,baz=216,slow=3.4,SNR=9.3						
ILAR	Eielson Array	83.41	11	P	P	06 51 57.3	-0.8
	comp=Z,0.4nm,0.4s,baz=218,slow=5.1,SNR=8.7						
IMAR	Indian Mountai	83.42	8	P	P	06 51 58.1	0.0
KMBO	Kilima Mbogo	144.79	243	PKP	PKPdf	06 59 09.3	+0.1
	comp=Z,0.8nm,0.4s,baz=0.0,slow=1.0,SNR=4.2						
BRTR	Keskin Array B	146.61	320	PKPbc	PKPbc	06 59 13.1	-0.1
	comp=Z,3.2nm,0.8s,baz=103,slow=2.7,SNR=10						
BRTR	Keskin Array B	146.61	320		PKPdf	06 59 11.9	+0.4
GERES	GERESS Array B	146.98	351	PKPbc	PKPbc	06 59 13.7	-0.1
	comp=Z,0.3nm,0.3s,baz=64,slow=3.1,SNR=7.2						
GERES	GERESS Array B	146.98	351		PKPbc	06 59 12.8	-0.9

NEIC 23 07:02:24.5±1.3, **36°.182N**±0°.005×**97°.04W**±0°.02, **h5**^{km}±7^{km}, **mb_Lg2.1**/6, **Error ellipse: s-maj=1.9km s-min=0.5km az=74.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QUOK	Quay	0.27	92	Pg	Pg	07 02 29.8	0.0
QUOK				Sg	Sg	07 02 33.6	+0.2
OK031	S. Brethren Rd	0.28	144	Pg	Pg	07 02 29.9	-0.1
OK031				Sg	Sg	07 02 33.9	+0.2
OK030	Cody Creek RV	0.33	140		Pg	07 02 30.8	-0.1
OK030				Sg	Sg	07 02 35.4	+0.2
OK029	Liberty Lake	0.51	221	Pg	Pg	07 02 34.2	-0.1
BLOK	Blackwell	0.59	347	Pg	Pg	07 02 35.9	0.0
BLOK				Sg	Sg	07 02 44.2	+0.5
OK025	Westminster Rd	0.65	202	Pg	Pg	07 02 36.8	-0.1
OK025				Sg	Sg	07 02 45.7	+0.4
BCOK	Bluff Creek, N	0.70	221	Pg	Pg	07 02 37.6	-0.3
BCOK				Sg	Sg	07 02 47.3	+0.4
CROK	Carrier	0.82	293		Pg	07 02 39.9	-0.4
CROK				Sg	Sg	07 02 51.2	+0.2
OKCFA	Oklahoma City	0.83	204	Pg	Pg	07 02 39.9	-0.6
OKCFA				IAmb_Lg		07 02 50.3	
	comp=Z,9.3nm,1.1s						
OKCFA				Sg	Sg	07 02 51.7	+0.4
OKCSW	OKLAHOMA CITY	0.84	203	Pg	Pg	07 02 39.9	-0.7
OKCSW				Sg	Sg	07 02 51.6	+0.1
T35A	Sooner Cattle	0.85	30		Pg	07 02 40.4	-0.4
T35A				Sg	Sg	07 02 52.0	+0.1
KAN13	South Haven SW	0.90	337	Pg	Pg	07 02 41.3	-0.5
KAN13				Sg	Sg	07 02 53.5	0.0
GC02	Grant County #	0.94	316	Pg	Pg	07 02 42.1	-0.4
GC02				Sg	Sb	07 02 55.5	-0.5
FNO	Franklin	0.97	198	Pg	Pg	07 02 42.1	-1.0
FNO				Sg	Sg	07 02 55.5	-0.1
W35A	Tecumseh	1.04	172	Pg	Pg	07 02 43.2	-1.2
W35A				Sg	Sg	07 02 57.3	-0.5
KAN17	Caldwell West	1.04	326	Pg	Pg	07 02 43.7	-0.7
KAN17				Sg	Sg	07 02 57.5	-0.3
TUL1	Leonard	1.05	105	Pg	Pg	07 02 43.3	-1.3
TUL1				Sg	Sg	07 02 57.3	-1.0
KAN09	Caldwell North	1.06	334	Pg	Pg	07 02 44.3	-0.5
KAN09				Sg	Sg	07 02 58.2	-0.4
KAN14	Manchester OK	1.07	317		Pg	07 02 44.5	-0.6
KAN14				Sg	Sg	07 02 59.2	+0.2
OK032	Salt Plains WL	1.13	304		Pg	07 02 45.4	-0.7
OK032				Sg	Sb	07 03 01.2	-0.2
KAN01	Argonia South	1.13	330	Pg	Pg	07 02 45.5	-0.6
KAN01				Sg	Sg	07 03 00.4	-0.4
KAN05	Bluff City Nor	1.14	324	Pg	Pg	07 02 45.9	-0.4
KAN05				Sg	Sb	07 03 01.8	-0.1
KAN10	Anthony SW Sta	1.26	318		Pg	07 02 48.1	-0.7
KAN08	Anthony NE Sta	1.28	325	Pn	Pg	07 02 48.2	-0.9
KAN16	Harper SW Stat	1.33	322	Pn	Pn	07 02 49.2	-0.5
U32A	Winter Ranch,	1.59	278		Pn	07 02 53.3	-0.1
X34A	Smith Ranch, M	1.70	202	Pn	Pn	07 02 55.0	+0.1
WMOK	Wichita Mounta	2.02	225		Pn	07 02 59.7	+0.4
WMOK				IAmb_Lg		07 03 27.7	
	comp=Z,9.0nm,0.8s						
X37A	Clayton	2.10	139	Pn	Pn	07 03 00.5	+0.2
U38A	Gravette	2.16	82	Pn	Pn	07 03 01.7	+0.4
LOOK	Love County	2.19	183	Pn	Pn	07 03 01.7	+0.1
HHAR	Hobbs	2.51	87		Pn	07 03 08.0	+2.0
R32A	Long Quarter,	2.60	330	Pn	Pn	07 03 08.5	+1.2
W39A	Magazine	2.83	109	Pn	Pn	07 03 10.9	+0.5
MIAR	Mount Ida	3.27	119	Pn	Pn	07 03 17.2	+0.8
S39A	Bolivar	3.34	62	Pn	Pn	07 03 19.7	+2.2
S39A				IAmb_Lg		07 04 13.4	
	comp=Z,6.1nm,1.1s						
U40A	Yellville	3.39	86	Pn	Pn	07 03 19.1	+0.9
U40A				IAmb_Lg		07 04 19.6	
	comp=Z,7.2nm,0.7s						
X40A	Basin Creek Fa	3.83	115	Pn	Pn	07 03 24.9	+0.7
MGMO	Mountain Grove	3.96	74	Pn	Pn	07 03 26.7	+0.7
FCAR	Ozark Folk Cen	4.00	93	Pn	Pn	07 03 26.6	+0.1
P38A	Dawn	4.42	38	Pn	Pn	07 03 33.6	+1.4
CCM	Cathedral Cave	5.00	66	Pn	Pn	07 03 39.4	-0.8

NOU 23 07:11:01.9, 17°.86S×168°.36E, h0^{km}**, MLv4.0**/13**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTV	Rentapao	0.09	43	P	Pg	07 11 04.3	+0.6
DVP	Devils Point	0.21	309	P	Pg	07 11 05.8	-0.2
LIFNC	LIFOU	3.09	200	P	Pn	07 11 51.2	-0.7
MARNC	Mare, Loyalty	3.62	185	P	Pn	07 11 57.4	-1.8
YATNC	Mamie plateau,	4.40	198	P	Pn	07 12 09.3	-0.7
DZM	Mont Dzumac	4.56	203	P	Pn	07 12 11.4	-0.9
NOUC	Port Laguerre	4.64	204	P	Pn	07 12 14.3	+1.0
KOUNC	Koumac, New Ca	4.69	235	P	Pn	07 12 15.0	+1.0
OUENC	Ouen Island, N	4.75	197	P	Pn	07 12 16.2	+1.3

NOU 23 07:14:01.2, 14°.56S×167°.45E, h139^{km}**, mb3.8**/7**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.91	195	P	Pn	07 14 23.8	-0.4
KOUNC	Koumac, New Ca	6.68	206	P	Pn	07 15 37.4	+0.5
YATNC	Mamie plateau,	7.48	184	P	Pn	07 15 46.5	-1.1
DZM	Mont Dzumac	7.53	187	P	Pn	07 15 48.9	+0.5

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*TUL **23** 07:14:27.2±1.6, 36°.61N±0°.02×99°.00W±0°.01, h5^{km}±6^{km}, ML2.6, mb_Lg2.4/17(NEIC), Error ellipse: s-maj=3.5km s-min=0.6km az=156.0*

NEIC 23 07:14:27.3±1.7, **36°.60N**±0°.02×**99°.02W**±0°.04, **h4**^{km}±6^{km}, **Error ellipse: s-maj=4.9km s-min=3.0km az=109.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	Winter Ranch,	0.22	176	Pg	Pg	07 14 32.2	+0.5
U32A				Sg	Sg	07 14 32.6	-2.0
OK032	Salt Plains WL	0.68	73	Pg	Pg	07 14 40.0	-0.4
OK032				Sg	Sg	07 14 49.3	+0.1
CROK	Carrier	0.84	96	Pg	Pg	07 14 43.0	-0.4
CROK					Sg	07 14 55.2	+0.9
KAN10	Anthony SW Sta	0.91	55	Pg	Pg	07 14 44.2	-0.5
KAN10				Sg	Sg	07 14 56.4	-0.1
KAN14	Manchester OK	0.92	67		Pg	07 14 44.4	-0.5
KAN14				Sg	Sg	07 14 56.0	-0.9
GC02	Grant County #	0.96	75	Pg	Pg	07 14 45.1	-0.7
GC02				Sg	Sg	07 14 58.1	-0.2
KAN16	Harper SW Stat	0.99	51	Pg	Pg	07 14 45.6	-0.6
KAN16				Sg	Sg	07 14 58.4	-0.7
KAN12	Harper NE Stat	1.07	49	Pg	Pg	07 14 47.4	-0.5
KAN12				Sg	Sg	07 15 01.3	-0.5
KAN17	Caldwell West	1.10	66		Pg	07 14 47.8	-0.6
KAN17				Sg	Sg	07 15 01.8	-0.9
KAN01	Argonia South	1.15	61	Pg	Pg	07 14 48.8	-0.7
KAN09	Caldwell North	1.24	64		Pg	07 14 50.1	-1.1
KAN09					Sg	07 15 07.4	+0.1
KAN09					Sb	07 15 07.6	-0.2
KAN13	South Haven SW	1.30	71		Pg	07 14 51.2	-1.1
BLOK	Blackwell	1.46	83		Pn	07 14 54.0	-0.5
BCOK	Bluff Creek, N	1.48	129		Pn	07 14 54.8	-0.1
OK029	Liberty Lake	1.50	122		Pn	07 14 54.8	-0.3
OK025	Westminster Rd	1.70	126		Pn	07 14 58.1	+0.3
OKCFA	Oklahoma City	1.74	133		Pn	07 14 57.9	-0.4
OKCSW	OKLAHOMA CITY	1.75	133	Pn	Pn	07 14 59.0	+0.4
R32A	Long Quarter,	1.83	8		Pn	07 15 00.1	+0.4
WMOK	Wichita Mounta	1.87	174		Pn	07 15 00.6	+0.4
OK031	S. Brethren Rd	1.88	110		Pn	07 15 00.2	-0.1
FNO	Franklin	1.88	135		Pn	07 15 00.9	+0.6
QUOK	Quay	1.91	102		Pn	07 15 00.9	+0.1
OK030	Cody Creek RV	1.93	110		Pn	07 15 01.6	+0.6
OK030				IAmb_Lg		07 15 27.3	
	comp=Z,12nm,1.0s						
T35A	Sooner Cattle	2.04	80	Pn	Pn	07 15 02.8	+0.3
T35A				IAmb_Lg		07 15 32.2	
	comp=Z,17nm,0.8s						
X34A	Smith Ranch, M	2.22	154		Pb	07 15 07.5	-0.6
W35A	Tecumseh	2.27	129	Pn	Pn	07 15 06.2	+0.6
CBKS	Cedar Bluff	2.28	346		Pn	07 15 07.3	+1.5
TUL1	Leonard	2.70	104		Pn	07 15 12.7	+1.2
TUL1				IAmb_Lg		07 15 51.4	
	comp=Z,11nm,0.7s						
AMTX	Amarillo	2.76	232	IAmb_Lg		07 16 02.7	
	comp=Z,12nm,0.8s						
X37A	Clayton	3.59	123	Pn	Pn	07 15 21.8	-2.0
X37A				IAmb_Lg		07 16 23.1	
	comp=Z,12nm,0.7s						
KSCO	Kaye Shedlock’	3.73	311		Pn	07 15 25.1	-0.8
KSCO				IAmb_Lg		07 16 33.4	
	comp=Z,14nm,0.7s						
U38A	Gravette	3.74	91		Pn	07 15 26.8	+0.9
U38A				IAmb_Lg		07 16 25.5	
	comp=Z,12nm,1.0s						
ABTX	Abilene, Hawle	4.00	188	Pn	Pn	07 15 29.8	+0.2
HHAR	Hobbs	4.11	93		Pn	07 15 30.8	-0.2
W39A	Magazine	4.48	107		Pn	07 15 35.7	-0.3
S39A	Bolivar	4.68	75	Pn	Pn	07 15 39.0	+0.2
MIAR	Mount Ida	4.89	113		Pn	07 15 42.0	+0.4
U40A	Yellville	4.97	91	Pn	Pn	07 15 40.6	-2.3
SDCO	Great Sand Dun	5.30	284	Pn	Pn	07 15 49.1	+1.5
MGMO	Mountain Grove	5.44	82	Pn	Pn	07 15 49.5	+0.2
MGMO				IAmb_Lg		07 17 21.8	
	comp=Z,6.7nm,1.1s						
X40A	Basin Creek Fa	5.47	111	Pn	Pn	07 15 51.0	+1.4
WHAR	Wooly Hollow	5.62	102	Pn	Pn	07 15 53.5	+1.8
FCAR	Ozark Folk Cen	5.62	95	Pn	Pn	07 15 53.3	+1.6
R40A	Maddies Statio	5.63	71	Pn	Pn	07 15 50.6	-1.2
ISCO	Idaho Springs	6.09	304	Pn	Pn	07 15 60.0	+1.4
JCT	Junction City	6.14	186	IAmb_Lg		07 17 48.0	
	comp=Z,7.4nm,1.0s						

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*SOME **23** 07:14:39.9, 41°.32N×73°.65E, h0^{km}*

*NNC **23** 07:14:40.9±1.4, 41°.25N×73°.65E, h0^{km}, mb3.7, mpv3.5, Error ellipse: s-maj=12.1km s-min=6.1km az=167.0*

*KRNET **23** 07:14:40.2±0.1, 41°.20N×73°.72E, h23^{km}, mb3.3*

*KNET **23** 07:14:42.1±0.3, 41°.33N×73°.80E, h8^{km}±1^{km}, ml2.7, Error ellipse: s-maj=2.3km s-min=1.7km az=65.0*

ISC 23 07:14:39.9±1.2, **41°.25N**±0°.03×**73°.71E**±0°.02, **h3**^{km}±10^{km}, **n50**, σ**1s.09**/89, **43C-23D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	0.88	359	⇓P	Pb	07 14 57.8	-0.3
	84nm,0.1s,SNR=392						
AML				⇓S	Sn	07 15 10.6	-2.6
	138nm,0.2s						
AML	Almayashu	0.88	359	⇓*i*P	Pb	07 14 57.7	-0.4
	baz=59						
AML				⇓*i*S	Sn	07 15 10.5	-2.6
	baz=59						
OHH	Osh	1.01	224	⇑*i*P	Pg	07 14 58.3	-1.0
	baz=27						
OHH				⇑*i*S	Sg	07 15 11.5	-0.9
	baz=27						
UCH	Uchtor	1.15	31	⇓P	Pb	07 15 02.2	-0.5
	16nm,0.1s,SNR=26						
UCH				⇑S	Sn	07 15 18.4	-1.5
	58nm,0.2s						
UCH	Uchtor	1.15	31	⇓*i*P	Pb	07 15 02.2	-0.5
	baz=30						
UCH				⇓*i*S	Sn	07 15 18.2	-1.6
	baz=30						
EKS2	Erkin-Say	1.41	2	⇓P	Pg	07 15 07.3	+0.3
	18nm,0.2s,SNR=6.1						
EKS2				⇑S	Sg	07 15 27.0	+1.7
	22nm,0.1s						
EKS2	Erkin-Say	1.41	2	⇑*i*P	Pg	07 15 06.9	-0.1
	baz=2.0						
EKS2				⇑*i*S	Sg	07 15 26.5	+1.2
	baz=2.0						
AAK	Ala-Archa	1.50	23	⇓P	Pg	07 15 08.7	-0.1
	14nm,0.1s,SNR=28						
AAK				⇑S	Sg	07 15 29.2	+0.9
	28nm,0.2s						
AAK	Ala-Archa	1.50	23	⇑P	Pg	07 15 08.6	-0.1
	5.1nm,0.2s						
AAK				⇓S	Sg	07 15 29.6	+1.4
	8.2nm,0.2s						
AAK	Ala-Archa	1.50	23	⇑*i*P	Pg	07 15 08.6	-0.1
	baz=22						
AAK				⇑*i*S	Sg	07 15 29.2	+0.9
	baz=22						
MNAS	Manas	1.53	324	⇑*i*P	Pg	07 15 09.1	-0.2
	baz=25						
MNAS				⇑*i*S	Sg	07 15 30.2	+1.1
	baz=25						
MRKS	Merke	1.54	347	*e*P	Pg	07 15 09.6	+0.3
	40nm,0.2s						
MRKS				*e*S	Sg	07 15 30.8	+1.5
	232nm,0.4s						
KBK	Karagaybulak	1.68	33	⇓P	Pg	07 15 12.0	-0.2
	19nm,0.1s,SNR=35						
KBK				⇑S	Sg	07 15 35.4	+1.5
	89nm,0.2s						
KBK	Karagaybulak	1.68	33	⇑*i*P	Pb	07 15 11.4	-0.2
	baz=32						
KBK				⇑*i*S	Sg	07 15 34.5	+0.6
	baz=32						
CHMS	Chumysh	1.91	24	⇓P	Pg	07 15 16.0	-0.5
	26nm,0.3s,SNR=16						
CHMS				⇑S	Sg	07 15 41.5	+0.2
	23nm,0.2s						
CHMS	Chumysh	1.91	24	⇑*i*P	Pb	07 15 14.9	-0.6
	baz=23						
CHMS				⇑*i*S	Sg	07 15 40.3	-1.0
	baz=23						
TRKS	Terek-Say	1.96	279	⇑*i*P	Pn	07 15 14.8	+0.6
	baz=79						
TRKS				⇑*i*S	Sn	07 15 40.1	+0.7
	baz=79						
BOOM	Boomskoye usch	2.07	53	⇑*e*P	Pb	07 15 17.2	-1.1
	baz=51						
BOOM				⇑*i*S	Sb	07 15 43.9	-0.7
	baz=51						
USP	Ospenovka	2.10	16	⇓P	Pg	07 15 19.4	-0.8
	23nm,0.2s,SNR=39						
USP				⇑S	Sg	07 15 47.8	+0.4
	73nm,0.3s						
USP	Ospenovka	2.10	16	⇓*i*P	Pb	07 15 17.6	-1.1
	baz=15						
USP				⇓*i*S	Sb	07 15 44.8	-0.4
	baz=15						
ULHL	Ulahol	2.14	61	⇑P	Pb	07 15 19.6	+0.1
	7.0nm,0.1s,SNR=7.4						
ULHL				⇑S	Sg	07 15 48.8	+0.1
	19nm,0.2s						
ULHL	Ulahol	2.14	61	⇓*i*P	Pn	07 15 18.0	+1.2
	baz=60						
ULHL				⇓*i*S	Sb	07 15 45.4	-1.1
	baz=60						
TKM2	Tokmak 2	2.18	39	⇓P	Pb	07 15 20.5	+0.3
	47nm,0.4s,SNR=56						
TKM2				⇑S	Sg	07 15 49.6	-0.4
	24nm,0.2s						
TKM2	Tokmak 2	2.18	39	⇑Pn	Pb	07 15 20.5	+0.3
	24nm,0.4s						
TKM2				⇑Sn	Sg	07 15 49.5	-0.5
	14nm,0.5s						
TKM2	Tokmak 2	2.18	39	⇑*i*P	Pb	07 15 18.6	-1.6
	baz=39						
TKM2				⇑*i*S	Sb	07 15 46.9	-0.8
	baz=39						
DRK	Karamyk	2.29	220	⇑*i*P	Pn	07 15 19.4	+0.4
	baz=21						
DRK				⇑*i*S	Sn	07 15 47.9	0.0
	baz=21						
BTK	Batken	2.50	243	⇑*i*P	Pn	07 15 22.3	+0.6
	baz=44						
BTK				⇑*i*S	Sn	07 15 53.0	+0.2
	baz=44						
DGS	Degeres	2.51	37	*e*P	Pg	07 15 26.9	-1.1
	24nm,0.5s						
DGS				*e*S	Sg	07 16 00.8	+0.2
	47nm,0.5s						
DGS	Degeres	2.51	37	Pg	Pb	07 15 26.2	+0.4
	24nm,0.5s						
DGS				Lg	Lg	07 16 00.7	
	47nm,0.5s						
KDJ	Kajisay	2.74	70	⇑*e*P	Pn	07 15 26.4	+1.4
	baz=69						
KDJ				⇑*i*S	Sn	07 15 59.9	+1.1
	baz=69						
MTBS	Maitube	2.76	46	*e*P	Pb	07 15 31.0	+1.1
	13nm,0.3s						
MTBS				*e*S	Sg	07 16 07.5	-1.0
	44nm,0.6s						
TNSS	Tian-Shan	3.00	52	*e*P	Pb	07 15 35.3	+1.1
	3.9nm,0.3s						
TNSS				*e*S	Sg	07 16 15.3	-0.8
	9.8nm,0.5s						
TNSS	Tian-Shan	3.00	52	Pg	Pg	07 15 35.9	-1.5
	9.2nm,0.3s						
TNSS				Lg	Lg	07 16 17.5	
	31nm,0.5s						
KK07	Karatay Array	3.01	309	⇓Pg	Pb	07 15 35.1	+0.9
	2.7nm,0.2s,baz=127,slow=18						
KK07				⇑Lg	Lg	07 16 15.7	
	13nm,0.4s,baz=128,slow=28						
TARG	Taragay, Kyrgy	3.11	80	⇑*e*P	Pn	07 15 31.4	+1.1
	baz=79						
TARG				⇑*i*S	Sn	07 16 08.5	+0.3
	baz=79						
MDOK	Medeo	3.13	51	*e*P	Pb	07 15 37.8	+1.5
	3.6nm,0.5s						
MDOK				*e*S	Sg	07 16 19.4	-1.1
	14nm,0.4s						
MDOK	Medeo	3.13	51	⇑Pg	Pb	07 15 37.5	+1.2
	2.4nm,0.4s						
MDOK				Lg	Lg	07 16 20.0	

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         11nm,0.5s
KOTS  Kotyrbulak          3.21  51  eP     Pg     07 15 39.6 -1.8
         9.9nm,0.3s
KOTS                                eS     Sg     07 16 22.9 -0.1
         38nm,0.5s
KOTS  Kotyrbulak          3.21  51   Pg    Pb     07 15 39.1 +1.4
         9.9nm,0.3s
KOTS                                 Lg    Lg     07 16 22.9
         38nm,0.5s
KUU   Kurty               3.28  35  eP     Pb     07 15 40.5 +1.7
         7.0nm,0.3s
KUU                                 eS     Sg     07 16 23.6 -1.6
         20nm,0.4s
KTBS  Karatobe            3.30  41  eP     Pb     07 15 40.6 +1.5
         5.4nm,0.2s
KTBS                                eS     Sg     07 16 24.2 -1.6
         48nm,0.6s
KTBS  Karatobe            3.30  41   Pg    Pb     07 15 39.9 +0.8
         5.4nm,0.2s
KTBS                                 Lg    Lg     07 16 24.2
         48nm,0.6s
ANVS  Anan'yevo           3.32  61⇑iP      Pn     07 15 34.5 +1.5
         baz=60
ANVS                                ⇑iS    Sn     07 16 14.0 +0.9
         baz=60
BRLS  Borolday            3.39 303  eP     Pb     07 15 41.7 +1.1
         10nm,0.4s
BRLS                                eS     Sg     07 16 26.5 -2.2
         43nm,0.5s
BRLS  Borolday            3.39 303   Pg    Pb     07 15 41.1 +0.5
         10nm,0.4s
BRLS                                 Lg    Lg     07 16 26.5
         43nm,0.5s
GAR   Garm                3.44 230⇓iP      Pn     07 15 35.4 +0.8
         baz=31
GAR                                 ⇓iS    Sn     07 16 15.4 -0.5
         baz=31
BTLS  Baital              3.80   4  eP     Pg     07 15 51.7 -1.0
         4.8nm,0.2s
BTLS                                eS     Sg     07 16 43.2 +1.3
         13nm,0.5s
BTLS  Baital              3.80   4   Pg    Pg     07 15 50.8 -1.8
         4.8nm,0.2s
BTLS                                 Lg    Lg     07 16 43.2
         13nm,0.5s
PDGK  Podgornoye          4.76  62 ⇓Pg     Pg     07 16 12.4 +1.3
         0.7nm,0.4s
PDGK                               ⇓Lg     Lg     07 17 11.7
         6.0nm,0.6s
OTUK  Ortayu              7.06 353 ⇑Lg     Lg     07 18 24.3
         11nm,0.8s
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IDC ***23*** *07:30:22.6±5.5, 21°.84S×68°.78W, h78km±44km, mb3.5/2, mb1 3.6/4, mb1mx3.2/32, mbtmp3.8/4, ML4.0/2, MS4.0/1, Ms1 4.0/1, ms1mx2.6/17, Error ellipse: s-maj=83.1km s-min=26.4km az=111.0*

GUC ***23*** *07:30:25.4±0.7, 22°.02S×68°.83W, h95km±4km, ML4.0*

VAO ***23*** *07:31:38.8±0.7, 17°.23S×65°.16W, h373km, mb3.8*

ISC 23 07:30:24.2±0.8**, 21°.97S**±0°.04×**68°.73W**±0°.08**, h102**km±7km**, n30, σ1s.20**/40**, 7C-2D, Chile-Bolivia border region**

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Code  Station Name         Δ°   AZ°    Phase ID          Time     Res
                                      Op     ISC       h  m  s   ISC
PB09  IPOC Station P      0.51 290⇓iP      Pn     07 30 41.5 +1.0
PB09                                eS     Sn     07 30 52.6 -0.1
PB09                                 IAML         07 30 54.6
         comp=N,7µm,0.6s
LVC   Limon Verde         0.65 195  eP     Pn     07 30 42.0 +0.1
LVC                                 eS     Sn     07 30 53.6 -1.5
PB03  IPOC Station P      0.95 265⇑iP      Pn     07 30 44.7 +0.3
PB03                                eS     Sn     07 30 59.2 -0.5
PB03                                 IAML         07 31 01.0
         comp=N,4µm,0.2s
PB06  IPOC Station P      1.06 227⇑iP      Pn     07 30 46.7 +1.0
PB06                                eS     Sn     07 31 02.3 +0.4
PB06                                 IAML         07 31 03.3
         comp=E,3µm,0.2s
PB07  IPOC Station P      1.10 283⇑iP      Pn     07 30 46.7 +0.6
PB07                                eS     Sn     07 31 02.4 -0.2
PB07                                 IAML         07 31 03.5
         comp=E,7µm,0.4s
PB01  IPOC Station P      1.16 323⇑iP      Pn     07 30 47.5 +0.7
PB01                                eS     Sn     07 31 03.7  0.0
PB01                                 IAML         07 31 05.8
         comp=N,5µm,0.3s
PB02  IPOC Station P      1.26 301  i P    Pn     07 30 48.3 +0.4
PB02                                eS     Sn     07 31 05.4 -0.4
PB02                                 IAML         07 31 06.6
         comp=E,7µm,0.3s
PB04  IPOC Station P      1.36 254  eP     Pn     07 30 49.1  0.0
PB04                                eS     Sn     07 31 07.3 -0.6
PB04                                 IAML         07 31 16.0
         comp=N,3µm,0.3s
PB15  IPOC Station P      1.41 209  eP     Pn     07 30 50.9 +1.2
PB15                                eS     Sn     07 31 10.0 +1.1
PB05  IPOC Station P      1.62 237⇓iP      Pn     07 30 52.4 +0.2
PB05                                eS     Sn     07 31 12.7 -0.7
PB05                                 IAML         07 31 18.2
         comp=N,2µm,0.3s
PB08  IPOC Station P      1.87 348⇑iP      Pn     07 30 57.6 +2.0
PB08                                eS     Sn     07 31 21.4 +2.1
PB08                                 IAML         07 31 27.3
         comp=E,1µm,0.2s
TA01  Diego Aracena       1.95 316⇑iP      Pn     07 30 56.3 +0.1
TA01                                eS     Sn     07 31 20.6  0.0
TA02  Huaiquique          2.14 322  eP     Pn     07 30 58.3 -0.4
PB10  IPOC Station P      2.27 227  eP     Pn     07 31 01.2 +0.7
PB10                                 IAML         07 31 38.7
         comp=N,419nm,0.5s
PB11  IPOC Station P      2.37 338⇑iP      Pn     07 31 02.0 +0.2
PB11                                 IAML         07 31 35.3
         comp=E,2µm,0.3s
SIV   San Ignacio         9.37  52   P     Pn     07 32 35.2 -1.3
         comp=E,1.0nm,0.3s,baz=228,slow=11,SNR=20
VILB  Vilhena            12.11  44  eP     Pn     07 33 14.0 +0.6
PDRB  Porto dos Gac      15.42  50  eP     Pn     07 33 56.3 -0.1
PLCA  Paso Flores        18.77 184   P     Pn     07 34 36.7 -0.3
         comp=E,0.1nm,0.3s,baz=351,slow=12,SNR=4.6
NPGB  Novo Progresso     19.67  43  eP     P      07 34 41.5 -3.8
MACA  Manacapuru-AM      20.27  24  eP     P      07 34 48.7 -3.0
PTGA  Pitinga            22.78  23   P     P      07 35 17.0 -1.2
         comp=E,0.9nm,0.3s,baz=127,slow=15,SNR=6.2
BOAV  Boa Vista          25.52  19  eP     P      07 35 45.4 +2.0
MCPB  Macapa, AP         26.94  39  eP     P      07 35 56.2  0.0
PCRV  Puerto La Cruz     32.20   8   LR    LR     07 50 16.6
         comp=E,238nm,20.0s,slow=37
NBPB  Pedra_Branca-C     32.58  64  eP     P      07 36 52.6 +6.4
TORD  Torodi Ar. Bea     77.36  70   P     P      07 42 09.1 +0.7
         comp=E,0.4nm,0.4s,baz=248,slow=5.3,SNR=4.7
ASAR  Alice Springs     129.57 207   PKP   PKiKP  07 49 22.9 +0.2
         comp=E,0.4nm,0.7s,baz=142,slow=3.5,SNR=4.9
WRA   Warramunga Arr    132.63 210   PKP   PKiKP  07 49 29.4 +0.4
         comp=E,0.8nm,0.9s,baz=155,slow=1.8,SNR=5.9
MKAR  Makanchi Array    145.92  36   PKPbc PKPab  07 49 53.2 +0.6
         comp=E,0.3nm,0.6s,baz=332,slow=1.9,SNR=4.1
```

IDC ***23*** *07:36:23.3±2.6, 12°.45N×87°.55W, h0km, mb3.9/8, mb1 4.1/10, mb1mx3.7/38, mbtmp3.9/10, ML3.5/2, MS3.0/1, Ms1 3.0/1, ms1mx2.4/32, Error ellipse: s-maj=54.9km s-min=31.0km az=11.0*

INET ***23*** *07:36:24.7, 12°.32N×88°.15W, h25km, MW3.8*

NEIC ***23*** *07:36:32.7±3.0, 12°.55N±0°.07×87°.98W±0°.05, h35km±2km, mb4.3/19, Md4.4(SNET), Error ellipse: s-maj=12.6km s-min=7.5km az=208.0*

SNET ***23*** *07:36:32.4±1.0, 12°.55N×88°.18W, h24km±5km, ML4.4*

UCR ***23*** *07:36:32.3±1.1, 12°.52N×88°.12W, h36km±463km, ML4.3, mb4.3(NEIC)*

GCG ***23*** *07:36:33.2±0.5, 11°.94N×88°.77W, h122km±54km, MD4.2*

ISC 23 07:36:32.3±1.2**, 12°.53N**±0°.06×**88°.05W**±0°.04**, h51**km±11km**, n113, σ1s.17**/126**, mb4.2**/19**, 5D, Off coast of central America**

```
Code  Station Name         Δ°   AZ°    Phase ID          Time     Res
                                      Op     ISC       h  m  s   ISC
CNCH  Conchagua           0.78  16  eP     Pn     07 36 46.9 -0.3
CNCH  Conchagua           0.78  16  eP     Pn     07 36 46.9 -0.3
LCND  La Caada            0.79  11⇓eP      Pn     07 36 46.8 -0.5
LCND                                eS     Sn     07 36 59.1 +0.8
LCND                                 IAML         07 37 04.1
         comp=Z,5µm,0.4s
LCND  La Caada            0.79  11⇓eP      Pn     07 36 46.8 -0.5
LCND                                eS     Sn     07 36 59.1 +0.8
LCND                                 IAML         07 37 04.1
         comp=Z,5µm,0.4s
PACA  Pacayal             0.97 344  eP     Pn     07 36 49.6 -0.2
PACA  Pacayal             0.97 344  eP     Pn     07 36 49.6 -0.2
COEB  Comit de Eme        1.07 334⇓eP      Pn     07 36 50.4 -0.8
COEB                                eS     Sn     07 37 05.2 +0.2
COEB                                 IAML         07 37 10.8
         comp=Z,11µm,0.3s
COEB  Comit de Eme        1.07 334⇓eP      Pn     07 36 50.4 -0.8
COEB                                eS     Sn     07 37 05.2 +0.2
COEB                                 IAML         07 37 10.8
         comp=Z,11µm,0.3s
PQSS  Presa 15 de Se      1.20 336  eP     Pn     07 36 53.0 +0.3
PQSS                                eS     Sn     07 37 08.6 +0.7
CNGN  Cerro Negro         1.32  91   Pn    Pn     07 36 53.8 -0.6
CNGN                                 Sn    Sn     07 37 09.1 -1.9
SCLA  Alcaldia de Sa      1.34 331  eP     Pn     07 36 54.7  0.0
SCLA                                 IAML         07 37 17.4
         comp=Z,4µm,0.5s
SCLA  Alcaldia de Sa      1.34 331  eP     Pn     07 36 54.7  0.0
SCLA                                 IAML         07 37 17.4
         comp=Z,4µm,0.5s
COEG  Centro de Oper      1.35 323  eP     Pn     07 36 54.3 -0.6
COEG                                eS     Sn     07 37 11.8 -0.1
COEG                                 IAML         07 37 19.0
         comp=Z,10µm,0.3s
COEG  Centro de Oper      1.35 323  eP     Pn     07 36 54.3 -0.6
COEG                                eS     Sn     07 37 11.8 -0.1
COEG                                 IAML         07 37 19.0
         comp=Z,10µm,0.3s
SJTE  Alcalda de S        1.43 319  eP     Pn     07 36 55.2 -0.7
SJTE                                eS     Sn     07 37 13.1 -0.5
SJTE  Alcalda de S        1.43 319  eP     Pn     07 36 55.2 -0.7
SJTE                                eS     Sn     07 37 13.1 -0.5
PAVA  Las Pavas           1.46 324  eP     Pn     07 36 56.2 -0.1
PAVA  Las Pavas           1.46 324  eP     Pn     07 36 56.2 -0.1
LFRS  El Faro             1.47 318  i P    Pn     07 36 55.9 -0.6
LFRS  El Faro             1.47 318  i P    Pn     07 36 55.9 -0.6
LBRS  Las Brisas          1.54 321  eP     Pn     07 36 57.4 -0.1
LBRS  Las Brisas          1.54 321  eP     Pn     07 36 57.4 -0.1
LALI  Alcalda de L        1.56 308  eP     Pn     07 36 56.6 -1.1
LALI  Alcalda de L        1.56 308  eP     Pn     07 36 56.6 -1.1
LFU   La Fuente           1.60 320  eP     Pn     07 36 58.1 -0.1
LFU   La Fuente           1.60 320  eP     Pn     07 36 58.1 -0.1
OPAM  Oficina de Pla      1.62 317  eP     Pn     07 36 58.1 -0.5
OPAM  Oficina de Pla      1.62 317  eP     Pn     07 36 58.1 -0.5
SNET  Serv Nac Est T      1.63 315  eP     Pn     07 36 58.1 -0.5
SNET                                eS     Sn     07 37 17.7 -0.8
SNET                                 IAML         07 37 23.0
         comp=Z,9µm,0.3s
SNET  Serv Nac Est T      1.63 315  eP     Pn     07 36 58.1 -0.5
SNET                                eS     Sn     07 37 17.7 -0.8
SNET                                 IAML         07 37 23.0
         comp=Z,9µm,0.3s
SNET  Serv Nac Est T      1.63 315   Pn    Pn     07 36 57.8 -0.9
UEES  Universidad Ev      1.65 316  eP     Pn     07 36 58.5 -0.5
UEES  Universidad Ev      1.65 316  eP     Pn     07 36 58.5 -0.5
BOQS  Boqueron            1.69 315  eP     Pn     07 36 59.9 +0.2
BOQS  Boqueron            1.69 315  eP     Pn     07 36 59.9 +0.2
TGUH  Tegucigalpa,Un      1.70  26   Pn    Pn     07 37 00.1 +0.4
JAYA  Jayaque - finc      1.76 310  eP     Pn     07 36 59.4 -1.1
JAYA  Jayaque - finc      1.76 310  eP     Pn     07 36 59.4 -1.1
TACO  Tacachico           1.92 319  eP     Pn     07 37 02.3 -0.2
TACO  Tacachico           1.92 319  eP     Pn     07 37 02.3 -0.2
CEVE  Cerro Verde         2.00 310  eP     Pn     07 37 04.3 +0.4
CEVE  Cerro Verde         2.00 310  eP     Pn     07 37 04.3 +0.4
RTR   El Retiro           2.06 311  eP     Pn     07 37 05.4 +0.7
RTR   El Retiro           2.06 311  eP     Pn     07 37 05.4 +0.7
SLOZ  Alcaldia de Sa      2.25 312  eP     Pn     07 37 07.1  0.0
MTO3  Montecristo         2.25 326  eP     Pn     07 37 07.3  0.0
MTO3  Montecristo         2.25 326  eP     Pn     07 37 07.3  0.0
MTO3  Montecristo         2.25 326         Pn     07 37 07.3  0.0
BOAB  BOACO BROADBAN2.33  92   Pn    Pn     07 37 06.5 -1.6
ESQI  Esquipulas          2.38 328⇓iP      Pn     07 37 09.4 +0.5
ESQI  Esquipulas          2.38 328   Pn    Pn     07 37 09.3 +0.4
ACON  Acoyapa             2.87 101   Pn    Pn     07 37 14.7 -0.9
MRL   Marmol              2.99 328  eP     Pn     07 37 24.1 +6.7
HZTE  Horizontes, Gu      3.01 127         Pn     07 37 17.6 +0.2
NBG   Las Nubes           3.03 313  eP     Pn     07 37 22.7 +4.7
FUG   Fuego 3             3.32 305  eP     Pn     07 37 23.6 +1.7
FUG                                 eS     Sn     07 38 02.7 +2.5
ORTG  Ortega, Santa       3.33 130         Pn     07 37 21.8 -0.2
APG   El Apazote          3.40 317   Pn    Pn     07 37 23.9 +0.9
         comp=Z,2.3nm,0.3s,baz=122,slow=11,SNR=20
APG                                  Sn    Sn     07 38 08.8 +6.5
         comp=Z,12nm,0.3s,baz=21,slow=18,SNR=7.1
DUNO  Dulce Nombre,       3.49 134   Pn    Pn     07 37 23.5 -0.6
ESPN  Las Esperanzas      3.68  95   Pn    Pn     07 37 27.7 +1.0
JTS   Las Juntas de       3.76 126         Pn     07 37 27.8  0.0
COVE  Coope Vega, Sa      4.00 116   Pn    Pn     07 37 30.6 -0.5
CAO2  Cobano, Puntar      4.04 134   Pn    Pn     07 37 31.6  0.0
STG3  Santiaguito 3,      4.05 303  eS     Sn     07 38 18.7 +0.5
RTAL  Retalhuleu          4.06 300   Pn    Pn     07 37 33.8 +1.8
HUEH  Huehuetenango       4.35 310   Pn    Pn     07 37 37.5 +1.4
HDC   Heredia             4.61 123   Pn    Pn     07 37 40.7 +1.1
PETF  Flores              4.70 338   Pn    Pn     07 37 42.9 +2.2
LCR2  La Lucha 2          4.84 124  eP     Pn     07 37 45.1 +2.3
RAFA  San Farael, Vo      4.88 121  eP     Pn     07 37 44.9 +1.5
RIMA  Rio Macho           4.94 123  eP     Pn     07 37 46.0 +1.8
RIMA  Rio Macho           4.94 123         Pn     07 37 45.0 +0.8
PEZE  Perez Zeledon,      5.31 126  eP     Pn     07 37 50.2 +1.1
PEZE  Perez Zeledon,      5.31 126         Pn     07 37 50.2 +1.1
CCIG  Comitan             5.44 314   Pn    Pn     07 37 53.8 +2.8
SRBA  San Rafael, Bu      5.65 125         Pn     07 37 54.7 +0.8
POTG  Potrero Grande      5.95 125  eP     Pn     07 37 59.1 +1.2
CMIG  Matias Romero       8.01 305   Pn    Pn     07 38 27.4 +1.3
         comp=Z,1.0nm,0.3s,baz=144,slow=8.9,SNR=10
CMIG                                 Sn    Sn     07 39 53.4 -2.1
         comp=Z,0.4nm,0.3s,baz=139,slow=20,SNR=2.1
BAUV  El Baul            19.98  98   P     P      07 40 58.7 -1.8
BAUV                                 IAmb  IAmb   07 41 13.3
         comp=Z,24nm,1.5s
GOGA  Godfrey            21.21  11   P     P      07 41 15.7 +2.1
GOGA                                 IAmb  IAmb   07 41 17.6
         comp=Z,9.9nm,0.8s
Y49A  Blount Mountai     21.29   4   P     P      07 41 16.4 +1.9
Y49A                                 IAmb  IAmb   07 41 22.6
         comp=Z,16nm,1.1s
Y52A  Lilburn            21.55   9   P     P      07 41 19.4 +2.1
TX31  Lajitas Ar. Si     22.15 321   P     P      07 41 25.0 +1.1
TXAR  Lajitas Array      22.15 321   P     P      07 41 25.1 +1.2
         comp=Z,8.5nm,0.7s,baz=139,slow=11,SNR=21
HODGE Hodges             22.24  13   P     P      07 41 26.4 +1.6
HODGE                                IAmb  IAmb   07 41 27.2
         comp=Z,8.4nm,1.0s
MIAR  Mount Ida          22.49 348   P     P      07 41 27.9 +0.4
MIAR                                 IAmb  IAmb   07 41 31.6
         comp=Z,9.3nm,0.8s
ABTX  Abilene, Hawle     22.65 334   P     P      07 41 30.0 +0.8
ABTX                                 IAmb  IAmb   07 41 31.4
         comp=Z,7.0nm,0.6s
SWET  Sewanee            22.67   5   P     P      07 41 28.9 -0.4
SWET                                 IAmb  IAmb   07 41 55.9
         comp=Z,22nm,1.5s
BG3   Lake Jocassee      22.84  11   P     P      07 41 32.7 +1.5
BG3                                  IAmb  IAmb   07 41 46.2
         comp=Z,20nm,1.2s
W39A  Magazine           23.16 348   P     P      07 41 35.5 +1.2
W39A                                 IAmb  IAmb   07 41 59.8
         comp=Z,9.0nm,1.2s
TKL   Tuckaleechee C     23.35   9   P     P      07 41 38.0 +1.8
         comp=Z,3.9nm,0.5s,baz=183,slow=11,SNR=7.5
TKL                                  LR    LR     07 51 42.9
         comp=Z,36nm,19.6s,baz=307,slow=39
TKL   Tuckaleechee C     23.35   9   P     P      07 41 37.4 +1.2
TKL                                  IAmb  IAmb   07 41 56.8
         comp=Z,18nm,1.2s
FCAR  Ozark Folk Cen     23.55 352   P     P      07 41 38.7 +0.7
U40A  Yellville          24.12 350   P     P      07 41 44.7 +1.4
WMOK  Wichita Mounta     24.16 338   P     P      07 41 43.9 +0.2
WMOK                                 IAmb  IAmb   07 41 44.2
         comp=Z,11nm,1.4s
S39A  Bolivar            25.50 350   P     P      07 41 56.0 +0.2
SDCO  Great Sand Dun     29.56 331   P     P      07 42 33.0 +0.5
ETMB  Extrema            31.04 135   P     P      07 42 45.2 -0.3
SADO  Sadowa             33.02  12   P     P      07 43 01.7 -0.9
         comp=Z,5.6nm,0.9s,baz=235,slow=5.2,SNR=4.4
PDAR  Pinedale Array     35.43 332   P     P      07 43 24.5 +0.7
         comp=Z,0.7nm,0.6s,baz=122,slow=10.0,SNR=8.1
PDAR  Pinedale Array     35.43 332   P     P      07 43 23.6 -0.1
REDW  Red Top Meadow     36.49 332   P     P      07 43 33.3 +0.5
NVAR  Mina Array Bea     37.26 319   P     P      07 43 41.0 +1.6
         comp=Z,0.4nm,0.6s,baz=121,slow=7.8,SNR=5.4
NVAR                                 PcP   PcP    07 45 59.0 +0.8
         comp=Z,0.4nm,0.7s,baz=134,slow=4.3,SNR=3.9
GCMT  Greycliff          37.89 335   P     P      07 43 44.7 +0.2
ULM   Lac du Bonnet      38.16 352   P     P      07 43 45.7 -0.9
         comp=Z,2.3nm,0.6s,baz=162,slow=9.8,SNR=3.7
SIV   San Ignacio        38.92 136   P     P      07 43 53.2 -0.2
         comp=Z,2.8nm,1.0s,baz=304,slow=11,SNR=9.0
SCHQ  Schefferville      45.38  17   P     P      07 44 42.6 -2.9
         comp=Z,1.3nm,0.4s,baz=231,slow=12,SNR=6.4
YKA   Yellowknife Ar     53.38 345   P     P      07 45 44.2 -2.2
         comp=Z,0.3nm,0.4s,baz=151,slow=6.3,SNR=7.5
BCAR  Beaver Creek A     62.94 336   P     P      07 46 53.6 +0.4
ILAR  Eielson Array      65.71 336   P     P      07 47 09.2 -2.1
         comp=Z,0.2nm,0.5s,baz=95,slow=6.2,SNR=7.0
ILAR  Eielson Array      65.71 336   P     P      07 47 11.1 -0.2
BMAR  Burnt Mountain     66.00 339   P     P      07 47 13.0 -0.2
WRA   Warramunga Arr    138.73 254   PKP   PKPdf  07 55 53.0 -0.6
         comp=Z,0.5nm,1.0s,baz=90,slow=2.2,SNR=6.1
```

GUC 23 07:51:38.9±0.8**, 29°.44S×71°.77W, h25**km±22km**, ML3.8, 2C-3D, Near coast of central Chile**

```
Code  Station Name         Δ°   AZ°    Phase ID          Time     Res
                                      Op     ISC       h  m  s   ISC
CO05  La Serena           0.67 136⇓iP      Pb     07 51 51.8 -0.1
CO05                                eS     Sb     07 52 00.5 -0.3
CO05                                 IAML         07 52 04.6
         comp=N,6µm,0.6s
LCO   Las Campanas        1.02  66⇓iP      Pn     07 51 57.1 -0.8
LCO                                 eS     Sb     07 52 11.4 +0.2
GO04  Tololo Observa      1.12 131  eP     Pn     07 51 59.1 -0.1
GO04                                eS     Sb     07 52 13.7 -0.2
CO06  Fray Jorge          1.24 175⇓iP      Pn     07 51 59.9 -0.8
CO06                                eS     Sb     07 52 17.2  0.0
CO06                                 IAML         07 52 21.7
         comp=E,2µm,0.2s
AC04  Llanos de Chal      1.37  27⇑iP      Pn     07 52 00.9 -1.5
CO03  El Pedregal         1.68 147  eP     Pn     07 52 07.6 +0.7
CO03                                eS     Sn     07 52 28.5 +0.8
GO03  Copiap              2.28  37   IAML         07 52 54.7
         comp=N,635nm,0.4s
VA06  Catapilco           3.14 173  eP     Pn     07 52 26.4 -0.4
VA06                                 IAML         07 53 19.3
         comp=N,404nm,0.4s
VCA   Vinchina            3.19  78⇑iP      Pb     07 52 33.7 -1.3
VCA                                 eS     Sb     07 53 14.4 +0.8
VCA                                  IAML         07 53 26.0
         comp=E,506nm,0.4s
VA03  San Esteban         3.48 163  eP     Pn     07 52 33.4 +1.8
```

IDC ***23*** *08:02:10.5±1.4, 36°.73N×3°.29W, h0km, mb3.3/2, mb1 3.6/5, mb1mx3.3/43, mbtmp3.4/5, ML3.3/3, MS2.9/3, Ms1 3.0/3, ms1mx2.6/16, Error ellipse: s-maj=26.5km s-min=18.0km az=89.0*

IGIL ***23*** *08:02:11.3, 36°.79N×3°.19W, h3km*

LDG ***23*** *08:02:11.0±0.2, 36°.71N×3°.14W, h3km, Ml3.6/2, Error ellipse: s-maj=4.0km s-min=2.0km az=166.0*

INMG ***23*** *08:02:11.4±1.5, 36°.78N×3°.19W, h6km±2km, ML3.6, Error ellipse: s-maj=2.0km s-min=1.6km az=164.0*

MDD ***23*** *08:02:11.4±0.2, 36°.80N×3°.18W, h7km±2km, mbLg3.8/41, Error ellipse: s-maj=3.0km s-min=1.6km az=178.0, PRXIMO*

MDD EMS: III INTENSIDAD MAXIMA.

CNRM ***23*** *08:02:16.5, 36°.48N×3°.53W, h58km, ml3.5*

ISC 23 08:02:10.8±1.0**, 36°.77N**±0°.02×**3°.19W**±0°.02**, h19**km±3km**, n136, σ1s.84**/227**, 6C-3D, Strait of Gibraltar**

```
Code  Station Name         Δ°   AZ°    Phase ID          Time     Res
                                      Op     ISC       h  m  s   ISC
EXAL  Albunol             0.03 339   Pg    Pg     08 02 13.3 -0.9
         SNR=7.9
EXAL                                 Lg    Lg     08 02 14.8
         SNR=7.9
EXAD  Adra                0.15  96   Pg    Pg     08 02 14.7 -0.6
         SNR=7.9
EXAD                                 Lg    Lg     08 02 17.2
         SNR=7.9
EBER  Berja               0.28  62 ⇓Pg     Pb     08 02 16.2 -0.9
         3µm,0.2s,SNR=18
EBER                                 Lg    Lg     08 02 19.6
         28µm,0.4s
ELGU  Los Guajares,       0.36 286 ⇑Pg     Pb     08 02 18.2 -0.5
         2µm,0.2s,SNR=18
ELGU                                 Lg    Lg     08 02 22.4
         12µm,0.2s,SNR=7.9
GORA  Gorafe              0.72  10 ⇑Pg     Pg     08 02 23.3 -1.7
         496nm,0.2s,SNR=18
GORA                                 Lg    Lg     08 02 32.2
         4µm,0.4s,SNR=7.9
EGOR  Sierra Gorda,       0.81 295 ⇓Pg     Pb     08 02 25.7 -0.7
         156nm,0.2s,SNR=18
EGOR                                 Lg    Lg     08 02 36.1
         2µm,0.4s,SNR=7.9
ENIJ  Nijar               0.82  75 ⇑Pg     Pg     08 02 25.5 -1.3
         57nm,0.1s,SNR=18
ENIJ                                 Lg    Lg     08 02 35.2
         6µm,0.3s,SNR=7.9
EALB  Alboran             0.84 171 ⇑Pg     Pb     08 02 27.0 +0.4
         448nm,0.2s,SNR=18
EALB                                 Lg    Lg     08 02 38.1
         4µm,0.2s,SNR=7.9
EMAL  Malaga-Limoner      0.99 270   P     Pg     08 02 27.1 -3.1
EMAL                                 S     Sg     08 02 39.0 -4.2
EMIJ  Mijas               1.29 261   Pg    Pg     08 02 31.6 -4.1
         23nm,0.2s,SNR=78
EMIJ                                 Lg    Lg     08 02 45.0
         427nm,0.2s
SESP  Santiago Espad      1.45  21 ⇑Pn     Pb     08 02 36.9 -0.3
         937nm,0.3s,SNR=18
SESP                                 Lg    Lg     08 02 56.7
         2µm,0.4s,SNR=7.9
EMEL  Melilla             1.48 173   Pg    Pn     08 02 37.1 +0.8
         41nm,0.1s,SNR=7.9
EMEL                                 Lg    Lg     08 02 54.6
         538nm,0.1s,SNR=7.9
TLOR  Lorca, Murcia       1.49  53   Pg    Pn     08 02 36.6 +0.1
         265nm,0.2s,SNR=7.9
TLOR                                 Lg    Lg     08 02 56.5
         3µm,0.6s,SNR=7.9
CHAS  Isla Isabel II      1.70 158   P     Pn     08 02 39.8 +0.4
CHAS                                 S     Sn     08 02 58.0 -2.5
EADA  Adamuz              1.78 322 ⇓Pn     Pn     08 02 41.6 +1.0
         2.9nm,0.1s,SNR=18
EADA                                 Pg    Pg     08 02 43.5 -1.6
         50nm,0.1s,SNR=7.9
EADA                                 Sn    Sn     08 03 02.4 -0.2
         76nm,0.2s,SNR=7.9
EADA                                 Lg    Lg     08 03 07.1
         754nm,0.3s
LIJA  Lijar               1.78 275   P     Pg     08 02 45.0 -0.1
LIJA                                 S     Sg     08 03 10.7 +2.4
EJIF  Jimena Fronter      1.86 261   Pn    Pn     08 02 41.0 -0.6
         SNR=7.9
EJIF                                 Pg    Pb     08 02 44.3 +0.1
         SNR=7.9
EJIF                                 Lg    Lg     08 03 11.2
         SNR=7.9
EMUR  La Murta            1.89  55   Pn    Pn     08 02 41.6 -0.4
         13nm,0.2s,SNR=59
EMUR                                 Lg    Lg     08 03 11.7
         468nm,0.6s,SNR=4.0
CART  Cartagena           1.93  64   P     Pn     08 02 41.6 -1.0
CART                                 S     Sn     08 03 04.1 -2.2
CEU   Ceuta               1.96 244   P     Pn     08 02 40.9 -2.1
CEU                                  S     Sn     08 03 04.0 -3.0
ECEU  Ceuta               1.97 244   Pn    Pn     08 02 41.9 -1.1
         9.9nm,0.3s,SNR=7.0
ECEU                                 Sn    Sn     08 03 03.9 -3.3
         17nm,0.1s,SNR=4.9
TAF   Taforalt            2.05 162   P     Pn     08 02 45.4 +1.2
TAF                                  S     Sn     08 03 10.2 +0.9
SMIR  Smir Dam            2.08 239   P     Pn     08 02 43.5 -1.1
SMIR                                 S     Sn     08 03 04.4 -5.4
ESPR  Espera              2.14 273   Pg    Pb     08 02 48.4 -0.5
         14nm,0.2s,SNR=4.0
ESPR                                 Lg    Lg     08 03 18.1
         334nm,0.3s,SNR=4.0
ECAB  El Cabril           2.20 307   Pn    Pn     08 02 47.0 +0.7
         6.7nm,0.2s,SNR=39
ECAB                                 Pg    Pg     08 02 51.1 -2.0
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	71nm,0.2s,SNR=7.9						
ECAB				Lg	Lg	08 03 19.6	
	417nm,0.4s						
ETOB	Tobarra	2.28	34	Pn	Pn	08 02 48.2	+0.7
	1.6nm,0.2s,SNR=92						
ETOB				Lg	Lg	08 03 21.9	
	466nm,0.3s						
CHEFC	Chefchaouen	2.41	227	P	Pn	08 02 51.2	+2.0
CHEFC				S	Sn	08 03 14.9	-3.2
JBK	JBK	2.48	168	P	Pn	08 02 51.5	+1.2
JBK				S	Sn	08 03 18.5	-1.7
AFON	Font Roja	2.83	47	Pn	Pn	08 02 55.3	+0.2
	15nm,0.3s,SNR=13						
AFON				Pg	Pb	08 03 01.5	+0.8
	115nm,0.6s,SNR=7.9						
AFON				Lg	Lg	08 03 39.4	
	600nm,1.0s,SNR=4.0						
ARNO	Arenosillo	2.86	278	P	Pn	08 02 57.8	+2.5
ARNO				S	Sn	08 03 27.3	-1.8
PAB	San Pablo	2.92	342	Pn	Pn	08 02 57.6	+1.4
	6.8nm,0.2s,SNR=7.9						
PAB				Lg	Lg	08 03 43.7	
	312nm,0.5s,SNR=7.9						
EMIN	Mina Concepcio	2.95	291	Pn	Pn	08 02 57.0	+0.4
	5.9nm,0.2s,SNR=86						
EMIN				Pg	Pg	08 03 04.3	-3.1
	37nm,0.4s,SNR=7.9						
EMIN				Sn	Sn	08 03 32.9	+1.5
	9.2nm,0.2s,SNR=7.9						
EMIN				Lg	Lg	08 03 45.5	
	323nm,0.8s						
ESDC	Sonseca Array	2.96	348	Pn	Pn	08 02 58.9	+2.1
	3.0nm,0.3s,baz=170,slow=12,SNR=53						
ESDC				Lg	Lg	08 03 45.9	
	59nm,0.3s,baz=169,slow=27,SNR=27						
ESDC	Sonseca Array	2.96	348	Pn	Pn	08 02 58.5	+1.6
	8.1nm,0.3s,baz=169,slow=12,SNR=34						
ESDC				Pg	Pg	08 03 05.1	-2.6
	5.7nm,0.1s,baz=167,slow=16,SNR=7.5						
ESDC				Lg	Lg	08 03 42.9	
	468nm,0.4s,baz=169,slow=28,SNR=26						
ECHE	Chera	3.32	31	Pn	Pn	08 03 03.0	+1.3
	5.2nm,0.2s,SNR=7.9						
ECHE				Pg	Pg	08 03 12.3	-2.1
	61nm,0.4s,SNR=7.9						
ECHE				Lg	Lg	08 03 53.2	
	336nm,1.1s,SNR=4.0						
PBAR	Barrancos	3.37	296	ePn	Pn	08 03 02.9	+0.6
PBAR				A	A	08 04 02.8	
	120nm,0.4s						
EGRO	El Granado	3.51	284	Pn	Pn	08 03 04.8	+0.5
	2.5nm,0.2s,SNR=48						
EGRO				Sn	Sn	08 03 46.3	+1.0
	7.1nm,0.1s,SNR=7.9						
EGRO				Lg	Lg	08 04 00.9	
	110nm,0.4s						
UCM	Universidad Co	3.54	359	P	Pn	08 03 06.8	+2.2
UCM				S	Sb	08 03 55.3	0.0
IFR	Ifrane	3.61	207	P	Pn	08 03 07.0	+1.1
IFR				S	Sn	08 03 44.6	-3.4
EBAD	Badajoz	3.62	304	Pn	Pn	08 03 06.3	+0.5
	6.4nm,0.3s,SNR=65						
EBAD				Pg	Pg	08 03 17.7	-2.5
	23nm,0.2s,SNR=7.9						
EBAD				Sn	Sn	08 03 49.8	+1.8
	52nm,0.2s,SNR=4.0						
EBAD				Lg	Lg	08 04 04.5	
	112nm,0.2s,SNR=4.0						
PVAQ	Vaqueiros	3.67	281	ePn	Pn	08 03 07.0	+0.5
PVAQ				eSn	Sn	08 03 49.7	+0.4
PVAQ				A	A	08 04 23.8	
	70nm,0.7s						
PVAQ	Vaqueiros	3.67	281	P	Pn	08 03 07.7	+1.2
PBDV	Barranco-do-Ve	3.82	279	ePn	Pn	08 03 09.6	+1.0
PBDV				eSn	Sn	08 03 53.2	+0.2
PBDV				A	A	08 04 37.1	
	62nm,0.6s						
TDRA	Tendrara	3.84	165	P	Pn	08 03 10.5	+1.5
TDRA				S	Sn	08 03 55.1	+1.4
PBEJ	Beja	3.93	290	ePn	Pn	08 03 11.2	+1.2
PBEJ				eSn	Sn	08 03 56.2	+0.6
PBEJ				A	A	08 04 32.9	
	44nm,0.7s						
PCVE	Castro Verde	3.96	284	ePn	Pn	08 03 11.5	+1.0
PCVE				eSn	Sn	08 03 57.8	+1.3
PCVE				eSg	Sg	08 04 18.5	+0.4
PCVE				A	A	08 04 28.3	
	63nm,0.6s						
EPLA	Plasencia	4.00	326	Pn	Pn	08 03 12.9	+1.9
	15nm,0.3s,SNR=24						
EPLA				Sn	Sn	08 03 56.2	-1.1
	7.5nm,0.2s,SNR=7.9						
EPLA				Lg	Lg	08 04 14.7	
	89nm,0.4s,SNR=13						
CZD	Col de Zad	4.03	203	P	Pn	08 03 13.5	+1.9
CZD				S	Sn	08 03 55.1	-3.3
PESTR	Estremoz	4.07	302	ePn	Pn	08 03 12.6	+0.7
PESTR				eSn	Sn	08 03 58.9	-0.1
PESTR				eSg	Sg	08 04 18.7	-2.6
PESTR				A	A	08 04 29.4	
	114nm,0.7s						
PESTR	Estremoz	4.07	302	P	Pn	08 03 12.4	+0.5
PESTR				S	Sn	08 04 04.2	+5.2
MD31	MD31	4.10	199	P	Pn	08 03 14.0	+1.6
MD31				S	Sn	08 03 56.2	-3.7
MDT	Midelt	4.11	197	Pn	Pn	08 03 14.0	+1.3
	0.7nm,0.3s,baz=128,slow=16,SNR=21						
MDT				Sn	Sn	08 04 02.5	+2.3
	3.8nm,0.3s,baz=31,slow=22,SNR=6.2						
MDT				LR	LR	08 04 54.9	
	comp=Z,50nm,18.3s,baz=317,slow=41						
MDT	Midelt	4.11	197	P	Pn	08 03 12.9	+0.3
MDT				S	Sn	08 03 55.9	-4.4
ETOR	Torete	4.14	12	Pn	Pn	08 03 14.2	+1.1
	13nm,0.2s,SNR=77						
ETOR				Pg	Pg	08 03 27.6	-2.5
	43nm,0.3s,SNR=6.7						
ETOR				Lg	Lg	08 04 22.4	
	320nm,0.8s,SNR=6.3						
MESJ	Messejana	4.15	286	eP	Pn	08 03 13.6	+0.5
MESJ	Messejana	4.15	286	ePn	Pn	08 03 13.6	+0.5
MESJ				eSn	Sn	08 04 01.0	0.0
MESJ				eSg	Sg	08 04 25.9	+1.9
MESJ				A	A	08 04 31.9	
	61nm,0.6s						
EMOS	Mosqueruela	4.18	30	Pn	Pn	08 03 14.4	+0.9
	0.5nm,0.2s,SNR=18						
EMOS				Pg	Pg	08 03 28.4	-2.4
	9.3nm,0.3s,SNR=13						
EMOS				Lg	Lg	08 04 25.3	
	235nm,1.3s						
EVO	Evora	4.21	296	P	Pn	08 03 15.1	+1.2
EVO				S	Sn	08 04 01.9	-0.7
EVO	Evora	4.21	296	ePn	Pn	08 03 15.3	+1.4
EVO				eSn	Sn	08 04 02.9	+0.3
EVO				eSg	Sg	08 04 25.2	-0.8
EVO				A	A	08 04 33.4	
	121nm,0.5s						
EIBI	Ibiza	4.24	56	Pn	Pn	08 03 14.1	-0.2
	7.2nm,0.3s,SNR=15						
EIBI				Sn	Sn	08 03 59.8	-3.4
	6.7nm,0.2s,SNR=7.9						
PMRV	Marv??o	4.25	310	ePn	Pn	08 03 15.4	+1.0
PMRV				eSn	Sn	08 04 03.6	+0.2
PMRV				eSg	Sg	08 04 26.8	-0.3
PMRV				A	A	08 04 37.9	
	93nm,0.5s						
ZHG	ZHG	4.36	221	P	Pn	08 03 16.5	+0.5
ZHG				S	Sn	08 04 03.3	-2.9
MORF	Marmelete	4.40	279	ePn	Pn	08 03 18.1	+1.5
MORF				eSn	Sn	08 04 09.6	+2.3
MORF				A	A	08 04 39.9	
	35nm,0.4s						
PNCL	Nicolau / Gran	4.45	289	ePn	Pn	08 03 17.9	+0.7
PNCL				eSn	Sn	08 04 08.4	-0.1
PNCL				eSg	Sg	08 04 33.0	-0.8
PNCL				A	A	08 04 54.4	
	36nm,0.5s						
PTEO	Sao Teotonio	4.49	282	ePn	Pn	08 03 19.0	+1.3
PTEO				eSn	Sn	08 04 10.0	+0.7
PTEO				eSg	Sg	08 04 35.2	+0.3
PTEO				A	A	08 04 40.2	
	53nm,0.5s						
PFVI	Vila Bisbo	4.53	276	ePn	Pn	08 03 19.6	+1.3
PFVI				eSn	Sn	08 04 10.3	-0.1
PFVI				A	A	08 04 56.2	
	36nm,0.9s						
PFVI	Vila Bisbo	4.53	276	Pn	Pn	08 03 19.4	+1.1
	5.3nm,0.1s,SNR=7.9						
PFVI				Sn	Sn	08 04 10.1	-0.3
	8.9nm,0.2s,SNR=7.9						
PFVI				Lg	Lg	08 04 36.4	
	86nm,0.7s,SNR=7.9						
PFVI	Vila Bisbo	4.53	276	P	Pn	08 03 19.5	+1.2
PFVI				S	Sn	08 04 07.5	-2.9
PCBR	Castelo Branco	4.56	314	ePn	Pn	08 03 20.5	+1.8
PCBR				eSn	Sn	08 04 11.0	-0.1
PCBR				eSg	Sg	08 04 36.1	-1.0
PCBR				A	A	08 04 49.7	
	112nm,0.5s						
PMTG	Montargil	4.59	302	ePn	Pn	08 03 20.2	+1.0
PMTG				eSn	Sn	08 04 11.7	-0.3
PMTG				eSg	Sg	08 04 39.8	+1.5
PMTG				A	A	08 04 47.8	
	92nm,0.5s						
FIGM	Figuig	4.89	160	P	Pn	08 03 24.8	+1.4
FIGM				S	Sn	08 04 19.9	+0.4
AVE	Averroes	4.90	226	P	Pn	08 03 24.9	+1.6
AVE				S	Sn	08 04 19.1	-0.3
AVE	Averroes	4.90	226	P	Pn	08 03 22.6	-0.8
AVE				S	Sn	08 04 11.3	-8.1
MTE	Manteigas	4.98	318	ePn	Pn	08 03 26.1	+1.6
MTE				eSn	Sn	08 04 21.4	-0.1
MTE				eSg	Sg	08 04 46.9	-3.7
MTE				A	A	08 04 59.0	
	130nm,0.5s						
ERTA	Horta de San J	5.01	32	Pn	Pn	08 03 26.7	+1.8
	7.4nm,0.2s,SNR=17						
ERTA				Lg	Lg	08 04 50.3	
	51nm,0.7s,SNR=4.0						
PMST	Lisbon--Monsan	5.14	294	ePn	Pn	08 03 28.0	+1.3
PMST				eSn	Sn	08 04 25.9	+0.5
PMST				eSg	Sg	08 04 58.1	+2.4
PMST				A	A	08 05 04.4	
	64nm,0.4s						
PSBE	So Bento	5.20	304	ePn	Pn	08 03 29.0	+1.5
PSBE				eSn	Sn	08 04 26.0	-0.9
PSBE				eSg	Sg	08 04 57.3	-0.3
PSBE				A	A	08 05 09.8	
	80nm,0.5s						
PMAFR	Mafra	5.29	296	⇑ePn	Pn	08 03 29.9	+1.1
PMAFR				eSn	Sn	08 04 29.6	+0.4
PMAFR				eSg	Sg	08 05 01.1	+0.5
PMAFR				A	A	08 05 16.8	
	66nm,0.4s						
PMAFR	Mafra	5.29	296	Pn	Pn	08 03 29.4	+0.6
	12nm,0.2s,SNR=7.9						
PMAFR				Sn	Sn	08 04 27.3	-1.8
	14nm,0.2s,SNR=7.9						
PMAFR				Lg	Lg	08 05 00.9	
	517nm,0.9s,SNR=7.9						
PCAS	Casmilo, Conde	5.30	310	ePn	Pn	08 03 30.3	+1.4
PCAS				eSn	Sn	08 04 28.8	-0.7
PCAS				eSg	Sg	08 05 00.0	-1.0
PCAS				A	A	08 05 11.3	
	84nm,0.5s						
MVO	Moncorvo	5.31	327	ePn	Pn	08 03 31.0	+1.9
MVO				eSn	Sn	08 04 28.5	-1.3
MVO				eSg	Sg	08 04 59.6	-1.7
MVO				A	A	08 05 05.5	
	92nm,0.5s						
MVO	Moncorvo	5.31	327	Pn	Pn	08 03 30.9	+1.8
	16nm,0.2s,SNR=7.9						
MVO				Sn	Sn	08 04 28.1	-1.7
	31nm,0.4s,SNR=6.2						
MVO				Lg	Lg	08 04 59.5	
	213nm,0.8s,SNR=7.9						
COI	Coimbra	5.34	312	ePn	Pn	08 03 31.3	+1.8
COI				eSn	Sn	08 04 29.8	-0.7
COI				eSg	Sg	08 05 03.5	+1.2
COI				A	A	08 05 04.2	
	154nm,0.6s						
PVIS	Viseu	5.39	318	ePn	Pn	08 03 31.5	+1.3
PVIS				eSn	Sn	08 04 30.3	-1.4
PVIS				eSg	Sg	08 05 02.2	-1.6
PVIS				A	A	08 05 06.0	
	48nm,0.7s						
ETOS	Mallorca	5.59	56	Pn	Pn	08 03 32.8	-0.1
	3.7nm,0.3s,SNR=7.0						
EPOB	Poblet	5.66	35	Pn	Pn	08 03 34.9	+1.1
	3.4nm,0.2s,SNR=17						
EPOB				Lg	Lg	08 05 07.8	
	8.7nm,0.6s						
PVRL	Vila Real	5.71	323	ePn	Pn	08 03 36.4	+1.8
PVRL				eSn	Sn	08 04 38.5	-1.2
PVRL				eSg	Sg	08 05 12.3	-1.9
PVRL				A	A	08 05 22.3	
	61nm,0.6s						
PBRG	Braganca	5.73	332	ePn	Pn	08 03 36.6	+1.7
PBRG				eSn	Sn	08 04 39.1	-1.0
PBRG				eSg	Sg	08 05 12.5	-2.3
PBRG				A	A	08 05 17.3	
	54nm,0.6s						
POLO	Lamas de Olo	5.83	324	ePn	Pn	08 03 37.9	+1.7
POLO				eSn	Sn	08 04 41.0	-1.5
POLO				eSg	Sg	08 05 17.7	-0.1
POLO				A	A	08 05 21.3	
	20nm,0.6s						
ECAL	Calabor	5.85	333	Pn	Pn	08 03 38.0	+1.5
	6.1nm,0.4s,SNR=14						
ECAL				Sn	Sn	08 04 40.2	-2.9
	6.5nm,0.3s,SNR=5.1						
ECAL				Lg	Lg	08 05 16.4	
	144nm,0.7s,SNR=6.4						
EARA	Aranguren	6.12	11	Pn	Pn	08 03 42.5	+2.3
	2.4nm,0.2s,SNR=4.0						
PCAB	Cabril	6.20	324	ePn	Pn	08 03 42.8	+1.5
PCAB				eSn	Sn	08 04 50.8	-0.8
PCAB				eSg	Sg	08 05 28.9	-0.8
PCAB				A	A	08 05 36.8	
	67nm,0.6s						
EORO	Oroz-Betelu	6.29	13	Pn	Pn	08 03 44.3	+1.8
	2.1nm,0.2s,SNR=27						
EORO				Pg	Pg	08 04 07.2	-3.9
	35nm,0.5s,SNR=7.9						
EORO				Lg	Lg	08 05 28.0	
	116nm,0.9s,SNR=4.0						
EMIR	Miracle	6.31	34	Pn	Pn	08 03 44.8	+2.1
	3.8nm,0.2s,SNR=5.8						
ELOB	Lobios	6.34	325	Pn	Pn	08 03 44.5	+1.3
	7.3nm,0.2s,SNR=39						
ELOB				Sn	Sn	08 04 50.0	-5.0
	7.3nm,0.3s,SNR=7.9						
ELOB				Lg	Lg	08 05 29.0	
	61nm,0.7s,SNR=6.6						
ECHI	Chisagues Biel	6.44	23	Pn	Pn	08 03 45.5	+0.8
	0.2nm,0.1s,SNR=4.0						
ETSF	Etsaut	6.45	17	ePn	Pn	08 03 45.4	+0.7
ETSF	Etsaut	6.45	17	eP	Pn	08 03 50.3	+5.6
ETSF				eSn	Sn	08 04 54.3	-3.5
	7.6nm,0.3s						
ELAN	Lanestosa	6.46	358	Pn	Pn	08 03 45.8	+1.0
	0.5nm,0.3s,SNR=12						
ELAN				Lg	Lg	08 05 33.2	
	94nm,0.7s,SNR=4.7						
PGAV	Gavieira, Arco	6.51	324	ePn	Pn	08 03 47.0	+1.4
PGAV				eSn	Sn	08 04 56.4	-3.0
PGAV				eSg	Sg	08 05 36.1	-3.6
PGAV				A	A	08 05 47.3	
	59nm,0.6s						
SJPF	Ste Jean	6.52	13	ePn	Pn	08 03 47.2	+1.6
SJPF	Ste Jean	6.52	13	eP	Pn	08 03 51.2	+5.6
SJPF				eSn	Sn	08 04 57.7	-1.6
	13nm,0.6s						
CSOR	Sort	6.52	29	Pn	Pn	08 03 47.2	+1.4
	3.8nm,0.3s,SNR=7.9						
CSOR				Sn	Sn	08 04 56.7	-2.9
	3.8nm,0.4s,SNR=4.0						
CSOR				Lg	Lg	08 05 40.4	
	104nm,1.0s,SNR=7.9						
EALK	Alkurruntz	6.57	11	Pn	Pn	08 03 48.1	+1.7
	40nm,0.4s,SNR=40						
EALK				Sn	Sn	08 04 59.2	-1.7
	102nm,0.4s,SNR=7.9						
EALK				Lg	Lg	08 05 41.5	
	178nm,0.6s,SNR=7.9						
ATE	Arette	6.59	16	Pn	Pn	08 03 48.7	+2.1
	1.5nm,0.2s,SNR=7.9						
ATE				Sn	Sn	08 04 58.0	-3.3
	1.9nm,0.3s,SNR=7.9						
ATE				Lg	Lg	08 05 41.5	
	24nm,0.6s,SNR=7.9						
CFON	Fontmartina	6.63	39	Pn	Pn	08 03 48.2	+1.0
	0.9nm,0.2s,SNR=4.0						
EARI	Arriondas	6.71	347	Pn	Pn	08 03 49.9	+1.6
	0.3nm,0.2s,SNR=12						
EARI				Sn	Sn	08 05 01.9	-2.2
	1.9nm,0.3s,SNR=7.9						
EARI				Lg	Lg	08 05 43.4	
	106nm,0.9s,SNR=4.5						
OUK	Oukaimeden	6.77	216	P	Pn	08 03 49.6	+0.2
OUK				S	Sn	08 04 59.8	-6.3
EPF	Esparros	6.82	22	ePn	Pn	08 03 50.5	+0.7
EPF	Esparros	6.82	22	eP	Pn	08 03 55.2	+5.4
EZAM	Zamans	6.86	323	Pn	Pn	08 03 51.6	+1.3
	2.4nm,0.2s,SNR=7.9						
EZAM				Lg	Lg	08 05 47.2	
	41nm,0.7s,SNR=7.9						
CLLI	Llivia	6.96	33	Pn	Pn	08 03 53.4	+1.6
	1.4nm,0.3s,SNR=7.9						
EPON	Pontenova	7.22	336	Pn	Pn	08 03 57.7	+2.5
	2.2nm,0.2s,SNR=7.6						
EPON				Lg	Lg	08 05 59.1	
	135nm,1.4s,SNR=7.9						
EMAZ	Mazaricos	7.61	326	Pn	Pn	08 04 02.2	+1.7
	5.2nm,0.2s,SNR=7.9						
EMAZ				Sn	Sn	08 05 21.6	-4.6
	1.5nm,0.2s,SNR=7.9						
EMAZ				Lg	Lg	08 06 11.9	
	28nm,0.7s,SNR=7.9						
MTLF	Montolieu	7.76	31	ePn	Pn	08 04 03.3	+0.6
MTLF	Montolieu	7.76	31	eP	Pn	08 04 07.2	+4.5
LFF	La Frestale	8.69	19	ePn	Pn	08 04 15.2	-0.2
LFF	La Frestale	8.69	19	eP	Pn	08 04 21.0	+5.6
CAF	Calviac	9.07	24	ePn	Pn	08 04 21.6	+1.0
CAF	Calviac	9.07	24	eP	Pn	08 04 26.7	+6.1
RJF	Les Rejaudoux	9.24	21	ePn	Pn	08 04 22.4	-0.5
MFF	Saint Martin d	10.09	12	ePn	Pn	08 04 33.8	-0.7
MFF	Saint Martin d	10.09	12	eP	Pn	08 04 40.0	+5.5
KEST	Kesra	10.18	92	Pn	Pn	08 04 39.5	+3.5
	0.6nm,0.3s,baz=194,slow=3.7,SNR=5.1						
TCF	Toulx Ste Croi	10.34	21	ePn	Pn	08 04 36.4	-1.5
QUIF	Quistinic	11.14	0	ePn	Pn	08 04 49.7	+0.8
QUIF	Quistinic	11.14	0	eP	Pn	08 04 55.0	+6.1
SGMF	Saint Gilles	11.49	2	ePn	Pn	08 04 54.0	+0.3
SGMF	Saint Gilles	11.49	2	eP	Pn	08 04 59.9	+6.2
ROSF	Rostrenen	11.56	360	ePn	Pn	08 04 53.8	-0.9
ROSF	Rostrenen	11.56	360	eP	Pn	08 05 00.2	+5.5
GRR	Gorron	11.74	8	ePn	Pn	08 04 55.6	-1.5
GERES	GERESS Array B	17.25	40	LR	LR	08 13 25.0	
	comp=Z,66nm,20.0s,baz=288,slow=39						
ARCES	ARCESS Array B	36.33	17	LR	LR	08 26 08.5	
	comp=Z,37nm,18.4s,baz=345,slow=40						
MKAR	Makanchi Array	61.54	51	P	P	08 12 30.0	+3.5
	0.2nm,0.6s,baz=278,slow=5.4,SNR=2.7						
TXAR	Lajitas Array	80.62	300	P	P	08 14 25.1	+2.6
	0.2nm,0.8s,baz=90,slow=3.6,SNR=2.8						

IASPEI ***23*** *08:34:29.2±0.9, 43°.29N±0°.02×19°.88E±0°.02, h9^{km}±6^{km}, Error ellipse: s-maj=3.5km s-min=2.5km az=108.4, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

RHSSO ***23*** *08:34:29.9±0.4, 43°.30N×19°.89E, h4^{km}±2^{km}, ML2.4/10*

BEO ***23*** *08:34:30.9±0.4, 43°.29N×19°.92E, h0^{km}, ML2.3/13*

PDG ***23*** *08:34:30.1±0.1, 43°.22N×19°.83E, h17^{km}, MD2.6/2, ML2.3/11, Error ellipse: s-maj=0.2km s-min=0.3km az=0.0*

ISC 23 08:34:29.3±0.9**, 43°.30N**±0°.01×**19°.87E**±0°.01**, h7**^{km}±7^{km}**,**
n57, σ1^{s}.22/104**, 21C-7D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJES	Sjenica	0.08	115	ePg	Pg	08 34 31.3	0.0
SJES				eSg	Sg	08 34 33.0	+0.3
PLE	Pljevlja	0.36	276	ePg	Pg	08 34 36.9	+0.7
PLE				eSg	Sg	08 34 41.8	+0.9
IVA	Berane	0.42	178	⇓iPg	Pg	08 34 37.3	-0.2
IVA				i Sg	Sg	08 34 42.9	-0.1
RUDO	Rudo	0.49	312	⇓iPg	Pg	08 34 38.3	-0.4
RUDO				eSg	Sg	08 34 45.2	+0.1
KOME	Kolasin	0.52	211	⇑iPg	Pg	08 34 38.7	-0.5
KOME				eSg	Sg	08 34 45.8	-0.2
BBLS	Lazići	0.67	329	ePg	Pb	08 34 42.7	-0.6
BBLS				eSg	Sb	08 34 52.3	-0.5
BBLS	Lazići	0.67	329	ePg	Pg	08 34 42.1	0.0
BBLS				eSg	Sg	08 34 51.7	+0.9
PVY	Plav	0.70	175	ePg	Pg	08 34 42.0	-0.8
PVY				i Sg	Sg	08 34 52.2	+0.3
UPM	Unac-Piva	0.71	263	ePg	Pg	08 34 43.6	+0.6
UPM				eSg	Sg	08 34 52.9	+0.6
UPM	Unac-Piva	0.71	263	ePg	Pg	08 34 43.1	+0.1
UPM				i Sg	Sg	08 34 53.1	+0.8
DIVS	Divibare	0.81	6	ePg	Pn	08 34 46.3	-0.9
DIVS				eSg	Sb	08 34 56.1	-0.8
DIVS	Divibare	0.81	6	⇑iPg	Pg	08 34 44.7	-0.1
DIVS				eSg	Sb	08 34 56.0	-0.8
GRUS	Gruza	0.85	46	ePg	Pb	08 34 46.5	+0.1
GRUS				eSg	Sg	08 34 56.8	+0.1
NKME	Niksic	0.86	232	ePg	Pg	08 34 45.0	-0.7
NKME				i Sg	Sg	08 34 57.3	+0.5
SELS	Selova	0.91	94	ePg	Pg	08 34 46.7	-0.1
SELS				eSg	Sg	08 34 58.4	-0.2
PDG	Podgorica	0.98	208	⇑P	Pg	08 34 47.5	-0.5
PDG				⇑S	Sg	08 35 00.7	+0.1
PDG	Podgorica	0.98	208	⇑iPg	Pg	08 34 47.4	-0.6
PDG				eSg	Sg	08 35 00.7	+0.1
TTG	Podgorica	0.98	208	⇓iPg	Pg	08 34 46.9	-1.1
TTG				eSg	Sb	08 35 01.2	-0.4
TRUS	Trudelj	1.01	22	ePg	Pn	08 34 49.4	-0.4
TRUS				eSg	Sn	08 35 03.4	-0.9
CEME	Cevo	1.03	224	ePg	Pg	08 34 47.8	-1.1
CEME				eSg	Sg	08 35 02.6	+0.4
HAPS	Han Pijesak,Bl	1.04	320	⇑iPg	Pg	08 34 48.9	-0.3
HAPS				eSg	Sg	08 35 03.1	+0.5
BRY	Bratogost	1.05	249	⇑iPg	Pg	08 34 49.1	-0.4
BRY				eSg	Sb	08 35 04.1	+0.1
DRME	Dracevica, Mon	1.22	205	ePg	Pb	08 34 51.9	-0.7
DRME				eSg	Sg	08 35 08.8	+0.4
DRME	Dracevica, Mon	1.22	205	⇓iPg	Pb	08 34 51.3	-1.3
DRME				eSg	Sg	08 35 08.9	+0.5
BUM	Brajici-Budva	1.23	216	⇑iPg	Pb	08 34 51.4	-1.4
BUM				i Sg	Sn	08 35 09.5	-0.3
TREB	Trebinje	1.26	243	⇑iPg	Pb	08 34 53.3	0.0
TREB				eSg	Sn	08 35 10.6	+0.1
TEKS	Tekeris	1.28	349	ePg	Pg	08 34 53.7	-0.1
TEKS				eSg	Sn	08 35 11.7	+0.7
TEKS	Tekeris	1.28	349	⇑iPg	Pn	08 34 52.5	-1.1
TEKS				eSg	Sn	08 35 10.8	-0.2
HCY	Herceg Novi	1.32	231	⇑iPg	Pn	08 34 53.7	-0.5
HCY				eSg	Sn	08 35 12.8	+0.8
HCY	Herceg Novi	1.32	231	⇓iPg	Pn	08 34 53.3	-0.9
HCY				i Sg	Sn	08 35 12.8	+0.8
BOVS	Bovan	1.38	75	⇑P	Pg	08 34 56.4	+0.8
BOVS				⇓S	Sg	08 35 14.1	+0.5
BOVS	Bovan	1.38	75	ePg	Pg	08 34 55.8	+0.2
BOVS				eSg	Sg	08 35 14.0	+0.5
ULC	Ulcinj	1.41	199	⇑iPg	Pn	08 34 54.7	-0.7
ULC				eSg	Sg	08 35 14.7	+0.2
DBRK	Dubrovnik	1.41	244	ePg	Pb	08 34 55.8	-0.1
DBRK				Sn	Sg	08 35 17.2	+2.5
BARS	Barje	1.50	108	ePg	Pb	08 34 57.0	-0.5
BARS	Barje	1.50	108	ePn	Pg	08 35 01.9	+3.9
BARS				eSg	Sg	08 35 18.0	+0.5
BARS				eSg	Sb	08 35 25.0	+8.3
STON	Ston	1.65	256	ePn	Pb	08 34 59.7	-0.2
STON				eSn	Sb	08 35 21.7	+0.8
STON	Ston	1.65	256	ePn	Pb	08 35 00.1	+0.1
STON				Sn	Sg	08 35 23.5	+1.3
ZAGS	Zajecar	1.79	72	ePn	Pg	08 35 03.3	-0.3
ZAGS				eSg	Sg	08 35 27.4	+0.6
PRVS	Prvonek	1.80	115	ePn	Pb	08 35 01.7	-0.9
PRVS				eSg	Sg	08 35 26.2	-0.8
FRGS	Fruska Gora	1.86	359	⇑P	Pg	08 35 05.2	+0.2
FRGS				⇑S	Sg	08 35 30.1	+0.9
FRGS	Fruska Gora	1.86	359	ePn	Pb	08 35 03.3	-0.4
FRGS				eSg	Sg	08 35 30.8	+1.7
FRGS	Fruska Gora	1.86	359	ePn	Pn	08 35 02.0	+0.4

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FRGS				*e*Sn	Sb	08 35 26.6	-0.6
MDVR	Moldovita	1.99	41	⇑P	Pg	08 35 06.4	-1.1
RICI	Ricice	2.01	277	*e*Pn	Pg	08 35 07.5	-0.2
ZAPS	Zavoj	2.02	90	*e*Pg	Pb	08 35 06.2	-0.1
ZAPS				*e*Sg	Sg	08 35 33.0	-1.0
BLKB	Belogradchik	2.07	80	⇑S	Sb	08 35 33.3	+0.3
BOSS	Bosilegrad	2.08	112	*e*Pn	Pg	08 35 08.5	-0.5
BOSS				*e*Sg	Sg	08 35 34.7	-1.2
MAKA	Makarska	2.08	271	*e*Pn	Pg	08 35 09.2	0.0
LSTV	Lastovo	2.25	257	*e*Pn	Pb	08 35 10.7	+0.5
HERR	Herculane	2.42	48	⇑P	Pn	08 35 10.4	+1.1
HVAR	Hvar	2.51	269	*e*Pn	Pb	08 35 15.4	+0.8
VTS	Vitosha	2.56	104	⇑P	Pn	08 35 11.6	+0.3
VTS				⇑S	Sb	08 35 44.8	-2.5
BZS	Buzias	2.64	28	⇓P	Pb	08 35 14.5	-2.3
GZR	Gura Zlata	2.96	44	⇑P	Pb	08 35 19.7	-2.7
MORH	Mrgy, Hungar	3.05	344	*e*Pn	Pn	08 35 18.7	+0.8
MORH				*e*Sn	Sn	08 35 55.2	+0.6
ZIRJ	Zirje	3.10	278	*e*Pn	Pb	08 35 23.7	-1.0

IDC ***23*** *08:35:16.8±0.6, 4°.19N×126°.71E, h0km, mb4.3/16, mb1 4.4/17, mb1mx4.1/52, mbtmp4.3/17, ML4.1/1, MS3.4/6, Ms1 3.4/6, ms1mx3.0/55, Error ellipse: s-maj=42.4km s-min=12.1km az=72.0*

DJA ***23*** *08:35:19.7±0.3, 4°N±2°×12°7E±°, h10km, M4.6/26, mB5.2/6, mb4.6/26, MLv4.7/14, Mw(mB)4.6/6*

NEIC ***23*** *08:35:23.6±1.6, 4°.19N±0°.06×126°.79E±0°.10, h40km±7km, mb4.6/34, Error ellipse: s-maj=14.3km s-min=8.8km az=72.0*

ISC 23 08:35:22.7±0.4, 4°.24N±0°.05×126°.88E±0°.06, h36km, n103, σ1.s21/97, mb4.6/34, MS3.4/4, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	1.46	248	P	Pn	08 35 46.0	-0.5
SGSI				S	Sn	08 36 05.8	+1.4
DAV	Davao City (W)	3.09	335	LR	LR	08 37 35.5	
	comp=Z,654nm,21.0s,baz=113,slow=45						
DAV	Davao City (W)	3.09	335	Pn	Pn	08 36 10.8	+1.8
TNTI	Ternate	3.48	172	P	Pn	08 36 16.4	+2.0
TNTI	Ternate	3.48	172	Pn	Pn	08 36 14.3	0.0
LBMI	Labuha	4.89	173	P	Pn	08 36 34.5	+0.8
GTOI	Gorontalo	5.27	227	P	Pn	08 36 40.2	+1.2
	0.1nm398nm30nm,0.7s						
GTOI	Gorontalo	5.27	227	S	Pn	08 36 39.3	+0.3
	30nm,0.7s,398nm0.1nm						
MRSI	Marisa	6.19	233	P	Pn	08 36 53.0	+1.3
	0.6nm2μm194nm,0.6s						
SANI	Sanana	6.31	188	P	Pn	08 36 53.0	-0.3
	0.2nm898nm46nm,0.9s						
LUWI	Luwuk	6.66	218	P	Pn	08 36 59.4	+1.3
	0.9nm215nm,1.1s						
LUWI	Luwuk	6.66	218		Pn	08 37 00.5	+2.3
SWI	Sorong	6.70	139	P	Pn	08 36 59.8	+1.2
	0.1nm32nm,0.5s						
SWI	Sorong	6.70	139	S	Pn	08 37 01.9	+3.3
	32nm,0.5s,0.1nm						
SIJI	Sorong	6.71	139	Pn	Pn	08 36 58.6	-0.1
	3.6nm,0.3s,baz=255,slow=21,SNR=4.3						
SIJI				Sn	Sn	08 38 11.2	-2.8
	baz=139,slow=20,SNR=1.6						
TOLI2	Tolitoli	6.84	243	Pn	Pn	08 36 59.0	-1.6
APSI	Ampana	7.32	226	P	Pn	08 37 07.8	+0.7
	0.4nm994nm120nm,1.1s						
MPSI	Mapaga	7.98	241	P	Pn	08 37 17.2	+1.0
	0.1nm16nm,0.8s						
FAKI	Fak Fak	8.91	143	P	Pn	08 37 30.5	+1.5
FAKI	Fak Fak	8.91	143	Pn	Pn	08 37 30.3	+1.3
FAKI	Fak Fak	8.91	143	S	Pn	08 37 30.2	+1.2
TTSI	Tana Toraja	10.11	224	P	Pn	08 37 46.2	+0.8
	29nm,0.6s						
BNSI	Bone	10.93	218	P	Pn	08 38 11.0	+14
KAPI	Kappang	11.63	218	LR	LR	08 43 07.7	
	comp=Z,188nm,19.5s,baz=71,slow=41						
EDFI	Ende, Flores	13.90	202	P	Pn	08 38 38.7	+1.2
	9.0nm,0.9s						
WBSI	Waikabubak, Su	15.68	208	P	Pn	08 39 02.0	+0.8
	43nm,0.7s						
PLAI	Plampang	15.84	215	P	Pn	08 39 03.9	+0.7
	39nm,0.8s						
TWSI	Taliwang, Sumb	16.30	218	P	Pn	08 39 09.0	0.0
	24nm,1.2s						
YULB	Yu-li	19.79	345	P	P	08 39 48.8	-1.3
YULB				IAmb	IAmb	08 39 53.6	
	comp=Z,33nm,1.3s						
KNRA	Kununurra	19.88	175	P	P	08 39 50.7	-0.4
KNRA				IAmb	IAmb	08 39 58.3	
	comp=Z,24nm,0.7s						
TPUB	Ta-pu	19.89	343	P	P	08 39 51.0	-0.1
FITZ	Fitzroy Crossi	22.23	183	P	P	08 40 14.9	-1.5
	comp=Z,6.3nm,0.6s,baz=11,slow=6.1,SNR=19						
UBPT	Khong Chiam	23.75	299	P	P	08 40 31.1	-0.8
UBPT				IAmb	IAmb	08 40 32.7	
	comp=Z,42nm,1.5s						
WB0	Warramunga Arr	24.98	163	P	P	08 40 41.9	-1.3
WB0				IAmb	IAmb	08 41 07.6	
	comp=Z,20nm,0.9s						
WRAB	Tennant Creek	25.12	163	P	P	08 40 43.4	-1.0
WRAB				IAmb	IAmb	08 40 44.9	
	comp=Z,23nm,1.0s						
WRA	Warramunga Arr	25.13	163	P	P	08 40 43.3	-1.3
	comp=Z,16nm,0.9s,baz=343,slow=10,SNR=75						
WB2	Warramunga Arr	25.13	163	P	P	08 40 42.9	-1.7
WB2				IAmb	IAmb	08 40 45.0	
	comp=Z,23nm,0.9s						
WR0	Warramunga Arr	25.20	163	P	P	08 40 43.9	-1.3
WR0				IAmb	IAmb	08 40 45.7	
	comp=Z,14nm,0.9s						
PSA00	Pilbara Seismi	26.56	195	P	P	08 40 57.3	-0.2
PSA00				IAmb	IAmb	08 41 03.2	
	comp=Z,12nm,0.7s						
PSA00	Pilbara Seismi	26.56	195	P	P	08 40 56.6	-0.9
PSA00				IAmb	IAmb	08 41 03.2	
	comp=Z,6.4nm,0.8s						
PPI	Padang Panjang	26.87	261	P	P	08 41 10.1	+10
MNSI	Mandailing Nat	27.48	264	P	P	08 41 06.8	+0.9
	comp=Z,2μmcomp=Z,15nm,0.4s						
AS31	Alice Springs	28.57	166	P	P	08 41 14.7	-0.8
ASAR	Alice Springs	28.57	166	P	P	08 41 14.4	-1.1
	comp=Z,1.2nm,0.6s,baz=347,slow=6.8,SNR=40						
ASAR				PcP	PcP	08 44 26.1	-0.4
	comp=Z,0.8nm,0.6s,baz=358,slow=2.7,SNR=4.4						
ASAR	Alice Springs	28.57	166	P	P	08 41 14.9	-0.6
NJ2	Nanjing	28.67	346	*e*P	P	08 41 18.0	+1.7
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
CMAR	Chiang Mai Arr	30.75	300	P	P	08 41 32.7	-2.1
CHTO	Chiang Mai	30.89	300	P	P	08 41 35.7	-0.4
CHTO				IAmb	IAmb	08 41 37.8	
	comp=Z,5.6nm,0.6s						
JWT	Wachi	31.88	13	P	P	08 41 44.8	+0.2
KSRS	Korea Array	33.07	2	LR	LR	08 58 44.7	
	comp=Z,32nm,18.0s,baz=160,slow=42						
MJAR	Matsushiro Arr	33.79	17	LR	LR	08 56 37.7	
	comp=Z,24nm,19.7s,baz=90,slow=38						
XAN	Xi'an	34.03	333	P	P	08 42 02.0	-1.5
XAN				pP	sP	08 42 15.4	-1.3
XAN				sP	pP	08 42 22.5	+8.6
XAN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
FORT	Forrest	34.84	178	P	P	08 42 09.7	-0.7
BJT	Baijiatuau	36.91	346	P	P	08 42 28.8	+0.7
EIDS	Eidsvold	37.66	143	P	P	08 42 34.7	0.0
BBOO	Buckleboo	37.86	167	P	P	08 42 35.9	-0.3
STKA	Stephens Creek	38.55	160	P	P	08 42 41.1	-0.9
	comp=Z,9.8nm,1.1s,baz=352,slow=7.1,SNR=12						
STKA	Stephens Creek	38.55	160	P	P	08 42 41.9	-0.2
HHC	Hu-ho-hao-te	38.96	341	*e*P	P	08 42 48.3	+2.7
HHC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,66nm,8.4s						
ARMA	Armidale	41.81	147	P	P	08 43 09.4	+0.2
ARMA				IAmb	IAmb	08 43 10.5	
	comp=Z,12nm,0.8s						
KLR	Kul'dur	45.02	5	P	P	08 43 34.8	0.0
	comp=Z,0.7nm,0.4s,baz=177,slow=10,SNR=4.0						
SONM	Songino Array	46.86	341	P	P	08 43 49.9	+0.4
	comp=Z,1.0nm,0.5s,baz=158,slow=8.1,SNR=8.9						
SONM	Songino Array	46.86	341	P	P	08 43 50.3	+0.9
WMQ	Urumqi	52.39	325	*e*P	P	08 44 33.6	+2.0
MK31	Makanchi Array	57.22	325	P	P	08 45 05.8	-0.7
MKAR	Makanchi Array	57.22	325	P	P	08 45 05.7	-0.8
	comp=Z,2.2nm,0.4s,baz=117,slow=7.7,SNR=38						
MAKZ	Makanchi	57.41	325	P	P	08 45 06.6	-1.1
MAKZ				IAmb	IAmb	08 45 15.1	
	comp=Z,3.6nm,0.8s						
KDJ	Kajisay	58.07	318	P	P	08 45 12.4	-0.3
KDJ				IAmb	IAmb	08 45 13.2	
	comp=Z,4.8nm,0.6s						
AAK	Ala-Archa	60.08	318	LR	LR	09 13 36.4	
	comp=Z,80nm,21.2s,baz=98,slow=38						
ZALV	Zalesovo Beam	60.20	333	P	P	08 45 24.7	-2.3
	comp=Z,1.7nm,0.4s,baz=127,slow=6.8,SNR=6.9						
ZALV	Zalesovo Beam	60.20	333	P	P	08 45 26.1	-0.9
KURBB	Kurchatov Arra	61.39	327	P	P	08 45 34.3	-0.8
	comp=Z,2.6nm,0.4s,baz=128,slow=6.3,SNR=10						
KURK	Kurchatov	61.39	327	P	P	08 45 34.3	-0.8
KKAR	Karatay Array	62.96	317	P	P	08 45 44.8	-1.1
BRVK	Borovoye	67.05	327	P	P	08 46 11.8	-0.4
BRVK				IAmb	IAmb	08 46 22.2	
	comp=Z,5.8nm,0.7s						
TIXI	Tiksi	67.33	1	P	P	08 46 14.0	+0.3
	comp=Z,2.7nm,0.4s,baz=184,slow=1.4,SNR=2.5						
CASY	Casey	71.34	187	P	P	08 46 38.6	+0.1
CASY				IAmb	IAmb	08 46 45.1	
	comp=Z,8.2nm,1.4s						
ABKAR	Akbulak array	71.85	321	P	P	08 46 41.6	-0.4
ABKAR	Akbulak array	71.85	321	P	P	08 46 41.3	-0.7
ARU	Arti	74.59	328	P	P	08 46 57.8	-0.2
	comp=Z,1.9nm,0.2s,baz=146,slow=3.6						
IMAR	Indian Mountai	81.82	24	P	P	08 47 38.6	+0.8
PPLA	Purkeypile	82.11	27	P	P	08 47 40.6	+1.0
PPLA				IAmb	IAmb	08 47 44.0	
	comp=Z,8.9nm,1.2s						
H21K	Melozitna Rive	82.16	24	P	P	08 47 41.1	+1.4
BPAW	Bear Paw Mtn.	82.76	26	P	P	08 47 45.3	+2.5
BPAW				IAmb	IAmb	08 47 45.4	
	comp=Z,7.6nm,1.2s						
KVAR	Kislovodsk Arr	82.89	314	LR	LR	09 28 10.0	
	comp=Z,35nm,21.7s,baz=110,slow=38						
I23K	Minto, Yukon-K	83.55	25	P	P	08 47 48.1	+1.3
VNDA	Vanda	83.91	173	P	P	08 47 48.1	-0.3
	comp=Z,1.9nm,0.9s,baz=298,slow=6.1,SNR=10						
VNDA	Vanda	83.91	173	P	P	08 47 48.5	0.0
VNDA				IAmb	IAmb	08 47 49.4	
	comp=Z,4.9nm,1.1s						
ILAR	Eielson Array	84.58	25	P	P	08 47 51.5	-0.6
	comp=Z,0.6nm,0.8s,baz=249,slow=7.4,SNR=7.7						
KLMR	Klimovskoe	85.03	331	*e*P	P	08 47 52.8	-1.6
KLMR				AMP		08 47 55.1	
	comp=Z,11nm,0.7s						
BMAR	Burnt Mountain	85.55	23	P	P	08 47 58.3	+1.3
BCAR	Beaver Creek A	86.86	27	P	P	08 48 04.6	+1.1
ARCES	ARCESS Array B	90.02	340	P	P	08 48 17.3	-1.0
	comp=Z,4.2nm,0.8s,baz=78,slow=6.6,SNR=12						
ARCES	ARCESS Array B	90.02	340	P	P	08 48 16.9	-1.4
ARCES				IAmb	IAmb	08 48 19.4	
	comp=Z,3.2nm,1.0s						
FINES	FINESS Array B	91.45	332	P	P	08 48 24.1	-1.0
	comp=Z,0.8nm,0.5s,baz=64,slow=4.4,SNR=5.3						
FINES	FINESS Array B	91.45	332	P	P	08 48 24.4	-0.7
AKASG	Malin Array Be	91.59	321	P	P	08 48 25.2	-0.8
	comp=Z,0.4nm,0.3s,baz=70,slow=4.5,SNR=4.5						
QSPA	South Pole Qui	94.14	180		P	08 48 39.9	+2.3
CRVS	Cervenica-Dubn	96.88	320	*e*PDIFF	P	08 48 50.8	+0.5
PDAR	Pinedale Array	110.87	41	PP	PP	08 54 21.2	-9.0
	comp=Z,0.3nm,0.7s,baz=292,slow=2.8,SNR=1.6						
TXAR	Lajitas Array	121.17	52	PKP	PKiKP	08 54 13.9	+1.1
	comp=Z,0.3nm,0.9s,baz=204,slow=2.0,SNR=2.9						
TORD	Torodi Ar. Bea	122.90	289	PKP	PKiKP	08 54 16.4	0.0
	comp=Z,0.8nm,0.6s,baz=50,slow=2.4,SNR=6.1						
TORD	Torodi Ar. Bea	122.90	289		PKPdf	08 54 15.7	-0.5

TAP 23 08:39:01.2, 24°.14N×121°.63E, h6km, ML1.6, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETL	Fush Village	0.01	350	P	Pg	08 39 02.4	0.0
	baz=348						
NACB	Ninganchiao	0.04	316	P	Pg	08 39 02.8	+0.3
	baz=315						
TWD	Chiawan	0.07	203	*i* P	Pg	08 39 03.4	+0.5
	baz=197						
TWD				S	Sg	08 39 05.3	+1.3
	baz=197						
ETLH	Xiulin Townshi	0.15	295	P	Pg	08 39 05.0	+0.8
	baz=295						
ETLH				S	Sg	08 39 07.9	+1.6
	baz=295						
WHF	Hehuan Shan	0.33	270	*i* P	Pg	08 39 08.5	+0.7
	baz=269						
WHF				S	Sb	08 39 14.8	-0.7
	baz=269						
EWUT	Wuta	0.33	25	*e*P	Pb	08 39 09.7	+0.2
	baz=24						
FUSS	Fushou	0.36	287	*i* P	Pb	08 39 09.7	-0.5
	baz=286						
FUSS				S	Sb	08 39 15.4	-0.9
	baz=286						
ESL	Shilin	0.37	208	P	Pb	08 39 09.3	-0.9
	baz=207						
ESL				*e*S	Sb	08 39 15.9	-0.4
	baz=207						
CHGB	Renai	0.42	259	P	Pb	08 39 10.7	-0.5
	baz=258						
CHGB				S	Sb	08 39 17.0	-0.9
	baz=258						
WHP	Taichung City	0.64	282	P	Pn	08 39 16.1	-0.8
	baz=282						
WHP				S	Sb	08 39 24.7	+0.7
	baz=282						

JMA 23 08:39:43.2±0.2, 24°.63N×123°.75E, h6km, M1.1, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IRIF	Iriomote-Funau	0.29	184	P	Pg	08 39 49.0	0.0
IRIF				S	Sg	08 39 52.9	+0.1
JIJ	Ishigaki jima	0.45	126	P	Pg	08 39 52.0	+0.2
JIJ				S	Sg	08 39 57.5	-0.1
JKRS	Kuro-shima	0.46	149	P	Pg	08 39 52.2	+0.2
JKRS				S	Sg	08 39 58.4	+0.4
JISG	Ishigakijimahi	0.51	95	P	Pg	08 39 53.1	0.0
JISG				S	Sg	08 40 00.9	+1.1
JTJ	Tarama	0.87	89	*e*S	Sb	08 40 12.8	+0.3

IDC 23 08:48:59.7±2.7, 54°.32N×86°.02E, h0km, mb1 2.7/2, mb1mx2.7/47, mbtmp2.7/2, ML2.5/2, Error ellipse: s-maj=19.8km s-min=11.2km az=52.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.80	243	*i*		08 53 46.3	
	baz=62,slow=349,SNR=1.7						
ZALV	Zalesovo Beam	0.80	243	Pg	Pg	08 49 14.6	-0.3
	0.6nm,0.3s,baz=60,slow=17,SNR=5.2						
ZALV				Lg	Lg	08 49 26.3	
	2.3nm,0.3s,baz=62,slow=30,SNR=12						
KURBB	Kurchatov Arra	5.88	234	Pn	Pn	08 50 28.8	+0.7
	0.1nm,0.3s,baz=50,slow=14,SNR=2.0						
MKAR	Makanchi Array	7.90	199	Pn	Pn	08 50 56.5	+0.8
	0.1nm,0.3s,baz=16,slow=14,SNR=7.1						

NOU 23 08:49:13.1, 20°.52S×168°.38E, h2km, MLv3.7/13, Loyalty Islands, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	1.01	199	P	Pg	08 49 32.0	-0.5
LIFNC	LIFOU	1.10	256	P	Pg	08 49 33.7	-0.5
YATNC	Mamie plateau,	2.07	222	P	Pn	08 49 48.2	-0.7
PINNC	Pines Island,	2.26	202	P	Pn	08 49 51.2	-0.3
OUENC	Ouen Island, N	2.37	217	P	Pn	08 49 53.3	+0.3
DZM	Mont Dzumac	2.38	229	P	Pn	08 49 52.5	-0.7
NOUC	Port Laguerre	2.50	231	P	Pn	08 49 55.3	+0.6
ONTNC	Ouen Toro	2.53	225	P	Pn	08 49 55.4	+0.2
DVP	Devils Point	2.79	356	P	Pn	08 49 58.5	-0.2
KOUNC	Koumac, New Ca	3.84	269	P	Pn	08 50 14.3	+1.1

THE ***23*** *08:59:52.0, 38°.53N×20°.56E, h12km, ML3.1/8, Error ellipse: s-maj=0.7km s-min=0.2km az=289.0*

ATH ***23*** *08:59:52.5, 38°.52N×20°.59E, h9km±1km, ML2.8/8, Error ellipse: s-maj=2.1km s-min=0.7km az=285.0*

ISC 23 08:59:52.0±0.8, 38°.53N±0°.02×20°.57E±0°.03, h13km±5km, n46, σ0.s48/69, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FSK	Fiskardo	0.07	185	P	Pg	08 59 54.6	0.0
FSK				S	Sg	08 59 56.3	-0.2
	26μm,0.1s						
FSK	Fiskardo	0.07	185	P	Pg	08 59 54.7	0.0
FSK				S	Sg	08 59 56.3	-0.2
FSK				AML	AML	08 59 56.8	
	comp=N,40326μm,0.2s						
FSK				AML	AML	08 59 57.0	
	comp=E,63200μm,0.2s						
EVGI	Lefkada island	0.12	36	P	Pg	08 59 55.2	0.0
EVGI				S	Sg	08 59 57.6	+0.1
	comp=E,13μm,0.2s						
EVGI	Lefkada island	0.12	36	P	Pg	08 59 55.2	0.0
EVGI				S	Sg	08 59 57.5	+0.1
DRAG	Dragano-Lefkad	0.16	1	P	Pg	08 59 55.5	-0.3
DRAG				S	Sg	08 59 58.4	0.0
	comp=E,43μm,0.3s						
DRAG	Dragano-Lefkad	0.16	1	P	Pg	08 59 55.6	-0.1
DRAG				S	Sg	08 59 58.5	+0.1
NYDR	Nydri-Lefkada	0.21	28	P	Pg	08 59 56.6	0.0
NYDR				S	Sg	09 00 00.0	+0.2
	comp=E,12μm,0.4s						
NYDR	Nydri-Lefkada	0.21	28	P	Pg	08 59 56.6	0.0
NYDR				S	Sg	08 59 59.9	+0.2
LKD2	Lefkada island	0.27	15	P	Pg	08 59 57.6	-0.1
LKD2				S	Sg	09 00 01.7	+0.2
	comp=E,4μm,0.4s						
LKD2	Lefkada island	0.27	15	P	Pg	08 59 57.5	-0.1
LKD2				S	Sg	09 00 01.8	+0.3
LKD2				AML	AML	09 00 03.1	
	comp=N,7759μm,0.5s						
LKD2				AML	AML	09 00 04.6	
	comp=E,4329μm,0.2s						
KEF4	Livadi, Kephal	0.29	203	P	Pg	08 59 57.9	-0.1
KEF4				S	Sg	09 00 02.3	+0.2
KEF4	Livadi, Kephal	0.29	203	P	Pg	08 59 57.9	-0.1
KEF4				S	Sg	09 00 02.8	+0.8
TSLK	Tsoukalades, L	0.30	13	P	Pg	08 59 58.2	-0.1
TSLK				S	Sg	09 00 02.9	+0.4
	comp=E,3μm,0.4s						
TSLK	Tsoukalades, L	0.30	13	P	Pg	08 59 58.4	+0.1
TSLK				S	Sg	09 00 03.1	+0.6
TSLK				AML	AML	09 00 05.4	
	comp=N,4385μm,0.3s						
TSLK				AML	AML	09 00 06.4	
	comp=E,4847μm,0.4s						
DMLN	Damoulianata-K	0.33	208	P	Pg	08 59 58.5	-0.2
DMLN				S	Sg	09 00 03.5	+0.4
	comp=E,5μm,0.4s						
DMLN	Damoulianata-K	0.33	208	P	Pg	08 59 58.5	-0.2
DMLN				S	Sg	09 00 04.0	+0.9
LXRA	Lixouri, Kepha	0.34	198	P	Pg	08 59 59.0	+0.1
VLS	Valsamata	0.35	177	P	Pg	08 59 59.0	-0.1
VLS				S	Sg	09 00 04.3	+0.5
	comp=E,6μm,0.2s						
VLS	Valsamata	0.35	177	P	Pg	08 59 58.9	-0.1
VLS				S	Sg	09 00 04.6	+0.8
VLS				AML	AML	09 00 05.0	
	comp=N,12798μm,0.2s						
VLS				AML	AML	09 00 05.5	
	comp=E,10816μm,0.2s						
ARGA	Argostoli. Kep	0.36	192	P	Pg	08 59 59.8	+0.6
KEF3	Kipouria, Keph	0.37	208	P	Pg	08 59 58.7	-0.7
KEF3				S	Sg	09 00 04.1	-0.2
PSDA	Pessada-Kefalo	0.41	178	P	Pg	09 00 00.1	-0.1
PSDA				S	Sg	09 00 06.4	+0.7
PSDA	Pessada-Kefalo	0.41	178	P	Pg	09 00 00.1	-0.1
PSDA				S	Sg	09 00 06.7	+0.9
PVO	Paravola	0.76	83	P	Pg	09 00 07.0	+0.3
PVO				AML	AML	09 00 25.1	
	comp=E,1004μm,0.4s						
PVO				AML	AML	09 00 27.2	
	comp=N,1309μm,0.5s						
LTHK	Lithakia	0.84	165	P	Pg	09 00 07.6	-0.7
LTHK				S	Sb	09 00 20.4	+0.7
LTHK	Lithakia	0.84	165	P	Pg	09 00 07.6	-0.7
LTHK				S	Sb	09 00 20.1	+0.4
LTHK				AML	AML	09 00 22.1	
	comp=N,1035μm,0.1s						
LTHK				AML	AML	09 00 22.4	
	comp=E,1174μm,0.2s						
RLS	Riolos of Patr	0.85	123	P	Pg	09 00 08.6	+0.2
RLS				AML	AML	09 00 23.6	
	comp=N,696μm,0.6s						
RLS				AML	AML	09 00 26.2	
	comp=E,525μm,0.5s						
EVR	Evrytania	1.04	68	P	Pg	09 00 11.3	-0.8
EFP	Efpalio	1.05	95	P	Pb	09 00 11.4	-0.7
DRO	Drossia	1.07	122	P	Pb	09 00 12.2	-0.1
DRO				AML	AML	09 00 31.5	
	comp=E,1517μm,0.3s						
DRO				AML	AML	09 00 32.0	
	comp=N,1445μm,0.4s						
LAKA	Lakka	1.14	104	P	Pb	09 00 13.0	-0.6
SERG	Sergoula	1.17	95	P	Pb	09 00 13.6	-0.6
TRIZ	Trizonia	1.19	97	P	Pb	09 00 13.9	-0.6
MAKR	Makrakomi, Fth	1.31	68	P	Pb	09 00 17.1	+0.5
KEK	Kerkira	1.33	333	P	Pg	09 00 17.6	+0.1
KLV	Kalavryta, Ach	1.33	111	P	Pn	09 00 16.0	-0.4
AGG	Agios Georgios	1.46	70	P	Pb	09 00 19.5	+0.4
GUR	Goura	1.52	112	P	Pb	09 00 20.2	+0.2
THL	Klokotos Trika	1.53	47	P	Pb	09 00 20.7	+0.5
DBRK	Dubrovnik	4.53	337	*e*Pn	Pn	09 01 01.5	+1.3
STON	Ston	4.86	334	*e*Pn	Pn	09 01 03.9	-0.9
LSTV	Lastovo	5.08	328	*e*Pn	Pn	09 01 07.0	-0.8
HVAR	Hvar	5.60	327	*e*Pn	Pn	09 01 14.4	-0.5
RICI	Ricice	5.60	333	*e*Pn	Pn	09 01 14.2	-0.8
ZIRJ	Zirje	6.33	326	*e*Pn	Pn	09 01 24.4	-0.5
DUGI	Dugi Otok	6.86	325	*e*Pn	Pn	09 01 31.6	-0.7

IDC 23 09:00:47.0±3.2, 54°.62N×86°.35E, h0km, mb1 2.7/2, mb1mx2.7/41, mbtmp2.7/2, ML2.4/2, Error ellipse: s-maj=24.8km s-min=14.8km az=47.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.12	234	*i*		09 07 09.3	
	baz=53,slow=349,SNR=5.9						
ZALV	Zalesovo Beam	1.12	234	Pg	Pg	09 01 07.8	-0.7
	0.7nm,0.3s,baz=56,slow=17,SNR=6.5						
ZALV				Lg	Lg	09 01 23.5	
	2.8nm,0.3s,baz=51,slow=26,SNR=17						
KURBB	Kurchatov Arra	6.21	233	Pn	Pn	09 02 21.1	+1.1
	0.1nm,0.3s,baz=49,slow=14,SNR=5.3						
KURBB				Lg	Lg	09 04 04.1	
	0.0nm,0.3s,baz=46,slow=31,SNR=1.1						
MKAR	Makanchi Array	8.24	200	Pn	Pn	09 02 48.0	+0.2
	0.1nm,0.3s,baz=27,slow=15,SNR=5.4						
MKAR				Sn	Sn	09 04 21.6	+0.1
	0.1nm,0.3s,baz=23,slow=26,SNR=5.2						

IDC ***23*** *09:02:02.3±2.7, 30°.30S×176°.47W, h0km, mb3.6/2, mb1 3.8/2, mb1mx3.4/23, mbtmp3.6/2, MS3.3/1, Ms1 3.3/1, ms1mx2.8/11, Error ellipse: s-maj=61.4km s-min=37.7km az=47.0*

ISC 23 09:02:06.3±2.1, 30°.38S±0°.07×176°.5W±0°.2, h35km, n15, σ1.s39/23, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.65	312	P	Pn	09 02 32.6	-0.1
GLKZ				S	Sn	09 02 52.5	-0.2
RAO	Raoul Island	1.65	312	Pn	Pn	09 02 32.8	0.0
	212nm,0.3s,baz=273,slow=22,SNR=3.7						
RAO				Sn	Sn	09 02 54.6	+1.8
	442nm,0.3s,baz=174,slow=20,SNR=7.0						
RIZ	Raoul Island	1.67	312	P	Pn	09 02 32.0	-0.9
RIZ				S	Sn	09 02 53.1	0.0
MXZ	Matakaoa Point	8.36	210	P	Pn	09 04 04.1	-0.8
MXZ				S	Sn	09 05 40.4	+2.5
WMGZ	Waiomatatini S	8.53	208	P	Pn	09 04 06.8	-0.5
WMGZ				S	Sn	09 05 42.2	0.0
URZ	Urewera	9.46	212	P	Pn	09 04 18.1	-1.9

URZ				S	Sn	09 06 05.9	+0.7
SNGZ	Shannon Statio	9.79	209	P	Pn	09 04 23.8	-0.8
MUGZ	Murupara	9.80	213	P	Pn	09 04 22.1	-2.5
MUGZ				S	Sn	09 06 11.9	-1.4
RTZ	Ruatahuna	9.81	211	P	Pn	09 04 24.0	-0.9
RTZ				P	Sn	09 06 15.1	+1.3
MTHZ	Maungataniwha	10.07	211	S	Sn	09 06 21.3	+1.2
ARHZ	Aropaoanui	10.34	209	P	Pn	09 04 29.4	-2.6
ARHZ				P	Sn	09 06 26.9	+0.2
PPT	Papeete	27.64	69	LR	LR	09 17 33.3	
	comp=Z,50nm,18.2s,baz=278,slow=34						
ASAR	Alice Springs	44.39	266	P	P	09 10 15.2	+1.5
	0.4nm,0.6s,baz=105,slow=7.7,SNR=7.6						
WRA	Warramunga Arr	45.38	271	P	P	09 10 22.7	+1.1
	0.9nm,0.8s,baz=110,slow=8.0,SNR=7.2						
FINES	FINESS Array B	145.55	341	PKPbc	PKPab	09 21 40.8	+0.3
	2.0nm,0.8s,baz=64,slow=4.4,SNR=3.9						

WBNET 23 09:09:50.0, 50°.32N×12°.58E, h8^{km}, Ml0.1, 5C-3D, Germany

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRCW	Kraslice	0.03	284	⇓P	Pg	09 09 51.7	0.0
KRCW				S	Sg	09 09 53.0	+0.1
STCW	Studenec	0.07	210	⇑P	Pg	09 09 52.2	+0.1
STCW				S	Sg	09 09 53.7	+0.1
POCW	Potky	0.10	268	⇓P	Pg	09 09 52.5	0.0
POCW				S	Sg	09 09 54.2	+0.1
LBCW	Luby	0.12	241	⇑P	Pg	09 09 52.9	+0.1
LBCW				S	Sg	09 09 54.8	+0.2
NKC	Novy Kostel	0.12	222	⇑P	Pg	09 09 52.8	0.0
NKC				S	Sg	09 09 54.8	+0.1
KVC	Kvetna	0.12	199	S	Sg	09 09 55.0	+0.2
VAC	Vackov	0.16	235	⇑P	Pg	09 09 53.3	0.0
VAC				S	Sg	09 09 55.6	0.0
KOCW	Kopaniny	0.23	255	⇑P	Pg	09 09 54.6	0.0
KOCW				S	Sg	09 09 57.8	0.0
TRCW	Trojmez	0.28	266	⇓P	Pg	09 09 55.3	-0.3
TRCW				S	Sg	09 09 59.2	-0.1

KRSZO 23 09:11:39.3±1.5, 48°.41N×19°.14E, h1^{km}±19^{km}, ML1.6/3, Error ellipse: s-maj=7.7km s-min=7.2km az=179.0, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VYHS	Vyhne	0.22	293	Pg	Pg	09 11 44.0	+0.5
	comp=Z,0.1nm,SNR=12						
VYHS				Lg	Lg	09 11 47.0	
VYHS	Vyhne	0.22	293	*e*PG	Pg	09 11 43.9	+0.4
VYHS				*e*SG	Sg	09 11 47.0	+0.6
KOLL	Kolacno	0.52	289	*e*PG	Pg	09 11 49.7	+0.5
KOLL				*e*SG	Sg	09 11 56.6	+0.6
PSZ	Piszkesteto	0.70	134	*e*PG	Pb	09 11 55.2	+0.8
PSZ				*e*SG	Sb	09 12 04.6	0.0
PSZ	Piszkesteto	0.70	134	Pn	Pb	09 11 55.2	+0.8
	comp=Z,0.1nm,SNR=2.3						
PSZ				Lg	Lg	09 12 04.6	
LANS	Liptovska Anna	0.77	16	Pg	Pb	09 11 55.4	-0.2
	SNR=3.3						
LANS				Lg	Lg	09 12 05.1	
LANS	Liptovska Anna	0.77	16	*e*PG	Pb	09 11 55.4	-0.2
CSKK	Cskako	1.20	210	*e*SG	Sn	09 12 20.9	+0.7
CSKK	Cskako	1.20	210	Lg	Lg	09 12 20.9	

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*DDA **23** 09:16:33.0, 34°.77N×25°.98E, h200^{km}±95^{km}, MW3.8*
*ATH **23** 09:16:42.6, 34°.90N×26°.65E, h10^{km}±5^{km}, ML3.0/2, Error ellipse: s-maj=8.6km s-min=2.0km az=344.0*
*THE **23** 09:16:42.9, 35°.02N×26°.63E, h0^{km}±6^{km}, ML2.9/3, Error ellipse: s-maj=11.4km s-min=0.7km az=100.0*
*ISK **23** 09:16:43.5, 35°.10N×26°.63E, h1^{km}, ML3.1/14*
ISC 23 09:16:43.3±1.6, **34°.97N**±0°.09×**26°.63E**±0°.04, **h14**^{km}±10^{km}, **n31, σ1^{s}.44**/42, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZKR	Zakros	0.36	293	P	Pg	09 16 50.5	-0.1
ZKR				S	Sb	09 16 56.4	-0.7
	2µm,0.3s						
ZKR	Zakros	0.36	293	P	Pg	09 16 50.6	-0.1
ZKR				S	Sb	09 16 56.5	-0.6
ZKR				AML	AML	09 16 57.0	
	comp=N,4012µm,0.3s						
ZKR				AML	AML	09 17 03.4	
	comp=E,5015µm,0.7s						
ZKR	Zakros	0.36	293	PG	Pg	09 16 50.6	-0.1
ZKR				SG	Sb	09 16 56.8	-0.3
STIA	Sitia Lasithi	0.49	298	P	Pg	09 16 52.8	-0.3
STIA				S	Sb	09 17 00.5	-0.4
FRMA	Ierapetra Chan	0.73	273	P	Pg	09 16 55.7	-1.9
FRMA				S	Sg	09 17 06.0	-1.2
	comp=E,598nm,0.5s						
NPS	Neapolis	0.88	289	P	Pb	09 17 00.4	0.0
NPS				S	Sn	09 17 13.8	-0.1
	comp=E,2µm,0.6s						
NPS	Neapolis	0.88	289	P	Pb	09 17 00.1	-0.2
NPS				AML	AML	09 17 16.9	
	comp=E,2299µm,0.4s						
NPS				AML	AML	09 17 17.1	
	comp=N,2048µm,0.4s						
HRKL	Herakleio	1.29	286	PN	Pg	09 17 09.1	+0.9
HRKL				SN	Sg	09 17 27.2	+2.1
IDI	Anoyia	1.46	283	P	Pn	09 17 09.5	+0.2
NIS1	Nisyros Isl.	1.69	15	PN	Pb	09 17 13.3	-0.8
ARG	Arkhangelos	1.74	44	P	Pb	09 17 14.6	-0.4
ARG	Arkhangelos	1.74	44	PN	Pb	09 17 14.8	-0.2
DAT	Datca	1.92	24	*i* P	Pb	09 17 16.7	-1.3
DAT	Datca	1.92	24	PN	Pb	09 17 16.8	-1.3
VAM	Vamos	2.03	283	P	Pb	09 17 19.6	-0.5
GVD	Gavdhos	2.09	267	PN	Pb	09 17 21.1	+0.1
BDRM	Kayabasi	2.19	17	*i* P	Pb	09 17 20.4	-2.3
IMMV	Iera Moni Meta	2.22	283	P	Pb	09 17 22.9	-0.3
IMMV	Iera Moni Meta	2.22	283	PN	Pb	09 17 22.7	-0.5
TURN	Turunc	2.23	36	PN	Pb	09 17 21.3	-2.0
APE	Apeiranthos	2.27	337	PN	Pb	09 17 21.8	-2.3
RODP	Rodopos	2.42	285	PN	Pb	09 17 25.0	-1.6
DALY	Dalyan (Mula)	2.47	41	*i* P	Pb	09 17 25.4	-2.0
DALY				*i* S	Sg	09 18 05.9	+3.3
DALY	Dalyan (Mula)	2.47	41	PN	Pb	09 17 24.8	-2.6
YER	Yerkesik	2.54	31	PN	Pn	09 17 25.7	+1.5
FETY	Fethiye	2.60	50	*i* P	Pn	09 17 25.5	+0.6
FETY				*i* S	Sg	09 18 07.4	+0.6
FETY	Fethiye	2.60	50	PN	Pb	09 17 26.8	-2.8
AYDN	Tasoluk	2.87	20	*i* P	Pn	09 17 27.9	-0.8
AYDN				*i* S	Sb	09 18 10.3	+1.1
CAME	Cameli-Denizli	2.93	47	PN	Pn	09 17 31.5	+1.9
TAVA	DENIZLI_Tavas	3.10	36	*i* P	Pn	09 17 33.5	+1.6
TAVA				*i* S	Sb	09 18 15.1	-0.8
AYDB	Zeytinkoy-Aydi	3.14	19	PN	Pn	09 17 34.1	+1.7

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*DDA **23** 09:26:34.6, 34°.72N×26°.18E, h2^{km}±3^{km}, MW3.5*
*IDC **23** 09:26:44.3±1.4, 34°.98N×26°.73E, h0^{km}, mb4.0/7, mb1 3.9/9, mb1mx3.6/38, mbtmp3.8/9, ML3.3/2, MS2.8/1, Ms1 2.8/1, ms1mx2.3/37, Error ellipse: s-maj=35.3km s-min=16.0km az=166.0*
*THE **23** 09:26:44.0, 35°.05N×26°.67E, h6^{km}±1^{km}, ML3.3/4, Error ellipse: s-maj=1.6km s-min=0.8km az=190.0*
*ATH **23** 09:26:45.7, 35°.17N×26°.63E, h8^{km}±3^{km}, ML3.5/10, Error ellipse: s-maj=4.5km s-min=1.3km az=182.0*
ISC 23 09:26:45.1±1.3, **35°.12N**±0°.05×**26°.63E**±0°.03, **h4**^{km}±9^{km}, **n49, σ1^{s}.46**/64, **mb3.7**/7, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZKR	Zakros	0.34	269	P	Pg	09 26 51.7	+0.1
ZKR				S	Sg	09 26 57.7	+1.7
	7µm,0.3s						
ZKR	Zakros	0.34	269	P	Pg	09 26 51.8	+0.1
ZKR				S	Sg	09 26 57.6	+1.6
ZKR				AML	AML	09 26 58.0	
	comp=N,9326µm,0.7s						
ZKR				AML	AML	09 27 01.3	
	comp=E,21015µm,0.4s						
STIA	Sitia Lasithi	0.45	281	P	Pg	09 26 53.9	+0.2
STIA				S	Sb	09 27 01.6	-1.0
FRMA	Ierapetra Chan	0.74	262	P	Pg	09 26 56.9	-2.4
FRMA				S	Sg	09 27 07.2	-1.7
	comp=E,2µm,0.4s						
NPS	Neapolis	0.84	280	P	Pg	09 27 00.9	-0.4
NPS				S	Sb	09 27 14.2	+0.1
	comp=E,4µm,0.5s						
NPS	Neapolis	0.84	280	P	Pg	09 27 01.3	0.0
NPS				S	Sg	09 27 13.3	+1.0
NPS				AML	AML	09 27 14.9	
	comp=N,6744µm,0.9s						
NPS				AML	AML	09 27 17.7	
	comp=E,10398µm,0.4s						
IACM	Heraklion	1.29	279	P	Pn	09 27 09.5	-0.4
KSTL	Kastelli Herak	1.29	279	P	Pn	09 27 04.3	-5.6
KSTL				S	Sb	09 27 20.1	-6.7
	comp=E,1µm,0.5s						
IDI	Anoyia	1.43	277	Pn	Pb	09 27 12.5	+0.1
	comp=E,23nm,0.3s,baz=104,slow=15,SNR=81						
IDI				Sn	Sg	09 27 34.2	+3.1
	comp=E,72nm,0.3s,baz=8.9,slow=22,SNR=9.5						
IDI	Anoyia	1.43	277	P	Pn	09 27 12.0	+0.1
IDI				AML	AML	09 27 36.8	
	comp=N,1881µm,0.9s						
IDI				AML	AML	09 27 40.7	
	comp=E,1496µm,0.5s						
NISR	Nisiros	1.54	15	P	Pn	09 27 12.7	-0.7
NIS1	Nisyros Isl.	1.55	17	P	Pg	09 27 15.2	+0.5
NIS1				AML	AML	09 27 47.9	
	comp=E,2578µm,0.5s						
NIS1				AML	AML	09 28 01.0	
	comp=N,3264µm,0.6s						
THR6	Thira Island,	1.59	321	P	Pb	09 27 14.3	-0.8
THR8	Santorini-Mono	1.59	324	P	Pn	09 27 13.5	-0.5
STAX	Taxiarchis Har	1.62	322	P	Pb	09 27 14.7	-0.8
THR3	Thira Island,	1.63	323	P	Pn	09 27 14.4	-0.2
ARG	Arkhangelos	1.64	48	P	Pb	09 27 15.6	-0.3
ARG				AML	AML	09 27 43.3	
	comp=E,2405µm,1.1s						
ARG				AML	AML	09 27 50.4	
	comp=N,1745µm,0.8s						
THR2	Thira island,	1.64	324	P	Pb	09 27 15.0	-1.0
THR5	Thira Island,	1.66	322	P	Pb	09 27 15.5	-0.8
CMBO	Columbo, Santo	1.68	324	P	Pb	09 27 15.7	-0.9
DAT	Datca	1.78	25	*i* P	Pn	09 27 15.9	-0.8
DAT				*i* S	Sg	09 27 44.1	+1.8
VAM	Vamos	2.01	279	P	Pb	09 27 22.4	+0.2
VAM				AML	AML	09 27 55.1	
	comp=E,1394µm,0.4s						
VAM				AML	AML	09 27 55.4	
	comp=N,1656µm,0.8s						
BDRM	Kayabasi	2.05	19	*i* P	Pn	09 27 20.0	-0.4
BDRM				*i* S	Sn	09 27 45.8	-0.7
GVD	Gavdhos	2.10	263	P	Pb	09 27 23.1	-0.7
GVD				AML	AML	09 28 07.5	
	comp=E,1330µm,0.8s						
GVD				AML	AML	09 28 13.8	
	comp=N,1016µm,0.6s						
APE	Apeiranthos	2.14	336	P	Pn	09 27 22.5	+0.8
APE				AML	AML	09 27 53.6	
	comp=E,870µm,0.6s						
APE				AML	AML	09 27 55.5	
	comp=N,869µm,0.5s						
IMMV	Iera Moni Meta	2.19	280	P	Pn	09 27 23.8	+1.4
IMMV				AML	AML	09 28 06.7	
	comp=N,1294µm,0.6s						
IMMV				AML	AML	09 28 09.7	
	comp=E,1660µm,0.9s						
DALY	Dalyan (Mula)	2.36	44	*i* P	Pn	09 27 18.4	-6.3
DALY				*i* S	Sg	09 28 02.3	+1.4
MHLO	Agia Marina, M	2.39	312	P	Pb	09 27 27.1	-1.6
MHLO				AML	AML	09 28 08.1	
	comp=N,2901µm,0.6s						
MHLO				AML	AML	09 28 08.4	
	comp=E,2902µm,0.5s						
FETY	Fethiye	2.50	52	*i* P	Pn	09 27 27.0	+0.4
FETY				*i* S	Sg	09 28 05.5	0.0
MULA	Mugla, Merkez-	2.53	32	*i* P	Pn	09 27 25.7	-1.4
MULA				*i* S	Sb	09 28 03.7	+0.9
SMG	Samos	2.59	4	P	Pb	09 27 30.4	-1.7
AKAS	Kas	2.67	64	*i* P	Pn	09 27 28.7	-0.3
AKAS				*i* S	Sn	09 28 02.1	+0.3
AYDN	Tasoluk	2.73	21	*i* P	Pn	09 27 29.9	+0.1
AYDN				*i* S	Sg	09 28 10.4	-2.4
CAEL	Denizli, Camel	2.96	47	*i* P	Pb	09 27 35.9	-2.6
CAEL				*i* S	Sg	09 28 21.5	+1.4
TAVA	DENIZLI_Tavas	2.98	38	*i* P	Pn	09 27 31.7	-1.6
TAVA				*i* S	Sb	09 28 16.9	+1.3
MANT	Manisa	3.71	24	*i* P	Pn	09 27 43.7	+0.3
BRDR	BURDUR-Merkez	3.78	46	*i* P	Pn	09 27 45.8	+1.6
BRDR				*i* S	Sg	09 28 44.3	-2.2
PASA	Karahalli, USA	3.96	35	*i* P	Pn	09 27 46.4	-0.3
GAZI	Gazipasa	4.76	75	*i* P	Pn	09 27 57.3	-0.4
BRTR	Keskin Array B	7.23	48	Pn	Pn	09 28 32.7	+1.1
	comp=E,0.1nm,0.3s,baz=237,slow=12,SNR=2.5						
GNI	Garni	15.20	65	LR	LR	09 36 44.4	
	comp=E,36nm,19.1s,baz=358,slow=40						
AKASG	Malin Array Be	15.69	6	Pn	Pn	09 30 28.1	+1.2
	comp=E,0.5nm,0.3s,baz=193,slow=11,SNR=4.9						
AKTO	Aktyubinsk	27.40	46	P	P	09 32 31.0	-0.6
	comp=E,0.5nm,0.4s,baz=207,slow=4.5,SNR=2.5						
TORD	Torodi Ar. Bea	31.40	232	P	P	09 33 07.0	-0.3
	comp=E,0.5nm,0.5s,baz=42,slow=10,SNR=3.5						
ARCES	ARCESS Array B	34.48	359	P	P	09 33 34.8	+1.1
	comp=E,4.5nm,1.0s,baz=190,slow=10,SNR=2.7						
MKAR	Makanchi Array	42.79	57	P	P	09 34 43.2	-0.6
	comp=E,0.9nm,0.5s,baz=266,slow=12,SNR=12						
ZALV	Zalesovo Beam	44.16	46	P	P	09 34 54.2	-0.6
	comp=E,1.1nm,0.4s,baz=272,slow=3.9,SNR=2.3						
SONM	Songino Array	58.58	51	P	P	09 36 44.2	+1.2
	comp=E,0.2nm,0.4s,baz=310,slow=7.7,SNR=3.7						
SCHQ	Schefferville	63.99	320	P	P	09 37 20.7	+1.2
	comp=E,4.5nm,1.0s,baz=74,slow=15,SNR=2.5						

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*IDC **23** 09:29:59.5±1.0, 38°.60N×20°.57E, h0^{km}, mb3.9/10, mb1 3.9/14, mb1mx3.7/42, mbtmp3.9/14, ML3.4/4, MS3.3/10, Ms1 3.4/10, ms1mx3.1/39, Error ellipse: s-maj=20.8km s-min=18.5km az=51.0*
*TIR **23** 09:30:00.8, 38°.51N×20°.53E, h9^{km}±3^{km}, Ml4.1*
*IASPEI **23** 09:30:01.4±0.8, 38°.52N±0°.02×20°.52E±0°.03, h14^{km}±5^{km}, mb4.0/12, MS3.5/6, Error ellipse: s-maj=4.4km s-min=2.6km az=94.4, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*
*PDG **23** 09:30:01.6±0.8, 38°.53N×20°.48E, h12^{km}±1^{km}, ML4.0/13, Error ellipse: s-maj=0.9km s-min=1.6km az=0.0*
*THE **23** 09:30:02.0, 38°.53N×20°.52E, h11^{km}, ML4.3/10, Error ellipse: s-maj=0.6km s-min=0.2km az=284.0*
*ATH **23** 09:30:02.2, 38°.52N×20°.58E, h12^{km}±1^{km}, ML3.9/24, Error ellipse: s-maj=1.6km s-min=0.7km az=273.0*
*NEIC **23** 09:30:05.1±2.4, 38°.49N±0°.06×20°.43E±0°.07, h43^{km}±6^{km}, Error ellipse: s-maj=9.1km s-min=6.9km az=208.0*
ISC 23 09:30:01.4±0.6, **38°.52N**±0°.01×**20°.51E**±0°.02, **h12**^{km}±4^{km}, **n208, σ1^{s}.62**/264, **mb4.0**/12, **MS3.5**/6, **10C-18D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FSK	Fiskardo	0.07	146	P	Pg	09 30 04.4	+0.5
FSK				S	Sg	09 30 06.0	+0.3
	316µm,0.3s						
FSK	Fiskardo	0.07	146	P	Pg	09 30 04.4	+0.5
FSK				S	Sg	09 30 06.2	+0.5
FSK				AML	AML	09 30 06.6	
FSK				AML	AML	09 30 06.6	
EVGI	Lefkada island	0.15	47	P	Pg	09 30 05.1	+0.1
EVGI				S	Sg	09 30 07.8	+0.2
	205µm,0.1s						
EVGI	Lefkada island	0.15	47	P	Pg	09 30 05.1	+0.1
EVGI				S	Sg	09 30 07.9	+0.2
DRAG	Dragano-Lefkad	0.17	16	P	Pg	09 30 05.5	+0.1
DRAG				S	Sg	09 30 08.2	0.0
	410µm,0.2s						
DRAG	Dragano-Lefkad	0.17	16	P	Pg	09 30 05.5	+0.1
DRAG				S	Sg	09 30 08.6	+0.5
NYDR	Nydri-Lefkada	0.24	36	P	Pg	09 30 06.6	+0.1
NYDR				S	Sg	09 30 10.4	+0.4
	109µm,0.4s						
NYDR	Nydri-Lefkada	0.24	36	P	Pg	09 30 06.6	+0.1
NYDR				S	Sg	09 30 09.6	-0.4
KEF4	Livadi, Kephal	0.27	195	P	Pg	09 30 07.5	+0.6
KEF4				S	Sg	09 30 12.0	+1.4
KEF4	Livadi, Kephal	0.27	195	P	Pg	09 30 07.8	+0.9
KEF4				S	Sg	09 30 12.5	+1.8
LKD2	Lefkada island	0.29	23	P	Pg	09 30 07.5	0.0
LKD2				S	Sg	09 30 12.1	+0.5
	38µm,0.5s						
LKD2	Lefkada island	0.29	23	P	Pg	09 30 07.5	0.0
LKD2				S	Sg	09 30 12.1	+0.5
LKD2				AML	AML	09 30 13.5	
	comp=N,82934µm,0.6s						
LKD2				AML	AML	09 30 15.4	
	comp=E,70406µm,0.5s						
LKD2	Lefkada island	0.29	23	P	Pg	09 30 07.5	0.0
	baz=19						
LKD2				S	Sg	09 30 11.7	+0.2
	baz=19						
DMLN	Damoulianata-K	0.30	202	P	Pg	09 30 08.0	+0.5
DMLN				S	Sg	09 30 13.1	+1.5
	comp=E,89µm,0.5s						
DMLN	Damoulianata-K	0.30	202	P	Pg	09 30 08.2	+0.7
DMLN				S	Sb	09 30 14.0	+0.5
LXRA	Lixouri, Kepha	0.32	191	P	Pg	09 30 08.6	+0.7
LXRA				S	Sb	09 30 14.4	+0.3
TSLK	Tsoukalades, L	0.33	20	P	Pg	09 30 08.2	+0.2
TSLK				S	Sg	09 30 13.3	+0.8
	comp=E,36µm,0.4s						
TSLK	Tsoukalades, L	0.33	20	P	Pg	09 30 08.3	+0.2
TSLK				S	Sg	09 30 13.4	+0.8
TSLK				AML	AML	09 30 14.4	
	comp=N,69488µm,0.5s						
TSLK				AML	AML	09 30 14.9	
	comp=E,73566µm,0.3s						
KEF3	Kipouria, Keph	0.34	203	P	Pg	09 30 08.5	+0.3
KEF3				S	Sg	09 30 13.9	+1.2
KEF3	Kipouria, Keph	0.34	203	P	Pg	09 30 08.5	+0.3
KEF3				S	Sg	09 30 14.0	+1.2
VLS	Valsamata	0.34	170	P	Pg	09 30 08.8	+0.5
VLS				S	Sg	09 30 14.2	+1.3
	comp=E,157µm,0.2s						
VLS	Valsamata	0.34	170	P	Pg	09 30 08.8	+0.5
VLS				S	Sg	09 30 14.4	+1.5
VLS				AML	AML	09 30 14.9	
VLS				AML	AML	09 30 15.0	
PSDA	Pessada-Kefalo	0.41	172	P	Pg	09 30 09.9	+0.5
PSDA				S	Sg	09 30 16.4	+1.6
PSDA	Pessada-Kefalo	0.41	172	P	Pg	09 30 09.8	+0.5
PSDA				S	Sb	09 30 16.7	+0.1
ZAK2	Zakynthos	0.79	157	P	Pg	09 30 17.1	+0.5
ZAK2				S	Sb	09 30 28.6	+1.0
	comp=E,86µm,0.6s						
VTN	Vitineika	0.80	138	P	Pg	09 30 17.4	+0.6
VTN	Vitineika	0.80	138	P	Pg	09 30 17.2	+0.4
PVO	Paravola	0.80	82	P	Pg	09 30 17.1	+0.2
PVO	Paravola	0.80	82	P	Pg	09 30 16.9	+0.1
PVO				AML	AML	09 30 30.9	
	comp=E,17989µm,0.2s						
PVO				AML	AML	09 30 34.8	
	comp=N,31027µm,0.7s						
LTHK	Lithakia	0.84	162	P	Pg	09 30 17.7	0.0
LTHK				S	Sb	09 30 30.5	+1.3
	comp=N,22µm,0.2s						
LTHK	Lithakia	0.84	162	P	Pg	09 30 17.2	-0.5
LTHK				AML	AML	09 30 31.3	
	comp=E,45852µm,0.3s						
LTHK				AML	AML	09 30 31.8	
	comp=N,43264µm,0.3s						
RLS	Riolos of Patr	0.88	121	P	Pg	09 30 18.3	0.0
RLS	Riolos of Patr	0.88	121	P	Pg	09 30 18.1	-0.2
RLS				AML	AML	09 30 33.6	
	comp=E,10345µm,0.2s						
RLS				AML	AML	09 30 33.7	
	comp=N,24942µm,0.3s						
IGT	Igoumenitsa	1.02	352	P	Pb	09 30 21.4	+0.4
IGT	Igoumenitsa	1.02	352	P	Pb	09 30 20.9	-0.1
IGT				AML	AML	09 30 39.6	
	comp=E,13497µm,0.5s						
IGT				AML	AML	09 30 40.2	
	comp=N,8148µm,0.5s						
IGT	Igoumenitsa	1.02	352	P	Pb	09 30 20.8	-0.2
	baz=352						
IGT				S	Sn	09 30 36.7	+0.8
	baz=352						
EVR	Evrytania	1.09	68	P	Pb	09 30 21.8	-0.4
EVR	Evrytania	1.09	68	P	Pb	09 30 21.6	-0.6
EVR				AML	AML	09 30 42.6	
	comp=N,11554µm,0.8s						
EVR				AML	AML	09 30 44.8	
	comp=E,9194µm,0.8s						
EFP	Efpalio	1.10	94	P	Pb	09 30 21.2	-1.0
EFP				AML	AML	09 30 43.5	
	comp=N,12768µm,0.7s						
EFP				AML	AML	09 30 44.8	
	comp=E,10106µm,0.5s						
DRO	Drossia	1.10	120	P	Pb	09 30 22.3	0.0
DRO	Drossia	1.10	120	P	Pb	09 30 21.9	-0.3
DRO				AML	AML	09 30 40.3	
	comp=N,62013µm,0.5s						
DRO				AML	AML	09 30 41.5	
	comp=E,77225µm,0.4s						
JAN	Janina	1.17	13	P	Pg	09 30 24.6	+0.7
JAN				AML	AML	09 30 44.2	
	comp=E,12748µm,1.0s						
JAN				AML	AML	09 30 48.5	
	comp=N,7311µm,0.4s						
LAKA	Lakka	1.18	103	P	Pb	09 30 22.9	-0.9
LAKA				AML	AML	09 30 47.8	
	comp=N,23476µm,0.7s						
LAKA				AML	AML	09 30 52.6	
	comp=E,51217µm,0.7s						
SERG	Sergoula	1.22	94	P	Pn	09 30 23.6	-0.6
SERG	Sergoula	1.22	94	P	Pn	09 30 23.1	-1.0
SERG				AML	AML	09 30 47.2	
	comp=E,9470µm,0.6s						
SERG				AML	AML	09 30 47.5	
	comp=N,12592µm,0.4s						
ALIK	Aliki, Aigiali	1.28	101	P	Pn	09 30 24.7	-0.3
KASA	Kassiopi	1.31	340	P	Pg	09 30 26.8	+0.3
KEK	Kerkira	1.32	335	P	Pb	09 30 26.8	+0.7
KEK				AML	AML	09 30 51.0	
	comp=N,4575µm,0.6s						
KEK				AML	AML	09 30 55.3	
	comp=E,7209µm,0.4s						
MAKR	Makrakomi, Fth	1.36	68	P	Pn	09 30 26.6	+0.4
MAKR				AML	AML	09 30 50.5	
	comp=N,10262µm,1.2s						
MAKR				AML	AML	09 30 53.2	
	comp=E,7549µm,1.0s						
KLV	Kalavryta, Ach	1.37	110	P	Pn	09 30 26.4	+0.1
KLV	Kalavryta, Ach	1.37	110	P	Pn	09 30 25.8	-0.6
KLV				AML	AML	09 30 53.5	
	comp=N,4581µm,0.5s						
KLV				AML	AML	09 30 57.5	
	comp=E,5688µm,0.6s						
SRN	Sarande	1.42	344	P	Pg	09 30 29.4	+0.8
	baz=344						
SRN				S	Sb	09 30 46.4	+0.7
	baz=344						
SRN				AMP			
	comp=N,4.9nm,0.6s,baz=344						
AGG	Agios Georgios	1.51	70	P	Pn	09 30 28.1	-0.1
AGG	Agios Georgios	1.51	70	Pn	Pg	09 30 33.6	+3.3
GUR	Goura	1.55	111	P	Pn	09 30 29.1	+0.2
GUR				AML	AML	09 30 56.3	
	comp=E,11755µm,0.4s						
GUR				AML	AML	09 30 60.0	
	comp=N,17935µm,0.5s						
KPRO	Kipourio	1.58	24	P	Pb	09 30 31.3	+0.8
LSK	Leskovik	1.63	2	P	Pb	09 30 32.0	+0.5
	baz=1.0						
LSK				S	Sg	09 30 55.4	+1.4
	baz=1.0						
LSK				AMP			
	comp=N,14nm,0.6s,baz=1.0						
ITM	Ithomi	1.74	140	P	Pb	09 30 33.6	+0.4
ITM				AML	AML	09 31 02.0	
	comp=N,5767µm,0.7s						
ITM				AML	AML	09 31 05.7	
	comp=E,3601µm,0.5s						
ITM	Ithomi	1.74	140	Pn	Pg	09 30 35.2	+0.5
PENT	Pentalofos	1.75	16	P	Pg	09 30 34.8	-0.1
PENT				AML	AML	09 31 06.4	
	comp=N,2148µm,0.6s						
PENT				AML	AML	09 31 07.6	
	comp=E,1842µm,0.4s						
LKR	Lokris	1.95	85	P	Pb	09 30 36.4	-0.4
LKR				AML	AML	09 31 08.8	

	comp=N,1553µm,0.8s						
LKR				AML	AML	09 31 14.1	
	comp=E,2336µm,0.7s						
KZN	Kozani	2.04	28	P	Pb	09 30 38.2	-0.1
KZN				AML	AML	09 31 11.2	
	comp=E,2293µm,0.4s						
KZN				AML	AML	09 31 14.8	
	comp=N,1454µm,0.8s						
VLO	Vlora	2.10	338	AMP			
	comp=E,9.0nm,0.5s,baz=339						
KBN	Korca	2.12	6		Pb	09 30 39.7	0.0
KBN	Korca	2.12	6	P	Pb	09 30 40.2	+0.6
	baz=5.0						
KBN				S	Sg	09 31 10.9	+1.6
	baz=5.0						
KBN				AMP			
	comp=N,4.4nm,1.0s,baz=5.0						
SCTE	Santa Cesarea	2.22	315		Pn	09 30 39.0	+1.0
SCTE	Santa Cesarea	2.22	315	P	Pn	09 30 38.9	+0.9
	baz=316						
SCTE				S	Sn	09 31 05.1	-0.2
	baz=316						
SCTE				AMP			
	comp=N,1.6nm,0.5s,baz=316						
NEO	Neokhori	2.26	69	P	Pb	09 30 41.0	-1.0
NEO				AML	AML	09 31 20.7	
	comp=N,3126µm,1.0s						
NEO				AML	AML	09 31 23.3	
	comp=E,2260µm,1.0s						
FNA	Florina	2.36	16	P	Pn	09 30 42.1	+2.2
FNA	Florina	2.36	16	Pn	Pn	09 30 42.1	+2.2
FNA	Florina	2.36	16	P	Pn	09 30 42.1	+2.2
	baz=15						
ATH	Athens Observa	2.58	101	P	Pb	09 30 45.8	-1.7
ATH				AML	AML	09 31 35.5	
	comp=N,2285µm,0.7s						
ATH				AML	AML	09 31 35.8	
	comp=E,1771µm,0.6s						
OHR	Ohrid	2.60	5	*i* Pn	Pn	09 30 45.8	+2.5
TIR	Tirane	2.87	350	⇑P	Pn	09 30 48.1	+1.2
TIR	Tirane	2.87	350		Pn	09 30 48.6	+1.7
TIR	Tirane	2.87	350	P	Pn	09 30 49.0	+2.1
	baz=351						
TIR				AMP			
	comp=E,1.4nm,0.6s,baz=351						
TIP	Timpagrande	3.00	284	⇓P	Pn	09 30 50.2	+1.4
TIP	Timpagrande	3.00	284		Pn	09 30 49.2	+0.4
PHP	Peshkopia	3.17	359	P	Pn	09 30 53.1	+2.1
	baz=359						
PHP				S	Sg	09 31 49.9	+6.8
	baz=359						
PHP				AMP			
	comp=N,1.3nm,0.9s,baz=359						
VAY	Valandovo	3.22	29	*i* Pn	Pn	09 30 53.2	+1.6
NOCI	Noci	3.50	312	P	Pn	09 30 56.4	+0.8
	baz=312						
SKO	Skopje	3.52	11	*i* Pn	Pn	09 30 58.1	+2.3
ULC	Ulcinj	3.58	345	⇓*i*Pn	Pn	09 30 56.8	+0.2
ULC				*i* Sn	Sn	09 31 38.0	-0.8
MATE	Matera	3.63	307	⇓P	Pn	09 30 57.8	+0.5
CEL	Celeste	3.64	267	Pn	Pn	09 30 57.9	+0.4
DRME	Dracevica, Mon	3.80	345	*e*Pn	Pn	09 30 59.6	-0.1
DRME	Dracevica, Mon	3.80	345	⇓*i*Pn	Pn	09 31 00.2	+0.5
DRME				*i* Sn	Sn	09 31 45.0	+0.6
BCI	Bajram Curri	3.86	355	P	Pn	09 31 02.5	+1.9
	baz=355						
BCI				S	Sn	09 31 47.3	+1.5
	baz=355						
BCI				AMP			
	comp=E,1.6nm,0.5s,baz=355						
BUM	Brajici-Budva	3.98	342	⇑*i*Pn	Pn	09 31 03.4	+1.2
BUM				*i* Sn	Sn	09 31 48.7	0.0
PDG	Podgorica	4.03	347	⇓P	Pn	09 31 03.5	+0.7
PDG	Podgorica	4.03	347	*e*Pn	Pn	09 31 03.0	+0.3
PDG	Podgorica	4.03	347	Pn	Pn	09 31 02.8	+0.1
TTG	Podgorica	4.03	347	⇓*i*Pn	Pn	09 31 04.0	+1.3
TTG				*i* Sn	Sn	09 31 49.9	+0.1
PVY	Plav	4.10	354	*e*Pn	Pn	09 31 05.8	+1.9
PVY				*i* Sn	Sn	09 31 51.7	0.0
MRVN	Minervino Murg	4.18	309	P	Pn	09 31 06.1	+1.1
	baz=309						
CEME	Cevo	4.21	344	*e*Pn	Pn	09 31 05.3	0.0
CEME				*i* Sn	Sn	09 31 53.0	-1.4
HCY	Herceg Novi	4.22	339	*e*Pn	Pn	09 31 04.1	-1.3
HCY	Herceg Novi	4.22	339	*e*Pn	Pn	09 31 05.1	-0.3
HCY				*i* Sn	Sn	09 31 52.1	-2.5
IVA	Berane	4.38	354	⇓*i*Pn	Pn	09 31 09.1	+1.4
IVA				*i* Sn	Sn	09 31 58.1	-0.5
KOME	Kolasin	4.40	350	⇓*i*Pn	Pn	09 31 09.4	+1.5
KOME				*i* Sn	Sn	09 32 00.5	+1.4
NKME	Niksic	4.41	345	⇓*i*Pn	Pn	09 31 08.8	+0.7
NKME				*i* Sn	Sn	09 31 57.6	-1.7
NKY	Niksic	4.45	345	⇑*i*Pn	Pn	09 31 10.0	+1.4
NKY				*i* Sn	Sn	09 32 00.4	+0.1
TREB	Trebinje	4.51	339	*e*Pn	Pn	09 31 08.8	-0.6
DBRK	Dubrovnik	4.52	337	*e*Pn	Pn	09 31 09.2	-0.4
DBRK				Sn	Sn	09 31 59.7	-2.3
VTS	Vitosha	4.59	26	⇓P	Pn	09 31 13.9	+3.2
VTS	Vitosha	4.59	26		Pn	09 31 11.6	+0.9
BRY	Bratogost	4.63	342	*e*Pn	Pn	09 31 11.1	-0.1
BRY	Bratogost	4.63	342	⇓*i*Pn	Pn	09 31 11.1	-0.1
BRY				*i* Sn	Sn	09 32 04.1	-0.8
IDI	Anoyia	4.76	131	Pn	Pn	09 31 13.2	+0.3
	comp=E,1.0nm,0.3s,baz=300,slow=14,SNR=1.5						
IDI				Sn	Sn	09 32 05.1	-3.0
	comp=E,5.2nm,0.3s,baz=288,slow=19,SNR=2.7						
UPM	Unac-Piva	4.84	346	*e*Pn	Pn	09 31 14.9	+0.8
UPM	Unac-Piva	4.84	346	⇓*i*Pn	Pn	09 31 15.4	+1.3
UPM				*i* Sn	Sn	09 32 08.2	-1.9
STON	Ston	4.85	335	*e*Pn	Pn	09 31 13.5	-0.5
STON	Ston	4.85	335	*e*Pn	Pn	09 31 13.4	-0.7
SGRT	San Giovanni R	4.88	313	Pn	Pn	09 31 15.3	+0.7
SGRT	San Giovanni R	4.88	313	P	Pn	09 31 15.8	+1.2
	baz=314						
PLE	Pljevlja	4.88	350	⇓*i*Pn	Pn	09 31 16.0	+1.3
PLE				*i* Sn	Sn	09 32 11.5	+0.4
RAFF	Raffo Rosso	5.04	257		Pn	09 31 16.0	-0.6
LSTV	Lastovo	5.06	328	*e*Pn	Pn	09 31 16.3	-0.7
RUDO	Rudo	5.17	351	*e*Pn	Pn	09 31 18.9	+0.4
BOVS	Bovan	5.19	10	⇑P	Pn	09 31 20.6	+1.8
PAOL	Paolisi	5.22	301		Pn	09 31 21.9	+2.6
BBLS	Lazići	5.41	351	*e*Pn	Pn	09 31 24.7	+2.9
MAKA	Makarska	5.45	332	*e*Pn	Pn	09 31 22.8	+0.5
HVAR	Hvar	5.58	328	*e*Pn	Pn	09 31 23.9	-0.3
HVAR				Sn	Sn	09 32 25.3	-2.9
DIVS	Divibare	5.59	356	*e*Pn	Pn	09 31 24.6	+0.2
RICI	Ricice	5.59	334	*e*Pn	Pn	09 31 24.0	-0.3
RICI				Sn	Sn	09 32 26.3	-2.2
HAPS	Han Pijesak,BI	5.69	349	*e*Pn	Pn	09 31 24.8	-0.9
TEKS	Tekeris	6.07	353	*e*Pn	Pn	09 31 26.9	-4.0
ZIRJ	Zirje	6.31	326	*e*Pn	Pn	09 31 33.6	-0.6
ZIRJ				Sn	Sn	09 32 42.0	-4.2
MDVR	Moldovita	6.32	8	⇓P	Pn	09 31 36.5	+2.1
MGRS	Mrkonjic Grad	6.43	338	*e*Pn	Pn	09 31 34.7	-1.2
MORI	Morici	6.46	327	*e*Pn	Pn	09 31 36.4	+0.2
MORI				Sn	Sn	09 32 46.6	-3.1
FRGS	Fruska Gora	6.66	356	⇓P	Pn	09 31 39.3	+0.4
FRGS	Fruska Gora	6.66	356	*e*Pn	Pn	09 31 36.6	-2.3
BLY	Banja Luka	6.71	339	*e*Pn	Pn	09 31 40.3	+0.7
DUGI	Dugi Otok	6.84	325	*e*Pn	Pn	09 31 41.1	-0.3
DUGI				Sn	Sn	09 32 56.5	-2.6
UDBI	Udbina	6.98	331	*e*Pn	Pn	09 31 44.3	+0.9
GZR	Gura Zlata	7.08	13	⇓P	Pn	09 31 48.0	+3.3
NRCA	Norcia	7.08	310		Pn	09 31 47.3	+2.5
BZS	Buzias	7.14	6	⇓P	Pn	09 31 47.9	+2.3
PLIT	Plitvice	7.33	332	*e*Pn	Pn	09 31 49.0	+0.8
PLIT				Sn	Sn	09 33 09.2	-2.2
NVLJ	Novalja	7.38	327	*e*Pn	Pn	09 31 48.5	-0.2
NVLJ				Sn	Sn	09 33 08.8	-3.5
RABC	Rab	7.56	327	*e*Pn	Pn	09 31 50.5	-0.8
MOSL	Moslavina	7.62	340	*e*Pn	Pn	09 31 51.3	-0.9
MURB	Monte Urbino	7.69	311		Pn	09 31 56.3	+3.2
VOIR		7.70	25	⇑P	Pn	09 31 56.1	+2.8
MORH	Mrgy, Hungar	7.82	350	⇑P	Pn	09 31 55.1	+0.3
MORH	Mrgy, Hungar	7.82	350	*e*Pn	Pn	09 31 54.3	-0.5
OZLJ	Ozalj	8.02	334	*e*Pn	Pn	09 31 56.6	-1.0
MLR	Muntele Rosu	8.06	28	⇓P	Pn	09 32 02.2	+4.0
MLR	Muntele Rosu	8.06	28	Pn	Pn	09 32 01.6	+3.4
	comp=E,0.4nm,0.3s,baz=65,slow=1.1,SNR=4.8						
MLR				LR	LR	09 35 05.5	
	comp=E,108nm,21.0s,baz=214,slow=38						
MLR	Muntele Rosu	8.06	28		Pn	09 32 00.4	+2.2
SMRN	Sveta Marina	8.06	326	*e*Pn	Pn	09 31 58.5	+0.4
PTJ	Puntijarka	8.12	337	*e*Pn	Pn	09 31 58.4	-0.6
BRJN	Brijuni	8.14	324	*e*Pn	Pn	09 31 59.6	+0.4
BRJN				Sn	Sn	09 33 26.0	-5.1
RIY	Rijeka	8.15	328	*e*Pn	Pn	09 31 58.5	-0.9
RIY	Rijeka	8.15	328	*e*Pn	Pn	09 31 59.6	+0.2
KALN	Kalnik	8.18	340	*e*Pn	Pn	09 31 59.0	-0.8
CRES	Cresnjev	8.21	334	*e*Pn	Pn	09 31 59.3	-0.9
DOPR	Dopca	8.28	24	⇑P	Pn	09 32 04.9	+3.7
LOBO	Lobor	8.31	338	*e*Pn	Pn	09 32 00.9	-0.7
CEY	Cerknica	8.51	330	*e*Pn	Pn	09 32 03.6	-0.8
OZUR		8.52	26	⇑P	Pn	09 32 08.9	+4.4
PLOR	Plostina	8.63	30	⇑P	Pn	09 32 11.1	+5.1
VRI	Vrincioaia	8.67	30	⇑P	Pn	09 32 11.8	+5.3
MPLH	Magyarpolny	8.92	347	*e*PN	Pn	09 32 18.7	+8.7
MPLH				*e*SN	Sn	09 33 44.0	-6.3
SOKA	Soboth	9.10	335	*e*Pn	Pn	09 32 13.1	+0.6
	comp=E,1.7nm,0.2s						
SOKA				*e*Sn	Sn	09 33 52.7	-2.1
	comp=E,5.5nm,0.6s						
KEST	Kesra	9.34	256	Pn	Pn	09 32 16.4	+0.5
	comp=E,0.2nm,0.3s,baz=23,slow=13,SNR=2.6						
PSZ	Piszkesteto	9.41	357	*e*PN	Pn	09 32 27.0	+10
ARSA	Arzberg	9.46	339	*e*Pn	Pn	09 32 19.0	+1.6
	comp=E,2.1nm,0.5s						
ARSA				*e*Sn	Sn	09 34 07.9	+4.2
	comp=E,2.1nm,0.5s						
MYKA	Terra Mystica	9.56	330	*e*Pn	Pn	09 32 21.5	+2.7
	comp=E,0.6nm,0.2s						
MYKA				*e*Sn	Sn	09 34 02.3	-3.8
	comp=E,2.7nm,0.5s						
ZOU	Zoufplan	9.77	328		Pn	09 32 22.1	+0.4
CTI	Castel Tesino	9.98	322	Pn	Pn	09 32 24.8	+0.1
KBA	Koelnbreinsper	10.04	331	*e*Pn	Pn	09 32 27.1	+1.6
	comp=E,2.1nm,0.3s						
KBA				*e*Sn	Sn	09 34 16.4	-1.7
	comp=E,3.0nm,0.4s						
ABTA	Abfaltersbach	10.11	327	*e*Sn	Sn	09 34 17.5	-2.3
	comp=E,11nm,0.5s						
WTTA	Wattenberg	10.89	326	*e*Pn	Pn	09 32 40.2	+3.0
	comp=E,1.7nm,0.2s						
WTTA				*e*Sn	Sn	09 34 34.9	-4.1
	comp=E,3.3nm,0.3s						
WATA	Walderalm	10.97	326	*e*Pn	Pn	09 32 41.7	+3.5
	comp=E,1.7nm,0.2s						
WATA				*e*Sn	Sn	09 34 37.1	-3.8
	comp=E,5.6nm,0.4s						
FETA	Feichten	11.12	323	*e*Pn	Pn	09 32 43.1	+2.8
	comp=E,0.3nm,0.2s						
VRAC	Vranov	11.15	347	LR	LR	09 38 24.7	
	comp=E,139nm,21.3s,baz=168,slow=46						
MOTA	Moosalm	11.19	325	*e*Pn	Pn	09 32 43.6	+2.5
	comp=E,1.9nm,0.3s						
MOTA				*e*Sn	Sn	09 34 43.7	-2.5
	comp=E,2.0nm,0.3s						
DAVOX	Davos/Dischmat	11.37	320	Pn	Pn	09 32 42.4	-1.3
	comp=E,0.2nm,0.3s,baz=174,slow=17,SNR=1.7						
DAVOX				Sn	Sn	09 34 46.4	-4.3
	comp=E,1.0nm,0.3s,baz=316,slow=23,SNR=3.1						
DAVOX				LR	LR	09 37 44.1	
	comp=E,101nm,19.2s,baz=102,slow=41						
GERES	GERESS Array B	11.44	337	Pn	Pn	09 32 43.0	-1.5
	comp=E,0.2nm,0.3s,baz=174,slow=14,SNR=2.2						
GERES				LR	LR	09 38 04.5	
	comp=E,102nm,20.0s,baz=110,slow=43						
SENIN	Lac Senin/Sane	12.51	313	Pn	Pn	09 33 01.2	+2.0
NACGM	Naroch	16.93	13	*i* P	P	09 34 11.8	+12
HFS	Hagfors	22.07	351	P	P	09 34 55.7	-0.1
	comp=E,2.1nm,0.4s,baz=176,slow=10,SNR=11						
EKA	Eskdalemuir Ar	23.15	324	P	P	09 35 08.0	+0.7
	comp=E,2.2nm,0.6s,baz=275,slow=9.9,SNR=5.4						
FINES	FINESS Array B	23.21	7	P	P	09 35 06.9	-1.0
	comp=E,3.9nm,0.7s,baz=173,slow=10,SNR=16						
FINES				LR	LR	09 45 13.1	
	comp=E,66nm,19.5s,baz=183,slow=40						
FINES	FINESS Array B	23.21	7	P	P	09 35 07.0	-0.8
FIA1	FINESS Array S	23.21	7	P	P	09 35 07.3	-0.6
FIA1				IAmb	IAmb	09 35 14.3	
	comp=Z,13nm,0.9s						
NC405	NORSAR Array S	23.28	349	P	P	09 35 08.2	-0.4
NC405				IAmb	IAmb	09 35 18.1	
	comp=Z,5.3nm,0.9s						
NB2	NORSAR Subarra	23.29	349	P	P	09 35 08.4	-0.3
	comp=Z,0.6nm,0.6s,baz=161,slow=11						
NOA	NORSAR Array B	23.29	349	P	P	09 35 07.9	-0.7
	comp=Z,1.2nm,0.9s,baz=163,slow=11,SNR=3.9						
KLMR	Klimovskoe	25.33	22	*e*	P	09 35 25.8	-1.8
KLMR				AMP		09 35 31.2	
	comp=Z,15nm,1.1s						
TORD	Torodi Ar. Bea	30.29	219	P	P	09 36 13.4	+1.0
	comp=Z,0.7nm,0.6s,baz=26,slow=9.6,SNR=4.2						
ARCES	ARCESS Array B	31.20	3	P	P	09 36 19.9	0.0
	comp=Z,2.8nm,0.9s,baz=190,slow=9.9,SNR=5.6						
ARCES				LR	LR	09 50 36.8	
	comp=Z,66nm,18.9s,baz=200,slow=40						
KKAR	Karatay Array	37.67	67	P	P	09 37 16.5	+0.2
MK31	Makanchi Array	45.13	59	P	P	09 38 17.5	0.0
MKAR	Makanchi Array	45.13	59	P	P	09 38 16.8	-0.7
	comp=Z,0.9nm,0.5s,baz=278,slow=7.5,SNR=12						
MKAR	Makanchi Array	45.13	59	P	P	09 38 17.0	-0.5
ZAA0	Zalesovo Array	45.47	48	P	P	09 38 19.6	-0.5
ZALV	Zalesovo Beam	45.47	48	P	P	09 38 19.5	-0.6
	comp=Z,2.5nm,0.4s,baz=274,slow=8.0,SNR=9.8						
ZALV				LR	LR	10 01 04.2	
	comp=Z,25nm,19.7s,baz=13,slow=41						
ZALV	Zalesovo Beam	45.47	48	P	P	09 38 19.1	-1.0
SCHQ	Schefferville	58.21	317	P	P	09 39 55.3	+0.2
	comp=Z,3.4nm,0.8s,baz=65,slow=6.4,SNR=6.6						
SONM	Songino Array	60.25	51	P	P	09 40 08.9	-0.6
	comp=Z,0.2nm,0.3s,baz=262,slow=6.8,SNR=2.3						
YAK	Yakutsk	64.82	29	LR	LR	10 10 32.0	
	comp=Z,42nm,20.5s,baz=150,slow=38						
MJAR	Matsushiro Arr	85.75	46	LR	LR	10 24 51.3	
	comp=Z,22nm,18.0s,baz=235,slow=38						
NVAR	Mina Array Bea	94.58	329	LR	LR	10 28 19.9	
	comp=Z,58nm,18.1s,baz=312,slow=37						
ASAR	Alice Springs	122.22	96	PKP	PKPdf	09 48 55.1	-1.2
	comp=Z,0.3nm,0.8s,baz=310,slow=3.5,SNR=3.1						

DJA ***23*** *09:47:20.4±0.5, 7°N±5°×12°6E±°, h40^{km}±7^{km}, M4.7/7, mb4.6/7, mB5.6/6, MLv4.6/7, Mw(mB)5.0/6*

MAN 23 09:47:20.5, 7°.04N×125°.77E, h54^{km}, mb4.8, ML3.8, MS3.7, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GTOI	Gorontalo	6.93	204	P	Pn	09 48 59.9	+0.4
	0.3nm874nm54nm,0.5s						
MRSI	Marisa	7.56	211	P	Pn	09 49 09.4	+1.3
LUWI	Luwuk	8.57	201	P	Pn	09 49 23.1	+1.1
	24µm76nm,0.7s						
APSI	Ampana	8.90	208	P	Pn	09 49 27.8	+1.2
	20nm,0.6s						
MTKI	Muara Teweh, K	13.44	234	P	Pn	09 50 29.6	+1.0
SMPI	Sarmi	15.72	124	P	Pn	09 50 59.2	+0.6
	14nm,1.1s						

MAN 23 09:54:00.8, 13°.58N×120°.69E, h24^{km}, mb3.9, ML2.7, MS2.3, Mindoro

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NEIC ***23*** *10:12:27.1±2.0, 13°.2S±0°.1×167°.31E±0°.09, h87^{km}±8^{km}, mb4.5/15, Error ellipse: s-maj=18.5km s-min=12.4km az=168.0*

IDC ***23*** *10:12:35.1±2.9, 13°.35S×167°.12E, h158^{km}±26^{km}, mb3.7/9, mb1 3.8/10, mb1mx3.5/36, mbtmp4.1/10, Error ellipse: s-maj=31.8km s-min=19.2km az=120.0*

ISC 23 10:12:34.2±0.8, **13°.34S**±0°.08×**167°.1E**±0°.1, **h150^{km}, n29,** σ**1^{s}03**/32, **mb4.3**/18, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	8.71	184	P	Pn	10 14 39.4	+2.3
	0.5nm,0.3s,baz=341,slow=18,SNR=2.4						
DZM				S	Sn	10 16 14.7	+0.8
	0.3nm,0.3s,baz=306,slow=18,SNR=1.3						
DZM	Mont Dzumac	8.71	184	Pn	Pn	10 14 34.4	-2.8
EIDS	Eidsvold	19.24	229	P	P	10 16 47.7	+0.6
CTAO	Charters Tower	21.04	249	P	P	10 17 05.4	-1.0
CTAO				IAmb	IAmb	10 17 42.4	
	comp=Z,32nm,2.0s						
ARMA	Armidale	22.19	218	P	P	10 17 18.2	-0.3
ARMA				IAmb	IAmb	10 17 21.8	
	comp=Z,61nm,1.9s						
COEN	Coen	23.24	266		P	10 17 28.1	-0.3
COEN				IAmb	IAmb	10 17 32.3	
	comp=Z,28nm,1.8s						
BKZ	Black Stump Fm	27.04	164	P	P	10 18 01.8	-0.7
BKZ				IAmb	IAmb	10 18 53.7	
	comp=Z,52nm,1.7s						
STKA	Stephens Creek	29.77	228	P	P	10 18 28.0	+1.2
	comp=Z,1.3nm,0.4s,baz=40,slow=12,SNR=5.4						
WR0	Warramunga Arr	31.83	254	P	P	10 18 43.7	-1.4
WR0				IAmb	IAmb	10 19 34.0	
	comp=Z,10.0nm,1.6s						
WB0	Warramunga Arr	31.95	254	P	P	10 18 45.0	-1.1
WB0				IAmb	IAmb	10 19 03.4	
	comp=Z,15nm,1.9s						
WB2	Warramunga Arr	32.01	254	P	P	10 18 45.5	-1.1
WB2				IAmb	IAmb	10 19 26.6	
	comp=Z,17nm,1.6s						
WRA	Warramunga Arr	32.02	254	P	P	10 18 45.9	-0.9
	comp=Z,0.4nm,0.5s,baz=86,slow=9.3,SNR=3.0						
AS31	Alice Springs	33.02	247	P	P	10 18 54.9	-0.6
ASAR	Alice Springs	33.02	247	P	P	10 18 54.7	-0.8
	comp=Z,0.8nm,0.6s,baz=76,slow=9.1,SNR=26						
ASAR				PcP	PcP	10 21 35.5	-0.4
	comp=Z,0.6nm,0.6s,baz=68,slow=2.4,SNR=8.2						
ASAR				ScP	ScP	10 25 05.9	-0.3
	comp=Z,0.5nm,1.0s,baz=74,slow=3.5,SNR=4.1						
BBOO	Buckleboo	34.30	230	P	P	10 19 07.1	+0.7
FORT	Forrest	39.87	238	P	P	10 19 54.4	+1.0
SOEI	Soe	42.07	270	P	P	10 20 11.5	-0.3
USRK	Ussuriysk Ar.	65.57	333	P	P	10 23 02.9	+1.1
	comp=Z,0.7nm,0.6s,baz=142,slow=7.3,SNR=1.9						
PETK	Petropavlovsk-	66.67	354	P	P	10 23 09.2	+0.6
	comp=Z,2.5nm,0.8s,baz=157,slow=7.7,SNR=1.9						
CMAR	Chiang Mai Arr	74.23	294	P	P	10 23 56.5	+1.3
	comp=Z,1.2nm,0.4s,baz=126,slow=3.8,SNR=7.4						
QSPA	South Pole Qui	76.68	180	P	P	10 24 09.0	+0.4
QSPA				IAmb	IAmb	10 25 02.1	
	comp=Z,23nm,1.9s						
IL31		85.27	18	P	P	10 24 53.1	-0.5
IL31				IAmb	IAmb	10 26 07.6	
	comp=Z,14nm,1.7s						
ILAR	Eielson Array	85.27	18	P	P	10 24 52.9	-0.8
	comp=Z,1.6nm,0.5s,baz=242,slow=5.2,SNR=53						
MKAR	Makanchi Array	96.08	317	P	P	10 25 44.7	-0.1
	comp=Z,0.8nm,0.6s,baz=86,slow=6.2,SNR=5.3						
ZALV	Zalesovo Beam	96.17	324	P	P	10 25 44.4	-0.6
	comp=Z,0.3nm,0.4s,baz=112,slow=6.4,SNR=1.5						
ARCES	ARCESS Array B	118.87	346	PKP	PKPdf	10 31 03.5	-0.8
	comp=Z,1.4nm,0.7s,baz=66,slow=2.3,SNR=18						
FINES	FINESS Array B	124.37	339	PKP	PKPdf	10 31 14.5	-0.5
	comp=Z,1.4nm,0.8s,baz=64,slow=3.2,SNR=6.9						
ESDC	Sonseca Array	152.61	345	PKPbc	PKPbc	10 32 13.5	+0.1
	comp=Z,0.4nm,0.6s,baz=354,slow=3.9,SNR=1.9						
TORD	Torodi Ar. Bea	165.78	271	PKPab	PKPab	10 33 22.2	-0.1
	comp=Z,0.6nm,1.0s,baz=87,slow=5.6,SNR=3.6						

IDC ***23*** *10:59:41.4±0.6, 24°.98S×176°.94W, h0^{km}, mb4.4/17, mb1 4.6/19, mb1mx4.4/34, mbtmp4.5/19, ML4.4/2, MS3.4/12, Ms1 3.4/12, ms1mx3.2/36, Error ellipse: s-maj=20.8km s-min=16.7km az=149.0*

NEIC ***23*** *10:59:50.4±2.3, 25°.06S±0°.07×176°.8W±0°.1, h60^{km}±6^{km}, mb4.6/46, Error ellipse: s-maj=13.7km s-min=10.6km az=105.0*

NOU ***23*** *10:59:55.2, 25°.11S×176°.49W, h102^{km}, mb5.4/9, South of Fiji Islands*

ISC 23 10:59:56.7±0.4, **25°.16S**±0°.06×**176°.82W**±0°.08, **h126^{km}, n102,** σ**1^{s}49**/76, **mb4.4**/41, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	4.20	193	Pn	Pn	11 00 53.7	-5.2
	103nm,0.3s,baz=78,slow=24,SNR=2.6						
RAO				Sn	Sn	11 01 44.9	-2.3
	447nm,0.3s,baz=68,slow=23,SNR=3.4						
RAO				LR	LR	11 02 26.5	
	comp=Z,282nm,19.7s,baz=354,slow=38						
RAO	Raoul Island	4.20	193	P	Pn	11 00 58.3	-0.6
MSVF	Nonsavu	8.79	326	Pn	Pn	11 01 58.3	-2.7
	2.8nm,0.3s,baz=99,slow=17,SNR=23						
MSVF				LR	LR	11 04 07.6	
	comp=Z,125nm,19.4s,baz=56,slow=31						
MSVF	Nonsavu	8.79	326	P	Pn	11 01 59.2	-1.8
NIUE	Niue	8.80	48		Pn	11 01 49.8	-11
TAVE	Taveuni	8.89	340	P	Pn	11 02 03.4	+1.2
DGTI	Dogotuki	9.38	339	P	Pn	11 02 09.4	+0.6
	539nm,0.8s						
AFI	Afiamalu	12.15	24	Pn	Pn	11 02 33.2	-13
	8.4nm,0.3s,baz=205,slow=2.2,SNR=6.4						
AFI				Sn	Sn	11 04 36.9	-23
	18nm,0.3s,baz=94,slow=18,SNR=9.2						
DZM	Mont Dzumac	15.64	278	Pn	P	11 03 34.2	+2.3
	0.7nm,0.3s,baz=78,slow=18,SNR=6.2						
DZM				LR	LR	11 07 24.4	
	comp=Z,65nm,20.1s,baz=131,slow=30						
DZM	Mont Dzumac	15.64	278	*e*Pn	P	11 03 34.5	+2.6
	57nm,1.2s						
DZM				*e*LR	LR	11 07 18.7	
	comp=Z,374nm,28.9s						
DZM	Mont Dzumac	15.64	278	P	P	11 03 35.5	+3.6
RAR	Rarotonga	16.16	79	Pn	Pn	11 03 31.6	-5.1
	4.8nm,0.3s,baz=268,slow=8.2,SNR=19						
RAR				Sn	Sn	11 06 13.3	-23
	3.5nm,0.3s,baz=83,slow=17,SNR=2.1						
RAR				LR	LR	11 07 29.0	
	comp=Z,109nm,21.8s,baz=268,slow=29						
RAR	Rarotonga	16.16	79	Pn	Pn	11 03 32.0	-4.7
SANVU	Saraoutou	17.81	300	P	P	11 03 55.2	-0.5
SANVU	Saraoutou	17.81	300	P	Pn	11 03 57.7	+1.0
TBI	Tubuai	25.00	92	*e*LQ	LQ	11 09 49.7	
	518nm,30.2s						
TBI				*e*LR	LR	11 11 06.0	
	comp=Z,265nm,32.0s						
TBI	Tubuai	25.00	92	*e*T	T	11 30 30.2	
	31nm,0.4s						
PAE	Paea	26.40	79	*e*T	T	11 32 15.0	
	9.1nm,0.2s						
PPT2	Papeete2	26.43	79	*e*LR	LR	11 11 42.6	
	comp=Z,379nm,30.8s						
PPT2	Papeete2	26.43	79	*e*T	T	11 32 15.8	
	7.3nm,0.4s						
PPT	Papeete	26.44	79	LR	LR	11 13 47.7	
	comp=Z,51nm,18.4s,baz=238,slow=32						
MEH	Mehetia	27.68	81	*e*T	T	11 33 49.4	
	31nm,0.2s						
CTAO	Charters Tower	34.38	271	P	P	11 06 32.2	+0.2
STKA	Stephens Creek	36.98	250	P	P	11 06 53.0	-0.9
	2.2nm,0.5s,baz=101,slow=12,SNR=11						
STKA				LR	LR	11 19 23.4	
	comp=Z,88nm,21.1s,baz=29,slow=32						
STKA	Stephens Creek	36.98	250	IAmb	IAmb	11 06 57.5	
	comp=Z,0.5nm,0.8s						
PMG	Port Moresby	37.64	288	P	P	11 06 58.1	-1.6
	comp=Z,12nm,0.6s,baz=134,slow=7.1,SNR=4.9						
COEN	Coen	39.17	279	P	P	11 07 11.9	-0.7
COEN				IAmb	IAmb	11 07 36.3	
	comp=Z,14nm,1.2s						
BBOO	Buckleboo	41.64	248	P	P	11 07 31.1	-1.6
BBOO				IAmb	IAmb	11 07 46.1	
	comp=Z,16nm,1.4s						
AS31	Alice Springs	44.69	261	P	P	11 07 58.2	+0.8
ASAR	Alice Springs	44.70	261	P	P	11 07 55.9	-1.6
	comp=Z,0.9nm,0.3s,baz=96,slow=6.5,SNR=30						
ASAR				LR	LR	11 24 45.3	
	comp=Z,72nm,18.0s,baz=108,slow=34						
WR0	Warramunga Arr	45.03	266		P	11 07 58.8	-1.2
WRA	Warramunga Arr	45.21	266	P	P	11 07 58.6	-2.9
	comp=Z,3.2nm,0.5s,baz=100,slow=8.2,SNR=56						
WRA				ScP	ScP	11 13 37.9	+17
	comp=Z,1.2nm,0.8s,baz=108,slow=3.6,SNR=3.5						
WRA				LR	LR	11 26 20.2	
	comp=Z,43nm,18.9s,baz=110,slow=35						
FORT	Forrest	48.60	250	P	P	11 08 26.7	-1.0
VNDA	Vanda	53.40	186	P	P	11 09 03.0	+0.1
	comp=Z,0.6nm,0.9s,baz=12,slow=2.2,SNR=2.4						
SIJI	Sorong	55.57	287	LR	LR	11 31 52.4	
	comp=Z,62nm,18.1s,baz=0.5,slow=35						
MORW	Morawa	59.16	250	P	P	11 09 43.2	-1.3
CASY	Casey	60.27	206	P	P	11 09 52.1	+0.6
CASY				IAmb	IAmb	11 10 18.2	
	comp=Z,8.3nm,1.1s						
KAPI	Kappang	63.86	277	LR	LR	11 38 33.3	
	comp=Z,27nm,18.9s,baz=126,slow=37						
QSPA	South Pole Qui	64.94	180	P	P	11 10 24.3	+1.6
QSPA				IAmb	IAmb	11 10 47.7	

	comp=Z,13nm,1.3s						
TOLI2	Tolitoli	65.69	284	P	P	11 10 27.4	-0.8
TOLI2				IAmb	IAmb	11 10 28.0	
	comp=Z,4.2nm,0.6s						
MJAR	Matsushiro Arr	74.59	324	P	P	11 11 20.1	-1.9
	comp=Z,1.8nm,0.9s,baz=152,slow=7.2,SNR=5.0						
MAW	Mawson	77.57	200	P	P	11 11 40.1	+1.7
	comp=Z,3.2nm,0.6s,baz=137,slow=13,SNR=3.6						
MAW	Mawson	77.57	200	IAmb	IAmb	11 11 47.9	
	comp=Z,1.6nm,1.0s						
JKA	Kamikawa-asahi	78.32	331	P	P	11 11 43.1	+0.4
ASAJ	Asahikawa	78.32	331	P	P	11 11 43.1	+0.3
	comp=Z,5.8nm,1.0s,baz=182,slow=17,SNR=5.2						
SNCC	San Nicolas Is	79.65	46	P	P	11 11 50.8	+0.5
PETK	Petropavlovsk-	81.03	345	P	P	11 11 56.0	-1.2
	comp=Z,10nm,0.7s,baz=159,slow=8.6,SNR=12						
PETK				LR	LR	11 40 57.9	
	comp=Z,36nm,20.6s,baz=107,slow=31						
KSRS	Korea Array	81.08	319	LR	LR	11 41 53.5	
	comp=Z,25nm,21.9s,baz=155,slow=31						
ISA	Isabella, Lake	81.84	44	P	P	11 12 02.9	+0.9
ISA				IAmb	IAmb	11 12 04.4	
	comp=Z,5.6nm,1.0s						
H03S2	Juan Fernandez	82.49	124	T	T	12 43 02.6	
	baz=243,slow=74,SNR=146						
ORV	Oroville	82.50	40	P	P	11 12 05.7	+0.4
H03S1	Juan Fernandez	82.50	124	T	T	12 43 03.7	
	baz=243,slow=74,SNR=183						
H03S3	Juan Fernandez	82.51	124	T	T	12 43 08.8	
	baz=243,slow=74,SNR=11						
H03N3	Juan Fernandez	82.65	123	T	T	12 43 10.3	
	baz=250,slow=73,SNR=135						
H03N2	Juan Fernandez	82.65	123	T	T	12 43 11.9	
	baz=250,slow=73,SNR=95						
H03N1	Juan Fernandez	82.67	123	T	T	12 43 12.3	
	baz=250,slow=73,SNR=87						
GSC	Goldstone, Bar	82.69	46	P	P	11 12 06.8	+0.3
MDPB	Devils Postpil	82.70	43	P	P	11 12 07.7	+1.0
QSM	Queen of Sheba	83.05	45	P	P	11 12 08.5	+0.3
QSM				IAmb	IAmb	11 12 10.3	
	comp=Z,7.6nm,1.2s						
MPK	Martis Peak	83.19	41	P	P	11 12 09.1	-0.1
MPK				IAmb	IAmb	11 12 12.1	
	comp=Z,10nm,1.2s						
GWY	Greenwater Val	83.32	45	P	P	11 12 09.3	-0.4
PNTR	Pine Nut	83.32	41	P	P	11 12 09.7	0.0
PNTR				IAmb	IAmb	11 12 12.7	
	comp=Z,5.9nm,0.8s						
SNAA	Sanae	83.34	178	P	P	11 12 10.1	+0.8
SNAA				IAmb	IAmb	11 12 11.5	
	comp=Z,13nm,1.4s						
VNA3	Neumayer Olymp	83.44	176	P	P	11 12 10.4	+0.6
NVAR	Mina Array Bea	83.68	42	P	P	11 12 12.6	+1.0
	comp=Z,1.3nm,0.6s,baz=223,slow=8.1,SNR=18						
NVAR	Mina Array Bea	83.68	42	P	P	11 12 12.0	+0.4
NV11	Mina Array Sit	83.78	42	P	P	11 12 12.5	+0.5
VNA2	Neumayer--Watz	83.89	177	P	P	11 12 13.1	+1.1
	baz=188,slow=3.5						
VNA1	Neumayer--Stat	84.12	176	P	P	11 12 14.1	+1.1
TPH	Tonopah	84.13	43	P	P	11 12 14.8	+1.0
KVN	Kaiserville	84.20	42	IAmb	IAmb	11 12 16.0	
	comp=Z,7.9nm,1.5s						
Y14A	Wickenburg	84.40	49	P	P	11 12 16.2	+1.0
Y14A				IAmb	IAmb	11 12 17.1	
	comp=Z,4.2nm,0.9s						
SHPR	Sheep Range	84.48	45	P	P	11 12 16.5	+0.8
SHPR				IAmb	IAmb	11 12 18.2	
	comp=Z,9.3nm,1.5s						
W13A	Hualapai Mount	84.48	47	IAmb	IAmb	11 12 17.8	
	comp=Z,3.0nm,0.8s						
K05A	Summer Lake	84.93	38	P	P	11 12 19.1	+1.3
K05A				IAmb	IAmb	11 12 20.8	
	comp=Z,4.0nm,0.8s						
PRN	Pahroc Range	85.09	45	P	P	11 12 19.8	+1.2
PRN				IAmb	IAmb	11 12 22.1	
	comp=Z,12nm,1.3s						
LC01	Cunco	85.30	131	P	P	11 12 19.4	-0.3
PLCA	Paso Flores	85.31	133	P	P	11 12 21.8	+2.0
	comp=Z,2.5nm,0.8s,baz=200,slow=1.7,SNR=6.1						
BMN	Battle Mountai	85.59	41	P	P	11 12 22.4	+1.4
BMN				IAmb	IAmb	11 12 23.7	
	comp=Z,9.4nm,1.4s						
X16A	Lo Mia Camp, P	85.74	49	P	P	11 12 23.8	+1.7
X16A				IAmb	IAmb	11 12 24.9	
	comp=Z,6.2nm,1.0s						
KNB	Kanab	86.30	46	IAmb	IAmb	11 12 26.8	
	comp=Z,3.2nm,0.9s						
U15A	North Rim	86.31	47	IAmb	IAmb	11 12 27.1	
	comp=Z,3.5nm,0.7s						
KLR	Kul'dur	87.07	329	P	P	11 12 28.6	+0.7
	comp=Z,2.8nm,0.9s,baz=188,slow=7.1,SNR=6.2						
MTPU	Mount Pierson	87.30	46	IAmb	IAmb	11 12 40.0	
	comp=Z,3.0nm,1.1s						
MNTX	Cornudas Mount	88.58	54	IAmb	IAmb	11 12 37.2	
	comp=Z,3.0nm,0.8s						
TXAR	Lajitas Array	88.67	57	P	P	11 12 37.1	+1.1
	comp=Z,1.5nm,1.0s,baz=223,slow=8.6,SNR=11						
SRU	San Rafael Swe	88.98	45	IAmb	IAmb	11 12 39.3	
	comp=Z,4.0nm,0.9s						
F10A	Beach Ranch, E	89.03	37	P	P	11 12 37.4	0.0
F10A				IAmb	IAmb	11 13 00.6	
	comp=Z,6.0nm,1.1s						
SEY	Seymchan	91.14	346	P	P	11 12 46.9	+0.3
	comp=Z,4.8nm,0.7s,baz=135,slow=10.0,SNR=7.3						
PDAR	Pinedale Array	91.61	43	P	P	11 12 50.1	+0.5
	comp=Z,1.1nm,0.7s,baz=204,slow=2.9,SNR=8.6						
PDAR	Pinedale Array	91.61	43	P	P	11 12 49.5	-0.1
ILAR	Eielson Array	92.60	12	P	P	11 12 54.0	+0.5
	comp=Z,0.5nm,0.7s,baz=214,slow=5.3,SNR=5.7						
CMAR	Chiang Mai Arr	92.67	289	P	P	11 12 55.4	+0.5
	comp=Z,0.9nm,0.3s,baz=132,slow=4.0,SNR=4.1						
MKAR	Makanchi Array	115.14	312	PKP	PKPdf	11 18 22.8	-0.1
	comp=Z,0.2nm,0.6s,baz=112,slow=1.6,SNR=1.6						
ARCES	ARCESS Array B	133.68	349	PKP	PKPdf	11 18 57.9	+0.2
	comp=Z,4.6nm,1.1s,baz=48,slow=1.3,SNR=6.2						
FINES	FINESS Array B	140.52	343	PKhKP	PKPpre	11 19 04.3	
	comp=Z,2.9nm,1.0s,baz=52,slow=5.4,SNR=3.8						
NOA	NORSAR Array B	143.71	353	PKhKP	PKPpre	11 19 14.0	
	comp=Z,0.7nm,0.7s,baz=8.5,slow=6.3,SNR=2.4						
AKASG	Malin Array Be	147.57	329	PKPbc	PKPbc	11 19 25.5	-0.4
	comp=Z,6.0nm,0.6s,baz=45,slow=4.4,SNR=23						
BRTR	Keskin Array B	150.64	307	PKPbc	PKiKP	11 19 35.7	+0.8
	comp=Z,1.2nm,0.5s,baz=70,slow=4.7,SNR=6.9						
BRTR				PKPab	PKPab	11 19 41.2	-0.3
	comp=Z,4.6nm,0.6s,baz=82,slow=4.0,SNR=17						
CLL	Collm	152.82	346	i PKPbc	PKiKP	11 19 41.6	+2.9
CLL				i		11 19 46.2	
CLL				i PKPab	PKPab	11 19 50.3	+0.4
	comp=Z,6.0nm,1.0s						
GERES	GERESS Array B	154.96	343	PKPab	PKPab	11 19 59.3	+0.1
	comp=Z,0.4nm,0.3s,baz=27,slow=6.6,SNR=4.3						
TORD	Torodi Ar. Bea	167.97	173	PKP	PKPdf	11 19 48.5	-0.5
	comp=Z,0.4nm,0.8s,baz=196,slow=1.0,SNR=2.6						
TORD				PKPab	PKPab	11 20 58.0	+1.3
	comp=Z,1.0nm,0.7s,baz=200,slow=3.8,SNR=6.2						

IDC 23 11:04:57.8±7.3, 6°.45S×130°.68E, h259^{km}±79^{km}, mb3.3/2, mb1 3.2/3, mb1mx2.9/32, mbtmp3.8/3, Error ellipse: s-maj=138.0km s-min=22.3km az=71.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.87	165	S	S	11 10 23.9	-14
	1.0nm,0.3s,baz=338,slow=22,SNR=8.7						
ASAR	Alice Springs	17.39	170	P	P	11 08 42.5	-0.8
	0.3nm,0.3s,baz=347,slow=11,SNR=9.3						
ASAR				S	S	11 11 50.1	-0.6
	0.3nm,0.3s,baz=359,slow=29,SNR=6.8						
STKA	Stephens Creek	27.27	159	P	P	11 10 19.7	+1.1
	0.6nm,0.3s,baz=330,slow=10,SNR=6.2						
MKAR	Makanchi Array	68.14	326	P	P	11 15 29.8	-0.2
	0.6nm,0.4s,baz=121,slow=8.3,SNR=4.6						

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*IDC **23** 11:18:51.4±0.4, 53°.00S×21°.88E, h0^{km}, mb4.7/22, mb1 4.7/22, mb1mx4.5/36, mbtmp4.7/22, MS4.2/30, Ms1 4.1/30, ms1mx4.1/33, Error ellipse: s-maj=16.4km s-min=12.9km az=75.0*

*NEIC **23** 11:18:53.6±1.6, 53°.0S±0°.1×21°.8E±0°.2, h10^{km}±1^{km}, mb5.0/35, Error ellipse: s-maj=20.6km s-min=17.1km az=86.0*

*GCMT **23** 11:18:54.6±0.2, 53°.06S±0°.01×22°.25E±0°.03, h12^{km}, MW5.0/98, Moment Tensor Solution. s40,c49; s98,c143; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.18±.10; $M_{\theta\theta}$3.37±.08; $M_{\phi\phi}$0.81±.10; $M_{r\theta}$1.19±.34; $M_{\theta\phi}$-1.07±.08; $M_{\phi r}$-0.62±.35; Best double couple: $M_0$4.19000×10^{16} NP1:ϕ_s108.00000°,δ36.00000°,λ-93.00000°. NP2: ϕ_s292.00000°,δ54.00000°,λ-88.00000°. Principal axes: T 3.9760, Plg9.0000°, Azm20.0000°; N 0.4300, Plg2.0000°, Azm111.0000°; P -4.4030, Plg81.0000°, Azm213.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 23 11:18:53.3±0.3, 53°.02S±0°.07×21°.83E±0°.09, h10^{km}, n255, σ0^{s}.92/237, mb4.9/37, MS4.2/34, 1C-1D, South of Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SYO	Syowa Base	18.07	159	⇓eP	Pn	11 23 03.4	-0.7
SYO	Syowa Base	18.07	159	⇑epPn	P	11 23 05.4	+0.9
SUR	Sutherland	20.64	358	P	P	11 23 33.1	0.0
	22nm,0.8s,baz=163,slow=11,SNR=10						
SUR				LR	LR	11 29 35.6	
	comp=Z,1μm,21.4s,baz=186,slow=31						
SUR	Sutherland	20.64	358	P	P	11 23 33.5	+0.5
SUR				IAmb	IAmb	11 23 39.2	
	comp=Z,45nm,1.0s						
SNAA	Sanae	21.62	201	P	P	11 23 44.5	+1.3
	comp=Z,55nm,0.8s,baz=51,slow=11,SNR=170						
SNAA				LR	LR	11 30 14.7	
	comp=Z,1μm,19.9s,baz=12,slow=32						
SNAA	Sanae	21.62	201	P	P	11 23 44.7	+1.6
VNA2	Neumayer--Watz	22.19	205	P	P	11 23 50.1	+0.9
	baz=38,slow=11						
VNA1	Neumayer--Stat	22.25	206	P	P	11 23 50.2	+0.3
VNA3	Neumayer Olymp	22.98	206	P	P	11 23 58.1	+0.5
MAW	Mawson	24.40	142	P	P	11 24 11.1	-0.3
	comp=Z,11nm,1.1s,baz=304,slow=10,SNR=6.3						
MAW				LR	LR	11 31 38.4	
	comp=Z,405nm,21.7s,baz=278,slow=31						
MAW	Mawson	24.40	142	P	P	11 24 11.4	0.0
BOSA	Boshof	24.51	7	P	P	11 24 11.3	-1.6
	comp=Z,5.3nm,0.9s,baz=198,slow=8.4,SNR=5.6						
BOSA				LR	LR	11 32 07.2	
	comp=Z,1μm,20.0s,baz=184,slow=32						
BOSA	Boshof	24.51	7	P	P	11 24 14.2	+1.3
LBTB	Lobatse	28.11	7	P	P	11 24 43.5	-1.8
	comp=Z,4.8nm,0.8s,baz=183,slow=13,SNR=6.0						
LBTB				LR	LR	11 34 06.3	
	comp=Z,903nm,21.1s,baz=183,slow=33						
LBTB	Lobatse	28.11	7	P	P	11 24 44.5	-0.8
TSUM	Tsumeb	33.91	353	LR	LR	11 37 34.2	
	comp=Z,528nm,18.5s,baz=151,slow=33						
TSUM	Tsumeb	33.91	353	P	P	11 25 36.6	+0.1
TSUM				IAmb	IAmb	11 25 45.6	
	comp=Z,25nm,1.4s						
QSPA	South Pole Qui	37.21	180	P	P	11 26 04.2	-0.2
	comp=Z,44nm,0.9s,baz=242,slow=3.3,SNR=158						
QSPA				LR	LR	11 40 03.2	
	comp=Z,639nm,21.4s,baz=238,slow=34						
QSPA	South Pole Qui	37.21	180	P	P	11 26 04.4	-0.1
LSZ	Lusaka	37.99	10	P	P	11 26 11.2	-0.2
PMSA	Palmer Station	42.39	219	LR	LR	11 40 14.7	
	comp=Z,548nm,20.2s,baz=149,slow=30						
CASY	Casey	42.75	143	P	P	11 26 50.9	+0.7
CASY				IAmb	IAmb	11 26 51.9	
	comp=Z,14nm,0.9s						
VNDA	Vanda	47.38	169	P	P	11 27 26.3	-0.6
	comp=Z,2.0nm,0.8s,baz=238,slow=9.0,SNR=12						
VNDA				LR	LR	11 46 57.3	
	comp=Z,470nm,19.4s,baz=208,slow=36						
VNDA	Vanda	47.38	169	P	P	11 27 26.9	+0.1
KIBK	Kibwezi	52.27	21	P	P	11 28 04.1	-0.7
KIBK				IAmb	IAmb	11 28 16.4	
	comp=Z,14nm,1.5s						
KMBO	Kilima Mbogo	53.28	19	LR	LR	11 50 04.6	
	comp=Z,439nm,18.5s,baz=134,slow=35						
TRQA	Tornquist	57.27	249	P	P	11 28 40.4	-0.4
TRQA				IAmb	IAmb	11 28 41.7	
	comp=Z,20nm,0.8s						
GO07	Milladeo Hill,	59.98	237	P	P	11 28 58.3	-1.2
PLCA	Paso Flores	60.07	241	P	P	11 28 59.5	-0.9
	comp=Z,8.5nm,0.8s,baz=141,slow=8.3,SNR=23						
PLCA				LR	LR	11 52 27.5	
	comp=Z,74nm,18.9s,baz=144,slow=34						
PLCA	Paso Flores	60.07	241	P	P	11 29 00.3	0.0
PLCA				IAmb	IAmb	11 29 01.1	
	comp=Z,9.6nm,0.8s						
LC01	Cunco	62.10	242	P	P	11 29 13.2	-0.9
LC01				IAmb	IAmb	11 29 14.5	
	comp=Z,15nm,0.9s						
CPUP	Villa Florida	63.03	261	P	P	11 29 19.8	-0.6
	comp=Z,8.8nm,0.9s,baz=127,slow=3.5,SNR=8.7						
CPUP				LR	LR	11 51 30.1	
	comp=Z,108nm,21.6s,baz=150,slow=31						
CPUP	Villa Florida	63.03	261	P	P	11 29 20.1	-0.3
DBIC	Dimbokro	63.63	330	P	P	11 29 23.9	-0.4
	comp=Z,6.5nm,1.0s,baz=155,slow=11,SNR=3.7						
DBIC				LR	LR	11 51 58.3	
	comp=Z,138nm,18.3s,baz=152,slow=31						
H01W2	Cape Leeuwin H	64.28	114	T	T	12 39 51.3	
	baz=221,slow=75,SNR=3.9						
H01W3	Cape Leeuwin H	64.30	114	T	T	12 39 52.0	
	baz=221,slow=75,SNR=4.0						
H01W1	Cape Leeuwin H	64.30	114	T	T	12 39 52.7	
	baz=221,slow=75,SNR=4.2						
BO02	Sierra Bellavi	64.53	246	P	P	11 29 29.7	-0.7
BO02				IAmb	IAmb	11 29 40.2	
	comp=Z,21nm,1.2s						
BDFB	Brasilia	65.54	276	P	P	11 29 37.4	+0.3
	comp=Z,6.7nm,0.7s,baz=142,slow=6.0,SNR=8.2						
AQDB	Aquidauana	66.46	267	P	P	11 29 42.8	0.0
AQDB				IAmb	IAmb	11 29 43.9	
	comp=Z,20nm,1.4s						
TORD	Torodi Ar. Bea	68.14	339	P	P	11 29 52.9	-0.4
	comp=Z,5.9nm,0.9s,baz=182,slow=6.2,SNR=35						
TORD				LR	LR	11 53 51.1	
	comp=Z,115nm,21.6s,baz=160,slow=31						
TORD	Torodi Ar. Bea	68.14	339	P	P	11 29 53.1	-0.3
TORD				IAmb	IAmb	11 29 54.1	
	comp=Z,8.3nm,0.9s						
AC02	Maricunga	69.59	252	P	P	11 30 02.7	-0.4
AC02				IAmb	IAmb	11 30 04.8	
	comp=Z,20nm,1.0s						
KOWA	Kowa	70.83	333	P	P	11 30 10.1	+0.1
KOWA				IAmb	IAmb	11 30 11.0	
	comp=Z,11nm,0.9s						
LVC	Limon Verde	72.70	255	LR	LR	11 58 06.3	
	comp=Z,60nm,18.6s,baz=162,slow=32						
LVC	Limon Verde	72.70	255	P	P	11 30 21.8	0.0
LVC				IAmb	IAmb	11 30 23.3	
	comp=Z,10nm,0.9s						
SIV	San Ignacio	73.14	266	LR	LR	11 58 12.5	
	comp=Z,126nm,19.0s,baz=109,slow=32						
PB16	IPOC Station P	76.36	258	P	P	11 30 43.2	-0.2
PB16				IAmb	IAmb	11 30 45.8	
	comp=Z,21nm,1.5s						
BBOO	Buckleboo	77.23	128	P	P	11 30 47.7	+0.3
BBOO				IAmb	IAmb	11 30 47.8	
	comp=Z,11nm,0.8s						
PALK	Pallekele	77.90	60	P	P	11 30 51.9	+0.6
	comp=Z,7.3nm,0.9s,baz=220,slow=10,SNR=3.7						
RAYN	Ar Rayn	78.95	22	P	P	11 30 57.4	+0.5
SAML	Samuel	79.92	269	P	P	11 31 02.2	-0.2
STKA	Stephens Creek	80.58	132	P	P	11 31 05.6	-0.3
	comp=Z,9.5nm,0.9s,baz=212,slow=2.8,SNR=12						
STKA				LR	LR	12 03 06.5	
	comp=Z,62nm,18.0s,baz=204,slow=33						
STKA	Stephens Creek	80.58	132	P	P	11 31 06.2	+0.3
LEM	Lembang	82.06	91	P	P	11 31 15.5	+1.5
	comp=Z,23nm,0.8s,baz=162,slow=11,SNR=9.2						
SMRI	Semarang	83.59	93	P	P	11 31 22.5	+0.7
ASAR	Alice Springs	83.69	121	P	P	11 31 21.6	-0.7
	comp=Z,3.7nm,0.8s,baz=208,slow=4.0,SNR=33						
ASAR				LR	LR	12 01 38.8	
	comp=Z,92nm,20.8s,baz=216,slow=31						
AS31	Alice Springs	83.69	121	P	P	11 31 21.4	-0.9
FITZ	Fitzroy Crossi	83.75	112	P	P	11 31 21.8	-0.8
	comp=Z,2.7nm,0.9s,baz=162,slow=6.4,SNR=3.6						
PTGA	Pitinga	84.47	276	LR	LR	12 05 02.7	
	comp=Z,74nm,18.2s,baz=112,slow=33						
WRA	Warramunga Arr	86.98	120	P	P	11 31 37.6	-1.2
	comp=Z,1.8nm,0.7s,baz=213,slow=4.2,SNR=26						
WRA				LR	LR	12 05 17.0	
	comp=Z,36nm,20.5s,baz=30,slow=32						
WB2	Warramunga Arr	86.99	120	P	P	11 31 37.9	-1.0
WB2				IAmb	IAmb	11 31 39.6	
	comp=Z,17nm,1.1s						
WRAB	Tennant Creek	87.00	120	P	P	11 31 38.6	-0.3
WR0	Warramunga Arr	87.08	120	P	P	11 31 37.0	-2.2
WR0				IAmb	IAmb	11 31 48.3	
	comp=Z,8.5nm,1.2s						
WB0	Warramunga Arr	87.16	119	P	P	11 31 38.2	-1.4
WB0				IAmb	IAmb	11 31 48.5	
	comp=Z,17nm,1.4s						
BOAV	Boa Vista	87.29	278	P	P	11 31 39.7	-0.5
BOAV				IAmb	IAmb	11 31 41.5	
	comp=Z,15nm,1.0s						
MDT	Midelt	88.53	338	LR	LR	12 06 44.8	
	comp=Z,62nm,20.6s,baz=156,slow=32						
KEST	Kesra	89.05	350	P	P	11 31 49.5	+1.5
	comp=Z,9.5nm,1.1s,baz=182,slow=3.5,SNR=3.8						
KEST				LR	LR	12 12 35.6	
	comp=Z,175nm,19.5s,baz=54,slow=36						
MMRI	Maumere	89.37	103	P	P	11 31 50.4	+0.2
SPSI	Sidrap Palu	91.63	99	P	P	11 32 01.0	+0.3
BRTR	Keskin Array B	92.94	9	P	P	11 32 06.5	+0.4
	comp=Z,2.5nm,0.9s,baz=171,slow=7.8,SNR=9.0						
BRTR				LR	LR	12 13 26.8	
	comp=Z,178nm,21.1s,baz=184,slow=35						
GNI	Garni	94.89	17	LR	LR	12 14 18.0	
	comp=Z,92nm,21.6s,baz=206,slow=35						
ESDC	Sonseca Array	94.99	340	P	P	11 32 15.5	0.0
	comp=Z,0.3nm,0.3s,baz=165,slow=6.6,SNR=2.2						
GEYT	Alibeck	95.89	28	LR	LR	12 15 47.0	
	comp=Z,47nm,18.9s,baz=65,slow=36						
CMAR	Chiang Mai Arr	97.06	69	P	P	11 32 25.3	-0.1
	comp=Z,0.5nm,0.3s,baz=210,slow=5.2,SNR=1.8						
CMAR				LR	LR	12 10 43.8	
	comp=Z,59nm,18.4s,baz=214,slow=32						
ROSC	El Rosal	97.54	268	LR	LR	12 11 58.8	
	comp=Z,91nm,18.6s,baz=243,slow=33						
KBZ	Khabaz	98.06	15	LR	LR	12 19 06.6	
	comp=Z,78nm,18.6s,baz=200,slow=37						
KVAR	Kislovodsk Arr	98.25	15	LR	LR	12 18 57.9	
	comp=Z,69nm,18.9s,baz=112,slow=37						
DZM	Mont Dzumac	99.16	147	eLR	LR	12 04 55.8	
	comp=Z,159nm,37.0s						
DAVOX	Davos/Dischmat	99.94	352	LR	LR	12 18 25.5	
	comp=Z,95nm,20.7s,baz=118,slow=36						
TBI	Tubuai	103.58	188	eLR	LR	12 06 54.6	
	comp=Z,186nm,35.8s						
CLL	Collm	104.22	354	eSS	SS	11 52 09.0	+4.6
CLL				Lm	MLR	12 23 00.0	
	comp=Z,100nm,19.1s						
PPT2	Papeete2	109.29	189	eLR	LR	12 09 35.5	
	comp=Z,120nm,23.2s						
CD2	Chengdu	109.54	65	Pdif	Pdif	11 33 22.0	+1.3
WMQ	Urumqi	111.78	45	eP	PKiKP	11 37 29.3	+1.8
WMQ				pmax	pmax		
	comp=Z,97nm,4.3s						
MKAR	Makanchi Array	111.98	40	PKiKP	PKiKP	11 37 27.0	-0.8
	comp=Z,1.1nm,0.9s,baz=212,slow=3.5,SNR=5.2						
MKAR	Makanchi Array	111.98	40		PKiKP	11 37 26.1	-1.7
XAN	Xi'an	114.74	66	PKP	PKPdf	11 37 33.0	-0.5
XAN				pPKP	PKiKP	11 37 43.5	+10
ZALV	Zalesovo Beam	118.72	37	PKP	PKPdf	11 37 39.1	-1.2
	comp=Z,1.0nm,0.6s,baz=194,slow=3.0,SNR=5.3						
NJ2	Nanjing	118.92	74	eP	PKiKP	11 37 43.3	+1.8
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
HHC	Hu-ho-hao-te	121.14	62	eP	PKPdf	11 37 43.1	-2.6
SONM	Songino Array	123.39	53	PKP	PKPdf	11 37 48.2	-1.6
	comp=Z,2.2nm,0.7s,baz=206,slow=3.6,SNR=13						
SONM	Songino Array	123.39	53		PKPdf	11 37 48.9	-0.9
P60A	Greenville	124.66	292	P	PKiKP	11 37 53.6	+1.0
	baz=133						
L61B	Northampton	124.82	296	P	PKiKP	11 37 54.2	+1.4
	baz=133						
BRAL	Brewton	125.31	276	P	PKPdf	11 37 54.3	+0.5
	baz=136						
LBNH	Lisbon	125.63	298	P	PKiKP	11 37 55.6	+1.2
	baz=132						
SSPA	Standing Stone	126.48	291	P	PKiKP	11 37 56.8	+0.6
	baz=132						
MCWV	Mont Chateau	126.94	289	P	PKiKP	11 37 57.5	+0.4
	baz=132						
TZTN	Tazewell	126.97	284	P	PKiKP	11 37 57.8	+0.4
	baz=133						
LONY	Lake Ozonia	127.30	297	P	PKiKP	11 37 58.5	+0.8
	baz=131						
M54A	Oil Creek Stat	128.06	291	P	PKiKP	11 37 59.7	+0.3
	baz=131						
O53A	New Philadelph	128.11	289	P	PKiKP	11 37 59.9	+0.4
	baz=132						
P52A	Corning	128.23	287	P	PKPdf	11 37 59.6	+0.5
	baz=132						
WVT	Waverly	129.22	280	P	PKPdf	11 38 01.3	+0.2
	baz=133						
WCI	Wyandotte Cave	129.72	283	P	PKPdf	11 38 02.6	+0.6
	baz=132						
SCHQ	Schefferville	129.93	311	PKP	PKPdf	11 38 01.7	-0.1
	comp=Z,5.8nm,0.8s,baz=90,slow=8.1,SNR=3.7						
SCHQ	Schefferville	129.93	311		PKPdf	11 38 02.3	+0.4
W41B	Gary Mavity, V	131.22	276	P	PKPdf	11 38 05.5	+0.6
	baz=133						
MIAR	Mount Ida	131.59	275	P	PKPdf	11 38 06.1	+0.4
	baz=133						
W39A	Magazine	132.16	275	P	PKPdf	11 38 07.3	+0.6
	baz=133						
U40A	Yellville	132.38	277	P	PKPdf	11 38 07.9	+0.8
	baz=132						
CCM	Cathedral Cave	132.54	280	P	PKPdf	11 38 07.7	+0.3
	baz=131						
GLMI	Grayling	132.97	291	P	PKPdf	11 38 08.6	+0.6
	baz=128						
MJAR	Matsushiro Arr	133.52	84	PKP	PKPdf	11 38 09.4	+0.1
	comp=Z,1.3nm,0.4s,baz=242,slow=2.6,SNR=4.9						
TXAR	Lajitas Array	134.00	261	PKP	PKPdf	11 38 11.2	+0.7
	comp=Z,1.0nm,0.9s,baz=160,slow=4.0,SNR=7.8						
USRK	Ussuriysk Ar.	134.70	72	PKP	PKPdf	11 38 11.3	+0.1
	comp=Z,1.6nm,0.8s,baz=223,slow=5.9,SNR=3.1						
WMOK	Wichita Mounta	134.86	271	P	PKPdf	11 38 11.0	-0.9
	baz=133						
JFWS	Jewell Farm	135.03	286	P	PKPdf	11 38 11.7	-0.1
	baz=128						
MNTX	Cornudas Mount	136.73	262	P	PKPdf	11 38 14.7	-0.7
	baz=136						
CBKS	Cedar Bluff	138.12	274	P	PKPdf	11 38 17.7	-0.1
	baz=130						
ECSD	EROS Data Cent	139.25	282	P	PKPdf	11 38 20.2	+0.5
	baz=126						
ECSD	EROS Data Cent	139.25	282		PKPdf	11 38 20.7	+1.0
ANMO	Albuquerque	139.63	265	P	PKPdf	11 38 20.8	-0.1
	baz=133						
T25A	Trinidad	139.86	269	P	PKPdf	11 38 21.5	+0.2
	baz=131						
TUC	Tucson	140.38	258	P	PKPdf	11 38 22.3	+0.1
	baz=136						
TUC	Tucson	140.38	258		PKPdf	11 38 22.3	+0.1
SDCO	Great Sand Dun	140.91	269	P	PKPdf	11 38 24.0	+0.8
	baz=130						
Q24A	Divide	141.48	270	P	PKPdf	11 38 25.5	+1.2
	baz=129						
S22A	4UR Ranch, Cre	141.72	268	P	PKPdf	11 38 24.0	-0.7
	baz=131						
ULM	Lac du Bonnet	142.31	292	PKP	PKPdf	11 38 25.1	+0.1
	comp=Z,3.5nm,0.8s,baz=148,slow=2.7,SNR=4.2						
ULM	Lac du Bonnet	142.31	292		PKPdf	11 38 25.6	+0.7
WUAZ	Wupatki	142.97	261	P	PKPdf	11 38 25.3	-1.5
	baz=133						
WUAZ	Wupatki	142.97	261		PKPdf	11 38 25.6	-1.2
N23A	Red Feather La	143.15	272	P	PKPdf	11 38 26.5	-0.6
	baz=127						
PDMCI	Parker Dam,Lak	143.77	257	P	PKPbc	11 38 27.0	+1.3
	baz=135						
RSSD	Black Hills	143.88	278	P	PKPbc	11 38 26.7	+0.6
	baz=124						
RSSD	Black Hills	143.88	278	PKPdf	PKPbc	11 38 26.9	+0.8
BC3	Big Chuckawall	144.08	255	P	PKPbc	11 38 27.7	+0.9
	baz=136						
O20A	White River Ci	144.08	269	P	PKPbc	11 38 27.6	+0.9
	baz=128						
O20A	White River Ci	144.08	269		PKPbc	11 38 27.4	+0.6
MONP2	Monument Peak	144.09	253	P	PKPbc	11 38 27.6	+0.6
	baz=137						
U15A	North Rim	144.13	261		PKPab	11 38 27.1	+0.4
W13A	Hualapai Mount	144.17	258	PKPdf	PKPab	11 38 27.3	+0.5
IRM	Iron Mountain	144.25	256	P	PKPdf	11 38 28.6	-0.4
	baz=135						
K22A	Casper	144.54	274	P	PKPab	11 38 28.0	+0.2
	baz=125						
K22A	Casper	144.54	274	PKPdf	PKPab	11 38 26.9	-0.9
TPFO	Pinon Flats	144.62	254	P	PKPab	11 38 28.1	-0.3
	baz=136						
PFO	Pinyon Flats O	144.63	254	P	PKPab	11 38 28.1	-0.3

	baz=136						
PFO	Pinyon Flats O	144.63	254	PKPdf	PKPab	11 38 28.8	+0.3
BELC	Belle Mtn. Jos	144.64	255	P	PKPab	11 38 28.5	0.0
	baz=136,SNR=7.0						
PKCU	Pink Cliffs	144.82	262		PKPab	11 38 28.5	-0.8
SRU	San Rafael Swe	144.82	266		PKPab	11 38 28.7	-0.3
KNB	Kanab	144.84	261		PKPab	11 38 28.9	-0.2
EUNU	Eureka	144.85	343	PKPdf	PKPbc	11 38 28.5	+0.6
FCC	Fort Churchill	144.86	305	PKPdf	PKPab	11 38 27.5	-0.7
GMRC	Granite Mounta	145.00	256	P	PKPbc	11 38 29.6	-0.1
	baz=135						
MURC	Murrieta	145.05	253	P	PKPbc	11 38 29.7	-0.1
	baz=136						
BBRC	Big Bear Solar	145.36	254	P	PKPbc	11 38 31.1	0.0
	baz=136,SNR=5.6						
SCI2	San Clemente I	145.37	251	P	PKPbc	11 38 31.0	+0.2
	baz=137						
HEC	Hector,Ludlow	145.42	255	P	PKPdf	11 38 31.0	-0.1
	baz=135,SNR=18						
CIS	Catalina Islan	145.60	251	P	PKPdf	11 38 31.7	+0.4
	baz=137,SNR=6.5						
TUQ	Turquoise Moun	145.60	256	P	PKPdf	11 38 31.3	-0.1
	baz=134,SNR=24						
BFSC	Mount Baldy Ra	145.77	253	P	PKPdf	11 38 31.9	+0.2
	baz=136,SNR=6.7						
GSC	Goldstone, Bar	146.03	255	P	PKPdf	11 38 32.5	+0.4
	baz=134,SNR=17						
GSC	Goldstone, Bar	146.03	255		PKPdf	11 38 31.8	-0.3
SNCC	San Nicolas Is	146.12	250	P	PKPdf	11 38 32.8	+0.7
	baz=138						
SHOC	Shoshone, Teco	146.13	257	P	PKPdf	11 38 32.4	+0.3
	baz=134,SNR=6.4						
DGMT	Dagmar	146.23	284	P	PKPdf	11 38 32.7	+0.8
	baz=119,SNR=5.9						
DGMT	Dagmar	146.23	284	PKPdf	PKPdf	11 38 32.2	+0.3
EDW2	Edwards Air Fo	146.42	254	P	PKPdf	11 38 33.4	+0.6
	baz=135,SNR=12						
BW06	Boulder Array	146.44	272		PKPdf	11 38 33.1	+0.3
PD31	Pinedale Array	146.44	272		PKPdf	11 38 32.1	-0.6
PDAR	Pinedale Array	146.44	272	PKPbc	PKPdf	11 38 31.9	-0.8
	comp=Z,6.8nm,0.9s,baz=130,slow=3.7,SNR=30						
PDAR	Pinedale Array	146.44	272	PKPdf	PKPdf	11 38 32.5	-0.2
LAO	LASA Array	146.55	280	P	PKPbc	11 38 34.3	+0.2
	baz=120,SNR=5.9						
LAO	LASA Array	146.55	280	PKPdf	PKPdf	11 38 33.4	+0.8
LRMC	Laurel Mtn Rad	146.66	255	P	PKPdf	11 38 34.3	+1.1
	baz=135,SNR=5.7						
SCZ2	Santa Cruz Isl	146.73	251	P	PKPbc	11 38 34.8	-0.2
	baz=137						
FURC	Furnace Creek,	146.87	257	P	PKPbc	11 38 35.4	+0.2
	baz=133,SNR=12						
DUG	Dugway, Tooele	146.87	266	P	PKPbc	11 38 35.8	+0.4
	baz=128						
MPMC	Manual Prospec	146.95	256	P	PKPbc	11 38 35.7	0.0
	baz=134,SNR=9.9						
HWUT	Hardware Ranch	146.97	269		PKPdf	11 38 34.5	+0.9
ISA	Isabella, Lake	147.25	254	P	PKPbc	11 38 36.6	+0.1
	baz=135,SNR=6.8						
R11A	Troy Canyon, C	147.37	261	P	PKPbc	11 38 37.5	+0.6
	baz=131						
PKM	Mcpherson Peak	147.48	252	P	PKPbc	11 38 37.8	+0.6
	baz=136						
RLMT	Red Lodge	147.56	276	P	PKPbc	11 38 38.2	+1.0
	baz=122						
CWC	Cottonwood Cre	147.56	255	P	PKPbc	11 38 37.6	+0.3
	baz=134						
VES	Vestal, Richgr	147.73	254	P	PKPbc	11 38 38.1	+0.5
	baz=135						
SMMC	Simmler	147.89	252	P	PKPbc	11 38 39.2	+1.1
	baz=136						
TIN	Tinemaha, Big	148.07	256	P	PKPbc	11 38 39.3	+0.6
	baz=133,SNR=6.1						
MLAC	Mammoth, Mammo	148.81	256	P	PKPbc	11 38 41.3	+0.5
	baz=132						
NVAR	Mina Array Bea	149.03	258	PKP	PKPdf	11 38 38.2	+1.1
	comp=Z,7.0nm,0.9s,baz=160,slow=2.9,SNR=19						
NVAR				PKPbc	PKPbc	11 38 41.9	+0.6
	comp=Z,7.9nm,0.9s,baz=140,slow=4.1,SNR=42						
NVAR	Mina Array Bea	149.03	258		PKPdf	11 38 37.9	+0.7
EGMT	Eagleton	149.30	280	P	PKPbc	11 38 41.8	+0.4
	baz=118,SNR=6.7						
HLID	Hailey	149.82	270	P	PKPbc	11 38 43.4	+0.4
	baz=124,SNR=7.5						
MSO	Missoula	151.23	276	P	PKPbc	11 38 46.3	+0.1
	baz=119						
MA2	Magadan	151.54	56	PKPbc	PKPbc	11 38 45.6	-0.7
	comp=Z,5.7nm,0.5s,baz=198,slow=6.4,SNR=4.5						
WALA	Waterton Lakes	152.23	280	PKPdf	PKPdf	11 38 40.7	-0.9
WALA					PKPbc	11 38 48.2	-0.1
WALA				PKPab	PKPab	11 38 56.8	-1.5
BMO	Blue Mountains	152.26	270	PKPdf	PKPdf	11 38 41.0	-0.8
BMO				PKPbc	PKiKP	11 38 49.1	+0.3
BMO				PKPab	PKPab	11 38 56.6	-1.9
O03E	Paynes Creek	152.30	257	P	PKPbc	11 38 47.7	-1.1
	baz=130						
SEY	Seymchan	152.66	49	PKPbc	PKPbc	11 38 48.1	-0.5
	comp=Z,11nm,0.7s,baz=246,slow=5.7,SNR=16						
O02D	Mt. Diablo Mer	152.81	256	P	PKPbc	11 38 49.8	-0.1
	baz=130						
WDC	Whiskeytown Da	152.92	257		PKPdf	11 38 42.8	+0.1
WDC				PKPbc	PKiKP	11 38 51.4	+1.2
M04C	Macdoel	153.25	260	P	PKPbc	11 38 51.1	+0.3
	baz=128						
N02D	Trinity Center	153.26	258	P	PKPbc	11 38 51.2	+0.4
	baz=129						
EDM	Edmonton	153.43	289	PKPdf	PKPdf	11 38 42.3	-0.8
EDM					PKPbc	11 38 50.0	-0.7
M02C	Callahan	153.61	258	P	PKPbc	11 38 51.4	-0.2
	baz=128						
J05D	Fort Rock, OR	153.77	263	P	PKPbc	11 38 52.3	+0.4
	baz=125						
L04D	Klamath Falls	153.79	260	P	PKPbc	11 38 52.2	+0.2
	baz=127						
PETK	Petropavlovsk-	153.79	72	PKPbc	PKPbc	11 38 49.9	-1.6
	comp=Z,3.1nm,0.5s,baz=247,slow=5.9,SNR=17						
L02E	Cave Junction	154.52	259	P	PKiKP	11 38 54.2	+0.7
	baz=127						
K02D	Willamette Mer	154.88	260	P	PKPbc	11 38 54.4	+0.2
	baz=126						
G05D	Wamic, OR	154.89	267	P	PKPab	11 39 09.4	-0.2
	baz=122						
YKA	Yellowknife Ar	155.37	310	PKP	PKPdf	11 38 41.0	-4.4
	comp=Z,1.7nm,0.8s,baz=86,slow=2.8,SNR=6.8						
YKA				PKPab	PKPab	11 39 10.8	-0.3
	comp=Z,7.4nm,0.8s,baz=94,slow=6.0,SNR=19						
YKA	Yellowknife Ar	155.37	310	PKPdf	PKPdf	11 38 46.1	+0.6
YKA					PKPab	11 39 10.7	-0.3
A36M	Sachs Harbour	156.22	335	P	PKPab	11 39 16.2	+1.8
	baz=55						
E04D	Cinebar	156.31	269	P	PKPab	11 39 15.3	-0.3
	baz=119						
B05A	Bryant	156.80	273	P	PKPab	11 39 16.6	-1.0
	baz=116						
A04D	Lummi Island	157.36	273	P	PKPab	11 39 20.4	+0.4
	baz=114						
WRGLY	Wrigley	159.29	313	P	PKPab	11 39 28.9	+1.0
	baz=77						
INK	Inuvik	160.72	332	PKPab	PKPab	11 39 34.0	0.0
	comp=Z,3.9nm,1.1s,baz=46,slow=2.7,SNR=5.0						
INK	Inuvik	160.72	332	P	PKPab	11 39 35.1	+1.1
	baz=50						
INK	Inuvik	160.72	332	PKPdf	PKPdf	11 38 52.9	+1.1
INK					PKPab	11 39 34.7	+0.7
TGTN	Hyland Airport	161.88	310	P	PKPab	11 39 42.0	+2.6
	baz=76						
TOLK	Toolik Lake Re	163.81	349	P	PKPab	11 39 48.4	+0.8
	baz=19						
FARO	Faro, Yukon	163.92	315	P	PKPab	11 39 49.9	+1.6
	baz=66						
I29M	Ogilvie Camp,	164.09	329	P	PKPab	11 39 50.4	+1.5
	baz=48						
M31M	Drury Creek, Y	164.38	315	P	PKPab	11 39 51.7	+1.4
	baz=65						
M30M	Minto, Yukon	165.19	319	P	PKPab	11 39 55.5	+1.6
	baz=60						
WHY	Whitehorse	165.20	310	P	PKPab	11 39 54.9	+0.8
	baz=69						
EGAK	Eagle	165.37	330	P	PKPab	11 39 56.3	+1.8
	baz=44						
HYT	Haines Junctio	166.32	313	P	PKPab	11 40 00.5	+1.5
	baz=64						
TNA	Tin City	166.50	18	P	PKPab	11 40 00.1	+0.7
	baz=334						
YUK4	Talbot Arm	166.57	316	P	PKPab	11 40 00.8	+0.5
	baz=60						
YUK6	Outpost Mounta	166.64	314	P	PKPab	11 40 01.9	+1.3
	baz=62						
J25K	Salcha River,	166.66	336	P	PKPab	11 40 01.7	+1.4
	baz=36						
L27K	Beaver Creek,	166.77	326	P	PKPab	11 40 01.9	+1.1
	baz=48						
SCRK	Sand Creek	166.79	332	P	PKPab	11 40 02.2	+1.2
	baz=40						
BVCY	Beaver Creek	166.85	323	P	PKPab	11 40 02.8	+1.6
	baz=52						
ILAR	Eielson Array	166.88	338	PKPab	PKPab	11 40 00.4	-0.8
	comp=Z,1.1nm,1.1s,baz=40,slow=1.5,SNR=3.2						
ILAR	Eielson Array	166.88	338	PKPdf	PKPdf	11 38 56.9	-0.8
ILAR					PKPab	11 40 00.7	-0.5
YUK3	Moose Creek	167.08	320	P	PKPab	11 40 03.8	+1.4
	baz=55						
M27K	Edge Creek, AK	167.25	324	P	PKPab	11 40 04.4	+1.3
	baz=50						
L26K	Log Cabin Wild	167.30	328	P	PKPab	11 40 05.0	+1.9
	baz=45						
MCARA	McCarthy VSAT	168.29	322	P	PKPab	11 40 08.4	+0.8
	baz=51						
HARP	HAARP	168.33	329	P	PKPab	11 40 09.8	+2.0
	baz=42						
N25K	Chitina, Valde	168.71	325	P	PKPab	11 40 10.5	+0.9
	baz=46						
M24K	Tolsona, Glenn	168.86	330	P	PKPab	11 40 11.8	+1.7
	baz=41						
WAT6	Susitna Watana	168.93	334	P	PKPab	11 40 12.0	+1.4
	baz=35						
TTA	Tatalina	170.00	354	P	PKPab	11 40 15.0	-0.1
	baz=7.7						
PWL	Port Wells	170.49	330	P	PKPab	11 40 18.1	+0.8
	baz=39						
RC01	Rabbit Creek A	170.70	334	P	PKPab	11 40 18.7	+0.5
	baz=33						
Q23K	Middleton Isla	170.81	319	P	PKPab	11 40 20.0	+1.3
	baz=51						
CAPN	Captain Cook N	171.34	337	P	PKPab	11 40 22.9	+2.0
	baz=30						

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*FUNV **23** 11:25:25.0, 8°.48N×71°.43W, h5^{km}, MW3.3*

ISC 23 11:25:23.7±1.2**, 8°.50N**±0°.03×**71°.43W**±0°.02**, h11**^{km}±10^{km}**,**
n24, σ**1ˢ.52**/45**, 2C, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.60	111	⇑iP	Pg	11 25 35.4	0.0
SOCV				eS	Sg	11 25 44.2	+0.8
SOCV	Socops	0.60	111	⇑eP	Pg	11 25 35.4	0.0
SOCV				eS	Sb	11 25 44.8	0.0
SDV	Santo Domingo	0.87	64	eP	Pg	11 25 41.0	+0.4
SDV				eS	Sb	11 25 53.1	+0.3
CAPV	Capacho	1.08	234	eS	Sn	11 25 59.7	-0.4
PAMC	Pamplona, Colo	1.71	228	eP	Pb	11 25 54.9	-0.5
PAMC				eS	Sg	11 26 19.4	+0.6
MCQV	Machiques	1.89	325	eP	Pb	11 25 57.5	-0.7
MCQV				eS	Sb	11 26 21.5	-0.4
OCAC	Ocana	1.89	262	eP	Pb	11 25 57.0	-1.4
OCAC				eS	Sb	11 26 21.6	-0.4
TAMC	Tame, Arauca	2.08	190	eP	Pg	11 26 03.2	-0.5
TAMC				eS	Sg	11 26 29.4	-1.3
LL6C	La Loma 6 Bece	2.20	304	eP	Pn	11 26 01.0	+0.8
LL6C				eS	Sb	11 26 29.7	-1.1
ELOV	Elorza	2.43	128	eP	Pn	11 26 05.2	+1.8
ELOV				eS	Sn	11 26 33.6	+0.4
SMLC	San Martn de	2.63	277	eP	Pn	11 26 06.5	+0.3
SMLC				eS	Sb	11 26 42.8	-0.5
SIQV	Siquisique	2.67	37	eP	Pn	11 26 07.6	+0.9
SIQV				eS	Sn	11 26 40.6	+1.6
RUSC	La Rusia	3.07	213	eP	Pn	11 26 14.9	+2.3
RUSC				eS	Sn	11 26 51.8	+2.3
URIC	Uribia, Colomb	3.23	350	eP	Pn	11 26 17.7	+3.3
BAUV	El Baul	3.37	82	eP	Pn	11 26 17.9	+1.6
BAUV				eS	Sn	11 26 56.9	+0.5
ZARC	Zaragoza, Cauc	3.54	254	eP	Pn	11 26 18.6	-0.1
MONV	Montecano	3.72	23	eP	Pn	11 26 22.7	+1.6
MONV				eS	Sn	11 27 04.5	-0.5
SMRC	Santa Marta, M	3.82	314	eP	Pn	11 26 22.6	0.0
SMRC				eS	Sn	11 27 03.7	-3.8
SJCC	San Jacinto, C	3.96	291	eP	Pn	11 26 26.1	+1.7
SJCC				eS	Sn	11 27 13.5	+2.5
BENV	Beln	4.05	69	eP	Pn	11 26 25.8	0.0
BENV				eS	Sn	11 27 12.4	-0.8
MOTC	Monteria, Cord	4.20	274	eP	Pn	11 26 29.2	+1.4
MOTC				eS	Sn	11 27 19.7	+2.8
PAYV	Puerto Ayacuch	4.83	129	eP	Pn	11 26 36.9	+0.4
PAYV				eS	Sn	11 27 30.3	-2.1
MERV	Las Mercedes	5.12	81	eP	Pn	11 26 40.6	+0.1
MERV				eS	Sn	11 27 37.3	-2.3
BIRV	Birongo	5.45	68	eP	Pn	11 26 45.6	+0.6
BIRV				eS	Sn	11 27 44.9	-2.8

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*IDC **23** 11:29:12.1±0.7, 52°.89S×22°.00E, h0^{km}, mb4.1/9, mb1 4.2/9, mb1mx3.8/38, mbtmp4.2/9, MS3.8/7, Ms1 3.7/7, ms1mx3.5/25, Error ellipse: s-maj=30.1km s-min=18.9km az=80.0*

*NEIC **23** 11:29:14.9±1.3, 53°.0S±0°.1×22°.0E±0°.3, h16^{km}±3^{km}, mb4.7/13, Error ellipse: s-maj=23.5km s-min=16.9km az=68.0*

ISC 23 11:29:13.5±0.6**, 52°.95S**±0°.10×**22°.0E**±0°.1**, h10**^{km}**, n38,**
σ**0ˢ.76**/35**, mb4.4**/10**, MS3.8**/7**, South of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUR	Sutherland	20.58	357	P	P	11 33 52.5	-0.1
	14nm,0.9s,baz=177,slow=11,SNR=5.4						
SUR				LR	LR	11 40 17.0	
	comp=Z,305nm,19.3s,baz=171,slow=32						
SUR	Sutherland	20.58	357	P	P	11 33 54.2	+1.6
SUR				IAmb	IAmb	11 33 58.6	
	comp=Z,43nm,1.1s						
SNAA	Sanae	21.72	201	P	P	11 34 05.5	+1.0
	comp=Z,21nm,1.0s,baz=36,slow=9.3,SNR=4.2						
SNAA				LR	LR	11 40 34.8	
	comp=Z,344nm,19.4s,baz=11,slow=31						
SNAA	Sanae	21.72	201	P	P	11 34 04.6	+0.1
SNAA				IAmb	IAmb	11 34 07.9	
	comp=Z,25nm,0.9s						
VNA2	Neumayer--Watz	22.30	205	P	P	11 34 11.6	+1.0
	baz=38,slow=10.0						
VNA1	Neumayer--Stat	22.36	206	P	P	11 34 12.5	+1.3
VNA3	Neumayer Olymp	23.08	206	P	P	11 34 19.3	+0.4
MAW	Mawson	24.39	143	P	P	11 34 31.9	+0.4
	comp=Z,2.5nm,0.8s,baz=275,slow=6.0,SNR=2.2						
MAW				LR	LR	11 43 43.0	
	comp=Z,63nm,18.3s,baz=243,slow=36						
MAW	Mawson	24.39	143	P	P	11 34 31.5	0.0
BOSA	Boshof	24.43	7	LR	LR	11 42 37.6	
	comp=Z,290nm,18.9s,baz=187,slow=33						
LBTB	Lobatse	28.03	7	LR	LR	11 44 06.0	
	comp=Z,257nm,20.3s,baz=186,slow=32						
QSPA	South Pole Qui	37.27	180	P	P	11 36 25.8	+0.6
	comp=Z,10nm,0.7s,baz=249,slow=2.1,SNR=55						
QSPA	South Pole Qui	37.27	180	P	P	11 36 25.4	+0.1
QSPA				IAmb	IAmb	11 36 33.7	
	comp=Z,17nm,0.8s						
CASY	Casey	42.74	143	P	P	11 37 11.1	+0.8
VNDA	Vanda	47.43	169	P	P	11 37 48.0	+0.6
	comp=Z,0.7nm,0.7s,baz=206,slow=5.2,SNR=5.3						
VNDA	Vanda	47.43	169	P	P	11 37 47.4	-0.1
USHA	Ushuaia	49.71	229	LR	LR	11 54 41.5	
	comp=Z,114nm,18.3s,baz=114,slow=31						
TRQA	Tornquist	57.40	249	P	P	11 39 01.6	-0.4
TRQA				IAmb	IAmb	11 39 02.4	
	comp=Z,5.2nm,0.8s						
PLCA	Paso Flores	60.20	241	P	P	11 39 21.1	-0.4
	comp=Z,2.4nm,0.9s,baz=126,slow=7.9,SNR=4.5						
PLCA	Paso Flores	60.20	241	P	P	11 39 20.6	-0.9
PLCA				IAmb	IAmb	11 39 28.7	
	comp=Z,2.4nm,0.8s						
LC01	Cunco	62.23	242	P	P	11 39 33.9	-1.3
LC01				IAmb	IAmb	11 39 42.2	
	comp=Z,7.8nm,1.1s						
CPUP	Villa Florida	63.15	261	LR	LR	12 03 48.8	
	comp=Z,36nm,18.1s,baz=183,slow=33						
MCQ	Macquarie Isla	67.12	154	P	P	11 40 04.8	-1.9
TORD	Torodi Ar. Bea	68.11	339	P	P	11 40 13.2	-0.2
	comp=Z,1.7nm,0.9s,baz=183,slow=6.0,SNR=8.6						
TORD	Torodi Ar. Bea	68.11	339	P	P	11 40 13.8	+0.3
TORD				IAmb	IAmb	11 40 22.0	
	comp=Z,5.6nm,1.2s						
SAML	Samuel	80.03	268		P	11 41 23.3	0.0
ASAR	Alice Springs	83.63	121	P	P	11 41 42.7	+0.5
	comp=Z,0.8nm,0.8s,baz=205,slow=4.3,SNR=12						
ASAR	Alice Springs	83.63	121	P	P	11 41 42.0	-0.2
WRA	Warramunga Arr	86.92	119	P	P	11 41 58.9	+0.1
	comp=Z,1.1nm,1.1s,baz=212,slow=4.3,SNR=4.9						
WB0	Warramunga Arr	87.09	119	P	P	11 41 58.7	-0.9
SONM	Songino Array	123.26	53	PKP	PKPdf	11 48 09.8	+0.1
	comp=Z,0.6nm,0.7s,baz=236,slow=1.6,SNR=2.2						
TIXI	Tiksi	144.17	31	PKP	PKPab	11 48 45.6	0.0
	comp=Z,3.8nm,0.9s,baz=298,slow=4.8,SNR=6.2						
TIXI	Tiksi	144.17	31		PKPdf	11 48 47.2	-0.6
PDAR	Pinedale Array	146.54	272	PKPbc	PKPdf	11 48 53.7	+0.6
	comp=Z,0.8nm,0.6s,baz=129,slow=3.8,SNR=6.6						
PDAR	Pinedale Array	146.54	272		PKPdf	11 48 52.3	-0.8
NVAR	Mina Array Bea	149.15	258	PKPbc	PKPbc	11 49 02.5	+0.7
	comp=Z,1.4nm,0.9s,baz=141,slow=4.5,SNR=9.6						
NVAR	Mina Array Bea	149.15	258		PKPdf	11 48 56.6	-1.0
NVAR				PKPbc	PKiKP	11 49 03.0	0.0
PETK	Petropavlovsk-	153.67	72	PKPbc	PKiKP	11 49 11.8	+0.2
	comp=Z,2.6nm,0.8s,baz=122,slow=2.2,SNR=6.3						

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*IDC **23** 11:33:25.8±1.2, 55°.39S×27°.15W, h0^{km}, mb3.9/3, mb1 3.8/4, mb1mx3.5/24, mbtmp3.8/4, ML3.5/1, MS3.3/1, Ms1 3.2/1, ms1mx2.8/16, Error ellipse: s-maj=70.7km s-min=25.3km az=93.0*

ISC 23 11:33:27.8±1.3**, 55°.5S**±0°.1×**27°.6W**±0°.4**, h10**^{km}**, n10,**
σ**1ˢ.93**/9**, mb4.0**/3**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	17.43	158	P	Pn	11 37 31.5	+0.8
VNA3	Neumayer Olymp	17.63	161	P	Pn	11 37 32.8	-0.4
VNA2	Neumayer--Watz	17.83	158	P	Pn	11 37 35.0	-0.6
	baz=322,slow=12						
SNAA	Sanae	19.38	156	P	P	11 37 53.8	+0.4
	0.1nm,0.3s,baz=270,slow=13,SNR=8.0						
QSPA	South Pole Qui	34.80	180	P	P	11 40 16.6	-1.6
	1.5nm,0.8s,baz=186,slow=6.6,SNR=2.7						
MAW	Mawson	40.76	144	LR	LR	11 55 15.0	
	comp=Z,45nm,20.7s,baz=237,slow=32						
VNDA	Vanda	47.16	183	P	P	11 42 00.1	+0.5
	0.7nm,0.6s,baz=183,slow=8.4,SNR=12						
TORD	Torodi Ar. Bea	72.65	30	P	P	11 44 53.8	-1.6
	0.7nm,0.5s,baz=202,slow=6.1,SNR=6.3						
ILAR	Eielson Array	149.55	312	PKPbc	PKPbc	11 53 15.8	0.0
	0.8nm,0.7s,baz=128,slow=3.0,SNR=9.9						
SONM	Songino Array	150.91	86	PKPbc	PKPdf	11 53 18.0	+3.9
	0.4nm,0.5s,baz=211,slow=1.7,SNR=2.5						

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*IDC **23** 11:49:54.5±1.1, 40°.07N×20°.94E, h0^{km}, mb3.5/6, mb1 3.7/11, mb1mx3.5/47, mbtmp3.6/11, ML3.7/5, MS3.4/3, Ms1 3.4/3, ms1mx2.5/41, Error ellipse: s-maj=17.5km s-min=13.4km az=83.0*

*ATH **23** 11:49:55.7, 40°.09N×21°.01E, h11^{km}±2^{km}, ML3.3/19, Error ellipse: s-maj=2.4km s-min=0.9km az=4.0*

*THE **23** 11:49:55.5, 40°.08N×20°.98E, h8^{km}±2^{km}, ML3.4/7, Error ellipse: s-maj=2.2km s-min=0.3km az=15.0*

*SKO **23** 11:49:56.6, 40°.09N×20°.97E, h19^{km}*

*PDG **23** 11:49:57.4±0.5, 40°.24N×21°.09E, h11^{km}±1^{km}, ML3.1/6, Error ellipse: s-maj=0.7km s-min=1.0km az=0.0*

ISC 23 11:49:55.6±0.9**, 40°.06N**±0°.02×**21°.05E**±0°.02**, h10**^{km}±6^{km}**,**
n119, σ**1ˢ.42**/146**, mb3.5**/5**, 12C-8D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PENT	Pentalofos	0.15	27	P	Pg	11 49 58.8	-0.3
PENT				S	Sg	11 50 01.8	+0.3
	30µm,0.3s						
PENT	Pentalofos	0.15	27	P	Pg	11 49 59.0	-0.1
PENT				AML	AML	11 50 02.8	
	comp=E,70842µm,0.3s						
PENT				AML	AML	11 50 04.4	
	comp=N,48491µm,0.3s						
KPRO	Kipourio	0.26	113	P	Pb	11 50 01.7	-0.8
KPRO				S	Sg	11 50 06.6	+2.1
	comp=N,8µm,0.5s						
KPRO	Kipourio	0.26	113	P	Pb	11 50 02.0	-0.6
KPRO				S	Sg	11 50 06.7	+2.1
KPRO				AML	AML	11 50 10.6	
	comp=E,17192µm,0.5s						
KPRO				AML	AML	11 50 15.3	
	comp=N,12594µm,0.5s						
LSK	Leskovik	0.35	285	P	Pg	11 50 01.0	-1.7
LSK				S	Sg	11 50 05.5	-1.9
	comp=N,17µm,0.7s						
NEST	Nestorio	0.35	0	P	Pg	11 50 01.8	-0.9
NEST				S	Sg	11 50 07.2	-0.2
	comp=N,8µm,0.3s						
NEST	Nestorio	0.35	0	P	Pg	11 50 01.9	-0.8
NEST				S	Sg	11 50 07.6	+0.2
NEST				AML	AML	11 50 08.9	
	comp=E,21558µm,0.3s						
NEST				AML	AML	11 50 12.1	
	comp=N,15316µm,0.5s						
JAN	Janina	0.43	201	P	Pg	11 50 03.9	-0.1
JAN				S	Sg	11 50 10.5	+0.8
	comp=N,4µm,0.3s						
JAN	Janina	0.43	201	P	Pg	11 50 03.7	-0.3
JAN				S	Sb	11 50 10.9	-1.0
JAN				AML	AML	11 50 13.4	
	comp=E,7757µm,0.2s						
JAN				AML	AML	11 50 13.7	
	comp=N,9616µm,0.2s						
KZN	Kozani	0.61	66	P	Pb	11 50 07.8	-0.6
KZN				S	Sn	11 50 17.3	-3.0
	comp=N,3µm,0.4s						
KZN	Kozani	0.61	66	P	Pb	11 50 06.9	-1.4
KZN				AML	AML	11 50 22.6	
	comp=N,4991µm,0.3s						
KZN				AML	AML	11 50 24.1	
	comp=E,6727µm,0.5s						
IGT	Igoumenitsa	0.76	227	P	Pg	11 50 09.4	-0.9
IGT	Igoumenitsa	0.76	227	P	Pg	11 50 09.4	-0.9
IGT				AML	AML	11 50 25.3	
	comp=N,2535µm,0.7s						
IGT				AML	AML	11 50 26.3	
	comp=E,3090µm,0.8s						
IGT	Igoumenitsa	0.76	227	i Pg	Pg	11 50 09.4	-0.9
IGT				i Sg	Sb	11 50 23.0	+1.5
FNA	Florina	0.77	19	P	Pg	11 50 09.9	-0.5
FNA				S	Sb	11 50 21.3	-0.3
	comp=E,4µm,0.2s						
FNA	Florina	0.77	19	P	Pg	11 50 09.2	-1.2
FNA				S	Sb	11 50 21.3	-0.3
FNA				AML	AML	11 50 23.6	
	comp=E,9942µm,0.2s						
FNA				AML	AML	11 50 23.7	
	comp=N,6566µm,0.3s						
FNA	Florina	0.77	19	i Pg	Pg	11 50 09.1	-1.3
FNA				i Sg	Sb	11 50 21.8	+0.2
KTI	Kastanea	0.88	68	P	Pn	11 50 12.7	-1.6
THL	Klokotos Trika	0.89	123	P	Pn	11 50 13.2	-1.1
THL	Klokotos Trika	0.89	123	P	Pn	11 50 12.4	-1.8
THL				AML	AML	11 50 30.8	
	comp=N,1046µm,0.3s						
THL				AML	AML	11 50 31.0	
	comp=E,1617µm,0.2s						
KASA	Kassiopi	0.91	250	P	Pg	11 50 12.5	-0.6
KASA				S	Sg	11 50 24.8	-0.2
KASA				AML	AML	11 50 29.0	
	comp=N,6126µm,0.6s						
KASA				AML	AML	11 50 31.2	
	comp=E,4635µm,0.4s						
KEK	Kerkira	1.02	251	P	Pb	11 50 14.2	-1.2
KEK	Kerkira	1.02	251	P	Pb	11 50 14.0	-1.4
KEK				S	Sg	11 50 28.8	+0.3
KEK				AML	AML	11 50 35.8	
	comp=E,2926µm,1.0s						
KEK				AML	AML	11 50 36.2	
	comp=N,2498µm,0.9s						
OHR	Ohrid	1.07	350	i Pg	Pb	11 50 15.2	-1.1
OHR				i Sg	Sb	11 50 29.9	-0.4
OHR				eLg	Lg	11 50 33.7	
	comp=E,647nm,0.6s						
EVR	Evrytania	1.28	152	P	Pg	11 50 20.1	-0.2
EVR				AML	AML	11 50 49.6	
	comp=E,1471µm,0.9s						
EVR				AML	AML	11 50 49.8	
	comp=N,2261µm,0.6s						
MAKR	Makrakomi, Fth	1.34	141	P	Pg	11 50 21.4	+0.1
MAKR				AML	AML	11 50 45.5	
	comp=E,3832µm,0.6s						
MAKR				AML	AML	11 50 50.3	

	comp=N,3787µm,0.6s						
GRG	Griva	1.37	49	i Pg	Pg	11 50 20.8	-1.0
GRG				i Sg	Sg	11 50 42.7	+3.1
AGG	Agios Georgios	1.43	136	P	Pg	11 50 22.9	-0.2
AGG				AML	AML	11 50 51.5	
	comp=E,1699µm,0.5s						
AGG				AML	AML	11 50 53.2	
	comp=N,997µm,0.7s						
PVO	Paravola	1.49	165	P	Pg	11 50 24.2	0.0
TIR	Tirane	1.57	325	⇑P	Pb	11 50 25.4	+0.6
TIR	Tirane	1.57	325	i Pg	Pn	11 50 24.8	+1.2
THE	Thessaloniki	1.57	68	i Pg	Pg	11 50 23.9	-1.9
ANX	Ano Chora	1.61	155	P	Pg	11 50 25.3	-1.3
ANX				AML	AML	11 50 59.8	
	comp=E,2390µm,0.6s						
ANX				AML	AML	11 51 03.1	
	comp=N,1948µm,0.6s						
VAY	Valandovo	1.71	42	i Pn	Pb	11 50 25.6	-1.5
VAY				i Sn	Sg	11 50 50.9	+0.3
VAY				eLg	Lg	11 50 56.8	
	comp=E,180nm,0.8s						
EFP	Efpalio	1.76	158	P	Pg	11 50 28.0	-1.3
EFP				AML	AML	11 51 01.1	
	comp=N,1040µm,0.7s						
EFP				AML	AML	11 51 02.3	
	comp=E,1637µm,0.8s						
KNT	Kendrikon	1.79	51	P	Pb	11 50 26.5	-1.9
KNT	Kendrikon	1.79	51	i Pn	Pb	11 50 26.6	-1.9
XOR	Xorichti	1.79	112	P	Pg	11 50 27.8	-2.1
SERG	Sergoula	1.82	154	P	Pg	11 50 29.5	-1.0
SERG				AML	AML	11 51 03.6	
	comp=N,848µm,0.6s						
SERG				AML	AML	11 51 04.2	
	comp=E,1160µm,0.5s						
NEO	Neokhori	1.84	113	P	Pg	11 50 28.4	-2.5
NEO				AML	AML	11 51 05.5	
	comp=E,890µm,0.6s						
NEO				AML	AML	11 51 16.1	
	comp=N,878µm,0.7s						
STIP	Stip	1.85	27	i Pn	Pb	11 50 29.7	+0.2
STIP				i Sn	Sg	11 51 00.6	+5.7
STIP				eLg	Lg	11 51 01.8	
	comp=E,29nm,0.4s						
PLG	Polygyros	1.86	80	P	Pg	11 50 29.0	-2.3
TRIZ	Trizonia	1.87	154	P	Pg	11 50 30.8	-0.6
SOH	Sokhos	1.92	66	P	Pb	11 50 29.4	-1.3
SOH				AML	AML	11 51 05.5	
	comp=E,898µm,0.7s						
SOH				AML	AML	11 51 06.0	
	comp=N,659µm,0.5s						
SOH	Sokhos	1.92	66	i Pn	Pb	11 50 29.4	-1.3
SKO	Skopje	1.93	9	i Pn	Pn	11 50 27.5	-1.1
SKO				i Sn	Sn	11 50 54.0	+1.0
SKO				eLg	Lg	11 50 56.1	
	comp=E,18nm,0.7s						
LAKA	Lakka	1.96	158	P	Pg	11 50 33.0	-0.1
LKR	Lokris	2.07	132	P	Pg	11 50 32.7	-2.5
DRO	Drossia	2.17	166	P	Pg	11 50 35.8	-1.3
DRO				AML	AML	11 51 21.2	
	comp=E,928µm,0.6s						
DRO				AML	AML	11 51 21.9	
	comp=N,974µm,0.8s						
KLV	Kalavryta, Ach	2.19	157	P	Pg	11 50 35.6	-2.0
SRS	Serrai	2.21	61	i Pn	Pn	11 50 32.3	-0.1
LTK	Loutraki	2.52	143	P	Pb	11 50 39.7	-1.3
DRME	Dracevica, Mon	2.55	327	ePn	Pn	11 50 38.9	+1.9
DRME	Dracevica, Mon	2.55	327	⇑iPn	Pn	11 50 38.0	+0.9
DRME				i Sn	Sn	11 51 09.4	+1.2
PDG	Podgorica	2.73	331	⇑P	Pn	11 50 41.5	+2.0
PDG	Podgorica	2.73	331	ePn	Pn	11 50 41.3	+1.8
TTG	Podgorica	2.73	331	⇑iPn	Pn	11 50 40.2	+0.7
TTG				i Sn	Sn	11 51 13.5	+1.0
BUM	Brajici-Budva	2.77	325	⇓iPn	Pn	11 50 41.6	+1.5
BUM				i Sn	Sn	11 51 14.8	+1.2
BARS	Barje	2.81	12	i Pn	Pn	11 50 41.2	+0.5
IVA	Berane	2.94	343	⇓iPn	Pn	11 50 42.6	+0.1
IVA				i Sn	Sn	11 51 18.0	0.0
ITM	Ithomi	2.96	166	P	Pb	11 50 47.0	-1.4
CEME	Cevo	2.96	328	⇓iPn	Pn	11 50 43.8	+1.1
CEME				i Sn	Sn	11 51 19.2	+0.9
KOME	Kolasin	3.02	338	⇑iPn	Pn	11 50 44.3	+0.7
KOME				i Sn	Sn	11 51 20.2	+0.4
VTS	Vitosha	3.04	32	⇑P	Pn	11 50 43.4	-0.5
HCY	Herceg Novi	3.07	322	ePn	Pn	11 50 44.2	0.0
HCY	Herceg Novi	3.07	322	⇓iPn	Pn	11 50 45.2	+1.0
HCY				i Sn	Sn	11 51 22.1	+1.2
TREB	Trebinje	3.34	323	ePn	Pn	11 50 47.5	-0.4
MATE	Matera	3.37	281	⇓P	Pn	11 50 51.1	+2.8
DBRK	Dubrovnik	3.40	321	ePn	Pn	11 50 49.6	+0.8
BRY	Bratogost	3.41	327	ePn	Pn	11 50 50.0	+1.0
BRY	Bratogost	3.41	327	⇓iPn	Pn	11 50 49.7	+0.7
TIP	Timpagrande	3.43	257	⇑P	Pn	11 50 47.7	-1.4
UPM	Unac-Piva	3.53	334	ePn	Pn	11 50 52.7	+2.0
BOVS	Bovan	3.61	8	⇑P	Pn	11 50 50.9	-0.7
RUDO	Rudo	3.77	341	ePn	Pn	11 50 54.2	+0.4
STON	Ston	3.77	319	ePn	Pn	11 50 53.9	+0.1
STON	Ston	3.77	319	ePn	Pn	11 50 54.4	+0.6
STON				Sn	Sn	11 51 37.5	-0.7
BBLS	Lazići	4.00	343	ePn	Pn	11 50 56.7	-0.3
DIVS	Divibare	4.11	349	ePn	Pn	11 50 58.5	-0.1
LSTV	Lastovo	4.13	312	ePn	Pn	11 50 58.5	-0.4
HAPS	Han Pijesak,Bl	4.32	339	ePn	Pn	11 51 02.4	+1.0
MAKA	Makarska	4.42	318	ePn	Pn	11 51 03.0	+0.3
RICI	Ricice	4.51	321	ePn	Pn	11 51 04.3	+0.3
HVAR	Hvar	4.65	314	ePn	Pn	11 51 05.4	-0.4
MDVR	Moldovita	4.75	6	⇓P	Pb	11 51 14.2	-4.7
HERR	Herculane	4.92	11	⇑P	Pn	11 51 11.3	+1.6
ZIRJ	Zirje	5.40	313	ePn	Pn	11 51 16.0	-0.2
GZR	Gura Zlata	5.48	13	⇓P	Pn	11 51 17.8	+0.4
BLY	Banja Luka	5.49	330	ePn	Pn	11 51 18.1	+0.7
MORI	Morici	5.50	315	ePn	Pn	11 51 17.8	+0.2
BZS	Buzias	5.57	4	⇑P	Pn	11 51 23.9	+5.4
IDI	Anoyia	5.65	146	Pn	Pn	11 51 22.5	+2.7
	comp=N,0.3nm,0.3s,baz=240,slow=6.4,SNR=2.0						
IDI				Sn	Sn	11 52 28.3	+3.5
	comp=N,0.7nm,0.3s,baz=68,slow=3.8,SNR=2.0						
UDBI	Udbina	5.94	320	ePn	Pn	11 51 24.8	+1.1
DUGI	Dugi Otok	5.94	313	ePn	Pn	11 51 24.1	+0.4
VOIR		6.13	27	⇑P	Pn	11 51 15.7	-11
MORH	Mrgy, Hungar	6.40	345	⇑P	Pn	11 51 32.4	+2.5
MORH	Mrgy, Hungar	6.40	345	ePn	Pn	11 51 30.4	+0.5
MLR	Muntele Rosu	6.51	32	Pn	Pn	11 51 34.7	+3.1
	comp=N,0.6nm,0.3s,baz=233,slow=15,SNR=4.7						
MLR				Sn	Sn	11 52 48.1	+2.1
	comp=N,0.3nm,0.3s,baz=224,slow=17,SNR=1.6						
CRES	Cresnjev	7.07	326	ePn	Pn	11 51 39.0	-0.2
CEY	Cerknica	7.47	322	ePn	Pn	11 51 44.2	-0.5
ARSA	Arzberg	8.23	333	ePn	Pn	11 51 57.9	+2.9
	comp=N,0.4nm,0.1s						
ABTA	Abfaltersbach	9.12	320	ePn	Pn	11 52 10.3	+3.0
	comp=N,1.4nm,0.3s						
VRAC	Vranov	9.77	343	Pn	Pn	11 52 15.9	-0.3
	comp=N,0.6nm,0.3s,baz=157,slow=7.7,SNR=2.2						
WTTA	Wattenberg	9.91	320	ePn	Pn	11 52 19.8	+1.5
	comp=N,3.7nm,0.5s						
WATA	Walderalm	9.99	320	ePn	Pn	11 52 20.9	+1.6
	comp=N,4.7nm,0.4s						
FETA	Feichten	10.22	316	ePn	Pn	11 52 22.9	+0.4
	comp=N,0.6nm,0.4s						
GERES	GERESS Array B	10.23	332	Pn	Pn	11 52 22.4	-0.1
	comp=N,0.2nm,0.3s,baz=156,slow=17,SNR=2.4						
GERES				Sn	Sn	11 54 17.0	-0.3
	comp=N,0.2nm,0.3s,baz=154,slow=24,SNR=2.1						
GERES				LR	LR	11 56 52.9	
	comp=N,35nm,20.2s,baz=278,slow=41						
DAVOX	Davos/Dischmat	10.54	313	Pn	Pn	11 52 26.3	-0.5
	comp=N,0.4nm,0.3s,baz=107,slow=14,SNR=2.5						
DAVOX				Sn	Sn	11 54 21.4	-3.6
	comp=N,0.2nm,0.3s,baz=295,slow=20,SNR=1.9						
DAVA	Damuels	10.84	315	ePn	Pn	11 52 32.9	+1.9
	comp=N,0.4nm,0.2s						
HFS	Hagfors	20.62	350	P	P	11 54 33.4	-1.5
	comp=N,0.8nm,0.4s,baz=163,slow=10,SNR=1.9						
FINES	FINESS Array B	21.63	7	P	P	11 54 44.2	-1.5
	comp=N,1.4nm,0.7s,baz=175,slow=16,SNR=4.1						
NB2	NORSAR Subarra	21.87	347	P	P	11 54 47.9	-0.4
	comp=Z,5.7nm,0.5s,baz=159,slow=10						
NOA	NORSAR Array B	21.87	347	P	P	11 54 48.5	+0.2
	comp=Z,1.0nm,0.8s,baz=156,slow=9.3,SNR=4.9						
TORD	Torodi Ar. Bea	31.76	218	P	P	11 56 20.5	+0.4
	comp=Z,1.4nm,0.8s,baz=26,slow=7.7,SNR=8.6						
MKAR	Makanchi Array	43.99	60	P	P	11 58 02.7	-0.3
	comp=Z,0.3nm,0.5s,baz=278,slow=6.7,SNR=4.3						
SCHQ	Schefferville	57.37	317	LR	LR	12 23 04.3	
	comp=Z,54nm,20.7s,baz=84,slow=35						
SONM	Songino Array	58.96	52	LR	LR	12 24 51.2	
	comp=Z,111nm,19.7s,baz=260,slow=36						
ILAR	Eielson Array	75.08	355	P	P	12 01 38.7	+1.4
	comp=Z,0.3nm,0.7s,baz=2.8,slow=5.6,SNR=1.8						
ASAR	Alice Springs	121.95	95	PKP	PKiKP	12 08 50.1	-0.5
	comp=Z,0.2nm,0.7s,baz=328,slow=1.2,SNR=1.4						

MAN 23 12:26:15.5, 11°.10N×124°.66E, h13km, mb4.3, ML3.1, MS2.9, Leyte

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TUL 23 12:35:48.4±1.2, 36°.84N±0°.01×97°.80W±0°.02, h3km±5km, ML2.5, mb_Lg2.2/7(NEIC), Error ellipse: s-maj=2.1km s-min=1.2km az=62.0

NEIC 23 12:35:48.7±1.1, 36°.825N±0°.010×97°.79W±0°.02, h4km±5km, Error ellipse: s-maj=2.1km s-min=1.4km az=87.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
GC02	Grant County #	0.06	296	Pg	Pg	12 35 50.0	0.0
GC02				Sg	Sg	12 35 51.3	+0.3
KAN14	Manchester OK	0.19	314		Pg	12 35 52.4	0.0
KAN14				Sg	Sg	12 35 55.1	+0.2
KAN17	Caldwell West	0.22	6		Pg	12 35 53.0	0.0
KAN17				Sg	Sg	12 35 56.3	+0.4
KAN05	Bluff City Nor	0.29	347		Pg	12 35 54.3	-0.1
KAN05				Sg	Sg	12 35 57.9	-0.3
KAN13	South Haven SW	0.31	53		Pg	12 35 54.8	+0.1
KAN13				Sg	Sg	12 35 59.2	+0.3
KAN01	Argonia South	0.33	5		Pg	12 35 55.0	-0.1
KAN01				Sg	Sg	12 35 59.4	0.0
KAN09	Caldwell North	0.34	24		Pg	12 35 55.2	0.0
KAN09				Sg	Sg	12 36 00.1	+0.4
CROK	Carrier	0.35	206	Pg	Pg	12 35 55.7	+0.2
CROK				Sg	Sg	12 36 01.0	+0.8
KAN10	Anthony SW Sta	0.39	321	Pg	Pg	12 35 56.0	-0.1
KAN10				Sg	Sg	12 36 01.8	+0.6
KAN06	Argonia West S	0.43	353		Pg	12 35 56.8	-0.1
KAN06				Sg	Sg	12 36 02.5	+0.1
KAN08	Anthony NE Sta	0.43	340	Pg	Pg	12 35 56.8	-0.2
KAN08				Sg	Sg	12 36 02.5	+0.1
KAN16	Harper SW Stat	0.46	331		Pg	12 35 57.3	-0.2
KAN16				Sg	Sg	12 36 02.7	-0.7
BLOK	Blackwell	0.47	98	Pg	Pg	12 35 57.7	0.0
BLOK				Sg	Sg	12 36 04.1	+0.4
KAN12	Harper NE Stat	0.50	341	Pg	Pg	12 35 58.1	-0.2
KAN12				Sg	Sg	12 36 04.8	0.0
T35A	Sooner Cattle	1.03	85	Pg	Pg	12 36 07.9	-0.6
T35A				Sg	Sg	12 36 22.1	+0.3
OK029	Liberty Lake	1.06	165		Pg	12 36 08.5	-0.6
OK029					Sn	12 36 25.1	-0.6
U32A	Winter Ranch,	1.07	246	Pg	Pg	12 36 08.4	-0.8
U32A				Sg	Sg	12 36 22.9	-0.2
QUOK	Quay	1.09	126		Pg	12 36 09.3	-0.3
QUOK				Sg	Sb	12 36 24.7	0.0
OK031	S. Brethren Rd	1.16	138		Pg	12 36 10.4	-0.6
OK031				Sg	Sg	12 36 25.9	-0.1
BCOK	Bluff Creek, N	1.18	173		Pg	12 36 10.5	-0.7
BCOK				Sg	Sg	12 36 26.6	+0.2
OK030	Cody Creek RV	1.21	137		Pg	12 36 11.2	-0.7
OK030				Sg	Sg	12 36 27.7	+0.2
OK025	Westminster Rd	1.29	163	Pn	Pg	12 36 12.7	-0.8
OKCFA	Oklahoma City	1.43	169	Pn	Pn	12 36 15.0	-0.5
OKCSW	OKLAHOMA CITY	1.45	168	Pn	Pn	12 36 15.8	+0.1
FNO	Franklin	1.60	168		Pn	12 36 17.6	-0.1
R32A	Long Quarter,	1.75	336		Pn	12 36 19.7	-0.3
W35A	Tecumseh	1.83	156		Pn	12 36 21.2	+0.2
TUL1	Leonard	1.85	119		Pn	12 36 21.8	+0.5
TUL1				IAmb_Lg		12 36 48.3	
	comp=Z,7.2nm,0.8s						
X34A	Smith Ranch, M	2.22	181		Pn	12 36 27.7	+1.4
WMOK	Wichita Mounta	2.23	201		Pn	12 36 27.4	+0.9
WMOK				IAmb_Lg		12 36 59.1	
	comp=Z,8.6nm,0.8s						
KSU1	Kansas State U	2.46	22	Pn	Pn	12 36 30.2	+0.6
CBKS	Cedar Bluff	2.51	323	Pn	Pn	12 36 30.6	+0.1
CBKS				IAmb_Lg		12 37 06.0	
	comp=Z,4.3nm,0.8s						
U38A	Gravette	2.77	97		Pn	12 36 32.1	-1.7
LOOK	Love County	2.87	170	Pn	Pn	12 36 35.6	+0.3
X37A	Clayton	2.98	138		Pn	12 36 37.2	+0.5
HHAR	Hobbs	3.15	99		Pn	12 36 39.5	+0.4
HHAR				IAmb_Lg		12 37 28.8	
	comp=Z,14nm,1.2s						
W39A	Magazine	3.63	115	Pn	Pn	12 36 46.9	+1.1
S39A	Bolivar	3.67	75		Pn	12 36 44.7	-1.6
U40A	Yellville	4.00	95		Pn	12 36 50.8	0.0
MIAR	Mount Ida	4.12	122		Pn	12 36 52.5	+0.1
N35A	Tabor	4.37	22		Pn	12 36 55.0	-0.9
P38A	Dawn	4.37	49	Pn	Pn	12 36 54.4	-1.4
KSCO	Kaye Shedlock’	4.40	301	Pn	Pn	12 36 55.7	-0.8
MGMO	Mountain Grove	4.43	84	Pn	Pn	12 36 56.1	-0.7
R40A	Maddies Statio	4.63	70		Pn	12 36 58.9	-0.5
X40A	Basin Creek Fa	4.66	119	Pn	Pn	12 37 00.2	+0.3
FCAR	Ozark Folk Cen	4.67	100	Pn	Pn	12 37 00.6	+0.6
WHAR	Wooly Hollow	4.71	107	Pn	Pn	12 37 00.4	-0.2
N38A	Joes South For	5.33	41	IAmb_Lg		12 38 45.8	
	comp=Z,11nm,0.8s						
CCM	Cathedral Cave	5.35	75	Pn	Pn	12 37 08.5	-0.9

IDC 23 12:47:59.4±5.9, 3°.31S×150°.34E, h0km, mb2.9/2, mb1 3.2/2, mb1mx2.8/29, mbtmp2.9/2, Error ellipse: s-maj=275.9km s-min=53.5km az=113.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.74	222	P	P	12 53 02.4	-1.0
	0.3nm,0.7s,baz=41,slow=11,SNR=2.3						
ASAR	Alice Springs	25.73	217	P	P	12 53 32.5	+0.7
	0.1nm,0.4s,baz=54,slow=8.7,SNR=9.5						
TORD	Torodi Ar. Bea	147.51	289	PKPbc	PKPbc	13 07 45.8	-0.9
	0.3nm,0.6s,baz=85,slow=4.4,SNR=2.4						

IDC 23 12:48:37.5±3.4, 4°.00S×152°.17E, h0km, mb3.4/2, mb1 3.7/2, mb1mx3.1/31, mbtmp3.4/2, Error ellipse: s-maj=148.5km s-min=47.2km az=122.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.52	226	P	P	12 53 50.8	+1.3
	0.8nm,0.6s,baz=54,slow=10,SNR=11						
ASAR	Alice Springs	26.33	220	P	P	12 54 15.2	-0.1
	0.6nm,1.0s,baz=55,slow=8.9,SNR=4.4						
TORD	Torodi Ar. Bea	149.46	289	PKPbc	PKPbc	13 08 28.1	-1.8
	0.2nm,0.3s,baz=95,slow=3.6,SNR=1.6						

NEIC 23 12:54:09.6±1.8, 0°.52S±0°.08×98°.0E±0°.1, h23km±2km, mb4.5/21, Error ellipse: s-maj=17.3km s-min=7.5km az=56.0

DJA 23 12:54:10.1±0.6, 0° S±2°×9° 8E±°, h31km±6km, M4.6/21, mb4.7/20, mB5.2/6, MLv4.6/21, Mw(mB)4.5/6

IDC 23 12:54:16.7±4.2, 0°.13S×98°.66E, h71km±33km, mb4.1/8, mb1 4.2/10, mb1mx3.7/38, mbtmp4.3/10, ML4.1/2, MS3.4/10, Ms1 3.5/10, ms1mx3.1/46, Error ellipse: s-maj=56.2km s-min=14.9km az=63.0

ISC 23 12:54:10.0±1.3, 0°.50S±0°.04×98°.05E±0°.07, h30km±8km, n86, σ1s.15/82, mb4.5/28, MS3.5/9, 1C-1D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SISI	Saibi	1.33	128	P	Pn	12 54 32.6	+0.1
SISI				S	Sb	12 54 52.0	+1.1
GSI	Gunungsitoli	1.85	345	P	Pn	12 54 39.1	-0.7
GSI				S	Sn	12 55 00.4	-1.8
GSI	Gunungsitoli	1.85	345	Pn	Pn	12 54 38.8	-1.0
MNSI	Mandailing Nat	2.00	50	P	Pn	12 54 41.6	-0.1
MNSI				S	Sn	12 55 06.1	+0.4
SBSI	Sibolga	2.20	22	P	Pn	12 54 45.9	+1.3
SBSI				S	Sb	12 55 15.1	-0.9
PPI	Padang Panjang	2.35	89	P	Pn	12 54 46.4	-0.2
PPI				S	Sn	12 55 13.2	-1.2
PDSI	Padang	2.45	100	P	Pn	12 54 47.7	-0.3
PPSI	Pulau Pagai	2.98	139	P	Pn	12 54 56.4	+1.0
PPSI				S	Sn	12 55 28.1	-2.1
BKNI	Bangkinang	3.10	75	P	Pn	12 54 57.7	+0.8
BKNI	Bangkinang	3.10	75		Pn	12 54 55.3	-1.7
PSI	Prapat	3.39	15	P	Pn	12 54 59.6	-1.5
	6.7nm,0.3s,baz=166,slow=16,SNR=21						
PSI				S	Sn	12 55 43.2	+2.8
	7.4nm,0.3s,baz=150,slow=13,SNR=3.9						
PSI				LR	LR	12 56 00.7	
	comp=Z,208nm,19.0s,baz=291,slow=37						
TPTI		3.83	347	P	Pn	12 55 05.6	-1.4
TSI	Tuntungan	4.00	7	P	Pn	12 55 10.6	+1.2
MASI	Maura Aman, Be	4.94	122	P	Pn	12 55 23.3	+0.9
MLSI	Meulaboh, Aceh	5.01	341	P	Pn	12 55 22.5	-0.7
KSI	Kapahiang	5.52	125	P	Pn	12 55 31.6	+1.3
	0.9nm208nm,0.8s						
IPM	Ipoh	5.77	31	Pn	Pn	12 55 34.7	+1.1
MNAI	Manna	6.22	128	Pn	Pn	12 55 40.1	+0.1
MYKOM	Kota Tinggi	6.23	69		Pn	12 55 40.0	0.0
KULM	Kulim	6.31	24		Pn	12 55 40.5	-0.5
LHSI	Lahat	6.39	121	P	Pn	12 55 42.9	+0.7
	0.6nm173nm,0.6s						
DSRI	Dabo	6.53	90	P	Pn	12 55 44.1	0.0
	0.1nm1µm18nm,0.4s						
MDSI	Maura Dua	7.29	123	P	Pn	12 55 54.9	+0.3
	0.2nm1µm53nm,0.8s						
KLSI		7.87	122	P	Pn	12 56 02.8	+0.3
	0.1nm19nm,0.6s						
KASI	Kota Agung	8.15	128	P	Pn	12 56 05.6	-0.7
	66nm,0.5s						
SBUM	Sibu	14.46	78	Pn	Pn	12 57 32.9	0.0
CM31	Chiang Mai Arr	18.86	3	P	P	12 58 27.4	-0.5
CMAR	Chiang Mai Arr	18.86	3	P	Pn	12 58 28.1	-0.4
	0.7nm,0.3s,baz=192,slow=9.8,SNR=32						
CMAR				LR	LR	13 06 34.8	
	comp=Z,182nm,21.5s,baz=212,slow=40						
CMAR	Chiang Mai Arr	18.86	3	P	P	12 58 27.2	-0.7
PALK	Pallekele	18.95	294	LR	LR	13 05 06.4	
	comp=Z,131nm,18.2s,baz=222,slow=34						
CHTO	Chiang Mai	19.21	3		P	12 58 31.7	0.0
KKM	Kota Kinabalu	19.26	70	P	P	12 58 32.4	-0.1
KKM				IAmb	IAmb	12 58 33.8	
	comp=Z,27nm,0.8s						
MPSI	Mapaga	21.86	88	P	P	12 59 01.4	+0.8
	comp=Z,1µmcomp=Z,10nm,1.1s						
KAPI	Kappang	22.13	102	LR	LR	13 08 33.8	
	comp=Z,79nm,18.8s,baz=314,slow=40						
BNSI	Bone	22.37	100	P	P	12 59 21.4	+15
BKSI	Bulukumba	22.55	103	P	P	12 59 09.3	+1.3
	comp=Z,11nm,0.9s						
H08S2	Diego Garcia H	26.45	254	T	T	13 27 23.2	
	baz=75,slow=75,SNR=393						
H08S3	Diego Garcia H	26.45	254	T	T	13 27 27.5	
	baz=75,slow=75,SNR=1022						
H08S1	Diego Carcia H	26.47	254	T	T	13 27 24.4	
	baz=75,slow=75,SNR=96						
SHL	Shillong	26.59	347	P	P	12 59 45.7	-0.3
SHL				IAmb	IAmb	12 59 56.9	
	comp=Z,24nm,1.3s						
BATI	Baumata	27.23	112	LR	LR	13 12 09.2	
	comp=Z,104nm,20.1s,baz=185,slow=40						
ENH	Enshi	32.48	19	P	P	13 00 38.1	+0.1
WHN	Wuhan	34.55	25	⇓P	P	13 00 56.8	+0.8
XAN	Xi'an	35.84	16	⇑P	P	13 01 06.8	-0.4
XAN				pP	pP	13 01 13.6	-2.1
XAN				sP	pwP	13 01 17.0	+1.3
XAN				pmax	pmax		
	comp=Z,35nm,0.8s						
XAN				LR	LR		
	comp=N,280nm,16.5s						
XAN				LR	LR		
	comp=E,260nm,11.7s						
XAN				LR	LR		
	comp=Z,310nm,13.7s						
H01W3	Cape Leeuwin H	37.37	158	T	T	13 41 38.1	
	baz=335,slow=76,SNR=11						
H01W2	Cape Leeuwin H	37.38	158	T	T	13 41 39.1	
	baz=335,slow=76,SNR=12						
H01W1	Cape Leeuwin H	37.38	158	T	T	13 41 39.1	
	baz=335,slow=76,SNR=12						
NJ2	Nanjing	37.88	29	eP	P	13 01 27.1	+2.5
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
GTA	Gaotai	39.75	2	eP	P	13 01 40.4	+0.2
GTA				pP	pP	13 01 49.1	+0.5
GTA				sP	sP	13 01 53.6	+1.6
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,97nm,4.8s						
GTA				LR	LR		
	comp=N,120nm,14.9s						
GTA				LR	LR		
	comp=E,100nm,14.5s						
GTA				LR	LR		
	comp=Z,120nm,14.5s						
WB0	Warramunga Arr	40.41	121	P	P	13 01 44.7	-1.2
WB0				IAmb	IAmb	13 01 46.0	
	comp=Z,5.5nm,0.8s						
WRA	Warramunga Arr	40.43	121	P	P	13 01 45.3	-0.8
	comp=Z,3.6nm,0.7s,baz=300,slow=8.9,SNR=41						
WRA				LR	LR	13 20 33.3	
	comp=Z,54nm,18.6s,baz=90,slow=39						
WB2	Warramunga Arr	40.44	121	P	P	13 01 45.4	-0.8
WR0	Warramunga Arr	40.61	121	P	P	13 01 47.0	-0.6
WR0				IAmb	IAmb	13 01 48.2	
	comp=Z,6.1nm,0.7s						
ASAR	Alice Springs	41.71	126	P	P	13 01 56.5	0.0
	comp=Z,4.9nm,0.7s,baz=295,slow=8.0,SNR=98						
ASAR				PcP	PcP	13 03 53.9	+0.9
	comp=Z,0.3nm,0.6s,baz=303,slow=2.8,SNR=2.3						
ASAR				LR	LR	13 21 23.8	
	comp=Z,68nm,19.4s,baz=311,slow=39						
ASAR	Alice Springs	41.71	126	P	P	13 01 56.1	-0.5
AS31	Alice Springs	41.71	126	P	P	13 01 55.4	-1.1
HHC	Hu-ho-hao-te	42.95	15	eP	P	13 02 10.8	+4.3
HHC				pmax	pmax		
	comp=Z,28nm,0.9s						
HHC				pmax	pmax		
	comp=Z,81nm,7.4s						
BJT	Baijiatuau	43.58	20	P	P	13 02 12.6	+1.1
BJI	Beijing	43.61	20	P	P	13 02 13.1	+1.5
BJI				pP	pP	13 02 20.1	-0.2
BJI				pmax	pmax		
	comp=Z,19nm,0.9s						
WMQ	Urumqi	45.08	349	eP	P	13 02 25.3	+1.8
WMQ				pP	pP	13 02 32.9	+0.9
WMQ				sP	sP	13 02 37.3	+1.9
WMQ				pmax	pmax		
	comp=Z,18nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,180nm,3.9s						
KDJ	Kajisay	46.43	339	P	P	13 02 34.7	+0.4
KDJ				IAmb	IAmb	13 02 49.6	
	comp=Z,5.0nm,0.8s						
KSRS	Korea Array	46.78	33	P	P	13 02 34.5	-2.3
	comp=Z,2.1nm,0.6s,baz=226,slow=8.9,SNR=5.9						
KSRS				LR	LR	13 23 13.8	
	comp=Z,60nm,18.0s,baz=215,slow=38						
SONM	Songino Array	48.68	7	P	P	13 02 49.3	-2.4
	comp=Z,2.4nm,0.9s,baz=188,slow=9.4,SNR=12						
SONM	Songino Array	48.68	7	P	P	13 02 52.5	+0.9
MK31	Makanchi Array	49.08	346	P	P	13 02 55.4	+0.8
MK31				IAmb	IAmb	13 02 56.2	
	comp=Z,5.1nm,0.9s						
MKAR	Makanchi Array	49.08	346	P	P	13 02 55.2	+0.5
	comp=Z,4.7nm,0.8s,baz=156,slow=8.1,SNR=35						
MKAR	Makanchi Array	49.08	346		P	13 02 53.7	-0.9
MAKZ	Makanchi	49.17	345	P	P	13 02 56.0	+0.6
MAKZ				IAmb	IAmb	13 03 05.1	
	comp=Z,4.0nm,0.8s						
KKAR	Karatay Array	49.94	334	P	P	13 03 01.8	+0.5
CN2	Changchun	50.44	26	eP	P	13 03 04.8	-0.2
CN2				epP	pP	13 03 11.6	-2.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
STKA	Stephens Creek	51.60	132	P	P	13 03 14.7	+0.8
	comp=Z,2.4nm,0.6s,baz=292,slow=7.9,SNR=7.0						
STKA				LR	LR	13 26 51.5	
	comp=Z,55nm,20.5s,baz=216,slow=38						
STKA	Stephens Creek	51.60	132	P	P	13 03 14.5	+0.6
KURK	Kurchatov	53.64	345	P	P	13 03 28.8	+0.1
KURK				IAmb	IAmb	13 03 37.6	
	comp=Z,5.0nm,1.0s						
USA0B	Ussuriysk Arra	53.79	30	P	P	13 03 30.2	+0.3

USRK	**Ussuriysk Ar.**	**53.79**	**30**	P	**P**	**13 03 27.4**	**-2.5**
	comp=Z,13nm,0.8s,baz=234,slow=5.7,SNR=16						
USRK	**Ussuriysk Ar.**	**53.79**	**30**	P	**P**	**13 03 29.8**	**-0.1**
ZAA0	**Zalesovo Array**	**55.36**	**351**	P	**P**	**13 03 40.9**	**-0.1**
ZAA0				IAmb	IAmb	13 03 49.8	
	comp=Z,5.8nm,0.7s						
ZALV	**Zalesovo Beam**	**55.36**	**351**	P	**P**	**13 03 41.5**	**+0.4**
	comp=Z,4.1nm,0.6s,baz=184,slow=6.1,SNR=19						
EIDS	**Eidsvold**	**56.79**	**120**	P	**P**	**13 03 52.1**	**+0.2**
ABKAR	**Akbulak array**	**59.40**	**332**	P	**P**	**13 04 08.9**	**-0.8**
ABKAR				IAmb	IAmb	13 04 33.6	
	comp=Z,2.4nm,0.9s						
FINES	**FINESS Array B**	**81.89**	**333**	P	P	13 06 33.7	+7.3
	comp=Z,1.0nm,0.5s,baz=116,slow=4.4,SNR=6.1						
FINES	**FINESS Array B**	**81.89**	**333**	P	**P**	**13 06 25.9**	**-0.5**
NOA	**NORSAR Array B**	**88.89**	**331**	LR	LR	13 51 07.3	
	comp=Z,15nm,19.2s,baz=335,slow=38						
QSPA	**South Pole Qui**	**89.46**	**180**	P	P	13 06 59.1	-4.9
QSPA				IAmb	IAmb	13 07 17.8	
	comp=Z,3.4nm,1.4s						
TXAR	**Lajitas Array**	**144.62**	**34**	PKP	**PKPdf**	**13 13 44.5**	**-0.1**
	comp=Z,0.9nm,0.5s,baz=177,slow=0.8,SNR=25						
TXAR	**Lajitas Array**	**144.62**	**34**		**PKPab**	**13 13 42.8**	**-0.4**

MAN 23 13:28:41.5, 13°.49N×120°.71E, $h92^{km}$, mb4.1, ML2.9, MS2.5, Mindoro

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TAP 23 13:38:56.4, 23°.94N×121°.02E, $h12^{km}$, ML2.9, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WPL	**Puli Township**	**0.09**	**319**	*i* P	Pg	13 38 59.8	+0.7
	baz=316						
WPL				S	Sg	13 39 01.8	+0.7
	baz=316						
SMLT	**Sun Moon Lake**	**0.13**	**242**	*i* P	Pb	13 39 00.3	-0.6
	baz=240						
SMLT				S	Sg	13 39 03.0	+1.0
	baz=240						
OWD	**Renai**	**0.14**	**85**	P	Pb	13 39 01.2	0.0
	baz=84						
OWD				S	Sg	13 39 04.0	+1.7
	baz=84						
WCS	**Beigang Elemen**	**0.15**	**318**	*i* P	Pg	13 39 00.6	+0.6
	baz=318						
WCS				*i* S	Sg	13 39 02.8	+0.4
	baz=318						
TYC	**Yuchr**	**0.16**	**256**	*i* P	Pg	13 39 00.4	+0.4
	baz=255						
TYC				S	Sg	13 39 03.0	+0.5
	baz=255						
SSLB	**Suanglung**	**0.17**	**202**	*i* P	Pg	13 39 00.6	+0.4
	baz=202						
SSLB				*i* S	Sg	13 39 03.0	+0.2
	baz=202						
CHGB	**Renai**	**0.18**	**50**	P	Pb	13 39 01.6	-0.3
	baz=49						
CHGB				S	Sg	13 39 05.0	+1.5
	baz=49						
VWDT	**VWDT**	**0.22**	**150**	*i* P	Pb	13 39 02.2	-0.1
	baz=150						
VWDT				*i* S	Sg	13 39 05.6	+1.5
	baz=150						
WJS	**Zhushan**	**0.29**	**246**	P	Pb	13 39 03.5	-0.2
	baz=246						
WJS				S	Sb	13 39 08.4	-0.2
	baz=246						
WHF	**Hehuan Shan**	**0.30**	**48**	P	Pb	13 39 04.0	0.0
	baz=48						
WHF				S	Sb	13 39 08.3	-0.8
	baz=48						
WNT	**Mingjian**	**0.32**	**258**	P	Pb	13 39 04.0	0.0
	baz=257						
WNT				S	Sb	13 39 09.4	+0.2
	baz=257						
TDCB	**Techi**	**0.33**	**22**	P	Pg	13 39 03.7	+0.5
	baz=21						
TDCB				S	Sg	13 39 08.0	+0.2
	baz=21						
TWT	**Tachien**	**0.34**	**24**	P	Pg	13 39 03.7	+0.3
	baz=22						
TWT				S	Sg	13 39 08.1	+0.1
	baz=22						
WHP	**Taichung City**	**0.34**	**348**	P	Pb	13 39 04.4	-0.2
	baz=347						
WHP				S	Sb	13 39 09.5	-0.5
	baz=347						
FUSS	**Fushou**	**0.36**	**34**	P	Pg	13 39 04.2	+0.4
	baz=33						
FUSS				*e*S	Sb	13 39 10.5	-0.3
	baz=33						
TCU	**Taichung**	**0.38**	**303**	P	Pb	13 39 05.5	+0.4
	baz=303						
TCU				S	Sb	13 39 11.5	+0.6
	baz=303						
ESL	**Shilin**	**0.40**	**109**	P	Pb	13 39 05.4	0.0
	baz=108						
ESL				S	Sb	13 39 11.6	+0.1
	baz=108						
WCHH	**Zhanghua**	**0.45**	**288**	*e*P	Pb	13 39 06.5	+0.2
	baz=287						
WCHH				*e*S	Sb	13 39 13.2	+0.3
	baz=287						
EGFH	**Guangfu**	**0.46**	**126**	P	Pb	13 39 06.5	0.0
	baz=126						
EGFH				S	Sb	13 39 13.5	+0.2
	baz=126						
TWQ1	**Liyutan**	**0.46**	**331**	*e*P	Pb	13 39 07.0	+0.4
	baz=330						
TWQ1				*e*S	Sb	13 39 14.6	+1.1
	baz=330						
CHN5	**Tsauling**	**0.47**	**223**	P	Pb	13 39 06.8	+0.1
	baz=222						
CHN5				S	Sb	13 39 13.7	+0.1
	baz=222						
ALS	**Alishan**	**0.47**	**205**	P	Pb	13 39 06.7	-0.2
	baz=204						
ALS				S	Sb	13 39 14.0	0.0
	baz=204						
ETLH	**Xiulin Townshi**	**0.49**	**58**	P	Pb	13 39 06.7	-0.4
	baz=57						
ETLH				*e*S	Sg	13 39 13.2	+0.5
	baz=57						
WDLH	**Douliu**	**0.51**	**241**	*e*P	Pb	13 39 07.2	-0.2
	baz=240						
WDLH				*e*S	Sb	13 39 14.8	0.0
	baz=240						
EHY	**Hungye**	**0.51**	**148**	*e*P	Pb	13 39 07.4	0.0
	baz=147						
EHY				S	Sb	13 39 14.4	-0.5
	baz=147						
NSY	**Sanyi**	**0.53**	**333**	P	Pb	13 39 08.5	+0.8
	baz=333						
NSY				S	Sb	13 39 16.9	+1.6
	baz=333						
HWA	**Hwalien**	**0.53**	**86**	*e*P	Pb	13 39 08.3	+0.5
	baz=86						
HWA				*e*S	Sb	13 39 16.7	+1.3
	baz=86						
WDJ	**Dajia District**	**0.53**	**319**	*e*P	Pb	13 39 08.4	+0.7
	baz=319						
WDJ				*e*S	Sb	13 39 16.8	+1.3
	baz=319						
TWD	**Chiawan**	**0.54**	**75**	P	Pb	13 39 07.7	-0.2
	baz=75						
TWD				S	Sb	13 39 15.1	-0.5
	baz=75						
NACB	**Ninganchiao**	**0.57**	**66**	P	Pb	13 39 08.0	-0.4
	baz=66						
NACB				S	Sg	13 39 15.6	+0.5
	baz=66						
HGSD	**Ruisui**	**0.58**	**141**	P	Pb	13 39 09.0	+0.5
	baz=140						
HGSD				S	Sb	13 39 17.9	+1.2
	baz=140						
ETL	**Fush Village**	**0.59**	**68**	*e*P	Pb	13 39 08.5	-0.2
	baz=68						
ETL				*e*S	Sb	13 39 16.7	-0.3
	baz=68						
NNS	**Nan Shan**	**0.59**	**33**	P	Pg	13 39 08.2	+0.3
	baz=33						
NNS				S	Sg	13 39 16.4	+0.6
	baz=33						
WRL	**Guolierlin Hig**	**0.59**	**266**	*e*P	Pb	13 39 08.4	-0.3
	baz=266						
WRL				*e*S	Sb	13 39 16.9	-0.3
	baz=266						
YULB	**Yu-li**	**0.60**	**155**	P	Pb	13 39 08.7	-0.2
	baz=155						
YULB				*e*S	Sb	13 39 18.3	+0.9
	baz=155						
NMLH	**Miaoli**	**0.63**	**340**	P	Pn	13 39 10.4	-0.8
	baz=340						
NMLH				S	Sn	13 39 19.8	-1.5
	baz=340						
WTK	**Tuku**	**0.63**	**247**	P	Pb	13 39 09.4	-0.1
	baz=246						
WTK				S	Sb	13 39 18.1	-0.2
	baz=246						
CHN2	**Minshiung**	**0.65**	**231**	*e*P	Pb	13 39 10.1	+0.5
	baz=230						
CHN2				*e*S	Sb	13 39 19.7	+1.1
	baz=230						
EYUL	**Yuli**	**0.65**	**155**	P	Pb	13 39 09.8	+0.1
	baz=155						
EYUL				*e*S	Sb	13 39 19.3	+0.5
	baz=155						
WTCT	**Ta-ch'eng**	**0.68**	**264**	*e*P	Pg	13 39 09.8	+0.2
	baz=263						
WTCT				*e*S	Sb	13 39 19.7	0.0
	baz=263						
NSTT	**Nanjuang**	**0.69**	**358**	P	Pb	13 39 10.8	+0.4
	baz=358						
NSTT				S	Sb	13 39 20.3	+0.4
	baz=358						
LIOB	**Emei**	**0.70**	**359**	P	Pb	13 39 11.2	+0.6
	baz=359						
LIOB				S	Sb	13 39 20.6	+0.3
	baz=359						
CHY	**Chiayi**	**0.70**	**231**	*e*P	Pb	13 39 10.6	-0.1
	baz=230						
CHY				*e*S	Sb	13 39 20.5	+0.1
	baz=230						
TPUB	**Ta-pu**	**0.73**	**210**	P	Pb	13 39 11.1	-0.1
	baz=209						
TPUB				S	Sb	13 39 21.6	+0.4
	baz=209						
ELDTW	**Lidau**	**0.75**	**180**	P	Pg	13 39 11.1	+0.1
	baz=179						
ELDTW				S	Sb	13 39 22.6	+0.8
	baz=179						
FULB	**Fuli**	**0.78**	**161**	P	Pn	13 39 12.9	-0.4
	baz=161						
FULB				S	Sn	13 39 24.1	-0.9
	baz=161						
WTP	**Ta-pu**	**0.79**	**209**	P	Pb	13 39 12.0	-0.1
	baz=207						
WTP				S	Sb	13 39 22.9	+0.1
	baz=207						
NSK	**Sanguang**	**0.79**	**23**	P	Pg	13 39 11.9	+0.2
	baz=23						
NSK				*e*S	Sb	13 39 23.4	+0.5
	baz=23						
YHNB	**Yeheng**	**0.79**	**24**	P	Pg	13 39 11.9	+0.1
	baz=23						
YHNB				*e*S	Sb	13 39 23.7	+0.7
	baz=23						
WSF	**Szhu**	**0.79**	**248**	*e*P	Pg	13 39 11.9	+0.2
	baz=247						
WSF				*e*S	Sb	13 39 23.0	+0.1
	baz=247						
NDT	**Datong Townshi**	**0.80**	**34**	*e*P	Pb	13 39 12.5	+0.3
	baz=34						
NDT				*e*S	Sb	13 39 23.9	+0.9
	baz=34						
STYH	**Taoyuan**	**0.80**	**197**	P	Pb	13 39 12.4	+0.1
	baz=196						
STYH				S	Sb	13 39 23.5	+0.4
	baz=196						
ENA	**Nanau**	**0.81**	**53**	P	Pb	13 39 12.6	0.0
	baz=53						
ENA				*e*S	Sb	13 39 24.4	+0.9
	baz=53						
TWK	**Hsinying**	**0.83**	**216**	P	Pb	13 39 12.7	-0.1
	baz=215						
TWK				S	Sb	13 39 24.5	+0.4
	baz=215						
SBCB	**Hsinchu**	**0.85**	**358**	*e*P	Pb	13 39 13.2	+0.1
	baz=357						
SBCB				*e*S	Sb	13 39 25.4	+1.0
	baz=357						
ENTT	**Nioudou**	**0.85**	**35**	*e*P	Pb	13 39 13.1	-0.2
	baz=35						
ENTT				*e*S	Sb	13 39 25.3	+0.6
	baz=35						
EWUT	**Wuta**	**0.85**	**54**	*e*P	Pb	13 39 13.7	+0.5
	baz=53						
EWUT				*e*S	Sn	13 39 26.0	-0.8
	baz=53						
CHN1	**Nanshi**	**0.88**	**211**	P	Pb	13 39 13.7	0.0
	baz=211						
CHN1				S	Sb	13 39 26.0	+0.6
	baz=211						
ICHU	**Yijhu**	**0.89**	**230**	*e*P	Pb	13 39 14.0	+0.1
	baz=229						
ICHU				*e*S	Sb	13 39 26.1	+0.3
	baz=229						
CHKT	**Chengkung**	**0.90**	**159**	*e*P	Pn	13 39 15.2	+0.3
	baz=159						
NDS	**Dongshan**	**0.94**	**42**	*e*P	Pb	13 39 15.0	+0.4
	baz=42						
NDS				*e*S	Sg	13 39 26.8	+0.1
	baz=42						
NWLT	**Wulai**	**0.94**	**28**	*e*P	Pb	13 39 15.0	+0.3
	baz=27						
NWLT				*e*S	Sn	13 39 28.4	-0.6
	baz=27						
SGST	**Jiashian**	**0.95**	**205**	*e*P	Pb	13 39 14.8	0.0
	baz=204						
SGST				*e*S	Sb	13 39 28.1	+0.8
	baz=204						
CHN8	**Yiju**	**0.95**	**232**	*e*P	Pb	13 39 15.1	+0.2
	baz=231						
CHN8				*e*S	Sb	13 39 27.9	+0.4
	baz=231						
TWE	**Neicheng**	**0.97**	**37**	*e*P	Pn	13 39 15.8	-0.2
	baz=37						
TWE				*e*S	Sn	13 39 29.6	-0.1
	baz=37						
EDH	**Donghe**	**1.00**	**165**	*e*P	Pn	13 39 16.0	-0.3
	baz=165						
EDH				*e*S	Sn	13 39 30.3	-0.1
	baz=165						
TWC	**Suao**	**1.00**	**48**	*e*P	Pn	13 39 16.4	0.0
	baz=48						
TWC				*e*S	Sn	13 39 30.6	+0.1
	baz=48						
SLGT	**Liugui**	**1.01**	**200**	*e*P	Pn	13 39 16.6	+0.2
	baz=200						
SLGT				*e*S	Sn	13 39 30.7	+0.2
	baz=200						
LONT	**Longtian**	**1.04**	**175**	P	Pn	13 39 16.7	-0.1
	baz=174						
LONT				*e*S	Sn	13 39 31.0	-0.2
	baz=174						
TWG	**Pinlang**	**1.12**	**178**	P	Pn	13 39 18.2	+0.2
	baz=177						
TWG				S	Sn	13 39 33.6	+0.3
	baz=177						
TWGBT	**Beinan**	**1.12**	**177**	P	Pg	13 39 17.9	-0.1
	baz=177						
TWGBT				*e*S	Sn	13 39 33.6	+0.2
	baz=177						
TWA	**Mucha**	**1.15**	**26**	*e*P	Pg	13 39 18.8	+0.2
	baz=26						
TWA				*e*S	Sn	13 39 35.4	+1.2
	baz=26						
NTC	**Toucheng**	**1.17**	**39**	*e*P	Pg	13 39 18.8	-0.1
	baz=38						
NTC				*e*S	Sn	13 39 34.8	+0.3
	baz=38						
TWS1	**Kuangyinshan**	**1.21**	**17**	*e*P	Pb	13 39 19.4	+0.1
	baz=17						
TWS1				*e*S	Sn	13 39 35.7	+0.2
	baz=17						
SSD	**Sandimen**	**1.24**	**197**	*e*P	Pg	13 39 21.1	+0.8
	baz=196						
SSD				*e*S	Sn	13 39 36.4	0.0
	baz=196						
TIPB	**Shuangxi**	**1.26**	**35**	*e*P	Pg	13 39 20.9	+0.2
	baz=35						
TIPB				*e*S	Sg	13 39 38.0	+1.0
	baz=35						
TSMG	**Majia**	**1.28**	**196**	*e*P	Pg	13 39 20.9	-0.1
	baz=195						
TSMG				*e*S	Sg	13 39 38.0	+0.3
	baz=195						
YM01	**YM01**	**1.30**	**22**	*e*P	Pn	13 39 20.5	0.0
	baz=22						
YM01				*e*S	Sn	13 39 38.0	+0.1
	baz=22						
NWF	**Wu-fen Shan**	**1.32**	**31**	*e*P	Pn	13 39 20.6	-0.2
	baz=31						
NWF				*e*S	Sg	13 39 38.9	-0.1
	baz=31						
LDUT	**Ludao**	**1.33**	**162**	*e*S	Sn	13 39 38.8	+0.3
	baz=162						
ECL	**Taimali**	**1.34**	**183**	*e*P	Pg	13 39 22.3	+0.1
	baz=182						
MASBT	**Mashibuluo**	**1.37**	**195**	*e*P	Pb	13 39 22.2	+0.2
	baz=195						
MASBT				*e*S	Sg	13 39 40.3	-0.3
	baz=195						
PHUB	**P'eng-hu**	**1.40**	**252**	*e*P	Pn	13 39 21.3	-0.5
	baz=252						
PHUB				*e*S	Sn	13 39 38.9	-1.3
	baz=252						
EAST	**Anshuo**	**1.56**	**186**	*e*P	Pb	13 39 24.9	-0.4
	baz=185						
SCZT	**Fangliau**	**1.61**	**193**	*e*P	Pn	13 39 24.5	-0.2
	baz=193						
SLIU	**Shizi**	**1.73**	**187**	*e*P	Pn	13 39 26.3	-0.1
	baz=186						
SLIU				*e*S	Sn	13 39 48.5	+0.1
	baz=186						

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*NIC **23** 13:39:26.7±0.0, 37°.60N×31°.69E, $h15^{km}\pm7^{km}$, Ml4.0/5*
*DDA **23** 13:39:27.8, 37°.38N×31°.41E, $h23^{km}\pm1^{km}$, MW3.8*
*ISK **23** 13:39:27.9, 37°.40N×31°.37E, $h12^{km}$, ML3.7/57*
*IDC **23** 13:39:27.1±0.8, 37°.47N×31°.41E, $h0^{km}$, mb3.8/9, mb1 3.8/14, mb1mx3.7/54, mbtmp3.8/14, ML3.6/5, MS2.7/1, Ms1 2.7/1, ms1mx2.1/51, Error ellipse: s-maj=16.6km s-min=14.7km az=120.0*
*NEIC **23** 13:39:28.8±2.2, 37°.41N±0°.03×31°.35E±0°.04, $h10^{km}\pm1^{km}$, mb4.3/9, ML3.7(CSEM), Error ellipse: s-maj=7.8km s-min=2.9km az=228.0*
*THE **23** 13:39:30.2, 37°.55N×31°.61E, $h18^{km}\pm7^{km}$, ML3.6/1, Error ellipse: s-maj=8.8km s-min=1.0km az=83.0*

ISC 23 13:39:28.8±0.9, 37°.41N±0°.02×31°.40E±0°.01, $h13^{km}\pm6^{km}$, n177, $\sigma1^{s}26$/216, mb3.9/13, 3C-2D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SEDI	**Konya, Seydise**	**0.29**	**81**	*i* P	**Pg**	**13 39 34.8**	**-0.1**
SEDI				*i* S	**Sg**	**13 39 39.5**	**+0.6**
SEDI				IAML		13 39 42.0	
	comp=E,8μm,0.3s						
SEDI				IAML		13 39 43.0	
	comp=N,10μm,0.7s						
SEYD	**Seydisehir-KON**	**0.35**	**90**	PG	**Pg**	**13 39 35.9**	**-0.1**
SEYD				SG	**Sg**	**13 39 41.2**	**+0.4**
BCK	**Bucak**	**0.64**	**275**	PG	**Pg**	**13 39 40.4**	**-1.0**
BCK				SG	**Sg**	**13 39 49.9**	**0.0**
BUCA	**Burdur, Bucak-**	**0.67**	**263**	*i* P	**Pg**	**13 39 40.7**	**-1.2**
BUCA				*i* S	**Sb**	**13 39 52.1**	**+0.5**
BUCA				IAML		13 39 54.0	
	comp=E,3μm,0.4s						
BUCA				IAML		13 39 55.0	
	comp=N,2μm,0.4s						
DOGA	**KONYA_Doganhis**	**0.73**	**17**	*i* P	**Pg**	**13 39 42.5**	**-0.5**
DOGA				*i* S	**Sg**	**13 39 53.5**	**+0.8**
DOGA				IAML		13 39 56.0	
	comp=E,2μm,0.3s						
DOGA				IAML		13 39 57.0	
	comp=N,3μm,0.5s						
BAGO	**Egridir - ISPA**	**0.75**	**321**	*i* P	**Pg**	**13 39 42.9**	**-0.6**
BAGO				*i* S	**Sb**	**13 39 54.6**	**+0.5**
BAGO				IAML		13 39 57.0	
	comp=E,2μm,0.3s						
BAGO				IAML		13 39 58.0	
	comp=N,3μm,0.4s						
ANTB	**Antalya**	**0.78**	**230**	PG	**Pg**	**13 39 43.7**	**-0.2**
ISP	**Isparta**	**0.81**	**301**	PG	**Pg**	**13 39 43.8**	**-0.7**
ISP	**Isparta**	**0.81**	**301**		**Pg**	**13 39 43.5**	**-1.0**
ISP					**Sg**	**13 39 55.2**	**+0.1**
KMER	**Konya-Meram**	**0.85**	**65**	*i* P	**Pg**	**13 39 45.0**	**-0.3**
KMER				*i* S	**Sg**	**13 39 57.2**	**+0.7**
KMER				IAML		13 40 01.0	
	comp=N,3μm,0.4s						
KMER				IAML		13 40 02.0	
	comp=E,2μm,0.7s						
YVAC	**Isparta, Yalva**	**0.87**	**352**	*i* P	**Pg**	**13 39 44.5**	**-1.1**
YVAC				IAML		13 40 02.0	
	comp=E,944nm,0.6s						
YVAC				IAML		13 40 02.0	
	comp=N,898nm,0.4s						
KORT	**Korkueli**	**0.93**	**244**	*i* P	**Pg**	**13 39 45.6**	**-1.2**
KORT				IAML		13 40 03.0	
	comp=N,1μm,0.5s						
KORT				IAML		13 40 05.0	
	comp=E,1μm,0.7s						
KORT	**Korkueli**	**0.93**	**244**	PG	**Pg**	**13 39 45.4**	**-1.4**
KONT	**Konya--Tatoy**	**0.94**	**55**	*i* P	**Pg**	**13 39 46.7**	**-0.1**
KONT				*i* S	**Sg**	**13 39 58.5**	**-0.6**
KONT				IAML		13 40 07.0	
	comp=E,2μm,0.8s						
KONT				IAML		13 40 08.0	
	comp=N,1μm,0.5s						
KONT	**Konya--Tatoy**	**0.94**	**55**	PG	**Pg**	**13 39 46.8**	**-0.1**
BRDR	**BURDUR-Merkez**	**1.10**	**286**	*i* P	**Pg**	**13 39 48.3**	**-1.7**
BRDR				*i* S	**Sb**	**13 40 05.2**	**+1.2**
BRDR				IAML		13 40 08.0	
	comp=E,691nm,0.6s						
BRDR				IAML		13 40 10.0	
	comp=N,610nm,0.8s						
LADK	**Ladik-KONYA**	**1.10**	**44**	PN	**Pg**	**13 39 49.4**	**-0.7**
BASM	**Basmaki-Afyon**	**1.18**	**296**	PN	**Pg**	**13 39 50.5**	**-1.1**
KKBE	**Karaman, Kazim**	**1.25**	**98**	*i* P	**Pg**	**13 39 51.0**	**-1.8**
KKBE				*i* S	**Sg**	**13 40 07.6**	**-1.5**
KKBE				IAML		13 40 14.0	
	comp=N,452nm,0.6s						
KKBE				IAML		13 40 15.0	
	comp=E,522nm,1.1s						
KDHN	**Kadinhani**	**1.25**	**27**	*i* P	**Pg**	**13 39 51.9**	**-1.0**
KDHN				*i* S	**Sg**	**13 40 08.7**	**-0.4**
KDHN				IAML		13 40 13.0	
	comp=N,544nm,0.5s						
KDHN				IAML		13 40 13.0	
	comp=E,594nm,0.5s						
KZIL	**AFYON_Kizioren**	**1.30**	**311**	*i* P	**Pn**	**13 39 52.7**	**-0.2**
KZIL				*i* S	**Sn**	**13 40 12.1**	**+1.8**
KZIL				IAML		13 40 15.0	
	comp=N,736nm,0.7s						
KZIL				IAML		13 40 15.0	
	comp=E,589nm,0.5s						
SHUT	**Suhut-Afyon**	**1.32**	**330**	PN	**Pn**	**13 39 53.3**	**+0.2**
ELL	**Elmali**	**1.36**	**241**	PN	**Pn**	**13 39 53.1**	**-0.5**
ELL	**Elmali**	**1.36**	**241**	P	**Pg**	**13 39 55.3**	**+0.3**
ELL				S	**Sn**	**13 40 17.4**	**+5.8**
ELL	**Elmali**	**1.36**	**241**	Pn	**Pn**	**13 39 53.4**	**-0.2**
AKUM	**Antalya-Kumluc**	**1.37**	**218**	*i* P	**Pn**	**13 39 53.2**	**-0.5**
AKUM				IAML		13 40 26.0	
	comp=E,426nm,0.8s						
AKUM				IAML		13 40 31.0	
	comp=N,410nm,0.6s						
GAZI	**Gazipasa**	**1.39**	**147**	*i* P	**Pn**	**13 39 53.0**	**-0.9**
GAZI				*i* S	**Sg**	**13 40 13.1**	**-0.3**
GAZI				IAML		13 40 15.0	
	comp=E,1μm,0.3s						
GAZI				IAML		13 40 20.0	
	comp=N,1μm,0.5s						
GAZI	**Gazipasa**	**1.39**	**147**	PN	**Pn**	**13 39 53.0**	**-0.9**
ALIN	**Konya, Altinte**	**1.47**	**52**	*i* P	**Pn**	**13 39 51.8**	**-3.4**
ALIN				*i* S	**Sn**	**13 40 10.9**	**-3.5**
KRMN	**Karaman**	**1.51**	**98**	PN	**Pn**	**13 39 55.9**	**+0.2**
KIZT	**Kizilcal**	**1.52**	**14**	PN	**Pn**	**13 39 55.7**	**-0.1**
AFYO	**Afyonkarahisar**	**1.62**	**328**	*i* P	**Pn**	**13 39 58.4**	**+1.1**
AFYO				IAML		13 40 30.0	
	comp=N,1μm,0.9s						
AFYO				IAML		13 40 36.0	
	comp=E,951nm,0.9s						
CHBY	**Cihanbeyli**	**1.66**	**45**	PN	**Pn**	**13 39 57.2**	**-0.6**
CAEL	**Denizli, Camel**	**1.68**	**261**	*i* P	**Pb**	**13 40 00.0**	**+0.4**
CAEL				IAML		13 40 26.0	
	comp=N,979nm,0.8s						
CAEL				IAML		13 40 41.0	
	comp=E,845nm,0.8s						
CAME	**Cameli-Denizli**	**1.73**	**255**	PN	**Pn**	**13 39 58.0**	**-0.8**

BERE	Bereket-Mersin	1.81	125	PN	Pn	13 40 00.1	+0.3
AKAS	Kas	1.85	231	*i* P	Pb	13 40 02.9	+0.3
AKAS	Kas	1.85	231	PN	Pn	13 39 59.5	-0.9
SULT	Sultanhani-AKS	1.86	64	PN	Pn	13 40 00.5	+0.1
TEKE	Tekeli-Mersin	1.87	132	PN	Pn	13 40 00.9	+0.4
YESY	Yesilyurt	1.90	78	PN	Pn	13 40 01.3	+0.2
TEVE	Tevekalti-Mers	1.91	120	PN	Pn	13 40 01.6	+0.5
KSL	Kastellorizon	1.92	230	P	Pb	13 40 03.6	-0.1
KSL				S	Sg	13 40 29.0	-1.6
	comp=E,778nm,0.8s						
KSL	Kastellorizon	1.92	230	P	Pb	13 40 03.6	-0.1
KSL				S	Sg	13 40 30.8	+0.2
CIFT	Cifteler, Eski	1.97	352	PN	Pn	13 40 02.5	+0.5
TAVA	DENIZLI_Tavas	1.98	272	*i* P	Pn	13 40 02.4	+0.3
AUKIR	Kırka- Seyitga	1.98	340	*i* P	Pn	13 40 03.8	+1.5
AUKIR				IAML		13 40 37.0	
	comp=E,242nm,0.4s						
AUKIR				IAML		13 40 46.0	
	comp=N,196nm,0.7s						
FETY	Fethiye	2.00	248	P	Pb	13 40 04.5	-0.6
FETY				S	Sb	13 40 31.2	+1.2
FETY	Fethiye	2.00	248	*i* P	Pn	13 40 04.0	+1.6
FETY				*i* S	Sg	13 40 32.4	-0.9
FETY				IAML		13 40 39.0	
	comp=N,252nm,0.7s						
FETY				IAML		13 40 42.0	
	comp=E,142nm,0.8s						
FETY	Fethiye	2.00	248	PN	Pn	13 40 02.5	+0.1
AUSIV	SIVRIHISAR	2.03	3	*i* P	Pn	13 40 03.6	+0.7
AUSIV	SIVRIHISAR	2.03	3	PN	Pn	13 40 02.6	-0.3
SVRH	Sivrihisar-ESK	2.04	3	PN	Pn	13 40 03.6	+0.7
YORU	Yoruktepe-Mers	2.04	127	PN	Pn	13 40 03.7	+0.8
OREN	Orenkoy-Mersin	2.04	125	PN	Pn	13 40 02.9	0.0
KULU	Kulu	2.06	37	PN	Pn	13 40 02.9	-0.4
KEBE	Keben-Mersin	2.09	117	PN	Pn	13 40 04.3	+0.7
TEPK	Tepekoy-MERSIN	2.09	124	PN	Pn	13 40 03.5	-0.1
GULN	MERSIN_Gulnar	2.11	125	*i* P	Pn	13 40 05.9	+2.0
GULN				*i* S	Sb	13 40 33.4	+0.2
GULN				IAML		13 40 41.0	
	comp=E,385nm,0.4s						
GULN				IAML		13 40 41.0	
	comp=N,369nm,0.4s						
KKUL	Konya-Kulu	2.13	34	*i* P	Pn	13 40 02.9	-1.3
KKUL				*i* S	Sg	13 40 37.6	+0.3
KKUL				IAML		13 40 40.0	
	comp=E,158nm,1.1s						
KKUL				IAML		13 40 44.0	
	comp=N,198nm,0.8s						
AKKU	Akkuyu-Mersin	2.13	125	PN	Pn	13 40 04.8	+0.7
AKK2	Akkuyu-Mersin	2.15	126	PN	Pn	13 40 04.9	+0.6
KERG	Konya-Eregli	2.17	89	*i* P	Pb	13 40 07.6	-0.5
KERG				IAML		13 40 45.0	
	comp=E,286nm,0.5s						
KERG				IAML		13 40 51.0	
	comp=N,190nm,0.5s						
IKL	Isikli	2.18	122	PN	Pn	13 40 06.5	+1.8
TISA	Tisan-Mersin	2.22	123	PN	Pn	13 40 06.0	+0.7
AKSY	AKSARAY - Alti	2.24	56	*i* P	Pn	13 40 07.7	+2.0
DALY	Dalyan (Mula)	2.27	256	*i* P	Pn	13 40 07.9	+1.9
DALY				IAML		13 40 41.0	
	comp=E,254nm,0.8s						
DALY				IAML		13 40 53.0	
	comp=N,218nm,1.0s						
DALY	Dalyan (Mula)	2.27	256	PN	Pn	13 40 06.1	+0.1
SILI	Silifke-Mersin	2.28	116	PN	Pn	13 40 06.7	+0.6
USAK	Uak-Merkez	2.28	306	*i* P	Pn	13 40 06.7	+0.4
USAK				*i* S	Sn	13 40 35.7	+1.3
USAK				IAML		13 40 45.0	
	comp=N,60nm,0.5s						
USAK				IAML		13 41 10.0	
	comp=E,96nm,1.8s						
SERE	Sereflikochisa	2.30	47	PN	Pn	13 40 06.9	+0.4
KIZK	Mersin	2.39	112	*i* P	Pb	13 40 12.0	+0.3
KIZK	Mersin	2.39	112	PN	Pn	13 40 08.1	+0.4
ANDZ	Kutahya, Merke	2.40	331	*i* P	Pn	13 40 08.4	+0.5
ANDZ				IAML		13 40 57.0	
	comp=N,39nm,1.3s						
ANDZ				IAML		13 41 05.0	
	comp=E,40nm,1.2s						
AFSR	Afar-Bala (An	2.42	32	PN	Pn	13 40 08.3	+0.1
KULA	Kula-Manisa	2.43	298	P	Pn	13 40 08.4	+0.1
KULA				S	Sn	13 40 38.5	+0.6
KULA	Kula-Manisa	2.43	298	PN	Pn	13 40 08.3	0.0
ALFC	Alefka	2.45	156	P	Pn	13 40 07.2	-1.3
ALFC				S	Sn	13 40 39.5	+1.2
ALFC				AML	AML	13 40 40.2	
	comp=E,4.2nm,0.7s						
ALFC				AML	AML	13 40 40.2	
	comp=E,4.2nm,0.7s						
ALFC				AML	AML	13 40 41.7	
	comp=E,4.0nm,0.4s						
ALFC				AML	AML	13 40 41.7	
	comp=E,4.0nm,0.4s						
MANT	Manisa	2.49	297	*i* P	Pn	13 40 09.4	+0.1
MANT				IAML		13 40 43.0	
	comp=E,92nm,0.8s						
MANT				IAML		13 40 43.0	
	comp=N,70nm,0.3s						
YER	Yerkesik	2.50	265	P	Pn	13 40 11.0	+1.8
YER				S	Sn	13 40 42.3	+2.7
YER	Yerkesik	2.50	265	PN	Pn	13 40 09.8	+0.6
AKMS	Akamas	2.50	162	P	Pn	13 40 08.2	-1.1
AKMS				S	Sn	13 40 41.9	+2.3
AKMS				AML	AML	13 40 45.4	
	comp=N,3.4nm,0.6s						
AKMS				AML	AML	13 40 45.4	
	comp=N,3.4nm,0.6s						
AKMS				AML	AML	13 40 48.3	
	comp=N,4.2nm,0.6s						
AKMS				AML	AML	13 40 48.3	
	comp=N,4.2nm,0.6s						
SIMA	Simav-Kutahya	2.53	312	PN	Pn	13 40 10.4	+0.7
TVSB	Tavsanli	2.54	324	PN	Pn	13 40 09.9	0.0
MERS	Mersin	2.56	101	PN	Pn	13 40 10.8	+0.8
BORA	Eskisehir	2.58	344	*i* P	Pn	13 40 10.5	+0.2
BORA				*i* S	Sn	13 40 42.2	+0.6
BORA				IAML		13 40 47.0	
	comp=E,46nm,0.5s						
BORA				IAML		13 41 05.0	
	comp=N,39nm,0.8s						
BORA	Eskisehir	2.58	344	PN	Pn	13 40 10.6	+0.3
LEF	Lefka	2.58	152	*i* P	Pn	13 40 10.1	-0.2
LEF				IAML		13 40 43.0	
	comp=E,524nm,0.5s						
LEF				*i* S	Sn	13 40 43.1	+1.4
LEF				IAML		13 40 49.0	
	comp=N,356nm,0.7s						
LEF	Lefka	2.58	152	PN	Pn	13 40 09.7	-0.7
KIRS	Kırehir-Merke	2.63	48	*i* P	Pn	13 40 12.5	+1.4
KIRS				IAML		13 41 01.0	
	comp=E,49nm,0.6s						
KIRS				IAML		13 41 04.0	
	comp=N,45nm,0.7s						
BR231	Keskin MP Arra	2.66	24	Pn	Pn	13 40 13.3	+1.8
DEMI	Demirci	2.67	309	*i* P	Pn	13 40 11.9	+0.4
DEMI				IAML		13 40 46.0	
	comp=N,72nm,0.4s						
DEMI				IAML		13 40 47.0	
	comp=E,50nm,0.6s						
ANTO	Ankara	2.69	24	PN	Pn	13 40 12.4	+0.5
ANTO	Ankara	2.69	24		Pn	13 40 12.9	+1.1
SRCK	Saricakaya, Es	2.70	347	PN	Pn	13 40 12.2	+0.3
GULE	Gulek	2.70	92	*i* P	Pn	13 40 14.1	+2.1
GULE				IAML		13 40 59.0	
	comp=N,283nm,0.5s						
GULE				IAML		13 41 06.0	
	comp=E,386nm,0.4s						
AUBOZ	BOZOYUK	2.72	337	*i* P	Pn	13 40 13.0	+0.8
LFK	Lefkose	2.74	140	PN	Pn	13 40 12.9	+0.4
DED	Mersin	2.75	98	*i* P	Pn	13 40 15.6	+2.8
DED				IAML		13 41 03.0	
	comp=N,134nm,0.6s						
AYDN	Tasoluk	2.81	276	*i* P	Pn	13 40 13.3	-0.1
AYDN				IAML		13 40 49.0	
	comp=E,72nm,0.5s						
AYDN				IAML		13 40 50.0	
	comp=Z,53nm,0.6s						
AYDB	Zeytinkoy-Aydi	2.83	282	PN	Pn	13 40 13.5	-0.4
CMRD	Camardi-Nigde	2.87	84	PN	Pn	13 40 15.2	+0.8
ARG	Arkhangelos	2.88	247	P	Pn	13 40 15.8	+1.4
ARG	Arkhangelos	2.88	247	PN	Pn	13 40 14.8	+0.4
MLSB	Milas	2.88	269	PN	Pn	13 40 15.2	+0.7
CSS	Mathiatis	2.90	147	P	Pn	13 40 13.3	-1.5
CSS				S	Sn	13 40 49.6	+0.2
CSS				AML	AML	13 40 59.0	
	comp=Z,0.4nm,0.4s						
CSS				AML	AML	13 40 59.0	
	comp=Z,0.4nm,0.4s						
CSS				AML	AML	13 41 02.9	
	comp=Z,0.4nm,0.6s						
CSS				AML	AML	13 41 02.9	
	comp=Z,0.4nm,0.6s						
CSS	Mathiatis	2.90	147		Pn	13 40 14.5	-0.2
BR131	Keskin Array S	2.91	37		Pn	13 40 15.5	+0.6
BRTR	Keskin Array B	2.91	37	Pn	Pn	13 40 15.7	+0.8
	comp=Z,1.8nm,0.3s,baz=161,slow=24,SNR=31						
BRTR				Sn	Sn	13 40 52.2	+2.5
	comp=Z,10nm,0.3s,baz=210,slow=20,SNR=6.0						
BRTR				LR	LR	13 41 47.1	
	comp=Z,115nm,19.4s,baz=279,slow=49						
BRTR	Keskin Array B	2.91	37		Pn	13 40 15.4	+0.6
EREN	Erenkoy	2.92	129	*i* P	Pn	13 40 18.3	+3.4
EREN				IAML		13 41 22.0	
	comp=N,403nm,0.8s						
EREN				IAML		13 41 30.0	
	comp=E,364nm,0.8s						
EREN	Erenkoy	2.92	129	PN	Pn	13 40 15.3	+0.4
KARA	Karaisali	2.92	92	PN	Pn	13 40 15.7	+0.7
YUVA	Yuva-Kibriscik	2.99	4	PN	Pn	13 40 16.9	+0.9
BILE	Bilecik/Merkez	2.99	337	*i* P	Pn	13 40 17.2	+1.1
BILE				*i* S	Sn	13 40 54.3	+2.4
BILE				IAML		13 40 55.0	
	comp=N,44nm,0.5s						
BILE				IAML		13 41 13.0	
	comp=E,60nm,0.9s						
MVOU	Mavrovouni	3.00	142	P	Pn	13 40 15.9	-0.1
MVOU				S	Sn	13 40 50.9	-0.9
MVOU				AML	AML	13 40 53.0	
	comp=E,1.2nm,0.8s						
MVOU				AML	AML	13 40 53.0	
	comp=E,1.2nm,0.8s						
MVOU				AML	AML	13 40 59.5	
	comp=E,1.3nm,0.5s						
MVOU				AML	AML	13 40 59.5	
	comp=E,1.3nm,0.5s						
ASGA	Asgata	3.02	150	P	Pb	13 40 21.1	-1.3
ASGA				S	Sb	13 40 58.5	-0.6
ASGA				AML	AML	13 41 03.6	
	comp=E,1.8nm,0.8s						
ASGA				AML	AML	13 41 03.6	
	comp=E,1.8nm,0.8s						
ASGA				AML	AML	13 41 07.1	
	comp=E,1.5nm,1.0s						
ASGA				AML	AML	13 41 07.1	
	comp=E,1.5nm,1.0s						
KIBS	BOLU	3.03	7	*i* P	Pn	13 40 18.0	+1.4
CAVI	Cavuskoy	3.04	337	PN	Pn	13 40 17.1	+0.4
MDUB	Mudurnu	3.06	357	PN	Pn	13 40 17.4	+0.4
MDUB	Mudurnu	3.06	357		Pn	13 40 18.0	+1.0
GULT	Gulveren	3.10	347	PN	Pn	13 40 18.7	+1.2
DAT	Datca	3.13	259	P	Pn	13 40 19.8	+1.9
DAT				S	Sn	13 40 58.6	+3.4
DAT	Datca	3.13	259	*i* P	Pn	13 40 18.9	+1.0
DAT				*i* S	Sn	13 40 54.4	-0.8
DAT				IAML		13 41 01.0	
	comp=N,62nm,0.4s						
DAT				IAML		13 41 33.0	
	comp=E,66nm,1.4s						
DAT	Datca	3.13	259	PN	Pn	13 40 18.2	+0.3
DURS	Dursunbey	3.17	315	*i* P	Pn	13 40 19.2	+0.7
DURS				*i* S	Sn	13 40 56.3	+0.1
DURS				IAML		13 41 01.0	
	comp=N,68nm,0.5s						
DURS				IAML		13 41 01.0	
	comp=E,65nm,0.7s						
AKO	Adana	3.23	88	*i* P	Pb	13 40 27.1	+1.1
DELI	KIRIKKALE	3.25	37	*i* P	Pn	13 40 20.4	+0.7
DELI				IAML		13 41 01.0	
	comp=N,37nm,0.8s						
DELI				IAML		13 41 26.0	
	comp=E,34nm,1.1s						
BODT	Bodrum	3.28	265	P	Pn	13 40 21.1	+1.2
BODT	Bodrum	3.28	265	PN	Pn	13 40 20.5	+0.6
YURE	YUREGIR	3.44	98	*i* P	Pb	13 40 29.9	+0.3
BCAM	Yenicaga	3.44	9	*i* P	Pn	13 40 23.2	+1.0
NIS1	Nisyros Isl.	3.47	258	PN	Pn	13 40 23.5	+0.9
YLV	Yalova	3.52	334	PN	Pn	13 40 23.7	+0.3
BALB	Balikesir	3.54	310	Pn	Pn	13 40 24.7	+1.1
BLCB	Balcova	3.58	287	P	Pn	13 40 24.0	0.0
SMG	Samos	3.63	276	P	Pn	13 40 25.1	+0.3
SMG				S	Sn	13 41 08.8	+1.2
ASUZ	Hatay-Arsuz	3.69	106	*i* P	Pn	13 40 29.1	+3.5
GAZ	Gaziantep	4.64	91	Pn	Pn	13 40 40.9	+2.1
ARMN	Kirklareli, Me	5.40	327	*i* P	Pn	13 40 49.3	+0.2
ALN	Alexandroupoli	5.42	312	Pn	Pn	13 40 50.3	+0.9
MMAI	Mount Meron Ar	5.47	142	Pn	Pn	13 40 51.9	+1.8
	comp=E,8.1nm,0.3s,baz=328,slow=12,SNR=7.9						
MMAI				Sn	Sn	13 41 56.1	+3.0
	comp=E,4.7nm,0.3s,baz=309,slow=25,SNR=2.7						
IDI	Anoyia	5.66	250	Pn	Pn	13 40 54.4	+1.7
	comp=E,1.9nm,0.3s,baz=75,slow=12,SNR=5.5						
IDI				Sn	Sn	13 41 57.2	-0.4
	comp=E,1.1nm,0.3s,baz=78,slow=12,SNR=3.4						
ASF	Jabal al Asfar	6.91	137	Pn	Pn	13 41 11.8	+1.9
	comp=E,0.8nm,0.3s,baz=315,slow=7.1,SNR=2.9						
ASF				Sn	Sn	13 42 33.8	+5.3
	baz=111,slow=23,SNR=1.5						
TIRR	Tirgusor	7.39	343	⇓P	Pn	13 41 17.9	+1.5
TIRR				⇑S	Sn	13 42 38.0	-2.1
TIRR	Tirgusor	7.39	343		Pn	13 41 17.4	+1.0
TPGR	Topolog	7.77	344	⇓P	Pn	13 41 22.7	+1.1
TPGR				⇑S	Sn	13 42 48.1	-1.4
CFR	Carcaliu	8.14	344	⇑P	Pn	13 41 27.1	+0.5
EIL	Elat	8.27	158	Pn	Pn	13 41 28.4	-0.1
	comp=E,1.2nm,0.3s,baz=182,slow=7.0,SNR=5.9						
EIL				Sn	Sn	13 43 01.7	-0.1
	comp=E,1.1nm,0.3s,baz=68,slow=19,SNR=2.5						
MLR	Muntele Rosu	9.05	335	P	Pn	13 41 31.6	-7.7
VOIR		9.33	331	P	Pn	13 41 32.1	-11
DIVS	Divibare	10.92	311	Pn	Pn	13 42 07.0	+2.1
BURAR	Bucovina Array	11.17	338		Pn	13 42 07.5	-0.7
TIP	Timpagrande	11.64	283	Pn	Pn	13 42 16.1	+1.4
AKASG	Malin Array Be	13.38	354	Pn	Pn	13 42 40.4	+2.1
	comp=E,0.5nm,0.3s,baz=174,slow=9.7,SNR=2.6						
AKASG	Malin Array Be	13.38	354		Pn	13 42 38.9	+0.6
FINES	FINESS Array B	24.29	354	P	P	13 44 44.9	-0.7
	comp=E,0.9nm,0.5s,baz=159,slow=8.9,SNR=6.7						
HFS	Hagfors	25.39	339	P	P	13 44 56.3	+0.7
	comp=E,1.7nm,0.8s,baz=135,slow=14,SNR=2.3						
ESDC	Sonseca Array	27.64	286	P	P	13 45 17.8	+1.6
	comp=E,1.5nm,1.0s,baz=80,slow=11,SNR=4.4						
ESDC	Sonseca Array	27.64	286	IAmb	IAmb	13 45 21.2	
	comp=Z,5.5nm,1.4s						
ARCES	ARCESS Array B	32.34	356	P	P	13 45 57.0	-0.5
	comp=Z,2.3nm,0.8s,baz=158,slow=8.3,SNR=4.1						
ARCES	ARCESS Array B	32.34	356	IAmb	IAmb	13 45 57.4	
	comp=Z,18nm,1.4s						
KURK	Kurchatov	35.83	53	P	P	13 46 28.1	+0.2
KURK				IAmb	IAmb	13 46 34.4	
	comp=Z,3.9nm,1.2s						
TORD	Torodi Ar. Bea	35.85	235	P	P	13 46 27.7	-0.7
	comp=Z,1.6nm,0.9s,baz=20,slow=9.9,SNR=6.2						
TORD	Torodi Ar. Bea	35.85	235	IAmb	IAmb	13 46 28.9	
	comp=Z,2.6nm,1.2s						
MK31	Makanchi Array	38.32	59	P	P	13 46 48.0	-1.1
MKAR	Makanchi Array	38.32	59	P	P	13 46 49.2	+0.1
	comp=Z,0.6nm,0.7s,baz=276,slow=9.3,SNR=7.8						
MKAR	Makanchi Array	38.32	59	P	P	13 46 48.4	-0.7
ZALV	Zalesovo Beam	39.79	48	P	P	13 46 59.5	-1.8
	comp=Z,0.6nm,0.3s,baz=266,slow=6.9,SNR=3.2						
DBIC	Dimbokro	44.95	236	P	P	13 47 42.8	-1.0
DBIC				IAmb	IAmb	13 47 52.5	
	comp=Z,12nm,1.4s						
SONM	Songino Array	54.14	53	P	P	13 48 53.4	-0.2
	comp=Z,0.4nm,0.6s,baz=291,slow=7.8,SNR=2.3						
CMAR	Chiang Mai Arr	61.38	88	P	P	13 49 44.5	-0.3
	comp=Z,0.4nm,0.4s,baz=297,slow=8.0,SNR=4.5						
RER	Riviere de l'E	62.61	154	P	P	13 49 52.3	-0.6
BMAR	Burnt Mountain	75.44	358	P	P	13 51 10.1	-2.0
DAWY	Dawson	78.60	356	P	P	13 51 29.5	-0.4
DAWY				IAmb	IAmb	13 51 58.2	
	comp=Z,2.7nm,1.4s						
BCAR	Beaver Creek A	79.72	357	P	P	13 51 36.3	+0.3
MENT	Mentasta	79.92	358	P	P	13 51 36.5	-0.6
MENT				IAmb	IAmb	13 51 57.3	
	comp=Z,6.4nm,1.4s						

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*FUNV **23** 13:41:12.6,8°.27N×71°.37W,h5^{km},MW3.1*

ISC 23 13:41:11.8±0.8,**8°.35N**±0°.06×**71°.34W**±0°.04,**h10**^{km}**,n10,** σ1^{s}**24**/19,**Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	Socops	0.48	98	*e*P	Pb	13 41 22.0	-0.5
SOCV				*e*S	Sb	13 41 29.9	+0.4
SOCV	Socops	0.48	98	*e*P	Pb	13 41 21.9	-0.5
SOCV				*e*S	Sb	13 41 30.0	+0.4
SDV	Santo Domingo	0.88	53	*e*P	Pg	13 41 27.2	-1.5
SDV				*e*S	Sg	13 41 38.9	-1.3
CAPV	Capacho	1.08	243	*e*P	Pg	13 41 31.4	-1.2
CAPV				*e*S	Sg	13 41 46.0	-0.8
PAMC	Pamplona, Colo	1.68	233	*e*P	Pb	13 41 42.6	-0.6
PAMC				*e*S	Sg	13 42 06.6	+0.5
PAMC				*i*		13 42 08.2	
	comp=Z,26nm,0.2s						
BARC	Barichara	2.53	226	*e*P	Pb	13 41 57.1	-0.4
BARC				*e*S	Sg	13 42 31.2	-2.0
BARC				*i*		13 42 35.1	
	comp=Z,8.8nm,0.6s						
SIQV	Siquisique	2.73	33	*e*P	Pn	13 41 57.3	+1.5
SIQV				*e*S	Sn	13 42 30.8	+1.8
RUSC	La Rusia	3.00	215	*e*P	Pn	13 42 02.0	+2.1
BAUV	El Baul	3.31	80	*e*P	Pn	13 42 04.9	+1.1
BAUV				*e*S	Sn	13 42 43.9	+0.6
MONV	Montecano	3.82	21	*e*P	Pn	13 42 11.9	+1.1
MONV				*e*S	Sn	13 42 56.2	+0.3

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*IDC **23** 13:45:39.0±1.1,52°.61S×22°.15E,h0^{km},mb3.8/5, mb1 3.9/5,mb1mx3.6/28,mbtmp3.8/5,MS3.5/2,Ms1 3.5/2, ms1mx2.9/30,Error ellipse: s-maj=54.3km s-min=25.8km az=83.0*

ISC 23 13:45:40.2±1.0,**52°.6S**±0°.2×**21°.8E**±0°.3,**h10**^{km}**,n14,** σ1^{s}**33**/11,**mb3.8**/5,**South of Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNAA	Sanae	21.96	201	P	P	13 50 34.7	+0.9
	6.5nm,0.8s,baz=36,slow=8.9,SNR=20						
SNAA				S	S	13 54 23.5	-12
	0.6nm,0.8s,baz=138,slow=23,SNR=1.3						
VNA2	Neumayer--Watz	22.52	205	P	P	13 50 40.6	+0.9
	baz=39,slow=10						
VNA1	Neumayer--Stat	22.58	206	P	P	13 50 37.0	-3.2
VNA3	Neumayer Olymp	23.30	205	P	P	13 50 48.3	+0.5
QSPA	South Pole Qui	37.59	180	P	P	13 52 55.4	+0.8
	6.1nm,0.9s,baz=235,slow=5.5,SNR=16						
QSPA				LR	LR	14 07 00.9	
	comp=Z,59nm,20.4s,baz=246,slow=34						
VNDA	Vanda	47.77	169	P	P	13 54 16.9	+0.1
	0.4nm,0.8s,baz=223,slow=9.7,SNR=1.6						
MBAR	Mbarara	52.40	11	LR	LR	14 15 01.5	
	comp=Z,51nm,20.8s,baz=172,slow=34						
H10S2	ASCENSION HYDR	52.61	312	T	T	14 52 15.0	
	baz=152						
H10S3	ASCENSION HYDR	52.62	312	T	T	14 52 14.0	
	baz=68						
TORD	Torodi Ar. Bea	67.76	339	P	P	13 56 38.4	+0.5
	0.3nm,0.4s,baz=183,slow=4.9,SNR=3.2						
ASAR	Alice Springs	83.92	121	P	P	13 58 09.6	-0.8
	0.5nm,0.9s,baz=212,slow=4.4,SNR=3.1						
TIXI	Tiksi	143.98	31	PKP	PKPdf	14 05 14.5	+0.3
	1.5nm,0.7s,baz=273,slow=2.7,SNR=5.3						
PDAR	Pinedale Array	146.38	273	PKPbc	PKPab	14 05 21.4	-0.3
	0.7nm,0.8s,baz=130,slow=1.4,SNR=4.5						
NVAR	Mina Array Bea	149.07	259	PKPbc	PKiKP	14 05 29.1	-0.5
	0.8nm,0.9s,baz=140,slow=4.4,SNR=4.5						

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*IDC **23** 13:55:39.0±0.7,52°.95S×21°.99E,h0^{km},mb4.2/9, mb1 4.3/9,mb1mx3.9/32,mbtmp4.2/9,MS3.6/13, Ms1 3.5/13,ms1mx3.4/24,Error ellipse: s-maj=30.4km s-min=17.6km az=81.0*

*NEIC **23** 13:55:40.9±1.9,52°.99S±0°.08×22°.0E±0°.2,h10^{km}±1^{km}, mb4.7/10,Error ellipse: s-maj=27.9km s-min=7.0km az=64.0*

ISC 23 13:55:40.5±0.7,**53°.0S**±0°.1×**22°.0E**±0°.2,**h10**^{km}**,n44,** σ1^{s}**02**/26,**mb4.5**/9,**MS3.6**/13,**1D,South of Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SYO	Syowa Base	18.08	159	⇓*e*Pn	Pn	13 59 49.4	-2.0
SUR	Sutherland	20.60	357	P	P	14 00 20.6	+0.9
	9.1nm,0.9s,baz=266,slow=5.2,SNR=4.1						
SUR				LR	LR	14 06 33.8	
	comp=Z,272nm,18.5s,baz=175,slow=32						
SUR	Sutherland	20.60	357	IAmb	IAmb	14 00 41.1	
	comp=Z,34nm,1.4s						
SNAA	Sanae	21.70	201	P	P	14 00 32.6	+1.3
	comp=Z,14nm,0.9s,baz=50,slow=9.4,SNR=44						
SNAA				LR	LR	14 06 42.0	
	comp=Z,267nm,21.9s,baz=9.5,slow=30						
SNAA	Sanae	21.70	201	P	P	14 00 32.6	+1.3
SNAA				IAmb	IAmb	14 00 41.3	
	comp=Z,54nm,1.4s						
VNA2	Neumayer--Watz	22.28	205	P	P	14 00 38.5	+1.1
VNA1	Neumayer--Stat	22.34	206	P	P	14 00 40.0	+2.0
VNA3	Neumayer Olymp	23.07	206	P	P	14 00 46.3	+0.6
MAW	Mawson	24.38	143	LR	LR	14 08 26.4	
	comp=Z,86nm,21.4s,baz=248,slow=31						
BOSA	Boshof	24.45	7	LR	LR	14 08 44.5	
	comp=Z,232nm,20.4s,baz=185,slow=32						
LBTB	Lobatse	28.05	7	LR	LR	14 10 43.9	
	comp=Z,160nm,21.9s,baz=191,slow=32						
QSPA	South Pole Qui	37.26	180	P	P	14 02 52.5	+0.5
	comp=Z,11nm,0.8s,baz=241,slow=4.0,SNR=47						
QSPA	South Pole Qui	37.26	180	P	P	14 02 52.4	+0.4
QSPA				IAmb	IAmb	14 02 53.7	
	comp=Z,14nm,0.8s						
VNDA	Vanda	47.41	169	P	P	14 04 14.3	0.0
	comp=Z,1.8nm,1.3s,baz=222,slow=8.2,SNR=5.0						
VNDA				LR	LR	14 23 25.8	
	comp=Z,84nm,19.7s,baz=212,slow=35						
VNDA	Vanda	47.41	169	P	P	14 04 13.8	-0.4
H10S2	ASCENSION HYDR	52.94	312	T	T	15 02 16.4	
	baz=152						
H10S3	ASCENSION HYDR	52.96	312	T	T	15 02 16.0	
	baz=68						
KMBO	Kilima Mbogo	53.20	19	LR	LR	14 26 33.0	
	comp=Z,71nm,19.4s,baz=110,slow=35						
TRQA	Tornquist	57.39	249	P	P	14 05 28.7	-0.1
PLCA	Paso Flores	60.19	241	P	P	14 05 47.9	-0.4
	comp=Z,2.6nm,0.9s,baz=134,slow=6.4,SNR=7.1						
PLCA				LR	LR	14 28 40.1	
	comp=Z,25nm,18.0s,baz=173,slow=33						
PLCA	Paso Flores	60.19	241	IAmb	IAmb	14 06 11.2	
	comp=Z,6.8nm,1.4s						
CPUP	Villa Florida	63.14	261	LR	LR	14 28 07.8	
	comp=Z,22nm,21.6s,baz=160,slow=31						
DBIC	Dimbokro	63.64	330	LR	LR	14 26 27.0	
	comp=Z,44nm,21.4s,baz=160,slow=29						
H01W2	Cape Leeuwin H	64.21	114	T	T	15 16 35.9	
	baz=221						
H01W3	Cape Leeuwin H	64.22	114	T	T	15 16 36.9	
	baz=221						
H01W1	Cape Leeuwin H	64.22	114	T	T	15 16 43.9	
	baz=221						
MT02	Curacav	65.99	246	P	P	14 06 27.0	+0.1
TORD	Torodi Ar. Bea	68.13	339	P	P	14 06 40.1	-0.3
	comp=Z,1.4nm,0.8s,baz=185,slow=4.8,SNR=7.3						
TORD	Torodi Ar. Bea	68.13	339	P	P	14 06 38.5	-1.9
KOWA	Kowa	70.83	333	P	P	14 06 57.6	+0.4
	comp=Z,1.4nm,0.5s,baz=137,slow=7.5,SNR=5.3						
KOWA	Kowa	70.83	333	IAmb	IAmb	14 07 07.8	
	comp=Z,7.7nm,1.3s						
PB08	IPOC Station P	74.87	257	P	P	14 07 20.0	-1.8
PB08				IAmb	IAmb	14 07 22.6	
	comp=Z,5.0nm,0.8s						
SAML	Samuel	80.03	268	P	P	14 07 50.3	+0.1
STKA	Stephens Creek	80.53	131	P	P	14 07 53.4	+0.6
	comp=Z,1.7nm,0.9s,baz=101,slow=6.9,SNR=3.5						
ASAR	Alice Springs	83.62	121	P	P	14 08 09.1	0.0
	comp=Z,1.4nm,0.9s,baz=208,slow=5.0,SNR=9.6						
BRTR	Keskin Array B	92.87	9	LR	LR	14 51 52.2	
	comp=Z,13nm,18.3s,baz=181,slow=36						
CMAR	Chiang Mai Arr	96.94	69	LR	LR	14 46 17.3	
	comp=Z,11nm,19.2s,baz=230,slow=31						
KBZ	Khabaz	97.98	15	LR	LR	14 55 44.6	
	comp=Z,30nm,18.1s,baz=194,slow=37						
SONM	Songino Array	123.27	53	PKP	PKPdf	14 14 36.8	+0.1
	comp=Z,0.8nm,0.7s,baz=236,slow=2.6,SNR=4.1						
TIXI	Tiksi	144.19	31	PKP	PKPbc	14 15 12.8	-0.2

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
	comp=Z,6.8nm,0.9s,baz=325,slow=1.9,SNR=17						
PDAR	Pinedale Array	146.54	272	PKPbc	PKPdf	14 15 20.7	+0.6
	comp=Z,1.1nm,0.8s,baz=116,slow=3.4,SNR=9.1						
NVAR	Mina Array Bea	149.15	258	PKPbc	PKPbc	14 15 27.9	-0.8
	comp=Z,1.8nm,0.9s,baz=138,slow=4.4,SNR=11						
PETK	Petropavlovsk-	153.68	72	PKPbc	PKiKP	14 15 39.0	+0.5
	comp=Z,3.8nm,1.0s,baz=35,slow=3.6,SNR=5.9						
YKA	Yellowknife Ar	155.42	310	PKPab	PKPab	14 15 59.0	+0.6
	comp=Z,1.7nm,0.7s,baz=98,slow=6.7,SNR=6.3						

FUNV ***23*** *14:15:15.0, 8°.45N×71°.43W, h1^{km}, MW3.4*

ISC 23 14:15:13.8±1.3**, 8°.54N**±0°.03×**71°.39W**±0°.02**, h2**^{km}±11^{km}**, n22,** σ**1**^{s}.**36**/44**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.59	115	eP	Pg	14 15 25.8	+0.7
SOCV				eS	Sg	14 15 33.7	+0.9
SOCV	Socops	0.59	115	eP	Pb	14 15 26.8	-0.1
SOCV				eS	Sb	14 15 35.2	-0.5
SDV	Santo Domingo	0.83	65	eP	Pb	14 15 31.1	0.0
SDV				eS	Sb	14 15 42.5	-0.2
CAPV	Capacho	1.13	234	eP	Pg	14 15 35.0	-0.5
CAPV				eS	Sg	14 15 48.9	-1.3
PAMC	Pamplona, Colo	1.76	227	eP	Pb	14 15 47.2	+0.1
PAMC				eS	Sg	14 16 11.4	+1.0
MCQV	Machiques	1.88	323	eP	Pn	14 15 48.3	+1.2
MCQV				eS	Sb	14 16 13.4	+0.5
OCAC	Ocana	1.93	261	eP	Pn	14 15 48.8	+0.9
OCAC				eS	Sn	14 16 13.5	+0.7
TAMC	Tame, Arauca	2.12	191	eP	Pb	14 15 52.3	-0.8
TAMC				eS	Sg	14 16 22.6	+0.4
LL6C	La Loma 6 Bece	2.20	303	eP	Pn	14 15 51.0	-0.5
LL6C				eS	Sn	14 16 20.4	+1.0
SIQV	Siquisique	2.62	37	eP	Pb	14 15 59.9	-1.7
SIQV				eS	Sn	14 16 31.6	+2.0
BARC	Barichara	2.62	223	eP	Pn	14 15 59.4	+2.0
BARC				eS	Sg	14 16 36.8	-1.4
SMLC	San Martn de	2.66	276	eP	Pn	14 15 58.0	+0.2
SMLC				eS	Sb	14 16 33.8	-1.6
BRRC	Barranca, Sant	2.70	238	eP	Pb	14 16 01.8	-1.2
BRRC				eS	Sb	14 16 38.4	+1.8
RUSC	La Rusia	3.12	213	eP	Pn	14 16 05.7	+1.2
RUSC				eS	Sn	14 16 43.8	+1.2
BAUV	El Baul	3.34	83	eP	Pn	14 16 08.8	+1.7
BAUV				eS	Sn	14 16 47.0	-0.4
ZARC	Zaragoza, Cauc	3.58	253	eP	Pn	14 16 10.7	+0.1
ZARC				eS	Sb	14 17 03.2	+1.1
MONV	Montecano	3.67	22	eP	Pn	14 16 13.2	+1.5
MONV				eS	Sn	14 16 55.7	+0.1
SMRC	Santa Marta, M	3.82	313	eP	Pn	14 16 12.7	-1.1
SMRC				eS	Sn	14 16 57.7	-1.6
BENV	Beln	4.00	69	eP	Pn	14 16 17.9	+1.5
BENV				eS	Sn	14 17 03.4	-0.6
MOTC	Monteria, Cord	4.23	274	eP	Pn	14 16 20.6	+1.2
MOTC				eS	Sn	14 17 10.9	+1.5
PAYV	Puerto Ayacuch	4.83	130	eP	Pn	14 16 26.8	-0.8
PAYV				eS	Sn	14 17 20.1	-4.2
MERV	Las Mercedes	5.08	82	eP	Pn	14 16 32.1	+0.9
MERV				eS	Sn	14 17 28.2	-2.4

DJA ***23*** *14:15:46.5±0.1, 9°S±2°×12°2E±°, h173^{km}±2^{km}, M4.6/31, mB5.2/13, mb4.5/31, MLv4.7/22, Mw(mB)4.6/13*

NEIC ***23*** *14:15:47.0±1.9, 8°.56S±0°.08×122°.02E±0°.09, h172^{km}±4^{km}, mb4.5/28, Error ellipse: s-maj=14.4km s-min=8.8km az=55.0*

IDC ***23*** *14:15:47.7±1.0, 8°.40S×122°.25E, h188^{km}±9^{km}, mb3.7/8, mb1 3.9/12, mb1mx3.6/35, mbtmp4.3/12, Error ellipse: s-maj=24.5km s-min=7.9km az=61.0*

ISC 23 14:15:46.2±0.5**, 8°.64S**±0°.04×**122°.06E**±0°.05**, h175**^{km}±5^{km}**, n129,** σ**1**^{s}.**52**/140**, mb4.5**/33**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMRI	Maumere	0.17	88	P	Pn	14 16 10.3	+0.9
MMRI				S	Sn	14 16 27.6	+0.5
MMRI	Maumere	0.17	88	Pn	Pn	14 16 10.2	+0.8
MMRI				Sn	Sn	14 16 27.1	0.0
MMRI	Maumere	0.17	88	P	Pn	14 16 09.9	+0.5
EDFI	Ende, Flores	0.38	254	P	Pn	14 16 11.0	+1.0
EDFI				S	Sn	14 16 28.7	+0.4
BASI	Baing, Sumba	2.15	223	P	Pn	14 16 24.7	+0.2
BASI				S	Sn	14 16 53.9	-0.3
BATI	Baumata	2.22	135	P	Pn	14 16 27.3	+1.9
	273nm,0.3s,baz=313,slow=1.3,SNR=152						
BATI				S	Sn	14 16 54.1	-1.6
	293nm,0.3s,baz=149,slow=1.0,SNR=9.9						
BATI	Baumata	2.22	135	P	Pn	14 16 27.2	+1.9
SOEI	Soe	2.44	117	P	Pn	14 16 29.5	+1.5
SOEI	Soe	2.44	117	Pn	Pn	14 16 29.6	+1.5
WBSI	Waikabubak, Su	2.82	249	P	Pn	14 16 32.2	-0.2
BSSI	Bau Bau, Buton	2.93	328	P	Pn	14 16 33.9	+0.1
BKSI	Bulukumba	3.82	330	P	Pn	14 16 44.9	+0.1
PLAI	Plampang	4.24	267	P	Pn	14 16 50.7	+0.5
PLAI	Plampang	4.24	267	P	Pn	14 16 51.0	+0.8
KAPI	Kappang	4.27	327	P	Pn	14 16 50.3	-0.3
	7.0nm,0.3s,baz=158,slow=9.4,SNR=15						
KAPI				S	Sn	14 17 42.6	+1.5
	5.4nm,0.3s,baz=280,slow=12,SNR=6.4						
KAPI	Kappang	4.27	327	Pn	Pn	14 16 50.8	+0.2
KAPI	Kappang	4.27	327	P	Pn	14 16 52.2	+1.6
BNSI	Bone	4.64	335	P	Pn	14 16 55.9	+0.5
TWSI	Taliwang, Sumb	5.12	269	P	Pn	14 17 01.7	+0.1
SPSI	Sidrap Palu	5.17	334	P	Pn	14 17 02.6	+0.3
	0.1nm37nm,0.8s						
TTSI	Tana Toraja	5.99	338	P	Pn	14 17 14.2	+1.2
	0.2nm502nm67nm,0.8s						
DNP	Denpasar	6.77	269	P	Pn	14 17 23.1	-0.2
SRBI	Singaraja	6.80	274	P	Pn	14 17 23.2	-0.5
	0.7nm3µm127nm,0.6s						
IGBI	Denpasar	6.84	268	P	Pn	14 17 22.9	-1.3
LUWI	Luwuk	7.58	5	P	Pn	14 17 34.6	+0.6
SANI	Sanana	7.63	31	P	Pn	14 17 35.4	+0.8
	0.1nm14nm,0.6s						
SANI	Sanana	7.63	31	P	Pn	14 17 35.5	+0.8
APSI	Ampana	7.69	357	P	Pn	14 17 36.1	+0.6
	0.1nm497nm30nm,1.8s						
ABJI	Asem Bagus	7.79	276	P	Pn	14 17 37.2	+0.4
	0.3nm83nm,0.5s						
JAGI	Jajag, Banyuwa	7.82	271	P	Pn	14 17 34.3	-2.9
JAGI	Jajag, Banyuwa	7.82	271	Pn	Pn	14 17 34.0	-3.2
JAGI	Jajag, Banyuwa	7.82	271	P	Pn	14 17 36.8	-0.4
AAI	Ambon	7.83	51	P	Pn	14 17 38.9	+1.5
	0.2nm32nm,0.5s						
KMMI	Kalianget	8.17	281	P	Pn	14 17 43.1	+1.3
	100nm,1.1s						
BLJI	Banyuglugur	8.43	275	P	Pn	14 17 46.0	+0.8
	54nm,0.7s						
GMJI	Gumukmas	8.53	272	P	Pn	14 17 44.7	-1.9
	2µm43nm,0.9s						
MSAI	Masohi	8.62	53	P	Pn	14 17 49.8	+2.1
	216nm5.3nm,0.7s						
MRSI	Marisa	9.06	359	P	Pn	14 17 54.2	+0.7
	46nm,1.1s						
MPSI	Mapaga	9.18	346	P	Pn	14 17 56.9	+1.8
	4.9nm,0.8s						
GTOI	Gorontalo	9.27	6	P	Pn	14 17 58.3	+2.1
	13nm,1.0s						
DRS	Darwin Rock St	9.47	114	P	Pn	14 17 58.6	-0.3
	77nm,0.6s						
KNRA	Kununurra	9.58	138	Pn	Pn	14 17 59.4	-0.9
KNRA	Kununurra	9.58	138	P	Pn	14 18 00.0	-0.3
LBMI	Labuha	9.62	35	P	Pn	14 18 02.3	+1.4
	19nm,1.0s						
TOLI2	Tolitoli	9.77	352	Pn	Pn	14 18 03.1	+0.2
TOLI2	Tolitoli	9.77	352	P	Pn	14 18 04.6	+1.7
MTN	Manton Dam	9.84	116	Pn	Pn	14 18 02.9	-0.9
MTN	Manton Dam	9.84	116	P	Pn	14 18 03.3	-0.5
	160nm,0.4s						
FITZ	Fitzroy Crossi	10.02	160	P	Pn	14 18 06.4	+0.3
	5.3nm,0.3s,baz=0.3,slow=9.5,SNR=102						
FITZ				S	Sn	14 19 54.5	-3.1
	10nm,0.3s,baz=99,slow=8.1,SNR=8.6						
PCJI	Pacitan	10.78	272	P	Pn	14 18 15.0	-1.0
	2µm69nm,0.6s						
KDU	Kakadu	10.99	112	P	Pn	14 18 18.0	-0.8
	57nm,0.6s						
UGM	Wanagama	11.44	273	P	Pn	14 18 23.5	-1.2
	83nm,2.0s						
UGM	Wanagama	11.44	273	Pn	Pn	14 18 23.6	-1.0
FAKI	Fak Fak	11.62	61	P	Pn	14 18 25.7	-1.2
	1µm55nm,0.7s						
FAKI	Fak Fak	11.62	61	Pn	Pn	14 18 24.8	-2.1
FAKI	Fak Fak	11.62	61	P	Pn	14 18 25.8	-1.1
SWI	Sorong	11.98	50	P	Pn	14 18 31.5	-0.1
	49nm,0.8s						
SIJI	Sorong	11.98	50	P	Pn	14 18 29.7	-2.0
	7.8nm,0.3s,baz=247,slow=12,SNR=28						
SIJI				S	S	14 20 51.7	-0.4
	2.6nm,0.3s,baz=85,slow=21,SNR=7.1						
PSA00	Pilbara Seismi	13.03	189	Pn	Pn	14 18 45.1	+0.2
PSA00	Pilbara Seismi	13.03	189	Pn	Pn	14 18 45.2	+0.2
PSA00	Pilbara Seismi	13.03	189	P	Pn	14 18 45.6	+0.6
	30nm,0.6s						
KPJI	Karang Pucung	13.07	275	P	Pn	14 18 45.3	-0.2
	20nm,0.4s						
CMJI	Cimerak	13.50	273	P	Pn	14 18 47.4	-3.5
	26nm,1.0s						
SBUM	Sibu	14.75	318		P	14 19 08.0	-0.1
KSM	Kuching	15.43	310	P	P	14 19 16.5	+0.8
KSM				IAmb	IAmb	14 19 19.1	
	comp=Z,8.8nm,0.9s						
KKM	Kota Kinabalu	15.71	338	P	P	14 19 19.8	+1.0
KKM				IAmb	IAmb	14 19 20.5	
	comp=Z,24nm,0.9s						
BAKI	Biak	15.82	63	P	Pn	14 19 19.1	-0.6
GIRL	Giralia	15.82	207		P	14 19 22.6	+2.8
WRA	Warramunga Arr	16.35	135	P	Pn	14 19 26.8	+0.8
	comp=Z,2.9nm,0.3s,baz=301,slow=11,SNR=127						
WRA				S	S	14 22 20.1	-6.9
	comp=Z,2.9nm,0.3s,baz=305,slow=24,SNR=10						
WRAB	Tennant Creek	16.35	135	P	Pn	14 19 26.8	+0.8
WRAB				IAmb	IAmb	14 19 28.7	
	comp=Z,13nm,0.7s						
WRAB	Tennant Creek	16.35	135	P	Pn	14 19 26.7	+0.6
KASI	Kota Agung	17.70	279	P	P	14 19 38.9	-1.7
	comp=Z,14nm,0.9s						
AS31	Alice Springs	18.76	144	P	Pn	14 19 54.2	-0.4
AS31				IAmb	IAmb	14 20 04.8	
	comp=Z,9.1nm,0.5s						
ASAR	Alice Springs	18.76	144	P	Pn	14 19 54.1	-0.4
	comp=Z,1.5nm,0.3s,baz=327,slow=12,SNR=140						
ASAR				S	S	14 23 17.6	+1.2
	comp=Z,0.3nm,0.3s,baz=325,slow=22,SNR=8.7						
ASAR				ScP	ScP	14 27 29.2	-2.3
	comp=Z,0.1nm,0.3s,baz=340,slow=2.1,SNR=5.7						
ASAR	Alice Springs	18.76	144	P	Pn	14 19 54.4	-0.2
QIS	Mount Isa	20.67	127	P	P	14 20 14.1	+1.4
	comp=Z,69nm,0.5s						
MORW	Morawa	21.09	195	P	P	14 20 18.4	+1.4
MORW				IAmb	IAmb	14 20 35.9	
	comp=Z,19nm,0.6s						
COEN	Coen	21.36	106	P	P	14 20 20.3	+0.3
COEN				IAmb	IAmb	14 20 22.7	
	comp=Z,23nm,0.6s						
COEN	Coen	21.36	106	P	P	14 20 20.8	+0.8
	comp=Z,35nm,0.6s						
FORT	Forrest	22.73	167	P	P	14 20 35.2	+1.9
FORT				IAmb	IAmb	14 20 36.8	
	comp=Z,14nm,0.8s						
OOD	Oodnadatta	22.99	148	P	P	14 20 37.9	+2.2
	comp=Z,21nm,0.5s						
MTSU	Mount Surprise	23.59	116	P	P	14 20 43.4	+2.1
	comp=Z,39nm,0.8s						
KULM	Kulim	25.44	302	P	P	14 20 57.6	-0.5
KULM				IAmb	IAmb	14 20 59.3	
	comp=Z,6.9nm,1.0s						
CTAO	Charters Tower	26.01	119	P	P	14 21 04.9	+1.7
CTAO				IAmb	IAmb	14 21 06.0	
	comp=Z,4.7nm,0.8s						
BBOO	Buckleboo	27.32	154	P	P	14 21 16.0	+1.3
BBOO				IAmb	IAmb	14 21 35.0	
	comp=Z,23nm,1.5s						
STKA	Stephens Creek	29.39	145	P	P	14 21 35.2	+2.1
	comp=Z,7.1nm,0.6s,baz=318,slow=9.7,SNR=29						
STKA	Stephens Creek	29.39	145	P	P	14 21 34.9	+1.8
GUMO	Guam	31.63	46	P	P	14 21 52.3	-0.6
ARMA	Armidale	35.10	132	P	P	14 22 26.0	+3.0
ARMA				IAmb	IAmb	14 22 52.5	
	comp=Z,28nm,1.5s						
CMAR	Chiang Mai Arr	35.29	320	P	P	14 22 25.0	+0.4
	comp=Z,0.4nm,0.3s,baz=216,slow=26,SNR=2.9						
JCJ	Chichijima	40.53	28	P	P	14 23 08.9	+0.6
NJ2	Nanjing	40.58	356	eP	P	14 23 11.0	+2.3
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
SANVU	Saraoutou	44.59	103	P	P	14 23 42.5	+1.2
MJAR	Matsushiro Arr	47.44	18	P	P	14 24 01.4	-1.8
	comp=Z,1.0nm,0.4s,baz=188,slow=9.2,SNR=8.2						
LZH	Lanzhou	47.68	340	eP	P	14 24 03.9	-1.4
LZH				pP	pP	14 24 42.8	-0.1
LZH				sP	sP	14 24 59.9	-2.1
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
TAPN	Taplejung	48.86	318	eP	P	14 24 13.1	-1.6
	comp=Z,11nm,0.4s						
RAMN	Ramite	49.34	317	eP	P	14 24 17.7	-0.5
	comp=Z,10nm,0.4s						
JIRN	Jiri	50.08	317	eP	P	14 24 22.3	-1.6
	comp=Z,6.4nm,0.6s						
HHC	Hu-ho-hao-te	50.19	350	eP	P	14 24 27.3	+3.1
HHC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,8.2s						
GUN	Gumba	50.45	317	eP	P	14 24 25.3	-1.4
	comp=Z,11nm,0.5s						
PKI	Pulchoki	50.55	317	eP	P	14 24 26.1	-1.3
	comp=Z,6.2nm,0.4s						
PKIN	Phulchoki	50.56	317	eP	P	14 24 25.8	-1.6
	comp=Z,7.2nm,0.3s						
KKN	Kakani	50.77	317	eP	P	14 24 28.1	-0.9
	comp=Z,4.5nm,0.4s						
DMN	Daman	50.77	316	eP	P	14 24 28.0	-1.1
KOLN	Koldanda	51.91	316	eP	P	14 24 36.2	-1.2
DANN	Dangsing	52.16	316	eP	P	14 24 37.3	-2.1
	comp=Z,18nm,0.6s						
PYUN	Piuthan	52.54	315	eP	P	14 24 41.0	-1.1
	comp=Z,7.2nm,0.4s						
USRK	Ussuriysk Ar.	53.36	9	P	P	14 24 45.9	-1.5
	comp=Z,1.2nm,0.4s,baz=198,slow=7.1,SNR=6.1						
USRK	Ussuriysk Ar.	53.36	9	P	P	14 24 46.1	-1.4
FOZ	Fox Glacier	54.13	138	P	P	14 24 54.3	+1.1
LBZ	Lake Benmore	54.74	139	P	P	14 24 58.9	+1.3
THZ	Tophouse	55.52	135	P	P	14 25 05.1	+1.8
THZ				IAmb	IAmb	14 25 06.1	
	comp=Z,22nm,1.0s						
SNZO	South Karori	56.62	134	P	P	14 25 12.0	+1.0
BHW	Baring Head	56.77	134	P	P	14 25 13.1	+1.0
BKZ	Black Stump Fm	57.25	131	P	P	14 25 17.1	+1.5
BKZ				IAmb	IAmb	14 25 21.0	
	comp=Z,30nm,1.5s						
SONM	Songino Array	57.92	348	P	P	14 25 18.4	-1.7
	comp=Z,1.8nm,0.6s,baz=163,slow=7.9,SNR=12						
SONM	Songino Array	57.92	348	P	P	14 25 19.2	-0.9
WMQ	Urumqi	60.80	332	eP	P	14 25 42.4	+2.5
KSH	Kashi	64.16	322	P	P	14 26 01.5	-0.8
KSH				pmax	pmax		
	comp=Z,4.0nm,0.5s						
MK31	Makanchi Array	65.56	331	P	P	14 26 10.7	-0.4
MK31				IAmb	IAmb	14 26 25.9	
	comp=Z,3.3nm,1.3s						
MKAR	Makanchi Array	65.56	331	P	P	14 26 10.1	-1.0
	comp=Z,1.5nm,0.5s,baz=139,slow=7.7,SNR=37						
MKAR	Makanchi Array	65.56	331	P	P	14 26 10.6	-0.4
PETK	Petropavlovsk-	68.57	22	P	P	14 26 29.7	-0.1
ZAA0	Zalesovo Array	69.83	338	P	P	14 26 35.7	-1.8
ZALV	Zalesovo Beam	69.83	338	P	P	14 26 35.3	-2.2
	comp=Z,1.2nm,0.4s,baz=116,slow=4.3,SNR=4.5						
ZALV	Zalesovo Beam	69.83	338	P	P	14 26 35.5	-2.1
KURK	Kurchatov	70.05	332	P	P	14 26 38.1	-0.8
VNDA	Vanda	71.88	172	P	P	14 26 51.5	+1.9
	comp=Z,0.6nm,0.5s,baz=318,slow=8.3,SNR=14						
VNDA	Vanda	71.88	172	P	P	14 26 51.8	+2.1

NEIC ***23*** *14:25:56.6±1.1, 16°.7S±0°.1×171°.64W±0°.09, h10^{km}±2^{km}, mb4.3/3, Error ellipse: s-maj=23.2km s-min=11.5km az=29.0*

IDC ***23*** *14:25:59.4±2.0, 16°.39S×172°.46W, h0^{km}, mb3.8/3, mb1 4.1/4, mb1mx3.6/28, mbtmp3.8/4, ML3.0/1, Error ellipse: s-maj=72.1km s-min=22.8km az=133.0*

ISC 23 14:25:59.3±1.3**, 16°.6S**±0°.1×**172°.2W**±0°.2**, h10**^{km}**, n10,** σ**1**^{s}.**39**/10**, mb4.0**/6**, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.70	9	Pn	Pn	14 26 42.8	0.0
	2.8nm,0.3s,baz=114,slow=23,SNR=1.8						
AFI				Sn	Sn	14 27 13.4	-2.3
	37nm,0.3s,baz=164,slow=23,SNR=15						
NIUE	Niue	3.31	139	Pn	Pn	14 26 42.4	-8.8
RAO	Raoul Island	13.64	202	Pn	Pn	14 29 10.9	-2.0
MARNC	Mare, Loyalty	19.28	252		Pn	14 30 25.8	+0.5
WB2	Warramunga Arr	50.67	258	P	P	14 34 59.7	+0.5
WB2				IAmb	IAmb	14 35 03.6	
	comp=Z,4.0nm,1.1s						
WRA	Warramunga Arr	50.68	258	P	P	14 34 59.6	+0.2
	comp=Z,0.4nm,0.5s,baz=96,slow=7.0,SNR=7.2						
AS31	Alice Springs	50.82	253	P	P	14 35 01.1	+0.6
AS31				IAmb	IAmb	14 35 01.6	
	comp=Z,0.9nm,0.7s						
ASAR	Alice Springs	50.82	253	P	P	14 35 00.8	+0.4
	comp=Z,2.9nm,0.7s,baz=89,slow=8.3,SNR=54						
KNRA	Kununurra	56.51	262	P	P	14 35 42.6	+0.5
KNRA				IAmb	IAmb	14 36 11.1	
	comp=Z,15nm,1.3s						
NVAR	Mina Array Bea	74.47	41	P	P	14 37 40.0	+1.8
	comp=Z,0.4nm,0.7s,baz=222,slow=9.3,SNR=4.6						

KRNET 23 14:26:07.9±0.1**, 42°.22N**×**76°.09E, mb1.3, 4C-2D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULHL	Ulahol	0.12	78	⇓iP	Pg	14 26 10.1	0.0
	baz=78						
ULHL				⇓eS	Sg	14 26 11.9	+0.3
	baz=78						
BOOM	Boomskoye usch	0.29	338	⇑eP	Pg	14 26 13.7	+0.3
	baz=38						
BOOM				⇑eS	Sg	14 26 17.9	+0.7
	baz=38						
BOOM	Boomskoye usch	0.29	338	P	Pg	14 26 14.0	+0.5
KDJ	Kajisay	0.82	96	⇑eP	Pg	14 26 24.0	+0.5
	baz=96						
KDJ				⇑eS	Sb	14 26 35.8	-0.9
	baz=96						

WEL 23 14:41:20.6±0.7**, 45°S**±5°×**16°7E**±°**, h58**^{km}±7^{km}**, M4.0**/19**, mB5.4**/1**, ML4.3**/25**, MLv4.0**/19**, Mw(mB)4.8**/1**, Error ellipse: s-maj=0.0km s-min=0.0km az=119.2, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DCZ	Deep Cove	0.09	143	P	Pn	14 41 30.4	+1.0
DCZ				S	Sn	14 41 37.0	+1.4
MLZ	Mavora Lakes	0.74	88	P	Pn	14 41 36.3	+1.1
MLZ				S	Sn	14 41 47.9	+2.0
WHZ	Wether Hill Ro	0.79	130	P	Pn	14 41 36.8	+0.9
WHZ				S	Sn	14 41 47.9	+0.8
PYZ	Puysegur Point	0.82	199	P	Pn	14 41 37.2	+0.9
PYZ				S	Sn	14 41 48.6	+0.8
MSZ	Milford Sound	0.94	40	P	Pn	14 41 39.4	+1.7
MSZ				S	Sn	14 41 53.4	+3.0
WKZ	Wanaka	1.49	68	P	Pn	14 41 46.6	+1.6
WKZ				S	Sn	14 42 04.2	+0.8
APZ	The Paps	1.57	157	P	Pn	14 41 46.7	+0.4
APZ				S	Sn	14 42 05.8	+0.2
EAZ	Earnscleugh	1.58	85	P	Pn	14 41 47.7	+1.3
EAZ				S	Sn	14 42 06.7	+0.9
SYZ	Scrubby Hill	1.84	129	P	Pn	14 41 50.4	+0.6
TUZ	Tuapeka	1.88	108	P	Pn	14 41 51.2	+0.8
LBZ	Lake Benmore	2.43	67	P	Pn	14 41 57.9	0.0
HHSZ	Highcliff Hill	2.52	103	P	Pn	14 41 59.9	+0.8
ODZ	Otahua Downs	2.55	83	P	Pn	14 41 59.5	+0.1
FOZ	Fox Glacier	2.70	48	P	Pn	14 42 01.7	+0.1
TMZ	Timaru	2.97	72	P	Pn	14 42 04.7	-0.6
GCSZ	Gaunt Creek Bo	3.12	49	P	Pn	14 42 07.8	+0.5
ARCZ	Arundel	3.26	65	P	Pn	14 42 08.3	-1.0
RPZ	Rata Peaks	3.30	61	P	Pn	14 42 09.1	-0.7
WVZ	Waitaha Valley	3.51	50	P	Pn	14 42 13.2	+0.6
WACZ	Wakanui South	3.69	69	P	Pn	14 42 14.3	-0.9
MHCZ	Mount Hutt	3.71	62	P	Pn	14 42 14.3	-1.2
RACZ	Rakaia	3.98	67	P	Pn	14 42 18.1	-1.0
OXZ	Oxford	4.12	62	P	Pn	14 42 19.3	-1.6
MQZ	McQueen's Vall	4.33	69	P	Pn	14 42 22.5	-1.3
AKCZ	Akaroa Harbour	4.43	72	P	Pn	14 42 24.3	-1.0
LTZ	Lake Taylor	4.56	57	P	Pn	14 42 25.6	-1.5
AMCZ	Amberley	4.58	63	P	Pn	14 42 26.1	-1.2
OKCZ	Okains Bay	4.59	71	P	Pn	14 42 27.2	-0.3
GVZ	Greta Valley S	4.92	63	P	Pn	14 42 30.5	-1.5
DSZ	Denniston Nort	5.01	45	P	Pn	14 42 33.0	-0.2
KHZ	Kahutara	5.54	60	P	Pn	14 42 39.5	-0.8
THZ	Tophouse	5.58	51	P	Pn	14 42 39.2	-1.7
QRZ	Quartz Range	6.06	43	P	Pn	14 42 47.6	0.0
PKE	Pukeiti	8.03	42	P	Pn	14 43 15.7	+1.1
OTVZ	Oturere	8.90	49	P	Pn	14 43 33.2	+6.6
KMRZ	Kaimai	10.04	44	P	Pn	14 43 41.6	-0.5
OUZ	Omahuta	11.31	28	P	Pn	14 44 00.6	+1.3

INET ***23*** *14:43:50.5, 9°.03N×83°.87W, h40^{km}, MW3.6*

UCR ***23*** *14:43:52.2±1.4, 8°.91N×84°.03W, h3^{km}±4^{km}, MW4.4*

UPA ***23*** *14:43:53.2±1.1, 8°.96N×84°.05W, h10^{km}±5^{km}, MW4.4*

ISC 23 14:43:51.9±1.4**, 8°.95N**±0°.04×**84°.04W**±0°.05**, h7**^{km}±10^{km}**, n34,** σ**0**^{s}.**71**/58**, 1C-10D, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDDO	Dominical	0.34	30	⇓iP	Pb	14 44 00.3	-0.1
EDDO				eS	Sb	14 44 06.5	+0.5
EDPN	Palmar Norte	0.58	89	⇓iP	Pb	14 44 03.7	-0.6
EDPN				eS	Sb	14 44 12.8	+0.1
LCR2	La Lucha 2	0.78	3	⇓eP	Pb	14 44 08.0	0.0
LCR2				eS	Sn	14 44 20.6	-0.9
EDBA	Buenos Aires	0.78	75	eP	Pg	14 44 07.0	0.0
EDBA				eS	Sb	14 44 19.3	+0.6
RIMA	Rio Macho	0.83	12	⇓iP	Pb	14 44 08.6	-0.1
DRK0	Durika	0.84	69	eP	Pb	14 44 09.1	+0.2
DRK0				eS	Sn	14 44 21.9	-1.1
POTG	Potrero Grande	0.92	84	⇑eP	Pb	14 44 10.4	+0.3
POTG				eS	Sn	14 44 23.9	-0.8
RAFA	San Farael, Vo	1.02	13	⇓eP	Pn	14 44 12.5	-0.4
RAFA				eS	Sn	14 44 28.0	+0.3
HDC	Heredia	1.04	356	⇓eP	Pn	14 44 12.8	-0.1
HDC	Heredia	1.04	356	eP	Pn	14 44 12.9	-0.1
HDC				eS	Sn	14 44 27.7	-0.2
EDSV	San Vito	1.06	97	eP	Pg	14 44 11.9	-0.4
EDSV				eS	Sn	14 44 29.0	+0.6
LAFE	Finca La Fe, P	1.21	315	eP	Pn	14 44 14.3	-0.8
SBAR3	San Bartolo, C	1.31	119	eS	Sg	14 44 34.9	+0.9
BRU2	Volcan	1.34	97	⇓iP	Pn	14 44 17.2	0.0
BRU2				eS	Sg	14 44 36.1	+0.9
LESP3	La Esperanza,	1.35	114	eP	Pn	14 44 16.9	-0.2
LESP3				eS	Sg	14 44 35.8	+0.4
PTPM	Petroterminale	1.37	123	⇓iP	Pn	14 44 17.0	-0.4
PTPM				eS	Sg	14 44 36.0	+0.1
LIMO3	Limones	1.44	126	eP	Pn	14 44 17.7	-0.6
LIMO3				eS	Sn	14 44 36.3	-1.2
BCO2	Palmira	1.51	99	⇓iP	Pn	14 44 19.6	+0.1
BCO2				eS	Sg	14 44 40.0	-0.5
BAGA3	Bagala, Chiriq	1.57	108	eP	Pn	14 44 20.6	+0.4
BAGA3				eS	Sn	14 44 40.5	-0.3
LNBQ3	Los Naranjos,	1.59	96	eP	Pn	14 44 20.4	-0.1
LNBQ3				eS	Sg	14 44 42.4	-0.6
CNI2	El Empalme, Bo	1.62	73	eP	Pb	14 44 21.3	-0.7
CNI2				eS	Sn	14 44 40.4	-1.5
CASO	Castillo	1.62	335	i P	Pg	14 44 23.1	+0.1
ARE1	Arenal 1	1.64	336	eP	Pg	14 44 23.2	-0.2
DVD	David	1.66	108	eP	Pn	14 44 21.5	+0.2
DVD				eS	Sb	14 44 43.4	-0.4
LOCO3	Loma Colorada,	1.69	109	eP	Pb	14 44 23.6	+0.2
LOCO3				eS	Sg	14 44 45.5	-0.9
LOMA3	Las Lomas, Chi	1.71	108	⇓eP	Pn	14 44 22.6	+0.6
LOMA3				eS	Sb	14 44 44.7	-0.7
CHIR3	Chiriqui UPA,	1.78	108	eP	Pn	14 44 23.2	+0.2
CHIR3				eS	Sb	14 44 46.3	-1.1
COVE	Coope Vega, Sa	1.79	349	eP	Pn	14 44 24.0	+0.9
CHGR2	Aguacate	1.87	90	i P	Pn	14 44 24.5	+0.2
CHGR2				eS	Sn	14 44 48.6	+0.4
SAJU	San Juanillo,	1.98	304	eP	Pn	14 44 26.9	+1.0
REME3	Remedios, Chir	2.30	108	eP	Pn	14 44 25.2	-5.0
REME3				eS	Sn	14 44 59.6	+0.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CALO3	Calobre, Verag	3.23	101	eP	Pn	14 44 43.9	+1.0
CALO3				eS	Sn	14 45 22.5	+0.9
CACAO	El Cacao, Vera	3.53	117	eP	Pn	14 44 47.6	+0.4
CACAO				eS	Sn	14 45 29.5	+0.3
PNME	Penonome	3.70	97	eP	Pn	14 44 52.0	+2.6

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*NEIC **23** 14:49:38.4±4.6, 22°.08S±0°.10×63°.6W±0°.1, h480^{km}±2^{km}, Error ellipse: s-maj=19.7km s-min=16.3km az=266.0*

*IDC **23** 14:49:38.9±0.9, 22°.15S×63°.83W, h520^{km}±10^{km}, mb3.8/3, mb1 3.7/8, mb1mx3.3/29, mbtmp4.5/8, Error ellipse: s-maj=21.8km s-min=14.0km az=136.0*

*VAO **23** 14:49:39.9±0.3, 22°.25S×63°.74W, h529^{km}, mb4.0*

*SJA **23** 14:49:40±0.8, 22°.23S±0°.09×63°.9W±0°.1, h529^{km}±7^{km}, mb4.3/14(NEIC), Error ellipse: s-maj=17.3km s-min=13.2km az=85.0*

ISC 23 14:49:38.7±0.4, **22°.15S**±0°.05×**63°.72W**±0°.06, **h500**^{km}, **n178**, σ1^{s}.**86**/212, **mb4.5**/9, **7D**, **Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YJA	Yavi	1.66	269	iP	P	14 50 47.6	+4.8
YJA				iS	S	14 51 43.1	+8.4
YJA				IAML		14 51 45.9	
	comp=Z,5.9nm,0.9s						
ALOL	LOMAS DE OLMED	1.68	188	iP	P	14 50 47.1	+4.7
ALOL				eS	S	14 51 40.7	+6.6
ASTB	Santa Barbara	1.92	200	iP	P	14 50 48.0	+4.5
ASTB				iS	S	14 51 41.4	+5.1
ASTB				IAML		14 51 53.7	
	comp=Z,1.5nm,4.0s						
AZAP	Zapla	2.41	211	iP	P	14 50 50.0	+3.8
AZAP				IAML		14 51 52.0	
	comp=Z,28nm,0.6s						
SLA	San Lorenzo	3.04	212	iP	P	14 50 53.6	+3.5
SLA				iS	S	14 51 52.2	+4.0
SLA				IAML		14 51 55.0	
	comp=Z,42nm,0.9s						
FSA	Cafayete	4.45	207	iP	P	14 51 02.9	+1.9
FSA				iS	S	14 52 09.6	+1.3
LVC	Limon Verde	4.83	264	P	P	14 51 06.0	+1.5
	comp=Z,27nm,0.3s,baz=87,slow=5.9,SNR=106						
LVC				S	S	14 52 14.1	-0.4
	comp=Z,11nm,0.3s,baz=279,slow=20,SNR=15						
LVC	Limon Verde	4.83	264	iP	P	14 51 05.5	+1.0
LVC				iS	S	14 52 14.2	-0.4
LVC	Limon Verde	4.83	264	eP	P	14 51 06.0	+1.5
LVC	Limon Verde	4.83	264		P	14 51 05.8	+1.3
LVC	Limon Verde	4.83	264	iP	P	14 51 06.2	+1.6
LVC				iS	S	14 52 14.5	0.0
LVC				IAML		14 52 18.0	
	comp=Z,28nm,0.6s						
PB09	IPOC Station P	5.14	273	⇓iP	P	14 51 09.2	+2.0
PB09				iS	S	14 52 20.0	+0.7
PB09	IPOC Station P	5.14	273	P	P	14 51 09.1	+2.0
PB09	IPOC Station P	5.14	273	iP	P	14 51 09.4	+2.2
PB09				iS	S	14 52 19.2	-0.1
PB09				IAML		14 52 22.7	
	comp=Z,47nm,0.7s						
PB15	IPOC Station P	5.41	258	⇓iP	P	14 51 10.8	+1.0
PB15				iS	S	14 52 23.8	-0.2
PB15	IPOC Station P	5.41	258	P	P	14 51 10.7	+1.0
PB15	IPOC Station P	5.41	258	iP	P	14 51 10.9	+1.2
PB15				iS	S	14 52 23.8	-0.2
PB15				IAML		14 52 32.2	
	comp=Z,806nm,0.2s						
PB06	IPOC Station P	5.44	263	P	P	14 51 10.9	+0.9
PB06	IPOC Station P	5.44	263	iP	P	14 51 11.3	+1.4
PB06				iS	S	14 52 24.4	0.0
PB06				IAML		14 52 27.5	
	comp=Z,186nm,0.5s						
PB08	IPOC Station P	5.45	290	⇓iP	P	14 51 12.9	+2.6
PB08				iS	S	14 52 26.4	+1.4
PB08	IPOC Station P	5.45	290		P	14 51 12.1	+1.8
PB08	IPOC Station P	5.45	290	iP	P	14 51 13.1	+2.8
PB08				iS	S	14 52 26.4	+1.4
PB08				IAML		14 52 33.2	
	comp=Z,50nm,1.1s						
PB01	IPOC Station P	5.48	280	⇓iP	P	14 51 11.9	+1.7
PB01				iS	S	14 52 25.9	+1.0
PB01	IPOC Station P	5.48	280	P	P	14 51 11.8	+1.6
PB01	IPOC Station P	5.48	280	iP	P	14 51 12.2	+2.0
PB01				iS	S	14 52 26.2	+1.3
PB01				IAML		14 52 32.3	
	comp=Z,87nm,0.2s						
PB03	IPOC Station P	5.59	270	⇓iP	P	14 51 12.7	+1.4
PB03				iS	S	14 52 27.2	+0.1
PB03	IPOC Station P	5.59	270	iP	P	14 51 12.8	+1.4
PB03				iS	S	14 52 27.1	+0.1
PB03				IAML		14 52 33.2	
	comp=Z,157nm,0.3s						
PB07	IPOC Station P	5.74	273	P	P	14 51 14.1	+1.3
PB07	IPOC Station P	5.74	273	iP	P	14 51 14.5	+1.7
PB07				iS	S	14 52 30.1	+0.5
PB07				IAML		14 52 32.1	
	comp=Z,115nm,0.5s						
PB02	IPOC Station P	5.80	277	iP	P	14 51 15.3	+2.0
PB02				iS	S	14 52 31.5	+1.0
PB02				IAML		14 52 37.3	
	comp=Z,286nm,0.2s						
PB04	IPOC Station P	5.96	267	eP	P	14 51 15.7	+0.9
PB04	IPOC Station P	5.96	267	P	P	14 51 15.7	+0.9
PB04	IPOC Station P	5.96	267	iP	P	14 51 16.0	+1.2
PB04				iS	S	14 52 33.1	-0.3
PB04				IAML		14 52 43.7	
	comp=Z,109nm,0.3s						
PB11	IPOC Station P	6.03	292	⇓iP	P	14 51 17.2	+1.6
PB11	IPOC Station P	6.03	292		P	14 51 16.9	+1.3
PB11	IPOC Station P	6.03	292	iP	P	14 51 17.3	+1.7
PB11				iS	S	14 52 34.8	+0.1
PB11				IAML		14 52 43.2	
	comp=Z,133nm,0.3s						
PB05	IPOC Station P	6.03	262	iP	P	14 51 16.5	+1.0
PB05				iS	S	14 52 34.6	0.0
PB05				IAML		14 52 38.0	
	comp=Z,80nm,1.0s						
TA01	Diego Aracena	6.22	283	P	P	14 51 18.6	+1.4
TA01	Diego Aracena	6.22	283	iP	P	14 51 18.8	+1.6
TA01				IAML		14 53 48.6	
	comp=Z,172nm,0.8s						
TA02	Huaiquique	6.26	286	P	P	14 51 19.2	+1.6
TA02	Huaiquique	6.26	286	iP	P	14 51 19.6	+1.9
TA02				IAML		14 52 47.8	
	comp=Z,99nm,0.3s						
PB10	IPOC Station P	6.45	257	⇓iP	P	14 51 20.3	+0.9
PB10				iS	S	14 52 41.8	0.0
PB10	IPOC Station P	6.45	257		P	14 51 20.3	+0.9
PB10	IPOC Station P	6.45	257	iP	P	14 51 20.3	+0.9
PB10				iS	S	14 52 42.0	+0.1
PB10				IAML		14 52 50.9	
	comp=Z,91nm,0.3s						
CYA	Choya	6.54	196	iP	P	14 51 22.0	+1.7
CYA				IAML		14 53 26.6	
	comp=Z,6.4nm,2.9s						
SIV	San Ignacio	6.61	23	P	P	14 51 24.5	+3.3
	comp=Z,6.4nm,0.3s,baz=201,slow=8.6,SNR=83						
SIV				S	S	14 52 39.0	-6.0
	baz=280,slow=17,SNR=0.9						
PB14	IPOC Station P	6.62	247		P	14 51 22.1	+0.7
PB14	IPOC Station P	6.62	247	iP	P	14 51 22.7	+1.3
PB14				iS	S	14 52 45.7	+0.3
PB14				IAML		14 52 53.4	
	comp=Z,100nm,0.2s						
AC02	Maricunga	6.79	225		P	14 51 23.9	+0.7
AC02	Maricunga	6.79	225	iP	P	14 51 24.3	+1.0
AC02				iS	S	14 52 49.4	+0.6
AC02				IAML		14 54 10.6	
	comp=Z,76nm,0.8s						
PB12	IPOC Station P	7.12	298		P	14 51 27.5	+1.1
PB12	IPOC Station P	7.12	298	iP	P	14 51 27.5	+1.1
PB12				iS	S	14 52 53.5	-0.9
PB12				IAML		14 52 56.9	
	comp=Z,82nm,0.4s						
CPUP	Villa Florida	7.17	127	P	P	14 51 28.9	+2.3
	comp=Z,1.2nm,0.3s,baz=315,slow=10,SNR=13						
CPUP	Villa Florida	7.17	127	eP	P	14 51 29.0	+2.5
CPUP	Villa Florida	7.17	127	iP	P	14 51 29.0	+2.5
AP01	Chacalluta	7.26	300	iP	P	14 51 29.5	+1.9
AP01				IAML		14 53 06.5	
	comp=Z,151nm,0.5s						
AQDB	Aquidauana	7.66	79	eP	P	14 51 34.8	+3.1
AQDB	Aquidauana	7.66	79		P	14 51 34.4	+2.8
VCA	Vinchina	7.71	211	iP	P	14 51 33.0	+0.8
VCA				iS	S	14 53 02.6	-2.7
VCA				IAML		14 53 05.5	
	comp=Z,101nm,0.5s						
ACLC	CERRO LA CRUZ	7.81	201	iP	P	14 51 32.4	-0.8
ACLC				iS	S	14 53 01.8	-5.5
ACLC				IAML		14 53 06.3	
	comp=Z,14nm,0.4s						
PTLB	Pontes e Lacer	7.95	34	eP	P	14 51 38.5	+3.8
PTLB	Pontes e Lacer	7.95	34		P	14 51 38.2	+3.4
GO03	Copiap	8.02	226		P	14 51 36.6	+1.2
APLL	PUNTA DE LOS L	8.59	196	iP	P	14 51 40.4	-0.8
APLL				iS	S	14 53 13.3	-8.5
AC04	Llanos de Chal	8.98	226		P	14 51 46.2	+0.9
AVFE	Valle Fertil	9.11	201	iP	P	14 51 45.7	-1.0
AVFE				iS	S	14 53 25.2	-6.7
AVFE				iS	S	14 53 25.2	-6.7
LCO	Las Campanas	9.29	221	iP	P	14 51 50.0	+1.1
PP1B	Ponte de Pedra	9.47	63	eP	P	14 51 53.0	+2.4
AROD	Rodeo	9.51	212	iP	P	14 51 53.0	+1.8
AROD				iS	S	14 53 39.1	-0.9
AROD				iS	S	14 53 39.1	-0.9
ACCO	Cerro Coronel	9.68	209	iP	P	14 51 53.6	+0.7
VILB	Vilhena	9.74	21	eP	P	14 51 56.4	+2.9
VILB	Vilhena	9.74	21	P	P	14 51 56.1	+2.6
SALV	Santo Antonio	9.81	52	eP	P	14 51 56.8	+2.6
ITQB	Itaqui	9.84	141	eP	P	14 51 56.1	+1.8
ITQB	Itaqui	9.84	141		P	14 51 55.8	+1.4
GO04	Tololo Observa	10.21	217		P	14 51 59.1	+0.7
GO04	Tololo Observa	10.21	217	iP	P	14 51 59.2	+0.7
CO05	La Serena	10.27	220		P	14 51 59.0	+0.2
TRCB	Terra Rica	10.27	96	eP	P	14 52 00.8	+1.7
TRCB	Terra Rica	10.27	96		P	14 52 01.3	+2.2
ZON	Zonda	10.35	204		P	14 52 00.0	+0.2
CO03	El Pedregal	10.67	214		P	14 52 03.1	0.0
RTLS	Leoncito	10.82	206	iP	P	14 52 06.1	+1.1
RTLS				iS	S	14 54 04.0	-1.4
PTGB	Pitanga	11.00	106	eP	P	14 52 08.9	+2.0
CO06	Fray Jorge	11.06	218		P	14 52 06.4	-0.8
AUSP	Uspallata	11.23	205	iP	P	14 52 10.4	+1.1
AUSP				iS	S	14 54 13.1	-0.2
ASAL	Salagasta	11.35	202	iP	P	14 52 11.5	+1.1
ASAL				iS	S	14 54 15.3	+0.1
PCMB	Pacaembu	11.58	90	eP	P	14 52 14.7	+1.7
AAGR	Agrelo	11.80	201	iP	P	14 52 16.0	+0.9
VA03	San Esteban	12.19	208	P	P	14 52 19.6	+0.4
CPSB	Cacapava Do Su	12.35	134	eP	P	14 52 21.4	+0.5
PDRB	Porto dos Gac	12.43	34	eP	P	14 52 23.8	+1.8
ETMB	Extrema	12.49	349	eP	P	14 52 24.8	+2.2
PEL	Peldehue	12.57	208	P	P	14 52 23.1	-0.1
ITRB	Iturama	12.72	81	eP	P	14 52 26.3	+1.3
MT02	Curacav	12.87	209	P	P	14 52 25.6	-0.8
VA01	Torpederas	12.91	211	P	P	14 52 25.9	-0.9
ARAG	Araguaiana, MT	12.96	62	eP	P	14 52 29.2	+1.7
FRTB	Fartura	13.12	98	eP	P	14 52 29.7	+0.5
SAML	Samuel	13.13	2	P	P	14 52 30.9	+1.4
PLTB	Pedras Altas	13.15	139	eP	P	14 52 29.0	-0.4
PLTB	Pedras Altas	13.15	139	P	P	14 52 29.0	-0.4
MT09	Talagante	13.24	207	P	P	14 52 29.9	-0.6
RFA	San Rafael	13.25	197	iP	P	14 52 30.3	-0.1
MT01	Popeta	13.43	208	P	P	14 52 31.3	-1.0
CLDB	Colider	13.54	35	eP	P	14 52 34.8	+1.1
CNLB	Canela	13.61	124	eP	P	14 52 33.8	-0.5
BO01	Tunca	13.81	206	P	P	14 52 35.5	-0.8
TIJ01	Guaruva-PR	13.84	106	eP	P	14 52 37.2	+0.3
BO02	Sierra Bellavi	14.04	205	P	P	14 52 38.4	-0.4
BB19B	Bebedouro	14.17	88	eP	P	14 52 40.8	+0.4
TER01	Tubaro-SC	14.64	119	eP	P	14 52 44.1	-1.0
GO05	Huala	14.70	208	P	P	14 52 44.6	-1.0
ML02	Panimavida	15.14	205	P	P	14 52 49.0	-1.2
IPMB	Ipameri, GO	15.15	77	eP	P	14 52 50.6	0.0
VAO	Valinhos	15.50	96	eP	P	14 52 53.5	-0.8
BDFB	Brasilia	16.20	69	P	P	14 53 01.5	-0.2
	comp=Z,2.1nm,0.3s,baz=225,slow=12,SNR=8.8						
BDFB	Brasilia	16.20	69	P	P	14 53 01.6	-0.2
BDFB				IAmb	IAmb	14 53 04.3	
	comp=Z,8.8nm,0.9s						
PARB	Paraibuna	16.74	98	eP	P	14 53 06.0	-1.2
NPGB	Novo Progresso	17.04	30	eP	P	14 53 10.6	+0.3
BSCB	Bom Sucesso	17.66	90	eP	P	14 53 16.0	-0.1
PEXB	Peixe	17.79	58	eP	P	14 53 17.6	+0.3
LC01	Cunco	18.10	201	P	P	14 53 18.0	-1.8
LC01				IAmb	IAmb	14 53 30.6	
	comp=Z,4.4nm,0.7s						
MAN01	Angra dos Reis	18.27	96	eP	P	14 53 21.7	0.0
VAS01	Vassouras-RJ	18.78	94	eP	P	14 53 26.9	+0.6
DIAM	Diamantina, MG	19.20	82	eP	P	14 53 31.0	+0.7
ITTB	Itaituba	19.30	25	eP	P	14 53 31.4	+0.4
PLCA	Paso Flores	19.41	196	P	P	14 53 30.9	-1.0
	comp=Z,0.6nm,0.3s,baz=18,slow=10,SNR=16						
PLCA	Paso Flores	19.41	196	eP	P	14 53 31.4	-0.4
PLCA	Paso Flores	19.41	196	P	P	14 53 30.6	-1.3
MC01	Montes Claros	19.42	77	eP	P	14 53 32.0	-0.2
JANB	Januaria	19.69	72	eP	P	14 53 34.9	+0.2
DUB01	Friburgo-RJ	19.78	94	eP	P	14 53 36.0	+0.5
LL04	Puerto Octay	20.10	199	P	P	14 53 35.5	-2.6
SMTB	Santa Maria do	20.37	52	eP	P	14 53 42.1	+1.2
SDBA	SAO DESIDERIO	20.39	65	eP	P	14 53 41.7	+0.6
CAM01	Campos-RJ	20.46	93	eP	P	14 53 41.0	-0.6
PRPB	Parauapebas	20.80	42	eP	P	14 53 45.1	+0.3
SJMB	Sao Joao De Ma	21.39	85	eP	P	14 53 50.3	+0.2
PTGA	Pitinga	21.60	10	P	P	14 53 51.5	-0.4
	comp=Z,1.2nm,0.2s,baz=317,slow=23,SNR=3.1						
RIB01	Linhares ES	21.99	87	eP	P	14 53 54.6	-0.9
MALB	Monte Alegre	22.17	26	eP	P	14 53 57.4	+0.2
GUA01	Guaratinga, BA	23.22	80	eP	P	14 54 06.5	0.0
CMC01	Camacan, BA	23.87	78	eP	P	14 54 12.8	+0.5
NBIT	Itapeh - BA	24.10	77	eP	P	14 54 15.4	+1.1
GDU01	Guandu, BA	24.43	74	eP	P	14 54 16.9	-0.4
NBPN	Ponto Novo - B	25.16	67	eP	P	14 54 23.9	+0.1
NBLA	Lagarto - SE	27.17	70	eP	P	14 54 40.5	-1.0
NBPS	Pedro II - PI	27.88	54	eP	P	14 54 48.0	+0.1
NBMA	Muriti-CE	28.18	62	eP	P	14 54 50.8	+0.3
NBAN	Anadia - AL	29.10	69	eP	P	14 54 58.5	+0.1
MLPR	Magueyes Islan	40.00	355	P	P	14 56 28.5	-1.2
VNA3	Neumayer Olymp	57.95	162	P	P	14 58 41.9	-0.3
VNA1	Neumayer--Stat	58.09	161	P	P	14 58 42.0	-1.1
VNA2	Neumayer--Watz	58.47	161	P	P	14 58 44.9	-0.8
	baz=295,slow=8.1						
SNAA	Sanae	60.11	161	P	P	14 58 55.9	-0.9
SNAA	Sanae	60.11	161	P	P	14 58 54.3	-2.5
LIC	Lamto	63.99	71	eP	P	14 59 21.0	-1.9
	comp=Z,12nm,0.6s						
TIC	Toumodi	64.19	71	eP	P	14 59 22.8	-1.5
KIC	Kosan Boka	64.30	71	eP	P	14 59 23.7	-1.3
	comp=Z,14nm,0.5s						
DBIC	Dimbokro	64.35	71	P	P	14 59 23.6	-1.6
	comp=Z,3.4nm,0.4s,baz=237,slow=6.9,SNR=11						
DBIC	Dimbokro	64.35	71	P	P	14 59 24.4	-0.9
DBIC				IAmb	IAmb	14 59 25.6	
	comp=Z,7.4nm,1.0s						
M55A	Ridgway	64.81	348	P	P	14 59 27.1	-0.5
M55A				IAmb	IAmb	14 59 31.8	
	comp=Z,18nm,1.2s						
M54A	Oil Creek Stat	65.03	347	P	P	14 59 28.0	-1.0
J59A	Piesco	66.03	351	P	P	14 59 34.9	-0.3
J59A				IAmb	IAmb	14 59 50.1	
	comp=Z,17nm,1.3s						
F64A	Sherman	67.81	357	P	P	14 59 45.5	-0.6
KOWA	Kowa	68.92	64	P	P	14 59 52.6	-0.9
KOWA				IAmb	IAmb	14 59 53.4	
	comp=Z,4.8nm,0.7s						
E46A	Sault Ste Mari	70.69	345	P	P	15 00 01.9	-1.6
E46A				IAmb	IAmb	15 00 12.2	
	comp=Z,17nm,1.2s						
TORD	Torodi Ar. Bea	73.08	68	P	P	15 00 16.9	-1.2
	comp=Z,12nm,0.6s,baz=257,slow=5.6,SNR=90						
TORD	Torodi Ar. Bea	73.08	68	P	P	15 00 16.6	-1.5
TORD				IAmb	IAmb	15 00 17.6	
	comp=Z,7.5nm,0.6s						
ASAR	Alice Springs	131.34	202	PKP	PKPdf	15 07 52.7	-1.8
	comp=Z,0.3nm,0.8s,baz=160,slow=1.4,SNR=6.4						
ASAR				SKPbc	SKPbc	15 10 28.9	-3.9
	comp=Z,0.9nm,0.7s,baz=150,slow=3.9,SNR=20						
KURBB	Kurchatov Arra	139.10	37	PKP	PKPdf	15 08 05.3	-2.6
	comp=Z,0.3nm,0.5s,baz=301,slow=2.8,SNR=2.4						
KURK	Kurchatov	139.10	36		PKPdf	15 08 05.3	-2.6
ZALV	Zalesovo Beam	140.33	29	PKP	PKPdf	15 08 07.5	-2.6
	comp=Z,1.3nm,0.4s,baz=290,slow=1.7,SNR=2.9						
MK31	Makanchi Array	143.18	40		PKPab	15 08 12.4	-0.7
MKAR	Makanchi Array	143.18	40	PKP	PKPab	15 08 12.3	-0.8
	comp=Z,4.8nm,0.9s,baz=275,slow=2.5,SNR=16						
MKAR	Makanchi Array	143.18	40		PKPab	15 08 12.5	-0.6
SONM	Songino Array	153.17	15	PKPab	PKPab	15 08 52.2	-1.4
	comp=Z,0.5nm,0.6s,baz=318,slow=4.8,SNR=2.7						

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*IDC **23** 14:51:48.2±0.8, 1°.05N×127°.46E, h0^{km}, mb4.0/10, mb1 4.0/12, mb1mx3.8/44, mbtmp3.9/12, ML3.3/2, MS3.3/4, Ms1 3.3/4, ms1mx2.8/49, Error ellipse: s-maj=39.3km s-min=14.1km az=71.0*

*DJA **23** 14:51:50.7±0.2, 1°N±2°×12°8E±°, h10^{km}, M4.3/18, mb4.6/9, mB4.8/3, MLv4.2/18, Mw(mB)4.0/3*

*NEIC **23** 14:51:50.7±1.3, 0°.99N±0°.05×127°.52E±0°.06, h7^{km}±5^{km}, mb4.3/16, Error ellipse: s-maj=9.4km s-min=6.1km az=125.0*

ISC 23 14:51:49.9±0.6, **0°.99N**±0°.05×**127°.54E**±0°.06, **h10**^{km}, **n56**, σ1^{s}.**18**/55, **mb4.1**/15, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	0.28	219	P	Pg	14 51 56.6	+1.0
TNTI	Ternate	0.28	219		Pg	14 51 55.8	+0.2
TNTI				Sg	Sg	14 51 59.1	-0.3
LBMI	Labuha	1.62	182	P	Pn	14 52 19.1	+0.6
SANI	Sanana	3.40	207	P	Pn	14 52 43.5	+0.5
SANI				S	Sb	14 53 28.6	-3.0
KMSI	Cibinong	3.59	263	P	Pn	14 52 46.3	+0.7
SWI	Sorong	4.15	116	P	Pn	14 52 54.7	+1.4
SIJI	Sorong	4.16	116	Pn	Pn	14 52 55.0	+1.5
	1.7nm,0.3s,baz=149,slow=21,SNR=17						
SIJI				Sn	Sn	14 53 42.4	+0.2
	2.4nm,0.3s,baz=170,slow=22,SNR=6.6						
SIJI				LR	LR	14 54 47.2	
	comp=Z,272nm,20.6s,baz=132,slow=42						
MSAI	Masohi	4.52	162	P	Pn	14 52 59.2	+0.7
GTOI	Gorontalo	4.55	266	P	Pn	14 53 01.7	+2.9
AAI	Ambon	4.69	172	P	Pn	14 53 02.1	+1.3
LUWI	Luwuk	5.18	247	P	Pn	14 53 09.3	+1.7
	0.6nm860nm85nm,0.9s						
LUWI	Luwuk	5.18	247	Pn	Pn	14 53 08.9	+1.3
MRSI	Marisa	5.63	265	P	Pn	14 53 14.4	+0.7
	0.2nm58nm,0.6s						
FAKI	Fak Fak	6.10	130	P	Pn	14 53 22.4	+2.2
	0.1nm21nm,0.8s						
FAKI	Fak Fak	6.10	130	Pn	Pn	14 53 21.4	+1.2
APSI	Ampana	6.19	252	P	Pn	14 53 22.1	+0.7
	0.2nm476nm59nm,0.7s						
DAV	Davao City (W)	6.35	342	LR	LR	14 55 35.8	
	comp=Z,131nm,18.2s,baz=126,slow=36						
TOLI2	Tolitoli	6.76	271		Pn	14 53 28.1	-1.3
MPSI	Mapaga	7.67	265	P	Pn	14 53 43.0	+1.2
	0.1nm13nm,1.1s						
TTSI	Tana Toraja	8.70	243	P	Pn	14 53 56.1	+0.2
	28nm,0.5s						
BNSI	Bone	9.16	234	P	Pn	14 54 02.7	+0.5
	36nm,1.2s						
SPSI	Sidrap Palu	9.20	238	P	Pn	14 54 04.5	+1.7
	45nm,1.0s						
BKSI	Bulukumba	9.71	230	P	Pn	14 54 11.5	+1.7
KAPI	Kappang	9.80	232	Pn	Pn	14 54 13.9	+2.8
MYLDM	Lahad Datu	9.94	295	Pn	Pn	14 54 13.1	+0.2
MMRI	Maumere	10.93	209	Pn	Pn	14 54 27.4	+1.0
MTN	Manton Dam	14.20	166	P	P	14 55 20.6	+1.8
SBUM	Sibu	15.38	276	P	P	14 55 32.7	+0.8
SBUM				IAmb	IAmb	14 55 33.1	
	comp=Z,6.8nm,0.8s						
JAGI	Jajag, Banyuwa	16.32	235	Pn	Pn	14 55 38.4	-1.0
JAGI				IAmb	IAmb	14 55 47.3	
	comp=Z,26nm,1.1s						
KNRA	Kununurra	16.60	176	Pn	Pn	14 55 42.4	-0.6
KSM	Kuching	17.24	272	Pn	Pn	14 55 51.3	+0.2
KSM				IAmb	IAmb	14 55 54.0	
	comp=Z,18nm,1.0s						
FITZ	Fitzroy Crossi	19.06	186	P	P	14 56 12.5	0.0
	comp=Z,0.1nm,0.3s,baz=14,slow=11,SNR=2.2						
UGM	Wanagama	19.14	242	P	P	14 56 13.7	+0.2
GUMO	Guam	21.23	53	LR	LR	15 03 23.7	
	comp=Z,133nm,19.5s,baz=230,slow=33						
WB0	Warramunga Arr	21.69	162	P	P	14 56 41.4	+0.2
WB0				IAmb	IAmb	14 56 50.7	
	comp=Z,10.0nm,0.9s						
WRA	Warramunga Arr	21.84	163	P	P	14 56 44.0	+1.2
	comp=Z,4.3nm,0.6s,baz=341,slow=11,SNR=31						
WB2	Warramunga Arr	21.85	163	P	P	14 56 43.7	+0.8
WB2				IAmb	IAmb	14 56 56.2	
	comp=Z,10nm,0.9s						
WR0	Warramunga Arr	21.92	162	P	P	14 56 44.0	+0.4
WR0				IAmb	IAmb	14 56 53.6	
	comp=Z,7.9nm,0.9s						
AS31	Alice Springs	25.27	166	P	P	14 57 17.1	+0.4
ASAR	Alice Springs	25.27	166	P	P	14 57 16.8	+0.1
	comp=Z,2.6nm,0.7s,baz=342,slow=9.5,SNR=32						
ASAR	Alice Springs	25.27	166	P	P	14 57 17.1	+0.4
CM31	Chiang Mai Arr	33.00	303	P	P	14 58 26.1	+0.6
CM31				IAmb	IAmb	14 58 27.3	
	comp=Z,6.3nm,0.5s						
BBOO	Buckleboo	34.57	167	P	P	14 58 38.7	-0.2
STKA	Stephens Creek	35.30	159	P	P	14 58 45.6	+0.3
	comp=Z,2.2nm,0.7s,baz=318,slow=6.1,SNR=5.0						
STKA	Stephens Creek	35.30	159	IAmb	IAmb	14 58 50.5	
	comp=Z,1.6nm,1.2s						
KSRS	Korea Array	36.29	1	P	P	14 58 54.2	+0.6
	comp=Z,2.3nm,0.9s,baz=181,slow=9.5,SNR=3.5						
MJAR	Matsushiro Arr	36.73	14	P	P	14 58 55.5	-2.0
	comp=Z,2.3nm,0.7s,baz=191,slow=9.5,SNR=6.5						
SONM	Songino Array	50.14	342	P	P	15 00 45.2	-0.4
	comp=Z,0.3nm,0.6s,baz=156,slow=7.6,SNR=2.2						
MK31	Makanchi Array	60.26	326	P	P	15 01 58.7	0.0
MK31				IAmb	IAmb	15 02 03.7	
	comp=Z,5.7nm,1.1s						
MKAR	Makanchi Array	60.26	326	P	P	15 01 58.0	-0.7
	comp=Z,1.9nm,0.6s,baz=121,slow=7.8,SNR=9.8						
ZALV	Zalesovo Beam	63.38	333	P	P	15 02 19.6	+0.1
	comp=Z,0.6nm,0.4s,baz=121,slow=5.6,SNR=1.5						
KURBB	Kurchatov Arra	64.47	328	P	P	15 02 25.4	-1.3
	comp=Z,2.3nm,0.6s,baz=127,slow=6.0,SNR=16						
KURK	Kurchatov	64.48	328	P	P	15 02 27.4	+0.7
NRIK	Noril'sk	73.27	346	LR	LR	15 37 58.0	
	comp=Z,31nm,18.7s,baz=219,slow=38						
AKTO	Aktyubinsk	76.30	322	P	P	15 03 38.3	-0.8
	comp=Z,0.6nm,0.5s,baz=90,slow=9.1,SNR=1.9						
UWB	Uwekahuna B	77.58	70	P	P	15 03 47.1	0.0

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*IDC **23** 14:57:46.6±1.1, 26°.94N×67°.07E, h0^{km}, mb3.7/6, mb1 3.8/7, mb1mx3.4/50, mbtmp3.7/7, ML3.2/1, MS3.1/3, Ms1 3.2/3, ms1mx2.6/53, Error ellipse: s-maj=30.8km s-min=24.2km az=132.0*

ISC 23 14:57:47.8±1.1, **27°.1N**±0°.2×**66°.9E**±0°.1, **h10**^{km}, **n10**, σ2^{s}.**19**/9, **mb3.7**/6, **Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSAR	Wadi Sarin	8.41	245	Pn	Pn	14 59 51.3	+1.6
	0.3nm,0.3s,baz=306,slow=21,SNR=1.3						
WSAR				Sn	Sn	15 01 21.7	-3.0
	0.1nm,0.3s,baz=74,slow=10,SNR=1.6						
WSAR				LR	LR	15 03 16.3	
	comp=Z,30nm,20.9s,baz=68,slow=39						
AAK	Ala-Archa	16.70	20	Pn	Pn	15 01 39.1	-2.9
	0.1nm,0.3s,baz=210,slow=8.1,SNR=2.1						
MKAR	Makanchi Array	23.11	28	P	P	15 02 55.6	+1.7
	1.9nm,0.8s,baz=207,slow=9.1,SNR=5.8						
KURBB	Kurchatov Arra	25.11	18	P	P	15 03 14.2	+1.5
	1.2nm,0.9s,baz=209,slow=9.1,SNR=5.1						
ZALV	Zalesovo Beam	29.91	21	P	P	15 03 56.0	+0.4
	0.7nm,0.4s,baz=217,slow=7.0,SNR=3.9						
CMAR	Chiang Mai Arr	30.72	99	LR	LR	15 19 01.3	
	comp=Z,22nm,18.5s,baz=165,slow=42						
TORD	Torodi Ar. Bea	62.17	271	P	P	15 08 11.2	+1.4
	1.0nm,0.7s,baz=65,slow=7.3,SNR=6.0						
WRA	Warramunga Arr	80.34	118	P	P	15 09 59.2	-0.3
	0.8nm,0.8s,baz=316,slow=5.2,SNR=6.6						
ASAR	Alice Springs	82.06	122	P	P	15 10 07.7	-1.0
	0.4nm,0.8s,baz=308,slow=5.8,SNR=6.2						
YKA	Yellowknife Ar	90.71	1	LR	LR	15 56 33.1	
	comp=Z,49nm,19.0s,baz=0.0,slow=39						

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*IDC **23** 15:15:36.6±1.1, 51°.98N×179°.81E, h0^{km}, mb3.4/7, mb1 3.7/7, mb1mx3.5/64, mbtmp3.4/7, Error ellipse: s-maj=46.1km s-min=23.1km az=148.0*

*NEIC **23** 15:15:58.2±1.0, 52°.1N±0°.1×180°.00W±0°.09, h180^{km}±7^{km}, ML3.1(AEIC), Error ellipse: s-maj=20.1km s-min=7.9km*

az=175.0

*AEIC **23** 15:15:58±1.3, 52°.0N±0°.1×179°.99E±0°.05, h189km±6km, Error ellipse: s-maj=18.2km s-min=2.5km az=190.0*

ISC 23 15:15:58.5±0.8**, 52°.1N**±0°.2×**179°.93E**±0°.09**, h200**km**, n20, σ1s.97**/20**, mb3.1**/7**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AMKA	Amchitka	0.86	207		Pn	15 16 24.9	-2.5
LSSE	Little Sitkin	0.87	257		Pn	15 16 25.6	-1.8
LSNW	Little Sitkin	0.89	259		Pn	15 16 25.2	-2.3
GAEA	Gareloi East	0.89	113		Pn	15 16 25.1	-2.5
TASE	Tanaga Southea	1.29	103		Pn	15 16 27.8	-2.7
TAFP	Tanaga Falls P	1.31	100		Pn	15 16 28.0	-2.6
KIMD	Kanaga Island	1.79	101		Pn	15 16 32.7	-2.2
KIWB	Kanaga Island	1.83	98	Pn	Pn	15 16 33.4	-1.9
ADK	Adak	2.11	96		Pn	15 16 35.5	-2.6
GSTR	Great Sitkin T	2.47	90	Pn	Pn	15 16 40.4	-1.7
SMY	Shemya	3.62	282	Pn	Pn	15 16 54.8	-0.7
SPIA	Saint Paul Isl	7.60	45	Pn	Pn	15 17 47.0	+0.7
UNV	Unalaska Valle	8.36	73	Pn	Pn	15 17 56.2	-0.1
ILAR	Eielson Array	21.16	41	P	P	15 20 26.2	-1.5
	0.3nm,0.6s,baz=234,slow=8.8,SNR=7.8						
YKA	Yellowknife Ar	35.28	47	P	P	15 22 34.7	+1.0
	0.3nm,0.4s,baz=287,slow=7.4,SNR=1.9						
PDAR	Pinedale Array	46.83	72	P	P	15 24 08.0	-0.4
	0.3nm,0.5s,baz=326,slow=4.5,SNR=4.4						
MKAR	Makanchi Array	58.94	307	P	P	15 25 36.6	+0.1
	0.6nm,0.9s,baz=36,slow=7.3,SNR=2.2						
TXAR	Lajitas Array	59.31	81	P	P	15 25 40.3	+1.0
	0.2nm,0.5s,baz=306,slow=2.9,SNR=3.6						
WRA	Warramunga Arr	82.03	223	P	P	15 27 57.7	+1.5
	0.3nm,0.7s,baz=33,slow=5.7,SNR=2.5						
ASAR	Alice Springs	85.53	221	P	P	15 28 16.1	+2.4
	0.3nm,0.6s,baz=25,slow=5.8,SNR=7.7						

ATH 23 15:22:32.8, 38°.52N×20°.54E, h14km±1km, ML2.1/4, Error ellipse: s-maj=2.6km s-min=0.7km az=289.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FSK	Fiskardo	0.07	164	P	Pg	15 22 35.4	-0.1
FSK				S	Sg	15 22 37.0	-0.4
FSK				AML	AML	15 22 37.4	
	comp=N,3680μm,0.3s						
FSK				AML	AML	15 22 37.6	
	comp=E,9346μm,0.2s						
EVGI	Lefkada island	0.14	43	P	Pg	15 22 36.4	0.0
EVGI				S	Sg	15 22 38.8	0.0
DRAG	Dragano-Lefkad	0.16	10	P	Pg	15 22 35.8	-1.0
NYDR	Nydri-Lefkada	0.23	33	P	Pg	15 22 37.5	-0.2
NYDR				S	Sg	15 22 40.4	-0.8
KEF4	Livadi, Kephal	0.28	199	P	Pg	15 22 38.4	-0.2
KEF4				S	Sg	15 22 43.2	+0.6
LKD2	Lefkada island	0.28	19	P	Pg	15 22 38.5	-0.2
LKD2				S	Sg	15 22 43.1	+0.3
LKD2				AML	AML	15 22 43.9	
	comp=E,336μm,0.2s						
LKD2				AML	AML	15 22 45.5	
	comp=N,412μm,0.3s						
DMLN	Damoulianata-K	0.31	205	P	Pg	15 22 39.0	-0.2
DMLN				S	Sg	15 22 44.0	+0.5
TSLK	Tsoukalades, L	0.32	17	P	Pg	15 22 39.3	0.0
TSLK				S	Sb	15 22 44.8	-0.4
TSLK				AML	AML	15 22 45.2	
	comp=E,776μm,0.3s						
TSLK				AML	AML	15 22 46.4	
	comp=N,530μm,0.3s						
VLS	Valsamata	0.35	173	P	Pg	15 22 39.6	-0.2
VLS				S	Sg	15 22 45.2	+0.6
VLS				AML	AML	15 22 45.4	
	comp=E,1165μm,0.1s						
VLS				AML	AML	15 22 45.6	
	comp=N,1434μm,0.3s						
ARGA	Argostoli. Kep	0.35	188	P	Pb	15 22 40.3	-0.4
KEF3	Kipouria, Keph	0.35	205	P	Pg	15 22 39.0	-0.9
KEF3				S	Sg	15 22 44.3	-0.5
PVO	Paravola	0.78	83	P	Pb	15 22 48.1	0.0
LTHK	Lithakia	0.84	164	P	Pg	15 22 48.2	-0.9
EFP	Efpalio	1.08	95	P	Pb	15 22 52.4	-0.7
DRO	Drossia	1.08	121	P	Pb	15 22 52.4	-0.9

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*ATH **23** 15:23:18.4, 38°.53N×20°.55E, h11km±1km, ML2.8/3, Error ellipse: s-maj=2.3km s-min=0.6km az=106.0*

*THE **23** 15:23:18.3, 38°.53N×20°.55E, h12km±1km, ML2.8/8, Error ellipse: s-maj=1.6km s-min=0.4km az=94.0*

ISC 23 15:23:18.1±1.2**, 38°.53N**±0°.02×**20°.55E**±0°.04**, h13**km±6km**, n28, σ0s.45**/51**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FSK	Fiskardo	0.07	170	P	Pg	15 23 20.8	0.0
FSK				S	Sg	15 23 22.4	-0.2
	17μm,0.2s						
FSK	Fiskardo	0.07	170	P	Pg	15 23 20.8	0.0
FSK				S	Sg	15 23 22.3	-0.4
FSK				AML	AML	15 23 22.7	
	comp=N,29164μm,0.2s						
FSK				AML	AML	15 23 22.9	
	comp=E,37865μm,0.2s						
EVGI	Lefkada island	0.13	42	P	Pg	15 23 21.5	0.0
EVGI				S	Sg	15 23 23.7	-0.2
	comp=E,14μm,0.2s						
EVGI	Lefkada island	0.13	42	P	Pg	15 23 21.5	0.0
EVGI				S	Sg	15 23 23.9	0.0
DRAG	Dragano-Lefkad	0.16	8	P	Pg	15 23 21.9	-0.1
DRAG				S	Sg	15 23 25.0	+0.4
DRAG	Dragano-Lefkad	0.16	8	P	Pg	15 23 21.9	-0.1
NYDR	Nydri-Lefkada	0.22	32	P	Pg	15 23 22.9	0.0
NYDR				S	Sg	15 23 26.9	+0.7
	comp=E,4μm,0.3s						
NYDR	Nydri-Lefkada	0.22	32	P	Pg	15 23 22.9	0.0
NYDR				S	Sg	15 23 26.2	0.0
LKD2	Lefkada island	0.28	18	P	Pg	15 23 23.9	0.0
LKD2				S	Sg	15 23 27.7	-0.1
	comp=E,1μm,0.1s						
LKD2	Lefkada island	0.28	18	P	Pg	15 23 23.9	0.0
LKD2				S	Sg	15 23 27.9	+0.1
LKD2				AML	AML	15 23 28.8	
	comp=E,2184μm,0.2s						
LKD2				AML	AML	15 23 30.2	
	comp=N,2106μm,0.2s						
KEF4	Livadi, Kephal	0.28	200	P	Pg	15 23 24.0	0.0
KEF4				S	Sg	15 23 29.0	+1.0
KEF4	Livadi, Kephal	0.28	200	P	Pg	15 23 24.1	0.0
KEF4				S	Sg	15 23 28.5	+0.5
TSLK	Tsoukalades, L	0.31	16	P	Pg	15 23 24.7	+0.2
TSLK				S	Sb	15 23 30.1	-0.4
	comp=N,1μm,0.5s						
TSLK	Tsoukalades, L	0.31	16	P	Pg	15 23 24.8	+0.2
TSLK				S	Sg	15 23 29.1	+0.3
DMLN	Damoulianata-K	0.32	206	P	Pg	15 23 24.6	-0.1
DMLN				S	Sg	15 23 30.0	+0.9
	comp=N,2μm,0.4s						
DMLN	Damoulianata-K	0.32	206	P	Pg	15 23 24.6	-0.1
DMLN				S	Sg	15 23 29.9	+0.8
LXRA	Lixouri, Kepha	0.34	195	P	Pg	15 23 25.0	0.0
LXRA				S	Sg	15 23 29.9	+0.4
VLS	Valsamata	0.35	175	P	Pg	15 23 25.1	-0.2
VLS				S	Sg	15 23 30.9	+0.9
	comp=N,3μm,0.2s						
VLS	Valsamata	0.35	175	P	Pg	15 23 25.1	-0.2
VLS				S	Sg	15 23 30.7	+0.7
VLS				AML	AML	15 23 31.1	
	comp=E,5120μm,0.2s						
VLS				AML	AML	15 23 31.3	
	comp=N,5851μm,0.3s						
ARGA	Argostoli. Kep	0.35	189	P	Pg	15 23 26.0	+0.7
ARGA				S	Sg	15 23 30.7	+0.6
KEF3	Kipouria, Keph	0.36	206	P	Pg	15 23 24.8	-0.6
KEF3				S	Sg	15 23 30.2	-0.1
	comp=N,4μm,0.2s						
KEF3	Kipouria, Keph	0.36	206	P	Pg	15 23 24.7	-0.7
KEF3				S	Sg	15 23 30.0	-0.2
PSDA	Pessada-Kefalo	0.41	176	P	Pg	15 23 26.2	-0.2
PSDA				S	Sg	15 23 32.8	+0.9
PSDA	Pessada-Kefalo	0.41	176	P	Pg	15 23 26.2	-0.2
PSDA				S	Sg	15 23 31.6	-0.3
PVO	Paravola	0.77	83	P	Pg	15 23 33.4	+0.3
LTHK	Lithakia	0.85	164	P	Pg	15 23 33.5	-1.0
RLS	Riolos of Patr	0.86	123	P	Pg	15 23 34.9	+0.1
RLS	Riolos of Patr	0.86	123	P	Pg	15 23 34.4	-0.4

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*ATH **23** 15:23:32.7, 38°.53N×20°.56E, h11km±1km, ML3.4/22, Error ellipse: s-maj=1.4km s-min=0.6km az=279.0*

*THE **23** 15:23:32.3, 38°.54N×20°.49E, h12km, ML3.6/19, Error ellipse: s-maj=1.2km s-min=0.6km az=280.0*

*IDC **23** 15:23:37.9±3.2, 39°.20N×21°.73E, h0km, mb3.7/6, mb1 3.7/7, mb1mx3.5/40, mbtmp3.7/7, ML2.9/1, MS2.7/1, Ms1 2.7/1, ms1mx2.1/49, Error ellipse: s-maj=72.0km s-min=26.6km az=57.0*

ISC 23 15:23:31.8±0.8**, 38°.53N**±0°.02×**20°.47E**±0°.02**, h12**km±5km**, n100, σ1s.24**/139**, mb3.7**/6**, 6C-5D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FSK	Fiskardo	0.10	134	P	Pb	15 23 35.0	-0.7
FSK				S	Sg	15 23 36.8	0.0
	163μm,0.2s						
FSK	Fiskardo	0.10	134	P	Pb	15 23 35.0	-0.7
FSK				S	Sg	15 23 36.5	-0.3
FSK				AML	AML	15 23 37.0	
FSK				AML	AML	15 23 37.2	
EVGI	Lefkada island	0.17	58	P	Pg	15 23 35.7	-0.1
EVGI				S	Sg	15 23 38.1	-0.4
	106μm,0.2s						
EVGI	Lefkada island	0.17	58	P	Pg	15 23 35.6	-0.1
EVGI				S	Sg	15 23 38.1	-0.4
DRAG	Dragano-Lefkad	0.17	28	P	Pg	15 23 36.1	+0.3
DRAG				S	Sg	15 23 38.9	+0.3
	206μm,0.2s						
DRAG	Dragano-Lefkad	0.17	28	P	Pg	15 23 35.8	0.0
DRAG				S	Sg	15 23 38.8	+0.3
NYDR	Nydri-Lefkada	0.26	44	P	Pg	15 23 37.1	0.0
NYDR				S	Sg	15 23 40.9	+0.1
	44μm,0.5s						
NYDR	Nydri-Lefkada	0.26	44	P	Pg	15 23 37.2	0.0
NYDR				S	Sg	15 23 40.7	0.0
KEF4	Livadi, Kephal	0.27	188	P	Pb	15 23 38.2	-0.4
KEF4				S	Sb	15 23 43.1	-0.1
KEF4	Livadi, Kephal	0.27	188	P	Pb	15 23 38.2	-0.4
KEF4				S	Sb	15 23 42.7	-0.4
LKD2	Lefkada island	0.30	30	P	Pg	15 23 38.2	+0.2
LKD2				S	Sb	15 23 43.2	-0.8
	10μm,0.4s						
LKD2	Lefkada island	0.30	30	P	Pg	15 23 38.1	+0.2
LKD2				S	Sg	15 23 42.7	+0.7
LKD2				AML	AML	15 23 43.6	
	comp=N,20584μm,0.5s						
LKD2				AML	AML	15 23 47.7	
	comp=E,20039μm,0.5s						
DMLN	Damoulianata-K	0.30	195	P	Pb	15 23 38.8	-0.3
DMLN				S	Sb	15 23 44.1	+0.1
	comp=E,33μm,0.4s						
DMLN	Damoulianata-K	0.30	195	P	Pb	15 23 38.8	-0.3
DMLN				S	Sb	15 23 43.8	-0.2
TSLK	Tsoukalades, L	0.33	26	P	Pg	15 23 38.8	+0.3
TSLK				S	Sb	15 23 44.0	-0.8
	comp=E,12μm,0.4s						
TSLK	Tsoukalades, L	0.33	26	P	Pg	15 23 38.8	+0.3
TSLK				S	Sg	15 23 43.7	+0.7
TSLK				AML	AML	15 23 46.9	
	comp=E,21320μm,0.4s						
TSLK				AML	AML	15 23 49.2	
	comp=N,28313μm,0.4s						
LXRA	Lixouri, Kepha	0.33	185	P	Pb	15 23 39.3	-0.3
LXRA				S	Sb	15 23 44.4	-0.4
KEF3	Kipouria, Keph	0.34	196	P	Pb	15 23 39.0	-0.7
KEF3				S	Sb	15 23 44.5	-0.6
	comp=N,36μm,0.3s						
KEF3	Kipouria, Keph	0.34	196	P	Pb	15 23 38.7	-1.1
KEF3				S	Sb	15 23 44.0	-1.1
ARGA	Argostoli. Kep	0.35	179	P	Pb	15 23 40.4	+0.4
ARGA				S	Sb	15 23 45.9	+0.5
VLS	Valsamata	0.36	165	P	Pb	15 23 39.4	-0.8
VLS				S	Sb	15 23 45.2	-0.6
	comp=N,28μm,0.2s						
VLS	Valsamata	0.36	165	P	Pb	15 23 39.4	-0.8
VLS				S	Sb	15 23 44.8	-1.0
VLS				AML	AML	15 23 45.3	
	comp=N,56090μm,0.2s						
VLS				AML	AML	15 23 45.5	
	comp=E,56474μm,0.2s						
PSDA	Pessada-Kefalo	0.42	168	P	Pb	15 23 40.5	-0.7
PSDA				S	Sb	15 23 47.4	-0.1
	comp=E,5μm,0.2s						
PSDA	Pessada-Kefalo	0.42	168	P	Pb	15 23 40.5	-0.7
PSDA				S	Sb	15 23 47.2	-0.3
ZAK2	Zakynthos	0.81	155	P	Pb	15 23 47.9	+0.1
ZAK2				S	Sn	15 24 00.7	-0.3
	comp=E,11μm,0.5s						
PVO	Paravola	0.83	84	P	Pg	15 23 46.2	-1.7
PVO				S	Sb	15 24 00.5	+1.2
	comp=E,3μm,0.5s						
PVO	Paravola	0.83	84	P	Pg	15 23 46.5	-1.4
PVO				AML	AML	15 24 05.7	
	comp=N,5691μm,0.5s						
PVO				AML	AML	15 24 06.2	
	comp=E,4619μm,0.3s						
VTN	Vitineika	0.83	137	P	Pb	15 23 47.9	-0.2
VTN	Vitineika	0.83	137	P	Pg	15 23 47.4	-0.4
LTHK	Lithakia	0.87	160	P	Pg	15 23 47.4	-1.2
LTHK				S	Sb	15 24 00.7	+0.4
	comp=E,4μm,0.2s						
LTHK	Lithakia	0.87	160	P	Pg	15 23 47.3	-1.3
LTHK				AML	AML	15 24 02.5	
	comp=N,9850μm,0.2s						
LTHK				AML	AML	15 24 03.2	
	comp=E,5481μm,0.2s						
RLS	Riolos of Patr	0.92	121	P	Pg	15 23 48.7	-0.7
RLS				S	Sn	15 24 03.5	0.0
	comp=E,1μm,0.3s						
RLS	Riolos of Patr	0.92	121	P	Pg	15 23 48.4	-1.0
RLS				S	Sg	15 24 00.5	-0.9
RLS				AML	AML	15 24 04.2	
	comp=N,2398μm,0.3s						
RLS				AML	AML	15 24 10.6	
	comp=E,2307μm,0.3s						
IGT	Igoumenitsa	1.01	354	P	Pg	15 23 50.5	-0.7
IGT				S	Sn	15 24 06.7	+0.9
	comp=E,2μm,0.8s						
IGT	Igoumenitsa	1.01	354	P	Pn	15 23 51.1	-0.7
IGT				AML	AML	15 24 09.5	
	comp=E,5258μm,0.8s						
IGT				AML	AML	15 24 10.2	
	comp=N,3626μm,0.6s						
EVR	Evrytania	1.12	69	P	Pb	15 23 52.6	-0.5
EVR				AML	AML	15 24 14.8	
	comp=N,2123μm,0.4s						
EVR				AML	AML	15 24 17.6	
	comp=E,2062μm,0.4s						
EFP	Efpalio	1.13	95	P	Pb	15 23 51.8	-1.5
EFP				S	Sn	15 24 09.9	+1.1
	comp=E,2μm,0.4s						
EFP	Efpalio	1.13	95	P	Pb	15 23 51.7	-1.5
EFP				AML	AML	15 24 13.7	
	comp=E,3110μm,0.5s						
EFP				AML	AML	15 24 14.7	
	comp=N,3212μm,0.3s						
DRO	Drossia	1.13	120	P	Pb	15 23 52.5	-0.8
DRO				S	Sn	15 24 09.8	+0.8
	comp=N,4μm,0.3s						
DRO	Drossia	1.13	120	P	Pb	15 23 52.6	-0.8
DRO				S	Sg	15 24 08.4	0.0
DRO				AML	AML	15 24 12.0	
	comp=E,9510μm,0.3s						
DRO				AML	AML	15 24 12.4	
	comp=N,6863μm,0.3s						
ANX	Ano Chora	1.14	86	P	Pb	15 23 53.3	-0.2
ANX				AML	AML	15 24 15.1	
	comp=E,2794μm,0.4s						
ANX				AML	AML	15 24 21.6	
	comp=N,4326μm,0.5s						
JAN	Janina	1.16	15	P	Pg	15 23 54.9	+0.7
JAN				AML	AML	15 24 16.0	
	comp=N,2163μm,0.4s						
JAN				AML	AML	15 24 19.2	
	comp=E,2198μm,0.3s						
LAKA	Lakka	1.22	103	P	Pn	15 23 53.6	-1.1
LAKA				S	Sn	15 24 11.5	+0.4
	comp=E,3μm,0.5s						
LAKA	Lakka	1.22	103	P	Pn	15 23 53.5	-1.2
LAKA				AML	AML	15 24 20.1	
	comp=N,4655μm,0.4s						
LAKA				AML	AML	15 24 23.8	
	comp=E,6846μm,0.6s						
SERG	Sergoula	1.25	95	P	Pn	15 23 54.1	-1.0
SERG				S	Sg	15 24 12.4	+0.3
	comp=E,762nm,0.4s						
SERG	Sergoula	1.25	95	P	Pn	15 23 53.8	-1.3
SERG				AML	AML	15 24 14.1	
	comp=N,1702μm,0.2s						
SERG				AML	AML	15 24 19.9	
	comp=E,2306μm,0.3s						
TRIZ	Trizonia	1.27	97	P	Pn	15 23 54.3	-1.0
TRIZ	Trizonia	1.27	97	P	Pn	15 23 54.2	-1.0
KASA	Kassiopi	1.28	341	P	Pg	15 23 57.5	+1.0
KASA				S	Sg	15 24 13.6	+0.4
KASA				AML	AML	15 24 17.5	
	comp=N,2124μm,0.3s						
KASA				AML	AML	15 24 17.6	
	comp=E,3769μm,0.7s						
KEK	Kerkira	1.29	336	P	Pg	15 23 57.7	+1.1
KEK				AML	AML	15 24 20.3	
	comp=E,1554μm,0.4s						
KEK				AML	AML	15 24 24.6	
	comp=N,1142μm,0.4s						
MAKR	Makrakomi, Fth	1.39	69	P	Pn	15 23 57.0	0.0
MAKR				AML	AML	15 24 24.1	
	comp=N,1177μm,0.7s						
MAKR				AML	AML	15 24 26.3	
	comp=E,1818μm,0.4s						
KLV	Kalavryta, Ach	1.41	110	P	Pn	15 23 56.6	-0.6
KLV				AML	AML	15 24 28.0	
	comp=E,660μm,0.6s						
KLV				AML	AML	15 24 30.7	
	comp=N,689μm,0.5s						
AGG	Agios Georgios	1.54	71	P	Pb	15 24 00.5	+0.3
AGG				AML	AML	15 24 28.2	
	comp=E,2655μm,0.9s						
AGG				AML	AML	15 24 28.5	
	comp=N,2388μm,0.4s						
THL	Klokotos Trika	1.59	49	P	Pb	15 24 01.0	0.0
THL				AML	AML	15 24 29.8	
	comp=E,2332μm,0.4s						
THL				AML	AML	15 24 32.7	
	comp=N,1008μm,0.4s						
GUR	Goura	1.59	111	P	Pn	15 23 59.7	-0.1
GUR				AML	AML	15 24 33.9	
	comp=N,2307μm,0.5s						
GUR				AML	AML	15 24 35.8	
	comp=E,2393μm,0.4s						
THAL	Thalero	1.79	105	P	Pb	15 24 04.7	+0.1
PYL	PYLOS	1.92	148	P	Pb	15 24 06.4	-0.2
VIL2	Platees	2.22	97	P	Pb	15 24 10.9	-0.9
OHR	Ohrid	2.59	6	*i* Pn	Pb	15 24 16.4	-1.8
TIR	Tirane	2.85	351	⇑P	Pn	15 24 19.1	+2.0
TIR				⇓S	Sb	15 24 54.5	-3.0
TIP	Timpagrande	2.97	284	⇓P	Pn	15 24 20.1	+1.3
VAY	Valandovo	3.22	29	*i* Pn	Pn	15 24 23.7	+1.5
STIP	Stip	3.42	22	*i* Pn	Pb	15 24 28.6	-3.7
MATE	Matera	3.60	307	⇓P	Pn	15 24 29.1	+1.8
DRME	Dracevica, Mon	3.78	345	*e*Pn	Pn	15 24 31.2	+1.3
PDG	Podgorica	4.00	347	⇑P	Pn	15 24 34.7	+1.8
PDG	Podgorica	4.00	347	*e*Pn	Pn	15 24 29.3	-3.6
HCY	Herceg Novi	4.19	340	*e*Pn	Pn	15 24 35.3	-0.2
TREB	Trebinje	4.48	340	*e*Pn	Pn	15 24 39.2	-0.3
DBRK	Dubrovnik	4.50	338	*e*Pn	Pn	15 24 40.2	+0.5
DBRK				Sn	Sn	15 25 29.1	-2.8
VTS	Vitosha	4.59	26	⇑P	Pn	15 24 42.4	+1.2
BRY	Bratogost	4.61	342	*e*Pn	Pn	15 24 40.6	-0.7
IDI	Anoyia	4.80	131	Pn	Pn	15 24 48.7	+4.8
	comp=E,0.6nm,0.3s,baz=350,slow=6.2,SNR=1.6						
IDI				Sn	Sn	15 25 40.2	+0.9
	comp=E,0.8nm,0.3s,baz=80,slow=22,SNR=1.8						
UPM	Unac-Piva	4.82	346	*e*Pn	Pn	15 24 45.9	+1.6
STON	Ston	4.82	335	*e*Pn	Pn	15 24 44.1	0.0
STON	Ston	4.82	335	*e*Pn	Pn	15 24 43.9	-0.2
STON				Sn	Sn	15 25 36.4	-3.5
LSTV	Lastovo	5.03	328	*e*Pn	Pn	15 24 47.3	+0.2
LSTV				Sn	Sn	15 25 41.3	-3.7
BBLS	Lazići	5.39	352	*e*Pn	Pn	15 24 52.5	+0.5
HVAR	Hvar	5.55	328	*e*Pn	Pn	15 24 54.1	-0.1
RICI	Ricice	5.56	334	*e*Pn	Pn	15 24 54.7	+0.3
DIVS	Divibare	5.58	356	*e*Pn	Pn	15 24 54.5	-0.1
HAPS	Han Pijesak,BI	5.67	349	*e*Pn	Pn	15 24 55.4	-0.5
ZIRJ	Zirje	6.28	326	*e*Pn	Pn	15 25 04.4	+0.2
MORI	Morici	6.43	328	*e*Pn	Pn	15 25 07.0	+0.8
FRGS	Fruska Gora	6.64	356	*e*Pn	Pn	15 25 10.3	+1.1
DUGI	Dugi Otok	6.81	325	*e*Pn	Pn	15 25 11.1	-0.4
GZR	Gura Zlata	7.07	13	⇑P	Pn	15 25 16.3	+1.2
VOIR		7.70	25	⇓P	Pn	15 25 24.8	+1.1
MLR	Muntele Rosu	8.06	29	⇓P	Pn	15 25 30.8	+2.1
CRES	Cresnjev	8.18	335	*e*Pn	Pn	15 25 27.7	-2.6
CEY	Cerknica	8.49	330	*e*Pn	Pn	15 25 36.7	+2.2
PLOR	Plostina	8.63	30	⇑P	Pn	15 25 38.4	+1.9
VRI	Vrincioaia	8.68	30	⇑P	Pn	15 25 39.5	+2.4
GERES	GERESS Array B	11.41	337	LR	LR	15 32 02.9	
	comp=E,40nm,19.8s,baz=276,slow=45						
HFS	Hagfors	22.05	351	P	P	15 28 28.3	+2.2
	comp=E,4.1nm,1.0s,baz=154,slow=8.2,SNR=7.8						
FINES	FINESS Array B	23.20	7	P	P	15 28 36.4	-1.8
	comp=E,0.9nm,0.4s,baz=171,slow=11,SNR=14						
NOA	NORSAR Array B	23.27	349	P	P	15 28 43.2	+4.3
	comp=E,0.4nm,0.6s,baz=153,slow=10,SNR=2.3						
ARCES	ARCESS Array B	31.18	3	P	P	15 29 52.6	+2.2
	comp=E,3.6nm,1.0s,baz=189,slow=11,SNR=2.3						
MKAR	Makanchi Array	45.15	59	P	P	15 31 46.8	-1.4
	comp=E,0.5nm,0.6s,baz=283,slow=7.6,SNR=4.9						
ZALV	Zalesovo Beam	45.49	48	P	P	15 31 49.4	-1.2
	comp=E,1.2nm,0.4s,baz=270,slow=8.3,SNR=6.7						

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*MAN **23** 15:25:27.7, 20°.11N×121°.36E, h106km, mb4.1, ML2.8, MS2.5*

IDC 23 15:25:26.2±2.0**, 19°.70N×121°.46E, h0**km**, mb3.5**/4**, mb1 3.7**/4**, mb1mx3.4**/47**, mbtmp3.5**/4**, MS2.7**/1**, Ms1 2.9**/1**, ms1mx2.4**/22**, Error ellipse: s-maj=73.8km s-min=24.5km az=51.0, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	21.32	270	P	P	15 30 14.7	-0.1
	0.3nm,0.3s,baz=81,slow=7.8,SNR=4.2						
CMAR				LR	LR	15 37 35.8	
	comp=Z,18nm,18.3s,baz=325,slow=34						
WRA	Warramunga Arr	41.37	162	P	P	15 33 13.6	-0.7
	0.5nm,0.7s,baz=343,slow=9.0,SNR=9.3						
MKAR	Makanchi Array	41.81	319	P	P	15 33 17.5	-0.1
	0.8nm,0.9s,baz=119,slow=10.0,SNR=4.2						
ASAR	Alice Springs	44.78	164	P	P	15 33 42.2	+0.4
	0.3nm,0.3s,baz=344,slow=7.4,SNR=20						

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*NEIC **23** 15:26:10.3±1.8, 23°.1S±0°.2×179°.4W±0°.3, h426km±28km, mb4.2/14, Error ellipse: s-maj=38.6km s-min=21.4km az=122.0*

*IDC **23** 15:26:29.1±7.6, 24°.33S×178°.88E, h506km±41km, mb2.7/4, mb1 3.0/5, mb1mx2.8/24, mbtmp3.8/5, Error ellipse: s-maj=109.5km s-min=24.5km az=45.0*

ISC 23 15:26:13.1±0.9**, 23°.2S**±0°.2×**179°.2W**±0°.1**, h500**km**, n20, σ1s.88**/18**, mb4.1**/9**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	9.51	66	P	P	15 28 23.8	-1.5
URZ	Urewera	15.40	191	P	P	15 29 27.0	-0.2
	1.0nm,0.3s,baz=121,slow=23,SNR=8.3						
URZ				S	S	15 31 51.8	-16
	0.2nm,0.3s,baz=118,slow=23,SNR=2.0						
URZ	Urewera	15.40	191	IAmb	IAmb	15 29 51.4	
	comp=Z,18nm,1.1s						
BKZ	Black Stump Fm	16.39	192	P	P	15 29 37.3	-0.4
BKZ				IAmb	IAmb	15 29 56.0	
	comp=Z,18nm,1.3s						
QRZ	Quartz Range	18.97	200	P	P	15 30 04.3	+2.2
THZ	Tophouse	19.72	198	P	P	15 30 10.5	+1.5
THZ				IAmb	IAmb	15 30 31.6	
	comp=Z,22nm,1.3s						
KHZ	Kahutara	20.16	196	P	P	15 30 13.8	+0.9
KNTN	Kanton	21.50	21	P	P	15 30 27.2	+1.8
CTAO	Charters Tower	32.27	269	P	P	15 32 00.6	+0.5
CTAO				IAmb	IAmb	15 32 18.7	
	comp=Z,8.6nm,1.2s						
TOO	Toolangi	33.51	236	P	P	15 32 09.8	-0.6
TOO				IAmb	IAmb	15 32 32.6	
	comp=Z,16nm,1.4s						

STKA	Stephens Creek	35.73	247	P	P	15 32 28.2	-0.9
	comp=Z,0.8nm,0.4s,baz=88,slow=10,SNR=5.4						
STKA	Stephens Creek	35.73	247	P	P	15 32 28.1	-1.0
COEN	Coen	36.78	278	P	P	15 32 37.2	-0.8
COEN				IAmb	IAmb	15 33 06.2	
	comp=Z,11nm,1.3s						
BBOO	Buckleboo	40.46	246	P	P	15 33 06.0	-1.7
BBOO				IAmb	IAmb	15 33 21.0	
	comp=Z,18nm,1.4s						
AS31	Alice Springs	42.93	260	P	P	15 33 27.1	-0.4
ASAR	Alice Springs	42.94	260	P	P	15 33 27.4	0.0
	comp=Z,0.2nm,0.4s,baz=92,slow=7.5,SNR=19						
ASAR				ScP	ScP	15 38 15.9	+5.6
	comp=Z,0.2nm,0.9s,baz=112,slow=4.6,SNR=1.8						
WB2	Warramunga Arr	43.23	265	P	P	15 33 29.6	-0.2
WRAB	Tennant Creek	43.24	265	P	P	15 33 28.6	-1.2
WRAB				IAmb	IAmb	15 33 32.9	
	comp=Z,9.6nm,1.5s						
WRA	Warramunga Arr	43.24	265	P	P	15 33 29.8	-0.2
	comp=Z,0.4nm,0.4s,baz=104,slow=8.4,SNR=17						
VNDA	Vanda	55.19	185	P	P	15 35 04.1	+6.7
	comp=Z,0.3nm,0.5s,baz=30,slow=4.3,SNR=5.9						

*IDC **23** 15:29:01.2±0.6, 52°.99S×21°.88E, h0^{km}, mb4.4/14, mb1 4.5/14, mb1mx4.2/34, mbtmp4.4/14, MS3.8/16, Ms1 3.8/16, ms1mx3.7/22, Error ellipse: s-maj=23.0km s-min=14.7km az=87.0*

*NEIC **23** 15:29:03.2±1.3, 53°.0S±0°.1×21°.8E±0°.2, h10^{km}±1^{km}, mb4.9/28, Error ellipse: s-maj=18.5km s-min=17.4km az=231.0*

ISC 23 15:29:02.9±0.4**, 53°.00S**±0°.08×**21°.8E**±0°.1**, h10^{km}, n72, σ0^{s}.68**/57**, mb4.8**/21**, MS3.9**/15**, 1C, South of Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SYO	Syowa Base	18.09	159	⇑*e*pP	pP	15 33 15.6	-0.6
SUR	Sutherland	20.62	358	P	Pn	15 33 43.8	-1.0
	17nm,0.9s,baz=189,slow=6.5,SNR=4.6						
SUR				LR	LR	15 39 45.3	
	comp=Z,455nm,20.1s,baz=180,slow=31						
SUR	Sutherland	20.62	358	P	P	15 33 43.4	+0.9
SUR				IAmb	IAmb	15 33 50.8	
	comp=Z,76nm,1.2s						
SNAA	Sanae	21.63	201	P	P	15 33 54.2	+1.3
SNAA	Sanae	21.63	201	P	P	15 33 54.3	+1.3
	comp=Z,35nm,0.9s,baz=44,slow=10,SNR=89						
SNAA				LR	LR	15 40 42.2	
	comp=Z,421nm,18.3s,baz=11,slow=32						
SNAA	Sanae	21.63	201	P	P	15 33 53.8	+0.9
SNAA				IAmb	IAmb	15 33 55.4	
	comp=Z,43nm,0.9s						
VNA2	Neumayer--Watz	22.20	205	P	P	15 33 59.7	+0.8
	baz=41,slow=11						
VNA1	Neumayer--Stat	22.26	206	P	P	15 34 01.0	+1.4
VNA3	Neumayer Olymp	22.98	206	P	P	15 34 07.9	+0.6
MAW	Mawson	24.43	142	P	P	15 34 20.8	-0.4
	comp=Z,3.8nm,0.9s,baz=272,slow=12,SNR=3.8						
MAW				LR	LR	15 41 47.5	
	comp=Z,138nm,21.7s,baz=252,slow=31						
MAW	Mawson	24.43	142	P	P	15 34 21.3	+0.1
BOSA	Boshof	24.50	7	P	P	15 34 22.2	-0.2
	comp=Z,3.0nm,0.8s,baz=179,slow=11,SNR=2.6						
BOSA				LR	LR	15 42 17.1	
	comp=Z,399nm,19.9s,baz=188,slow=32						
BOSA	Boshof	24.50	7	P	P	15 34 22.9	+0.5
BOSA				IAmb	IAmb	15 34 44.2	
	comp=Z,27nm,1.4s						
LBTB	Lobatse	28.10	7	P	P	15 34 54.0	-0.8
	comp=Z,4.4nm,0.9s,baz=193,slow=14,SNR=3.2						
LBTB				LR	LR	15 44 05.4	
	comp=Z,363nm,20.9s,baz=182,slow=32						
LBTB	Lobatse	28.10	7	P	P	15 34 54.1	-0.7
TSUM	Tsumeb	33.89	353	P	P	15 35 46.9	+1.0
TSUM				IAmb	IAmb	15 35 54.1	
	comp=Z,18nm,1.2s						
QSPA	South Pole Qui	37.22	180	P	P	15 36 14.1	-0.1
	comp=Z,31nm,0.9s,baz=242,slow=3.1,SNR=102						
QSPA	South Pole Qui	37.22	180	P	P	15 36 14.1	-0.1
CASY	Casey	42.78	143	P	P	15 37 00.5	+0.4
VNDA	Vanda	47.40	169	P	P	15 37 36.6	0.0
	comp=Z,2.4nm,1.1s,baz=232,slow=8.0,SNR=9.0						
VNDA				PP	PP	15 39 28.3	+0.8
	comp=Z,1.5nm,1.0s,baz=240,slow=2.4,SNR=3.9						
VNDA				LR	LR	15 57 06.0	
	comp=Z,134nm,19.4s,baz=214,slow=36						
VNDA	Vanda	47.40	169	P	P	15 37 35.9	-0.8
H10S2	ASCENSION HYDR	52.87	313	T	T	16 35 32.7	
	baz=68,slow=74,SNR=4.7						
H10S3	ASCENSION HYDR	52.89	313	T	T	16 35 29.8	
	baz=152,slow=74,SNR=8.7						
KMBO	Kilima Mbogo	53.28	19	LR	LR	16 00 23.5	
	comp=Z,169nm,18.1s,baz=100,slow=35						
PLTB	Pedras Altas	56.83	260	P	P	15 38 47.5	+0.1
PLTB				IAmb	IAmb	15 39 03.0	
	comp=Z,20nm,1.5s						
TRQA	Tornquist	57.26	249	P	P	15 38 49.9	-0.5
TRQA				IAmb	IAmb	15 38 51.1	
	comp=Z,15nm,0.8s						
PLCA	Paso Flores	60.06	241	P	P	15 39 09.7	-0.2
	comp=Z,6.0nm,0.9s,baz=137,slow=7.5,SNR=15						
PLCA				LR	LR	16 02 55.8	
	comp=Z,29nm,18.3s,baz=163,slow=34						
PLCA	Paso Flores	60.06	241	P	P	15 39 09.6	-0.4
PLCA				IAmb	IAmb	15 39 10.9	
	comp=Z,7.7nm,1.0s						
LC01	Cunco	62.09	242	P	P	15 39 22.9	-0.8
LC01				IAmb	IAmb	15 39 23.9	
	comp=Z,11nm,0.9s						
CPUP	Villa Florida	63.01	261	P	P	15 39 29.7	-0.2
	comp=Z,5.6nm,0.8s,baz=126,slow=6.6,SNR=6.9						
CPUP				LR	LR	16 01 39.7	
	comp=Z,34nm,21.9s,baz=153,slow=31						
CPUP	Villa Florida	63.01	261	P	P	15 39 29.4	-0.5
CPUP				IAmb	IAmb	15 39 30.6	
	comp=Z,8.9nm,0.9s						
DBIC	Dimbokro	63.60	330	LR	LR	16 02 28.3	
	comp=Z,33nm,18.5s,baz=157,slow=32						
H01W2	Cape Leeuwin H	64.31	114	T	T	16 50 13.6	
	baz=216						
H01W3	Cape Leeuwin H	64.32	114	T	T	16 50 07.5	
	baz=216						
H01W1	Cape Leeuwin H	64.32	114	T	T	16 50 05.0	
	baz=216						
GO05	Huala	64.99	245	P	P	15 39 42.2	-0.7
GO05				IAmb	IAmb	15 39 43.9	
	comp=Z,9.9nm,0.9s						
BDFB	Brasilia	65.52	276	P	P	15 39 46.5	-0.1
	comp=Z,2.9nm,0.6s,baz=7.7,slow=4.0,SNR=5.0						
BDFB	Brasilia	65.52	276	IAmb	IAmb	15 39 60.0	
	comp=Z,5.6nm,1.0s						
MT02	Curacav	65.86	246	P	P	15 39 47.3	-1.2
VA03	San Esteban	65.91	247	P	P	15 39 47.9	-1.0
TORD	Torodi Ar. Bea	68.11	339	P	P	15 40 02.6	-0.2
	comp=Z,3.6nm,0.9s,baz=184,slow=6.8,SNR=18						
TORD	Torodi Ar. Bea	68.11	339	P	P	15 40 02.2	-0.7
KOWA	Kowa	70.81	333	P	P	15 40 19.1	-0.4
KOWA				IAmb	IAmb	15 40 27.4	
	comp=Z,9.3nm,1.2s						
PTLB	Pontes e Lacer	72.38	268	P	P	15 40 29.1	0.0
PB15	IPOC Station P	72.55	255	P	P	15 40 29.8	-0.6
PB10	IPOC Station P	72.94	254	P	P	15 40 32.7	+0.2
PB01	IPOC Station P	74.23	256	P	P	15 40 40.5	+0.3
PB01				IAmb	IAmb	15 40 41.2	
	comp=Z,7.8nm,1.0s						
PB11	IPOC Station P	75.33	257	P	P	15 40 46.8	+0.2
BBOO	Buckleboo	77.26	128	P	P	15 40 57.0	-0.2
BBOO				IAmb	IAmb	15 41 03.6	
	comp=Z,14nm,1.1s						
RAYN	Ar Rayn	78.94	22	P	P	15 41 07.3	+0.9
SAML	Samuel	79.90	269	P	P	15 41 12.1	+0.1
WRA	Warramunga Arr	87.01	120	P	P	15 41 47.9	-0.6
	comp=Z,2.0nm,1.0s,baz=195,slow=2.9,SNR=11						
KEST	Kesra	89.03	350	LR	LR	16 21 08.8	
	comp=Z,68nm,20.5s,baz=301,slow=35						
BRTR	Keskin Array B	92.92	9	P	P	15 42 16.2	+0.5
	comp=Z,0.4nm,0.4s,baz=157,slow=6.7,SNR=4.4						
BRTR				LR	LR	16 23 36.8	
	comp=Z,57nm,20.8s,baz=182,slow=35						
ESDC	Sonseca Array	94.96	340	P	P	15 42 24.3	-0.7
	comp=Z,0.2nm,0.3s,baz=354,slow=12,SNR=2.9						
GEYT	Alibeck	95.89	28	LR	LR	16 25 57.8	
	comp=Z,21nm,18.6s,baz=205,slow=36						
CMAR	Chiang Mai Arr	97.07	69	LR	LR	16 20 16.8	
	comp=Z,34nm,18.1s,baz=204,slow=32						
KBZ	Khabaz	98.05	15	LR	LR	16 29 08.7	
	comp=Z,37nm,18.1s,baz=188,slow=37						
CD2	Chengdu	109.55	65	Pdif	Pdif	15 43 31.6	+1.2
SONM	Songino Array	123.39	53	PKP	PKPdf	15 47 58.7	-0.8
	comp=Z,1.3nm,0.6s,baz=343,slow=4.5,SNR=5.2						
TXAR	Lajitas Array	133.99	261	PKP	PKPdf	15 48 20.2	+0.1
	comp=Z,0.8nm,1.0s,baz=131,slow=5.1,SNR=4.0						
KNB	Kanab	144.82	261		PKPbc	15 48 39.0	+0.2
FCC	Fort Churchill	144.83	306	PKPdf	PKPab	15 48 37.8	0.0
P18A	Preston Nutter	144.96	267		PKPbc	15 48 39.5	+0.2
PDAR	Pinedale Array	146.42	272	PKPbc	PKPdf	15 48 42.6	+0.3
	comp=Z,4.2nm,0.9s,baz=128,slow=2.7,SNR=20						
PDAR	Pinedale Array	146.42	272	PKPdf	PKPdf	15 48 41.3	-1.0
RES	Resolute Bay	147.16	334	PKPbc	PKPbc	15 48 45.1	+0.5
NVAR	Mina Array Bea	149.02	258	PKPbc	PKPbc	15 48 51.0	+0.1
	comp=Z,4.7nm,0.9s,baz=142,slow=4.0,SNR=26						
NVAR	Mina Array Bea	149.02	258		PKPbc	15 48 50.9	0.0
PETK	Petropavlovsk-	153.81	72	PKPbc	PKPbc	15 49 00.3	-0.8
	comp=Z,3.0nm,0.8s,baz=85,slow=3.4,SNR=8.9						
YKA	Yellowknife Ar	155.35	310	PKPab	PKPab	15 49 21.0	+0.4
	comp=Z,3.8nm,0.9s,baz=94,slow=6.1,SNR=9.1						
INK	Inuvik	160.70	332	PKPab	PKPab	15 49 44.4	+0.9
	comp=Z,1.4nm,0.8s,baz=87,slow=5.9,SNR=3.3						

*NEIC **23** 15:35:04.4±2.8, 10°.7S±0°.1×165°.2E±0°.1, h10^{km}±1^{km}, mb4.4/10, Error ellipse: s-maj=23.4km s-min=5.1km az=44.0*

*IDC **23** 15:35:10.5±3.6, 10°.92S×165°.04E, h66^{km}±29^{km}, mb3.4/5, mb1 3.8/7, mb1mx3.5/30, mbtmp3.9/7, ML4.4/2, MS3.3/8, Ms1 3.3/8, ms1mx3.0/20, Error ellipse: s-maj=30.9km s-min=18.9km az=54.0*

ISC 23 15:35:06.9±1.1**, 10°.8S**±0°.1×**165°.2E**±0°.1**, h31^{km}, n44, σ1^{s}.55**/32**, mb4.2**/9**, MS3.3**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	5.05	158		Pn	15 36 21.0	+0.5
SANVU	Saraoutou	5.05	158	P	Pn	15 36 21.4	+0.8
HNR	Honiara	5.34	284	P	Pn	15 36 25.3	+0.8
	20nm,0.3s,baz=123,slow=7.0,SNR=6.1						
HNR				S	Sn	15 37 26.4	+1.4
	32nm,0.3s,baz=1.3,slow=23,SNR=5.8						
HNR				LR	LR	15 38 28.3	
	comp=Z,408nm,20.2s,baz=126,slow=38						
HNR	Honiara	5.34	284		Pn	15 36 25.7	+1.1
HNR	Honiara	5.34	284	P	Pn	15 36 29.6	+5.0
KOUNC	Koumac, New Ca	9.78	185	P	Pn	15 37 27.0	+1.5
MARNC	Mare, Loyalty	11.00	166	Pn	Pn	15 37 42.9	+0.6
DZM	Mont Dzumac	11.31	174	P	Pn	15 37 47.6	+1.0
	1.8nm,0.3s,baz=331,slow=8.3,SNR=38						
DZM				S	Sn	15 39 51.1	-0.9
	0.2nm,0.3s,baz=167,slow=20,SNR=1.3						
DZM	Mont Dzumac	11.31	174	*e*Pn	Pn	15 37 47.7	+1.1
	7.6nm,0.3s						
DZM				*e*LR	LR	15 40 37.3	
	comp=Z,111nm,23.4s						
DZM	Mont Dzumac	11.31	174	P	Pn	15 37 48.1	+1.5
NOUC	Port Laguerre	11.33	175	P	Pn	15 37 49.1	+2.4
YATNC	Mamie plateau,	11.36	172	P	Pn	15 37 48.6	+1.5
ONTNC	Ouen Toro	11.55	174	Pn	Pn	15 37 50.8	+1.1
ONTNC	Ouen Toro	11.55	174	P	Pn	15 37 51.4	+1.7
OUENC	Ouen Island, N	11.70	173	Pn	Pn	15 37 49.8	-2.0
OUENC	Ouen Island, N	11.70	173	P	Pn	15 37 54.1	+2.3
MSVF	Nonsavu	14.25	121	LR	LR	15 42 12.9	
	comp=Z,17nm,21.2s,baz=117,slow=30						
PMG	Port Moresby	17.82	273	LR	LR	15 45 02.9	
	comp=Z,165nm,19.3s,baz=122,slow=34						
EIDS	Eidsvold	19.76	221	P	P	15 39 34.2	-0.2
EIDS				IAmb	IAmb	15 39 37.1	
	comp=Z,8.1nm,0.8s						
CTAO	Charters Tower	20.47	241	P	P	15 39 42.6	+0.4
CTAO				IAmb	IAmb	15 40 02.4	
	comp=Z,16nm,1.2s						
COEN	Coen	21.75	259	P	P	15 39 56.4	+0.3
COEN				IAmb	IAmb	15 40 18.2	
	comp=Z,14nm,1.2s						
AFI	Afiamalu	22.70	100	LR	LR	15 46 57.9	
	comp=Z,132nm,20.0s,baz=286,slow=31						
H11S2	WAKE ISLAND Hy	29.10	3	T	T	16 11 38.5	
	baz=184,slow=76,SNR=59						
H11S3	WAKE ISLAND Hy	29.10	3	T	T	16 11 41.9	
	baz=184,slow=76,SNR=46						
H11S1	WAKE ISLAND Hy	29.12	3	T	T	16 11 22.4	
	baz=184,slow=76,SNR=52						
BKZ	Black Stump Fm	30.03	162	P	P	15 41 14.2	+1.0
STKA	Stephens Creek	30.29	222	P	P	15 41 15.4	-0.1
	comp=Z,3.9nm,0.9s,baz=24,slow=10.0,SNR=4.8						
STKA				LR	LR	15 52 33.4	
	comp=Z,56nm,19.0s,baz=25,slow=35						
STKA	Stephens Creek	30.29	222	IAmb	IAmb	15 41 22.9	
	comp=Z,2.5nm,1.3s						
H11N1	WAKE ISLAND Hy	30.32	3	T	T	16 12 57.8	
	baz=182,slow=76,SNR=50						
H11N3	WAKE ISLAND Hy	30.33	3	T	T	16 12 45.4	
	baz=182,slow=76,SNR=22						
H11N2	WAKE ISLAND Hy	30.34	3	T	T	16 12 43.2	
	baz=182,slow=76,SNR=21						
WB0	Warramunga Arr	31.00	249	P	P	15 41 20.0	-1.9
WRA	Warramunga Arr	31.09	249	P	P	15 41 20.3	-2.4
	comp=Z,0.2nm,0.5s,baz=82,slow=9.0,SNR=3.1						
WRA				LR	LR	15 52 32.8	
	comp=Z,55nm,20.7s,baz=75,slow=34						
TOO	Toolangi	32.05	210	P	P	15 41 31.9	+0.9
ASAR	Alice Springs	32.45	243	LR	LR	16 15 06.2	
	comp=Z,45nm,19.6s,baz=180,slow=33						
ASAR	Alice Springs	32.45	243	P	P	15 41 31.4	-3.3
	comp=Z,0.6nm,0.6s,baz=63,slow=11,SNR=19						
ASAR				LR	LR	15 55 01.4	
	comp=Z,39nm,18.1s,baz=74,slow=37						
ASAR	Alice Springs	32.45	243	P	P	15 41 31.6	-3.1
BBOO	Buckleboo	34.64	226	P	P	15 41 53.3	-0.3
BBOO				IAmb	IAmb	15 41 54.3	
	comp=Z,9.5nm,0.8s						
KNRA	Kununurra	35.78	258	P	P	15 42 01.8	-1.8
KNRA				IAmb	IAmb	15 42 16.5	
	comp=Z,17nm,1.4s						
PPT	Papeete	44.28	104	LR	LR	15 58 53.5	
	comp=Z,47nm,21.1s,baz=298,slow=32						
PPT2	Papeete2	44.28	104	*e*LR	LR	15 56 05.7	
	comp=Z,58nm,22.8s						
CMAR	Chiang Mai Arr	71.51	294	P	P	15 46 24.8	-0.5
	comp=Z,0.7nm,0.7s,baz=120,slow=5.0,SNR=6.4						
QSPA	South Pole Qui	79.25	180	P	P	15 47 08.9	-0.2
QSPA				IAmb	IAmb	15 47 18.6	
	comp=Z,8.5nm,1.4s						
ILAR	Eielson Array	83.41	19	P	P	15 47 31.2	+0.4
	comp=Z,0.3nm,0.7s,baz=238,slow=5.2,SNR=4.9						

*IDC **23** 15:39:40.5±3.6, 36°.22N×71°.41E, h72^{km}±32^{km}, mb3.4/11, mb1 3.5/17, mb1mx3.4/47, mbtmp3.8/17, ML3.7/6, MS2.7/1, Ms1 2.6/1, ms1mx2.2/26, Error ellipse: s-maj=28.7km s-min=18.3km az=15.0*

*BJI **23** 15:39:41.1±0.0, 36°.66N×71°.31E, h90^{km}, mB4.5/9, mb4.4/12*

*NNC **23** 15:39:43.9±8.8, 36°.88N×71°.24E, h0^{km}, mb4.3, mpv4.1, Error ellipse: s-maj=77.4km s-min=54.4km az=149.0*

*MOS **23** 15:39:43.4±1.1, 36°.45N×71°.46E, h108^{km}, mb4.5/1, Error ellipse: s-maj=14.1km s-min=6.4km az=86.2*

*NEIC **23** 15:39:44.1±1.9, 36°.47N±0°.05×71°.27E±0°.08, h98^{km}±5^{km}, mb4.1/11, Error ellipse: s-maj=9.8km s-min=6.7km az=98.0*

ISC 23 15:39:43.5±0.6**, 36°.36N**±0°.06×**71°.41E**±0°.06**, h114^{km}, n87, σ2^{s}.12**/87**, mb3.9**/15**, 2C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	Kabul	2.65	227	PN	Pn	15 40 26.8	+1.6
KBL	Kabul	2.65	227	Pn	Pn	15 40 26.8	+1.6
GAR	Garm	2.77	342	Pn	Pn	15 40 25.3	-1.5
CHGR	Chuyangaron	2.91	323		Pn	15 40 26.9	-1.6
NIL	Nilore	3.10	150	PN	Pn	15 40 32.8	+1.8
NIL	Nilore	3.10	150		Pn	15 40 32.8	+1.8
BTK	Batken	3.72	353	PN	Pn	15 40 39.2	-0.1
BTK	Batken	3.72	353	Pn	Pn	15 40 39.2	-0.1
KSH	Kashi	4.79	47	P	Pn	15 40 47.5	-6.1
KSH				S	Sn	15 41 35.6	-13
KSH				smax	smax		
	comp=N,280nm,0.5s						
KSH				smax	smax		
	comp=E,170nm,0.5s						
DHRM	DHARAMSHALA	5.76	134	*e*P	Pn	15 41 07.2	+0.4
DHRM				*e*S	Sn	15 42 08.1	-3.7
DHRM				IAML		15 42 12.6	
	comp=E,466nm,0.3s						
AML	Almayashu	6.03	16	P	Pn	15 41 09.9	-0.7
	SNR=83						
UCH	Uchtor	6.34	21	P	Pn	15 41 15.0	+0.2
	SNR=8.1						
EKS2	Erkin-Say	6.55	15	P	Pn	15 41 16.9	-0.5
	SNR=13						
AAK	Ala-Archa	6.71	20	P	Pn	15 41 19.4	-0.2
	comp=E,3.2nm,0.3s,baz=166,slow=4.8,SNR=15						
AAK				S	Sn	15 42 30.4	-4.2
	comp=E,0.9nm,0.3s,baz=312,slow=23,SNR=9.6						
AAK	Ala-Archa	6.71	20	P	Pn	15 41 19.3	-0.2
	SNR=13						
AAK	Ala-Archa	6.71	20	⇓Pn	Pn	15 41 19.0	-0.6
	comp=E,4.4nm,0.4s						
AAK				⇓Sn	Sn	15 42 30.6	-4.0
	comp=E,12nm,0.5s						
AAK	Ala-Archa	6.71	20	Pn	Pn	15 41 19.1	-0.4
KK07	Karatay Array	6.76	354	⇑Pn	Pn	15 41 18.5	-1.5
	comp=E,12nm,0.4s,baz=180,slow=13						
KK07				⇓Sn	Sn	15 42 30.5	-5.1
	comp=E,5.1nm,0.3s,baz=170,slow=24						
KKAR	Karatay Array	6.77	354	PN	Pn	15 41 18.9	-1.4
KKAR	Karatay Array	6.77	354	Pn	Pn	15 41 18.9	-1.4
BOOM	Boomskoye usch	7.05	28	PN	Pn	15 41 24.2	-0.1
BOOM	Boomskoye usch	7.05	28		Pn	15 41 24.2	-0.1
SMLA	Simla	7.08	136	*e*P	Pn	15 41 23.8	-0.7
SMLA				*e*S	Sn	15 42 37.1	-6.4
SMLA				IAML		15 42 41.6	
	comp=E,183nm,0.3s						
CHMS	Chumysh	7.11	20	P	Pn	15 41 24.3	-0.6
	SNR=7.4						
KDJ	Kajisay	7.30	36	PN	Pn	15 41 27.7	+0.1
KDJ	Kajisay	7.30	36	Pn	Pn	15 41 27.7	+0.1
USP	Ospenovka	7.30	18	P	Pn	15 41 26.7	-0.7
	SNR=6.0						
GEYT	Alibeck	10.73	282	P	Pn	15 42 11.3	-2.5
	comp=E,0.8nm,0.3s,baz=96,slow=12,SNR=9.3						
GEYT				S	Sn	15 44 06.7	-5.2
	comp=E,2.6nm,0.3s,baz=121,slow=26,SNR=8.7						
GEYT	Alibeck	10.73	282	Pn	Pn	15 42 11.0	-2.8
GYA0B	ALIBECK ARRAY	10.73	282	Pn	Pn	15 42 11.0	-2.8
PYUN	Piuthan	12.79	127	*e*P	Pn	15 42 38.1	-3.3
	comp=E,23nm,0.3s						
PYUN				*e*S	Sn	15 44 49.8	-13
MAKZ	Makanchi	13.09	34	P	P	15 42 52.0	+1.2
MAKZ	Makanchi	13.09	34	P	P	15 42 52.0	+1.2
DANN	Dangsing	13.14	124	*e*P	Pn	15 42 42.9	-3.1
	comp=E,12nm,0.3s						
DANN				*e*S	Sn	15 44 57.5	-13
MK31	Makanchi Array	13.22	35	P	Pn	15 42 46.9	+0.3
MK31	Makanchi Array	13.22	35	Pn	Pn	15 42 46.9	+0.3
MKAR	Makanchi Array	13.22	35	P	Pn	15 42 46.5	-0.1
	comp=E,0.0nm,0.3s,baz=234,slow=16,SNR=2.6						
KOLN	Koldanda	13.41	126	*e*P	Pn	15 42 46.6	-2.9
	comp=E,5.9nm,0.3s						
GKN	Gorkha	13.95	123	*e*P	Pn	15 42 54.1	-2.3
	comp=E,28nm,0.5s						
GKN				*e*S	Sn	15 45 16.3	-14
BHPL	Bhopal	14.07	157	*e*S	Sn	15 45 22.2	-11
WMQ	Urumqi	14.51	54	*e*P	P	15 43 04.4	-2.3
WMQ				pmax	pmax		
	comp=E,13nm,0.7s						
WMQ				pmax	pmax		
	comp=E,150nm,4.1s						
DMN	Daman	14.52	123	*e*P	Pn	15 43 01.6	-2.2
	comp=E,7.2nm,0.3s						
KKN	Kakani	14.52	122	*e*P	Pn	15 43 01.0	-2.8
	comp=E,8.5nm,0.3s						
PKIN	Phulchoki	14.74	122	*e*P	Pn	15 43 03.6	-2.9
	comp=E,8.2nm,0.3s						
PKI	Pulchoki	14.75	122	*e*P	Pn	15 43 04.2	-2.6
	comp=E,5.4nm,0.2s						
GUN	Gumba	14.86	120	*e*P	Pn	15 43 05.4	-2.8
	comp=E,11nm,0.4s						
KURBB	Kurchatov Arra	15.15	18	P	P	15 43 12.3	-1.4
	comp=E,0.1nm,0.3s,baz=208,slow=9.8,SNR=7.9						
JIRN	Jiri	15.23	121	*e*P	Pn	15 43 09.6	-3.3
	comp=E,10nm,0.3s						
KURK	Kurchatov	15.26	18	P	Pn	15 43 12.3	-0.3
KURK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
KURK	Kurchatov	15.26	18		Pn	15 43 12.3	-0.3
AB31	Akbulak array	15.37	331	P	Pn	15 43 11.7	-2.3
	comp=Z,1.3nm,0.3s,baz=144,slow=12,SNR=102						
ABKAR	Akbulak array	15.37	331		Pn	15 43 11.6	-2.4
ABKAR				IAmb	IAmb	15 43 14.2	
	comp=Z,3.0nm,0.6s						
ABKAR	Akbulak array	15.37	331		Pn	15 43 11.2	-2.8
RAMN	Ramite	15.96	122	*e*P	Pn	15 43 20.2	-1.6
	comp=Z,10nm,0.4s						
TAPN	Taplejung	16.49	118	*e*P	Pn	15 43 26.8	-1.6
	comp=Z,8.7nm,0.4s						
ODAN	Odare	16.56	120	*e*P	Pn	15 43 28.2	-1.0
	comp=Z,10nm,0.5s						
BVAR	Borovoye Array	16.68	358	P	Pn	15 43 29.7	-0.5
	comp=Z,0.3nm,0.3s,baz=189,slow=17,SNR=6.6						
BRVK	Borovoye	16.72	358	P	Pn	15 43 30.3	-0.3
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRVK	Borovoye	16.72	358	P	Pn	15 43 30.3	-0.3
AKTO	Aktyubinsk	17.07	330	P	P	15 43 34.5	-0.3
	comp=Z,1.4nm,0.3s,baz=124,slow=7.8,SNR=29						
AKTO	Aktyubinsk	17.07	330	⇑P	P	15 43 34.6	-0.3
	comp=Z,2.0nm,0.5s						
ZAA0	Zalesovo Array	19.91	24	P	P	15 44 05.4	-0.4
ZAA0				IAmb	IAmb	15 44 09.4	
	comp=Z,5.4nm,0.4s						
ZALV	Zalesovo Beam	19.91	24	P	P	15 44 06.2	+0.3
	comp=Z,5.0nm,0.3s,baz=224,slow=10.0,SNR=22						
ZALV	Zalesovo Beam	19.91	24	P	P	15 44 05.9	0.0
ARU	Arti	21.87	341	P	P	15 44 27.7	+0.9
	comp=Z,0.4nm,0.4s,baz=110,slow=12,SNR=3.1						
ARU	Arti	21.87	341	IAmb	IAmb	15 44 37.4	
	comp=Z,9.5nm,1.4s						
GTA	Gaotai	22.59	74	⇓P	P	15 44 37.6	+3.1
GTA				pP	pP	15 44 59.5	+1.9
GTA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KBZ	Khabaz	22.96	297	P	P	15 44 40.1	+2.2
	comp=Z,0.5nm,0.4s,baz=139,slow=9.3,SNR=1.8						
KBZ				LR	LR	15 56 47.6	
	comp=Z,20nm,19.9s,baz=164,slow=45						
BELG	Belogornoye	23.21	321	P	P	15 44 43.0	+2.8
	comp=Z,5.1nm,0.5s,baz=86,slow=14,SNR=2.9						
BELG	Belogornoye	23.21	321	P	P	15 44 43.0	+2.8
SONM	Songino Array	28.15	55	P	P	15 45 27.3	+2.5
	comp=Z,0.3nm,0.3s,baz=265,slow=11,SNR=2.1						
SONM	Songino Array	28.15	55	P	P	15 45 27.4	+2.5
SONM				pmax	pmax		
	comp=Z,4.0nm,1.4s						
SONM	Songino Array	28.15	55	IAmb	IAmb	15 45 31.7	
	comp=Z,4.1nm,1.4s						
HHC	Hu-ho-hao-te	31.50	69	*e*P	P	15 45 56.6	+2.0
HHC				pmax	pmax		
	comp=Z,11nm,1.0s						
HHC				pmax	pmax		
	comp=Z,65nm,7.1s						
AKASG	Malin Array Be	33.29	309	P	P	15 46 11.4	+1.4
	comp=Z,0.6nm,0.5s,baz=83,slow=7.4,SNR=2.6						
FINES	FINESS Array B	37.78	326	P	P	15 46 50.4	+2.2
	comp=Z,1.5nm,0.8s,baz=104,slow=8.0,SNR=4.2						
ARCES	ARCESS Array B	41.40	338	P	P	15 47 21.1	+3.0
	comp=Z,4.4nm,1.1s,baz=117,slow=9.7,SNR=4.5						
ARCES	ARCESS Array B	41.40	338	P	P	15 47 21.1	+3.0
ARCES				pmax	pmax		
	comp=Z,37nm,1.5s						
NOA	NORSAR Array B	44.69	323	P	P	15 47 46.1	+1.3
	comp=Z,0.5nm,0.5s,baz=96,slow=7.8,SNR=3.9						
TOLK	Toolik Lake Re	70.97	15	P	P	15 50 49.9	+1.7
TOLK				IAmb	IAmb	15 50 52.8	
	comp=Z,8.7nm,1.5s						
BMAR	Burnt Mountain	73.00	14	P	P	15 51 02.2	+1.8
K20K	Telida	74.23	20	P	P	15 51 09.2	+1.7
K20K				IAmb	IAmb	15 51 18.4	
	comp=Z,9.6nm,1.4s						
PPLA	Purkeypile	75.11	19	P	P	15 51 13.8	+1.0
RND	Reindeer	75.53	17	P	P	15 51 16.0	+0.9
RND				pmax	pmax		
	comp=Z,6.0nm,1.2s						
RND	Reindeer	75.53	17	P	P	15 51 16.0	+0.9
RND				IAmb	IAmb	15 51 16.2	
	comp=Z,5.7nm,1.2s						

WRA	Warramunga Arr	81.64	122	P	P	15 51 50.5	+1.5
	comp=Z,0.3nm,0.7s,baz=322,slow=4.7,SNR=5.9						
ASAR	Alice Springs	83.90	125	P	P	15 52 01.7	+0.9
	comp=Z,0.2nm,0.8s,baz=319,slow=4.4,SNR=4.6						

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*IDC **23** 16:09:12.4±4.5, 26°.13S×28°.98E, h0^{km}, mb3.4/1, mb1 3.1/2, mb1mx2.9/26, mbtmp3.1/2, ML2.3/1, Error ellipse: s-maj=78.1km s-min=25.1km az=123.0*

*EAF **23** 16:09:16.8±2.1, 26°.04S×29°.48E, h10^{km}, MD3.7*

*BUL **23** 16:09:17.7±1.3, 26°.02S×29°.40E, h10^{km}, MD3.9*

ISC 23 16:09:14.7±1.3**, 26°.01S**±0°.06×**29°.45E**±0°.07**, h10^{km}, n16, σ2ˢ.31**/25**, 2D, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOPA	Mopani	3.05	36	eP	Pn	16 10 05.2	+2.1
MOPA				eS	Sn	16 10 37.7	-2.0
MOPA	Mopani	3.05	36	eP	Pn	16 10 05.2	+2.1
MOPA				eS	Sn	16 10 37.7	-2.0
LBTB	Lobatse	3.62	285	eP	Pn	16 10 14.0	+3.0
LBTB				eS	Sn	16 10 52.7	-1.2
LBTB	Lobatse	3.62	285	eP	Pn	16 10 14.0	+3.0
LBTB				eS	Sn	16 10 52.7	-1.2
MSNA	Messina	3.69	8	eP	Pn	16 10 14.5	+2.6
MSNA				eS	Sn	16 10 56.9	+1.4
MSNA	Messina	3.69	8	eP	Pn	16 10 14.5	+2.6
MSNA				eS	Sn	16 10 56.9	+1.4
BOSA	Boshof	4.54	234	Pn	Pn	16 10 16.9	-6.7
	0.1nm,0.3s,baz=58,slow=13,SNR=1.3						
BOSA				Pg	Pb	16 10 26.1	-8.5
	0.7nm,0.3s,baz=54,slow=16,SNR=11						
BOSA				Lg	Lg	16 11 25.6	
	3.0nm,0.3s,baz=151,slow=22,SNR=10						
BOSA				Rg	Rg	16 11 48.1	
	7.1nm,0.7s,baz=335,slow=21,SNR=1.7						
BOSA	Boshof	4.54	234	eP	Pn	16 10 26.1	+2.4
BOSA				eS	Sn	16 11 14.6	-2.1
BOSA	Boshof	4.54	234	eP	Pn	16 10 26.1	+2.4
BOSA				eS	Sn	16 11 14.6	-2.1
I47ZA	BOSHOF INFRASO	4.56	234	i		16 34 30.0	
	baz=52,slow=308,SNR=2.2						
MATP	Matopo	5.63	351	⇓eP	Pn	16 10 40.4	+1.7
MATP				eS	Sn	16 11 40.6	-2.9
MATP	Matopo	5.63	351	⇓eP	Pn	16 10 40.4	+1.7
MATP				eS	Sn	16 11 40.6	-2.9
BLWY	Bulawayo	5.90	352	eP	Pn	16 10 44.5	+2.1
BLWY				eS	Sn	16 11 48.2	-1.9
BLWY	Bulawayo	5.90	352	eP	Pn	16 10 44.5	+2.1
BLWY				eS	Sn	16 11 48.2	-1.9
I35NA	TSUMEB INFRASO	12.89	299	i		17 27 30.0	
	baz=125,slow=319,SNR=1.2						
TORD	Torodi Ar. Bea	47.38	322	P	P	16 17 47.3	-2.0
	0.6nm,1.0s,baz=150,slow=6.4,SNR=2.4						

MAN 23 16:10:01.2, 16°.14N×122°.04E, h25^{km}, mb4.3, ML3.1, MS2.8, Luzon

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*KRNET **23** 16:12:49.2±0.1, 40°.36N×73°.19E, h14^{km}, mb3.1*

*ISU **23** 16:12:49, 40°.30N×73°.10E, h5^{km}*

*SOME **23** 16:12:50.8, 40°.52N×73°.18E, h0^{km}*

*KNET **23** 16:12:51.3±0.8, 40°.50N×73°.28E, h3^{km}±6^{km}, ml2.8, Error ellipse: s-maj=12.3km s-min=5.9km az=101.0*

*NNC **23** 16:12:51.6±1.1, 40°.49N×73°.21E, h0^{km}, mb3.7, mpv3.5, Error ellipse: s-maj=8.4km s-min=4.1km az=172.0*

ISC 23 16:12:49.6±0.8**, 40°.38N**±0°.02×**73°.20E**±0°.02**, h10^{km}, n44, σ1ˢ.97**/76**, 23C-22D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHH	Osh	0.35	295	eP	Pg	16 12 56.0	-0.5
OHH				eS	Sg	16 13 02.0	+0.8
OHH	Osh	0.35	295	⇑iP	Pg	16 12 55.8	-0.7
	baz=97						
OHH				⇑eS	Sg	16 13 01.3	+0.1
	baz=97						
SFK	Sufi-Kurgan	0.43	147	eP	Pg	16 12 57.0	-1.1
SFK				eS	Sg	16 13 03.0	-0.8
SFK	Sufi-Kurgan	0.43	147	⇑eP	Pg	16 12 57.3	-0.8
	baz=45						
SFK				⇑eS	Sg	16 13 03.6	-0.2
	baz=45						
SALK	Salom-Alik	0.69	43	⇑eP	Pg	16 13 02.5	-0.5
	baz=43						
SALK				⇑eS	Sg	16 13 12.3	+0.2
	baz=43						
DRK	Karamyk	1.40	231	⇑iP	Pn	16 13 15.1	-0.3
	baz=31						
DRK				⇑iS	Sg	16 13 34.4	-0.2
	baz=31						
AML	Almayashu	1.79	12	⇓P	Pb	16 13 23.0	+0.2
	86nm,0.2s,SNR=170						
AML				⇑S	Sg	16 13 47.9	+0.6
	194nm,0.5s						
AML	Almayashu	1.79	12	⇓eP	Pb	16 13 22.5	-0.3
	baz=12						
AML				⇓eS	Sg	16 13 47.3	0.0
	baz=12						
BTK	Batken	1.85	261	eP	Pb	16 13 23.0	-0.5
BTK				eS	Sg	16 13 49.0	0.0
BTK	Batken	1.85	261	⇑eP	Pb	16 13 23.0	-0.5
	baz=61						
BTK				⇑iS	Sg	16 13 48.1	-0.9
	baz=61						
TRKS	Terek-Say	1.94	307	⇓iP	Pb	16 13 23.7	-1.4
	baz=6.0						
TRKS				⇓iS	Sb	16 13 49.0	-0.4
	baz=6.0						
UCH	Uchtor	2.10	28	⇓P	Pb	16 13 28.0	-0.1
	5.7nm,0.2s,SNR=20						
UCH				⇑S	Sg	16 13 57.0	0.0
	22nm,0.2s						
UCH	Uchtor	2.10	28	⇑iP	Pb	16 13 27.0	-1.0
	baz=28						
UCH				⇑iS	Sb	16 13 54.6	+0.3
	baz=28						
MNAS	Manas	2.17	346	⇓iP	Pb	16 13 28.1	-1.0
	baz=47						
MNAS				⇓iS	Sb	16 13 56.8	+0.7
	baz=47						
EKS2	Erkin-Say	2.33	11	⇓P	Pb	16 13 31.5	-0.2
	4.1nm,0.1s,SNR=20						
EKS2				⇑S	Sg	16 14 03.3	-1.0
	7.1nm,0.2s						
EKS2	Erkin-Say	2.33	11	⇑eP	Pb	16 13 30.2	-1.5
	baz=11						
EKS2				⇑iS	Sb	16 14 00.0	-0.5
	baz=11						
MRKS	Merke	2.37	1	eP	Pb	16 13 33.4	+1.0
	18nm,0.3s						
MRKS				eS	Sg	16 14 04.4	-1.2
	86nm,0.3s						
MRKS	Merke	2.37	1	Pg	Pb	16 13 33.4	+1.0
	18nm,0.3s						
MRKS				Lg	Lg	16 14 04.9	
	86nm,0.3s						
AAK	Ala-Archa	2.46	23	⇓P	Pb	16 13 33.2	-0.8
	8.5nm,0.2s,SNR=8.4						
AAK				⇓S	Sb	16 14 05.9	+1.4
	20nm,0.3s						
AAK	Ala-Archa	2.46	23	⇓Pg	Pb	16 13 34.8	+0.8
	11nm,0.5s						
AAK				⇑Lg	Lg	16 14 06.6	
	24nm,0.5s						
AAK	Ala-Archa	2.46	23	⇓eP	Pb	16 13 32.2	-1.8
	baz=23						
AAK				⇓iS	Sb	16 14 03.3	-1.1
	baz=23						
GAR	Garm	2.61	239	⇑eP	Pn	16 13 33.3	+1.3
	baz=39						
GAR				⇑eS	Sb	16 14 06.1	-2.7
	baz=39						
KBK	Karagaybulak	2.63	29	⇑P	Pb	16 13 36.6	-0.3
	3.0nm,0.1s,SNR=7.7						
KBK	Karagaybulak	2.63	29	⇓iP	Pn	16 13 34.4	+2.1
	baz=29						
KBK				⇓iS	Sb	16 14 07.3	-2.0
	baz=29						
BOOM	Boomskoye usch	2.95	43	⇑iP	Pb	16 13 39.5	-2.9
	baz=43						
BOOM				⇑iS	Sb	16 14 15.6	-3.0
	baz=43						
IUG	Iuzhnay	2.97	308	eP	Pg	16 13 44.9	-1.6
	218nm,0.2s						
IUG				eS	Sg	16 14 23.4	-1.6
	56nm,0.4s						
IUG	Iuzhnay	2.97	308	Pg	Pg	16 13 45.2	-1.3
	218nm,0.2s						
IUG				Lg	Lg	16 14 23.7	
	56nm,0.4s						
USP	Ospenovka	3.05	18	⇓eP	Pn	16 13 40.0	+2.1
	baz=18						
USP				⇓iS	Sn	16 14 17.5	+3.0
	baz=18						
KK07	Karatay Array	3.38	324	⇓Pg	Pb	16 13 51.2	+1.7
	5.6nm,0.6s,baz=140,slow=16						
KK07				⇓Lg	Lg	16 14 35.2	
	12nm,0.5s,baz=143,slow=29						
DGS	Degeres	3.45	33	eP	Pg	16 13 53.8	-1.8
	7.5nm,0.5s						
DGS				eS	Sg	16 14 38.9	-1.5
	10nm,0.7s						
DGS	Degeres	3.45	33	Pg	Pg	16 13 53.8	-1.8
	7.5nm,0.5s						
DGS				Lg	Lg	16 14 38.8	
	10nm,0.7s						
KDJ	Kajisay	3.48	58	⇓iP	Pn	16 13 46.2	+2.3
	baz=58						
KDJ				⇓iS	Sn	16 14 28.0	+2.8
	baz=58						
MTBS	Maitube	3.66	40	eP	Pg	16 13 57.0	-2.7
	3.6nm,0.5s						
MTBS				eS	Sg	16 14 45.3	-1.9
	9.0nm,0.4s						
MTBS	Maitube	3.66	40	Pg	Pg	16 13 57.0	-2.7
	3.6nm,0.5s						
MTBS				Lg	Lg	16 14 45.3	
	9.0nm,0.4s						
TNSS	Tian-Shan	3.87	45	eP	Pg	16 14 01.0	-2.7
	2.9nm,0.2s						
TNSS				eS	Sg	16 14 51.9	-1.8
	5.3nm,0.6s						
TNSS	Tian-Shan	3.87	45	Pg	Pg	16 14 01.0	-2.7
	2.9nm,0.2s						
TNSS				Lg	Lg	16 14 51.9	
	5.3nm,0.6s						
MDOK	Medeo	4.01	45	eP	Pb	16 14 03.1	+2.7
	4.5nm,0.6s						
MDOK				eS	Sg	16 14 55.1	-3.1
	16nm,0.5s						
MDOK	Medeo	4.01	45	Pg	Pb	16 14 03.1	+2.7
	4.5nm,0.6s						
MDOK				Lg	Lg	16 14 55.1	
	16nm,0.5s						
KUU	Kurty	4.22	33	eP	Pb	16 14 06.8	+2.9
	1.9nm,0.7s						
KUU				eS	Sg	16 15 01.2	-3.8
	10nm,0.6s						
KUU	Kurty	4.22	33	Pg	Pb	16 14 06.8	+2.9
	1.9nm,0.7s						
KUU				Lg	Lg	16 15 01.2	
	10nm,0.6s						
BTLS	Baital	4.70	7	eP	Pb	16 14 14.8	+2.7
	1.9nm,0.4s						
BTLS				eS	Sg	16 15 15.2	-5.4
	4.3nm,0.4s						
BTLS	Baital	4.70	7	Pg	Pb	16 14 14.2	+2.1
	1.9nm,0.4s						
BTLS				Lg	Lg	16 15 15.2	
	4.3nm,0.4s						
SATY	Saty	4.73	54	eP	Pb	16 14 16.1	+3.4
	2.3nm,0.3s						
SATY				eS	Sg	16 15 17.1	-4.3
	6.6nm,0.9s						
SATY	Saty	4.73	54	Pg	Pb	16 14 16.1	+3.4
	2.3nm,0.3s						
SATY				Lg	Lg	16 15 17.1	
	6.6nm,0.9s						

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*JMA **23** 16:30:26.5±0.3, 24°.81N×122°.43E, h13^{km}±4^{km}, M1.9*

*TAP **23** 16:30:29.4, 24°.47N×122°.50E, h17^{km}±1^{km}, ML2.6, D*

ISC 23 16:30:27.8±1.2**, 24°.66N**±0°.06×**122°.53E**±0°.02**, h8**^{km}±11^{km}**, n27, σ0ˢ.78**/53**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.43	118	P	Pb	16 30 37.8	+0.1
JYNG				eS	Sb	16 30 45.5	+1.1
YOJ	Yonaguni jima	0.48	114	P	Pb	16 30 39.2	+0.7
	baz=90						
YOJ				S	Sb	16 30 46.1	+0.3
	baz=90						
YOJ	Yonaguni jima	0.48	114	P	Pb	16 30 38.8	+0.2
YOJ				eS	Sb	16 30 47.1	+1.3
EGS		0.57	289	eP	Pn	16 30 42.4	+0.1
	baz=306						
EGS				eS	Sn	16 30 51.0	-0.9
	baz=306						
TWB1	Santiao Chiao	0.60	306	eP	Pn	16 30 42.8	+0.1
	baz=319						
TWB1				eS	Sn	16 30 50.8	-1.8
	baz=319						
TWC	Suao	0.62	266	eP	Pb	16 30 40.5	-0.4
	baz=283						
TWC				S	Sb	16 30 50.2	+0.5
	baz=283						
NTC	Toucheng	0.66	288	eP	Pn	16 30 43.2	-0.4
	baz=302						
NTC				eS	Sb	16 30 51.3	+0.3
	baz=302						
TIPB	Shuangxi	0.71	296	P	Pn	16 30 45.0	+0.8
	baz=309						
TIPB				S	Sn	16 30 55.4	0.0
	baz=309						
EWUT	Wuta	0.71	253	eP	Pb	16 30 43.4	+0.9
	baz=267						
EWUT				S	Sg	16 30 51.8	+1.0
	baz=267						
NDS	Dongshan	0.74	268	P	Pb	16 30 43.6	+0.6
	baz=282						
NDS				S	Sb	16 30 54.0	+0.8
	baz=282						
ENA	Nanau	0.75	253	eP	Pg	16 30 42.9	+0.6
	baz=266						
ENA				eS	Sg	16 30 52.6	+0.5
	baz=266						
TWE	Neicheng	0.78	275	i P	Pb	16 30 44.1	+0.3
	baz=288						
TWE				i S	Sb	16 30 55.6	+1.0
	baz=288						
NWF	Wu-fen Shan	0.79	302	P	Pn	16 30 46.5	+1.0
	baz=312						
NWF				S	Sn	16 30 58.3	+0.8
	baz=312						
ENTT	Nioudou	0.87	269	i P	Pb	16 30 45.6	+0.3
	baz=281						
ENTT				S	Sb	16 30 58.0	+0.8
	baz=281						
NDT	Datong Townshi	0.92	267	i P	Pb	16 30 46.5	+0.4
	baz=278						
NDT				i S	Sb	16 30 59.2	+0.6
	baz=278						
NWLT	Wulai	0.94	278	eP	Pn	16 30 47.1	-0.3
	baz=288						
NWLT				eS	Sn	16 30 59.7	-1.3
	baz=288						
ETL	Fush Village	0.96	239	eP	Pn	16 30 47.9	+0.2
	baz=248						
ETL				eS	Sg	16 30 57.3	-1.4
	baz=248						
NACB	Ninganchiao	0.97	241	P	Pg	16 30 45.7	-0.9
	baz=250						
NACB				S	Sg	16 30 58.3	-0.9
	baz=250						
YHNB	Yeheng	1.05	271	eP	Pn	16 30 49.6	+0.7
	baz=280						
YHNB				S	Sn	16 31 03.0	-0.8
	baz=280						
ETLH	Xiulin Townshi	1.05	245	eP	Pg	16 30 47.2	-0.8
	baz=254						
ETLH				eS	Sg	16 31 01.3	-0.4
	baz=254						
NSK	Sanguang	1.06	271	P	Pn	16 30 49.6	+0.4
	baz=281						
NSK				S	Sb	16 31 02.7	+0.1
	baz=281						
NNS	Nan Shan	1.07	259	eP	Pg	16 30 48.2	-0.2
	baz=268						
NNS				eS	Sg	16 31 01.7	-0.7
	baz=268						
IRIF	Iriomote-Funau	1.14	106	P	Pg	16 30 49.5	-0.3
IRIF				eS	Sn	16 31 05.2	-0.8
HATJ	Hateruma jima	1.31	117	eS	Sg	16 31 11.2	+1.2
JKRS	Kuro-shima	1.41	107	P	Pb	16 30 54.2	-0.3
JKRS				eS	Sg	16 31 14.2	+0.9
JIJ	Ishigaki jima	1.50	101	P	Pb	16 30 55.3	-0.7
JIJ				eS	Sg	16 31 15.2	-0.9
JISG	Ishigakijimahi	1.63	92	P	Pb	16 30 57.6	-0.5
JISG				eS	Sg	16 31 19.4	-0.7

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*IDC **23** 16:37:00.0±4.5, 25°.06S×179°.83E, h488^{km}±34^{km}, mb3.1/4, mb1 3.4/6, mb1mx3.1/38, mbtmp4.0/6, Error ellipse: s-maj=86.0km s-min=21.1km az=153.0*

*NEIC **23** 16:37:00.3±3.0, 24°.9S±0°.1×180°.0E±0°.2, h486^{km}±10^{km}, mb4.2/14, Error ellipse: s-maj=22.7km s-min=18.9km az=103.0*

ISC 23 16:37:01.4±0.7**, 24°.9S**±0°.1×**179°.8E**±0°.1**, h501^{km}, n31, σ0ˢ.96**/32**, mb4.1**/12**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	7.30	347	P	P	16 38 51.1	+0.2
	1.3nm,0.3s,baz=98,slow=21,SNR=2.0						
MSVF	Nonsavu	7.30	347	P	P	16 38 50.9	-0.1
MARNC	Mare, Loyalty	11.35	285	P	P	16 39 33.6	+0.5
PINNC	Pines Island,	11.54	279	P	P	16 39 36.2	+1.0
OUENC	Ouen Island, N	12.13	279	P	P	16 39 42.7	+1.2
DZM	Mont Dzumac	12.58	280	P	P	16 39 47.3	+1.0
	0.2nm,0.3s,baz=99,slow=23,SNR=5.5						
FUNA	Funafuti	16.28	358	P	P	16 40 24.1	-1.0
SNZO	South Karori	16.92	193	P	P	16 40 29.1	-2.2
QRZ	Quartz Range	17.02	199	P	P	16 40 32.4	0.0
EIDS	Eidsvold	25.99	263	P	P	16 41 54.0	+0.2
EIDS				IAmb	IAmb	16 42 02.7	
	comp=Z,10nm,1.4s						
CTAO	Charters Tower	31.32	272	P	P	16 42 40.6	+0.3
CTAO				IAmb	IAmb	16 42 41.5	
	comp=Z,7.5nm,1.0s						
COEN	Coen	36.11	281	P	P	16 43 21.1	+0.4
COEN				IAmb	IAmb	16 43 21.2	
	comp=Z,17nm,1.4s						
BBOO	Buckleboo	38.90	248	P	P	16 43 42.7	-0.7
BBOO				IAmb	IAmb	16 44 01.1	
	comp=Z,18nm,1.4s						
AS31	Alice Springs	41.71	262	P	P	16 44 05.3	-0.8
ASAR	Alice Springs	41.71	262	P	P	16 44 05.8	-0.3
	comp=Z,1.7nm,0.7s,baz=90,slow=8.8,SNR=52						
ASAR	Alice Springs	41.71	262	P	P	16 44 05.5	-0.6
WB2	Warramunga Arr	42.16	267	P	P	16 44 08.6	-1.1
WRAB	Tennant Creek	42.16	267	P	P	16 44 08.8	-0.9
WRAB				IAmb	IAmb	16 44 10.4	
	comp=Z,6.0nm,1.1s						
WB0	Warramunga Arr	42.17	268	P	P	16 44 08.7	-1.1
WB0				IAmb	IAmb	16 44 10.5	
	comp=Z,5.4nm,0.8s						
WRA	Warramunga Arr	42.17	267	P	P	16 44 08.7	-1.1
	comp=Z,2.5nm,0.5s,baz=102,slow=7.8,SNR=54						
WRA				ScP	ScP	16 48 57.6	+2.3
	comp=Z,0.3nm,0.7s,baz=99,slow=4.1,SNR=1.7						
MTN	Manton Dam	47.36	275	P	P	16 44 49.2	-0.7
MTN				IAmb	IAmb	16 44 54.0	
	comp=Z,13nm,1.4s						
KNRA	Kununurra	48.51	271	P	P	16 44 57.7	-0.8
KNRA				IAmb	IAmb	16 45 22.9	
	comp=Z,17nm,1.4s						
QSPA	South Pole Qui	65.20	180	P	P	16 46 53.9	+1.4
NVAR	Mina Array Bea	85.58	44	P	P	16 48 46.9	+0.3
	comp=Z,0.3nm,0.6s,baz=208,slow=5.9,SNR=4.1						
NVAR	Mina Array Bea	85.58	44	P	P	16 48 46.0	-0.7
TXAR	Lajitas Array	91.10	58	P	P	16 49 13.2	+0.7
	comp=Z,0.4nm,0.8s,baz=231,slow=5.7,SNR=3.0						
ARCES	ARCESS Array B	132.81	348	PKP	PKPdf	16 55 18.5	+0.2
	comp=Z,2.9nm,0.9s,baz=28,slow=4.1,SNR=5.3						
AKASG	Malin Array Be	145.70	326	PKPbc	PKPdf	16 55 42.6	+0.5
	comp=Z,0.5nm,0.4s,baz=48,slow=4.2,SNR=5.9						
AKASG	Malin Array Be	145.70	326	PKPdf	PKPdf	16 55 42.0	-0.1
BRTR	Keskin Array B	148.02	306	PKPbc	PKPbc	16 55 49.6	-0.9
	comp=Z,0.3nm,0.5s,baz=351,slow=6.4,SNR=2.4						
CLL	Collm	151.74	342	ePKPbc	PKPbc	16 55 58.0	-0.7

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*IDC **23** 16:39:54.4±8.2, 26°.25S×28°.59E, h0^{km}, mb1 2.6/1, mb1mx2.5/27, mbtmp2.7/1, ML2.1/1, Error ellipse: s-maj=76.8km s-min=55.1km az=141.0*

*EAF **23** 16:39:58.0±1.8, 25°.86S×29°.26E, h10^{km}, MD3.7*

*BUL **23** 16:39:58.7±1.6, 25°.83S×29°.18E, h10^{km}, MD4.0*

ISC 23 16:39:48.6±1.1**, 26°.00S**±0°.07×**28°.91E**±0°.09**, h3^{km}, n13, σ1ˢ.40**/19**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOPA	Mopani	3.35	43	eP	Pn	16 40 44.2	+2.3
MOPA				eS	Sn	16 41 20.9	-1.4
MOPA	Mopani	3.35	43	eP	Pn	16 40 44.2	+2.3
MOPA				eS	Sn	16 41 20.9	-1.4
MSNA	Messina	3.78	16	eP	Pb	16 40 54.9	-1.2
MSNA				eS	Sn	16 41 33.7	+0.8
MSNA	Messina	3.78	16	eP	Pb	16 40 54.9	-1.2
MSNA				eS	Sn	16 41 33.7	+0.8
BOSA	Boshof	4.16	231	Pn	Pn	16 40 54.8	+1.6
	0.1nm,0.3s,baz=57,slow=15,SNR=1.6						
BOSA				Pg	Pb	16 41 02.1	-0.5
	0.2nm,0.3s,baz=53,slow=17,SNR=1.5						
BOSA				Sn	Sn	16 41 42.2	-0.2
	0.8nm,0.3s,baz=185,slow=15,SNR=2.5						
BOSA				Lg	Lg	16 41 54.3	
	0.7nm,0.3s,baz=4.0,slow=19,SNR=3.6						
BOSA	Boshof	4.16	231	eP	Pg	16 41 06.6	-1.8
BOSA				eS	Sb	16 41 54.5	+1.2
BOSA	Boshof	4.16	231	eP	Pg	16 41 06.6	-1.8
BOSA				eS	Sb	16 41 54.5	+1.2
I47ZA	BOSHOF INFRASO	4.18	231	i		17 04 50.0	
	baz=52,slow=319,SNR=19						
MATP	Matopo	5.56	356	eP	Pb	16 41 19.7	-6.8
MATP				eS	Sn	16 42 16.9	-0.1
MATP	Matopo	5.56	356	eP	Pb	16 41 19.7	-6.8
MATP				eS	Sn	16 42 16.9	-0.1
BLWY	Bulawayo	5.84	357	eP	Pn	16 41 22.8	+6.4
BLWY				eS	Sn	16 42 23.5	-0.4
BLWY	Bulawayo	5.84	357	eP	Pn	16 41 22.8	+6.4
BLWY				eS	Sn	16 42 23.5	-0.4
I35NA	TSUMEB INFRASO	12.47	301	i		17 57 50.0	
	baz=126,slow=327,SNR=0.7						

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*IDC **23** 16:58:03.2±0.6, 29°.85N×63°.90E, h0^{km}, mb4.2/31, mb1 4.3/34, mb1mx4.2/48, mbtmp4.2/34, ML4.0/2, MS3.8/32, Ms1 3.8/32, ms1mx3.7/50, Error ellipse: s-maj=13.4km s-min=11.4km az=176.0*

*MOS **23** 16:58:03.8±1.2, 29°.96N×63°.98E, h11^{km}, mb4.8/16, Error ellipse: s-maj=7.1km s-min=4.9km az=92.9*

*BJI **23** 16:58:05.9±0.0, 30°.03N×64°.18E, h10^{km}, mB4.9/21, mb4.6/39, Ms4.5/25, Ms7 4.2/23*

*NEIC **23** 16:58:05.1±2.3, 29°.91N±0°.05×63°.83E±0°.06, h10^{km}±1^{km}, mb4.7/36, Error ellipse: s-maj=10.9km s-min=4.6km az=225.0*

*OMAN **23** 16:58:09.0±0.1, 29°.58N×63°.99E, h10^{km}, mb5.9/21, ms3.5/8, Error ellipse: s-maj=17.9km s-min=1.9km az=314.0*

ISC 23 16:58:04.8±0.3**, 29°.90N**±0°.04×**63°.94E**±0°.03**, h10^{km}, n259, σ1ˢ.78**/277**, mb4.5**/70**, MS3.8**/39**, 28C-15D, Southwestern Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HRA	Herat	4.70	343	Pn	Pn	16 59 17.4	+1.4
KBL	Kabul	6.33	42	P	Pn	16 59 39.0	+0.6
KBL	Kabul	6.33	42	P	Pn	16 59 45.5	+7.1
	SNR=62						
KBL	Kabul	6.33	42	Pn	Pn	16 59 39.0	+0.6
JASL	Jaisalmer	6.81	114	eP	Pn	16 59 46.2	+1.4
THW	Thamme Wali	7.27	65	P	Pn	16 59 51.3	+0.2
CEP	Cherat	7.82	58	P	Pn	16 59 59.4	+0.6
BANOM	Banah	7.84	241	Pn	Pn	16 59 59.8	+0.8
BANOM	Banah	7.84	241	P	Pn	17 00 00.3	+1.3
SHME	Shamm	7.89	243	Pn	Pn	16 59 59.8	+0.1
SHME	Shamm	7.89	243	P	Pn	17 00 01.8	+2.1
WSAR	Wadi Sarin	8.16	217	Pn	Pn	17 00 03.0	-0.3
	2.6nm,0.3s,baz=79,slow=5.6,SNR=13						

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WSAR                                  Sn      Sn       17 01 29.1  -6.7
      3.6nm,0.3s,baz=54,slow=11,SNR=4.3
WSAR                                  LR      LR       17 03 44.5
      comp=Z,394nm,18.1s,baz=69,slow=42
WSAR  Wadi Sarin         8.16 217     P       Pn       17 00 03.9 +0.5
WSAR                                  S       Sn       17 01 34.0  -1.7
MDH   Madha              8.19 238     Pn      Pn       17 00 03.6  -0.1
MDH   Madha              8.19 238     P       Pn       17 00 03.9 +0.2
BIDO  Bidbid             8.21 221     P       Pn       17 00 04.8 +0.8
BIDO                                  P       Pn       17 00 04.8 +0.8
MASF  Masafi             8.25 239     P       Pn       17 00 08.3 +3.7
MASF                                  P       Pn       17 00 08.3 +3.7
MSFE  Esma-Masafi        8.25 239   i Pn      Pn       17 00 07.6 +2.9
      SNR=14
UOSS  Minazif            8.46 236     Pn      Pn       17 00 07.0  -0.5
UOSS  Minazif            8.46 236     Pn      Pn       17 00 07.2  -0.3
WBK   Wadi Bani Khal     8.52 213     P       Pn       17 00 07.4  -0.9
HATD  Hatta, Dubai       8.59 236     Pn      Pn       17 00 09.0  -0.3
HATD  Hatta, Dubai       8.59 236     P       Pn       17 00 08.9  -0.3
HATD                                  P       Pn       17 00 08.9  -0.3
SMDO  Samad              8.62 219     P       Pn       17 00 11.1 +1.4
SMDO                                  P       Pn       17 00 11.1 +1.4
SMDO                                  S       Sn       17 01 47.8 +0.7
SMDO                                  S       Sn       17 01 47.8 +0.7
HOQ   Hoqain             8.64 225     P       Pn       17 00 09.9  -0.1
      SNR=20
HOQ                                   P       Pn       17 00 09.9  -0.1
      SNR=20
ASHO  Ashiyiah           8.73 235   i Pn      Pn       17 00 11.5 +0.4
      SNR=19
ASHO  Ashiyiah           8.73 235     P       Pn       17 00 13.1 +1.9
ASHO                                  S       Sn       17 01 51.5 +1.8
JLN   Jalan Bani Buh     8.73 209     P       Pn       17 00 11.9 +0.8
SOHO  SOHO               8.75 231     Pn      Pn       17 00 11.2  -0.2
SOHO  SOHO               8.75 231     P       Pn       17 00 11.6 +0.2
SOHO                                  P       Pn       17 00 11.6 +0.2
NIL   Nilore             8.76  62     P       Pn       17 00 11.7 +0.1
NIL   Nilore             8.76  62     Pn      Pn       17 00 11.7 +0.1
CHCP  Chirah Chowk       8.77  62     P       Pn       17 00 11.7  -0.1
NAZ   Nazwa, Dubai       8.83 238     Pn      Pn       17 00 15.5 +2.9
FAQ   Al Faqa, Dubai     9.03 237   i Pn      Pn       17 00 18.0 +2.8
      SNR=8.1
FAQ   Al Faqa, Dubai     9.03 237     P       Pn       17 00 17.9 +2.6
JMDO  Jabal Madar        9.15 216     P       Pn       17 00 19.5 +2.5
      SNR=5.0
ASUD  Al Ashush, Dub     9.29 238   i Pn      Pn       17 00 21.1 +2.3
      SNR=9.8
ASUD  Al Ashush, Dub     9.29 238     P       Pn       17 00 21.3 +2.5
ARQ   Araqi              9.32 227     P       Pn       17 00 22.3 +3.0
ARQ                                   P       Pn       17 00 22.3 +3.0
ALNE  Al Ain             9.34 233   i Pn      Pn       17 00 21.8 +2.2
      SNR=8.7
ALNE  Al Ain             9.34 233     P       Pn       17 00 21.9 +2.4
BSY   Bisya              9.35 222     P       Pn       17 00 22.0 +2.3
      SNR=14
BSY                                   P       Pn       17 00 22.0 +2.3
      SNR=14
GEYT  Alibeck            9.35 330     Pn      Pn       17 00 20.2 +0.5
      1.0nm,0.3s,baz=192,slow=19,SNR=23
GEYT                                  Lg      Lg       17 02 58.7
      0.6nm,0.3s,baz=39,slow=31,SNR=1.8
GEYT                                  LR      LR       17 04 26.2
      comp=Z,596nm,18.7s,baz=85,slow=41
GEYT  Alibeck            9.35 330             Pn       17 00 17.7  -2.0
GYA0B ALIBECK ARRAY      9.35 330     Pn      Pn       17 00 17.8  -2.0
CHGR  Chuyangaron        9.74  25             Pn       17 00 24.4  -0.6
AJM   Ajmer             10.04 107   eP        Pn       17 00 30.6 +1.5
AJM                                 eS        Sn       17 02 20.5  -1.4
GAR   Garm              10.49  28     Pn      Pn       17 00 36.2 +0.9
BHK   Bhakra            10.85  79   eP        Pn       17 00 39.8  -0.4
DHRM  DHARAMSHALA       10.85  74   eP        Pn       17 00 40.1  -0.3
DHRM                                eS        Sn       17 02 37.5  -4.5
KUDL  Kundal            11.12  96   eP        Pn       17 00 42.8  -1.1
KUDL                                eS        Sn       17 02 44.4  -3.9
SMLA  Simla             11.47  81   eP        Pn       17 00 49.0 +0.3
SMLA                                eS        Sn       17 02 50.5  -6.4
SMLA                                  IAML             17 02 54.5
      comp=N,169nm,0.4s
SMLA                                  IAML             17 03 06.5
      comp=E,247nm,0.4s
SMLA                                  IAML             17 03 06.8
      comp=N,165nm,1.1s
BTK   Batken            11.59  27     P       Pn       17 00 50.9 +0.5
BTK   Batken            11.59  27     Pn      Pn       17 00 50.9 +0.5
SONA  Sohna             11.61  95   eP        Pn       17 00 50.3  -0.3
SONA                                eS        Sn       17 02 54.6  -5.7
NDI   New Delhi         11.65  93   eP        Pn       17 00 50.2  -1.0
NDI                                 eP                 17 00 51.0
NDI                                 eS        Sn       17 02 57.0  -4.4
BHPL  Bhopal            13.76 116   eP        Pn       17 01 21.0 +0.9
BHPL                                ex        x        17 03 52.2
KSH   Kashi             13.77  43     P       Pn       17 01 15.3  -4.9
KSH                                   pP      P        17 01 18.8   -10
KSH                                   sP               17 01 21.6
KSH                                   S       Sn       17 03 44.8  -8.4
KSH                                   sS      S        17 03 51.6   -24
KSH                                   SS      SnSn     17 03 59.8  -5.9
KSH                                   pmax    pmax
      comp=N,23nm,1.1s
KSH                                   pmax    pmax
      comp=N,210nm,4.4s
KSH                                   LR      LR
      comp=N,1µm,13.4s
KSH                                   LR      LR
      comp=N,2µm,13.4s
KSH                                   LR      LR
      comp=N,1µm,13.1s
KKAR  Karatay Array     14.19  20     P       Pn       17 01 23.4  -2.4
KKAR  Karatay Array     14.19  20     Pn      Pn       17 01 23.4  -2.4
DOK   Doka              14.35 221     P       Pn       17 01 30.4 +2.2
POO   Poona             14.47 139   ex        P        17 01 34.0  -2.7
AML   Almayashu         14.52  30   i Pn      Pn       17 01 29.1  -1.6
      SNR=10.0
WHFO  Wadi Hawf         15.11 220     P       Pn       17 01 39.9 +1.4
AAK   Ala-Archa         15.28  31     Pn      Pn       17 01 39.2  -1.5
      comp=N,0.2nm,0.3s,baz=207,slow=7.3,SNR=16
AAK                                   Sn      Sn       17 04 34.2 +4.2
      comp=N,0.1nm,0.3s,baz=236,slow=10,SNR=1.6
AAK   Ala-Archa         15.28  31   i Pn      Pn       17 01 39.7  -1.0
      SNR=8.9
AAK   Ala-Archa         15.28  31     P       Pn       17 01 38.5  -2.2
AAK                                                    17 04 34.2
AAK                                   pmax    pmax
      comp=Z,10.0nm,1.0s
AAK   Ala-Archa         15.28  31     Pn      Pn       17 01 38.5  -2.2
BOOM  Boomskoye usch    15.84  34     P       Pn       17 01 46.3  -1.8
BOOM                                  pmax    pmax
      comp=Z,10.0nm,0.9s
BOOM  Boomskoye usch    15.84  34     Pn      Pn       17 01 46.2  -1.8
KDJ   Kajisay           16.21  38     P       Pn       17 01 53.5 +0.7
KDJ                                   pmax    pmax
      comp=Z,12nm,1.2s
KDJ   Kajisay           16.21  38     Pn      Pn       17 01 53.5 +0.7
PYUN  Piuthan           16.76  91   eP        Pn       17 01 57.6  -2.4
      comp=Z,83nm,0.6s
MDOK  Medeo             16.89  35     P       Pn       17 02 00.3  -1.1
KOLN  Koldanda          17.36  92   eP        Pn       17 02 06.0  -1.4
      comp=Z,94nm,0.8s
DANN  Dangsing          17.39  90   eP        Pn       17 02 06.2  -1.7
      comp=Z,78nm,0.4s
RAYN  Ar Rayn           17.65 253   i Pn      Pn       17 02 08.5  -2.5
      SNR=7.9
RAYN  Ar Rayn           17.65 253     P       Pn       17 02 07.5  -3.4
RAYN                                  pmax    pmax
      comp=Z,16nm,0.8s
RAYN  Ar Rayn           17.65 253             Pn       17 02 07.5  -3.4
GKN   Gorkha            18.21  91   eP        Pn       17 02 16.1  -1.8
      comp=Z,45nm,0.4s
HYB   Hyderabad         18.24 130   i P       Pn       17 02 17.5  -0.7
PDGK  Podgornoye        18.27  39     P       Pn       17 02 18.5   0.0
MAK   Makhachkala       18.52 319   eP        P        17 02 16.6  -4.7
MAK                                 eS        Sn       17 05 42.3  -6.2
MAK                                   pmax    pmax
      comp=Z,70nm,0.7s
MAK                                   MLR     MLR
      comp=Z,253nm,11.0s
DMN   Daman             18.70  92   eP        P        17 02 22.6  -1.0
      comp=Z,43nm,0.6s
GNI   Garni             18.72 308     P       Pn       17 02 24.9 +0.9
      comp=Z,0.5nm,0.3s,baz=3.2,slow=1.8,SNR=5.5
GNI                                   LR      LR       17 09 45.0
      comp=Z,352nm,18.4s,baz=106,slow=38
GNI   Garni             18.72 308     Pn      Pn       17 02 26.4 +2.3
GNI   Garni             18.72 308⇓eP          Pn       17 02 26.1 +2.0
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GNI                                   pmax    pmax
      comp=Z,11nm,1.1s
GNI   Garni             18.72 308     P       P        17 02 22.3  -1.4
KKN   Kakani            18.81  91   eP        P        17 02 23.8  -1.0
      comp=Z,78nm,0.6s
PKIN  Phulchoki         18.95  92   eP        P        17 02 25.6  -0.9
      comp=Z,40nm,0.4s
PKI   Pulchoki          18.97  92   eP        P        17 02 25.6  -1.1
      comp=Z,33nm,0.6s
GUN   Gumba             19.31  90   eP        P        17 02 30.6 +0.2
      comp=Z,118nm,0.5s
SIRT  Sirnak            19.41 299     P       Pn       17 02 31.9  -0.4
SIRT                                          pP       17 02 33.5  -0.8
SIRT                                  IAmb    IAmb     17 02 56.7
      comp=Z,46nm,0.8s
AB31  Akbulak array     19.57 352   eP        Pn       17 02 33.7  -0.3
ABKAR Akbulak array     19.57 352     P       Pn       17 02 33.5  -0.5
ABKAR                                 IAmb    IAmb     17 02 35.0
      comp=Z,18nm,0.7s
JIRN  Jiri              19.63  91   eP        P        17 02 35.0 +1.1
      comp=Z,65nm,0.5s
GROC  Groznyy           19.66 317   eP        Pn       17 02 35.8 +0.6
GROC                                eS        Sn       17 06 18.6 +2.7
GROC                                  pmax    pmax
      comp=Z,40nm,1.1s
RAMN  Ramite            20.14  93   eP        P        17 02 40.7 +1.3
      comp=Z,76nm,0.5s
ZEI   Tsey              20.58 314   eP        Pn       17 02 46.7 +0.5
ZEI                                   pmax    pmax
      comp=Z,4.0nm,1.1s
ODAN  Odare             20.84  93   eP        P        17 02 49.0 +1.9
      comp=Z,302nm,0.7s
AKTO  Aktyubinsk        20.99 349     P       P        17 02 48.8 +0.7
      comp=Z,6.4nm,0.6s,baz=161,slow=10,SNR=17
AKTO                                  LR      LR       17 12 37.5
      comp=Z,123nm,18.2s,baz=152,slow=42
TAPN  Taplejung         21.01  91   eP        P        17 02 50.6 +1.7
      comp=Z,68nm,0.6s
NCK   Nalchik           21.15 315⇑eP          P        17 02 52.4 +2.5
NCK                                   pmax    pmax
      comp=Z,36nm,0.7s
KBZ   Khabaz            21.70 315     P       P        17 02 57.1 +1.3
      comp=Z,12nm,0.8s,baz=125,slow=6.8,SNR=26
KBZ   Khabaz            21.70 315c iP         P        17 02 57.7 +1.9
KBZ                                   pmax    pmax
      comp=Z,12nm,0.8s
MAKZ  Makanchi          21.93  35     P       P        17 02 58.9 +0.5
MAKZ                                  pmax    pmax
      comp=Z,14nm,1.1s
MAKZ  Makanchi          21.93  35     P       P        17 02 58.9 +0.5
KVAR  Kislovodsk Arr    21.94 316     P       P        17 03 00.9 +2.3
      comp=Z,3.3nm,0.7s,baz=270,slow=20,SNR=2.3
KIV   Kislovodsk        21.95 316     P       P        17 02 59.0 +0.3
KIV   Kislovodsk        21.95 316   eP        P        17 03 00.4 +1.7
KIV                                 eS        S        17 07 02.6 +1.6
KIV                                   pmax    pmax
      comp=Z,23nm,1.1s
KIV                                   MLR     MLR
      comp=Z,73nm,14.0s
KIV   Kislovodsk        21.95 316     P       P        17 02 58.5  -0.1
KIV                                   IAmb    IAmb     17 03 01.5
      comp=Z,21nm,1.0s
MK31  Makanchi Array    22.08  35   i P       P        17 03 03.5 +3.5
MK31  Makanchi Array    22.08  35     P       P        17 03 00.2 +0.2
MKAR  Makanchi Array    22.08  35     P       P        17 03 00.2 +0.3
      comp=Z,5.8nm,0.9s,baz=226,slow=13,SNR=8.2
MKAR                                  LR      LR       17 12 12.6
      comp=Z,261nm,19.0s,baz=232,slow=38
MKAR  Makanchi Array    22.08  35     P       P        17 03 00.1 +0.2
GOF   Gofitskoye        22.36 318⇑eP          P        17 03 03.8 +0.9
ASF   Jabal al Asfar    23.26 282     P       P        17 03 13.8 +1.2
      comp=Z,3.9nm,1.1s,baz=222,slow=1.6,SNR=2.5
KURBB Kurchatov Arra    23.42  24     P       P        17 03 14.3 +0.4
      comp=Z,12nm,1.0s,baz=218,slow=9.1,SNR=35
KURBB Kurchatov Arra    23.42  24     P       P        17 03 13.9   0.0
WMQ   Urumqi            23.44  47   eP        P        17 03 16.6 +2.4
WMQ                                   pP      sP       17 03 20.1 +1.2
WMQ                                   sP      pP       17 03 21.6 +4.1
WMQ                                   pmax    pmax
      comp=Z,26nm,0.7s
WMQ                                   pmax    pmax
      comp=Z,220nm,4.5s
WMQ                                   LR      LR
      comp=Z,700nm,18.9s
WMQ                                   LR      LR
      comp=Z,550nm,18.7s
KURK  Kurchatov         23.53  24ceP          P        17 03 15.6 +0.6
KURK                                  pmax    pmax
      comp=Z,21nm,1.3s
KURK  Kurchatov         23.53  24     P       P        17 03 14.5  -0.5
KURK                                  IAmb    IAmb     17 03 17.3
      comp=Z,18nm,1.1s
BVAR  Borovoye Array    23.58  10     P       P        17 03 16.4 +0.9
      comp=Z,8.3nm,0.6s,baz=200,slow=17,SNR=32
LSA   Lhasa             23.59  84     P       P        17 03 18.8 +2.4
LSA                                   LR      LR
      comp=Z,2µm,18.5s
LSA                                   LR      LR
      comp=Z,1µm,21.4s
LSA                                   LR      LR
      comp=Z,2µm,16.4s
BRVK  Borovoye          23.60  10d iP         P        17 03 16.4 +0.7
BRVK                                  pmax    pmax
      comp=Z,63nm,2.5s
BRVK  Borovoye          23.60  10     P       P        17 03 15.8 +0.1
BRVK                                  IAmb    IAmb     17 03 25.7
      comp=Z,32nm,0.8s
SOC   Sochi             23.63 312   eP        P        17 03 13.8  -2.2
SOC                                 ePPP      PPP      17 03 45.0
SOC                                 eS        S        17 07 27.6  -2.9
SOC                                 eSSS      SSS      17 08 27.4
SOC                                   MLR     MLR
      comp=Z,131nm,15.0s
MMAI  Mount Meron Ar    24.51 285     P       P        17 03 24.9 +0.4
      comp=Z,4.3nm,0.8s,baz=102,slow=15,SNR=6.2
MMAI                                  LR      LR       17 14 12.7
      comp=Z,165nm,19.6s,baz=80,slow=40
EIL   Elat              25.14 277     P       P        17 03 31.6 +1.4
      comp=Z,2.5nm,0.6s,baz=160,slow=7.9,SNR=4.2
EIL                                   LR      LR       17 15 31.7
      comp=Z,273nm,19.3s,baz=94,slow=42
BELG  Belogornoye       25.49 336     P       P        17 03 33.4 +0.3
      comp=Z,70nm,0.9s,baz=309,slow=2.7,SNR=12
BELG                                  LR      LR       17 15 36.3
      comp=Z,186nm,19.5s,baz=135,slow=41
ANN   Anapa             25.64 313   eP        P        17 03 34.6 +0.1
ANN                                 e*PP      pP       17 03 37.5  -0.4
ANN                                 e                  17 07 04.3
ANN                                 eS        S        17 08 03.3 +0.6
ANN                                 eSSS      SSS      17 09 11.5
ANN                                   pmax    pmax
      comp=Z,129nm,1.7s
DGZ   Jazzator, Alta    26.58  35⇑eP          P        17 03 44.7 +1.5
BRTR  Keskin Array B    26.63 300     P       P        17 03 44.2 +0.4
      comp=Z,0.9nm,0.5s,baz=305,slow=37,SNR=2.4
BRTR                                  LR      LR       17 15 35.3
      comp=Z,140nm,20.0s,baz=106,slow=40
ARU   Arti              26.79 353     P       P        17 03 44.9 +0.2
      comp=Z,1.5nm,0.6s,baz=172,slow=8.6,SNR=8.7
ARU   Arti              26.79 353c iP         P        17 03 46.1 +1.3
ARU                                                    17 04 24.8
ARU                                   S       S        17 08 21.4 +0.8
ARU                                   pmax    pmax
      comp=Z,6.0nm,0.9s
ARU                                   MLR     MLR
      comp=Z,183nm,14.0s
ATD   Arta Tunnel       26.81 231     P       P        17 03 46.7 +1.2
      comp=Z,2.2nm,0.3s,baz=270,slow=22,SNR=1.6
ATD                                   LR      LR       17 16 34.0
      comp=Z,123nm,20.3s,baz=40,slow=42
PALK  Pallekele         27.48 142     LR      LR       17 15 11.9
      comp=Z,208nm,18.5s,baz=75,slow=38
ZAA0  Zalesovo Array    28.40  26     P       P        17 03 58.8  -0.4
ZAA0                                  IAmb    IAmb     17 04 26.2
      comp=Z,5.7nm,0.8s
ZALV  Zalesovo Beam     28.40  26     P       P        17 03 59.9 +0.6
      comp=Z,2.1nm,0.6s,baz=236,slow=11,SNR=15
ZALV                                  LR      LR       17 16 14.7
      comp=Z,294nm,18.6s,baz=221,slow=38
ZALV  Zalesovo Beam     28.40  26     P       P        17 03 58.9  -0.3
KIRV  Kirov             30.37 345     P       P        17 04 17.0 +0.4
      comp=Z,8.7nm,0.7s,baz=172,slow=21,SNR=4.5
KIRV                                  LR      LR       17 17 29.9
      comp=Z,136nm,19.4s,baz=154,slow=38
KIRV  Kirov             30.37 345     P       P        17 04 17.0 +0.4
GTA   Gaotai            30.82  62   ⇓P        P        17 04 23.3 +2.2
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GTA                                   pP      sP       17 04 27.8 +2.0
GTA                                   sP      pP       17 04 30.3 +5.8
GTA                                   pmax    pmax
      comp=Z,5.0nm,1.3s
GTA                                   pmax    pmax
      comp=Z,82nm,6.7s
GTA                                   LR      LR
      comp=Z,310nm,14.5s
GTA                                   LR      LR
      comp=Z,260nm,10.9s
GTA                                   LR      LR
      comp=Z,260nm,12.0s
TIRR  Tirgusor          31.54 307   ⇑P        P        17 04 27.7 +0.5
TIRR  Tirgusor          31.54 307   ⇑P        P        17 04 27.7 +0.5
MOS   Moscow            31.87 332   eP        P        17 04 27.2  -2.7
OBN   Obninsk           31.90 330     P       P        17 04 30.7 +0.6
      comp=Z,2.4nm,0.5s,baz=319,slow=18,SNR=3.2
OBN   Obninsk           31.90 330⇑eP          P        17 04 30.8 +0.7
OBN                                   PPP     PPP      17 05 44.0
OBN                                                    17 07 23.0
OBN                                   SS      SS       17 11 36.0   -21
OBN                                   pmax    pmax
      comp=Z,25nm,1.7s
OBN                                   MLR     MLR
      comp=Z,168nm,18.0s
OBN   Obninsk           31.90 330     IAmb    IAmb     17 04 31.4
      comp=Z,13nm,0.6s
SORM  Soroca            32.73 314   ⇑P        P        17 04 37.5   0.0
SORM  Soroca            32.73 314   ⇑P        P        17 04 37.5   0.0
VRI   Vrincioaia        33.07 309   ⇓P        P        17 04 40.9 +0.3
VRI   Vrincioaia        33.07 309   ⇓P        P        17 04 40.9 +0.3
PLOR  Plostina          33.12 309   ⇑P        P        17 04 41.3 +0.3
PLOR  Plostina          33.12 309   ⇑P        P        17 04 41.3 +0.3
AKASG Malin Array Be    33.21 319     P       P        17 04 41.2  -0.5
      comp=Z,2.8nm,0.9s,baz=116,slow=8.1,SNR=12
AKASG                                 LR      LR       17 20 44.6
      comp=Z,86nm,18.9s,baz=165,slow=41
AKASG Malin Array Be    33.21 319   i P       P        17 04 41.7   0.0
AKASG                                 pmax    pmax
      comp=Z,1.0nm,0.4s
AKBB  Malin Array Si    33.21 319ceP          P        17 04 41.8 +0.1
AKBB                                  pmax    pmax
      comp=Z,12nm,1.5s
NEHR  Nehoiu            33.25 308   ⇑P        P        17 04 42.5 +0.4
COVR  Voineasa-Covas    33.42 309   ⇑P        P        17 04 43.9 +0.3
MLR   Muntele Rosu      33.50 308   ⇑P        P        17 04 45.1 +0.5
MLR   Muntele Rosu      33.50 308     P       P        17 04 45.0 +0.5
      comp=Z,3.4nm,0.7s,baz=148,slow=2.6,SNR=8.5
MLR   Muntele Rosu      33.50 308   ⇑P        P        17 04 45.1 +0.5
MLR   Muntele Rosu      33.50 308     P       P        17 04 41.1  -3.4
MLR                                   IAmb    IAmb     17 04 56.0
      comp=Z,9.6nm,0.9s
CMAR  Chiang Mai Arr    33.77 102     P       P        17 04 47.7 +0.7
      comp=Z,1.2nm,0.7s,baz=301,slow=8.9,SNR=9.7
CMAR                                  LR      LR       17 23 18.5
      comp=Z,147nm,18.7s,baz=322,slow=45
DOPR  Dopca             34.00 309   ⇓P        P        17 04 49.0 +0.3
CD2   Chengdu           34.23  78   eP        P        17 04 50.8  -0.1
CD2                                   pmax    pmax
      comp=Z,10.0nm,0.5s
BURAR Bucovina Array    34.56 312   ⇑P        P        17 04 54.2 +0.6
BURAR Bucovina Array    34.56 312   ⇑P        P        17 04 54.2 +0.6
BURAR Bucovina Array    34.56 312     P       P        17 04 50.9  -2.7
BUR08 Bucovina Ar. S    34.58 312     P       P        17 04 51.3  -2.5
BUR08                                 IAmb    IAmb     17 05 04.7
      comp=Z,5.3nm,1.0s
KMI   Kunming           34.62  88   ⇓P        P        17 04 58.9 +4.3
KMI                                   pmax    pmax
      comp=Z,13nm,1.2s
VTS   Vitosha           34.87 303   ⇓P        P        17 04 56.8 +0.4
VTS   Vitosha           34.87 303   ⇓P        P        17 04 56.8 +0.4
KLMR  Klimovskoe        34.96 339   eP        P        17 04 54.9  -1.9
KLMR                                e                  17 06 09.7
KLMR                                  pmax    pmax
      comp=Z,14nm,0.9s
KLMR  Klimovskoe        34.96 339   eP        P        17 04 54.9  -1.9
KLMR                                  AMP              17 04 56.7
      comp=Z,14nm,0.9s
KLMR                                ePP       PnPn     17 06 09.7  -3.8
LOT   Lotru             34.98 308   ⇑P        P        17 04 57.4 +0.1
ITM   Ithomi            35.54 293     P       P        17 05 01.5  -0.6
MNK   Minsk             35.68 324   i P       P        17 05 02.2  -0.8
MNK                                 i                  17 06 21.3
MNK                                 i                  17 07 30.3
MNK                                 i S       S        17 10 38.8  -0.6
MNK                                 i SS      SnSn     17 13 00.1  -0.5
MNK                                   pmax    pmax
      comp=Z,17nm,0.8s
MNK                                   pmax    pmax
      comp=N,13nm,0.8s
MNK                                   pmax    pmax
      comp=E,4.0nm,1.0s
MNK                                   MLR     MLR
      comp=Z,93nm,16.0s
MNK                                   MLR     MLR
      comp=N,272nm,20.0s
MNK                                   MLR     MLR
      comp=E,23nm,19.0s
MNK   Minsk             35.68 324   i P       P        17 05 02.2  -0.8
      comp=E,4.0nm,1.0s
MNK                                 i P       P        17 05 02.2  -0.8
      comp=N,13nm,0.8s
MNK                                 i P       P        17 05 02.2  -0.8
      comp=Z,17nm,0.8s,baz=119
MNK                                 i PP      PnPn     17 06 21.4  -1.1
MNK                                 i PPP     PPP      17 06 33.8
MNK                                 i S       S        17 10 38.8  -0.6
MNK                                 i SS      SnSn     17 13 00.2  -0.4
MNK                                 i SSS     SSS      17 13 17.6
MNK                                 i LQ      LQ       17 16 54.6
MNK                                 i LR      LR       17 19 37.0
MNK                                 i LRM     MLR      17 21 46.8
      comp=Z,93nm,15.9s
MNK                                 i LRM     MLR      17 21 49.3
      comp=N,272nm,20.4s
MNK                                 i LRM     MLR      17 21 50.0
      comp=E,23nm,19.1s
BOVS  Bovan             36.12 304   ⇑P        P        17 05 07.4 +0.5
MDVR  Moldovita         36.28 306   ⇑P        P        17 05 08.7 +0.2
BZS   Buzias            36.50 307   ⇑P        P        17 05 10.5 +0.3
BZS   Buzias            36.50 307   ⇑P        P        17 05 10.5 +0.3
KOLS  Kolonicke sedl    36.81 313   eP        P        17 05 19.0 +6.2
KOLS  Kolonicke sedl    36.81 313   eP        P        17 05 19.0 +6.2
SONM  Songino Array     37.04  49     P       P        17 05 16.9 +1.9
      comp=E,2.2nm,0.9s,baz=270,slow=9.8,SNR=12
SONM                                  LR      LR       17 21 47.1
      comp=E,266nm,19.8s,baz=248,slow=38
SONM  Songino Array     37.04  49     P       P        17 05 16.9 +1.9
SONM                                  pmax    pmax
      comp=Z,10.0nm,1.5s
SONM  Songino Array     37.04  49     IAmb    IAmb     17 05 23.0
      comp=Z,10nm,1.5s
CRVS  Cervenica-Dubn    37.32 313   eP        P        17 05 24.3 +7.1
CRVS  Cervenica-Dubn    37.32 313   eP        P        17 05 24.3 +7.1
ULN   Ulaanbaatar       37.48  49⇓eP          P        17 05 23.0 +4.3
ULN                                   pmax    pmax
      comp=Z,7.0nm,1.3s
GYA   Guiyang           37.66  85   ⇓P        P        17 05 22.3 +1.9
GYA                                   pmax    pmax
      comp=Z,7.0nm,0.7s
PABE  Paberze           38.14 324     P       P        17 05 21.3  -2.6
PABE                                  IAmb    IAmb     17 05 24.6
      comp=Z,12nm,0.7s
XAN   Xi'an             38.15  72     P       P        17 05 25.1 +0.7
XAN                                   sP      sP       17 05 32.4 +3.1
XAN                                   pmax    pmax
      comp=Z,5.0nm,1.4s
XAN                                   LR      LR
      comp=Z,340nm,15.1s
XAN                                   LR      LR
      comp=Z,330nm,21.3s
XAN                                   LR      LR
      comp=Z,400nm,16.5s
MORH  Mrgy, Hungar      38.64 308   ⇑P        P        17 05 28.5 +0.2
HHC   Hu-ho-hao-te      39.90  61   eP        P        17 05 39.9 +0.8
HHC                                   pmax    pmax
      comp=Z,12nm,0.9s
HHC                                   pmax    pmax
      comp=Z,110nm,7.9s
KMBO  Kilima Mbogo      40.01 224     P       P        17 05 42.2 +1.9
      comp=Z,3.2nm,0.8s,baz=40,slow=15,SNR=3.7
KMBO                                  LR      LR       17 24 28.4
      comp=Z,77nm,19.4s,baz=95,slow=40
KMBO  Kilima Mbogo      40.01 224   i P       P        17 05 44.0 +3.7
KMBO                                  pmax    pmax
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	comp=Z,3.0nm,0.8s						
MORC	Moravsky Berou	40.02	313	eP	P	17 05 41.4	+1.6
FIA1	FINESS Array S	40.15	333	P	P	17 05 40.2	-0.5
FIA1				IAmb	IAmb	17 05 40.5	
	comp=Z,26nm,1.4s						
FINES	FINESS Array B	40.15	333	P	P	17 05 40.5	-0.2
	comp=Z,19nm,1.1s,baz=128,slow=8.7,SNR=39						
FINES				LR	LR	17 24 12.9	
	comp=Z,203nm,19.1s,baz=133,slow=39						
FINES	FINESS Array B	40.15	333	P	P	17 05 40.2	-0.5
VRAC	Vranov	40.53	312	eP	P	17 05 44.4	+0.3
UBPT	Khong Chiam	40.78	102	P	P	17 05 46.6	+0.2
UBPT				IAmb	IAmb	17 05 59.6	
	comp=Z,14nm,1.1s						
RAFF	Raffo Rosso	41.57	294	P	P	17 05 49.8	-3.0
NRIK	Noril'sk	41.75	12	P	P	17 05 54.7	+0.9
	comp=Z,8.1nm,0.9s,baz=206,slow=5.0,SNR=14						
NRIK				LR	LR	17 25 26.2	
	comp=Z,300nm,19.3s,baz=207,slow=39						
LVZ	Lovozero	41.78	344	⇓eP	P	17 05 55.3	+1.2
LVZ				pmax	pmax		
	comp=Z,81nm,1.7s						
GERES	GERESS Array B	42.33	311	P	P	17 05 59.0	+0.1
	comp=Z,0.9nm,0.6s,baz=104,slow=5.6,SNR=7.9						
KHC	Kasperske Hory	42.45	311	eP	P	17 06 04.0	+4.1
KHC	Kasperske Hory	42.45	311	eP	P	17 06 04.0	+4.1
BRG	Berggiesshubel	42.49	314	eP	P	17 06 01.3	+1.2
BRG				Amp		17 06 02.3	
	comp=Z,4.2nm,0.7s						
CLL	Collm	43.15	315	eP	P	17 06 06.0	+0.6
CLL	Collm	43.15	315	eP	P	17 06 06.0	+0.6
MBAR	Mbarara	43.84	232	ceP	P	17 06 14.1	+2.5
GRF	Grafenberg Arr	44.05	312	eP	P	17 06 12.5	-0.2
	comp=Z,5.0nm,1.1s,baz=96,slow=8.3						
ARCES	ARCESS Array B	45.29	342	P	P	17 06 21.9	-0.4
	comp=Z,3.0nm,0.8s,baz=105,slow=4.3,SNR=6.7						
ARCES				LR	LR	17 26 32.8	
	comp=Z,160nm,19.8s,baz=20,slow=38						
ARCES	ARCESS Array B	45.29	342	P	P	17 06 22.0	-0.4
ARCES	ARCESS Array B	45.29	342	P	P	17 06 21.4	-1.0
ARCES				IAmb	IAmb	17 06 30.5	
	comp=Z,12nm,1.4s						
KEST	Kesra	45.76	292	P	P	17 06 27.7	+1.0
	comp=Z,7.2nm,0.6s,baz=108,slow=4.4,SNR=12						
KEST	Kesra	45.76	292	P	P	17 06 26.2	-0.4
NC602	NORSAR Array S	46.19	327	P	P	17 06 28.4	-1.1
NC405	NORSAR Array S	46.22	328	P	P	17 06 28.2	-1.6
NB2	NORSAR Subarra	46.43	328	P	P	17 06 30.5	-1.0
	comp=Z,5.6nm,0.8s,baz=108,slow=7.9						
NOA	NORSAR Array B	46.43	328	P	P	17 06 30.3	-1.2
	comp=Z,3.0nm,0.8s,baz=109,slow=7.5,SNR=8.8						
NOA				LR	LR	17 28 26.0	
	comp=Z,83nm,18.7s,baz=135,slow=39						
NJ2	Nanjing	46.70	73	eP	P	17 06 33.6	-0.4
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
ZEA	Zeya	50.90	43	eP	P	17 07 12.0	+6.1
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YAK	Yakutsk	52.73	33	⇑eP	P	17 07 19.3	-0.1
YAK				pmax	pmax		
	comp=Z,13nm,1.3s						
KSRS	Korea Array	52.88	64	P	P	17 07 21.2	+0.3
	comp=Z,4.5nm,0.8s,baz=280,slow=7.9,SNR=9.8						
KSRS				LR	LR	17 32 47.1	
	comp=Z,120nm,18.6s,baz=278,slow=39						
KLR	Kul'dur	53.87	49	⇓eP	P	17 07 32.4	+4.3
KLR				pmax	pmax		
	comp=Z,14nm,1.3s						
TIXI	Tiksi	54.05	21	⇓eP	P	17 07 29.0	0.0
VOI	Vohitsoka	54.09	200	P	P	17 07 30.5	+0.5
ESDC	Sonseca Array	55.43	300	P	P	17 07 37.9	-1.7
	comp=Z,1.7nm,0.9s,baz=63,slow=7.0,SNR=7.9						
ESDC				LR	LR	17 32 32.8	
	comp=Z,28nm,20.4s,baz=30,slow=37						
TORD	Torodi Ar. Bea	59.60	268	P	P	17 08 07.3	-1.9
	comp=Z,2.5nm,0.7s,baz=57,slow=6.7,SNR=17						
TORD				LR	LR	17 36 01.9	
	comp=Z,116nm,21.2s,baz=100,slow=38						
TORD	Torodi Ar. Bea	59.60	268	P	P	17 08 06.8	-2.5
MJAR	Matsushiro Arr	61.08	62	LR	LR	17 36 48.7	
	comp=Z,73nm,18.1s,baz=175,slow=38						
LBTB	Lobatse	65.84	218	P	P	17 08 49.8	-0.9
LBTB				pmax	pmax		
	comp=Z,21nm,1.5s						
LBTB	Lobatse	65.84	218	P	P	17 08 49.8	-0.9
DBIC	Dimbokro	68.34	265	LR	LR	17 40 06.9	
	comp=Z,78nm,21.3s,baz=69,slow=37						
PETK	Petropavlovsk-	68.81	40	LR	LR	17 42 35.9	
	comp=Z,92nm,19.1s,baz=302,slow=39						
BOSA	Boshof	68.92	216	P	P	17 09 08.4	-1.7
	comp=Z,3.9nm,1.0s,baz=102,slow=2.8,SNR=4.3						
BOSA	Boshof	68.92	216	P	P	17 09 09.4	-0.8
BOSA				pmax	pmax		
	comp=Z,15nm,1.4s						
BOSA	Boshof	68.92	216	P	P	17 09 09.3	-0.8
EUNU	Eureka	69.07	355	P	P	17 09 10.6	+0.2
EUNU				IAmb	IAmb	17 09 12.8	
	comp=Z,8.6nm,1.3s						
TULEG	Thule	69.88	349	P	P	17 09 14.7	-0.7
TULEG				IAmb	IAmb	17 09 15.6	
	comp=Z,8.9nm,0.9s						
GUMO	Guam	75.58	82	LR	LR	17 45 59.8	
	comp=Z,48nm,20.2s,baz=155,slow=38						
KNRA	Kununurra	77.13	117	P	P	17 09 58.4	-0.6
A36M	Sachs Harbour	78.19	3	P	P	17 10 03.4	-0.5
A36M				IAmb	IAmb	17 10 28.9	
	comp=Z,6.8nm,0.8s						
TOLK	Toolik Lake Re	78.68	12	P	P	17 10 06.7	-0.1
TOLK				IAmb	IAmb	17 10 31.8	
	comp=Z,12nm,1.4s						
FRB	Frobisher Bay	79.43	341	LR	LR	17 45 51.5	
	comp=Z,67nm,20.4s,baz=198,slow=36						
COLD	Coldfoot	79.80	13	P	P	17 10 12.9	0.0
COLD				IAmb	IAmb	17 10 18.1	
	comp=Z,13nm,1.4s						
COLA	College	82.33	13	⇓eP	P	17 10 29.8	+3.4
COLA				pmax	pmax		
	comp=Z,7.0nm,1.2s						
ILAR	Eielson Array	82.61	13	P	P	17 10 26.6	-1.3
	comp=Z,0.6nm,0.6s,baz=318,slow=4.5,SNR=12						
ILAR				LR	LR	17 51 41.8	
	comp=Z,64nm,19.8s,baz=288,slow=39						
WRA	Warramunga Arr	83.92	117	P	P	17 10 35.6	+0.2
	comp=Z,0.8nm,0.8s,baz=319,slow=4.3,SNR=13						
SCHQ	Schefferville	85.61	334	LR	LR	17 49 19.3	
	comp=Z,76nm,21.2s,baz=76,slow=36						
ASAR	Alice Springs	85.71	120	P	P	17 10 44.5	+0.1
	comp=Z,1.3nm,0.8s,baz=304,slow=4.8,SNR=19						
YKA	Yellowknife Ar	87.92	359	iP	P	17 10 54.2	-0.3
YKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ULM	Lac du Bonnet	98.22	347	LR	LR	18 00 39.6	
	comp=Z,67nm,18.9s,baz=22,slow=38						

*GCG **23** 17:15:28.5±0.4, 13°.56N×91°.33W, h19km±4km, MD3.7*
*SNET **23** 17:15:32.3±1.0, 13°.87N×91°.13W, h19km±5km, ML3.9*
*UCR **23** 17:15:32.5±1.0, 13°.87N×91°.13W, h19km±6km, ML3.8*
*MEX **23** 17:15:33.1±0.5, 13°.78N×91°.36W, h26km±55km, MD4.1*
ISC 23 17:15:28.7±2.4, **13°.71N**±0°.09×**91°.29W**±0°.05, **h15**km±13km, **n24**, σ**1s.70**/35, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FUG	Fuego 3	0.86	30	eP	Pn	17 15 46.8	+0.3
PCG	Pacaya	0.95	44	eP	Pn	17 15 48.7	+0.8
STG3	Santiaguito 3,	1.04	345	eP	Pb	17 15 49.8	+1.2
NBG	Las Nubes	1.27	46	eP	Pg	17 15 53.8	+0.5
NBG				eS	Sg	17 16 09.9	+0.1
SLOZ	Alcaldia de Sa	1.50	78	eP	Pn	17 15 56.0	+0.8
SLOZ				eS	Sg	17 16 14.6	-2.5
SLOZ				IAML		17 16 21.4	
	comp=Z,868nm,0.4s						
THIG		1.52	322	iP	Pn	17 15 55.2	-0.3
THIG				iS	Sn	17 16 13.0	-2.1
RTR	El Retiro	1.61	83	eP	Pn	17 15 58.0	+1.2
RTR	El Retiro	1.61	83	eP	Pn	17 15 58.0	+1.2
CEVE	Cerro Verde	1.62	86	eP	Pn	17 15 58.0	+0.9
CEVE				eS	Sb	17 16 18.2	-0.9
CEVE				IAML		17 16 19.5	
	comp=Z,5μm,0.3s						
CEVE	Cerro Verde	1.62	86	eP	Pn	17 15 58.0	+0.9
CEVE				eS	Sb	17 16 18.2	-0.9
CEVE				IAML		17 16 19.5	
	comp=Z,5μm,0.3s						
JAYA	Jayaque - finc	1.79	91	eP	Pn	17 16 00.1	+0.7
JAYA				eS	Sn	17 16 21.6	-0.3
JAYA				IAML		17 16 26.3	
	comp=Z,3μm,0.2s						
JAYA	Jayaque - finc	1.79	91	eP	Pn	17 16 00.1	+0.7
JAYA				eS	Sn	17 16 21.6	-0.3
JAYA				IAML		17 16 26.3	
	comp=Z,3μm,0.2s						
LALI	Alcalda de L	1.93	96	eP	Pn	17 16 02.2	+1.2
LALI				IAML		17 16 32.7	
	comp=Z,452nm,0.6s						
LALI	Alcalda de L	1.93	96	eP	Pn	17 16 02.2	+1.2
LALI				IAML		17 16 32.7	
	comp=Z,452nm,0.6s						
MTO3	Montecristo	2.00	70	eP	Pn	17 16 02.4	+0.2
MTO3	Montecristo	2.00	70	eP	Pn	17 16 02.4	+0.2
MRL	Marmol	2.07	48	eP	Pn	17 16 04.4	+1.2
MRL				eS	Sg	17 16 32.8	-2.7
LFRS	El Faro	2.17	92	eP	Pn	17 16 06.0	+1.6
LFRS	El Faro	2.17	92	eP	Pn	17 16 06.0	+1.6
COEG	Centro de Oper	2.34	92	eP	Pn	17 16 08.2	+1.4
COEG				IAML		17 16 42.9	
	comp=Z,677nm,0.5s						
COEG	Centro de Oper	2.34	92	eP	Pn	17 16 08.2	+1.4
COEG				IAML		17 16 42.9	
	comp=Z,677nm,0.5s						
CCIG	Comitan	2.69	342	iP	Pn	17 16 15.2	+3.5
CCIG				iS	Sn	17 16 46.9	+2.8
PCIG		2.73	317	iP	Pn	17 16 12.1	0.0
PCIG				iS	Sn	17 16 41.6	-3.2
CMIG	Matias Romero	4.83	315	eP	Pn	17 16 43.5	+2.4
CMIG				iS	Sn	17 17 33.4	-3.5

*NEIC **23** 17:32:39.6±0.8, 43°.79N±0°.05×105°.27W±0°.03, h0km±2km, ML3.4/52, Error ellipse: s-maj=8.7km s-min=3.5km az=354.0*
*ANF **23** 17:32:39.7±0.2, 43°.76N×105°.37W, h0km, ML3.6/14, Error ellipse: s-maj=3.4km s-min=2.7km az=87.0*
*IDC **23** 17:32:40.3±0.9, 44°.20N×105°.83W, h0km, mb4.1/1, mb1 3.8/6, mb1mx3.5/55, mbtmp3.5/6, ML3.4/5, MS2.5/1, Ms1 2.5/1, ms1mx2.2/41, Error ellipse: s-maj=25.8km s-min=8.6km az=144.0*
ISC 23 17:32:39.9±0.7, **43°.75N**±0°.04×**105°.34W**±0°.04, **h0**km, **n62**, σ**1s.24**/69, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	1.01	68	P	Pg	17 32 57.8	-1.6
	baz=250						
RSSD				S	Sb	17 33 12.9	-1.6
	baz=250						
RSSD	Black Hills	1.01	68	Pg	Pg	17 32 57.8	-1.6
K22A	Casper	1.40	219	P	Pn	17 33 05.2	-1.6
	baz=37,SNR=130						
K22A				S	Sg	17 33 25.4	+0.6
	baz=37						
K22A	Casper	1.40	219		Pn	17 33 05.4	-1.5
K22A				IAML		17 33 31.1	
	comp=N,855nm,0.3s						
K22A				IAML		17 33 31.2	
	comp=E,758nm,0.3s						
PHWY	Pilot Hill	2.45	182	Pn	Pn	17 33 21.4	0.0
PHWY				IAML		17 33 59.6	
	comp=E,97nm,0.4s						
PHWY				IAML		17 34 01.2	
	comp=E,144nm,0.4s						
RWWY	Rawlins	2.48	214		Pn	17 33 22.9	+1.1
RWWY				IAML		17 34 00.2	
	comp=E,206nm,0.5s						
RWWY				IAML		17 34 02.3	
	comp=E,196nm,0.7s						
N23A	Red Feather La	2.89	189	P	Pn	17 33 27.7	+0.3
	baz=8.2,SNR=42						
LAO	LASA Array	3.00	348	P	Pn	17 33 28.6	-0.2
	baz=168						
LAO	LASA Array	3.00	348	Pn	Pn	17 33 28.9	+0.1
RLMT	Red Lodge	3.13	297	P	Pn	17 33 30.3	-0.5
	baz=115,SNR=12						
RLMT	Red Lodge	3.13	297		Pn	17 33 30.2	-0.5
RLMT				IAML		17 34 19.9	
	comp=E,96nm,0.3s						
RLMT				IAML		17 34 20.1	
	comp=E,134nm,0.3s						
BW06	Boulder Array	3.23	254	P	Pn	17 33 32.6	+0.4
	baz=71						
BW06	Boulder Array	3.23	254		Pn	17 33 32.7	+0.5
BW06				IAML		17 34 21.3	
	comp=E,87nm,0.3s						
BW06				IAML		17 34 27.8	
	comp=E,64nm,0.3s						
PD31	Pinedale Array	3.23	254		Pn	17 33 32.1	0.0
PDAR	Pinedale Array	3.23	254	Pn	Pn	17 33 32.0	-0.1
	comp=E,5.8nm,0.3s,baz=70,slow=17,SNR=100						
PDAR				Pg	Pb	17 33 35.5	-2.8
	comp=E,23nm,0.3s,baz=70,slow=19,SNR=56						
PDAR				Lg	Lg	17 34 17.6	
	comp=E,28nm,0.3s,baz=257,slow=20,SNR=3.3						
PDAR				LR	LR	17 35 14.5	
	comp=E,86nm,19.7s,baz=134,slow=50						
PDAR	Pinedale Array	3.23	254	Pn	Pn	17 33 32.2	0.0
YMP	Mirror Lake Pl	3.60	288		Pn	17 33 37.0	-0.2
GCMT	Greycliff	3.69	305		Pn	17 33 38.1	-0.3
OGNE	Ogallala	3.73	138	P	Pn	17 33 39.1	+0.4
	baz=320						
OGNE	Ogallala	3.73	138		Pn	17 33 38.9	+0.1
OGNE				IAML		17 34 43.5	
	comp=E,110nm,1.2s						
LOHW	Long Hollow	3.82	270		Pn	17 33 40.8	+0.6
LOHW				IAML		17 34 56.1	
	comp=E,33nm,2.3s						
H17A	Grant Village	3.83	282	P	Pn	17 33 40.7	+0.3
	baz=98						
H17A	Grant Village	3.83	282		Pn	17 33 40.8	+0.5
H17A				IAML		17 34 43.5	
	comp=N,48nm,0.3s						
FLWY	Flagg Ranch	3.88	277	Pn	Pn	17 33 41.3	+0.2
FLWY				IAML		17 34 56.0	
	comp=N,65nm,1.9s						
MOOW	Moose Ponds	3.91	272		Pn	17 33 42.3	+0.8
ISCO	Idaho Springs	3.95	183	P	Pn	17 33 42.5	+0.4
	baz=2.5,SNR=7.9						
ISCO				Sb	Sb	17 34 42.0	+2.8
	baz=2.5						
ISCO	Idaho Springs	3.95	183		Pn	17 33 42.4	+0.2
REDW	Red Top Meadow	4.02	266		Pn	17 33 43.2	+0.2
REDW				IAML		17 34 54.9	
	comp=N,65nm,1.4s						
REDW				IAML		17 35 01.2	
	comp=N,66nm,1.6s						
TPAW	Teton Pass	4.08	268		Pn	17 33 44.0	+0.2
TPAW				IAML		17 35 08.3	
	comp=N,45nm,0.9s						
TPAW				IAML		17 35 09.6	
	comp=N,36nm,1.0s						
YHH	Holmes Hill	4.09	287	Pn	Pn	17 33 44.1	+0.1
FXWY	Fox Creek	4.12	270	Pn	Pn	17 33 44.7	+0.3
O20A	White River Ci	4.21	212	P	Pn	17 33 44.9	-0.6
	baz=30						
O20A	White River Ci	4.21	212		Pn	17 33 46.3	+0.8
O20A				IAML		17 35 37.0	
	comp=E,55nm,2.6s						
E28A	Huff	4.33	48		Pn	17 33 46.3	-0.8
YHL	Hebgen Lake	4.33	287	Pn	Pn	17 33 47.1	-0.2
YHL				IAML		17 35 04.1	
	comp=E,36nm,1.0s						
YHL				IAML		17 35 09.3	
	comp=N,44nm,1.9s						
RDMU	Red Mountain	4.47	226	Pn	Pn	17 33 49.2	+0.1
RDMU				IAML		17 35 04.7	
	comp=E,45nm,1.1s						
RDMU				IAML		17 35 11.3	
	comp=N,29nm,1.6s						
Q24A	Divide	4.78	178	P	Pn	17 33 53.5	-0.1
	baz=358						
DGMT	Dagmar	4.79	9	P	Pn	17 33 53.6	+0.3
	baz=190						
DGMT				Sb	Sb	17 35 05.7	+2.9
	baz=190						
DGMT	Dagmar	4.79	9	Pn	Pn	17 33 52.4	-0.9
BOZ	Bozeman (W)	4.85	295	P	Pn	17 33 54.6	+0.3
	baz=110						
BOZ				Sb	Sb	17 35 06.8	+2.1
	baz=110						
HWUT	Hardware Ranch	5.06	247		Pn	17 33 57.1	-0.2
HWUT				IAML		17 35 25.4	
	comp=N,38nm,1.1s						
HWUT				IAML		17 35 31.8	
	comp=N,35nm,2.1s						
TCUT	Toone Canyon	5.20	242		Pn	17 33 59.7	+0.5
EGMT	Eagleton	5.27	326	P	Pn	17 33 59.5	-0.4
	baz=143						
EGMT				Sb	Sb	17 35 20.3	+3.6
	baz=143						
EGMT	Eagleton	5.27	326	Pn	Pn	17 33 58.8	-1.1
LRM	Limekiln Ridge	5.47	295		Pn	17 34 02.1	-0.7
MCMT	McKenzie Canyo	5.50	284		Pn	17 34 03.1	-0.1
P18A	Preston Nutter	5.52	223		Pn	17 34 03.1	-0.4
MDND	Maddock	5.74	42	Pb	Pb	17 34 21.9	+1.1
	baz=227						
MDND				Sb	Sb	17 35 34.6	+4.6
	baz=227						
SRU	San Rafael Swe	6.05	222		Pn	17 34 11.2	+0.3
TMUT	Trail Mountain	6.26	227		Pn	17 34 14.1	+0.3
ECSD	EROS Data Cent	6.32	87	P	Pn	17 34 14.2	-0.2
	baz=273						
DUG	Dugway, Tooele	6.60	240	P	Pn	17 34 17.9	-0.4
	baz=55,SNR=5.4						
DUG	Dugway, Tooele	6.60	240	Pn	Pn	17 34 18.2	-0.1
MSO	Missoula	6.80	300	P	Pn	17 34 21.1	+0.1
	baz=114						
MSU	Marysvale	7.35	227		Pn	17 34 28.4	-0.2
JTMT	Jette	7.42	306	Pn	Pn	17 34 29.2	-0.3
ELK	Elko	7.93	251	Pn	Pn	17 34 38.0	+1.3
	comp=N,0.5nm,0.3s,baz=56,slow=7.8,SNR=6.3						
ELK				Lg	Lg	17 36 39.6	
	comp=N,0.1nm,0.3s,baz=62,slow=14,SNR=1.6						
I10CA	LAC DU BONNET	9.06	41	i		18 30 10.0	
	baz=219,slow=322,SNR=2.8						
ULM	Lac du Bonnet	9.17	42	Pn	Pn	17 34 50.5	-2.8
	comp=N,1.5nm,0.3s,baz=235,slow=12,SNR=8.2						
ULM				Lg	Lg	17 37 21.3	
	comp=N,0.8nm,0.3s,baz=147,slow=21,SNR=2.1						
NVAR	Mina Array Bea	11.13	246	Pn	Pn	17 35 21.4	+1.0
	comp=N,0.1nm,0.3s,baz=53,slow=13,SNR=3.7						
TXAR	Lajitas Array	14.45	174	Pn	P	17 36 14.8	+1.9
	comp=N,0.0nm,0.3s,baz=1.0,slow=9.9,SNR=1.7						
TXAR				Lg	Lg	17 40 22.7	
	comp=N,0.0nm,0.3s,baz=11,slow=33,SNR=3.1						
ARCES	ARCESS Array B	61.42	18	P	P	17 42 56.2	-1.2
	comp=N,2.3nm,1.0s,baz=331,slow=7.2,SNR=1.2						

*IDC **23** 17:37:22.4±3.4, 3°.61S×100°.62E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.5/50, mbtmp3.8/6, Error ellipse: s-maj=136.9km s-min=21.1km az=57.0*
*DJA **23** 17:37:28.1±0.3, 4°S±3°×10°1E±°, h10km, M3.7/13, mb3.9/1, MLv3.7/13*
*NEIC **23** 17:37:29.5±1.9, 3°.1S±0°.3×101°.2E±0°.3, h27km±10km, mb4.3/4, Error ellipse: s-maj=52.1km s-min=9.0km az=47.0*
ISC 23 17:37:27.3±0.8, **3°.63S**±0°.09×**100°.87E**±0°.06, **h32**km, **n29**, σ**2s.45**/28, **mb3.9**/8, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PPSI	Pulau Pagai	1.21	315	P	Pb	17 37 51.0	+1.3
PPSI				S	Sb	17 38 10.3	+5.3
MASI	Maura Aman, Be	1.45	71	P	Pb	17 37 54.4	+0.7
MASI				S	Sb	17 38 14.4	+2.5
KSI	Kapahiang	1.72	91	P	Pb	17 37 58.4	+0.1
KSI				S	Sb	17 38 22.7	+3.0
MNAI	Manna	2.21	109	P	Pb	17 38 05.0	-1.6
MNAI				S	Sb	17 38 34.6	+1.1
MNAI	Manna	2.21	109	Pn	Pn	17 38 02.9	+1.2
LHSI	Lahat	2.66	94	P	Pb	17 38 12.1	-2.1
PDSI	Padang	2.73	351	P	Pb	17 38 12.4	-3.0
SISI	Saibi	2.89	322	P	Pb	17 38 15.6	-2.6
MDSI	Maura Dua	3.41	105	P	Pn	17 38 21.6	+3.3
LWLI	Liwa	3.47	114	P	Pn	17 38 21.7	+2.5
BKNI	Bangkinang	3.93	3	P	Pn	17 38 10.2	-15
KLSI		4.00	105	P	Pn	17 38 30.3	+4.0
KASI	Kota Agung	4.08	118	P	Pn	17 38 30.5	+3.0
BLSI	Bandar Lampung	4.70	112	P	Pb	17 38 45.3	-3.6
DBJI	Dramaga	6.54	117	P	Pb	17 39 11.5	-8.9
TPTI		7.77	332	P	Pn	17 39 17.3	-0.9
CMAR	Chiang Mai Arr	22.03	355	P	P	17 42 19.3	0.0
	1.2nm,0.9s,baz=180,slow=9.8,SNR=6.9						
H08S2	Diego Garcia H	28.51	261	T	T	18 12 44.0	
	baz=83,slow=75,SNR=40						
H08S3	Diego Garcia H	28.52	261	T	T	18 12 45.9	
	baz=83,slow=75,SNR=238						
H08S1	Diego Carcia H	28.53	261	T	T	18 12 45.3	
	baz=83,slow=75,SNR=6.2						
WRA	Warramunga Arr	36.44	119	P	P	17 44 30.8	+1.4
	0.5nm,0.4s,baz=287,slow=8.0,SNR=8.1						
ASAR	Alice Springs	37.61	125	P	P	17 44 40.7	+1.3
	0.4nm,0.4s,baz=298,slow=8.4,SNR=2.5						
SONM	Songino Array	51.47	5	P	P	17 46 28.8	-0.9
	1.1nm,0.7s,baz=186,slow=8.7,SNR=8.7						
MKAR	Makanchi Array	52.82	344	P	P	17 46 38.9	-0.8
	1.1nm,0.8s,baz=147,slow=7.3,SNR=7.5						
MJAR	Matsushiro Arr	53.00	38	P	P	17 46 37.7	-3.5
MJAR				IAmb	IAmb	17 46 38.1	
	comp=Z,2.2nm,0.8s						
ZAA0	Zalesovo Array	58.92	349	P	P	17 47 22.5	-0.7
ZAA0				IAmb	IAmb	17 47 23.6	
	comp=Z,4.1nm,1.2s						
ZALV	Zalesovo Beam	58.92	349	P	P	17 47 21.8	-1.3
	comp=Z,1.0nm,0.5s,baz=172,slow=4.0,SNR=5.9						
ABKAR	Akbulak array	63.47	331	P	P	17 47 53.1	-1.1
TXAR	Lajitas Array	145.43	40	PKPbc	PKPab	17 57 04.3	+1.3
	comp=Z,1.0nm,0.6s,baz=296,slow=0.7,SNR=14						

*IDC **23** 17:37:55.4±1.6, 0°.96N×127°.36E, h0km, mb3.7/4, mb1 3.8/5, mb1mx3.4/47, mbtmp3.6/5, ML2.8/1, Error ellipse: s-maj=65.8km s-min=25.1km az=61.0*
*DJA **23** 17:37:57.0±0.3, 1°N±2°×12°7E±°, h10km, M3.4/9, MLv3.4/9*
ISC 23 17:37:56.8±2.0, **0°.95N**±0°.09×**127°.38E**±0°.07, **h11**km±10km, **n11**, σ**1s.28**/14, **mb3.7**/4, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	0.18	184	P	Pb	17 38 02.5	+0.4
TNTI				S	Sb	17 38 05.1	+1.8
LBMI	Labuha	1.58	176	P	Pg	17 38 26.2	-1.0
LBMI				S	Sg	17 38 46.4	-1.3
SANI	Sanana	3.29	205	P	Pn	17 38 48.3	0.0
SANI				S	Sn	17 39 28.4	+1.0
KMSI	Cibinong	3.42	264	P	Pn	17 38 47.7	-2.4
SIJI	Sorong	4.29	115	Pn	Pn	17 39 01.8	-0.2
	0.5nm,0.3s,baz=355,slow=23,SNR=1.7						
GTOI	Gorontalo	4.38	266	P	Pn	17 39 04.0	+0.7
AAI	Ambon	4.68	170	P	Pn	17 39 05.8	-1.6
WRA	Warramunga Arr	21.86	162	P	P	17 42 50.5	+0.8
	1.5nm,0.8s,baz=339,slow=11,SNR=9.2						
ASAR	Alice Springs	25.28	166	P	P	17 43 23.7	+0.3
	1.8nm,0.9s,baz=350,slow=9.4,SNR=18						
STKA	Stephens Creek	35.32	159	P	P	17 44 52.3	+0.2
	0.3nm,0.3s,baz=4.7,slow=16,SNR=3.0						
MKAR	Makanchi Array	60.20	326	P	P	17 48 05.1	+0.1
	0.5nm,0.6s,baz=117,slow=6.6,SNR=4.1						

*IDC **23** 17:41:28.1±1.4, 33°.51N×140°.39E, h90km±8km, mb3.5/9, mb1 3.6/12, mb1mx3.4/45, mbtmp3.9/12, Error ellipse: s-maj=32.6km s-min=12.0km az=75.0*
*NEIC **23** 17:41:29.4±0.7, 33°.54N±0°.07×140°.37E±0°.09, h97km±5km, mb4.2/8, Error ellipse: s-maj=11.9km s-min=8.8km az=124.0*
*JMA **23** 17:41:30.7±0.1, 33°.58N×140°.18E, h87km±1km, M3.6*
ISC 23 17:41:28.9±0.8, **33°.55N**±0°.04×**140°.26E**±0°.07, **h93**km±7km, **n58**, σ**1s.59**/64, **mb3.9**/13, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	Mitsune	0.57	220	P	Pn	17 41 45.8	+1.2
JHJ2				S	Sn	17 41 56.8	+0.5
JHJ2	Mitsune	0.57	220		Pn	17 41 45.9	+1.3
JHJ	Hachijo jima 2	0.59	223	P	Pn	17 41 45.9	+1.2
	301nm,0.3s,baz=342,slow=22,SNR=134						
JHJ				S	Sn	17 41 57.2	+0.7
	2μm,0.3s,baz=331,slow=23,SNR=36						
JHCJ	Hachijojimakas	0.62	219	P	Pn	17 41 46.0	+1.0
JHCJ				S	Sn	17 41 57.4	+0.5

JMKN	Mikurajimanish	0.65	301	P	Pn	17 41 45.8	+0.6
JKO	Kozu shima	1.13	304	P	Pn	17 41 51.1	+0.8
JKO				*e*S	Sn	17 42 06.4	+0.1
JAOM	Aogashimamukai	1.16	201	P	Pn	17 41 52.6	+1.8
BSO1	Boso 1	1.25	28	P	Pn	17 41 53.4	+2.2
JTHY	Toshimahigashi	1.26	321	P	Pn	17 41 53.0	+1.2
JTHY				S	Sn	17 42 09.8	+0.7
BSO3	Boso 3	1.26	9	P	Pn	17 41 53.7	+2.1
JIM2	Oshima 3	1.35	330	P	Pn	17 41 53.9	+0.9
JIM2				S	Sn	17 42 11.3	+0.2
BSO4	Boso 4	1.43	3	P	Pn	17 41 56.0	+2.1
JIZS	Izushimoda	1.63	316	P	Pn	17 41 57.5	+1.1
JIZS				S	Sn	17 42 17.5	+0.2
KTJ3	Kamata3	1.69	325	P	Pn	17 41 58.1	+0.9
KTJ3				S	Sn	17 42 19.7	+1.0
JOD2	Odawara 2	1.96	331	P	Pn	17 42 01.9	+1.2
JOD2				*e*S	Sn	17 42 25.4	+0.4
JFNN	Fujinakano	2.09	322	P	Pn	17 42 04.1	+1.7
TK04	Tokai 4	2.15	293	P	Pn	17 42 04.7	+1.7
JYT	Yasato	2.67	359		Pn	17 42 11.1	+1.0
JGF	Kuroka	3.15	311		Pn	17 42 18.4	+1.9
INU	Inuyama	3.22	305		Pn	17 42 18.9	+1.4
MJAR	Matsushiro Arr	3.42	331	P	Pn	17 42 21.1	+1.0
	0.6nm,0.3s,baz=142,slow=13,SNR=26						
MJAR				S	Sn	17 42 52.6	-7.2
	0.5nm,0.3s,baz=289,slow=16,SNR=2.7						
MJAR	Matsushiro Arr	3.42	331		Pn	17 42 20.9	+0.8
MAJO	Matsushiro	3.42	331		Pn	17 42 22.1	+1.8
MAT	Matsushiro	3.42	331	P	Pn	17 42 21.8	+1.6
MAT				*e*S	Sn	17 43 00.7	+0.9
JMM	Marumori	4.33	6		Pn	17 42 32.6	+0.2
JWT	Wachi	4.37	295		Pn	17 42 34.5	+1.5
JSD	Sado	4.76	341	Pn	Pn	17 42 39.1	+0.9
JMN	Monobe	5.32	274	Pn	Pn	17 42 47.0	+1.0
JHS	Saijyo	6.08	286	Pn	Pn	17 42 57.9	+1.5
JCJ	Chichijima	6.65	165	P	Pn	17 43 03.0	-1.1
	4.8nm,0.3s,baz=13,slow=22,SNR=6.7						
JCJ				S	Sn	17 44 12.7	-5.6
	6.2nm,0.3s,baz=271,slow=18,SNR=1.5						
JTM	Tenmabayashi	7.25	5	Pn	Pn	17 43 12.3	+0.3
ERM	Erimo	8.75	14	Pn	Pn	17 43 31.2	-1.4
ASAJ	Asahikawa	10.70	9	P	Pn	17 43 57.3	-1.8
	1.4nm,0.3s,baz=222,slow=8.6,SNR=23						
H11N2	WAKE ISLAND Hy	27.41	113	T	T	18 16 06.9	
	baz=306,slow=75,SNR=49						
H11N1	WAKE ISLAND Hy	27.41	113	T	T	18 15 56.3	
	baz=306,slow=75,SNR=49						
H11N3	WAKE ISLAND Hy	27.42	113	T	T	18 16 08.3	
	baz=306,slow=75,SNR=56						
H11S3	WAKE ISLAND Hy	27.98	116	T	T	18 16 43.8	
	baz=307,slow=75,SNR=7.0						
H11S1	WAKE ISLAND Hy	27.98	116	T	T	18 16 46.0	
	baz=307,slow=75,SNR=5.9						
H11S2	WAKE ISLAND Hy	28.00	116	T	T	18 16 44.3	
	baz=307,slow=75,SNR=4.7						
SONM	Songino Array	29.11	309	P	P	17 47 21.1	+0.3
	0.6nm,0.8s,baz=132,slow=11,SNR=1.9						
ZALV	Zalesovo Beam	43.63	315	P	P	17 49 22.9	-1.0
	1.1nm,0.5s,baz=117,slow=8.7,SNR=4.9						
MK31	Makanchi Array	45.25	305	P	P	17 49 37.2	+0.3
MK31				IAmb	IAmb	17 49 46.4	
	comp=Z,5.2nm,1.4s						
MKAR	Makanchi Array	45.25	305	P	P	17 49 37.1	+0.3
	comp=Z,0.7nm,0.4s,baz=85,slow=10,SNR=14						
MKAR	Makanchi Array	45.25	305	P	P	17 49 37.5	+0.6
MAKZ	Makanchi	45.46	305	P	P	17 49 38.8	+0.2
MAKZ				IAmb	IAmb	17 49 46.6	
	comp=Z,5.8nm,1.2s						
KURK	Kurchatov	47.40	311	P	P	17 49 53.6	-0.1
BRVK	Borovoye	52.32	314	P	P	17 50 30.0	-0.9
BRVK				IAmb	IAmb	17 50 32.0	
	comp=Z,1.6nm,0.8s						
WB0	Warramunga Arr	53.32	187	P	P	17 50 38.6	+0.1
WB2	Warramunga Arr	53.49	187	P	P	17 50 39.4	-0.3
WB2				IAmb	IAmb	17 50 56.5	
	comp=Z,4.0nm,1.1s						
WRA	Warramunga Arr	53.50	187	P	P	17 50 39.2	-0.6
	comp=Z,1.0nm,0.4s,baz=4.2,slow=7.7,SNR=42						
AS31	Alice Springs	57.22	187	P	P	17 51 06.5	0.0
ASAR	Alice Springs	57.22	187	P	P	17 51 06.5	-0.1
	comp=Z,0.2nm,0.5s,baz=21,slow=11,SNR=14						
ABKAR	Akbulak array	59.49	311	P	P	17 51 22.2	+0.2
ARCES	ARCESS Array B	66.92	340	P	P	17 52 11.4	+0.6
	comp=Z,3.7nm,0.9s,baz=76,slow=7.7,SNR=2.0						
FINES	FINESS Array B	71.45	332	P	P	17 52 39.0	+0.2
	comp=Z,1.3nm,0.7s,baz=64,slow=8.7,SNR=4.1						
AKASG	Malin Array Be	76.47	322	P	P	17 53 08.1	-0.2
	comp=Z,0.3nm,0.3s,baz=53,slow=5.4,SNR=3.0						
NOA	NORSAR Array B	77.02	337	P	P	17 53 11.0	-0.3
	comp=Z,0.2nm,0.3s,baz=45,slow=5.6,SNR=1.4						
TORD	Torodi Ar. Bea	119.05	312	PKP	PKPdf	18 00 07.3	-0.1
	comp=Z,0.2nm,0.4s,baz=22,slow=1.2,SNR=1.8						
H11S2	WAKE ISLAND Hy	126.22	271	T	T	21 08 15.8	
	baz=116,slow=75,SNR=8.3						
H11S1	WAKE ISLAND Hy	126.23	271	T	T	21 08 15.5	
	baz=116,slow=75,SNR=7.1						
H11S3	WAKE ISLAND Hy	126.23	271	T	T	21 08 13.0	
	baz=116,slow=75,SNR=6.9						
ZALV	Zalesovo Beam	151.16	29	PKPbc	PKiKP	18 50 14.1	-1.0
	comp=N,0.9nm,0.5s,baz=291,slow=2.3,SNR=5.1						

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*IDC **23** 18:30:14.7±7.3, 33°.12S×71°.58W, $h0^{km}$, mb3.4/2, mb1 3.7/2, mb1mx3.5/14, mbtmp3.4/2, Error ellipse: s-maj=330.3km s-min=60.3km az=26.0*

*GUC **23** 18:30:26.9±0.7, 30°.70S×71°.38W, $h53^{km}\pm3^{km}$, ML3.6*

ISC 23 18:30:27.2±1.1, **30°.69S**±0°.03×**71°.50W**±0°.09, **h49**$^{km}\pm9^{km}$, **n25**, σ**1^{s}.00**/34, **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.12	280	*e*P	Pn	18 30 35.2	+0.1
CO06				*i* S	Sn	18 30 41.5	+0.8
CO06				IAML		18 30 45.1	
	comp=E,6μm,0.1s						
GO04	Tololo Observa	0.80	49	*e*P	Pn	18 30 41.4	-1.1
GO04				*i* P	Pn	18 30 41.6	-0.8
GO04				*i* S	Sn	18 30 52.2	-1.4
GO04				*e*S	Sn	18 30 52.4	-1.1
CO05	La Serena	0.81	16	*e*P	Pn	18 30 42.4	+0.1
CO05				*i* S	Sn	18 30 53.3	-0.1
LCO	Las Campanas	1.81	23	*i* P	Pn	18 30 56.4	+0.1
LCO				*i* S	Sn	18 31 18.7	+0.4
VA06	Catapilco	1.87	175	*e*P	Pn	18 30 56.8	0.0
VA06				*i* S	Sn	18 31 20.2	+1.0
VA06				IAML		18 31 24.8	
	comp=N,981nm,0.5s						
VA03	San Esteban	2.21	159	*e*P	Pn	18 31 01.8	+0.1
VA03				*i* S	Sn	18 31 28.2	+0.3
VA03				IAML		18 31 31.5	
	comp=E,888nm,0.2s						
ROCH	El Roble	2.31	170	*e*P	Pn	18 31 03.0	0.0
ROCH				*e*P	Pn	18 31 03.1	0.0
ROCH				*i* S	Sn	18 31 31.6	+1.2
ROCH				IAML		18 31 38.1	
	comp=N,411nm,0.4s						
ROCH				IAML		18 31 38.2	
	comp=N,515nm,0.3s						
PEL	Peldehue	2.54	164	*e*P	Pn	18 31 06.2	+0.2
PEL				*i* S	Sn	18 31 36.2	+0.5
PEL				IAML		18 31 43.4	
	comp=N,293nm,0.4s						
MT02	Curacav	2.58	173	*e*P	Pn	18 31 06.1	-0.4
MT09	Talagante	3.10	172	*e*P	Pn	18 31 13.9	0.0
MT09				*i* S	Sn	18 31 49.5	-0.3
MT09				IAML		18 31 58.0	
	comp=E,229nm,0.2s						
MT01	Popeta	3.17	176	*e*P	Pn	18 31 14.5	-0.1
MT01				*e*S	Sn	18 31 50.7	-0.4
MT01				IAML		18 32 03.0	
	comp=E,162nm,0.3s						
GO03	Copiap	3.28	20	*e*P	Pn	18 31 17.2	+1.0
GO03				*e*S	Sn	18 31 55.2	+1.1
LMEL	Las Melosas	3.33	161	*e*P	Pn	18 31 17.6	+0.6
LMEL				*e*S	Sn	18 31 57.5	+2.2
BO04	La Punta	3.37	167	*e*P	Pn	18 31 17.4	0.0
BO04				*i* S	Sn	18 31 55.5	-0.7
BO04				IAML		18 32 11.7	
	comp=N,181nm,0.2s						
VCA	Vinchina	3.46	57	*e*P	Pn	18 31 21.9	+3.0
VCA				*e*S	Sn	18 32 06.5	+7.8
AC02	Maricunga	4.37	29	*e*P	Pn	18 31 33.0	+1.4
H03N1	Juan Fernandez	6.86	245	T	T	18 38 56.8	
	baz=78,slow=72,SNR=538						
H03N3	Juan Fernandez	6.88	244	T	T	18 38 56.8	
	baz=78,slow=72,SNR=575						
H03N2	Juan Fernandez	6.88	245	T	T	18 38 56.7	
	baz=78,slow=72,SNR=613						
TXAR	Lajitas Array	67.10	330	P	P	18 41 23.1	+7.3
	comp=N,0.1nm,0.3s,baz=147,slow=5.4,SNR=1.6						
TORD	Torodi Ar. Bea	82.66	70	P	P	18 42 45.1	-0.7
	comp=N,0.4nm,0.8s,baz=248,slow=4.7,SNR=2.1						

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*TUL **23** 18:31:01±0.8, 36°.65N±0°.02×98°.48W±0°.03, $h7^{km}\pm7^{km}$, ML3.2, mb_Lg3.0/47(NEIC), Error ellipse: s-maj=4.3km s-min=1.1km az=133.0*

*NEIC **23** 18:31:01±0.7, 36°.63N±0°.02×98°.46W±0°.03, $h5^{km}\pm2^{km}$, Error ellipse: s-maj=4.8km s-min=3.0km az=301.0*

*ANF **23** 18:31:02.2±0.9, 36°.63N×98°.50W, $h12^{km}\pm8^{km}$, ML3.6/9, Error ellipse: s-maj=6.5km s-min=3.5km az=59.0*

ISC 23 18:31:01.0±1.0, **36°.64N**±0°.02×**98°.46W**±0°.02, **h8**$^{km}\pm9^{km}$, **n73**, σ**0^{s}.78**/71, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK032	Salt Plains WL	0.26	50	Pg	Pg	18 31 06.5	+0.4
OK032				Sg	Sg	18 31 10.0	+0.4
CROK	Carrier	0.41	109	Pg	Pg	18 31 09.4	+0.5
U32A	Winter Ranch,	0.51	240		Pg	18 31 11.0	+0.1
U32A				Sg	Sg	18 31 17.4	0.0
U32A	Winter Ranch,	0.51	240	P	Pg	18 31 10.9	+0.1
	baz=57,SNR=84						
U32A				S	Sg	18 31 18.2	+0.7
	baz=57						
KAN14	Manchester OK	0.51	51		Pg	18 31 10.9	+0.1
KAN14				Sg	Sg	18 31 18.0	+0.5
GC02	Grant County #	0.53	66	Pg	Pg	18 31 11.3	+0.2
KAN10	Anthony SW Sta	0.56	31	Pg	Pg	18 31 12.0	+0.1
KAN10				Sg	Sg	18 31 19.4	+0.1
KAN05	Bluff City Nor	0.66	45		Pg	18 31 13.7	-0.1
KAN05				Sg	Sg	18 31 22.6	+0.2
KAN16	Harper SW Stat	0.67	28		Pg	18 31 13.7	-0.1
KAN17	Caldwell West	0.69	54		Pg	18 31 14.0	-0.2
KAN08	Anthony NE Sta	0.70	33	Pg	Pg	18 31 14.4	-0.1
KAN01	Argonia South	0.76	47		Pg	18 31 15.5	-0.1
KAN01				Sg	Sg	18 31 25.7	+0.2
KAN06	Argonia West S	0.78	38		Pg	18 31 15.7	-0.2
KAN09	Caldwell North	0.84	53		Pg	18 31 16.9	-0.2
KAN13	South Haven SW	0.87	64		Pg	18 31 17.6	-0.2
BLOK	Blackwell	1.01	83	Pg	Pb	18 31 20.0	-0.7
OK029	Liberty Lake	1.17	136	Pg	Pb	18 31 23.0	-0.4
BCOK	Bluff Creek, N	1.20	145		Pn	18 31 23.3	-0.8
OK025	Westminster Rd	1.39	139	Pn	Pb	18 31 26.6	-0.7
OKCFA	Oklahoma City	1.47	146	Pn	Pb	18 31 27.8	-0.8
OKCFA	Oklahoma City	1.47	146	S	Sg	18 31 48.3	+0.1
	baz=326						
OK031	S. Brethren Rd	1.48	117	Pn	Pb	18 31 28.2	-0.5
OKCSW	OKLAHOMA CITY	1.48	146	Pn	Pb	18 31 28.2	-0.6
QUOK	Quay	1.49	108	Pn	Pb	18 31 28.1	-0.7
OK030	Cody Creek RV	1.53	117		Pb	18 31 28.8	-0.8
T35A	Sooner Cattle	1.59	79	Pn	Pb	18 31 29.9	-0.6
T35B	Sooner Cattle	1.59	79	P	Pb	18 31 30.3	-0.3
	baz=261						
T35B				S	Sg	18 31 51.3	-0.6
	baz=261						
FNO	Franklin	1.62	148	Pn	Pb	18 31 30.2	-0.9
R32A	Long Quarter,	1.79	354	Pn	Pb	18 31 33.1	-1.0
R32A	Long Quarter,	1.79	354	P	Pb	18 31 33.2	-0.9
	baz=174,SNR=46						
R32A				S	Sb	18 31 56.9	+0.2
	baz=174						
WMOK	Wichita Mounta	1.91	188		Pn	18 31 34.1	+0.2
WMOK	Wichita Mounta	1.91	188	P	Pb	18 31 34.6	-1.5
	baz=7.2,SNR=95						
W35A	Tecumseh	1.96	139	Pn	Pn	18 31 35.2	+0.6
X34A	Smith Ranch, M	2.10	166	Pn	Pb	18 31 37.4	-1.9
X34A				IAmb_Lg		18 32 09.1	
	comp=Z,111nm,0.7s						
TUL1	Leonard	2.27	108		Pn	18 31 39.1	+0.3
TUL1				IAmb_Lg		18 32 13.8	
	comp=Z,64nm,0.8s						
TUL1	Leonard	2.27	108	P	Pb	18 31 41.0	-1.3
	baz=290,SNR=9.1						
CBKS	Cedar Bluff	2.40	335		Pn	18 31 40.5	-0.1
CBKS	Cedar Bluff	2.40	335	P	Pn	18 31 41.5	+0.9
	baz=155,SNR=13						
CBKS				S	Sn	18 32 11.3	+1.1
	baz=155						
LOOK	Love County	2.84	158		Pn	18 31 47.5	+0.9
LOOK				IAmb_Lg		18 32 37.4	
	comp=Z,35nm,0.7s						
KSU1	Kansas State U	2.86	30		Pn	18 31 46.1	-0.8
KSU1	Kansas State U	2.86	30	S	Sn	18 32 22.1	+0.5
	baz=212						
AMTX	Amarillo	3.15	237	Pn	Pn	18 31 51.6	+0.6
X37A	Clayton	3.24	128		Pn	18 31 52.0	-0.2
X37A				IAmb_Lg		18 32 49.4	
	comp=Z,40nm,0.7s						
X37A	Clayton	3.24	128	P	Pn	18 31 54.7	+2.5
	baz=310,SNR=6.1						
U38A	Gravette	3.29	92		Pn	18 31 52.8	0.0
U38A				IAmb_Lg		18 32 46.7	
	comp=Z,32nm,0.8s						
Z35A	Perchaven, San	3.44	163	Pn	Pn	18 31 55.8	+0.9
HHAR	Hobbs	3.66	94		Pn	18 31 57.9	-0.1
HHAR				IAmb_Lg		18 32 59.7	
	comp=Z,24nm,0.8s						
W39A	Magazine	4.06	109		Pn	18 32 03.2	-0.1
W39A				IAmb_Lg		18 33 16.0	
	comp=Z,34nm,0.8s						
KSCO	Kaye Shedlock’	4.06	307	IAmb_Lg		18 33 15.3	
	comp=Z,30nm,0.7s						
S39A	Bolivar	4.23	74		Pn	18 32 04.5	-1.3
S39A				IAmb_Lg		18 33 20.9	
	comp=Z,31nm,0.7s						
Z38A	Mt. Pleasant	4.42	139	IAmb_Lg		18 33 30.0	
	comp=Z,40nm,0.9s						
MSTX	Muleshoe	4.42	234	Pn	Pn	18 32 07.8	-0.6
MSTX				IAmb_Lg		18 33 28.6	
	comp=Z,32nm,1.0s						
MIAR	Mount Ida	4.49	116	Pn	Pn	18 32 09.1	-0.2
U40A	Yellville	4.52	92		Pn	18 32 10.2	+0.4
BGNE	Belgrade	4.77	3	Pn	Pn	18 32 12.9	-0.3
T25A	Trinidad	4.80	278	Pn	Pn	18 32 12.6	-1.1
MGMO	Mountain Grove	4.99	82	Pn	Pn	18 32 16.6	+0.4
MGMO				IAmb_Lg		18 33 47.5	
	comp=Z,31nm,1.1s						
X40A	Basin Creek Fa	5.06	113	Pn	Pn	18 32 16.9	-0.2
OGNE	Ogallala	5.13	328	Pn	Pn	18 32 19.7	+1.5
OGNE	Ogallala	5.13	328	P	Pn	18 32 19.9	+1.8
	baz=146,SNR=7.1						
WHAR	Wooly Hollow	5.18	103	Pn	Pn	18 32 20.1	+1.3
WHAR				IAmb_Lg		18 33 52.4	
	comp=Z,21nm,0.8s						
R40A	Maddies Statio	5.19	70	Pn	Pn	18 32 20.0	+1.1
R40A				IAmb_Lg		18 33 46.0	
	comp=Z,27nm,0.9s						
SDCO	Great Sand Dun	5.73	283	Pn	Pn	18 32 26.7	+0.1
435B	Jarrell	5.88	173	IAmb_Lg		18 34 14.2	
	comp=Z,31nm,0.8s						
CCM	Cathedral Cave	5.92	74	IAmb_Lg		18 34 12.2	
	comp=Z,29nm,0.8s						
LCAR	Lake Charles	5.92	93	IAmb_Lg		18 34 12.2	
	comp=Z,13nm,1.0s						
K31A	O'Neill	5.98	358	IAmb_Lg		18 34 19.3	
	comp=Z,25nm,0.8s						
JCT	Junction City	6.24	191	IAmb_Lg		18 34 23.7	
	comp=Z,21nm,1.0s						
PBMO	Poplar Bluff	6.45	86	IAmb_Lg		18 34 33.9	
	comp=Z,17nm,0.8s						
ISCO	Idaho Springs	6.46	301	IAmb_Lg		18 34 30.2	
	comp=Z,13nm,0.8s						
441A	DeRidder	7.33	142	IAmb_Lg		18 34 58.0	
	comp=Z,26nm,0.9s						
RSSD	Black Hills	8.60	332	IAmb_Lg		18 35 43.6	
	comp=Z,8.4nm,0.8s						
K22A	Casper	8.64	316	IAmb_Lg		18 35 57.9	
	comp=Z,12nm,0.7s						

NOU 23 18:45:26.0, 18°.13S×167°.89E, h24^{km}, **MLv4.0**/13, **Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	0.49	35	P	Pn	18 45 37.1	-0.4
RTV	Rentapao	0.61	57	P	Pn	18 45 39.1	-0.1
SANVU	Saraoutou	2.75	346	P	Pn	18 46 08.2	-0.4
MARNC	Mare, Loyalty	3.34	178	P	Pn	18 46 16.3	-0.4
YATNC	Mamie plateau,	4.02	193	P	Pn	18 46 25.1	-1.0
DZM	Mont Dzumac	4.15	199	P	Pn	18 46 28.0	0.0
KOUNC	Koumac, New Ca	4.17	234	P	Pn	18 46 28.0	-0.1
NOUC	Port Laguerre	4.22	200	P	Pn	18 46 28.5	-0.4
ONTNC	Ouen Toro	4.37	198	P	Pn	18 46 32.2	+1.3
PINNC	Pines Island,	4.48	185	P	Pn	18 46 32.7	+0.3

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*JMA **23** 19:10:46.6, 40°.20N×142°.34E, $h37^{km}\pm1^{km}$, M3.7*
JMA Felt I J1.

*IDC **23** 19:10:47.8±2.8, 40°.13N×142°.63E, $h57^{km}\pm27^{km}$, mb3.1/5, mb1 3.3/7, mb1mx3.0/56, mbtmp3.4/7, ML3.1/2, MS2.4/1, Ms1 2.4/1, ms1mx1.9/19, Error ellipse: s-maj=43.0km s-min=17.3km az=91.0*

ISC 23 19:10:47.5±1.1, **40°.20N**±0°.04×**142°.27E**±0°.08, **h39**$^{km}\pm5^{km}$, **n25**, σ**1^{s}.16**/31, **mb3.4**/5, **6C-3D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	0.41	230	⇑P	Pn	19 10 56.5	-0.5
JTH				S	Sn	19 11 03.5	-0.1
JKEN	Kujiedanarisaw	0.43	271	⇑P	Pn	19 10 56.6	-0.6
JKEN				S	Sn	19 11 04.0	-0.1
JANG	Nango	0.60	287	⇑P	Pn	19 10 59.2	-0.5
JANG				S	Sn	19 11 08.1	-0.2
MIYJ	Miyakonagasawa	0.71	209	⇓P	Pn	19 11 00.4	-0.7
MIYJ				S	Sn	19 11 09.9	-1.0
JKZ	Kuzumaki	0.75	254	⇑P	Pn	19 11 01.6	-0.1
JKZ				S	Sn	19 11 12.4	+0.5
JOM	Ohasama	1.05	226	⇑P	Pn	19 11 05.8	+0.1
JOM				S	Sn	19 11 19.8	+0.8
JARK	Aomorirokkasho	1.06	320	⇓P	Pn	19 11 05.6	-0.3
JARK				S	Sn	19 11 19.7	+0.3
JTM	Tenmabayashi	1.09	303	⇓P	Pn	19 11 06.2	-0.1
JTM				S	Sn	19 11 20.4	+0.3
JAH	Hinai	1.25	270	⇑P	Pn	19 11 08.8	+0.3
JAH				S	Sn	19 11 25.6	+1.5
JMK	Ichinoseki	1.49	213	P	Pn	19 11 12.1	+0.4
JMK				S	Sn	19 11 32.3	+2.4
JRG	Rokugo	1.49	238	P	Pn	19 11 12.7	+0.9
JOT	Ohata	1.50	322	P	Pn	19 11 11.7	-0.2
JOT				*e*S	Sn	19 11 30.4	+0.1
ASAJ	Asahikawa	3.92	3	P	Pn	19 11 45.5	+0.3
	2.0nm,0.3s,baz=210,slow=15,SNR=27						
ASAJ				S	Sn	19 12 32.5	+2.5
	1.4nm,0.3s,baz=356,slow=30,SNR=1.4						
ASAJ				LR	LR	19 13 48.5	
	comp=Z,51nm,21.8s,baz=152,slow=45						
MJAR	Matsushiro Arr	4.85	222	P	Pn	19 12 00.5	+2.5
	0.1nm,0.3s,baz=32,slow=14,SNR=8.5						
H11N2	WAKE ISLAND Hy	29.35	127	T	T	19 47 42.0	
	baz=319,slow=75						
H11N1	WAKE ISLAND Hy	29.36	127	T	T	19 47 36.9	
	baz=319,slow=75						
H11N3	WAKE ISLAND Hy	29.37	127	T	T	19 47 41.2	
	baz=319,slow=75						
H11S1	WAKE ISLAND Hy	30.16	129	T	T	19 48 42.6	
	baz=321,slow=76						
H11S3	WAKE ISLAND Hy	30.17	129	T	T	19 48 43.9	
	baz=321,slow=76						
H11S2	WAKE ISLAND Hy	30.18	129	T	T	19 48 43.2	
	baz=321,slow=76						
ZALV	Zalesovo Beam	40.34	310	P	P	19 18 22.9	+1.8
	0.3nm,0.3s,baz=93,slow=9.6,SNR=2.0						
MKAR	Makanchi Array	43.08	299	P	P	19 18 43.0	-0.5
	0.2nm,0.6s,baz=72,slow=7.8,SNR=2.1						
KURBB	Kurchatov Arra	44.64	306	P	P	19 18 56.2	+0.2
	0.4nm,0.5s,baz=79,slow=8.6,SNR=2.8						
WRA	Warramunga Arr	60.28	189	P	P	19 20 49.8	-2.2
	0.1nm,0.3s,baz=5.3,slow=7.1,SNR=6.4						
ASAR	Alice Springs	64.01	189	P	P	19 21 15.4	-1.6
	0.1nm,0.4s,baz=14,slow=4.9,SNR=2.2						

IDC 23 19:13:02.5±1.9, **26°.10N**×**142°.18E, h0**^{km}, **mb3.6**/4, **mb1 3.8**/4, **mb1mx3.3**/49, **mbtmp3.6**/4, **Error ellipse: s-maj=72.6km s-min=19.3km az=94.0, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	1.00	0	Pn	Pn	19 13 24.2	+0.4
	35nm,0.3s,baz=276,slow=21,SNR=24						
JCJ				Sn	Sn	19 13 38.7	+0.1
	56nm,0.3s,baz=110,slow=23,SNR=18						
WRA	Warramunga Arr	46.39	190	P	P	19 21 30.7	-0.2
	0.2nm,0.4s,baz=10,slow=8.3,SNR=5.8						
MKAR	Makanchi Array	51.11	310	P	P	19 22 07.1	+0.1
	0.2nm,0.5s,baz=91,slow=8.0,SNR=1.3						
KURBB	Kurchatov Arra	53.73	315	P	P	19 22 26.4	+0.1
	0.3nm,0.3s,baz=91,slow=9.2,SNR=3.2						
FINES	FINESS Array B	78.84	334	P	P	19 25 06.8	-0.4
	1.9nm,0.9s,baz=76,slow=5.9,SNR=5.6						

JMA 23 19:40:59.1±0.2, **38°.05N**×**144°.40E, h52**^{km}, **M3.8, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	2.33	277	P	Pn	19 41 36.0	+1.1
JIKH				S	Sn	19 42 03.3	+1.0
OFUJ	Ofunato	2.38	297	P	Pn	19 41 36.7	+1.1
OFUJ				*e*S	Sn	19 42 04.6	+1.1
JKMT	Kesennumamotoy	2.42	289	P	Pn	19 41 37.3	+1.1
JIO	Ouri	2.44	280	P	Pn	19 41 37.7	+1.3
JIO				S	Sn	19 42 06.0	+1.0
JMK	Ichinoseki	2.65	291	P	Pn	19 41 41.0	+1.6
JMK				*e*S	Sn	19 42 11.9	+1.6
JOM	Ohasama	2.81	301	P	Pn	19 41 43.2	+1.6
JOM				*e*S	Sn	19 42 16.4	+2.1
JANG	Nango	3.23	317	P	Pn	19 41 48.1	+0.9
JFT	Otama	3.26	262	S	Sn	19 42 27.4	+2.1
JYK	Kaneyama	3.29	287	P	Pn	19 41 50.5	+2.4
JYK				*e*S	Sn	19 42 28.7	+2.8
JOT	Ohata	4.21	323	P	Pn	19 42 02.2	+1.5
BSO1	Boso 1	4.37	220	P	Pn	19 42 02.5	0.0
JCH	Churui	4.63	350	P	Pn	19 42 05.7	-0.7
JCH				*e*S	Sn	19 42 56.4	-2.4
JRY	Ryogami san	4.84	247	P	Pn	19 42 10.6	+1.1
JRY				*e*S	Sn	19 43 03.8	-0.5
NEM2	Nemuro 2	5.41	10	P	Pn	19 42 14.0	-3.1
NEM2				*e*S	Sn	19 43 11.7	-6.3
JTKR	Abashiri--Toko	5.93	357	P	Pn	19 42 23.2	-1.0
JTKR				*e*S	Sn	19 43 26.6	-4.1

IDC 23 19:41:38.4±2.0, **6°.44S**×**129°.11E, h0**^{km}, **mb3.7**/2, **mb1 3.7**/4, **mb1mx3.4**/32, **mbtmp3.6**/4, **ML3.8**/2, **Error ellipse: s-maj=155.0km s-min=29.4km az=68.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.35	160	Pn	Pn	19 45 02.3	-0.7
	0.6nm,0.3s,baz=342,slow=13,SNR=32						
WRA				Sn	Sn	19 47 28.4	-15
	0.4nm,0.3s,baz=340,slow=22,SNR=7.9						
ASAR	Alice Springs	17.74	165	P	P	19 45 47.5	-0.4
	0.2nm,0.3s,baz=343,slow=8.7,SNR=12						
ASAR				S	Sn	19 48 50.6	-15
	0.1nm,0.3s,baz=340,slow=24,SNR=2.2						
MKAR	Makanchi Array	67.28	327	P	P	19 52 35.4	+0.5
	1.5nm,1.0s,baz=119,slow=7.6,SNR=7.3						
KURBB	Kurchatov Arra	71.57	329	P	P	19 53 00.7	-0.7
	0.6nm,0.8s,baz=120,slow=5.5,SNR=3.2						

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*SOME **23** 19:55:58.3, 50°.22N×88°.57E, $h0^{km}$*

*NNC **23** 19:56:05.7±2.8, 50°.18N×87°.56E, $h0^{km}$, mb4.0, mpv3.6, Error ellipse: s-maj=27.0km s-min=9.6km az=102.0*

ISC 23 19:56:02.7±1.2, **50°.16N**±0°.03×**87°.86E**±0°.03, **h3**$^{km}\pm10^{km}$, **n19**, σ**2^{s}.03**/38, **12C-6D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKAR	Aktash	0.23	316	Pg	Pg	19 56 06.9	-0.1
AKAR				Sg	Sg	19 56 10.1	0.0
CHBI	Chibit, Altay	0.28	304	Pg	Pg	19 56 08.6	+0.5
CHBI				Sg	Sg	19 56 12.2	+0.4

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CUR   Chagan-Uzun       0.32 100  Pg       Pg      19 56 09.7 +0.8
CUR                               Sg       Sb      19 56 15.0 -1.8
ULGR  Ulagan, Altay     0.47   8  Pg       Pb      19 56 13.0 -0.8
ULGR                              Sg       Sb      19 56 19.6 -1.5
DGZ   Jazzator, Alta    0.54 212  Pg       Pg      19 56 11.5 -1.4
DGZ                               Sg       Sg      19 56 17.7 -2.1
ARTR  Artybash          1.68 348  Pg       Pg      19 56 34.6 -0.4
ARTR                              Sg       Sg      19 56 56.1 -0.7
UKR   Ust'-Kan          2.12 293  Pg       Pb      19 56 41.6 -0.2
UKR                               Sg       Sb      19 57 09.9 +1.4
TASR  Tashtagol         2.61   0  Pg       Pb      19 56 50.4 +0.3
TASR                              Sg       Sg      19 57 25.7 -0.7
ELT   Eltsovka          3.27 343  Pg       Pn      19 56 57.5 +2.7
ELT                               Sg       Sb      19 57 39.1 -2.4
TBTR  Tabat             3.30  32  Pg       Pb      19 57 00.9 -1.0
TBTR                              Sg       Sb      19 57 42.4  0.0
ZSN   Zaisan            3.36 217 eP        Pn      19 56 59.1 +3.1
      15nm,0.2s
ZSN                              eS        Sb      19 57 44.9 +0.9
      92nm,0.3s
DJO   Djoy, Khakassi    3.36  37  Pg       Pg      19 57 06.7 -0.4
DJO                               Sg       Sg      19 57 51.7 +1.1
ZAA0  Zalesovo Array    4.24 335 ⇑Pn       Pn      19 57 09.4 +1.3
      0.3nm,0.3s
ZAA0                             ⇑Sn       Sn      19 57 59.9 +1.8
      1.3nm,0.3s
ZAA0                             ⇑Lg       Lg      19 58 19.9
      3.4nm,0.4s
SEM   Semipalatinsk     4.89 276 eP        Pn      19 57 19.4 +2.1
      7.4nm,0.2s
SEM                              eS        Sn      19 58 16.5 +2.1
      58nm,0.5s
MK31  Makanchi Array    5.00 230 ⇑Pn       Pn      19 57 21.3 +2.6
      5.4nm,0.3s,baz=52,slow=12,SNR=272
MK31                             ⇑Sn       Sn      19 58 20.6 +3.5
      5.9nm,0.5s,baz=60,slow=26,SNR=5.5
MK31                             ⇑Lg       Lg      19 58 40.0
      10nm,0.4s,baz=50,slow=30,SNR=6.2
MAKZ  Makanchi          5.15 232 ⇓Pn       Pn      19 57 23.2 +2.5
      14nm,0.8s
MAKZ                             ⇓Sn       Sn      19 58 22.6 +1.9
      8.2nm,0.6s
MAKZ                             ⇑Lg       Lg      19 58 42.0
      23nm,0.8s
KURBB Kurchatov Arra    5.99 278 ⇑Pn       Pn      19 57 33.0 +0.9
      9.1nm,0.5s
KURBB                            ⇓Sn       Sn      19 58 42.4 +1.2
      32nm,0.7s
KURBB                            ⇓Lg       Lg      19 59 07.0
      38nm,0.6s
PDGK  Podgornoye        8.92 223 ⇑Pn       Pn      19 58 12.2 -0.4
      0.9nm,0.3s
PDGK                             ⇓Sn       Sn      19 59 49.9 -3.7
      4.2nm,0.7s
PDGK                             ⇓Lg       Lg      20 00 41.1
      6.4nm,0.8s
OTUK  Ortayu           10.34 265 ⇑Pn       Pn      19 58 30.8 -1.1
      1.8nm,0.6s
OTUK                             ⇑Sn       Sn      20 00 22.2 -6.1
      2.4nm,1.1s
OTUK                             ⇑Lg       Lg      20 01 22.8
      6.6nm,0.8s
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*IDC **23** 20:01:08.6±2.8, 17°.98N×103°.15W, h0km, mb3.4/2, mb1 3.8/4, mb1mx3.5/38, mbtmp3.4/4, ML3.3/2, MS2.7/1, Ms1 2.7/1, ms1mx2.4/25, Error ellipse: s-maj=47.3km s-min=25.0km az=31.0*

*MEX **23** 20:01:13.6±1.2, 18°.09N×103°.28W, h9km±5km, MD4.1*

ISC 23 20:01:12.4±1.0**, 18°.28N**±0°.05×**103°.11W**±0°.03**, h11**km±8km**,**
n19, σ1s.79/25**, Near coast of Michoacan**

```
Code  Station Name       Δ°   AZ°   Phase ID          Time      Res
                                   Op       ISC      h  m  s    ISC
MMIG  Aquila            0.23 272 i P       Pg      20 01 17.4 +0.2
MMIG                             i S       Sg      20 01 20.7 +0.3
COIG  Colima            1.05 328 eP        Pb      20 01 31.9 -0.7
COIG                             i S       Sb      20 01 45.7 -0.8
R15V                    1.21 317 i P       Pn      20 01 33.5 -1.8
R15V                             i S       Sb      20 01 49.2 -1.9
UON   La Union          1.27 104 i P       Pb      20 01 36.1 -0.1
UON                              i S       Sg      20 01 53.6 +0.4
EZ5V                    1.28 339 eP        Pb      20 01 36.5 -0.2
URUA  Uruapan           1.50  41 i P       Pb      20 01 40.4 +0.1
URUA                             i S       Sg      20 02 01.6 +0.9
ZIIG  Zihuatanejo       1.70 113 eP        Pn      20 01 40.5 -1.5
ZIIG                             i S       Sg      20 02 07.6 +0.5
CJM   Chamela           2.20 304 eP        Pn      20 01 47.9 -1.0
CJM                              i S       Sn      20 02 15.8 -0.3
MOIG  Morelia           2.28  52 eP        Pb      20 01 51.6 -2.2
MOIG                             i S       Sb      20 02 22.3 +0.2
JRQG  Juriquilla Cam    3.48  46 eP        Pb      20 02 12.6 -1.5
JRQG                             eS        Sg      20 03 03.9 -0.2
ZAIG  Zacatecas         4.49   6 i P       Pg      20 02 36.2 -2.3
ZAIG                             i S       Sb      20 03 30.9 +5.1
H06E1 SOCORRO T-PHAS    7.43 275  T        T       20 10 22.4
      SNR=81
CMIG  Matias Romero     7.93  97  Pn       Pn      20 03 06.7 -0.9
      0.2nm,0.3s,baz=280,slow=18,SNR=1.2
CMIG                              Lg       Lg      20 05 18.9
      0.4nm,0.3s,baz=277,slow=16,SNR=2.8
TXAR  Lajitas Array    11.01 357  Pn       Pn      20 03 53.8 +3.7
      0.1nm,0.3s,baz=179,slow=15,SNR=8.5
TXAR                              Lg       Lg      20 07 06.6
      0.1nm,0.3s,baz=177,slow=29,SNR=5.4
TXAR                              LR       LR      20 07 32.9
      comp=Z,32nm,18.2s,baz=0.0,slow=34
NVAR  Mina Array Bea   24.06 330  P        P       20 06 28.6 +0.7
      0.5nm,0.6s,baz=158,slow=11,SNR=4.5
ILAR  Eielson Array    54.85 339  P        P       20 10 41.6 -0.8
      0.9nm,1.1s,baz=161,slow=5.2,SNR=4.3
H03N2 Juan Fernandez   56.37 156  T        T       21 11 40.6
      baz=333,slow=77,SNR=7.4
H03N1 Juan Fernandez   56.38 156  T        T       21 11 41.8
      baz=333,slow=77,SNR=91
H03N3 Juan Fernandez   56.39 156  T        T       21 11 40.8
      baz=333,slow=77,SNR=64
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*IDC **23** 20:03:43.0±1.9, 62°.14N×146°.15E, h19km±14km, mb3.6/7, mb1 3.7/10, mb1mx3.4/62, mbtmp3.8/10, ML4.2/3, MS2.6/4, Ms1 2.6/4, ms1mx2.4/37, Error ellipse: s-maj=15.8km s-min=11.6km az=14.0*

*NERS **23** 20:03:42.2±0.0, 62°.15N×146°.27E, h15km*

ISC 23 20:03:41.0±0.6**, 62°.09N**±0°.04×**146°.33E**±0°.04**, h10**km**, n18,**
σ1s.91/38**, mb3.6**/7**, 1D, Eastern Siberia**

```
Code  Station Name       Δ°   AZ°   Phase ID          Time      Res
                                   Op       ISC      h  m  s    ISC
SUUS  Susuman           1.10  50⇓iP        Pg      20 04 01.4 -0.6
SUUS                             ePg       Pb      20 04 02.4 +0.4
SUUS                              Pgmax            20 04 02.7
      530nm,0.3s
SUUS                             eSg       Sb      20 04 16.8 +0.4
SUUS                              Sgmax            20 04 20.1
      820nm,0.3s
SUUS                              Sgmax            20 04 20.1
      3μm,0.3s
SEY   Seymchan          2.93  71  Pn       Pn      20 04 28.6 +1.0
      10.0nm,0.3s,baz=262,slow=22,SNR=77
SEY                               Pg       Pg      20 04 36.9 -0.1
      32nm,0.3s,baz=271,slow=17,SNR=26
SEY                               Lg       Lg      20 05 16.4
      112nm,0.3s,baz=9.0,slow=23,SNR=18
SEY                               LR       LR      20 05 54.8
      comp=Z,111nm,19.0s,baz=184,slow=44
SEY   Seymchan          2.93  71 eP        Pn      20 04 28.6 +1.0
SEY                              ePg       Pg      20 04 36.7 -0.3
SEY                               Pgmax            20 04 36.9
      50nm,0.2s
SEY                              eS        Sn      20 05 04.7 +2.0
SEY                              eSg       Sg      20 05 16.3 +1.3
SEY                               Sgmax            20 05 19.2
      430nm,0.2s
SEY                               Sgmax            20 05 19.2
      110nm,0.2s
MGD   Magadan 1         2.96 132 eP        Pn      20 04 29.9 +1.9
MGD                              ePg       Pg      20 04 38.0 +0.3
MGD                               Pgmax            20 04 39.1
      60nm,0.3s
MGD                              eS        Sb      20 05 08.1 -1.9
MGD                              eSg       Sg      20 05 17.5 +1.4
MGD                               Sgmax            20 05 24.4
      700nm,0.4s
MGD                               Sgmax            20 05 24.4
      300nm,0.4s
TLAR  Talaya            3.06 106 eP        Pn      20 04 32.0 +2.7
TLAR                             ePg       Pg      20 04 40.1 +0.7
TLAR                              Pgmax            20 04 41.4
      40nm,0.3s
TLAR                             eSg       Sg      20 05 21.2 +2.2
TLAR                              Sgmax            20 05 27.4
      2μm,0.3s
TLAR                              Sgmax            20 05 27.4
      3μm,0.4s
MA2   Magadan           3.33 137  Pn       Pn      20 04 35.4 +2.3
      10.0nm,0.3s,baz=289,slow=9.4,SNR=26
MA2                               Pg       Pg      20 04 44.6 -0.1
      52nm,0.3s,baz=289,slow=11,SNR=17
MA2                               Lg       Lg      20 05 29.0
      38nm,0.3s,baz=74,slow=19,SNR=9.6
MA2                               LR       LR      20 05 38.0
      comp=Z,37nm,18.4s,baz=232,slow=34
MA2   Magadan           3.33 137 eP        Pn      20 04 35.7 +2.6
MA2                              ePg       Pg      20 04 45.2 +0.5
MA2                               Pgmax            20 04 45.7
      130nm,0.3s
MA2                              eSg       Sg      20 05 28.8 +1.0
MA2                               Sgmax            20 05 35.5
      140nm,0.4s
MA2                               Sgmax            20 05 35.5
      470nm,0.4s
GADL  Gadlja            3.44 133 eP        Pn      20 04 31.6 -3.0
GADL                             eP        Pb      20 04 41.3 -0.7
GADL                             eS        Sn      20 05 15.4  0.0
GADL                             eS        Sg      20 05 28.4 -3.1
OMS   Omsukchan         4.43  80 ePg       Pg      20 05 03.4 -2.3
OMS                               Pgmax            20 05 04.5
      40nm,0.4s
OMS                              eSg       Sg      20 06 02.6 -0.4
OMS                               Sgmax            20 06 09.9
      470nm,0.7s
OMS                               Sgmax            20 06 09.9
      180nm,0.5s
EVEN  Evensk            6.08  86 eP        Pg      20 05 32.5 -4.7
EVEN                              Pgmax            20 05 36.2
      10.0nm,0.2s
EVEN                             eS        Sg      20 06 50.8 -5.1
EVEN                              Sgmax            20 07 06.6
      210nm,0.5s
EVEN                              Sgmax            20 07 06.6
      240nm,0.5s
YAK   Yakutsk           7.82 277  Pn       Pn      20 05 34.0 -0.6
      0.1nm,0.3s,baz=119,slow=2.0,SNR=4.6
YAK                               Pg       Pb      20 05 55.7 -0.8
      0.1nm,0.3s,baz=344,slow=2.2,SNR=2.7
YAK                               Sn       Sn      20 06 49.0  -14
      0.1nm,0.3s,baz=205,slow=23,SNR=1.5
YAK                               Lg       Lg      20 07 37.9
      0.1nm,0.3s,baz=153,slow=22,SNR=13
YAK                               LR       LR      20 09 09.3
      comp=Z,27nm,18.6s,baz=92,slow=42
SONM  Songino Array    26.48 256  P        P       20 09 20.1 +2.0
      1.4nm,0.6s,baz=48,slow=9.0,SNR=12
SONM                              LR       LR      20 20 11.3
      comp=Z,41nm,19.2s,baz=31,slow=37
ILAR  Eielson Array    28.75  55  P        P       20 09 39.8 +1.7
      1.5nm,1.0s,baz=287,slow=7.2,SNR=9.6
ZALV  Zalesovo Beam    32.39 284  P        P       20 10 09.9 -0.5
      0.2nm,0.3s,baz=72,slow=14,SNR=1.5
KURBB Kurchatov Arra   37.49 284  P        P       20 10 52.8 -1.5
      0.5nm,0.6s,baz=50,slow=8.7,SNR=6.8
FINES FINESS Array B   48.70 326  P        P       20 12 25.5 +0.7
      1.7nm,0.9s,baz=67,slow=11,SNR=3.7
CMAR  Chiang Mai Arr   54.55 239  P        P       20 13 09.3 +0.3
      0.2nm,0.3s,baz=8.2,slow=8.2,SNR=1.7
ASAR  Alice Springs    86.04 191  P        P       20 16 20.7 -0.7
      0.2nm,0.8s,baz=12,slow=4.9,SNR=1.5
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*NNC **23** 20:09:18.7±7.6, 34°.31N×68°.40E, h0km, mb4.5, mpv4.2, Error ellipse: s-maj=78.5km s-min=53.4km az=150.0*

*IDC **23** 20:09:48.8±0.8, 36°.73N×69°.13E, h0km, mb3.6/13, mb1 3.8/18, mb1mx3.7/51, mbtmp3.7/18, ML3.4/5, Error ellipse: s-maj=16.8km s-min=14.9km az=159.0*

ISC 23 20:09:49.6±0.9**, 36°.62N**±0°.07×**68°.48E**±0°.09**, h24**km**, n44,**
σ2s.35/41**, mb3.7**/10**, 6C, Hindu Kush region**

```
Code  Station Name       Δ°   AZ°   Phase ID          Time      Res
                                   Op       ISC      h  m  s    ISC
KK07  Karatay Array     6.65  13 ⇑P        Pn      20 11 25.6 -0.2
      8.4nm,0.8s,baz=193,slow=17
KK07                             ⇑S        Sb      20 13 09.5 +6.1
      14nm,0.6s,baz=190,slow=27
AML   Almayashu         6.83  35  P        Pn      20 11 27.3 -1.2
      SNR=17
EKS2  Erkin-Say         7.29  32  P        Pn      20 11 36.4 +1.7
      SNR=7.2
UCH   Uchtor            7.29  38  P        Pn      20 11 33.9 -1.0
      SNR=60
AAK   Ala-Archa         7.59  36  Pn       Pn      20 11 36.8 -2.0
      6.0nm,0.3s,baz=213,slow=7.3,SNR=131
AAK                               Sn       Sn      20 13 05.3 +1.2
      0.5nm,0.3s,baz=247,slow=23,SNR=1.0
AAK                               Lg       Lg      20 13 38.1
      baz=201,slow=17,SNR=2.0
AAK   Ala-Archa         7.59  36  P        Pn      20 11 38.1 -0.7
      SNR=50
AAK   Ala-Archa         7.59  36 ⇑P        Pn      20 11 38.1 -0.7
      21nm,0.5s
AAK                              ⇑S        Sb      20 13 31.1 +0.5
      13nm,0.9s
KBK   Karagaybulak      7.82  38  P        Pn      20 11 41.9 -0.1
      SNR=50
CHMS  Chumysh           7.99  35  P        Pn      20 11 43.1 -1.1
      SNR=23
USP   Ospenovka         8.09  33  P        Pn      20 11 44.0 -1.6
      SNR=8.3
TKM2  Tokmak 2          8.34  39  P        Pn      20 11 47.9 -1.3
      SNR=6.1
TKM2  Tokmak 2          8.34  39 ⇑P        Pn      20 11 47.8 -1.3
      9.7nm,0.5s
GEYT  Alibeck           8.37 282  Pn       Pn      20 11 55.8 +6.4
      0.4nm,0.3s,baz=25,slow=18,SNR=1.3
GEYT                              Sn       Sn      20 13 33.0  +10
      1.7nm,0.3s,baz=111,slow=24,SNR=6.8
AB31  Akbulak array    14.08 336  P        Pn      20 13 07.1 -0.3
      1.7nm,0.5s,baz=155,slow=12,SNR=34
MKAR  Makanchi Array   14.46  41  Pn       Pn      20 13 05.6 -7.1
      0.0nm,0.3s,baz=211,slow=25,SNR=3.3
PYUN  Piuthan          14.90 121 eP        Pn      20 13 18.2 -0.7
      13nm,0.4s
DANN  Dangsing         15.29 118 eP        Pn      20 13 24.5 +0.4
      15nm,0.6s
KOLN  Koldanda         15.53 120 eP        Pn      20 13 26.8 -0.4
AKTO  Aktyubinsk       15.74 335  Pn       P       20 13 31.1 -2.2
      0.2nm,0.3s,baz=152,slow=14,SNR=5.7
AKTO                              Sn       Sn      20 16 16.4 -6.7
      0.0nm,0.3s,baz=86,slow=22,SNR=1.2
AKTO  Aktyubinsk       15.74 335 ⇑P        P       20 13 30.7 -2.6
      4.5nm,0.9s
KURBB Kurchatov Arra   15.75  24  Pn       Pn      20 13 24.8 -4.9
      0.0nm,0.3s,baz=210,slow=12,SNR=4.8
KURBB                             Lg       Lg      20 18 02.7
      0.0nm,0.3s,baz=215,slow=32,SNR=5.7
GKN   Gorkha           16.12 118 eP        Pn      20 13 34.4 -0.3
      19nm,0.5s
BVAR  Borovoye Array   16.46   4  Pn       Pn      20 13 36.3 -2.5
      0.1nm,0.3s,baz=202,slow=19,SNR=2.5
DMN   Daman            16.68 118 eP        Pn      20 13 42.0  0.0
      18nm,0.6s
PKIN  Phulchoki        16.91 117 eP        Pn      20 13 45.3 +0.4
      22nm,0.6s
PKI   Pulchoki         16.92 117 eP        Pn      20 13 45.6 +0.5
      32nm,0.7s
GUN   Gumba            17.06 116 eP        P       20 13 48.3 -0.3
      11nm,0.4s
JIRN  Jiri             17.43 116 eP        P       20 13 52.6 -0.1
      7.5nm,0.4s
RAMN  Ramite           18.14 117 eP        P       20 14 00.9 +0.5
      7.8nm,0.4s
TAPN  Taplejung        18.72 114 eP        Pn      20 14 09.6 +2.4
      13nm,0.6s
ODAN  Odare            18.77 116 eP        Pn      20 14 09.1 +1.4
      13nm,0.7s
ZALV  Zalesovo Beam    20.71  28  P        P       20 14 26.3 -1.6
      1.5nm,0.4s,baz=210,slow=10,SNR=9.2
KBZ   Khabaz           20.75 298  P        Pn      20 14 34.0 +3.1
      2.1nm,0.9s,baz=135,slow=1.4,SNR=3.9
ARU   Arti             20.92 344  P        Pn      20 14 33.1 +0.3
      0.9nm,0.5s,baz=128,slow=6.7,SNR=4.8
BELG  Belogornoye      21.56 324  P        P       20 14 42.4 +5.3
      11nm,0.8s,baz=143,slow=8.8,SNR=2.3
MMAI  Mount Meron Ar   27.32 272  P        P       20 15 39.9 +7.3
      0.9nm,0.5s,baz=112,slow=11,SNR=5.2
SONM  Songino Array    29.94  56  P        P       20 15 53.9 -1.9
      0.2nm,0.6s,baz=282,slow=9.3,SNR=1.9
AKASG Malin Array Be   31.30 309  P        P       20 16 12.2 +4.6
      0.2nm,0.3s,baz=88,slow=7.1,SNR=4.4
CMAR  Chiang Mai Arr   32.31 116  P        P       20 16 14.7 -2.1
      0.1nm,0.3s,baz=298,slow=8.2,SNR=0.9
TORD  Torodi Ar. Bea   63.70 267  P        P       20 20 26.9 +7.5
      0.8nm,0.6s,baz=42,slow=6.4,SNR=5.7
ILAR  Eielson Array    75.20  15  P        P       20 21 31.3 +1.6
      0.2nm,0.9s,baz=240,slow=4.8,SNR=3.3
YKA   Yellowknife Ar   81.20   1  P        P       20 22 05.9 +3.0
      1.1nm,0.8s,baz=11,slow=8.2,SNR=2.7
WRA   Warramunga Arr   83.79 120  P        P       20 22 19.0 +2.0
      0.5nm,0.7s,baz=323,slow=4.6,SNR=7.8
ASAR  Alice Springs    86.00 123  P        P       20 22 29.6 +1.4
      0.3nm,0.7s,baz=311,slow=4.4,SNR=6.6
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*IDC **23** 20:15:41.7±2.0, 8°.50N×71°.40W, h8km±12km, mb4.0/11, mb1 4.3/16, mb1mx4.1/32, mbtmp4.2/16, ML4.2/4, MS4.0/7, Ms1 4.0/7, ms1mx3.4/45, Error ellipse: s-maj=16.2km s-min=11.0km az=134.0*

*NEIC **23** 20:15:41.6±1.7, 8°.62N±0°.06×71°.41W±0°.04, h10km±1km, mb4.5/29, Mwr4.2(CAR), Error ellipse: s-maj=11.1km s-min=6.4km az=155.0*

*CAR **23** 20:15:42.5±4.3, 8°.46N±0°.06×71°.48W±0°.04, h5km±2km, Error ellipse: s-maj=0.0km s-min=0.0km az=63.0*

*FUNV **23** 20:15:42.2, 8°.47N×71°.45W, h5km, MW4.2*

*VAO **23** 20:15:45.8±0.6, 8°.61N×71°.24W, h10km, mb4.3*

ISC 23 20:15:41.4±0.3**, 8°.60N**±0°.02×**71°.42W**±0°.02**, h10**km**, n165,**
σ1s.74/193**, mb4.4**/22**, MS4.7**/3**, 2C-4D, Venezuela**

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Code  Station Name       Δ°   AZ°   Phase ID          Time      Res
                                   Op       ISC      h  m  s    ISC
SOCV  Socops            0.64 119⇓iP        Pg      20 15 52.9 -0.9
SOCV                             eS        Sg      20 16 00.8 -1.4
SOCV  Socops            0.64 119⇓eP        Pg      20 15 53.0 -0.8
SOCV                             eS        Sb      20 16 02.2 -1.5
SDV   Santo Domingo     0.83  70  Pg       Pn      20 15 58.0 -1.3
      516nm,0.3s,baz=221,slow=5.8,SNR=401
SDV                               Lg       Lg      20 16 09.8
      3μm,0.3s,baz=304,slow=18,SNR=38
SDV   Santo Domingo     0.83  70 i P       Pn      20 15 58.2 -1.2
SDV                              eS        Sn      20 16 09.9 -1.8
SDV   Santo Domingo     0.83  70 eP        Pn      20 15 58.5 -0.8
SDV   Santo Domingo     0.83  70           Pn      20 15 58.1 -1.2
SDV                                        Sg      20 16 06.0 -2.3
CAPV  Capacho           1.14 231 eP        Pb      20 16 01.2 -2.1
CAPV                             eS        Sg      20 16 15.7 -2.6
PAMC  Pamplona, Colo    1.78 225 eP        Pb      20 16 12.9 -1.4
PAMC                             eS        Sn      20 16 34.8 -0.8
MCQV  Machiques         1.81 323 eP        Pg      20 16 14.6 -1.6
MCQV                             eS        Sg      20 16 38.8 -0.9
OCAC  Ocana             1.91 259 eP        Pb      20 16 14.6 -1.8
OCAC                             eS        Sb      20 16 40.1 -0.3
OCAC  Ocana             1.91 259           Pb      20 16 14.6 -1.8
OCAC                                       Sb      20 16 40.7 +0.3
LL6C  La Loma 6 Bece    2.15 302 eP        Pb      20 16 17.9 -2.5
LL6C                             eS        Sb      20 16 46.9 -0.2
TAMC  Tame, Arauca      2.18 190⇑eP        Pn      20 16 18.2 +0.5
TAMC                             eS        Sb      20 16 49.1 +1.1
LL1C  La Loma 1 Cana    2.31 294 eP        Pb      20 16 21.0 -2.1
LL1C                             eS        Sg      20 16 54.5 -1.0
ELOV  Elorza            2.49 129 eP        Pn      20 16 22.9 +0.8
ELOV  Elorza            2.49 129 eP        Pn      20 16 22.8 +0.8
LL5C  La Loma 5 El P    2.54 297 eP        Pg      20 16 28.2 -1.9
LL5C                             eS        Sg      20 17 00.6 -2.6
SIQV  Siquisique        2.59  38 eP        Pb      20 16 26.1 -1.8
SIQV                             eS        Sb      20 16 58.0 -1.8
SMLC  San Martn de      2.63 275⇓iP        Pn      20 16 24.0 +0.1
SMLC                             eS        Sb      20 17 01.6 +0.7
BARC  Barichara         2.65 221 eP        Pb      20 16 26.3 -2.7
BARC                             eS        Sb      20 17 02.6 +0.9
BRRC  Barranca, Sant    2.71 237 eP        Pn      20 16 26.1 +1.1
BRRC                             eS        Sb      20 17 04.1 +0.9
URIC  Uribia, Colomb    3.14 350 eP        Pn      20 16 31.1 +0.2
URIC  Uribia, Colomb    3.14 350           Pn      20 16 30.7 -0.2
RUSC  La Rusia          3.15 212 eP        Pn      20 16 31.9 +0.4
RUSC                             eS        Sb      20 17 18.6 +2.1
BAUV  El Baul           3.36  84 eP        Pn      20 16 35.5 +1.5
BAUV                             eS        Sn      20 17 14.4 +0.5
JACV  Jacura            3.56  46 eP        Pn      20 16 38.1 +1.4
JACV                             eS        Sn      20 17 20.0 +1.1
ZARC  Zaragoza, Cauc    3.58 252 eP        Pn      20 16 37.3 +0.4
ZARC                             eS        Sb      20 17 29.8 +1.5
ZARC  Zaragoza, Cauc    3.58 252  Pn       Pn      20 16 37.4 +0.5
MONV  Montecano         3.63  23⇑eP        Pn      20 16 39.6 +2.0
MONV                             eS        Sn      20 17 22.4 +1.8
PTBC  PUERTO BERRIO,    3.64 236 eP        Pn      20 16 37.0 -0.8
SMRC  Santa Marta, M    3.76 313 eP        Pn      20 16 39.7 +0.3
SJCC  San Jacinto, C    3.93 290⇓iP        Pn      20 16 43.7 +1.9
SJCC                             eS        Sn      20 17 31.7 +3.6
SJCC  San Jacinto, C    3.93 290  Pn       Pn      20 16 43.4 +1.5
SPBC  San Pablo de B    3.93 222 eP        Pn      20 16 42.9 +1.0
TURV  Turiamo           3.98  62 eP        Pn      20 16 44.0 +1.5
TURV                             eS        Sn      20 17 29.8 +0.4
BENV  Beln              4.01  70 eP        Pn      20 16 44.9 +1.9
BENV                             eS        Sn      20 17 29.8 -0.3
UREC  San Jos de Ur     4.16 259 eP        Pn      20 16 46.8 +1.8
UREC                             eS        Sn      20 17 36.1 +2.5
MOTC  Monteria, Cord    4.20 273 eP        Pn      20 16 46.9 +1.4
MOTC                             eS        Sn      20 17 36.0 +1.3
MOTC  Monteria, Cord    4.20 273           Pn      20 16 46.7 +1.2
HATO  Hato, Curacao     4.31  34  Pn       Pn      20 16 45.5 -1.4
PTGC  Puerto Gaitan,    4.42 189 eP        Pn      20 16 48.4 -0.3
NORC  Norcasia          4.56 229 eP        Pn      20 16 51.7 +1.2
NORC                             eS        Sn      20 17 46.2 +2.5
ROSC  El Rosal          4.71 218  Pn       Pn      20 16 53.5 +0.6
      32nm,0.3s,baz=161,slow=13,SNR=23
ROSC                              Sn       Sn      20 17 46.5 -1.3
      26nm,0.3s,baz=31,slow=23,SNR=2.2
ROSC                              Lg       Lg      20 18 10.8
      31nm,0.3s,baz=18,slow=20,SNR=5.5
ROSC                              LR       LR      20 18 48.2
      comp=Z,802nm,21.2s,baz=18,slow=40
ROSC  El Rosal          4.71 218 eP        Pn      20 16 54.8 +1.8
ROSC                             eS        Sg      20 18 08.4 -4.4
HELC  Santa Helena      4.72 240 eP        Pn      20 16 53.9 +0.8
HELC                             eS        Sn      20 17 53.0 +4.9
PAYV  Puerto Ayacuch    4.89 130 eP        Pn      20 16 54.5 -0.6
PAYV                             eS        Sn      20 17 48.4 -3.4
LCBC  Los crdobas,      4.90 273 eP        Pn      20 16 56.4 +1.3
MERV  Las Mercedes      5.11  82 eP        Pn      20 16 58.9 +0.9
MERV                             eS        Sn      20 17 54.8 -2.2
CBOC  Ciudad Bolivar    5.30 240 eP        Pn      20 17 03.8 +3.0
CBOC                             eP        Pb      20 17 03.9  -10
ANIL  Santa Ana         5.68 224 eP        Pn      20 17 07.8 +1.7
PRAC  Prado             5.95 216 eP        Pn      20 17 09.8 +0.2
PRAC                             eS        Sn      20 18 20.2 +2.3
ORTC  Ortega, Tolima    6.01 219 eP        Pn      20 17 10.2 -0.3
ORTC                             eS        Sn      20 18 19.6 +0.1
PLMC  San Jos del P     6.06 233 eP        Pn      20 17 13.7 +2.5
PTAC  Punta Ardita,     6.49 258 eP        Pn      20 17 17.3 +0.3
PRGV  PARIAGUAN         6.70  88 eP        Pn      20 17 20.2 +0.3
PRGV                             eS        Sn      20 18 32.1 -4.3
YOTC  Yotoco, Valle     6.70 227 eP        Pn      20 17 20.7 +0.6
YOTC                             eS        Sb      20 18 56.2 -2.2
MACC  Macarena, Meta    6.85 201 eP        Pn      20 17 20.1 -1.8
PCRV  Puerto La Cruz    6.88  76  Pn       Pn      20 17 23.8 +1.4
      9.6nm,0.3s,baz=310,slow=3.4,SNR=21
PCRV                              Sn       Sn      20 18 44.1 +3.3
      27nm,0.3s,baz=274,slow=19,SNR=12
PCRV                              Lg       Lg      20 19 17.6
      17nm,0.3s,baz=123,slow=19,SNR=3.0
BETC  Betania           7.11 214 eP        Pn      20 17 25.0 -0.6
MARP  Paez Belalcaza    7.28 219 eP        Pn      20 17 28.3 +0.1
MARP                             eS        Sn      20 18 49.0 -2.0
GARC  Garzon, Huila     7.55 213 eP        Pn      20 17 31.3 -0.5
PCON  Cinco Dias        7.96 219 eP        Pn      20 17 38.5 +0.8
SOTA  Rioblanco         8.24 219 eP        Pn      20 17 41.8 +0.4
BCIP  Isla Barro Col    8.34 275  Pn       Pn      20 17 40.5 -1.8
MLPR  Magueyes Islan   10.24  24  Pn       Pn      20 18 07.4 -1.1
CRPR  Cabo Rojo, PR    10.25  24  Pn       Pn      20 18 07.3 -1.3
SDDR  Presa de Saban   10.33   1  Pn       Pn      20 18 08.8 -0.9
PRSN  Puerto Rico Se   10.43  23  Pn       Pn      20 18 10.0 -1.1
OBIP  Obispado Ponce   10.49  26  Pn       Pn      20 18 10.8 -1.2
CELP  Cerrillos        10.53  26           Pn      20 18 11.4 -1.1
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AOPR	Arecibo Observ	10.70	25	Pn	Pn	20 18 13.8	-1.1
PDPR	Patillas Dam,	10.74	29	Pn	Pn	20 18 14.5	-0.8
SJG	San Juan	10.76	28	Pn	Pn	20 18 15.6	0.0
	12nm,0.3s,baz=196,slow=11,SNR=20						
SJG				Sn	Sn	20 20 15.6	-0.5
	2.6nm,0.3s,baz=252,slow=20,SNR=1.6						
SJG				LR	LR	20 22 33.1	
	comp=Z,369nm,21.9s,baz=206,slow=38						
SJG	San Juan	10.76	28		Pn	20 18 14.5	-1.1
OTAV	Otavalo	10.86	220	*e*P	Pn	20 18 22.7	+5.2
OTAV	Otavalo	10.86	220		Pn	20 18 17.0	-0.5
GCPR	Guaynabo City	10.96	28		Pn	20 18 17.7	-0.7
SVB	Belmont	11.01	64	Pn	Pn	20 18 15.6	-3.5
CBYP	Canovanas	11.03	29		Pn	20 18 18.9	-0.5
CDVI	St. Croix	11.17	35	Pn	Pn	20 18 19.9	-1.3
MTDJ	Mount Denham	11.27	329	Pn	Pn	20 18 22.1	-0.5
CUPR	Culebra, Puert	11.35	31	Pn	Pn	20 18 22.4	-1.2
STVI	Saint Thomas	11.55	32	Pn	Pn	20 18 25.4	-1.1
FDF	Fort de France	11.76	58	Pn	Pn	20 18 28.4	-0.9
SRBA	San Rafael, Bu	11.81	274	Pn	Pn	20 18 29.4	-0.8
GTBY	Guantanamo Bay	11.82	343	Pn	Pn	20 18 29.4	-0.7
PEZE	Perez Zeledon,	12.13	275	Pn	Pn	20 18 34.6	+0.1
BOAV	Boa Vista	12.47	119		Pn	20 18 36.6	-2.4
PTGA	Pitinga	14.70	129	Pn	Pn	20 19 07.6	-2.0
	0.9nm,0.3s,baz=322,slow=22,SNR=4.5						
PTGA				Sn	Sn	20 21 49.9	-2.8
	1.5nm,0.3s,baz=313,slow=19,SNR=4.0						
PTGA				Lg	Lg	20 23 19.2	
	4.0nm,0.3s,baz=311,slow=20,SNR=6.8						
CZSB	Cruzeiro do Su	16.27	185	Pn	Pn	20 19 28.6	-1.5
TGUH	Tegucigalpa,Un	16.46	291	Pn	Pn	20 19 31.7	-1.0
TGUH				IAmb	IAmb	20 19 42.3	
	comp=Z,19nm,0.6s						
ATAH	Atahualpa	17.10	204	P	Pn	20 19 40.0	-1.1
	baz=24,slow=18,SNR=1.9						
ATAH				LR	LR	20 27 30.8	
	comp=Z,353nm,18.1s,baz=359,slow=42						
MTO3	Montecristo	18.50	290	P	P	20 19 55.8	-2.2
MTO3				IAmb	IAmb	20 20 04.2	
	comp=Z,27nm,0.7s						
ESQI	Esquipulas	18.52	290	P	P	20 19 56.1	-2.1
ESQI				IAmb	IAmb	20 20 07.8	
	comp=Z,56nm,1.3s						
ETMB	Extrema	19.01	164	*e*P	Pn	20 20 06.5	+2.3
ETMB	Extrema	19.01	164		P	20 20 01.6	-1.9
SAML	Samuel	19.26	155		Pn	20 20 06.0	-1.3
APG	El Apazote	19.69	291	LR	LR	20 29 18.2	
	comp=Z,148nm,19.6s,baz=229,slow=41						
MALB	Monte Alegre	20.01	120	*e*P	Pn	20 20 17.5	+1.4
ITTB	Itaituba	20.26	129	*e*P	Pn	20 20 20.2	+1.1
NNA	Nana	21.15	195	LR	LR	20 30 53.3	
	comp=Z,186nm,18.6s,baz=6.0,slow=43						
MCPB	Macapa, AP	21.25	114	*e*P	P	20 20 30.1	+2.2
NPGB	Novo Progresso	22.31	134	*e*P	P	20 20 41.8	+2.5
PDRB	Porto dos Gac	24.83	144	*e*P	P	20 21 08.1	+4.0
PRPB	Parauapebas	26.06	124	*e*P	P	20 21 18.3	+3.0
SIV	San Ignacio	26.49	157	P	P	20 21 19.8	+0.7
	comp=Z,1.5nm,0.8s,baz=344,slow=12,SNR=3.4						
PTLB	Pontes e Lacer	26.81	153	*e*P	P	20 21 26.2	+4.2
PB16	IPOC Station P	26.83	176	P	P	20 21 22.4	-0.3
PB16				IAmb	IAmb	20 21 27.2	
	comp=Z,6.8nm,0.8s						
SNDB	Serra Nova Dou	28.60	135	*e*P	P	20 21 41.8	+3.7
PB08	IPOC Station P	28.64	176	P	P	20 21 38.5	-0.2
PB08				IAmb	IAmb	20 21 42.7	
	comp=Z,7.9nm,0.9s						
SALV	Santo Antonio	28.90	147	*e*P	P	20 21 44.5	+3.9
TKL	Tuckaleechee C	29.21	339	P	P	20 21 45.3	+2.0
	comp=Z,1.7nm,0.4s,baz=75,slow=16,SNR=1.7						
SMTB	Santa Maria do	29.40	126	*e*P	P	20 21 48.1	+2.9
PEXB	Peixe	30.84	131	*e*P	P	20 22 01.5	+3.6
ARAG	Araguaiana, MT	30.99	141	*e*P	P	20 22 03.1	+3.9
SDBA	SAO DESIDERIO	33.62	128	*e*P	P	20 22 24.7	+2.3
U40A	Yellville	33.83	328	P	P	20 22 23.9	0.0
NBMA	Muriti-CE	36.21	115	*e*P	P	20 22 48.1	+3.3
NBPN	Ponto Novo - B	36.58	121	*e*P	P	20 22 51.6	+3.6
TXAR	Lajitas Array	36.61	309	P	P	20 22 48.2	+0.1
	comp=Z,0.5nm,0.5s,baz=130,slow=9.0,SNR=7.3						
TXAR				PcP	PcP	20 25 11.9	+0.6
	comp=Z,0.6nm,0.6s,baz=138,slow=4.5,SNR=5.0						
CMC01	Camacan, BA	39.57	127	*e*P	P	20 23 16.3	+3.2
TIJ01	Guaruva-PR	40.16	148	*e*P	P	20 23 22.3	+4.2
ITQB	Itaqui	40.63	160	*e*P	P	20 23 25.9	+4.2
CAM01	Campos-RJ	42.03	136	*e*P	P	20 23 37.3	+4.0
SDCO	Great Sand Dun	42.28	319	P	P	20 23 36.6	+1.0
ULM	Lac du Bonnet	46.23	338	P	P	20 24 05.7	-1.0
	comp=Z,3.8nm,0.8s,baz=158,slow=11,SNR=2.1						
ULM	Lac du Bonnet	46.23	338	IAmb	IAmb	20 24 13.1	
	comp=Z,7.0nm,0.9s						
SCHQ	Schefferville	46.26	4	P	P	20 24 07.9	+1.1
	comp=Z,3.4nm,0.7s,baz=228,slow=9.0,SNR=3.6						
SCHQ	Schefferville	46.26	4	IAmb	IAmb	20 24 10.2	
	comp=Z,24nm,1.4s						
BW06	Boulder Array	47.68	322	P	P	20 24 16.7	-1.8
PD31	Pinedale Array	47.68	322	P	P	20 24 17.0	-1.5
PD31				IAmb	IAmb	20 24 27.8	
	comp=Z,4.4nm,0.9s						
PDAR	Pinedale Array	47.68	322	P	P	20 24 19.4	+1.0
	comp=Z,2.1nm,0.5s,baz=129,slow=11,SNR=29						
PDAR	Pinedale Array	47.68	322	P	P	20 24 17.8	-0.6
LOHW	Long Hollow	48.79	322	P	P	20 24 27.1	+0.1
LOHW				IAmb	IAmb	20 24 34.6	
	comp=Z,6.6nm,1.0s						
REDW	Red Top Meadow	48.80	322	P	P	20 24 25.9	-1.2
REDW				IAmb	IAmb	20 24 33.9	
	comp=Z,7.5nm,1.0s						
BGU	Big Grassy Mou	48.91	318		P	20 24 27.2	-0.7
MOOW	Moose Ponds	48.95	322	P	P	20 24 28.2	0.0
MOOW				IAmb	IAmb	20 24 35.5	
	comp=Z,3.5nm,1.0s						
FXWY	Fox Creek	49.06	322	P	P	20 24 28.5	-0.6
FXWY				IAmb	IAmb	20 24 36.4	
	comp=Z,6.0nm,1.3s						
PLCA	Paso Flores	49.09	179	P	P	20 24 29.0	0.0
	comp=Z,9.6nm,0.8s,baz=356,slow=8.8,SNR=23						
PLCA	Paso Flores	49.09	179	P	P	20 24 28.2	-0.8
GCMT	Greycliff	49.50	325	P	P	20 24 30.7	-1.6
YHH	Holmes Hill	49.60	324	P	P	20 24 31.7	-1.5
YMR	Madison River	49.60	323	P	P	20 24 32.4	-0.7
YMR				IAmb	IAmb	20 24 40.5	
	comp=Z,10nm,1.3s						
RPN	Rapa Nui	51.10	225	LR	LR	20 43 49.0	
	comp=Z,1µm,21.5s,baz=172,slow=33						
LRM	Limekiln Ridge	51.11	324	P	P	20 24 43.0	-1.6
PLID	Pearl Lake	52.86	321	P	P	20 24 56.8	-0.8
PLID				IAmb	IAmb	20 25 03.5	
	comp=Z,5.4nm,1.2s						
C09A	Chrisman Ranch	55.55	323	P	P	20 25 14.8	-2.1
C09A				IAmb	IAmb	20 25 24.8	
	comp=Z,5.8nm,0.9s						
B08A	Colville Reser	56.45	324	P	P	20 25 23.9	+0.5
YKA	Yellowknife Ar	62.20	339	P	P	20 26 05.4	+2.5
	comp=Z,186nm,0.2s,baz=109,slow=6.1,SNR=4.6						
ESDC	Sonseca Array	67.23	51	P	P	20 26 37.1	+0.9
	comp=Z,0.7nm,0.7s,baz=264,slow=6.7,SNR=7.6						
A36M	Sachs Harbour	71.17	345	P	P	20 26 59.7	-0.2
TORD	Torodi Ar. Bea	71.74	79	P	P	20 27 04.9	+0.4
	comp=Z,0.6nm,0.6s,baz=293,slow=7.2,SNR=6.1						
ILAR	Eielson Array	76.08	335	P	P	20 27 30.8	+1.8
	comp=Z,0.5nm,0.7s,baz=90,slow=5.0,SNR=4.3						
GERES	GERESS Array B	80.39	42	P	P	20 27 54.1	+0.8
	comp=Z,0.5nm,0.7s,baz=240,slow=2.6,SNR=4.2						
FINES	FINESS Array B	86.09	29	P	P	20 28 22.6	+0.3
	comp=Z,1.2nm,0.8s,baz=242,slow=8.8,SNR=1.6						
VNA3	Neumayer Olymp	89.38	163	P	P	20 28 40.5	+2.7
VNA1	Neumayer--Stat	89.49	163	P	P	20 28 41.5	+3.2
VNA2	Neumayer--Watz	89.88	163	P	P	20 28 42.4	+2.3
SNAA	Sanae	91.53	163	P	P	20 28 48.4	+0.5
RAR	Rarotonga	91.54	249	LR	LR	21 01 50.6	
	comp=Z,259nm,20.1s,baz=304,slow=30						
SONM	Songino Array	123.78	2	PKP	PKiKP	20 34 41.6	+1.4
	comp=Z,0.4nm,0.9s,baz=330,slow=2.7,SNR=2.1						
CMAR	Chiang Mai Arr	151.49	19	PKPbc	PKiKP	20 35 38.5	+1.3
	comp=Z,0.8nm,0.4s,baz=321,slow=4.3,SNR=7.1						
ASAR	Alice Springs	151.50	235	PKPbc	PKiKP	20 35 36.0	-1.1
	comp=Z,2.6nm,0.8s,baz=147,slow=2.4,SNR=20						
ASAR	Alice Springs	151.50	235		PKPbc	20 35 35.3	-1.3
WRA	Warramunga Arr	152.65	243	PKPbc	PKiKP	20 35 38.5	-1.1
	comp=Z,4.6nm,0.9s,baz=109,slow=2.5,SNR=30						

ATH 23 20:31:54.6, 38.°23N×20.°36E, h17$^{km}\pm1^{km}$, ML2.1/2, Error ellipse: s-maj=2.2km s-min=1.1km az=268.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DMLN	Damoulianata-K	0.01	47	P	Pg	20 31 57.4	-0.1
DMLN				S	Sg	20 31 59.6	0.0
KEF3	Kipouria, Keph	0.03	200	P	Pg	20 31 57.2	-0.3
KEF3				S	Sg	20 31 59.4	0.0
KEF4	Livadi, Kephal	0.06	60	P	Pg	20 31 57.6	-0.1
KEF4				S	Sg	20 31 59.9	+0.2
LXRA	Lixouri, Kepha	0.07	115	P	Pg	20 31 57.7	0.0
LXRA				S	Sg	20 32 00.2	+0.4
VLS	Valsamata	0.19	106	P	Pg	20 31 58.8	-0.3
VLS				S	Sg	20 32 02.2	-0.1
VLS				AML	AML	20 32 02.4	
	comp=N,1238µm,0.1s						
VLS				AML	AML	20 32 02.5	
	comp=E,1867µm,0.1s						
PSDA	Pessada-Kefalo	0.21	123	P	Pg	20 31 59.3	-0.2
PSDA				S	Sg	20 32 03.0	+0.1
FSK	Fiskardo	0.28	35	P	Pg	20 32 00.4	-0.2
FSK				S	Sg	20 32 05.1	+0.3
FSK				AML	AML	20 32 05.3	
	comp=E,1597µm,0.2s						
FSK				AML	AML	20 32 05.5	
	comp=N,476µm,0.2s						
EVGI	Lefkada island	0.46	31	P	Pg	20 32 03.4	-0.3
EVGI				S	Sg	20 32 10.2	+0.2
LTHK	Lithakia	0.64	144	P	Pg	20 32 07.0	-0.1
LTHK				S	Sb	20 32 16.2	+0.2

SKO ***23*** *20:32:12.1, 41.°35N×19.°23E, h34^{km}*
IDC ***23*** *20:32:14.1±5.0, 41.°62N×19.°60E, h0^{km}, mb3.8/4, mb1 3.8/5, mb1mx3.5/39, mbtmp3.7/5, ML3.3/1, Error ellipse: s-maj=95.2km s-min=17.9km az=39.0*
THE ***23*** *20:32:15.2, 41.°63N×19.°54E, h2$^{km}\pm21^{km}$, ML3.1/13, Error ellipse: s-maj=21.5km s-min=0.7km az=74.0*
ATH ***23*** *20:32:15.2, 41.°52N×19.°46E, h13$^{km}\pm2^{km}$, ML3.1/6, Error ellipse: s-maj=6.5km s-min=1.7km az=160.0*
TIR ***23*** *20:32:15.3, 41.°57N×19.°62E, h19$^{km}\pm1^{km}$, Md3.2, Ml3.4*
BEO ***23*** *20:32:16.9±0.3, 41.°54N×19.°56E, h6$^{km}\pm2^{km}$, ML3.3/18*
RHSSO ***23*** *20:32:16.5±0.6, 41.°55N×19.°58E, h6$^{km}\pm2^{km}$, ML3.5/12*
ISC 23 20:32:16.1±0.9, **41.°55N**±0.°02×**19.°56E**±0.°02, **h13**$^{km}\pm7^{km}$, **n166**, σ**1.^{s}34**/230, **mb3.9**/3, **32C-15D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DURR	Durres	0.24	198	P	Pg	20 32 21.5	+0.2
	baz=206						
DURR				S	Sb	20 32 26.8	+0.2
	baz=206						
TIR	Tirane	0.31	131	⇑P	Pg	20 32 22.4	0.0
TIR				⇓S	Sb	20 32 28.4	0.0
TIR	Tirane	0.31	131	*e*Pg	Pg	20 32 22.0	-0.4
TIR				*e*Sg	Sb	20 32 28.0	-0.4
TIR	Tirane	0.31	131	P	Pg	20 32 22.0	-0.4
TIR				S	Sb	20 32 27.9	-0.4
	4µm,0.3s						
TIR	Tirane	0.31	131	P	Pg	20 32 22.0	-0.4
TIR				S	Sg	20 32 27.2	+0.5
TIR				AML	AML	20 32 28.4	
	comp=E,23224µm,0.4s						
TIR				AML	AML	20 32 30.2	
	comp=N,17388µm,0.3s						
TIR	Tirane	0.31	131	*i* Pg	Pg	20 32 22.0	-0.4
TIR	Tirane	0.31	131	P	Pg	20 32 22.0	-0.4
	baz=140						
TIR				S	Sg	20 32 27.1	+0.4
	baz=140						
TIR				AMP			
	comp=E,18nm,0.3s,baz=140						
ULC	Ulcinj	0.47	330	*i* Pg	Pg	20 32 24.9	-0.6
PHP	Peshkopia	0.68	78	P	Pg	20 32 28.0	-1.3
PHP				S	Sg	20 32 37.9	-0.3
PHP	Peshkopia	0.68	78	P	Pg	20 32 28.3	-1.0
	baz=79						
PHP				S	Sg	20 32 37.9	-0.3
	baz=79						
PHP				AMP			
	comp=N,6.4nm,0.4s,baz=79						
DRME	Dracevica, Mon	0.69	336	⇑*i*Pg	Pg	20 32 28.8	-0.9
DRME				*e*Sg	Sb	20 32 39.6	0.0
BCI	Bajram Curri	0.90	25	P	Pg	20 32 32.3	-1.3
	baz=22						
BCI				S	Sb	20 32 45.7	+0.2
	baz=22						
BCI				AMP			
	comp=N,6.1nm,0.5s,baz=22						
PDG	Podgorica	0.91	346	⇑P	Pg	20 32 33.4	-0.2
PDG				⇓S	Sn	20 32 47.3	-0.2
PDG	Podgorica	0.91	346	*e*Pg	Pg	20 32 32.3	-1.4
PDG				*e*Sg	Sn	20 32 47.1	-0.4
PDG	Podgorica	0.91	346	*e*Pg	Pg	20 32 32.2	-1.4
PDG				*e*Sg	Sb	20 32 45.7	0.0
PDG	Podgorica	0.91	346	*i* Pg	Pg	20 32 32.2	-1.5
PDG				*i* Sg	Sn	20 32 46.7	-0.8
OHR	Ohrid	1.03	115	*e*Pg	Pb	20 32 34.5	-1.4
OHR				*e*Sg	Sn	20 32 50.5	-0.2
OHR	Ohrid	1.03	115	*i* Pg	Pb	20 32 34.5	-1.4
OHR				*i* Sg	Sn	20 32 50.8	+0.1
OHR				*e*Lg	Lg	20 32 54.1	
	comp=E,474nm,0.6s						
VLO	Vlora	1.08	183	P	Pn	20 32 37.9	+1.0
VLO				S	Sn	20 32 54.6	+2.8
	comp=E,2µm,0.3s						
VLO	Vlora	1.08	183	P	Pn	20 32 37.5	+0.6
	baz=185						
HCY	Herceg Novi	1.20	319	⇑*i*Pg	Pb	20 32 38.7	0.0
HCY				*e*Sg	Sn	20 32 54.8	+0.1
KBN	Korca	1.31	135	P	Pg	20 32 41.5	+0.1
KBN				S	Sg	20 32 59.8	+1.4
	comp=E,868nm,0.7s						
KBN	Korca	1.31	135	S	Sg	20 32 58.8	+0.4
	baz=136						
KBN				AMP			
	comp=N,4.0nm,0.7s,baz=136						
BEY	Berane	1.34	11	*i* Pg	Pn	20 32 40.5	-0.1
SKO	Skopje	1.47	73	*i* Pn	Pg	20 32 44.0	-0.4
SKO				*i* Sn	Sg	20 33 04.1	+0.7
SKO				*e*Lg	Lg	20 33 07.4	
	comp=E,36nm,0.7s						
TREB	Trebinje	1.47	323	*e*Pg	Pb	20 32 43.0	-0.3
TREB				*e*Sg	Sg	20 33 03.7	+0.2
TREB	Trebinje	1.47	323	*e*Pg	Pn	20 32 42.7	+0.4
TREB				*e*Sg	Sg	20 33 03.0	-0.5
DBRK	Dubrovnik	1.53	317	*e*Pn	Pb	20 32 43.9	-0.5
DBRK				Sn	Sg	20 33 06.5	+1.0
BRY	Bratogost	1.55	331	*e*Pg	Pb	20 32 44.6	-0.1
BRY				*e*Sg	Sg	20 33 06.5	+0.5
FNA	Florina	1.57	119	P	Pn	20 32 44.2	+0.5
FNA				S	Sg	20 33 06.0	-0.7
	comp=E,745nm,0.5s						
FNA	Florina	1.57	119	P	Pn	20 32 44.2	+0.5
FNA				AML	AML	20 33 09.6	
	comp=N,1348µm,0.4s						
FNA				AML	AML	20 33 09.7	
	comp=E,1698µm,0.7s						
FNA	Florina	1.57	119	*i* Pn	Pn	20 32 44.3	+0.5
FNA				*i* Sn	Sg	20 33 07.6	+0.8
FNA	Florina	1.57	119	P	Pn	20 32 44.3	+0.6
	baz=120						
NEST	Nestorio	1.60	135	P	Pb	20 32 46.0	+0.4
NEST				S	Sg	20 33 07.8	+0.1
	comp=E,350nm,0.6s						
NEST	Nestorio	1.60	135	P	Pn	20 32 44.4	+0.2
NEST				AML	AML	20 33 13.6	
	comp=E,971µm,0.7s						
NEST				AML	AML	20 33 14.3	
	comp=N,938µm,1.0s						
LSK	Leskovik	1.61	150	P	Pb	20 32 45.7	0.0
LSK				S	Sg	20 33 07.7	-0.2
	comp=N,765nm,0.8s						
SCTE	Santa Cesarea	1.69	210	P	Pn	20 32 44.5	-0.8
SRN	Sarande	1.70	168	P	Pn	20 32 45.7	+0.2
SRN				S	Sg	20 33 10.1	-0.8
	comp=N,265nm,0.6s						
UPM	Unac-Piva	1.72	344	⇑*i*Pn	Pb	20 32 47.3	-0.4
UPM				*e*Sn	Sb	20 33 09.3	0.0
SJES	Sjenica	1.74	10	*e*Pn	Pb	20 32 48.4	+0.5
PENT	Pentalofos	1.81	138	P	Pb	20 32 49.1	0.0
PENT				S	Sg	20 33 13.3	-1.0
PENT	Pentalofos	1.81	138	P	Pn	20 32 47.9	+0.8
PENT				AML	AML	20 33 18.2	
	comp=N,519µm,0.8s						
PENT				AML	AML	20 33 19.9	
	comp=E,471µm,0.4s						
KASA	Kassiopi	1.83	171	P	Pn	20 32 47.4	+0.2
KEK	Kerkira	1.84	174	P	Pn	20 32 47.5	+0.1
KEK				S	Sg	20 33 14.5	-1.0
	comp=E,345nm,0.3s						
KEK	Kerkira	1.84	174	P	Pn	20 32 47.5	+0.1
KEK				AML	AML	20 33 17.8	
	comp=E,699µm,0.3s						
KEK				AML	AML	20 33 19.5	
	comp=N,676µm,0.3s						
STON	Ston	1.91	314	*e*Pn	Pb	20 32 50.6	-0.2
STON				*e*Sn	Sb	20 33 15.6	+1.1
STON	Ston	1.91	314	⇑*i*Pn	Pb	20 32 50.5	-0.2
STON				*e*Sn	Sb	20 33 14.7	+0.2
STON	Ston	1.91	314	*e*Pn	Pn	20 32 48.5	+0.2
STON				Sn	Sg	20 33 16.4	-1.1
STIP	Stip	1.98	85	*i* Pn	Pb	20 32 52.6	+0.7
STIP				*i* Sn	Sg	20 33 22.4	+2.7
STIP				*e*Lg	Lg	20 33 25.1	
	comp=N,64nm,0.7s						
SELS	Selova	2.03	34	*e*Pn	Pb	20 32 51.4	-1.5
SELS				*e*Sn	Sb	20 33 17.5	-0.5
RUDO	Rudo	2.07	356	*e*Pn	Pb	20 32 52.2	-1.4
RUDO				*e*Sn	Sb	20 33 18.0	-1.2
KZN	Kozani	2.09	126	P	Pn	20 32 51.8	+0.9
KZN				S	Sb	20 33 20.0	+0.3
	comp=N,225nm,0.6s						
KZN	Kozani	2.09	126	P	Pb	20 32 53.0	-0.9
KZN				AML	AML	20 33 32.4	
	comp=N,412µm,0.5s						
KZN				AML	AML	20 33 33.8	
	comp=E,473µm,0.7s						
BARS	Barje	2.10	52	*e*Pn	Pg	20 33 05.3	+8.9
BARS				*e*Sn	Sg	20 33 44.2	+21
BARS	Barje	2.10	52	*i* Pn	Pn	20 32 52.0	+1.1
IGT	Igoumenitsa	2.10	163	P	Pn	20 32 51.6	+0.6
IGT				S	Sb	20 33 20.3	+0.3
	comp=E,325nm,0.5s						
IGT	Igoumenitsa	2.10	163	P	Pn	20 32 52.1	+1.1
IGT	Igoumenitsa	2.10	163	*i* Pn	Pn	20 32 51.0	0.0
IGT				*i* Sn	Sn	20 33 17.4	+0.5
KPRO	Kipourio	2.10	139	P	Pb	20 32 52.8	-1.3
PRVS	Prvonek	2.10	62	*e*Pn	Pn	20 32 52.1	+1.0
JAN	Janina	2.13	152	P	Pn	20 32 52.6	+1.2
JAN				S	Sb	20 33 21.7	+0.7
	comp=E,415nm,0.5s						
JAN	Janina	2.13	152	P	Pn	20 32 52.9	+1.5
GRG	Griva	2.22	105	P	Pn	20 32 53.9	+1.2
GRG				S	Sb	20 33 23.0	-0.6
	comp=E,142nm,0.6s						
GRG	Griva	2.22	105	*i* Pn	Pn	20 32 54.1	+1.4
GRG				*i* Sn	Sb	20 33 23.9	+0.2
VAY	Valandovo	2.28	95	*e*Pn	Pn	20 32 54.5	+1.1
VAY	Valandovo	2.28	95	*i* Pn	Pn	20 32 53.3	-0.1
VAY				*i* Sn	Sb	20 33 24.4	-0.7
VAY				*e*Lg	Lg	20 33 31.4	
	comp=N,120nm,0.8s						
BBLS	Lazići	2.32	357	*e*Pn	Pb	20 32 56.7	-1.1
BBLS				*e*Sn	Sn	20 33 24.2	+1.8
BBLS	Lazići	2.32	357	⇑*i*Pn	Pn	20 32 55.5	+1.5
BBLS				*e*Sn	Sb	20 33 24.6	-1.7
LSTV	Lastovo	2.33	302	*e*Pn	Pn	20 32 53.7	-0.4
BOSS	Bosilegrad	2.37	66	*e*Pn	Pn	20 32 56.3	+1.6
BOSS				*e*Sn	Sb	20 33 26.3	-1.6
GRUS	Gruza	2.49	20	*e*Pn	Pn	20 32 58.2	+1.9
GRUS				*e*Sn	Sb	20 33 29.8	-1.3
KNT	Kendrikon	2.54	98	P	Pn	20 32 58.1	+1.0
KNT				S	Sb	20 33 30.7	-2.1
	comp=N,72nm,0.6s						
MAKA	Makarska	2.56	314	*e*Pn	Pn	20 32 57.3	+0.1
DIVS	Divibare	2.56	7	*e*Pn	Pn	20 32 58.5	+1.0
DIVS	Divibare	2.56	7	⇑*i*Pn	Pn	20 32 58.4	+1.0
DIVS				*e*Sn	Sn	20 33 29.8	+1.3
HAPS	Han Pijesak,Bl	2.57	350	*e*Pn	Pn	20 32 59.0	+1.4
HAPS				*e*Sn	Sn	20 33 30.7	+1.9
BOVS	Bovan	2.62	37	*e*Pn	Pn	20 32 59.0	+0.9
BOVS				*e*Sn	Sn	20 33 31.2	+1.5
RICI	Ricice	2.64	318	*e*Pn	Pn	20 32 58.6	+0.2
TRUS	Trudelj	2.74	13	*e*Pn	Pn	20 33 01.4	+1.6
HVAR	Hvar	2.82	306	*e*Pn	Pn	20 33 00.5	-0.4
ZAPS	Zavoj	2.85	52	*e*Pn	Pn	20 33 03.9	+2.5
ZAPS				*e*Sn	Sn	20 33 37.6	+2.0
VTS	Vitosha	2.94	67	⇑S	Sb	20 33 42.9	-1.4
VTS	Vitosha	2.94	67	*e*Pn	Pn	20 33 04.2	+1.6
VTS	Vitosha	2.94	67	⇑P	Pn	20 33 04.3	+1.6
SOH	Sokhos	2.96	103	P	Pn	20 33 04.3	+1.5
TEKS	Tekeris	3.00	360	*e*Pn	Pn	20 33 05.4	+2.1
ZAGS	Zajecar	3.00	40	*e*Pn	Pn	20 33 04.7	+1.4
SRS	Serrai	3.07	97	P	Pn	20 33 05.8	+1.5
PLG	Polygyros	3.17	111	P	Pn	20 33 07.1	+1.4
TIP	Timpagrande	3.19	223	⇑P	Pn	20 33 04.8	-1.2
NVR	Nevrokopi	3.24	92	P	Pn	20 33 08.3	+1.6
MGRS	Mrkonjic Grad	3.39	328	*e*Pn	Pn	20 33 09.6	+0.9
MGRS				*e*Sn	Sn	20 33 50.5	+1.7
ZIRJ	Zirje	3.57	307	*e*Pn	Pn	20 33 11.5	+0.3
MDVR	Moldovita	3.59	25	⇓P	Pn	20 33 12.8	+1.3
FRGS	Fruska Gora	3.61	3	⇓P	Pn	20 33 12.4	+0.7
FRGS	Fruska Gora	3.61	3	*e*Pn	Pn	20 33 12.6	+0.9
FRGS				*e*Sn	Sn	20 33 54.9	+0.7
BLY	Banja Luka	3.64	332	*e*Pn	Pn	20 33 14.2	+2.1
BLY	Banja Luka	3.64	332	*e*Pn	Pn	20 33 13.8	+1.7
BLY				*e*Sn	Sn	20 33 56.0	+1.2
MORI	Morici	3.66	310	*e*Pn	Pn	20 33 12.8	+0.4
HERR	Herculane	3.93	31	⇑P	Pn	20 33 17.7	+1.6
SRE	Strehaia	4.10	39	⇓P	Pn	20 33 20.2	+1.8
DUGI	Dugi Otok	4.11	308	*e*Pn	Pn	20 33 19.2	+0.6
VLAD	Vladila	4.32	54	⇑P	Pn	20 33 24.6	+3.1
BZS	Buzias	4.33	20	⇓P	Pn	20 33 22.7	+1.1
BZS	Buzias	4.33	20	*e*Pn	Pn	20 33 23.0	+1.4
BZS				*e*Sn	Sn	20 34 12.5	+0.6
PLIT	Plitvice	4.40	320	*e*Pn	Pn	20 33 23.6	+1.0
GZR	Gura Zlata	4.50	30	⇑P	Pn	20 33 25.3	+1.3
MOSL	Moslavina	4.54	334	*e*Pn	Pn	20 33 25.1	+0.6
NVLJ	Novalja	4.57	313	*e*Pn	Pn	20 33 24.9	0.0
KOVH	Kovagotottos	4.66	347	*e*PN	Pn	20 33 26.3	+0.2
AQU	L'Aquila	4.66	282	*e*Pn	Pn	20 33 26.4	+0.2
MORH	Mrgy, Hungar	4.71	352	⇓P	Pn	20 33 28.2	+1.4
MORH	Mrgy, Hungar	4.71	352	*e*PN	Pn	20 33 27.0	+0.2
MORH	Mrgy, Hungar	4.71	352	⇑*i*Pn	Pn	20 33 28.1	+1.3
MORH				*e*Sn	Sn	20 34 21.2	0.0
RABC	Rab	4.74	314	*e*Pn	Pn	20 33 27.3	+0.1
SIRR	Siria	4.95	17	⇓P	Pn	20 33 31.1	+0.9
HUMR	Humele	4.96	51	⇑P	Pn	20 33 32.4	+2.1
OZLJ	Ozalj	5.03	325	*e*Pn	Pn	20 33 31.8	+0.6
CRES	Cresnjev	5.21	327	⇑*i*Pn	Pn	20 33 33.9	+0.2
SMRN	Sveta Marina	5.26	313	*e*Pn	Pn	20 33 35.1	+0.7
RIY	Rijeka	5.28	317	*e*Pn	Pn	20 33 35.7	+1.1
RIY	Rijeka	5.28	317	*e*Pn	Pn	20 33 33.9	-0.8
BRJN	Brijuni	5.41	310	*e*Pn	Pn	20 33 36.0	-0.4
MTUR	Matau	5.44	46	⇑P	Pn	20 33 39.7	+2.8
TIH	Tihany	5.48	348	*e*PN	Pn	20 33 40.3	+3.0
VOIR		5.57	44	⇑P	Pn	20 33 40.9	+2.1
CEY	Cerknica	5.60	320	⇑*i*Pn	Pn	20 33 39.8	+0.7
CEY				*e*Sn	Sn	20 34 42.1	-1.2
DRGR		5.71	22	⇓P	Pn	20 33 42.8	+2.2
LJU	Ljubljana	5.78	323	*e*Pn	Pn	20 33 42.7	+1.2
MPLH	Magyarpolny	5.80	346	*e*PN	Pn	20 33 46.7	+4.9
SULR		5.81	55	⇑P	Pn	20 33 44.3	+2.4
SOKA	Soboth	6.07	329	*i* Pn	Pn	20 33 46.2	+0.6
	comp=N,1.9nm,0.3s						
MLR	Muntele Rosu	6.09	48	⇑P	Pn	20 33 48.5	+2.6
DOPR	Dopca	6.11	42	⇑P	Pn	20 33 48.0	+2.0
OBKA	Obir	6.13	326	*i* Pn	Pn	20 33 48.2	+1.8
	comp=N,1.5nm,0.2s						
OBKA				*e*Sn	Sn	20 34 59.5	+3.1
	comp=N,6.0nm,0.4s						
NEHR	Nehoiu	6.25	49	⇑P	Pn	20 33 51.1	+3.1
PSZ	Piszkesteto	6.37	2	⇑P	Pn	20 33 51.2	+1.5
ARSA	Arzberg	6.39	334	*e*Pn	Pn	20 33 51.3	+1.4
	comp=N,4.0nm,0.5s						
OZUR		6.40	43	⇑P	Pn	20 33 52.8	+2.8
APE	Apeiranthos	6.44	132	⇓P	Pn	20 33 51.5	+0.8
COVR	Voineasa-Covas	6.45	46	⇑P	Pn	20 33 54.1	+3.3
ICOR	Ion Corvin	6.58	64	⇓P	Pn	20 33 55.1	+2.7
PLOR	Plostina	6.70	48	⇑P	Pn	20 33 57.3	+3.1
VRI	Vrincioaia	6.75	48	⇓P	Pn	20 33 58.2	+3.4
HARR	Harsova	6.88	60	⇓P	Pn	20 33 59.2	+2.6
CONA	Conrad Observa	6.90	339	*e*Pn	Pn	20 33 59.0	+2.1
	comp=N,1.2nm,0.4s						

TRPA	Tarpa	6.91	17	⇑P	Pn	20 33 58.9	+1.9
VYHS	Vyhne	6.96	356	eSN	Sn	20 35 16.7	0.0
TIRR	Tirgusor	7.11	63	⇑P	Pn	20 34 01.8	+2.1
TIRR	Tirgusor	7.11	63	⇑P	Pn	20 34 01.8	+2.1
ABTA	Abfaltersbach	7.25	318	i Pn	Pn	20 34 03.2	+1.3
	comp=N,0.8nm,0.2s						
ABTA				i Sn	Sn	20 35 24.0	-0.1
	comp=N,4.9nm,0.6s						
TPGR	Topolog	7.27	60	⇓P	Pn	20 34 04.6	+2.6
BURAR	Bucovina Array	7.28	32	⇓P	Pn	20 34 05.0	+2.7
CRVS	Cervenica-Dubn	7.47	10	ePN	Pn	20 34 08.1	+3.3
LANS	Liptovska Anna	7.60	360	ePG	Pg	20 34 43.5	+2.0
LANS				eSG	Sn	20 34 56.7	-36
LANS				ePG		20 36 04.8	
LANS				eSG	Sg	20 36 20.9	+1.0
LANS				eLG	Lg	20 36 24.1	
TLCR		7.66	59	⇑P	Pn	20 34 10.3	+3.0
WTTA	Wattenberg	8.05	318	i Pn	Pn	20 34 15.1	+2.3
	comp=N,0.9nm,0.2s						
WTTA				eSn	Sn	20 35 43.0	-0.7
	comp=N,3.8nm,0.4s						
SQTA	Sankt Quirin	8.24	316	ePn	Pn	20 34 17.5	+2.1
	comp=N,2.2nm,0.4s						
SQTA				eSn	Sn	20 35 47.1	-1.1
	comp=N,3.0nm,0.4s						
MOTA	Moosalm	8.37	317	ePn	Pn	20 34 18.6	+1.4
	comp=N,2.8nm,0.6s						
MOTA				eSn	Sn	20 35 52.1	+0.4
	comp=N,3.2nm,0.5s						
GERES	GERESS Array B	8.38	332	Pn	Pn	20 34 17.7	+0.4
	comp=N,0.2nm,0.3s,baz=158,slow=14,SNR=4.1						
GERES				Sn	Sn	20 35 50.7	-1.1
	comp=N,0.3nm,0.3s,baz=146,slow=22,SNR=3.0						
RETA	Reutte	8.64	316	ePn	Pn	20 34 22.2	+1.3
	comp=N,0.9nm,0.4s						
RETA				eSn	Sn	20 35 57.5	-0.6
	comp=N,1.2nm,0.4s						
KHC	Kasperske Hory	8.67	333	eP	Pn	20 34 24.5	+3.3
FINES	FINESS Array B	20.31	9	P	P	20 36 50.2	-1.3
	comp=N,2.5nm,0.6s,baz=183,slow=10,SNR=20						
ZALV	Zalesovo Beam	44.06	51	P	P	20 40 22.8	-0.6
	comp=N,1.7nm,0.5s,baz=282,slow=8.1,SNR=8.5						
MKAR	Makanchi Array	44.24	61	P	P	20 40 24.6	-0.4
	comp=N,1.1nm,0.6s,baz=283,slow=7.6,SNR=12						
SONM	Songino Array	58.92	52	P	P	20 42 14.2	-0.7
	comp=N,0.4nm,0.9s,baz=297,slow=6.3,SNR=3.7						

*SEA **23** 20:37:54.0±0.7, 46°.666N±0°.008×121°.89W±0°.01, h14^{km}±3^{km}, ML2.0/33, ML1.8/10(NEIC), Error ellipse: s-maj=1.5km s-min=0.8km az=52.0*

NEIC 23 20:37:53.2±0.7**, 46°.68N**±0°.01×**121°.88W**±0°.02**, h18**^{km}±1^{km}**, Error ellipse: s-maj=2.4km s-min=1.5km az=108.0, Washington**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LON	Longmire	0.09	34		Pg	20 37 56.8	-0.1
LON					Sg	20 37 58.8	-0.6
REMR	Mount Rainier-	0.14	11		Pg	20 37 57.7	0.0
RCS	Mount Rainier-	0.22	28		Pg	20 37 58.9	+0.1
GLK	Glacier Lake	0.22	121		Pg	20 37 58.6	0.0
OBSR	Observation Ro	0.23	12		Pg	20 37 59.3	+0.5
OBSR					Sg	20 38 03.1	+0.5
WPW	White Pass	0.23	85		Pg	20 37 58.8	+0.1
PANH	Panhandle Gap,	0.24	42		Pg	20 37 59.0	0.0
PANH					Sb	20 38 02.9	-0.1
RVC	Mount Rainier-	0.27	347		Pb	20 37 59.7	+0.2
FMW	Mount Fremont	0.29	29		Pb	20 38 00.2	+0.3
SR41	SR410 Landslid	0.32	49		Pg	20 38 00.1	0.0
SR41					Sg	20 38 04.6	-0.3
B941	Kapowsin	0.39	323		Pg	20 38 01.2	0.0
B941					Sg	20 38 06.8	+0.1
TDL	Tradedollar La	0.40	215		Pg	20 38 01.7	+0.1
TDL					Sg	20 38 07.2	0.0
GHW	Garrison Hill	0.45	324		Pg	20 38 02.4	0.0
JRO	Jston Ridge Ob	0.47	210		Pb	20 38 02.9	0.0
JRO					Sg	20 38 08.8	-0.3
B202	Windy Ridge, M	0.47	202		Pg	20 38 02.5	-0.2
B202					Sg	20 38 09.0	-0.2
ERK	Elk Rock	0.49	221		Pg	20 38 02.7	-0.4
BOLM	Sugar Bowl	0.51	204		Pg	20 38 03.5	0.0
VALT	Mount Saint He	0.51	205		Pg	20 38 03.5	0.0
D05A	Enumclaw	0.52	352	Pg	Pg	20 38 03.0	-0.6
D05A				IAML		20 38 19.8	
	comp=N,26nm,4.6s						
ESD	East Dome	0.52	201		Pg	20 38 03.7	+0.1
SEPW	September Lobe	0.52	204		Pb	20 38 04.0	0.0
GSM	Grass Mountain	0.53	6		Pb	20 38 04.1	+0.1
HSR	South Ridge	0.55	203		Pg	20 38 04.3	0.0
SWF2	Southwest Flan	0.55	205		Pg	20 38 04.3	0.0
ASR	Mount Adams--S	0.56	159		Pg	20 38 04.2	-0.3
CDFW	Cedar Flats	0.57	192		Pg	20 38 04.3	-0.4
FL2	Flat Top 2	0.58	214		Pg	20 38 04.4	-0.4
B203	Quarry, Mount	0.60	212		Pb	20 38 04.7	-0.4
B203					Sg	20 38 12.7	-0.4
MTMW	Mount Mitchell	0.69	199		Pb	20 38 06.5	-0.2
LVP	Lakeview Peak	0.71	211		Pb	20 38 06.9	-0.2
RATT	Rattlesnake La	0.75	4		Pb	20 38 07.8	+0.1
F04A	Amboy	0.83	207	Pg	Pb	20 38 08.4	-0.7
F04A				IAML		20 38 20.6	
	comp=N,43nm,0.5s						
F04A				IAML		20 38 21.0	
	comp=E,46nm,0.3s						
F05D	White Salmon	0.85	160		Pb	20 38 09.2	-0.1
EBG	Ellensburg	0.93	75		Pn	20 38 11.6	+0.1
BMW	Boistfort Moun	0.95	258		Pb	20 38 10.9	-0.3
B023	Clatskanie	1.00	236		Pb	20 38 11.5	-0.5
LTY	Liberty	1.01	55		Pb	20 38 10.9	-1.4
LTY				IAML		20 38 38.5	
	comp=N,15nm,4.8s						
GMW	Gold Mountain	1.07	325		Pb	20 38 12.8	-0.4
GNW	Green Mountain	1.10	324		Pb	20 38 13.2	-0.4
HTW	Haystack Looko	1.13	4		Pn	20 38 14.2	0.0
D03D	Eldon	1.19	316		Pn	20 38 14.9	0.0
RADR	Rader Ridge	1.35	260	Pn	Pn	20 38 17.4	+0.3
JCW	Jim Creek	1.52	359		Pb	20 38 20.8	0.0
NLWA	Neilton Lookou	1.54	298	Pn	Pn	20 38 20.2	+0.5
NLWA				IAML		20 38 39.7	
	comp=N,15nm,4.3s						
NLWA				Sn	Sb	20 38 40.3	0.0
NLWA				IAML		20 38 42.1	
	comp=N,19nm,0.2s						
MCW	Mount Constitu	2.10	343		Pb	20 38 29.9	-1.0

*MOS **23** 20:41:19.4±1.0, 17°.04N×98°.75W, h31^{km}, mb5.7/14, MS5.3/38, Error ellipse: s-maj=7.1km s-min=3.7km az=101.4*

*IDC **23** 20:41:20.4±3.1, 16°.97N×98°.80W, h33^{km}±22^{km}, mb4.6/31, mb1 4.7/35, mb1mx4.6/48, mbtmp4.8/35, ML4.5/4, MS5.2/25, Ms1 5.2/25, ms1mx5.1/33, Error ellipse: s-maj=17.1km s-min=8.5km az=52.0*

*NEIC **23** 20:41:21.8, 17°.05N×98°.80W, h32^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.82; $M_{\theta\theta}$-1.92; $M_{\phi\phi}$0.11; $M_{r\theta}$-1.01; $M_{\theta\phi}$-0.10; $M_{\phi r}$0.54; Fault plane solution: $M_0$2.19000×10^{17} NP1:ϕ_s72.17000°, δ33.05000°, λ63.94000°. NP2:ϕ_s282.42000°, δ60.66000°, λ105.95000°. Principal axes: T 2.2110, Plg70.0000°, Azm227.0000°; N -0.0349, Plg14.0000°, Azm94.0000°; P -2.1761, Plg14.0000°, Azm1.0000°;*

*NEIC **23** 20:41:21.5±2.8, 16°.98N±0°.02×98°.91W±0°.03, h34^{km}±1^{km}, mb5.5/671, Ms_20 5.3/244, Mwb5.5/43, Mww5.6, Md5.6/146(MEX), Mwc5.6(GCMT) Error ellipse: s-maj=4.5km s-min=4.0km az=26.0*

*MEX **23** 20:41:22.0±2.1, 16°.89N×98°.90W, h26^{km}±36^{km}, MD5.6*

*GCMT **23** 20:41:22.5±0.1, 17°.15N±0°.01×98°.79W±0°.01, h37^{km}, MW5.6/140, Moment Tensor Solution. s140,c242; s137,c268; Duration: 1^{s}6 Moment tensor: Scale 10^{17} Nm; M_{rr}2.63±.04; $M_{\theta\theta}$-2.90±.03; $M_{\phi\phi}$0.27±.03; $M_{r\theta}$-1.36±.04; $M_{\theta\phi}$0.01±.02; $M_{\phi r}$1.13±.04; Best double couple: $M_0$3.28900×10^{17} NP1:ϕ_s71.00000°, δ35.00000°, λ57.00000°. NP2:ϕ_s290.00000°, δ61.00000°, λ111.00000°. Principal axes: T 3.3410, Plg67.0000°, Azm239.0000°; N -0.1030, Plg18.0000°, Azm99.0000°; P -3.2370, Plg14.0000°, Azm5.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **23** 20:41:23.0±0.0, 17°.10N×98°.70W, h40^{km}, mB5.6/22, Ms5.6/32, Ms7 5.5/32*

*NEIC **23** 20:41:25, 17°.12N×98°.82W, h40^{km}, Moment Tensor Solution. Duration: 5^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}2.58; $M_{\theta\theta}$-2.56; $M_{\phi\phi}$-0.02; $M_{r\theta}$-0.89; $M_{\theta\phi}$0.35; $M_{\phi r}$0.92; Fault plane solution: $M_0$2.89000×10^{17} NP1:ϕ_s84.00000°, δ36.00000°, λ66.00000°. NP2:ϕ_s293.00000°, δ57.00000°, λ107.00000°. Principal axes: T 2.9713, Plg72.0000°, Azm244.0000°; N -0.1732, Plg14.0000°, Azm104.0000°; P -2.7981, Plg11.0000°, Azm11.0000°;*

*NEIC **23** 20:41:25, 17°.10N×98°.74W, h33^{km}, Moment Tensor Solution. Duration: 3^{s}2 Moment tensor: Scale 10^{17}Nm; M_{rr}2.46; $M_{\theta\theta}$-3.01; $M_{\phi\phi}$0.55; $M_{r\theta}$-1.29; $M_{\theta\phi}$-0.11; $M_{\phi r}$1.13; Fault plane solution: $M_0$3.26000×10^{17} NP1:ϕ_s66.00000°, δ37.00000°, λ52.00000°. NP2:ϕ_s290.00000°, δ61.00000°, λ115.00000°. Principal axes: T 3.2245, Plg64.0000°, Azm244.0000°; N 0.0787, Plg22.0000°, Azm98.0000°; P -3.3032, Plg13.0000°, Azm2.0000°;*

ISC 23 20:41:20.7±0.4**, 16°.92N**±0°.02×**98°.92W**±0°.02**, h34**^{km}±1^{km}**, h35**^{km}**:pP-P, n1616, σ1^{s}68**/1782**, mb5.5**/364**, MS5.3**/180**, 38C-68D, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MGIG	Malinaltepec	0.42	41	⇑eP	Pb	20 41 29.4	-0.9
MGIG				i S	Sb	20 41 35.8	-1.1
DAIG	Los Arroyos	0.70	279		Pn	20 41 33.4	-0.9
DAIG					Sn	20 41 43.3	-0.7
DAIG	Los Arroyos	0.70	279	⇓eP	Pn	20 41 33.4	-0.9
DAIG				⇑eS	Sn	20 41 43.3	-0.7
TLIG	Tlapa	0.73	28		Pn	20 41 33.4	-1.2
TLIG				Sn	Sn	20 41 43.2	-1.4
TLIG	Tlapa	0.73	28	⇓eP	Pn	20 41 33.7	-0.9
TLIG				⇓eS	Sn	20 41 43.2	-1.4
PNIG	Pinotepa	0.92	124		Pn	20 41 36.5	-0.7
PNIG					Sb	20 41 50.9	+0.6
PNIG	Pinotepa	0.92	124	⇓eP	Pn	20 41 36.5	-0.7
PNIG				⇓iS	Sb	20 41 50.9	+0.6
ACP2	Acapulco	0.93	267		Pn	20 41 36.3	-1.0
ACP2					Sn	20 41 48.6	-0.8
ACP2	Acapulco	0.93	267	eP	Pn	20 41 36.3	-1.0
ACP2				i S	Sn	20 41 48.6	-0.8
HMTT	Tlapaneco	0.94	21		Pn	20 41 36.9	-0.7
HMTT					Sn	20 41 49.5	-0.5
HMTT	Tlapaneco	0.94	21	eP	Pn	20 41 36.9	-0.7
HMTT				i S	Sn	20 41 49.5	-0.5
TXIG	Tlaxiaco	1.15	73	⇓eP	Pn	20 41 40.7	0.0
TXIG				⇑iS	Sb	20 41 56.8	-0.3
MEIG	Mezcala	1.20	326		Pn	20 41 40.6	-0.6
MEIG					Sn	20 41 56.9	+0.5
MEIG	Mezcala	1.20	326	⇓eP	Pn	20 41 40.6	-0.6
MEIG				⇓iS	Sn	20 41 56.9	+0.5
FTIG	Fresnillo de T	1.24	37	⇓eP	Pn	20 41 41.6	-0.1
FTIG				⇓eS	Sb	20 41 58.5	-1.0
CAIG	El Cayaco	1.29	276		Pn	20 41 41.4	-0.9
CAIG					Sn	20 41 56.7	-1.8
CAIG	El Cayaco	1.29	276	⇑eP	Pn	20 41 41.4	-0.9
CAIG				⇑eS	Sn	20 41 56.7	-1.8
YOIG	Yosondua	1.32	92	⇓eP	Pn	20 41 43.3	+0.3
YOIG				⇑eS	Sn	20 41 55.0	-4.5
HLIG	Huajuapan de L	1.40	49	⇓eP	Pn	20 41 43.9	-0.2
HLIG				⇓iS	Sb	20 42 03.3	-0.8
PEIG	Puerto Escondi	1.93	118	⇓eP	Pn	20 41 51.1	-0.1
PEIG				eS	Sn	20 42 14.4	+0.1
YAIG	Yautepec	1.94	356		Pn	20 41 51.8	+0.4
YAIG					Sn	20 42 15.9	+1.2
YAIG	Yautepec	1.94	356	⇓eP	Pn	20 41 51.8	+0.4
YAIG				⇑eS	Sn	20 42 15.9	+1.2
MAVM	Malinalco, Edo	2.10	345		Pn	20 41 54.1	+0.4
MAVM					Sn	20 42 18.7	0.0
MAVM	Malinalco, Edo	2.10	345	eP	Pn	20 41 54.1	+0.4
MAVM				i S	Sn	20 42 18.7	0.0
VHO	Vista Hermosa	2.10	85	i P	Pn	20 41 54.9	+1.3
VHO				i S	Sb	20 42 26.0	+2.0
OXBJ	Oaxaca	2.11	86		Pn	20 41 55.2	+1.5
OXBJ					Sn	20 42 19.3	+0.4
OXBJ	Oaxaca	2.11	86	⇓eP	Pn	20 41 55.2	+1.5
OXBJ				eS	Sn	20 42 19.3	+0.4
TPIG	Tehuac#an	2.11	45		Pn	20 41 53.8	+0.1
TPIG					Sn	20 42 20.3	+1.5
TPIG	Tehuac#an	2.11	45	⇓eP	Pn	20 41 53.8	+0.1
TPIG				eS	Sn	20 42 20.3	+1.5
TOIG	Toxpalan	2.12	56	⇓eP	Pn	20 41 54.1	+0.2
TOIG				eS	Sn	20 42 21.3	+2.1
PPM	Popocatepetl	2.16	7	⇑iP	Pn	20 41 55.5	+0.8
PPM				i S	Sb	20 42 28.3	+2.4
AMVM	AMECAMECA	2.21	3		Pb	20 41 57.6	-2.5
AMVM	AMECAMECA	2.21	3	eP	Pb	20 41 57.6	-2.5
UNM	Universidad Na	2.41	354	P	Pn	20 41 58.2	+0.2
UNM	Universidad Na	2.41	354		Pn	20 41 58.2	+0.2
UNM	Universidad Na	2.41	354	⇓eP	Pn	20 41 58.5	+0.6
UNM				eS	Sb	20 42 32.0	-1.0
CVM	Colonia del Va	2.46	354	eP	Pn	20 42 00.0	+1.6
ZIIG	Zihuatanejo	2.52	286		Pn	20 41 59.1	-0.2
ZIIG					Sb	20 42 37.0	+1.0
ZIIG	Zihuatanejo	2.52	286	⇑eP	Pn	20 41 59.1	-0.2
ZIIG				⇓eS	Sb	20 42 37.0	+1.0
PANG	Puerto Angel	2.66	118		Pb	20 42 06.4	-1.3
PANG					Sn	20 42 30.0	-2.2
PANG	Puerto Angel	2.66	118	i P	Pb	20 42 06.4	-1.3
PANG				i S	Sn	20 42 30.0	-2.2
PTVM	Pico Tres Padr	2.67	356		Pn	20 42 02.0	+0.5
PTVM					Sn	20 42 34.2	+1.4
PTVM	Pico Tres Padr	2.67	356	⇓eP	Pn	20 42 02.0	+0.5
PTVM				i S	Sn	20 42 34.2	+1.4
HUIG	Huatulco	2.93	113		Pn	20 42 05.8	+0.9
HUIG					Sb	20 42 44.8	-3.0
HUIG	Huatulco	2.93	113	eP	Pn	20 42 05.8	+0.9
HUIG				eS	Sb	20 42 44.8	-3.0
UON	La Union	2.95	291	⇑eP	Pn	20 42 06.0	+0.8
UON				⇑iS	Sb	20 42 47.4	-0.9
ACIG	Acambay	3.18	344	⇓eP	Pn	20 42 09.3	+0.8
ACIG				i S	Sb	20 42 50.5	-4.5
DEIG	Demacu	3.37	358	⇓eP	Pn	20 42 11.0	-0.1
DEIG				eS	Sn	20 42 49.5	-0.6
MOIG	Morelia	3.49	322	Pn	Pn	20 42 14.4	+1.6
MOIG	Morelia	3.49	322		Sn	20 42 54.5	+1.4
MOIG	Morelia	3.49	322	⇓iP	Pn	20 42 14.5	+1.8
MOIG				i S	Sn	20 42 54.5	+1.4
LVIG	Laguna Verde	3.67	40		Pn	20 42 13.0	-2.0
LVIG					Sn	20 43 00.5	+3.4
LVIG	Laguna Verde	3.67	40	⇑eP	Pn	20 42 13.0	-2.0
LVIG				eS	Sn	20 43 00.5	+3.4
CMIG	Matias Romero	3.87	87	Pn	Pn	20 42 17.4	-0.3
	29nm,0.3s,baz=260,slow=13,SNR=108						
CMIG				Sn	Sn	20 43 00.7	-1.3
	183nm,0.3s,baz=288,slow=10,SNR=5.5						
CMIG				Lg	Lg	20 43 22.7	
	244nm,0.3s,baz=180,slow=20,SNR=4.5						
CMIG				LR	LR	20 44 05.5	
	comp=Z,41µm,19.2s,baz=248,slow=44						
CMIG	Matias Romero	3.87	87		Pn	20 42 18.1	+0.4
CMIG					Sn	20 43 07.1	+5.0
CMIG	Matias Romero	3.87	87	⇑eP	Pn	20 42 18.1	+0.4
CMIG				eS	Sn	20 43 07.1	+5.0
URUA	Uruapan	3.90	310		Pn	20 42 20.3	+2.0
URUA					Sn	20 43 06.9	+3.9
URUA	Uruapan	3.90	310	⇑iP	Pn	20 42 20.3	+2.0
URUA				i S	Sn	20 43 06.9	+3.9
MMIG	Aquila	4.43	289		Pn	20 42 25.3	-0.3
MMIG					Sn	20 43 16.1	+0.1
MMIG	Aquila	4.43	289	⇑eP	Pn	20 42 25.3	-0.3
MMIG				eS	Sn	20 43 16.1	+0.1
TUIG	Tuzandepetl	4.43	75		Pn	20 42 26.6	+1.0
TUIG					Sn	20 43 17.3	+1.3
TUIG	Tuzandepetl	4.43	75	⇑eP	Pn	20 42 26.6	+1.0
TUIG				⇑eS	Sn	20 43 17.3	+1.3
IGIG	Irapuato, Guan	4.44	330		Pn	20 42 27.0	+1.1
IGIG					Sn	20 43 21.8	+5.3
IGIG	Irapuato, Guan	4.44	330	eP	Pn	20 42 27.0	+1.1
IGIG				eS	Sn	20 43 21.8	+5.3
RPIG	Rio Verde	5.04	349	eP	Pb	20 42 43.7	-4.5
RPIG				eS	Sn	20 43 36.0	+4.9
COIG	Colima	5.06	297	⇑eP	Pn	20 42 36.1	+1.8
COIG				eS	Sn	20 43 34.9	+3.2
EZ5V		5.13	301		Pn	20 42 38.4	+3.1
EZ5V		5.13	301	⇑eP	Pn	20 42 38.4	+3.1
EZ5V				eS	Sn	20 43 37.2	+3.7
R15V		5.31	296		Pn	20 42 39.2	+1.6
R15V		5.31	296	⇑eP	Pn	20 42 39.2	+1.6
R15V				eS	Sn	20 43 45.6	+7.8
TGIG		5.55	91		Pn	20 42 43.5	+2.5
TGIG					Sn	20 43 46.8	+3.1
TGIG		5.55	91	eP	Pn	20 42 43.5	+2.5
TGIG				eS	Sn	20 43 46.8	+3.1
PCIG		5.61	102		Pn	20 42 43.3	+1.6
PCIG					Sn	20 43 43.0	-2.0
PCIG		5.61	102	⇑eP	Pn	20 42 43.3	+1.6
PCIG				⇓eS	Sn	20 43 43.0	-2.0
AAIG	Aguscalientes	5.99	328	⇓eP	Pn	20 42 49.0	+1.9
AAIG				eS	Sn	20 44 00.4	+5.7
GTIG	Gomez Farias	6.12	358	⇓eP	Pn	20 42 48.4	-0.4
GTIG				i S	Sn	20 44 05.2	+7.5
CJM	Chamela	6.36	295	⇑eP	Pn	20 42 51.1	-0.9
CJM				eS	Sn	20 44 13.8	+10
CCIG	Comitan	6.54	95		Pn	20 42 56.5	+1.9
CCIG	Comitan	6.54	95		Sn	20 44 12.1	+4.0
CCIG	Comitan	6.54	95	⇑eP	Pn	20 42 56.3	+1.7
CCIG				eS	Sn	20 44 12.1	+4.0
ZAIG	Zacatecas	6.76	330	Pn	Pn	20 42 57.9	+0.2
ZAIG	Zacatecas	6.76	330		Sn	20 44 20.3	+6.6
ZAIG	Zacatecas	6.76	330	⇓iP	Pn	20 42 59.1	+1.3
ZAIG				eS	Sn	20 44 20.3	+6.6
HUEH	Huehuetenango	7.31	102	Pn	Pn	20 43 05.6	+0.4
RTAL	Retalhuleu	7.35	108	Pn	Pn	20 43 07.8	+2.1
SCIG	Sabancuy	7.64	73		Pn	20 43 17.0	+7.4
SCIG					Sn	20 44 31.9	-3.2
SCIG	Sabancuy	7.64	73	eP	Pn	20 43 17.0	+7.4
SCIG				i S	Sn	20 44 31.9	-3.2
LNIG	Linares	7.96	356		Pn	20 43 13.4	-0.6
LNIG					Sn	20 44 41.9	-0.9
LNIG	Linares	7.96	356	⇓eP	Pn	20 43 13.4	-0.6
LNIG				i S	Sn	20 44 41.9	-0.9
APG	El Apazote	8.35	102	Pn	Pn	20 43 19.8	+0.1
	8.0nm,0.3s,baz=304,slow=8.4,SNR=41						
APG				Sn	Sn	20 44 51.3	-1.7
	baz=12,slow=17,SNR=1.7						
APG				Lg	Lg	20 45 44.6	
	11nm,0.3s,baz=39,slow=19,SNR=3.7						
PETF	Flores	8.67	89		Pn	20 43 23.9	+0.2
MAIG	Mazatlaan	9.41	313		Pn	20 43 37.4	+3.5
MAIG					Sn	20 45 21.3	+2.7
MAIG	Mazatlaan	9.41	313	⇓eP	Pn	20 43 37.4	+3.5
MAIG				eS	Sn	20 45 21.3	+2.7
ESQI	Esquipulas	9.52	103	Pn	Pn	20 43 36.9	+1.4
MTO3	Montecristo	9.54	104		Pn	20 43 36.7	+0.7
SNET	Serv Nac Est T	9.88	108	Pn	Pn	20 43 38.5	-2.0
PDIG	Papasquiaro	10.09	324	⇓eP	Pn	20 43 47.5	+4.1
PDIG				i S	Sn	20 45 35.3	-0.3
KVTX	Kingsville	10.62	5	Pn	Pn	20 43 51.0	+0.5
SSIG	Sanalona	10.99	317	⇓eP	Pn	20 43 59.6	+4.0
SSIG				i S	Sn	20 45 54.6	-2.7
833A	Chaparral WMA,	11.36	358	P	Pn	20 44 01.7	+1.1
	baz=177,SNR=24						
H06E1	SOCORRO T-PHAS	11.58	281	Pn	Pn	20 44 06.4	+2.7
H06E1				T	T	20 55 22.6	
	SNR=78						
TGUH	Tegucigalpa,Un	11.58	103	Pn	Pn	20 44 06.3	+2.4
H06S1	SOCORRO T	11.60	281	Pn	Pn	20 44 06.0	+2.0
H06S1				T	T	20 55 24.0	
H06N1	SOCORRO T-PHAS	11.65	281	Pn	Pn	20 44 07.1	+2.6
H06N1				T	T	20 55 21.8	
	SNR=14						
HPIG		11.77	329		Pn	20 44 08.1	+1.7
HPIG					Sn	20 46 21.1	+4.5
HPIG		11.77	329	⇓eP	Pn	20 44 08.1	+1.7
HPIG				i S	Sn	20 46 21.1	+4.5
735A	Kenedy	11.93	5	Pn	Pn	20 44 04.9	-3.4
SLBS	Sierra La Lagu	12.34	305	Pn	Pn	20 44 16.7	+2.6
CNGN	Cerro Negro	12.61	109	Pn	Pn	20 44 19.4	+1.6
LPIG	La Paz	12.84	306		Pn	20 44 26.0	+5.2
LPIG	La Paz	12.84	306	i P	Pn	20 44 26.0	+5.2
TX31	Lajitas Ar. Si	13.10	341		Pn	20 44 26.0	+1.5
TX32	Lajitas Array	13.10	341		Pn	20 44 25.2	+0.7
TXAR	Lajitas Array	13.10	341	Pn	Pn	20 44 25.6	+1.0
	0.4nm,0.3s,baz=161,slow=15,SNR=44						
TXAR				Lg	Lg	20 48 15.9	
	0.4nm,0.3s,baz=189,slow=29,SNR=2.9						
TXAR				LR	LR	20 50 00.5	
	comp=Z,17µm,18.0s,baz=0.0,slow=40						
TXAR	Lajitas Array	13.10	341	P	Pn	20 44 25.7	+1.2
TXAR	Lajitas Array	13.10	341		Pn	20 44 25.7	+1.2
HKT	Hockley	13.28	12	P	Pn	20 44 25.9	-0.8
HKT	Hockley	13.28	12	Pn	Pn	20 44 25.9	-0.8
JCT	Junction City	13.53	357	P	Pn	20 44 29.9	-0.3
JCT	Junction City	13.53	357	P	Pn	20 44 30.6	+0.4
	baz=176,SNR=28						
JCT	Junction City	13.53	357		Pn	20 44 29.9	-0.3
BOAB	BOACO BROADBAN	13.57	107		Pn	20 44 32.1	+1.3
435B	Jarrell	13.86	5	P	Pn	20 44 34.2	-0.5
	baz=185						
435B				S	Sn	20 47 08.6	+1.2
	baz=185						
435B	Jarrell	13.86	5		Pn	20 44 33.4	-1.3
ACON	Acoyapa	14.19	108		Pn	20 44 40.7	+1.4
HZTE	Horizontes, Gu	14.33	114		Pn	20 44 42.3	+1.1
ORTG	Ortega, Santa	14.61	115	P	P	20 44 49.4	-1.7
DUNO	Dulce Nombre,	14.71	116		Pn	20 44 48.7	+2.2
441A	DeRidder	14.73	20		Pn	20 44 45.6	-0.9
ESPN	Las Esperanzas	14.91	106		Pn	20 44 50.8	+1.7
WHTX	Lake Whitney,	15.07	5	P	Pn	20 44 50.0	-1.1
	baz=185,SNR=44						
WHTX				S	S	20 47 51.1	-2.3
	baz=185						
WHTX	Lake Whitney,	15.07	5	Pn	Pn	20 44 50.1	-1.1
JTS	Las Juntas de	15.09	114	d iP	P	20 44 54.9	-1.4
JTS				pmax	pmax		
	comp=Z,104nm,1.2s						
JTS	Las Juntas de	15.09	114	eP	P	20 44 55.0	-1.4
JTS	Las Juntas de	15.09	114	P	P	20 44 54.4	-2.0
CAO2	Cobano, Puntar	15.24	116		Pn	20 44 54.6	+1.2
NATX	Nacogdoches	15.28	14	P	Pn	20 44 51.8	-2.0
	baz=195						
NATX	Nacogdoches	15.28	14		Pn	20 44 52.1	-1.8
237A	Washetta, Mont	15.28	10		Pn	20 44 52.4	-1.5
COVE	Coope Vega, Sa	15.38	112	P	P	20 44 58.2	-1.4
342A	Flagon Creek P	15.59	21		Pn	20 44 55.4	-2.6
ABTX	Abilene, Hawle	15.65	358	P	Pn	20 44 57.5	-1.2
	baz=177,SNR=29						
ABTX				S	S	20 48 02.5	-2.9
	baz=177						
ABTX	Abilene, Hawle	15.65	358	Pn	Pn	20 44 57.4	-1.4
ABTX				IAmb	IAmb	20 45 23.2	
	comp=Z,285nm,0.8s						
MNTX	Cornudas Mount	15.84	339	P	Pn	20 45 02.2	+1.0
	baz=156,SNR=98						
MNTX				S	S	20 48 05.0	-4.3
	baz=156						
MNTX	Cornudas Mount	15.84	339	P	Pn	20 45 01.3	+0.1
HDC	Heredia	15.95	114		Pn	20 45 03.7	+0.9
HDC				IAmb	IAmb	20 45 28.3	
	comp=Z,379nm,1.2s						
SOR	Soroa	16.07	66	P	Pn	20 45 02.7	-1.4
SOR				pmax	pmax		
	comp=Z,58nm,1.1s						
SOR	Soroa	16.07	66		Pn	20 45 02.7	-1.4
CVTR	Volcan Turrial	16.25	113	P	P	20 45 08.8	-0.9
344A	Westbrook Farm	16.27	26	Pn	Pn	20 45 05.0	-1.7
344A				IAmb	IAmb	20 45 25.3	
	comp=Z,736nm,1.4s						
RIMA	Rio Macho	16.28	114	P	P	20 45 11.1	+1.4
Z35A	Perchaven, San	16.41	5	P	Pn	20 45 07.3	-1.1
Z35A				IAmb	IAmb	20 45 22.3	
	comp=Z,463nm,1.1s						
PEZE	Perez Zeledon,	16.62	115	P	Pn	20 45 11.2	0.0
Z38A	Mt. Pleasant	16.66	12	P	Pn	20 45 10.4	-1.1
Z38A				IAmb	IAmb	20 45 34.9	
	comp=Z,609nm,1.1s						
346A	Big Creek Wild	16.78	29		Pn	20 45 09.9	-3.2
346A				IAmb	IAmb	20 45 30.8	
	comp=Z,463nm,1.4s						
SRBA	San Rafael, Bu	16.96	115	P	P	20 45 16.9	-0.4
VBMS	Vicksburg	17.03	25	P	Pn	20 45 14.5	-1.7
	baz=208,SNR=15						
VBMS				S	S	20 48 32.3	-1.2
	baz=208						
VBMS	Vicksburg	17.03	25	P	Pn	20 45 13.1	-3.1
VBMS				IAmb	IAmb	20 45 19.9	
	comp=Z,725nm,1.3s						
DRK0	Durika	17.05	115		Pn	20 45 17.2	+0.5

DRK0				IAmb	IAmb	20 45 35.6	
	comp=Z,191nm,0.7s						
LOOK	**Love County**	**17.07**	**5**		**Pn**	**20 45 14.1**	**-2.6**
LOOK				IAmb	IAmb	20 45 24.4	
	comp=Z,583nm,1.2s						
RIOS	**Rincon, Osa**	**17.09**	**117**		**Pn**	**20 45 16.9**	**-0.1**
143A	**Socs Landing,**	**17.12**	**22**	P	**Pn**	**20 45 15.2**	**-2.2**
Z41A	**Richland Creek**	**17.18**	**18**	P	**P**	**20 45 19.0**	**-0.5**
	baz=200,SNR=20						
Z41A				S	**S**	**20 48 33.6**	**-3.0**
	baz=200						
319A	**Douglas**	**17.20**	**329**	P	**P**	**20 45 20.2**	**+0.4**
319A				IAmb	IAmb	20 45 49.0	
	comp=Z,338nm,0.9s						
MSTX	**Muleshoe**	**17.33**	**349**	P	**Pn**	**20 45 19.0**	**-1.0**
	baz=167						
MSTX				S	**S**	**20 48 38.0**	**-1.9**
	baz=167						
MSTX	**Muleshoe**	**17.33**	**349**	Pn	**Pn**	**20 45 19.3**	**-0.8**
MSTX				IAmb	IAmb	20 45 48.8	
	comp=Z,366nm,1.1s						
121A	**Cookes Peak, D**	**17.49**	**334**	P	**P**	**20 45 23.7**	**+0.6**
	baz=150,SNR=32						
121A	**Cookes Peak, D**	**17.49**	**334**	P	**P**	**20 45 23.1**	**0.0**
WLAR	**White Oak Lake**	**17.50**	**16**	P	**Pn**	**20 45 20.5**	**-1.5**
WLAR				IAmb	IAmb	20 45 40.6	
	comp=Z,707nm,1.1s						
X34A	**Smith Ranch, M**	**17.64**	**3**	Pn	**Pn**	**20 45 21.4**	**-2.3**
X34A				IAmb	IAmb	20 45 41.1	
	comp=Z,303nm,1.0s						
CDITO	**Canoas**	**17.70**	**116**	P	**P**	**20 45 27.5**	**+2.2**
WMOK	**Wichita Mounta**	**17.75**	**0**	P	**Pn**	**20 45 23.2**	**-2.0**
WMOK				pmax	pmax		
	comp=Z,233nm,0.9s						
WMOK	**Wichita Mounta**	**17.75**	**0**	P	**Pn**	**20 45 23.6**	**-1.6**
	baz=180,SNR=43						
WMOK				S	**S**	**20 48 46.8**	**-1.4**
	baz=180						
WMOK	**Wichita Mounta**	**17.75**	**0**	P	**Pn**	**20 45 23.1**	**-2.0**
BRU2	**Volcan**	**17.75**	**115**	*e*P	**P**	**20 45 28.5**	**+2.5**
BRU2	**Volcan**	**17.75**	**115**		**P**	**20 45 26.6**	**+0.5**
BRAL	**Brewton**	**17.83**	**35**	P	**Pn**	**20 45 22.7**	**-3.5**
	baz=220						
BRAL				S	**S**	**20 48 49.1**	**-0.8**
	baz=220						
BRAL	**Brewton**	**17.83**	**35**	Pn	**Pn**	**20 45 23.3**	**-2.9**
X37A	**Clayton**	**17.88**	**10**	P	**Pn**	**20 45 25.5**	**-1.3**
X37A				IAmb	IAmb	20 45 46.3	
	comp=Z,709nm,1.4s						
146A	**Union**	**18.01**	**28**	P	**Pn**	**20 45 26.3**	**-2.1**
146A				IAmb	IAmb	20 45 44.6	
	comp=Z,476nm,1.1s						
AMTX	**Amarillo**	**18.06**	**353**	P	**Pn**	**20 45 28.0**	**-1.1**
	baz=171						
AMTX				S	**S**	**20 48 54.6**	**-0.1**
	baz=171						
AMTX	**Amarillo**	**18.06**	**353**	P	**Pn**	**20 45 27.5**	**-1.6**
AMTX				IAmb	IAmb	20 45 47.8	
	comp=Z,227nm,0.8s						
LCCY	**Blossom Villag**	**18.10**	**78**	P	**Pn**	**20 45 28.2**	**-1.3**
LCCY				IAmb	IAmb	20 45 41.5	
	comp=Z,471nm,1.2s						
CCAR	**Cane Creek**	**18.11**	**19**	P	**Pn**	**20 45 27.7**	**-1.8**
MIAR	**Mount Ida**	**18.20**	**14**	P	**Pn**	**20 45 29.0**	**-1.6**
MIAR				pmax	pmax		
	comp=Z,428nm,1.3s						
MIAR	**Mount Ida**	**18.20**	**14**	P	**Pn**	**20 45 28.9**	**-1.8**
	baz=196,SNR=76						
MIAR				S	**Sn**	**20 48 53.4**	**+0.7**
	baz=196						
MIAR	**Mount Ida**	**18.20**	**14**	P	**Pn**	**20 45 29.0**	**-1.6**
MIAR				IAmb	IAmb	20 45 47.3	
	comp=Z,428nm,1.3s						
W35A	**Tecumseh**	**18.25**	**5**		**P**	**20 45 29.6**	**-1.7**
FNO	**Franklin**	**18.32**	**4**		**P**	**20 45 30.2**	**-1.8**
X40A	**Basin Creek Fa**	**18.33**	**16**	P	**P**	**20 45 29.9**	**-2.2**
	baz=198,SNR=31						
X40A	**Basin Creek Fa**	**18.33**	**16**	P	**P**	**20 45 30.3**	**-1.8**
X40A				IAmb	IAmb	20 45 48.1	
	comp=Z,513nm,1.5s						
OKCSW	**OKLAHOMA CITY**	**18.46**	**4**	P	**P**	**20 45 33.4**	**-0.1**
OKCFA	**Oklahoma City**	**18.47**	**4**		**P**	**20 45 32.7**	**-1.0**
BNM	**Barren Site**	**18.50**	**339**	P	**Pn**	**20 45 35.0**	**+0.4**
Y22D	**IRIS PASSCAL I**	**18.53**	**339**	P	**Pn**	**20 45 35.5**	**+0.6**
	baz=155						
Y22D	**IRIS PASSCAL I**	**18.53**	**339**	P	**Pn**	**20 45 35.9**	**+1.0**
Y22D				IAmb	IAmb	20 45 59.1	
	comp=Z,274nm,1.0s						
LENM	**Lemitar**	**18.64**	**339**	P	**Pn**	**20 45 35.9**	**-0.2**
OK025	**Westminster Rd**	**18.64**	**4**		**P**	**20 45 33.9**	**-1.6**
OK025				IAmb	IAmb	20 45 53.1	
	comp=Z,583nm,1.1s						
BCOK	**Bluff Creek, N**	**18.70**	**3**		**P**	**20 45 34.4**	**-1.8**
BCOK				IAmb	IAmb	20 45 51.3	
	comp=Z,620nm,1.4s						
553A	**Crawfordville**	**18.71**	**42**	P	**P**	**20 45 30.3**	**-5.9**
TUC	**Tucson**	**18.71**	**327**	P	**Pn**	**20 45 38.4**	**+1.4**
TUC				pmax	pmax		
	comp=Z,238nm,1.2s						
TUC	**Tucson**	**18.71**	**327**	P	**Pn**	**20 45 38.0**	**+0.9**
	baz=142						
TUC				S	**S**	**20 49 08.9**	**+1.1**
	baz=142						
TUC	**Tucson**	**18.71**	**327**	P	**Pn**	**20 45 38.4**	**+1.4**
W39A	**Magazine**	**18.77**	**13**	P	**P**	**20 45 36.2**	**-0.7**
	baz=195,SNR=40						
W39A				S	**S**	**20 49 08.7**	**0.0**
	baz=195						
W39A	**Magazine**	**18.77**	**13**	P	**P**	**20 45 36.8**	**-0.2**
W39A				IAmb	IAmb	20 45 55.1	
	comp=Z,631nm,1.3s						
OK029	**Liberty Lake**	**18.85**	**4**		**P**	**20 45 36.7**	**-1.1**
OK029				IAmb	IAmb	20 45 55.5	
	comp=Z,662nm,1.3s						
Y45A	**Yeager Farm, C**	**18.86**	**25**	P	**P**	**20 45 37.6**	**-0.4**
250A	**Grady**	**18.88**	**35**	P	**P**	**20 45 35.3**	**-2.9**
Z47A	**Carrollton**	**18.94**	**29**	P	**P**	**20 45 36.8**	**-1.9**
Z47A				IAmb	IAmb	20 45 58.7	
	comp=Z,295nm,1.1s						
OK030	**Cody Creek RV**	**19.03**	**5**	P	**P**	**20 45 38.1**	**-1.6**
OK031	**S. Brethren Rd**	**19.05**	**5**		**P**	**20 45 37.8**	**-2.2**
TUL1	**Leonard**	**19.12**	**8**	P	**P**	**20 45 40.0**	**-0.8**
	baz=189,SNR=58						
TUL1				S	**Sn**	**20 49 14.5**	**-0.6**
	baz=189						
TUL1	**Leonard**	**19.12**	**8**		**P**	**20 45 38.2**	**-2.6**
W41B	**Gary Mavity, V**	**19.13**	**17**	P	**P**	**20 45 40.0**	**-0.9**
	baz=200,SNR=17						
W41B				S	**Sn**	**20 49 13.7**	**-1.7**
	baz=200						
ANMO	**Albuquerque**	**19.18**	**341**	P	**P**	**20 45 42.0**	**+0.4**
	comp=Z,3.2nm,0.3s,baz=152,slow=11,SNR=87						
ANMO				Lg	Lg	20 51 27.1	
	comp=Z,0.1nm,0.3s,baz=229,slow=20,SNR=1.6						
ANMO				LR	LR	20 53 47.8	
	comp=Z,34µm,19.6s,baz=160,slow=39						
ANMO	**Albuquerque**	**19.18**	**341**	*d i*P	**Pn**	**20 45 42.8**	**+0.1**
ANMO				pmax	pmax		
	comp=Z,109nm,1.0s						
ANMO	**Albuquerque**	**19.18**	**341**	P	**Pn**	**20 45 42.5**	**-0.2**
	baz=157						
ANMO				S	**S**	**20 49 18.2**	**+1.0**
	baz=157						
ANMO	**Albuquerque**	**19.18**	**341**	P	**Pn**	**20 45 42.6**	**-0.1**
WHAR	**Wooly Hollow**	**19.23**	**17**	P	**P**	**20 45 40.8**	**-1.2**
WHAR				IAmb	IAmb	20 46 01.0	
	comp=Z,461nm,1.3s						
QUOK	**Quay**	**19.28**	**5**		**P**	**20 45 41.4**	**-1.1**
QUOK				IAmb	IAmb	20 46 08.4	
	comp=Z,301nm,0.9s						
352A	**Blakely**	**19.29**	**39**	P	**P**	**20 45 42.0**	**-0.6**
U32A	**Winter Ranch,**	**19.39**	**360**	P	**P**	**20 45 42.4**	**-1.3**
656A	**Willston**	**19.48**	**48**	P	**P**	**20 45 43.3**	**-1.5**
656A				IAmb	IAmb	20 46 12.4	
	comp=Z,278nm,1.1s						
CROK	**Carrier**	**19.53**	**2**		**P**	**20 45 43.6**	**-1.6**
CROK				IAmb	IAmb	20 46 05.6	
	comp=Z,292nm,1.0s						
214A	**Organ Pipe Nat**	**19.57**	**322**	P	**Pn**	**20 45 47.7**	**+0.5**
	baz=136,SNR=43						
214A				S	**S**	**20 49 25.3**	**+0.4**
	baz=136						
214A	**Organ Pipe Nat**	**19.57**	**322**	P	**P**	**20 45 44.2**	**-1.5**
DWPF	**Disney Wildern**	**19.60**	**52**	P	**P**	**20 45 44.8**	**-1.3**
	baz=239						
HHAR	**Hobbs**	**19.79**	**12**	P	**P**	**20 45 46.8**	**-1.3**
HHAR				IAmb	IAmb	20 46 04.0	
	comp=Z,636nm,1.5s						
OK032	**Salt Plains WL**	**19.82**	**2**		**P**	**20 45 47.0**	**-1.4**
BLOK	**Blackwell**	**19.82**	**4**		**P**	**20 45 47.3**	**-1.2**
BLOK				IAmb	IAmb	20 45 52.1	
	comp=Z,378nm,1.1s						
FCAR	**Ozark Folk Cen**	**19.84**	**16**	P	**P**	**20 45 47.5**	**-1.2**
FCAR				IAmb	IAmb	20 46 06.5	
	comp=Z,202nm,0.9s						
U38A	**Gravette**	**19.86**	**11**	P	**P**	**20 45 47.1**	**-1.7**
U38A				IAmb	IAmb	20 46 04.8	
	comp=Z,520nm,1.4s						
GC02	**Grant County #**	**19.88**	**3**		**P**	**20 45 45.3**	**-3.8**
HBAR	**Harrisburg**	**19.97**	**20**	P	**P**	**20 45 49.5**	**-0.5**
KAN14	**Manchester OK**	**19.98**	**2**	P	**P**	**20 45 48.7**	**-1.5**
KAN14				IAmb	IAmb	20 46 18.9	
	comp=Z,197nm,1.1s						
T35A	**Sooner Cattle**	**20.03**	**6**		**P**	**20 45 49.0**	**-1.8**
KAN13	**South Haven SW**	**20.06**	**3**	P	**P**	**20 45 49.8**	**-1.2**
KAN13				IAmb	IAmb	20 46 20.0	
	comp=Z,464nm,1.2s						
KAN17	**Caldwell West**	**20.07**	**3**	P	**P**	**20 45 50.0**	**-1.2**
KAN17				IAmb	IAmb	20 46 17.0	
	comp=Z,176nm,1.0s						
TIGA	**Tifton**	**20.08**	**41**	P	**P**	**20 45 50.3**	**-1.0**
	baz=227						
TIGA				S	**S**	**20 49 32.0**	**-3.1**
	baz=227						
TIGA	**Tifton**	**20.08**	**41**	P	**P**	**20 45 50.7**	**-0.6**
TIGA				IAmb	IAmb	20 46 01.5	
	comp=Z,305nm,1.2s						
U40A	**Yellville**	**20.10**	**14**	P	**P**	**20 45 50.4**	**-1.1**
	baz=197,SNR=109						
U40A				S	**S**	**20 49 31.8**	**-3.7**
	baz=197						
U40A	**Yellville**	**20.10**	**14**	P	**P**	**20 45 50.0**	**-1.5**
BCIP	**Isla Barro Col**	**20.11**	**110**	*e*P	Pn	20 45 53.0	-0.8
X18A	**Snowflake**	**20.13**	**333**	P	Pn	20 45 53.7	-0.3
X18A				IAmb	IAmb	20 46 10.0	
	comp=Z,221nm,1.1s						
LPAR	**Lepanto**	**20.13**	**21**	P	**P**	**20 45 51.0**	**-0.8**
KAN05	**Bluff City Nor**	**20.13**	**2**	P	**P**	**20 45 50.8**	**-1.0**
KAN05				IAmb	IAmb	20 46 17.5	
	comp=Z,147nm,0.8s						
W45A	**Hickory Valley**	**20.14**	**24**	P	**P**	**20 45 50.2**	**-1.6**
W45A				IAmb	IAmb	20 45 53.7	
	comp=Z,355nm,1.1s						
KAN10	**Anthony SW Sta**	**20.14**	**2**		**P**	**20 45 50.2**	**-1.7**
KAN10				IAmb	IAmb	20 46 11.9	
	comp=Z,292nm,1.2s						
KAN09	**Caldwell North**	**20.17**	**3**	P	**P**	**20 45 51.5**	**-0.8**
KAN09				IAmb	IAmb	20 46 13.9	
	comp=Z,193nm,0.8s						
KAN01	**Argonia South**	**20.18**	**3**	P	**P**	**20 45 51.2**	**-1.2**
KAN01				IAmb	IAmb	20 46 09.3	
	comp=Z,264nm,1.2s						
SFX	**San Felipe**	**20.20**	**317**	P	Pn	20 45 53.6	-1.0
KAN16	**Harper SW Stat**	**20.24**	**2**	P	**P**	**20 45 53.0**	**0.0**
KAN16				IAmb	IAmb	20 46 08.3	
	comp=Z,281nm,1.4s						
KAN08	**Anthony NE Sta**	**20.25**	**2**		**P**	**20 45 52.6**	**-0.5**
152A	**Waverly Hall**	**20.27**	**37**	P	**P**	**20 45 52.9**	**-0.4**
Y49A	**Blount Mountai**	**20.27**	**31**	P	**P**	**20 45 52.2**	**-1.2**
Y49A				IAmb	IAmb	20 45 57.2	
	comp=Z,308nm,1.4s						
KAN06	**Argonia West S**	**20.27**	**2**	P	**P**	**20 45 51.9**	**-1.5**
KAN06				IAmb	IAmb	20 46 15.9	
	comp=Z,242nm,1.1s						
LCAR	**Lake Charles**	**20.29**	**18**	P	**P**	**20 45 52.3**	**-1.2**
LCAR				IAmb	IAmb	20 46 17.6	
	comp=Z,406nm,1.3s						
KAN12	**Harper NE Stat**	**20.32**	**2**		**P**	**20 45 53.5**	**-0.4**
KAN12				IAmb	IAmb	20 46 12.5	
	comp=Z,232nm,1.0s						
MTDJ	**Mount Denham**	**20.43**	**83**	*e*P	**P**	**20 45 55.0**	**-0.3**
MTDJ	**Mount Denham**	**20.43**	**83**	P	**P**	**20 45 55.8**	**+0.5**
MTDJ				IAmb	IAmb	20 46 12.2	
	comp=Z,269nm,1.3s						
PLAL	**Pickwick Lake**	**20.44**	**26**	P	**P**	**20 45 54.1**	**-1.1**
PLAL				IAmb	IAmb	20 46 16.9	
	comp=Z,267nm,1.1s						
X48A	**Hartselle**	**20.45**	**29**	P	**P**	**20 45 53.5**	**-1.8**
X48A				IAmb	IAmb	20 45 58.7	
	comp=Z,338nm,1.1s						
Z51A	**Franklin**	**20.50**	**35**	P	**P**	**20 45 55.3**	**-0.5**
W18A	**Petrified Fore**	**20.54**	**334**	P	Pn	20 45 58.2	-0.6
	baz=149,SNR=33						
W18A				S	Sn	20 49 48.7	-0.8
	baz=149						
W18A	**Petrified Fore**	**20.54**	**334**	P	Pn	20 45 58.0	-0.8
GNAR	**Gosnell**	**20.56**	**21**	P	**P**	**20 45 56.0**	**-0.4**
113A	**Mohawk Valley,**	**20.71**	**322**		Pn	20 46 00.2	-0.4
T25A	**Trinidad**	**20.72**	**348**	P	**P**	**20 45 59.2**	**+0.8**
	baz=165,SNR=74						
T25A				S	**S**	**20 49 49.8**	**+1.7**
	baz=165						
T25A	**Trinidad**	**20.72**	**348**	P	**P**	**20 45 58.7**	**+0.3**
T25A				IAmb	IAmb	20 46 06.8	
	comp=Z,198nm,1.1s						
X16A	**Lo Mia Camp, P**	**20.73**	**330**	P	Pn	20 46 00.2	-0.8
X16A				IAmb	IAmb	20 46 26.9	
	comp=Z,190nm,0.9s						
PEBM	**Pemiscott Bayo**	**20.74**	**21**	P	**P**	**20 45 58.3**	**-0.1**
HALT	**Halls**	**20.75**	**22**	P	**P**	**20 45 57.3**	**-1.2**
LNXT	**Lenox**	**20.86**	**22**	P	**P**	**20 45 57.9**	**-1.8**
MGMO	**Mountain Grove**	**21.00**	**15**	P	**P**	**20 46 00.1**	**-1.1**
PVMO	**Portageville**	**21.07**	**21**	P	**P**	**20 46 01.1**	**-0.9**
GLAT	**Glass**	**21.09**	**22**	P	**P**	**20 46 00.1**	**-2.0**
255A	**Hazlehurst**	**21.11**	**42**	P	**P**	**20 46 01.4**	**-1.0**
255A				IAmb	IAmb	20 46 12.7	
	comp=Z,237nm,0.8s						
PENMO	**Penman**	**21.13**	**21**	P	**P**	**20 46 01.1**	**-1.4**
Y14A	**Wickenburg**	**21.15**	**326**	P	**P**	**20 46 04.6**	**+1.7**
Y14A				IAmb	IAmb	20 46 23.7	
	comp=Z,303nm,1.5s						
PBMO	**Poplar Bluff**	**21.16**	**19**	P	**P**	**20 46 01.6**	**-1.3**
PBMO				IAmb	IAmb	20 46 20.2	
	comp=Z,465nm,1.4s						
154A	**Montrose**	**21.18**	**40**	P	**P**	**20 46 01.8**	**-1.4**
FPAL	**Fort Paine**	**21.21**	**32**	P	**P**	**20 46 02.1**	**-1.5**
S39A	**Bolivar**	**21.27**	**12**	P	**P**	**20 46 02.2**	**-2.0**
S39A				IAmb	IAmb	20 46 21.6	
	comp=Z,194nm,0.9s						
PARMO	**Parma**	**21.28**	**21**	P	**P**	**20 46 03.2**	**-1.0**
UTMT	**University of**	**21.31**	**23**	P	**P**	**20 46 03.0**	**-1.5**
HICK	**Hickman**	**21.35**	**22**	P	**P**	**20 46 03.2**	**-1.7**
CPBX	**Cerro Prieto**	**21.40**	**319**	P	**P**	**20 46 05.9**	**+0.3**
HENM	**Henderson Moun**	**21.42**	**21**	P	**P**	**20 46 05.0**	**-0.7**
R32A	**Long Quarter,**	**21.43**	**0**	P	**P**	**20 46 04.4**	**-1.4**
Y52A	**Lilburn**	**21.52**	**36**	P	**P**	**20 46 05.5**	**-1.3**
Y52A				IAmb	IAmb	20 46 24.1	
	comp=Z,364nm,1.4s						
WVT	**Waverly**	**21.52**	**25**	P	**P**	**20 46 04.7**	**-2.1**
WVT				pmax	pmax		
	comp=Z,271nm,1.1s						
WVT	**Waverly**	**21.52**	**25**	P	**P**	**20 46 04.9**	**-1.9**
	baz=210						
WVT				S	**S**	**20 50 02.0**	**-1.7**
	baz=210						
WVT	**Waverly**	**21.52**	**25**	P	**P**	**20 46 04.7**	**-2.1**
WVT				IAmb	IAmb	20 46 24.4	
	comp=Z,271nm,1.1s						
GOGA	**Godfrey**	**21.53**	**37**	P	**P**	**20 46 05.1**	**-1.8**
GOGA				pmax	pmax		
	comp=Z,203nm,1.3s						
GOGA	**Godfrey**	**21.53**	**37**	P	**P**	**20 46 05.8**	**-1.0**
	baz=224,SNR=17						
GOGA				S	**S**	**20 50 01.8**	**-2.0**
	baz=224						
GOGA	**Godfrey**	**21.53**	**37**	P	**P**	**20 46 05.1**	**-1.8**
GOGA				IAmb	IAmb	20 46 24.7	
	comp=Z,203nm,1.3s						
GLA	**Glamis**	**21.54**	**321**	P	**P**	**20 46 08.0**	**+0.9**
GLA				pmax	pmax		
	comp=Z,203nm,1.0s						
GLA	**Glamis**	**21.54**	**321**	P	**P**	**20 46 09.2**	**+2.1**
	baz=134,SNR=34						
GLA				S	**S**	**20 50 08.1**	**+4.0**
	baz=134						
GLA	**Glamis**	**21.54**	**321**	P	**P**	**20 46 08.0**	**+0.9**
GLA				IAmb	IAmb	20 46 24.2	
	comp=Z,203nm,1.0s						
SDCO	**Great Sand Dun**	**21.54**	**346**	P	**P**	**20 46 07.9**	**+0.6**
	baz=162,SNR=46						
SDCO				S	**S**	**20 50 05.7**	**+1.1**
	baz=162						
SDCO	**Great Sand Dun**	**21.54**	**346**	P	**P**	**20 46 07.1**	**-0.3**
SDCO				IAMs_20	IAMs_20	20 55 16.9	
	comp=Z,16µm,20.0s						
WUAZ	**Wupatki**	**21.59**	**331**	P	**P**	**20 46 09.9**	**+2.1**
	baz=146,SNR=183						
WUAZ				S	**S**	**20 50 08.8**	**+3.4**
	baz=146						
WUAZ	**Wupatki**	**21.59**	**331**	P	**P**	**20 46 09.7**	**+1.9**
WUAZ				IAMs_20	IAMs_20	20 55 43.6	
	comp=Z,11µm,21.0s						
SWET	**Sewanee**	**21.60**	**30**	P	**P**	**20 46 05.8**	**-1.9**
SWET				IAmb	IAmb	20 46 31.4	
	comp=Z,153nm,0.8s						
V48A	**Smith Brothers**	**21.62**	**28**	P	**P**	**20 46 05.3**	**-2.6**
V48A				IAmb	IAmb	20 46 28.4	
	comp=Z,213nm,1.1s						
X51A	**Calhoun**	**21.62**	**33**	P	**P**	**20 46 07.3**	**-0.6**
X51A				IAmb	IAmb	20 46 21.2	
	comp=Z,137nm,0.9s						
CBKS	**Cedar Bluff**	**21.83**	**358**	P	**P**	**20 46 09.0**	**-1.1**
CBKS				pmax	pmax		
	comp=Z,404nm,1.1s						
CBKS	**Cedar Bluff**	**21.83**	**358**	P	**P**	**20 46 09.3**	**-0.9**
	baz=178,SNR=15						
CBKS				S	**S**	**20 50 06.3**	**-3.4**
	baz=178						
CBKS	**Cedar Bluff**	**21.83**	**358**	P	**P**	**20 46 09.0**	**-1.1**
S22A	**4UR Ranch, Cre**	**21.89**	**343**	P	**P**	**20 46 12.0**	**+0.9**
	baz=159,SNR=109						
W50A	**Signal Mountai**	**21.89**	**31**	P	**P**	**20 46 08.8**	**-2.1**
W50A				IAmb	IAmb	20 46 25.3	
	comp=Z,156nm,1.0s						
MVCO	**Mesa Verde**	**21.91**	**339**	P	**P**	**20 46 11.9**	**+0.7**
	baz=154,SNR=108						
MVCO				S	**S**	**20 50 11.7**	**+0.1**
	baz=154						
MVCO	**Mesa Verde**	**21.91**	**339**	P	**P**	**20 46 11.1**	**-0.2**
CCX	**Cicese**	**21.92**	**316**	P	**P**	**20 46 12.0**	**+0.9**
CCX				IAmb	IAmb	20 46 30.4	
	comp=Z,220nm,1.1s						
T45A	**Paducah**	**21.99**	**22**	P	**P**	**20 46 09.9**	**-1.9**
RMX	**La Rumorosa**	**22.01**	**318**	P	**P**	**20 46 11.6**	**-0.7**
RMX				IAmb	IAmb	20 46 30.7	
	comp=Z,266nm,1.4s						
PDMCI	**Parker Dam,Lak**	**22.04**	**325**	P	**P**	**20 46 13.8**	**+1.4**
	baz=138,SNR=60						
PDMCI				S	**S**	**20 50 18.2**	**+4.4**
	baz=138						
IKP	**In-Ko-Pah, Jac**	**22.06**	**318**	P	**P**	**20 46 14.6**	**+1.8**
	baz=131,SNR=58						
IKP				S	**S**	**20 50 17.2**	**+2.9**
	baz=131						
SWSC	**Sam W. Stewart**	**22.06**	**319**	P	**P**	**20 46 14.4**	**+1.8**
	baz=132,SNR=20						
SWSC				S	**S**	**20 50 19.1**	**+5.0**
	baz=132						
R40A	**Maddies Statio**	**22.08**	**14**	P	**P**	**20 46 11.0**	**-1.8**
R40A				IAmb	IAmb	20 46 36.0	
	comp=Z,193nm,0.8s						
257A	**Skidaway Islan**	**22.09**	**44**	P	**P**	**20 46 12.0**	**-1.0**
CCM	**Cathedral Cave**	**22.11**	**16**	P	**P**	**20 46 10.8**	**-2.4**
CCM				pmax	pmax		
	comp=Z,172nm,0.9s						
CCM	**Cathedral Cave**	**22.11**	**16**	P	**P**	**20 46 11.4**	**-1.8**
	baz=200						
CCM				S	**S**	**20 50 11.7**	**-3.3**
	baz=200						
CCM	**Cathedral Cave**	**22.11**	**16**	P	**P**	**20 46 10.8**	**-2.4**
CCM				IAmb	IAmb	20 46 31.9	
	comp=Z,172nm,0.9s						
CLTN	**Cedars of Leba**	**22.13**	**28**	P	**P**	**20 46 11.9**	**-1.5**
CLTN				IAmb	IAmb	20 46 25.7	
	comp=Z,116nm,0.7s						
KSU1	**Kansas State U**	**22.19**	**5**	P	**P**	**20 46 11.8**	**-2.2**
	baz=186,SNR=12						
KSU1				S	**S**	**20 50 13.8**	**-2.6**
	baz=186						
KSU1	**Kansas State U**	**22.19**	**5**	P	**P**	**20 46 11.6**	**-2.4**
KSU1				IAmb	IAmb	20 46 30.3	
	comp=Z,339nm,1.2s						
KSCO	**Kaye Shedlock’**	**22.25**	**352**	P	**P**	**20 46 14.2**	**-0.6**
	baz=170,SNR=9.8						
KSCO				S	**S**	**20 50 17.7**	**-0.1**
	baz=170						
KSCO	**Kaye Shedlock’**	**22.25**	**352**	P	**P**	**20 46 14.5**	**-0.3**
KSCO				IAmb	IAmb	20 46 31.0	
	comp=Z,228nm,0.8s						
FVM	**French Village**	**22.28**	**18**	P	**P**	**20 46 12.3**	**-2.6**
FVM				pmax	pmax		
	comp=Z,117nm,0.9s						
FVM	**French Village**	**22.28**	**18**	P	**P**	**20 46 12.3**	**-2.6**
TKX	**Tecate**	**22.33**	**318**	P	**P**	**20 46 17.6**	**+2.1**
TKX				IAmb	IAmb	20 46 21.1	
	comp=Z,304nm,1.4s						
BC3	**Big Chuckawall**	**22.34**	**321**	P	**P**	**20 46 17.1**	**+1.4**
	baz=134,SNR=120						
BC3				S	**S**	**20 50 22.0**	**+2.6**
	baz=134						
S44A	**Carbondale**	**22.38**	**20**	P	**P**	**20 46 13.7**	**-2.3**
SIUC	**Southern Illin**	**22.41**	**21**	P	**P**	**20 46 14.2**	**-2.2**
MONP2	**Monument Peak**	**22.42**	**318**	P	**P**	**20 46 18.4**	**+1.7**
	baz=131,SNR=74						
MONP2				S	**S**	**20 50 24.9**	**+3.8**
	baz=131						
BAR	**Barrett**	**22.44**	**318**	P	**P**	**20 46 17.6**	**+0.8**
BAR				IAmb	IAmb	20 46 35.1	
	comp=Z,196nm,1.2s						
CPCT	**Cooper Cave**	**22.48**	**32**	P	**P**	**20 46 15.9**	**-1.2**
CPCT				IAmb	IAmb	20 46 39.5	
	comp=Z,237nm,1.3s						
W13A	**Hualapai Mount**	**22.50**	**326**	P	**P**	**20 46 18.8**	**+1.1**
IRM	**Iron Mountain**	**22.51**	**323**	P	**P**	**20 46 19.1**	**+1.7**
	baz=135,SNR=116						
IRM				S	**S**	**20 50 25.7**	**+3.3**
	baz=135						
W52A	**Murphy**	**22.52**	**34**	P	**P**	**20 46 15.4**	**-2.1**
T47A	**Sharon Grove**	**22.56**	**25**	P	**P**	**20 46 15.9**	**-2.0**
T47A				IAmb	IAmb	20 46 34.3	
	comp=Z,191nm,0.8s						
TJX	**Tijuana**	**22.58**	**317**	P	**P**	**20 46 20.5**	**+2.3**
Q24A	**Divide**	**22.63**	**347**	P	**P**	**20 46 18.5**	**-0.5**
	baz=164						
Q24A				S	**S**	**20 50 25.4**	**+0.4**
	baz=164						
NEE2	**Needles Airpor**	**22.65**	**325**	P	**P**	**20 46 20.7**	**+1.7**
	baz=137						
NEE2				S	**S**	**20 50 28.2**	**+3.3**
	baz=137						
U49A	**Red Boiling Sp**	**22.73**	**28**	P	**P**	**20 46 17.6**	**-2.2**
U49A				IAmb	IAmb	20 46 41.0	
	comp=Z,206nm,1.2s						
U15A	**North Rim**	**22.76**	**331**	P	**P**	**20 46 21.8**	**+1.3**
U15A				IAmb	IAmb	20 46 25.9	
	comp=Z,222nm,1.2s						
GTBY	**Guantanamo Bay**	**22.78**	**79**	*e*P	**P**	**20 46 19.9**	**-0.6**
GTBY	**Guantanamo Bay**	**22.78**	**79**	P	**P**	**20 46 20.1**	**-0.4**
GTBY				IAmb	IAmb	20 46 31.0	
	comp=Z,162nm,0.8s						
PTAC	**Punta Ardita,**	**22.79**	**113**	*e*P	**P**	**20 46 19.4**	**-1.2**
HODGE	**Hodges**	**22.82**	**38**	P	**P**	**20 46 19.5**	**-1.2**
V51A	**Loudon**	**22.84**	**32**	P	**P**	**20 46 19.6**	**-1.3**
V51A				IAmb	IAmb	20 46 43.0	
	comp=Z,130nm,1.0s						
109C	**Camp Elliot, M**	**22.85**	**317**	P	**P**	**20 46 22.9**	**+1.8**
	baz=129,SNR=6.2						
109C				S	**S**	**20 50 32.1**	**+3.7**
	baz=129						
109C	**Camp Elliot, M**	**22.85**	**317**	P	**P**	**20 46 21.7**	**+0.6**
109C				IAmb	IAmb	20 46 25.9	
	comp=Z,158nm,1.2s						
109C				IAMs_20	IAMs_20	20 54 44.3	
	comp=Z,8µm,19.0s						
BELC	**Belle Mtn. Jos**	**22.90**	**321**	P	**P**	**20 46 23.1**	**+1.4**
	baz=133,SNR=113						
BELC				S	**S**	**20 50 32.7**	**+3.3**
	baz=133						
TPFO	**Pinon Flats**	**22.91**	**320**	P	**P**	**20 46 23.6**	**+1.8**
	baz=132,SNR=28						
TPFO				S	**S**	**20 50 32.2**	**+2.6**
	baz=132						
PFO	**Pinyon Flats O**	**22.92**	**320**	P	**P**	**20 46 23.4**	**+1.5**
	comp=Z,54nm,1.1s,baz=115,slow=6.8,SNR=41						
PFO				Lg	Lg	20 53 21.6	
	comp=Z,0.7nm,0.5s,baz=108,slow=20,SNR=1.4						

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PFO                                LR       LR       20 55 23.7
       comp=Z,8µm,18.3s,baz=139,slow=37
PFO    Pinyon Flats O    22.92 320 P        P        20 46 23.4 +1.5
PFO                                pmax     pmax
       comp=Z,109nm,1.1s
PFO                                MLR      MLR
       comp=Z,8µm,20.0s
PFO    Pinyon Flats O    22.92 320 P        P        20 46 23.5 +1.6
       baz=132,SNR=31
PFO                                S        S        20 50 32.5 +2.8
       baz=132
PFO    Pinyon Flats O    22.92 320 P        P        20 46 23.4 +1.5
PFO    Pinyon Flats O    22.92 320 IAMs_20  IAMs_20  20 55 18.8
       comp=Z,8µm,20.0s
SLM    Saint Louis       22.94  18 P        P        20 46 19.9 -2.0
SLM                                pmax     pmax
       comp=Z,104nm,0.8s
SLM    Saint Louis       22.94  18 P        P        20 46 19.9 -2.0
SLM                                IAmb     IAmb     20 46 44.1
       comp=Z,104nm,0.8s
BG3    Lake Jocassee     22.98  35 P        P        20 46 21.5 -0.9
BG3                                IAmb     IAmb     20 46 33.9
       comp=Z,109nm,0.8s
TKL    Tuckaleechee C    23.03  33 P        P        20 46 21.9 -0.9
       comp=Z,20nm,1.0s,baz=201,slow=9.7,SNR=17
TKL                                LR       LR       20 56 10.0
       comp=Z,934nm,21.9s,baz=164,slow=39
TKL    Tuckaleechee C    23.03  33 P        P        20 46 21.6 -1.3
TKL                                IAmb     IAmb     20 46 50.9
       comp=Z,180nm,1.1s
P38A   Dawn              23.11  11 P        P        20 46 21.2 -2.4
P38A                               IAmb     IAmb     20 46 45.5
       comp=Z,221nm,1.4s
GMRC   Granite Mounta    23.25 323 P        P        20 46 26.6 +1.4
       baz=135,SNR=102
GMRC                               S        S        20 50 39.3 +4.0
       baz=135
V52A   Sevierville       23.26  33 P        P        20 46 23.9 -1.3
SMCO   Snowmass          23.27 344 P        P        20 46 24.9 -0.8
SMCO                               IAmb     IAmb     20 46 39.9
       comp=Z,175nm,1.4s
SMCO                               IAMs_20  IAMs_20  20 56 25.6
       comp=Z,12µm,18.0s
P40A   Paris             23.31  14 P        P        20 46 22.7 -3.0
P40A                               IAmb     IAmb     20 46 43.3
       comp=Z,129nm,0.8s
NHSC   New Hope          23.35  43 P        P        20 46 24.4 -1.7
       baz=231,SNR=6.9
NHSC                               S        S        20 50 35.7 -1.0
       baz=231
NHSC   New Hope          23.35  43 P        P        20 46 24.8 -1.3
MURC   Murrieta          23.37 319 P        P        20 46 27.9 +1.6
       baz=130,SNR=16
MURC                               S        S        20 50 40.0 +3.0
       baz=130
JSC    Jenkinsville      23.45  39 P        P        20 46 25.6 -1.4
JSC                                pmax     pmax
       comp=Z,73nm,0.9s
JSC    Jenkinsville      23.45  39 P        P        20 46 25.6 -1.4
KNB    Kanab             23.49 331 P        P        20 46 28.5 +0.8
KNB                                pmax     pmax
       comp=Z,302nm,1.1s
KNB    Kanab             23.49 331 P        P        20 46 28.5 +0.8
PAULI  Pauline           23.49  37 P        P        20 46 26.3 -1.1
ISCO   Idaho Springs     23.53 347 P        P        20 46 27.9 -0.3
ISCO                               pmax     pmax
       comp=Z,92nm,1.1s
ISCO                               MLR      MLR
       comp=Z,12µm,18.0s
ISCO   Idaho Springs     23.53 347 P        P        20 46 28.3 +0.1
       baz=164,SNR=71
ISCO                               S        S        20 50 40.1 +0.1
       baz=164
ISCO   Idaho Springs     23.53 347 P        P        20 46 27.9 -0.3
ISCO                               IAMs_20  IAMs_20  20 56 25.6
       comp=Z,12µm,18.0s
V53A   Saluda            23.55  34 P        P        20 46 27.6 -0.5
V53A                               IAmb     IAmb     20 46 53.2
       comp=Z,196nm,1.1s
Q44A   Meyer Farm, Va    23.55  20 P        P        20 46 26.4 -1.6
T50A   Nancy             23.58  29 P        P        20 46 26.8 -1.5
T50A                               IAmb     IAmb     20 46 56.5
       comp=Z,134nm,0.8s
PKCU   Pink Cliffs       23.61 333 P        P        20 46 29.0  0.0
BBRC   Big Bear Solar    23.64 320 P        P        20 46 30.5 +1.3
       baz=132
BBRC                               S        S        20 50 46.2 +4.5
       baz=132
HEC    Hector,Ludlow     23.68 322 P        P        20 46 32.2 +2.8
       baz=134,SNR=55
HEC                                S        S        20 50 45.7 +3.7
       baz=134
LCMT   Little Creek M    23.68 330 P        P        20 46 30.0 +0.5
OLIL   Olney             23.71  21 P        P        20 46 27.9 -1.6
OLIL                               IAmb     IAmb     20 46 47.0
       comp=Z,202nm,1.0s
Y57A   Sumter            23.80  41 P        P        20 46 29.8 -0.7
Y57A                               IAmb     IAmb     20 46 52.9
       comp=Z,195nm,1.2s
TZTN   Tazewell          23.83  32 P        P        20 46 29.2 -1.5
       baz=219,SNR=26
TZTN                               S        S        20 50 44.1 -0.2
       baz=219
TZTN   Tazewell          23.83  32 P        P        20 46 30.3 -0.3
TZTN                               IAmb     IAmb     20 46 57.6
       comp=Z,262nm,1.1s
SCI2   San Clemente I    23.86 316 P        P        20 46 33.4 +2.4
       baz=127,SNR=18
SCI2                               S        S        20 50 47.6 +2.8
       baz=127
TUQ    Turquoise Moun    23.87 324 P        P        20 46 32.4 +1.2
       baz=136,SNR=39
TUQ                                S        S        20 50 49.5 +4.2
       baz=136
WCI    Wyandotte Cave    23.95  25 P        P        20 46 30.4 -1.4
WCI                                pmax     pmax
       comp=Z,220nm,0.8s
WCI    Wyandotte Cave    23.95  25 P        P        20 46 30.2 -1.5
       baz=211
WCI                                S        S        20 50 45.9 -0.3
       baz=211
WCI    Wyandotte Cave    23.95  25 P        P        20 46 30.4 -1.4
KMSC   Kings Mountain    24.00  38 P        P        20 46 30.8 -1.5
       baz=225,SNR=15
KMSC                               S        S        20 50 47.2 +0.1
       baz=225
KMSC   Kings Mountain    24.00  38 P        P        20 46 31.4 -0.9
KMSC                               IAmb     IAmb     20 46 43.2
       comp=Z,175nm,1.1s
N35A   Tabor             24.03   6 P        P        20 46 31.3 -1.2
CIS    Catalina Islan    24.03 317 P        P        20 46 34.7 +2.1
       baz=128,SNR=16
CIS                                S        S        20 50 51.6 +3.9
       baz=128
MOTC   Monteria, Cord    24.05 107 P        P        20 46 33.8 +0.9
MTPU   Mount Pierson     24.06 334 P        P        20 46 34.4 +1.2
MTPU                               IAmb     IAmb     20 46 50.5
       comp=Z,275nm,1.2s
P43A   Skaggs, Pawnee    24.08  18 P        P        20 46 31.5 -1.4
P43A                               IAmb     IAmb     20 46 52.9
       comp=Z,256nm,1.1s
BFSC   Mount Baldy Ra    24.08 319 P        P        20 46 35.4 +2.2
       baz=131,SNR=18
BFSC                               S        S        20 50 53.6 +5.0
       baz=131
SZCU   Shurtz Canyon     24.08 332 P        P        20 46 34.6 +1.3
SZCU                               IAmb     IAmb     20 46 53.2
       comp=Z,146nm,1.2s
OGNE   Ogallala          24.09 354 P        P        20 46 33.2  0.0
       baz=172,SNR=9.2
OGNE   Ogallala          24.09 354 P        P        20 46 33.9 +0.7
RRX    Edison Barstow    24.10 321 P        P        20 46 34.9 +1.6
       baz=133
RRX                                S        S        20 50 52.7 +3.9
       baz=133
SJCC   San Jacinto, C    24.11 104 eP       P        20 46 33.7 +0.1
SJCC   San Jacinto, C    24.11 104 P        P        20 46 35.3 +1.8
SJCC                               IAmb     IAmb     20 46 52.2
       comp=Z,194nm,1.4s
FMP    Fort Macarthur    24.14 317 P        P        20 46 35.6 +2.0
       baz=129
FMP                                S        S        20 50 52.6 +3.2
       baz=129
CCUT   Cedar City        24.17 331 P        P        20 46 35.6 +1.4
BIRD   Birdtown, Kers    24.18  40 P        P        20 46 33.4 -0.5
Y58A   Scranton          24.19  42 P        P        20 46 33.4 -0.6
SHPR   Sheep Range       24.24 327 P        P        20 46 35.5 +0.8
GSC    Goldstone, Bar    24.28 322 P        P        20 46 35.3 +0.3
GSC                                pmax     pmax
       comp=Z,100nm,1.1s
GSC    Goldstone, Bar    24.28 322 P        P        20 46 37.2 +2.2
       baz=134,SNR=24
GSC                                S        S        20 50 53.0 +1.2
       baz=134
GSC    Goldstone, Bar    24.28 322 P        P        20 46 35.3 +0.3
N38A   Joes South For    24.30  11 P        P        20 46 33.5 -1.4
N38A                               IAmb     IAmb     20 46 58.6
       comp=Z,138nm,0.7s
MWC    Mount Wilson      24.32 319 P        P        20 46 35.9 +0.4
MWC                                pmax     pmax
       comp=Z,119nm,1.3s
MWC    Mount Wilson      24.32 319 P        P        20 46 35.9 +0.4
SRU    San Rafael Swe    24.32 338 P        P        20 46 35.8 +0.3
SRU                                pmax     pmax
       comp=Z,302nm,1.3s
SRU    San Rafael Swe    24.32 338 P        P        20 46 35.8 +0.3
SRU                                IAmb     IAmb     20 46 52.6
       comp=Z,302nm,1.3s
PASC   Pasadena Art C    24.36 318 P        P        20 46 35.9 +0.2
PASC                               IAmb     IAmb     20 46 54.4
       comp=Z,212nm,1.4s
Q16A   Castle Valley     24.40 336 P        P        20 46 37.2 +1.0
Q16A                               IAmb     IAmb     20 46 48.9
       comp=Z,154nm,0.9s
SHOC   Shoshone, Teco    24.40 324 P        P        20 46 38.2 +2.2
       baz=136
SHOC                               S        S        20 50 58.3 +4.7
       baz=136
BGNE   Belgrade          24.42   1 P        P        20 46 35.2 -0.9
       baz=182
BGNE   Belgrade          24.42   1 P        P        20 46 35.3 -0.8
MSU    Marysvale         24.45 334 P        P        20 46 37.7 +1.1
MSU    Marysvale         24.45 334 P        P        20 46 37.7 +1.1
MVU    Marysvale         24.46 334 P        P        20 46 37.8 +1.0
R49A   Shelbyville       24.48  27 P        P        20 46 35.5 -1.1
R49A                               IAmb     IAmb     20 46 51.2
       comp=Z,111nm,0.9s
O20A   White River Ci    24.51 343 P        P        20 46 38.1 +1.0
       baz=158,SNR=65
O20A                               S        S        20 51 03.8 +8.2
       baz=158
O20A   White River Ci    24.51 343 P        P        20 46 37.8 +0.6
O20A                               IAmb     IAmb     20 46 54.1
       comp=Z,291nm,1.3s
DECC   Green Verdugo     24.51 318 P        P        20 46 39.3 +2.3
       baz=130
DECC                               S        S        20 51 00.1 +4.7
       baz=130
V55A   Taylorsville      24.57  36 P        P        20 46 36.4 -1.1
V55A                               IAmb     IAmb     20 46 49.2
       comp=Z,271nm,1.3s
UREC   San Jos de Ur     24.57 109 eP       P        20 46 38.4 +0.6
SMRC   Santa Marta, M    24.62 100 eP       P        20 46 37.7 -0.5
TCRU   Three Creeks R    24.65 334 P        P        20 46 39.1 +0.6
N23A   Red Feather La    24.65 347 P        P        20 46 39.0 +0.5
       baz=163,SNR=38
N23A                               S        S        20 51 04.4 +6.4
       baz=163
S51A   Beattyville       24.66  30 P        P        20 46 37.5 -0.8
S51A                               IAmb     IAmb     20 46 40.6
       comp=Z,133nm,0.9s
BLO    Bloomington       24.68  24 P        P        20 46 36.7 -1.7
BLO                                pmax     pmax
       comp=Z,183nm,0.8s
BLO    Bloomington       24.68  24 P        P        20 46 36.7 -1.7
SNCC   San Nicolas Is    24.68 315 P        P        20 46 41.0 +2.5
       baz=126
SNCC                               S        S        20 51 03.3 +5.3
       baz=126
SNCC   San Nicolas Is    24.68 315 P        P        20 46 39.2 +0.8
P18A   Preston Nutter    24.68 339 P        P        20 46 39.2 +0.3
EDW2   Edwards Air Fo    24.71 320 P        P        20 46 40.0 +1.1
       baz=131,SNR=35
EDW2                               S        S        20 51 01.4 +2.8
       baz=131
N41A   Harden Midland    24.71  15 P        P        20 46 36.9 -1.8
N41A                               IAmb     IAmb     20 47 02.3
       comp=Z,206nm,1.1s
U54A   Nelsons Funny     24.72  35 P        P        20 46 36.5 -2.4
P17A   Butcher Ranch,    24.72 338 P        P        20 46 40.0 +0.9
TMUT   Trail Mountain    24.74 337 P        P        20 46 40.1 +0.8
TMUT                               IAmb     IAmb     20 47 02.9
       comp=Z,216nm,1.3s
Y59A   Loris             24.75  43 P        P        20 46 39.0 -0.1
Y59A                               IAmb     IAmb     20 46 51.1
       comp=Z,176nm,0.8s
QSM    Queen of Sheba    24.78 323 P        P        20 46 40.2 +0.8
W57A   Gilead            24.80  39 P        P        20 46 39.1 -0.4
W57A                               IAmb     IAmb     20 46 51.1
       comp=Z,121nm,0.9s
P46A   Rosedale          24.81  22 P        P        20 46 38.9 -0.7
P46A                               IAmb     IAmb     20 46 58.2
       comp=Z,127nm,0.8s
X58A   Rowland           24.81  41 P        P        20 46 39.3 -0.4
X58A                               IAmb     IAmb     20 46 51.6
       comp=Z,217nm,1.1s
GWY    Greenwater Val    24.83 324 P        P        20 46 40.9 +0.9
R50A   Paris             24.84  28 P        P        20 46 39.1 -0.8
R50A                               IAmb     IAmb     20 46 54.7
       comp=Z,205nm,1.4s
O44A   Mansfield         24.87  19 P        P        20 46 38.2 -2.0
O44A                               IAmb     IAmb     20 46 41.9
       comp=Z,204nm,1.1s
PRN    Pahroc Range      24.88 328 P        P        20 46 41.2 +0.8
LRMC   Laurel Mtn Rad    24.92 321 P        P        20 46 43.3 +2.4
       baz=133,SNR=16
CBOC   Ciudad Bolivar    24.97 113 eP       P        20 46 42.1 +0.6
HDIL   Hopedale          24.99  18 P        P        20 46 40.2 -1.0
       baz=202,SNR=22
HDIL                               S        S        20 51 03.8 +1.0
       baz=202
HDIL   Hopedale          24.99  18 P        P        20 46 40.2 -1.0
OSI    Osito Audit: C    24.99 319 P        P        20 46 43.5 +2.1
       baz=130,SNR=6.3
OSI                                S        S        20 51 08.7 +5.6
       baz=130
OSI    Osito Audit: C    24.99 319 P        P        20 46 43.1 +1.7
OSI                                IAmb     IAmb     20 47 00.5
       comp=Z,152nm,1.2s
L34A   Svendsen Farm,    25.06   4 P        P        20 46 41.1 -0.7
LGNH   Logne             25.11  82 P        P        20 46 41.5 -1.1
LGNH                               IAmb     IAmb     20 47 06.3
       comp=Z,166nm,1.5s
FURC   Furnace Creek,    25.14 324 P        P        20 46 44.5 +2.0
       baz=136,SNR=18
FURC                               S        S        20 51 05.9 +0.6
       baz=136
PLMC   San Jos del P     25.19 116 eP       P        20 46 41.2 -2.2
SCZ2   Santa Cruz Isl    25.20 316 P        P        20 46 45.5 +2.3
       baz=127,SNR=12
SCZ2                               S        S        20 51 09.7 +3.4
       baz=127
JAKH   Jacmel            25.20  83 P        P        20 46 42.0 -1.4
PSUT   Pine Spring       25.20 332 P        P        20 46 43.4 -0.1
MPMC   Manual Prospec    25.21 323 P        P        20 46 45.3 +1.8
       baz=134,SNR=128
MPMC                               S        S        20 51 07.8 +1.0
       baz=134
ZARC   Zaragoza, Cauc    25.29 109 eP       P        20 46 44.8 +0.6
ZARC   Zaragoza, Cauc    25.29 109 P        P        20 46 44.9 +0.6
RDMU   Red Mountain      25.31 341 P        P        20 46 44.9 +0.5
P48A   Milroy            25.35  25 P        P        20 46 42.2 -2.4
P48A                               IAmb     IAmb     20 46 59.7
       comp=Z,117nm,0.8s
SCIA   State Center      25.38  10 P        P        20 46 45.9 +1.1
       baz=193
SCIA   State Center      25.38  10 P        P        20 46 44.0 -0.8
ARVC   Arvin             25.39 319 P        P        20 46 47.9 +3.0
       baz=130,SNR=12
ARVC                               S        S        20 51 13.0 +3.6
       baz=130
U56A   King              25.39  37 P        P        20 46 44.1 -0.9
SMLC   San Martn de      25.51 105 eP       P        20 46 45.3 -1.0
SBC    Santa Barbara     25.52 317 P        P        20 46 48.7 +2.6
       baz=128
SBC                                S        S        20 51 15.5 +4.1
       baz=128
ISA    Isabella, Lake    25.52 321 P        P        20 46 47.4 +1.2
ISA                                pmax     pmax
       comp=Z,86nm,1.1s
ISA    Isabella, Lake    25.52 321 P        P        20 46 48.6 +2.4
       baz=132,SNR=47
ISA                                S        S        20 51 16.9 +5.3
       baz=132
ISA    Isabella, Lake    25.52 321 P        P        20 46 47.4 +1.2
MPU    Maple Canyon      25.53 337 P        P        20 46 47.0 +0.7
MPU                                IAmb     IAmb     20 47 03.5
       comp=Z,124nm,1.1s
SFIN   Lafayette         25.53  21 P        P        20 46 45.0 -1.1
       baz=207,SNR=20
SFIN                               S        S        20 51 11.3 -0.1
       baz=207
SFIN   Lafayette         25.53  21 P        P        20 46 45.1 -1.0
SFIN                               IAmb     IAmb     20 46 57.4
       comp=Z,100nm,0.8s
YOTC   Yotoco, Valle     25.61 118 eP       P        20 46 47.8 +0.5
K31A   O'Neill           25.62   0 P        P        20 46 47.1 +0.1
K31A                               IAmb     IAmb     20 47 14.1
       comp=Z,228nm,1.1s
NLU    North Lily Min    25.64 336 P        P        20 46 48.4 +0.9
NLU                                IAmb     IAmb     20 47 05.0
       comp=Z,203nm,1.2s
RWWY   Rawlins           25.70 346 P        P        20 46 48.2 +0.3
RWWY                               IAmb     IAmb     20 47 12.2
       comp=Z,226nm,1.2s
RWWY                               IAMs_20  IAMs_20  20 57 46.8
       comp=Z,12µm,19.0s
P49A   Miami Univ. Ec    25.71  26 P        P        20 46 47.0 -0.8
       baz=213,SNR=25
P49A                               S        S        20 51 13.3 -1.0
       baz=213
P49A   Miami Univ. Ec    25.71  26 P        P        20 46 46.8 -1.0
SPR3   Spring Creek 3    25.79 332 P        P        20 46 49.5 +0.5
SPR3                               IAmb     IAmb     20 47 05.9
       comp=Z,121nm,1.2s
CWC    Cottonwood Cre    25.82 323 P        P        20 46 51.6 +2.6
       baz=134
CWC                                S        S        20 51 19.8 +3.4
       baz=134
PKM    Mcpherson Peak    25.86 318 P        P        20 46 51.7 +2.3
       baz=128,SNR=20
PKM                                S        S        20 51 22.4 +5.2
       baz=128
R11A   Troy Canyon, C    25.87 329 P        P        20 46 50.6 +1.1
       baz=141,SNR=45
R11A                               S        S        20 51 24.1 +6.7
       baz=141
R11A   Troy Canyon, C    25.87 329 P        P        20 46 50.7 +1.1
Q51A   Peebles           25.89  29 P        P        20 46 48.8 -0.6
L40A   Anamosa           25.92  13 P        P        20 46 47.7 -1.9
L40A                               IAmb     IAmb     20 47 07.8
       comp=Z,167nm,0.9s
S54A   Dingess, Beckl    25.94  33 P        P        20 46 49.5 -0.4
S54A                               IAmb     IAmb     20 47 01.9
       comp=Z,95nm,0.7s
LL6C   La Loma 6 Bece    25.94 103 eP       P        20 46 50.6 +0.5
JLU    Jordanelle        25.97 338 P        P        20 46 49.0 -1.5
BLA    Blacksburg        25.99  35 P        P        20 46 49.9 -0.5
BLA                                pmax     pmax
       comp=Z,137nm,0.9s
BLA    Blacksburg        25.99  35 P        P        20 46 50.4  0.0
       baz=224,SNR=12
BLA                                S        S        20 51 21.3 +2.5
       baz=224
BLA    Blacksburg        25.99  35 P        P        20 46 49.9 -0.5
BLA                                IAmb     IAmb     20 47 13.7
       comp=Z,137nm,0.8s
VES    Vestal, Richgr    26.01 320 P        P        20 46 53.3 +2.7
       baz=131,SNR=9.5
R53A   Hurricane         26.01  32 P        P        20 46 49.9 -0.6
PTBC   PUERTO BERRIO,    26.05 110 eP       P        20 46 49.8 -1.3
OTAV   Otavalo           26.10 127 P        P        20 46 52.6 +0.5
OTAV                               pmax     pmax
       comp=Z,78nm,1.1s
OTAV   Otavalo           26.10 127⇑eP       P        20 46 53.8 +1.7
OTAV   Otavalo           26.10 127 eP       P        20 46 53.7 +1.6
OTAV   Otavalo           26.10 127 P        P        20 46 52.6 +0.5
NORC   Norcasia          26.11 113 eP       P        20 46 51.5 -0.3
LCH    Last Change Ra    26.12 324 P        P        20 46 52.5 +0.8
M44A   Midewin, Midew    26.12  19 P        P        20 46 49.5 -2.1
M44A                               IAmb     IAmb     20 47 03.7
       comp=Z,178nm,1.1s
DUG    Dugway, Tooele    26.14 335 P        P        20 46 52.7 +0.9
DUG                                pmax     pmax
       comp=Z,126nm,1.1s
DUG                                MLR      MLR
       comp=Z,14µm,18.0s
DUG    Dugway, Tooele    26.14 335 P        P        20 46 53.5 +1.7
       baz=148,SNR=61
DUG                                S        S        20 51 24.9 +3.5
       baz=148
DUG    Dugway, Tooele    26.14 335 P        P        20 46 52.7 +0.9
DUG                                IAmb     IAmb     20 47 11.3
       comp=Z,126nm,1.1s
ANIL   Santa Ana         26.16 116 eP       P        20 46 53.9 +1.5
CTU    Camp Tracy        26.16 337 P        P        20 46 52.3 +0.3
CNNC   Cliffs of the     26.17  42 P        P        20 46 52.9 +1.0
       baz=231
CNNC   Cliffs of the     26.17  42 P        P        20 46 50.5 -1.5
K38A   Parkersburg       26.18  10 P        P        20 46 50.4 -1.6
K38A                               IAmb     IAmb     20 47 11.0
       comp=Z,138nm,0.9s
L42A   Oliver, Polo      26.23  16 P        P        20 46 50.7 -1.8
SMMC   Simmler           26.24 318 P        P        20 46 55.1 +2.4
       baz=129
TULM   Tulcn-Chalpat     26.31 126 eP       P        20 46 56.4 +2.4
TIN    Tinemaha, Big     26.33 323 P        P        20 46 54.3 +0.8
       baz=134,SNR=38
TIN                                S        S        20 51 29.7 +5.3
       baz=134
GCUF   Volcan Galeras    26.35 124 eP       P        20 46 56.2 +1.8
Q52A   Bidwell           26.35  30 P        P        20 46 52.8 -0.7
SDDR   Presa de Saban    26.36  81 eP       P        20 46 52.3 -1.7
SDDR   Presa de Saban    26.36  81 P        P        20 46 53.8 -0.1
P51A   Williamsport      26.39  28 P        P        20 46 52.5 -1.4
SOTA   Rioblanco         26.40 121 eP       P        20 46 54.8 -0.1
OCAC   Ocana             26.41 106 eP       P        20 46 53.4 -1.2
OCAC   Ocana             26.41 106 P        P        20 46 53.8 -0.7
TCUT   Toone Canyon      26.41 338 P        P        20 46 55.1 +0.7
TCUT                               IAmb     IAmb     20 47 12.9
       comp=Z,211nm,1.1s
O49A   Covington         26.42  26 P        P        20 46 53.0 -1.1
K22A   Casper            26.46 347 P        P        20 46 55.0 +0.3
       baz=163,SNR=17
K22A   Casper            26.46 347 P        P        20 46 55.5 +0.7
K22A                               IAmb     IAmb     20 47 24.8
       comp=Z,157nm,1.4s
PCON   Cinco Dias        26.47 121 eP       P        20 46 56.4 +0.9
N47A   Urbana            26.47  23 P        P        20 46 52.6 -2.1
BRRC   Barranca, Sant    26.48 109 eP       P        20 46 51.6 -3.4
T57A   Hurt              26.50  37 P        P        20 46 53.5 -1.4
T57A                               IAmb     IAmb     20 47 07.4
       comp=Z,147nm,1.1s
TPH    Tonopah           26.51 326 P        P        20 46 56.0 +0.8
TPH                                pmax     pmax
       comp=Z,443nm,1.3s
TPH    Tonopah           26.51 326 P        P        20 46 56.0 +0.8
VOG    Valley Oaks Go    26.51 321 P        P        20 46 56.9 +1.8
       baz=131
VOG                                S        S        20 51 30.8 +3.8
       baz=131
MARP   Paez Belalcaza    26.55 119 eP       P        20 46 59.6 +3.7
HQIL   Hanson Quary C    26.56  19 P        P        20 46 54.2 -1.2
ORTC   Ortega, Tolima    26.59 116 eP       P        20 46 56.0  0.0
URIC   Uribia, Colomb    26.59  98 eP       P        20 46 57.2 +1.2
URIC   Uribia, Colomb    26.59  98          P        20 46 55.9 -0.1
PAGB   Antelope Grade    26.66 319 P        P        20 46 58.0 +1.5
PAGB                               IAmb     IAmb     20 47 19.8
       comp=Z,177nm,1.4s
SPBC   San Pablo de B    26.78 112 eP       P        20 46 58.3 +0.5
ECSD   EROS Data Cent    26.80   4 P        P        20 46 58.7 +1.1
       baz=185,SNR=26
ECSD   EROS Data Cent    26.80   4 P        P        20 46 56.6 -1.0
ECSD                               IAmb     IAmb     20 47 20.5
       comp=Z,91nm,0.9s
ECSD   EROS Data Cent    26.80   4 IAMs_20  IAMs_20  20 58 21.9
       comp=Z,7µm,18.0s
BGU    Big Grassy Mou    26.85 336 P        P        20 46 58.5 +0.3
L44A   Lake County Fo    26.89  18 P        P        20 46 57.1 -1.2
       baz=204,SNR=6.4
L44A   Lake County Fo    26.89  18 P        P        20 46 58.2 -0.1
SC01   Santiago de lo    26.89  80 P        P        20 46 59.4 +0.7
HWUT   Hardware Ranch    26.90 339 P        P        20 46 59.1 +0.4
HWUT                               IAmb     IAmb     20 47 15.5
       comp=Z,128nm,0.9s
R55A   Marlinton         26.93  34 P        P        20 46 58.6 -0.3
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ROSC El Rosal          26.93 114 P        P        20 46 58.2 -1.3
     comp=Z,6.1nm,0.4s,baz=279,slow=19,SNR=1.4
ROSC El Rosal          26.93 114 P        P        20 47 01.6 +2.1
ROSC                             pmax     pmax
     comp=Z,109nm,1.1s
ROSC El Rosal          26.93 114 P        P        20 47 01.6 +2.1
ROSC                             IAmb     IAmb     20 47 24.2
     comp=Z,109nm,1.1s
U59A Littleton         26.94  40 P        P        20 46 58.3 -0.6
P52A Corning           26.94  29 P        P        20 46 57.7 -1.3
     baz=217,SNR=8.0
P52A Corning           26.94  29 P        P        20 46 57.6 -1.3
P52A                             IAmb     IAmb     20 47 16.7
     comp=Z,166nm,1.1s
JFWS Jewell Farm       26.95  14 P        P        20 46 58.0 -0.9
JFWS                             pmax     pmax
     comp=Z,117nm,0.8s
JFWS                             MLR      MLR
     comp=Z,8µm,20.0s
JFWS Jewell Farm       26.95  14 P        P        20 46 59.1 +0.1
     baz=198,SNR=10.0
JFWS Jewell Farm       26.95  14 P        P        20 46 58.0 -0.9
JFWS                             IAmb     IAmb     20 47 17.7
     comp=Z,117nm,0.8s
JFWS Jewell Farm       26.95  14 IAMs_20  IAMs_20  20 59 06.7
     comp=Z,8µm,20.0s
SPUT South Promonto    26.96 337 P        P        20 46 59.8 +0.6
SPUT                             IAmb     IAmb     20 47 16.4
     comp=Z,107nm,1.1s
ACSO Alum Creek Sta    27.03  28 P        P        20 46 58.8 -0.9
     baz=215,SNR=15
ACSO Alum Creek Sta    27.03  28 P        P        20 46 58.9 -0.9
ACSO                             IAmb     IAmb     20 47 18.1
     comp=Z,196nm,1.0s
Q54A Coxs Mills        27.07  32 P        P        20 46 59.5 -0.6
Q54A                             IAmb     IAmb     20 47 15.9
     comp=Z,116nm,0.9s
MLAC Mammoth, Mammo27.08 324 P        P        20 47 03.2 +2.8
     baz=134,SNR=8.1
N49A Columbus Grove    27.10  25 P        P        20 46 59.6 -0.7
N49A                             IAmb     IAmb     20 47 17.6
     comp=Z,133nm,1.0s
BARC Barichara         27.17 109 eP       P        20 47 03.6 +2.1
P53A Whipple           27.18  31 P        P        20 47 01.2 +0.1
P53A                             IAmb     IAmb     20 47 16.4
     comp=Z,147nm,1.3s
S57A Dark Hollow, R    27.20  36 P        P        20 47 00.8 -0.5
S57A                             IAmb     IAmb     20 47 12.2
     comp=Z,136nm,0.8s
MDPB Devils Postpil    27.22 323 P        P        20 47 03.3 +1.6
K43A Burlington        27.25  17 P        P        20 47 00.1 -1.5
K43A                             IAmb     IAmb     20 47 27.6
     comp=Z,127nm,1.1s
L46A Eue Claire        27.25  21 P        P        20 46 58.1 -3.6
L46A                             IAmb     IAmb     20 47 19.0
     comp=Z,188nm,1.1s
NV11 Mina Array Sit    27.27 326 P        P        20 47 01.8 -0.3
NV11                             IAmb     IAmb     20 47 19.8
     comp=Z,137nm,1.4s
PAMC Pamplona, Colo    27.31 107 eP       P        20 47 05.4 +2.3
PMPB Monarch Peak      27.32 319 P        P        20 47 04.4 +2.0
PMPB                             IAmb     IAmb     20 47 23.0
     comp=Z,166nm,1.2s
BW06 Boulder Array     27.32 343 P        P        20 47 03.2 +0.6
     baz=157,SNR=87
BW06 Boulder Array     27.32 343 P        P        20 47 02.6 +0.1
BW06                             IAmb     IAmb     20 47 22.5
     comp=Z,136nm,1.1s
PD31 Pinedale Array    27.32 343 P        P        20 47 02.8 +0.3
PD31                             IAmb     IAmb     20 47 22.5
     comp=Z,124nm,1.1s
PDAR Pinedale Array    27.32 343 P        P        20 47 02.1 -0.4
     comp=Z,129nm,1.1s,baz=139,slow=9.2,SNR=120
PDAR                             PcP      PcP      20 50 21.2 -0.3
     comp=Z,3.0nm,0.8s,baz=153,slow=3.6,SNR=3.8
PDAR                             LR       LR       20 59 05.5
     comp=Z,19µm,18.2s,baz=165,slow=39
PDAR Pinedale Array    27.32 343 P        P        20 47 02.3 -0.2
LHV  Little Huntoon    27.33 325 P        P        20 47 03.2 +0.8
LHV                              IAmb     IAmb     20 47 23.5
     comp=Z,96nm,1.1s
NVAR Mina Array Bea    27.35 325 P        P        20 47 03.2 +0.3
     comp=Z,65nm,1.1s,baz=148,slow=8.4,SNR=85
NVAR                             PcP      PcP      20 50 23.2 +1.6
     comp=Z,0.9nm,0.6s,baz=144,slow=3.2,SNR=3.5
NVAR                             Lg       Lg       20 55 39.5
     comp=Z,0.1nm,0.4s,baz=142,slow=18,SNR=1.6
NVAR                             LR       LR       20 59 45.1
     comp=Z,7µm,18.1s,baz=139,slow=40
NVAR Mina Array Bea    27.35 325 P        P        20 47 03.9 +1.0
I37A Lemond, Waseca    27.41   9 P        P        20 47 03.2 +0.1
SUSD Miller            27.44 360 P        P        20 47 02.5 -0.9
     baz=180
RSSD Black Hills       27.46 352 P        P        20 47 02.8 -1.0
RSSD                             pmax     pmax
     comp=Z,124nm,1.4s
RSSD                             MLR      MLR
     comp=Z,4µm,20.0s
RSSD Black Hills       27.46 352 P        P        20 47 04.3 +0.5
     baz=169
RSSD Black Hills       27.46 352 P        P        20 47 02.8 -1.0
RSSD                             IAmb     IAmb     20 47 23.7
     comp=Z,124nm,1.4s
O52A Adamsville        27.46  29 P        P        20 47 00.6 -3.0
O52A                             IAmb     IAmb     20 47 21.4
     comp=Z,186nm,1.1s
T59A Double "B" Far    27.48  39 P        P        20 47 03.5 -0.3
HVU  Hansel Valley     27.49 337 P        P        20 47 04.4 +0.4
HVU                              pmax     pmax
     comp=Z,90nm,0.8s
HVU  Hansel Valley     27.49 337 P        P        20 47 04.4 +0.4
HVU                              IAmb     IAmb     20 47 07.4
     comp=Z,90nm,0.8s
RUSC La Rusia          27.55 110 eP       P        20 47 05.8 +0.6
RYN  Ryan              27.61 325 P        P        20 47 07.0 +1.9
ELK  Elko              27.62 333 P        P        20 47 05.7 +0.4
     comp=Z,18nm,1.1s,baz=154,slow=7.0,SNR=18
ELK                              PcP      PcP      20 50 22.8 +0.6
     comp=Z,3.9nm,0.8s,baz=176,slow=2.0,SNR=2.5
ELK                              Lg       Lg       20 55 52.3
     comp=Z,0.3nm,0.4s,baz=164,slow=19,SNR=1.1
ELK                              LR       LR       20 59 13.0
     comp=Z,14µm,20.3s,baz=154,slow=39
ELK  Elko              27.62 333 P        P        20 47 06.0 +0.8
KVN  Kaiserville       27.69 327 P        P        20 47 07.4 +1.5
KVN                              pmax     pmax
     comp=Z,104nm,1.4s
KVN  Kaiserville       27.69 327 P        P        20 47 07.4 +1.5
JSRW J. Sargeant Re    27.77  38 P        P        20 47 05.0 -1.3
AHID Auburn Hatcher    27.78 341 P        P        20 47 06.9 +0.3
I40A Norwalk           27.79  13 P        P        20 47 05.4 -1.1
N51A Ashland           27.86  28 P        P        20 47 05.8 -1.3
N51A                             IAmb     IAmb     20 47 26.9
     comp=Z,244nm,1.4s
O53A New Philadelph    27.86  30 P        P        20 47 06.7 -0.4
     baz=218
O53A New Philadelph    27.86  30 P        P        20 47 06.3 -0.9
O53A                             IAmb     IAmb     20 47 26.0
     comp=Z,102nm,1.2s
L48A N Adams           27.87  24 P        P        20 47 06.2 -1.0
R58B Mineral           27.95  37 P        P        20 47 08.7 +0.7
M50A Fremont           27.97  26 P        P        20 47 07.3 -0.8
M50A                             IAmb     IAmb     20 47 28.1
     comp=Z,216nm,1.4s
SAO  San Andreas Ge    28.06 319 P        P        20 47 10.3 +1.3
SAO                              pmax     pmax
     comp=Z,61nm,1.2s
SAO                              MLR      MLR
     comp=Z,4µm,20.0s
SAO  San Andreas Ge    28.06 319 P        P        20 47 10.3 +1.3
MCWV Mont Chateau      28.09  32 P        P        20 47 08.9 -0.3
     baz=222,SNR=10
MCWV Mont Chateau      28.09  32 P        P        20 47 08.7 -0.5
MCWV                             IAmb     IAmb     20 47 29.6
     comp=Z,155nm,1.2s
ECR  Eagle Creek       28.13 340 P        P        20 47 10.0 +0.2
I42A Draeger Farm,     28.19  15 P        P        20 47 07.3 -2.7
REDW Red Top Meadow    28.24 341 P        P        20 47 11.3 +0.5
REDW                             IAmb     IAmb     20 47 28.8
     comp=Z,191nm,1.2s
CMB  Columbia Colle    28.25 322 P        P        20 47 11.3 +0.6
CMB  Columbia Colle    28.25 322 P        P        20 47 11.3 +0.6
YERR Yerington         28.25 325 P        P        20 47 12.1 +1.1
BMN  Battle Mountai    28.29 330 P        P        20 47 11.8 +0.6
BMN                              pmax     pmax
     comp=Z,59nm,1.4s
BMN  Battle Mountai    28.29 330 P        P        20 47 11.8 +0.6
SNOW Snow King Moun    28.30 342 P        P        20 47 11.5 +0.1
SNOW                             IAmb     IAmb     20 47 15.3
     comp=Z,192nm,1.2s
TPAW Teton Pass        28.39 341 P        P        20 47 12.2 +0.1
TPAW                             IAmb     IAmb     20 47 33.6
     comp=Z,128nm,1.1s
LOHW Long Hollow       28.40 342 P        P        20 47 12.4 +0.3
LOHW                             IAmb     IAmb     20 47 29.4
     comp=Z,173nm,1.4s
CBN  Corbin Frederi    28.41  37 P        P        20 47 11.0 -1.0
     baz=228
CBN  Corbin Frederi    28.41  37 P        P        20 47 10.7 -1.4
CBN                              IAmb     IAmb     20 47 23.3
     comp=Z,113nm,1.1s
AAM  Ann Arbor         28.47  24 P        P        20 47 11.7 -0.9
AAM                              pmax     pmax
     comp=Z,145nm,0.8s
AAM  Ann Arbor         28.47  24 P        P        20 47 11.4 -1.2
     baz=212
AAM  Ann Arbor         28.47  24 P        P        20 47 11.7 -0.9
N53A Lisbon            28.48  30 P        P        20 47 11.4 -1.2
N53A                             IAmb     IAmb     20 47 30.4
     comp=Z,154nm,1.1s
TAMC Tame, Arauca      28.50 108 eP       P        20 47 13.3 +0.2
PNTR Pine Nut          28.53 325 P        P        20 47 13.7 +0.3
FXWY Fox Creek         28.55 341 P        P        20 47 13.9 +0.4
MOOW Moose Ponds       28.56 342 P        P        20 47 12.9 -0.7
SOCV Socops            28.67 104 eP       P        20 47 12.7 -2.0
SDV  Santo Domingo     28.68 103 P        P        20 47 16.2 +1.3
     comp=Z,14nm,0.6s,baz=298,slow=6.2,SNR=12
SDV                              LR       LR       20 59 45.5
     comp=Z,4µm,19.9s,baz=304,slow=39
SDV  Santo Domingo     28.68 103 eP       P        20 47 15.4 +0.5
SDV  Santo Domingo     28.68 103 eP       P        20 47 16.3 +1.3
SDV  Santo Domingo     28.68 103 P        P        20 47 13.6 -1.3
SPMN Marine on St.     28.68   9 P        P        20 47 13.5 -0.9
     baz=192
SPMN Marine on St.     28.68   9 P        P        20 47 12.9 -1.6
VCNR Virginia City     28.70 325 P        P        20 47 16.3 +1.4
EMB  Emerald Bay       28.73 324 P        P        20 47 15.7 +0.6
EMB                              IAmb     IAmb     20 47 29.9
     comp=Z,140nm,1.1s
RUBR Rubicon Trail     28.81 324 P        P        20 47 17.2 +1.3
M52A Chesterland       28.82  28 P        P        20 47 14.5 -1.2
M52A                             IAmb     IAmb     20 47 33.2
     comp=Z,151nm,1.0s
J47A Sunmer            28.85  22 P        P        20 47 14.0 -1.9
J47A                             IAmb     IAmb     20 47 17.8
     comp=Z,149nm,1.2s
PAHR Pah Rah Range     28.85 326 P        P        20 47 17.1 +0.9
FLWY Flagg Ranch       28.85 342 P        P        20 47 16.3 +0.1
FLWY                             IAmb     IAmb     20 47 28.4
     comp=Z,124nm,1.2s
MPK  Martis Peak       28.91 325 P        P        20 47 17.4 +0.5
MPK                              IAmb     IAmb     20 47 41.8
     comp=Z,111nm,1.1s
F33A 5 Mile Ranch,     28.92   4 P        P        20 47 15.3 -1.2
P57A Homestead Farm    28.93  35 P        P        20 47 16.6 -0.1
N54A Moraine State     29.00  30 P        P        20 47 16.2 -1.1
     baz=220,SNR=5.6
N54A Moraine State     29.00  30 P        P        20 47 16.2 -1.1
PTLC Puerto Leguiza    29.01 123 eP       P        20 47 20.3 +2.6
M53A Wl Miller and     29.05  29 P        P        20 47 16.2 -1.6
     baz=218
M53A Wl Miller and     29.05  29 P        P        20 47 18.0 +0.3
M53A                             IAmb     IAmb     20 47 33.1
     comp=Z,112nm,1.2s
I45A Fountain          29.09  19 P        P        20 47 16.0 -2.0
I45A                             IAmb     IAmb     20 47 37.5
     comp=Z,94nm,0.9s
H17A Grant Village     29.11 343 P        P        20 47 18.8 +0.3
     baz=156
H17A Grant Village     29.11 343 P        P        20 47 19.0 +0.5
PTGC Puerto Gaitan,    29.16 113 eP       P        20 47 17.2 -1.7
G40A Rib Lake          29.20  13 P        P        20 47 16.7 -2.3
O56A Blue Knob Stat    29.20  33 P        P        20 47 18.2 -0.9
     baz=223,SNR=8.2
O56A Blue Knob Stat    29.20  33 P        P        20 47 17.4 -1.7
O56A                             IAmb     IAmb     20 47 30.2
     comp=Z,102nm,1.1s
F36A Milaca            29.21   8 P        P        20 47 17.7 -1.4
LKWY Lake              29.21 343 P        P        20 47 20.4 +1.0
LKWY                             pmax     pmax
     comp=Z,45nm,1.1s
LKWY                             MLR      MLR
     comp=Z,9µm,21.0s
LKWY Lake              29.21 343 P        P        20 47 20.4 +1.0
LKWY                             IAMs_20  IAMs_20  20 58 03.9
     comp=Z,9µm,21.0s
K50A Casco             29.28  25 P        P        20 47 18.6 -1.1
K50A                             IAmb     IAmb     20 47 39.5
     comp=Z,180nm,1.2s
YMP  Mirror Lake Pl    29.31 344 P        P        20 47 21.1 +0.8
YUF  Upper Falls       29.38 343 P        P        20 47 21.8 +0.9
YUF                              IAmb     IAmb     20 47 48.3
     comp=Z,96nm,1.3s
YNR  Norris Junctio    29.43 343 P        P        20 47 22.0 +0.6
RLMT Red Lodge         29.43 345 P        P        20 47 21.1 -0.2
     baz=159,SNR=84
RLMT Red Lodge         29.43 345 P        P        20 47 20.7 -0.6
RLMT                             IAmb     IAmb     20 47 40.4
     comp=Z,151nm,1.1s
RLMT                             IAMs_20  IAMs_20  21 00 16.7
     comp=Z,7µm,19.0s
ALLY Alegheny Colle    29.46  29 P        P        20 47 19.1 -2.3
ALLY                             IAmb     IAmb     20 47 39.1
     comp=Z,68nm,0.8s
YMR  Madison River     29.47 342 P        P        20 47 22.3 +0.7
YMR                              IAmb     IAmb     20 47 39.4
     comp=Z,160nm,1.3s
SDMD Soldier's Deli    29.53  36 P        P        20 47 20.2 -1.8
YHH  Holmes Hill       29.54 343 P        P        20 47 22.9 +0.4
M54A Oil Creek Stat    29.58  30 P        P        20 47 21.3 -1.1
     baz=220,SNR=6.4
M54A Oil Creek Stat    29.58  30 P        P        20 47 22.6 +0.2
E28A Huff              29.61 358 P        P        20 47 21.9 -0.8
E28A                             IAmb     IAmb     20 47 42.9
     comp=Z,120nm,1.2s
HLID Hailey            29.64 337 P        P        20 47 22.9 -0.2
     baz=149,SNR=68
HLID Hailey            29.64 337 P        P        20 47 23.6 +0.5
HLID                             IAMs_20  IAMs_20  21 00 47.3
     comp=Z,7µm,20.0s
QLMT Earthquake Lak    29.75 342 P        P        20 47 25.4 +1.2
MCCM Marconi Confer    29.82 320 P        P        20 47 26.7 +2.2
MCCM                             IAmb     IAmb     20 47 46.5
     comp=Z,93nm,1.1s
SSPA Standing Stone    29.82  33 P        P        20 47 24.0 -0.6
     baz=224
SSPA Standing Stone    29.82  33 P        P        20 47 23.4 -1.2
SSPA                             IAmb     IAmb     20 47 35.8
     comp=Z,138nm,1.1s
ERPA Erie              29.90  29 P        P        20 47 24.3 -1.0
     baz=218
ERPA Erie              29.90  29 P        P        20 47 24.1 -1.2
ORV  Oroville          29.91 323 P        P        20 47 26.2 +0.8
ORV                              pmax     pmax
     comp=Z,58nm,1.4s
ORV                              MLR      MLR
     comp=Z,4µm,18.0s
ORV  Oroville          29.91 323 P        P        20 47 26.2 +0.8
BCYI Bear Canyon       29.92 339 P        P        20 47 26.5 +0.8
M55A Ridgway           29.99  31 P        P        20 47 25.4 -0.7
Q61A Milford           30.06  39 P        P        20 47 25.1 -1.6
     baz=230
MFID Camas Ranch       30.06 335 P        P        20 47 27.3 +0.5
MFID                             IAmb     IAmb     20 47 49.9
     comp=Z,103nm,1.2s
MFID                             IAMs_20  IAMs_20  21 00 18.7
     comp=Z,6µm,19.0s
F42A Maple Grove Fa    30.14  15 P        P        20 47 25.5 -1.8
GCMT Greycliff         30.16 345 P        P        20 47 28.1 +0.4
G45A Suttons Bay       30.17  19 P        P        20 47 25.7 -1.9
G45A                             IAmb     IAmb     20 47 29.2
     comp=Z,100nm,0.9s
D32A Dogwood Acres,    30.17   3 P        P        20 47 25.9 -1.7
GDXM Geysers           30.18 321 P        P        20 47 30.6 +2.7
I49A Point Hope        30.19  23 P        P        20 47 27.5 -0.3
I49A                             IAmb     IAmb     20 47 29.1
     comp=Z,132nm,1.1s
MCMT McKenzie Canyo    30.19 340 P        P        20 47 29.2 +1.1
MVL  Millersville      30.21  36 P        P        20 47 27.6 -0.4
COWI Conover           30.22  14 P        P        20 47 27.1 -1.0
COWI                             IAMs_20  IAMs_20  21 00 55.3
     comp=Z,6µm,22.0s
E38A The Farm, Brul    30.23  10 P        P        20 47 27.4 -0.7
LAO  LASA Array        30.30 350 P        P        20 47 28.2 -0.6
     baz=166
LAO  LASA Array        30.30 350 P        P        20 47 27.9 -0.9
LAO                              IAmb     IAmb     20 47 47.4
     comp=Z,104nm,1.2s
GLMI Grayling          30.31  20 P        P        20 47 28.1 -0.8
     baz=208
GLMI Grayling          30.31  20 P        P        20 47 27.0 -1.9
GLMI                             IAMs_20  IAMs_20  21 01 35.8
     comp=Z,6µm,19.0s
HOPS Hopland Field     30.47 321 P        P        20 47 32.7 +2.4
HOPS                             IAmb     IAmb     20 47 56.7
     comp=Z,73nm,1.1s
P60A Greenville        30.49  37 P        P        20 47 30.0 -0.5
     baz=228
P60A Greenville        30.49  37 P        P        20 47 30.6 +0.2
P60A                             IAmb     IAmb     20 47 41.5
     comp=Z,112nm,1.4s
BOZ  Bozeman (W)       30.51 342 P        P        20 47 30.6 -0.2
BOZ                              pmax     pmax
     comp=Z,151nm,1.5s
BOZ                              MLR      MLR
     comp=Z,22µm,18.0s
BOZ  Bozeman (W)       30.51 342 P        P        20 47 31.2 +0.4
     baz=155,SNR=38
BOZ  Bozeman (W)       30.51 342 P        P        20 47 30.6 -0.2
BOZ                              IAmb     IAmb     20 47 47.8
     comp=Z,151nm,1.5s
WVOR Wild Horse Val    30.51 331 P        P        20 47 31.6 +0.8
WVOR                             pmax     pmax
     comp=Z,76nm,1.2s
WVOR                             MLR      MLR
     comp=Z,13µm,20.0s
WVOR Wild Horse Val    30.51 331 P        P        20 47 31.6 +0.8
WVOR                             IAmb     IAmb     20 47 48.4
     comp=Z,76nm,1.1s
O03E Paynes Creek      30.59 324 P        P        20 47 32.3 +0.9
     baz=133,SNR=8.3
DLMT Dillon            30.59 341 P        P        20 47 32.4 +0.9
N58A Sunbury           30.59  34 P        P        20 47 31.0 -0.4
M57A Sunshine Farm,    30.73  33 P        P        20 47 32.6  0.0
M57A                             IAmb     IAmb     20 47 43.6
     comp=Z,66nm,0.8s
WVNY West Valley, N    30.77  30 P        P        20 47 30.3 -2.7
CELP Cerrillos         30.85  83 P        P        20 47 33.7 -0.2
MDND Maddock           30.85 359 P        P        20 47 32.2 -1.3
     baz=178
MDND Maddock           30.85 359 P        P        20 47 32.4 -1.2
MOD  Modoc Plateau     30.92 328 P        P        20 47 34.6 +0.1
MOD                              IAmb     IAmb     20 47 52.1
     comp=Z,65nm,0.9s
LRM  Limekiln Ridge    30.95 341 P        P        20 47 35.5 +0.7
E43A Lone Tree Farm    31.00  16 P        P        20 47 33.4 -1.5
O02D Mt. Diablo Mer    31.07 323 P        P        20 47 36.6 +0.9
     baz=131,SNR=6.0
L56A Greenwood         31.09  32 P        P        20 47 33.9 -1.9
L56A                             IAmb     IAmb     20 48 02.1
     comp=Z,125nm,1.4s
J08A Circle Bar Ran    31.15 332 P        P        20 47 37.7 +1.3
N59A State Game Lan    31.16  35 P        P        20 47 34.7 -1.7
     baz=227
N59A State Game Lan    31.16  35 P        P        20 47 35.0 -1.4
LUPA Lehigh Univers    31.17  36 P        P        20 47 35.8 -0.7
LUPA                             IAmb     IAmb     20 48 00.3
     comp=Z,58nm,0.9s
WDC  Whiskeytown Da    31.19 324 P        P        20 47 36.3 -0.4
WDC                              pmax     pmax
     comp=Z,9.0nm,1.0s
WDC                              MLR      MLR
     comp=Z,2µm,20.0s
WDC  Whiskeytown Da    31.19 324 P        P        20 47 36.3 -0.4
KCPM Cahto Peak        31.21 322 P        P        20 47 37.3 +0.3
KCPM                             IAmb     IAmb     20 47 41.9
     comp=Z,105nm,1.2s
SJG  San Juan          31.25  83 P        P        20 47 37.0 -0.4
     comp=Z,16nm,0.8s,baz=280,slow=7.9,SNR=7.2
SJG                              PcP      PcP      20 50 28.5 -3.1
     comp=Z,4.2nm,0.2s,baz=201,slow=8.6,SNR=1.6
SJG  San Juan          31.25  83 P        P        20 47 37.2 -0.3
D41A Chassel           31.26  14 P        P        20 47 36.9 -0.2
MMNY Mt. Morris Dam    31.36  31 P        P        20 47 37.2 -0.9
MMNY                             IAmb     IAmb     20 47 53.2
     comp=Z,108nm,1.3s
PDPR Patillas Dam,     31.38  83 P        P        20 47 37.5 -1.1
AGMN Agassiz Nation    31.40   4 P        P        20 47 37.6 -0.8
     baz=185,SNR=18
AGMN Agassiz Nation    31.40   4 P        P        20 47 36.7 -1.7
AGMN                             IAmb     IAmb     20 47 58.3
     comp=Z,54nm,0.8s
AGMN                             IAMs_20  IAMs_20  21 01 03.5
     comp=Z,6µm,21.0s
J54A Appleton          31.42  29 P        P        20 47 35.6 -3.0
J54A                             IAmb     IAmb     20 48 03.3
     comp=Z,76nm,1.2s
MEDO Medina            31.42  29 P        P        20 47 35.2 -3.5
MEDO                             IAmb     IAmb     20 47 52.2
     comp=Z,62nm,1.1s
CBYP Canovanas         31.52  83 P        P        20 47 38.9 -1.1
PLID Pearl Lake        31.53 337 P        P        20 47 39.8 -0.1
PLID                             IAMs_20  IAMs_20  21 01 29.5
     comp=Z,7µm,22.0s
EYMN Ely               31.54  10 P        P        20 47 38.4 -1.2
     baz=194
EYMN Ely               31.54  10 P        P        20 47 38.7 -1.0
EYMN Ely               31.54  10 IAMs_20  IAMs_20  21 01 25.3
     comp=Z,7µm,18.0s
N02D Trinity Center    31.55 324 P        P        20 47 39.9  0.0
     baz=132
HRY  Holter Researc    31.58 343 P        P        20 47 40.4 +0.2
KSPA Keystone Colle    31.60  34 P        P        20 47 38.2 -2.1
KMRM Mail Ridge        31.63 322 P        P        20 47 41.8 +1.1
M04C Macdoel           31.64 326 P        P        20 47 41.8 +1.0
     baz=134,SNR=25
B35A Bob, Littlefor    31.65   7 P        P        20 47 39.0 -1.6
BRNJ Basking Ridge     31.68  37 P        P        20 47 40.5 -0.5
BRNJ                             IAmb     IAmb     20 47 52.3
     comp=Z,92nm,0.8s
DGMT Dagmar            31.76 353 P        P        20 47 41.5 -0.1
     baz=170
DGMT Dagmar            31.76 353 P        P        20 47 41.8 +0.2
DGMT                             IAmb     IAmb     20 48 01.4
     comp=Z,101nm,1.0s
E46A Sault Ste Mari    31.78  19 P        P        20 47 40.6 -1.2
E46A                             IAmb     IAmb     20 47 43.2
     comp=Z,54nm,1.0s
J55A Hilton            31.80  30 P        P        20 47 41.0 -1.0
J55A                             IAmb     IAmb     20 47 56.7
     comp=Z,132nm,1.4s
K05A Summer Lake       31.82 328 P        P        20 47 42.3 -0.2
BMO  Blue Mountains    31.85 335 P        P        20 47 42.4 -0.2
BMO                              pmax     pmax
     comp=Z,46nm,1.1s
BMO                              MLR      MLR
     comp=Z,6µm,22.0s
BMO  Blue Mountains    31.85 335 P        P        20 47 42.4 -0.2
BMO                              IAMs_20  IAMs_20  21 01 48.0
     comp=Z,6µm,22.0s
M02C Callahan          31.91 325 P        P        20 47 42.9 -0.3
     baz=132,SNR=5.5
BINY Binghamton        31.94  33 P        P        20 47 42.0 -1.2
     baz=225
BINY Binghamton        31.94  33 P        P        20 47 44.4 +1.1
BINY                             IAmb     IAmb     20 47 54.4
     comp=Z,97nm,1.0s
K57A Scipio Center     32.05  32 P        P        20 47 43.1 -1.1
K57A                             IAmb     IAmb     20 47 54.9
     comp=Z,128nm,1.2s
KHMM Horse Mountain    32.06 323 P        P        20 47 45.3 +0.7
KHMM                             IAmb     IAmb     20 48 07.2
     comp=Z,69nm,1.1s
YBH  Yreka Blue Hor    32.07 325 P        P        20 47 43.7 -0.8
YBH                              pmax     pmax
     comp=Z,21nm,1.4s
YBH                              MLR      MLR
     comp=Z,3µm,18.0s
YBH  Yreka Blue Hor    32.07 325 P        P        20 47 43.7 -0.8
TRNY Table Rock, Ra    32.18  36 P        P        20 47 43.9 -1.5
TRNY                             IAmb     IAmb     20 47 56.4
     comp=Z,85nm,0.8s
I07A Izee              32.18 332 P        P        20 47 45.9 +0.3
L04D Klamath Falls     32.19 326 P        P        20 47 45.4 -0.1
     baz=134,SNR=16
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K04D	**Chiloquin, OR**	32.19	327	P	P	20 47 46.2	+0.7
	baz=136						
JCC	**Jacoby Creek,**	32.20	323	P	P	20 47 47.6	+2.1
JCC				IAMs_20	IAMs_20	21 00 54.5	
	comp=Z,4µm,18.0s						
PAL	**Palisades**	32.27	37	P	P	20 47 46.3	+0.2
PAL				pmax	pmax		
	comp=Z,92nm,1.0s						
PAL	**Palisades**	32.27	37	P	P	20 47 45.0	-1.1
	baz=229						
PAL	**Palisades**	32.27	37	P	P	20 47 46.3	+0.2
PAL				IAmb	IAmb	20 47 57.1	
	comp=Z,92nm,0.9s						
EGMT	**Eagleton**	32.27	346	P	P	20 47 46.0	-0.2
	baz=160,SNR=25						
EGMT	**Eagleton**	32.27	346	P	P	20 47 45.8	-0.4
J56A	**Wolcott**	32.27	31	P	P	20 47 46.0	-0.2
J56A				IAmb	IAmb	20 48 01.3	
	comp=Z,116nm,1.1s						
MSO	**Missoula**	32.32	341	P	P	20 47 47.0	+0.4
	baz=152,SNR=41						
MSO	**Missoula**	32.32	341	P	P	20 47 46.7	+0.1
MSO				IAmb	IAmb	20 48 03.0	
	comp=Z,114nm,1.3s						
SADO	**Sadowa**	32.37	27	P	P	20 47 45.6	-1.4
SADO				IAmb	IAmb	20 48 06.5	
	comp=Z,63nm,1.0s						
J05D	**Fort Rock, OR**	32.41	329	P	P	20 47 48.3	+0.8
	baz=137,SNR=6.7						
L59A	**Walton**	32.43	34	P	P	20 47 47.9	+0.3
L59A				IAmb	IAmb	20 47 58.8	
	comp=Z,90nm,0.9s						
KRMB	**Red Mountain**	32.59	324	P	P	20 47 50.3	+1.1
KRMB				IAmb	IAmb	20 47 53.2	
	comp=Z,110nm,1.5s						
PINE	**Pine Mountain**	32.64	330	P	P	20 47 51.0	+1.4
PECO	**Prince Edward**	32.70	30	P	P	20 47 48.7	-1.1
PECO				IAmb	IAmb	20 48 00.1	
	comp=Z,47nm,0.8s						
WSPT	**Westport, CT**	32.71	37	P	P	20 47 49.9	-0.1
WSPT				IAmb	IAmb	20 48 00.8	
	comp=Z,100nm,1.0s						
F10A	**Beach Ranch, E**	32.74	336	P	P	20 47 50.2	-0.2
J57A	**Williamstown**	32.80	32	P	P	20 47 49.8	-1.0
HUMO	**Hull Mountain**	32.80	326	P	P	20 47 51.8	+0.9
HUMO				IAMs_20	IAMs_20	21 02 44.5	
	comp=Z,5µm,18.0s						
J04D	**Umpqua Nationa**	32.81	328	P	P	20 47 51.3	+0.1
	baz=136,SNR=7.7						
L02E	**Cave Junction**	32.85	325	P	P	20 47 52.3	+1.1
	baz=132						
DELO	**Deloro Mine**	32.85	29	P	P	20 47 50.7	-0.4
DELO				IAmb	IAmb	20 48 08.8	
	comp=Z,63nm,1.1s						
G08A	**Pilot Rock**	32.89	334	P	P	20 47 52.4	+0.7
G08A				IAmb	IAmb	20 48 08.7	
	comp=Z,63nm,1.0s						
KSCT	**Kent School, K**	32.98	36	P	P	20 47 53.2	+0.9
KSCT				IAmb	IAmb	20 48 03.5	
	comp=Z,72nm,0.9s						
J58A	**Remsen**	33.13	32	P	P	20 47 53.0	-0.7
J58A				IAmb	IAmb	20 48 04.3	
	comp=Z,51nm,0.8s						
KBO	**Bosley Butte**	33.23	325	P	P	20 47 55.0	+0.4
I05D	**Terrebonne, OR**	33.24	330	P	P	20 47 56.1	+1.5
	baz=138,SNR=12						
JTMT	**Jette**	33.24	341	P	P	20 47 54.8	+0.1
JTMT				IAmb	IAmb	20 48 11.7	
	comp=Z,82nm,1.2s						
K02D	**Willamette Mer**	33.24	326	P	P	20 47 56.0	+1.2
	baz=133,SNR=7.0						
ULM	**Lac du Bonnet**	33.34	4	P	P	20 47 54.2	-1.2
	comp=Z,17nm,1.0s,baz=189,slow=9.6,SNR=8.8						
ULM				LR	LR	21 02 21.4	
	comp=Z,5µm,19.8s,baz=184,slow=38						
ULM	**Lac du Bonnet**	33.34	4	P	P	20 47 51.4	-4.0
ULM				IAmb	IAmb	20 48 10.9	
	comp=Z,50nm,1.1s						
I04A	**Tendick Farm,**	33.36	328	P	P	20 47 55.7	-0.1
	baz=136,SNR=9.1						
PLVO	**Plevna**	33.50	29	P	P	20 47 54.4	-2.4
PLVO				IAmb	IAmb	20 47 59.1	
	comp=Z,65nm,1.4s						
E09A	**Wood Farm, Sta**	33.55	336	P	P	20 47 56.5	-0.7
E09A				IAmb	IAmb	20 48 00.0	
	comp=Z,78nm,1.2s						
J59A	**Piesco**	33.60	33	P	P	20 47 55.8	-2.0
M63A	**Gales Ferry**	33.60	38	P	P	20 47 57.4	-0.4
J01E	**Myrtle Point**	33.71	326	P	P	20 47 59.3	+0.6
	baz=133,SNR=7.7						
KEBM	**Edson Butte**	33.73	325	P	P	20 47 59.8	+0.9
UCCT	**U. Connecticut**	33.74	37	P	P	20 47 55.4	-3.6
I03D	**Drain, OR**	33.77	327	P	P	20 48 00.1	+0.9
	baz=134,SNR=9.3						
F07A	**Phinny Hill Vi**	33.79	333	P	P	20 48 00.3	+1.0
E08A	**Dider Farm, El**	33.90	335	P	P	20 47 59.8	-0.5
G05D	**Wamic, OR**	33.90	331	P	P	20 48 02.1	+1.7
	baz=139						
L61B	**Northampton**	33.91	36	P	P	20 47 59.2	-1.2
	baz=229						
BUCK	**Buck Mountain**	33.94	328	P	P	20 48 02.0	+1.2
BUCK				IAmb	IAmb	20 48 17.7	
	comp=Z,95nm,1.1s						
ACCN	**Adirondack Com**	33.99	34	P	P	20 48 00.5	-0.6
ACCN				IAmb	IAmb	20 48 23.0	
	comp=Z,56nm,1.1s						
HAWA	**Hanford**	34.02	334	P	P	20 48 02.0	+0.7
HAWA				IAMs_20	IAMs_20	21 02 58.2	
	comp=Z,6µm,21.0s						
H04D	**Lebanon**	34.05	329	P	P	20 48 02.0	+0.3
	baz=136,SNR=9.5						
NCB	**Newcomb**	34.10	33	P	P	20 48 01.5	-0.6
NCB				IAmb	IAmb	20 48 24.6	
	comp=Z,46nm,0.9s						
HOOD	**Mount Hood Mea**	34.12	331	P	P	20 48 03.3	+0.8
E07A	**Sunnyside**	34.28	334	P	P	20 48 04.3	+0.7
WALA	**Waterton Lakes**	34.30	342	P	P	20 48 03.3	-0.6
D08A	**Wollman Farm,**	34.30	335	P	P	20 48 03.3	-0.5
I02E	**Swisshome, OR**	34.31	327	P	P	20 48 04.5	+0.5
	baz=134						
COR	**Corvallis**	34.38	329	P	P	20 48 06.7	+2.3
COR				pmax	pmax		
	comp=Z,73nm,1.1s						
COR				MLR	MLR		
	comp=Z,7µm,20.0s						
COR	**Corvallis**	34.38	329	P	P	20 48 06.7	+2.3
COR				IAmb	IAmb	20 48 08.2	
	comp=Z,73nm,1.1s						
COR	**Corvallis**	34.38	329	IAMs_20	IAMs_20	21 03 14.0	
	comp=Z,7µm,20.0s						
LONY	**Lake Ozonia**	34.38	31	P	P	20 48 04.0	-0.6
	baz=224,SNR=6.0						
LONY	**Lake Ozonia**	34.38	31	P	P	20 48 04.1	-0.4
LONY				IAmb	IAmb	20 48 15.1	
	comp=Z,61nm,1.1s						
F05D	**White Salmon**	34.46	332	P	P	20 48 06.0	+0.8
	baz=139,SNR=21						
HRV	**Adam Dziewonsk**	34.58	37	P	P	20 48 05.7	-0.5
	baz=231						
NEW	**Newport**	34.63	338	P	P	20 48 06.3	-0.4
NEW				pmax	pmax		
	comp=Z,47nm,1.2s						
NEW				MLR	MLR		
	comp=Z,7µm,18.0s						
NEW	**Newport**	34.63	338	P	P	20 48 06.5	-0.2
	baz=148,SNR=12						
NEW	**Newport**	34.63	338	P	P	20 48 06.3	-0.4
NEW	**Newport**	34.63	338	IAMs_20	IAMs_20	21 03 50.5	
	comp=Z,7µm,18.0s						
C09A	**Chrisman Ranch**	34.66	337	P	P	20 48 07.5	+0.6
C09A				IAmb	IAmb	20 48 25.1	
	comp=Z,86nm,1.0s						
G03D	**McMinnville, O**	34.81	329	P	P	20 48 08.4	+0.2
	baz=136,SNR=11						
F04A	**Amboy**	34.93	331	P	P	20 48 09.6	+0.4
F04A				IAmb	IAmb	20 48 12.5	
	comp=Z,79nm,1.2s						
FRNY	**Flat Rock**	35.03	32	P	P	20 48 10.0	-0.1
LTY	**Liberty**	35.18	334	P	P	20 48 12.7	+1.3
LTY				IAmb	IAmb	20 48 15.0	
	comp=Z,95nm,1.2s						
F04D	**Rainier, OR**	35.32	331	P	P	20 48 12.7	+0.1
	baz=137						
E04D	**Cinebar**	35.47	332	P	P	20 48 14.8	+0.9
	baz=138,SNR=6.9						
MNTQ	**Montreal, Queb**	35.48	31	P	P	20 48 12.8	-1.2
MNTQ				IAmb	IAmb	20 48 24.9	
	comp=Z,79nm,0.9s						
LBNH	**Lisbon**	35.50	34	P	P	20 48 13.1	-1.1
	baz=228						
TBTG	**Tabatinga, AM**	35.52	124	*e*P	P	20 48 16.2	+1.6
B08A	**Colville Reser**	35.52	336	P	P	20 48 14.1	-0.3
B08A				IAmb	IAmb	20 48 31.6	
	comp=Z,108nm,1.1s						
TRQ	**Mont Tremblant**	35.55	30	P	P	20 48 14.3	-0.4
TRQ				IAmb	IAmb	20 48 25.6	
	comp=Z,63nm,1.0s						
I62A	**Tamworth**	35.58	35	P	P	20 48 14.0	-0.8
I62A				IAmb	IAmb	20 48 39.4	
	comp=Z,96nm,1.0s						
CZSB	**Cruzeiro do Su**	35.66	131	*e*P	P	20 48 18.9	+3.0
CZSB	**Cruzeiro do Su**	35.66	131	P	P	20 48 16.9	+1.0
D05A	**Enumclaw**	35.69	333	P	P	20 48 17.2	+1.5
D05A				IAmb	IAmb	20 48 19.4	
	comp=Z,102nm,1.0s						
VLDQ	**Val d'Or**	35.74	25	P	P	20 48 13.8	-2.3
C06D	**Leavenworth**	35.80	335	P	P	20 48 17.3	+0.6
	baz=142,SNR=7.7						
E03A	**Lebam**	35.92	331	P	P	20 48 17.9	+0.2
RADR	**Rader Ridge**	35.94	330	P	P	20 48 19.2	+1.3
D04E	**Lakebay**	36.03	332	P	P	20 48 20.1	+1.5
	baz=139						
MOQ	**Mont Orford**	36.05	33	P	P	20 48 18.5	-0.4
NNA	**Nana**	36.07	141	P	P	20 48 20.1	+0.7
	comp=Z,12nm,0.6s,baz=307,slow=8.2,SNR=5.7						
NNA	**Nana**	36.07	141	P	P	20 48 20.8	+1.4
NNA				pmax	pmax		
	comp=Z,34nm,0.9s						
NNA				MLR	MLR		
	comp=Z,3µm,19.0s						
NNA	**Nana**	36.07	141	P	P	20 48 20.8	+1.4
WISH	**Wishkah**	36.44	331	P	P	20 48 23.9	+1.8
WISH				IAmb	IAmb	20 48 37.5	
	comp=Z,146nm,1.5s						
D03D	**Eldon**	36.44	332	P	P	20 48 22.9	+0.7
	baz=138,SNR=20						
B06A	**Marblemount**	36.51	335	P	P	20 48 22.3	-0.4
B05A	**Bryant**	36.56	334	P	P	20 48 23.6	+0.4
	baz=141,SNR=11						
NLWA	**Neilton Lookou**	36.69	331	P	P	20 48 25.6	+1.2
NLWA				IAmb	IAmb	20 48 29.1	
	comp=Z,146nm,1.4s						
G62A	**West of Eustis**	36.89	34	P	P	20 48 25.9	-0.1
B04A	**Port Angeles**	37.02	332	P	P	20 48 27.9	+0.8
B04A				IAmb	IAmb	20 48 30.8	
	comp=Z,101nm,1.1s						
A04D	**Lummi Island**	37.17	334	P	P	20 48 29.2	+0.9
	baz=140,SNR=22						
PGC	**Sidney**	37.44	333	P	P	20 48 30.8	+0.2
PKME	**Peaks-Kenny Pk**	37.59	35	P	P	20 48 31.7	-0.3
	baz=231						
FFC	**Flin Flon**	37.81	357	P	P	20 48 32.2	-1.5
FFC				pmax	pmax		
	comp=Z,45nm,0.9s						
FFC				MLR	MLR		
	comp=Z,4µm,18.0s						
FFC	**Flin Flon**	37.81	357	P	P	20 48 32.2	-1.5
FFC				IAmb	IAmb	20 48 52.7	
	comp=Z,45nm,0.8s						
FFC	**Flin Flon**	37.81	357	IAMs_20	IAMs_20	21 05 25.1	
	comp=Z,4µm,18.0s						
CLRS	**Cowichan Lake**	37.87	333	P	P	20 48 34.6	+0.4
EDM	**Edmonton**	37.95	346	P	P	20 48 34.4	-0.6
EDM				pmax	pmax		
	comp=Z,185nm,1.1s						
EDM	**Edmonton**	37.95	346	P	P	20 48 34.4	-0.6
BBGH	**Gun Hill**	38.16	90	IAMs_20	IAMs_20	21 02 51.5	
	comp=Z,4µm,21.0s						
LLLB	**Lillooet**	38.32	336	P	P	20 48 38.3	+0.2
LLLB				IAmb	IAmb	20 48 55.5	
	comp=Z,171nm,1.4s						
F64A	**Sherman**	38.48	35	P	P	20 48 38.7	-0.7
F64A				IAmb	IAmb	20 48 51.6	
	comp=Z,51nm,0.8s						
LMQ	**La Malbaie**	38.55	31	P	P	20 48 37.0	-3.0
LMQ				IAmb	IAmb	20 48 51.0	
	comp=Z,168nm,1.4s						
D62A	**Allapoint, All**	38.88	33	P	P	20 48 42.6	-0.3
D62A				IAmb	IAmb	20 48 54.4	
	comp=Z,121nm,1.2s						
CBB	**Campbell River**	39.31	333	P	P	20 48 45.8	-0.6
TLCB	**Telegraph Cove**	40.33	333	P	P	20 48 53.8	-0.9
TLCB				IAmb	IAmb	20 48 58.4	
	comp=Z,192nm,1.3s						
BOAV	**Boa Vista**	40.40	107	*e*P	P	20 48 56.7	+0.8
BOAV	**Boa Vista**	40.40	107	P	P	20 48 55.3	-0.5
ETMB	**Extrema**	41.85	127	*e*P	P	20 49 08.7	+0.9
ETMB	**Extrema**	41.85	127	P	P	20 49 06.5	-1.3
ETMB				IAmb	IAmb	20 49 24.2	
	comp=Z,87nm,1.2s						
MACA	**Manacapuru-AM**	42.70	114	*e*P	P	20 49 15.6	+0.9
SAML	**Samuel**	43.70	123	P	P	20 49 20.6	-2.2
SAML				pmax	pmax		
	comp=Z,512nm,1.0s						
SAML	**Samuel**	43.70	123	P	P	20 49 20.6	-2.2
MOBC	**Moresby Island**	44.42	332	P	P	20 49 29.0	+0.9
RUBB	**Prince Rupert**	44.49	334	P	P	20 49 30.2	+1.6
RUBB				IAmb	IAmb	20 49 41.7	
	comp=Z,80nm,1.0s						
DIB	**Dawson Inlet,**	44.69	332	P	P	20 49 32.8	+2.6
DIB				IAmb	IAmb	20 49 44.4	
	comp=Z,112nm,1.0s						
LPAZ	**La Paz**	44.84	136	P	P	20 49 31.9	-0.6
	comp=Z,9.4nm,0.9s,baz=218,slow=10,SNR=4.3						
LPAZ				LR	LR	21 07 05.4	
	comp=Z,2µm,18.6s,baz=214,slow=34						
LPAZ	**La Paz**	44.84	136	P	P	20 49 33.6	+1.1
LPAZ				pmax	pmax		
	comp=Z,58nm,1.4s						
LPAZ	**La Paz**	44.84	136	*e*P	P	20 49 33.8	+1.3
LPAZ	**La Paz**	44.84	136	P	P	20 49 33.6	+1.1
SCHQ	**Schefferville**	45.16	26	P	P	20 49 32.9	-1.1
	comp=Z,33nm,0.5s,baz=234,slow=7.4,SNR=49						
SCHQ				LR	LR	21 12 06.1	
	comp=Z,2µm,18.1s,baz=230,slow=41						
SCHQ	**Schefferville**	45.16	26	P	P	20 49 32.8	-1.1
SCHQ				IAmb	IAmb	20 49 45.1	
	comp=Z,122nm,1.1s						
PB16	**IPOC Station P**	45.44	139	P	P	20 49 39.0	+1.7
PB16				IAmb	IAmb	20 49 55.5	
	comp=Z,126nm,1.2s						
PB11	**IPOC Station P**	46.42	141	P	P	20 49 45.5	+0.9
CRAG	**Craig**	46.48	334	P	P	20 49 45.5	+1.2
	baz=132						
CRAG	**Craig**	46.48	334	P	P	20 49 46.9	+2.6
TA01	**Diego Aracena**	46.73	142	P	P	20 49 48.3	+1.6
WRAK	**Wrangell Islan**	46.81	335	P	P	20 49 48.1	+1.2
	baz=134						
WRAK	**Wrangell Islan**	46.81	335	IAMs_20	IAMs_20	21 10 54.7	
	comp=Z,5µm,19.0s						
YKA	**Yellowknife Ar**	46.84	350	P	P	20 49 45.5	-1.5
	comp=Z,226nm,0.2s,baz=149,slow=8.3,SNR=15						
PB08	**IPOC Station P**	47.02	140	P	P	20 49 49.4	0.0
DLBC	**Dease Lake**	47.38	338	P	P	20 49 53.3	+1.9
PB01	**IPOC Station P**	47.51	141	P	P	20 49 53.2	+0.4
PB01				IAmb	IAmb	20 50 11.5	
	comp=Z,43nm,1.0s						
ITTB	**Itaituba**	47.62	112	*e*P	P	20 49 54.0	+0.2
PB07	**IPOC Station P**	47.80	142	P	P	20 49 56.0	+0.7
PB07				IAmb	IAmb	20 50 13.1	
	comp=Z,69nm,0.9s						
MALB	**Monte Alegre**	47.83	109	*e*P	P	20 49 56.5	+1.0
PB04	**IPOC Station P**	48.12	143	P	P	20 49 56.6	-1.0
TAOE	**Nuku Hiva Isla**	48.14	241	*e*S	S	20 56 51.5	-3.5
	comp=Z,609nm,26.2s						
TAOE				*e*LR	LR	21 03 27.0	
	comp=Z,5µm,25.6s,baz=50						
TAOE	**Nuku Hiva Isla**	48.14	241	*e*T	T	21 40 11.8	
	comp=Z,163nm,0.3s						
PB09	**IPOC Station P**	48.23	142	P	P	20 49 59.5	+1.0
WTLY	**Watson Lake, Y**	48.24	340	P	P	20 49 59.0	+0.9
	baz=140,SNR=6.5						
VILB	**Vilhena**	48.42	125	*e*P	P	20 50 00.6	+0.6
VILB	**Vilhena**	48.42	125	P	P	20 49 59.0	-1.0
SIT	**Sitka**	48.46	334	P	P	20 50 00.6	+1.0
	baz=130						
PB06	**IPOC Station P**	48.74	143	P	P	20 50 02.8	+0.3
JIS	**Juneau Island**	48.89	336	P	P	20 50 05.5	+2.6
JIS				IAMs_20	IAMs_20	21 11 35.6	
	comp=Z,3µm,21.0s						
LVC	**Limon Verde**	49.05	142	P	P	20 50 04.2	-0.9
	comp=Z,12nm,1.0s,baz=314,slow=2.8,SNR=15						
LVC	**Limon Verde**	49.05	142	P	P	20 50 05.9	+0.8
LVC				pmax	pmax		
	comp=Z,80nm,1.2s						
LVC	**Limon Verde**	49.05	142	*e*P	P	20 50 06.7	+1.6
LVC	**Limon Verde**	49.05	142	P	P	20 50 05.8	+0.8
LVC				IAmb	IAmb	20 50 23.5	
	comp=Z,80nm,1.2s						
TGTN	**Hyland Airport**	49.18	342	P	P	20 50 06.1	+0.8
	baz=142,SNR=41						
PB15	**IPOC Station P**	49.19	143	P	P	20 50 07.2	+1.2
PB15				IAmb	IAmb	20 50 25.0	
	comp=Z,103nm,1.5s						
MCPB	**Macapa, AP**	49.26	106	*e*P	P	20 50 06.3	-0.1
BESE	**Bessie Mountai**	49.28	336	P	P	20 50 07.6	+1.5
BESE				IAmb	IAmb	20 50 19.4	
	comp=Z,40nm,1.1s						
SIV	**San Ignacio**	49.62	129	P	P	20 50 08.2	-1.0
	comp=Z,13nm,0.9s,baz=311,slow=7.2,SNR=37						
P33M	**Teslin, Yukon**	49.66	339	P	P	20 50 10.5	+1.6
	baz=135,SNR=11						
SKAG	**Skagway**	50.05	337	P	P	20 50 12.6	+0.8
	baz=132,SNR=6.0						
SKAG	**Skagway**	50.05	337	P	P	20 50 13.9	+2.1
SKAG				IAmb	IAmb	20 50 25.1	
	comp=Z,73nm,1.3s						
PDRB	**Porto dos Gac**	50.43	121	*e*P	P	20 50 14.8	-0.5
WHY	**Whitehorse**	50.70	338	P	P	20 50 18.3	+1.4
	baz=133,SNR=9.0						
WHY	**Whitehorse**	50.70	338	P	P	20 50 17.4	+0.5
WHY				IAmb	IAmb	20 50 34.6	
	comp=Z,57nm,1.2s						
PTLB	**Pontes e Lacer**	50.74	127	*e*P	P	20 50 18.3	+0.7
PTLB	**Pontes e Lacer**	50.74	127	P	P	20 50 16.8	-0.8
PTLB				IAmb	IAmb	20 50 33.8	
	comp=Z,70nm,1.3s						
CLDB	**Colider**	50.80	120	*e*P	P	20 50 18.1	0.0
MMPY	**Sheldon Lake,**	50.92	341	P	P	20 50 19.8	+1.3
	baz=139,SNR=64						
FARO	**Faro, Yukon**	51.29	340	P	P	20 50 21.8	+0.6
	baz=136,SNR=34						
N31M	**Braeburn, Yuko**	51.59	338	P	P	20 50 24.3	+0.9
	baz=133,SNR=19						
M31M	**Drury Creek, Y**	51.61	340	P	P	20 50 25.2	+1.6
	baz=135,SNR=19						
HYT	**Haines Junctio**	51.77	337	P	P	20 50 24.5	-0.5
	baz=130,SNR=24						
HYT	**Haines Junctio**	51.77	337	P	P	20 50 26.6	+1.7
PNL	**Peninsula**	51.77	335	P	P	20 50 25.0	+0.2
	baz=128						
YUK6	**Outpost Mounta**	52.17	337	P	P	20 50 28.5	+0.5
	baz=130,SNR=16						
AC02	**Maricunga**	52.23	146	P	P	20 50 31.6	+2.3
AC02				IAmb	IAmb	20 50 47.8	
	comp=Z,65nm,1.2s						
PINM	**Pinnacle**	52.38	335	P	P	20 50 30.0	+0.7
	baz=127,SNR=6.0						
PCA	**Pinnacle**	52.38	335	P	P	20 50 30.3	+0.9
YUK4	**Talbot Arm**	52.53	337	P	P	20 50 30.5	-0.1
	baz=130,SNR=11						
M30M	**Minto, Yukon**	52.68	339	P	P	20 50 32.1	+0.6
	baz=132,SNR=14						
TABL	**Table Mountain**	52.94	335	P	P	20 50 36.3	+2.6
TABL				IAmb	IAmb	20 50 57.2	
	comp=Z,110nm,1.4s						
MESA	**MESA**	53.11	335	P	P	20 50 36.4	+1.4
	baz=125						
MESA	**MESA**	53.11	335	P	P	20 50 38.0	+3.1
LOGN	**Logan Glacier**	53.11	336	P	P	20 50 37.1	+2.2
LOGN				IAmb	IAmb	20 50 58.1	
	comp=Z,68nm,1.1s						
YAH	**Yahtse**	53.14	335	P	P	20 50 37.5	+2.3
YAH				IAmb	IAmb	20 51 06.6	
	comp=Z,110nm,1.4s						
LCO	**Las Campanas**	53.18	149	IAMs_20	IAMs_20	21 07 26.3	
	comp=Z,2µm,22.0s						
CTGM	**Chitina Glacie**	53.33	336	P	P	20 50 38.9	+2.4
CTGM				IAmb	IAmb	20 50 50.6	
	comp=Z,122nm,1.4s						
CTG	**Chitna Glacier**	53.33	336	P	P	20 50 37.0	+0.6
	baz=126,SNR=7.7						
PUH	**Pauahi**	53.35	282	P	P	20 50 38.8	+1.6
HLP	**Hilina Pali**	53.45	282	P	P	20 50 40.5	+2.5
SNH	**Sunshine Point**	53.48	334	P	P	20 50 39.3	+1.9
SNH				IAMs_20	IAMs_20	21 15 06.0	
	comp=Z,4µm,19.0s						
YUK3	**Moose Creek**	53.48	337	P	P	20 50 38.0	+0.3
	baz=128,SNR=16						
MLH	**Mauna Loa**	53.50	282	P	P	20 50 39.2	+0.7
BARN	**Barnard Glacie**	53.51	336	P	P	20 50 39.5	+1.7
BARN				IAmb	IAmb	20 50 57.5	
	comp=Z,93nm,1.3s						
ISLE	**Juniper Island**	53.52	335	P	P	20 50 39.6	+1.8
ISLE				IAmb	IAmb	20 50 57.2	
	comp=Z,88nm,1.2s						
ISLE				IAMs_20	IAMs_20	21 12 10.0	
	comp=Z,4µm,21.0s						
HMH	**Humu'ula Sheep**	53.58	282	P	P	20 50 41.1	+2.0
AIN	**Ainahou**	53.58	282	P	P	20 50 40.5	+1.5
H03N2	**Juan Fernandez**	53.59	159	T	T	21 47 47.5	
	baz=338,slow=77,SNR=1124						
H03N1	**Juan Fernandez**	53.60	159	T	T	21 47 48.7	
	baz=338,slow=77,SNR=1359						
POHA	**Pohakuloa**	53.60	282	P	P	20 50 40.4	+1.2
H03N3	**Juan Fernandez**	53.61	159	T	T	21 47 47.7	
	baz=338,slow=77,SNR=1334						
BGLC	**Bering Glacier**	53.63	334	P	P	20 50 39.8	+1.4
	baz=124						
WAX	**Waxell Ridge**	53.64	335	P	P	20 50 39.6	+0.9
MLOA	**Mauna Loa Obse**	53.67	282	P	P	20 50 41.9	+1.9
SALV	**Santo Antonio**	53.67	125	*e*P	P	20 50 39.9	+0.5
PRPB	**Parauapebas**	53.69	111	*e*P	P	20 50 40.4	+0.8
HPAH	**Hawaii Prepara**	53.73	283	P	P	20 50 41.5	+1.6
KHU	**Kahuku**	53.74	282	P	P	20 50 41.9	+1.6
KHU	**Kahuku**	53.74	282	P	P	20 50 41.9	+1.6
TGL	**Tana Glacier**	53.80	335	P	P	20 50 41.2	+1.3
TGL				IAmb	IAmb	20 50 59.8	
	comp=Z,66nm,1.0s						
TGL				IAMs_20	IAMs_20	21 16 08.5	
	comp=Z,4µm,18.0s						
SUCK	**Suckling Hills**	53.81	334	IAMs_20	IAMs_20	21 11 58.7	
	comp=Z,2µm,21.0s						
CRQE	**Cirque**	53.91	335	P	P	20 50 41.8	+1.2
	baz=124,SNR=9.2						
CRQM	**Cirque**	53.93	335	P	P	20 50 42.0	+1.1
CRQM				IAMs_20	IAMs_20	21 16 12.3	
	comp=Z,3µm,21.0s						
BERG	**Berg Lake**	53.95	334	P	P	20 50 42.6	+1.7
KAIM	**Kayak Island**	54.00	334	P	P	20 50 41.5	+0.3
	baz=122						
KAIM	**Kayak Island**	54.00	334	IAMs_20	IAMs_20	21 14 05.8	
	comp=Z,4µm,18.0s						
BVCY	**Beaver Creek**	54.02	337	P	P	20 50 40.8	-0.6
	baz=128						
HMT	**Hamilton**	54.16	334	P	P	20 50 44.5	+2.1
HMT				IAMs_20	IAMs_20	21 16 10.9	
	comp=Z,3µm,19.0s						
MCARA	**McCarthy VSAT**	54.24	336	P	P	20 50 43.9	+0.9
	baz=125,SNR=15						
MCARA	**McCarthy VSAT**	54.24	336	P	P	20 50 45.1	+2.2
VRDI	**Verde Repeater**	54.32	335	P	P	20 50 45.5	+1.7
VRDI				IAmb	IAmb	20 51 04.8	
	comp=Z,57nm,1.1s						
VRDI				IAMs_20	IAMs_20	21 15 51.2	
	comp=Z,4µm,20.0s						
RAGM	**Ragged Mountai**	54.36	334	P	P	20 50 45.5	+1.7
RAGM				IAmb	IAmb	20 51 04.0	
	comp=Z,73nm,1.1s						
M27K	**Edge Creek, AK**	54.37	337	P	P	20 50 44.4	+0.4
	baz=126,SNR=11						
M27K	**Edge Creek, AK**	54.37	337	P	P	20 50 45.1	+1.0
M27K				IAmb	IAmb	20 50 47.6	
	comp=Z,52nm,1.4s						
J29M	**Klondike Camp**	54.42	340	P	P	20 50 44.7	+0.4
	baz=132						
DAWY	**Dawson**	54.55	339	P	P	20 50 45.4	+0.2
	baz=130						
DAWY	**Dawson**	54.55	339	P	P	20 50 44.8	-0.5
DAWY				IAmb	IAmb	20 50 57.9	
	comp=Z,60nm,1.4s						
GLB	**Gilahina Butte**	54.58	335	P	P	20 50 46.5	+1.0
GLB				IAmb	IAmb	20 51 04.9	
	comp=Z,63nm,1.0s						
BMRM	**Bremner River**	54.64	335	P	P	20 50 47.3	+1.4
	baz=123,SNR=11						
BMRM	**Bremner River**	54.64	335	P	P	20 50 47.6	+1.7

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BMRM                                   IAmb     IAmb     20 51 07.2
       comp=Z,69nm,1.0s
BMRM                                   IAMs_20  IAMs_20  21 16 20.7
       comp=Z,4µm,18.0s
CO03   El Pedregal          54.70 150  P        P        20 50 47.5 +0.7
CO03                                   IAmb     IAmb     20 51 04.3
       comp=Z,50nm,1.1s
BCAR   Beaver Creek A       54.76 338  P        P        20 50 47.0 +0.2
L27K   Beaver Creek,        54.77 338  P        P        20 50 47.8 +0.9
       baz=127,SNR=30
L27K   Beaver Creek,        54.77 338  P        P        20 50 47.5 +0.7
L27K                                   IAmb     IAmb     20 51 00.4
       comp=Z,80nm,1.3s
M26K   Nabesna, AK          54.81 337  P        P        20 50 48.9 +1.7
       baz=125,SNR=22
M26K   Nabesna, AK          54.81 337  P        P        20 50 47.9 +0.7
M26K                                   IAmb     IAmb     20 51 18.0
       comp=Z,82nm,1.2s
EYAK   Cordova Ski Ar       54.89 334  P        P        20 50 48.9 +1.2
       baz=121
EYAK   Cordova Ski Ar       54.89 334  P        P        20 50 49.7 +2.0
EYAK                                   IAmb     IAmb     20 51 18.1
       comp=Z,107nm,1.4s
N25K   Chitina, Valde       54.99 335  P        P        20 50 49.9 +1.4
       baz=123,SNR=14
N25K   Chitina, Valde       54.99 335  P        P        20 50 49.4 +0.9
N25K                                   IAmb     IAmb     20 51 09.2
       comp=Z,79nm,1.1s
I29M   Ogilvie Camp,        55.06 341  P        P        20 50 49.8 +0.9
       baz=132,SNR=27
SNDB   Serra Nova Dou       55.13 118 eP        P        20 50 51.4 +1.3
HIN    Hinchinbrook I       55.13 333  P        P        20 50 51.2 +1.7
HIN                                    IAMs_20  IAMs_20  21 15 07.8
       comp=Z,3µm,19.0s
DIV    Divide               55.21 334  P        P        20 50 51.7 +1.7
DIV                                    IAmb     IAmb     20 51 18.6
       comp=Z,59nm,1.1s
PP1B   Ponte de Pedra       55.29 126 eP        P        20 50 51.8 +0.6
FID    Port Fidalgo         55.30 334  P        P        20 50 52.0 +1.3
L26K   Log Cabin Wild       55.31 337  P        P        20 50 51.7 +1.0
       baz=125
L26K   Log Cabin Wild       55.31 337  P        P        20 50 53.3 +2.6
L26K                                   IAmb     IAmb     20 51 09.8
       comp=Z,66nm,1.3s
L26K                                   IAMs_20  IAMs_20  21 14 23.3
       comp=Z,4µm,21.0s
MENT   Mentasta             55.40 337  P        P        20 50 53.5 +2.1
KLU    Klutina              55.46 335  P        P        20 50 52.8 +0.9
       baz=122,SNR=12
KLU    Klutina              55.46 335  P        P        20 50 53.1 +1.2
KLU                                    IAmb     IAmb     20 51 12.3
       comp=Z,50nm,1.0s
EGAK   Eagle                55.60 340  P        P        20 50 52.8 +0.1
EGAK                                   IAmb     IAmb     20 51 11.3
       comp=Z,71nm,1.1s
GLI    Glacier Island       55.63 334  P        P        20 50 53.1 +0.1
       baz=120
GLI    Glacier Island       55.63 334  P        P        20 50 52.3 -0.8
GLI                                    IAmb     IAmb     20 51 15.2
       comp=Z,58nm,1.0s
GLI                                    IAMs_20  IAMs_20  21 17 27.0
       comp=Z,4µm,18.0s
HARP   HAARP                55.64 336  P        P        20 50 54.5 +1.4
       baz=123,SNR=7.9
KIP    Kipapa               55.73 285⇑eP        P        20 50 55.1 +0.8
KIP                                    pmax     pmax
       comp=Z,346nm,2.5s
INK    Inuvik               55.85 345  P        P        20 50 53.9 -0.5
INK                                    pmax     pmax
       comp=Z,196nm,1.2s
INK    Inuvik               55.85 345  P        P        20 50 54.6 +0.2
       baz=139,SNR=60
INK    Inuvik               55.85 345  P        P        20 50 53.9 -0.5
M24K   Tolsona, Glenn       55.89 335  P        P        20 50 55.2 +0.2
       baz=122
M24K   Tolsona, Glenn       55.89 335  P        P        20 50 57.0 +2.1
DOT    Dot Lake             55.93 338  P        P        20 50 56.0 +0.8
PAX    Paxson               56.08 336  P        P        20 50 57.0 +0.7
PAX                                    pmax     pmax
       comp=Z,69nm,1.3s
PAX    Paxson               56.08 336  P        P        20 50 57.3 +1.0
       baz=123,SNR=20
PAX    Paxson               56.08 336  P        P        20 50 57.0 +0.7
PAX                                    IAmb     IAmb     20 51 26.7
       comp=Z,69nm,1.3s
SCRK   Sand Creek           56.10 338  P        P        20 50 57.4 +1.0
       baz=125,SNR=40
SCRK   Sand Creek           56.10 338  P        P        20 50 56.6 +0.2
SCRK                                   IAmb     IAmb     20 51 15.7
       comp=Z,73nm,1.2s
PWL    Port Wells           56.15 333  P        P        20 50 56.6 -0.2
       baz=119
PWL    Port Wells           56.15 333  P        P        20 50 57.1 +0.4
PWL                                    IAmb     IAmb     20 51 26.1
       comp=Z,47nm,1.0s
PWL                                    IAMs_20  IAMs_20  21 15 28.6
       comp=Z,2µm,19.0s
SCM    Sheep Creek Mo       56.21 335  P        P        20 50 58.0 +0.7
SCM                                    pmax     pmax
       comp=Z,73nm,1.1s
SCM                                    MLR      MLR
       comp=Z,4µm,20.0s
SCM    Sheep Creek Mo       56.21 335  P        P        20 50 57.8 +0.5
       baz=120
SCM    Sheep Creek Mo       56.21 335  P        P        20 50 58.0 +0.7
SCM                                    IAmb     IAmb     20 51 28.0
       comp=Z,72nm,1.1s
SCM                                    IAMs_20  IAMs_20  21 16 21.3
       comp=Z,4µm,20.0s
J26L   Joseph Creek         56.25 339  P        P        20 50 57.3 -0.2
       baz=126,SNR=73
ZON    Zonda                56.26 149  P        P        20 50 58.8 +0.9
ZON                                    pmax     pmax
       comp=Z,60nm,1.4s
ZON    Zonda                56.26 149  P        P        20 50 58.8 +0.9
ZON                                    IAmb     IAmb     20 51 01.3
       comp=Z,60nm,1.4s
RIDG   Independent Ri       56.27 337  P        P        20 50 57.5 -0.1
       baz=124,SNR=18
RIDG   Independent Ri       56.27 337  P        P        20 50 58.6 +0.9
RIDG                                   IAMs_20  IAMs_20  21 14 52.8
       comp=Z,4µm,21.0s
SEW    Seward               56.28 332  P        P        20 50 58.7 +1.0
       baz=117
VA03   San Esteban          56.37 151  P        P        20 50 59.7 +1.0
VA03                                   IAmb     IAmb     20 51 16.4
       comp=Z,100nm,1.3s
AQDB   Aquidauana           56.40 130 eP        P        20 50 59.5 +0.5
AQDB   Aquidauana           56.40 130  P        P        20 50 58.5 -0.5
AQDB                                   IAmb     IAmb     20 51 15.1
       comp=Z,46nm,1.0s
KNK    Knik Glacier         56.47 334  P        P        20 50 59.7 +0.6
       baz=119,SNR=6.1
KNK    Knik Glacier         56.47 334  P        P        20 50 58.5 -0.6
KNK                                    IAmb     IAmb     20 51 28.8
       comp=Z,51nm,1.2s
KNK                                    IAMs_20  IAMs_20  21 15 35.1
       comp=Z,3µm,20.0s
MT02   Curacav              56.51 152  P        P        20 51 01.0 +1.4
MT02                                   IAmb     IAmb     20 51 17.2
       comp=Z,68nm,1.4s
O22K   Cooper Landing       56.57 333  IAMs_20  IAMs_20  21 15 37.9
       comp=Z,3µm,20.0s
SML    Sawmill              56.61 334  P        P        20 51 01.5 +1.4
       baz=119,SNR=7.3
SML    Sawmill              56.61 334  P        P        20 51 00.6 +0.6
SML                                    IAmb     IAmb     20 51 12.9
       comp=Z,102nm,1.3s
SML                                    IAMs_20  IAMs_20  21 16 21.8
       comp=Z,4µm,22.0s
PEL    Peldehue             56.62 152  P        P        20 51 00.2 -0.3
PEL                                    pmax     pmax
       comp=Z,31nm,1.2s
PEL                                    MLR      MLR
       comp=Z,3µm,21.0s
PEL    Peldehue             56.62 152  P        P        20 51 00.2 -0.3
PEL                                    IAMs_20  IAMs_20  21 09 17.5
       comp=Z,3µm,21.0s
ARAG   Araguaiana, MT       56.65 122 eP        P        20 51 01.7 +0.7
BRSE   Bradley Lake S       56.70 332  P        P        20 51 01.4 +0.7
       baz=116
WAT6   Susitna Watana       56.76 335  P        P        20 51 01.9 +0.7
       baz=120,SNR=31
BRLK   Bradley Lake         56.77 332  P        P        20 51 01.4 +0.2
BRLK                                   IAmb     IAmb     20 51 03.7
       comp=Z,100nm,1.4s
BRLK                                   IAMs_20  IAMs_20  21 15 19.4
       comp=Z,3µm,20.0s
MT05   Renca                56.80 152  P        P        20 51 04.2 +2.4
CNPM   China Poot           56.83 331  IAMs_20  IAMs_20  21 15 21.8
       comp=Z,3µm,18.0s
PMR    Palmer               56.84 334  P        P        20 51 01.7 +0.1
PMR                                    pmax     pmax
       comp=Z,36nm,0.9s
PMR    Palmer               56.84 334  P        P        20 51 02.6 +1.0
       baz=118
PMR    Palmer               56.84 334  P        P        20 51 01.7 +0.1
PMR                                    IAmb     IAmb     20 51 20.8
       comp=Z,36nm,0.9s
GHO    Glory Hole Cre       56.84 334  IAMs_20  IAMs_20  21 16 18.9
       comp=Z,3µm,20.0s
SMTB   Santa Maria do       56.85 113 eP        P        20 51 03.3 +0.9
RC01   Rabbit Creek A       56.86 333  P        P        20 51 03.5 +1.8
       baz=117
RC01   Rabbit Creek A       56.86 333  P        P        20 51 00.8 -0.9
RC01                                   IAmb     IAmb     20 51 20.5
       comp=Z,42nm,1.1s
RC01                                   IAMs_20  IAMs_20  21 16 00.5
       comp=Z,3µm,20.0s
DHY    Denali Highway       56.87 336  P        P        20 51 02.1 +0.1
       baz=121
DHY    Denali Highway       56.87 336  P        P        20 51 03.3 +1.3
DHY                                    IAMs_20  IAMs_20  21 17 12.6
       comp=Z,3µm,19.0s
OHAK   Old Harbor           56.90 328  P        P        20 51 03.4 +1.2
       baz=112
OHAK   Old Harbor           56.90 328  P        P        20 51 03.8 +1.7
J25K   Salcha River,        56.96 338  P        P        20 51 03.2 +0.7
       baz=124,SNR=24
MT01   Popeta               56.97 153  P        P        20 51 03.6 +0.7
MT09   Talagante            57.02 152  P        P        20 51 02.8 -0.6
SII    Sitkinak Islan       57.12 327  P        P        20 51 04.8 +1.0
       baz=110
A36M   Sachs Harbour        57.19 351  P        P        20 51 04.2 +0.2
       baz=150,SNR=30
A36M   Sachs Harbour        57.19 351  P        P        20 51 03.0 -1.0
A36M                                   IAMs_20  IAMs_20  21 18 24.7
       comp=Z,2µm,20.0s
WAT1   Susitna Watana       57.21 335  P        P        20 51 04.8 +0.5
       baz=120
CAPN   Captain Cook N       57.33 333  P        P        20 51 05.0  0.0
       baz=116
M22K   Willow               57.33 334  P        P        20 51 05.5 +0.4
       baz=117
HDA    Harding Lake         57.41 337  P        P        20 51 04.9 -0.8
       baz=122,SNR=18
HDA    Harding Lake         57.41 337  P        P        20 51 05.1 -0.6
HDA                                    IAmb     IAmb     20 51 23.9
       comp=Z,45nm,1.0s
HDA                                    IAMs_20  IAMs_20  21 16 49.9
       comp=Z,4µm,22.0s
BO01   Tunca                57.49 153  P        P        20 51 08.0 +1.4
BO01                                   IAmb     IAmb     20 51 24.1
       comp=Z,70nm,1.4s
PRP    Porcupine Dome       57.52 339  P        P        20 51 07.1 +0.6
       baz=124,SNR=41
PRP    Porcupine Dome       57.52 339  P        P        20 51 07.2 +0.6
ROSB   Rosrio               57.55 105 eP        P        20 51 08.4 +1.0
IL31                        57.59 338  P        P        20 51 06.3 -0.5
ILAR   Eielson Array        57.59 338  P        P        20 51 06.9  0.0
       comp=Z,38nm,1.1s,baz=134,slow=5.1,SNR=102
ILAR                                   LR       LR       21 18 11.2
       comp=Z,7µm,18.1s,baz=134,slow=38
ILAR   Eielson Array        57.59 338  P        P        20 51 06.5 -0.3
RND    Reindeer             57.62 336  P        P        20 51 07.9 +0.7
RND                                    pmax     pmax
       comp=Z,169nm,1.4s
RND                                    MLR      MLR
       comp=Z,3µm,19.0s
RND    Reindeer             57.62 336  P        P        20 51 07.9 +0.7
RND                                    IAMs_20  IAMs_20  21 17 16.4
       comp=Z,3µm,19.0s
CHIR   Chirikof Islan       57.63 326  P        P        20 51 08.1 +0.8
       baz=108
GO05   Huala                57.66 154  P        P        20 51 08.7 +0.9
GO05                                   IAmb     IAmb     20 51 24.9
       comp=Z,48nm,1.2s
CUT    Chulitna             57.70 335  P        P        20 51 08.2 +0.6
       baz=118,SNR=6.3
CUT    Chulitna             57.70 335  P        P        20 51 09.2 +1.6
PEXB   Peixe                57.74 117 eP        P        20 51 09.9 +1.2
PMOR   Pomariorio Ree       57.80 239 eT        T        21 53 03.8
       comp=Z,36nm,0.2s
MCK    McKinley             57.81 336  P        P        20 51 08.8 +0.3
MCK                                    pmax     pmax
       comp=Z,46nm,1.0s
MCK                                    MLR      MLR
       comp=Z,4µm,18.0s
MCK    McKinley             57.81 336  P        P        20 51 09.2 +0.7
       baz=120,SNR=12
MCK    McKinley             57.81 336  P        P        20 51 08.8 +0.3
MCK                                    IAmb     IAmb     20 51 36.5
       comp=Z,46nm,1.0s
RES    Resolute Bay         57.82   1  P        P        20 51 08.8 +0.5
RES                                    pmax     pmax
       comp=Z,73nm,1.3s
RES    Resolute Bay         57.82   1  P        P        20 51 08.8 +0.5
RES                                    IAmb     IAmb     20 51 25.0
       comp=Z,73nm,1.2s
CCB    Clear Creek Bu       57.85 337  P        P        20 51 08.4 -0.3
CCB                                    IAmb     IAmb     20 51 21.3
       comp=Z,52nm,1.4s
WRH    Wood River Hil       57.87 337  P        P        20 51 09.4 +0.6
WRH                                    IAMs_20  IAMs_20  21 16 38.0
       comp=Z,4µm,22.0s
SPU    Mount Spurr          57.91 333  P        P        20 51 09.6 +0.4
RSO    Redoubt South        57.92 332  P        P        20 51 09.5  0.0
BO02   Sierra Bellavi       57.97 153  P        P        20 51 11.3 +1.3
BO02                                   IAmb     IAmb     20 51 12.7
       comp=Z,62nm,1.4s
POKR   Poker Plat Res       57.97 338  P        P        20 51 09.6 +0.1
       baz=122,SNR=13
POKR   Poker Plat Res       57.97 338  P        P        20 51 09.9 +0.3
POKR                                   IAmb     IAmb     20 51 32.1
       comp=Z,81nm,1.2s
SPCR   Spurr Chakacha       57.98 333  P        P        20 51 10.7 +0.9
       baz=115
COLA   College              57.99 338ceP        P        20 51 10.8 +1.1
COLA                                   pmax     pmax
       comp=Z,50nm,1.2s
COLA   College              57.99 338  P        P        20 51 10.5 +0.8
       baz=122
COLA   College              57.99 338  P        P        20 51 09.4 -0.2
COLA                                   IAmb     IAmb     20 51 32.0
       comp=Z,42nm,0.9s
TCOL   CIGO, UAF Yank       57.99 338  P        P        20 51 10.7 +1.1
       baz=122
TCOL   CIGO, UAF Yank       57.99 338  P        P        20 51 09.6 -0.1
TCOL                                   IAmb     IAmb     20 51 31.9
       comp=Z,38nm,0.8s
FYU    Fort Yukon           58.03 340  P        P        20 51 11.4 +1.5
MDM    Murphy Dome          58.17 338  P        P        20 51 10.7 -0.4
MDM                                    IAmb     IAmb     20 51 32.6
       comp=Z,55nm,1.3s
TRF    Thorofare Moun       58.20 336  P        P        20 51 12.1 +0.7
       baz=118,SNR=24
TRF    Thorofare Moun       58.20 336  P        P        20 51 11.1 -0.3
BWN    Browne               58.23 337  P        P        20 51 11.8 +0.4
NEA2   Nenana               58.30 337  P        P        20 51 12.8 +1.0
       baz=120,SNR=7.4
NEA2   Nenana               58.30 337  P        P        20 51 12.7 +0.8
NEA2                                   IAmb     IAmb     20 51 42.6
       comp=Z,65nm,1.2s
NEA2                                   IAMs_20  IAMs_20  21 17 02.2
       comp=Z,3µm,21.0s
BMAR   Burnt Mountain       58.33 341  P        P        20 51 12.1  0.0
KTH    Kantishna Hill       58.50 336  P        P        20 51 13.5 +0.1
KTH                                    IAmb     IAmb     20 51 36.6
       comp=Z,49nm,0.9s
H24K   Noodor Dome          58.51 339  P        P        20 51 13.8 +0.4
       baz=122
H24K   Noodor Dome          58.51 339  P        P        20 51 13.2 -0.2
ML02   Panimavida           58.52 154  P        P        20 51 15.1 +1.4
O19K   Port Alsworth        58.53 331  IAMs_20  IAMs_20  21 16 25.6
       comp=Z,2µm,20.0s
P18K   Big Mountain,        58.65 330  P        P        20 51 13.9 -0.6
       baz=111
I23K   Minto, Yukon-K       58.68 338  P        P        20 51 14.8 +0.3
       baz=120,SNR=34
I23K   Minto, Yukon-K       58.68 338  P        P        20 51 14.2 -0.3
I23K                                   IAMs_20  IAMs_20  21 18 01.4
       comp=Z,3µm,19.0s
PPLA   Purkeypile           58.71 335  P        P        20 51 15.5 +0.6
       baz=116,SNR=11
PPLA   Purkeypile           58.71 335  P        P        20 51 16.1 +1.2
BPAW   Bear Paw Mtn.        58.78 336  P        P        20 51 15.6 +0.3
       baz=118,SNR=11
BPAW   Bear Paw Mtn.        58.78 336  P        P        20 51 15.4 +0.1
BPAW                                   IAmb     IAmb     20 51 38.5
       comp=Z,70nm,1.3s
N19K   Bonanza Creek        58.84 332  IAMs_20  IAMs_20  21 16 37.9
       comp=Z,2µm,22.0s
CAST   Castle Rocks         58.90 335  P        P        20 51 16.5 +0.4
       baz=116
SFJD   Kangerlussuaq        58.92  20  P        P        20 51 15.0 -1.1
SFJD                                   pmax     pmax
       comp=Z,72nm,1.1s
SFJD                                   MLR      MLR
       comp=Z,3µm,20.0s
SFJD   Kangerlussuaq        58.92  20 eP        P        20 51 16.0 -0.1
SFJD                                   IAmb     IAmb     20 51 27.6
       comp=Z,11nm,1.0s
SFJD   Kangerlussuaq        58.92  20  P        P        20 51 15.0 -1.1
SFJD   Kangerlussuaq        58.92  20  IAMs_20  IAMs_20  21 17 53.3
       comp=Z,3µm,20.0s
CPUP   Villa Florida        59.01 136  P        P        20 51 16.4 -0.9
       comp=Z,7.6nm,0.9s,baz=331,slow=5.4,SNR=7.6
CPUP   Villa Florida        59.01 136 eP        P        20 51 18.1 +0.8
CPUP   Villa Florida        59.01 136  P        P        20 51 15.9 -1.4
CPUP                                   IAmb     IAmb     20 51 33.4
       comp=Z,34nm,1.1s
MLY    Manley               59.13 337  P        P        20 51 18.2 +0.5
       baz=119,SNR=39
MLY    Manley               59.13 337  P        P        20 51 18.3 +0.5
MLY                                    IAMs_20  IAMs_20  21 16 53.4
       comp=Z,4µm,22.0s
CHUM   Lake Minchumin       59.20 336  P        P        20 51 18.3 +0.2
       baz=116,SNR=5.8
M19K   Big River Lodg       59.23 333  IAMs_20  IAMs_20  21 19 03.0
       comp=Z,3µm,19.0s
L20K   Farewell, AK         59.24 334  P        P        20 51 19.1 +0.6
       baz=114,SNR=5.3
CHGN   Chignik              59.27 326  P        P        20 51 19.0 +0.3
       baz=106
XMAS   Kiritimati           59.35 262  P        P        20 51 20.9 +0.9
CHNA   Chernabura Isl       59.52 324  P        P        20 51 20.9 +0.4
       baz=104
L19K   White Mountain       59.54 333  P        P        20 51 21.0 +0.5
       baz=113,SNR=6.3
L19K   White Mountain       59.54 333  P        P        20 51 20.5  0.0
L19K                                   IAmb     IAmb     20 51 40.4
       comp=Z,42nm,1.1s
I21K   Tanana               59.67 337  P        P        20 51 21.0 -0.3
       baz=117,SNR=19
I21K   Tanana               59.67 337  P        P        20 51 20.4 -0.9
K20K   Telida               59.68 335  P        P        20 51 21.8 +0.3
       baz=114,SNR=18
K20K   Telida               59.68 335  P        P        20 51 20.3 -1.2
BDFB   Brasilia             59.73 120  P        P        20 51 21.6 -1.0
       comp=Z,31nm,0.9s,baz=292,slow=8.2,SNR=35
BDFB   Brasilia             59.73 120  P        P        20 51 22.2 -0.4
BDFB                                   pmax     pmax
       comp=Z,76nm,1.1s
BDFB   Brasilia             59.73 120  P        P        20 51 22.2 -0.4
ITRB   Iturama              60.00 125 eP        P        20 51 25.1 +0.7
COLD   Coldfoot             60.03 339  P        P        20 51 23.9 +0.1
       baz=120,SNR=22
COLD   Coldfoot             60.03 339  P        P        20 51 23.7 -0.1
COLD                                   IAmb     IAmb     20 51 42.9
       comp=Z,44nm,1.0s
J20K   Nowinta River        60.06 335  P        P        20 51 23.7 -0.3
       baz=115,SNR=20
J20K   Nowinta River        60.06 335  P        P        20 51 22.9 -1.2
TRCB   Terra Rica           60.06 130 eP        P        20 51 24.9 +0.2
DY2G   Dye2                 60.13  22 i P       P        20 51 24.3 -0.5
DY2G                                   IAmb     IAmb     20 51 35.9
       comp=Z,30nm,0.7s
SDPT   Sand Point           60.14 325  P        P        20 51 25.4 +0.6
       baz=104
H21K   Melozitna Rive       60.19 337  P        P        20 51 25.4 +0.4
       baz=117
H21K   Melozitna Rive       60.19 337  P        P        20 51 24.4 -0.5
H21K                                   IAmb     IAmb     20 51 27.6
       comp=Z,59nm,1.4s
H21K                                   IAMs_20  IAMs_20  21 17 36.4
       comp=Z,4µm,22.0s
TTA    Tatalina             60.32 334  P        P        20 51 25.9  0.0
TTA                                    pmax     pmax
       comp=Z,41nm,1.0s
TTA    Tatalina             60.32 334  P        P        20 51 26.0  0.0
       baz=112
TTA    Tatalina             60.32 334  P        P        20 51 25.9  0.0
TTA                                    IAmb     IAmb     20 51 44.6
       comp=Z,41nm,1.0s
PCMB   Pacaembu             60.39 128 eP        P        20 51 28.0 +1.1
PPT    Papeete              60.52 238  LR       LR       21 10 45.7
       comp=Z,1µm,18.4s,baz=32,slow=29
PPT2   Papeete2             60.53 238 eS        S        20 59 38.1 -3.7
       comp=Z,653nm,26.2s
PPT2                                  eLQ       LQ       21 06 44.7
       comp=Z,2µm,30.0s
PPT2                                  eLR       LR       21 09 11.8
       comp=Z,4µm,25.8s,baz=52
TOLK   Toolik Lake Re       60.56 341  P        P        20 51 27.7 +0.2
       baz=122,SNR=24
TOLK   Toolik Lake Re       60.56 341  P        P        20 51 27.1 -0.4
NBPS   Pedro II - PI        60.58 105 eP        P        20 51 29.8 +1.2
IMAR   Indian Mountai       60.69 337  P        P        20 51 27.8 -0.5
IPMB   Ipameri, GO          60.78 122 eP        P        20 51 30.3 +0.6
SDBA   SAO DESIDERIO        60.81 115 eP        P        20 51 30.7 +0.7
LC01   Cunco                61.02 156  P        P        20 51 30.8 -0.1
LC01                                   IAmb     IAmb     20 51 48.0
       comp=Z,74nm,1.4s
GCSA   Galena City Sc       61.37 336  P        P        20 51 33.4 +0.5
       baz=112
NBMO   Morrinhos-CE         61.49 103 eP        P        20 51 35.6 +1.0
TULEG  Thule                61.63   8 eP        P        20 51 35.2 +0.8
TULEG                                  IAmb     IAmb     20 51 46.5
       comp=Z,181nm,1.7s
TULEG  Thule                61.63   8  P        P        20 51 31.0 -3.5
TULEG                                  IAmb     IAmb     20 51 46.9
       comp=Z,80nm,1.3s
TULEG                                  IAMs_20  IAMs_20  21 19 59.6
       comp=Z,3µm,21.0s
PTGB   Pitanga              61.64 131 eP        P        20 51 36.9 +1.5
FALS   False Pass           61.69 324  P        P        20 51 35.9 +0.7
       baz=101
ITQB   Itaqui               61.72 138 eP        P        20 51 36.4 +0.6
ITQB   Itaqui               61.72 138  P        P        20 51 35.6 -0.1
BB19B  Bebedouro            62.19 126 eP        P        20 51 39.9 +0.8
JANB   Januaria             62.55 117 eP        P        20 51 42.8 +1.0
LL04   Puerto Octay         62.58 158  P        P        20 51 40.9 -0.5
LL05   Los Muermos          62.63 159  P        P        20 51 41.7 +0.1
LL05                                   IAmb     IAmb     20 52 06.4
       comp=Z,30nm,0.8s
PLCA   Paso Flores          63.12 156  P        P        20 51 45.1  0.0
       comp=Z,21nm,1.2s,baz=343,slow=7.9,SNR=12
PLCA                                   LR       LR       21 13 50.5
       comp=Z,2µm,18.3s,baz=344,slow=31
PLCA   Paso Flores          63.12 156  P        P        20 51 45.6 +0.5
PLCA                                   pmax     pmax
       comp=Z,71nm,1.4s
PLCA   Paso Flores          63.12 156 eP        P        20 51 46.8 +1.8
PLCA   Paso Flores          63.12 156  P        P        20 51 45.6 +0.5
PLCA                                   IAmb     IAmb     20 52 02.7
       comp=Z,71nm,1.4s
UNV    Unalaska Valle       63.30 322  P        P        20 51 46.2 +0.2
       baz=98
EUNU   Eureka               63.43   2  P        P        20 51 46.1 -0.5
NBCL   Cascavel-CE          63.45 104 eP        P        20 51 49.8 +2.1
ICESG  Greenland Ices       63.54  20 i P       P        20 51 46.9 -0.9
ICESG                                  IAmb     IAmb     20 52 01.2
       comp=Z,37nm,0.8s
TBI    Tubuai               63.56 232 eS        S        21 00 15.7 -4.1
       comp=Z,525nm,26.8s
TBI                                   eLQ       LQ       21 08 01.6
       comp=Z,1µm,33.8s
TBI                                   eLR       LR       21 10 42.4
       comp=Z,3µm,26.8s,baz=56
TBI    Tubuai               63.56 232 eT        T        22 00 12.6
       comp=Z,38nm,0.2s
MC01   Montes Claros        63.65 119 eP        P        20 51 50.3 +1.3
RCLB   Rio Claro- Sao       63.70 126 eP        P        20 51 50.5 +1.3
LL01   San Ignacio de       63.86 158  P        P        20 51 51.2 +1.4
LL01                                   IAmb     IAmb     20 51 52.6
       comp=Z,55nm,1.3s
LL07   Hotel Espejo d       63.90 159  P        P        20 51 52.4 +2.4
A21K   Barrow               63.98 342  P        P        20 51 49.6 -0.7
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      baz=116,SNR=8.8
A21K  Barrow            63.98 342   P         P         20 51 50.0 -0.2
A21K                                IAMs_20   IAMs_20   21 22 37.4
      comp=Z,3µm,19.0s
GO07  Milladeo Hill,    64.09 160   P         P         20 51 52.9 +1.7
NBMA  Muriti-CE         64.17 107  eP         P         20 51 53.7 +1.2
CPSB  Cacapava Do Su    64.27 137  eP         P         20 51 53.5 +0.8
NBPN  Ponto Novo - B    64.27 111  eP         P         20 51 54.1 +1.0
VAO   Valinhos          64.46 126  eP         P         20 51 55.3 +1.1
NIKH  Nikolski High     64.60 321   P         P         20 51 54.1 -0.5
      baz=95
DIAM  Diamantina, MG    64.65 120  eP         P         20 51 56.9 +1.3
TRQA  Tornquist         64.76 148   P         P         20 51 56.6 +0.8
TRQA                                pmax      pmax
      comp=Z,81nm,1.5s
TRQA                                MLR       MLR
      comp=Z,3µm,21.0s
TRQA  Tornquist         64.76 148  eP         P         20 51 57.6 +1.8
TRQA  Tornquist         64.76 148   P         P         20 51 56.6 +0.8
TRQA                                IAmb      IAmb      20 52 13.0
      comp=Z,81nm,1.4s
TRQA                                IAMs_20   IAMs_20   21 15 02.8
      comp=Z,3µm,21.0s
ANM   Nome              64.78 334   P         P         20 51 55.7 +0.1
      baz=104
RDOG  Red Dog Mine      64.80 338   P         P         20 51 55.2 -0.5
      baz=108,SNR=6.2
PET01 Itanhaem-SP       64.93 128  eP         P         20 52 00.1 +3.0
NEEM  North Greenlan    64.99  10  i P        P         20 51 56.9 -0.3
NEEM                               i                    20 52 14.2
PLTB  Pedras Altas      65.05 138  eP         P         20 51 58.7 +0.9
PLTB  Pedras Altas      65.05 138   P         P         20 51 58.1 +0.3
NBPA  Parau_RN          65.09 105  eP         P         20 51 59.2 +0.7
BSCB  Bom Sucesso       65.11 123  eP         P         20 51 59.7 +1.1
SUMG  Summit            65.30  17   P         P         20 51 58.6 -0.7
SUMG                                pmax      pmax
      comp=Z,66nm,1.1s
SUMG  Summit            65.30  17  i P        P         20 51 58.3 -1.0
SUMG                                IAmb      IAmb      20 52 18.2
      comp=Z,24nm,0.9s
SUMG  Summit            65.30  17   P         P         20 51 58.6 -0.7
SUMG                                IAmb      IAmb      20 52 18.7
      comp=Z,66nm,1.1s
CNLB  Canela            65.31 134  eP         P         20 52 00.2 +0.6
PARB  Paraibuna         65.68 126  eP         P         20 52 04.0 +1.9
NBLV  Livramento - P    65.86 106  eP         P         20 52 05.7 +2.2
TER01 Tubaro-SC         66.03 133  eP         P         20 52 05.7 +1.5
GDU01 Guandu, BA        66.04 114  eP         P         20 52 05.8 +1.3
NBLA  Lagarto - SE      66.48 110  eP         P         20 52 08.2 +0.8
NBIT  Itapeh - BA       66.69 115  eP         P         20 52 10.2 +1.6
MAN01 Angra dos Reis    66.72 125  eP         P         20 52 10.1 +1.2
COYC  Coyhaique         66.79 160   P         P         20 52 10.4 +1.7
CMC01 Camacan, BA       66.80 115  eP         P         20 52 11.0 +1.7
VAS01 Vassouras-RJ      66.83 124  eP         P         20 52 11.2 +1.7
SJMB  Sao Joao De Ma    66.91 119  eP         P         20 52 11.4 +1.4
NBPV  Pedro Velho       67.02 105  eP         P         20 52 13.2 +2.3
GUA01 Guaratinga, BA    67.10 117  eP         P         20 52 13.2 +1.9
BSFB  Barra de Sao F    67.25 119  eP         P         20 52 12.8 +0.6
NBAN  Anadia - AL       67.33 108  eP         P         20 52 13.9 +1.1
GAMB  Gambell           67.36 333   P         P         20 52 12.8 +0.7
      baz=98
DUB01 Friburgo-RJ       67.58 123  eP         P         20 52 15.5 +1.2
RIB01 Linhares ES       67.86 120  eP         P         20 52 16.9 +0.9
NBRF  Rio Formoso -     68.00 107  eP         P         20 52 18.9 +1.9
CAM01 Campos-RJ         68.03 123  eP         P         20 52 19.0 +1.9
ALF01 Guarapari-ES      68.20 121  eP         P         20 52 19.5 +1.3
DBG   Daneborg          70.77  16  eP         P         20 52 32.5 -0.7
DBG                                 IAmb      IAmb      20 52 57.3
      comp=Z,9.0nm,0.8s
DAG   Danmarks Havn     71.42  14  i P        P         20 52 35.3 -1.7
DAG                                 IAmb      IAmb      20 52 59.7
      comp=Z,23nm,0.7s
NOR   Nord              72.24   9  i P        P         20 52 41.0 -0.9
NOR                                 IAmb      IAmb      20 53 00.4
      comp=Z,8.7nm,0.9s
PMOZ  Porto Moniz, M    74.22  60  eLR        LR        21 16 35.8
      comp=Z,1µm,20.0s
USHA  Ushuaia           76.03 162   P         P         20 53 04.7 +0.5
      comp=Z,21nm,1.0s,baz=288,slow=1.0,SNR=3.8
BILL  Bilibino          76.24 337c iP         P         20 53 06.9 +1.5
BILL                               e*PP       pP        20 53 15.6 -0.8
BILL                               i                    20 53 17.9
BILL                               e*SP       sP        20 53 22.1 +1.9
BILL                               eS         S         21 02 49.8 +2.6
BILL                               ePPS       PPS       21 03 45.9
BILL                                pmax      pmax
      comp=Z,98nm,1.7s
BILL                                MLR       MLR
      comp=Z,1µm,18.0s
BILL  Bilibino          76.24 337   P         P         20 53 04.3 -1.2
BILL                                IAmb      IAmb      20 53 08.7
      comp=Z,115nm,1.5s
KBS   Kingsbay          77.42  11⇓eP          P         20 53 14.3 +2.4
KBS                                 pmax      pmax
      comp=Z,69nm,1.7s
KBS   Kingsbay          77.42  11   IAMs_20   IAMs_20   21 28 13.9
      comp=Z,2µm,22.0s
DSB   Dublin            78.14  38   IAMs_20   IAMs_20   21 21 24.0
      comp=Z,1µm,19.0s
MBO   M'Bour            78.40  78   IAMs_20   IAMs_20   21 26 12.2
      comp=Z,1µm,20.0s
SPITS Spitsbergen Ar    78.54  11   P         P         20 53 17.2 -1.0
      comp=Z,4.1nm,0.5s,baz=31,slow=5.9,SNR=10
SPITS Spitsbergen Ar    78.54  11   P         P         20 53 17.2 -1.0
SPITS                               pmax      pmax
      comp=Z,95nm,1.4s
PGAV  Gavieira, Arco    79.36  49  eLR        LR        21 18 42.8
      comp=Z,905nm,20.0s
EKA   Eskdalemuir Ar    79.49  35   P         P         20 53 24.2 +0.5
      comp=Z,2.6nm,0.8s,baz=243,slow=3.7,SNR=3.6
PCAS  Casmilo, Conde    79.63  51  eP         P         20 53 25.7 +0.8
      comp=Z,180nm,1.5s
PCAS                               epP        pP        20 53 37.1 +1.1
COI   Coimbra           79.66  51   IAMs_20   IAMs_20   21 30 14.4
      comp=Z,1µm,19.0s
POLO  Lamas de Olo      79.85  50  epP        pP        20 53 37.6 +0.4
POLO                                A         A         20 53 40.2
      comp=Z,26nm,1.9s
PFVI  Vila Bisbo        80.06  54  epP        pP        20 53 38.4 +0.1
PFVI                                A         A         20 53 41.1
      comp=Z,192nm,1.5s
PNCL  Nicolau / Gran    80.06  53  eP         P         20 53 27.6 +0.4
PNCL                               epP        pP        20 53 38.9 +0.6
PMTG  Montargil         80.07  52  eP         P         20 53 27.2  0.0
      comp=Z,82nm,1.7s
PMTG                               epP        pP        20 53 38.9 +0.6
MTE   Manteigas         80.26  51  eP         P         20 53 28.7 +0.4
      comp=Z,76nm,1.4s
MTE                                epP        pP        20 53 40.3 +0.9
MTE                                eS         S         21 03 36.3 +4.7
MTE                                eSS        SS        21 08 45.2 +2.5
MTE                                eLQ        LQ        21 14 31.8
MTE                                eLR        LR        21 19 27.4
      comp=Z,1µm,20.0s
MTE   Manteigas         80.26  51   IAMs_20   IAMs_20   21 28 55.3
      comp=Z,1µm,19.0s
EVO   Evora             80.36  53   P         P         20 53 38.9  +10
EVO                                 S         S         21 03 38.5 +6.0
EVO   Evora             80.36  53  eP         P         20 53 30.3 +1.5
      comp=Z,90nm,1.5s
EVO                                epP        pP        20 53 40.6 +0.7
MESJ  Messejana         80.36  53  epP        pP        20 53 40.6 +0.7
MVO   Moncorvo          80.46  50  eP         P         20 53 30.2 +0.8
      comp=Z,80nm,1.9s
MVO                                epP        pP        20 53 41.3 +0.8
MVO   Moncorvo          80.46  50  eLR        LR        21 19 13.4
      comp=Z,1µm,18.0s
PBRG  Braganca          80.51  49  eP         P         20 53 31.4 +1.8
      comp=Z,52nm,1.7s
PBRG                               epP        pP        20 53 42.2 +1.5
PCVE  Castro Verde      80.55  54  eP         P         20 53 31.8 +1.9
      comp=Z,58nm,1.5s
PCVE                               epP        pP        20 53 41.9 +0.9
PESTR Estremoz          80.60  52  epP        pP        20 53 42.0 +0.8
PESTR                               A         A         20 53 44.1
      comp=Z,47nm,1.8s
PMRV  Marv??o           80.61  52  eP         P         20 53 29.8 -0.4
      comp=Z,99nm,1.4s
PMRV                               epP        pP        20 53 41.9 +0.6
PMRV  Marv??o           80.61  52  eLR        LR        21 19 29.7
      comp=Z,908nm,18.0s
PBDV  Barranco-do-Ve    80.73  54  epP        pP        20 53 43.2 +1.2
PBDV                                A         A         20 53 44.8
      comp=Z,125nm,1.5s
PVAQ  Vaqueiros         80.86  54  eP         P         20 53 30.7 -0.8
      comp=Z,99nm,1.5s
PVAQ                               epP        pP        20 53 43.6 +1.0
PVAQ                               eS         S         21 03 38.4 +0.7
PVAQ                               eSS        SS        21 08 58.9 +7.4
PVAQ                               eLR        LR        21 18 51.6
      comp=Z,984nm,20.0s
ARNO  Arenosillo        81.69  54   P         P         20 53 46.5  +11
AVE   Averroes          82.13  58   P         P         20 53 40.6 +2.3
AVE                                 S         S         21 03 51.6 +0.5
PAB   San Pablo         82.86  51   P         P         20 53 41.9 -0.2
PAB                                 pmax      pmax
      comp=Z,99nm,1.3s
PAB                                 MLR       MLR
      comp=Z,1µm,18.0s
PAB   San Pablo         82.86  51   P         P         20 53 41.9 -0.2
PAB   San Pablo         82.86  51   IAMs_20   IAMs_20   21 32 26.9
      comp=Z,1µm,18.0s
CEU   Ceuta             83.07  55   P         P         20 53 55.2  +12
CEU                                 S         S         21 04 20.6  +20
ESDC  Sonseca Array     83.11  51   P         P         20 53 42.2 -1.1
      comp=Z,3.6nm,1.0s,baz=289,slow=5.9,SNR=13
ESDC                                LR        LR        21 31 27.8
      comp=Z,718nm,18.0s,baz=290,slow=36
ESDC  Sonseca Array     83.11  51   P         P         20 53 42.5 -0.8
ESBB  Sonseca Array     83.11  51   P         P         20 53 40.0 -3.4
UCM   Universidad Co    83.46  50   P         P         20 53 55.9  +11
UCM                                 S         S         21 04 28.5  +24
EMAL  Malaga-Limoner    83.56  54   P         P         20 53 53.5 +7.8
EMAL                                S         S         21 04 13.5 +8.0
PET   Petropavlovsk     83.91 324  eP         P         20 53 48.9 +1.8
PET                                eS         S         21 04 07.5 -0.9
PET                                eSS        SS        21 09 42.2 +6.3
PET                                 pmax      pmax
      comp=Z,300nm,12.2s
PET                                 MLR       MLR
      comp=Z,1µm,19.0s
PET                                 MLR       MLR
      comp=Z,1µm,18.0s
IFR   Ifrane            83.91  57   P         P         20 53 48.5 +0.8
IFR                                 S         S         21 04 10.8 +1.2
PEA0B Petropavlovsk-    84.42 324⇑eP          P         20 53 50.0 +0.3
PETK  Petropavlovsk-    84.42 324   P         P         20 53 50.6 +0.9
      comp=Z,12nm,1.0s,baz=97,slow=6.1,SNR=5.1
PETK  Petropavlovsk-    84.42 324   P         P         20 53 50.2 +0.5
KONO  Kongsberg         84.56  29⇑eP          P         20 53 53.2 +2.9
KONO                                pmax      pmax
      comp=Z,139nm,1.4s
KONO  Kongsberg         84.56  29   P         P         20 53 49.7 -0.6
NB2   NORSAR Subarra    84.71  27   P         P         20 53 52.2 +1.2
      comp=Z,156nm,1.7s,baz=298,slow=5.3
NOA   NORSAR Array B    84.71  27   P         P         20 53 51.0  0.0
      comp=Z,5.9nm,1.1s,baz=297,slow=4.9,SNR=4.6
NOA                                 LR        LR        21 31 21.5
      comp=Z,498nm,21.9s,baz=290,slow=36
CLF   Chambon-Foret     84.85  41   P         P         20 53 52.1 +0.1
CLF                                 IAMs_20   IAMs_20   21 34 26.9
      comp=Z,1µm,19.0s
UCC   Uccle             85.18  38  dpP        pP        20 54 05.1 +0.4
SNF   Seneffe           85.24  39  dP         P         20 53 53.7 -0.1
SNF                                dpP        pP        20 54 05.6 +0.6
ARCES ARCESS Array B    85.39  17   P         P         20 53 53.5 -0.8
      comp=Z,3.7nm,0.9s,baz=34,slow=5.0,SNR=10.0
ARCES                               LR        LR        21 33 45.3
      comp=Z,1µm,21.8s,baz=305,slow=37
ARCES ARCESS Array B    85.39  17   P         P         20 53 53.5 -0.8
ARCES                               pmax      pmax
      comp=Z,29nm,1.1s
ARCES ARCESS Array B    85.39  17   IAmb      IAmb      20 54 19.5
      comp=Z,29nm,1.1s
MA2   Magadan           85.42 331⇓eP          P         20 53 56.6 +2.0
MA2                                 pmax      pmax
      comp=Z,34nm,1.7s
DOU   Dourbes           85.58  39  dPcP       PcP       20 53 59.3 +0.9
DOU                                dpP        pP        20 54 07.6 +0.9
BMRD  Maredsous         85.60  39  dP         P         20 53 56.1 +0.4
BMRD                               dpP        pP        20 54 07.7 +0.9
KEV   Kevo              85.66  16   IAMs_20   IAMs_20   21 32 10.8
      comp=Z,1µm,21.0s
BGES  Gesves            85.77  39  dP         P         20 53 56.1 -0.4
BGES                               dPcP       PcP       20 53 58.0 -1.3
BGES                               dpP        pP        20 54 08.4 +0.7
BGES                               dsP        sP        20 54 13.1 +1.7
BCLA  Clavier           85.88  38  dpP        pP        20 54 08.9 +0.7
RCHB  Rochefort         85.93  39  dPcP       P         20 53 58.6 +1.3
RCHB                               dpP        pP        20 54 08.0 -0.5
TIXI  Tiksi             85.95 346d iP         P         20 53 57.6 +0.6
TIXI                                pmax      pmax
      comp=Z,80nm,1.4s
TIXI  Tiksi             85.95 346   P         P         20 53 56.3 -0.7
TIXI                                IAMs_20   IAMs_20   21 37 50.9
      comp=Z,1µm,19.0s
HFS   Hagfors           86.21  28   P         P         20 53 58.6 +0.1
      comp=Z,2.1nm,1.0s,baz=264,slow=5.7,SNR=1.4
SKR   Severo-Kuril's    86.22 322  eP         P         20 53 55.6 -3.1
SKR                                eS         S         21 04 15.6  -16
SKR                                 pmax      pmax
      comp=Z,200nm,11.6s
SKR                                 MLR       MLR
      comp=Z,300nm,20.0s
MEM   Membach           86.23  38  dP         P         20 53 58.9 +0.1
MEM                                dpP        pP        20 54 11.3 +1.3
BTNL  Ternell           86.31  38  dP         P         20 53 58.4 -0.9
BTNL                               dPcP       PcP       20 54 01.0 -0.7
BTNL                               dpP        pP        20 54 10.4  0.0
BHOU  Houvegnez         86.32  38  dPcP       PcP       20 54 01.3 -0.5
BHOU                               dpP        pP        20 54 11.6 +1.1
BHOU                               dsP        sP        20 54 16.6 +2.5
WLF   Walferdange       86.67  39  dP         P         20 54 00.8 -0.2
WLF                                dpP        pP        20 54 12.6 +0.4
WLF   Walferdange       86.67  39   IAMs_20   IAMs_20   21 34 48.9
      comp=Z,1µm,20.0s
ECH   Echery            87.84  40   IAMs_20   IAMs_20   21 36 28.9
      comp=Z,857nm,18.0s
BFO   Black Forest      88.51  40   IAMs_20   IAMs_20   21 36 35.7
      comp=Z,1µm,18.0s
RGN   Rugen             88.63  33   IAMs_20   IAMs_20   21 37 14.2
      comp=Z,819nm,20.0s
MSVF  Nonsavu           88.67 251   P         P         20 54 11.2  0.0
      comp=Z,21nm,0.9s,baz=122,slow=8.6,SNR=4.7
MSVF  Nonsavu           88.67 251   P         P         20 54 12.7 +1.5
MSVF                                pmax      pmax
      comp=Z,91nm,1.2s
MSVF  Nonsavu           88.67 251   P         P         20 54 12.7 +1.5
BNI   Bardonecchia      88.77  43   IAMs_20   IAMs_20   21 37 19.7
      comp=Z,1µm,18.0s
APA   Apatity           88.87  16⇓iP          P         20 54 13.4 +2.3
APA                                i                    21 04 37.0
APA                                i S        S         21 04 56.0 -0.1
APA                                i SS       SS        21 10 46.0 -1.7
APA                                 pmax      pmax
      comp=Z,8.0nm,1.0s
APA                                 MLR       MLR
      comp=Z,2µm,24.0s
GRA1  Grafenberg Arr    89.67  38   IAMs_20   IAMs_20   21 35 56.0
      comp=Z,924nm,19.0s
GRF   Grafenberg Arr    89.67  38  eP         P         20 54 16.3 +1.1
      comp=Z,24nm,1.3s,baz=296,slow=4.7
GRF                                epP        pP        20 54 27.4 +0.9
GRF                                eL         L         21 35 46.5
      comp=Z,820nm,19.7s
GRFO  Grafenberg        89.67  38   IAMs_20   IAMs_20   21 35 46.0
      comp=Z,879nm,20.0s
DAVA  Damuels           89.90  40  eP         P         20 54 18.2 +1.6
      comp=Z,16nm,1.4s
DAVA                               i P        pP        20 54 28.5 +0.7
      comp=Z,23nm,1.2s
CLL   Collm             89.95  36  eP         P         20 54 16.0 -0.5
      comp=Z,11nm,1.6s
CLL                                i pP       pP        20 54 27.6 -0.2
      comp=Z,10.0nm,1.3s
CLL                                esP        sP        20 54 34.0 +2.2
CLL                                ePP        PP        20 57 48.0 -1.1
CLL                                eSKSac     SKSac     21 04 45.0 +0.1
CLL                                eS         ScS       21 05 12.0 +1.0
CLL                                ePS        PS        21 06 16.0 -0.7
CLL                                eSS        SS        21 11 00.0 -4.3
CLL                                eSSS       SSS       21 14 42.0
CLL                                e(SSSS)              21 18 24.0
CLL                                 Lm        MLR       21 38 00.0
      comp=N,600nm,19.0s
CLL                                 Lm        MLR       21 38 00.0
      comp=E,700nm,18.6s
CLL                                 Lm        MLR       21 38 00.0
      comp=Z,1µm,19.6s
CLL   Collm             89.95  36  eP         P         20 54 16.0 -0.5
CLL                                i *PP      pP        20 54 27.6 -0.2
CLL                                e                    21 04 45.0
CLL                                eS         ScS       21 05 12.0 +1.0
CLL                                 pmax      pmax
      comp=Z,11nm,1.6s
CLL                                 MLR       MLR
      comp=Z,1µm,19.6s
CLL   Collm             89.95  36   IAMs_20   IAMs_20   21 38 17.5
      comp=Z,1µm,19.0s
NKC   Novy Kostel       90.13  37  epP        pP        20 54 29.2 +0.5
NKC                                 AMS       AMS       21 38 00.0
      comp=Z,1µm,19.6s
NKC   Novy Kostel       90.13  37  eP         P         20 54 29.2  +12
NKC                                 MLR       MLR
      comp=Z,1µm,19.6s
RETA  Reutte            90.35  40  eP         P         20 54 20.0 +1.4
      comp=Z,10nm,1.4s
RETA                               eP         pP        20 54 30.5 +0.7
      comp=Z,19nm,1.4s
KOWA  Kowa              90.42  75   P         P         20 54 18.8 -0.6
FINES FINESS Array B    90.58  23   P         P         20 54 17.7 -1.5
      comp=Z,2.4nm,0.9s,baz=8.5,slow=3.9,SNR=6.9
FINES                               LR        LR        21 36 55.2
      comp=Z,2µm,19.9s,baz=306,slow=37
FINES FINESS Array B    90.58  23  i P        P         20 54 19.5 +0.3
FINES                               pmax      pmax
      comp=Z,2.0nm,0.9s
FINES FINESS Array B    90.58  23   P         P         20 54 18.9 -0.4
FIA1  FINESS Array S    90.58  23   P         P         20 54 18.6 -0.6
FIA1                                IAmb      IAmb      20 54 30.9
      comp=Z,36nm,1.4s
MOTA  Moosalm           90.62  40  eP         P         20 54 21.3 +1.3
      comp=Z,11nm,1.7s
MOTA                               eP         pP        20 54 31.8 +0.6
      comp=Z,23nm,1.3s
BRG   Berggiesshubel    90.68  36  eP         P         20 54 20.2 +0.2
BRG                                 Amp                 20 54 22.3
      comp=Z,5.8nm,1.0s
BRG   Berggiesshubel    90.68  36   P         P         20 54 31.8  +12
BRG                                 Amp                 20 54 34.0
      comp=Z,16nm,1.2s
BRG   Berggiesshubel    90.68  36   SS        SS        21 10 59.0  -16
SQTA  Sankt Quirin      90.74  40  eP         P         20 54 22.0 +1.5
      comp=Z,14nm,1.5s
SQTA                               eP         pP        20 54 32.5 +0.8
      comp=Z,21nm,1.3s
WATA  Walderalm         90.92  40  i P        P         20 54 23.0 +1.7
      comp=Z,8.5nm,1.0s
WATA                               i P        pP        20 54 33.2 +0.7
      comp=Z,17nm,1.1s
WTTA  Wattenberg        90.98  40  eP         P         20 54 23.3 +1.6
      comp=Z,16nm,1.8s
WTTA                               eP         pP        20 54 34.3 +1.4
      comp=Z,18nm,1.7s
KHC   Kasperske Hory    91.29  37  eP         P         20 54 23.5 +0.6
KHC                                epP        pP        20 54 35.0 +0.9
KHC                                eSKS       SKSac     21 04 53.4 +0.6
KHC                                eSS        SS        21 11 21.8 -2.1
KHC                                 AMS       AMS       21 36 50.0
      comp=Z,900nm,23.5s
KHC   Kasperske Hory    91.29  37  eP         P         20 54 23.5 +0.6
KHC                                e                    20 54 35.0
KHC                                e                    21 04 53.4
KHC                                eSS        SS        21 11 21.8 -2.1
KHC                                 MLR       MLR
      comp=Z,900nm,23.5s
PRU   Pruhonice         91.44  36  epP        pP        20 54 35.6 +0.9
PRU                                eSKS       SKSac     21 04 53.2 -0.3
PRU                                eSS        SS        21 11 26.0 +0.2
PRU                                 AMS       AMS       21 38 40.0
      comp=Z,1µm,18.1s
PRU   Pruhonice         91.44  36  eP         P         20 54 35.6  +12
PRU                                e                    21 04 53.2
PRU                                eSS        SS        21 11 26.0 +0.2
PRU                                 MLR       MLR
      comp=Z,1µm,18.1s
GEC2  GERESS Array S    91.50  38             P         20 54 22.4 -1.6
GERES GERESS Array B    91.50  38   P         P         20 54 22.3 -1.6
      comp=Z,0.7nm,0.2s,baz=270,slow=1.3,SNR=4.4
GERES                               PP        PP        20 58 03.0 +1.4
      comp=Z,0.2nm,0.3s,baz=316,slow=8.3,SNR=1.4
GERES                               LR        LR        21 38 58.0
      comp=Z,780nm,18.3s,baz=300,slow=38
GERES GERESS Array B    91.50  38   P         P         20 54 20.7 -3.2
ABTA  Abfaltersbach     91.75  40  eP         P         20 54 25.4 +0.2
      comp=Z,15nm,1.4s
ABTA                               i P        pP        20 54 37.0 +0.6
      comp=Z,29nm,1.3s
TIC   Toumodi           91.80  83  eP         P         20 54 25.8 -0.1
LIC   Lamto             91.92  83  eP         P         20 54 26.3 -0.1
      comp=Z,114nm,1.3s
DBIC  Dimbokro          91.95  82   P         P         20 54 24.8 -1.8
      comp=Z,8.1nm,0.9s,baz=288,slow=2.6,SNR=6.2
DBIC                                LR        LR        21 31 58.9
      comp=Z,608nm,21.3s,baz=298,slow=33
CHVC  Chvalec           92.00  35  epP        pP        20 54 37.8 +0.5
CHVC                                AMS       AMS       21 39 10.0
      comp=Z,1µm,17.0s
OSTC  Ostas             92.10  35  eP         P         20 54 38.7  +12
OSTC                                AMS       AMS       21 39 20.0
      comp=Z,1µm,18.4s
KIC   Kosan Boka        92.15  83  eP         P         20 54 27.6 +0.1
      comp=Z,37nm,1.0s
DPC   Dobruska-Polom    92.26  35  epP        pP        20 54 39.4 +0.8
DPC                                eSKS       SKSac     21 05 00.1 +1.9
DPC                                eSS        SS        21 11 35.9 -1.8
DPC                                 AMS       AMS       21 39 10.0
      comp=Z,1µm,17.0s
DPC   Dobruska-Polom    92.26  35  eP         P         20 54 39.4  +12
DPC                                e                    21 05 00.1
DPC                                eSS        SS        21 11 35.9 -1.8
DPC                                 MLR       MLR
      comp=Z,1µm,17.0s
MOA   Molln             92.30  38  eP         P         20 54 28.7 +1.2
      comp=Z,5.8nm,1.0s
MOA                                eP         pP        20 54 39.3 +0.5
      comp=Z,14nm,1.6s
YAK   Yakutsk           92.49 339  eP         P         20 54 28.5 +0.5
YAK                                e*PP       pP        20 54 40.1 +0.9
YAK                                e                    20 58 09.1
YAK                                ePPP       PPP       21 00 06.8
YAK                                eS         SKSac     21 04 57.7 -1.1
YAK                                e                    21 05 32.0
YAK                                eSS        SS        21 11 40.7 +0.7
YAK                                eSSS       SSS       21 15 19.4
YAK                                 pmax      pmax
      comp=Z,40nm,1.8s
YAK                                 pmax      pmax
      comp=N,10.0nm,1.4s
YAK                                 pmax      pmax
      comp=E,9.0nm,1.5s
YAK                                 pmax      pmax
      comp=Z,150nm,3.8s
YAK                                 pmax      pmax
      comp=N,249nm,3.7s
YAK                                 pmax      pmax
      comp=E,101nm,3.0s
YAK                                 smax      smax
      comp=N,164nm,3.2s
YAK                                 smax      smax
      comp=E,194nm,2.8s
YAK                                 MLR       MLR
      comp=Z,2µm,23.0s
YAK                                 MLR       MLR
      comp=N,1µm,19.0s
YAK                                 MLR       MLR
      comp=E,1µm,22.0s
YAK   Yakutsk           92.49 339   P         P         20 54 28.2 +0.2
YAK                                 IAMs_20   IAMs_20   21 38 03.8
      comp=Z,2µm,22.0s
VRAC  Vranov            92.94  36   P         P         20 54 29.4 -1.0
      comp=Z,2.3nm,0.8s,baz=277,slow=8.1,SNR=3.3
VRAC  Vranov            92.94  36  eP         P         20 54 31.5 +1.1
VRAC                               e                    20 54 41.1
KRUC  Moravsky          92.95  37  eP         P         20 54 31.2 +0.7
KRUC                               e                    20 54 41.9
OBKA  Obir              93.11  39  eP         P         20 54 32.0 +0.6
      comp=Z,13nm,1.4s
OBKA                               eP         pP        20 54 42.5 -0.1
      comp=Z,18nm,1.2s
CONA  Conrad Observa    93.20  38  eP         P         20 54 43.8  +12
      comp=Z,16nm,1.7s
MORC  Moravsky Berou    93.23  36   P         P         20 54 32.2 +0.4
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MORC				pmax	pmax		
	comp=Z,17nm,1.3s						
MORC	**Moravsky Berou**	**93.23**	**36**	*e*P	**P**	**20 54 33.0**	**+1.2**
MORC				*e*		20 54 43.7	
MORC	**Moravsky Berou**	**93.23**	**36**	P	**P**	**20 54 32.2**	**+0.4**
SOKA	**Soboth**	**93.32**	**39**	*e*P	**P**	**20 54 33.1**	**+0.8**
	comp=Z,11nm,1.3s						
SOKA				*e*P	**pP**	**20 54 43.5**	**-0.1**
	comp=Z,19nm,1.3s						
PABE	**Paberze**	**93.32**	**29**	IAMs_20	IAMs_20	21 35 15.9	
	comp=Z,874nm,21.0s						
OKC	**Ostrava-Krasne**	**93.53**	**35**	*e*SS	SS	21 12 03.6	+7.8
OKC				AMS	AMS	21 39 10.0	
	comp=Z,700nm,19.5s						
MODS	**Modra-Piesok**	**93.80**	**37**	*e*P	**P**	**20 54 35.3**	**+0.8**
MODS				*e*		20 54 45.8	
MODS	**Modra-Piesok**	**93.80**	**37**	*e*P	**P**	**20 54 35.2**	**+0.8**
MODS				*e*		20 54 45.8	
NRIK	**Noril'sk**	**93.85**	**358**	P	**P**	**20 54 33.5**	**-0.7**
	comp=Z,2.2nm,0.6s,baz=38,slow=4.6,SNR=8.0						
NRIK				PP	**PP**	**20 58 19.9**	**+0.6**
	comp=Z,6.2nm,0.9s,baz=66,slow=6.1,SNR=4.4						
NRIK				PKKP	**PKKPdf**	**21 11 38.5**	**+1.1**
	comp=Z,1.2nm,0.4s,baz=190,slow=4.7,SNR=3.8						
NRIK				LR	LR	21 40 44.4	
	comp=Z,745nm,18.2s,baz=50,slow=38						
NRIK	**Noril'sk**	**93.85**	**358**	*d* *i*P	**P**	**20 54 35.0**	**+0.8**
NRIK				pmax	pmax		
	comp=Z,21nm,1.5s						
NRIK	**Noril'sk**	**93.85**	**358**	P	**P**	**20 54 34.2**	**0.0**
NRIK				IAmb	IAmb	20 54 46.6	
	comp=Z,22nm,1.1s						
OJC	**Ojcow**	**94.23**	**34**	P	**P**	**20 54 35.5**	**-0.9**
OJC				pmax	pmax		
	comp=Z,21nm,1.4s						
OJC	**Ojcow**	**94.23**	**34**		**P**	**20 54 35.5**	**-0.9**
OJC				IAmb	IAmb	20 54 48.8	
	comp=Z,21nm,1.4s						
AQU	**L'Aquila**	**94.32**	**43**	IAMs_20	IAMs_20	21 40 38.8	
	comp=Z,816nm,19.0s						
KEST	**Kesra**	**94.36**	**51**	P	**P**	**20 54 35.5**	**-1.8**
	comp=Z,3.3nm,0.9s,baz=209,slow=9.6,SNR=4.4						
KEST				LR	LR	21 33 41.6	
	comp=Z,674nm,21.8s,baz=234,slow=33						
KEST	**Kesra**	**94.36**	**51**		**P**	**20 54 34.9**	**-2.4**
KEST				IAmb	IAmb	20 54 58.8	
	comp=Z,32nm,1.2s						
MXZ	**Matakaoa Point**	**94.58**	**232**	IAMs_20	IAMs_20	21 28 07.8	
	comp=Z,1µm,19.0s						
NACGM	**Naroch**	**94.97**	**28**	*i* P	P	20 54 51.1	+11
PSZ	**Piszkesteto**	**95.53**	**36**	P	**P**	**20 54 40.3**	**-2.2**
PSZ				pmax	pmax		
	comp=Z,32nm,1.5s						
PSZ				MLR	MLR		
	comp=Z,1µm,19.0s						
PSZ	**Piszkesteto**	**95.53**	**36**		**P**	**20 54 40.3**	**-2.2**
PSZ				IAmb	IAmb	20 54 55.9	
	comp=Z,32nm,1.5s						
PSZ				IAMs_20	IAMs_20	21 41 52.0	
	comp=Z,1µm,19.0s						
KLMR	**Klimovskoe**	**95.65**	**19**	*e*P	**P**	**20 54 41.4**	**-1.2**
KLMR				*e*		20 58 30.9	
KLMR				*e*SS	SS	21 12 21.6	-3.5
KLMR				pmax	pmax		
	comp=Z,28nm,1.4s						
KLMR	**Klimovskoe**	**95.65**	**19**	*e*P	**P**	**20 54 41.4**	**-1.2**
KLMR				AMP		20 54 54.6	
	comp=Z,28nm,1.4s						
KLMR				*e*PP	**PP**	**20 58 30.9**	**-2.5**
KLMR				*e*PPP	PPP	21 00 31.6	
KLMR				*e*SS	**SS**	**21 12 21.6**	**-3.5**
KLMR				*e*SS	**SS**	**21 12 21.6**	**-3.5**
KLMR				LQ	LQ	21 29 47.1	
KLMR				LQ	LQ	21 29 47.1	
KLMR				LR	LR	21 34 34.8	
MNK	**Minsk**	**95.71**	**28**	*i* P	**P**	**20 54 42.0**	**-1.0**
MNK				*i*		20 58 33.4	
MNK				*i* PPP	PPP	21 00 33.7	
MNK				*i* S	**SKSac**	**21 05 15.2**	**-1.5**
MNK				*i* SS	**SS**	**21 12 27.4**	**+1.0**
MNK				*i* SSS	SSS	21 16 13.5	
MNK				pmax	pmax		
	comp=N,7.0nm,1.3s						
MNK				pmax	pmax		
	comp=E,2.0nm,1.0s						
MNK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MNK				MLR	MLR		
	comp=Z,783nm,21.0s						
MNK				MLR	MLR		
	comp=E,90nm,24.0s						
MNK				MLR	MLR		
	comp=N,350nm,22.0s						
MNK	**Minsk**	**95.71**	**28**	*i* P	**P**	**20 54 42.1**	**-0.9**
	comp=E,2.0nm,1.0s						
MNK				*i* P	**P**	**20 54 42.1**	**-0.9**
	comp=N,7.0nm,1.3s						
MNK				*i* P	**P**	**20 54 42.1**	**-0.9**
	comp=Z,7.0nm,1.0s,baz=310						
MNK				*i* PP	**PP**	**20 58 33.5**	**-0.6**
MNK				*i* PPP	PPP	21 00 33.7	
MNK				*i* S	**SKSac**	**21 05 15.3**	**-1.4**
MNK				*i* SS	**SS**	**21 12 27.5**	**+1.1**
MNK				*i* SSS	SSS	21 16 13.5	
MNK				*i* LR	LR	21 30 42.4	
MNK				*i* LQ	LQ	21 31 58.9	
MNK				*i* LRM	MLR	21 37 27.4	
	comp=Z,783nm,21.1s						
MNK				*i* LRM	MLR	21 37 28.7	
	comp=E,90nm,23.6s						
MNK				*i* LRM	MLR	21 37 33.8	
	comp=N,350nm,22.4s						
YSS	**Yuzh-Sakhalins**	**95.76**	**323**	IAMs_20	IAMs_20	21 42 55.8	
	comp=Z,1µm,20.0s						
CRVS	**Cervenica-Dubn**	**95.86**	**35**	*e*P	**P**	**20 54 45.3**	**+1.4**
CRVS				*e*		20 55 01.0	
CRVS	**Cervenica-Dubn**	**95.86**	**35**	*e*P	**P**	**20 54 45.3**	**+1.4**
CRVS				*e*		20 55 01.0	
TORD	**Torodi Ar. Bea**	**96.11**	**74**	P	**P**	**20 54 44.0**	**-1.6**
	comp=Z,1.8nm,0.9s,baz=308,slow=2.5,SNR=7.3						
TORD				PKKP	**PKKPdf**	**21 11 33.3**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=86,slow=2.3,SNR=4.7						
TORD				LR	LR	21 40 02.1	
	comp=Z,482nm,18.0s,baz=280,slow=37						
TORD	**Torodi Ar. Bea**	**96.11**	**74**	P	**P**	**20 54 43.4**	**-2.2**
CLTB	**Caltabellotta**	**96.37**	**48**	IAMs_20	IAMs_20	21 39 49.4	
	comp=Z,1µm,20.0s						
UZH	**Uzhgorod**	**96.47**	**35**	⇑*e*P	**P**	**20 54 46.5**	**-0.1**
UZH				*e*		20 54 53.2	
UZH				*e*		20 55 00.4	
LVV	**L'vov**	**96.72**	**33**	*e*P	**P**	**20 54 49.2**	**+1.5**
PRGR	**Permogore**	**96.79**	**16**	*e*P	**P**	**20 54 46.4**	**-1.3**
PRGR				*e**PP	**pP**	**20 54 57.2**	**-1.8**
PRGR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TRPA	**Tarpa**	**96.89**	**35**	⇑P	**P**	**20 54 48.9**	**+0.4**
FRGS	**Fruska Gora**	**96.96**	**39**	⇑P	P	20 55 00.6	+12
SIRR	**Siria**	**97.44**	**37**	⇑P	**P**	**20 54 50.8**	**-0.3**
DRGR		**97.75**	**36**	⇑P	Pdif	20 55 02.6	+10
DRGR		**97.75**	**36**	⇑P	Pdif	20 55 02.6	+10
BZS	**Buzias**	**97.78**	**38**	⇓P	**P**	**20 54 51.2**	**-1.4**
BZS	**Buzias**	**97.78**	**38**	⇓P	**P**	**20 54 51.2**	**-1.4**
PDG	**Podgorica**	**98.06**	**41**	IAMs_20	IAMs_20	21 44 15.6	
	comp=Z,659nm,18.0s						
TIP	**Timpagrande**	**98.07**	**45**	IAMs_20	IAMs_20	21 40 13.2	
	comp=Z,796nm,21.0s						
AKASG	**Malin Array Be**	**98.79**	**30**	LR	LR	21 43 29.8	
	comp=Z,442nm,18.9s,baz=305,slow=38						
MOS	**Moscow**	**98.89**	**23**	*e*P	**P**	**20 54 56.9**	**-0.4**
MOS				*e*		20 58 56.5	
MOS				MLR	MLR		
	comp=E,1µm,22.0s						
MOS				MLR	MLR		
	comp=Z,1µm,22.0s						
OBN	**Obninsk**	**98.94**	**24**	⇓*e*P	Pdif	20 54 59.0	+1.4
OBN				*i* *PP	pP	20 55 08.9	+0.1
OBN				*e**SP	sP	20 55 15.8	+3.4
OBN				*i* S	**SKSac**	**21 05 35.1**	**+1.9**
OBN				*e*		21 06 30.7	
OBN				*i* PS	PS	21 07 52.6	-2.4
OBN				pmax	pmax		
	comp=Z,31nm,1.3s						
OBN				MLR	MLR		
	comp=Z,1µm,20.0s						
OBN	**Obninsk**	**98.94**	**24**	IAMs_20	IAMs_20	21 42 03.3	
	comp=Z,2µm,20.0s						
TIR	**Tirane**	**99.02**	**42**	IAMs_20	IAMs_20	21 45 03.8	
	comp=Z,714nm,19.0s						
MLR	**Muntele Rosu**	**100.33**	**36**	⇓P	**Pdif**	**20 55 16.1**	**+12**
MLR	**Muntele Rosu**	**100.33**	**36**	P	**Pdif**	**20 55 04.5**	**+0.3**
	comp=Z,1.5nm,0.8s,baz=278,slow=7.1						
MLR	**Muntele Rosu**	**100.33**	**36**	IAMs_20	IAMs_20	21 45 05.1	
	comp=Z,1µm,19.0s						
DZM	**Mont Dzumac**	**100.36**	**250**	*e*PP	**PP**	**20 59 05.3**	**-6.2**
	comp=Z,188nm,25.3s						
DZM	**Mont Dzumac**	**100.36**	**250**	*e*SS	SS	21 13 30.2	-4.6
	comp=Z,202nm,28.9s						
DZM	**Mont Dzumac**	**100.36**	**250**	*e*LR	LR	21 27 47.4	
	comp=Z,2µm,27.2s						
KIRV	**Kirov**	**100.39**	**16**	⇑*e*P	**Pdif**	**20 55 04.1**	**+0.2**
MILM	**Milestii Mici**	**101.01**	**34**	*e*P	**Pdif**	**20 55 06.0**	**-1.0**
MILM				*e*		21 05 40.0	
MILM				*e*PS	PS	21 08 14.0	-3.6
MILM				pmax	pmax		
	comp=Z,50nm,1.3s						
MJAR	**Matsushiro Arr**	**104.30**	**316**	PKiKP	**PKiKP**	**20 59 37.7**	**-0.8**
	comp=Z,1.8nm,0.9s,baz=75,slow=6.6,SNR=4.1						
ARU	**Arti**	**104.52**	**13**	PKiKP	**PKiKP**	**20 59 40.9**	**+2.6**
	comp=Z,0.3nm,0.3s,baz=350,slow=9.0,SNR=4.5						
ARU	**Arti**	**104.52**	**13**	IAMs_20	IAMs_20	21 49 36.3	
	comp=Z,642nm,19.0s						
HIA	**Hailar**	**105.73**	**335**	IAMs_20	IAMs_20	21 48 57.3	
	comp=Z,1µm,20.0s						
QSPA	**South Pole Qui**	**106.84**	**180**	IAMs_20	IAMs_20	21 37 19.9	
	comp=Z,898nm,18.0s						
SNAA	**Sanae**	**107.85**	**161**	IAMs_20	IAMs_20	21 36 05.9	
	comp=Z,730nm,22.0s						
ZALV	**Zalesovo Beam**	**109.35**	**358**	PP	**PP**	**21 00 13.9**	**-2.0**
	comp=Z,5.2nm,0.9s,baz=352,slow=9.0,SNR=8.9						
BRVK	**Borovoye**	**109.69**	**7**	IAMs_20	IAMs_20	21 52 50.8	
	comp=Z,1µm,18.0s						
BVAR	**Borovoye Array**	**109.74**	**7**	PP	**PP**	**21 00 19.4**	**+0.6**
	comp=Z,3.5nm,1.0s,baz=332,slow=9.7,SNR=6.2						
AKTO	**Aktyubinsk**	**109.93**	**15**	PP	**PP**	**21 00 18.5**	**-1.8**
	comp=Z,1.8nm,0.8s,baz=336,slow=7.0,SNR=6.7						
ULN	**Ulaanbaatar**	**111.45**	**342**	IAMs_20	IAMs_20	21 49 52.0	
	comp=Z,1µm,22.0s						
SONM	**Songino Array**	**111.67**	**342**	PKiKP	**PKiKP**	**20 59 51.8**	**-0.3**
	comp=Z,0.5nm,0.9s,baz=82,slow=11,SNR=2.6						
SONM				PP	**PP**	**21 00 27.9**	**-5.2**
	comp=Z,1.9nm,1.1s,baz=29,slow=3.4,SNR=4.3						
SONM				PKKPbc	**PKKPbc**	**21 10 44.4**	**-2.7**
	comp=Z,0.7nm,1.0s,baz=329,slow=1.7,SNR=4.2						
KURK	**Kurchatov**	**112.63**	**2**	*i* PKIKP	**PKiKP**	**20 59 52.0**	**-1.6**
KURK	**Kurchatov**	**112.63**	**2**	IAMs_20	IAMs_20	21 52 13.4	
	comp=Z,1µm,22.0s						
KURBB	**Kurchatov Arra**	**112.72**	**2**	PKiKP	**PKiKP**	**20 59 52.0**	**-1.8**
	comp=Z,0.4nm,0.6s,baz=7.4,slow=1.7,SNR=3.6						
KURBB				PP	**PP**	**21 00 38.0**	**-2.2**
	comp=Z,6.4nm,1.2s,baz=357,slow=6.9,SNR=7.0						
MAK	**Makhachkala**	**112.90**	**26**	*i* P	**Pdif**	**20 55 57.2**	**-2.7**
MAK				*i*		20 59 53.3	
MAK				*e*		21 00 41.5	
MAK				*e*		21 06 35.3	
MAK				*e*SS	SS	21 16 19.5	-2.5
MAK				*e*SSS	SSS	21 20 38.6	
MAK				pmax	pmax		
	comp=Z,184nm,1.7s						
DGZ	**Jazzator, Alta**	**113.44**	**356**	⇑*i*PKIKP	**PKiKP**	**20 59 54.3**	**-1.1**
BJT	**Baijiatuau**	**114.60**	**331**	IAMs_20	IAMs_20	21 55 10.5	
	comp=Z,539nm,18.0s						
HHC	**Hu-ho-hao-te**	**115.94**	**335**	*e*PKP	**PKPdf**	**21 00 01.8**	**+1.4**
HHC				LR	LR		
	comp=Z,470nm,18.0s						
HHC				LR	LR		
	comp=Z,380nm,18.5s						
HHC				LR	LR		
	comp=Z,780nm,18.4s						
MAKZ	**Makanchi**	**116.57**	**359**	IAMs_20	IAMs_20	21 55 56.6	
	comp=Z,1µm,22.0s						
MKAR	**Makanchi Array**	**116.58**	**359**	PKP	**PKiKP**	**21 00 00.7**	**-0.7**
	comp=Z,0.7nm,0.7s,baz=0.0,slow=4.9,SNR=4.4						
MKAR				PP	**PP**	**21 01 02.1**	**-5.4**
	comp=Z,2.0nm,1.0s,baz=350,slow=5.9,SNR=3.1						
MKAR				PKKPbc	**PKKPbc**	**21 10 30.4**	**+0.1**
	comp=Z,2.9nm,1.0s,baz=181,slow=5.9,SNR=8.7						
CTA	**Charters Tower**	**118.46**	**256**	PKP	**PKPdf**	**21 00 04.6**	**-1.0**
	comp=Z,4.7nm,0.5s,baz=77,slow=1.9,SNR=2.3						
WMQ	**Urumqi**	**119.26**	**355**	*e*PKP	**PKiKP**	**21 00 07.4**	**+0.7**
WMQ				LR	LR		
	comp=Z,970nm,21.1s						
WMQ				LR	LR		
	comp=Z,630nm,18.1s						
WMQ				LR	LR		
	comp=Z,1µm,19.9s						
NJ2	**Nanjing**	**119.33**	**323**	*e*PKP	**PKiKP**	**21 00 09.1**	**+2.0**
AAK	**Ala-Archa**	**120.43**	**6**	PKP	**PKPdf**	**21 00 08.7**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=286,slow=7.4,SNR=4.4						
AAK				PP	**PP**	**21 01 32.2**	**-2.2**
	comp=Z,1.9nm,0.8s,baz=310,slow=1.9,SNR=5.4						
AAK	**Ala-Archa**	**120.43**	**6**	PKIKP	**PKPdf**	**21 00 06.7**	**-2.4**
AAK						21 01 32.2	
AAK				MLR	MLR		
	comp=Z,1µm,22.0s						
AAK	**Ala-Archa**	**120.43**	**6**	PKPdf	**PKPdf**	**21 00 06.7**	**-2.4**
GTA	**Gaotai**	**121.29**	**343**	*e*PKP	**PKiKP**	**21 00 11.3**	**+0.4**
GTA				sPKP		21 00 27.8	
GTA				PP	**PP**	**21 01 44.8**	**+4.4**
GTA				AMB	AMB		
	comp=Z,84nm,5.8s						
GTA				LR	LR		
	comp=Z,830nm,21.8s						
GTA				LR	LR		
	comp=Z,450nm,23.3s						
GTA				LR	LR		
	comp=Z,1µm,23.6s						
SMPI	**Sarmi**	**121.48**	**278**	PKP	**PKiKP**	**21 00 11.8**	**+0.1**
SMPI				PKP	**PKPdf**	**21 00 12.3**	**+0.7**
MMPI	**Merauke**	**121.72**	**270**	PKP	**PKPdf**	**21 00 11.0**	**-1.0**
XAN	**Xi'an**	**122.80**	**333**	PKP	**PKPdf**	**21 00 13.3**	**-0.4**
XAN				LR	LR		
	comp=Z,880nm,16.5s						
XAN				LR	LR		
	comp=Z,560nm,19.2s						
XAN				LR	LR		
	comp=Z,1µm,17.9s						
LZH	**Lanzhou**	**123.05**	**338**	*e*PKP	**PKiKP**	**21 00 15.3**	**+0.8**
LZH				sPKP		21 00 27.0	
LZH				SS	SS	21 18 39.6	+5.7
LZH				LR	LR		
	comp=Z,800nm,12.5s						
LZH				LR	LR		
	comp=Z,520nm,17.3s						
LZH				LR	LR		
	comp=Z,660nm,18.2s						
GAR	**Garm**	**123.47**	**10**	PKPdf	**PKiKP**	**21 00 15.7**	**+0.5**
STKA	**Stephens Creek**	**123.56**	**243**	PKP	**PKPdf**	**21 00 15.2**	**+0.1**
	comp=Z,12nm,1.0s,baz=80,slow=1.4,SNR=13						
STKA	**Stephens Creek**	**123.56**	**243**	PKPdf	**PKPdf**	**21 00 14.7**	**-0.3**
KSH	**Kashi**	**123.66**	**5**	PKP	**PKiKP**	**21 00 15.8**	**+0.2**
KSH				sPKP		21 00 28.3	
KSH				PP	**PP**	**21 02 03.0**	**+6.8**
KSH				SKS	**SKSdf**	**21 07 21.3**	**-3.8**
KSH				SKKS	**SKKSac**	**21 08 48.4**	**-5.7**
KSH				SS	**SS**	**21 18 43.8**	**+2.8**
KSH				AMB	AMB		
	comp=Z,270nm,8.1s						
KSH				LR	LR		
	comp=Z,1µm,22.8s						
KSH				LR	LR		
	comp=Z,580nm,22.7s						
KSH				LR	LR		
	comp=Z,2µm,24.4s						
RAYN	**Ar Rayn**	**126.86**	**42**	PKIKP	**PKPdf**	**21 00 21.2**	**-0.6**
RAYN				MLR	MLR		
	comp=Z,400nm,20.0s						
RAYN	**Ar Rayn**	**126.86**	**42**		**PKPdf**	**21 00 21.2**	**-0.6**
BOSA	**Boshof**	**127.63**	**113**	PKP	**PKPdf**	**21 00 22.9**	**-0.2**
	comp=Z,13nm,1.1s,baz=311,slow=2.8,SNR=5.9						
BOSA	**Boshof**	**127.63**	**113**	PKIKP	**PKPdf**	**21 00 23.3**	**+0.2**
BOSA	**Boshof**	**127.63**	**113**	PKPdf	**PKPdf**	**21 00 23.3**	**+0.2**
CD2	**Chengdu**	**127.68**	**335**	PKP	**PKPdf**	**21 00 22.8**	**-0.4**
CD2				AMB	AMB		
	comp=Z,350nm,5.9s						
CD2				LR	LR		
	comp=Z,690nm,18.6s						
CD2				LR	LR		
	comp=Z,950nm,17.6s						
CD2				LR	LR		
	comp=Z,1µm,22.6s						
MBAR	**Mbarara**	**127.88**	**77**	IAMs_20	IAMs_20	21 53 02.3	
	comp=Z,543nm,20.0s						
FAKI	**Fak Fak**	**127.88**	**280**	PKP	**PKiKP**	**21 00 25.4**	**+0.9**
FAKI	**Fak Fak**	**127.88**	**280**	IAMs_20	IAMs_20	21 44 43.7	
	comp=Z,971nm,22.0s						
MAW	**Mawson**	**128.00**	**171**	PKP	**PKiKP**	**21 00 23.0**	**0.0**
	comp=Z,10nm,0.9s,baz=203,slow=7.1,SNR=4.4						
MAW	**Mawson**	**128.00**	**171**	PKIKP	**PKiKP**	**21 00 23.0**	**0.0**
SWI	**Sorong**	**128.12**	**283**	PKP	**PKiKP**	**21 00 25.0**	**+0.1**
NIL	**Nilore**	**129.16**	**8**	IAMs_20	IAMs_20	22 03 51.2	
	comp=Z,956nm,20.0s						
WRAB	**Tennant Creek**	**129.54**	**258**	*ce*PKIKP	**PKiKP**	**21 00 27.5**	**-0.1**
WRAB	**Tennant Creek**	**129.54**	**258**		**PKPdf**	**21 00 25.8**	**-1.0**
WRA	**Warramunga Arr**	**129.55**	**258**	PKP	**PKiKP**	**21 00 27.3**	**-0.3**
	comp=Z,11nm,1.0s,baz=81,slow=1.4,SNR=38						
AS31	**Alice Springs**	**130.22**	**253**	PKPdf	**PKPdf**	**21 00 27.6**	**-0.5**
ASAR	**Alice Springs**	**130.22**	**253**	PKP	**PKPdf**	**21 00 28.4**	**+0.3**
	comp=Z,7.5nm,1.0s,baz=93,slow=2.1,SNR=33						
ASAR	**Alice Springs**	**130.22**	**253**	PKPdf	**PKPdf**	**21 00 26.9**	**-1.1**
GYA	**Guiyang**	**130.23**	**330**	PKP	**PKiKP**	**21 00 28.9**	**-0.1**
LODK	**Lodwar**	**130.54**	**70**	IAMs_20	IAMs_20	21 56 30.3	
	comp=Z,651nm,20.0s						
FURI	**Furi**	**130.85**	**62**	IAMs_20	IAMs_20	21 57 59.4	
	comp=Z,476nm,20.0s						
LBMI	**Labuha**	**131.53**	**285**	PKP	**PKiKP**	**21 00 32.8**	**+1.0**
MTN	**Manton Dam**	**131.55**	**268**		**PKPdf**	**21 00 30.5**	**-0.2**
AAI	**Ambon**	**131.96**	**280**	PKP	**PKiKP**	**21 00 33.1**	**+0.5**
LSA	**Lhasa**	**132.65**	**348**	PKP	**PKiKP**	**21 00 34.3**	**0.0**
LSA	**Lhasa**	**132.65**	**348**	IAMs_20	IAMs_20	22 04 19.7	
	comp=Z,735nm,22.0s						
ATD	**Arta Tunnel**	**132.81**	**56**	IAMs_20	IAMs_20	21 58 27.5	
	comp=Z,533nm,22.0s						
KMI	**Kunming**	**133.19**	**333**	PKP	**PKiKP**	**21 00 34.6**	**-0.6**
KMI				sPKP		21 00 52.8	
KMI				PP	**PP**	**21 03 03.3**	**+4.0**
KMI				PKS		21 04 07.6	
KMI				SS	SS	21 20 37.0	-3.1
KMI				AMB	AMB		
	comp=Z,250nm,7.7s						
KMI				LR	LR		
	comp=Z,530nm,22.9s						
KMI				LR	LR		
	comp=Z,330nm,19.7s						
KMI				LR	LR		
	comp=Z,650nm,19.7s						
SANI	**Sanana**	**133.46**	**284**	PKP	**PKiKP**	**21 00 35.6**	**-0.1**
KMBO	**Kilima Mbogo**	**134.12**	**75**	PKP	**PKPdf**	**21 00 36.3**	**+0.3**
	comp=Z,0.6nm,0.4s,baz=310,slow=3.9,SNR=9.2						
KMBO	**Kilima Mbogo**	**134.12**	**75**	PKPdf	**PKPdf**	**21 00 34.1**	**-1.9**
KMBO	**Kilima Mbogo**	**134.12**	**75**	IAMs_20	IAMs_20	21 55 12.5	
	comp=Z,827nm,22.0s						
KMSI	**Cibinong**	**134.29**	**288**	PKP	**PKiKP**	**21 00 38.2**	**+0.8**
QIZ	**Qiongzhong**	**134.44**	**320**	PKP	**PKiKP**	**21 00 37.0**	**-0.5**
QIZ				PP	**PP**	**21 03 08.4**	**+0.9**
QIZ				SS	SS	21 20 58.8	+3.2
QIZ				LR	LR		
	comp=Z,430nm,17.2s						
QIZ				LR	LR		
	comp=Z,410nm,18.1s						
QIZ				LR	LR		
	comp=Z,560nm,17.2s						
KIBK	**Kibwezi**	**135.31**	**76**	IAMs_20	IAMs_20	21 57 35.2	
	comp=Z,820nm,21.0s						
SLVN	**Son La**	**135.89**	**329**	IAMs_20	IAMs_20	22 07 40.6	
	comp=Z,735nm,21.0s						
SHL	**Shillong**	**136.48**	**346**	PKIKP	**PKPdf**	**21 00 39.4**	**-0.7**
SHL	**Shillong**	**136.48**	**346**	PKPdf	**PKPdf**	**21 00 39.4**	**-0.7**
TOLI2	**Tolitoli**	**136.95**	**291**		**PKPdf**	**21 00 40.9**	**-0.1**
APSI	**Ampana**	**137.02**	**287**	PKP	**PKPdf**	**21 00 40.9**	**-0.2**
MPSI	**Mapaga**	**138.08**	**290**	PKP	PKPpre	21 00 35.3	
MPSI				PKP	PKPpre	21 00 35.3	
TTSI	**Tana Toraja**	**139.54**	**286**	PKP	**PKiKP**	**21 00 47.0**	**-1.0**
EDFI	**Ende, Flores**	**139.65**	**276**	PKP	PKPpre	21 00 41.6	
EDFI				PKP	**PKPdf**	**21 00 42.8**	**-3.2**
BNSI	**Bone**	**139.78**	**284**	PKP	**PKiKP**	**21 00 48.1**	**-0.4**
SPSI	**Sidrap Palu**	**139.93**	**284**	PKP	**PKiKP**	**21 00 47.9**	**-0.9**
BSSI	**Bau Bau, Buton**	**140.01**	**281**	PKP	**PKPdf**	**21 00 47.7**	**+1.1**
BKSI	**Bulukumba**	**140.08**	**282**	PKP	**PKPdf**	**21 00 47.2**	**+0.5**
CHTO	**Chiang Mai**	**140.38**	**333**	IAMs_20	IAMs_20	22 11 59.0	
	comp=Z,546nm,19.0s						
CMAR	**Chiang Mai Arr**	**140.70**	**333**	PKP	**PKPdf**	**21 00 47.9**	**+0.2**
	comp=Z,3.3nm,0.8s,baz=340,slow=2.4,SNR=7.1						
CMAR	**Chiang Mai Arr**	**140.70**	**333**		PKPpre	21 00 39.9	
KBKI	**Kotabaru**	**142.99**	**288**	PKP	**PKPdf**	**21 00 48.7**	**-3.2**
KBKI				PKP	**PKiKP**	**21 00 49.1**	**-6.0**
MTKI	**Muara Teweh, K**	**143.12**	**292**	PKP	PKPbc	21 00 50.0	+0.9
MTKI				PKP	**PKPdf**	**21 00 50.2**	**-2.0**
PSA00	**Pilbara Seismi**	**143.17**	**256**		PKPab	21 00 48.0	+0.4
POO	**Poona**	**144.06**	**12**	*e*P	**PKPab**	**21 00 49.0**	**-2.2**
TWSI	**Taliwang, Sumb**	**144.21**	**279**	PKP	**PKPab**	**21 00 51.3**	**-0.5**
TWSI				PKP	PKPbc	21 00 51.6	-0.6
BBKI	**Banjar Baru**	**144.27**	**288**	PKP	PKPbc	21 00 52.5	+0.1
BBKI				PKP	**PKPab**	**21 00 52.6**	**+0.5**
SRBI	**Singaraja**	**145.59**	**281**	PKP	**PKPdf**	**21 00 55.9**	**-0.5**
STKI	**Sintang**	**145.62**	**296**	PKP	**PKPab**	**21 00 57.4**	**+0.3**
MORW	**Morawa**	**145.75**	**243**	PKPdf	**PKPdf**	**21 00 55.5**	**-0.7**
DNP	**Denpasar**	**145.77**	**280**	PKP	**PKPbc**	**21 00 57.2**	**0.0**
HYB	**Hyderabad**	**145.79**	**4**	*i* PKP	**PKPdf**	**21 00 56.0**	**-0.7**
HYB				*e*pPKP	**pPKPdf**	**21 01 08.0**	**-0.2**
KSM	**Kuching**	**145.87**	**300**	P	**PKPab**	**21 00 58.0**	**0.0**
KSM	**Kuching**	**145.87**	**300**	PKPdf	**PKPdf**	**21 00 56.3**	**-0.6**
IGBI	**Denpasar**	**145.87**	**279**	PKP	**PKPbc**	**21 00 57.2**	**-0.3**
ABJI	**Asem Bagus**	**146.41**	**282**	PKP	**PKPdf**	**21 00 57.9**	**+0.1**
KMMI	**Kalianget**	**146.42**	**283**	PKP	**PKPbc**	**21 00 59.2**	**0.0**
JAGI	**Jajag, Banyuwa**	**146.70**	**280**	PKP	**PKPdf**	**21 00 58.2**	**-0.1**
JAGI	**Jajag, Banyuwa**	**146.70**	**280**	PKPdf	**PKPdf**	**21 00 57.4**	**-0.9**
PBKI	**Pangkalan Bun**	**146.79**	**292**	PKP	**PKPbc**	**21 01 00.9**	**+0.6**
BLJI	**Banyuglugur**	**147.00**	**282**	PKP	**PKPdf**	**21 00 55.5**	**-3.3**
BLJI				PKP	**PKPbc**	**21 01 00.1**	**-0.7**
BLJI				PKP	**PKPab**	**21 01 00.7**	**-1.6**
GMJI	**Gumukmas**	**147.31**	**281**	PKP	**PKPbc**	**21 01 01.7**	**0.0**
SRIT	**Nakonsritamara**	**148.72**	**323**		**PKPdf**	**21 01 01.6**	**-0.1**
NGJI	**Ngawi**	**148.86**	**284**	PKP	**PKPbc**	**21 01 04.0**	**-1.8**
NGJI				PKP	**PKiKP**	**21 01 07.5**	**+0.3**
UWJI	**Ujung Watu**	**148.99**	**286**	PKP	**PKPdf**	**21 01 02.6**	**+0.5**
PCJI	**Pacitan**	**149.41**	**283**	PKP	**PKPdf**	**21 01 04.2**	**+1.5**
SMRI	**Semarang**	**149.69**	**285**	PKP	**PKPdf**	**21 01 04.4**	**+1.2**
SMRI				PKP	**PKPbc**	**21 01 08.1**	**+0.2**
SMRI				PKP	**PKiKP**	**21 01 08.9**	**0.0**
SMRI	**Semarang**	**149.69**	**285**		**PKPdf**	**21 01 05.2**	**+2.0**
UGM	**Wanagama**	**149.92**	**284**	PKP	**PKPdf**	**21 01 05.4**	**+1.8**
UGM				PKP	**PKPbc**	**21 01 08.3**	**-0.2**
UGM	**Wanagama**	**149.92**	**284**		**PKPbc**	**21 01 07.0**	**-1.5**
YOGI	**Yogyakarta**	**150.10**	**284**	PKP	**PKPbc**	**21 01 07.9**	**-1.0**
TPI	**Tanjungpandan**	**150.34**	**295**	PKP	**PKPdf**	**21 01 05.3**	**+1.0**
TPI				PKP	**PKPbc**	**21 01 09.8**	**+0.3**
JRMM	**Jerantut**	**150.43**	**312**	P	**PKPdf**	**21 01 06.0**	**+1.6**
KULM	**Kulim**	**150.65**	**317**	P	**PKPbc**	**21 01 10.0**	**-0.2**
KULM	**Kulim**	**150.65**	**317**		**PKPdf**	**21 01 05.1**	**+0.3**
KULM				IAMs_20	IAMs_20	22 23 19.4	
	comp=Z,465nm,22.0s						
MYKOM	**Kota Tinggi**	**150.84**	**307**	P	**PKiKP**	**21 01 12.0**	**+0.7**
MYKOM	**Kota Tinggi**	**150.84**	**307**	IAMs_20	IAMs_20	22 19 31.8	
	comp=Z,423nm,20.0s						
IPM	**Ipoh**	**151.01**	**315**	P	**PKPbc**	**21 01 11.0**	**-0.1**
IPM	**Ipoh**	**151.01**	**315**	PKPdf	**PKPdf**	**21 01 05.2**	**-0.1**
IPM				IAMs_20	IAMs_20	22 23 06.0	
	comp=Z,534nm,20.0s						
KPJI	**Karang Pucung**	**151.19**	**286**	PKP	**PKPdf**	**21 01 06.5**	**+1.0**
KPJI				PKP	**PKiKP**	**21 01 11.9**	**-0.1**
PPBI	**Pangkal Pinang**	**151.33**	**298**	PKP	**PKPdf**	**21 01 07.0**	**+1.2**
PPBI				PKP	**PKiKP**	**21 01 12.2**	**-0.1**
DSRI	**Dabo**	**151.67**	**303**	PKP	**PKPdf**	**21 01 08.1**	**+1.8**
CMJI	**Cimerak**	**151.80**	**285**	PKP	**PKPdf**	**21 01 06.6**	**+0.1**
CMJI				PKP	**PKPbc**	**21 01 11.3**	**-1.5**
LEM	**Lembang**	**152.20**	**288**	PKP	**PKPdf**	**21 01 07.8**	**+0.5**
LEM				PKP	**PKiKP**	**21 01 14.7**	**+0.4**
CBJI	**Citeko**	**152.73**	**289**	PKP	**PKPdf**	**21 01 08.9**	**+1.1**
CBJI				PKP	**PKPbc**	**21 01 14.6**	**-0.4**
CBJI				PKP	**PKiKP**	**21 01 14.7**	**-0.5**
CNJI	**Cibinong**	**152.83**	**287**	PKP	**PKPdf**	**21 01 08.2**	**+0.2**
CNJI				PKP	**PKPbc**	**21 01 15.1**	**-0.1**
DBJI	**Dramaga**	**152.87**	**289**	PKP	**PKPdf**	**21 01 09.8**	**+1.7**
DBJI				PKP	**PKPbc**	**21 01 15.1**	**-0.2**
JMBI	**JAMBI**	**153.10**	**302**	PKP	**PKPdf**	**21 01 07.4**	**-1.0**
TSI	**Tuntungan**	**153.35**	**318**	PKP	**PKPbc**	**21 01 13.1**	**-3.3**
KLSI		**153.82**	**295**	PKP	**PKPdf**	**21 01 09.2**	**-0.3**
KLSI				PKP	**PKPbc**	**21 01 09.6**	**-7.8**
BKNI	**Bangkinang**	**153.91**	**309**	PKP	**PKPdf**	**21 01 11.7**	**+2.1**
BKNI				PKP	**PKPbc**	**21 01 16.6**	**-1.0**
BKNI	**Bangkinang**	**153.91**	**309**	IAMs_20	IAMs_20	22 23 11.9	
	comp=Z,689nm,21.0s						
MLSI	**Meulaboh, Aceh**	**154.07**	**323**	PKP	**PKPdf**	**21 01 13.5**	**+3.7**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MDSI	**Maura Dua**	**154.20**	**296**	PKP	**PKPdf**	**21 01 08.6**	**-1.4**
MDSI				PKP	PKPbc	21 01 09.3	-8.9
LHSI	**Lahat**	**154.42**	**298**	PKP	**PKPbc**	**21 01 17.3**	**-1.3**
KASI	**Kota Agung**	**154.43**	**294**	PKP	**PKPdf**	**21 01 11.7**	**+1.4**
LWLI	**Liwa**	**154.57**	**295**	PKP	**PKPdf**	**21 01 12.1**	**+1.5**
MNSI	**Mandailing Nat**	**154.65**	**312**	PKP	**PKPbc**	**21 01 15.5**	**-3.6**
MNSI				PKP	**PKiKP**	**21 01 18.3**	**-0.9**
KSI	**Kapahiang**	**155.10**	**300**	PKP	**PKPdf**	**21 01 11.7**	**+0.4**
PALK	**Pallekele**	**155.96**	**1**	IAMs_20	IAMs_20	22 19 28.9	
	comp=Z,728nm,21.0s						

IDC ***23*** *20:49:47.4±8.9, 13°.28S×166°.97E, h211^{km}±90^{km}, mb3.3/5, mb1 3.5/6, mb1mx3.2/31, mbtmp3.7/6, Error ellipse: s-maj=76.6km s-min=25.6km az=164.0*

ISC 23 20:49:46.4±1.0**, 13°.2S**±0°.1×**166°.9E**±0°.2**, h200^{km}, n8, σ0^s.86**/9**, mb3.3**/4**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**8.82**	**183**	P	**Pn**	**20 51 51.6**	**+1.2**
	0.2nm,0.3s,baz=308,slow=22,SNR=1.4						
DZM				S	**Sn**	**20 53 28.0**	**-1.4**
	0.1nm,0.3s,baz=330,slow=20,SNR=1.2						
WRA	**Warramunga Arr**	**31.91**	**254**	P	**P**	**20 55 53.4**	**+0.1**
	0.3nm,0.6s,baz=86,slow=8.8,SNR=4.8						
ASAR	**Alice Springs**	**32.94**	**247**	P	**P**	**20 56 02.4**	**+0.1**
	0.6nm,0.5s,baz=75,slow=9.0,SNR=16						
ILAR	**Eielson Array**	**85.20**	**18**	P	**P**	**21 01 59.2**	**-0.6**
	0.5nm,0.5s,baz=246,slow=4.8,SNR=10.0						
NVAR	**Mina Array Bea**	**86.54**	**49**	P	**P**	**21 02 07.7**	**+0.3**
	0.1nm,0.3s,baz=254,slow=2.5,SNR=1.9						
KURBB	**Kurchatov Arra**	**99.08**	**320**	P	**Pdif**	**21 03 03.9**	**-0.6**
	0.6nm,0.8s,baz=77,slow=4.0,SNR=2.2						
ARCES	**ARCESS Array B**	**118.72**	**346**	PKP	**PKPdf**	**21 08 09.9**	**-0.2**
	4.4nm,1.0s,baz=68,slow=2.3,SNR=12						
ESDC	**Sonseca Array**	**152.45**	**345**	PKPbc	**PKPbc**	**21 09 19.1**	**-0.1**
	1.0nm,1.0s,baz=300,slow=2.8,SNR=4.5						

BUT ***23*** *21:03:23.0±1.7, 48°.12N±0°.03×116°.30W±0°.03, h6^{km}±5^{km}, Error ellipse: s-maj=4.9km s-min=2.4km az=194.0*
PGC ***23*** *21:03:23.4±0.0, 48°.13N×116°.33W, h6^{km}, ML3.4, ML3.5/12, 94km Ene of Spokane, Wa Western Idaho*
NEIC ***23*** *21:03:23.8±2.1, 48°.04N±0°.03×116°.24W±0°.03, h5^{km}±1^{km}, ML3.4/58, ML3.5(OTT), ML3.7/17(BUT), Error ellipse: s-maj=6.1km s-min=3.0km az=202.0*

ISC 23 21:03:22.9±0.7**, 48°.13N**±0°.03×**116°.30W**±0°.02**, h10^{km}, n110, σ2^s.52**/140**, Western Idaho**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEW	**Newport**	**0.57**	**284**	Pg	**Pg**	**21 03 33.6**	**-0.3**
NEW				IAML		21 03 41.3	
	2µm,0.2s						
BHMT	**Big Hole Peak**	**1.01**	**123**		**Pb**	**21 03 41.6**	**-0.9**
BHMT	**Big Hole Peak**	**1.01**	**123**	P	**Pb**	**21 03 41.6**	**-0.9**
BSMT	**Bassoo Peak**	**1.05**	**105**		**Pb**	**21 03 42.6**	**-0.7**
BSMT	**Bassoo Peak**	**1.05**	**105**	P	**Pb**	**21 03 42.6**	**-0.7**
C09A	**Chrisman Ranch**	**1.37**	**257**		**Pn**	**21 03 47.7**	**-0.3**
C09A	**Chrisman Ranch**	**1.37**	**257**	P	**Pn**	**21 03 47.7**	**-0.3**
C09A				S	**Sb**	**21 04 06.0**	**-0.1**
JTMT	**Jette**	**1.41**	**105**		**Pg**	**21 03 49.1**	**-0.7**
JTMT				Sn	**Sg**	**21 04 07.8**	**-0.3**
JTMT				IAML		21 04 10.8	
	comp=E,619nm,0.3s						
JTMT	**Jette**	**1.41**	**105**	Pn	**Pg**	**21 03 49.2**	**-0.7**
JTMT				Sg	**Sg**	**21 04 09.5**	**+1.3**
FBMT	**Ferry Basin**	**1.46**	**119**	Pn	**Pg**	**21 03 50.0**	**-0.9**
FBMT	**Ferry Basin**	**1.46**	**119**	Pn	**Pg**	**21 03 50.0**	**-0.9**
YBMT	**Yellow Bay**	**1.56**	**99**	Pn	**Pb**	**21 03 51.0**	**-0.8**
YBMT				Sg	**Sg**	**21 04 13.0**	**0.0**
YBMT	**Yellow Bay**	**1.56**	**99**	Pn	**Pb**	**21 03 51.0**	**-0.8**
YBMT				Sg	**Sg**	**21 04 13.0**	**0.0**
SWMT	**Swartz Lake**	**1.67**	**111**	Pn	**Pb**	**21 03 52.7**	**-1.1**
SWMT	**Swartz Lake**	**1.67**	**111**	Pn	**Pb**	**21 03 52.7**	**-1.1**
OD2	**Odessa Site #2**	**1.79**	**246**		**Pn**	**21 03 53.7**	**-0.1**
WALA	**Waterton Lakes**	**1.83**	**59**		**Pb**	**21 03 55.2**	**-1.3**
WALA	**Waterton Lakes**	**1.83**	**59**	Pn	**Pb**	**21 03 55.3**	**-1.3**
WALA				Sn	**Sb**	**21 04 19.8**	**+0.2**
B08A	**Colville Reser**	**2.04**	**277**		**Sb**	**21 04 26.6**	**+1.1**
B08A	**Colville Reser**	**2.04**	**277**	Pn	**Pn**	**21 03 56.6**	**-0.7**
B08A	**Colville Reser**	**2.04**	**277**	IAML		21 04 27.5	
	comp=N,511nm,0.3s						
B08A				IAML		21 04 28.2	
	comp=E,398nm,0.2s						
B08A	**Colville Reser**	**2.04**	**277**	Pn	**Pn**	**21 03 56.9**	**-0.5**
B08A				Sg	**Sb**	**21 04 26.6**	**+1.1**
E09A	**Wood Farm, Sta**	**2.05**	**219**		**Pn**	**21 03 57.8**	**+0.4**
E09A				IAML		21 04 30.8	
	comp=N,315nm,0.2s						
E09A				IAML		21 04 31.2	
	comp=E,339nm,0.1s						
MSO	**Missoula**	**2.06**	**128**		**Pn**	**21 03 57.9**	**+0.2**
D08A	**Wollman Farm,**	**2.08**	**240**	Pn	**Pn**	**21 03 57.8**	**0.0**
D08A				IAML		21 04 29.8	
	comp=N,252nm,0.2s						
SLMT	**Seeley Lake**	**2.09**	**114**	Pn	**Pn**	**21 03 58.3**	**+0.2**
SLMT	**Seeley Lake**	**2.09**	**114**	Pn	**Pn**	**21 03 58.3**	**+0.2**
F10A	**Beach Ranch, E**	**2.25**	**197**		**Pn**	**21 04 00.3**	**0.0**
F10A				IAML		21 04 39.0	
	comp=N,371nm,0.6s						
OVMT	**Ovando**	**2.48**	**114**	Pn	**Pn**	**21 04 03.6**	**+0.2**
OVMT	**Ovando**	**2.48**	**114**	Pn	**Pn**	**21 04 03.6**	**+0.2**
OVMT				Sg	**Sg**	**21 04 40.5**	**-1.8**
PNT	**Penticton**	**2.50**	**300**		**Pn**	**21 04 03.9**	**+0.4**
PNT	**Penticton**	**2.50**	**300**	Pn	**Pn**	**21 04 03.8**	**+0.3**
PNT				Pg	**Pb**	**21 04 08.0**	**+0.2**
PNT				Sg	**Sb**	**21 04 40.1**	**+1.5**
BPMT	**Black Pine Rid**	**2.58**	**130**	Pn	**Pn**	**21 04 05.0**	**+0.2**
BPMT	**Black Pine Rid**	**2.58**	**130**	Pn	**Pn**	**21 04 05.0**	**+0.2**
LNOR	**Lincton Mounta**	**2.64**	**212**		**Pb**	**21 04 09.1**	**-1.2**
HAWA	**Hanford**	**2.81**	**233**	Pn	**Pn**	**21 04 08.8**	**+1.0**
HAWA				IAML		21 04 57.4	
	comp=N,120nm,0.5s						
E07A	**Sunnyside**	**2.89**	**238**	Pn	**Pn**	**21 04 08.5**	**-0.4**
E07A				IAML		21 05 07.4	
	comp=E,239nm,0.5s						
PRDA	**Priddis**	**3.03**	**25**	Pn	**Pn**	**21 04 11.5**	**+0.5**
PRDA				Sg	**Sg**	**21 04 57.3**	**-2.9**
PRDA	**Priddis**	**3.03**	**25**	Pn	**Pn**	**21 04 11.5**	**+0.5**
PRDA				Sg	**Sg**	**21 04 57.3**	**-2.9**
ELMT	**Elliston**	**3.05**	**121**	Pn	**Pn**	**21 04 11.7**	**+0.5**
ELMT	**Elliston**	**3.05**	**121**	Pn	**Pn**	**21 04 11.7**	**+0.5**
ELMT				Sg	**Sg**	**21 04 57.9**	**-2.8**
PLID	**Pearl Lake**	**3.05**	**176**	Pn	**Pn**	**21 04 11.8**	**+0.4**
PLID				IAML		21 05 01.7	
	comp=E,108nm,0.3s						
LTY	**Liberty**	**3.08**	**255**	Pn	**Pn**	**21 04 11.5**	**-0.2**
LTY				IAML		21 05 01.1	
	comp=E,99nm,0.6s						
LTY				IAML		21 05 03.3	
	comp=N,96nm,0.5s						
LTY	**Liberty**	**3.08**	**255**	Pn	**Pn**	**21 04 11.4**	**-0.2**
LTY				Sg	**Sb**	**21 04 58.2**	**+2.8**
GPW	**Glacier Peak**	**3.24**	**272**	Pn	**Pn**	**21 04 14.0**	**0.0**
GPW				Sg	**Sb**	**21 05 03.7**	**+3.4**
SLEB	**Sale Mountain**	**3.26**	**339**	Pn	**Pn**	**21 04 15.4**	**+1.2**
SLEB				Pg	**Pb**	**21 04 22.2**	**+1.2**
SLEB				Sg	**Sg**	**21 05 05.7**	**-1.9**
SLEB	**Sale Mountain**	**3.26**	**339**	Pn	**Pn**	**21 04 15.4**	**+1.2**
SLEB				Pg	**Pb**	**21 04 22.2**	**+1.2**
SLEB				Sg	**Sg**	**21 05 05.7**	**-1.9**
F07A	**Phinny Hill Vi**	**3.34**	**229**	Pn	**Pn**	**21 04 16.3**	**+1.1**
F07A				IAML		21 05 19.4	
	comp=E,96nm,0.6s						
HRY	**Holter Researc**	**3.35**	**113**	Pn	**Pn**	**21 04 16.1**	**+0.8**
HRY	**Holter Researc**	**3.35**	**113**	Pn	**Pn**	**21 04 16.3**	**+1.0**
BMO	**Blue Mountains**	**3.35**	**192**	Pn	**Pn**	**21 04 16.2**	**+0.8**
BMO				IAML		21 05 58.8	
	comp=E,76nm,0.1s						
G08A	**Pilot Rock**	**3.38**	**214**	Pn	**Pn**	**21 04 15.9**	**+0.1**
HBMT	**Mount Humbug**	**3.44**	**131**	Pn	**Pn**	**21 04 17.2**	**+0.4**
HBMT	**Mount Humbug**	**3.44**	**131**	Pn	**Pn**	**21 04 17.2**	**+0.4**
B06A	**Marblemount**	**3.48**	**278**	Pn	**Pn**	**21 04 17.4**	**+0.4**
B06A	**Marblemount**	**3.48**	**278**	Pn	**Pn**	**21 04 16.9**	**-0.1**
B06A				Sg	**Sb**	**21 05 10.9**	**+4.0**
RPW	**Rockport**	**3.50**	**277**	Pn	**Pn**	**21 04 17.4**	**+0.1**
RPW				Sg	**Sb**	**21 05 10.4**	**+3.0**
LRM	**Limekiln Ridge**	**3.50**	**130**		**Pn**	**21 04 17.8**	**+0.2**
LRM	**Limekiln Ridge**	**3.50**	**130**	Pn	**Pn**	**21 04 18.1**	**+0.6**
LRM				Sg	**Sg**	**21 05 12.5**	**-2.8**
HOPB	**Hope**	**3.61**	**292**	Sg	**Sb**	**21 05 13.6**	**+2.9**
HOPB	**Hope**	**3.61**	**292**	Sg	**Sb**	**21 05 13.6**	**+2.9**
C05A	**Tolt Reservoir**	**3.65**	**265**	Sg	**Sb**	**21 05 15.6**	**+3.7**
DLMT	**Dillon**	**3.76**	**136**	Pn	**Pn**	**21 04 21.4**	**+0.4**
DLMT				IAML		21 05 25.0	
	comp=E,99nm,0.8s						
DLMT				IAML		21 05 26.7	
	comp=E,83nm,0.9s						
JCW	**Jim Creek**	**3.77**	**273**	Pn	**Pn**	**21 04 21.3**	**+0.2**
JCW				Sg	**Sb**	**21 05 19.4**	**+4.2**
CMW	**Cultus Mountai**	**3.90**	**276**	Sg	**Sb**	**21 05 22.2**	**+3.2**
A05A	**Maple Falls**	**3.94**	**285**	Pn	**Pn**	**21 04 23.8**	**+0.4**
A05A				Sg	**Sg**	**21 05 25.2**	**-4.1**
VDB	**Vedder Mountai**	**3.96**	**285**	Pn	**Pn**	**21 04 23.8**	**+0.2**
VDB				Sg	**Sg**	**21 05 25.4**	**-4.4**
MCMT	**McKenzie Canyo**	**4.07**	**143**		**Pn**	**21 04 26.1**	**+0.7**
BOZ	**Bozeman (W)**	**4.08**	**127**	Pn	**Pn**	**21 04 25.9**	**+0.4**
BOZ				IAML		21 05 36.0	
	comp=E,50nm,0.5s						
MNB	**Mounoet Dainar**	**4.29**	**343**	Pn	**Pn**	**21 04 29.9**	**+1.5**
HNBB	**Haney**	**4.31**	**288**	Pg	**Pb**	**21 04 39.7**	**+1.0**
HNBB	**Haney**	**4.31**	**288**	Pg	**Pb**	**21 04 39.7**	**+1.0**
HNBB				Sg	**Sb**	**21 05 35.8**	**+5.0**
BCYI	**Bear Canyon**	**4.32**	**151**		**Pn**	**21 04 29.6**	**+0.8**
BLBC	**Blue River**	**4.35**	**335**	Pn	**Pn**	**21 04 29.5**	**+0.3**
BLBC				Sg	**Sg**	**21 05 37.9**	**-4.6**
BLBC	**Blue River**	**4.35**	**335**	Pn	**Pn**	**21 04 29.5**	**+0.3**
BLBC				Sg	**Sg**	**21 05 37.9**	**-4.6**
EGMT	**Eagleton**	**4.39**	**89**		**Pn**	**21 04 31.6**	**+2.0**
LLLB	**Lillooet**	**4.41**	**306**	Pn	**Pn**	**21 04 31.2**	**+1.3**
LLLB				IAML		21 05 43.6	
	comp=E,65nm,1.0s						
LLLB	**Lillooet**	**4.41**	**306**	Pg	**Pb**	**21 04 42.8**	**+2.4**
LLLB				Sg	**Sb**	**21 05 38.9**	**+5.3**
LLLB	**Lillooet**	**4.41**	**306**	Pg	**Pb**	**21 04 42.8**	**+2.4**
LLLB				Sg	**Sb**	**21 05 38.9**	**+5.3**
GNW	**Green Mountain**	**4.43**	**265**	Pn	**Pn**	**21 04 29.7**	**-0.4**
GNW				Sg	**Sg**	**21 05 40.3**	**-4.8**
ICI	**Italian Canyon**	**4.46**	**147**		**Pn**	**21 04 31.8**	**+1.0**
SNB	**Saturna Island**	**4.62**	**281**	Sg	**Sb**	**21 05 45.3**	**+5.7**
EMI	**Eightmile Cany**	**4.69**	**149**		**Pn**	**21 04 34.5**	**+0.6**
VGZ	**Gonzales**	**4.70**	**276**	Sg	**Sb**	**21 05 47.6**	**+5.7**
MFID	**Camas Ranch**	**4.73**	**176**	Pn	**Pn**	**21 04 35.7**	**+1.3**
MFID				IAML		21 05 55.0	
	comp=E,46nm,0.7s						
MFID				IAML		21 05 55.6	
	comp=E,33nm,0.5s						
HLID	**Hailey**	**4.76**	**163**	Pn	**Pn**	**21 04 35.0**	**+0.3**
HLID				IAML		21 06 02.0	
	comp=E,29nm,1.0s						
HLID				IAML		21 06 02.7	
	comp=E,32nm,0.9s						
CPW	**Capitol Peak**	**4.77**	**258**	Sg	**Sg**	**21 05 50.3**	**-5.7**
B011	**North Saanich**	**4.79**	**279**	Sg	**Sb**	**21 05 50.4**	**+5.8**
B010	**North Saanich**	**4.79**	**279**	Sg	**Sb**	**21 05 50.5**	**+5.9**
PGC	**Sidney**	**4.79**	**279**	Sg	**Sb**	**21 05 50.2**	**+5.6**
YHL	**Hebgen Lake**	**4.82**	**131**		**Pn**	**21 04 36.7**	**+0.9**
CMI	**Centennial Mou**	**4.85**	**136**		**Pn**	**21 04 37.4**	**+1.4**
YMC	**Maple Creek**	**4.97**	**131**		**Pn**	**21 04 39.5**	**+1.7**
J08A	**Circle Bar Ran**	**5.01**	**198**	Pn	**Pn**	**21 04 39.4**	**+1.2**
J08A				IAML		21 06 14.7	
	comp=E,20nm,4.5s						
YHH	**Holmes Hill**	**5.03**	**130**	Pn	**Pn**	**21 04 39.6**	**+0.9**
YHH				IAML		21 06 03.6	
	comp=E,27nm,0.6s						
YHH				IAML		21 06 08.0	
	comp=N,47nm,0.8s						
YMR	**Madison River**	**5.06**	**131**		**Pn**	**21 04 39.8**	**+0.8**
NLWA	**Neilton Lookou**	**5.16**	**265**	Pn	**Pn**	**21 04 41.8**	**+1.6**
NLWA				IAML		21 06 15.5	
	comp=N,19nm,2.4s						
NLWA				IAML		21 06 16.8	
	comp=N,27nm,4.5s						
SHB	**Sechelt**	**5.21**	**289**	Sg	**Sb**	**21 06 02.7**	**+5.9**
MCID	**Moose Creek**	**5.31**	**136**		**Pn**	**21 04 44.3**	**+1.9**
PINE	**Pine Mountain**	**5.42**	**218**	Pn	**Pn**	**21 04 46.0**	**+2.2**
PINE				IAML		21 06 29.2	
	comp=E,17nm,3.3s						
PINE				IAML		21 06 42.2	
	comp=N,18nm,4.2s						
EDM	**Edmonton**	**5.43**	**19**	Pn	**Pn**	**21 04 45.4**	**+1.5**
EDM	**Edmonton**	**5.43**	**19**	Sn	**Sn**	**21 05 43.8**	**-2.5**
PFB	**Port Renfrew**	**5.45**	**278**	Sg	**Sg**	**21 06 11.4**	**-6.3**
TXB	**Texada**	**5.59**	**289**	Sg	**Sb**	**21 06 14.2**	**+6.7**
RLMT	**Red Lodge**	**5.70**	**119**	Pn	**Pn**	**21 04 48.6**	**+0.9**
MOOW	**Moose Ponds**	**5.85**	**137**	Pn	**Pn**	**21 04 51.0**	**+1.2**
LOHW	**Long Hollow**	**6.02**	**137**	Pn	**Pn**	**21 04 53.5**	**+1.4**
BTB	**Buttle Lake**	**6.24**	**286**	Sg	**Sb**	**21 06 34.5**	**+8.2**
MOD	**Modoc Plateau**	**6.84**	**206**	Pn	**Pn**	**21 05 05.0**	**+1.6**
UBRB	**Upper Baezaeko**	**6.88**	**317**	Sg	**Sg**	**21 06 55.6**	**-7.9**

NEIC ***23*** *21:04:11.8±0.9, 38°.44S±0°.02×75°.3W±0°.2, h19^{km}±7^{km}, mb4.1/2, ML4.4(GUC), Error ellipse: s-maj=18.8km s-min=2.1km az=85.0*
IDC ***23*** *21:04:16.7±5.0, 38°.43S×74°.66W, h0^{km}, mb3.6/1, mb1 3.9/3, mb1mx3.7/23, mbtmp3.7/3, ML4.1/2, MS4.5/1, Ms1 4.5/1, ms1mx3.6/25, Error ellipse: s-maj=95.0km s-min=42.2km az=64.0*
GUC ***23*** *21:04:16.2±0.5, 38°.57S×74°.81W, h15^{km}, ML4.5*

ISC 23 21:04:14.3±1.6**, 38°.45S**±0°.05×**75°.2W**±0°.1**, h35^{km}, n37, σ1^s.47**/39**, 1C, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LR04	**Corral**	**1.98**	**137**	⇑*i*P	**Pn**	**21 04 44.4**	**-0.8**
LR04				*e*S	**Sn**	**21 05 04.3**	**-4.4**
LR04				IAML		21 05 07.0	
	comp=N,14µm,0.3s						
LR03	**Panguipulli**	**2.51**	**119**	Pn	**Pn**	**21 04 53.0**	**+0.5**
LC01	**Cunco**	**2.63**	**101**	*e*P	**Pn**	**21 04 54.2**	**0.0**
LC01				*e*S	**Sn**	**21 05 23.0**	**-2.0**
LC01				IAML		21 05 25.7	
	comp=N,721nm,0.3s						
LC01	**Cunco**	**2.63**	**101**	Pn	**Pn**	**21 04 54.0**	**-0.2**
LL05	**Los Muermos**	**3.23**	**156**	Pn	**Pn**	**21 05 02.1**	**-0.3**
LL04	**Puerto Octay**	**3.26**	**140**	*e*P	**Pn**	**21 05 02.8**	**-0.1**
LL04				*e*S	**Sn**	**21 05 36.3**	**-4.1**
LL04				IAML		21 05 36.9	
	comp=N,1µm,0.2s						
LL04	**Puerto Octay**	**3.26**	**140**	Pn	**Pn**	**21 05 02.6**	**-0.3**
LL03	**Petrohue**	**3.43**	**142**	Pn	**Pn**	**21 05 04.9**	**-0.3**
PLCA	**Paso Flores**	**4.25**	**124**	Pn	**Pn**	**21 05 17.4**	**+0.9**
	comp=N,2.7nm,0.3s,baz=300,slow=10,SNR=44						
PLCA				Sn	**Sn**	**21 06 08.1**	**+3.3**
	comp=N,9.8nm,0.3s,baz=30,slow=20,SNR=3.2						
PLCA	**Paso Flores**	**4.25**	**124**	*e*P	**Pn**	**21 05 17.0**	**+0.5**
PLCA	**Paso Flores**	**4.25**	**124**	Pn	**Pn**	**21 05 16.7**	**+0.2**
GO05	**Huala**	**4.32**	**38**	Pn	**Pn**	**21 05 17.0**	**-0.5**
LL01	**San Ignacio de**	**4.46**	**152**	Pn	**Pn**	**21 05 19.2**	**-0.1**
GO07	**Milladeo Hill,**	**4.80**	**167**	Pn	**Pn**	**21 05 23.1**	**-0.9**
BO02	**Sierra Bellavi**	**5.09**	**45**	*e*P	**Pn**	**21 05 28.6**	**+0.5**
BO02				*e*S	**Sn**	**21 06 24.5**	**-1.2**
BO02	**Sierra Bellavi**	**5.09**	**45**	Pn	**Pn**	**21 05 28.3**	**+0.2**
BO01	**Tunca**	**5.23**	**40**	*e*P	**Pn**	**21 05 29.8**	**-0.2**
BO01	**Tunca**	**5.23**	**40**	Pn	**Pn**	**21 05 29.6**	**-0.3**
H03S1	**Juan Fernandez**	**5.50**	**326**	T	T	21 11 14.3	
	baz=147,slow=71,SNR=51						
H03S2	**Juan Fernandez**	**5.51**	**326**	T	T	21 11 17.2	
	baz=147,slow=71,SNR=60						
H03S3	**Juan Fernandez**	**5.51**	**326**	T	T	21 11 16.5	
	baz=147,slow=71,SNR=69						
MT01	**Popeta**	**5.58**	**36**	Pn	**Pn**	**21 05 34.1**	**-0.7**
VA05	**Santo Domingo**	**5.59**	**32**	Pn	**Pn**	**21 05 34.1**	**-0.8**
MT09	**Talagante**	**5.77**	**37**	*e*P	**Pn**	**21 05 37.6**	**+0.1**
MT09				*e*S	**Sn**	**21 06 41.0**	**-1.6**
MT09	**Talagante**	**5.77**	**37**	Pn	**Pn**	**21 05 36.8**	**-0.8**
MT02	**Curacav**	**6.14**	**34**	Pn	**Pn**	**21 05 41.0**	**-1.5**
MT05	**Renca**	**6.21**	**37**	Pn	**Pn**	**21 05 43.5**	**0.0**
PEL	**Peldehue**	**6.44**	**36**	Pn	**Pn**	**21 05 46.9**	**+0.3**
VA03	**San Esteban**	**6.82**	**35**	Pn	**Pn**	**21 05 50.9**	**-1.0**
CO03	**El Pedregal**	**8.45**	**27**	Pn	**Pn**	**21 06 14.4**	**+0.1**
GO04	**Tololo Observa**	**9.02**	**25**		**Pn**	**21 06 21.2**	**-1.0**
TRQA	**Tornquist**	**10.40**	**92**		**Pn**	**21 06 41.9**	**+1.1**
AC02	**Maricunga**	**12.65**	**26**	Pn	**Pn**	**21 07 10.2**	**-2.0**
CPUP	**Villa Florida**	**19.29**	**56**	P	**Pn**	**21 08 38.7**	**+1.4**
	comp=N,0.2nm,0.3s,baz=225,slow=11,SNR=3.5						
CPUP				LR	LR	21 15 46.8	
	comp=N,1µm,21.0s,baz=324,slow=36						
CPUP	**Villa Florida**	**19.29**	**56**	P	**Pn**	**21 08 37.0**	**-0.3**
CPUP				IAmb	IAmb	21 08 44.8	
	comp=Z,9.3nm,1.1s						
SNAA	**Sanae**	**48.48**	**156**	P	**P**	**21 12 55.6**	**+2.5**
SNAA				IAmb	IAmb	21 13 24.0	
	comp=Z,3.1nm,1.1s						
TORD	**Torodi Ar. Bea**	**88.08**	**72**	P	P	21 17 07.8	+6.5
	comp=Z,0.3nm,0.8s,baz=242,slow=3.1,SNR=2.1						

NNC 23 21:10:21.9±7.4**, 36°.75N**×**70°.37E, h0^{km}, mb3.6, mpv3.3, 4C-1D, Error ellipse: s-maj=67.2km s-min=53.7km az=141.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK07	**Karatay Array**	**6.33**	**1**	⇑P	Pn	21 11 57.7	+1.2
	1.0nm,0.4s,baz=177,slow=13						
KK07				⇓S	Sn	21 13 10.5	+1.0
	1.7nm,0.5s						
AAK	**Ala-Archa**	**6.69**	**27**	⇑P	Pn	21 12 01.2	-0.2
	1.1nm,0.5s						
AAK				⇑S	Sn	21 13 19.7	+1.3
	2.5nm,0.6s						
AB31	**Akbulak array**	**14.62**	**332**	⇑P	Pn	21 13 47.6	-2.3
	0.2nm,0.3s,baz=162,slow=12,SNR=16						

BGR ***23*** *21:17:43.5±0.0, 36°.25N×99°.03W, h5^{km}, mb4.9*
IDC ***23*** *21:17:45.5±0.3, 36°.84N×98°.14W, h0^{km}, mb4.7/28, mb1 4.7/39, mb1mx4.7/49, mbtmp4.6/39, ML4.0/9, MS3.9/12, Ms1 3.9/12, ms1mx3.6/59, Error ellipse: s-maj=8.3km s-min=7.8km az=151.0*
ANF ***23*** *21:17:45.3±0.2, 36°.85N×98°.20W, h0^{km}, ML5.8/17, Error ellipse: s-maj=3.3km s-min=1.8km az=0.0*
NEIC ***23*** *21:17:46.6±1.4, 36°.816N±0°.004×98°.27W±0°.04, h6^{km}±3^{km}, Error ellipse: s-maj=5.1km s-min=0.5km az=96.0*
NEIC ***23*** *21:17:46.5, 36°.84N×98°.28W, h3^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-3.64; $M_{\theta\theta}$2.70; $M_{\phi\phi}$0.94; $M_{r\theta}$2.19; $M_{\theta\phi}$1.04; $M_{\phi r}$1.94; Fault plane solution: $M_0$4.51000×10^{15} NP1:ϕ_s234.94000°, δ65.36000°, λ-97.31000°. NP2:ϕ_s72.03000°, δ25.64000°, λ-74.51000°. Principal axes: T 4.2042, Plg20.0000°, Azm330.0000°; N 0.5579, Plg7.0000°, Azm238.0000°; P -4.7621, Plg69.0000°, Azm131.0000°;*
TUL ***23*** *21:17:46.5±1.4, 36°.84N±0°.02×98°.28W±0°.03, h5^{km}±3^{km}, ML4.8, mb4.6/109(NEIC), mb_Lg4.9/124(NEIC), Mwr4.4/60(NEIC) Error ellipse: s-maj=3.9km s-min=2.2km az=122.0*

ISC 23 21:17:46.0±0.8**, 36°.83N**±0°.02×**98°.27W**±0°.02**, h6^{km}**±4^{km}**, n685, σ1^s.10**/722**, mb4.7**/97**, MS4.2**/6**, 20C-10D, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK032	**Salt Plains WL**	**0.06**	**118**	Pg	**Pg**	**21 17 48.4**	**+0.8**
OK032				Sg	**Sg**	**21 17 49.6**	**+0.9**
KAN14	**Manchester OK**	**0.28**	**63**		**Pg**	**21 17 52.4**	**+0.9**
KAN14				Sg	**Sg**	**21 17 56.5**	**+1.3**
KAN10	**Anthony SW Sta**	**0.33**	**26**	Pg	**Pg**	**21 17 53.1**	**+0.7**
KAN10				Sg	**Sg**	**21 17 57.1**	**+0.3**
GC02	**Grant County #**	**0.33**	**86**	Pg	**Pg**	**21 17 53.4**	**+0.9**
GC02				Sg	**Sg**	**21 17 57.6**	**+0.7**
CROK	**Carrier**	**0.40**	**144**	Pg	**Pg**	**21 17 54.6**	**+0.8**
CROK				Sg	**Sg**	**21 18 00.4**	**+1.4**
KAN05	**Bluff City Nor**	**0.42**	**49**		**Pg**	**21 17 55.1**	**+0.8**
KAN05				Sg	**Sg**	**21 18 01.0**	**+1.2**
KAN16	**Harper SW Stat**	**0.43**	**23**		**Pg**	**21 17 55.1**	**+0.7**
KAN16				Sg	**Sg**	**21 18 01.1**	**+1.1**
KAN17	**Caldwell West**	**0.46**	**62**		**Pg**	**21 17 55.5**	**+0.6**
KAN17				Sg	**Sg**	**21 18 01.0**	**0.0**
KAN08	**Anthony NE Sta**	**0.46**	**31**	Pg	**Pg**	**21 17 55.8**	**+0.7**
KAN08				Sg	**Sg**	**21 18 02.2**	**+1.2**
KAN12	**Harper NE Stat**	**0.52**	**25**	Pg	**Pg**	**21 17 56.7**	**+0.7**
KAN12				Sg	**Sg**	**21 18 03.4**	**+0.7**
KAN01	**Argonia South**	**0.52**	**52**		**Pg**	**21 17 56.9**	**+0.8**
KAN01				Sg	**Sg**	**21 18 04.2**	**+1.2**
KAN06	**Argonia West S**	**0.53**	**38**		**Pg**	**21 17 57.0**	**+0.7**
KAN06				Sg	**Sg**	**21 18 04.4**	**+1.1**
KAN09	**Caldwell North**	**0.61**	**60**		**Pg**	**21 17 58.4**	**+0.6**
KAN09				Sg	**Sb**	**21 18 06.8**	**-1.0**
KAN13	**South Haven SW**	**0.66**	**74**		**Pg**	**21 17 59.3**	**+0.5**
KAN13				Sg	**Sb**	**21 18 08.4**	**-1.0**
U32A	**Winter Ranch,**	**0.74**	**233**		**Pg**	**21 18 00.8**	**+0.5**
U32A	**Winter Ranch,**	**0.74**	**233**	P	**Pg**	**21 18 00.7**	**+0.5**
	baz=52,SNR=578						
U32A				S	**Sg**	**21 18 11.0**	**+1.1**
	baz=52						
BLOK	**Blackwell**	**0.85**	**94**	Pg	**Pg**	**21 18 02.6**	**+0.2**
BLOK				Sg	**Sg**	**21 18 13.6**	**+0.1**
OK029	**Liberty Lake**	**1.23**	**147**		**Pg**	**21 18 09.3**	**-0.2**
OK029				Sg	**Sb**	**21 18 25.6**	**-0.1**
BCOK	**Bluff Creek, N**	**1.29**	**155**		**Pn**	**21 18 10.3**	**-0.2**
BCOK				Sg	**Sn**	**21 18 27.8**	**-0.4**
T35A	**Sooner Cattle**	**1.41**	**86**		**Pb**	**21 18 12.7**	**-0.2**
T35B	**Sooner Cattle**	**1.41**	**86**	P	**Pb**	**21 18 12.9**	**0.0**
	baz=267,SNR=1000						
T35B				S	**Sg**	**21 18 31.7**	**+0.2**
	baz=267						
QUOK	**Quay**	**1.42**	**117**		**Pb**	**21 18 12.8**	**-0.2**
OK009	**Oakdale Elemen**	**1.42**	**151**		**Pn**	**21 18 12.7**	**+0.3**
OK031	**S. Brethren Rd**	**1.45**	**127**		**Pb**	**21 18 13.3**	**-0.2**
OK005	**Luther M Schoo**	**1.46**	**143**		**Pn**	**21 18 13.2**	**+0.3**
OK030	**Cody Creek RV**	**1.50**	**126**		**Pb**	**21 18 14.0**	**-0.3**
OKCFA	**Oklahoma City**	**1.56**	**155**		**Pn**	**21 18 14.8**	**+0.5**
OKCFA				IAmb_Lg		21 18 38.3	
	comp=Z,6µm,0.8s						
OKCFA	**Oklahoma City**	**1.56**	**155**	P	**Pb**	**21 18 15.0**	**-0.4**
	baz=335,SNR=46						
OKCFA				S	**Sg**	**21 18 36.1**	**-0.1**
	baz=335						
OKCSW	**OKLAHOMA CITY**	**1.57**	**154**		**Pn**	**21 18 15.0**	**+0.5**
R32A	**Long Quarter,**	**1.63**	**348**		**Pb**	**21 18 16.4**	**-0.1**
R32A				IAmb_Lg		21 18 38.8	
	comp=Z,5µm,0.8s						
R32A	**Long Quarter,**	**1.63**	**348**	P	**Pb**	**21 18 16.4**	**-0.1**
	baz=168,SNR=677						
R32A				S	**Sb**	**21 18 37.7**	**+0.4**
	baz=168						
FNO	**Franklin**	**1.72**	**156**		**Pb**	**21 18 17.5**	**-0.6**
FNO				IAmb_Lg		21 18 44.8	
	comp=Z,6µm,0.8s						
OK011	**Prague**	**1.86**	**136**	Pn	**Pb**	**21 18 19.7**	**-0.7**
W35A	**Tecumseh**	**2.02**	**145**		**Pn**	**21 18 21.7**	**+1.0**
W35A				IAmb_Lg		21 18 53.1	
	comp=Z,6µm,0.7s						
WMOK	**Wichita Mounta**	**2.13**	**191**	P	**Pn**	**21 18 22.9**	**+0.7**
	baz=11,SNR=1000						
WMOK				S	**Sn**	**21 18 49.7**	**+0.8**
	baz=11						
WMOK	**Wichita Mounta**	**2.13**	**191**	P	**Pn**	**21 18 22.8**	**+0.7**
	baz=11,SNR=910						
WMOK				S	**Sb**	**21 18 50.6**	**-1.1**
	baz=11						
TUL1	**Leonard**	**2.20**	**114**	P	**Pn**	**21 18 23.7**	**+0.5**
	baz=296,SNR=930						
TUL1				S	**Sb**	**21 18 52.9**	**-0.9**
	baz=296						
TUL1	**Leonard**	**2.20**	**114**	Pn	**Pn**	**21 18 23.6**	**+0.5**
TUL1	**Leonard**	**2.20**	**114**	P	**Pn**	**21 18 23.8**	**+0.7**
	baz=296,SNR=304						
TUL1				S	**Sb**	**21 18 54.2**	**+0.4**
	baz=296						
X34A	**Smith Ranch, M**	**2.25**	**171**	IAmb_Lg		21 19 01.4	
	comp=Z,7µm,0.9s						
CBKS	**Cedar Bluff**	**2.29**	**330**	P	**Pn**	**21 18 25.9**	**+1.4**
	baz=149,SNR=358						
CBKS				S	**Sb**	**21 18 55.8**	**-0.7**
	baz=149						
CBKS	**Cedar Bluff**	**2.29**	**330**	IAmb_Lg		21 19 02.5	
	comp=Z,6µm,0.7s						
CBKS	**Cedar Bluff**	**2.29**	**330**	P	**Pn**	**21 18 25.9**	**+1.4**
	baz=149,SNR=338						
CBKS				S	**Sn**	**21 18 55.0**	**+2.0**
	baz=149						
KSU1	**Kansas State U**	**2.62**	**30**	P	**Pn**	**21 18 30.1**	**+1.2**
	baz=211,SNR=200						
KSU1				S	**Sb**	**21 19 03.5**	**-2.3**
	baz=211						
KSU1	**Kansas State U**	**2.62**	**30**	IAmb_Lg		21 19 14.5	
	comp=Z,3µm,0.9s						
KSU1	**Kansas State U**	**2.62**	**30**	P	**Pn**	**21 18 30.3**	**+1.4**
	baz=211,SNR=48						
LOOK	**Love County**	**2.97**	**162**	Pn	**Pn**	**21 18 35.1**	**+1.4**
LOOK				IAmb_Lg		21 19 21.9	
	comp=Z,3µm,0.9s						

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U38A  Gravette          3.15  96  IAmb_Lg           21 19 33.4
      comp=Z,5µm,0.8s
U38A  Gravette          3.15  96  P        Pn       21 18 37.3 +1.1
      baz=278,SNR=148
X37A  Clayton           3.25 133  Pn       Pn       21 18 38.4 +0.8
X37A                              IAmb_Lg           21 19 36.1
      comp=Z,5µm,1.1s
X37A  Clayton           3.25 133  P        Pn       21 18 38.7 +1.1
      baz=314,SNR=214
AMTX  Amarillo          3.38 236  P        Pn       21 18 41.3 +1.9
      baz=54
AMTX                              Sb       Sg       21 19 31.7  -3.0
      baz=54
AMTX  Amarillo          3.38 236  Pn       Pn       21 18 41.2 +1.7
AMTX                              IAmb_Lg           21 19 34.3
      comp=Z,3µm,0.8s
AMTX  Amarillo          3.38 236  P        Pn       21 18 41.4 +1.9
      baz=54,SNR=34
HHAR  Hobbs             3.53  98  Pn       Pn       21 18 42.2 +0.8
HHAR                              IAmb_Lg           21 19 44.5
      comp=Z,5µm,1.1s
Z35A  Perchaven, San    3.59 166  IAmb_Lg           21 19 47.6
      comp=Z,2µm,1.0s
Z35A  Perchaven, San    3.59 166  P        Pn       21 18 43.4 +1.2
      baz=347,SNR=52
N33B  J Bar K, Exete    3.95   9  P        Pn       21 18 47.4 +0.1
      baz=190,SNR=44
W39A  Magazine          3.99 113  P        Pn       21 18 48.0 +0.3
      baz=296,SNR=44
W39A                              Sb       Sb       21 19 49.1 +4.0
      baz=296
W39A  Magazine          3.99 113  IAmb_Lg           21 20 01.1
      comp=Z,3µm,0.9s
W39A  Magazine          3.99 113  P        Pn       21 18 48.4 +0.7
      baz=296,SNR=69
W39A                              Sb       Sb       21 19 49.0 +3.8
      baz=296
S39A  Bolivar           4.04  76  IAmb_Lg           21 20 00.4
      comp=Z,2µm,0.8s
S39A  Bolivar           4.04  76  P        Pn       21 18 49.0 +0.6
      baz=259,SNR=194
KSCO  Kaye Shedlock'    4.07 304  P        Pn       21 18 50.2 +1.2
      baz=121,SNR=24
KSCO                              S        Sn       21 19 37.5 +0.4
      baz=121
KSCO  Kaye Shedlock'    4.07 304  Pn       Pn       21 18 49.6 +0.6
KSCO                              IAmb_Lg           21 20 03.8
      comp=Z,4µm,1.0s
KSCO  Kaye Shedlock'    4.07 304  P        Pn       21 18 50.0 +1.0
      baz=121,SNR=53
ABTX  Abilene, Hawle    4.35 195  P        Pn       21 18 52.9 +0.3
      baz=14,SNR=15
ABTX                              S        Sn       21 19 44.6 +1.0
      baz=14
ABTX  Abilene, Hawle    4.35 195  Pn       Pn       21 18 52.4  -0.3
ABTX                              IAmb_Lg           21 20 06.6
      comp=Z,4µm,1.2s
ABTX  Abilene, Hawle    4.35 195  P        Pn       21 18 53.0 +0.4
      baz=14,SNR=21
U40A  Yellville         4.39  95  P        Pn       21 18 53.7 +0.5
      baz=278,SNR=194
U40A                              S        Sn       21 19 43.9  -0.7
      baz=278
U40A  Yellville         4.39  95  Pn       Pn       21 18 53.4 +0.2
U40A  Yellville         4.39  95  P        Pn       21 18 54.0 +0.8
      baz=278,SNR=92
U40A                              P        Pn       21 18 54.0 +0.8
      baz=278,SNR=92
MIAR  Mount Ida         4.45 119  P        Pn       21 18 54.6 +0.5
      baz=302,SNR=93
MIAR                              S        Sn       21 19 46.6 +0.4
      baz=302
MIAR  Mount Ida         4.45 119  Pn       Pn       21 18 54.5 +0.5
MIAR                              IAmb_Lg           21 20 09.9
      comp=Z,3µm,1.0s
MIAR  Mount Ida         4.45 119  P        Pn       21 18 54.8 +0.7
      baz=302,SNR=64
Z38A  Mt. Pleasant      4.47 142  Pn       Pn       21 18 55.0 +0.7
Z38A  Mt. Pleasant      4.47 142  P        Pn       21 18 55.2 +0.9
      baz=324,SNR=30
N35A  Tabor             4.52  26  P        Pn       21 18 56.0 +1.0
      baz=208,SNR=20
BGNE  Belgrade          4.57   1  P        Pn       21 18 56.5 +0.8
      baz=181,SNR=20
BGNE                              S        Sn       21 19 48.8  -0.4
      baz=181
BGNE  Belgrade          4.57   1  Pn       Pn       21 18 56.7 +0.9
BGNE  Belgrade          4.57   1  P        Pn       21 18 56.9 +1.2
      baz=181,SNR=98
MSTX  Muleshoe          4.65 233  P        Pn       21 18 57.9 +1.0
      baz=51,SNR=44
MSTX  Muleshoe          4.65 233  Pn       Pn       21 18 58.0 +1.0
MSTX                              IAmb_Lg           21 20 15.2
      comp=Z,3µm,1.1s
MSTX  Muleshoe          4.65 233  P        Pn       21 18 58.0 +1.0
      baz=51,SNR=28
P38A  Dawn              4.66  52  P        Pn       21 18 57.8 +0.9
      baz=235,SNR=41
MGMO  Mountain Grove    4.82  84           Pn       21 18 59.8 +0.7
MGMO                              IAmb_Lg           21 20 29.2
      comp=Z,3µm,1.1s
WHTX  Lake Whitney,     4.87 172  P        Pn       21 19 00.5 +0.6
      baz=352,SNR=62
WHTX                              Sb       Sb       21 20 15.3 +4.6
      baz=352
WHTX  Lake Whitney,     4.87 172           Pn       21 19 00.3 +0.4
WHTX                              IAmb_Lg           21 20 23.9
      comp=Z,2µm,1.1s
WHTX  Lake Whitney,     4.87 172  P        Pn       21 19 00.5 +0.6
      baz=352,SNR=98
T25A  Trinidad          4.92 275  P        Pn       21 19 01.5 +0.7
      baz=92,SNR=36
T25A                              S        Sn       21 19 58.2   0.0
      baz=92
T25A  Trinidad          4.92 275           Pn       21 19 01.7 +0.9
R40A  Maddies Statio    4.99  71  P        Pn       21 19 02.0 +0.6
      baz=255,SNR=146
X40A  Basin Creek Fa    5.01 116  P        Pn       21 19 02.4 +0.7
      baz=300,SNR=180
X40A                              S        Sn       21 20 00.9 +1.1
      baz=300
X40A  Basin Creek Fa    5.01 116  Pn       Pn       21 19 02.5 +0.7
X40A                              IAmb_Lg           21 20 33.4
      comp=Z,2µm,0.8s
X40A  Basin Creek Fa    5.01 116  P        Pn       21 19 02.5 +0.9
      baz=300,SNR=154
X40A                              P        Pn       21 19 02.5 +0.9
      baz=300,SNR=154
OGNE  Ogallala          5.05 326  P        Pn       21 19 03.6 +1.3
      baz=143,SNR=46
OGNE                              S        Sn       21 20 02.2 +1.2
      baz=143
OGNE  Ogallala          5.05 326  IAmb_Lg           21 20 27.7
      comp=Z,3µm,0.7s
OGNE  Ogallala          5.05 326  P        Pn       21 19 03.4 +1.1
      baz=143,SNR=119
FCAR  Ozark Folk Cen    5.05  99           Pn       21 19 03.0 +0.7
FCAR                              IAmb_Lg           21 20 34.5
      comp=Z,2µm,0.9s
WHAR  Wooly Hollow      5.08 106  Pn       Pn       21 19 03.4 +0.6
WHAR                              IAmb_Lg           21 20 36.5
      comp=Z,3µm,1.1s
W41B  Gary Mavity, V    5.16 107  P        Pn       21 19 03.9 +0.1
      baz=291,SNR=65
W41B                              S        Sn       21 20 03.1  -0.4
      baz=291
W41B  Gary Mavity, V    5.16 107  P        Pn       21 19 04.3 +0.6
      baz=291,SNR=62
237A  Washetta, Mont    5.23 156  P        Pn       21 19 04.7  -0.1
      baz=338,SNR=73
WLAR  White Oak Lake    5.26 125  Pn       Pn       21 19 06.0 +0.9
WLAR                              IAmb_Lg           21 20 43.6
      comp=Z,2µm,0.9s
L34A  Svendsen Farm,    5.33  15  Pn       Pn       21 19 06.1  -0.1
L34A                              IAmb_Lg           21 20 44.7
      comp=Z,3µm,0.8s
N38A  Joes South For    5.58  43           Pn       21 19 09.6   0.0
N38A                              IAmb_Lg           21 20 58.9
      comp=Z,3µm,0.8s
N38A  Joes South For    5.58  43  P        Pn       21 19 10.1 +0.5
      baz=226,SNR=34
P40A  Paris             5.59  59           Pn       21 19 10.6 +0.8
P40A                              IAmb_Lg           21 20 57.5
      comp=Z,2µm,0.9s
CCM   Cathedral Cave    5.72  76  P        Pn       21 19 11.6 +0.1
      baz=260
CCM   Cathedral Cave    5.72  76  Pn       Pn       21 19 11.3  -0.2
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CCM                               IAmb_Lg           21 20 49.6
      comp=Z,1µm,0.7s
CCM   Cathedral Cave    5.72  76  P        Pn       21 19 11.7 +0.1
      baz=260,SNR=25
Z41A  Richland Creek    5.73 127  P        Pn       21 19 11.5  -0.1
      baz=310,SNR=18
Z41A                              S        Sn       21 20 16.5  -1.2
      baz=310
LCAR  Lake Charles      5.79  95  IAmb_Lg           21 20 54.4
      comp=Z,1µm,1.0s
LCAR  Lake Charles      5.79  95  P        Pn       21 19 13.8 +1.3
      baz=280,SNR=9.2
K31A  O'Neill           5.80 356           Pn       21 19 13.1 +0.5
SDCO  Great Sand Dun    5.84 281  P        Pn       21 19 13.7 +0.3
      baz=97,SNR=88
SDCO                              S        Sn       21 20 21.2 +0.5
      baz=97
SDCO  Great Sand Dun    5.84 281  Pn       Pn       21 19 14.6 +1.3
SDCO                              IAmb_Lg           21 21 00.1
      comp=Z,2µm,1.1s
SDCO  Great Sand Dun    5.84 281  P        Pn       21 19 14.8 +1.4
      baz=97,SNR=47
Q24A  Divide            5.84 293  P        Pn       21 19 14.0 +0.5
      baz=109,SNR=19
Q24A                              S        Sn       21 20 20.6  -0.3
      baz=109
NATX  Nacogdoches       5.87 148  P        Pn       21 19 12.8  -0.8
      baz=330,SNR=10
NATX  Nacogdoches       5.87 148  Pn       Pn       21 19 13.1  -0.6
CCAR  Cane Creek        6.05 117           Pn       21 19 16.6 +0.5
CCAR                              IAmb_Lg           21 21 08.9
      comp=Z,2µm,0.9s
CCAR  Cane Creek        6.05 117  P        Pn       21 19 17.0 +0.9
      baz=301,SNR=8.3
435B  Jarrell           6.06 174  P        Pn       21 19 15.8  -0.3
      baz=355,SNR=14
435B  Jarrell           6.06 174  Pn       Pn       21 19 15.9  -0.3
435B  Jarrell           6.06 174  P        Pn       21 19 16.4 +0.2
      baz=355,SNR=6.5
HBAR  Harrisburg        6.29  99  IAmb_Lg           21 21 11.4
      comp=Z,2µm,0.9s
FVM   French Village    6.35  77  Pn       Pn       21 19 20.1  -0.1
FVM                               IAmb_Lg           21 21 11.9
      comp=Z,2µm,1.1s
FVM   French Village    6.35  77  P        Pn       21 19 20.4 +0.3
      baz=262,SNR=13
SCIA  State Center      6.41  36  P        Pn       21 19 21.1 +0.2
      baz=219
JCT   Junction City     6.46 192  P        Pn       21 19 21.0  -0.8
      baz=11,SNR=23
ISCO  Idaho Springs     6.49 299  P        Pn       21 19 23.2 +0.8
      baz=115,SNR=37
ISCO  Idaho Springs     6.49 299  Pn       Pn       21 19 23.5 +1.2
ISCO                              IAmb_Lg           21 21 21.5
      comp=Z,1µm,0.9s
ISCO  Idaho Springs     6.49 299  P        Pn       21 19 23.3 +0.9
      baz=115,SNR=38
SLM   Saint Louis       6.62  72  Pn       Pn       21 19 24.0 +0.2
GNAR  Gosnell           6.71  95  Pn       Pn       21 19 25.7 +0.5
HDBT  Hernando Brdge    6.87 102  IAmb_Lg           21 21 43.9
      comp=Z,2µm,1.0s
S22A  4UR Ranch, Cre    6.88 280  P        Pn       21 19 28.2 +0.4
      baz=95
ANMO  Albuquerque       6.91 257  Pn       Pn       21 19 28.9 +1.0
      comp=Z,2.3nm,0.3s,baz=69,slow=13,SNR=28
ANMO                              Lg       Lg       21 21 21.0
      comp=Z,70nm,0.3s,baz=341,slow=20,SNR=9.9
ANMO                              LR       LR       21 22 29.1
      comp=Z,327nm,19.3s,baz=83,slow=40
ANMO  Albuquerque       6.91 257  P        Pn       21 19 28.6 +0.6
      baz=72
ANMO  Albuquerque       6.91 257  Pn       Pn       21 19 29.2 +1.3
PVMO  Portageville      6.91  91  IAmb_Lg           21 21 33.4
      comp=Z,2µm,1.1s
N41A  Harden Midland    6.97  54  IAmb_Lg           21 21 33.9
      comp=Z,2µm,0.9s
MET   Memphis--Engin    6.97 102  IAmb_Lg           21 21 33.8
      comp=Z,2µm,0.8s
143A  Socs Landing,     6.99 124  Pn       Pn       21 19 30.0 +1.0
143A                              IAmb_Lg           21 21 40.5
      comp=Z,1µm,0.9s
ECSD  EROS Data Cent    7.01  10  P        Pn       21 19 28.3  -1.0
      baz=191,SNR=38
ECSD  EROS Data Cent    7.01  10  Pn       Pn       21 19 28.9  -0.3
LNXT  Lenox             7.11  93  Pn       Pn       21 19 31.2 +0.5
LNXT                              IAmb_Lg           21 21 39.3
      comp=Z,2µm,0.9s
HKT   Hockley           7.16 163  Pn       Pn       21 19 31.2   0.0
N23A  Red Feather La    7.23 306  P        Pn       21 19 33.1 +0.6
      baz=122,SNR=65
S44A  Carbondale        7.24  80           Pn       21 19 32.6 +0.2
S44A                              IAmb_Lg           21 21 42.2
      comp=Z,1µm,0.7s
S44A  Carbondale        7.24  80  P        Pn       21 19 32.9 +0.5
      baz=266,SNR=15
HALT  Halls             7.26  95  IAmb_Lg           21 21 51.4
      comp=Z,2µm,1.1s
HICK  Hickman           7.27  90  Pn       Pn       21 19 33.3 +0.5
SIUC  Southern Illin    7.27  80           Pn       21 19 32.8  -0.1
SIUC                              IAmb_Lg           21 21 40.7
      comp=Z,1µm,0.8s
342A  Flagon Creek P    7.34 136  Pn       Pn       21 19 33.8   0.0
441A  DeRidder          7.39 144  Pn       Pn       21 19 34.4  -0.1
P43A  Skaggs, Pawnee    7.44  65  Pn       Pn       21 19 35.5 +0.5
P43A                              IAmb_Lg           21 21 51.1
      comp=Z,2µm,0.8s
P43A  Skaggs, Pawnee    7.44  65  P        Pn       21 19 34.9  -0.2
      baz=251,SNR=31
L40A  Anamosa           7.55  44           Pn       21 19 36.8 +0.2
L40A  Anamosa           7.55  44  P        Pn       21 19 37.0 +0.4
      baz=228,SNR=7.4
Y22D  IRIS PASSCAL I    7.57 251  P        Pn       21 19 38.0 +0.9
      baz=66
Q44A  Meyer Farm, Va    7.61  71           Pn       21 19 37.6 +0.2
Q44A                              IAmb_Lg           21 22 00.6
      comp=Z,1µm,0.9s
Q44A  Meyer Farm, Va    7.61  71  P        Pn       21 19 37.9 +0.5
      baz=257,SNR=12
SUSD  Miller            7.62 356  P        Pn       21 19 38.0 +0.4
      baz=176,SNR=7.6
SUSD  Miller            7.62 356           Pn       21 19 38.0 +0.4
SUSD                              IAmb_Lg           21 21 59.7
      comp=Z,1µm,0.8s
T45A  Paducah           7.71  86  Pn       Pn       21 19 39.7 +0.8
Y45A  Yeager Farm, C    7.72 110  Pn       Pn       21 19 38.6  -0.3
Y45A                              IAmb_Lg           21 22 05.5
      comp=Z,921nm,1.0s
MNTX  Cornudas Mount    7.80 231  Pn       Pn       21 19 40.3 +0.2
MNTX                              IAmb_Lg           21 22 03.7
      comp=Z,945nm,0.9s
MNTX  Cornudas Mount    7.80 231  P        Pn       21 19 40.5 +0.4
      baz=47,SNR=87
VBMS  Vicksburg         7.88 123  P        Pn       21 19 40.6  -0.5
      baz=308,SNR=7.1
VBMS  Vicksburg         7.88 123  Pn       Pn       21 19 41.5 +0.3
HDIL  Hopedale          7.94  59  P        Pn       21 19 41.4  -0.6
      baz=245,SNR=88
HDIL  Hopedale          7.94  59           Pn       21 19 42.8 +0.8
HDIL                              IAmb_Lg           21 22 09.4
      comp=Z,1µm,0.8s
HDIL  Hopedale          7.94  59  P        Pn       21 19 42.7 +0.7
      baz=245,SNR=16
735A  Kenedy            7.96 177  Pn       Pn       21 19 42.4 +0.1
735A                              IAmb_Lg           21 22 13.0
      comp=Z,1µm,0.8s
I37A  Lemond, Waseca    8.08  26  Pn       Pn       21 19 43.9 +0.1
I37A                              IAmb_Lg           21 22 16.1
      comp=Z,944nm,1.0s
MVCO  Mesa Verde        8.19 276  P        Pn       21 19 46.9 +1.3
      baz=90
344A  Westbrook Farm    8.23 128  Pn       Pn       21 19 45.9  -0.1
O44A  Mansfield         8.37  64           Pn       21 19 47.4  -0.5
O44A                              IAmb_Lg           21 22 15.1
      comp=Z,1µm,0.8s
L42A  Oliver, Polo      8.43  50  IAmb_Lg           21 22 28.4
      comp=Z,1µm,0.9s
L42A  Oliver, Polo      8.43  50  P        Pn       21 19 48.9 +0.2
      baz=235,SNR=19
WVT   Waverly           8.44  92  P        Pn       21 19 47.1  -1.7
      baz=278
RWWY  Rawlins           8.46 308  IAmb_Lg           21 22 20.5
      comp=Z,952nm,0.9s
RSSD  Black Hills       8.50 331  P        Pn       21 19 50.3 +0.4
      baz=147
RSSD  Black Hills       8.50 331  IAmb_Lg           21 22 24.4
      comp=Z,1µm,0.8s
833A  Chaparral WMA,    8.54 187  P        Pn       21 19 49.5  -0.7
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      baz=6.0
JFWS  Jewell Farm       8.66  43  P        Pn       21 19 51.3  -0.5
      baz=228,SNR=33
JFWS  Jewell Farm       8.66  43  Pn       Pn       21 19 51.7  -0.1
JFWS                              IAmb_Lg           21 22 23.7
      comp=Z,1µm,0.8s
TX31  Lajitas Ar. Si    8.74 213  Pn       Pn       21 19 52.4  -0.7
TX31  Lajitas Ar. Si    8.74 213  P        Pn       21 19 53.1 +0.1
      baz=30,SNR=13
TX32  Lajitas Array     8.74 213  Pn       Pn       21 19 52.4  -0.6
TXAR  Lajitas Array     8.74 213  Pn       Pn       21 19 52.4  -0.6
      comp=Z,9.2nm,0.3s,baz=32,slow=10,SNR=114
TXAR                              Pg       Pg       21 20 20.4   -13
      comp=Z,8.0nm,0.3s,baz=37,slow=11,SNR=7.0
TXAR                              Lg       Lg       21 22 16.2
      comp=Z,15nm,0.3s,baz=47,slow=43,SNR=3.7
TXAR                              LR       LR       21 22 42.6
      comp=Z,348nm,21.0s,baz=0.0,slow=34
121A  Cookes Peak, D    8.93 244  P        Pn       21 19 56.3 +0.6
      baz=58,SNR=12
121A  Cookes Peak, D    8.93 244  IAmb_Lg           21 22 51.4
      comp=Z,663nm,1.1s
T47A  Sharon Grove      8.95  86  Pn       Pn       21 19 55.6  -0.1
F33A  5 Mile Ranch,     9.12   9           Pn       21 19 56.8  -1.4
F33A                              IAmb_Lg           21 22 35.0
      comp=Z,1µm,1.2s
I40A  Norwalk           9.15  37  IAmb_Lg           21 22 48.2
      comp=Z,848nm,1.1s
V48A  Smith Brothers    9.31  93  Pn       Pn       21 20 00.6  -0.2
SPMN  Marine on St.     9.35  25  P        Pn       21 20 01.2   0.0
      baz=208
SPMN  Marine on St.     9.35  25  Pn       Pn       21 20 00.9  -0.3
SFIN  Lafayette         9.44  65  P        Pn       21 20 02.6 +0.2
      baz=252
WCI   Wyandotte Cave    9.62  78  P        Pn       21 20 04.2  -0.7
      baz=265
L44A  Lake County Fo    9.62  53  P        Pn       21 20 03.5  -1.5
      baz=240
L44A  Lake County Fo    9.62  53  Pn       Pn       21 20 04.0  -1.0
K43A  Burlington        9.64  49  Pn       Pn       21 20 04.5  -0.7
SRU   San Rafael Swe    9.94 287  Pn       Pn       21 20 09.8 +0.2
I42A  Draeger Farm,    10.03  42  Pn       Pn       21 20 09.7  -0.9
SWET  Sewanee          10.12  95  Pn       Pn       21 20 11.8  -0.2
G40A  Rib Lake         10.40  33  P        Pn       21 20 15.6   0.0
      baz=219,SNR=7.8
BW06  Boulder Array    10.51 308  P        Pn       21 20 15.9  -1.5
      baz=121,SNR=13
PD31  Pinedale Array   10.51 308  Pn       Pn       21 20 16.7  -0.7
PDAR  Pinedale Array   10.51 308  Pn       Pn       21 20 16.7  -0.7
      comp=Z,1.4nm,0.3s,baz=122,slow=14,SNR=37
PDAR                              Pg                21 21 01.8
      comp=Z,13nm,0.3s,baz=112,slow=14,SNR=13
PDAR                              Lg       Lg       21 23 15.0
      comp=Z,13nm,0.3s,baz=122,slow=30,SNR=3.9
PDAR                              LR       LR       21 24 57.1
      comp=Z,470nm,21.3s,baz=120,slow=41
FPAL  Fort Paine       10.55  99  Pn       Pn       21 20 17.3  -0.5
319A  Douglas          10.62 242  Pn       Pn       21 20 19.2 +0.3
W50A  Signal Mountai   10.62  95  Pn       Pn       21 20 19.0 +0.2
WUAZ  Wupatki          10.67 267  P        Pn       21 20 20.0 +0.4
      baz=79,SNR=8.0
BRAL  Brewton          10.89 118  P        Pn       21 20 21.3  -1.1
      baz=304,SNR=7.1
BRAL  Brewton          10.89 118  Pn       Pn       21 20 21.7  -0.7
P49A  Miami Univ. Ec   11.01  72  P        Pn       21 20 22.0  -2.0
      baz=260,SNR=10
P49A  Miami Univ. Ec   11.01  72  Pn       Pn       21 20 24.3 +0.3
H43A  Windswept, Lux   11.03  43  P        Pn       21 20 23.1  -1.3
      baz=230,SNR=8.4
MDND  Maddock          11.05 355  P        Pn       21 20 22.4  -2.2
      baz=174
R50A  Paris            11.17  78  Pn       Pn       21 20 25.2  -1.0
CPCT  Cooper Cave      11.21  93  Pn       Pn       21 20 26.3  -0.5
TUC   Tucson           11.26 250  P        Pn       21 20 27.3  -0.2
      baz=63
V51A  Loudon           11.28  91  P        Pn       21 20 28.4 +0.7
      baz=279,SNR=24
Z51A  Franklin         11.29 104  Pn       Pn       21 20 26.8  -1.1
HWUT  Hardware Ranch   11.36 299  Pn       Pn       21 20 30.5 +1.5
LAO   LASA Array       11.49 331  P        Pn       21 20 29.6  -1.1
      baz=146
LAO   LASA Array       11.49 331  Pn       Pn       21 20 29.9  -0.8
AHID  Auburn Hatcher   11.51 305  Pn       Pn       21 20 30.3  -0.7
AGMN  Agassiz Nation   11.60   8  P        Pn       21 20 29.2  -2.9
      baz=190,SNR=9.2
LOHW  Long Hollow      11.60 310  Pn       Pn       21 20 33.0 +0.7
I45A  Fountain         11.65  48  Pn       Pn       21 20 32.4  -0.4
HPIG                   11.69 215  Pn       Pn       21 20 32.6  -1.0
N49A  Columbus Grove   11.72  65  P        Pn       21 20 31.9  -1.8
      baz=254,SNR=7.6
N49A                              P        Pn       21 20 31.9  -1.8
      baz=254,SNR=7.6
RLMT  Red Lodge        11.72 318  P        Pn       21 20 33.3  -0.7
      baz=131,SNR=13
RLMT  Red Lodge        11.72 318  Pn       Pn       21 20 33.2  -0.8
F42A  Maple Grove Fa   11.72  37  Pn       Pn       21 20 32.7  -1.1
S51A  Beattyville      11.73  82           Pn       21 20 33.2  -0.7
W52A  Murphy           11.75  94  Pn       Pn       21 20 34.2  -0.1
TPAW  Teton Pass       11.76 308  Pn       Pn       21 20 34.8 +0.3
MOOW  Moose Ponds      11.76 310  Pn       Pn       21 20 34.6 +0.2
TKL   Tuckaleechee C   11.77  91  Pn       Pn       21 20 33.1  -1.3
      comp=Z,7.3nm,0.3s,baz=230,slow=7.8,SNR=52
TKL                               Sn       Sn       21 22 40.2  -5.9
      comp=Z,2.5nm,0.3s,baz=275,slow=12,SNR=2.0
TKL                               Lg       Lg       21 23 48.1
      comp=Z,5.8nm,0.3s,baz=3.2,slow=18,SNR=7.6
TKL                               LR       LR       21 25 12.7
      comp=Z,283nm,20.9s,baz=302,slow=38
ECR   Eagle Creek      11.81 306  Pn       Pn       21 20 35.2   0.0
TZTN  Tazewell         11.83  87  P        Pn       21 20 34.4  -0.8
      baz=276
TZTN  Tazewell         11.83  87  Pn       Pn       21 20 35.4 +0.1
L48A  N Adams          11.86  60  P        Pn       21 20 33.9  -1.8
      baz=249,SNR=9.6
L48A                              P        Pn       21 20 33.9  -1.8
      baz=249,SNR=9.6
DUG   Dugway, Tooele   11.88 291  P        Pn       21 20 34.4  -1.6
      baz=102
152A  Waverly Hall     11.89 106  Pn       Pn       21 20 36.1  -0.1
B35A  Bob, Littlefor   12.00  15  P        Pn       21 20 35.3  -2.2
      baz=198,SNR=8.5
451A  Vernon           12.12 117  Pn       Pn       21 20 38.4  -0.9
J47A  Sunmer           12.13  54  Pn       Pn       21 20 37.8  -1.5
EYMN  Ely              12.18  22  P        Pn       21 20 37.4  -2.6
      baz=207,SNR=16
EYMN  Ely              12.18  22  P        Pn       21 20 37.2  -2.8
      baz=207,SNR=22
GCMT  Greycliff        12.38 320           Pn       21 20 42.6  -0.3
YHH   Holmes Hill      12.40 314  Pn       Pn       21 20 43.2  -0.1
DGMT  Dagmar           12.42 341  P        Pn       21 20 42.0  -1.2
      baz=157,SNR=31
ACSO  Alum Creek Sta   12.45  70  P        Pn       21 20 40.9  -2.7
      baz=259,SNR=32
AAM   Ann Arbor        12.53  60  P        Pn       21 20 42.2  -2.5
      baz=249,SNR=6.3
V53A  Saluda           12.54  91           Pn       21 20 44.2  -0.8
GOGA  Godfrey          12.59 101  P        Pn       21 20 44.2  -1.5
      baz=290
E43A  Lone Tree Farm   12.72  38  P        Pn       21 20 44.3  -3.1
      baz=225,SNR=19
QLMT  Earthquake Lak   12.76 313  Pn       Pn       21 20 48.7 +0.5
214A  Organ Pipe Nat   12.95 252  P        Pn       21 20 51.2 +0.5
      baz=64,SNR=5.4
P52A  Corning          13.00  73  P        Pn       21 20 48.4  -2.8
      baz=263,SNR=11
P52A  Corning          13.00  73           Pn       21 20 49.3  -1.9
R53A  Hurricane        13.04  78           Pn       21 20 50.1  -1.7
GLMI  Grayling         13.05  48  P        Pn       21 20 48.9  -3.1
      baz=237,SNR=20
553A  Crawfordville    13.31 116  Pn       Pn       21 20 54.5  -0.9
ULM   Lac du Bonnet    13.53   7  Pn       Pn       21 20 53.8  -4.6
      comp=Z,2.7nm,0.3s,baz=180,slow=12,SNR=16
ULM                               Sn       Sn       21 23 17.6   -11
      comp=Z,3.2nm,0.3s,baz=275,slow=20,SNR=6.1
ULM                               Lg       Lg       21 24 43.6
      comp=Z,3.9nm,0.3s,baz=104,slow=22,SNR=2.3
ULM                               LR       LR       21 26 17.1
      comp=Z,722nm,18.6s,baz=150,slow=38
BCYI  Bear Canyon      13.70 308  Pn       Pn       21 21 01.3 +0.2
O53A  New Philadelph   13.78  70  P        Pn       21 20 59.5  -2.4
      baz=261
ELK   Elko             13.80 292  Pn       Pn       21 21 05.7 +3.4
      comp=Z,0.1nm,0.3s,baz=103,slow=9.0,SNR=6.0
ELK                               Lg       Lg       21 25 01.1
      comp=Z,0.1nm,0.3s,baz=62,slow=20,SNR=2.1
ELK                               LR       LR       21 26 39.1
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      comp=Z,608nm,20.2s,baz=110,slow=38
R11A  Troy Canyon, C  13.82 282  P     Pn    21 21 03.0 +0.5
      baz=91
IRM   Iron Mountain   14.01 264  P     Pn    21 21 05.3 +0.3
      baz=74,SNR=5.2
EGMT  Eagleton        14.02 327  P     Pn    21 21 04.0 -1.2
      baz=139,SNR=7.4
EGMT  Eagleton        14.02 327  Pn    Pn    21 21 03.7 -1.5
HLID  Hailey          14.04 304  P     Pn    21 21 06.2 +0.6
      baz=113
N53A  Lisbon          14.16  68  P     Pn    21 21 03.9 -3.2
      baz=259,SNR=6.5
N53A                             P     Pn    21 21 03.9 -3.2
      baz=259,SNR=6.5
GMRC  Granite Mounta  14.26 267  P     Pn    21 21 09.0 +0.4
      baz=77
BLA   Blacksburg      14.27  83  P     Pn    21 21 07.2 -1.5
      baz=274
BC3   Big Chuckawall  14.39 262  P     Pn    21 21 11.4 +1.0
      baz=72
M53A  WI Miller and   14.41  66  P     Pn    21 21 07.6 -2.9
      baz=257,SNR=8.7
ZAIG  Zacatecas       14.50 196  Pn    Pn    21 21 12.6 +0.6
BELC  Belle Mtn. Jos  14.73 264  P     Pn    21 21 15.0  0.0
      baz=74
MCWV  Mont Chateau    14.75  73  P     Pn    21 21 11.7 -3.5
      baz=265
N54A  Moraine State   14.82  68  P     Pn    21 21 13.0 -3.1
      baz=260
ERPA  Erie            15.07  64  P     Pn    21 21 16.9 -2.5
      baz=256
M54A  Oil Creek Stat  15.16  66  P     Pn    21 21 18.1 -2.7
      baz=258,SNR=7.2
M54A  Oil Creek Stat  15.16  66  Pn    Pn    21 21 18.9 -1.8
PFO   Pinyon Flats O  15.21 263  Pn    P     21 21 25.3 -1.3
      comp=Z,0.2nm,0.3s,baz=99,slow=14,SNR=2.7
PFO                              Lg    Lg    21 25 46.7
      comp=Z,0.1nm,0.3s,baz=7.7,slow=16,SNR=4.2
BMN   Battle Mountai  15.24 289  P     P     21 21 27.6 +0.7
BMN                              IAmb  IAmb  21 21 31.8
      comp=Z,11nm,0.8s
IKP   In-Ko-Pah, Jac  15.24 259  P     Pn    21 21 22.5 +0.6
      baz=69
MSO   Missoula        15.34 316  P     Pn    21 21 23.4 +0.2
      baz=125
MSO   Missoula        15.34 316  P     P     21 21 28.5 +0.5
MONP2 Monument Peak   15.41 261  P     Pn    21 21 24.7 +0.5
      baz=70
LCH   Last Change Ra  15.48 277  P     P     21 21 29.3 -0.3
LCH                              IAmb  IAmb  21 21 33.3
      comp=Z,19nm,0.8s
MPMC  Manual Prospec  15.49 273  P     Pn    21 21 25.7 +0.5
      baz=81,SNR=8.1
BAR   Barrett         15.68 260  P     P     21 21 30.1 -1.6
BAR                              IAmb  IAmb  21 21 36.4
      comp=Z,22nm,0.8s
O56A  Blue Knob Stat  15.79  71  P     Pn    21 21 26.3 -2.8
      baz=264
KVN   Kaiserville     15.80 284  P     P     21 21 32.3 -0.9
NV11  Mina Array Sit  15.84 282  P     P     21 21 33.8 +0.2
NVAR  Mina Array Bea  15.95 282  Pn    P     21 21 34.4 -0.5
      comp=Z,0.7nm,0.3s,baz=100,slow=9.5,SNR=43
NVAR                             Pg          21 22 39.6
      baz=106,slow=8.2,SNR=1.5
NVAR                             Lg    Lg    21 26 08.2
      baz=113,slow=23,SNR=1.4
NVAR                             LR    LR    21 29 04.6
      comp=Z,138nm,20.1s,baz=94,slow=43
NVAR  Mina Array Bea  15.95 282  P     P     21 21 34.7 -0.2
BFSC  Mount Baldy Ra  15.99 266  P     Pn    21 21 32.1 +0.4
      baz=75
EDW2  Edwards Air Fo  16.11 269  P     Pn    21 21 34.1 +1.0
      baz=77,SNR=5.2
LHV   Little Huntoon  16.11 281  P     P     21 21 36.5  0.0
LHV                              IAmb  IAmb  21 21 38.9
      comp=Z,31nm,0.7s
RYN   Ryan            16.12 283  P     P     21 21 36.0 -0.7
ISA   Isabella, Lake  16.34 272  P     Pn    21 21 37.8 +1.7
      baz=80
ISA   Isabella, Lake  16.34 272  P     P     21 21 38.6 -0.5
SSPA  Standing Stone  16.35  70  P     Pn    21 21 33.1 -3.0
      baz=263
BMO   Blue Mountains  16.46 305  P     Pn    21 21 39.1 +1.5
SADO  Sadowa          16.49  55  Pn    Pn    21 21 32.8 -5.1
      comp=Z,0.7nm,0.3s,baz=267,slow=13,SNR=4.4
SADO                             Lg    Lg    21 26 15.9
      comp=Z,0.9nm,0.3s,baz=270,slow=18,SNR=3.5
SLBS  Sierra La Lagu  16.51 221  P     Pn    21 21 39.6 +1.2
T59A  Double "B" Far  16.58  83  Pn    Pn    21 21 37.5 -1.5
T59A                             IAmb  IAmb  21 21 51.2
      comp=Z,43nm,1.4s
MDPB  Devils Postpil  16.59 279  Pn    Pn    21 21 38.5 -1.1
WVOR  Wild Horse Val  16.64 296  P     P     21 21 43.2 +0.7
YERR  Yerington       16.69 284  P     P     21 21 42.6 -0.5
WALA  Waterton Lakes  16.71 322        P     21 21 44.0 +0.8
PAHR  Pah Rah Range   16.82 286  P     P     21 21 45.1 +0.6
PKM   Mcpherson Peak  17.57 270  P     Pn    21 21 51.8 +0.1
      baz=77
E09A  Wood Farm, Sta  17.68 309  P     Pn    21 21 53.0 +0.2
K57A  Scipio Center   17.71  64  P     Pn    21 21 52.3 -0.9
K57A                             IAmb  IAmb  21 21 54.2
      comp=Z,23nm,0.8s
MOD   Modoc Plateau   17.76 293  P     P     21 21 55.9 +1.0
NEW   Newport         17.93 315  P     P     21 21 56.8 +0.2
      comp=Z,0.4nm,0.3s,baz=124,slow=11,SNR=15
NEW                              Lg    Lg    21 27 03.0
      comp=Z,0.3nm,0.3s,baz=127,slow=20,SNR=1.6
NEW   Newport         17.93 315  P     P     21 21 56.8 +0.2
      baz=123,SNR=7.3
NEW   Newport         17.93 315  P     P     21 21 56.8 +0.2
N59A  State Game Lan  17.98  70  P     Pn    21 21 54.6 -2.0
      baz=264
N59A  State Game Lan  17.98  70  P     Pn    21 21 55.2 -1.3
N59A                             IAmb  IAmb  21 21 59.5
      comp=Z,22nm,0.8s
BINY  Binghamton      17.99  66  P     Pn    21 21 54.5 -2.2
      baz=260
P60A  Greenville      18.00  74  P     Pn    21 21 54.5 -2.3
      baz=268
WUPA  West Chester U  18.03  73  Pn    Pn    21 21 54.5 -2.6
PMPB  Monarch Peak    18.12 275  P     P     21 22 00.3 +1.6
PMPB                             IAmb  IAmb  21 22 03.7
      comp=Z,36nm,0.7s
J57A  Williamstown    18.23  62  Pn    Pn    21 21 57.4 -2.3
J57A                             IAmb  IAmb  21 22 01.0
      comp=Z,25nm,0.6s
E08A  Dider Farm, El  18.24 308  P     P     21 22 01.0 +1.1
C09A  Chrisman Ranch  18.36 313  P     P     21 22 03.1 +1.9
C09A                             IAmb  IAmb  21 22 05.7
      comp=Z,28nm,0.7s
HAWA  Hanford         18.50 308  P     P     21 22 02.8  0.0
SAO   San Andreas Ge  18.56 277  P     Pn    21 22 04.8 +1.2
F07A  Phinny Hill Vi  18.56 306  P     P     21 22 02.8 -0.7
J05D  Fort Rock, OR   18.69 297  P     P     21 22 04.5 -0.6
      baz=102
O03E  Paynes Creek    18.71 288  P     P     21 22 05.4 +0.1
      baz=93,SNR=9.2
J58A  Remsen          18.73  63  P     P     21 22 04.0 -1.3
J58A                             IAmb  IAmb  21 22 23.7
      comp=Z,56nm,1.4s
ODNJ  Ogdensburg      18.87  70  P     P     21 22 04.9 -2.0
ODNJ                             IAmb  IAmb  21 22 17.2
      comp=Z,25nm,1.0s
M04C  Macdoel         18.88 292  P     P     21 22 07.5 +0.4
      baz=97
VLDQ  Val d'Or        18.99  47  P     P     21 22 06.4 -1.7
I05D  Terrebonne, OR  19.02 300  P     P     21 22 08.0 -0.6
      baz=105
B08A  Colville Reser  19.25 313  P     Pn    21 22 11.8 -0.2
G05D  Wamic, OR       19.26 303  P     P     21 22 10.7 -0.5
      baz=108
L04D  Klamath Falls   19.28 294  P     P     21 22 11.9 +0.3
      baz=98
WDC   Whiskeytown Da  19.29 289  P     P     21 22 10.7 -0.9
J04D  Umpqua Nationa  19.31 297  P     P     21 22 11.9  0.0
      baz=101
N02D  Trinity Center  19.44 290  P     P     21 22 13.1 -0.1
      baz=94
O02D  Mt. Diablo Mer  19.46 287  P     P     21 22 13.6 +0.1
      baz=92,SNR=9.0
EDM   Edmonton        19.48 332  P     P     21 22 13.6  0.0
EDM                              IAmb  IAmb  21 22 22.1
      comp=Z,44nm,1.1s
YBH   Yreka Blue Hor  19.52 292  P     P     21 22 14.6 +0.5
      comp=Z,0.6nm,0.3s,baz=106,slow=7.3,SNR=20
YBH   Yreka Blue Hor  19.52 292  P     P     21 22 14.8 +0.7
M02C  Callahan        19.59 291  P     P     21 22 15.5 +0.6
      baz=95,SNR=8.2
I04A  Tendick Farm,   19.64 298  P     P     21 22 15.9 +0.5
      baz=102
ACCN  Adirondack Com  19.89  63  P     P     21 22 17.7 -0.3
ACCN                             IAmb  IAmb  21 22 28.3
      comp=Z,52nm,1.4s
CMIG  Matias Romero   19.89 170  P     P     21 22 18.3 +0.1
      comp=Z,0.5nm,0.3s,baz=319,slow=16,SNR=5.5
CMIG                             S     S     21 25 49.2  -13
      comp=Z,0.1nm,0.3s,baz=341,slow=17,SNR=2.1
KHMM  Horse Mountain  20.21 289  P     Pn    21 22 23.6 -0.1
KHMM                             IAmb  IAmb  21 22 26.3
      comp=Z,26nm,0.8s
MNTQ  Montreal, Queb  20.42  57  P     P     21 22 24.8 +1.0
MNTQ                             IAmb  IAmb  21 22 28.0
      comp=Z,34nm,0.9s
JCC   Jacoby Creek,   20.43 289  P     P     21 22 24.0 +0.1
JCC                              IAmb  IAmb  21 22 28.5
      comp=Z,31nm,0.8s
L61B  Northampton     20.45  66  P     P     21 22 24.5 +0.3
      baz=263
M63A  Gales Ferry     20.82  69  P     P     21 22 29.0 +0.8
M63A                             IAmb  IAmb  21 22 56.7
      comp=Z,52nm,1.2s
B05A  Bryant          20.85 311  P     P     21 22 28.8 +0.3
      baz=114,SNR=6.6
D03D  Eldon           21.18 308  P     P     21 22 32.2 +0.1
      baz=111
MOQ   Mont Orford     21.30  58  P     P     21 22 33.2 -0.2
FCC   Fort Churchill  22.11   6  P     P     21 22 42.5 +0.6
FCC                              IAmb  IAmb  21 22 47.0
      comp=Z,45nm,1.1s
APG   El Apazote      22.82 160  P     P     21 22 49.2 -0.9
      comp=Z,12nm,0.7s,baz=331,slow=9.2,SNR=12
APG                              S     S     21 26 58.4 -1.5
      comp=Z,5.6nm,0.7s,baz=286,slow=19,SNR=2.8
E62A  Clayton Lake    23.47  56        P     21 22 55.2 -1.0
E62A                             IAmb  IAmb  21 22 58.8
      comp=Z,25nm,1.0s
F63A  Nahmakanta, Br  23.54  59  P     P     21 22 58.3 +1.3
F63A                             IAmb  IAmb  21 23 09.5
      comp=Z,22nm,1.2s
D62A  Allapoint, All  23.90  55  P     P     21 23 01.2 +0.8
F64A  Sherman         24.09  59  P     P     21 23 02.7 +0.5
BBB   Bella Bella     26.00 316  LR    LR    21 34 27.9
      comp=Z,637nm,18.0s,baz=96,slow=38
YKA   Yellowknife Ar  27.61 344  P     P     21 23 33.0 -0.9
      comp=Z,11nm,0.8s,baz=139,slow=9.9,SNR=36
YKA                              Lg    Lg    21 32 12.0
      comp=Z,2.3nm,0.9s,baz=146,slow=25,SNR=1.9
YKA   Yellowknife Ar  27.61 344  P     P     21 23 34.3 +0.5
SCHQ  Schefferville   28.01  40  P     P     21 23 36.9 -0.8
      comp=Z,13nm,0.6s,baz=244,slow=9.8,SNR=16
SCHQ                             Lg    Lg    21 32 15.3
      comp=Z,37nm,1.0s,baz=319,slow=20,SNR=5.5
SCHQ  Schefferville   28.01  40  P     P     21 23 36.8 -0.8
SCHQ                             IAmb  IAmb  21 23 39.3
      comp=Z,12nm,0.6s
DLBC  Dease Lake      29.95 326  P     P     21 23 57.1 +2.3
      comp=Z,7.3nm,0.8s,baz=132,slow=7.1,SNR=9.7
DLBC                             PcP   PcP   21 26 58.9 +1.7
      comp=Z,5.2nm,0.8s,baz=102,slow=5.0,SNR=3.4
DLBC                             Lg    Lg    21 33 42.2
      comp=Z,2.3nm,0.8s,baz=46,slow=22,SNR=1.6
DLBC                             LR    LR    21 36 41.6
      comp=Z,601nm,18.8s,baz=112,slow=38
P33M  Teslin, Yukon   32.10 328  P     P     21 24 13.6 -0.2
      baz=121
SKAG  Skagway         32.84 325  P     P     21 24 19.7 -0.4
      baz=117
WHY   Whitehorse      33.21 328  P     P     21 24 23.7 +0.2
      baz=119
WHY   Whitehorse      33.21 328  P     P     21 24 23.8 +0.3
WHY                              IAmb  IAmb  21 24 27.7
      comp=Z,6.6nm,0.8s
FARO  Faro, Yukon     33.39 331  P     P     21 24 25.3 +0.3
      baz=123
M31M  Drury Creek, Y  33.79 330  P     P     21 24 29.0 +0.5
      baz=122
N31M  Braeburn, Yuko  34.00 328  P     P     21 24 30.9 +0.6
      baz=119
YUK6  Outpost Mounta  34.86 327  P     P     21 24 37.0 -1.0
      baz=115
M30M  Minto, Yukon    34.95 330  P     P     21 24 38.1 -0.4
      baz=119
YUK4  Talbot Arm      35.16 327  P     P     21 24 39.8 -0.7
      baz=116,SNR=5.6
CTG   Chitna Glacier  36.20 326  P     P     21 24 49.0 -0.3
      baz=112
M27K  Edge Creek, AK  36.97 328  P     P     21 24 55.4 -0.5
      baz=113,SNR=6.2
M27K  Edge Creek, AK  36.97 328  P     P     21 24 56.3 +0.3
M27K                             IAmb  IAmb  21 25 00.1
      comp=Z,13nm,0.9s
INK   Inuvik          37.09 339  P     P     21 24 56.1 -0.6
      comp=Z,5.9nm,0.9s,baz=122,slow=9.0,SNR=13
INK                              PcP   PcP   21 27 18.8 +1.8
      comp=Z,3.3nm,0.2s,baz=136,slow=5.5,SNR=37
INK   Inuvik          37.09 339  P     P     21 24 56.7  0.0
      baz=130
INK   Inuvik          37.09 339  P     P     21 24 57.4 +0.7
INK                              IAmb  IAmb  21 24 59.5
      comp=Z,7.4nm,0.9s
MCARA McCarthy VSAT   37.11 326  P     P     21 24 57.3 +0.3
      baz=111
MCARA McCarthy VSAT   37.11 326  P     P     21 24 58.1 +1.1
MCARA                            IAmb  IAmb  21 25 04.2
      comp=Z,10nm,0.8s
BCAR  Beaver Creek A  37.22 329  P     P     21 24 59.9 +1.9
L27K  Beaver Creek,   37.23 329  P     P     21 24 58.2 +0.1
      baz=114,SNR=11
L27K  Beaver Creek,   37.23 329  P     P     21 24 59.5 +1.4
L27K                             IAmb  IAmb  21 25 02.1
      comp=Z,9.0nm,0.8s
SDV   Santo Domingo   37.44 131  PcP   PcP   21 27 20.1 +0.9
      comp=Z,3.7nm,0.3s,baz=265,slow=3.6,SNR=1.6
SDV   Santo Domingo   37.44 131  eP    P     21 24 60.0 -0.5
M26K  Nabesna, AK     37.47 327  P     P     21 25 00.3 +0.2
      baz=112
BMRM  Bremner River   37.70 325  P     P     21 25 02.3 +0.3
      baz=108
A36M  Sachs Harbour   37.84 347  P     P     21 25 03.4 +0.3
      baz=144,SNR=7.0
A36M  Sachs Harbour   37.84 347  P     P     21 25 03.8 +0.8
A36M                             IAmb  IAmb  21 25 05.7
      comp=Z,20nm,0.8s
L26K  Log Cabin Wild  37.85 328  P     P     21 25 02.5 -0.8
      baz=112
N25K  Chitina, Valde  37.90 326  P     P     21 25 04.4 +0.7
      baz=109
RES   Resolute Bay    37.98   1  P     P     21 25 03.0 -1.1
      comp=Z,3.0nm,0.8s,baz=184,slow=9.5,SNR=8.2
RES                              PcP   PcP   21 27 20.9 +1.3
      comp=Z,2.0nm,0.7s,baz=162,slow=6.4,SNR=2.7
RES   Resolute Bay    37.98   1  P     P     21 25 04.3 +0.2
KLU   Klutina         38.46 325  P     P     21 25 08.0 -0.5
      baz=108
J26L  Joseph Creek    38.52 330  P     P     21 25 08.7 -0.3
      baz=114,SNR=8.5
PAX   Paxson          38.74 328  P     P     21 25 10.9 +0.1
      baz=110
J25K  Salcha River,   39.28 330  P     P     21 25 15.2 -0.1
      baz=112
WAT6  Susitna Watana  39.61 327  P     P     21 25 18.0 -0.1
      baz=107
KNK   Knik Glacier    39.61 325  P     P     21 25 18.1 +0.1
      baz=105
SML   Sawmill         39.66 325  P     P     21 25 18.6 +0.2
SML                              IAmb  IAmb  21 25 21.5
      comp=Z,30nm,1.3s
PRP   Porcupine Dome  39.69 331  P     P     21 25 18.7 -0.1
      baz=113
HDA   Harding Lake    39.85 329  P     P     21 25 20.5 +0.5
      baz=110
IL31                  39.95 330  P     P     21 25 22.3 +1.6
IL31                             IAmb  IAmb  21 25 24.5
      comp=Z,21nm,0.8s
ILAR  Eielson Array   39.95 330  P     P     21 25 21.5 +0.7
      comp=Z,16nm,0.8s,baz=109,slow=6.8,SNR=111
ILAR                             PcP   PcP   21 27 27.0 +1.0
      comp=Z,5.9nm,0.9s,baz=128,slow=1.9,SNR=12
ILAR                             LR    LR    21 42 34.3
      comp=Z,273nm,19.0s,baz=100,slow=37
ILAR  Eielson Array   39.95 330  P     P     21 25 21.9 +1.1
BMAR  Burnt Mountain  40.13 334  P     P     21 25 24.4 +2.0
CCB   Clear Creek Bu  40.28 330  P     P     21 25 24.6 +1.1
CCB                              IAmb  IAmb  21 25 27.2
      comp=Z,17nm,1.0s
POKR  Poker Plat Res  40.29 330  P     P     21 25 23.3 -0.3
      baz=110
WRH   Wood River Hil  40.34 329  P     P     21 25 24.7 +0.7
WRH                              IAmb  IAmb  21 25 27.8
      comp=Z,8.3nm,1.0s
BRSE  Bradley Lake S  40.34 322  P     P     21 25 23.9 -0.2
      baz=101
COLA  College         40.37 330  P     P     21 25 24.4 +0.1
      baz=110
TCOL  CIGO, UAF Yank  40.38 330  P     P     21 25 24.0 -0.3
      baz=110
TCOL  CIGO, UAF Yank  40.38 330  P     P     21 25 23.6 -0.7
TCOL                             IAmb  IAmb  21 25 28.0
      comp=Z,18nm,0.8s
SFJD  Kangerlussuaq   40.42  27  P     P     21 25 24.5 -0.1
      comp=Z,6.8nm,0.7s,baz=264,slow=3.4,SNR=8.8
SFJD  Kangerlussuaq   40.42  27 i P    P     21 25 24.6 -0.1
SFJD                             IAmb  IAmb  21 25 26.3
      comp=Z,7.7nm,0.6s
MCK   McKinley        40.46 328  P     P     21 25 24.7 -0.4
      baz=107
MDM   Murphy Dome     40.55 330  P     P     21 25 27.1 +1.2
MDM                              IAmb  IAmb  21 25 29.4
      comp=Z,12nm,1.0s
CUT   Chulitna        40.69 326  P     P     21 25 27.0 +0.1
      baz=104
H24K  Noodor Dome     40.71 331  P     P     21 25 27.5 +0.3
      baz=110
OTAV  Otavalo         40.78 149  eP    P     21 25 29.1 +0.5
OTAV  Otavalo         40.78 149  P     P     21 25 28.9 +0.3
OTAV                             IAmb  IAmb  21 25 30.7
      comp=Z,18nm,1.3s
NEA2  Nenana          40.78 329  P     P     21 25 27.5 -0.1
      baz=108
TRF   Thorofare Moun  40.97 327  P     P     21 25 29.3 -0.2
      baz=105
TRF   Thorofare Moun  40.97 327  P     P     21 25 31.3 +1.9
TRF                              IAmb  IAmb  21 25 35.6
      comp=Z,18nm,1.0s
KTH   Kantishna Hill  41.27 327  P     P     21 25 32.9 +1.1
KTH                              IAmb  IAmb  21 25 35.2
      comp=Z,16nm,1.0s
BPAW  Bear Paw Mtn.   41.44 328  P     P     21 25 33.6 +0.5
      baz=105
BPAW  Bear Paw Mtn.   41.44 328  P     P     21 25 33.3 +0.2
BPAW                             IAmb  IAmb  21 25 36.4
      comp=Z,8.7nm,0.9s
MLY   Manley          41.59 330  P     P     21 25 33.7 -0.7
      baz=107,SNR=7.6
MLY   Manley          41.59 330  P     P     21 25 35.5 +1.1
MLY                              IAmb  IAmb  21 25 38.4
      comp=Z,9.5nm,0.9s
TULEG Thule           41.93  10 i P    P     21 25 37.5 +0.6
TULEG                            IAmb  IAmb  21 25 39.0
      comp=Z,6.7nm,0.8s
TULEG Thule           41.93  10  P     P     21 25 37.1 +0.2
TULEG                            IAmb  IAmb  21 25 40.0
      comp=Z,13nm,0.9s
CHUM  Lake Minchumin  41.95 328  P     P     21 25 37.7 +0.4
      baz=104
COLD  Coldfoot        42.06 333  P     P     21 25 37.5 -0.6
      baz=110
I21K  Tanana          42.14 330  P     P     21 25 39.3 +0.5
      baz=106,SNR=14
I21K  Tanana          42.14 330  P     P     21 25 40.1 +1.3
TOLK  Toolik Lake Re  42.34 335  P     P     21 25 40.7 +0.2
      baz=112,SNR=9.6
TOLK  Toolik Lake Re  42.34 335  P     P     21 25 41.7 +1.2
TOLK                             IAmb  IAmb  21 25 44.3
      comp=Z,11nm,0.6s
H21K  Melozitna Rive  42.60 330  P     P     21 25 42.4 -0.2
      baz=105
H21K  Melozitna Rive  42.60 330  P     P     21 25 43.6 +1.1
H21K                             IAmb  IAmb  21 25 46.3
      comp=Z,15nm,1.1s
J20K  Nowinta River   42.80 328  P     P     21 25 44.1 -0.1
      baz=102
J20K  Nowinta River   42.80 328  P     P     21 25 44.9 +0.7
J20K                             IAmb  IAmb  21 25 47.2
      comp=Z,6.1nm,0.7s
ICESG Greenland Ices  45.00  26 i P    P     21 26 01.8 -0.5
ICESG                            IAmb  IAmb  21 26 03.7
      comp=Z,22nm,0.6s
NEEM  North Greenlan  45.44  13 i P    P     21 26 05.8 +0.2
NEEM                             IAmb  IAmb  21 26 08.2
      comp=Z,16nm,0.8s
A21K  Barrow          45.52 337  P     P     21 26 05.9 +0.1
      baz=107
SUMG  Summit          46.32  21 i P    P     21 26 13.3 +0.6
SUMG                             IAmb  IAmb  21 26 14.8
      comp=Z,9.0nm,1.1s
SUMG  Summit          46.32  21  P     P     21 26 12.8 +0.2
ATAH  Atahualpa       47.54 153  LR    LR    21 46 46.7
      comp=Z,136nm,21.8s,baz=335,slow=37
TBTG  Tabatinga, AM   48.63 141  eP    P     21 26 30.8  0.0
TBTG  Tabatinga, AM   48.63 141  P     P     21 26 29.7 -1.1
BOAV  Boa Vista       48.80 126  eP    P     21 26 32.2  0.0
BOAV  Boa Vista       48.80 126  P     P     21 26 31.7 -0.5
BOAV                             IAmb  IAmb  21 26 32.8
      comp=Z,8.5nm,0.8s
CZSB  Cruzeiro do Su  50.39 146  eP    P     21 26 45.1 +0.8
CZSB  Cruzeiro do Su  50.39 146  P     P     21 26 44.5 +0.3
DAG   Danmarks Havn   52.11  17 i P    P     21 26 56.4 -0.1
DAG                              IAmb  IAmb  21 26 57.7
      comp=Z,17nm,0.8s
NOR   Nord            52.58  11 i P    P     21 27 00.1 +0.2
NOR                              IAmb  IAmb  21 27 02.1
      comp=Z,6.0nm,0.7s
MACA  Manacapuru-AM   52.98 130  eP    P     21 27 03.2 -0.4
ETMB  Extrema         55.32 140  P     P     21 27 18.8 -1.8
MALB  Monte Alegre    56.11 123  eP    P     21 27 25.9 -0.5
SAML  Samuel          56.19 137  P     P     21 27 24.2 -2.8
MCPB  Macapa, AP      56.53 120  eP    P     21 27 28.1 -1.3
ITTB  Itaituba        57.02 127  eP    P     21 27 32.3 -0.6
NPGB  Novo Progresso  59.30 128  eP    P     21 27 47.7 -1.2
LPAZ  La Paz          60.00 146  P     P     21 27 53.9 -0.4
      comp=Z,2.3nm,0.6s,baz=306,slow=12,SNR=5.3
LPAZ  La Paz          60.00 146  eP    P     21 27 54.4 +0.1
LPAZ  La Paz          60.00 146  P     P     21 27 52.2 -2.1
LPAZ                             IAmb  IAmb  21 27 57.3
      comp=Z,10.0nm,1.4s
TMAB  Tom-Au,PA,Br    60.73 118  eP    P     21 27 58.4 -0.3
VILB  Vilhena         61.13 137  eP    P     21 28 01.2 -0.1
VILB  Vilhena         61.13 137  P     P     21 28 01.2 -0.1
PB16  IPOC Station P  61.22 149  P     P     21 28 02.4 -0.2
CLDB  Colider         62.00 131  eP    P     21 28 06.5 -0.8
PDRB  Porto dos Gac   62.03 133  eP    P     21 28 06.8 -0.7
PRPB  Parauapebas     62.27 123  eP    P     21 28 08.6 -0.5
PTLB  Pontes e Lacer  63.76 137  eP    P     21 28 19.4 +0.5
PTLB  Pontes e Lacer  63.76 137  P     P     21 28 18.8 -0.1
ROSB  Rosrio          63.94 116  eP    P     21 28 18.4 -1.8
LVC   Limon Verde     65.29 150  eP    P     21 28 29.9 +0.6
SNDB  Serra Nova Dou  65.63 128  eP    P     21 28 29.8 -1.4
SMTB  Santa Maria do  65.73 123  eP    P     21 28 31.5 -0.4
SALV  Santo Antonio   66.05 135  eP    P     21 28 34.1 +0.3
ARCES ARCESS Array B  66.31  19  P     P     21 28 34.0 -0.8
      comp=Z,14nm,0.9s,baz=318,slow=3.4,SNR=17
ARCES ARCESS Array B  66.31  19  P     P     21 28 35.4 +0.5
NBPS  Pedro II - PI   66.90 115  eP    P     21 28 38.5 -0.9
NOA   NORSAR Array B  66.97  30  P     P     21 28 38.6 -0.7
      comp=Z,2.8nm,0.8s,baz=304,slow=6.4,SNR=5.3
NBMO  Morrinhos-CE    67.20 113  eP    P     21 28 40.2 -1.1
PEXB  Peixe           67.64 126  eP    P     21 28 43.5 -0.5
PP1B  Ponte de Pedra  67.87 135  eP    P     21 28 45.1 -0.3
ARAG  Araguaiana, MT  68.18 131  eP    P     21 28 47.1 -0.2
NBCL  Cascavel-CE     69.11 112  eP    P     21 28 52.5 -0.7
AQDB  Aquidauana      69.73 137  eP    P     21 28 57.1 +0.2
AQDB  Aquidauana      69.73 137  P     P     21 28 56.8 -0.2
SDBA  SAO DESIDERIO   70.11 124  eP    P     21 28 58.7 -0.7
UPP   Uppsala         70.22  29  eP    P     21 29 00.2 +0.8
IBBN  Ibbenburen      70.42  39  eP    P     21 29 01.9 +1.1
      comp=Z,30nm,1.0s,baz=308,slow=5.8
BDFB  Brasilia        70.47 128  P     P     21 29 02.0 +0.3
      comp=Z,3.1nm,0.7s,baz=315,slow=5.7,SNR=5.9
ESDC  Sonseca Array   70.55  55  P     P     21 29 01.9  0.0
      comp=Z,1.5nm,0.8s,baz=306,slow=5.6,SNR=8.8
BSEG  Bad Segeberg    70.72  36  eP    P     21 29 04.1 +1.5
      comp=Z,24nm,0.9s,baz=308,slow=5.8
RETH  Rethem/Aller,   70.97  38  eP    P     21 29 05.7 +1.6
      comp=Z,34nm,1.0s,baz=308,slow=5.8
WLF   Walferdange     71.11  42  eP    P     21 29 07.4 +2.4
      comp=Z,20nm,1.2s,baz=308,slow=5.8
NRDL  Niedersach Rie  71.48  38  eP    P     21 29 08.6 +1.4
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	comp=Z,14nm,0.8s,baz=308,slow=5.8						
ASSE	Asse, Remlinge	71.98	38	eP	P	21 29 11.3	+1.1
	comp=Z,13nm,1.0s,baz=308,slow=5.8						
GTTG	Gottingen	71.98	39	eP	P	21 29 11.5	+1.2
	comp=Z,12nm,1.4s,baz=308,slow=5.8						
CLZ	Clausthal	72.00	38	eP	P	21 29 11.7	+1.2
	comp=Z,11nm,0.7s,baz=308,slow=5.8						
IPMB	Ipameri, GO	72.12	130	eP	P	21 29 11.4	-0.2
FLTG	Flechtingen	72.13	37	eP	P	21 29 11.7	+0.5
	comp=Z,12nm,0.8s,baz=308,slow=5.8						
FIA1	FINESS Array S	72.19	25	P	P	21 29 11.8	+0.5
FINES	FINESS Array B	72.19	25	P	P	21 29 11.5	+0.2
	comp=Z,14nm,0.8s,baz=317,slow=4.1,SNR=36						
NBPN	Ponto Novo - B	72.23	119	eP	P	21 29 11.6	-0.7
JANB	Januaria	72.43	125	eP	P	21 29 12.9	-0.5
MILB	Miltenberg	72.66	40	eP	P	21 29 15.1	+0.6
	baz=308,slow=5.8						
NBPV	Pedro Velho	72.78	112	eP	P	21 29 14.8	-0.9
LNIZ	Loecknitz	72.83	35	eP	P	21 29 15.6	+0.3
	baz=308,slow=5.8						
BFO	Black Forest	73.05	42	eP	P	21 29 16.4	-0.4
	comp=Z,11nm,1.2s,baz=308,slow=5.8						
NEUB	Neuenburg	73.08	38	eP	P	21 29 17.8	+0.9
	comp=Z,7.1nm,1.0s,baz=308,slow=5.8						
PCMB	Pacaembu	73.11	135	eP	P	21 29 17.6	+0.2
RUE	Ruedersdorf	73.26	36	eP	P	21 29 18.7	+0.8
	comp=Z,10nm,0.7s,baz=308,slow=5.8						
MTSE	Matsula	73.34	27	eP	P	21 29 19.0	+0.8
MOX	Moxa	73.35	39	eP	P	21 29 19.4	+0.9
	baz=308,slow=5.8						
ZON	Zonda	73.45	154	P	P	21 29 19.8	+0.7
CLL	Collm	73.63	38	iP	P	21 29 20.9	+0.8
	comp=Z,7.0nm,1.0s						
CLL	Collm	73.63	38	eP	P	21 29 20.9	+0.8
	comp=Z,6.8nm,0.9s,baz=308,slow=5.8						
CLL	Collm	73.63	38	P	P	21 29 20.8	+0.7
CLL				IAmb	IAmb	21 29 22.9	
	comp=Z,5.8nm,0.8s						
CPUP	Villa Florida	73.70	142	P	P	21 29 20.5	-0.2
	comp=Z,5.9nm,0.9s,baz=332,slow=6.8,SNR=6.1						
CPUP	Villa Florida	73.70	142	eP	P	21 29 20.9	+0.2
GRF	Grafenberg Arr	73.74	40	eP	P	21 29 22.1	+1.2
	comp=Z,8.9nm,1.1s,baz=308,slow=5.8						
MC01	Montes Claros	73.87	126	eP	P	21 29 21.5	-0.5
GUNZ	Gunzen	73.89	39	eP	P	21 29 22.5	+0.8
	comp=Z,5.6nm,0.9s,baz=308,slow=5.8						
TANN	Tannenbergstha	73.92	39	eP	P	21 29 23.0	+1.1
	comp=Z,6.0nm,0.8s,baz=308,slow=5.8						
WERN	Wernitzgruen	73.95	39	eP	P	21 29 23.2	+1.1
	comp=Z,9.4nm,1.2s,baz=308,slow=5.8						
NKC	Novy Kostel	74.03	39	eP	P	21 29 23.5	+1.0
NBLA	Lagarto - SE	74.03	117	eP	P	21 29 22.1	-0.9
FBE	Freiberg	74.04	38	eP	P	21 29 24.0	+1.5
	comp=Z,14nm,0.8s,baz=308,slow=5.8						
NRIK	Noril'sk	74.05	358	P	P	21 29 22.6	+0.4
	comp=Z,6.6nm,0.8s,baz=26,slow=4.2,SNR=8.3						
NRIK	Noril'sk	74.05	358	P	P	21 29 23.3	+1.0
NBAN	Anadia - AL	74.23	115	eP	P	21 29 23.7	-0.4
BRG	Berggiesshubel	74.36	38	eP	P	21 29 25.0	+0.6
	comp=Z,6.8nm,0.8s,baz=308,slow=5.8						
BRG	Berggiesshubel	74.36	38	eP	P	21 29 25.3	+0.9
BRG				Amp		21 29 27.0	
	comp=Z,6.9nm,0.8s						
BRG				Amp		21 38 37.0	
	comp=Z,1.4nm,17.6s						
BRG				Amp		21 38 41.0	
	comp=N,0.7nm,18.9s						
BRG				Amp		21 38 42.0	
	comp=E,0.7nm,19.3s						
UBR	Ueberruh	74.39	42	eP	P	21 29 25.6	+0.8
	comp=E,11nm,0.8s,baz=308,slow=5.8						
NBRF	Rio Formoso -	74.40	114	eP	P	21 29 24.3	-0.8
DAVA	Damuels	74.51	42	eP	P	21 29 26.4	+0.9
	comp=E,8.1nm,1.2s						
VSU	Vasula	74.58	27	eP	P	21 29 26.3	+0.8
GDU01	Guandu, BA	74.67	121	eP	P	21 29 26.0	-0.6
PVCC	Panska Ves	74.89	38	eP	P	21 29 28.3	+0.8
WET	Wettzell	74.93	39	eP	P	21 29 29.0	+1.2
	comp=E,7.8nm,0.9s,baz=308,slow=5.8						
PTGB	Pitanga	75.12	137	eP	P	21 29 29.1	0.0
FETA	Feichten	75.13	42	iP	P	21 29 30.5	+1.4
	comp=E,1.9nm,0.6s						
DIAM	Diamantina, MG	75.21	127	eP	P	21 29 29.1	-0.7
PRU	Pruhonice	75.22	38	eP	P	21 29 30.6	+1.2
BO01	Tunca	75.25	157	P	P	21 29 30.1	+0.5
KHC	Kasperske Hory	75.29	39	eP	P	21 29 29.7	-0.2
WTTA	Wattenberg	75.47	41	eP	P	21 29 32.4	+1.3
	comp=E,9.7nm,1.1s						
GEC2	GERESS Array S	75.54	39	P	P	21 29 31.8	+0.4
GEC2				IAmb	IAmb	21 29 32.9	
	comp=Z,3.7nm,0.9s						
GERES	GERESS Array B	75.54	39	P	P	21 29 31.9	+0.6
	comp=Z,2.0nm,0.6s,baz=323,slow=4.3,SNR=20						
GERES	GERESS Array B	75.54	39	P	P	21 29 31.6	+0.2
CHVC	Chvalec	75.57	37	eP	P	21 29 32.5	+1.1
UPC	Upice	75.60	37	eP	P	21 29 32.8	+1.2
OSTC	Ostas	75.67	37	eP	P	21 29 33.3	+1.3
PABE	Paberze	75.68	30	eP	P	21 29 32.5	+0.6
PABE	Paberze	75.68	30	P	P	21 29 32.7	+0.8
BO02	Sierra Bellavi	75.72	157	P	P	21 29 32.5	+0.2
DPC	Dobruska-Polom	75.86	37	eP	P	21 29 34.3	+1.2
CKRC	Cesky Krumlov	75.86	39	eP	P	21 29 34.1	+1.0
RCLB	Rio Claro- Sao	75.91	132	eP	P	21 29 32.9	-0.8
ABTA	Abfaltersbach	76.26	41	eP	P	21 29 36.6	+1.1
	comp=Z,6.4nm,0.8s						
SUW	Suwalki	76.42	31	eP	P	21 29 37.0	+0.8
SUW	Suwalki	76.42	31	P	P	21 29 36.1	-0.1
MOA	Molln	76.47	40	eP	P	21 29 37.2	+0.6
	comp=Z,11nm,1.8s						
ISAL	Salakas	76.48	29	eP	P	21 29 37.2	+0.7
KBA	Koelnbreinsper	76.48	41	iP	P	21 29 38.9	+2.0
	comp=Z,5.0nm,0.7s						
BSCB	Bom Sucesso	76.51	129	eP	P	21 29 36.6	-0.5
GUA01	Guaratinga, BA	76.52	123	eP	P	21 29 36.6	-0.6
VRAC	Vranov	76.68	38	⇓P	P	21 29 38.4	+0.6
VRAC	Vranov	76.68	38	eP	P	21 29 37.9	+0.2
VAO	Valinhos	76.69	132	eP	P	21 29 37.7	-0.4
KLMR	Klimovskoe	76.73	20	eP	P	21 29 37.7	-0.1
KLMR				AMP		21 29 40.3	
	comp=Z,8.0nm,0.7s						
KRUC	Moravsky	76.74	38	eP	P	21 29 37.7	-0.4
MORC	Moravsky Berou	76.82	37	⇑P	P	21 29 38.8	+0.1
MORC	Moravsky Berou	76.82	37	eP	P	21 29 39.3	+0.7
ITQB	Itaqui	76.83	144	eP	P	21 29 39.0	+0.3
OKC	Ostrava-Krasne	77.07	37	eP	P	21 29 42.0	+2.1
SJMB	Sao Joao De Ma	77.12	125	eP	P	21 29 40.0	-0.5
NAN01	Guarapari, ES	77.20	124	eP	P	21 29 40.5	-0.5
CONA	Conrad Observa	77.23	39	iP	P	21 29 42.0	+1.0
	comp=Z,5.0nm,0.9s						
BSFB	Barra de Sao F	77.43	125	eP	P	21 29 42.5	+0.2
OBKA	Obir	77.48	41	eP	P	21 29 42.9	+0.5
	comp=Z,16nm,1.1s						
ARSA	Arzberg	77.50	40	iP	P	21 29 43.2	+0.8
	comp=Z,6.8nm,1.0s						
OJC	Ojcow	77.59	35	P	P	21 29 43.2	+0.4
SOKA	Soboth	77.63	40	eP	P	21 29 43.6	+0.4
	comp=Z,7.0nm,0.6s						
MNK	Minsk	77.95	29	iP	P	21 29 45.7	+1.0
	comp=E,2.0nm,0.9s						
MNK				iP	P	21 29 45.7	+1.0
	comp=N,22nm,0.9s						
MNK				iP	P	21 29 45.7	+1.0
	comp=Z,33nm,0.9s,baz=318						
MNK				iPP	PP	21 32 39.4	-0.6
MNK				iPPP	PPP	21 34 25.6	
MNK				iS	S	21 39 40.9	+2.6
MNK				iSS	SS	21 44 41.0	+3.0
MNK				iSSS	SSS	21 48 06.1	
MNK				iLQ	LQ	21 59 04.4	
MNK				iLR	LR	22 02 06.6	
MNK				iLRM	MLR	22 05 49.2	
	comp=Z,124nm,19.1s						
MNK				iLRM	MLR	22 05 51.8	
	comp=E,21nm,22.9s						
MNK				iLRM	MLR	22 06 10.9	
	comp=N,274nm,24.2s						
RIB01	Linhares ES	78.07	125	eP	P	21 29 45.4	-0.5
LANS	Liptovska Anna	78.17	36	eP	P	21 29 48.0	+1.9
VYHS	Vyhne	78.32	37	eP	P	21 29 49.0	+2.1
CPSB	Cacapava Do Su	78.99	142	eP	P	21 29 51.4	+0.8
LC01	Cunco	79.19	159	P	P	21 29 51.9	+0.3
LC01				IAmb	IAmb	21 29 52.8	
	comp=Z,12nm,0.9s						
PSZ	Piszkesteto	79.23	37	⇓P	P	21 29 53.5	+1.5
PSZ	Piszkesteto	79.23	37	P	P	21 29 52.0	-0.1
PSZ				IAmb	IAmb	21 29 56.1	
	comp=Z,8.7nm,1.1s						
CRVS	Cervenica-Dubn	79.29	36	eP	P	21 29 51.7	-0.6
MORH	Mrgy, Hungar	79.79	39	⇑P	P	21 29 55.4	+0.4
PLTB	Pedras Altas	80.02	143	eP	P	21 29 56.5	+0.2
TRPA	Tarpa	80.34	36	⇓P	P	21 29 59.3	+1.4
LL04	Puerto Octay	80.92	160	P	P	21 30 01.4	+0.6
LL04				IAmb	IAmb	21 30 02.5	
	comp=Z,11nm,0.8s						
FRGS	Fruska Gora	81.11	39	⇑P	P	21 30 03.3	+1.1
BMR	Baia Mare	81.11	36	⇑P	P	21 30 02.8	+0.7
PLCA	Paso Flores	81.27	159	P	P	21 30 03.9	+1.0
	comp=Z,6.0nm,0.9s,baz=345,slow=9.4,SNR=8.4						
PLCA	Paso Flores	81.27	159	eP	P	21 30 04.7	+1.8
PLCA	Paso Flores	81.27	159	P	P	21 30 03.4	+0.6
AKASG	Malin Array Be	81.37	31	P	P	21 30 03.5	+0.1
	comp=Z,6.9nm,0.6s,baz=314,slow=4.3,SNR=37						
AKASG	Malin Array Be	81.37	31	P	P	21 30 01.7	-1.7
AKASG				IAmb	IAmb	21 30 05.8	
	comp=Z,3.2nm,0.8s						
AKBB	Malin Array Si	81.37	31	P	P	21 30 03.4	0.0
DRGR		81.38	37	⇓P	P	21 30 04.4	+0.7
KEST	Kesra	81.41	52	P	P	21 30 04.5	+0.6
	comp=Z,12nm,0.9s,baz=268,slow=3.3,SNR=13						
KEST	Kesra	81.41	52	P	P	21 30 04.9	+0.9
BZS	Buzias	81.69	38	⇑P	P	21 30 06.2	+1.0
BUR08	Bucovina Ar. S	81.92	35	P	P	21 30 07.5	+1.0
BUR08				IAmb	IAmb	21 30 10.2	
	comp=Z,9.1nm,0.9s						
DIVS	Divibare	81.94	40	P	P	21 30 07.1	+0.4
DIVS				IAmb	IAmb	21 30 09.5	
	comp=Z,9.8nm,1.0s						
BURAR	Bucovina Array	81.95	35	⇓P	P	21 30 07.8	+1.1
BURAR	Bucovina Array	81.95	35	P	P	21 30 07.4	+0.7
LL01	San Ignacio de	82.29	161	P	P	21 30 09.2	+1.2
MDVR	Moldovita	82.33	38	⇑P	P	21 30 09.4	+0.8
GZR	Gura Zlata	82.42	38	⇓P	P	21 30 09.5	+0.4
PRAR	RASCA	82.60	34	⇑P	P	21 30 11.4	+1.5
PDG	Podgorica	82.72	41	⇑P	P	21 30 11.5	+0.9
SORM	Soroca	82.96	33	⇑P	P	21 30 12.0	+0.2
BOVS	Bovan	83.15	39	⇑P	P	21 30 13.7	+0.8
DOPR	Dopca	83.25	36	⇑P	P	21 30 13.5	+0.1
PUNG	Punghina	83.30	38	⇑P	P	21 30 15.0	+1.4
OZUR		83.34	35	⇓P	P	21 30 15.1	+1.2
TESR	Tescani	83.43	35	⇑P	P	21 30 14.2	-0.1
VOIR		83.48	36	⇑P	P	21 30 15.4	+0.7
COVR	Voineasa-Covas	83.72	35	⇑P	P	21 30 16.5	+0.7
MLR	Muntele Rosu	83.86	36	⇑P	P	21 30 17.6	+0.9
MLR	Muntele Rosu	83.86	36	P	P	21 30 16.1	-0.6
MLR				IAmb	IAmb	21 30 20.6	
	comp=Z,6.2nm,0.8s						
PLOR	Plostina	83.92	35	⇓P	P	21 30 18.5	+1.7
VRI	Vrincioaia	83.95	35	⇑P	P	21 30 19.0	+2.0
MILM	Milestii Mici	84.09	33	⇓P	P	21 30 17.6	-0.1
KOWA	Kowa	84.79	76	P	P	21 30 21.7	0.0
KOWA				IAmb	IAmb	21 30 23.1	
	comp=Z,5.1nm,0.8s						
PURM	Purcari	84.86	33	⇑P	P	21 30 21.9	+0.4
CFR	Carcaliu	85.12	35	⇑P	P	21 30 22.4	-0.4
TPGR	Topolog	85.49	35	⇓P	P	21 30 24.6	-0.2
TIRR	Tirgusor	85.79	35	⇑P	P	21 30 27.5	+1.2
USRK	Ussuriysk Ar.	87.38	326	P	P	21 30 34.5	+0.5
	comp=Z,2.6nm,0.8s,baz=53,slow=8.4,SNR=4.0						
DBIC	Dimbokro	88.78	83	P	P	21 30 40.9	-0.2
	comp=Z,4.2nm,0.8s,baz=348,slow=7.6,SNR=4.4						
ZALV	Zalesovo Beam	89.55	358	P	P	21 30 44.3	+0.2
	comp=Z,9.9nm,0.9s,baz=350,slow=4.8,SNR=27						
TORD	Torodi Ar. Bea	90.02	74	P	P	21 30 45.2	-1.7
	comp=Z,1.9nm,0.8s,baz=311,slow=4.3,SNR=11						
TORD	Torodi Ar. Bea	90.02	74	P	P	21 30 46.4	-0.6
BRTR	Keskin Array B	91.91	35	P	P	21 30 54.7	-0.9
	comp=Z,1.2nm,0.7s,baz=245,slow=1.3,SNR=4.5						
KBZ	Khabaz	92.41	27	P	P	21 30 58.5	+0.9
	comp=Z,6.6nm,0.9s,baz=327,slow=3.2,SNR=15						
SONM	Songino Array	92.88	344	P	P	21 31 01.8	+2.0
	comp=Z,3.3nm,0.8s,baz=18,slow=4.2,SNR=22						
SONM				PP	PP	21 34 41.7	+0.6
	comp=Z,0.2nm,0.6s,baz=9.5,slow=13,SNR=2.9						
MSVF	Nonsavu	95.54	252	LR	LR	22 10 01.2	
	comp=Z,172nm,18.4s,baz=28,slow=33						
MKAR	Makanchi Array	96.75	360	P	P	21 31 17.2	-0.2
	comp=Z,3.8nm,1.0s,baz=3.5,slow=4.0,SNR=11						
MKAR	Makanchi Array	96.75	360	P	P	21 31 16.9	-0.5
HHC	Hu-ho-hao-te	98.00	338	eP	P	21 31 21.1	-2.2
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,180nm,8.6s						
WMQ	Urumqi	99.54	356	eP	Pdif	21 31 32.8	+2.7
CMAR	Chiang Mai Arr	122.66	341	PKP	PKiKP	21 36 43.4	0.0
	comp=Z,1.3nm,0.9s,baz=326,slow=2.6,SNR=11						
CMAR	Chiang Mai Arr	122.66	341		PKPdf	21 36 43.1	-0.1
KMBO	Kilima Mbogo	125.74	60	PKP	PKiKP	21 36 50.4	+0.5
	comp=Z,1.4nm,0.9s,baz=3.9,slow=6.9,SNR=3.8						
SNAA	Sanae	126.17	157	PKP	PKPdf	21 36 47.7	-0.6
	comp=Z,2.8nm,0.9s,baz=224,slow=5.1,SNR=11						
SNAA	Sanae	126.17	157		PKPdf	21 36 48.0	-0.3
QSPA	South Pole Qui	126.68	180	PKPdf	PKiKP	21 36 50.6	+0.8
VNDA	Vanda	127.77	196	PKP	PKiKP	21 36 52.6	+0.9
	comp=Z,2.5nm,0.9s,baz=135,slow=2.9,SNR=8.1						
VNDA	Vanda	127.77	196	PKPdf	PKiKP	21 36 52.4	+0.7
WRA	Warramunga Arr	131.35	275	PKP	PKPdf	21 36 60.0	+0.3
	comp=Z,0.7nm,0.6s,baz=62,slow=2.2,SNR=7.1						
BOSA	Boshof	132.38	97	PKP	PKPdf	21 37 01.1	-0.3
	comp=Z,6.4nm,0.9s,baz=326,slow=3.6,SNR=6.2						
ASAR	Alice Springs	133.58	271	PKP	PKPdf	21 37 03.4	-0.4
	comp=Z,0.6nm,0.6s,baz=80,slow=2.3,SNR=8.0						
ASAR	Alice Springs	133.58	271	PKPdf	PKPdf	21 37 02.7	-1.1
MAW	Mawson	147.38	167	PKPbc	PKPbc	21 37 30.3	+0.7
	comp=Z,27nm,0.8s,baz=218,slow=4.2,SNR=19						

FUNV ***23*** *21:21:40.7, 8.°49N×71.°44W, h5km, MW3.1*

ISC 23 21:21:40.4±1.2**, 8.°52N**±0.°03×**71.°37W**±0.°02**, h6**km±10km**,**
n26, σ1.ˢ47/51**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.56	115	eP	Pg	21 21 51.9	+0.8
SOCV				eS	Sg	21 21 59.4	+0.9
SOCV	Socops	0.56	115	eP	Pg	21 21 52.0	+0.8
SOCV				eS	Sb	21 22 01.2	+0.3
SDV	Santo Domingo	0.81	63	eP	Pg	21 21 56.9	+0.8
SDV				eS	Sb	21 22 09.2	+0.7
CAPV	Capacho	1.14	235	eP	Pg	21 22 00.6	-1.7
CAPV				eS	Sg	21 22 15.9	-1.1
PAMC	Pamplona, Colo	1.76	228	eP	Pn	21 22 12.2	+0.3
PAMC				eS	Sb	21 22 36.5	+0.5
MCQV	Machiques	1.91	323	eP	Pn	21 22 14.0	+0.5
MCQV				eS	Sn	21 22 38.5	+0.7
OCAC	Ocana	1.95	262	eP	Pn	21 22 14.8	+0.7
OCAC				eS	Sn	21 22 40.3	+1.2
TAMC	Tame, Arauca	2.11	191	eP	Pb	21 22 18.4	-0.7
TAMC				eS	Sg	21 22 48.0	-0.3
LL6C	La Loma 6 Bece	2.23	303	eP	Pn	21 22 17.7	-0.2
LL6C				eS	Sn	21 22 45.5	-0.3
LL1C	La Loma 1 Cana	2.39	295	eP	Pb	21 22 24.9	+1.1
LL1C				eS	Sb	21 22 53.1	-0.4
SIQV	Siquisique	2.62	36	eP	Pn	21 22 24.7	+1.4
SIQV				eS	Sn	21 22 56.9	+1.5
BARC	Barichara	2.62	223	eP	Pb	21 22 27.3	-0.7
BARC				eS	Sb	21 23 01.6	+1.0
SMLC	San Martn de	2.69	276	eP	Pb	21 22 27.1	-1.9
SMLC				eS	Sb	21 23 01.1	-1.0
BRRC	Barranca, Sant	2.71	239	eP	Pn	21 22 25.8	+1.2
BRRC				eS	Sb	21 23 03.8	+1.0
RUSC	La Rusia	3.11	213	eP	Pn	21 22 31.7	+1.2
RUSC				eS	Sn	21 23 10.0	+1.7
ARGC	Ariguani, Magd	3.14	295	eP	Pn	21 22 33.9	+3.5
ARGC				eS	Sn	21 23 06.5	-1.7
BAUV	El Baul	3.32	82	eP	Pn	21 22 34.6	+1.7
BAUV				eS	Sn	21 23 12.6	-0.1
ZARC	Zaragoza, Cauc	3.60	254	eP	Pn	21 22 36.9	+0.1
ZARC				eS	Sb	21 23 25.3	-3.2
PTBC	PUERTO BERRIO,	3.64	237	eP	Pn	21 22 36.7	-0.6
PTBC				eS	Sb	21 23 29.7	+0.1
MONV	Montecano	3.68	22	eP	Pn	21 22 38.7	+0.8
MONV				eS	Sn	21 23 21.5	-0.2
SPBC	San Pablo de B	3.91	223	eP	Pb	21 22 53.1	+3.3
SJCC	San Jacinto, C	4.00	290	eP	Pn	21 22 44.0	+1.7
SJCC				eS	Sn	21 23 29.7	+0.1
MOTC	Monteria, Cord	4.25	274	eP	Pn	21 22 46.7	+0.9
MOTC				eS	Sn	21 23 35.7	-0.1
CACV	CAICARA DEL OR	4.88	101	eP	Pb	21 23 02.5	-3.7
CACV				eS	Sb	21 24 02.2	-3.0
MERV	Las Mercedes	5.07	81	eP	Pn	21 22 57.7	+0.7
MERV				eS	Sn	21 23 54.3	-1.5
BIRV	Birongo	5.39	68	eP	Pn	21 23 02.0	+0.5
BIRV				eS	Sn	21 24 02.4	-1.5

TUL ***23*** *21:28:32±1.1, 36.°84N±0.°01×98.°27W±0.°01, h4km±4km,*
ML2.6, mb_Lg2.7/5(NEIC), Error ellipse: s-maj=1.8km
s-min=1.4km az=168.0

NEIC 23 21:28:31.9±0.6**, 36.°820N**±0.°009×**98.°29W**±0.°02**, h7**km±5km**,**
Error ellipse: s-maj=2.6km s-min=0.7km az=116.0,
Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK032	Salt Plains WL	0.07	104		Pg	21 28 33.8	+0.1
OK032				Sg	Sg	21 28 34.9	-0.1
KAN14	Manchester OK	0.29	62		Pg	21 28 37.6	-0.2
KAN14				Sg	Sg	21 28 41.6	-0.1
KAN10	Anthony SW Sta	0.34	27		Pg	21 28 38.6	0.0
KAN10				Sg	Sg	21 28 43.1	-0.1
GC02	Grant County #	0.35	85		Pg	21 28 38.7	-0.1
GC02				Sg	Sg	21 28 43.6	+0.3
CROK	Carrier	0.40	142		Pg	21 28 40.1	+0.4
KAN16	Harper SW Stat	0.44	24	Pg	Pg	21 28 40.4	-0.1
KAN16					Sg	21 28 46.5	+0.1
KAN17	Caldwell West	0.48	62	Pg	Pg	21 28 41.0	-0.2
KAN08	Anthony NE Sta	0.48	32		Pg	21 28 41.1	-0.1
KAN08				Sg	Sg	21 28 47.5	0.0
KAN01	Argonia South	0.54	52	Pg	Pg	21 28 42.2	-0.2
KAN01				Sg	Sg	21 28 49.5	0.0
KAN06	Argonia West S	0.55	39		Pg	21 28 42.0	-0.5
KAN09	Caldwell North	0.62	59		Pg	21 28 43.7	-0.3
KAN09					Sg	21 28 52.4	+0.3
U32A	Winter Ranch,	0.72	233	Pg	Pg	21 28 46.1	+0.2
U32A				Sg	Sg	21 28 55.2	-0.1
BLOK	Blackwell	0.86	94		Pg	21 28 47.4	-1.1
BLOK				Sg	Sg	21 28 59.3	-0.5
OK029	Liberty Lake	1.22	146		Pb	21 28 55.0	-0.4
OK029				IAmb_Lg		21 29 10.6	
	comp=Z,46nm,1.2s						
BCOK	Bluff Creek, N	1.28	154	Pn	Pn	21 28 55.5	-0.8
OK033	Mehan	1.34	125	Pn	Pn	21 28 56.8	-0.2
QUOK	Quay	1.43	116	Pn	Pn	21 28 58.3	0.0
T35A	Sooner Cattle	1.43	86	Pn	Pn	21 28 58.3	0.0
OK031	S. Brethren Rd	1.46	126	Pn	Pn	21 28 58.9	+0.3
OK025	Westminster Rd	1.46	148	Pn	Pb	21 28 59.1	-0.3
OK025				IAmb_Lg		21 29 20.4	
	comp=Z,32nm,0.7s						
OK034	N. Norfolk Rd.	1.51	122	Pn	Pn	21 28 59.6	+0.2
W35A	Tecumseh	2.02	145	Pn	Pn	21 29 07.2	+0.8
WMOK	Wichita Mounta	2.12	191	Pn	Pn	21 29 08.6	+0.8
CBKS	Cedar Bluff	2.30	331	IAmb_Lg		21 29 50.5	
	comp=Z,50nm,1.1s						
LOOK	Love County	2.96	162	Pn	Pn	21 29 20.5	+1.1

KRNET ***23*** *21:32:31.3±0.1, 39.°65N×73.°84E, h12km, mb3.3*
ISU ***23*** *21:32:32, 39.°63N×73.°56E, h5km*
SOME ***23*** *21:32:34.7, 40.°00N×73.°33E, h0km*
NNC ***23*** *21:32:35.4±2.7, 39.°87N×73.°47E, h0km, mb3.9, mpv3.5,*
Error ellipse: s-maj=20.9km s-min=10.9km az=169.0

ISC 23 21:32:36.1±1.4**, 39.°83N**±0.°05×**73.°60E**±0.°03**, h13**km±6km**,**
n40, σ2.ˢ07/71**, 20C-21D, Tajikistan-Xinjiang border**
region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	0.20	338	eP	Pg	21 32 39.0	-1.7
SFK				eS	Sg	21 32 46.0	+2.1
SFK	Sufi-Kurgan	0.20	338	⇓eP	Pg	21 32 39.8	-0.9
	baz=24						
SFK				⇓eS	Sg	21 32 46.6	+2.7
	baz=24						
OHH	Osh	0.94	318	eP	Pg	21 32 53.0	-1.2
OHH				eS	Sn	21 33 08.0	-0.3
OHH	Osh	0.94	318	⇑iP	Pb	21 32 53.8	-0.4
	baz=17						
OHH				⇑eS	Sn	21 33 10.4	+2.1
	baz=17						
SALK	Salom-Alik	1.06	9	⇑eP	Pg	21 32 54.6	-2.0
	baz=59						
SALK				⇑eS	Sb	21 33 11.5	+1.1
	baz=59						
DRK	Karamyk	1.43	257	⇑eP	Pn	21 33 00.8	-1.2
	baz=64						
DRK				⇑iS	Sn	21 33 22.3	+1.4
	baz=64						
BTK	Batken	2.15	277	eP	Pn	21 33 13.0	+1.3
BTK				eS	Sg	21 33 48.0	+2.7
BTK	Batken	2.15	277	⇑iP	Pn	21 33 13.1	+1.3
	baz=81						
BTK				⇑eS	Sg	21 33 43.9	-1.4
	baz=81						
AML	Almayashu	2.30	2	⇓iP	Pn	21 33 14.7	+0.6
	baz=57						
AML				⇓iS	Sb	21 33 46.8	+0.6
	baz=57						
UCH	Uchtor	2.50	16	⇑eP	Pn	21 33 16.8	0.0
	baz=11						
UCH				⇑iS	Sn	21 33 50.0	+2.7
	baz=11						
TRKS	Terek-Say	2.53	313	⇑iP	Pn	21 33 17.9	+0.9
	baz=13						
TRKS				⇑iS	Sb	21 33 52.2	-0.3
	baz=13						
GAR	Garm	2.67	253	⇓eP	Pn	21 33 19.2	+0.3
	baz=58						
GAR				⇓iS	Sn	21 33 54.3	+3.0
	baz=58						
MNAS	Manas	2.78	343	⇓iP	Pn	21 33 21.9	+1.4
	baz=41						
MNAS				⇓iS	Sb	21 33 58.6	-1.2
	baz=41						
EKS2	Erkin-Say	2.83	3	⇓eP	Pn	21 33 21.9	+0.8
	baz=59						
EKS2				⇓eS	Sn	21 33 58.6	+3.4
	baz=59						
AAK	Ala-Archa	2.89	13	⇑Pg	Pb	21 33 28.5	+0.9
	7.7nm,0.5s						
AAK				⇑Lg	Lg	21 34 06.2	
	12nm,0.6s						
AAK	Ala-Archa	2.89	13	⇓iP	Pn	21 33 22.2	+0.3
	baz=9.0						
AAK				⇓iS	Sn	21 33 59.4	+2.8
	baz=9.0						
MRKS	Merke	2.93	355	eP	Pb	21 33 28.1	-0.1
	3.6nm,0.4s						
MRKS				eS	Sb	21 34 06.6	+2.7
	29nm,0.4s						
MRKS	Merke	2.93	355	Pg	Pb	21 33 28.1	-0.1
	3.6nm,0.4s						
MRKS				Lg	Lg	21 34 06.6	
	29nm,0.4s						
KBK	Karagaybulak	3.00	19	⇓iP	Pn	21 33 23.5	0.0
	baz=15						
KBK				⇓eS	Sn	21 34 01.5	+2.1
	baz=15						
FRU1	Bishkek	3.08	14	⇑iP	Pn	21 33 25.2	+0.7
	baz=10.0						
FRU1				⇑iS	Sn	21 34 04.4	+3.2
	baz=10.0						
ULHL	Ulahol	3.13	39	⇑iP	Pn	21 33 24.2	-1.1
	baz=34						
ULHL				⇑iS	Sn	21 34 03.1	+0.4
	baz=34						
BOOM	Boomskoye usch	3.19	33	⇓iP	Pn	21 33 25.4	-0.7
	baz=29						
BOOM				⇓iS	Sn	21 34 05.0	+0.9
	baz=29						
CHMG	Chimgan	3.23	303	eP	Pb	21 33 32.0	-1.3
CHMG				eS	Sg	21 34 21.0	+1.3
TKM2	Tokmak 2	3.44	25	⇓Pn	Pn	21 33 31.7	+2.2
	8.4nm,0.8s						
TKM2				⇓Lg	Lg	21 34 26.1	
	10nm,0.7s						
DZA	Taraz	3.51	332	eP	Pb	21 33 35.8	-2.1
DZA				eS	Sb	21 34 20.6	+0.1
DZA	Taraz	3.51	332	Pg	Pb	21 33 35.8	-2.1
DZA				Lg	Lg	21 34 20.6	
KDJ	Kajisay	3.55	49	⇓iP	Pn	21 33 29.6	-1.5
	baz=45						

KDJ				⇓*i*S	Sn	21 34 12.3	-0.7
	baz=45						
IUG	**Iuzhnay**	3.56	312	*e*P	Pb	21 33 36.3	-2.6
	59nm,0.3s						
IUG				*e*S	Sb	21 34 20.9	-1.1
	35nm,0.4s						
IUG	**Iuzhnay**	3.56	312	Pg	Pb	21 33 36.7	-2.3
	146nm,0.3s						
IUG				Lg	Lg	21 34 20.9	
	35nm,0.4s						
DGS	**Degeres**	3.78	25	*e*P	Pb	21 33 45.5	+2.8
	3.0nm,0.3s						
DGS				*e*S	Sg	21 34 36.7	-0.8
	18nm,0.5s						
DGS	**Degeres**	3.78	25	Pg	Pb	21 33 45.5	+2.8
	3.0nm,0.3s						
DGS				Lg	Lg	21 34 38.0	
	18nm,0.5s						
KK07	**Karatay Array**	4.01	325	⇑Pn	Pn	21 33 38.0	+0.9
	1.5nm,0.4s,baz=144,slow=14						
KK07				⇓Pg	Pg	21 33 50.3	-2.4
	3.6nm,0.4s,baz=148,slow=14						
KK07				⇑Lg	Lg	21 34 45.0	
	5.4nm,0.5s,baz=130,slow=30						
TNSS	**Tian-Shan**	4.08	37	*e*P	Pb	21 33 49.6	+1.7
	2.3nm,0.4s						
TNSS				*e*S	Sg	21 34 43.5	-3.5
	5.3nm,0.4s						
TNSS	**Tian-Shan**	4.08	37	Pg	Pb	21 33 48.8	+0.9
	3.0nm,0.3s						
TNSS				Lg	Lg	21 34 44.8	
	5.3nm,0.4s						
MDOK	**Medeo**	4.22	37	*e*P	Pb	21 33 52.0	+1.8
	1.9nm,0.8s						
MDOK				*e*S	Sg	21 34 47.8	-3.7
	11nm,0.6s						
MDOK	**Medeo**	4.22	37	Pg	Pb	21 33 50.8	+0.6
	5.9nm,0.5s						
MDOK				Lg	Lg	21 34 47.8	
	11nm,0.6s						
KUU	**Kurty**	4.55	26	*e*P	Pb	21 33 58.8	+3.0
	2.2nm,0.5s						
KUU				*e*S	Sg	21 34 59.9	-2.1
	14nm,0.6s						
KUU	**Kurty**	4.55	26	Pg	Pb	21 33 57.6	+1.9
	2.2nm,0.5s						
KUU				Lg	Lg	21 34 59.9	
	14nm,0.6s						
CHKK	**Chushkaly**	4.75	31	*e*P	Pb	21 34 03.2	+4.0
	1.7nm,0.1s						
CHKK				*e*S	Sg	21 35 06.5	-2.1
	10nm,0.6s						
BTLS	**Baital**	5.22	3	*e*P	Pb	21 34 09.2	+2.1
	0.8nm,0.4s						
BTLS				*e*S	Sg	21 35 16.9	-6.7
	2.7nm,0.6s						

*TUL **23** 21:36:18.4±1.3, 36.°83N±0.°02×98.°29W±0.°03, h4^{km}±6^{km}, ML3.8, mb_Lg3.5/91(NEIC), Error ellipse: s-maj=4.3km s-min=2.3km az=130.0*
*IDC **23** 21:36:19.6±1.1, 36.°90N×98.°39W, h0^{km}, mb3.6/4, mb1 3.8/8, mb1mx3.6/47, mbtmp3.5/8, ML3.4/4, Error ellipse: s-maj=18.8km s-min=10.5km az=111.0*
*NEIC **23** 21:36:19.1±1.3, 36.°81N±0.°03×98.°27W±0.°04, h9^{km}±6^{km}, Error ellipse: s-maj=6.1km s-min=2.4km az=133.0*
*ANF **23** 21:36:21.0±1.8, 36.°88N×98.°27W, h19^{km}±14^{km}, ML4.4/15, Error ellipse: s-maj=5.0km s-min=4.0km az=41.0*
ISC 23 21:36:19.4±0.8**, 36.°83N**±0.°02×**98.°25W**±0.°02**, h6**^{km}±5^{km}**, n172,** σ1.^{s}**07**/179**, mb3.6**/4**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
OK032	**Salt Plains WL**	0.04	122		Pg	21 36 20.4	-0.4
OK032				Sg	Sg	21 36 21.6	-0.1
KAN14	**Manchester OK**	0.27	61		Pg	21 36 24.6	-0.1
KAN14				Sg	Sg	21 36 28.7	+0.4
GC02	**Grant County #**	0.32	85	Pg	Pg	21 36 25.5	-0.1
GC02				Sg	Sg	21 36 30.4	+0.6
KAN10	**Anthony SW Sta**	0.32	23	Pg	Pg	21 36 25.4	-0.4
KAN10				Sg	Sg	21 36 30.1	0.0
CROK	**Carrier**	0.39	146	Pg	Pg	21 36 26.6	-0.3
KAN05	**Bluff City Nor**	0.42	47		Pg	21 36 27.2	-0.3
KAN16	**Harper SW Stat**	0.43	21		Pg	21 36 27.3	-0.4
KAN17	**Caldwell West**	0.45	61		Pg	21 36 27.8	-0.3
KAN17				Sg	Sg	21 36 34.2	+0.2
KAN08	**Anthony NE Sta**	0.46	29	Pg	Pg	21 36 28.0	-0.4
KAN01	**Argonia South**	0.51	50		Pg	21 36 29.0	-0.3
KAN01				Sg	Sg	21 36 36.3	+0.3
KAN12	**Harper NE Stat**	0.51	23	Pg	Pg	21 36 28.8	-0.5
KAN12				Sg	Sg	21 36 36.3	+0.2
KAN06	**Argonia West S**	0.53	37		Pg	21 36 29.2	-0.4
KAN06				Sg	Sg	21 36 36.8	+0.3
KAN09	**Caldwell North**	0.60	58		Pg	21 36 30.6	-0.3
KAN09				Sg	Sg	21 36 38.8	+0.1
KAN13	**South Haven SW**	0.65	73	Pg	Pg	21 36 31.4	-0.5
KAN13				Sg	Sg	21 36 40.6	+0.2
U32A	**Winter Ranch,**	0.75	234		Pg	21 36 32.6	-1.2
U32A				Sg	Sg	21 36 43.0	-0.5
U32A	**Winter Ranch,**	0.75	234	P	Pg	21 36 32.6	-1.2
	baz=51,SNR=181						
BLOK	**Blackwell**	0.84	94	Pg	Pg	21 36 34.8	-0.7
OK029	**Liberty Lake**	1.21	148		Pg	21 36 41.3	-1.4
BCOK	**Bluff Creek, N**	1.28	156		Pn	21 36 42.3	-1.5
OK033	**Mehan**	1.32	126	Pn	Pn	21 36 43.4	-0.9
T35A	**Sooner Cattle**	1.40	86	Pn	Pn	21 36 44.8	-0.7
T35B	**Sooner Cattle**	1.40	86	P	Pn	21 36 44.9	-0.6
	baz=267,SNR=118						
T35B				S	Sn	21 37 04.1	-0.3
	baz=267						
QUOK	**Quay**	1.41	117	Pn	Pn	21 36 45.0	-0.6
OK031	**S. Brethren Rd**	1.44	127		Pn	21 36 45.1	-0.9
OK025	**Westminster Rd**	1.45	149		Pn	21 36 45.2	-0.9
OK034	**N. Norfolk Rd.**	1.49	123	Pn	Pn	21 36 46.1	-0.6
OK030	**Cody Creek RV**	1.49	127		Pn	21 36 45.9	-0.8
OKCFA	**Oklahoma City**	1.55	155		Pn	21 36 46.9	-0.7
OKCFA	**Oklahoma City**	1.55	155	P	Pn	21 36 47.1	-0.5
	baz=335,SNR=11						
OKCFA				S	Sn	21 37 08.4	+0.3
	baz=335						
OKCSW	**OKLAHOMA CITY**	1.56	155		Pn	21 36 47.0	-0.8
R32A	**Long Quarter,**	1.64	347	Pn	Pn	21 36 48.5	-0.3
R32A	**Long Quarter,**	1.64	347	P	Pn	21 36 48.6	-0.2
	baz=168,SNR=83						
R32A				S	Sg	21 37 10.6	-1.4
	baz=168						
FNO	**Franklin**	1.71	156	Pn	Pn	21 36 49.3	-0.5
W35A	**Tecumseh**	2.01	146		Pn	21 36 53.9	0.0
W35A				IAmb_Lg		21 37 26.0	
	comp=Z,217nm,0.8s						
WMOK	**Wichita Mounta**	2.13	192	P	Pn	21 36 55.0	-0.5
	baz=11						
WMOK				S	Sb	21 37 24.9	-0.1
	baz=11						
WMOK	**Wichita Mounta**	2.13	192		Pn	21 36 54.7	-0.8
WMOK	**Wichita Mounta**	2.13	192	P	Pn	21 36 55.1	-0.5
	baz=11,SNR=77						
TUL1	**Leonard**	2.19	114	P	Pn	21 36 57.5	+1.1
	baz=295						
TUL1				S	Sb	21 37 27.2	+0.4
	baz=295						
TUL1	**Leonard**	2.19	114		Pn	21 36 55.8	-0.5
TUL1	**Leonard**	2.19	114	P	Pn	21 36 56.9	+0.5
	baz=295,SNR=51						
X34A	**Smith Ranch, M**	2.25	171	Pn	Pn	21 36 56.5	-0.7
CBKS	**Cedar Bluff**	2.31	330	P	Pn	21 36 58.0	-0.1
	baz=150						
CBKS				Sb	Sb	21 37 29.7	-0.6
	baz=150						
CBKS	**Cedar Bluff**	2.31	330	Pn	Pn	21 36 57.8	-0.2
CBKS				IAmb_Lg		21 37 34.6	
	comp=Z,193nm,0.8s						
CBKS	**Cedar Bluff**	2.31	330	P	Pn	21 36 57.9	-0.1
	baz=150,SNR=75						
CBKS				S	Sn	21 37 27.2	+0.4
	baz=150						
KSU1	**Kansas State U**	2.62	29	Sb	Sb	21 37 39.6	+0.5
	baz=211						
KSU1	**Kansas State U**	2.62	29	Pn	Pn	21 37 02.4	+0.2
KSU1				IAmb_Lg		21 37 49.0	
	comp=Z,211nm,0.9s						
LOOK	**Love County**	2.96	162	Pn	Pn	21 37 07.0	0.0
LOOK				IAmb_Lg		21 38 01.1	
	comp=Z,103nm,0.7s						
U38A	**Gravette**	3.13	96	Pn	Pn	21 37 09.3	-0.1
U38A				IAmb_Lg		21 38 06.1	
	comp=Z,186nm,0.8s						
U38A	**Gravette**	3.13	96	P	Pn	21 37 09.8	+0.4
	baz=278,SNR=16						
X37A	**Clayton**	3.24	133	Pn	Pn	21 37 10.7	-0.1
X37A				IAmb_Lg		21 38 04.7	
	comp=Z,116nm,0.7s						
X37A	**Clayton**	3.24	133	P	Pn	21 37 10.9	+0.1
	baz=314,SNR=23						
X37A				S	Sn	21 37 50.1	+0.5
	baz=314						
AMTX	**Amarillo**	3.39	236	P	Pn	21 37 13.5	+0.5
	baz=54						
AMTX	**Amarillo**	3.39	236	Pn	Pn	21 37 13.4	+0.4
AMTX	**Amarillo**	3.39	236	P	Pn	21 37 13.5	+0.5
	baz=54,SNR=13						
HHAR	**Hobbs**	3.52	98	Pn	Pn	21 37 14.4	-0.2
HHAR				IAmb_Lg		21 38 18.0	
	comp=Z,114nm,0.9s						
Z35A	**Perchaven, San**	3.58	166	Pn	Pn	21 37 15.5	0.0
Z35A	**Perchaven, San**	3.58	166	P	Pn	21 37 15.6	+0.1
	baz=347,SNR=7.1						
Z35A				S	Sn	21 37 58.6	+0.5
	baz=347						
N33B	**J Bar K, Exete**	3.96	9	P	Pn	21 37 19.6	-1.0
	baz=190,SNR=9.4						
N33B				S	Sn	21 38 06.3	-1.1
	baz=190						
W39A	**Magazine**	3.97	113	P	Pn	21 37 21.2	+0.4
	baz=296						
W39A	**Magazine**	3.97	113	Pn	Pn	21 37 20.8	-0.1
W39A				IAmb_Lg		21 38 33.9	
	comp=Z,151nm,0.9s						
W39A	**Magazine**	3.97	113	P	Pn	21 37 20.8	-0.1
	baz=296,SNR=23						
S39A	**Bolivar**	4.03	76	Pn	Pn	21 37 21.5	-0.2
S39A	**Bolivar**	4.03	76	P	Pn	21 37 21.7	0.0
	baz=259,SNR=26						
KSCO	**Kaye Shedlock'**	4.09	304	P	Pn	21 37 22.5	-0.2
	baz=121						
KSCO	**Kaye Shedlock'**	4.09	304	Pn	Pn	21 37 22.2	-0.4
KSCO				IAmb_Lg		21 38 33.3	
	comp=Z,92nm,0.7s						
KSCO	**Kaye Shedlock'**	4.09	304	P	Pn	21 37 22.4	-0.2
	baz=121,SNR=6.6						
ABTX	**Abilene, Hawle**	4.34	196	Pn	Pn	21 37 25.4	-0.7
U40A	**Yellville**	4.37	95	S	Sn	21 38 17.1	-0.6
	baz=278						
U40A	**Yellville**	4.37	95	Pn	Pn	21 37 25.9	-0.4
U40A				IAmb_Lg		21 38 48.9	
	comp=Z,77nm,0.7s						
U40A	**Yellville**	4.37	95	P	Pn	21 37 26.0	-0.4
	baz=278,SNR=16						
U40A				P	Pn	21 37 26.0	-0.4
	baz=278,SNR=16						
MIAR	**Mount Ida**	4.43	119	P	Pn	21 37 27.7	+0.5
	baz=302						
MIAR	**Mount Ida**	4.43	119	Pn	Pn	21 37 28.0	+0.8
MIAR				IAmb_Lg		21 38 39.3	
	comp=Z,87nm,0.8s						
MIAR	**Mount Ida**	4.43	119	P	Pn	21 37 27.5	+0.3
	baz=302,SNR=22						
Z38A	**Mt. Pleasant**	4.46	142	Pn	Pn	21 37 27.1	-0.4
Z38A				IAmb_Lg		21 38 43.9	
	comp=Z,83nm,0.7s						
N35A	**Tabor**	4.52	26	Pn	Pn	21 37 26.6	-1.8
BGNE	**Belgrade**	4.58	1	P	Pn	21 37 29.0	-0.2
	baz=181						
BGNE	**Belgrade**	4.58	1		Pn	21 37 28.9	-0.3
BGNE	**Belgrade**	4.58	1	P	Pn	21 37 28.8	-0.5
	baz=181,SNR=26						
P38A	**Dawn**	4.65	52	Pn	Pn	21 37 30.2	0.0
P38A				IAmb_Lg		21 38 50.4	
	comp=Z,68nm,0.8s						
P38A	**Dawn**	4.65	52	P	Pn	21 37 29.9	-0.3
	baz=235,SNR=8.0						
MSTX	**Muleshoe**	4.66	234	Sb	Sb	21 38 43.2	+5.1
	baz=51						
MSTX	**Muleshoe**	4.66	234	Pn	Pn	21 37 30.6	+0.1
MGMO	**Mountain Grove**	4.80	84	Pn	Pn	21 37 32.4	+0.1
MGMO				IAmb_Lg		21 38 53.1	
	comp=Z,90nm,0.8s						
WHTX	**Lake Whitney,**	4.87	172	P	Pn	21 37 32.7	-0.5
	baz=352						
WHTX	**Lake Whitney,**	4.87	172	Pn	Pn	21 37 32.5	-0.7
WHTX	**Lake Whitney,**	4.87	172	P	Pn	21 37 32.5	-0.7
	baz=352,SNR=20						
T25A	**Trinidad**	4.94	275	Pn	Pn	21 37 34.4	+0.1
R40A	**Maddies Statio**	4.98	71	Pn	Pn	21 37 34.8	+0.1
R40A	**Maddies Statio**	4.98	71	P	Pn	21 37 34.3	-0.4
	baz=255,SNR=24						
X40A	**Basin Creek Fa**	4.99	116	P	Pn	21 37 35.4	+0.5
	baz=299						
X40A	**Basin Creek Fa**	4.99	116		Pn	21 37 35.4	+0.5
X40A				IAmb_Lg		21 39 02.4	
	comp=Z,94nm,1.1s						
FCAR	**Ozark Folk Cen**	5.04	99	Pn	Pn	21 37 34.8	-0.7
FCAR				IAmb_Lg		21 38 58.6	
	comp=Z,62nm,0.8s						
OGNE	**Ogallala**	5.06	326	P	Pn	21 37 36.7	+0.8
	baz=144						
OGNE	**Ogallala**	5.06	326	Pn	Pn	21 37 36.7	+0.8
OGNE				IAmb_Lg		21 39 07.8	
	comp=Z,74nm,0.8s						
OGNE	**Ogallala**	5.06	326	P	Pn	21 37 36.6	+0.7
	baz=144,SNR=20						
WHAR	**Wooly Hollow**	5.07	106	Pn	Pn	21 37 35.7	-0.3
W41B	**Gary Mavity, V**	5.14	107	P	Pn	21 37 36.8	-0.1
	baz=290						
237A	**Washetta, Mont**	5.22	157	Pn	Pn	21 37 36.9	-1.1
237A				IAmb_Lg		21 39 15.8	
	comp=Z,111nm,1.1s						
237A	**Washetta, Mont**	5.22	157	P	Pn	21 37 37.1	-0.9
	baz=338,SNR=12						
WLAR	**White Oak Lake**	5.24	125	Pn	Pn	21 37 38.0	-0.3
WLAR				IAmb_Lg		21 39 14.7	
	comp=Z,66nm,0.7s						
L34A	**Svendsen Farm,**	5.34	15	Pn	Pn	21 37 38.2	-1.4
N38A	**Joes South For**	5.57	43	Pn	Pn	21 37 42.1	-0.7
N38A				IAmb_Lg		21 39 31.3	
	comp=Z,98nm,0.9s						
N38A	**Joes South For**	5.57	43	P	Pn	21 37 42.4	-0.5
	baz=226,SNR=10						
P40A	**Paris**	5.58	59	Pn	Pn	21 37 42.4	-0.7
P40A				IAmb_Lg		21 39 21.5	
	comp=Z,75nm,0.8s						
CCM	**Cathedral Cave**	5.71	75	Pn	Pn	21 37 44.4	-0.4
Z41A	**Richland Creek**	5.71	127	S	Sn	21 38 48.2	-2.5
	baz=310						
LCAR	**Lake Charles**	5.77	95	IAmb_Lg		21 39 26.0	
	comp=Z,75nm,0.8s						
K31A	**O'Neill**	5.80	356	Pn	Pn	21 37 45.9	-0.2
K31A				IAmb_Lg		21 39 30.4	
	comp=Z,90nm,0.8s						
K31A	**O'Neill**	5.80	356	P	Pn	21 37 45.8	-0.2
	baz=176,SNR=6.5						
SDCO	**Great Sand Dun**	5.85	281	Pn	Pn	21 37 46.6	-0.3
Q24A	**Divide**	5.86	293	S	Sn	21 38 52.9	-1.8
	baz=109						
NATX	**Nacogdoches**	5.86	148	IAmb_Lg		21 39 41.1	
	comp=Z,46nm,1.1s						
CCAR	**Cane Creek**	6.04	117	IAmb_Lg		21 39 39.9	
	comp=Z,71nm,0.9s						
435B	**Jarrell**	6.05	175	IAmb_Lg		21 39 39.2	
	comp=Z,90nm,0.9s						
PBMO	**Poplar Bluff**	6.28	88	Pn	Pn	21 37 53.3	+0.7
PBMO				IAmb_Lg		21 39 39.5	
	comp=Z,74nm,0.8s						
FVM	**French Village**	6.34	77	IAmb_Lg		21 39 43.9	
	comp=Z,44nm,0.7s						
ISCO	**Idaho Springs**	6.50	299	Pn	Pn	21 37 55.3	-0.6
ANMO	**Albuquerque**	6.92	257	Pn	Pn	21 38 02.4	+0.9
	comp=Z,0.2nm,0.3s,baz=63,slow=8.8,SNR=1.9						
ANMO				Pg	Pb	21 38 23.3	+3.2
	comp=Z,0.7nm,0.3s,baz=76,slow=12,SNR=3.8						
ANMO				Lg	Lg	21 39 52.8	
	comp=Z,1.4nm,0.3s,baz=349,slow=18,SNR=4.3						
ANMO	**Albuquerque**	6.92	257	Pn	Pn	21 38 01.9	+0.3
N41A	**Harden Midland**	6.96	54	Pn	Pn	21 38 00.5	-1.4
N41A				IAmb_Lg		21 40 06.0	
	comp=Z,71nm,1.0s						
143A	**Socs Landing,**	6.98	124	IAmb_Lg		21 40 13.4	
	comp=Z,50nm,0.8s						
ECSD	**EROS Data Cent**	7.01	10	Pn	Pn	21 38 00.8	-1.9
K38A	**Parkersburg**	7.18	34	Pn	Pn	21 38 04.7	-0.3
S44A	**Carbondale**	7.23	80	Pn	Pn	21 38 05.4	-0.2
S44A				IAmb_Lg		21 40 17.9	
	comp=Z,72nm,0.9s						
SIUC	**Southern Illin**	7.26	80	Pn	Pn	21 38 05.3	-0.7
SIUC				IAmb_Lg		21 40 15.9	
	comp=Z,69nm,0.8s						
BNM	**Barren Site**	7.33	251	Pn	Pn	21 38 07.3	0.0
P43A	**Skaggs, Pawnee**	7.42	65	Pn	Pn	21 38 07.8	-0.5
P43A				IAmb_Lg		21 40 21.1	
	comp=Z,80nm,0.7s						
L40A	**Anamosa**	7.54	44	Pn	Pn	21 38 08.4	-1.6
L40A				IAmb_Lg		21 40 24.4	
	comp=Z,55nm,1.0s						
Q44A	**Meyer Farm, Va**	7.60	71	Pn	Pn	21 38 09.3	-1.4
SUSD	**Miller**	7.63	356	IAmb_Lg		21 40 40.5	
	comp=Z,66nm,1.1s						
Y45A	**Yeager Farm, C**	7.71	110	IAmb_Lg		21 40 42.3	
	comp=Z,44nm,1.0s						
MNTX	**Cornudas Mount**	7.81	231		Pn	21 38 12.3	-1.3
HDIL	**Hopedale**	7.93	59	Pn	Pn	21 38 15.0	-0.3
HDIL				IAmb_Lg		21 40 43.5	
	comp=Z,66nm,0.8s						
O44A	**Mansfield**	8.36	64	IAmb_Lg		21 40 50.2	
	comp=Z,47nm,0.7s						
L42A	**Oliver, Polo**	8.42	49	Pn	Pn	21 38 20.5	-1.4
L42A				IAmb_Lg		21 40 53.1	
	comp=Z,36nm,0.8s						
WVT	**Waverly**	8.43	92	Pn	Pn	21 38 18.9	-3.1
PLAL	**Pickwick Lake**	8.46	100	Pn	Pn	21 38 20.4	-2.1
RWWY	**Rawlins**	8.47	308	IAmb_Lg		21 40 56.3	
	comp=Z,30nm,1.0s						
RSSD	**Black Hills**	8.51	331	Pn	Pn	21 38 23.6	+0.2
RSSD				IAmb_Lg		21 40 56.4	
	comp=Z,26nm,0.8s						
K22A	**Casper**	8.62	315	IAmb_Lg		21 41 06.9	
	comp=Z,28nm,0.8s						
JFWS	**Jewell Farm**	8.65	43	IAmb_Lg		21 41 02.9	
	comp=Z,54nm,0.7s						
TX31	**Lajitas Ar. Si**	8.74	213	Pn	Pn	21 38 25.0	-1.5
TX32	**Lajitas Array**	8.74	213		Pn	21 38 25.0	-1.5
TXAR	**Lajitas Array**	8.74	213	Pn	Pn	21 38 25.2	-1.2
	comp=Z,0.6nm,0.3s,baz=35,slow=11,SNR=32						
TXAR				Pg	Pg	21 38 52.7	-14
	comp=Z,0.5nm,0.3s,baz=32,slow=10,SNR=4.7						
TXAR				Lg	Lg	21 40 52.2	
	comp=Z,1.7nm,0.3s,baz=36,slow=28,SNR=9.2						
TXAR	**Lajitas Array**	8.74	213	Pn	Pn	21 38 24.7	-1.8
T47A	**Sharon Grove**	8.93	86	Pn	Pn	21 38 28.8	-0.2
F33A	**5 Mile Ranch,**	9.13	9	Pn	Pn	21 38 30.9	-0.7
I40A	**Norwalk**	9.15	37	IAmb_Lg		21 41 19.6	
	comp=Z,39nm,1.1s						
M44A	**Midewin, Midew**	9.15	57	Pn	Pn	21 38 31.0	-0.9
SFIN	**Lafayette**	9.43	65	Pn	Pn	21 38 35.1	-0.6
K43A	**Burlington**	9.63	49	Pn	Pn	21 38 37.6	-1.0
K43A				IAmb_Lg		21 41 32.1	
	comp=Z,44nm,1.0s						
F36A	**Milaca**	9.70	20	Pn	Pn	21 38 38.3	-1.2
E28A	**Huff**	9.91	350	IAmb_Lg		21 41 51.7	
	comp=Z,34nm,0.9s						
I42A	**Draeger Farm,**	10.03	42	Pn	Pn	21 38 43.2	-0.7
G40A	**Rib Lake**	10.39	33	Pn	Pn	21 38 47.8	-1.2
PDAR	**Pinedale Array**	10.52	308	Pn	Pn	21 38 50.9	-0.1
	comp=Z,0.1nm,0.3s,baz=122,slow=14,SNR=2.6						
PDAR				Pg	Pg	21 39 30.6	
	comp=Z,0.4nm,0.3s,baz=114,slow=17,SNR=4.5						
PDAR				Lg	Lg	21 41 46.6	
	comp=Z,0.5nm,0.3s,baz=115,slow=31,SNR=3.1						
PDAR	**Pinedale Array**	10.52	308	Pn	Pn	21 38 49.1	-1.9
BW06	**Boulder Array**	10.52	308	Pn	Pn	21 38 48.4	-2.6
V51A	**Loudon**	11.27	91	Pn	Pn	21 39 01.4	+0.4
COWI	**Conover**	11.51	34	Pn	Pn	21 39 02.2	-2.0
N49A	**Columbus Grove**	11.71	65	Pn	Pn	21 39 06.0	-0.9
S51A	**Beattyville**	11.72	82	Pn	Pn	21 39 06.2	-1.0
TKL	**Tuckaleechee C**	11.75	91	Lg	Lg	21 42 24.6	
	comp=Z,0.7nm,0.3s,baz=284,slow=17,SNR=4.1						
B35A	**Bob, Littlefor**	12.00	15	Pn	Pn	21 39 07.7	-3.2
EYMN	**Ely**	12.18	22	Pn	Pn	21 39 09.5	-3.9
E43A	**Lone Tree Farm**	12.72	38	Pn	Pn	21 39 17.4	-3.3
ULM	**Lac du Bonnet**	13.53	7	Pn	Pn	21 39 26.4	-5.3
	comp=Z,0.6nm,0.3s,baz=266,slow=8.7,SNR=1.7						
ULM				Sn	Sn	21 41 47.8	-15
	comp=Z,0.3nm,0.3s,baz=122,slow=21,SNR=1.7						
ULM				Lg	Lg	21 43 16.7	
	comp=Z,0.3nm,0.3s,baz=270,slow=20,SNR=1.8						
N53A	**Lisbon**	14.15	68	Pn	Pn	21 39 37.9	-2.4
YKA	**Yellowknife Ar**	27.62	344	P	P	21 42 07.5	+0.1
	comp=Z,0.6nm,0.7s,baz=128,slow=9.9,SNR=2.1						
ILAR	**Eielson Array**	39.96	330	P	P	21 43 56.0	+1.7
	comp=Z,0.4nm,0.7s,baz=107,slow=7.4,SNR=4.7						
ESDC	**Sonseca Array**	70.54	55	P	P	21 47 37.3	+2.0
	comp=Z,0.7nm,0.9s,baz=300,slow=10,SNR=2.7						
FINES	**FINESS Array B**	72.19	25	P	P	21 47 45.4	+0.6
	comp=Z,1.5nm,0.9s,baz=286,slow=7.1,SNR=3.3						

*SOME **23** 21:45:25.6, 42.°60N×76.°07E, h15^{km}*
*KRNET **23** 21:45:25.5±0.1, 42.°63N×76.°08E, h19^{km}, mb2.2*
*NNC **23** 21:45:25.5±0.6, 42.°62N×76.°08E, h0^{km}, mb2.7, mpv2.7, Error ellipse: s-maj=5.0km s-min=2.5km az=172.0*
*KNET **23** 21:45:26.6±0.5, 42.°59N×75.°98E, h0^{km}, ml1.6, Error ellipse: s-maj=5.0km s-min=2.0km az=49.0*
ISC 23 21:45:25.7±0.8**, 42.°63N**±0.°02×**76.°08E**±0.°01**, h17**^{km}±6^{km}**, n56,** σ0.^{s}**68**/99**, 36C-16D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
BOOM	**Boomskoye usch**	0.17	218	⇑*i*P	Pg	21 45 30.0	-0.3
	baz=16						
BOOM				⇑*i*S	Sg	21 45 33.0	-0.3
	baz=16						
ULHL	**Ulahol**	0.40	163	⇑P	Pg	21 45 34.1	+0.1
	8.3nm,0.1s,SNR=26						
ULHL				⇓S	Sg	21 45 39.7	+0.1
	68nm,0.1s						
ULHL	**Ulahol**	0.40	163	⇑*i*P	Pg	21 45 33.7	-0.3
	baz=63						
ULHL				⇑*i*S	Sg	21 45 39.5	-0.1
	baz=63						
TKM2	**Tokmak 2**	0.46	310	⇓P	Pb	21 45 35.4	-0.1
	8.4nm,0.1s,SNR=6.8						
TKM2				⇑S	Sg	21 45 41.7	+0.2
	166nm,0.1s						
TKM2	**Tokmak 2**	0.46	310	⇓P	Pb	21 45 35.4	-0.1
	1.0nm,0.2s						
TKM2				⇑S	Sg	21 45 41.8	+0.4
	7.6nm,0.1s						
TKM2	**Tokmak 2**	0.46	310	⇓*e*P	Pg	21 45 34.9	-0.2
	baz=9.0						
TKM2				⇓*i*S	Sg	21 45 41.3	-0.2
	baz=9.0						
MTBS	**Maitube**	0.56	27	*e*P	Pg	21 45 37.0	+0.1
	43nm,0.1s						
MTBS				*e*S	Sb	21 45 44.8	-0.2
	72nm,0.1s						
MTBS	**Maitube**	0.56	27	P	Pg	21 45 37.0	+0.1
	43nm,0.1s						
MTBS				S	Sb	21 45 44.8	-0.2
	72nm,0.1s						
DGS	**Degeres**	0.66	340	*e*P	Pb	21 45 38.7	-0.1
	6.7nm,0.1s						
DGS				*e*S	Sb	21 45 47.7	0.0
	47nm,0.1s						
DGS	**Degeres**	0.66	340	P	Pb	21 45 38.7	-0.1
	6.7nm,0.1s						
DGS				S	Sb	21 45 47.7	0.0
	47nm,0.1s						
TNSS	**Tian-Shan**	0.76	57	*e*P	Pb	21 45 40.6	0.0
	1.7nm,0.1s						
TNSS				*e*S	Sb	21 45 51.3	+0.4
	8.2nm,0.2s						
TNSS	**Tian-Shan**	0.76	57	P	Pb	21 45 40.6	0.0
	1.7nm,0.1s						
TNSS				S	Sb	21 45 51.3	+0.4
	8.2nm,0.2s						
KBK	**Karagaybulak**	0.84	272	⇑P	Pb	21 45 42.2	+0.3
	3.7nm,0.1s,SNR=5.2						
KBK	**Karagaybulak**	0.84	272	⇑*i*P	Pg	21 45 41.3	-0.7
	baz=72						
KBK				⇑*i*S	Sg	21 45 52.8	-0.3
	baz=72						
KNDC	**Almaty**	0.88	47	⇑P	Pb	21 45 41.9	-0.6
KNDC				⇑S	Sg	21 45 55.0	+0.6
MDOK	**Medeo**	0.89	53	*e*P	Pg	21 45 42.9	-0.1
	1.6nm,0.2s						
MDOK				*e*S	Sg	21 45 55.1	+0.3
	10nm,0.3s						

MDOK	Medeo	0.89	53	P	Pb	21 45 42.1	-0.7
	0.9nm,0.4s						
MDOK				S	Sg	21 45 54.9	+0.1
	5.1nm,0.4s						
MDOK	Medeo	0.89	53	Pg	Pg	21 45 42.9	-0.1
	1.6nm,0.2s						
MDOK				Lg	Lg	21 45 55.1	
	10nm,0.3s						
KDJ	Kajisay	0.95	121	⇑*e*P	Pb	21 45 43.7	-0.2
	baz=21						
KDJ				⇑*i*S	Sg	21 45 56.5	-0.3
	baz=21						
KOTS	Kotyrbulak	0.97	51	*e*P	Pn	21 45 44.7	0.0
	2.3nm,0.2s						
KOTS				*e*S	Sn	21 45 58.2	0.0
	13nm,0.3s						
KOTS	Kotyrbulak	0.97	51	P	Pn	21 45 44.7	0.0
	2.3nm,0.2s						
KOTS				S	Sn	21 45 58.2	0.0
	13nm,0.3s						
CHMS	Chumysh	1.05	291	⇑P	Pb	21 45 45.4	0.0
	2.1nm,0.1s						
CHMS				⇑S	Sb	21 45 59.2	+0.4
	9.4nm,0.1s						
CHMS	Chumysh	1.05	291	⇑*i*P	Pb	21 45 44.8	-0.6
	baz=91						
CHMS				⇑*i*S	Sb	21 45 58.9	0.0
	baz=91						
FRU1	Bishkek	1.09	280	⇓*e*P	Pb	21 45 45.9	-0.2
	baz=81						
FRU1				⇓*e*S	Sg	21 46 00.5	-0.4
	baz=81						
KTBS	Karatobe	1.17	22	*e*P	Pg	21 45 48.1	-0.2
	4.0nm,0.2s						
KTBS				*e*S	Sg	21 46 03.5	-0.1
	15nm,0.3s						
KTBS	Karatobe	1.17	22	P	Pg	21 45 48.1	-0.2
	4.0nm,0.2s						
KTBS				S	Sg	21 46 03.5	-0.1
	15nm,0.3s						
AAK	Ala-Archa	1.17	271	⇑P	Pb	21 45 47.9	+0.3
	1.7nm,0.1s						
AAK				⇑S	Sg	21 46 03.5	-0.2
	2.2nm,0.1s						
AAK	Ala-Archa	1.17	271	⇓P	Pb	21 45 47.7	+0.1
	0.6nm,0.2s						
AAK				⇓S	Sg	21 46 03.5	-0.2
	5.0nm,0.6s						
AAK	Ala-Archa	1.17	271	⇑*e*P	Pn	21 45 47.2	-0.3
	baz=71						
AAK				⇑*i*S	Sb	21 46 03.0	+0.4
	baz=71						
ANVS	Anan'yevo	1.18	82	⇓*i*P	Pn	21 45 47.3	-0.3
	baz=82						
ANVS				⇓*i*S	Sn	21 46 03.4	0.0
	baz=82						
UCH	Uchtor	1.23	252	⇑*i*P	Pn	21 45 48.4	-0.1
	baz=51						
UCH				⇑*i*S	Sb	21 46 04.8	+0.3
	baz=51						
KUU	Kurty	1.28	8	*e*P	Pb	21 45 49.7	+0.3
	2.8nm,0.2s						
KUU				*e*S	Sg	21 46 06.5	-0.6
	9.6nm,0.2s						
KUU	Kurty	1.28	8	P	Pb	21 45 49.7	+0.3
	2.8nm,0.2s						
KUU				S	Sg	21 46 06.5	-0.6
	9.6nm,0.2s						
USP	Ospenovka	1.33	299	⇑P	Pb	21 45 50.4	+0.2
	2.9nm,0.1s,SNR=5.1						
USP	Ospenovka	1.33	299	⇑*i*P	Pn	21 45 49.7	+0.2
	baz=99						
USP				⇑*i*S	Sn	21 46 07.6	+0.8
	baz=99						
CHKK	Chushkaly	1.39	28	*e*P	Pb	21 45 51.8	+0.5
	2.3nm,0.2s						
CHKK				*e*S	Sg	21 46 10.2	-0.5
	20nm,0.2s						
CHKK	Chushkaly	1.39	28	P	Pb	21 45 51.8	+0.5
	2.3nm,0.2s						
CHKK				S	Sg	21 46 10.2	-0.5
	20nm,0.2s						
TARG	Taragay, Kyrgy	1.56	124	⇑*i*P	Pb	21 45 54.1	-0.3
	baz=25						
TARG				⇑*i*S	Sg	21 46 15.1	-1.1
	baz=25						
EKS2	Erkin-Say	1.70	272	⇑P	Pg	21 45 57.8	-0.6
	1.6nm,0.1s,SNR=12						
EKS2				⇓S	Sg	21 46 21.4	+0.9
	4.9nm,0.2s						
EKS2	Erkin-Say	1.70	272	⇓*i*P	Pb	21 45 56.6	0.0
	baz=72						
EKS2				⇓*i*S	Sb	21 46 19.1	+1.3
	baz=72						
PRZ	Przheval'sk	1.72	94	⇑*i*P	Pb	21 45 56.6	-0.3
	baz=94						
PRZ				⇑*i*S	Sb	21 46 19.5	+1.2
	baz=94						
SATY	Saty	1.76	75	*e*P	Pg	21 45 58.8	-0.8
	1.3nm,0.2s						
SATY				*e*S	Sg	21 46 22.4	-0.1
	8.2nm,0.2s						
SATY	Saty	1.76	75	P	Pg	21 45 58.8	-0.8
	1.3nm,0.2s						
SATY				S	Sg	21 46 22.4	-0.1
	8.2nm,0.2s						
AML	Almayashu	1.84	255	⇑*i*P	Pb	21 45 58.8	-0.3
	baz=55						
AML				⇑*i*S	Sb	21 46 22.9	+0.9
	baz=55						
ARXS	Arharly	2.03	38	*e*P	Pb	21 46 03.0	+0.7
	1.4nm,0.2s						
ARXS				*e*S	Sg	21 46 29.6	-1.6
	24nm,0.3s						
ARXS	Arharly	2.03	38	Pg	Pb	21 46 03.0	+0.7
	1.4nm,0.2s						
ARXS				Lg	Lg	21 46 29.6	
	24nm,0.3s						
MRKS	Merke	2.11	274	*e*P	Pb	21 46 04.2	+0.6
	6.7nm,0.3s						
MRKS				*e*S	Sg	21 46 32.3	-1.3
	8.9nm,0.2s						
MRKS	Merke	2.11	274	Pg	Pb	21 46 04.2	+0.6
	6.7nm,0.3s						
MRKS				Lg	Lg	21 46 32.3	
	8.9nm,0.2s						
UZB	Uzynbulak	2.22	75	*e*P	Pb	21 46 06.3	+0.8
	1.5nm,0.2s						
UZB				*e*S	Sb	21 46 35.0	+2.2
	3.5nm,0.4s						
BLB	Baldybastay	2.28	49	Pg	Pb	21 46 07.1	+0.6
	2.0nm,0.1s						
BLB				Lg	Lg	21 46 36.5	
	10nm,0.3s						
PDGK	Podgornoye	2.60	73	Pg	Pb	21 46 12.6	+0.7
	0.4nm,0.2s						
PDGK				Lg	Lg	21 46 45.8	
	1.5nm,0.6s						
PDGK	Podgornoye	2.60	73	⇓Pg	Pb	21 46 09.8	-2.1
	0.2nm,0.3s						
PDGK				⇑Lg	Lg	21 46 46.2	
	2.7nm,0.5s						
BTLS	Baital	2.83	329	*e*P	Pb	21 46 16.9	+1.2
	0.8nm,0.2s						
BTLS				*e*S	Sg	21 46 53.5	-3.0
	3.3nm,0.3s						
BTLS	Baital	2.83	329	Pg	Pb	21 46 16.9	+1.2
	0.8nm,0.2s						
BTLS				Lg	Lg	21 46 53.5	
	3.3nm,0.3s						
KK07	Karatay Array	4.13	278	⇓Lg	Lg	21 47 35.2	
	0.7nm,0.5s,baz=103,slow=28						
OTUK	Ortayu	6.20	336	⇑Lg	Lg	21 48 37.7	
	1.4nm,0.8s						

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*IDC **23** 21:52:14.0±6.9, 36°.32N×70°.45E, h168km±55km, mb3.2/6, mb1 3.3/11, mb1mx3.0/52, mbtmp3.8/11, Error ellipse: s-maj=52.7km s-min=23.5km az=27.0*

*NNC **23** 21:52:27.6±11.0, 37°.47N×70°.40E, h233km±163km, mb2.7, mpv3.8, Error ellipse: s-maj=122.2km s-min=61.2km az=9.0*

ISC 23 21:52:17.8±1.0**, 36°.54N**±0°.08×**70°.5E**±0°.1**, h204km, n36, σ0s.95**/38**, mb3.5**/5**, 4C-4D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	6.11	23	P	Pn	21 53 46.7	-0.1
	SNR=74						
UCH	Uchtor	6.48	28	P	Pn	21 53 51.7	+0.1
	SNR=48						
KK07	Karatay Array	6.54	0	⇓P	Pn	21 53 50.8	-1.2
	1.0nm,0.2s,baz=174,slow=11						
KK07				⇑S	S	21 54 55.2	-11
	4.9nm,0.4s,baz=180,slow=20						
EKS2	Erkin-Say	6.62	22	P	Pn	21 53 53.3	+0.2
	SNR=20						
AAK	Ala-Archa	6.83	26	P	Pn	21 53 56.0	+0.2
	4.3nm,0.3s,baz=213,slow=17,SNR=54						
AAK				S	S	21 55 12.2	-1.4
	2.2nm,0.3s,baz=319,slow=19,SNR=7.9						
AAK	Ala-Archa	6.83	26	P	Pn	21 53 56.1	+0.2
	SNR=19						
AAK	Ala-Archa	6.83	26	⇑P	Pn	21 53 55.6	-0.3
	3.7nm,0.3s						
AAK				⇑S	S	21 55 11.5	-2.1
	27nm,0.6s						
KBK	Karagaybulak	7.01	28	P	Pn	21 53 58.7	+0.5
	SNR=11						
CHMS	Chumysh	7.24	26	P	Pn	21 54 01.1	+0.1
	SNR=7.9						
USP	Ospenovka	7.39	23	P	Pn	21 54 03.1	+0.1
	SNR=8.2						
TKM2	Tokmak 2	7.49	30	P	Pn	21 54 05.0	+0.6
	SNR=10						
TKM2	Tokmak 2	7.49	30	⇑P	Pn	21 54 04.1	-0.4
	13nm,0.5s						
TKM2				⇓S	S	21 55 20.1	-9.2
	7.3nm,0.7s						
PYUN	Piuthan	13.50	125	*e*P	Pn	21 55 21.5	-0.1
	7.8nm,0.3s						
MKAR	Makanchi Array	13.50	37	P	Pn	21 55 21.9	+0.7
	0.4nm,0.3s,baz=206,slow=9.2,SNR=12						
DANN	Dangsing	13.85	122	*e*P	P	21 55 26.3	-1.7
	8.7nm,0.3s						
GKN	Gorkha	14.67	121	*e*P	P	21 55 36.5	-0.5
	12nm,0.3s						
AB31	Akbulak array	14.85	332	⇓P	Pn	21 55 35.8	-2.0
	0.4nm,0.4s,baz=149,slow=13,SNR=15						
KURBB	Kurchatov Arra	15.22	20	P	Pn	21 55 40.8	-1.4
	0.1nm,0.3s,baz=209,slow=11,SNR=4.6						
DMN	Daman	15.24	122	*e*P	P	21 55 43.5	+0.1
	7.2nm,0.4s						
KKN	Kakani	15.25	121	*e*P	P	21 55 43.1	-0.3
	15nm,0.5s						
PKIN	Phulchoki	15.46	121	*e*P	Pn	21 55 46.1	+0.4
	17nm,0.6s						
PKI	Pulchoki	15.47	121	*e*P	Pn	21 55 45.8	-0.1
	20nm,0.5s						
GUN	Gumba	15.59	119	*e*P	Pn	21 55 47.1	-0.3
	10.0nm,0.5s						
JIRN	Jiri	15.96	119	*e*P	Pn	21 55 51.8	-0.1
	16nm,0.5s						
BVAR	Borovoye Array	16.48	360	P	Pn	21 55 57.7	+0.3
	0.5nm,0.3s,baz=219,slow=18,SNR=6.5						
AKTO	Aktyubinsk	16.54	331	P	Pn	21 55 58.1	-0.1
	0.6nm,0.3s,baz=149,slow=12,SNR=15						
AKTO	Aktyubinsk	16.54	331	⇓P	Pn	21 55 57.5	-0.7
	3.6nm,0.6s						
RAMN	Ramite	16.69	120	*e*P	Pn	21 56 00.3	-0.1
	15nm,0.6s						
TAPN	Taplejung	17.23	117	*e*P	Pn	21 56 07.1	+0.3
	8.3nm,0.6s						
ODAN	Odare	17.30	119	*e*P	Pn	21 56 08.0	+0.4
	10nm,0.6s						
ZALV	Zalesovo Beam	20.05	25	P	P	21 56 35.9	+0.7
	2.2nm,0.4s,baz=215,slow=11,SNR=12						
ARU	Arti	21.46	342	P	P	21 56 51.5	+1.5
	0.9nm,0.6s,baz=161,slow=8.1,SNR=6.3						
SONM	Songino Array	28.65	55	P	P	21 57 57.8	+2.4
	0.4nm,0.8s,baz=252,slow=7.4,SNR=2.0						
FINES	FINESS Array B	37.22	326	P	P	21 59 09.8	+0.6
	1.3nm,0.9s,baz=118,slow=11,SNR=3.3						
ARCES	ARCESS Array B	40.95	338	P	P	21 59 40.9	+0.9
	2.1nm,0.8s,baz=114,slow=9.0,SNR=5.7						
WRA	Warramunga Arr	82.36	122	P	P	22 04 15.7	-1.3
	0.4nm,0.8s,baz=323,slow=5.2,SNR=2.5						

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*IDC **23** 21:52:36.5±2.8, 24°.14S×179°.96W, h493km±25km, mb3.4/5, mb1 3.6/6, mb1mx3.2/31, mbtmp4.3/6, Error ellipse: s-maj=39.6km s-min=27.5km az=174.0*

*NEIC **23** 21:52:37.5±1.2, 24°.6S±0°.3×179°.8W±0°.2, h511km±15km, mb4.1/14, Error ellipse: s-maj=36.6km s-min=23.6km az=181.0*

ISC 23 21:52:36.4±1.2**, 24°.3S**±0°.1×**179°.8W**±0°.1**, h505km, n25, σ1s.26**/28**, mb4.0**/13**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	5.18	162	P	P	21 54 03.2	-2.0
MARNC	Mare, Loyalty	11.58	282	P	P	21 55 11.1	+0.6
DZM	Mont Dzumac	12.86	277	P	P	21 55 26.0	+1.9
URZ	Urewera	14.13	190	P	P	21 55 40.0	+2.7
	1.1nm,0.3s,baz=308,slow=20,SNR=5.6						
URZ				S	S	21 58 08.0	+1.6
	0.3nm,0.3s,baz=308,slow=20,SNR=1.5						
URZ	Urewera	14.13	190	P	P	21 55 36.6	-0.7
ARMA	Armidale	26.05	250	P	P	21 57 30.6	+1.5
ARMA				IAmb	IAmb	21 57 38.0	
	comp=Z,7.3nm,1.0s						
EIDS	Eidsvold	26.43	262	P	P	21 57 32.6	+0.3
EIDS				IAmb	IAmb	21 57 33.5	
	comp=Z,2.6nm,0.6s						
CTA	Charters Tower	31.67	271	P	P	21 58 18.3	+0.3
	comp=Z,6.2nm,0.4s,baz=99,slow=10.0,SNR=8.9						
CTAO	Charters Tower	31.67	271	P	P	21 58 17.9	-0.1
TOO	Toolangi	32.38	238	P	P	21 58 23.1	-0.8
TOO				IAmb	IAmb	21 58 23.8	
	comp=Z,11nm,1.1s						
STKA	Stephens Creek	34.74	249	P	P	21 58 44.6	+0.7
	comp=Z,0.8nm,0.3s,baz=79,slow=10,SNR=3.7						
STKA	Stephens Creek	34.74	249	P	P	21 58 42.2	-1.7
BBOO	Buckleboo	39.45	247	P	P	21 59 22.1	-0.5
BBOO				IAmb	IAmb	21 59 39.7	
	comp=Z,4.2nm,0.9s						
AS31	Alice Springs	42.15	261	P	P	21 59 43.4	-0.9
ASAR	Alice Springs	42.15	261	P	P	21 59 44.0	-0.4
	comp=Z,1.9nm,0.5s,baz=97,slow=6.9,SNR=28						
ASAR				ScP	ScP	22 04 30.9	+1.4
	comp=Z,0.1nm,0.3s,baz=104,slow=3.8,SNR=2.8						
ASAR	Alice Springs	42.15	261	P	P	21 59 43.7	-0.6
WB2	Warramunga Arr	42.56	267	P	P	21 59 46.5	-1.0
WB0	Warramunga Arr	42.56	267	P	P	21 59 46.4	-1.2
WB0				IAmb	IAmb	21 59 47.2	
	comp=Z,6.0nm,0.7s						
WRA	Warramunga Arr	42.57	267	P	P	21 59 46.5	-1.1
	comp=Z,5.7nm,0.6s,baz=103,slow=8.1,SNR=47						
WRA				ScP	ScP	22 04 32.9	+1.7
	comp=Z,0.4nm,0.7s,baz=105,slow=3.6,SNR=2.6						
FORT	Forrest	46.34	250	P	P	22 00 15.6	-1.0
KNRA	Kununurra	48.88	270	P	P	22 00 35.1	-0.7
KNRA				IAmb	IAmb	22 00 35.9	
	comp=Z,10nm,0.9s						
PSA00	Pilbara Seismi	55.27	260	P	P	22 01 21.0	-0.9
PSA00				IAmb	IAmb	22 01 36.9	
	comp=Z,8.2nm,1.1s						
MORW	Morawa	56.91	250	P	P	22 01 32.3	-0.8
MORW				IAmb	IAmb	22 01 35.8	
	comp=Z,7.5nm,1.1s						
TOLI2	Tolitoli	62.87	285	P	P	22 02 12.9	-0.1
TXAR	Lajitas Array	90.50	58	P	P	22 04 45.5	+1.2
	comp=Z,0.5nm,0.8s,baz=198,slow=5.7,SNR=4.6						

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*IDC **23** 22:01:31.2±1.5, 21°.28N×122°.90E, h0km, mb3.5/4, mb1 3.8/4, mb1mx3.4/45, mbtmp3.6/4, Error ellipse: s-maj=50.2km s-min=27.1km az=70.0*

*JMA **23** 22:01:33.3±0.4, 21°.75N×123°.15E, h47km, M4.2*

*TAP **23** 22:01:35.8, 21°.75N×122°.97E, h57km±1km, ML4.5, D*

ISC 23 22:01:33.4±1.2**, 21°.68N**±0°.06×**123°.18E**±0°.03**, h35km, n122, σ1s.75**/198**, mb3.4**/3**, Southeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAY	Lan-yu	1.56	284	*i* P	Pn	22 01 57.9	-0.7
	baz=282						
LAY				*i* S	Sn	22 02 15.3	-2.3
	baz=282						
LDUT	Ludao	1.87	302	*i* P	Pn	22 02 02.0	-0.9
	baz=313						
LDUT				*e*S	Sn	22 02 22.4	-2.9
	baz=313						
EDH	Donghe	2.16	307	*i* P	Pn	22 02 06.4	-0.5
	baz=308						
EDH				*i* S	Sn	22 02 30.2	-2.4
	baz=308						
CHKT	Chengkung	2.20	310	*i* P	Pn	22 02 06.9	-0.5
	baz=320						
CHKT				*i* S	Sn	22 02 30.4	-3.0
	baz=320						
TWKBT	Hengchun	2.22	277	P	Pn	22 02 09.1	+1.4
	baz=285						
TWKBT				*e*S	Sn	22 02 32.0	-1.9
	baz=285						
TAW	Tawu	2.23	288	P	Pn	22 02 06.0	-1.8
	baz=288						
TAW				*e*S	Sn	22 02 31.9	-2.2
	baz=288						
TWGBT	Beinan	2.25	301	P	Pn	22 02 08.2	0.0
	baz=308						
TWGBT				*e*S	Sn	22 02 31.9	-2.9
	baz=308						
ECL	Taimali	2.26	294	*i* P	Pn	22 02 08.5	+0.3
	baz=284						
ECL				*i* S	Sn	22 02 33.2	-1.8
	baz=284						
LONT	Longtian	2.26	303	*i* P	Pn	22 02 08.8	+0.5
	baz=310						
LONT				*e*S	Sn	22 02 32.2	-2.8
	baz=310						
TWG	Pinlang	2.26	301	*i* P	Pn	22 02 08.4	+0.1
	baz=308						
TWG				*i* S	Sn	22 02 33.5	-1.5
	baz=308						
EAST	Anshuo	2.28	288	*i* P	Pn	22 02 08.7	+0.2
	baz=288						
EAST				S	Sn	22 02 32.0	-3.4
	baz=288						
SLIU	Shizi	2.28	284	*i* P	Pn	22 02 09.0	+0.5
	baz=283						
SLIU				*i* S	Sn	22 02 34.9	-0.5
	baz=283						
HEN	Hengchun	2.29	279	P	Pn	22 02 09.6	+0.8
	baz=286						
HEN				*e*S	Sn	22 02 33.8	-2.0
	baz=286						
FULB	Fuli	2.31	311	*i* P	Pn	22 02 08.4	-0.6
	baz=319						
FULB				*i* S	Sn	22 02 33.5	-2.7
	baz=319						
EYUL	Yuli	2.39	314	*i* P	Pn	22 02 10.1	-0.1
	baz=322						
EYUL				S	Sn	22 02 36.0	-2.3
	baz=322						
HGSD	Ruisui	2.43	318	P	Pn	22 02 10.0	-0.6
	baz=321						
HGSD				S	Sn	22 02 36.3	-2.8
	baz=321						
HATJ	Hateruma jima	2.44	14	P	Pn	22 02 11.2	+0.5
HATJ				*e*S	Sn	22 02 37.9	-1.4
YULB	Yu-li	2.44	315	P	Pn	22 02 10.8	0.0
	baz=317						
YULB				S	Sn	22 02 37.7	-1.6
	baz=317						
SCZT	Fangliau	2.48	287	*i* P	Pn	22 02 12.0	+0.8
	baz=286						
SCZT				*e*S	Sn	22 02 37.7	-2.5
	baz=286						
EHY	Hungye	2.50	317	P	Pn	22 02 12.9	+1.2
	baz=319						
EHY				*i* S	Sn	22 02 37.9	-3.1
	baz=319						
ELDTW	Lidau	2.50	307	*i* P	Pn	22 02 11.5	-0.3
	baz=309						
ELDTW				*e*S	Sn	22 02 38.1	-3.0
	baz=309						
MASBT	Mashibuluo	2.54	292	P	Pn	22 02 12.7	+0.5
	baz=286						
MASBT				S	Sn	22 02 37.2	-4.6
	baz=286						
SSPT	Xinbi	2.55	289	*i* P	Pn	22 02 13.8	+1.5
	baz=288						
SSPT				*e*S	Sn	22 02 40.1	-2.0
	baz=288						
EGFH	Guangfu	2.56	321	*i* P	Pn	22 02 12.8	+0.4
	baz=323						
EGFH				*i* S	Sn	22 02 39.4	-2.9
	baz=323						
TSMG	Majia	2.56	294	*i* P	Pn	22 02 13.7	+1.2
	baz=285						
TSMG				*e*S	Sn	22 02 41.3	-1.1
	baz=285						
SSD	Sandimen	2.59	295	*i* P	Pn	22 02 13.8	+0.9
	baz=304						
SSD				S	Sn	22 02 40.9	-2.2
	baz=304						
JKRS	Kuro-shima	2.66	17	P	Pn	22 02 14.6	+0.8
JKRS				*e*S	Sn	22 02 45.5	+0.7
ESL	Shilin	2.67	323	*i* P	Pn	22 02 13.7	-0.2
	baz=334						
ESL				*i* S	Sn	22 02 42.9	-2.1
	baz=334						
STYH	Taoyuan	2.68	304	*i* P	Pn	22 02 14.8	+0.9
	baz=298						
STYH				S	Sn	22 02 43.1	-2.1
	baz=298						
WLCH	Liuqiu	2.69	285	*i* P	Pn	22 02 17.5	+3.4
	baz=284						
SLGT	Liugui	2.69	300	*i* P	Pn	22 02 16.0	+1.8
	baz=300						
SLGT				*e*S	Sn	22 02 44.4	-1.2
	baz=300						
IRIF	Iriomote-Funau	2.69	11	P	Pn	22 02 14.9	+0.7
IRIF				S	Sn	22 02 45.1	-0.5
SGLT	Jiouru	2.70	293	*e*P	Pn	22 02 17.1	+2.7
	baz=293						
SGLT				*e*S	Sn	22 02 45.1	-0.8
	baz=293						
HWA	Hwalien	2.71	328	*e*S	Sn	22 02 45.3	-0.8
	baz=331						
SCST	Cishan	2.76	296	P	Pn	22 02 18.9	+3.7
	baz=296						
SCST				*e*S	Sn	22 02 48.2	+0.8
	baz=296						
JYNG	Yonagunijimaku	2.77	356	P	Pn	22 02 16.5	+1.2
JYNG				S	Sn	22 02 46.8	-0.7
YOJ	Yonaguni jima	2.77	357	P	Pn	22 02 15.9	+0.6
YOJ				S	Sn	22 02 46.7	-1.0
YOJ	Yonaguni jima	2.77	357	P	Pn	22 02 16.2	+0.8
YOJ				*e*S	Sn	22 02 46.6	-1.0
SGST	Jiashian	2.78	301	*i* P	Pn	22 02 16.8	+1.3
	baz=301						
SGST				S	Sn	22 02 49.3	+1.5
	baz=301						
VWDT	VWDT	2.80	318	P	Pn	22 02 17.1	+1.4
	baz=327						
VWDT				S	Sn	22 02 44.1	-4.1
	baz=327						
TWM1	Shoushan	2.80	295	*i* P	Pn	22 02 19.8	+4.0
	baz=294						
TWM1				S	Sn	22 02 49.7	+1.4
	baz=294						
TWD	Chiawan	2.80	329	*i* P	Pn	22 02 16.6	+0.9
	baz=331						
TWD				*e*S	Sn	22 02 44.8	-3.6
	baz=331						
KAU	Kaohsiung	2.81	289	*e*P	Pn	22 02 19.8	+4.0
	baz=288						
JIJ	Ishigaki jima	2.81	18	P	Pn	22 02 16.0	+0.1
JIJ				*e*S	Sn	22 02 47.2	-1.4
WTP	Ta-pu	2.84	304	*i* P	Pn	22 02 18.1	+1.8
	baz=294						
WTP				S	Sn	22 02 51.4	+2.0
	baz=294						
ALS	Alishan	2.85	310	*i* P	Pn	22 02 18.2	+1.4
	baz=317						
ALS				*e*S	Sn	22 02 49.0	-1.1
	baz=317						
ETL	Fush Village	2.86	330	P	Pn	22 02 16.4	-0.1
	baz=333						
ETL				S	Sn	22 02 47.6	-2.1
	baz=333						
TPUB	Ta-pu	2.86	305	P	Pn	22 02 18.5	+2.0
	baz=296						
TPUB				S	Sn	22 02 51.7	+1.9
	baz=296						
CHN1	Nanshi	2.88	302	*i* P	Pn	22 02 18.8	+2.0
	baz=291						
CHN1				*e*S	Sn	22 02 51.4	+1.1
	baz=291						
NACB	Ninganchiao	2.88	330	P	Pn	22 02 16.9	+0.1

	baz=341						
NACB				S	Sn	22 02 46.5	-3.9
	baz=341						
SNST	Tainan City	2.92	302	*i* P	Pn	22 02 20.4	+3.0
	baz=291						
SNST				*i* S	Sn	22 02 53.9	+2.7
	baz=291						
OWD	Renai	2.92	321	*i* P	Pn	22 02 18.5	+1.0
	baz=323						
OWD				*e*S	Sn	22 02 49.4	-2.1
	baz=323						
SSLB	Suanglung	2.94	316	P	Pn	22 02 18.8	+1.1
	baz=325						
SSLB				S	Sn	22 02 48.2	-3.5
	baz=325						
TWK	Hsinying	2.95	303	*i* P	Pn	22 02 19.8	+2.0
	baz=292						
TWK				*e*S	Sn	22 02 52.5	+0.4
	baz=292						
CHN3	Shinhua	2.96	299	*i* P	Pn	22 02 22.1	+4.2
	baz=299						
CHN3				*e*S	Sn	22 02 53.6	+1.5
	baz=299						
ETLH	Xiulin Townshi	2.96	328	P	Pn	22 02 18.2	+0.2
	baz=339						
ETLH				S	Sn	22 02 50.7	-1.8
	baz=339						
CHN5	Tsauling	3.00	310	*i* P	Pn	22 02 20.9	+2.4
	baz=318						
CHN5				S	Sn	22 02 53.6	+0.3
	baz=318						
CHGB	Renai	3.01	322	*i* P	Pn	22 02 19.8	+1.0
	baz=324						
CHGB				*e*S	Sn	22 02 51.4	-2.4
	baz=324						
WHF	Hehuan Shan	3.02	325	*i* P	Pn	22 02 19.7	+0.5
	baz=327						
WHF				*i* S	Sn	22 02 52.4	-2.1
	baz=327						
ENA	Nanau	3.04	334	*i* P	Pn	22 02 19.3	+0.3
	baz=337						
ENA				*i* S	Sn	22 02 52.3	-1.9
	baz=337						
SMLT	Sun Moon Lake	3.04	317	*i* P	Pn	22 02 20.5	+1.3
	baz=324						
SMLT				*e*S	Sn	22 02 52.2	-2.2
	baz=324						
EWUT	Wuta	3.04	335	*i* P	Pn	22 02 20.1	+1.0
	baz=338						
EWUT				*i* S	Sn	22 02 53.0	-1.3
	baz=338						
SSHA	Shanhua	3.05	299	*e*S	Sn	22 02 54.7	+0.4
	baz=299						
JISG	Ishigakijimahi	3.08	20	P	Pn	22 02 19.5	0.0
JISG				*e*S	Sn	22 02 52.9	-2.2
TYC	Yuchr	3.08	316	*i* P	Pn	22 02 22.1	+2.5
	baz=324						
TYC				*e*S	Sn	22 02 54.9	-0.4
	baz=324						
CHN2	Minshiung	3.11	307	*i* P	Pn	22 02 23.1	+3.2
	baz=295						
CHN2				S	Sn	22 02 57.4	+1.5
	baz=295						
WJS	Zhushan	3.11	314	*i* P	Pn	22 02 22.5	+2.5
	baz=322						
WJS				*i* S	Sn	22 02 58.0	+2.0
	baz=322						
FUSS	Fushou	3.12	325	*i* P	Pn	22 02 21.3	+0.9
	baz=336						
FUSS				*e*S	Sn	22 02 55.8	-0.7
	baz=336						
CHY	Chiayi	3.13	306	*i* P	Pn	22 02 22.8	+2.6
	baz=293						
CHY				S	Sn	22 02 57.4	+1.0
	baz=293						
WDLH	Douliu	3.16	310	*i* P	Pn	22 02 23.5	+2.9
	baz=296						
WDLH				*i* S	Sn	22 03 00.4	+3.3
	baz=296						
TWT	Tachien	3.16	325	*i* P	Pn	22 02 22.1	+1.3
	baz=326						
TWT				S	Sn	22 02 56.4	-1.0
	baz=326						
WCS	Beigang Elemen	3.16	319	*i* P	Pn	22 02 22.6	+1.9
	baz=327						
WCS				*e*S	Sn	22 02 56.2	-1.0
	baz=327						
ICHU	Yijhu	3.16	302	*i* P	Pn	22 02 23.7	+3.0
	baz=291						
ICHU				S	Sn	22 02 57.9	+0.7
	baz=291						
TWC	Suao	3.16	337	*i* P	Pn	22 02 21.9	+1.2
	baz=340						
TWC				S	Sn	22 02 53.9	-3.4
	baz=340						
TDCB	Techi	3.17	324	P	Pn	22 02 22.6	+1.7
	baz=326						
TDCB				S	Sn	22 02 54.9	-2.7
	baz=326						
WNT	Mingjian	3.18	314	*i* P	Pn	22 02 24.1	+3.2
	baz=315						
WNT				S	Sn	22 02 60.0	+2.3
	baz=315						
CHN8	Yiju	3.21	302	*i* P	Pn	22 02 22.7	+1.3
	baz=302						
CHN8				S	Sn	22 02 58.9	+0.6
	baz=302						
NNS	Nan Shan	3.21	329	*i* P	Pn	22 02 22.6	+1.1
	baz=339						
NNS				*i* S	Sn	22 02 57.8	-0.9
	baz=339						
NDS	Dongshan	3.24	336	*i* P	Pn	22 02 23.0	+1.2
	baz=338						
NDS				*i* S	Sn	22 02 58.6	-0.4
	baz=338						
JTJ	Tarama	3.26	25	P	Pn	22 02 22.4	+0.3
JTJ				S	Sn	22 02 58.9	-0.8
WTK	Tuku	3.26	308	*i* P	Pn	22 02 24.4	+2.3
	baz=295						
WTK				*i* S	Sn	22 03 01.9	+2.2
	baz=295						
NDT	Datong Townshi	3.29	332	P	Pn	22 02 24.3	+1.8
	baz=341						
NDT				S	Sn	22 02 56.8	-3.6
	baz=341						
ENTT	Nioudou	3.30	334	*i* P	Pn	22 02 23.4	+0.8
	baz=336						
ENTT				S	Sn	22 02 59.0	-1.7
	baz=336						
WHP	Taichung City	3.31	322	*i* P	Pn	22 02 26.2	+3.4
	baz=330						
WHP				*e*S	Sn	22 02 59.7	-1.2
	baz=330						
TWE	Neicheng	3.33	336	*i* P	Pn	22 02 23.7	+0.7
	baz=338						
TWE				S	Sn	22 02 58.5	-2.9
	baz=338						
ILA	Ilan	3.34	337	P	Pn	22 02 25.2	+2.0
	baz=339						
ILA				S	Sn	22 03 00.6	-1.0
	baz=339						
WSF	Szhu	3.36	306	*i* S	Sn	22 03 03.6	+1.6
	baz=294						
TCU	Taichung	3.37	317	P	Pn	22 02 26.6	+3.0
	baz=327						
TCU				*i* S	Sn	22 03 05.8	+3.4
	baz=327						
NTC	Toucheng	3.40	339	*e*S	Sn	22 03 01.3	-1.7
	baz=351						
WCHH	Zhanghua	3.40	315	*e*P	Pn	22 02 28.5	+4.5
	baz=316						
WCHH				*i* S	Sn	22 03 05.2	+2.1
	baz=316						
WRL	Guolierlin Hig	3.41	311	*i* P	Pn	22 02 26.2	+2.2
	baz=298						
WRL				*i* S	Sn	22 03 04.5	+1.3
	baz=298						
YHNB	Yeheng	3.41	331	*i* P	Pn	22 02 25.5	+1.3
	baz=333						
YHNB				*e*S	Sn	22 03 01.7	-1.8
	baz=333						
NSK	Sanguang	3.42	331	*i* P	Pn	22 02 26.0	+1.6
	baz=333						
NSK				S	Sn	22 03 00.7	-3.1
	baz=333						
NWLT	Wulai	3.45	334	*i* P	Pn	22 02 25.8	+1.1
	baz=336						
NWLT				S	Sn	22 03 02.9	-1.5
	baz=336						
TWQ1	Liyutan	3.46	321	*i* P	Pn	22 02 28.2	+3.4
	baz=330						
TWQ1				S	Sn	22 03 06.3	+1.7
	baz=330						
TWB1	Santiao Chiao	3.49	342	*e*S	Sn	22 03 06.2	+0.9
	baz=354						
TIPB	Shuangxi	3.51	339	*i* P	Pn	22 02 27.0	+1.5
	baz=351						
TIPB				*i* S	Sn	22 03 04.7	-1.1
	baz=351						
NSY	Sanyi	3.52	321	P	Pn	22 02 28.8	+3.1
	baz=333						
NSY				*i* S	Sn	22 03 09.2	+3.1
	baz=333						
WDJ	Dajia District	3.54	319	*i* S	Sn	22 03 09.8	+3.2
	baz=334						
NSTT	Nanjuang	3.56	326	*i* P	Pn	22 02 29.8	+3.6
	baz=335						
NSTT				*e*S	Sn	22 03 05.4	-1.6
	baz=335						
LIOB	Emei	3.56	326	*i* P	Pn	22 02 29.5	+3.3
	baz=335						
LIOB				*e*S	Sn	22 03 06.5	-0.7
	baz=335						
NMLH	Miaoli	3.60	323	*i* S	Sn	22 03 10.0	+2.1
	baz=336						
TWA	Mucha	3.60	336	*i* P	Pn	22 02 29.8	+3.0
	baz=348						
TWA				S	Sn	22 03 07.5	-0.6
	baz=348						
NWF	Wu-fen Shan	3.61	339	*i* P	Pn	22 02 28.9	+2.0
	baz=342						
NWF				*i* S	Sn	22 03 07.7	-0.8
	baz=342						
JIRB	Irabujima	3.63	30	P	Pn	22 02 27.7	+0.6
JIRB				S	Sn	22 03 07.0	-1.7
JMJ2	Miyako jima3	3.63	33	P	Pn	22 02 28.4	+1.3
JMJ2				*e*S	Sn	22 03 09.0	+0.2
SBCB	Hsinchu	3.70	327	*e*S	Sn	22 03 12.4	+2.0
	baz=329						
JIKM	Ikemajima	3.75	30	P	Pn	22 02 29.6	+0.9
JIKM				*e*S	Sn	22 03 10.9	-0.7
VCHM	Qimei	3.79	294	P	Pn	22 02 30.3	+1.0
	baz=294						
VCHM				*e*S	Sn	22 03 10.5	-2.2
	baz=294						
PHUB	P'eng-hu	3.80	299	P	Pn	22 02 31.1	+1.6
	baz=299						
PHUB				*e*S	Sn	22 03 09.2	-3.8
	baz=299						
JKE	Kume jima 2	5.68	35	P	Pn	22 02 55.8	+0.5
JKE				S	Sn	22 03 57.7	-1.6
JAGN	Aguni-jima	6.13	36	P	Pn	22 03 01.9	+0.3
JAGN				*e*S	Sn	22 04 10.1	-0.4
JNTH	Nagotoyohara	6.54	42	P	Pn	22 03 07.3	+0.2
JIH	Iheya	6.89	38	P	Pn	22 03 11.7	-0.2
JOW	Kunigami	6.92	41	P	Pn	22 03 12.5	+0.1
MJAR	Matsushiro Arr	19.75	38	P	Pn	22 06 07.5	+5.5
	0.9nm,0.5s,baz=224,slow=10.0,SNR=1.9						
SONM	Songino Array	29.38	337	P	P	22 07 40.1	+6.8
	0.4nm,0.8s,baz=148,slow=8.5,SNR=1.9						
H11S3	WAKE ISLAND Hy	40.89	86	T	T	22 53 16.4	
	baz=283						
H11S1	WAKE ISLAND Hy	40.90	86	T	T	22 53 16.5	
	baz=283						
H11S2	WAKE ISLAND Hy	40.90	86	T	T	22 53 18.8	
	baz=283						
MKAR	Makanchi Array	41.41	317	P	P	22 09 19.4	+3.0
	0.3nm,0.4s,baz=115,slow=8.9,SNR=8.1						
WRA	Warramunga Arr	42.78	164	P	P	22 09 28.2	+0.4
	1.1nm,0.7s,baz=346,slow=9.1,SNR=5.3						

IDC 23 22:01:44.5±6.7**, 32°.67S×178°.02W, h0^{km}, mb3.8**/2**, mb1 4.1**/2**, mb1mx3.7**/24**, mbtmp3.8**/2**, Error ellipse: s-maj=307.8km s-min=54.9km az=160.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.02	269	P	P	22 09 46.0	+0.1
	0.8nm,0.6s,baz=108,slow=7.8,SNR=11						
WRA	Warramunga Arr	44.21	274	P	P	22 09 55.2	-0.3
	0.8nm,0.5s,baz=116,slow=7.4,SNR=12						
FINES	FINESS Array B	147.26	339	PKPbc	PKPbc	22 21 28.2	-0.8
	1.1nm,0.6s,baz=20,slow=4.4,SNR=8.8						

IDC 23 22:32:17.8±4.0**, 6°.20S×149°.97E, h0^{km}, mb3.1**/2**, mb1 3.5**/2**, mb1mx3.2**/21**, mbtmp3.2**/2**, Error ellipse: s-maj=157.1km s-min=50.3km az=117.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	20.43	227	P	P	22 36 56.5	-0.5
	0.8nm,0.5s,baz=53,slow=11,SNR=6.4						
ASAR	Alice Springs	23.25	220	P	P	22 37 27.3	+0.3
	0.2nm,0.3s,baz=54,slow=9.3,SNR=2.4						
TORD	Torodi Ar. Bea	148.00	285	PKPbc	PKPbc	22 52 05.8	-0.6
	0.4nm,0.5s,baz=64,slow=2.8,SNR=6.1						

IDC 23 22:59:05.8±9.2**, 31°.58S×179°.45E, h0^{km}, mb3.4**/2**, mb1 3.7**/2**, mb1mx3.6**/20**, mbtmp3.4**/2**, Error ellipse: s-maj=392.6km s-min=64.5km az=159.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	40.89	269	P	P	23 06 49.1	-0.8
	0.2nm,0.3s,baz=104,slow=7.4,SNR=1.9						
WRA	Warramunga Arr	41.99	275	P	P	23 06 59.5	+0.5
	0.2nm,0.3s,baz=114,slow=8.0,SNR=1.5						
FINES	FINESS Array B	145.46	338	PKPbc	PKPbc	23 18 44.2	-0.9
	1.0nm,0.9s,baz=20,slow=4.4,SNR=4.3						

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*TAP **23** 23:16:20.1, 25°.44N×122°.45E, h233^{km}±1^{km}, ML3.6, C*
*JMA **23** 23:16:22.4±0.3, 25°.24N×122°.47E, h209^{km}±5^{km}, M3.1*
ISC 23 23:16:22.0±2.5**, 25°.3N**±0°.1×**122°.50E**±0°.04**, h215**^{km}±14^{km}**, n45, σ0^{s}.52**/82**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCYT	Pengchaiyu	0.50	310	*e*P	Pn	23 16 50.7	-0.1
	baz=299						
PCYT				*e*S	S	23 17 12.5	-0.8
	baz=299						
TWB1	Santiao Chiao	0.55	237	*e*P	Pn	23 16 51.1	+0.1
	baz=223						
NWF	Wu-fen Shan	0.69	250	*i* P	Pn	23 16 51.9	+0.3
	baz=238						
NWF				*e*S	S	23 17 14.6	-0.1
	baz=238						
WFSB	Wu-fen Shan	0.69	250	*i* P	Pn	23 16 51.9	+0.4
	baz=238						
WFSB				*e*S	S	23 17 14.6	+0.1
	baz=238						
TIPB	Shuangxi	0.69	241	*i* P	Pn	23 16 51.7	0.0
	baz=230						
TIPB				*i* S	S	23 17 14.8	+0.2
	baz=230						
NHY	Taipei	0.88	252	*e*S	S	23 17 15.9	-0.3
	baz=243						
TWC	Suao	0.91	220	*i* P	Pn	23 16 53.5	+0.7
	baz=212						
TWC				S	S	23 17 17.2	+0.6
	baz=212						
TWE	Neicheng	0.95	232	*i* P	Pn	23 16 52.5	-0.4
	baz=224						
TWE				S	S	23 17 16.9	-0.1
	baz=224						
YOJ	Yonaguni jima	0.97	151	*e*P	Pn	23 16 52.8	-0.3
	baz=152						
YOJ				*e*S	S	23 17 18.5	+1.3
	baz=152						
NDS	Dongshan	0.98	227	P	Pn	23 16 53.8	+0.7
	baz=219						
NDS				S	S	23 17 18.2	+0.9
	baz=219						
NWLT	Wulai	1.05	240	P	Pn	23 16 53.6	0.0
	baz=232						
NWLT				S	S	23 17 18.2	+0.1
	baz=232						
ENTT	Nioudou	1.08	232	*i* P	Pn	23 16 53.8	0.0
	baz=224						
ENTT				*e*S	S	23 17 18.9	+0.4
	baz=224						
EWUT	Wuta	1.08	217	P	Pn	23 16 54.0	+0.2
	baz=211						
EWUT				S	S	23 17 18.4	-0.1
	baz=211						
NDT	Datong Townshi	1.14	232	P	Pn	23 16 54.4	+0.2
	baz=225						
NDT				S	S	23 17 19.8	+0.7
	baz=225						
YHNB	Yeheng	1.20	238	P	Pn	23 16 54.2	-0.6
	baz=231						
YHNB				S	S	23 17 19.5	-0.6
	baz=231						
NSK	Sanguang	1.21	239	*i* P	Pn	23 16 54.6	-0.2
	baz=232						
NSK				S	S	23 17 19.5	-0.7
	baz=232						
NNS	Nan Shan	1.34	230	*i* P	Pn	23 16 55.8	0.0
	baz=224						
NNS				*i* S	S	23 17 22.4	+0.4
	baz=224						
NHW	Xinwu Township	1.35	257	S	S	23 17 21.4	-0.4
	baz=251						
ETL	Fush Village	1.40	215	P	Pn	23 16 55.6	-0.6
	baz=210						
ETL				*e*S	S	23 17 22.3	-0.3
	baz=210						
NACB	Ninganchiao	1.40	216	P	Pn	23 16 55.8	-0.3
	baz=211						
NACB				*e*S	S	23 17 21.7	-0.9
	baz=211						
ETLH	Xiulin Townshi	1.44	220	*e*P	Pn	23 16 56.2	-0.4
	baz=215						
ETLH				*e*S	S	23 17 22.7	-0.6
	baz=215						
IRIF	Iriomote-Funau	1.48	131	P	Pn	23 16 57.0	+0.1
LIOB	Emei	1.50	244	P	Pn	23 16 57.0	-0.1
	baz=238						
LIOB				S	S	23 17 24.1	0.0
	baz=238						
NSTT	Nanjuang	1.52	244	*i* P	Pn	23 16 56.8	-0.3
	baz=238						
NSTT				S	S	23 17 24.2	0.0
	baz=238						
FUSS	Fushou	1.56	227	P	Pn	23 16 58.3	+0.5
	baz=222						
FUSS				S	S	23 17 26.0	+0.6
	baz=222						
TDCB	Techi	1.61	229	P	Pn	23 16 58.8	+0.6
	baz=224						
TDCB				S	S	23 17 26.4	+0.3
	baz=224						
WHF	Hehuan Shan	1.61	224	*i* P	Pn	23 16 58.9	+0.4
	baz=219						
WHF				S	S	23 17 26.5	-0.2
	baz=219						
ETM	Tongmen	1.62	214	*e*P	Pn	23 16 57.4	-0.7
	baz=210						
ETM				*e*S	S	23 17 25.5	-0.5
	baz=210						
CHGB	Renai	1.73	224	P	Pn	23 16 59.9	+0.6
	baz=220						
CHGB				S	S	23 17 28.7	+0.5
	baz=220						
JKRS	Kuro-shima	1.74	128	P	Pn	23 16 59.5	+0.4
JKRS				S	S	23 17 27.4	-0.4
WHP	Taichung City	1.75	234	P	Pn	23 16 59.2	-0.1
	baz=229						
WHP				S	S	23 17 27.8	-0.2
	baz=229						
JIJ	Ishigaki jima	1.77	122	P	Pn	23 16 59.1	-0.3
JIJ				S	S	23 17 26.8	-1.4
ESL	Shilin	1.78	213	*i* P	Pn	23 17 00.0	+0.5
	baz=209						
ESL				*e*S	S	23 17 29.0	+0.5
	baz=209						
JISG	Ishigakijimahi	1.80	113	P	Pn	23 16 59.6	0.0
JISG				S	S	23 17 28.0	-0.7
OWD	Renai	1.81	222	*i* P	Pn	23 17 00.5	+0.5
	baz=218						
OWD				S	S	23 17 30.2	+0.9
	baz=218						
WCS	Beigang Elemen	1.91	229	P	Pn	23 17 00.5	-0.2
	baz=225						
WCS				S	S	23 17 30.9	+0.3
	baz=225						
DPDB	Guoxing	1.91	229	P	Pn	23 17 00.6	-0.2
	baz=224						
DPDB				S	S	23 17 31.1	+0.2
	baz=224						
SSLB	Suanglung	2.07	223	P	Pn	23 17 02.1	-0.2
	baz=219						
SSLB				*e*S	S	23 17 32.8	-0.8
	baz=219						
JTJ	Tarama	2.11	108	P	Pn	23 17 03.1	+0.4
JTJ				*e*S	S	23 17 33.5	-0.6
CHN5	Tsauling	2.38	225	*i* P	Pn	23 17 05.3	-0.3
	baz=221						
CHN5				*i* S	S	23 17 39.3	0.0
	baz=221						
JIRB	Irabujima	2.47	101	P	Pn	23 17 06.7	+0.2
JIKM	Ikemajima	2.52	98	P	Pn	23 17 07.7	+0.7
JMJ	Miyako jima 2	2.58	100	P	Pn	23 17 08.8	+1.1
	baz=103						
JMJ				*e*S	S	23 17 42.7	-0.4
	baz=103						
JMJ2	Miyako jima3	2.63	102	P	Pn	23 17 08.8	+0.6
TWK	Hsinying	2.74	222	*i* P	Pn	23 17 09.3	-0.3
	baz=219						

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*ATH **23** 23:39:24.3, 35°.34N×23°.29E, h17^{km}±4^{km}, ML3.2/5, Error ellipse: s-maj=5.0km s-min=1.3km az=306.0*
*IDC **23** 23:39:26.7±1.7, 35°.41N×23°.70E, h85^{km}±16^{km}, mb3.5/5, mb1 3.5/8, mb1mx3.3/42, mbtmp3.7/8, MS2.7/1, Ms1 2.7/1, ms1mx2.1/41, Error ellipse: s-maj=29.2km s-min=24.5km az=139.0*
*THE **23** 23:39:26.0, 35°.45N×23°.38E, h29^{km}±1^{km}, ML3.1/12, Error ellipse: s-maj=1.9km s-min=0.8km az=229.0*
ISC 23 23:39:23.2±0.8**, 35°.42N**±0°.05×**23°.35E**±0°.06**, h48**^{km}±8^{km}**, n42, σ1^{s}.72**/57**, mb3.6**/5**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNDR	Palaiochora Ch	0.33	125	P	Pn	23 39 32.2	-0.2
KNDR				S	Sn	23 39 39.2	+0.2
	2µm,0.8s						
RODP	Rodopos	0.36	67	P	Pn	23 39 33.4	+0.7
RODP				S	Sn	23 39 40.0	+0.5
	1µm,0.4s						
ANKY	Antikythira Is	0.45	355	P	Pn	23 39 34.7	+1.0
ANKY				S	Sn	23 39 42.7	+1.5
	3µm,0.5s						
ANKY	Antikythira Is	0.45	355	P	Pn	23 39 34.5	+0.8
ANKY				S	Sn	23 39 42.3	+1.1
ANKY				AML	AML	23 39 43.4	
	comp=N,4845µm,0.4s						
ANKY				AML	AML	23 39 48.9	
	comp=E,3326µm,0.5s						
IMMV	Iera Moni Meta	0.52	86	P	Pn	23 39 35.3	+0.8
IMMV				S	Sn	23 39 42.8	+0.2
	comp=E,6µm,0.5s						
IMMV	Iera Moni Meta	0.52	86	P	Pn	23 39 35.3	+0.8
IMMV				S	Sn	23 39 43.7	+1.1
IMMV				AML	AML	23 39 45.2	
	comp=N,14512µm,0.8s						
IMMV				AML	AML	23 39 45.5	
	comp=E,9770µm,0.3s						
VAM	Vamos	0.69	91	P	Pn	23 39 38.1	+1.3
VAM				S	Sn	23 39 48.9	+2.3
	comp=E,2µm,0.5s						
VAM	Vamos	0.69	91	P	Pn	23 39 38.1	+1.3
VAM				S	Sn	23 39 48.5	+1.9
VAM				AML	AML	23 39 49.4	
	comp=E,5005µm,0.5s						
VAM				AML	AML	23 39 50.2	
	comp=N,3992µm,0.5s						
GVD	Gavdhos	0.84	134	P	Pn	23 39 40.5	+1.8
GVD				S	Sn	23 39 53.1	+3.1
	comp=N,1µm,0.4s						
GVD	Gavdhos	0.84	134	P	Pn	23 39 39.7	+1.0
GVD				AML	AML	23 39 58.8	
	comp=E,2044µm,0.4s						
GVD				AML	AML	23 40 00.0	

	comp=N,2031µm,0.5s						
KTHA	Kythira Island	0.86	344	P	Pn	23 39 41.5	+2.4
KTHA				S	Sn	23 39 52.2	+1.5
	comp=N,3µm,0.5s						
KTHA	Kythira Island	0.86	344	P	Pn	23 39 41.5	+2.4
KTHA				AML	AML	23 39 57.0	
	comp=N,4169µm,0.4s						
KTHA				AML	AML	23 39 59.3	
	comp=E,7096µm,0.5s						
KTHR	Kythira	0.88	341	P	Pn	23 39 41.6	+2.3
KTHR				S	Sn	23 39 53.0	+1.9
	comp=E,2µm,0.4s						
PRNS	Prines Rethymn	0.94	93	P	Pn	23 39 41.3	+1.3
PRNS				S	Sn	23 39 53.3	+0.9
	comp=E,618nm,0.7s						
IDI	Anoyia	1.26	96	P	Pn	23 39 46.6	+2.1
	comp=E,11nm,0.3s,baz=283,slow=12,SNR=51						
IDI				S	Sn	23 40 00.5	+0.1
	comp=E,18nm,0.3s,baz=330,slow=20,SNR=8.0						
IDI	Anoyia	1.26	96	P	Pn	23 39 46.6	+2.1
IDI				S	Sn	23 40 03.5	+3.1
	comp=E,310nm,0.5s						
VLI	Veliai	1.34	346	P	Pn	23 39 47.6	+2.2
VLI				S	Sn	23 40 04.6	+2.5
	comp=E,562nm,0.6s						
MHLO	Agia Marina, M	1.52	34	P	Pn	23 39 49.3	+1.3
MHLO				S	Sn	23 40 08.2	+1.5
	comp=E,2µm,0.5s						
THR6	Thira Island,	1.90	60	P	Pn	23 39 55.0	+1.8
THR3	Thira Island,	1.93	59	P	Pn	23 39 54.8	+1.2
THR8	Santorini-Mono	1.99	60	P	Pn	23 39 55.5	+1.2
DBRK	Dubrovnik	8.29	332	*e*Pn	Pn	23 41 18.3	-2.4
STON	Ston	8.63	331	*e*Pn	Pn	23 41 23.0	-2.4
LSTV	Lastovo	8.89	328	*e*Pn	Pn	23 41 26.2	-2.7
BRTR	Keskin Array B	9.22	59	LR	LR	23 45 54.0	
	comp=E,45nm,19.4s,baz=240,slow=43						
MAKA	Makarska	9.26	330	*e*Pn	Pn	23 41 31.9	-2.0
RICI	Ricice	9.38	331	*e*Pn	Pn	23 41 33.2	-2.5
HVAR	Hvar	9.41	327	*e*Pn	Pn	23 41 34.1	-1.9
ZIRJ	Zirje	10.14	326	*e*Pn	Pn	23 41 44.5	-1.6
MMAI	Mount Meron Ar	10.26	100	P	Pn	23 41 46.8	-1.1
	comp=E,0.4nm,0.3s,baz=297,slow=11,SNR=2.0						
MMAI				S	Sn	23 43 28.4	-13
	comp=E,0.2nm,0.3s,baz=297,slow=22,SNR=1.4						
MORI	Morici	10.28	327	*e*Pn	Pn	23 41 47.2	-0.7
DUGI	Dugi Otok	10.67	326	*e*Pn	Pn	23 41 52.2	-1.1
NVLJ	Novalja	11.20	327	*e*Pn	Pn	23 41 58.8	-1.7
EIL	Elat	11.34	117	P	Pn	23 42 01.1	-1.5
	baz=10,slow=15,SNR=1.6						
EIL				S	Sn	23 43 53.8	-14
	comp=E,0.2nm,0.3s,baz=206,slow=18,SNR=1.8						
RABC	Rab	11.39	327	*e*Pn	Pn	23 42 01.6	-1.5
GERES	GERESS Array B	15.18	335	P	P	23 42 60.0	+1.3
	comp=E,0.1nm,0.3s,baz=147,slow=9.2,SNR=5.4						
KHC	Kasperske Hory	15.47	335	*e*P	P	23 43 02.5	+0.7
FINES	FINESS Array B	26.10	3	P	P	23 44 51.4	-0.8
	comp=E,2.0nm,0.9s,baz=171,slow=9.7,SNR=4.5						
TORD	Torodi Ar. Bea	29.56	227	P	P	23 45 25.2	+1.7
	comp=E,0.5nm,0.8s,baz=30,slow=9.2,SNR=3.1						
ARCES	ARCESS Array B	34.19	1	P	P	23 46 02.4	-1.2
	comp=E,2.6nm,1.0s,baz=189,slow=10.0,SNR=1.7						
MKAR	Makanchi Array	44.86	57	P	P	23 47 30.8	-1.8
	comp=E,0.7nm,0.6s,baz=270,slow=8.1,SNR=9.0						
ZALV	Zalesovo Beam	45.89	46	P	P	23 47 39.6	-1.0
	comp=E,0.7nm,0.3s,baz=268,slow=9.9,SNR=3.9						

*IDC **23** 23:45:03.1±2.2, 5°.95S×129°.93E, h0^{km}, mb3.9/1, mb1 4.3/3, mb1mx3.7/29, mbtmp4.0/3, ML4.3/2, Error ellipse: s-maj=153.5km s-min=29.7km az=70.0*

*NEIC **23** 23:45:10.1±2.3, 5°.64S±0°.06×131°.55E±0°.10, h86^{km}±13^{km}, mb4.1/5, Error ellipse: s-maj=13.8km s-min=8.3km az=89.0*

ISC 23 23:45:09.9±0.8**, 5°.69S**±0°.06×**131°.7E**±0°.1**, h100**^{km}**, n16,** σ**2**^{s}**.28**/20**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.31	189		Pn	23 45 48.0	+1.4
FAKI	Fak Fak	2.81	12		Pn	23 45 53.7	+0.4
FAKI				Sn	Sn	23 46 23.6	-3.0
MTN	Manton Dam	7.13	184		Pn	23 46 53.2	+1.6
MTN				Sn	Sn	23 48 11.1	0.0
SOEI	Soe	8.36	241	Pn	Pn	23 47 09.4	+0.9
KNRA	Kununurra	10.32	196		Pn	23 47 34.0	-1.1
COEN	Coen	14.01	127		P	23 48 31.2	+2.5
WB0	Warramunga Arr	14.24	169	Pn	Pn	23 48 27.6	+0.4
WRA	Warramunga Arr	14.41	170	Pn	Pn	23 48 28.6	-0.6
	1.5nm,0.3s,baz=346,slow=13,SNR=45						
WRA				Sn	Sn	23 51 02.8	-5.3
	0.5nm,0.3s,baz=337,slow=23,SNR=2.6						
MYLDM	Lahad Datu	17.00	309	IAmb	IAmb	23 49 00.0	
	comp=Z,10.0nm,0.6s						
MYLDM					Pn	23 49 00.5	-1.2
AS31	Alice Springs	18.00	173	P	Pn	23 49 14.4	+0.6
ASAR	Alice Springs	18.00	173	P	Pn	23 49 16.2	+2.4
	comp=Z,0.6nm,0.3s,baz=350,slow=11,SNR=30						
ASAR				S	S	23 52 29.6	-4.9
	comp=Z,0.1nm,0.3s,baz=353,slow=23,SNR=2.8						
ASAR	Alice Springs	18.00	173	P	Pn	23 49 15.6	+1.7
KKM	Kota Kinabalu	19.32	307	P	P	23 49 26.5	-1.0
KKM				IAmb	IAmb	23 49 33.8	
	comp=Z,11nm,1.0s						
PSA00	Pilbara Seismi	19.50	215	P	P	23 49 29.6	+0.3
PSA00				IAmb	IAmb	23 49 30.0	
	comp=Z,4.6nm,0.5s						
CASY	Casey	62.25	189	P	P	23 55 21.8	+0.9
MKAR	Makanchi Array	68.06	326	P	P	23 55 60.0	+1.1
	comp=Z,0.5nm,0.4s,baz=115,slow=7.7,SNR=18						

*IDC **23** 23:46:34.8±0.8, 24°.93S×175°.77W, h0^{km}, mb4.5/13, mb1 4.7/14, mb1mx4.6/24, mbtmp4.5/14, ML6.1/1, MS3.9/13, Ms1 3.9/13, ms1mx3.6/37, Error ellipse: s-maj=30.8km s-min=19.6km az=161.0*

*NEIC **23** 23:46:36.1±2.3, 24°.48S±0°.07×175°.32W±0°.09, h10^{km}±1^{km}, mb4.5/29, Error ellipse: s-maj=13.6km s-min=11.3km az=108.0*

*NOU **23** 23:46:38.3, 24°.24S×175°.06W, h0^{km}, mb4.9/6, South of Tonga Islands*

ISC 23 23:46:37.2±0.4**, 24°.48S**±0°.06×**175°.30W**±0°.06**, h19**^{km}**, n107,** σ**2**^{s}**.04**/101**, mb4.5**/25**, MS3.9**/8**, 10C-8D, South of Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	5.29	206	Pn	Pn	23 47 55.5	+0.3
NIUE	Niue	7.34	44	Pn	Pn	23 48 22.4	-1.0
NIUE				Sn	Sn	23 49 42.7	-3.6
NIUE	Niue	7.34	44	P	Pn	23 48 22.3	-1.1
MSVF	Nonsavu	9.14	316	Pn	Pn	23 48 50.4	+2.1
	6.9nm,0.3s,baz=146,slow=15,SNR=15						
MSVF				LR	LR	23 52 00.4	
	comp=Z,992nm,20.0s,baz=120,slow=36						
MSVF	Nonsavu	9.14	316	Pn	Pn	23 48 49.8	+1.5
MSVF	Nonsavu	9.14	316	P	Pn	23 48 51.0	+2.8
AFI	Afiamalu	11.03	18	Pn	Pn	23 49 14.3	+0.2
	11nm,0.3s,baz=214,slow=7.6,SNR=4.5						
AFI				Sn	Sn	23 51 09.5	-7.6
	7.0nm,0.3s,baz=163,slow=19,SNR=2.3						
AFI				LR	LR	23 53 37.2	
	comp=Z,226nm,20.4s,baz=178,slow=36						
RAR	Rarotonga	14.68	80	Pn	Pn	23 50 02.2	-1.7
	6.0nm,0.3s,baz=272,slow=9.6,SNR=9.8						
RAR				Sn	Sn	23 52 35.0	-11
	1.9nm,0.3s,baz=74,slow=20,SNR=1.7						
RAR				LR	LR	23 56 16.8	
	comp=Z,265nm,18.1s,baz=278,slow=38						
RAR	Rarotonga	14.68	80	Pn	Pn	23 50 03.0	-0.9
RAR	Rarotonga	14.68	80	P	Pn	23 50 03.6	-0.3
URZ	Urewera	15.18	203	Sn	Sn	23 52 41.5	-16
	0.7nm,0.3s,baz=308,slow=20,SNR=2.1						
URZ				LR	LR	23 55 05.0	
	comp=Z,424nm,19.2s,baz=31,slow=35						
URZ	Urewera	15.18	203	Pn	Pn	23 50 11.2	+0.7
URZ				IAmb	IAmb	23 50 31.0	
	comp=Z,13nm,0.9s						
URZ	Urewera	15.18	203	P	P	23 50 18.0	+2.6
BKZ	Black Stump Fm	16.20	203	Pn	Pn	23 50 23.2	-0.6
HIZ	Hauiti	16.30	209	Pn	Pn	23 50 22.5	-2.5
HIZ				IAmb	IAmb	23 50 40.4	
	comp=Z,29nm,1.2s						
OUENC	Ouen Island, N	16.52	274	Pn	Pn	23 50 25.7	-2.2
DZM	Mont Dzumac	16.95	274	LR	LR	23 56 01.2	
	comp=Z,579nm,18.7s,baz=106,slow=34						
DZM	Mont Dzumac	16.95	274	*e*Pn	P	23 50 36.2	+0.9
	comp=Z,78nm,1.4s						
DZM	Mont Dzumac	16.95	274		P	23 50 34.4	-0.9
DZM				IAmb	IAmb	23 50 40.3	
	comp=Z,20nm,1.0s						
DZM	Mont Dzumac	16.95	274	P	P	23 50 39.4	+4.1
MSWZ	Moikau Station	18.63	203	P	P	23 50 53.6	-0.1
SANVU	Saraoutou	18.73	295	P	Pn	23 50 56.1	+0.8
SANVU				IAmb	IAmb	23 51 09.6	
	comp=Z,42nm,0.9s						
SNZO	South Karori	18.74	204	P	P	23 50 54.3	-0.4
SNZO				IAmb	IAmb	23 50 56.5	
	comp=Z,76nm,1.1s						
LBZ	Lake Benmore	23.12	207	P	P	23 51 42.3	+0.3
LBZ				IAmb	IAmb	23 51 42.5	
	comp=Z,7.5nm,0.9s						
ODZ	Otahua Downs	23.47	206	P	P	23 51 44.8	-0.7
PPT	Papeete	24.95	79	LR	LR	23 59 10.9	
	comp=Z,266nm,20.2s,baz=201,slow=30						
HNR	Honiara	27.94	298	LR	LR	00 02 06.6	
	comp=Z,242nm,19.0s,baz=134,slow=34						
EIDS	Eidsvold	30.45	261	P	P	23 52 46.8	-2.1
EIDS				IAmb	IAmb	23 53 06.3	
	comp=Z,5.9nm,0.9s						
CTAO	Charters Tower	35.76	269	P	P	23 53 32.9	-2.4
CTAO				IAmb	IAmb	23 53 34.2	
	comp=Z,7.9nm,1.0s						
STKA	Stephens Creek	38.51	249	P	P	23 53 54.5	-3.9
	comp=Z,1.1nm,0.5s,baz=108,slow=11,SNR=5.2						
STKA	Stephens Creek	38.51	249	P	P	23 53 54.7	-3.7
PMG	Port Moresby	38.76	286	P	P	23 53 59.1	-1.6
	comp=Z,9.1nm,0.3s,baz=202,slow=2.7,SNR=5.4						
COEN	Coen	40.45	277	P	P	23 54 15.1	+0.4
BBOO	Buckleboo	43.17	247	P	P	23 54 34.9	-2.1
BBOO				IAmb	IAmb	23 54 43.6	
	comp=Z,6.2nm,0.9s						
AS31	Alice Springs	46.17	260	P	P	23 54 58.1	-2.9
ASAR	Alice Springs	46.17	260	P	P	23 54 56.4	-4.6
	comp=Z,5.6nm,1.0s,baz=97,slow=8.0,SNR=24						
ASAR				PcP	PcP	23 56 36.3	-0.5
	comp=Z,0.9nm,0.7s,baz=113,slow=4.8,SNR=1.8						
ASAR				LR	LR	00 14 02.2	
	comp=Z,271nm,18.1s,baz=112,slow=36						
ASAR	Alice Springs	46.17	260	P	P	23 54 58.3	-2.7
WB0	Warramunga Arr	46.64	265	P	P	23 55 02.0	-2.6
WB0				IAmb	IAmb	23 55 02.7	
	comp=Z,5.7nm,0.7s						
WRA	Warramunga Arr	46.64	265	P	P	23 54 59.7	-5.0
	comp=Z,3.4nm,0.5s,baz=103,slow=8.3,SNR=11						
KNRA	Kununurra	52.97	268	P	P	23 55 50.4	-2.4
KNRA				IAmb	IAmb	23 55 57.0	
	comp=Z,8.9nm,0.8s						
DAV	Davao City (W)	65.56	291	LR	LR	00 25 12.8	
	comp=Z,34nm,18.4s,baz=168,slow=36						
QSPA	South Pole Qui	65.61	180	P	P	23 57 20.1	+0.4
MJAR	Matsushiro Arr	74.88	323	P	P	23 58 17.9	+1.2
	comp=Z,2.4nm,0.7s,baz=165,slow=4.9,SNR=5.0						
KMRM	Mail Ridge	80.31	37	P	P	23 58 46.6	-0.4
KMRM				IAmb	IAmb	23 58 52.3	
	comp=Z,8.3nm,0.7s						
CMB	Columbia Colle	80.75	41	P	P	23 58 50.0	+0.6
CMB				IAmb	IAmb	23 58 54.1	
	comp=Z,5.6nm,1.1s						
PETK	Petropavlovsk-	80.76	344	P	P	23 58 52.0	+3.0
	comp=Z,6.6nm,0.8s,baz=148,slow=6.5,SNR=4.8						
PETK	Petropavlovsk-	80.76	344	P	P	23 58 49.3	+0.3
KSRS	Korea Array	81.51	318	P	P	23 58 55.0	+1.7
	comp=Z,5.3nm,1.0s,baz=132,slow=5.2,SNR=5.9						
KSAR	Wonju Array Be	81.52	318	P	P	23 58 54.7	+1.2
NVAR	Mina Array Bea	82.26	42	P	P	23 59 01.5	+3.9
	comp=Z,2.7nm,0.9s,baz=219,slow=9.0,SNR=15						
NVAR	Mina Array Bea	82.26	42	P	P	23 58 56.8	-0.8
USA0B	Ussuriysk Arra	83.64	325	P	P	23 59 04.9	+0.6
USRK	Ussuriysk Ar.	83.64	325	P	P	23 59 06.1	+1.8
	comp=Z,11nm,0.9s,baz=116,slow=4.4,SNR=9.0						
USRK	Ussuriysk Ar.	83.64	325	P	P	23 59 05.3	+1.0
R11A	Troy Canyon, C	83.88	43	P	P	23 59 06.1	+0.2
SNAA	Sanae	83.96	178	P	P	23 59 05.5	-0.3
SNAA	Sanae	83.96	178	P	P	23 59 04.9	-0.9
VNA3	Neumayer Olymp	84.00	175	P	P	23 59 05.8	-0.1
VNA2	Neumayer--Watz	84.47	176	P	P	23 59 08.5	+0.2
	baz=185,slow=3.3						
VNA1	Neumayer--Stat	84.69	176	P	P	23 59 09.6	+0.3
MTPU	Mount Pierson	85.85	45	P	P	23 59 15.1	-1.0
MTPU				IAmb	IAmb	23 59 23.2	
	comp=Z,3.1nm,0.9s						
CN2	Changchun	86.96	321	*e*P	P	23 59 23.3	+2.4
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
MNTX	Cornudas Mount	87.07	53	P	P	23 59 21.6	-0.2
MNTX				IAmb	IAmb	23 59 26.4	
	comp=Z,2.6nm,1.0s						
TXAR	Lajitas Array	87.15	56	P	P	23 59 25.5	+3.2
	comp=Z,1.2nm,0.9s,baz=206,slow=8.3,SNR=10						
TXAR				LR	LR	00 32 53.9	
	comp=Z,50nm,18.9s,baz=0.0,slow=32						
GSI	Gunungsitoli	87.91	272	P	P	23 59 24.6	-1.7
MA2	Magadan	88.28	343	LR	LR	00 33 33.5	
	comp=Z,60nm,20.3s,baz=150,slow=32						
PDAR	Pinedale Array	90.18	42	P	P	23 59 39.4	+2.9
	comp=Z,0.4nm,0.6s,baz=202,slow=3.9,SNR=2.0						
PDAR				LR	LR	00 38 56.8	
	comp=Z,39nm,18.4s,baz=268,slow=35						
ENH	Enshi	90.32	303	P	P	23 59 36.9	-0.3
M27K	Edge Creek, AK	90.57	15	P	P	23 59 38.6	+0.9
SEY	Seymchan	90.82	346	LR	LR	00 35 60.0	
	comp=Z,73nm,19.7s,baz=135,slow=32						
ILAR	Eielson Array	91.66	12	P	P	23 59 44.5	+1.9
	comp=Z,0.9nm,1.0s,baz=256,slow=3.2,SNR=4.5						
XAN	Xi'an	92.51	306	⇑P	P	23 59 49.3	+2.0
XAN	Xi'an	92.51	306	pP	pP	23 59 59.8	+8.1
XAN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
CMAR	Chiang Mai Arr	93.77	288	P	P	23 59 54.6	+1.2
	comp=Z,5.7nm,1.0s,baz=116,slow=3.2,SNR=19						
CMAR	Chiang Mai Arr	93.77	288	P	P	23 59 53.8	+0.4
CHTO	Chiang Mai	93.91	289	P	P	23 59 54.6	+0.5
SONM	Songino Array	100.38	318	P	Pdif	00 00 25.3	+2.6
	comp=Z,0.5nm,1.0s,baz=114,slow=5.3,SNR=2.6						
ZALV	Zalesovo Beam	115.14	320	PKP	PKiKP	00 05 16.9	+0.1
	comp=Z,0.7nm,0.8s,baz=132,slow=2.1,SNR=1.8						
MKAR	Makanchi Array	115.72	312	PKP	PKPdf	00 05 17.9	-0.3
	comp=Z,0.8nm,0.9s,baz=82,slow=2.2,SNR=3.1						
ARCES	ARCESS Array B	133.26	350	PKP	PKiKP	00 05 52.3	0.0
	comp=Z,3.9nm,0.9s,baz=38,slow=1.6,SNR=4.7						
FINES	FINESS Array B	140.28	344	PKhKP	PKPpre	00 05 59.6	
	comp=Z,2.2nm,0.9s,baz=27,slow=3.7,SNR=2.4						
AKH	Akhalkalaki	143.68	307	⇓P	PKPdf	00 06 10.4	-0.8
AKASG	Malin Array Be	147.69	330	PKPbc	PKPbc	00 06 20.2	0.0
	comp=Z,0.4nm,0.3s,baz=41,slow=2.8,SNR=9.6						
AKASG	Malin Array Be	147.69	330		PKPdf	00 06 18.8	+1.3
SORM	Soroca	149.89	328	⇑P	PKPbc	00 06 24.6	-1.3
PURM	Purcari	150.16	324	⇓P	PKiKP	00 06 27.7	+0.2
MILM	Milestii Mici	150.47	325	⇑P	PKiKP	00 06 28.9	+0.8
BRTR	Keskin Array B	151.32	309	PKPbc	PKPbc	00 06 29.8	-0.1
	comp=Z,1.4nm,0.5s,baz=116,slow=4.3,SNR=9.5						
BURAR	Bucovina Array	151.74	330	⇑P	PKiKP	00 06 31.9	+1.0
TESR	Tescani	151.85	327	⇓P	PKPab	00 06 43.4	+3.7
CFR	Carcaliu	151.96	323	⇑P	PKiKP	00 06 31.3	+0.1
TPGR	Topolog	152.00	322	⇓P	PKiKP	00 06 32.9	+1.5
VRI	Vrincioaia	152.25	326	⇑P	PKPab	00 06 44.8	+3.4
PLOR	Plostina	152.30	326	⇑P	PKPab	00 06 41.2	-0.5
CLL	Collm	152.47	349	*e*PKPbc	PKiKP	00 06 33.0	+0.9
	comp=Z,7.0nm,1.0s						
CLL				*i* PKPab	PKPab	00 06 43.3	+1.2
	comp=Z,7.0nm,0.8s						
OSTC	Ostas	152.48	344	*e*PKP	PKPbc	00 06 31.1	-0.9
TRPA	Tarpa	152.50	334	⇑P	PKPab	00 06 38.3	-4.0
OZUR		152.57	327	⇓P	PKPab	00 06 46.8	+4.0
DPC	Dobruska-Polom	152.65	344	*e*PKP	PKPbc	00 06 29.6	-2.8
MORC	Moravsky Berou	152.84	342	*e*PKP	PKiKP	00 06 33.9	+0.9
DOPR	Dopca	152.85	327	⇑P	PKiKP	00 06 33.9	+0.7
MLR	Muntele Rosu	152.91	326	⇓P	PKiKP	00 06 35.6	+2.2
VRAC	Vranov	153.53	342	*e*PKP	PKiKP	00 06 35.6	+1.2
ARR	Arges	153.65	327	⇑P	PKPdf	00 06 28.7	+1.7
BZS	Buzias	154.87	331	⇓P	PKPbc	00 06 36.5	-0.8
VTS	Vitosha	156.31	324	⇓P	PKPab	00 07 02.6	+3.7
TORD	Torodi Ar. Bea	168.37	165	PKPab	PKPab	00 07 53.1	+1.1
	comp=Z,1.3nm,0.8s,baz=185,slow=3.5,SNR=6.8						

*NEIC **23** 23:59:14.4±1.8, 24°.86S±0°.08×175°.1W±0°.1, h10^{km}±1^{km}, mb4.6/14, Error ellipse: s-maj=18.1km s-min=11.9km az=302.0*

*IDC **23** 23:59:17.5±0.8, 24°.78S×175°.84W, h0^{km}, mb4.5/11, mb1 4.6/11, mb1mx4.5/33, mbtmp4.4/11, MS4.0/9, Ms1 4.0/9, ms1mx3.7/29, Error ellipse: s-maj=35.2km s-min=19.5km az=157.0*

ISC 23 23:59:20.7±0.5**, 25°.01S**±0°.08×**175°.58W**±0°.08**, h27**^{km}**, n73,** σ**2**^{s}**.03**/67**, mb4.6**/16**, MS3.9**/9**, 8C-3D, South of Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	7.90	43	Pn	Pn	00 01 05.3	-8.6
NIUE				Sn	Sn	00 02 23.5	-19
MSVF	Nonsavu	9.36	319	Pn	Pn	00 01 32.8	-1.2
	3.0nm,0.3s,baz=151,slow=13,SNR=6.3						
MSVF	Nonsavu	9.36	319	Pn	Pn	00 01 32.6	-1.3
AFI	Afiamalu	11.61	19	Pn	Pn	00 01 56.0	-8.8
	4.4nm,0.3s,baz=198,slow=21,SNR=2.0						
AFI				Sn	Sn	00 03 53.1	-21
	2.0nm,0.3s,baz=14,slow=22,SNR=1.4						
URZ	Urewera	14.59	203	Sn	Sn	00 05 22.3	-3.9
	0.4nm,0.3s,baz=121,slow=23,SNR=1.7						
RAR	Rarotonga	15.03	79	Pn	Pn	00 02 45.9	-5.4
	5.1nm,0.3s,baz=221,slow=7.6,SNR=6.9						
RAR				Sn	Sn	00 05 17.7	-19
	2.0nm,0.3s,baz=214,slow=22,SNR=1.4						
RAR				LR	LR	00 09 03.1	
	comp=Z,196nm,18.4s,baz=272,slow=38						
HIZ	Hauiti	15.71	209	P	P	00 03 04.6	+0.6
DZM	Mont Dzumac	16.74	276	LR	LR	00 08 37.0	
	comp=Z,593nm,19.1s,baz=100,slow=34						
DZM	Mont Dzumac	16.74	276	*e*LR	LR	00 07 18.0	
	comp=Z,517nm,21.9s						
DZM	Mont Dzumac	16.74	276	P	P	00 03 17.8	+2.3
PLWZ	Palliser	18.18	203	P	Pn	00 03 30.2	-1.0
KHZ	Kahutara	19.55	205	P	P	00 03 45.2	-1.0
KHZ				IAmb	IAmb	00 03 53.5	
	comp=Z,47nm,1.2s						
LTZ	Lake Taylor	20.35	206	P	P	00 03 53.9	-1.2
LTZ				IAmb	IAmb	00 03 57.6	
	comp=Z,29nm,1.2s						
MQZ	McQueen’s Vall	20.99	204	P	P	00 04 01.6	-0.3
MQZ				IAmb	IAmb	00 04 19.9	
	comp=Z,17nm,1.1s						
PPT2	Papeete2	25.30	78	*e*S	S	00 09 06.2	-3.7
	comp=Z,90nm,27.3s						
PPT2				*e*LQ	LQ	00 09 40.6	
	comp=Z,287nm,24.0s						
PPT2				*e*LR	LR	00 10 57.5	
	comp=Z,255nm,22.2s						
PPT	Papeete	25.31	78	LR	LR	00 11 55.0	
	comp=Z,185nm,19.6s,baz=194,slow=30						
HNR	Honiara	27.96	299	LR	LR	00 15 02.2	
	comp=Z,277nm,19.1s,baz=152,slow=34						
CTAO	Charters Tower	35.50	270	P	P	00 06 14.7	-0.8
CTAO				IAmb	IAmb	00 06 15.8	
	comp=Z,17nm,1.1s						
TAOE	Nuku Hiva Isla	37.36	71	*e*LR	LR	00 16 25.0	
	comp=Z,141nm,21.9s						
STKA	Stephens Creek	38.08	250	P	P	00 06 37.7	+0.4
	comp=Z,1.1nm,0.4s,baz=101,slow=16,SNR=4.8						
STKA				LR	LR	00 21 15.2	
	comp=Z,444nm,18.6s,baz=38,slow=35						
PMG	Port Moresby	38.66	287	P	P	00 06 40.0	-2.3
	comp=Z,18nm,0.6s,baz=86,slow=3.8,SNR=4.9						
PMG	Port Moresby	38.66	287	P	P	00 06 39.2	-3.1
PMG				IAmb	IAmb	00 06 41.5	
	comp=Z,19nm,0.8s						
BBOO	Buckleboo	42.74	248	P	P	00 07 15.2	-0.6
BBOO				IAmb	IAmb	00 07 17.3	
	comp=Z,15nm,1.1s						
AS31	Alice Springs	45.83	261	P	P	00 07 39.5	-1.2
ASAR	Alice Springs	45.83	261	P	P	00 07 39.4	-1.3
	comp=Z,5.3nm,1.0s,baz=94,slow=8.3,SNR=33						
ASAR				PcP	PcP	00 09 19.5	+1.6
	comp=Z,1.0nm,0.8s,baz=109,slow=4.1,SNR=2.0						
ASAR				LR	LR	00 25 52.6	
	comp=Z,328nm,19.2s,baz=108,slow=35						
ASAR	Alice Springs	45.83	261	P	P	00 07 40.0	-0.7
WR0	Warramunga Arr	46.16	266	P	P	00 07 41.6	-1.7
WR0				IAmb	IAmb	00 07 42.3	
	comp=Z,4.8nm,1.1s						
WB2	Warramunga Arr	46.33	266	P	P	00 07 43.1	-1.6
WB2				IAmb	IAmb	00 07 44.2	
	comp=Z,4.9nm,0.7s						
WRAB	Tennant Creek	46.34	266	P	P	00 07 40.8	-3.9
WB0	Warramunga Arr	46.34	266	P	P	00 07 42.8	-2.0
WRA	Warramunga Arr	46.34	266	P	P	00 07 42.4	-2.4
	comp=Z,4.2nm,0.7s,baz=103,slow=8.0,SNR=29						
WRA				PcP	PcP	00 09 20.9	+1.2
	comp=Z,3.6nm,1.0s,baz=101,slow=3.4,SNR=6.4						
WRA				LR	LR	00 26 32.5	
	comp=Z,357nm,18.4s,baz=100,slow=35						
FORT	Forrest	49.71	250	P	P	00 08 09.4	-1.3
KNRA	Kununurra	52.70	269	P	P	00 08 32.7	-0.5
PETK	Petropavlovsk-	81.19	344	P	P	00 11 33.7	0.0
	comp=Z,6.3nm,0.9s,baz=174,slow=18,SNR=4.6						
PETK				LR	LR	00 43 14.0	
	comp=Z,98nm,18.9s,baz=132,slow=33						
KSRS	Korea Array	81.72	318	P	P	00 11 38.1	+1.4
	comp=Z,5.6nm,1.0s,baz=142,slow=6.4,SNR=7.6						
NVAR	Mina Array Bea	82.82	42	P	P	00 11 44.3	+1.4
	comp=Z,1.5nm,0.9s,baz=220,slow=7.5,SNR=11						
SNAA	Sanae	83.45	178	P	P	00 11 48.9	+3.4
VNA3	Neumayer Olymp	83.50	175	P	P	00 11 49.0	+3.2
USRK	Ussuriysk Ar.	83.93	325	P	P	00 11 49.2	+1.1
	comp=Z,17nm,1.1s,baz=98,slow=2.1,SNR=12						
VNA2	Neumayer--Watz	83.97	176	P	P	00 11 51.4	+3.4
	baz=185,slow=4.8						
VNA1	Neumayer--Stat	84.18	176	P	P	00 11 52.5	+3.3
PLCA	Paso Flores	84.58	133	LR	LR	00 41 28.1	
	comp=Z,37nm,19.2s,baz=208,slow=30						
TXAR	Lajitas Array	87.65	56	P	P	00 12 08.2	+1.1
	comp=Z,1.3nm,1.1s,baz=197,slow=3.8,SNR=7.9						
PDAR	Pinedale Array	90.74	42	P	P	00 12 22.0	+0.5
	comp=Z,0.3nm,0.5s,baz=242,slow=3.2,SNR=4.0						
ILAR	Eielson Array	92.22	12	P	P	00 12 27.1	-0.4
	comp=Z,3.6nm,1.3s,baz=204,slow=6.1,SNR=7.9						
CMAR	Chiang Mai Arr	93.69	289	P	P	00 12 37.4	+2.0
	comp=Z,2.2nm,0.4s,baz=128,slow=3.0,SNR=26						
ZALV	Zalesovo Beam	115.38	320	PKP	PKiKP	00 17 58.3	-1.2
	comp=Z,0.3nm,0.3s,baz=77,slow=3.1,SNR=1.8						
MKAR	Makanchi Array	115.88	312	PKP	PKPdf	00 18 00.3	-0.5
	comp=Z,0.8nm,0.8s,baz=58,slow=1.5,SNR=3.8						
KURBB	Kurchatov Arra	118.84	316	PKP	PKPdf	00 18 05.7	-0.6
	comp=Z,0.9nm,0.7s,baz=89,slow=1.8,SNR=7.7						
BVAR	Borovoye Array	123.93	318	PKP	PKPdf	00 18 15.8	-0.2
	comp=Z,0.9nm,0.7s,baz=186,slow=12,SNR=5.9						
FINES	FINESS Array B	140.71	344	PKhKP	PKPpre	00 18 40.8	
	comp=Z,2.3nm,1.0s,baz=306,slow=3.8,SNR=1.9						
AKASG	Malin Array Be	148.02	330	PKPbc	PKPbc	00 19 02.7	-0.8
	comp=Z,1.1nm,0.4s,baz=41,slow=3.8,SNR=15						
SORM	Soroca	150.19	327	⇑P	PKPbc	00 19 09.4	+0.5
MILM	Milestii Mici	150.76	325	⇑P	PKPbc	00 19 09.8	-0.5
BRTR	Keskin Array B	151.44	308	PKPbc	PKPbc	00 19 12.7	+0.3
	comp=Z,4.5nm,1.0s,baz=149,slow=3.0,SNR=14						
BURAR	Bucovina Array	152.06	329	⇓P	PKiKP	00 19 14.4	+0.5
TESR	Tescani	152.14	326	⇓P	PKiKP	00 19 14.8	+0.9
CFR	Carcaliu	152.22	322	⇑P	PKiKP	00 19 14.7	+0.6
TPGR	Topolog	152.26	322	⇑P	PKiKP	00 19 15.1	+0.8
TRPA	Tarpa	152.85	333	⇓P	PKiKP	00 19 15.6	+0.3
OSTC	Ostas	152.91	343	*e*PKPAB	PKiKP	00 19 16.0	+0.6
CHVC	Chvalec	152.93	344	*e*PKPAB	PKPab	00 19 27.4	+1.0
CLL	Collm	152.93	348	*e*PKPbc	PKPbc	00 19 15.0	-0.2
	comp=Z,16nm,1.4s						
DPC	Dobruska-Polom	153.07	343	*e*PKPAB	PKPbc	00 19 15.9	+0.3
MLR	Muntele Rosu	153.19	325	⇑P	PKPbc	00 19 16.3	+0.1
KRLC	Kraliky	153.20	342	*e*PKPAB	PKiKP	00 19 17.5	+1.4
MORC	Moravsky Berou	153.25	341	⇑P	PKiKP	00 19 19.8	+3.6
DRGR		153.82	331	⇑P	PKiKP	00 19 19.0	+1.5
ARR	Arges	153.95	326	⇑P	PKPdf	00 19 12.2	+2.5
KHC	Kasperske Hory	154.88	346	*e*PKPAB	PKPab	00 19 28.7	-6.1
GERES	GERESS Array B	155.12	345	PKPab	PKPab	00 19 34.2	-1.6
	comp=Z,0.5nm,0.7s,baz=5.7,slow=3.9,SNR=4.7						
ESDC	Sonseca Array	163.77	24	PKP	PKPdf	00 19 23.1	+1.6
	comp=Z,1.9nm,1.1s,baz=14,slow=0.5,SNR=4.5						
TORD	Torodi Ar. Bea	167.92	167	PKP	PKPdf	00 19 26.1	+0.6
	comp=Z,2.8nm,1.3s,baz=234,slow=0.2,SNR=6.0						
TORD				PKPab	PKPab	00 20 35.5	+3.2
	comp=Z,1.2nm,0.8s,baz=193,slow=4.2,SNR=6.1						

*SOME **24** 00:03:55.4, 40°.82N×83°.60E, h0^{km}*

*NNC **24** 00:04:00.5±4.0, 40°.92N×83°.51E, h0^{km}, mb3.6, mpv3.2,*

Error ellipse: s-maj=28.8km s-min=20.2km az=167.0

ISC 24 00:03:48.8±2.8, 40°.6N±0°.1×83°.85E±0°.06, h10km, n16, σ1s.36/21, 5C-1D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode 2.9nm,0.2s	4.15	309	eP	Pb	00 05 03.6	+1.6
SHLS	106nm,0.4s			eS	Sb	00 05 54.0	+1.8
SHLS	Shalkode 2.9nm,0.2s	4.15	309	Pg	Pb	00 05 03.6	+1.6
SHLS	106nm,0.4s			Lg	Lg	00 05 54.0	
PDGK	Podgornoye 0.5nm,0.4s	4.23	311	Pg	Pg	00 05 08.6	-1.4
PDGK	10nm,0.6s			Lg	Lg	00 06 01.7	
PDGK	Podgornoye 3.6nm,0.8s	4.23	311	⇑Pg	Pg	00 05 14.7	+4.8
PDGK	13nm,0.5s			⇑Lg	Lg	00 05 59.3	
WMQ	Urumqi	4.29	40	eP	Pg	00 05 10.1	-1.0
WMQ	comp=Z,120nm,4.3s			pmax	pmax		
UZB	Uzynbulak comp=Z,3.2nm,0.3s	4.40	307	eP	Pg	00 05 12.6	-0.6
UZB	comp=Z,27nm,0.6s			eS	Sg	00 06 09.0	-1.2
UZB	Uzynbulak comp=Z,3.2nm,0.3s	4.40	307	Pg	Pg	00 05 12.6	-0.6
UZB	comp=Z,27nm,0.6s			Lg	Lg	00 06 09.0	
SATY	Saty comp=Z,1.3nm,0.4s	4.74	303	eP	Pg	00 05 18.8	-0.9
SATY	comp=Z,26nm,0.5s			eS	Sg	00 06 20.0	-1.1
SATY	Saty comp=Z,1.3nm,0.4s	4.74	303	Pg	Pg	00 05 18.8	-0.9
SATY	comp=Z,26nm,0.5s			Lg	Lg	00 06 20.0	
DJR	Jarkent comp=Z,1.0nm,0.2s	4.78	322	eP	Pg	00 05 19.9	-0.4
DJR	comp=Z,8.6nm,0.6s			eS	Sg	00 06 21.7	-0.5
DJR	Jarkent comp=Z,1.0nm,0.2s	4.78	322	Pg	Pg	00 05 19.9	-0.4
DJR	comp=Z,8.6nm,0.6s			Lg	Lg	00 06 21.7	
KPKS	Kokpek comp=Z,1.1nm,0.1s	4.79	308	eP	Pg	00 05 19.4	-1.1
KPKS	comp=Z,39nm,0.2s			eS	Sg	00 06 19.4	-3.1
MK31	Makanchi Array comp=Z,2.4nm,0.8s,baz=168,slow=15,SNR=5.0	6.28	350	⇑Pg	Pg	00 05 50.3	+1.2
MK31	comp=Z,2.2nm,0.6s,baz=168,slow=30,SNR=5.8			⇑Lg	Lg	00 07 08.8	
MAKZ	Makanchi comp=Z,2.8nm,0.9s	6.34	348	⇓Pg	Pg	00 05 49.5	-0.8
MAKZ	comp=Z,2.3nm,0.9s			⇑Lg	Lg	00 07 07.7	
ZSN	Zaisan comp=Z,4.3nm,0.7s	6.88	6	eP	Pg	00 05 59.2	-1.2
ZSN	comp=Z,5.3nm,1.3s			eS	Sg	00 07 28.7	-0.7
ZSN	Zaisan comp=Z,4.3nm,0.7s	6.88	6	Pg	Pg	00 05 59.2	-1.2
ZSN	comp=Z,5.3nm,1.3s			Lg	Lg	00 07 28.7	

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*NEIC **24** 00:20:08.7±1.3, 60°.28N±0°.02×152°.64W±0°.08, h107km±5km, Error ellipse: s-maj=6.2km s-min=3.4km az=101.0*

*ANF **24** 00:20:09.5±0.3, 60°.32N×152°.47W, h102km±4km, ML3.7/48, Error ellipse: s-maj=2.5km s-min=2.1km az=37.0*

*AEIC **24** 00:20:10.1±1.2, 60°.32N±0°.03×152°.55W±0°.08, h101km±4km, ML3.3/127, ML3.5/140(NEIC), Error ellipse: s-maj=6.2km s-min=3.8km az=124.0*

*IDC **24** 00:20:16.7±6.4, 60°.99N×152°.64W, h142km±49km, mb3.2/3, mb1 3.3/6, mb1mx3.0/38, mbtmp3.6/6, Error ellipse: s-maj=59.0km s-min=32.2km az=7.0*

ISC 24 00:20:08.9±0.7, 60°.31N±0°.03×152°.51W±0°.03, h109km±5km, n236, σ0s.91/277, mb3.8/3, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RED	Redoubt Volcan	0.17	309		Pn	00 20 23.6	-0.5
RED					Sn	00 20 34.3	-1.3
RSO	Redoubt South	0.19	320		Pn	00 20 23.6	-0.7
REF	Redoubt East F	0.20	331		Pn	00 20 23.9	-0.4
O20K	Slope Mountain baz=9.3,SNR=17	0.24	194	P	Pn	00 20 24.4	+0.1
O20K	baz=9.3			S	Sn	00 20 35.6	-0.3
O20K	Slope Mountain	0.24	194		Pn	00 20 24.2	-0.1
O20K					Sn	00 20 35.5	-0.3
RDWB	Redoubt West	0.24	317		Pn	00 20 23.8	-0.6
IVE	Iliamna Volcan	0.39	221		Pn	00 20 24.6	-0.4
IVE					Sn	00 20 36.0	-1.1
ILS	Iliamna Low So	0.46	219		Pn	00 20 24.9	-0.5
ILS					Sn	00 20 36.9	-0.8
ILSW	Iliamna Southw	0.46	224		Pn	00 20 24.7	-0.7
OPT	Oil Point	0.76	209		Pn	00 20 27.6	0.0
P19K	Oil Pt baz=27,SNR=27	0.76	209	P	Pn	00 20 27.6	0.0
P19K	baz=27			S	Sn	00 20 41.7	0.0
P19K	Oil Pt	0.76	209		Pn	00 20 27.6	0.0
P19K				Sn	Sn	00 20 41.3	-0.3
HOM	Homer baz=326	0.79	146	P	Pn	00 20 28.3	+0.5
HOM	baz=326			S	Sn	00 20 43.3	+1.2
HOM	Homer	0.79	146		Pn	00 20 28.3	+0.5
HOM				Sn	Sn	00 20 43.3	+1.2
CAPN	Captain Cook N baz=237	0.81	55	P	Pn	00 20 30.0	+2.0
CAPN	baz=237			S	Sn	00 20 45.8	+3.4
CAPN	Captain Cook N	0.81	55	Pn	Pn	00 20 29.9	+2.0
CAPN				Sn	Sn	00 20 46.7	+4.3
SPU	Mount Spurr	0.90	14		Pn	00 20 29.0	+0.1
SPCR	Spurr Chakacha baz=191	0.90	9	P	Pn	00 20 29.1	+0.1
SPCR	baz=191			S	Sn	00 20 44.0	-0.2
SPCR	Spurr Chakacha	0.90	9		Pn	00 20 29.1	+0.1
SPCR					Sn	00 20 44.1	-0.1
O19K	Port Alsworth baz=81	0.91	263	P	Pn	00 20 28.4	-0.6
O19K	baz=81			S	Sn	00 20 43.0	-1.2
O19K	Port Alsworth	0.91	263	Pn	Pn	00 20 28.2	-0.8
O19K	comp=N,1μm,0.5s			IAML		00 20 43.7	
O19K	comp=E,1μm,0.5s			IAML		00 20 48.2	
SPCN	Chakachatna No	0.93	10		Pn	00 20 29.6	+0.4
SPBG	Spurr Blockage	0.95	4		Pn	00 20 29.9	+0.3
BRLK	Bradley Lake	0.98	123		Pn	00 20 29.6	-0.1
BRLK	Bradley Lake comp=E,2μm,0.3s	0.98	123	IAML		00 20 48.1	
BRLK	comp=N,2μm,0.3s			IAML		00 20 48.7	
SPCG	Spurr Capps Gl	1.01	13		Pn	00 20 30.4	+0.3
CNPM	China Poot	1.02	140		Pn	00 20 30.3	+0.2
CNPM					Sn	00 20 46.3	+0.1
CNPM	China Poot comp=N,1μm,0.3s	1.02	140	IAML		00 20 51.6	
AU22	Augustine Moun	1.04	205		Pn	00 20 30.2	0.0
AU22					Sn	00 20 46.4	-0.1
AUL	Augustine Lava	1.04	207		Pn	00 20 30.5	+0.1
AUL					Sn	00 20 46.7	0.0
BRSE	Bradley Lake S baz=303	1.05	122	P	Pn	00 20 30.4	-0.1
BRSE	baz=303			S	Sn	00 20 47.0	+0.1
BRSE	Bradley Lake S	1.05	122		Pn	00 20 30.4	-0.1
BRSE					Sn	00 20 47.2	+0.3
AGU	Augustine-Summ	1.06	206		Pn	00 20 30.7	-0.1
AUW	Augustine West	1.06	208		Pn	00 20 30.7	+0.2
AUQ	Augustine Qik’	1.07	206		Pn	00 20 30.7	+0.1
N19K	Bonanza Creek	1.10	298		Pn	00 20 30.5	-0.5
SLKM	Skilak Lake	1.15	79		Pn	00 20 31.9	+0.3
SLKM					Sn	00 20 48.5	-0.2
STLK	Strandline Lak	1.23	15		Pn	00 20 33.0	+0.5
O22K	Cooper Landing baz=264,SNR=18	1.39	82	P	Pn	00 20 34.8	+0.6
O22K	baz=264			S	Sn	00 20 52.8	-0.6
O22K	Cooper Landing	1.39	82		Pn	00 20 34.1	-0.1
FIS	Fire Island	1.40	52		Sn	00 20 58.7	+5.1
Q19K	Cape Douglas, baz=21,SNR=22	1.50	203	P	Pn	00 20 35.4	-0.2
Q19K	Cape Douglas,	1.50	203	Pn	Pn	00 20 35.5	-0.2
SEW	Seward baz=279	1.54	97	P	Pn	00 20 35.9	-0.1
SEW	baz=279			S	Sn	00 20 56.0	-0.6
SEW	Seward	1.54	97		Pn	00 20 36.1	+0.1
SEW					Sn	00 20 56.3	-0.3
RC01	Rabbit Creek A baz=242	1.57	59	P	Pn	00 20 36.9	+0.6
RC01	baz=242			S	Sn	00 20 57.4	+0.1
RC01	Rabbit Creek A	1.57	59		Pn	00 20 37.2	+0.8
RC01	Rabbit Creek A comp=E,859nm,0.4s	1.57	59	IAML		00 20 59.6	
RC01	comp=N,764nm,0.3s			IAML		00 21 00.2	
P18K	Big Mountain, baz=54,SNR=5.7	1.66	237	P	Pn	00 20 36.9	-0.6
P18K	baz=54			S	Sn	00 20 57.5	-1.8
P18K	Big Mountain,	1.66	237		Pn	00 20 36.9	-0.6
M19K	Big River Lodg	1.84	331	Pn	Pn	00 20 39.2	-0.5
M22K	Willow baz=220,SNR=9.9	1.85	38	P	Pn	00 20 40.9	+1.1
M22K	baz=220			S	Sn	00 21 05.1	+1.6
M22K	Willow	1.85	38		Pn	00 20 41.0	+1.2
PMR	Palmer baz=234	2.09	51	P	Pn	00 20 42.8	0.0
PMR	baz=234			S	Sn	00 21 07.9	-0.9
PMR	Palmer	2.09	51		Pn	00 20 42.9	0.0
PMR	Palmer comp=E,256nm,0.4s	2.09	51	IAML		00 21 09.2	
PMR	comp=N,169nm,0.3s			IAML		00 21 10.2	
PWL	Port Wells baz=257	2.13	73	P	Pn	00 20 43.0	-0.4
PWL	baz=257			S	Sn	00 21 09.3	-0.6
PWL	Port Wells	2.13	73		Pn	00 20 43.0	-0.4
PWL	Port Wells comp=E,453nm,0.6s	2.13	73	IAML		00 21 12.2	
L19K	White Mountain baz=148,SNR=41	2.19	330	P	Pn	00 20 44.4	+0.2
L19K	baz=148			S	Sn	00 21 11.3	0.0
L19K	White Mountain	2.19	330		Pn	00 20 44.4	+0.2
KNK	Knik Glacier baz=243	2.27	59	P	Pn	00 20 45.3	+0.1
KNK	baz=243			S	Sn	00 21 12.4	-0.6
KNK	Knik Glacier	2.27	59		Pn	00 20 45.2	+0.1
KNK	Knik Glacier comp=N,383nm,0.4s	2.27	59	IAML		00 21 13.7	
KNK	comp=E,355nm,0.3s			IAML		00 21 14.3	
L20K	Farewell, AK baz=163	2.27	344	P	Pn	00 20 45.7	+0.5
L20K	Farewell, AK	2.27	344		Pn	00 20 45.8	+0.5
GHO	Glory Hole Cre	2.28	48		Pn	00 20 45.5	+0.1
GHO	Glory Hole Cre comp=E,373nm,0.8s	2.28	48	IAML		00 21 19.4	
GHO	comp=N,288nm,0.6s			IAML		00 21 20.0	
CUT	Chulitna baz=209	2.36	26	P	Pn	00 20 47.0	+0.7
CUT	baz=209			S	Sn	00 21 15.6	+0.6
CUT	Chulitna	2.36	26		Pn	00 20 47.0	+0.7
CUT	Chulitna comp=N,320nm,0.5s	2.36	26	IAML		00 21 19.2	
KABU	Katmai Buttres	2.50	216		Pn	00 20 48.6	+0.4
SML	Sawmill baz=236	2.52	52	P	Pn	00 20 48.6	+0.1
SML	baz=236			S	Sn	00 21 17.8	-1.1
SML	Sawmill	2.52	52	Pn	Pn	00 20 48.0	-0.5
SML	comp=N,141nm,0.6s			IAML		00 21 19.8	
SML	comp=E,172nm,0.9s			IAML		00 21 26.4	
PPLA	Purkeypile	2.60	3		Pn	00 20 48.5	-1.1
GLI	Glacier Island baz=260	2.73	76	P	Pn	00 20 49.8	-1.3
GLI	baz=260			S	Sn	00 21 22.3	-1.4
GLI	Glacier Island	2.73	76		Pn	00 20 50.9	-0.2
GLI	comp=N,283nm,0.6s			IAML		00 21 23.7	
GLI	comp=E,276nm,0.3s			IAML		00 21 24.1	
SCM	Sheep Creek Mo baz=241	2.94	57	P	Pn	00 20 54.1	+0.1
SCM	baz=241			S	Sn	00 21 28.6	-0.2
SCM	Sheep Creek Mo	2.94	57		Pn	00 20 53.7	-0.3
SCM	comp=E,192nm,0.7s			IAML		00 21 30.5	
SCM	comp=N,168nm,0.8s			IAML		00 21 41.7	
HIN	Hinchinbrook I	2.98	86	Pn	Pn	00 20 55.0	+0.5
HIN	comp=N,151nm,0.4s			IAML		00 21 29.4	
HIN	comp=E,179nm,0.4s			IAML		00 21 29.6	
FID	Port Fidalgo	3.01	79	Pn	Pn	00 20 54.4	-0.5
FID	comp=E,216nm,0.4s			IAML		00 21 32.5	
WAT7	Susitna Watana	3.08	33		Pn	00 20 56.1	+0.3
TT01	Tatalina	3.10	329		Pn	00 20 55.4	-0.6
TTA	Tatalina baz=146	3.11	329	P	Pn	00 20 56.0	-0.3
TTA	baz=146			S	Sn	00 21 33.0	0.0
TTA	Tatalina	3.11	329	Pn	Pn	00 20 56.3	0.0
CAST	Castle Rocks	3.12	3	Pn	Pn	00 20 56.5	+0.1
OHAK	Old Harbor baz=6.8	3.13	188	P	Pn	00 20 55.8	-0.6
OHAK	baz=6.8			S	Sn	00 21 30.1	-3.0
OHAK	Old Harbor	3.13	188	Pn	Pn	00 20 55.8	-0.6
K20K	Telida baz=166,SNR=13	3.14	347	P	Pn	00 20 57.1	+0.4
K20K	Telida	3.14	347	Pn	Pn	00 20 57.4	+0.7
WAT1	Susitna Watana baz=219	3.15	35	P	Pn	00 20 57.1	+0.2
WAT1	baz=219			S	Sn	00 21 32.9	-1.0
WAT1	Susitna Watana	3.15	35		Pn	00 20 57.3	+0.5
WAT6	Susitna Watana baz=228	3.23	43	P	Pn	00 20 58.4	+0.5
WAT6	baz=228			S	Sn	00 21 34.4	-1.3
WAT6	Susitna Watana	3.23	43		Pn	00 20 58.1	+0.2
Q23K	Middleton Isla baz=289	3.23	103	P	Pn	00 20 58.4	+0.6
Q23K	Middleton Isla	3.23	103	Pn	Pn	00 20 58.7	+1.0
MID	Middleton Isla	3.23	103	Pn	Pn	00 20 58.7	+0.9
TRF	Thorofare Moun	3.32	17	Pn	Pn	00 20 59.6	+0.5
TRF	comp=N,72nm,0.5s			IAML		00 21 41.0	
TRF	comp=E,81nm,0.5s			IAML		00 21 42.1	
KTH	Kantishna Hill	3.34	12		Pn	00 20 59.4	+0.2
EYAK	Cordova Ski Ar baz=269	3.36	83	P	Pn	00 20 59.5	0.0
EYAK	baz=269			S	Sn	00 21 37.2	-1.4
EYAK	Cordova Ski Ar	3.36	83	Pn	Pn	00 20 59.2	-0.2
DIV	Divide	3.41	73		Pn	00 20 59.9	-0.4
KLU	Klutina baz=253	3.43	67	P	Pn	00 21 00.3	-0.2
KLU	baz=253			S	Sn	00 21 39.1	-1.2
KLU	Klutina	3.43	67		Pn	00 21 00.2	-0.2
M24K	Tolsona, Glenn baz=243,SNR=10	3.55	57	P	Pn	00 21 02.6	+0.5
M24K	baz=243			S	Sn	00 21 43.7	+0.4
M24K	Tolsona, Glenn	3.55	57		Pn	00 21 02.7	+0.5
M24K	Tolsona, Glenn comp=N,110nm,1.1s	3.55	57	IAML		00 22 06.9	
M24K	comp=E,134nm,1.1s			IAML		00 22 14.8	
RND	Reindeer	3.55	28	Pn	Pn	00 21 02.5	+0.3
RND	comp=E,48nm,0.8s			IAML		00 22 03.6	
CHUM	Lake Minchumin baz=182,SNR=26	3.58	1	P	Pn	00 21 03.0	+0.6
CHUM	Lake Minchumin	3.58	1		Pn	00 21 03.1	+0.6
DHY	Denali Highway baz=224	3.69	39	P	Pn	00 21 04.6	+0.5
DHY	baz=224			S	Sn	00 21 46.7	-0.1
DHY	Denali Highway	3.69	39		Pn	00 21 04.7	+0.6
DHY	Denali Highway comp=N,90nm,0.2s	3.69	39	IAML		00 21 49.0	
DHY	comp=E,80nm,0.6s			IAML		00 21 50.1	
MCK	McKinley baz=208	3.82	25	P	Pn	00 21 06.3	+0.7
MCK	baz=208			S	Sn	00 21 49.3	-0.4
MCK	McKinley	3.82	25		Pn	00 21 06.8	+1.1
GOAT	Goat Mountain	3.86	83		Pn	00 21 05.2	-1.1
BPAW	Bear Paw Mtn. baz=192	3.87	10	P	Pn	00 21 06.1	-0.2
BPAW	Bear Paw Mtn.	3.87	10		Pn	00 21 05.7	-0.6
SII	Sitkinak Islan	3.87	194	Pn	Pn	00 21 06.0	-0.4
RAGM	Ragged Mountai	3.89	86	Pn	Pn	00 21 07.0	+0.3
RAGM	comp=E,106nm,0.3s			IAML		00 21 56.0	
BMRM	Bremner River baz=264	3.94	77	P	Pn	00 21 06.9	-0.5
BMRM	baz=264			S	Sn	00 21 51.3	-1.5
BMRM	Bremner River	3.94	77	Pn	Pn	00 21 07.3	-0.1
BMRM	comp=N,68nm,0.8s			IAML		00 22 02.9	
BMRM	comp=E,63nm,0.9s			IAML		00 22 07.5	
J20K	Nowinta River baz=168	3.95	350	P	Pn	00 21 07.8	+0.4
J20K	Nowinta River	3.95	350		Pn	00 21 07.9	+0.5
N25K	Chitina, Valde baz=255	4.07	68	P	Pn	00 21 09.0	-0.1
N25K	baz=255			S	Sn	00 21 54.4	-1.3
N25K	Chitina, Valde	4.07	68		Pn	00 21 09.3	+0.3
N25K	comp=E,58nm,0.6s			IAML		00 21 56.5	
HARP	HAARP baz=243	4.11	56	S	Sn	00 21 56.9	+0.2
BWN	Browne comp=E,59nm,2.3s	4.12	19	IAML		00 22 56.4	
BWN	comp=N,66nm,2.2s			IAML		00 23 01.3	
PAX	Paxson baz=235	4.29	48	P	Pn	00 21 12.7	+0.7
PAX	baz=235			S	Sn	00 21 60.0	-1.0
PAX	Paxson	4.29	48		Pn	00 21 12.7	+0.7
SUCK	Suckling Hills	4.36	89	Pn	Pn	00 21 13.2	+0.2
SUCK	comp=N,59nm,2.2s			IAML		00 22 16.4	
SUCK	comp=E,50nm,2.0s			IAML		00 22 51.4	
BERG	Berg Lake	4.37	85	Pn	Pn	00 21 13.2	+0.1
GLB	Gilahina Butte	4.40	71	Pn	Pn	00 21 13.5	0.0
GLB	comp=N,48nm,0.4s			IAML		00 22 04.4	
GLB	comp=E,29nm,0.9s			IAML		00 22 31.1	
VRDI	Verde Repeater	4.53	74	Pn	Pn	00 21 15.2	-0.3
VRDI	comp=N,39nm,0.7s			IAML		00 22 07.8	
NEA2	Nenana baz=202	4.58	19	P	Pn	00 21 15.7	-0.2
NEA2	Nenana	4.58	19		Pn	00 21 15.7	-0.2
CRQM	Cirque	4.65	80	Pn	Pn	00 21 17.4	+0.4
CRQM	comp=E,44nm,0.5s			IAML		00 22 11.5	
CRQM	comp=N,59nm,0.3s			IAML		00 22 12.5	
WRH	Wood River Hil	4.65	24		Pn	00 21 16.6	-0.2
CRQE	Cirque baz=269	4.67	81	P	Pn	00 21 17.4	+0.2
CRQE	baz=269			S	Sn	00 22 08.1	-2.2
MCARA	McCarthy VSAT baz=261	4.76	73	P	Pn	00 21 18.4	+0.1
MCARA	baz=261			S	Sn	00 22 11.8	-0.5
MCARA	McCarthy VSAT	4.76	73	Pn	Pn	00 21 19.4	+1.1
WAX	Waxell Ridge	4.79	84	Pn	Pn	00 21 19.3	+0.4
TGL	Tana Glacier	4.80	80	Pn	Pn	00 21 19.5	+0.6
TGL	comp=E,43nm,0.4s			IAML		00 22 14.4	
TGL	comp=N,31nm,0.9s			IAML		00 22 15.3	
MLY	Manley baz=191	4.80	9	P	Pn	00 21 19.2	+0.3
MLY	Manley	4.80	9		Pn	00 21 19.4	+0.5
MLY	Manley comp=N,19nm,4.7s	4.80	9	IAML		00 24 12.2	
SNH	Sunshine Point	4.82	87	Pn	Pn	00 21 19.4	+0.2
SNH	comp=N,46nm,1.8s			IAML		00 22 18.0	
SNH	comp=E,36nm,4.3s			IAML		00 24 07.5	
HDA	Harding Lake baz=215	4.86	30	P	Pn	00 21 19.9	+0.4
HDA	baz=215			S	Sn	00 22 12.3	-2.3
HDA	baz=215			S	Sn	00 22 12.3	-2.3
HDA	Harding Lake	4.86	30		Pn	00 21 20.0	+0.4
CCB	Clear Creek Bu	4.86	25		Pn	00 21 19.6	0.0
GCSA	Galena City Sc baz=154	4.89	337	P	Pn	00 21 20.6	+0.6
I21K	Tanana baz=183	4.89	3	P	Pn	00 21 20.2	+0.2
I21K	Tanana comp=N,26nm,4.3s	4.89	3	IAML		00 23 33.3	
I21K	comp=E,24nm,3.5s			IAML		00 24 08.2	
MENT	Mentasta	4.95	54	Pn	Pn	00 21 20.9	0.0
MENT	comp=E,44nm,0.5s			IAML		00 22 39.6	
MENT	comp=N,49nm,0.7s			IAML		00 22 44.7	
RIDG	Independent Ri baz=230	4.98	43	P	Pn	00 21 22.1	+0.7
RIDG	baz=230			S	Sn	00 22 16.5	-1.2
RIDG	Independent Ri	4.98	43		Pn	00 21 22.4	+1.1
RIDG	Independent Ri comp=N,45nm,2.3s	4.98	43	IAML		00 22 34.6	
RIDG	comp=E,52nm,1.2s			IAML		00 22 34.7	
PTPK	Patty Peak	5.00	76		Pn	00 21 21.6	-0.1
M26K	Nabesna, AK baz=250	5.03	61	P	Pn	00 21 22.7	+0.6
M26K	baz=250			S	Sn	00 22 18.1	-0.9
M26K	Nabesna, AK	5.03	61		Pn	00 21 22.5	+0.5
M26K	Nabesna, AK comp=E,21nm,4.8s	5.03	61	IAML		00 22 09.6	
M26K	comp=N,32nm,0.7s			IAML		00 22 18.9	
KIAG	Kiagna River	5.04	79		Pn	00 21 21.9	-0.3
ISLE	Juniper Island	5.04	82		Pn	00 21 23.2	+1.0
ISLE	comp=E,37nm,0.7s			IAML		00 22 22.8	
ISLE	comp=N,37nm,1.0s			IAML		00 22 24.7	
BALM	Baldy	5.05	77		Pn	00 21 21.8	-0.5
TCOL	CIGO, UAF Yank baz=207	5.05	23	P	Pn	00 21 23.0	+0.8
TCOL	baz=207			S	Sn	00 22 19.3	-0.1

TCOL	CIGO, UAF Yank	5.05	23		Pn	00 21 22.4	+0.2
COLA	College	5.06	23	P	Pn	00 21 22.9	+0.7
	baz=207						
COLA				S	Sn	00 22 19.4	0.0
	baz=207						
COLA	College	5.06	23		Pn	00 21 22.6	+0.3
MDM	Murphy Dome	5.06	21		Pn	00 21 22.1	-0.3
MDM	Murphy Dome	5.06	21	IAML		00 22 43.0	
	comp=N,19nm,4.2s						
MDM				IAML		00 23 10.2	
	comp=E,18nm,4.5s						
I23K	Minto, Yukon-K	5.06	15	P	Pn	00 21 23.2	+0.9
	baz=198,SNR=21						
I23K	Minto, Yukon-K	5.06	15		Pn	00 21 23.6	+1.3
I23K				IAML		00 23 00.7	
	comp=E,23nm,3.6s						
I23K				IAML		00 23 43.0	
	comp=N,25nm,4.6s						
CHGN	Chignik	5.09	220		Pn	00 21 20.8	-1.9
BAGL	Bagley Icefiel	5.17	84		Pn	00 21 24.4	+0.7
IL31		5.17	28		Pn	00 21 23.8	0.0
ILAR	Eielson Array	5.17	28	P	Pn	00 21 24.3	+0.4
	comp=N,4.9nm,0.3s,baz=214,slow=13,SNR=188						
ILAR				S	Sn	00 22 18.9	-3.4
	comp=N,1.3nm,0.3s,baz=220,slow=22,SNR=5.5						
DOT	Dot Lake	5.20	46		Pn	00 21 24.8	+0.6
MESA	MESA	5.26	87	P	Pn	00 21 26.2	+1.0
	baz=276						
MESA				S	Sn	00 22 22.5	-2.2
	baz=276						
MESA	MESA	5.26	87		Pn	00 21 26.5	+1.3
MESA				IAML		00 22 25.1	
	comp=E,41nm,0.3s						
YAH	Yahtse	5.35	85		Pn	00 21 26.8	+0.3
YAH	Yahtse	5.35	85	IAML		00 22 12.4	
	comp=E,31nm,4.3s						
YAH				IAML		00 23 35.8	
	comp=N,30nm,3.7s						
POKR	Poker Plat Res	5.36	24	P	Pn	00 21 26.9	+0.6
	baz=208,SNR=10.0						
POKR				S	Sn	00 22 23.2	-3.5
	baz=208						
POKR	Poker Plat Res	5.36	24		Pn	00 21 26.9	+0.6
POKR	Poker Plat Res	5.36	24	IAML		00 23 08.6	
	comp=E,17nm,4.0s						
POKR				IAML		00 23 21.7	
	comp=N,21nm,4.2s						
H21K	Melozitna Rive	5.37	359	P	Pn	00 21 26.4	-0.2
	baz=179						
H21K	Melozitna Rive	5.37	359		Pn	00 21 26.3	-0.2
H21K	Melozitna Rive	5.37	359	IAML		00 23 11.9	
	comp=E,16nm,4.9s						
H21K				IAML		00 24 55.6	
	comp=N,19nm,4.7s						
BARN	Barnard Glacie	5.38	77	Pn	Pn	00 21 27.7	+0.8
SCRK	Sand Creek	5.43	44	P	Pn	00 21 27.3	-0.1
	baz=231						
SCRK				S	Sn	00 22 24.7	-3.8
	baz=231						
SCRK	Sand Creek	5.43	44		Pn	00 21 27.4	-0.1
J25K	Salcha River,	5.44	34	P	Pn	00 21 28.2	+0.7
	baz=221,SNR=28						
J25K				S	Sn	00 22 25.5	-3.2
	baz=221						
J25K	Salcha River,	5.44	34		Pn	00 21 28.1	+0.7
M27K	Edge Creek, AK	5.51	64	S	Sn	00 22 29.1	-1.6
	baz=253						
M27K	Edge Creek, AK	5.51	64	Pn	Pn	00 21 29.5	+0.9
CTG	Chitna Glacier	5.53	78	P	Pn	00 21 30.0	+1.1
	baz=268						
CTG				S	Sn	00 22 29.8	-1.4
	baz=268						
CTGM	Chitina Glacie	5.54	78		Pn	00 21 30.3	+1.3
RKAV	Rock Avalanche	5.55	85		Pn	00 21 29.5	+0.4
TABL	Table Mountain	5.64	84	Pn	Pn	00 21 31.4	+1.0
CHX	Chaix Hills	5.69	88		Pn	00 21 31.7	+0.7
LOGN	Logan Glacier	5.70	80	Pn	Pn	00 21 32.2	+1.1
IM03		5.72	355		Pn	00 21 31.6	+0.4
IMAR	Indian Mountai	5.72	355	Pn	Pn	00 21 31.8	+0.5
L27K	Beaver Creek,	5.78	57	P	Pn	00 21 32.4	+0.3
	baz=246						
L27K	Beaver Creek,	5.78	57	Pn	Pn	00 21 32.7	+0.6
BC03		5.80	57		Pn	00 21 32.9	+0.6
BCAR	Beaver Creek A	5.80	57	Pn	Pn	00 21 32.5	+0.1
J26L	Joseph Creek	5.91	41	P	Pn	00 21 34.3	+0.5
	baz=229,SNR=10						
J26L				S	Sn	00 22 36.6	-3.6
	baz=229						
H24K	Noodor Dome	5.93	19	Pn	Pn	00 21 34.8	+0.7
BVCY	Beaver Creek	5.98	64	S	Sn	00 22 40.7	-1.2
	baz=255						
YUK3	Moose Creek	6.03	71	P	Pn	00 21 36.2	+0.5
	baz=261						
YUK3				S	Sn	00 22 41.7	-1.7
	baz=261						
PCA	Pinnacle	6.11	87		Pn	00 21 37.3	+0.6
PINM	Pinnacle	6.11	87	P	Pn	00 21 37.1	+0.5
	baz=277						
PINM				S	Sn	00 22 43.3	-1.9
	baz=277						
PRP	Porcupine Dome	6.12	28	P	Pn	00 21 37.3	+0.6
	baz=215						
PRP				S	Sn	00 22 42.4	-2.9
	baz=215						
PRP	Porcupine Dome	6.12	28		Pn	00 21 37.9	+1.1
BCPM	Bancas Point	6.44	88	Pn	Pn	00 21 39.8	-1.3
PNL	Peninsula	6.61	90	P	Pn	00 21 43.5	+0.2
	baz=281						
PNL				S	Sn	00 22 55.4	-1.7
	baz=281						
PNL	Peninsula	6.61	90		Pn	00 21 43.8	+0.5
YUK4	Talbot Arm	6.86	75	P	Pn	00 21 48.0	+1.2
	baz=267						
YUK4				S	Sn	00 23 02.7	-0.7
	baz=267						
EGAK	Eagle	6.89	45	P	Pn	00 21 47.2	+0.1
	baz=235						
YUK6	Outpost Mounta	6.99	79	P	Pn	00 21 49.1	+0.4
	baz=271						
COLD	Coldfoot	7.02	7	P	Pn	00 21 49.3	+0.6
	baz=190						
COLD	Coldfoot	7.02	7	Pn	Pn	00 21 49.2	+0.4
DAWY	Dawson	7.19	53	P	Pn	00 21 52.0	+0.7
	baz=244						
DAWY	Dawson	7.19	53	Pn	Pn	00 21 52.2	+1.0
HYT	Haines Junctio	7.41	80	P	Pn	00 21 54.5	+0.3
	baz=273						
BM03	Burnt Mountain	7.93	23		Pn	00 22 00.5	-0.7
BMAR	Burnt Mountain	7.95	23		Pn	00 22 01.1	-0.3
BM01	Burnt Mountain	7.97	23		Pn	00 22 01.1	-0.7
TOLK	Toolik Lake Re	8.46	7	Pn	Pn	00 22 10.2	+1.8
WHY	Whitehorse	8.71	80	Pn	Pn	00 22 11.9	+0.1
INK	Inuvik	11.44	38	P	Pn	00 22 48.5	0.0
	comp=N,0.2nm,0.3s,baz=230,slow=15,SNR=4.1						
A36M	Sachs Harbour	15.86	31	P	Pn	00 23 45.2	-0.3
	baz=237						
YKA	Yellowknife Ar	18.10	67	P	P	00 24 13.7	+1.9
	comp=N,0.1nm,0.3s,baz=287,slow=10,SNR=6.1						
RES	Resolute Bay	24.91	32	P	P	00 25 21.8	+0.7
	comp=N,0.3nm,0.4s,baz=270,slow=10,SNR=1.3						
SONM	Songino Array	54.81	306	P	P	00 29 28.3	+1.1
	comp=N,0.8nm,0.7s,baz=50,slow=7.3,SNR=5.2						
ZALV	Zalesovo Beam	57.27	324	P	P	00 29 44.4	-0.1
	comp=N,0.7nm,0.6s,baz=17,slow=6.0,SNR=2.2						

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*IDC **24** 00:35:15.4±1.2, 38°.50N×20°.52E, h0^{km}, mb3.5/6, mb1 3.6/11, mb1mx3.5/40, mbtmp3.4/11, ML3.4/5, Error ellipse: s-maj=21.3km s-min=18.8km az=70.0*

*IASPEI **24** 00:35:17.4±0.8, 38°.54N±0°.02×20°.56E±0°.03, h16^{km}±5^{km}, mb3.5/6, Error ellipse: s-maj=4.4km s-min=2.2km az=99.7, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*PDG **24** 00:35:17.3±0.5, 38°.53N×20°.53E, h19^{km}, ML3.6/7, Error ellipse: s-maj=0.9km s-min=1.3km az=0.0*

*THE **24** 00:35:17.7, 38°.54N×20°.51E, h11^{km}±1^{km}, ML3.5/10, Error ellipse: s-maj=1.1km s-min=0.3km az=302.0*

*ATH **24** 00:35:18.1, 38°.52N×20°.58E, h12^{km}±1^{km}, ML3.2/23, Error ellipse: s-maj=1.5km s-min=0.6km az=282.0*

ISC 24 00:35:17.3±0.7, **38°.54N**±0°.01×**20°.56E**±0°.02, **h14**^{km}±4^{km}, **n137**, σ1**°.61**/171, **mb3.5**/6, **14C-17D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FSK	Fiskardo	0.08	180	P	Pg	00 35 20.5	+0.3
FSK				S	Sg	00 35 22.1	0.0
	32µm,0.3s						
FSK	Fiskardo	0.08	180	P	Pg	00 35 20.5	+0.3
FSK				S	Sg	00 35 22.2	+0.1
FSK				AML	AML	00 35 22.6	
	comp=N,57238µm,0.4s						
FSK				AML	AML	00 35 23.4	
	comp=E,71448µm,0.2s						
EVGI	Lefkada island	0.11	43	P	Pb	00 35 21.0	-0.2
EVGI				S	Sg	00 35 23.3	+0.5
EVGI	Lefkada island	0.11	43	P	Pb	00 35 21.0	-0.2
EVGI				S	Sg	00 35 23.3	+0.5
DRAG	Dragano-Lefkad	0.14	4	P	Pg	00 35 21.3	+0.3
DRAG				S	Sg	00 35 24.1	+0.6
DRAG	Dragano-Lefkad	0.14	4	P	Pg	00 35 21.4	+0.3
DRAG				S	Sg	00 35 24.1	+0.6
NYDR	Nydri-Lefkada	0.20	32	P	Pg	00 35 22.4	+0.5
NYDR				S	Sb	00 35 26.0	-0.5
	comp=E,34µm,0.3s						
NYDR	Nydri-Lefkada	0.20	32	P	Pg	00 35 22.4	+0.5
NYDR				S	Sb	00 35 25.9	-0.5
LKD2	Lefkada island	0.26	17	P	Pg	00 35 23.3	+0.4
LKD2				S	Sg	00 35 26.9	+0.3
	comp=E,10µm,0.3s						
LKD2	Lefkada island	0.26	17	P	Pg	00 35 23.3	+0.4
LKD2				S	Sg	00 35 27.2	+0.6
LKD2				AML	AML	00 35 28.3	
	comp=N,21500µm,0.2s						
LKD2				AML	AML	00 35 29.9	
	comp=E,19907µm,0.2s						
TSLK	Tsoukalades, L	0.29	14	P	Pb	00 35 24.0	-0.3
TSLK				S	Sb	00 35 29.4	+0.3
	comp=E,13µm,0.5s						
TSLK	Tsoukalades, L	0.29	14	P	Pb	00 35 24.0	-0.3
TSLK				S	Sb	00 35 28.7	-0.4
TSLK				AML	AML	00 35 32.2	
	comp=E,26710µm,0.6s						
TSLK				AML	AML	00 35 34.4	
	comp=N,24631µm,0.5s						
KEF4	Livadi, Kephal	0.30	201	P	Pg	00 35 23.8	+0.3
KEF4				S	Sg	00 35 28.1	+0.3
KEF4	Livadi, Kephal	0.30	201	P	Pg	00 35 23.8	+0.3
KEF4				S	Sg	00 35 27.9	+0.2
DMLN	Damoulianata-K	0.34	206	P	Pg	00 35 24.3	+0.2
DMLN				S	Sb	00 35 29.8	-0.5
	comp=N,21µm,0.4s						
DMLN	Damoulianata-K	0.34	206	P	Pg	00 35 24.4	+0.2
DMLN				S	Sb	00 35 29.6	-0.6
LXRA	Lixouri, Kepha	0.35	196	P	Pg	00 35 24.7	+0.3
VLS	Valsamata	0.36	177	P	Pg	00 35 24.7	+0.1
VLS				S	Sb	00 35 30.8	-0.3
	comp=N,14µm,0.3s						
VLS	Valsamata	0.36	177	P	Pg	00 35 24.7	+0.1
VLS				S	Sg	00 35 30.2	+0.5
VLS				AML	AML	00 35 31.0	
	comp=N,40172µm,0.4s						
VLS				AML	AML	00 35 31.1	
	comp=E,16486µm,0.3s						
ARGA	Argostoli. Kep	0.37	190	P	Pb	00 35 25.8	+0.2
KEF3	Kipouria, Keph	0.38	207	P	Pg	00 35 24.5	-0.4
KEF3				S	Sg	00 35 29.9	-0.1
	comp=E,22µm,0.3s						
KEF3	Kipouria, Keph	0.38	207	P	Pg	00 35 24.5	-0.4
KEF3				S	Sg	00 35 29.7	-0.3
PSDA	Pessada-Kefalo	0.43	178	P	Pg	00 35 25.9	+0.1
PSDA				S	Sb	00 35 32.5	-0.3
PSDA	Pessada-Kefalo	0.43	178	P	Pg	00 35 25.9	+0.1
PSDA				S	Sb	00 35 32.2	-0.6
PVO	Paravola	0.76	84	P	Pb	00 35 32.6	+0.3
PVO				S	Sn	00 35 45.3	+0.5
	comp=E,2µm,0.5s						
PVO	Paravola	0.76	84	P	Pb	00 35 32.8	+0.5
PVO				AML	AML	00 35 54.1	
	comp=N,3591µm,0.4s						
PVO				AML	AML	00 35 58.3	
	comp=E,3328µm,0.7s						
VTN	Vitineika	0.79	142	P	Pb	00 35 33.0	+0.2
LTHK	Lithakia	0.86	165	P	Pg	00 35 33.1	-0.8
LTHK				S	Sb	00 35 46.2	+1.0
	comp=E,2µm,0.3s						
LTHK	Lithakia	0.86	165	P	Pg	00 35 33.1	-0.8
RLS	Riolos of Patr	0.86	124	P	Pb	00 35 34.4	+0.4
RLS				S	Sn	00 35 48.3	+1.0
RLS	Riolos of Patr	0.86	124	P	Pb	00 35 34.4	+0.4
RLS				AML	AML	00 35 54.7	
	comp=E,1347µm,0.5s						
RLS				AML	AML	00 35 54.9	
	comp=N,1308µm,0.5s						
IGT	Igoumenitsa	1.01	350	P	Pb	00 35 36.3	-0.2
IGT	Igoumenitsa	1.01	350	P	Pb	00 35 36.2	-0.2
IGT				AML	AML	00 35 55.6	
	comp=N,4296µm,0.4s						
IGT				AML	AML	00 35 55.8	
	comp=E,5164µm,0.4s						
EVR	Evrytania	1.04	69	P	Pb	00 35 37.4	+0.2
EVR	Evrytania	1.04	69	P	Pb	00 35 37.3	+0.2
EVR				AML	AML	00 35 59.1	
	comp=E,1317µm,0.7s						
EVR				AML	AML	00 36 00.8	
	comp=N,1478µm,0.6s						
EFP	Efpalio	1.06	96	P	Pb	00 35 37.2	-0.2
EFP	Efpalio	1.06	96	P	Pb	00 35 37.2	-0.2
EFP				AML	AML	00 36 00.8	
	comp=E,2223µm,0.6s						
EFP				AML	AML	00 36 05.5	
	comp=N,1787µm,0.4s						
ANX	Ano Chora	1.07	87	P	Pb	00 35 37.7	+0.2
ANX	Ano Chora	1.07	87	P	Pb	00 35 37.8	+0.2
ANX				AML	AML	00 36 07.9	
	comp=E,2554µm,0.5s						
ANX				AML	AML	00 36 08.3	
	comp=N,2520µm,0.9s						
DRO	Drossia	1.08	123	P	Pn	00 35 38.1	+0.1
DRO				S	Sn	00 35 55.9	+3.2
	comp=N,2µm,0.4s						
DRO	Drossia	1.08	123	P	Pn	00 35 38.1	+0.1
DRO				AML	AML	00 35 57.0	
	comp=N,3260µm,0.3s						
DRO				AML	AML	00 35 57.0	
	comp=E,4593µm,0.5s						
JAN	Janina	1.14	11	P	Pg	00 35 40.0	+0.8
JAN	Janina	1.14	11	P	Pg	00 35 40.0	+0.8
JAN				AML	AML	00 36 00.8	
	comp=E,2324µm,0.3s						
JAN				AML	AML	00 36 00.9	
	comp=N,2551µm,0.3s						
LAKA	Lakka	1.15	105	P	Pb	00 35 38.7	-0.3
LAKA	Lakka	1.15	105	P	Pb	00 35 38.7	-0.3
LAKA				AML	AML	00 36 11.7	
	comp=E,3261µm,0.5s						
LAKA				AML	AML	00 36 18.1	
	comp=N,2652µm,0.6s						
SERG	Sergoula	1.18	96	P	Pn	00 35 39.4	0.0
SERG	Sergoula	1.18	96	P	Pn	00 35 38.8	-0.6
SERG				AML	AML	00 36 05.4	
	comp=N,1401µm,0.5s						
SERG				AML	AML	00 36 16.6	
	comp=E,1120µm,0.4s						
TRIZ	Trizonia	1.20	98	P	Pn	00 35 39.7	+0.1
TRIZ	Trizonia	1.20	98	P	Pn	00 35 39.6	0.0
ALIK	Aliki, Aigiali	1.25	102	P	Pn	00 35 40.4	+0.1
KASA	Kassiopi	1.30	338	P	Pg	00 35 42.8	+0.6
KEK	Kerkira	1.31	333	P	Pb	00 35 42.2	+0.5
KEK	Kerkira	1.31	333	P	Pb	00 35 42.2	+0.5
KEK				AML	AML	00 36 06.8	
	comp=N,1754µm,0.6s						
KEK				AML	AML	00 36 08.7	
	comp=E,1420µm,0.6s						
MAKR	Makrakomi, Fth	1.31	68	P	Pb	00 35 42.2	+0.5
MAKR				AML	AML	00 36 11.5	
	comp=E,1109µm,0.6s						
MAKR				AML	AML	00 36 12.2	
	comp=N,1185µm,0.7s						
KLV	Kalavryta, Ach	1.34	111	P	Pn	00 35 41.8	+0.1
KLV	Kalavryta, Ach	1.34	111	P	Pn	00 35 41.9	+0.2
KLV				AML	AML	00 36 20.4	
	comp=E,496µm,0.8s						
KLV				AML	AML	00 36 23.3	
	comp=N,484µm,0.8s						
SRN	Sarande	1.41	342	P	Pb	00 35 43.7	+0.4
AGG	Agios Georgios	1.46	70	P	Pb	00 35 44.6	+0.3
AGG				AML	AML	00 36 13.6	
	comp=E,1771µm,0.5s						
AGG				AML	AML	00 36 18.0	
	comp=N,1238µm,0.6s						
THL	Klokotos Trika	1.52	47	P	Pb	00 35 45.8	+0.5
THL				AML	AML	00 36 12.4	
	comp=N,1256µm,0.7s						
THL				AML	AML	00 36 15.0	
	comp=E,1951µm,0.5s						
GUR	Goura	1.53	113	P	Pb	00 35 45.0	-0.4
GUR	Goura	1.53	113	P	Pb	00 35 45.0	-0.4
GUR				AML	AML	00 36 21.1	
	comp=N,1446µm,0.4s						
GUR				AML	AML	00 36 27.7	
	comp=E,1191µm,0.7s						
THAL	Thalero	1.73	106	P	Pb	00 35 49.1	+0.4
ITM	Ithomi	1.74	141	P	Pb	00 35 48.5	-0.4
ITM				AML	AML	00 36 28.0	
	comp=E,548µm,0.7s						
ITM				AML	AML	00 36 30.9	
	comp=N,474µm,0.7s						
PYL	PYLOS	1.89	150	P	Pb	00 35 51.5	-0.1
KZN	Kozani	2.00	28	P	Pb	00 35 54.2	+0.7
KZN				AML	AML	00 36 28.2	
	comp=N,325µm,0.6s						
KZN				AML	AML	00 36 37.2	
	comp=E,614µm,0.5s						
NEO	Neokhori	2.21	69	P	Pb	00 35 57.3	+0.2
NEO				AML	AML	00 36 44.5	
	comp=E,396µm,0.7s						
NEO				AML	AML	00 36 44.9	
	comp=N,414µm,0.9s						
OHR	Ohrid	2.57	4	*i* Pn	Pb	00 36 01.4	-1.9
TIR	Tirane	2.85	349	⇑P	Pn	00 35 56.2	-6.1
TIP	Timpagrande	3.04	283	⇑P	Pg	00 36 19.3	+3.8
TIP				⇑S	Sg	00 37 00.9	+6.1
VAY	Valandovo	3.18	28	*i* Pn	Pn	00 36 08.9	+2.0
STIP	Stip	3.39	21	*i* Pn	Pn	00 36 13.5	+3.8
SKO	Skopje	3.49	11	*i* Pn	Pn	00 36 07.3	-3.9
ULC	Ulcinj	3.56	344	⇓*i*Pn	Pn	00 36 12.8	+0.6
MATE	Matera	3.65	306	⇓P	Pb	00 36 18.9	-2.6
MATE				⇑S	Sn	00 36 59.3	+3.2
DRME	Dracevica, Mon	3.79	344	*e*Pn	Pn	00 36 16.4	+1.1
DRME	Dracevica, Mon	3.79	344	⇓*i*Pn	Pn	00 36 16.6	+1.3
DRME				*i* Sn	Sn	00 36 59.4	-0.3
BUM	Brajici-Budva	3.97	342	⇓*i*Pn	Pn	00 36 18.2	+0.5
BUM				*i* Sn	Sn	00 37 00.3	-3.8
PDG	Podgorica	4.01	346	⇑P	Pn	00 36 12.1	-6.2
PDG				⇑S	Sn	00 36 46.4	-19
PDG	Podgorica	4.01	346	*e*Pn	Pn	00 36 19.1	+0.8
TTG	Podgorica	4.01	346	⇓*i*Pn	Pn	00 36 19.8	+1.5
TTG				*i* Sn	Sn	00 37 04.8	-0.2
PVY	Plav	4.08	354	⇑*i*Pn	Pn	00 36 20.9	+1.6
PVY				*i* Sn	Sn	00 37 07.5	+0.6
CEME	Cevo	4.19	343	⇑*i*Pn	Pn	00 36 21.3	+0.4
CEME				*i* Sn	Sn	00 37 08.6	-1.1
HCY	Herceg Novi	4.21	339	*e*Pn	Pn	00 36 20.6	-0.5
HCY	Herceg Novi	4.21	339	⇓*i*Pn	Pn	00 36 20.5	-0.5
HCY				*i* Sn	Sn	00 37 05.8	-4.2
IVA	Berane	4.36	354	⇓*i*Pn	Pn	00 36 25.1	+2.0
IVA				*i* Sn	Sn	00 37 14.0	+0.3
KOME	Kolasin	4.38	350	⇑*i*Pn	Pn	00 36 24.6	+1.2
KOME				*i* Sn	Sn	00 37 14.1	-0.2
NKME	Niksic	4.40	344	⇓*i*Pn	Pn	00 36 23.6	0.0
TREB	Trebinje	4.50	339	*e*Pn	Pn	00 36 24.4	-0.6
DBRK	Dubrovnik	4.51	337	*e*Pn	Pn	00 36 24.8	-0.4
VTS	Vitosha	4.55	26	⇓P	Pn	00 36 19.1	-6.8
VTS				⇓S	Sn	00 36 57.0	-22
BRY	Bratogost	4.62	341	*e*Pn	Pn	00 36 26.2	-0.6
BRY	Bratogost	4.62	341	⇓*i*Pn	Pn	00 36 26.5	-0.3
BRY				*i* Sn	Sn	00 37 17.0	-3.3
IDI	Anoyia	4.75	132	Pn	Pn	00 36 29.0	+0.4
	comp=N,0.4nm,0.3s,baz=346,slow=15,SNR=2.0						
IDI				Sn	Sn	00 37 27.0	+3.6
	comp=N,0.9nm,0.3s,baz=332,slow=8.5,SNR=2.5						
UPM	Unac-Piva	4.82	345	*e*Pn	Pn	00 36 30.6	+1.0
UPM	Unac-Piva	4.82	345	⇓*i*Pn	Pn	00 36 31.0	+1.4
UPM				*i* Sn	Sn	00 37 24.9	-0.5
STON	Ston	4.84	334	*e*Pn	Pn	00 36 29.2	-0.5
STON	Ston	4.84	334	*e*Pn	Pn	00 36 29.2	-0.5
LSTV	Lastovo	5.06	328	*e*Pn	Pn	00 36 32.2	-0.5
RUDO	Rudo	5.15	350	*e*Pn	Pn	00 36 34.1	+0.1
BBLS	Lazići	5.39	351	*e*Pn	Pn	00 36 38.1	+0.8
MAKA	Makarska	5.45	332	*e*Pn	Pn	00 36 38.2	+0.2
DIVS	Divibare	5.57	356	*e*Pn	Pn	00 36 39.5	-0.3
HVAR	Hvar	5.58	327	*e*Pn	Pn	00 36 39.8	-0.1
RICI	Ricice	5.59	333	*e*Pn	Pn	00 36 39.7	-0.3
HAPS	Han Pijesak,Bl	5.67	348	*e*Pn	Pn	00 36 40.9	-0.3
MGRS	Mrkonjic Grad	6.42	337	*e*Pn	Pn	00 36 52.4	+0.9
FRGS	Fruska Gora	6.64	355	⇑P	Pn	00 36 46.3	-8.1
FRGS				⇑S	Sn	00 37 48.0	-22
FRGS	Fruska Gora	6.64	355	*e*Pn	Pn	00 36 53.8	-0.6
BLY	Banja Luka	6.70	339	*e*Pn	Pn	00 36 55.5	+0.3
BZS	Buzias	7.12	6	⇓P	Pn	00 36 52.0	-8.9
BZS				⇑S	Sn	00 37 58.9	-23
ARR	Arges	7.46	23	⇓P	Pn	00 36 58.5	-7.3
VOIR		7.66	24	⇓P	Pn	00 37 01.0	-7.4
MORH	Mrgy, Hungar	7.80	350	*e*Pn	Pn	00 37 08.5	-1.8
MLR	Muntele Rosu	8.02	28	⇑P	Pn	00 37 06.8	-6.6
MLR	Muntele Rosu	8.02	28	Pn	Pn	00 37 17.3	+3.9
	comp=N,0.1nm,0.3s,baz=242,slow=14,SNR=8.4						
CRES	Cresnjev	8.21	334	*e*Pn	Pn	00 37 15.6	-0.3
HARR	Harsova	8.26	40	⇓P	Pn	00 37 10.7	-5.8
CEY	Cerknica	8.51	330	*e*Pn	Pn	00 37 20.0	-0.1
PLOR	Plostina	8.59	30	⇓P	Pn	00 37 14.0	-7.2
VRI	Vrincioaia	8.63	30	⇑P	Pn	00 37 14.4	-7.3
SOKA	Soboth	9.09	335	*i* Pn	Pn	00 37 27.6	-0.6
	comp=N,2.1nm,0.6s						
SOKA				*e*Sn	Sn	00 39 04.2	-6.1
	comp=N,3.6nm,0.6s						
OBKA	Obir	9.11	333	*i* Pn	Pn	00 37 28.5	+0.1
	comp=N,0.9nm,0.3s						
OBKA				*e*Sn	Sn	00 39 06.7	-4.1
	comp=N,5.3nm,0.6s						
ABTA	Abfaltersbach	10.12	327	*e*Sn	Sn	00 39 31.3	-4.1
	comp=N,5.9nm,0.7s						
WTTA	Wattenberg	10.89	326	*i* Pn	Pn	00 37 53.4	+0.5
	comp=N,0.7nm,0.3s						
WTTA				*e*Sn	Sn	00 39 48.6	-6.0
	comp=N,5.6nm,0.8s						
WATA	Walderalm	10.98	326	*i* Pn	Pn	00 37 55.7	+1.8
	comp=N,1.7nm,0.4s						
FETA	Feichten	11.13	323	*e*Sn	Sn	00 39 58.2	-2.2
	comp=N,1.5nm,0.5s						
MOTA	Moosalm	11.19	325	*e*Pn	Pn	00 37 58.3	+1.4
	comp=N,1.6nm,0.5s						
MOTA				*i* Sn	Sn	00 39 58.1	-3.7
	comp=N,1.7nm,0.4s						
DAVOX	Davos/Dischmat	11.38	320	Pn	Pn	00 38 00.8	+1.3
	comp=N,0.1nm,0.3s,baz=345,slow=12,SNR=2.0						
DAVOX				Sn	Sn	00 40 03.2	-3.3
	comp=N,0.4nm,0.3s,baz=349,slow=20,SNR=3.0						
GERES	GERESS Array B	11.43	337	Pn	Pn	00 38 00.4	+0.3
	comp=N,0.1nm,0.3s,baz=154,slow=13,SNR=4.5						
GERES				Sn	Sn	00 40 01.1	-6.5
	comp=N,0.2nm,0.3s,baz=148,slow=24,SNR=3.5						
DAVA	Damuels	11.72	322	*e*Sn	Sn	00 40 10.8	-4.1
	comp=N,5.3nm,0.7s						
ESDC	Sonseca Array	19.06	281	P	Pn	00 39 40.1	+0.2
	comp=N,0.0nm,0.3s,baz=84,slow=11,SNR=4.6						
HFS	Hagfors	22.05	351	P	P	00 40 12.4	+1.1
	comp=N,1.7nm,0.5s,baz=170,slow=9.0,SNR=8.1						
FINES	FINESS Array B	23.18	7	P	P	00 40 23.2	0.0
	comp=N,1.1nm,0.6s,baz=183,slow=10,SNR=8.3						
NOA	NORSAR Array B	23.27	348	P	P	00 40 24.7	+0.6
	comp=N,0.6nm,0.6s,baz=154,slow=11,SNR=1.2						
TORD	Torodi Ar. Bea	30.33	219	P	P	00 41 28.4	-0.1
	comp=N,0.3nm,0.5s,baz=31,slow=8.7,SNR=3.1						
MKAR	Makanchi Array	45.09	59	P	P	00 43 32.5	-0.3
	comp=N,0.2nm,0.7s,baz=276,slow=6.0,SNR=1.3						
ZALV	Zalesovo Beam	45.43	48	P	P	00 43 34.3	-1.0
	comp=N,0.8nm,0.4s,baz=273,slow=9.8,SNR=4.4						

IDC 24 00:38:37.2±5.7, **30°.28S**×**177°.08W**, **h0**^{km}, **mb3.9**/3, **mb1 4.1**/3, **mb1mx3.8**/22, **mbtmp3.9**/3, **Error ellipse: s-maj=227.9km s-min=48.3km az=151.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	35.28	257	P	P	00 45 35.0	+1.2
	0.5nm,0.3s,baz=110,slow=15,SNR=1.7						

ASAR	Alice Springs	43.91	266	P	P	00 46 45.5	-0.5
	1.1nm,0.5s,baz=105,slow=7.2,SNR=26						
WRA	Warramunga Arr	44.89	272	P	P	00 46 52.3	-1.5
	0.9nm,0.4s,baz=109,slow=7.2,SNR=18						
FINES	FINESS Array B	145.31	341	PKPbc	PKPdf	00 58 16.5	+0.2
	1.4nm,0.5s,baz=48,slow=3.4,SNR=18						

MAN 24 00:48:59.9, 16°.96N×122°.87E, h17km, mb4.2, ML3.0, MS2.6, Luzon

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*TUL **24** 00:54:18.2±1.3, 36°.82N±0°.02×98°.29W±0°.04, h6km±6km, ML3.5, mb_Lg3.5/104(NEIC), Mwr3.3/10(SLM), Error ellipse: s-maj=4.1km s-min=2.0km az=84.0*

*NEIC **24** 00:54:18.2, 36°.82N×98°.29W, h5km, Moment Tensor Solution. Moment tensor: Scale 10^{13}Nm; M_{rr}-4.69; $M_{\theta\theta}$8.98; $M_{\phi\phi}$-4.29; $M_{r\theta}$-0.82; $M_{\theta\phi}$2.51; $M_{\phi r}$4.65; Fault plane solution: $M_0$9.44000×10^{13} NP1:ϕ_s115.00000°, δ60.00000°, λ-35.00000°. NP2:ϕ_s224.00000°, δ60.00000°, λ-145.00000°. Principal axes: T 9.4390, Plg0.0000°, Azm350.0000°; N 0.0023, Plg45.0000°, Azm259.0000°; P -9.4412, Plg45.0000°, Azm80.0000°;*

*ANF **24** 00:54:18.7±0.5, 36°.84N×98°.25W, h0km, ML4.4/13 Error ellipse: s-maj=5.4km s-min=4.6km az=80.0*

*NEIC **24** 00:54:19.0±1.5, 36°.82N±0°.02×98°.24W±0°.02, h5km±1km, Error ellipse: s-maj=3.2km s-min=2.9km az=224.0*

ISC 24 00:54:18.9±0.9**, 36°.79N**±0°.02×**98°.28W**±0°.02**, h7**km±6km**, n118,** σ1ˢ41/97**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK032	Salt Plains WL	0.06	75	Pg	Pg	00 54 20.2	-0.4
OK032				Sg	Sg	00 54 21.7	-0.1
KAN14	Manchester OK	0.30	56		Pg	00 54 24.4	-0.5
KAN14				Sg	Sg	00 54 28.8	0.0
GC02	Grant County #	0.34	79	Pg	Pg	00 54 25.2	-0.4
GC02				Sg	Sg	00 54 30.1	0.0
KAN10	Anthony SW Sta	0.36	24	Pg	Pg	00 54 25.1	-0.9
KAN10				Sg	Sg	00 54 30.6	-0.3
CROK	Carrier	0.37	140	Pg	Pg	00 54 26.0	0.0
CROK				Sg	Sg	00 54 31.8	+0.8
KAN05	Bluff City Nor	0.46	45		Pg	00 54 27.1	-0.6
KAN05				Sg	Sg	00 54 33.3	-0.3
KAN16	Harper SW Stat	0.47	21		Pg	00 54 27.2	-0.8
KAN16				Sg	Sg	00 54 33.5	-0.6
KAN17	Caldwell West	0.48	58		Pg	00 54 27.7	-0.6
KAN17				Sg	Sg	00 54 34.5	-0.1
KAN08	Anthony NE Sta	0.50	29	Pg	Pg	00 54 27.5	-1.1
KAN08				Sg	Sg	00 54 34.9	-0.2
KAN01	Argonia South	0.55	49		Pg	00 54 28.9	-0.6
KAN01				Sg	Sg	00 54 36.3	-0.4
KAN12	Harper NE Stat	0.55	24	Pg	Pg	00 54 28.8	-0.8
KAN12				Sg	Sg	00 54 36.7	-0.2
KAN06	Argonia West S	0.57	36		Pg	00 54 29.0	-0.8
KAN06				Sg	Sg	00 54 36.6	-0.6
KAN09	Caldwell North	0.63	57		Pg	00 54 30.3	-0.7
KAN13	South Haven SW	0.68	71		Pg	00 54 31.2	-0.7
U32A	Winter Ranch,	0.71	235	Pg	Pg	00 54 32.0	-0.6
U32A	Winter Ranch,	0.71	235	P	Pg	00 54 32.0	-0.6
	baz=52,SNR=179						
BLOK	Blackwell	0.85	92	Pg	Pg	00 54 34.4	-0.9
OK029	Liberty Lake	1.19	146	Pn	Pg	00 54 40.6	-1.1
BCOK	Bluff Creek, N	1.25	154	Pn	Pn	00 54 41.7	-1.1
OK033	Mehan	1.31	124	Pn	Pn	00 54 42.8	-0.8
QUOK	Quay	1.41	116	Pn	Pn	00 54 44.3	-0.6
T35A	Sooner Cattle	1.42	84	Pn	Pn	00 54 44.4	-0.7
T35B	Sooner Cattle	1.42	84	P	Pn	00 54 44.6	-0.5
	baz=267						
T35B				S	Sb	00 55 03.3	-0.7
	baz=267						
OK025	Westminster Rd	1.43	148		Pn	00 54 44.5	-0.6
OK025				IAmb_Lg		00 55 06.7	
	comp=Z,234nm,0.8s						
OK031	S. Brethren Rd	1.43	125		Pn	00 54 44.5	-0.6
OK034	N. Norfolk Rd.	1.48	121	Pn	Pn	00 54 45.5	-0.4
OKCFA	Oklahoma City	1.52	154		Pn	00 54 46.4	-0.2
OKCFA	Oklahoma City	1.52	154	P	Pn	00 54 46.4	-0.2
	baz=335,SNR=12						
OKCFA				S	Sb	00 55 07.5	+0.6
	baz=335						
OKCSW	OKLAHOMA CITY	1.54	154		Pn	00 54 46.6	-0.1
R32A	Long Quarter,	1.67	348	Pn	Pn	00 54 48.2	-0.2
R32A	Long Quarter,	1.67	348	P	Pn	00 54 48.3	-0.2
	baz=168,SNR=68						
R32A				S	Sn	00 55 10.2	+0.1
	baz=168						
FNO	Franklin	1.69	155	IAmb_Lg		00 55 14.4	
	comp=Z,158nm,0.9s						
W35A	Tecumseh	1.99	145		Pn	00 54 53.3	+0.4
W35A				IAmb_Lg		00 55 25.4	
	comp=Z,176nm,0.7s						
WMOK	Wichita Mounta	2.09	191	P	Pn	00 54 55.0	+0.7
	baz=11						
WMOK				S	Sb	00 55 23.5	+0.4
	baz=11						
WMOK	Wichita Mounta	2.09	191		Pn	00 54 55.2	+0.9
WMOK	Wichita Mounta	2.09	191	P	Pn	00 54 55.0	+0.7
	baz=11,SNR=74						
WMOK				S	Sb	00 55 22.4	-0.7
	baz=11						
TUL1	Leonard	2.19	113	P	Pn	00 54 56.8	+1.2
	baz=295						
TUL1				S	Sb	00 55 26.3	+0.2
	baz=295						
TUL1	Leonard	2.19	113		Pn	00 54 56.5	+0.9
TUL1	Leonard	2.19	113	P	Pn	00 54 56.9	+1.2
	baz=295,SNR=60						
TUL1				S	Sb	00 55 26.1	0.0
	baz=295						
X34A	Smith Ranch, M	2.21	170		Pn	00 54 57.0	+1.0
X34A				IAmb_Lg		00 55 34.4	
	comp=Z,234nm,0.7s						
CBKS	Cedar Bluff	2.33	331	P	Pn	00 54 59.0	+1.4
	baz=150						
CBKS				S	Sb	00 55 29.5	-0.7
	baz=150						
CBKS	Cedar Bluff	2.33	331		Pn	00 54 58.3	+0.7
CBKS	Cedar Bluff	2.33	331	P	Pn	00 54 57.4	-0.2
	baz=150						
CBKS				S	Sb	00 55 29.4	-0.7
	baz=150						
KSU1	Kansas State U	2.66	29	Sb	Sb	00 55 40.6	+1.0
	baz=211						
KSU1	Kansas State U	2.66	29	Pn	Pn	00 55 02.9	+0.8
KSU1				IAmb_Lg		00 55 46.3	
	comp=Z,152nm,0.9s						
KSU1	Kansas State U	2.66	29	Sb	Sb	00 55 41.1	+1.5
	baz=211						
LOOK	Love County	2.93	162	Pn	Pn	00 55 06.2	+0.4
LOOK				IAmb_Lg		00 55 57.7	
	comp=Z,98nm,0.8s						
U38A	Gravette	3.15	95		Pn	00 55 08.9	0.0
U38A				IAmb_Lg		00 56 06.0	
	comp=Z,115nm,0.8s						
U38A	Gravette	3.15	95	P	Pn	00 55 08.8	0.0
	baz=278						
X37A	Clayton	3.23	132	Pn	Pn	00 55 10.1	+0.2
X37A	Clayton	3.23	132	P	Pn	00 55 10.3	+0.4
	baz=314,SNR=35						
X37A				S	Sn	00 55 49.7	+1.1
	baz=314						
AMTX	Amarillo	3.36	236	Pb	Pb	00 55 19.4	+0.7
	baz=54						
AMTX	Amarillo	3.36	236		Pn	00 55 12.7	+0.9
AMTX				IAmb_Lg		00 56 12.7	
	comp=Z,124nm,0.7s						
HHAR	Hobbs	3.53	97	IAmb_Lg		00 56 13.6	
	comp=Z,94nm,0.7s						
Z35A	Perchaven, San	3.55	166		Pn	00 55 14.7	+0.3
W39A	Magazine	3.98	112	Sb	Sg	00 56 23.8	-2.7
	baz=295						
W39A	Magazine	3.98	112		Pn	00 55 20.7	+0.5
S39A	Bolivar	4.05	76	P	Pn	00 55 21.4	+0.1
	baz=259,SNR=32						
KSCO	Kaye Shedlock’	4.09	304	IAmb_Lg		00 56 30.9	
	comp=Z,76nm,0.8s						
ABTX	Abilene, Hawle	4.30	196	IAmb_Lg		00 56 36.8	
	comp=Z,78nm,0.8s						
U40A	Yellville	4.39	94	P	Pn	00 55 27.4	+1.5
	baz=278						
U40A	Yellville	4.39	94	IAmb_Lg		00 56 36.4	
	comp=Z,106nm,0.9s						
U40A	Yellville	4.39	94	P	Pn	00 55 25.9	0.0
	baz=278,SNR=22						
U40A				P	Pn	00 55 25.9	0.0
	baz=278,SNR=22						
MIAR	Mount Ida	4.43	119	IAmb_Lg		00 56 38.3	
	comp=Z,74nm,0.8s						
MIAR	Mount Ida	4.43	119	P	Pn	00 55 26.8	+0.3
	baz=302,SNR=16						
Z38A	Mt. Pleasant	4.44	142	IAmb_Lg		00 56 49.6	
	comp=Z,87nm,0.7s						
BGNE	Belgrade	4.61	1	P	Pn	00 55 28.7	-0.3
	baz=181						
BGNE	Belgrade	4.61	1	P	Pn	00 55 28.8	-0.2
	baz=181,SNR=12						
MSTX	Muleshoe	4.63	234	Sb	Sg	00 56 45.4	-2.0
	baz=51						
MSTX	Muleshoe	4.63	234	IAmb_Lg		00 56 50.1	
	comp=Z,74nm,1.0s						
P38A	Dawn	4.69	51	IAmb_Lg		00 56 48.3	
	comp=Z,67nm,0.8s						
P38A	Dawn	4.69	51	P	Pn	00 55 29.7	-0.3
	baz=235,SNR=9.3						
MGMO	Mountain Grove	4.83	84	IAmb_Lg		00 57 00.7	
	comp=Z,55nm,0.8s						
WHTX	Lake Whitney,	4.83	172	Sb	Sb	00 56 48.5	+6.3
	baz=352						
T25A	Trinidad	4.92	276	P	Pn	00 55 33.5	0.0
	baz=92						
T25A				Sb	Sb	00 56 50.3	+5.2
	baz=92						
X40A	Basin Creek Fa	4.99	116	P	Pn	00 55 35.2	+1.1
	baz=299						
X40A	Basin Creek Fa	4.99	116	IAmb_Lg		00 57 02.6	
	comp=Z,124nm,0.8s						
FCAR	Ozark Folk Cen	5.05	98	IAmb_Lg		00 57 02.0	
	comp=Z,55nm,0.8s						
WHAR	Wooly Hollow	5.08	105	IAmb_Lg		00 57 13.5	
	comp=Z,59nm,0.8s						
OGNE	Ogallala	5.08	326	IAmb_Lg		00 56 57.0	
	comp=Z,86nm,0.7s						
W41B	Gary Mavity, V	5.15	106	Sb	Sb	00 56 57.0	+5.8
	baz=290						
237A	Washetta, Mont	5.19	156	IAmb_Lg		00 57 16.1	
	comp=Z,54nm,0.9s						
WLAR	White Oak Lake	5.24	125	IAmb_Lg		00 57 11.3	
	comp=Z,99nm,0.7s						
N38A	Joes South For	5.61	43	P	Pn	00 55 42.1	-0.5
	baz=226,SNR=8.0						
P40A	Paris	5.62	59	IAmb_Lg		00 57 17.4	
	comp=Z,107nm,0.8s						
Z41A	Richland Creek	5.71	127	S	Sn	00 56 47.3	-2.4
	baz=310						
CCM	Cathedral Cave	5.74	75	P	Pn	00 55 45.1	+0.7
	baz=260						
CCM	Cathedral Cave	5.74	75	IAmb_Lg		00 57 24.0	
	comp=Z,82nm,1.1s						
T42A	Van Buren	5.76	85	IAmb_Lg		00 57 23.2	
	comp=Z,53nm,0.8s						
K31A	O'Neill	5.84	357	IAmb_Lg		00 57 24.1	
	comp=Z,89nm,0.7s						
SDCO	Great Sand Dun	5.84	282	P	Pn	00 55 46.9	+0.8
	baz=97						
435B	Jarrell	6.02	174	Sb	Sg	00 57 27.0	-5.1
	baz=355						
435B	Jarrell	6.02	174	IAmb_Lg		00 57 32.9	
	comp=Z,67nm,0.8s						
CCAR	Cane Creek	6.04	116	IAmb_Lg		00 57 39.1	
	comp=Z,101nm,0.8s						
FVM	French Village	6.36	77	IAmb_Lg		00 57 49.7	
	comp=Z,46nm,0.7s						
SCIA	State Center	6.44	36	IAmb_Lg		00 57 54.9	
	comp=Z,66nm,0.7s						
SLM	Saint Louis	6.63	71	IAmb_Lg		00 57 54.6	
	comp=Z,46nm,0.8s						
143A	Socs Landing,	6.97	124	IAmb_Lg		00 58 16.7	
	comp=Z,50nm,0.9s						
N41A	Harden Midland	7.00	54	IAmb_Lg		00 58 13.3	
	comp=Z,73nm,0.8s						
ECSD	EROS Data Cent	7.05	10	P	Pn	00 56 01.0	-1.4
	baz=191						
ECSD	EROS Data Cent	7.05	10	IAmb_Lg		00 57 59.9	
	comp=Z,32nm,0.9s						
K38A	Parkersburg	7.23	34	IAmb_Lg		00 58 20.0	
	comp=Z,76nm,0.8s						
S44A	Carbondale	7.25	80	IAmb_Lg		00 58 14.4	
	comp=Z,70nm,0.7s						
SIUC	Southern Illin	7.29	80	IAmb_Lg		00 58 08.5	
	comp=Z,73nm,0.7s						
Y22D	IRIS PASSCAL I	7.56	252	IAmb_Lg		00 58 34.0	
	comp=Z,64nm,1.0s						
L40A	Anamosa	7.58	44	IAmb_Lg		00 58 28.0	
	comp=Z,55nm,0.7s						
Q44A	Meyer Farm, Va	7.62	71	IAmb_Lg		00 58 26.0	
	comp=Z,66nm,1.0s						
SUSD	Miller	7.66	356	IAmb_Lg		00 58 35.1	
	comp=Z,71nm,1.2s						
Y45A	Yeager Farm, C	7.71	110	IAmb_Lg		00 58 31.3	
	comp=Z,56nm,0.8s						
MNTX	Cornudas Mount	7.77	231	IAmb_Lg		00 58 34.4	
	comp=Z,28nm,0.7s						
I37A	Lemond, Waseca	8.12	26	IAmb_Lg		00 58 52.2	
	comp=Z,59nm,1.1s						
O44A	Mansfield	8.39	63	IAmb_Lg		00 58 55.9	
	comp=Z,45nm,0.8s						
L42A	Oliver, Polo	8.46	49	IAmb_Lg		00 58 56.1	
	comp=Z,45nm,0.7s						
RWWY	Rawlins	8.48	308	IAmb_Lg		00 58 57.8	
	comp=Z,26nm,0.8s						
K22A	Casper	8.64	315	IAmb_Lg		00 59 09.1	
	comp=Z,50nm,1.2s						
146A	Union	8.64	116	IAmb_Lg		00 59 09.2	
	comp=Z,33nm,0.8s						
JFWS	Jewell Farm	8.69	43	IAmb_Lg		00 58 57.2	
	comp=Z,63nm,0.8s						
E28A	Huff	9.94	350	IAmb_Lg		00 59 60.0	
	comp=Z,25nm,1.0s						

MAN 24 00:55:53.4, 17°.06N×122°.84E, h1km, mb4.7, ML3.6, MS3.5, Luzon

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NOU 24 00:56:04.5, 17°.58S×168°.15E, h16km, MLv3.7/4, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	0.15	166	P	Pb	00 56 09.6	+0.7
RTV	Rentapao	0.34	129	P	Pb	00 56 12.7	+0.6

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*TUL **24** 01:13:55.2±0.8, 36°.81N±0°.02×98°.28W±0°.04, h7km±7km, ML3.1, mb_Lg2.8/36(NEIC), Error ellipse: s-maj=5.0km s-min=2.0km az=120.0*

NEIC 24 01:13:55.6±0.8**, 36°.82N**±0°.04×**98°.26W**±0°.05**, h12**km±6km**, Error ellipse: s-maj=6.3km s-min=5.3km az=177.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK032	Salt Plains WL	0.05	116	Pg	Pg	01 13 57.1	-0.8
OK032				Sg	Sg	01 13 58.4	-1.2
KAN14	Manchester OK	0.27	61		Pg	01 14 01.3	+0.1
KAN14				Sg	Sg	01 14 05.5	+0.5
GC02	Grant County #	0.32	85	Pg	Pg	01 14 02.1	0.0
GC02				Sg	Sg	01 14 07.0	+0.5
KAN10	Anthony SW Sta	0.33	24	Pg	Pg	01 14 02.4	+0.2
KAN10				Sg	Sg	01 14 07.3	+0.6
CROK	Carrier	0.39	145	Pg	Pg	01 14 02.9	-0.4
CROK				Sg	Sg	01 14 08.5	0.0
KAN05	Bluff City Nor	0.42	48		Pg	01 14 03.7	-0.3
KAN17	Caldwell West	0.46	61		Pg	01 14 04.5	-0.1
KAN08	Anthony NE Sta	0.46	30	Pg	Pg	01 14 04.5	-0.2
KAN01	Argonia South	0.52	51		Pg	01 14 05.7	0.0
KAN06	Argonia West S	0.53	37		Pg	01 14 06.0	0.0
KAN09	Caldwell North	0.60	59		Pg	01 14 07.0	-0.3
KAN13	South Haven SW	0.66	73		Pg	01 14 08.0	-0.3
U32A	Winter Ranch,	0.74	233	Pg	Pg	01 14 09.0	-1.0
BLOK	Blackwell	0.84	94	Pg	Pg	01 14 11.3	-0.5
OK029	Liberty Lake	1.22	147	Pg	Pn	01 14 17.5	-0.9
BCOK	Bluff Creek, N	1.28	155		Pn	01 14 18.4	-0.8
T35A	Sooner Cattle	1.41	86		Pn	01 14 21.3	+0.3
QUOK	Quay	1.41	117		Pn	01 14 21.4	+0.3
OK031	S. Brethren Rd	1.44	127		Pn	01 14 21.4	0.0
OK025	Westminster Rd	1.45	149	Pn	Pn	01 14 21.7	+0.1
OK025				IAmb_Lg		01 14 43.9	
	comp=Z,40nm,0.8s						
OK030	Cody Creek RV	1.49	126		Pn	01 14 22.1	-0.1
OKCFA	Oklahoma City	1.55	155	Pn	Pn	01 14 23.1	+0.1
OKCSW	OKLAHOMA CITY	1.56	155		Pn	01 14 23.2	0.0
R32A	Long Quarter,	1.64	348		Pn	01 14 24.9	+0.7
FNO	Franklin	1.71	156	Pn	Pn	01 14 25.1	-0.1
WMOK	Wichita Mounta	2.12	192		Pn	01 14 31.3	+0.4
TUL1	Leonard	2.19	114		Pn	01 14 31.9	+0.1
TUL1				IAmb_Lg		01 15 06.8	
	comp=Z,44nm,0.7s						
X34A	Smith Ranch, M	2.25	171		Pn	01 14 32.4	-0.2
CBKS	Cedar Bluff	2.30	330		Pn	01 14 33.3	-0.1
KSU1	Kansas State U	2.62	29	IAmb_Lg		01 15 20.0	
	comp=Z,25nm,0.8s						
LOOK	Love County	2.96	162	Pn	Pn	01 14 42.2	-0.2
U38A	Gravette	3.14	96	Pn	Pn	01 14 45.7	+0.8
X37A	Clayton	3.24	133	Pn	Pn	01 14 46.8	+0.6
AMTX	Amarillo	3.38	236	Pn	Pn	01 14 48.7	+0.4
AMTX				IAmb_Lg		01 15 42.9	
	comp=Z,17nm,0.9s						
HHAR	Hobbs	3.52	98	Pn	Pn	01 14 50.2	+0.1
S39A	Bolivar	4.03	76	Pn	Pn	01 14 57.7	+0.6
ABTX	Abilene, Hawle	4.34	196	IAmb_Lg		01 16 16.8	
	comp=Z,16nm,1.0s						
U40A	Yellville	4.38	95		Pn	01 15 01.7	-0.2
U40A				IAmb_Lg		01 16 13.3	
	comp=Z,22nm,0.9s						
Z38A	Mt. Pleasant	4.46	142	IAmb_Lg		01 16 23.9	
	comp=Z,14nm,0.7s						
P38A	Dawn	4.66	52	Pn	Pn	01 15 06.1	+0.4
T25A	Trinidad	4.93	275	IAmb_Lg		01 16 38.4	
	comp=Z,21nm,0.8s						
R40A	Maddies Statio	4.98	71	Pn	Pn	01 15 09.9	-0.2
X40A	Basin Creek Fa	5.00	116	IAmb_Lg		01 16 38.3	
	comp=Z,21nm,0.8s						
OGNE	Ogallala	5.06	326	Pn	Pn	01 15 10.5	-0.8
OGNE				IAmb_Lg		01 16 35.6	
	comp=Z,17nm,0.8s						
WLAR	White Oak Lake	5.25	125	IAmb_Lg		01 16 51.9	
	comp=Z,20nm,0.8s						
N38A	Joes South For	5.58	43	IAmb_Lg		01 16 57.9	
	comp=Z,16nm,0.8s						
T42A	Van Buren	5.75	86	IAmb_Lg		01 17 00.6	
	comp=Z,16nm,1.0s						
LCAR	Lake Charles	5.78	95	IAmb_Lg		01 16 57.8	
	comp=Z,10nm,0.7s						
435B	Jarrell	6.05	174	IAmb_Lg		01 17 11.4	
	comp=Z,10nm,0.7s						
PBMO	Poplar Bluff	6.29	88	IAmb_Lg		01 17 13.9	
	comp=Z,15nm,0.7s						
FVM	French Village	6.34	77	IAmb_Lg		01 17 26.8	
	comp=Z,9.8nm,0.7s						
S44A	Carbondale	7.24	80	IAmb_Lg		01 17 44.2	
	comp=Z,13nm,0.7s						

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*SOME **24** 01:15:11.4, 41°.88N×77°.13E, h10km*

*KRNET **24** 01:15:11.3±0.1, 41°.86N×77°.12E, h19km, mb3.3*

*KNET **24** 01:15:12.8±0.3, 41°.97N×77°.04E, h12km±1km, ml2.2, Error ellipse: s-maj=5.9km s-min=1.7km az=26.0*

*NNC **24** 01:15:12.8±0.7, 41°.94N×77°.11E, h0km, mb3.7, mpv3.6, Error ellipse: s-maj=4.7km s-min=3.1km az=175.0*

ISC 24 01:15:12.2±1.1**, 41°.91N**±0°.03×**77°.10E**±0°.02**, h8**km±9km**, n82,** σ1ˢ**17**/151**, 41C-28D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDJ	Kajisay	0.22	15	⇑iP	Pg	01 15 17.0	+0.2
	baz=12						
KDJ				⇑iS	Sg	01 15 21.2	+1.3
	baz=12						
TARG	Taragay, Kyrgy	0.56	109	⇑iP	Pg	01 15 21.3	-1.7
	baz=4.0						
TARG				⇑iS	Sg	01 15 28.7	-1.7
	baz=4.0						
ULHL	Ulahol	0.72	298	⇑P	Pg	01 15 25.4	-0.8
	15nm,0.1s,SNR=14						
ULHL				⇑S	Sg	01 15 35.9	+0.3
	71nm,0.1s						
ULHL	Ulahol	0.72	298	⇓iP	Pg	01 15 25.5	-0.7
	baz=1.0						
ULHL				⇓iS	Sg	01 15 36.0	+0.4
	baz=1.0						
ANVS	Anan'yevo	0.96	25	⇑iP	Pg	01 15 30.2	-0.6
	baz=24						
ANVS				⇑iS	Sb	01 15 44.1	-0.2
	baz=24						
BOOM	Boomskoye usch	1.04	304	⇑iP	Pg	01 15 31.2	-1.0
	baz=7.0						
BOOM				⇑iS	Sg	01 15 45.8	+0.1
	baz=7.0						
PRZ	Przheval'sk	1.12	59	⇑iP	Pb	01 15 32.5	-1.4
	baz=56						
PRZ				⇑iS	Sb	01 15 48.1	-0.7
	baz=56						
TNSS	Tian-Shan	1.13	354	⇓eP	Pb	01 15 33.5	-0.8
	77nm,0.2s						
TNSS				eS	Sn	01 15 49.4	-1.3
	35nm,0.1s						
TNSS	Tian-Shan	1.13	354	P	Pb	01 15 33.5	-0.8
	77nm,0.2s						
TNSS				S	Sn	01 15 49.4	-1.3
	40nm,0.4s						
TNSS	Tian-Shan	1.13	354	⇓eP	Pb	01 15 33.5	-0.8
	baz=54						
TNSS				⇓eS	Sn	01 15 49.4	-1.3
	baz=54						
MDOK	Medeo	1.25	358	⇑eP	Pn	01 15 35.4	-0.7
	54nm,0.0s						
MDOK				eS	Sg	01 15 52.2	-0.2
	18nm,0.1s						
MDOK	Medeo	1.25	358	⇑P	Pn	01 15 35.2	-0.9
	19nm,0.3s						
MDOK				⇓S	Sg	01 15 52.2	-0.2
	18nm,0.6s						
MDOK	Medeo	1.25	358	Pg	Pn	01 15 35.5	-0.7
	61nm,0.3s						
MDOK				Lg	Lg	01 15 52.2	
	25nm,0.5s						
MDOK	Medeo	1.25	358	⇑eP	Pn	01 15 35.4	-0.7
	baz=58						
MDOK				⇑eS	Sg	01 15 52.2	-0.2
	baz=58						
AAA	Alma-Ata	1.30	354	eP	Pb	01 15 36.9	-0.1
	172nm,0.1s						
AAA				eS	Sg	01 15 55.1	+0.9
	63nm,0.1s						
AAA	Alma-Ata	1.30	354	P	Pb	01 15 36.9	-0.1
	172nm,0.3s						
AAA				S	Sg	01 15 55.1	+0.9
	93nm,0.3s						
AAA	Alma-Ata	1.30	354	eP	Pb	01 15 36.9	-0.1
	baz=54						
AAA				eS	Sg	01 15 55.1	+0.9
	baz=54						
KNDC	Almaty	1.31	356	⇓P	Pb	01 15 36.9	-0.2
	49nm,0.3s						
KNDC				⇑S	Sg	01 15 55.5	+1.2
	47nm,0.4s						
MTBS	Maitube	1.31	338	⇓eP	Pn	01 15 36.6	-0.4
	33nm,0.3s						
MTBS				eS	Sg	01 15 54.8	+0.3
	47nm,0.0s						
MTBS	Maitube	1.31	338	P	Pn	01 15 36.6	-0.4
	33nm,0.3s						
MTBS				S	Sg	01 15 54.8	+0.3
	50nm,0.2s						
MTBS	Maitube	1.31	338	⇓eP	Pn	01 15 36.6	-0.4
	baz=39						
MTBS				⇓eS	Sg	01 15 54.8	+0.3
	baz=39						
KOTS	Kotyrbulak	1.32	0	eP	Pb	01 15 37.0	-0.3
	184nm,0.1s						
KOTS				eS	Sg	01 15 55.1	+0.4
	53nm,0.2s						
KOTS	Kotyrbulak	1.32	0	P	Pb	01 15 37.0	-0.3
	182nm,0.2s						
KOTS				S	Sg	01 15 55.1	+0.4
	53nm,0.2s						
KOTS	Kotyrbulak	1.32	0	eP	Pb	01 15 37.1	-0.3
	baz=60						
KOTS				eS	Sg	01 15 55.2	+0.5
	baz=60						
KST	Kastek	1.41	324	eP	Pn	01 15 38.3	-0.1

	30nm,0.2s						
KST				eS	Sg	01 15 57.7	+0.1
	37nm,0.3s						
KST	Kastek	1.41	324	P	Pn	01 15 38.2	-0.1
	30nm,0.2s						
KST				S	Sg	01 15 57.7	+0.1
	37nm,0.3s						
KST	Kastek	1.41	324	eP	Pn	01 15 38.3	-0.1
	baz=25						
KST				eS	Sg	01 15 57.7	+0.1
	baz=25						
SATY	Saty	1.50	40	eP	Pn	01 15 39.6	0.0
	32nm,0.2s						
SATY				eS	Sg	01 15 59.9	-0.4
	143nm,0.1s						
SATY	Saty	1.50	40	P	Pn	01 15 39.6	0.0
	32nm,0.2s						
SATY				S	Sg	01 15 59.9	-0.4
	143nm,0.1s						
SATY	Saty	1.50	40	eP	Pn	01 15 39.6	0.0
	baz=38						
SATY				eS	Sg	01 16 00.0	-0.4
	baz=38						
TKM2	Tokmak 2	1.50	313	⇑P	Pn	01 15 39.8	+0.1
	10nm,0.1s,SNR=12						
TKM2				⇓S	Sg	01 16 00.6	0.0
	51nm,0.1s						
TKM2	Tokmak 2	1.50	313	⇓P	Pn	01 15 39.8	+0.1
	3.4nm,0.3s						
TKM2				⇓S	Sg	01 16 00.5	0.0
	14nm,0.2s						
TKM2	Tokmak 2	1.50	313	⇑iP	Pn	01 15 39.5	-0.2
	baz=14						
TKM2				⇑iS	Sg	01 16 00.3	-0.3
	baz=14						
DGS	Degeres	1.65	324	⇓eP	Pb	01 15 42.5	-0.4
	12nm,0.1s						
DGS				eS	Sg	01 16 04.6	-0.7
	58nm,0.2s						
DGS	Degeres	1.65	324	P	Pb	01 15 42.6	-0.4
	15nm,0.4s						
DGS				S	Sg	01 16 04.6	-0.7
	58nm,0.2s						
DGS	Degeres	1.65	324	⇓eP	Pb	01 15 42.6	-0.4
	baz=25						
DGS				⇓eS	Sg	01 16 04.6	-0.7
	baz=25						
KURS	Kuram	1.76	26	eP	Pb	01 15 44.4	-0.4
	12nm,0.5s						
KURS				eS	Sg	01 16 07.6	-1.2
	15nm,0.3s						
KURS	Kuram	1.76	26	P	Pb	01 15 44.4	-0.4
	12nm,0.5s						
KURS				S	Sg	01 16 07.6	-1.2
	15nm,0.3s						
KURS	Kuram	1.76	26	eP	Pb	01 15 44.4	-0.4
	baz=25						
KURS				eS	Sg	01 16 07.6	-1.2
	baz=25						
KBK	Karagaybulak	1.76	296	⇓P	Pb	01 15 44.3	-0.6
	5.0nm,0.1s,SNR=16						
KBK				⇑S	Sg	01 16 08.6	-0.3
	13nm,0.2s						
KBK	Karagaybulak	1.76	296	⇓iP	Pn	01 15 43.8	+0.6
	baz=97						
KBK				⇓iS	Sb	01 16 07.7	+0.4
	baz=97						
KTBS	Karatobe	1.82	350	eP	Pb	01 15 45.7	-0.2
	11nm,0.1s						
KTBS				eS	Sg	01 16 09.8	-1.1
	41nm,0.3s						
KTBS	Karatobe	1.82	350	P	Pb	01 15 45.7	-0.2
	17nm,0.2s						
KTBS				S	Sg	01 16 09.8	-1.1
	41nm,0.3s						
KTBS	Karatobe	1.82	350	eP	Pb	01 15 45.7	-0.2
	baz=50						
KTBS				eS	Sg	01 16 09.8	-1.1
	baz=50						
UZB	Uzynbulak	1.88	48	eP	Pb	01 15 46.0	-0.9
	29nm,0.1s						
UZB				eS	Sb	01 16 10.3	-0.3
	33nm,0.3s						
UZB	Uzynbulak	1.88	48	P	Pb	01 15 46.0	-0.9
	30nm,0.4s						
UZB				S	Sb	01 16 10.3	-0.3
	33nm,0.3s						
UZB	Uzynbulak	1.88	48	eP	Pb	01 15 46.0	-0.9
	baz=47						
UZB				eS	Sb	01 16 10.3	-0.3
	baz=47						
KPKS	Kokpek	1.94	36	eP	Pb	01 15 47.9	0.0
	42nm,0.1s						
KPKS				eS	Sg	01 16 13.6	-1.0
	126nm,0.2s						
CHKK	Chushkaly	1.94	358	eP	Pb	01 15 48.0	+0.2
	33nm,0.2s						
CHKK				eS	Sg	01 16 14.0	-0.6
	81nm,0.2s						
CHKK	Chushkaly	1.94	358	P	Pb	01 15 48.0	+0.2
	33nm,0.2s						
CHKK				S	Sg	01 16 14.0	-0.6
	81nm,0.2s						
UCH	Uchtor	1.95	280	⇓iP	Pn	01 15 46.5	+0.4
	baz=82						
UCH				⇓iS	Sb	01 16 12.3	-0.7
	baz=82						
FRU1	Bishkek	2.04	297	⇑iP	Pn	01 15 47.8	+0.9
	baz=99						
FRU1				⇑iS	Sb	01 16 14.7	-0.5
	baz=99						
CHMS	Chumysh	2.05	303	⇓P	Pb	01 15 48.9	-0.8
	5.4nm,0.3s,SNR=5.1						
CHMS				⇑S	Sb	01 16 16.8	+1.3
	16nm,0.2s						
CHMS	Chumysh	2.05	303	⇑iP	Pn	01 15 47.8	+0.7
	baz=4.0						
CHMS				⇑iS	Sb	01 16 14.6	-0.8
	baz=4.0						
KUU	Kurty	2.06	344	eP	Pb	01 15 49.8	-0.1
	15nm,0.3s						
KUU				eS	Sg	01 16 17.0	-1.3
	29nm,0.1s						
KUU	Kurty	2.06	344	Pg	Pb	01 15 49.8	-0.1
	15nm,0.3s						
KUU				Lg	Lg	01 16 17.0	
	27nm,0.3s						
AAK	Ala-Archa	2.07	291	⇓P	Pb	01 15 49.6	-0.4
	7.0nm,0.3s,SNR=10						
AAK				⇓S	Sb	01 16 17.4	+1.4
	16nm,0.4s						
AAK	Ala-Archa	2.07	291	⇓P	Pb	01 15 49.7	-0.4
	2.9nm,0.3s						
AAK				⇑S	Sb	01 16 17.1	+1.1
	6.8nm,0.5s						
AAK	Ala-Archa	2.07	291	⇑iP	Pn	01 15 48.0	+0.6
	baz=93						
AAK				⇑iS	Sb	01 16 15.0	-1.0
	baz=93						
SHLS	Shalkode	2.14	54	eP	Pg	01 15 56.0	+2.7
	19nm,0.3s						
SHLS				eS	Sg	01 16 27.6	+6.6
	64nm,0.5s						
SHLS	Shalkode	2.14	54	Pg	Pg	01 15 56.0	+2.7
	19nm,0.3s						
SHLS				Lg	Lg	01 16 27.6	
	64nm,0.5s						
PDGK	Podgornoye	2.26	50	Pg	Pb	01 15 51.8	-1.5
	3.4nm,0.2s						
PDGK				Lg	Lg	01 16 20.6	
	33nm,0.4s						
PDGK	Podgornoye	2.26	50	⇓Pn	Pb	01 15 51.8	-1.5
	2.4nm,0.4s						
PDGK				⇑Sn	Sb	01 16 22.6	+1.1
	50nm,0.6s						
USP	Ospenovka	2.35	306	⇓P	Pb	01 15 53.9	-1.0
	5.2nm,0.2s,SNR=7.4						
USP	Ospenovka	2.35	306	⇑iP	Pn	01 15 52.0	+0.8
	baz=7.0						
USP				⇑iS	Sb	01 16 22.0	-2.1
	baz=7.0						
ARXS	Arharly	2.36	13	eP	Pb	01 15 55.2	+0.2
	6.9nm,0.1s						
ARXS				eS	Sg	01 16 26.6	-1.4
	53nm,0.2s						
ARXS	Arharly	2.36	13	Pg	Pb	01 15 55.2	+0.2
	18nm,0.4s						
ARXS				Lg	Lg	01 16 26.6	
	53nm,0.2s						
AML	Almayashu	2.55	276	⇑eP	Pn	01 15 54.7	+0.5
	baz=77						
AML				⇑iS	Sn	01 16 26.5	+0.8
	baz=77						
EKS2	Erkin-Say	2.58	288	⇑iP	Pn	01 15 55.0	+0.6
	baz=89						
EKS2				⇑iS	Sn	01 16 27.1	+1.1
	baz=89						
MRKS	Merke	2.99	287	eP	Pb	01 16 07.5	+1.7
	2.9nm,0.1s						
MRKS				eS	Sg	01 16 47.1	-1.2
	20nm,0.3s						
MRKS	Merke	2.99	287	Pg	Pb	01 16 07.5	+1.7
	3.0nm,0.5s						
MRKS				Lg	Lg	01 16 47.1	
	20nm,0.3s						
DJR	Jarkent	3.12	38	eP	Pb	01 16 07.5	-0.5
	3.0nm,0.1s						
DJR				eS	Sb	01 16 47.2	+1.1
	9.6nm,0.3s						
DJR	Jarkent	3.12	38	Pg	Pb	01 16 07.4	-0.5
	3.8nm,0.2s						
DJR				Lg	Lg	01 16 47.2	
	9.6nm,0.3s						
TDK	Taldyqorghan	3.23	17	eP	Pb	01 16 10.6	+0.8
	41nm,0.4s						
TDK				eS	Sg	01 16 52.5	-3.4
	42nm,0.3s						
TDK	Taldyqorghan	3.23	17	Pg	Pb	01 16 10.6	+0.8
	41nm,0.4s						
TDK				Lg	Lg	01 16 52.5	
	42nm,0.3s						
MNAS	Manas	3.46	281	⇑eP	Pn	01 16 07.2	+0.6
	baz=82						
MNAS				⇑iS	Sn	01 16 48.1	+0.2
	baz=82						
KAPS	Kapalarasan	3.75	25	eP	Pb	01 16 19.6	+0.9
	3.4nm,0.1s						
KAPS				eS	Sg	01 17 08.0	-4.5
	6.5nm,0.1s						
KAPS	Kapalarasan	3.75	25	Pg	Pb	01 16 19.6	+0.9
	3.8nm,0.4s						
KAPS				Lg	Lg	01 17 08.0	
	5.9nm,0.5s						
BTLS	Baital	3.84	326	eP	Pb	01 16 21.7	+1.5
	2.5nm,0.4s						
BTLS				eS	Sg	01 17 11.8	-3.6
	3.3nm,0.1s						
BTLS	Baital	3.84	326	Pg	Pb	01 16 21.7	+1.5
	2.5nm,0.4s						
BTLS				Lg	Lg	01 17 11.8	
	1.5nm,0.4s						
MAKZ	Makanchi	6.01	34	⇑Pn	Pn	01 16 43.5	+2.1
	2.8nm,0.9s						
MAKZ				⇑Lg	Lg	01 18 24.8	
	2.3nm,1.0s						
MK31	Makanchi Array	6.13	36	⇓Pn	Pn	01 16 44.9	+1.7
	2.3nm,0.9s,baz=212,slow=15,SNR=2.9						
MK31				⇑Lg	Lg	01 18 28.3	
	2.4nm,0.9s,baz=213,slow=28						

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*TUL **24** 01:35:35.5±1.0, 36°.82N±0°.02×98°.28W±0°.04, h6^{km}±7^{km}, ML2.7, mb_Lg2.3/10(NEIC), Error ellipse: s-maj=5.2km s-min=2.9km az=109.0*

NEIC 24 01:35:36.0±1.2**, 36°.79N**±0°.04×**98°.25W**±0°.04**, h10**^{km}±7^{km}**, Error ellipse: s-maj=6.4km s-min=4.7km az=148.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK032	Salt Plains WL	0.03	64	Pg	Pg	01 35 37.5	-0.4
OK032				Sg	Sg	01 35 38.8	-0.4
KAN14	Manchester OK	0.28	54	Pg	Pg	01 35 41.6	-0.1
KAN14				Sg	Sg	01 35 45.9	+0.3
GC02	Grant County #	0.32	79	Pg	Pg	01 35 42.5	+0.1
GC02				Sg	Sg	01 35 47.4	+0.7
CROK	Carrier	0.35	143	Pg	Pg	01 35 43.2	+0.2
KAN10	Anthony SW Sta	0.36	20	Pg	Pg	01 35 42.6	-0.5
KAN10				Sg	Sg	01 35 47.6	-0.2
KAN17	Caldwell West	0.46	57		Pg	01 35 45.0	-0.1
KAN08	Anthony NE Sta	0.49	27	Pg	Pg	01 35 45.3	-0.3
KAN01	Argonia South	0.54	47		Pg	01 35 46.2	-0.3
KAN12	Harper NE Stat	0.55	21	Pg	Pg	01 35 46.1	-0.6
KAN06	Argonia West S	0.55	34		Pg	01 35 46.3	-0.5
KAN09	Caldwell North	0.61	55		Pg	01 35 47.3	-0.6
KAN13	South Haven SW	0.66	70		Pg	01 35 48.3	-0.5
U32A	Winter Ranch,	0.73	236	Pg	Pg	01 35 49.3	-0.9
BLOK	Blackwell	0.83	92	Pg	Pg	01 35 51.7	-0.3
OK029	Liberty Lake	1.18	147	Pg	Pb	01 35 58.0	-0.6
BCOK	Bluff Creek, N	1.24	155		Pn	01 35 58.8	-0.7
QUOK	Quay	1.39	116		Pb	01 36 01.9	-0.1
T35A	Sooner Cattle	1.40	84		Pn	01 36 01.6	-0.1
OK031	S. Brethren Rd	1.41	126	Pn	Pn	01 36 01.8	-0.1
OK025	Westminster Rd	1.41	148	Pn	Pn	01 36 01.9	+0.1
OK030	Cody Creek RV	1.46	126		Pn	01 36 02.6	+0.1
R32A	Long Quarter,	1.67	347		Pn	01 36 04.8	-0.7
FNO	Franklin	1.68	156	Pn	Pn	01 36 06.0	+0.5
WMOK	Wichita Mounta	2.09	192	Pn	Pn	01 36 12.2	+1.0
TUL1	Leonard	2.17	113	Pn	Pb	01 36 14.1	-1.3
X34A	Smith Ranch, M	2.21	171	Pn	Pn	01 36 13.7	+0.9
CBKS	Cedar Bluff	2.34	330		Pn	01 36 16.2	+1.5
CBKS				IAmb_Lg		01 36 47.1	
	comp=Z,18nm,1.2s						
U38A	Gravette	3.13	95	Pn	Pn	01 36 26.3	+0.8
U38A				IAmb_Lg		01 37 20.4	
	comp=Z,9.0nm,0.9s						
X37A	Clayton	3.21	132	Pn	Pn	01 36 26.8	+0.2
X37A				IAmb_Lg		01 37 25.8	
	comp=Z,8.7nm,0.7s						
AMTX	Amarillo	3.38	237	Pn	Pn	01 36 28.7	-0.3
HHAR	Hobbs	3.51	97	Pn	Pn	01 36 29.1	-1.6
HHAR				IAmb_Lg		01 37 29.7	
	comp=Z,9.9nm,0.9s						
S39A	Bolivar	4.03	76	Pn	Pn	01 36 38.3	+0.4
P38A	Dawn	4.67	51	Pn	Pn	01 36 46.4	-0.2
PBMO	Poplar Bluff	6.28	88	IAmb_Lg		01 39 04.4	
	comp=Z,6.3nm,0.8s						

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*IDC **24** 01:50:06.9±0.8, 22°.02S×65°.84W, h255^{km}±7^{km}, mb3.4/13, mb1 3.6/19, mb1mx3.5/40, mbtmp4.1/19, Error ellipse: s-maj=12.1km s-min=9.9km az=119.0*

*SJA **24** 01:50:06±4.6, 22°.04S±0°.07×65°.98W±0°.08, h287^{km}±6^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=155.0*

*NEIC **24** 01:50:07.8±1.5, 22°.09S±0°.07×65°.97W±0°.04, h265^{km}±7^{km}, mb4.1/23, Md4.2(SJA), Error ellipse: s-maj=10.8km s-min=5.7km az=179.0*

*VAO **24** 01:50:08.1±0.3, 22°.00S×65°.95W, h270^{km}, mb4.1*

ISC 24 01:50:07.1±0.4**, 22°.01S**±0°.05×**65°.97W**±0°.04**, h262**^{km}**, n204, σ1^{s}.04**/222**, mb4.0**/20**, 11C, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YJA	Yavi	0.46	111	iP	Pn	01 50 44.1	+2.3
YJA				eS	S	01 51 10.0	+1.0
YJA				IAML		01 51 12.7	
	comp=Z,313nm,0.8s						
HJA	Humahuaca	1.30	156	iP	Pn	01 50 47.8	+2.2
HJA				IAML		01 51 24.5	
	comp=Z,150nm,0.5s						
AZAP	Zapla	2.35	159	iP	Pn	01 50 55.4	+1.3
AZAP				IAML		01 51 34.2	
	comp=Z,84nm,1.0s						
ASTB	Santa Barbara	2.38	144	iP	Pn	01 50 55.7	+1.5
ALOL	LOMAS DE OLMED	2.57	135	iP	Pn	01 50 56.8	+1.0
SLA	San Lorenzo	2.73	171	iP	Pn	01 50 59.6	+1.9
LVC	Limon Verde	2.78	257	P	Pn	01 50 59.9	+1.5
	comp=Z,44nm,0.3s,baz=97,slow=5.1,SNR=269						
LVC				S	S	01 51 40.0	+0.9
	comp=Z,26nm,0.3s,baz=86,slow=23,SNR=36						
LVC	Limon Verde	2.78	257	⇑iP	Pn	01 50 59.6	+1.1
LVC				iS	S	01 51 38.2	-1.0
LVC	Limon Verde	2.78	257	eP	Pn	01 50 59.8	+1.4
LVC	Limon Verde	2.78	257	iP	Pn	01 51 00.0	+1.5
LVC				IAML		01 51 45.6	
	comp=Z,76nm,0.1s						
PB09	IPOC Station P	3.04	273	⇑iP	Pn	01 51 02.8	+1.9
PB09	IPOC Station P	3.04	273		Pn	01 51 02.7	+1.8
PB09	IPOC Station P	3.04	273	iP	Pn	01 51 02.9	+1.9
PB09				IAML		01 51 51.6	
	comp=Z,161nm,0.2s						
PB06	IPOC Station P	3.40	258	eP	Pn	01 51 05.9	+1.0
PB06				iS	S	01 51 49.8	-0.9
PB06	IPOC Station P	3.40	258		Pn	01 51 05.7	+0.8
PB06				Sn	S	01 51 50.5	-0.2
PB06	IPOC Station P	3.40	258	iP	Pn	01 51 06.0	+1.2
PB06				eS	S	01 51 51.0	+0.3
PB06				IAML		01 51 58.2	
	comp=Z,584nm,0.3s						
PB01	IPOC Station P	3.41	286	⇑iP	Pn	01 51 06.1	+1.1
PB01				iS	S	01 51 50.5	-0.4
PB01	IPOC Station P	3.41	286		Pn	01 51 06.0	+1.1
PB01	IPOC Station P	3.41	286	iP	Pn	01 51 06.0	+1.1
PB01				IAML		01 51 52.5	
	comp=Z,454nm,0.2s						
PB15	IPOC Station P	3.44	249	⇑iP	Pn	01 51 06.3	+0.9
PB15				iS	S	01 51 51.1	-0.5
PB15	IPOC Station P	3.44	249		Pn	01 51 06.2	+0.8
PB15	IPOC Station P	3.44	249	iP	Pn	01 51 06.7	+1.3
PB08	IPOC Station P	3.51	302	⇑iP	Pn	01 51 08.5	+2.3
PB08				iS	S	01 51 54.4	+1.2
PB08	IPOC Station P	3.51	302		Pn	01 51 08.6	+2.3
PB08	IPOC Station P	3.51	302	iP	Pn	01 51 08.6	+2.4
PB08				eS	S	01 51 54.9	+1.6
PB08				IAML		01 52 02.4	
	comp=Z,176nm,0.3s						
PB03	IPOC Station P	3.51	269	eP	Pn	01 51 07.1	+1.1
PB03				iS	S	01 51 51.7	-1.2
PB03	IPOC Station P	3.51	269	iP	Pn	01 51 07.4	+1.4
PB03				IAML		01 51 56.4	
	comp=Z,569nm,0.2s						
PB07	IPOC Station P	3.65	274	⇑iP	Pn	01 51 08.6	+1.0
PB07				iS	S	01 51 54.3	-1.4
PB07	IPOC Station P	3.65	274		Pn	01 51 08.3	+0.7
PB07	IPOC Station P	3.65	274	iP	Pn	01 51 09.1	+1.5
PB07				eS	S	01 51 54.1	-1.6
PB07				IAML		01 51 57.3	
	comp=Z,683nm,0.2s						
PB02	IPOC Station P	3.71	280	iP	Pn	01 51 09.4	+1.1
PB02	IPOC Station P	3.71	280	iP	Pn	01 51 09.3	+1.1
PB04	IPOC Station P	3.88	265	⇑iP	Pn	01 51 11.1	+0.8
PB04	IPOC Station P	3.88	265		Pn	01 51 10.8	+0.5
PB04	IPOC Station P	3.88	265	iP	Pn	01 51 11.0	+0.7
PB05	IPOC Station P	4.00	257	⇑iP	Pn	01 51 12.5	+0.9
PB05	IPOC Station P	4.00	257	iP	Pn	01 51 12.4	+0.8
PB05				eS	S	01 52 00.1	-2.8
PB05				IAML		01 52 06.0	
	comp=Z,315nm,0.2s						
FSA	Cafayete	4.08	180	iP	Pn	01 51 13.7	+1.2
PB11	IPOC Station P	4.11	302	⇑iP	Pn	01 51 14.1	+1.1
PB11	IPOC Station P	4.11	302	Pn	Pn	01 51 13.8	+0.9
PB11	IPOC Station P	4.11	302	iP	Pn	01 51 14.0	+1.1
PB11				IAML		01 52 07.6	
	comp=Z,511nm,0.1s						
TA01	Diego Aracena	4.18	289	⇑iP	Pn	01 51 14.1	+0.5
TA01	Diego Aracena	4.18	289		Pn	01 51 14.1	+0.5
TA01	Diego Aracena	4.18	289	iP	Pn	01 51 14.0	+0.5
TA02	Huaiquique	4.25	293	eP	Pn	01 51 14.9	+0.6
TA02	Huaiquique	4.25	293		Pn	01 51 14.9	+0.6
TA02	Huaiquique	4.25	293	iP	Pn	01 51 15.0	+0.6
PB10	IPOC Station P	4.48	250	⇑iP	Pn	01 51 17.3	+0.2
PB10	IPOC Station P	4.48	250		Pn	01 51 17.4	+0.4
PB10	IPOC Station P	4.48	250	iP	Pn	01 51 17.3	+0.2
PB10				IAML		01 52 12.8	
	comp=Z,284nm,0.3s						
PB14	IPOC Station P	4.83	237		Pn	01 51 21.8	+0.2
PB14	IPOC Station P	4.83	237	iP	Pn	01 51 21.7	+0.2
PB14				IAML		01 52 21.9	
	comp=Z,683nm,0.2s						
PB16	IPOC Station P	4.94	317		Pn	01 51 25.4	+2.2
PB12	IPOC Station P	5.30	309	Pn	Pn	01 51 26.9	-0.3
PB12	IPOC Station P	5.30	309	iP	Pn	01 51 26.7	-0.4
PB12				IAML		01 52 31.7	
	comp=Z,229nm,0.4s						
AP01	Chacalluta	5.47	311	Pn	Pn	01 51 29.2	+0.2
AP01	Chacalluta	5.47	311	iP	Pn	01 51 30.0	+0.9
AC02	Maricunga	5.60	210		Pn	01 51 31.0	+0.1
AC02	Maricunga	5.60	210	iP	Pn	01 51 31.4	+0.4
LPAZ	La Paz	6.05	340	P	Pn	01 51 38.9	+2.1
	comp=Z,2.9nm,0.3s,baz=16,slow=8.0,SNR=25						
LPAZ				S	S	01 52 48.1	-0.5
	comp=Z,1.0nm,0.3s,baz=186,slow=18,SNR=10						
LPAZ	La Paz	6.05	340	eP	Pn	01 51 38.4	+1.6
LPAZ	La Paz	6.05	340	Pn	Pn	01 51 38.5	+1.7
CYA	Choya	6.40	179	iP	Pn	01 51 42.0	+1.5
CYA				IAML		01 53 10.5	
	comp=Z,4.4nm,2.1s						
GO03	Copiap	6.77	214	Pn	Pn	01 51 43.9	-1.2
GO03	Copiap	6.77	214	iP	Pn	01 51 44.0	-1.1
VCA	Vinchina	6.99	196	iP	Pn	01 51 48.4	+0.5
VCA				IAML		01 53 11.4	
	comp=Z,17nm,0.3s						
ACLC	CERRO LA CRUZ	7.43	187	iP	Pn	01 51 52.6	-0.9
ACLC				IAML		01 53 16.9	
	comp=Z,10nm,0.4s						
SIV	San Ignacio	7.57	39	P	Pn	01 51 54.6	-0.6
	comp=Z,3.5nm,0.3s,baz=222,slow=12,SNR=3.1						
SIV				S	S	01 53 19.6	-2.7
	baz=237,slow=13,SNR=5.3						
AC04	Llanos de Chal	7.70	216	Pn	Pn	01 51 55.1	-1.7
AC04	Llanos de Chal	7.70	216	iP	Pn	01 51 55.0	-1.7
APLL	PUNTA DE LOS L	8.36	183	iP	Pn	01 52 03.3	-1.7
APLL				IAML		01 53 36.3	
	comp=Z,45nm,4.2s						
ACCO	Cerro Coronel	8.98	197	iP	Pn	01 52 13.0	0.0
ACCO				IAML		01 53 52.1	
	comp=Z,14nm,0.3s						
CO05	La Serena	9.19	210	Pn	Pn	01 52 16.6	+1.3
PTLB	Pontes e Lacer	9.20	46	eP	Pn	01 52 15.7	+0.2
PTLB	Pontes e Lacer	9.20	46	Pn	Pn	01 52 15.3	-0.2
GO04	Tololo Observa	9.21	207	Pn	Pn	01 52 15.7	-0.2
AQDB	Aquidauana	9.70	83	eP	Pn	01 52 23.3	+1.4
AQDB	Aquidauana	9.70	83	Pn	Pn	01 52 23.1	+1.2
MRA	San Martin	10.37	179	iP	Pn	01 52 28.0	-2.2
VILB	Vilhena	10.56	32	eP	Pn	01 52 33.7	+1.0
VILB	Vilhena	10.56	32	Pn	Pn	01 52 34.1	+1.5
PP1B	Ponte de Pedra	11.32	69	eP	Pn	01 52 43.0	+0.8
ITQB	Itaqui	11.36	134	eP	Pn	01 52 43.0	+0.6
ITQB	Itaqui	11.36	134	Pn	Pn	01 52 40.9	-1.5
VA03	San Esteban	11.45	200		Pn	01 52 43.6	-0.1
SALV	Santo Antonio	11.47	60	eP	Pn	01 52 44.5	+0.6
PEL	Peldehue	11.85	200	P	Pn	01 52 48.7	+0.2
MT05	Renca	12.09	199	P	Pn	01 52 51.3	-0.2
MT02	Curacav	12.10	201		Pn	01 52 51.0	-0.5
ETMB	Extrema	12.13	359	eP	P	01 52 53.4	-1.2
TRCB	Terra Rica	12.37	96	P	Pn	01 52 55.8	+0.8
MT09	Talagante	12.53	200	P	Pn	01 52 56.4	-0.5
MT01	Popeta	12.69	200	P	Pn	01 52 58.3	-0.6
PTGB	Pitanga	13.05	105	eP	P	01 53 05.2	+0.4
BO01	Tunca	13.13	199	P	Pn	01 53 04.0	-0.1
BO02	Sierra Bellavi	13.41	197	P	Pn	01 53 08.0	+0.2
PDRB	Porto dos Gac	13.60	42	eP	Pn	01 53 10.3	+0.2
PCMB	Pacaembu	13.67	91	eP	P	01 53 11.5	-0.2
GO05	Huala	13.96	201		Pn	01 53 13.8	-0.5
CPSB	Cacapava Do Su	14.01	129	eP	P	01 53 15.3	+0.1
NNA	Nana	14.39	312	P	Pn	01 53 20.4	+0.6
	comp=Z,0.4nm,0.3s,baz=148,slow=14,SNR=1.4						
NNA	Nana	14.39	312	P	P	01 53 18.1	-1.6
ML02	Panimavida	14.50	198		P	01 53 20.1	-0.5
PLTB	Pedras Altas	14.69	134	eP	P	01 53 22.7	-0.1
PLTB	Pedras Altas	14.69	134		P	01 53 22.6	-0.1
CLDB	Colider	14.75	43	eP	Pn	01 53 24.3	+0.2
ITRB	Iturama	14.78	84	eP	Pn	01 53 24.8	+0.6
ARAG	Araguaiana, MT	14.79	67	eP	Pn	01 53 25.2	+0.7
FRTB	Fartura	15.21	98	eP	Pn	01 53 29.6	+0.2
CNLB	Canela	15.44	121	eP	P	01 53 31.2	+0.1
TIJ01	Guaruva-PR	15.89	105	eP	P	01 53 36.6	+0.4
BB19B	Bebedouro	16.26	90	eP	Pn	01 53 41.1	-0.8
TRQA	Tornquist	16.36	169	eP	P	01 53 41.8	+0.7
TRQA	Tornquist	16.36	169	P	P	01 53 40.1	-1.0
TER01	Tubaro-SC	16.55	116	eP	P	01 53 43.8	+0.5
RCLB	Rio Claro- Sao	17.08	95	eP	P	01 53 49.9	+0.7
IPMB	Ipameri, GO	17.17	80	eP	P	01 53 51.1	+1.0
SNDB	Serra Nova Dou	17.21	57	eP	P	01 53 51.4	+0.9
PET01	Itanhaem-SP	17.34	101	eP	P	01 53 52.8	+0.8
LC01	Cunco	17.57	195	P	P	01 53 54.3	0.0
LC01				IAmb	IAmb	01 53 60.0	
	comp=Z,6.4nm,0.9s						
VAO	Valinhos	17.59	97	eP	P	01 53 55.3	+0.6
NPGB	Novo Progresso	18.07	36	eP	P	01 53 59.2	-0.6
BDFB	Brasilia	18.14	73	P	P	01 54 00.8	+0.1
	comp=Z,1.2nm,0.3s,baz=234,slow=13,SNR=10						
BDFB	Brasilia	18.14	73	P	P	01 54 01.3	+0.6
BDFB				IAmb	IAmb	01 54 06.4	

	comp=Z,5.6nm,0.6s						
LR03	Panguipulli	18.39	196	P	P	01 54 03.1	+0.1
PARB	Paraibuna	18.83	98	eP	P	01 54 07.3	-0.7
PLCA	Paso Flores	19.06	191	P	P	01 54 10.6	+0.2
	comp=Z,0.8nm,0.3s,baz=15,slow=12,SNR=26						
PLCA	Paso Flores	19.06	191	eP	P	01 54 11.1	+0.8
PLCA	Paso Flores	19.06	191	P	P	01 54 10.0	-0.4
PLCA				IAmb	IAmb	01 54 11.5	
	comp=Z,6.7nm,1.1s						
MACA	Manacapuru-AM	19.43	16	eP	P	01 54 14.8	+0.4
MACA	Manacapuru-AM	19.43	16	IAmb	IAmb	01 54 15.3	
	comp=Z,8.5nm,0.7s						
MACA				P	P	01 54 15.5	+1.0
PEXB	Peixe	19.54	63	eP	P	01 54 16.0	+0.4
LL04	Puerto Octay	19.61	195	P	P	01 54 15.9	-0.2
BSCB	Bom Sucesso	19.75	91	eP	P	01 54 19.6	+1.7
ITTB	Itaituba	20.16	31	eP	P	01 54 21.5	-0.6
VAS01	Vassouras-RJ	20.87	95	eP	P	01 54 30.5	+0.9
LL01	San Ignacio de	21.01	193	P	P	01 54 31.0	+0.2
LL01				IAmb	IAmb	01 54 31.4	
	comp=Z,9.0nm,1.0s						
DIAM	Diamantina, MG	21.25	84	eP	P	01 54 33.8	+0.2
MC01	Montes Claros	21.44	80	eP	P	01 54 34.2	-1.0
JANB	Januaria	21.66	75	eP	P	01 54 36.5	-0.7
DUB01	Friburgo-RJ	21.87	95	eP	P	01 54 39.8	+0.6
PTGA	Pitinga	21.95	16	P	P	01 54 40.8	+1.0
	comp=Z,1.2nm,0.3s,baz=331,slow=22,SNR=1.2						
SMTB	Santa Maria do	21.99	56	eP	P	01 54 40.2	0.0
GO07	Milladeo Hill,	22.00	195	P	P	01 54 39.1	-0.8
PRPB	Parauapebas	22.18	47	eP	P	01 54 41.3	-0.6
SDBA	SAO DESIDERIO	22.25	68	eP	P	01 54 42.1	-0.5
CAM01	Campos-RJ	22.56	94	eP	P	01 54 46.1	+0.8
MALB	Monte Alegre	23.05	31	eP	P	01 54 51.3	+1.4
SJMB	Sao Joao De Ma	23.46	86	eP	P	01 54 52.3	-1.3
ALF01	Guarapari-ES	23.56	91	eP	P	01 54 54.7	+0.3
BSFB	Barra de Sao F	23.75	87	eP	P	01 54 55.7	-0.5
RIB01	Linhares ES	24.07	88	eP	P	01 54 58.5	-0.6
NAN01	Guarapari, ES	24.64	85	eP	P	01 55 03.7	-0.5
GUA01	Guaratinga, BA	25.26	82	eP	P	01 55 09.5	-0.3
CMC01	Camacan, BA	25.89	80	eP	P	01 55 15.5	-0.1
NBIT	Itapeh - BA	26.11	79	eP	P	01 55 17.4	-0.1
GDU01	Guandu, BA	26.41	76	eP	P	01 55 19.0	-1.1
NBPN	Ponto Novo - B	27.05	70	eP	P	01 55 24.7	-1.2
NBPS	Pedro II - PI	29.52	57	eP	P	01 55 47.7	-0.1
NBMA	Muriti-CE	30.00	65	eP	P	01 55 51.7	-0.3
NBPB	Pedra_Branca-C	30.32	61	eP	P	01 55 54.5	-0.3
ZARC	Zaragoza, Cauc	30.59	342	P	P	01 55 56.2	-0.8
ZARC				IAmb	IAmb	01 55 57.2	
	comp=Z,2.2nm,0.6s						
NBAN	Anadia - AL	31.02	71	eP	P	01 56 01.2	+0.3
NBLV	Livramento - P	31.57	67	eP	P	01 56 05.0	-0.7
NBPA	Parau_RN	32.25	64	eP	P	01 56 11.1	-0.5
NBPV	Pedro Velho	33.44	67	eP	P	01 56 21.8	-0.1
APG	El Apazote	43.93	325	P	P	01 57 50.5	+1.6
	comp=Z,1.0nm,0.4s,baz=236,slow=23,SNR=1.7						
VNA3	Neumayer Olymp	58.72	162	P	P	01 59 38.8	+1.5
VNA1	Neumayer--Stat	58.90	161	P	P	01 59 38.6	+0.2
VNA2	Neumayer--Watz	59.27	161	P	P	01 59 42.7	+1.8
	baz=298,slow=7.2						
V55A	Taylorsville	59.33	346	P	P	01 59 42.7	+0.9
V55A				IAmb	IAmb	01 59 55.5	
	comp=Z,4.8nm,1.0s						
V53A	Saluda	59.55	344	P	P	01 59 43.1	-0.2
V53A				IAmb	IAmb	01 59 48.7	
	comp=Z,7.0nm,1.1s						
SNAA	Sanae	60.91	161	P	P	01 59 53.6	+1.5
SNAA	Sanae	60.91	161	P	P	01 59 53.0	+0.9
	comp=Z,0.7nm,0.5s,baz=332,slow=11,SNR=2.6						
WVT	Waverly	61.41	340	P	P	01 59 55.7	-0.1
WVT				IAmb	IAmb	01 59 58.0	
	comp=Z,4.6nm,1.1s						
LNXT	Lenox	61.94	339	P	P	01 59 59.0	-0.2
MIAR	Mount Ida	62.07	334	P	P	02 00 00.5	+0.3
TXAR	Lajitas Array	62.64	323	P	P	02 00 04.3	+0.1
	comp=Z,0.2nm,0.3s,baz=144,slow=6.3,SNR=5.1						
TXAR	Lajitas Array	62.64	323	P	P	02 00 05.0	+0.8
TX31	Lajitas Ar. Si	62.64	323	P	P	02 00 05.4	+1.1
TX32	Lajitas Array	62.64	323	P	P	02 00 05.4	+1.1
L64A	Middleborough	63.78	356	P	P	02 00 08.3	-3.0
R40A	Maddies Statio	64.87	337	P	P	02 00 19.1	+0.7
R40A				IAmb	IAmb	02 00 19.4	
	comp=Z,3.6nm,0.8s						
DBIC	Dimbokro	66.28	72	P	P	02 00 27.3	-0.6
	comp=Z,3.5nm,0.9s,baz=59,slow=3.7,SNR=2.2						
ANMO	Albuquerque	68.45	325	P	P	02 00 42.8	+1.5
	comp=Z,0.4nm,0.5s,baz=157,slow=7.4,SNR=4.7						
ANMO	Albuquerque	68.45	325	P	P	02 00 42.3	+1.0
SDCO	Great Sand Dun	70.11	328	P	P	02 00 53.2	+1.7
SDCO				IAmb	IAmb	02 00 54.5	
	comp=Z,3.2nm,1.1s						
TORD	Torodi Ar. Bea	74.97	69	P	P	02 01 19.5	-0.7
	comp=Z,1.8nm,0.5s,baz=255,slow=5.7,SNR=48						
TORD	Torodi Ar. Bea	74.97	69	P	P	02 01 19.6	-0.6
PDAR	Pinedale Array	75.94	328	P	P	02 01 27.0	+1.6
	comp=Z,0.5nm,0.5s,baz=128,slow=8.1,SNR=6.6						
PDAR	Pinedale Array	75.94	328	P	P	02 01 25.8	+0.4
ULM	Lac du Bonnet	76.66	341	P	P	02 01 29.1	+0.1
	comp=Z,1.7nm,0.5s,baz=131,slow=8.7,SNR=2.6						
ULM	Lac du Bonnet	76.66	341	P	P	02 01 30.0	+1.1
ULM				IAmb	IAmb	02 01 45.1	
	comp=Z,2.6nm,0.8s						
ELK	Elko	77.42	324	P	P	02 01 33.1	-0.6
	comp=Z,0.8nm,0.7s,baz=145,slow=8.0,SNR=3.6						
ELK	Elko	77.42	324	P	P	02 01 34.3	+0.6
NVAR	Mina Array Bea	77.60	320	P	P	02 01 36.7	+2.0
	comp=Z,0.5nm,0.7s,baz=162,slow=6.2,SNR=6.2						
NVAR	Mina Array Bea	77.60	320	P	P	02 01 34.5	-0.2
BOSA	Boshof	80.79	117	P	P	02 01 51.8	-0.3
	comp=Z,1.2nm,0.6s,baz=228,slow=8.9,SNR=3.8						
BOSA	Boshof	80.79	117	P	P	02 01 51.9	-0.3
BOSA				IAmb	IAmb	02 02 01.8	
	comp=Z,4.7nm,1.1s						
YKA	Yellowknife Ar	92.60	340	P	P	02 02 49.2	+0.8
	comp=Z,0.3nm,0.5s,baz=120,slow=5.7,SNR=6.0						
ASAR	Alice Springs	130.65	204	PKP	PKiKP	02 08 48.5	0.0
	comp=Z,0.6nm,0.6s,baz=137,slow=1.9,SNR=6.6						
ASAR				SKPbc	SKPab	02 11 47.5	+0.6
	comp=Z,0.5nm,0.6s,baz=149,slow=4.0,SNR=4.3						
WRA	Warramunga Arr	133.82	207	PKP	PKiKP	02 08 54.7	-0.3
	comp=Z,0.7nm,0.4s,baz=156,slow=1.7,SNR=13						
WRA				SKPbc	SKPbc	02 11 58.3	+0.6
	comp=Z,1.0nm,0.8s,baz=151,slow=3.2,SNR=4.5						
MKAR	Makanchi Array	144.39	38	PKP	PKPdf	02 09 12.5	+0.4
	comp=Z,0.6nm,0.5s,baz=319,slow=3.5,SNR=7.7						
MKAR	Makanchi Array	144.39	38		PKPdf	02 09 11.9	-0.1

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*IDC **24** 02:06:27.1±0.7, 14°.64N×60°.14W, h0^{km}, mb4.0/15, mb1 4.3/18, mb1mx4.1/38, mbtmp4.1/18, ML3.7/3, MS2.9/2, Ms1 2.9/2, ms1mx2.6/34, Error ellipse: s-maj=19.2km s-min=16.4km az=146.0*

*TRN **24** 02:06:33.6, 14°.50N×60°.26W, h41^{km}, MD4.3*

*NEIC **24** 02:06:35.3±1.6, 14°.48N±0°.05×60°.27W±0°.06, h60^{km}±6^{km}, mb4.6/52, Error ellipse: s-maj=9.1km s-min=6.1km az=51.0*

ISC 24 02:06:34.2±0.8**, 14°.49N**±0°.03×**60°.26W**±0°.04**, h57**^{km}±7^{km}**, n174, σ1.^{s}20**/207**, mb4.5**/37**, 2C-1D, Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H05S1	Guadeloupe/Mar	0.56	263	Pn	Pn	02 06 46.9	+0.4
H05S1				Sn	Sn	02 06 56.8	+1.3
MPOM	Morne Pois Mar	0.58	265	⇑iP	Pn	02 06 47.0	+0.2
MPOM				eS	Sn	02 06 56.1	+0.2
MPOM	Morne Pois Mar	0.58	265		Pn	02 06 47.0	+0.2
MPOM				Sn	Sn	02 06 56.2	+0.3
MVM	Montagne Vaucl	0.62	276	eP	Pn	02 06 47.6	+0.4
ILAM	Ilet Lapin Mar	0.65	296	eP	Pn	02 06 47.9	+0.3
ILAM				eS	Sn	02 06 57.3	-0.2
ILAM	Ilet Lapin Mar	0.65	296		Pn	02 06 47.6	0.0
ILAM				Sn	Sn	02 06 58.2	+0.7
LPMF	Morne Lapointe	0.69	277	eP	Pn	02 06 48.3	+0.3
ZAM	Aeronautique	0.75	276	eP	Pn	02 06 49.3	+0.5
TRMF	Trois Ilets	0.77	273	eP	Pn	02 06 49.6	+0.5
BIM	Bigot	0.78	272	⇑iP	Pn	02 06 50.0	+0.7
BIM				eS	Sn	02 07 01.7	+1.3
BIM	Bigot	0.78	272		Pn	02 06 49.9	+0.6
BIM				Sn	Sn	02 07 01.6	+1.2
SLBI	Saint Lucia, B	0.83	236	eP	Pn	02 06 49.6	-0.3
SLBI				eS	Sn	02 07 01.8	+0.3
SLCP	Castries, St.	0.85	236	eP	Pn	02 06 50.0	-0.1
SLCP				eS	Sn	02 07 02.7	+0.8
FDF	Fort de France	0.89	286	eP	Pn	02 06 51.4	+0.6
FDF				eS	Sn	02 07 04.3	+1.4
FDF	Fort de France	0.89	286		Pn	02 06 51.1	+0.4
FDF				Sn	Sn	02 07 04.0	+1.1
BAMF	Morne Balai	0.92	291	eP	Pn	02 06 51.9	+0.9
GBMF	Grand Be	0.92	289	eP	Pn	02 06 51.9	+0.7
CXM	Morne La Croix	0.93	290	eP	Pn	02 06 52.2	+0.9
PML	Morne Lenard	0.94	288	eP	Pn	02 06 52.1	+0.8
SVN	Savane Anatole	0.94	292	eP	Pn	02 06 52.3	+1.0
SVN	Savane Anatole	0.94	292		Pn	02 06 52.2	+0.8
SVN				Sn	Sn	02 07 05.7	+1.7
PCM	Pelee Case Pet	0.97	289	eP	Pn	02 06 52.6	+0.9
MCLT	Moule a Chique	1.02	220	eP	Pn	02 06 51.0	-1.3
DLPL	La Plaine	1.27	311	eP	Pn	02 06 56.7	+1.0
MDN	Morne-Daniel	1.37	307	eP	Pn	02 06 58.1	+1.1
MDN				eS	Sn	02 07 14.4	+0.3
DSLB	Salisbury	1.46	310	eP	Pn	02 06 59.3	+1.0
DSLB				eS	Sn	02 07 18.1	+1.7
SSV	Crater Summit	1.47	218	eP	Pn	02 06 59.5	+1.1
BCHC	Barbados, Cave	1.48	155	eP	Pn	02 06 59.8	+1.2
SVV	Soufriere Volc	1.49	219	eP	Pn	02 06 59.9	+1.3
BBGH	Gun Hill	1.50	153	eP	Pn	02 06 59.5	+0.6
BBGH				eS	Sn	02 07 18.5	+1.1
BBGH	Gun Hill	1.50	153		Pn	02 06 59.3	+0.5
SVB	Belmont	1.55	218	eP	Pn	02 06 59.7	+0.2
MDVC	Dominica, Viel	1.57	315	eP	Pn	02 07 00.4	+0.7
MDVC				eS	Sn	02 07 19.7	+0.7
BBSP	Saint Philip	1.59	150	eP	Pn	02 07 01.4	+1.5
BBSP				eS	Sn	02 07 21.5	+2.1
MDPV	Dominica, Penn	1.59	315	eP	Pn	02 07 00.9	+0.8
MDPV				eS	Sn	02 07 21.2	+1.6
SVOC	Richmond Hill,	1.62	215	eS	Sn	02 07 21.0	+0.7
MAGL	Barre de l'ile	1.75	326	⇓iP	Pn	02 07 02.5	+0.3
MAGL				eS	Sn	02 07 23.8	+0.3
TDBA	Terre de Bas,	1.89	316	eP	Pn	02 07 05.4	+1.3
TDBA				eS	Sn	02 07 28.5	+1.6
TBG	Guadaloupe-3	1.90	316	eP	Pn	02 07 05.2	+1.0
TBG				eS	Sn	02 07 27.9	+0.8
H05N1	Guadeloupe/Mar	1.97	337	Pn	Pn	02 07 05.0	-0.2
H05N1				Sn	Sn	02 07 28.4	-0.3
CBE	Ff, Capester	2.04	321	eP	Pn	02 07 06.9	+0.8
CBE				eS	Sn	02 07 31.1	+0.7
GCMP	Grenada, Carri	2.29	210	eP	Pn	02 07 10.4	+0.8
GRSS	Sisters	2.54	211	eP	Pn	02 07 14.1	+1.0
GRHS	Sauteurs	2.62	211	eP	Pn	02 07 15.1	+0.9
GRHS				eS	Sn	02 07 47.1	+2.4
GRGR	Grenville	2.71	210	eP	Pn	02 07 16.4	+1.1
GRGR				eS	Sn	02 07 48.4	+1.5
GRGR	Grenville	2.71	210	Pn	Pn	02 07 16.4	+1.1
GRFF	Grenada Fort F	2.82	211	eP	Pn	02 07 17.8	+1.0
GRFF				eS	Sn	02 07 50.5	+0.8
ANBD	Bethesda, Anti	2.92	331	eP	Pn	02 07 18.7	+0.5
ANBD				eS	Sn	02 07 52.1	-0.1
BOT	Bacolet	3.33	188	eP	Pn	02 07 25.4	+1.6
ANWB	Willy Bob	3.48	335	eP	Pn	02 07 26.9	+1.1
ANWB				eS	Sn	02 08 05.8	-0.1
ANWB	Willy Bob	3.48	335	Pn	Pn	02 07 27.5	+1.6
SKOC	St. Kitts, UWI	3.66	320	eP	Pn	02 07 30.3	+2.0
SKI	Saint Kitts	3.69	320	eP	Pn	02 07 30.7	+1.9
SKI				eS	Sn	02 08 12.2	+1.0
SEUS	St. Eustatius	3.97	319	e	Pn	02 07 37.0	+4.4
SEUS				eS	Sn	02 08 19.1	+1.4
SEUS	St. Eustatius	3.97	319		Pn	02 07 34.7	+2.2
TRN	Trinidad (W)	3.98	196	eP	Pn	02 07 33.5	+0.8
TBH	Brigand Hill	4.06	191	eP	Pn	02 07 35.2	+1.4
SABA	Saba	4.23	318	e	Pn	02 07 38.6	+2.5
SABA	Saba	4.23	318	e	Pn	02 07 40.3	+4.1
SABA	Saba	4.23	318		Pn	02 07 37.8	+1.7
TPP	Pointe-a-Pierr	4.31	196	eP	Pn	02 07 39.7	+2.5
SMRT	St. Maarten	4.45	323	e	Pn	02 07 43.0	+3.8
SMRT	St. Maarten	4.45	323	eS	Sn	02 08 28.7	-1.1
SMRT	St. Maarten	4.45	323	Pn	Pn	02 07 40.9	+1.7
PLCV	Puerto La Cruz	6.03	225		Pn	02 08 02.0	+1.1
PLCV					Sn	02 09 08.2	-0.4
PCRV	Puerto La Cruz	6.05	225	Pn	Pn	02 08 02.0	+0.8
	13nm,0.3s,baz=292,slow=0.2,SNR=37						
PCRV				Sn	Sn	02 09 08.2	-1.0
	baz=255,slow=22,SNR=1.0						
CUPR	Culebra, Puert	6.13	309	Pn	Pn	02 08 04.0	+1.8
PDPR	Patillas Dam,	6.55	303	Pn	Pn	02 08 08.8	+0.9
CBYP	Canovanas	6.55	306		Pn	02 08 09.9	+1.9
SJG	San Juan	6.70	303	Pn	Pn	02 08 11.4	+1.4
	9.8nm,0.3s,baz=141,slow=12,SNR=38						
SJG				Sn	Sn	02 09 23.4	-1.6
	6.1nm,0.3s,baz=331,slow=20,SNR=7.3						
SJG	San Juan	6.70	303		Pn	02 08 11.8	+1.8
GCPR	Guaynabo City	6.75	305		Pn	02 08 12.8	+2.1
CELP	Cerrillos	7.03	301		Pn	02 08 15.8	+1.2
OBIP	Obispado Ponce	7.04	301		Pn	02 08 15.4	+0.7
AOPR	Arecibo Observ	7.31	302		Pn	02 08 19.9	+1.5
MLPR	Magueyes Islan	7.37	299	Pn	Pn	02 08 20.0	+0.8
CRPR	Cabo Rojo, PR	7.45	299	Pn	Pn	02 08 21.2	+1.0
DR12	Loma Pena Alta	9.73	297		Pn	02 08 54.3	+2.8
DR12					Sn	02 10 38.6	-0.7
SDV	Santo Domingo	11.58	242	Pn	Pn	02 09 16.0	-1.1
	2.7nm,0.3s,baz=20,slow=5.1,SNR=2.9						
SDV				LR	LR	02 13 58.4	
	comp=Z,85nm,20.9s,baz=94,slow=38						
BOAV	Boa Vista	12.02	181	Pn	Pn	02 09 18.8	-4.1
SOCV	Socops	12.08	240	eP	Pn	02 09 22.9	-0.7
OCAC	Ocana	14.22	246	eP	Pn	02 09 56.8	+3.9
OCAC	Ocana	14.22	246		Pn	02 09 52.1	-0.8
OCAC					S	02 12 46.3	-0.9
SMLC	San Martn de	14.65	249	eP	Pn	02 09 58.5	+0.1
BARC	Barichara	14.92	240	eP	Pn	02 10 03.3	+1.2
PTGA	Pitinga	15.13	179	Pn	Pn	02 10 00.2	-4.3
	4.0nm,0.3s,baz=348,slow=18,SNR=41						
PTGA				Sn	Sn	02 12 40.0	-11
	1.1nm,0.3s,baz=292,slow=14,SNR=7.2						
PTGA				LR	LR	02 16 29.3	
	comp=Z,37nm,20.8s,baz=16,slow=39						
PTGA	Pitinga	15.13	179	Pn	Pn	02 10 00.0	-4.5
PTGA				IAmb	IAmb	02 10 04.1	
	comp=Z,30nm,0.7s						
RUSC	La Rusia	15.23	237	eP	Pn	02 10 07.5	+1.2
SJCC	San Jacinto, C	15.28	254	eP	Pn	02 10 06.4	-0.1
ZARC	Zaragoza, Cauc	15.92	246	eP	Pn	02 10 16.6	+1.9
ZARC	Zaragoza, Cauc	15.92	246		Pn	02 10 15.2	+0.5
PTBC	PUERTO BERRIO,	16.03	242	eP	Pn	02 10 16.3	+0.2
MOTC	Monteria, Cord	16.11	251	eP	Pn	02 10 16.8	-0.3
SPBC	San Pablo de B	16.18	238	eP	Pn	02 10 19.5	+1.5
UREC	San Jos de Ur	16.41	248	eP	P	02 10 23.1	+0.4
ROSC	El Rosal	16.84	237	P	Pn	02 10 28.2	+1.6
	comp=Z,2.4nm,0.3s,baz=270,slow=22,SNR=2.9						
NORC	Norcasia	16.89	240	eP	P	02 10 29.4	+1.3
MACA	Manacapuru-AM	17.54	181	Pn	Pn	02 10 32.2	-2.7
MACA				IAmb	IAmb	02 10 37.8	
	comp=Z,18nm,0.5s						
CBOC	Ciudad Bolivar	17.70	243	eP	P	02 10 38.5	+1.2
PRAC	Prado	17.96	235	eP	Pn	02 10 40.2	+0.1
MACC	Macarena, Meta	18.18	229	eP	P	02 10 42.8	+0.4
YOTC	Yotoco, Valle	18.98	238	eP	P	02 10 50.4	-0.9
MARP	Paez Belalcaza	19.33	235	eP	P	02 10 55.7	+0.4
SAML	Samuel	23.47	187	P	P	02 11 38.4	-0.4
ETMB	Extrema	24.86	194	P	P	02 11 52.0	+0.4
LPAZ	La Paz	31.56	195	P	P	02 12 54.6	+2.6
	comp=Z,1.0nm,0.6s,baz=257,slow=9.6,SNR=4.3						
PLAL	Pickwick Lake	32.29	314	P	P	02 12 58.2	+0.6
PLAL				IAmb	IAmb	02 12 59.4	
	comp=Z,7.0nm,0.7s						
143A	Socs Landing,	33.62	308	P	P	02 13 09.2	-0.1
SIUC	Southern Illin	34.55	317	P	P	02 13 18.0	+0.7
S44A	Carbondale	34.57	317	P	P	02 13 18.4	+0.9
PBMO	Poplar Bluff	34.86	315	P	P	02 13 20.7	+0.7
PBMO				IAmb	IAmb	02 13 21.4	
	comp=Z,9.1nm,0.8s						
X40A	Basin Creek Fa	35.47	310	P	P	02 13 26.3	+1.0
X40A				IAmb	IAmb	02 13 27.3	
	comp=Z,5.9nm,0.7s						
P43A	Skaggs, Pawnee	35.85	320	P	P	02 13 29.5	+1.0
CCM	Cathedral Cave	36.08	316	P	P	02 13 31.0	+0.5
MGMO	Mountain Grove	36.31	314	P	P	02 13 32.8	+0.2
MGMO				IAmb	IAmb	02 13 34.3	
	comp=Z,6.8nm,0.7s						
W39A	Magazine	36.48	310	P	P	02 13 34.6	+0.6
W39A				IAmb	IAmb	02 13 35.8	
	comp=Z,6.0nm,0.8s						
HHAR	Hobbs	37.08	312	P	P	02 13 39.4	+0.4
HHAR				IAmb	IAmb	02 13 40.2	
	comp=Z,6.4nm,0.6s						
S39A	Bolivar	37.31	314	P	P	02 13 40.8	-0.1
S39A				IAmb	IAmb	02 13 42.3	
	comp=Z,10.0nm,0.9s						
TUL1	Leonard	38.27	310	P	P	02 13 48.7	-0.4
P38A	Dawn	38.42	317	P	P	02 13 50.7	+0.4
T35A	Sooner Cattle	39.22	311	P	P	02 13 56.8	-0.3
JCT	Junction City	39.61	300	P	P	02 14 00.2	-0.3
JCT				IAmb	IAmb	02 14 00.9	
	comp=Z,11nm,1.1s						
BLOK	Blackwell	39.67	311	P	P	02 14 00.6	-0.2
ABTX	Abilene, Hawle	40.08	304	P	P	02 14 03.1	-1.1
ABTX				IAmb	IAmb	02 14 04.8	
	comp=Z,8.5nm,0.8s						
KSU1	Kansas State U	40.25	314	P	P	02 14 05.0	-0.6
KSU1				IAmb	IAmb	02 14 05.7	
	comp=Z,7.8nm,0.7s						
KAN14	Manchester OK	40.29	311	P	P	02 14 06.4	+0.4
SCHQ	Schefferville	40.58	354	P	P	02 14 08.3	+0.3
	comp=Z,3.3nm,0.8s,baz=251,slow=19,SNR=1.7						
SCHQ	Schefferville	40.58	354	P	P	02 14 09.0	+0.9
SCHQ				IAmb	IAmb	02 14 23.9	
	comp=Z,17nm,1.2s						
ECSD	EROS Data Cent	42.54	321	P	P	02 14 24.7	+0.4
TX31	Lajitas Ar. Si	42.64	298	P	P	02 14 25.4	0.0
TX31				IAmb	IAmb	02 14 27.6	
	comp=Z,15nm,1.4s						
TXAR	Lajitas Array	42.64	298	P	P	02 14 25.0	-0.4
	comp=Z,0.3nm,0.4s,baz=108,slow=6.1,SNR=14						
TXAR	Lajitas Array	42.64	298	P	P	02 14 25.5	+0.1
MNTX	Cornudas Mount	44.55	301	P	P	02 14 40.9	+0.2
MNTX				IAmb	IAmb	02 14 41.8	
	comp=Z,7.2nm,1.1s						
AGMN	Agassiz Nation	44.68	326	P	P	02 14 41.6	+0.2
ULM	Lac du Bonnet	45.88	329	P	P	02 14 50.3	-0.6
	comp=Z,3.3nm,0.6s,baz=116,slow=8.2,SNR=5.0						
ULM	Lac du Bonnet	45.88	329	P	P	02 14 50.6	-0.2
ULM				IAmb	IAmb	02 14 50.9	
	comp=Z,15nm,1.5s						
BNM	Barren Site	46.11	304	P	P	02 14 53.3	0.0
SDCO	Great Sand Dun	46.19	309	P	P	02 14 54.5	+0.6
LENM	Lemitar	46.39	304	P	P	02 14 57.3	+1.9
PV13	Radium Mtn., P	48.82	308	P	P	02 15 14.5	+0.3
PV13				IAmb	IAmb	02 15 16.1	
	comp=Z,3.2nm,0.8s						
X18A	Snowflake	48.88	303	P	P	02 15 15.2	+0.5
X18A				IAmb	IAmb	02 15 16.6	
	comp=Z,4.8nm,0.8s						
TUC	Tucson	49.18	300	P	P	02 15 17.4	+0.5
X16A	Lo Mia Camp, P	50.07	303	P	P	02 15 23.6	-0.2
BW06	Boulder Array	50.70	314	P	P	02 15 28.8	+0.4
PD31	Pinedale Array	50.70	314	P	P	02 15 28.8	+0.4
PDAR	Pinedale Array	50.70	314	P	P	02 15 28.8	+0.4
	comp=Z,2.1nm,0.7s,baz=116,slow=9.8,SNR=16						
TMUT	Trail Mountain	50.92	309	P	P	02 15 30.5	+0.2
TMUT				IAmb	IAmb	02 15 31.9	
	comp=Z,5.2nm,0.7s						
Y14A	Wickenburg	51.27	302	P	P	02 15 32.4	-0.2
W13A	Hualapai Mount	52.16	303	P	P	02 15 39.1	-0.4
DUG	Dugway, Tooele	52.34	310	P	P	02 15 39.9	-0.7
DUG				IAmb	IAmb	02 15 42.3	
	comp=Z,4.5nm,1.0s						
YHL	Hebgen Lake	52.47	316	P	P	02 15 41.5	-0.2
YHL				IAmb	IAmb	02 15 44.3	
	comp=Z,6.6nm,0.9s						
BGU	Big Grassy Mou	52.67	311	P	P	02 15 41.6	-1.5
BGU				IAmb	IAmb	02 15 44.6	
	comp=Z,5.3nm,0.8s						
HVU	Hansel Valley	52.70	312	P	P	02 15 42.5	-0.8
HVU				IAmb	IAmb	02 15 44.8	
	comp=Z,3.3nm,0.9s						
PSUT	Pine Spring	52.76	308	P	P	02 15 43.2	-0.7
PSUT				IAmb	IAmb	02 15 47.4	
	comp=Z,4.3nm,0.8s						
ESDC	Sonseca Array	55.05	52	P	P	02 15 59.8	-0.5
	comp=Z,0.8nm,0.7s,baz=260,slow=8.4,SNR=6.8						
ESDC	Sonseca Array	55.05	52	P	P	02 16 00.2	-0.1
BMN	Battle Mountai	55.68	309	P	P	02 16 04.7	-0.3
BMN				IAmb	IAmb	02 16 06.6	
	comp=Z,3.9nm,0.8s						
PLCA	Paso Flores	55.77	189	P	P	02 16 06.1	+0.8
	comp=Z,1.0nm,0.7s,baz=204,slow=23,SNR=2.5						
NVAR	Mina Array Bea	56.18	307	P	P	02 16 09.6	+0.9
	comp=Z,1.5nm,0.7s,baz=100,slow=6.7,SNR=15						
NVAR	Mina Array Bea	56.18	307	P	P	02 16 09.0	+0.3
NEW	Newport	57.40	318	P	P	02 16 15.7	-1.3
TORD	Torodi Ar. Bea	60.02	83	P	P	02 16 35.1	-0.5
	comp=Z,1.3nm,0.8s,baz=277,slow=6.4,SNR=10						
TORD	Torodi Ar. Bea	60.02	83	P	P	02 16 34.2	-1.4
YKA	Yellowknife Ar	61.16	334	P	P	02 16 42.3	-0.3
	comp=Z,0.9nm,0.6s,baz=104,slow=8.6,SNR=4.7						
YKA	Yellowknife Ar	61.16	334	P	P	02 16 42.4	-0.1
A36M	Sachs Harbour	68.67	342	P	P	02 17 31.0	-0.2
A36M				IAmb	IAmb	02 17 32.7	
	comp=Z,5.9nm,0.8s						
GERES	GERESS Array B	68.69	43	P	P	02 17 31.2	-0.7
	comp=Z,0.4nm,0.7s,baz=254,slow=6.0,SNR=3.9						
ARCES	ARCESS Array B	75.05	21	P	P	02 18 09.9	+0.4
	comp=Z,5.0nm,1.0s,baz=310,slow=4.6,SNR=5.2						
ILAR	Eielson Array	75.57	334	P	P	02 18 12.5	-0.1
	comp=Z,0.8nm,0.6s,baz=85,slow=4.6,SNR=16						
FINES	FINESS Array B	75.65	30	P	P	02 18 13.4	+0.3
	comp=Z,1.5nm,0.6s,baz=291,slow=5.3,SNR=7.6						
FINES	FINESS Array B	75.65	30	P	P	02 18 13.7	+0.6
BUR08	Bucovina Ar. S	76.41	44	P	P	02 18 18.4	+0.6
BRTR	Keskin Array B	83.83	51	P	P	02 18 57.6	-0.5
	comp=Z,0.5nm,0.4s,baz=260,slow=5.3,SNR=4.9						
ASAR	Alice Springs	163.81	234	PKP	PKPdf	02 26 30.4	-1.3
	comp=Z,0.3nm,0.6s,baz=162,slow=0.3,SNR=4.1						

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*INET **24** 02:27:06.2, 8°.98N×83°.03W, h31^{km}, MW3.5*

*NEIC **24** 02:27:11.4±1.3, 8°.81N±0°.02×83°.17W±0°.02, h52^{km}±7^{km}, mb4.0/1, ML4.0(UCR), Error ellipse: s-maj=3.8km s-min=1.6km az=148.0*

*UCR **24** 02:27:11.0±1.4, 8°.79N×83°.16W, h52^{km}±3^{km}, MW3.9, mb4.0(NEIC)*

*UPA **24** 02:27:11.8±0.8, 8°.81N×83°.17W, h36^{km}±2^{km}, MW4.3*

ISC 24 02:27:11.2±1.1**, 8°.80N**±0°.03×**83°.17W**±0°.03**, h49**^{km}±6^{km}**, n94, σ0.^{s}75**/130**, 1C-3D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDSV	San Vito	0.20	84	eP	Pn	02 27 19.8	+0.2
EDSV				eS	Sn	02 27 27.8	+2.2
POTG	Potrero Grande	0.26	11	eP	Pn	02 27 19.9	-0.1
POTG				eS	Sn	02 27 27.3	+1.1
EDPN	Palmar Norte	0.33	300	eP	Pn	02 27 20.2	-0.3
EDPN				eS	Sn	02 27 28.4	+1.3
MLIR3	Monte Lirio, C	0.34	91	eP	Pn	02 27 21.0	+0.2
MLIR3				eS	Sn	02 27 26.5	-1.1
RIOS	Rincon, Osa	0.35	254	eP	Pn	02 27 20.4	-0.4
RIOS	Rincon, Osa	0.35	254	Pn	Pn	02 27 20.4	-0.4
RIOS				Sn	Sn	02 27 28.3	+0.7
CDITO	Canoas	0.37	127	eP	Pn	02 27 20.5	-0.5
CDITO				eS	Sn	02 27 28.9	+1.0
CDITO	Canoas	0.37	127	Pn	Pn	02 27 20.5	-0.5
CDITO				Sn	Sn	02 27 28.6	+0.7
CDITO	Canoas	0.37	127	⇓iP	Pn	02 27 20.5	-0.5
EDBA	Buenos Aires	0.38	344	eP	Pn	02 27 21.1	0.0
EDBA				eS	Sn	02 27 29.5	+1.4
PIRO	Carate, Puerto	0.42	203	eP	Pn	02 27 21.0	-0.5
PIRO	Carate, Puerto	0.42	203	eP	Pn	02 27 21.1	-0.5
PIRO				eS	Sn	02 27 28.4	-0.6
CCOL	Caracol de Cor	0.43	153	eP	Pn	02 27 21.5	-0.2
CCOL				eS	Sn	02 27 31.2	+2.1
DRK0	Durika	0.47	351	eP	Pn	02 27 21.9	-0.4
DRK0	Durika	0.47	351	Pn	Pn	02 27 21.9	-0.4
DRK0				Sn	Sn	02 27 30.6	+0.5
DRK0	Durika	0.47	351	⇓eP	Pn	02 27 21.9	-0.4
DRK0				eS	Sn	02 27 29.5	-0.6
SRBA	San Rafael, Bu	0.47	337	eP	Pn	02 27 21.8	-0.4
SRBA	San Rafael, Bu	0.47	337	Pn	Pn	02 27 21.8	-0.4
SRBA				Sn	Sn	02 27 30.5	+0.4
BRU2	Volcan	0.47	90	eP	Pn	02 27 21.9	-0.4
BRU2				eS	Sn	02 27 31.0	+0.8
BRU2	Volcan	0.47	90	Pn	Pn	02 27 21.8	-0.5
BRU2				Sn	Sn	02 27 31.0	+0.8
BRU2	Volcan	0.47	90	⇓iP	Pn	02 27 21.9	-0.4
BRU2				eS	Sn	02 27 30.5	+0.3
LESP3	La Esperanza,	0.54	136	eP	Pn	02 27 22.6	-0.4
SBAR3	San Bartolo, C	0.56	149	eP	Pn	02 27 23.1	0.0
BCO2	Palmira	0.64	97	⇑eP	Pn	02 27 24.1	-0.2
BCO2				eS	Sn	02 27 34.1	+0.3
PTPM	Petroterminale	0.66	154	eP	Pn	02 27 24.4	+0.1

PTPM				eS	Sn	02 27 35.9	+2.0
BAGA3	Bagala, Chiriq	0.72	117	eP	Pn	02 27 24.9	-0.2
BAGA3				eS	Sn	02 27 35.6	+0.3
LNBQ3	Los Naranjos,	0.72	90	eP	Pn	02 27 24.9	-0.4
LNBQ3				eS	Sn	02 27 35.8	+0.3
PEZE	Perez Zeledon,	0.77	319	eP	Pn	02 27 25.4	-0.5
PEZE				eS	Sn	02 27 37.1	+0.5
PEZE	Perez Zeledon,	0.77	319	Pn	Pn	02 27 25.5	-0.4
DVD	David	0.80	117	eP	Pn	02 27 25.7	-0.5
DVD				eS	Sn	02 27 37.6	+0.5
EDDO	Dominical	0.82	304	eP	Pn	02 27 25.9	-0.6
EDDO				eS	Sn	02 27 39.1	+1.4
LOCO3	Loma Colorada,	0.84	117	eP	Pn	02 27 26.5	-0.2
LOCO3				eS	Sn	02 27 38.5	+0.4
LOMA3	Las Lomas, Chi	0.85	115	eP	Pn	02 27 26.6	-0.4
LOMA3				eS	Sn	02 27 39.2	+0.8
GUAL3	Gualaca, Chiri	0.90	107	eP	Pn	02 27 27.6	0.0
GUAL3				eS	Sn	02 27 39.8	+0.2
CHIR3	Chiriqui UPA,	0.92	116	eP	Pn	02 27 27.8	-0.1
CHIR3				eS	Sn	02 27 40.8	+0.6
CNI2	El Empalme, Bo	0.93	48	eP	Pn	02 27 27.7	-0.2
CNI2				eS	Sn	02 27 39.4	-0.9
CDM	Cerro de Muert	0.95	322	eP	Pn	02 27 27.9	-0.8
CHGR2	Aguacate	1.02	82	eP	Pn	02 27 29.0	-0.3
CHGR2				eS	Sn	02 27 43.0	+0.4
RIMA	Rio Macho	1.18	325	eP	Pn	02 27 30.9	-0.7
RIMA	Rio Macho	1.18	325	Pn	Pn	02 27 30.9	-0.7
LCR2	La Lucha 2	1.25	319	eP	Pn	02 27 31.8	-0.7
VTCV	VTCV, Calle Va	1.30	335	eP	Pn	02 27 33.3	+0.2
BATAN	Batan	1.31	351	eP	Pn	02 27 34.2	+1.1
BATAN	Batan	1.31	351	Pn	Pn	02 27 33.8	+0.8
BATAN	Batan	1.31	351	eP	Pn	02 27 33.9	+0.8
RAFA	San Farael, Vo	1.31	331	eP	Pn	02 27 33.5	0.0
VTRT	Volcan Turrial	1.34	333	eP	Pn	02 27 34.1	+0.2
CVTR	Volcan Turrial	1.35	334	eP	Pn	02 27 34.0	+0.1
CVTR	Volcan Turrial	1.35	334	Pn	Pn	02 27 34.1	+0.1
VTUC	Crater, Volcan	1.35	334	eP	Pn	02 27 34.0	0.0
SJS	Escuela Geolog	1.43	323	eP	Pn	02 27 35.0	+0.2
REME3	Remedios, Chir	1.44	113	eP	Pn	02 27 35.1	+0.2
REME3				eS	Sn	02 27 54.1	+1.4
HDC	Heredia	1.52	322	eP	Pn	02 27 36.3	+0.3
HDC	Heredia	1.52	322	Pn	Pn	02 27 36.0	0.0
HDC	Heredia	1.52	322	eP	Pn	02 27 36.6	+0.5
HDC				eS	Sn	02 27 55.8	+1.1
HDC3	Heredia 3	1.52	322	eP	Pn	02 27 36.3	+0.3
RIFO	Rio Frio, Sara	1.68	334	eP	Pn	02 27 38.8	+0.6
CRPO	Crater poas	1.74	323	eP	Pn	02 27 39.5	+0.3
SRA1	San Ramn	1.82	315	eP	Pn	02 27 40.8	+0.6
LAFE	Finca La Fe, P	1.99	300	eP	Pn	02 27 42.5	+0.1
SAFE3	Santa Fe, Vera	2.09	98	eP	Pn	02 27 44.5	+0.7
RSUS3	Rio de Jesus,	2.15	112	eP	Pn	02 27 44.5	-0.1
RSUS3				eS	Sn	02 28 11.2	+1.2
ARE1	Arenal 1	2.25	317	eP	Pn	02 27 47.0	+1.0
CEDE	Laguna Cedeo	2.26	318	i P	Pn	02 27 46.8	+0.7
COVE	Coope Vega, Sa	2.26	328	eP	Pn	02 27 46.2	+0.1
COVE	Coope Vega, Sa	2.26	328	Pn	Pn	02 27 46.3	+0.1
STIA3	Santiago, Vera	2.28	108	eP	Pn	02 27 46.6	+0.1
JTS	Las Juntas de	2.30	310	eP	Pn	02 27 46.8	+0.1
JTS	Las Juntas de	2.30	310	Pn	Pn	02 27 46.3	-0.4
JTS	Las Juntas de	2.30	310	eP	Pn	02 27 47.8	+1.1
JTS				eS	Sn	02 28 14.8	+1.0
CALO3	Calobre, Verag	2.35	101	eP	Pn	02 27 48.3	+0.9
INDI	Punta indio, G	2.53	295	eP	Pn	02 27 49.7	-0.2
DUNO	Dulce Nombre,	2.62	299	Pn	Pn	02 27 50.7	-0.4
PLVR	Palo Verde	2.65	306	eP	Pn	02 27 51.8	+0.3
CUI	Cuipilapa	2.70	313	i P	Pn	02 27 53.5	+1.4
CACAO	El Cacao, Vera	2.70	122	eP	Pn	02 27 53.1	+0.9
CACAO				eS	Sn	02 28 24.4	+0.7
COLC	Colonia	2.73	313	i P	Pn	02 27 54.2	+1.6
ORTG	Ortega, Santa	2.74	305	Pn	Pn	02 27 53.2	+0.4
SAJU	San Juanillo,	2.81	297	eP	Pn	02 27 53.2	-0.4
PNME	Penonome	2.83	96	eP	Pn	02 27 55.1	+1.2
CHIT3	Chitre	2.85	107	eP	Pn	02 27 54.9	+0.7
AZU	Azuero	3.04	109	eP	Pn	02 27 57.3	+0.5
AZU	Azuero	3.04	109	eP	Pn	02 27 57.5	+0.7
AZU				eS	Sn	02 28 32.1	+0.3
HZTE	Horizontes, Gu	3.06	309	Pn	Pn	02 27 58.3	+1.3
BCIP	Isla Barro Col	3.31	83	Pn	Pn	02 28 00.7	+0.1
BCIP	Isla Barro Col	3.31	83	eP	Pn	02 28 00.9	+0.4
BCIP				eS	Sn	02 28 38.9	+0.2
GAMB1	Gamboa	3.43	84	eP	Pn	02 28 02.8	+0.6
GAMB1				eS	Sn	02 28 31.7	-10
ACON	Acoyapa	3.72	328	eP	Pn	02 28 06.3	+0.2
ACON	Acoyapa	3.72	328	Pn	Pn	02 28 06.0	-0.1
MOTC	Monteria, Cord	7.42	90	Pn	Pn	02 28 54.9	-2.1
SJCC	San Jacinto, C	7.96	81	Pn	Pn	02 29 04.6	+0.2
MTO3	Montecristo	8.23	313	Pn	Pn	02 29 07.7	-0.5
ZARC	Zaragoza, Cauc	8.33	98	Pn	Pn	02 29 10.3	+0.9
JCT	Junction City	26.59	326	P	P	02 32 42.5	-2.4
JCT				IAmb	IAmb	02 32 49.5	
	comp=Z,5.1nm,1.2s						

KMA ***24*** *02:27:52.5±0.7, 35.°67N×129.°80E, h12^{km}±3^{km}, Error ellipse: s-maj=6.5km s-min=2.1km az=106.0*
JMA ***24*** *02:27:52.2±0.6, 35.°67N×129.°82E, h13^{km}, M3.4*
IDC ***24*** *02:27:54.8±1.4, 35.°67N×129.°60E, h0^{km}, mb3.3/2, mb1 3.5/5, mb1mx3.3/40, mbtmp3.3/5, ML2.8/3, MS2.9/1, Ms1 2.9/1, ms1mx2.3/26, Error ellipse: s-maj=33.4km s-min=11.3km az=62.0*
ISC 24 02:27:52.5±1.3**, 35.°64N**±0.°03×**129.°78E**±0.°04**, h10**^{km}±11^{km}**, n24, σ1^{s}12**/30**, South Korea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSUSN	Ulsan	0.54	277	P	Pb	02 28 03.4	-0.7
	SNR=55						
KSUSN				S	Sg	02 28 10.7	+0.6
KSBUS	Busan	0.67	235	P	Pb	02 28 06.0	-0.4
	SNR=93						
KSDAG	Daegu	0.73	280	P	Pb	02 28 06.8	-0.6
	SNR=150						
KSBSA	Busan_acc	0.81	229	P	Pb	02 28 08.7	-0.1
	SNR=19						
MIYA	Miryang-si	0.86	260	P	Pb	02 28 09.3	-0.2
	SNR=18						
KSYOD	Yeongdeok	0.91	340	P	Pb	02 28 10.1	-0.4
	SNR=134						
YODB	Yeongdeok	0.94	341	P	Pg	02 28 10.0	-0.6
	SNR=138						
KSADO	Andong	1.02	319	P	Pg	02 28 11.7	-0.6
	SNR=157						
KSMAS	Masan	1.09	245	P	Pn	02 28 13.5	-0.4
	SNR=20						
KSULJ	Uljin	1.10	344	P	Pb	02 28 12.6	-1.1
	SNR=488						
KSULJ				S	Sb	02 28 27.5	-0.6
EUSB	Uiseong	1.14	309	P	Pb	02 28 13.6	-0.7
	SNR=20						
EUSB				S	Sb	02 28 28.5	-0.7
JTU	Tsushima	1.16	196	P	Pg	02 28 14.1	-0.7
JTU				eS	Sn	02 28 30.0	-0.7
KUJA	Jangpyeong	1.22	232	P	Pg	02 28 15.6	-0.4
	SNR=9.0						
EURB	Uiryeong-eup	1.26	256	P	Pg	02 28 16.3	-0.4
	SNR=23						
JTSM	Tsushimamitsus	1.34	194	P	Pb	02 28 17.0	-0.7
JTSM				eS	Sb	02 28 34.1	-0.9
UJN	ULJIN	1.38	348	P	Pb	02 28 17.7	-0.7
	SNR=10						
JHGM	Hagimishima	1.41	127	P	Pb	02 28 17.5	-1.3
JHGM				eS	Sn	02 28 35.1	-1.7
JTY	Toyota	1.73	142	P	Pn	02 28 21.5	-1.2
JII	Iki	1.84	181	P	Pb	02 28 25.0	-1.3
KSRS	Korea Array	2.35	321	Pn	Pb	02 28 34.5	-0.4
	13nm,0.3s,baz=139,slow=17,SNR=55						
KSRS				Lg	Lg	02 29 05.6	
	65nm,0.3s,baz=144,slow=30,SNR=29						
KSRS				LR	LR	02 29 09.0	
	comp=Z,255nm,19.8s,baz=226,slow=33						
JNU	Nakatsue	2.67	160	Pn	Pb	02 28 39.8	-0.8
	2.4nm,0.3s,baz=268,slow=6.2,SNR=8.3						
JNU				Pg	Pg	02 28 46.5	+2.7
	6.4nm,0.3s,baz=12,slow=7.8,SNR=12						
JNU				Lg	Lg	02 29 21.3	
	5.1nm,0.3s,baz=107,slow=21,SNR=1.8						
USRK	Ussuriysk Ar.	8.71	11	Pn	Pn	02 30 00.6	+2.0
	baz=192,slow=12,SNR=5.6						
SONM	Songino Array	21.19	312	P	P	02 32 40.4	+2.1
	0.6nm,0.7s,baz=126,slow=10,SNR=4.4						
WRA	Warramunga Arr	55.45	175	P	P	02 37 31.4	+4.1
	0.5nm,0.8s,baz=355,slow=7.8,SNR=3.1						

BJI ***24*** *02:46:13.6±0.0, 24.°82S×174.°11W, h16^{km}, mB5.9/19, mb5.5/31, Ms5.4/28, Ms7 5.1/32*
IDC ***24*** *02:46:17.0±0.4, 24.°64S×176.°06W, h0^{km}, mb5.0/19, mb1 5.1/21, mb1mx5.1/23, mbtmp4.9/21, ML4.9/2, MS4.8/28, Ms1 4.8/28, ms1mx4.8/32, Error ellipse: s-maj=16.6km s-min=14.6km az=125.0*
NEIC ***24*** *02:46:18.3, 24.°70S×175.°42W, h13^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.64; $M_{\theta\theta}$0.14; $M_{\phi\phi}$-1.79; $M_{r\theta}$0.27; $M_{\theta\phi}$-0.03; $M_{\phi r}$1.47; Fault plane solution: $M_0$2.28000×10^{17} NP1:ϕ_s7.00000°, δ66.00000°, λ96.00000°. NP2:ϕ_s174.00000°, δ25.00000°, λ78.00000°. Principal axes: T 2.2133, Plg69.0000°, Azm289.0000°; N 0.1242, Plg5.0000°, Azm185.0000°; P -2.3375, Plg20.0000°, Azm93.0000°;*
NEIC ***24*** *02:46:18.3±1.7, 24.°76S±0.°07×175.°57W±0.°10, h10^{km}±1^{km}, mb5.4/279, Mwb5.4/47, Mwc5.5/9(GCMT) Error ellipse: s-maj=15.1km s-min=11.9km az=93.0*
MOS ***24*** *02:46:18.8±1.7, 24.°73S×175.°79W, h15^{km}, mb5.5/34, MS5.0/8, Error ellipse: s-maj=11.9km s-min=8.4km az=101.3*
GCMT ***24*** *02:46:22.3±0.1, 24.°72S±0.°01×175.°44W, h14^{km}, MW5.5/143, Moment Tensor Solution. s121, c214; s143, c273; Duration: 1^{s}3 Moment tensor: Scale 10^{17} Nm; M_{rr}1.68±.03; $M_{\theta\theta}$0.11±.02; $M_{\phi\phi}$-1.79±.02; $M_{r\theta}$0.30±.04; $M_{\theta\phi}$-0.05±.01; $M_{\phi r}$1.10±.05; Best double couple: $M_0$2.07800×10^{17} NP1:ϕ_s173.00000°, δ29.00000°, λ76.00000°. NP2:ϕ_s9.00000°, δ62.00000°, λ98.00000°. Principal axes: T 2.0390, Plg72.0000°, Azm298.0000°; N 0.0760, Plg7.0000°, Azm186.0000°; P -2.1170, Plg16.0000°, Azm94.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***24*** *02:46:23.5, 24.°79S×175.°88W, h11^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.60; $M_{\theta\theta}$-0.04; $M_{\phi\phi}$-1.56; $M_{r\theta}$-0.24; $M_{\theta\phi}$-0.37; $M_{\phi r}$-0.05; Fault plane solution: $M_0$1.64000×10^{17} NP1:ϕ_s201.00000°, δ47.45000°, λ100.93000°. NP2:ϕ_s5.07000°, δ43.67000°, λ78.33000°. Principal axes: T 1.6318, Plg82.0000°, Azm180.0000°; N 0.0127, Plg8.0000°, Azm14.0000°; P -1.6446, Plg2.0000°, Azm283.0000°;*
NOU ***24*** *02:46:24.2, 24.°32S×174.°96W, h108^{km}, mb5.1/48, South of Tonga Islands*
BGR ***24*** *02:46:26.3±0.0, 23.°80S×173.°32W, h33^{km}, Ms5.2*
ISC 24 02:46:17.8±0.4**, 25.°01S**±0.°04×**175.°58W**±0.°05**, h11**^{km}±2^{km}**, h10^{km}:pP-P, n673, σ2^{s}30**/632**, mb5.4**/202**, MS5.0**/46**, 30C-29D, South of Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	Raoul Island	4.71	206	P	Pn	02 47 30.1	+1.3
RAO	Raoul Island	4.71	206	Pn	Pn	02 47 32.6	+3.8
	88nm,0.3s,baz=63,slow=18,SNR=2.2						
RAO				Sn	Sb	02 48 31.7	-5.4
	215nm,0.3s,baz=102,slow=20,SNR=4.8						
RAO	Raoul Island	4.71	206	P	Pn	02 47 32.6	+3.8
RAO						02 48 31.7	
RAO	Raoul Island	4.71	206	Pn	Pn	02 47 32.5	+3.7
RAO				Sn	Sn	02 48 29.6	+6.2
RAO	Raoul Island	4.71	206	P	Pg	02 47 46.2	-1.8
	1µm,0.8s						
GLKZ	Green Lake	4.72	206	P	Pn	02 47 30.9	+2.0
GLKZ				S	Sn	02 48 27.4	+3.8
NIUE	Niue	7.90	43	P	Pn	02 48 03.0	-10
	baz=7.1,SNR=96						
NIUE				S	Sn	02 49 23.7	-18
	baz=7.1						
NIUE	Niue	7.90	43	P	Pn	02 48 03.0	-10
MSVF	Nonsavu	9.36	319	Pn	Pn	02 48 31.6	-1.2
	7.5nm,0.3s,baz=141,slow=14,SNR=20						
MSVF				LR	LR	02 51 39.9	
	comp=Z,15µm,19.6s,baz=127,slow=37						
MSVF	Nonsavu	9.36	319⇓	eP	Pn	02 48 31.4	-1.4
MSVF	Nonsavu	9.36	319	Pn	Pn	02 48 30.8	-2.0
MSVF	Nonsavu	9.36	319	P	Pn	02 48 31.8	-1.0
DGTI	Dogotuki	9.71	332	P	Pn	02 48 33.1	-4.5
AFI	Afiamalu	11.61	19	Pn	Pn	02 48 55.1	-8.6
	22nm,0.3s,baz=147,slow=3.5,SNR=11						
AFI				Sn	Sn	02 50 53.2	-20
	17nm,0.3s,baz=71,slow=24,SNR=2.6						
AFI				LR	LR	02 52 54.9	
	comp=Z,2µm,20.4s,baz=188,slow=35						
WMGZ	Waiomatatini S	13.75	200	P	Pn	02 49 29.9	-2.8
HAZ	Te Kaha	13.90	202	P	Pn	02 49 31.6	-3.2
URZ	Urewera	14.59	203	Pn	P	02 49 47.8	-2.9
	3.2nm,0.3s,baz=120,slow=24,SNR=11						
URZ				Sn	Sn	02 52 19.6	-6.3
	1.1nm,0.3s,baz=300,slow=23,SNR=2.0						
URZ				LR	LR	02 54 28.6	
	comp=Z,6µm,19.7s,baz=31,slow=33						
URZ	Urewera	14.59	203		Pn	02 49 47.5	+3.3
RAR	Rarotonga	15.03	79	Pn	Pn	02 49 43.3	-6.9
	5.5nm,0.3s,baz=224,slow=10,SNR=13						
RAR				Sn	Sn	02 52 17.7	-19
	2.7nm,0.3s,baz=64,slow=15,SNR=1.5						
RAR	Rarotonga	15.03	79	P	Pn	02 49 43.5	-6.7
RAR	Rarotonga	15.03	79		Pn	02 49 43.5	-6.7
RAR	Rarotonga	15.03	79	P	Pn	02 49 43.7	-6.5
BKZ	Black Stump Fm	15.62	203	P	P	02 50 07.8	+5.6
HIZ	Hauiti	15.71	209	P	P	02 50 07.1	+3.9
PINNC	Pines Island,	15.72	275	P	P	02 50 05.8	+2.5
MCHZ	McNeill Hill	15.79	202	P	P	02 50 06.3	+2.3
MCHZ				S	Sn	02 52 47.7	-7.5
ETVZ	East Tongariro	15.88	205	P	P	02 50 07.8	+2.5
WTVZ	West Tongariro	15.91	206	P	P	02 50 09.8	+4.3
OTVZ	Oturere	15.93	206	P	P	02 50 07.5	+1.8
SNVZ	South Ngauruho	15.96	206	P	P	02 50 04.7	-1.3
KAHZ	Kahuranaki	16.05	201	P	P	02 50 06.4	-0.5
KAHZ				S	Sn	02 52 52.4	-9.0
FWVZ	Far West T-bar	16.05	206	P	Pn	02 50 03.4	-0.3
BHHZ	Black Hill Sta	16.06	204	P	Pn	02 50 02.3	-1.3
BHHZ				S	Sn	02 52 56.5	-5.3
KRHZ	Kereru	16.08	203	P	P	02 50 06.4	-0.9
KRHZ				S	Sn	02 52 56.7	-5.7
WNVZ	Wahianoa	16.09	205	P	Pn	02 50 01.4	-2.8
WNVZ				S	Sn	02 53 02.0	-0.8
MOVZ	Moawhango	16.10	205	P	P	02 50 07.8	+0.2
PXZ	Pawanui	16.26	201	P	P	02 50 09.5	+0.3
PXZ				S	Sn	02 52 58.1	-8.5
OUENC	Ouen Island, N	16.30	275	P	Pn	02 50 06.9	+0.1
OUENC	Ouen Island, N	16.30	275	P	P	02 50 14.3	+4.5
YATNC	Mamie plateau,	16.34	277	P	P	02 50 13.8	+3.6
PNHZ	Pukenui	16.38	203	P	P	02 50 10.1	-0.5
PNHZ				S	Sn	02 52 58.7	-11
PRHZ	Porangahau	16.55	201	P	P	02 50 12.5	0.0
ONTNC	Ouen Toro	16.68	276		Pn	02 50 09.6	-2.0
ONTNC	Ouen Toro	16.68	276	P	P	02 50 19.0	+5.0
DVHZ	Dannevirke	16.74	202	P	P	02 50 17.2	+2.7
DZM	Mont Dzumac	16.74	276	Pn	P	02 50 16.7	+1.9
	1.9nm,0.3s,baz=93,slow=17,SNR=29						
DZM				LR	LR	02 54 12.1	
	comp=Z,3µm,19.8s,baz=110,slow=29						
DZM	Mont Dzumac	16.74	276	eP	P	02 50 15.4	+0.6
	384nm,1.5s						
DZM				eLR	LR	02 54 09.7	
	comp=Z,12µm,24.3s						
DZM	Mont Dzumac	16.74	276	P	Pn	02 50 10.7	-1.9
DZM	Mont Dzumac	16.74	276	P	P	02 50 17.6	+2.8
NOUC	Port Laguerre	16.86	276	P	P	02 50 18.5	+2.5
BFZ	Birch Farm	17.05	202	P	P	02 50 19.5	+1.5
BFZ				S	Sn	02 53 15.8	-10
BFZ	Birch Farm	17.05	202	P	P	02 50 18.1	+0.1
BFZ	Birch Farm	17.05	202	P	P	02 50 22.0	+4.0
HOWZ	Holdsworth Sta	17.50	203	P	Pn	02 50 21.6	-0.2
HOWZ				S	Sn	02 53 23.9	-13
OGWZ	Otaki Gorge	17.55	204	P	Pn	02 50 22.6	+0.2
OGWZ				S	Sn	02 53 24.9	-13
MSWZ	Moikau Station	18.05	203	P	P	02 50 31.0	+2.0
TCW	Tory Channel	18.23	205	P	Pn	02 50 30.5	-0.2
TCW				S	Sn	02 53 40.6	-14
NNZ	Nelson	18.59	207	P	P	02 50 34.5	-0.5
NNZ				S	Sn	02 53 51.3	-12
SANVU	Saraoutou	18.73	297		P	02 50 33.3	-3.4
SANVU				IAmb	IAmb	02 50 50.3	
	comp=Z,391nm,1.2s						
SANVU	Saraoutou	18.73	297	P	Pn	02 50 38.2	+1.1
KOUNC	Koumac, New Ca	19.08	279	P	Pn	02 50 44.7	+3.4
KHZ	Kahutara	19.55	205	P	Pn	02 50 46.4	-0.2
KHZ	Kahutara	19.55	205	P	P	02 50 45.5	+0.1
OXZ	Oxford	20.90	206	P	Pn	02 51 03.7	+1.1
KNTN	Kanton	22.42	10	P	P	02 51 14.1	-2.6
KNTN				IAmb	IAmb	02 51 17.3	
	comp=Z,395nm,1.4s						
TBI	Tubuai	23.88	91	eS	S	02 55 43.0	-4.7
	comp=Z,1µm,24.8s						
TBI				eLQ	LQ	02 56 16.1	
	comp=Z,2µm,27.0s						
TBI				eLR	LR	02 57 15.2	
	comp=Z,9µm,28.0s,baz=262						
TBI	Tubuai	23.88	91	eT	T	03 16 03.7	
	comp=Z,12nm,0.3s						
PAE	Paea	25.27	78	eT	T	03 17 41.1	
	comp=Z,6.3nm,0.3s						
PPT2	Papeete2	25.30	78	eS	S	02 56 05.6	-5.2
	comp=Z,1µm,26.2s						
PPT2				eLQ	LQ	02 56 49.4	
	comp=Z,5µm,23.2s						
PPT2				eLR	LR	02 57 49.3	
	comp=Z,12µm,26.8s,baz=248						
PPT2	Papeete2	25.30	78	eT	T	03 17 43.3	
	comp=Z,5.4nm,0.3s						
PPT	Papeete	25.31	78	LR	LR	02 58 53.3	
	comp=Z,3µm,19.6s,baz=253,slow=30						
HNR	Honiara	27.96	299	P	P	02 52 05.8	-2.8
	comp=Z,105nm,0.4s,baz=195,slow=12,SNR=2.5						
HNR				LR	LR	03 01 27.1	
	comp=Z,4µm,20.4s,baz=142,slow=33						
HNR	Honiara	27.96	299	P	P	02 52 06.1	-2.5
HNR				pmax	pmax		
	comp=Z,133nm,1.0s						
HNR	Honiara	27.96	299	P	P	02 52 06.1	-2.5
EIDS	Eidsvold	30.13	262	P	P	02 52 28.7	+0.9
	baz=30,SNR=7.7						
EIDS	Eidsvold	30.13	262	P	P	02 52 26.2	-1.6
EIDS	Eidsvold	30.13	262	P	P	02 52 29.4	+1.6
	comp=Z,26nm,0.7s						
MGCD	Mangrove Creek	30.13	247	P	P	02 52 30.9	+3.1
	baz=31						
RMQ	Roma	32.09	260	P	P	02 52 46.7	+1.6
	baz=32,SNR=7.6						
RMQ	Roma	32.09	260	P	P	02 52 49.5	+4.4
	comp=Z,28nm,1.0s						
MILA	Mila	32.33	240	P	P	02 52 50.1	+2.8
	baz=33						
YNG	Young	32.50	245	P	P	02 52 54.1	+5.4
	comp=Z,22nm,1.3s						
CMSA	Cobar Meteorol	34.59	250	P	P	02 53 08.0	+1.1
	baz=35,SNR=12						
CMSA	Cobar Meteorol	34.59	250	P	P	02 53 09.3	+2.4
	comp=Z,20nm,2.0s						
TOO	Toolangi	35.30	240	P	P	02 53 16.6	+3.6
	baz=36,SNR=6.4						
TOO	Toolangi	35.30	240	P	P	02 53 13.4	+0.4
TOO				pmax	pmax		
	comp=Z,14nm,0.9s						
TOO	Toolangi	35.30	240	P	P	02 53 13.4	+0.4
CTAO	Charters Tower	35.51	270	P	P	02 53 12.3	-2.6
CTAO				pmax	pmax		
	comp=Z,48nm,1.4s						
CTAO	Charters Tower	35.51	270	P	P	02 53 12.2	-2.6
CTAO				IAmb	IAmb	02 53 19.5	
	comp=Z,48nm,1.4s						
CTAO	Charters Tower	35.51	270	P	P	02 53 12.6	-2.3
QLP	Quilpie	36.11	259	P	P	02 53 18.9	-1.1
	baz=36,SNR=5.2						
QLP	Quilpie	36.11	259	P	P	02 53 21.8	+1.8
	comp=Z,31nm,1.4s						
BRAT	Ballarat	36.52	240	P	P	02 53 26.9	+3.5
	comp=Z,16nm,0.8s						
TAOE	Nuku Hiva Isla	37.36	71	eS	S	02 59 14.8	-4.2
	comp=Z,642nm,24.1s						
TAOE				eLQ	LQ	03 01 53.4	
	comp=Z,2µm,23.1s						
TAOE				eLR	LR	03 03 03.8	
	comp=Z,4µm,30.1s,baz=241						
MTSU	Mount Surprise	37.81	272	P	P	02 53 31.5	-3.1
	baz=38,SNR=20						
MTSU	Mount Surprise	37.81	272	P	P	02 53 33.2	-1.4
	comp=Z,27nm,0.8s						
STKA	Stephens Creek	38.08	250	P	P	02 53 35.0	-1.7
	comp=Z,6.4nm,0.6s,baz=85,slow=9.2,SNR=16						
STKA				LR	LR	03 08 16.5	
	comp=Z,5µm,18.1s,baz=84,slow=35						
STKA	Stephens Creek	38.08	250	P	P	02 53 36.1	-0.6
STKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
STKA	Stephens Creek	38.08	250	P	P	02 53 36.1	-0.6
ARPS	Mount Arapiles	38.09	242	P	P	02 53 38.3	+1.6
	baz=39,SNR=6.4						
ARPS	Mount Arapiles	38.09	242	P	P	02 53 41.2	+4.5
	comp=Z,36nm,0.8s						
PMG	Port Moresby	38.66	287	P	P	02 53 37.1	-4.7
	comp=Z,29nm,0.7s,baz=110,slow=5.4,SNR=11						
PMG	Port Moresby	38.66	287	P	P	02 53 37.5	-4.3
PMG				pmax	pmax		
	comp=Z,67nm,0.9s						
PMG	Port Moresby	38.66	287	P	P	02 53 37.5	-4.3
PMG				IAmb	IAmb	02 53 55.1	
	comp=Z,67nm,0.8s						
PMG	Port Moresby	38.66	287	P	P	02 53 37.9	-3.9
PMG	Port Moresby	38.66	287	P	P	02 53 37.9	-3.9
INKA	Innaminka	39.07	256	P	P	02 53 48.2	+3.1
COEN	Coen	40.26	278	P	P	02 53 54.0	-1.1
COEN	Coen	40.26	278	P	P	02 53 56.6	+1.5
	comp=Z,19nm,1.0s						
HTT	Hallett	40.32	247	P	P	02 53 54.8	-0.7
	baz=41,SNR=14						
HTT	Hallett	40.32	247	P	P	02 53 56.2	+0.7
	comp=Z,24nm,1.2s						
LCRK	Leigh Creek	41.03	252	P	P	02 54 03.7	+2.3
	comp=Z,35nm,0.9s						
QIS	Mount Isa	41.41	267	P	P	02 54 04.6	0.0
	baz=42,SNR=6.4						
QIS	Mount Isa	41.41	267	P	P	02 54 05.1	+0.5
	comp=Z,22nm,1.4s						
WHYH	Whyalla	41.46	248	P	P	02 54 05.7	+0.9
	comp=Z,13nm,0.7s						
BBOO	Buckleboo	42.74	248	P	P	02 54 15.6	+0.3
	baz=43,SNR=11						
BBOO	Buckleboo	42.74	248	P	P	02 54 14.9	-0.4
BBOO	Buckleboo	42.74	248	P	P	02 54 18.2	+2.9
	comp=Z,18nm,0.8s						
OOD	Oodnadatta	43.51	255	P	P	02 54 23.6	+2.0
	comp=Z,36nm,1.1s						
MULG	Mulgathing	44.63	251	P	P	02 54 30.4	-0.1
	comp=Z,19nm,0.7s						
AS31	Alice Springs	45.83	261	P	P	02 54 38.6	-1.6
ASAR	Alice Springs	45.83	261	P	P	02 54 36.5	-3.7
	comp=Z,3.7nm,0.5s,baz=94,slow=6.6,SNR=34						
ASAR				PcP	PcP	02 56 17.2	-0.4
	comp=Z,3.1nm,0.8s,baz=106,slow=4.1,SNR=1.0						
ASAR				ScP	ScP	03 00 13.0	+2.3
	comp=Z,1.5nm,1.0s,baz=98,slow=5.0,SNR=3.7						
ASAR				S	S	03 01 17.8	-6.5
	comp=Z,4.2nm,1.2s,baz=94,slow=16,SNR=12						
ASAR				LR	LR	03 13 42.7	
	comp=Z,5µm,18.2s,baz=119,slow=36						
ASAR	Alice Springs	45.83	261	P	P	02 54 36.5	-3.7
ASAR						02 56 17.2	
ASAR	Alice Springs	45.83	261	P	P	02 54 38.3	-1.9
ASAR				PcP	PcP	02 56 17.5	-0.1
WC3	Warramunga Arr	46.31	266	P	P	02 54 42.0	-2.0
	baz=47						
WRAB	Tennant Creek	46.34	266	P	P	02 54 44.3	+0.1
WRAB				pmax	pmax		
	comp=Z,18nm,0.8s						
WRAB	Tennant Creek	46.34	266	P	P	02 54 44.3	+0.1
WRAB				IAmb	IAmb	02 54 44.6	
	comp=Z,18nm,0.8s						
WRAB	Tennant Creek	46.34	266	P	P	02 54 42.1	-2.1
WRA	Warramunga Arr	46.34	266	P	P	02 54 40.5	-3.8
	comp=Z,12nm,0.6s,baz=103,slow=8.2,SNR=48						
WRA				PcP	PcP	02 56 18.9	-0.5
	comp=Z,6.4nm,0.9s,baz=104,slow=3.8,SNR=6.1						
WRA				LR	LR	03 13 44.9	
	comp=Z,4µm,18.4s,baz=100,slow=36						
WRA	Warramunga Arr	46.34	266	P	P	02 54 40.5	-3.8
WRA						02 56 18.9	
KIP	Kipapa	49.21	22⇑	eP	P	02 55 07.1	+0.8
KIP				pmax	pmax		
	comp=Z,143nm,1.7s						
FORT	Forrest	49.71	250	P	P	02 55 09.8	-0.3
	baz=50,SNR=14						
FORT	Forrest	49.71	250	P	P	02 55 09.9	-0.3

FORT	**Forrest**	**49.71**	**250**	P	**P**	**02 55 10.6**	**+0.5**
	comp=Z,89nm,0.7s						
KDU	**Kakadu**	**50.39**	**274**	P	**P**	**02 55 11.6**	**-3.9**
	baz=51,SNR=8.6						
KDU	**Kakadu**	**50.39**	**274**	P	**P**	**02 55 13.9**	**-1.6**
	comp=Z,23nm,0.7s						
WRKA	**Warakurna**	**50.52**	**257**	P	**P**	**02 55 14.1**	**-2.4**
	baz=51,SNR=13						
WRKA	**Warakurna**	**50.52**	**257**	P	**P**	**02 55 16.5**	**0.0**
	comp=Z,22nm,0.7s						
MTN	**Manton Dam**	**51.55**	**273**	P	**P**	**02 55 21.8**	**-2.5**
KNRA	**Kununurra**	**52.70**	**269**	P	**P**	**02 55 29.3**	**-3.5**
	baz=53,SNR=12						
KNRA	**Kununurra**	**52.70**	**269**	P	**P**	**02 55 32.0**	**-0.7**
KNRA				IAmb	IAmb	02 55 37.6	
	comp=Z,37nm,0.6s						
KNRA	**Kununurra**	**52.70**	**269**	P	**P**	**02 55 32.4**	**-0.4**
	comp=Z,60nm,0.7s						
VNDA	**Vanda**	**53.65**	**186**	P	**P**	**02 55 43.3**	**+4.4**
	comp=Z,13nm,1.0s,baz=6.1,slow=3.3,SNR=20						
VNDA				LR	LR	03 14 42.1	
	comp=Z,702nm,21.5s,baz=22,slow=32						
VNDA	**Vanda**	**53.65**	**186**	P	**P**	**02 55 43.3**	**+4.4**
VNDA	**Vanda**	**53.65**	**186**	P	**P**	**02 55 41.5**	**+2.5**
VNDA				IAmb	IAmb	02 55 48.2	
	comp=Z,40nm,1.3s						
GUMO	**Guam**	**54.40**	**310**	LR	LR	03 16 13.3	
	comp=Z,1µm,21.9s,baz=138,slow=33						
FITZ	**Fitzroy Crossi**	**54.75**	**265**	P	**P**	**02 55 46.8**	**-1.0**
	baz=55,SNR=40						
KLBR	**Kellerberrin**	**58.27**	**247**	P	**P**	**02 56 13.5**	**+0.7**
	baz=59,SNR=17						
MEEK	**Meekatharra**	**58.65**	**253**	P	**P**	**02 56 16.1**	**+0.6**
	baz=59,SNR=4.1						
PSA00	**Pilbara Seismi**	**58.91**	**259**	P	**P**	**02 56 17.1**	**-0.3**
MORW	**Morawa**	**60.27**	**250**	P	**P**	**02 56 25.8**	**-0.8**
	baz=61,SNR=7.5						
MORW	**Morawa**	**60.27**	**250**	P	**P**	**02 56 24.2**	**-2.4**
MORW				IAmb	IAmb	02 56 30.7	
	comp=Z,12nm,0.7s						
SANI	**Sanana**	**60.68**	**282**	P	**P**	**02 56 27.1**	**-2.5**
	comp=Z,946nmcomp=Z,23nm,0.7s						
CASY	**Casey**	**60.89**	**206**	P	**P**	**02 56 31.9**	**+1.7**
CASY				IAmb	IAmb	02 56 39.1	
	comp=Z,37nm,0.8s						
GIRL	**Giralia**	**63.57**	**256**	P	**P**	**02 56 50.6**	**+1.7**
	baz=64,SNR=3.1						
GIRL	**Giralia**	**63.57**	**256**	P	**P**	**02 56 48.3**	**-0.6**
QSPA	**South Pole Qui**	**65.08**	**180**	P	**P**	**02 56 59.4**	**+1.2**
TWSI	**Taliwang, Sumb**	**66.04**	**271**	P	**P**	**02 57 03.1**	**-2.0**
	comp=Z,271nmcomp=Z,13nm,1.0s						
TOLI2	**Tolitoli**	**66.75**	**283**	P	**P**	**02 57 07.7**	**-1.9**
MPSI	**Mapaga**	**67.18**	**282**	P	**P**	**02 57 10.1**	**-2.3**
	comp=Z,14nm,0.8s						
MJAR	**Matsushiro Arr**	**75.15**	**323**	P	**P**	**02 57 58.0**	**-2.2**
	comp=Z,8.0nm,0.6s,baz=110,slow=10,SNR=15						
MJAR				LR	LR	03 26 23.5	
	comp=Z,460nm,21.9s,baz=145,slow=32						
MJAR	**Matsushiro Arr**	**75.15**	**323**	P	**P**	**02 57 59.1**	**-1.1**
MJAR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MJAR	**Matsushiro Arr**	**75.15**	**323**	P	**P**	**02 57 59.1**	**-1.1**
MAJO	**Matsushiro**	**75.15**	**323**	⇑*e*P	**P**	**02 58 00.2**	**0.0**
MAJO				pmax	pmax		
	comp=Z,74nm,3.4s						
ADK	**Adak**	**76.57**	**359**	P	**P**	**02 58 07.2**	**-0.6**
ADK				pmax	pmax		
	comp=Z,300nm,1.4s						
ADK	**Adak**	**76.57**	**359**	P	**P**	**02 58 07.2**	**-0.6**
JHS	**Saijyo**	**76.96**	**319**		**P**	**02 58 09.8**	**-0.8**
JNU	**Nakatsue**	**77.07**	**316**	P	**P**	**02 58 10.2**	**-1.1**
JNU				IAmb	IAmb	02 58 14.5	
	comp=Z,45nm,1.1s						
KUR	**Kuril'sk**	**77.44**	**334**	*e*P	**P**	**02 58 14.4**	**+1.5**
KUR				S	**S**	**03 08 08.4**	**+4.9**
KUR				pmax	pmax		
	comp=Z,373nm,1.4s						
KUR				MLR	MLR		
	comp=Z,951nm,15.0s						
MAW	**Mawson**	**78.08**	**199**	P	**P**	**02 58 19.0**	**+2.7**
	comp=Z,6.5nm,0.6s,baz=104,slow=7.9,SNR=7.2						
MAW				LR	LR	03 33 20.1	
	comp=Z,1µm,18.2s,baz=113,slow=36						
MAW	**Mawson**	**78.08**	**199**	P	**P**	**02 58 19.2**	**+2.9**
MAW				pmax	pmax		
	comp=Z,10.0nm,1.3s						
MAW	**Mawson**	**78.08**	**199**		**P**	**02 58 19.2**	**+2.9**
JKA	**Kamikawa-asahi**	**78.74**	**331**		**P**	**02 58 17.7**	**-2.5**
ASAJ	**Asahikawa**	**78.74**	**331**	P	**P**	**02 58 17.7**	**-2.5**
ASAJ				pmax	pmax		
	comp=Z,136nm,1.2s						
MDSI	**Maura Dua**	**79.28**	**270**	P	**P**	**02 58 26.1**	**+2.2**
SKR	**Severo-Kuril's**	**79.41**	**342**	*e*P	**P**	**02 58 27.3**	**+3.6**
SKR				*e*S	**S**	**03 08 31.0**	**+6.6**
SKR				pmax	pmax		
	comp=Z,66nm,1.9s						
SKR				pmax	pmax		
	comp=Z,200nm,3.4s						
SKR				MLR	MLR		
	comp=Z,600nm,16.0s						
SKR				MLR	MLR		
	comp=Z,1µm,17.0s						
SAO	**San Andreas Ge**	**79.85**	**41**	P	**P**	**02 58 24.8**	**-1.7**
SAO				pmax	pmax		
	comp=Z,61nm,1.5s						
SAO	**San Andreas Ge**	**79.85**	**41**		**P**	**02 58 24.8**	**-1.7**
SAO				IAmb	IAmb	02 58 31.4	
	comp=Z,61nm,1.4s						
PMPB	**Monarch Peak**	**79.88**	**42**	P	**P**	**02 58 25.6**	**-1.2**
PMPB				IAmb	IAmb	02 58 32.7	
	comp=Z,30nm,1.1s						
PAGB	**Antelope Grade**	**79.90**	**43**	P	**P**	**02 58 26.2**	**-0.6**
PAGB				IAmb	IAmb	02 58 32.9	
	comp=Z,62nm,1.4s						
BAR	**Barrett**	**80.26**	**47**	P	**P**	**02 58 28.3**	**-0.5**
MWC	**Mount Wilson**	**80.31**	**45**	P	**P**	**02 58 28.5**	**-0.8**
MWC				pmax	pmax		
	comp=Z,14nm,1.0s						
MWC	**Mount Wilson**	**80.31**	**45**	P	**P**	**02 58 28.5**	**-0.8**
HOPS	**Hopland Field**	**80.40**	**39**	P	**P**	**02 58 28.0**	**-1.4**
GDXM	**Geysers**	**80.43**	**39**	P	**P**	**02 58 28.8**	**-0.8**
KCPM	**Cahto Peak**	**80.58**	**38**	P	**P**	**02 58 28.5**	**-2.0**
QZH	**Quanzhou**	**80.74**	**303**	P	**P**	**02 58 35.3**	**+3.8**
QZH				LR	LR		
	comp=Z,790nm,17.4s						
QZH				LR	LR		
	comp=Z,840nm,19.4s						
PET	**Petropavlovsk**	**80.88**	**345**	*c i*P	**P**	**02 58 30.1**	**-1.5**
PET				*e*S	**S**	**03 08 35.9**	**-3.9**
PET				pmax	pmax		
	comp=Z,400nm,11.7s						
PET				pmax	pmax		
	comp=Z,200nm,13.3s						
KMRM	**Mail Ridge**	**80.88**	**38**	IAmb	IAmb	02 58 38.0	
	comp=Z,38nm,0.7s						
YSS	**Yuzh-Sakhalins**	**80.91**	**333**	*e*P	**P**	**02 58 32.8**	**+0.9**
YSS				*e*		02 58 39.4	
YSS				*e*		03 01 31.8	
YSS				*e*PPP	PPP	03 03 29.8	
YSS				*e*S	**S**	**03 08 42.6**	**+2.3**
YSS				*e*SS	**SS**	**03 13 59.6**	**+4.5**
YSS				pmax	pmax		
	comp=Z,130nm,1.1s						
YSS				pmax	pmax		
	comp=Z,800nm,6.5s						
YSS				smax	smax		
	comp=N,500nm,8.1s						
YSS	**Yuzh-Sakhalins**	**80.91**	**333**	P	**P**	**02 58 30.7**	**-1.2**
ISA	**Isabella, Lake**	**80.96**	**44**	IAmb	IAmb	02 58 37.5	
	comp=Z,83nm,1.5s						
PFO	**Pinyon Flats O**	**80.97**	**46**	P	**P**	**02 58 32.3**	**-0.4**
PFO				pmax	pmax		
	comp=Z,19nm,1.3s						
PFO	**Pinyon Flats O**	**80.97**	**46**		**P**	**02 58 32.3**	**-0.4**
KSI	**Kapahiang**	**81.06**	**270**	P	**P**	**02 58 37.2**	**+3.6**
PEA0B	**Petropavlovsk-**	**81.19**	**344**	*d i*P	**P**	**02 58 34.6**	**+1.3**
PEA0B	**Petropavlovsk-**	**81.19**	**344**		**P**	**02 58 32.4**	**-0.9**
PETK	**Petropavlovsk-**	**81.19**	**344**	P	**P**	**02 58 32.2**	**-1.0**
	comp=Z,28nm,0.7s,baz=169,slow=5.1,SNR=17						
PETK				LR	LR	03 32 11.1	
	comp=Z,509nm,18.7s,baz=159,slow=34						
PETK	**Petropavlovsk-**	**81.19**	**344**	P	**P**	**02 58 32.3**	**-1.0**
PETK	**Petropavlovsk-**	**81.19**	**344**		**P**	**02 58 32.1**	**-1.1**
CMB	**Columbia Colle**	**81.32**	**41**	IAmb	IAmb	02 58 38.9	
	comp=Z,33nm,1.3s						
H03S2	**Juan Fernandez**	**81.63**	**123**	T	T	04 29 35.0	
	baz=243,slow=74,SNR=4.7						
H03S1	**Juan Fernandez**	**81.64**	**123**	T	T	04 29 36.4	
	baz=243,slow=74,SNR=13						
H03S3	**Juan Fernandez**	**81.65**	**123**	T	T	04 29 39.0	
	baz=243,slow=74,SNR=5.3						
ORV	**Oroville**	**81.67**	**39**	P	**P**	**02 58 34.5**	**-1.7**
ORV				pmax	pmax		
	comp=Z,21nm,1.4s						
ORV	**Oroville**	**81.67**	**39**	P	**P**	**02 58 34.5**	**-1.7**
KSRS	**Korea Array**	**81.72**	**318**	P	**P**	**02 58 35.9**	**-0.5**
	comp=Z,19nm,1.0s,baz=124,slow=6.5,SNR=20						
KSRS				LR	LR	03 32 58.9	
	comp=Z,588nm,18.5s,baz=130,slow=34						
KSRS	**Korea Array**	**81.72**	**318**	P	**P**	**02 58 35.9**	**-0.5**
KSRS	**Korea Array**	**81.72**	**318**	P	**P**	**02 58 35.9**	**-0.5**
KSAR	**Wonju Array Be**	**81.74**	**318**	P	**P**	**02 58 36.1**	**-0.4**
KSAR	**Wonju Array Be**	**81.74**	**318**		**P**	**02 58 36.1**	**-0.4**
WDC	**Whiskeytown Da**	**81.78**	**38**	P	**P**	**02 58 36.0**	**-0.7**
WDC				pmax	pmax		
	comp=Z,16nm,1.0s						
WDC	**Whiskeytown Da**	**81.78**	**38**		**P**	**02 58 36.0**	**-0.7**
MDPB	**Devils Postpil**	**81.84**	**42**	IAmb	IAmb	02 58 42.2	
	comp=Z,44nm,1.3s						
QSM	**Queen of Sheba**	**82.16**	**44**	IAmb	IAmb	02 58 43.6	
	comp=Z,60nm,1.4s						
GWY	**Greenwater Val**	**82.43**	**44**	IAmb	IAmb	02 58 45.1	
	comp=Z,49nm,1.4s						
LCH	**Last Change Ra**	**82.47**	**43**	P	**P**	**02 58 40.8**	**+0.2**
YBH	**Yreka Blue Hor**	**82.47**	**37**	LR	LR	03 28 56.7	
	comp=Z,312nm,19.0s,baz=220,slow=31						
PNTR	**Pine Nut**	**82.47**	**41**	IAmb	IAmb	02 58 45.4	
	comp=Z,51nm,1.1s						
VCNR	**Virginia City**	**82.58**	**40**	IAmb	IAmb	02 58 45.2	
	comp=Z,20nm,1.1s						
LHV	**Little Huntoon**	**82.59**	**42**	IAmb	IAmb	02 58 50.3	
	comp=Z,52nm,1.4s						
YERR	**Yerington**	**82.62**	**41**	IAmb	IAmb	02 58 58.0	
	comp=Z,27nm,1.2s						
SYO	**Syowa Base**	**82.82**	**192**	⇑*e*pP	pP	02 58 46.7	+2.9
RYN	**Ryan**	**82.82**	**41**	P	**P**	**02 58 41.5**	**-0.9**
RYN				IAmb	IAmb	02 58 56.4	
	comp=Z,32nm,1.4s						
NVAR	**Mina Array Bea**	**82.82**	**42**	P	**P**	**02 58 43.8**	**+1.3**
	comp=Z,6.6nm,0.8s,baz=223,slow=8.7,SNR=42						
NVAR				LR	LR	03 30 16.7	
	comp=Z,473nm,19.4s,baz=238,slow=32						
NVAR	**Mina Array Bea**	**82.82**	**42**	P	**P**	**02 58 41.5**	**-1.0**
NV11	**Mina Array Sit**	**82.92**	**42**	P	**P**	**02 58 42.1**	**-0.8**
NV11				IAmb	IAmb	02 58 47.6	
	comp=Z,58nm,1.4s						
HUMO	**Hull Mountain**	**82.94**	**36**	IAmb	IAmb	02 58 48.0	
	comp=Z,56nm,1.4s						
DBO	**Dodson Butte**	**83.14**	**36**	IAmb	IAmb	02 58 48.7	
	comp=Z,43nm,1.4s						
LL04	**Puerto Octay**	**83.25**	**132**	P	**P**	**02 58 45.5**	**+0.9**
TPH	**Tonopah**	**83.26**	**43**	P	**P**	**02 58 45.0**	**+0.3**
TPH				pmax	pmax		
	comp=Z,332nm,1.5s						
TPH	**Tonopah**	**83.26**	**43**	P	**P**	**02 58 45.0**	**+0.3**
MSHR	**Mys Shultsa**	**83.26**	**323**	⇑*e*P	**P**	**02 58 47.0**	**+2.7**
KVN	**Kaiserville**	**83.34**	**41**	IAmb	IAmb	02 58 49.6	
	comp=Z,46nm,1.5s						
SNAA	**Sanae**	**83.45**	**178**	P	**P**	**02 58 46.4**	**+1.3**
SNAA	**Sanae**	**83.45**	**178**	*ce*P	**P**	**02 58 46.1**	**+1.0**
SNAA				pmax	pmax		
	comp=Z,63nm,1.4s						
SNAA	**Sanae**	**83.45**	**178**	P	**P**	**02 58 47.1**	**+2.0**
Y14A	**Wickenburg**	**83.47**	**48**	IAmb	IAmb	02 58 53.7	
	comp=Z,24nm,1.3s						
VNA3	**Neumayer Olymp**	**83.50**	**175**	P	**P**	**02 58 46.4**	**+1.0**
SHPR	**Sheep Range**	**83.58**	**45**	IAmb	IAmb	02 58 55.4	
	comp=Z,38nm,1.4s						
LR03	**Panguipulli**	**83.87**	**131**	IAmb	IAmb	02 58 57.5	
	comp=Z,40nm,1.4s						
MOD	**Modoc Plateau**	**83.92**	**38**	IAmb	IAmb	02 58 53.1	
	comp=Z,20nm,0.9s						
USA0B	**Ussuriysk Arra**	**83.93**	**325**	P	**P**	**02 58 47.0**	**-0.7**
USRK	**Ussuriysk Ar.**	**83.93**	**325**	P	**P**	**02 58 47.3**	**-0.4**
	comp=Z,71nm,0.9s,baz=119,slow=3.4,SNR=38						
USRK				LR	LR	03 34 49.2	
	comp=Z,621nm,18.9s,baz=129,slow=35						
USRK	**Ussuriysk Ar.**	**83.93**	**325**	P	**P**	**02 58 47.3**	**-0.4**
USRK	**Ussuriysk Ar.**	**83.93**	**325**	P	**P**	**02 58 47.6**	**-0.2**
VNA2	**Neumayer--Watz**	**83.96**	**176**	P	**P**	**02 58 49.2**	**+1.5**
	baz=178,slow=4.0						
BUCK	**Buck Mountain**	**84.01**	**35**		**P**	**02 58 48.0**	**-0.3**
TYV	**Tymovskoe**	**84.05**	**335**	*e*P	**P**	**02 58 50.0**	**+1.8**
TYV				pmax	pmax		
	comp=Z,700nm,3.1s						
TYV				pmax	pmax		
	comp=Z,72nm,1.6s						
TUC	**Tucson**	**84.06**	**50**		**P**	**02 58 48.6**	**-0.2**
TUC				IAmb	IAmb	02 58 57.2	
	comp=Z,19nm,1.2s						
VNA1	**Neumayer--Stat**	**84.18**	**176**	P	**P**	**02 58 50.8**	**+2.1**
NJ2	**Nanjing**	**84.45**	**309**	*e*P	P	02 58 43.3	-7.4
NJ2				pmax	pmax		
	comp=Z,15nm,0.9s						
LC01	**Cunco**	**84.54**	**130**	IAmb	IAmb	02 59 08.1	
	comp=Z,18nm,1.2s						
PLCA	**Paso Flores**	**84.58**	**133**	P	**P**	**02 58 54.3**	**+2.8**
	comp=Z,6.0nm,1.1s,baz=204,slow=4.3,SNR=5.9						
PLCA				LR	LR	03 26 48.8	
	comp=Z,314nm,21.7s,baz=250,slow=29						
PLCA	**Paso Flores**	**84.58**	**133**	P	**P**	**02 58 54.3**	**+2.8**
PLCA	**Paso Flores**	**84.58**	**133**	IAmb	IAmb	02 59 07.3	
	comp=Z,21nm,1.5s						
319A	**Douglas**	**84.60**	**52**	IAmb	IAmb	02 58 57.0	
	comp=Z,24nm,1.3s						
QIZ	**Qiongzhong**	**84.72**	**294**	P	**P**	**02 58 47.6**	**-4.8**
QIZ	**Qiongzhong**	**84.72**	**294**	S	**S**	**03 09 23.4**	**+3.0**
QIZ	**Qiongzhong**	**84.72**	**294**	SS	SS	03 15 02.8	+10
QIZ				pmax	pmax		
	comp=Z,590nm,13.1s						
QIZ				LR	LR		
	comp=E,570nm,18.1s						
QIZ				LR	LR		
	comp=Z,550nm,18.6s						
BMN	**Battle Mountai**	**84.74**	**41**	P	**P**	**02 58 52.0**	**-0.2**
BMN				IAmb	IAmb	02 59 06.0	
	comp=Z,35nm,1.4s						
PINE	**Pine Mountain**	**84.82**	**36**		**P**	**02 58 52.2**	**-0.4**
LCMT	**Little Creek M**	**85.12**	**45**		**P**	**02 58 53.7**	**-0.4**
LCMT				IAmb	IAmb	02 58 59.3	
	comp=Z,47nm,1.3s						
WVOR	**Wild Horse Val**	**85.20**	**39**	P	**P**	**02 58 54.7**	**+0.2**
WVOR				IAmb	IAmb	02 58 58.9	
	comp=Z,54nm,1.5s						
CCUT	**Cedar City**	**85.36**	**45**		**P**	**02 58 55.5**	**0.0**
CCUT				IAmb	IAmb	02 59 00.9	
	comp=Z,58nm,1.4s						
MDJ	**Mudanjiang**	**85.47**	**324**	P	**P**	**02 58 55.3**	**-0.2**
MDJ				pmax	pmax		
	comp=Z,18nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,980nm,7.7s						
HOOD	**Mount Hood Mea**	**85.48**	**35**	IAmb	IAmb	02 58 60.0	
	comp=Z,43nm,1.3s						
WUAZ	**Wupatki**	**85.48**	**47**		**P**	**02 58 55.6**	**-0.4**
WUAZ				IAmb	IAmb	02 59 02.3	
	comp=Z,37nm,1.3s						
SZCU	**Shurtz Canyon**	**85.56**	**45**	IAmb	IAmb	02 59 01.8	
	comp=Z,63nm,1.4s						
MNSI	**Mandailing Nat**	**85.65**	**273**	P	**P**	**02 58 58.5**	**+1.3**
NLWA	**Neilton Lookou**	**85.79**	**32**	IAmb	IAmb	02 59 02.1	
	comp=Z,59nm,1.4s						
I07A	**Izee**	**85.79**	**37**	IAmb	IAmb	02 59 01.9	
	comp=Z,33nm,1.3s						
J08A	**Circle Bar Ran**	**85.89**	**38**	P	**P**	**02 58 56.4**	**-1.4**
J08A				IAmb	IAmb	02 59 02.2	
	comp=Z,28nm,1.2s						
IPM	**Ipoh**	**85.90**	**277**		**P**	**02 58 57.5**	**-1.0**
IPM				IAmb	IAmb	02 59 13.4	
	comp=Z,13nm,0.6s						
PKCU	**Pink Cliffs**	**85.97**	**45**	IAmb	IAmb	02 59 14.7	
	comp=Z,72nm,1.5s						
ML02	**Panimavida**	**86.33**	**128**	P	**P**	**02 59 00.2**	**0.0**
ML02				IAmb	IAmb	02 59 07.9	
	comp=Z,26nm,1.3s						
W18A	**Petrified Fore**	**86.36**	**49**	IAmb	IAmb	02 59 04.9	
	comp=Z,19nm,1.1s						
MTPU	**Mount Pierson**	**86.40**	**45**	IAmb	IAmb	02 59 06.7	
	comp=Z,54nm,1.4s						
GRNR	**Gornyy**	**86.52**	**332**	⇓*i*P	**P**	**02 59 03.5**	**+2.9**
GRNR				pmax	pmax		
	comp=E,6.0nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,20nm,1.1s						
TCRU	**Three Creeks R**	**86.57**	**44**	IAmb	IAmb	02 59 06.8	
	comp=Z,36nm,1.4s						
D05A	**Enumclaw**	**86.57**	**33**		**P**	**02 59 00.6**	**-0.4**
NKL	**Nikolayevsk**	**86.61**	**335**	*e*P	**P**	**02 59 00.6**	**-0.3**
NKL				pmax	pmax		
	comp=N,3.0nm,1.5s						
NKL				pmax	pmax		
	comp=E,3.0nm,1.2s						
NKL				pmax	pmax		
	comp=Z,43nm,1.2s						
NKL				MLR	MLR		
	comp=N,95nm,12.0s						
NKL				MLR	MLR		
	comp=E,97nm,12.0s						
NKL				MLR	MLR		
	comp=Z,533nm,15.0s						
CLRS	**Cowichan Lake**	**86.67**	**31**	IAmb	IAmb	02 59 05.9	
	comp=Z,43nm,1.5s						
F07A	**Phinny Hill Vi**	**86.76**	**35**	IAmb	IAmb	02 59 06.3	
	comp=Z,20nm,1.2s						
G08A	**Pilot Rock**	**86.88**	**36**	IAmb	IAmb	02 59 09.9	
	comp=Z,21nm,1.3s						
WHN	**Wuhan**	**86.89**	**306**	⇑P	**P**	**02 59 04.8**	**+1.9**
CBB	**Campbell River**	**86.96**	**30**	P	**P**	**02 59 01.9**	**-0.9**
CBB				IAmb	IAmb	02 59 07.5	
	comp=Z,43nm,1.3s						
RPSI	**Rantau Prapat**	**87.05**	**274**	IAmb	IAmb	02 59 10.0	
	comp=Z,44nm,1.3s						
CN2	**Changchun**	**87.21**	**322**	*e*P	**P**	**02 59 04.8**	**+0.7**
CN2				*e*PP	**PP**	**03 02 31.9**	**+3.5**
CN2				*e*S	**S**	**03 09 43.3**	**-0.5**
CN2				*e*SS	**SS**	**03 15 31.4**	**+2.9**
CN2				pmax	pmax		
	comp=Z,90nm,1.7s						
CN2				pmax	pmax		
	comp=Z,620nm,5.0s						
CN2				LR	LR		
	comp=Z,530nm,17.0s						
CN2				LR	LR		
	comp=Z,530nm,17.0s						
CN2				LR	LR		
	comp=Z,640nm,19.0s						
E07A	**Sunnyside**	**87.24**	**35**	IAmb	IAmb	02 59 17.9	
	comp=Z,18nm,1.2s						
HAWA	**Hanford**	**87.29**	**35**	IAmb	IAmb	02 59 09.0	
	comp=Z,45nm,1.4s						
MT01	**Popeta**	**87.34**	**126**	P	**P**	**02 59 06.3**	**+1.0**
MT01				IAmb	IAmb	02 59 12.9	
	comp=Z,24nm,1.2s						
BBB	**Bella Bella**	**87.35**	**27**	LR	LR	03 31 21.6	
	comp=Z,431nm,20.1s,baz=232,slow=31						
KLR	**Kul'dur**	**87.53**	**329**	*ce*P	**P**	**02 59 07.3**	**+1.8**
KLR				pmax	pmax		
	comp=Z,68nm,1.5s						
MNTX	**Cornudas Mount**	**87.59**	**53**		**P**	**02 59 05.1**	**-1.1**
MNTX				IAmb	IAmb	02 59 11.2	
	comp=Z,40nm,1.5s						
E08A	**Dider Farm, El**	**87.61**	**35**	IAmb	IAmb	02 59 10.2	
	comp=Z,23nm,1.5s						
TX31	**Lajitas Ar. Si**	**87.65**	**56**		**P**	**02 59 05.6**	**-1.1**
TX31				IAmb	IAmb	02 59 11.1	
	comp=Z,49nm,1.2s						
TX32	**Lajitas Array**	**87.65**	**56**	IAmb	IAmb	02 59 11.1	
	comp=Z,16nm,1.2s						
TXAR	**Lajitas Array**	**87.65**	**56**	P	**P**	**02 59 08.3**	**+1.6**
	comp=Z,3.2nm,0.9s,baz=222,slow=6.7,SNR=17						
TXAR				PKKPbc	**PKKPbc**	**03 16 57.8**	**+2.6**
	comp=Z,0.3nm,1.0s,baz=27,slow=6.2,SNR=2.4						
TXAR				LR	LR	03 32 35.9	
	comp=Z,383nm,19.4s,baz=0.0,slow=32						
TXAR	**Lajitas Array**	**87.65**	**56**	P	**P**	**02 59 08.3**	**+1.6**
TXAR	**Lajitas Array**	**87.65**	**56**		**P**	**02 59 05.2**	**-1.5**
GSI	**Gunungsitoli**	**87.68**	**273**	P	**P**	**02 59 10.3**	**+3.1**
TMUT	**Trail Mountain**	**87.75**	**44**	IAmb	IAmb	02 59 12.3	
	comp=Z,27nm,1.1s						
TIA	**Tai'an**	**87.94**	**312**	⇑P	**P**	**02 59 08.1**	**+0.3**
TIA				pmax	pmax		
	comp=Z,17nm,0.8s						
D08A	**Wollman Farm,**	**88.05**	**35**	P	**P**	**02 59 07.3**	**-0.8**
D08A				IAmb	IAmb	02 59 11.7	
	comp=Z,12nm,1.1s						
SRU	**San Rafael Swe**	**88.08**	**45**	IAmb	IAmb	02 59 13.2	
	comp=Z,30nm,1.4s						
E09A	**Wood Farm, Sta**	**88.10**	**36**	P	**P**	**02 59 08.2**	**-0.1**
E09A				IAmb	IAmb	02 59 12.4	
	comp=Z,45nm,1.5s						
SPUT	**South Promonto**	**88.14**	**42**	IAmb	IAmb	02 59 13.3	
	comp=Z,24nm,1.3s						
P17A	**Butcher Ranch,**	**88.15**	**45**	IAmb	IAmb	02 59 13.8	
	comp=Z,27nm,1.4s						
HLID	**Hailey**	**88.32**	**40**		**P**	**02 59 09.4**	**-0.3**
PLID	**Pearl Lake**	**88.36**	**38**	IAmb	IAmb	02 59 13.9	
	comp=Z,30nm,1.5s						
PV05	**Paradox Valley**	**88.43**	**46**	IAmb	IAmb	02 59 18.3	
	comp=Z,28nm,1.4s						
ANMO	**Albuquerque**	**88.52**	**50**	⇑*e*P	**P**	**02 59 11.6**	**+0.7**
ANMO				pmax	pmax		
	comp=Z,25nm,1.3s						
ANMO	**Albuquerque**	**88.52**	**50**		**P**	**02 59 09.9**	**-0.9**
ANMO				IAmb	IAmb	02 59 15.1	
	comp=Z,20nm,1.3s						
PV17	**East Wray Mesa**	**88.63**	**46**	IAmb	IAmb	02 59 18.7	
	comp=Z,19nm,1.5s						
PV19	**Morning Glory**	**88.63**	**46**	IAmb	IAmb	02 59 18.7	
	comp=Z,22nm,1.4s						
TCUT	**Toone Canyon**	**88.67**	**43**	IAmb	IAmb	02 59 16.0	
	comp=Z,42nm,1.3s						
B08A	**Colville Reser**	**88.69**	**34**	IAmb	IAmb	02 59 14.7	
	comp=Z,36nm,1.5s						
PV11	**David Mesa, Pa**	**88.70**	**46**	IAmb	IAmb	02 59 18.2	
	comp=Z,20nm,1.4s						
MA2	**Magadan**	**88.72**	**344**	⇑*e*P	**P**	**02 59 12.8**	**+1.9**
MA2				pmax	pmax		
	comp=Z,103nm,2.5s						
PV04	**Paradox Valley**	**88.73**	**46**	IAmb	IAmb	02 59 16.5	
	comp=Z,22nm,1.5s						
PV12	**Saucer Basin,**	**88.75**	**46**	IAmb	IAmb	02 59 19.4	
	comp=Z,30nm,1.4s						
PV01	**Paradox Valley**	**88.81**	**47**	IAmb	IAmb	02 59 19.7	
	comp=Z,20nm,1.4s						
HWUT	**Hardware Ranch**	**88.86**	**42**	P	**P**	**02 59 11.9**	**-0.3**
TPTI		**88.86**	**274**	P	**P**	**02 59 14.5**	**+1.8**
C09A	**Chrisman Ranch**	**88.86**	**35**	P	**P**	**02 59 11.8**	**-0.1**
C09A				IAmb	IAmb	02 59 17.5	
	comp=Z,18nm,1.0s						
LLLB	**Lillooet**	**88.96**	**31**	IAmb	IAmb	02 59 16.7	
	comp=Z,25nm,1.3s						
CMIG	**Matias Romero**	**89.00**	**71**	P	**P**	**02 59 16.2**	**+2.9**
	comp=Z,3.0nm,0.8s,baz=246,slow=23,SNR=2.4						
KLU	**Klutina**	**89.47**	**14**	IAmb	IAmb	02 59 18.8	
	comp=Z,41nm,1.2s						
ISLE	**Juniper Island**	**89.51**	**16**	P	**P**	**02 59 13.8**	**-0.9**
K20K	**Telida**	**89.70**	**10**	IAmb	IAmb	02 59 19.5	
	comp=Z,34nm,1.1s						
NEW	**Newport**	**89.75**	**35**	LR	LR	03 33 01.3	
	comp=Z,584nm,19.9s,baz=221,slow=31						
JIS	**Juneau Island**	**89.79**	**20**	IAmb	IAmb	02 59 20.3	
	comp=Z,58nm,1.5s						
AHID	**Auburn Hatcher**	**89.81**	**42**	IAmb	IAmb	02 59 26.4	
	comp=Z,27nm,1.4s						
BESE	**Bessie Mountai**	**89.89**	**20**	IAmb	IAmb	02 59 21.0	
	comp=Z,42nm,1.3s						
MLSI	**Meulaboh, Aceh**	**89.98**	**275**	P	**P**	**02 59 20.7**	**+2.7**
LOGN	**Logan Glacier**	**90.03**	**16**	IAmb	IAmb	02 59 21.8	
	comp=Z,45nm,1.1s						
CAST	**Castle Rocks**	**90.07**	**10**	IAmb	IAmb	02 59 19.8	
	comp=Z,34nm,1.0s						
REDW	**Red Top Meadow**	**90.30**	**41**	P	**P**	**02 59 18.1**	**-0.9**
REDW				IAmb	IAmb	02 59 36.4	
	comp=Z,42nm,1.5s						
TPAW	**Teton Pass**	**90.31**	**41**	P	**P**	**02 59 19.1**	**0.0**
TPAW				IAmb	IAmb	02 59 23.8	
	comp=Z,29nm,1.5s						
KTH	**Kantishna Hill**	**90.39**	**11**	P	**P**	**02 59 17.8**	**-1.0**
KTH				IAmb	IAmb	02 59 21.0	
	comp=Z,56nm,1.4s						
TRF	**Thorofare Moun**	**90.40**	**11**	P	**P**	**02 59 18.4**	**-0.5**
SMCO	**Snowmass**	**90.42**	**46**	IAmb	IAmb	02 59 25.3	
	comp=Z,21nm,1.4s						
DLMT	**Dillon**	**90.44**	**39**	P	**P**	**02 59 19.6**	**0.0**
DLMT				IAmb	IAmb	02 59 33.4	
	comp=Z,25nm,1.3s						
J20K	**Nowinta River**	**90.47**	**9**	IAmb	IAmb	02 59 23.1	
	comp=Z,38nm,1.1s						

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LOHW  Long Hollow        90.59  41   IAmb     IAmb     02 59 24.8
      comp=Z,21nm,1.5s
DHY   Denali Highway     90.60  12   IAmb     IAmb     02 59 23.9
      comp=Z,50nm,1.4s
BJT   Baijiatuau         90.64 314   IAmb     IAmb     02 59 29.9
      comp=Z,32nm,1.3s
SLVN  Son La             90.73 293   IAmb     IAmb     02 59 29.3
      comp=Z,20nm,1.3s
BW06  Boulder Array      90.74  42   IAmb     IAmb     02 59 25.0
      comp=Z,21nm,1.4s
PD31  Pinedale Array     90.74  42   P        P        02 59 19.4  -1.7
PD31                                 IAmb     IAmb     02 59 25.0
      comp=Z,19nm,1.4s
PDAR  Pinedale Array     90.74  42   P        P        02 59 21.3  +0.2
      comp=Z,3.8nm,0.9s,baz=224,slow=4.1,SNR=17
PDAR                                 LR       LR       03 35 58.0
      comp=Z,321nm,18.2s,baz=246,slow=33
PDAR  Pinedale Array     90.74  42            P        02 59 19.8  -1.3
GYA   Guiyang            90.79 299 ⇓P       P        02 59 24.3  +2.7
GYA                                  pmax     pmax
      comp=Z,23nm,1.2s
GYA                                  pmax     pmax
      comp=Z,450nm,6.9s
GYA                                  LR       LR
      comp=Z,210nm,4.9s
GYA                                  LR       LR
      comp=Z,310nm,5.5s
GYA                                  LR       LR
      comp=Z,190nm,5.0s
FLWY  Flagg Ranch        90.80  41   IAmb     IAmb     02 59 26.2
      comp=Z,29nm,1.2s
PAX   Paxson             90.89  13   IAmb     IAmb     02 59 25.0
      comp=Z,34nm,1.2s
MCK   McKinley           90.90  12   IAmb     IAmb     02 59 24.9
      comp=Z,41nm,1.1s
HYT   Haines Junctio     90.95  18   IAmb     IAmb     02 59 26.7
      comp=Z,14nm,1.2s
YMR   Madison River      90.98  40   IAmb     IAmb     02 59 36.6
      comp=Z,24nm,1.4s
H17A  Grant Village      91.05  41   IAmb     IAmb     02 59 28.1
      comp=Z,23nm,1.5s
T25A  Trinidad           91.08  49   IAmb     IAmb     02 59 43.8
      comp=Z,19nm,1.4s
YHH   Holmes Hill        91.11  40   IAmb     IAmb     02 59 28.1
      comp=Z,29nm,1.4s
BOZ   Bozeman (W)        91.13  39   IAmb     IAmb     02 59 28.1
      comp=Z,22nm,1.0s
MENT  Mentasta           91.23  14   IAmb     IAmb     02 59 27.2
      comp=Z,36nm,1.2s
SEY   Seymchan           91.27 346   LR       LR       03 34 08.9
      comp=Z,510nm,20.8s,baz=153,slow=32
DLBC  Dease Lake         91.34  22            P        02 59 22.3  -1.0
DLBC                                 IAmb     IAmb     02 59 28.6
      comp=Z,18nm,1.1s
L26K  Log Cabin Wild     91.39  14   IAmb     IAmb     02 59 28.0
      comp=Z,29nm,1.1s
WHY   Whitehorse         91.56  19   IAmb     IAmb     02 59 29.3
      comp=Z,14nm,1.1s
RIDG  Independent Ri     91.70  13   IAmb     IAmb     02 59 29.0
      comp=Z,36nm,1.1s
WRH   Wood River Hil     91.73  12   P        P        02 59 24.1  -0.8
L27K  Beaver Creek,      91.76  15   IAmb     IAmb     02 59 29.6
      comp=Z,19nm,1.1s
BCAR  Beaver Creek A     91.78  15            P        02 59 25.2   0.0
DOT   Dot Lake           91.78  13   P        P        02 59 23.5  -1.7
HDA   Harding Lake       91.89  12   IAmb     IAmb     02 59 28.6
      comp=Z,48nm,1.5s
WALA  Waterton Lakes     91.92  35   IAmb     IAmb     02 59 31.1
      comp=Z,32nm,1.4s
TIY   Taiyuan            91.92 311  eP        P        02 59 28.5  +2.0
TIY                                  SKS      SKSac    03 09 57.8  -1.8
TIY                                  S        ScS      03 10 37.0  +6.3
TIY                                  pmax     pmax
      comp=Z,430nm,6.0s
CCB   Clear Creek Bu     91.94  12   IAmb     IAmb     02 59 29.3
      comp=Z,36nm,1.2s
H21K  Melozitna Rive     92.06   9   IAmb     IAmb     02 59 31.4
      comp=Z,14nm,1.2s
SCRK  Sand Creek         92.09  13   IAmb     IAmb     02 59 31.1
      comp=Z,28nm,1.4s
I23K  Minto, Yukon-K     92.13  11   IAmb     IAmb     02 59 34.7
      comp=Z,28nm,1.3s
COLA  College            92.14  11 i P        P        02 59 26.6  -0.1
COLA                                 pmax     pmax
      comp=Z,41nm,1.2s
COLA  College            92.14  11   P        P        02 59 25.8  -0.9
IL31                     92.22  12   IAmb     IAmb     02 59 30.7
      comp=Z,25nm,1.1s
ILAR  Eielson Array      92.22  12   P        P        02 59 26.2  -0.9
      comp=Z,16nm,1.2s,baz=221,slow=4.2,SNR=29
ILAR                                 LR       LR       03 34 29.3
      comp=Z,265nm,19.2s,baz=204,slow=32
ILAR  Eielson Array      92.22  12   P        P        02 59 26.2  -0.9
ILAR  Eielson Array      92.22  12            P        02 59 26.9  -0.3
RLMT  Red Lodge          92.23  40   IAmb     IAmb     02 59 45.3
      comp=Z,19nm,1.4s
IMAR  Indian Mountai     92.23   9            P        02 59 28.0  +0.9
ABTX  Abilene, Hawle     92.27  55            P        02 59 27.8  -0.4
ABTX                                 IAmb     IAmb     02 59 32.3
      comp=Z,25nm,1.2s
POKR  Poker Plat Res     92.44  12   IAmb     IAmb     02 59 31.6
      comp=Z,22nm,1.1s
K22A  Casper             92.56  44   IAmb     IAmb     02 59 33.6
      comp=Z,20nm,1.2s
XAN   Xi'an              92.61 306   P        P        02 59 30.6  +0.8
XAN                                  pP       pwP      02 59 38.8  +0.5
XAN                                  sP       sP       02 59 42.6   +10
XAN                                  SKS      SKSac    03 10 03.8  +0.2
XAN                                  S        ScS      03 10 41.5  +4.9
XAN                                  pmax     pmax
      comp=Z,44nm,1.4s
XAN                                  pmax     pmax
      comp=Z,580nm,7.8s
XAN                                  LR       LR
      comp=Z,690nm,19.2s
XAN                                  LR       LR
      comp=Z,870nm,19.9s
ZEA   Zeya               92.64 330  eP        P        02 59 33.4  +4.1
ZEA                                 e                  03 10 03.1
ZEA                                 ePS       PS       03 11 50.8  +4.2
ZEA                                  pmax     pmax
      comp=E,10.0nm,0.5s
ZEA                                  pmax     pmax
      comp=N,10.0nm,0.8s
ZEA                                  pmax     pmax
      comp=Z,10.0nm,1.5s
ZEA                                  pmax     pmax
      comp=N,100nm,4.3s
ZEA                                  pmax     pmax
      comp=Z,200nm,4.0s
ZEA                                  smax     smax
      comp=Z,200nm,16.9s
ZEA                                  smax     smax
      comp=E,200nm,7.4s
ZEA                                  smax     smax
      comp=N,500nm,16.2s
ZEA                                  MLR      MLR
      comp=Z,300nm,19.0s
PRP   Porcupine Dome     93.15  12   IAmb     IAmb     02 59 35.5
      comp=Z,35nm,1.3s
DAWY  Dawson             93.19  15            P        02 59 31.2  -0.5
DAWY                                 IAmb     IAmb     02 59 36.3
      comp=Z,24nm,1.2s
KSCO  Kaye Shedlock'     93.23  48   IAmb     IAmb     02 59 38.7
      comp=Z,15nm,1.1s
KMI   Kunming            93.35 296 ⇑P       P        02 59 33.3  -0.3
KMI                                  SKS      SKSac    03 10 05.0  -3.5
KMI                                  S        S        03 10 42.4  +0.6
KMI                                  SS       SS       03 17 12.8   +14
KMI                                  pmax     pmax
      comp=Z,41nm,1.5s
KMI                                  pmax     pmax
      comp=Z,250nm,8.5s
KMI                                  LR       LR
      comp=Z,410nm,20.0s
KMI                                  LR       LR
      comp=Z,360nm,19.1s
KMI                                  LR       LR
      comp=Z,520nm,20.0s
EGMT  Eagleton           93.57  38   IAmb     IAmb     02 59 52.7
      comp=Z,12nm,1.1s
CMAR  Chiang Mai Arr     93.69 289   P        P        02 59 35.3  +0.3
      comp=Z,8.5nm,0.7s,baz=129,slow=3.1,SNR=27
CMAR                                 LR       LR       03 41 53.8
      comp=Z,183nm,18.5s,baz=170,slow=36
CMAR  Chiang Mai Arr     93.69 289   P        P        02 59 35.3  +0.3
CMAR  Chiang Mai Arr     93.69 289   P        P        02 59 33.6  -1.4
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BILL  Bilibino           93.75 353 i P        P        02 59 31.4  -2.7
BILL                               i                   02 59 36.3
BILL                               i                   03 03 24.8
BILL                               i S        SKSac    03 10 08.6  +0.4
BILL                                 pmax     pmax
      comp=Z,9.0nm,1.0s
BILL                                 MLR      MLR
      comp=Z,464nm,18.0s
BILL  Bilibino           93.75 353            P        02 59 33.4  -0.7
CHTO  Chiang Mai         93.84 289   P        P        02 59 35.4  -0.4
HKT   Hockley            93.94  59⇑eP       P        02 59 36.6  +0.8
HKT                                  pmax     pmax
      comp=Z,28nm,3.5s
HHC   Hu-ho-hao-te       94.08 313  eP        P        02 59 28.3  -8.1
HHC                                  PP       PP       03 03 20.3  -2.8
HHC   Hu-ho-hao-te       94.08 313   S        S        03 10 39.9  -7.3
HHC                                  pmax     pmax
      comp=Z,4.0nm,1.0s
HHC                                  pmax     pmax
      comp=Z,80nm,8.5s
HHC                                  LR       LR
      comp=N,470nm,15.2s
HHC                                  LR       LR
      comp=E,520nm,16.2s
HHC                                  LR       LR
      comp=Z,770nm,17.7s
X34A  Smith Ranch, M     94.52  54   IAmb     IAmb     02 59 43.2
      comp=Z,16nm,1.0s
EDM   Edmonton           94.69  32   IAmb     IAmb     02 59 42.9
      comp=Z,30nm,1.3s
LAO   LASA Array         94.87  40   IAmb     IAmb     02 59 44.8
      comp=Z,35nm,1.4s
RSSD  Black Hills        94.87  43            P        02 59 38.5  -1.7
RSSD                                 IAmb     IAmb     02 59 43.9
      comp=Z,20nm,1.1s
BMAR  Burnt Mountain     95.03  12            P        02 59 43.0  +2.9
CD2   Chengdu            95.07 302   P        P        02 59 32.3  -8.9
CD2                                  sP       PcP      02 59 38.5  -3.0
CD2   Chengdu            95.07 302   S        S        03 10 52.3  -3.9
CD2   Chengdu            95.07 302   SS       SS       03 17 29.8  +7.3
CD2                                  pmax     pmax
      comp=Z,10.0nm,0.5s
CD2                                  pmax     pmax
      comp=Z,250nm,6.7s
CD2                                  LR       LR
      comp=E,560nm,11.0s
CD2                                  LR       LR
      comp=Z,670nm,16.1s
YAK   Yakutsk            97.12 337deP       Pdif     02 59 50.7  +1.0
YAK                                  pmax     pmax
      comp=Z,20nm,0.8s
LZH   Lanzhou            97.25 306  eP        P        02 59 47.6  -3.5
LZH                                  sP       sP       02 59 54.1  +0.4
LZH   Lanzhou            97.25 306   S        S        03 11 08.9  -6.2
LZH   Lanzhou            97.25 306   sS       sS       03 11 22.9  +4.3
LZH                                  pmax     pmax
      comp=Z,22nm,1.5s
LZH                                  pmax     pmax
      comp=Z,250nm,9.2s
LZH                                  LR       LR
      comp=N,390nm,16.6s
LZH                                  LR       LR
      comp=E,630nm,17.1s
LZH                                  LR       LR
      comp=Z,500nm,19.5s
LPAZ  La Paz             98.28 112   P        Pdif     03 00 00.1  +3.2
      comp=Z,1.3nm,0.8s,baz=92,slow=2.6,SNR=6.2
LPAZ                                 LR       LR       03 35 18.3
      comp=Z,181nm,21.9s,baz=3.0,slow=30
LPAZ  La Paz             98.28 112   P        Pdif     03 00 00.1  +3.2
ECSD  EROS Data Cent     99.43  46            Pdif     02 59 58.6  -1.9
ECSD                                 IAmb     IAmb     03 00 09.9
      comp=Z,16nm,1.4s
YKA   Yellowknife Ar     99.67  24   P        Pdif     02 59 59.8  -1.3
      comp=Z,0.6nm,0.8s,baz=64,slow=43,SNR=4.0
YKA                                  LR       LR       03 39 05.3
      comp=Z,391nm,20.9s,baz=0.0,slow=32
YKA   Yellowknife Ar     99.67  24   P        Pdif     02 59 59.8  -1.3
ULN   Ulaanbaatar       100.21 318ceP       Pdif     03 00 04.6  +0.5
ULN                                  pmax     pmax
      comp=Z,13nm,2.0s
SONM  Songino Array     100.60 318   P        Pdif     03 00 05.9  +0.2
      comp=Z,0.2nm,0.4s,baz=176,slow=40,SNR=4.9
SONM  Songino Array     100.60 318   P        Pdif     03 00 05.9  +0.2
SONM  Songino Array     100.60 318   Pdif     Pdif     03 00 06.0  +0.2
GTA   Gaotai            101.53 308  eP        Pdif     03 00 12.1  +2.0
GTA                                  SKS               03 10 50.8
GTA                                  pmax     pmax
      comp=Z,6.0nm,1.7s
GTA                                  pmax     pmax
      comp=Z,110nm,6.6s
GTA                                  LR       LR
      comp=Z,130nm,20.0s
GTA                                  LR       LR
      comp=Z,370nm,20.4s
GTA                                  LR       LR
      comp=Z,360nm,19.3s
ZALV  Zalesovo Beam     115.38 320   PKP      PKiKP    03 04 57.7  -1.6
      comp=Z,1.6nm,0.7s,baz=114,slow=1.2,SNR=7.8
ZALV  Zalesovo Beam     115.38 320   PKIKP    PKiKP    03 04 57.7  -1.6
NRIK  Noril'sk          115.57 337⇑ePKIKP   PKPdf    03 05 01.2  +2.0
MKAR  Makanchi Array    115.88 312   PKP      PKPdf    03 04 59.1  -1.4
      comp=Z,2.7nm,0.9s,baz=60,slow=3.2,SNR=11
MKAR  Makanchi Array    115.88 312   PKIKP    PKPdf    03 04 59.1  -1.4
MKAR  Makanchi Array    115.88 312            PKPdf    03 04 59.3  -1.2
KURK  Kurchatov         118.79 316⇓iPKIKP   PKiKP    03 05 07.5  +1.5
KURK                                 pmax     pmax
      comp=Z,9.0nm,1.0s
KURK  Kurchatov         118.79 316   PKPdf    PKPdf    03 05 04.9  -1.1
KSH   Kashi             119.25 303   PKP      PKPdf    03 04 57.4   -10
KSH                                  LR       LR
      comp=N,230nm,17.9s
KSH                                  LR       LR
      comp=E,310nm,17.0s
KSH                                  LR       LR
      comp=Z,390nm,14.8s
AAK   Ala-Archa         120.79 306⇑iPKIKP   PKiKP    03 05 12.3  +1.9
NEEM  North Greenlan    121.52  12  eP        PKPdf    03 05 11.1  +0.2
BOSA  Boshof            123.04 202   PKP      PKiKP    03 05 17.2  +1.9
      comp=Z,2.6nm,0.8s,baz=119,slow=6.6,SNR=3.2
BOSA  Boshof            123.04 202   PKIKP    PKiKP    03 05 17.2  +1.9
KKAR  Karatay Array     123.75 306   PKPdf    PKPdf    03 05 15.4  -0.4
KBL   Kabul             123.94 296            PKPdf    03 05 16.4  -0.3
BRVK  Borovoye          124.00 318⇓iPKIKP   PKPdf    03 05 14.7  -1.2
BRVK                                 pmax     pmax
      comp=Z,17nm,1.3s
BRVK  Borovoye          124.00 318   PKPdf    PKPdf    03 05 15.0  -0.9
SUMG  Summit            126.96  15 i P        PKiKP    03 05 22.0   0.0
SUMG                                 IAmb     IAmb     03 05 26.4
      comp=Z,28nm,1.2s
DAG   Danmarks Havn     126.97   6 i P        PKPdf    03 05 19.9  -1.1
DAG                                  IAmb     IAmb     03 05 23.9
      comp=Z,16nm,1.2s
DY2G  Dye2              128.02  23 i P        PKiKP    03 05 24.5  +0.4
DY2G                                 IAmb     IAmb     03 05 27.9
      comp=Z,93nm,1.6s
ICESG Greenland Ices    128.79  19 i P        PKiKP    03 05 25.9  +0.2
SVE   Sverdlovsk        128.95 324  ePKIKP    PKiKP    03 05 28.5  +2.6
SVE                                  pmax     pmax
      comp=Z,21nm,1.4s
ARU   Arti              130.16 324 i PKIKP    PKiKP    03 05 29.0  +0.7
ARU                                                    03 07 37.5
ARU                                  MLR      MLR
      comp=Z,276nm,15.0s
ARU   Arti              130.16 324   PKPdf    PKPdf    03 05 25.4  -2.1
ABKAR Akbulak array     130.86 314   PKPdf    PKiKP    03 05 29.7  -0.3
GEYT  Alibeck           133.01 299   PKP      PKPdf    03 05 33.7  +0.1
      comp=Z,4.6nm,0.9s,baz=278,slow=4.5,SNR=6.6
ARCES ARCESS Array B    133.74 350   PKP      PKPdf    03 05 34.0   0.0
      comp=Z,6.8nm,1.0s,baz=29,slow=2.1,SNR=8.8
ARCES ARCESS Array B    133.74 350   PKIKP    PKPdf    03 05 34.0   0.0
KIRV  Kirov             133.97 329d iPKIKP    PKiKP    03 05 36.9  +1.0
PRGR  Permogore         134.06 334  ePKIKP    PKiKP    03 05 37.6  +1.6
PRGR                                 pmax     pmax
      comp=Z,13nm,1.4s
KLMR  Klimovskoe        136.89 336  ePKIKP    PKiKP    03 05 41.2  -0.6
KLMR                                 pmax     pmax
      comp=Z,26nm,1.4s
KLMR  Klimovskoe        136.89 336  ePKPdf    PKiKP    03 05 41.3  -0.6
KLMR                                 AMP               03 05 48.8
      comp=Z,26nm,1.4s
KLMR                                eSKPab    SKPab    03 09 24.5  +5.3
BELG  Belogornoye       137.52 322⇓iPKIKP   PKiKP    03 05 43.7  +0.3
KMBO  Kilima Mbogo      138.94 236   PKP      PKiKP    03 05 47.4  -0.4
      comp=Z,0.6nm,0.4s,baz=66,slow=16,SNR=2.0
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KMBO  Kilima Mbogo      138.94 236   PKIKP    PKiKP    03 05 47.4  -0.4
MAK   Makhachkala       140.53 308 i P        Pdif     03 02 57.4  -5.8
MAK                                i                   03 05 46.0
MAK                                  pmax     pmax
      comp=Z,201nm,1.7s
FINES FINESS Array B    140.71 344   PKhKP    PKPpre   03 05 39.6
      comp=Z,0.8nm,0.5s,baz=225,slow=2.2,SNR=6.9
MOS   Moscow            140.91 331 i PKIKP    PKiKP    03 05 49.3  -0.9
MOS                                e                   03 08 45.4
MOS                                  pmax     pmax
      comp=Z,60nm,1.6s
VRH   Novokhopyorsk     141.34 322  ePKIKP    PKPdf    03 05 49.7  +1.2
VRH                                  pmax     pmax
      comp=Z,10.0nm,1.8s
OBN   Obninsk           141.77 330⇑ePKIKP   PKPdf    03 05 49.5  +0.4
OBN                                i                   03 08 50.1
OBN                                i SS       SS       03 27 19.1  -5.6
OBN                                  pmax     pmax
      comp=Z,23nm,1.4s
LPSR  Galich'ya Gora    142.11 326  ePKIKP    PKPdf    03 05 49.2  -0.6
LPSR                                 pmax     pmax
      comp=Z,20nm,0.8s
RAYN  Ar Rayn           142.62 277            PKPdf    03 05 51.1  -0.6
VSR   Storozhevoye      142.73 324  ePKIKP    PKPdf    03 05 52.0  +1.0
VSR                                  pmax     pmax
      comp=Z,20nm,1.4s
VORD  Divnogorie        142.79 323  ePKIKP    PKPdf    03 05 52.5  +1.4
VORD                                 pmax     pmax
      comp=Z,10.0nm,1.2s
GOF   Gofitskoye        143.04 313⇑ePKIKP   PKPdf    03 05 50.5  -1.2
GOF                                  pmax     pmax
      comp=Z,27nm,1.1s
ZEI   Tsey              143.14 309 i PKIKP    PKPdf    03 05 51.4  -0.9
ZEI                                  pmax     pmax
      comp=Z,2.0nm,1.0s
NCK   Nalchik           143.15 310⇑ePKIKP   PKPdf    03 05 51.1  -0.9
GNI   Garni             143.16 304⇑ePKIKP   PKPdf    03 05 52.1  -0.2
LODK  Lodwar            143.29 239   PKPdf    PKPdf    03 05 52.9  -0.3
KBZ   Khabaz            143.57 311   PKP      PKPbc    03 05 50.9  +0.9
      comp=Z,2.3nm,0.8s,baz=108,slow=5.8,SNR=4.5
KBZ   Khabaz            143.57 311⇑ePKIKP   PKPdf    03 05 53.3  +0.7
KIV   Kislovodsk        143.64 311 i PKIKP    PKPdf    03 05 53.0   0.0
KIV                                e                   03 09 00.4
KIV                                eSS        SS       03 27 37.8   -10
KIV                                  pmax     pmax
      comp=Z,11nm,1.1s
KIV   Kislovodsk        143.64 311   PKPdf    PKPbc    03 05 51.5  +1.2
NB2   NORSAR Subarra    143.69 354   PKP      PKPbc    03 05 49.7  -0.2
      comp=Z,31nm,1.7s,baz=10,slow=3.2
NOA   NORSAR Array B    143.69 354   PKP      PKPbc    03 05 50.5  +0.6
      comp=Z,3.2nm,1.0s,baz=18,slow=3.7,SNR=4.6
NOA   NORSAR Array B    143.69 354   PKIKP    PKPbc    03 05 50.5  +0.6
MBAR  Mbarara           143.98 229c iPKIKP    PKPdf    03 05 54.3  -0.3
MBAR  Mbarara           143.98 229            PKPbc    03 05 53.4  +1.0
BCA   Borcka            145.14 307 ⇓P       PKPbc    03 05 54.6  -0.4
KONO  Kongsberg         145.19 355   PKPdf    PKPdf    03 05 55.6  +0.6
ISAL  Salakas           145.57 338  eP        PKiKP    03 05 59.5  -0.2
SOC   Sochi             145.79 312  ePKP2     PKPdf    03 05 55.4  -1.1
SOC                                i                   03 05 59.8
SOC                                e                   03 09 15.2
SOC                                eSSS       SSS      03 33 38.5
SOC                                  pmax     pmax
      comp=Z,14nm,0.6s
SOC                                  pmax     pmax
      comp=Z,11nm,0.6s
MNK   Minsk             145.79 336 i PKIKP    PKPdf    03 05 56.3  +0.1
MNK                                i                   03 09 17.3
MNK                                i PPP      PPP      03 12 30.3
MNK                                i                   03 13 02.6
MNK                                i SS       SS       03 28 10.9  +0.1
MNK                                i SSS      SSS      03 33 38.4
MNK                                  pmax     pmax
      comp=Z,163nm,1.0s
MNK                                  pmax     pmax
      comp=N,83nm,1.2s
MNK                                  pmax     pmax
      comp=E,11nm,1.2s
MNK                                  MLR      MLR
      comp=E,16nm,20.0s
MNK                                  MLR      MLR
      comp=N,281nm,20.0s
MNK                                  MLR      MLR
      comp=Z,277nm,20.0s
MNK   Minsk             145.79 336 i PKP      PKPdf    03 05 56.3  +0.1
      comp=E,11nm,1.2s
MNK                                i PKP      PKPdf    03 05 56.3  +0.1
      comp=N,83nm,1.2s
MNK                                i PKP      PKPdf    03 05 56.3  +0.1
      comp=Z,163nm,1.0s,baz=220
MNK                                i PP       PP       03 09 17.4   0.0
MNK                                i SKP               03 09 30.5
MNK                                i PKS      PKSdf    03 09 31.8  +0.4
MNK                                i PPP      PPP      03 12 30.3
MNK                                i SKS      SKSdf    03 13 02.6  -2.4
MNK                                i SS       SS       03 28 11.0  +0.2
MNK                                i SSS      SSS      03 33 38.4
MNK                                i LR       LR       04 07 45.6
MNK                                i LRM      MLR      04 10 41.4
      comp=E,16nm,19.5s
MNK                                i LRM      MLR      04 10 41.4
      comp=N,281nm,20.2s
MNK                                i LRM      MLR      04 10 48.0
      comp=Z,277nm,19.6s
NACGM Naroch            145.88 337 i PKP      PKPbc    03 05 56.9   0.0
PABE  Paberze           146.33 340  eP        PKiKP    03 06 01.1  -0.3
PABE  Paberze           146.33 340   PKPdf    PKPbc    03 05 58.0  -0.2
PBUR  Paburge           146.49 342  eP        PKiKP    03 06 02.0  +0.3
ANN   Anapa             146.82 315  ePKHKP    PKPpre   03 05 49.6
ANN                                i                   03 06 02.1
ANN                                e                   03 09 19.6
ANN                                e                   03 13 06.2
ANN                                  pmax     pmax
      comp=Z,27nm,0.9s
ANN                                  pmax     pmax
      comp=Z,167nm,1.7s
SUW   Suwalki           147.83 339  ePKPdf    PKiKP    03 06 04.5   0.0
SUW   Suwalki           147.83 339  eP        PKPab    03 06 05.1  +0.2
AKASG Malin Array Be    148.02 330   PKPbc    PKPdf    03 06 00.8  +0.7
      comp=Z,22nm,0.8s,baz=42,slow=4.1,SNR=44
AKASG Malin Array Be    148.02 330   PKIKP    PKPdf    03 06 00.8  +0.7
AKASG Malin Array Be    148.02 330   PKPab    PKPab    03 06 05.7  -0.1
AKBB  Malin Array Si    148.02 330⇑ePKIKP   PKPbc    03 06 01.9  -1.3
AKBB  Malin Array Si    148.02 330   PKPdf    PKPdf    03 06 00.6  +0.5
MUD   Monsted U'grnd    148.40 355  eP        PKPbc    03 06 04.5  +0.6
MUD                                  IAmb     IAmb     03 06 08.0
      comp=Z,98nm,1.2s
GAZ   Gaziantep         149.56 301   PKPdf    PKPdf    03 06 02.9  -0.2
BNN   Bunyan            150.14 305   PKPdf    PKPdf    03 06 03.8  -0.3
GKP   Gorka Klasztor    150.18 344  eP        PKPbc    03 06 07.9  -0.6
SORM  Soroca            150.19 327 ⇑P       PKPbc    03 06 08.7   0.0
PURM  Purcari           150.44 323 ⇑P       PKiKP    03 06 12.3  +2.2
BEL   Belsk             150.45 339  ePKPdf    PKPbc    03 06 08.9  -0.3
LNIZ  Loecknitz         150.62 348  ePKPbc    PKiKP    03 06 12.8  +2.6
      baz=13,slow=2.3
KIS   Kishinev          150.71 325  ePKP      PKPbc    03 06 09.0  -1.0
      comp=Z,100nm,2.4s
KIS   Kishinev          150.71 325  ePP       PP       03 09 43.0  -3.4
KIS                                  LRM      MLR      04 08 24.0
      comp=Z,200nm,19.0s
KIS   Kishinev          150.71 325  ePKIKP    PKPbc    03 06 09.0  -1.0
KIS                                e                   03 09 43.0
KIS                                  pmax     pmax
      comp=Z,100nm,2.4s
MILM  Milestii Mici     150.76 325 ⇑P       PKiKP    03 06 12.5  +1.7
MILM  Milestii Mici     150.76 325 i PKIKP    PKiKP    03 06 11.2  +0.4
MILM                                 pmax     pmax
      comp=Z,150nm,1.3s
BSEG  Bad Segeberg      150.78 353  ePKPbc    PKiKP    03 06 13.6  +3.0
      baz=13,slow=2.3
LVV   L'vov             150.92 333  ePKIKP    PKPbc    03 06 10.2  -0.2
BR131 Keskin Array S    151.44 308   PKPdf    PKPdf    03 06 06.2  +0.2
BRTR  Keskin Array B    151.44 308   PKPbc    PKPbc    03 06 09.8  -2.4
      comp=Z,4.0nm,0.7s,baz=157,slow=2.9,SNR=16
BRTR  Keskin Array B    151.44 308   PKIKP    PKPbc    03 06 09.8  -2.4
BRTR  Keskin Array B    151.44 308   PKPdf    PKPdf    03 06 07.2  +1.1
RUE   Ruedersdorf       151.67 348  eP        PKiKP    03 06 12.8  +0.4
RUE   Ruedersdorf       151.67 348  ePKPbc    PKiKP    03 06 15.4  +3.0
      baz=13,slow=2.3
SCTR  Scanteiesti       151.99 323 ⇓P       PKiKP    03 06 17.0  +3.6
ANTO  Ankara            151.99 309   PKPdf    PKPdf    03 06 06.5  -0.3
JURR  Jurilovca         152.06 321 ⇑P       PKiKP    03 06 14.0  +0.5
BURAR Bucovina Array    152.07 329 ⇓P       PKPbc    03 06 13.4  +0.2
TESR  Tescani           152.15 326 ⇑P       PKPbc    03 06 13.1  -0.3
OJC   Ojcow             152.16 339  ePKPdf    PKiKP    03 06 14.1  +0.5
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NRDL	Niedersach Rie	152.22	353	*e*PKPbc	PKiKP	03 06 16.4	+2.9
	baz=13,slow=2.3						
CFR	Carcaliu	152.22	322	⇓P	PKPbc	03 06 13.4	-0.1
FLTG	Flechtingen	152.23	351	*e*PKPbc	PKiKP	03 06 16.3	+2.7
	baz=13,slow=2.3						
TPGR	Topolog	152.26	322	⇓P	PKiKP	03 06 14.9	+0.9
KOLS	Kolonicke sedl	152.33	334	*e*PKIKP	PKPbc	03 06 10.9	-2.8
KOLS				*e*		03 06 17.4	
KOLS	Kolonicke sedl	152.33	334	*e*PKP	PKPbc	03 06 10.9	-2.8
KOLS				*e*		03 06 17.4	
ASSE	Asse, Remlinge	152.51	352	*e*PKPbc	PKiKP	03 06 17.3	+3.2
	baz=13,slow=2.3						
VRI	Vrincioaia	152.54	325	⇓P	PKPbc	03 06 13.0	-1.3
UZH	Uzhgorod	152.56	334	*e*PKIKP	PKPbc	03 06 14.3	+0.1
IBBN	Ibbenburen	152.63	356	*e*PKPdf	PKPdf	03 06 10.6	+3.4
	baz=11,slow=1.2						
IBBN				*e*PKPbc	sPKPbc	03 06 17.5	+0.5
	baz=13,slow=2.3						
KSP	Ksiaz	152.63	344	*e*PKPdf	PKiKP	03 06 17.6	+3.1
HARR	Harsova	152.64	322	⇓P	PKiKP	03 06 15.1	+0.4
NIE	Niedzica	152.66	337	*e*PKPdf	PKPbc	03 06 12.0	-2.4
CRVS	Cervenica-Dubn	152.67	335	*e*PKIKP	PKPdf	03 06 10.8	+3.4
CRVS				*e*		03 06 16.2	
CRVS	Cervenica-Dubn	152.67	335	*e*PKP	PKPdf	03 06 10.8	+3.4
CRVS				*e*		03 06 16.2	
CRVS				*e*		03 06 28.0	
CLZ	Clausthal	152.83	352	*e*PKPdf	PKPdf	03 06 10.6	+3.0
	baz=11,slow=1.2						
CLZ				*e*PKPbc	sPKPbc	03 06 17.9	+0.4
	baz=13,slow=2.3						
TRPA	Tarpa	152.86	333	⇑P	PKPdf	03 06 11.1	+3.4
TRPA	Tarpa	152.86	333	*e*P	PKPdf	03 06 11.3	+3.6
OZUR		152.87	326	⇓P	PKiKP	03 06 18.4	+3.2
OSTC	Ostas	152.92	343	*e*PKP	PKPdf	03 06 07.7	0.0
OSTC				*e*x	x	03 06 18.3	
CHVC	Chvalec	152.93	344	*e*PKP	PKPdf	03 06 10.7	+2.9
CLL	Collm	152.93	348	*e*(PKPdf)	PKPdf	03 06 10.0	+2.3
CLL				*i* PKPbc	PKPbc	03 06 14.8	-0.1
	comp=Z,12nm,1.0s						
CLL				⇓*i*PKPbcmax		03 06 17.7	
	comp=Z,63nm,1.2s						
CLL				*i* PKPab	PKPab	03 06 24.6	-1.4
	comp=Z,36nm,1.2s						
CLL				*i*		03 06 28.0	
CLL				*e*PP	PP	03 09 56.0	-2.5
CLL				*e*		03 10 05.0	
CLL				*e*PPP	PPP	03 13 24.0	
CLL				*e*PSKS		03 20 18.0	
CLL				*e*SS	SS	03 29 27.0	-3.1
CLL				*e*SSSS		03 39 24.0	
CLL				LmV		04 17 00.0	
	comp=Z,400nm,20.5s						
CLL	Collm	152.93	348	*e*PKIKP	PKPdf	03 06 10.0	+2.3
CLL				*i*		03 06 14.8	
CLL				*i*		03 06 24.6	
CLL				pmax	pmax		
	comp=Z,12nm,1.0s						
CLL				pmax	pmax		
	comp=Z,36nm,1.2s						
CLL				MLR	MLR		
	comp=Z,400nm,20.5s						
CLL	Collm	152.93	348	*e*PKPdf	PKPdf	03 06 10.9	+3.2
	baz=11,slow=1.2						
CLL				*e*PKPbc	sPKPbc	03 06 18.1	+0.4
	baz=13,slow=2.3						
UPC	Upice	153.01	344	*e*PKP	PKiKP	03 06 18.1	+2.8
UPC	Upice	153.01	344	*e*PKIKP	PKiKP	03 06 18.1	+2.8
OKC	Ostrava-Krasne	153.01	340	*e*PKP	PKiKP	03 06 17.4	+2.1
OKC				*e*x	x	03 06 28.7	
OKC	Ostrava-Krasne	153.01	340	*e*PKIKP	PKiKP	03 06 17.4	+2.1
DPC	Dobruska-Polom	153.08	343	*e*PKP	PKPdf	03 06 10.1	+2.1
DPC				*e*x	x	03 06 18.1	
DPC	Dobruska-Polom	153.08	343	*e*PKIKP	PKPdf	03 06 10.1	+2.1
DPC				*e*		03 06 18.1	
CSS	Mathiatis	153.15	298	PKPdf	PKPdf	03 06 06.7	-1.9
DOPR	Dopca	153.16	326	⇑P	PKiKP	03 06 15.9	+0.1
BRG	Berggiesshubel	153.16	347	*e*PKPdf	PKPdf	03 06 11.4	+3.4
	baz=11,slow=1.2						
BRG				*e*PKPbc	sPKPbc	03 06 19.0	+0.9
	baz=13,slow=2.3						
BRG	Berggiesshubel	153.16	347	*e*PKP	PKPdf	03 06 08.8	+0.7
BRG				Amp		03 06 13.5	
	comp=Z,19nm,1.4s						
BRG	Berggiesshubel	153.16	347	P	PKiKP	03 06 19.2	+3.6
BRG				Amp		03 06 20.1	
	comp=Z,32nm,1.1s						
BRG	Berggiesshubel	153.16	347	P	PKPab	03 06 25.5	-1.5
BRG				Amp		03 06 27.0	
	comp=Z,19nm,0.9s						
GTTG	Gottingen	153.17	352	*e*PKPdf	PKPdf	03 06 11.0	+3.0
	baz=11,slow=1.2						
GTTG				*e*PKPbc	sPKPbc	03 06 18.7	+0.5
	baz=13,slow=2.3						
GTTG				*e*PKPab	pPKPab	03 06 29.2	+0.1
	baz=13,slow=4.0						
MLR	Muntele Rosu	153.20	325	⇓P	PKPdf	03 06 11.5	+3.1
KRLC	Kraliky	153.20	342	*e*PKP	PKPdf	03 06 11.6	+3.4
KRLC				*e*x	x	03 06 19.2	
KRLC	Kraliky	153.20	342	*e*PKIKP	PKPdf	03 06 11.6	+3.4
KRLC				*e*		03 06 19.2	
FBE	Freiberg	153.23	347	*e*PKPdf	PKPdf	03 06 11.6	+3.5
	baz=11,slow=1.2						
FBE				*e*PKPbc	sPKPbc	03 06 19.2	+0.9
	baz=13,slow=2.3						
FBE				*e*PKPab	sPKPab	03 06 30.1	-0.1
	baz=13,slow=4.0						
NEUB	Neuenburg	153.24	350	*e*PKPdf	PKPdf	03 06 11.4	+3.3
	baz=11,slow=1.2						
NEUB				*e*PKPbc	sPKPbc	03 06 18.9	+0.5
	baz=13,slow=2.3						
MORC	Moravsky Berou	153.25	341	⇓P	PKPdf	03 06 12.0	+3.7
MORC	Moravsky Berou	153.25	341	*e*PKP	PKPdf	03 06 11.8	+3.5
MORC				*e*		03 06 19.2	
MORC				*e*		03 06 30.2	
PVCC	Panska Ves	153.34	345	*e*PKP	PKiKP	03 06 18.6	+2.6
PVCC	Panska Ves	153.34	345	*e*PKIKP	PKiKP	03 06 18.6	+2.6
BUG	Bochum--Univer	153.52	356	*e*PKPdf	PKPdf	03 06 11.4	+2.9
	baz=11,slow=1.2						
BUG				*e*PKPbc	sPKPbc	03 06 19.4	+0.5
	baz=13,slow=2.3						
BUG				*e*PKPab	pPKPab	03 06 30.7	+0.3
	baz=13,slow=4.0						
KASTN	Kahler Asten	153.67	354	*e*PKPdf	PKPdf	03 06 11.7	+2.9
	baz=11,slow=1.2						
KASTN				*e*PKPbc	sPKPbc	03 06 19.9	+0.5
	baz=13,slow=2.3						
KASTN				*e*PKPab	pPKPab	03 06 31.2	-0.2
	baz=13,slow=4.0						
VOIR		153.69	326	⇓P	PKPbc	03 06 15.4	-1.5
PRA	Prague	153.80	345	*e*PKP	PKiKP	03 06 19.7	+2.8
PRA	Prague	153.80	345	*e*PKIKP	PKiKP	03 06 19.7	+2.8
MOX	Moxa	153.81	350	*e*PKPdf	PKPdf	03 06 11.5	+2.5
	baz=11,slow=1.2						
MOX				*e*PKPbc	sPKPbc	03 06 19.8	+0.1
	baz=13,slow=2.3						
DRGR		153.82	331	⇓P	PKPbc	03 06 16.9	-0.3
PRU	Pruhonice	153.85	345	*e*PKP	PKiKP	03 06 19.6	+2.5
PRU	Pruhonice	153.85	345	*e*PKIKP	PKiKP	03 06 19.6	+2.5
PLN	Plauen	153.87	349	*e*PKPdf	PKPdf	03 06 12.0	+2.9
	baz=11,slow=1.2						
PLN				*e*PKPbc	sPKPbc	03 06 20.3	+0.4
	baz=13,slow=2.3						
PLN				*e*PKPab	pPKPab	03 06 32.1	-0.1
	baz=13,slow=4.0						
UBBA	Unterbreizbach	153.88	352	*e*PKPdf	PKPdf	03 06 12.1	+3.1
	baz=11,slow=1.2						
UBBA				*e*PKPbc	sPKPbc	03 06 20.1	+0.4
	baz=13,slow=2.3						
UBBA				*e*PKPab	pPKPab	03 06 31.9	-0.1
	baz=13,slow=4.0						
WERD	Werda	153.88	349	*e*PKPdf	PKPdf	03 06 12.0	+2.8
	baz=11,slow=1.2						
WERD				*e*PKPbc	sPKPbc	03 06 20.2	+0.3
	baz=13,slow=2.3						
WERD				*e*PKPab	pPKPab	03 06 32.1	-0.2
	baz=13,slow=4.0						
TANN	Tannenbergstha	153.89	348	*e*PKPdf	PKPdf	03 06 12.1	+2.9
	baz=11,slow=1.2						
TANN				*e*PKPbc	sPKPbc	03 06 20.5	+0.5
	baz=13,slow=2.3						
TANN				*e*PKPab	pPKPab	03 06 32.3	0.0
	baz=13,slow=4.0						
VRAC	Vranov	153.95	342	*e*	PKPab	03 06 32.6	+2.2
VRAC	Vranov	153.95	342	*e*PKP	PKPdf	03 06 12.5	+3.2
VRAC	Vranov	153.95	342	*e*	PKiKP	03 06 20.6	+3.3
ARR	Arges	153.95	326	⇓P	PKPdf	03 06 12.8	+3.4
GUNZ	Gunzen	153.96	348	*e*PKPdf	PKPdf	03 06 12.3	+3.0
	baz=11,slow=1.2						
GUNZ				*e*PKPbc	sPKPbc	03 06 20.7	+0.6
	baz=13,slow=2.3						
GUNZ				*e*PKPab	pPKPab	03 06 32.9	+0.2
	baz=13,slow=4.0						
VYHS	Vyhne	153.96	338	*e*PKIKP	PKiKP	03 06 20.7	+3.3
VYHS				*e*		03 06 31.7	
VYHS	Vyhne	153.96	338	*e*PKP	PKiKP	03 06 20.7	+3.3
VYHS				*e*		03 06 31.7	
JAVC	Velka Javorina	154.03	340	*e*	PKPab	03 06 34.5	+3.7
JAVC	Velka Javorina	154.03	340	*e*PKP	PKPbc	03 06 13.7	-3.8
WERN	Wernitzgruen	154.03	348	*e*PKPdf	PKPdf	03 06 12.4	+3.1
	baz=11,slow=1.2						
WERN				*e*PKPbc	sPKPbc	03 06 21.1	+0.9
	baz=13,slow=2.3						
WERN				*e*PKPab	sPKPab	03 06 33.4	-0.2
	baz=13,slow=4.0						
NKC	Novy Kostel	154.06	348	*e*PKP	PKiKP	03 06 20.9	+3.4
NKC	Novy Kostel	154.06	348	*e*PKIKP	PKiKP	03 06 20.9	+3.4
PSZ	Piszkesteto	154.07	336	*e*P	PKiKP	03 06 21.2	+3.6
KRUC	Moravsky	154.23	342	*e*	PKPab	03 06 34.4	+2.8
KRUC	Moravsky	154.23	342	*e*PKP	PKPdf	03 06 12.7	+3.1
KRUC	Moravsky	154.23	342	*e*	PKiKP	03 06 20.8	+2.9
TREC	Trest	154.26	343	*e*PKP	PKiKP	03 06 19.6	+1.6
TREC	Trest	154.26	343	*e*PKIKP	PKiKP	03 06 19.6	+1.6
MANZ	Manzenberg	154.36	348	*e*PKPdf	PKPdf	03 06 12.6	+2.8
	baz=11,slow=1.2						
MANZ				*e*PKPbc	sPKPbc	03 06 21.3	+0.4
	baz=13,slow=2.3						
MANZ				*e*PKPab	pPKPab	03 06 33.8	-0.5
	baz=13,slow=4.0						
SMOL	Smolenice	154.41	340	*e*PKIKP	PKiKP	03 06 22.1	+3.8
SMOL	Smolenice	154.41	340	*e*PKP	PKiKP	03 06 22.1	+3.8
SMOL				*e*		03 06 34.1	
AHRW	Bad Neuenahr-A	154.43	356	*e*PKPdf	PKPdf	03 06 12.6	+2.8
	baz=11,slow=1.2						
AHRW				*e*PKPbc	sPKPbc	03 06 21.6	+0.6
	baz=13,slow=2.3						
AHRW				*e*PKPab	pPKPab	03 06 34.2	-0.1
	baz=13,slow=4.0						
ROTZ	Rotzenmuhle	154.56	348	*e*PKPdf	PKPdf	03 06 12.9	+2.8
	baz=11,slow=1.2						
ROTZ				*e*PKPbc	sPKPbc	03 06 21.8	+0.5
	baz=13,slow=2.3						
ROTZ				*e*PKPab	pPKPab	03 06 35.3	+0.2
	baz=13,slow=4.0						
MODS	Modra-Piesok	154.58	340	*e*PKIKP	PKPdf	03 06 13.0	+2.8
MODS				*e*		03 06 21.5	
MODS	Modra-Piesok	154.58	340	*e*PKP	PKPdf	03 06 13.0	+2.8
MODS				*e*		03 06 21.5	
MODS				*e*		03 06 35.3	
BCLA	Clavier	154.63	359	*d*PKPab	PKPbc	03 06 16.1	-2.5
TNS	Taunus Mts	154.64	354	*e*PKPdf	PKPdf	03 06 13.2	+2.9
	baz=11,slow=1.2						
TNS				*e*PKPbc	sPKPbc	03 06 22.1	+0.6
	baz=13,slow=2.3						
TNS				*e*PKPab	pPKPab	03 06 35.7	+0.1
	baz=13,slow=4.0						
ZST	Bratislava	154.79	340	*e*PKP2	PKPab	03 06 36.0	+2.0
GRF	Grafenberg Arr	154.80	350	*e*PKPdf	PKPdf	03 06 13.3	+2.8
	baz=11,slow=1.2						
GRF				*e*PKPbc	sPKPbc	03 06 22.1	+0.3
	baz=13,slow=2.3						
GRF				*e*PKPab	pPKPab	03 06 36.1	-0.1
	baz=13,slow=4.0						
GRF				*e*L	L	04 20 20.7	
	comp=Z,424nm,20.4s						
GZR	Gura Zlata	154.84	329	⇓P	PKPdf	03 06 13.6	+2.9
KHC	Kasperske Hory	154.88	346	*e*x	x	03 06 37.3	
KHC	Kasperske Hory	154.88	346	*e*PKIKP	PKPdf	03 06 11.0	+0.4
KHC	Kasperske Hory	154.88	346	*e*PKP	PKPdf	03 06 11.0	+0.4
KHC	Kasperske Hory	154.88	346	*e*x	x	03 06 22.0	
MILB	Miltenberg	154.94	353	*e*PKPdf	PKPdf	03 06 13.2	+2.6
	baz=11,slow=1.2						
MILB				*e*PKPbc	sPKPbc	03 06 22.7	+0.6
	baz=13,slow=2.3						
DOU	Dourbes	154.96	360	*d*PKPdf	PKPdf	03 05 55.5	-15
DOU				*d*PKiKP	pPKPdf	03 06 04.1	-8.6
DOU				*d*PKPab	PKPbc	03 06 17.4	-2.0
DOU				*d*pPKPab	sPKPbc	03 06 22.3	+0.2
CKRC	Cesky Krumlov	155.00	344	*e*PKP	PKPdf	03 06 10.3	-0.4
WET	Wettzell	155.02	347	*e*PKPdf	PKPdf	03 06 13.5	+2.7
	baz=11,slow=1.2						
WET				*e*PKPbc	sPKPbc	03 06 22.9	+0.7
	baz=13,slow=2.3						
WET				*e*PKPab	PKPab	03 06 35.9	+0.9
	baz=13,slow=4.0						
GEC2	GERESS Array S	155.12	345	*e*PKPdf	PKPdf	03 06 13.6	+2.5
	baz=11,slow=1.2						
GEC2				*e*PKPbc	sPKPbc	03 06 23.4	+0.8
	baz=13,slow=2.3						
GEC2				*e*PKPab	pPKPab	03 06 37.1	-0.6
	baz=13,slow=4.0						
GERES	GERESS Array B	155.12	345	PKP	PKPdf	03 06 11.6	+0.6
	comp=Z,1.8nm,1.0s,baz=45,slow=0.4,SNR=11						
GERES	GERESS Array B	155.12	345	PKIKP	PKPdf	03 06 11.6	+0.6
GERES	GERESS Array B	155.12	345	PKPdf	PKPdf	03 06 11.4	+0.4
WLF	Walferdange	155.35	357	*e*PKPbc	PKPab	03 06 24.3	-12
	baz=13,slow=2.3						
WLF				*e*PKPab	pPKPab	03 06 38.2	-0.1
	baz=13,slow=4.0						
CONA	Conrad Observa	155.40	341	*e*P	PKPdf	03 06 14.3	+2.9
	comp=Z,9.9nm,1.4s						
CONA				*e*P	pPKPab	03 06 39.2	+0.3
	comp=Z,36nm,1.2s						
SOP	Sopron	155.41	340	*e*P	PKPab	03 06 40.0	+3.4
MOA	Molln	155.91	344	*e*P	PKPdf	03 06 14.7	+2.7
	comp=Z,11nm,2.0s						
MOA				*e*P	pPKPab	03 06 40.5	-0.5
	comp=Z,41nm,1.5s,SNR=8.7						
STU	Stuttgart	155.99	352	*e*PKPbc	PKPdf	03 06 24.9	+13
	baz=13,slow=2.3						
STU				*e*PKPab	PKPab	03 06 39.6	+0.5
	baz=13,slow=4.0						
ARSA	Arzberg	156.11	341	*e*P	PKPdf	03 06 14.0	+1.7
	comp=Z,4.7nm,1.1s						
ARSA				*e*P	pPKPab	03 06 41.5	-0.4
	comp=Z,33nm,2.0s						
FUR	Furstenfeldbru	156.26	349	*e*PKPab	PKPab	03 06 41.9	+1.5
	baz=13,slow=4.0						
BFO	Black Forest	156.52	353	*e*PKPab	PKPab	03 06 43.6	+2.1
	baz=13,slow=4.0						
SOKA	Soboth	156.77	341	*e*P	PKPab	03 06 44.4	+1.7
	comp=Z,55nm,1.4s,SNR=8.0						
KBA	Koelnbreinsper	156.86	344	*e*P	PKPdf	03 06 15.3	+1.8
	comp=Z,10.0nm,1.4s						
KBA				*e*P	pPKPab	03 06 45.0	-0.3
	comp=Z,29nm,1.1s						
WATA	Walderalm	157.01	347	*e*P	PKPdf	03 06 16.4	+2.8
	comp=Z,13nm,1.2s						
WATA				*i* P	pPKPab	03 06 45.5	-0.3
	comp=Z,32nm,1.3s						
RETA	Reutte	157.01	349	*e*P	PKPab	03 06 45.2	+1.6
	comp=Z,18nm,1.2s						
WTTA	Wattenberg	157.06	347	*i* P	PKPdf	03 06 16.5	+2.7
	comp=Z,24nm,1.5s						
WTTA				*i* P	pPKPab	03 06 46.0	-0.2
	comp=Z,27nm,1.0s						
OBKA	Obir	157.07	342	*e*P	PKPdf	03 06 15.8	+2.1
	comp=Z,14nm,1.6s						
OBKA				*e*P	PKPab	03 06 44.9	+0.9
	comp=Z,18nm,1.1s						
MOTA	Moosalm	157.09	348	*e*P	PKPdf	03 06 15.2	+1.5
	comp=Z,16nm,1.3s						
MOTA				*i* P	PKPab	03 06 45.1	+1.0
	comp=Z,21nm,1.1s						
SQTA	Sankt Quirin	157.19	348	*e*P	PKPdf	03 06 16.5	+2.7
	comp=Z,15nm,1.4s						
SQTA				*i* P	pPKPab	03 06 46.4	-0.3
	comp=Z,27nm,1.4s						
MYKA	Terra Mystica	157.20	343	*e*P	PKPdf	03 06 18.0	+4.2
	comp=Z,9.3nm,1.2s						
MYKA				*e*P	PKPab	03 06 45.5	+1.0
	comp=Z,39nm,1.4s,SNR=7.7						
DAVA	Damuels	157.35	350	*e*P	PKPdf	03 06 14.5	+0.4
	comp=Z,19nm,1.9s						
ABTA	Abfaltersbach	157.37	345	*e*P	PKPdf	03 06 16.5	+2.5
	comp=Z,12nm,1.2s						
ABTA				*e*P	pPKPab	03 06 46.4	-1.0
	comp=Z,32nm,1.2s						
FETA	Feichten	157.47	349	*e*P	PKPdf	03 06 17.3	+3.1
	comp=Z,21nm,1.2s						
FETA				*i* P	pPKPab	03 06 47.7	-0.2
	comp=Z,18nm,1.3s						
STIP	Stip	157.78	323	*i* P	PKPab	03 06 46.1	-1.0
VAY	Valandovo	157.81	322	*i* P	PKPab	03 06 49.3	+2.1
PCAB	Cabril	160.41	29	*e*PKPdf	PKPdf	03 06 18.9	+1.2
PBRG	Braganca	160.87	26	*e*PKPdf	PKPdf	03 06 23.1	+4.9
PBRG	Braganca	160.87	26	*e*PKPab	PKPab	03 07 03.9	+3.4
MVO	Moncorvo	161.28	28	*e*PKPdf	PKPdf	03 06 20.7	+2.0
MTE	Manteigas	161.68	30	*e*PKPdf	PKPdf	03 06 21.0	+1.9
PCBR	Castelo Branco	162.16	31	*e*PKPdf	PKPdf	03 06 21.5	+2.0
PMRV	Marv??o	162.52	32	*e*PKPdf	PKPdf	03 06 22.9	+2.9
EVO	Evora	162.90	35	*e*PKPdf	PKPdf	03 06 22.7	+2.4
MESJ	Messejana	163.29	37	*e*PKPdf	PKPdf	03 06 22.8	+2.1
PBEJ	Beja	163.35	36	*e*PKPdf	PKPdf	03 06 24.7	+3.9
MORF	Marmelete	163.43	39	*e*PKPdf	PKPdf	03 06 23.0	+2.0
PBAR	Barrancos	163.67	34	*e*PKPdf	PKPdf	03 06 22.7	+1.6
ESDC	Sonseca Array	163.77	24	PKP	PKPdf	03 06 22.1	+0.9
	comp=Z,8.0nm,1.1s,baz=359,slow=2.4,SNR=18						
ESDC				PKPab	PKPab	03 07 13.3	0.0
	comp=Z,2.0nm,0.8s,baz=345,slow=3.9,SNR=6.9						
ESDC	Sonseca Array	163.77	24	PKPdf	PKPdf	03 06 21.4	+0.2
KOWA	Kowa	166.87	141		PKPdf	03 06 23.9	-0.6
TORD	Torodi Ar. Bea	167.92	167	PKP	PKPdf	03 06 25.1	-0.1
	comp=Z,5.0nm,1.1s,baz=359,slow=0.8,SNR=16						
TORD				PKPab	sPKPab	03 07 35.0	+0.2
	comp=Z,3.6nm,0.7s,baz=186,slow=3.4,SNR=12						
TORD	Torodi Ar. Bea	167.92	167		PKPdf	03 06 22.7	-2.5
KEST	Kesra	168.50	339	PKPab	PKPab	03 07 34.4	+0.1
	comp=Z,20nm,1.2s,baz=294,slow=4.9,SNR=6.4						

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*TUL **24** 02:47:40.6±0.7, 36°.82N±0°.04×98°.28W±0°.04, h6km±7km, ML3.0, mb_Lg2.7/26(NEIC), Error ellipse: s-maj=6.0km s-min=5.0km az=176.0*

NEIC 24 02:47:41.3±1.1**, 36°.80N**±0°.04×**98°.25W**±0°.03**, h11**km±6km**, Error ellipse: s-maj=6.1km s-min=3.3km az=184.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK032	Salt Plains WL	0.03	88	Pg	Pg	02 47 42.6	-0.8
OK032				Sg	Sg	02 47 43.9	-1.1
KAN14	Manchester OK	0.28	56		Pg	02 47 46.8	-0.2
KAN14				Sg	Sg	02 47 51.0	+0.2
GC02	Grant County #	0.32	81	Pg	Pg	02 47 47.6	-0.1
GC02				Sg	Sg	02 47 52.3	+0.3
KAN10	Anthony SW Sta	0.34	21	Pg	Pg	02 47 47.8	-0.5
CROK	Carrier	0.37	144	Pg	Pg	02 47 48.5	-0.2
KAN05	Bluff City Nor	0.43	44		Pg	02 47 49.5	-0.3
KAN16	Harper SW Stat	0.45	19	Pg	Pg	02 47 49.6	-0.6
KAN17	Caldwell West	0.46	58		Pg	02 47 50.0	-0.3
KAN08	Anthony NE Sta	0.48	28	Pg	Pg	02 47 50.2	-0.6
KAN01	Argonia South	0.53	48		Pg	02 47 51.2	-0.4
KAN06	Argonia West S	0.54	35		Pg	02 47 51.2	-0.7
KAN09	Caldwell North	0.60	56		Pg	02 47 52.7	-0.4
KAN13	South Haven SW	0.65	71		Pg	02 47 53.6	-0.4
U32A	Winter Ranch,	0.74	235	Pg	Pg	02 47 54.4	-1.2
BLOK	Blackwell	0.83	93	Pg	Pg	02 47 56.7	-0.7
BCOK	Bluff Creek, N	1.25	155		Pn	02 48 04.0	-0.7
QUOK	Quay	1.39	116		Pn	02 48 06.9	+0.2
T35A	Sooner Cattle	1.40	85	Pn	Pn	02 48 06.6	-0.1
OK031	S. Brethren Rd	1.42	126	Pn	Pn	02 48 06.9	-0.1
OK025	Westminster Rd	1.42	149	Pn	Pn	02 48 07.1	0.0
OK025				IAmb_Lg		02 48 29.3	
	comp=Z,36nm,0.7s						
OK030	Cody Creek RV	1.47	126		Pn	02 48 07.8	+0.1
OKCFA	Oklahoma City	1.53	155	Pn	Pn	02 48 08.5	0.0
OKCSW	OKLAHOMA CITY	1.54	155		Pn	02 48 08.8	+0.1
R32A	Long Quarter,	1.66	347	Pn	Pn	02 48 10.7	+0.3
FNO	Franklin	1.69	156		Pn	02 48 11.1	+0.4
WMOK	Wichita Mounta	2.10	192	Pn	Pn	02 48 16.8	+0.3
TUL1	Leonard	2.17	113	Pn	Pn	02 48 17.9	+0.6
TUL1				IAmb_Lg		02 48 53.1	
	comp=Z,44nm,0.8s						
X34A	Smith Ranch, M	2.22	171		Pn	02 48 17.9	-0.2
CBKS	Cedar Bluff	2.33	330	Pn	Pn	02 48 19.7	+0.2
KSU1	Kansas State U	2.63	29	IAmb_Lg		02 49 11.2	
	comp=Z,15nm,0.8s						
LOOK	Love County	2.94	162	Pn	Pn	02 48 28.1	+0.2
U38A	Gravette	3.13	96	Pn	Pn	02 48 31.5	+1.0
X37A	Clayton	3.22	132	Pn	Pn	02 48 31.7	0.0
AMTX	Amarillo	3.38	237	IAmb_Lg		02 49 28.0	
	comp=Z,13nm,0.8s						
HHAR	Hobbs	3.51	97	Pn	Pn	02 48 36.3	+0.5
W39A	Magazine	3.96	113	IAmb_Lg		02 49 49.5	
	comp=Z,24nm,0.8s						
S39A	Bolivar	4.03	76	Pn	Pn	02 48 43.3	+0.4
S39A				IAmb_Lg		02 49 48.2	
	comp=Z,10nm,0.8s						
ABTX	Abilene, Hawle	4.32	196	IAmb_Lg		02 49 57.8	
	comp=Z,10nm,0.9s						
U40A	Yellville	4.37	94	IAmb_Lg		02 50 01.5	
	comp=Z,15nm,0.8s						
MIAR	Mount Ida	4.42	119	Pn	Pn	02 48 48.8	+0.5
BGNE	Belgrade	4.60	1	IAmb_Lg		02 50 16.2	
	comp=Z,21nm,0.7s						
P38A	Dawn	4.66	51	IAmb_Lg		02 50 13.4	
	comp=Z,9.7nm,0.7s						
T25A	Trinidad	4.95	276	IAmb_Lg		02 50 17.2	
	comp=Z,17nm,0.8s						
X40A	Basin Creek Fa	4.98	116	IAmb_Lg		02 50 24.8	
	comp=Z,17nm,0.9s						
FCAR	Ozark Folk Cen	5.03	99	IAmb_Lg		02 50 24.2	
	comp=Z,15nm,1.2s						
PBMO	Poplar Bluff	6.28	88	IAmb_Lg		02 50 59.7	
	comp=Z,14nm,0.8s						

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*ISK **24** 02:53:03.5, 35°.16N×25°.25E, h73km, ML2.7/10*

*ATH **24** 02:53:09.9, 35°.57N×25°.95E, h27km±12km, ML2.2/3, Error ellipse: s-maj=12.6km s-min=1.2km az=166.0*

*THE **24** 02:53:11.8, 35°.46N×25°.91E, h17km±1km, ML2.1/3, Error ellipse: s-maj=2.7km s-min=0.5km az=188.0*

*DDA **24** 02:53:13.2, 35°.31N×26°.57E, h3km±3km, ML2.0*

ISC 24 02:53:10.9±1.0**, 35°.55N**±0°.03×**25°.84E**±0°.03**, h13**km±9km**, n31,** σ1^{s}42/46**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NPS	Neapolis	0.34	214	P	Pg	02 53 18.1	+0.3
NPS				S	Sb	02 53 23.9	-0.3
	572nm,0.3s						
NPS	Neapolis	0.34	214	P	Pg	02 53 18.1	+0.3
NPS				AML	AML	02 53 24.0	
	comp=E,1416μm,0.4s						
NPS				AML	AML	02 53 25.4	
	comp=N,848μm,0.4s						
STIA	Sitia Lasithi	0.40	149	P	Pg	02 53 18.4	-0.5
STIA				S	Sg	02 53 23.0	-1.2
ZKR	Zakros	0.53	144	P	Pg	02 53 20.5	-0.8
ZKR				S	Sg	02 53 27.1	-1.3
	comp=N,218nm,0.2s						
ZKR	Zakros	0.53	144	P	Pg	02 53 20.6	-0.8
ZKR				S	Sg	02 53 27.1	-1.3
ZKR				AML	AML	02 53 27.4	
	comp=E,459μm,0.2s						
ZKR				AML	AML	02 53 28.0	
	comp=N,411μm,0.3s						
ZKR	Zakros	0.53	144	PG	Pg	02 53 20.4	-0.8
IDI	Anoyia	0.82	252	P	Pg	02 53 27.4	+0.6
IDI				S	Sb	02 53 39.4	+1.3
	comp=N,182nm,0.2s						
IDI	Anoyia	0.82	252	P	Pg	02 53 27.2	+0.4
IDI				S	Sb	02 53 38.9	+0.8
IDI				AML	AML	02 53 41.7	
	comp=N,342μm,0.2s						
IDI				AML	AML	02 53 42.1	
	comp=E,378μm,0.2s						
THR6	Thira Island,	0.89	336	P	Pg	02 53 26.9	-1.1
THR3	Thira Island,	0.93	338	P	Pg	02 53 27.2	-1.8
THT2	Imerovigli	0.95	339	P	Pg	02 53 27.7	-1.6
THR2	Thira island,	0.96	340	P	Pg	02 53 27.4	-2.0
CMBO	Columbo, Santo	0.99	339	P	Pg	02 53 28.0	-2.0
SIVA	Sivas	0.99	238	P	Pg	02 53 29.3	-0.8
VAM	Vamos	1.35	265	P	Pn	02 53 35.5	0.0
VAM				S	Sb	02 53 53.5	+0.2
NIS1	Nisyros Isl.	1.51	45	PN	Pn	02 53 38.2	+0.4
KOSK	Kos Island	1.52	37	PN	Pn	02 53 38.2	+0.4
KOSK				SN	Sg	02 54 03.2	+3.4
APE	Apeiranthos	1.54	351	PN	Pn	02 53 35.4	-2.8
APE				SN	Sn	02 53 58.6	+0.4
DAT	Datca	1.84	49	*i* P	Pn	02 53 42.2	-0.1
DAT	Datca	1.84	49	PN	Pn	02 53 42.9	+0.5
DAT				SN	Sg	02 54 11.7	+1.6

BODT	Bodrum	1.92	38	PN	Pn	02 53 43.8	+0.3
ARG	Arkhangelos	1.97	69	P	Pn	02 53 43.2	-0.9
ARG				S	Sn	02 54 06.6	-2.2
ARG	Arkhangelos	1.97	69	PN	Pn	02 53 43.9	-0.2
BDRM	Kayabasi	2.00	40	*i* P	Pb	02 53 47.6	+0.4
TURN	Turunc	2.30	57	PN	Pn	02 53 49.3	+0.7
DALY	Dalyan (Mula)	2.61	60	*i* P	Pn	02 53 54.2	+1.4
DALY				*i* S	Sn	02 54 24.4	+0.1
DALY				IAML		02 54 33.0	
	comp=E,7.2nm,0.8s						
DALY	Dalyan (Mula)	2.61	60	PN	Pn	02 53 53.5	+0.7
AYDN	Tasoluk	2.67	37	*i* P	Pb	02 53 59.9	+1.2
AYDN				*i* S	Sb	02 54 33.1	+1.6
FETY	Fethiye	2.84	67	*i* P	Pn	02 53 57.2	+1.1
FETY				*i* S	Sn	02 54 29.5	-0.7
FETY				IAML		02 54 33.0	
	comp=E,13nm,1.4s						
FETY				IAML		02 54 33.0	
	comp=N,18nm,1.3s						
CAME	Cameli-Denizli	3.13	62	PN	Pn	02 54 01.0	+0.9
TAVA	DENIZLI_Tavas	3.13	51	*i* P	Pn	02 54 02.7	+2.6
TAVA				*i* S	Sn	02 54 33.7	-3.8
TAVA				IAML		02 54 40.0	
	comp=E,6.5nm,1.0s						

MAN 24 02:57:19.7, 13°.13N×119°.47E, h35^{km}, mb4.1, ML2.9, MS2.6, Philippine Islands region

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ROM 24 03:03:31.2±0.1**, 40°.788N**±0°.005×**15°.327E**±0°.008**, h10^{km}, ML1.9**/5**, Error ellipse: s-maj=0.7km s-min=0.4km az=235.0, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCRV	Calabrutti - M	0.12	267	P	Pg	03 03 34.5	+0.3
MCRV				S	Sg	03 03 37.3	+1.1
MCRV				AML	AML		
	comp=E,1555µm,0.7s						
MCRV				AML	AML		
	comp=N,1635µm,0.7s						
MRLC	Muro Lucano	0.13	104	P	Pg	03 03 34.2	0.0
MRLC				S	Sg	03 03 37.7	+1.4
MRLC				AML	AML		
	comp=N,2605µm,0.4s						
MRLC				AML	AML		
	comp=E,1775µm,1.3s						
MRLC				AML	AML		
	comp=N,2600µm,0.4s						
MRLC				AML	AML		
	comp=N,2755µm,0.4s						
MRLC				AML	AML		
	comp=E,1900µm,1.3s						
SNAL	S. Angelo Dei	0.16	327	P	Pg	03 03 35.2	+0.3
SNAL				S	Sg	03 03 38.2	+0.9
SNAL				AML	AML		
	comp=E,1730µm,0.9s						
SNAL				AML	AML		
	comp=N,1338µm,1.0s						
SNAL				AML	AML		
	comp=E,1660µm,0.9s						
SNAL				AML	AML		
	comp=N,1420µm,1.3s						
CAFE	Carife	0.25	344	P	Pg	03 03 36.8	+0.4
CAFE				S	Sg	03 03 42.1	+2.4
CAFE				AML	AML		
	comp=E,401µm,1.5s						
CAFE				AML	AML		
	comp=N,283µm,1.6s						
CAFE				AML	AML		
	comp=N,344µm,0.5s						
CAFE				AML	AML		
	comp=E,374µm,1.5s						
CAFE				AML	AML		
	comp=E,400µm,1.5s						
CAFE				AML	AML		
	comp=N,284µm,1.6s						
VULT	Monte Vulture	0.28	53	P	Pg	03 03 37.0	+0.2
CDRU	Civita di Ruta	0.30	183	P	Pg	03 03 37.6	+0.4
CDRU				S	Sb	03 03 42.9	-0.8
SGTA	Sant Agata di	0.35	5	P	Pb	03 03 39.3	-0.3
MRB1	Monte Rocchett	0.43	322	P	Pg	03 03 39.8	+0.1
ACER	Acerenza	0.47	90	P	Pb	03 03 41.0	-0.6
ACER				AML	AML		
	comp=N,228µm,1.1s						
ACER				AML	AML		
	comp=E,186µm,1.6s						
ACER				AML	AML		
	comp=N,229µm,1.1s						
ACER				AML	AML		
	comp=N,164µm,0.6s						
ACER				AML	AML		
	comp=E,170µm,1.5s						
CMPR	Campora	0.47	182	P	Pg	03 03 40.5	+0.1
CMPR				S	Sb	03 03 48.5	-0.1
PALZ	Palazzo San Ge	0.51	72	P	Pb	03 03 41.7	-0.5
PSB1	Pescosannita	0.58	318	P	Pg	03 03 42.6	0.0
MCEL	Monticello	0.59	142	P	Pg	03 03 42.9	+0.3
MTSN	Montesano sull	0.61	148	P	Pg	03 03 43.4	+0.3
MTSN				AML	AML		
	comp=N,74µm,0.5s						
MTSN				AML	AML		
	comp=E,91µm,0.7s						
AG11	Viggiano (PZ)	0.66	134	P	Pg	03 03 43.7	-0.2
BULG	Bulgheria - Ca	0.71	177	P	Pg	03 03 45.0	+0.1
SIRI	Monte Sirino -	0.73	146	P	Pg	03 03 45.0	-0.3
SIRI				AML	AML		
	comp=E,64µm,0.9s						
SIRI				AML	AML		
	comp=N,53µm,1.6s						

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*IDC **24** 03:15:03.9±1.4, 25°.12S×175°.70W, h0^{km}, mb4.2/7, mb1 4.4/8, mb1mx4.2/28, mbtmp4.2/8, ML5.4/1, MS3.9/6, Ms1 3.9/6, ms1mx3.6/23, Error ellipse: s-maj=54.2km s-min=25.1km az=157.0*

*NEIC **24** 03:15:04.3±1.9, 25°.0S±0°.1×175°.8W±0°.1, h10^{km}±1^{km}, mb4.5/7, Error ellipse: s-maj=28.5km s-min=6.1km az=48.0*

ISC 24 03:15:04.1±0.6**, 25°.2S**±0°.1×**175°.6W**±0°.1**, h10^{km}, n30,** σ**1^{s}.76**/25**, mb4.3**/12**, MS4.1**/4**, South of Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	9.48	320	Pn	Pn	03 17 20.5	-0.3
	1.4nm,0.3s,baz=138,slow=14,SNR=5.1						
MSVF	Nonsavu	9.48	320		Pn	03 17 16.4	-4.4
RAR	Rarotonga	15.03	78	Pn	Pn	03 18 33.0	-3.7
	2.7nm,0.3s,baz=270,slow=10,SNR=3.7						
RAR				LR	LR	03 23 38.5	
	comp=Z,266nm,21.1s,baz=262,slow=34						
DZM	Mont Dzumac	16.78	277	LR	LR	03 23 46.5	
	comp=Z,366nm,20.6s,baz=44,slow=31						
PPT	Papeete	25.31	78	LR	LR	03 28 40.5	
	comp=Z,100nm,18.5s,baz=202,slow=32						
HNR	Honiara	28.05	300	LR	LR	03 30 39.6	
	comp=Z,421nm,18.3s,baz=190,slow=34						
TOO	Toolangi	35.25	240	P	P	03 21 57.0	-2.0
TOO				IAmb	IAmb	03 22 09.4	
	comp=Z,21nm,1.4s						
STKA	Stephens Creek	38.06	250	P	P	03 22 24.2	+1.3
	comp=Z,0.8nm,0.4s,baz=106,slow=8.5,SNR=3.1						
STKA				LR	LR	03 37 11.7	
	comp=Z,497nm,18.2s,baz=45,slow=35						
AS31	Alice Springs	45.83	261	P	P	03 23 24.0	-2.6
ASAR	Alice Springs	45.83	261	P	P	03 23 26.9	+0.3
	comp=Z,1.8nm,0.8s,baz=97,slow=7.7,SNR=16						
ASAR	Alice Springs	45.83	261	P	P	03 23 24.5	-2.1
WB2	Warramunga Arr	46.35	266	P	P	03 23 28.6	-2.0
WB2				IAmb	IAmb	03 23 43.2	
	comp=Z,3.5nm,0.9s						
WB0	Warramunga Arr	46.36	266	P	P	03 23 29.6	-1.1
WB0				IAmb	IAmb	03 23 31.9	
	comp=Z,3.4nm,0.9s						
WRA	Warramunga Arr	46.36	266	P	P	03 23 29.6	-1.1
	comp=Z,1.2nm,0.5s,baz=103,slow=8.1,SNR=12						
QSPA	South Pole Qui	64.94	180	P	P	03 25 45.2	+1.5
CMB	Columbia Colle	81.41	41	P	P	03 27 22.2	+1.0
CMB				IAmb	IAmb	03 27 30.5	
	comp=Z,3.9nm,1.3s						
NVAR	Mina Array Bea	82.91	42	P	P	03 27 30.6	+1.2
	comp=Z,1.3nm,0.9s,baz=230,slow=8.2,SNR=4.7						
NVAR	Mina Array Bea	82.91	42	P	P	03 27 28.6	-0.8
SNAA	Sanae	83.31	178	P	P	03 27 30.8	0.0
SNAA				IAmb	IAmb	03 27 39.9	
	comp=Z,6.1nm,1.3s						
USRK	Ussuriysk Ar.	84.06	325	P	P	03 27 36.0	+1.2
	comp=Z,6.7nm,1.0s,baz=96,slow=7.4,SNR=4.6						
USRK	Ussuriysk Ar.	84.06	325	P	P	03 27 33.6	-1.2
PLCA	Paso Flores	84.47	132	LR	LR	04 00 29.9	
	comp=Z,71nm,18.2s,baz=182,slow=32						
TXAR	Lajitas Array	87.71	56	P	P	03 27 55.8	+2.4
	comp=Z,0.7nm,1.0s,baz=187,slow=6.3,SNR=3.3						
CMAR	Chiang Mai Arr	93.76	289	P	P	03 28 24.4	+2.7
	comp=Z,1.4nm,0.3s,baz=97,slow=3.1,SNR=6.6						
CMAR	Chiang Mai Arr	93.76	289	P	P	03 28 19.2	-2.6
AKASG	Malin Array Be	148.15	330	PKPbc	PKPbc	03 34 50.5	+0.6
	comp=Z,0.3nm,0.2s,baz=61,slow=2.6,SNR=5.4						
AKASG	Malin Array Be	148.15	330		PKPdf	03 34 47.1	+0.4
BRTR	Keskin Array B	151.55	308	PKPbc	PKPbc	03 34 59.1	+0.3
	comp=Z,0.7nm,0.5s,baz=132,slow=1.8,SNR=3.9						
BRTR	Keskin Array B	151.55	308		PKPdf	03 34 51.6	-1.0
CLL	Collm	153.07	348	*e*PKPbc	PKiKP	03 35 03.0	+1.2

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*IDC **24** 03:22:27.2±1.4, 38°.33N×110°.94W, h0^{km}, mb1 3.5/2, mb1mx3.3/41, mbtmp3.0/2, ML3.4/2, Error ellipse: s-maj=22.0km s-min=11.9km az=89.0*

*NEIC **24** 03:22:34.2±1.7, 38°.92N±0°.04×107°.46W±0°.04, h1^{km}±2^{km}, ML3.2/113, Error ellipse: s-maj=8.3km s-min=3.0km az=144.0*

*ANF **24** 03:22:36.1±1.5, 38°.90N×107°.59W, h19^{km}±13^{km}, ML3.2/14, Error ellipse: s-maj=6.9km s-min=4.1km az=82.0*

ISC 24 03:22:35.3±0.8**, 38°.90N**±0°.02×**107°.51W**±0°.02**, h10^{km}, n86,** σ**1^{s}.25**/98**, Colorado**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMCO	Snowmass	0.50	56	Pg	Pg	03 22 42.7	-2.4
SMCO				Sg	Sg	03 22 48.9	-2.8
PV15	Paradox Valley	0.95	234		Pg	03 22 52.7	-0.8
PV15				Sg	Sb	03 23 06.3	-0.3
PV15				IAML		03 23 28.9	
	comp=N,353nm,1.7s						
PV07	Paradox Valley	1.01	243		Pg	03 22 53.6	-1.0
PV07				Sg	Sg	03 23 07.6	-0.2
PV01	Paradox Valley	1.13	228	Pg	Pg	03 22 56.4	-0.7
PV01				Sg	Sb	03 23 12.1	+0.1
PV12	Saucer Basin,	1.17	240		Pb	03 22 57.1	-0.7
PV12				Sn	Sn	03 23 15.1	+1.0
PV12				IAML		03 23 17.1	
	comp=E,430nm,0.6s						
PV12				IAML		03 23 17.4	
	comp=N,467nm,0.6s						
PV02	Paradox Valley	1.19	235		Pb	03 22 57.4	-0.6
PV02				IAML		03 23 28.1	
	comp=N,230nm,0.6s						
PV21	Cone Mtn., Par	1.20	254		Pb	03 22 57.3	-0.9
PV11	David Mesa, Pa	1.23	241		Pb	03 22 58.2	-0.4
PV03	Paradox Valley	1.23	239		Pb	03 22 58.0	-0.8
PV23	Carpenter Ridg	1.26	250		Pn	03 22 58.7	-0.5
S22A	4UR Ranch, Cre	1.27	155	P	Pn	03 22 58.7	-0.7
	baz=337,SNR=290						
S22A				S	Sg	03 23 16.3	0.0
	baz=337						
PV20	West Nyswonger	1.27	244		Pn	03 22 58.9	-0.4
PV18	Skein Mesa, Pa	1.28	240		Pn	03 22 58.8	-0.6
PV18				IAML		03 23 22.2	
	comp=N,206nm,0.8s						
PV17	East Wray Mesa	1.30	242		Pn	03 22 59.2	-0.4
PV17				IAML		03 23 22.8	
	comp=N,206nm,0.8s						
PV19	Morning Glory	1.30	243		Pn	03 22 59.3	-0.3
PV14	Lion Creek, Pa	1.30	246		Pn	03 22 59.4	-0.3
PV14				IAML		03 23 24.8	
	comp=N,423nm,0.9s						
PV14				IAML		03 23 30.6	
	comp=E,266nm,0.9s						
PV10	Paradox Valley	1.31	247		Pb	03 23 00.3	+0.2
PV10				IAML		03 23 27.0	
	comp=N,259nm,0.9s						
PV10				IAML		03 23 28.6	
	comp=E,289nm,0.8s						
O20A	White River Ci	1.36	335	P	Pn	03 22 59.1	-1.3
	baz=154,SNR=84						
O20A	White River Ci	1.36	335		Pn	03 22 59.2	-1.3
PV05	Paradox Valley	1.50	237		Pn	03 23 00.6	-1.8
PV05				IAML		03 23 31.2	
	comp=N,296nm,0.5s						
PV05				IAML		03 23 36.4	
	comp=E,249nm,1.0s						
ISCO	Idaho Springs	1.72	58	P	Pn	03 23 05.6	+0.1
	baz=239,SNR=163						
ISCO				S	Sb	03 23 29.7	+0.8
	baz=239						
ISCO	Idaho Springs	1.72	58		Pn	03 23 05.0	-0.6
Q24A	Divide	1.84	87	P	Pn	03 23 08.0	+0.8
	baz=269,SNR=60						
Q24A				S	Sb	03 23 32.1	-0.3
	baz=269						
MVCO	Mesa Verde	1.86	205	Pb	Pb	03 23 09.5	0.0
	baz=25,SNR=155						
MVCO	Mesa Verde	1.86	205		Pn	03 23 08.0	+0.6
MVCO				IAML		03 23 43.2	
	comp=E,107nm,0.9s						
SDCO	Great Sand Dun	1.96	126	P	Pn	03 23 10.1	+1.4
	baz=308,SNR=132						
SDCO				Sb	Sg	03 23 38.5	+0.4
	baz=308						
SDCO	Great Sand Dun	1.96	126		Pn	03 23 09.1	+0.3
P18A	Preston Nutter	2.25	290		Pn	03 23 13.4	+0.6
P18A				IAML		03 23 46.2	
	comp=N,234nm,0.8s						
P18A				IAML		03 23 49.6	
	comp=E,252nm,0.8s						
RDMU	Red Mountain	2.30	317		Pn	03 23 14.3	+0.8
RDMU				IAML		03 23 48.2	
	comp=N,84nm,1.0s						
RDMU				IAML		03 23 48.6	
	comp=E,190nm,0.7s						
N23A	Red Feather La	2.33	31	P	Pn	03 23 15.1	+1.3
	baz=211,SNR=113						
N23A				Sb	Sb	03 23 48.1	+1.7
	baz=211						
SRU	San Rafael Swe	2.36	276		Pn	03 23 15.8	+1.5
SRU				IAML		03 23 52.1	
	comp=N,181nm,0.7s						
P17A	Butcher Ranch,	2.58	284		Pn	03 23 17.9	+0.7
P17A				IAML		03 23 59.2	
	comp=N,119nm,0.9s						
P17A				IAML		03 24 09.8	
	comp=E,104nm,0.9s						
RWWY	Rawlins	2.79	5	Pn	Pn	03 23 20.7	+0.4
RWWY				IAML		03 24 04.4	
	comp=E,102nm,1.1s						
RWWY				IAML		03 24 08.8	
	comp=E,102nm,1.1s						
Q16A	Castle Valley	2.86	271		Pn	03 23 22.2	+1.1
Q16A				IAML		03 24 06.0	
	comp=N,113nm,0.5s						
Q16A				IAML		03 24 06.8	
	comp=E,136nm,0.7s						
TMUT	Trail Mountain	2.91	279		Pn	03 23 23.3	+1.4
T25A	Trinidad	3.01	125	Pb	Pb	03 23 29.8	+0.6
	baz=307						
T25A				Sb	Sg	03 24 10.2	-1.9
	baz=307						
T25A	Trinidad	3.01	125		Pn	03 23 23.1	-0.1
T25A				IAML		03 24 12.9	
	comp=E,36nm,0.6s						
T25A				IAML		03 24 14.9	
	comp=N,48nm,1.7s						
MPU	Maple Canyon	3.38	290		Pn	03 23 27.8	-0.5
MPU				IAML		03 24 28.1	
	comp=N,27nm,1.4s						
JLU	Jordanelle	3.48	300		Pn	03 23 29.3	-0.4
JLU				IAML		03 24 32.5	
	comp=N,43nm,1.1s						
JLU				IAML		03 24 32.6	
	comp=E,75nm,0.9s						
MSU	Marysvale	3.67	265		Pn	03 23 33.3	+0.9
NLU	North Lily Min	3.69	288		Pn	03 23 32.3	-0.3
MVU	Marysvale	3.70	265		Pn	03 23 33.0	+0.2
TCUT	Toone Canyon	3.73	308		Pn	03 23 33.3	+0.3
CTU	Camp Tracy	3.73	300		Pn	03 23 33.3	+0.3
CTU				IAML		03 24 40.5	
	comp=E,40nm,0.9s						
CTU				IAML		03 24 41.5	
	comp=N,39nm,1.0s						
MTPU	Mount Pierson	3.77	258	Pn	Pn	03 23 34.3	+0.5
MTPU				IAML		03 24 38.9	
	comp=N,37nm,0.8s						
MTPU				IAML		03 24 40.7	
	comp=E,35nm,0.9s						
KSCO	Kaye Shedlock’	3.81	87	Pb	Pb	03 23 43.6	+1.0
	baz=270						
KSCO				Sb	Sg	03 24 34.1	-3.4
	baz=270						
KSCO	Kaye Shedlock’	3.81	87		Pn	03 23 33.9	-0.2
KSCO				IAML		03 24 43.5	
	comp=E,45nm,1.5s						
KSCO				IAML		03 24 48.5	
	comp=N,56nm,1.1s						
K22A	Casper	3.82	11	Pb	Pb	03 23 42.6	-0.2
	baz=191						
K22A				Sb	Sb	03 24 31.9	+2.7
	baz=191						
K22A	Casper	3.82	11	Pn	Pn	03 23 34.3	0.0
K22A				IAML		03 24 40.3	
	comp=N,46nm,1.2s						
K22A				IAML		03 24 56.2	
	comp=E,40nm,1.3s						
TCRU	Three Creeks R	3.87	267	Pn	Pn	03 23 36.2	+1.1
TCRU				IAML		03 24 02.0	
	comp=N,39nm,1.1s						
TCRU				IAML		03 24 46.0	
	comp=E,57nm,0.9s						
ANMO	Albuquerque	4.04	168	Pb	Pb	03 23 48.4	+1.8
	baz=349						
ANMO	Albuquerque	4.04	168	Pn	Pn	03 23 37.9	+0.6
PKCU	Pink Cliffs	4.06	250		Pn	03 23 41.3	+3.6
HWUT	Hardware Ranch	4.12	312		Pn	03 23 38.8	+0.4
HWUT				IAML		03 25 03.0	
	comp=E,51nm,1.0s						
BW06	Boulder Array	4.16	339	Pb	Pb	03 23 49.8	+1.0
	baz=157						
BW06	Boulder Array	4.16	339		Pn	03 23 39.9	+0.8
BW06				IAML		03 24 53.8	
	comp=E,24nm,0.8s						
BW06				IAML		03 25 03.1	
	comp=E,16nm,1.1s						
PD31	Pinedale Array	4.16	339		Pn	03 23 39.0	-0.1
PDAR	Pinedale Array	4.16	339	Pn	Pn	03 23 40.1	+1.0
	comp=E,0.5nm,0.3s,baz=167,slow=13,SNR=15						
PDAR				Pg	Pb	03 23 50.1	+1.4
	comp=E,3.3nm,0.3s,baz=168,slow=14,SNR=65						
PDAR				Lg	Lg	03 24 48.4	
	comp=E,1.9nm,0.3s,baz=184,slow=27,SNR=2.3						
PDAR	Pinedale Array	4.16	339		Pn	03 23 40.0	+0.9
W18A	Petrified Fore	4.18	206	P	Pn	03 23 39.4	+0.2
	baz=25,SNR=21						
W18A	Petrified Fore	4.18	206		Pn	03 23 42.5	+3.3
W18A				IAML		03 25 00.2	
	comp=E,41nm,0.9s						
W18A				IAML		03 25 02.3	
	comp=N,42nm,1.1s						
DUG	Dugway, Tooele	4.30	289		Pn	03 23 40.9	0.0
DUG				IAML		03 25 26.8	
	comp=N,14nm,4.0s						
SPUT	South Promonto	4.49	304		Pn	03 23 43.4	0.0
SPUT				IAML		03 25 01.6	
	comp=N,29nm,1.0s						
U15A	North Rim	4.53	238		Pn	03 23 47.7	+3.5
WUAZ	Wupatki	4.58	224	P	Pn	03 23 46.0	+1.4
	baz=41,SNR=7.3						
WUAZ	Wupatki	4.58	224		Pn	03 23 45.5	+0.8
SZCU	Shurtz Canyon	4.58	255	Pn	Pn	03 23 46.0	+1.1
SZCU				IAML		03 25 04.8	
	comp=N,23nm,1.2s						
SZCU				IAML		03 25 15.3	
	comp=E,22nm,1.3s						
KNB	Kanab	4.60	248		Pn	03 23 45.5	+0.5
KNB				IAML		03 25 12.1	
	comp=N,35nm,1.4s						
OGNE	Ogallala	4.68	62	Pb	Pb	03 23 59.6	+2.2
	baz=246						
AHID	Auburn Hatcher	4.72	326		Pn	03 23 48.3	+1.6
X18A	Snowflake	4.79	205		Pn	03 23 47.7	+0.1
CCUT	Cedar City	4.80	256		Pn	03 23 51.3	+3.4
CCUT				IAML		03 25 07.1	
	comp=N,14nm,4.4s						
CCUT				IAML		03 25 10.6	
	comp=E,9.7nm,0.9s						
HVU	Hansel Valley	4.95	307	Pn	Pn	03 23 50.6	+0.8
HVU				IAML		03 25 28.0	
	comp=E,20nm,1.0s						
PSUT	Pine Spring	4.98	268		Pn	03 23 50.8	+0.6
PSUT				IAML		03 24 29.4	
	comp=E,9.0nm,0.9s						
PSUT				IAML		03 24 53.8	
	comp=N,8.2nm,4.9s						
REDW	Red Top Meadow	5.12	332		Pn	03 23 52.2	0.0
LOHW	Long Hollow	5.25	335		Pn	03 23 55.9	+1.9
LOHW				IAML		03 25 31.8	
	comp=N,19nm,1.5s						
TPAW	Teton Pass	5.27	332		Pn	03 23 55.6	+1.3
SPR3	Spring Creek 3	5.32	273		Pn	03 23 54.8	-0.2
SPR3				IAML		03 25 24.0	
	comp=E,10nm,4.9s						
SPR3				IAML		03 25 29.3	
	comp=N,6.5nm,1.1s						
MOOW	Moose Ponds	5.42	334		Pn	03 23 55.6	-0.8
FXWY	Fox Creek	5.42	332		Pn	03 23 55.8	-0.6
X16A	Lo Mia Camp, P	5.48	216		Pn	03 23 56.8	-0.4
RSSD	Black Hills	5.83	25	Pb	Pb	03 24 17.7	+0.6
	baz=207						
RSSD	Black Hills	5.83	25	Pn	Pn	03 24 00.8	-1.1
YMR	Madison River	6.31	337	Pn	Pn	03 24 07.6	-1.0
NVAR	Mina Array Bea	8.46	270	Sn	Pb	03 24 52.5	-9.4
	baz=73,slow=10,SNR=6.0						
NVAR				Lg	Lg	03 25 18.2	
	comp=N,0.1nm,0.3s,baz=89,slow=16,SNR=7.2						
TXAR	Lajitas Array	10.06	160	Pn	Pn	03 25 06.1	+6.2
	comp=N,0.0nm,0.3s,baz=342,slow=13,SNR=5.7						
TXAR				Pg		03 25 44.5	
	comp=N,0.0nm,0.3s,baz=348,slow=13,SNR=7.6						

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*NEIC **24** 03:24:43.1±1.0, 59°.74N±0°.03×152°.98W±0°.06, h101^{km}±3^{km}, Error ellipse: s-maj=4.8km s-min=4.5km az=137.0*

*ANF **24** 03:24:43.3±0.1, 59°.73N×152°.96W, h96^{km}±2^{km}, ML4.4/53, Error ellipse: s-maj=2.0km s-min=1.7km az=135.0*

*IDC **24** 03:24:44.5±3.3, 59°.95N×153°.16W, h102^{km}±31^{km}, mb3.7/12, mb1 3.9/16, mb1mx3.6/50, mbtmp4.0/16, Error ellipse: s-maj=28.2km s-min=11.9km az=28.0*

*AEIC **24** 03:24:44.1±1.2, 59°.73N±0°.03×152°.99W±0°.06, h99^{km}±3^{km}, ML4.0/174, mb3.8/3(NEIC), ML4.2/120(NEIC), Error ellipse: s-maj=4.6km s-min=3.5km az=224.0*

ISC 24 03:24:43.0±0.5**, 59°.75N**±0°.03×**152°.93W**±0°.03**, h98^{km}**±4^{km}**, n328,** σ**0^{s}.92**/336**, mb3.9**/12**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPT	Oil Point	0.18	238		Pn	03 24 57.6	+0.7
P19K	Oil Pt	0.18	238	P	Pn	03 24 57.6	+0.7
	baz=58,SNR=66						
P19K				S	Sn	03 25 08.2	+0.9
	baz=58						
P19K	Oil Pt	0.18	238		Pn	03 24 57.6	+0.7
P19K					Sn	03 25 08.5	+1.2
ILS	Iliamna Low So	0.22	342		Pn	03 24 57.7	+0.5
ILS					Sn	03 25 08.5	+0.8
ILSW	Iliamna Southw	0.26	336		Pn	03 24 57.7	+0.4
ILSW					Sn	03 25 08.1	+0.1
IVE	Iliamna Volcan	0.27	351		Pn	03 24 57.8	+0.5
IVE					Sn	03 25 08.3	+0.2
O20K	Slope Mountain	0.37	25	P	Pn	03 24 58.6	+0.8
	baz=207,SNR=120						
O20K				S	Sn	03 25 10.3	+1.4
	baz=207						
O20K	Slope Mountain	0.37	25		Pn	03 24 58.4	+0.6
O20K					Sn	03 25 10.6	+1.8
AU22	Augustine Moun	0.44	210		Pn	03 24 58.7	+0.6
AU22					Sn	03 25 10.3	+0.9
AUL	Augustine Lava	0.45	215		Pn	03 24 59.0	+0.8
AUL					Sn	03 25 10.5	+0.9
AGU	Augustine-Summ	0.47	213		Pn	03 24 59.2	+0.8
AUQ	Augustine Qik’	0.47	212		Pn	03 24 59.0	+0.6
AUW	Augustine West	0.47	216		Pn	03 24 59.1	+0.7
HOM	Homer	0.66	97	P	Pn	03 25 00.9	+1.1

	baz=277,SNR=26						
HOM				S	Sn	03 25 14.5	+2.1
	baz=277						
HOM	**Homer**	**0.66**	**97**		**Pn**	**03 25 01.0**	**+1.1**
HOM					**Sn**	**03 25 14.6**	**+2.1**
HOM	**Homer**	**0.66**	**97**	IAML		03 25 14.9	
	comp=N,15µm,0.7s						
HOM				IAML		03 25 15.6	
	comp=E,14µm,0.4s						
RED	**Redoubt Volcan**	**0.68**	**7**		**Pn**	**03 25 00.6**	**+0.5**
RED					**Sn**	**03 25 13.5**	**+0.6**
RSO	**Redoubt South**	**0.72**	**7**		**Pn**	**03 25 01.4**	**+0.7**
RDWB	**Redoubt West**	**0.74**	**3**		**Pn**	**03 25 01.3**	**+0.5**
RDWB					**Sn**	**03 25 14.6**	**+0.5**
NCT	**North Crescent**	**0.82**	**0**		**Pn**	**03 25 02.0**	**+0.6**
NCT					**Sn**	**03 25 15.6**	**+0.4**
O19K	**Port Alsworth**	**0.83**	**303**	P	**Pn**	**03 25 01.8**	**+0.4**
	baz=124,SNR=448						
O19K				S	**Sn**	**03 25 15.5**	**+0.3**
	baz=124						
O19K	**Port Alsworth**	**0.83**	**303**		**Pn**	**03 25 01.8**	**+0.4**
O19K					**Sn**	**03 25 15.6**	**+0.3**
O19K	**Port Alsworth**	**0.83**	**303**	IAML		03 25 16.1	
	comp=E,13µm,0.5s						
O19K				IAML		03 25 16.2	
	comp=N,13µm,0.5s						
DFR	**Drift River**	**0.86**	**8**		**Pn**	**03 25 02.5**	**+0.7**
DFR					**Sn**	**03 25 16.7**	**+0.7**
CNPM	**China Poot**	**0.89**	**104**		**Pn**	**03 25 02.8**	**+0.7**
CNPM					**Sn**	**03 25 17.3**	**+0.9**
CNPM	**China Poot**	**0.89**	**104**	IAML		03 25 17.7	
	comp=E,8µm,0.5s						
CNPM				IAML		03 25 17.9	
	comp=N,10µm,0.5s						
Q19K	**Cape Douglas,**	**0.90**	**204**	P	**Pn**	**03 25 02.4**	**+0.1**
	baz=22						
Q19K				S	**Sn**	**03 25 17.1**	**+0.5**
	baz=22						
Q19K	**Cape Douglas,**	**0.90**	**204**	Pn	**Pn**	**03 25 02.4**	**+0.1**
BRLK	**Bradley Lake**	**1.04**	**88**		**Pn**	**03 25 04.1**	**+0.4**
BRLK	**Bradley Lake**	**1.04**	**88**	IAML		03 25 20.4	
	comp=N,5µm,0.4s						
BRLK				IAML		03 25 20.6	
	comp=E,3µm,0.3s						
BRSE	**Bradley Lake S**	**1.11**	**89**	P	**Pn**	**03 25 04.9**	**+0.4**
	baz=270,SNR=48						
BRSE				S	**Sn**	**03 25 21.2**	**+0.5**
	baz=270						
BRSE	**Bradley Lake S**	**1.11**	**89**		**Pn**	**03 25 04.9**	**+0.4**
P18K	**Big Mountain,**	**1.22**	**254**	P	**Pn**	**03 25 05.5**	**-0.3**
	baz=72						
P18K				S	**Sn**	**03 25 22.2**	**-0.9**
	baz=72						
P18K	**Big Mountain,**	**1.22**	**254**		**Pn**	**03 25 05.5**	**-0.3**
P18K					**Sn**	**03 25 22.2**	**-0.9**
N19K	**Bonanza Creek**	**1.32**	**325**	P	**Pn**	**03 25 07.4**	**+0.4**
	baz=145						
N19K				S	**Sn**	**03 25 25.4**	**+0.2**
	baz=145						
N19K	**Bonanza Creek**	**1.32**	**325**		**Pn**	**03 25 07.4**	**+0.4**
CAPN	**Captain Cook N**	**1.35**	**40**	P	**Pn**	**03 25 09.8**	**+2.5**
	baz=222,SNR=5.3						
CAPN	**Captain Cook N**	**1.35**	**40**		**Pn**	**03 25 09.8**	**+2.5**
CAPN	**Captain Cook N**	**1.35**	**40**	IAML		03 25 39.1	
	comp=E,5µm,0.7s						
SPCR	**Spurr Chakacha**	**1.50**	**13**	P	**Pn**	**03 25 10.0**	**+0.8**
	baz=195,SNR=48						
SPCR				S	**Sn**	**03 25 29.5**	**+0.5**
	baz=195						
SPCR	**Spurr Chakacha**	**1.50**	**13**		**Pn**	**03 25 10.0**	**+0.8**
SPU	**Mount Spurr**	**1.50**	**16**		**Pn**	**03 25 10.0**	**+0.8**
SPCN	**Chakachatna No**	**1.53**	**14**		**Pn**	**03 25 10.5**	**+1.0**
SPBG	**Spurr Blockage**	**1.54**	**10**		**Pn**	**03 25 10.7**	**+1.0**
SLKM	**Skilak Lake**	**1.56**	**60**		**Pn**	**03 25 10.1**	**+0.3**
SLKM					**Sn**	**03 25 30.8**	**+0.6**
CRP	**Crater Peak**	**1.57**	**14**		**Pn**	**03 25 11.2**	**+1.0**
SPCG	**Spurr Capps Gl**	**1.61**	**16**		**Pn**	**03 25 11.6**	**+0.9**
O22K	**Cooper Landing**	**1.77**	**64**	P	**Pn**	**03 25 13.2**	**+0.8**
	baz=247,SNR=34						
O22K				S	**Sn**	**03 25 36.1**	**+1.3**
	baz=247						
O22K	**Cooper Landing**	**1.77**	**64**		**Pn**	**03 25 13.3**	**+0.8**
SEW	**Seward**	**1.79**	**77**	P	**Pn**	**03 25 12.9**	**+0.2**
	baz=260,SNR=49						
SEW				S	**Sn**	**03 25 35.6**	**+0.3**
	baz=260						
SEW	**Seward**	**1.79**	**77**		**Pn**	**03 25 13.0**	**+0.3**
STLK	**Strandline Lak**	**1.84**	**17**		**Pn**	**03 25 14.4**	**+0.9**
SVW2	**Sparrevohn**	**1.89**	**317**		**Pn**	**03 25 14.0**	**0.0**
KABU	**Katmai Buttres**	**1.92**	**220**		**Pn**	**03 25 15.1**	**+0.6**
FIS	**Fire Island**	**1.94**	**43**	Pn	**Pn**	**03 25 16.4**	**+1.7**
FIS				IAML		03 25 46.0	
	comp=N,2µm,0.6s						
FIS				IAML		03 25 48.4	
	comp=E,3µm,0.8s						
RC01	**Rabbit Creek A**	**2.08**	**48**	P	**Pn**	**03 25 17.2**	**+0.7**
	baz=231,SNR=114						
RC01				S	**Sn**	**03 25 42.4**	**+0.4**
	baz=231						
RC01	**Rabbit Creek A**	**2.08**	**48**		**Pn**	**03 25 17.1**	**+0.7**
RC01	**Rabbit Creek A**	**2.08**	**48**	IAML		03 25 44.0	
	comp=E,2µm,0.5s						
RC01				IAML		03 25 44.9	
	comp=N,2µm,0.4s						
M19K	**Big River Lodg**	**2.28**	**342**	P	**Pn**	**03 25 19.6**	**+0.5**
	baz=162						
M19K	**Big River Lodg**	**2.28**	**342**		**Pn**	**03 25 19.6**	**+0.5**
M22K	**Willow**	**2.44**	**33**	P	**Pn**	**03 25 22.3**	**+1.1**
	baz=216,SNR=20						
M22K	**Willow**	**2.44**	**33**		**Pn**	**03 25 22.4**	**+1.2**
OHAK	**Old Harbor**	**2.54**	**184**	P	**Pn**	**03 25 21.8**	**-0.7**
	baz=3.5,SNR=21						
OHAK				S	**Sn**	**03 25 50.7**	**-2.1**
	baz=3.5						
OHAK	**Old Harbor**	**2.54**	**184**		**Pn**	**03 25 21.8**	**-0.7**
OHAK	**Old Harbor**	**2.54**	**184**	IAML		03 25 52.8	
	comp=N,728nm,0.5s						
OHAK				IAML		03 25 53.0	
	comp=E,813nm,0.3s						
PWL	**Port Wells**	**2.54**	**62**	P	**Pn**	**03 25 22.5**	**-0.1**
	baz=246,SNR=56						
PWL				S	**Sn**	**03 25 52.1**	**-0.9**
	baz=246						
PWL	**Port Wells**	**2.54**	**62**		**Pn**	**03 25 22.5**	**-0.1**
PWL	**Port Wells**	**2.54**	**62**	IAML		03 25 54.0	
	comp=E,1µm,0.6s						
PWL				IAML		03 25 54.2	
	comp=N,2µm,0.4s						
L19K	**White Mountain**	**2.62**	**340**	P	**Pn**	**03 25 23.9**	**+0.3**
	baz=159,SNR=267						
L19K	**White Mountain**	**2.62**	**340**		**Pn**	**03 25 23.8**	**+0.3**
PMR	**Palmer**	**2.63**	**44**	P	**Pn**	**03 25 23.6**	**-0.1**
	baz=227,SNR=108						
PMR				S	**Sn**	**03 25 53.5**	**-1.4**
	baz=227						
PMR	**Palmer**	**2.63**	**44**		**Pn**	**03 25 23.8**	**+0.1**
PMR	**Palmer**	**2.63**	**44**	IAML		03 25 55.5	
	comp=N,519nm,0.5s						
PMR				IAML		03 26 01.3	
	comp=E,603nm,0.8s						
KNK	**Knik Glacier**	**2.77**	**51**	P	**Pn**	**03 25 25.5**	**-0.1**
	baz=235,SNR=122						
KNK				S	**Sn**	**03 25 57.1**	**-1.2**
	baz=235						
KNK	**Knik Glacier**	**2.77**	**51**		**Pn**	**03 25 25.5**	**-0.1**
L20K	**Farewell, AK**	**2.78**	**351**	P	**Pn**	**03 25 26.4**	**+0.7**
	baz=171,SNR=34						
L20K	**Farewell, AK**	**2.78**	**351**		**Pn**	**03 25 26.5**	**+0.7**
GHO	**Glory Hole Cre**	**2.83**	**42**		**Pn**	**03 25 26.4**	**0.0**
GHO				IAML		03 26 05.8	
	comp=N,858nm,0.6s						
GHO				IAML		03 26 10.4	
	comp=E,889nm,0.8s						
CUT	**Chulitna**	**2.96**	**25**	P	**Pn**	**03 25 28.9**	**+0.9**
	baz=207,SNR=25						
CUT	**Chulitna**	**2.96**	**25**		**Pn**	**03 25 29.0**	**+0.9**
CUT	**Chulitna**	**2.96**	**25**	IAML		03 26 06.9	
	comp=N,1µm,0.5s						
SML	**Sawmill**	**3.06**	**46**	P	**Pn**	**03 25 29.3**	**-0.1**
	baz=230,SNR=46						
SML				S	**Sn**	**03 26 03.7**	**-1.6**
	baz=230						
SML	**Sawmill**	**3.06**	**46**		**Pn**	**03 25 29.4**	**-0.1**
SML	**Sawmill**	**3.06**	**46**	IAML		03 26 15.7	
	comp=E,637nm,1.3s						
SML				IAML		03 26 16.0	
	comp=N,875nm,1.1s						
GLI	**Glacier Island**	**3.12**	**66**	P	**Pn**	**03 25 29.1**	**-1.1**
	baz=251						
GLI				S	**Sn**	**03 26 04.3**	**-2.3**
	baz=251						
GLI	**Glacier Island**	**3.12**	**66**		**Pn**	**03 25 29.1**	**-1.1**
GLI	**Glacier Island**	**3.12**	**66**	IAML		03 26 07.4	
	comp=E,749nm,0.4s						
GLI				IAML		03 26 08.6	
	comp=N,419nm,0.4s						
PPLA	**Purkeypile**	**3.18**	**6**	P	**Pn**	**03 25 32.4**	**+1.3**
	baz=187						
PPLA	**Purkeypile**	**3.18**	**6**		**Pn**	**03 25 31.9**	**+0.8**
SII	**Sitkinak Islan**	**3.27**	**192**	P	**Pn**	**03 25 31.3**	**-0.9**
	baz=11						
SII	**Sitkinak Islan**	**3.27**	**192**		**Pn**	**03 25 31.4**	**-0.9**
SII	**Sitkinak Islan**	**3.27**	**192**	IAML		03 26 11.6	
	comp=N,879nm,0.5s						
SII				IAML		03 26 18.8	
	comp=E,790nm,0.6s						
HIN	**Hinchinbrook I**	**3.29**	**76**		**Pn**	**03 25 32.4**	**-0.2**
HIN	**Hinchinbrook I**	**3.29**	**76**	IAML		03 26 13.1	
	comp=E,771nm,0.6s						
Q23K	**Middleton Isla**	**3.36**	**93**	P	**Pn**	**03 25 33.8**	**+0.4**
	baz=278						
Q23K	**Middleton Isla**	**3.36**	**93**		**Pn**	**03 25 33.9**	**+0.4**
Q23K	**Middleton Isla**	**3.36**	**93**	IAML		03 26 14.2	
	comp=N,761nm,0.4s						
Q23K				IAML		03 26 14.9	
	comp=E,435nm,0.5s						
MID	**Middleton Isla**	**3.37**	**93**		**Pn**	**03 25 33.9**	**+0.4**
MID					**Sn**	**03 26 11.8**	**-0.8**
MID	**Middleton Isla**	**3.37**	**93**	IAML		03 26 14.1	
	comp=E,546nm,0.3s						
MID				IAML		03 26 14.1	
	comp=N,677nm,0.4s						
FID	**Port Fidalgo**	**3.37**	**70**		**Pn**	**03 25 32.3**	**-1.3**
FID	**Port Fidalgo**	**3.37**	**70**	IAML		03 26 12.7	
	comp=E,834nm,0.3s						
FID				IAML		03 26 13.8	
	comp=N,813nm,0.3s						
JPK	**Jack Peak**	**3.41**	**65**		**Pn**	**03 25 33.4**	**-0.7**
SCM	**Sheep Creek Mo**	**3.45**	**50**	P	**Pn**	**03 25 34.7**	**-0.1**
	baz=235,SNR=29						
SCM	**Sheep Creek Mo**	**3.45**	**50**		**Pn**	**03 25 34.6**	**-0.1**
SCM	**Sheep Creek Mo**	**3.45**	**50**	IAML		03 26 16.6	
	comp=E,671nm,1.0s						
SCM				IAML		03 26 18.1	
	comp=N,767nm,0.7s						
TT01	**Tatalina**	**3.50**	**336**		**Pn**	**03 25 35.3**	**0.0**
TTA	**Tatalina**	**3.52**	**336**	P	**Pn**	**03 25 35.6**	**-0.1**
	baz=154,SNR=44						
TTA	**Tatalina**	**3.52**	**336**		**Pn**	**03 25 35.6**	**-0.1**
K20K	**Telida**	**3.66**	**352**	P	**Pn**	**03 25 38.1**	**+0.5**
	baz=171,SNR=63						
K20K	**Telida**	**3.66**	**352**		**Pn**	**03 25 38.1**	**+0.5**
WAT7	**Susitna Watana**	**3.67**	**31**		**Pn**	**03 25 38.4**	**+0.7**
EYAK	**Cordova Ski Ar**	**3.68**	**74**	P	**Pn**	**03 25 37.2**	**-0.5**
	baz=260,SNR=18						
EYAK	**Cordova Ski Ar**	**3.68**	**74**		**Pn**	**03 25 37.3**	**-0.5**
CAST	**Castle Rocks**	**3.71**	**6**	P	**Pn**	**03 25 38.8**	**+0.7**
	baz=187						
CAST	**Castle Rocks**	**3.71**	**6**		**Pn**	**03 25 39.2**	**+1.1**
WAT1	**Susitna Watana**	**3.75**	**32**	P	**Pn**	**03 25 39.1**	**+0.4**
	baz=216						
WAT1	**Susitna Watana**	**3.75**	**32**		**Pn**	**03 25 39.1**	**+0.4**
WAT6	**Susitna Watana**	**3.79**	**39**	P	**Pn**	**03 25 39.4**	**0.0**
	baz=224,SNR=41						
WAT6	**Susitna Watana**	**3.79**	**39**		**Pn**	**03 25 39.5**	**0.0**
DIV	**Divide**	**3.81**	**66**		**Pn**	**03 25 39.1**	**-0.4**
KLU	**Klutina**	**3.87**	**60**	P	**Pn**	**03 25 40.2**	**-0.2**
	baz=246,SNR=133						
KLU	**Klutina**	**3.87**	**60**		**Pn**	**03 25 40.1**	**-0.2**
KLU	**Klutina**	**3.87**	**60**	IAML		03 26 25.4	
	comp=E,309nm,0.4s						
TRF	**Thorofare Moun**	**3.92**	**18**	P	**Pn**	**03 25 42.0**	**+0.8**
	baz=200,SNR=21						
TRF	**Thorofare Moun**	**3.92**	**18**		**Pn**	**03 25 42.0**	**+0.8**
TRF	**Thorofare Moun**	**3.92**	**18**	IAML		03 26 30.2	
	comp=N,357nm,0.5s						
TRF				IAML		03 26 49.4	
	comp=E,218nm,0.9s						
KTH	**Kantishna Hill**	**3.94**	**13**		**Pn**	**03 25 41.6**	**+0.4**
KTH	**Kantishna Hill**	**3.94**	**13**	IAML		03 26 44.7	
	comp=E,169nm,1.0s						
M24K	**Tolsona, Glenn**	**4.06**	**51**	P	**Pn**	**03 25 43.3**	**+0.4**
	baz=237,SNR=48						
M24K	**Tolsona, Glenn**	**4.06**	**51**		**Pn**	**03 25 43.2**	**+0.3**
M24K	**Tolsona, Glenn**	**4.06**	**51**	IAML		03 26 31.6	
	comp=N,442nm,1.0s						
RND	**Reindeer**	**4.16**	**26**		**Pn**	**03 25 44.9**	**+0.6**
RND	**Reindeer**	**4.16**	**26**	IAML		03 26 33.0	
	comp=N,144nm,0.7s						
CHUM	**Lake Minchumin**	**4.16**	**4**	P	**Pn**	**03 25 45.3**	**+1.1**
	baz=185,SNR=38						
CHUM	**Lake Minchumin**	**4.16**	**4**		**Pn**	**03 25 45.0**	**+0.9**
RAGM	**Ragged Mountai**	**4.19**	**78**		**Pn**	**03 25 44.0**	**-0.7**
CHIR	**Chirikof Islan**	**4.19**	**201**	Pn	**Pn**	**03 25 43.8**	**-0.9**
DHY	**Denali Highway**	**4.27**	**36**	P	**Pn**	**03 25 46.0**	**+0.1**
	baz=221						
DHY	**Denali Highway**	**4.27**	**36**		**Pn**	**03 25 46.2**	**+0.3**
DHY	**Denali Highway**	**4.27**	**36**	IAML		03 26 36.5	
	comp=N,265nm,0.6s						
DHY				IAML		03 26 36.9	
	comp=E,390nm,0.5s						
KAIM	**Kayak Island**	**4.30**	**84**	P	**Pn**	**03 25 46.5**	**+0.4**
	baz=271,SNR=6.6						
KAIM	**Kayak Island**	**4.30**	**84**		**Pn**	**03 25 46.6**	**+0.4**
BMRM	**Bremner River**	**4.31**	**70**	P	**Pn**	**03 25 45.6**	**-0.8**
	baz=257,SNR=39						
BMRM	**Bremner River**	**4.31**	**70**		**Pn**	**03 25 45.6**	**-0.8**
BMRM	**Bremner River**	**4.31**	**70**	IAML		03 26 37.1	
	comp=N,297nm,0.4s						
BMRM				IAML		03 26 38.1	
	comp=E,231nm,0.5s						
PS11	**TAPS Pump St11**	**4.33**	**54**		**Pn**	**03 25 46.8**	**+0.4**
HMT	**Hamilton**	**4.39**	**79**		**Pn**	**03 25 47.9**	**+0.6**
MCK	**McKinley**	**4.43**	**24**	P	**Pn**	**03 25 48.0**	**+0.2**
	baz=207,SNR=15						
MCK	**McKinley**	**4.43**	**24**		**Pn**	**03 25 48.8**	**+0.9**
MCK	**McKinley**	**4.43**	**24**	IAML		03 26 46.4	
	comp=E,119nm,0.4s						
MCK				IAML		03 27 00.9	
	comp=N,125nm,1.1s						
BPAW	**Bear Paw Mtn.**	**4.46**	**11**	P	**Pn**	**03 25 48.2**	**-0.2**
	baz=193,SNR=24						
BPAW	**Bear Paw Mtn.**	**4.46**	**11**		**Pn**	**03 25 48.1**	**-0.3**
BPAW	**Bear Paw Mtn.**	**4.46**	**11**	IAML		03 26 38.5	
	comp=N,108nm,0.8s						
J20K	**Nowinta River**	**4.48**	**353**	P	**Pn**	**03 25 49.1**	**+0.5**
	baz=172,SNR=115						
J20K	**Nowinta River**	**4.48**	**353**		**Pn**	**03 25 49.1**	**+0.5**
N25K	**Chitina, Valde**	**4.50**	**62**	P	**Pn**	**03 25 48.7**	**-0.2**
	baz=249,SNR=123						
N25K	**Chitina, Valde**	**4.50**	**62**		**Pn**	**03 25 48.7**	**-0.2**
N25K	**Chitina, Valde**	**4.50**	**62**	IAML		03 26 42.6	
	comp=E,226nm,0.6s						
N25K				IAML		03 26 42.8	
	comp=N,257nm,0.7s						
CHGN	**Chignik**	**4.52**	**223**	P	**Pn**	**03 25 49.0**	**-0.1**
	baz=38						
CHGN	**Chignik**	**4.52**	**223**		**Pn**	**03 25 49.0**	**-0.1**
CHGN				IAML		03 26 40.0	
	comp=N,210nm,0.7s						
CHGN				IAML		03 26 42.3	
	comp=E,242nm,0.3s						
NICHA	**Nichawak Mount**	**4.53**	**80**		**Pn**	**03 25 49.1**	**-0.1**
HARP	**HAARP**	**4.62**	**52**	P	**Pn**	**03 25 50.5**	**+0.2**
	baz=238,SNR=25						
HARP	**HAARP**	**4.62**	**52**		**Pn**	**03 25 50.6**	**+0.2**
SUCK	**Suckling Hills**	**4.62**	**82**		**Pn**	**03 25 51.2**	**+0.7**
SUCK	**Suckling Hills**	**4.62**	**82**	IAML		03 26 45.3	
	comp=N,295nm,0.7s						
SUCK				IAML		03 26 49.4	
	comp=E,310nm,0.4s						
BERG	**Berg Lake**	**4.67**	**78**		**Pn**	**03 25 51.5**	**+0.4**
GLB	**Gilahina Butte**	**4.81**	**65**		**Pn**	**03 25 52.6**	**-0.4**
GLB	**Gilahina Butte**	**4.81**	**65**	IAML		03 26 49.3	
	comp=E,187nm,0.7s						
PAX	**Paxson**	**4.83**	**45**	P	**Pn**	**03 25 53.5**	**+0.2**
	baz=231,SNR=44						
PAX	**Paxson**	**4.83**	**45**		**Pn**	**03 25 53.5**	**+0.2**
GRIN	**Grindle Hills**	**4.85**	**80**		**Pn**	**03 25 53.9**	**+0.3**
BGLC	**Bering Glacier**	**4.87**	**81**	P	**Pn**	**03 25 54.8**	**+1.1**
	baz=270						
VNSG	**Veniaminof 6**	**4.89**	**225**		**Pn**	**03 25 54.5**	**+0.3**
KHIT	**Khitrov Hills**	**4.90**	**78**		**Pn**	**03 25 53.7**	**-0.6**
VRDI	**Verde Repeater**	**4.92**	**68**		**Pn**	**03 25 54.0**	**-0.6**
VRDI	**Verde Repeater**	**4.92**	**68**	IAML		03 26 53.8	
	comp=N,157nm,0.5s						
CRQM	**Cirque**	**4.98**	**74**		**Pn**	**03 25 55.4**	**-0.2**
CRQE	**Cirque**	**5.00**	**74**	P	**Pn**	**03 25 55.5**	**-0.3**
	baz=263,SNR=38						
SNH	**Sunshine Point**	**5.09**	**81**		**Pn**	**03 25 57.1**	**+0.2**
WAX	**Waxell Ridge**	**5.09**	**78**		**Pn**	**03 25 56.2**	**-0.7**
TGL	**Tana Glacier**	**5.13**	**74**		**Pn**	**03 25 57.4**	**-0.1**
TGL	**Tana Glacier**	**5.13**	**74**	IAML		03 26 58.3	
	comp=N,202nm,0.6s						
MCARA	**McCarthy VSAT**	**5.16**	**67**	P	**Pn**	**03 25 58.0**	**+0.3**
	baz=256,SNR=34						
MCARA	**McCarthy VSAT**	**5.16**	**67**		**Pn**	**03 25 57.3**	**-0.4**
MCARA	**McCarthy VSAT**	**5.16**	**67**	IAML		03 27 00.6	
	comp=E,188nm,0.4s						
NEA2	**Nenana**	**5.19**	**19**	P	**Pn**	**03 25 58.2**	**+0.1**
	baz=202,SNR=21						
NEA2	**Nenana**	**5.19**	**19**		**Pn**	**03 25 58.1**	**0.0**
WRH	**Wood River Hil**	**5.26**	**24**		**Pn**	**03 25 59.1**	**+0.1**
GCSA	**Galena City Sc**	**5.34**	**342**	P	**Pn**	**03 26 00.2**	**+0.1**
	baz=158,SNR=16						
GCSA	**Galena City Sc**	**5.34**	**342**		**Pn**	**03 26 00.3**	**+0.1**
ISLE	**Juniper Island**	**5.36**	**76**		**Pn**	**03 26 00.3**	**-0.2**
PTPK	**Patty Peak**	**5.38**	**70**		**Pn**	**03 26 01.5**	**+0.6**
KIAG	**Kiagna River**	**5.38**	**73**		**Pn**	**03 26 01.0**	**+0.1**
MLY	**Manley**	**5.40**	**10**	P	**Pn**	**03 26 01.1**	**+0.1**
	baz=192,SNR=25						
MLY	**Manley**	**5.40**	**10**		**Pn**	**03 26 00.9**	**-0.1**
BALM	**Baldy**	**5.41**	**72**		**Pn**	**03 26 01.0**	**-0.2**
HDA	**Harding Lake**	**5.46**	**28**	P	**Pn**	**03 26 01.8**	**+0.1**
	baz=214,SNR=16						
HDA	**Harding Lake**	**5.46**	**28**		**Pn**	**03 26 01.4**	**-0.4**
MENT	**Mentasta**	**5.47**	**50**		**Pn**	**03 26 01.9**	**0.0**
CCB	**Clear Creek Bu**	**5.47**	**24**		**Pn**	**03 26 02.1**	**+0.2**
I21K	**Tanana**	**5.47**	**4**	P	**Pn**	**03 26 02.4**	**+0.4**
	baz=185,SNR=15						
I21K	**Tanana**	**5.47**	**4**		**Pn**	**03 26 02.4**	**+0.4**
BAGL	**Bagley Icefiel**	**5.47**	**78**		**Pn**	**03 26 02.2**	**+0.3**
M26K	**Nabesna, AK**	**5.51**	**57**	P	**Pn**	**03 26 02.8**	**+0.2**
	baz=246,SNR=259						
M26K	**Nabesna, AK**	**5.51**	**57**		**Pn**	**03 26 02.7**	**+0.2**
MESA	**MESA**	**5.54**	**81**	P	**Pn**	**03 26 03.8**	**+0.8**
	baz=270,SNR=39						
MESA	**MESA**	**5.54**	**81**		**Pn**	**03 26 03.6**	**+0.6**
RIDG	**Independent Ri**	**5.55**	**40**	P	**Pn**	**03 26 03.4**	**+0.3**
	baz=228,SNR=16						
RIDG	**Independent Ri**	**5.55**	**40**		**Pn**	**03 26 03.6**	**+0.6**
YAH	**Yahtse**	**5.64**	**79**		**Pn**	**03 26 05.0**	**+0.6**
L26K	**Log Cabin Wild**	**5.66**	**50**		**Pn**	**03 26 05.6**	**+1.1**
TCOL	**CIGO, UAF Yank**	**5.66**	**22**	P	**Pn**	**03 26 04.4**	**-0.1**
	baz=207,SNR=14						
TCOL	**CIGO, UAF Yank**	**5.66**	**22**		**Pn**	**03 26 04.1**	**-0.4**
COLA	**College**	**5.66**	**23**	P	**Pn**	**03 26 04.7**	**+0.2**
	baz=207						
COLA	**College**	**5.66**	**23**		**Pn**	**03 26 04.5**	**0.0**
I23K	**Minto, Yukon-K**	**5.67**	**15**	P	**Pn**	**03 26 05.0**	**+0.5**
	baz=199,SNR=23						
I23K	**Minto, Yukon-K**	**5.67**	**15**		**Pn**	**03 26 04.9**	**+0.3**
MDM	**Murphy Dome**	**5.67**	**21**		**Pn**	**03 26 04.8**	**+0.1**
BARN	**Barnard Glacie**	**5.74**	**72**		**Pn**	**03 26 05.9**	**+0.1**
DOT	**Dot Lake**	**5.75**	**43**		**Pn**	**03 26 06.2**	**+0.4**
IL31		**5.78**	**27**		**Pn**	**03 26 05.7**	**-0.4**
ILAR	**Eielson Array**	**5.78**	**27**	P	**Pn**	**03 26 05.7**	**-0.4**
	comp=E,5.5nm,0.3s,baz=215,slow=14,SNR=179						
ILAR				S	**Sn**	**03 27 07.8**	**-3.0**
	comp=E,8.2nm,0.3s,baz=208,slow=22,SNR=5.2						
ILAR	**Eielson Array**	**5.78**	**27**	Pn	**Pn**	**03 26 05.8**	**-0.3**
RKAV	**Rock Avalanche**	**5.84**	**80**		**Pn**	**03 26 07.6**	**+0.5**
CTG	**Chitna Glacier**	**5.88**	**73**	P	**Pn**	**03 26 08.6**	**+0.9**
	baz=263,SNR=64						
CTGM	**Chitina Glacie**	**5.88**	**73**		**Pn**	**03 26 08.2**	**+0.5**
H21K	**Melozitna Rive**	**5.93**	**1**	P	**Pn**	**03 26 08.7**	**+0.5**
	baz=181						
H21K	**Melozitna Rive**	**5.93**	**1**		**Pn**	**03 26 08.9**	**+0.7**
TABL	**Table Mountain**	**5.94**	**78**		**Pn**	**03 26 08.8**	**+0.3**
CHX	**Chaix Hills**	**5.95**	**82**		**Pn**	**03 26 09.7**	**+1.1**
POKR	**Poker Plat Res**	**5.96**	**23**	P	**Pn**	**03 26 08.6**	**0.0**
	baz=208,SNR=11						
POKR	**Poker Plat Res**	**5.96**	**23**		**Pn**	**03 26 09.1**	**+0.5**
M27K	**Edge Creek, AK**	**5.97**	**59**	P	**Pn**	**03 26 09.6**	**+0.7**
	baz=249,SNR=82						
M27K	**Edge Creek, AK**	**5.97**	**59**		**Pn**	**03 26 09.6**	**+0.7**
SCRK	**Sand Creek**	**5.99**	**41**	P	**Pn**	**03 26 08.4**	**-0.7**
	baz=229,SNR=13						
SCRK	**Sand Creek**	**5.99**	**41**		**Pn**	**03 26 08.5**	**-0.7**
SDPT	**Sand Point**	**5.99**	**226**	P	**Pn**	**03 26 08.0**	**-1.0**
	baz=39						
J25K	**Salcha River,**	**6.03**	**33**	P	**Pn**	**03 26 09.4**	**-0.2**
	baz=220,SNR=32						
J25K	**Salcha River,**	**6.03**	**33**		**Pn**	**03 26 09.6**	**0.0**
LOGN	**Logan Glacier**	**6.03**	**75**		**Pn**	**03 26 10.6**	**+0.9**
YUK2	**White River**	**6.27**	**66**		**Pn**	**03 26 13.1**	**+0.2**
IM03		**6.27**	**357**		**Pn**	**03 26 13.3**	**+0.5**
IMAR	**Indian Mountai**	**6.27**	**357**	Pn	**Pn**	**03 26 13.7**	**+0.9**
L27K	**Beaver Creek,**	**6.28**	**53**	P	**Pn**	**03 26 13.0**	**0.0**
	baz=243,SNR=47						
L27K	**Beaver Creek,**	**6.28**	**53**		**Pn**	**03 26 12.1**	**-0.9**
BC03		**6.30**	**53**		**Pn**	**03 26 13.3**	**+0.1**
BCAR	**Beaver Creek A**	**6.30**	**53**	Pn	**Pn**	**03 26 13.3**	**+0.1**
PS06	**TAPS Pump Stn6**	**6.30**	**12**		**Pn**	**03 26 13.1**	**-0.1**
PCA	**Pinnacle**	**6.38**	**81**		**Pn**	**03 26 15.1**	**+0.6**
PINM	**Pinnacle**	**6.39**	**81**	P	**Pn**	**03 26 14.9**	**+0.4**
	baz=272,SNR=21						
BVCY	**Beaver Creek**	**6.44**	**60**	P	**Pn**	**03 26 16.0**	**+1.0**
	baz=251,SNR=30						
BVCY	**Beaver Creek**	**6.44**	**60**		**Pn**	**03 26 16.0**	**+1.0**
YUK3	**Moose Creek**	**6.44**	**66**	P	**Pn**	**03 26 15.7**	**+0.4**
	baz=257,SNR=63						
YUK3	**Moose Creek**	**6.44**	**66**		**Pn**	**03 26 15.7**	**+0.4**
J26L	**Joseph Creek**	**6.48**	**39**	P	**Pn**	**03 26 15.5**	**-0.2**
	baz=227,SNR=29						
H24K	**Noodor Dome**	**6.53**	**19**	P	**Pn**	**03 26 16.3**	**-0.1**
	baz=203,SNR=12						
H24K	**Noodor Dome**	**6.53**	**19**		**Pn**	**03 26 16.2**	**-0.1**
YUK8	**Steele Glacier**	**6.68**	**71**		**Pn**	**03 26 17.5**	**-1.2**
BCPM	**Bancas Point**	**6.70**	**83**		**Pn**	**03 26 19.3**	**+0.6**
PRP	**Porcupine Dome**	**6.72**	**27**	P	**Pn**	**03 26 19.4**	**+0.4**
	baz=214,SNR=28						
PRP	**Porcupine Dome**	**6.72**	**27**		**Pn**	**03 26 19.6**	**+0.6**
PNL	**Peninsula**	**6.85**	**85**	P	**Pn**	**03 26 21.0**	**+0.3**
	baz=276,SNR=50						
PNL	**Peninsula**	**6.85**	**85**		**Pn**	**03 26 21.0**	**+0.3**
YUK4	**Talbot Arm**	**7.22**	**71**	P	**Pn**	**03 26 27.4**	**+1.5**
	baz=263,SNR=32						
YUK6	**Outpost Mounta**	**7.33**	**74**	P	**Pn**	**03 26 28.1**	**+0.7**
	baz=267,SNR=20						
YUK6	**Outpost Mounta**	**7.33**	**74**		**Pn**	**03 26 28.1**	**+0.7**
YUK7	**Dusty Glacier**	**7.43**	**78**		**Pn**	**03 26 29.4**	**+0.7**
YUK5	**Granite Creek**	**7.58**	**73**		**Pn**	**03 26 31.6**	**+0.8**
COLD	**Coldfoot**	**7.61**	**8**	P	**Pn**	**03 26 30.8**	**-0.1**
	baz=191,SNR=11						
COLD	**Coldfoot**	**7.61**	**8**		**Pn**	**03 26 31.4**	**+0.5**
FYU	**Fort Yukon**	**7.67**	**24**	Pn	**Pn**	**03 26 31.8**	**0.0**
DAWY	**Dawson**	**7.71**	**50**	P	**Pn**	**03 26 32.6**	**+0.1**
	baz=242,SNR=15						
DAWY	**Dawson**	**7.71**	**50**		**Pn**	**03 26 32.7**	**+0.3**
HYT	**Haines Junctio**	**7.74**	**75**	P	**Pn**	**03 26 33.4**	**+0.5**
	baz=269,SNR=17						
HYT	**Haines Junctio**	**7.74**	**75**		**Pn**	**03 26 33.9**	**+1.0**
M30M	**Minto, Yukon**	**8.30**	**63**	P	**Pn**	**03 26 40.9**	**+0.5**
	baz=257,SNR=38						
M30M	**Minto, Yukon**	**8.30**	**63**		**Pn**	**03 26 40.2**	**-0.2**
J29M	**Klondike Camp**	**8.35**	**49**	P	**Pn**	**03 26 41.5**	**+0.4**
	baz=242						
BM03	**Burnt Mountain**	**8.54**	**22**		**Pn**	**03 26 42.4**	**-1.2**
BMAR	**Burnt Mountain**	**8.55**	**22**		**Pn**	**03 26 42.8**	**-1.0**
BM01	**Burnt Mountain**	**8.58**	**22**		**Pn**	**03 26 42.9**	**-1.3**
N31M	**Braeburn, Yuko**	**8.61**	**71**	P	**Pn**	**03 26 45.0**	**+0.3**
	baz=266,SNR=21						
SKAG	**Skagway**	**8.93**	**84**	P	**Pn**	**03 26 49.3**	**+0.4**
	baz=279,SNR=27						
SKAG	**Skagway**	**8.93**	**84**		**Pn**	**03 26 49.5**	**+0.5**
WHY	**Whitehorse**	**9.03**	**76**	P	**Pn**	**03 26 50.5**	**+0.1**
	baz=272,SNR=37						
WHY	**Whitehorse**	**9.03**	**76**		**Pn**	**03 26 50.8**	**+0.3**
TOLK	**Toolik Lake Re**	**9.05**	**8**	P	**Pn**	**03 26 51.4**	**+0.9**
	baz=191						
TOLK	**Toolik Lake Re**	**9.05**	**8**	Pn	**Pn**	**03 26 51.9**	**+1.4**
M31M	**Drury Creek, Y**	**9.34**	**67**	P	**Pn**	**03 26 54.8**	**+0.3**
	baz=263,SNR=32						
BESE	**Bessie Mountai**	**9.36**	**89**		**Pn**	**03 26 56.3**	**+1.5**
UNV	**Unalaska Valle**	**9.50**	**237**	P	**Pn**	**03 26 56.0**	**-0.7**

	baz=46						
SIT	Sitka	9.62	99	Pn	Pn	03 26 57.7	-0.6
JIS	Juneau Island	9.68	91		Pn	03 27 00.6	+1.5
FARO	Faro, Yukon	9.82	67	P	Pn	03 27 01.7	+0.5
	baz=264,SNR=25						
P33M	Teslin, Yukon	10.09	79	P	Pn	03 27 05.1	+0.3
	baz=276,SNR=14						
MMPY	Sheldon Lake,	10.83	65	P	Pn	03 27 15.5	+0.7
	baz=264,SNR=22						
CRAG	Craig	11.44	103	P	Pn	03 27 23.3	+0.3
	baz=300						
DLBC	Dease Lake	11.84	86	P	Pn	03 27 30.6	+2.3
	comp=E,5.4nm,0.3s,baz=313,slow=5.8,SNR=64						
DLBC				S	Sn	03 29 37.3	-1.1
	comp=E,1.0nm,0.3s,baz=270,slow=20,SNR=9.6						
DLBC	Dease Lake	11.84	86	Pn	Pn	03 27 30.1	+1.7
INK	Inuvik	12.02	36	P	Pn	03 27 31.2	+0.6
	comp=E,0.3nm,0.3s,baz=265,slow=13,SNR=2.1						
INK				S	Sn	03 29 38.1	-4.4
	baz=199,slow=20,SNR=1.3						
INK	Inuvik	12.02	36		Pn	03 27 32.0	+1.4
TGTN	Hyland Airport	12.21	71	P	Pn	03 27 33.9	+0.6
	baz=272						
BBB	Bella Bella	15.75	108	S	Sn	03 31 12.2	-0.7
	comp=E,0.3nm,0.3s,baz=292,slow=19,SNR=1.5						
A36M	Sachs Harbour	16.46	31	P	Pn	03 28 27.6	0.0
	baz=236,SNR=17						
A36M	Sachs Harbour	16.46	31		Pn	03 28 28.0	+0.4
A36M				IAmb	IAmb	03 28 32.2	
	comp=Z,13nm,0.7s						
YKA	Yellowknife Ar	18.53	65	P	Pn	03 28 52.6	-0.1
	comp=Z,0.3nm,0.3s,baz=278,slow=10,SNR=11						
YKA				pP	pP	03 29 11.8	+2.1
	comp=Z,0.3nm,0.3s,baz=278,slow=9.8,SNR=7.9						
YKA	Yellowknife Ar	18.53	65	P	P	03 28 51.5	+0.2
NEW	Newport	23.66	103	P	P	03 29 47.7	+2.4
	comp=Z,1.7nm,0.9s,baz=354,slow=5.0,SNR=3.6						
RES	Resolute Bay	25.50	32	P	P	03 30 01.5	-0.1
	comp=Z,0.9nm,0.8s,baz=254,slow=19,SNR=1.9						
RES	Resolute Bay	25.50	32	P	P	03 30 02.0	+0.4
RES				IAmb	IAmb	03 30 12.9	
	comp=Z,3.2nm,1.3s						
YBH	Yreka Blue Hor	25.93	121	P	P	03 30 09.4	+3.4
	comp=Z,0.4nm,0.3s,baz=297,slow=2.3,SNR=5.7						
YBH	Yreka Blue Hor	25.93	121	P	P	03 30 06.5	+0.5
YBH				IAmb	IAmb	03 30 10.5	
	comp=Z,1.7nm,0.8s						
O03E	Paynes Creek	27.50	121	P	P	03 30 21.5	+1.5
	baz=326						
PETK	Petropavlovsk-	27.53	278	P	P	03 30 18.9	-1.2
	comp=Z,1.7nm,0.4s,baz=63,slow=12,SNR=2.3						
NVAR	Mina Array Bea	30.57	119	P	P	03 30 50.4	+3.0
	comp=Z,2.1nm,0.7s,baz=308,slow=8.9,SNR=16						
NVAR				PcP	PcP	03 33 44.3	+0.7
	comp=Z,0.2nm,0.6s,baz=304,slow=2.1,SNR=2.6						
NVAR	Mina Array Bea	30.57	119	P	P	03 30 47.9	+0.5
PDAR	Pinedale Array	31.30	103	P	P	03 30 56.5	+2.7
	comp=Z,0.2nm,0.4s,baz=354,slow=1.5,SNR=2.6						
PDAR	Pinedale Array	31.30	103	P	P	03 30 54.4	+0.6
TXAR	Lajitas Array	44.86	110	P	P	03 32 49.5	+2.1
	comp=Z,0.4nm,0.7s,baz=325,slow=5.9,SNR=5.4						
TXAR				pP	sP	03 33 15.5	-6.0
	comp=Z,0.3nm,0.8s,baz=329,slow=4.7,SNR=3.4						
TXAR	Lajitas Array	44.86	110	P	P	03 32 48.2	+0.8
USRK	Ussuriysk Ar.	46.14	285	P	P	03 32 55.7	-1.5
	comp=Z,1.1nm,0.5s,baz=48,slow=11,SNR=2.3						
KSRS	Korea Array	53.27	283	P	P	03 33 51.6	+0.4
	comp=Z,4.1nm,0.5s,baz=38,slow=7.2,SNR=12						
SONM	Songino Array	54.97	306	P	P	03 34 04.1	+0.4
	comp=Z,3.5nm,0.6s,baz=42,slow=6.5,SNR=23						
ZALV	Zalesovo Beam	57.60	324	P	P	03 34 21.7	-0.4
	comp=Z,3.6nm,0.5s,baz=35,slow=7.0,SNR=16						
ZALV	Zalesovo Beam	57.60	324	P	P	03 34 21.9	-0.2
MKAR	Makanchi Array	64.65	321	P	P	03 35 08.9	-0.9
	comp=Z,0.6nm,0.4s,baz=38,slow=7.0,SNR=7.9						
BOSA	Boshof	148.85	3	PKPbc	PKPbc	03 44 17.7	-1.1
	comp=Z,1.3nm,0.5s,baz=3.8,slow=5.3,SNR=6.1						
BOSA	Boshof	148.85	3	PKPdf	PKPdf	03 44 15.5	+0.7

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*JMA **24** 03:32:53.4±0.2,24°.50N×122°.50E,h27^{km},M2.2*
*TAP **24** 03:32:54.0,24°.51N×122°.47E,h22^{km},ML2.7,D*
ISC 24 03:32:53.6±1.0,**24°.50N**±0°.03×**122°.49E**±0°.02,**h24**^{km}±12^{km},
n36,σ**0^{s}.55**/65,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.42	97	P	Pb	03 33 01.9	-0.4
JYNG				S	Sb	03 33 08.7	+0.4
YOJ	Yonaguni jima	0.47	94	P	Pb	03 33 03.0	-0.4
	baz=89						
YOJ				S	Sb	03 33 11.3	+1.4
	baz=89						
YOJ	Yonaguni jima	0.47	94	P	Pb	03 33 02.9	-0.4
YOJ				*e*S	Sb	03 33 10.7	+0.8
TWC	Suao	0.59	281	*i* P	Pb	03 33 04.4	-1.0
	baz=280						
TWC				*i* S	Sb	03 33 12.8	-0.6
	baz=280						
EWUT	Wuta	0.65	265	*i* P	Pb	03 33 05.5	-0.8
	baz=264						
TWB1	Santiao Chiao	0.68	318	P	Pb	03 33 06.7	-0.1
	baz=329						
TWB1				S	Sb	03 33 16.0	+0.1
	baz=329						
ENA	Nanau	0.69	264	*i* P	Pb	03 33 06.9	-0.1
	baz=269						
ENA				*i* S	Sb	03 33 16.2	+0.2
	baz=269						
NTC	Toucheng	0.70	301	*e*S	Sn	03 33 17.7	-0.3
	baz=301						
NDS	Dongshan	0.72	281	*i* P	Pb	03 33 07.3	-0.2
	baz=274						
NDS				S	Sb	03 33 17.3	+0.4
	baz=274						
TIPB	Shuangxi	0.77	308	*i* P	Pb	03 33 08.3	0.0
	baz=308						
TIPB				*i* S	Sb	03 33 18.4	+0.1
	baz=308						
TWE	Neicheng	0.78	287	*e*P	Pb	03 33 08.3	-0.2
	baz=286						
TWE				S	Sb	03 33 19.1	+0.3
	baz=286						
ENTT	Nioudou	0.85	280	*i* P	Pb	03 33 09.4	-0.4
	baz=279						
ENTT				S	Sb	03 33 21.1	+0.3
	baz=279						
NWF	Wu-fen Shan	0.86	312	*i* P	Pn	03 33 10.1	-0.2
	baz=312						
NWF				*i* S	Sn	03 33 21.9	-0.3
	baz=312						
NACB	Ninganchiao	0.88	249	P	Pb	03 33 09.8	-0.4
	baz=252						
NACB				S	Sn	03 33 23.7	+1.1
	baz=252						
NDT	Datong Townshi	0.90	277	*i* P	Pn	03 33 10.8	0.0
	baz=276						
NDT				S	Sn	03 33 23.0	0.0
	baz=276						
TWD	Chiawan	0.92	243	*e*P	Pn	03 33 11.5	+0.5
	baz=242						
NWLT	Wulai	0.94	287	*i* P	Pn	03 33 11.6	+0.2
	baz=287						
NWLT				*i* S	Sb	03 33 23.2	-0.1
	baz=287						
TWA	Mucha	0.95	300	P	Pb	03 33 11.5	0.0
	baz=300						
ETLH	Xiulin Townshi	0.97	253	P	Pn	03 33 11.7	-0.1
	baz=252						
ETLH				S	Sn	03 33 25.2	+0.4
	baz=252						
NNS	Nan Shan	1.02	267	P	Pn	03 33 11.7	-0.9
	baz=266						
NNS				S	Sb	03 33 25.6	-0.1
	baz=266						
YHNB	Yeheng	1.03	280	P	Pb	03 33 12.8	-0.1
	baz=292						
YHNB				S	Sn	03 33 26.3	-0.1
	baz=292						
NSK	Sanguang	1.05	280	*i* P	Pb	03 33 13.6	+0.5
	baz=291						
NSK				*i* S	Sb	03 33 26.3	-0.1
	baz=291						
YM01	YM01	1.06	308	P	Pb	03 33 13.1	-0.1
	baz=308						
YM01				S	Sn	03 33 27.2	+0.2
	baz=308						
IRIF	Iriomote-Funau	1.14	98	P	Pn	03 33 13.6	-0.5
IRIF				S	Sn	03 33 28.9	-0.1
WHF	Hehuan Shan	1.17	253	*i* P	Pb	03 33 15.3	-0.2
	baz=252						
WHF				*e*S	Sb	03 33 31.5	+1.1
	baz=252						
CHGB	Renai	1.28	250	P	Pb	03 33 17.6	+0.5
	baz=235						
CHGB				S	Sb	03 33 33.7	+0.4
	baz=235						
LIOB	Emei	1.35	276	*e*P	Pb	03 33 19.0	+0.7
	baz=292						
HGSD	Ruisui	1.40	224	P	Pn	03 33 17.4	-0.3
	baz=211						
HGSD				*e*S	Sn	03 33 35.4	0.0
	baz=211						
JKRS	Kuro-shima	1.41	100	P	Pn	03 33 18.0	+0.2
JKRS				*e*S	Sn	03 33 35.3	-0.3
WHP	Taichung City	1.43	261	P	Pb	03 33 20.7	+1.2
	baz=248						
EHY	Hungye	1.46	227	*e*P	Pn	03 33 18.7	+0.3
	baz=215						
EHY				*e*S	Sb	03 33 38.7	+0.6
	baz=215						
JIJ	Ishigaki jima	1.51	95	P	Pn	03 33 18.9	-0.3
JIJ				*e*S	Sn	03 33 37.2	-0.9
SSLB	Suanglung	1.57	244	P	Pb	03 33 21.1	-0.9
	baz=244						
SSLB				S	Sb	03 33 40.6	-0.9
	baz=244						
JISG	Ishigakijimahi	1.66	87	P	Pn	03 33 21.9	+0.7
FULB	Fuli	1.70	221	P	Pb	03 33 23.1	-1.1
	baz=208						
FULB				S	Sn	03 33 43.6	+0.8
	baz=208						
CHN5	Tsauling	1.89	242	P	Pb	03 33 27.1	-0.3
	baz=228						
CHN5				S	Sb	03 33 50.5	0.0
	baz=228						

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*SOF **24** 03:35:34.8,41°.71N×24°.18E,h20^{km},MD2.4*
*ATH **24** 03:35:36.6,41°.66N×24°.20E,h11^{km}±1^{km},ML2.4/11,Error ellipse: s-maj=2.7km s-min=1.0km az=183.0*
*ISK **24** 03:35:36.0,41°.72N×24°.10E,h6^{km},ML2.7/17*
*THE **24** 03:35:36.0,41°.69N×24°.20E,h2^{km}±31^{km},ML2.3/7,Error ellipse: s-maj=31.1km s-min=0.8km az=228.0*
*SKO **24** 03:35:37.6,41°.73N×24°.12E,h1^{km}*
*DDA **24** 03:35:38.4,41°.49N×24°.09E,h8^{km}±3^{km},ML2.5*
*BEO **24** 03:35:40.9±0.9,41°.73N×23°.99E,h0^{km},ML2.4/5*
ISC 24 03:35:35.5±1.0,**41°.71N**±0°.01×**24°.17E**±0°.01,**h7**^{km}±9^{km},
n86,σ**1^{s}.16**/124,**7C-8D,Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMB	Musomiste	0.35	249	*i* Pg	Pg	03 35 43.0	+0.6
RZN	Rozhen	0.41	93	*i* Pg	Pg	03 35 44.1	+0.5
NVR	Nevrokopi	0.43	212	P	Pg	03 35 44.1	+0.2
NVR				S	Sg	03 35 50.1	+0.6
	312nm,0.2s						
NVR	Nevrokopi	0.43	212	P	Pg	03 35 44.1	+0.2
NVR				S	Sg	03 35 50.1	+0.6
NVR				AML	AML	03 35 50.2	
	comp=E,642µm,0.3s						
NVR				AML	AML	03 35 50.4	
	comp=N,602µm,0.3s						
PLD	Plovdiv	0.56	46	PG	Pb	03 35 47.8	+0.2
PLD	Plovdiv	0.56	46	*i* Pg	Pb	03 35 47.4	-0.2
PLD	Plovdiv	0.56	46	*i* Pg	Pb	03 35 47.8	+0.2
PLD				*i* Sg	Sb	03 35 56.1	+0.2
SRS	Serrai	0.74	216	P	Pg	03 35 49.8	+0.2
SRS	Serrai	0.74	216	P	Pg	03 35 49.9	+0.2
SRS				S	Sb	03 36 00.1	-0.8
SRS				AML	AML	03 36 06.5	
	comp=N,481µm,0.4s						
SRS				AML	AML	03 36 06.8	
	comp=E,246µm,0.2s						
SRS	Serrai	0.74	216	*i* Pg	Pg	03 35 49.8	+0.2
SRS				*i* Sg	Sb	03 36 00.2	-0.7
KAVA	Kavala	0.76	160	P	Pg	03 35 49.7	-0.4
KAVA	Kavala	0.76	160	P	Pg	03 35 49.7	-0.4
KAVA				S	Sg	03 35 59.9	-0.2
KAVA				AML	AML	03 36 00.0	
	comp=E,546µm,0.5s						
KAVA				AML	AML	03 36 01.4	
	comp=N,577µm,0.4s						
KVLA	Kavala	0.79	168	P	Pg	03 35 51.0	+0.3
KVLA				S	Sg	03 36 00.5	-0.5
KVLA				AML	AML	03 36 01.8	
	comp=N,798µm,0.3s						
KVLA				AML	AML	03 36 01.8	
	comp=E,838µm,0.3s						
KKB	Krupnik	0.82	281	*i* Pg	Pg	03 35 51.2	-0.1
PGB	Panagyurishte	0.83	0	*i* Pg	Pg	03 35 51.6	0.0
KDZ	Kurdzhali	0.94	94	*i* Pg	Pg	03 35 52.4	-1.1
SOH	Sokhos	1.08	215	P	Pg	03 35 56.2	-0.1
SOH				S	Sn	03 36 12.6	+0.2
	comp=E,168nm,0.4s						
SOH	Sokhos	1.08	215	P	Pg	03 35 56.2	-0.1
SOH				S	Sb	03 36 10.7	-0.2
SOH				AML	AML	03 36 15.5	
	comp=N,508µm,0.4s						
SOH				AML	AML	03 36 16.7	
	comp=E,316µm,0.3s						
SOH	Sokhos	1.08	215	*i* Pg	Pg	03 35 56.0	-0.2
SOH				*i* Sg	Sg	03 36 09.4	-0.9
KNT	Kendrikon	1.10	240	P	Pg	03 35 56.5	-0.1
KNT				S	Sb	03 36 11.3	-0.2
	comp=E,195nm,0.4s						
KNT	Kendrikon	1.10	240	P	Pn	03 35 57.5	+0.2
KNT				S	Sb	03 36 11.1	-0.3
KNT	Kendrikon	1.10	240	PG	Pb	03 35 56.8	-0.1
KNT	Kendrikon	1.10	240	*i* Pg	Pb	03 35 56.9	-0.1
VTS	Vitosha	1.14	323	⇓P	Pb	03 35 57.6	0.0
VTS				⇓S	Sb	03 36 12.8	+0.2
VTS	Vitosha	1.14	323	*e*Pg	Pb	03 35 57.6	0.0
VTS				*e*Sg	Sn	03 36 14.7	+0.8
VTS	Vitosha	1.14	323	*i* Pg	Pn	03 35 57.7	-0.4
VTS	Vitosha	1.14	323	*i* Pg	Pn	03 35 57.6	-0.4
VTS				*i* Sg	Sb	03 36 12.5	-0.1
RDO	Rodhopi	1.18	118	P	Pg	03 35 57.5	-0.6
RDO				S	Sb	03 36 13.7	+0.1
	comp=E,382nm,0.2s						
RDO	Rodhopi	1.18	118	P	Pg	03 35 57.5	-0.6
RDO				S	Sg	03 36 12.6	-0.7
RDO				AML	AML	03 36 16.4	
	comp=N,717µm,0.4s						
RDO				AML	AML	03 36 17.7	
	comp=E,796µm,0.2s						
THAS	Thassos island	1.18	159	P	Pg	03 35 57.4	-0.8
THAS				S	Sn	03 36 15.1	+0.3
	comp=E,248nm,0.3s						
THAS	Thassos island	1.18	159	P	Pg	03 35 57.3	-0.8
THAS				AML	AML	03 36 15.7	
	comp=N,562µm,0.3s						
THAS				AML	AML	03 36 18.2	
	comp=E,437µm,0.4s						
VAY	Valandovo	1.26	252	*e*Pg	Pg	03 36 01.6	+1.9
VAY				*e*Sg	Sn	03 36 17.5	+0.8
VAY	Valandovo	1.26	252	*i* Pg	Pg	03 36 01.2	+1.5
VAY				*i* Sg	Sn	03 36 18.8	+2.0
	comp=E,68nm,0.7s						
VAY				*e*Lg	Lg	03 36 19.7	
HORT	Hortiatis	1.38	216	PN	Pb	03 36 01.3	-0.3
OUR	Ouranopolis	1.39	186	P	Pn	03 36 01.1	-0.1
OUR				S	Sb	03 36 19.1	-0.4
OUR				AML	AML	03 36 22.2	
	comp=N,347µm,0.4s						
OUR				AML	AML	03 36 24.2	
	comp=E,249µm,0.3s						
OUR	Ouranopolis	1.39	186	PN	Pg	03 36 02.4	+0.3
THE	Thessaloniki	1.41	220	P	Pb	03 36 02.1	0.0
THE				S	Sg	03 36 20.6	-0.2
PLG	Polygyros	1.45	202	P	Pb	03 36 02.5	-0.3
PLG	Polygyros	1.45	202	P	Pb	03 36 02.4	-0.4
PLG				AML	AML	03 36 26.5	
	comp=E,142µm,0.5s						
PLG				AML	AML	03 36 26.8	
	comp=N,120µm,0.4s						
BOSS	Bosilegrad	1.48	302	*e*Pg	Pg	03 36 04.5	+0.6
BOSS				*e*Sg	Sg	03 36 23.5	+0.5
STIP	Stip	1.48	270	*i* Pg	Pn	03 36 00.0	-2.6
STIP				*i* Sg	Sn	03 36 16.9	-5.4
STIP				*e*Lg	Lg	03 36 19.1	
	comp=N,21nm,0.3s						
GRG	Griva	1.53	241	PN	Pb	03 36 03.9	-0.3
GRG				SN	Sg	03 36 24.4	-0.3
SMTH	Samothraki Isl	1.61	140	P	Pb	03 36 05.7	+0.1
SMTH				S	Sn	03 36 24.8	-0.7
ALN	Alexandroupoli	1.63	119	P	Pn	03 36 05.3	+0.7
ALN				S	Sn	03 36 26.1	+0.2
	comp=N,60nm,0.3s						
ALN	Alexandroupoli	1.63	119	P	Pb	03 36 06.2	+0.2
ALN				S	Sn	03 36 25.8	-0.1
ALN				AML	AML	03 36 31.5	
	comp=E,140µm,0.3s						
ALN				AML	AML	03 36 32.6	
	comp=N,89µm,0.7s						
ALN	Alexandroupoli	1.63	119	PN	Pg	03 36 06.5	-0.3
ALN				SN	Sg	03 36 29.3	+1.3
ENEZ	Enez	1.79	122	PN	Pb	03 36 08.9	+0.3
ENEZ				SN	Sg	03 36 33.1	+0.1
CAVK	Edirne/Enez-Ca	1.82	123	*i* P	Pb	03 36 09.8	+0.6
CAVK				*i* S	Sb	03 36 33.1	+0.9
CAVK				IAML		03 36 36.0	
	comp=E,76nm,0.6s						
CAVK				IAML		03 36 37.0	
	comp=N,49nm,0.3s						
PAIG	Paliouri	1.82	192	P	Pn	03 36 07.3	0.0
ZAPS	Zavoj	1.93	324	*e*Pn	Pg	03 36 13.2	+0.8
ZAPS				*e*Sn	Sg	03 36 37.8	+0.4
EDRB	Edirne	1.93	85	PN	Pb	03 36 11.1	+0.1
UKOP	Uzunkopru-Edir	1.94	107	PN	Pb	03 36 11.6	+0.4
LIA	Limnos Island	1.97	157	P	Pn	03 36 09.4	+0.1
LIA				AML	AML	03 36 41.4	
	comp=N,140µm,0.6s						
LIA				AML	AML	03 36 41.5	
	comp=E,270µm,0.4s						
GADA	Gvkgeada	2.01	139	PN	Pb	03 36 11.9	-0.4
GOKA	anakkale-Gk	2.01	139	*i* P	Pn	03 36 10.8	+0.9
GOKA				*i* S	Sn	03 36 34.9	-0.4
KESN	Edirne-Kesan	2.09	114	*i* P	Pb	03 36 13.0	-1.0
KESN				*i* S	Sb	03 36 41.1	+0.8
KESN				IAML		03 36 46.0	
	comp=E,44nm,0.3s						
KESN				IAML		03 36 53.0	
	comp=N,47nm,0.4s						
ZIMR		2.13	24	⇑P	Pg	03 36 15.6	-0.8
ZIMR				⇑S	Sg	03 36 44.7	+0.7
GELI	Tayfur-Gelibol	2.19	126	PN	Pb	03 36 14.6	-0.7
KIRK	Kırklareli	2.19	87	*i* P	Pb	03 36 16.4	+0.9
KIRK				*i* S	Sb	03 36 44.4	+1.5
BLKB	Belogradchik	2.20	331	⇓S	Sn	03 36 40.5	+0.5
VLAD	Vladila	2.29	4	⇑S	Sg	03 36 48.1	-1.0
FNA	Florina	2.30	247	PN	Pn	03 36 14.8	+0.9
LPK	Lapseki	2.38	123	PN	Pb	03 36 17.3	-1.3
ARMN	Kirklareli, Me	2.44	85	*i* P	Pb	03 36 18.4	-1.4
RKY	Sarkoy-Tekirda	2.49	113	PN	Pb	03 36 19.1	-1.5
SART	Tekirdag	2.49	113	*i* P	Pb	03 36 20.2	-0.5
SART				IAML		03 36 59.0	
	comp=N,42nm,1.2s						
EZN	Ezine	2.50	138	PN	Pb	03 36 19.1	-1.6
RAZG	Razgrad	2.53	42	⇑S	Sg	03 36 57.1	+0.2
ZAGS	Zajecar	2.54	326	*e*Pn	Pg	03 36 22.9	-1.2
ZAGS				*e*Sn	Sb	03 36 53.0	+0.3
COPA	Copaceanca	2.54	17	⇑S	Sb	03 36 54.2	+1.5
MAR6	Marsite Statio	2.55	112	PN	Pb	03 36 20.1	-1.4
MAR3	Marsite Statio	2.55	111	PN	Pb	03 36 19.9	-1.7
MAR2	Marsite Statio	2.57	112	PN	Pb	03 36 20.3	-1.7
BOVS	Bovan	2.64	317	*e*Pn	Pb	03 36 24.1	+1.0
BOVS				*e*Sn	Sb	03 36 56.1	+0.3
KRBG	Karabiga-Canak	2.71	118	PN	Pb	03 36 22.2	-2.1
VIZE	Kirklareli, Vi	2.76	92	*i* P	Pn	03 36 20.5	+0.4
VIZE				IAML		03 37 06.0	
	comp=E,18nm,1.2s						
KNL	Balıkesir	2.92	118	*i* P	Pn	03 36 24.1	+1.8
KNL				*i* S	Sn	03 36 58.0	+0.3
AGG	Agios Georgios	3.03	208	PN	Pn	03 36 25.8	+1.9
BUHA	Balikesir, Bur	3.13	134	*i* P	Pn	03 36 27.1	+1.9
BUHA				*i* S	Sn	03 37 02.7	-0.1
HERR	Herculane	3.41	339	⇓P	Pn	03 36 29.6	+0.5
GZR	Gura Zlata	3.81	345	⇓P	Pn	03 36 35.9	+1.2
MLR	Muntele Rosu	3.99	18	⇑P	Pb	03 36 42.1	-4.1
NEHR	Nehoiu	4.02	22	⇑P	Pb	03 36 42.1	-4.6
PLOR	Plostina	4.51	23	⇓P	Pn	03 36 49.5	+5.2
VRI	Vrincioaia	4.55	23	⇓P	Pn	03 36 48.5	+3.8
VLDR	Vladesti	5.01	33	⇓P	Pn	03 36 56.0	+5.0

NOU 24 03:41:01.8,16°.90S×167°.82E,h19^{km},MLv4.5/14,
Vanuatu Islands,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	Devils Point	0.89	157	P	Pn	03 41 19.3	0.0
RTV	Rentapao	1.06	147	P	Pg	03 41 22.7	+0.3
SANVU	Saraoutou	1.56	338	P	Pb	03 41 29.7	-0.4
MARNC	Mare, Loyalty	4.56	178	P	Pn	03 42 08.5	-1.3
KOUNC	Koumac, New Ca	4.94	222	P	Pn	03 42 15.7	+0.7
YATNC	Mamie plateau,	5.21	190	P	Pn	03 42 17.8	-0.9
DZM	Mont Dzumac	5.30	194	P	Pn	03 42 20.1	-0.1
NOUC	Port Laguerre	5.37	195	P	Pn	03 42 20.6	-0.3

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*TUL **24** 03:52:31.9±1.0,36°.00N±0°.02×97°.30W±0°.02,h5^{km}±7^{km},
ML2.6,mb_Lg2.5/21(NEIC),Error ellipse: s-maj=2.4km
s-min=1.7km az=140.0*
NEIC 24 03:52:32.0±0.5,**36°.01N**±0°.01×**97°.32W**±0°.02,**h7**^{km}±5^{km},
Error ellipse: s-maj=2.2km s-min=1.8km az=101.0,
Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK029	Liberty Lake	0.24	206	Pg	Pg	03 52 36.8	+0.1
OK029				Sg	Sg	03 52 40.5	+0.5
OK033	Mehan	0.31	84	Pg	Pg	03 52 38.1	0.0
OK033				Sg	Sg	03 52 42.4	+0.1
OK031	S. Brethren Rd	0.40	99	Pg	Pg	03 52 39.5	-0.1
OK031				Sg	Sg	03 52 44.8	-0.1
BCOK	Bluff Creek, N	0.42	213	Pg	Pg	03 52 40.4	+0.2
OK025	Westminster Rd	0.43	182	Pg	Pg	03 52 40.4	+0.1
OK030	Cody Creek RV	0.45	101		Pg	03 52 40.4	-0.2
QUOK	Quay	0.52	72	Pg	Pg	03 52 42.0	-0.1
OKCFA	Oklahoma City	0.61	190	Pg	Pg	03 52 43.6	0.0
OKCSW	OKLAHOMA CITY	0.61	189		Pg	03 52 43.7	-0.1
CROK	Carrier	0.72	313	Pg	Pg	03 52 46.4	+0.5
BLOK	Blackwell	0.75	7	Pg	Pg	03 52 46.5	+0.1
FNO	Franklin	0.76	185	Pg	Pg	03 52 46.2	-0.3
FNO				IAmb_Lg		03 52 56.9	
	comp=Z,46nm,0.8s						
W35A	Tecumseh	0.93	157		Pg	03 52 49.3	-0.6
GC02	Grant County #	0.94	333	Pg	Pg	03 52 50.2	+0.1
KAN13	South Haven SW	1.00	353		Pg	03 52 51.3	0.0
OK032	Salt Plains WL	1.07	318	Pg	Pg	03 52 52.5	+0.1
KAN14	Manchester OK	1.07	331	Pg	Pg	03 52 52.6	0.0
KAN17	Caldwell West	1.09	341		Pb	03 52 53.0	-0.2
T35A	Sooner Cattle	1.11	36	Pg	Pg	03 52 52.9	-0.4
KAN09	Caldwell North	1.15	348		Pg	03 52 53.8	-0.1
KAN01	Argonia South	1.19	343		Pg	03 52 54.6	-0.2
TUL1	Leonard	1.25	94	Pg	Pb	03 52 54.2	-1.6
KAN10	Anthony SW Sta	1.27	331	Pn	Pn	03 52 56.2	-0.1
KAN06	Argonia West S	1.31	341		Pn	03 52 56.7	0.0
KAN08	Anthony NE Sta	1.32	337	Pn	Pn	03 52 56.9	0.0
KAN16	Harper SW Stat	1.35	334	Pn	Pb	03 52 57.5	-0.2
KAN12	Harper NE Stat	1.39	337	Pn	Pb	03 52 58.2	-0.1
X34A	Smith Ranch, M	1.47	197	Pn	Pn	03 52 58.9	-0.1
WMOK	Wichita Mounta	1.74	224		Pn	03 53 02.8	+0.1
WMOK				IAmb_Lg		03 53 31.3	
	comp=Z,33nm,0.8s						
LOOK	Love County	2.02	177	Pn	Pn	03 53 06.2	-0.3
LOOK				IAmb_Lg		03 53 37.6	
	comp=Z,30nm,1.2s						
X37A	Clayton	2.14	131	Pn	Pn	03 53 07.7	-0.5
X37A				IAmb_Lg		03 53 42.3	
	comp=Z,24nm,0.8s						
U38A	Gravette	2.41	79	Pn	Pn	03 53 11.8	-0.1
R32A	Long Quarter,	2.65	336		Pn	03 53 15.4	+0.2
R32A				IAmb_Lg		03 53 60.0	
	comp=Z,18nm,0.9s						
HHAR	Hobbs	2.75	83		Pn	03 53 15.8	-0.8
W39A	Magazine	3.00	105		Pn	03 53 19.7	-0.2
KSU1	Kansas State U	3.13	10	Pn	Pn	03 53 22.2	+0.3
Z38A	Mt. Pleasant	3.35	144	IAmb_Lg		03 54 21.7	
	comp=Z,15nm,0.7s						
MIAR	Mount Ida	3.40	114	Pn	Pn	03 53 26.2	+0.7

S39A	Bolivar	3.62	61	Pn	Pn	03 53 27.9	-0.6
S39A				IAmb_Lg		03 54 32.1	
	comp=Z,9.7nm,0.7s						
U40A	Yellville	3.63	83		Pn	03 53 28.1	-0.6
U40A				IAmb_Lg		03 54 29.8	
	comp=Z,17nm,0.7s						
AMTX	Amarillo	3.73	254	IAmb_Lg		03 54 37.2	
	comp=Z,9.2nm,0.9s						
X40A	Basin Creek Fa	3.98	111	Pn	Pn	03 53 33.2	-0.2
X40A				IAmb_Lg		03 54 37.9	
	comp=Z,11nm,0.9s						
FCAR	Ozark Folk Cen	4.22	90	Pn	Pn	03 53 37.0	+0.3
FCAR				IAmb_Lg		03 54 50.6	
	comp=Z,7.9nm,0.7s						

IDC ***24*** *04:07:15.4±0.6, 34°.68N×136°.11E, h0^{km}, mb3.3/3, mb1 3.5/4, mb1mx3.3/29, mbtmp3.2/4, ML2.2/1, Error ellipse: s-maj=22.8km s-min=5.6km az=134.0*

NIED ***24*** *04:07:16.2, 34°.98N×135°.70E, h11^{km}, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}1.76; $M_{\theta\theta}$0.20; $M_{\phi\phi}$-1.96; $M_{r\theta}$0.02; $M_{\theta\phi}$-0.59; $M_{\phi r}$-0.63; Fault plane solution: $M_0$2.04000×10^{14} NP1: ϕ_s188.00000°, δ54.00000°, λ82.00000°. NP2: ϕ_s21.00000°, δ37.00000°, λ101.00000°.*

JMA ***24*** *04:07:16.2, 34°.98N×135°.70E, h11^{km}, M3.6 Broadband fault plane solution: P waves. NP1: ϕ_s5.00000°, δ36.00000°, λ87.00000°. NP2: ϕ_s189.00000°, δ54.00000°, λ92.00000°. Principal axes: T Plg81.0000°, Azm110.0000°; N Plg2.0000°, Azm7.0000°; P Plg9.0000°, Azm277.0000°;*

JMA Felt III J1.

NEIC ***24*** *04:07:17.2±1.9, 35°.01N±0°.05×135°.75E±0°.03, h10^{km}±2^{km}, ML3.4/16 Error ellipse: s-maj=9.5km s-min=3.1km az=15.0*

ISC 24 04:07:16.1±1.1**, 34°.98N**±0°.03×**135°.73E**±0°.03**, h6**^{km}±9^{km}**, n22,** σ1.^{s}**05**/30**, mb3.4**/3**, 7D, Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHE	Heguri	0.33	187	⇓P	Pg	04 07 22.7	+0.2
JHE				S	Sg	04 07 27.2	+0.4
JWT	Wachi	0.41	318	⇓P	Pg	04 07 24.0	+0.1
JWT				S	Sg	04 07 28.9	-0.4
JWT	Wachi	0.41	318	Pg	Pg	04 07 24.0	+0.1
JWT				Sg	Sg	04 07 29.1	-0.2
TSUJ	Tsu 2	0.63	115	⇓P	Pg	04 07 28.4	+0.2
JKS	Kasai	0.73	270	⇓P	Pg	04 07 29.5	-0.6
JWY	Kouya	0.77	189	P	Pg	04 07 30.7	-0.2
JWY				S	Sg	04 07 40.7	-0.1
JKY	Yasaka	0.82	322	⇓P	Pg	04 07 31.5	-0.5
JKY				S	Sg	04 07 42.2	-0.5
JAWN	Awajishima-nag	0.84	234	⇓P	Pg	04 07 31.5	-0.8
JKN2	Miekihoku	0.86	149	⇓P	Pg	04 07 32.3	-0.4
JKN2				S	Sg	04 07 43.8	-0.1
INU	Inuyama	1.12	70		Pn	04 07 38.1	-0.3
INU				Sg	Sb	04 07 52.4	-0.3
INU				IAML		04 07 53.0	
	comp=N,2µm,0.5s						
JGF	Kuroka	1.47	65	Pn	Pg	04 07 44.0	-0.3
JGF				IAML		04 08 03.8	
	comp=E,932nm,0.3s						
JMN	Monobe	1.98	231	Pn	Pn	04 07 51.1	+0.9
JMN				IAML		04 08 19.4	
	comp=E,169nm,0.4s						
JMN				IAML		04 08 32.5	
	comp=N,161nm,0.8s						
JSG	Sagara	2.04	98	Pn	Pb	04 07 53.9	+0.2
JHS	Saijyo	2.15	271	Pn	Pn	04 07 53.2	+0.7
JHS				IAML		04 08 26.4	
	comp=N,208nm,0.6s						
JHS				IAML		04 08 29.9	
	comp=E,165nm,0.8s						
MAJO	Matsushiro	2.55	52	Pn	Pn	04 07 58.9	+0.9
MAT	Matsushiro	2.55	52	P	Pn	04 07 58.3	+0.3
MAT				*e*S	Sn	04 08 29.7	+0.3
MJAR	Matsushiro Arr	2.55	52	Pn	Pn	04 07 58.0	0.0
	comp=E,0.5nm,0.3s,baz=235,slow=15,SNR=17						
MJAR				Lg	Lg	04 08 35.7	
	comp=E,1.6nm,0.3s,baz=221,slow=28,SNR=8.7						
MJAR	Matsushiro Arr	2.55	52	Pn	Pn	04 07 58.7	+0.7
JNU	Nakatsue	4.43	247	Pn	Pn	04 08 23.9	-0.1
JNU				IAML		04 10 06.8	
	comp=E,36nm,2.7s						
JNU				IAML		04 11 17.4	
	comp=N,42nm,3.5s						
SONM	Songino Array	25.31	309	P	P	04 12 47.8	+4.2
	comp=N,0.4nm,0.7s,baz=118,slow=10,SNR=2.4						
ILAR	Eielson Array	53.66	31	P	P	04 16 37.5	-0.8
	comp=N,0.3nm,0.8s,baz=257,slow=5.5,SNR=4.9						
WRA	Warramunga Arr	54.63	182	P	P	04 16 43.4	-2.4
	comp=N,0.3nm,0.7s,baz=356,slow=7.5,SNR=1.7						

NEIC 24 04:37:55.6±0.9**, 36°.34N**±0°.01×**96°.79W**±0°.02**, h1**^{km}±7^{km}**, mb_Lg2.1**/4**, Error ellipse: s-maj=2.2km s-min=1.7km az=61.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QUOK	Quay	0.18	157		Pg	04 37 59.2	+0.1
QUOK				Sg	Sg	04 38 01.7	+0.3
OK034	N. Norfolk Rd.	0.33	169	Pg	Pg	04 38 02.0	0.0
OK034				Sg	Sg	04 38 06.6	+0.2
OK031	S. Brethren Rd	0.39	185	Pg	Pg	04 38 03.1	+0.1
OK031				Sg	Sg	04 38 08.3	+0.4
OK030	Cody Creek RV	0.41	179		Pg	04 38 03.5	0.0
OK030				Sg	Sg	04 38 09.1	+0.3
BLOK	Blackwell	0.54	321		Pg	04 38 06.2	+0.2
BLOK				Sg	Sg	04 38 13.4	+0.3
T35A	Sooner Cattle	0.62	21		Pg	04 38 07.6	0.0
T35A				Sg	Sg	04 38 15.7	+0.1
OK029	Liberty Lake	0.76	225	Pg	Pg	04 38 10.1	-0.1
OK029				Sg	Sg	04 38 20.3	+0.2
KAN13	South Haven SW	0.87	321	Pg	Pg	04 38 12.1	-0.2
KAN13				Sg	Sg	04 38 23.8	+0.2
OK025	Westminster Rd	0.87	210	Pg	Pg	04 38 12.1	-0.3
TUL1	Leonard	0.92	117	Pg	Pg	04 38 12.6	-0.6
TUL1				Sg	Sg	04 38 25.0	-0.1
BCOK	Bluff Creek, N	0.95	224	Pg	Pg	04 38 13.5	-0.3
BCOK				Sg	Sg	04 38 26.1	0.0
CROK	Carrier	0.97	280	Pg	Pg	04 38 13.9	-0.4
CROK				Sg	Sg	04 38 26.9	0.0
GC02	Grant County #	1.00	301	Pg	Pg	04 38 14.4	-0.4
GC02				Sg	Sg	04 38 27.9	+0.1
KAN09	Caldwell North	1.04	321	Pg	Pg	04 38 15.1	-0.4
KAN17	Caldwell West	1.05	312	Pg	Pg	04 38 15.3	-0.5
OKCFA	Oklahoma City	1.06	210	Pg	Pg	04 38 15.4	-0.7
KAN01	Argonia South	1.12	317	Pg	Pg	04 38 16.7	-0.5
KAN14	Manchester OK	1.12	304	Pg	Pg	04 38 16.8	-0.4
KAN05	Bluff City Nor	1.16	312	Pg	Pg	04 38 17.4	-0.4
W35A	Tecumseh	1.18	183	Pg	Pg	04 38 16.9	-1.4
FNO	Franklin	1.19	205	Pg	Pg	04 38 17.2	-1.1
OK032	Salt Plains WL	1.23	293	Pg	Pg	04 38 18.6	-0.6
KAN16	Harper SW Stat	1.35	311	Pg	Pg	04 38 20.7	-0.8
U32A	Winter Ranch,	1.78	272	Pn	Pn	04 38 28.0	+0.4
X34A	Smith Ranch, M	1.93	206	Pn	Pn	04 38 30.1	+0.5
U38A	Gravette	1.95	86	Pn	Pn	04 38 30.0	+0.2
X37A	Clayton	2.10	146	Pn	Pn	04 38 32.4	+0.6
WMOK	Wichita Mounta	2.27	226	Pn	Pn	04 38 34.9	+0.6
HHAR	Hobbs	2.31	91	Pn	Pn	04 38 35.1	+0.4
S39A	Bolivar	3.09	63	Pn	Pn	04 38 45.4	-0.1
S39A				IAmb_Lg		04 39 39.9	
	comp=Z,5.4nm,0.8s						
MIAR	Mount Ida	3.18	123	Pn	Pn	04 38 47.5	+0.8
U40A	Yellville	3.18	88	Pn	Pn	04 38 46.4	-0.4
X40A	Basin Creek Fa	3.72	119	IAmb_Lg		04 40 01.7	
	comp=Z,6.1nm,0.8s						
MGMO	Mountain Grove	3.73	76	Pn	Pn	04 38 54.7	+0.4
R40A	Maddies Statio	4.10	60	Pn	Pn	04 38 59.0	-0.4
T42A	Van Buren	4.63	80	Pn	Pn	04 39 06.9	+0.2

SJA ***24*** *04:46:54.2±0.9, 31°.84S×72°.67W, h10^{km}, ML4.2, MW3.8*

IDC ***24*** *04:46:58.0±0.5, 31°.89S×72°.02W, h0^{km}, mb3.9/5, mb1 3.9/9, mb1mx3.8/21, mbtmp3.7/9, ML3.7/4, MS3.3/4, Ms1 3.4/4, ms1mx3.1/23, Error ellipse: s-maj=15.5km s-min=8.4km az=96.0*

NEIC ***24*** *04:46:58.8±0.9, 31°.86S±0°.03×72°.19W±0°.10, h3^{km}±4^{km}, mb4.2/6, ML3.9(GUC), Error ellipse: s-maj=11.7km s-min=3.9km az=86.0*

GUC ***24*** *04:47:02.9±0.6, 31°.95S×72°.03W, h38^{km}±2^{km}, ML3.9*

ISC 24 04:46:58.2±1.7**, 31°.88S**±0°.03×**72°.24W**±0°.05**, h1**^{km}±10^{km}**, n95,** σ1.^{s}**50**/115**, mb4.2**/8**, 7C-2D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VA06	Catapilco	1.05	131	⇓*i*P	Pg	04 47 19.1	+0.8
VA06				*i* S	Sb	04 47 32.5	-0.8
VA06				IAML		04 47 38.1	
	comp=E,9µm,0.5s						
VA01	Torpederas	1.24	156		Pb	04 47 22.4	0.0
VA01				Sn	Sb	04 47 38.5	-0.5
VA01	Torpederas	1.24	156	*i* P	Pb	04 47 22.7	+0.2
CO06	Fray Jorge	1.31	23	⇑*i*P	Pn	04 47 22.4	-1.3
CO06				*i* S	Sb	04 47 38.4	-2.5
CO06	Fray Jorge	1.31	23		Pn	04 47 22.3	-1.3
CO06				Sn	Sb	04 47 42.4	+1.5
ROCH	El Roble	1.50	137	⇑*i*P	Pn	04 47 26.5	-0.1
ROCH				⇑*i*P	Pn	04 47 26.4	-0.1
ROCH				*i* S	Sb	04 47 43.3	-3.4
ROCH				*i* S	Sn	04 47 44.2	-2.6
ROCH				IAML		04 47 56.7	
	comp=E,3µm,0.4s						
ROCH				IAML		04 47 56.9	
	comp=E,3µm,0.6s						
ROC1	El Roble	1.50	137	*i* P	Pn	04 47 26.4	-0.1
ROC1				*e*S	Sg	04 47 47.8	+1.3
MT02	Curacav	1.66	146	⇑*i*P	Pn	04 47 28.7	+0.3
MT02				*e*S	Sn	04 47 48.5	-1.8
MT02	Curacav	1.66	146		Pn	04 47 28.9	+0.5
MT02				Sn	Sb	04 47 50.2	-0.7
MT02	Curacav	1.66	146	*i* P	Pn	04 47 28.8	+0.3
MT02				*e*S	Sg	04 47 51.7	+0.2
VA03	San Esteban	1.68	122	*e*P	Pn	04 47 28.5	-0.3
VA03				*i* S	Sn	04 47 48.3	-2.6
VA03				IAML		04 47 55.3	
	comp=N,5µm,0.4s						
VA03	San Esteban	1.68	122		Pn	04 47 28.9	+0.1
VA03	San Esteban	1.68	122	*i* P	Pn	04 47 28.9	+0.1
VA03				*e*S	Sg	04 47 50.8	-1.3
PEL	Peldehue	1.82	134	⇑*i*P	Pn	04 47 30.7	0.0
PEL				*i* S	Sn	04 47 52.1	-2.2
PEL				IAML		04 48 01.5	
	comp=N,2µm,0.5s						
PEL	Peldehue	1.82	134		Pn	04 47 30.8	+0.2
PEL	Peldehue	1.82	134	*i* P	Pn	04 47 31.0	+0.3
PEL				*e*S	Sg	04 47 55.9	-0.7
VA05	Santo Domingo	1.85	164	*e*P	Pn	04 47 31.3	+0.3
VA05				IAML		04 48 07.8	
	comp=E,2µm,0.4s						
VA05	Santo Domingo	1.85	164		Pn	04 47 31.4	+0.3
MT05	Renca	1.97	140	IAML		04 48 08.7	
	comp=E,3µm,0.5s						
MT05	Renca	1.97	140		Pn	04 47 32.6	-0.1
MT05	Renca	1.97	140	*i* P	Pn	04 47 33.2	+0.5
GO04	Tololo Observa	2.10	36	*e*P	Pn	04 47 34.0	-0.8
GO04				*e*S	Sn	04 48 00.0	-1.7
GO04	Tololo Observa	2.10	36		Pn	04 47 34.3	-0.4
GO04	Tololo Observa	2.10	36	*i* P	Pn	04 47 34.0	-0.8
CO05	La Serena	2.14	24	*e*P	Pn	04 47 34.3	-0.7
CO05	La Serena	2.14	24		Pn	04 47 34.6	-0.4
MT01	Popeta	2.14	157	⇓*e*P	Pn	04 47 35.5	+0.4
MT01				*e*S	Sn	04 48 01.0	-1.3
MT01	Popeta	2.14	157		Pn	04 47 35.8	+0.7
MT01	Popeta	2.14	157	*i* P	Pn	04 47 35.5	+0.4
MT01				*e*S	Sg	04 48 07.8	+0.6
MT09	Talagante	2.16	151	*e*P	Pn	04 47 36.3	+0.8
MT09				*e*S	Sn	04 48 01.9	-1.1
MT09				IAML		04 48 15.2	
	comp=E,1µm,0.4s						
MT09	Talagante	2.16	151		Pn	04 47 36.1	+0.7
FCH	Farellones	2.19	132	⇑*i*P	Pn	04 47 36.4	+0.4
FCH				*i* S	Sn	04 48 01.8	-2.0
FCH				IAML		04 48 11.2	
	comp=E,1µm,0.4s						
AUSP	Uspallata	2.44	99	*i* P	Pn	04 47 41.9	+2.4
RTLS	Leoncito	2.50	89	*i* P	Pn	04 47 42.4	+2.1
RTLS				*e*S	Sb	04 48 14.8	-0.7
RTLS				IAML		04 48 19.8	
	comp=Z,340nm,0.6s						
BO04	La Punta	2.51	147	⇑*i*P	Pn	04 47 41.4	+1.3
LMEL	Las Melosas	2.60	139	*e*P	Pn	04 47 41.7	+0.1
LMEL				*e*S	Sn	04 48 11.9	-2.0
BO01	Tunca	2.68	159	*e*P	Pn	04 47 43.1	+0.6
BO01				*e*S	Sn	04 48 13.6	-2.1
BO01				IAML		04 48 35.1	
	comp=N,342nm,0.7s						
BO01	Tunca	2.68	159		Pn	04 47 43.0	+0.5
BO01	Tunca	2.68	159	*i* P	Pn	04 47 43.4	+0.9
AROD	Rodeo	2.92	55	*i* P	Pn	04 47 48.0	+1.9
ARCO	CERRO ARCO	2.96	110	*i* P	Pb	04 47 50.0	-1.8
ARCO				IAML		04 48 40.9	
	comp=Z,583nm,0.5s						
ASAL	Salagasta	2.97	105	*i* P	Pn	04 47 50.0	+3.5
ASAL				IAML		04 48 42.6	
	comp=Z,442nm,0.5s						
ACCO	Cerro Coronel	3.01	65	*i* P	Pn	04 47 50.0	+2.7
ACCO				*e*S	Sb	04 48 31.0	+0.9
ACCO				IAML		04 48 34.9	
	comp=Z,600nm,0.9s						
ZON	Zonda	3.05	85	*i* P	Pn	04 47 50.4	+2.8
ZON				*e*S	Sg	04 48 35.5	-0.8
ZON				IAML		04 48 36.8	
	comp=Z,341nm,0.8s						
AAGR	Agrelo	3.12	114	*i* P	Pn	04 47 52.0	+3.4
AAGR				IAML		04 48 45.2	
	comp=Z,330nm,0.9s						
GO05	Huala	3.13	175	Pn	Pn	04 47 49.2	+0.5
GO05	Huala	3.13	175	*i* P	Pn	04 47 49.0	+0.3
RTCV	Cerro Valdivia	3.15	91	*i* P	Pn	04 47 52.0	+3.1
RTCV				IAML		04 48 46.0	
	comp=Z,133nm,0.7s						
BO02	Sierra Bellavi	3.15	158	*e*P	Pn	04 47 50.0	+1.0
BO02				*e*S	Sn	04 48 25.4	-1.8
BO02				IAML		04 48 43.5	
	comp=N,584nm,0.4s						
BO02	Sierra Bellavi	3.15	158		Pn	04 47 49.8	+0.8
BO02	Sierra Bellavi	3.15	158	*i* P	Pn	04 47 50.4	+1.4
LCO	Las Campanas	3.15	25	*e*P	Pn	04 47 48.5	-0.7
LCO	Las Campanas	3.15	25	*i* P	Pn	04 47 49.0	-0.2
LCO				IAML		04 48 49.0	
	comp=Z,2µm,0.5s						
AC04	Llanos de Chal	3.80	16	Pn	Pn	04 47 56.6	-1.3
AC04	Llanos de Chal	3.80	16	*i* P	Pn	04 47 56.5	-1.4
ML02	Panimavida	3.93	170	Pn	Pn	04 48 00.2	+0.6
AVFE	Valle Fertil	4.27	75	*i* P	Pn	04 48 06.0	+1.6
AVFE				IAML		04 49 09.7	
	comp=Z,337nm,0.6s						
RFA	San Rafael	4.27	133	*i* P	Pn	04 48 07.0	+2.5
RFA				IAML		04 49 16.4	
	comp=Z,115nm,1.1s						
GO03	Copiap	4.61	23		Pn	04 48 08.5	-0.7
GO03	Copiap	4.61	23	*i* P	Pn	04 48 08.3	-0.8
VCA	Vinchina	4.69	49	*i* P	Pn	04 48 13.0	+2.8
VCA				*i* P	Pb	04 48 13.5	-7.8
VCA				*e*S	Sb	04 49 16.3	-2.0
VCA				IAML		04 49 37.3	
	comp=Z,478nm,0.7s						
APLL	PUNTA DE LOS L	5.11	75	*i* P	Pn	04 48 19.6	+3.6
APLL				IAML		04 49 27.4	
	comp=Z,183nm,2.3s						
ACLC	CERRO LA CRUZ	5.17	63	*i* P	Pn	04 48 19.0	+2.1
ACLC				IAML		04 49 30.2	
	comp=Z,408nm,0.9s						
MRA	San Martin	5.56	97	*i* P	Pn	04 48 23.0	+0.9
MRA				IAML		04 49 57.8	
	comp=Z,43nm,0.6s						
AC02	Maricunga	5.71	29	Pn	Pn	04 48 23.8	-0.8
AC02	Maricunga	5.71	29	*i* P	Pn	04 48 24.0	-0.6
CYA	Choya	6.54	60	*i* P	Pn	04 48 37.0	+1.4
CYA				*i* P	Pn	04 48 38.0	+2.3
CYA				IAML		04 50 02.1	
	comp=Z,95nm,0.9s						
LC01	Cunco	7.01	178	Pn	Pn	04 48 42.2	+0.3
LC01	Cunco	7.01	178	*i* P	Pn	04 48 43.0	+1.1
AHML	Horco Molle	7.88	52	*i* P	Pn	04 48 55.5	+1.5
AHML				IAML		04 50 58.5	
	comp=Z,47nm,0.9s						
PLCA	Paso Flores	8.94	172	Pn	Pn	04 49 08.4	-0.1
	comp=Z,0.3nm,0.3s,baz=346,slow=7.0,SNR=5.5						
PLCA				LR	LR	04 52 49.1	
	comp=Z,169nm,19.1s,baz=348,slow=39						
PLCA	Paso Flores	8.94	172		Pn	04 49 08.5	0.0
LVC	Limon Verde	9.70	19	LR	LR	04 52 53.4	
	comp=Z,108nm,19.8s,baz=128,slow=37						
TRQA	Tornquist	10.43	129	Pn	Pn	04 49 29.0	+0.2
CPUP	Villa Florida	14.15	71	Pn	Pn	04 50 18.5	-1.4
	comp=Z,0.1nm,0.3s,baz=218,slow=12,SNR=2.8						
CPUP				LR	LR	04 55 37.5	
	comp=Z,90nm,18.5s,baz=274,slow=37						
CPUP	Villa Florida	14.15	71		Pn	04 50 18.6	-1.2
LPAZ	La Paz	15.97	14	Pn	Pn	04 50 44.9	+0.2
	comp=Z,0.1nm,0.3s,baz=88,slow=11,SNR=6.0						
LPAZ	La Paz	15.97	14		Pn	04 50 43.7	-1.0
SIV	San Ignacio	18.80	35	P	P	04 51 18.0	-1.2
	comp=Z,0.1nm,0.3s,baz=227,slow=12,SNR=4.9						
ETMB	Extrema	22.66	16	P	P	04 52 00.4	-0.5
ETMB				IAmb	IAmb	04 52 02.3	
	comp=Z,4.5nm,1.0s						
BDFB	Brasilia	27.34	59	P	P	04 52 43.6	-1.4
	comp=Z,3.4nm,0.6s,baz=220,slow=9.4,SNR=5.6						
BDFB	Brasilia	27.34	59	P	P	04 52 44.1	-0.8
BDFB				IAmb	IAmb	04 52 45.3	
	comp=Z,4.9nm,0.8s						
PTGA	Pitinga	33.08	23	P	P	04 53 33.0	-2.6
	comp=Z,0.7nm,0.3s,baz=172,slow=11,SNR=1.1						
VNA3	Neumayer Olymp	51.38	158	P	P	04 56 05.6	+1.5
VNA2	Neumayer--Watz	52.03	158	P	P	04 56 09.8	+0.9
	baz=288,slow=8.0						
SNAA	Sanae	53.61	158	P	P	04 56 21.5	+0.9
SNAA	Sanae	53.61	158	P	P	04 56 21.5	+0.9
SNAA				IAmb	IAmb	04 56 22.5	
	comp=Z,2.8nm,0.9s						
QSPA	South Pole Qui	58.35	180	P	P	04 56 55.0	+0.3
QSPA				IAmb	IAmb	04 56 56.8	
	comp=Z,3.3nm,1.3s						
TXAR	Lajitas Array	67.81	331	P	P	04 57 58.3	+0.4
	comp=Z,0.2nm,0.6s,baz=147,slow=8.6,SNR=3.3						
NVAR	Mina Array Bea	82.05	325	P	P	04 59 21.9	+1.6
	comp=Z,0.2nm,0.5s,baz=148,slow=5.3,SNR=1.4						
NVAR				LR	LR	05 32 10.6	
	comp=Z,51nm,20.9s,baz=80,slow=33						
NVAR	Mina Array Bea	82.05	325	P	P	04 59 18.8	-1.5
TORD	Torodi Ar. Bea	83.65	70	P	P	04 59 27.9	-1.0
	comp=Z,1.7nm,0.7s,baz=262,slow=4.6,SNR=15						
TORD	Torodi Ar. Bea	83.65	70	P	P	04 59 28.4	-0.5
KURBB	Kurchatov Arra	151.41	41	PKPbc	PKPdf	05 06 53.0	+5.7
	comp=Z,0.5nm,0.3s,baz=295,slow=2.9,SNR=4.2						
ZALV	Zalesovo Beam	152.50	30	PKPbc	PKPbc	05 06 55.6	-0.1
	comp=Z,0.9nm,0.5s,baz=290,slow=4.3,SNR=5.8						

IDC ***24*** *04:52:37.5±3.3, 2°.89S×100°.86E, h0^{km}, mb3.9/5, mb1 3.9/5, mb1mx3.6/47, mbtmp3.9/5, Error ellipse: s-maj=143.8km s-min=22.2km az=55.0*

DJA ***24*** *04:53:00.8±0.4, 2°S±5°×10°2E±°, h169^{km}±4^{km}, M3.9/12, mb4.4/2, mB5.3/1, MLv3.7/12, Mw(mB)4.7/1*

ISC 24 04:53:00.9±0.9**, 1°.98S**±0°.08×**102°.11E**±0°.09**, h150**^{km}**, n18,** σ1.^{s}**96**/20**, mb3.8**/5**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRJI	Kerinci	0.66	260	P	Pn	04 53 24.2	+0.9
KRJI				S	Sn	04 53 44.5	+4.2
MASI	Maura Aman, Be	1.16	174	P	Pn	04 53 28.6	+1.3
MASI				S	Sn	04 53 51.0	+3.6
PDSI	Padang	1.96	303	P	Pn	04 53 36.7	+1.1
PDSI				S	Sn	04 54 03.2	+0.9
PPSI	Pulau Pagai	2.24	250	P	Pn	04 53 39.5	+0.6
PPI	Padang Panjang	2.28	311	P	Pn	04 53 40.8	+1.4
BKNI	Bangkinang	2.52	335	P	Pn	04 53 45.1	+2.7
SISI	Saibi	3.09	282	P	Pn	04 53 49.8	+0.4
MDSI	Maura Dua	3.24	140	P	Pn	04 53 52.1	+0.8
KLSI		3.76	136	P	Pn	04 53 59.0	+0.9
KASI	Kota Agung	4.25	146	P	Pn	04 54 03.8	-0.7
GSI	Gunungsitoli	5.58	306	P	Pn	04 54 22.0	-0.2
	0.7nm4µm169nm,0.5s						
TPTI		7.17	317	P	Pn	04 54 42.0	-1.3
WRA	Warramunga Arr	36.20	122	P	P	04 59 47.6	-2.0
	0.2nm,0.3s,baz=312,slow=9.0,SNR=7.4						
ASAR	Alice Springs	37.58	128	P	P	04 59 58.5	-2.6
	0.4nm,0.5s,baz=288,slow=6.2,SNR=1.9						
SONM	Songino Array	49.75	4	P	P	05 01 39.0	+0.8
	1.7nm,0.5s,baz=187,slow=9.8,SNR=12						
MKAR	Makanchi Array	51.60	343	P	P	05 01 50.5	-1.4
	0.6nm,0.3s,baz=148,slow=9.2,SNR=15						
ZALV	Zalesovo Beam	57.56	348	P	P	05 02 33.0	-1.7
	1.0nm,0.3s,baz=164,slow=6.0,SNR=6.1						
TXAR	Lajitas Array	143.37	40	PKP	PKPab	05 12 14.6	-0.2
	0.2nm,0.4s,baz=206,slow=1.6,SNR=8.4						

GCG ***24*** *05:19:42.8±0.3, 13°.77N×91°.94W, h0^{km}±7^{km}, MD3.8*

IDC ***24*** *05:19:52.1±1.3, 15°.85N×91°.42W, h0^{km}, mb3.7/6, mb1 3.9/8, mb1mx3.6/44, mbtmp3.6/8, ML3.0/2, MS3.1/1, Ms1 3.1/1, ms1mx2.6/34, Error ellipse: s-maj=59.1km s-min=11.3km az=46.0*

ISC 24 05:19:42.8±2.2**, 14°.0N**±0°.3×**92°.08W**±0°.06**, h10**^{km}**, n13,** σ1.^{s}**90**/13**, mb3.8**/6**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STG3	Santiaguito 3,	0.84	35	*e*P	Pn	05 20 02.9	+1.9
FUG	Fuego 3	1.27	70	*e*P	Pg	05 20 06.9	-0.3
NBG	Las Nubes	1.77	71	*e*P	Pn	05 20 15.1	+1.4
NBG				*e*S	Sg	05 20 40.3	+0.5
APG	El Apazote	1.84	58	Pg	Pb	05 20 16.0	-0.8
	25nm,0.3s,baz=209,slow=8.0,SNR=122						
APG				Lg	Lg	05 20 33.2	
	14nm,0.3s,baz=52,slow=12,SNR=6.5						
CMIG	Matias Romero	4.08	319	Pn	Pn	05 20 46.5	+1.1
	0.7nm,0.3s,baz=169,slow=11,SNR=14						
TXAR	Lajitas Array	18.64	327	P	Pn	05 23 58.9	-2.3
	0.0nm,0.3s,baz=145,slow=9.7,SNR=4.3						
ANMO	Albuquerque	24.55	331	P	P	05 25 04.0	+1.0
	0.5nm,0.4s,baz=146,slow=13,SNR=4.6						
SJG	San Juan	25.23	77	LR	LR	05 35 01.7	
	comp=Z,39nm,18.5s,baz=282,slow=38						
NVAR	Mina Array Bea	33.61	321	P	P	05 26 27.3	+3.6
	0.4nm,0.6s,baz=127,slow=9.4,SNR=4.4						
YKA	Yellowknife Ar	50.99	347	P	P	05 28 43.8	-0.8
	1.5nm,0.7s,baz=140,slow=9.0,SNR=7.2						
INK	Inuvik	60.40	344	P	P	05 29 50.9	-1.1
	1.3nm,0.6s,baz=124,slow=3.6,SNR=3.3						
RES	Resolute Bay	60.68	359	P	P	05 29 51.1	-2.8
	1.0nm,0.8s,baz=198,slow=9.6,SNR=2.3						
ILAR	Eielson Array	62.80	337	P	P	05 30 08.7	+0.4
	0.4nm,0.9s,baz=108,slow=4.9,SNR=4.1						

IDC 24 05:37:11.4±1.3**, 9°.48S**×**158°.26E, h0**^{km}**, mb3.8**/4**, mb1 4.0**/4**, mb1mx3.7**/39**, mbtmp3.8**/4**, MS3.4**/1**, Ms1 3.3**/1**, ms1mx2.6**/25**, Error ellipse: s-maj=41.2km s-min=20.1km az=165.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	1.67	88	Pn	Pn	05 37 41.9	-0.1
	23nm,0.3s,baz=123,slow=19,SNR=2.2						
HNR				Sn	Sn	05 38 03.7	-0.4
	42nm,0.3s,baz=179,slow=19,SNR=6.6						
WRA	Warramunga Arr	25.33	243	P	P	05 42 40.0	-0.2
	2.2nm,0.8s,baz=68,slow=9.2,SNR=13						
STKA	Stephens Creek	27.12	212	P	P	05 42 57.3	+1.0
	0.8nm,0.4s,baz=48,slow=12,SNR=3.5						
STKA				LR	LR	05 52 30.5	
	comp=Z,70nm,18.4s,baz=25,slow=34						
ASAR	Alice Springs	27.20	236	P	P	05 42 56.2	-1.0
	1.2nm,1.0s,baz=64,slow=9.7,SNR=8.8						
SONM	Songino Array	73.17	326	P	P	05 48 45.0	+0.7
	0.4nm,0.6s,baz=134,slow=4.2,SNR=3.1						

IDC ***24*** *05:48:22.2±1.0, 42°.00N×81°.32E, h0^{km}, mb4.2/12, mb1 4.2/19, mb1mx4.0/54, mbtmp4.1/19, ML3.3/7, MS3.1/9, Ms1 3.2/9, ms1mx2.9/41, Error ellipse: s-maj=17.7km s-min=13.6km az=169.0*

BJI ***24*** *05:48:22.9±0.0, 42°.10N×81°.20E, h10^{km}, mb3.9/3, ML4.2/10*

SOME ***24*** *05:48:22.0, 42°.18N×81°.30E, h5^{km}, MS3.6*

*NNC **24** 05:48:23.1±1.2, 42°.08N×81°.19E, h0^{km}, mb4.8, mpv4.5, Error ellipse: s-maj=8.2km s-min=6.7km az=159.0*
*NEIC **24** 05:48:24.6±2.1, 42°.05N±0°.08×81°.4E±0°.1, h10^{km}±1^{km}, mb4.4/10, ML4.1(BJI), Error ellipse: s-maj=18.1km s-min=6.2km az=138.0*
*MOS **24** 05:48:24.2±1.6, 42°.08N×81°.38E, h20^{km}, mb4.6/16, Error ellipse: s-maj=8.1km s-min=5.3km az=113.1*
ISC 24 05:48:24.8±1.2**, 42°.32N**±0°.04×**81°.34E**±0°.03**, h7**^{km}±7^{km}**, n149, σ2^{s}.40**/176**, mb4.3**/25**, MS3.3**/8**, 13C-17D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**1.34**	**328**	*e*P	**Pn**	**05 48 50.4**	**+0.3**
	71nm,0.2s						
KTMS				*e*S	**Sn**	**05 49 11.2**	**+2.9**
	411nm,0.5s						
KTMS	**Ketmen**	**1.34**	**328**	P	**Pn**	**05 48 50.4**	**+0.3**
	268nm,0.8s						
KTMS				S	**Sn**	**05 49 11.2**	**+2.9**
	411nm,0.5s						
SHLS	**Shalkode**	**1.62**	**302**	⇓*e*P	**Pn**	**05 48 50.3**	**-3.6**
	145nm,0.3s						
SHLS				*e*S	**Sn**	**05 49 10.7**	**-4.4**
	606nm,0.2s						
SHLS	**Shalkode**	**1.62**	**302**	*e*P*	**Pb**	**05 48 56.1**	**+1.0**
SHLS	**Shalkode**	**1.62**	**302**	P	**Pn**	**05 48 50.3**	**-3.6**
	538nm,0.8s						
SHLS				S	**Sn**	**05 49 10.7**	**-4.4**
	762nm,0.7s						
PDGK	**Podgornoye**	**1.70**	**307**	PN	**Pn**	**05 48 55.2**	**+0.3**
PDGK						05 49 20.6	
PDGK	**Podgornoye**	**1.70**	**307**	P	**Pn**	**05 48 55.6**	**+0.6**
	113nm,1.1s						
PDGK				S	**Sb**	**05 49 20.4**	**+2.4**
	352nm,0.8s						
PDGK	**Podgornoye**	**1.70**	**307**	Pn	**Pn**	**05 48 55.3**	**+0.3**
	318nm,0.9s						
PDGK				⇓Sn	**Sb**	**05 49 20.6**	**+2.6**
	764nm,0.8s						
UZB	**Uzynbulak**	**1.90**	**297**	⇓*e*P	**Pn**	**05 48 59.0**	**+1.2**
	251nm,0.2s						
UZB				*e*S	**Sb**	**05 49 25.9**	**+2.0**
	465nm,0.5s						
UZB	**Uzynbulak**	**1.90**	**297**	*e*PN	**Pn**	**05 48 58.8**	**+1.0**
UZB	**Uzynbulak**	**1.90**	**297**	Pg	**Pn**	**05 48 59.0**	**+1.2**
	418nm,0.7s						
UZB				Lg	Lg	05 49 25.9	
	465nm,0.5s						
KPKS	**Kokpek**	**2.27**	**301**	*e*P	**Pb**	**05 49 05.8**	**-0.3**
	196nm,0.1s						
KPKS				*e*S	**Sb**	**05 49 37.1**	**+2.7**
	1µm,0.1s						
SATY	**Saty**	**2.29**	**290**	*e*P	**Pb**	**05 49 05.8**	**-0.6**
	342nm,0.9s						
SATY				*e*S	**Sb**	**05 49 37.7**	**+2.7**
	480nm,0.7s						
SATY	**Saty**	**2.29**	**290**	Pg	**Pn**	**05 49 05.1**	**+2.0**
	342nm,0.9s						
SATY				Lg	Lg	05 49 37.7	
	480nm,0.7s						
DJR	**Jarkent**	**2.31**	**331**	*e*P	**Pb**	**05 49 08.0**	**+1.1**
	218nm,0.7s						
DJR				*e*S	**Sg**	**05 49 41.4**	**+2.3**
	852nm,0.8s						
DJR	**Jarkent**	**2.31**	**331**	Pg	**Pb**	**05 49 07.8**	**+1.0**
	218nm,0.7s						
DJR				Lg	Lg	05 49 40.9	
	852nm,0.8s						
KURS	**Kuram**	**2.61**	**298**	*e*P	**Pb**	**05 49 12.2**	**+0.3**
	399nm,1.2s						
KURS				*e*S	**Sb**	**05 49 48.9**	**+4.8**
	369nm,0.8s						
KURS	**Kuram**	**2.61**	**298**	Pg	**Pb**	**05 49 10.7**	**-1.2**
	399nm,1.2s						
KURS				Lg	Lg	05 49 46.8	
	369nm,0.8s						
TARG	**Taragay, Kyrgy**	**2.70**	**259**		**Pn**	**05 49 09.2**	**+0.2**
BLB	**Baldybastay**	**2.75**	**311**	Pg	**Pb**	**05 49 14.1**	**-0.2**
	226nm,0.8s						
BLB				Lg	Lg	05 49 52.1	
	641nm,0.3s						
KDJ	**Kajisay**	**3.10**	**268**	PN	**Pn**	**05 49 15.8**	**+1.5**
KDJ	**Kajisay**	**3.10**	**268**		**Pn**	**05 49 15.8**	**+1.5**
ARXS	**Arharly**	**3.19**	**308**	*e*P	**Pb**	**05 49 22.4**	**+0.5**
	79nm,0.9s						
ARXS				*e*S	**Sb**	**05 50 06.2**	**+5.3**
	214nm,0.6s						
ARXS	**Arharly**	**3.19**	**308**	*e*PN	**Pn**	**05 49 18.3**	**+2.9**
ARXS	**Arharly**	**3.19**	**308**	Pg	**Pb**	**05 49 21.7**	**-0.2**
	79nm,0.9s						
ARXS				Lg	Lg	05 50 04.9	
	214nm,0.6s						
KOTS	**Kotyrbulak**	**3.25**	**288**	*e*P	**Pb**	**05 49 23.5**	**+0.6**
	68nm,0.8s						
KOTS				*e*S	**Sb**	**05 50 07.7**	**+5.1**
	572nm,0.6s						
KOTS	**Kotyrbulak**	**3.25**	**288**	Pg	**Pb**	**05 49 22.0**	**-0.8**
	68nm,0.8s						
KOTS				Lg	Lg	05 50 05.3	
	572nm,0.6s						
MDOK	**Medeo**	**3.27**	**286**	*e*P	**Pb**	**05 49 22.7**	**-0.6**
	90nm,0.7s						
MDOK				*e*S	**Sb**	**05 50 06.3**	**+2.9**
	214nm,0.8s						
MDOK	**Medeo**	**3.27**	**286**	PN	**Pn**	**05 49 18.6**	**+2.0**
MDOK						05 50 04.9	
MDOK	**Medeo**	**3.27**	**286**	⇓Pg	**Pn**	**05 49 19.6**	**+3.0**
	89nm,0.6s						
MDOK				⇓Lg	Lg	05 50 05.0	
	223nm,0.6s						
MDOK	**Medeo**	**3.27**	**286**	Pg	**Pb**	**05 49 21.3**	**-2.0**
	90nm,0.7s						
MDOK				Lg	Lg	05 50 04.2	
	214nm,0.8s						
KAPS	**Kapalarasan**	**3.30**	**335**	*e*P	**Pb**	**05 49 23.9**	**+0.2**
	130nm,0.3s						
KAPS				*e*S	**Sg**	**05 50 09.0**	**-1.7**
	263nm,0.6s						
KAPS	**Kapalarasan**	**3.30**	**335**	Pg	**Pb**	**05 49 23.3**	**-0.3**
	130nm,0.8s						
KAPS				Lg	Lg	05 50 07.5	
	263nm,0.6s						
TNSS	**Tian-Shan**	**3.32**	**284**	*e*P	**Pb**	**05 49 23.7**	**-0.6**
	45nm,0.1s						
TNSS				*e*S	**Sb**	**05 50 08.4**	**+3.5**
	84nm,0.8s						
TNSS	**Tian-Shan**	**3.32**	**284**	Pg	**Pb**	**05 49 22.9**	**-1.3**
	58nm,0.7s						
TNSS				Lg	Lg	05 50 06.9	
	84nm,0.8s						
KNDC	**Almaty**	**3.35**	**287**	⇑Pg	**Pn**	**05 49 20.9**	**+3.3**
	292nm,0.9s						
KNDC				⇑Lg	Lg	05 50 08.7	
	584nm,0.8s						
AAA	**Alma-Ata**	**3.38**	**287**	*e*P	**Pb**	**05 49 26.2**	**+1.1**
	139nm,0.5s						
AAA				*e*S	**Sg**	**05 50 12.7**	**-0.6**
	347nm,0.8s						
AAA	**Alma-Ata**	**3.38**	**287**	Pg	**Pb**	**05 49 25.8**	**+0.8**
	139nm,0.5s						
AAA				Lg	Lg	05 50 11.7	
	347nm,0.8s						
TDK	**Taldyqorghan**	**3.43**	**323**	*e*P	**Pb**	**05 49 27.2**	**+1.4**
	269nm,0.7s						
TDK				*e*S	**Sg**	**05 50 14.0**	**-0.9**
	687nm,1.0s						
TDK	**Taldyqorghan**	**3.43**	**323**	Pg	**Pb**	**05 49 26.9**	**+1.1**
	269nm,0.7s						
TDK				Lg	Lg	05 50 13.6	
	687nm,1.0s						
CHKK	**Chushkaly**	**3.54**	**297**	*e*P	**Pb**	**05 49 29.6**	**+1.9**
	86nm,0.3s						
CHKK				*e*S	**Sg**	**05 50 17.8**	**-0.7**
	131nm,0.2s						
CHKK	**Chushkaly**	**3.54**	**297**	Pg	**Pb**	**05 49 26.7**	**-1.1**
	86nm,0.8s						
CHKK				Lg	Lg	05 50 13.2	
	103nm,0.5s						
KTBS	**Karatobe**	**3.69**	**294**	*e*P	**Pb**	**05 49 32.0**	**+1.6**
	119nm,0.9s						
KTBS				*e*S	**Sb**	**05 50 21.4**	**+6.2**
	212nm,0.7s						
KTBS	**Karatobe**	**3.69**	**294**	Pg	**Pb**	**05 49 29.0**	**-1.3**
	119nm,0.9s						
KTBS				Lg	Lg	05 50 17.4	
	212nm,0.7s						
MTBS	**Maitube**	**3.71**	**284**	*e*P	**Pb**	**05 49 30.0**	**-0.7**
	41nm,0.2s						
MTBS				*e*S	**Sb**	**05 50 18.9**	**+3.0**
	132nm,1.2s						
MTBS	**Maitube**	**3.71**	**284**	Pg	**Pb**	**05 49 27.7**	**-3.0**
	48nm,1.1s						
MTBS				Lg	Lg	05 50 17.0	
	132nm,1.2s						
KUU	**Kurty**	**3.99**	**295**	*e*P	**Pb**	**05 49 37.0**	**+1.6**
	121nm,0.9s						
KUU				*e*S	**Sb**	**05 50 30.5**	**+6.7**
	105nm,0.6s						
KUU	**Kurty**	**3.99**	**295**	Pg	**Pb**	**05 49 36.2**	**+0.8**
	121nm,0.9s						
KUU				Lg	Lg	05 50 29.4	
	105nm,0.6s						
BOOM	**Boomskoye usch**	**4.00**	**274**	PN	**Pn**	**05 49 27.1**	**+0.4**
BOOM	**Boomskoye usch**	**4.00**	**274**		**Pn**	**05 49 27.1**	**+0.4**
KST	**Kastek**	**4.03**	**282**	*e*P	**Pb**	**05 49 38.0**	**+1.8**
	79nm,0.9s						
KST				*e*S	**Sb**	**05 50 32.3**	**+7.1**
	124nm,1.0s						
KST	**Kastek**	**4.03**	**282**	Pg	**Pb**	**05 49 37.0**	**+0.8**
	79nm,0.9s						
KST				Lg	Lg	05 50 30.9	
	124nm,1.0s						
DGS	**Degeres**	**4.20**	**285**	*e*P	**Pb**	**05 49 40.2**	**+1.1**
	59nm,0.7s						
DGS				*e*S	**Sb**	**05 50 36.9**	**+6.8**
	108nm,0.7s						
DGS	**Degeres**	**4.20**	**285**	Pg	**Pb**	**05 49 39.6**	**+0.5**
	59nm,0.7s						
DGS				Lg	Lg	05 50 35.5	
	108nm,0.7s						
TKM2	**Tokmak 2**	**4.28**	**280**	⇓Pg	**Pb**	**05 49 39.9**	**-0.6**
	138nm,1.1s						
TKM2				⇓Lg	Lg	05 50 38.2	
	111nm,0.6s						
MAKZ	**Makanchi**	**4.51**	**6**	PN	Pn	05 49 38.0	+4.5
MAKZ						05 50 52.1	
MAKZ	**Makanchi**	**4.51**	**6**	⇑Pn	**Pn**	**05 49 36.2**	**+2.7**
	156nm,1.1s						
MAKZ				⇑Lg	Lg	05 50 54.8	
	142nm,1.0s						
MAKZ	**Makanchi**	**4.51**	**6**	Pn	**Pn**	**05 49 37.2**	**+3.6**
MK31	**Makanchi Array**	**4.53**	**8**	*e*PN	Pn	05 49 38.1	+4.4
MK31				*e*		05 50 53.4	
MK31	**Makanchi Array**	**4.53**	**8**	⇓Pn	Pn	05 49 37.8	+4.1
	29nm,0.8s,baz=187,slow=13,SNR=106						
MK31				⇓Lg	Lg	05 50 54.4	
	264nm,0.9s,baz=191,slow=30,SNR=11						
MK31	**Makanchi Array**	**4.53**	**8**	Pn	Pn	05 49 37.8	+4.1
MKAR	**Makanchi Array**	**4.53**	**8**	Pn	**Pn**	**05 49 37.4**	**+3.6**
	2.5nm,0.3s,baz=191,slow=12,SNR=72						
MKAR				Pg	**Pg**	**05 49 50.5**	**-1.0**
	4.2nm,0.3s,baz=185,slow=16,SNR=12						
MKAR				Lg	Lg	05 50 50.7	
	6.3nm,0.3s,baz=198,slow=19,SNR=6.7						
MKAR	**Makanchi Array**	**4.53**	**8**	*i* PN	**Pn**	**05 49 37.4**	**+3.6**
MKAR				pmax	pmax		
	comp=Z,24nm,0.8s						
MKAR	**Makanchi Array**	**4.53**	**8**	Pn	**Pn**	**05 49 37.2**	**+3.5**
WMQ	**Urumqi**	**4.89**	**70**	*e*Pn	**Pn**	**05 49 38.3**	**-0.5**
WMQ				Sn	**Sb**	**05 50 42.4**	**-7.4**
WMQ				smax	smax		
	comp=Z,440nm,1.1s						
WMQ				smax	smax		
	comp=Z,410nm,1.3s						
KSH	**Kashi**	**4.94**	**237**	Pn	Pn	05 49 45.4	+5.9
KSH				Sn	**Sb**	**05 50 47.3**	**-3.9**
KSH				smax	smax		
	comp=Z,100nm,1.2s						
KSH				smax	smax		
	comp=Z,130nm,1.0s						
AAK	**Ala-Archa**	**5.08**	**276**	Pn	**Pn**	**05 49 42.7**	**+1.3**
	comp=Z,0.6nm,0.3s,baz=109,slow=11,SNR=9.7						
AAK				Pg	**Pb**	**05 49 55.6**	**+1.6**
	comp=Z,2.0nm,0.3s,baz=110,slow=16,SNR=22						
AAK				Lg	Lg	05 51 02.4	
	comp=Z,2.7nm,0.3s,baz=267,slow=17,SNR=6.7						
AAK				LR	LR	05 51 14.4	
	comp=Z,36nm,20.8s,baz=48,slow=34						
AAK	**Ala-Archa**	**5.08**	**276**	⇑Pg	**Pb**	**05 49 58.1**	**+4.1**
	comp=Z,42nm,0.8s						
AAK				Lg	Lg	05 50 59.2	
	comp=Z,131nm,0.8s						
AAK	**Ala-Archa**	**5.08**	**276**	Pn	**Pn**	**05 49 43.1**	**+1.7**
ZSN	**Zaisan**	**5.71**	**25**	*e*P	Pg	05 50 08.3	-5.8
	comp=Z,21nm,0.9s						
ZSN				*e*S	**Sg**	**05 51 24.3**	**-3.8**
	comp=Z,146nm,0.2s						
MRKS	**Merke**	**6.01**	**277**	*e*P	**Pb**	**05 50 12.8**	**+2.8**
	comp=Z,21nm,0.8s						
MRKS				*e*S	Sb	05 51 32.3	+10
	comp=Z,36nm,0.3s						
MRKS	**Merke**	**6.01**	**277**	Pg	**Pb**	**05 50 12.4**	**+2.5**
	comp=Z,21nm,0.8s						
MRKS				Lg	Lg	05 51 32.3	
	comp=Z,32nm,0.9s						
KKAR	**Karatay Array**	**8.02**	**279**	P	**Pn**	**05 50 23.4**	**+1.8**
KKAR	**Karatay Array**	**8.02**	**279**	Pn	**Pn**	**05 50 23.4**	**+1.8**
DGZ	**Jazzator, Alta**	**8.51**	**28**	*i* P	Pn	05 50 33.1	+4.6
DGZ				pmax	pmax		
	comp=Z,13nm,0.6s						
KURBB	**Kurchatov Arra**	**8.53**	**348**	Pn	**Pn**	**05 50 32.0**	**+3.4**
	comp=Z,0.1nm,0.3s,baz=170,slow=12,SNR=16						
KURBB				Lg	Lg	05 52 58.1	
	comp=Z,0.5nm,0.3s,baz=176,slow=32,SNR=5.9						
KURBB	**Kurchatov Arra**	**8.53**	**348**	⇑Pn	**Pn**	**05 50 31.6**	**+3.0**
	comp=Z,14nm,0.9s						
KURBB				⇓Pg	Pg	05 51 01.0	-7.0
	comp=Z,46nm,1.0s						
KURBB				⇓Lg	Lg	05 53 06.3	
	comp=Z,199nm,1.2s						
KURK	**Kurchatov**	**8.61**	**348**	*de*P	**Pn**	**05 50 33.2**	**+3.5**
KURK				pmax	pmax		
	comp=Z,16nm,1.3s						
KURK	**Kurchatov**	**8.61**	**348**	⇑Pn	**Pn**	**05 50 33.6**	**+4.0**
	comp=Z,17nm,0.8s						
KURK				⇓Lg	Lg	05 53 05.2	
	comp=Z,153nm,1.1s						
KURK	**Kurchatov**	**8.61**	**348**	Pn	**Pn**	**05 50 32.9**	**+3.2**
GAR	**Garm**	**9.01**	**252**	Pn	**Pn**	**05 50 33.7**	**-1.7**
CHGR	**Chuyangaron**	**9.97**	**253**		**Pn**	**05 50 47.2**	**-1.4**
CHCP	**Chirah Chowk**	**10.73**	**219**	P	**Pn**	**05 50 57.5**	**-1.4**
NIL	**Nilore**	**10.75**	**219**	P	**Pn**	**05 50 56.7**	**-2.4**
NIL	**Nilore**	**10.75**	**219**		**Pn**	**05 50 56.7**	**-2.4**
CEP	**Cherat**	**11.27**	**224**	P	**Pn**	**05 51 05.6**	**-0.7**
ZAA0	**Zalesovo Array**	**11.87**	**10**	Pn	**Pn**	**05 51 16.4**	**+2.2**
ZALV	**Zalesovo Beam**	**11.87**	**10**	Pn	**Pn**	**05 51 15.8**	**+1.5**
	comp=Z,0.5nm,0.3s,baz=193,slow=13,SNR=16						
ZALV				Lg	Lg	05 54 44.4	
	comp=Z,0.1nm,0.3s,baz=176,slow=27,SNR=5.5						
ZALV	**Zalesovo Beam**	**11.87**	**10**	*i* P	**Pn**	**05 51 16.7**	**+2.4**
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BVAR	**Borovoye Array**	**12.99**	**329**	Pn	**Pn**	**05 51 31.1**	**+1.5**
	comp=Z,0.2nm,0.3s,baz=195,slow=16,SNR=2.4						
BVAR				Lg	Lg	05 55 19.7	
	comp=Z,0.4nm,0.3s,baz=140,slow=25,SNR=5.4						
BRVK	**Borovoye**	**13.06**	**329***c*	*i*P	**Pn**	**05 51 34.2**	**+3.6**
BRVK				pmax	pmax		
	comp=Z,10.0nm,1.7s						
BRVK	**Borovoye**	**13.06**	**329**	Pn	**Pn**	**05 51 31.2**	**+0.6**
GTA	**Gaotai**	**14.28**	**96**	*e*P	**Pn**	**05 51 48.3**	**+0.9**
GTA				pP	P	05 51 54.3	-0.5
GTA				sP		05 51 57.6	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
AB31	**Akbulak array**	**16.43**	**302**	*i* P	**Pn**	**05 52 14.5**	**-1.1**
ABKAR	**Akbulak array**	**16.43**	**302**		**Pn**	**05 52 15.7**	**0.0**
ABKAR				IAmb	IAmb	05 52 20.2	
	comp=Z,23nm,1.5s						
ABKAR	**Akbulak array**	**16.43**	**302**	Pn	**Pn**	**05 52 15.2**	**-0.5**
AKTO	**Aktyubinsk**	**17.97**	**305**	P	**Pn**	**05 52 34.5**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=95,slow=12,SNR=6.4						
AKTO				LR	LR	05 59 10.0	
	comp=Z,51nm,19.9s,baz=82,slow=36						
GEYT	**Alibeck**	**18.28**	**264**	LR	LR	06 00 31.2	
	comp=Z,68nm,20.7s,baz=140,slow=40						
GEYT	**Alibeck**	**18.28**	**264**	P	**Pn**	**05 52 35.5**	**-3.4**
GYA0B	**ALIBECK ARRAY**	**18.28**	**264**	P	**Pn**	**05 52 35.9**	**-3.0**
SONM	**Songino Array**	**18.50**	**64**	P	**P**	**05 52 42.6**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=259,slow=9.0,SNR=17						
ULN	**Ulaanbaatar**	**18.94**	**64**	⇓*e*P	**Pn**	**05 52 48.8**	**+1.9**
ULN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ARU	**Arti**	**20.34**	**322**	P	Pn	05 53 02.8	-0.7
	comp=Z,5.7nm,0.8s,baz=131,slow=9.2,SNR=15						
ARU				LR	LR	06 01 19.1	
	comp=Z,116nm,20.0s,baz=112,slow=38						
ARU	**Arti**	**20.34**	**322***c*	*i*P	**P**	**05 53 02.3**	**+0.9**
ARU				S	**S**	**05 56 50.7**	**+1.3**
ARU				SS	**SnSn**	**05 57 08.6**	**+1.6**
ARU				pmax	pmax		
	comp=Z,44nm,1.6s						
ARU	**Arti**	**20.34**	**322**	P	**P**	**05 53 02.1**	**+0.6**
ARU				IAmb	IAmb	05 53 07.3	
	comp=Z,23nm,0.9s						
XAN	**Xi'an**	**23.13**	**102**	P	**P**	**05 53 33.8**	**+2.3**
XAN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BELG	**Belogornoye**	**24.76**	**306**	P	**P**	**05 53 47.5**	**+0.8**
	comp=Z,21nm,1.0s,baz=1.9,slow=2.2,SNR=5.3						
BELG	**Belogornoye**	**24.76**	**306**	*de*P	**P**	**05 53 48.6**	**+1.9**
BELG				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KIRV	**Kirov**	**25.70**	**320**	LR	LR	06 04 47.5	
	comp=Z,88nm,19.0s,baz=251,slow=38						
KIRV	**Kirov**	**25.70**	**320**	⇑*e*P	**P**	**05 53 57.0**	**+1.8**
NRIK	**Noril'sk**	**27.28**	**5**	P	**P**	**05 54 10.6**	**+1.2**
	comp=Z,4.5nm,0.9s,baz=200,slow=7.5,SNR=4.8						
NRIK	**Noril'sk**	**27.28**	**5**	P	**P**	**05 54 10.9**	**+1.5**
NRIK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
NRIK	**Noril'sk**	**27.28**	**5**	P	**P**	**05 54 10.9**	**+1.5**
NRIK				IAmb	IAmb	05 54 26.8	
	comp=Z,7.4nm,1.1s						
GNI	**Garni**	**27.48**	**278**	*i* P	**P**	**05 54 13.1**	**+1.4**
KBZ	**Khabaz**	**27.98**	**286**	LR	LR	06 07 30.6	
	comp=Z,82nm,18.7s,baz=359,slow=41						
KIV	**Kislovodsk**	**28.09**	**287**	*e*P	**P**	**05 54 18.2**	**+1.2**
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**28.10**	**142**	LR	LR	06 07 54.6	
	comp=Z,15nm,20.8s,baz=180,slow=42						
SOC	**Sochi**	**30.27**	**287**	*e*P	**P**	**05 54 37.0**	**+0.8**
SOC				*e*PPP	PPP	05 55 43.6	
SOC				*e*S	**S**	**05 59 35.8**	**-0.3**
SOC				*e*SS	**SnSn**	**06 01 09.0**	**-0.8**
KLMR	**Klimovskoe**	**31.19**	**321**	*e*P	**P**	**05 54 43.8**	**-0.4**
KLMR				pmax	pmax		
	comp=Z,16nm,1.4s						
KLMR	**Klimovskoe**	**31.19**	**321**	*e*P	**P**	**05 54 43.9**	**-0.3**
KLMR				AMP		05 54 49.1	
	comp=Z,16nm,1.4s						
OBN	**Obninsk**	**31.62**	**309**	*i* P	**P**	**05 54 51.0**	**+3.0**
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
YAK	**Yakutsk**	**34.52**	**38**	⇑*e*P	**P**	**05 55 12.9**	**-0.3**
YAK				pmax	pmax		
	comp=Z,14nm,0.7s						
KLR	**Kul'dur**	**35.27**	**61**	⇓*i*P	P	05 55 23.1	+3.2
KLR				pmax	pmax		
	comp=Z,10.0nm,2.0s						
BRTR	**Keskin Array B**	**35.72**	**282**	P	**P**	**05 55 24.0**	**0.0**
	comp=Z,1.8nm,0.6s,baz=97,slow=10,SNR=7.4						
BRTR	**Keskin Array B**	**35.72**	**282**	P	**P**	**05 55 23.8**	**-0.2**
AKBB	**Malin Array Si**	**36.17**	**302**	⇑*e*P	**P**	**05 55 30.9**	**+3.3**
AKBB				pmax	pmax		
	comp=Z,11nm,1.8s						
MNK	**Minsk**	**36.64**	**308**	*i* P	**P**	**05 55 29.2**	**-2.3**
MNK				*i*		05 56 52.2	
MNK				*i*		05 57 52.3	
MNK				*i* S	**S**	**06 01 09.2**	**-5.4**
MNK				*i* SS	**SnSn**	**06 03 41.0**	**-3.0**
MNK				*i*		06 05 42.8	
MNK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MNK				pmax	pmax		
	comp=N,23nm,1.0s						
MNK				pmax	pmax		
	comp=E,1.0nm,0.8s						
MNK				MLR	MLR		
	comp=Z,70nm,18.0s						
MNK				MLR	MLR		
	comp=E,7.0nm,12.0s						
MNK				MLR	MLR		
	comp=N,58nm,20.0s						
MNK	**Minsk**	**36.64**	**308**	*i* P	**P**	**05 55 29.2**	**-2.3**
	comp=E,1.0nm,0.8s						
MNK				*i* P	**P**	**05 55 29.2**	**-2.3**
	comp=N,23nm,1.1s						
MNK				*i* P	**P**	**05 55 29.2**	**-2.3**
	comp=Z,5.0nm,0.7s,baz=89						
MNK				*i* PP	**PnPn**	**05 56 52.2**	**-2.2**
MNK				*i* PPP	PPP	05 57 07.7	
MNK				*i* S	**S**	**06 01 09.3**	**-5.3**
MNK				*i* SS	**SnSn**	**06 03 41.1**	**-2.9**
MNK				*i* SSS	SSS	06 03 58.4	
MNK				*i* LR	LR	06 10 33.0	
MNK				*i* LRM	MLR	06 11 35.0	
	comp=Z,70nm,18.1s						
MNK				*i* LRM	MLR	06 11 45.1	
	comp=E,7.0nm,12.3s						
MNK				*i* LRM	MLR	06 11 49.5	
	comp=N,58nm,20.2s						
TIXI	**Tiksi**	**37.36**	**23**	*ce*P	**P**	**05 55 38.3**	**+0.9**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.9s						
FINES	**FINESS Array B**	**37.69**	**320**	P	**P**	**05 55 40.8**	**+0.4**
	comp=Z,1.3nm,0.8s,baz=112,slow=6.2,SNR=3.5						
ARCES	**ARCESS Array B**	**39.25**	**333**	P	**P**	**05 55 53.5**	**+0.1**
	comp=Z,7.9nm,1.1s,baz=92,slow=9.7,SNR=6.6						
NC405	**NORSAR Array S**	**44.62**	**320**	P	**P**	**05 56 37.5**	**+0.1**
NC602	**NORSAR Array S**	**44.76**	**319**	P	**P**	**05 56 38.8**	**+0.3**
NB201	**NORSAR Array S**	**44.84**	**320**	P	**P**	**05 56 39.9**	**+0.8**
NB2	**NORSAR Subarra**	**44.88**	**320**	P	**P**	**05 56 39.5**	**0.0**
	comp=Z,3.0nm,0.6s,baz=82,slow=8.6						
NOA	**NORSAR Array B**	**44.88**	**320**	P	**P**	**05 56 39.4**	**0.0**
	comp=Z,1.4nm,0.6s,baz=83,slow=7.2,SNR=9.2						
NOA				LR	LR	06 16 03.0	
	comp=Z,36nm,19.3s,baz=300,slow=37						
NC204	**NORSAR Array S**	**45.05**	**320**	P	**P**	**05 56 41.6**	**+0.6**
BILL	**Bilibino**	**49.75**	**29**	*i* P	**P**	**05 57 16.2**	**-1.1**
BILL				pmax	pmax		
	comp=Z,7.0nm,1.5s						
BNI	**Bardonecchia**	**52.25**	**300**	P	**P**	**05 57 36.3**	**-0.3**
BNI				pmax	pmax		
	comp=Z,11nm,1.0s						
BNI	**Bardonecchia**	**52.25**	**300**	P	**P**	**05 57 36.3**	**-0.3**
BNI				IAmb	IAmb	05 57 39.5	
	comp=Z,11nm,1.0s						
TOLK	**Toolik Lake Re**	**63.08**	**19**	P	**P**	**05 58 53.3**	**+1.0**
TOLK				IAmb	IAmb	05 58 57.2	
	comp=Z,2.9nm,1.4s						
BMAR	**Burnt Mountain**	**65.19**	**18**	P	**P**	**05 59 07.8**	**+1.6**
COLA	**College**	**66.45**	**21**	⇓*e*P	**P**	**05 59 15.6**	**+1.4**
COLA				pmax	pmax		
	comp=Z,16nm,2.4s						
INK	**Inuvik**	**66.64**	**13**	P	**P**	**05 59 15.0**	**-0.4**
	comp=Z,4.7nm,1.2s,baz=172,slow=7.7,SNR=3.6						
ILAR	**Eielson Array**	**66.78**	**20**	P	**P**	**05 59 16.3**	**-0.1**
	comp=Z,0.9nm,0.8s,baz=314,slow=5.4,SNR=9.9						
TORD	**Torodi Ar. Bea**	**73.65**	**273**	P	**P**	**05 59 57.5**	**-1.7**
	comp=Z,2.4nm,0.8s,baz=40,slow=5.2,SNR=14						
YKA	**Yellowknife Ar**	**74.75**	**8**	P	**P**	**06 00 04.7**	**-0.3**
	comp=Z,1.6nm,0.9s,baz=0.0,slow=4.9,SNR=4.6						
YKA				LR	LR	06 38 00.1	
	comp=Z,23nm,18.1s,baz=0.0,slow=40						
YKA	**Yellowknife Ar**	**74.75**	**8**	*i* P	**P**	**06 00 06.0**	**+1.1**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ASAR	**Alice Springs**	**81.62**	**133**	P	**P**	**06 00 41.8**	**-1.7**
	comp=Z,0.9nm,0.9s,baz=318,slow=4.5,SNR=8.8						

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*NIED **24** 05:51:35.9, 30°.85N×128°.53E, h19^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.30; $M_{\theta\theta}$2.25; $M_{\phi\phi}$-0.95; $M_{r\theta}$0.93; $M_{\theta\phi}$4.15; $M_{\phi r}$-1.91; Fault plane solution: $M_0$5.05000×10^{14} NP1:ϕ_s15.00000°, δ72.00000°, λ-156.00000°. NP2:ϕ_s277.00000°, δ67.00000°, λ-20.00000°.*
JMA 24 05:51:35.8±0.3**, 30°.85N×128°.53E, h19**^{km}**, M3.6, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	**Shimokoshiki**	**1.31**	**51**	P	Pn	05 51 58.9	-0.2
JKC	**Kuchinoerabu**	**1.49**	**105**	P	Pn	05 52 02.0	+0.5
JKC				*e*S	Sn	05 52 20.5	+0.1

JNN	Nakanoshima	1.54	131	P	Pb	05 52 03.1	-0.6
JSU	Suzuyama	1.77	68	P	Pn	05 52 06.2	+0.7
JFU	Fukue jima 2	1.81	6	P	Pn	05 52 07.0	+1.0
JYAK	Yakushimahirau	1.81	109	P	Pn	05 52 05.4	-0.6
JMTN	Minamitane	2.09	102	P	Pn	05 52 10.4	+0.5
JTN	Tanegashima 3	2.12	95	P	Pn	05 52 11.1	+0.9
JTZ	Takazaki	2.43	64	P	Pn	05 52 15.7	+1.3
JIU3	Izumi3	2.58	48	P	Pn	05 52 18.0	+1.4

NOU 24 06:08:01.3, 20°.55S×168°.14E, h67^{km}, MLv3.9/8, Loyalty Islands, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LIFNC	LIFOU	0.87	255	P	Pn	06 08 18.6	+0.6
MARNC	Mare, Loyalty	0.93	186	P	Pn	06 08 19.2	+0.4
YATNC	Mamie plateau,	1.90	218	P	Pn	06 08 30.8	-0.8
DZM	Mont Dzumac	2.19	226	P	Pn	06 08 35.8	+0.3
OUENC	Ouen Island, N	2.22	213	P	Pn	06 08 36.2	+0.4
RTV	Rentapao	2.76	6	P	Pn	06 08 42.9	-0.3
DVP	Devils Point	2.81	1	P	Pn	06 08 44.3	+0.4

*NEIC **24** 06:15:09.7±1.9, 20°.4S±0°.1×177°.8W±0°.2, h497^{km}±7^{km}, mb4.4/20, Error ellipse: s-maj=23.8km s-min=15.6km az=127.0*

*IDC **24** 06:15:09.6±2.2, 20°.38S×177°.81W, h496^{km}±23^{km}, mb3.5/13, mb1 3.8/15, mb1mx3.7/23, mbtmp4.4/15, Error ellipse: s-maj=24.5km s-min=13.4km az=145.0*

ISC 24 06:15:09.2±0.4**, 20°.41S**±0°.08×**177°.76W**±0°.08**, h500^{km}, n86, σ1ˢ42**/87**, mb4.2**/24**, 10C-7D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	8.63	42	P	P	06 17 11.2	-1.2
	6.9nm,0.3s,baz=208,slow=3.7,SNR=7.7						
AFI				S	S	06 18 50.5	-2.9
	14nm,0.3s,baz=100,slow=23,SNR=8.2						
GLKZ	Green Lake	8.81	181	S	S	06 18 51.5	-4.9
DZM	Mont Dzumac	14.82	261	P	P	06 18 18.4	+0.8
	0.9nm,0.3s,baz=294,slow=22,SNR=7.7						
MXZ	Matakaoa Point	17.43	190	P	P	06 18 45.5	+1.5
MXZ				S	S	06 21 53.6	+14
WMGZ	Waiomatatini S	17.66	190	P	P	06 18 57.2	+11
WMGZ				S	S	06 22 02.4	+19
PKGZ	Pakihiroa	17.78	191	P	P	06 18 50.9	+3.4
PKGZ				S	S	06 22 02.7	+17
PUZ	Puketiti	17.93	190	P	P	06 18 47.8	-0.9
PUZ				S	S	06 22 04.2	+16
RUGZ	Raukumara Rang	17.93	192	P	P	06 18 48.5	-0.4
RUGZ				S	S	06 22 09.6	+21
TWGZ	Tauwhareparae	18.08	191	P	P	06 18 52.7	+2.5
TWGZ				S	S	06 22 12.3	+22
TOZ	Tahuroa Road	18.22	197	P	P	06 18 52.9	+1.5
URZ	Urewera	18.33	193	P	P	06 18 52.3	-0.1
URZ				S	S	06 22 14.4	+20
URZ	Urewera	18.33	193	P	P	06 18 52.5	+0.1
RIGZ	Rimuhau	18.64	191	P	P	06 18 56.7	+1.5
RIGZ				S	S	06 22 24.6	+25
MTHZ	Maungataniwha	18.96	193	P	P	06 18 54.9	-3.3
MTHZ				S	S	06 22 30.6	+26
NMHZ	Naumai	19.20	193	P	P	06 19 02.1	+1.7
NMHZ				S	S	06 22 35.4	+27
BKZ	Black Stump Fm	19.33	194	P	P	06 19 01.6	0.0
TMVZ	Te Maari	19.47	195	P	P	06 19 03.6	+0.6
THZ	Tophouse	22.70	198	P	P	06 19 32.1	-0.1
CTAO	Charters Tower	33.72	264	P	P	06 21 07.6	-0.9
CTAO				IAmb	IAmb	06 21 10.3	
	comp=Z,9.1nm,0.7s						
TOO	Toolangi	36.13	234	P	P	06 21 30.0	+1.5
TOO				IAmb	IAmb	06 21 39.7	
	comp=Z,15nm,1.2s						
COEN	Coen	37.80	273	P	P	06 21 43.1	+0.6
COEN				IAmb	IAmb	06 21 44.1	
	comp=Z,9.0nm,1.2s						
STKA	Stephens Creek	38.03	244	P	P	06 21 44.7	+0.5
	comp=Z,1.4nm,0.5s,baz=94,slow=11,SNR=4.2						
STKA	Stephens Creek	38.03	244	IAmb	IAmb	06 21 46.6	
	comp=Z,1.0nm,1.2s						
BBOO	Buckleboo	42.78	243	P	P	06 22 22.8	+0.6
BBOO				IAmb	IAmb	06 22 24.5	
	comp=Z,16nm,1.3s						
AS31	Alice Springs	44.75	257	P	P	06 22 38.2	+0.4
ASAR	Alice Springs	44.76	257	P	P	06 22 38.1	+0.4
	comp=Z,9.1nm,0.5s,baz=95,slow=7.5,SNR=194						
ASAR				PcP	pP	06 24 09.8	+0.3
	comp=Z,2.6nm,0.7s,baz=103,slow=3.9,SNR=10.0						
ASAR				S	S	06 28 34.9	-3.2
	comp=Z,2.0nm,0.9s,baz=91,slow=15,SNR=16						
ASAR	Alice Springs	44.76	257	P	P	06 22 38.4	+0.6
WB0	Warramunga Arr	44.81	262	P	P	06 22 38.4	+0.2
WB0				IAmb	IAmb	06 22 38.7	
	comp=Z,9.8nm,0.5s						
WB2	Warramunga Arr	44.82	262	P	P	06 22 38.4	+0.1
WB2				IAmb	IAmb	06 22 38.9	
	comp=Z,13nm,1.2s						
WRAB	Tennant Creek	44.83	262	P	P	06 22 38.0	-0.3
WRAB				IAmb	IAmb	06 22 39.5	
	comp=Z,6.8nm,0.9s						
WRA	Warramunga Arr	44.83	262	P	P	06 22 38.1	-0.3
	comp=Z,4.3nm,0.4s,baz=97,slow=7.9,SNR=150						
WRA				S	S	06 28 33.9	-5.3
	comp=Z,1.0nm,0.9s,baz=97,slow=13,SNR=4.6						
FORT	Forrest	49.53	247	P	P	06 23 13.9	+0.2
FORT				IAmb	IAmb	06 23 14.4	
	comp=Z,14nm,0.6s						
KNRA	Kununurra	50.89	266	P	P	06 23 24.1	+0.3
KNRA				IAmb	IAmb	06 23 24.8	
	comp=Z,9.6nm,0.7s						
PSA00	Pilbara Seismi	57.90	257	P	P	06 24 12.8	-0.5
VNDA	Vanda	58.01	185	P	P	06 24 14.6	+1.6
	comp=Z,0.2nm,0.5s,baz=0.0,slow=5.1,SNR=5.3						
MORW	Morawa	60.07	248		P	06 24 28.0	+0.3
MORW				IAmb	IAmb	06 24 47.8	
	comp=Z,15nm,1.1s						
QSPA	South Pole Qui	69.65	180	P	P	06 25 29.4	+1.6
QSPA				IAmb	IAmb	06 25 30.0	
	comp=Z,5.0nm,0.7s						
PETK	Petropavlovsk-	76.25	345	P	P	06 26 06.1	+0.6
	comp=Z,4.2nm,0.7s,baz=106,slow=5.3,SNR=7.4						
PETK	Petropavlovsk-	76.25	345		P	06 26 06.6	+1.0
USRK	Ussuriysk Ar.	79.02	326	P	P	06 26 22.8	+2.0
	comp=Z,6.3nm,0.8s,baz=157,slow=3.4,SNR=8.6						
NVAR	Mina Array Bea	80.81	43	P	P	06 26 32.6	+2.0
	comp=Z,1.1nm,0.8s,baz=223,slow=8.9,SNR=7.7						
RPSI	Rantau Prapat	84.67	275	P	P	06 26 50.4	0.0
PSI	Prapat	84.71	275	P	P	06 26 50.4	-0.4
	comp=Z,4.1nm,0.7s,baz=320,slow=1.5,SNR=5.3						
TXAR	Lajitas Array	86.82	57	P	P	06 27 01.8	+1.3
	comp=Z,0.8nm,0.7s,baz=221,slow=6.6,SNR=10						
BWN	Browne	87.13	12	P	P	06 26 59.2	-1.8
SNAA	Sanae	88.09	178	P	P	06 27 05.7	0.0
ILAR	Eielson Array	88.18	13	P	P	06 27 05.7	-0.2
	comp=Z,1.3nm,0.6s,baz=218,slow=5.5,SNR=24						
VNA3	Neumayer Olymp	88.21	176	P	P	06 27 06.3	+0.1
VNA2	Neumayer--Watz	88.66	177	P	P	06 27 08.7	+0.5
	baz=184,slow=4.0						
PDAR	Pinedale Array	88.75	43	P	P	06 27 10.6	+1.2
	comp=Z,0.8nm,0.6s,baz=213,slow=3.0,SNR=8.0						
VNA1	Neumayer--Stat	88.88	177	P	P	06 27 09.7	+0.5
CMAR	Chiang Mai Arr	90.30	289	P	P	06 27 18.9	+2.1
	comp=Z,5.8nm,0.8s,baz=122,slow=3.2,SNR=18						
CHTO	Chiang Mai	90.42	290	P	P	06 27 18.6	+1.2
SONM	Songino Array	95.84	319	P	P	06 27 42.3	+0.6
	comp=Z,0.3nm,0.5s,baz=119,slow=1.8,SNR=2.0						
MKAR	Makanchi Array	111.30	313	PKiKP	PKiKP	06 32 45.0	-0.9
	comp=Z,0.9nm,0.6s,baz=34,slow=0.4,SNR=8.7						
KURK	Kurchatov	114.08	317		PKiKP	06 32 50.5	-0.5
KURBB	Kurchatov Arra	114.14	317	PKiKP	PKiKP	06 32 50.5	-0.6
	comp=Z,1.1nm,0.6s,baz=103,slow=1.6,SNR=7.5						
BVAR	Borovoye Array	119.16	320	PKP	PKiKP	06 33 00.2	-0.5
	comp=Z,1.7nm,0.5s,baz=224,slow=6.2,SNR=9.6						
ARU	Arti	125.26	326	PKP	PKiKP	06 33 12.0	-0.7
	comp=Z,0.9nm,0.3s,baz=324,slow=6.0,SNR=5.9						
AKTO	Aktyubinsk	127.15	318	PKP	PKiKP	06 33 16.6	-0.1
	comp=Z,1.4nm,0.7s,baz=153,slow=2.3,SNR=5.7						
FINES	FINESS Array B	135.75	344	PKP	PKPdf	06 33 30.3	-1.7
	comp=Z,1.7nm,0.8s,baz=97,slow=4.8,SNR=5.7						
AKASG	Malin Array Be	143.05	331	PKhKP	PKPpre	06 33 42.5	
	comp=Z,6.3nm,0.5s,baz=42,slow=4.7,SNR=54						
SORM	Soroca	145.25	329	⇑P	PKPab	06 33 50.4	-0.9
BRTR	Keskin Array B	146.95	313	PKPbc	PKPbc	06 33 55.4	-0.3
	comp=Z,3.6nm,0.6s,baz=132,slow=4.0,SNR=12						
BRTR	Keskin Array B	146.95	313		PKPbc	06 33 55.1	-0.5
BURAR	Bucovina Array	147.10	331	⇑P	PKiKP	06 33 56.8	-0.8
BURAR	Bucovina Array	147.10	331		PKPbc	06 33 55.9	+0.2
CFR	Carcaliu	147.34	325	⇑P	PKPbc	06 33 54.6	-1.6
TPGR	Topolog	147.40	324	⇑P	PKiKP	06 33 56.9	-1.3
VRI	Vrincioaia	147.62	327	⇑P	PKPbc	06 33 56.2	-0.8
PLOR	Plostina	147.67	327	⇓P	PKPab	06 34 01.0	-0.1
HARR	Harsova	147.77	325	⇓P	PKiKP	06 33 57.6	-1.2
TRPA	Tarpa	147.86	334	⇑P	PKPbc	06 33 55.8	-1.7
OSTC	Ostas	147.95	343	*e*PKP	PKiKP	06 33 58.5	-0.6
CLL	Collm	148.03	347	⇓*i*PKPbc	PKiKP	06 33 58.2	-1.0
	comp=Z,15nm,0.7s						
DPC	Dobruska-Polom	148.11	343	*e*PKP	PKiKP	06 33 59.2	-0.3
DOPR	Dopca	148.21	329	⇓P	PKiKP	06 33 59.1	-0.7
KRLC	Kraliky	148.23	342	*e*PKP	PKiKP	06 33 58.7	-1.0
MLR	Muntele Rosu	148.27	327	⇑P	PKPdf	06 33 53.6	-1.1
VOIR		148.76	328	⇓P	PKiKP	06 34 00.5	-0.5
DRGR		148.84	332	⇑P	PKiKP	06 34 00.5	-0.6
ARR	Arges	149.01	329	⇓P	PKiKP	06 34 01.9	+0.4
GZR	Gura Zlata	149.88	330	⇑P	PKiKP	06 34 02.8	-0.5
GERES	GERESS Array B	150.18	345	PKPbc	PKiKP	06 34 03.5	-0.4
	comp=Z,2.5nm,0.8s,baz=20,slow=1.6,SNR=13						
HERR	Herculane	150.43	330	⇓P	PKPbc	06 34 02.0	-1.8
MDVR	Moldovita	150.83	331	⇑P	PKPbc	06 34 04.4	-0.5

*KRNET **24** 06:39:13.3±0.1, 39°.66N×71°.07E, h13^{km}, mb3.1*

*SOME **24** 06:39:14.1, 39°.77N×71°.12E, h0^{km}*

*NNC **24** 06:39:16.4±3.0, 39°.76N×71°.12E, h0^{km}, mb4.1, mpv3.7, Error ellipse: s-maj=22.2km s-min=11.5km az=10.0*

ISC 24 06:39:13.0±1.1**, 39°.71N**±0°.03×**71°.12E**±0°.03**, h8^{km}**±11^{km}**, n17, σ1ˢ73**/30**, 16C-6D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	Batken	0.42	327	⇓*i*P	Pg	06 39 21.9	+0.6
	baz=34						
BTK				⇓*i*S	Sb	06 39 28.0	-1.4
	baz=34						
DRK	Karamyk	0.57	113	⇑*i*P	Pg	06 39 24.7	+0.6
	baz=7.0						
DRK				⇑*i*S	Sg	06 39 32.8	+1.1
	baz=7.0						
GAR	Garm	0.94	222	⇑*i*P	Pg	06 39 30.0	-1.1
	baz=22						
GAR				⇑*i*S	Sg	06 39 41.9	-1.4
	baz=22						
OHH	Osh	1.52	57	⇑*i*P	Pg	06 39 42.4	+0.3
	baz=56						
OHH				⇑*i*S	Sg	06 40 04.0	+2.2
	baz=56						
TRKS	Terek-Say	1.82	1	⇑*i*P	Pb	06 39 46.9	+0.1
	baz=3.0						
TRKS				⇑*i*S	Sg	06 40 11.1	-0.5
	baz=3.0						
CHGR	Chuyangaron	1.85	236	⇑*i*P	Pn	06 39 46.4	+1.2
	baz=37						
CHGR				⇑*i*S	Sn	06 40 10.5	+1.7
	baz=37						
SFK	Sufi-Kurgan	1.86	80	⇓*e*P	Pg	06 39 49.1	+0.4
	baz=78						
SFK				⇓*e*S	Sg	06 40 14.3	+1.5
	baz=78						
IUG	Iuzhnay	2.58	342	*e*P	Pg	06 40 02.4	0.0
	219nm,0.2s						
IUG				*e*S	Sg	06 40 37.2	+1.4
	96nm,0.4s						
IUG	Iuzhnay	2.58	342	Pg	Pg	06 40 02.4	0.0
	219nm,0.2s						
IUG				Lg	Lg	06 40 37.2	
	96nm,0.4s						
MNAS	Manas	2.97	20	⇓*i*P	Pb	06 40 04.1	-2.2
	baz=21						
MNAS				⇓*i*S	Sb	06 40 40.9	-1.9
	baz=21						
AML	Almayashu	3.11	38	⇑*e*P	Pb	06 40 06.4	-2.5
	baz=38						
AML				⇑*i*S	Sb	06 40 44.9	-2.2
	baz=38						
MRKS	Merke	3.43	27	*e*P	Pg	06 40 17.5	-1.2
	3.2nm,0.4s						
MRKS				*e*S	Sg	06 41 02.9	-0.2
	17nm,0.4s						
MRKS	Merke	3.43	27	Pg	Pg	06 40 17.5	-1.2
	3.2nm,0.4s						
MRKS				Lg	Lg	06 41 02.7	
	17nm,0.4s						
BRLS	Borolday	3.46	344	*e*P	Pb	06 40 14.4	-0.2
	0.9nm,0.0s						
BRLS				*e*S	Sb	06 40 57.2	+0.5
	8.7nm,0.1s						
UCH	Uchtor	3.60	44	⇑*e*P	Pn	06 40 12.8	+3.2
	baz=44						
UCH				⇑*i*S	Sb	06 40 56.5	-4.7
	baz=44						
AAK	Ala-Archa	3.88	40	⇑Pg	Pg	06 40 26.1	-1.2
	1.9nm,0.5s						
AAK				⇑Lg	Lg	06 41 18.7	
	2.2nm,0.5s						
DGS	Degeres	4.97	43	Pg	Pg	06 40 47.8	-0.5
DGS				Lg	Lg	06 41 54.7	

IDC 24 06:42:52.7±999.0**, 28°.25N**×**136°.35E, h0^{km}, Error ellipse: s-maj=727.4km s-min=175.1km az=18.0, West of Bonin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I30JP	ISUMI INFRASON	7.81	25	*i*		07 32 20.0	
	baz=206,slow=313,SNR=2.3						
I45RU	USSURIYSK INFR	16.30	349	*i*		08 22 10.0	
	baz=166,slow=329,SNR=1.9						
I44RU	PETROPAVLOVSK	29.43	27	*i*		09 43 30.0	
	baz=221,slow=328,SNR=1.3						

IDC 24 06:48:53.4±343.0**, 30°.53N**×**132°.37E, h0^{km}, Error ellipse: s-maj=176.7km s-min=118.9km az=87.0, Southeast of Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I30JP	ISUMI INFRASON	8.21	52	*i*		07 41 20.0	
	baz=239,slow=310,SNR=6.4						
I45RU	USSURIYSK INFR	13.65	359	*i*		08 15 10.0	
	baz=176,slow=342,SNR=2.2						
I39PW	PALAU INFRASON	22.96	174	*i*		09 08 50.0	
	baz=352,slow=316,SNR=3.0						
I44RU	PETROPAVLOVSK	29.15	32	*i*		09 47 08.1	
	baz=226,slow=334,SNR=1.1						

*DJA **24** 06:58:12.5±0.5, 8°S±2°×10°6E±°, h11^{km}±4^{km}, M4.5/18, mb4.7/6, mB6.1/1, MLv4.4/18, Mw(mB)5.8/1*

*IDC **24** 06:58:22.0±2.9, 7°.40S×106°.40E, h91^{km}±23^{km}, mb3.7/13, mb1 3.8/13, mb1mx3.5/61, mbtmp4.1/13, MS3.2/6, Ms1 3.2/6, ms1mx2.9/42, Error ellipse: s-maj=37.6km s-min=13.5km az=55.0*

ISC 24 06:58:14.7±1.8**, 7°.72S**±0°.07×**106°.12E**±0°.05**, h30^{km}**±12^{km}**, n46, σ1ˢ69**/52**, mb4.1**/13**, MS3.1**/5**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNJI	Cibinong	1.08	68	P	Pb	06 58 33.9	-0.9
CNJI				Pg	Pb	06 58 34.0	-0.9
CNJI				Sg	Sb	06 58 47.8	-0.8
CNJI				S	Sn	06 58 48.1	+0.3
DBJI	Dramaga	1.32	28	P	Pb	06 58 39.2	+0.3
DBJI				S	Sb	06 58 56.5	+1.0
SBJI	Serang	1.59	0	P	Pb	06 58 42.3	-1.2
SBJI				S	Sb	06 59 03.2	-0.1
TNG	Tangerang	1.63	19	P	Pn	06 58 45.1	+3.8
TNG				P	Pb	06 58 43.9	-0.2
TNG				S	Sb	06 59 04.2	-0.1
TNG				S	Sn	06 59 05.7	+4.4
LEM	Lembang	1.73	59	P	Pb	06 58 45.9	0.0
	90nm,0.3s,baz=314,slow=7.6,SNR=35						
LEM				S	Sn	06 59 01.7	-2.4
	158nm,0.3s,baz=304,slow=2.8,SNR=10						
LEM				LR	LR	06 59 23.5	
	comp=Z,338nm,20.3s,baz=164,slow=46						
LEM	Lembang	1.73	59	P	Pb	06 58 46.1	+0.1
LEM				S	Sb	06 59 08.2	+0.8
CMJI	Cimerak	2.31	92	P	Pn	06 58 51.1	+0.4
CMJI				S	Sn	06 59 17.4	-0.7
KASI	Kota Agung	2.72	323	P	Pn	06 58 56.7	+0.4
KPJI	Karang Pucung	2.81	82	P	Pn	06 59 00.1	+2.5
KPJI				S	Sn	06 59 32.3	+1.8
KLI	Kotabumi	3.11	336	P	Pn	06 59 02.9	+1.2
KLSI		3.32	335	P	Pn	06 59 07.2	+2.6
LWLI	Liwa	3.38	323	P	Pn	06 59 06.6	+1.1
LWLI				S	Sn	06 59 47.9	+3.2
MDSI	Maura Dua	3.75	329	P	Pn	06 59 11.8	+1.3
SMRI	Semarang	4.34	81	P	Pn	06 59 18.5	-0.1
UGM	Wanagama	4.37	93	P	Pn	06 59 20.7	+1.7
MNAI	Manna	4.59	317	P	Pn	06 59 23.6	+1.5
LHSI	Lahat	4.66	326	P	Pn	06 59 24.6	+1.6
PCJI	Pacitan	5.03	96	P	Pn	06 59 29.5	+1.4
	0.4nm55nm,0.7s						
TPI	Tanjungpandan	5.17	17	P	Pn	06 59 30.5	+0.5
	0.1nm16nm,0.9s						
PPBI	Pangkal Pinang	5.53	0	P	Pn	06 59 35.6	+0.6
GMJI	Gumukmas	7.27	95	P	Pn	06 59 57.9	-1.1
	0.1nm16nm,1.1s						
PPSI	Pulau Pagai	7.83	309	P	Pn	07 00 02.3	-4.3
	0.5nm136nm,1.2s						
JAGI	Jajag, Banyuwa	7.99	96	P	Pn	07 00 10.9	+2.1
	0.2nm41nm,0.7s						
KAPI	Kappang	13.81	80	LR	LR	07 07 37.2	
	comp=Z,86nm,18.6s,baz=278,slow=41						
FITZ	Fitzroy Crossi	21.62	120	P	P	07 03 03.8	+1.4
	2.8nm,0.9s,baz=336,slow=7.8,SNR=5.0						
FITZ				LR	LR	07 11 45.0	
	comp=Z,64nm,19.8s,baz=295,slow=37						
DAV	Davao City (W)	24.34	53	LR	LR	07 16 14.6	
	comp=Z,54nm,18.2s,baz=183,slow=45						
SIJI	Sorong	25.97	76	P	P	07 03 42.3	-2.6
	4.6nm,0.3s,baz=0.2,slow=4.0,SNR=4.4						
H01W3	Cape Leeuwin H	28.02	166	T	T	07 33 47.8	
	baz=342,slow=78,SNR=33						
H01W1	Cape Leeuwin H	28.03	166	T	T	07 33 47.9	
	baz=342,slow=78,SNR=32						
H01W2	Cape Leeuwin H	28.03	166	T	T	07 33 48.7	
	baz=342,slow=78,SNR=42						
WRA	Warramunga Arr	29.91	117	P	P	07 04 20.6	+0.5
	0.9nm,0.8s,baz=286,slow=13,SNR=12						
WRA				LR	LR	07 17 26.8	
	comp=Z,47nm,19.5s,baz=165,slow=38						
ASAR	Alice Springs	31.00	124	P	P	07 04 30.7	+1.0
	1.1nm,0.9s,baz=302,slow=7.6,SNR=9.1						
ASAR				LR	LR	07 17 27.6	
	comp=Z,43nm,21.4s,baz=332,slow=37						
H08S2	Diego Garcia H	33.32	268	T	T	07 40 13.0	
	baz=91,slow=75,SNR=4.4						
H08S3	Diego Garcia H	33.33	268	T	T	07 40 20.1	
	baz=91,slow=75,SNR=4.3						
H08S1	Diego Carcia H	33.34	268	T	T	07 40 08.6	
	baz=91,slow=75,SNR=4.7						
STKA	Stephens Creek	40.82	131	P	P	07 05 55.0	+1.4
	0.6nm,0.2s,baz=309,slow=14,SNR=2.0						
STKA				LR	LR	07 22 48.2	
	comp=Z,44nm,20.4s,baz=204,slow=36						
SONM	Songino Array	55.32	0	P	P	07 07 43.9	-1.7
	0.5nm,0.7s,baz=177,slow=9.2,SNR=4.1						
SONM				PcP	PcP	07 08 45.9	-0.1
	0.3nm,0.4s,baz=173,slow=4.9,SNR=4.3						
MKAR	Makanchi Array	58.27	341	P	P	07 08 05.5	-0.9
	1.3nm,0.6s,baz=152,slow=8.6,SNR=5.8						
KURBB	Kurchatov Arra	62.84	341	P	P	07 08 36.6	-0.9
	1.6nm,0.7s,baz=156,slow=5.9,SNR=8.7						
ZALV	Zalesovo Beam	64.02	346	P	P	07 08 43.9	-1.3
	0.9nm,0.5s,baz=154,slow=4.3,SNR=2.5						
BVAR	Borovoye Array	67.69	338	P	P	07 09 08.0	-1.0
	1.6nm,0.7s,baz=185,slow=14,SNR=9.1						
VNDA	Vanda	75.42	169	P	P	07 09 55.8	+0.6
	0.7nm,0.8s,baz=331,slow=4.2,SNR=5.2						
BELG	Belogornoye	77.77	328	P	P	07 10 07.1	-1.6
	6.7nm,0.7s,baz=157,slow=5.7,SNR=3.7						
BRTR	Keskin Array B	81.66	312	P	P	07 10 29.9	-0.5
	1.1nm,0.6s,baz=145,slow=5.3,SNR=2.7						
TXAR	Lajitas Array	144.70	49	PKP	PKPdf	07 17 49.6	+0.3
	1.0nm,0.9s,baz=276,slow=1.7,SNR=9.9						
BDFB	Brasilia	145.42	228	PKPbc	PKPab	07 17 53.0	+2.0
	0.9nm,0.7s,baz=162,slow=4.1,SNR=4.1						

*IDC **24** 06:59:16.6±2.5, 8°.08N×87°.62W, h0^{km}, mb3.8/6, mb1 4.1/8, mb1mx3.8/39, mbtmp3.8/8, ML3.3/2, MS3.2/3, Ms1 3.2/3, ms1mx2.7/26, Error ellipse: s-maj=128.9km s-min=21.7km az=43.0*

*INET **24** 06:59:20.5, 10°.35N×85°.80W, h57^{km}, MW4.1*

*UCR **24** 06:59:25.6±2.6, 10°.44N×85°.76W, h29^{km}±3^{km}, MW4.1*

ISC 24 06:59:24.4±1.6**, 10°.40N**±0°.03×**85°.76W**±0°.06**, h31^{km}**±13^{km}**, n53, σ1ˢ20**/50**, mb3.7**/6**, 11C-2D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUAI	GUAI	0.28	118	⇑*i*P	Pn	06 59 32.8	+0.4
GUAI				*i* S	Sn	06 59 38.8	+1.3
ORTG	Ortega, Santa	0.30	97	*e*P	Pn	06 59 32.9	+0.1
SAJU	San Juanillo,	0.33	172	*e*P	Pn	06 59 33.5	+0.4
SAJU				*e*S	Sn	06 59 40.5	+1.6
HZTE	Horizontes, Gu	0.35	27	*e*P	Pn	06 59 33.5	+0.1
HZTE				*e*S	Sn	06 59 40.0	+0.6
PLVR	Palo Verde	0.40	97	*e*P	Pn	06 59 34.4	+0.1
DUNO	Dulce Nombre,	0.41	141	*e*P	Pn	06 59 34.6	+0.3
GBS3	Finca Las Img	0.48	38	⇑*i*P	Pn	06 59 35.0	-0.2
GBS3				*i* S	Sn	06 59 42.5	-0.2
LAPC	Finca la Perla	0.49	41	⇑*i*P	Pn	06 59 35.0	-0.2
GRZA	Playa Garza	0.50	166	*e*P	Pn	06 59 35.6	+0.2
GB1A	Borinquen Arri	0.55	40	⇑*i*P	Pn	06 59 36.1	-0.1
GB1A				*i* S	Sn	06 59 44.3	-0.1
VRLE	La Escondida,	0.55	45	*e*P	Pn	06 59 36.0	-0.2
LIM1	Limonal	0.58	59	⇑*i*P	Pn	06 59 36.7	+0.1
INDI	Punta indio, G	0.59	155	*e*P	Pn	06 59 36.9	+0.3
GUAB	Guayabo de Bag	0.60	60	⇑*i*P	Pn	06 59 36.9	0.0
COLC	Colonia	0.61	64	⇑*i*P	Pn	06 59 37.1	+0.2
BUAI	Buenos Aires	0.63	41	⇑*i*P	Pn	06 59 37.5	+0.1
CUI	Cuipilapa	0.64	66	⇑*i*P	Pn	06 59 37.8	+0.3
CUI				*i* S	Sn	06 59 47.1	+0.6
HORNC	Hornillas	0.65	61	⇑*i*P	Pn	06 59 37.7	+0.1
ACAL	Aguas Claras	0.75	72	*i* P	Pb	06 59 39.7	+0.6
VMAR	Armenia, Volca	0.75	57	*e*P	Pb	06 59 39.6	+0.5
VMAR				*e*S	Sn	06 59 50.8	+1.5
PTEN	Parque Tenorio	0.82	68	⇓*i*P	Pb	06 59 40.7	+0.4
PACM	Arenal	0.98	85	⇑*i*P	Pn	06 59 35.9	-6.2
CASO	Castillo	1.01	88	⇓*i*P	Pb	06 59 43.9	+0.5
LAFE	Finca La Fe, P	1.02	125	*e*P	Pb	06 59 42.8	-0.8
ARE1	Arenal 1	1.02	87	*e*P	Pb	06 59 44.4	+0.7
CEDE	Laguna Cedeo	1.04	85	*i* P	Pb	06 59 44.7	+0.7
FORC	Fortuna	1.07	86	*i* P	Pb	06 59 45.1	+0.6
CONN	Concepcion	1.16	6	*e*P	Pb	06 59 45.4	-0.7
SRA1	San Ramn	1.30	104	*e*P	Pb	06 59 48.2	-0.1
COVE	Coope Vega, Sa	1.37	76	*e*P	Pb	06 59 47.4	-2.1
CRPO	Crater poas	1.52	98	*e*P	Pb	06 59 51.4	-0.9
ACON	Acoyapa	1.66	20	*e*P	Pb	06 59 52.4	-2.1
HDC3	Heredia 3	1.67	104	*e*P	Pb	06 59 53.6	-1.0
SJS	Escuela Geolog	1.74	105	*e*P	Pb	06 59 54.5	-1.4
RIFO	Rio Frio, Sara	1.81	92	*e*P	Pb	06 59 54.6	-2.3
LCR2	La Lucha 2	1.85	111	*e*P	Pb	06 59 55.6	-2.1
RIMA	Rio Macho	1.97	108	*e*P	Pb	06 59 57.2	-2.6
CVTR	Volcan Turrial	2.00	101	*e*P	Pb	06 59 59.8	-0.7
CDM	Cerro de Muert	2.14	113	*e*P	Pb	07 00 00.2	-2.6
EDDO	Dominical	2.19	121	*e*P	Pb	07 00 02.7	-0.7
EDPN	Palmar Norte	2.68	122	*e*P	Pb	07 00 08.2	-3.6
EDBA	Buenos Aires	2.74	116	*e*P	Pb	07 00 11.6	-1.2
EDSV	San Vito	3.17	120	*e*P	Pb	07 00 14.6	-5.5
APG	El Apazote	6.48	315	Pn	Pb	07 01 06.5	-10
	0.6nm,0.3s,baz=135,slow=13,SNR=8.1						
CMIG	Matias Romero	11.08	308	Pn	Pn	07 02 02.4	+1.5
	0.1nm,0.3s,baz=161,slow=13,SNR=2.2						
ROSC	El Rosal	12.61	115	LR	LR	07 06 55.3	
	comp=Z,62nm,18.3s,baz=44,slow=34						
TXAR	Lajitas Array	25.20	321	P	P	07 04 49.5	+1.9
	2.2nm,0.7s,baz=138,slow=10,SNR=23						
PTGA	Pitinga	27.94	112	LR	LR	07 18 04.1	
	comp=Z,22nm,19.0s,baz=312,slow=39						
PDAR	Pinedale Array	38.35	331	P	P	07 06 50.5	+7.6
	0.2nm,0.3s,baz=134,slow=7.7,SNR=2.0						
NVAR	Mina Array Bea	40.33	319	P	P	07 07 01.3	+1.9
	0.7nm,0.7s,baz=127,slow=7.6,SNR=5.4						
BDFB	Brasilia	45.46	124	P	P	07 07 40.5	-0.6
	2.1nm,0.7s,baz=264,slow=9.4,SNR=3.7						
ILAR	Eielson Array	68.55	336	P	P	07 10 30.6	+6.7
	0.2nm,0.6s,baz=134,slow=4.6,SNR=7.2						
ILAR				LR	LR	07 44 06.9	
	comp=Z,34nm,18.7s,baz=190,slow=38						
DBIC	Dimbokro	79.91	85	P	P	07 11 38.6	+7.5

3.2nm,0.7s,baz=284,slow=4.2,SNR=3.4

NNC 24 07:04:46.2±20.0, 37°.70N×69°.89E, h0^{km}, mb3.8, mpv3.4, 6C-2D, Error ellipse: s-maj=192.0km s-min=91.7km az=170.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	6.06	34	⇑P	Pn	07 06 18.6	+1.3
	1.4nm,0.3s						
AAK				⇑S	Sn	07 07 27.8	+0.4
	11nm,0.9s						
TKM2	**Tokmak 2**	6.79	38	⇓P	Pn	07 06 27.2	-0.2
	1.5nm,0.6s						
TKM2				⇑S	Sn	07 07 44.8	-0.8
	2.6nm,0.9s						
AB31	**Akbulak array**	13.60	331	⇑P	Pn	07 08 03.0	+2.7
	0.8nm,0.6s,baz=164,slow=11,SNR=13						
AB31				⇑S	Sn	07 10 33.7	+1.6
	0.6nm,0.6s,baz=163,slow=21						
AKTO	**Aktyubinsk**	15.29	330	⇑P	Pn	07 08 24.9	+1.6
	1.7nm,0.9s						
AKTO				⇓S	Sn	07 11 13.8	+0.5
	1.5nm,1.1s						

JMA 24 07:19:09.5±0.3, 25°.17N×123°.48E, h150^{km}, M3.0, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	0.86	165	P	Pn	07 19 33.2	0.0
IRIF				S	Sn	07 19 51.7	+0.5
JISG	**Ishigakijimahi**	0.95	127	P	Pn	07 19 34.0	+0.1
JISG				S	Sn	07 19 53.0	+0.6
JIJ	**Ishigaki jima**	1.00	143	P	Pn	07 19 33.9	-0.4
JIJ				S	Sn	07 19 53.2	0.0
JKRS	**Kuro-shima**	1.05	152	P	Pn	07 19 35.2	+0.5
JKRS				S	Sn	07 19 54.6	+0.7
HATJ	**Hateruma jima**	1.15	165	S	Sn	07 19 56.0	+0.5
JTJ	**Tarama**	1.23	115	*e*S	Sn	07 19 56.4	-0.4
JIRB	**Irabujima**	1.57	102	S	Sn	07 20 03.2	+0.2
JIKM	**Ikemajima**	1.62	98	P	Pn	07 19 41.0	+0.7
JMJ2	**Miyako jima3**	1.73	104	P	Pn	07 19 42.1	+0.6
JMJ2				S	Sn	07 20 06.6	+0.5

TAP 24 07:19:26.0, 24°.26N×121°.67E, h7^{km}, ML1.6, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	**Heping Village**	0.08	52	*e*P	Pg	07 19 28.6	+0.6
	baz=56						
EHP				S	Sg	07 19 30.7	+1.3
	baz=56						
ETL	**Fush Village**	0.11	204	*e*P	Pg	07 19 29.3	+0.9
	baz=203						
ETL				*e*S	Sg	07 19 31.7	+1.6
	baz=203						
NACB	**Ninganchiao**	0.11	219	*i* P	Pg	07 19 29.2	+0.8
	baz=219						
NACB				*i* S	Sg	07 19 31.5	+1.4
	baz=219						
ENA	**Nanau**	0.18	21	P	Pg	07 19 30.4	+0.8
	baz=22						
ETLH	**Xiulin Townshi**	0.18	253	P	Pg	07 19 30.6	+0.9
	baz=252						
ETLH				S	Sg	07 19 33.5	+1.3
	baz=252						
TWD	**Chiawan**	0.19	201	P	Pg	07 19 30.6	+0.8
	baz=199						
TWD				*e*S	Sg	07 19 33.8	+1.4
	baz=199						
EWUT	**Wuta**	0.21	28	*e*P	Pg	07 19 31.2	+1.1
	baz=27						
EWUT				S	Sg	07 19 34.9	+1.9
	baz=27						
HWA	**Hwalien**	0.29	192	*e*P	Pb	07 19 32.8	-0.7
	baz=190						
HWA				*e*S	Sb	07 19 37.8	-0.7
	baz=190						
NNS	**Nan Shan**	0.33	303	P	Pb	07 19 33.5	-0.7
	baz=303						
ETM	**Tongmen**	0.34	209	*e*P	Pb	07 19 33.8	-0.6
	baz=209						
ETM				*e*S	Sb	07 19 38.8	-1.1
	baz=209						
NDT	**Datong Townshi**	0.37	337	*e*P	Pb	07 19 34.5	-0.4
	baz=336						
NDS	**Dongshan**	0.37	6	*e*P	Pb	07 19 34.3	-0.7
	baz=6.0						
NDS				*e*S	Sb	07 19 40.0	-1.1
	baz=6.0						
WHF	**Hehuan Shan**	0.39	253	*i* P	Pb	07 19 34.7	-0.8
	baz=252						
WHF				*i* S	Sb	07 19 40.9	-0.9
	baz=252						
ENTT	**Nioudou**	0.39	346	*e*P	Pb	07 19 34.5	-0.8
	baz=346						
FUSS	**Fushou**	0.39	268	P	Pb	07 19 35.4	0.0
	baz=268						
YHNB	**Yeheng**	0.49	327	*e*P	Pb	07 19 37.0	0.0
	baz=326						
YHNB				*e*S	Sb	07 19 44.5	0.0
	baz=326						
CHGB	**Renai**	0.50	246	P	Pb	07 19 37.2	0.0
	baz=246						
CHGB				S	Sb	07 19 44.8	0.0
	baz=246						
NSK	**Sanguang**	0.50	325	*e*P	Pb	07 19 37.0	-0.3
	baz=325						
NWLT	**Wulai**	0.54	343	*e*P	Pb	07 19 37.7	-0.1
	baz=343						
NWLT				*e*S	Sb	07 19 45.8	0.0
	baz=343						

*NEIC **24** 07:35:59.1±1.4, 51°.44N±0°.04×131°.30W±0°.10, h6^{km}±8^{km}, Error ellipse: s-maj=9.2km s-min=5.2km az=72.0*

*PGC **24** 07:35:59.5±3.2, 51°.40N×131°.32W, h10^{km}, MLSn3.3/20, Mw4.0/20, 208km Sse of Sandspit, Bc Haida Gwaii Region*

ISC 24 07:35:57.4±1.8, 51°.39N±0°.06×131°.29W±0°.06, h7^{km}±12^{km}, n50, σ1^{s}.50/63, Queen Charlotte Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HG4B	**Hotspring**	0.90	4		Pg	07 36 15.2	+0.5
HG4B					Sg	07 36 26.5	+0.1
HG4B	**Hotspring**	0.90	4	Pg	Pg	07 36 15.7	+1.0
HG4B				Sg	Sg	07 36 26.6	+0.1
HG4B				IAML		07 36 36.8	
	comp=N,826nm,0.8s						
HG4B				IAML		07 36 41.6	
	comp=E,1µm,0.9s						
HG4B	**Hotspring**	0.90	4	P	Pg	07 36 15.2	+0.5
HG4B				S	Sg	07 36 26.5	+0.1
BNB	**Barry Inlet**	1.22	347		Pg	07 36 20.2	-0.5
BNB					Sg	07 36 35.2	-1.4
BNB	**Barry Inlet**	1.22	347	P	Pg	07 36 20.2	-0.5
BNB				S	Sg	07 36 35.2	-1.4
MOBC	**Moresby Island**	1.80	347	Pn	Pn	07 36 30.5	+1.6
MOBC	**Moresby Island**	1.80	347	Pn	Pn	07 36 30.2	+1.3
MOBC				IAML		07 37 12.6	
	comp=N,321nm,0.9s						
MOBC				IAML		07 37 20.5	
	comp=E,341nm,1.1s						
MOBC	**Moresby Island**	1.80	347	Pn	Pn	07 36 29.4	+0.5
DIB	**Dawson Inlet,**	1.95	339	Pn	Pn	07 36 31.6	+0.7
DIB	**Dawson Inlet,**	1.95	339	Pn	Pn	07 36 32.0	+1.2
DIB				IAML		07 37 16.8	
	comp=N,146nm,0.7s						
DIB				IAML		07 37 20.5	
	comp=E,126nm,1.1s						
DIB	**Dawson Inlet,**	1.95	339	Pn	Pn	07 36 30.5	-0.3
VIB	**Van Inlet**	2.01	338	Pn	Pn	07 36 31.6	-0.2
BNKB	**Banks Island**	2.12	23	Pn	Pn	07 36 33.1	-0.1
BNKB				Sn	Sn	07 36 58.0	-1.8
BBB	**Bella Bella**	2.12	67	Pn	Pn	07 36 35.2	+2.0
BBB				IAML		07 37 23.8	
	comp=E,242nm,0.8s						
BBB	**Bella Bella**	2.12	67	Pn	Pn	07 36 33.1	-0.1
BBB				Sn	Sn	07 36 58.3	-1.5
HOLB	**Holberg**	2.13	109	Pn	Pn	07 36 34.1	+0.7
HOLB	**Holberg**	2.13	109	Pn	Pn	07 36 33.1	-0.3
HOLB				Sn	Sn	07 36 59.1	-1.0
BNAB	**Bonilla**	2.14	10	Pn	Pn	07 36 33.2	-0.3
BUTB	**Butedale**	2.41	45	Pn	Pn	07 36 38.4	+1.1
PHC	**Port Hardy**	2.53	104	Pn	Pn	07 36 38.2	-0.5
PHC				Sn	Sn	07 37 07.6	-2.2
PACB	**Port Alice, BC**	2.59	110	Pn	Pn	07 36 39.5	-0.1
PACB				Sn	Sn	07 37 10.6	-0.7
GRNB	**Grenville Isla**	2.59	18	Pn	Pn	07 36 41.4	+1.7
GRNB				IAML		07 37 27.7	
	comp=N,222nm,0.9s						
GRNB				IAML		07 37 41.5	
	comp=E,153nm,1.2s						
GRNB	**Grenville Isla**	2.59	18	Pn	Pn	07 36 40.0	+0.4
MAYB	**Maynard**	2.79	109	Pn	Pn	07 36 42.8	+0.3
TLCB	**Telegraph Cove**	2.94	105	Pn	Pn	07 36 45.5	+1.0
TLCB				IAML		07 37 48.8	
	comp=N,100nm,0.9s						
TLCB	**Telegraph Cove**	2.94	105	Pn	Pn	07 36 44.9	+0.5
RUBB	**Prince Rupert**	3.00	12	Pn	Pn	07 36 46.9	+1.6
RUBB				IAML		07 37 52.5	
	comp=E,114nm,1.0s						
RUBB				IAML		07 38 03.1	
	comp=N,94nm,1.4s						
RUBB	**Prince Rupert**	3.00	12	Pn	Pn	07 36 46.0	+0.7
EDB	**Eliza Dome**	3.06	118	Pn	Pn	07 36 48.9	+2.8
EDB				Sn	Sn	07 37 21.9	-1.0
KITB	**Kitimat**	3.13	30	Pn	Pn	07 36 48.0	+0.9
WOSB	**Woss**	3.24	111	Pn	Pn	07 36 49.6	+0.9
WOSB				Sn	Sn	07 37 28.9	+1.4
NCRB	**Newcastle Ridg**	3.46	105	Pn	Pn	07 36 52.7	+1.0
GDR	**Gold River**	3.72	114	Pn	Pn	07 36 57.6	+2.5
SPLB	**Strathcona Par**	3.89	111	Pn	Pn	07 36 58.6	+1.1
CBB	**Campbell River**	4.00	108	Pn	Pn	07 36 59.4	+0.3
CBB				IAML		07 38 13.8	
	comp=E,56nm,2.2s						
CBB				IAML		07 38 23.4	
	comp=N,46nm,2.1s						
CBB	**Campbell River**	4.00	108	Pn	Pn	07 37 00.4	+1.3
CRAG	**Craig**	4.23	346	Pn	Pn	07 37 04.4	+2.3
CRAG				IAML		07 38 20.6	
	comp=E,48nm,2.1s						
CRAG				IAML		07 38 43.2	
	comp=N,46nm,2.1s						
OZB	**Mount Ozzard**	4.45	121	Pn	Pn	07 37 07.4	+2.2
UBRB	**Upper Baezaeko**	4.68	69	Pn	Pn	07 37 10.6	+2.0
UBRB				Sg	Sg	07 38 25.0	-2.7
TXB	**Texada**	4.69	109	Pn	Pn	07 37 09.2	+0.7
MGB	**Mount Grey**	4.87	117	Pn	Pn	07 37 12.2	+1.1
SHB	**Sechelt**	5.06	108	Pn	Pn	07 37 15.0	+1.3
WRAK	**Wrangell Islan**	5.07	353	Pn	Pn	07 37 15.9	+2.1
WRAK				IAML		07 39 13.0	
	comp=N,31nm,1.9s						
CLRS	**Cowichan Lake**	5.28	116	Pn	Pn	07 37 18.4	+1.9
LLLB	**Lillooet**	5.99	94	Pn	Pn	07 37 30.6	+4.2
WISH	**Wishkah**	6.52	128	Pn	Pn	07 37 36.1	+2.5
DLBC	**Dease Lake**	7.10	5	Pn	Pn	07 37 41.8	+0.2
DLBC	**Dease Lake**	7.10	5	Pn	Pn	07 37 41.6	0.0
JIS	**Juneau Island**	7.12	347	Pn	Pn	07 37 44.9	+3.0
NBC5	**NorthernBC 5**	7.92	36	Pn	Pn	07 37 55.4	+2.4

*THE **24** 07:47:17.6, 36°.73N×25°.65E, h7^{km}±2^{km}, ML2.8/2, Error ellipse: s-maj=2.2km s-min=0.7km az=100.0*

ATH 24 07:47:18.0, 36°.72N×25°.67E, h8^{km}±2^{km}, ML2.7/5, Error ellipse: s-maj=2.3km s-min=0.7km az=237.0, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMBO	**Columbo, Santo**	0.33	220	P	Pg	07 47 24.6	+0.1
CMBO				S	Sg	07 47 29.0	+0.2
THR2	**Thira island,**	0.33	214	P	Pg	07 47 24.3	-0.2
THR2	**Thira island,**	0.33	214	P	Pg	07 47 24.4	-0.2
THT2	**Imerovigli**	0.35	215	P	Pg	07 47 24.7	-0.1
THT2				S	Sg	07 47 30.3	+0.9
THR8	**Santorini-Mono**	0.35	206	P	Pg	07 47 24.5	-0.3
THR8	**Santorini-Mono**	0.35	206	P	Pg	07 47 24.5	-0.4
APE	**Apeiranthos**	0.36	343	P	Pg	07 47 24.8	-0.3
APE				S	Sg	07 47 30.1	+0.2
	1µm,0.2s						
APE	**Apeiranthos**	0.36	343	P	Pg	07 47 24.8	-0.3
APE				S	Sg	07 47 30.1	+0.1
APE				AML	AML	07 47 34.6	
	comp=E,2620µm,0.2s						
APE				AML	AML	07 47 35.1	
	comp=N,3548µm,0.2s						
THR3	**Thira Island,**	0.38	214	P	Pg	07 47 25.0	-0.4
THR3	**Thira Island,**	0.38	214	P	Pg	07 47 25.2	-0.2
THR5	**Thira Island,**	0.40	220	P	Pg	07 47 25.2	-0.6
THR5	**Thira Island,**	0.40	220	P	Pg	07 47 25.3	-0.4
THR6	**Thira Island,**	0.42	211	P	Pg	07 47 26.1	-0.2
THR6	**Thira Island,**	0.42	211	P	Pg	07 47 26.2	-0.1
THR9	**Santorini-Faro**	0.44	214	P	Pg	07 47 26.6	0.0
TNSA	**Tinos**	0.91	334	P	Pg	07 47 35.0	-0.5
TNSA				S	Sg	07 47 47.1	-0.2
MHLO	**Agia Marina, M**	1.02	269	P	Pg	07 47 37.0	-0.5
MHLO				S	Sg	07 47 50.5	-0.2
	comp=N,740nm,0.4s						
MHLO	**Agia Marina, M**	1.02	269	P	Pg	07 47 36.9	-0.6
MHLO				S	Sg	07 47 50.7	0.0
MHLO				AML	AML	07 47 52.1	
	comp=E,1821µm,0.4s						
MHLO				AML	AML	07 47 53.5	
	comp=N,1165µm,0.3s						
NISR	**Nisiros**	1.18	95	P	Pg	07 47 40.3	-0.3
NISR				S	Sg	07 47 55.6	-0.3
NISR				AML	AML	07 48 02.6	
	comp=E,1518µm,0.3s						
NISR				AML	AML	07 48 03.8	
	comp=N,942µm,0.4s						
NIS1	**Nisyros Isl.**	1.22	95	P	Pb	07 47 41.0	-0.4
IDI	**Anoyia**	1.56	204	P	Pn	07 47 44.9	-1.3
IDI	**Anoyia**	1.56	204	P	Pn	07 47 46.0	-0.3
IDI				S	Sn	07 48 06.8	+0.1
IDI				AML	AML	07 48 08.8	
	comp=E,324µm,0.6s						
IDI				AML	AML	07 48 09.0	
	comp=N,245µm,0.5s						
KARY	**Karystos**	1.63	324	P	Pb	07 47 48.1	-0.3
KARY				S	Sb	07 48 08.9	-0.3
CHOS	**Chios island**	1.69	10	P	Pn	07 47 45.8	-2.2
CHOS	**Chios island**	1.69	10	P	Pb	07 47 48.9	-0.5
VLY	**Voula,Athens**	1.87	308	P	Pb	07 47 52.0	-0.4
DION	**Dionisos Attik**	1.93	315	P	Pb	07 47 53.7	+0.2
DION				S	Sb	07 48 18.5	+0.6
ATHU	**Athens Univers**	1.95	310	P	Pb	07 47 54.0	+0.2
ATHU				S	Sb	07 48 17.5	-0.7
ATHU				AML	AML	07 48 20.5	
	comp=E,198µm,0.4s						
ATHU				AML	AML	07 48 20.6	
	comp=N,164µm,0.3s						
VIL2	**Platees**	2.42	309	P	Pn	07 47 59.7	+1.7

*ISK **24** 07:47:25.9, 37°.41N×26°.95E, h3^{km}, ML2.5/11*

*DDA **24** 07:47:26.7, 37°.40N×26°.96E, h7^{km}±1^{km}, ML2.0*

ISC 24 07:47:26.8±1.2, 37°.41N±0°.03×26°.96E±0°.05, h15^{km}±8^{km}, n20, σ0^{s}.41/28, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DIDI	**Didim-Aydin**	0.23	99	PG	Pg	07 47 31.4	-0.4
DIDI				SG	Sg	07 47 35.8	+0.6
DDIM	**Aydin, Didim**	0.23	79	*i* P	Pg	07 47 31.6	-0.2
DDIM				*i* S	Sg	07 47 35.5	+0.2
DDIM				IAML		07 47 36.0	
	comp=E,316nm,0.5s						
DDIM				IAML		07 47 36.0	
	comp=N,211nm,0.4s						
GCAM	**G?zelcaml?**	0.36	37	*i* P	Pb	07 47 34.5	-0.4
GCAM				*i* S	Sb	07 47 39.9	-0.4
GCAM				IAML		07 47 40.0	
	comp=N,638nm,0.2s						
GCAM				IAML		07 47 40.0	
	comp=E,657nm,0.2s						
GCAM	**G?zelcaml?**	0.36	37	PG	Pg	07 47 34.2	+0.1
GCAM				SG	Sb	07 47 40.3	0.0
YKAV	**Yalikavak-Bodr**	0.38	138	PG	Pg	07 47 34.3	-0.3
YKAV				SG	Sb	07 47 40.3	-0.7
BODT	**Bodrum**	0.45	141	PG	Pg	07 47 35.5	-0.2
BODT				SG	Sb	07 47 42.5	-0.3
BDRM	**Kayabasi**	0.52	132	*i* P	Pb	07 47 37.2	-0.4
BDRM				*i* S	Sb	07 47 44.5	-0.4
BDRM				IAML		07 47 45.0	
	comp=N,131nm,0.2s						
BDRM				IAML		07 47 46.0	
	comp=E,143nm,0.2s						
DGB	**zmir**	0.64	355	*i* P	Pg	07 47 39.0	-0.4
KOSK	**Kos Island**	0.66	179	PG	Pg	07 47 39.3	-0.4
MLSB	**Milas**	0.66	100	PG	Pg	07 47 39.6	-0.1
AYDN	**Tasoluk**	0.77	71	*i* P	Pg	07 47 41.4	-0.4
AYDN				*i* S	Sg	07 47 51.3	-0.7
AYDN				IAML		07 47 53.0	
	comp=N,44nm,0.2s						
AYDN				IAML		07 47 56.0	
	comp=E,62nm,0.3s						
NIS1	**Nisyros Isl.**	0.83	168	PG	Pb	07 47 42.9	+0.1
DAT	**Datca**	0.84	144	PG	Pg	07 47 42.9	-0.2
ZEYE	**Izmir, Urla-Ze**	0.90	336	*i* P	Pb	07 47 44.3	+0.2
AYDB	**Zeytinkoy-Aydi**	0.91	54	PG	Pg	07 47 44.3	-0.2
BLCB	**Balcova**	0.97	4	PG	Pg	07 47 45.4	-0.2
URLA	**Izmir**	0.99	343	PG	Pg	07 47 45.6	-0.3
YER	**Yerkesik**	1.09	104	PN	Pb	07 47 47.7	+0.3
TURN	**Turunc**	1.21	121	PN	Pn	07 47 49.8	+0.7
DALY	**Dalyan (Mula)**	1.48	113	PN	Pb	07 47 54.4	+0.5

*ATH **24** 07:51:49.9, 38°.98N×20°.70E, h31^{km}±2^{km}, ML3.0/4, Error ellipse: s-maj=4.7km s-min=1.7km az=145.0*

*THE **24** 07:51:50.7, 38°.83N×20°.97E, h14^{km}±3^{km}, ML3.0/3, Error ellipse: s-maj=4.9km s-min=1.0km az=241.0*

ISC 24 07:51:51.9±0.9, 38°.83N±0°.03×20°.86E±0°.03, h19^{km}±2^{km}, n32, σ1^{s}.10/46, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TSLK	**Tsoukalades, L**	0.16	269	P	Pb	07 51 55.5	+0.2
TSLK				S	Sg	07 51 59.9	+0.5
	10µm,0.5s						
TSLK	**Tsoukalades, L**	0.16	269	P	Pb	07 51 55.6	+0.3
TSLK				S	Sg	07 52 00.3	+0.9
TSLK				AML	AML	07 52 01.3	
	comp=E,18103µm,0.5s						
TSLK				AML	AML	07 52 01.5	
	comp=N,22595µm,0.6s						
LKD2	**Lefkada island**	0.17	257	P	Pb	07 51 55.3	-0.1
LKD2				S	Sg	07 51 59.8	+0.3
	comp=N,6µm,0.5s						
LKD2	**Lefkada island**	0.17	257	P	Pb	07 51 55.6	+0.2
LKD2				S	Sg	07 52 00.6	+1.1
LKD2				AML	AML	07 52 01.6	
	comp=N,14528µm,0.4s						
LKD2				AML	AML	07 52 01.9	
	comp=E,7861µm,0.2s						
NYDR	**Nydri-Lefkada**	0.17	229	P	Pb	07 51 55.1	-0.5
NYDR				S	Sg	07 52 00.4	+0.8
	comp=E,2µm,0.6s						
NYDR	**Nydri-Lefkada**	0.17	229	P	Pg	07 51 56.9	+0.4
NYDR				S	Sg	07 52 01.3	+1.7
EVGI	**Lefkada island**	0.26	218	P	Pb	07 51 57.2	-0.7
EVGI				S	Sg	07 52 02.9	+1.0
EVGI	**Lefkada island**	0.26	218	P	Pb	07 51 57.2	-0.7
EVGI				S	Sg	07 52 04.4	+2.4
DRAG	**Dragano-Lefkad**	0.27	238	P	Pb	07 51 57.4	-0.6
DRAG				S	Sg	07 52 03.0	+0.9
DRAG	**Dragano-Lefkad**	0.27	238	P	Pb	07 51 57.5	-0.6
DRAG				S	Sg	07 52 03.5	+1.4
FSK	**Fiskardo**	0.44	213	P	Pg	07 52 00.6	-0.2
FSK				S	Sb	07 52 08.2	+0.9
FSK				AML	AML	07 52 16.3	
	comp=E,1952µm,0.5s						
FSK				AML	AML	07 52 16.5	
	comp=N,2606µm,0.6s						
KEF4	**Livadi, Kephal**	0.67	211	P	Pb	07 52 04.5	-0.4
KEF4	**Livadi, Kephal**	0.67	211	P	Pb	07 52 04.4	-0.4
VLS	**Valsamata**	0.68	198	P	Pb	07 52 04.5	-0.7
VLS	**Valsamata**	0.68	198	P	Pb	07 52 04.7	-0.5
DMLN	**Damoulianata-K**	0.70	213	P	Pb	07 52 05.0	-0.6
DMLN	**Damoulianata-K**	0.70	213	P	Pb	07 52 05.0	-0.6
EVR	**Evrytania**	0.74	83	P	Pb	07 52 06.2	-0.1
EVR				S	Sg	07 52 18.3	+1.8
EVR				AML	AML	07 52 19.7	
	comp=E,841µm,0.6s						
EVR				AML	AML	07 52 23.8	
	comp=N,728µm,0.5s						
KEF3	**Kipouria, Keph**	0.74	213	P	Pb	07 52 05.2	-1.1
KEF3	**Kipouria, Keph**	0.74	213	P	Pb	07 52 05.4	-0.8
PSDA	**Pessada-Kefalo**	0.74	197	P	Pb	07 52 05.8	-0.5
IGT	**Igoumenitsa**	0.82	330	P	Pb	07 52 06.2	-1.3
IGT				S	Sn	07 52 20.0	-0.1
JAN	**Janina**	0.83	359	P	Pb	07 52 07.5	-0.3
OHR	**Ohrid**	2.28	359	*i* Pn	Pb	07 52 32.5	0.0
STIP	**Stip**	3.04	19	*i* Pn	Pb	07 52 46.4	+1.0
DBRK	**Dubrovnik**	4.36	333	*e*Pn	Pn	07 52 57.6	+0.5
STON	**Ston**	4.70	330	*e*Pn	Pn	07 53 00.6	-1.2
LSTV	**Lastovo**	4.96	324	*e*Pn	Pn	07 53 05.1	-0.2
LSTV				Sn	Sn	07 53 57.8	-4.4
RICI	**Ricice**	5.45	330	*e*Pn	Pn	07 53 11.6	-0.6
HVAR	**Hvar**	5.48	324	*e*Pn	Pn	07 53 13.3	+0.7
ZIRJ	**Zirje**	6.22	322	*e*Pn	Pn	07 53 23.2	+0.4
MORI	**Morici**	6.35	324	*e*Pn	Pn	07 53 25.4	+0.8

*INET **24** 07:52:42.5, 14°.34N×89°.60W, h162^{km}, MW3.2*

*SNET **24** 07:52:45.6±1.0, 14°.09N×89°.84W, h165^{km}±3^{km}, ML3.3*

*UCR **24** 07:52:45.6±1.1, 14°.10N×89°.83W, h166^{km}±3^{km}, ML3.2, mb4.4(NEIC)*

*IDC **24** 07:52:45.4±2.6, 14°.20N×89°.73W, h175^{km}±7^{km}, mb3.4/6, mb1 3.6/8, mb1mx3.4/35, mbtmp3.8/8, MS3.2/1, Ms1 3.2/1, ms1mx2.3/27, Error ellipse: s-maj=42.6km s-min=28.5km az=170.0*

*GCG **24** 07:52:45.0±0.4, 14°.06N×89°.92W, h180^{km}±11^{km}, MD3.7*

*NEIC **24** 07:52:46.5±1.5, 14°.19N±0°.09×89°.87W±0°.08, h169^{km}±8^{km}, mb4.4/29, Error ellipse: s-maj=16.9km s-min=2.5km az=219.0*

ISC 24 07:52:44.9±0.7, 14°.07N±0°.06×89°.89W±0°.05, h175^{km}±5^{km}, n109, σ1^{s}.09/132, mb4.3/15, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLOZ	**Alcaldia de Sa**	0.12	114	*e*P	Pn	07 53 07.8	-0.2
SLOZ				*e*S	Sn	07 53 24.9	-0.9
RTR	**El Retiro**	0.30	126	*e*P	Pn	07 53 08.6	0.0
RTR	**El Retiro**	0.30	126	*e*P	Pn	07 53 08.6	0.0
SNJE	**San Jose**	0.34	126	*e*P	Pn	07 53 08.5	-0.3
SNJE				*e*S	Sn	07 53 27.4	+0.4
SNJE	**San Jose**	0.34	126	*e*P	Pn	07 53 08.5	-0.3
SNJE				*e*S	Sn	07 53 27.4	+0.4
CEVE	**Cerro Verde**	0.36	133	*e*P	Pn	07 53 08.9	0.0
CEVE				IAML		07 53 36.9	
	comp=Z,827nm,0.2s						
CEVE	**Cerro Verde**	0.36	133	*e*P	Pn	07 53 08.9	0.0
CEVE				IAML		07 53 36.9	
	comp=Z,827nm,0.2s						
TACO	**Tacachico**	0.53	101	*e*P	Pn	07 53 09.1	-0.2
TACO				*e*S	Sn	07 53 26.6	-1.3
TACO				IAML		07 53 29.4	
	comp=Z,171nm,0.6s						
TACO	**Tacachico**	0.53	101	*e*P	Pn	07 53 09.1	-0.2
TACO				*e*S	Sn	07 53 26.6	-1.3
TACO				IAML		07 53 29.4	
	comp=Z,171nm,0.6s						
CEDA	**San Andres**	0.55	119	*e*P	Pn	07 53 09.3	-0.1
CEDA				*e*S	Sn	07 53 27.4	-0.7
CEDA	**San Andres**	0.55	119	*e*P	Pn	07 53 09.3	-0.1
CEDA				*e*S	Sn	07 53 27.4	-0.7
JAYA	**Jayaque - finc**	0.60	134	*e*P	Pn	07 53 09.2	-0.6
JAYA				*e*S	Sn	07 53 28.8	0.0
JAYA				IAML		07 53 32.0	
	comp=Z,2µm,0.2s						
JAYA	**Jayaque - finc**	0.60	134	*e*P	Pn	07 53 09.2	-0.6
JAYA				*e*S	Sn	07 53 28.8	0.0
JAYA				IAML		07 53 32.0	
	comp=Z,2µm,0.2s						
MTO3	**Montecristo**	0.61	58	*e*P	Pn	07 53 10.0	+0.2
MTO3				*e*S	Sn	07 53 28.7	-0.3
MTO3	**Montecristo**	0.61	58	*e*P	Pn	07 53 10.0	+0.2
MTO3				*e*S	Sn	07 53 28.7	-0.3
MTO3	**Montecristo**	0.61	58		Pn	07 53 09.8	0.0
NBG	**Las Nubes**	0.68	319	*e*P	Pn	07 53 11.9	+1.6
ESQI	**Esquipulas**	0.72	48	*e*P	Pn	07 53 10.9	+0.6
ESQI				*e*S	Sn	07 53 29.3	-0.6
ESQI	**Esquipulas**	0.72	48	Pn	Pn	07 53 10.7	+0.4
UEES	**Universidad Ev**	0.73	119	*e*P	Pn	07 53 10.9	+0.6
UEES	**Universidad Ev**	0.73	119	*e*P	Pn	07 53 10.9	+0.6

SNET	Serv Nac Est T	0.75	121	Pn	Pn	07 53 11.5	+1.1
PCG	Pacaya	0.76	295	eP	Pn	07 53 12.0	+1.2
OPAM	Oficina de Pla	0.76	118	eP	Pn	07 53 10.0	-0.5
OPAM				IAML		07 53 36.3	
	comp=Z,390nm,0.3s						
OPAM	Oficina de Pla	0.76	118	eP	Pn	07 53 10.0	-0.5
OPAM				IAML		07 53 36.3	
	comp=Z,390nm,0.3s						
LALI	Alcalda de L	0.80	136	eP	Pn	07 53 10.4	-0.3
LALI	Alcalda de L	0.80	136	eP	Pn	07 53 10.4	-0.3
LFRS	El Faro	0.92	119	eP	Pn	07 53 11.8	+0.2
LFRS				eS	Sn	07 53 31.2	-1.0
LFRS	El Faro	0.92	119	eP	Pn	07 53 11.8	+0.2
LFRS				eS	Sn	07 53 31.2	-1.0
SJTE	Alcalda de S	0.97	118	eP	Pn	07 53 11.3	-0.6
SJTE				eS	Sn	07 53 32.2	-0.5
SJTE				IAML		07 53 38.5	
	comp=Z,161nm,0.3s						
SJTE	Alcalda de S	0.97	118	eP	Pn	07 53 11.3	-0.6
SJTE				eS	Sn	07 53 32.2	-0.5
SJTE				IAML		07 53 38.5	
	comp=Z,161nm,0.3s						
PAVA	Las Pavas	0.99	111	eP	Pn	07 53 12.3	+0.2
PAVA	Las Pavas	0.99	111	eP	Pn	07 53 12.3	+0.2
FUG	Fuego 3	0.99	292	eP	Pn	07 53 13.4	+1.2
FUG				eS	Sn	07 53 41.5	+8.2
MRL	Marmol	1.02	11	eP	Pn	07 53 14.0	+1.6
MRL				eS	Sn	07 53 34.8	+1.0
APG	El Apazote	1.08	329	P	Pn	07 53 13.6	+0.7
	comp=Z,9.4nm,0.3s,baz=130,slow=5.8,SNR=119						
APG				S	Sn	07 53 35.2	+0.6
	comp=Z,5.1nm,0.3s,baz=283,slow=21,SNR=37						
COEG	Centro de Oper	1.08	115	eP	Pn	07 53 12.8	+0.1
COEG				IAML		07 53 40.5	
	comp=Z,250nm,0.3s						
COEG	Centro de Oper	1.08	115	eP	Pn	07 53 12.8	+0.1
COEG				IAML		07 53 40.5	
	comp=Z,250nm,0.3s						
SCLA	Alcaldia de Sa	1.19	108	eP	Pn	07 53 14.0	+0.4
SCLA				eS	Sn	07 53 36.2	+0.4
SCLA				IAML		07 53 39.3	
	comp=Z,39nm,0.6s						
SCLA	Alcaldia de Sa	1.19	108	eP	Pn	07 53 14.0	+0.4
SCLA				eS	Sn	07 53 36.2	+0.4
SCLA				IAML		07 53 39.3	
	comp=Z,39nm,0.6s						
COEB	Comit de Eme	1.44	113	eP	Pn	07 53 15.9	0.0
COEB				IAML		07 53 45.1	
	comp=Z,202nm,0.2s						
COEB	Comit de Eme	1.44	113	eP	Pn	07 53 15.9	0.0
COEB				IAML		07 53 45.1	
	comp=Z,202nm,0.2s						
ALJI	Alcalda de J	1.48	120	eP	Pn	07 53 16.2	0.0
ALJI				eS	Sn	07 53 40.0	-0.5
ALJI				IAML		07 53 46.8	
	comp=Z,540nm,0.2s						
ALJI	Alcalda de J	1.48	120	eP	Pn	07 53 16.2	0.0
ALJI				eS	Sn	07 53 40.0	-0.5
ALJI				IAML		07 53 46.8	
	comp=Z,540nm,0.2s						
STG3	Santiaguito 3,	1.75	291	eP	Pn	07 53 20.3	+1.2
STG3				eS	Sn	07 53 47.8	+2.3
RTAL	Retalhuleu	1.81	285	Pn	Pn	07 53 20.3	+0.8
HUEH	Huehuetenango	1.99	309	Pn	Pn	07 53 21.9	+0.2
LCND	La Caada	2.09	111	eP	Pn	07 53 22.5	-0.1
LCND				IAML		07 54 08.8	
	comp=Z,187nm,0.4s						
LCND	La Caada	2.09	111	eP	Pn	07 53 22.5	-0.1
LCND				IAML		07 54 08.8	
	comp=Z,187nm,0.4s						
TGUH	Tegucigalpa,Un	2.54	90	eP	Pn	07 53 28.2	+0.3
TGUH	Tegucigalpa,Un	2.54	90	eP	Pn	07 53 28.2	+0.3
TGUH	Tegucigalpa,Un	2.54	90	Pn	Pn	07 53 28.3	+0.3
PETF	Flores	2.83	0	eP	Pn	07 53 32.0	+0.8
PETF	Flores	2.83	0	Pn	Pn	07 53 32.0	+0.8
CCIG	Comitan	3.09	316		Pn	07 53 36.1	+1.6
CNGN	Cerro Negro	3.48	116	Pn	Pn	07 53 42.4	+3.1
BOAB	BOACO BROADBAN	4.42	111	Pn	Pn	07 53 52.9	+1.7
ACON	Acoyapa	5.05	114	Pn	Pn	07 53 59.9	+0.5
HZTE	Horizontes, Gu	5.36	128	Pn	Pn	07 54 05.7	+2.2
CMIG	Matias Romero	5.67	303	P	Pn	07 54 07.9	+0.4
	comp=Z,0.3nm,0.3s,baz=135,slow=7.9,SNR=13						
CMIG				S	Sn	07 55 06.9	-5.6
	comp=Z,0.9nm,0.3s,baz=295,slow=22,SNR=10						
ORTG	Ortega, Santa	5.69	130		Pn	07 54 10.2	+2.3
DUNO	Dulce Nombre,	5.85	132	Pn	Pn	07 54 12.5	+2.6
JTS	Las Juntas de	6.12	127		Pn	07 54 15.6	+2.2
CAO2	Cobano, Puntar	6.40	132	Pn	Pn	07 54 19.3	+2.2
RIMA	Rio Macho	7.29	125	Pn	Pn	07 54 31.0	+1.9
SRBA	San Rafael, Bu	8.00	126	Pn	Pn	07 54 40.2	+1.8
DRK0	Durika	8.08	126	Pn	Pn	07 54 41.4	+2.0
JCT	Junction City	18.71	332	P	P	07 56 50.9	+0.7
JCT				IAmb	IAmb	07 56 51.8	
	comp=Z,6.7nm,0.6s						
152A	Waverly Hall	19.10	13	P	P	07 56 55.7	+1.3
152A				IAmb	IAmb	07 56 56.8	
	comp=Z,15nm,0.9s						
Z47A	Carrollton	19.11	5		P	07 56 54.4	0.0
WHTX	Lake Whitney,	19.13	340	P	P	07 56 55.7	+1.0
Z51A	Franklin	19.63	12	P	P	07 57 00.1	+0.1
Z51A				IAmb	IAmb	07 57 04.7	
	comp=Z,12nm,0.8s						
Y45A	Yeager Farm, C	19.71	1	P	P	07 57 01.8	+1.0
WLAR	White Oak Lake	19.75	352	P	P	07 57 02.2	+1.0
WLAR				IAmb	IAmb	07 57 06.9	
	comp=Z,12nm,0.8s						
TX31	Lajitas Ar. Si	19.83	322	P	Pn	07 57 04.7	-1.3
TX32	Lajitas Array	19.83	322	P	Pn	07 57 04.7	-1.3
TXAR	Lajitas Array	19.83	322	P	P	07 57 03.8	+1.5
	comp=Z,0.4nm,0.3s,baz=142,slow=10,SNR=35						
TXAR	Lajitas Array	19.83	322	P	Pn	07 57 04.8	-1.2
GOGA	Godfrey	20.12	16	P	P	07 57 05.4	+0.2
FPAL	Fort Paine	20.74	10	P	P	07 57 13.3	+1.4
FPAL				IAmb	IAmb	07 57 13.5	
	comp=Z,10nm,0.8s						
HODGE	Hodges	21.23	18	P	P	07 57 17.6	+0.5
SWET	Sewanee	21.35	9	P	P	07 57 18.5	0.0
SWET				IAmb	IAmb	07 57 19.6	
	comp=Z,14nm,0.6s						
W50A	Signal Mountai	21.44	10	P	P	07 57 19.0	-0.4
W50A				IAmb	IAmb	07 57 47.9	
	comp=Z,13nm,1.4s						
FCAR	Ozark Folk Cen	21.82	355	P	P	07 57 23.7	+0.4
CPCT	Cooper Cave	21.83	12	P	P	07 57 24.0	+0.6
LCAR	Lake Charles	21.93	357	P	P	07 57 24.7	+0.3
LCAR				IAmb	IAmb	07 57 25.6	
	comp=Z,17nm,1.5s						
WVT	Waverly	22.04	4	P	P	07 57 25.7	+0.2
WVT				IAmb	IAmb	07 57 26.7	
	comp=Z,24nm,1.5s						
FNO	Franklin	22.15	344	P	P	07 57 26.4	-0.2
CLTN	Cedars of Leba	22.16	8	P	P	07 57 27.9	+1.3
CLTN				IAmb	IAmb	07 57 28.1	
	comp=Z,8.5nm,0.7s						
TKL	Tuckaleechee C	22.19	13	P	P	07 57 27.1	+0.2
	comp=Z,6.5nm,0.8s,baz=177,slow=11,SNR=12						
TKL	Tuckaleechee C	22.19	13	P	P	07 57 27.3	+0.4
TKL				IAmb	IAmb	07 57 29.4	
	comp=Z,10.0nm,0.9s						
PBMO	Poplar Bluff	22.62	359	P	P	07 57 30.6	-0.3
PBMO				IAmb	IAmb	07 57 33.6	
	comp=Z,6.9nm,0.6s						
S39A	Bolivar	23.72	353	P	P	07 57 41.3	+0.4
S39A				IAmb	IAmb	07 57 42.1	
	comp=Z,6.1nm,0.6s						
CCM	Cathedral Cave	23.92	357	P	P	07 57 43.8	+1.1
CCM				IAmb	IAmb	07 57 44.7	
	comp=Z,6.1nm,0.6s						
I42A	Draeger Farm,	29.73	1	P	P	07 58 34.6	0.0
ECSD	EROS Data Cent	30.11	350	P	P	07 58 38.0	-0.1
COWI	Conover	31.93	1	P	P	07 58 53.5	-0.5
SADO	Sadowa	31.93	15	LR	LR	08 12 19.1	
	comp=Z,38nm,18.1s,baz=39,slow=37						
PDAR	Pinedale Array	33.24	333	P	P	07 59 06.0	+0.4
	comp=Z,0.5nm,0.7s,baz=160,slow=9.3,SNR=4.5						
REDW	Red Top Meadow	34.29	332	P	P	07 59 16.4	+1.7
REDW				IAmb	IAmb	07 59 16.8	
	comp=Z,6.5nm,0.5s						
NVAR	Mina Array Bea	34.93	319	P	P	07 59 22.4	+2.1
	comp=Z,0.3nm,0.7s,baz=132,slow=10,SNR=3.5						
ULM	Lac du Bonnet	36.41	354	P	P	07 59 30.0	-2.4
	comp=Z,3.1nm,0.7s,baz=186,slow=10,SNR=3.6						
SCHQ	Schefferville	44.47	19	P	P	08 00 37.6	-0.9
	comp=Z,6.6nm,0.5s,baz=218,slow=6.7,SNR=24						
SCHQ	Schefferville	44.47	19	P	P	08 00 37.4	-1.1
ILAR	Eielson Array	63.59	336	P	P	08 02 55.5	-1.1
	comp=Z,0.3nm,1.0s,baz=118,slow=5.5,SNR=4.3						
BMAR	Burnt Mountain	63.93	339	P	P	08 02 59.0	+0.1
EUNU	Eureka	66.02	1	P	P	08 03 12.0	-0.3
WRA	Warramunga Arr	137.40	256	PKP	PKPdf	08 11 49.2	+0.6
	comp=Z,0.6nm,0.5s,baz=90,slow=2.1,SNR=14						
ASAR	Alice Springs	137.62	250	PKP	PKPdf	08 11 49.8	+0.9
	comp=Z,0.3nm,0.6s,baz=109,slow=2.1,SNR=4.1						

JMA ***24*** *07:55:40.5±0.1, 23°.97N×121°.64E, h46km±1km, M3.1*
TAP ***24*** *07:55:41.4, 24°.01N×121°.65E, h45km, ML3.7, C*
ISC 24 07:55:41.8±1.2**, 24°.01N**±0°.02×**121°.68E**±0°.02**, h40**km±5km**,**
n107, σ0^{s}**84**/176**, 5C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	Hwalien	0.08	243	eP	Pn	07 55 49.2	+0.8
	baz=234						
HWA				S	Sn	07 55 54.0	+1.0
	baz=234						
TWD	Chiawan	0.10	311	iP	Pn	07 55 48.8	+0.3
	baz=315						
TWD				S	Sn	07 55 53.9	+0.8
	baz=315						
ETL	Fush Village	0.15	340	P	Pn	07 55 48.9	0.0
	baz=338						
ETL				eS	Sn	07 55 54.4	+0.6
	baz=338						
NACB	Ninganchiao	0.18	334	iP	Pn	07 55 48.8	-0.2
	baz=331						
NACB				S	Sn	07 55 53.3	-0.7
	baz=331						
ETLH	Xiulin Townshi	0.27	317⇑	iP	Pn	07 55 49.8	-0.1
	baz=316						
ETLH				S	Sn	07 55 55.5	0.0
	baz=316						
ESL	Shilin	0.30	229	iP	Pn	07 55 49.6	-0.5
	baz=232						
ESL				eS	Sn	07 55 55.5	-0.4
	baz=232						
EHP	Heping Village	0.30	11	P	Pn	07 55 50.6	+0.4
	baz=8.0						
EHP				eS	Sn	07 55 57.3	+1.3
	baz=8.0						
WHF	Hehuan Shan	0.40	289	P	Pn	07 55 51.4	-0.3
	baz=286						
WHF				S	Sn	07 55 58.7	0.0
	baz=286						
EGFH	Guangfu	0.41	214	iP	Pn	07 55 50.7	-0.8
	baz=220						
EGFH				eS	Sn	07 55 57.8	-0.4
	baz=220						
ENA	Nanau	0.42	8	P	Pn	07 55 51.5	-0.1
	baz=6.0						
ENA				eS	Sn	07 56 00.0	+1.7
	baz=6.0						
EWUT	Wuta	0.44	12	P	Pn	07 55 52.0	+0.2
	baz=9.0						
EWUT				S	Sn	07 55 59.8	+1.0
	baz=9.0						
FUSS	Fushou	0.46	301	P	Pn	07 55 52.4	+0.1
	baz=305						
FUSS				eS	Sn	07 56 00.0	+0.3
	baz=305						
OWD	Renai	0.46	263	iP	Pn	07 55 52.3	0.0
	baz=266						
OWD				eS	Sn	07 55 59.3	-0.3
	baz=266						
CHGB	Renai	0.47	276	iP	Pn	07 55 52.1	-0.2
	baz=273						
CHGB				S	Sn	07 55 59.1	-0.6
	baz=273						
NNS	Nan Shan	0.51	327	P	Pn	07 55 52.6	-0.3
	baz=336						
NNS				eS	Sn	07 56 00.6	0.0
	baz=336						
TWT	Tachien	0.52	298⇑	iP	Pn	07 55 53.1	+0.1
	baz=298						
TWT				eS	Sn	07 56 01.2	+0.3
	baz=298						
TDCB	Techi	0.53	297⇑	iP	Pn	07 55 53.2	0.0
	baz=298						
TDCB				eS	Sn	07 56 00.6	-0.6
	baz=298						
VWDT	VWDT	0.56	243	eP	Pn	07 55 53.3	0.0
	baz=236						
VWDT				eS	Sn	07 56 01.2	-0.3
	baz=236						
HGSD	Ruisui	0.57	204	P	Pn	07 55 53.7	+0.2
	baz=213						
HGSD				eS	Sn	07 56 02.5	+0.8
	baz=213						
EHY	Hungye	0.60	213	eP	Pn	07 55 54.4	+0.4
	baz=210						
EHY				eS	Sn	07 56 01.0	-1.5
	baz=210						
NDT	Datong Townshi	0.61	346	iP	Pn	07 55 53.7	-0.3
	baz=347						
NDT				S	Sn	07 56 03.1	+0.4
	baz=347						
TWC	Suao	0.61	15	P	Pn	07 55 54.4	+0.2
	baz=9.0						
TWC				eS	Sn	07 56 04.5	+1.7
	baz=9.0						
NDS	Dongshan	0.62	3	P	Pn	07 55 53.9	-0.3
	baz=356						
NDS				eS	Sn	07 56 02.7	-0.3
	baz=356						
ENTT	Nioudou	0.63	351	P	Pn	07 55 54.1	-0.3
	baz=352						
ENTT				eS	Sn	07 56 03.3	-0.1
	baz=352						
WCS	Beigang Elemen	0.70	274	eP	Pn	07 55 56.4	+1.1
	baz=273						
WCS				eS	Sn	07 56 06.0	+0.9
	baz=273						
TWE	Neicheng	0.71	359	eP	Pn	07 55 55.2	-0.2
	baz=355						
TWE				eS	Sn	07 56 05.6	+0.5
	baz=355						
YULB	Yu-li	0.71	210	P	Pn	07 55 53.8	-1.6
	baz=208						
YHNB	Yeheng	0.71	337⇑	iP	Pn	07 55 55.3	-0.2
	baz=344						
YHNB				S	Sn	07 56 04.7	-0.6
	baz=344						
WHP	Taichung City	0.72	292	eP	Pn	07 55 56.0	+0.4
	baz=294						
WHP				eS	Sn	07 56 06.1	+0.6
	baz=294						
NSK	Sanguang	0.72	336⇑	iP	Pn	07 55 55.4	-0.2
	baz=343						
NSK				eS	Sn	07 56 04.9	-0.7
	baz=343						
SMLT	Sun Moon Lake	0.72	260	eP	Pn	07 55 56.2	+0.5
	baz=257						
SMLT				eS	Sn	07 56 06.1	+0.4
	baz=257						
EYUL	Yuli	0.74	207	eP	Pn	07 55 55.3	-0.6
	baz=213						
EYUL				eS	Sn	07 56 05.6	-0.3
	baz=213						
ILA	Ilan	0.75	5	eP	Pn	07 55 55.4	-0.5
	baz=359						
ILA				eS	Sn	07 56 07.5	+1.3
	baz=359						
TYC	Yuchr	0.76	262	eP	Pn	07 55 56.4	+0.3
	baz=255						
NWLT	Wulai	0.78	348	P	Pn	07 55 56.0	-0.4
	baz=349						
NWLT				eS	Sn	07 56 06.0	-0.9
	baz=349						
YUS	Yu-Shan	0.85	232	iP	Pn	07 55 57.5	-0.2
	baz=226						
YUS				S	Sn	07 56 09.0	-0.2
	baz=226						
NTC	Toucheng	0.85	9	eP	Pn	07 55 57.1	-0.2
	baz=359						
NTC				eS	Sn	07 56 10.4	+1.8
	baz=359						
EGS		0.86	15	eP	Pn	07 55 58.3	+0.8
	baz=11						
NSTT	Nanjuang	0.87	315	eP	Pn	07 55 58.3	+0.7
	baz=319						
NSTT				eS	Sn	07 56 09.7	+0.5
	baz=319						
LIOB	Emei	0.87	316	eP	Pn	07 55 58.5	+0.8
	baz=320						
LIOB				eS	Sn	07 56 10.1	+0.8
	baz=320						
FULB	Fuli	0.88	204	eP	Pn	07 55 57.8	-0.1
	baz=211						
FULB				eS	Sn	07 56 10.1	+0.6
	baz=211						
WJS	Zhushan	0.89	258	eP	Pn	07 55 58.3	+0.4
	baz=257						
WJS				eS	Sn	07 56 11.4	+1.7
	baz=257						
TWQ1	Liyutan	0.89	292	P	Pn	07 55 58.0	+0.1
	baz=292						
TWQ1				eS	Sn	07 56 09.8	+0.1
	baz=292						
WNT	Mingjian	0.92	262	eP	Pn	07 55 59.1	+0.9
	baz=252						
WNT				eS	Sn	07 56 12.3	+2.0
	baz=252						
TCU	Taichung	0.93	279	eP	Pn	07 55 58.7	+0.3
	baz=278						
TCU				eS	Sn	07 56 12.1	+1.7
	baz=278						
NSY	Sanyi	0.93	296	eP	Pn	07 55 58.7	+0.3
	baz=296						
NSY				eS	Sn	07 56 11.8	+1.2
	baz=296						
ALS	Alishan	0.94	238	eP	Pn	07 55 59.2	+0.3
	baz=230						
ALS				eS	Sn	07 56 11.1	-0.2
	baz=230						
CHKT	Chengkung	0.95	198	eP	Pn	07 55 60.0	+1.2
	baz=206						
NHDH	Xindian Distri	0.96	352	eP	Pn	07 55 59.0	+0.2
	baz=352						
NHDH				eS	Sn	07 56 11.1	-0.1
	baz=352						
NMLH	Miaoli	0.96	303	eP	Pn	07 55 58.9	0.0
	baz=303						
TIPB	Shuangxi	0.96	8	P	Pn	07 55 59.1	+0.2
	baz=1.0						
TIPB				eS	Sn	07 56 12.4	+0.9
	baz=1.0						
TWA	Mucha	0.97	355	eP	Pn	07 55 59.0	0.0
	baz=355						
TWA				eS	Sn	07 56 11.7	+0.2
	baz=355						
SBCB	Hsinchu	1.00	321	eP	Pn	07 55 59.6	+0.2
	baz=335						
CHN5	Tsauling	1.01	246	eP	Pn	07 56 00.1	+0.6
	baz=237						
CHN5				eS	Sn	07 56 14.1	+1.6
	baz=237						
WDJ	Dajia District	1.01	290	eP	Pn	07 55 59.4	0.0
	baz=289						
WDJ				eS	Sn	07 56 13.0	+0.5
	baz=289						
ELDTW	Lidau	1.02	217	eP	Pn	07 55 58.8	-1.0
	baz=210						
WCHH	Zhanghua	1.03	274	eP	Pn	07 55 59.7	0.0
	baz=273						
WCHH				eS	Sn	07 56 14.0	+1.0
	baz=273						
TWB1	Santiao Chiao	1.03	16	eP	Pn	07 56 00.3	+0.5
	baz=27						
NCUH	Zhongli	1.05	335	eP	Pn	07 56 00.0	-0.1
	baz=335						
NWF	Wu-fen Shan	1.06	5	P	Pn	07 56 00.3	+0.1
	baz=351						
NWF				S	Sn	07 56 13.3	-0.5
	baz=351						
EDH	Donghe	1.09	199	eP	Pn	07 56 00.1	-0.5
	baz=197						
WDLH	Douliu	1.09	253	eP	Pn	07 56 01.2	+0.5
	baz=243						
TWS1	Kuangyinshan	1.11	348	eP	Pn	07 56 01.4	+0.5
TWS1				eS	Sn	07 56 15.6	+0.6
YM01	YM01	1.13	355	eP	Pn	07 56 00.8	-0.5
	baz=355						
YM01				eS	Sn	07 56 15.5	-0.1
	baz=355						
STYH	Taoyuan	1.18	225	eP	Pn	07 56 01.7	-0.1
	baz=224						
STYH				eS	Sn	07 56 17.4	+0.7
	baz=224						
CHN4	Tsaushan	1.19	237	eP	Pn	07 56 01.1	-1.0
	baz=227						
CHN4				eS	Sn	07 56 17.8	+0.7
	baz=227						
TPUB	Ta-pu	1.20	234	eP	Pn	07 56 02.4	+0.3
	baz=224						
TPUB				eS	Sn	07 56 19.0	+1.9
	baz=224						
WRL	Guolierlin Hig	1.20	265	eP	Pn	07 56 01.8	-0.3
	baz=274						
WRL				eS	Sn	07 56 18.0	+0.9
	baz=274						
CHN2	Minshiung	1.20	247	eP	Pn	07 56 02.9	+0.8
	baz=246						
LONT	Longtian	1.21	205	eP	Pn	07 56 00.2	-2.0
	baz=194						
WTK	Tuku	1.23	255	eP	Pn	07 56 02.8	+0.4
	baz=254						
WTK				eS	Sn	07 56 18.8	+1.0
	baz=254						
WTP	Ta-pu	1.24	232	eP	Pn	07 56 03.2	+0.5
	baz=231						
CHY	Chiayi	1.26	246	eP	Pn	07 56 03.0	+0.1
	baz=245						
TWY	Chenhua	1.26	357	eP	Pn	07 56 02.9	0.0
	baz=356						
TWY				eS	Sn	07 56 19.1	+0.5
	baz=356						
YOJ	Yonaguni jima	1.29	70	eP	Pn	07 56 03.7	+0.3
	baz=68						
YOJ				eS	Sn	07 56 19.8	+0.3
	baz=68						
YOJ	Yonaguni jima	1.29	70	P	Pn	07 56 03.6	+0.2
YOJ				eS	Sn	07 56 19.8	+0.3
TWGBT	Beinan	1.31	205	eP	Pn	07 56 02.6	-1.1
	baz=195						
TWK	Hsinying	1.32	236	eP	Pn	07 56 04.4	+0.6
	baz=234						
TWK				eS	Sn	07 56 22.4	+2.1
	baz=234						
CHN1	Nanshi	1.34	232	eP	Pn	07 56 04.8	+0.7
	baz=231						
CHN1				eS	Sn	07 56 22.7	+2.1
	baz=231						
LDUT	Ludao	1.35	188	eP	Pn	07 56 02.5	-1.7
	baz=181						
SGST	Jiashian	1.37	228	eP	Pn	07 56 04.2	-0.2
	baz=219						
SGST				eS	Sn	07 56 22.7	+1.4
	baz=219						
WSF	Szhu	1.39	255	eP	Pn	07 56 05.0	+0.4
	baz=266						
SLGT	Liugui	1.39	223	eP	Pn	07 56 05.7	+1.0
	baz=223						
SLGT				eS	Sn	07 56 23.4	+1.5
	baz=223						
ICHU	Yijhu	1.44	243	eP	Pn	07 56 05.9	+0.5
	baz=243						
ECL	Taimali	1.56	205	eP	Pn	07 56 06.3	-0.7
	baz=198						
SSD	Sandimen	1.59	218	eP	Pn	07 56 08.2	+0.8
	baz=207						
TSMG	Majia	1.61	216	eP	Pn	07 56 09.0	+1.2
	baz=216						
MASBT	Mashibuluo	1.69	215	eP	Pn	07 56 09.4	+0.6
	baz=214						
EAST	Anshuo	1.79	205	eP	Pn	07 56 10.6	+0.3
	baz=197						
IRIF	Iriomote-Funau	1.90	80	P	Pn	07 56 12.0	+0.3
IRIF				S	Sn	07 56 34.3	-0.1
SCZT	Fangliau	1.90	211	eP	Pn	07 56 12.4	+0.7
	baz=201						
HATJ	Hateruma jima	1.94	88	eS	Sn	07 56 36.1	+0.6
SLIU	Shizi	1.96	205	eP	Pn	07 56 12.1	-0.5
	baz=197						
LAY	Lan-yu	1.97	183	eP	Pn	07 56 11.5	-1.2
	baz=177						
PHUB	P'eng-hu	1.99	256	eP	Pn	07 56 11.8	-1.2
	baz=255						
PNG	Penghu	2.00	258	eP	Pn	07 56 12.1	-0.9
	baz=257						
JKRS	Kuro-shima	2.14	84	P	Pn	07 56 15.5	+0.5

JKRS				*e*S	**Sn**	**07 56 41.1**	**+0.8**
JIJ	**Ishigaki jima**	**2.28**	**81**	P	**Pn**	**07 56 16.9**	**0.0**
JIJ				S	**Sn**	**07 56 42.4**	**-1.3**
JISG	**Ishigakijimahi**	**2.47**	**76**	P	**Pn**	**07 56 19.2**	**-0.3**
JISG				S	**Sn**	**07 56 47.5**	**-0.9**
PTMZ	**Houxiangcun**	**2.55**	**294**	*e*P	**Pn**	**07 56 19.3**	**-1.3**
	baz=294						
MATB	**Ma-tsu**	**2.65**	**324**	*e*P	**Pn**	**07 56 20.4**	**-1.6**
	baz=322						
JTJ	**Tarama**	**2.83**	**77**	S	**Sn**	**07 56 59.1**	**+1.8**
KNM	**Kinmen**	**2.99**	**278**	*e*P	**Pn**	**07 56 27.2**	**+0.4**
	baz=277						
KNMB	**Chin-men Tao**	**3.04**	**279**	*e*P	**Pn**	**07 56 25.5**	**-1.9**
	baz=279						
XPSS	**Dashiqiu**	**3.20**	**335**	*e*P	**Pn**	**07 56 27.8**	**-1.8**
	baz=333						
AXDP	**Jialang**	**3.49**	**285**	*e*P	**Pn**	**07 56 32.0**	**-1.6**
	baz=285						
ZPLA	**Ao Xicun**	**3.60**	**269**	*e*P	**Pn**	**07 56 33.1**	**-2.0**
	baz=268						

JMA 24 07:56:17.1±0.5, 38°.79N×147°.61E, h49^{km}, M4.2, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	**4.57**	**282**	P	Pn	07 57 25.9	+2.3
MIYJ				*e*S	Sn	07 58 17.3	+1.9
JTH	**Tanohata**	**4.60**	**286**	P	Pn	07 57 27.1	+3.0
OFUJ	**Ofunato**	**4.64**	**275**	P	Pn	07 57 26.3	+1.7
OFUJ				*e*S	Sn	07 58 18.6	+1.4
NEM2	**Nemuro 2**	**4.78**	**343**	P	Pn	07 57 27.5	+0.9
NEM2				*e*S	Sn	07 58 21.8	+1.2
JMK	**Ichinoseki**	**4.99**	**274**	P	Pn	07 57 31.3	+1.9
JMK				*e*S	Sn	07 58 27.2	+1.4
JCH	**Churui**	**5.00**	**321**	P	Pn	07 57 32.6	+3.0
JCH				*e*S	Sn	07 58 29.5	+3.5
JOT	**Ohata**	**5.66**	**299**	*e*S	Sn	07 58 45.6	+3.4
JTKR	**Abashiri--Toko**	**5.88**	**333**	P	Pn	07 57 43.9	+2.4
JTKR				*e*S	Sn	07 58 51.2	+3.7
BSO1	**Boso 1**	**6.74**	**234**	P	Pn	07 57 50.5	-2.4
BSO1				*e*S	Sn	07 59 05.3	-2.7
JRY	**Ryogami san**	**7.46**	**251**	P	Pn	07 58 02.7	-0.7

IDC 24 08:04:25.6±48.0, 16°.35S×172°.41W, h0^{km}, mb3.8/3, mb1 4.0/3, mb1mx3.6/24, mbtmp3.8/3, Error ellipse: s-maj=936.5km s-min=194.9km az=80.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**44.40**	**241**	P	P	08 12 38.3	0.0
	0.4nm,0.4s,baz=86,slow=15,SNR=1.1						
WRA	**Warramunga Arr**	**50.57**	**257**	P	P	08 13 26.0	-0.4
	0.3nm,0.5s,baz=95,slow=6.9,SNR=12						
ASAR	**Alice Springs**	**50.73**	**253**	P	P	08 13 27.7	+0.1
	2.2nm,0.6s,baz=88,slow=8.3,SNR=46						

IDC 24 08:24:42.0±2.3, 1°.50N×126°.98E, h0^{km}, mb3.3/3, mb1 3.6/3, mb1mx3.2/47, mbtmp3.4/3, Error ellipse: s-maj=181.3km s-min=28.2km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.50**	**162**	P	P	08 29 43.9	+0.6
	0.5nm,0.3s,baz=340,slow=11,SNR=23						
ASAR	**Alice Springs**	**25.90**	**165**	P	P	08 30 15.4	-0.6
	0.3nm,1.0s,baz=355,slow=8.1,SNR=4.4						
MKAR	**Makanchi Array**	**59.53**	**326**	P	P	08 34 47.3	0.0
	0.3nm,0.5s,baz=118,slow=9.4,SNR=2.5						

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*NEIC **24** 08:27:06.8±1.1, 1°.1N±0°.2×127°.3E±0°.6, h11^{km}±11^{km}, mb4.1/8, Error ellipse: s-maj=95.0km s-min=6.3km az=73.0*

*IDC **24** 08:27:07.1±2.1, 0°.81N×127°.16E, h0^{km}, mb3.7/3, mb1 3.9/3, mb1mx3.3/47, mbtmp3.7/3, MS3.2/1, Ms1 3.2/1, ms1mx2.4/35, Error ellipse: s-maj=166.1km s-min=25.6km az=66.0*

*DJA **24** 08:27:08.2±0.4, 1°N±3°×12°7E±°, h10^{km}, M3.4/5, MLv3.4/5*

ISC 24 08:27:07.0±1.0, 0°.9N±0°.1×127°.1E±0°.1, h10^{km}, n16, σ1^{s}.02/18, mb3.8/6, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.33**	**120**	P	**Pg**	**08 27 13.6**	**0.0**
TNTI				S	**Sg**	**08 27 17.5**	**-0.5**
TNTI	**Ternate**	**0.33**	**120**	Pg	**Pg**	**08 27 13.9**	**+0.3**
LBMI	**Labuha**	**1.62**	**165**	P	**Pb**	**08 27 37.1**	**+0.1**
LBMI				S	**Sb**	**08 27 57.8**	**+0.2**
KNRA	**Kununurra**	**16.59**	**174**		**Pn**	**08 30 59.7**	**-0.2**
KNRA				IAmb	IAmb	08 31 16.0	
	comp=Z,13nm,1.2s						
WB0	**Warramunga Arr**	**21.79**	**161**	P	**P**	**08 31 59.9**	**+0.5**
WB0				IAmb	IAmb	08 32 07.4	
	comp=Z,8.5nm,1.2s						
WRA	**Warramunga Arr**	**21.94**	**161**	P	**P**	**08 32 00.4**	**-0.5**
	comp=Z,1.0nm,0.3s,baz=340,slow=11,SNR=22						
WRA				LR	LR	08 40 43.4	
	comp=Z,63nm,19.0s,baz=60,slow=38						
WRA	**Warramunga Arr**	**21.94**	**161**	P	**P**	**08 32 01.0**	**+0.1**
WB2	**Warramunga Arr**	**21.94**	**161**	P	**P**	**08 32 01.2**	**+0.3**
WB2				IAmb	IAmb	08 32 04.3	
	comp=Z,4.6nm,1.1s						
QIZ	**Qiongzhong**	**24.68**	**318**	P	**P**	**08 32 26.0**	**-2.3**
AS31	**Alice Springs**	**25.34**	**165**	P	**P**	**08 32 35.0**	**+0.7**
ASAR	**Alice Springs**	**25.34**	**165**	P	**P**	**08 32 35.0**	**+0.7**
	comp=Z,1.9nm,0.8s,baz=345,slow=11,SNR=17						
ASAR	**Alice Springs**	**25.34**	**165**	P	**P**	**08 32 34.5**	**+0.2**
FORT	**Forrest**	**31.56**	**178**	P	**P**	**08 33 28.7**	**-1.0**
BBOO	**Buckleboo**	**34.62**	**167**	P	**P**	**08 33 56.5**	**+0.1**
BBOO				IAmb	IAmb	08 34 16.9	
	comp=Z,15nm,1.4s						
MKAR	**Makanchi Array**	**60.04**	**326**	P	**P**	**08 37 16.9**	**+2.7**
	comp=Z,0.6nm,0.7s,baz=127,slow=7.9,SNR=5.6						
MKAR	**Makanchi Array**	**60.04**	**326**	P	**P**	**08 37 14.4**	**+0.2**

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*MAN **24** 08:36:55.6, 9°.94N×124°.10E, h16^{km}, mb5.0, ML3.9, MS4.0*

*NEIC **24** 08:36:55.0±2.8, 9°.9N±0°.1×124°.3E±0°.1, h10^{km}±1^{km}, mb4.5/14, Error ellipse: s-maj=23.4km s-min=18.6km az=72.0*

*IDC **24** 08:37:01.5±7.9, 9°.95N×124°.57E, h77^{km}±73^{km}, mb3.7/11, mb1 3.8/11, mb1mx3.6/54, mbtmp4.0/11, MS3.0/6, Ms1 3.1/6, ms1mx2.8/38, Error ellipse: s-maj=37.9km s-min=15.6km az=66.0*

ISC 24 08:36:57.6±0.5, 9°.79N±0°.08×124°.3E±0°.1, h33^{km}, n42, σ1^{s}.57/40, mb4.3/22, MS2.9/6, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MYLDM	**Lahad Datu**	**7.36**	**232**	Pn	**Pn**	**08 38 42.4**	**-0.4**
MTN	**Manton Dam**	**23.49**	**163**	P	**P**	**08 42 04.0**	**-0.6**
MTN				IAmb	IAmb	08 42 27.2	
	comp=Z,25nm,1.3s						
KNRA	**Kununurra**	**25.69**	**170**	P	**P**	**08 42 26.0**	**+1.2**
KNRA				IAmb	IAmb	08 42 48.3	
	comp=Z,15nm,1.2s						
CMAR	**Chiang Mai Arr**	**26.03**	**292**	P	**P**	**08 42 29.4**	**+1.4**
	comp=Z,3.6nm,0.9s,baz=108,slow=8.1,SNR=16						
CMAR				LR	LR	08 52 44.2	
	comp=Z,44nm,20.1s,baz=125,slow=36						
CMAR	**Chiang Mai Arr**	**26.03**	**292**	P	**P**	**08 42 28.3**	**+0.2**
PSI	**Prapat**	**26.15**	**256**	LR	LR	08 53 40.4	
	comp=Z,39nm,18.9s,baz=76,slow=38						
KSRS	**Korea Array**	**27.73**	**6**	P	**P**	**08 42 40.6**	**-2.5**
	comp=Z,0.8nm,0.6s,baz=187,slow=10,SNR=1.7						
KSRS				LR	LR	08 54 03.9	
	comp=Z,22nm,18.9s,baz=142,slow=37						
MJAR	**Matsushiro Arr**	**29.46**	**23**	LR	LR	08 54 46.3	
	comp=Z,21nm,19.4s,baz=285,slow=36						
WB0	**Warramunga Arr**	**31.01**	**161**	P	**P**	**08 43 11.8**	**-0.6**
WB0				IAmb	IAmb	08 43 28.7	
	comp=Z,5.6nm,1.4s						
WRA	**Warramunga Arr**	**31.16**	**162**	P	**P**	**08 43 13.2**	**-0.4**
	comp=Z,0.5nm,0.8s,baz=341,slow=9.5,SNR=3.1						
WRA				LR	LR	08 57 44.2	
	comp=Z,21nm,18.1s,baz=65,slow=40						
WRA	**Warramunga Arr**	**31.16**	**162**	P	**P**	**08 43 14.9**	**+1.3**
WB2	**Warramunga Arr**	**31.16**	**162**	P	**P**	**08 43 13.3**	**-0.4**
WB2				IAmb	IAmb	08 43 20.4	
	comp=Z,6.6nm,1.4s						
HHC	**Hu-ho-hao-te**	**32.93**	**342**	*e*P	**P**	**08 43 31.8**	**+2.7**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,140nm,7.9s						
SHL	**Shillong**	**34.51**	**301**	P	**P**	**08 43 41.8**	**-1.4**
AS31	**Alice Springs**	**34.55**	**164**	P	**P**	**08 43 45.2**	**+1.9**
ASAR	**Alice Springs**	**34.55**	**164**	P	**P**	**08 43 43.8**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=342,slow=6.9,SNR=18						
ASAR				PcP	**PcP**	**08 46 16.7**	**-1.1**
	comp=Z,0.5nm,0.7s,baz=359,slow=2.9,SNR=4.2						
ASAR	**Alice Springs**	**34.55**	**164**	P	**P**	**08 43 44.6**	**+1.2**
GTA	**Gaotai**	**36.71**	**328**	*e*P	**P**	**08 44 05.8**	**+4.0**
GTA				pP	pP	08 44 09.8	-1.8
GTA				sP	sP	08 44 12.6	-3.0
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BBOO	**Buckleboo**	**43.82**	**166**	P	**P**	**08 45 02.0**	**+1.4**
BBOO				IAmb	IAmb	08 45 08.0	
	comp=Z,18nm,1.5s						
STKA	**Stephens Creek**	**44.61**	**159**	LR	LR	09 05 38.7	
	comp=Z,32nm,18.5s,baz=23,slow=38						
STKA	**Stephens Creek**	**44.61**	**159**	P	**P**	**08 45 06.9**	**-0.1**
WMQ	**Urumqi**	**46.43**	**323**	*e*P	**P**	**08 45 23.4**	**+2.1**
MK31	**Makanchi Array**	**51.25**	**324**	P	**P**	**08 46 00.1**	**+1.8**
MKAR	**Makanchi Array**	**51.25**	**324**	P	**P**	**08 45 57.7**	**-0.6**
	comp=Z,2.8nm,0.8s,baz=133,slow=7.7,SNR=10.0						
KSH	**Kashi**	**52.12**	**313**	P	**P**	**08 46 05.1**	**+0.1**
KSH				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KURK	**Kurchatov**	**55.38**	**326**	P	**P**	**08 46 26.9**	**-1.6**
KURK				IAmb	IAmb	08 46 32.5	
	comp=Z,9.3nm,1.1s						
KURBB	**Kurchatov Arra**	**55.38**	**326**	P	**P**	**08 46 27.7**	**-0.8**
	comp=Z,1.7nm,0.5s,baz=128,slow=6.3,SNR=7.1						
KKAR	**Karatay Array**	**57.22**	**315**	P	**P**	**08 46 40.5**	**-1.3**
BVAR	**Borovoye Array**	**60.97**	**326**	P	**P**	**08 47 07.1**	**-0.4**
	comp=Z,1.3nm,0.9s,baz=177,slow=7.2,SNR=3.7						
NRIK	**Noril'sk**	**64.01**	**346**	P	**P**	**08 47 26.3**	**-1.3**
	comp=Z,2.7nm,0.6s,baz=114,slow=4.4,SNR=5.5						
ABKAR	**Akbulak array**	**65.98**	**320**	P	**P**	**08 47 42.6**	**+1.8**
BKZ	**Black Stump Fm**	**68.69**	**139**	P	**P**	**08 48 00.7**	**+2.6**
ILAR	**Eielson Array**	**80.71**	**26**	P	**P**	**08 49 04.9**	**-2.4**
	comp=Z,0.4nm,1.0s,baz=259,slow=4.7,SNR=2.0						
BMAR	**Burnt Mountain**	**81.46**	**23**	P	**P**	**08 49 12.0**	**+0.7**
BCAR	**Beaver Creek A**	**83.12**	**27**	P	**P**	**08 49 20.7**	**+0.6**
ARCES	**ARCESS Array B**	**83.97**	**340**	P	**P**	**08 49 22.0**	**-2.2**
	comp=Z,2.2nm,0.9s,baz=64,slow=2.8,SNR=4.0						
ARCES	**ARCESS Array B**	**83.97**	**340**	P	**P**	**08 49 23.2**	**-1.0**
AKASG	**Malin Array Be**	**85.70**	**321**	P	**P**	**08 49 31.4**	**-1.9**
	comp=Z,0.3nm,0.2s,baz=60,slow=5.5,SNR=1.7						
MAW	**Mawson**	**88.59**	**200**	P	**P**	**08 49 45.4**	**-1.4**
MAW				IAmb	IAmb	08 50 13.7	
	comp=Z,4.5nm,1.4s						
VNDA	**Vanda**	**89.71**	**172**	P	**P**	**08 49 51.8**	**-0.1**
VNDA				IAmb	IAmb	08 49 58.2	
	comp=Z,3.4nm,1.2s						
PLCA	**Paso Flores**	**146.49**	**159**	PKPbc	**PKPdf**	**08 56 33.5**	**-1.1**
	comp=Z,3.4nm,1.1s,baz=271,slow=4.8,SNR=4.3						
PLCA	**Paso Flores**	**146.49**	**159**		**PKPdf**	**08 56 33.2**	**-1.3**

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*SOME **24** 08:57:23.4, 41°.82N×81°.52E, h5^{km}*

*NNC **24** 08:57:24.4±1.3, 41°.75N×81°.50E, h0^{km}, mb3.9, mpv3.6, Error ellipse: s-maj=8.8km s-min=6.6km az=154.0*

ISC 24 08:57:25.7±2.2, 41°.82N±0°.09×81°.35E±0°.08, h10^{km}, n39, σ1^{s}.85/60, 7C-4D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**1.79**	**336**	*e*P	**Pb**	**08 57 58.7**	**0.0**
	52nm,0.3s						
KTMS				*e*S	**Sg**	**08 58 23.9**	**+0.7**
	87nm,0.6s						
KTMS	**Ketmen**	**1.79**	**336**	P	**Pb**	**08 57 58.6**	**0.0**
	52nm,0.3s						
KTMS				S	**Sg**	**08 58 23.9**	**+0.7**
	87nm,0.6s						
SHLS	**Shalkode**	**1.93**	**315**	*e*P	**Pn**	**08 57 58.5**	**-0.3**
	48nm,0.1s						
SHLS				*e*S	**Sn**	**08 58 24.2**	**+1.0**
	202nm,0.1s						
SHLS	**Shalkode**	**1.93**	**315**	Pg	**Pn**	**08 57 58.5**	**-0.3**
	89nm,0.2s						
SHLS				Lg	Lg	08 58 24.2	
	101nm,0.4s						
PDGK	**Podgornoye**	**2.04**	**318**	Pg	**Pb**	**08 58 03.5**	**+0.6**
	26nm,0.2s						
PDGK				Lg	Lg	08 58 32.6	
	30nm,0.5s						
PDGK	**Podgornoye**	**2.04**	**318**	⇑Pn	**Pb**	**08 58 02.8**	**-0.2**
	16nm,0.3s						
PDGK				⇓Sn	**Sg**	**08 58 32.9**	**+1.6**
	35nm,0.5s						
UZB	**Uzynbulak**	**2.17**	**309**	*e*P	**Pg**	**08 58 06.0**	**-1.4**
	24nm,0.3s						
UZB				*e*S	**Sg**	**08 58 37.0**	**+1.4**
	28nm,0.3s						
UZB	**Uzynbulak**	**2.17**	**309**	Pg	**Pb**	**08 58 05.7**	**+0.5**
	24nm,0.3s						
UZB				Lg	Lg	08 58 37.0	
	28nm,0.3s						
SATY	**Saty**	**2.50**	**301**	*e*P	**Pb**	**08 58 11.5**	**+0.6**
	23nm,0.4s						
SATY				*e*S	**Sg**	**08 58 46.3**	**+0.1**
	27nm,0.4s						
SATY	**Saty**	**2.50**	**301**	Pg	**Pb**	**08 58 11.5**	**+0.6**
	23nm,0.4s						
SATY				Lg	Lg	08 58 46.3	
	27nm,0.4s						
KPKS	**Kokpek**	**2.56**	**311**	*e*P	**Pb**	**08 58 12.5**	**+0.7**
	14nm,0.1s						
KPKS				*e*S	**Sg**	**08 58 48.1**	**0.0**
	48nm,0.1s						
DJR	**Jarkent**	**2.76**	**336**	*e*P	**Pb**	**08 58 16.0**	**+0.8**
	4.6nm,0.4s						
DJR				*e*S	**Sg**	**08 58 53.7**	**-0.7**
	34nm,0.6s						
DJR	**Jarkent**	**2.76**	**336**	Pg	**Pb**	**08 58 16.0**	**+0.8**
	4.6nm,0.4s						
DJR				Lg	Lg	08 58 53.7	
	34nm,0.6s						
KURS	**Kuram**	**2.88**	**307**	*e*P	**Pg**	**08 58 18.9**	**-2.0**
	5.8nm,0.2s						
KURS				*e*S	**Sg**	**08 58 59.1**	**+1.0**
	15nm,0.5s						
KURS	**Kuram**	**2.88**	**307**	Pg	**Pg**	**08 58 18.9**	**-2.0**
	9.0nm,0.7s						
KURS				Lg	Lg	08 58 59.1	
	15nm,0.5s						
BLB	**Baldybastay**	**3.10**	**318**	Pg	**Pg**	**08 58 23.2**	**-2.0**
	13nm,0.4s						
BLB				Lg	Lg	08 59 06.1	
	18nm,0.4s						
KOTS	**Kotyrbulak**	**3.43**	**296**	*e*P	**Pb**	**08 58 28.3**	**+1.6**
	4.7nm,0.1s						
KOTS				*e*S	**Sg**	**08 59 14.8**	**-1.2**
	21nm,0.7s						
KOTS	**Kotyrbulak**	**3.43**	**296**	Pg	**Pb**	**08 58 28.3**	**+1.6**
	8.2nm,0.3s						
KOTS				Lg	Lg	08 59 14.8	
	21nm,0.7s						
MDOK	**Medeo**	**3.45**	**294**	*e*P	**Pg**	**08 58 29.2**	**-2.6**
	5.1nm,0.4s						
MDOK				*e*S	**Sg**	**08 59 16.9**	**+0.4**
	8.7nm,0.5s						
MDOK	**Medeo**	**3.45**	**294**	Pg	**Pb**	**08 58 28.8**	**+1.7**
	4.3nm,0.6s						
MDOK				Lg	Lg	08 59 18.8	
	6.4nm,0.5s						
MDOK	**Medeo**	**3.45**	**294**	Pg	**Pg**	**08 58 29.2**	**-2.6**
	5.1nm,0.4s						
MDOK				Lg	Lg	08 59 17.0	
	8.7nm,0.5s						
TNSS	**Tian-Shan**	**3.48**	**292**	*e*P	**Pg**	**08 58 29.7**	**-2.6**
	5.7nm,0.3s						
TNSS				*e*S	**Sg**	**08 59 17.7**	**+0.3**
	5.6nm,0.4s						
TNSS	**Tian-Shan**	**3.48**	**292**	Pg	**Pg**	**08 58 29.7**	**-2.6**
	5.7nm,0.3s						
TNSS				Lg	Lg	08 59 17.7	
	5.6nm,0.4s						
ARXS	**Arharly**	**3.52**	**314**	*e*P	**Pb**	**08 58 30.3**	**+2.1**
	4.5nm,0.4s						
ARXS				*e*S	**Sg**	**08 59 18.1**	**-0.6**
	12nm,0.6s						
ARXS	**Arharly**	**3.52**	**314**	Pg	**Pb**	**08 58 30.3**	**+2.1**
	4.5nm,0.4s						
ARXS				Lg	Lg	08 59 18.1	
	12nm,0.6s						
KAPS	**Kapalarasan**	**3.76**	**338**	*e*P	**Pg**	**08 58 34.5**	**-3.2**
	10nm,0.4s						
KAPS				*e*S	**Sg**	**08 59 25.7**	**-0.6**
	9.8nm,0.4s						
KAPS	**Kapalarasan**	**3.76**	**338**	Pg	**Pg**	**08 58 34.5**	**-3.2**
	10nm,0.4s						
KAPS				Lg	Lg	08 59 25.7	
	9.8nm,0.4s						
KTBS	**Karatobe**	**3.92**	**300**	*e*P	**Pg**	**08 58 38.1**	**-2.7**
	3.7nm,0.3s						
KTBS				*e*S	**Sg**	**08 59 31.8**	**+0.2**
	19nm,0.6s						
KTBS	**Karatobe**	**3.92**	**300**	Pg	**Pg**	**08 58 38.1**	**-2.7**
	3.7nm,0.3s						
KTBS				Lg	Lg	08 59 31.8	
	19nm,0.6s						
KST	**Kastek**	**4.17**	**289**	*e*P	**Pg**	**08 58 43.0**	**-2.6**
	8.2nm,0.3s						
KST				*e*S	**Sg**	**08 59 40.0**	**+0.5**
	11nm,0.8s						
KST	**Kastek**	**4.17**	**289**	Pg	**Pg**	**08 58 43.0**	**-2.6**
	10nm,0.7s						
KST				Lg	Lg	08 59 40.1	
	11nm,0.8s						
KUU	**Kurty**	**4.22**	**301**	*e*P	**Pg**	**08 58 43.9**	**-2.8**
	2.7nm,0.1s						
KUU				*e*S	**Sg**	**08 59 41.7**	**+0.4**
	5.5nm,0.1s						
KUU	**Kurty**	**4.22**	**301**	Pg	**Pg**	**08 58 43.9**	**-2.8**
	3.5nm,0.6s						
KUU				Lg	Lg	08 59 41.7	
	7.5nm,0.5s						
DGS	**Degeres**	**4.36**	**291**	*e*P	**Pg**	**08 58 45.5**	**-3.7**
	6.6nm,0.5s						
DGS				*e*S	**Sg**	**08 59 44.5**	**-1.1**
	6.7nm,0.6s						
DGS	**Degeres**	**4.36**	**291**	Pg	**Pg**	**08 58 45.5**	**-3.7**
	6.6nm,0.5s						
DGS				Lg	Lg	08 59 43.5	
	6.7nm,0.6s						
TKM2	**Tokmak 2**	**4.40**	**286**	⇑Pn	**Pn**	**08 58 35.2**	**+2.4**
	2.2nm,0.3s						
TKM2				⇑Pg	**Pg**	**08 58 48.0**	**-2.0**
	3.7nm,0.8s						
TKM2				⇓Lg	Lg	08 59 48.6	
	4.8nm,0.6s						
MAKZ	**Makanchi**	**5.01**	**5**	⇑Pn	**Pn**	**08 58 41.6**	**+0.6**
	1.0nm,0.5s						
MAKZ				⇓Sn	**Sn**	**08 59 41.4**	**+2.4**
	2.0nm,0.5s						
MAKZ				⇑Lg	Lg	09 00 07.7	
	4.2nm,0.8s						
MK31	**Makanchi Array**	**5.02**	**7**	⇑Pn	**Pn**	**08 58 41.6**	**+0.5**
	0.6nm,0.4s,baz=193,slow=13,SNR=25						
MK31				⇑Sn	**Sn**	**08 59 40.8**	**+1.6**
	1.2nm,0.5s,baz=281,slow=27,SNR=6.1						
MK31				⇓Lg	Lg	09 00 03.3	
	1.3nm,0.4s,baz=190,slow=27,SNR=4.0						
AAK	**Ala-Archa**	**5.15**	**281**	Pg	**Pg**	**08 59 00.8**	**-3.6**
	3.4nm,0.8s						
AAK				Lg	Lg	09 00 10.4	
	5.0nm,0.8s						

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*INET **24** 09:00:24.6, 9°.56N×84°.84W, h15^{km}, MW3.4*

UCR 24 09:00:29.0±1.3, 9°.55N×84°.88W, h18^{km}±3^{km}, MW3.9, 5C-17D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAFE	**Finca La Fe, P**	**0.26**	**354**	*e*P	Pg	09 00 34.9	-0.1
LAFE				*e*S	Sg	09 00 39.3	+0.3
SRA1	**San Ramn**	**0.67**	**37**	⇓*e*P	Pb	09 00 41.2	-0.9
INDI	**Punta indio, G**	**0.69**	**298**	⇓*i*P	Pb	09 00 42.2	-0.2
JTS	**Las Juntas de**	**0.74**	**355**	⇓*i*P	Pb	09 00 42.4	-1.0
HDC	**Heredia**	**0.88**	**59**	⇓*i*P	Pb	09 00 45.3	-0.6
LCR2	**La Lucha 2**	**0.89**	**77**	⇓*i*P	Pb	09 00 45.0	-1.0
CASO	**Castillo**	**0.89**	**9**	⇓*i*P	Pb	09 00 45.2	-0.7
ARE1	**Arenal 1**	**0.92**	**10**	⇓*i*P	Pb	09 00 46.0	-0.5
FORC	**Fortuna**	**0.94**	**13**	⇓*i*P	Pb	09 00 46.0	-0.7
GUAI	**GUAI**	**0.95**	**319**	⇑*i*P	Pb	09 00 46.2	-0.7
GUAI				*i* S	Sn	09 01 00.5	+0.1
CEDE	**Laguna Cedeo**	**0.95**	**11**	⇓*i*P	Pb	09 00 46.5	-0.5
CEDE				*i* S	Sg	09 01 00.3	+0.2
SAJU	**San Juanillo,**	**0.96**	**302**	*e*P	Pb	09 00 45.9	-1.2
RIMA	**Rio Macho**	**1.03**	**78**	⇓*e*P	Pb	09 00 47.2	-1.1
EDDO	**Dominical**	**1.05**	**106**	⇓*i*P	Pb	09 00 47.6	-1.0
EDDO				*e*S	Sg	09 01 03.1	-0.1
ACAL	**Aguas Claras**	**1.09**	**352**	⇓*i*P	Pb	09 00 48.4	-1.0
RAFA	**San Farael, Vo**	**1.13**	**69**	*e*P	Pn	09 00 49.4	-0.9
CUI	**Cuipilapa**	**1.14**	**346**	⇓*i*P	Pn	09 00 49.2	-0.9
COLC	**Colonia**	**1.16**	**344**	⇓*i*P	Pn	09 00 49.4	-0.9
PTEN	**Parque Tenorio**	**1.17**	**355**	⇓*i*P	Pn	09 00 49.5	-0.9
HORNC	**Hornillas**	**1.19**	**346**	⇓*i*P	Pn	09 00 50.0	-0.9
LIM1	**Limonal**	**1.20**	**342**	*i* P	Pn	09 00 50.0	-0.9
PEZE	**Perez Zeledon,**	**1.20**	**98**	*e*P	Pn	09 00 50.0	-0.9
COVE	**Coope Vega, Sa**	**1.26**	**22**	⇑*i*P	Pn	09 00 50.9	-0.7
LAPC	**Finca la Perla**	**1.33**	**336**	⇓*i*P	Pn	09 00 52.0	-0.7
GBS3	**Finca Las Img**	**1.35**	**335**	*i* P	Pn	09 00 52.5	-0.5
HZTE	**Horizontes, Gu**	**1.35**	**329**	⇑*e*P	Pn	09 00 52.9	-0.1
BUAI	**Buenos Aires**	**1.39**	**342**	*i* P	Pn	09 00 53.3	-0.2
EDPN	**Palmar Norte**	**1.52**	**112**	⇑*i*P	Pn	09 00 54.5	-0.8
EDBA	**Buenos Aires**	**1.63**	**103**	*e*P	Pn	09 00 56.0	-0.9
POTG	**Potrero Grande**	**1.81**	**106**	⇑*e*P	Pn	09 00 58.8	-0.5

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*IDC **24** 09:14:14.6±0.5, 31°.79S×71°.93W, h0^{km}, mb4.7/12, mb1 4.7/16, mb1mx4.7/23, mbtmp4.6/16, ML4.2/4, MS4.3/16, Ms1 4.3/16, ms1mx4.2/23, Error ellipse: s-maj=22.7km s-min=13.5km az=89.0*

*NEIC **24** 09:14:15.8±2.8, 31°.80S±0°.04×72°.13W±0°.09, h10^{km}±3^{km}, mb4.8/104, Mwr4.8/47, Mww5.0, ML5.0(GUC), Error ellipse: s-maj=11.5km s-min=5.9km az=89.0*

*NEIC **24** 09:14:16.8, 31°.84S×72°.21W, h15^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}1.97; $M_{\theta\theta}$0.17; $M_{\phi\phi}$-2.15; $M_{r\theta}$0.15; $M_{\theta\phi}$-0.06; $M_{\phi r}$-0.66; Fault plane solution: $M_0$2.17000×10^{16} NP1:ϕ_s176.59000°, δ54.02000°, λ84.00000°. NP2:ϕ_s6.74000°, δ36.41000°, λ98.19000°. Principal axes: T 2.0885, Plg80.0000°, Azm62.0000°; N 0.1609, Plg5.0000°, Azm180.0000°; P -2.2494, Plg9.0000°, Azm271.0000°;*

*GUC **24** 09:14:16.1±0.7, 31°.82S×72°.17W, h39^{km}±2^{km}, ML5.0*

*VAO **24** 09:14:17.2±0.4, 31°.80S×71°.93W, h14^{km}, mb4.9*

*NEIC **24** 09:14:18, 31°.84S×72°.21W, h16^{km}, Moment Tensor Solution. Duration: 5^{s}.2 Moment tensor: Scale 10^{16}Nm; M_{rr}2.06; $M_{\theta\theta}$0.14; $M_{\phi\phi}$-2.19; $M_{r\theta}$0.62; $M_{\theta\phi}$0.30; $M_{\phi r}$-3.24; Fault plane solution: $M_0$3.94000×10^{16} NP1: ϕ_s357.00000°, δ17.00000°, λ97.00000°. NP2: ϕ_s170.00000°, δ73.00000°, λ88.00000°. Principal axes: T 3.8509, Plg61.0000°, Azm77.0000°; N 0.1661, Plg2.0000°, Azm170.0000°; P -4.0169, Plg29.0000°, Azm261.0000°;*

*GCMT **24** 09:14:20.0±0.3, 31°.85S±0°.03×72°.20W±0°.03, h25^{km}±1^{km}, MW5.0/73, Moment Tensor Solution. s29,c30; s73,c98; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.45±.20; $M_{\theta\theta}$-0.27±.10; $M_{\phi\phi}$-3.18±.14; $M_{r\theta}$0.04±.21; $M_{\theta\phi}$0.05±.08; $M_{\phi r}$-2.39±.26; Best double couple: $M_0$4.08700×10^{16} NP1:ϕ_s359.00000°, δ27.00000°, λ90.00000°. NP2: ϕ_s179.00000°, δ63.00000°, λ90.00000°. Principal axes: T 4.2220, Plg72.0000°, Azm89.0000°; N -0.2700, Plg0.0000°, Azm179.0000°; P -3.9530, Plg18.0000°, Azm269.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 24 09:14:14.6±0.9, 31°.80S±0°.02×72°.19W±0°.04, h6^{km}±5^{km}, n320, σ1^{s}.46/302, mb4.9/66, MS4.4/15, 15C-2D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VA06	**Catapilco**	**1.08**	**135**	⇓*i*P	**Pg**	**09 14 35.1**	**-0.2**
VA06				*i* S	**Sg**	**09 14 48.6**	**-0.6**
VA06				IAML		09 14 56.9	
	comp=N,85μm,0.4s						
CO06	**Fray Jorge**	**1.22**	**23**	⇑*i*P	**Pb**	**09 14 37.8**	**-0.2**

CO06				i S	Sg	09 14 53.9	+0.1
CO06	Fray Jorge	1.22	23		Pb	09 14 37.4	-0.7
VA01	Torpederas	1.31	159	⇑iP	Pn	09 14 38.6	-0.8
VA01	Torpederas	1.31	159		Pn	09 14 38.4	-0.9
VA01	Torpederas	1.31	159	i P	Pn	09 14 38.4	-0.9
ROCH	El Roble	1.54	140	⇑iP	Pn	09 14 42.4	-0.5
ROCH				⇑iP	Pn	09 14 42.3	-0.5
ROCH				i S	Sn	09 15 02.5	-0.8
ROCH				IAML		09 15 06.8	
	comp=N,32µm,0.4s						
ROCH				IAML		09 15 06.9	
	comp=N,43µm,0.4s						
ROC1	El Roble	1.54	140	i P	Pn	09 14 42.4	-0.5
ROC1				eS	Sn	09 15 02.9	-0.4
VA03	San Esteban	1.69	125	⇑iP	Pn	09 14 44.7	-0.1
VA03				i S	Sn	09 15 05.6	-1.3
VA03				IAML		09 15 12.7	
	comp=E,37µm,0.4s						
VA03	San Esteban	1.69	125	Pn	Pn	09 14 44.6	-0.1
VA03	San Esteban	1.69	125	i P	Pn	09 14 45.0	+0.2
VA03				eS	Sn	09 15 06.3	-0.5
MT02	Curacav	1.71	149	⇑iP	Pn	09 14 44.6	-0.3
MT02				i S	Sn	09 15 04.8	-2.3
MT02	Curacav	1.71	149		Pn	09 14 44.7	-0.3
MT02	Curacav	1.71	149	i P	Pn	09 14 44.7	-0.3
MT02				eS	Sn	09 15 07.5	+0.4
PEL	Peldehue	1.85	137	⇑iP	Pn	09 14 47.0	0.0
PEL				i S	Sn	09 15 10.5	-0.2
PEL				IAML		09 15 20.4	
	comp=N,21µm,0.4s						
PEL	Peldehue	1.85	137		Pn	09 14 46.8	-0.1
PEL	Peldehue	1.85	137	i P	Pn	09 14 47.0	0.0
PEL				eS	Sb	09 15 12.1	-0.2
VA05	Santo Domingo	1.92	165	⇑iP	Pn	09 14 47.2	-0.6
VA05				i S	Sg	09 15 16.4	+0.2
VA05				IAML		09 15 30.1	
	comp=N,24µm,0.5s						
VA05	Santo Domingo	1.92	165		Pn	09 14 47.1	-0.7
MT05	Renca	2.01	143	⇑iP	Pn	09 14 49.1	-0.1
MT05				i S	Sb	09 15 16.7	-0.2
MT05	Renca	2.01	143		Pn	09 14 49.2	+0.1
MT05	Renca	2.01	143	i P	Pn	09 14 49.0	-0.1
GO04	Tololo Observa	2.01	37	⇑iP	Pn	09 14 49.5	+0.1
GO04	Tololo Observa	2.01	37	Pn	Pn	09 14 49.2	-0.2
GO04	Tololo Observa	2.01	37	i P	Pn	09 14 49.9	+0.5
CO05	La Serena	2.04	24	eP	Pn	09 14 49.9	+0.4
CO05				i S	Sn	09 15 15.5	+0.2
CO05	La Serena	2.04	24		Pn	09 14 50.1	+0.6
MT01	Popeta	2.21	159	⇑iP	Pn	09 14 51.4	-0.4
MT01				IAML		09 15 33.9	
	comp=E,8µm,0.2s						
MT01	Popeta	2.21	159		Pn	09 14 51.7	-0.1
MT01	Popeta	2.21	159	i P	Pn	09 14 51.0	-0.8
FCH	Farellones	2.22	134	⇑iP	Pn	09 14 52.3	+0.1
FCH				i S	Sb	09 15 21.8	-1.3
FCH				IAML		09 15 27.1	
	comp=E,11µm,0.4s						
MT09	Talagante	2.22	153	⇑iP	Pn	09 14 52.2	+0.1
MT09				IAML		09 15 31.7	
	comp=E,14µm,0.3s						
MT09	Talagante	2.22	153		Pn	09 14 52.6	+0.5
AUSP	Uspallata	2.42	101	i P	Pb	09 14 57.0	-1.8
RTLS	Leoncito	2.47	91	i P	Pb	09 14 58.0	-1.5
RTLS				eS	Sb	09 15 31.4	+1.1
RTLS				IAML		09 15 36.9	
	comp=Z,5µm,0.7s						
BO04	La Punta	2.56	149	IAML		09 15 42.3	
	comp=E,8µm,0.3s						
LMEL	Las Melosas	2.64	141	IAML		09 15 43.1	
	comp=N,10µm,0.4s						
BO01	Tunca	2.75	161		Pn	09 14 59.3	+0.1
BO01	Tunca	2.75	161	i P	Pn	09 14 59.0	-0.2
BO01				eS	Sb	09 15 39.5	+1.4
AROD	Rodeo	2.85	56	i P	Pb	09 15 04.0	-2.0
AROD				eS	Sb	09 15 42.8	+1.6
ACCO	Cerro Coronel	2.94	67	i P	Pb	09 15 06.0	-1.6
ARCO	CERRO ARCO	2.95	112	i P	Pb	09 15 06.0	-1.7
ARCO				IAML		09 15 56.5	
	comp=Z,9µm,1.2s						
ASAL	Salagasta	2.96	106	i P	Pb	09 15 06.0	-1.7
ASAL				IAML		09 15 52.6	
	comp=Z,2µm,1.3s						
ZON	Zonda	3.01	86		Pb	09 15 06.0	-2.6
ZON	Zonda	3.01	86	i P	Pb	09 15 05.9	-2.7
ZON				eS	Sb	09 15 48.2	+2.5
ZON				IAML		09 15 54.3	
	comp=Z,6µm,2.4s						
LCO	Las Campanas	3.06	25	Pn	Pn	09 15 04.6	+0.8
ACDV	Cuesta del Vie	3.10	59	i P	Pb	09 15 07.9	-2.3
ACDV				eS	Sg	09 15 51.9	-2.3
ACDV				IAML		09 15 54.1	
	comp=Z,7µm,0.9s						
RTCV	Cerro Valdivia	3.11	92	i P	Pn	09 15 07.0	+2.7
RTCV				IAML		09 16 03.5	
	comp=Z,963nm,2.3s						
AAGR	Agrelo	3.12	115	i P	Pb	09 15 08.0	-2.6
AAGR				IAML		09 16 04.2	
	comp=Z,2µm,1.2s						
GO05	Huala	3.21	176	⇑iP	Pn	09 15 05.0	-0.6
GO05				IAML		09 16 14.1	
	comp=E,2µm,0.4s						
GO05	Huala	3.21	176	Pn	Pn	09 15 04.8	-0.8
GO05	Huala	3.21	176	i P	Pn	09 15 01.9	-3.7
BO02	Sierra Bellavi	3.21	159		Pn	09 15 05.9	+0.2
BO02	Sierra Bellavi	3.21	159	i P	Pn	09 15 06.0	+0.3
BO02				eS	Sb	09 15 54.6	+3.1
AC04	Llanos de Chal	3.71	15	Pn	Pn	09 15 12.4	-0.1
AC04	Llanos de Chal	3.71	15	i P	Pn	09 15 12.0	-0.5
ML02	Panimavida	4.01	171	Pn	Pn	09 15 16.4	-0.2
AVFE	Valle Fertil	4.21	76	i P	Pn	09 15 21.2	+1.8
AVFE				IAML		09 16 26.1	
	comp=Z,6µm,0.7s						
RFA	San Rafael	4.30	135	i P	Pn	09 15 22.0	+1.3
RFA				IAML		09 16 35.1	
	comp=Z,2µm,0.7s						
GO03	Copiap	4.52	23	Pn	Pn	09 15 23.3	-0.4
GO03	Copiap	4.52	23	i P	Pn	09 15 24.0	+0.3
VCA	Vinchina	4.61	50	i P	Pn	09 15 29.0	+4.1
VCA				eS	Sb	09 16 32.2	+0.5
VCA				IAML		09 16 49.7	
	comp=Z,5µm,1.2s						
ACHE	Chepes	4.77	84	i P	Pn	09 15 31.0	+3.9
APLL	PUNTA DE LOS L	5.06	75	i P	Pn	09 15 34.0	+3.0
ACLC	CERRO LA CRUZ	5.10	64	i P	Pn	09 15 35.0	+3.3
ACLC				IAML		09 16 45.8	
	comp=Z,6µm,0.9s						
AC02	Maricunga	5.62	29	Pn	Pn	09 15 39.6	+0.4
AC02	Maricunga	5.62	29	i P	Pn	09 15 40.0	+0.8
H03N1	Juan Fernandez	5.90	252	T	T	09 22 30.3	
	baz=78,slow=72,SNR=1580						
H03N3	Juan Fernandez	5.91	252	T	T	09 22 28.1	
	baz=78,slow=72,SNR=1938						
H03N2	Juan Fernandez	5.92	252	T	T	09 22 27.0	
	baz=78,slow=72,SNR=907						
H03S3	Juan Fernandez	6.00	249	T	T	09 22 37.0	
	baz=84,slow=74,SNR=47						
H03S1	Juan Fernandez	6.01	248	T	T	09 22 34.2	
	baz=84,slow=74,SNR=55						
H03S2	Juan Fernandez	6.02	248	T	T	09 22 36.4	
	baz=84,slow=74,SNR=75						
CYA	Choya	6.47	60	i P	Pn	09 15 50.7	+0.3
CYA				IAML		09 17 18.1	
	comp=Z,1µm,0.9s						
LC01	Cunco	7.09	178	Pn	Pn	09 15 58.2	-0.6
LC01	Cunco	7.09	178	i P	Pn	09 15 58.0	-0.9
AHML	Horco Molle	7.80	52	i P	Pn	09 16 11.0	+2.3
AHML				IAML		09 18 14.5	
	comp=Z,643nm,1.0s						
PLCA	Paso Flores	9.02	172	Pn	Pn	09 16 25.9	+0.5
	comp=Z,1.7nm,0.3s,baz=336,slow=11,SNR=74						
PLCA				LR	LR	09 20 24.0	
	comp=Z,1µm,20.7s,baz=348,slow=41						
PLCA	Paso Flores	9.02	172	Pn	Pn	09 16 26.1	+0.8
PB05	IPOC Station P	9.08	12	i P	Pn	09 16 24.0	-2.4
PB05				IAML		09 18 48.0	
	comp=Z,123nm,1.9s						
LVC	Limon Verde	9.61	18	Pn	Pn	09 16 31.3	-2.5
	comp=Z,0.3nm,0.3s,baz=298,slow=15,SNR=3.5						
LVC				Sn	Sn	09 18 19.2	-3.1
	comp=Z,4.3nm,0.3s,baz=173,slow=11,SNR=3.2						
LVC				LR	LR	09 20 28.2	
	comp=Z,1µm,19.3s,baz=198,slow=39						
LVC	Limon Verde	9.61	18	eP	Pn	09 16 34.3	+0.6
TRQA	Tornquist	10.45	129	Pn	Pn	09 16 44.9	-0.1
PB01	IPOC Station P	10.98	13		Pn	09 16 52.2	-0.2
GO07	Milladeo Hill,	11.36	185		Pn	09 16 58.3	+0.9
LPA	La Plata	12.32	108	PN	Pn	09 17 11.8	+1.2
LPA				pPP		09 17 22.6	
LPA				PP		09 17 51.4	
LPA				PPP	PPP	09 18 04.8	
LPA				S	Sn	09 19 27.6	-0.6
LPA	La Plata	12.32	108	SN	Sn	09 19 32.8	+4.6
LPA				SS	SnSn	09 19 40.3	+0.1
LPA				SSS	SSS	09 19 52.7	
LPA				SS	SbSb	09 20 26.5	+7.8
LPA				PCP	PcP	09 22 52.2	-0.3
LPA				SCS	ScS	09 29 58.3	-3.8
LPA				PKIKP	PKiKP	09 30 48.1	-2.1
LPA				SKIKP		09 34 23.8	
LPA				PKIKS		09 34 29.0	
LPA				SKIKS		09 37 57.4	
PB12	IPOC Station P	13.23	8	Pn	Pn	09 17 23.9	+0.7
ITQB	Itaqui	13.56	85	eP	Pn	09 17 26.7	-0.9
ITQB	Itaqui	13.56	85	Pn	Pn	09 17 26.4	-1.1
CPUP	Villa Florida	14.09	71	Pn	Pn	09 17 35.5	+0.7
	comp=Z,0.5nm,0.3s,baz=239,slow=12,SNR=9.5						
CPUP				LR	LR	09 23 15.6	
	comp=Z,1µm,21.2s,baz=249,slow=39						
CPUP	Villa Florida	14.09	71	Pn	Pn	09 17 33.6	-1.2
PLTB	Pedras Altas	15.81	95	eP	Pn	09 17 57.2	-0.7
PLTB	Pedras Altas	15.81	95	Pn	Pn	09 17 55.0	-2.9
LPAZ	La Paz	15.88	14	Pn	Pn	09 18 00.5	+1.1
	comp=Z,0.7nm,0.3s,baz=78,slow=8.0,SNR=37						
LPAZ	La Paz	15.88	14	eP	Pn	09 18 00.5	+1.1
LPAZ	La Paz	15.88	14	P	Pn	09 17 59.9	+0.5
CPSB	Cacapava Do Su	16.13	90	eP	Pn	09 18 01.0	-1.0
CNLB	Canela	18.55	88	eP	P	09 18 31.4	-0.7
AQDB	Aquidauana	18.59	57	eP	Pn	09 18 32.7	0.0
AQDB	Aquidauana	18.59	57	P	P	09 18 29.0	-3.5
SIV	San Ignacio	18.71	35	P	P	09 18 33.0	-0.9
	comp=Z,0.4nm,0.3s,baz=221,slow=12,SNR=41						
SIV				LR	LR	09 27 08.3	
	comp=Z,962nm,20.7s,baz=206,slow=42						
PTGB	Pitanga	19.07	73	eP	Pn	09 18 38.7	+0.1
TRCB	Terra Rica	19.54	68	eP	P	09 18 40.1	-2.9
TRCB	Terra Rica	19.54	68	P	P	09 18 39.6	-3.3
PTLB	Pontes e Lacer	20.17	39	eP	P	09 18 50.4	+0.6
PTLB	Pontes e Lacer	20.17	39	P	P	09 18 48.5	-1.2
NNA	Nana	20.18	347	P	Pn	09 18 53.9	+2.1
	comp=Z,4.4nm,0.4s,baz=213,slow=6.7,SNR=4.5						
NNA				LR	LR	09 25 18.8	
	comp=Z,468nm,18.3s,baz=160,slow=33						
NNA	Nana	20.18	347	P	P	09 18 50.3	+0.4
TER01	Tubaro-SC	20.20	87	eP	P	09 18 50.2	0.0
PP1B	Ponte de Pedra	21.11	52	eP	P	09 18 59.5	-0.6
PCMB	Pacaembu	21.24	67	eP	P	09 19 00.5	-1.0
FRTB	Fartura	21.73	73	eP	P	09 19 05.6	-1.1
VILB	Vilhena	21.76	33	eP	P	09 19 07.0	0.0
VILB	Vilhena	21.76	33	P	P	09 19 06.5	-0.5
SALV	Santo Antonio	21.82	47	eP	P	09 19 07.0	-0.7
EFI	East Falkland	22.41	157	P	P	09 19 12.7	-1.1
ETMB	Extrema	22.57	16	eP	P	09 19 17.5	+1.8
ETMB	Extrema	22.57	16	IAmb	IAmb	09 19 18.3	
	comp=Z,64nm,1.0s						
ITRB	Iturama	23.01	64	eP	P	09 19 19.1	-1.3
USHA	Ushuaia	23.18	174	P	P	09 19 23.0	+1.3
	comp=Z,17nm,1.0s,baz=0.0,slow=7.1,SNR=3.3						
USHA				LR	LR	09 29 48.1	
	comp=Z,1µm,18.4s,baz=352,slow=40						
PET01	Itanhaem-SP	23.20	77	eP	P	09 19 21.6	-0.6
BB19B	Bebedouro	23.68	69	eP	P	09 19 26.0	-1.2
RCLB	Rio Claro- Sao	23.81	73	eP	P	09 19 26.8	-1.7
CZSB	Cruzeiro do Su	23.95	359	eP	P	09 19 32.0	+2.3
VAO	Valinhos	24.01	75	eP	P	09 19 29.0	-1.4
SAML	Samuel	24.23	22	P	P	09 19 30.1	-2.2
ARAG	Araguaiana, MT	24.52	54	eP	P	09 19 34.3	-0.7
PDRB	Porto dos Gac	24.64	39	eP	P	09 19 35.7	-0.4
PARB	Paraibuna	24.97	77	eP	P	09 19 39.1	0.0
ATAH	Atahualpa	25.21	345	P	P	09 19 45.5	+3.9
	comp=Z,3.9nm,0.7s,baz=180,slow=20,SNR=2.6						
ATAH				LR	LR	09 28 04.0	
	comp=Z,301nm,18.4s,baz=180,slow=33						
IPMB	Ipameri, GO	25.66	63	eP	P	09 19 44.8	-0.6
CLDB	Colider	25.75	40	eP	P	09 19 46.0	-0.2
BSCB	Bom Sucesso	26.74	73	eP	P	09 19 54.1	-1.1
VAS01	Vassouras-RJ	27.24	77	eP	P	09 19 59.0	-0.6
BDFB	Brasilia	27.27	59	P	P	09 19 59.5	-0.5
	comp=Z,61nm,0.9s,baz=229,slow=7.8,SNR=46						
BDFB				LR	LR	09 32 28.6	
	comp=Z,1µm,21.2s,baz=227,slow=40						
BDFB	Brasilia	27.27	59	P	P	09 19 58.1	-1.8
TBTG	Tabatinga, AM	27.55	5	eP	P	09 20 03.8	+1.5
TBTG	Tabatinga, AM	27.55	5	P	P	09 20 02.4	+0.1
SNDB	Serra Nova Dou	27.57	49	eP	P	09 20 02.0	-0.5
CAM01	Campos-RJ	28.92	77	eP	P	09 20 14.3	-0.3
DIAM	Diamantina, MG	29.02	69	eP	P	09 20 14.9	-0.8
NPGB	Novo Progresso	29.21	36	eP	P	09 20 16.3	-0.9
PEXB	Peixe	29.46	54	eP	P	09 20 19.1	-0.4
ALF01	Guarapari-ES	30.25	76	eP	P	09 20 25.8	-0.5
JANB	Januaria	30.40	63	eP	P	09 20 27.2	-0.6
MACA	Manacapuru-AM	30.48	23	eP	P	09 20 29.2	+0.8
MACA	Manacapuru-AM	30.48	23	P	P	09 20 28.7	+0.4
SJMB	Sao Joao De Ma	30.81	72	eP	P	09 20 30.8	-0.6
BSFB	Barra de Sao F	31.02	73	eP	P	09 20 32.1	-1.1
RIB01	Linhares ES	31.15	74	eP	P	09 20 33.5	-0.8
ITTB	Itaituba	31.36	33	eP	P	09 20 35.7	-0.5
SDBA	SAO DESIDERIO	31.66	59	eP	P	09 20 38.1	-0.8
PTLC	Puerto Leguiza	31.89	355	eP	P	09 20 40.5	-0.4
NAN01	Guarapari, ES	32.11	72	eP	P	09 20 41.8	-1.0
SMTB	Santa Maria do	32.30	50	eP	P	09 20 44.8	+0.4
OTAV	Otavalo	32.41	348	eP	P	09 20 47.6	+1.7
PRPB	Parauapebas	32.98	44	eP	P	09 20 50.0	-0.5
PTGA	Pitinga	32.99	23	P	P	09 20 49.4	-1.1
GUA01	Guaratinga, BA	33.05	70	eP	P	09 20 50.4	-0.7
PMSA	Palmer Station	33.38	174	eP	P	09 20 54.5	+1.1
MACC	Macarena, Meta	33.79	357	eP	P	09 20 58.7	+1.2
CMC01	Camacan, BA	33.95	69	eP	P	09 20 58.5	-0.5
SOTA	Rioblanco	34.01	352	eP	P	09 21 03.1	+3.2
MALB	Monte Alegre	34.25	33	eP	P	09 21 01.4	0.0
NBIT	Itapeh - BA	34.26	68	eP	P	09 21 01.2	-0.4
GDU01	Guandu, BA	34.86	66	eP	P	09 21 05.8	-1.0
ORTC	Ortega, Tolima	35.63	355	eP	P	09 21 16.1	+2.8
BOAV	Boa Vista	35.77	20	eP	P	09 21 15.1	+0.6
BOAV	Boa Vista	35.77	20	P	P	09 21 12.6	-2.0
BOAV				IAmb	IAmb	09 21 15.9	
	comp=Z,16nm,0.9s						
NBPN	Ponto Novo - B	36.15	62	eP	P	09 21 16.7	-1.3
MCPB	Macapa, AP	36.61	35	eP	P	09 21 21.6	-0.2
TMAB	Tom-Au,PA,Br	37.04	43	eP	P	09 21 26.1	+0.6
RUSC	La Rusia	37.49	359	eP	P	09 21 31.9	+2.2
CBOC	Ciudad Bolivar	37.63	354	eP	P	09 21 32.8	+2.2
NBLA	Lagarto - SE	37.89	65	eP	P	09 21 31.6	-1.1
ROSB	Rosrio	39.04	48	eP	P	09 21 42.3	0.0
ZARC	Zaragoza, Cauc	39.15	356	P	P	09 21 44.2	+1.0
NBMA	Muriti-CE	39.50	59	eP	P	09 21 46.0	-0.3
NBPS	Pedro II - PI	39.68	53	eP	P	09 21 47.6	-0.3
NBAN	Anadia - AL	39.88	64	eP	P	09 21 48.6	-0.8
NBPB	Pedra_Branca-C	40.16	56	eP	P	09 21 51.2	-0.5
SMLC	San Martn de	40.41	357	eP	P	09 21 53.2	-0.4
SDV	Santo Domingo	40.48	2	P	P	09 21 54.0	-0.5
	comp=Z,4.1nm,0.3s,baz=138,slow=10,SNR=2.8						
SDV	Santo Domingo	40.48	2	eP	P	09 21 54.6	+0.2
NBLV	Livramento - P	40.87	61	eP	P	09 21 57.0	-0.7
NBPA	Parau_RN	41.80	59	eP	P	09 22 04.7	-0.5
NBCL	Cascavel-CE	41.99	56	eP	P	09 22 06.7	-0.1
NBPV	Pedro Velho	42.70	62	eP	P	09 22 12.7	+0.1
OBIP	Obispado Ponce	49.84	7	P	P	09 23 09.4	+0.8
OBIP				IAmb	IAmb	09 23 21.5	
	comp=Z,19nm,1.0s						
CELP	Cerrillos	49.88	7	P	P	09 23 08.8	0.0
PDPR	Patillas Dam,	49.88	8	P	P	09 23 05.9	-3.0
VNA3	Neumayer Olymp	51.45	158	P	P	09 23 21.6	+1.4
VNA1	Neumayer--Stat	51.75	158	P	P	09 23 24.3	+1.9
VNA2	Neumayer--Watz	52.09	158	P	P	09 23 25.6	+0.6
	baz=285,slow=8.6						
SNAA	Sanae	53.67	158	P	P	09 23 37.3	+0.5
SNAA	Sanae	53.67	158	P	P	09 23 37.3	+0.5
	comp=Z,24nm,1.0s,baz=279,slow=5.8,SNR=45						
SNAA	Sanae	53.67	158	P	P	09 23 35.9	-0.9
QSPA	South Pole Qui	58.43	180	P	P	09 24 10.3	-0.7
H06E1	SOCORRO T-PHAS	62.52	318	T	T	10 32 48.1	
	SNR=14						
VNDA	Vanda	66.23	191	P	P	09 25 05.0	+2.1
	comp=Z,1.7nm,1.0s,baz=108,slow=1.9,SNR=5.3						
VNDA	Vanda	66.23	191	IAmb	IAmb	09 25 16.0	
	comp=Z,7.8nm,1.2s						
TAOE	Nuku Hiva Isla	66.67	274	eLR	LR	09 45 28.1	
	comp=Z,236nm,26.6s						
X48A	Hartselle	67.36	347	IAmb	IAmb	09 25 23.4	
	comp=Z,14nm,1.1s						
TX32	Lajitas Array	67.76	330	IAmb	IAmb	09 25 34.6	
	comp=Z,7.1nm,1.4s						
TXAR	Lajitas Array	67.76	330	P	P	09 25 15.3	+2.1
	comp=Z,1.5nm,0.7s,baz=152,slow=8.1,SNR=22						
TXAR				LR	LR	09 50 30.8	
	comp=Z,143nm,18.5s,baz=0.0,slow=32						
TX31	Lajitas Ar. Si	67.76	330	P	P	09 25 14.5	+1.3
SWET	Sewanee	67.90	348	IAmb	IAmb	09 25 16.9	
	comp=Z,7.4nm,0.8s						
SYO	Syowa Base	67.96	159	⇑epP	P	09 25 14.0	+0.1
ABTX	Abilene, Hawle	69.13	335	P	P	09 25 22.0	+0.4
WVT	Waverly	69.14	346	P	P	09 25 21.1	-0.5
LCAR	Lake Charles	69.81	344	IAmb	IAmb	09 25 36.6	
	comp=Z,9.0nm,1.0s						
PBMO	Poplar Bluff	70.32	345	IAmb	IAmb	09 25 40.6	
	comp=Z,16nm,1.4s						
PPT2	Papeete2	70.43	261	eS	S	09 34 46.0	+2.1
	comp=Z,83nm,22.8s						
PPT2	Papeete2	70.43	261	eLR	LR	09 47 02.4	
	comp=Z,160nm,24.5s						
PPT	Papeete	70.44	261	LR	LR	09 48 24.9	
	comp=Z,132nm,18.3s,baz=128,slow=29						
U40A	Yellville	70.51	342	IAmb	IAmb	09 25 41.7	
	comp=Z,12nm,1.1s						
MNTX	Cornudas Mount	70.53	330	P	P	09 25 29.9	-0.4
MNTX				IAmb	IAmb	09 25 42.2	
	comp=Z,5.8nm,0.8s						
HHAR	Hobbs	70.72	342	IAmb	IAmb	09 25 33.3	
	comp=Z,9.5nm,0.8s						
MGMO	Mountain Grove	71.12	343	IAmb	IAmb	09 25 48.9	
	comp=Z,10.0nm,1.2s						
OK029	Liberty Lake	71.30	339	IAmb	IAmb	09 25 36.7	
	comp=Z,12nm,0.8s						
CCM	Cathedral Cave	71.73	344	P	P	09 25 37.9	+0.5
CCM				IAmb	IAmb	09 26 06.0	
	comp=Z,11nm,1.1s						
S39A	Bolivar	71.89	342	IAmb	IAmb	09 25 50.0	
	comp=Z,12nm,1.1s						
R40A	Maddies Statio	72.20	344	IAmb	IAmb	09 25 42.1	
	comp=Z,15nm,0.9s						
121A	Cookes Peak, D	72.29	329	P	P	09 25 42.0	+0.9
121A				IAmb	IAmb	09 25 44.7	
	comp=Z,8.7nm,0.9s						
P40A	Paris	73.32	344	IAmb	IAmb	09 25 48.9	
	comp=Z,13nm,0.8s						
TUC	Tucson	73.46	327	P	P	09 25 45.5	-2.5
P38A	Dawn	73.77	343	IAmb	IAmb	09 25 51.6	
	comp=Z,13nm,0.9s						
ANMO	Albuquerque	73.79	331	P	P	09 25 50.0	+0.1
ANMO				IAmb	IAmb	09 26 06.3	
	comp=Z,8.4nm,1.2s						
LIC	Lamto	74.22	72	eP	P	09 25 52.2	-0.5
	comp=Z,83nm,1.3s						
TIC	Toumodi	74.46	72	eP	P	09 25 53.9	-0.3
KIC	Kosan Boka	74.53	72	eP	P	09 25 54.5	0.0
	comp=Z,63nm,1.0s						
DBIC	Dimbokro	74.61	72	P	P	09 25 55.1	+0.1
	comp=Z,23nm,0.9s,baz=233,slow=5.2,SNR=24						
DBIC				LR	LR	09 55 21.0	
	comp=Z,301nm,21.2s,baz=226,slow=33						
DBIC	Dimbokro	74.61	72		P	09 25 52.9	-2.1
T25A	Trinidad	74.90	334	IAmb	IAmb	09 25 59.9	
	comp=Z,12nm,0.9s						
MAW	Mawson	75.32	164	P	P	09 25 58.9	+0.6
	comp=Z,9.2nm,1.0s,baz=191,slow=5.9,SNR=5.2						
MAW				LR	LR	09 58 30.3	
	comp=Z,374nm,20.3s,baz=230,slow=35						
W18A	Petrified Fore	75.33	329	P	P	09 26 02.0	+3.1
W18A				IAmb	IAmb	09 26 15.5	
	comp=Z,18nm,1.4s						
X16A	Lo Mia Camp, P	75.52	327	P	P	09 26 01.9	+1.9
X16A				IAmb	IAmb	09 26 13.4	
	comp=Z,6.5nm,1.0s						
Y14A	Wickenburg	75.85	326	P	P	09 26 03.1	+1.4
KSCO	Kaye Shedlock’	75.92	336	P	P	09 26 04.4	+2.3
KSCO				IAmb	IAmb	09 26 05.4	
	comp=Z,18nm,1.1s						
WUAZ	Wupatki	76.40	328	P	P	09 26 06.6	+1.7
WUAZ				IAmb	IAmb	09 26 18.5	
	comp=Z,5.9nm,0.9s						
MVCO	Mesa Verde	76.58	331	P	P	09 26 07.5	+1.5
MVCO				IAmb	IAmb	09 26 19.2	
	comp=Z,16nm,1.4s						
W13A	Hualapai Mount	77.22	326	P	P	09 26 10.1	+0.4
PFO	Pinyon Flats O	77.29	323	P	P	09 26 11.4	+1.4
PFO				IAmb	IAmb	09 26 23.7	
	comp=Z,8.6nm,1.1s						
U15A	North Rim	77.57	328	P	P	09 26 14.2	+2.5
U15A				IAmb	IAmb	09 26 25.2	
	comp=Z,5.9nm,0.9s						
KNB	Kanab	78.29	328	P	P	09 26 17.4	+1.9
KNB				IAmb	IAmb	09 26 31.7	
	comp=Z,16nm,1.3s						
PKCU	Pink Cliffs	78.42	328	P	P	09 26 16.0	-0.4
PKCU				IAmb	IAmb	09 26 16.9	
	comp=Z,7.5nm,1.0s						
ECSD	EROS Data Cent	78.42	342	IAmb	IAmb	09 26 17.8	
	comp=Z,8.7nm,0.8s						
SHPR	Sheep Range	78.96	326	P	P	09 26 22.2	+2.9
CCUT	Cedar City	78.98	328	P	P	09 26 21.7	+2.3
CCUT				IAmb	IAmb	09 26 33.2	
	comp=Z,7.0nm,1.0s						
Q16A	Castle Valley	79.14	330	P	P	09 26 20.0	-0.3
Q16A				IAmb	IAmb	09 26 33.5	
	comp=Z,8.7nm,1.2s						
MVU	Marysvale	79.25	329	P	P	09 26 19.2	-1.7
MVU				IAmb	IAmb	09 26 24.3	
	comp=Z,14nm,0.9s						
P18A	Preston Nutter	79.36	331	IAmb	IAmb	09 26 37.8	
	comp=Z,10nm,1.1s						
P17A	Butcher Ranch,	79.43	331	IAmb	IAmb	09 26 24.6	
	comp=Z,9.6nm,1.3s						
PRN	Pahroc Range	79.64	327	P	P	09 26 24.8	+1.9
PRN				IAmb	IAmb	09 26 36.6	
	comp=Z,14nm,1.1s						
F36A	Milaca	79.68	345	P	P	09 26 22.4	-0.3
KOWA	Kowa	79.85	66	P	P	09 26 23.2	-1.2
KOWA				IAmb	IAmb	09 26 25.9	
	comp=Z,18nm,0.8s						
TSUM	Tsumeb	79.95	106	P	P	09 26 24.5	-0.6
TSUM				IAmb	IAmb	09 26 26.7	
	comp=Z,14nm,1.2s						
SPR3	Spring Creek 3	80.60	328	IAmb	IAmb	09 26 40.5	
	comp=Z,8.4nm,1.2s						
R11A	Troy Canyon, C	80.65	327	P	P	09 26 30.4	+2.0
BOSA	Boshof	81.21	118	P	P	09 26 30.7	-1.1
	comp=Z,9.7nm,0.9s,baz=256,slow=5.1,SNR=10						
BOSA				LR	LR	09 59 15.4	
	comp=Z,281nm,19.1s,baz=208,slow=33						
BOSA	Boshof	81.21	118	P	P	09 26 30.4	-1.4
BOSA				IAmb	IAmb	09 26 33.4	
	comp=Z,14nm,1.0s						
HWUT	Hardware Ranch	81.56	331	P	P	09 26 34.4	+1.2
HWUT				IAmb	IAmb	09 26 44.9	
	comp=Z,6.0nm,0.9s						
SPUT	South Promonto	81.68	331	IAmb	IAmb	09 26 49.5	
	comp=Z,5.7nm,1.0s						
PDAR	Pinedale Array	81.74	333	P	P	09 26 35.5	+1.3
	comp=Z,0.3nm,0.6s,baz=157,slow=4.9,SNR=4.8						
PDAR	Pinedale Array	81.74	333	P	P	09 26 34.4	+0.2
LHV	Little Huntoon	81.97	325	P	P	09 26 36.9	+1.8
LHV				IAmb	IAmb	09 26 48.8	
	comp=Z,8.0nm,1.0s						
NVAR	Mina Array Bea	82.01	325	P	P	09 26 38.1	+2.5
	comp=Z,1.4nm,0.7s,baz=157,slow=6.1,SNR=11						
NVAR	Mina Array Bea	82.01	325	P	P	09 26 37.1	+1.4
KVN	Kaiserville	82.40	326	P	P	09 26 39.1	+1.5
KVN				IAmb	IAmb	09 26 50.4	
	comp=Z,5.6nm,1.0s						
PAHR	Pah Rah Range	83.53	325	IAmb	IAmb	09 26 56.8	
	comp=Z,8.2nm,1.0s						
TORD	Torodi Ar. Bea	83.59	70	P	P	09 26 44.2	+0.1
	comp=Z,18nm,0.8s,baz=260,slow=4.8,SNR=95						
TORD				LR	LR	10 01 17.6	
	comp=Z,268nm,19.9s,baz=220,slow=34						
TORD	Torodi Ar. Bea	83.59	70	P	P	09 26 43.0	-1.2
YMR	Madison River	83.90	333	IAmb	IAmb	09 27 04.9	
	comp=Z,8.9nm,1.2s						
YHH	Holmes Hill	83.95	333	IAmb	IAmb	09 26 48.5	
	comp=Z,5.6nm,1.1s						

ULM	Lac du Bonnet	84.34	345	P	P	09 26 48.1	+1.0
	comp=Z,4.1nm,0.8s,baz=125,slow=7.7,SNR=3.5						
ORV	Oroville	84.45	324	IAmb	IAmb	09 27 01.3	
	comp=Z,3.7nm,0.8s						
J08A	Circle Bar Ran	85.96	328	IAmb	IAmb	09 27 09.0	
	comp=Z,9.9nm,0.9s						
PLID	Pearl Lake	86.26	331	IAmb	IAmb	09 27 03.8	
	comp=Z,8.5nm,1.4s						
SCHQ	Schefferville	86.40	3	LR	LR	10 09 03.0	
	comp=Z,48nm,18.7s,baz=150,slow=38						
ESDC	Sonseca Array	95.15	46	LR	LR	10 09 51.5	
	comp=Z,162nm,18.5s,baz=225,slow=35						
DZM	Mont Dzumac	102.43	234	*e*LR	LR	10 01 45.2	
	comp=Z,234nm,21.3s						
ASAR	Alice Springs	119.46	208	PKP	PKPdf	09 33 05.3	-0.4
	comp=Z,0.7nm,0.9s,baz=144,slow=2.3,SNR=5.5						
AKASG	Malin Array Be	120.79	47	PKP	PKPdf	09 33 06.7	-0.5
	comp=Z,1.1nm,0.7s,baz=278,slow=2.0,SNR=5.2						
WRA	Warramunga Arr	122.61	210	PKP	PKiKP	09 33 12.1	+0.1
	comp=Z,1.6nm,1.0s,baz=158,slow=1.8,SNR=9.5						
WRA	Warramunga Arr	122.61	210		PKPpre	09 33 04.7	
H11S2	WAKE ISLAND Hy	125.64	271	T	T	11 52 22.5	
	baz=118,slow=74,SNR=68						
H11S1	WAKE ISLAND Hy	125.65	271	T	T	11 52 23.1	
	baz=118,slow=74,SNR=49						
H11S3	WAKE ISLAND Hy	125.66	271	T	T	11 52 26.0	
	baz=118,slow=74,SNR=56						
H11N3	WAKE ISLAND Hy	126.00	272	T	T	11 52 40.4	
	baz=116,slow=74,SNR=18						
H11N1	WAKE ISLAND Hy	126.01	272	T	T	11 52 46.3	
	baz=116						
H11N2	WAKE ISLAND Hy	126.02	272	T	T	11 52 42.8	
	baz=116,slow=74,SNR=52						
FITZ	Fitzroy Crossi	127.52	202	PKP	PKiKP	09 33 22.2	+0.4
	comp=Z,1.5nm,0.7s,baz=224,slow=0.9,SNR=3.0						
KLMR	Klimovskoe	127.69	35	*e*	PKPdf	09 33 17.9	-2.2
KLMR				AMP		09 33 31.9	
	comp=Z,20nm,1.4s						
BVAR	Borovoye Array	145.73	41	PKPbc	PKPab	09 33 55.1	+0.7
	comp=Z,5.8nm,0.8s,baz=233,slow=12,SNR=27						
RPSI	Rantau Prapat	149.87	162		PKPbc	09 34 06.0	-0.4
HYB	Hyderabad	149.91	111	*i* PKP	PKPbc	09 34 07.0	+0.6
HYB				*e*sPKP		09 34 16.5	
PSI	Prapat	149.97	162	PKPbc	PKPbc	09 34 06.0	-0.8
	comp=Z,2.0nm,0.3s,baz=180,slow=9.1,SNR=7.1						
EKS2	Erkin-Say	151.00	58	P	PKiKP	09 34 09.9	+0.9
	SNR=6.4						
AML	Almayashu	151.03	59	P	PKiKP	09 34 09.9	+0.4
	SNR=6.1						
KURBB	Kurchatov Arra	151.32	40	PKPbc	PKiKP	09 34 09.9	+0.7
	comp=Z,6.5nm,0.8s,baz=291,slow=3.0,SNR=35						
KURK	Kurchatov	151.32	40	PKPbc	PKiKP	09 34 09.4	+0.2
USP	Ospenovka	151.39	57	P	PKiKP	09 34 10.5	+0.8
	SNR=5.8						
AAK	Ala-Archa	151.52	58	PKPbc	PKiKP	09 34 10.8	+0.7
	comp=Z,7.3nm,0.8s,baz=231,slow=1.5,SNR=17						
AAK	Ala-Archa	151.52	58	P	PKiKP	09 34 11.3	+1.2
	SNR=7.3						
AAK	Ala-Archa	151.52	58	PKPbc	PKiKP	09 34 10.7	+0.5
UCH	Uchtor	151.61	59	P	PKiKP	09 34 11.3	+0.5
	SNR=11						
TKM2	Tokmak 2	152.25	57	P	PKiKP	09 34 12.5	+0.8
	SNR=5.8						
ZALV	Zalesovo Beam	152.41	30	PKP	PKPdf	09 34 02.6	-1.6
	comp=Z,0.5nm,0.4s,baz=306,slow=2.8,SNR=4.3						
ZALV				PKPbc	PKiKP	09 34 11.5	+0.1
	comp=Z,12nm,0.8s,baz=298,slow=3.2,SNR=31						
ZALV	Zalesovo Beam	152.41	30	PKPdf	PKPdf	09 34 04.0	-0.2
KSH	Kashi	153.11	64	PKPbc	PKPbc	09 34 10.3	-3.0
MKAR	Makanchi Array	155.36	45	PKP	PKPdf	09 34 09.2	+0.4
	comp=Z,0.2nm,0.5s,baz=270,slow=0.7,SNR=4.0						
MKAR				PKPbc	pPKPbc	09 34 18.6	0.0
	comp=Z,2.4nm,1.0s,baz=330,slow=1.7,SNR=7.4						
MKAR				PKPab	pPKPab	09 34 35.1	+0.2
	comp=Z,4.4nm,0.8s,baz=280,slow=3.6,SNR=14						
MKAR	Makanchi Array	155.36	45		PKPdf	09 34 07.5	-1.3
MKAR					pPKPbc	09 34 17.7	-1.0
WMQ	Urumqi	160.15	47	*e*P	PKPdf	09 34 14.8	0.0
WMQ				pmax	pmax		
	comp=Z,190nm,4.7s						
SONM	Songino Array	163.95	3	PKPab	PKPab	09 35 12.4	+1.0
	comp=Z,1.1nm,0.9s,baz=340,slow=2.4,SNR=4.3						
GTA	Gaotai	170.00	38	*e*PKPbc	PKPdf	09 34 25.0	+1.6
GTA				pPKP	sPKPdf	09 34 34.6	+10
GTA				sPKP		09 34 39.8	
GTA				PKPab	pPKPab	09 35 39.8	+0.5
HHC	Hu-ho-hao-te	170.47	343	*e*P	PKPdf	09 34 20.0	-3.6
NJ2	Nanjing	170.61	274	*e*P	PKPdf	09 34 23.8	0.0
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
GYA	Guiyang	174.59	169	⇓P	PKPdf	09 34 25.8	0.0
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LZH	Lanzhou	174.60	37	*e*PKP	PKPdf	09 34 28.0	+2.4

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*IDC **24** 09:38:37.8±1.1, 38.°55N×65.°46E, h0^{km}, mb3.6/6, mb1 3.8/14, mb1mx3.6/60, mbtmp3.7/14, ML3.4/8, MS3.2/6, Ms1 3.3/6, ms1mx2.9/52, Error ellipse: s-maj=22.1km s-min=12.9km az=159.0*

*ISU **24** 09:38:38, 38.°48N×65.°40E, h5^{km}*

ISC 24 09:38:38.8±0.8**, 38.°60N**±0.°07×**65.°47E**±0.°04**, h10**^{km}**, n21, σ2^{s}10**/24**, mb3.6**/5**, Southeastern Uzbekistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PKMR	Pachkamar	0.72	95	*e*P	Pg	09 38 52.0	-0.8
PKMR				*e*S	Sn	09 39 11.0	+4.7
BUXR	Bukhara	1.43	323	*e*P	Pb	09 39 06.0	+0.4
BUXR				*e*S	Sg	09 39 28.0	+3.1
SAM	Samarkand	1.59	47	*e*P	Pb	09 39 09.0	+0.6
SAM				*e*S	Sn	09 39 28.0	+0.2
TMD	Tamdy-Bulak	3.21	349	*e*P	Pb	09 39 38.0	+2.2
TMD				*e*S	Sg	09 40 25.0	+3.2
GEYT	Alibeck	5.83	266	Pn	Pn	09 40 06.0	+0.7
	0.8nm,0.3s,baz=90,slow=16,SNR=2.5						
GEYT				Sn	Sn	09 41 11.4	-0.8
	3.2nm,0.3s,baz=139,slow=14,SNR=3.9						
AAK	Ala-Archa	7.96	57	Pn	Pn	09 40 35.1	+0.4
	1.3nm,0.3s,baz=223,slow=7.6,SNR=4.9						
AAK				Sn	Sn	09 42 03.1	-1.7
	0.3nm,0.3s,baz=30,slow=16,SNR=2.0						
AAK				LR	LR	09 43 45.6	
	comp=Z,79nm,18.1s,baz=298,slow=38						
AKTO	Aktyubinsk	12.96	338	Pn	Pn	09 41 41.8	-1.2
	0.2nm,0.3s,baz=123,slow=17,SNR=2.2						
AKTO				LR	LR	09 46 35.5	
	comp=Z,82nm,19.5s,baz=153,slow=37						
MKAR	Makanchi Array	14.81	51	Pn	Pn	09 42 05.8	-2.5
	0.1nm,0.3s,baz=246,slow=12,SNR=2.9						
BVAR	Borovoye Array	14.82	12	Pn	Pn	09 42 04.6	-3.7
	0.4nm,0.3s,baz=199,slow=20,SNR=11						
KURBB	Kurchatov Arra	15.16	33	Pn	Pn	09 42 09.4	-3.5
	0.0nm,0.3s,baz=231,slow=12,SNR=1.7						
KBZ	Khabaz	17.73	294	P	Pn	09 42 45.7	0.0
	0.1nm,0.3s,baz=110,slow=8.6,SNR=4.2						
ARU	Arti	18.42	348	LR	LR	09 50 14.5	
	comp=Z,91nm,21.6s,baz=170,slow=38						
BELG	Belogornoye	18.55	324	P	P	09 42 54.1	-1.3
	0.5nm,0.3s,baz=166,slow=2.0,SNR=5.7						
BELG				LR	LR	09 51 49.1	
	comp=Z,72nm,20.7s,baz=209,slow=43						
ZALV	Zalesovo Beam	20.25	34	P	P	09 43 14.4	+0.3
	1.2nm,0.5s,baz=240,slow=11,SNR=3.5						
NRIK	Noril'sk	33.01	14	LR	LR	10 00 58.0	
	comp=Z,76nm,18.6s,baz=172,slow=40						
NOA	NORSAR Array B	40.04	322	LR	LR	10 05 17.9	
	comp=Z,70nm,19.7s,baz=255,slow=40						
TORD	Torodi Ar. Bea	61.47	264	P	P	09 48 56.5	+0.7
	0.3nm,0.5s,baz=48,slow=5.8,SNR=4.4						
INK	Inuvik	72.46	7	P	P	09 50 05.9	+0.9
	0.6nm,0.6s,baz=2.2,slow=5.0,SNR=4.1						
ILAR	Eielson Array	73.87	14	P	P	09 50 14.6	+1.2
	0.3nm,0.8s,baz=329,slow=3.2,SNR=3.8						
WRA	Warramunga Arr	86.84	118	P	P	09 51 23.0	-0.8
	0.3nm,0.7s,baz=323,slow=4.3,SNR=1.9						
ASAR	Alice Springs	89.08	121	P	P	09 51 35.7	+1.3
	0.1nm,0.6s,baz=308,slow=4.6,SNR=1.9						

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*MOS **24** 09:39:02.8±1.4, 38.°77N×20.°49E, h14^{km}, mb4.8/11, Error ellipse: s-maj=8.2km s-min=4.2km az=86.6*

*IDC **24** 09:39:02.7±0.7, 38.°78N×20.°57E, h0^{km}, mb4.2/22, mb1 4.4/30, mb1mx4.2/55, mbtmp4.2/30, ML4.0/8, MS3.2/11, Ms1 3.3/11, ms1mx3.0/50, Error ellipse: s-maj=13.5km s-min=13.1km az=168.0*

*PDG **24** 09:39:04.2±0.7, 38.°75N×20.°48E, h11^{km}±1^{km}, MD4.5/2, ML4.5/7, Error ellipse: s-maj=0.9km s-min=1.1km az=0.0*

*NEIC **24** 09:39:04.5±2.2, 38.°75N±0.°05×20.°55E±0.°06, h8^{km}±5^{km}, Error ellipse: s-maj=7.9km s-min=6.2km az=219.0*

*TIR **24** 09:39:04.3, 38.°68N×20.°63E, h8^{km}±3^{km}, Md4.2, Ml4.5*

*MED_RC **24** 09:39:05.0±0.5, 38.°76N×20.°45E, h10^{km}, MW4.3/9, Moment Tensor Solution.Mantle waves: s9,c11; Duration: 1^{s}0 Moment tensor: Scale 10^{15}Nm; M_{rr}0.56±.34; $M_{\theta\theta}$0.16±.27; $M_{\phi\phi}$-0.72±.31; $M_{r\theta}$0.51±.69; $M_{\theta\phi}$2.82±.16; $M_{\phi r}$-2.03±.88; Best double couple: $M_0$3.48000×10^{15} NP1:ϕ_s273.00000°,δ54.00000°,λ2.00000°. NP2: ϕ_s181.00000°,δ88.00000°,λ144.00000°. Principal axes: T 3.0300, Plg26.0000°, Azm131.0000°; N 0.9000, Plg54.0000°, Azm359.0000°; P -3.9400, Plg23.0000°, Azm233.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*THE **24** 09:39:05.0, 38.°76N×20.°56E, h10^{km}±1^{km}, ML4.1/8 Error ellipse: s-maj=1.5km s-min=0.5km az=100.0*

*ATH **24** 09:39:05.3, 38.°73N×20.°60E, h12^{km}, ML4.0/19, Error ellipse: s-maj=1.4km s-min=0.8km az=284.0*

*SOF **24** 09:39:25.3, 39.°93N×21.°62E, h17^{km}, MD3.8*

ISC 24 09:39:04.6±0.5**, 38.°75N**±0.°02×**20.°57E**±0.°02**, h14**^{km}±2^{km}**, n342, σ1^{s}58**/389**, mb4.6**/45**, MS3.2**/7**, 41C-12D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRAG	Dragano-Lefkad	0.07	178	P	Pg	09 39 07.1	-0.3
DRAG				S	Sg	09 39 09.1	-0.2
DRAG	Dragano-Lefkad	0.07	178	P	Pg	09 39 06.9	-0.5
DRAG				S	Sg	09 39 09.5	+0.2
LKD2	Lefkada island	0.08	60	P	Pg	09 39 07.4	-0.1
LKD2				S	Sg	09 39 09.0	-0.5
LKD2	Lefkada island	0.08	60	P	Pg	09 39 07.5	-0.1
LKD2				S	Sg	09 39 09.1	-0.5
LKD2	Lefkada island	0.08	60	P	Pg	09 39 07.4	-0.1
	baz=11						
LKD2				S	Sg	09 39 09.2	-0.4
	baz=11						
TSLK	Tsoukalades, L	0.10	41	P	Pg	09 39 07.9	+0.1
TSLK				S	Sb	09 39 10.4	+0.5
	468μm,0.6s						
TSLK	Tsoukalades, L	0.10	41	P	Pb	09 39 08.0	+0.2
TSLK				S	Sb	09 39 10.4	+0.5
NYDR	Nydri-Lefkada	0.10	110	P	Pg	09 39 07.3	-0.5
NYDR				S	Sg	09 39 09.3	-0.6
	240μm,0.3s						
NYDR	Nydri-Lefkada	0.10	110	P	Pg	09 39 07.4	-0.5
NYDR				S	Sg	09 39 09.5	-0.4
EVGI	Lefkada island	0.14	153	P	Pg	09 39 08.1	-0.2
EVGI				S	Sg	09 39 10.9	+0.1
EVGI	Lefkada island	0.14	153	P	Pg	09 39 08.0	-0.3
EVGI				S	Sg	09 39 11.0	+0.1
FSK	Fiskardo	0.29	181	P	Pg	09 39 10.8	+0.1
FSK				S	Sb	09 39 15.9	-0.4
	36μm,0.3s						
FSK	Fiskardo	0.29	181	P	Pg	09 39 11.0	+0.3
FSK				S	Sg	09 39 15.2	+0.4
FSK				AML	AML	09 39 17.4	
	comp=E,73272μm,0.3s						
FSK				AML	AML	09 39 18.7	
	comp=N,67684μm,0.4s						
KEF4	Livadi, Kephal	0.50	193	P	Pg	09 39 14.6	0.0
KEF4				S	Sb	09 39 22.9	+0.4
KEF4	Livadi, Kephal	0.50	193	P	Pg	09 39 14.6	0.0
DMLN	Damoulianata-K	0.53	197	P	Pg	09 39 15.2	+0.1
DMLN				S	Sb	09 39 23.9	+0.5
	comp=N,21μm,0.4s						
DMLN	Damoulianata-K	0.53	197	P	Pg	09 39 14.9	-0.2
DMLN				S	Sb	09 39 23.5	+0.2
DSL	Palaion Diasel	0.56	47	P	Pg	09 39 15.9	+0.2
VLS	Valsamata	0.57	179	P	Pg	09 39 15.4	-0.5
VLS				S	Sb	09 39 24.8	+0.3
	comp=N,12μm,0.4s						
VLS	Valsamata	0.57	179	P	Pg	09 39 15.5	-0.4
VLS				S	Sg	09 39 23.8	+0.4
VLS				AML	AML	09 39 25.9	
	comp=E,24812μm,0.4s						
VLS				AML	AML	09 39 32.2	
	comp=N,22091μm,0.5s						
KEF3	Kipouria, Keph	0.57	198	P	Pg	09 39 15.3	-0.6
KEF3				S	Sb	09 39 24.4	-0.1
	comp=N,31μm,0.6s						
KEF3	Kipouria, Keph	0.57	198	P	Pg	09 39 15.2	-0.6
ARGA	Argostoli. Kep	0.58	187	P	Pb	09 39 16.5	0.0
ARGA				S	Sb	09 39 24.1	-0.4
PSDA	Pessada-Kefalo	0.63	179	P	Pg	09 39 16.7	-0.3
PSDA				S	Sb	09 39 26.3	+0.1
PSDA	Pessada-Kefalo	0.63	179	P	Pg	09 39 16.7	-0.3
PVO	Paravola	0.76	100	P	Pb	09 39 19.6	0.0
PVO				S	Sn	09 39 31.5	-0.7
	comp=N,32μm,0.4s						
PVO	Paravola	0.76	100	P	Pb	09 39 19.6	0.0
PVO				S	Sb	09 39 30.1	+0.3
PVO				AML	AML	09 39 32.4	
	comp=N,56680μm,0.4s						
PVO				AML	AML	09 39 32.4	
	comp=E,69186μm,0.4s						
IGT	Igoumenitsa	0.80	347	P	Pg	09 39 19.8	-0.5
IGT	Igoumenitsa	0.80	347	P	Pb	09 39 20.2	-0.3
IGT				AML	AML	09 39 37.8	
	comp=E,37919μm,0.4s						
IGT				AML	AML	09 39 38.7	
	comp=N,30946μm,0.3s						
IGT	Igoumenitsa	0.80	347	P	Pb	09 39 20.1	-0.3
	baz=345						
IGT				S	Sn	09 39 35.9	+2.5
	baz=345						
JAN	Janina	0.93	13	P	Pb	09 39 22.9	+0.3
JAN				AML	AML	09 39 42.0	
	comp=E,26585μm,0.4s						
JAN				AML	AML	09 39 42.9	
	comp=N,16023μm,0.3s						
VTN	Vitineika	0.96	150	P	Pg	09 39 23.2	-0.1
EVR	Evrytania	0.98	80	P	Pb	09 39 23.3	-0.2
EVR				AML	AML	09 39 52.9	
	comp=N,14893μm,0.9s						
EVR				AML	AML	09 39 53.2	
	comp=E,15170μm,0.5s						
RLS	Riolos of Patr	0.98	134	P	Pb	09 39 23.0	-0.5
RLS	Riolos of Patr	0.98	134	P	Pb	09 39 23.1	-0.4
RLS				AML	AML	09 39 44.2	
	comp=N,10645μm,0.6s						
RLS				AML	AML	09 39 45.8	
	comp=E,10100μm,0.6s						
LTHK	Lithakia	1.06	169	P	Pb	09 39 24.0	-0.7
LTHK				S	Sn	09 39 41.4	+1.8
	comp=E,5μm,0.5s						
LTHK	Lithakia	1.06	169	P	Pb	09 39 23.8	-1.0
ANX	Ano Chora	1.07	98	P	Pb	09 39 24.7	-0.3
ANX				AML	AML	09 39 46.5	
	comp=N,25624μm,0.7s						
ANX				AML	AML	09 39 48.3	
	comp=E,22773μm,0.7s						
EFP	Efpalio	1.09	107	P	Pb	09 39 24.8	-0.6
EFP				AML	AML	09 39 45.4	
	comp=E,17868μm,0.5s						
EFP				AML	AML	09 39 52.8	
	comp=N,14628μm,0.5s						
KASA	Kassiopi	1.11	334	P	Pg	09 39 26.7	+0.7
KEK	Kerkira	1.13	328	P	Pg	09 39 27.4	+0.9
KEK				AML	AML	09 39 49.7	
	comp=E,16297μm,0.3s						
KEK				AML	AML	09 39 52.5	
	comp=N,13365μm,0.4s						
DRO	Drossia	1.20	131	P	Pn	09 39 26.6	-0.4
DRO				AML	AML	09 39 52.5	
	comp=N,13795μm,0.6s						
DRO				AML	AML	09 39 53.3	
	comp=E,18273μm,0.5s						
SERG	Sergoula	1.21	106	P	Pn	09 39 26.9	-0.3
SERG				AML	AML	09 39 49.1	
	comp=N,12494μm,0.4s						
SERG				AML	AML	09 39 52.0	
	comp=E,9314μm,0.4s						
LAKA	Lakka	1.22	114	P	Pn	09 39 26.7	-0.6
LAKA				AML	AML	09 39 53.4	
	comp=N,22025μm,0.7s						
LAKA				AML	AML	09 39 56.6	
	comp=E,27329μm,0.7s						
TRIZ	Trizonia	1.24	108	P	Pn	09 39 27.2	-0.4
MAKR	Makrakomi, Fth	1.25	77	P	Pn	09 39 27.8	+0.1
MAKR				AML	AML	09 39 53.5	
	comp=N,12265μm,0.9s						
MAKR				AML	AML	09 39 55.1	
	comp=E,12093μm,0.4s						
THL	Klokotos Trika	1.39	54	P	Pb	09 39 30.3	-0.1
THL				AML	AML	09 39 56.8	
	comp=E,20202μm,0.6s						
THL				AML	AML	09 39 58.0	
	comp=N,21104μm,0.6s						
AGG	Agios Georgios	1.40	78	P	Pb	09 39 31.0	+0.4
AGG				AML	AML	09 39 57.2	
	comp=E,21613μm,0.7s						
AGG				AML	AML	09 39 58.2	
	comp=N,18188μm,0.8s						
AGG	Agios Georgios	1.40	78	P	Pg	09 39 31.6	+0.1
AGG	Agios Georgios	1.40	78		Pg	09 39 31.6	+0.1
LSK	Leskovik	1.40	1	P	Pg	09 39 32.3	+0.7
	baz=0.0						
LSK				S	Sg	09 39 53.0	+3.2
	baz=0.0						
LSK				AMP			
	comp=E,37nm,0.6s,baz=0.0						
KLV	Kalavryta, Ach	1.43	119	P	Pn	09 39 30.2	0.0
KLV				AML	AML	09 39 58.4	
	comp=E,4131μm,0.8s						
KLV				AML	AML	09 40 02.3	
	comp=N,5192μm,0.9s						
PENT	Pentalofos	1.51	17	P	Pg	09 39 33.5	-0.2
GUR	Goura	1.61	120	P	Pn	09 39 33.6	+0.8
GUR				AML	AML	09 40 06.7	
	comp=N,12592μm,0.5s						
GUR				AML	AML	09 40 08.8	
	comp=E,7081μm,0.4s						
KZN	Kozani	1.81	30	P	Pg	09 39 38.6	-0.8
KBN	Korca	1.88	5	P	Pg	09 39 40.0	-0.7
KBN	Korca	1.88	5		Pg	09 39 40.0	-0.7
KBN	Korca	1.88	5	P	Pg	09 39 40.8	0.0
	baz=3.0						
KBN				S	Sg	09 40 07.7	+2.6
	baz=3.0						
KBN				AMP			
	comp=N,11nm,0.7s,baz=3.0						
ITM	Ithomi	1.90	145	Pn	Pb	09 39 38.4	-0.7
LKR	Lokris	1.90	92	P	Pb	09 39 39.7	+0.5
LKR				AML	AML	09 40 11.1	
	comp=N,2912μm,0.7s						
LKR				AML	AML	09 40 16.4	
	comp=E,2542μm,1.0s						
VLO	Vlora	1.91	335	P	Pn	09 39 37.2	+0.5
VLO	Vlora	1.91	335		Pn	09 39 37.2	+0.5
VLO	Vlora	1.91	335	P	Pb	09 39 39.6	+0.4
	baz=335						
SCTE	Santa Cesarea	2.10	310		Pn	09 39 40.5	+1.1
FNA	Florina	2.12	17	P	Pb	09 39 42.4	-0.6
FNA	Florina	2.12	17	Pn	Pb	09 39 42.4	-0.6
FNA	Florina	2.12	17	P	Pb	09 39 42.6	-0.4
	baz=15						
NEO	Neokhori	2.14	74	P	Pb	09 39 42.3	-0.9
OHR	Ohrid	2.37	4	*i* Pn	Pb	09 39 46.5	-0.6
TIR	Tirane	2.65	348	P	Pn	09 39 48.9	+1.9
TIR	Tirane	2.65	348	Pn	Pn	09 39 48.9	+1.9
TIR	Tirane	2.65	348	P	Pn	09 39 49.3	+2.3
	baz=348						
TIR				AMP			
	comp=N,3.3nm,0.7s,baz=348						
PHP	Peshkopia	2.93	358	P	Pn	09 39 53.5	+2.5
	baz=358						
VAY	Valandovo	2.99	30	*i* Pn	Pn	09 39 53.9	+2.2
TIP	Timpagrande	3.00	279	⇑P	Pn	09 39 53.4	+1.5
TIP	Timpagrande	3.00	279		Pn	09 39 52.8	+0.9
STIP	Stip	3.19	22	*i* Pn	Pb	09 39 58.2	-2.9
SKO	Skopje	3.29	11	*i* Pn	Pn	09 39 58.0	+2.2
ULC	Ulcinj	3.37	343	⇑*i*Pn	Pn	09 39 57.6	+0.7
ULC				*i* Sn	Sn	09 40 36.8	+0.2
MATE	Matera	3.54	304	⇑P	Pn	09 40 00.6	+1.5
DRME	Dracevica, Mon	3.59	343	⇑*i*Pn	Pn	09 40 01.1	+1.2
KKB	Krupnik	3.66	31	*i* P	Pn	09 40 03.2	+2.4
CEL	Celeste	3.70	264	Pn	Pn	09 40 01.3	-0.2
MMB	Musomiste	3.73	39	*i* P	Pn	09 40 03.9	+2.1
BUM	Brajici-Budva	3.77	341	⇑*i*Pn	Pn	09 40 03.2	+0.8
BUM				*i* Sn	Sn	09 40 47.1	+0.4
PDG	Podgorica	3.81	345	⇑P	Pn	09 40 04.2	+1.3
PDG	Podgorica	3.81	345	⇑*i*Pn	Pn	09 40 04.1	+1.2
PDG	Podgorica	3.81	345	Pn	Pn	09 40 03.7	+0.8
TTG	Podgorica	3.81	345	⇑*i*Pn	Pn	09 40 04.1	+1.2
TTG				*i* Sn	Sn	09 40 48.5	+1.0
PVY	Plav	3.87	353	⇓*i*Pn	Pn	09 40 06.5	+2.6
PVY				*i* Sn	Sn	09 40 50.1	+0.9
CEME	Cevo	4.00	342	⇓*i*Pn	Pn	09 40 06.6	+1.1
CEME				*i* Sn	Sn	09 40 50.4	-1.8
HCY	Herceg Novi	4.02	337	⇑*i*Pn	Pn	09 40 05.9	+0.1
IVA	Berane	4.15	353	⇑*i*Pn	Pn	09 40 08.9	+1.2
APE	Apeiranthos	4.26	112	⇓P	Pn	09 40 13.9	+4.6
TREB	Trebinje	4.31	338	⇑*i*Pn	Pn	09 40 10.0	+0.2
RZN	Rozhen	4.32	46	*e*P	Pn	09 40 13.3	+3.2
DBRK	Dubrovnik	4.33	336	*e*Pn	Pn	09 40 09.9	-0.1
DBRK				Sn	Sn	09 40 57.0	-3.3
VTS	Vitosha	4.36	27	⇑P	Pn	09 40 12.9	+2.2
VTS	Vitosha	4.36	27	P	Pn	09 40 12.6	+2.0
VTS	Vitosha	4.36	27	*i* P	Pn	09 40 12.9	+2.2
VTS	Vitosha	4.36	27	Pn	Pn	09 40 12.6	+2.0
BRY	Bratogost	4.42	340	⇑*i*Pn	Pn	09 40 11.6	+0.1
BRY	Bratogost	4.42	340	⇑*i*Pn	Pn	09 40 11.8	+0.3
BRY				*i* Sn	Sn	09 41 02.7	-0.2
PLD	Plovdiv	4.60	42	*e*P	Pn	09 40 15.9	+2.1
UPM	Unac-Piva	4.62	345	⇑*i*Pn	Pn	09 40 15.3	+1.0
UPM	Unac-Piva	4.62	345	⇑*i*Pn	Pn	09 40 15.3	+1.0
UPM				*i* Sn	Sn	09 41 07.3	-0.6
STON	Ston	4.66	333	⇑*i*Pn	Pn	09 40 14.6	+0.1
STON	Ston	4.66	333	*e*Pn	Pn	09 40 14.6	+0.1
PLE	Pljevlja	4.66	349	⇓*i*Pn	Pn	09 40 16.1	+1.4
PLE				*i* Sn	Sn	09 41 09.0	+0.3
KDZ	Kurdzhali	4.71	50	*i* P	Pn	09 40 18.0	+2.7
ALN	Alexandroupoli	4.73	61	P	Pn	09 40 16.7	+1.2
ALN	Alexandroupoli	4.73	61	Pn	Pn	09 40 16.7	+1.2
SGRT	San Giovanni R	4.76	311	Pn	Pn	09 40 17.3	+1.3
IDI	Anoyia	4.89	134	Pn	Pn	09 40 17.4	-0.4
	comp=N,0.4nm,0.3s,baz=328,slow=19,SNR=1.6						
IDI				Sn	Sn	09 41 13.3	-0.8
	comp=N,2.8nm,0.3s,baz=96,slow=21,SNR=4.1						
IDI				LR	LR	09 42 17.2	
	comp=N,137nm,19.7s,baz=288,slow=40						
LSTV	Lastovo	4.89	326	*e*Pn	Pn	09 40 17.9	+0.2
LSTV				Sn	Sn	09 41 10.5	-3.6
RUDO	Rudo	4.95	350	⇑*i*Pn	Pn	09 40 19.0	+0.4
BOVS	Bovan	4.96	10	⇑P	Pn	09 40 19.3	+0.6
PAOL	Paolisi	5.15	298		Pn	09 40 21.9	+0.6
BBLS	Lazići	5.19	351	⇑*i*Pn	Pn	09 40 22.4	+0.5
MAKA	Makarska	5.27	330	*e*Pn	Pn	09 40 23.3	+0.4
DIVS	Divibare	5.36	356	⇑*i*Pn	Pn	09 40 24.8	+0.5
RICI	Ricice	5.41	332	*i* Pn	Pn	09 40 25.1	+0.3
HVAR	Hvar	5.41	326	*i* Pn	Pn	09 40 25.4	+0.4
HAPS	Han Pijesak,Bl	5.47	348	⇑*i*Pn	Pn	09 40 26.5	+0.7
BALB	Balikesir	5.75	79	Pn	Pn	09 40 31.1	+1.6
TEKS	Tekeris	5.85	353	⇑*i*Pn	Pn	09 40 30.3	-0.6
MDVR	Moldovita	6.09	8	⇑P	Pn	09 40 34.7	+0.5
ZIRJ	Zirje	6.15	324	*e*Pn	Pn	09 40 35.4	+0.4
ZIRJ				Sn	Sn	09 41 40.7	-4.4
SRE	Strehaia	6.23	18	⇑P	Pn	09 40 38.2	+2.1
MGRS	Mrkonjic Grad	6.24	336	*e*Pn	Pn	09 40 37.6	+1.3
HERR	Herculane	6.28	12	⇑P	Pn	09 40 37.6	+0.8
MORI	Morici	6.29	326	*e*Pn	Pn	09 40 37.9	+1.0
FRGS	Fruska Gora	6.43	355	⇓P	Pn	09 40 39.2	+0.3
FRGS	Fruska Gora	6.43	355	⇑*i*Pn	Pn	09 40 38.8	-0.1
BLY	Banja Luka	6.51	338	⇑*i*Pn	Pn	09 40 40.5	+0.5
DUGI	Dugi Otok	6.68	323	*e*Pn	Pn	09 40 42.9	+0.6
UDBI	Udbina	6.80	330	*e*Pn	Pn	09 40 45.5	+1.4
GZR	Gura Zlata	6.84	13	⇑P	Pn	09 40 45.4	+0.9
PRIJ	Prijedor	6.86	336	*e*Pn	Pn	09 40 45.5	+0.8
BZS	Buzias	6.91	6	⇓P	Pn	09 40 45.6	+0.2
NRCA	Norcia	6.97	308		Pn	09 40 46.4	0.0
PLIT	Plitvice	7.15	330	*e*Pn	Pn	09 40 49.6	+0.8
NVLJ	Novalja	7.21	326	*e*Pn	Pn	09 40 50.0	+0.5
ARR	Arges	7.27	23	⇓P	Pn	09 40 52.5	+2.0
RABC	Rab	7.39	326	*e*Pn	Pn	09 40 52.5	+0.4
MOSL	Moslavina	7.42	339	*e*Pn	Pn	09 40 51.7	-0.8
VOIR		7.46	25	⇑P	Pn	09 40 55.5	+2.4
SIRR	Siria	7.56	6	⇑P	Pn	09 40 55.0	+0.7
KOVH	Kovagotottos	7.56	347	*e*P	Pn	09 40 54.0	-0.4
KOVH	Kovagotottos	7.56	347	*e*PN	Pn	09 40 53.9	-0.5
KOVH				*e*SN	Sn	09 42 14.0	-5.8
MURB	Monte Urbino	7.57	309		Pn	09 40 56.1	+1.4

MORH	Mrgy, Hungar	7.59	350	ePN	Pn	09 40 54.3	-0.6
MORH	Mrgy, Hungar	7.59	350	eP	Pn	09 40 54.5	-0.3
MORH	Mrgy, Hungar	7.59	350	eSN	Sn	09 42 14.5	-6.2
MORH	Mrgy, Hungar	7.59	350	⇑iPn	Pn	09 40 53.4	-1.5
ISR	Istrita	7.76	33	⇑P	Pn	09 40 58.5	+1.2
MLR	Muntele Rosu	7.83	29	⇑P	Pn	09 41 01.3	+3.1
MLR	Muntele Rosu	7.83	29	Pn	Pn	09 40 59.2	+1.0
	comp=N,0.5nm,0.3s,baz=246,slow=10.0,SNR=5.9						
MLR				LR	LR	09 44 26.1	
	comp=N,241nm,19.3s,baz=173,slow=42						
MLR	Muntele Rosu	7.83	29	Pn	Pn	09 40 59.0	+0.7
OZLJ	Ozalj	7.84	333	ePn	Pn	09 40 58.1	-0.1
SMRN	Sveta Marina	7.89	325	ePn	Pn	09 40 59.7	+0.8
PTJ	Puntijarka	7.92	336	ePn	Pn	09 40 58.7	-0.8
KALN	Kalnik	7.98	339	ePn	Pn	09 40 59.5	-0.7
RIY	Rijeka	7.98	327	ePn	Pn	09 41 00.5	+0.4
RIY	Rijeka	7.98	327	ePn	Pn	09 41 00.6	+0.4
BRJN	Brijuni	7.98	323	ePn	Pn	09 41 00.8	+0.6
GBRS	Gornja Briga	8.01	330	i Pn	Pn	09 41 01.4	+0.8
CRES	Cresnjev	8.02	333	⇑iPn	Pn	09 41 00.7	-0.1
CRES	Cresnjev	8.02	333	⇑iPn	Pn	09 41 00.8	+0.1
CRES				eSn	Sn	09 42 25.9	-5.4
DOPR	Dopca	8.04	25	⇑P	Pn	09 41 02.7	+1.6
LOBO	Lobor	8.11	337	ePn	Pn	09 41 01.6	-0.4
DRGR		8.19	10	⇓P	Pn	09 41 04.1	+0.9
COVR	Voineasa-Covas	8.23	29	⇓P	Pn	09 41 05.7	+2.1
OZUR		8.29	26	⇑P	Pn	09 41 07.0	+2.6
CEY	Cerknica	8.34	329	⇑iPn	Pn	09 41 05.4	+0.3
VNDS	Vrh nad Dolski	8.53	331	i Pn	Pn	09 41 07.8	0.0
LJU	Ljubljana	8.55	330	⇑iPn	Pn	09 41 08.0	0.0
TRI	Trieste	8.59	326	P	Pn	09 41 07.3	-1.3
TRI	Trieste	8.59	326	Pn	Pn	09 41 07.2	-1.3
PERS	Pernice	8.84	335	i Pn	Pn	09 41 11.6	-0.4
SOKA	Soboth	8.91	335	i Pn	Pn	09 41 12.9	-0.1
	comp=N,41nm,0.6s,SNR=21						
SOKA				eSn	Sn	09 42 47.1	-6.1
	comp=N,8.3nm,0.5s						
OBKA	Obir	8.93	332	ePn	Pn	09 41 13.3	0.0
	comp=N,19nm,0.3s,SNR=28						
OBKA				i Sn	Sn	09 42 50.7	-3.1
	comp=N,24nm,0.3s						
PSZ	Piszkesteto	9.18	357	⇑P	Pn	09 41 17.2	+0.5
PSZ	Piszkesteto	9.18	357	ePN	Pn	09 41 17.0	+0.4
PSZ	Piszkesteto	9.18	357	eP	Pn	09 41 17.7	+1.0
PSZ	Piszkesteto	9.18	357	P	Pn	09 41 16.7	0.0
PSZ	Piszkesteto	9.18	357	Pn	Pn	09 41 16.7	0.0
ARSA	Arzberg	9.26	338	ePn	Pn	09 41 17.7	-0.1
	comp=N,18nm,0.4s,SNR=19						
TEOL	Teolo	9.35	318		Pn	09 41 18.8	-0.1
MYKA	Terra Mystica	9.38	329	ePn	Pn	09 41 19.9	+0.5
	comp=N,12nm,0.5s,SNR=9.1						
MYKA				eSn	Sn	09 43 00.2	-4.5
	comp=N,4.3nm,0.4s						
KEST	Kesra	9.44	255	Pn	Pn	09 41 22.8	+2.5
	comp=N,0.2nm,0.3s,baz=127,slow=10,SNR=1.3						
STAL	STALIGIAL	9.48	325		Pn	09 41 19.9	-0.9
ZOU	Zoufplan	9.60	327		Pn	09 41 22.3	-0.2
KECS	Kecovo	9.73	360	eP	Pn	09 41 25.3	+1.1
KECS	Kecovo	9.73	360	ePN	Pn	09 41 25.3	+1.1
CONA	Conrad Observa	9.79	341	ePn	Pn	09 41 24.9	-0.2
	comp=N,2.7nm,0.3s,SNR=6.2						
VYHS	Vyhne	9.82	353	eP	Pn	09 41 24.9	-0.5
VYHS				e		09 43 09.0	
VYHS	Vyhne	9.82	353	ePN	Pn	09 41 24.9	-0.5
VYHS				eSN	Sn	09 43 09.0	-6.5
CTI	Castel Tesino	9.83	321	P	Pn	09 41 24.8	-0.8
CTI	Castel Tesino	9.83	321	Pn	Pn	09 41 24.8	-0.8
KBA	Koelnbreinsper	9.86	330	ePn	Pn	09 41 26.8	+0.6
	comp=N,14nm,0.4s,SNR=12						
KBA				eSn	Sn	09 43 12.7	-4.0
	comp=N,5.1nm,0.3s						
MODS	Modra-Piesok	9.91	347	eP	Pn	09 41 26.1	-0.6
MODS				e		09 43 09.9	
MODS	Modra-Piesok	9.91	347	ePN	Pn	09 41 26.1	-0.6
MODS				eSN	Sn	09 43 09.9	-7.8
ABTA	Abfaltersbach	9.95	326	ePn	Pn	09 41 27.4	+0.2
	comp=N,15nm,0.4s,SNR=7.0						
ABTA				i Sn	Sn	09 43 12.9	-5.8
	comp=N,15nm,0.8s						
BRTR	Keskin Array B	10.19	80	Pn	Pn	09 41 33.2	+2.7
	comp=N,0.6nm,0.3s,baz=254,slow=11,SNR=3.4						
BRTR				LR	LR	09 45 32.3	
	comp=N,142nm,19.7s,baz=272,slow=38						
MOA	Molln	10.19	335	ePn	Pn	09 41 30.9	+0.5
	comp=N,31nm,0.3s,SNR=32						
KOLS	Kolonicke sedl	10.25	6	eP	Pn	09 41 37.5	+6.2
KOLS	Kolonicke sedl	10.25	6	ePN	Pn	09 41 37.5	+6.2
JAVC	Velka Javorina	10.32	349	ePN	Pn	09 41 33.1	+0.8
WTTA	Wattenberg	10.73	325	ePn	Pn	09 41 38.7	+0.7
	comp=N,18nm,0.4s,SNR=9.9						
WTTA				eSn	Sn	09 43 33.9	-4.0
	comp=N,18nm,0.5s						
KRUC	Moravsky	10.74	345	ePN	Pn	09 41 37.9	0.0
WATA	Walderalm	10.81	325	ePn	Pn	09 41 40.6	+1.6
	comp=N,32nm,0.4s,SNR=9.3						
WATA				i Sn	Sn	09 43 37.0	-2.8
	comp=N,7.4nm,0.4s						
SQTA	Sankt Quirin	10.89	324	i Pn	Pn	09 41 41.8	+1.7
	comp=N,11nm,0.3s						
VRAC	Vranov	10.94	346	Pn	Pn	09 41 40.4	-0.3
	comp=N,0.7nm,0.3s,baz=177,slow=14,SNR=7.0						
VRAC				LR	LR	09 46 15.8	
	comp=N,154nm,19.7s,baz=169,slow=40						
VRAC	Vranov	10.94	346	ePN	Pn	09 41 40.0	-0.7
FETA	Feichten	10.97	322	ePn	Pn	09 41 42.0	+0.7
	comp=N,2.6nm,0.4s						
FETA				i Sn	Sn	09 43 38.6	-5.1
	comp=N,2.9nm,0.5s						
MOTA	Moosalm	11.03	324	ePn	Pn	09 41 42.8	+0.8
	comp=N,38nm,0.6s,SNR=13						
MOTA				eSn	Sn	09 43 40.9	-4.4
	comp=N,11nm,0.5s						
CKRC	Cesky Krumlov	11.03	338	ePN	Pn	09 41 41.6	-0.4
DAVOX	Davos/Dischmat	11.22	319	Pn	Pn	09 41 46.6	+1.8
	comp=N,1.7nm,0.3s,baz=148,slow=16,SNR=10						
DAVOX				Sn	Sn	09 43 44.0	-6.1
	comp=N,1.7nm,0.3s,baz=348,slow=20,SNR=2.6						
DAVOX				LR	LR	09 47 33.7	
	comp=N,118nm,20.1s,baz=66,slow=46						
MORC	Moravsky Berou	11.24	350	P	Pn	09 41 45.0	+0.2
MORC	Moravsky Berou	11.24	350	ePN	Pn	09 41 44.9	+0.2
MORC	Moravsky Berou	11.24	350		Pn	09 41 45.0	+0.2
GEC2	GERESS Array S	11.24	336		Pn	09 41 44.3	-0.6
GERES	GERESS Array B	11.24	336	Pn	Pn	09 41 44.0	-0.9
	comp=N,3.7nm,0.3s,baz=156,slow=13,SNR=50						
GERES				Sn	Sn	09 43 44.2	-6.2
	comp=N,1.1nm,0.3s,baz=148,slow=24,SNR=5.2						
GERES	GERESS Array B	11.24	336	P	Pn	09 41 44.3	-0.6
GERES	GERESS Array B	11.24	336		Pn	09 41 44.3	-0.6
KHC	Kasperske Hory	11.53	336	ePN	Pn	09 41 47.8	-1.0
KHC				eSN	Sn	09 43 52.1	-5.3
KHC	Kasperske Hory	11.53	336	eP	Pn	09 41 47.8	-1.0
KHC				e		09 43 52.1	
DAVA	Damuels	11.57	321	i Pn	Pn	09 41 51.1	+1.6
	comp=N,2.4nm,0.2s						
DAVA				eSn	Sn	09 43 53.3	-5.1
	comp=N,4.8nm,0.2s						
KRLC	Kraliky	11.64	348	ePN	Pn	09 41 50.8	+0.5
KRLC	Kraliky	11.64	348	eP	Pn	09 41 50.8	+0.5
PRU	Pruhonice	12.03	341	ePN	Pn	09 41 55.1	-0.5
PRU	Pruhonice	12.03	341	eP	Pn	09 41 55.1	-0.5
SENIN	Lac Senin/Sane	12.38	312		Pn	09 41 59.9	-0.7
BFO	Black Forest	13.04	321	P	Pn	09 42 10.3	+0.8
BFO	Black Forest	13.04	321		Pn	09 42 10.3	+0.8
AKASG	Malin Array Be	13.43	24	Pn	Pn	09 42 14.2	-0.5
	comp=N,0.7nm,0.3s,baz=209,slow=12,SNR=3.5						
CLL	Collm	13.64	339	e(P)	Pn	09 42 21.0	+3.5
CLL				ePP	P	09 42 28.0	+1.6
	comp=Z,14nm,1.1s						
CLL				e		09 42 34.0	
CLL	Collm	13.64	339	eP	P	09 42 28.0	+1.6
SOC	Sochi	15.20	65	eP	Pn	09 42 36.1	-2.7
SOC				e		09 45 25.5	
SOC				MLR	MLR		
	comp=Z,19nm,8.0s						
NACGM	Naroch	16.70	13	i P	P	09 42 59.4	-0.9
PABE	Paberze	16.92	7		Pn	09 43 00.6	-0.2
PABE				IAmb	IAmb	09 43 03.3	
	comp=Z,32nm,0.7s						
ISAL	Salakas	17.24	11	IAmb	IAmb	09 43 54.8	
	comp=Z,12nm,1.1s						
PBUR	Paburge	17.31	3	IAmb	IAmb	09 43 45.4	
	comp=Z,111nm,0.4s						
SHA1	Shidzhatmaz	17.32	66	i P	Pn	09 43 06.0	-0.2
KIV	Kislovodsk	17.38	66	eP	Pn	09 43 05.2	-1.6
KIV				eS	Sn	09 46 19.3	-0.7
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,39nm,14.0s						
KBZ	Khabaz	17.50	66	P	P	09 43 09.1	-0.1
	comp=Z,0.3nm,0.3s,baz=350,slow=6.1,SNR=4.1						
GNI	Garni	18.71	78	P	P	09 43 22.9	+0.1
	comp=Z,5.2nm,0.3s,baz=148,slow=15,SNR=5.1						
GNI	Garni	18.71	78	P	P	09 43 22.9	+0.1
GNI				pmax	pmax		
	comp=Z,20nm,0.5s						
GNI	Garni	18.71	78	IAmb	IAmb	09 43 23.6	
	comp=Z,20nm,0.5s						
LPSR	Galich'ya Gora	18.80	37	eP	P	09 43 23.2	-0.3
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ESDC	Sonseca Array	19.02	281	P	Pn	09 43 27.4	+0.5
	comp=Z,0.1nm,0.3s,baz=75,slow=11,SNR=8.8						
OBN	Obninsk	19.60	28	i P	P	09 43 31.3	-0.9
OBN				pmax	pmax		
	comp=Z,11nm,0.9s						
MTSE	Matsula	20.09	5	eP	P	09 43 37.4	-0.1
VSU	Vasula	20.13	9	eP	P	09 43 37.8	-0.1
VSU	Vasula	20.13	9	i P	P	09 43 37.1	-0.9
VSU				pmax	pmax		
	comp=Z,106nm,0.8s						
MAK	Makhachkala	20.77	70	eP	P	09 43 37.1	-7.9
MAK				eS	S	09 47 24.0	-12
MAK				pmax	pmax		
	comp=Z,34nm,0.4s						
MAK				MLR	MLR		
	comp=Z,111nm,17.0s						
HOMB	Homborsund	21.05	342	eP	P	09 43 49.1	+1.2
UPP	Uppsala	21.21	356	eP	P	09 43 49.5	-0.2
MDT	Midelt	21.24	262	LR	LR	09 53 16.2	
	comp=Z,27nm,20.6s,baz=98,slow=40						
AAL	Aland	21.45	359	eP	P	09 43 51.8	-0.5
HFS	Hagfors	21.84	351	P	P	09 43 56.8	+0.3
	comp=Z,11nm,0.4s,baz=170,slow=12,SNR=53						
HFS				LR	LR	09 52 15.5	
	comp=Z,111nm,20.7s,baz=206,slow=36						
KONO	Kongsberg	22.05	345	eP	P	09 43 59.2	+0.5
NC602	NORSAR Array S	22.73	348	eP	P	09 44 06.0	0.0
NC602	NORSAR Array S	22.73	348	P	P	09 44 05.4	-0.5
NC602				IAmb	IAmb	09 44 07.2	
	comp=Z,32nm,0.8s						
NAO01	NORSAR Array S	22.93	348	P	P	09 44 08.3	+0.2
FINES	FINESS Array B	22.98	7	P	P	09 44 07.2	-1.3
	comp=Z,18nm,0.6s,baz=179,slow=13,SNR=47						
FINES				LR	LR	09 53 57.4	
	comp=Z,230nm,18.1s,baz=198,slow=39						
FINES	FINESS Array B	22.98	7	P	P	09 44 08.5	0.0
FINES	FINESS Array B	22.98	7	P	P	09 44 08.5	0.0
FIA1	FINESS Array S	22.98	7	P	P	09 44 08.7	+0.2
FIA1				IAmb	IAmb	09 44 10.6	
	comp=Z,30nm,0.9s						
EKA	Eskdalemuir Ar	22.99	324	P	P	09 44 09.2	+0.5
	comp=Z,36nm,0.8s,baz=122,slow=11,SNR=46						
ESK	Eskdalemuir	23.00	324	P	P	09 44 08.8	0.0
ESK				pmax	pmax		
	comp=Z,57nm,1.0s						
ESK	Eskdalemuir	23.00	324	P	P	09 44 08.8	0.0
NC405	NORSAR Array S	23.06	349	P	P	09 44 08.9	-0.5
NC405				IAmb	IAmb	09 44 09.4	
	comp=Z,31nm,0.8s						
NB201	NORSAR Array S	23.06	348	P	P	09 44 09.9	+0.4
NB2	NORSAR Subarra	23.07	348	P	P	09 44 08.9	-0.6
	comp=Z,6.4nm,0.6s,baz=156,slow=10						
NOA	NORSAR Array B	23.07	348	P	P	09 44 09.7	+0.2
	comp=Z,11nm,0.8s,baz=158,slow=9.4,SNR=22						
NOA				LR	LR	09 54 15.7	
	comp=Z,37nm,20.4s,baz=165,slow=40						
NBO00	NORSAR Array S	23.13	348	P	P	09 44 09.1	-1.1
BELG	Belogornoye	23.17	45	P	P	09 44 11.2	+0.6
	comp=Z,16nm,0.7s,baz=70,slow=11,SNR=5.4						
NC303	NORSAR Array S	23.22	349	P	P	09 44 10.2	-0.8
NC303				IAmb	IAmb	09 44 11.7	
	comp=Z,31nm,0.8s						
SKAR	Skarslia	23.26	345	eP	P	09 44 12.4	+0.9
NC204	NORSAR Array S	23.36	348	P	P	09 44 12.4	-0.1
NC204				IAmb	IAmb	09 44 21.8	
	comp=Z,49nm,1.2s						
DOMB	Dombas	24.37	347	eP	P	09 44 22.9	+0.8
FOO	Floro	24.81	342	eP	P	09 44 26.0	0.0
KLMR	Klimovskoe	25.09	22	eP	P	09 44 27.5	-1.0
KLMR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KLMR	Klimovskoe	25.09	22	AMP		09 44 29.4	
	comp=Z,10.0nm,0.7s						
KLMR	Klimovskoe	25.09	22	eP	P	09 44 27.6	-1.0
NSS	Namsos	26.32	352	eP	P	09 44 40.4	+0.8
PRGR	Permogore	27.63	26	eP	P	09 44 51.6	+0.1
PRGR				pmax	pmax		
	comp=Z,9.0nm,0.6s						
AKTO	Aktyubinsk	28.81	54	LR	LR	09 57 16.8	
	comp=Z,36nm,18.1s,baz=320,slow=38						
FAUS	Fauske	28.84	356	eP	P	09 45 02.6	+0.5
STEI	Steigen	29.38	356	eP	P	09 45 07.5	+0.5
LOF	Lofoten	29.69	355	eP	P	09 45 10.1	+0.3
TORD	Torodi Ar. Bea	30.50	218	P	P	09 45 17.1	-0.3
	comp=Z,1.5nm,0.7s,baz=29,slow=8.6,SNR=8.3						
TORD	Torodi Ar. Bea	30.50	218	P	P	09 45 18.0	+0.6
ARU	Arti	30.61	42	d iP	P	09 45 17.2	-0.8
ARU				S	S	09 50 18.9	-0.5
ARU				pmax	pmax		
	comp=Z,4.0nm,1.0s						
JETT	Jettan, Norway	30.87	360	eP	P	09 45 21.5	+1.3
TRO	Tromso	30.96	359	eP	P	09 45 20.8	-0.1
ARA0	ARCESS Array S	30.96	3	eP	P	09 45 21.1	+0.1
ARCES	ARCESS Array B	30.96	3	P	P	09 45 20.5	-0.5
	comp=Z,2.6nm,0.4s,baz=187,slow=11,SNR=41						
ARCES				LR	LR	09 58 55.9	
	comp=Z,93nm,19.6s,baz=285,slow=39						
ARCES	ARCESS Array B	30.96	3	P	P	09 45 20.5	-0.5
ARCES				pmax	pmax		
	comp=Z,31nm,1.5s						
HAMF	Hammerfest	32.00	2	eP	P	09 45 31.6	+1.5
KOWA	Kowa	32.46	229	P	P	09 45 34.9	+0.3
	comp=Z,2.8nm,0.7s,baz=353,slow=4.8,SNR=3.6						
KOWA	Kowa	32.46	229	IAmb	IAmb	09 45 40.3	
	comp=Z,2.7nm,0.7s						
SPA0	Spitsbergen Ar	39.58	359	eP	P	09 46 36.0	+1.0
SPITS	Spitsbergen Ar	39.58	359	P	P	09 46 33.2	-1.7
	comp=Z,3.4nm,0.6s,baz=131,slow=8.1,SNR=5.4						
KURBB	Kurchatov Arra	41.86	54	P	P	09 46 53.4	-0.7
	comp=Z,3.6nm,1.0s,baz=284,slow=9.3,SNR=5.8						
KURK	Kurchatov	41.91	54	P	P	09 46 53.4	-1.0
KURK				pmax	pmax		
	comp=Z,12nm,1.0s						
KURK	Kurchatov	41.91	54	P	P	09 46 53.4	-1.0
KURK	Kurchatov	41.91	54	IAmb	IAmb	09 47 02.3	
	comp=Z,12nm,1.0s						
MKAR	Makanchi Array	44.97	59	P	P	09 47 19.2	-0.1
	comp=Z,2.0nm,0.6s,baz=280,slow=7.4,SNR=4.0						
ZAA0	Zalesovo Array	45.28	49	P	P	09 47 22.1	+0.5
ZAA0				IAmb	IAmb	09 47 28.1	
	comp=Z,8.2nm,0.6s						
ZALV	Zalesovo Beam	45.28	49	P	P	09 47 21.7	+0.1
	comp=Z,5.3nm,0.4s,baz=272,slow=8.9,SNR=9.5						
NRIK	Noril'sk	46.27	27	i P	P	09 47 28.7	-0.5
NRIK				pmax	pmax		
	comp=Z,7.0nm,1.5s						
WMQ	Urumqi	49.45	61	eP	P	09 47 57.3	+3.0
TLY	Talaya	56.87	48	i P	P	09 48 46.9	-1.9
TLY				pmax	pmax		
	comp=Z,7.0nm,0.8s						
SCHQ	Schefferville	58.07	317	P	P	09 48 58.2	+1.1
	comp=Z,4.8nm,0.5s,baz=66,slow=5.4,SNR=21						
SCHQ	Schefferville	58.07	317	IAmb	IAmb	09 49 06.3	
	comp=Z,43nm,1.5s						
GTA	Gaotai	59.52	62	eP	P	09 49 07.3	-0.3
GTA				pP	pP	09 49 11.4	-0.7
GTA				sP	sP	09 49 14.3	+0.5
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SONM	Songino Array	60.07	51	P	P	09 49 11.5	+0.2
	comp=Z,0.8nm,0.7s,baz=291,slow=11,SNR=5.2						
ULN	Ulaanbaatar	60.45	51	i P	P	09 49 13.3	-0.6
ULN				pmax	pmax		
	comp=Z,7.0nm,1.7s						
LZH	Lanzhou	63.91	64	eP	P	09 49 38.1	+0.8
LZH				sP	pP	09 49 42.1	+0.3
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
YAK	Yakutsk	64.59	30	i P	P	09 49 38.6	-2.5
YAK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HHC	Hu-ho-hao-te	66.68	56	eP	P	09 49 54.9	-0.2
HHC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,49nm,8.0s						
A36M	Sachs Harbour	66.97	349	P	P	09 49 57.5	+1.2
A36M				IAmb	IAmb	09 49 59.1	
	comp=Z,5.1nm,0.9s						
KMI	Kunming	68.91	74	⇓P	P	09 50 09.8	+0.2
KMI				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BILL	Bilibino	70.45	13	i P	P	09 50 18.0	-0.1
BILL				i		09 50 36.6	
BILL				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GYA	Guiyang	71.09	71	⇓P	P	09 50 23.4	+0.6
GYA				pmax	pmax		
	comp=Z,13nm,0.8s						
INK	Inuvik	71.51	350	P	P	09 50 24.5	+0.1
	comp=Z,0.6nm,0.7s,baz=48,slow=3.6,SNR=4.1						
YKA	Yellowknife Ar	72.87	340	P	P	09 50 34.0	+1.3
	comp=Z,1.1nm,0.8s,baz=48,slow=6.3,SNR=4.0						
YKA	Yellowknife Ar	72.87	340	P	P	09 50 34.0	+1.3
ULM	Lac du Bonnet	75.26	324	P	P	09 50 45.2	-1.7
	comp=Z,3.2nm,0.6s,baz=85,slow=4.2,SNR=4.5						
ILAR	Eielson Array	76.34	355	P	P	09 50 54.0	+1.1
	comp=Z,0.4nm,0.7s,baz=356,slow=3.2,SNR=7.5						
ILAR	Eielson Array	76.34	355	P	P	09 50 54.0	+1.1
NJ2	Nanjing	76.49	60	eP	P	09 50 54.8	+0.5
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
M27K	Edge Creek, AK	78.25	352	P	P	09 51 05.9	+2.2
KSRS	Korea Array	78.94	51	P	P	09 51 08.4	+0.7
	comp=Z,1.8nm,0.7s,baz=304,slow=6.1,SNR=3.5						
MJAR	Matsushiro Arr	85.56	46	P	P	09 51 42.6	+0.1
	comp=Z,1.8nm,0.8s,baz=296,slow=2.1,SNR=2.4						
PDAR	Pinedale Array	87.10	326	P	P	09 51 51.3	+1.0
	comp=Z,0.3nm,0.7s,baz=80,slow=5.6,SNR=2.7						
TXAR	Lajitas Array	94.61	314	P	P	09 52 26.1	+0.7
	comp=Z,0.3nm,0.7s,baz=66,slow=5.1,SNR=4.3						
WRA	Warramunga Arr	120.52	92	PKP	PKPdf	09 57 55.0	-1.1
	comp=Z,0.2nm,0.6s,baz=321,slow=1.7,SNR=4.6						
ASAR	Alice Springs	122.19	96	PKP	PKPdf	09 57 59.4	0.0
	comp=Z,0.4nm,0.6s,baz=316,slow=1.6,SNR=10						

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*LVSN **24** 09:45:00.0±2.8, 57°.95N×28°.33E, h0^{km}±42^{km}, ML2.4*

*EST **24** 09:45:15.4±0.1, 59°.25N×27°.74E, h0^{km}, ML1.7(HEL), Explosion*

HEL 24 09:45:16.1±0.2**, 59°.26N×27°.67E, h0^{km}, ML1.8, Explosion, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EE04	Vaivara Sinima	0.16	41	eP	Pg	09 45 18.1	-1.0
EE05	Udria, Vaivara	0.19	43	eP	Pg	09 45 18.4	-1.3
EE03	Tooma soojaam,	0.82	243	eP	Pg	09 45 30.3	-1.5
EE03				eS	Sg	09 45 41.5	-0.9
ARBE	Arbavere	0.88	283	eP	Pg	09 45 32.0	-1.0
ARBE				eS	Sg	09 45 43.1	-1.3
VSU	Vasula	0.93	212	eP	Pg	09 45 18.6	-15
VSU				eS	Pg	09 45 31.9	-2.0
VSU				AML	AML	09 45 50.2	
	comp=E,84nm,0.6s						
VSU				AML	AML	09 45 59.2	
	comp=N,91nm,0.4s						
VSU				AML	AML	09 46 00.3	
	comp=Z,44nm,0.7s						
VSU	Vasula	0.93	212	eP	Pg	09 45 32.4	-1.6
VJF	Virojoki	1.29	357	ePB	Pg	09 45 39.0	-1.8
VJF				MSG		09 45 55.0	
	comp=Z,5.6nm,0.2s						
VJF				eSB	Sg	09 45 56.2	-1.3
EE02	Kiisa, Saku	1.53	269	eP	Pn	09 45 43.3	-1.3
EE02				eSB	Sn	09 46 04.0	-1.2
PVF	Pernaja	1.58	326	ePG	Pn	09 45 44.3	-1.1
PVF				MSG		09 46 03.5	
	comp=Z,3.7nm,0.2s						
PVF				eSG	Sn	09 46 05.2	-1.4
MEF	Metsahovi	1.92	302	ePG	Pn	09 45 50.2	+0.2
MEF				eSG	Sn	09 46 15.4	+0.6
MEF				MSG		09 46 17.3	
	comp=Z,6.1nm,0.1s						
NUR	Nurmijrvi	1.98	311	ePG	Pn	09 45 51.3	+0.5
NUR				eSB	Sn	09 46 16.4	+0.1
NUR				MSG		09 46 18.7	
	comp=Z,6.1nm,0.1s						
MTSE	Matsula	2.07	256	eS	Sn	09 46 19.1	+0.6
MTSE				AML	AML	09 46 22.0	
	comp=N,91nm,0.5s						
MTSE				AML	AML	09 46 22.4	
	comp=Z,70nm,0.5s						
MTSE				AML	AML	09 46 24.9	
	comp=E,58nm,0.4s						
MTSE	Matsula	2.07	256	ePB	Pn	09 45 52.5	+0.5
MTSE				eSB	Sn	09 46 19.1	+0.7
EE01	Perakula, Nova	2.08	270	ePB	Pn	09 45 52.5	+0.3
EE01				eSB	Sn	09 46 19.4	+0.6
RUFX	Ruokolahti	2.27	16	eP	Pn	09 45 54.1	-0.8
RUFX				ePB	Pb	09 45 55.1	-2.9
RUFX				eSG	Sb	09 46 25.6	-1.0
FIA0	FINESS Array S	2.33	341	eP	Pn	09 45 55.0	-0.7
FIA0				eSG	Sb	09 46 28.0	-0.3
FIA0				MSG		09 46 29.8	
	comp=Z,2.8nm,0.1s						
FIA1	FINESS Array S	2.33	341	eP	Pn	09 45 54.8	-0.9
EE06	Soera, Palade,	2.50	266	eP	Pn	09 45 58.4	+0.3
EE06				eSB	Sb	09 46 32.1	-1.2
KAF	Kangasniemi	2.94	347	eP	Pn	09 46 04.1	+0.1
KAF				ePB	Pb	09 46 06.1	-3.3
KAF				eSG	Sb	09 46 46.5	+0.5
KEF	Keuruu	3.23	336	MSG		09 46 50.9	
	comp=Z,1.8nm,0.2s						
RAF	Rauma	3.45	303	eP	Pn	09 46 11.7	+0.7
JOF	Joensuu	4.08	24	eP	Pn	09 46 19.6	0.0
PABE	Paberze	4.26	210	eS	Pg	09 46 39.1	+1.4

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*IDC **24** 10:00:38.3±2.1, 11°.22S×162°.95E, h0^{km}, mb3.8/5, mb1 4.0/7, mb1mx3.8/39, mbtmp3.9/7, ML4.0/2, MS3.2/2, Ms1 3.2/2, ms1mx2.8/35, Error ellipse: s-maj=46.1km s-min=28.4km az=83.0*

ISC 24 10:00:39.3±1.5**, 11°.3S**±0°.1×**163°.2E**±0°.2**, h10^{km}, n13,** σ**1^{s}63**/9**, mb3.8**/5**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	3.63	300	Pn	Pn	10 01 35.3	-0.3
	43nm,0.3s,baz=85,slow=1.2,SNR=22						
HNR				Sn	Sn	10 02 20.4	+1.9
	51nm,0.3s,baz=145,slow=11,SNR=4.3						
HNR				LR	LR	10 02 46.8	
	comp=Z,174nm,18.7s,baz=132,slow=37						
DZM	Mont Dzumac	11.21	164	Pn	Pn	10 03 21.4	+1.7
	0.4nm,0.3s,baz=323,slow=18,SNR=6.4						
DZM				Sn	Sn	10 05 24.4	-0.8
	0.1nm,0.3s,baz=225,slow=20,SNR=1.8						
STKA	Stephens Creek	28.57	221	P	P	10 06 36.1	+0.5
	1.8nm,0.8s,baz=23,slow=15,SNR=4.2						
WRA	Warramunga Arr	29.02	249	P	P	10 06 38.4	-1.3
	0.5nm,0.6s,baz=78,slow=8.8,SNR=6.7						
WRA				LR	LR	10 17 49.3	
	comp=Z,95nm,18.4s,baz=15,slow=36						
H11S2	WAKE ISLAND Hy	29.77	7	T	T	10 37 44.1	
	baz=188,slow=76,SNR=40						
H11S3	WAKE ISLAND Hy	29.77	7	T	T	10 37 38.9	
	baz=188,slow=76,SNR=26						
H11S1	WAKE ISLAND Hy	29.78	7	T	T	10 37 45.5	
	baz=188,slow=76,SNR=31						
ASAR	Alice Springs	30.43	242	P	P	10 06 50.8	-1.4
	0.6nm,0.8s,baz=67,slow=9.8,SNR=7.6						
H11N1	WAKE ISLAND Hy	31.00	7	T	T	10 39 10.7	
	baz=188,slow=76,SNR=12						
H11N3	WAKE ISLAND Hy	31.00	7	T	T	10 39 14.1	
	baz=188,slow=76,SNR=16						
H11N2	WAKE ISLAND Hy	31.01	7	T	T	10 39 10.1	
	baz=188,slow=76,SNR=15						
SONM	Songino Array	77.35	325	P	P	10 12 35.6	+1.2
	0.7nm,0.8s,baz=132,slow=6.0,SNR=3.8						
MKAR	Makanchi Array	91.94	317	P	P	10 13 46.3	-1.8
	0.6nm,0.7s,baz=103,slow=5.4,SNR=4.9						

HEL ***24*** *10:02:28.9±0.3, 64°.73N×30°.54E, h0^{km}, ML2.0, Explosion*
KOLA ***24*** *10:02:29.9, 64°.76N×30°.47E, h0^{km}, ML2.5, Kostomuksha, Karelia*
IDC ***24*** *10:02:30.8±2.5, 64°.72N×30°.71E, h0^{km}, mb1 3.1/3, mb1mx3.0/43, mbtmp3.0/3, ML2.0/2, Error ellipse: s-maj=38.8km s-min=9.5km az=102.0*
BER ***24*** *10:02:31.6±2.4, 64°.75N×30°.65E, h0^{km}, ML2.3(NAO), Suspected explosion*
NAO ***24*** *10:02:31.4±1.6, 64°.82N×30°.43E, ML2.3*
ISC 24 10:02:30.5±1.0**, 64°.83N**±0°.03×**30°.52E**±0°.05**, h0^{km}, n37, σ1^{s}.59**/58**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KU6	Riekki	1.23	348	PG	Pg	10 02 53.1	-1.0
KU6				MSG		10 03 08.8	
	comp=Z,7.9nm,0.2s						
KU6				SG	Sg	10 03 09.9	-0.1
MSF	Maaselka	1.25	331	PN	Pg	10 02 53.7	-0.7
	baz=149						
MSF				SG	Sg	10 03 11.2	+0.5
JOF	Joensuu	1.95	169	PG	Pn	10 03 02.4	-2.3
JOF				SG	Sn	10 03 29.1	-0.8
OUF	Merijarvi	2.54	262	PG	Pn	10 03 14.5	+1.7
OUF				MSG		10 03 43.8	
	comp=Z,9.5nm,0.2s						
OUF				SG	Sb	10 03 49.0	+0.4
RNF	Rovaniemi	2.58	316	PG	Pn	10 03 15.6	+2.1
RNF				SG	Sb	10 03 50.2	+0.4
OBF0	Syolatti, Pyha	2.72	266	PG	Pb	10 03 19.0	-0.9
SUF	Sumiainen	2.87	225	PG	Pn	10 03 19.0	+1.7
	baz=42						
SUF				MSG		10 03 51.6	
	comp=Z,6.5nm,0.2s						
SUF				SG	Sb	10 03 56.8	-1.3
TOF	Tornio	2.88	299	PG	Pb	10 03 20.6	-1.9
TOF				MSG		10 03 54.9	
	comp=Z,5.1nm,0.2s						
TOF				SG	Sb	10 03 57.5	-0.8
VRF	Varrio	2.96	353	PB	Pn	10 03 19.7	+1.1
VRF				MSG		10 03 58.5	
	comp=Z,4.6nm,0.2s						
VRF				SG	Sb	10 04 01.4	+0.8
APA0	Apatity Array	2.97	19	Pn	Pn	10 03 18.7	0.0
	baz=189,slow=16						
APA0				Sn	Sn	10 03 54.0	-0.9
	baz=192,slow=37						
APA0	Apatity Array	2.97	19	Pn	Pn	10 03 18.7	0.0
	baz=189,slow=16						
APA0				Sn	Sn	10 03 54.0	-0.9
	baz=192,slow=37						
APA0	Apatity Array	2.97	19	P	Pn	10 03 18.6	-0.2
APA0				S	Sn	10 03 55.1	+0.1
APA	Apatity	2.99	22	P	Pn	10 03 19.0	-0.1
APA				S	Sn	10 03 55.6	0.0
SGF	Sodankyl	3.09	330	SG	Sb	10 04 04.3	-0.1
KALU	Kalix	3.18	292	PB	Pn	10 03 22.8	+1.2
KAF	Kangasniemi	3.31	217	PG	Pn	10 03 25.2	+1.7
KLF	Kolari	3.61	315	PB	Pn	10 03 29.5	+2.0
KLF				SG	Sg	10 04 25.2	-0.9
KEF	Keuruu	3.68	226	PB	Pn	10 03 30.0	+1.5
KEF				SB	Sn	10 04 15.6	+3.1
PAJU	Pajala	3.75	309	PB	Pn	10 03 31.3	+1.8
	baz=125						
ERTU	Ertsjaerv	3.86	300	PB	Pn	10 03 33.6	+2.7
VAF	Ylistaro	3.90	246	PB	Pn	10 03 33.8	+2.3
BURU	Burvik	3.93	271	PB	Pn	10 03 32.3	+0.3
FIA0	FINESS Array S	3.95	213	Pn	Pn	10 03 32.3	+0.1
	baz=36,slow=11						
FIA0				Pg	Pb	10 03 40.1	-0.7
	baz=24,slow=16						
FIA0				Sn	Sn	10 04 20.0	+0.9
	baz=38,slow=28						
FIA0				Lg	Lg	10 04 33.1	
	baz=25,slow=28						
FIA0	FINESS Array S	3.95	213	Pn	Pn	10 03 32.3	+0.1
	baz=36,slow=11						
FIA0				Sg	Sb	10 04 33.1	+4.1
	baz=25,slow=28						
FIA0	FINESS Array S	3.95	213	PB	Pn	10 03 32.3	+0.1
FINES	FINESS Array B	3.95	213	Pn	Pn	10 03 32.1	-0.1
	comp=Z,0.2nm,0.3s,baz=33,slow=14,SNR=7.5						
FINES				Lg	Lg	10 04 31.5	
	comp=Z,1.3nm,0.3s,baz=33,slow=26,SNR=11						
HEF	Hetta	4.52	326	PG	Pb	10 03 52.6	+2.1
HEF				SG	Sb	10 04 50.0	+4.5
LANU	Lannavaara	4.71	317	PN	Pn	10 03 44.2	+1.5
LANU				SG	Sg	10 04 58.3	-3.3
ARA0	ARCESS Array S	5.12	340	Pn	Pn	10 03 47.9	-0.4
	baz=153,slow=14						
ARA0				Sn	Sn	10 04 45.9	-2.0
	baz=156,slow=28						
ARA0				Lg	Lg	10 05 08.8	
	baz=156,slow=37						
ARA0	ARCESS Array S	5.12	340	Pn	Pn	10 03 47.9	-0.4
	baz=153,slow=14						
ARA0				Sn	Sn	10 04 45.9	-2.0
	baz=156,slow=28						
ARCES	ARCESS Array B	5.12	340	Pn	Pn	10 03 48.0	-0.2
	baz=154,slow=13,SNR=32						
ARCES				Sn	Sn	10 04 45.5	-2.4
	baz=156,slow=25,SNR=5.5						
ARCES				Lg	Lg	10 05 06.5	
	baz=157,slow=26,SNR=3.1						
I43RU	DUBNA INFRASON	8.76	155	*i*		10 56 40.0	
	baz=348,slow=330,SNR=0.9						
NB2	NORSAR Subarra	9.57	256	Pn	Pn	10 04 50.0	+0.7
	baz=66,slow=16						
NB2	NORSAR Subarra	9.57	256	Pn	Pn	10 04 50.0	+0.7
	baz=66,slow=16						
NOA	NORSAR Array B	9.57	256	Pn	Pn	10 04 47.8	-1.4
	baz=80,slow=20,SNR=1.5						
NRA0	NORESS Array S	9.60	253	Pn	Pn	10 04 49.5	-0.2
	baz=48,slow=12						
NRA0	NORESS Array S	9.60	253	Pn	Pn	10 04 49.5	-0.2
	baz=48,slow=12						

IDC 24 10:11:51.3±2.0**, 8°.39S**×**129°.69E, h0^{km}, mb3.6**/1**, mb1 3.5**/4**, mb1mx3.2**/43**, mbtmp3.3**/4**, ML3.1**/3**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.6**/25**, Error ellipse: s-maj=56.9km s-min=25.0km az=79.0, Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	10.42	202	Pn	Pn	10 14 23.8	+1.7
	0.1nm,0.3s,baz=23,slow=13,SNR=1.9						
FITZ				Sn	Sn	10 16 20.9	+1.1
	0.3nm,0.3s,baz=266,slow=19,SNR=2.5						
WRA	Warramunga Arr	12.33	159	Pn	Pn	10 14 48.2	-0.1
	0.1nm,0.3s,baz=336,slow=14,SNR=11						
WRA				Sn	Sn	10 17 07.2	+0.5
	0.5nm,0.3s,baz=341,slow=23,SNR=11						
ASAR	Alice Springs	15.72	166	Pn	Pn	10 15 32.9	-1.3
	0.0nm,0.3s,baz=335,slow=8.9,SNR=1.5						
LEM	Lembang	21.93	273	LR	LR	10 26 40.1	
	comp=Z,80nm,19.4s,baz=212,slow=40						
MKAR	Makanchi Array	69.22	327	P	P	10 22 60.0	-0.1
	0.3nm,0.4s,baz=110,slow=8.0,SNR=4.9						

IDC 24 10:12:30.5±10.0**, 24°.01S**×**178°.63E, h577^{km}**±79^{km}**, mb2.8**/3**, mb1 3.1**/4**, mb1mx2.6**/39**, mbtmp4.0**/4**, Error ellipse: s-maj=139.1km s-min=67.4km az=133.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	11.38	277	P	P	10 15 03.1	+0.1
	0.7nm,0.3s,baz=84,slow=18,SNR=6.7						
STKA	Stephens Creek	33.52	248	P	P	10 18 23.1	-0.3
	0.5nm,0.5s,baz=98,slow=14,SNR=4.3						
ASAR	Alice Springs	40.78	261	P	P	10 19 22.6	-0.1
	0.8nm,0.4s,baz=93,slow=8.1,SNR=11						
WRA	Warramunga Arr	41.15	267	P	P	10 19 25.5	-0.2
	1.7nm,0.6s,baz=104,slow=8.2,SNR=6.7						
AKASG	Malin Array Be	144.37	326	PKP	PKPdf	10 31 00.7	-0.6
	0.6nm,0.6s,baz=43,slow=4.5,SNR=4.3						

IDC 24 10:12:47.9±2.6**, 3°.32N**×**128°.23E, h0^{km}, mb3.6**/4**, mb1 3.8**/4**, mb1mx3.4**/46**, mbtmp3.6**/4**, Error ellipse: s-maj=213.1km s-min=27.0km az=67.0, North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	23.89	166	P	P	10 18 04.5	+1.1
	1.3nm,0.5s,baz=346,slow=9.9,SNR=5.2						
ASAR	Alice Springs	27.39	169	P	P	10 18 34.2	-1.0
	0.3nm,0.5s,baz=353,slow=7.4,SNR=7.7						
STKA	Stephens Creek	37.24	161	P	P	10 20 01.1	-0.3
	1.0nm,0.8s,baz=0.0,slow=11,SNR=1.6						
MKAR	Makanchi Array	58.75	325	P	P	10 22 48.0	+0.2
	0.2nm,0.4s,baz=110,slow=5.7,SNR=1.8						

TAP ***24*** *10:17:22.5, 24°.93N×122°.28E, h123^{km}±1^{km}, ML3.4, D*
JMA ***24*** *10:17:23.5±0.1, 24°.82N×122°.23E, h118^{km}±2^{km}, M2.6*
ISC 24 10:17:24.8±1.7**, 24°.84N**±0°.06×**122°.26E**±0°.03**, h110^{km}**±10^{km}**, n55, σ0^{s}.70**/101**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EGS		0.29	271	*i* P	Pn	10 17 40.0	-0.5
	baz=254						
TWB1	Santiao Chiao	0.29	304	*i* P	Pn	10 17 39.9	-0.6
	baz=286						
TWB1				*i* S	Sn	10 17 52.4	+0.1
	baz=286						
TIPB	Shuangxi	0.41	288	*i* P	Pn	10 17 40.4	-0.7
	baz=275						
TIPB				S	Sn	10 17 53.0	-0.3
	baz=275						
TWC	Suao	0.44	238	P	Pn	10 17 40.8	-0.5
	baz=229						
NWF	Wu-fen Shan	0.49	298	*i* P	Pn	10 17 40.8	-0.8
	baz=287						
NWF				*i* S	Sn	10 17 54.4	+0.1
	baz=287						
WFSB	Wu-fen Shan	0.49	298	*i* P	Pn	10 17 40.8	-0.8
	baz=287						
WFSB				S	Sn	10 17 54.2	+0.1
	baz=287						
NDS	Dongshan	0.53	247	P	Pn	10 17 41.5	-0.4
	baz=240						
NDS				S	Sn	10 17 56.4	+1.7
	baz=240						
TWE	Neicheng	0.55	258	P	Pn	10 17 41.7	-0.2
	baz=248						
TWE				*i* S	Sn	10 17 55.9	+1.0
	baz=248						
EWUT	Wuta	0.59	228	P	Pn	10 17 42.2	0.0
	baz=223						
EWUT				S	Sn	10 17 56.5	+1.2
	baz=223						
ENA	Nanau	0.62	229	*i* P	Pn	10 17 42.5	0.0
	baz=223						
ENA				*i* S	Sn	10 17 57.2	+1.4
	baz=223						
ENTT	Nioudou	0.66	252	*i* P	Pn	10 17 42.4	-0.5
	baz=245						
ENTT				S	Sn	10 17 57.9	+1.6
	baz=245						
NWLT	Wulai	0.69	265	P	Pn	10 17 41.8	-1.2
	baz=257						
NWLT				S	Sn	10 17 57.2	+0.4
	baz=257						
NDT	Datong Townshi	0.72	251	*i* P	Pn	10 17 43.2	-0.1
	baz=244						
NDT				S	Sn	10 17 58.1	+0.9
	baz=244						
JYNG	Yonagunijimaku	0.74	122	P	Pn	10 17 43.3	-0.1
JYNG				*e*S	Sn	10 17 58.2	+0.7
YOJ	Yonaguni jima	0.78	119	P	Pn	10 17 43.6	-0.2
	baz=124						
YOJ				*e*S	Sn	10 17 58.6	+0.5
	baz=124						
YHNB	Yeheng	0.82	258	P	Pn	10 17 43.6	-0.7
	baz=252						
YHNB				S	Sn	10 17 58.6	-0.3
	baz=252						
NSK	Sanguang	0.83	259	*i* P	Pn	10 17 43.8	-0.6
	baz=252						
NSK				*i* S	Sn	10 17 58.5	-0.7
	baz=252						
ETL	Fush Village	0.89	220	P	Pn	10 17 44.5	-0.4
	baz=217						
ETL				S	Sn	10 18 00.9	+0.8
	baz=217						
NACB	Ninganchiao	0.90	222	P	Pn	10 17 44.3	-0.6
	baz=219						
NACB				*e*S	Sn	10 18 00.1	0.0
	baz=219						
NNS	Nan Shan	0.90	244	P	Pn	10 17 45.1	0.0
	baz=239						
NNS				S	Sn	10 18 00.8	+0.5
	baz=239						
ETLH	Xiulin Townshi	0.95	228	P	Pn	10 17 45.0	-0.5
	baz=225						
ETLH				*e*S	Sn	10 18 01.0	-0.2
	baz=225						
TWD	Chiawan	0.97	219	*i* P	Pn	10 17 45.2	-0.4
	baz=215						
TWD				S	Sn	10 18 01.5	+0.2
	baz=215						
FUSS	Fushou	1.10	238	P	Pn	10 17 47.2	0.0
	baz=234						
FUSS				S	Sn	10 18 04.5	+0.3
	baz=234						
ETM	Tongmen	1.12	219	P	Pn	10 17 46.3	-1.0
	baz=216						
ETM				*e*S	Sn	10 18 03.8	-0.4
	baz=216						
WHF	Hehuan Shan	1.14	233	*i* P	Pn	10 17 47.9	0.0
	baz=229						
WHF				S	Sn	10 18 05.3	0.0
	baz=229						
TDCB	Techi	1.16	240	P	Pn	10 17 47.2	-0.6
	baz=236						
TDCB				S	Sn	10 18 05.8	+0.6
	baz=236						
CHGB	Renai	1.26	232	P	Pn	10 17 49.4	+0.4
	baz=229						
CHGB				S	Sn	10 18 07.4	+0.1
	baz=229						
ESL	Shilin	1.27	216	*e*P	Pn	10 17 47.6	-1.4
	baz=214						
ESL				*e*S	Sn	10 18 06.0	-1.2
	baz=214						
WHP	Taichung City	1.32	245	P	Pn	10 17 49.3	-0.3
	baz=241						
WHP				S	Sn	10 18 08.3	0.0
	baz=241						
OWD	Renai	1.32	228	*i* P	Pn	10 17 49.7	0.0
	baz=225						
OWD				*i* S	Sn	10 18 08.9	+0.5
	baz=225						
EGFH	Guangfu	1.39	213	P	Pn	10 17 49.3	-1.0
	baz=211						
EGFH				*e*S	Sn	10 18 08.8	-0.9
	baz=211						
IRIF	Iriomote-Funau	1.43	110	S	Sn	10 18 10.6	+0.1
WPL	Puli Township	1.44	235	P	Pn	10 17 51.3	+0.3
	baz=233						
WPL				S	Sn	10 18 11.6	+0.8
	baz=233						
WCS	Beigang Elemen	1.45	238	P	Pn	10 17 50.9	-0.1
	baz=235						
WCS				S	Sn	10 18 11.3	+0.4
	baz=235						
DPDB	Guoxing	1.46	237	*e*P	Pn	10 17 52.0	+0.9
	baz=234						
DPDB				S	Sn	10 18 10.8	-0.3
	baz=234						
VWDT	VWDT	1.49	223	*e*P	Pn	10 17 50.9	-0.5
	baz=221						
VWDT				*e*S	Sn	10 18 12.0	+0.4
	baz=221						
HGSD	Ruisui	1.54	210	*e*P	Pn	10 17 51.7	-0.4
	baz=208						
HGSD				*e*S	Sn	10 18 13.2	+0.3
	baz=208						
SMLT	Sun Moon Lake	1.56	233	P	Pn	10 17 52.5	+0.1
	baz=230						
SMLT				*e*S	Sn	10 18 14.9	+1.5
	baz=230						
EHY	Hungye	1.58	213	*e*P	Pn	10 17 51.7	-0.9
	baz=211						
EHY				*e*S	Sn	10 18 12.3	-1.3
	baz=211						
TYC	Yuchr	1.58	234	P	Pn	10 17 52.4	-0.2
	baz=231						
TYC				*i* S	Sn	10 18 14.6	+0.9
	baz=231						
SSLB	Suanglung	1.58	229	P	Pn	10 17 52.9	+0.2
	baz=226						
HATJ	Hateruma jima	1.61	119	P	Pn	10 17 52.9	0.0
YULB	Yu-li	1.69	211	P	Pn	10 17 52.8	-1.1
	baz=210						
YULB				*e*S	Sn	10 18 14.3	-1.7
	baz=210						
JKRS	Kuro-shima	1.71	110	P	Pn	10 17 54.2	+0.1
JKRS				S	Sn	10 18 16.8	+0.4
EYUL	Yuli	1.72	210	*e*P	Pn	10 17 54.0	-0.3
	baz=209						
EYUL				*e*S	Sn	10 18 18.4	+1.7
	baz=209						
WJS	Zhushan	1.73	234	P	Pn	10 17 54.0	-0.3
	baz=232						
WJS				S	Sn	10 18 17.6	+0.8
	baz=232						
JIJ	Ishigaki jima	1.78	105	P	Pn	10 17 54.5	-0.5
JIJ				S	Sn	10 18 17.4	-0.7
ALS	Alishan	1.87	225	*i* P	Pn	10 17 56.5	0.0
	baz=223						
ALS				*e*S	Sn	10 18 22.1	+1.5
	baz=223						
JISG	Ishigakijimahi	1.89	97	P	Pn	10 17 56.1	-0.2
JISG				*e*S	Sn	10 18 20.8	+0.5
CHN5	Tsauling	1.90	230	*i* P	Pn	10 17 56.7	+0.1
	baz=227						
CHN5				S	Sn	10 18 21.4	+0.6
	baz=227						
JTJ	Tarama	2.23	95	P	Pn	10 18 00.4	-0.3
JTJ				S	Sn	10 18 28.2	0.0
JIRB	Irabujima	2.65	90	P	Pn	10 18 06.1	0.0
JIKM	Ikemajima	2.72	88	P	Pn	10 18 06.8	-0.2
JMJ2	Miyako jima3	2.79	91	P	Pn	10 18 07.8	-0.2
JOGS	Gusukube	2.86	91	P	Pn	10 18 09.4	+0.4

IDC ***24*** *11:21:02.8±0.9, 31°.82S×71°.86W, h0^{km}, mb4.2/6, mb1 4.2/9, mb1mx4.0/26, mbtmp4.0/9, ML3.9/3, MS3.5/8, Ms1 3.4/8, ms1mx3.3/21, Error ellipse: s-maj=32.0km s-min=23.0km az=99.0*
NEIC ***24*** *11:21:03.1, 31°.86S×72°.22W, h16^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$2.32; M$_{\theta\theta}$0.05; M$_{\phi\phi}$-2.37; M$_{r\theta}$0.12; M$_{\theta\phi}$-0.01; M$_{\phi r}$-0.58; Fault plane solution: M$_0$2.42000×10^{15} NP1:ϕ_s177.14000°, δ51.97000°, λ86.18000°. NP2:ϕ_s3.32000°, δ38.19000°, λ94.87000°. Principal axes: T 2.3956, Plg82.0000°, Azm66.0000°; N 0.0424, Plg3.0000°, Azm179.0000°; P -2.4379, Plg7.0000°, Azm270.0000°;*
NEIC ***24*** *11:21:03.1±1.1, 31°.86S±0°.04×72°.22W±0°.09, h11^{km}±4^{km}, mb4.4/9, Mwr4.2/43, ML3.8(GUC) Error ellipse: s-maj=11.1km s-min=5.6km az=87.0*
GUC ***24*** *11:21:04.5±0.7, 31°.96S×72°.18W, h42^{km}±4^{km}, ML3.9*
ISC 24 11:21:05.4±1.1**, 31°.86S**±0°.03×**72°.28W**±0°.04**, h27^{km}**±8^{km}**, n69, σ1^{s}.49**/85**, mb4.5**/9**, MS3.7**/5**, 7C-2D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VA06	Catapilco	1.08	130	⇓ *i*P	Pn	11 21 22.6	-2.2
VA06				*i* S	Sn	11 21 36.4	-2.5
VA06				IAML		11 21 38.6	
	comp=E,7μm,0.4s						
VA01	Torpederas	1.27	155	*e*P	Pn	11 21 25.9	-1.5
VA01				*i* S	Sn	11 21 41.7	-1.9
VA01	Torpederas	1.27	155		Pn	11 21 26.0	-1.4
VA01				Sg	Sn	11 21 40.2	-3.4
CO06	Fray Jorge	1.31	25	⇑ *e*P	Pn	11 21 26.2	-1.7
CO06				*i* S	Sn	11 21 42.6	-1.8
CO06	Fray Jorge	1.31	25		Pn	11 21 25.9	-2.0
ROCH	El Roble	1.54	136	⇑ *i*P	Pn	11 21 29.9	-1.4
ROCH				⇑ *e*P	Pn	11 21 29.7	-1.6
ROCH				*i* S	Sn	11 21 49.0	-1.5
ROCH				*i* S	Sn	11 21 50.2	-0.3
ROCH				IAML		11 21 56.5	
	comp=N,3μm,0.5s						
ROCH				IAML		11 21 58.0	
	comp=E,3μm,0.7s						
MT02	Curacav	1.69	146	⇑ *i*P	Pn	11 21 32.0	-1.1
MT02				*e*S	Sn	11 21 52.0	-2.0
MT02				IAML		11 22 00.8	
	comp=N,727nm,0.7s						
MT02	Curacav	1.69	146		Pn	11 21 32.1	-1.1
CO03	El Pedregal	1.70	53		Pn	11 21 32.2	-1.1
VA03	San Esteban	1.71	122	⇑ *i*P	Pn	11 21 32.3	-1.3
VA03				*i* S	Sn	11 21 54.5	-0.2
VA03				IAML		11 21 56.6	
	comp=E,3μm,0.3s						
VA03	San Esteban	1.71	122		Pn	11 21 32.3	-1.3
PEL	Peldehue	1.85	134	⇓ *i*P	Pn	11 21 34.4	-1.0
PEL				*i* S	Sn	11 21 57.4	-0.7
PEL				IAML		11 22 05.4	
	comp=N,1μm,0.4s						
PEL	Peldehue	1.85	134		Pn	11 21 34.5	-1.0
VA05	Santo Domingo	1.87	163	*e*P	Pn	11 21 34.8	-0.9
VA05				*i* S	Sn	11 21 57.5	-1.0
VA05				IAML		11 22 11.2	
	comp=N,2μm,0.6s						
VA05	Santo Domingo	1.87	163		Pn	11 21 34.6	-1.1
MT05	Renca	2.00	140	*e*P	Pn	11 21 36.6	-0.9
MT05				*e*S	Sn	11 22 01.7	-0.1
MT05				IAML		11 22 17.6	
	comp=E,2μm,0.6s						
MT05	Renca	2.00	140		Pn	11 21 36.5	-1.1
GO04	Tololo Observa	2.11	37	*e*P	Pn	11 21 38.3	-0.9
GO04				*e*S	Sn	11 22 04.7	+0.1
GO04				IAML		11 22 13.7	
	comp=N,4μm,0.3s						
GO04	Tololo Observa	2.11	37		Pn	11 21 37.8	-1.4
CO05	La Serena	2.13	25		Pn	11 21 38.7	-0.5
MT01	Popeta	2.17	157	*e*P	Pn	11 21 38.8	-1.0
MT01				*e*S	Sn	11 22 04.0	-1.9
MT01	Popeta	2.17	157		Pn	11 21 38.7	-1.1
MT09	Talagante	2.19	151	⇑ *i*P	Pn	11 21 39.8	-0.5
MT09				*i* S	Sn	11 22 04.0	-2.5
MT09	Talagante	2.19	151		Pn	11 21 39.6	-0.7
BO04	La Punta	2.54	147	⇑ *i*P	Pn	11 21 44.8	-0.1
BO04				*e*S	Sn	11 22 13.3	-1.7
BO04				IAML		11 22 28.3	
	comp=N,495nm,0.4s						
LMEL	Las Melosas	2.64	139	*e*P	Pn	11 21 46.5	+0.1
BO01	Tunca	2.71	159		Pn	11 21 46.2	-1.0
ZON	Zonda	3.08	85		Pn	11 21 53.9	+1.5
LCO	Las Campanas	3.15	26	*e*P	Pn	11 21 52.6	-0.9
LCO				*e*S	Sb	11 22 39.0	0.0
LCO	Las Campanas	3.15	26	Pn	Pn	11 21 52.7	-0.8
GO05	Huala	3.15	175	Pn	Pn	11 21 52.3	-1.0
BO02	Sierra Bellavi	3.18	157		Pn	11 21 53.3	-0.4
AC04	Llanos de Chal	3.79	16	Pn	Pn	11 22 00.4	-1.7
ML02	Panimavida	3.96	170	Pn	Pn	11 22 03.8	-0.5
GO03	Copiap	4.61	23	Pn	Pn	11 22 12.4	-1.0
AC02	Maricunga	5.71	30	Pn	Pn	11 22 27.7	-1.2
H03N1	Juan Fernandez	5.81	253	Pn	Pn	11 22 31.0	+1.4
H03N1				Sn	Sn	11 23 33.0	-2.2
H03N1				T	T	11 29 14.6	
	baz=81,slow=71,SNR=105						
H03N3	Juan Fernandez	5.83	252	Pn	Pn	11 22 30.7	+0.9
H03N3				Sn	Sn	11 23 32.3	-3.3
H03N3				T	T	11 29 11.4	
	baz=81,slow=71,SNR=98						
H03N2	Juan Fernandez	5.83	253	Pn	Pn	11 22 31.1	+1.3
H03N2				Sn	Sn	11 23 32.7	-2.9
H03N2				T	T	11 29 10.9	
	baz=81,slow=71,SNR=99						
LC01	Cunco	7.03	177	Pn	Pn	11 22 45.2	-1.3
PLCA	Paso Flores	8.96	172	Pn	Pn	11 23 13.2	+0.1
	comp=N,0.5nm,0.3s,baz=336,slow=11,SNR=16						
PLCA				LR	LR	11 27 00.2	
	comp=N,301nm,18.2s,baz=348,slow=40						
LVC	Limon Verde	9.69	19	LR	LR	11 27 16.4	
	comp=N,154nm,19.3s,baz=192,slow=39						
TRQA	Tornquist	10.46	129	Pn	Pn	11 23 35.3	+1.7
CPUP	Villa Florida	14.18	71	LR	LR	11 30 05.1	
	comp=N,149nm,21.9s,baz=232,slow=39						
LPAZ	La Paz	15.96	15	Pn	Pn	11 24 48.7	0.0
	comp=N,0.1nm,0.3s,baz=90,slow=20,SNR=2.9						
LPAZ	La Paz	15.96	15		Pn	11 24 48.0	-0.7
SIV	San Ignacio	18.81	35	P	P	11 25 21.8	-1.2

	comp=N,0.3nm,0.3s,baz=236,slow=11,SNR=6.1						
NNA	Nana	20.22	347	LR	LR	11 31 37.2	
	comp=N,52nm,18.1s,baz=164,slow=31						
PTLB	Pontes e Lacer	20.26	39	P	P	11 25 37.6	-1.3
ETMB	Extrema	22.65	16	P	P	11 26 05.2	+0.7
ETMB				IAmb	IAmb	11 26 07.0	
	comp=Z,12nm,1.2s						
BDFB	Brasilia	27.36	59	P	P	11 26 47.0	-1.6
	comp=Z,9.9nm,1.1s,baz=218,slow=11,SNR=5.7						
BDFB				LR	LR	11 38 24.6	
	comp=Z,130nm,21.1s,baz=154,slow=38						
BDFB	Brasilia	27.36	59	P	P	11 26 47.9	-0.7
BDFB				IAmb	IAmb	11 26 48.4	
	comp=Z,17nm,1.3s						
PMSA	Palmer Station	33.33	174	P	P	11 27 43.3	+2.7
	comp=Z,9.7nm,0.8s,baz=266,slow=14,SNR=2.3						
VNA1	Neumayer--Stat	51.72	158	P	P	11 30 10.7	+0.9
VNA2	Neumayer--Watz	52.06	158	P	P	11 30 12.8	+0.5
SNAA	Sanae	53.64	158	P	P	11 30 24.9	+0.8
SNAA	Sanae	53.64	158	P	P	11 30 22.5	-1.6
SNAA				IAmb	IAmb	11 30 26.2	
	comp=Z,5.3nm,1.0s						
TXAR	Lajitas Array	67.78	331	P	P	11 32 03.2	+2.3
	comp=Z,0.3nm,0.7s,baz=148,slow=9.5,SNR=4.4						
TXAR	Lajitas Array	67.78	331	P	P	11 32 01.1	+0.2
DBIC	Dimbokro	74.70	72	P	P	11 32 41.8	-1.2
	comp=Z,5.4nm,1.0s,baz=254,slow=4.0,SNR=4.3						
DBIC	Dimbokro	74.70	72	P	P	11 32 40.0	-3.0
MAW	Mawson	75.28	164	LR	LR	12 08 17.8	
	comp=Z,36nm,18.3s,baz=230,slow=38						
X16A	Lo Mia Camp, P	75.53	327	P	P	11 32 48.2	+0.6
X16A				IAmb	IAmb	11 32 52.0	
	comp=Z,1.7nm,1.0s						
BOSA	Boshof	81.25	118	LR	LR	12 06 32.3	
	comp=Z,32nm,18.6s,baz=176,slow=34						
NVAR	Mina Array Bea	82.02	325	P	P	11 33 26.6	+3.4
	comp=Z,0.4nm,0.8s,baz=107,slow=5.8,SNR=2.1						
TORD	Torodi Ar. Bea	83.68	70	P	P	11 33 32.4	+0.4
	comp=Z,3.0nm,0.8s,baz=262,slow=4.8,SNR=18						
TORD				LR	LR	12 07 45.7	
	comp=Z,39nm,21.3s,baz=280,slow=34						
TORD	Torodi Ar. Bea	83.68	70	P	P	11 33 30.9	-1.2
TORD				IAmb	IAmb	11 33 33.2	
	comp=Z,3.3nm,0.8s						
WRA	Warramunga Arr	122.52	210	PKP	PKiKP	11 39 59.7	+0.6
	comp=Z,0.8nm,1.1s,baz=168,slow=1.7,SNR=6.0						
ZALV	Zalesovo Beam	152.50	30	PKPbc	PKiKP	11 41 00.0	+1.1
	comp=Z,3.6nm,0.8s,baz=277,slow=3.3,SNR=12						
ZALV				PKPab	sPKPbc	11 41 09.6	+0.7
	comp=Z,3.7nm,0.6s,baz=304,slow=2.9,SNR=13						

IDC 24 11:25:43.4±2.0**, 8°.30S**×**125°.25E, h0^{km}, mb3.6**/1**, mb1 3.5**/4**, mb1mx3.1**/31**, mbtmp3.3**/4**, ML3.2**/2**, Error ellipse: s-maj=106.3km s-min=29.3km az=67.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	9.75	178	Pn	Pn	11 28 06.2	+1.2
	0.2nm,0.3s,baz=17,slow=12,SNR=5.7						
FITZ				Sn	Sn	11 29 47.3	-7.9
	0.1nm,0.3s,baz=315,slow=5.7,SNR=2.4						
WRA	Warramunga Arr	14.54	144	Pn	Pn	11 29 09.5	-1.1
	0.1nm,0.3s,baz=317,slow=13,SNR=11						
WRA				Sn	Sn	11 31 46.8	-5.9
	0.1nm,0.3s,baz=320,slow=30,SNR=1.7						
ASAR	Alice Springs	17.39	152	P	Pn	11 29 46.9	-0.7
	0.0nm,0.3s,baz=317,slow=11,SNR=2.2						
MKAR	Makanchi Array	66.83	329	P	P	11 36 37.1	+0.1
	0.5nm,0.8s,baz=133,slow=10.0,SNR=2.7						

NEIC 24 11:34:56.7±0.7, 37°.17N±0°.02×97°.802W±0°.009, h5^{km}±6^{km}, Error ellipse: s-maj=2.5km s-min=0.9km az=194.0

NEIC 24 11:34:56.3±0.7**, 37°.17N**±0°.02×**97°.80W**±0°.01**, h4^{km}**±6^{km}**, mb_Lg2.6**/12**, ML2.5**/23**, Error ellipse: s-maj=2.4km s-min=1.1km az=197.0, Kansas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN01	Argonia South	0.04	115	Pg	Pg	11 34 57.5	+0.2
KAN01				Sg	Sg	11 34 58.3	+0.3
KAN05	Bluff City Nor	0.08	224	Pg	Pg	11 34 58.3	+0.2
KAN05				Sg	Sg	11 34 59.8	+0.5
KAN06	Argonia West S	0.09	329	Pg	Pg	11 34 58.5	+0.3
KAN06				Sg	Sg	11 35 00.1	+0.6
KAN17	Caldwell West	0.13	167	Pg	Pg	11 34 59.2	+0.3
KAN17				Sg	Sg	11 35 01.3	+0.7
KAN09	Caldwell North	0.15	103		Pg	11 34 59.5	+0.3
KAN09				Sg	Sg	11 35 02.0	+0.8
KAN08	Anthony NE Sta	0.15	293		Pg	11 34 59.6	+0.3
KAN08					Sg	11 35 01.9	+0.7
KAN12	Harper NE Stat	0.20	309		Pg	11 35 00.6	+0.3
KAN12					Sg	11 35 03.7	+0.7
KAN16	Harper SW Stat	0.22	285		Pg	11 35 00.9	+0.3
KAN16				Sg	Sg	11 35 04.1	+0.7
KAN10	Anthony SW Sta	0.24	259		Pg	11 35 01.3	+0.3
KAN10					Sg	11 35 04.7	+0.6
KAN14	Manchester OK	0.25	212		Pg	11 35 01.4	+0.3
KAN14					Sg	11 35 05.0	+0.6
KAN13	South Haven SW	0.30	121		Pg	11 35 02.4	+0.3
KAN13					Sg	11 35 06.7	+0.7
GC02	Grant County #	0.32	189	Pg	Pg	11 35 02.7	+0.2
GC02				Sg	Sg	11 35 07.3	+0.6
OK032	Salt Plains WL	0.49	222		Pg	11 35 05.9	+0.2
OK032					Sg	11 35 12.8	+0.7
BLOK	Blackwell	0.62	131	Pg	Pg	11 35 08.2	0.0
CROK	Carrier	0.68	193	Pg	Pg	11 35 09.4	0.0
T35A	Sooner Cattle	1.06	103		Pg	11 35 16.2	-0.4
U32A	Winter Ranch,	1.25	231	Pg	Pg	11 35 19.5	-0.7
QUOK	Quay	1.33	138		Pn	11 35 21.1	-0.5
OK029	Liberty Lake	1.40	168		Pn	11 35 22.3	-0.3
OK031	S. Brethren Rd	1.44	147		Pn	11 35 23.1	-0.1
R32A	Long Quarter,	1.45	330		Pn	11 35 23.3	-0.1
OK034	N. Norfolk Rd.	1.45	143	Pn	Pn	11 35 23.3	0.0
OK030	Cody Creek RV	1.48	146		Pn	11 35 23.8	0.0
BCOK	Bluff Creek, N	1.52	174		Pn	11 35 24.4	+0.1
BCOK				IAmb_Lg		11 35 47.5	
	comp=Z,37nm,0.8s						
OK025	Westminster Rd	1.63	167		Pn	11 35 26.2	+0.5
OKCFA	Oklahoma City	1.77	171	Pn	Pn	11 35 28.4	+0.6
FNO	Franklin	1.94	170	Pn	Pn	11 35 30.9	+0.8
TUL1	Leonard	2.05	127	Pn	Pn	11 35 32.2	+0.7
TUL1					Pb	11 35 32.6	-1.5
KSU1	Kansas State U	2.15	26	Pn	Pn	11 35 33.3	+0.4
CBKS	Cedar Bluff	2.25	318	Pn	Pn	11 35 35.2	+0.9
WMOK	Wichita Mounta	2.55	198	Pn	Pn	11 35 36.4	-2.2
X34A	Smith Ranch, M	2.56	181	Pn	Pn	11 35 40.4	+1.8
U38A	Gravette	2.83	104	Pn	Pn	11 35 42.7	+0.3
HHAR	Hobbs	3.23	105	Pn	Pn	11 35 48.5	+0.7
X37A	Clayton	3.24	142	Pn	Pn	11 35 49.2	+1.2
S39A	Bolivar	3.60	80	Pn	Pn	11 35 53.7	+0.8
W39A	Magazine	3.80	120	Pn	Pn	11 35 57.3	+1.7
AMTX	Amarillo	3.88	235	IAmb_Lg		11 37 06.0	
	comp=Z,10nm,0.7s						
U40A	Yellville	4.05	100	Pn	Pn	11 35 59.5	+0.4
U40A				IAmb_Lg		11 37 10.4	
	comp=Z,9.9nm,0.8s						
KSCO	Kaye Shedlock'	4.23	297	IAmb_Lg		11 37 21.9	
	comp=Z,9.4nm,0.8s						
MIAR	Mount Ida	4.31	126	Pn	Pn	11 36 03.2	+0.5
R40A	Maddies Statio	4.53	74	Pn	Pn	11 36 05.1	-0.5
L34A	Svendsen Farm,	4.92	12	IAmb_Lg		11 37 34.8	
	comp=Z,13nm,0.7s						
N38A	Joes South For	5.07	43	IAmb_Lg		11 37 37.8	
	comp=Z,16nm,0.7s						

IDC 24 11:56:19.5±1.2, 38°.52N×20°.36E, h0^{km}, mb3.7/6, mb1 3.8/10, mb1mx3.6/39, mbtmp3.7/10, ML3.5/3, MS3.1/7, Ms1 3.1/7, ms1mx2.7/61, Error ellipse: s-maj=24.1km s-min=18.7km az=50.0

THE 24 11:56:21.1, 38°.37N×20°.42E, h12^{km}, ML3.8/6, Error ellipse: s-maj=1.0km s-min=0.4km az=269.0

ATH 24 11:56:21.4, 38°.37N×20°.47E, h12^{km}±1^{km}, ML3.7/16, Error ellipse: s-maj=1.6km s-min=0.6km az=267.0

PDG 24 11:56:21.7±0.5, 38°.22N×20°.08E, h35^{km}±4^{km}, ML3.9/7, Error ellipse: s-maj=1.8km s-min=2.2km az=0.0

ISC 24 11:56:21.0±0.7**, 38°.37N**±0°.02×**20°.42E**±0°.03**, h15^{km}**±4^{km}**, n105, σ1^{s}37**/138**, mb3.8**/6**, MS2.8**/3**, 5C-4D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.11	176	P	Pg	11 56 24.1	-0.3
KEF4				S	Sg	11 56 26.6	0.0
KEF4	Livadi, Kephal	0.11	176	P	Pg	11 56 24.0	-0.3
KEF4				S	Sg	11 56 26.6	0.0
DMLN	Damoulianata-K	0.14	194	P	Pg	11 56 24.6	-0.1
DMLN				S	Sg	11 56 27.5	+0.4
	93µm,0.6s						
DMLN	Damoulianata-K	0.14	194	P	Pg	11 56 24.5	-0.1
DMLN				S	Sg	11 56 27.7	+0.6
FSK	Fiskardo	0.15	53	P	Pg	11 56 24.0	-0.8
FSK				S	Sg	11 56 26.3	-1.1
FSK				AML	AML	11 56 26.6	
FSK				AML	AML	11 56 26.8	
LXRA	Lixouri, Kepha	0.17	174	P	Pg	11 56 25.2	0.0
LXRA				S	Sg	11 56 28.7	+0.8
KEF3	Kipouria, Keph	0.17	197	P	Pg	11 56 24.8	-0.4
KEF3				S	Sg	11 56 27.3	-0.7
	102µm,0.3s						
KEF3	Kipouria, Keph	0.17	197	P	Pg	11 56 24.8	-0.4
KEF3				S	Sg	11 56 27.9	-0.1
ARGA	Argostoli. Kep	0.20	165	P	Pg	11 56 26.2	+0.6
ARGA				S	Sg	11 56 28.7	0.0
VLS	Valsamata	0.24	144	P	Pg	11 56 25.8	-0.4
VLS				S	Sg	11 56 29.4	-0.3
	34µm,0.3s						
VLS	Valsamata	0.24	144	P	Pg	11 56 25.7	-0.4
VLS				S	Sg	11 56 29.4	-0.3
VLS				AML	AML	11 56 29.8	
	comp=E,75016µm,0.3s						
VLS				AML	AML	11 56 33.1	
	comp=N,60747µm,0.3s						
PSDA	Pessada-Kefalo	0.29	152	P	Pg	11 56 26.9	-0.2
PSDA				S	Sg	11 56 30.9	-0.3
PSDA	Pessada-Kefalo	0.29	152	P	Pg	11 56 26.8	-0.2
PSDA				S	Sg	11 56 31.4	+0.3
EVGI	Lefkada island	0.31	37	P	Pg	11 56 27.3	-0.2
EVGI				S	Sg	11 56 32.2	+0.2
	comp=N,15µm,0.3s						
EVGI	Lefkada island	0.31	37	P	Pg	11 56 27.1	-0.4
EVGI				S	Sg	11 56 32.2	+0.2
DRAG	Dragano-Lefkad	0.34	22	P	Pg	11 56 27.7	-0.2
DRAG				S	Sg	11 56 33.2	+0.5
DRAG	Dragano-Lefkad	0.34	22	P	Pg	11 56 27.8	-0.2
DRAG				S	Sg	11 56 33.4	+0.7
NYDR	Nydri-Lefkada	0.41	33	P	Pg	11 56 28.8	-0.4
NYDR				S	Sg	11 56 34.9	+0.1
NYDR	Nydri-Lefkada	0.41	33	P	Pg	11 56 28.8	-0.4
NYDR				S	Sg	11 56 35.1	+0.3
LKD2	Lefkada island	0.46	24	P	Pg	11 56 29.8	-0.4
LKD2				S	Sg	11 56 36.8	+0.4
	comp=N,7µm,0.4s						
LKD2	Lefkada island	0.46	24	P	Pg	11 56 29.8	-0.4
LKD2				S	Sg	11 56 36.8	+0.4
LKD2				AML	AML	11 56 38.0	
	comp=E,13988µm,0.3s						
LKD2				AML	AML	11 56 41.9	
	comp=N,13463µm,0.4s						
TSLK	Tsoukalades, L	0.49	22	P	Pg	11 56 30.6	-0.1
TSLK				S	Sg	11 56 38.2	+0.9
	comp=N,14µm,0.7s						
TSLK	Tsoukalades, L	0.49	22	P	Pg	11 56 30.6	-0.1
TSLK				S	Sg	11 56 36.8	-0.6
TSLK				AML	AML	11 56 43.5	
	comp=E,30062µm,0.7s						
TSLK				AML	AML	11 56 43.8	
	comp=N,24649µm,0.7s						
LTHK	Lithakia	0.74	153	P	Pg	11 56 34.5	-0.8
LTHK				S	Sb	11 56 46.2	+0.8
LTHK	Lithakia	0.74	153	P	Pg	11 56 34.5	-0.8
VTN	Vitineika	0.76	126	P	Pg	11 56 35.5	-0.2
RLS	Riolos of Patr	0.89	110	P	Pg	11 56 37.1	-1.0
RLS				S	Sb	11 56 50.4	+0.7
RLS	Riolos of Patr	0.89	110	P	Pg	11 56 37.2	-1.0
RLS				AML	AML	11 56 59.5	
	comp=N,7443µm,0.5s						
RLS				AML	AML	11 56 59.8	
	comp=E,5692µm,0.5s						
PVO	Paravola	0.91	74	P	Pg	11 56 38.0	-0.5
PVO				S	Sn	11 56 51.9	-0.1
DRO	Drossia	1.10	112	P	Pb	11 56 40.7	-1.1
DRO	Drossia	1.10	112	P	Pb	11 56 41.0	-0.8
DRO				AML	AML	11 57 04.0	
	comp=N,16156µm,0.5s						
DRO				AML	AML	11 57 04.6	
	comp=E,15087µm,0.5s						
IGT	Igoumenitsa	1.16	357	P	Pb	11 56 42.5	-0.3
IGT	Igoumenitsa	1.16	357	P	Pb	11 56 42.7	-0.1
IGT				AML	AML	11 57 03.4	
	comp=E,4999µm,0.8s						
IGT				AML	AML	11 57 05.5	
	comp=N,5320µm,0.3s						
EFP	Efpalio	1.17	87	P	Pb	11 56 42.0	-0.9
EFP	Efpalio	1.17	87	P	Pb	11 56 42.0	-0.9
EFP				AML	AML	11 57 05.5	
	comp=E,17156µm,0.9s						
EFP				AML	AML	11 57 05.9	
	comp=N,10260µm,0.5s						
ANX	Ano Chora	1.20	79	P	Pn	11 56 42.8	-0.5
ANX				AML	AML	11 57 07.6	
	comp=E,13414µm,0.6s						
ANX				AML	AML	11 57 07.8	
	comp=N,15792µm,0.5s						
EVR	Evrytania	1.22	63	P	Pn	11 56 43.0	-0.6
EVR	Evrytania	1.22	63	P	Pn	11 56 43.2	-0.4
EVR				AML	AML	11 57 07.2	
	comp=N,4427µm,0.8s						
EVR				AML	AML	11 57 10.9	
	comp=E,4611µm,0.8s						
LAKA	Lakka	1.24	96	P	Pn	11 56 43.1	-0.6
LAKA				AML	AML	11 57 07.0	
	comp=E,18084µm,0.8s						
LAKA				AML	AML	11 57 08.2	
	comp=N,8100µm,0.5s						
SERG	Sergoula	1.29	88	P	Pn	11 56 44.1	-0.4
SERG				AML	AML	11 57 08.2	
	comp=N,7692µm,0.5s						
SERG				AML	AML	11 57 08.6	
	comp=E,7021µm,0.4s						
TRIZ	Trizonia	1.30	90	P	Pn	11 56 44.3	-0.3
JAN	Janina	1.33	15	P	Pn	11 56 45.8	+0.7
KLV	Kalavryta, Ach	1.41	103	P	Pn	11 56 45.9	-0.2
KLV	Kalavryta, Ach	1.41	103	P	Pn	11 56 46.1	0.0
KLV				AML	AML	11 57 15.1	
	comp=E,2438µm,0.5s						
KLV				AML	AML	11 57 17.6	
	comp=N,1698µm,0.5s						
KASA	Kassiopi	1.42	345	P	Pb	11 56 48.1	+0.9
KEK	Kerkira	1.42	340	P	Pb	11 56 47.6	+0.4
KEK				AML	AML	11 57 17.7	
	comp=N,3398µm,0.6s						
KEK				AML	AML	11 57 18.4	
	comp=E,3177µm,0.6s						
MAKR	Makrakomi, Fth	1.49	64	P	Pn	11 56 48.1	+0.8
MAKR				AML	AML	11 57 20.2	
	comp=E,2935µm,0.5s						
MAKR				AML	AML	11 57 23.6	
	comp=N,2232µm,0.6s						
GUR	Goura	1.58	105	P	Pn	11 56 49.0	+0.5
GUR	Goura	1.58	105	P	Pn	11 56 49.0	+0.5
THL	Klokotos Trika	1.73	46	P	Pb	11 56 52.4	0.0
THL				AML	AML	11 57 23.4	
	comp=E,2584µm,0.5s						
THL				AML	AML	11 57 24.8	
	comp=N,2601µm,0.6s						
OHR	Ohrid	2.75	6	ePn	Pn	11 57 07.8	+3.2
VAY	Valandovo	3.38	29	ePn	Pn	11 57 16.9	+3.7
STIP	Stip	3.59	22	ePn	Pn	11 57 20.4	+4.4
ULC	Ulcinj	3.70	346	⇓iPn	Pn	11 57 17.9	+0.3
ULC				i Sn	Sn	11 58 01.4	+0.4
DRME	Dracevica, Mon	3.93	347	ePn	Pn	11 57 21.5	+0.8
BUM	Brajici-Budva	4.09	344	⇑iPn	Pn	11 57 23.9	+0.8
BUM				i Sn	Sn	11 58 11.3	+0.5
PDG	Podgorica	4.15	348	ePn	Pn	11 57 24.6	+0.8
TTG	Podgorica	4.15	348	⇑iPn	Pn	11 57 25.3	+1.5
TTG				i Sn	Sn	11 58 12.7	+0.7
PVY	Plav	4.23	355	⇑iPn	Pn	11 57 27.0	+1.9
PVY				i Sn	Sn	11 58 15.6	+1.3
CEME	Cevo	4.33	345	⇓iPn	Pn	11 57 26.5	+0.2
CEME				i Sn	Sn	11 58 16.9	+0.4
HCY	Herceg Novi	4.33	341	ePn	Pn	11 57 23.0	-3.2
IVA	Berane	4.51	355	⇑iPn	Pn	11 57 30.0	+1.1
TREB	Trebinje	4.62	341	ePn	Pn	11 57 29.8	-0.4
IDI	Anoyia	4.73	129	Pn	Pn	11 57 35.6	+3.8
	comp=N,0.6nm,0.3s,baz=284,slow=17,SNR=2.2						
IDI				Sn	Sn	11 58 30.5	+4.1
	comp=N,5.2nm,0.3s,baz=168,slow=22,SNR=12						
IDI				LR	LR	11 59 56.8	
	comp=N,96nm,20.0s,baz=324,slow=45						
BRY	Bratogost	4.75	343	ePn	Pn	11 57 31.2	-0.9
BRY	Bratogost	4.75	343	⇑iPn	Pn	11 57 32.3	+0.2
STON	Ston	4.95	336	ePn	Pn	11 57 33.9	-0.8
UPM	Unac-Piva	4.96	347	ePn	Pn	11 57 35.6	+0.5
UPM	Unac-Piva	4.96	347	⇓iPn	Pn	11 57 35.1	0.0
UPM				i Sn	Sn	11 58 32.2	-0.1
PLE	Pljevlja	5.01	351	⇓iPn	Pn	11 57 37.3	+1.5
PLE				i Sn	Sn	11 58 34.1	+0.6
RUDO	Rudo	5.30	352	ePn	Pn	11 57 41.3	+1.7
BBLS	Lazići	5.54	352	ePn	Pn	11 57 43.5	+0.5
DIVS	Divibare	5.73	357	ePn	Pn	11 57 45.5	-0.1
HAPS	Han Pijesak,Bl	5.82	350	ePn	Pn	11 57 46.4	-0.4
MGRS	Mrkonjic Grad	6.54	339	ePn	Pn	11 57 57.7	+1.1
BLY	Banja Luka	6.82	340	ePn	Pn	11 57 56.3	-4.1
MORH	Mrgy, Hungar	7.95	351	ePn	Pn	11 58 14.9	-1.0
BOJS	Bojanci	8.10	333	i Pn	Pn	11 58 18.7	+0.8
MLR	Muntele Rosu	8.22	28	Pn	Pn	11 58 24.3	+4.5
	comp=N,0.3nm,0.3s,baz=242,slow=11,SNR=3.3						
GBRS	Gornja Briga	8.28	332	i Pn	Pn	11 58 21.2	+0.7
CRES	Cresnjev	8.31	335	ePn	Pn	11 58 21.0	+0.1
CRES	Cresnjev	8.31	335	i Pn	Pn	11 58 21.0	+0.1
CEY	Cerknica	8.60	331	ePn	Pn	11 58 25.3	+0.4
LJU	Ljubljana	8.82	332	ePn	Pn	11 58 28.2	+0.3
PERS	Pernice	9.14	336	ePn	Pn	11 58 31.8	-0.5
SOKA	Soboth	9.20	336	i Pn	Pn	11 58 33.0	-0.2
	comp=N,2.8nm,0.2s						
SOKA				eSn	Sn	12 00 11.9	-4.5
	comp=N,2.8nm,0.5s						
OBKA	Obir	9.21	334	ePn	Pn	11 58 34.0	+0.6
	comp=N,3.1nm,0.2s						
OBKA				i Sn	Sn	12 00 12.9	-3.9
	comp=N,5.5nm,0.3s						
KBA	Koelnbreinsper	10.13	331	i Sn	Sn	12 00 34.3	-5.2
	comp=N,1.1nm,0.2s						
BRTR	Keskin Array B	10.38	78	LR	LR	12 03 26.5	
	comp=N,113nm,21.5s,baz=271,slow=41						
WTTA	Wattenberg	10.97	327	i Pn	Pn	11 58 58.2	+0.7
	comp=N,2.3nm,0.4s						
WTTA				eSn	Sn	12 00 55.0	-5.1
	comp=N,8.7nm,0.8s						
FETA	Feichten	11.20	324	eSn	Sn	12 01 03.6	-1.9
	comp=N,1.8nm,0.5s						
MOTA	Moosalm	11.27	326	ePn	Pn	11 59 01.1	-0.4
	comp=N,2.8nm,0.4s						
MOTA				eSn	Sn	12 01 08.3	+1.0
	comp=N,8.1nm,1.0s						
VRAC	Vranov	11.28	347	LR	LR	12 04 07.6	
	comp=N,205nm,18.3s,baz=170,slow=42						
DAVOX	Davos/Dischmat	11.43	321	Pn	Pn	11 59 01.9	-1.9
	comp=N,0.2nm,0.3s,baz=162,slow=20,SNR=2.0						
GERES	GERESS Array B	11.54	337	Pn	Pn	11 59 03.4	-1.9
	comp=N,0.3nm,0.3s,baz=162,slow=14,SNR=5.6						
GERES				LR	LR	12 03 56.1	
	comp=N,90nm,20.3s,baz=304,slow=40						
KHC	Kasperske Hory	11.83	338	ePN	Pn	11 59 08.3	-0.8
ESDC	Sonseca Array	18.98	282	P	Pn	12 00 43.0	+0.5
	baz=77,slow=12,SNR=5.1						
MDT	Midelt	21.06	262	LR	LR	12 10 24.0	
	comp=N,38nm,19.8s,baz=22,slow=40						
HFS	Hagfors	22.20	351	P	P	12 01 16.6	+0.2
	comp=N,4.2nm,0.7s,baz=156,slow=11,SNR=9.9						
FINES	FINESS Array B	23.37	7	P	P	12 01 28.2	-0.5
	comp=N,1.0nm,0.5s,baz=188,slow=8.4,SNR=1.6						
NOA	NORSAR Array B	23.41	349	P	P	12 01 28.5	-0.7
	comp=N,1.0nm,0.8s,baz=161,slow=9.8,SNR=3.3						
NOA				LR	LR	12 11 53.3	
	comp=N,34nm,18.9s,baz=245,slow=40						
TORD	Torodi Ar. Bea	30.13	219	P	P	12 02 31.1	+0.8
	comp=N,0.4nm,0.7s,baz=20,slow=8.0,SNR=3.1						
MKAR	Makanchi Array	45.27	59	P	P	12 04 37.8	0.0
	comp=N,0.7nm,0.4s,baz=281,slow=7.6,SNR=13						
ZALV	Zalesovo Beam	45.62	48	P	P	12 04 40.6	+0.2
	comp=N,1.4nm,0.4s,baz=281,slow=7.6,SNR=11						
LSZ	Lusaka	53.86	171	LR	LR	12 33 02.6	
	comp=N,38nm,18.0s,baz=191,slow=41						

MAN 24 11:59:01.5, 9°.89N×124°.10E, h11^{km}, mb4.0, ML2.8, MS2.5, Mindanao

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CNRM 24 12:07:49.3, 36°.55N×9°.39W, h126^{km}, ml2.3

INMG 24 12:07:51.8±1.2, 36°.66N×9°.74W, h16^{km}±4^{km}, ML2.2, Error ellipse: s-maj=4.9km s-min=3.8km az=39.0

IGIL 24 12:07:51.5, 36°.64N×9°.74W, h15^{km}, ML2.0

MDD 24 12:07:51.1±1.9, 36°.67N×9°.79W, h19^{km}±7^{km}, mbLg2.6/10, Error ellipse: s-maj=16.0km s-min=12.1km az=15.0, PRXIMO

ISC 24 12:07:48.8±2.4**, 36°.59N**±0°.08×**9°.83W**±0°.09**, h31^{km}**±14^{km}**, n43, σ1^{s}43**/75**, 5C, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	0.97	56	⇑iP	Pn	12 08 07.6	+1.3
PFVI				eS	Sn	12 08 19.3	+0.3
PFVI				A	A	12 08 20.6	
	37nm,0.1s						
PFVI	Vila Bisbo	0.97	56	⇑P	Pn	12 08 07.6	+1.3
	16nm,0.1s,SNR=18						
PFVI				S	Sn	12 08 19.3	+0.3
	20nm,0.1s,SNR=26						
MORF	Marmelete	1.18	53	eP	Pb	12 08 10.6	0.0
MORF				eS	Sn	12 08 24.7	+0.3
MORF				IAML		12 08 25.9	
	comp=N,37nm,0.2s						
MORF	Marmelete	1.18	53	⇑eP	Pb	12 08 10.7	0.0
MORF				eS	Sn	12 08 25.1	+0.7
MORF				A	A	12 08 25.9	
	comp=N,26nm,0.1s						
MORF	Marmelete	1.18	53	P	Pb	12 08 10.6	0.0
MORF				S	Sn	12 08 24.7	+0.3
PTEO	Sao Teotonio	1.30	43	eP	Pb	12 08 12.3	-0.3
PTEO				eS	Sb	12 08 28.0	-0.9
PTEO				A	A	12 08 29.6	
	comp=N,20nm,0.5s						
PBDV	Barranco-do-Ve	1.65	66	⇑iP	Pn	12 08 17.3	+1.5
PBDV				eS	Sn	12 08 36.3	+0.3
PBDV				A	A	12 08 40.5	
	comp=N,6.6nm,0.8s						
PCVE	Castro Verde	1.77	54	ePn	Pn	12 08 19.0	+1.7
PCVE				eSn	Sn	12 08 39.5	+0.8
PCVE				A	A	12 08 41.3	
	comp=N,14nm,0.4s						
MESJ	Messejana	1.79	45	eP	Pn	12 08 19.1	+1.5
MESJ				eS	Sn	12 08 39.2	-0.1
MESJ				IAML		12 08 42.5	
	comp=N,11nm,0.1s						
MESJ	Messejana	1.79	45	ePn	Pn	12 08 19.1	+1.5
MESJ				eSn	Sn	12 08 39.5	+0.3
MESJ				A	A	12 08 46.6	
	comp=N,6.5nm,0.6s						
MESJ	Messejana	1.79	45	P	Pn	12 08 19.1	+1.5
PNCL	Nicolau / Gran	1.84	34	ePn	Pn	12 08 19.5	+1.3
PNCL				eSn	Sn	12 08 41.0	+0.6
PNCL				A	A	12 08 42.0	
	comp=N,10.0nm,0.1s						
PVAQ	Vaqueiros	1.88	64	⇑ePn	Pn	12 08 20.2	+1.4
PVAQ				eSn	Sn	12 08 41.6	+0.2
PVAQ				A	A	12 08 44.6	
	comp=N,9.3nm,0.1s						
PVAQ	Vaqueiros	1.88	64	P	Pn	12 08 19.9	+1.1
PVAQ				S	Sn	12 08 41.1	-0.2
EGRO	El Granado	2.10	63	P	Pn	12 08 23.6	+1.7
	comp=N,1.5nm,0.1s,SNR=13						
EGRO				S	Sn	12 08 47.4	+0.5
	comp=N,3.2nm,0.2s,SNR=5.6						
PBEJ	Beja	2.12	47	eSn	Sn	12 08 47.8	+0.3
PBEJ				A	A	12 08 48.2	
	comp=N,5.7nm,0.2s						
PMAFR	Mafra	2.40	10	ePn	Pn	12 08 27.1	+1.1
PMAFR				eSn	Sn	12 08 54.7	+0.4
PMAFR				A	A	12 08 57.2	
	comp=N,29nm,0.2s						
PMAFR	Mafra	2.40	10	P	Pn	12 08 27.1	+1.1
	comp=N,3.1nm,0.1s,SNR=5.8						
PMAFR				S	Sn	12 08 54.9	+0.6
	comp=N,29nm,0.1s,SNR=13						

EVO	Evora	2.41	36	eSn	Sn	12 08 54.5	-0.2
EVO				A	A	12 08 56.8	
	comp=N,17nm,0.1s						
PMTG	Montargil	2.78	27	ePn	Pn	12 08 32.8	+1.6
PMTG				eSn	Sn	12 09 03.0	-0.7
PMTG				A	A	12 09 05.1	
	comp=N,7.4nm,0.3s						
EMIN	Mina Concepcio	2.78	64	P	Pn	12 08 32.7	+1.5
	comp=N,0.4nm,0.1s,SNR=7.9						
EMIN				S	Sn	12 09 03.6	-0.2
	comp=N,1.8nm,0.1s,SNR=7.3						
PESTR	Estremoz	2.88	37	eSn	Sn	12 09 05.7	-0.6
PESTR				A	A	12 09 07.2	
	comp=N,3.9nm,0.5s						
PESTR	Estremoz	2.88	37	P	Pn	12 08 31.1	-1.6
PESTR				S	Sn	12 09 04.6	-1.6
PSBE	So Bento	3.03	15	ePn	Pn	12 08 36.4	+1.8
PSBE				eSn	Sn	12 09 10.9	+1.0
PSBE				A	A	12 09 13.0	
	comp=N,14nm,0.6s						
PMRV	Marv??o	3.42	33	ePn	Pn	12 08 41.4	+1.3
PMRV				eSn	Sn	12 09 18.3	-1.3
PMRV				A	A	12 09 21.3	
	comp=N,6.3nm,0.5s						
PCAS	Casmilo, Conde	3.61	16	ePn	Pn	12 08 44.2	+1.6
PCAS				eSn	Sn	12 09 24.6	+0.4
PCAS				A	A	12 09 25.6	
	comp=N,3.7nm,0.7s						
PCBR	Castelo Branco	3.73	29	eSn	Sn	12 09 26.5	-0.7
ECAB	El Cabril	3.81	66	P	Pn	12 08 46.9	+1.4
	comp=N,1.0nm,0.1s,SNR=7.7						
ECAB				S	Sn	12 09 27.9	-1.4
	comp=N,5.9nm,0.4s,SNR=8.4						
ZHG	ZHG	4.09	139	P	Pn	12 08 46.2	-3.1
ZHG				S	Sn	12 09 31.9	-4.2
PVIS	Viseu	4.38	20	eSn	Sn	12 09 43.9	+0.5
PVIS				A	A	12 09 44.7	
	comp=N,4.5nm,0.2s						
EADA	Adamuz	4.47	68	P	Pn	12 08 56.0	+1.5
	comp=N,0.7nm,0.2s,SNR=7.9						
EADA				S	Sn	12 09 43.7	-1.7
	comp=N,1.8nm,0.1s,SNR=7.9						
EPLA	Plasencia	4.55	39	P	Pn	12 08 57.1	+1.6
	comp=N,0.2nm,0.1s,SNR=4.0						
EPLA				S	Sn	12 09 46.1	-1.3
	comp=N,2.6nm,0.1s,SNR=6.4						
POLO	Lamas de Olo	5.03	18	ePn	Pn	12 09 03.4	+1.2
POLO				eSn	Sn	12 09 58.1	-1.2
POLO				A	A	12 10 02.1	
	comp=N,1.3nm,0.7s						
MVO	Moncorvo	5.06	25	ePn	Pn	12 09 04.2	+1.6
MVO				eSn	Sn	12 09 58.2	-1.8
MVO				A	A	12 10 00.4	
	comp=N,4.0nm,0.6s						
MVO	Moncorvo	5.06	25	P	Pn	12 09 03.8	+1.2
	comp=N,0.8nm,0.1s,SNR=7.9						
MVO				S	Sn	12 09 58.6	-1.5
	comp=N,3.4nm,0.1s,SNR=6.5						
PAB	San Pablo	5.23	54	P	Pn	12 09 06.3	+1.3
	comp=N,0.5nm,0.1s,SNR=7.9						
PAB				S	Sn	12 10 01.7	-2.6
	comp=N,0.5nm,0.1s,SNR=7.9						
ELOB	Lobios	5.44	14	P	Pn	12 09 08.9	+1.0
	comp=N,0.2nm,0.0s,SNR=7.9						
ELOB				S	Sn	12 10 06.4	-3.1
	comp=N,1.3nm,0.2s,SNR=7.9						
PGAV	Gavieira, Arco	5.50	12	ePn	Pn	12 09 09.7	+1.0
PGAV				eSn	Sn	12 10 08.3	-2.6
PGAV				A	A	12 10 19.5	
	comp=N,2.9nm,0.8s						
ESDC	Sonseca Array	5.55	55	P	Pn	12 09 10.6	+1.3
	comp=N,0.9nm,0.2s,baz=239,slow=13,SNR=7.9						
ESDC				S	Sn	12 10 10.8	-1.4
	comp=N,1.8nm,0.3s,baz=240,slow=24,SNR=7.5						
MD31	MD31	5.59	130	P	Pn	12 09 07.8	-2.1
MD31				S	Sn	12 10 07.2	-6.0
MDT	Midelt	5.72	130	P	Pn	12 09 09.9	-1.8
MDT				S	Sn	12 10 09.4	-7.0
ECAL	Calabor	5.85	23	P	Pn	12 09 14.1	+0.6
	comp=N,0.3nm,0.1s,SNR=7.9						
ECAL				S	Sn	12 10 17.7	-1.9
	comp=N,1.4nm,0.2s,SNR=7.9						
EMAZ	Mazaricos	6.38	6	S	Sn	12 10 28.9	-3.6
	comp=N,0.9nm,0.2s,SNR=7.9						

IDC 24 12:15:37.0±3.1**, 11°.50S×163°.12E, h0**km**, mb3.6**/3**, mb1 3.9**/4**, mb1mx3.6**/36**, mbtmp3.9**/4**, ML4.6**/1**, MS2.8**/1**, Ms1 2.8**/1**, ms1mx2.5**/33**, Error ellipse: s-maj=56.4km s-min=40.0km az=87.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	3.73	303	Pn	Pn	12 16 35.6	-0.3
	42nm,0.3s,baz=191,slow=2.2,SNR=10						
HNR				Sn	Sn	12 17 21.4	+0.9
	29nm,0.3s,baz=49,slow=20,SNR=2.4						
HNR				LR	LR	12 17 52.6	
	comp=Z,114nm,18.4s,baz=3.0,slow=36						
WRA	Warramunga Arr	28.91	250	P	P	12 21 38.6	+0.6
	0.6nm,0.7s,baz=81,slow=9.2,SNR=4.3						
H11S2	WAKE ISLAND Hy	30.00	7	T	T	12 52 38.4	
	baz=188,slow=76,SNR=20						
H11S3	WAKE ISLAND Hy	30.01	7	T	T	12 52 38.8	
	baz=188,slow=76,SNR=7.7						
H11S1	WAKE ISLAND Hy	30.02	7	T	T	12 52 35.2	
	baz=188,slow=76,SNR=6.3						
ASAR	Alice Springs	30.29	243	P	P	12 21 49.6	-0.6
	0.3nm,0.3s,baz=70,slow=11,SNR=4.3						
H11N1	WAKE ISLAND Hy	31.23	7	T	T	12 54 06.6	
	baz=188,slow=76,SNR=5.7						
H11N3	WAKE ISLAND Hy	31.24	7	T	T	12 54 08.6	
	baz=188,slow=76,SNR=5.1						
H11N2	WAKE ISLAND Hy	31.25	7	T	T	12 54 09.2	
	baz=188,slow=76,SNR=5.0						
SONM	Songino Array	77.52	325	P	P	12 27 34.8	0.0
	0.5nm,0.6s,baz=130,slow=5.2,SNR=3.7						

IDC ***24*** *12:24:14.7±0.6, 28°.18N×84°.82E, h0km, mb4.3/27, mb1 4.3/30, mb1mx4.2/65, mbtmp4.2/30, ML4.0/3, MS3.4/12, Ms1 3.4/12, ms1mx3.1/50, Error ellipse: s-maj=16.1km s-min=12.4km az=65.0*

NDI ***24*** *12:24:15.4±2.1, 27°.93N×84°.78E, h10km±15km, ML4.1, mb4.6(NEIC)*

NEIC ***24*** *12:24:15.6±1.9, 28°.16N±0°.08×84°.76E±0°.07, h8km±4km, mb4.6/48, Error ellipse: s-maj=13.6km s-min=4.9km az=216.0*

MOS ***24*** *12:24:16.0±1.2, 28°.15N×84°.68E, h25km, mb4.7/21, Error ellipse: s-maj=9.6km s-min=4.8km az=112.8*

BJI ***24*** *12:24:20.2±0.0, 28°.47N×85°.03E, h37km, mB4.5/6, mb4.4/22, Ms4.1/9, Ms7 3.9/9*

ISC 24 12:24:15.6±0.4**, 28°.07N**±0°.05×**84°.76E**±0°.04**, h12**km**, n153, σ1s.60**/149**, mb4.5**/60**, MS3.4**/12**, 9C-2D, Nepal**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTH	Pithoragarh	4.25	291	eP	Pn	12 25 22.1	+1.8
PTH				eS	Sb	12 26 25.9	+4.2
LSA	Lhasa	5.83	72	P	Pn	12 25 44.3	+2.0
LSA				pmax	pmax		
	comp=Z,56nm,0.9s						
LSA	Lhasa	5.83	72	P	Pn	12 25 43.3	+1.0
LSA	Lhasa	5.83	72		Pn	12 25 43.3	+1.0
SHL	Shillong	6.84	110	P	Pn	12 25 56.0	+0.1
SHL	Shillong	6.84	110	eP	Pn	12 25 56.2	+0.4
SHL				eS	Sn	12 27 08.5	-5.3
SHL				IAML		12 27 12.9	
	comp=N,163nm,0.5s						
SHL	Shillong	6.84	110	Pn	Pn	12 25 56.0	+0.1
SMLA	Simla	7.28	297	eP	Pn	12 26 04.3	+2.6
SMLA				eS	Sn	12 27 23.0	-1.2
SMLA				IAML		12 27 26.9	
	comp=E,142nm,0.5s						
SMLA				IAML		12 27 30.4	
	comp=N,132nm,0.9s						
SMLA				IAML		12 27 33.4	
	comp=E,160nm,1.1s						
BHPL	Bhopal	8.18	236	eP	Pn	12 26 14.4	+0.2
BHPL				eS	Sn	12 27 41.5	-5.2
BHPL				IAML		12 27 48.5	
	comp=N,166nm,0.3s						
BHPL				IAML		12 27 50.0	
	comp=E,174nm,0.5s						
DHRM	DHARAMSHALA	8.42	302	eP	Pn	12 26 19.4	+1.7
DHRM				eS	Sn	12 27 50.4	-2.4
CHCP	Chirah Chowk	11.33	302	P	Pn	12 26 57.1	-0.3
NIL	Nilore	11.34	302	P	Pn	12 26 57.0	-0.4
NIL	Nilore	11.34	302	Pn	Pn	12 26 57.0	-0.4
HYB	Hyderabad	12.05	210	i P	Pn	12 27 06.0	-1.2
HYB				eS	Sn	12 29 36.0	+14
HYB	Hyderabad	12.05	210	eP	Pn	12 27 06.2	-1.0
HYB				IAmb	IAmb	12 27 08.0	
	comp=Z,26nm,0.3s						
THW	Thamme Wali	12.18	296	P	Pn	12 27 08.4	-0.5
CEP	Cherat	12.43	301	P	Pn	12 27 10.6	-1.8
CEP				S	Sn	12 29 24.0	-6.9
KSH	Kashi	13.54	330	P	Pn	12 27 24.3	-3.3
KSH				S	Sn	12 29 47.8	-10
KSH				pmax	pmax		
	comp=Z,12nm,0.8s						
KSH				LR	LR		
	comp=Z,150nm,13.4s						
KSH				LR	LR		
	comp=Z,500nm,12.0s						
KSH				LR	LR		
	comp=Z,290nm,15.8s						
POO	Poona	13.80	229	eP	Pn	12 27 28.0	-3.2
TARG	Taragay, Kyrgy	14.76	339		Pn	12 27 42.6	-1.9
KBL	Kabul	14.89	300	P	Pn	12 27 42.9	-3.3
KBL	Kabul	14.89	300		Pn	12 27 42.9	-3.3
PRZ	Przheval'sk	15.28	342	P	Pn	12 27 50.0	-1.2
PRZ				pmax	pmax		
	comp=Z,22nm,0.7s						
PRZ	Przheval'sk	15.28	342	Pn	Pn	12 27 50.0	-1.2
PRZ				IAmb	IAmb	12 27 59.5	
	comp=Z,22nm,0.7s						
KDJ	Kajisay	15.32	338	P	Pn	12 27 49.9	-2.0
KDJ				pmax	pmax		
	comp=Z,11nm,1.2s						
KDJ	Kajisay	15.32	338		Pn	12 27 49.9	-2.0
DRK	Karamyk	15.65	320		Pn	12 27 53.0	-3.3
CHTO	Chiang Mai	15.94	122	P	P	12 28 02.3	-1.1
CHTO				pmax	pmax		
	comp=Z,20nm,1.1s						
CHTO	Chiang Mai	15.94	122	P	P	12 28 02.3	-1.1
BOOM	Boomskoye usch	16.07	336	P	Pn	12 28 00.3	-1.2
BOOM				pmax	pmax		
	comp=Z,23nm,1.5s						
BOOM	Boomskoye usch	16.07	336		Pn	12 28 00.2	-1.2
CMAR	Chiang Mai Arr	16.16	123	Pn	Pn	12 28 02.5	0.0
	comp=Z,0.1nm,0.3s,baz=303,slow=14,SNR=11						
GAR	Garm	16.22	316	Pn	Pn	12 28 00.6	-2.8
GAR				IAmb	IAmb	12 28 08.1	
	comp=Z,57nm,1.3s						
BTK	Batken	16.60	320	P	Pn	12 28 04.9	-3.3
BTK				pmax	pmax		
	comp=Z,15nm,0.7s						
BTK	Batken	16.60	320		Pn	12 28 04.9	-3.3
CHGR	Chuyangaron	16.75	313	P	P	12 28 12.4	0.0
CHGR				IAmb	IAmb	12 28 15.4	
	comp=Z,62nm,0.8s						
AAK	Ala-Archa	16.75	333	Pn	Pn	12 28 09.1	-1.1
	comp=Z,0.2nm,0.3s,baz=176,slow=9.0,SNR=12						
AAK				LR	LR	12 35 39.1	
	comp=Z,195nm,19.6s,baz=132,slow=41						
AAK	Ala-Archa	16.75	333	ceP	Pn	12 28 09.8	-0.4
AAK				pmax	pmax		
	comp=Z,41nm,1.0s						
AAK	Ala-Archa	16.75	333	Pn	Pn	12 28 09.0	-1.2
MK31	Makanchi Array	18.79	355	d iP	Pn	12 28 35.0	-0.2
MK31	Makanchi Array	18.79	355	P	P	12 28 34.1	-0.6
MKAR	Makanchi Array	18.79	355	P	Pn	12 28 34.5	-0.7
	comp=Z,1.1nm,0.3s,baz=173,slow=12,SNR=45						
MKAR				LR	LR	12 37 02.2	
	comp=Z,200nm,19.0s,baz=172,slow=41						
MKAR	Makanchi Array	18.79	355	i P	Pn	12 28 35.0	-0.2
MKAR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
MKAR	Makanchi Array	18.79	355		Pn	12 28 34.7	-0.5
MAKZ	Makanchi	18.83	354	P	Pn	12 28 35.1	-0.6
MAKZ				pmax	pmax		
	comp=Z,11nm,0.9s						
MAKZ	Makanchi	18.83	354		Pn	12 28 35.1	-0.6
KKAR	Karatay Array	18.91	326	P	P	12 28 33.7	-2.4
KKAR	Karatay Array	18.91	326	P	P	12 28 33.7	-2.4
PALK	Pallekele	21.04	191	P	P	12 29 01.5	+2.0
	comp=Z,4.7nm,0.7s,baz=111,slow=14,SNR=2.6						
PALK				LR	LR	12 36 46.8	
	comp=Z,152nm,19.5s,baz=130,slow=36						
PALK	Pallekele	21.04	191	P	P	12 29 01.5	+2.0
PALK				pmax	pmax		
	comp=Z,47nm,1.8s						
PALK	Pallekele	21.04	191	IAmb	IAmb	12 29 17.4	
	comp=Z,47nm,1.8s						
XAN	Xi'an	21.51	68	⇑P	P	12 29 03.6	-0.9
XAN				pmax	pmax		
	comp=Z,16nm,0.9s						
ENH	Enshi	21.69	78	P	P	12 29 06.0	-0.4
ENH				IAmb	IAmb	12 29 13.4	
	comp=Z,24nm,1.2s						
DGZ	Jazzator, Alta	21.69	5	i P	P	12 29 06.4	0.0
DGZ				pmax	pmax		
	comp=Z,21nm,1.6s						
KURBB	Kurchatov Arra	23.01	350	P	P	12 29 20.0	-0.2
	comp=Z,5.5nm,0.6s,baz=166,slow=10.0,SNR=36						
KURK	Kurchatov	23.09	350	ceP	P	12 29 21.1	+0.1
KURK				pmax	pmax		
	comp=Z,38nm,1.7s						
KURK	Kurchatov	23.09	350	P	P	12 29 20.6	-0.4
KURK				IAmb	IAmb	12 29 29.4	
	comp=Z,33nm,1.1s						
WSAR	Wadi Sarin	24.02	264	LR	LR	12 38 56.4	
	comp=Z,49nm,20.6s,baz=137,slow=37						
GEYT	Alibeck	24.34	301	P	P	12 29 36.0	+2.7
	comp=Z,2.5nm,0.5s,baz=82,slow=2.1,SNR=4.1						
ZAA0	Zalesovo Array	25.85	0	IAmb	IAmb	12 29 48.4	
	comp=Z,9.7nm,0.9s						
ZALV	Zalesovo Beam	25.85	0	P	P	12 29 47.5	+0.7
	comp=Z,7.4nm,0.7s,baz=181,slow=10,SNR=18						
ZALV				LR	LR	12 40 50.6	
	comp=Z,45nm,19.4s,baz=357,slow=39						
ZALV	Zalesovo Beam	25.85	0	P	P	12 29 47.2	+0.4
SONM	Songino Array	25.93	35	P	P	12 29 49.2	+1.5
	comp=Z,8.6nm,0.8s,baz=221,slow=9.7,SNR=34						
SONM				LR	LR	12 39 30.3	
	comp=Z,26nm,18.0s,baz=304,slow=36						
SONM	Songino Array	25.93	35	P	P	12 29 48.8	+1.0
ULN	Ulaanbaatar	26.28	35	ceP	P	12 29 51.6	+0.6
ULN				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ULN	Ulaanbaatar	26.28	35	P	P	12 29 50.3	-0.7
ULN				IAmb	IAmb	12 29 55.0	
	comp=Z,6.4nm,0.8s						
ZAK	Zakamensk	26.36	27	eP	P	12 29 52.4	+0.8
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BVAR	Borovoye Array	27.11	341	P	P	12 29 58.6	+0.5
	comp=Z,0.5nm,0.3s,baz=178,slow=19,SNR=7.8						
BRVK	Borovoye	27.17	341	ceP	P	12 29 58.8	+0.1
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.7s						
BRVK	Borovoye	27.17	341	P	P	12 29 57.6	-1.1
TLY	Talaya	27.52	26	LR	LR	12 41 57.8	
	comp=Z,91nm,20.1s,baz=178,slow=39						
TLY	Talaya	27.52	26	P	P	12 30 00.2	-1.6
TLY				IAmb	IAmb	12 30 33.3	
	comp=Z,9.4nm,1.0s						
ABKAR	Akbulak array	28.46	325	P	P	12 30 09.0	-1.3
PSI	Prapat	28.54	149	LR	LR	12 42 40.0	
	comp=Z,57nm,20.8s,baz=347,slow=38						
AKTO	Aktyubinsk	30.17	325	P	P	12 30 25.9	+0.5
	comp=Z,1.1nm,0.5s,baz=133,slow=9.6,SNR=4.7						
AKTO	Aktyubinsk	30.17	325	P	P	12 30 26.0	+0.5
ARU	Arti	33.93	334	d iP	P	12 30 59.0	+0.6
ARU						12 32 07.4	
ARU				S	S	12 36 21.3	-1.4
ARU				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ARU	Arti	33.93	334	P	P	12 30 57.8	-0.6
ARU				IAmb	IAmb	12 30 59.9	
	comp=Z,6.2nm,0.7s						
BELG	Belogornoye	36.71	322	i P	P	12 31 23.9	+1.6
BELG				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KBZ	Khabaz	36.91	306	LR	LR	12 49 28.9	
	comp=Z,67nm,18.1s,baz=0.0,slow=41						
KBZ	Khabaz	36.91	306	ceP	P	12 31 25.1	+0.9
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KIRV	Kirov	39.08	331	ceP	P	12 31 43.1	+0.9
NRIK	Noril'sk	41.33	2	P	P	12 32 00.4	-0.4
	comp=Z,3.7nm,0.7s,baz=188,slow=5.8,SNR=5.8						
NRIK				LR	LR	12 51 17.4	
	comp=Z,128nm,19.9s,baz=182,slow=39						
NRIK	Noril'sk	41.33	2	ceP	P	12 32 01.5	+0.7
NRIK				pmax	pmax		
	comp=Z,17nm,1.7s						
NRIK	Noril'sk	41.33	2	P	P	12 32 01.3	+0.5
NRIK				IAmb	IAmb	12 32 08.1	
	comp=Z,11nm,1.1s						
KLR	Kul'dur	41.53	46	i P	P	12 32 03.6	+0.9
KLR				pmax	pmax		
	comp=Z,10.0nm,1.6s						
PRGR	Permogore	42.38	333	eP	P	12 32 10.3	+0.8
PRGR				pmax	pmax		
	comp=Z,12nm,1.3s						
MOS	Moscow	43.44	323	eP	P	12 32 17.6	-0.6
MOS				e		12 32 23.7	
OBN	Obninsk	43.81	322	i P	P	12 32 21.4	+0.3
OBN				i		12 32 27.1	
OBN				i		12 34 01.0	
OBN				pmax	pmax		
	comp=Z,14nm,1.1s						
OBN				MLR	MLR		
	comp=Z,120nm,13.0s						
KLMR	Klimovskoe	44.54	330	eP	P	12 32 26.7	-0.2
KLMR				e		12 34 10.2	
KLMR				pmax	pmax		
	comp=Z,25nm,1.4s						
KLMR	Klimovskoe	44.54	330	eP	P	12 32 26.7	-0.2
KLMR				AMP		12 32 34.1	
	comp=Z,25nm,1.4s						
KLMR				ePP	PP	12 34 10.2	-0.5
YAK	Yakutsk	44.94	28	ceP	P	12 32 29.6	-0.5
YAK				pmax	pmax		
	comp=Z,11nm,0.7s						
YAK	Yakutsk	44.94	28	P	P	12 32 29.1	-1.0
KAPI	Kappang	47.11	129	LR	LR	12 58 04.5	
	comp=Z,32nm,18.5s,baz=304,slow=43						
AKASG	Malin Array Be	47.21	314	P	P	12 32 47.8	-0.3
	comp=Z,0.7nm,0.6s,baz=77,slow=6.7,SNR=8.4						
AKASG	Malin Array Be	47.21	314	P	P	12 32 47.8	-0.3
AKASG				pmax	pmax		
	comp=Z,4.0nm,1.6s						
AKBB	Malin Array Si	47.21	314	P	P	12 32 47.1	-1.1
AKBB				pmax	pmax		
	comp=Z,5.0nm,0.8s						
AKBB	Malin Array Si	47.21	314	P	P	12 32 47.1	-1.1
AKBB				IAmb	IAmb	12 32 49.3	
	comp=Z,4.6nm,0.8s						
MLR	Muntele Rosu	49.11	307	P	P	12 33 04.4	+1.3
	comp=Z,12nm,0.9s,baz=162,slow=2.9,SNR=11						
MLR	Muntele Rosu	49.11	307	P	P	12 33 02.9	-0.2
TIXI	Tiksi	49.83	17	P	P	12 33 08.3	+0.3
	comp=Z,5.4nm,0.7s,baz=206,slow=4.6,SNR=6.6						
TIXI	Tiksi	49.83	17	P	P	12 33 07.1	-0.9
TIXI				IAmb	IAmb	12 33 09.3	
	comp=Z,8.0nm,0.8s						
VSU	Vasula	49.89	324	i P	P	12 33 10.4	+1.8
FINES	FINESS Array B	50.86	328	P	P	12 33 16.0	+0.1
	comp=Z,3.6nm,0.5s,baz=105,slow=7.9,SNR=13						
FINES	FINESS Array B	50.86	328	i P	P	12 33 16.2	+0.3
FINES				pmax	pmax		
	comp=Z,7.0nm,0.8s						
FINES	FINESS Array B	50.86	328	P	P	12 33 14.3	-1.6
ARCES	ARCESS Array B	53.34	338	P	P	12 33 35.0	+0.7
	comp=Z,4.3nm,0.7s,baz=92,slow=6.2,SNR=9.9						
ARCES	ARCESS Array B	53.34	338	P	P	12 33 34.4	+0.1
KMBO	Kilima Mbogo	54.01	246	P	P	12 33 42.5	+2.2
	comp=Z,1.5nm,0.5s,baz=41,slow=9.1,SNR=6.4						
KMBO	Kilima Mbogo	54.01	246	i P	P	12 33 45.5	+5.2
KMBO				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KMBO	Kilima Mbogo	54.01	246	P	P	12 33 43.5	+3.3
KMBO				IAmb	IAmb	12 33 45.9	
	comp=Z,5.6nm,1.1s						
SEY	Seymchan	55.24	31	P	P	12 33 49.0	+0.9
	comp=Z,1.3nm,0.4s,baz=259,slow=12,SNR=3.6						
HFS	Hagfors	56.72	326	P	P	12 33 58.8	0.0
	comp=Z,1.7nm,0.3s,baz=100,slow=8.1,SNR=12						
GERES	GERESS Array B	57.25	312	P	P	12 34 02.6	-0.4
	comp=Z,0.4nm,0.4s,baz=79,slow=10,SNR=2.0						
SAUI	Saumlaki	57.49	122	P	P	12 34 04.4	-0.6
NB2	NORSAR Subarra	57.94	327	P	P	12 34 07.1	-0.4
	comp=Z,1.1nm,0.7s,baz=88,slow=7.4						
NOA	NORSAR Array B	57.94	327	P	P	12 34 06.5	-1.0
	comp=Z,1.7nm,0.8s,baz=90,slow=7.0,SNR=4.2						
NOA				LR	LR	13 00 31.8	
	comp=Z,56nm,21.8s,baz=270,slow=38						
SPB2	Spitsbergen Ar	58.31	347	P	P	12 34 09.2	-0.6
BILL	Bilibino	61.13	25	i P	P	12 34 27.5	-1.9
BILL				i		12 34 35.5	
BILL				i		12 35 12.2	
BILL				i		12 36 44.0	
BILL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BILL				MLR	MLR		
	comp=Z,71nm,16.0s						
KEST	Kesra	63.05	298	P	P	12 34 43.9	+1.0
	comp=Z,5.0nm,0.8s,baz=99,slow=16,SNR=4.2						
NOR	Nord	64.07	351	i P	P	12 34 49.1	+0.3
NOR				IAmb	IAmb	12 34 55.1	
	comp=Z,7.4nm,1.1s						
WRA	Warramunga Arr	67.65	129	P	P	12 35 13.7	+1.0
	comp=Z,2.0nm,0.6s,baz=321,slow=6.4,SNR=17						
WRA	Warramunga Arr	67.65	129	P	P	12 35 13.4	+0.7
WRAB	Tennant Creek	67.65	129	i P	P	12 35 18.1	+5.4
WRAB				pmax	pmax		
	comp=Z,2.0nm,1.0s						
WB2	Warramunga Arr	67.66	129	P	P	12 35 13.4	+0.6
WB2				IAmb	IAmb	12 35 18.5	
	comp=Z,4.3nm,0.7s						
ASAR	Alice Springs	69.93	132	P	P	12 35 28.1	+1.1
	comp=Z,1.9nm,0.8s,baz=313,slow=5.9,SNR=12						
NEEM	North Greenlan	71.45	351	i P	P	12 35 35.8	+0.1
NEEM				IAmb	IAmb	12 35 36.6	
	comp=Z,11nm,0.9s						
ESDC	Sonseca Array	71.77	306	P	P	12 35 37.6	-0.4
	comp=Z,0.8nm,0.8s,baz=54,slow=9.6,SNR=5.1						
EUNU	Eureka	71.99	358	P	P	12 35 39.2	+0.5
EUNU				IAmb	IAmb	12 35 40.9	
	comp=Z,6.7nm,1.1s						
SUMG	Summit	72.51	345	P	P	12 35 43.2	+0.9
SUMG				pmax	pmax		
	comp=Z,17nm,1.2s						
SUMG	Summit	72.51	345	i P	P	12 35 42.9	+0.6
SUMG				IAmb	IAmb	12 35 50.2	
	comp=Z,13nm,1.1s						
SUMG	Summit	72.51	345	P	P	12 35 43.2	+0.9
ICESG	Greenland Ices	75.07	342	eP	P	12 35 56.9	-0.4
ICESG				IAmb	IAmb	12 36 03.5	
	comp=Z,3µm,4.4s						
TOLK	Toolik Lake Re	75.71	18	P	P	12 36 00.2	-0.4
IMAR	Indian Mountai	76.22	21	P	P	12 36 03.9	+0.4
COLD	Coldfoot	76.48	19	P	P	12 36 05.9	+0.9
COLD				IAmb	IAmb	12 36 07.7	
	comp=Z,7.0nm,1.0s						
H21K	Melozitna Rive	76.73	21	P	P	12 36 07.8	+1.4
H21K				IAmb	IAmb	12 36 08.8	
	comp=Z,7.2nm,1.0s						
MLY	Manley	77.79	21	P	P	12 36 12.9	+0.5
MLY				IAmb	IAmb	12 36 15.0	
	comp=Z,6.9nm,1.1s						
TORD	Torodi Ar. Bea	77.89	279	P	P	12 36 16.1	+2.3
	comp=Z,2.9nm,0.9s,baz=53,slow=5.2,SNR=8.8						
TORD	Torodi Ar. Bea	77.89	279	P	P	12 36 15.2	+1.4
BMAR	Burnt Mountain	77.90	17	P	P	12 36 14.6	+1.6
A36M	Sachs Harbour	78.06	9	P	P	12 36 13.9	+0.2
A36M				IAmb	IAmb	12 36 15.4	
	comp=Z,7.3nm,0.8s						
POKR	Poker Plat Res	78.76	20	IAmb	IAmb	12 36 19.8	
	comp=Z,10nm,1.1s						
COLA	College	78.80	20	i P	P	12 36 17.6	-0.3
COLA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ILAR	Eielson Array	79.17	20	P	P	12 36 19.9	-0.1
	comp=Z,2.2nm,0.8s,baz=293,slow=4.4,SNR=24						
ILAR	Eielson Array	79.17	20	P	P	12 36 19.7	-0.3
INK	Inuvik	79.82	14	P	P	12 36 23.6	+0.2
INK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
INK	Inuvik	79.82	14	P	P	12 36 23.6	+0.2

INK				IAmb	IAmb	12 36 25.1	
	comp=Z,4.1nm,1.0s						
BOSA	Boshof	80.14	230	P	P	12 36 28.7	+2.8
	comp=Z,2.8nm,0.9s,baz=79,slow=5.2,SNR=3.0						
STKA	Stephens Creek	80.49	134	P	P	12 36 28.3	+0.7
	comp=Z,1.0nm,0.6s,baz=301,slow=12,SNR=1.9						
SCRK	Sand Creek	80.61	20	IAmb	IAmb	12 36 29.6	
	comp=Z,9.4nm,1.0s						
KOWA	Kowa	82.26	282	P	P	12 36 37.9	+0.5
	comp=Z,5.2nm,0.8s,baz=66,slow=10.0,SNR=3.7						
KOWA	Kowa	82.26	282	IAmb	IAmb	12 36 42.8	
	comp=Z,10nm,1.1s						

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*ATH **24** 12:29:32.9, 38°.46N×20°.46E, h14^{km}±1^{km}, ML3.3/21, Error ellipse: s-maj=1.4km s-min=0.5km az=284.0*

*THE **24** 12:29:32.7, 38°.46N×20°.43E, h12^{km}, ML3.5/9, Error ellipse: s-maj=0.9km s-min=0.3km az=283.0*

ISC 24 12:29:32.4±0.8, **38°.47N**±0°.02×**20°.44E**±0°.03, **h17**^{km}±5^{km}, **n78, σ0^{s}.56**/104, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FSK	Fiskardo	0.10	93	P	Pg	12 29 35.6	-0.3
FSK				S	Sg	12 29 37.5	-0.8
	79µm,0.2s						
FSK	Fiskardo	0.10	93	P	Pg	12 29 35.6	-0.3
FSK				S	Sg	12 29 37.6	-0.8
FSK				AML	AML	12 29 37.8	
FSK				AML	AML	12 29 38.4	
KEF4	Livadi, Kephal	0.21	182	P	Pg	12 29 37.3	0.0
KEF4				S	Sg	12 29 40.9	+0.2
KEF4	Livadi, Kephal	0.21	182	P	Pg	12 29 37.3	0.0
KEF4				S	Sb	12 29 41.3	+0.1
DMLN	Damoulianata-K	0.23	192	P	Pg	12 29 37.8	+0.1
DMLN				S	Sg	12 29 41.3	-0.1
	8µm,0.3s						
DMLN	Damoulianata-K	0.23	192	P	Pg	12 29 37.8	+0.1
DMLN				S	Sg	12 29 41.8	+0.4
EVGI	Lefkada island	0.23	48	P	Pg	12 29 37.7	-0.1
EVGI				S	Sg	12 29 41.7	+0.3
	29µm,0.2s						
EVGI	Lefkada island	0.23	48	P	Pg	12 29 37.7	-0.1
EVGI				S	Sg	12 29 41.4	0.0
DRAG	Dragano-Lefkad	0.24	27	P	Pg	12 29 37.7	-0.2
DRAG				S	Sg	12 29 42.0	+0.2
	99µm,0.2s						
DRAG	Dragano-Lefkad	0.24	27	P	Pg	12 29 37.7	-0.2
DRAG				S	Sg	12 29 42.0	+0.2
LXRA	Lixouri, Kepha	0.26	180	P	Pg	12 29 38.4	+0.2
LXRA				S	Sb	12 29 42.9	+0.1
KEF3	Kipouria, Keph	0.27	195	P	Pg	12 29 38.0	-0.4
KEF3				S	Sg	12 29 42.2	-0.2
KEF3	Kipouria, Keph	0.27	195	P	Pg	12 29 37.9	-0.4
KEF3				S	Sg	12 29 42.4	0.0
ARGA	Argostoli. Kep	0.29	173	P	Pb	12 29 39.5	+0.4
VLS	Valsamata	0.31	157	P	Pg	12 29 38.8	-0.2
VLS				S	Sg	12 29 44.0	+0.4
	10µm,0.1s						
VLS	Valsamata	0.31	157	P	Pg	12 29 38.8	-0.2
VLS				S	Sg	12 29 44.1	+0.4
VLS				AML	AML	12 29 44.5	
	comp=N,21779µm,0.2s						
VLS				AML	AML	12 29 45.1	
	comp=E,21657µm,0.3s						
NYDR	Nydri-Lefkada	0.32	40	P	Pg	12 29 39.3	+0.1
NYDR				S	Sg	12 29 44.3	+0.4
	comp=E,27µm,0.4s						
NYDR	Nydri-Lefkada	0.32	40	P	Pg	12 29 39.0	-0.2
NYDR				S	Sg	12 29 44.0	+0.1
LKD2	Lefkada island	0.37	28	P	Pg	12 29 39.9	-0.2
LKD2				S	Sb	12 29 46.1	+0.1
	comp=E,8µm,0.2s						
LKD2	Lefkada island	0.37	28	P	Pg	12 29 40.0	-0.1
LKD2				S	Sg	12 29 45.7	+0.4
LKD2				AML	AML	12 29 48.8	
	comp=N,13229µm,0.3s						
LKD2				AML	AML	12 29 51.7	
	comp=E,20497µm,0.4s						
PSDA	Pessada-Kefalo	0.37	161	P	Pg	12 29 39.9	-0.1
PSDA				S	Sg	12 29 45.6	+0.4
PSDA	Pessada-Kefalo	0.37	161	P	Pg	12 29 39.9	-0.1
PSDA				S	Sg	12 29 45.6	+0.4
TSLK	Tsoukalades, L	0.40	26	P	Pg	12 29 40.7	+0.1
TSLK				S	Sb	12 29 47.4	+0.6
	comp=E,12µm,0.3s						
TSLK	Tsoukalades, L	0.40	26	P	Pg	12 29 40.6	+0.1
TSLK				S	Sg	12 29 46.6	+0.4
TSLK				AML	AML	12 29 49.0	
	comp=E,29399µm,0.2s						
TSLK				AML	AML	12 29 50.1	
	comp=N,20262µm,0.3s						
VTN	Vitineika	0.81	133	P	Pb	12 29 48.5	+0.6
LTHK	Lithakia	0.82	157	P	Pg	12 29 47.5	-0.8
LTHK				S	Sb	12 30 00.5	+1.7
	comp=N,2µm,0.4s						
LTHK	Lithakia	0.82	157	P	Pg	12 29 47.5	-0.8
PVO	Paravola	0.87	80	P	Pg	12 29 49.3	0.0
PVO	Paravola	0.87	80	P	Pg	12 29 49.1	-0.2
PVO				AML	AML	12 30 09.2	
	comp=N,5981µm,0.4s						
PVO				AML	AML	12 30 09.9	
	comp=E,7930µm,0.5s						
RLS	Riolos of Patr	0.91	116	P	Pg	12 29 49.9	-0.1
RLS	Riolos of Patr	0.91	116	P	Pg	12 29 49.4	-0.6
RLS				AML	AML	12 30 10.8	
	comp=E,2047µm,0.6s						
RLS				AML	AML	12 30 14.9	
	comp=N,2151µm,0.5s						
IGT	Igoumenitsa	1.07	356	P	Pb	12 29 52.4	0.0
IGT	Igoumenitsa	1.07	356	P	Pb	12 29 52.4	0.0
IGT				AML	AML	12 30 17.2	
	comp=N,1862µm,0.4s						
IGT				AML	AML	12 30 18.7	
	comp=E,1370µm,0.5s						
DRO	Drossia	1.13	117	P	Pb	12 29 53.3	-0.2
DRO	Drossia	1.13	117	P	Pb	12 29 53.2	-0.2
DRO				AML	AML	12 30 16.3	
	comp=E,4203µm,0.7s						
DRO				AML	AML	12 30 17.9	
	comp=N,4227µm,0.5s						
EFP	Efpalio	1.16	91	P	Pb	12 29 53.2	-0.6
EFP	Efpalio	1.16	91	P	Pb	12 29 53.3	-0.6
EFP				AML	AML	12 30 16.9	
	comp=N,4427µm,0.4s						
EFP				AML	AML	12 30 17.2	
	comp=E,11713µm,0.6s						
EVR	Evrytania	1.17	67	P	Pb	12 29 54.1	-0.1
EVR				AML	AML	12 30 21.8	
	comp=E,1926µm,0.7s						
EVR				AML	AML	12 30 22.7	
	comp=N,1666µm,0.6s						
ANX	Ano Chora	1.17	83	P	Pb	12 29 54.4	+0.2
ANX	Ano Chora	1.17	83	P	Pb	12 29 54.4	+0.2
ANX				AML	AML	12 30 19.2	
	comp=N,4147µm,0.5s						
ANX				AML	AML	12 30 21.0	
	comp=E,3828µm,0.5s						
JAN	Janina	1.23	15	P	Pn	12 29 55.8	+0.9
JAN				AML	AML	12 30 20.1	
	comp=E,1772µm,0.4s						
JAN				AML	AML	12 30 26.9	
	comp=N,1442µm,0.4s						
LAKA	Lakka	1.23	100	P	Pn	12 29 55.1	+0.2
LAKA	Lakka	1.23	100	P	Pn	12 29 54.6	-0.2
LAKA				AML	AML	12 30 19.2	
	comp=E,10352µm,0.7s						
LAKA				AML	AML	12 30 21.9	
	comp=N,5894µm,0.6s						
SERG	Sergoula	1.27	92	P	Pn	12 29 55.7	+0.3
SERG	Sergoula	1.27	92	P	Pn	12 29 55.5	+0.1
SERG				AML	AML	12 30 20.7	
	comp=E,4608µm,0.8s						
SERG				AML	AML	12 30 22.6	
	comp=N,2479µm,0.6s						
TRIZ	Trizonia	1.29	94	P	Pn	12 29 55.7	+0.1
ALIK	Aliki, Aigiali	1.33	98	P	Pn	12 29 56.6	+0.4
KASA	Kassiopi	1.34	343	P	Pb	12 29 57.9	+1.0
KEK	Kerkira	1.34	339	P	Pn	12 29 57.6	+1.3
KEK				AML	AML	12 30 21.7	
	comp=N,1700µm,0.5s						
KEK				AML	AML	12 30 28.6	
	comp=E,1504µm,0.5s						
KLV	Kalavryta, Ach	1.42	107	P	Pn	12 29 58.0	+0.6
KLV	Kalavryta, Ach	1.42	107	P	Pn	12 29 57.8	+0.4
KLV				AML	AML	12 30 27.9	
	comp=E,912µm,0.4s						
KLV				AML	AML	12 30 30.8	
	comp=N,744µm,0.6s						
MAKR	Makrakomi, Fth	1.44	67	P	Pb	12 29 59.0	+0.4
MAKR				AML	AML	12 30 24.2	
	comp=N,1245µm,0.8s						
MAKR				AML	AML	12 30 27.8	
	comp=E,1955µm,0.4s						
AGG	Agios Georgios	1.58	69	P	Pb	12 30 01.4	+0.2
AGG				AML	AML	12 30 28.8	
	comp=N,1985µm,0.7s						
AGG				AML	AML	12 30 30.9	
	comp=E,1697µm,0.5s						
GUR	Goura	1.59	109	P	Pn	12 30 00.9	+1.0
GUR				AML	AML	12 30 34.7	
	comp=E,1365µm,0.5s						
GUR				AML	AML	12 30 36.2	
	comp=N,2139µm,0.4s						
ATAL	Atalanti	2.04	83	P	Pb	12 30 09.1	+0.1
ATAL				AML	AML	12 30 49.4	
	comp=E,238µm,0.7s						
ATAL				AML	AML	12 30 52.0	
	comp=N,514µm,1.0s						
VIL2	Platees	2.24	96	P	Pb	12 30 12.2	-0.2
VIL2				AML	AML	12 30 56.2	
	comp=N,543µm,0.6s						
VIL2				AML	AML	12 30 57.2	
	comp=E,906µm,0.9s						
DRME	Dracevica, Mon	3.84	346	*e*Pn	Pn	12 30 31.9	+1.3
PDG	Podgorica	4.06	348	*e*Pn	Pn	12 30 34.9	+1.2
HCY	Herceg Novi	4.25	340	*e*Pn	Pn	12 30 36.1	-0.1
TREB	Trebinje	4.53	340	*e*Pn	Pn	12 30 39.9	-0.3
DBRK	Dubrovnik	4.55	338	*e*Pn	Pn	12 30 40.5	+0.1
DBRK				Sn	Sn	12 31 31.5	-1.3
BRY	Bratogost	4.66	343	*e*Pn	Pn	12 30 42.3	+0.2
STON	Ston	4.87	336	*e*Pn	Pn	12 30 44.1	-0.6
STON	Ston	4.87	336	*e*Pn	Pn	12 30 44.7	0.0
UPM	Unac-Piva	4.87	347	*e*Pn	Pn	12 30 46.3	+1.3
LSTV	Lastovo	5.07	329	*e*Pn	Pn	12 30 47.0	-0.6
MAKA	Makarska	5.47	333	*e*Pn	Pn	12 30 53.5	+0.5
HVAR	Hvar	5.59	329	*e*Pn	Pn	12 30 54.1	-0.6
RICI	Ricice	5.61	335	*i* Pn	Pn	12 30 55.1	+0.1
DIVS	Divibare	5.64	357	*e*Pn	Pn	12 30 55.3	-0.1
HAPS	Han Pijesak,BI	5.73	349	*e*Pn	Pn	12 30 57.0	+0.3
ZIRJ	Zirje	6.32	327	*e*Pn	Pn	12 31 04.5	-0.2
MORI	Morici	6.47	328	*e*Pn	Pn	12 31 07.0	+0.3
MORI				Sn	Sn	12 32 17.7	-2.4
DUGI	Dugi Otok	6.85	325	*e*Pn	Pn	12 31 12.4	+0.4
NVLJ	Novalja	7.38	327	*e*Pn	Pn	12 31 20.1	+0.8
BRJN	Brijuni	8.15	324	*e*Pn	Pn	12 31 30.5	+0.7
CRES	Cresnjev	8.23	335	*e*Pn	Pn	12 31 31.2	+0.3
CEY	Cerknica	8.53	330	*e*Pn	Pn	12 31 34.9	-0.1

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*HEL **24** 12:29:37.8±0.1, 64°.00N×28°.10E, h0^{km}, ML1.9, Explosion*

*IDC **24** 12:29:38.2±1.7, 63°.89N×28°.31E, h0^{km}, mb1 3.1/4, mb1mx3.0/45, mbtmp3.1/4, ML2.1/4, Error ellipse: s-maj=28.8km s-min=7.7km az=100.0*

*UPP **24** 12:29:38.8±2.4, 63°.88N×27°.88E, h0^{km}, ML1.9, Suspected explosion*

ISC 24 12:29:37.8±0.9, **63°.93N**±0°.03×**28°.03E**±0°.04, **h0**^{km}, **n31, σ1^{s}.31**/49, **Finland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUF	Sumiainen	1.48	216	PG	Pn	12 30 05.8	+0.2
SUF				MSG		12 30 24.5	
	comp=Z,6.0nm,0.2s						
SUF				SN	Sn	12 30 26.0	+0.4
OUF	Merijarvi	1.51	289	PN	Pn	12 30 05.6	-0.5
OUF				MSG		12 30 23.4	
	comp=Z,10nm,0.2s						
OUF				SN	Sg	12 30 26.1	-0.3
OBF0	Syolatti, Pyha	1.75	291	PG	Pn	12 30 09.9	+0.5
OBF0				SG	Sn	12 30 33.1	+0.7
JOF	Joensuu	1.79	123	PG	Pn	12 30 10.3	+0.3
	baz=309						
JOF				SG	Sn	12 30 33.6	+0.3
KAF	Kangasniemi	1.98	204	PG	Pb	12 30 14.5	-0.2
KAF				SG	Sg	12 30 41.3	-0.1
MSF	Maaselka	2.04	12	PG	Pn	12 30 11.9	-1.5
MSF				SG	Sn	12 30 38.9	-0.7
KU6	Riekki	2.25	20	PG	Pn	12 30 17.1	+0.8
	baz=201						
KU6				MSG		12 30 42.1	
	comp=Z,3.9nm,0.2s						
KU6				SG	Sn	12 30 45.6	+0.8
KEF	Keuruu	2.27	221	PG	Pb	12 30 19.3	-0.4
KEF				MSG		12 30 47.5	
	comp=Z,8.9nm,0.2s						
KEF				SG	Sg	12 30 49.9	-0.9
VAF	Ylistaro	2.56	252	PG	Pb	12 30 23.7	-0.8
	baz=71						
VAF				MSG		12 30 55.0	
	comp=Z,6.0nm,0.2s						
VAF				SG	Sb	12 30 57.7	+1.2
FIA0	FINESS Array S	2.65	201	PB	Pb	12 30 24.8	-1.2
FIA0				SG	Sb	12 30 59.5	+0.4
FINES	FINESS Array B	2.65	201	Pn	Pb	12 30 24.9	-1.2
	comp=Z,0.6nm,0.3s,baz=20,slow=16,SNR=23						
FINES				Lg	Lg	12 30 59.9	
	comp=Z,2.1nm,0.3s,baz=18,slow=28,SNR=28						
TOF	Tornio	2.67	326	PB	Pn	12 30 22.5	+0.5
TOF				MSG		12 30 55.3	
	comp=Z,4.4nm,0.2s						
TOF				SG	Sb	12 30 58.6	-1.2
KALU	Kalix	2.78	316	P	Pn	12 30 24.2	+0.7
KALU				S	Sn	12 30 58.1	+0.4
KALU	Kalix	2.78	316	PB	Pn	12 30 24.4	+0.9
KALU				SB	Sn	12 30 58.4	+0.7
RNF	Rovaniemi	2.83	343	PG	Pn	12 30 26.9	+2.7
RNF				SB	Sn	12 30 58.6	-0.3
BURU	Burvik	2.98	286	P	Pn	12 30 26.7	+0.4
BURU				S	Sn	12 31 03.4	+0.8
BURU	Burvik	2.98	286	PN	Pn	12 30 26.6	+0.4
ODEU	Stanfors	3.24	282	P	Pn	12 30 29.7	-0.1
VJF	Virojoki	3.41	184	SB	Sb	12 31 21.9	+1.1
SGF	Sodankyl	3.59	351	PB	Pn	12 30 35.9	+1.3
	baz=173						
ERTU	Ertsjaerv	3.60	320	P	Pn	12 30 36.1	+1.2
ERTU				S	Sn	12 31 18.0	-0.1
ERTU	Ertsjaerv	3.60	320	PN	Pn	12 30 35.8	+1.0
PAJU	Pajala	3.73	329	SN	Sn	12 31 19.7	-1.4
KLF	Kolari	3.73	335	PN	Pn	12 30 37.1	+0.6
	baz=150						
KLF				SN	Sn	12 31 19.3	-1.8
SVAU	Svanoeiden	3.74	283	P	Pn	12 30 36.9	+0.2
LILU	Lilltraesk	3.78	295	P	Pn	12 30 37.8	+0.6
LANU	Lannavaara	4.82	332	SG	Sb	12 32 05.7	+4.2
HEF	Hetta	4.84	340	SN	Sn	12 31 45.7	-2.7
ARCES	ARCESS Array B	5.72	351	Pn	Pn	12 31 03.8	-0.1
	baz=164,slow=11,SNR=12						
ARCES				Sn	Sn	12 32 06.0	-4.3
	baz=170,slow=26,SNR=8.1						
ARCES				Lg	Lg	12 32 30.7	
	baz=170,slow=28,SNR=6.7						
HFS	Hagfors	7.73	247	Pn	Pn	12 31 32.1	+0.6
	comp=Z,0.2nm,0.3s,baz=58,slow=14,SNR=4.1						
NOA	NORSAR Array B	8.30	257	Pn	Pn	12 31 39.6	+0.3
	comp=Z,0.0nm,0.3s,baz=66,slow=12,SNR=1.3						

MAN 24 12:33:13.0, 9°.89N×124°.07E, h8^{km}**, mb4.4, ML3.3, MS3.0, Mindanao**

MAN 24 12:37:52.3, 13°.61N×120°.17E, h25^{km}**, mb3.9, ML2.7, MS2.3, Mindoro**

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*IDC **24** 12:55:31.6±2.4, 24°.82S×175°.92W, h0^{km}, mb4.0/6, mb1 4.2/6, mb1mx4.0/35, mbtmp3.9/6, MS3.6/2, Ms1 3.6/2, ms1mx3.0/35, Error ellipse: s-maj=163.9km s-min=25.2km az=158.0*

ISC 24 12:55:37.0±2.0, **24°.9S**±0°.9×**175°.9W**±0°.4, **h35**^{km}, **n8, σ1^{s}.43**/6, **mb3.9**/6, **South of Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PPT	Papeete	25.58	79	LR	LR	13 10 14.6	
	comp=Z,12nm,18.6s,baz=212,slow=34						
STKA	Stephens Creek	37.84	249	P	P	13 02 50.7	+0.2
	0.5nm,0.2s,baz=122,slow=9.5,SNR=3.1						
ASAR	Alice Springs	45.55	261	P	P	13 03 53.7	0.0
	0.9nm,0.9s,baz=102,slow=8.0,SNR=10						
WRA	Warramunga Arr	46.05	266	P	P	13 03 55.8	-1.9
	0.8nm,0.6s,baz=103,slow=8.0,SNR=10						
NVAR	Mina Array Bea	82.92	42	P	P	13 07 58.2	-0.3
	0.9nm,0.8s,baz=208,slow=8.7,SNR=5.8						
PSI	Prapat	86.77	275	LR	LR	13 47 32.0	
	comp=Z,284nm,20.4s,baz=70,slow=36						
TXAR	Lajitas Array	87.82	56	P	P	13 08 22.9	-0.2
	0.6nm,0.9s,baz=211,slow=6.8,SNR=4.8						
CMAR	Chiang Mai Arr	93.35	289	P	P	13 08 50.5	+1.6
	0.5nm,0.3s,baz=111,slow=2.9,SNR=6.8						

IDC 24 13:01:27.9±59.0, **17°.34S×178°.76W, h0**^{km}**, mb4.1**/3, **mb1 4.3**/3, **mb1mx3.7**/32, **mbtmp4.1**/3, **Error ellipse: s-maj=1079.0km s-min=155.1km az=78.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	38.61	240	P	P	13 08 52.8	-0.2
	0.9nm,0.4s,baz=85,slow=11,SNR=5.8						
WRA	Warramunga Arr	44.41	259	P	P	13 09 40.5	-0.4
	0.4nm,0.3s,baz=94,slow=7.6,SNR=44						
ASAR	Alice Springs	44.63	254	P	P	13 09 42.8	+0.2
	3.3nm,0.4s,baz=89,slow=7.9,SNR=125						

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*NEIC **24** 13:13:44.6±1.9, 36°.73N±0°.07×71°.19E±0°.07, h186^{km}±6^{km}, mb4.1/3, Error ellipse: s-maj=10.2km s-min=7.1km az=210.0*

*NNC **24** 13:13:45.8±3.2, 36°.96N×70°.92E, h122^{km}±72^{km}, mb2.8, mpv3.4, Error ellipse: s-maj=27.8km s-min=23.7km az=77.0*

ISC 24 13:13:43.9±0.7, **36°.67N**±0°.06×**71°.29E**±0°.07, **h200**^{km}, **n25, σ2^{s}.24**/30, **mb4.0**/6, **4C-5D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAR	Garm	2.45	342	Pn	Pn	13 14 26.5	-0.9
CHGR	Chuyangaron	2.61	320	Pn	Pn	13 14 28.0	-1.1
KBL	Kabul	2.81	221	Pn	Pn	13 14 31.7	+0.1
DRK	Karamyk	2.83	8	Pn	Pn	13 14 31.6	-0.3
BTK	Batken	3.41	354		Pn	13 14 39.0	+0.5
NIL	Nilore	3.41	151	Pn	Pn	13 14 39.5	+0.9
DHRM	DHARAMSHALA	6.04	135	*e*P	Pn	13 15 11.9	-0.1
DHRM				*e*S	Sn	13 16 17.1	-4.5
DHRM				IAML		13 16 19.9	
	comp=E,145nm,0.8s						
DHRM				IAML		13 16 20.7	
	comp=N,100nm,0.0s						
AAK	Ala-Archa	6.45	22	⇓P	Pn	13 15 16.8	-0.3
	comp=N,1.1nm,0.4s						
AAK				⇓S	Sn	13 16 28.3	-2.7
	comp=N,4.5nm,0.6s						
AAK	Ala-Archa	6.45	22	Pn	Pn	13 15 17.2	+0.1
KKAR	Karatay Array	6.46	355	Pn	Pn	13 15 16.1	-0.9
BOOM	Boomskoye usch	6.83	30	Pn	Pn	13 15 23.3	+1.3
TKM2	Tokmak 2	7.07	27	⇑P	Pn	13 15 24.4	-0.8
	comp=N,1.9nm,0.6s						
TKM2				⇓S	Sn	13 16 42.8	-2.8
	comp=N,3.4nm,0.9s						
SMLA	Simla	7.37	137	*e*P	Pn	13 15 28.3	-0.7
SMLA				*e*S	Sn	13 16 46.2	-6.3
SMLA				IAML		13 16 51.0	
	comp=N,39nm,0.7s						
SMLA				IAML		13 16 51.8	
	comp=E,29nm,0.3s						
WMQ	Urumqi	14.41	55	*e*P	P	13 17 01.3	+1.1
AB31	Akbulak array	15.05	330	⇓P	P	13 17 07.9	+0.7
	comp=E,0.2nm,0.3s,baz=139,slow=13,SNR=28						
AB31				⇑S	S	13 19 49.3	-4.2
	comp=E,0.9nm,0.6s,baz=138,slow=26,SNR=5.2						
ABKAR	Akbulak array	15.05	330		P	13 17 08.6	+1.5
AKTO	Aktyubinsk	16.75	329	⇑P	Pn	13 17 27.9	+0.9
	comp=E,1.0nm,0.7s						
AKTO				⇑S	S	13 20 29.0	-1.5
	comp=E,1.3nm,0.8s						
GTA	Gaotai	22.59	74	*e*P	P	13 18 38.8	+11
GTA				pP	pP	13 19 05.8	+1.4
GTA				sP	sP	13 19 27.5	-2.5
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
LZH	Lanzhou	26.15	81	⇓P	P	13 19 03.3	+3.4
LZH				pmax	pmax		
	comp=Z,17nm,1.1s						
HHC	Hu-ho-hao-te	31.48	70	*e*P	P	13 19 49.3	+2.4
HHC				pmax	pmax		
	comp=Z,5.0nm,1.2s						
HHC				pmax	pmax		
	comp=Z,130nm,8.1s						
KULM	Kulim	41.21	132	P	P	13 21 12.3	+3.0
KULM				IAmb	IAmb	13 21 30.2	
	comp=Z,10.0nm,1.1s						
GEC2	GERESS Array S	43.02	305	P	P	13 21 23.0	-0.7
GEC2				IAmb	IAmb	13 21 25.4	
	comp=Z,6.6nm,1.4s						
GERES	GERESS Array B	43.02	305	P	P	13 21 23.0	-0.7
TOLI2	Tolitoli	57.75	116	P	P	13 23 14.8	+0.6
TOLI2				IAmb	IAmb	13 23 36.2	
	comp=Z,3.3nm,1.0s						
RES	Resolute Bay	68.55	356	P	P	13 24 24.7	+0.5

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*IDC **24** 13:16:15.4±1.7, 8°.10S×105°.74E, h0^{km}, mb3.5/4, mb1 3.9/6, mb1mx3.6/31, mbtmp3.9/6, ML4.1/2, MS3.7/2, Ms1 3.8/2, ms1mx3.3/40, Error ellipse: s-maj=35.9km s-min=24.5km az=43.0*

*DJA **24** 13:16:21.3±0.4, 8°S±4°×10°6E±°, h10^{km}, M4.2/12, mb4.3/1, MLv4.0/12*

ISC 24 13:16:19.9±1.1, **7°.86S**±0°.07×**106°.04E**±0°.05, **h10**^{km}, **n32, σ1^{s}.95**/29, **mb3.6**/4, **Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNJI	Cibinong	1.21	63	P	Pb	13 16 42.9	-0.1
CNJI				S	Sb	13 16 57.3	-1.4
DBJI	Dramaga	1.48	28	P	Pn	13 16 47.3	+0.7
CBJI	Citeko	1.65	29	P	Pn	13 16 46.5	-2.4
SBJI	Serang	1.73	3	P	Pn	13 16 50.8	+0.7
TNG	Tangerang	1.79	20	P	Pb	13 16 52.8	+0.1
TNG				P	Pg	13 16 53.3	-0.9
LEM	Lembang	1.88	57	Pn	Pb	13 16 54.7	+0.4
	38nm,0.3s,baz=303,slow=4.8,SNR=22						
LEM				Sn	Sg	13 17 22.8	+2.5
	43nm,0.3s,baz=340,slow=19,SNR=9.5						
LEM				LR	LR	13 18 00.2	
	comp=Z,389nm,19.0s,baz=206,slow=46						
LEM	Lembang	1.88	57	P	Pb	13 16 54.5	+0.2
CMJI	Cimerak	2.39	88	P	Pn	13 16 59.9	+0.8
KASI	Kota Agung	2.79	327	P	Pn	13 17 06.4	+1.9
KPJI	Karang Pucung	2.92	80	P	Pn	13 17 07.3	+1.0
KLSI		3.41	338	P	Pn	13 17 15.4	+2.2
LWLI	Liwa	3.44	325	P	Pn	13 17 15.6	+1.8
MDSI	Maura Dua	3.83	331	P	Pn	13 17 21.1	+2.1
UGM	Wanagama	4.44	91	P	Pn	13 17 29.2	+1.8
MNAI	Manna	4.64	318	P	Pn	13 17 32.1	+2.0
PCJI	Pacitan	5.10	94	P	Pn	13 17 38.5	+2.1
TPI	Tanjungpandan	5.32	18	P	Pn	13 17 42.2	+2.7
PPBI	Pangkal Pinang	5.67	1	P	Pb	13 17 58.0	-0.9
MPSI	Mapaga	16.04	60	P	P	13 20 10.2	+1.0
APSI	Ampana	17.02	67	P	P	13 20 25.4	+5.3
BATI	Baumata	17.56	99	P	Pn	13 20 25.7	+0.7
	1.1nm,0.3s,baz=309,slow=6.5,SNR=1.9						
SANI	Sanana	20.69	75	P	P	13 21 01.3	+0.9
H01W3	Cape Leeuwin H	27.90	166	T	T	13 51 55.3	
	baz=342,slow=78,SNR=15						
H01W1	Cape Leeuwin H	27.91	166	T	T	13 51 56.9	
	baz=342,slow=78,SNR=15						
H01W2	Cape Leeuwin H	27.92	166	T	T	13 51 57.0	
	baz=342,slow=78,SNR=21						
WRA	Warramunga Arr	29.92	117	P	P	13 22 26.1	-2.3
	0.5nm,0.8s,baz=289,slow=11,SNR=1.7						
ASAR	Alice Springs	30.98	124	P	P	13 22 36.1	-1.6
	1.0nm,1.1s,baz=308,slow=7.9,SNR=4.8						
H08S2	Diego Garcia H	33.23	268	T	T	13 58 19.4	
	baz=212,slow=74,SNR=7.3						
H08S3	Diego Garcia H	33.24	268	T	T	13 58 22.1	
	baz=92,slow=74,SNR=53						

SONM	Songino Array	55.46	0	P	P	13 25 54.1	-0.7
	0.3nm,0.4s,baz=194,slow=5.3,SNR=1.8						
MKAR	Makanchi Array	58.38	341	P	P	13 26 13.1	-2.4
	0.7nm,0.6s,baz=139,slow=6.5,SNR=7.2						
NOA	NORSAR Array B	99.17	331	LR	LR	14 19 44.1	
	comp=Z,132nm,19.6s,baz=40,slow=38						

MAN 24 13:20:39.9, 13°.58N×120°.60E, h31^{km}, mb3.6, ML2.3, MS1.8, Mindoro

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*BJI **24** 13:21:34.1±0.0, 18°.80N×145°.45E, h590^{km}, mB5.6/50, mb5.9/86*

*MOS **24** 13:21:34.6±0.7, 18°.72N×145°.27E, h595^{km}, mb6.0/116, MS4.8/7, Error ellipse: s-maj=6.1km s-min=3.6km az=111.8*

*NEIC **24** 13:21:35.5, 18°.78N×145°.30E, h590^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.86; $M_{\theta\theta}$-0.38; $M_{\phi\phi}$1.24; $M_{r\theta}$-0.58; $M_{\theta\phi}$-0.05; $M_{\phi r}$-0.03; Fault plane solution: $M_0$1.25000×10^{18} NP1:ϕ_s27.36000°, δ54.38000°, λ-47.05000°. NP2:ϕ_s149.39000°, δ53.48000°, λ-133.56000°. Principal axes: T 1.2418, Plg1.0000°, Azm89.0000°; N 0.0069, Plg34.0000°, Azm179.0000°; P -1.2486, Plg56.0000°, Azm358.0000°;*

*NEIC **24** 13:21:35.7±1.6, 18°.78N±0°.08×145°.27E±0°.09, h587^{km}±3^{km}, mb5.9/538, ML6.1/7, Mwb6.0/52, Mww6.0, Mwc6.0(GCMT) Error ellipse: s-maj=12.0km s-min=11.8km az=103.0*

*IDC **24** 13:21:36.6±0.4, 18°.73N×145°.34E, h610^{km}±3^{km}, mb5.0/29, mb1 5.2/30, mb1mx5.1/31, mbtmp6.0/30, Error ellipse: s-maj=7.2km s-min=5.6km az=91.0*

*GCMT **24** 13:21:37.7±0.1, 18°.82N±0°.01×145°.26E±0°.01, h582^{km}, MW6.0/160, Moment Tensor Solution. s160,c340; s115,c134; Duration: 2^{s}4 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.88±.01; $M_{\theta\theta}$-0.26±.01; $M_{\phi\phi}$1.13±.01; $M_{r\theta}$-0.50±.01; $M_{\theta\phi}$-0.10±.01; $M_{\phi r}$-0.10±.01; Best double couple: $M_0$1.15300×10^{18} NP1:ϕ_s150.00000°, δ50.00000°, λ-130.00000°. NP2:ϕ_s22.00000°, δ54.00000°, λ-53.00000°. Principal axes: T 1.1400, Plg2.0000°, Azm86.0000°; N 0.0240, Plg29.0000°, Azm178.0000°; P -1.1670, Plg61.0000°, Azm353.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to mantle waves, cutoff=125s. Triangular moment-rate function*

*NEIC **24** 13:21:37, 18°.78N×145°.30E, h600^{km}, Moment Tensor Solution. Duration: 2^{s}0 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.90; $M_{\theta\theta}$-0.31; $M_{\phi\phi}$1.21; $M_{r\theta}$-0.48; $M_{\theta\phi}$-0.12; $M_{\phi r}$-0.15; Fault plane solution: $M_0$1.21000×10^{18} NP1: ϕ_s149.00000°, δ49.00000°, λ-130.00000°. NP2: ϕ_s22.00000°, δ55.00000°, λ-53.00000°. Principal axes: T 1.2298, Plg3.0000°, Azm86.0000°; N -0.0484, Plg29.0000°, Azm178.0000°; P -1.1813, Plg60.0000°, Azm351.0000°;*

*NEIC **24** 13:21:38, 18°.76N×145°.32E, h586^{km}, Moment Tensor Solution. Duration: 4^{s}8 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.91; $M_{\theta\theta}$-0.20; $M_{\phi\phi}$1.11; $M_{r\theta}$-0.50; $M_{\theta\phi}$-0.14; $M_{\phi r}$-0.08; Fault plane solution: $M_0$1.15000×10^{18} NP1: ϕ_s149.00000°, δ51.00000°, λ-127.00000°. NP2: ϕ_s19.00000°, δ52.00000°, λ-54.00000°. Principal axes: T 1.1241, Plg1.0000°, Azm84.0000°; N 0.0555, Plg28.0000°, Azm175.0000°; P -1.1796, Plg62.0000°, Azm353.0000°;*

ISC 24 13:21:36.4±0.2**, 18°.79N**±0°.02×**145°.31E**±0°.03**, h603**^{km}±2^{km}**, h604**^{km}**:pP-P, n2048,** σ1^s**23**/2431**, mb5.9**/500**, 168C-352D, Fault plane solution: NP1:**ϕ_s130.79248°, δ57.55931°, λ-113.20117°. **NP2:**ϕ_s349.41864°**,** δ39.13193°, λ-58.20898°. **Principal axes:** T Plg9.7406°**,** Azm237.2107°**;** N Plg19.4195°**,** Azm143.7412°**;** P Plg68.0959°**,** Azm352.4841°**; Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANA2	Anatahan	2.46	171	P	P	13 22 50.5	-2.6
GUMO	Guam	5.19	185	P	P	13 23 07.4	-3.7
GUMO	Guam	5.19	185	P	P	13 23 07.4	-3.7
GUMO				IAML		13 24 30.9	
	9µm,0.8s						
GUMO				IAML		13 24 31.0	
	12µm,0.7s						
JCJ	Chichijima	8.76	341	P	P	13 23 42.3	-0.6
JMZ	Minamidaito 2	14.79	301	P	P	13 24 42.4	-0.1
JHJ2	Mitsune	15.09	342	P	P	13 24 45.3	+0.1
JSG	Sagara	17.05	340	P	P	13 25 03.5	+0.5
PATS	Pohnpei	17.35	132	P	P	13 25 05.9	-0.2
PATS				IAmb	IAmb	13 25 31.7	
	comp=Z,692nm,1.3s						
JOW	Kunigami	17.62	300	P	P	13 25 09.9	+1.5
JYT	Yasato	17.95	346	P	P	13 25 11.7	+0.5
JMN	Monobe	18.05	328	P	P	13 25 13.1	+0.8
INU	Inuyama	18.06	338	P	P	13 25 13.2	+0.9
JGF	Kuroka	18.17	339	P	P	13 25 14.0	+0.7
JSU	Suzuyama	18.45	316	P	P	13 25 16.8	+0.9
JSU				IAmb	IAmb	13 25 23.4	
	comp=Z,308nm,0.7s						
JWT	Wachi	18.63	334	P	P	13 25 17.9	+0.4
MJAR	Matsushiro Arr	18.76	342	P	P	13 25 18.4	-0.3
	comp=Z,13nm,0.3s,baz=175,slow=8.9,SNR=480						
MJAR				S	S	13 28 17.6	-1.2
	comp=Z,1.4nm,0.3s,baz=155,slow=6.6,SNR=3.1						
MJAR				ScP	ScP	13 31 52.3	-2.4
	comp=Z,0.2nm,0.3s,baz=174,slow=3.0,SNR=5.7						
MJAR	Matsushiro Arr	18.76	342	P	P	13 25 18.4	-0.3
MJAR	Matsushiro Arr	18.76	342	P	P	13 25 17.9	-0.8
MJAR	Matsushiro Arr	18.76	342		S	13 28 17.6	-1.2
MAJO	Matsushiro	18.76	342	P	P	13 25 18.5	-0.1
MAJO				pmax	pmax		
	comp=Z,1µm,0.8s						
MAJO	Matsushiro	18.76	342	P	P	13 25 18.5	-0.1
MAT	Matsushiro	18.76	342	P	P	13 25 18.1	-0.6
MAT				S	S	13 28 15.4	-3.4
MJB9	Matsu-Tunnel	18.77	342	P	P	13 25 18.7	0.0
JNU	Nakatsue	19.26	321	P	P	13 25 23.5	+0.2
JMM	Marumori	19.42	349	P	P	13 25 25.4	+0.9
JHS	Saijyo	19.44	329	P	P	13 25 25.6	+0.8
JSD	Sado	20.14	344	P	P	13 25 31.4	+0.3
WAKE	Wake Island	20.18	85	P	P	13 25 31.6	-0.1
H11S3	WAKE ISLAND Hy	20.26	87	P	P	13 25 33.5	+1.3
	baz=241,slow=6.0,SNR=19						
H11S3	WAKE ISLAND Hy	20.26	87	P	P	13 25 33.5	+1.3
H11S1	WAKE ISLAND Hy	20.27	87	P	P	13 25 33.2	+0.9
	baz=241,slow=6.0,SNR=27						
H11S1	WAKE ISLAND Hy	20.27	87	P	P	13 25 33.2	+0.9
H11S2	WAKE ISLAND Hy	20.27	87	P	P	13 25 33.1	+0.7
	baz=241,slow=6.0,SNR=36						
H11N1	WAKE ISLAND Hy	20.39	84	P	P	13 25 33.7	+0.3
	baz=258,slow=11,SNR=48						
H11N2	WAKE ISLAND Hy	20.40	84	P	P	13 25 33.6	+0.1
	baz=258,slow=11,SNR=42						
H11N3	WAKE ISLAND Hy	20.41	84	P	P	13 25 33.9	+0.4
	baz=258,slow=11,SNR=33						
MANU	Manus Island	20.80	174	P	P	13 25 37.9	+0.6
JTU	Tsushima	21.12	321	P	P	13 25 40.4	+0.5
YOJ	Yonaguni jima	21.48	289	P	P	13 25 42.5	-0.8
YOJ				pmax	pmax		
	comp=Z,733nm,0.6s						
YOJ	Yonaguni jima	21.48	289	P	P	13 25 42.5	-0.8
SMPI	Sarmi	21.64	198	P	P	13 25 45.2	+0.3
	comp=Z,1µmcomp=Z,83nm,1.7s						
JAY	Jayapura	21.65	193	P	P	13 25 47.1	+2.1
	comp=Z,768nmcomp=Z,58nm,1.3s						
BAKI	Biak	21.82	205	P	P	13 25 46.0	-0.4
YKDB	Yokjido	21.87	320	P	P	13 25 48.0	+1.4
	SNR=18						
GMDB	Geomundo	22.11	317	P	P	13 25 50.0	+1.2
	SNR=14						
JTM	Tenmabayashi	22.23	351	P	P	13 25 50.6	+0.9
KSJJU	Jeju	22.23	315	P	P	13 25 51.7	+1.8
	SNR=28						
SRPI	Serui, Papua	22.38	204	P	P	13 25 52.9	+1.4
	comp=Z,54nm,0.4s						
HALB	Hallimjungang-	22.40	314	P	P	13 25 53.2	+1.8
	SNR=17						
DAV	Davao City (W)	22.45	241	P	P	13 25 51.5	-0.6
KOHB	KOHEUNG	22.49	318	P	P	13 25 52.5	+0.4
	SNR=27						
ULDB	Ullung-do Bore	22.50	329	P	P	13 25 52.8	+0.6
	SNR=8.5						
BOSB	Boseong-gun	22.62	318	P	P	13 25 53.8	+0.5
	SNR=56						
KSULJ	Uljin	22.67	325	P	P	13 25 54.0	+0.2
	SNR=11						
NACB	Ninganchiao	22.70	288	P	P	13 25 54.1	-0.1
CJD	Chujado	22.72	315	P	P	13 25 56.0	+1.9
	SNR=16						
CJD	Chujado	22.72	315	P	P	13 25 55.0	+0.8
	SNR=24						
KSSCH	SUNCHEON	22.80	319	P	P	13 25 55.4	+0.5
	SNR=74						
YULB	Yu-li	22.86	286	P	P	13 25 55.1	-0.5
UJN	ULJIN	22.89	326	P	P	13 25 56.6	+1.0
	SNR=9.3						
HANB	Haenam	22.90	317	P	P	13 25 57.0	+1.2
	SNR=28						
TATO	Taipei	22.93	290	P	P	13 25 58.1	+1.9
TATO	Taipei	22.93	290	P	P	13 25 57.1	+0.9
NAWB	Namwon	22.94	320	P	P	13 25 57.1	+1.0
	SNR=14						
KSGIC	Gimchen	22.96	322	P	P	13 25 57.0	+0.7
	SNR=5.8						
YHNB	Yeheng	22.98	289	P	P	13 25 57.1	+0.3
TWG	Pinlang	23.01	284	P	P	13 25 56.3	-0.6
KSKWJ	Gwangju	23.02	319	P	P	13 25 57.5	+0.6
	SNR=60						
KSKWJ	Gwangju	23.02	319	P	P	13 25 57.4	+0.6
	SNR=27						
KSKWJ	Gwangju	23.02	319	P	P	13 25 57.4	+0.6
	SNR=28						
KSKWJ	Gwangju	23.02	319	P	P	13 25 58.0	+1.2
	SNR=60						
SUCA	Sunchang	23.06	319	P	P	13 25 58.2	+1.0
	SNR=14						
IMWB	Imwonan-gil	23.11	326	P	P	13 25 59.0	+1.4
	SNR=5.7						
CHYB	Chungyang	23.12	325	P	P	13 25 59.0	+1.2
	SNR=11						
KSCPR	CHUPUNGNYEONG	23.14	322	P	P	13 25 58.4	+0.6
	SNR=26						
KSSAJ	Sangju	23.16	323	P	P	13 25 58.7	+0.6
	SNR=14						
SSLB	Suanglung	23.23	287	P	P	13 25 59.1	+0.2
ERM	Erimo	23.23	356	ceP	P	13 26 00.5	+2.0
ERM				pmax	pmax		
	comp=Z,608nm,1.0s						
ERM	Erimo	23.23	356	P	P	13 25 59.8	+1.3
ERM				IAmb	IAmb	13 26 20.5	
	comp=Z,341nm,0.8s						
KSTBA	Taebaek	23.23	325	P	P	13 25 59.9	+1.2
	SNR=24						
KSJEU	Jeongeup	23.27	319	P	P	13 26 00.7	+1.6
	SNR=17						
YOJB	Youngju	23.29	324	P	P	13 26 01.0	+1.8
	SNR=12						
OKCB	Cheongsan-myeo	23.32	322	P	P	13 25 60.0	+0.5
	SNR=24						
KSJEO	Jeonju	23.34	321	P	P	13 26 01.0	+1.3
	SNR=7.2						
KSGWL	Sabuk	23.36	325	P	P	13 26 00.9	+1.1
	SNR=14						
GOCB	Gochang-gun	23.38	319	P	P	13 26 01.0	+0.9
	SNR=22						
KSMGY	Mungyeong	23.39	323	P	P	13 26 01.5	+1.4
	SNR=14						
KSBON	Boeun	23.43	322	P	P	13 26 02.0	+1.5
	SNR=9.8						
TPUB	Ta-pu	23.46	285	P	P	13 26 01.0	0.0
KSYOW	Yeongwol	23.54	325	P	P	13 26 03.2	+1.8
	SNR=13						
KSCHJ	Chungju	23.59	323	P	P	13 26 03.0	+1.1
	SNR=15						
TJN	Taejon	23.60	322	ceP	P	13 26 01.6	-0.3
SMKB	Mukjeong-gil	23.63	319	P	P	13 26 03.0	+0.8
	SNR=24						
ANMD	Anmado	23.74	318	P	P	13 26 03.0	-0.2
	SNR=20						
KWAJ	Kwajalein Atol	23.79	112	P	P	13 26 04.1	+0.1
KWAJ				pmax	pmax		
	comp=Z,1µm,1.5s						
KWAJ	Kwajalein Atol	23.79	112	P	P	13 26 04.1	+0.1
KSDGY	Daegwallycong	23.80	326	P	P	13 26 06.0	+2.3
	SNR=6.6						
RABL	Rabaul	23.81	163	P	P	13 26 03.4	-0.8
EMSB	Eumseong	23.86	323	P	P	13 26 05.0	+0.7
	SNR=15						
SWI	Sorong	23.92	217	P	P	13 26 04.7	-0.4
	comp=Z,2µmcomp=Z,5µmcomp=Z,430nm,1.2s						
SIJI	Sorong	23.92	217	ScP	ScP	13 32 06.8	-1.3
	comp=Z,18nm,0.8s,baz=31,slow=6.0,SNR=5.2						
KSCEA	Cheonan	23.97	322	P	P	13 26 05.7	+0.5
	SNR=16						
KSRS	Korea Array	24.03	324	P	P	13 26 06.2	+0.4
	comp=Z,562nm,0.8s,baz=145,slow=9.1,SNR=616						
KSRS				PcP	PcP	13 29 25.2	-0.5
	comp=Z,57nm,1.1s,baz=116,slow=2.8,SNR=6.2						
KSRS				ScP	ScP	13 32 07.2	-0.8
	comp=Z,40nm,1.0s,baz=132,slow=3.2,SNR=14						
KSRS	Korea Array	24.03	324	P	P	13 26 06.2	+0.4
KSRS						13 29 25.2	
KSAR	Wonju Array Be	24.05	324	P	P	13 26 06.1	+0.2
KSAR	Wonju Array Be	24.05	324	P	P	13 26 06.1	+0.2
KS19	Wonju Array Si	24.10	324	P	P	13 26 06.0	-0.3
JEW	Eniwo	24.20	353	P	P	13 26 08.3	+1.1
OYDB	Oeyeondo	24.27	320	P	P	13 26 09.0	+1.0
	SNR=24						
KSCHC	Chuncheon	24.33	325	P	P	13 26 10.0	+1.6
	SNR=17						
HAWB	Hwaseong-si	24.43	322	P	P	13 26 10.0	+0.7
	SNR=7.0						
INCN	Inchon	24.78	323	P	P	13 26 12.3	-0.1
INCN				pmax	pmax		
	comp=Z,113nm,0.7s						
INCN	Inchon	24.78	323	P	P	13 26 13.2	+0.8
INCN	Inchon	24.78	323	P	P	13 26 12.3	-0.1
INCN				IAmb	IAmb	13 26 14.1	
	comp=Z,113nm,0.7s						
SSE	Sheshan	25.01	304	P	P	13 26 13.5	-1.0
SSE				sP	sP	13 28 52.8	-2.3
SSE				S	S	13 29 55.8	-1.7
SSE				pmax	pmax		
	comp=Z,300nm,6.1s						
FAKI	Fak Fak	25.11	212	P	P	13 26 15.0	-0.6
	comp=Z,2µmcomp=Z,4µmcomp=Z,274nm,1.2s						
FAKI	Fak Fak	25.11	212	P	P	13 26 14.4	-1.2
FAKI				IAmb	IAmb	13 26 18.2	
	comp=Z,516nm,1.4s						
TNTI	Ternate	25.11	227	P	P	13 26 16.1	+0.5
	comp=Z,2µmcomp=Z,4µmcomp=Z,195nm,1.0s						
TNTI	Ternate	25.11	227	P	P	13 26 14.3	-1.3
TNTI				IAmb	IAmb	13 26 19.5	
	comp=Z,458nm,1.5s						
YUK	Yuzh-Kuril'sk	25.18	1	d iP	P	13 26 17.5	+1.8
YUK				S	S	13 30 00.7	+1.0
YUK				pmax	pmax		
	comp=Z,4µm,1.1s						
YUK				pmax	pmax		
	comp=N,1µm,0.8s						
YUK				pmax	pmax		
	comp=E,1µm,0.9s						
JKA	Kamikawa-asahi	25.36	355	P	P	13 26 18.5	+1.2
ASAJ	Asahikawa	25.36	355	P	P	13 26 18.5	+1.1
ASAJ				pmax	pmax		
	comp=Z,1µm,0.8s						
YPDB	Yeonpyeongdo	25.41	322	P	P	13 26 19.0	+1.1
	SNR=24						
QZH	Quanzhou	25.52	289	⇓iP	P	13 26 19.8	+0.7
QZH				sP	sP	13 28 59.9	-0.8
QZH				S	S	13 30 04.0	-1.6
QZH				PcS	PcS	13 33 04.1	-6.7
QZH				ScS	ScS	13 36 03.1	+0.2
QZH				pmax	pmax		
	comp=Z,550nm,0.7s						
KNMB	Chin-men Tao	25.64	287	P	P	13 26 20.6	+0.5
KNMB				IAmb	IAmb	13 26 23.2	
	comp=Z,326nm,1.0s						
LBMI	Labuha	26.06	224	P	P	13 26 24.0	+0.1
	comp=Z,3µmcomp=Z,7µmcomp=Z,587nm,1.1s						
MSHR	Mys Shultsa	26.58	336	ceP	P	13 26 29.9	+1.8
MSHR				pmax	pmax		
	comp=Z,484nm,0.8s						
VLA	Vladivostok	26.78	338	d iP	P	13 26 30.9	+1.1
VLA				pmax	pmax		
	comp=Z,1µm,1.1s						
NJ2	Nanjing	27.22	304	eP	P	13 26 34.9	+1.0
NJ2				sP	sP	13 29 14.4	-2.5
NJ2				PcP	PcP	13 29 34.3	+1.0
NJ2				S	S	13 30 29.9	-2.0
NJ2				ScP	ScP	13 32 17.3	-0.2
NJ2				PcS	PcS	13 33 19.1	+3.3
NJ2				ScS	ScS	13 36 13.6	+3.3
NJ2				pmax	pmax		
	comp=Z,29nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,420nm,4.0s						
MSAI	Masohi	27.27	218	P	P	13 26 34.9	+0.3
	comp=Z,114nmcomp=Z,978nmcomp=Z,50nm,0.7s						
KMSI	Cibinong	27.67	232	P	P	13 26 38.5	+0.4
	comp=Z,6µmcomp=Z,738nm,0.9s						
USA0B	Ussuriysk Arra	27.69	339	P	P	13 26 39.0	+1.2
USA0B				pmax	pmax		
	comp=Z,289nm,0.7s						
USA0B	Ussuriysk Arra	27.69	339	P	P	13 26 39.0	+1.2
USA0B				IAmb	IAmb	13 26 40.9	
	comp=Z,289nm,0.7s						
USRK	Ussuriysk Ar.	27.69	339	P	P	13 26 38.9	+1.1
	comp=Z,283nm,0.6s,baz=153,slow=9.3,SNR=332						
USRK	Ussuriysk Ar.	27.69	339	P	P	13 26 38.9	+1.1
USRK	Ussuriysk Ar.	27.69	339	P	P	13 26 38.8	+1.0
AAI	Ambon	27.98	219	P	P	13 26 41.0	+0.3
	comp=Z,6µmcomp=Z,565nm,1.2s						
PMG	Port Moresby	28.07	176	P	P	13 26 41.8	+0.3
PMG				pmax	pmax		
	comp=Z,159nm,0.9s						
PMG	Port Moresby	28.07	176	P	P	13 26 41.8	+0.3
PMG				IAmb	IAmb	13 26 43.7	
	comp=Z,158nm,0.9s						
SANI	Sanana	28.11	225	P	P	13 26 39.5	-2.3
	comp=Z,2µmcomp=Z,3µmcomp=Z,160nm,1.1s						
YSS	Yuzh-Sakhalins	28.17	356	α iP	P	13 26 43.2	+1.3
YSS				e*SP	sP	13 29 25.6	+0.5
YSS				eS	S	13 30 50.4	+4.2
YSS				pmax	pmax		
	comp=Z,3µm,3.8s						
YSS				pmax	pmax		
	comp=N,2µm,3.1s						
YSS				pmax	pmax		
	comp=E,700nm,2.1s						
YSS				pmax	pmax		
	comp=Z,1µm,1.0s						
YSS				MLR	MLR		
	comp=Z,1µm,13.3s						
YSS	Yuzh-Sakhalins	28.17	356	P	P	13 26 42.6	+0.7
GTOI	Gorontalo	28.36	233	P	P	13 26 43.9	-0.1
	comp=Z,3µmcomp=Z,191nm,1.6s						
DL2	Dalian	28.70	319	P	P	13 26 48.0	+1.4
DL2				sP	sP	13 29 30.3	-0.6
DL2				S	S	13 30 55.5	+0.8
DL2				ScP	ScP	13 32 22.1	+0.1
DL2				ScS	ScS	13 36 15.4	-1.5
DL2				pmax	pmax		
	comp=Z,210nm,0.9s						
DL2				pmax	pmax		
	comp=Z,1µm,5.5s						
MDJ	Mudanjiang	28.91	336	P	P	13 26 49.9	+1.5
MDJ				PcP	PcP	13 29 39.3	+1.9
MDJ				S	S	13 30 58.9	+1.1
MDJ				pmax	pmax		
	comp=Z,550nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,3µm,4.8s						
MRSI	Marisa	29.28	234	P	P	13 26 52.3	+0.3
	comp=Z,4µmcomp=Z,17µmcomp=Z,2µm,1.2s						
HKC	Hong Kong Obse	29.34	282	⇑P	P	13 26 56.0	+3.6
MYLDM	Lahad Datu	29.45	246	P	P	13 26 54.8	+1.3
SNY	Shenyang	29.50	326	⇑P	P	13 26 54.4	+1.0
SNY				S	S	13 30 59.8	-7.1
SNY				pmax	pmax		
	comp=Z,370nm,0.9s						
LUWI	Luwuk	29.65	231	P	P	13 26 54.3	-0.8
	comp=Z,20µmcomp=Z,2µm,0.8s						
LUWI	Luwuk	29.65	231	P	P	13 26 53.6	-1.5
TOLI2	Tolitoli	29.79	237	P	P	13 26 56.1	-0.2
SAUI	Saumlaki	29.98	209	P	P	13 26 58.8	+0.9
	comp=Z,15µmcomp=Z,859nm,1.1s						
SAUI	Saumlaki	29.98	209	P	P	13 26 58.2	+0.3
CN2	Changchun	30.01	331	eP	P	13 26 58.3	+0.5
CN2				PcP	PcP	13 29 41.4	+1.1
CN2				S	S	13 31 16.5	+1.8
CN2				pmax	pmax		
	comp=Z,460nm,1.0s						
CN2				pmax	pmax		
	comp=Z,2µm,3.0s						
TIA	Tai'an	30.28	311	⇑P	P	13 27 01.5	+1.2
TIA				sP	PcP	13 29 42.9	+1.7
TIA				S	S	13 31 17.4	-1.7
TIA				PcS	PcS	13 33 28.0	+2.3
TIA				pmax	pmax		
	comp=Z,30nm,0.7s						
TIA				pmax	pmax		
	comp=Z,520nm,6.7s						
UGL	Uglegorsk	30.33	356	eP	P	13 27 02.2	+1.7
UGL				eS	S	13 31 14.0	-5.4
UGL				pmax	pmax		
	comp=N,2µm,4.0s						
UGL				pmax	pmax		
	comp=Z,5µm,3.0s						
UGL				pmax	pmax		
	comp=Z,1µm,1.0s						
UGL				smax	smax		
	comp=E,2µm,5.0s						
UGL				smax	smax		
	comp=N,4µm,6.0s						
WHN	Wuhan	30.38	299	⇓iP	P	13 27 02.6	+1.4
WHN				PcP	sP	13 29 43.8	-1.8
WHN				S	S	13 31 21.5	+0.8
WHN				SS	SS	13 34 24.6	-4.9
WHN				ScS	ScS	13 36 25.3	-0.1
WHN				pmax	pmax		
	comp=N,170nm,0.6s						
APSI	Ampana	30.40	232	P	P	13 27 01.2	-0.4
	comp=N,2µmcomp=N,15µmcomp=N,1µm,1.3s						
MPSI	Mapaga	30.96	237	P	P	13 27 06.7	+0.3
	comp=N,3µmcomp=N,8µmcomp=N,486nm,1.2s						
KKM	Kota Kinabalu	31.05	250	P	P	13 27 07.5	+0.2
SPMM	Sapulut	31.45	247	P	P	13 27 11.0	+0.4
HNR	Honiara	31.54	152	P	P	13 27 10.6	-0.6
HNR				pmax	pmax		
	comp=Z,127nm,0.9s						
HNR	Honiara	31.54	152	P	P	13 27 10.6	-0.6
TYV	Tymovskoe	32.08	357	eP	P	13 27 16.8	+1.5
TYV				eS	S	13 31 47.9	+1.9
TYV				pmax	pmax		
	comp=Z,956nm,0.8s						
TYV				pmax	pmax		
	comp=Z,4µm,2.1s						
TYV				smax	smax		
	comp=N,149nm,1.2s						
TYV				smax	smax		
	comp=E,88nm,1.2s						
TYV				smax	smax		
	comp=N,5µm,4.4s						
TYV				smax	smax		
	comp=E,1µm,4.4s						
TARA	Tarawa	32.13	119	P	P	13 27 15.7	-0.6
TARA				IAmb	IAmb	13 27 19.1	
	comp=Z,503nm,1.2s						
KLR	Kul'dur	32.28	343	d iP	P	13 27 17.3	+0.2
KLR				pmax	pmax		
	comp=Z,669nm,0.8s						
COEN	Coen	32.60	184	P	P	13 27 20.1	-0.1
GRNR	Gornyy	32.69	350	⇓iP	P	13 27 22.7	+2.2
GRNR				eS	S	13 32 06.3	+11
GRNR				pmax	pmax		
	comp=E,180nm,0.8s						
GRNR				pmax	pmax		
	comp=N,330nm,0.7s						
GRNR				pmax	pmax		
	comp=Z,860nm,0.7s						
GRNR				smax	smax		
	comp=N,50nm,0.9s						
BJI	Beijing	32.82	316	P	P	13 27 22.4	+0.7
BJI				PcP	PcP	13 29 49.9	+1.8
BJI				S	S	13 31 57.1	-0.5
BJI				PcS	PcS	13 33 33.3	-1.1
BJI				sS	sS	13 34 58.5	+0.7
BJI				SS	SS	13 35 13.4	+3.4
BJI				pmax	pmax		
	comp=N,420nm,1.2s						
SKR	Severo-Kuril's	32.97	13	eP	P	13 27 22.0	-0.8
SKR				eS	S	13 31 57.3	-2.2

SKR				*e**SS	**sS**	**13 34 53.0**	**-6.8**
SKR				pmax	pmax		
	comp=Z,2µm,4.4s						
SKR				pmax	pmax		
	comp=Z,607nm,0.8s						
SKR				pmax	pmax		
	comp=Z,400nm,4.0s						
SKR				MLR	MLR		
	comp=Z,500nm,16.0s						
SKR				MLR	MLR		
	comp=Z,800nm,14.0s						
TTSI	**Tana Toraja**	**33.17**	**232**	P	**P**	**13 27 25.9**	**+0.8**
	comp=Z,3µmcomp=Z,12µmcomp=Z,1µm,1.0s						
QIZ	**Qiongzhong**	**33.52**	**276**	P	**P**	**13 27 29.4**	**+1.4**
QIZ				sP	**sP**	**13 30 13.3**	**0.0**
QIZ				S	**S**	**13 32 10.6**	**+1.7**
QIZ				pmax	pmax		
	comp=Z,130nm,1.1s						
QIZ				pmax	pmax		
	comp=Z,730nm,6.8s						
SMKI	**Samarinda**	**33.58**	**238**	P	**P**	**13 27 30.5**	**+2.0**
	comp=Z,6µmcomp=Z,21µmcomp=Z,2µm,1.2s						
SPSI	**Sidrap Palu**	**33.82**	**231**	P	**P**	**13 27 30.2**	**-0.3**
	comp=Z,8µmcomp=Z,534nm,0.8s						
BNSI	**Bone**	**33.87**	**230**	P	**P**	**13 27 32.2**	**+1.3**
	comp=Z,8µmcomp=Z,594nm,1.2s						
BKB	**Balikpapan**	**34.31**	**238**	P	**P**	**13 27 35.4**	**+0.8**
	comp=Z,8µmcomp=Z,858nm,1.3s						
BKB	**Balikpapan**	**34.31**	**238**	P	**P**	**13 27 34.9**	**+0.3**
TIY	**Taiyuan**	**34.31**	**310**	*e*P	**P**	**13 27 36.1**	**+1.7**
TIY				sP	**sP**	**13 30 21.1**	**+0.5**
TIY				S	**S**	**13 32 22.8**	**+2.4**
TIY				pmax	pmax		
	comp=Z,460nm,0.6s						
MTN	**Manton Dam**	**34.40**	**205**	P	**P**	**13 27 34.5**	**-0.7**
NKL	**Nikolayevsk**	**34.48**	**355**	*e*P	**P**	**13 27 35.8**	**+0.4**
NKL				*e*S	**S**	**13 32 23.1**	**+0.8**
NKL				pmax	pmax		
	comp=E,4.0nm,1.2s						
NKL				pmax	pmax		
	comp=N,3.0nm,0.7s						
NKL				pmax	pmax		
	comp=Z,737nm,1.3s						
NKL				smax	smax		
	comp=E,3.0nm,1.5s						
NKL				smax	smax		
	comp=N,5.0nm,4.8s						
BKSI	**Bulukumba**	**34.50**	**228**	P	**P**	**13 27 36.4**	**+0.3**
	comp=N,3µmcomp=N,217nm,1.7s						
KAPI	**Kappang**	**34.55**	**229**	P	**P**	**13 27 36.4**	**-0.2**
KAPI				pmax	pmax		
	comp=Z,549nm,1.2s						
KAPI	**Kappang**	**34.55**	**229**	P	**P**	**13 27 37.2**	**+0.6**
KAPI	**Kappang**	**34.55**	**229**	P	**P**	**13 27 36.4**	**-0.2**
KAPI				IAmb	IAmb	13 27 40.0	
	comp=Z,549nm,1.1s						
BSSI	**Bau Bau, Buton**	**34.82**	**227**	P	**P**	**13 27 39.1**	**+0.3**
	comp=Z,2µmcomp=Z,7µmcomp=Z,531nm,1.4s						
SOEI	**Soe**	**35.15**	**218**	P	**P**	**13 27 40.5**	**-1.1**
	comp=Z,3µmcomp=Z,232nm,1.0s						
SOEI	**Soe**	**35.15**	**218**	P	**P**	**13 27 39.4**	**-2.3**
SOEI				IAmb	IAmb	13 27 47.2	
	comp=Z,148nm,0.7s						
MIDW	**Midway**	**35.37**	**68**	P	**P**	**13 27 43.4**	**+0.2**
MMRI	**Maumere**	**35.50**	**222**	P	**P**	**13 27 44.5**	**0.0**
	comp=Z,8µmcomp=Z,533nm,1.2s						
MMRI	**Maumere**	**35.50**	**222**	P	**P**	**13 27 43.4**	**-1.0**
MMRI				IAmb	IAmb	13 27 46.9	
	comp=Z,315nm,0.8s						
PEA0B	**Petropavlovsk-**	**35.58**	**13**	*ce*P	**P**	**13 27 45.9**	**+1.3**
PEA0B	**Petropavlovsk-**	**35.58**	**13**	P	**P**	**13 27 45.5**	**+1.0**
PETK	**Petropavlovsk-**	**35.58**	**13**	P	**P**	**13 27 45.2**	**+0.7**
	comp=Z,194nm,0.8s,baz=151,slow=4.9,SNR=196						
PETK				PcP	**PcP**	**13 29 55.6**	**-0.4**
	comp=Z,111nm,1.0s,baz=172,slow=3.0,SNR=5.7						
PETK				ScP	**ScP**	**13 32 43.5**	**-2.1**
	comp=Z,24nm,0.8s,baz=158,slow=4.3,SNR=5.1						
PETK				PKiKP	**PKiKP**	**13 37 13.7**	**-1.1**
	comp=Z,2.1nm,0.6s,baz=146,slow=1.4,SNR=6.1						
PETK	**Petropavlovsk-**	**35.58**	**13**	P	**P**	**13 27 45.3**	**+0.7**
PETK	**Petropavlovsk-**	**35.58**	**13**	P	**P**	**13 27 45.3**	**+0.7**
PET	**Petropavlovsk**	**35.71**	**14**	*de*P	**P**	**13 27 46.8**	**+1.2**
PET				*e*		13 29 57.1	
PET				*e*S	**S**	**13 32 41.9**	**+1.3**
PET				pmax	pmax		
	comp=Z,3µm,5.6s						
PET				pmax	pmax		
	comp=Z,807nm,0.8s						
PET				pmax	pmax		
	comp=Z,2µm,15.3s						
PET	**Petropavlovsk**	**35.71**	**14**	P	**P**	**13 27 46.2**	**+0.6**
PET					**PcP**	**13 29 56.7**	**+0.3**
MTKI	**Muara Teweh, K**	**35.74**	**240**	P	**P**	**13 27 46.9**	**+0.4**
	comp=Z,2µmcomp=Z,7µmcomp=Z,632nm,1.0s						
XAN	**Xi'an**	**35.74**	**303**	⇓P	**P**	**13 27 46.8**	**+0.5**
XAN				PcP	**PcP**	**13 29 58.9**	**+1.9**
XAN				sP	sP	13 30 30.1	-2.8
XAN				S	**S**	**13 32 40.1**	**-1.8**
XAN				ScP	**ScP**	**13 32 48.8**	**+2.1**
XAN				sS	sS	13 35 43.5	-0.8
XAN				SS	**SS**	**13 35 53.1**	**-5.9**
XAN				ScS	**ScS**	**13 36 53.6**	**-0.4**
XAN				pmax	pmax		
	comp=Z,180nm,1.1s						
XAN				pmax	pmax		
	comp=Z,730nm,5.9s						
BATI	**Baumata**	**35.86**	**218**	P	**P**	**13 27 46.1**	**-1.3**
	comp=Z,159nm,0.5s,baz=172,slow=1.4,SNR=40						
BATI				S	**S**	**13 32 41.5**	**-2.4**
	comp=Z,43nm,0.7s,baz=127,slow=21,SNR=5.9						
BATI	**Baumata**	**35.86**	**218**	P	**P**	**13 27 46.5**	**-0.9**
	comp=Z,2µmcomp=Z,225nm,1.1s						
BATI	**Baumata**	**35.86**	**218**	P	**P**	**13 27 46.1**	**-1.3**
BATI					**S**	**13 32 41.5**	**-2.4**
EDFI	**Ende, Flores**	**35.94**	**222**	P	**P**	**13 27 47.0**	**-1.2**
	comp=Z,2µmcomp=Z,120nm,0.8s						
KBKI	**Kotabaru**	**36.12**	**236**	P	**P**	**13 27 49.2**	**-0.4**
	comp=Z,3µmcomp=Z,221nm,0.8s						
SBUM	**Sibu**	**36.24**	**247**	P	**P**	**13 27 51.0**	**+0.5**
SBUM	**Sibu**	**36.24**	**247**	P	**P**	**13 27 51.1**	**+0.6**
HHC	**Hu-ho-hao-te**	**36.28**	**315**	*e*P	**P**	**13 27 49.5**	**-1.1**
HHC				PP	**pwP**	**13 29 32.1**	**-2.7**
HHC				S	**S**	**13 32 49.8**	**0.0**
HHC				pmax	pmax		
	comp=Z,2µm,7.9s						
GYA	**Guiyang**	**36.38**	**289**	⇑P	**P**	**13 27 53.5**	**+1.8**
GYA				PcP	**PcP**	**13 30 01.4**	**+2.2**
GYA				S	**S**	**13 32 54.5**	**+2.9**
GYA				ScS	**ScS**	**13 36 59.8**	**+1.8**
GYA				pmax	pmax		
	comp=Z,46nm,1.0s						
GYA				pmax	pmax		
	comp=Z,300nm,4.4s						
BTO	**Baotou**	**37.23**	**313**	*e*P	**P**	**13 28 00.5**	**+2.1**
BTO				PP	**pP**	**13 29 39.5**	**+1.9**
BBKI	**Banjar Baru**	**37.27**	**237**	P	**P**	**13 27 59.3**	**+0.4**
	comp=Z,2µmcomp=Z,128nm,1.1s						
ZEA	**Zeya**	**37.58**	**342**	*e*P	**P**	**13 28 01.2**	**+0.4**
ZEA				*e*		13 29 46.6	
ZEA				*e**SP	**PcP**	**13 30 04.8**	**+2.6**
ZEA				*e*S	**S**	**13 33 08.6**	**+0.4**
ZEA				*e*SS	**SS**	**13 36 23.2**	**-5.1**
ZEA				pmax	pmax		
	comp=E,300nm,2.9s						
ZEA				pmax	pmax		
	comp=N,700nm,1.6s						
ZEA				pmax	pmax		
	comp=Z,1µm,1.6s						
ZEA				pmax	pmax		
	comp=E,170nm,1.0s						
ZEA				pmax	pmax		
	comp=N,500nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,870nm,0.8s						
ZEA				smax	smax		
	comp=E,500nm,5.8s						
ZEA				smax	smax		
	comp=N,1µm,9.1s						
BASI	**Baing, Sumba**	**37.76**	**222**	P	**P**	**13 28 01.6**	**-1.3**
	comp=N,13µmcomp=N,1µm,1.1s						
KNRA	**Kununurra**	**37.93**	**207**	P	**P**	**13 28 04.4**	**+0.2**
KNRA				IAmb	IAmb	13 28 07.2	
	comp=Z,212nm,1.0s						
STKI	**Sintang**	**38.07**	**245**	P	**P**	**13 28 05.5**	**+0.1**
	comp=Z,6µmcomp=Z,428nm,1.0s						
WBSI	**Waikabubak, Su**	**38.10**	**224**	P	**P**	**13 28 04.2**	**-1.5**
	comp=Z,29µmcomp=Z,3µmcomp=Z,308nm,0.9s						
UBPT	**Khong Chiam**	**38.20**	**271**	P	**P**	**13 28 06.7**	**+0.2**
KSM	**Kuching**	**38.38**	**247**	P	**P**	**13 28 08.0**	**+0.1**
KSM	**Kuching**	**38.38**	**247**	P	**P**	**13 28 07.4**	**-0.6**
KSM				IAmb	IAmb	13 28 10.7	
	comp=Z,229nm,1.0s						
PLAI	**Plampang**	**38.61**	**227**	P	**P**	**13 28 09.1**	**-0.6**
	comp=Z,7µmcomp=Z,597nm,1.1s						
CTAO	**Charters Tower**	**38.65**	**179**	P	**P**	**13 28 09.9**	**0.0**
CTAO				pmax	pmax		
	comp=Z,124nm,0.9s						
CTAO	**Charters Tower**	**38.65**	**179**	P	**P**	**13 28 09.9**	**0.0**
SLVN	**Son La**	**38.90**	**281**	P	**P**	**13 28 13.0**	**+0.9**
TWSI	**Taliwang, Sumb**	**39.17**	**228**	P	**P**	**13 28 13.6**	**-0.7**
	comp=Z,1µmcomp=Z,6µmcomp=Z,536nm,1.1s						
CD2	**Chengdu**	**39.38**	**296**	P	**P**	**13 28 16.8**	**+1.0**
CD2				sP	sP	13 31 02.9	-1.5
CD2				S	**S**	**13 33 35.6**	**+0.1**
CD2				sS	sS	13 36 43.5	+2.3
CD2				pmax	pmax		
	comp=Z,350nm,0.7s						
CD2				pmax	pmax		
	comp=Z,450nm,4.5s						
PBKI	**Pangkalan Bun**	**39.39**	**241**	P	**P**	**13 28 17.0**	**+0.9**
	comp=Z,12µmcomp=Z,1µm,1.1s						
WB0	**Warramunga Arr**	**39.78**	**196**	P	**P**	**13 28 18.1**	**-1.0**
KMI	**Kunming**	**39.86**	**287**	⇓P	**P**	**13 28 21.6**	**+1.6**
KMI				pP	pP	13 30 02.0	+0.9
KMI				PP	**PcP**	**13 30 10.8**	**+0.4**
KMI				sP	sP	13 31 08.8	+0.2
KMI				ScP	**ScP**	**13 33 03.8**	**+0.9**
KMI				S	**S**	**13 33 43.5**	**+0.5**
KMI				pmax	pmax		
	comp=Z,240nm,4.5s						
SRBI	**Singaraja**	**39.93**	**231**	P	**P**	**13 28 21.1**	**+0.8**
	comp=Z,3µmcomp=Z,5µmcomp=Z,572nm,1.4s						
WRAB	**Tennant Creek**	**39.95**	**196**	P	**P**	**13 28 19.8**	**-0.6**
WRAB				pmax	pmax		
	comp=Z,156nm,0.9s						
WRAB	**Tennant Creek**	**39.95**	**196**	P	**P**	**13 28 19.8**	**-0.6**
WB2	**Warramunga Arr**	**39.96**	**196**	P	**P**	**13 28 19.9**	**-0.6**
WB2				IAmb	IAmb	13 28 23.3	
	comp=Z,200nm,0.9s						
WRA	**Warramunga Arr**	**39.97**	**196**	P	**P**	**13 28 20.0**	**-0.6**
	comp=Z,41nm,0.4s,baz=0.5,slow=8.6,SNR=478						
WRA				pP	**pP**	**13 30 03.8**	**+1.6**
	comp=Z,28nm,1.0s,baz=16,slow=9.0,SNR=1.9						
WRA				PcP	**PcP**	**13 30 11.9**	**+1.5**
	comp=Z,38nm,1.0s,baz=22,slow=5.2,SNR=7.6						
WRA				ScP	**ScP**	**13 33 00.8**	**-2.2**
	comp=Z,58nm,0.9s,baz=13,slow=3.9,SNR=9.1						
WRA				S	**S**	**13 33 41.7**	**-2.3**
	comp=Z,8.6nm,1.0s,baz=16,slow=15,SNR=2.4						
WRA				PKiKP	**ScS**	**13 37 18.8**	**-0.1**
	comp=Z,1.9nm,0.4s,baz=3.0,slow=0.8,SNR=6.8						
WRA				P3KPbc		13 57 55.4	
	comp=Z,1.5nm,0.8s,baz=198,slow=3.6,SNR=14						
WRA				P3KP		13 59 24.0	
	comp=Z,0.3nm,0.4s,baz=209,slow=4.0,SNR=1.7						
WRA	**Warramunga Arr**	**39.97**	**196**	*i* P	**P**	**13 28 20.0**	**-0.6**
WRA				pmax	pmax		
	comp=Z,60nm,0.5s						
WRA	**Warramunga Arr**	**39.97**	**196**	P	**P**	**13 28 19.9**	**-0.6**
WRA	**Warramunga Arr**	**39.97**	**196**		**ScP**	**13 33 00.8**	**-2.2**
WRA					**ScS**	**13 37 18.8**	**-0.1**
KMMI	**Kalianget**	**40.18**	**233**	P	**P**	**13 28 24.5**	**+2.2**
	comp=Z,3µmcomp=Z,5µmcomp=Z,508nm,1.2s						
SANVU	**Saraoutou**	**40.27**	**146**	P	**P**	**13 28 22.6**	**-0.4**
SANVU				IAmb	IAmb	13 28 26.4	
	comp=Z,219nm,1.0s						
LZH	**Lanzhou**	**40.30**	**304**	⇓P	**P**	**13 28 24.9**	**+1.7**
LZH				pP	pP	13 30 04.4	-0.2
LZH				PP	**PP**	**13 30 14.1**	**+1.2**
LZH				sP	sP	13 31 10.5	-1.7
LZH				S	**S**	**13 33 50.3**	**+1.5**
LZH				sS	sS	13 36 58.8	+3.4
LZH				pmax	pmax		
	comp=Z,980nm,1.3s						
LZH				pmax	pmax		
	comp=Z,2µm,4.8s						
DNP	**Denpasar**	**40.33**	**230**	P	**P**	**13 28 25.0**	**+1.5**
	comp=Z,1µm,1.1s						
BWJI	**Bawean**	**40.44**	**236**	P	**P**	**13 28 25.3**	**+0.9**
	comp=Z,6µmcomp=Z,659nm,1.1s						
ABJI	**Asem Bagus**	**40.46**	**232**	P	**P**	**13 28 25.8**	**+1.3**
	comp=Z,5µmcomp=Z,342nm,1.6s						
IGBI	**Denpasar**	**40.47**	**230**	P	**P**	**13 28 25.3**	**+0.7**
	comp=Z,15µmcomp=Z,4µmcomp=Z,323nm,1.1s						
SMY	**Shemya**	**40.62**	**27**	P	**P**	**13 28 27.1**	**+1.9**
SMY				pmax	pmax		
	comp=Z,3µm,1.5s						
SMY	**Shemya**	**40.62**	**27**	P	**P**	**13 28 27.1**	**+1.9**
BLJI	**Banyuglugur**	**40.91**	**233**	P	**P**	**13 28 29.2**	**+1.1**
	comp=Z,5µmcomp=Z,423nm,1.0s						
MA2	**Magadan**	**40.93**	**4**	*ce*P	**P**	**13 28 28.0**	**+0.4**
MA2				pmax	pmax		
	comp=Z,1µm,0.7s						
MA2	**Magadan**	**40.93**	**4**	P	**P**	**13 28 28.4**	**+0.9**
JAGI	**Jajag, Banyuwa**	**40.97**	**231**	P	**P**	**13 28 27.9**	**-0.6**
	comp=Z,3µmcomp=Z,319nm,1.2s						
JAGI	**Jajag, Banyuwa**	**40.97**	**231**	P	**P**	**13 28 27.5**	**-1.1**
JAGI				IAmb	IAmb	13 28 30.2	
	comp=Z,197nm,0.7s						
GMJI	**Gumukmas**	**41.36**	**232**	P	**P**	**13 28 31.7**	**0.0**
	comp=Z,2µmcomp=Z,216nm,1.1s						
FITZ	**Fitzroy Crossi**	**41.44**	**209**	P	**P**	**13 28 32.1**	**0.0**
	comp=Z,192nm,0.7s,baz=26,slow=10.0,SNR=329						
FITZ				PcP	**pwP**	**13 30 17.2**	**-1.8**
	comp=Z,12nm,0.4s,baz=37,slow=4.6,SNR=4.5						
AMKA	**Amchitka**	**42.12**	**31**	P	**P**	**13 28 38.5**	**+1.4**
UWJI	**Ujung Watu**	**42.13**	**237**	P	**P**	**13 28 38.1**	**+0.4**
	comp=Z,8µmcomp=Z,821nm,1.2s						
NGJI	**Ngawi**	**42.30**	**235**	P	**P**	**13 28 40.8**	**+1.8**
	comp=Z,2µmcomp=Z,169nm,1.1s						
ULN	**Ulaanbaatar**	**42.48**	**322**	P	**P**	**13 28 41.3**	**+1.2**
ULN				pmax	pmax		
	comp=Z,652nm,0.8s						
ULN	**Ulaanbaatar**	**42.48**	**322**	P	**P**	**13 28 41.7**	**+1.6**
ULN	**Ulaanbaatar**	**42.48**	**322**	P	**P**	**13 28 41.3**	**+1.2**
TPI	**Tanjungpandan**	**42.79**	**244**	P	**P**	**13 28 42.8**	**-0.1**
	comp=Z,2µmcomp=Z,161nm,0.9s						
SONM	**Songino Array**	**42.85**	**322**	P	**P**	**13 28 44.1**	**+1.1**
	comp=Z,457nm,0.6s,baz=133,slow=8.8,SNR=737						
SONM				PcP	**PcP**	**13 30 19.9**	**0.0**
	comp=Z,104nm,0.8s,baz=115,slow=3.9,SNR=7.5						
SONM				ScP	**ScP**	**13 33 12.8**	**-1.5**
	comp=Z,41nm,0.9s,baz=139,slow=3.0,SNR=5.7						
SONM				S	**S**	**13 34 25.6**	**+0.6**
	comp=Z,37nm,1.1s,baz=123,slow=7.1,SNR=5.8						
SONM				PKiKP	**PKiKP**	**13 37 20.3**	**-1.1**
	comp=Z,5.0nm,1.2s,baz=180,slow=1.4,SNR=1.5						
SONM				P4KPbc		14 06 28.4	
	comp=Z,1.5nm,0.9s,baz=100,slow=4.4,SNR=5.7						
SONM	**Songino Array**	**42.85**	**322**	P	**P**	**13 28 44.1**	**+1.1**
SONM						13 30 19.9	
SONM				S	**S**	**13 34 25.6**	**+0.6**
SONM	**Songino Array**	**42.85**	**322**	P	**P**	**13 28 44.2**	**+1.2**
SMRI	**Semarang**	**42.91**	**236**	P	**P**	**13 28 44.6**	**+0.8**
	comp=Z,5µmcomp=Z,457nm,1.1s						
SMRI	**Semarang**	**42.91**	**236**	P	**P**	**13 28 44.2**	**+0.4**
SMRI				IAmb	IAmb	13 28 47.2	
	comp=Z,474nm,1.1s						
PCJI	**Pacitan**	**43.04**	**234**	P	**P**	**13 28 46.1**	**+1.4**
	comp=Z,6µmcomp=Z,403nm,1.2s						
UGM	**Wanagama**	**43.37**	**235**	P	**P**	**13 28 48.8**	**+1.4**
	comp=Z,9µmcomp=Z,836nm,1.1s						
UGM	**Wanagama**	**43.37**	**235**	P	**P**	**13 28 46.8**	**-0.6**
YOGI	**Yogyakarta**	**43.49**	**236**	P	**P**	**13 28 48.3**	**0.0**
	comp=Z,7µmcomp=Z,810nm,0.9s						
AS31	**Alice Springs**	**43.64**	**195**	P	**P**	**13 28 48.4**	**-0.8**
ASAR	**Alice Springs**	**43.64**	**195**	P	**P**	**13 28 48.5**	**-0.7**
	comp=Z,30nm,0.5s,baz=13,slow=6.7,SNR=319						
ASAR				PcP	**PcP**	**13 30 22.3**	**-0.5**
	comp=Z,13nm,0.6s,baz=17,slow=4.3,SNR=7.2						
ASAR				ScP	**ScP**	**13 33 17.0**	**-0.7**
	comp=Z,28nm,0.8s,baz=18,slow=4.3,SNR=13						
ASAR				S	**S**	**13 34 33.8**	**-2.8**
	comp=Z,11nm,0.8s,baz=20,slow=21,SNR=9.7						
ASAR				PKiKP	**PKiKP**	**13 37 21.7**	**-0.8**
	comp=Z,2.1nm,0.9s,baz=359,slow=0.8,SNR=2.4						
ASAR				P3KPbc		13 57 40.1	
	comp=Z,0.8nm,0.5s,baz=188,slow=4.2,SNR=26						
ASAR				P3KP		13 59 19.6	
	comp=Z,0.4nm,0.7s,baz=204,slow=2.0,SNR=2.3						
ASAR				PKP2ab		14 01 35.5	
	comp=Z,3.0nm,1.1s,baz=192,slow=4.1,SNR=4.8						
ASAR	**Alice Springs**	**43.64**	**195**	P	**P**	**13 28 48.6**	**-0.7**
ASAR						13 30 22.3	
ASAR				S	**S**	**13 34 33.8**	**-2.8**
ASAR	**Alice Springs**	**43.64**	**195**	P	**P**	**13 28 48.3**	**-0.9**
PPBI	**Pangkal Pinang**	**43.79**	**246**	P	**P**	**13 28 50.4**	**-0.2**
	comp=Z,76nm,1.0s						
CHTO	**Chiang Mai**	**43.80**	**278**	P	**P**	**13 28 50.7**	**0.0**
CHTO				pmax	pmax		
	comp=Z,30nm,0.7s						
CHTO	**Chiang Mai**	**43.80**	**278**	P	**P**	**13 28 51.5**	**+0.9**
CHTO	**Chiang Mai**	**43.80**	**278**	P	**P**	**13 28 50.6**	**0.0**
CM31	**Chiang Mai Arr**	**43.85**	**277**	P	**P**	**13 28 52.4**	**+1.4**
	SNR=52						
CM31	**Chiang Mai Arr**	**43.85**	**277**	P	**P**	**13 28 51.9**	**+0.9**
CMAR	**Chiang Mai Arr**	**43.85**	**277**	P	**P**	**13 28 52.2**	**+1.2**
	comp=Z,112nm,0.9s,baz=70,slow=6.5,SNR=289						
CMAR				PcP	**PcP**	**13 30 24.3**	**+0.6**
	comp=Z,47nm,0.9s,baz=81,slow=1.9,SNR=12						
CMAR				pP	**pP**	**13 30 37.3**	**+2.3**
	comp=Z,92nm,1.1s,baz=67,slow=7.6,SNR=5.9						
CMAR				S	**S**	**13 34 40.5**	**+0.8**
	comp=Z,11nm,1.1s,baz=68,slow=8.0,SNR=5.5						
CMAR	**Chiang Mai Arr**	**43.85**	**277**	P	**P**	**13 28 51.9**	**+0.9**
CMAR				S	**S**	**13 34 40.5**	**+0.8**
CMAR	**Chiang Mai Arr**	**43.85**	**277**	P	**P**	**13 28 51.9**	**+0.9**
CMAR	**Chiang Mai Arr**	**43.85**	**277**		**PcP**	**13 30 24.3**	**+0.6**
CMAR					**S**	**13 34 40.5**	**+0.8**
MYKOM	**Kota Tinggi**	**43.98**	**252**	P	**P**	**13 28 54.0**	**+1.9**
MYKOM	**Kota Tinggi**	**43.98**	**252**	P	**P**	**13 28 52.7**	**+0.6**
MYKOM				IAmb	IAmb	13 28 56.7	
	comp=Z,478nm,0.9s						
KIWB	**Kanaga Island**	**44.19**	**33**	P	**P**	**13 28 53.9**	**+0.9**
GTA	**Gaotai**	**44.21**	**308**	⇓P	**P**	**13 28 54.8**	**+1.2**
GTA				PcP	**PcP**	**13 30 26.5**	**+1.8**
GTA				pP	pwP	13 30 41.6	-2.0
GTA				sP	sP	13 31 42.3	-2.3
GTA				ScP	**ScP**	**13 33 20.3**	**+0.3**
GTA				S	**S**	**13 34 45.5**	**+1.0**
GTA				ScS	**ScS**	**13 37 46.3**	**+0.9**
GTA				SS	**SS**	**13 38 14.3**	**-2.4**
GTA				pmax	pmax		
	comp=Z,230nm,1.2s						
GTA				pmax	pmax		
	comp=Z,1µm,6.4s						
EIDS	**Eidsvold**	**44.25**	**173**	P	**P**	**13 28 53.4**	**-0.4**
KPJI	**Karang Pucung**	**44.28**	**237**	P	**P**	**13 28 53.8**	**-0.5**
	comp=Z,477nm,1.1s						
DSRI	**Dabo**	**44.34**	**249**	P	**P**	**13 28 56.7**	**+1.8**
	comp=Z,1µmcomp=Z,101nm,1.4s						
JRMM	**Jerantut**	**44.38**	**256**	P	**P**	**13 28 56.0**	**+0.8**
ADK	**Adak**	**44.45**	**33**	P	**P**	**13 28 55.8**	**+0.8**
ADK				pmax	pmax		
	comp=Z,2µm,1.4s						
ADK	**Adak**	**44.45**	**33**	P	**P**	**13 28 55.8**	**+0.8**
YAK	**Yakutsk**	**44.57**	**350**	*c i*P	**P**	**13 28 56.6**	**+0.8**
YAK				*e*		13 30 25.7	
YAK				*e**PP	**pP**	**13 30 41.5**	**+1.3**
YAK				*e*		13 30 50.8	
YAK				*e*S	**S**	**13 34 49.9**	**+1.4**
YAK				*e*		13 37 45.7	
YAK				*e**SS	**sS**	**13 37 56.2**	**-3.1**
YAK				*e*SS	**SS**	**13 38 24.8**	**+3.5**
YAK				pmax	pmax		
	comp=Z,3µm,0.9s						
YAK				pmax	pmax		
	comp=E,150nm,0.9s						
YAK				pmax	pmax		
	comp=N,737nm,1.0s						
YAK				pmax	pmax		
	comp=Z,142nm,1.3s						
YAK				pmax	pmax		
	comp=N,88nm,1.0s						
YAK				pmax	pmax		
	comp=E,109nm,1.5s						
YAK				smax	smax		
	comp=E,558nm,1.8s						
YAK				smax	smax		
	comp=N,463nm,1.3s						
YAK	**Yakutsk**	**44.57**	**350**	P	**P**	**13 28 56.0**	**+0.2**
GSTR	**Great Sitkin T**	**44.88**	**33**	P	**P**	**13 28 58.9**	**+0.4**
CMJI	**Cimerak**	**44.93**	**237**	P	**P**	**13 28 59.2**	**-0.1**
	comp=N,80nm,0.6s						
BOD	**Bodaibo**	**45.29**	**337**	*e*P	**P**	**13 29 01.3**	**0.0**
BOD				pmax	pmax		
	comp=Z,697nm,1.6s						
IPM	**Ipoh**	**45.50**	**257**	P	**P**	**13 29 05.0**	**+1.3**
IPM	**Ipoh**	**45.50**	**257**	P	**P**	**13 29 03.2**	**-0.5**
KULM	**Kulim**	**45.55**	**259**	P	**P**	**13 29 05.0**	**+0.9**
KULM	**Kulim**	**45.55**	**259**	P	**P**	**13 29 04.5**	**+0.4**
KULM				IAmb	IAmb	13 29 08.2	
	comp=Z,401nm,1.5s						
DZM	**Mont Dzumac**	**45.56**	**152**	*e*P	**P**	**13 29 05.5**	**+1.4**
	comp=Z,234nm,1.2s						
DZM	**Mont Dzumac**	**45.56**	**152**	P	**P**	**13 29 04.4**	**+0.3**
DBJI	**Dramaga**	**45.60**	**240**	P	**P**	**13 29 05.4**	**+1.0**
	comp=Z,27µmcomp=Z,149nm,1.4s						
JMBI	**JAMBI**	**45.71**	**248**	P	**P**	**13 29 07.1**	**+1.8**
	comp=Z,3µmcomp=Z,285nm,0.8s						
CNJI	**Cibinong**	**45.71**	**239**	P	**P**	**13 29 04.5**	**-0.8**
	comp=Z,4µmcomp=Z,478nm,0.9s						
ONTNC	**Ouen Toro**	**45.77**	**152**	P	**P**	**13 29 05.8**	**+0.3**
ZAK	**Zakamensk**	**45.86**	**323**	*e*P	**P**	**13 29 07.5**	**+1.5**
ZAK				pmax	pmax		
	comp=Z,937nm,1.2s						
SBJI	**Serang**	**45.87**	**241**	P	**P**	**13 29 08.4**	**+1.9**
	comp=Z,7µmcomp=Z,556nm,1.2s						
OUENC	**Ouen Island, N**	**46.04**	**152**	P	**P**	**13 29 07.8**	**+0.2**
LKP	**Lekhapani**	**46.06**	**290**	*e*P	**P**	**13 29 09.3**	**+1.6**
LKP				*i* x	**PcP**	**13 30 32.4**	**+1.1**
BLSI	**Bandar Lampung**	**46.20**	**243**	P	**P**	**13 29 09.3**	**+0.3**
	comp=Z,7µmcomp=Z,754nm,1.0s						
IRK	**Irkutsk**	**46.23**	**326**	*e*P	**P**	**13 29 08.6**	**0.0**
IRK				*e*S	**S**	**13 35 14.9**	**+2.9**
IRK				pmax	pmax		
	comp=Z,1µm,1.1s						
KLSI		**46.28**	**244**	P	**P**	**13 29 09.3**	**-0.3**
	comp=Z,2µmcomp=Z,212nm,1.4s						
TLY	**Talaya**	**46.28**	**325**	*d i*P	**P**	**13 29 10.2**	**+1.1**
TLY				*e*		13 30 32.9	
TLY				*e*S	**S**	**13 35 07.6**	**-5.2**
TLY				*e*SS	**ScS**	**13 37 59.1**	**+0.8**
TLY				pmax	pmax		
	comp=Z,2µm,1.0s						
TLY	**Talaya**	**46.28**	**325**	P	**P**	**13 29 10.5**	**+1.4**
TLY				P	**P**	**13 29 10.5**	**+1.4**
TLY	**Talaya**	**46.28**	**325**	P	**P**	**13 29 09.7**	**+0.7**
PINNC	**Pines Island,**	**46.49**	**151**	P	**P**	**13 29 11.3**	**+0.4**
MDSI	**Maura Dua**	**46.65**	**244**	P	**P**	**13 29 11.3**	**-1.0**
	comp=Z,1µmcomp=Z,103nm,1.2s						
DIBR	**DIBRUGARH**	**46.89**	**290**	*e*P	**P**	**13 29 16.1**	**+2.1**
KASI	**Kota Agung**	**46.91**	**243**	P	**P**	**13 29 13.0**	**-1.3**
	comp=Z,5µmcomp=Z,574nm,1.0s						
MBWA	**Marble Bar**	**46.94**	**213**	P	**P**	**13 29 14.3**	**-0.1**
LWLI	**Liwa**	**47.02**	**244**	P	**P**	**13 29 15.6**	**+0.3**
	comp=Z,8µmcomp=Z,343nm,1.1s						
BKNI	**Bangkinang**	**47.15**	**252**	P	**P**	**13 29 16.7**	**+0.6**
	comp=Z,3µmcomp=Z,312nm,1.1s						
BKNI	**Bangkinang**	**47.15**	**252**	P	**P**	**13 29 16.6**	**+0.5**
BKNI				IAmb	IAmb	13 29 19.5	
	comp=Z,252nm,0.9s						
PSA00	**Pilbara Seismi**	**47.23**	**213**	P	**P**	**13 29 15.8**	**-0.7**
PSA00				IAmb	IAmb	13 29 19.3	
	comp=Z,245nm,0.9s						
PSA00	**Pilbara Seismi**	**47.23**	**213**	P	**P**	**13 29 16.2**	**-0.3**
PSA00				IAmb	IAmb	13 29 19.3	
	comp=Z,250nm,0.9s						
MOKO	**MOKOCHONG**	**47.27**	**289**	*e*P	**P**	**13 29 17.9**	**+0.9**
MOKO				*i* x	**PcP**	**13 30 37.1**	**+1.2**
KSI	**Kapahiang**	**47.60**	**246**	P	**P**	**13 29 18.6**	**-0.9**
	comp=Z,584nm,0.8s						
MNAI	**Manna**	**47.63**	**245**	P	**P**	**13 29 20.9**	**+1.2**
	comp=Z,614nm,1.2s						
MNAI	**Manna**	**47.63**	**245**	P	**P**	**13 29 19.7**	**0.0**
MNAI				IAmb	IAmb	13 29 21.0	
	comp=Z,671nm,1.1s						
KOHI	**KOHIMA**	**47.66**	**288**	*e*P	**P**	**13 29 19.5**	**-0.5**
KOHI				*i* x	**PcP**	**13 30 37.6**	**+0.3**
MASI	**Maura Aman, Be**	**47.66**	**247**	P	**P**	**13 29 20.7**	**+0.8**
	comp=Z,5µmcomp=Z,548nm,1.1s						
MOY	**Mondy**	**47.73**	**324**	*e*P	**P**	**13 29 21.2**	**+1.2**
MOY				*e*		13 35 35.4	
MOY				pmax	pmax		
	comp=Z,480nm,1.4s						

ITAN	ITANAGAR	47.95	290	eP	P	13 29 23.4	+1.5
ITAN				i x	PcP	13 30 40.0	+1.8
PPI	Padang Panjang	48.06	252	P	P	13 29 23.0	+0.1
	comp=Z,442nmcomp=Z,51nm,0.8s						
PDSI	Padang	48.20	251	P	P	13 29 24.9	+0.9
	comp=Z,72nm,1.2s						
MNSI	Mandailing Nat	48.27	254	P	P	13 29 24.9	+0.4
	comp=Z,3µmcomp=Z,445nm,0.8s						
MSVF	Nonsavu	48.50	137	i P	P	13 29 27.1	+1.0
MSVF				pmax	pmax		
	comp=Z,42nm,0.9s						
XMIS	Christmas Isla	48.74	237	P	P	13 29 26.3	-1.7
XMIS				IAmb	IAmb	13 29 29.5	
	comp=Z,315nm,0.9s						
NIKH	Nikolski High	49.14	35	P	P	13 29 30.7	+0.5
	baz=244						
NIKH				S	S	13 35 51.1	-0.8
	baz=244						
ARMA	Armidale	49.30	173	P	P	13 29 33.3	+1.5
PPSI	Pulau Pagai	49.44	249	P	P	13 29 34.0	+0.9
	comp=Z,3µmcomp=Z,276nm,1.3s						
TPTI		49.51	258	P	P	13 29 33.2	-0.4
	comp=Z,206nmcomp=Z,22nm,0.9s						
SISI	Saibi	49.62	251	P	P	13 29 35.1	+0.7
	comp=Z,2µmcomp=Z,225nm,0.8s						
SHL	Shillong	49.67	288	P	P	13 29 34.9	+0.1
SHL				pmax	pmax		
	comp=Z,175nm,0.9s						
SHL	Shillong	49.67	288	P	P	13 29 35.5	+0.6
	SNR=52						
SHL	Shillong	49.67	288	P	P	13 29 34.9	+0.1
MLSI	Meulaboh, Aceh	49.86	259	P	P	13 29 37.1	+0.9
	comp=Z,68nm,0.8s						
GSI	Gunungsitoli	49.90	255	P	P	13 29 36.7	+0.3
	comp=Z,4µmcomp=Z,440nm,0.9s						
GSI	Gunungsitoli	49.90	255	P	P	13 29 36.1	-0.3
GSI				IAmb	IAmb	13 29 40.4	
	comp=Z,285nm,0.7s						
LSA	Lhasa	50.18	293	P	P	13 29 41.4	+2.6
LSA				pmax	pmax		
	comp=Z,2µm,1.2s						
SPIA	Saint Paul Isl	50.44	30	P	P	13 29 40.7	+1.1
	baz=239						
SPIA	Saint Paul Isl	50.44	30	P	P	13 29 40.8	+1.1
STKA	Stephens Creek	50.50	184	P	P	13 29 39.8	-0.7
	comp=Z,36nm,0.7s,baz=349,slow=7.7,SNR=96						
STKA				ScP	ScP	13 33 45.9	-0.6
	comp=Z,14nm,0.8s,baz=321,slow=5.7,SNR=5.5						
STKA	Stephens Creek	50.50	184	P	P	13 29 39.8	-0.7
STKA	Stephens Creek	50.50	184	P	P	13 29 39.7	-0.7
UNV	Unalaska Valle	50.79	35	P	P	13 29 43.1	+0.9
	baz=246,SNR=18						
UNV				S	S	13 36 15.3	+1.2
	baz=246						
UNV	Unalaska Valle	50.79	35	P	P	13 29 42.1	-0.1
UNV				IAmb	IAmb	13 29 45.0	
	comp=Z,483nm,0.9s						
BILL	Bilibino	51.00	10c	i P	P	13 29 44.0	+0.5
BILL				i		13 30 50.1	
BILL				i		13 31 50.8	
BILL				i S	S	13 36 13.8	-2.6
BILL				i SS	SS	13 39 59.6	-3.0
BILL				pmax	pmax		
	comp=Z,1µm,1.3s						
BILL	Bilibino	51.00	10	P	P	13 29 44.0	+0.5
GIRL	Giralia	51.17	218	P	P	13 29 45.3	-0.1
AKUT	Akutan	51.30	35	P	P	13 29 46.0	+0.1
FORT	Forrest	52.00	199	P	P	13 29 50.9	-0.4
FORT				IAmb	IAmb	13 29 54.4	
	comp=Z,346nm,1.1s						
BBOO	Buckleboo	52.06	190	P	P	13 29 51.3	-0.4
GTK	Tadong	52.50	290	ex	P	13 29 57.4	+2.2
GTK				i x	PcP	13 30 56.7	+1.3
FALS	False Pass	52.85	34	P	P	13 29 57.2	+0.2
	baz=248,SNR=25						
FALS				S	S	13 36 40.4	-1.0
	baz=248						
FALS	False Pass	52.85	34	P	P	13 29 57.0	+0.1
OPA	Opana	53.01	77	P	P	13 30 00.1	+1.4
OPA				pmax	pmax		
	comp=Z,233nm,1.4s						
OPA	Opana	53.01	77	P	P	13 30 00.1	+1.4
KIP	Kipapa	53.04	77c	eP	P	13 30 00.0	+1.1
KIP				pmax	pmax		
	comp=Z,163nm,1.0s						
KIP	Kipapa	53.04	77	P	P	13 29 59.6	+0.7
HON	Honolulu	53.07	77	P	P	13 30 00.3	+1.2
HON				pmax	pmax		
	comp=Z,462nm,1.4s						
HON	Honolulu	53.07	77	P	P	13 30 00.3	+1.2
HON				IAmb	IAmb	13 30 02.5	
	comp=Z,462nm,1.4s						
DHH	Diamond Head	53.26	77	P	P	13 30 00.8	+0.3
DHH	Diamond Head	53.26	77	P	P	13 30 00.8	+0.3
TAPN	Taplejung	53.29	290	eP	P	13 30 01.9	+0.9
	comp=Z,451nm,0.9s						
TAPN	Taplejung	53.29	290	eP	S	13 36 47.3	-1.5
	comp=Z,645nm,1.4s						
WMR	Waimanalo Ridg	53.36	77	P	P	13 30 02.0	+0.8
GAMB	Gambell	53.51	22	P	P	13 30 02.7	+1.3
	baz=233,SNR=9.4						
GAMB	Gambell	53.51	22	P	P	13 30 01.9	+0.5
GAMB				IAmb	IAmb	13 30 04.6	
	comp=Z,603nm,1.2s						
ODAN	Odare	53.61	290	eP	P	13 30 03.9	+0.7
	comp=Z,1µm,1.1s						
ODAN	Odare	53.61	290	eP	S	13 36 54.5	+1.6
	comp=Z,204nm,1.2s						
TIXI	Tiksi	53.74	354	P	P	13 30 02.8	-0.2
TIXI				pmax	pmax		
	comp=Z,363nm,1.0s						
TIXI	Tiksi	53.74	354	P	P	13 30 02.8	-0.2
TIXI				IAmb	IAmb	13 30 04.8	
	comp=Z,363nm,1.0s						
CAN	Canberra	53.92	176	P	P	13 30 05.2	+0.4
CAN				pmax	pmax		
	comp=Z,81nm,1.0s						
CAN	Canberra	53.92	176	P	P	13 30 05.2	+0.4
WMQ	Urumqi	53.98	311	P	P	13 30 07.4	+2.2
WMQ				PcP	PcP	13 31 02.9	+2.2
WMQ				sP	sP	13 32 58.3	-3.2
WMQ				S	S	13 37 00.0	+3.2
WMQ				ScS	ScS	13 38 52.3	+0.1
WMQ				sS	sS	13 40 19.5	+2.2
WMQ				pmax	pmax		
	comp=Z,1µm,1.1s						
WMQ				pmax	pmax		
	comp=Z,3µm,4.5s						
RAMN	Ramite	54.31	290	eP	P	13 30 08.8	+0.7
	comp=Z,100nm,0.4s						
KHLH	Kahului Airpor	54.58	77	P	P	13 30 11.0	+1.3
SDPT	Sand Point	54.60	35	P	P	13 30 09.6	+0.3
	baz=250,SNR=32						
SDPT				S	S	13 37 04.0	-0.4
	baz=250						
SDPT	Sand Point	54.60	35	P	P	13 30 09.5	+0.2
JIRN	Jiri	54.62	291	eP	P	13 30 11.6	+1.2
	comp=Z,1µm,0.8s						
JIRN	Jiri	54.62	291	eP	S	13 37 04.9	-1.4
	comp=Z,493nm,1.5s						
HLK	Haleakala	54.77	77	P	P	13 30 13.0	+1.6
GUN	Gumba	54.87	291	eP	P	13 30 13.0	+0.9
	comp=Z,1µm,0.9s						
GUN	Gumba	54.87	291	eP	S	13 37 07.6	-2.0
	comp=Z,836nm,1.3s						
CNBA	Chernabura Isl	54.92	35	P	P	13 30 12.6	+1.1
CHNA	Chernabura Isl	54.92	35	P	P	13 30 12.1	+0.6
	baz=252,SNR=6.1						
CHNA				S	S	13 37 09.9	+1.4
	baz=252						
DGZ	Jazzator, Alta	55.22	318d	i P	P	13 30 14.9	+1.0
DGZ				pmax	pmax		
	comp=Z,1µm,1.0s						
KHLU	Kahalu`u	55.28	79	P	P	13 30 15.7	+0.9
PKI	Pulchoki	55.31	291	eP	P	13 30 15.5	+0.3
PKI	Pulchoki	55.31	291	eP	S	13 37 14.7	-0.5
	comp=Z,336nm,1.1s						
HUH	Hualalai	55.32	79	P	P	13 30 15.6	+0.3
PKIN	Phulchoki	55.33	291	eP	P	13 30 15.4	+0.2
	comp=Z,478nm,0.6s						
PKIN	Phulchoki	55.33	291	eP	S	13 37 14.4	-0.9
	comp=Z,766nm,1.5s						
MORW	Morawa	55.34	211	P	P	13 30 14.1	-0.7
HPAH	Hawaii Prepara	55.39	78	P	P	13 30 14.2	-1.3
KKN	Kakani	55.41	291	eP	P	13 30 16.2	+0.5
	comp=Z,733nm,0.9s						
KKN	Kakani	55.41	291	eP	S	13 37 15.2	-1.1
	comp=Z,850nm,1.6s						
MWH	Moku‘aweowe	55.58	79	P	P	13 30 18.9	+1.6
DMN	Daman	55.58	291	eP	P	13 30 17.5	+0.6
	comp=Z,842nm,0.9s						
MLOA	Mauna Loa Obse	55.59	79	P	P	13 30 17.8	+0.5
POHA	Pohakuloa	55.59	79	P	P	13 30 18.3	+1.2
HMH	Humu‘ula Sheep	55.66	79	P	P	13 30 18.9	+1.2
AIN	Ainahou	55.73	79	P	P	13 30 19.1	+1.2
MLH	Mauna Loa	55.77	79	P	P	13 30 19.5	+1.2
TNA	Tin City	55.87	21	P	P	13 30 18.7	+0.8
	baz=236,SNR=19						
TNA	Tin City	55.87	21	P	P	13 30 18.9	+1.0
TNA				IAmb	IAmb	13 30 20.9	
	comp=Z,698nm,1.2s						
HLP	Hilina Pali	55.88	79	P	P	13 30 20.3	+1.5
GKN	Gorkha	55.96	292	eP	P	13 30 20.1	+0.7
GKN	Gorkha	55.96	292	eP	S	13 37 22.4	-0.8
	comp=Z,2µm,1.6s						
CHGN	Chignik	56.01	34	P	P	13 30 19.3	+0.3
	baz=252,SNR=25						
CHGN				S	S	13 37 21.3	-1.2
	baz=252						
CHGN	Chignik	56.01	34	P	P	13 30 19.4	+0.4
CHGN				IAmb	IAmb	13 30 20.9	
	comp=Z,1µm,1.4s						
TOO	Toolangi	56.05	180	P	P	13 30 20.0	+0.4
TOO				pmax	pmax		
	comp=Z,93nm,1.4s						
TOO	Toolangi	56.05	180	P	P	13 30 20.0	+0.4
ANM	Nome	56.26	23	P	P	13 30 21.7	+1.1
ANM				pmax	pmax		
	comp=Z,588nm,1.0s						
ANM	Nome	56.26	23	P	P	13 30 21.6	+1.0
	baz=240,SNR=17						
ANM				S	S	13 37 25.4	-0.1
	baz=240						
ANM	Nome	56.26	23	P	P	13 30 21.7	+1.1
ANM				IAmb	IAmb	13 30 23.8	
	comp=Z,588nm,1.0s						
ZSN	Zaisan	56.48	315	eP	P	13 30 23.4	+0.9
	baz=314						
ZSN				i S	S	13 37 30.4	+1.3
	baz=314						
ZSN	Zaisan	56.48	315	eP	P	13 30 23.3	+0.9
ZSN				i S	S	13 37 30.3	+1.3
DANN	Dangsing	56.70	292	eP	P	13 30 25.5	+0.8
	comp=Z,2µm,0.8s						
DANN	Dangsing	56.70	292	eP	S	13 37 32.8	-0.2
	comp=Z,1µm,1.1s						
COCO	West Island	56.85	241	P	P	13 30 26.6	+1.2
COCO				pmax	pmax		
	comp=Z,174nm,0.8s						
COCO	West Island	56.85	241	P	P	13 30 26.6	+1.2
KOLN	Koldanda	56.90	291	eP	P	13 30 26.3	+0.4
	comp=Z,936nm,0.9s						
KOLN	Koldanda	56.90	291	eP	S	13 37 35.7	+0.4
	comp=Z,1µm,1.5s						
CHIR	Chirikof Islan	57.38	35	P	P	13 30 29.4	+1.0
	baz=255,SNR=14						
CHIR	Chirikof Islan	57.38	35	P	P	13 30 29.3	+0.9
CHIR				IAmb	IAmb	13 30 31.5	
	comp=Z,1µm,1.0s						
PYUN	Piuthan	57.40	292	eP	P	13 30 29.8	+0.5
	comp=Z,1µm,0.9s						
PYUN	Piuthan	57.40	292	eP	S	13 37 42.1	+0.3
	comp=Z,319nm,1.0s						
ZAA0	Zalesovo Array	57.73	323	P	P	13 30 30.8	+0.1
ZAA0				IAmb	IAmb	13 30 33.3	
	comp=Z,530nm,0.9s						
ZALV	Zalesovo Beam	57.73	323	P	P	13 30 30.7	+0.1
	comp=Z,254nm,0.5s,baz=104,slow=4.7,SNR=643						
ZALV				PcP	PcP	13 31 15.3	+0.2
	comp=Z,64nm,0.6s,baz=114,slow=4.1,SNR=6.5						
ZALV				S	S	13 37 41.1	-3.4
	comp=Z,43nm,1.0s,baz=96,slow=12,SNR=12						
ZALV				PKPPKP	P'P'df	14 00 02.9	-2.9
	comp=Z,6.4nm,1.2s,baz=318,slow=1.9,SNR=2.0						
ZALV				P4KPbc		14 07 29.5	
	comp=Z,0.2nm,0.3s,baz=104,slow=4.6,SNR=1.4						
ZALV	Zalesovo Beam	57.73	323	P	P	13 30 30.8	+0.1
ZALV	Zalesovo Beam	57.73	323	P	P	13 30 30.8	+0.1
ZALV	Zalesovo Beam	57.73	323		PcP	13 31 15.3	+0.2
NWAO	Narrogin (SRO)	58.01	208	P	P	13 30 34.7	+1.8
MK31	Makanchi Array	58.14	314	P	P	13 30 34.8	+1.1
MK31				pmax	pmax		
	comp=Z,530nm,1.1s						
MK31	Makanchi Array	58.14	314	P	P	13 30 34.8	+1.1
MK31				IAmb	IAmb	13 30 37.2	
	comp=Z,530nm,1.1s						
MKAR	Makanchi Array	58.14	314	P	P	13 30 34.6	+1.0
	comp=Z,406nm,0.8s,baz=92,slow=8.0,SNR=563						
MKAR				PcP	PcP	13 31 17.7	+0.7
	comp=Z,117nm,0.9s,baz=93,slow=4.9,SNR=7.1						
MKAR				PKiKP	PKiKP	13 37 37.3	-0.4
	comp=Z,4.3nm,1.0s,baz=86,slow=1.5,SNR=7.0						
MKAR				S	S	13 37 52.1	+2.0
	comp=Z,6.1nm,0.7s,baz=84,slow=21,SNR=4.8						
MKAR				PKPPKP	P'P'df	14 00 03.3	-2.3
	comp=Z,0.5nm,0.7s,baz=304,slow=3.3,SNR=3.6						
MKAR				PKP2bc		14 00 16.6	
	comp=Z,5.8nm,1.1s,baz=286,slow=2.3,SNR=9.9						
MKAR				P4KPbc		14 07 36.3	
	comp=Z,2.3nm,0.8s,baz=90,slow=6.4,SNR=14						
MKAR	Makanchi Array	58.14	314	P	P	13 30 34.7	+1.0
MKAR	Makanchi Array	58.14	314	P	P	13 30 34.7	+1.0
SII	Sitkinak Islan	58.34	34	P	P	13 30 35.7	+0.8
	baz=256,SNR=34						
SII				S	S	13 37 55.1	+2.8
	baz=256						
SII	Sitkinak Islan	58.34	34	P	P	13 30 36.1	+1.2
MAKZ	Makanchi	58.35	314	P	P	13 30 36.2	+1.0
MAKZ				pmax	pmax		
	comp=Z,740nm,0.9s						
MAKZ	Makanchi	58.35	314	P	P	13 30 36.2	+1.0
MAKZ				IAmb	IAmb	13 30 38.6	
	comp=Z,740nm,0.9s						
P18K	Big Mountain,	58.58	31	P	P	13 30 36.0	-0.4
	baz=253,SNR=25						
P18K	Big Mountain,	58.58	31	P	P	13 30 36.1	-0.4
O18K	Koktuh Hills	58.72	31	P	P	13 30 38.2	+0.9
	baz=253,SNR=99						
O18K	Koktuh Hills	58.72	31	P	P	13 30 38.3	+0.9
O18K				IAmb	IAmb	13 30 40.5	
	comp=Z,924nm,1.0s						
RDOG	Red Dog Mine	58.87	20	P	P	13 30 45.1	+6.9
	baz=240,SNR=164						
SVW2	Sparrevohn	58.93	29	P	P	13 30 39.6	+0.9
SVW2				IAmb	IAmb	13 30 42.1	
	comp=Z,559nm,1.4s						
OHAK	Old Harbor	58.98	34	P	P	13 30 40.3	+1.3
	baz=256,SNR=35						
OHAK				S	S	13 38 01.9	+1.7
	baz=256						
OHAK	Old Harbor	58.98	34	P	P	13 30 39.2	+0.2
OHAK				IAmb	IAmb	13 30 41.9	
	comp=Z,494nm,0.9s						
Q19K	Cape Douglas,	59.23	32	P	P	13 30 40.2	-0.6
	baz=255,SNR=28						
Q19K				S	S	13 38 00.1	-3.3
	baz=255						
Q19K	Cape Douglas,	59.23	32	P	P	13 30 40.1	-0.6
Q19K				IAmb	IAmb	13 30 42.2	
	comp=Z,585nm,1.1s						
TTA	Tatalina	59.34	27	P	P	13 30 42.2	+0.7
TTA				pmax	pmax		
	comp=Z,576nm,1.3s						
TTA	Tatalina	59.34	27	P	P	13 30 42.0	+0.6
	baz=250,SNR=113						
TTA				S	S	13 38 05.2	+0.5
	baz=250						
TTA	Tatalina	59.34	27	P	P	13 30 42.2	+0.7
TTA				IAmb	IAmb	13 30 44.4	
	comp=Z,576nm,1.3s						
L19K	White Mountain	59.60	28	P	P	13 30 44.0	+0.9
	baz=252,SNR=134						
L19K	White Mountain	59.60	28	P	P	13 30 44.1	+0.9
L19K				IAmb	IAmb	13 30 46.4	
	comp=Z,530nm,1.1s						
GCSA	Galena City Sc	59.62	25	P	P	13 30 43.5	+0.3
	baz=248,SNR=71						
GCSA				S	S	13 38 08.5	+0.5
	baz=248						
P19K	Oil Pt	59.62	31	P	P	13 30 43.7	+0.3
	baz=255,SNR=38						
P19K	Oil Pt	59.62	31	P	P	13 30 43.8	+0.3
P19K				IAmb	IAmb	13 30 45.5	
	comp=Z,811nm,0.8s						
M19K	Big River Lodg	59.72	28	P	P	13 30 45.1	+1.2
	baz=252						
M19K	Big River Lodg	59.72	28	P	P	13 30 45.1	+1.2
PDGK	Podgornoye	59.87	310	P	P	13 30 46.3	+0.8
SHLS	Shalkode	59.88	309⇓	i P	P	13 30 44.0	-1.6
	comp=Z,330nm,1.0s,baz=309						
SHLS				eS	S	13 38 10.8	-1.5
	comp=Z,526nm,1.6s,baz=309						
SHLS	Shalkode	59.88	309d	i P	P	13 30 43.9	-1.6
SHLS				eS	S	13 38 10.8	-1.5
SHLS				pmax	pmax		
	comp=Z,330nm,1.0s						
SHLS				smax	smax		
	comp=N,526nm,1.6s						
SEM	Semipalatinsk	59.90	318⇓	i P	P	13 30 45.2	-0.5
	comp=N,560nm,1.1s,baz=317						
SEM				i S	S	13 38 10.6	-1.9
	baz=317						
SEM	Semipalatinsk	59.90	318d	i P	P	13 30 45.1	-0.5
SEM				i S	S	13 38 10.5	-1.9
SEM				pmax	pmax		
	comp=Z,560nm,1.1s						
O20K	Slope Mountain	60.03	31	P	P	13 30 46.5	+0.4
	baz=255,SNR=8.7						
OUZ	Omahuta	60.05	153	P	P	13 30 48.0	+1.6
RSO	Redoubt South	60.07	30	P	P	13 30 46.3	-0.2
L20K	Farewell, AK	60.12	28	P	P	13 30 47.5	+0.8
	baz=252,SNR=81						
UZB	Uzynbulak	60.20	309⇓	i P	P	13 30 48.2	+0.5
	comp=Z,272nm,1.0s,baz=309						
UZB				eS	S	13 38 17.8	+1.4
	comp=Z,741nm,2.6s,baz=309						
UZB	Uzynbulak	60.20	309d	i P	P	13 30 48.2	+0.5
UZB				eS	S	13 38 17.7	+1.4
UZB				pmax	pmax		
	comp=Z,272nm,1.0s						
UZB				smax	smax		
	comp=N,741nm,2.6s						
K20K	Telida	60.31	27	P	P	13 30 48.6	+0.8
	baz=252,SNR=242						
K20K				S	S	13 38 19.0	+2.3
	baz=252						
K20K	Telida	60.31	27	P	P	13 30 49.2	+1.4
K20K				IAmb	IAmb	13 30 51.3	
	comp=Z,582nm,0.8s						
HOM	Homer	60.41	31	P	P	13 30 49.1	+0.7
	baz=256						
HOM				S	S	13 38 17.1	-0.9
	baz=256						
HOM	Homer	60.41	31	P	P	13 30 49.9	+1.4
HOM				IAmb	IAmb	13 30 51.4	
	comp=Z,651nm,0.9s						
KPKS	Kokpek	60.46	310⇓	i P	P	13 30 50.0	+0.7
	comp=Z,165nm,0.7s,baz=309						
KPKS				eS	S	13 38 22.2	+2.8
	comp=Z,437nm,2.8s,baz=309						
KPKS	Kokpek	60.46	310d	i P	P	13 30 50.0	+0.7
KPKS				eS	S	13 38 22.2	+2.8
KPKS				pmax	pmax		
	comp=Z,165nm,0.7s						
KPKS				smax	smax		
	comp=N,437nm,2.8s						
SPCR	Spurr Chakacha	60.52	30	P	P	13 30 49.9	+0.6
	baz=255,SNR=32						
SPCR				S	S	13 38 20.6	+1.1
	baz=255						
J20K	Nowinta River	60.54	26	P	P	13 30 50.3	+1.1
	baz=251,SNR=317						
J20K				S	S	13 38 21.0	+1.6
	baz=251						
J20K	Nowinta River	60.54	26	P	P	13 30 50.7	+1.4
J20K				IAmb	IAmb	13 30 52.4	
	comp=Z,474nm,0.7s						
CNPM	China Poot	60.58	32	P	P	13 30 49.6	-0.1
CNPM				IAmb	IAmb	13 30 51.7	
	comp=Z,857nm,0.9s						
SPU	Mount Spurr	60.59	30	P	P	13 30 49.9	+0.2
PRZ	Przheval'sk	60.65	309	P	P	13 30 52.5	+1.8
PRZ				pmax	pmax		
	comp=Z,1µm,0.9s						
PRZ	Przheval'sk	60.65	309	P	P	13 30 52.5	+1.8
SATY	Saty	60.65	309	eP	P	13 30 51.6	+1.0
	comp=Z,306nm,1.2s,baz=309						
SATY				eS	S	13 38 23.2	+1.3
	comp=Z,462nm,2.8s,baz=309						
SATY	Saty	60.65	309	eP	P	13 30 51.6	+1.0
SATY				eS	S	13 38 23.1	+1.3
SATY				pmax	pmax		
	comp=Z,306nm,1.2s						
SATY				smax	smax		
	comp=E,462nm,2.8s						
TDK	Taldyqorghan	60.71	312	eP	P	13 30 51.8	+0.9
	comp=E,991nm,1.0s,baz=311						
TDK				eS	S	13 38 25.1	+2.8
	baz=311						
TDK	Taldyqorghan	60.71	312	eP	P	13 30 51.7	+0.9
TDK				eS	S	13 38 25.1	+2.8
TDK				pmax	pmax		
	comp=Z,991nm,1.0s						
BRLK	Bradley Lake	60.81	31	P	P	13 30 50.8	-0.4
BRLK				IAmb	IAmb	13 30 52.8	
	comp=Z,485nm,0.9s						
BRSE	Bradley Lake S	60.87	31	P	P	13 30 51.6	0.0
	baz=257,SNR=37						
BRSE				S	S	13 38 22.9	-0.8
	baz=257						
CAPN	Captain Cook N	60.91	30	P	P	13 30 52.6	+0.8
CAPN				IAmb	IAmb	13 30 54.2	
	comp=Z,400nm,0.9s						
KURK	Kurchatov	60.96	318	P	P	13 30 52.9	+0.6
KURK				pmax	pmax		
	comp=Z,2µm,1.0s						
KURK	Kurchatov	60.96	318	P	P	13 30 53.1	+0.8
KURK	Kurchatov	60.96	318	P	P	13 30 52.9	+0.6
PPLA	Purkeypile	60.99	28	P	P	13 30 53.1	+0.7
	baz=254,SNR=63						
PPLA				S	S	13 38 26.0	+0.6
	baz=254						
PPLA	Purkeypile	60.99	28	P	P	13 30 53.2	+0.7
PPLA				IAmb	IAmb	13 30 54.9	
	comp=Z,308nm,0.8s						
KURBB	Kurchatov Arra	61.01	318	P4KPbc		14 07 47.8	
	comp=Z,0.4nm,0.7s,baz=94,slow=3.6,SNR=4.4						
KURBB	Kurchatov Arra	61.01	318	P	P	13 30 53.3	+0.7
ARXS	Arharly	61.10	311	eP	P	13 30 54.1	+0.6
CAST	Castle Rocks	61.18	27	P	P	13 30 54.0	+0.5
	baz=254,SNR=109						
CAST				S	S	13 38 27.5	0.0
	baz=254						
CAST	Castle Rocks	61.18	27	P	P	13 30 54.3	+0.7
CHUM	Lake Minchumin	61.22	27	P	P	13 30 54.4	+0.7
	baz=253,SNR=202						
CHUM				S	S	13 38 28.8	+1.1
	baz=253						
IMAR	Indian Mountai	61.29	24	P	P	13 30 54.8	+0.7
NRIK	Noril'sk	61.40	340	P	P	13 30 55.1	+0.3
	comp=Z,724nm,0.9s,baz=111,slow=7.4,SNR=321						
NRIK				S	S	13 38 30.4	+0.5
	comp=Z,18nm,1.0s,baz=351,slow=20,SNR=11						
NRIK				PKP2bc		14 00 07.5	
	comp=Z,2.9nm,0.5s,baz=252,slow=1.8,SNR=4.8						
NRIK				P4KPbc		14 07 50.4	
	comp=Z,6.0nm,0.8s,baz=108,slow=4.7,SNR=7.1						
NRIK	Noril'sk	61.40	340	P	P	13 30 55.1	+0.3
NRIK				pmax	pmax		
	comp=Z,2µm,1.3s						
NRIK	Noril'sk	61.40	340	P	P	13 30 55.1	+0.3
TAU	Tasmania Unive	61.41	178	P	P	13 30 55.0	-0.2
TAU				pmax	pmax		
	comp=Z,99nm,1.2s						
TAU	Tasmania Unive	61.41	178	P	P	13 30 55.0	-0.2
FIS	Fire Island	61.44	30	P	P	13 30 56.6	+1.4
O22K	Cooper Landing	61.53	31	P	P	13 30 55.9	+0.2
	baz=258,SNR=71						
O22K	Cooper Landing	61.53	31	P	P	13 30 56.0	+0.2
H21K	Melozitna Rive	61.55	25	P	P	13 30 56.9	+1.0
	baz=252,SNR=278						
H21K				S	S	13 38 34.0	+2.1
	baz=252						
H21K	Melozitna Rive	61.55	25	P	P	13 30 56.9	+1.0
H21K				IAmb	IAmb	13 30 59.2	
	comp=Z,866nm,1.4s						
KDJ	Kajisay	61.55	308	P	P	13 30 57.8	+1.2

KDJ	**Kajisay**	61.55	308	P	P	13 30 57.8	+1.2
KDJ				IAmb	IAmb	13 31 00.3	
	comp=Z,636nm,1.1s						
SEW	**Seward**	61.58	31	P	P	13 30 57.1	+0.9
	baz=258,SNR=60						
SEW				S	S	13 38 31.0	-1.4
	baz=258						
SEW	**Seward**	61.58	31	P	P	13 30 55.8	-0.3
SEW				IAmb	IAmb	13 30 58.6	
	comp=Z,776nm,1.0s						
M22K	**Willow**	61.63	29	P	P	13 30 56.3	-0.1
	baz=256,SNR=129						
M22K				S	S	13 38 30.8	-2.0
	baz=256						
MDOK	**Medeo**	61.65	309	*i* P	P	13 30 58.4	+1.2
	baz=309						
MDOK				*i* S	S	13 38 36.6	+2.4
	baz=309						
MDOK	**Medeo**	61.65	309	*i* P	P	13 30 58.3	+1.2
MDOK				*i* S	S	13 38 36.6	+2.4
RC01	**Rabbit Creek A**	61.66	30	P	P	13 30 56.5	-0.2
	baz=257,SNR=90						
RC01				S	S	13 38 30.3	-3.0
	baz=257						
RC01	**Rabbit Creek A**	61.66	30	P	P	13 30 56.6	0.0
CHKK	**Chushkaly**	61.70	310⇓	*i*P	P	13 30 57.6	+0.3
	baz=310						
KNDC	**Almaty**	61.71	309	P	P	13 30 57.5	+0.1
CUT	**Chulitna**	61.72	28	P	P	13 30 56.3	-0.7
	baz=256,SNR=52						
CUT				S	S	13 38 31.9	-2.1
	baz=256						
CUT	**Chulitna**	61.72	28	P	P	13 30 56.7	-0.3
CUT				IAmb	IAmb	13 30 58.7	
	comp=Z,883nm,1.2s						
KTH	**Kantishna Hill**	61.72	27	P	P	13 30 57.5	+0.4
KTH				IAmb	IAmb	13 30 59.6	
	comp=Z,684nm,1.0s						
TNSS	**Tian-Shan**	61.72	309	*e*P	P	13 30 59.4	+1.5
	baz=309						
I21K	**Tanana**	61.73	25	P	P	13 30 58.0	+0.9
	baz=253,SNR=324						
I21K				S	S	13 38 35.9	+1.8
	baz=253						
I21K	**Tanana**	61.73	25	P	P	13 30 58.2	+1.2
I21K				IAmb	IAmb	13 31 00.4	
	comp=Z,684nm,1.1s						
AAA	**Alma-Ata**	61.75	309	*e*P	P	13 30 57.9	+0.2
	baz=309						
AAA				*e*S	S	13 38 37.7	+2.5
	baz=309						
AAA	**Alma-Ata**	61.75	309	*e*P	P	13 30 57.9	+0.2
AAA				*e*S	S	13 38 37.7	+2.5
BPAW	**Bear Paw Mtn.**	61.84	27	P	P	13 30 58.3	+0.5
	baz=254,SNR=256						
BPAW				S	S	13 38 36.1	+0.6
	baz=254						
BPAW	**Bear Paw Mtn.**	61.84	27	P	P	13 30 58.5	+0.7
TRF	**Thorofare Moun**	61.97	27	P	P	13 30 58.6	-0.3
	baz=255,SNR=150						
TRF				S	S	13 38 36.0	-1.4
	baz=255						
TRF	**Thorofare Moun**	61.97	27	P	P	13 30 58.7	-0.1
TRF				IAmb	IAmb	13 31 00.9	
	comp=Z,517nm,1.0s						
PMR	**Palmer**	62.06	30	P	P	13 30 59.0	-0.2
PMR				pmax	pmax		
	comp=Z,379nm,0.7s						
PMR	**Palmer**	62.06	30	P	P	13 30 58.8	-0.3
	baz=258,SNR=137						
PMR				S	S	13 38 36.1	-2.0
	baz=258						
PMR	**Palmer**	62.06	30	P	P	13 30 59.0	-0.2
PMR				IAmb	IAmb	13 31 01.0	
	comp=Z,379nm,0.7s						
SMLA	**Simla**	62.16	296	*e*P	P	13 31 00.5	+0.1
KUU	**Kurty**	62.17	310⇓	*i*P	P	13 31 00.9	+0.5
	baz=310						
KUU				*i* S	S	13 38 42.2	+2.0
	baz=310						
KUU	**Kurty**	62.17	310*d*	*i*P	P	13 31 00.8	+0.5
KUU				*i* S	S	13 38 42.2	+2.0
GHO	**Glory Hole Cre**	62.19	29	P	P	13 31 00.2	0.0
GHO				IAmb	IAmb	13 31 02.2	
	comp=Z,548nm,0.8s						
MLY	**Manley**	62.20	26	P	P	13 31 00.6	+0.5
	baz=254,SNR=496						
MLY				S	S	13 38 40.7	+0.8
	baz=254						
MLY	**Manley**	62.20	26	P	P	13 31 00.9	+0.8
MLY				IAmb	IAmb	13 31 03.1	
	comp=Z,662nm,0.9s						
ULHL	**Ulahol**	62.25	308	P	P	13 31 03.8	+2.7
	SNR=21						
PWL	**Port Wells**	62.28	30	P	P	13 31 00.9	+0.2
	baz=259,SNR=203						
PWL				S	S	13 38 41.0	0.0
	baz=259						
PWL	**Port Wells**	62.28	30	P	P	13 31 01.1	+0.4
A21K	**Barrow**	62.32	18	P	P	13 31 01.6	+0.9
	baz=245,SNR=36						
A21K				S	S	13 38 41.8	+0.7
	baz=245						
A21K	**Barrow**	62.32	18	P	P	13 31 01.7	+0.9
KNK	**Knik Glacier**	62.33	30	P	P	13 31 01.0	0.0
	baz=258,SNR=117						
KNK				S	S	13 38 40.0	-1.6
	baz=258						
KNK	**Knik Glacier**	62.33	30	P	P	13 31 01.4	+0.3
KNK				IAmb	IAmb	13 31 03.5	
	comp=Z,687nm,0.9s						
NDI	**New Delhi**	62.40	293	*e*P	P	13 31 02.4	+0.4
NDI	**New Delhi**	62.40	293	*e*P	P	13 31 02.0	0.0
BOOM	**Boomskoye usch**	62.47	309	P	P	13 31 03.5	+1.0
BOOM				pmax	pmax		
	comp=Z,314nm,0.8s						
BOOM	**Boomskoye usch**	62.47	309	P	P	13 31 03.5	+1.0
BOOM				IAmb	IAmb	13 31 06.0	
	comp=Z,314nm,0.8s						
SML	**Sawmill**	62.47	29	P	P	13 31 02.2	+0.2
	baz=258,SNR=180						
SML				S	S	13 38 42.5	-0.9
	baz=258						
SML	**Sawmill**	62.47	29	P	P	13 31 02.2	+0.2
AYAN	**Aya Nagar**	62.50	293	*e*P	P	13 31 02.1	-0.6
BWN	**Browne**	62.50	27	P	P	13 31 02.7	+0.7
KSH	**Kashi**	62.52	305	P	P	13 31 05.5	+2.7
KSH				PcP	PcP	13 31 37.9	+2.8
KSH				sP	sP	13 34 07.3	+5.1
KSH				S	S	13 38 51.0	+6.1
KSH				ScS	ScS	13 39 58.0	+1.8
KSH				sS	sS	13 42 18.8	+5.3
KSH				SS	SS	13 43 12.5	+8.5
KSH				pmax	pmax		
	comp=Z,510nm,1.0s						
KSH				pmax	pmax		
	comp=Z,2µm,5.9s						
SONA	**Sohna**	62.57	293	*e*P	P	13 31 03.9	+0.8
RND	**Reindeer**	62.59	28	P	P	13 31 02.5	-0.2
RND				pmax	pmax		
	comp=Z,305nm,0.7s						
RND	**Reindeer**	62.59	28	P	P	13 31 02.5	-0.2
RND				IAmb	IAmb	13 31 04.6	
	comp=Z,305nm,0.7s						
WAT1	**Susitna Watana**	62.59	28	P	P	13 31 02.4	-0.2
	baz=257						
WAT1				S	S	13 38 43.0	-1.7
	baz=257						
MCK	**McKinley**	62.63	27	P	P	13 31 02.9	0.0
MCK				pmax	pmax		
	comp=Z,595nm,1.2s						
MCK	**McKinley**	62.63	27	P	P	13 31 03.5	+0.6
	baz=257,SNR=71						
MCK				S	S	13 38 42.8	-2.3
	baz=257						
MCK	**McKinley**	62.63	27	P	P	13 31 02.9	0.0
MCK				IAmb	IAmb	13 31 04.9	
	comp=Z,595nm,1.2s						
TKM2	**Tokmak 2**	62.71	309	P	P	13 31 05.1	+1.0
	SNR=540						
TKM2	**Tokmak 2**	62.71	309	P	P	13 31 04.9	+0.8
BHK	**Bhakra**	62.76	296	*e*P	P	13 31 04.8	+0.4
NEA2	**Nenana**	62.77	26	P	P	13 31 04.5	+0.8
	baz=256,SNR=208						
NEA2				S	S	13 38 45.1	-1.7
	baz=256						
NEA2	**Nenana**	62.77	26	P	P	13 31 03.8	0.0
NEA2				IAmb	IAmb	13 31 06.6	
	comp=Z,334nm,0.8s						
DHRM	**DHARAMSHALA**	62.77	297	*e*P	P	13 31 04.8	+0.1
DHRM				IAmb	IAmb	13 31 10.4	
	comp=Z,329nm,1.1s						
I23K	**Minto, Yukon-K**	62.79	26	P	P	13 31 04.8	+1.0
	baz=256,SNR=257						
I23K				S	S	13 38 46.6	-0.3
	baz=256						
I23K	**Minto, Yukon-K**	62.79	26	P	P	13 31 04.6	+0.7
I23K				IAmb	IAmb	13 31 07.0	
	comp=Z,562nm,0.8s						
GLI	**Glacier Island**	62.88	31	P	P	13 31 04.8	+0.2
	baz=260						
GLI				S	S	13 38 49.4	+1.2
	baz=260						
GLI	**Glacier Island**	62.88	31	P	P	13 31 04.7	+0.1
GLI				IAmb	IAmb	13 31 07.0	
	comp=Z,982nm,1.4s						
WAT6	**Susitna Watana**	62.90	29	P	P	13 31 04.9	0.0
	baz=258,SNR=223						
WAT6				S	S	13 38 47.5	-1.2
	baz=258						
SCM	**Sheep Creek Mo**	62.95	29	P	P	13 31 05.4	+0.4
SCM				pmax	pmax		
	comp=Z,1µm,1.0s						
SCM	**Sheep Creek Mo**	62.95	29	P	P	13 31 06.1	+1.1
	baz=259,SNR=122						
SCM				S	S	13 38 48.9	-0.2
	baz=259						
SCM	**Sheep Creek Mo**	62.95	29	P	P	13 31 05.4	+0.4
Q23K	**Middleton Isla**	63.01	32	P	P	13 31 06.9	+1.6
	baz=261,SNR=6.0						
Q23K	**Middleton Isla**	63.01	32	P	P	13 31 05.8	+0.4
MID	**Middleton Isla**	63.01	32	P	P	13 31 05.8	+0.5
MID				pmax	pmax		
	comp=Z,1µm,1.2s						
MID	**Middleton Isla**	63.01	32	P	P	13 31 05.8	+0.5
COLD	**Coldfoot**	63.02	23	P	P	13 31 06.5	+1.2
	baz=254,SNR=474						
COLD				S	S	13 38 50.8	+1.1
	baz=254						
COLD	**Coldfoot**	63.02	23	P	P	13 31 06.3	+1.0
COLD				IAmb	IAmb	13 31 08.8	
	comp=Z,573nm,1.0s						
BHPL	**Bhopal**	63.03	287	*e*P	P	13 31 06.3	0.0
BHPL				IAmb	IAmb	13 31 08.8	
	comp=Z,128nm,0.8s						
BHPL				*i* x	PcP	13 31 38.2	+0.8
HIN	**Hinchinbrook I**	63.09	31	P	P	13 31 06.5	+0.6
HIN				IAmb	IAmb	13 31 08.8	
	comp=Z,735nm,1.0s						
KUDL	**Kundal**	63.10	293	*e*P	P	13 31 06.2	-0.4
HYB	**Hyderabad**	63.12	280	*i* P	P	13 31 07.0	+0.1
	comp=Z,200nm,1.0s						
HYB				*e*PcP	PcP	13 31 38.0	+0.2
HYB				*e*pP	pP	13 33 03.0	-0.4
HYB				*e*sP	sP	13 34 06.0	-0.3
HYB				*e*S	S	13 38 53.0	+0.4
HYB	**Hyderabad**	63.12	280	*e*P	P	13 31 07.3	+0.4
HYB				IAmb	IAmb	13 31 09.9	
	comp=Z,79nm,0.7s						
FID	**Port Fidalgo**	63.16	31	P	P	13 31 06.5	+0.2
WRH	**Wood River Hil**	63.16	26	P	P	13 31 05.9	-0.3
WRH				IAmb	IAmb	13 31 08.1	
	comp=Z,521nm,1.0s						
DHY	**Denali Highway**	63.17	28	P	P	13 31 06.9	+0.4
	baz=258						
DHY				S	S	13 38 50.4	-1.6
	baz=258						
DHY	**Denali Highway**	63.17	28	P	P	13 31 06.7	+0.1
DHY				IAmb	IAmb	13 31 09.0	
	comp=Z,255nm,0.9s						
KBK	**Karagaybulak**	63.20	309	P	P	13 31 08.1	+0.9
	SNR=259						
MDM	**Murphy Dome**	63.21	26	P	P	13 31 06.4	-0.2
MDM				IAmb	IAmb	13 31 09.6	
	comp=Z,446nm,0.8s						
CCB	**Clear Creek Bu**	63.32	26	P	P	13 31 06.7	-0.5
CHMS	**Chumysh**	63.33	309	P	P	13 31 08.5	+0.7
	SNR=158						
TCOL	**CIGO, UAF Yank**	63.34	26	P	P	13 31 08.2	+0.8
	baz=257,SNR=85						
TCOL				S	S	13 38 52.2	-1.4
	baz=257						
TCOL	**CIGO, UAF Yank**	63.34	26	P	P	13 31 07.8	+0.4
TCOL				IAmb	IAmb	13 31 11.6	
	comp=Z,369nm,1.0s						
COLA	**College**	63.35	26	P	P	13 31 07.9	+0.5
COLA				pmax	pmax		
	comp=Z,363nm,1.0s						
COLA	**College**	63.35	26	P	P	13 31 08.1	+0.7
	baz=257						
COLA				S	S	13 38 53.6	-0.1
	baz=257						
COLA	**College**	63.35	26	P	P	13 31 07.9	+0.5
COLA				IAmb	IAmb	13 31 11.6	
	comp=Z,363nm,1.0s						
HIZ	**Hauiti**	63.38	154	P	P	13 31 07.5	-0.5
FRU1	**Bishkek**	63.43	309	P	P	13 31 09.1	+0.6
FRU1				pmax	pmax		
	comp=Z,520nm,1.1s						
FRU1	**Bishkek**	63.43	309	P	P	13 31 09.1	+0.6
FRU1				IAmb	IAmb	13 31 11.9	
	comp=Z,520nm,1.1s						
EYAK	**Cordova Ski Ar**	63.48	31	P	P	13 31 09.1	+0.8
	baz=261,SNR=29						
EYAK				S	S	13 38 56.2	+0.9
	baz=261						
EYAK	**Cordova Ski Ar**	63.48	31	P	P	13 31 09.1	+0.8
EYAK				IAmb	IAmb	13 31 11.3	
	comp=Z,454nm,0.9s						
USP	**Ospenovka**	63.51	310	P	P	13 31 09.5	+0.5
	SNR=296						
UCH	**Uchtor**	63.53	308	P	P	13 31 11.1	+1.5
	SNR=596						
AAK	**Ala-Archa**	63.53	309	PKP2bc		14 00 00.7	
	comp=Z,5.6nm,0.9s,baz=245,slow=2.9,SNR=4.1						
AAK	**Ala-Archa**	63.53	309	P	P	13 31 10.0	+0.7
	SNR=162						
AAK	**Ala-Archa**	63.53	309	*i* P	P	13 31 10.0	+0.7
	SNR=196						
AAK	**Ala-Archa**	63.53	309	P	P	13 31 09.8	+0.5
AAK				pmax	pmax		
	comp=Z,242nm,1.1s						
AAK	**Ala-Archa**	63.53	309	P	P	13 31 10.2	+0.9
AAK				P	P	13 31 10.2	+0.9
AAK	**Ala-Archa**	63.53	309	P	P	13 31 09.8	+0.5
M24K	**Tolsona, Glenn**	63.53	29	P	P	13 31 09.8	+1.1
	baz=260,SNR=32						
M24K				S	S	13 38 57.7	+1.6
	baz=260						
M24K	**Tolsona, Glenn**	63.53	29	P	P	13 31 09.6	+0.8
M24K				IAmb	IAmb	13 31 12.0	
	comp=Z,583nm,1.2s						
KLU	**Klutina**	63.55	30	P	P	13 31 09.4	+0.6
	baz=260,SNR=98						
KLU				S	S	13 38 56.2	-0.2
	baz=260						
KLU	**Klutina**	63.55	30	P	P	13 31 09.6	+0.8
KLU				IAmb	IAmb	13 31 11.8	
	comp=Z,988nm,1.3s						
H24K	**Noodor Dome**	63.56	25	P	P	13 31 09.6	+0.8
	baz=256						
H24K				S	S	13 38 56.5	+0.2
	baz=256						
H24K	**Noodor Dome**	63.56	25	P	P	13 31 09.6	+0.8
H24K				IAmb	IAmb	13 31 12.2	
	comp=Z,343nm,0.9s						
DIV	**Divide**	63.56	30	P	P	13 31 09.5	+0.5
DIV				IAmb	IAmb	13 31 12.0	
	comp=Z,432nm,0.9s						
POKR	**Poker Plat Res**	63.57	26	P	P	13 31 08.8	-0.1
	baz=257,SNR=154						
POKR				S	S	13 38 53.9	-2.6
	baz=257						
POKR	**Poker Plat Res**	63.57	26	P	P	13 31 08.4	-0.5
POKR				IAmb	IAmb	13 31 11.5	
	comp=Z,542nm,1.5s						
HDA	**Harding Lake**	63.63	27	P	P	13 31 08.4	-0.8
	baz=258,SNR=169						
HDA				S	S	13 38 53.1	-4.1
	baz=258						
HDA				S	S	13 38 53.1	-4.1
	baz=258						
HDA	**Harding Lake**	63.63	27	P	P	13 31 08.4	-0.8
HDA				IAmb	IAmb	13 31 10.7	
	comp=Z,385nm,1.0s						
TOLK	**Toolik Lake Re**	63.65	22	P	P	13 31 10.3	+0.9
	baz=254,SNR=535						
TOLK				S	S	13 38 58.3	+0.9
	baz=254						
TOLK	**Toolik Lake Re**	63.65	22	P	P	13 31 10.7	+1.3
PALK	**Pallekele**	63.69	269	P	P	13 31 09.8	-0.8
	comp=Z,36nm,0.9s,baz=156,slow=6.4,SNR=15						
PALK	**Pallekele**	63.69	269	P	P	13 31 09.8	-0.8
PALK	**Pallekele**	63.69	269	P	P	13 31 12.1	+1.5
PALK	**Pallekele**	63.69	269	P	P	13 31 09.6	-1.0
IL31		63.73	26	P	P	13 31 08.9	-0.9
IL31				IAmb	IAmb	13 31 11.2	
	comp=Z,646nm,1.1s						
ILAR	**Eielson Array**	63.73	26	P	P	13 31 08.8	-1.0
	comp=Z,323nm,0.9s,baz=255,slow=5.0,SNR=734						
ILAR				S	S	13 38 50.6	-7.7
	comp=Z,3.0nm,1.0s,baz=270,slow=14,SNR=3.3						
ILAR				PKPPKP	P'P'df	13 59 53.4	-2.5
	comp=Z,3.0nm,1.2s,baz=54,slow=2.3,SNR=6.5						
ILAR				P4KPbc		14 07 59.8	
	comp=Z,1.3nm,0.9s,baz=276,slow=4.3,SNR=9.2						
ILAR	**Eielson Array**	63.73	26	P	P	13 31 09.0	-0.9
ILAR	**Eielson Array**	63.73	26	P	P	13 31 09.0	-0.9
BTLS	**Baital**	63.80	312⇓	*i*P	P	13 31 11.4	+0.6
	comp=Z,262nm,0.8s,baz=311						
BTLS				*e*S	S	13 38 60.0	0.0
	baz=311						
BTLS	**Baital**	63.80	312*d*	*i*P	P	13 31 11.3	+0.6
BTLS				*e*S	S	13 38 59.9	0.0
BTLS				pmax	pmax		
	comp=Z,261nm,0.8s						
RAGM	**Ragged Mountai**	63.98	31	P	P	13 31 12.8	+1.2
RAGM				IAmb	IAmb	13 31 14.8	
	comp=Z,701nm,1.2s						
PAX	**Paxson**	64.00	28	P	P	13 31 12.3	+0.5
PAX				pmax	pmax		
	comp=Z,1µm,1.4s						
PAX	**Paxson**	64.00	28	P	P	13 31 11.9	+0.2
	baz=260,SNR=270						
PAX				S	S	13 39 00.3	-1.6
	baz=260						
PAX	**Paxson**	64.00	28	P	P	13 31 12.2	+0.5
KAIM	**Kayak Island**	64.05	32	P	P	13 31 13.4	+1.4
	baz=263,SNR=14						
KAIM	**Kayak Island**	64.05	32	P	P	13 31 13.3	+1.4
HARP	**HAARP**	64.05	29	P	P	13 31 12.6	+0.6
	baz=261,SNR=122						
EKS2	**Erkin-Say**	64.06	309	P	P	13 31 13.4	+0.8
	SNR=316						
MXZ	**Matakaoa Point**	64.08	151	P	P	13 31 12.9	+0.4
BMRM	**Bremner River**	64.09	31	P	P	13 31 13.0	+0.7
	baz=262,SNR=132						
BMRM				S	S	13 39 04.8	+1.8
	baz=262						
BMRM	**Bremner River**	64.09	31	P	P	13 31 12.9	+0.6
URZ	**Urewera**	64.12	153	P	P	13 31 12.6	-0.1
AML	**Almayashu**	64.14	308	P	P	13 31 14.7	+1.3
	SNR=488						
AML	**Almayashu**	64.14	308	*i* P	P	13 31 14.3	+0.9
	SNR=492						
AML	**Almayashu**	64.14	308	P	P	13 31 14.9	+1.5
HMT	**Hamilton**	64.18	31	P	P	13 31 13.4	+0.5
HMT				IAmb	IAmb	13 31 15.8	
	comp=Z,482nm,1.0s						
N25K	**Chitina, Valde**	64.19	30	P	P	13 31 13.6	+0.6
	baz=262,SNR=66						
N25K				S	S	13 39 04.4	+0.3
	baz=262						
N25K	**Chitina, Valde**	64.19	30	P	P	13 31 13.7	+0.7
N25K				IAmb	IAmb	13 31 15.5	
	comp=Z,216nm,0.8s						
J25K	**Salcha River,**	64.34	27	P	P	13 31 13.2	-0.6
	baz=260,SNR=190						
J25K				S	S	13 39 02.8	-2.9
	baz=260						
SUCK	**Suckling Hills**	64.38	32	P	P	13 31 14.5	+0.4
RIDG	**Independent Ri**	64.41	28	P	P	13 31 14.4	+0.1
	baz=260,SNR=192						
RIDG				S	S	13 39 05.1	-1.5
	baz=260						
RIDG	**Independent Ri**	64.41	28	P	P	13 31 15.2	+0.9
PRP	**Porcupine Dome**	64.44	26	P	P	13 31 14.0	-0.5
	baz=259,SNR=19						
PRP				S	S	13 39 03.7	-3.4
	baz=259						
BERG	**Berg Lake**	64.46	31	P	P	13 31 15.4	+0.9
QRZ	**Quartz Range**	64.48	157	P	P	13 31 15.5	+0.6
QRZ	**Quartz Range**	64.48	157	P	P	13 31 15.0	+0.1
GLB	**Gilahina Butte**	64.54	30	P	P	13 31 15.6	+0.5
GLB				IAmb	IAmb	13 31 18.1	
	comp=Z,624nm,1.1s						
BKZ	**Black Stump Fm**	64.61	154	P	P	13 31 15.5	-0.4
BGLC	**Bering Glacier**	64.64	32	P	P	13 31 15.9	+0.3
	baz=264						
VRDI	**Verde Repeater**	64.68	30	P	P	13 31 16.6	+0.3
VRDI				IAmb	IAmb	13 31 18.4	
	comp=Z,243nm,0.6s						
BRZS	**Berezniki**	64.72	317⇓	*i*P	P	13 31 16.3	-0.1
	comp=Z,258nm,1.4s,baz=317						
BRZS				*e*S	S	13 39 10.8	0.0
	baz=317						
BRZS	**Berezniki**	64.72	317*d*	*i*P	P	13 31 16.3	-0.1
BRZS				*e*S	S	13 39 10.7	0.0
BRZS				pmax	pmax		
	comp=Z,258nm,1.4s						
DOT	**Dot Lake**	64.74	28	P	P	13 31 16.5	+0.2
FYU	**Fort Yukon**	64.76	24	P	P	13 31 17.4	+1.1
CRQM	**Cirque**	64.78	31	P	P	13 31 17.2	+0.4
MENT	**Mentasta**	64.79	29	P	P	13 31 17.1	+0.5
CRQE	**Cirque**	64.80	31	P	P	13 31 17.5	+0.6
	baz=263,SNR=73						
SCRK	**Sand Creek**	64.82	27	P	P	13 31 17.1	+0.2
	baz=261,SNR=266						
SCRK				S	S	13 39 10.3	-1.4
	baz=261						
SCRK	**Sand Creek**	64.82	27	P	P	13 31 17.2	+0.2
SCRK				IAmb	IAmb	13 31 19.4	
	comp=Z,586nm,1.1s						
SNH	**Sunshine Point**	64.86	32	P	P	13 31 18.4	+1.2
WAX	**Waxell Ridge**	64.89	31	P	P	13 31 18.3	+0.9
WAX				IAmb	IAmb	13 31 20.5	
	comp=Z,832nm,1.2s						
MCARA	**McCarthy VSAT**	64.91	30	P	P	13 31 18.4	+1.0
	baz=263,SNR=113						
MCARA				S	S	13 39 11.9	-0.6
	baz=263						
MCARA	**McCarthy VSAT**	64.91	30	P	P	13 31 18.1	+0.7
MCARA				IAmb	IAmb	13 31 20.3	
	comp=Z,527nm,0.9s						
TGL	**Tana Glacier**	64.93	31	P	P	13 31 18.1	+0.5
TGL				IAmb	IAmb	13 31 20.6	
	comp=Z,505nm,1.0s						
L26K	**Log Cabin Wild**	64.97	28	P	P	13 31 18.1	+0.3
	baz=262,SNR=146						
L26K				S	S	13 39 12.5	-0.7
	baz=262						
L26K	**Log Cabin Wild**	64.97	28	P	P	13 31 18.4	+0.6
L26K				IAmb	IAmb	13 31 20.2	
	comp=Z,266nm,0.7s						
AJM	**Ajmer**	64.97	291	*e*P	P	13 31 18.8	+0.2
DSZ	**Denniston Nort**	65.03	158	P	P	13 31 19.5	+1.1
M26K	**Nabesna, AK**	65.05	29	P	P	13 31 18.9	+0.6
	baz=263,SNR=55						
M26K				S	S	13 39 14.7	+0.4
	baz=263						
M26K	**Nabesna, AK**	65.05	29	P	P	13 31 18.9	+0.6
J26L	**Joseph Creek**	65.09	27	P	P	13 31 18.8	+0.2
	baz=261,SNR=433						
J26L				S	S	13 39 12.6	-2.2
	baz=261						
NNZ	**Nelson**	65.13	157	P	P	13 31 18.6	-0.4
NNZ	**Nelson**	65.13	157	P	P	13 31 18.7	-0.3
ISLE	**Juniper Island**	65.15	31	P	P	13 31 19.5	+0.4
ISLE				IAmb	IAmb	13 31 21.3	
	comp=Z,235nm,0.6s						
NIL	**Nilore**	65.17	299	P	P	13 31 19.4	-0.2
NIL				pmax	pmax		
	comp=Z,2µm,0.8s						
NIL	**Nilore**	65.17	299	P	P	13 31 19.4	-0.2
BMAR	**Burnt Mountain**	65.18	24	P	P	13 31 20.7	+1.7
MESA	**MESA**	65.31	32	P	P	13 31 21.1	+1.0
	baz=265,SNR=46						
MESA				S	S	13 39 19.0	+1.3

	baz=265						
MESA	MESA	65.31	32	P	P	13 31 21.0	+1.0
YAH	Yahtse	65.42	31	P	P	13 31 21.6	+0.8
YAH				IAmb	IAmb	13 31 24.1	
	comp=Z,573nm,1.1s						
THZ	Tophouse	65.43	158	P	P	13 31 21.0	+0.1
THZ	Tophouse	65.43	158	P	P	13 31 21.1	+0.1
TCW	Tory Channel	65.46	156	P	P	13 31 21.7	+0.7
OGWZ	Otaki Gorge	65.47	155	P	P	13 31 21.9	+0.8
TUWZ	Tuamarina	65.53	157	P	P	13 31 22.1	+0.7
BARN	Barnard Glacie	65.53	31	P	P	13 31 22.1	+0.6
M27K	Edge Creek, AK	65.56	29	P	P	13 31 22.2	+0.6
	baz=264,SNR=55						
M27K				S	S	13 39 21.3	+0.8
	baz=264						
M27K	Edge Creek, AK	65.56	29	P	P	13 31 22.5	+0.9
M27K				IAmb	IAmb	13 31 24.6	
	comp=Z,736nm,1.5s						
L27K	Beaver Creek,	65.66	29	P	P	13 31 22.5	+0.4
	baz=264,SNR=194						
L27K				S	S	13 39 21.9	+0.4
	baz=264						
L27K	Beaver Creek,	65.66	29	P	P	13 31 22.6	+0.5
L27K				IAmb	IAmb	13 31 24.4	
	comp=Z,189nm,0.7s						
CTG	Chitna Glacier	65.68	31	P	P	13 31 23.2	+0.9
	baz=265,SNR=108						
CAW	Cannon Point	65.68	156	P	P	13 31 22.1	-0.3
BCAR	Beaver Creek A	65.68	29	P	P	13 31 23.0	+0.8
CTGM	Chitina Glacie	65.68	31	P	P	13 31 23.1	+0.8
CTGM				IAmb	IAmb	13 31 25.5	
	comp=Z,409nm,0.8s						
SNZO	South Karori	65.71	156	P	P	13 31 21.4	-1.1
TABL	Table Mountain	65.73	31	P	P	13 31 23.6	+0.8
BSWZ	Blackbirch Sta	65.75	157	P	P	13 31 24.0	+1.1
BSWZ	Blackbirch Sta	65.75	157	P	P	13 31 21.0	-1.8
BFZ	Birch Farm	65.78	155	P	P	13 31 24.4	+1.3
BFZ	Birch Farm	65.78	155	P	P	13 31 22.7	-0.4
LOGN	Logan Glacier	65.83	31	P	P	13 31 24.1	+0.8
LOGN				IAmb	IAmb	13 31 26.4	
	comp=Z,698nm,1.2s						
DZA	Taraz	65.85	309	eP	P	13 31 23.3	-0.3
	baz=309						
DZA				i S	S	13 39 25.1	+0.6
	baz=309						
DZA	Taraz	65.85	309	eP	P	13 31 23.3	-0.3
DZA				i S	S	13 39 25.0	+0.6
WVZ	Waitaha Valley	65.85	160	P	P	13 31 23.5	+0.1
BHW	Baring Head	65.86	156	P	P	13 31 23.3	-0.2
BHW	Baring Head	65.86	156	P	P	13 31 22.6	-0.9
MTW	Mount Morrison	65.89	155	P	P	13 31 23.3	-0.5
CMWZ	Cape Campbell	65.90	157	P	P	13 31 25.5	+1.7
CMWZ	Cape Campbell	65.90	157	P	P	13 31 23.2	-0.5
FOZ	Fox Glacier	65.97	161	P	P	13 31 23.7	-0.4
TMWZ	Te Maipa	66.00	155	P	P	13 31 24.5	0.0
MSWZ	Moikau Station	66.01	156	P	P	13 31 24.5	0.0
MSWZ	Moikau Station	66.01	156	P	P	13 31 23.5	-0.9
BVCY	Beaver Creek	66.04	29	P	P	13 31 25.2	+0.8
	baz=265,SNR=114						
BVCY				S	S	13 39 26.3	+0.4
	baz=265						
PAWZ	Paruwai Farm	66.05	156	P	P	13 31 25.9	+1.1
LTZ	Lake Taylor	66.11	159	P	P	13 31 24.9	-0.1
LTZ	Lake Taylor	66.11	159	P	P	13 31 24.6	-0.4
PCA	Pinnacle	66.14	32	P	P	13 31 25.9	+0.7
PCA				IAmb	IAmb	13 31 28.2	
	comp=Z,534nm,1.0s						
PINM	Pinnacle	66.14	32	P	P	13 31 25.8	+0.7
	baz=266,SNR=49						
PINM				S	S	13 39 28.4	+1.0
	baz=266						
PLWZ	Palliser	66.15	156	P	P	13 31 24.6	-0.7
PLWZ	Palliser	66.15	156	P	P	13 31 24.8	-0.6
YUK3	Moose Creek	66.17	30	P	P	13 31 26.6	+1.1
	baz=265,SNR=175						
YUK3				S	S	13 39 28.1	+0.2
	baz=265						
TRWZ	Traveller	66.17	155	P	P	13 31 25.8	+0.3
KHZ	Kahutara	66.23	158	P	P	13 31 24.3	-1.4
KHZ	Kahutara	66.23	158	P	P	13 31 24.1	-1.7
BRVK	Borovoye	66.24	320	P	P	13 31 26.4	+0.6
BRVK				pmax	pmax		
	comp=Z,877nm,0.9s						
BRVK	Borovoye	66.24	320	P	P	13 31 27.0	+1.2
BRVK	Borovoye	66.24	320	P	P	13 31 26.4	+0.6
KKAR	Karatay Array	66.43	310	P	P	13 31 27.9	+0.7
KKAR	Karatay Array	66.43	310	P	P	13 31 27.9	+0.7
BCPM	Bancas Point	66.45	32	P	P	13 31 27.9	+1.0
BCPM				IAmb	IAmb	13 31 30.2	
	comp=Z,522nm,1.1s						
BTK	Batken	66.45	306	P	P	13 31 26.8	-0.7
BTK				pmax	pmax		
	comp=Z,297nm,1.3s						
BTK	Batken	66.45	306	P	P	13 31 26.8	-0.7
OXZ	Oxford	66.51	159	P	P	13 31 28.1	+0.6
OXZ	Oxford	66.51	159	P	P	13 31 26.9	-0.6
RPZ	Rata Peaks	66.53	160	P	P	13 31 27.2	-0.4
RPZ	Rata Peaks	66.53	160	P	P	13 31 26.8	-0.8
GVZ	Greta Valley S	66.53	158	P	P	13 31 27.4	-0.3
PNL	Peninsula	66.55	32	P	P	13 31 28.3	+0.7
	baz=267,SNR=42						
PNL				S	S	13 39 33.6	+1.6
	baz=267						
AMCZ	Amberley	66.58	159	P	P	13 31 28.1	+0.2
DAWY	Dawson	66.84	28	P	P	13 31 30.0	+0.6
	baz=265,SNR=281						
DAWY				S	S	13 39 36.4	+1.0
	baz=265						
DAWY	Dawson	66.84	28	P	P	13 31 30.4	+1.0
DAWY				IAmb	IAmb	13 31 32.5	
	comp=Z,600nm,1.3s						
LBZ	Lake Benmore	66.85	161	P	P	13 31 28.7	-0.9
IUG	Iuzhnay	66.86	309	⇓iP	P	13 31 30.6	+0.6
	baz=308						
IUG				i S	S	13 39 38.1	+1.6
	baz=308						
IUG	Iuzhnay	66.86	309	d iP	P	13 31 30.5	+0.6
IUG				i S	S	13 39 38.0	+1.6
RAR	Rarotonga	66.86	124	P	P	13 31 31.4	+1.3
RAR				pmax	pmax		
	comp=Z,43nm,1.0s						
RAR	Rarotonga	66.86	124	P	P	13 31 31.4	+1.3
TRD	Trivandrum	66.88	271	eP	P	13 31 31.3	+0.9
TRD				IAmb	IAmb	13 31 33.8	
	comp=Z,146nm,0.9s						
WKZ	Wanaka	66.90	162	P	P	13 31 31.2	+1.3
BRLS	Borolday	66.93	310	eP	P	13 31 31.1	+0.8
	baz=309						
BRLS				i S	S	13 39 39.0	+1.9
	baz=309						
BRLS	Borolday	66.93	310	eP	P	13 31 31.1	+0.8
BRLS				i S	S	13 39 39.0	+1.9
GAR	Garm	66.94	305	P	P	13 31 31.0	+0.5
DCZ	Deep Cove	66.96	163	P	P	13 31 30.4	+0.3
YUK4	Talbot Arm	67.01	31	P	P	13 31 32.0	+1.4
	baz=267,SNR=219						
YUK4				S	S	13 39 40.0	+2.3
	baz=267						
MQZ	McQueen's Vall	67.05	159	P	P	13 31 31.4	+0.7
YUK6	Outpost Mounta	67.12	31	P	P	13 31 32.6	+1.2
	baz=268,SNR=84						
YUK6				S	S	13 39 42.2	+3.1
	baz=268						
KAD	Karad	67.21	281	eP	P	13 31 31.7	-0.8
KAD				i x	PcP	13 31 55.7	+0.8
POO	Poona	67.24	283	eP	P	13 31 32.9	+0.3
POO				IAmb	IAmb	13 31 36.0	
	comp=Z,135nm,0.7s						
POO	Poona	67.24	283	eP	P	13 31 30.0	-2.6
J29M	Klondike Camp	67.38	27	P	P	13 31 33.8	+1.1
	baz=266,SNR=21						
J29M				S	S	13 39 42.9	+1.2
	baz=266						
I29M	Ogilvie Camp,	67.41	26	P	P	13 31 33.8	+1.0
	baz=266,SNR=249						
I29M				S	S	13 39 42.1	+0.2
	baz=266						
HYT	Haines Junctio	67.54	31	P	P	13 31 35.0	+1.2
	baz=268,SNR=433						
HYT				S	S	13 39 45.9	+2.1
	baz=268						
HYT	Haines Junctio	67.54	31	P	P	13 31 35.1	+1.4
ODZ	Otahua Downs	67.59	161	P	P	13 31 34.3	+0.3
CHGR	Chuyangaron	67.88	305	P	P	13 31 36.7	+0.5
M30M	Minto, Yukon	67.93	29	P	P	13 31 36.8	+0.8
	baz=268,SNR=178						
M30M				S	S	13 39 50.1	+2.1
	baz=268						
GOA	Goa	67.98	280	eP	P	13 31 38.2	+1.1
GOA				IAmb	IAmb	13 31 38.7	
	comp=Z,123nm,1.1s						
EPYK	Eagle Plains	68.13	25	P	P	13 31 37.7	+0.5
	baz=267,SNR=288						
EPYK				S	S	13 39 50.1	0.0
	baz=267						
EPYK	Eagle Plains	68.13	25	P	P	13 31 38.0	+0.8
EPYK				IAmb	IAmb	13 31 39.6	
	comp=Z,412nm,0.7s						
JASL	Jaisalmer	68.19	292	eP	P	13 31 38.9	+0.7
N31M	Braeburn, Yuko	68.39	30	P	P	13 31 40.0	+1.2
	baz=270,SNR=158						
N31M				S	S	13 39 55.6	+2.3
	baz=270						
KBL	Kabul	68.51	300	P	P	13 31 40.8	+0.5
KBL				pmax	pmax		
	comp=Z,650nm,1.0s						
KBL	Kabul	68.51	300	P	P	13 31 40.6	+0.3
	SNR=197						
KBL				P	P	13 31 40.6	+0.3
	SNR=197						
KBL	Kabul	68.51	300	P	P	13 31 40.8	+0.5
SKAG	Skagway	68.62	33	P	P	13 31 41.2	+1.1
	baz=271,SNR=77						
SKAG				S	S	13 39 57.5	+1.6
	baz=271						
SKAG	Skagway	68.62	33	P	P	13 31 41.3	+1.2
SKAG				IAmb	IAmb	13 31 43.7	
	comp=Z,360nm,1.2s						
SIT	Sitka	68.67	35	P	P	13 31 41.2	+0.7
SIT				pmax	pmax		
	comp=Z,229nm,1.2s						
SIT	Sitka	68.67	35	P	P	13 31 41.6	+1.1
	baz=272,SNR=11						
SIT				S	S	13 39 58.7	+2.1
	baz=272						
SIT	Sitka	68.67	35	P	P	13 31 41.2	+0.7
WHY	Whitehorse	68.83	31	P	P	13 31 42.9	+1.3
	baz=271,SNR=160						
WHY				S	S	13 40 00.8	+2.2
	baz=271						
WHY	Whitehorse	68.83	31	P	P	13 31 42.6	+1.0
WHY				IAmb	IAmb	13 31 45.1	
	comp=Z,592nm,1.4s						
BESE	Bessie Mountai	68.88	34	P	P	13 31 42.4	+0.6
BESE				IAmb	IAmb	13 31 45.3	
	comp=Z,819nm,1.4s						
M31M	Drury Creek, Y	69.05	30	P	P	13 31 43.4	+0.7
	baz=271,SNR=198						
M31M				S	S	13 40 00.7	-0.1
	baz=271						
JIS	Juneau Island	69.14	34	P	P	13 31 44.1	+0.8
JIS				IAmb	IAmb	13 31 46.8	
	comp=Z,678nm,1.3s						
INK	Inuvik	69.43	23	P	P	13 31 45.1	+0.3
INK				pmax	pmax		
	comp=Z,809nm,1.1s						
INK	Inuvik	69.43	23	P	P	13 31 45.6	+0.7
	baz=269						
INK				S	S	13 40 02.8	-2.1
	baz=269						
INK	Inuvik	69.43	23	P	P	13 31 45.1	+0.3
FARO	Faro, Yukon	69.53	30	P	P	13 31 46.2	+0.6
	baz=272,SNR=142						
FARO				S	S	13 40 08.2	+1.8
	baz=272						
P33M	Teslin, Yukon	69.86	32	P	P	13 31 48.9	+1.2
	baz=273,SNR=69						
P33M				S	S	13 40 11.3	+1.0
	baz=273						
CRAG	Craig	69.98	37	P	P	13 31 49.6	+1.2
	baz=274,SNR=20						
CRAG				S	S	13 40 14.1	+2.5
	baz=274						
CRAG	Craig	69.98	37	P	P	13 31 49.0	+0.7
CRAG				IAmb	IAmb	13 31 51.9	
	comp=Z,280nm,1.2s						
WRAK	Wrangell Islan	70.35	36	P	P	13 31 51.4	+0.9
	baz=274,SNR=62						
WRAK				S	S	13 40 17.4	+1.7
	baz=274						
WRAK	Wrangell Islan	70.35	36	P	P	13 31 51.6	+1.1
WRAK				IAmb	IAmb	13 31 53.9	
	comp=Z,409nm,1.0s						
MMPY	Sheldon Lake,	70.49	29	P	P	13 31 52.5	+1.2
	baz=273,SNR=132						
MMPY				S	S	13 40 18.2	+1.0
	baz=273						
H02N1	VAN INLET T-PH	70.51	39	P	P	13 31 51.8	+0.2
	SNR=5.3						
DIB	Dawson Inlet,	70.55	39	P	P	13 31 52.2	+0.5
DIB				IAmb	IAmb	13 31 54.3	
	comp=Z,289nm,1.0s						
H02S1	DAWSON INLET T	70.55	39	P	P	13 31 51.9	+0.2
	SNR=67						
H02S1	DAWSON INLET T	70.55	39	P	P	13 31 51.9	+0.2
MOBC	Moresby Island	70.86	39	P	P	13 31 53.7	+0.1
MOBC				IAmb	IAmb	13 31 56.5	
	comp=Z,388nm,1.4s						
DLBC	Dease Lake	71.42	34	P	P	13 31 58.2	+1.4
DLBC				IAmb	IAmb	13 32 00.5	
	comp=Z,761nm,1.2s						
SVE	Sverdlovsk	71.60	325	ceP	P	13 31 58.3	+0.5
SVE				eS	S	13 40 29.4	-0.3
SVE				pmax	pmax		
	comp=Z,1µm,1.1s						
RUBB	Prince Rupert	71.74	38	P	P	13 31 59.5	+0.8
RUBB				IAmb	IAmb	13 32 02.0	
	comp=Z,352nm,1.2s						
WTLY	Watson Lake, Y	71.88	32	P	P	13 32 00.6	+1.2
	baz=276,SNR=50						
GRNB	Grenville Isla	71.97	38	P	P	13 32 00.8	+0.8
TGTN	Hyland Airport	71.98	30	P	P	13 32 01.0	+1.0
	baz=276,SNR=266						
TGTN				S	S	13 40 34.5	+0.5
	baz=276						
A36M	Sachs Harbour	72.11	19	P	P	13 32 00.8	+0.4
	baz=276,SNR=614						
A36M				S	S	13 40 34.1	-0.9
	baz=276						
A36M	Sachs Harbour	72.11	19	P	P	13 32 00.9	+0.4
ARU	Arti	72.78	325	d iP	P	13 32 04.9	+0.3
ARU						13 32 17.4	
ARU				*PP	pP	13 34 05.7	-0.8
ARU						13 34 58.1	
ARU				*SP	sP	13 35 10.9	+2.8
ARU				S	S	13 40 44.2	+1.3
ARU						13 41 15.4	
ARU				SS	SS	13 45 37.7	-1.7
ARU				pmax	pmax		
	comp=Z,2µm,1.0s						
ARU				MLR	MLR		
	comp=Z,656nm,16.0s						
ARU	Arti	72.78	325	P	P	13 32 04.9	+0.3
AB31	Akbulak array	73.03	317	i P	P	13 32 05.8	-0.4
ABKAR	Akbulak array	73.03	317	P	P	13 32 06.1	0.0
ABKAR				IAmb	IAmb	13 32 08.6	
	comp=Z,546nm,1.1s						
KAAM	Kaadhehdhoo	73.11	265	P	P	13 32 10.4	+3.1
BBB	Bella Bella	73.31	40	P	P	13 32 06.9	-0.8
BBB				IAmb	IAmb	13 32 10.7	
	comp=Z,323nm,1.1s						
PPT	Papeete	73.48	116	P	P	13 32 09.8	+0.5
	comp=Z,21nm,0.5s,baz=42,slow=9.9,SNR=7.6						
PPT	Papeete	73.48	116	P	P	13 32 09.8	+0.5
PPT2	Papeete2	73.49	116	eP	P	13 32 11.0	+1.6
	comp=Z,33nm,0.7s						
PPTF	Pamatai, Papee	73.50	116	P	P	13 32 11.6	+2.2
PAE	Paea	73.52	116	ePn	P	13 32 13.0	+3.6
PAE	Paea	73.52	116	eP	P	13 32 11.0	+1.6
	comp=Z,7.8nm,0.6s						
HOLB	Holberg	73.56	42	P	P	13 32 10.5	+1.3
PMOR	Pomariorio Ree	73.83	112	ePn	P	13 32 14.0	+2.7
PMOR	Pomariorio Ree	73.83	112	eP	P	13 32 12.5	+1.2
	comp=Z,68nm,0.6s						
WRGLY	Wrigley	73.97	28	P	P	13 32 12.1	+0.9
	baz=280,SNR=243						
WRGLY				S	S	13 40 56.2	+0.6
	baz=280						
HRA	Herat	74.07	301	P	P	13 32 13.1	+0.4
HRA				IAmb	IAmb	13 32 15.8	
	comp=Z,335nm,1.0s						
TLCB	Telegraph Cove	74.39	41	P	P	13 32 14.8	+1.0
TLCB				IAmb	IAmb	13 32 17.3	
	comp=Z,412nm,1.3s						
CBB	Campbell River	75.41	42	P	P	13 32 20.6	+1.1
CBB				IAmb	IAmb	13 32 23.2	
	comp=Z,318nm,1.2s						
OZB	Mount Ozzard	75.55	43	P	P	13 32 21.5	+1.1
OZB				IAmb	IAmb	13 32 23.9	
	comp=Z,664nm,1.2s						
DGAR	Diego Garcia	76.36	257	ceP	P	13 32 24.4	-1.0
DGAR				pmax	pmax		
	comp=Z,204nm,1.7s						
C03A	Quillayute Air	76.37	44	P	P	13 32 26.6	+1.7
C03A				IAmb	IAmb	13 32 29.3	
	comp=Z,788nm,1.3s						
H08S2	Diego Garcia H	76.41	257	P	P	13 32 26.6	+1.3
	baz=248,slow=74,SNR=3.3						
H08S3	Diego Garcia H	76.41	257	P	P	13 32 25.9	+0.5
	baz=57,slow=74,SNR=4.2						
H08S3	Diego Garcia H	76.41	257	P	P	13 32 25.9	+0.5
CLRS	Cowichan Lake	76.46	43	P	P	13 32 26.3	+1.0
GEYT	Alibeck	76.55	306	P	P	13 32 26.9	+0.8
	comp=Z,186nm,0.9s,baz=177,slow=2.5,SNR=144						
GEYT	Alibeck	76.55	306	P	P	13 32 27.1	+1.0
GEYT				IAmb	IAmb	13 32 29.5	
	comp=Z,255nm,0.9s						
GYA0B	ALIBECK ARRAY	76.55	306	P	P	13 32 27.1	+0.9
GYA0B				IAmb	IAmb	13 32 29.4	
	comp=Z,334nm,1.0s						
PGC	Sidney	76.94	43	P	P	13 32 28.8	+0.9
PGC				IAmb	IAmb	13 32 31.3	
	comp=Z,374nm,1.1s						
NLWA	Neilton Lookou	76.96	44	P	P	13 32 29.6	+1.4
NLWA				IAmb	IAmb	13 32 32.0	
	comp=Z,816nm,1.2s						
B04A	Port Angeles	77.04	43	P	P	13 32 29.7	+1.2
B04A				IAmb	IAmb	13 32 32.3	
	comp=Z,529nm,1.1s						
WISH	Wishkah	77.09	44	P	P	13 32 30.3	+1.5
WISH				IAmb	IAmb	13 32 33.0	
	comp=Z,685nm,1.0s						
KIRV	Kirov	77.19	328	ceP	P	13 32 29.2	+0.1
RADR	Rader Ridge	77.23	45	P	P	13 32 31.0	+1.3
RADR				IAmb	IAmb	13 32 33.6	
	comp=Z,714nm,1.2s						
E03A	Lebam	77.36	45	P	P	13 32 31.5	+1.3
E03A				IAmb	IAmb	13 32 33.9	
	comp=Z,753nm,1.1s						
A04D	Lummi Island	77.40	43	P	P	13 32 31.3	+0.9
	baz=284,SNR=9.6						
A04D				S	S	13 41 32.9	+0.1
	baz=284						
D03D	Eldon	77.44	44	P	P	13 32 32.0	+1.3
	baz=284,SNR=112						
D03D				S	S	13 41 35.4	+2.1
	baz=284						
LLLB	Lillooet	77.46	41	P	P	13 32 31.7	+1.0
LLLB				IAmb	IAmb	13 32 34.2	
	comp=Z,446nm,1.2s						
HEBO	Mount Hebo	77.55	46	P	P	13 32 32.5	+1.1
HEBO				IAmb	IAmb	13 32 34.5	
	comp=Z,323nm,0.9s						
EUNU	Eureka	77.69	8	P	P	13 32 32.2	+0.7
EUNU				IAmb	IAmb	13 32 34.6	
	comp=Z,729nm,1.2s						
KEBM	Edson Butte	77.72	49	P	P	13 32 33.1	+0.7
D04E	Lakebay	77.73	44	P	P	13 32 33.9	+1.6
	baz=284,SNR=18						
D04E				S	S	13 41 34.9	-1.4
	baz=284						
I02E	Swisshome, OR	77.76	47	P	P	13 32 33.4	+1.0
	baz=284,SNR=11						
F04D	Rainier, OR	77.84	45	P	P	13 32 34.2	+1.3
	baz=284,SNR=8.8						
G03D	McMinnville, O	77.89	46	P	P	13 32 34.3	+1.2
	baz=284,SNR=14						
G03D				S	S	13 41 39.2	+1.1
	baz=284						
B05A	Bryant	77.90	43	P	P	13 32 34.1	+1.0
	baz=285,SNR=74						
B05A				S	S	13 41 38.3	+0.2
	baz=285						
J01E	Myrtle Point	77.93	48	P	P	13 32 34.6	+1.2
	baz=284,SNR=17						
KBO	Bosley Butte	77.96	49	P	P	13 32 34.7	+1.0
E04D	Cinebar	78.02	45	P	P	13 32 35.1	+1.3
	baz=285,SNR=40						
E04D				S	S	13 41 40.6	+1.2
	baz=285						
YKA	Yellowknife Ar	78.08	28	P	P	13 32 33.9	+0.1
	comp=Z,241nm,0.9s,baz=284,slow=5.8,SNR=337						
YKA				pP	pP	13 34 37.7	+0.7
	comp=Z,8.4nm,0.8s,baz=291,slow=5.2,SNR=2.7						
YKA				S	S	13 41 36.6	-2.8
	comp=Z,8.0nm,1.1s,baz=284,slow=9.0,SNR=7.8						
YKA	Yellowknife Ar	78.08	28	P	P	13 32 34.0	+0.2
YKA	Yellowknife Ar	78.08	28	P	P	13 32 34.0	+0.2
PRGR	Permogore	78.16	331	eP	P	13 32 34.1	-0.1
PRGR				eS	S	13 41 38.6	-1.7
PRGR				pmax	pmax		
	comp=Z,141nm,1.2s						
I03D	Drain, OR	78.21	48	P	P	13 32 35.8	+1.0
	baz=285,SNR=35						
I03D				S	S	13 41 42.8	+1.3
	baz=285						
B06A	Marblemount	78.23	43	P	P	13 32 34.4	-0.4
B06A				IAmb	IAmb	13 32 38.0	
	comp=Z,431nm,1.3s						
K02D	Willamette Mer	78.24	49	P	P	13 32 36.0	+0.8
	baz=285,SNR=33						
D05A	Enumclaw	78.25	44	P	P	13 32 36.1	+1.1
D05A				IAmb	IAmb	13 32 38.2	
	comp=Z,284nm,0.7s						
F04A	Amboy	78.28	45	P	P	13 32 36.0	+0.8
F04A				IAmb	IAmb	13 32 38.5	
	comp=Z,499nm,1.1s						
BUCK	Buck Mountain	78.34	47	P	P	13 32 36.8	+1.2
KRMB	Red Mountain	78.36	50	P	P	13 32 36.9	+1.0
L02E	Cave Junction	78.42	49	P	P	13 32 37.5	+1.4
	baz=285,SNR=30						
L02E				S	S	13 41 44.8	+1.0
	baz=285						
H04D	Lebanon	78.42	47	P	P	13 32 37.7	+1.7
	baz=285,SNR=22						
H04D				S	S	13 41 44.1	+0.4
	baz=285						
JCC	Jacoby Creek,	78.45	51	P	P	13 32 37.4	+1.2
JCC				IAmb	IAmb	13 32 40.2	
	comp=Z,646nm,1.4s						
HOPEN	Hopen	78.53	348	⇓iP	P	13 32 37.5	+1.6
KHMM	Horse Mountain	78.66	51	P	P	13 32 39.0	+1.4
KHMM				IAmb	IAmb	13 32 41.5	
	comp=Z,494nm,1.2s						
HUMO	Hull Mountain	78.77	49	P	P	13 32 39.6	+1.6
C06D	Leavenworth	78.77	43	P	P	13 32 38.8	+0.9
	baz=286,SNR=21						
C06D				S	S	13 41 47.1	-0.1
	baz=286						
I04A	Tendick Farm,	78.84	48	P	P	13 32 39.2	+0.9
	baz=285,SNR=43						
KMRM	Mail Ridge	78.84	51	P	P	13 32 39.3	+0.8
KMRM				IAmb	IAmb	13 32 42.3	
	comp=Z,306nm,1.1s						
F05D	White Salmon	78.94	45	P	P	13 32 39.8	+1.0
	baz=286,SNR=24						
F05D				S	S	13 41 49.6	+0.6
	baz=286						
HOOD	Mount Hood Mea	78.96	46	P	P	13 32 39.5	+0.4
HOOD				IAmb	IAmb	13 32 42.4	
	comp=Z,383nm,1.2s						
SPA0	Spitsbergen Ar	79.02	351	⇓iP	P	13 32 39.6	+1.1
SPA0				IVmB_BB		13 32 40.2	
	comp=Z,7µm,1.8s						
SPB2	Spitsbergen Ar	79.02	351	P	P	13 32 38.6	0.0
SPB2				IAmb	IAmb	13 32 41.8	
	comp=Z,659nm,1.2s						
SPITS	Spitsbergen Ar	79.02	351	P	P	13 32 38.6	0.0
SPITS				pmax	pmax		
	comp=Z,955nm,1.3s						
KCPM	Cahto Peak	79.08	52	P	P	13 32 40.9	+1.2
KCPM				IAmb	IAmb	13 32 43.3	
	comp=Z,851nm,1.2s						
LTY	Liberty	79.09	44	P	P	13 32 39.9	+0.3
LTY				IAmb	IAmb	13 32 42.5	
	comp=Z,422nm,1.2s						

KBS	**Kingsbay**	79.15	352	P	P	13 32 39.6	+0.4
KBS				pmax	pmax		
	comp=Z,490nm,0.9s						
KBS	**Kingsbay**	79.15	352	⇓iP	P	13 32 40.6	+1.4
KBS	**Kingsbay**	79.15	352	P	P	13 32 39.6	+0.4
KBS				IAmb	IAmb	13 32 41.9	
	comp=Z,490nm,0.8s						
M02C	**Callahan**	79.16	50	P	P	13 32 41.3	+1.2
	baz=286,SNR=59						
M02C				S	S	13 41 53.1	+1.5
	baz=286						
YBH	**Yreka Blue Hor**	79.17	50	P	P	13 32 41.3	+1.1
YBH				pmax	pmax		
	comp=Z,487nm,1.4s						
YBH	**Yreka Blue Hor**	79.17	50	P	P	13 32 41.3	+1.1
YBH				IAmb	IAmb	13 32 43.7	
	comp=Z,487nm,1.4s						
J04D	**Umpqua Nationa**	79.20	48	P	P	13 32 41.2	+0.7
	baz=286,SNR=48						
J04D				S	S	13 41 48.2	-4.0
	baz=286						
G05D	**Wamic, OR**	79.21	46	P	P	13 32 41.3	+1.1
	baz=286,SNR=14						
G05D				S	S	13 41 50.8	-1.1
	baz=286						
L04D	**Klamath Falls**	79.33	49	P	P	13 32 41.6	+0.6
	baz=286,SNR=62						
L04D				S	S	13 41 54.0	+0.5
	baz=286						
N02D	**Trinity Center**	79.38	50	P	P	13 32 42.1	+0.9
	baz=286,SNR=73						
N02D				S	S	13 41 54.3	+0.4
	baz=286						
NOR	**Nord**	79.39	357	iP	P	13 32 39.9	-0.5
NOR				IAmb	IAmb	13 32 43.8	
	comp=Z,66nm,1.0s						
RES	**Resolute Bay**	79.42	14	P	P	13 32 41.6	+0.9
RES				pmax	pmax		
	comp=Z,673nm,1.2s						
RES	**Resolute Bay**	79.42	14	P	P	13 32 41.6	+0.9
RES				IAmb	IAmb	13 32 43.5	
	comp=Z,673nm,1.2s						
I05D	**Terrebonne, OR**	79.44	47	P	P	13 32 42.4	+0.9
	baz=286,SNR=31						
I05D				S	S	13 41 55.0	+0.7
	baz=286						
JLN	**Jalan Bani Buh**	79.47	290	P	P	13 32 42.4	+0.4
	SNR=17						
O02D	**Mt. Diablo Mer**	79.53	51	P	P	13 32 43.1	+1.0
	baz=286,SNR=63						
O02D				S	S	13 41 57.9	+2.4
	baz=286						
WDC	**Whiskeytown Da**	79.61	51	P	P	13 32 42.8	+0.5
WDC				pmax	pmax		
	comp=Z,337nm,1.4s						
WDC	**Whiskeytown Da**	79.61	51	P	P	13 32 42.8	+0.5
K04D	**Chiloquin, OR**	79.62	49	P	P	13 32 43.4	+0.8
	baz=286,SNR=53						
K04D				S	S	13 41 57.1	+0.8
	baz=286						
HOPS	**Hopland Field**	79.64	52	P	P	13 32 43.0	+0.5
B08A	**Colville Reser**	79.66	42	P	P	13 32 43.1	+0.6
B08A				IAmb	IAmb	13 32 45.3	
	comp=Z,791nm,1.4s						
WBK	**Wadi Bani Khal**	79.74	290	P	P	13 32 44.2	+0.8
	SNR=17						
M04C	**Macdoel**	79.79	49	P	P	13 32 44.2	+0.7
	baz=286,SNR=96						
M04C				S	S	13 41 58.7	+0.6
	baz=286						
J05D	**Fort Rock, OR**	79.80	48	P	P	13 32 44.0	+0.5
	baz=286,SNR=157						
J05D				S	S	13 41 59.0	+0.7
	baz=286						
E07A	**Sunnyside**	79.83	44	P	P	13 32 44.0	+0.6
WSAR	**Wadi Sarin**	79.86	291	P	P	13 32 44.8	+0.8
	SNR=13						
PINE	**Pine Mountain**	79.87	47	P	P	13 32 45.0	+1.1
PINE				IAmb	IAmb	13 32 47.4	
	comp=Z,472nm,0.9s						
GDXM	**Geysers**	79.90	52	P	P	13 32 45.1	+1.1
GDXM				IAmb	IAmb	13 32 47.7	
	comp=Z,334nm,1.2s						
BELG	**Belogornoye**	79.91	322	d iP	P	13 32 43.8	+0.2
BELG				pmax	pmax		
	comp=Z,640nm,1.0s						
HSPB	**Hornsund (broa**	79.95	350	eP	P	13 32 44.8	+1.4
F07A	**Phinny Hill Vi**	79.97	45	P	P	13 32 44.9	+0.8
MCCM	**Marconi Confer**	80.02	53	P	P	13 32 45.5	+1.1
HAWA	**Hanford**	80.09	44	P	P	13 32 44.7	0.0
K05A	**Summer Lake**	80.20	48	P	P	13 32 46.1	+0.5
K05A				IAmb	IAmb	13 32 49.1	
	comp=Z,518nm,1.1s						
LVZ	**Lovozero**	80.22	339	ceP	P	13 32 45.2	+0.1
LVZ				pmax	pmax		
	comp=Z,727nm,1.3s						
LVZ	**Lovozero**	80.22	339	P	P	13 32 44.4	-0.7
LVZ				IAmb	IAmb	13 32 46.9	
	comp=Z,591nm,1.1s						
O03E	**Paynes Creek**	80.23	51	P	P	13 32 46.0	+0.3
	baz=286,SNR=86						
O03E				S	S	13 42 02.2	-0.4
	baz=286						
BIDO	**Bidbid**	80.23	292	P	P	13 32 47.7	+1.7
	SNR=25						
D08A	**Wollman Farm,**	80.30	44	P	P	13 32 46.0	+0.2
D08A				IAmb	IAmb	13 32 48.9	
	comp=Z,312nm,1.1s						
E08A	**Dider Farm, El**	80.37	44	P	P	13 32 46.3	+0.1
E08A				IAmb	IAmb	13 32 49.4	
	comp=Z,358nm,1.4s						
SMDO	**Samad**	80.43	291	P	P	13 32 48.4	+1.3
	SNR=15						
C09A	**Chrisman Ranch**	80.50	43	P	P	13 32 46.7	-0.2
C09A				IAmb	IAmb	13 32 49.8	
	comp=Z,535nm,1.4s						
JMDO	**Jabal Madar**	80.57	290	P	P	13 32 49.6	+1.9
	SNR=32						
ORV	**Oroville**	80.66	51	P	P	13 32 47.8	0.0
ORV				pmax	pmax		
	comp=Z,348nm,1.2s						
ORV	**Oroville**	80.66	51	P	P	13 32 47.8	0.0
ORV				IAmb	IAmb	13 32 50.6	
	comp=Z,348nm,1.1s						
I07A	**Izee**	80.78	47	P	P	13 32 48.5	-0.1
G08A	**Pilot Rock**	80.79	45	P	P	13 32 48.9	+0.3
APA	**Apatity**	80.80	339	⇓iP	P	13 32 46.9	-1.0
APA				iS	S	13 42 05.0	-2.1
APA				iSS	SS	13 47 37.0	-0.8
APA				pmax	pmax		
	comp=Z,476nm,0.9s						
APA				MLR	MLR		
	comp=Z,600nm,15.0s						
MOD	**Modoc Plateau**	80.85	49	P	P	13 32 49.0	0.0
MOD				IAmb	IAmb	13 32 52.1	
	comp=Z,380nm,1.4s						
HOQ	**Hoqain**	80.93	292	P	P	13 32 52.0	+2.4
	SNR=26						
BJO1	**Bjornoya**	80.94	347	⇓iP	P	13 32 49.3	+0.8
BJO1				IVmB_BB		13 32 50.2	
	comp=Z,3µm,1.2s						
E09A	**Wood Farm, Sta**	80.97	44	P	P	13 32 49.9	+0.6
NEW	**Newport**	81.09	42	P	P	13 32 50.2	+0.2
NEW				pmax	pmax		
	comp=Z,230nm,1.0s						
NEW	**Newport**	81.09	42	P	P	13 32 50.3	+0.4
	baz=288,SNR=132						
NEW				S	S	13 42 10.7	-0.3
	baz=288						
NEW	**Newport**	81.09	42	P	P	13 32 50.2	+0.2
NEW				IAmb	IAmb	13 32 52.8	
	comp=Z,230nm,0.9s						
BANOM	**Banah**	81.15	294	iP	P	13 32 52.5	+1.7
	SNR=13						
BANOM	**Banah**	81.15	294	P	P	13 32 52.4	+1.7
	SNR=13						
KLMR	**Klimovskoe**	81.21	332	eP	P	13 32 49.1	-1.1
KLMR				e*PP	pP	13 34 57.3	+1.7
KLMR				e		13 36 06.1	
KLMR				eS	S	13 42 09.6	-1.8
KLMR				eSS	SS	13 47 42.4	-1.7
KLMR				pmax	pmax		
	comp=Z,1µm,1.1s						
KLMR	**Klimovskoe**	81.21	332	eP	P	13 32 49.2	-1.0
KLMR				AMP		13 32 52.1	
	comp=Z,1µm,1.1s						
KLMR				epP	pP	13 34 57.4	+1.8
KLMR				ePP	PP	13 36 06.1	-0.4
KLMR				eS	S	13 42 09.7	-1.7
KLMR				eS	S	13 42 09.7	-1.7
KLMR				eSS	SS	13 47 42.4	-1.7
KLMR				eSS	SS	13 47 42.4	-1.7
SHME	**Shamm**	81.25	294	iP	P	13 32 52.7	+1.6
	SNR=47						
SHME	**Shamm**	81.25	294	P	P	13 32 52.3	+1.1
	SNR=47						
BSY	**Bisya**	81.27	291	P	P	13 32 53.7	+2.4
	SNR=25						
MDH	**Madha**	81.33	294	iP	P	13 32 52.5	+1.0
	SNR=12						
MASF	**Masafi**	81.43	294	P	P	13 32 53.5	+1.3
	SNR=28						
MSFE	**Esma-Masafi**	81.43	294	iP	P	13 32 53.4	+1.2
	SNR=62						
SOHO	**SOHO**	81.46	293	iP	P	13 32 53.5	+1.3
	SNR=63						
SOHO	**SOHO**	81.46	293	P	P	13 32 54.6	+2.4
SAO	**San Andreas Ge**	81.50	54	P	P	13 32 53.0	+0.8
SAO				pmax	pmax		
	comp=Z,155nm,1.2s						
SAO	**San Andreas Ge**	81.50	54	P	P	13 32 53.0	+0.8
UOSS	**Minazif**	81.51	293	iP	P	13 32 53.1	+0.6
	SNR=45						
UOSS	**Minazif**	81.51	293	P	P	13 32 53.3	+0.8
UOSS	**Minazif**	81.51	293	P	P	13 32 52.6	+0.1
UOSS				IAmb	IAmb	13 32 55.4	
	comp=Z,518nm,1.0s						
HATD	**Hatta, Dubai**	81.61	293	iP	P	13 32 53.7	+0.7
	SNR=66						
HATD	**Hatta, Dubai**	81.61	293	P	P	13 32 54.2	+1.2
	SNR=33						
ARQ	**Araqi**	81.69	292	P	P	13 32 55.3	+1.8
	SNR=60						
J08A	**Circle Bar Ran**	81.71	47	P	P	13 32 53.7	+0.4
J08A				IAmb	IAmb	13 32 56.3	
	comp=Z,231nm,0.9s						
ASHO	**Ashiyiah**	81.71	293	iP	P	13 32 54.5	+0.9
	SNR=69						
ASHO	**Ashiyiah**	81.71	293	P	P	13 32 54.5	+0.9
	SNR=36						
EDM	**Edmonton**	81.73	37	P	P	13 32 53.1	0.0
EDM				pmax	pmax		
	comp=Z,806nm,1.4s						
EDM	**Edmonton**	81.73	37	P	P	13 32 53.1	0.0
EDM				IAmb	IAmb	13 32 56.0	
	comp=Z,806nm,1.4s						
KEV	**Kevo**	81.74	342	P	P	13 32 52.5	-0.2
KEV				pmax	pmax		
	comp=Z,624nm,0.8s						
KEV	**Kevo**	81.74	342	P	P	13 32 52.5	-0.2
F10A	**Beach Ranch, E**	81.74	44	P	P	13 32 53.3	-0.1
UMQ	**Umm Al-Quwin**	81.81	294	iP	P	13 32 55.4	+1.4
	SNR=6.2						
UMQ	**Umm Al-Quwin**	81.81	294	P	P	13 32 55.8	+1.8
	SNR=7.1						
MPK	**Martis Peak**	81.82	51	P	P	13 32 55.5	+1.3
MPK				IAmb	IAmb	13 32 57.4	
	comp=Z,501nm,1.0s						
EMB	**Emerald Bay**	81.86	52	P	P	13 32 55.0	+0.7
EMB				IAmb	IAmb	13 32 57.4	
	comp=Z,401nm,1.3s						
WVOR	**Wild Horse Val**	81.88	48	P	P	13 32 54.5	+0.3
WVOR				pmax	pmax		
	comp=Z,142nm,0.9s						
WVOR	**Wild Horse Val**	81.88	48	P	P	13 32 54.5	+0.3
CMB	**Columbia Colle**	81.93	53	P	P	13 32 54.7	+0.2
CMB				pmax	pmax		
	comp=Z,574nm,1.4s						
CMB	**Columbia Colle**	81.93	53	P	P	13 32 54.7	+0.2
CMB				IAmb	IAmb	13 32 57.4	
	comp=Z,574nm,1.4s						
NAZ	**Nazwa, Dubai**	81.97	294	iP	P	13 32 55.5	+0.7
	SNR=16						
NAZ	**Nazwa, Dubai**	81.97	294	P	P	13 32 56.1	+1.3
	SNR=57						
BMO	**Blue Mountains**	82.04	45	P	P	13 32 55.2	+0.2
BMO				pmax	pmax		
	comp=Z,463nm,1.2s						
BMO	**Blue Mountains**	82.04	45	P	P	13 32 55.2	+0.2
BMO				IAmb	IAmb	13 32 57.9	
	comp=Z,463nm,1.2s						
FAQ	**Al Faqa, Dubai**	82.10	293	iP	P	13 32 55.9	+0.4
	SNR=23						
FAQ	**Al Faqa, Dubai**	82.10	293	P	P	13 32 57.6	+2.1
	SNR=23						
VCNR	**Virginia City**	82.10	51	P	P	13 32 56.1	+0.6
PMPB	**Monarch Peak**	82.16	55	P	P	13 32 55.5	-0.1
ALNE	**Al Ain**	82.16	293	iP	P	13 32 56.2	+0.4
	SNR=59						
ALNE	**Al Ain**	82.16	293	P	P	13 32 57.3	+1.5
	SNR=59						
PAHR	**Pah Rah Range**	82.17	51	P	P	13 32 55.9	+0.1
HAMF	**Hammerfest**	82.18	343	⇓iP	P	13 32 55.5	+0.6
HAMF				IVmB_BB		13 32 56.1	
	comp=Z,6µm,0.9s						
HAMF				eSKSac	SKSac	13 42 18.2	-0.1
PNTR	**Pine Nut**	82.20	51	P	P	13 32 56.1	0.0
PNTR				IAmb	IAmb	13 32 59.3	
	comp=Z,290nm,1.0s						
ARA0	**ARCESS Array S**	82.30	342	⇓iP	P	13 32 56.5	+1.0
ARCES	**ARCESS Array B**	82.30	342	P	P	13 32 55.5	-0.1
	comp=Z,710nm,0.8s,baz=54,slow=6.2,SNR=298						
ARCES				PKKPbc	PKKPbc	13 51 16.3	-4.2
	comp=Z,1.7nm,0.5s,baz=270,slow=2.7,SNR=13						
ARCES	**ARCESS Array B**	82.30	342	P	P	13 32 55.5	-0.1
ARCES	**ARCESS Array B**	82.30	342	P	P	13 32 55.2	-0.4
ASUD	**Al Ashush, Dub**	82.36	293	iP	P	13 32 57.5	+0.7
	SNR=39						
ASUD	**Al Ashush, Dub**	82.36	293	P	P	13 32 58.0	+1.2
	SNR=40						
YERR	**Yerington**	82.50	51	P	P	13 32 57.7	+0.2
YERR				IAmb	IAmb	13 33 00.7	
	comp=Z,578nm,1.4s						
TULEG	**Thule**	82.68	8	iP	P	13 32 58.2	+0.9
TULEG				IAmb	IAmb	13 32 59.5	
	comp=Z,349nm,0.7s						
TULEG	**Thule**	82.68	8	P	P	13 32 57.8	+0.5
AJN	**Ajban**	82.68	293	iP	P	13 32 58.7	+0.3
	SNR=29						
AJN	**Ajban**	82.68	293	P	P	13 32 59.0	+0.7
	SNR=26						
PAGB	**Antelope Grade**	82.73	55	P	P	13 32 58.9	+0.4
PAGB				IAmb	IAmb	13 33 01.8	
	comp=Z,326nm,1.2s						
WALA	**Waterton Lakes**	82.84	41	P	P	13 32 59.7	+0.8
WALA				IAmb	IAmb	13 33 02.5	
	comp=Z,627nm,1.5s						
PLID	**Pearl Lake**	82.84	45	P	P	13 32 58.7	-0.4
PLID				IAmb	IAmb	13 33 01.3	
	comp=Z,224nm,0.9s						
MAK	**Makhachkala**	82.94	313	c iP	P	13 33 00.8	+1.5
MAK				e*SP	sP	13 36 03.7	-2.4
MAK				e		13 36 16.2	
MAK				eS	S	13 42 24.9	-4.4
MAK				eSSS	SSS	13 48 11.1	
MAK				pmax	pmax		
	comp=Z,609nm,1.9s						
MAK				MLR	MLR		
	comp=Z,575nm,17.0s						
MDPB	**Devils Postpil**	83.04	53	P	P	13 33 00.6	+0.3
SMMC	**Simmler**	83.06	55	P	P	13 33 00.9	+0.8
	baz=288,SNR=31						
SMMC				S	S	13 42 31.6	+0.6
	baz=288						
JTMT	**Jette**	83.06	42	P	P	13 33 00.2	+0.2
JTMT				IAmb	IAmb	13 33 02.9	
	comp=Z,493nm,1.2s						
UMZA	**Um Al Zommool**	83.08	292	P	P	13 33 01.9	+1.5
RYN	**Ryan**	83.14	52	P	P	13 33 01.1	+0.4
RYN				IAmb	IAmb	13 33 03.9	
	comp=Z,276nm,1.2s						
VOG	**Valley Oaks Go**	83.22	54	P	P	13 33 01.5	+0.7
	baz=288,SNR=6.3						
VOG				S	S	13 42 31.6	-0.7
	baz=288						
MLAC	**Mammoth, Mammo**	83.22	53	P	P	13 33 02.0	+0.8
	baz=288,SNR=19						
MLAC				S	S	13 42 34.9	+2.0
	baz=288						
KTK1	**Kautokeino**	83.26	342	⇓iP	P	13 33 01.0	+0.6
KTK1				IVmB_BB		13 33 01.6	
	comp=Z,6µm,1.2s						
KTK1				eSKSac	SKSac	13 42 25.4	0.0
LHV	**Little Huntoon**	83.28	52	P	P	13 33 02.0	+0.9
LHV				IAmb	IAmb	13 33 04.8	
	comp=Z,324nm,1.2s						
KVN	**Kaiserville**	83.32	51	P	P	13 33 01.8	+0.2
KVN				pmax	pmax		
	comp=Z,464nm,1.4s						
KVN	**Kaiserville**	83.32	51	P	P	13 33 01.8	+0.2
KVN				IAmb	IAmb	13 33 04.8	
	comp=Z,464nm,1.4s						
PKM	**Mcpherson Peak**	83.33	56	P	P	13 33 02.3	+0.6
	baz=288,SNR=56						
PKM				S	S	13 42 35.2	+1.3
	baz=288						
NVAR	**Mina Array Bea**	83.37	52	P	P	13 33 02.6	+0.7
	comp=Z,209nm,0.8s,baz=265,slow=6.1,SNR=328						
NVAR				pP	pP	13 35 09.7	+1.4
	comp=Z,22nm,0.9s,baz=259,slow=6.6,SNR=4.3						
NVAR				PKKPbc	PKKPbc	13 51 17.6	+0.5
	comp=Z,1.0nm,0.8s,baz=133,slow=3.8,SNR=5.1						
NVAR				PKPPKP		13 59 14.9	
	comp=Z,1.6nm,1.1s,baz=106,slow=3.3,SNR=4.9						
NVAR	**Mina Array Bea**	83.37	52	P	P	13 33 02.2	+0.3
NV11	**Mina Array Sit**	83.48	52	P	P	13 33 02.6	+0.3
NV11				IAmb	IAmb	13 33 05.5	
	comp=Z,357nm,1.3s						
NEEM	**North Greenlan**	83.48	4	iP	P	13 33 02.2	+0.5
NEEM				IAmb	IAmb	13 33 04.3	
	comp=Z,365nm,1.1s						
MFID	**Camas Ranch**	83.52	46	P	P	13 33 02.7	+0.3
BMN	**Battle Mountai**	83.52	50	P	P	13 33 02.9	+0.4
BMN				pmax	pmax		
	comp=Z,291nm,1.3s						
BMN	**Battle Mountai**	83.52	50	P	P	13 33 02.9	+0.4
BMN				IAmb	IAmb	13 33 05.8	
	comp=Z,291nm,1.3s						
SBC	**Santa Barbara**	83.55	56	P	P	13 33 03.2	+0.7
	baz=288,SNR=7.1						
SBC				S	S	13 42 36.1	+0.4
	baz=288						
VES	**Vestal, Richgr**	83.60	54	P	P	13 33 02.5	-0.3
	baz=288,SNR=35						
VES				S	S	13 42 36.3	+0.2
	baz=288						
MSO	**Missoula**	83.60	43	P	P	13 33 02.8	+0.1
	baz=291,SNR=92						
MSO				S	S	13 42 35.5	-0.5
	baz=291						
MSO	**Missoula**	83.60	43	P	P	13 33 02.5	-0.2
JETT	**Jettan, Norway**	83.73	343	⇓iP	P	13 33 04.5	+1.8
SCZ2	**Santa Cruz Isl**	83.75	56	P	P	13 33 04.0	+0.5
	baz=288,SNR=7.3						
SCZ2				S	S	13 42 37.5	-0.2
	baz=288						
VRH	**Novokhopyorsk**	83.76	322	eP	P	13 33 02.1	-1.1
VRH				eS	S	13 42 32.1	-4.9
VRH				pmax	pmax		
	comp=Z,230nm,0.9s						
VRH				smax	smax		
	comp=N,680nm,2.0s						
TIN	**Tinemaha, Big**	83.87	53	P	P	13 33 05.0	+0.8
	baz=289,SNR=40						
TIN				S	S	13 42 39.2	+0.3
	baz=289						
MZWR	**Madinat Zayed**	83.89	293	P	P	13 33 06.2	+1.9
ARVC	**Arvin**	84.02	55	P	P	13 33 05.2	+0.3
	baz=289,SNR=17						
ARVC				S	S	13 42 40.9	+0.7
	baz=289						
GROC	**Groznyy**	84.04	314	eP	P	13 33 05.2	+0.4
GROC				pmax	pmax		
	comp=Z,637nm,1.1s						
SHAO	**Shalim**	84.07	287	iP	P	13 33 05.3	-0.1
	SNR=30						
SHAO	**Shalim**	84.07	287	P	P	13 33 06.1	+0.7
	SNR=8.6						
SNCC	**San Nicolas Is**	84.07	57	P	P	13 33 05.8	+0.7
	baz=288,SNR=6.5						
SNCC				S	S	13 42 40.0	-0.8
	baz=288						
SNCC	**San Nicolas Is**	84.07	57	P	P	13 33 05.9	+0.7
SNCC				IAmb	IAmb	13 33 08.0	
	comp=Z,251nm,1.0s						
TRO	**Tromso**	84.08	344	⇓iP	P	13 33 05.1	+0.8
TRO				IVmB_BB		13 33 05.5	
	comp=Z,8µm,1.0s						
TRO				eSKSac	SKSac	13 42 31.7	+1.2
ISA	**Isabella, Lake**	84.13	54	P	P	13 33 05.0	-0.5
ISA				pmax	pmax		
	comp=Z,148nm,1.5s						
ISA	**Isabella, Lake**	84.13	54	P	P	13 33 05.7	+0.2
	baz=289,SNR=37						
ISA				S	S	13 42 40.0	-1.4
	baz=289						
ISA	**Isabella, Lake**	84.13	54	P	P	13 33 05.0	-0.5
DAG	**Danmarks Havn**	84.16	356	iP	P	13 33 04.4	-0.3
DAG				IAmb	IAmb	13 33 06.3	
	comp=Z,320nm,1.0s						
CWC	**Cottonwood Cre**	84.18	54	P	P	13 33 06.1	+0.3
	baz=289						
CWC				S	S	13 42 41.4	-0.6
	baz=289						
MOS	**Moscow**	84.19	327	eP	P	13 33 03.9	-1.3
MOS				e*PP	pwP	13 35 15.1	-1.2
MOS				e		13 36 32.9	
MOS				eS	SKSac	13 42 30.0	-1.7
MOS				e		13 42 39.0	
MOS				eSS	SS	13 48 32.3	+4.4
MOS				pmax	pmax		
	comp=Z,657nm,1.6s						
MOS				pmax	pmax		
	comp=N,158nm,1.2s						
MOS				pmax	pmax		
	comp=E,71nm,0.9s						
MOS				pmax	pmax		
	comp=Z,1µm,1.8s						
LCH	**Last Change Ra**	84.25	53	P	P	13 33 06.1	0.0
LCH				IAmb	IAmb	13 33 09.2	
	comp=Z,393nm,1.4s						
OSI	**Osito Audit: C**	84.27	56	P	P	13 33 07.0	+0.8
	baz=289,SNR=5.6						
OSI				S	S	13 42 42.8	0.0
	baz=289						
OSI	**Osito Audit: C**	84.27	56	P	P	13 33 05.8	-0.4
TPH	**Tonopah**	84.29	52	P	P	13 33 06.7	+0.3
TPH				pmax	pmax		
	comp=Z,2µm,1.4s						
TPH	**Tonopah**	84.29	52	P	P	13 33 06.7	+0.3
JRN	**Qarnain Island**	84.42	294	P	P	13 33 09.0	+2.1
HLID	**Hailey**	84.43	46	P	P	13 33 07.4	+0.5
	baz=291,SNR=437						
HLID				S	S	13 42 43.5	-0.8
	baz=291						
HLID	**Hailey**	84.43	46	P	P	13 33 07.1	+0.2
HLID				IAmb	IAmb	13 33 10.0	
	comp=Z,348nm,1.1s						
DECC	**Green Verdugo**	84.69	56	P	P	13 33 08.7	+0.5
	baz=289,SNR=6.1						
DECC				S	S	13 42 46.0	-0.8
	baz=289						
GHWR	**Ruwais**	84.70	293	P	P	13 33 09.5	+1.1
EDW2	**Edwards Air Fo**	84.75	55	P	P	13 33 09.2	+0.7
	baz=289,SNR=76						
EDW2				S	S	13 42 47.7	+0.3
	baz=289						
MPMC	**Manual Prospec**	84.75	54	P	P	13 33 09.0	+0.3
	baz=289,SNR=284						
MPMC				S	S	13 42 46.8	-0.9
	baz=289						
DMTO	**DMTO**	84.78	287	P	P	13 33 09.3	+0.4
	SNR=12						
LRMC	**Laurel Mtn Rad**	84.80	54	P	P	13 33 09.6	+0.8
	baz=289,SNR=7.4						
LPSR	**Galich'ya Gora**	84.80	324	eP	P	13 33 07.6	-0.6
LPSR				eS	S	13 42 42.5	-4.5
LPSR				pmax	pmax		
	comp=Z,650nm,1.1s						
LPSR				smax	smax		
	comp=N,830nm,2.7s						
PASC	**Pasadena Art C**	84.83	56	P	P	13 33 08.7	-0.1
ELK	**Elko**	84.84	49	P	P	13 33 09.5	+0.5
ELK				pmax	pmax		
	comp=Z,576nm,1.3s						
ELK	**Elko**	84.84	49	P	P	13 33 09.5	+0.5
ELK				IAmb	IAmb	13 33 12.2	
	comp=Z,576nm,1.2s						

BCYI	**Bear Canyon**	**84.85**	**45**	P	**P**	**13 33 09.5**	**+0.5**
FMP	**Fort Macarthur**	**84.90**	**56**	P	**P**	**13 33 10.0**	**+0.8**
	baz=289,SNR=5.4						
FMP				S	**S**	**13 42 49.4**	**+0.6**
	baz=289						
CIS	**Catalina Islan**	**84.90**	**57**	P	**P**	**13 33 09.6**	**+0.3**
	baz=289,SNR=28						
CIS				S	**S**	**13 42 46.8**	**-2.0**
	baz=289						
MWC	**Mount Wilson**	**84.92**	**56**	P	**P**	**13 33 09.6**	**+0.1**
MWC				pmax	pmax		
	comp=Z,175nm,1.2s						
MWC	**Mount Wilson**	**84.92**	**56**	P	**P**	**13 33 09.6**	**+0.1**
LRM	**Limekiln Ridge**	**84.93**	**43**	P	**P**	**13 33 09.6**	**+0.2**
SCI2	**San Clemente I**	**84.94**	**57**	P	**P**	**13 33 10.0**	**+0.6**
	baz=289						
SCI2				S	**S**	**13 42 48.4**	**-0.7**
	baz=289						
HRY	**Holter Researc**	**85.00**	**42**	P	**P**	**13 33 09.9**	**+0.3**
DLMT	**Dillon**	**85.00**	**44**	P	**P**	**13 33 09.6**	**-0.1**
DLMT				IAmb	IAmb	13 33 12.4	
	comp=Z,226nm,1.2s						
OBN	**Obninsk**	**85.00**	**327**	⇑P	**P**	**13 33 09.6**	**+0.4**
OBN	**Obninsk**	**85.00**	**327**	*c i*P	**P**	**13 33 08.7**	**-0.4**
OBN				*i* *PP	**pP**	**13 35 15.6**	**-0.7**
OBN				*i*		13 36 37.4	
OBN				*i* S	**SKSac**	**13 42 37.4**	**+0.7**
OBN				pmax	pmax		
	comp=Z,359nm,1.1s						
OBN	**Obninsk**	**85.00**	**327**	P	**P**	**13 33 08.4**	**-0.8**
OBN				IAmb	IAmb	13 33 10.7	
	comp=Z,578nm,1.2s						
MCMT	**McKenzie Canyo**	**85.03**	**44**	P	**P**	**13 33 09.9**	**0.0**
FURC	**Furnace Creek,**	**85.10**	**53**	P	**P**	**13 33 11.0**	**+1.0**
	baz=290,SNR=176						
FURC				S	**S**	**13 42 49.6**	**-0.9**
	baz=290						
BFSC	**Mount Baldy Ra**	**85.22**	**56**	P	**P**	**13 33 11.3**	**+0.4**
	baz=289,SNR=30						
BFSC				S	**S**	**13 42 50.0**	**-2.2**
	baz=289						
VSR	**Storozhevoye**	**85.23**	**323**	*e*P	**P**	**13 33 09.3**	**-1.1**
VSR				*e*S	**S**	**13 42 46.8**	**-4.4**
VSR				pmax	pmax		
	comp=Z,630nm,1.2s						
VSR				smax	smax		
	comp=N,320nm,1.4s						
GOF	**Gofitskoye**	**85.23**	**316**	⇑*e*P	**P**	**13 33 10.5**	**0.0**
GOF				*e*S	**SKSac**	**13 42 40.2**	**+1.5**
GOF				*i*		13 42 53.5	
GOF				pmax	pmax		
	comp=Z,367nm,1.4s						
GOF				smax	smax		
	comp=N,109nm,1.3s						
DOK	**Doka**	**85.24**	**288**	P	**P**	**13 33 12.3**	**+1.2**
	SNR=37						
VORD	**Divnogorie**	**85.26**	**322**	*e*P	**P**	**13 33 09.7**	**-0.8**
VORD				*e*S	**S**	**13 42 47.8**	**-3.6**
VORD				pmax	pmax		
	comp=Z,470nm,1.2s						
VORD				smax	smax		
	comp=N,110nm,1.0s						
QSM	**Queen of Sheba**	**85.26**	**54**	P	**P**	**13 33 11.0**	**+0.2**
QSM				IAmb	IAmb	13 33 14.0	
	comp=Z,425nm,1.3s						
GWY	**Greenwater Val**	**85.34**	**53**	P	**P**	**13 33 11.4**	**-0.1**
GWY				IAmb	IAmb	13 33 14.4	
	comp=Z,432nm,1.2s						
R11A	**Troy Canyon, C**	**85.41**	**51**	P	**P**	**13 33 12.2**	**+0.5**
	baz=290,SNR=358						
R11A				S	**S**	**13 42 53.4**	**-0.5**
	baz=290						
R11A	**Troy Canyon, C**	**85.41**	**51**	P	**P**	**13 33 12.0**	**+0.2**
R11A				IAmb	IAmb	13 33 15.1	
	comp=Z,394nm,1.4s						
NCK	**Nalchik**	**85.44**	**314**	*i* P	**P**	**13 33 11.1**	**-0.5**
NCK				pmax	pmax		
	comp=Z,543nm,1.0s						
ZEI	**Tsey**	**85.49**	**314**	*e*P	**P**	**13 33 08.7**	**-3.4**
ZEI				pmax	pmax		
	comp=Z,122nm,0.9s						
RBK	**Rabkut**	**85.52**	**287**	P	**P**	**13 33 14.5**	**+2.0**
	SNR=17						
RRX	**Edison Barstow**	**85.53**	**55**	P	**P**	**13 33 13.1**	**+0.9**
	baz=290,SNR=7.7						
RRX				S	**S**	**13 42 54.6**	**-0.1**
	baz=290						
BOZ	**Bozeman (W)**	**85.55**	**43**	P	**P**	**13 33 12.2**	**0.0**
BOZ				pmax	pmax		
	comp=Z,144nm,1.3s						
BOZ	**Bozeman (W)**	**85.55**	**43**	P	**P**	**13 33 12.7**	**+0.5**
	baz=292,SNR=120						
BOZ				S	**S**	**13 42 53.7**	**-1.1**
	baz=292						
BOZ	**Bozeman (W)**	**85.55**	**43**	P	**P**	**13 33 12.2**	**0.0**
SLWR	**Sila**	**85.69**	**294**	P	**P**	**13 33 14.3**	**+1.2**
SHOC	**Shoshone, Teco**	**85.73**	**54**	P	**P**	**13 33 14.0**	**+0.8**
	baz=290,SNR=27						
SHOC				S	**S**	**13 42 55.2**	**-1.5**
	baz=290						
SHMA	**Al-Shehemyia**	**85.75**	**296**	P	**P**	**13 33 14.1**	**+0.8**
PUL	**Pulkovo**	**85.78**	**333**	*ce*P	**P**	**13 33 12.6**	**-0.2**
PUL				pmax	pmax		
	comp=Z,195nm,0.6s						
WHFO	**Wadi Hawf**	**85.78**	**287**	P	**P**	**13 33 13.6**	**-0.1**
	SNR=9.8						
EGMT	**Eagleton**	**85.79**	**41**	P	**P**	**13 33 13.7**	**+0.4**
	baz=293,SNR=69						
EGMT				S	**S**	**13 42 56.0**	**-0.9**
	baz=293						
EGMT	**Eagleton**	**85.79**	**41**	P	**P**	**13 33 13.7**	**+0.4**
EGMT				IAmb	IAmb	13 33 15.9	
	comp=Z,383nm,1.4s						
BBRC	**Big Bear Solar**	**85.79**	**55**	P	**P**	**13 33 14.3**	**+0.5**
	baz=290,SNR=5.9						
BBRC				S	**S**	**13 42 56.4**	**-1.4**
	baz=290						
MURC	**Murrieta**	**85.80**	**56**	P	**P**	**13 33 13.5**	**-0.1**
	baz=290,SNR=25						
MURC				S	**S**	**13 42 56.9**	**-0.6**
	baz=290						
KBZ	**Khabaz**	**85.82**	**315**	P	**P**	**13 33 12.6**	**-0.7**
	comp=Z,302nm,0.9s,baz=122,slow=1.4,SNR=273						
KBZ	**Khabaz**	**85.82**	**315**	P	**P**	**13 33 12.6**	**-0.7**
GNI	**Garni**	**85.85**	**311**	P	**P**	**13 33 13.9**	**+0.1**
GNI				pmax	pmax		
	comp=Z,536nm,1.5s						
GNI	**Garni**	**85.85**	**311**	P	**P**	**13 33 15.5**	**+1.7**
GNI	**Garni**	**85.85**	**311**	P	**P**	**13 33 13.9**	**+0.1**
GNI				IAmb	IAmb	13 33 17.3	
	comp=Z,536nm,1.5s						
KIV	**Kislovodsk**	**85.88**	**315**	⇑P	**P**	**13 33 13.8**	**0.0**
KIV	**Kislovodsk**	**85.88**	**315**	*i* P	**P**	**13 33 13.1**	**-0.7**
	SNR=43						
KIV	**Kislovodsk**	**85.88**	**315**	*e*P	**P**	**13 33 13.4**	**-0.4**
KIV				*e**PP	**pP**	**13 35 21.7**	**+0.5**
KIV				*e**SP	**sP**	**13 36 21.5**	**0.0**
KIV				*e*		13 36 44.4	
KIV				*e*		13 42 41.4	
KIV				*e*SS	SS	13 48 54.4	+1.1
KIV				*e*SSS	SSS	13 52 34.2	
KIV				pmax	pmax		
	comp=Z,371nm,1.1s						
KIV				pmax	pmax		
	comp=Z,203nm,3.6s						
KIV				MLR	MLR		
	comp=Z,404nm,20.0s						
KIV	**Kislovodsk**	**85.88**	**315**	P	**P**	**13 33 15.2**	**+1.4**
KIV	**Kislovodsk**	**85.88**	**315**	P	**P**	**13 33 13.1**	**-0.7**
KIV				IAmb	IAmb	13 33 17.1	
	comp=Z,343nm,1.0s						
TRNA	**Turayna**	**85.89**	**295**	P	**P**	**13 33 14.9**	**+0.9**
QLMT	**Earthquake Lak**	**85.97**	**44**	P	**P**	**13 33 14.8**	**+0.5**
SHA1	**Shidzhatmaz**	**85.98**	**315**	*d i*P	**P**	**13 33 12.8**	**-1.6**
N2IH	**Innhavet**	**86.01**	**343**	⇓*i*P	**P**	**13 33 14.5**	**+0.8**
HEC	**Hector,Ludlow**	**86.05**	**55**	P	**P**	**13 33 15.1**	**+0.3**
	baz=290,SNR=97						
HEC				S	**S**	**13 42 59.0**	**-0.9**
	baz=290						
SAKB	**Bahrain**	**86.08**	**296**	P	**P**	**13 33 15.9**	**+1.0**
SPR3	**Spring Creek 3**	**86.10**	**50**	P	**P**	**13 33 15.8**	**+0.6**
SPR3				IAmb	IAmb	13 33 18.7	
	comp=Z,462nm,1.3s						
109C	**Camp Elliot, M**	**86.11**	**57**	P	**P**	**13 33 15.4**	**+0.5**
	baz=290,SNR=13						
109C				S	**S**	**13 42 59.0**	**-1.2**
	baz=290						
109C	**Camp Elliot, M**	**86.11**	**57**	P	**P**	**13 33 15.3**	**+0.3**
109C				IAmb	IAmb	13 33 17.7	
	comp=Z,249nm,1.2s						
PRN	**Pahroc Range**	**86.14**	**52**	P	**P**	**13 33 15.7**	**+0.6**
PRN				IAmb	IAmb	13 33 18.6	
	comp=Z,342nm,1.1s						
TUQ	**Turquoise Moun**	**86.16**	**54**	P	**P**	**13 33 15.8**	**+0.4**
	baz=290,SNR=95						
TUQ				S	**S**	**13 43 01.3**	**+0.3**
	baz=290						
HVU	**Hansel Valley**	**86.20**	**47**	P	**P**	**13 33 16.0**	**+0.6**
HVU				pmax	pmax		
	comp=Z,305nm,1.1s						
HVU	**Hansel Valley**	**86.20**	**47**	P	**P**	**13 33 15.9**	**+0.6**
HVU				IAmb	IAmb	13 33 18.9	
	comp=Z,305nm,1.1s						
STEI	**Steigen**	**86.22**	**343**	⇓*i*P	**P**	**13 33 15.2**	**+0.5**
AKH	**Akhalkalaki**	**86.28**	**312**	⇑P	**P**	**13 33 16.6**	**+0.8**
TJX	**Tijuana**	**86.28**	**57**	P	**P**	**13 33 16.8**	**+1.0**
YMR	**Madison River**	**86.33**	**44**	P	**P**	**13 33 16.9**	**+0.8**
YMR				IAmb	IAmb	13 33 19.9	
	comp=Z,214nm,1.0s						
BGU	**Big Grassy Mou**	**86.34**	**48**	P	**P**	**13 33 16.3**	**+0.2**
YHH	**Holmes Hill**	**86.36**	**44**	P	**P**	**13 33 16.9**	**+0.7**
SHPR	**Sheep Range**	**86.37**	**53**	P	**P**	**13 33 17.0**	**+0.6**
SHPR				IAmb	IAmb	13 33 19.3	
	comp=Z,176nm,0.9s						
PFO	**Pinyon Flats O**	**86.37**	**56**	P	**P**	**13 33 16.2**	**-0.2**
PFO				pmax	pmax		
	comp=Z,245nm,1.2s						
PFO	**Pinyon Flats O**	**86.37**	**56**	P	**P**	**13 33 16.3**	**0.0**
	baz=290,SNR=125						
PFO				S	**S**	**13 43 01.9**	**-1.2**
	baz=290						
PFO	**Pinyon Flats O**	**86.37**	**56**	P	**P**	**13 33 16.2**	**-0.2**
PFO				IAmb	IAmb	13 33 19.2	
	comp=Z,245nm,1.1s						
TPFO	**Pinon Flats**	**86.38**	**56**	P	**P**	**13 33 16.4**	**+0.1**
	baz=290,SNR=111						
TPFO				S	**S**	**13 43 01.7**	**-1.4**
	baz=290						
ABTO	**Aybut**	**86.39**	**287**	P	**P**	**13 33 16.6**	**0.0**
	SNR=22						
BAR	**Barrett**	**86.52**	**57**	P	**P**	**13 33 17.0**	**0.0**
BAR				IAmb	IAmb	13 33 19.8	
	comp=Z,253nm,1.5s						
LOF	**Lofoten**	**86.54**	**344**	*e*P	**P**	**13 33 17.2**	**+1.0**
FAUS	**Fauske**	**86.59**	**343**	⇓*i*P	**P**	**13 33 17.0**	**+0.6**
GMRC	**Granite Mounta**	**86.59**	**55**	P	**P**	**13 33 17.7**	**+0.4**
	baz=290,SNR=194						
GMRC				S	**S**	**13 43 03.3**	**-1.7**
	baz=290						
BELC	**Belle Mtn. Jos**	**86.60**	**55**	P	**P**	**13 33 17.5**	**+0.1**
	baz=290,SNR=110						
BELC				S	**S**	**13 43 03.9**	**-1.3**
	baz=290						
SPUT	**South Promonto**	**86.60**	**48**	P	**P**	**13 33 17.5**	**+0.2**
SPUT				IAmb	IAmb	13 33 20.6	
	comp=Z,327nm,1.4s						
TKX	**Tecate**	**86.61**	**57**	P	**P**	**13 33 18.0**	**+0.6**
YUF	**Upper Falls**	**86.61**	**44**	P	**P**	**13 33 18.3**	**+0.8**
PSUT	**Pine Spring**	**86.62**	**51**	P	**P**	**13 33 17.8**	**+0.3**
PSUT				IAmb	IAmb	13 33 20.6	
	comp=Z,396nm,1.1s						
MONP2	**Monument Peak**	**86.65**	**57**	P	**P**	**13 33 18.0**	**+0.2**
	baz=290,SNR=68						
MONP2				S	**S**	**13 43 04.6**	**-1.3**
	baz=290						
FIA1	**FINESS Array S**	**86.65**	**335**	P	**P**	**13 33 15.2**	**-1.7**
FIA1				IAmb	IAmb	13 33 17.4	
	comp=Z,261nm,0.8s						
FINES	**FINESS Array B**	**86.65**	**335**	P	**P**	**13 33 15.3**	**-1.5**
	comp=Z,107nm,0.3s,baz=63,slow=4.0,SNR=397						
FINES				PKKP	**PKKPdf**	**13 51 00.1**	**-1.1**
	comp=Z,2.7nm,1.0s,baz=236,slow=1.5,SNR=1.1						
FINES	**FINESS Array B**	**86.65**	**335**	P	**P**	**13 33 15.4**	**-1.5**
FINES	**FINESS Array B**	**86.65**	**335**	P	**P**	**13 33 15.2**	**-1.6**
DBG	**Daneborg**	**86.66**	**356**	*i* P	**P**	**13 33 16.3**	**-0.3**
DBG				IAmb	IAmb	13 33 17.9	
	comp=Z,59nm,0.6s						
ECR	**Eagle Creek**	**86.69**	**46**	P	**P**	**13 33 18.5**	**+0.7**
FXWY	**Fox Creek**	**86.69**	**45**	P	**P**	**13 33 18.2**	**+0.4**
H17A	**Grant Village**	**86.70**	**44**	P	**P**	**13 33 19.9**	**+2.1**
	baz=293,SNR=89						
H17A				S	**S**	**13 43 09.9**	**+4.0**
	baz=293						
H17A	**Grant Village**	**86.70**	**44**	P	**P**	**13 33 19.4**	**+1.6**
H17A				IAmb	IAmb	13 33 22.7	
	comp=Z,199nm,1.2s						
GCMT	**Greycliff**	**86.74**	**43**	P	**P**	**13 33 18.3**	**+0.4**
FLWY	**Flagg Ranch**	**86.74**	**44**	P	**P**	**13 33 18.8**	**+0.8**
FLWY				IAmb	IAmb	13 33 21.8	
	comp=Z,414nm,1.4s						
CHVG	**Ch'k'valeri**	**86.76**	**314**	⇑P	**P**	**13 33 18.6**	**+0.8**
CHVG	**Ch'k'valeri**	**86.76**	**314**	⇑P	**P**	**13 33 18.6**	**+0.8**
DUG	**Dugway, Tooele**	**86.76**	**49**	P	**P**	**13 33 18.5**	**+0.4**
DUG				pmax	pmax		
	comp=Z,577nm,1.4s						
DUG	**Dugway, Tooele**	**86.76**	**49**	P	**P**	**13 33 18.4**	**+0.4**
	baz=292,SNR=265						
DUG				S	**S**	**13 43 07.3**	**+0.8**
	baz=292						
DUG	**Dugway, Tooele**	**86.76**	**49**	P	**P**	**13 33 18.5**	**+0.4**
NBB08	**Skaug oppvekst**	**86.77**	**343**	*e*P	**P**	**13 33 18.1**	**+0.8**
TPAW	**Teton Pass**	**86.80**	**45**	P	**P**	**13 33 19.0**	**+0.7**
MOOW	**Moose Ponds**	**86.84**	**45**	P	**P**	**13 33 18.4**	**-0.1**
YMP	**Mirror Lake Pl**	**86.84**	**44**	P	**P**	**13 33 19.5**	**+0.9**
YMP				IAmb	IAmb	13 33 22.7	
	comp=Z,435nm,1.5s						
KARS	**Kars**	**86.86**	**312**	P	**P**	**13 33 18.9**	**+0.4**
KARS				pmax	pmax		
	comp=Z,2µm,1.1s						
KARS	**Kars**	**86.86**	**312**	P	**P**	**13 33 18.9**	**+0.4**
REDW	**Red Top Meadow**	**86.92**	**45**	P	**P**	**13 33 18.7**	**-0.2**
SNOW	**Snow King Moun**	**86.94**	**45**	P	**P**	**13 33 19.8**	**+0.8**
NBB28	**Valnes**	**86.95**	**343**	⇓*i*P	**P**	**13 33 18.6**	**+0.4**
IKP	**In-Ko-Pah, Jac**	**86.98**	**57**	P	**P**	**13 33 19.6**	**+0.4**
	baz=290,SNR=28						
IKP				S	**S**	**13 43 08.7**	**0.0**
	baz=290						
AHID	**Auburn Hatcher**	**86.98**	**46**	P	**P**	**13 33 19.3**	**+0.1**
AHID				IAmb	IAmb	13 33 22.2	
	comp=Z,176nm,1.2s						
LOHW	**Long Hollow**	**86.98**	**45**	P	**P**	**13 33 19.7**	**+0.6**
RMX	**La Rumorosa**	**87.02**	**57**	P	**P**	**13 33 19.8**	**+0.3**
RMX				IAmb	IAmb	13 33 22.7	
	comp=Z,250nm,1.4s						
SWSC	**Sam W. Stewart**	**87.12**	**56**	P	**P**	**13 33 19.7**	**0.0**
	baz=290,SNR=33						
SWSC				S	**S**	**13 43 08.9**	**-0.9**
	baz=290						
BC3	**Big Chuckawall**	**87.14**	**56**	P	**P**	**13 33 20.3**	**+0.3**
	baz=291,SNR=137						
BC3				S	**S**	**13 43 08.5**	**-1.7**
	baz=291						
NBB05	**Inndyr**	**87.18**	**343**	⇓*i*P	**P**	**13 33 19.9**	**+0.7**
IRM	**Iron Mountain**	**87.21**	**55**	P	**P**	**13 33 20.7**	**+0.6**
	baz=291,SNR=188						
IRM				S	**S**	**13 43 09.2**	**-1.4**
	baz=291						
FFC	**Flin Flon**	**87.21**	**32**	P	**P**	**13 33 19.8**	**+0.1**
FFC				pmax	pmax		
	comp=Z,415nm,1.0s						
FFC	**Flin Flon**	**87.21**	**32**	P	**P**	**13 33 19.8**	**+0.1**
UMR	**Umm Al-Rimmam**	**87.25**	**300**	*e*P	**P**	**13 33 19.4**	**-1.0**
RLMT	**Red Lodge**	**87.26**	**43**	P	**P**	**13 33 21.8**	**+1.4**
	baz=294,SNR=75						
RLMT				S	**S**	**13 43 10.7**	**-0.4**
	baz=294						
RLMT	**Red Lodge**	**87.26**	**43**	P	**P**	**13 33 20.9**	**+0.5**
CTU	**Camp Tracy**	**87.33**	**48**	P	**P**	**13 33 21.1**	**+0.4**
CTU				IAmb	IAmb	13 33 23.7	
	comp=Z,275nm,1.3s						
CCUT	**Cedar City**	**87.34**	**51**	P	**P**	**13 33 21.5**	**+0.5**
CCUT				IAmb	IAmb	13 33 24.6	
	comp=Z,375nm,1.4s						
NBB17	**Glomfjord B¥r**	**87.36**	**343**	⇓*i*P	**P**	**13 33 20.5**	**+0.4**
QRN	**Al-Qurain**	**87.36**	**299**	*e*P	**P**	**13 33 19.5**	**-1.4**
NLU	**North Lily Min**	**87.38**	**49**	P	**P**	**13 33 21.2**	**+0.1**
NLU				IAmb	IAmb	13 33 24.1	
	comp=Z,231nm,1.1s						
SOCY	**Socotra**	**87.38**	**282**	P	**P**	**13 33 21.8**	**+0.5**
SOCY	**Socotra**	**87.38**	**282**	P	**P**	**13 33 20.8**	**-0.5**
KBD	**Kabd**	**87.40**	**300**	*e*P	**P**	**13 33 19.1**	**-1.9**
NEE2	**Needles Airpor**	**87.40**	**54**	P	**P**	**13 33 22.1**	**+1.1**
	baz=291,SNR=12						
NEE2				S	**S**	**13 43 12.0**	**-0.3**
	baz=291						
TCUT	**Toone Canyon**	**87.40**	**47**	P	**P**	**13 33 21.4**	**+0.2**
BATM	**Batumi**	**87.45**	**313**	⇓P	**P**	**13 33 21.2**	**+0.1**
BATM	**Batumi**	**87.45**	**313**	⇓P	**P**	**13 33 21.2**	**+0.1**
MIB	**Mutribah**	**87.48**	**301**	*e*P	**P**	**13 33 19.4**	**-2.0**
SZCU	**Shurtz Canyon**	**87.53**	**51**	P	**P**	**13 33 22.1**	**+0.3**
SZCU				IAmb	IAmb	13 33 25.1	
	comp=Z,199nm,1.3s						
UPNV	**Upernavik**	**87.54**	**6**	*i* P	**P**	**13 33 20.7**	**-0.1**
UPNV				IAmb	IAmb	13 33 22.2	
	comp=Z,112nm,0.6s						
BCA	**Borcka**	**87.56**	**313**	⇑P	**P**	**13 33 21.6**	**0.0**
JLU	**Jordanelle**	**87.57**	**48**	P	**P**	**13 33 22.1**	**+0.1**
JLU				IAmb	IAmb	13 33 24.4	
	comp=Z,166nm,1.0s						
RDF	**Al-Radifah**	**87.60**	**300**	*e*P	**P**	**13 33 20.1**	**-1.9**
LCMT	**Little Creek M**	**87.62**	**52**	P	**P**	**13 33 22.8**	**+0.6**
LCMT				IAmb	IAmb	13 33 25.8	
	comp=Z,382nm,1.4s						
MPU	**Maple Canyon**	**87.67**	**48**	P	**P**	**13 33 22.7**	**+0.3**
MPU				IAmb	IAmb	13 33 25.5	
	comp=Z,221nm,1.2s						
NBB13	**Alf Garage**	**87.67**	**343**	⇓*i*P	**P**	**13 33 21.9**	**+0.4**
MOR8	**Moi Rana**	**87.67**	**342**	⇓*i*P	**P**	**13 33 20.7**	**-0.9**
MOR8				*e*SKSac	**SKSac**	**13 42 49.7**	**-2.9**
CPBX	**Cerro Prieto**	**87.70**	**57**	P	**P**	**13 33 23.2**	**+0.8**
CPBX				IAmb	IAmb	13 33 25.6	
	comp=Z,161nm,1.4s						
KONS	**Konsvik**	**87.82**	**343**	*e*P	**P**	**13 33 22.8**	**+0.6**
MVU	**Marysvale**	**87.83**	**50**	P	**P**	**13 33 24.0**	**+0.8**
NBB40	**Tonnes**	**87.84**	**343**	*e*P	**P**	**13 33 23.0**	**+0.7**
W13A	**Hualapai Mount**	**87.84**	**54**	P	**P**	**13 33 24.0**	**+0.7**
W13A				IAmb	IAmb	13 33 26.6	
	comp=Z,316nm,1.4s						
GLA	**Glamis**	**87.85**	**56**	P	**P**	**13 33 23.9**	**+0.7**
GLA				pmax	pmax		
	comp=Z,526nm,1.4s						
GLA	**Glamis**	**87.85**	**56**	P	**P**	**13 33 23.8**	**+0.7**
	baz=291,SNR=53						
GLA				S	**S**	**13 43 16.6**	**0.0**
	baz=291						
GLA	**Glamis**	**87.85**	**56**	P	**P**	**13 33 23.9**	**+0.7**
MSU	**Marysvale**	**87.85**	**50**	P	**P**	**13 33 24.2**	**+0.9**
MSU	**Marysvale**	**87.85**	**50**	P	**P**	**13 33 24.2**	**+0.9**
PDMCI	**Parker Dam,Lak**	**87.93**	**55**	P	**P**	**13 33 24.0**	**+0.5**
	baz=291,SNR=133						
PDMCI				S	**S**	**13 43 17.0**	**-0.2**
	baz=291						
KNB	**Kanab**	**87.94**	**52**	P	**P**	**13 33 24.6**	**+0.9**
KNB				pmax	pmax		
	comp=Z,706nm,1.3s						
KNB	**Kanab**	**87.94**	**52**	P	**P**	**13 33 24.6**	**+0.9**
STOK	**Stokkvaagen**	**87.97**	**343**	*e*P	**P**	**13 33 23.7**	**+0.8**
SOC	**Sochi**	**88.01**	**316**	*e*P	**P**	**13 33 21.1**	**-2.5**
SOC				*e**PP	**pP**	**13 35 31.9**	**0.0**
SOC				*e**SP	**sP**	**13 36 25.0**	**-6.4**
SOC				*e*		13 36 59.0	
SOC				*e*PPP	PPP	13 38 59.3	
SOC				*e*S	**SKSac**	**13 42 52.0**	**-3.4**
SOC				*e*SSS	SSS	13 53 05.6	
SOC				pmax	pmax		
	comp=Z,89nm,0.7s						
BW06	**Boulder Array**	**88.02**	**45**	P	**P**	**13 33 23.9**	**-0.1**
	baz=294,SNR=40						
BW06				S	**S**	**13 43 15.7**	**-2.6**
	baz=294						
BW06	**Boulder Array**	**88.02**	**45**	P	**P**	**13 33 23.6**	**-0.4**
MTPU	**Mount Pierson**	**88.02**	**50**	P	**P**	**13 33 23.8**	**-0.5**
PD31	**Pinedale Array**	**88.02**	**45**	P	**P**	**13 33 24.0**	**0.0**
PDAR	**Pinedale Array**	**88.02**	**45**	P	**P**	**13 33 23.7**	**-0.3**
	comp=Z,21nm,0.8s,baz=273,slow=0.8,SNR=79						
PDAR				pP	**pP**	**13 35 32.8**	**+1.1**
	comp=Z,4.2nm,0.7s,baz=251,slow=3.3,SNR=4.6						
PDAR				PKKP	**PKKPdf**	**13 50 58.8**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=115,slow=4.1,SNR=2.3						
PDAR	**Pinedale Array**	**88.02**	**45**	P	**P**	**13 33 23.7**	**-0.3**
VSU	**Vasula**	**88.05**	**332**	*e*P	**P**	**13 33 24.0**	**+0.6**
VSU	**Vasula**	**88.05**	**332**	*d i*P	**P**	**13 33 23.2**	**-0.2**
TMUT	**Trail Mountain**	**88.25**	**49**	P	**P**	**13 33 25.6**	**+0.3**
GURO	**Guroymak-BITLI**	**88.39**	**310**	P	**P**	**13 33 25.8**	**+0.1**
GURO				IAmb	IAmb	13 33 28.0	
	comp=Z,199nm,1.1s						
Q16A	**Castle Valley**	**88.42**	**49**	P	**P**	**13 33 26.2**	**+0.3**
Q16A				IAmb	IAmb	13 33 28.7	
	comp=Z,192nm,0.9s						
SIRT	**Sirnak**	**88.50**	**309**	P	**P**	**13 33 25.7**	**-0.5**
P17A	**Butcher Ranch,**	**88.51**	**49**	P	**P**	**13 33 26.6**	**+0.3**
LAO	**LASA Array**	**88.53**	**41**	P	**P**	**13 33 26.4**	**+0.3**
	baz=296,SNR=79						
LAO				S	**S**	**13 43 22.8**	**+0.4**
	baz=296						
LAO	**LASA Array**	**88.53**	**41**	P	**P**	**13 33 26.4**	**+0.3**
SFX	**San Felipe**	**88.55**	**58**	P	**P**	**13 33 26.6**	**+0.2**
U15A	**North Rim**	**88.55**	**52**	P	**P**	**13 33 27.0**	**+0.3**
U15A				IAmb	IAmb	13 33 30.3	
	comp=Z,267nm,1.2s						
FCC	**Fort Churchill**	**88.75**	**27**	P	**P**	**13 33 27.1**	**+0.5**
FCC				pmax	pmax		
	comp=Z,309nm,1.2s						
FCC	**Fort Churchill**	**88.75**	**27**	P	**P**	**13 33 27.1**	**+0.5**
113A	**Mohawk Valley,**	**88.78**	**56**	P	**P**	**13 33 27.6**	**+0.1**
113A				IAmb	IAmb	13 33 30.6	
	comp=Z,235nm,1.2s						
P18A	**Preston Nutter**	**88.80**	**48**	P	**P**	**13 33 28.0**	**+0.2**
P18A				IAmb	IAmb	13 33 30.1	
	comp=Z,108nm,0.9s						
SRU	**San Rafael Swe**	**88.81**	**49**	P	**P**	**13 33 27.8**	**+0.1**
SRU				pmax	pmax		
	comp=Z,235nm,0.6s						
SRU	**San Rafael Swe**	**88.81**	**49**	P	**P**	**13 33 27.8**	**+0.1**
SUMG	**Summit**	**88.83**	**1**	P	**P**	**13 33 27.7**	**+0.4**
SUMG				pmax	pmax		
	comp=Z,179nm,1.0s						
SUMG	**Summit**	**88.83**	**1**	*i* P	**P**	**13 33 27.4**	**+0.1**
SUMG				IAmb	IAmb	13 33 31.5	
	comp=Z,82nm,1.1s						
SUMG	**Summit**	**88.83**	**1**	P	**P**	**13 33 27.7**	**+0.4**
SUMG				IAmb	IAmb	13 33 33.0	
	comp=Z,178nm,1.0s						
RDMU	**Red Mountain**	**88.90**	**47**	P	**P**	**13 33 28.3**	**+0.1**
Y14A	**Wickenburg**	**88.94**	**55**	P	**P**	**13 33 28.7**	**+0.4**
DGMT	**Dagmar**	**88.95**	**39**	P	**P**	**13 33 27.9**	**-0.1**
	baz=298						
DGMT				S	**S**	**13 43 25.2**	**-0.9**
	baz=298						
DGMT	**Dagmar**	**88.95**	**39**	P	**P**	**13 33 27.6**	**-0.4**
DGMT				IAmb	IAmb	13 33 30.1	
	comp=Z,263nm,1.2s						
ANN	**Anapa**	**88.99**	**317**	*i* P	**P**	**13 33 27.6**	**-0.5**
ANN				*i* *PP	**pP**	**13 35 33.5**	**-3.0**
ANN				*e*		13 37 07.2	
ANN				*e*S	**SKSac**	**13 43 00.2**	**-0.8**
ANN				*e*SS	**SS**	**13 49 37.2**	**-0.2**
ANN				pmax	pmax		
	comp=Z,360nm,1.2s						
NUUG	**Nuugaatsiaq**	**89.01**	**6**	*i* P	**P**	**13 33 27.4**	**-0.3**
NUUG				IAmb	IAmb	13 33 28.9	
	comp=Z,23nm,0.8s						
KTUT	**Trabzon**	**89.03**	**313**	⇓P	**P**	**13 33 28.3**	**-0.2**
MTSE	**Matsula**	**89.16**	**334**	*e*P	**P**	**13 33 28.6**	**0.0**
NSS	**Namsos**	**89.57**	**342**	⇓*i*P	**P**	**13 33 30.5**	**+0.1**
NSS				*e*SKSac	**SKSac**	**13 43 05.4**	**+1.9**
WUAZ	**Wupatki**	**89.59**	**53**	P	**P**	**13 33 32.1**	**+0.7**
	baz=293,SNR=117						
WUAZ				S	**S**	**13 43 32.0**	**-0.6**
	baz=293						
WUAZ	**Wupatki**	**89.59**	**53**	P	**P**	**13 33 32.0**	**+0.7**
MNK	**Minsk**	**89.69**	**329**	*i* P	**P**	**13 33 29.1**	**-2.0**
MNK				*i* *PP	**pP**	**13 35 38.6**	**-1.5**
MNK				*i*		13 37 12.2	
MNK				*i* PPP	PPP	13 39 15.3	
MNK				*i* S	**SKSac**	**13 43 02.1**	**-2.5**
MNK				*i* SSS	SSS	13 53 30.4	
MNK				pmax	pmax		
	comp=N,118nm,1.0s						
MNK				pmax	pmax		
	comp=E,32nm,1.0s						
MNK				pmax	pmax		
	comp=Z,514nm,1.0s						
MNK				MLR	MLR		

	comp=E,80nm,20.0s						
MNK				MLR	MLR		
	comp=Z,430nm,20.0s						
MNK				MLR	MLR		
	comp=N,309nm,20.0s						
MNK	Minsk	89.69	329	*i* P	P	13 33 29.1	-2.0
	comp=E,32nm,1.0s						
MNK				*i* P	P	13 33 29.1	-2.0
	comp=N,118nm,1.0s,baz=57						
MNK				*i* P	P	13 33 29.1	-2.0
	comp=Z,514nm,1.0s						
MNK				*i* pP	pP	13 35 38.6	-1.5
MNK				*i* sP	sP	13 36 51.6	+12
MNK				*i* PP	PP	13 37 12.2	-1.7
MNK				*i* PPP	PPP	13 39 15.4	
MNK				*i* S	SKSac	13 43 02.1	-2.5
MNK				*i* PS		13 44 10.9	
MNK				*i* sS	sS	13 47 08.1	-14
MNK				*i* SS	SS	13 49 17.4	-29
MNK				*i* SSS	SSS	13 53 30.5	
MNK				*i* LRM	MLR	14 16 24.0	
	comp=E,80nm,20.0s						
MNK				*i* LRM	MLR	14 16 28.1	
	comp=Z,430nm,20.0s						
MNK				*i* LRM	MLR	14 17 58.6	
	comp=N,309nm,20.0s						
AAL	Aland	89.80	336	*e*P	P	13 33 30.7	-0.8
214A	Organ Pipe Nat	89.83	56	P	P	13 33 33.2	+0.8
	baz=292,SNR=144						
214A				S	S	13 43 35.0	+0.4
	baz=292						
214A	Organ Pipe Nat	89.83	56	P	P	13 33 32.9	+0.5
214A				IAmb	IAmb	13 33 35.9	
	comp=Z,271nm,1.1s						
ISAL	Salakas	89.94	330	*e*P	P	13 33 32.2	-0.1
X16A	Lo Mia Camp, P	89.96	54	P	P	13 33 33.7	+0.6
X16A				IAmb	IAmb	13 33 36.8	
	comp=Z,119nm,1.3s						
O20A	White River Ci	90.00	47	P	P	13 33 33.4	+0.2
	baz=295,SNR=149						
O20A				S	S	13 43 34.1	-2.2
	baz=295						
O20A	White River Ci	90.00	47	P	P	13 33 33.0	-0.2
RWWY	Rawlins	90.06	46	P	P	13 33 34.0	+0.4
K22A	Casper	90.10	45	P	P	13 33 34.4	+0.8
	baz=296,SNR=45						
K22A	Casper	90.10	45	P	P	13 33 34.1	+0.5
K22A				IAmb	IAmb	13 33 37.4	
	comp=Z,189nm,1.1s						
SLIT	Slitere, Latvi	90.45	333	*e*P	P	13 33 34.4	-0.2
SCO	Scoresbysund	90.52	356	P	P	13 33 35.4	+0.8
SCO				pmax	pmax		
	comp=Z,148nm,1.1s						
SCO	Scoresbysund	90.52	356	*i* P	P	13 33 35.6	+0.9
SCO				IAmb	IAmb	13 33 37.6	
	comp=N,12nm,1.0s						
SCO	Scoresbysund	90.52	356	P	P	13 33 35.4	+0.8
SCO				IAmb	IAmb	13 33 37.0	
	comp=Z,148nm,1.1s						
UPP	Uppsala	90.91	336	*e*P	P	13 33 36.3	-0.4
W18A	Petrified Fore	90.98	52	P	P	13 33 38.6	+0.8
	baz=294,SNR=60						
W18A				S	S	13 43 45.1	+0.1
	baz=294						
W18A	Petrified Fore	90.98	52	P	P	13 33 38.4	+0.5
W18A				IAmb	IAmb	13 33 41.2	
	comp=Z,142nm,1.1s						
PABE	Paberze	90.98	331	*e*P	P	13 33 37.3	+0.2
PABE	Paberze	90.98	331	P	P	13 33 36.3	-0.7
AKASG	Malin Array Be	91.03	325	P	P	13 33 35.5	-1.9
	comp=Z,13nm,0.5s,baz=50,slow=4.8,SNR=83						
AKASG				pP	pP	13 35 48.5	+2.0
	comp=Z,4.9nm,0.7s,baz=46,slow=5.6,SNR=2.9						
AKASG				PP	PP	13 37 24.4	-0.1
	comp=Z,14nm,0.9s,baz=47,slow=8.8,SNR=7.1						
AKASG				PKiKP	PKiKP	13 38 26.0	0.0
	comp=Z,1.0nm,0.4s,baz=49,slow=2.3,SNR=4.3						
AKASG				PKKP	PKKPdf	13 50 53.1	-0.5
	comp=Z,0.3nm,0.3s,baz=258,slow=3.2,SNR=2.2						
AKASG	Malin Array Be	91.03	325	P	P	13 33 35.9	-1.5
AKASG				pmax	pmax		
	comp=Z,49nm,1.2s						
AKASG	Malin Array Be	91.03	325	P	P	13 33 35.9	-1.5
AKBB	Malin Array Si	91.03	325	*ce*P	P	13 33 36.7	-0.7
AKBB	Malin Array Si	91.03	325	P	P	13 33 35.5	-1.9
TBLU	Trondheim	91.03	341	*e*P	P	13 33 37.1	-0.1
TBLU				*e*SKSac	SKSac	13 43 09.2	-2.7
MVCO	Mesa Verde	91.04	50	P	P	13 33 38.6	+0.4
	baz=295,SNR=112						
MVCO				S	S	13 43 43.2	-2.3
	baz=295						
MVCO	Mesa Verde	91.04	50	P	P	13 33 38.1	0.0
X18A	Snowflake	91.05	53	P	P	13 33 38.0	-0.2
X18A				IAmb	IAmb	13 33 41.5	
	comp=Z,92nm,1.1s						
RSSD	Black Hills	91.06	42	P	P	13 33 37.6	-0.5
RSSD				pmax	pmax		
	comp=Z,79nm,0.9s						
RSSD	Black Hills	91.06	42	P	P	13 33 37.6	-0.5
	baz=298						
RSSD				S	S	13 43 44.9	-0.6
	baz=298						
RSSD	Black Hills	91.06	42	P	P	13 33 37.6	-0.5
RSSD				IAmb	IAmb	13 33 39.7	
	comp=Z,79nm,0.8s						
RAYN	Ar Rayn	91.21	295	*i* P	P	13 33 37.6	-1.4
	SNR=117						
RAYN	Ar Rayn	91.21	295	P	P	13 33 37.5	-1.4
RAYN				pmax	pmax		
	comp=Z,183nm,1.1s						
RAYN	Ar Rayn	91.21	295	P	P	13 33 37.5	-1.5
RAYN				IAmb	IAmb	13 33 40.5	
	comp=Z,182nm,1.1s						
N23A	Red Feather La	91.26	46	P	P	13 33 39.9	+0.8
	baz=296,SNR=208						
TUC	Tucson	91.29	55	P	P	13 33 39.5	+0.4
TUC				pmax	pmax		
	comp=Z,138nm,1.3s						
TUC	Tucson	91.29	55	P	P	13 33 39.6	+0.5
	baz=293						
TUC				S	S	13 43 49.1	+1.4
	baz=293						
TUC	Tucson	91.29	55	P	P	13 33 39.5	+0.4
TUC				IAmb	IAmb	13 33 42.7	
	comp=Z,138nm,1.2s						
SMCO	Snowmass	91.30	48	P	P	13 33 39.7	+0.3
ILULI	Ilulissat	91.46	6	P	P	13 33 38.9	-0.1
ILULI				pmax	pmax		
	comp=Z,93nm,0.8s						
ILULI	Ilulissat	91.46	6	*i* P	P	13 33 38.5	-0.4
ILULI				IAmb	IAmb	13 33 40.0	
	comp=Z,52nm,0.7s						
ILULI	Ilulissat	91.46	6	P	P	13 33 38.9	-0.1
ILULI				IAmb	IAmb	13 33 40.4	
	comp=Z,93nm,0.8s						
PBUR	Paburge	91.59	332	*e*P	P	13 33 40.5	+0.6
SNOP	Sinop	91.67	316	P	P	13 33 39.9	-0.7
SNOP				IAmb	IAmb	13 33 41.9	
	comp=Z,131nm,1.2s						
DIKM	Dikmen	91.81	315	⇑P	P	13 33 41.7	+0.5
MDND	Maddock	91.94	38	P	P	13 33 42.0	+0.3
	baz=301,SNR=21						
MDND	Maddock	91.94	38	P	P	13 33 41.7	-0.1
E28A	Huff	91.95	39	P	P	13 33 41.6	-0.2
ISCO	Idaho Springs	91.97	47	P	P	13 33 42.5	+0.1
ISCO				pmax	pmax		
	comp=Z,145nm,1.2s						
ISCO	Idaho Springs	91.97	47	P	P	13 33 42.7	+0.3
	baz=296,SNR=98						
ISCO				S	S	13 43 51.8	-2.0
	baz=296						
ISCO	Idaho Springs	91.97	47	P	P	13 33 42.5	+0.1
ISCO				IAmb	IAmb	13 33 45.6	
	comp=Z,145nm,1.2s						
S22A	4UR Ranch, Cre	92.01	49	P	P	13 33 43.0	+0.3
	baz=296,SNR=175						
S22A				S	S	13 43 56.0	+1.7
	baz=296						
SRIG	Santa Rosalia	92.03	60	P	P	13 33 43.6	+1.0
SRIG				IAmb	IAmb	13 33 45.6	
	comp=Z,119nm,1.2s						
NC405	NORSAR Array S	92.14	339	P	P	13 33 40.2	-2.1
NC303	NORSAR Array S	92.18	340	P	P	13 33 41.4	-1.1
NC303				IAmb	IAmb	13 33 43.1	
	comp=Z,81nm,1.1s						
SUW	Suwalki	92.23	330	*e*P	P	13 33 42.8	-0.1
SUW	Suwalki	92.23	330	*e*P	P	13 33 42.7	-0.1
SUW	Suwalki	92.23	330	P	P	13 33 41.8	-1.1
SUW				pmax	pmax		
	comp=Z,776nm,1.1s						
SUW	Suwalki	92.23	330	P	P	13 33 41.8	-1.1
ICESG	Greenland Ices	92.30	2	*i* P	P	13 33 42.9	-0.4
ICESG				IAmb	IAmb	13 33 44.3	
	comp=Z,68nm,0.7s						
DOMB	Dombas	92.30	341	⇓*i*P	P	13 33 43.4	+0.3
NB201	NORSAR Array S	92.33	340	P	P	13 33 41.7	-1.5
NB201				IAmb	IAmb	13 33 43.8	
	comp=Z,102nm,0.8s						
NC204	NORSAR Array S	92.34	340	P	P	13 33 41.8	-1.6
NC204				IAmb	IAmb	13 33 44.0	
	comp=Z,161nm,0.9s						
MOL	Molde	92.36	342	⇓*i*P	P	13 33 43.6	+0.4
NB2	NORSAR Subarra	92.36	340	P	P	13 33 41.8	-1.6
	comp=Z,60nm,0.9s,baz=44,slow=5.1						
NOA	NORSAR Array B	92.36	340	P	P	13 33 41.9	-1.6
	comp=Z,20nm,0.6s,baz=46,slow=4.5,SNR=60						
NOA				PP	PP	13 37 33.1	-1.4
	comp=Z,24nm,1.0s,baz=44,slow=8.0,SNR=7.5						
NOA	NORSAR Array B	92.36	340	P	P	13 33 41.9	-1.6
NOA	NORSAR Array B	92.36	340	P	P	13 33 41.9	-1.6
NOA					PP	13 37 33.1	-1.4
HSIG		92.44	58	P	P	13 33 44.4	0.0
HSIG				IAmb	IAmb	13 33 47.4	
	comp=Z,88nm,0.9s						
GAZ	Gaziantep	92.44	311	P	P	13 33 42.6	-1.8
GAZ				IAmb	IAmb	13 33 44.5	
	comp=Z,72nm,1.0s						
NC602	NORSAR Array S	92.48	339	*e*P	P	13 33 43.4	-0.4
NC602				*e*SKSac	SKSac	13 43 21.3	+1.3
NC602	NORSAR Array S	92.48	339	P	P	13 33 42.8	-1.0
NC602				IAmb	IAmb	13 33 43.9	
	comp=Z,78nm,1.1s						
BZK	Bozkurt	92.50	316	⇓P	P	13 33 44.9	+0.6
NAO01	NORSAR Array S	92.62	340	P	P	13 33 42.5	-2.0
NAO01				IAmb	IAmb	13 33 45.0	
	comp=Z,140nm,1.1s						
Q24A	Divide	92.67	47	P	P	13 33 46.0	+0.4
	baz=297,SNR=24						
BNN	Bunyan	92.67	313	P	P	13 33 44.5	-0.9
ULM	Lac du Bonnet	92.73	34	P	P	13 33 44.8	-0.5
	comp=Z,56nm,1.0s,baz=303,slow=5.2,SNR=37						
ULM				pP	pP	13 35 55.4	+1.6
	comp=Z,19nm,1.0s,baz=296,slow=5.1,SNR=4.5						
ULM	Lac du Bonnet	92.73	34	P	P	13 33 44.8	-0.5
ULM				*PP	pP	13 35 55.4	+1.6
ULM	Lac du Bonnet	92.73	34	P	P	13 33 45.0	-0.3
ULM				IAmb	IAmb	13 33 47.1	
	comp=Z,91nm,1.1s						
AKN	Aaknes	92.82	342	⇓*i*P	P	13 33 46.4	+0.9
319A	Douglas	92.83	56	P	P	13 33 47.3	+0.9
PURM	Purcari	92.83	321	⇑P	P	13 33 45.7	-0.1
SORM	Soroca	92.87	323	⇑P	P	13 33 44.0	-1.9
SORM	Soroca	92.87	323	⇑P	P	13 33 44.0	-1.9
SDCO	Great Sand Dun	92.96	49	P	P	13 33 47.3	+0.3
	baz=296,SNR=70						
SDCO				S	S	13 44 00.8	-1.7
	baz=296						
SDCO	Great Sand Dun	92.96	49	P	P	13 33 46.7	-0.3
SDCO				IAmb	IAmb	13 33 49.8	
	comp=Z,116nm,1.4s						
OSL	Oslo	93.34	339	*e*P	P	13 33 48.4	+0.6
ANMO	Albuquerque	93.49	51	*d i*P	P	13 33 49.8	+0.4
ANMO				pmax	pmax		
	comp=Z,70nm,1.4s						
ANMO	Albuquerque	93.49	51	P	P	13 33 49.8	+0.4
	baz=296						
ANMO				S	S	13 44 08.0	+1.1
	baz=296						
ANMO	Albuquerque	93.49	51	P	P	13 33 49.7	+0.4
121A	Cookes Peak, D	93.52	54	P	P	13 33 50.7	+1.2
	baz=295,SNR=20						
121A				S	S	13 44 07.0	-0.2
	baz=295						
121A	Cookes Peak, D	93.52	54	P	P	13 33 50.1	+0.6
SKAR	Skarslia	93.58	340	*e*P	P	13 33 49.7	+0.7
SFJD	Kangerlussuaq	93.65	6	P	P	13 33 48.7	-0.4
SFJD				pmax	pmax		
	comp=Z,182nm,1.3s						
SFJD	Kangerlussuaq	93.65	6	*i* P	P	13 33 48.3	-0.8
SFJD				IAmb	IAmb	13 33 49.7	
	comp=Z,20nm,0.7s						
SFJD	Kangerlussuaq	93.65	6	P	P	13 33 48.7	-0.4
SFJD				IAmb	IAmb	13 33 50.8	
	comp=Z,182nm,1.3s						
BNM	Barren Site	93.71	52	P	P	13 33 50.4	0.0
BR131	Keskin Array S	93.79	314	P	P	13 33 49.6	-0.9
BR131				pmax	pmax		
	comp=Z,180nm,1.0s						
BR131	Keskin Array S	93.79	314	P	P	13 33 50.3	-0.3
	SNR=46						
BR131	Keskin Array S	93.79	314	P	P	13 33 49.6	-0.9
BRTR	Keskin Array B	93.79	314	P	P	13 33 50.2	-0.3
	comp=Z,87nm,0.9s,baz=100,slow=3.0,SNR=133						
BRTR				pP	pwP	13 36 02.4	-2.6
	comp=Z,6.2nm,0.9s,baz=116,slow=2.8,SNR=4.2						
BRTR				PP	PP	13 37 46.4	+0.1
	comp=Z,16nm,0.9s,baz=70,slow=6.5,SNR=4.0						
BRTR	Keskin Array B	93.79	314	P	P	13 33 50.3	-0.3
BRTR				*PP	pwP	13 36 02.4	-2.6
BRTR	Keskin Array B	93.79	314	P	P	13 33 49.3	-1.3
BRTR	Keskin Array B	93.79	314		PP	13 37 46.4	+0.1
AGMN	Agassiz Nation	93.83	36	P	P	13 33 50.7	+0.4
	baz=304,SNR=23						
AGMN				S	S	13 44 04.7	-4.2
	baz=304						
AGMN	Agassiz Nation	93.83	36	P	P	13 33 49.6	-0.7
AGMN				IAmb	IAmb	13 33 52.1	
	comp=Z,88nm,1.1s						
FOO	Floro	93.85	342	*e*P	P	13 33 51.0	+0.9
HYA	Hoyanger	93.86	341	*e*P	P	13 33 50.8	+0.7
OGNE	Ogallala	93.87	44	P	P	13 33 51.3	+0.5
	baz=299,SNR=8.6						
OGNE	Ogallala	93.87	44	P	P	13 33 50.5	-0.3
KONO	Kongsberg	93.94	339	*e*P	P	13 33 50.7	+0.2
T25A	Trinidad	94.01	49	P	P	13 33 52.1	+0.4
	baz=297,SNR=39						
T25A				S	S	13 44 11.7	+0.3
	baz=297						
T25A	Trinidad	94.01	49	P	P	13 33 51.9	+0.2
T25A				IAmb	IAmb	13 33 54.6	
	comp=Z,76nm,1.1s						
SUSD	Miller	94.08	40	P	P	13 33 51.5	-0.1
	baz=301,SNR=7.9						
SUSD				S	S	13 44 06.9	-4.5
	baz=301						
SUSD	Miller	94.08	40	P	P	13 33 51.5	-0.1
TLCR		94.16	321	⇑P	P	13 33 52.2	+0.3
TLCR		94.16	321	⇑P	P	13 33 52.2	+0.3
VLDR	Vladesti	94.25	321	⇑P	P	13 33 52.8	+0.5
BORU	Boraas	94.28	337	*e*P	P	13 33 51.0	-1.2
LVV	L'vov	94.29	326	*e*P	P	13 33 51.3	-1.1
ANTO	Ankara	94.30	315	P	P	13 33 52.0	-0.7
ANTO				pmax	pmax		
	comp=Z,107nm,1.0s						
ANTO	Ankara	94.30	315	P	P	13 33 52.0	-0.7
ANTO				IAmb	IAmb	13 33 54.2	
	comp=Z,107nm,0.9s						
BR231	Keskin MP Arra	94.32	315	P	P	13 33 52.3	-0.6
BR231				IAmb	IAmb	13 33 54.3	
	comp=Z,90nm,1.0s						
SUE	Sulen	94.37	342	*e*P	P	13 33 53.7	+1.2
KSCO	Kaye Shedlock’	94.39	46	P	P	13 33 53.9	+0.6
	baz=298,SNR=22						
KSCO	Kaye Shedlock’	94.39	46	P	P	13 33 53.8	+0.6
DY2G	Dye2	94.55	5	*i* P	P	13 33 52.5	-1.1
DY2G				IAmb	IAmb	13 33 54.3	
	comp=Z,23nm,0.6s						
CFR	Carcaliu	94.58	321	⇑P	P	13 33 53.5	-0.3
CFR	Carcaliu	94.58	321	⇑P	P	13 33 53.5	-0.3
TPGR	Topolog	94.58	320	⇑P	P	13 33 54.2	+0.4
DEL	Delary	94.69	335	*i* P	P	13 33 52.1	-1.9
ASK	Askoy	94.70	341	*e*P	P	13 33 54.6	+0.6
ODD1	Odda	94.70	341	*e*P	P	13 33 54.4	+0.3
TESR	Tescani	94.72	323	⇑P	P	13 33 54.5	0.0
BER	Bergen	94.73	341	*e*P	P	13 33 55.0	+0.9
FABU	Falkenberg	94.76	336	*i* P	P	13 33 53.1	-1.2
TIRR	Tirgusor	94.79	320	⇓P	P	13 33 55.8	+1.1
TIRR	Tirgusor	94.79	320	⇓P	P	13 33 55.8	+1.1
BUR08	Bucovina Ar. S	94.91	324	P	P	13 33 54.9	-0.5
BURAR	Bucovina Array	94.92	324	⇑P	P	13 33 55.0	-0.4
BURAR	Bucovina Array	94.92	324	⇑P	P	13 33 55.0	-0.4
BURAR	Bucovina Array	94.92	324	P	P	13 33 54.4	-1.1
MFTR	Murfatlar	94.93	320	⇑P	P	13 33 55.6	+0.2
F33A	5 Mile Ranch,	94.94	38	P	P	13 33 54.8	-0.6
F33A				IAmb	IAmb	13 33 57.3	
	comp=Z,133nm,1.2s						
B35A	Bob, Littlefor	94.96	35	P	P	13 33 55.6	+0.2
B35A				IAmb	IAmb	13 33 57.6	
	comp=Z,100nm,1.4s						
TLBR	Topalu	94.97	320	⇑P	P	13 33 55.8	+0.3
VRI	Vrincioaia	95.03	322	⇑P	P	13 33 56.1	+0.2
VRI	Vrincioaia	95.03	322	⇑P	P	13 33 56.1	+0.2
MDUB	Mudurnu	95.07	316	P	P	13 33 55.2	-1.1
PLOR	Plostina	95.09	322	⇑P	P	13 33 56.5	+0.4
PLOR	Plostina	95.09	322	⇑P	P	13 33 56.5	+0.4
KWP	Kalwaria Pacla	95.09	327	*e*P	P	13 33 56.2	+0.1
KWP	Kalwaria Pacla	95.09	327	P	P	13 33 55.6	-0.4
KWP				pmax	pmax		
	comp=Z,1µm,1.1s						
KWP	Kalwaria Pacla	95.09	327	P	P	13 33 55.6	-0.4
K31A	O'Neill	95.15	42	P	P	13 33 56.0	-0.5
BSD	Bornholm Skovb	95.21	334	*e*P	P	13 33 56.6	+0.3
BSD	Bornholm Skovb	95.21	334	*e*P	P	13 33 55.2	-1.2
BJUU	Bjuv	95.30	335	*i* P	P	13 33 55.3	-1.5
SLBS	Sierra La Lagu	95.34	63	P	P	13 33 57.7	-0.1
SLBS				IAmb	IAmb	13 34 01.7	
	comp=Z,116nm,1.4s						
COVR	Voineasa-Covas	95.35	322	⇑P	P	13 33 57.3	0.0
HOMB	Homborsund	95.35	339	*e*P	P	13 33 57.6	+0.6
GKP	Gorka Klasztor	95.45	332	*e*P	P	13 33 58.0	+0.5
OZUR		95.45	323	⇑P	P	13 33 58.6	+0.8
NEHR	Nehoiu	95.53	322	⇑P	P	13 34 06.4	+8.3
KMY	Karmoy	95.69	341	*e*P	P	13 33 59.1	+0.7
MLR	Muntele Rosu	95.70	322	⇑P	P	13 33 59.2	+0.2
MLR	Muntele Rosu	95.70	322	⇑P	P	13 33 59.2	+0.2
MNTX	Cornudas Mount	95.71	54	P	P	13 33 59.5	+0.3
	baz=296,SNR=51						
MNTX	Cornudas Mount	95.71	54	P	P	13 33 59.4	+0.2
MNTX				IAmb	IAmb	13 34 02.1	
	comp=Z,65nm,1.2s						
KOLS	Kolonicke sedl	95.74	326	*e*P	P	13 33 59.4	+0.4
KOLS	Kolonicke sedl	95.74	326	*e*PDIFF	P	13 33 59.3	+0.3
SNART	Snartemo	95.74	339	*e*P	P	13 33 58.9	+0.2
DOPR	Dopca	95.75	323	⇑P	P	13 33 59.9	+0.8
BMR	Baia Mare	95.83	325	⇑P	P	13 33 59.6	+0.2
BMR	Baia Mare	95.83	325	⇑P	P	13 33 59.6	+0.2
SECR		95.88	322	⇑P	P	13 33 59.6	-0.1
ECSD	EROS Data Cent	95.89	40	P	P	13 33 59.6	-0.1
	baz=303,SNR=22						
ECSD				S	S	13 44 21.4	-5.4
	baz=303						
ECSD	EROS Data Cent	95.89	40	P	P	13 33 59.7	-0.1
ECSD				IAmb	IAmb	13 34 01.5	
	comp=Z,100nm,1.4s						
UZH	Uzhgorod	95.91	326	⇑*i*P	P	13 33 59.2	-0.5
TRPA	Tarpa	96.08	325	⇑P	P	13 34 00.3	-0.2
TRPA	Tarpa	96.08	325	*e*P	P	13 34 00.3	-0.2
BGNE	Belgrade	96.17	43	P	P	13 34 00.5	-0.6
	baz=302						
BGNE	Belgrade	96.17	43	P	P	13 34 00.7	-0.4
BGNE				IAmb	IAmb	13 34 03.1	
	comp=Z,98nm,1.1s						
CRVS	Cervenica-Dubn	96.18	327	*e*P	P	13 34 01.3	+0.3
CRVS	Cervenica-Dubn	96.18	327	*e*PDIFF	P	13 34 01.2	+0.3
OJC	Ojcow	96.21	328	*e*P	P	13 34 01.1	+0.1
OJC	Ojcow	96.21	328	P	P	13 34 00.4	-0.6
OJC				pmax	pmax		
	comp=Z,47nm,1.2s						
OJC	Ojcow	96.21	328	P	P	13 34 00.4	-0.6
CSS	Mathiatis	96.24	310	P	P	13 34 00.9	-0.7
CSS				IAmb	IAmb	13 34 02.3	
	comp=Z,49nm,1.1s						
VOIR		96.25	322	⇑P	P	13 34 01.6	+0.2
VOIR		96.25	322	⇑P	P	13 34 01.6	+0.2
EYMN	Ely	96.41	34	P	P	13 34 01.8	-0.3
	baz=307						
EYMN				S	S	13 44 29.4	-1.6
	baz=307						
EYMN	Ely	96.41	34	P	P	13 34 02.1	+0.1
RAZG	Razgrad	96.43	320	⇑P	P	13 34 02.7	+0.6
CBKS	Cedar Bluff	96.45	45	P	P	13 34 02.4	0.0
CBKS				pmax	pmax		
	comp=Z,66nm,1.1s						
CBKS	Cedar Bluff	96.45	45	Pdiff	P	13 34 02.5	0.0
	baz=300						
CBKS	Cedar Bluff	96.45	45	P	P	13 34 02.4	0.0
CBKS				IAmb	IAmb	13 34 04.1	
	comp=Z,66nm,1.1s						
NIE	Niedzica	96.46	327	*e*P	P	13 34 03.6	+1.3
LEF	Lefka	96.48	310	⇓P	P	13 34 01.9	-0.7
F36A	Milaca	96.52	37	P	P	13 34 02.3	-0.2
F36A				IAmb	IAmb	13 34 04.3	
	comp=Z,63nm,1.2s						
ARR	Arges	96.53	322	⇓P	P	13 34 02.9	+0.2
VNDA	Vanda	96.60	176	P	P	13 34 02.0	0.0
	comp=Z,2.9nm,1.1s,baz=293,slow=5.9,SNR=6.4						
VNDA				pP	pP	13 36 13.2	+1.2
	comp=Z,3.5nm,1.0s,baz=332,slow=4.5,SNR=6.6						
VNDA				PKKP	PKKPbc	13 50 44.4	-1.1
	comp=Z,6.7nm,1.0s,baz=218,slow=2.6,SNR=16						
VNDA	Vanda	96.60	176	P	P	13 34 02.1	0.0
VNDA				*PP	pP	13 36 13.2	+1.2
VNDA	Vanda	96.60	176	P	P	13 34 03.6	+1.5
VNDA				PKKPdf	PKKPbc	13 50 44.1	-1.4
MSTX	Muleshoe	96.65	51	Pdiff	P	13 34 03.9	+0.4
	baz=298						
DRGR		96.79	324	⇑P	P	13 34 04.2	+0.4
DRGR		96.79	324	⇑P	P	13 34 04.2	+0.4
HUMR	Humele	96.81	322	⇑P	P	13 34 03.6	-0.2
COPA	Copaceanca	96.89	321	⇑P	P	13 34 03.4	-0.8
KECS	Kecovo	96.95	327	*e*P	P	13 34 04.8	+0.4
KECS				*e*		13 38 09.9	
KECS	Kecovo	96.95	327	*e*PDIFF	P	13 34 04.8	+0.4
KECS				*e*PP	PP	13 38 09.9	+0.2
AMTX	Amarillo	97.02	50	Pdiff	Pdif	13 34 05.6	+0.5
	baz=299						
AMTX	Amarillo	97.02	50	P	Pdif	13 34 06.1	+1.0
AMTX				IAmb	IAmb	13 34 07.8	
	comp=Z,82nm,1.1s						
ZIMR		97.07	321	⇑P	Pdif	13 34 05.9	+0.9
ZIMR		97.07	321	⇑P	Pdif	13 34 05.9	+0.9
E38A	The Farm, Brul	97.19	36	P	P	13 34 05.5	0.0
E38A				IAmb	IAmb	13 34 07.0	
	comp=Z,39nm,1.1s						
EDRB	Edirne	97.22	319	P	P	13 34 06.0	+0.2
OKC	Ostrava-Krasne	97.28	329	*e*PDIFF	P	13 34 06.2	+0.4
OKC	Ostrava-Krasne	97.28	329	*i* P	P	13 34 06.2	+0.4
R32A	Long Quarter,	97.34	45	P	P	13 34 07.2	+0.8
R32A				IAmb	IAmb	13 34 08.3	
	comp=Z,57nm,1.1s						
VLAD	Vladila	97.45	321	⇑P	P	13 34 07.2	+0.5
KSP	Ksiaz	97.50	330	*e*P	P	13 34 07.2	+0.4
GZR	Gura Zlata	97.58	323	⇑P	P	13 34 07.5	+0.2
GZR	Gura Zlata	97.58	323	⇑P	P	13 34 07.5	+0.2
MORC	Moravsky Berou	97.61	329	⇑P	P	13 34 07.6	+0.2
MORC	Moravsky Berou	97.61	329	⇑P	P	13 34 07.6	+0.2
MORC	Moravsky Berou	97.61	329	*e*PDIFF	Pdif	13 34 07.3	-0.1
PSZ	Piszkesteto	97.61	326	⇑P	P	13 34 08.1	+0.6
PSZ	Piszkesteto	97.61	326	⇑P	P	13 34 08.1	+0.6
SIRR	Siria	97.68	324	⇑P	P	13 34 07.9	+0.2
OSTC	Ostas	97.73	330	*e*PDIFF	P	13 34 08.4	+0.5
KULA	Kula-Manisa	97.75	315	P	Pdif	13 34 07.8	-0.5
SRE	Strehaia	97.77	322	⇑P	P	13 34 08.5	+0.4
SRE	Strehaia	97.77	322	⇑P	P	13 34 08.5	+0.4
KRLC	Kraliky	97.78	329	*e*PDIFF	P	13 34 08.2	+0.1
KRLC	Kraliky	97.78	329	*i* P	P	13 34 08.2	+0.1
CHVC	Chvalec	97.79	330	*e*PDIFF	Pdif	13 34 07.9	-0.2
VYHS	Vyhne	97.80	327	*e*P	Pdif	13 34 07.9	-0.3
VYHS				*e*		13 38 15.4	
VYHS	Vyhne	97.80	327	*e*PDIFF	Pdif	13 34 07.9	-0.3
VYHS				*e*PP	PP	13 38 15.4	-0.6
DPC	Dobruska-Polom	97.82	330	*e*PDIFF	Pdif	13 34 07.2	-1.1
DPC				*e*PP	PP	13 38 16.0	-0.2
DPC	Dobruska-Polom	97.82	330	*i* P	Pdif	13 34 07.2	-1.1
DPC				*e*		13 38 16.0	
UPC	Upice	97.86	330	*e*PDIFF	P	13 34 09.1	+0.7
UPC				*e*PP	PP	13 38 17.8	+1.4
UPC	Upice	97.86	330	*i* P	P	13 34 09.1	+0.7
UPC				*e*		13 38 17.8	
TXAR	Lajitas Array	98.09	55	P	Pdif	13 34 09.9	-0.1
	comp=Z,13nm,1.1s,baz=298,slow=2.7,SNR=44						

TXAR				pP	pP	13 36 22.3	+3.4
	comp=Z,1.4nm,0.8s,baz=311,slow=3.5,SNR=1.7						
TXAR				PP	PP	13 38 18.0	-1.1
	comp=Z,2.8nm,0.9s,baz=296,slow=6.9,SNR=2.6						
TXAR				PKiKP	PKiKP	13 38 35.8	-3.3
	comp=Z,12nm,1.3s,baz=267,slow=1.8,SNR=2.1						
TXAR				PKKPbc	PKKPbc	13 50 38.6	-1.6
	comp=Z,5.8nm,0.8s,baz=142,slow=3.4,SNR=27						
TXAR	Lajitas Array	98.09	55	P	Pdif	13 34 09.9	-0.1
TXAR				*PP	pP	13 36 22.3	+3.4
TXAR	Lajitas Array	98.09	55		PKKPdf	13 50 40.2	-0.9
TXAR	Lajitas Array	98.09	55		PKiKP	13 38 35.8	-3.3
HERR	Herculane	98.09	323	⇑P	P	13 34 09.7	+0.2
BZS	Buzias	98.10	324	⇓P	Pdif	13 34 09.3	-0.3
BZS	Buzias	98.10	324	⇓P	Pdif	13 34 09.3	-0.3
PUNG	Punghina	98.15	322	⇑P	P	13 34 10.2	+0.4
JAVC	Velka Javorina	98.15	328	ePDIFF	P	13 34 10.9	+1.1
ENEZ	Enez	98.20	318	P	Pdif	13 34 09.9	-0.2
KSL	Kastellorizon	98.33	313	P	Pdif	13 34 09.8	-1.0
VRAC	Vranov	98.39	329	⇑P	P	13 34 11.1	+0.3
VRAC	Vranov	98.39	329	⇑P	P	13 34 11.1	+0.3
VRAC	Vranov	98.39	329	ePDIFF	P	13 34 11.1	+0.3
VRAC				ePP	PP	13 38 19.2	-1.2
KSU1	Kansas State U	98.39	44	Pdiff	P	13 34 11.3	+0.3
	baz=302						
FETY	Fethiye	98.43	313	P	Pdif	13 34 09.9	-1.4
SMOL	Smolenice	98.50	328	eP	P	13 34 12.2	+0.9
SMOL				e		13 38 22.3	
SMOL	Smolenice	98.50	328	ePDIFF	P	13 34 12.2	+0.9
SMOL				ePP	PP	13 38 22.3	+1.0
SRO	Srobarova	98.50	327	ePP	PP	13 38 20.9	-0.4
PVCC	Panska Ves	98.52	331	ePDIFF	P	13 34 12.0	+0.6
PVCC	Panska Ves	98.52	331	i P	P	13 34 12.0	+0.6
MDVR	Moldovita	98.55	323	⇓P	P	13 34 11.7	0.0
BRG	Berggiesshubel	98.57	331	eP	Pdif	13 34 11.5	0.0
BRG				Amp		13 34 13.3	
	comp=Z,35nm,1.1s						
BRG	Berggiesshubel	98.57	331	P	P	13 34 17.7	+6.1
BRG				Amp		13 34 18.5	
	comp=Z,9.9nm,0.9s						
KRUC	Moravsky	98.65	329	ePDIFF	Pdif	13 34 11.9	0.0
KRUC				ePP	PP	13 38 19.6	-2.8
MODS	Modra-Piesok	98.67	328	eP	Pdif	13 34 11.9	-0.2
MODS				e		13 38 23.0	
MODS	Modra-Piesok	98.67	328	ePDIFF	Pdif	13 34 11.9	-0.2
MODS				ePP	PP	13 38 23.0	+0.5
CLL	Collm	98.69	332	⇓iPdif	P	13 34 12.1	0.0
	comp=Z,72nm,1.1s						
CLL				epP	pP	13 36 22.0	0.0
CLL				e		13 36 33.0	
CLL				e		13 37 13.0	
CLL				e(sP)	sP	13 37 22.0	+0.8
CLL				e		13 37 41.0	
CLL				e		13 38 14.0	
	comp=Z,101nm,1.4s						
CLL				ePP	PP	13 38 25.0	+2.4
CLL				e		13 50 52.0	
CLL				eSS	SS	13 51 56.0	+3.2
CLL				esSS		13 55 09.0	
CLL				e		14 00 24.0	
CLL	Collm	98.69	332	⇓iP	P	13 34 12.1	0.0
CLL				e*PP	pP	13 36 22.0	0.0
CLL				pmax	pmax		
	comp=Z,72nm,1.1s						
YER	Yerkesik	98.72	314	P	P	13 34 12.8	+0.1
PRU	Pruhonice	98.91	330	ePDIFF	P	13 34 13.1	0.0
PRU				ex	PP	13 38 18.0	-6.2
PRU	Pruhonice	98.91	330	i P	P	13 34 13.1	0.0
TREC	Trest	98.93	329	ePDIFF	P	13 34 13.7	+0.4
TREC	Trest	98.93	329	i P	P	13 34 13.7	+0.4
PRK	Paraskevi	98.94	317	P	P	13 34 14.0	+0.5
VTS	Vitosha	98.94	321	⇑P	P	13 34 14.8	+1.1
VTS	Vitosha	98.94	321	⇑P	P	13 34 14.8	+1.1
SCIA	State Center	98.98	40	Pdiff	P	13 34 13.8	+0.1
	baz=305						
KAVA	Kavala	99.09	319	P	Pdif	13 34 14.3	+0.2
WMOK	Wichita Mounta	99.17	49	Pdiff	Pdif	13 34 15.0	+0.4
	baz=300						
SIGR	SIGRI	99.23	317	P	Pdif	13 34 14.7	0.0
BOVS	Bovan	99.24	322	⇑P	Pdif	13 34 14.0	-0.7
NVR	Nevrokopi	99.29	319	P	Pdif	13 34 15.1	+0.1
MPLH	Magyarpolny	99.32	327	eP	Pdif	13 34 15.0	0.0
MORH	Mrgy, Hungar	99.35	326	⇑P	Pdif	13 34 15.3	+0.2
MORH	Mrgy, Hungar	99.35	326	eP	Pdif	13 34 14.2	-0.9
MORH	Mrgy, Hungar	99.35	326	eP	Pdif	13 34 13.8	-1.3
FRGS	Fruska Gora	99.39	324	⇑P	Pdif	13 34 16.0	+0.7
FRGS	Fruska Gora	99.39	324	eP	Pdif	13 34 15.3	0.0
BODT	Bodrum	99.42	314	P	Pdif	13 34 15.5	-0.2
SOP	Sopron	99.48	328	eP	Pdif	13 34 16.1	+0.4
ABTX	Abilene, Hawle	99.59	51	Pdiff	Pdif	13 34 17.5	+0.9
	baz=300						
SRS	Serrai	99.59	319	P	Pdif	13 34 15.9	-0.4
T35A	Sooner Cattle	99.62	46	Pdif	Pdif	13 34 17.1	+0.6
T35A				IAmb	IAmb	13 34 18.6	
	comp=Z,51nm,1.4s						
CONA	Conrad Observa	99.67	328	eP	Pdif	13 34 16.8	+0.2
	comp=Z,47nm,1.2s,SNR=20						
CONA				eP	PP	13 38 31.8	+1.7
	comp=Z,48nm,1.1s						
NKC	Novy Kostel	99.70	331	ePDIFF	Pdif	13 34 17.0	+0.4
NKC				ePP	PP	13 38 30.4	+0.2
NKC	Novy Kostel	99.70	331	i P	Pdif	13 34 17.0	+0.4
NKC				e		13 38 30.4	
KOVH	Kovagotottos	99.72	326	eP	Pdif	13 34 15.9	-0.9
CKRC	Cesky Krumlov	99.82	330	ePDIFF	Pdif	13 34 16.8	-0.4
CKRC				ePP	PP	13 38 27.0	-4.1
FNO	Franklin	99.87	48	Pdif	Pdif	13 34 18.2	+0.5
FNO				IAmb	IAmb	13 34 19.6	
	comp=Z,30nm,0.9s						
TEKS	Tekeris	99.92	324	eP	Pdif	13 34 17.5	-0.2
DIVS	Divibare	99.94	323	eP	Pdif	13 34 17.0	-0.9
KHC	Kasperske Hory	99.96	330	ePDIFF	Pdif	13 34 17.7	-0.1
KHC				ex	x	13 34 42.0	
KHC				ePP	PP	13 38 30.1	-2.0
KHC	Kasperske Hory	99.96	330	i P	Pdif	13 34 17.7	-0.1
KHC				e		13 38 30.1	
KNT	Kendrikon	100.00	320	P	Pdif	13 34 18.1	0.0
GERES	GERESS Array B	100.10	330	P	Pdif	13 34 17.2	-1.3
	comp=Z,12nm,0.9s,baz=55,slow=5.1,SNR=46						
GERES				PP	PP	13 38 33.0	-0.2
	comp=Z,26nm,0.8s,baz=45,slow=7.9,SNR=12						
GERES				PKKPbc	PKKPbc	13 50 32.7	-2.8
	comp=Z,1.1nm,0.5s,baz=249,slow=3.7,SNR=6.7						
GERES	GERESS Array B	100.10	330	P	Pdif	13 34 18.4	-0.1
GERES	GERESS Array B	100.10	330		Pdif	13 34 18.4	-0.1
GERES	GERESS Array B	100.10	330		PKiKP	13 38 33.0	-9.1
GERES					PKKPbc	13 50 32.7	-2.8
VAY	Valandovo	100.10	320	i P	Pdif	13 34 18.7	+0.1
STIP	Stip	100.12	320	i P	Pdif	13 34 17.8	-0.8
JFWS	Jewell Farm	100.16	38	Pdiff	Pdif	13 34 18.4	-0.4
	baz=308						
HORT	Hortiatis	100.20	319	P	Pdif	13 34 18.3	-0.8
PAIG	Paliouri	100.22	318	P	Pdif	13 34 18.8	-0.3
ARSA	Arzberg	100.30	328	eP	Pdif	13 34 19.2	-0.1
	comp=Z,32nm,1.2s,SNR=10						
ARSA				eP	PP	13 38 36.6	+1.9
	comp=Z,33nm,1.2s						
SKO	Skopje	100.40	321	i P	Pdif	13 34 20.6	+0.7
BBLS	Lazići	100.42	323	eP	Pdif	13 34 20.3	+0.3
MOA	Molln	100.51	329	eP	Pdif	13 34 20.2	-0.1
	comp=Z,9.4nm,0.8s,SNR=6.4						
MOA				eP	PKiKP	13 38 42.2	-0.6
	comp=Z,35nm,1.1s						
JCT	Junction City	100.52	53	Pdiff	Pdif	13 34 21.6	+0.8
	baz=299						
HAPS	Han Pijesak,Bl	100.54	324	eP	Pdif	13 34 20.7	+0.1
RUDO	Rudo	100.59	323	eP	Pdif	13 34 20.1	-0.6
GRF	Grafenberg Arr	100.64	332	ePdiff	Pdif	13 34 21.4	+0.6
	baz=44,slow=4.3						
GRF				ePP	PP	13 38 36.9	-0.2
	baz=39,slow=6.7						
TUL1	Leonard	100.64	46	Pdiff	Pdif	13 34 21.2	+0.1
	baz=303						
SOKA	Soboth	100.93	328	eP	Pdif	13 34 22.1	-0.2
	comp=Z,40nm,1.3s,SNR=9.4						
SOKA				eP	PKiKP	13 38 41.6	-2.1
	comp=Z,48nm,1.1s						
BLY	Banja Luka	101.08	325	eP	Pdif	13 34 22.5	-0.4
UPM	Unac-Piva	101.12	323	eP	Pdif	13 34 23.3	0.0
PHP	Peshkopia	101.17	321	P	Pdif	13 34 23.7	+0.3
E46A	Sault Ste Mari	101.19	33	Pdif	Pdif	13 34 24.5	+1.2
CRES	Cresnjev	101.29	327	eP	Pdif	13 34 22.7	-1.1
OBKA	Obir	101.29	328	eP	PKiKP	13 38 44.5	+0.1
	comp=Z,97nm,1.8s						
OHR	Ohrid	101.30	321	i P	Pdif	13 34 23.7	-0.3
ATAL	Atalanti	101.35	318	P	Pdif	13 34 23.0	-1.2
MGRS	Mrkonjic Grad	101.35	325	eP	Pdif	13 34 25.0	+0.9
PDG	Podgorica	101.40	322	⇑P	Pdif	13 34 24.4	+0.1
PDG	Podgorica	101.40	322	eP	Pdif	13 34 24.3	0.0
KBA	Koelnbreinsper	101.50	329	i P	Pdif	13 34 24.8	-0.1
	comp=Z,7.7nm,0.9s						
KBA				eP	PKiKP	13 38 46.4	+1.6
	comp=Z,151nm,1.1s,SNR=8.4						
WHTX	Lake Whitney,	101.51	50	Pdiff	Pdif	13 34 26.0	+1.0
	baz=301						
BRY	Bratogost	101.52	323	eP	Pdif	13 34 24.4	-0.6
DRME	Dracevica, Mon	101.59	322	eP	Pdif	13 34 24.8	-0.4
MYKA	Terra Mystica	101.66	328	eP	Pdif	13 34 24.6	-0.9
	comp=Z,15nm,1.4s						
MYKA				eP	PKiKP	13 38 46.6	+1.6
	comp=Z,115nm,1.2s,SNR=6.0						
SCHQ	Schefferville	101.71	18	P	Pdif	13 34 24.7	-0.8
	comp=Z,13nm,0.8s,baz=326,slow=5.7,SNR=8.7						
SCHQ				PKiKP	PKiKP	13 38 45.4	+0.6
	comp=Z,21nm,0.9s,baz=311,slow=3.3,SNR=5.2						
TIR	Tirane	101.71	321	⇑P	Pdif	13 34 26.7	+0.9
TIR	Tirane	101.71	321	⇑P	Pdif	13 34 26.7	+0.9
HCY	Herceg Novi	101.83	323	eP	Pdif	13 34 26.5	+0.3
833A	Chaparral WMA,	101.87	55	Pdiff	Pdif	13 34 27.7	+1.0
	baz=299						
CEY	Cerknica	101.88	327	eP	Pdif	13 34 21.4	-5.0
L44A	Lake County Fo	101.97	37	Pdiff	Pdif	13 34 27.1	+0.3
	baz=309						
STON	Ston	102.01	323	eP	Pdif	13 34 25.9	-1.1
435B	Jarrell	102.03	52	Pdiff	Pdif	13 34 27.3	-0.1
	baz=301						
GLMI	Grayling	102.07	34	Pdiff	Pdif	13 34 26.7	-0.5
	baz=312						
ANX	Ano Chora	102.11	318	P	Pdif	13 34 27.1	-0.6
ABTA	Abfaltersbach	102.14	329	eP	Pdif	13 34 26.8	-0.9
	comp=Z,15nm,0.9s						
ABTA				eP	PP	13 38 49.7	+1.3
	comp=Z,69nm,1.5s,SNR=6.5						
BTNL	Ternell	102.15	335	dPdif	Pdif	13 34 28.1	+0.6
BTNL				dPP	PP	13 38 47.9	-0.3
HDIL	Hopedale	102.17	39	Pdiff	Pdif	13 34 27.7	0.0
	baz=308						
WATA	Walderalm	102.17	330	eP	Pdif	13 34 27.8	0.0
	comp=Z,13nm,1.1s						
WATA				eP	PP	13 38 50.4	+1.8
	comp=Z,105nm,1.1s,SNR=6.9						
MEM	Membach	102.18	335	dPdif	Pdif	13 34 27.6	0.0
WTTA	Wattenberg	102.19	330	eP	Pdif	13 34 27.6	-0.4
	comp=Z,20nm,1.2s						
WTTA				eP	PP	13 38 50.7	+1.8
	comp=Z,108nm,1.2s,SNR=7.5						
KLV	Kalavryta, Ach	102.28	317	P	Pdif	13 34 27.2	-1.2
BHOU	Houvegnez	102.38	335	dPP	PP	13 38 48.6	-1.2
U40A	Yellville	102.38	45	Pdiff	Pdif	13 34 28.6	-0.2
	baz=305						
MOTA	Moosalm	102.39	330	eP	Pdif	13 34 28.5	-0.3
	comp=Z,16nm,1.1s						
MOTA				eP	PP	13 38 52.5	+2.2
	comp=Z,164nm,1.2s,SNR=6.0						
W39A	Magazine	102.40	46	Pdiff	Pdif	13 34 29.0	0.0
	baz=304						
SQTA	Sankt Quirin	102.43	330	eP	PKiKP	13 38 52.7	+6.2
	comp=Z,108nm,1.1s,SNR=6.6						
RETA	Reutte	102.45	330	eP	Pdif	13 34 29.2	+0.2
	comp=Z,10nm,0.9s						
RETA				eP	PP	13 38 52.5	+1.9
	comp=Z,49nm,1.3s,SNR=5.3						
CCM	Cathedral Cave	102.45	42	Pdiff	Pdif	13 34 29.3	+0.2
	baz=306						
BCLA	Clavier	102.61	335	dPP	PP	13 38 52.2	+0.7
FETA	Feichten	102.80	330	eP	Pdif	13 34 30.4	-0.2
	comp=Z,15nm,1.0s						
FETA				eP	PP	13 38 55.6	+2.3
	comp=Z,74nm,1.3s						
RCHB	Rochefort	102.84	335	dPP	PP	13 38 52.8	-0.4
WLF	Walferdange	102.85	334	dPdif	Pdif	13 34 30.5	-0.1
MIAR	Mount Ida	102.91	46	P	Pdif	13 34 31.5	+0.3
MIAR	Mount Ida	102.91	46	Pdiff	Pdif	13 34 31.3	+0.1
	baz=304						
MIAR	Mount Ida	102.91	46	Pdif	Pdif	13 34 31.5	+0.3
BMRD	Maredsous	102.91	335	dPP	PP	13 38 53.1	-0.6
SNF	Seneffe	102.94	336	dPP	PP	13 38 54.0	+0.1
DAVA	Damuels	103.00	331	eP	Pdif	13 34 31.7	+0.2
	comp=Z,19nm,1.1s						
DAVA				eP	PP	13 38 56.2	+1.4
	comp=Z,98nm,1.5s,SNR=8.1						
DOU	Dourbes	103.14	335	dPdif	Pdif	13 34 32.1	+0.3
DOU				dPP	PP	13 38 54.5	-1.0
SFIN	Lafayette	103.58	39	Pdiff	Pdif	13 34 34.2	+0.1
	baz=310						
MATE	Matera	104.01	322	⇓P	Pdif	13 34 36.4	+0.4
MAW	Mawson	104.36	203	PKKPbc	PKKPbc	13 50 21.5	-1.6
	comp=Z,12nm,1.0s,baz=254,slow=2.7,SNR=7.1						
TIP	Timpagrande	104.92	321	⇑P	Pdif	13 34 41.7	+1.5
WCI	Wyandotte Cave	105.43	40	Pdiff	PKiKP	13 38 52.1	0.0
	baz=310						
P49A	Miami Univ. Ec	105.53	38	PKiKP	PKiKP	13 38 52.2	0.0
	baz=311						
WVT	Waverly	105.79	42	PKiKP	PKiKP	13 38 53.2	+0.4
	baz=308						
ACSO	Alum Creek Sta	106.06	36	PKiKP	PKiKP	13 38 53.6	+0.4
	baz=313						
P52A	Corning	106.94	36	PKiKP	PKiKP	13 38 54.9	+0.1
	baz=313						
M54A	Oil Creek Stat	106.98	34	PKiKP	PKiKP	13 38 55.1	+0.2
	baz=316						
O53A	New Philadelph	107.03	36	PKiKP	PKiKP	13 38 55.2	+0.1
	baz=314						
KMBO	Kilima Mbogo	107.45	275	Pdiff	Pdif	13 34 51.9	-0.2
	comp=Z,1.3nm,0.3s,baz=318,slow=0.3,SNR=6.4						
KMBO	Kilima Mbogo	107.45	275	P	Pdif	13 34 52.4	+0.3
KMBO	Kilima Mbogo	107.45	275	Pdif	Pdif	13 34 52.4	+0.3
TZTN	Tazewell	108.19	40	PKiKP	PKiKP	13 38 57.8	+0.5
	baz=311						
MCWV	Mont Chateau	108.19	35	PKiKP	PKiKP	13 38 57.8	+0.6
	baz=315						
BINY	Binghamton	108.34	31	PKiKP	PKiKP	13 38 58.1	+0.7
	baz=319						
L61B	Northampton	109.71	29	PKiKP	PKiKP	13 39 00.5	+0.5
	baz=322						
HRV	Adam Dziewonsk	110.18	28	PKiKP	PKiKP	13 39 01.3	+0.4
	baz=323						
GOGA	Godfrey	110.29	42	PKiKP	PKiKP	13 39 02.1	+0.8
	baz=311						
KMSC	Kings Mountain	110.46	39	PKiKP	PKiKP	13 39 02.2	+0.6
	baz=313						
KEST	Kesra	111.60	323	PKiKP	PKiKP	13 39 04.7	+0.8
	comp=Z,8.1nm,0.7s,baz=256,slow=1.1,SNR=6.9						
KEST				PP	PP	13 39 56.8	+0.2
	comp=Z,20nm,1.0s,baz=297,slow=5.8,SNR=4.3						
SYO	Syowa Base	113.02	202	⇑eX	Pdif	13 35 21.6	+6.4
SYO	Syowa Base	113.02	202	⇓ePKiKP	PKiKP	13 39 07.6	+2.3
PBRG	Braganca	114.40	337	ePKPdf	PKiKP	13 39 09.9	+0.9
PBRG	Braganca	114.40	337	ePP	PP	13 40 17.5	+1.8
PGAV	Gavieira, Arco	114.80	339	ePKPdf	PKiKP	13 39 10.7	+0.8
PGAV	Gavieira, Arco	114.80	339	ePP	PP	13 40 18.9	+0.4
PCAB	Cabril	114.94	338	ePKPdf	PKiKP	13 39 11.2	+1.1
PCAB	Cabril	114.94	338	ePP	PP	13 40 18.5	-0.9
MVO	Moncorvo	115.07	337	ePKPdf	PKiKP	13 39 11.5	+1.1
MVO	Moncorvo	115.07	337	ePP	PP	13 40 20.8	+0.5
ESDC	Sonseca Array	115.15	334	Pdiff	Pdif	13 35 25.9	+0.2
	comp=Z,0.8nm,0.8s,baz=11,slow=4.4,SNR=2.5						
ESDC				PKP	PKPdf	13 39 09.6	-0.9
	comp=Z,3.1nm,0.4s,baz=14,slow=3.1,SNR=18						
ESDC				PP	PP	13 40 18.5	-2.4
	comp=Z,24nm,0.8s,baz=24,slow=5.9,SNR=17						
ESDC				PKKPbc	PKKPbc	13 49 48.3	-0.7
	comp=Z,1.6nm,0.9s,baz=210,slow=5.1,SNR=6.5						
ESDC				PKKPab	PKKPab	13 49 56.2	-1.4
	comp=Z,6.9nm,1.1s,baz=222,slow=4.8,SNR=11						
ESDC	Sonseca Array	115.15	334	PKPdf	PKPdf	13 39 10.1	-0.4
ESDC	Sonseca Array	115.15	334		Pdif	13 35 25.9	+0.2
ESDC	Sonseca Array	115.15	334		PP	13 40 18.5	-2.4
POLO	Lamas de Olo	115.16	338	ePKPdf	PKiKP	13 39 11.6	+1.0
POLO	Lamas de Olo	115.16	338	ePP	PP	13 40 19.6	-1.4
PVRL	Vila Real	115.22	338	ePKPdf	PKiKP	13 39 11.9	+1.3
PAB	San Pablo	115.42	334	PKIKP	PKPdf	13 39 10.7	-0.4
PAB	San Pablo	115.42	334		PKPdf	13 39 10.7	-0.4
PAB	San Pablo	115.42	334	P	PKiKP	13 39 12.7	+1.6
PVIS	Viseu	115.77	338	ePKPdf	PKiKP	13 39 12.4	+0.7
PVIS	Viseu	115.77	338	ePP	PP	13 40 24.4	-0.7
MTE	Manteigas	115.92	337	ePKPdf	PKiKP	13 39 12.5	+0.5
MTE	Manteigas	115.92	337	ePP	PP	13 40 27.7	+1.5
MTE	Manteigas	115.92	337	PKPdf	PKPdf	13 39 11.8	-0.2
PCBR	Castelo Branco	116.39	337	ePKPdf	PKiKP	13 39 13.0	+0.2
PCBR	Castelo Branco	116.39	337	ePP	PP	13 40 30.3	+1.0
PCAS	Casmilo, Conde	116.58	338	ePKPdf	PKiKP	13 39 13.9	+0.7
PCAS	Casmilo, Conde	116.58	338	ePP	PP	13 40 30.9	+0.3
PMRV	Marv??o	116.72	337	ePKPdf	PKiKP	13 39 14.3	+0.8
PMRV	Marv??o	116.72	337	ePP	PP	13 40 31.9	+0.3
PSBE	So Bento	117.16	338	ePKPdf	PKiKP	13 39 15.1	+0.7
PESTR	Estremoz	117.28	336	ePKPdf	PKiKP	13 39 15.4	+0.8
PESTR	Estremoz	117.28	336	ePP	PP	13 40 35.6	+0.1
PESTR	Estremoz	117.28	336	PKPdf	PKiKP	13 39 15.2	+0.5
PMTG	Montargil	117.34	337	ePKPdf	PKPdf	13 39 14.7	0.0
PMTG	Montargil	117.34	337	ePP	PP	13 40 35.9	+0.1
PBAR	Barrancos	117.67	336	ePKPdf	PKiKP	13 39 16.4	+1.0
PBAR	Barrancos	117.67	336	ePP	PP	13 40 38.7	+0.6
EVO	Evora	117.73	337	ePKPdf	PKPdf	13 39 15.3	-0.2
EVO	Evora	117.73	337	ePP	PP	13 40 39.0	+0.5
PBEJ	Beja	118.12	336	ePKPdf	PKiKP	13 39 17.4	+1.1
PBEJ	Beja	118.12	336	ePP	PP	13 40 42.6	+1.4
PNCL	Nicolau / Gran	118.30	337	ePKPdf	PKiKP	13 39 16.7	+0.1
PNCL	Nicolau / Gran	118.30	337	ePP	PP	13 40 43.5	+1.2
MESJ	Messejana	118.42	336	ePKPdf	PKiKP	13 39 17.4	+0.5
MESJ	Messejana	118.42	336	ePKPdf	PKiKP	13 39 17.3	+0.5
MESJ	Messejana	118.42	336	ePP	PP	13 40 44.9	+1.7
TAF	Taforalt	118.50	330	P	PKiKP	13 39 19.0	+1.8
PCVE	Castro Verde	118.53	336	ePKPdf	PKiKP	13 39 17.8	+0.7
PCVE	Castro Verde	118.53	336	ePP	PP	13 40 45.6	+1.6
PVAQ	Vaqueiros	118.61	336	ePKPdf	PKiKP	13 39 18.4	+1.2
PVAQ	Vaqueiros	118.61	336	ePP	PP	13 40 45.8	+1.3
PVAQ	Vaqueiros	118.61	336	PKPdf	PKiKP	13 39 18.4	+1.2
PVAQ	Vaqueiros	118.61	336	P	PKiKP	13 39 18.5	+1.2
PBDV	Barranco-do-Ve	118.83	336	ePKPdf	PKiKP	13 39 19.2	+1.5
PBDV	Barranco-do-Ve	118.83	336	ePP	PP	13 40 48.0	+2.0
PTEO	Sao Teotonio	118.87	337	ePKPdf	PKiKP	13 39 19.1	+1.4
JBK	JBK	118.96	330	P	PKiKP	13 39 20.0	+1.7
MORF	Marmelete	119.05	336	ePKPdf	PKiKP	13 39 18.6	+0.4
MORF	Marmelete	119.05	336	ePKPdf	PKiKP	13 39 18.6	+0.4
MORF	Marmelete	119.05	336	ePP	PP	13 40 49.2	+1.7
PFVI	Vila Bisbo	119.27	336	ePKPdf	PKiKP	13 39 19.3	+0.8
PFVI	Vila Bisbo	119.27	336	ePP	PP	13 40 50.7	+1.8
PFVI	Vila Bisbo	119.27	336	P	PKiKP	13 39 20.0	+1.5
LCRM	LCR	120.57	331	P	PKiKP	13 39 23.4	+2.0
BOAB	BOACO BROADBA	120.93	62		PKiKP	13 39 22.7	+0.4
MDT	Midelt	121.18	330	P	PKiKP	13 39 24.2	+1.7
NVL	N'lazarevskaya	121.20	196	ePKIKP	PKiKP	13 39 26.4	+5.2
NVL				pmax	pmax		
	comp=Z,63nm,1.2s						
ZHG	ZHG	121.57	333	P	PKiKP	13 39 25.0	+1.7
ACON	Acoyapa	121.59	62		PKiKP	13 39 24.3	+0.7
AVE	Averroes	122.03	333	P	PKiKP	13 39 26.1	+2.1
GOLM	Goulmima	122.26	330	P	PKiKP	13 39 27.0	+2.2
JTS	Las Juntas de	122.63	64	PKIKP	PKiKP	13 39 26.0	+0.3
JTS	Las Juntas de	122.63	64		PKiKP	13 39 26.0	+0.3
SRHM	Skhour des Reh	122.94	333	P	PKiKP	13 39 28.1	+2.0
TZRR	Tazzarine	123.32	330	P	PKiKP	13 39 29.0	+2.1
OUZM	OUZ	123.77	331	P	PKiKP	13 39 29.2	+1.5
RIMA	Rio Macho	123.81	64		PKiKP	13 39 28.8	+0.5
ZGR	Zagora	123.89	330	P	PKiKP	13 39 30.0	+2.0
SNAA	Sanae	123.94	192	PKKPbc	PKKPbc	13 49 15.7	-1.7
SNAA	Sanae	123.94	192	PKPdf	PKiKP	13 39 27.8	+1.1
SNAA	Sanae	123.94	192	PKIKP	PKPdf	13 39 25.6	-0.8
SNAA	Sanae	123.94	192	PKPdf	PKPdf	13 39 25.6	-0.8
OUK	Oukaimeden	124.01	332	P	PKiKP	13 39 30.0	+1.4
MTDJ	Mount Denham	124.10	51	PKPdf	PKiKP	13 39 28.5	-0.2
LBTB	Lobatse	124.11	252	PKIKP	PKPdf	13 39 27.9	-0.2
LBTB	Lobatse	124.11	252	PKPdf	PKPdf	13 39 27.9	-0.2
EAH	EAH	124.37	334	P	PKiKP	13 39 31.0	+2.2
SRBA	San Rafael, Bu	124.51	64		PKPdf	13 39 29.2	0.0
RIOS	Rincon, Osa	124.64	65		PKiKP	13 39 29.8	+0.1
BOSA	Boshof	124.73	248	PKP	PKPdf	13 39 29.0	-0.3
	comp=Z,8.2nm,0.6s,baz=83,slow=1.6,SNR=18						
BOSA				PKKPbc	PKKPbc	13 49 13.5	+0.1
	comp=Z,4.9nm,0.9s,baz=260,slow=2.7,SNR=7.4						
BOSA	Boshof	124.73	248	PKIKP	PKiKP	13 39 30.2	+0.6
BOSA	Boshof	124.73	248	PKPdf	PKiKP	13 39 30.2	+0.6
BOSA	Boshof	124.73	248		PKKPab	13 49 13.5	+0.4
GTBY	Guantanamo Bay	124.76	48	PKPdf	PKiKP	13 39 30.2	+0.4
TTIG	Tnine Tigouga,	124.83	332	P	PKiKP	13 39 31.0	+1.1
VNA2	Neumayer--Watz	125.39	191	PKKPbc	PKKPbc	13 49 09.9	-1.6
VNA2	Neumayer--Watz	125.39	191	PKPdf	PKiKP	13 39 29.6	0.0
VNA3	Neumayer Olymp	125.49	190	PKKPbc	PKKPbc	13 49 10.0	-1.1
VNA3	Neumayer Olymp	125.49	190	PKPdf	PKiKP	13 39 31.1	+1.3
PMPS	Porto Santo	125.55	341	ePKPdf	PKiKP	13 39 31.2	+0.2
VNA1	Neumayer--Stat	125.77	191	PKKPbc	PKKPbc	13 49 08.7	-1.2
VNA1	Neumayer--Stat	125.77	191	PKPdf	PKiKP	13 39 31.6	+1.4
PMAR	Madeira	126.03	341	ePKPdf	PKiKP	13 39 33.4	+1.1
BCIP	Isla Barro Col	127.52	62	PKIKP	PKiKP	13 39 35.3	-0.1
BCIP	Isla Barro Col	127.52	62		PKiKP	13 39 35.3	-0.1
SDDR	Presa de Saban	128.04	46	eP	PKPpre	13 39 28.9	
SDDR	Presa de Saban	128.04	46		PKiKP	13 39 36.4	-0.1
PMSA	Palmer Station	130.02	164	eP	PKiKP	13 39 39.1	+0.2
PTAC	Punta Ardita,	130.29	63	eP	PKPpre	13 39 35.2	
SJCC	San Jacinto, C	130.94	58	eP	PKPpre	13 39 34.6	
SMRC	Santa Marta, M	130.95	56	eP	PKPpre	13 39 36.7	
MOTC	Monteria, Cord	131.18	59	eP	PKPpre	13 39 32.5	
MOTC	Monteria, Cord	131.18	59	PKPdf	PKPdf	13 39 41.0	-0.7
CRPR	Cabo Rojo, PR	131.50	43	PKPdf	PKPdf	13 39 42.6	+0.4
MLPR	Magueyes Islan	131.57	43	PKPdf	PKPdf	13 39 42.5	+0.1
CELP	Cerrillos	131.79	42	PKPdf	PKPdf	13 39 43.2	+0.3
OBIP	Obispado Ponce	131.80	42		PKPdf	13 39 43.2	+0.4
UREC	San Jos de Ur	131.86	60	eP	PKPpre	13 39 31.7	
SJG	San Juan	132.04	42	PKP	PKPdf	13 39 42.9	-0.4
	comp=Z,14nm,0.2s,baz=0.0,slow=2.9,SNR=8.4						
SJG				SKPbc	SKPbc	13 42 13.0	-1.2
	comp=Z,18nm,0.2s,baz=9.3,slow=2.8,SNR=9.8						
SJG	San Juan	132.04	42	PKIKP	PKPdf	13 39 43.2	-0.1
SJG						13 42 13.0	
SJG	San Juan	132.04	42	eP	PKPpre	13 39 35.0	
SJG	San Juan	132.04	42		PKPdf	13 39 43.2	-0.1
SJG	San Juan	132.04	42		PP	13 42 13.0	-0.1
TUMC	Tumaco	132.11	69	eP	PKPdf	13 39 41.8	-1.8
TORD	Torodi Ar. Bea	132.12	309	PKhKP	PKPpre	13 39 27.5	
	comp=Z,1.5nm,0.5s,baz=70,slow=3.2,SNR=13						
TORD				PKP	PKPdf	13 39 42.9	-0.6
	comp=Z,14nm,0.4s,baz=29,slow=2.2,SNR=55						
TORD				SKPbc	SKPbc	13 42 12.8	-1.7
	comp=Z,58nm,0.9s,baz=35,slow=2.9,SNR=26						
TORD				SKKPbc	SKKPbc	13 51 38.8	-0.3
	comp=Z,4.5nm,0.8s,baz=240,slow=3.4,SNR=13						
TORD	Torodi Ar. Bea	132.12	309	PKPdf	PKPdf	13 39 43.3	-0.3
TORD	Torodi Ar. Bea	132.12	309		SKPbc	13 42 12.8	-1.7
PDPR	Patillas Dam,	132.19	42	PKPdf	PKPdf	13 39 43.8	+0.2
URIC	Uribia, Colomb	132.34	53	eP	PKPpre	13 39 37.8	
SMLC	San Martn de	132.46	58	eP	PKPpre	13 39 36.5	
ZARC	Zaragoza, Cauc	132.56	60	eP	PKPpre	13 39 33.0	
ZARC	Zaragoza, Cauc	132.56	60	PKPdf	PKPdf	13 39 44.4	0.0
STVI	Saint Thomas	132.61	41	PKPdf	PKPdf	13 39 44.4	0.0
PLMC	San Jos del P	132.75	64	eP	PKPpre	13 39 33.8	
PAC1	Pacto, Paraso	132.75	71	eP	PKPdf	13 39 42.2	-2.8
OTAV	Otavalo	133.07	71	PKIKP	PKPdf	13 39 45.8	-0.1
OTAV	Otavalo	133.07	71	eP	PKPdf	13 39 46.3	+0.4
OTAV	Otavalo	133.07	71	PKPdf	PKPdf	13 39 45.8	-0.1
YOTC	Yotoco, Valle	133.16	65	eP	PKPpre	13 39 37.2	
CDVI	St. Croix	133.18	41	PKPdf	PKPdf	13 39 45.9	+0.5
OCAC	Ocana	133.39	58		PKPdf	13 39 46.4	+0.2
PTBC	PUERTO BERRIO,	133.41	61	eP	PKPpre	13 39 32.5	
TULM	Tulcn-Chalpat	133.45	70	eP	PKPdf	13 39 44.0	-2.7
NORC	Norcasia	133.60	62	eP	PKPpre	13 39 32.8	
ANIL	Santa Ana	133.71	64	eP	PKPpre	13 39 39.5	
SOTA	Rioblanco	133.83	68	eP	PKPpre	13 39 35.6	
PCON	Cinco Dias	133.93	67	eP	PKPpre	13 39 41.0	
MARP	Paez Belalcaza	134.06	66	eP	PKPpre	13 39 41.1	
ORTC	Ortega, Tolima	134.14	65	eP	PKPpre	13 39 38.0	
SPBC	San Pablo de B	134.22	62	eP	PKPpre	13 39 35.3	
ROSC	El Rosal	134.44	63	PKhKP	PKPpre	13 39 33.8	
	comp=Z,7.2nm,0.3s,baz=333,slow=4.5,SNR=1.2						
ROSC	El Rosal	134.44	63	eP	PKPpre	13 39 41.7	
SDV	Santo Domingo	135.13	55	PKhKP	PKPpre	13 39 33.7	
	comp=Z,9.2nm,0.4s,baz=346,slow=4.2,SNR=1.7						
SDV				SKP	SKPbc	13 42 25.3	+0.7
	comp=Z,26nm,0.6s,baz=297,slow=5.2,SNR=6.1						
SDV	Santo Domingo	135.13	55	PKPdf	PKiKP	13 39 50.4	-0.7
KOWA	Kowa	135.21	315	SKPbc	SKPbc	13 42 23.3	-1.3
	comp=Z,94nm,0.8s,baz=37,slow=2.6,SNR=7.4						
KOWA	Kowa	135.21	315	PKPdf	PKiKP	13 39 50.2	-0.8
KOWA	Kowa	135.21	315	P	PKiKP	13 39 52.6	+1.6
SOCV	Socops	135.32	56	eP	PKPpre	13 39 36.7	
VILC	Villavicencio,	135.36	63	eP	PKPpre	13 39 40.6	
ATAH	Atahualpa	135.98	81	PKhKP	PKPpre	13 39 42.3	
	comp=Z,8.2nm,0.7s,baz=281,slow=6.2,SNR=7.3						
ATAH				PKP	PKPdf	13 39 50.7	-0.6

	comp=Z,94nm,1.3s,baz=307,slow=2.2,SNR=19						
ATAH				SKP		13 42 28.4	
	comp=Z,22nm,0.9s,baz=322,slow=3.5,SNR=7.0						
GO09	Cerro Castillo	136.07	146	PKPdf	PKiKP	13 39 51.8	+0.1
MACC	Macarena, Meta	136.23	66	*e*P	PKPpre	13 39 38.7	
ELOV	Elorza	137.18	56	*e*P	PKPpre	13 39 45.8	
PCRV	Puerto La Cruz	138.76	48	PKhKP	PKPpre	13 39 47.4	
	comp=Z,10.0nm,0.4s,baz=278,slow=4.5,SNR=3.1						
PCRV				PKP	PKPdf	13 39 55.6	-0.3
	comp=Z,15nm,0.5s,baz=328,slow=1.4,SNR=7.8						
NNA	Nana	138.87	87	PKhKP	PKPpre	13 39 51.4	
	comp=Z,6.2nm,0.4s,baz=273,slow=1.6,SNR=2.1						
LL01	San Ignacio de	140.37	135		PKPdf	13 39 59.0	+1.0
DBIC	Dimbokro	141.21	308	PKhKP	PKPpre	13 39 54.8	
	comp=Z,47nm,0.4s,baz=53,slow=3.4,SNR=133						
DBIC				SKPbc	SKPbc	13 42 40.4	-0.9
	comp=Z,34nm,0.8s,baz=48,slow=5.1,SNR=5.4						
DBIC	Dimbokro	141.21	308		SKPbc	13 42 40.4	-0.9
KIC	Kosan Boka	141.32	307	*e*PKP2	PKPdf	13 39 57.1	-3.4
	comp=Z,86nm,0.5s						
TIC	Toumodi	141.35	308	*e*PKP2	PKPdf	13 39 56.7	-3.9
LIC	Lamto	141.63	308	*e*PKP2	PKPdf	13 39 58.1	-3.0
	comp=Z,445nm,1.1s						
LC01	Cunco	142.10	130	⇓*e*P	PKPdf	13 39 57.6	-3.5
LC01	Cunco	142.10	130		PKPpre	13 39 57.7	
PLCA	Paso Flores	142.33	133	PKP	PKPdf	13 39 58.8	-2.8
	comp=Z,61nm,0.6s,baz=232,slow=3.8,SNR=59						
PLCA	Paso Flores	142.33	133	PKIKP	PKPdf	13 39 58.8	-2.8
PLCA	Paso Flores	142.33	133	PKPpre	PKPpre	13 39 58.8	
EFI	East Falkland	142.37	156	PKIKP	PKPdf	13 39 58.9	-2.3
EFI	East Falkland	142.37	156	PKPpre	PKPpre	13 39 58.9	
TBTG	Tabatinga, AM	142.66	72	*e*P	PKPpre	13 39 57.5	
TBTG	Tabatinga, AM	142.66	72		PKPpre	13 39 59.0	
GO05	Huala	143.31	124	⇓*e*P	PKPab	13 40 02.0	+0.1
GO05	Huala	143.31	124	PKPdf	PKPbc	13 40 02.2	+0.1
ML02	Panimavida	143.49	125		PKPbc	13 40 02.8	+0.2
VA05	Santo Domingo	143.93	122	*e*P	PKPab	13 40 04.3	+0.1
VA05	Santo Domingo	143.93	122		PKPbc	13 40 04.0	0.0
VA01	Torpederas	144.06	121	⇓*e*P	PKPab	13 40 05.1	+0.3
VA01	Torpederas	144.06	121		PKPbc	13 40 04.2	-0.2
BO01	Tunca	144.15	123		PKPbc	13 40 04.4	-0.3
MT01	Popeta	144.16	122	⇓*e*P	PKPbc	13 40 04.8	+0.1
MT01	Popeta	144.16	122		PKPbc	13 40 04.5	-0.2
BO02	Sierra Bellavi	144.28	124	⇓*e*P	PKPab	13 40 05.6	-0.1
BO02	Sierra Bellavi	144.28	124		PKPab	13 40 05.7	-0.1
MT09	Talagante	144.40	122	⇓*e*P	PKPdf	13 40 05.3	-0.2
MT09	Talagante	144.40	122		PKPdf	13 40 05.3	-0.2
MT02	Curacav	144.41	121	⇓*e*P	PKPbc	13 40 05.5	-0.1
MT02	Curacav	144.41	121		PKPdf	13 40 05.4	0.0
VA06	Catapilco	144.45	120	⇓*e*P	PKPdf	13 40 05.2	-0.2
HOPE	Hope Point	144.54	178	PKIKP	PKPbc	13 40 05.4	+0.2
HOPE	Hope Point	144.54	178		PKPbc	13 40 05.4	+0.2
CO06	Fray Jorge	144.57	117	⇓*e*P	PKPdf	13 40 05.4	-0.3
CO06	Fray Jorge	144.57	117		PKPdf	13 40 05.6	-0.2
ROCH	El Roble	144.59	121	⇓*e*P	PKPdf	13 40 06.1	+0.1
ROCH				*e*P	PKPbc	13 40 06.1	-0.2
BO04	La Punta	144.64	123	⇓*e*P	PKPbc	13 40 06.2	-0.1
PEL	Peldehue	144.81	121	PKIKP	PKPbc	13 40 06.5	-0.3
PEL	Peldehue	144.81	121	⇓*e*P	PKPbc	13 40 06.9	+0.1
PEL	Peldehue	144.81	121		PKPbc	13 40 06.5	-0.3
LMEL	Las Melosas	145.01	123	*e*P	PKPab	13 40 09.5	+0.9
VA03	San Esteban	145.01	121	⇓*e*P	PKPbc	13 40 07.6	+0.1
VA03	San Esteban	145.01	121	PKPdf	PKPdf	13 40 07.0	+0.4
CO05	La Serena	145.04	116	PKPdf	PKPdf	13 40 06.8	+0.3
GO04	Tololo Observa	145.37	116	⇓*e*P	PKPbc	13 40 08.5	-0.3
GO04	Tololo Observa	145.37	116	PKPdf	PKPdf	13 40 08.1	+0.6
AC04	Llanos de Chal	145.45	113	⇑*e*P	PKPbc	13 40 09.1	+0.3
AC04	Llanos de Chal	145.45	113	PKPbc	PKPbc	13 40 09.0	+0.2
LCO	Las Campanas	145.65	114	⇓*e*P	PKPbc	13 40 10.0	+0.3
AP01	Chacalluta	146.23	95		PKPdf	13 40 09.7	+0.9
GO03	Copiap	146.26	112	⇓*e*P	PKPbc	13 40 11.0	-0.2
GO03	Copiap	146.26	112		PKPbc	13 40 11.4	+0.3
PB12	IPOC Station P	146.27	96	⇓*e*P	PKPdf	13 40 09.0	0.0
PB12	IPOC Station P	146.27	96	PKPdf	PKPdf	13 40 09.2	+0.1
PB10	IPOC Station P	146.28	104	⇓*e*P	PKPbc	13 40 10.8	-0.4
PB10	IPOC Station P	146.28	104		PKPbc	13 40 11.3	+0.1
PB14	IPOC Station P	146.38	106	⇓*e*P	PKPbc	13 40 11.3	-0.6
PB14	IPOC Station P	146.38	106		PKPbc	13 40 11.6	-0.2
TA01	Diego Aracena	146.57	99	⇓*e*P	PKPdf	13 40 09.9	+0.5
TA01	Diego Aracena	146.57	99	PKPdf	PKPdf	13 40 09.8	+0.5
PB05	IPOC Station P	146.61	103	⇓*e*P	PKPdf	13 40 10.0	+0.5
PB04	IPOC Station P	146.66	102	⇑*i*P	PKPbc	13 40 11.1	-1.3
PB04	IPOC Station P	146.66	102		PKPdf	13 40 09.9	+0.2
ZON	Zonda	146.85	119	PKIKP	PKPdf	13 40 10.4	+0.7
ZON	Zonda	146.85	119	PKPdf	PKPdf	13 40 10.3	+0.7
PB02	IPOC Station P	146.87	100	⇓*e*P	PKPdf	13 40 10.6	+0.6
PB07	IPOC Station P	146.89	101	⇑*e*P	PKPdf	13 40 11.0	+0.8
PB07	IPOC Station P	146.89	101	PKPdf	PKPdf	13 40 10.6	+0.5
BOAV	Boa Vista	147.00	53	*e*P	PKPdf	13 40 11.6	+1.2
BOAV	Boa Vista	147.00	53		PKPdf	13 40 11.1	+0.8
PB11	IPOC Station P	147.01	98	⇓*e*P	PKPdf	13 40 10.6	+0.3
PB16	IPOC Station P	147.02	95	PKPbc	PKPbc	13 40 13.3	-0.7
PB03	IPOC Station P	147.02	102	⇓*e*P	PKPdf	13 40 10.8	+0.5
PB06	IPOC Station P	147.19	103	⇓*i*P	PKPbc	13 40 12.5	-1.4
PB01	IPOC Station P	147.24	100	⇓*e*P	PKPdf	13 40 11.6	+1.0
PB01	IPOC Station P	147.24	100		PKPdf	13 40 11.1	+0.5
PB15	IPOC Station P	147.28	104	⇓*e*P	PKPbc	13 40 12.8	-1.3
PB15	IPOC Station P	147.28	104		PKPdf	13 40 11.2	+0.4
PB15				PKPbc	PKPbc	13 40 14.7	+0.6
AC02	Maricunga	147.33	111	⇓*e*P	PKPbc	13 40 13.6	-1.0
AC02	Maricunga	147.33	111		PKPbc	13 40 13.9	-0.6
PB09	IPOC Station P	147.49	101	⇑*e*P	PKPbc	13 40 13.1	-1.5
PB09	IPOC Station P	147.49	101		PKPbc	13 40 13.8	-0.9
PB08	IPOC Station P	147.51	98	⇓*e*P	PKPdf	13 40 12.0	+0.6
PB08	IPOC Station P	147.51	98	PKPdf	PKPdf	13 40 11.4	0.0
LVC	Limon Verde	147.80	103	PKPbc	PKPdf	13 40 13.6	+1.8
	comp=Z,120nm,0.5s,baz=268,slow=3.2,SNR=72						
LVC				pPKPbc	pPKPbc	13 42 31.5	-0.2
	comp=Z,21nm,0.6s,baz=262,slow=3.6,SNR=4.4						
LVC	Limon Verde	147.80	103	PKHKP	PKPdf	13 40 13.6	+1.8
LVC	Limon Verde	147.80	103	*e*P	PKPdf	13 40 13.0	+1.2
VCA	Vinchina	147.86	114	⇓*e*P	PKPbc	13 40 14.0	-1.4
LPAZ	La Paz	148.04	91	PKPbc	PKPdf	13 40 13.4	+0.8
	comp=Z,29nm,0.6s,baz=247,slow=3.1,SNR=57						
LPAZ				pPKPbc	pPKPab	13 42 34.2	+0.2
	comp=Z,31nm,0.9s,baz=315,slow=2.9,SNR=4.3						
LPAZ	La Paz	148.04	91	PKHKP	PKPpre	13 40 13.4	
LPAZ	La Paz	148.04	91	*e*P	PKPdf	13 40 11.5	-1.1
LPAZ	La Paz	148.04	91	*e*P	PKPdf	13 40 13.5	+0.8
LPAZ	La Paz	148.04	91	PKPdf	PKPdf	13 40 12.8	+0.2
ETMB	Extrema	148.22	78	*e*P	PKPdf	13 40 11.8	-0.5
ETMB	Extrema	148.22	78	PKPdf	PKPdf	13 40 12.4	+0.1
ETMB				PKPbc	PKPbc	13 40 16.9	+0.4
PTGA	Pitinga	149.39	57	PKP	PKPdf	13 40 14.1	0.0
	comp=Z,50nm,1.0s,baz=330,slow=1.8,SNR=53						
PTGA				PKPbc	PKPbc	13 40 18.9	-0.5
	comp=Z,397nm,1.0s,baz=317,slow=2.8,SNR=98						
PTGA				pPKPbc	pPKPab	13 42 38.2	0.0
	comp=Z,23nm,0.7s,baz=349,slow=4.1,SNR=3.6						
TRQA	Tornquist	149.44	135	PKHKP	PKPpre	13 40 14.7	
TRQA	Tornquist	149.44	135	*e*P	PKPdf	13 40 15.2	+1.6
TRQA	Tornquist	149.44	135	PKPdf	PKPdf	13 40 14.7	+1.1
TRQA				PKPbc	PKiKP	13 40 19.9	+0.4
MACA	Manacapuru-AM	150.20	62	*e*P	PKPdf	13 40 16.7	+1.3
MDP	Montagnes des	150.39	38	PKP	PKPdf	13 40 14.5	-1.3
	comp=Z,52nm,1.1s,baz=338,slow=2.0,SNR=10.0						
MDP				PKPbc	PKiKP	13 40 22.1	-0.1
	comp=Z,250nm,0.7s,baz=266,slow=1.5,SNR=78						
MDP				pPKP	pPKPdf	13 42 36.2	+1.4
	comp=Z,8.4nm,0.6s,baz=56,slow=22,SNR=2.2						
MDP	Montagnes des	150.39	38		PKPdf	13 40 14.5	-1.3
SAML	Samuel	150.70	74	PKIKP	PKPdf	13 40 16.1	-0.1
SAML	Samuel	150.70	74	PKPdf	PKPdf	13 40 16.1	-0.1
MALB	Monte Alegre	154.48	51	*e*P	PKPdf	13 40 22.8	+1.1
SIV	San Ignacio	154.67	88	PKP	PKPdf	13 40 21.9	0.0
	comp=Z,21nm,0.7s,baz=256,slow=1.9,SNR=57						
SIV				SKP		13 42 56.5	
	comp=Z,9.6nm,0.9s,baz=311,slow=4.7,SNR=5.2						
SIV	San Ignacio	154.67	88		PKPdf	13 40 21.9	0.0
VILB	Vilhena	154.80	80	*e*P	PKPdf	13 40 23.8	+1.7
ITTB	Itaituba	154.94	58	*e*P	PKPdf	13 40 23.3	+1.0
MCPB	Macapa, AP	154.98	45	*e*P	PKPdf	13 40 23.6	+1.2
PTLB	Pontes e Lacer	156.40	86	*e*P	PKPdf	13 40 24.4	+0.3
PTLB	Pontes e Lacer	156.40	86	PKPdf	PKPdf	13 40 24.2	+0.1
NPGB	Novo Progresso	156.75	63	*e*P	PKPdf	13 40 25.9	+1.3
ITQB	Itaqui	157.29	123	*e*P	PKPdf	13 40 25.3	+0.4
ITQB	Itaqui	157.29	123		PKPdf	13 40 25.4	+0.6
PDRB	Porto dos Gac	157.58	75	*e*P	PKPdf	13 40 26.4	+0.8
CPUP	Villa Florida	157.80	114	PKP	PKPdf	13 40 25.1	-0.5
	comp=Z,18nm,1.1s,baz=2.6,slow=1.6,SNR=8.9						
CPUP				PKPab	PKPab	13 41 01.8	-0.7
	comp=Z,12nm,0.6s,baz=271,slow=5.5,SNR=8.3						
CPUP	Villa Florida	157.80	114	PKIKP	PKPdf	13 40 25.1	-0.5
CPUP						13 41 01.8	
CPUP	Villa Florida	157.80	114	*e*P	PKPdf	13 40 26.4	+0.8
CPUP	Villa Florida	157.80	114	PKPdf	PKPdf	13 40 26.2	+0.6
CLDB	Colider	158.15	72	*e*P	PKPdf	13 40 26.9	+0.6
PLTB	Pedras Altas	158.60	131	*e*P	PKPdf	13 40 27.4	+1.0
PLTB	Pedras Altas	158.60	131	PKPdf	PKPdf	13 40 26.9	+0.5
TMAB	Tom-Au,PA,Br	159.06	40	*e*P	PKPdf	13 40 29.1	+1.7
CPSB	Cacapava Do Su	159.43	128	*e*P	PKPdf	13 40 28.3	+0.9
SALV	Santo Antonio	159.74	85	*e*P	PKPdf	13 40 29.7	+1.7
AQDB	Aquidauana	160.13	98	*e*P	PKPdf	13 40 29.0	+0.6
AQDB	Aquidauana	160.13	98	PKPdf	PKPdf	13 40 29.0	+0.6
PRPB	Parauapebas	160.65	52	*e*P	PKPdf	13 40 30.4	+1.2
PP1B	Ponte de Pedra	160.78	90	*e*P	PKPdf	13 40 29.9	+0.7
ROSB	Rosrio	161.70	31	*e*P	PKPdf	13 40 30.2	0.0
CNLB	Canela	161.91	128	*e*P	PKPdf	13 40 31.1	+1.0
SNDB	Serra Nova Dou	162.62	69	*e*P	PKPdf	13 40 31.9	+0.8
TRCB	Terra Rica	162.75	106	*e*P	PKPdf	13 40 33.0	+1.9
PTGB	Pitanga	162.82	113	*e*P	PKPdf	13 40 33.2	+2.1
ARAG	Araguaiana, MT	163.36	82	*e*P	PKPdf	13 40 33.7	+1.9
TER01	Tubaro-SC	163.61	129	*e*P	PKPdf	13 40 33.8	+2.1
NBMO	Morrinhos-CE	163.75	19	*e*P	PKPdf	13 40 32.1	-0.1
SMTB	Santa Maria do	164.06	53	*e*P	PKPdf	13 40 34.5	+2.0
PCMB	Pacaembu	164.19	103	*e*P	PKPdf	13 40 33.2	+0.8
NBPS	Pedro II - PI	164.24	26	*e*P	PKPdf	13 40 32.4	-0.4
NBCL	Cascavel-CE	165.10	14	*e*P	PKPdf	13 40 34.8	+1.4
ITRB	Iturama	165.17	96	*e*P	PKPdf	13 40 35.1	+1.8
TIJ01	Guaruva-PR	165.22	119	*e*P	PKPdf	13 40 35.0	+1.7
PEXB	Peixe	165.30	65	*e*P	PKPdf	13 40 34.2	+0.7
FRTB	Fartura	165.39	111	*e*P	PKPdf	13 40 35.8	+2.4
NBPB	Pedra_Branca-C	166.00	21	*e*P	PKPdf	13 40 35.1	+1.0
BB19B	Bebedouro	166.78	102	*e*P	PKPdf	13 40 35.5	+1.0
NBPA	Parau_RN	166.83	11	*e*P	PKPdf	13 40 34.8	+0.1
BDFB	Brasilia	166.89	78	PKP	PKPdf	13 40 33.2	-1.6
	comp=Z,38nm,1.1s,baz=338,slow=1.1,SNR=27						
BDFB				PKPab	PKPab	13 41 43.3	+0.4
	comp=Z,14nm,1.0s,baz=68,slow=1.2,SNR=5.2						
BDFB	Brasilia	166.89	78	PKIKP	PKPdf	13 40 33.2	-1.6
BDFB						13 41 43.3	
BDFB	Brasilia	166.89	78		PKPdf	13 40 34.9	+0.1
PET01	Itanhaem-SP	167.07	117	*e*P	PKPdf	13 40 36.5	+1.9
IPMB	Ipameri, GO	167.13	89	*e*P	PKPdf	13 40 35.7	+0.8
RCLB	Rio Claro- Sao	167.44	109	*e*P	PKPdf	13 40 36.4	+1.4
NBPV	Pedro Velho	167.69	3	*e*P	PKPdf	13 40 36.4	+1.1
VAO	Valinhos	167.78	112	*e*P	PKPdf	13 40 37.0	+1.7
NBMA	Muriti-CE	167.97	20	*e*P	PKPdf	13 40 36.5	+1.0
SDBA	SAO DESIDERIO	168.29	59	*e*P	PKPdf	13 40 37.0	+1.2
NBLV	Livramento - P	168.43	11	*e*P	PKPdf	13 40 36.5	+0.6
PARB	Paraibuna	168.83	116	*e*P	PKPdf	13 40 37.7	+1.8
NBRF	Rio Formoso -	169.94	3	*e*P	PKPdf	13 40 37.3	+0.5
JANB	Januaria	170.07	70	*e*P	PKPdf	13 40 37.1	+0.3
BSCB	Bom Sucesso	170.26	105	*e*P	PKPdf	13 40 38.3	+1.4
MAN01	Angra dos Reis	170.42	117	*e*P	PKPdf	13 40 38.9	+2.0
NBPN	Ponto Novo - B	170.48	35	*e*P	PKPdf	13 40 37.3	+0.2
NBAN	Anadia - AL	170.81	10	*e*P	PKPdf	13 40 37.7	+0.5
MC01	Montes Claros	170.94	78	*e*P	PKPdf	13 40 38.7	+1.4
VAS01	Vassouras-RJ	171.09	114	*e*P	PKPdf	13 40 39.3	+2.1
DIAM	Diamantina, MG	171.46	88	*e*P	PKPdf	13 40 38.9	+1.3
NBLA	Lagarto - SE	171.69	22	*e*P	PKPdf	13 40 38.4	+0.8
DUB01	Friburgo-RJ	172.08	116	*e*P	PKPdf	13 40 39.7	+2.0
CAM01	Campos-RJ	172.79	116	*e*P	PKPdf	13 40 39.3	+1.4
GDU01	Guandu, BA	173.11	44	*e*P	PKPdf	13 40 39.0	+0.8
SJMB	Sao Joao De Ma	173.84	90	*e*P	PKPdf	13 40 39.0	+0.6
ALF01	Guarapari-ES	174.03	109	*e*P	PKPdf	13 40 39.0	+0.6
NBIT	Itapeh - BA	174.05	51	*e*P	PKPdf	13 40 39.6	+1.1
BSFB	Barra de Sao F	174.16	91	*e*P	PKPdf	13 40 39.0	+0.5
CMC01	Camacan, BA	174.26	54	*e*P	PKPdf	13 40 39.6	+1.0
RIB01	Linhares ES	174.57	96	*e*P	PKPdf	13 40 39.0	+0.4
GUA01	Guaratinga, BA	174.65	67	*e*P	PKPdf	13 40 39.4	+0.7

IDC ***24*** *13:41:24.9±1.6, 6°.94S×131°.18E, h0^{km}, mb4.0/3, mb1 4.0/7, mb1mx3.7/37, mbtmp3.9/7, ML3.9/4 Error ellipse: s-maj=71.7km s-min=23.1km az=86.0*

NEIC ***24*** *13:41:25.5±2.5, 6°.85S±0°.07×132°.0E±0°.2, h10^{km}±2^{km}, mb4.2/6, Error ellipse: s-maj=27.1km s-min=8.6km az=110.0*

DJA ***24*** *13:41:31.1±0.3, 7°S±2°×13°2E±°, h81^{km}±8^{km}, M4.2/12, mB4.9/1, mb4.0/7, MLv4.2/12, Mw(mB)4.2/1*

ISC 24 13:41:28.0±0.8**, 6°.77S**±0°.04×**131°.76E**±0°.09**, h35^{km}, n30, σ3^{s}.07**/35**, mb4.2**/5**, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	1.29	201	P	Pn	13 41 54.5	+4.9
SAUI				S	Sn	13 42 11.3	+5.7
SAUI	Saumlaki	1.29	201		Pn	13 41 50.5	+1.0
SAUI				Sn	Sn	13 42 09.5	+3.9
FAKI	Fak Fak	3.86	7	P	Pn	13 42 28.7	+3.8
FAKI				S	Sn	13 43 11.2	+2.2
FAKI	Fak Fak	3.86	7		Pn	13 42 28.0	+3.1
MSAI	Masohi	4.42	320	P	Pn	13 42 32.8	+0.2
MSAI				S	Sn	13 43 20.6	-2.3
AAI	Ambon	4.69	311	P	Pn	13 42 36.4	0.0
SIJI	Sorong	5.88	355	Pn	Pn	13 42 54.3	+1.5
	3.3nm,0.3s,baz=190,slow=6.1,SNR=37						
SIJI				Sn	Sn	13 43 55.0	-4.0
	9.5nm,0.3s,baz=100,slow=23,SNR=18						
SWI	Sorong	5.89	355	P	Pn	13 42 55.6	+2.8
MTN	Manton Dam	6.07	186		Pn	13 42 57.3	+2.0
SANI	Sanana	7.42	309	P	Pn	13 43 15.6	+1.7
	0.1nm12nm,0.7s						
LBMI	Labuha	7.43	325	P	Pn	13 43 15.2	+1.2
	0.1nm10nm,0.9s						
SOEI	Soe	7.99	248	P	Pn	13 43 21.4	-0.4
	0.2nm16nm,0.5s						
SOEI	Soe	7.99	248	Pn	Pn	13 43 21.6	-0.2
KNRA	Kununurra	9.33	198		Pn	13 43 40.4	+0.4
FITZ	Fitzroy Crossi	12.74	207	Pn	Pn	13 44 23.7	-3.1
	1.3nm,0.3s,baz=26,slow=9.3,SNR=54						
FITZ				Sn	Sn	13 46 34.6	-13
	0.9nm,0.3s,baz=192,slow=21,SNR=6.9						
WB0	Warramunga Arr	13.17	169	Pn	Pn	13 44 31.2	-1.5
WRA	Warramunga Arr	13.33	169	Pn	Pn	13 44 33.1	-1.8
	0.4nm,0.3s,baz=346,slow=14,SNR=21						
WRA				Sn	Sn	13 46 53.4	-8.5
	1.2nm,0.3s,baz=352,slow=23,SNR=8.4						
WB2	Warramunga Arr	13.33	169	Pn	Pn	13 44 33.5	-1.4
PLAI	Plampang	14.01	261	P	Pn	13 44 43.1	-1.0
	17nm,1.2s						
AS31	Alice Springs	16.92	173	P	Pn	13 45 21.6	-0.7
ASAR	Alice Springs	16.93	173	Pn	Pn	13 45 21.7	-0.6
	0.3nm,0.3s,baz=356,slow=8.7,SNR=25						
ASAR				Sn	Sn	13 48 20.5	-8.9
	0.3nm,0.3s,baz=340,slow=11,SNR=6.5						
PSA00	Pilbara Seismi	18.69	217	P	Pn	13 45 44.0	0.0
PSA00				IAmb	IAmb	13 46 09.1	
	comp=Z,5.7nm,1.4s						
SONM	Songino Array	58.80	340	P	P	13 51 24.7	+1.8
	comp=Z,0.5nm,0.7s,baz=148,slow=7.3,SNR=3.5						
SONM	Songino Array	58.80	340	IAmb	IAmb	13 51 37.8	
	comp=Z,3.1nm,1.4s						
MK31	Makanchi Array	69.00	326	P	P	13 52 31.2	+1.2
MK31				IAmb	IAmb	13 52 33.3	
	comp=Z,2.7nm,1.1s						
MKAR	Makanchi Array	69.00	326	P	P	13 52 31.8	+1.7
	comp=Z,2.4nm,0.7s,baz=114,slow=7.9,SNR=18						
MKAR	Makanchi Array	69.00	326	P	P	13 52 31.1	+1.1
MAKZ	Makanchi	69.19	326	P	P	13 52 32.1	+1.0
KDJ	Kajisay	69.52	320	P	P	13 52 35.2	+1.7
KDJ				IAmb	IAmb	13 52 36.6	
	comp=Z,2.5nm,0.8s						
ZALV	Zalesovo Beam	72.16	333	P	P	13 52 50.3	+1.3
	comp=Z,0.7nm,0.3s,baz=142,slow=5.1,SNR=1.3						

UPP ***24*** *13:52:15.8±0.9, 59°.72N×9°.43E, h0^{km}, ML2.3, Suspected explosion*

DNK ***24*** *13:52:16.6±1.5, 59°.69N×9°.49E, h0^{km}, ML2.5(UPP), Suspected explosion*

BER ***24*** *13:52:20.1±1.3, 59°.69N×9°.70E, h0^{km}, ML1.3, Suspected explosion*

ISC 24 13:52:18.0±0.8**, 59°.69N**±0°.03×**9°.76E**±0°.03**, h0^{km}, n18, σ0^{s}.50**/31**, Southern Norway**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KONO	Kongsberg	0.09	245	*e*P	Pg	13 52 20.6	+0.8
KONO				*e*S	Sg	13 52 21.7	+0.8
KONO				IAML		13 52 22.7	
	comp=Z,263nm,0.4s						
STRU	Stroemstad	0.98	131	P	Pb	13 52 37.4	-0.4
STRU				S	Sn	13 52 52.5	-1.0
STRU	Stroemstad	0.98	131	P	Pb	13 52 37.4	-0.4
STRU				S	Sn	13 52 52.5	-1.0
SKAR	Skarslia	1.23	324	*e*P	Pg	13 52 41.1	-0.6
SKAR				*e*S	Sg	13 52 57.6	0.0
SKAR				IAML		13 53 04.4	
	comp=Z,6.2nm,0.5s						
NAO01	NORSAR Array S	1.29	25	*e*P	Pg	13 52 43.0	+0.3
NAO01				*e*S	Sb	13 53 00.2	+0.1
NAO01				IAML		13 53 03.5	
	comp=Z,4.5nm,0.6s						
NC602	NORSAR Array S	1.38	39	*e*P	Pb	13 52 44.8	+0.2
FINU	Finntorp	1.41	101	P	Pn	13 52 44.8	-0.1
FINU				S	Sn	13 53 04.3	+0.1
FINU	Finntorp	1.41	101	P	Pn	13 52 44.8	-0.1
FINU				S	Sn	13 53 04.3	+0.1
HOMB	Homborsund	1.56	205	*e*P	Pn	13 52 47.1	+0.1
HOMB				*e*S	Sn	13 53 07.3	-0.6
ODD1	Odda	1.60	279	*e*P	Pb	13 52 48.3	-0.1
ODD1				*e*S	Sn	13 53 08.1	-0.9
ODD1				IAML		13 53 12.6	
	comp=Z,6.3nm,0.3s						
NC204	NORSAR Array S	1.67	17	*e*P	Pb	13 52 49.4	-0.2
VANU	Vaenersborg	1.69	134	P	Pn	13 52 48.4	-0.3
VANU				S	Sn	13 53 10.9	-0.2
VANU	Vaenersborg	1.69	134	P	Pn	13 52 48.4	-0.3
VANU				S	Sn	13 53 10.9	-0.2
NASU	Vaermlandsnaes	1.91	112	P	Pn	13 52 52.3	+0.5
NASU	Vaermlandsnaes	1.91	112	P	Pn	13 52 52.3	+0.5
TJOU	Tjoern	1.92	149	P	Pn	13 52 51.5	-0.4
TJOU				S	Sn	13 53 17.1	+0.4
TJOU	Tjoern	1.92	149	P	Pn	13 52 51.5	-0.4
TJOU				S	Sn	13 53 17.1	+0.4
UDD	Uddeholm	1.98	77	P	Pn	13 52 53.3	+0.6

IDC 24 13:52:24.6±26.0**, 6°.08N**×**127°.20E, h0^{km}, mb4.0**/4**, mb1 4.1**/4**, mb1mx3.4**/55**, mbtmp4.0**/4**, MS4.0**/1**, Ms1 4.0**/1**, ms1mx2.8**/50**, Error ellipse: s-maj=447.5km s-min=108.1km az=160.0, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	24.08	184	P	P	13 57 42.4	+0.5
	1.0nm,0.7s,baz=21,slow=9.1,SNR=6.0						
WRA	Warramunga Arr	26.80	165	P	P	13 58 06.2	-0.5
	1.1nm,0.5s,baz=344,slow=10.0,SNR=29						
ASAR	Alice Springs	30.28	168	P	P	13 58 38.0	+0.2
	0.8nm,0.4s,baz=353,slow=7.4,SNR=57						
STKA	Stephens Creek	40.17	161	P	P	14 00 02.5	-0.2
	1.5nm,0.3s,baz=348,slow=7.1,SNR=10						
MSVF	Nonsavu	55.49	116	LR	LR	14 23 07.7	
	comp=Z,121nm,19.0s,baz=229,slow=33						

NEIC ***24*** *14:00:00.7±1.6, 5°.46S±0°.07×150°.41E±0°.08, h131^{km}±7^{km}, mb4.6/28, Error ellipse: s-maj=12.2km s-min=10.3km az=118.0*

IDC ***24*** *14:00:02.2±1.6, 5°.58S×150°.37E, h156^{km}±14^{km}, mb3.6/10, mb1 3.6/11, mb1mx3.4/46, mbtmp4.0/11, Error ellipse: s-maj=21.0km s-min=9.5km az=117.0*

ISC 24 13:59:58.5±0.5**, 5°.45S**±0°.06×**150°.36E**±0°.07**, h114^{km}, n56, σ1^{s}.50**/61**, mb4.4**/25**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	2.19	55	Pn	Pn	14 00 36.6	+2.5
RABL	Rabaul	2.19	55	P	Pn	14 00 36.7	+2.6
PMG	Port Moresby	5.05	219	P	Pn	14 01 14.9	+2.9
	9.2nm,0.3s,baz=33,slow=6.7,SNR=17						
PMG				S	Sn	14 02 12.3	+3.0
	56nm,0.3s,baz=220,slow=23,SNR=18						
PMG	Port Moresby	5.05	219	P	Pn	14 01 15.6	+3.6
	47nm,0.5s						
PMG	Port Moresby	5.05	219	P	Pn	14 01 15.3	+3.3
	47nm,0.5s						
CTAO	Charters Tower	15.09	195	Pn	P	14 03 27.0	-1.3
KDU	Kakadu	19.06	247	P	P	14 04 12.0	-0.1
	9.0nm,1.3s						
SANVU	Saraoutou	19.30	122	Pn	Pn	14 04 16.8	-0.1
SANVU				IAmb	IAmb	14 04 38.8	
	comp=Z,41nm,0.9s						
EIDS	Eidsvold	19.82	178	P	P	14 04 20.8	+0.6
EIDS				IAmb	IAmb	14 04 22.1	
	comp=Z,9.0nm,0.7s						
EIDS	Eidsvold	19.82	178	P	Pn	14 04 21.4	-1.4
	comp=Z,15nm,0.7s						
RMQ	Roma	20.97	184	P	P	14 04 34.1	+1.5
	comp=Z,9.8nm,0.8s						
WB0	Warramunga Arr	21.07	226	P	P	14 04 33.5	-0.3
WB0				IAmb	IAmb	14 04 59.8	
	comp=Z,10nm,1.2s						
WRAB	Tennant Creek	21.21	226	P	P	14 04 34.2	-1.0
WRAB	Tennant Creek	21.21	226	P	P	14 04 34.8	-0.4
	comp=Z,7.1nm,1.2s						
WB2	Warramunga Arr	21.21	226		P	14 04 33.8	-1.4
WRA	Warramunga Arr	21.22	226	P	P	14 04 35.0	-0.3
	comp=Z,1.9nm,0.5s,baz=53,slow=9.8,SNR=37						
WRA				S	S	14 08 21.5	-3.5
	comp=Z,1.8nm,0.8s,baz=53,slow=15,SNR=5.2						
WRA				PcP	PcP	14 08 34.8	-1.6
	comp=Z,0.9nm,1.0s,baz=33,slow=2.5,SNR=5.9						
WRA	Warramunga Arr	21.22	226	P	P	14 04 34.1	-1.3
DVP	Devils Point	21.27	126	P	P	14 04 37.2	+1.3
RTV	Rentapao	21.50	126	P	P	14 04 37.9	-0.4
	comp=Z,770µm,0.4s						
QLP	Quilpie	21.81	195	P	P	14 04 42.2	+0.6
	comp=Z,30nm,1.1s						
LIFNC	LIFOU	22.37	134	P	P	14 04 47.9	+0.4
DZM	Mont Dzumac	22.70	138	P	P	14 04 50.4	-0.4
	comp=Z,11nm,0.5s,baz=327,slow=24,SNR=19						
DZM	Mont Dzumac	22.70	138	P	P	14 04 50.6	-0.1
DZM				IAmb	IAmb	14 04 52.1	
	comp=Z,13nm,0.8s						
DZM	Mont Dzumac	22.70	138	P	P	14 04 50.7	-0.1
	comp=Z,27nm,0.8s						
KNRA	Kununurra	23.51	243	P	P	14 04 57.9	-0.5
KNRA				IAmb	IAmb	14 05 09.6	
	comp=Z,32nm,1.4s						
KNRA	Kununurra	23.51	243	P	P	14 04 57.5	-0.9
	comp=Z,19nm,0.9s						
AS31	Alice Springs	24.06	220		P	14 05 03.4	0.0
ASAR	Alice Springs	24.07	220	P	P	14 05 03.3	-0.1
	comp=Z,0.9nm,0.4s,baz=51,slow=8.8,SNR=48						
ASAR				PcP	PcP	14 08 39.9	-2.3
	comp=Z,0.3nm,0.7s,baz=37,slow=2.2,SNR=1.8						
ASAR				S	S	14 09 09.1	-3.7
	comp=Z,1.2nm,0.6s,baz=46,slow=14,SNR=15						
ASAR	Alice Springs	24.07	220	P	P	14 05 03.1	-0.2
ARMA	Armidale	24.86	177	P	P	14 05 10.6	-0.1
ARMA				IAmb	IAmb	14 05 13.3	
	comp=Z,20nm,1.4s						
FITZ	Fitzroy Crossi	27.22	240	P	P	14 05 31.5	-0.4
	comp=Z,8.7nm,0.4s,baz=53,slow=7.8,SNR=104						
STKA	Stephens Creek	27.54	196	P	P	14 05 33.5	-1.1
	comp=Z,1.2nm,0.5s,baz=32,slow=14,SNR=5.8						
FORT	Forrest	32.78	217	P	P	14 06 20.3	-0.6
FORT				IAmb	IAmb	14 06 42.1	
	comp=Z,21nm,1.1s						
PSA00	Pilbara Seismi	33.61	239	P	P	14 06 27.4	-0.8
PSA00				IAmb	IAmb	14 06 52.5	
	comp=Z,16nm,1.2s						
OUZ	Omahuta	36.56	147	P	P	14 06 54.2	+0.8
OUZ				IAmb	IAmb	14 07 12.6	
	comp=Z,18nm,1.3s						
TAU	Tasmania Unive	37.40	184	P	P	14 07 00.8	+0.5
GIRL	Giralia	38.83	240	P	P	14 07 12.9	+0.3
MORW	Morawa	40.06	230	P	P	14 07 20.7	-2.0
MORW				IAmb	IAmb	14 07 45.2	
	comp=Z,25nm,1.3s						
SSLB	Suanglung	40.83	317	P	P	14 07 30.7	+1.5
SSLB				IAmb	IAmb	14 07 44.4	
	comp=Z,24nm,1.0s						
MLZ	Mavora Lakes	42.67	162	P	P	14 07 43.6	-0.2
JWT	Wachi	42.89	342	P	P	14 07 45.9	+0.2
MAJO	Matsushiro	43.30	346	P	P	14 07 49.0	0.0
MAJO				IAmb	IAmb	14 07 59.4	
	comp=Z,13nm,1.2s						
JHS	Saijyo	43.39	339	P	P	14 07 51.1	+1.3
KSRS	Korea Array	47.54	336	P	P	14 08 23.6	+1.2
	comp=Z,1.4nm,0.9s,baz=152,slow=8.9,SNR=4.1						
USA0B	Ussuriysk Arra	52.12	343	P	P	14 08 54.4	-2.6
USA0B				IAmb	IAmb	14 09 02.9	

	comp=Z,21nm,1.4s						
USRK	**Ussuriysk Ar.**	52.12	343	P	P	14 08 55.2	-1.8
PEA0B	**Petropavlovsk-**	58.67	5	P	P	14 09 43.7	-0.1
PETK	**Petropavlovsk-**	58.67	5	P	P	14 09 43.0	-0.7
	comp=Z,1.7nm,0.5s,baz=161,slow=6.2,SNR=9.2						
PETK	**Petropavlovsk-**	58.67	5	P	P	14 09 43.6	-0.1
ULN	**Ulaanbaatar**	65.29	329	P	P	14 10 28.9	+0.6
ULN				IAmb	IAmb	14 10 31.9	
	comp=Z,7.5nm,1.4s						
SONM	**Songino Array**	65.61	329	P	P	14 10 31.7	+1.3
	comp=Z,0.4nm,0.4s,baz=164,slow=6.4,SNR=5.3						
SONM	**Songino Array**	65.61	329	P	P	14 10 30.8	+0.4
SEY	**Seymchan**	68.21	1	P	P	14 10 45.4	-0.9
	comp=Z,0.9nm,0.4s,baz=40,slow=23,SNR=4.5						
MKAR	**Makanchi Array**	79.23	320	P	P	14 11 51.9	+0.8
	comp=Z,0.5nm,0.8s,baz=105,slow=6.4,SNR=1.9						
ZALV	**Zalesovo Beam**	80.36	327	P	P	14 11 56.5	-0.5
	comp=Z,0.7nm,0.6s,baz=122,slow=5.4,SNR=2.0						
TORD	**Torodi Ar. Bea**	148.17	286	PKPbc	PKPdf	14 19 29.4	+0.6
	comp=Z,0.5nm,0.3s,baz=78,slow=2.3,SNR=9.5						

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*IDC **24** 14:07:01.8±2.3, 6°.31S×129°.30E, h193^{km}±27^{km}, mb2.9/2, mb1 3.2/6, mb1mx2.8/46, mbtmp3.6/6, Error ellipse: s-maj=49.4km s-min=14.0km az=80.0*

ISC 24 14:07:01.6±1.0**, 6°.25S**±0°.07×**129°.3E**±0°.2**, h200^{km}, n11, σ1^{s}90**/13**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	4.41	42	P	Pn	14 08 10.8	+2.2
SIJI	**Sorong**	5.69	20	P	Pn	14 08 26.4	+1.5
	1.2nm,0.3s,baz=255,slow=22,SNR=25						
SIJI				S	Sn	14 09 26.6	-4.2
	4.0nm,0.3s,baz=271,slow=23,SNR=19						
DRS	**Darwin Rock St**	6.34	166	P	Pn	14 08 33.1	-0.2
	19nm,0.7s						
MTN	**Manton Dam**	6.79	165	P	Pn	14 08 38.8	-0.4
KDU	**Kakadu**	7.11	154	P	Pn	14 08 42.8	-0.5
	12nm,1.2s						
KNRA	**Kununurra**	9.38	183	P	Pn	14 09 11.6	-1.3
	19nm,0.7s						
FITZ	**Fitzroy Crossi**	12.31	197	P	Pn	14 09 49.6	-0.9
	0.3nm,0.3s,baz=21,slow=11,SNR=12						
FITZ				S	Sn	14 11 56.9	-11
	0.4nm,0.3s,baz=116,slow=20,SNR=2.8						
WRA	**Warramunga Arr**	14.46	161	P	Pn	14 10 15.5	-1.8
	0.3nm,0.3s,baz=347,slow=13,SNR=15						
WRA				S	S	14 12 47.8	-10
	0.2nm,0.3s,baz=341,slow=19,SNR=1.9						
ASAR	**Alice Springs**	17.87	166	P	Pn	14 10 57.1	-1.2
	0.6nm,0.3s,baz=341,slow=9.2,SNR=52						
ASAR				S	S	14 14 12.3	+1.2
	0.0nm,0.3s,baz=346,slow=18,SNR=4.6						
MKAR	**Makanchi Array**	67.23	327	P	P	14 17 35.6	+1.1
	0.1nm,0.3s,baz=116,slow=7.2,SNR=4.3						
KURBB	**Kurchatov Arra**	71.52	329	P	P	14 18 01.7	+1.1
	0.2nm,0.4s,baz=130,slow=4.7,SNR=1.7						

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*EAF **24** 14:13:02.3±1.9, 26°.03S×29°.94E, h10^{km}, MD3.7*

BUL 24 14:13:03.7±1.5**, 25°.99S×29°.83E, h10^{km}, MD4.0, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOPA	**Mopani**	2.85	30	*e*P	Pn	14 13 48.7	-0.5
MOPA				*e*S	Sn	14 14 17.6	-6.0
MOPA	**Mopani**	2.85	30	*e*P	Pn	14 13 48.7	-0.5
MOPA				*e*S	Sn	14 14 17.6	-6.0
MSNA	**Messina**	3.63	3	*e*P	Pn	14 13 59.8	-0.3
MSNA				*e*S	Sn	14 14 39.6	-3.4
MSNA	**Messina**	3.63	3	*e*P	Pn	14 13 59.8	-0.3
MSNA				*e*S	Sn	14 14 39.6	-3.4
LBTB	**Lobatse**	3.94	283	*e*P	Pn	14 14 03.6	-0.8
LBTB				*e*S	Sn	14 14 48.6	-2.1
LBTB	**Lobatse**	3.94	283	*e*P	Pn	14 14 03.6	-0.8
LBTB				*e*S	Sn	14 14 48.6	-2.1
BOSA	**Boshof**	4.83	236	*e*P	Pn	14 14 16.2	-0.4
BOSA				*e*S	Sn	14 15 08.2	-4.5
BOSA	**Boshof**	4.83	236	*e*P	Pn	14 14 16.2	-0.4
BOSA				*e*S	Sn	14 15 08.2	-4.5
MATP	**Matopo**	5.67	347	*e*P	Pn	14 14 27.0	-1.1
MATP				*e*S	Sn	14 15 29.5	-3.9
MATP	**Matopo**	5.67	347	*e*P	Pn	14 14 27.0	-1.1
MATP				*e*S	Sn	14 15 29.5	-3.9
BLWY	**Bulawayo**	5.93	349	*e*P	Pn	14 14 30.4	-1.3
BLWY				*e*S	Sn	14 15 34.4	-5.4
BLWY	**Bulawayo**	5.93	349	*e*P	Pn	14 14 30.4	-1.3
BLWY				*e*S	Sn	14 15 34.4	-5.4
KRI	**Karoi**	9.12	359	*e*P	Pn	14 15 05.1	-10
KRI				*e*S	Sn	14 16 35.6	-23
KRI	**Karoi**	9.12	359	*e*P	Pn	14 15 05.1	-10
KRI				*e*S	Sn	14 16 35.6	-23

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*IDC **24** 14:15:38.3±1.8, 7°.70S×127°.96E, h181^{km}±21^{km}, mb3.4/4, mb1 3.7/8, mb1mx3.3/40, mbtmp4.1/8, MS3.1/1, Ms1 3.1/1, ms1mx2.4/24, Error ellipse: s-maj=31.0km s-min=20.3km az=103.0*

*NEIC **24** 14:15:39.1±1.9, 7°.56S±0°.09×127°.85E±0°.09, h168^{km}±8^{km}, mb4.1/11, Error ellipse: s-maj=13.2km s-min=11.8km az=142.0*

*DJA **24** 14:15:39.3±0.2, 8°S±3°×12°8E±°, h157^{km}±6^{km}, M4.3/12, mB4.8/5, mb4.2/12, MLv4.5/12, Mw(mB)4.1/5*

ISC 24 14:15:40.1±0.6**, 7°.78S**±0°.06×**127°.84E**±0°.05**, h200^{km}, n54, σ2^{s}32**/58**, mb3.9**/10**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	3.43	94	P	Pn	14 16 33.8	-1.2
SAUI				S	Sn	14 17 16.1	-1.8
SAUI	**Saumlaki**	3.43	94		Pn	14 16 33.2	-1.8
SOEI	**Soe**	4.04	241	P	Pn	14 16 42.1	-0.4
SOEI	**Soe**	4.04	241		Pn	14 16 41.5	-1.1
AAI	**Ambon**	4.08	5	P	Pn	14 16 37.7	-5.4
BATI	**Baumata**	4.78	239	P	Pn	14 16 51.4	-0.4
	14nm,0.3s,baz=277,slow=5.1,SNR=16						
BATI				S	Sn	14 17 44.3	-3.9
	38nm,0.3s,baz=143,slow=22,SNR=18						
BATI	**Baumata**	4.78	239	P	Pn	14 16 51.1	-0.7
DRS	**Darwin Rock St**	5.51	147	P	Pn	14 17 00.7	-0.5
	65nm,0.6s						
MMRI	**Maumere**	5.61	261	P	Pn	14 17 00.8	-1.6
	0.3nm78nm,1.2s						
MMRI	**Maumere**	5.61	261	Pn	Pn	14 17 01.0	-1.4
MTN	**Manton Dam**	5.98	147		Pn	14 17 07.2	0.0
MTN	**Manton Dam**	5.98	147	P	Pn	14 17 06.5	-0.7
SANI	**Sanana**	5.99	342	P	Pn	14 17 04.5	-2.8
	0.1nm27nm,1.0s						
EDFI	**Ende, Flores**	6.16	261	P	Pn	14 17 08.5	-1.1
	0.1nm361nm26nm,0.9s						
FAKI	**Fak Fak**	6.53	42	P	Pn	14 17 11.1	-3.2
	0.3nm14nm,0.7s						
FAKI	**Fak Fak**	6.53	42		Pn	14 17 09.9	-4.5
FAKI	**Fak Fak**	6.53	42	P	Pn	14 17 10.2	-4.1
KDU	**Kakadu**	6.67	137	P	Pn	14 17 15.7	-0.5
	592nm,0.6s						
LBMI	**Labuha**	7.11	357	P	Pn	14 17 18.6	-3.2
	1.1nm6.4nm,1.2s						
SIJI	**Sorong**	7.67	27	P	Pn	14 17 25.4	-3.8
	3.7nm,0.3s,baz=209,slow=22,SNR=17						
SIJI				S	Sn	14 18 43.1	-13
	1.2nm,0.3s,baz=272,slow=23,SNR=1.3						
SWI	**Sorong**	7.67	27	P	Pn	14 17 26.9	-2.3
	0.1nm23nm,0.5s						
KNRA	**Kununurra**	7.90	174	Pn	Pn	14 17 31.6	-0.5
KNRA	**Kununurra**	7.90	174	P	Pn	14 17 31.5	-0.6
	54nm,1.4s						
PLAI	**Plampang**	10.01	263	P	Pn	14 17 58.4	-1.2
	13nm,0.8s						
FITZ	**Fitzroy Crossi**	10.47	192	P	Pn	14 18 05.0	-0.6
	0.6nm,0.3s,baz=20,slow=12,SNR=22						
FITZ				S	Sn	14 19 56.6	-5.9
	1.5nm,0.3s,baz=89,slow=19,SNR=4.2						
FITZ				LR	LR	14 22 07.0	
	comp=Z,83nm,18.1s,baz=2.5,slow=37						
TWSI	**Taliwang, Sumb**	10.89	264	P	Pn	14 18 09.9	-1.0
	5.8nm,0.9s						
WB0	**Warramunga Arr**	13.50	153		Pn	14 18 43.3	-0.7
WRAB	**Tennant Creek**	13.63	153		Pn	14 18 45.3	-0.2
WRA	**Warramunga Arr**	13.63	153	P	Pn	14 18 45.4	-0.2
	3.9nm,0.3s,baz=324,slow=13,SNR=152						
WRA				S	S	14 21 12.0	-5.6
	3.8nm,0.3s,baz=325,slow=24,SNR=15						
WRA	**Warramunga Arr**	13.63	153		Pn	14 18 44.2	-1.4
WB2	**Warramunga Arr**	13.64	153	Pn	Pn	14 18 45.3	-0.4
PSA00	**Pilbara Seismi**	15.73	209		Pn	14 19 13.8	+2.5
PSA00				IAmb	IAmb	14 19 26.9	
	comp=Z,28nm,1.4s						
COEN	**Coen**	16.26	113	P	Pn	14 19 18.4	+0.7
AS31	**Alice Springs**	16.83	160		Pn	14 19 27.0	+2.5
AS31				IAmb	IAmb	14 19 30.5	
	comp=Z,4.0nm,0.6s						
ASAR	**Alice Springs**	16.83	160	P	Pn	14 19 26.9	+2.5
	comp=Z,1.5nm,0.3s,baz=328,slow=9.7,SNR=160						
ASAR				S	S	14 22 26.2	-2.7
	comp=Z,0.3nm,0.3s,baz=322,slow=18,SNR=4.5						
ASAR	**Alice Springs**	16.83	160		Pn	14 19 27.0	+2.5
PMG	**Port Moresby**	19.17	96	P	Pn	14 19 53.9	+1.8
	comp=Z,1.7nm,0.3s,baz=284,slow=8.2,SNR=10						
FORT	**Forrest**	22.88	180	P	P	14 20 30.9	+4.5
BBOO	**Buckleboo**	26.05	164	P	P	14 20 59.4	+4.3
BBOO				IAmb	IAmb	14 21 20.4	
	comp=Z,9.6nm,1.2s						
CMAR	**Chiang Mai Arr**	38.64	313	P	P	14 22 44.5	0.0
	comp=Z,0.7nm,0.7s,baz=138,slow=6.6,SNR=5.8						
HHC	**Hu-ho-hao-te**	50.66	344	*e*P	P	14 24 21.8	+2.6
HHC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,140nm,9.2s						
SONM	**Songino Array**	58.53	343	P	P	14 25 15.6	-0.2
	comp=Z,0.8nm,0.8s,baz=161,slow=9.4,SNR=4.9						
SONM	**Songino Array**	58.53	343	P	P	14 25 16.7	+0.9
WMQ	**Urumqi**	62.91	328	*e*P	P	14 25 48.0	+2.8
MK31	**Makanchi Array**	67.73	328	P	P	14 26 16.0	-0.1
MKAR	**Makanchi Array**	67.73	328	P	P	14 26 16.6	+0.5
	comp=Z,0.5nm,0.4s,baz=118,slow=7.6,SNR=9.9						
MKAR	**Makanchi Array**	67.73	328	P	P	14 26 15.9	-0.1
BOOM	**Boomskoye usch**	68.80	321	P	P	14 26 23.8	+0.8
BOOM				IAmb	IAmb	14 26 44.3	
	comp=Z,2.3nm,0.9s						
ZAA0	**Zalesovo Array**	71.35	335	P	P	14 26 37.7	-0.4
ZAA0				IAmb	IAmb	14 26 38.0	
	comp=Z,1.8nm,0.8s						
ZALV	**Zalesovo Beam**	71.35	335	P	P	14 26 37.6	-0.4
	comp=Z,1.7nm,0.7s,baz=115,slow=5.7,SNR=6.1						
ZALV	**Zalesovo Beam**	71.35	335	P	P	14 26 37.9	-0.2
VNDA	**Vanda**	71.94	173	P	P	14 26 45.2	+3.9
VNDA				IAmb	IAmb	14 26 46.9	
	comp=Z,2.0nm,1.1s						
KURK	**Kurchatov**	72.08	330	P	P	14 26 43.0	+0.5
KURK				IAmb	IAmb	14 26 44.7	
	comp=Z,3.1nm,0.9s						
TORD	**Torodi Ar. Bea**	126.85	281	PKP	PKPdf	14 34 20.9	-0.2
	comp=Z,0.5nm,0.6s,baz=118,slow=1.4,SNR=2.9						

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*EAF **24** 14:34:38.8±6.0, 16°.55S×27°.64E, h10^{km}, MD3.5*

BUL 24 14:34:39.6±1.3**, 16°.68S×27°.68E, h10^{km}, MD3.7, Zambia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRI	**Karoi**	1.86	95	*e*P	Pg	14 35 17.2	+1.8
KRI				*e*S	Sg	14 35 46.5	+7.0
KRI	**Karoi**	1.86	95	*e*P	Pg	14 35 17.2	+1.8
KRI				*e*S	Sg	14 35 46.5	+7.0
MATP	**Matopo**	3.80	168	*e*P	Pn	14 35 38.0	-0.4
MATP				*e*S	Sn	14 36 19.6	-3.7
MATP	**Matopo**	3.80	168	*e*P	Pn	14 35 38.0	-0.4
MATP				*e*S	Sn	14 36 19.6	-3.7
MSNA	**Messina**	6.05	159	*e*P	Pn	14 36 09.4	+0.1
MSNA				*e*S	Sn	14 37 13.7	-5.0
MSNA	**Messina**	6.05	159	*e*P	Pn	14 36 09.4	+0.1
MSNA				*e*S	Sn	14 37 13.7	-5.0
MOPA	**Mopani**	7.64	153	*e*P	Pn	14 36 36.0	+5.0
MOPA				*e*S	Sn	14 37 59.9	+2.1
MOPA	**Mopani**	7.64	153	*e*P	Pn	14 36 36.0	+5.0
MOPA				*e*S	Sn	14 37 59.9	+2.1

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*IDC **24** 14:38:04.6±15.0, 1°.21N×127°.16E, h0^{km}, mb3.9/3, mb1 4.1/4, mb1mx3.6/48, mbtmp3.9/4, ML3.3/1, MS3.5/1, Ms1 3.5/1, ms1mx2.5/41, Error ellipse: s-maj=241.1km s-min=62.3km az=163.0*

*DJA **24** 14:38:10.6±0.3, 1°N±3°×12°8E±°, h10^{km}, M4.0/10, mb4.6/2, MLv3.6/10*

*NEIC **24** 14:38:12.7±0.9, 0°.7N±0°.2×127°.4E±0°.1, h14^{km}±6^{km}, mb4.1/8, Error ellipse: s-maj=25.9km s-min=12.4km az=208.0*

ISC 24 14:38:11.3±1.9**, 0°.8N**±0°.1×**127°.53E**±0°.09**, h10^{km}**±10^{km}**, n25, σ0^{s}98**/28**, mb3.9**/7**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	0.17	252	P	Pg	14 38 14.4	-0.5
TNTI				S	Sg	14 38 18.2	+0.7
TNTI	**Ternate**	0.17	252		Pg	14 38 14.2	-0.8
TNTI				Sg	Sg	14 38 17.5	0.0
LBMI	**Labuha**	1.45	181	P	Pn	14 38 38.6	+1.0
SANI	**Sanana**	3.24	208	P	Pn	14 39 02.1	-0.1
KMSI	**Cibinong**	3.56	266	P	Pn	14 39 06.3	-0.2
SWI	**Sorong**	4.09	114	P	Pn	14 39 15.2	+1.3
SIJI	**Sorong**	4.10	114	Pn	Pn	14 39 14.5	+0.4
	1.4nm,0.3s,baz=210,slow=23,SNR=7.0						
SIJI				Sn	Sn	14 40 00.1	-2.1
	0.6nm,0.3s,baz=264,slow=22,SNR=1.2						
SIJI				LR	LR	14 41 08.3	
	comp=Z,462nm,18.8s,baz=34,slow=40						
GTOI	**Gorontalo**	4.52	268	P	Pn	14 39 21.2	+1.4
MRSI	**Marisa**	5.60	266	P	Pb	14 39 49.7	+0.6
FAKI	**Fak Fak**	6.01	128	Pn	Pn	14 39 41.8	+1.5
TOLI2	**Tolitoli**	6.75	272		Pn	14 39 49.3	-1.2
TTSI	**Tana Toraja**	8.61	243	P	Pn	14 40 15.5	-0.5
	14nm,0.6s						
SPSI	**Sidrap Palu**	9.10	238	P	Pn	14 40 24.1	+1.4
WB0	**Warramunga Arr**	21.54	162	P	P	14 43 00.7	-0.2
WB0				IAmb	IAmb	14 43 11.6	
	comp=Z,7.5nm,1.2s						
WRA	**Warramunga Arr**	21.69	162	P	P	14 43 02.5	0.0
	comp=Z,3.1nm,0.6s,baz=340,slow=11,SNR=29						
WRA	**Warramunga Arr**	21.69	162	P	P	14 43 01.8	-0.7
WB2	**Warramunga Arr**	21.70	162		P	14 43 02.2	-0.3
WB2				IAmb	IAmb	14 43 08.6	
	comp=Z,5.6nm,0.9s						
AS31	**Alice Springs**	25.12	166	P	P	14 43 36.0	-0.6
AS31				IAmb	IAmb	14 43 42.2	
	comp=Z,1.5nm,0.7s						
ASAR	**Alice Springs**	25.12	166	P	P	14 43 35.8	-0.8
	comp=Z,1.3nm,0.6s,baz=341,slow=7.7,SNR=37						
ASAR	**Alice Springs**	25.12	166	P	P	14 43 35.5	-1.1
BBOO	**Buckleboo**	34.41	167	P	P	14 44 58.1	-0.8
EIDS	**Eidsvold**	34.60	140	P	P	14 45 01.2	+0.6
EIDS				IAmb	IAmb	14 45 02.5	
	comp=Z,11nm,1.4s						
STKA	**Stephens Creek**	35.15	159	P	P	14 45 04.6	-0.7
	comp=Z,0.5nm,0.3s,baz=352,slow=8.3,SNR=5.1						
MK31	**Makanchi Array**	60.39	326	P	P	14 48 21.8	+1.0
MKAR	**Makanchi Array**	60.39	326	P	P	14 48 21.7	+0.9

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*IDC **24** 14:44:45.8±1.1, 40°.28N×73°.27E, h0^{km}, mb3.7/6, mb1 3.7/13, mb1mx3.5/58, mbtmp3.6/13, ML3.1/5, MS3.3/4, Ms1 3.3/4, ms1mx2.9/46, Error ellipse: s-maj=18.8km s-min=13.7km az=121.0*

*KRNET **24** 14:44:49.5±0.1, 40°.40N×73°.23E, h19^{km}, mb4.1*

*KNET **24** 14:44:50.4±1.0, 40°.47N×73°.40E, h19^{km}±10^{km}, ml3.8, Error ellipse: s-maj=13.7km s-min=7.6km az=73.0*

ISC 24 14:44:46.6±1.2**, 40°.38N**±0°.03×**73°.31E**±0°.03**, h5^{km}**±9^{km}**, n44, σ1^{s}32**/65**, mb3.6**/6**, MS3.3**/4**, 40C-11D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	0.40	158	⇑*e*P	Pn	14 44 58.0	-1.2
	baz=52						
SFK				⇑*e*S	Sb	14 45 04.2	+1.4
	baz=52						
OHH	**Osh**	0.42	290	⇓*i*P	Pb	14 44 56.9	+0.3
	baz=90						
OHH				⇓*i*S	Sb	14 45 02.2	-1.1
	baz=90						
SALK	**Salom-Alik**	0.63	38	⇓*e*P	Pn	14 45 02.2	-0.2
	baz=43						
SALK				⇓*e*S	Sn	14 45 11.2	-1.7
	baz=43						
DRK	**Karamyk**	1.47	233	⇓*i*P	Pg	14 45 15.7	+1.0
	baz=31						
DRK				⇓*i*S	Sg	14 45 34.9	+1.1
	baz=31						
AML	**Almayashu**	1.77	9	⇑P	Pg	14 45 21.5	+1.0
	108nm,0.2s,SNR=338						
AML				⇑S	Sg	14 45 45.0	+1.5
	1µm,0.5s						
AML	**Almayashu**	1.77	9	⇑*i*P	Pg	14 45 21.7	+1.2
	baz=11						
AML				⇑*i*S	Sg	14 45 45.2	+1.7
	baz=11						
BTK	**Batken**	1.93	261	⇑*i*P	Pg	14 45 23.2	-0.4
	baz=60						
BTK				⇑*i*S	Sg	14 45 48.0	-0.7
	baz=60						
TRKS	**Terek-Say**	2.00	306	⇑*i*P	Pb	14 45 23.3	-0.3
	baz=5.0						
TRKS				⇑*i*S	Sb	14 45 48.5	-0.4
	baz=5.0						
UCH	**Uchtor**	2.05	26	⇑P	Pg	14 45 26.0	+0.1
	24nm,0.2s,SNR=53						
UCH				⇓S	Sg	14 45 53.4	+0.8
	291nm,0.5s						
UCH	**Uchtor**	2.05	26	⇑*i*P	Pg	14 45 26.1	+0.1
	baz=27						
UCH				⇑*i*S	Sg	14 45 52.7	+0.1
	baz=27						
MNAS	**Manas**	2.19	344	⇑*i*P	Pb	14 45 27.2	+0.5
	baz=46						
MNAS				⇑*i*S	Sb	14 45 54.5	+0.3
	baz=46						
EKS2	**Erkin-Say**	2.30	9	⇓P	Pg	14 45 29.8	-0.9
	54nm,0.5s,SNR=21						
EKS2				⇑S	Sg	14 45 60.0	-0.6
	167nm,0.6s						
EKS2	**Erkin-Say**	2.30	9	⇑*e*P	Pb	14 45 29.0	+0.3
	baz=10.0						
EKS2				⇑*i*S	Sb	14 45 57.7	+0.2
	baz=10.0						
AAK	**Ala-Archa**	2.42	21	Pn	Pb	14 45 31.6	+0.8
	7.1nm,0.3s,baz=185,slow=6.9,SNR=64						
AAK				Sn	Sg	14 46 04.7	+0.3
	32nm,0.3s,baz=57,slow=12,SNR=42						
AAK	**Ala-Archa**	2.42	21	⇑P	Pb	14 45 31.5	+0.8
	43nm,0.3s,SNR=43						
AAK				⇑S	Sb	14 46 01.5	+0.6
	360nm,0.6s						
AAK	**Ala-Archa**	2.42	21	⇑*i*P	Pb	14 45 30.9	+0.2
	baz=23						
AAK				⇑*i*S	Sb	14 46 01.1	+0.1
	baz=23						
KBK	**Karagaybulak**	2.58	28	⇑P	Pb	14 45 34.0	+0.5
	24nm,0.3s,SNR=29						
KBK	**Karagaybulak**	2.58	28	⇑*e*P	Pb	14 45 33.1	-0.4
	baz=29						
KBK				⇑*i*S	Sb	14 46 05.1	-0.5
	baz=29						
FRU1	**Bishkek**	2.62	22	⇑*e*P	Pb	14 45 33.9	-0.1
	baz=23						
FRU1				⇑*e*S	Sb	14 46 06.1	-0.5
	baz=23						
GAR	**Garm**	2.69	240	⇑*e*P	Pb	14 45 34.0	-1.3
	baz=39						
GAR				⇑*i*S	Sb	14 46 06.4	-2.2
	baz=39						
CHMS	**Chumysh**	2.83	22	⇑P	Pb	14 45 35.6	-1.9
	6.6nm,0.3s,SNR=10						
CHMS	**Chumysh**	2.83	22	⇑*e*P	Pb	14 45 36.4	-1.2
	baz=23						
CHMS				⇑*i*S	Sb	14 46 10.5	-2.0
	baz=23						
BOOM	**Boomskoye usch**	2.89	42	⇑*e*P	Pb	14 45 38.0	-0.7
	baz=43						
BOOM				⇑*i*S	Sb	14 46 13.4	-1.0
	baz=43						
ULHL	**Ulahol**	2.89	49	⇓P	Pb	14 45 37.2	-1.5
	7.8nm,0.5s,SNR=11						
USP	**Ospenovka**	3.02	17	⇑*e*P	Pb	14 45 38.9	-1.9
	baz=18						
USP				⇑*i*S	Sb	14 46 15.0	-2.9
	baz=18						
TKM2	**Tokmak 2**	3.06	33	⇑*i*P	Pb	14 45 39.8	-1.8
	baz=34						
TKM2				⇑*i*S	Sb	14 46 16.8	-2.6
	baz=34						
TAS	**Tashkent**	3.19	288	⇑*e*P	Pb	14 45 40.5	-3.1
	baz=89						
TAS				⇑*i*S	Sn	14 46 17.6	+1.9
	baz=89						
CHGR	**Chuyangaron**	3.64	243	⇓*i*P	Pn	14 45 46.9	+3.2
	baz=42						
CHGR				⇓*i*S	Sn	14 46 29.2	+2.1
	baz=42						
MKAR	**Makanchi Array**	9.14	43	Pn	Pn	14 47 00.6	+1.6
	0.0nm,0.3s,baz=226,slow=14,SNR=2.4						
KURBB	**Kurchatov Arra**	10.87	18	Pn	Pn	14 47 23.3	+0.5
	0.0nm,0.3s,baz=210,slow=13,SNR=2.0						
GEYT	**Alibeck**	12.05	263	Pn	Pn	14 47 37.6	-1.3
	0.3nm,0.3s,baz=246,slow=26,SNR=1.7						
BVAR	**Borovoye Array**	12.80	352	Pn	Pn	14 47 48.6	-0.5
	baz=262,slow=40,SNR=2.1						
AKTO	**Aktyubinsk**	14.68	318	Pn	Pn	14 48 12.8	-1.9
	0.1nm,0.3s,baz=136,slow=17,SNR=3.0						
ZALV	**Zalesovo Beam**	15.63	26	Pn	Pn	14 48 28.7	+1.3
	0.2nm,0.3s,baz=221,slow=9.9,SNR=3.4						
BELG	**Belogornoye**	21.27	313	P	P	14 49 33.7	+0.1
	12nm,0.9s,baz=108,slow=6.4,SNR=5.4						
KVAR	**Kislovodsk Arr**	22.90	289	LR	LR	15 01 51.5	
	comp=Z,33nm,19.6s,baz=256,slow=45						
SONM	**Songino Array**	24.76	61	P	P	14 50 10.5	+1.4
	1.0nm,1.0s,baz=273,slow=8.9,SNR=4.2						
BRTR	**Keskin Array B**	30.20	282	LR	LR	15 05 30.1	
	comp=Z,49nm,18.2s,baz=347,slow=41						
ARCES	**ARCESS Array B**	38.32	335	P	P	14 52 08.4	+0.6
	0.7nm,0.5s,baz=102,slow=8.4,SNR=5.1						
NOA	**NORSAR Array B**	42.46	320	LR	LR	15 09 40.6	
	comp=Z,44nm,18.8s,baz=245,slow=35						
USRK	**Ussuriysk Ar.**	42.78	65	LR	LR	15 11 39.7	
	comp=Z,77nm,19.6s,baz=297,slow=38						
TORD	**Torodi Ar. Bea**	67.63	268	P	P	14 55 45.2	+0.5
	0.2nm,0.4s,baz=49,slow=6.5,SNR=1.1						
WRA	**Warramunga Arr**	82.58	124	P	P	14 57 10.3	-0.5
	0.4nm,0.8s,baz=318,slow=4.8,SNR=2.8						
ASAR	**Alice Springs**	85.05	127	P	P	14 57 22.9	-0.4
	0.2nm,0.7s,baz=327,slow=6.9,SNR=4.9						

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*IDC **24** 14:45:51.8±0.7, 40°.26N×73°.29E, h0^{km}, mb4.0/16, mb1 4.1/24, mb1mx3.9/64, mbtmp4.0/24, ML3.3/8, MS3.2/1, Ms1 3.2/1, ms1mx2.5/50, Error ellipse: s-maj=12.6km s-min=9.9km az=111.0*

*MOS **24** 14:45:53.3±1.8, 40°.38N×73°.19E, h13^{km}, mb4.4/10, Error ellipse: s-maj=7.1km s-min=4.5km az=69.8*

MOS Felt (IV-V) at Chaychi, Alga-Bas; (IV) at Kara-Shoro, Gul'cha, Toguz-Bulak, Kurack; (III-IV) at Osh.

*NEIC **24** 14:45:54.4±1.2, 40°.41N±0°.04×73°.18E±0°.06, h10^{km}±1^{km}, mb4.6/43, Error ellipse: s-maj=8.2km s-min=6.7km az=62.0*

*KRNET **24** 14:45:55.8±0.1, 40°.41N×73°.25E, h19^{km}, mb4.6*

*NNC **24** 14:45:57.0±1.4, 40°.54N×73°.28E, h6^{km}±8^{km}, mb4.9, mpv4.6, Error ellipse: s-maj=11.2km s-min=5.2km az=176.0*

*BJI **24** 14:45:57.3±0.0, 40°.74N×73°.65E, h15^{km}, mB4.5/3, mb4.0/7, ML4.6/3, Ms4.1/1, Ms7 3.7/1*

*SOME **24** 14:45:57.0, 40°.53N×73°.37E, h5^{km}, MS3.6*

ISC 24 14:45:53.3±1.1**, 40°.42N**±0°.02×**73°.30E**±0°.02**, h4^{km}**±7^{km}**, n238, σ1^{s}90**/300**, mb4.4**/45**, 44C-26D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	0.40	286	⇓*i*P	Pb	14 46 03.2	+0.1
	baz=88						
OHH				⇓*i*S	Sb	14 46 08.5	-1.2
	baz=88						
SFK	**Sufi-Kurgan**	0.43	158	*i* PG	Pb	14 46 04.7	+1.1
SFK				*i* S	Sb	14 46 10.8	+0.2
SFK	**Sufi-Kurgan**	0.43	158	⇑*e*P	Pb	14 46 04.1	+0.5
	baz=54						
SFK				⇑*e*S	Sb	14 46 10.4	-0.2
	baz=54						
SALK	**Salom-Alik**	0.61	41	⇓*e*P	Pb	14 46 08.1	+1.4
	baz=42						
SALK				⇓*e*S	Sb	14 46 17.0	+1.2
	baz=42						
DRK	**Karamyk**	1.48	231	Pn	Pn	14 46 19.9	-1.1

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DRK   Karamyk          1.48 231⇑iP    Pg     14 46 22.6 +0.9
      baz=31
DRK                         ⇑iS    Sn     14 46 42.0 +1.0
      baz=31
AML   Almayashu        1.74  10 iPN   Pg     14 46 27.8 +1.1
AML                          iS    Sg     14 46 50.9 +1.7
AML   Almayashu        1.74  10⇓iP    Pg     14 46 27.8 +1.1
      baz=11
AML                         ⇓iS    Sg     14 46 50.9 +1.7
      baz=11
BTK   Batken           1.93 260  PN   Pn     14 46 26.2 -0.8
BTK   Batken           1.93 260       Pn     14 46 26.2 -0.8
BTK   Batken           1.93 260⇑iP    Pb     14 46 29.7 +0.6
      baz=60
BTK                         ⇑iS    Sg     14 46 54.6 -0.7
      baz=60
TRKS  Terek-Say        1.98 305⇑iP    Pb     14 46 29.7 -0.2
      baz=4.0
TRKS                        ⇑iS    Sb     14 46 54.5 -0.5
      baz=4.0
UCH   Uchtor           2.03  26⇓eP    Pg     14 46 32.2  0.0
      baz=27
UCH                         ⇓iS    Sg     14 46 58.4 -0.1
      baz=27
MNAS  Manas            2.15 344⇑eP    Pb     14 46 33.3 +0.3
      baz=45
MNAS                        ⇑eS    Sb     14 47 01.1 +1.0
      baz=45
KSH   Kashi            2.25 113  Pg   Pb     14 46 34.8 +0.3
KSH                              Sg   Sn     14 47 00.4 +0.8
KSH                              smax smax
      comp=N,5μm,0.6s
KSH                              smax smax
      comp=E,4μm,0.6s
EKS2  Erkin-Say        2.27   9⇑iP    Pb     14 46 35.1 +0.1
      baz=10.0
EKS2                        ⇑iS    Sb     14 47 03.7 +0.2
      baz=10.0
MRKS  Merke            2.33 359 eP    Pg     14 46 37.6 -0.3
      273nm,0.1s
MRKS                            eS    Sg     14 47 07.4 -0.7
      2μm,0.4s
MRKS  Merke            2.33 359  Pg   Pg     14 46 37.6 -0.3
      271nm,0.5s
MRKS                             Lg   Lg     14 47 07.4
      2μm,0.4s
AAK   Ala-Archa        2.40  22  Pn   Pb     14 46 37.7 +0.6
      58nm,0.3s,baz=134,slow=3.2,SNR=9.4
AAK                              Sn   Sg     14 47 10.4 +0.2
      140nm,0.3s,baz=68,slow=13,SNR=28
AAK   Ala-Archa        2.40  22  Pn   Pb     14 46 37.9 +0.8
      289nm,0.6s
AAK                              Lg   Lg     14 47 10.3
      2μm,0.7s
AAK   Ala-Archa        2.40  22       Pn     14 46 34.3 +0.8
AAK   Ala-Archa        2.40  22⇑eP    Pb     14 46 37.0 -0.1
      baz=22
AAK                         ⇑iS    Sb     14 47 07.0 -0.1
      baz=22
KBK   Karagaybulak     2.56  28⇓eP    Pb     14 46 39.4 -0.5
      baz=29
KBK                         ⇓iS    Sb     14 47 11.0 -0.8
      baz=29
FRU1  Bishkek          2.59  22⇓iP    Pb     14 46 39.9 -0.5
      baz=22
FRU1                        ⇓iS    Sb     14 47 11.9 -0.8
      baz=22
GAR   Garm             2.70 239  Pn   Pn     14 46 37.2 -0.4
GAR   Garm             2.70 239⇑eP    Pb     14 46 40.6 -1.6
      baz=39
GAR                         ⇑iS    Sn     14 47 13.0 +2.2
      baz=39
CHMS  Chumysh          2.80  22 ePN   Pb     14 46 42.6 -1.3
CHMS                             iS   Sb     14 47 16.5 -2.1
CHMS  Chumysh          2.80  22⇑eP    Pb     14 46 42.6 -1.3
      baz=23
CHMS                        ⇑iS    Sb     14 47 16.5 -2.1
      baz=23
BOOM  Boomskoye usch   2.87  43 iPN   Pb     14 46 44.0 -1.2
BOOM                             iS   Sb     14 47 18.7 -2.1
BOOM  Boomskoye usch   2.87  43⇓iP    Pb     14 46 44.0 -1.2
      baz=43
BOOM                        ⇓iS    Sb     14 47 18.7 -2.1
      baz=43
ULHL  Ulahol           2.88  50⇑iP    Pb     14 46 44.0 -1.3
      baz=50
ULHL                        ⇑iS    Sb     14 47 18.7 -2.2
      baz=50
DZA   Taraz            2.88 330 eP    Pg     14 46 48.4 -0.1
      196nm,0.1s
DZA                             eS    Sg     14 47 25.5 -0.2
      1μm,0.2s
DZA   Taraz            2.88 330 ePg   Pg     14 46 47.9 -0.5
      baz=329
DZA                             eLg   Lg     14 47 25.4
      baz=329
DZA   Taraz            2.88 330 ePN   Pg     14 46 47.9 -0.5
DZA   Taraz            2.88 330  Pg   Pg     14 46 48.3 -0.2
      414nm,0.3s
DZA                              Lg   Lg     14 47 25.5
      2μm,0.5s
USP   Ospenovka        2.99  17 ePN   Pb     14 46 45.1 -2.0
USP                             eS    Sn     14 47 20.9 +3.1
USP   Ospenovka        2.99  17⇑eP    Pb     14 46 45.1 -2.0
      baz=18
USP                         ⇑eS    Sn     14 47 20.9 +3.1
      baz=18
IUG   Iuzhnay          3.01 306 eP    Pg     14 46 50.9  0.0
      17μm,0.1s
IUG                             eS    Sg     14 47 29.3 -0.6
      2μm,0.5s
IUG   Iuzhnay          3.01 306 ePn   Pn     14 46 44.1 +2.3
      baz=306
IUG                             ePg   Pg     14 46 51.0 +0.1
      baz=306
IUG                             eLg   Lg     14 47 31.3
      baz=306
IUG   Iuzhnay          3.01 306 ePN   Pn     14 46 44.1 +2.3
IUG                             e            14 46 51.0
IUG   Iuzhnay          3.01 306  Pg   Pg     14 46 50.4 -0.5
      19μm,0.4s
IUG                              Lg   Lg     14 47 29.3
      2μm,0.5s
TKM2  Tokmak 2         3.04  34 ⇓Pg   Pg     14 46 50.3 -1.3
      90nm,0.6s
TKM2                            ⇑Lg   Lg     14 47 31.6
      451nm,0.6s
TKM2  Tokmak 2         3.04  34⇑eP    Pb     14 46 46.1 -2.0
      baz=34
TKM2                        ⇑iS    Sn     14 47 22.8 +3.5
      baz=34
TAS   Tashkent         3.17 288  PN   Pn     14 46 41.8 -2.1
TAS   Tashkent         3.17 288  Pn   Pn     14 46 41.8 -2.1
TAS   Tashkent         3.17 288⇑eP    Pn     14 46 47.0 +3.1
      baz=88
TAS                         ⇑iS    Sn     14 47 24.2 +2.0
      baz=88
KST   Kastek           3.30  36 eP    Pg     14 46 56.1 -0.4
      94nm,0.2s
KST                             eS    Sg     14 47 38.4 -0.8
      227nm,1.2s
KST   Kastek           3.30  36  Pg   Pg     14 46 55.9 -0.5
      98nm,0.3s
KST                              Lg   Lg     14 47 39.1
      227nm,1.2s
CHM   Chimkent         3.37 306 eP    Pg     14 46 58.6 +0.8
      2.9nm,0.1s
CHM                             eS    Sg     14 47 42.6 +1.1
      2μm,0.1s
DGS   Degeres          3.38  32 eP    Pg     14 46 57.5 -0.4
      61nm,0.2s
DGS                             eS    Sg     14 47 41.3 -0.5
      367nm,0.2s
DGS   Degeres          3.38  32  Pg   Pg     14 46 57.6 -0.4
      112nm,0.4s
DGS                              Lg   Lg     14 47 41.3
      303nm,0.7s
KDJ   Kajisay          3.39  58 ePN   Pb     14 46 51.3 -2.8
KDJ                             eS    Sn     14 47 31.5 +3.5
KDJ   Kajisay          3.39  58⇓eP    Pb     14 46 51.3 -2.8
      baz=59
KDJ                         ⇓eS    Sn     14 47 31.5 +3.5
      baz=59
MTBS  Maitube          3.58  40 eP    Pg     14 47 01.4 -0.6
      56nm,0.2s
MTBS                            eS    Sg     14 47 47.6 -0.8
      153nm,0.5s
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MTBS  Maitube          3.58  40  Pg   Pg     14 47 01.4 -0.6
      58nm,0.4s
MTBS                             Lg   Lg     14 47 47.6
      153nm,0.5s
CHGR  Chuyangaron      3.65 243⇑eP    Pn     14 46 53.7 +3.1
      baz=42
CHGR                        ⇑iS    Sn     14 47 36.0 +1.8
      baz=42
TARG  Taragay, Kyrgy   3.65  67  Pn   Pn     14 46 46.6 -4.3
BRLS  Borolday         3.68 316 eP    Pg     14 47 02.9 -0.9
      355nm,0.1s
BRLS                            eS    Sg     14 47 49.6 -1.8
      525nm,0.2s
BRLS  Borolday         3.68 316 ePg   Pb     14 47 01.4 +2.5
      baz=312
BRLS                            eLg   Lg     14 47 50.1
      baz=312
BRLS  Borolday         3.68 316 ePN   Pb     14 47 01.3 +2.5
TNSS  Tian-Shan        3.79  45 eP    Pg     14 47 05.7 -0.1
      58nm,0.5s
TNSS                            eS    Sg     14 47 54.9  0.0
      182nm,0.7s
TNSS  Tian-Shan        3.79  45 ePg   Pb     14 47 03.3 +2.4
      baz=44
TNSS                            eLg   Lg     14 47 54.2
      baz=44
TNSS  Tian-Shan        3.79  45  Pg   Pg     14 47 05.7 -0.1
      58nm,0.5s
TNSS                             Lg   Lg     14 47 54.9
      182nm,0.7s
AAA   Alma-Ata         3.89  43 eP    Pg     14 47 08.5 +0.7
      63nm,0.1s
AAA                             eS    Sg     14 47 59.4 +1.3
      3μm,9.1s
AAA   Alma-Ata         3.89  43 ePg   Pb     14 47 05.2 +2.7
      baz=42
AAA                             eLg   Lg     14 47 57.2
      baz=42
AAA   Alma-Ata         3.89  43 ePN   Pb     14 47 05.1 +2.7
KNDC  Almaty           3.92  43  PN   Pn     14 46 54.8 +0.5
KNDC  Almaty           3.92  43 ⇑Pn   Pn     14 46 54.8 +0.5
      315nm,0.8s
KNDC                            ⇓Lg   Lg     14 48 01.1
      1μm,0.8s
MDOK  Medeo            3.92  44 eP    Pg     14 47 07.7 -0.8
      71nm,0.6s
MDOK                            eS    Sg     14 47 58.6 -0.8
      503nm,3.4s
MDOK  Medeo            3.92  44 ePg   Pg     14 47 06.5 -2.1
      baz=43
MDOK                            eLg   Lg     14 47 58.5
      baz=43
MDOK  Medeo            3.92  44  PN   Pn     14 46 54.5  0.0
MDOK                                         14 47 59.5
MDOK  Medeo            3.92  44 ⇓Pn   Pn     14 46 54.5  0.0
      109nm,0.7s
MDOK                            ⇓Lg   Lg     14 47 59.5
      296nm,0.8s
MDOK  Medeo            3.92  44  Pg   Pg     14 47 07.7 -0.8
      71nm,0.6s
MDOK                             Lg   Lg     14 47 58.6
      252nm,0.6s
KOTS  Kotyrbulak       4.01  44 eP    Pg     14 47 09.7 -0.4
      73nm,0.2s
KOTS                            eS    Sg     14 48 01.6 -0.4
      405nm,0.3s
KOTS  Kotyrbulak       4.01  44  Pg   Pg     14 47 09.7 -0.4
      93nm,0.6s
KOTS                             Lg   Lg     14 48 02.6
      534nm,0.7s
ANVS  Anan'yevo        4.04  53 ePN   Pn     14 47 00.3 +4.2
ANVS                             iS   Sn     14 47 47.1 +3.1
ANVS  Anan'yevo        4.04  53⇑eP    Pn     14 47 00.3 +4.2
      baz=53
ANVS                        ⇑iS    Sn     14 47 47.1 +3.1
      baz=53
KUU   Kurty            4.15  32 eP    Pg     14 47 11.5 -1.2
      79nm,0.6s
KUU                             eS    Sg     14 48 05.1 -1.3
      311nm,0.3s
KUU   Kurty            4.15  32 ePg   Pb     14 47 10.1 +3.2
      baz=31
KUU                             eLg   Lg     14 48 05.2
      baz=31
KUU   Kurty            4.15  32 ePN   Pb     14 47 10.0 +3.2
KUU   Kurty            4.15  32  Pg   Pg     14 47 11.5 -1.2
      79nm,0.6s
KUU                              Lg   Lg     14 48 05.1
      311nm,0.7s
KTBS  Karatobe         4.15  36 eP    Pg     14 47 12.0 -0.8
      50nm,0.2s
KTBS                            eS    Sg     14 48 06.0 -0.5
      447nm,0.2s
KTBS  Karatobe         4.15  36  Pg   Pg     14 47 12.0 -0.8
      50nm,0.5s
KTBS                             Lg   Lg     14 48 06.0
      448nm,0.5s
PRZ   Przheval'sk      4.36  60 ePN   Pn     14 47 04.6 +4.1
PRZ                             eS    Sn     14 47 54.6 +2.8
PRZ   Przheval'sk      4.36  60⇓eP    Pn     14 47 04.6 +4.1
      baz=60
PRZ                         ⇓eS    Sn     14 47 54.6 +2.8
      baz=60
CHKK  Chushkaly        4.40  37 eP    Pb     14 47 14.4 +3.3
      41nm,0.3s
CHKK                            eS    Sb     14 48 09.7 +5.2
      260nm,0.2s
CHKK  Chushkaly        4.40  37 ePg   Pb     14 47 14.4 +3.3
      baz=36
CHKK                            eLg   Lg     14 48 13.4
      baz=36
CHKK  Chushkaly        4.40  37  Pg   Pb     14 47 14.4 +3.3
      38nm,0.6s
CHKK                             Lg   Lg     14 48 09.7
      251nm,0.5s
SATY  Saty             4.65  54 eP    Pg     14 47 20.6 -1.7
      92nm,0.3s
SATY                            eS    Sg     14 48 20.5 -2.0
      338nm,0.4s
SATY  Saty             4.65  54 ePg   Pb     14 47 17.5 +2.0
      baz=53
SATY                            eLg   Lg     14 48 21.3
      baz=53
SATY  Saty             4.65  54 ePN   Pb     14 47 17.4 +2.0
SATY  Saty             4.65  54  Pg   Pg     14 47 20.6 -1.7
      92nm,0.2s
SATY                             Lg   Lg     14 48 20.5
      338nm,0.9s
BTLS  Baital           4.66   7 eP    Pb     14 47 19.2 +3.7
      51nm,0.6s
BTLS                            eS    Sg     14 48 17.9 -4.8
      143nm,0.2s
BTLS  Baital           4.66   7  Pg   Pb     14 47 19.2 +3.7
      51nm,0.6s
BTLS                             Lg   Lg     14 48 17.9
      176nm,0.5s
KURS  Kuram            4.76  48 eP    Pg     14 47 22.9 -1.6
      66nm,0.3s
KURS                            eS    Sg     14 48 24.6 -1.5
      102nm,0.7s
KURS  Kuram            4.76  48  Pg   Pg     14 47 22.9 -1.6
      66nm,0.7s
KURS                             Lg   Lg     14 48 24.6
      102nm,0.7s
KPKS  Kokpek           5.04  51 eP    Pg     14 47 28.4 -1.5
      60nm,0.2s
KPKS                            eS    Sg     14 48 33.9 -1.3
      262nm,0.2s
KPKS  Kokpek           5.04  51 ePn   Pn     14 47 13.5 +3.7
      baz=50
KPKS                            ePg   Pb     14 47 26.3 +4.1
      baz=50
KPKS  Kokpek           5.04  51 ePN   Pn     14 47 13.5 +3.7
KPKS                            e            14 47 26.2
ARXS  Arharly          5.07  40 eP    Pg     14 47 28.0 -2.4
      64nm,0.1s
ARXS                            eS    Sg     14 48 33.0 -3.0
      259nm,0.1s
UZB   Uzynbulak        5.08  56 eP    Pg     14 47 28.1 -2.5
      46nm,0.4s
UZB                             eS    Sg     14 48 33.2 -3.1
      188nm,0.6s
UZB   Uzynbulak        5.08  56 ePn   Pn     14 47 09.5 -0.9
      baz=55
UZB                             ePg   Pb     14 47 25.9 +3.2
      baz=55
UZB                             eLg   Lg     14 48 34.4
      baz=55
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UZB   Uzynbulak        5.08  56 ePN   Pn     14 47 09.4 -0.9
UZB                             e            14 47 25.9
UZB   Uzynbulak        5.08  56  Pg   Pg     14 47 28.1 -2.5
      47nm,0.9s
UZB                              Lg   Lg     14 48 33.2
      188nm,0.6s
SHLS  Shalkode         5.36  57 eP    Pg     14 47 39.0 +3.0
      50nm,0.2s
SHLS                            eS    Sg     14 48 52.1 +6.6
      161nm,0.3s
SHLS  Shalkode         5.36  57 ePn   Pn     14 47 17.6 +3.4
      baz=58
SHLS                            ePg   Pg     14 47 34.7 -1.3
      baz=58
SHLS                            eLg   Lg     14 48 53.2
      baz=58
SHLS  Shalkode         5.36  57 ePN   Pn     14 47 17.6 +3.4
SHLS                            e            14 47 34.7
SHLS  Shalkode         5.36  57  Pg   Pg     14 47 39.0 +3.0
      50nm,0.9s
SHLS                             Lg   Lg     14 48 52.1
      222nm,0.5s
PDGK  Podgornoye       5.46  56  Pg   Pg     14 47 34.5 -3.4
      16nm,0.6s
PDGK                             Lg   Lg     14 48 44.4
      85nm,1.0s
PDGK  Podgornoye       5.46  56 ⇑Pg   Pg     14 47 36.7 -1.2
      49nm,0.9s
PDGK                            ⇑Lg   Lg     14 48 47.0
      249nm,0.9s
TDK   Taldyqorghan     5.93  38 ePn   Pn     14 47 21.5 -0.5
      baz=37
TDK                             ePg   Pb     14 47 38.3 +1.1
      baz=37
TDK                             eLg   Lg     14 49 01.9
      baz=37
TDK   Taldyqorghan     5.93  38 ePN   Pn     14 47 21.4 -0.5
CEP   Cherat           6.67 190  P    Pn     14 47 37.9 +5.7
CEP                              S    Sn     14 48 53.0 +4.2
CHCP  Chirah Chowk     6.75 180  P    Pn     14 47 38.9 +5.8
KBL   Kabul            6.77 211  PN   Pn     14 47 32.9 -0.7
KBL   Kabul            6.77 211       Pn     14 47 32.9 -0.7
THW   Thamme Wali      7.71 190  P    Pn     14 47 50.9 +4.5
MAKZ  Makanchi         8.97  42 ⇑Pn   Pn     14 48 04.2 +0.7
      2.9nm,0.5s
MAKZ                            ⇓Lg   Lg     14 50 37.4
      37nm,1.3s
MK31  Makanchi Array   9.12  43  P    Pn     14 48 06.9 +1.3
MK31  Makanchi Array   9.12  43 ⇑Pn   Pn     14 48 09.9 +4.3
      6.3nm,0.8s,baz=223,slow=12,SNR=5.6
MK31                            ⇑Lg   Lg     14 50 43.3
      13nm,0.9s,baz=226,slow=26,SNR=3.7
MK31  Makanchi Array   9.12  43  Pn   Pn     14 48 06.9 +1.3
MKAR  Makanchi Array   9.12  43  Pn   Pn     14 48 07.4 +1.8
      0.1nm,0.3s,baz=226,slow=13,SNR=1.5
MKAR                             Lg   Lg     14 50 34.9
      0.5nm,0.3s,baz=234,slow=24,SNR=2.5
HRA   Herat           10.65 239  Pn   Pn     14 48 26.6 -0.2
KURBB Kurchatov Arra  10.84  18  Pn   Pn     14 48 29.7 +0.5
      0.1nm,0.3s,baz=208,slow=13,SNR=4.8
KURBB                            Sn   Sn     14 50 28.2 -2.8
      0.1nm,0.3s,baz=203,slow=29,SNR=4.1
KURBB                            Lg   Lg     14 51 30.8
      0.2nm,0.3s,baz=202,slow=29,SNR=11
KURBB Kurchatov Arra  10.84  18 ⇑Lg   Lg     14 51 39.0
      66nm,0.7s
KURK  Kurchatov       10.95  18 iP    Pn     14 48 31.1 +0.4
KURK  Kurchatov       10.95  18 ⇑Lg   Lg     14 51 42.8
      72nm,0.9s
KURK  Kurchatov       10.95  18       Pn     14 48 29.7 -1.0
GEYT  Alibeck         12.04 263  Pn   Pn     14 48 42.5 -3.1
      0.1nm,0.3s,baz=87,slow=11,SNR=1.4
GEYT                             Sn   Sn     14 50 49.2  -11
      0.4nm,0.3s,baz=86,slow=27,SNR=1.3
GEYT                             Lg   Lg     14 52 23.0
      0.1nm,0.3s,baz=86,slow=39,SNR=1.2
GEYT  Alibeck         12.04 263  Pn   Pn     14 48 44.8 -0.9
GYA0B ALIBECK ARRAY   12.04 263  Pn   Pn     14 48 44.8 -0.9
BVAR  Borovoye Array  12.77 352  Pn   Pn     14 48 55.9 +0.4
      0.3nm,0.3s,baz=186,slow=22,SNR=6.6
BVAR                             Sn   Sn     14 51 13.5 -4.5
      0.4nm,0.3s,baz=182,slow=30,SNR=1.6
BRVK  Borovoye        12.81 352ceP    Pn     14 48 56.0 -0.1
BRVK                             pmax pmax
      comp=Z,11nm,2.5s
BRVK  Borovoye        12.81 352 ⇑P    Pn     14 48 55.8 -0.3
      comp=Z,2.8nm,0.9s
AB31  Akbulak array   12.94 317 eP    Pn     14 48 57.1 -0.8
AB31  Akbulak array   12.94 317 ⇓P    Pn     14 48 56.9 -1.0
      comp=Z,6.8nm,0.5s,baz=130,slow=13,SNR=41
ABKAR Akbulak array   12.94 317  Pn   Pn     14 48 56.7 -1.2
DGZ   Jazzator, Alta  13.62  42 iP    Pn     14 49 08.5 +1.2
AKTO  Aktyubinsk      14.65 318  Pn   Pn     14 49 20.7 -0.5
      comp=Z,1.2nm,0.3s,baz=116,slow=12,SNR=13
AKTO                             Sn   Sn     14 51 54.2  -10
      comp=Z,0.4nm,0.3s,baz=154,slow=17,SNR=1.5
AKTO                             Lg   Lg     14 53 41.8
      comp=Z,0.1nm,0.3s,baz=49,slow=14,SNR=1.3
AKTO                             LR   LR     14 54 37.3
      comp=Z,95nm,19.0s,baz=109,slow=36
AKTO  Aktyubinsk      14.65 318 ⇓P    Pn     14 49 19.9 -1.4
      comp=Z,5.1nm,0.7s
PYUN  Piuthan         14.65 144 eP    Pn     14 49 19.0 -2.6
      comp=Z,46nm,0.4s
DANN  Dangsing        14.80 141 eP    Pn     14 49 20.4 -3.3
      comp=Z,19nm,0.3s
KOLN  Koldanda        15.21 143 eP    Pn     14 49 26.2 -2.9
      comp=Z,17nm,0.3s
GKN   Gorkha          15.52 139 eP    Pn     14 49 30.4 -2.7
      comp=Z,21nm,0.3s
ZAA0  Zalesovo Array  15.61  26       Pn     14 49 34.6 +0.6
ZALV  Zalesovo Beam   15.61  26  Pn   Pn     14 49 36.5 +2.5
      comp=Z,1.0nm,0.3s,baz=219,slow=12,SNR=13
ZALV                             Sn   S      14 52 38.6 -4.3
      comp=Z,0.1nm,0.3s,baz=228,slow=21,SNR=1.5
ZALV                             Lg   Lg     14 54 04.2
      comp=Z,0.0nm,0.3s,baz=225,slow=24,SNR=2.0
ZALV  Zalesovo Beam   15.61  26 iP    Pn     14 49 36.5 +2.5
ZALV                             pmax pmax
      comp=Z,3.0nm,0.3s
ZALV  Zalesovo Beam   15.61  26       Pn     14 49 34.7 +0.7
KKN   Kakani          16.01 138 eP    Pn     14 49 36.7 -2.9
      comp=Z,13nm,0.5s
GUN   Gumba           16.23 136 eP    Pn     14 49 39.5 -3.0
      comp=Z,14nm,0.4s
PKIN  Phulchoki       16.25 138 eP    Pn     14 49 39.8 -2.9
      comp=Z,11nm,0.4s
PKI   Pulchoki        16.26 138 eP    Pn     14 49 39.9 -3.0
      comp=Z,13nm,0.5s
JIRN  Jiri            16.59 136 eP    Pn     14 49 44.5 -2.7
      comp=Z,14nm,0.3s
RAMN  Ramite          17.38 137 eP    Pn     14 49 54.5 -2.4
      comp=Z,14nm,0.3s
TAPN  Taplejung       17.66 133 eP    Pn     14 49 58.8 -1.7
ODAN  Odare           17.87 135 eP    Pn     14 50 00.8 -2.2
      comp=Z,26nm,0.6s
LSA   Lhasa           18.08 121  P    P      14 50 07.9 +1.6
LSA                              pmax pmax
      comp=Z,4.0nm,0.5s
LSA   Lhasa           18.08 121  P    P      14 50 07.9 +1.6
ARU   Arti            18.70 334  P    P      14 50 12.0 -0.5
      comp=Z,0.0nm,0.3s,baz=184,slow=5.1,SNR=6.0
ARU   Arti            18.70 334d iP   Pn     14 50 14.2 +1.4
ARU                              S    Sn     14 53 42.7 +0.5
ARU                              pmax pmax
      comp=Z,5.0nm,0.9s
ARU   Arti            18.70 334  P    P      14 50 12.6 +0.1
GTA   Gaotai          20.34  84 eP    Pn     14 50 32.6 -0.1
GTA                              pP   sP     14 50 36.3 +3.2
GTA                              sP   pP     14 50 38.9 +6.6
GTA                              pmax pmax
      comp=Z,5.0nm,1.1s
BELG  Belogornoye     21.25 313  P    P      14 50 40.0 -0.2
      comp=Z,54nm,0.9s,baz=40,slow=0.7,SNR=13
BELG  Belogornoye     21.25 313  P    P      14 50 40.0 -0.2
GNI   Garni           21.75 279ceP    P      14 50 48.8 +2.9
GNI                              pmax pmax
      comp=Z,18nm,1.0s
GNI   Garni           21.75 279  P    P      14 50 47.1 +1.2
GNI                              IAmb IAmb   14 50 59.2
      comp=Z,16nm,0.9s
NCK   Nalchik         22.25 288 iP    P      14 50 54.6 +3.5
NCK                              pmax pmax
      comp=Z,24nm,0.5s
KBZ   Khabaz          22.74 288  P    P      14 50 55.8 -0.5
      comp=Z,0.8nm,0.4s,baz=110,slow=9.2,SNR=1.5
```

KBZ	Khabaz	22.74	288	ceP	P	14 51 00.5	+4.2
KBZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KVAR	Kislovodsk Arr	22.88	289	P	P	14 50 60.0	+2.0
	comp=Z,1.4nm,0.3s,baz=84,slow=23,SNR=2.1						
KIV	Kislovodsk	22.89	289	eP	P	14 50 59.3	+1.3
KIV				eS	S	14 55 07.8	-0.6
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KIV	Kislovodsk	22.89	289	P	P	14 50 55.2	-2.8
KIV				IAmb	IAmb	14 51 19.0	
	comp=Z,11nm,0.7s						
SHA1	Shidzhatmaz	22.92	288	i P	P	14 51 02.1	+3.7
SONM	Songino Array	24.75	62	P	P	14 51 16.6	+0.7
	comp=Z,2.0nm,0.6s,baz=266,slow=9.8,SNR=13						
SONM	Songino Array	24.75	62	P	P	14 51 15.0	-1.0
SOC	Sochi	25.06	288	eP	P	14 51 19.8	+1.2
SOC				MLR	MLR		
	comp=Z,89nm,16.0s						
ULN	Ulaanbaatar	25.19	62	P	P	14 51 20.4	+0.4
ULN				pmax	pmax		
	comp=Z,8.0nm,1.2s						
ULN	Ulaanbaatar	25.19	62	P	P	14 51 20.4	+0.4
NRIK	Noril'sk	29.96	10	i P	P	14 52 04.0	+1.7
NRIK				pmax	pmax		
	comp=Z,5.0nm,1.6s						
BRTR	Keskin Array B	30.18	282	P	P	14 52 04.5	-0.3
	comp=Z,0.7nm,0.6s,baz=97,slow=9.2,SNR=2.0						
AKASG	Malin Array Be	32.09	304	P	P	14 52 21.1	-0.1
	comp=Z,0.2nm,0.2s,baz=80,slow=7.7,SNR=1.7						
FIA1	FINESS Array S	35.36	322	P	P	14 52 50.1	+0.6
FIA1				IAmb	IAmb	14 52 52.3	
	comp=Z,27nm,1.4s						
FINES	FINESS Array B	35.36	322	P	P	14 52 50.3	+0.8
	comp=Z,1.8nm,0.5s,baz=111,slow=9.3,SNR=10						
ARCES	ARCESS Array B	38.28	335	P	P	14 53 14.8	+0.4
	comp=Z,4.0nm,0.9s,baz=107,slow=7.8,SNR=14						
ARCES	ARCESS Array B	38.28	335	P	P	14 53 14.8	+0.4
ARCES				pmax	pmax		
	comp=Z,3.0nm,1.1s						
YAK	Yakutsk	39.75	38	ceP	P	14 53 26.6	-0.1
YAK				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KLR	Kul'dur	41.45	58	i P	P	14 53 40.5	-0.4
KLR				pmax	pmax		
	comp=Z,14nm,1.8s						
TIXI	Tiksi	41.47	23	P	P	14 53 41.5	+0.7
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
TIXI	Tiksi	41.47	23	P	P	14 53 41.5	+0.7
TIXI				IAmb	IAmb	14 53 42.3	
	comp=Z,4.7nm,0.6s						
GERES	GERESS Array B	42.26	302	P	P	14 53 48.1	+0.4
	comp=Z,0.4nm,0.5s,baz=64,slow=6.8,SNR=3.6						
NC303	NORSAR Array S	42.35	321	P	P	14 53 48.9	+0.7
NC303				IAmb	IAmb	14 54 10.8	
	comp=Z,44nm,1.4s						
NOA	NORSAR Array B	42.43	320	P	P	14 53 46.9	-1.9
	comp=Z,1.0nm,0.7s,baz=90,slow=5.3,SNR=1.7						
NC204	NORSAR Array S	42.65	321	P	P	14 53 50.9	+0.3
NC204				IAmb	IAmb	14 53 51.5	
	comp=Z,24nm,1.3s						
BILL	Bilibino	54.30	28	P	P	14 55 20.9	+0.7
BILL				IAmb	IAmb	14 55 22.2	
	comp=Z,3.1nm,0.8s						
TNTI	Ternate	62.83	114	P	P	14 56 20.2	-0.2
TOLK	Toolik Lake Re	66.68	16	P	P	14 56 45.1	+0.3
TOLK				IAmb	IAmb	14 57 05.9	
	comp=Z,6.8nm,1.5s						
VOI	Vohitsoka	66.74	207	P	P	14 56 46.1	+0.3
VOI				IAmb	IAmb	14 57 00.9	
	comp=Z,11nm,1.1s						
A36M	Sachs Harbour	67.14	6	P	P	14 56 47.9	+0.3
A36M				IAmb	IAmb	14 56 50.5	
	comp=Z,5.7nm,0.8s						
TORD	Torodi Ar. Bea	67.62	268	P	P	14 56 50.8	-0.8
	comp=Z,0.5nm,0.5s,baz=42,slow=5.9,SNR=3.3						
TORD	Torodi Ar. Bea	67.62	268	P	P	14 56 50.6	-1.0
TORD				IAmb	IAmb	14 56 60.0	
	comp=Z,1.8nm,0.7s						
COLD	Coldfoot	67.71	17	P	P	14 56 51.6	+0.2
COLD				IAmb	IAmb	14 56 59.8	
	comp=Z,3.4nm,1.1s						
IMAR	Indian Mountai	67.90	19	P	P	14 56 52.3	-0.2
H21K	Melozitna Rive	68.39	19	P	P	14 56 55.8	+0.2
H21K				IAmb	IAmb	14 57 21.7	
	comp=Z,3.8nm,1.2s						
BMAR	Burnt Mountain	68.71	15	P	P	14 56 58.5	+0.9
J20K	Nowinta River	69.24	20	P	P	14 57 01.4	+0.5
J20K				IAmb	IAmb	14 57 28.6	
	comp=Z,9.9nm,1.4s						
H24K	Noodor Dome	69.39	17	P	P	14 57 02.6	+0.7
I23K	Minto, Yukon-K	69.64	18	P	P	14 57 03.5	+0.2
I23K				IAmb	IAmb	14 57 24.7	
	comp=Z,6.7nm,1.4s						
INK	Inuvik	69.75	10	P	P	14 57 04.2	+0.2
INK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
INK	Inuvik	69.75	10	P	P	14 57 04.2	+0.2
INK				IAmb	IAmb	14 57 20.4	
	comp=Z,3.4nm,1.2s						
K20K	Telida	69.92	21	P	P	14 57 05.5	+0.4
MDM	Murphy Dome	70.06	17	P	P	14 57 06.0	0.0
MDM				IAmb	IAmb	14 57 06.3	
	comp=Z,7.8nm,1.4s						
POKR	Poker Plat Res	70.10	17	P	P	14 57 06.9	+0.6
POKR				IAmb	IAmb	14 57 08.8	
	comp=Z,9.1nm,1.5s						
IL31		70.52	17	P	P	14 57 08.2	-0.5
ILAR	Eielson Array	70.52	17	P	P	14 57 07.9	-0.9
	comp=Z,0.4nm,0.6s,baz=336,slow=4.0,SNR=13						
ILAR	Eielson Array	70.52	17	P	P	14 57 08.2	-0.6
ILAR	Eielson Array	70.52	17	P	P	14 57 08.2	-0.6
KTH	Kantishna Hill	70.58	19	P	P	14 57 08.8	-0.5
KTH				IAmb	IAmb	14 57 28.7	
	comp=Z,9.6nm,1.3s						
PPLA	Purkeypile	70.80	20	P	P	14 57 10.8	+0.1
SCRK	Sand Creek	71.84	16	P	P	14 57 16.4	-0.6
DHY	Denali Highway	71.86	18	P	P	14 57 16.6	-0.5
DHY				IAmb	IAmb	14 57 17.3	
	comp=Z,12nm,1.4s						
RIDG	Independent Ri	71.86	17	P	P	14 57 16.9	-0.1
RIDG				IAmb	IAmb	14 57 24.6	
	comp=Z,10nm,1.2s						
DOT	Dot Lake	72.12	17	P	P	14 57 18.4	-0.1
DOT				IAmb	IAmb	14 57 22.8	
	comp=Z,5.0nm,1.2s						
GHO	Glory Hole Cre	72.58	20	P	P	14 57 21.0	-0.4
SML	Sawmill	72.70	19	P	P	14 57 21.6	-0.5
SCM	Sheep Creek Mo	72.93	19	P	P	14 57 23.4	-0.1
SCM				pmax	pmax		
	comp=Z,36nm,1.4s						
SCM	Sheep Creek Mo	72.93	19	P	P	14 57 23.4	-0.1
M24K	Tolsona, Glenn	72.98	18	P	P	14 57 24.2	+0.5
KNK	Knik Glacier	73.01	20	P	P	14 57 24.2	+0.3
BCAR	Beaver Creek A	73.12	16	P	P	14 57 25.0	+0.5
CNPM	China Poot	73.85	22	P	P	14 57 29.2	+0.4
FITZ	Fitzroy Crossi	75.86	129	P	P	14 57 40.0	-0.9
	comp=Z,0.8nm,0.6s,baz=342,slow=6.4						
KNRA	Kununurra	75.91	125	P	P	14 57 41.4	+0.2
HYT	Haines Junctio	76.02	15	P	P	14 57 40.8	-0.7
HYT				IAmb	IAmb	14 57 42.5	
	comp=Z,3.9nm,1.0s						
YKA	Yellowknife Ar	77.24	4	P	P	14 57 48.0	-0.2
	comp=Z,0.8nm,0.5s,baz=4.0,slow=5.7,SNR=9.1						
YKA	Yellowknife Ar	77.24	4	i P	P	14 57 48.2	0.0
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BOSA	Boshof	81.89	221	P	P	14 58 12.2	-1.7
	comp=Z,1.5nm,0.6s,baz=127,slow=0.9,SNR=4.2						
WRA	Warramunga Arr	82.60	124	P	P	14 58 16.6	-1.2
	comp=Z,1.7nm,0.8s,baz=310,slow=3.6,SNR=11						
ASAR	Alice Springs	85.08	127	P	P	14 58 28.9	-1.6
	comp=Z,1.0nm,0.7s,baz=312,slow=5.0,SNR=16						

*IDC **24** 14:52:31.9±1.9, 21°.65N×142°.88E, h311^{km}±19^{km}, mb3.1/11, mb1 3.2/12, mb1mx2.9/56, mbtmp3.8/12, Error ellipse: s-maj=31.9km s-min=12.4km az=87.0*

ISC 24 14:52:31.8±1.0,**21°.64N**±0°.09×**142°.9E**±0°.2,**h311**^{km},**n12,** σ**0**^{s}**.70**/13,**mb3.2**/10,**Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	5.47	353	P	Pn	14 53 55.2	+0.1
	6.3nm,0.3s,baz=291,slow=23,SNR=9.0						
JCJ				S	S	14 55 02.5	+0.2
	3.9nm,0.3s,baz=314,slow=23,SNR=1.0						
KSRS	Korea Array	20.40	324	P	P	14 56 45.6	-0.3
	1.7nm,0.6s,baz=144,slow=9.4,SNR=7.6						
KLR	Kul'dur	28.92	345	P	P	14 58 03.9	+1.2
	2.0nm,0.5s,baz=178,slow=11,SNR=7.2						
SONM	Songino Array	39.21	321	P	P	14 59 29.7	-1.0
	0.1nm,0.3s,baz=126,slow=7.3,SNR=1.6						
CMAR	Chiang Mai Arr	41.30	274	P	P	14 59 47.5	-0.5
	0.4nm,0.4s,baz=75,slow=8.5,SNR=1.4						
WRA	Warramunga Arr	42.16	192	P	P	14 59 54.8	0.0
	1.1nm,0.6s,baz=15,slow=9.5,SNR=18						
FITZ	Fitzroy Crossi	42.95	204	P	P	15 00 01.8	+0.8
	1.7nm,0.9s,baz=16,slow=7.6,SNR=2.1						
ASAR	Alice Springs	45.87	192	P	P	15 00 24.0	0.0
	0.2nm,0.5s,baz=19,slow=12,SNR=7.9						
MKAR	Makanchi Array	54.53	313	P	P	15 01 28.6	+0.3
	0.3nm,0.6s,baz=80,slow=8.8,SNR=2.3						
ILAR	Eielson Array	62.22	27	P	P	15 02 19.7	-1.0
	0.1nm,0.5s,baz=271,slow=6.0,SNR=1.6						
ARCES	ARCESS Array B	78.89	341	P	P	15 04 01.4	+0.8
	3.4nm,0.9s,baz=70,slow=8.0,SNR=4.1						
FINES	FINESS Array B	83.11	334	P	P	15 04 22.8	0.0
	1.7nm,0.8s,baz=82,slow=4.0,SNR=5.3						

MAN 24 14:58:08.7,8°.20N×125°.82E,h1^{km}**,mb3.7,ML2.4,MS1.9, Mindanao**

*IDC **24** 15:19:19.3±3.4, 3°.97N×95°.00E, h0^{km}, mb3.6/2, mb1 3.7/4, mb1mx3.2/42, mbtmp3.5/4, ML3.6/2, Error ellipse: s-maj=68.1km s-min=46.6km az=56.0*

*DJA **24** 15:19:23.9±1.0, 5°N±3°×9°6E±°, h10^{km}, M3.9/6, mb4.0/1, MLv3.8/6*

ISC 24 15:19:24.5±1.5,**4°.73N**±0°.06×**96°.1E**±0°.1,**h10**^{km}**,n8,** σ**1**^{s}**.46**/12,**Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLSI	Meulaboh, Aceh	0.53	150	P	Pn	15 19 37.8	-0.3
MLSI				S	Sn	15 19 47.1	0.0
LHMI	Lhok Sumawe	0.95	58	P	Pn	15 19 43.6	-0.4
LHMI				S	Sn	15 19 57.3	-0.3
TPTI		1.79	144	P	Pg	15 19 58.3	-0.6
TPTI				S	Sg	15 20 24.0	+1.9
PSI	Prapat	3.38	124	Pn	Pb	15 20 22.2	-2.3
	2.7nm,0.3s,baz=275,slow=17,SNR=7.1						
PSI				Sn	Sg	15 21 15.8	+2.7
	4.8nm,0.3s,baz=130,slow=8.5,SNR=5.7						
GSI	Gunungsitoli	3.69	157	P	Pn	15 20 21.9	+0.2
CMAR	Chiang Mai Arr	13.92	11	Pn	P	15 22 51.8	+1.5
	0.1nm,0.3s,baz=208,slow=13,SNR=2.3						
WRA	Warramunga Arr	44.84	124	P	P	15 27 38.9	-0.4
	0.3nm,0.4s,baz=300,slow=9.1,SNR=3.1						
ASAR	Alice Springs	46.39	129	P	P	15 27 51.8	+0.2
	0.5nm,0.4s,baz=299,slow=7.4,SNR=24						

*NEIC **24** 15:58:28.0±1.3, 34°.17S±0°.03×72°.33W±0°.07, h17^{km}±9^{km}, mb4.2/3, Error ellipse: s-maj=8.4km s-min=4.2km az=109.0*

*SJA **24** 15:58:27.0, 34°.16S×72°.49W, h10^{km}, ML4.3*

*GUC **24** 15:58:29.0±0.7, 34°.17S×72°.36W, h47^{km}±6^{km}, ML3.9*

ISC 24 15:58:28.2±1.6,**34°.16S**±0°.03×**72°.35W**±0°.06,**h20**^{km}±6^{km}, **n52,**σ**0**^{s}**.90**/72,**9C-8D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA05	Santo Domingo	0.79	51	⇓iP	Pg	15 58 43.6	-0.1
VA05				eS	Sn	15 58 55.1	-0.3
VA05				IAML		15 58 59.4	
	comp=N,15µm,0.4s						
VA05	Santo Domingo	0.79	51		Pb	15 58 43.5	+0.3
GO05	Huala	0.92	158	⇓iP	Pb	15 58 45.1	-0.4
GO05				eS	Sb	15 58 57.5	+0.2
GO05				IAML		15 58 58.9	
	comp=E,5µm,0.2s						
GO05	Huala	0.92	158	Pg	Pb	15 58 45.1	-0.4
GO05				Sg	Sb	15 58 56.9	-0.4
GO05	Huala	0.92	158	i P	Pb	15 58 45.0	-0.4
MT01	Popeta	0.96	73	⇓iP	Pb	15 58 45.9	-0.3
MT01				eS	Sg	15 58 59.2	-0.4
MT01				IAML		15 59 03.1	
	comp=N,2µm,0.7s						
MT01	Popeta	0.96	73		Pb	15 58 45.7	-0.4
BO01	Tunca	1.08	103	⇓iP	Pb	15 58 47.2	-0.9
BO01				i S	Sb	15 59 01.9	+0.1
BO01	Tunca	1.08	103		Pb	15 58 47.0	-1.1
BO01				Sg	Sb	15 59 01.3	-0.5
BO01	Tunca	1.08	103	i P	Pb	15 58 47.0	-1.1
MT09	Talagante	1.20	72	⇓eP	Pn	15 58 49.6	-0.4
MT09				eS	Sb	15 59 05.2	-0.2
MT09				IAML		15 59 10.0	
	comp=N,2µm,0.4s						
MT09	Talagante	1.20	72		Pn	15 58 49.4	-0.5
VA01	Torpederas	1.28	28	⇑eP	Pn	15 58 50.5	-0.4
VA01				i S	Sn	15 59 06.8	-0.6
VA01	Torpederas	1.28	28		Pn	15 58 50.2	-0.7
MT02	Curacav	1.35	49	⇑iP	Pn	15 58 51.7	-0.3
MT02				eS	Sn	15 59 08.7	-0.6
MT02	Curacav	1.35	49		Pn	15 58 51.5	-0.4
MT02	Curacav	1.35	49	i P	Pn	15 58 51.0	-1.0
BO02	Sierra Bellavi	1.45	116	⇓iP	Pn	15 58 53.6	+0.3
BO02				i S	Sb	15 59 13.6	+1.1
BO02				IAML		15 59 18.2	
	comp=E,8µm,0.3s						
BO02	Sierra Bellavi	1.45	116		Pn	15 58 53.4	+0.1
BO02	Sierra Bellavi	1.45	116	i P	Pn	15 58 53.0	-0.3
BO04	La Punta	1.46	84	⇓iP	Pn	15 58 53.7	+0.2
BO04				eS	Sn	15 59 11.8	-0.2
BO04				IAML		15 59 20.5	
	comp=N,2µm,0.4s						
MT05	Renca	1.55	61	⇑iP	Pn	15 58 55.0	+0.3
MT05				eS	Sn	15 59 13.9	-0.3
MT05				IAML		15 59 22.4	
	comp=E,3µm,0.4s						
MT05	Renca	1.55	61		Pn	15 58 54.7	0.0
ROC1	El Roble	1.62	44	i P	Pn	15 58 56.0	+0.1
ROCH	El Roble	1.63	44	⇑iP	Pn	15 58 56.1	+0.2
ROCH				⇓iP	Pn	15 58 56.1	+0.2
ROCH				eS	Sn	15 59 16.1	-0.5
ROCH				eS	Sb	15 59 18.0	+0.1
ROCH				IAML		15 59 31.8	
	comp=N,3µm,0.6s						
PEL	Peldehue	1.72	54	⇑iP	Pn	15 58 57.9	+0.9
PEL				eS	Sn	15 59 17.9	-0.6
PEL				IAML		15 59 30.6	
	comp=E,2µm,0.6s						
PEL	Peldehue	1.72	54		Pn	15 58 57.6	+0.6
PEL	Peldehue	1.72	54	i P	Pn	15 58 58.0	+0.9
ML02	Panimavida	1.78	155	⇑eP	Pn	15 58 58.3	+0.5
ML02				eS	Sn	15 59 19.1	-0.7
ML02				IAML		15 59 31.2	
	comp=E,2µm,0.4s						
ML02	Panimavida	1.78	155	Pn	Pn	15 58 57.8	0.0
LMEL	Las Melosas	1.81	81	⇑iP	Pn	15 58 59.3	+0.9
LMEL				eS	Sn	15 59 20.0	-0.9
LMEL				IAML		15 59 34.1	
	comp=N,2µm,0.4s						
VA06	Catapilco	1.82	29	⇑iP	Pn	15 58 58.1	-0.3
VA06				eS	Sn	15 59 19.1	-1.8
VA06				IAML		15 59 36.9	
	comp=E,4µm,0.5s						
VA03	San Esteban	2.05	48	⇑iP	Pn	15 59 02.5	+0.8
VA03				i S	Sn	15 59 28.3	+1.6
VA03				IAML		15 59 43.5	
	comp=N,2µm,0.6s						
VA03	San Esteban	2.05	48	Pn	Pn	15 59 01.9	+0.3
RFA	San Rafael	3.27	102	i P	Pb	15 59 23.0	-2.6
CO06	Fray Jorge	3.53	10		Pn	15 59 20.9	-0.9
CO03	El Pedregal	3.59	23	i P	Pn	15 59 24.0	+1.1
GO04	Tololo Observa	4.19	19		Pn	15 59 31.0	-0.2
LC01	Cunco	4.75	175	Pn	Pn	15 59 38.0	-0.7
LC01	Cunco	4.75	175	i P	Pn	15 59 39.0	+0.4
AC04	Llanos de Chal	6.04	11	Pn	Pn	15 59 57.4	+1.0
PLCA	Paso Flores	6.72	168	Pn	Pn	16 00 07.0	+1.2
PLCA	Paso Flores	6.72	168	i P	Pn	16 00 08.0	+2.2
GO03	Copiap	6.79	16	Pn	Pn	16 00 06.4	-0.4
GO03	Copiap	6.79	16	i P	Pn	16 00 07.0	+0.2
TCA	Tanti	7.11	69	i P	Pn	16 00 15.0	+3.7
AC02	Maricunga	7.81	22	Pn	Pn	16 00 20.7	-0.5
TRQA	Tornquist	9.25	118	Pn	Pn	16 00 41.3	+0.8
PTLB	Pontes e Lacer	22.11	36	P	P	16 03 23.0	+0.6
PTLB				IAmb	IAmb	16 03 25.6	
	comp=Z,9.3nm,1.1s						
ETMB	Extrema	24.87	15	P	P	16 03 50.5	+0.9
ETMB				IAmb	IAmb	16 03 53.5	
	comp=Z,7.1nm,1.1s						
SAML	Samuel	26.47	21	P	P	16 04 04.6	+0.5
SNAA	Sanae	51.54	158	P	P	16 07 33.3	+0.9

*TUL **24** 16:40:25.4±0.8, 35°.98N±0°.02×96°.80W±0°.02, h5^{km}±3^{km}, ML2.8, mb_Lg2.3/15(NEIC), Error ellipse: s-maj=3.0km s-min=1.8km az=118.0*

NEIC 24 16:40:25.4±0.5,**35°.99N**±0°.01×**96°.81W**±0°.03,**h7**^{km}±3^{km}, **Error ellipse: s-maj=3.8km s-min=1.6km az=114.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK031	S. Brethren Rd	0.04	215	Pg	Pg	16 40 26.9	0.0
OK031				Sg	Sg	16 40 27.8	-0.2
OK030	Cody Creek RV	0.06	162		Pg	16 40 27.1	0.0
OK030				Sg	Sg	16 40 28.4	0.0
OK034	N. Norfolk Rd.	0.08	74	Pg	Pg	16 40 27.5	+0.1
OK034				Sg	Sg	16 40 28.9	+0.1
OK033	Mehan	0.12	298	Pg	Pg	16 40 28.3	+0.3
OK033				Sg	Sg	16 40 30.0	+0.3
QUOK	Quay	0.20	24	Pg	Pg	16 40 29.8	+0.4
OK029	Liberty Lake	0.56	250	Pg	Pg	16 40 36.4	+0.3
OK029				Sg	Sg	16 40 43.4	0.0
OK025	Westminster Rd	0.59	227	Pg	Pg	16 40 36.7	-0.1
OK025				Sg	Sg	16 40 44.3	-0.2
BCOK	Bluff Creek, N	0.73	243	Pg	Pg	16 40 39.4	0.0
BCOK				Sg	Sg	16 40 49.0	+0.1
OKCFA	Oklahoma City	0.78	223	Pg	Pg	16 40 40.3	0.0
OKCFA				Sg	Sg	16 40 50.2	-0.1
TUL1	Leonard	0.83	95	Pg	Pg	16 40 41.0	-0.2
BLOK	Blackwell	0.84	337	Pg	Pg	16 40 41.5	0.0
BLOK				Sg	Sg	16 40 52.2	-0.1
FNO	Franklin	0.88	214	Pg	Pg	16 40 41.7	-0.4
FNO				Sg	Sg	16 40 53.5	0.0
T35A	Sooner Cattle	0.96	14	Pg	Pg	16 40 43.5	-0.2
CROK	Carrier	1.08	299	Pg	Pg	16 40 45.9	-0.2
KAN13	South Haven SW	1.16	332	Pg	Pg	16 40 47.3	-0.3
GC02	Grant County #	1.21	316	Pg	Pg	16 40 48.2	-0.4
KAN17	Caldwell West	1.30	324	Pn	Pg	16 40 50.4	0.0
KAN09	Caldwell North	1.32	331	Pn	Pn	16 40 50.3	+0.1
KAN16	Harper SW Stat	1.60	321	IAmb_Lg		16 41 18.3	
	comp=Z,38nm,0.9s						
X34A	Smith Ranch, M	1.62	211	Pn	Pn	16 40 54.7	+0.3
X37A	Clayton	1.82	139	IAmb_Lg		16 41 26.0	
	comp=Z,13nm,0.8s						
U38A	Gravette	2.01	76		Pn	16 40 59.6	-0.1
LOOK	Love County	2.01	189	Pn	Pn	16 40 59.4	-0.4
WMOK	Wichita Mounta	2.04	233	IAmb_Lg		16 41 29.5	
	comp=Z,9.9nm,0.8s						
HHAR	Hobbs	2.34	82	Pn	Pn	16 41 04.2	-0.1
U40A	Yellville	3.22	82	IAmb_Lg		16 42 15.3	
	comp=Z,8.9nm,0.9s						
S39A	Bolivar	3.27	58	IAmb_Lg		16 42 13.7	
	comp=Z,6.6nm,0.8s						
CBKS	Cedar Bluff	3.66	321	IAmb_Lg		16 42 19.7	
	comp=Z,6.4nm,1.1s						
MGMO	Mountain Grove	3.83	71	IAmb_Lg		16 42 31.7	
	comp=Z,12nm,0.7s						
PBMO	Poplar Bluff	5.21	79	IAmb_Lg		16 43 18.6	
	comp=Z,6.3nm,0.7s						
N38A	Joes South For	5.56	29	IAmb_Lg		16 43 27.9	
	comp=Z,9.8nm,0.9s						

*IDC **24** 17:10:03.5±3.0, 2°.44S×100°.26E, h0^{km}, mb3.6/6, mb1 3.8/6, mb1mx3.5/42, mbtmp3.7/6, MS3.3/1, Ms1 3.3/1, ms1mx2.5/35, Error ellipse: s-maj=126.1km s-min=20.2km az=57.0*

*DJA **24** 17:10:04.0±0.6, 3°S±5°×10°0E±°, h25^{km}±3^{km}, M3.7/9, MLv3.7/9*

ISC 24 17:10:06.0±1.0,**2°.7S**±0°.1×**100°.0E**±0°.1,**h30**^{km}**,n21,** σ**0**^{s}**.99**/16,**mb3.7**/6,**Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPSI	Pulau Pagai	0.08	140	P	Pb	17 10 10.8	-0.4
PPSI				S	Sb	17 10 14.6	-0.1
SISI	Saibi	1.62	328	P	Pn	17 10 31.7	-0.9
SISI				S	Sn	17 10 52.2	-0.3
PDSI	Padang	1.85	16	P	Pn	17 10 35.5	-0.2
PPI	Padang Panjang	2.27	11	P	Pn	17 10 41.0	-0.6
MASI	Maura Aman, Be	2.32	101	P	Pn	17 10 41.5	-0.7
MNAI	Manna	3.41	119	P	Pn	17 10 55.8	-1.4
MNSI	Mandailing Nat	3.50	354	P	Pn	17 10 57.5	-0.9
CMAR	Chiang Mai Arr	21.05	357	P	P	17 14 46.2	-1.6
	0.5nm,0.3s,baz=187,slow=11,SNR=5.3						
H08S2	Diego Garcia H	27.78	259	T	T	17 44 48.4	
	baz=80,slow=75,SNR=73						
H08S3	Diego Garcia H	27.79	259	T	T	17 44 48.6	
	baz=80,slow=75,SNR=169						
H08S1	Diego Carcia H	27.80	259	T	T	17 44 46.8	
	baz=80,slow=75,SNR=43						
H01W3	Cape Leeuwin H	34.62	159	T	T	17 53 19.7	
	baz=336,slow=76,SNR=15						
H01W2	Cape Leeuwin H	34.64	159	T	T	17 53 19.7	
	baz=336,slow=76,SNR=13						
H01W1	Cape Leeuwin H	34.64	159	T	T	17 53 19.4	
	baz=336,slow=76,SNR=8.9						
WRA	Warramunga Arr	37.68	120	P	P	17 17 19.0	0.0
	0.4nm,0.4s,baz=305,slow=8.9,SNR=7.8						
ASAR	Alice Springs	38.88	125	P	P	17 17 31.0	+1.9
	0.4nm,0.5s,baz=300,slow=8.2,SNR=8.6						
SONM	Songino Array	50.65	6	P	P	17 19 03.0	+0.5
	0.4nm,0.4s,baz=187,slow=10,SNR=4.3						
MKAR	Makanchi Array	51.69	345	P	P	17 19 11.3	+1.0
	0.8nm,0.4s,baz=155,slow=9.0,SNR=17						
USRK	Ussuriysk Ar.	54.79	28	LR	LR	17 44 58.9	
	comp=Z,32nm,20.5s,baz=142,slow=38						
ZALV	Zalesovo Beam	57.85	349	P	P	17 19 54.8	+0.1
	0.3nm,0.3s,baz=212,slow=5.3,SNR=4.0						
TXAR	Lajitas Array	145.28	38	PKP	PKPdf	17 29 42.5	+0.8
	0.6nm,0.7s,baz=321,slow=1.3,SNR=6.1						

*SKHL **24** 17:14:25.7±0.7, 44°.40N×148°.30E, h48^{km}±4^{km}, mb4.4/2*

*JMA **24** 17:14:25.5±0.4, 44°.09N×148°.05E, h0^{km}, M3.8*

ISC 24 17:14:24.6±2.6,**44°.39N**±0°.09×**148°.1E**±0°.2,**h10**^{km}**,n13,** σ**1**^{s}**.07**/24,**Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	0.85	350	i P	Pg	17 14 41.0	-0.1
KUR				AMB	AMB	17 14 41.0	
	282nm,0.4s						
KUR				i S	Sg	17 14 52.0	-0.3
KUR				A	A	17 14 53.0	
	313nm,0.3s						
KUR				A	A	17 14 53.0	
	984nm,0.3s						
YUK	Yuzh-Kuril'sk	1.64	258	eP	Pn	17 14 53.0	-0.5
YUK				AMB	AMB	17 14 56.0	
	216nm,0.4s						
YUK				eS	Sn	17 15 14.0	-0.6
YUK				A	A	17 15 19.0	
	250nm,0.3s						
YUK				A	A	17 15 19.0	
	220nm,0.3s						
GLVR	Golovnino	1.96	251	eP	Pn	17 14 58.0	+0.1
GLVR				eS	Sn	17 15 23.0	+0.4
GLVR				A	A	17 15 28.0	
	259nm,0.3s						
GLVR				A	A	17 15 28.0	
	258nm,0.3s						
NEM2	Nemuro 2	1.98	240	P	Pn	17 14 58.3	+0.1
NEM2				eS	Sn	17 15 22.4	-0.6
NMR	Nemuro--Hokkai	1.99	240	i P	Pn	17 14 58.0	-0.3
NMR				eS	Sn	17 15 22.0	-1.2
JRA	Rausu	2.18	259	P	Pb	17 15 03.0	-1.1
JRA				eS	Sb	17 15 31.1	-0.1
JNSB	Nemuroshibetsu	2.30	256	P	Pn	17 15 04.4	+1.8
JAK	Akkeshi	2.83	242	P	Pn	17 15 10.5	+0.7
JAK				eS	Sn	17 15 43.0	-0.9
JAR	Ashorobuto	3.31	252	P	Pn	17 15 18.7	+2.2
JAR				eS	Sn	17 15 57.4	+1.6

JCH	Churui	3.87	244	P	Pn	17 15 25.5	+1.4
JCH				eS	Sn	17 16 10.0	+0.4
JNBK	Urakawa-nobuka	4.42	243	P	Pn	17 15 33.4	+1.6
JKB	Kayabe	5.74	247	P	Pn	17 15 51.4	+1.6
JKB				eS	Sn	17 16 55.6	0.0
JOT	Ohata	5.98	242	P	Pn	17 15 54.1	+0.9
JOT				eS	Sn	17 17 01.5	-0.2

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*INET **24** 17:23:55.8, 10°.01N×84°.22W, h78^{km}, MW3.5*
*UCR **24** 17:23:58.6±1.1, 10°.16N×84°.13W, h90^{km}±2^{km}, MW4.2, Fault plane solution: NP1:φ$_s$141.09000°, δ51.57000°, λ7.22000°.*
*UPA **24** 17:23:59.6±3.1, 10°.19N×84°.04W, h10^{km}±50^{km}, MW3.9*
ISC 24 17:24:00.0±1.3, **10°.20N**±0°.05×**84°.13W**±0°.04, **h81**^{km}±7^{km}, **n58**, σ**0^{s}97**/74, **18C-22D**, **Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRPO	Crater poas	0.10	269	⇓eP	Pn	17 24 11.6	-0.4
HDC3	Heredia 3	0.19	175	⇑eP	Pn	17 24 11.7	-0.4
HDC	Heredia	0.20	175	⇑eP	Pn	17 24 11.6	-0.4
HDC				eS	Sn	17 24 21.3	+0.4
HDC	Heredia	0.20	175	⇑iP	Pn	17 24 11.8	-0.3
HDC				eS	Sn	17 24 21.5	+0.6
RIFO	Rio Frio, Sara	0.24	59	⇑eP	Pn	17 24 11.7	-0.3
SRA1	San Ramn	0.36	252	⇓eP	Pn	17 24 12.3	-0.6
SRA1				eS	Sn	17 24 23.0	+0.5
VTRT	Volcan Turrial	0.38	120	⇑eP	Pn	17 24 12.9	-0.4
RAFA	San Farael, Vo	0.39	127	⇑eP	Pn	17 24 13.2	-0.2
VTUC	Crater, Volcan	0.40	115	⇑eP	Pn	17 24 13.1	-0.5
CVTR	Volcan Turrial	0.41	116	⇑eP	Pn	17 24 13.0	-0.5
VTCV	VTCV, Calle Va	0.45	118	⇑eP	Pn	17 24 13.3	-0.3
LCR2	La Lucha 2	0.47	165	⇑eP	Pn	17 24 12.9	-0.9
LCR2				eS	Sn	17 24 24.3	+0.3
RIMA	Rio Macho	0.50	148	⇑eP	Pn	17 24 13.2	-0.9
RIMA				eS	Sn	17 24 24.9	+0.4
COVE	Coope Vega, Sa	0.58	333	⇓eP	Pn	17 24 14.0	-0.6
CASO	Castillo	0.64	292	⇓iP	Pn	17 24 14.8	-0.4
CASO				iS	Sn	17 24 27.5	+1.1
CDM	Cerro de Muert	0.73	151	⇑eP	Pn	17 24 15.3	-1.2
JTS	Las Juntas de	0.81	277	⇓eP	Pn	17 24 16.2	-0.8
LAFE	Finca La Fe, P	0.86	243	⇓eP	Pn	17 24 17.7	+0.2
PEZE	Perez Zeledon,	0.92	151	⇑eP	Pn	17 24 17.1	-1.2
EDDO	Dominical	0.97	164	⇓iP	Pn	17 24 18.2	-0.6
PTEN	Parque Tenorio	0.99	301	⇓iP	Pn	17 24 18.4	-0.6
ACAL	Aguas Claras	0.99	296	⇓iP	Pn	17 24 18.4	-0.7
CUI	Cuipilapa	1.12	294	eP	Pn	17 24 19.9	-0.6
CUI				eS	Sn	17 24 37.3	+1.4
VMAR	Armenia, Volca	1.15	302	eP	Pn	17 24 20.0	-1.0
HORNC	Hornillas	1.15	297	⇓iP	Pn	17 24 20.3	-0.7
COLC	Colonia	1.16	294	⇓iP	Pn	17 24 20.5	-0.5
GUAB	Guayabo de Bag	1.20	295	⇓iP	Pn	17 24 20.9	-0.6
LIM1	Limonal	1.21	294	⇓iP	Pn	17 24 21.2	-0.5
PLVR	Palo Verde	1.21	277	eP	Pn	17 24 20.9	-0.9
SRBA	San Rafael, Bu	1.22	142	⇑eP	Pn	17 24 20.5	-1.5
DRK0	Durika	1.27	137	eP	Pn	17 24 21.3	-1.3
DRK0	Durika	1.27	137	eP	Pn	17 24 21.6	-1.1
DRK0				eS	Sn	17 24 38.0	-1.6
EDBA	Buenos Aires	1.33	141	⇑eP	Pn	17 24 21.7	-1.5
DUNO	Dulce Nombre,	1.35	265	⇓eP	Pn	17 24 22.7	-0.7
VRLE	La Escondida,	1.35	296	eP	Pn	17 24 22.9	-0.7
GUAI	GUAI	1.36	273	⇓iP	Pn	17 24 23.4	-0.1
BUAI	Buenos Aires	1.36	300	⇓iP	Pn	17 24 22.7	-0.9
INDI	Punta indio, G	1.39	256	⇓eP	Pn	17 24 22.6	-1.4
GB1A	Borinquen Arri	1.39	296	iP	Pn	17 24 23.7	-0.3
EDPN	Palmar Norte	1.40	152	eP	Pn	17 24 23.7	-0.3
LAPC	Finca la Perla	1.40	294	⇓iP	Pn	17 24 23.3	-0.9
GBS3	Finca Las Img	1.43	294	⇓iP	Pn	17 24 23.6	-0.8
GRZA	Playa Garza	1.51	259	⇓eP	Pn	17 24 23.9	-1.6
HZTE	Horizontes, Gu	1.53	290	⇓eP	Pn	17 24 25.1	-0.6
HZTE				eS	Sn	17 24 45.9	+0.7
SAJU	San Juanillo,	1.56	265	⇓eP	Pn	17 24 24.7	-1.4
CNI2	El Empalme, Bo	1.81	115	eS	Sn	17 24 51.0	-0.6
BRU2	Volcan	1.99	134	⇑eP	Pn	17 24 30.9	-1.1
BRU2	Volcan	1.99	134	eP	Pn	17 24 31.1	-0.8
BRU2				eS	Sn	17 24 55.5	-0.7
ESPN	Las Esperanzas	1.99	355	⇑eP	Pn	17 24 31.2	-0.6
BC3P	Paso Ancho	2.03	132	eP	Pn	17 24 33.9	+1.3
BC3P				eS	Sn	17 24 57.4	0.0
ACON	Acoyapa	2.04	330	eP	Pn	17 24 31.8	-0.6
BCO2	Palmira	2.16	133	⇑eP	Pn	17 24 32.4	-1.8
BCO2				eS	Sn	17 24 59.8	-0.4
LNBQ3	Los Naranjos,	2.17	130	eP	Pn	17 24 34.4	0.0
LNBQ3				eS	Sn	17 25 00.9	+0.2
CHGR2	Aguacate	2.32	122	eP	Pn	17 24 37.4	+1.1
CHGR2				eS	Sn	17 25 05.3	+1.3
PTPM	Petroterminale	2.33	148	eP	Pn	17 24 37.3	+0.9
PTPM				eS	Sn	17 25 06.6	+2.4
DVD	David	2.41	136	eS	Sn	17 25 05.9	-0.1
LIMO3	Limones	2.43	149	eP	Pn	17 24 38.2	+0.5
LIMO3				eS	Sn	17 25 09.6	+3.1
LOMA3	Las Lomas, Chi	2.45	135	eS	Sn	17 25 07.8	+0.7

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*IDC **24** 17:26:27.9±1.9, 34°.81N×138°.40E, h0^{km}, mb3.4/2, mb1 3.6/2, mb1mx3.2/29, mbtmp3.4/2, Error ellipse: s-maj=80.7km s-min=21.4km az=86.0*
*JMA **24** 17:26:31.3±0.1, 35°.67N×140°.00E, h65^{km}±2^{km}, M2.9*
ISC 24 17:26:31.0±1.0, **35°.61N**±0°.04×**140°.03E**±0°.05, **h75**^{km}±8^{km}, **n16**, σ**1^{s}08**/27, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCN	Nagara	0.23	143	P	Pn	17 26 42.7	+0.3
JCN				S	Sn	17 26 51.5	+0.8
JSMT	Sammumatsuo	0.34	84	P	Pn	17 26 43.0	0.0
JOD2	Odawara 2	0.84	246	P	Pn	17 26 47.7	-0.2
JOD2				S	Sn	17 26 59.6	-0.9
BSO3	Boso 3	0.90	154	P	Pn	17 26 48.1	-0.2
BSO3				eS	Sn	17 27 02.0	+0.9
JAG	Ashikaga	0.94	330	P	Pn	17 26 48.5	-0.6
JAG				S	Sn	17 27 01.3	-1.2
JRY	Ryogami san	1.00	294	P	Pn	17 26 50.1	+0.2
JIM2	Oshima 3	1.01	209	P	Pn	17 26 49.2	-0.8
JIM2				S	Sn	17 27 03.2	-0.9
JFNN	Fujinakano	1.17	250	P	Pn	17 26 52.0	+0.1
JFNN				S	Sn	17 27 07.4	-0.2
JYN	Shimob	1.22	265	P	Pn	17 26 52.6	+0.1
JYN				S	Sn	17 27 08.8	+0.1
BSO1	Boso 1	1.23	141	P	Pn	17 26 51.7	-0.4
JIZS	Izushimoda	1.30	227	P	Pn	17 26 53.5	0.0
JIZS				S	Sn	17 27 09.8	-0.6
JKT	Katashina	1.32	332	P	Pn	17 26 53.2	-0.7
JKT				S	Sn	17 27 09.3	-1.7
MJAR	Matsushiro Arr	1.75	303	Pn	Pn	17 26 58.5	-0.9
	1.7nm,0.3s,baz=158,slow=13,SNR=56						
MJAR				Sn	Sn	17 27 24.8	+3.9
	0.9nm,0.3s,baz=150,slow=19,SNR=3.1						
MAT	Matsushiro	1.75	303	P	Pn	17 26 59.9	+0.5
MAT				eS	Sn	17 27 21.1	+0.1
MKAR	Makanchi Array	43.95	303	P	P	17 34 31.0	+0.6
	0.2nm,0.4s,baz=80,slow=10.0,SNR=1.8						
WRA	Warramunga Arr	55.51	186	P	P	17 35 58.0	-0.3
	0.5nm,0.8s,baz=360,slow=7.5,SNR=12						

NOU 24 17:39:08.2, 19°.41S×169°.19E, h156^{km}, **MLv3.2**/6, **Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	1.93	330	P	Pn	17 39 43.4	+0.5
LIFNC	LIFOU	2.28	233	P	Pn	17 39 46.9	-0.1
MARNC	Mare, Loyalty	2.33	208	P	Pn	17 39 47.7	+0.2

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*IDC **24** 17:47:36.1±0.8, 1°.42N×31°.04E, h0^{km}, mb3.7/5, mb1 3.8/7, mb1mx3.6/33, mbtmp3.7/7, ML4.3/3, MS3.2/6, Ms1 3.1/6, ms1mx2.9/36, Error ellipse: s-maj=19.5km s-min=12.0km az=98.0*
*NEIC **24** 17:47:37.9±3.0, 1°.46N±0°.08×31°.08E±0°.08, h10^{km}±1^{km}, mb4.2/4, Error ellipse: s-maj=16.9km s-min=9.2km az=310.0*
*EAF **24** 17:47:39.6±3.8, 1°.34N×31°.02E, h0^{km}±107^{km}, MD3.5*
ISC 24 17:47:37.4±0.7, **1°.41N**±0°.05×**31°.07E**±0°.05, **h10**^{km}, **n24**, σ**1^{s}89**/30, **mb4.0**/7, **MS3.1**/4, **Uganda**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIL	Kilembe	1.61	221	eP	Pn	17 48 05.3	-0.7
KIL				eS	Sn	17 48 25.3	-1.6
MBAR	Mbarara	2.03	189	Pn	Pn	17 48 12.5	+0.7
	534nm,0.3s,baz=356,slow=23,SNR=414						
MBAR				Pg	Pb	17 48 14.1	-0.4
	534nm,0.3s,baz=0.0,slow=20,SNR=310						
MBAR				Lg	Lg	17 48 39.1	
	1μm,0.3s,baz=0.7,slow=21,SNR=12						
MBAR				LR	LR	17 49 11.8	
	comp=Z,332nm,19.4s,baz=358,slow=47						
MBAR	Mbarara	2.03	189	eP	Pb	17 48 14.1	-0.4
MBAR				eS	Sn	17 48 38.3	+0.9
MBAR	Mbarara	2.03	189		Pn	17 48 12.5	+0.7
MBAR				Sn	Sn	17 48 38.2	+0.9
LODK	Lodwar	4.73	65		Pn	17 48 48.8	-0.1
LODK				Sn	Sn	17 49 41.8	-2.1
KMBO	Kilima Mbogo	6.68	112	Pn	Pn	17 49 18.4	+2.5
	0.7nm,0.3s,baz=246,slow=14,SNR=6.0						
KMBO				Pg	Pb	17 49 39.0	+5.2
	1.3nm,0.3s,baz=286,slow=18,SNR=7.0						
KMBO				Sn	Sn	17 50 32.4	+0.2
	1.0nm,0.3s,baz=246,slow=17,SNR=3.8						
KMBO				Lg	Lg	17 51 06.7	
	3.5nm,0.3s,baz=184,slow=22,SNR=5.8						
KMBO	Kilima Mbogo	6.68	112		Pn	17 49 17.6	+1.7
KMBO				Sn	Sn	17 50 32.3	+0.2
KOND	Kondoa	7.85	143	iP	Pn	17 49 32.8	+0.8
KOND				e		17 49 34.0	
	baz=290,slow=5.6						
KOND				iS	Sn	17 50 53.6	-7.5
KIBK	Kibwezi	7.91	118		Pn	17 49 34.0	+1.3
KIBK				Sn	Sn	17 50 59.0	-3.4
LSZ	Lusaka	16.83	190	Pn	P	17 51 35.5	0.0
	0.3nm,0.3s,baz=18,slow=12,SNR=3.9						
LSZ				Sn	Sn	17 54 42.3	+1.7
	0.2nm,0.3s,baz=68,slow=18,SNR=1.4						
LSZ				Lg	Lg	17 56 14.8	
	0.3nm,0.3s,baz=112,slow=17,SNR=3.6						
LSZ				LR	LR	17 58 03.4	
	comp=Z,95nm,18.2s,baz=348,slow=37						
LSZ	Lusaka	16.83	190	IAmb	IAmb	17 51 38.8	
	comp=Z,8.1nm,1.2s						
TSUM	Tsumeb	24.40	212	LR	LR	18 02 39.8	
	comp=Z,30nm,18.7s,baz=64,slow=37						
LBTB	Lobatse	26.80	191	LR	LR	18 03 52.7	
	comp=Z,55nm,19.9s,baz=20,slow=36						
BOSA	Boshof	30.37	190	LR	LR	18 06 16.0	
	comp=Z,50nm,18.4s,baz=12,slow=37						
TORD	Torodi Ar. Bea	31.33	293	P	P	17 53 58.0	-0.3
	comp=Z,0.6nm,1.0s,baz=110,slow=8.8,SNR=2.1						
TORD				PcP	PcP	17 56 53.0	+0.4
	comp=Z,0.5nm,0.6s,baz=120,slow=4.7,SNR=2.6						
MK31	Makanchi Array	63.38	37	P	P	17 58 08.0	+0.9
MK31				IAmb	IAmb	17 58 27.8	
	comp=Z,2.9nm,1.2s						
MKAR	Makanchi Array	63.38	37	P	P	17 58 07.7	+0.5
	comp=Z,0.7nm,0.6s,baz=240,slow=6.7,SNR=4.9						
MKAR	Makanchi Array	63.38	37	P	P	17 58 07.3	+0.1
ARCES	ARCESS Array B	68.11	358	P	P	17 58 36.9	-0.3
	comp=Z,21nm,1.5s,baz=144,slow=6.7,SNR=3.6						
ZALV	Zalesovo Beam	68.33	31	P	P	17 58 38.6	-0.2
	comp=Z,0.6nm,0.5s,baz=243,slow=6.5,SNR=4.7						
ZALV	Zalesovo Beam	68.33	31	P	P	17 58 37.6	-1.3
CMAR	Chiang Mai Arr	68.58	71	P	P	17 58 42.0	+0.9
	comp=Z,0.6nm,0.8s,baz=252,slow=6.0,SNR=4.5						
MAW	Mawson	72.37	168	LR	LR	18 29 21.0	
	comp=Z,15nm,19.0s,baz=236,slow=35						
SONM	Songino Array	79.12	42	P	P	17 59 43.1	+0.6
	comp=Z,0.3nm,0.7s,baz=260,slow=4.2,SNR=2.1						

DJA 24 17:54:26.8±0.6, **0°N**±4°×**12°7E**±°, **h128**^{km}±8^{km}, **M3.6**/8, **mB4.5**/1, **mb3.9**/1, **MLv3.5**/8, **Mw(mB)3.7**/1, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	0.42	26	P	Pn	17 54 49.1	+3.9
LBMI	Labuha	1.07	163	P	Pn	17 54 51.3	+1.1
LBMI				S	Sn	17 55 06.9	-1.1
SANI	Sanana	2.70	206	P	Pn	17 55 08.8	-0.7
KMSI	Cibinong	3.20	273	P	Pn	17 55 30.8	+15
AAI	Ambon	4.17	166	P	Pn	17 55 28.9	0.0
SWI	Sorong	4.26	107	P	Pn	17 55 28.0	-2.1
APSI	Ampana	5.68	257	P	Pn	17 55 50.5	+1.5

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*NEIC **24** 18:10:05.0±2.1, 10°.67S±0°.08×71°.1W±0°.1, h596^{km}±7^{km}, mb4.3/21, Error ellipse: s-maj=16.1km s-min=9.4km az=122.0*
*IDC **24** 18:10:06.6±1.5, 10°.51S×70°.97W, h614^{km}±18^{km}, mb3.0/8, mb1 3.2/11, mb1mx3.0/33, mbtmp4.0/11, Error ellipse: s-maj=24.1km s-min=14.3km az=40.0*
*VAO **24** 18:10:07.3±0.8, 10°.48S×70°.95W, h587^{km}±7^{km}, mb4.0*
ISC 24 18:10:05.0±0.5, **10°.73S**±0°.06×**71°.12W**±0°.07, **h602**^{km}, **n68**, σ**1^{s}32**/74, **mb3.9**/16, **Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CZSB	Cruzeiro do Su	3.37	332	eP	P	18 11 26.5	-0.1
CZSB	Cruzeiro do Su	3.37	332	P	P	18 11 26.1	-0.5
ETMB	Extrema	4.91	80	eP	P	18 11 38.1	+0.8
ETMB	Extrema	4.91	80	P	P	18 11 37.9	+0.6
ETMB				S	S	18 12 52.0	-0.7
NNA	Nana	5.75	257	P	P	18 11 41.5	-2.8
PB16	IPOC Station P	7.72	169	P	P	18 12 03.5	+1.1
PB16				S	S	18 13 37.4	-1.1
PB12	IPOC Station P	7.88	175	P	P	18 12 03.7	+0.4
PB12				S	S	18 13 37.0	-3.2
SAML	Samuel	8.01	78	P	P	18 12 04.8	+0.2
ATAH	Atahualpa	8.03	296	P	P	18 12 07.8	+2.6
	0.9nm,0.3s,baz=50,slow=6.2,SNR=6.8						
ATAH				S	S	18 13 47.3	+3.8
	0.3nm,0.3s,baz=102,slow=17,SNR=3.8						
PB11	IPOC Station P	9.09	171	P	P	18 12 16.7	+1.6
PB11				S	S	18 14 00.2	-1.5
PB08	IPOC Station P	9.55	169	P	P	18 12 20.6	+0.9
PB08				S	S	18 14 10.0	-0.3
TA01	Diego Aracena	9.82	175	P	P	18 12 23.5	+1.5
PB01	IPOC Station P	10.38	172	P	P	18 12 28.6	+0.9
VILB	Vilhena	10.91	103	eP	P	18 12 34.1	+1.1
VILB	Vilhena	10.91	103	P	P	18 12 32.2	-0.8
SIV	San Ignacio	11.08	119	P	P	18 12 35.9	+1.3
	3.3nm,0.3s,baz=294,slow=9.4,SNR=29						
SIV				S	S	18 14 38.6	+1.1
	0.1nm,0.3s,baz=299,slow=15,SNR=1.4						
PB09	IPOC Station P	11.15	171	P	P	18 12 35.7	+0.3
LVC	Limon Verde	12.00	170	P	P	18 12 44.8	+0.7
PTLB	Pontes e Lacer	12.57	113	eP	P	18 12 50.8	+1.2
PTLB	Pontes e Lacer	12.57	113	P	P	18 12 49.8	+0.2
MACA	Manacapuru-AM	12.79	55	eP	P	18 12 50.9	-0.8
MACA	Manacapuru-AM	12.79	55	P	P	18 12 51.0	-0.8
PDRB	Porto dos Gac	14.14	95	eP	P	18 13 05.6	+0.3
PTGA	Pitinga	14.88	49	P	P	18 13 11.1	-1.0
	1.9nm,0.3s,baz=332,slow=22,SNR=8.5						
CLDB	Colider	15.05	92	eP	P	18 13 14.5	+0.8
SALV	Santo Antonio	15.86	111	eP	P	18 13 23.4	+2.3
NPGB	Novo Progresso	15.99	78	eP	P	18 13 22.8	+0.5
ITTB	Itaituba	16.50	69	eP	P	18 13 27.7	+0.7
BOAV	Boa Vista	16.77	40	eP	P	18 13 29.6	+0.2
BOAV	Boa Vista	16.77	40	P	P	18 13 30.5	+1.1
PP1B	Ponte de Pedra	17.15	115	eP	P	18 13 35.9	+3.0
ZARC	Zaragoza, Cauc	18.48	348	P	P	18 13 43.4	-1.7
MALB	Monte Alegre	18.91	63	eP	P	18 13 49.8	+0.8
SNDB	Serra Nova Dou	19.47	96	eP	P	18 13 55.8	+1.7
SDV	Santo Domingo	19.49	1	eP	P	18 13 55.1	+0.7
BAUV	El Baul	19.78	9	P	P	18 13 58.1	+1.3
BAUV				IAmb	IAmb	18 13 58.4	
	comp=Z,7.7nm,1.0s						
MOTC	Monteria, Cord	19.90	347	P	P	18 13 57.7	-0.1
MOTC				IAmb	IAmb	18 14 25.0	
	comp=Z,18nm,1.6s						
BIRV	Birongo	21.61	13	P	P	18 14 11.9	-1.3
TXAR	Lajitas Array	50.72	323	P	P	18 18 11.2	+0.3
	comp=Z,0.1nm,0.3s,baz=166,slow=11,SNR=2.8						
S44A	Carbondale	51.08	341	P	P	18 18 12.1	-1.2
T42A	Van Buren	51.08	339	P	P	18 18 11.0	-2.3
T42A				IAmb	IAmb	18 18 20.8	
	comp=Z,9.2nm,1.4s						
SIUC	Southern Illin	51.09	342	P	P	18 18 12.2	-1.1
FVM	French Village	51.72	341		P	18 18 17.0	-0.9
FVM				IAmb	IAmb	18 18 17.8	
	comp=Z,13nm,0.7s						
N53A	Lisbon	52.06	351	P	P	18 18 19.6	-0.6
N53A				IAmb	IAmb	18 18 41.9	
	comp=Z,26nm,1.6s						
S39A	Bolivar	52.47	338	P	P	18 18 21.8	-1.5
S39A				IAmb	IAmb	18 18 23.1	
	comp=Z,6.7nm,1.1s						
M53A	WI Miller and	52.65	351	P	P	18 18 23.9	-0.5
M53A				IAmb	IAmb	18 18 41.3	
	comp=Z,14nm,1.1s						
SFIN	Lafayette	52.96	345	P	P	18 18 24.4	-2.2
SFIN				IAmb	IAmb	18 18 25.0	
	comp=Z,5.9nm,0.6s						
T35A	Sooner Cattle	53.06	335	P	P	18 18 25.4	-2.1
T35A				IAmb	IAmb	18 18 43.7	
	comp=Z,9.5nm,1.1s						
D62A	Allapoint, All	57.58	2	P	P	18 18 58.0	-0.4
D62A				IAmb	IAmb	18 19 14.0	
	comp=Z,37nm,1.6s						
SDCO	Great Sand Dun	57.98	328	P	P	18 19 02.0	+0.2
DRLN	Deer Lake	60.91	10	P	P	18 19 19.2	-1.4
PDAR	Pinedale Array	63.79	329	P	P	18 19 38.8	-0.8
	comp=Z,0.4nm,0.4s,baz=112,slow=8.8,SNR=4.7						
DBIC	Dimbokro	68.18	78	P	P	18 20 06.8	-0.3
	comp=Z,1.1nm,0.4s,baz=273,slow=7.7,SNR=1.5						
PLID	Pearl Lake	68.73	328	P	P	18 20 09.9	-0.2
GDXM	Geysers	68.86	319	P	P	18 20 11.1	+0.3
BMO	Blue Mountains	69.27	327	P	P	18 20 13.4	+0.2
SNAA	Sanae	73.11	162	P	P	18 20 36.7	+1.6
	comp=Z,0.7nm,0.6s,baz=2.5,slow=2.5,SNR=10						
TORD	Torodi Ar. Bea	76.05	74	P	P	18 20 52.3	-0.1
	comp=Z,1.2nm,0.3s,baz=245,slow=4.8,SNR=17						
TORD	Torodi Ar. Bea	76.05	74	IAmb	IAmb	18 20 52.6	
	comp=Z,1.2nm,0.8s						
QSPA	South Pole Qui	79.40	180	P	P	18 21 11.3	+1.7
	comp=Z,0.7nm,0.7s,baz=24,slow=4.5,SNR=2.5						
YKA	Yellowknife Ar	80.37	341	P	P	18 21 14.3	-0.2
	comp=Z,1.2nm,0.7s,baz=129,slow=6.2,SNR=7.6						
ILAR	Eielson Array	93.64	335	P	P	18 22 17.3	-0.5
	comp=Z,0.4nm,1.1s,baz=133,slow=5.3,SNR=1.8						
ZALV	Zalesovo Beam	132.81	19	PKP	PKPdf	18 28 12.6	+0.1
	comp=Z,0.8nm,0.5s,baz=355,slow=2.9,SNR=4.6						
ASAR	Alice Springs	137.96	215	PKP	PKPdf	18 28 23.5	+0.4
	comp=Z,0.2nm,0.5s,baz=149,slow=1.8,SNR=1.7						
WRA	Warramunga Arr	140.54	220	PKP	PKiKP	18 28 30.2	-0.4
	comp=Z,0.4nm,0.3s,baz=145,slow=1.1,SNR=6.4						
WRA	Warramunga Arr	140.54	220		PKPdf	18 28 26.1	-1.7
SONM	Songino Array	142.95	3	PKP	PKPdf	18 28 30.1	-1.4
	comp=Z,0.6nm,0.4s,baz=314,slow=3.1,SNR=8.0						
KSRS	Korea Array	148.35	330	PKPbc	PKPbc	18 28 45.3	+0.3
	comp=Z,1.3nm,0.9s,baz=12,slow=2.0,SNR=4.6						

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*ATH **24** 18:15:59.1, 38°.37N×20°.45E, h13^{km}±1^{km}, ML2.8/10, Error ellipse: s-maj=2.2km s-min=0.6km az=278.0*
*THE **24** 18:15:59.2, 38°.37N×20°.45E, h11^{km}±1^{km}, ML2.7/8, Error ellipse: s-maj=1.2km s-min=0.3km az=269.0*
ISC 24 18:15:58.6±0.8, **38°.37N**±0°.02×**20°.43E**±0°.03, **h16**^{km}±5^{km}, **n53**, σ**0^{s}61**/80, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEF4	Livadi, Kephal	0.11	183	P	Pg	18 16 02.1	-0.1
KEF4				S	Sg	18 16 04.5	+0.1
KEF4	Livadi, Kephal	0.11	183	P	Pg	18 16 02.1	-0.1
KEF4				S	Sg	18 16 04.6	+0.1
FSK	Fiskardo	0.13	50	P	Pg	18 16 02.0	-0.4
FSK				S	Sg	18 16 04.2	-0.7
	4μm,0.3s						
FSK	Fiskardo	0.13	50	P	Pg	18 16 02.0	-0.4
FSK				S	Sg	18 16 04.3	-0.5
FSK				AML	AML	18 16 04.5	
	comp=N,8616μm,0.5s						
FSK				AML	AML	18 16 08.1	
	comp=E,8572μm,0.2s						
DMLN	Damoulianata-K	0.14	199	P	Pg	18 16 02.6	+0.1
DMLN				S	Sg	18 16 05.5	+0.5
	comp=E,6μm,0.2s						
DMLN	Damoulianata-K	0.14	199	P	Pg	18 16 02.6	+0.1
DMLN				S	Sg	18 16 05.6	+0.5
LXRA	Lixouri, Kepha	0.17	179	P	Pg	18 16 03.2	+0.3
LXRA				S	Sg	18 16 06.6	+0.9
LXRA				AML	AML	18 16 06.9	
	comp=E,56596μm,0.2s						
LXRA				AML	AML	18 16 07.3	
	comp=N,33552μm,0.2s						
KEF3	Kipouria, Keph	0.18	201	P	Pg	18 16 02.8	-0.2
KEF3				S	Sg	18 16 06.0	0.0
KEF3	Kipouria, Keph	0.18	201	P	Pg	18 16 02.8	-0.2
KEF3				S	Sg	18 16 05.8	-0.2
VLS	Valsamata	0.23	147	P	Pg	18 16 03.7	-0.1
VLS				S	Sg	18 16 07.0	-0.3
	comp=N,4μm,0.2s						
VLS	Valsamata	0.23	147	P	Pg	18 16 03.7	-0.1
VLS				S	Sg	18 16 07.0	-0.3
VLS				AML	AML	18 16 07.7	
	comp=E,8290μm,0.3s						
VLS				AML	AML	18 16 07.8	
	comp=N,6502μm,0.2s						
PSDA	Pessada-Kefalo	0.28	155	P	Pg	18 16 04.8	+0.1
PSDA				S	Sg	18 16 09.4	+0.6
PSDA	Pessada-Kefalo	0.28	155	P	Pg	18 16 04.8	+0.1
PSDA				S	Sg	18 16 09.4	+0.6
EVGI	Lefkada island	0.30	35	P	Pg	18 16 05.2	+0.1
EVGI				S	Sg	18 16 10.2	+0.7
	comp=N,4μm,0.1s						
EVGI	Lefkada island	0.30	35	P	Pg	18 16 05.1	+0.1
EVGI				S	Sg	18 16 10.1	+0.6
DRAG	Dragano-Lefkad	0.33	20	P	Pg	18 16 05.7	+0.2
DRAG				S	Sg	18 16 11.0	+0.7
DRAG	Dragano-Lefkad	0.33	20	P	Pg	18 16 05.5	0.0
DRAG				S	Sg	18 16 10.7	+0.4
NYDR	Nydri-Lefkada	0.40	31	P	Pg	18 16 06.7	-0.1
NYDR				S	Sg	18 16 12.4	+0.1
	comp=N,1μm,0.2s						
NYDR	Nydri-Lefkada	0.40	31	P	Pg	18 16 06.7	-0.1
NYDR				S	Sg	18 16 12.3	+0.1
LKD2	Lefkada island	0.45	23	P	Pg	18 16 07.7	0.0
LKD2				S	Sg	18 16 14.6	+0.7
	comp=N,470nm,0.4s						
LKD2	Lefkada island	0.45	23	P	Pg	18 16 07.6	-0.1
LKD2				S	Sg	18 16 14.6	+0.7
LKD2				AML	AML	18 16 19.5	
	comp=N,1083μm,0.3s						
LKD2				AML	AML	18 16 19.7	
	comp=E,938μm,0.3s						
TSLK	Tsoukalades, L	0.48	21	P	Pg	18 16 08.5	+0.2
TSLK				S	Sb	18 16 15.9	+0.1
	comp=E,655nm,0.3s						
TSLK	Tsoukalades, L	0.48	21	P	Pg	18 16 08.3	0.0
TSLK				S	Sg	18 16 15.2	+0.3
TSLK				AML	AML	18 16 18.0	
	comp=E,1780μm,0.3s						
TSLK				AML	AML	18 16 21.1	
	comp=N,1566μm,0.4s						
LTHK	Lithakia	0.73	154	P	Pg	18 16 12.7	-0.3
LTHK				S	Sb	18 16 24.2	+1.3
	comp=N,1μm,0.2s						
LTHK	Lithakia	0.73	154	P	Pg	18 16 12.4	-0.5
LTHK				AML	AML	18 16 25.6	
	comp=E,1638μm,0.3s						
LTHK				AML	AML	18 16 25.7	
	comp=N,3438μm,0.2s						
VTN	Vitineika	0.75	127	P	Pg	18 16 13.3	+0.1
RLS	Riolos of Patr	0.87	111	P	Pg	18 16 15.2	-0.4
PVO	Paravola	0.89	74	P	Pg	18 16 16.1	+0.2
PVO	Paravola	0.89	74	P	Pg	18 16 16.1	+0.2
PVO				AML	AML	18 16 32.5	
	comp=N,1252μm,0.5s						
PVO				AML	AML	18 16 34.0	
	comp=E,907μm,0.5s						
DRO	Drossia	1.09	112	P	Pb	18 16 19.0	-0.2
DRO	Drossia	1.09	112	P	Pb	18 16 18.8	-0.4
DRO				AML	AML	18 16 42.4	
	comp=N,1148μm,0.5s						
DRO				AML	AML	18 16 47.3	
	comp=E,1172μm,0.7s						
EFP	Efpalio	1.16	87	P	Pb	18 16 20.1	-0.3
EFP	Efpalio	1.16	87	P	Pb	18 16 20.0	-0.3
EFP				AML	AML	18 16 43.7	
	comp=N,609μm,0.5s						
EFP				AML	AML	18 16 44.0	
	comp=E,1020μm,0.5s						
ANX	Ano Chora	1.19	79	P	Pb	18 16 21.2	+0.3
ANX	Ano Chora	1.19	79	P	Pb	18 16 21.2	+0.3
ANX				AML	AML	18 16 45.1	

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
	comp=N,1180μm,0.5s						
ANX				AML	AML	18 16 46.4	
	comp=E,831μm,0.5s						
LAKA	**Lakka**	**1.22**	**96**	P	**Pn**	**18 16 21.1**	**-0.1**
SERG	**Sergoula**	**1.28**	**88**	P	**Pn**	**18 16 21.9**	**0.0**
SERG	**Sergoula**	**1.28**	**88**	P	**Pn**	**18 16 21.6**	**-0.3**
KLV	**Kalavryta, Ach**	**1.39**	**103**	P	**Pn**	**18 16 23.9**	**+0.4**
KLV	**Kalavryta, Ach**	**1.39**	**103**	P	**Pn**	**18 16 23.9**	**+0.4**
GUR	**Goura**	**1.57**	**106**	P	**Pn**	**18 16 26.8**	**+0.9**
GUR	**Goura**	**1.57**	**106**	P	**Pn**	**18 16 26.9**	**+0.9**
PYL	**PYLOS**	**1.80**	**144**	P	**Pb**	**18 16 31.0**	**-0.3**
DBRK	**Dubrovnik**	**4.63**	**339**	*e*Pn	**Pn**	**18 17 08.7**	**+0.7**
DBRK				Sn	**Sn**	**18 18 01.1**	**-0.4**
STON	**Ston**	**4.95**	**336**	*e*Pn	**Pn**	**18 17 12.8**	**+0.5**
STON				Sn	**Sn**	**18 18 07.9**	**-1.4**
LSTV	**Lastovo**	**5.15**	**330**	*e*Pn	**Pn**	**18 17 15.2**	**+0.1**
MAKA	**Makarska**	**5.55**	**333**	*e*Pn	**Pn**	**18 17 21.4**	**+0.9**
HVAR	**Hvar**	**5.67**	**329**	*e*Pn	**Pn**	**18 17 23.0**	**+0.8**
HVAR				Sn	**Sn**	**18 18 24.0**	**-3.1**
RICI	**Ricice**	**5.69**	**335**	*e*Pn	**Pn**	**18 17 23.0**	**+0.5**
ZIRJ	**Zirje**	**6.40**	**327**	*e*Pn	**Pn**	**18 17 32.2**	**0.0**
MORI	**Morici**	**6.54**	**328**	*e*Pn	**Pn**	**18 17 35.1**	**+0.9**
DUGI	**Dugi Otok**	**6.92**	**326**	*e*Pn	**Pn**	**18 17 40.1**	**+0.7**
NVLJ	**Novalja**	**7.46**	**328**	*e*Pn	**Pn**	**18 17 48.1**	**+1.3**

*IDC **24** 18:17:55.2±1.3, 5°.61S×147°.66E, h146km±11km, mb4.0/11, mb1 4.1/14, mb1mx4.0/30, mbtmp4.4/14, Error ellipse: s-maj=19.4km s-min=9.0km az=101.0*

*NEIC **24** 18:17:57.1±2.5, 5°.63S±0°.07×147°.54E±0°.06, h157km±5km, mb4.7/44, Error ellipse: s-maj=10.4km s-min=8.0km az=171.0*

*DJA **24** 18:17:58.3±0.4, 6°S±4°×14°7E±°, h136km±7km, M4.7/12, mB5.0/4, mb4.7/12, MLv4.8/3, Mw(mB)4.4/4*

ISC 24 18:17:57.8±0.4**, 5°.66S**±0°.05×**147°.54E**±0°.06**, h170**km**, n126, σ1s.35**/133**, mb4.6**/55**, 1D, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
PMG	**Port Moresby**	**3.74**	**186**	P	**Pn**	**18 18 54.5**	**-0.9**
	56nm,0.3s,baz=330,slow=6.7,SNR=199						
PMG				S	**Sn**	**18 19 36.8**	**-3.5**
	74nm,0.3s,baz=208,slow=20,SNR=18						
PMG	**Port Moresby**	**3.74**	**186**	P	**Pn**	**18 18 54.8**	**-0.6**
PMG	**Port Moresby**	**3.74**	**186**	P	**Pn**	**18 18 54.9**	**-0.5**
RABL	**Rabaul**	**4.83**	**73**		**Pn**	**18 19 09.6**	**+0.2**
JAY	**Jayapura**	**7.50**	**294**	P	**Pn**	**18 19 44.3**	**-0.3**
	2.0nm,0.3s,baz=140,slow=8.2,SNR=2.2						
COEN	**Coen**	**9.30**	**207**	Pn	**Pn**	**18 20 09.3**	**+0.8**
COEN					**Sn**	**18 21 49.7**	**-2.3**
COEN	**Coen**	**9.30**	**207**	P	**Pn**	**18 20 09.2**	**+0.8**
	21nm,0.8s						
HNR	**Honiara**	**12.86**	**108**	P	**Pn**	**18 20 55.2**	**+0.6**
CTA	**Charters Tower**	**14.40**	**185**	P	**P**	**18 21 17.2**	**+1.1**
	0.4nm,0.3s,baz=8.2,slow=13,SNR=1.3						
CTAO	**Charters Tower**	**14.40**	**185**		**P**	**18 21 15.3**	**-0.8**
CTAO	**Charters Tower**	**14.40**	**185**	P	**Pn**	**18 21 14.9**	**+0.9**
FAKI	**Fak Fak**	**15.49**	**279**	P	**Pn**	**18 21 25.4**	**-2.1**
PATS	**Pohnpei**	**16.42**	**41**	P	**P**	**18 21 38.1**	**-0.3**
KDU	**Kakadu**	**16.43**	**244**	P	**P**	**18 21 38.0**	**-0.5**
	24nm,0.6s						
QIS	**Mount Isa**	**16.70**	**207**	P	**Pn**	**18 21 42.9**	**+0.8**
	37nm,0.7s						
MTN	**Manton Dam**	**17.69**	**245**	P	**P**	**18 21 52.4**	**-0.1**
MTN				IAmb	IAmb	18 21 55.4	
	comp=Z,18nm,0.5s						
MTN	**Manton Dam**	**17.69**	**245**	P	**P**	**18 21 52.8**	**+0.4**
	comp=Z,32nm,0.6s						
DRS	**Darwin Rock St**	**17.75**	**247**	P	**P**	**18 21 53.9**	**+0.8**
	comp=Z,32nm,0.7s						
WB0	**Warramunga Arr**	**18.98**	**221**	P	**P**	**18 22 07.4**	**+0.9**
WB0				IAmb	IAmb	18 22 08.5	
	comp=Z,28nm,0.8s						
WRAB	**Tennant Creek**	**19.13**	**221**	P	**P**	**18 22 08.9**	**+0.8**
WRAB				IAmb	IAmb	18 22 10.0	
	comp=Z,45nm,0.7s						
WRAB	**Tennant Creek**	**19.13**	**221**	P	**P**	**18 22 09.4**	**+1.3**
WB2	**Warramunga Arr**	**19.14**	**221**	P	**P**	**18 22 09.1**	**+1.0**
WB2				IAmb	IAmb	18 22 10.1	
	comp=Z,41nm,0.7s						
WB2					**S**	**18 25 36.0**	**-0.1**
WRA	**Warramunga Arr**	**19.14**	**221**	P	**P**	**18 22 08.8**	**+0.5**
	comp=Z,3.4nm,0.3s,baz=47,slow=11,SNR=297						
WRA				S	**S**	**18 25 37.4**	**+1.0**
	baz=39,slow=21,SNR=5.1						
WRA	**Warramunga Arr**	**19.14**	**221**	P	**P**	**18 22 07.5**	**-0.7**
EIDS	**Eidsvold**	**19.89**	**171**	P	**P**	**18 22 18.3**	**+2.1**
RMQ	**Roma**	**20.75**	**177**	P	**P**	**18 22 27.3**	**+2.0**
	comp=Z,30nm,0.7s						
KNRA	**Kununurra**	**20.95**	**240**	P	**P**	**18 22 27.0**	**-0.6**
KNRA	**Kununurra**	**20.95**	**240**	P	**P**	**18 22 26.7**	**-0.9**
	comp=Z,56nm,0.9s						
QLP	**Quilpie**	**21.05**	**188**	P	**P**	**18 22 29.7**	**+1.2**
	comp=Z,50nm,0.7s						
AS31	**Alice Springs**	**22.20**	**215**	P	**P**	**18 22 41.5**	**+0.9**
AS31				IAmb	IAmb	18 22 42.4	
	comp=Z,12nm,0.5s						
AS31					**S**	**18 26 36.8**	**+4.1**
ASAR	**Alice Springs**	**22.20**	**215**	P	**P**	**18 22 41.8**	**+1.2**
	comp=Z,23nm,0.5s,baz=48,slow=8.7,SNR=1248						
ASAR				S	**S**	**18 26 38.0**	**+5.3**
	comp=Z,6.4nm,0.9s,baz=31,slow=22,SNR=22						
ASAR				ScP	**ScP**	**18 29 53.2**	**+0.8**
	comp=Z,0.4nm,0.8s,baz=20,slow=3.0,SNR=2.9						
ASAR	**Alice Springs**	**22.20**	**215**	P	**P**	**18 22 41.4**	**+0.8**
ASAR					**S**	**18 26 36.9**	**+4.1**
INKA	**Innaminka**	**22.89**	**196**	P	**P**	**18 22 48.0**	**+1.2**
	comp=Z,61nm,0.9s						
SOEI	**Soe**	**23.42**	**259**	P	**P**	**18 22 49.7**	**-2.2**
BATI	**Baumata**	**24.07**	**258**	P	**P**	**18 22 59.1**	**+1.4**
	comp=Z,38nm,0.7s,baz=140,slow=1.3,SNR=20						
BATI	**Baumata**	**24.07**	**258**	P	**P**	**18 22 59.8**	**+2.0**
	comp=Z,30nm,0.7s						
KMSI	**Cibinong**	**24.33**	**284**	P	**P**	**18 23 02.9**	**+2.8**
DZM	**Mont Dzumac**	**24.50**	**134**	P	**P**	**18 23 02.3**	**+0.6**
DZM				IAmb	IAmb	18 23 07.4	
	comp=Z,28nm,1.4s						
FITZ	**Fitzroy Crossi**	**24.70**	**238**	P	**P**	**18 23 03.9**	**+0.5**
	comp=Z,29nm,0.8s,baz=59,slow=9.2,SNR=160						
OOD	**Oodnadatta**	**24.73**	**206**	P	**P**	**18 23 04.4**	**+0.8**
ARMA	**Armidale**	**24.93**	**172**	P	**P**	**18 23 05.3**	**-0.2**
ARMA				IAmb	IAmb	18 23 09.6	
	comp=Z,8.1nm,0.8s						
PINNC	**Pines Island,**	**25.57**	**133**	P	**P**	**18 23 07.8**	**-3.4**
	comp=Z,60nm,1.1s						
EDFI	**Ende, Flores**	**25.83**	**262**	P	**P**	**18 23 12.0**	**-1.8**
LCRK	**Leigh Creek**	**26.18**	**198**	P	**P**	**18 23 17.8**	**+1.2**
	comp=Z,17nm,0.8s						
STKA	**Stephens Creek**	**26.67**	**191**	P	**P**	**18 23 21.9**	**+0.9**
	comp=Z,1.5nm,0.6s,baz=32,slow=14,SNR=7.4						
STKA	**Stephens Creek**	**26.67**	**191**	P	**P**	**18 23 21.0**	**-0.1**
WRKA	**Warakurna**	**26.68**	**222**	P	**P**	**18 23 21.2**	**-0.1**
	comp=Z,16nm,0.6s						
TOLI2	**Tolitoli**	**27.56**	**283**	P	**P**	**18 23 27.9**	**-1.3**
MULG	**Mulgathing**	**27.59**	**206**	P	**P**	**18 23 29.8**	**+0.6**
	comp=Z,15nm,2.4s						
BBOO	**Buckleboo**	**29.06**	**200**	P	**P**	**18 23 40.7**	**-1.5**
BBOO				IAmb	IAmb	18 23 42.7	
	comp=Z,24nm,1.4s						
CAN	**Canberra**	**29.55**	**178**	P	**P**	**18 23 47.9**	**+1.3**
CAN				IAmb	IAmb	18 24 26.6	
	comp=Z,29nm,1.6s						
PLAI	**Plampang**	**29.69**	**262**	P	**P**	**18 23 46.6**	**-1.4**
FORT	**Forrest**	**30.98**	**214**	P	**P**	**18 23 59.7**	**+0.5**
FORT				IAmb	IAmb	18 24 12.3	
	comp=Z,43nm,1.4s						
FORT	**Forrest**	**30.98**	**214**	P	**P**	**18 23 59.7**	**+0.5**
	comp=Z,28nm,1.6s						
MBWA	**Marble Bar**	**31.05**	**238**	P	**P**	**18 24 00.0**	**+0.1**
PSA00	**Pilbara Seismi**	**31.13**	**237**	P	**P**	**18 24 00.2**	**-0.5**
PSA00				IAmb	IAmb	18 24 01.8	
	comp=Z,5.1nm,0.8s						
PSA00	**Pilbara Seismi**	**31.13**	**237**	P	**P**	**18 24 00.7**	**+0.1**
PSA00				IAmb	IAmb	18 24 01.4	
	comp=Z,12nm,0.7s						
PSA00	**Pilbara Seismi**	**31.13**	**237**	P	**P**	**18 24 00.5**	**-0.2**
	comp=Z,20nm,0.9s						
ARPS	**Mount Arapiles**	**31.40**	**189**	P	**P**	**18 24 04.5**	**+1.7**
	comp=Z,14nm,0.8s						
JAGI	**Jajag, Banyuwa**	**33.25**	**263**	P	**P**	**18 24 16.3**	**-2.9**
	comp=Z,8.3nm,0.8s						
MEEK	**Meekatharra**	**34.59**	**230**	P	**P**	**18 24 30.8**	**+0.1**
	comp=Z,31nm,0.8s						
MORW	**Morawa**	**37.80**	**228**	P	**P**	**18 24 58.3**	**+0.4**
MORW				IAmb	IAmb	18 24 59.5	
	comp=Z,32nm,1.4s						
MORW	**Morawa**	**37.80**	**228**	P	**P**	**18 24 58.0**	**+0.1**
	comp=Z,18nm,2.4s						
KLBR	**Kellerberrin**	**37.99**	**224**	P	**P**	**18 24 59.4**	**-0.1**
	comp=Z,37nm,0.7s						
BLDU	**Ballidu**	**38.16**	**226**	P	**P**	**18 25 00.8**	**-0.1**
	comp=Z,14nm,2.6s						
YULB	**Yu-li**	**38.61**	**319**	P	**P**	**18 25 04.4**	**-0.2**
YULB				IAmb	IAmb	18 25 32.9	
	comp=Z,45nm,1.3s						
NACB	**Ninganchiao**	**38.97**	**321**	P	**P**	**18 25 08.2**	**+0.5**
TPUB	**Ta-pu**	**38.98**	**319**	P	**P**	**18 25 06.8**	**-1.0**
SSLB	**Suanglung**	**39.11**	**319**	P	**P**	**18 25 08.0**	**-0.9**
MUN	**Mundaring**	**39.28**	**224**	P	**P**	**18 25 11.5**	**+1.3**
	comp=Z,18nm,1.7s						
YHNB	**Yeheng**	**39.47**	**321**	P	**P**	**18 25 12.2**	**+0.4**
TATO	**Taipei**	**39.62**	**321**	P	**P**	**18 25 13.4**	**+0.4**
JWT	**Wachi**	**42.30**	**345**	P	**P**	**18 25 35.1**	**+0.4**
MAJO	**Matsushiro**	**42.88**	**349**	P	**P**	**18 25 38.2**	**-1.2**
MAJO				IAmb	IAmb	18 25 41.7	
	comp=Z,26nm,1.3s						
MAT	**Matsushiro**	**42.88**	**349**	P	**P**	**18 25 39.2**	**-0.2**
NJ2	**Nanjing**	**46.40**	**326**	*e*P	**P**	**18 26 09.3**	**+2.0**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.7s						
JTM	**Tenmabayashi**	**46.60**	**353**	P	**P**	**18 26 09.1**	**+0.4**
KSRS	**Korea Array**	**46.63**	**338**	P	**P**	**18 26 09.4**	**+0.4**
	comp=Z,0.7nm,0.4s,baz=158,slow=9.8,SNR=2.5						
KS19	**Wonju Array Si**	**46.69**	**338**	P	**P**	**18 26 09.7**	**+0.1**
SNSI	**Sinabang, Aceh**	**51.77**	**278**	P	P	18 27 03.9	+15
CMAR	**Chiang Mai Arr**	**53.57**	**298**	P	**P**	**18 27 02.0**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=128,slow=5.8,SNR=6.1						
XAN	**Xi'an**	**53.77**	**320**	P	**P**	**18 27 02.6**	**-0.3**
XAN				pP	pP	18 27 42.0	+0.8
XAN				sP	sP	18 27 58.8	-1.0
XAN				pmax	pmax		
	comp=Z,13nm,1.1s						
HHC	**Hu-ho-hao-te**	**56.83**	**328**	*e*P	**P**	**18 27 28.1**	**+3.4**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,100nm,8.5s						
LZH	**Lanzhou**	**58.31**	**319**	*e*P	**P**	**18 27 36.6**	**+1.4**
LZH				pP	pP	18 28 13.3	-0.8
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
GTA	**Gaotai**	**62.83**	**320**	*e*P	**P**	**18 28 06.6**	**+0.9**
GTA				pP	pP	18 28 45.3	0.0
GTA				sP	sP	18 29 03.0	-0.6
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ULN	**Ulaanbaatar**	**64.07**	**331**	P	**P**	**18 28 13.6**	**-0.2**
ULN				IAmb	IAmb	18 28 15.5	
	comp=Z,5.7nm,0.7s						
SONM	**Songino Array**	**64.37**	**331**	P	**P**	**18 28 16.3**	**+0.6**
	comp=Z,2.2nm,0.5s,baz=144,slow=6.0,SNR=24						
SONM	**Songino Array**	**64.37**	**331**	P	**P**	**18 28 15.9**	**+0.2**
SONM				IAmb	IAmb	18 28 18.4	
	comp=Z,3.7nm,0.9s						
TAPN	**Taplejung**	**66.42**	**303**	*e*P	**P**	**18 28 29.7**	**+0.3**
ODAN	**Odare**	**66.52**	**302**	*e*P	**P**	**18 28 29.8**	**-0.2**
	comp=Z,6.5nm,0.6s						
RAMN	**Ramite**	**67.21**	**302**	*e*P	**P**	**18 28 34.3**	**-0.1**
	comp=Z,4.4nm,0.4s						
GUN	**Gumba**	**68.13**	**303**	*e*P	**P**	**18 28 40.5**	**+0.2**
	comp=Z,12nm,0.4s						
PKI	**Pulchoki**	**68.42**	**302**	*e*P	**P**	**18 28 41.8**	**-0.2**
	comp=Z,2.8nm,0.5s						
PKIN	**Phulchoki**	**68.43**	**302**	*e*P	**P**	**18 28 41.8**	**-0.2**
	comp=Z,2.8nm,0.5s						
KKN	**Kakani**	**68.59**	**303**	*e*P	**P**	**18 28 43.0**	**0.0**
	comp=Z,5.3nm,0.6s						
DMN	**Daman**	**68.68**	**302**	*e*P	**P**	**18 28 43.8**	**+0.2**
GKN	**Gorkha**	**69.20**	**303**	*e*P	**P**	**18 28 46.5**	**-0.2**
	comp=Z,8.1nm,0.5s						
KOLN	**Koldanda**	**70.00**	**302**	*e*P	**P**	**18 28 51.2**	**-0.4**
	comp=Z,9.7nm,0.5s						
DANN	**Dangsing**	**70.05**	**303**	*e*P	**P**	**18 28 51.9**	**-0.1**
	comp=Z,7.2nm,0.4s						
PYUN	**Piuthan**	**70.62**	**302**	*e*P	**P**	**18 28 56.0**	**+0.6**
	comp=Z,9.5nm,0.4s						
VNDA	**Vanda**	**72.22**	**177**	P	**P**	**18 29 04.5**	**+0.7**
	comp=Z,1.3nm,0.5s,baz=333,slow=6.8,SNR=18						
VNDA	**Vanda**	**72.22**	**177**	P	**P**	**18 29 04.9**	**+1.1**
WMQ	**Urumqi**	**72.89**	**319**	*e*P	**P**	**18 29 10.8**	**+2.4**
MK31	**Makanchi Array**	**77.58**	**320**	P	**P**	**18 29 34.4**	**-0.8**
MKAR	**Makanchi Array**	**77.58**	**320**	P	**P**	**18 29 35.0**	**-0.1**
	comp=Z,1.6nm,0.4s,baz=98,slow=7.8,SNR=17						
MKAR	**Makanchi Array**	**77.58**	**320**	P	**P**	**18 29 34.0**	**-1.1**
MAKZ	**Makanchi**	**77.78**	**320**	P	**P**	**18 29 35.6**	**-0.7**
ZAA0	**Zalesovo Array**	**79.01**	**328**	P	**P**	**18 29 41.6**	**-1.2**
ZALV	**Zalesovo Beam**	**79.01**	**328**	P	**P**	**18 29 41.8**	**-1.0**
	comp=Z,2.3nm,0.5s,baz=109,slow=5.1,SNR=14						
ZALV	**Zalesovo Beam**	**79.01**	**328**	P	**P**	**18 29 41.7**	**-1.1**
KSH	**Kashi**	**79.55**	**312**	P	**P**	**18 29 48.1**	**+1.9**
KSH				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NIL	**Nilore**	**80.17**	**305**	P	**P**	**18 29 49.1**	**-0.4**
NIL				IAmb	IAmb	18 29 50.5	
	comp=Z,6.1nm,0.6s						
BOOM	**Boomskoye usch**	**80.42**	**315**	P	**P**	**18 29 51.1**	**+0.2**
BOOM				IAmb	IAmb	18 30 07.3	
	comp=Z,5.4nm,1.1s						
SPU	**Mount Spurr**	**81.23**	**25**	P	**P**	**18 29 54.0**	**-0.6**
KURK	**Kurchatov**	**81.26**	**323**	P	**P**	**18 29 54.6**	**-0.3**
KTH	**Kantishna Hill**	**82.83**	**23**	P	**P**	**18 30 01.7**	**-1.2**
KTH				IAmb	IAmb	18 30 31.7	
	comp=Z,34nm,1.6s						
GHO	**Glory Hole Cre**	**82.83**	**25**	P	**P**	**18 29 58.8**	**-4.1**
GHO				IAmb	IAmb	18 30 03.0	
	comp=Z,31nm,1.7s						
TRF	**Thorofare Moun**	**83.03**	**24**	P	**P**	**18 30 04.4**	**+0.3**
TRF				IAmb	IAmb	18 30 04.5	
	comp=Z,24nm,1.6s						
BWN	**Browne**	**83.69**	**23**	P	**P**	**18 30 07.0**	**-0.1**
QSPA	**South Pole Qui**	**84.31**	**180**	P	**P**	**18 30 10.7**	**+0.2**
KKAR	**Karatay Array**	**84.44**	**314**	P	**P**	**18 30 10.7**	**-0.7**
ILAR	**Eielson Array**	**84.96**	**23**	P	**P**	**18 30 12.5**	**-1.0**
	comp=Z,0.7nm,0.7s,baz=249,slow=5.0,SNR=8.2						
ILAR	**Eielson Array**	**84.96**	**23**	P	**P**	**18 30 12.2**	**-1.3**
SYO	**Syowa Base**	**91.10**	**200**	⇓*e*P	**P**	**18 30 41.6**	**-1.1**
TORD	**Torodi Ar. Bea**	**145.53**	**285**	PKPbc	**PKPbc**	**18 37 17.1**	**-0.1**
	comp=Z,3.2nm,0.6s,baz=57,slow=3.5,SNR=31						
TORD	**Torodi Ar. Bea**	**145.53**	**285**		**PKPdf**	**18 37 16.1**	**-0.7**

*IDC **24** 18:49:45.4±2.3, 4°.50S×135°.84E, h0km, mb3.7/2, mb1 3.7/4, mb1mx3.4/46, mbtmp3.6/4, ML3.3/2, MS3.0/1, Ms1 3.0/1, ms1mx2.3/31, Error ellipse: s-maj=94.7km s-min=28.7km az=78.0*

ISC 24 18:49:46.8±1.7**, 4°.8S**±0°.1×**136°.0E**±0°.2**, h10**km**, n5, σ3s.18**/7**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
WRA	**Warramunga Arr**	**15.14**	**186**	Pn	**Pn**	**18 53 18.3**	**-2.6**
	0.1nm,0.3s,baz=16,slow=13,SNR=12						
WRA				Sn	**Sn**	**18 56 05.3**	**-3.4**
	0.1nm,0.3s,baz=10,slow=24,SNR=3.6						
WRA				LR	LR	19 00 03.0	
	comp=Z,56nm,19.8s,baz=180,slow=40						
FITZ	**Fitzroy Crossi**	**16.63**	**217**	Pn	**P**	**18 53 43.5**	**+0.9**
	0.1nm,0.3s,baz=45,slow=8.6,SNR=1.8						
FITZ				Sn	**Sn**	**18 56 46.2**	**+1.2**
	0.1nm,0.3s,baz=305,slow=21,SNR=1.7						
ASAR	**Alice Springs**	**18.87**	**186**	P	**P**	**18 54 08.5**	**+1.2**
	0.2nm,0.3s,baz=15,slow=10,SNR=9.8						
STKA	**Stephens Creek**	**27.46**	**170**	P	**P**	**18 55 37.0**	**+3.9**
	0.6nm,0.4s,baz=326,slow=16,SNR=1.4						
MKAR	**Makanchi Array**	**69.80**	**324**	P	**P**	**19 00 55.8**	**-1.6**
	0.3nm,0.5s,baz=113,slow=7.9,SNR=5.6						

*MOS **24** 18:50:19.0±1.1, 44°.45N×147°.73E, h115km, mb4.4/7, Error ellipse: s-maj=12.7km s-min=12.5km az=16.4*

*NEIC **24** 18:50:19.5±1.2, 44°.3N±0°.2×147°.9E±0°.1, h111km±11km, mb4.2/11, Error ellipse: s-maj=31.0km s-min=13.5km az=170.0*

*SKHL **24** 18:50:20.9±0.4, 44°.40N×147°.50E, h117km±1km, mb4.7/5, msha5.9/3*

*JMA **24** 18:50:21.1±0.3, 44°.08N×147°.76E, h94km, M3.9*

*IDC **24** 18:50:22.5±5.1, 44°.85N×147°.71E, h113km±31km, mb3.6/12, mb1 3.7/13, mb1mx3.4/71, mbtmp4.0/13, MS2.3/1, Ms1 2.3/1, ms1mx2.0/47, Error ellipse: s-maj=74.0km s-min=28.3km az=151.0*

ISC 24 18:50:17.8±1.1**, 44°.14N**±0°.07×**147°.94E**±0°.08**, h105**km±7km**, n72, σ1s.51**/86**, mb4.1**/16**, 1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
KUR	**Kuril'sk**	**1.09**	**357**	*d i*PN	**Pn**	**18 50 40.3**	**+0.7**
KUR				*i* S	**Sn**	**18 50 54.9**	**-1.1**
KUR				pmax	pmax		
	comp=E,203nm,0.4s						
KUR				pmax	pmax		
	comp=Z,464nm,0.4s						
KUR				smax	smax		
	comp=N,2μm,0.4s						
KUR				smax	smax		
	comp=E,3μm,0.4s						
KUR	**Kuril'sk**	**1.09**	**357**	*i* P	**Pn**	**18 50 40.0**	**+0.4**
KUR				AMB	AMB	18 50 40.0	
	comp=E,464nm,0.4s						
KUR				*i* S	**Sn**	**18 50 54.0**	**-2.0**
KUR				A	A	18 50 55.0	
	comp=E,2μm,0.4s						
KUR				A	A	18 50 55.0	
	comp=E,3μm,0.4s						
YUK	**Yuzh-Kuril'sk**	**1.50**	**267**	*e*PN	**Pn**	**18 50 45.1**	**+0.7**
YUK				*e*S	**Sn**	**18 51 03.0**	**-1.5**
YUK				pmax	pmax		
	comp=Z,915nm,0.2s						
YUK				pmax	pmax		
	comp=E,52nm,0.1s						
YUK				pmax	pmax		
	comp=N,79nm,0.2s						
YUK				smax	smax		
	comp=N,1μm,0.2s						
YUK				smax	smax		
	comp=E,1μm,0.4s						
YUK	**Yuzh-Kuril'sk**	**1.50**	**267**	*e*P	**Pn**	**18 50 45.0**	**+0.7**
YUK				AMB	AMB	18 50 45.0	
	comp=E,440nm,0.4s						
YUK				*e*S	**Sn**	**18 51 03.4**	**-1.1**
YUK				A	A	18 51 05.0	
	comp=E,1μm,0.3s						
YUK				A	A	18 51 05.0	
	comp=E,2μm,0.3s						
NEM2	**Nemuro 2**	**1.77**	**245**	P	**Pn**	**18 50 49.1**	**+1.4**
NEM2				*e*S	**Sn**	**18 51 09.9**	**-0.5**
NMR	**Nemuro--Hokkai**	**1.78**	**245**	*e*PN	**Pn**	**18 50 48.9**	**+1.1**
NMR				*e*S	**Sn**	**18 51 09.9**	**-0.7**
NMR	**Nemuro--Hokkai**	**1.78**	**245**	*e*P	**Pn**	**18 50 49.2**	**+1.4**
NMR				*e*S	**Sn**	**18 51 10.2**	**-0.4**
GLVR	**Golovnino**	**1.80**	**258**	*e*PN	**Pn**	**18 50 49.3**	**+1.3**
GLVR				*e*S	**Sn**	**18 51 10.9**	**-0.1**
GLVR				pmax	pmax		
	comp=Z,412nm,0.2s						
GLVR				pmax	pmax		
	comp=N,13nm,0.1s						
GLVR				pmax	pmax		
	comp=E,17nm,0.1s						
GLVR				smax	smax		
	comp=E,1μm,0.2s						
GLVR				smax	smax		
	comp=N,1μm,0.3s						
GLVR	**Golovnino**	**1.80**	**258**	*e*P	**Pn**	**18 50 49.0**	**+1.0**
GLVR				AMB	AMB	18 50 49.0	
	comp=N,412nm,0.4s						
GLVR				*e*S	**Sn**	**18 51 10.0**	**-1.0**
GLVR				A	A	18 51 12.0	
	comp=N,1μm,0.3s						
GLVR				A	A	18 51 12.0	
	comp=N,1μm,0.3s						
RUSJ	**Misakicho**	**1.94**	**270**	*e*PN	**Pn**	**18 50 51.9**	**+2.1**
RUSJ				*e*S	**Sn**	**18 51 14.2**	**0.0**
JRA	**Rausu**	**2.04**	**265**	P	**Pn**	**18 50 52.4**	**+1.3**
JRA				*e*S	**Sn**	**18 51 16.3**	**-0.3**
JNSB	**Nemuroshibetsu**	**2.15**	**261**	P	**Pn**	**18 50 54.6**	**+2.1**
JNSB				*e*S	**Sn**	**18 51 19.8**	**+0.7**
JKHN	**Kushirohamanak**	**2.28**	**243**	P	**Pn**	**18 50 55.6**	**+1.4**
JKHN				*e*S	**Sn**	**18 51 21.7**	**-0.4**
JNK	**Nakash**	**2.40**	**258**	P	**Pn**	**18 50 57.3**	**+1.6**
JNK				*e*S	**Sn**	**18 51 24.0**	**-0.8**
AKK	**Akkeshi**	**2.52**	**245**	*e*P	**Pn**	**18 50 58.1**	**+0.8**
AKK				*e*S	**Sn**	**18 51 26.6**	**-1.0**
JAK	**Akkeshi**	**2.62**	**245**	P	**Pn**	**18 50 59.9**	**+1.3**
JAK				*e*S	**Sn**	**18 51 29.0**	**-1.0**
JTKR	**Abashiri--Toko**	**2.91**	**268**	P	**Pn**	**18 51 03.6**	**+1.1**
JTKR				*e*S	**Sn**	**18 51 36.9**	**0.0**
JAR	**Ashorobuto**	**3.14**	**256**	P	**Pn**	**18 51 07.6**	**+2.1**
JAR				*e*S	**Sn**	**18 51 43.2**	**+0.8**
JCH	**Churui**	**3.67**	**247**	P	**Pn**	**18 51 14.0**	**+1.4**
JCH				*e*S	**Sn**	**18 51 53.5**	**-1.6**
JKA	**Kamikawa-asahi**	**3.85**	**271**	*e*P	**Pn**	**18 51 17.1**	**+2.1**
JKA	**Kamikawa-asahi**	**3.85**	**271**		**Pn**	**18 51 17.1**	**+2.1**
JKA					**Sn**	**18 52 02.8**	**+3.6**
ASAJ	**Asahikawa**	**3.85**	**271**	P	**Pn**	**18 51 17.1**	**+2.1**
	comp=N,1.7nm,0.3s,baz=74,slow=11,SNR=8.7						
ASAJ				S	**Sn**	**18 52 02.8**	**+3.5**
	comp=N,0.5nm,0.3s,baz=7.9,slow=12,SNR=1.8						
ERM	**Erimo**	**4.10**	**240**	PN	**Pn**	**18 51 21.2**	**+2.8**
ERM	**Erimo**	**4.10**	**240**	Pn	**Pn**	**18 51 21.2**	**+2.8**
JNBK	**Urakawa-nobuka**	**4.23**	**246**	P	**Pn**	**18 51 20.9**	**+0.8**
YSS	**Yuzh-Sakhalins**	**4.60**	**309**	*e*P	**Pn**	**18 51 23.8**	**-1.3**
YSS				AMB	AMB	18 51 26.5	
	comp=N,10.0nm,0.6s						
JEW	**Eniwo**	**4.90**	**257**	Pn	**Pn**	**18 51 30.4**	**+1.2**
JKB	**Kayabe**	**5.54**	**248**	P	**Pn**	**18 51 38.8**	**+0.9**
JKB				*e*S	**Sn**	**18 52 36.7**	**-3.6**
JOT	**Ohata**	**5.78**	**244**	*e*S	**Sn**	**18 52 41.0**	**-4.9**
JTM	**Tenmabayashi**	**6.09**	**239**	Pn	**Pn**	**18 51 46.3**	**+1.0**
TYV	**Tymovskoe**	**7.62**	**334**	*e*P	**Pn**	**18 52 04.9**	**-1.0**
TYV				AMB	AMB	18 52 06.6	
	comp=N,20nm,0.4s						
JMM	**Marumori**	**8.28**	**223**	Pn	**Pn**	**18 52 14.8**	**-0.2**
MJAR	**Matsushiro Arr**	**10.62**	**228**	LR	LR	18 57 00.5	
	comp=N,18nm,21.7s,baz=235,slow=36						
YAK	**Yakutsk**	**20.87**	**335**	P	**P**	**18 54 47.5**	**-3.6**
	comp=N,3.9nm,0.3s,baz=135,slow=2.7,SNR=8.7						
SONM	**Songino Array**	**28.85**	**292**	P	**P**	**18 56 06.4**	**+0.2**
	comp=N,0.4nm,0.4s,baz=89,slow=8.5,SNR=7.9						
SONM	**Songino Array**	**28.85**	**292**	P	**P**	**18 56 05.3**	**-0.9**
H11N2	**WAKE ISLAND Hy**	**29.03**	**141**	T	T	19 27 15.9	
	baz=332,slow=76,SNR=34						
H11N1	**WAKE ISLAND Hy**	**29.05**	**141**	T	T	19 27 16.8	
	baz=332,slow=76,SNR=34						
H11N3	**WAKE ISLAND Hy**	**29.05**	**141**	T	T	19 27 10.5	
	baz=332,slow=76,SNR=44						
H11S1	**WAKE ISLAND Hy**	**30.02**	**142**	T	T	19 28 30.0	
	baz=333,slow=76,SNR=60						
H11S3	**WAKE ISLAND Hy**	**30.02**	**142**	T	T	19 28 23.7	
	baz=333,slow=76,SNR=52						
H11S2	**WAKE ISLAND Hy**	**30.04**	**142**	T	T	19 28 24.1	
	baz=333,slow=76,SNR=32						
MK31	**Makanchi Array**	**44.91**	**298**	P	**P**	**18 58 21.8**	**0.0**
MK31				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MK31	**Makanchi Array**	**44.91**	**298**	P	**P**	**18 58 21.8**	**0.0**
MK31				IAmb	IAmb	18 58 22.9	
	comp=Z,4.6nm,1.0s						
MKAR	**Makanchi Array**	**44.91**	**298**	P	**P**	**18 58 21.8**	**0.0**
	comp=Z,1.4nm,0.7s,baz=75,slow=7.8,SNR=8.3						
MAKZ	**Makanchi**	**45.10**	**298**	P	**P**	**18 58 22.5**	**-0.8**
MAKZ				pmax	pmax		
	comp=Z,5.0nm,1.1s						
MAKZ	**Makanchi**	**45.10**	**298**	P	**P**	**18 58 22.5**	**-0.8**
MAKZ				IAmb	IAmb	18 58 41.0	
	comp=Z,4.8nm,1.1s						
INK	**Inuvik**	**45.77**	**31**	P	**P**	**18 58 30.7**	**+2.5**
INK				pmax	pmax		
	comp=Z,5.0nm,1.4s						
INK	**Inuvik**	**45.77**	**31**	P	**P**	**18 58 30.7**	**+2.5**
INK				IAmb	IAmb	18 58 49.3	
	comp=Z,4.8nm,1.4s						
KURK	**Kurchatov**	**45.78**	**304**	P	**P**	**18 58 28.7**	**+0.1**
KURK	**Kurchatov**	**45.78**	**304**	*e*P	**P**	**18 58 28.7**	**+0.1**
KURK	**Kurchatov**	**45.78**	**304**	P	**P**	**18 58 27.1**	**-1.4**
KURK				IAmb	IAmb	18 58 28.8	
	comp=Z,6.3nm,1.5s						
KURBB	**Kurchatov Arra**	**45.87**	**304**	P	**P**	**18 58 28.7**	**-0.5**
	comp=Z,0.8nm,0.5s,baz=74,slow=8.1,SNR=7.9						
KDJ	**Kajisay**	**50.19**	**294**	P	**P**	**18 59 03.7**	**+0.9**
KDJ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KDJ	**Kajisay**	**50.19**	**294**	P	**P**	**18 59 03.7**	**+0.9**
AAK	**Ala-Archa**	**51.70**	**296**	P	**P**	**18 59 14.5**	**+0.3**

	comp=Z,0.8nm,0.4s,baz=170,slow=7.3,SNR=5.1						
AAK	Ala-Archa	51.70	296	P	P	18 59 14.5	+0.3
AAK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
AAK	Ala-Archa	51.70	296	IAmb	IAmb	18 59 32.4	
	comp=Z,4.0nm,1.4s						
KKAR	Karatay Array	54.03	298	P	P	18 59 31.4	+0.3
KKAR	Karatay Array	54.03	298	P	P	18 59 31.4	+0.3
RES	Resolute Bay	54.42	17	P	P	18 59 33.2	-0.2
	comp=Z,1.3nm,0.9s,baz=316,slow=7.0,SNR=4.2						
RES	Resolute Bay	54.42	17	P	P	18 59 33.2	-0.2
RES				pmax	pmax		
	comp=Z,2.0nm,1.1s						
ABKAR	Akbulak array	57.26	309	P	P	18 59 54.1	0.0
ABKAR	Akbulak array	57.26	309	P	P	18 59 54.0	0.0
ARCES	ARCESS Array B	59.08	340	P	P	19 00 05.2	-1.2
	comp=Z,4.0nm,0.9s,baz=47,slow=7.2,SNR=7.4						
ARCES	ARCESS Array B	59.08	340	P	P	19 00 05.2	-1.2
ARCES				pmax	pmax		
	comp=Z,31nm,1.5s						
FIA1	FINESS Array S	64.78	333	P	P	19 00 44.2	-0.4
FINES	FINESS Array B	64.78	333	P	P	19 00 43.9	-0.8
	comp=Z,3.7nm,0.9s,baz=48,slow=6.4,SNR=11						
NOA	NORSAR Array B	69.44	339	P	P	19 01 13.9	-0.3
	comp=Z,0.3nm,0.4s,baz=31,slow=6.6,SNR=4.0						
KBZ	Khabaz	69.97	312	P	P	19 01 18.4	+0.8
	comp=Z,1.2nm,0.6s,baz=136,slow=5.0,SNR=5.2						
AKASG	Malin Array Be	71.60	324	P	P	19 01 27.0	-0.3
	comp=Z,1.2nm,0.5s,baz=39,slow=6.5,SNR=3.1						
GERES	GERESS Array B	79.09	331	P	P	19 02 10.9	+0.5
	comp=Z,0.4nm,0.4s,baz=22,slow=5.5,SNR=2.4						

IDC ***24*** *18:57:18.4±1.8, 27°.97N×85°.64E, h0^{km}, mb3.5/6, mb1 3.7/8, mb1mx3.4/71, mbtmp3.5/8, ML3.8/1, Error ellipse: s-maj=66.8km s-min=20.1km az=65.0*

ISC 24 18:57:21.2±1.8**, 28°.0N**±0°.2×**85°.6E**±0°.4**, h18**^{km}**, n8, σ0^s.62**/8**, mb3.5**/6**, Nepal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	15.48	125	Pn	Pn	19 00 59.0	+0.2
	baz=302,slow=14,SNR=1.5						
MKAR	Makanchi Array	18.93	353	P	Pn	19 01 41.1	-0.6
	0.3nm,0.3s,baz=173,slow=11,SNR=16						
KURBB	Kurchatov Arra	23.21	348	P	P	19 02 27.4	+0.4
	0.7nm,0.7s,baz=166,slow=10.0,SNR=5.8						
SONM	Songino Array	25.54	34	P	P	19 02 48.8	-0.2
	0.5nm,0.7s,baz=220,slow=9.8,SNR=5.1						
ZALV	Zalesovo Beam	25.91	359	P	P	19 02 53.1	+1.0
	0.5nm,0.4s,baz=182,slow=9.6,SNR=3.1						
ARCES	ARCESS Array B	53.68	338	P	P	19 06 41.5	0.0
	3.5nm,0.9s,baz=99,slow=9.2,SNR=2.3						
WRA	Warramunga Arr	67.02	130	P	P	19 08 12.9	-0.5
	0.3nm,0.5s,baz=322,slow=6.5,SNR=7.4						
ASAR	Alice Springs	69.33	133	P	P	19 08 28.0	+0.2
	0.3nm,0.9s,baz=311,slow=6.5,SNR=2.2						

WEL 24 19:09:53.1, 43°S±2°×**17°3E**±°**, h7**^{km}±2^{km}**, M3.5**/9**, ML3.7**/9**, MLv3.5**/9**, Error ellipse: s-maj=0.0km s-min=0.0km az=52.7, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MQZ	McQueen's Vall	0.23	188	P	Pg	19 09 59.7	+2.2
MQZ				S	Sg	19 10 03.5	+2.9
AMCZ	Amberley	0.31	354	P	Pb	19 10 01.0	+0.1
OKCZ	Okains Bay	0.36	133	P	Pb	19 10 01.9	+0.1
AKCZ	Akaroa Harbour	0.42	158	P	Pb	19 10 03.2	+0.4
RACZ	Rakaia	0.47	239	P	Pb	19 10 05.0	+1.2
OXZ	Oxford	0.50	288	P	Pb	19 10 05.0	+0.7
GVZ	Greta Valley S	0.57	26	P	Pb	19 10 05.7	+0.3
LTZ	Lake Taylor	0.77	336	P	Pn	19 10 09.6	-0.8
WACZ	Wakanui South	0.77	233	P	Pn	19 10 10.7	+0.3
MHCZ	Mount Hutt	0.82	266	P	Pn	19 10 11.0	-0.1
INZ	Inchbonnie	1.19	309	P	Pn	19 10 16.1	0.0
ARCZ	Arundel	1.20	247	P	Pn	19 10 16.3	+0.1
RPZ	Rata Peaks	1.22	258	P	Pn	19 10 16.7	+0.2
KHZ	Kahutara	1.23	30	P	Pb	19 10 15.4	-1.2
WVZ	Waitaha Valley	1.49	285	P	Pg	19 10 21.3	-0.3
TMZ	Timaru	1.52	233	P	Pn	19 10 21.0	+0.4
THZ	Tophouse	1.73	5	P	Pn	19 10 23.2	-0.4
GCSZ	Gaunt Creek Bo	1.73	275	P	Pg	19 10 25.9	-0.4
DSZ	Denniston Nort	1.86	339	P	Pn	19 10 25.8	+0.4
BSWZ	Blackbirch Sta	1.97	27	P	Pn	19 10 26.5	-0.4
LBZ	Lake Benmore	2.03	243	P	Pn	19 10 28.6	+0.9
FOZ	Fox Glacier	2.10	268	P	Pb	19 10 30.4	-1.0
ODZ	Otahua Downs	2.15	223	P	Pn	19 10 29.6	+0.3
TUWZ	Tuamarina	2.25	25	P	Pn	19 10 29.9	-0.8
NNZ	Nelson	2.32	13	P	Pn	19 10 31.7	0.0
TCW	Tory Channel	2.55	28	P	Pn	19 10 33.7	-1.2
BHW	Baring Head	2.62	39	P	Pn	19 10 34.6	-1.2
QRZ	Quartz Range	2.66	357	P	Pn	19 10 36.1	-0.2
MSWZ	Moikau Station	2.80	43	P	Pn	19 10 36.5	-1.8
DUWZ	D'Urville Isla	2.83	19	P	Pn	19 10 38.8	+0.1
CAW	Cannon Point	2.95	37	P	Pn	19 10 38.8	-1.6
EAZ	Earnscleugh	2.99	233	P	Pn	19 10 41.3	+0.4
KIW	Kapiti Island	3.09	33	P	Pn	19 10 41.2	-1.1
MTW	Mount Morrison	3.12	43	P	Pn	19 10 41.0	-1.6
OGWZ	Otaki Gorge	3.24	35	P	Pn	19 10 42.6	-1.7
MRZ	Mangatainoka R	3.54	38	P	Pn	19 10 47.0	-1.5
MLZ	Mavora Lakes	3.78	239	P	Pn	19 10 52.1	+0.3
TSZ	Takapari Road	4.20	37	P	Pn	19 10 56.2	-1.4
KHEZ	Kahui Hut	4.30	14	P	Pn	19 11 00.5	+1.5
NEZ	North Egmont	4.34	15	P	Pn	19 11 00.5	+1.0
PKVZ	Pokaka	4.64	26	P	Pn	19 11 04.2	+0.6
MOVZ	Moawhango	4.67	30	P	Pn	19 11 03.5	-0.6
WNVZ	Wahianoa	4.69	29	P	Pn	19 11 04.4	-0.1
BHHZ	Black Hill Sta	4.72	34	P	Pn	19 11 03.5	-1.2
WHVZ	Whangaehu Hut	4.73	28	P	Pn	19 11 05.2	+0.2
FWVZ	Far West T-bar	4.74	28	P	Pn	19 11 05.2	0.0
TUVZ	Tukino	4.76	29	P	Pn	19 11 05.8	+0.4
NGZ	Ngauruhoe	4.83	28	P	Pn	19 11 06.1	-0.1
OTVZ	Oturere	4.86	28	P	Pn	19 11 06.5	-0.3
NNVZ	North Ngauruho	4.87	28	P	Pn	19 11 06.7	-0.2
WTVZ	West Tongariro	4.88	28	P	Pn	19 11 06.8	-0.2
ETVZ	East Tongariro	4.90	29	P	Pn	19 11 07.3	0.0
TMVZ	Te Maari	4.92	28	P	Pn	19 11 07.0	-0.5
NTVZ	North Tongarir	4.92	28	P	Pn	19 11 07.7	+0.2
HIZ	Hauiti	5.23	19	P	Pn	19 11 11.4	-0.2
RUGZ	Raukumara Rang	6.68	36	P	Pn	19 11 29.3	-2.4

BJI ***24*** *19:25:25.1±0.0, 23°.15S×177°.07W, h141^{km}, mB5.2/8, mb4.5/13*

NEIC ***24*** *19:25:29.1±1.7, 22°.52S±0°.05×177°.0W±0°.1, h153^{km}±6^{km}, mb4.8/58, Error ellipse: s-maj=15.0km s-min=5.7km az=109.0*

IDC ***24*** *19:25:35.8±1.8, 22°.54S×177°.09W, h213^{km}±15^{km}, mb4.2/13, mb1 4.4/14, mb1mx4.1/26, mbtmp4.7/14, Error ellipse: s-maj=15.4km s-min=11.3km az=1.0*

NOU ***24*** *19:25:41.8, 22°.82S×177°.02W, h269^{km}, mb4.8/35, South of Fiji Islands*

ISC 24 19:25:29.0±0.4**, 22°.77S**±0°.06×**176°.89W**±0°.06**, h150**^{km}**, n197, σ1^s.77**/190**, mb4.9**/64**, 10C-2D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	6.90	316	P	Pn	19 27 09.7	+1.9
	3.0nm,0.3s,baz=132,slow=12,SNR=8.1						
MSVF				S	Sn	19 28 27.1	+1.7
	0.2nm,0.3s,baz=330,slow=23,SNR=0.5						
MSVF	Nonsavu	6.90	316	Pn	Pn	19 27 09.0	+1.1
DGTI	Dogotuki	7.18	333	P	Pn	19 27 25.1	+14
NIUE	Niue	7.47	62	P	Pn	19 27 10.7	-4.7
	baz=6.8,SNR=26						
NIUE				S	Sn	19 28 25.2	-14
	baz=6.8						
NIUE	Niue	7.47	62	Pn	Pn	19 27 10.8	-4.5
NIUE					Sn	19 28 23.4	-15
AFI	Afiamalu	10.06	30	P	Pn	19 27 51.9	+2.1
	6.7nm,0.3s,baz=339,slow=20,SNR=1.7						
AFI				S	Sn	19 29 25.3	-16
	9.3nm,0.3s,baz=51,slow=22,SNR=2.4						
MARNC	Mare, Loyalty	14.04	272		Pn	19 28 44.2	+2.8
PINNC	Pines Island,	14.46	268	P	Pn	19 28 48.4	+1.7
LIFNC	LIFOU	14.88	275	P	Pn	19 28 52.3	+0.4
OUENC	Ouen Island, N	15.03	268		Pn	19 28 54.0	+0.1
OUENC	Ouen Island, N	15.03	268	P	P	19 29 00.2	+4.6
ONTNC	Ouen Toro	15.40	268	P	Pn	19 28 58.3	-0.1
ONTNC				IAmb	IAmb	19 29 07.5	
	comp=Z,47nm,1.1s						
DZM	Mont Dzumac	15.43	269	P	P	19 29 02.8	+2.7
	comp=Z,1.2nm,0.3s,baz=86,slow=16,SNR=23						
DZM	Mont Dzumac	15.43	269	*e*P	Pn	19 29 00.9	+2.0
	comp=Z,192nm,1.1s						
DZM	Mont Dzumac	15.43	269		Pn	19 28 58.4	-0.5
DZM				IAmb	IAmb	19 29 06.3	
	comp=Z,77nm,0.9s						
NOUC	Port Laguerre	15.56	269	P	P	19 29 05.7	+4.3
URZ	Urewera	16.28	197	P	Pn	19 29 08.5	-0.5
	comp=Z,2.8nm,0.3s,baz=300,slow=23,SNR=10						
URZ				S	S	19 31 55.1	-15
	comp=Z,1.7nm,0.3s,baz=119,slow=23,SNR=2.5						
URZ	Urewera	16.28	197	P	Pn	19 29 07.1	-1.8
SANVU	Saraoutou	16.70	293		P	19 29 12.2	-1.8
SANVU	Saraoutou	16.70	293	P	Pn	19 29 17.5	+3.2
BKZ	Black Stump Fm	17.29	198	P	P	19 29 18.0	-2.5
PLWZ	Palliser	19.88	198	P	P	19 29 46.8	-1.7
QRZ	Quartz Range	20.10	204	P	P	19 29 50.9	+0.1
QRZ				IAmb	IAmb	19 30 03.1	
	comp=Z,38nm,1.2s						
QRZ	Quartz Range	20.10	204	P	P	19 29 54.8	+4.0
	comp=Z,24nm,1.6s						
KNTN	Kanton	20.50	15	P	P	19 29 50.2	-5.1
KNTN				IAmb	IAmb	19 30 23.5	
	comp=Z,123nm,1.6s						
KHZ	Kahutara	21.16	200	P	P	19 29 58.8	-3.4
KHZ				IAmb	IAmb	19 30 40.3	
	comp=Z,98nm,1.8s						
KHZ	Kahutara	21.16	200	P	P	19 30 03.4	+1.2
LTZ	Lake Taylor	21.91	202	P	P	19 30 08.8	-1.3
OXZ	Oxford	22.47	202	P	P	19 30 14.1	-1.5
OXZ				IAmb	IAmb	19 30 30.0	
	comp=Z,56nm,1.5s						
FOZ	Fox Glacier	23.45	205	P	P	19 30 22.5	-2.2
LBZ	Lake Benmore	24.04	203	P	P	19 30 26.6	-3.5
MLZ	Mavora Lakes	25.65	205	P	P	19 30 43.5	-1.2
WHZ	Wether Hill Ro	26.16	204	P	P	19 30 47.1	-2.1
WHZ				IAmb	IAmb	19 30 49.3	
	comp=Z,57nm,1.4s						
ARMA	Armidale	29.10	248	P	P	19 31 17.4	+1.7
	baz=30,SNR=18						
ARMA	Armidale	29.10	248	P	P	19 31 13.7	-2.0
ARMA				IAmb	IAmb	19 31 18.6	
	comp=Z,18nm,0.7s						
ARMA	Armidale	29.10	248	P	P	19 31 17.9	+2.2
	comp=Z,29nm,1.1s						
EIDS	Eidsvold	29.32	258	P	P	19 31 18.6	+1.0
	baz=30,SNR=5.8						
EIDS	Eidsvold	29.32	258	P	P	19 31 16.6	-1.0
EIDS				IAmb	IAmb	19 31 19.9	
	comp=Z,17nm,1.3s						
EIDS	Eidsvold	29.32	258	P	P	19 31 19.8	+2.2
	comp=Z,11nm,1.0s						
MGCD	Mangrove Creek	30.01	243	P	P	19 31 25.4	+1.8
	baz=31,SNR=4.7						
RMQ	Roma	31.39	256	P	P	19 31 37.5	+1.7
	baz=32,SNR=14						
RMQ	Roma	31.39	256	P	P	19 31 37.3	+1.4
	comp=Z,28nm,0.9s						
CNB	Canberra Magne	31.89	239	P	P	19 31 41.9	+1.8
	baz=32,SNR=5.9						
CAN	Canberra	32.18	239	P	P	19 31 44.0	+1.3
CMSA	Cobar Meteorol	34.29	247	P	P	19 32 01.0	0.0
	baz=35,SNR=42						
CMSA	Cobar Meteorol	34.29	247	P	P	19 32 01.5	+0.5
	comp=Z,46nm,0.8s						
CTA	Charters Tower	34.36	267	P	P	19 32 01.9	+0.1
	comp=Z,18nm,0.3s,baz=92,slow=10,SNR=44						
CTAO	Charters Tower	34.36	267	P	P	19 32 01.4	-0.4
CTAO	Charters Tower	34.36	267	P	P	19 32 02.2	+0.5
QLP	Quilpie	35.44	256	P	P	19 32 10.8	-0.1
	baz=36,SNR=28						
QLP	Quilpie	35.44	256	P	P	19 32 10.9	-0.1
	comp=Z,77nm,1.2s						
TOO	Toolangi	35.46	237	P	P	19 32 12.4	+1.4
	baz=36,SNR=3.9						
TOO	Toolangi	35.46	237	P	P	19 32 11.1	+0.1
TAU	Tasmania Unive	35.80	227	P	P	19 32 14.3	+0.5
MTSU	Mount Surprise	36.57	270	P	P	19 32 20.8	+0.2
	baz=37,SNR=25						
MTSU	Mount Surprise	36.57	270	P	P	19 32 20.8	+0.2
	comp=Z,22nm,0.9s						
BRAT	Ballarat	36.66	237	P	P	19 32 22.9	+1.7
	comp=Z,15nm,0.9s						
PMG	Port Moresby	36.90	285	P	P	19 32 23.4	0.0
	comp=Z,33nm,0.8s,baz=115,slow=5.5,SNR=11						
PMG	Port Moresby	36.90	285	P	P	19 32 22.7	-0.7
PMG	Port Moresby	36.90	285	P	P	19 32 23.7	+0.3
PMG	Port Moresby	36.90	285	P	P	19 32 23.7	+0.3
STKA	Stephens Creek	37.80	247	P	P	19 32 30.8	-0.1
	comp=Z,9.7nm,0.5s,baz=94,slow=11,SNR=41						
STKA	Stephens Creek	37.80	247	P	P	19 32 30.7	-0.1
ARPS	Mount Arapiles	38.15	239	P	P	19 32 34.7	+0.9
	baz=39,SNR=6.2						
ARPS	Mount Arapiles	38.15	239	P	P	19 32 34.9	+1.1
	comp=Z,36nm,0.8s						
COEN	Coen	38.80	276	P	P	19 32 39.2	-0.2
	baz=39						
COEN	Coen	38.80	276	P	P	19 32 39.3	-0.1
COEN				IAmb	IAmb	19 32 40.9	
	comp=Z,19nm,0.8s						
COEN	Coen	38.80	276	P	P	19 32 40.6	+1.2
	comp=Z,29nm,1.0s						
HTT	Hallett	40.14	245	P	P	19 32 49.9	-0.5
	baz=41,SNR=25						
HTT	Hallett	40.14	245	P	P	19 32 50.6	+0.2
	comp=Z,44nm,0.8s						
QIS	Mount Isa	40.39	265	P	P	19 32 51.8	-0.8
	baz=41,SNR=6.6						
QIS	Mount Isa	40.39	265	P	P	19 32 52.5	0.0
	comp=Z,9.7nm,1.1s						
LCRK	Leigh Creek	40.65	249	P	P	19 32 55.0	+0.4
	comp=Z,43nm,1.0s						
WHYH	Whyalla	41.25	245	P	P	19 32 59.9	+0.5
	comp=Z,26nm,0.6s						
BBOO	Buckleboo	42.52	246	P	P	19 33 08.4	-1.3
	baz=43,SNR=58						
BBOO	Buckleboo	42.52	246	P	P	19 33 08.5	-1.2
BBOO				IAmb	IAmb	19 33 10.2	
	comp=Z,18nm,0.8s						
BBOO	Buckleboo	42.52	246	P	P	19 33 10.8	+1.1
	comp=Z,28nm,0.9s						
OOD	Oodnadatta	42.97	253	P	P	19 33 14.1	+0.7
	comp=Z,67nm,0.8s						
MULG	Mulgathing	44.25	249	P	P	19 33 23.4	-0.2
	comp=Z,38nm,0.6s						
AS31	Alice Springs	45.05	259	P	P	19 33 29.0	-1.1
ASAR	Alice Springs	45.05	259	P	P	19 33 29.3	-0.8
	comp=Z,26nm,0.8s,baz=95,slow=7.7,SNR=234						
ASAR				S	S	19 39 52.6	-5.3
	comp=Z,1.0nm,0.6s,baz=97,slow=14,SNR=8.0						
ASPA	Alice Springs	45.05	259	P	P	19 33 28.9	-1.2
	baz=46						
WB0	Warramunga Arr	45.34	264	P	P	19 33 30.8	-1.6
WB0				IAmb	IAmb	19 33 32.3	
	comp=Z,26nm,0.6s						
WB2	Warramunga Arr	45.34	264	P	P	19 33 30.7	-1.7
	baz=46						
WB2	Warramunga Arr	45.34	264	P	P	19 33 30.9	-1.5
WB2				IAmb	IAmb	19 33 31.9	
	comp=Z,25nm,0.7s						
WRAB	Tennant Creek	45.34	264	P	P	19 33 30.9	-1.5
WRAB				IAmb	IAmb	19 33 31.9	
	comp=Z,25nm,0.8s						
WRAB	Tennant Creek	45.34	264	P	P	19 33 31.0	-1.4
WRA	Warramunga Arr	45.35	264	P	P	19 33 31.0	-1.5
	comp=Z,7.7nm,0.3s,baz=89,slow=5.8,SNR=480						
WRA				S	S	19 39 53.9	-8.3
	comp=Z,2.9nm,1.4s,baz=99,slow=16,SNR=2.8						
WRA	Warramunga Arr	45.35	264	P	P	19 33 29.8	-2.7
JAY	Jayapura	45.76	290	P	P	19 33 34.1	-1.7
	comp=Z,4.7nm,0.3s,baz=182,slow=6.6,SNR=6.9						
KDU	Kakadu	49.06	273	P	P	19 34 00.6	-0.7
	baz=50,SNR=6.5						
FORT	Forrest	49.39	248	P	P	19 34 03.3	-0.2
	baz=50,SNR=10.0						
FORT	Forrest	49.39	248	P	P	19 34 02.0	-1.5
WRKA	Warakurna	49.88	256	P	P	19 34 06.1	-1.3
	baz=50,SNR=109						
MTN	Manton Dam	50.25	272	P	P	19 34 08.9	-1.3
	baz=51,SNR=6.2						
MTN	Manton Dam	50.25	272	P	P	19 34 08.2	-2.0
MTN				IAmb	IAmb	19 34 09.5	
	comp=Z,18nm,0.6s						
KNRA	Kununurra	51.57	268	P	P	19 34 19.0	-1.1
	baz=52,SNR=52						
KNRA	Kununurra	51.57	268	P	P	19 34 18.7	-1.4
FAKI	Fak Fak	53.04	284	P	P	19 34 29.7	-1.2
	comp=Z,21nm,1.0s						
FAKI	Fak Fak	53.04	284	P	P	19 34 29.1	-1.8
FAKI				IAmb	IAmb	19 34 30.2	
	comp=Z,14nm,0.8s						
FAKI	Fak Fak	53.04	284	P	P	19 34 29.9	-1.0
FITZ	Fitzroy Crossi	53.78	264	P	P	19 34 35.4	-0.9
	baz=54,SNR=51						
BNDI	Bandanaira	54.46	281	P	P	19 34 40.3	-1.0
SWI	Sorong	54.84	286	P	P	19 34 43.3	-0.7
	comp=Z,97nm,0.8s						
VNDA	Vanda	55.76	185	P	P	19 34 52.0	+2.4
	comp=Z,1.3nm,0.9s,baz=354,slow=7.9,SNR=4.8						
VNDA	Vanda	55.76	185	P	P	19 34 51.1	+1.5
AAI	Ambon	56.36	281	P	P	19 34 54.2	-0.7
	comp=Z,30nm,1.2s						
SOEI	Soe	57.62	273	P	P	19 35 04.6	+0.7
	comp=Z,76nm,1.1s						
SOEI	Soe	57.62	273	P	P	19 35 03.6	-0.3
SOEI	Soe	57.62	273	P	P	19 35 05.1	+1.2
BATI	Baumata	58.02	272	P	P	19 35 07.5	+0.9
	comp=Z,22nm,0.9s						
KLBR	Kellerberrin	58.06	246	P	P	19 35 05.4	-1.2
	baz=59,SNR=9.8						
MEEK	Meekatharra	58.18	252	P	P	19 35 06.4	-1.1
	baz=59,SNR=12						
PSA00	Pilbara Seismi	58.19	258	P	P	19 35 05.8	-1.8
PSA00				IAmb	IAmb	19 35 38.3	
	comp=Z,14nm,0.6s						
PSA00	Pilbara Seismi	58.19	258	P	P	19 35 05.6	-2.0
PSA00				IAmb	IAmb	19 35 10.6	
	comp=Z,20nm,1.3s						
LBMI	Labuha	58.30	284	P	P	19 35 08.0	-0.5
	comp=Z,31nm,0.8s						
SANI	Sanana	59.04	282	P	P	19 35 12.1	-1.5
	comp=Z,27nm,0.9s						
SANI	Sanana	59.04	282	P	P	19 35 12.4	-1.2
BLDU	Ballidu	59.10	247	P	P	19 35 12.5	-1.3
	baz=60,SNR=29						
MUN	Mundaring	59.30	245	P	P	19 35 14.7	-0.5
	baz=60,SNR=6.8						
MORW	Morawa	59.95	249	P	P	19 35 18.4	-1.2
	baz=60,SNR=13						
MORW	Morawa	59.95	249	P	P	19 35 18.5	-1.2
EDFI	Ende, Flores	60.36	273	P	P	19 35 21.6	-1.1
	comp=Z,15nm,0.8s						
GTOI	Gorontalo	62.88	283	P	P	19 35 39.5	0.0
	comp=Z,14nm,0.8s						
TOLI2	Tolitoli	65.09	283	P	P	19 35 51.9	-2.1
TOLI2				IAmb	IAmb	19 35 54.8	
	comp=Z,11nm,0.8s						
TOLI2	Tolitoli	65.09	283	P	P	19 35 52.8	-1.2
QSPA	South Pole Qui	67.31	180	P	P	19 36 09.0	+1.6
	comp=Z,6.0nm,1.0s,baz=30,slow=3.4,SNR=13						
QSPA	South Pole Qui	67.31	180	P	P	19 36 08.8	+1.3
QSPA				IAmb	IAmb	19 36 09.9	
	comp=Z,11nm,1.1s						
JAGI	Jajag, Banyuwa	67.41	270	P	P	19 36 06.4	-2.4
JAGI				IAmb	IAmb	19 36 33.3	
	comp=Z,20nm,1.3s						
PCJI	Pacitan	70.26	269	P	P	19 36 25.7	-0.7
	comp=Z,66nm,0.6s						
UGM	Wanagama	70.96	269	P	P	19 36 29.9	-0.8
XMIS	Christmas Isla	74.54	265	P	P	19 36 49.1	-2.7
KSM	Kuching	74.75	278	P	P	19 36 50.8	-2.3
KSM				IAmb	IAmb	19 36 53.5	
	comp=Z,7.3nm,0.7s						
MDSI	Maura Dua	78.08	270	P	P	19 37 12.4	+0.6
	comp=Z,5.2nm,0.8s						
MAW	Mawson	79.79	200	P	P	19 37 27.6	+7.5
	baz=80,SNR=18						
ISA	Isabella, Lake	80.19	45	P	P	19 37 22.3	-0.5
NJ2	Nanjing	82.11	309	*e*P	P	19 37 33.3	+0.4
NJ2				pmax	pmax		
	comp=Z,11nm,1.4s						
Y14A	Wickenburg	82.88	49	P	P	19 37 35.8	-1.1
W13A	Hualapai Mount	82.92	47	P	P	19 37 37.0	-0.4
TUC	Tucson	83.57	51	P	P	19 37 39.9	-0.7
TUC				IAmb	IAmb	19 37 42.3	
	comp=Z,8.1nm,0.8s						
H03S2	Juan Fernandez	83.87	124	T	T	21 10 06.1	
	baz=246,slow=75,SNR=14						
H03S1	Juan Fernandez	83.88	124	T	T	21 10 05.9	
	baz=246,slow=75,SNR=16						
H03S3	Juan Fernandez	83.88	124	T	T	21 10 04.7	
	baz=246,slow=75,SNR=17						
H03N2	Juan Fernandez	84.02	124	T	T	21 09 56.0	
	baz=247,slow=73,SNR=19						
H03N3	Juan Fernandez	84.02	124	T	T	21 09 50.2	
	baz=247,slow=73,SNR=16						
H03N1	Juan Fernandez	84.03	124	T	T	21 09 57.3	
	baz=247,slow=73,SNR=23						
319A	Douglas	84.18	53	P	P	19 37 43.0	-0.8
319A				IAmb	IAmb	19 37 45.4	
	comp=Z,12nm,0.8s						
SNAA	Sanae	85.72	178	P	P	19 37 51.0	+0.2
VNA3	Neumayer Olymp	85.82	176	P	P	19 37 51.2	+0.1
121A	Cookes Peak, D	85.86	52	P	P	19 37 51.8	-0.4
VNA2	Neumayer--Watz	86.27	177	P	P	19 37 53.3	-0.1
VNA1	Neumayer--Stat	86.49	176	P	P	19 37 55.0	+0.6
LC01	Cunco	86.90	131	P	P	19 37 57.4	+0.3
LC01				IAmb	IAmb	19 37 58.5	
	comp=Z,7.5nm,0.8s						
PLCA	Paso Flores	86.97	133	P	P	19 37 57.9	+0.4
	comp=Z,2.3nm,0.9s,baz=248,slow=12,SNR=3.5						
MNTX	Cornudas Mount	87.23	54	P	P	19 37 58.5	-0.2
MNTX				IAmb	IAmb	19 37 59.8	
	comp=Z,9.1nm,1.0s						
TX31	Lajitas Ar. Si	87.41	57	P	P	19 37 58.8	-0.9
TXAR	Lajitas Array	87.41	57	P	P	19 37 59.6	-0.1
	comp=Z,4.7nm,0.9s,baz=210,slow=7.2,SNR=38						
TXAR	Lajitas Array	87.41	57	P	P	19 37 59.2	-0.5
ANMO	Albuquerque	88.02	51	P	P	19 38 01.8	-0.8
GYA	Guiyang	88.66	299	⇓P	P	19 38 05.5	-0.2
GYA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
RND	Reindeer	88.68	12	P	P	19 38 03.4	-1.4
RND				IAmb	IAmb	19 38 15.5	
	comp=Z,8.8nm,1.0s						
PDAR	Pinedale Array	89.91	43	P	P	19 38 10.0	-1.3
	comp=Z,1.3nm,0.9s,baz=204,slow=3.3,SNR=7.7						
HDA	Harding Lake	89.96	13	P	P	19 38 08.8	-1.8
HDA				IAmb	IAmb	19 38 51.2	
	comp=Z,12nm,1.5s						
CCB	Clear Creek Bu	90.00	12	P	P	19 38 08.6	-2.2
IL31		90.29	12	P	P	19 38 10.6	-1.6
IL31				IAmb	IAmb	19 38 39.5	
	comp=Z,22nm,1.7s						
ILAR	Eielson Array	90.29	12	P	P	19 38 10.7	-1.5
	comp=Z,0.9nm,0.5s,baz=219,slow=5.3,SNR=24						
KMI	Kunming	91.29	297	⇓P	P	19 38 16.8	-1.3
KMI				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HHC	Hu-ho-hao-te	91.67	314	*e*P	P	19 38 19.1	-0.2
HHC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,170nm,9.4s						
CMAR	Chiang Mai Arr	91.84	289	P	P	19 38 20.6	+0.1
	comp=Z,2.3nm,0.9s,baz=133,slow=3.4,SNR=15						
CMAR	Chiang Mai Arr	91.84	289	P	P	19 38 17.9	-2.6
CHTO	Chiang Mai	91.98	289	P	P	19 38 23.3	+2.2
RSSD	Black Hills	94.07	44	P	P	19 38 29.0	-1.5
RSSD				IAmb	IAmb	19 38 30.9	
	comp=Z,5.0nm,0.8s						
LZH	Lanzhou	94.96	307	*e*P	P	19 38 33.0	-1.7
LZH				pmax	pmax		
	comp=Z,25nm,1.4s						
ZALV	Zalesovo Beam	112.90	321	PKiKP	PKiKP	19 43 45.4	-2.3
	comp=Z,0.5nm,0.5s,baz=171,slow=5.4,SNR=3.6						
MKAR	Makanchi Array	113.49	313	PKiKP	PKiKP	19 43 47.1	-2.0
	comp=Z,0.5nm,0.8s,baz=144,slow=1.9,SNR=1.7						
ARCES	ARCESS Array B	131.33	350	PKP	PKPdf	19 44 21.4	-1.2
	comp=Z,1.3nm,0.7s,baz=82,slow=2.6,SNR=7.6						
FINES	FINESS Array B	138.23	344	PKP	PKPdf	19 44 35.2	-0.5
	comp=Z,2.4nm,0.9s,baz=72,slow=0.6,SNR=4.4						
KMBO	Kilima Mbogo	139.14	239	PKP	PKiKP	19 44 44.6	+3.1
	comp=Z,1.1nm,0.4s,baz=228,slow=3.2,SNR=5.4						
AKASG	Malin Array Be	145.49	330	PKPbc	PKPdf	19 44 47.3	-1.6
	comp=Z,3.0nm,0.5s,baz=44,slow=4.3,SNR=23						
AKASG	Malin Array Be	145.49	330		PKPdf	19 44 47.1	-1.8
SORM	Soroca	147.67	328	⇑P	PKPdf	19 44 54.0	+1.3
PURM	Purcari	147.93	324	⇑P	PKPdf	19 44 55.5	+2.3
BRTR	Keskin Array B	149.11	310	PKPbc	PKPdf	19 44 58.3	+2.7

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
	comp=Z,1.2nm,0.4s,baz=170,slow=2.6,SNR=2.4						
BURAR	Bucovina Array	149.53	330	⇑P	PKPbc	19 45 01.4	+0.8
CFR	Carcaliu	149.72	324	⇑P	PKPdf	19 44 59.9	+3.7
KOLS	Kolonicke sedl	149.79	335	*e*PKP	PKPdf	19 44 59.0	+2.8
CLL	Collm	150.49	347	*e*PKPbc	PKPdf	19 45 02.0	+4.8
CLL				*i* PKPab	PKiKP	19 45 06.4	+3.1
	comp=Z,6.0nm,0.8s						
CLL				*e*pPKPbc	pPKPdf	19 45 39.0	+2.9
VOIR		151.17	327	⇑P	PKPbc	19 45 07.0	+2.4
LEF	Lefka	151.29	302	⇑P	PKPdf	19 45 03.7	+4.8
ARR	Arges	151.43	327	⇑P	PKPbc	19 45 05.1	0.0
GZR	Gura Zlata	152.31	329	⇑P	PKPbc	19 45 09.3	+2.2
KHC	Kasperske Hory	152.41	345	*e*PKP	PKiKP	19 45 11.1	+3.7
GERES	GERESS Array B	152.65	345	PKPbc	PKPbc	19 45 07.2	-0.6
	comp=Z,0.7nm,0.7s,baz=20,slow=4.3,SNR=3.5						
GERES	GERESS Array B	152.65	345		PKPdf	19 45 05.7	+5.0
MORH	Mrgy, Hungar	153.43	335	⇑P	PKPbc	19 45 11.7	+2.3
VTS	Vitosha	154.07	324	⇑P	PKPbc	19 45 12.2	+1.0
TORD	Torodi Ar. Bea	170.34	172	PKP	PKPdf	19 45 17.4	-2.4
	comp=Z,1.1nm,1.0s,baz=334,slow=1.2,SNR=5.1						
TORD				PKPab	PKPab	19 46 37.2	+0.6
	comp=Z,2.2nm,1.0s,baz=206,slow=4.1,SNR=8.5						

NOU ***24*** *19:45:09.3,38°.34S×175°.68E,h218^{km},MLv3.6/8,North Island, New Zealand*

WEL 24 19:45:14.4±0.9**,38°S**±6°×**17°6E**±°**,h175**^{km}±7^{km}**,M2.9**/37**,ML2.5**/7**,MLv2.9**/37**,Error ellipse: s-maj=0.0km s-min=0.0km az=160.8,North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RATZ	Rangitukua	0.48	179	P	Pn	19 45 39.3	+0.6
KATZ	Kakaramea	0.59	185	P	Pn	19 45 39.8	+0.5
RITZ	Rihia Road	0.60	173	P	Pn	19 45 39.9	+0.7
TOZ	Tahuroa Road	0.68	343	P	Pn	19 45 40.4	+0.8
MRHZ	Matea Rd	0.69	131	P	Pn	19 45 39.9	+0.3
MRHZ				S	Sn	19 45 59.4	+0.3
KRVZ	Karewarewa	0.72	187	P	Pn	19 45 39.7	-0.2
NTVZ	North Tongarir	0.72	185	P	Pn	19 45 40.5	+0.6
HIZ	Hauiti	0.72	259	P	Pn	19 45 40.5	+0.7
HIZ	Hauiti	0.72	259	P	Pn	19 45 40.2	+0.4
TWVZ	Taurewa	0.73	200	P	Pn	19 45 40.4	+0.4
TMVZ	Te Maari	0.73	183	P	Pn	19 45 40.5	+0.6
WTVZ	West Tongariro	0.74	190	P	Pn	19 45 40.5	+0.4
ETVZ	East Tongariro	0.75	183	P	Pn	19 45 40.6	+0.5
NNVZ	North Ngauruho	0.76	188	P	Pn	19 45 40.5	+0.3
OTVZ	Oturere	0.78	185	P	Pn	19 45 40.8	+0.4
NGZ	Ngauruhoe	0.80	189	P	Pn	19 45 40.9	+0.4
SNVZ	South Ngauruho	0.81	187	P	Pn	19 45 41.0	+0.5
FWVZ	Far West T-bar	0.89	190	P	Pn	19 45 41.3	+0.2
TUVZ	Tukino	0.89	185	P	Pn	19 45 40.4	-0.6
DRZ	Dome Shelter	0.90	190	P	Pn	19 45 41.7	+0.4
WHVZ	Whangaehu Hut	0.91	188	P	Pn	19 45 41.6	+0.4
WNVZ	Wahianoa	0.95	188	P	Pn	19 45 41.8	+0.3
PKVZ	Pokaka	0.96	199	P	Pn	19 45 41.7	+0.3
BKZ	Black Stump Fm	0.97	144	P	Pn	19 45 41.7	+0.3
BKZ				S	Sn	19 46 03.1	+0.6
BKZ	Black Stump Fm	0.97	144	P	Pn	19 45 41.0	-0.5
MTHZ	Maungataniwha	0.97	119	P	Pn	19 45 41.9	+0.5
MTHZ				S	Sn	19 46 02.4	0.0
RTZ	Ruatahuna	0.99	104	P	Pn	19 45 41.9	+0.3
RTZ				S	Sn	19 46 03.7	+1.1
MOVZ	Moawhango	1.02	180	P	Pn	19 45 41.9	0.0
MTVZ	Mangateitei	1.02	193	P	Pn	19 45 42.2	+0.3
URZ	Urewera	1.07	84	P	Pn	19 45 41.9	-0.2
URZ	Urewera	1.07	84	P	Pn	19 45 41.8	-0.4
VRZ	Vera Road	1.08	226	P	Pn	19 45 42.6	+0.4
BHHZ	Black Hill Sta	1.13	168	P	Pn	19 45 42.7	0.0
KWHZ	Kaweka Forest	1.16	154	P	Pn	19 45 43.4	+0.4
RAHZ	Arahi	1.17	118	P	Pn	19 45 43.8	+0.9
MCHZ	McNeill Hill	1.29	146	P	Pn	19 45 44.9	+0.9
SNGZ	Shannon Statio	1.30	108	P	Pn	19 45 44.8	+0.6
ARHZ	Aropaoanui	1.31	133	P	Pn	19 45 44.9	+0.8
KRHZ	Kereru	1.34	159	P	Pn	19 45 44.7	+0.2
MWZ	Matawai	1.39	89	P	Pn	19 45 44.9	-0.1
WAZ	Wanganui	1.50	203	P	Pn	19 45 45.7	-0.2
PNHZ	Pukenui	1.57	167	P	Pn	19 45 46.4	-0.3
RUGZ	Raukumara Rang	1.57	75	P	Pn	19 45 45.6	-1.2
NEZ	North Egmont	1.57	235	P	Pn	19 45 47.5	+0.8
PKE	Pukeiti	1.60	239	P	Pn	19 45 47.1	+0.1
RIGZ	Rimuhau	1.60	102	P	Pn	19 45 47.3	+0.2
KNZ	Kokohu	1.63	114	P	Pn	19 45 47.6	+0.4
CKHZ	Cape Kidnapper	1.64	141	P	Pn	19 45 47.7	+0.4
KHEZ	Kahui Hut	1.64	236	P	Pn	19 45 47.5	+0.1
TKGZ	Te Karaka	1.64	93	P	Pn	19 45 47.6	+0.3
KAHZ	Kahuranaki	1.66	149	P	Pn	19 45 48.0	+0.4
WIAZ	Waiheke Island	1.66	342	P	Pn	19 45 47.5	-0.1
TSZ	Takapari Road	1.68	175	P	Pn	19 45 47.3	-0.4
WPHZ	Waipukurau	1.76	163	P	Pn	19 45 48.2	-0.3
TWGZ	Tauwhareparae	1.76	84	P	Pn	19 45 48.9	+0.3
MHGZ	Mahia Peninsul	1.85	115	P	Pn	19 45 49.8	+0.4
OHWZ	Ohakea	1.85	191	P	Pn	19 45 49.3	-0.2
PXZ	Pawanui	1.85	153	P	Pn	19 45 48.9	-0.6
PKGZ	Pakihiroa	1.89	76	P	Pn	19 45 49.7	-0.3
CNGZ	Carnagh Statio	1.93	94	P	Pn	19 45 50.7	+0.3
DVHZ	Dannevirke	1.94	171	P	Pn	19 45 49.5	-1.0
PUZ	Puketiti	1.99	82	P	Pn	19 45 50.6	-0.5
PRHZ	Porangahau	2.00	160	P	Pn	19 45 50.4	-0.7
POWZ	Post Office Ro	2.01	180	P	Pn	19 45 50.3	-0.9
GRZ	Great Barrier	2.14	353	P	Pn	19 45 52.2	-0.6
ANWZ	Angora Road	2.15	165	P	Pn	19 45 52.0	-0.7
WMGZ	Waiomatatini S	2.17	76	P	Pn	19 45 52.4	-0.6
MXZ	Matakaoa Point	2.17	69	P	Pn	19 45 52.5	-0.5
PRWZ	Pori Road	2.17	176	P	Pn	19 45 52.1	-1.0
MRZ	Mangatainoka R	2.28	183	P	Pn	19 45 52.6	-1.6
BFZ	Birch Farm	2.33	171	P	Pn	19 45 53.3	-1.4
BFZ	Birch Farm	2.33	171	P	Pn	19 45 53.5	-1.3
OGWZ	Otaki Gorge	2.47	190	P	Pn	19 45 54.9	-1.6
HOWZ	Holdsworth Sta	2.52	184	P	Pn	19 45 55.0	-2.0
KIW	Kapiti Island	2.56	195	P	Pn	19 45 55.4	-2.1
TMWZ	Te Maipa	2.72	178	P	Pn	19 45 57.2	-2.2
CAW	Cannon Point	2.77	191	P	Pn	19 45 57.9	-2.1
MTW	Mount Morrison	2.78	184	P	Pn	19 45 57.5	-2.5
DUWZ	D’Urville Isla	2.80	210	P	Pn	19 45 57.8	-2.6
WEL	Wellington	3.00	194	P	Pn	19 46 00.3	-2.4
PAWZ	Paruwai Farm	3.01	185	P	Pn	19 46 00.2	-2.7
TRWZ	Traveller	3.01	181	P	Pn	19 46 00.4	-2.6
SNZO	South Karori	3.03	195	P	Pn	19 46 00.5	-2.7
TCW	Tory Channel	3.05	202	P	Pn	19 46 00.8	-2.6
MSWZ	Moikau Station	3.05	187	P	Pn	19 46 00.6	-2.8
BHW	Baring Head	3.10	192	P	Pn	19 46 01.2	-2.7
PLWZ	Palliser	3.21	187	P	Pn	19 46 02.2	-3.1
TUWZ	Tuamarina	3.35	204	P	Pn	19 46 04.2	-2.9
NNZ	Nelson	3.37	212	P	Pn	19 46 04.3	-3.0
QRZ	Quartz Range	3.49	225	P	Pn	19 46 05.0	-3.8
QRZ	Quartz Range	3.49	225	P	Pn	19 46 05.1	-3.7
CMWZ	Cape Campbell	3.56	199	P	Pn	19 46 07.4	-2.4
BSWZ	Blackbirch Sta	3.63	203	P	Pn	19 46 07.6	-3.0
THZ	Tophouse	4.02	212	P	Pn	19 46 12.0	-3.7
KHZ	Kahutara	4.37	202	P	Pn	19 46 16.5	-3.5
KHZ	Kahutara	4.37	202	P	Pn	19 46 16.4	-3.6
DSZ	Denniston Nort	4.53	221	P	Pn	19 46 17.1	-5.0
GVZ	Greta Valley S	5.03	203	P	Pn	19 46 24.4	-4.2
LTZ	Lake Taylor	5.13	210	P	Pn	19 46 25.2	-4.8
INZ	Inchbonnie	5.44	216	P	Pn	19 46 29.4	-4.5
OXZ	Oxford	5.69	209	P	Pn	19 46 31.8	-5.4
OKCZ	Okains Bay	5.71	200	P	Pn	19 46 33.0	-4.5
MQZ	McQueen’s Vall	5.81	203	P	Pn	19 46 33.2	-5.5
AKCZ	Akaroa Harbour	5.89	201	P	Pn	19 46 34.9	-4.9
TMZ	Timaru	6.98	209	P	Pn	19 46 48.7	-5.5
ODZ	Otahua Downs	7.67	208	P	Pn	19 46 58.3	-5.0
ODZ	Otahua Downs	7.67	208	P	Pn	19 46 58.5	-4.8

JMA ***24*** *19:55:44.6±0.2,31°.35N×138°.58E,h420^{km},M3.4*

IDC ***24*** *19:55:46.0±0.7,31°.29N×138°.34E,h395^{km}±11^{km},mb2.9/10,mb1 3.0/15,mb1mx3.0/34,mbtmp3.7/15,Error ellipse: s-maj=29.6km s-min=10.2km az=71.0*

ISC 24 19:55:45.8±0.6**,31°.31N**±0°.06×**138°.49E**±0°.09**,h400**^{km}**,n25,**σ**1.^{s}16**/33**,mb3.1**/10**,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ	Hachijo jima 2	2.11	31	P	Pn	19 56 44.0	+1.6
	45nm,0.3s,baz=133,slow=22,SNR=6.3						
JHJ				S	S	19 57 29.9	+1.7
	26nm,0.3s,baz=56,slow=21,SNR=1.4						
TTO1	TONANKAI O.B.S	2.72	328	P	Pn	19 56 47.9	+1.5
JIE	Ise	3.42	334	P	Pn	19 56 53.6	+1.1
JTNC	Tanabenakahech	3.49	317	P	Pn	19 56 53.4	+0.3
JWY	Kouya	3.79	321	P	Pn	19 56 56.8	+0.9
BSO1	Boso 1	3.94	31	P	Pn	19 56 57.1	+0.5
BSO1				*e*S	S	19 57 53.7	-0.4
JOD2	Odawara 2	3.98	7	P	Pn	19 56 57.8	+0.2
JOD2				*e*S	S	19 57 54.7	-1.2
JRY	Ryogami san	4.71	4	P	Pn	19 57 04.8	0.0
JRY				*e*S	S	19 58 06.6	-2.4
MJAR	Matsushiro Arr	5.23	358	P	Pn	19 57 09.6	-0.4
	0.2nm,0.3s,baz=169,slow=11,SNR=12						
CBIJ	Chichi jima	5.29	142	P	Pn	19 57 11.0	+0.1
CBIJ				*e*S	S	19 58 19.1	-1.0
JCJ	Chichijima	5.29	142	P	Pn	19 57 11.3	+0.3
	2.4nm,0.3s,baz=9.2,slow=20,SNR=6.9						
JCJ				S	S	19 58 17.7	-2.5
	13nm,0.3s,baz=147,slow=23,SNR=9.3						
JHS	Saijyo	5.82	311	P	Pn	19 57 16.6	+0.2
KSRS	Korea Array	10.67	308	P	P	19 58 10.2	-0.4
	0.2nm,0.3s,baz=124,slow=10,SNR=5.2						
KLR	Kul'dur	18.61	346	P	P	19 59 38.2	+1.6
	0.2nm,0.3s,baz=184,slow=13,SNR=1.8						
SONM	Songino Array	29.47	313	P	P	20 01 14.1	-0.7
	0.3nm,0.4s,baz=127,slow=8.8,SNR=5.9						
CMAR	Chiang Mai Arr	37.89	260	P	P	20 02 25.9	-0.8
	0.3nm,0.7s,baz=65,slow=11,SNR=1.5						
ZALV	Zalesovo Beam	44.21	317	P	P	20 03 16.2	-0.8
	0.4nm,0.4s,baz=94,slow=4.5,SNR=2.3						
ZALV				PcP	PcP	20 04 53.2	-0.3
	0.9nm,0.6s,baz=90,slow=1.8,SNR=5.8						
MKAR	Makanchi Array	45.34	307	P	P	20 03 25.1	-0.9
	0.7nm,0.7s,baz=100,slow=10.0,SNR=4.5						
WRA	Warramunga Arr	51.11	185	P	P	20 04 10.1	+0.4
	0.3nm,0.5s,baz=0.4,slow=8.0,SNR=9.4						
WRA				PcP	PcP	20 05 20.6	+1.8
	0.3nm,0.5s,baz=356,slow=4.0,SNR=6.1						
ASAR	Alice Springs	54.84	185	P	P	20 04 38.5	+2.1
	0.2nm,0.5s,baz=11,slow=14,SNR=6.7						
ARCES	ARCESS Array B	68.50	340	P	P	20 06 06.7	+0.8
	2.0nm,1.0s,baz=40,slow=9.6,SNR=4.2						
FINES	FINESS Array B	72.74	332	P	P	20 06 31.3	0.0
	3.4nm,1.0s,baz=65,slow=6.2,SNR=14						
KBZ	Khabaz	72.80	311	P	P	20 06 32.5	+0.6
	1.4nm,0.8s,baz=91,slow=2.4,SNR=4.8						
AKASG	Malin Array Be	77.32	322	P	P	20 06 56.4	-0.9
	0.2nm,0.3s,baz=51,slow=5.7,SNR=4.9						
TORD	Torodi Ar. Bea	119.40	310	PKP	PKiKP	20 13 49.3	+0.1
	0.3nm,0.9s,baz=28,slow=1.6,SNR=1.6						

IDC 24 20:13:53.7±12.0**,21°.90S**×**179°.44W,h0**^{km}**,mb3.9**/3**,mb1 4.1**/3**,mb1mx3.5**/30**,mbtmp3.9**/3**,Error ellipse: s-maj=425.5km s-min=91.4km az=140.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	42.90	258	P	P	20 21 55.5	+1.1
	1.9nm,1.1s,baz=96,slow=6.7,SNR=7.3						
WRA	Warramunga Arr	43.09	264	P	P	20 21 54.5	-1.4
	0.6nm,0.4s,baz=103,slow=7.8,SNR=7.7						
CMAR	Chiang Mai Arr	89.32	290	P	P	20 26 52.6	+0.1
	0.4nm,0.4s,baz=112,slow=2.4,SNR=5.8						

IDC ***24*** *20:18:20.5±1.9,3°.12S×130°.69E,h0^{km},mb3.7/4,mb1 3.9/5,mb1mx3.5/31,mbtmp3.7/5,ML3.6/1,Error ellipse: s-maj=96.0km s-min=24.4km az=70.0*

ISC 24 20:18:22.9±0.9**,3°.1S**±0°.1×**130°.76E**±0°.05**,h10**^{km}**,n11,**σ**2.^{s}43**/10**,mb3.6**/3**,Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	Fak Fak	1.50	84	P	Pb	20 18 51.9	+1.1
MSAI	Masohi	1.85	262	P	Pg	20 18 58.6	+0.2
SWI	Sorong	2.26	13	P	Pg	20 19 15.0	+8.8
AAI	Ambon	2.63	257	P	Pb	20 19 10.3	+0.1
SANI	Sanana	4.87	282	P	Pb	20 19 48.8	+0.3
WRA	Warramunga Arr	17.12	168	Pn	Pn	20 22 21.7	-0.8
	0.2nm,0.3s,baz=345,slow=12,SNR=6.0						
WRA				Sn	Sn	20 25 18.7	-14
	0.1nm,0.3s,baz=351,slow=23,SNR=2.1						
ASAR	Alice Springs	20.69	172	P	P	20 23 01.6	-1.8
	3.7nm,0.5s,baz=350,slow=9.7,SNR=36						
TNG	Tangerang	24.23	262	P	P	20 23 45.8	+5.6
CMAR	Chiang Mai Arr	37.94	306	P	P	20 25 40.2	-0.8
	0.3nm,0.3s,baz=133,slow=9.2,SNR=4.2						
SONM	Songino Array	55.01	340	P	P	20 27 52.7	-2.0
	0.6nm,1.0s,baz=140,slow=7.6,SNR=3.2						
MKAR	Makanchi Array	65.41	326	P	P	20 29 05.6	-0.3
	0.6nm,0.5s,baz=118,slow=8.1,SNR=5.6						

DJA ***24*** *20:23:07.9±0.3,7°S±3°×10°5E±°,h10^{km},M4.4/16,mb4.3/7,mB5.5/1,MLv4.4/16,Mw(mB)5.0/1*

IDC ***24*** *20:23:10.1±2.1,6°.56S×105°.06E,h53^{km}±16^{km},mb3.8/18,mb1 4.0/19,mb1mx3.8/35,mbtmp4.1/19,ML5.0/2,MS3.3/5,Ms1 3.3/5,ms1mx2.9/45,Error ellipse: s-maj=20.5km s-min=9.3km az=37.0*

NEIC ***24*** *20:23:12.0±1.3,6°.59S±0°.08×105°.13E±0°.09,h65^{km}±5^{km},mb4.5/15,Error ellipse: s-maj=15.3km s-min=7.3km az=51.0*

ISC 24 20:23:09.3±0.5**,6°.75S**±0°.07×**105°.00E**±0°.05**,h49**^{km}**,n91,**σ**1.^{s}60**/87**,mb4.5**/36**,MS3.1**/4**,Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SBJI	Serang	1.28	61	P	Pn	20 23 30.2	-0.7
SBJI				S	Sn	20 23 46.1	-0.8
KASI	Kota Agung	1.32	338	P	Pn	20 23 33.0	+1.7
BLSI	Bandar Lampung	1.39	10	P	Pn	20 23 33.4	+1.0
TNG	Tangerang	1.73	71	P	Pn	20 23 39.1	+2.1
DBJI	Dramaga	1.75	84	P	Pn	20 23 37.3	+0.1
DBJI				S	Sn	20 23 58.5	+0.1
CBJI	Citeko	1.87	80	P	Pn	20 23 40.2	+1.4
KLI	Kotabumi	1.88	356	P	Pn	20 23 41.5	+2.5
LWLI	Liwa	1.96	331	P	Pn	20 23 43.7	+3.5
KLSI		2.06	352	P	Pn	20 23 44.0	+2.5
CNJI	Cibinong	2.19	105	P	Pn	20 23 42.4	-0.8
MDSI	Maura Dua	2.39	340	P	Pn	20 23 48.8	+2.8
LEM	Lembang	2.60	92	P	Pn	20 23 50.1	+1.1
	67nm,0.3s,baz=328,slow=17,SNR=30						
LEM				S	Sn	20 24 19.9	+0.4
	65nm,0.3s,baz=197,slow=22,SNR=9.4						
MNAI	Manna	3.13	319	P	Pn	20 23 59.4	+3.3
MNAI	Manna	3.13	319		Pn	20 23 59.1	+3.0
MNAI	Manna	3.13	319	P	Pn	20 24 00.4	+4.3
LHSI	Lahat	3.25	333	P	Pn	20 24 02.7	+4.8
CMJI	Cimerak	3.57	107	P	Pn	20 24 02.3	+0.1
XMI	Christmas Isla	3.74	170	P	Pn	20 24 01.4	-3.2
XMIS	Christmas Isla	3.76	170	P	Pn	20 24 00.4	-4.5
KSI	Kapahiang	3.90	322	P	Pn	20 24 10.4	+3.6
MASI	Maura Aman, Be	4.52	322	P	Pn	20 24 19.5	+4.2
PPBI	Pangkal Pinang	4.70	14	P	Pn	20 24 19.4	+1.7
UGM	Wanagama	5.60	102	P	Pn	20 24 30.6	+0.5
	0.5nm70nm,1.2s						
UGM	Wanagama	5.60	102	P	Pn	20 24 32.2	+2.1
DSRI	Dabo	6.24	356	P	Pn	20 24 42.5	+3.6
	0.1nm14nm,0.4s						
PCJI	Pacitan	6.29	104	P	Pn	20 24 41.0	+1.4
	0.3nm38nm,1.1s						
PWJI	Pagerwojo	6.87	101	P	Pn	20 24 49.8	+2.4
ABJI	Asem Bagus	9.22	97	P	Pn	20 25 22.7	+3.0
JAGI	Jajag, Banyuwa	9.23	101		Pn	20 25 20.3	+0.4
JAGI	Jajag, Banyuwa	9.23	101	P	Pn	20 25 21.3	+1.4
STKI	Sintang	9.36	44	P	Pn	20 25 23.6	+2.0
	2μm10nm,1.1s						
GSI	Gunungsitoli	10.90	317		Pn	20 25 41.0	-1.8
PSI	Prapat	11.26	327	LR	LR	20 29 54.8	
	comp=Z,92nm,19.4s,baz=94,slow=37						
SBUM	Sibu	11.64	38		Pn	20 25 54.1	+1.3
EDFI	Ende, Flores	16.66	98	P	Pn	20 26 59.2	-0.4
	5.4nm,0.6s						
TOLI2	Tolitoli	17.58	64	P	Pn	20 27 10.0	-1.0
MRSI	Marisa	18.36	68	P	Pn	20 27 20.9	+0.3
BATI	Baumata	18.77	102	P	Pn	20 27 25.5	-0.1
	19nm,0.3s,baz=342,slow=3.1,SNR=6.5						
BATI				S	S	20 30 57.8	+1.8
	3.5nm,0.3s,baz=280,slow=23,SNR=3.8						
BATI	Baumata	18.77	102	P	Pn	20 27 26.9	+1.4
SOEI	Soe	19.30	100	P	P	20 27 31.2	+0.7
SOEI	Soe	19.30	100	P	P	20 27 29.4	-1.1
SOEI				IAmb	IAmb	20 27 44.8	
	comp=Z,24nm,0.7s						
FITZ	Fitzroy Crossi	23.07	121	P	P	20 28 10.6	-0.2
	comp=Z,0.8nm,0.7s,baz=300,slow=20,SNR=1.4						
FITZ				S	S	20 32 19.2	+0.9
	comp=Z,2.7nm,1.1s,baz=340,slow=12,SNR=2.5						
FITZ				LR	LR	20 37 53.2	
	comp=Z,25nm,21.4s,baz=354,slow=38						
CMAR	Chiang Mai Arr	25.75	347	P	P	20 28 33.0	-2.5
	comp=Z,1.0nm,0.6s,baz=180,slow=8.9,SNR=11						
CMAR				LR	LR	20 39 11.6	
	comp=Z,56nm,19.2s,baz=196,slow=38						
MTN	Manton Dam	26.44	105	P	P	20 28 41.2	-0.6
MTN				IAmb	IAmb	20 29 03.6	
	comp=Z,21nm,1.3s						
H01W3	Cape Leeuwin H	29.24	164	T	T	20 59 30.6	
	baz=344,slow=76,SNR=194						
H01W1	Cape Leeuwin H	29.25	164	T	T	20 59 31.7	
	baz=344,slow=76,SNR=132						
H01W2	Cape Leeuwin H	29.25	165	T	T	20 59 31.7	
	baz=344,slow=76,SNR=228						
WRA	Warramunga Arr	31.34	118	P	P	20 29 25.1	-0.4
	comp=Z,0.7nm,0.5s,baz=287,slow=10,SNR=10						
H08S2	Diego Garcia H	32.26	266	T	T	21 03 49.0	
	baz=90,slow=75,SNR=60						
H08S3	Diego Garcia H	32.27	266	T	T	21 03 51.8	
	baz=90,slow=75,SNR=80						
H08S1	Diego Carcia H	32.28	266	T	T	21 03 51.4	
	baz=90,slow=75,SNR=18						
ASAR	Alice Springs	32.46	124	P	P	20 29 35.4	+0.1
	comp=Z,0.2nm,0.4s,baz=301,slow=8.2,SNR=3.3						
SHL	Shillong	34.56	339	P	P	20 29 53.0	-0.6
SHL				IAmb	IAmb	20 29 53.4	
	comp=Z,4.3nm,0.5s						
ODAN	Odare	37.52	334	*e*P	P	20 30 19.0	0.0
	comp=Z,9.3nm,0.4s						
TAPN	Taplejung	37.80	334	*e*P	P	20 30 21.8	+0.3
	comp=Z,6.6nm,0.5s						
RAMN	Ramite	37.95	333	*e*P	P	20 30 23.1	+0.5
	comp=Z,7.1nm,0.4s						
JIRN	Jiri	38.74	333	*e*P	P	20 30 29.8	+0.4
	comp=Z,7.8nm,0.5s						
PKI	Pulchoki	39.03	332	*e*P	P	20 30 31.5	-0.3
	comp=Z,1.9nm,0.3s						
PKIN	Phulchoki	39.04	332	*e*P	P	20 30 31.5	-0.3
	comp=Z,3.2nm,0.3s						
GUN	Gumba	39.10	333	*e*P	P	20 30 32.6	+0.2
	comp=Z,12nm,0.4s						
DMN	Daman	39.20	331	*e*P	P	20 30 33.3	+0.1
	comp=Z,4.7nm,0.5s						
KKN	Kakani	39.27	332	*e*P	P	20 30 33.8	+0.1
	comp=Z,8.7nm,0.7s						
GKN	Gorkha	39.76	331	*e*P	P	20 30 37.6	-0.1
	comp=Z,6.6nm,0.4s						
KOLN	Koldanda	40.07	330	*e*P	P	20 30 40.7	+0.4
	comp=Z,28nm,0.6s						
JOW	Kunigami	40.29	33	LR	LR	20 47 35.6	
	comp=Z,29nm,18.2s,baz=168,slow=36						
DANN	Dangsing	40.47	331	*e*P	P	20 30 44.0	+0.3
	comp=Z,29nm,0.6s						
PYUN	Piuthan	40.65	329	*e*P	P	20 30 45.3	+0.2
	comp=Z,22nm,0.4s						
STKA	Stephens Creek	42.29	131	P	P	20 30 59.5	+1.2
	comp=Z,9.7nm,0.7s,baz=306,slow=8.2,SNR=31						
STKA	Stephens Creek	42.29	131	P	P	20 30 59.4	+1.1
STKA				IAmb	IAmb	20 31 00.3	
	comp=Z,1.9nm,0.6s						
KSRS	Korea Array	48.91	24	P	P	20 31 48.9	-1.5
	comp=Z,0.9nm,0.7s,baz=217,slow=7.7,SNR=2.2						
NIL	Nilore	50.20	325	P	P	20 32 00.5	+0.1
NIL				IAmb	IAmb	20 32 01.3	
	comp=Z,7.6nm,0.7s						
SONM	Songino Array	54.36	1	P	P	20 32 30.2	-0.9
	comp=Z,0.7nm,0.5s,baz=181,slow=9.5,SNR=11						
SONM				PcP	PcP	20 33 34.8	+0.2
	comp=Z,0.7nm,0.5s,baz=165,slow=3.1,SNR=6.1						
SONM				ScP	ScP	20 37 27.3	-1.7
	comp=Z,0.1nm,0.4s,baz=197,slow=4.5,SNR=2.2						
SONM	Songino Array	54.36	1	P	P	20 32 30.4	-0.8
DRK	Karamyk	55.30	329	P	P	20 32 38.1	-0.3
DRK				IAmb	IAmb	20 32 40.7	
	comp=Z,3.7nm,0.8s						
CHGR	Chuyangaron	56.10	326	P	P	20 32 42.1	-1.7
CHGR				IAmb	IAmb	20 32 46.2	
	comp=Z,5.0nm,0.6s						
USRK	Ussuriysk Ar.	56.26	23	P	P	20 32 43.5	-1.2
	comp=Z,5.4nm,0.5s,baz=198,slow=6.3,SNR=14						
MKAR	Makanchi Array	57.00	342	P	P	20 32 48.8	-1.2
	comp=Z,0.7nm,0.4s,baz=152,slow=8.8,SNR=17						
GEYT	Alibeck	62.27	319	P	P	20 33 27.2	+0.7
	comp=Z,2.1nm,0.5s,baz=113,slow=2.3,SNR=2.6						
ZALV	Zalesovo Beam	62.81	347	P	P	20 33 28.5	-1.2
	comp=Z,0.8nm,0.3s,baz=159,slow=5.7,SNR=4.6						
ABKAR	Akbulak array	68.19	330	P	P	20 34 04.5	0.0
ABKAR	Akbulak array	68.19	330	P	P	20 34 04.6	0.0
ABKAR				IAmb	IAmb	20 34 05.4	
	comp=Z,12nm,0.7s						
PETK	Petropavlovsk-	74.35	30	P	P	20 34 40.3	-1.4
	comp=Z,2.6nm,0.9s,baz=180,slow=1.5,SNR=4.1						
KBZ	Khabaz	75.14	318	P	P	20 34 46.2	-0.2
	comp=Z,2.1nm,0.9s,baz=135,slow=6.0,SNR=6.5						
VNDA	Vanda	76.58	169	P	P	20 34 55.6	+1.5
	comp=Z,0.4nm,0.6s,baz=6.3,slow=5.0,SNR=2.0						
NRIK	Noril'sk	76.87	354	P	P	20 34 55.6	-0.1
	comp=Z,1.5nm,0.4s,baz=153,slow=3.7,SNR=2.2						
BOSA	Boshof	77.81	242	P	P	20 35 03.5	+1.4
	comp=Z,1.6nm,0.7s,baz=121,slow=12,SNR=2.2						
TIXI	Tiksi	79.81	7	LR	LR	21 13 07.4	
	comp=Z,113nm,19.8s,baz=22,slow=38						
FINES	FINESS Array B	90.61	332	P	P	20 36 07.5	+1.4
	comp=Z,4.1nm,1.0s,baz=108,slow=6.2,SNR=6.3						
ARCES	ARCESS Array B	92.61	340	P	P	20 36 15.8	+0.5
	comp=Z,3.3nm,0.9s,baz=29,slow=2.8,SNR=5.2						
TXAR	Lajitas Array	144.87	47	PKP	PKPdf	20 42 41.6	-0.1
	comp=Z,1.6nm,0.5s,baz=302,slow=0.8,SNR=23						
TKL	Tuckaleechee C	150.12	14	PKPbc	PKPbc	20 42 55.1	-0.1
	comp=Z,2.5nm,0.4s,baz=262,slow=7.1,SNR=5.0						

IDC ***24*** *20:32:55.8±1.3,12°.62N×87°.71W,h0^{km},mb4.0/8,mb1 4.2/10,mb1mx3.9/35,mbtmp3.9/10,ML3.3/2,MS3.0/4,Ms1 3.0/4,ms1mx2.8/35,Error ellipse: s-maj=37.7km s-min=22.2km az=54.0*

INET ***24*** *20:32:56.9,12°.44N×88°.26W,h19^{km},MW3.9*

SNET ***24*** *20:33:04.7±1.1,12°.57N×88°.26W,h37^{km}±4^{km},ML4.4*

UCR ***24*** *20:33:04.6±1.6,12°.56N×88°.26W,h38^{km}±93^{km},ML4.3,mb4.3(NEIC)*

NEIC ***24*** *20:33:06.6±1.6,12°.65N±0°.07×88°.01W±0°.07,h75^{km}±8^{km},mb4.3/48,Md4.4(SNET),Error ellipse: s-maj=12.3km s-min=7.2km az=219.0*

ISC 24 20:33:04.1±0.9**,12°.58N**±0°.05×**88°.18W**±0°.04**,h63**^{km}±8^{km}**,n154,**σ**1.^{s}12**/176**,mb4.3**/31**,6C-14D,Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JUCU	Jucuar¡n	0.68	355	*e*P	Pn	20 33 17.8	-0.6
JUCU				*e*S	Sn	20 33 28.2	-0.5
JUCU				IAML		20 33 32.4	
	comp=Z,19μm,0.3s						
JUCU	Jucuar¡n	0.68	355	*e*P	Pn	20 33 17.8	-0.6
JUCU				*e*S	Sn	20 33 28.2	-0.5
JUCU				IAML		20 33 32.4	
	comp=Z,19μm,0.3s						
CNCH	Conchagua	0.77	26	⇓*i*P	Pn	20 33 19.6	+0.1
CNCH				*e*	Sn	20 33 31.4	+0.5
CNCH				*e*S	Sn	20 33 31.4	+0.5
CNCH	Conchagua	0.77	26	⇓*i*P	Pn	20 33 19.6	+0.1
CNCH				*e*S	Sn	20 33 31.4	+0.5
CNCH				*e*		20 33 31.4	
LCND	La Caada	0.78	21	⇑*i*P	Pn	20 33 19.5	0.0
LCND				⇓*e*S	Sn	20 33 31.4	+0.5
LCND				IAML		20 33 35.7	
	comp=Z,12μm,0.3s						
LCND	La Caada	0.78	21	⇑*i*P	Pn	20 33 19.5	0.0
LCND				⇓*e*S	Sn	20 33 31.4	+0.5
LCND				IAML		20 33 35.7	
	comp=Z,12μm,0.3s						
ALJI	Alcalda de J	0.84	333	⇓*i*P	Pn	20 33 19.8	-0.5
ALJI				*e*S	Sn	20 33 32.0	0.0
ALJI				IAML		20 33 33.1	
	comp=Z,7μm,0.1s						
ALJI	Alcalda de J	0.84	333	⇓*i*P	Pn	20 33 19.8	-0.5
ALJI				*e*S	Sn	20 33 32.0	0.0
ALJI				IAML		20 33 33.1	
	comp=Z,7μm,0.1s						
LCY	Lacayo	0.85	353	*e*P	Pn	20 33 20.5	0.0

LCY	Lacayo	0.85	353	*e*P	Pn	20 33 20.5	0.0
VSM	San Miguel	0.85	354	⇓*i*P	Pn	20 33 21.0	+0.3
VSM	San Miguel	0.85	354	⇓*i*P	Pn	20 33 21.0	+0.3
PACA	Pacayal	0.90	351	*e*P	Pn	20 33 21.6	+0.5
PACA				*e*S	Sn	20 33 34.0	+0.3
PACA	Pacayal	0.90	351	*e*P	Pn	20 33 21.6	+0.5
PACA				*e*S	Sn	20 33 34.0	+0.3
COEB	Comit de Eme	0.98	340	*e*P	Pn	20 33 21.9	-0.2
COEB				*e*S	Sn	20 33 35.4	0.0
COEB				IAML		20 33 39.5	
	comp=Z,10µm,0.5s						
COEB	Comit de Eme	0.98	340	*e*P	Pn	20 33 21.9	-0.2
COEB				*e*S	Sn	20 33 35.4	0.0
COEB				IAML		20 33 39.5	
	comp=Z,10µm,0.5s						
PQSS	Presa 15 de Se	1.10	341	*i* P	Pn	20 33 24.1	+0.5
PQSS				*e*S	Sn	20 33 39.1	+1.0
SCLA	Alcaldia de Sa	1.24	335	⇓*i*P	Pn	20 33 25.9	+0.5
SCLA				*e*S	Sn	20 33 42.5	+1.1
SCLA	Alcaldia de Sa	1.24	335	⇓*i*P	Pn	20 33 25.9	+0.5
SCLA				*e*S	Sn	20 33 42.5	+1.1
COEG	Centro de Oper	1.24	327	*e*P	Pn	20 33 25.4	-0.2
COEG				*e*S	Sn	20 33 41.0	-0.5
COEG	Centro de Oper	1.24	327	*e*P	Pn	20 33 25.4	-0.2
COEG				*e*S	Sn	20 33 41.0	-0.5
SJTE	Alcalda de S	1.31	322	*e*P	Pn	20 33 26.0	-0.4
SJTE				*e*S	Sn	20 33 42.7	-0.4
SJTE	Alcalda de S	1.31	322	*e*P	Pn	20 33 26.0	-0.4
SJTE				*e*S	Sn	20 33 42.7	-0.4
LFRS	El Faro	1.35	321	⇓*e*P	Pn	20 33 26.5	-0.4
LFRS	El Faro	1.35	321	⇓*e*P	Pn	20 33 26.5	-0.4
PAVA	Las Pavas	1.35	327	*e*P	Pn	20 33 27.0	0.0
PAVA				*e*S	Sn	20 33 44.1	0.0
PAVA	Las Pavas	1.35	327	*e*P	Pn	20 33 27.0	0.0
PAVA				*e*S	Sn	20 33 44.1	0.0
LBRS	Las Brisas	1.43	324	⇓*i*P	Pn	20 33 28.5	+0.5
LBRS	Las Brisas	1.43	324	⇓*i*P	Pn	20 33 28.5	+0.5
LALI	Alcalda de L	1.43	309	⇑*e*P	Pn	20 33 27.3	-0.7
LALI				*e*S	Sn	20 33 44.7	-1.2
LALI	Alcalda de L	1.43	309	⇑*e*P	Pn	20 33 27.3	-0.7
LALI				*e*S	Sn	20 33 44.7	-1.2
CNGN	Cerro Negro	1.45	93		Pn	20 33 28.8	+0.6
LFU	La Fuente	1.48	322	*e*P	Pn	20 33 28.8	+0.2
LFU	La Fuente	1.48	322	*e*P	Pn	20 33 28.8	+0.2
OPAM	Oficina de Pla	1.50	319	*e*P	Pn	20 33 29.3	+0.3
OPAM				*e*S	Sn	20 33 47.2	-0.5
OPAM	Oficina de Pla	1.50	319	*e*P	Pn	20 33 29.3	+0.3
OPAM				*e*S	Sn	20 33 47.2	-0.5
SNET	Serv Nac Est T	1.50	317		Pn	20 33 28.4	-0.7
UEES	Universidad Ev	1.53	318	*e*P	Pn	20 33 29.8	+0.4
UEES	Universidad Ev	1.53	318	*e*P	Pn	20 33 29.8	+0.4
BOQS	Boqueron	1.57	317	*e*P	Pn	20 33 30.2	+0.2
BOQS	Boqueron	1.57	317	*e*P	Pn	20 33 30.2	+0.2
JAYA	Jayaque - finc	1.63	311	*e*P	Pn	20 33 30.1	-0.8
JAYA	Jayaque - finc	1.63	311	*e*P	Pn	20 33 30.1	-0.8
TGUH	Tegucigalpa,Un	1.72	31	⇑*i*P	Pn	20 33 33.1	+1.2
TGUH	Tegucigalpa,Un	1.72	31	⇑*i*P	Pn	20 33 33.1	+1.2
TGUH	Tegucigalpa,Un	1.72	31	Pn	Pn	20 33 33.0	+1.1
TACO	Tacachico	1.79	321	*e*P	Pn	20 33 33.2	+0.3
TACO	Tacachico	1.79	321	*e*P	Pn	20 33 33.2	+0.3
CEVE	Cerro Verde	1.88	312	*e*P	Pn	20 33 34.3	+0.1
CEVE	Cerro Verde	1.88	312	*e*P	Pn	20 33 34.3	+0.1
MTO3	Montecristo	2.14	328	*e*P	Pn	20 33 38.3	+0.4
MTO3	Montecristo	2.14	328	*e*P	Pn	20 33 38.3	+0.4
MTO3	Montecristo	2.14	328		Pn	20 33 38.2	+0.4
ESQI	Esquipulas	2.27	330	*e*P	Pn	20 33 40.7	+1.3
ESQI	Esquipulas	2.27	330		Pn	20 33 40.7	+1.3
BOAB	BOACO BROADBAN	2.46	93	Pn	Pn	20 33 41.0	-0.9
CONN	Concepcion	2.69	112	*e*P	Pn	20 33 45.8	+0.7
ACON	Acoyapa	3.00	101		Pn	20 33 48.3	-0.9
HZTE	Horizontes, Gu	3.14	126	*e*P	Pn	20 33 52.4	+1.2
HZTE	Horizontes, Gu	3.14	126		Pn	20 33 52.1	+1.0
APG	El Apazote	3.28	318	Pn	Pn	20 33 53.9	+0.7
	comp=Z,1.6nm,0.3s,baz=85,slow=12,SNR=11						
SAJU	San Juanillo,	3.48	136	*e*P	Pn	20 33 56.0	+0.2
GUAI	GUAI	3.48	131	*i* P	Pn	20 33 56.5	+0.6
PLVR	Palo Verde	3.55	128	*e*P	Pn	20 33 58.1	+1.2
DUNO	Dulce Nombre,	3.62	133		Pn	20 33 58.9	+1.2
DUNO				Sn	Sn	20 34 37.1	-2.2
GRZA	Playa Garza	3.64	136	*e*P	Pn	20 33 58.3	+0.3
INDI	Punta indio, G	3.76	135	*e*P	Pn	20 33 59.9	+0.2
ESPN	Las Esperanzas	3.81	95		Pn	20 34 00.6	+0.2
JTS	Las Juntas de	3.90	125	*e*P	Pn	20 34 02.9	+1.3
JTS	Las Juntas de	3.90	125	Pn	Pn	20 34 02.7	+1.1
RTAL	Retalhuleu	3.93	300	Pn	Pn	20 34 05.9	+4.0
CAO2	Cobano, Puntar	4.17	133		Pn	20 34 05.5	+0.2
LAFE	Finca La Fe, P	4.23	130	*e*P	Pn	20 34 06.8	+0.7
JACO	JACO, Garabito	4.51	130	Pn	Pn	20 34 11.8	+1.9
PETF	Flores	4.61	340		Pn	20 34 14.0	+2.7
LCR2	La Lucha 2	4.97	124	*e*P	Pn	20 34 19.3	+2.8
CVTR	Volcan Turrial	5.03	120	Pn	Pn	20 34 19.1	+1.7
RIMA	Rio Macho	5.08	123	*e*P	Pn	20 34 20.9	+3.1
RIMA	Rio Macho	5.08	123		Pn	20 34 19.0	+1.2
CDM	Cerro de Muert	5.28	124	*e*P	Pn	20 34 23.2	+2.4
CCIG	Comitan	5.32	314	Pn	Pn	20 34 25.3	+4.2
MRVA	Moravia de Chi	5.39	120	*e*P	Pn	20 34 25.8	+3.6
PEZE	Perez Zeledon,	5.44	125	Pn	Pn	20 34 22.5	-0.3
SRBA	San Rafael, Bu	5.79	125		Pn	20 34 28.7	+1.2
RIOS	Rincon, Osa	5.99	130	*e*P	Pn	20 34 32.7	+2.5
RIOS	Rincon, Osa	5.99	130		Pn	20 34 31.3	+1.1
POTG	Potrero Grande	6.08	125	*e*P	Pn	20 34 34.1	+2.5
PRVC	Isla de Provid	6.69	82	Pn	Pn	20 34 39.6	-0.2
CMIG	Matias Romero	7.88	306	Pn	Pn	20 34 57.5	+1.4
	comp=Z,0.5nm,0.3s,baz=147,slow=8.3,SNR=4.1						
CMIG				Sn	Sn	20 36 25.3	+1.4
	comp=Z,0.6nm,0.3s,baz=99,slow=13,SNR=1.6						
BCIP	Isla Barro Col	8.87	112	Pn	Pn	20 35 10.6	+1.0
ROSC	El Rosal	15.70	118	LR	LR	20 42 33.3	
	comp=Z,84nm,21.1s,baz=64,slow=38						
SDV	Santo Domingo	17.63	100	LR	LR	20 44 58.3	
	comp=Z,41nm,19.6s,baz=272,slow=42						
GOGA	Godfrey	21.18	11	P	P	20 37 42.9	-1.5
GOGA				IAmb	IAmb	20 37 49.3	
	comp=Z,15nm,1.1s						
Y52A	Lilburn	21.52	9	P	P	20 37 47.7	-0.3
ATAH	Atahualpa	21.87	153	LR	LR	20 45 09.4	
	comp=Z,56nm,18.4s,baz=333,slow=34						
TX31	Lajitas Ar. Si	22.03	322	P	P	20 37 55.3	+1.7
TX32	Lajitas Array	22.03	322	P	P	20 37 55.1	+1.5
TXAR	Lajitas Array	22.03	322	P	P	20 37 55.3	+1.7
	comp=Z,6.1nm,0.7s,baz=138,slow=10,SNR=76						
TXAR	Lajitas Array	22.03	322	P	P	20 37 55.1	+1.6
PDPR	Patillas Dam,	22.04	73	P	P	20 37 52.2	-1.4
HODGE	Hodges	22.22	13	P	P	20 37 55.1	-0.4
CBYP	Canovanas	22.24	72	P	P	20 37 54.6	-1.4
CBYP				IAmb	IAmb	20 37 56.2	
	comp=Z,20nm,1.1s						
MIAR	Mount Ida	22.41	348	P	P	20 37 58.0	+0.4
MIAR				IAmb	IAmb	20 38 22.0	
	comp=Z,15nm,1.3s						
JSC	Jenkinsville	22.51	15	P	P	20 37 58.3	-0.2
JSC				IAmb	IAmb	20 38 00.9	
	comp=Z,8.0nm,0.7s						
SWET	Sewanee	22.63	5	P	P	20 38 00.3	+0.3
SWET				IAmb	IAmb	20 38 11.2	
	comp=Z,17nm,1.5s						
W50A	Signal Mountai	22.67	6	P	P	20 37 60.0	-0.4
W50A				IAmb	IAmb	20 38 32.1	
	comp=Z,23nm,1.5s						
CUPR	Culebra, Puert	22.79	73	P	P	20 38 00.6	-1.1
BG3	Lake Jocassee	22.82	11	P	P	20 38 02.4	+0.5
PAULI	Pauline	22.89	14	P	P	20 38 03.0	+0.5
PAULI				IAmb	IAmb	20 38 18.9	
	comp=Z,17nm,1.3s						
CPCT	Cooper Cave	23.01	8	P	P	20 38 04.0	+0.2
CPCT				IAmb	IAmb	20 38 30.2	
	comp=Z,15nm,1.4s						
BIRD	Birdtown, Kers	23.06	16	P	P	20 38 03.9	-0.4
BIRD				IAmb	IAmb	20 38 16.0	
	comp=Z,16nm,1.2s						
W39A	Magazine	23.09	348	P	P	20 38 05.5	+1.0
W39A				IAmb	IAmb	20 38 07.1	
	comp=Z,7.5nm,0.6s						
STVI	Saint Thomas	23.10	73	P	P	20 38 03.5	-1.3
KMSC	Kings Mountain	23.31	14	P	P	20 38 05.7	-0.9
KMSC				IAmb	IAmb	20 38 08.8	
	comp=Z,9.7nm,0.7s						
TKL	Tuckaleechee C	23.32	9	P	P	20 38 06.3	-0.6
	comp=Z,7.2nm,0.8s,baz=195,slow=13,SNR=5.3						
V53A	Saluda	23.50	11	P	P	20 38 08.9	+0.4
LCAR	Lake Charles	23.55	354	P	P	20 38 06.5	-2.3
X34A	Smith Ranch, M	23.61	340	P	P	20 38 10.4	+0.9
W57A	Gilead	23.67	17	P	P	20 38 09.7	-0.3
W57A				IAmb	IAmb	20 38 38.4	
	comp=Z,9.8nm,1.0s						
U49A	Red Boiling Sp	23.93	5	P	P	20 38 11.8	-0.6
U49A				IAmb	IAmb	20 38 33.2	
	comp=Z,16nm,1.3s						
U40A	Yellville	24.05	351	P	P	20 38 13.7	+0.2
FNO	Franklin	24.07	341	P	P	20 38 13.7	0.0
HHAR	Hobbs	24.17	349	P	P	20 38 15.4	+0.9
TZTN	Tazewell	24.23	9	P	P	20 38 15.3	+0.3
TZTN				IAmb	IAmb	20 38 24.2	
	comp=Z,11nm,1.0s						
U54A	Nelsons Funny	24.52	12	P	P	20 38 18.4	+0.7
MNTX	Cornudas Mount	24.75	323	P	P	20 38 20.9	+0.9
MSTX	Muleshoe	25.10	330	P	P	20 38 23.3	+0.1
MSTX				IAmb	IAmb	20 38 24.7	
	comp=Z,9.5nm,0.7s						
AMTX	Amarillo	25.36	333	P	P	20 38 27.4	+1.9
AMTX				IAmb	IAmb	20 38 29.4	
	comp=Z,8.8nm,0.8s						
S39A	Bolivar	25.43	350	P	P	20 38 26.0	0.0
S39A				IAmb	IAmb	20 38 27.1	
	comp=Z,9.0nm,0.6s						
121A	Cookes Peak, D	26.79	321	P	P	20 38 39.5	+1.0
NNA	Nana	26.87	155	LR	LR	20 47 18.1	
	comp=Z,26nm,18.1s,baz=317,slow=32						
N49A	Columbus Grove	28.45	6	P	P	20 38 51.9	-1.2
N49A				IAmb	IAmb	20 38 53.7	
	comp=Z,6.6nm,0.8s						
ETMB	Extrema	31.16	135	P	P	20 39 17.6	+0.3
ETMB				IAmb	IAmb	20 39 19.6	
	comp=Z,5.3nm,0.6s						
PDAR	Pinedale Array	35.33	332	P	P	20 39 54.4	+0.8
	comp=Z,1.1nm,0.7s,baz=130,slow=11,SNR=10.0						
HWUT	Hardware Ranch	35.40	329	P	P	20 39 55.2	+1.0
HWUT				IAmb	IAmb	20 39 57.4	
	comp=Z,3.7nm,0.7s						
AHID	Auburn Hatcher	36.04	331	P	P	20 40 01.1	+1.4
REDW	Red Top Meadow	36.38	332	P	P	20 40 04.0	+1.4
LOHW	Long Hollow	36.46	332	P	P	20 40 04.3	+0.9
LOHW				IAmb	IAmb	20 40 06.2	
	comp=Z,4.9nm,1.0s						
TPAW	Teton Pass	36.53	332	P	P	20 40 05.2	+1.3
MOOW	Moose Ponds	36.63	332	P	P	20 40 06.1	+1.3
YMR	Madison River	37.45	333	P	P	20 40 13.8	+2.1
YHH	Holmes Hill	37.49	333	P	P	20 40 14.0	+1.9
YHH				IAmb	IAmb	20 40 19.0	
	comp=Z,2.9nm,1.0s						
MCMT	McKenzie Canyo	38.43	331	P	P	20 40 22.1	+2.2
BOZ	Bozeman (W)	38.47	333	P	P	20 40 21.3	+1.1
BOZ				IAmb	IAmb	20 40 23.1	
	comp=Z,2.8nm,0.8s						
SCHQ	Schefferville	45.37	17	P	P	20 41 14.5	-1.6
	comp=Z,2.6nm,0.4s,baz=226,slow=7.7,SNR=5.9						
FCC	Fort Churchill	46.31	356	P	P	20 41 22.8	-0.6
YKA	Yellowknife Ar	53.30	345	P	P	20 42 16.0	-0.5
	comp=Z,0.6nm,0.4s,baz=144,slow=7.1,SNR=7.5						
PLCA	Paso Flores	55.50	164	P	P	20 42 32.7	0.0
	comp=Z,1.8nm,0.8s,baz=0.7,slow=10,SNR=3.7						
PLCA	Paso Flores	55.50	164	IAmb	IAmb	20 42 34.2	
	comp=Z,2.2nm,0.8s						
BCAR	Beaver Creek A	62.84	336	P	P	20 43 24.0	+0.8
ILAR	Eielson Array	65.62	336	P	P	20 43 41.0	-0.3
	comp=Z,0.7nm,0.9s,baz=107,slow=5.8,SNR=5.6						
BMAR	Burnt Mountain	65.91	339	P	P	20 43 43.3	+0.2
TORD	Torodi Ar. Bea	87.08	77	P	P	20 45 41.6	-2.1
	comp=Z,0.7nm,1.0s,baz=281,slow=5.0,SNR=2.6						
TORD	Torodi Ar. Bea	87.08	77	IAmb	IAmb	20 45 44.1	
	comp=Z,2.8nm,1.4s						

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*IDC **24** 20:45:00.6±0.4, 0°.02N×17°.84W, h0^{km}, mb4.8/29, mb1 4.9/31, mb1mx4.8/35, mbtmp4.8/31, ML5.2/2, MS5.0/32, Ms1 4.9/32, ms1mx4.9/32, Error ellipse: s-maj=13.2km s-min=11.3km az=137.0*

*MOS **24** 20:45:01.3±1.0, 0°.02S×17°.90W, h17^{km}, mb5.4/24, MS5.1/40, Error ellipse: s-maj=8.7km s-min=4.4km az=56.1*

*BGR **24** 20:45:01.8±0.0, 0°.10S×18°.61W, h33^{km}, mb5.2*

*BJI **24** 20:45:01.6±0.0, 0°.02N×18°.01W, h9^{km}, mB5.9/6, mb5.2/5, Ms5.5/14, Ms7 5.1/14*

*NEIC **24** 20:45:02.3±1.8, 0°.10S±0°.08×17°.83W±0°.09, h10^{km}±1^{km}, mb5.4/373, Ms_20 5.2/167, Mwb5.5/23, Mwc5.6(GCMT), Error ellipse: s-maj=15.0km s-min=14.2km az=257.0*

*NEIC **24** 20:45:03.4, 0°.13S×17°.83W, h9^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.05; M$_{\theta\theta}$1.09; M$_{\phi\phi}$-1.04; M$_{r\theta}$-0.33; M$_{\theta\phi}$-1.69; M$_{\phi r}$0.59; Fault plane solution: M$_0$2.11000×10^{17} NP1:ϕ_s344.22000°, δ87.18000°, λ18.20000°. NP2:ϕ_s253.29000°, δ71.83000°, λ177.03000°. Principal axes: T 2.1728, Plg15.0000°, Azm210.0000°; N -0.1394, Plg72.0000°, Azm353.0000°; P -2.0334, Plg11.0000°, Azm117.0000°;*

*GCMT **24** 20:45:05.3±0.1, 0°.18N±0°.01×17°.83W±0°.01, h17^{km}, MW5.6/151, Moment Tensor Solution. s115,c204; s151,c288; Duration: 1^{s}5 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.14±.03; M$_{\theta\theta}$1.39±.03; M$_{\phi\phi}$-1.25±.03; M$_{r\theta}$0.43±.09; M$_{\theta\phi}$-2.50±.03; M$_{\phi r}$0.37±.08; Best double couple: M$_0$2.88700×10^{17} NP1:ϕ_s166.00000°, δ80.00000°, λ-6.00000°. NP2:ϕ_s257.00000°, δ84.00000°, λ-170.00000°. Principal axes: T 2.9080, Plg3.0000°, Azm31.0000°; N -0.0450, Plg78.0000°, Azm284.0000°; P -2.8660, Plg11.0000°, Azm121.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **24** 20:45:06, 0°.14N×17°.80W, h17^{km}, Moment Tensor Solution. Duration: 3^{s}0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.29; M$_{\theta\theta}$1.61; M$_{\phi\phi}$-1.32; M$_{r\theta}$0.01; M$_{\theta\phi}$-2.58; M$_{\phi r}$0.61; Fault plane solution: M$_0$3.04000×10^{17} NP1: ϕ_s256.00000°, δ78.00000°, λ-175.00000°. NP2: ϕ_s165.00000°, δ85.00000°, λ-12.00000°. Principal axes: T 3.1397, Plg5.0000°, Azm211.0000°; N -0.2089, Plg77.0000°, Azm324.0000°; P -2.9307, Plg12.0000°, Azm120.0000°;*

ISC 24 20:45:03.9±0.2, **0°.05S**±0°.04×**17°.81W**±0°.05, **h23**^{km}, **n871**, σ**1^{s}57**/719, **mb5.3**/286, **MS5.2**/154, **36C-27D, North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N2	ASCENSION HYDR	8.40	157	Pn	Pn	20 47 04.0	-0.1
	baz=340,slow=13,SNR=188						
H10N2				T	T	20 56 00.2	
	baz=338,slow=74,SNR=2206						
H10N3	ASCENSION HYDR	8.41	157	Pn	Pn	20 47 03.9	-0.3
	baz=340,slow=13,SNR=267						
H10N3				T	T	20 56 01.1	
	baz=338,slow=74,SNR=3089						
H10N1	ASCENSION HYDR	8.42	157	Pn	Pn	20 47 04.3	-0.1
	baz=340,slow=13,SNR=240						
H10N1				T	T	20 56 16.8	
	baz=338,slow=74,SNR=3880						
ASCN	Ascension	8.55	156	Pn	Pn	20 47 04.7	-1.7
H10S3	ASCENSION HYDR	9.38	161	Pn	Pn	20 47 18.1	+0.5
	baz=211,slow=74,SNR=157						
H10S3				T	T	20 57 29.3	
	baz=240,slow=74,SNR=2643						
H10S2	ASCENSION HYDR	9.39	160	Pn	Pn	20 47 18.6	+0.9
	baz=9.0,slow=74,SNR=51						
H10S2				T	T	20 57 22.4	
	baz=340,slow=74,SNR=591						
LIC	Lamto	14.20	64	*e*P	Pn	20 48 24.3	+0.6
	454nm,0.9s						
MBO	M'Bour	14.38	3		Pn	20 48 21.7	-4.5
TIC	Toumodi	14.39	62	*e*P	Pn	20 48 24.9	-1.5
KIC	Kosan Boka	14.51	64	*e*P	Pn	20 48 26.1	-2.0
	272nm,0.9s						
DBIC	Dimbokro	14.55	62	Pn	Pn	20 48 26.0	-2.5
	19nm,0.3s,baz=256,slow=12,SNR=104						
DBIC				Sn	Sn	20 50 56.7	-12
	4.4nm,0.3s,baz=164,slow=21,SNR=2.0						
DBIC				LR	LR	20 52 53.8	
	comp=Z,7µm,20.3s,baz=248,slow=32						
DBIC	Dimbokro	14.55	62	P	Pn	20 48 25.1	-3.4
DBIC	Dimbokro	14.55	62	Pn	Pn	20 48 25.1	-3.4
SACV	Santiago Islan	15.99	339	Pn	Pn	20 48 42.7	-4.9
NBRF	Rio Formoso -	19.27	243	*e*P	P	20 49 26.4	-0.7
SHEL	Horse Pasture	19.79	144	P	P	20 49 28.8	-4.0
SHEL				pmax	pmax		
	comp=Z,120nm,1.2s						
SHEL	Horse Pasture	19.79	144	P	P	20 49 28.8	-4.0
KOWA	Kowa	19.88	43	P	P	20 49 32.2	-1.6
	comp=Z,3.8nm,0.3s,baz=221,slow=8.6,SNR=60						
KOWA				S	S	20 52 59.4	-17
	comp=Z,2.4nm,0.3s,baz=159,slow=18,SNR=2.6						
KOWA				LR	LR	20 56 44.8	
	comp=Z,11µm,18.7s,baz=220,slow=36						
KOWA	Kowa	19.88	43	P	P	20 49 32.2	-1.6
KOWA				IAmb	IAmb	20 49 39.7	
	comp=Z,245nm,1.2s						
NBPA	Parau_RN	20.09	253	*e*P	Pn	20 49 37.4	-0.6
NBLV	Livramento - P	20.39	249	*e*P	P	20 49 39.3	-0.2
NBAN	Anadia - AL	20.71	242	*e*P	P	20 49 42.4	-0.5
NBCL	Cascavel-CE	20.88	258	*e*P	P	20 49 44.8	0.0
NBMA	Muriti-CE	22.13	250	*e*P	P	20 49 56.6	-1.6
NBPB	Pedra_Branca-C	22.42	256	*e*P	P	20 50 01.2	-0.1
NBMO	Morrinhos-CE	22.46	261	*e*P	P	20 50 01.2	-0.5
NBLA	Lagarto - SE	22.64	241	*e*P	P	20 50 02.7	-0.9
TORD	Torodi Ar. Bea	23.36	55	P	P	20 50 09.2	-1.8
	comp=Z,42nm,0.9s,baz=240,slow=9.0,SNR=69						
TORD				S	S	20 54 21.3	-1.5
	comp=Z,1.9nm,0.5s,baz=88,slow=26,SNR=1.4						
TORD				LR	LR	20 58 31.2	
	comp=Z,8µm,18.6s,baz=230,slow=35						
TORD	Torodi Ar. Bea	23.36	55	P	P	20 50 08.4	-2.6
NBPS	Pedro II - PI	24.01	259	*e*P	P	20 50 18.1	+0.7
NBPN	Ponto Novo - B	24.71	244	*e*P	P	20 50 23.1	-0.6
GDU01	Guandu, BA	25.48	237	*e*P	P	20 50 29.9	-0.7
NBIT	Itapeh - BA	25.99	234	*e*P	P	20 50 36.2	+0.9
CMC01	Camacan, BA	26.29	234	*e*P	P	20 50 38.7	+0.7
ROSB	Rosrio	26.46	264	*e*P	P	20 50 37.7	-1.8
GUA01	Guaratinga, BA	27.21	232	*e*P	P	20 50 46.9	+0.7
RIB01	Linhares ES	29.28	228	*e*P	P	20 51 05.5	+0.8
BSFB	Barra de Sao F	29.32	229	*e*P	P	20 51 06.1	+1.0
SJMB	Sao Joao De Ma	29.50	230	*e*P	P	20 51 07.1	+0.4
SDBA	SAO DESIDERIO	29.55	244	*e*P	P	20 51 06.9	-0.3
JANB	Januaria	30.14	239	*e*P	P	20 51 11.8	-0.7
ALF01	Guarapari-ES	30.33	226	*e*P	P	20 51 14.4	+0.4
TMAB	Tom-Au,PA,Br	30.37	265	*e*P	P	20 51 15.6	+1.1
MC01	Montes Claros	30.62	236	*e*P	P	20 51 16.4	-0.2
SMTB	Santa Maria do	30.93	253	*e*P	P	20 51 20.2	+0.8
DIAM	Diamantina, MG	31.22	233	*e*P	P	20 51 22.1	0.0
CAM01	Campos-RJ	31.77	226	*e*P	P	20 51 26.7	+0.1
DUB01	Friburgo-RJ	32.45	226	*e*P	P	20 51 33.1	+0.4
PRPB	Parauapebas	32.52	259	*e*P	P	20 51 33.3	-0.2
PEXB	Peixe	32.55	247	*e*P	P	20 51 33.5	-0.2
PMOZ	Porto Moniz, M	32.71	1	*e*S	S	20 56 57.3	+7.1
PMOZ				*e*LQ	LQ	20 58 34.4	
PMOZ				*e*LR	LR	21 00 39.4	
	comp=Z,1µm,18.0s						
VAS01	Vassouras-RJ	33.34	227	*e*P	P	20 51 41.3	+0.8
BSCB	Bom Sucesso	33.58	230	*e*P	P	20 51 42.6	0.0
BDFB	Brasilia	33.61	241	P	P	20 51 42.8	-0.2
	comp=Z,56nm,0.9s,baz=56,slow=9.4,SNR=42						
BDFB				LR	LR	21 03 24.8	
	comp=Z,2µm,19.2s,baz=70,slow=33						
BDFB	Brasilia	33.61	241	P	P	20 51 43.0	0.0
BDFB				pmax	pmax		
	comp=Z,59nm,0.9s						
BDFB	Brasilia	33.61	241	P	P	20 51 43.0	0.0
BDFB				IAmb	IAmb	20 51 44.6	
	comp=Z,59nm,0.9s						
MCPB	Macapa, AP	34.25	269	*e*P	P	20 51 49.3	+0.8
IPMB	Ipameri, GO	34.80	238	*e*P	P	20 51 53.1	-0.2
MDP	Montagnes des	35.16	279	P	P	20 51 56.1	-0.3
	comp=Z,20nm,0.8s,baz=96,slow=11,SNR=5.5						
SNDB	Serra Nova Dou	35.29	249	*e*P	P	20 51 58.1	+0.7
PARB	Paraibuna	35.58	227	*e*P	P	20 52 00.7	+0.7
VAO	Valinhos	36.39	229	*e*P	P	20 52 06.6	-0.3
RCLB	Rio Claro- Sao	36.49	230	*e*P	P	20 52 08.2	+0.5
MALB	Monte Alegre	36.49	267	*e*P	P	20 52 08.0	+0.2
BB19B	Bebedouro	36.56	233	*e*P	P	20 52 08.9	+0.5
ARAG	Araguaiana, MT	37.00	244	*e*P	P	20 52 12.7	+0.6
PET01	Itanhaem-SP	37.36	228	*e*P	P	20 52 15.7	+0.6
ITRB	Iturama	37.40	237	*e*P	P	20 52 16.1	+0.6
PSMN	Pico do Norte,	37.48	350	*e*T	T	21 31 19.8	
PSMA	Santa Maria	37.48	350	*e*T	T	21 31 16.3	
SFS	San Fernando	37.90	15	IAMs_20	IAMs_20	21 08 20.9	
	comp=Z,5µm,21.0s						
PFVI	Vila Bisbo	37.92	12	P	P	20 52 22.1	+2.4
PFVI				IAmb	IAmb	20 53 10.8	
	comp=Z,121nm,1.4s						
NPGB	Novo Progresso	38.09	259	*e*P	P	20 52 20.3	-1.2
MORF	Marmelete	38.13	12	*e*P	P	20 52 22.8	+1.4
MORF				*e*PP	PnPn	20 53 50.1	-0.3
MORF				*e*S	S	20 58 17.8	+4.5
MORF				IAMs_20	IAMs_20	21 05 43.1	
	comp=Z,2µm,17.7s						
MORF	Marmelete	38.13	12	*e*P	P	20 52 22.8	+1.4
	comp=Z,90nm,1.8s						
MORF	Marmelete	38.13	12	*e*P	P	20 52 22.8	+1.4
MORF				*e*		20 53 50.1	
MORF				*e*S	S	20 58 17.8	+4.5
ITTB	Itaituba	38.13	263	*e*P	P	20 52 21.1	-0.6
PBDV	Barranco-do-Ve	38.22	13	*e*P	P	20 52 23.4	+1.3
	comp=Z,126nm,1.9s						
BART	Pico Bartolome	38.25	351	*e*T	T	21 32 25.1	
CMLA	Cha da Macela	38.30	350	*e*T	T	21 32 21.1	
PDA	Ponta Delgada	38.31	350	*e*T	T	21 32 26.1	
PTEO	Sao Teotonio	38.34	12	*e*P	P	20 52 25.1	+2.0
	comp=Z,117nm,1.2s						
PSET	Sete Cidades	38.39	350	*e*T	T	21 32 30.2	
PVAQ	Vaqueiros	38.42	13	*e*P	P	20 52 25.6	+1.8
	comp=Z,74nm,1.7s						
PVAQ				*e*S	S	20 58 24.5	+6.9
PVAQ				*e*LQ	LQ	21 01 05.8	
PVAQ				*e*LR	LR	21 03 34.9	
	comp=Z,2µm,20.0s						
PVAQ	Vaqueiros	38.42	13	P	P	20 52 25.7	+1.9
PCVE	Castro Verde	38.57	12	*e*P	P	20 52 26.3	+1.3
MESJ	Messejana	38.73	12	*e*P	P	20 52 27.8	+1.4
MESJ				*e*PP	PnPn	20 53 56.5	-1.1
MESJ				*e*S	S	20 58 26.9	+4.6
MESJ				IAMs_20	IAMs_20	21 05 25.9	
	comp=Z,2µm,25.0s						
MESJ	Messejana	38.73	12	*e*P	P	20 52 28.0	+1.6
	comp=Z,79nm,1.5s						
MESJ	Messejana	38.73	12	*e*P	P	20 52 27.8	+1.4
MESJ				*e*		20 53 56.5	
MESJ				*e*S	S	20 58 26.9	+4.6
PNCL	Nicolau / Gran	38.93	12	*e*P	P	20 52 30.6	+2.6
	comp=Z,46nm,1.7s						
PBEJ	Beja	38.98	13	*e*P	P	20 52 30.7	+2.2
	comp=Z,42nm,1.8s						
PCMB	Pacaembu	39.04	235	*e*P	P	20 52 29.7	+0.5
TIJ01	Guaruva-PR	39.24	228	*e*P	P	20 52 31.7	+0.8
CLDB	Colider	39.26	253	*e*P	P	20 52 30.6	-0.6
PBAR	Barrancos	39.31	13	*e*P	P	20 52 33.0	+1.7
	comp=Z,36nm,1.6s						
LIS	Lisbon	39.39	11	*e*PP	PP	20 54 04.0	+1.4
LIS				*e*S	S	20 58 36.8	+4.6
LIS				IAMs_20	IAMs_20	21 07 50.9	
	comp=E,5µm,20.3s						
EVO	Evora	39.44	12	*e*P	P	20 52 33.6	+1.3
	comp=E,65nm,1.7s						
PCAN	Candelaria	39.57	347	*e*T	T	21 33 58.8	
TSUM	Tsumeb	39.58	121	P	P	20 52 35.1	+1.1
	comp=E,2.6nm,0.7s,baz=288,slow=6.6,SNR=4.6						
TSUM	Tsumeb	39.58	121	P	P	20 52 34.2	+0.2
PICO	Pico	39.59	347	*e*T	T	21 33 55.3	
PESTR	Estremoz	39.85	12	*e*P	P	20 52 41.4	+5.6
PESTR	Estremoz	39.85	12	P	P	20 52 33.5	-2.3
PMTG	Montargil	39.91	12	*e*P	P	20 52 39.0	+2.7
	comp=E,47nm,1.4s						
PSBE	So Bento	40.23	11	*e*P	P	20 52 45.1	+6.2
PDRB	Porto dos Gac	40.32	252	*e*P	P	20 52 40.4	+0.4
PP1B	Ponte de Pedra	40.42	242	*e*P	P	20 52 41.9	+1.0
PMRV	Marv??o	40.43	12	*e*P	P	20 52 42.1	+1.5
	comp=E,52nm,1.8s						
PMRV				*e*S	S	20 58 55.4	+7.5
PMRV				*e*LQ	LQ	21 01 51.9	
PMRV				*e*LR	LR	21 04 24.0	
	comp=E,1µm,20.0s						
CART	Cartagena	40.54	21	P	P	20 52 38.7	-2.8
SALV	Santo Antonio	40.57	245	*e*P	P	20 52 42.3	+0.3
WIN	Windhoek	40.68	126	P	P	20 52 42.9	-0.2
WIN				pmax	pmax		
	comp=Z,15nm,0.9s						
WIN	Windhoek	40.68	126	P	P	20 52 42.9	-0.2
TRCB	Terra Rica	40.72	234	*e*P	P	20 52 44.4	+1.1
TRCB	Terra Rica	40.72	234	P	P	20 52 42.9	-0.4
TRCB				IAmb	IAmb	20 52 45.6	

	comp=Z,74nm,1.2s						
PCAS	**Casmilo, Conde**	**40.81**	**11**	*e*P	**P**	**20 52 45.2**	**+1.5**
	comp=Z,84nm,1.9s						
COI	**Coimbra**	**40.98**	**11**	P	**P**	**20 52 44.7**	**-0.3**
COI				pmax	pmax		
	comp=Z,51nm,0.9s						
COI				MLR	MLR		
	comp=Z,2µm,20.0s						
COI	**Coimbra**	**40.98**	**11**	P	**P**	**20 52 44.7**	**-0.3**
COI				IAmb	IAmb	20 52 51.9	
	comp=Z,51nm,0.9s						
COI				IAMs_20	IAMs_20	21 09 08.4	
	comp=Z,3µm,20.0s						
TER01	**Tubaro-SC**	**41.23**	**224**	*e*P	**P**	**20 52 47.2**	**-0.1**
PAB	**San Pablo**	**41.29**	**16**	P	**P**	**20 52 48.4**	**+0.6**
PAB				pmax	pmax		
	comp=Z,41nm,1.2s						
PAB				MLR	MLR		
	comp=Z,2µm,20.0s						
PAB	**San Pablo**	**41.29**	**16**	P	**P**	**20 52 48.4**	**+0.6**
MTE	**Manteigas**	**41.33**	**12**	*e*P	**P**	**20 52 49.3**	**+1.2**
	comp=Z,55nm,1.7s						
MTE				*e*S	**S**	**20 59 07.9**	**+6.6**
MTE				*e*LQ	LQ	21 02 05.1	
MTE				*e*LR	LR	21 04 51.0	
	comp=Z,2µm,16.0s						
MTE	**Manteigas**	**41.33**	**12**	P	**P**	**20 52 47.9**	**-0.2**
MTE				IAMs_20	IAMs_20	21 12 13.8	
	comp=Z,2µm,18.0s						
ESDC	**Sonseca Array**	**41.52**	**16**	P	**P**	**20 52 49.9**	**+0.4**
	comp=Z,7.8nm,1.2s,baz=204,slow=8.0,SNR=20						
ESDC				LR	LR	21 10 32.9	
	comp=Z,2µm,19.6s,baz=225,slow=37						
ESDC	**Sonseca Array**	**41.52**	**16**	P	**P**	**20 52 50.2**	**+0.7**
ESBB	**Sonseca Array**	**41.52**	**16**	P	**P**	**20 52 50.5**	**+1.0**
PVIS	**Viseu**	**41.57**	**11**	*e*P	**P**	**20 52 51.7**	**+1.7**
	comp=Z,56nm,1.4s						
MVO	**Moncorvo**	**42.18**	**12**	*e*P	**P**	**20 52 56.8**	**+1.8**
	comp=Z,79nm,1.5s						
MVO				*e*S	**S**	**20 59 20.4**	**+6.6**
MVO				*e*LQ	LQ	21 02 17.6	
MVO				*e*LR	LR	21 04 57.7	
	comp=Z,2µm,16.0s						
POLO	**Lamas de Olo**	**42.22**	**11**	*e*P	**P**	**20 52 56.6**	**+1.2**
	comp=Z,18nm,1.1s						
AQDB	**Aquidauana**	**42.25**	**239**	*e*P	**P**	**20 52 55.9**	**+0.1**
AQDB	**Aquidauana**	**42.25**	**239**	P	**P**	**20 52 55.4**	**-0.4**
PGAV	**Gavieira, Arco**	**42.70**	**10**	*e*P	**P**	**20 53 03.2**	**+3.9**
PGAV				*e*S	**S**	**20 59 27.8**	**+6.2**
PGAV				*e*LQ	LQ	21 02 28.1	
PGAV				*e*LR	LR	21 04 57.2	
	comp=Z,2µm,20.0s						
BOAV	**Boa Vista**	**42.77**	**274**	*e*P	**P**	**20 53 00.7**	**+0.5**
BOAV	**Boa Vista**	**42.77**	**274**	P	**P**	**20 52 59.5**	**-0.7**
BOAV				IAmb	IAmb	20 53 03.7	
	comp=Z,158nm,1.7s						
PBRG	**Braganca**	**42.85**	**12**	*e*P	**P**	**20 53 02.7**	**+2.3**
	comp=Z,41nm,1.8s						
CNLB	**Canela**	**42.90**	**224**	*e*P	**P**	**20 53 01.1**	**+0.1**
MACA	**Manacapuru-AM**	**42.97**	**265**	*e*P	**P**	**20 53 02.3**	**+0.5**
MACA	**Manacapuru-AM**	**42.97**	**265**	P	**P**	**20 53 00.4**	**-1.4**
PTLB	**Pontes e Lacer**	**43.58**	**247**	*e*P	**P**	**20 53 07.0**	**+0.4**
PTLB	**Pontes e Lacer**	**43.58**	**247**	P	**P**	**20 53 06.5**	**-0.1**
KEST	**Kesra**	**43.66**	**33**	P	**P**	**20 53 06.8**	**-0.3**
	comp=Z,13nm,1.1s,baz=224,slow=11,SNR=7.3						
KEST				LR	LR	21 12 48.3	
	comp=Z,9µm,19.1s,baz=176,slow=38						
KEST	**Kesra**	**43.66**	**33**	P	**P**	**20 53 08.1**	**+1.0**
KEST				IAmb	IAmb	20 53 38.5	
	comp=Z,63nm,1.2s						
TOSP	**Speyside**	**43.92**	**286**	P	**P**	**20 53 10.1**	**+0.7**
TOSP				IAmb	IAmb	20 53 11.9	
	comp=Z,62nm,1.2s						
VILB	**Vilhena**	**43.93**	**251**	*e*P	**P**	**20 53 10.0**	**+0.4**
VILB	**Vilhena**	**43.93**	**251**	P	**P**	**20 53 09.5**	**-0.1**
VILB				IAmb	IAmb	20 53 13.7	
	comp=Z,58nm,1.2s						
MCLT	**Moule a Chique**	**44.85**	**290**	P	**P**	**20 53 14.8**	**-2.1**
H05S1	**Guadeloupe/Mar**	**44.93**	**291**	T	T	21 41 08.7	
	SNR=26						
MPOM	**Morne Pois Mar**	**44.95**	**291**	P	**P**	**20 53 17.7**	**+0.1**
GRGR	**Grenville**	**45.16**	**287**	P	**P**	**20 53 19.5**	**+0.1**
BIM	**Bigot**	**45.17**	**291**	P	**P**	**20 53 19.5**	**+0.1**
BIM				IAmb	IAmb	20 53 25.9	
	comp=Z,69nm,0.9s						
FDF	**Fort de France**	**45.30**	**291**	P	**P**	**20 53 21.1**	**+0.7**
FDF				pmax	pmax		
	comp=Z,72nm,0.9s						
FDF				MLR	MLR		
	comp=Z,900nm,20.0s						
FDF	**Fort de France**	**45.30**	**291**	P	**P**	**20 53 21.1**	**+0.7**
SVN	**Savane Anatole**	**45.34**	**291**	P	**P**	**20 53 21.4**	**+0.6**
CPSB	**Cacapava Do Su**	**45.36**	**225**	*e*P	**P**	**20 53 21.4**	**+0.8**
SAML	**Samuel**	**46.04**	**258**	P	**P**	**20 53 26.3**	**0.0**
SAML				pmax	pmax		
	comp=Z,930nm,1.2s						
SAML				MLR	MLR		
	comp=Z,2µm,20.0s						
SAML	**Samuel**	**46.04**	**258**	P	**P**	**20 53 26.2**	**0.0**
SAML				IAMs_20	IAMs_20	21 10 15.6	
	comp=Z,2µm,20.0s						
CPUP	**Villa Florida**	**46.16**	**232**	P	**P**	**20 53 26.8**	**-0.3**
	comp=Z,15nm,1.0s,baz=67,slow=10.0,SNR=11						
CPUP				LR	LR	21 11 23.0	
	comp=Z,2µm,18.6s,baz=70,slow=34						
CPUP	**Villa Florida**	**46.16**	**232**	*e*P	**P**	**20 53 27.2**	**+0.2**
CPUP	**Villa Florida**	**46.16**	**232**	P	**P**	**20 53 25.9**	**-1.1**
CPUP				IAmb	IAmb	20 53 39.4	
	comp=Z,51nm,1.4s						
PLTB	**Pedras Altas**	**46.26**	**224**	*e*P	**P**	**20 53 29.1**	**+1.3**
PLTB	**Pedras Altas**	**46.26**	**224**	P	**P**	**20 53 28.4**	**+0.6**
VSL	**Villasalto**	**46.55**	**29**	P	**P**	**20 53 30.1**	**+0.2**
VSL				IAmb	IAmb	20 54 03.8	
	comp=Z,104nm,1.7s						
ANWB	**Willy Bob**	**46.70**	**295**	P	**P**	**20 53 30.5**	**-0.9**
CLTB	**Caltabellotta**	**47.13**	**34**	P	**P**	**20 53 35.2**	**+0.6**
CLTB				IAmb	IAmb	20 53 57.3	
	comp=Z,69nm,1.2s						
ITQB	**Itaqui**	**47.27**	**228**	*e*P	**P**	**20 53 35.8**	**+0.1**
ITQB	**Itaqui**	**47.27**	**228**	P	**P**	**20 53 35.0**	**-0.7**
CORL	**Corleone**	**47.41**	**34**	P	**P**	**20 53 38.0**	**+1.3**
SEUS	**St. Eustatius**	**47.74**	**294**	P	**P**	**20 53 39.9**	**+0.4**
LSZ	**Lusaka**	**47.88**	**111**	P	**P**	**20 53 42.3**	**+1.6**
	comp=Z,5.5nm,0.7s,baz=292,slow=6.2,SNR=20						
LSZ	**Lusaka**	**47.88**	**111**	P	**P**	**20 53 40.1**	**-0.7**
LSZ	**Lusaka**	**47.88**	**111**	IAMs_20	IAMs_20	21 10 03.4	
	comp=Z,2µm,22.0s						
SMRT	**St. Maarten**	**47.99**	**295**	P	**P**	**20 53 41.2**	**-0.3**
SABA	**Saba**	**48.02**	**294**	P	**P**	**20 53 41.5**	**-0.2**
MBAR	**Mbarara**	**48.55**	**91**	*i* P	**P**	**20 53 48.6**	**+2.5**
MBAR	**Mbarara**	**48.55**	**91**	P	**P**	**20 53 45.7**	**-0.4**
MBAR				IAmb	IAmb	20 54 00.3	
	comp=Z,62nm,1.5s						
SUR	**Sutherland**	**48.58**	**135**	P	**P**	**20 53 47.0**	**+0.9**
	comp=Z,8.1nm,0.6s,baz=289,slow=8.5,SNR=16						
SUR	**Sutherland**	**48.58**	**135**	P	**P**	**20 53 46.2**	**+0.2**
SUR	**Sutherland**	**48.58**	**135**	IAMs_20	IAMs_20	21 08 43.0	
	comp=Z,2µm,21.0s						
LBTB	**Lobatse**	**48.73**	**124**	P	**P**	**20 53 46.7**	**-0.6**
LBTB				pmax	pmax		
	comp=Z,23nm,1.2s						
LBTB	**Lobatse**	**48.73**	**124**	P	**P**	**20 53 46.7**	**-0.6**
ETMB	**Extrema**	**49.13**	**257**	*e*P	**P**	**20 53 50.1**	**-0.2**
ETMB	**Extrema**	**49.13**	**257**	P	**P**	**20 53 49.5**	**-0.8**
ETMB				IAmb	IAmb	20 53 54.1	
	comp=Z,46nm,1.2s						
CEL	**Celeste**	**49.13**	**35**	P	**P**	**20 53 49.6**	**-0.3**
CEL				IAmb	IAmb	20 54 02.1	
	comp=Z,38nm,0.9s						
SSB	**Saint Sauveur**	**49.28**	**21**	P	**P**	**20 53 51.5**	**+0.5**
SSB				pmax	pmax		
	comp=Z,24nm,1.2s						
SSB				MLR	MLR		
	comp=Z,2µm,18.0s						
SSB	**Saint Sauveur**	**49.28**	**21**	P	**P**	**20 53 51.5**	**+0.5**
SSB	**Saint Sauveur**	**49.28**	**21**	IAMs_20	IAMs_20	21 12 21.3	
	comp=Z,2µm,18.0s						
CDVI	**St. Croix**	**49.45**	**294**	P	**P**	**20 53 51.9**	**-0.8**
STVI	**Saint Thomas**	**49.78**	**294**	P	**P**	**20 53 54.0**	**-1.3**
STVI				IAmb	IAmb	20 53 57.5	
	comp=Z,85nm,1.4s						
BNI	**Bardonecchia**	**49.88**	**23**	P	**P**	**20 53 56.4**	**+0.7**
BNI				pmax	pmax		
	comp=Z,45nm,1.4s						
BNI				MLR	MLR		
	comp=Z,2µm,22.0s						
BNI	**Bardonecchia**	**49.88**	**23**	P	**P**	**20 53 56.4**	**+0.7**
BNI				IAmb	IAmb	20 54 02.5	
	comp=Z,45nm,1.4s						
BNI				IAMs_20	IAMs_20	21 13 27.0	
	comp=Z,2µm,22.0s						
BOSA	**Boshof**	**50.00**	**128**	P	**P**	**20 53 57.0**	**+0.1**
	comp=Z,7.2nm,0.5s,baz=307,slow=7.3,SNR=41						
BOSA				LR	LR	21 12 25.6	
	comp=Z,845nm,18.4s,baz=292,slow=33						
BOSA	**Boshof**	**50.00**	**128**	P	**P**	**20 53 57.0**	**+0.1**
BOSA	**Boshof**	**50.00**	**128**	P	**P**	**20 53 56.7**	**-0.2**
CUPR	**Culebra, Puert**	**50.07**	**294**	P	**P**	**20 53 56.6**	**-0.8**
TIP	**Timpagrande**	**50.25**	**35**	P	**P**	**20 53 58.7**	**+0.2**
TIP				IAmb	IAmb	20 54 04.4	
	comp=Z,78nm,1.3s						
PAOL	**Paolisi**	**50.33**	**32**	P	**P**	**20 54 00.4**	**+1.3**
OSSC	**Osservatorio P**	**50.56**	**27**	P	**P**	**20 54 03.1**	**+2.3**
OSSC				IAmb	IAmb	20 54 23.0	
	comp=Z,85nm,1.9s						
CBYP	**Canovanas**	**50.59**	**294**	P	**P**	**20 54 01.9**	**+0.5**
PDPR	**Patillas Dam,**	**50.67**	**293**	P	**P**	**20 54 02.0**	**0.0**
PDPR				IAmb	IAmb	20 54 04.2	
	comp=Z,58nm,1.1s						
AQU	**L'Aquila**	**50.70**	**30**	P	**P**	**20 54 03.1**	**+1.2**
AQU				pmax	pmax		
	comp=Z,109nm,1.3s						
AQU				MLR	MLR		
	comp=Z,6µm,20.0s						
AQU	**L'Aquila**	**50.70**	**30**	P	**P**	**20 54 03.1**	**+1.2**
GCPR	**Guaynabo City**	**50.80**	**294**	P	**P**	**20 54 03.4**	**+0.4**
SJG	**San Juan**	**50.81**	**294**	P	**P**	**20 54 03.3**	**+0.3**
SJG				pmax	pmax		
	comp=Z,48nm,1.3s						
SJG				MLR	MLR		
	comp=Z,2µm,21.0s						
SJG	**San Juan**	**50.81**	**294**	P	**P**	**20 54 03.3**	**+0.3**
SJG				IAmb	IAmb	20 54 05.3	
	comp=Z,48nm,1.3s						
NRCA	**Norcia**	**50.92**	**29**	P	**P**	**20 54 02.9**	**-0.6**
NRCA				IAmb	IAmb	20 54 31.3	
	comp=Z,69nm,1.5s						
MURB	**Monte Urbino**	**50.96**	**28**	P	**P**	**20 54 04.5**	**+0.7**
MURB				IAmb	IAmb	20 54 23.2	
	comp=Z,67nm,1.3s						
CLF	**Chambon-Foret**	**50.96**	**17**	P	**P**	**20 54 04.8**	**+1.1**
CLF				IAmb	IAmb	20 54 18.1	
	comp=Z,39nm,1.0s						
CELP	**Cerrillos**	**51.20**	**293**	P	**P**	**20 54 05.2**	**-0.7**
CELP				IAmb	IAmb	20 54 09.5	
	comp=Z,44nm,1.0s						
OBIP	**Obispado Ponce**	**51.21**	**293**	P	**P**	**20 54 05.8**	**-0.3**
OBIP				IAmb	IAmb	20 54 07.3	
	comp=Z,40nm,1.1s						
AOPR	**Arecibo Observ**	**51.43**	**294**	P	**P**	**20 54 07.7**	**-0.1**
AOPR				IAmb	IAmb	20 54 12.2	
	comp=Z,54nm,0.8s						
MLPR	**Magueyes Islan**	**51.60**	**293**	P	**P**	**20 54 08.4**	**-0.5**
MLPR				IAmb	IAmb	20 54 10.1	
	comp=Z,59nm,1.1s						
CRPR	**Cabo Rojo, PR**	**51.67**	**293**	P	**P**	**20 54 09.2**	**-0.2**
CRPR				IAmb	IAmb	20 54 13.7	
	comp=Z,39nm,0.9s						
PRSN	**Puerto Rico Se**	**51.75**	**293**	P	**P**	**20 54 09.9**	**-0.2**
PRSN				IAmb	IAmb	20 54 12.2	
	comp=Z,72nm,1.0s						
ITM	**Ithomi**	**52.15**	**40**	P	**P**	**20 54 12.5**	**-0.3**
ITM	**Ithomi**	**52.15**	**40**	P	**P**	**20 54 12.9**	**+0.2**
ITM				IAmb	IAmb	20 54 18.5	
	comp=Z,48nm,0.9s						
LPAZ	**La Paz**	**52.16**	**249**	P	**P**	**20 54 12.1**	**-1.8**
LPAZ	**La Paz**	**52.16**	**249**	P	**P**	**20 54 12.1**	**-1.8**
TEOL	**Teolo**	**52.19**	**26**	P	**P**	**20 54 13.3**	**+0.4**
DRO	**Drossia**	**52.46**	**39**	P	**P**	**20 54 17.4**	**+2.3**
VLI	**Veliai**	**52.54**	**41**	P	**P**	**20 54 16.7**	**+1.0**
IMMV	**Iera Moni Meta**	**52.54**	**43**	P	**P**	**20 54 17.4**	**+1.7**
CTI	**Castel Tesino**	**52.72**	**25**	P	**P**	**20 54 16.1**	**-0.9**
CTI				pmax	pmax		
	comp=Z,103nm,1.9s						
CTI	**Castel Tesino**	**52.72**	**25**	P	**P**	**20 54 16.1**	**-0.9**
CTI				IAmb	IAmb	20 54 33.3	
	comp=Z,103nm,1.9s						
ECH	**Echery**	**52.73**	**21**	P	**P**	**20 54 16.8**	**0.0**
ECH				pmax	pmax		
	comp=Z,43nm,1.5s						
ECH	**Echery**	**52.73**	**21**	P	**P**	**20 54 16.8**	**0.0**
KLV	**Kalavryta, Ach**	**52.80**	**40**	P	**P**	**20 54 19.2**	**+1.6**
LAKA	**Lakka**	**52.80**	**39**	P	**P**	**20 54 18.9**	**+1.3**
GUR	**Goura**	**52.86**	**40**	P	P	20 54 23.5	+5.4
EFP	**Efpalio**	**52.87**	**39**	P	P	20 54 23.0	+4.9
SERG	**Sergoula**	**52.96**	**39**	P	**P**	**20 54 19.9**	**+1.1**
DAVA	**Damuels**	**52.98**	**23**	*e*P	**P**	**20 54 19.1**	**+0.2**
	comp=Z,28nm,1.2s,SNR=12						
ANX	**Ano Chora**	**52.98**	**39**	P	**P**	**20 54 20.5**	**+1.5**
KRND	**KRANIDI**	**53.06**	**41**	P	**P**	**20 54 19.4**	**-0.1**
IDI	**Anoyia**	**53.08**	**44**	P	**P**	**20 54 19.8**	**0.0**
FETA	**Feichten**	**53.10**	**24**	*e*P	**P**	**20 54 19.4**	**-0.4**
	comp=Z,21nm,1.4s,SNR=7.2						
EVR	**Evrytania**	**53.10**	**38**	P	**P**	**20 54 19.7**	**-0.2**
BFO	**Black Forest**	**53.24**	**22**	P	**P**	**20 54 20.8**	**+0.1**
BFO				pmax	pmax		
	comp=Z,60nm,1.6s						
BFO	**Black Forest**	**53.24**	**22**	P	**P**	**20 54 20.8**	**+0.1**
BFO				IAmb	IAmb	20 54 35.9	
	comp=Z,60nm,1.6s						
LODK	**Lodwar**	**53.25**	**86**	P	**P**	**20 54 20.7**	**-0.6**
LTK	**Loutraki**	**53.31**	**40**	P	**P**	**20 54 22.3**	**+1.0**
SDV	**Santo Domingo**	**53.35**	**281**	*e*P	**P**	**20 54 21.6**	**-0.7**
SDV	**Santo Domingo**	**53.35**	**281**	*e*P	**P**	**20 54 22.3**	**+0.1**
SDV	**Santo Domingo**	**53.35**	**281**	P	**P**	**20 54 21.5**	**-0.7**
MAKR	**Makrakomi, Fth**	**53.36**	**39**	P	**P**	**20 54 24.0**	**+2.3**
TRI	**Trieste**	**53.39**	**27**	P	**P**	**20 54 21.8**	**0.0**
TRI				pmax	pmax		
	comp=Z,74nm,1.2s						
TRI	**Trieste**	**53.39**	**27**	P	**P**	**20 54 21.8**	**0.0**
TRI				IAmb	IAmb	20 54 24.2	
	comp=Z,74nm,1.2s						
SQTA	**Sankt Quirin**	**53.46**	**24**	*e*P	**P**	**20 54 22.2**	**-0.2**
	comp=Z,39nm,1.4s,SNR=9.5						
KPRO	**Kipourio**	**53.46**	**37**	P	**P**	**20 54 25.0**	**+2.5**
TIR	**Tirane**	**53.46**	**35**	IAMs_20	IAMs_20	21 19 35.1	
	comp=Z,2µm,19.0s						
RETA	**Reutte**	**53.49**	**24**	*e*P	**P**	**20 54 22.8**	**+0.2**
	comp=Z,12nm,1.2s						
SOCV	**Socops**	**53.50**	**280**	*e*P	**P**	**20 54 21.0**	**-2.2**
MOTA	**Moosalm**	**53.52**	**24**	*e*P	**P**	**20 54 22.5**	**-0.4**
	comp=Z,18nm,1.3s						
WLF	**Walferdange**	**53.62**	**19**	IAMs_20	IAMs_20	21 15 33.1	
	comp=Z,2µm,19.0s						
ABTA	**Abfaltersbach**	**53.63**	**26**	*e*P	**P**	**20 54 24.9**	**+1.3**
	comp=Z,26nm,1.5s,SNR=12						
WTTA	**Wattenberg**	**53.67**	**25**	*e*P	**P**	**20 54 24.3**	**+0.3**
	comp=Z,22nm,1.4s,SNR=7.3						
ZOU	**Zoufplan**	**53.69**	**26**	P	**P**	**20 54 24.7**	**+0.5**
ZOU				IAmb	IAmb	20 54 46.1	
	comp=Z,80nm,1.5s						
WATA	**Walderalm**	**53.70**	**24**	*e*P	**P**	**20 54 24.4**	**+0.2**
	comp=Z,23nm,1.5s,SNR=5.7						
ATAL	**Atalanti**	**53.73**	**39**	P	**P**	**20 54 24.1**	**-0.3**
ATHU	**Athens Univers**	**53.80**	**41**	P	**P**	**20 54 26.8**	**+1.8**
PDG	**Podgorica**	**53.83**	**34**	IAMs_20	IAMs_20	21 18 04.9	
	comp=Z,3µm,21.0s						
OHR	**Ohrid**	**53.85**	**36**	*i* P	**P**	**20 54 22.5**	**-2.8**
CRNS	**Crni Vrh**	**53.90**	**27**	*e*P	**P**	**20 54 26.8**	**+1.3**
PTL	**Penteli**	**53.90**	**41**	P	**P**	**20 54 26.8**	**+1.1**
PB16	**IPOC Station P**	**53.91**	**247**	IAMs_20	IAMs_20	21 16 28.0	
	comp=Z,2µm,20.0s						
DR12	**Loma Pena Alta**	**53.95**	**293**	P	**P**	**20 54 25.5**	**-0.9**
DION	**Dionisos Attik**	**53.96**	**41**	P	**P**	**20 54 26.0**	**-0.2**
FNA	**Florina**	**53.98**	**36**	P	**P**	**20 54 30.8**	**+4.5**
FNA	**Florina**	**53.98**	**36**	IAmb	IAmb	20 54 31.7	
	comp=Z,63nm,1.0s						
LJU	**Ljubljana**	**53.99**	**27**	*e*P	**P**	**20 54 26.4**	**+0.1**
PHP	**Peshkopia**	**54.01**	**35**	P	**P**	**20 54 28.8**	**+2.3**
MYKA	**Terra Mystica**	**54.04**	**26**	*e*P	**P**	**20 54 27.4**	**+0.8**
	comp=Z,24nm,1.2s,SNR=7.5						
PB08	**IPOC Station P**	**54.04**	**245**	P	**P**	**20 54 25.9**	**-1.5**
PB08				IAMs_20	IAMs_20	21 14 53.3	
	comp=Z,1µm,20.0s						
SANT	**Santorini**	**54.04**	**43**	⇓P	**P**	**20 54 26.2**	**-0.6**
SANT	**Santorini**	**54.04**	**43**	P	**P**	**20 54 26.0**	**-0.8**
NEO	**Neokhori**	**54.22**	**39**	P	**P**	**20 54 29.9**	**+1.9**
KBA	**Koelnbreinsper**	**54.25**	**26**	*e*P	**P**	**20 54 28.3**	**0.0**
	comp=Z,16nm,1.6s						
APE	**Apeiranthos**	**54.47**	**42**	⇓P	**P**	**20 54 31.0**	**+1.1**
APE	**Apeiranthos**	**54.47**	**42**	P	**P**	**20 54 30.6**	**+0.7**
APE	**Apeiranthos**	**54.47**	**42**	⇓P	**P**	**20 54 31.0**	**+1.1**
LVC	**Limon Verde**	**54.51**	**242**	P	**P**	**20 54 28.5**	**-2.3**
LVC				pmax	pmax		
	comp=Z,67nm,1.5s						
LVC	**Limon Verde**	**54.51**	**242**	*e*P	**P**	**20 54 30.6**	**-0.2**
LVC	**Limon Verde**	**54.51**	**242**	P	**P**	**20 54 28.5**	**-2.3**
LVC				IAmb	IAmb	20 54 31.9	
	comp=Z,66nm,1.5s						
PB01	**IPOC Station P**	**54.58**	**244**	IAmb	IAmb	20 54 31.9	
	comp=Z,68nm,1.8s						
SOKA	**Soboth**	**54.70**	**27**	*e*P	**P**	**20 54 32.3**	**+0.9**
	comp=Z,22nm,1.4s,SNR=6.3						
PERS	**Pernice**	**54.71**	**27**	*e*P	**P**	**20 54 32.3**	**+0.9**
PB12	**IPOC Station P**	**54.74**	**247**	IAmb	IAmb	20 54 34.4	
	comp=Z,47nm,1.1s						
PB12				IAMs_20	IAMs_20	21 17 02.8	
	comp=Z,2µm,18.0s						
SKO	**Skopje**	**54.77**	**35**	*i* P	**P**	**20 54 32.7**	**+0.8**
TA02	**Huaiquique**	**54.96**	**245**	P	**P**	**20 54 32.6**	**-1.0**
TA02				IAmb	IAmb	20 54 57.8	
	comp=Z,35nm,0.8s						
VAY	**Valandovo**	**55.03**	**37**	*i* P	P	20 54 28.5	-5.3
VAY				*i* S	**S**	**21 02 18.3**	**+3.4**
STIP	**Stip**	**55.03**	**36**	*i* P	**P**	**20 54 35.7**	**+1.9**
URIC	**Uribia, Colomb**	**55.04**	**284**	*e*P	**P**	**20 54 33.2**	**-1.1**
URIC	**Uribia, Colomb**	**55.04**	**284**	IAmb	IAmb	20 54 35.1	
	comp=Z,42nm,1.0s						
KMBO	**Kilima Mbogo**	**55.06**	**91**	P	**P**	**20 54 36.1**	**+1.2**
	comp=Z,2.8nm,0.7s,baz=256,slow=7.0,SNR=9.6						
KMBO				LR	LR	21 15 43.2	
	comp=Z,480nm,21.9s,baz=263,slow=33						
KMBO	**Kilima Mbogo**	**55.06**	**91**	P	**P**	**20 54 35.0**	**+0.2**
TA01	**Diego Aracena**	**55.08**	**245**	IAmb	IAmb	20 54 36.5	
	comp=Z,30nm,1.0s						
PB15	**IPOC Station P**	**55.18**	**242**	P	**P**	**20 54 34.8**	**-0.7**
SOH	**Sokhos**	**55.20**	**37**	P	**P**	**20 54 36.2**	**+1.1**
PAMC	**Pamplona, Colo**	**55.23**	**279**	*e*P	**P**	**20 54 36.7**	**+0.4**
MOA	**Molln**	**55.24**	**26**	*e*P	**P**	**20 54 34.9**	**-0.4**
	comp=Z,22nm,1.4s,SNR=5.6						
CZSB	**Cruzeiro do Su**	**55.25**	**261**	*e*P	**P**	**20 54 36.6**	**+0.7**
OUR	**Ouranopolis**	**55.29**	**38**	P	**P**	**20 54 37.0**	**+1.3**
DIVS	**Divibare**	**55.34**	**32**	IAMs_20	IAMs_20	21 21 24.9	
	comp=Z,2µm,18.0s						
ARSA	**Arzberg**	**55.35**	**27**	*e*P	**P**	**20 54 34.9**	**-1.2**
	comp=Z,15nm,1.6s						
GRA1	**Grafenberg Arr**	**55.45**	**22**	IAMs_20	IAMs_20	21 19 27.5	
	comp=Z,1µm,18.0s						
GRF	**Grafenberg Arr**	**55.45**	**22**	*e*P	**P**	**20 54 37.2**	**+0.5**
	comp=Z,40nm,1.7s,baz=217,slow=7.5						
TRQA	**Tornquist**	**55.48**	**222**	P	**P**	**20 54 36.3**	**-0.9**
TRQA				pmax	pmax		
	comp=Z,82nm,1.7s						
TRQA				MLR	MLR		
	comp=Z,2µm,22.0s						
TRQA	**Tornquist**	**55.48**	**222**	P	**P**	**20 54 36.3**	**-0.9**
TRQA				IAmb	IAmb	20 54 50.3	
	comp=Z,82nm,1.6s						
TRQA				IAMs_20	IAMs_20	21 14 23.0	
	comp=Z,3µm,22.0s						
RUSC	**La Rusia**	**55.49**	**277**	*e*P	**P**	**20 54 36.6**	**-1.6**
SRS	**Serrai**	**55.52**	**37**	P	**P**	**20 54 36.4**	**-1.0**
CHOS	**Chios island**	**55.52**	**41**	P	**P**	**20 54 39.0**	**+1.5**
PB04	**IPOC Station P**	**55.53**	**243**	IAmb	IAmb	20 54 45.1	
	comp=Z,52nm,0.9s						
BARC	**Barichara**	**55.64**	**278**	*e*P	**P**	**20 54 40.1**	**+1.1**
BODT	**Bodrum**	**55.67**	**43**	P	**P**	**20 54 39.0**	**+0.4**
SMG	**Samos**	**55.69**	**42**	P	**P**	**20 54 39.0**	**+0.4**
DAT	**Datca**	**55.69**	**44**	P	**P**	**20 54 39.1**	**+0.3**
KOVH	**Kovagotottos**	**55.73**	**30**	*e*P	**P**	**20 54 38.8**	**0.0**
SDDR	**Presa de Saban**	**55.75**	**293**	*e*P	**P**	**20 54 38.4**	**-1.1**
SDDR	**Presa de Saban**	**55.75**	**293**	P	**P**	**20 54 39.7**	**+0.3**
SDDR				IAMs_20	IAMs_20	21 12 57.5	
	comp=Z,2µm,22.0s						
GEC2	**GERESS Array S**	**55.77**	**25**	IAmb	IAmb	20 54 41.2	
	comp=Z,54nm,1.7s						
GERES	**GERESS Array B**	**55.77**	**25**	P	**P**	**20 54 39.1**	**0.0**
	comp=Z,2.7nm,0.8s,baz=213,slow=4.6,SNR=21						
GERES	**GERESS Array B**	**55.77**	**25**	P	**P**	**20 54 38.3**	**-0.8**
NVR	**Nevrokopi**	**55.82**	**37**	P	**P**	**20 54 41.5**	**+1.9**
KIBK	**Kibwezi**	**55.88**	**93**	P	**P**	**20 54 39.3**	**-1.3**
KIBK				IAMs_20	IAMs_20	21 15 40.6	
	comp=Z,1µm,20.0s						
KHC	**Kasperske Hory**	**55.94**	**24**	*e*P	**P**	**20 54 40.3**	**0.0**
KHC				*e*x	x	20 54 54.0	
KHC				AMS	AMS	21 17 50.0	
	comp=Z,1µm,18.1s						
KHC	**Kasperske Hory**	**55.94**	**24**	*e*P	**P**	**20 54 40.3**	**0.0**
KHC				MLR	MLR		
	comp=Z,1µm,18.1s						
FRGS	**Fruska Gora**	**55.96**	**31**	⇓P	**P**	**20 54 41.6**	**+1.1**
BOVS	**Bovan**	**55.98**	**34**	⇑P	**P**	**20 54 41.3**	**+0.8**
CKRC	**Cesky Krumlov**	**56.01**	**25**	*e*P	**P**	**20 54 40.2**	**-0.5**
CONA	**Conrad Observa**	**56.01**	**27**	*e*P	**P**	**20 54 41.3**	**+0.5**
	comp=Z,24nm,1.3s,SNR=9.2						
MORH	**Mrgy, Hungar**	**56.09**	**30**	⇓P	**P**	**20 54 42.7**	**+1.4**
MORH	**Mrgy, Hungar**	**56.09**	**30**	*e*P	**P**	**20 54 41.1**	**-0.2**
SOP	**Sopron**	**56.15**	**27**	*e*P	**P**	**20 54 40.1**	**-1.6**
BLCB	**Balcova**	**56.18**	**42**	P	**P**	**20 54 43.1**	**+1.0**
VTS	**Vitosha**	**56.21**	**36**	⇓P	**P**	**20 54 43.2**	**+0.7**
VTS	**Vitosha**	**56.21**	**36**	⇓P	**P**	**20 54 43.2**	**+0.7**
VTS	**Vitosha**	**56.21**	**36**	P	**P**	**20 54 42.6**	**+0.1**
VTS				IAmb	IAmb	20 54 48.7	
	comp=Z,30nm,1.0s						
MPLH	**Magyarpolny**	**56.23**	**28**	*e*P	**P**	**20 54 42.2**	**-0.2**
NKC	**Novy Kostel**	**56.36**	**23**	*e*P	**P**	**20 54 44.0**	**+0.8**
NKC				AMS	AMS	21 16 30.0	
	comp=Z,2µm,22.3s						
NKC	**Novy Kostel**	**56.36**	**23**	*e*P	**P**	**20 54 44.0**	**+0.8**
NKC				MLR	MLR		
	comp=Z,2µm,22.3s						
YER	**Yerkesik**	**56.38**	**44**	P	**P**	**20 54 44.4**	**+0.7**
PB14	**IPOC Station P**	**56.41**	**240**	IAmb	IAmb	20 54 50.1	
	comp=Z,48nm,0.9s						
ROSC	**El Rosal**	**56.65**	**276**	P	**P**	**20 54 47.5**	**+1.1**
	comp=Z,23nm,0.7s,baz=48,slow=3.5,SNR=15						
ROSC				LR	LR	21 17 50.2	
	comp=Z,1µm,18.1s,baz=122,slow=35						
ROSC	**El Rosal**	**56.65**	**276**	P	**P**	**20 54 46.8**	**+0.4**
FETY	**Fethiye**	**56.69**	**45**	P	**P**	**20 54 46.7**	**+0.8**
SMLC	**San Martn de**	**56.72**	**281**	*e*P	**P**	**20 54 43.1**	**-3.3**
JAKH	**Jacmel**	**56.72**	**292**	IAmb	IAmb	20 54 49.8	
	comp=Z,43nm,0.8s						
MDVR	**Moldovita**	**56.72**	**33**	⇑P	**P**	**20 54 47.5**	**+1.6**
ZST	**Bratislava**	**56.77**	**27**	*e*P	**P**	**20 54 47.5**	**+1.4**
ZST				pmax	pmax		
	comp=Z,128nm,1.6s						
ZST	**Bratislava**	**56.77**	**27**	*e*P	**P**	**20 54 47.5**	**+1.4**
LGNH	**Logne**	**56.86**	**292**	P	**P**	**20 54 46.5**	**-0.8**
PTBC	**PUERTO BERRIO,**	**56.90**	**278**	*e*P	**P**	**20 54 46.0**	**-1.7**
MODS	**Modra-Piesok**	**56.98**	**27**	*e*P	**P**	**20 54 47.5**	**-0.2**
MODS				pmax	pmax		
	comp=Z,44nm,1.3s						
MODS	**Modra-Piesok**	**56.98**	**27**	*e*P	**P**	**20 54 47.5**	**-0.2**
PRU	**Pruhonice**	**57.00**	**24**	*e*P	**P**	**20 54 48.6**	**+0.8**
PRU				AMS	AMS	21 20 20.0	
	comp=Z,2µm,22.2s						
PRU	**Pruhonice**	**57.00**	**24**	*e*P	**P**	**20 54 48.6**	**+0.8**
PRU				MLR	MLR		
	comp=Z,2µm,22.2s						
SRO	**Srobarova**	**57.06**	**28**	*e*P	**P**	**20 54 50.0**	**+1.8**
SRO	**Srobarova**	**57.06**	**28**	*e*P	**P**	**20 54 50.0**	**+1.8**
DJES	**Djerdap**	**57.09**	**33**	⇓P	**P**	**20 54 51.4**	**+2.9**
KRUC	**Moravsky**	**57.09**	**26**	*e*P	**P**	**20 54 48.1**	**-0.3**
SMRC	**Santa Marta, M**	**57.14**	**283**	*e*P	**P**	**20 54 46.3**	**-3.0**
SMOL	**Smolenice**	**57.15**	**27**	*e*P	**P**	**20 54 50.5**	**+1.6**
SMOL	**Smolenice**	**57.15**	**27**	*e*P	**P**	**20 54 50.5**	**+1.6**
PRAC	**Prado**	**57.16**	**274**	*e*P	**P**	**20 54 50.1**	**+0.5**
BUD	**Budapest**	**57.17**	**29**	*e*P	**P**	**20 54 47.9**	**-1.1**
HERR	**Herculane**	**57.17**	**33**	⇓P	**P**	**20 54 49.6**	**+0.6**
BZS	**Buzias**	**57.21**	**32**	⇑P	**P**	**20 54 49.6**	**+0.2**
NORC	**Norcasia**	**57.24**	**277**	*e*P	**P**	**20 54 49.4**	**-0.8**
ELL	**Elmali**	**57.33**	**45**	P	**P**	**20 54 51.2**	**+0.7**
ELL				pmax	pmax		
	comp=Z,160nm,0.9s						
ELL	**Elmali**	**57.33**	**45**	P	**P**	**20 54 51.1**	**+0.7**
VRAC	**Vranov**	**57.36**	**26**	*e*P	**P**	**20 54 49.8**	**-0.5**
ZARC	**Zaragoza, Cauc**	**57.37**	**279**	*e*P	**P**	**20 54 49.4**	**-1.6**
BALB	**Balikesir**	**57.40**	**41**	P	**P**	**20 54 51.3**	**+0.6**
BALB				IAmb	IAmb	20 54 56.5	
	comp=Z,59nm,1.3s						
CLL	**Collm**	**57.43**	**22**	*i* P	**P**	**20 54 51.8**	**+1.1**
	comp=Z,48nm,1.9s						

CLL				*e*		20 55 01.0	
CLL				*e*S	**S**	**21 02 46.0**	**-0.4**
CLL				*e*		21 04 10.0	
CLL				*e*SS	**SS**	**21 06 30.0**	**-6.4**
CLL				*e*SSS	SSS	21 08 54.0	
CLL	**Collm**	**57.43**	**22**	*i* P	**P**	**20 54 51.8**	**+1.1**
CLL				*e*S	**S**	**21 02 46.0**	**-0.4**
CLL				pmax	pmax		
	comp=Z,48nm,1.9s						
PVCC	**Panska Ves**	**57.43**	**24**	*e*P	**P**	**20 54 52.3**	**+1.5**
PVCC				AMS	AMS	21 18 30.0	
	comp=Z,2µm,21.3s						
PVCC	**Panska Ves**	**57.43**	**24**	*e*P	**P**	**20 54 52.3**	**+1.5**
PVCC				MLR	MLR		
	comp=Z,2µm,21.3s						
BRG	**Berggiesshubel**	**57.45**	**23**	*e*P	**P**	**20 54 52.6**	**+1.7**
BRG				Amp		20 54 56.9	
	comp=Z,16nm,1.1s						
JAVC	**Velka Javorina**	**57.51**	**27**	*e*P	**P**	**20 54 52.4**	**+0.9**
ORTC	**Ortega, Tolima**	**57.53**	**275**	*e*P	**P**	**20 54 51.4**	**-0.8**
KOLL	**Kolacno**	**57.65**	**28**	*e*P	**P**	**20 54 53.7**	**+1.4**
SIRR	**Siria**	**57.66**	**31**	⇓P	**P**	**20 54 53.5**	**+1.0**
GZR	**Gura Zlata**	**57.69**	**33**	⇓P	**P**	**20 54 54.0**	**+1.2**
GZR	**Gura Zlata**	**57.69**	**33**	⇓P	**P**	**20 54 54.0**	**+1.2**
VYHS	**Vyhne**	**57.79**	**28**	*e*P	**P**	**20 54 54.1**	**+0.7**
VYHS				pmax	pmax		
	comp=Z,50nm,1.4s						
VYHS	**Vyhne**	**57.79**	**28**	*e*P	**P**	**20 54 54.1**	**+0.7**
EDRB	**Edirne**	**57.87**	**38**	P	**P**	**20 54 54.8**	**+0.8**
PSZ	**Piszkesteto**	**57.89**	**29**	⇑P	**P**	**20 54 49.6**	**-4.6**
PSZ	**Piszkesteto**	**57.89**	**29**	*e*P	**P**	**20 54 54.6**	**+0.4**
PSZ	**Piszkesteto**	**57.89**	**29**	P	**P**	**20 54 53.9**	**-0.3**
PSZ				pmax	pmax		
	comp=Z,50nm,1.5s						
PSZ				MLR	MLR		
	comp=Z,2µm,19.0s						
PSZ	**Piszkesteto**	**57.89**	**29**	P	**P**	**20 54 53.9**	**-0.3**
PSZ				IAmb	IAmb	20 55 00.5	
	comp=Z,50nm,1.5s						
PSZ				IAMs_20	IAMs_20	21 21 22.2	
	comp=Z,2µm,19.0s						
SJCC	**San Jacinto, C**	**57.92**	**282**	*e*P	**P**	**20 54 50.8**	**-4.1**
SJCC	**San Jacinto, C**	**57.92**	**282**	IAmb	IAmb	20 55 08.5	
	comp=Z,55nm,1.2s						
UPC	**Upice**	**58.01**	**25**	*e*P	**P**	**20 54 55.2**	**+0.3**
UPC				AMS	AMS	21 18 50.0	
	comp=Z,2µm,21.2s						
UPC	**Upice**	**58.01**	**25**	*e*P	**P**	**20 54 55.2**	**+0.3**
UPC				MLR	MLR		
	comp=Z,2µm,21.2s						
KRLC	**Kraliky**	**58.01**	**26**	*e*P	**P**	**20 54 54.0**	**-1.0**
KRLC				AMS	AMS	21 22 10.0	
	comp=Z,2µm,17.0s						
KRLC	**Kraliky**	**58.01**	**26**	*e*P	**P**	**20 54 54.0**	**-1.0**
KRLC				MLR	MLR		
	comp=Z,2µm,17.0s						
DPC	**Dobruska-Polom**	**58.02**	**25**	*e*P	**P**	**20 54 56.4**	**+1.4**
DPC				AMS	AMS	21 21 20.0	
	comp=Z,1µm,20.6s						
DPC	**Dobruska-Polom**	**58.02**	**25**	*e*P	**P**	**20 54 56.4**	**+1.4**
DPC				MLR	MLR		
	comp=Z,1µm,20.6s						
LCO	**Las Campanas**	**58.07**	**235**	IAMs_20	IAMs_20	21 17 54.2	
	comp=Z,1µm,18.0s						
CHVC	**Chvalec**	**58.09**	**25**	*e*P	**P**	**20 54 56.5**	**+1.1**
CHVC				AMS	AMS	21 19 00.0	
	comp=Z,2µm,20.2s						
MORC	**Moravsky Berou**	**58.12**	**26**	⇓P	**P**	**20 54 56.1**	**+0.4**
MORC	**Moravsky Berou**	**58.12**	**26**	⇓P	**P**	**20 54 56.1**	**+0.4**
MORC	**Moravsky Berou**	**58.12**	**26**	*e*P	**P**	**20 54 55.4**	**-0.3**
MORC	**Moravsky Berou**	**58.12**	**26**	IAmb	IAmb	20 55 01.2	
	comp=Z,39nm,1.4s						
OSTC	**Ostas**	**58.13**	**25**	*e*P	**P**	**20 54 56.4**	**+0.7**
OSTC				AMS	AMS	21 19 00.0	
	comp=Z,2µm,18.6s						
MARP	**Paez Belalcaza**	**58.20**	**273**	*e*P	**P**	**20 54 56.6**	**-0.6**
LOT	**Lotru**	**58.27**	**33**	⇓P	**P**	**20 54 58.6**	**+1.7**
MOTC	**Monteria, Cord**	**58.28**	**280**	*e*P	**P**	**20 54 56.0**	**-1.4**
HUMR	**Humele**	**58.38**	**35**	⇑P	**P**	**20 54 58.7**	**+1.1**
CBOC	**Ciudad Bolivar**	**58.40**	**277**	*e*P	**P**	**20 54 57.4**	**-1.0**
OKC	**Ostrava-Krasne**	**58.44**	**26**	*e*P	**P**	**20 54 58.5**	**+0.6**
OKC				AMS	AMS	21 24 00.0	
	comp=Z,1µm,14.5s						
OKC	**Ostrava-Krasne**	**58.44**	**26**	*e*P	**P**	**20 54 58.5**	**+0.6**
OKC				MLR	MLR		
	comp=Z,1µm,14.5s						
DRGR		**58.56**	**32**	⇓P	**P**	**20 54 59.3**	**+0.5**
DRGR		**58.56**	**32**	⇓P	**P**	**20 54 59.3**	**+0.5**
PLMC	**San Jos del P**	**58.61**	**276**	*e*P	**P**	**20 54 57.8**	**-2.0**
PCON	**Cinco Dias**	**58.62**	**273**	*e*P	**P**	**20 55 01.8**	**+1.3**
YOTC	**Yotoco, Valle**	**58.63**	**275**	*e*P	**P**	**20 54 57.3**	**-2.7**
ARR	**Arges**	**58.70**	**34**	⇑P	**P**	**20 55 00.4**	**+0.6**
SOTA	**Rioblanco**	**58.83**	**273**	*e*P	**P**	**20 55 02.8**	**+0.9**
VOIR		**58.97**	**34**	⇓P	**P**	**20 55 02.1**	**+0.4**
VOIR		**58.97**	**34**	⇓P	**P**	**20 55 02.1**	**+0.4**
CJR	**Cluj-Napoca**	**58.97**	**32**	⇑P	**P**	**20 55 04.1**	**+2.4**
CJR	**Cluj-Napoca**	**58.97**	**32**	⇑P	**P**	**20 55 04.1**	**+2.4**
CSS	**Mathiatis**	**59.01**	**48**	P	**P**	**20 55 01.5**	**-0.7**
CSS				IAMs_20	IAMs_20	21 19 51.3	
	comp=Z,2µm,22.0s						
GHAJ	**Ghor Haditha**	**59.32**	**53**	IAMs_20	IAMs_20	21 18 36.6	
	comp=Z,1µm,19.0s						
CRVS	**Cervenica-Dubn**	**59.33**	**29**	*e*P	**P**	**20 55 06.0**	**+1.9**
CRVS				pmax	pmax		
	comp=Z,64nm,1.6s						
CRVS	**Cervenica-Dubn**	**59.33**	**29**	*e*P	**P**	**20 55 06.0**	**+1.9**
TRPA	**Tarpa**	**59.34**	**30**	⇑P	**P**	**20 55 04.7**	**+0.6**
TRPA	**Tarpa**	**59.34**	**30**	*e*P	**P**	**20 55 03.7**	**-0.5**
CO06	**Fray Jorge**	**59.40**	**234**	P	**P**	**20 55 05.2**	**+0.3**
OJC	**Ojcow**	**59.45**	**27**	P	**P**	**20 55 04.9**	**0.0**
OJC				pmax	pmax		
	comp=Z,31nm,1.3s						
OJC	**Ojcow**	**59.45**	**27**	P	**P**	**20 55 04.9**	**0.0**
OJC				IAmb	IAmb	20 55 10.3	
	comp=Z,30nm,1.3s						
DOPR	**Dopca**	**59.48**	**34**	⇓P	**P**	**20 55 05.7**	**+0.5**
MLR	**Muntele Rosu**	**59.51**	**34**	⇑P	**P**	**20 55 06.3**	**+0.8**
MLR	**Muntele Rosu**	**59.51**	**34**	⇑P	**P**	**20 55 06.3**	**+0.8**
GCUF	**Volcan Galeras**	**59.55**	**271**	*e*P	**P**	**20 55 08.0**	**+1.1**
PEL	**Peldehue**	**59.55**	**231**	IAmb	IAmb	20 55 09.2	
	comp=Z,34nm,1.0s						
UZH	**Uzhgorod**	**59.55**	**30**	⇓*i*P	**P**	**20 55 05.8**	**+0.2**
UZH				*e*		20 55 16.7	
KOLS	**Kolonicke sedl**	**59.74**	**29**	*e*P	**P**	**20 55 09.3**	**+2.3**
KOLS	**Kolonicke sedl**	**59.74**	**29**	*e*P	**P**	**20 55 09.3**	**+2.3**
NNA	**Nana**	**59.76**	**256**	IAMs_20	IAMs_20	21 19 02.8	
	comp=Z,1µm,20.0s						
OZUR		**59.78**	**34**	⇑P	**P**	**20 55 08.4**	**+1.1**
ICOR	**Ion Corvin**	**59.79**	**37**	⇑P	**P**	**20 55 09.8**	**+2.5**
COVR	**Voineasa-Covas**	**59.86**	**34**	⇓P	**P**	**20 55 08.4**	**+0.5**
MDUB	**Mudurnu**	**60.01**	**42**	P	**P**	**20 55 08.9**	**-0.2**
MT09	**Talagante**	**60.02**	**230**	P	**P**	**20 55 08.4**	**-0.9**
MT09				IAmb	IAmb	20 55 10.5	
	comp=Z,37nm,0.8s						
PLOR	**Plostina**	**60.12**	**34**	⇑P	**P**	**20 55 09.7**	**+0.1**
PLOR	**Plostina**	**60.12**	**34**	⇑P	**P**	**20 55 09.7**	**+0.1**
VRI	**Vrincioaia**	**60.17**	**34**	⇑P	**P**	**20 55 10.0**	**+0.1**
VRI	**Vrincioaia**	**60.17**	**34**	⇑P	**P**	**20 55 10.0**	**+0.1**
TLBR	**Topalu**	**60.17**	**36**	⇑P	**P**	**20 55 10.0**	**+0.1**
HARR	**Harsova**	**60.19**	**36**	⇓P	**P**	**20 55 10.5**	**+0.5**
HARR	**Harsova**	**60.19**	**36**	⇓P	**P**	**20 55 10.5**	**+0.5**
MT01	**Popeta**	**60.26**	**230**	P	**P**	**20 55 10.0**	**-0.8**
ODBI	**Odobesti**	**60.30**	**35**	⇑P	**P**	**20 55 13.5**	**+2.7**
BO01	**Tunca**	**60.33**	**230**	P	**P**	**20 55 10.4**	**-0.9**
BO01				IAmb	IAmb	20 55 12.5	
	comp=Z,28nm,0.8s						
BURAR	**Bucovina Array**	**60.40**	**32**	⇓P	**P**	**20 55 13.3**	**+1.7**
BURAR	**Bucovina Array**	**60.40**	**32**	P	**P**	**20 55 12.2**	**+0.6**
BUR08	**Bucovina Ar. S**	**60.41**	**32**	P	**P**	**20 55 12.4**	**+0.8**
BUR08				IAmb	IAmb	20 55 26.6	
	comp=Z,42nm,1.5s						
TPGR	**Topolog**	**60.57**	**36**	⇑P	**P**	**20 55 12.5**	**-0.2**
CFR	**Carcaliu**	**60.58**	**36**	⇑P	**P**	**20 55 12.9**	**+0.2**
CFR	**Carcaliu**	**60.58**	**36**	⇑P	**P**	**20 55 12.9**	**+0.2**
OTAV	**Otavalo**	**60.65**	**270**	P	**P**	**20 55 12.8**	**-1.5**
OTAV				pmax	pmax		
	comp=Z,14nm,1.1s						
OTAV				MLR	MLR		
	comp=Z,2µm,22.0s						
OTAV	**Otavalo**	**60.65**	**270**	*e*P	**P**	**20 55 14.1**	**-0.3**
OTAV	**Otavalo**	**60.65**	**270**	P	**P**	**20 55 12.8**	**-1.5**
OTAV	**Otavalo**	**60.65**	**270**	IAMs_20	IAMs_20	21 17 45.0	
	comp=Z,1µm,22.0s						
ANTO	**Ankara**	**60.80**	**43**	P	**P**	**20 55 14.3**	**-0.2**
ANTO				pmax	pmax		
	comp=Z,96nm,1.7s						
ANTO				MLR	MLR		
	comp=Z,1µm,22.0s						
ANTO	**Ankara**	**60.80**	**43**	P	**P**	**20 55 14.2**	**-0.2**
ANTO				IAMs_20	IAMs_20	21 21 48.2	
	comp=Z,1µm,22.0s						
TLCR		**60.98**	**36**	⇑P	**P**	**20 55 15.4**	**0.0**
TLCR		**60.98**	**36**	⇑P	**P**	**20 55 15.4**	**0.0**
ML02	**Panimavida**	**61.12**	**228**	P	**P**	**20 55 15.5**	**-1.1**
LVV	**L'vov**	**61.19**	**30**	*e*P	**P**	**20 55 17.9**	**+1.1**
LVV				*e*		20 57 38.5	
LVV				*e*PPP	PPP	20 59 01.5	
LVV				*e*S	**S**	**21 03 35.3**	**+0.1**
LVV				*e*PS	**PnS**	**21 03 55.3**	**+4.5**
LVV				MLR	MLR		
	comp=E,700nm,17.0s						
LVV				MLR	MLR		
	comp=N,700nm,18.0s						
LVV				MLR	MLR		
	comp=Z,900nm,18.0s						
ATD	**Arta Tunnel**	**61.30**	**77**	P	**P**	**20 55 18.2**	**-0.1**
BR131	**Keskin Array S**	**61.31**	**43**	IAmb	IAmb	20 55 32.0	
	comp=Z,42nm,1.1s						
BRTR	**Keskin Array B**	**61.31**	**43**	P	**P**	**20 55 18.8**	**+0.7**
	comp=Z,12nm,0.9s,baz=248,slow=6.5,SNR=16						
BRTR				LR	LR	21 24 46.4	
	comp=Z,1µm,19.5s,baz=229,slow=39						
BRTR	**Keskin Array B**	**61.31**	**43**	P	**P**	**20 55 17.9**	**-0.1**
EFI	**East Falkland**	**61.58**	**207**	P	**P**	**20 55 20.2**	**+0.8**
EFI				pmax	pmax		
	comp=Z,125nm,1.4s						
EFI	**East Falkland**	**61.58**	**207**	P	**P**	**20 55 20.2**	**+0.8**
MILM	**Milestii Mici**	**61.96**	**34**	*e*P	**P**	**20 55 22.0**	**0.0**
MILM				*e*PPP	PPP	20 59 16.0	
MILM				*e*S	**S**	**21 03 48.0**	**+3.1**
MILM				*e*PS	PnS	21 04 17.0	+16
MILM				MLR	MLR		
	comp=Z,1µm,17.0s						
SORM	**Soroca**	**62.40**	**33**	⇑P	**P**	**20 55 22.6**	**-2.4**
SORM	**Soroca**	**62.40**	**33**	⇑P	**P**	**20 55 22.6**	**-2.4**
BCIP	**Isla Barro Col**	**62.42**	**280**	*e*P	**P**	**20 55 26.6**	**+0.9**
PLCA	**Paso Flores**	**62.57**	**223**	P	**P**	**20 55 25.7**	**-0.7**
	comp=Z,4.4nm,0.9s,baz=60,slow=9.4,SNR=5.6						
PLCA				LR	LR	21 18 42.8	
	comp=Z,1µm,21.6s,baz=68,slow=32						
PLCA	**Paso Flores**	**62.57**	**223**	*e*P	**P**	**20 55 26.7**	**+0.3**
PLCA	**Paso Flores**	**62.57**	**223**	P	**P**	**20 55 25.1**	**-1.3**
PLCA				IAmb	IAmb	20 55 39.9	
	comp=Z,34nm,1.6s						
GAZ	**Gaziantep**	**62.78**	**47**	P	**P**	**20 55 28.3**	**+0.4**
GAZ				IAmb	IAmb	20 55 32.8	
	comp=Z,43nm,1.0s						
KONO	**Kongsberg**	**63.25**	**15**	*ce*P	**P**	**20 55 30.8**	**+0.4**
KONO				pmax	pmax		
	comp=Z,97nm,2.5s						
SUW	**Suwalki**	**63.59**	**26**	P	**P**	**20 55 32.6**	**-0.2**
SUW				pmax	pmax		
	comp=Z,42nm,0.9s						
SUW	**Suwalki**	**63.59**	**26**	P	**P**	**20 55 32.6**	**-0.2**
BRYW	**Bryant College**	**63.84**	**318**	IAMs_20	IAMs_20	21 17 01.7	
	comp=Z,2µm,20.0s						
WES	**Weston**	**63.90**	**318**	IAMs_20	IAMs_20	21 24 00.9	
	comp=Z,2µm,18.0s						
LL04	**Puerto Octay**	**63.92**	**223**	P	**P**	**20 55 33.9**	**-1.3**
LL04				IAmb	IAmb	20 55 47.6	
	comp=Z,65nm,1.4s						
HRV	**Adam Dziewonsk**	**64.11**	**318**	IAMs_20	IAMs_20	21 15 45.0	
	comp=Z,1µm,22.0s						
AKASG	**Malin Array Be**	**64.36**	**31**	P	**P**	**20 55 37.0**	**-0.8**
	comp=Z,11nm,0.9s,baz=234,slow=6.6,SNR=32						
AKASG	**Malin Array Be**	**64.36**	**31**	P	**P**	**20 55 36.6**	**-1.3**
AKASG				IAmb	IAmb	20 55 50.9	
	comp=Z,37nm,1.6s						
AKBB	**Malin Array Si**	**64.36**	**31**	*i* P	**P**	**20 55 36.8**	**-1.1**
AKBB	**Malin Array Si**	**64.36**	**31**	IAmb	IAmb	20 55 42.3	
	comp=Z,39nm,1.1s						
YLE	**Yale**	**64.53**	**317**	IAMs_20	IAMs_20	21 23 55.5	
	comp=Z,1µm,19.0s						
QUA2	**Belchertown**	**64.54**	**318**	IAMs_20	IAMs_20	21 24 43.3	
	comp=Z,2µm,18.0s						
LL01	**San Ignacio de**	**64.55**	**222**	P	**P**	**20 55 37.8**	**-1.5**
LL01				IAmb	IAmb	20 55 54.6	
	comp=Z,60nm,1.4s						
I62A	**Tamworth**	**64.58**	**320**	IAmb	IAmb	20 55 44.3	
	comp=Z,43nm,1.1s						
FFD	**Franklin Falls**	**64.60**	**319**	IAMs_20	IAMs_20	21 18 21.0	
	comp=Z,2µm,20.0s						
NBO00	**NORSAR Array S**	**64.74**	**15**	P	**P**	**20 55 40.5**	**+0.3**
NB2	**NORSAR Subarra**	**64.86**	**15**	P	**P**	**20 55 41.7**	**+0.7**
	comp=Z,237nm,3.3s,baz=209,slow=6.9						
NOA	**NORSAR Array B**	**64.86**	**15**	P	**P**	**20 55 41.5**	**+0.5**
	comp=Z,5.7nm,0.9s,baz=211,slow=6.5,SNR=11						
NC204	**NORSAR Array S**	**64.95**	**15**	P	**P**	**20 55 43.6**	**+2.0**
NC405	**NORSAR Array S**	**65.06**	**15**	P	**P**	**20 55 43.1**	**+0.8**
HNH	**Hanover**	**65.12**	**319**	IAMs_20	IAMs_20	21 18 55.7	
	comp=Z,1µm,20.0s						
TRY	**Troy**	**65.61**	**318**	IAMs_20	IAMs_20	21 25 25.2	
	comp=Z,1µm,18.0s						
RAYN	**Ar Rayn**	**65.67**	**64**	P	**P**	**20 55 48.9**	**+1.8**
RAYN				pmax	pmax		
	comp=Z,29nm,1.5s						
RAYN				MLR	MLR		
	comp=Z,1µm,19.0s						
RAYN	**Ar Rayn**	**65.67**	**64**	P	**P**	**20 55 48.9**	**+1.8**
RAYN				IAmb	IAmb	20 56 02.2	
	comp=Z,29nm,1.4s						
RAYN	**Ar Rayn**	**65.67**	**64**	IAMs_20	IAMs_20	21 20 44.8	
	comp=Z,1µm,19.0s						
VT1	**Waterbury**	**65.70**	**320**	IAMs_20	IAMs_20	21 23 52.8	
	comp=Z,2µm,19.0s						
NACGM	**Naroch**	**65.76**	**26**	*i* P	**P**	**20 55 48.1**	**+1.2**
MOQ	**Mont Orford**	**65.82**	**321**	P	**P**	**20 55 47.1**	**-0.5**
P60A	**Greenville**	**65.82**	**314**	IAMs_20	IAMs_20	21 19 31.3	
	comp=Z,1µm,20.0s						
CNNC	**Cliffs of the**	**65.94**	**309**	IAMs_20	IAMs_20	21 17 31.4	
	comp=Z,1µm,20.0s						
MNK	**Minsk**	**66.00**	**27**	*i* P	**P**	**20 55 45.9**	**-2.6**
MNK				*i*		20 56 17.3	
MNK				*i*		20 58 10.1	
MNK				*i* S	**S**	**21 04 32.1**	**-2.8**
MNK				*i*		21 05 41.5	
MNK				*i* SS	**SS**	**21 08 47.1**	**-3.4**
MNK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MNK				pmax	pmax		
	comp=N,41nm,0.9s						
MNK				pmax	pmax		
	comp=E,1.0nm,0.9s						
MNK				MLR	MLR		
	comp=Z,1µm,18.0s						
MNK				MLR	MLR		
	comp=E,85nm,18.0s						
MNK				MLR	MLR		
	comp=N,864nm,18.0s						
MNK	**Minsk**	**66.00**	**27**	*i* P	**P**	**20 55 46.0**	**-2.5**
	comp=E,1.0nm,0.9s						
MNK				*i* P	**P**	**20 55 46.0**	**-2.5**
	comp=N,41nm,0.9s						
MNK				*i* P	**P**	**20 55 46.0**	**-2.5**
	comp=Z,8.0nm,0.9s,baz=231						
MNK				*i* PcP	**PcP**	**20 56 17.3**	**-1.7**
MNK				*i* PP	**PP**	**20 58 10.2**	**-3.8**
MNK				*i* PPP	PPP	20 59 43.4	
MNK				*i* S	**S**	**21 04 32.1**	**-2.8**
MNK				*i* SS	**SS**	**21 08 47.1**	**-3.4**
MNK				*i* SSS	SSS	21 12 41.7	
MNK				*i* LQ	LQ	21 16 36.0	
MNK				*i* LR	LR	21 21 03.2	
MNK				*i* LRM	MLR	21 26 21.0	
	comp=Z,1µm,18.4s						
MNK				*i* LRM	MLR	21 26 24.9	
	comp=E,85nm,18.4s						
MNK				*i* LRM	MLR	21 26 25.2	
	comp=N,864nm,18.4s						
RIOS	**Rincon, Osa**	**66.01**	**279**	P	**P**	**20 55 48.1**	**-1.2**
RIOS				IAmb	IAmb	20 56 03.6	
	comp=Z,32nm,0.8s						
U59A	**Littleton**	**66.22**	**310**	IAmb	IAmb	20 57 28.2	
	comp=Z,20nm,0.5s						
T59A	**Double "B" Far**	**66.24**	**311**	P	**P**	**20 55 50.2**	**-0.1**
N59A	**State Game Lan**	**66.33**	**315**	P	**P**	**20 55 52.7**	**+1.8**
	baz=112						
N59A	**State Game Lan**	**66.33**	**315**	IAmb	IAmb	20 56 05.9	
	comp=Z,32nm,1.2s						
RIMA	**Rio Macho**	**66.43**	**281**	P	**P**	**20 55 50.8**	**-1.5**
RIMA				IAmb	IAmb	20 56 04.8	
	comp=Z,23nm,0.9s						
CBN	**Corbin Frederi**	**66.52**	**312**	IAMs_20	IAMs_20	21 17 18.7	
	comp=Z,2µm,21.0s						
JSRW	**J. Sargeant Re**	**66.72**	**312**	P	**P**	**20 55 50.8**	**-2.7**
SIRT	**Sirnak**	**66.79**	**49**	P	**P**	**20 55 53.0**	**-1.0**
GURO	**Guroymak-BITLI**	**66.83**	**48**	IAmb	IAmb	20 56 00.2	
	comp=Z,38nm,1.0s						
DWPF	**Disney Wildern**	**66.92**	**301**	IAMs_20	IAMs_20	21 17 44.5	
	comp=Z,1µm,20.0s						
J58A	**Remsen**	**66.95**	**318**	IAmb	IAmb	20 55 58.9	
	comp=Z,31nm,1.1s						
N58A	**Sunbury**	**66.97**	**315**	IAmb	IAmb	20 56 01.9	
	comp=Z,34nm,1.2s						
BINY	**Binghamton**	**66.97**	**317**	P	**P**	**20 55 56.2**	**+1.2**
	baz=113						
BINY	**Binghamton**	**66.97**	**317**	IAmb	IAmb	20 56 07.9	
	comp=Z,68nm,1.5s						
LONY	**Lake Ozonia**	**67.01**	**320**	IAMs_20	IAMs_20	21 17 25.3	
	comp=Z,1µm,21.0s						
SOC	**Sochi**	**67.07**	**42**	*e*P	**P**	**20 55 55.6**	**0.0**
SOC				*e*		20 58 32.7	
SOC				*e*PPP	PPP	20 59 55.8	
SOC				*e*S	**S**	**21 04 50.2**	**+1.9**
SOC				MLR	MLR		
	comp=Z,544nm,19.0s						
NHSC	**New Hope**	**67.12**	**306**	IAMs_20	IAMs_20	21 17 45.8	
	comp=Z,2µm,22.0s						
P57A	**Homestead Farm**	**67.42**	**313**	IAmb	IAmb	20 56 00.3	
	comp=Z,38nm,1.4s						
T57A	**Hurt**	**67.54**	**310**	P	**P**	**20 55 58.1**	**-0.6**
T57A				IAmb	IAmb	20 56 43.8	
	comp=Z,39nm,1.0s						
S57A	**Dark Hollow, R**	**67.55**	**311**	P	**P**	**20 55 59.1**	**+0.4**
BCA	**Borcka**	**67.56**	**44**	⇑P	**P**	**20 55 58.4**	**-0.3**
TRQ	**Mont Tremblant**	**67.67**	**321**	P	**P**	**20 55 59.0**	**-0.4**
TRQ				IAmb	IAmb	20 56 11.4	
	comp=Z,60nm,1.4s						
SSPA	**Standing Stone**	**67.73**	**315**	P	**P**	**20 56 01.3**	**+1.5**
	baz=111						
SSPA	**Standing Stone**	**67.73**	**315**	P	**P**	**20 56 00.0**	**+0.2**
SSPA	**Standing Stone**	**67.73**	**315**	IAMs_20	IAMs_20	21 18 52.8	
	comp=Z,1µm,20.0s						
SCHQ	**Schefferville**	**67.75**	**332**	P	**P**	**20 56 00.0**	**+0.3**
	comp=Z,5.7nm,0.8s,baz=39,slow=19,SNR=2.4						
SCHQ				LR	LR	21 20 48.7	
	comp=Z,781nm,20.7s,baz=138,slow=32						
BIRD	**Birdtown, Kers**	**67.78**	**308**	IAmb	IAmb	20 57 15.4	
	comp=Z,16nm,0.6s						
J56A	**Wolcott**	**67.98**	**317**	P	**P**	**20 56 00.5**	**-0.7**
J56A				IAmb	IAmb	20 56 44.0	
	comp=Z,24nm,0.9s						
O56A	**Blue Knob Stat**	**68.09**	**314**	P	**P**	**20 56 03.7**	**+1.6**
	baz=110						
O56A	**Blue Knob Stat**	**68.09**	**314**	IAmb	IAmb	20 57 25.7	
	comp=Z,27nm,0.7s						
Q56A	**Snyder Ridge,**	**68.13**	**313**	P	**P**	**20 56 02.8**	**+0.4**
Q56A				IAmb	IAmb	20 56 49.0	
	comp=Z,28nm,0.7s						
U56A	**King**	**68.20**	**309**	P	**P**	**20 56 03.8**	**+0.9**
KARS	**Kars**	**68.30**	**46**	P	**P**	**20 56 03.7**	**+0.1**
KARS				pmax	pmax		
	comp=Z,204nm,1.6s						
KARS	**Kars**	**68.30**	**46**	P	**P**	**20 56 03.7**	**+0.1**
JSC	**Jenkinsville**	**68.31**	**307**	IAmb	IAmb	20 56 05.9	
	comp=Z,22nm,1.0s						
BOAB	**BOACO BROADBAN**	**68.41**	**283**	IAMs_20	IAMs_20	21 22 28.0	
	comp=Z,1µm,22.0s						
BLA	**Blacksburg**	**68.49**	**310**	IAMs_20	IAMs_20	21 19 41.9	
	comp=Z,2µm,20.0s						
MMNY	**Mt. Morris Dam**	**68.49**	**317**	IAmb	IAmb	20 56 08.3	
	comp=Z,28nm,1.0s						
KMSC	**Kings Mountain**	**68.60**	**308**	P	**P**	**20 56 06.7**	**+1.3**
	baz=106						
KMSC	**Kings Mountain**	**68.60**	**308**	IAmb	IAmb	20 56 55.9	
	comp=Z,18nm,0.7s						
PLVO	**Plevna**	**68.80**	**319**	P	**P**	**20 56 05.4**	**-1.0**
PLVO				IAmb	IAmb	20 56 19.0	
	comp=Z,55nm,1.4s						
MCWV	**Mont Chateau**	**68.82**	**313**	IAMs_20	IAMs_20	21 19 04.9	
	comp=Z,1µm,19.0s						
AKH	**Akhalkalaki**	**68.86**	**45**	⇑P	**P**	**20 56 08.0**	**+0.9**
HODGE	**Hodges**	**69.10**	**307**	IAmb	IAmb	20 58 28.1	
	comp=Z,17nm,0.5s						
SHA1	**Shidzhatmaz**	**69.10**	**42**	*i* P	**P**	**20 56 08.9**	**+0.3**
KIV	**Kislovodsk**	**69.20**	**42**	*e*P	**P**	**20 56 09.9**	**+0.8**
KIV				*e*S	**S**	**21 05 15.3**	**+1.4**
KIV				pmax	pmax		
	comp=Z,23nm,1.1s						
KIV				MLR	MLR		
	comp=Z,511nm,17.0s						
KIV	**Kislovodsk**	**69.20**	**42**	P	**P**	**20 56 08.8**	**-0.3**
KIV				IAmb	IAmb	20 56 42.9	
	comp=Z,43nm,1.3s						
KBZ	**Khabaz**	**69.26**	**43**	P	**P**	**20 56 09.6**	**+0.3**
	comp=Z,20nm,0.9s,baz=280,slow=2.4,SNR=33						
KBZ				LR	LR	21 28 39.5	
	comp=Z,612nm,20.5s,baz=266,slow=38						
M54A	**Oil Creek Stat**	**69.29**	**315**	IAMs_20	IAMs_20	21 20 45.5	
	comp=Z,1µm,20.0s						
N54A	**Moraine State**	**69.34**	**314**	P	**P**	**20 56 11.2**	**+1.3**
	baz=109						
GNI	**Garni**	**69.34**	**47**	*ce*P	**P**	**20 56 11.1**	**+1.0**
GNI				pmax	pmax		
	comp=Z,52nm,1.7s						
GNI	**Garni**	**69.34**	**47**	P	**P**	**20 56 09.8**	**-0.4**
GNI				IAmb	IAmb	20 56 33.7	
	comp=Z,73nm,1.5s						
DY2G	**Dye2**	**69.39**	**348**	*i* P	**P**	**20 56 12.0**	**+2.1**
TIGA	**Tifton**	**69.50**	**304**	P	**P**	**20 56 13.0**	**+2.0**
	baz=103						
PYA1	**Pyatigorsk**	**69.52**	**42**	*i* P	**P**	**20 56 11.4**	**+0.5**
ZEI	**Tsey**	**69.62**	**44**	*e*P	**P**	**20 56 11.3**	**-0.5**
ZEI				pmax	pmax		
	comp=Z,7.0nm,1.7s						
NCK	**Nalchik**	**69.65**	**43**	*i* P	**P**	**20 56 11.0**	**-0.8**
NCK				pmax	pmax		
	comp=Z,44nm,1.6s						
ERPA	**Erie**	**69.72**	**315**	P	**P**	**20 56 13.4**	**+1.2**
	baz=110						
FINES	**FINESS Array B**	**69.79**	**21**	P	**P**	**20 56 12.2**	**+0.1**
	comp=Z,6.3nm,0.6s,baz=204,slow=4.0,SNR=29						
FINES				LR	LR	21 26 40.5	
	comp=Z,2µm,21.4s,baz=232,slow=36						
BG3	**Lake Jocassee**	**69.83**	**307**	P	**P**	**20 56 11.9**	**-1.1**
BG3				IAmb	IAmb	20 56 15.6	
	comp=Z,25nm,0.9s						
GOF	**Gofitskoye**	**69.84**	**41**	⇑*e*P	**P**	**20 56 12.9**	**0.0**
GOF				pmax	pmax		
	comp=Z,51nm,1.0s						
GOGA	**Godfrey**	**69.86**	**306**	IAMs_20	IAMs_20	21 19 31.4	
	comp=Z,2µm,22.0s						
N53A	**Lisbon**	**69.90**	**314**	IAmb	IAmb	20 57 14.7	
	comp=Z,23nm,0.7s						
V53A	**Saluda**	**69.91**	**308**	IAmb	IAmb	20 56 47.0	
	comp=Z,22nm,0.8s						
M53A	**WI Miller and**	**69.98**	**315**	P	**P**	**20 56 15.3**	**+1.5**
	baz=109						
VSR	**Storozhevoye**	**70.00**	**34**	*e*P	**P**	**20 56 13.2**	**-0.5**
VSR				pmax	pmax		
	comp=Z,20nm,1.0s						
O53A	**New Philadelph**	**70.00**	**313**	P	**P**	**20 56 13.8**	**-0.1**
O53A				IAMs_20	IAMs_20	21 22 28.8	
	comp=Z,1µm,19.0s						
SADO	**Sadowa**	**70.06**	**318**	LR	LR	21 20 23.8	
	comp=Z,935nm,21.3s,baz=145,slow=30						
SADO	**Sadowa**	**70.06**	**318**	IAmb	IAmb	20 56 15.8	
	comp=Z,37nm,1.2s						
Y52A	**Lilburn**	**70.46**	**306**	IAmb	IAmb	20 56 19.5	
	comp=Z,32nm,1.1s						
P52A	**Corning**	**70.49**	**312**	IAMs_20	IAMs_20	21 19 44.8	
	comp=Z,2µm,22.0s						
OBN	**Obninsk**	**70.50**	**30**	*i* P	**P**	**20 56 16.9**	**+0.3**
OBN				*i*		20 56 34.8	
OBN				*i*		20 58 52.7	
OBN				pmax	pmax		
	comp=Z,13nm,0.9s						
OBN				MLR	MLR		
	comp=Z,2µm,18.0s						
LPSR	**Galich'ya Gora**	**70.50**	**33**	*e*P	**P**	**20 56 16.9**	**+0.2**
LPSR				pmax	pmax		
	comp=Z,40nm,0.8s						
V52A	**Sevierville**	**70.57**	**308**	IAmb	IAmb	20 56 55.0	
	comp=Z,21nm,0.6s						

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ICESG Greenland Ices     70.59 352 eP       P        20 56 18.9 +1.5
ICESG                              IAmb     IAmb     20 56 23.1
      comp=Z,25nm,1.3s
W52A  Murphy             70.64 307 P        P        20 56 17.5 -0.5
TKL   Tuckaleechee C     70.66 308 LR       LR       21 23 39.4
      comp=Z,628nm,18.4s,baz=114,slow=33
TKL   Tuckaleechee C     70.66 308 IAmb     IAmb     20 56 57.7
      comp=Z,29nm,0.6s
152A  Waverly Hall       70.72 305 IAmb     IAmb     20 56 26.4
      comp=Z,36nm,1.4s
VNA1  Neumayer--Stat     70.76 177 P        P        20 56 20.4 +2.5
N51A  Ashland            71.05 314 IAmb     IAmb     20 57 21.2
      comp=Z,26nm,0.6s
GROC  Groznyy            71.07  44 eP       P        20 56 20.5 +0.1
GROC                               e                 20 56 40.7
GROC                               e                 20 58 59.2
GROC                               eS       S        21 05 39.7 +4.1
GROC                               eSS      SS       21 10 04.2 -5.0
GROC                               pmax     pmax
      comp=Z,19nm,1.0s
VNA2  Neumayer--Watz     71.08 176 P        P        20 56 22.3 +2.4
      baz=339,slow=7.0
V51A  Loudon             71.15 308 IAmb     IAmb     20 57 15.4
      comp=Z,28nm,0.7s
Z51A  Franklin           71.23 305 P        P        20 56 21.3 -0.3
VNA3  Neumayer Olymp     71.27 177 P        P        20 56 22.9 +1.8
ACSO  Alum Creek Sta     71.29 313 P        P        20 56 22.6 +0.8
      baz=107
ACSO  Alum Creek Sta     71.29 313 IAMs_20  IAMs_20  21 19 45.9
      comp=Z,1μm,21.0s
MOS   Moscow             71.33  29 eP       P        20 56 21.8 +0.1
MOS                                e                 20 56 41.7
MOS                                eS       S        21 05 41.1 +3.0
MOS                                pmax     pmax
      comp=Z,70nm,0.9s
MOS                                MLR      MLR
      comp=Z,1μm,17.0s
VRH   Novokhopyorsk      71.44  35 eP       P        20 56 22.5 +0.1
VRH                                pmax     pmax
      comp=Z,10.0nm,1.0s
M50A  Fremont            71.67 314 IAmb     IAmb     20 56 31.5
      comp=Z,50nm,1.2s
R50A  Paris              71.76 311 IAmb     IAmb     20 56 37.8
      comp=Z,25nm,0.6s
W50A  Signal Mountai     71.77 307 IAmb     IAmb     20 56 29.4
      comp=Z,26nm,0.9s
T50A  Nancy              71.83 309 IAmb     IAmb     20 56 55.0
      comp=Z,32nm,0.6s
250A  Grady              71.85 304 IAmb     IAmb     20 56 38.3
      comp=Z,49nm,1.1s
FPAL  Fort Paine         71.86 306 IAmb     IAmb     20 56 28.3
      comp=Z,26nm,1.1s
SNAA  Sanae              72.15 175 P        P        20 56 28.3 +1.9
SNAA  Sanae              72.15 175 P        P        20 56 27.3 +0.8
      comp=Z,14nm,0.8s,baz=330,slow=5.9,SNR=55
SNAA  Sanae              72.15 175 P        P        20 56 25.6 -0.8
MAK   Makhachkala        72.18  44 eP       P        20 56 24.4 -2.7
MAK                                e                 20 59 04.1
MAK                                eS       S        21 05 46.2 -2.2
MAK                                eSS      SS       21 10 22.5 -3.8
MAK                                pmax     pmax
      comp=Z,132nm,1.1s
MAK                                MLR      MLR
      comp=Z,621nm,15.0s
SWET  Sewanee            72.27 307 IAmb     IAmb     20 57 49.4
      comp=Z,25nm,0.6s
N49A  Columbus Grove     72.36 313 IAmb     IAmb     20 57 29.5
      comp=Z,22nm,0.7s
R49A  Shelbyville        72.41 310 IAmb     IAmb     20 57 02.4
      comp=Z,24nm,0.6s
U49A  Red Boiling Sp     72.45 308 P        P        20 56 27.5 -1.3
U49A                               IAmb     IAmb     20 56 30.9
      comp=Z,33nm,0.9s
PMSA  Palmer Station     72.71 199 eP       P        20 56 30.7 +0.9
CLTN  Cedars of Leba     72.78 308 IAmb     IAmb     20 57 44.1
      comp=Z,18nm,0.7s
L48A  N Adams            72.82 314 IAmb     IAmb     20 56 32.8
      comp=Z,47nm,0.9s
PETF  Flores             72.87 288 IAmb     IAmb     20 56 44.5
      comp=Z,63nm,1.3s
X48A  Hartselle          73.00 306 P        P        20 56 32.2  0.0
X48A                               IAmb     IAmb     20 56 33.8
      comp=Z,24nm,0.8s
V48A  Smith Brothers     73.09 307 IAmb     IAmb     20 56 48.0
      comp=Z,30nm,1.1s
WCI   Wyandotte Cave     73.25 310 P        P        20 56 33.7 +0.1
WCI                                pmax     pmax
      comp=Z,28nm,1.0s
WCI   Wyandotte Cave     73.25 310 P        P        20 56 35.0 +1.4
      baz=104
WCI   Wyandotte Cave     73.25 310 P        P        20 56 33.7 +0.1
WCI                                IAmb     IAmb     20 56 55.6
      comp=Z,28nm,0.9s
APG   El Apazote         73.27 286 LR       LR       21 28 36.3
      comp=Z,302nm,19.0s,baz=102,slow=36
N47A  Urbana             73.45 313 P        P        20 56 34.1 -0.6
N47A                               IAmb     IAmb     20 56 36.3
      comp=Z,38nm,0.9s
T47A  Sharon Grove       73.59 309 P        P        20 56 35.3 -0.3
T47A                               IAmb     IAmb     20 56 43.3
      comp=Z,27nm,1.0s
BLO   Bloomington        73.64 311 IAmb     IAmb     20 57 42.9
      comp=Z,29nm,0.8s
SUMG  Summit             73.68 354 P        P        20 56 36.5 +0.6
SUMG                               pmax     pmax
      comp=Z,30nm,1.0s
SUMG  Summit             73.68 354 i P      P        20 56 37.0 +1.1
SUMG                               IAmb     IAmb     20 56 50.6
      comp=Z,12nm,0.8s
SUMG  Summit             73.68 354 P        P        20 56 36.5 +0.6
SUMG                               IAmb     IAmb     20 56 51.1
      comp=Z,30nm,1.0s
PLAL  Pickwick Lake      73.94 306 IAmb     IAmb     20 56 39.7
      comp=Z,74nm,1.8s
PLAL                               IAMs_20  IAMs_20  21 22 10.5
      comp=Z,1μm,20.0s
WVT   Waverly            73.98 308 P        P        20 56 37.0 -0.9
WVT                                pmax     pmax
      comp=Z,20nm,1.0s
WVT                                MLR      MLR
      comp=Z,1μm,22.0s
WVT   Waverly            73.98 308 P        P        20 56 37.8 -0.1
      baz=102
WVT   Waverly            73.98 308 P        P        20 56 37.0 -0.9
WVT   Waverly            73.98 308 IAMs_20  IAMs_20  21 22 11.6
      comp=Z,1μm,22.0s
P46A  Rosedale           74.27 311 P        P        20 56 38.3 -1.2
P46A                               IAmb     IAmb     20 56 40.9
      comp=Z,52nm,0.9s
SFIN  Lafayette          74.36 312 P        P        20 56 40.5 +0.4
      baz=104
SFIN  Lafayette          74.36 312 IAmb     IAmb     20 58 06.4
      comp=Z,20nm,0.7s
KLMR  Klimovskoe         74.72  25 eP       P        20 56 40.2 -1.4
KLMR                                                 20 59 30.4
KLMR                               eS       S        21 06 14.4 -2.0
KLMR                               SS       SS       21 11 01.2 -3.1
KLMR                               pmax     pmax
      comp=Z,45nm,1.5s
KLMR  Klimovskoe         74.72  25 eP       P        20 56 40.3 -1.4
KLMR                               AMP               20 56 46.3
      comp=Z,45nm,1.5s
KLMR                               PP       PP       20 59 30.5 +1.6
KLMR                               eS       S        21 06 14.5 -2.0
KLMR                               eS       S        21 06 14.5 -2.0
KLMR                               SS       SS       21 11 01.2 -3.1
KLMR                               SS       SS       21 11 01.2 -3.1
KLMR                               LQ       LQ       21 23 09.9
KLMR                               LQ       LQ       21 23 09.9
KLMR                               LR       LR       21 28 15.0
W45A  Hickory Valley     74.86 306 P        P        20 56 42.1 -0.9
Y45A  Yeager Farm, C     74.92 305 IAmb     IAmb     20 56 55.9
      comp=Z,46nm,1.1s
CCIG  Comitan            74.98 287 P        P        20 56 44.2 -0.1
CCIG                               IAmb     IAmb     20 56 49.1
      comp=Z,36nm,0.8s
ARCES ARCESS Array B     75.22  14 P        P        20 56 44.4 -0.1
      comp=Z,6.9nm,0.9s,baz=235,slow=4.3,SNR=16
ARCES ARCESS Array B     75.22  14 IAmb     IAmb     20 58 19.7
      comp=Z,99nm,1.8s
BELG  Belogornoye        75.28  35 eP       P        20 56 44.2 -0.8
BELG                               pmax     pmax
      comp=Z,6.0nm,0.9s
O44A  Mansfield          75.33 312 P        P        20 56 44.5 -1.2
O44A                               IAmb     IAmb     20 56 58.1
      comp=Z,31nm,0.9s
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L44A  Lake County Fo     75.39 314 IAMs_20  IAMs_20  21 23 51.8
      comp=Z,1μm,19.0s
SIUC  Southern Illin     75.39 309 IAmb     IAmb     20 56 53.4
      comp=Z,35nm,1.0s
S44A  Carbondale         75.42 309 IAmb     IAmb     20 56 58.7
      comp=Z,43nm,1.1s
UOSS  Minazif            75.54  64 P        P        20 56 46.6 -0.6
UOSS                               IAmb     IAmb     20 57 00.8
      comp=Z,64nm,1.1s
UOSS  Minazif            75.54  64 IAMs_20  IAMs_20  21 32 38.2
      comp=Z,913nm,19.0s
HDIL  Hopedale           76.03 312 P        P        20 56 50.0 +0.3
      baz=102
HDIL  Hopedale           76.03 312 IAmb     IAmb     20 56 56.5
      comp=Z,59nm,1.2s
FVM   French Village     76.38 309 P        P        20 56 50.0 -1.7
FVM                                pmax     pmax
      comp=Z,40nm,1.1s
FVM   French Village     76.38 309 P        P        20 56 50.0 -1.7
FVM                                IAmb     IAmb     20 57 03.8
      comp=Z,40nm,1.1s
I42A  Draeger Farm,      76.50 315 IAmb     IAmb     20 57 04.8
      comp=Z,34nm,1.1s
LCAR  Lake Charles       76.61 307 IAmb     IAmb     20 59 36.1
      comp=Z,23nm,0.9s
L42A  Oliver, Polo       76.62 313 IAmb     IAmb     20 57 00.7
      comp=Z,44nm,1.1s
DAG   Danmarks Havn      76.74 360 eP       P        20 56 54.6 +1.7
DAG                                IAmb     IAmb     20 57 07.2
      comp=Z,7.9nm,0.6s
CCM   Cathedral Cave     77.03 309 P        P        20 56 53.3 -2.1
CCM                                pmax     pmax
      comp=Z,33nm,0.8s
CCM                                MLR      MLR
      comp=Z,1μm,20.0s
CCM   Cathedral Cave     77.03 309 P        P        20 56 55.0 -0.4
      baz=100
CCM   Cathedral Cave     77.03 309 P        P        20 56 53.3 -2.1
CCM                                IAmb     IAmb     20 56 58.2
      comp=Z,32nm,0.8s
CCM   Cathedral Cave     77.03 309 IAMs_20  IAMs_20  21 23 25.4
      comp=Z,1μm,20.0s
COWI  Conover            77.17 317 IAmb     IAmb     20 57 08.5
      comp=Z,34nm,1.3s
COWI                               IAMs_20  IAMs_20  21 24 30.0
      comp=Z,1μm,20.0s
N41A  Harden Midland     77.23 312 IAmb     IAmb     20 57 03.0
      comp=Z,38nm,1.1s
JFWS  Jewell Farm        77.23 314 P        P        20 56 56.8 +0.4
      baz=102
JFWS  Jewell Farm        77.23 314 IAmb     IAmb     20 56 57.5
      comp=Z,29nm,0.8s
JFWS  Jewell Farm        77.23 314 IAMs_20  IAMs_20  21 23 41.7
      comp=Z,1μm,22.0s
W41B  Gary Mavity, V     77.34 306 P        P        20 56 57.2 +0.1
      baz=99
WHAR  Wooly Hollow       77.39 306 P        P        20 56 55.3 -2.1
WHAR                               IAmb     IAmb     20 56 58.2
      comp=Z,30nm,1.2s
CMIG  Matias Romero      77.67 287 LR       LR       21 30 09.4
      comp=Z,189nm,19.9s,baz=97,slow=35
MGMO  Mountain Grove     77.67 308 IAmb     IAmb     20 57 11.6
      comp=Z,54nm,1.1s
I40A  Norwalk            77.70 315 IAmb     IAmb     20 57 11.0
      comp=Z,42nm,1.4s
G40A  Rib Lake           77.70 316 IAmb     IAmb     20 57 06.7
      comp=Z,54nm,2.0s
X40A  Basin Creek Fa     77.71 305 P        P        20 56 59.7 +0.5
      baz=99
PRGR  Permogore          77.72  26 eP       P        20 57 01.6 +3.0
PRGR                               pmax     pmax
      comp=Z,20nm,0.9s
L40A  Anamosa            77.76 313 P        P        20 56 58.2 -1.1
L40A                               IAmb     IAmb     20 57 06.8
      comp=Z,32nm,1.0s
P40A  Paris              77.91 310 IAmb     IAmb     20 57 07.5
      comp=Z,40nm,1.5s
U40A  Yellville          78.01 307 P        P        20 57 01.0 +0.1
      baz=99
U40A  Yellville          78.01 307 IAmb     IAmb     20 57 13.1
      comp=Z,41nm,1.1s
U40A                               IAMs_20  IAMs_20  21 24 23.3
      comp=Z,1μm,22.0s
MIAR  Mount Ida          78.32 305 P        P        20 57 02.7  0.0
      baz=98
MIAR  Mount Ida          78.32 305 IAmb     IAmb     20 57 09.6
      comp=Z,38nm,1.4s
KIRV  Kirov              78.35  30ceP       P        20 57 01.7 -0.5
S39A  Bolivar            78.59 308 P        P        20 57 02.9 -1.1
S39A                               IAmb     IAmb     20 57 16.3
      comp=Z,52nm,1.1s
SYO   Syowa Base         78.75 162⇓epP      P        20 57 06.7 +2.4
SYO   Syowa Base         78.75 162⇑ePcP     PcP      20 57 13.1 +0.1
E38A  The Farm, Brul     78.91 318 IAmb     IAmb     20 57 29.2
      comp=Z,86nm,1.9s
GEYT  Alibeck            78.94  51 P        P        20 57 06.7 +0.7
      comp=Z,2.2nm,0.6s,baz=260,slow=8.3,SNR=2.8
GEYT                               LR       LR       21 34 57.6
      comp=Z,670nm,18.6s,baz=40,slow=38
GEYT  Alibeck            78.94  51 P        P        20 57 05.6 -0.5
P38A  Dawn               79.06 310 IAmb     IAmb     20 57 18.4
      comp=Z,39nm,0.9s
EYMN  Ely                79.16 319 IAMs_20  IAMs_20  21 25 22.8
      comp=Z,1μm,21.0s
U38A  Gravette           79.24 307 IAmb     IAmb     20 57 13.5
      comp=Z,30nm,1.1s
NEEM  North Greenlan     79.51 353 i P      P        20 57 10.5 +1.8
NEEM                               IAmb     IAmb     20 57 22.8
      comp=Z,20nm,0.8s
HKT   Hockley            79.65 300 P        P        20 57 08.3 -1.6
HKT                                pmax     pmax
      comp=Z,23nm,1.4s
HKT                                MLR      MLR
      comp=Z,1μm,20.0s
HKT   Hockley            79.65 300 P        P        20 57 08.3 -1.6
HKT   Hockley            79.65 300 IAMs_20  IAMs_20  21 31 12.1
      comp=Z,953nm,20.0s
I37A  Lemond, Waseca     79.70 315 IAmb     IAmb     20 57 17.6
      comp=Z,45nm,1.1s
TUL1  Leonard            80.30 306 P        P        20 57 13.3 -0.2
      baz=97
TUL1  Leonard            80.30 306 P        P        20 57 12.5 -0.9
TUL1                               IAMs_20  IAMs_20  21 26 24.0
      comp=Z,1μm,21.0s
B35A  Bob, Littlefor     80.70 319 IAmb     IAmb     20 57 20.9
      comp=Z,30nm,0.9s
T35A  Sooner Cattle      81.00 307 P        P        20 57 16.5 -0.7
T35A                               IAmb     IAmb     20 57 24.5
      comp=Z,61nm,1.2s
QUOK  Quay               81.07 307 IAmb     IAmb     20 57 29.9
      comp=Z,41nm,1.1s
W35A  Tecumseh           81.09 305          P        20 57 15.5 -2.2
W35A                               IAmb     IAmb     20 57 24.0
      comp=Z,53nm,1.2s
OK030 Cody Creek RV      81.10 306 IAMs_20  IAMs_20  21 26 17.3
      comp=Z,1μm,22.0s
BLOK  Blackwell          81.54 307 IAmb     IAmb     20 57 28.3
      comp=Z,46nm,1.0s
TULEG Thule              81.58 349 eP       P        20 57 21.2 +1.8
TULEG                              IAmb     IAmb     20 57 25.3
      comp=Z,15nm,1.1s
NOR   Nord               81.60   0 eP       P        20 57 20.6 +1.1
NOR                                IAmb     IAmb     20 57 24.1
      comp=Z,32nm,1.7s
OK029 Liberty Lake       81.63 306 IAmb     IAmb     20 57 21.9
      comp=Z,24nm,0.9s
HRA   Herat              81.81  55 P        P        20 57 21.0 -0.8
ECSD  EROS Data Cent     81.95 314 P        P        20 57 21.9 -0.2
      baz=98
ECSD  EROS Data Cent     81.95 314 IAmb     IAmb     20 57 28.1
      comp=Z,31nm,1.1s
ECSD  EROS Data Cent     81.95 314 IAMs_20  IAMs_20  21 29 39.5
      comp=Z,1μm,20.0s
AGMN  Agassiz Nation     82.10 319 P        P        20 57 22.7  0.0
      baz=99
AGMN  Agassiz Nation     82.10 319 P        P        20 57 22.0 -0.7
AGMN                               IAmb     IAmb     20 57 29.0
      comp=Z,33nm,0.9s
OK032 Salt Plains WL     82.34 307 IAMs_20  IAMs_20  21 27 18.1
      comp=Z,786nm,19.0s
ULM   Lac du Bonnet      82.41 321 P        P        20 57 23.9 -0.4
      comp=Z,14nm,0.9s,baz=101,slow=7.1,SNR=9.7
ULM                                LR       LR       21 31 52.4
      comp=Z,591nm,18.1s,baz=90,slow=34
ULM   Lac du Bonnet      82.41 321 P        P        20 57 22.9 -1.4
ARU   Arti               82.52  33c iP      P        20 57 26.0 +1.3
ARU                                S        S        21 07 43.0 +2.8
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ARU                                pmax     pmax
      comp=Z,21nm,1.1s
ARU                                MLR      MLR
      comp=Z,967nm,15.0s
ARU   Arti               82.52  33 P        P        20 57 24.3 -0.5
WMOK  Wichita Mounta     82.61 305 P        P        20 57 25.9 +0.2
      baz=95
WMOK  Wichita Mounta     82.61 305 IAmb     IAmb     20 57 38.3
      comp=Z,27nm,0.9s
WMOK  Wichita Mounta     82.61 305 IAMs_20  IAMs_20  21 27 51.1
      comp=Z,1μm,21.0s
833A  Chaparral WMA,     82.61 298 P        P        20 57 27.5 +1.6
      baz=94
JCT   Junction City      83.12 301 P        P        20 57 29.2 +0.7
      baz=94
JCT   Junction City      83.12 301 IAmb     IAmb     20 57 41.0
      comp=Z,30nm,0.8s
SVE   Sverdlovsk         83.72  33 eP       P        20 57 32.1 +1.2
SVE                                pmax     pmax
      comp=Z,15nm,1.1s
SVE                                MLR      MLR
      comp=Z,1μm,19.0s
CBKS  Cedar Bluff        83.74 309 P        P        20 57 32.0 +0.5
      baz=95
CBKS  Cedar Bluff        83.74 309 IAMs_20  IAMs_20  21 34 15.9
      comp=Z,1μm,19.0s
MDND  Maddock            84.52 318 P        P        20 57 34.6 -0.6
AMTX  Amarillo           85.00 305 IAmb     IAmb     20 57 45.7
      comp=Z,35nm,1.2s
MSTX  Muleshoe           85.85 304 P        P        20 57 43.4 +1.1
      baz=93
KSCO  Kaye Shedlock’     86.00 309 P        P        20 57 44.9 +1.9
      baz=93
KSCO  Kaye Shedlock’     86.00 309 IAmb     IAmb     20 57 56.8
      comp=Z,36nm,0.9s
MAW   Mawson             86.39 158 P        P        20 57 46.3 +2.3
      comp=Z,15nm,1.1s,baz=326,slow=7.4,SNR=6.5
MAW                                LR       LR       21 27 35.5
      comp=Z,613nm,21.9s,baz=284,slow=30
MAW   Mawson             86.39 158 P        P        20 57 44.4 +0.3
TXAR  Lajitas Array      86.41 299 P        P        20 57 45.6 +0.4
      comp=Z,12nm,0.9s,baz=114,slow=4.5,SNR=64
TXAR                               LR       LR       21 33 23.3
      comp=Z,371nm,20.7s,baz=0.0,slow=34
TXAR  Lajitas Array      86.41 299 P        P        20 57 44.8 -0.4
TX32  Lajitas Array      86.41 299 IAmb     IAmb     20 57 58.1
      comp=Z,20nm,0.9s
EUNU  Eureka             86.42 351 IAmb     IAmb     20 57 51.3
      comp=Z,45nm,1.9s
RES   Resolute Bay       86.65 345 LR       LR       21 29 58.4
      comp=Z,381nm,19.3s,baz=101,slow=31
T25A  Trinidad           87.32 307 IAmb     IAmb     20 58 06.0
      comp=Z,22nm,1.1s
RSSD  Black Hills        87.32 314 P        P        20 57 47.1 -2.4
RSSD                               pmax     pmax
      comp=Z,17nm,1.1s
RSSD                               MLR      MLR
      comp=Z,1μm,20.0s
RSSD  Black Hills        87.32 314 P        P        20 57 49.9 +0.4
      baz=93
RSSD  Black Hills        87.32 314 P        P        20 57 47.1 -2.4
KBL   Kabul              87.43  56 P        P        20 57 49.7 -0.5
KBL                                pmax     pmax
      comp=Z,14nm,1.4s
KBL   Kabul              87.43  56 P        P        20 57 49.7 -0.5
DGMT  Dagmar             87.64 318 P        P        20 57 52.2 +1.6
      baz=93
DGMT  Dagmar             87.64 318 IAmb     IAmb     20 57 58.0
      comp=Z,36nm,1.2s
CHGR  Chuyangaron        87.66  51 IAmb     IAmb     20 58 12.7
      comp=Z,26nm,1.1s
MNTX  Cornudas Mount     87.96 302 P        P        20 57 54.1 +1.5
      baz=91
MNTX  Cornudas Mount     87.96 302 IAMs_20  IAMs_20  21 33 47.9
      comp=Z,868nm,22.0s
Q24A  Divide             87.96 309 P        P        20 57 54.8 +2.0
      baz=92
SDCO  Great Sand Dun     88.20 308 P        P        20 57 55.6 +1.6
      baz=92
SDCO  Great Sand Dun     88.20 308 P        P        20 57 54.0 +0.1
SDCO                               IAmb     IAmb     20 58 07.8
      comp=Z,22nm,1.0s
SDCO                               IAMs_20  IAMs_20  21 30 54.2
      comp=Z,967nm,21.0s
BRLS  Borolday           88.31  47 eP       P        20 57 53.6 -0.3
      baz=47
BRLS  Borolday           88.31  47 eP       P        20 57 53.6 -0.3
ISCO  Idaho Springs      88.34 310 P        P        20 57 56.4 +1.9
      baz=92
ISCO  Idaho Springs      88.34 310 IAmb     IAmb     20 58 03.0
      comp=Z,27nm,1.2s
IUG   Iuzhnay            88.43  48 eP       P        20 57 55.0 +0.3
      baz=48
IUG   Iuzhnay            88.43  48 eP       P        20 57 54.9 +0.3
N23A  Red Feather La     88.62 311 P        P        20 57 56.8 +1.0
      baz=91
BRVK  Borovoye           88.89  37ceP       P        20 57 57.0 +0.6
BRVK                               pmax     pmax
      comp=Z,9.0nm,1.7s
BRVK  Borovoye           88.89  37 P        P        20 57 56.1 -0.3
BRVK                               IAMs_20  IAMs_20  21 39 23.4
      comp=Z,873nm,20.0s
EPT   El Paso            88.92 302 IAMs_20  IAMs_20  21 33 21.3
      comp=Z,630nm,19.0s
ANMO  Albuquerque        88.92 305 P        P        20 57 56.2 -1.1
ANMO                               pmax     pmax
      comp=Z,12nm,1.2s
ANMO                               MLR      MLR
      comp=Z,2μm,20.0s
ANMO  Albuquerque        88.92 305 P        P        20 57 57.9 +0.7
      baz=91
ANMO  Albuquerque        88.92 305 P        P        20 57 56.2 -1.1
LAO   LASA Array         88.95 317 IAmb     IAmb     20 58 11.0
      comp=Z,37nm,1.1s
S22A  4UR Ranch, Cre     89.26 308 P        P        20 58 00.2 +1.3
      baz=91
Y22D  IRIS PASSCAL I     89.29 304 IAMs_20  IAMs_20  21 33 54.2
      comp=Z,784nm,18.0s
DZA   Taraz              89.40  47 eP       P        20 57 59.2 +0.1
      baz=47
DZA   Taraz              89.40  47 eP       P        20 57 59.1  0.0
DRK   Karamyk            89.73  51 IAmb     IAmb     20 58 16.1
      comp=Z,24nm,1.2s
121A  Cookes Peak, D     90.01 302 P        P        20 58 03.8 +1.4
      baz=90
QSPA  South Pole Qui     90.02 180 P        P        20 58 01.6 +0.1
BRZS  Berezniki          90.35  40 eP       P        20 58 03.9 +0.5
      baz=40
BRZS  Berezniki          90.35  40 eP       P        20 58 03.9 +0.5
MVCO  Mesa Verde         90.58 307 P        P        20 58 06.5 +1.4
      baz=90
MVCO  Mesa Verde         90.58 307 IAmb     IAmb     20 58 19.8
      comp=Z,28nm,1.1s
NIL   Nilore             90.91  57 P        P        20 58 05.3 -1.1
NIL                                pmax     pmax
      comp=Z,19nm,1.0s
NIL                                MLR      MLR
      comp=Z,800nm,19.0s
NIL   Nilore             90.91  57 P        P        20 58 05.3 -1.1
NIL                                IAmb     IAmb     20 58 11.3
      comp=Z,19nm,1.0s
NIL   Nilore             90.91  57 IAMs_20  IAMs_20  21 41 15.5
      comp=Z,817nm,19.0s
319A  Douglas            91.29 301 IAmb     IAmb     20 58 21.6
      comp=Z,16nm,1.0s
PD31  Pinedale Array     91.33 313 P        P        20 58 06.9 -1.5
PDAR  Pinedale Array     91.33 313 P        P        20 58 07.7 -0.7
      comp=Z,1.3nm,0.8s,baz=101,slow=3.2,SNR=8.0
PDAR                               LR       LR       21 33 14.8
      comp=Z,1μm,21.4s,baz=96,slow=32
EGMT  Eagleton           91.35 318 IAMs_20  IAMs_20  21 33 52.0
      comp=Z,1μm,21.0s
BTLS  Baital             91.35  45 eP       P        20 58 09.5 +1.3
      baz=45
BTLS  Baital             91.35  45 eP       P        20 58 09.4 +1.3
AAK   Ala-Archa          91.73  48ceP       P        20 58 11.4 +1.2
AAK                                pmax     pmax
      comp=Z,24nm,0.9s
AAK   Ala-Archa          91.73  48 P        P        20 58 09.5 -0.7
AAK                                IAMs_20  IAMs_20  21 43 49.3
      comp=Z,918nm,19.0s
REDW  Red Top Meadow     92.26 313 IAmb     IAmb     20 58 24.1
      comp=Z,14nm,1.1s
FXWY  Fox Creek          92.37 313 P        P        20 58 11.9 -1.3
YHL   Hebgen Lake        92.44 315 IAmb     IAmb     20 58 20.2
      comp=Z,17nm,1.3s
AHID  Auburn Hatcher     92.46 313 IAmb     IAmb     20 58 43.3
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      comp=Z,23nm,1.4s
TUC   Tucson             92.55 302  P        P        20 58 14.3 +0.2
TUC                                 pmax     pmax
      comp=Z,5.0nm,1.1s
TUC                                 MLR      MLR
      comp=Z,400nm,18.0s
TUC   Tucson             92.55 302  P        P        20 58 15.0 +1.0
      baz=88
TUC   Tucson             92.55 302  P        P        20 58 14.3 +0.2
HWUT  Hardware Ranch     92.85 311  IAmb     IAmb     20 58 47.1
      comp=Z,25nm,1.7s
WUAZ  Wupatki            92.94 305  P        P        20 58 13.7 -2.2
WUAZ                                IAmb     IAmb     20 58 30.3
      comp=Z,21nm,1.4s
KSH   Kashi              92.96  51  P        P        20 58 15.0 -0.8
KSH                                 pP       pP       20 58 19.3 -2.1
KSH                                 sP       sP       20 58 21.3 -2.1
KSH                                 SS       SS       21 15 30.8 -4.3
KSH                                 pmax     pmax
      comp=Z,5.0nm,0.8s
KSH                                 LR       LR
      comp=Z,320nm,17.2s
KSH                                 LR       LR
      comp=Z,650nm,13.7s
KSH                                 LR       LR
      comp=Z,690nm,16.5s
KUU   Kurty              93.03  46 eP        P        20 58 15.8 -0.2
      baz=46
KUU   Kurty              93.03  46 eP        P        20 58 15.7 -0.2
YKA   Yellowknife Ar     93.20 332  P        P        20 58 16.3 +0.1
      comp=Z,6.0nm,0.9s,baz=87,slow=6.3,SNR=15
YKA                                 LR       LR       21 36 01.4
      comp=Z,706nm,19.9s,baz=0.0,slow=33
DLMT  Dillon             93.41 315  IAMs_20  IAMs_20  21 36 29.8
      comp=Z,799nm,20.0s
MDOK  Medeo              93.59  47 eP        P        20 58 20.3 +1.5
      baz=47
MDOK  Medeo              93.59  47 eP        P        20 58 20.2 +1.5
KURK  Kurchatov          94.12  39  P        P        20 58 21.6 +0.9
KURK                                pmax     pmax
      comp=Z,4.0nm,1.1s
KURK                                MLR      MLR
      comp=Z,900nm,21.0s
KURK  Kurchatov          94.12  39  P        P        20 58 21.6 +0.9
KURK  Kurchatov          94.12  39  IAMs_20  IAMs_20  21 43 18.9
      comp=Z,886nm,21.0s
MSO   Missoula           94.25 317  IAmb     IAmb     20 58 43.9
      comp=Z,26nm,1.9s
TDK   Taldyqorghan       94.44  45 eP        P        20 58 22.6 +0.2
      baz=45
TDK   Taldyqorghan       94.44  45 eP        P        20 58 22.6 +0.2
KPKS  Kokpek             94.76  47 eP        P        20 58 23.9 -0.1
      baz=47
KPKS  Kokpek             94.76  47 eP        P        20 58 23.9 -0.1
UZB   Uzynbulak          95.03  47 eP        P        20 58 26.2 +0.8
      baz=47
UZB   Uzynbulak          95.03  47 eP        P        20 58 26.1 +0.8
SHLS  Shalkode           95.35  47 eP        P        20 58 29.1 +2.3
      baz=47
SHLS  Shalkode           95.35  47 eP        P        20 58 29.0 +2.3
NRIK  Noril'sk           95.44  20  LR       LR       21 43 43.3
      comp=Z,658nm,21.2s,baz=290,slow=37
NRIK  Noril'sk           95.44  20 iP        P        20 58 27.6 +1.2
NRIK                                pmax     pmax
      comp=Z,9.0nm,1.6s
ELK   Elko               95.67 311  P        P        20 58 27.6 -0.8
ELK                                 pmax     pmax
      comp=Z,6.0nm,1.1s
ELK   Elko               95.67 311  P        P        20 58 27.6 -0.8
R11A  Troy Canyon, C     96.14 308  P        P        20 58 31.2 +0.7
      baz=85
NEW   Newport            96.25 318  LR       LR       21 39 50.0
      comp=Z,739nm,18.3s,baz=76,slow=34
MAKZ  Makanchi           96.74  43  IAMs_20  IAMs_20  21 48 17.5
      comp=Z,796nm,19.0s
MKAR  Makanchi Array     96.96  43  P        P        20 58 33.3 -0.5
      comp=Z,0.6nm,0.8s,baz=293,slow=2.8,SNR=1.8
MKAR                                LR       LR       21 48 44.5
      comp=Z,565nm,18.7s,baz=288,slow=40
ZALV  Zalesovo Beam      97.47  36  LR       LR       21 46 50.4
      comp=Z,1µm,18.5s,baz=292,slow=38
J08A  Circle Bar Ran     97.80 314  IAmb     IAmb     20 58 49.6
      comp=Z,9.1nm,1.1s
NVAR  Mina Array Bea     98.26 309  LR       LR       21 42 25.6
      comp=Z,501nm,18.1s,baz=90,slow=35
INK   Inuvik             99.33 340  P        Pdif     20 58 45.4 +1.5
      comp=Z,2.5nm,1.0s,baz=53,slow=4.2,SNR=4.7
INK                                 LR       LR       21 38 01.7
      comp=Z,453nm,19.3s,baz=64,slow=32
WMQ   Urumqi            101.19  45 eP        Pdif     20 58 55.8 +2.9
WMQ                                 LR       LR
      comp=Z,990nm,21.9s
WMQ                                 LR       LR
      comp=Z,450nm,21.1s
WMQ                                 LR       LR
      comp=Z,440nm,21.9s
TIXI  Tiksi             105.40  10  IAMs_20  IAMs_20  21 49 59.6
      comp=Z,598nm,21.0s
TLY   Talaya            109.00  34  IAMs_20  IAMs_20  21 54 26.1
      comp=Z,724nm,21.0s
YAK   Yakutsk           113.48  16  IAMs_20  IAMs_20  21 57 26.0
      comp=Z,672nm,21.0s
LZH   Lanzhou           115.19  50 ePKP      PKPdf    21 03 46.4 +2.2
LZH                                 LR       LR
      comp=Z,540nm,17.6s
LZH                                 LR       LR
      comp=Z,530nm,17.5s
LZH                                 LR       LR
      comp=Z,490nm,19.8s
CD2   Chengdu           116.77  55  PKP      PKPdf    21 03 46.5 -0.7
CD2                                 AMB      AMB
      comp=Z,280nm,6.5s
CD2                                 LR       LR
      comp=Z,440nm,15.2s
CD2                                 LR       LR
      comp=Z,820nm,18.1s
HHC   Hu-ho-hao-te      118.80  42 ePKP      PKPdf    21 03 48.0 -3.0
HHC                                 LR       LR
      comp=Z,360nm,14.2s
HHC                                 LR       LR
      comp=Z,330nm,16.2s
HHC                                 LR       LR
      comp=Z,360nm,17.3s
BKNI  Bangkinang        118.85  90  IAMs_20  IAMs_20  21 48 15.6
      comp=Z,461nm,22.0s
GYA   Guiyang           120.52  59 ⇓PKP      PKiKP    21 03 58.5 +3.7
ENH   Enshi             121.64  54  IAMs_20  IAMs_20  22 02 50.6
      comp=Z,542nm,21.0s
MDSI  Maura Dua         121.87  95  PKP      PKiKP    21 04 10.5  +13
TAOE  Nuku Hiva Isla    121.91 260 eLR       LR       21 41 29.9
      comp=Z,230nm,22.3s
TNG   Tangerang         124.22  97  PKP      PKiKP    21 04 06.9 +4.7
TNG                                 PKP      pPKPdf   21 04 08.5 +0.9
KLR   Kul'dur           124.46  24  PKP      PKiKP    21 04 01.9 +0.1
      comp=Z,1.1nm,0.6s,baz=243,slow=2.3,SNR=2.4
QIZ   Qiongzhong        125.32  67  PKP      PKPdf    21 04 02.3 -1.6
QIZ                                 PP       PP       21 05 58.8 +4.7
QIZ                                 SS       SS       21 22 53.9 +2.5
QIZ                                 LR       LR
      comp=Z,310nm,16.7s
QIZ                                 LR       LR
      comp=Z,220nm,13.7s
QIZ                                 LR       LR
      comp=Z,290nm,23.0s
PETK  Petropavlovsk-    127.00   3  PKP      PKPdf    21 04 05.3 -0.8
      comp=Z,1.3nm,0.7s,baz=88,slow=3.6,SNR=1.6
MDJ   Mudanjiang        127.03  29  IAMs_20  IAMs_20  22 01 54.4
      comp=Z,633nm,21.0s
NJ2   Nanjing           128.18  48 ePKP      PKiKP    21 04 10.3 +0.7
SKR   Severo-Kuril’s    129.29   5 ePKHKP    PKPpre   21 03 47.3
SKR                                 MLR      MLR
      comp=Z,300nm,21.0s
SKR                                 MLR      MLR
      comp=Z,500nm,22.0s
PPT2  Papeete2          129.43 247 eSS       SS       21 23 37.5 -5.2
      comp=Z,164nm,31.5s
PPT2  Papeete2          129.43 247 eLQ       LQ       21 39 11.0
      comp=Z,1µm,30.5s
PPT2                               eLR       LR       21 44 57.4
      comp=Z,424nm,25.2s
SOEI  Soe               141.02 106  IAMs_20  IAMs_20  22 00 11.3
      comp=Z,529nm,20.0s
STKA  Stephens Creek    142.74 150  PKP      PKPdf    21 04 33.9 -2.3
      comp=Z,2.8nm,0.8s,baz=210,slow=6.1,SNR=4.5
ASAR  Alice Springs     143.81 133  PKP      PKPbc    21 04 36.5 +0.6
      comp=Z,9.2nm,1.0s,baz=220,slow=3.2,SNR=30
ASAR  Alice Springs     143.81 133  PKIKP    PKPbc    21 04 36.7 +0.9
ASAR  Alice Springs     143.81 133           PKPpre   21 04 33.5
ASAR                                PKPdf    PKPbc    21 04 36.7 +0.9
AS31  Alice Springs     143.81 133  PKPpre   PKPpre   21 04 32.0
AS31                                         PKPbc    21 04 35.9 +0.1
WRA   Warramunga Arr    146.25 128  PKPbc    PKPbc    21 04 43.4 -0.2
      comp=Z,5.5nm,0.8s,baz=242,slow=2.8,SNR=25
WRAB  Tennant Creek     146.26 128  PKIKP    PKPdf    21 04 41.1 -1.4
FAKI  Fak Fak           149.92  96  PKPdf    PKPdf    21 04 45.4 -3.3
FAKI                                PKPbc    PKPbc    21 04 50.9 -2.7
FAKI                                         PKiKP    21 04 55.4 +0.9
DZM   Mont Dzumac       157.62 190 eLR       LR       21 58 15.8
      comp=Z,1µm,28.9s
```

IDC ***24*** *20:45:44.5±0.5, 2°.94N×127°.40E, h0^{km}, mb4.2/19, mb1 4.3/19, mb1mx4.2/44, mbtmp4.2/19, Error ellipse: s-maj=32.0km s-min=9.8km az=79.0*

DJA ***24*** *20:45:50.8±0.3, 3°N±3°×12°7E±°, h46^{km}±5^{km}, M4.2/19, mB4.9/5, mb4.4/19, MLv4.2/19, Mw(mB)4.2/5*

NEIC ***24*** *20:45:51.6±2.2, 2°.96N±0°.08×127°.32E±0°.07, h50^{km}±6^{km}, mb4.5/35, Error ellipse: s-maj=12.3km s-min=9.0km az=221.0*

ISC 24 20:45:51.2±1.1**, 3°.05N**±0°.05×**127°.35E**±0°.06**, h46**^{km}±11^{km}**, n136, σ1°.45**/145**, mb4.4**/55**, 1D, Talaud Islands**

```
Code  Station Name        Δ°   AZ°    Phase ID           Time      Res
                                    Op       ISC       h  m  s    ISC
SGSI  Sangihe             1.93 289  P        Pn       20 46 20.5 -1.0
SGSI                                S        Sn       20 46 44.2 -0.4
TNTI  Ternate             2.26 180  P        Pn       20 46 25.7 -0.4
TNTI  Ternate             2.26 180  Pn       Pn       20 46 25.4 -0.7
TNTI                                Sn       Sn       20 46 56.5 +3.8
TNTI  Ternate             2.26 180  P        Pn       20 46 25.6 -0.5
LBMI  Labuha              3.66 178  P        Pn       20 46 45.8 +0.4
KMSI  Cibinong            4.17 234  P        Pn       20 46 54.1 +1.8
GTOI  Gorontalo           4.96 241  P        Pn       20 47 03.9 +0.8
      0.1nm14nm,0.7s
SANI  Sanana              5.24 195  P        Pn       20 47 05.1 -2.0
      0.2nm1µm21nm,0.6s
SANI  Sanana              5.24 195  P        Pn       20 47 08.4 +1.3
SWI   Sorong              5.51 135  P        Pn       20 47 12.2 +1.5
      0.2nm34nm,0.5s
SIJI  Sorong              5.52 135  Pn       Pn       20 47 09.3 -1.5
      6.2nm,0.3s,baz=337,slow=23,SNR=18
SIJI                                Sn       Sn       20 48 14.2 +1.1
      baz=270,slow=20,SNR=1.2
MRSI  Marisa              5.98 245  P        Pn       20 47 18.2 +1.0
      0.2nm743nm61nm,0.5s
LUWI  Luwuk               6.12 229           Pn       20 47 19.2 +0.1
LUWI  Luwuk               6.12 229  P        Pn       20 47 22.6 +3.5
MSAI  Masohi              6.54 166  P        Pn       20 47 25.4 +0.5
AAI   Ambon               6.74 173  P        Pn       20 47 28.9 +1.3
      0.1nm23nm,0.8s
TOLI2 Tolitoli            6.84 254           Pn       20 47 27.2 -1.8
TOLI2 Tolitoli            6.84 254  P        Pn       20 47 27.6 -1.4
APSI  Ampana              6.93 236  P        Pn       20 47 31.8 +1.6
      0.1nm26nm,0.6s
FAKI  Fak Fak             7.69 140  P        Pn       20 47 41.7 +1.1
      0.1nm19nm,0.8s
FAKI  Fak Fak             7.69 140  Pn       Pn       20 47 41.8 +1.1
MPSI  Mapaga              7.92 250  P        Pn       20 47 45.4 +1.6
      0.0nm11nm,0.8s
MYLDM Lahad Datu          9.08 284  Pn       Pn       20 47 59.8  0.0
KAPI  Kappang            11.04 224  P        Pn       20 48 29.9 +3.4
      8.9nm,0.8s
KKM   Kota Kinabalu      11.49 285  Pn       Pn       20 48 31.6 -1.3
SBUM  Sibu               15.13 268           P        20 49 26.4  0.0
PLAI  Plampang           15.18 219  P        Pn       20 49 24.3 +1.7
      51nm,0.8s
PLAI  Plampang           15.18 219  P        P        20 49 25.7 -1.2
TWSI  Taliwang, Sumb     15.69 222  P        Pn       20 49 30.1 +0.9
      35nm,0.8s
STKI  Sintang            16.14 260  P        Pn       20 49 35.9 +0.9
MTN   Manton Dam         16.23 167  P        Pn       20 49 36.1 +0.1
      baz=16,SNR=17
MTN   Manton Dam         16.23 167  P        Pn       20 49 35.0 -1.1
MTN                                 IAmb     IAmb     20 49 52.5
      comp=Z,31nm,1.6s
MTN   Manton Dam         16.23 167  P        Pn       20 49 37.3 +1.2
      comp=Z,12nm,0.6s
KDU   Kakadu             16.44 162  P        Pn       20 49 39.2 +0.5
      baz=16,SNR=8.1
KSM   Kuching            17.10 265           Pn       20 49 46.9 -0.2
BLJI  Banyuglugur        17.42 232  P        P        20 49 51.5 -0.2
      comp=Z,18nm,0.8s
JAGI  Jajag, Banyuwa     17.44 229           Pn       20 49 50.3 -1.0
JAGI  Jajag, Banyuwa     17.44 229  P        P        20 49 53.2 +1.2
KNRA  Kununurra          18.66 176  P        P        20 50 04.2 -1.2
      baz=18,SNR=19
KNRA  Kununurra          18.66 176  P        P        20 50 03.3 -2.1
KNRA  Kununurra          18.66 176  P        P        20 50 03.9 -1.4
      comp=Z,20nm,0.8s
YULB  Yu-li              21.06 344  P        P        20 50 28.9 -2.6
YULB                                IAmb     IAmb     20 50 32.7
      comp=Z,35nm,1.2s
FITZ  Fitzroy Crossi     21.08 185  P        P        20 50 29.5 -2.2
      comp=Z,3.3nm,0.4s,baz=11,slow=7.3,SNR=29
FITZ  Fitzroy Crossi     21.08 185  P        P        20 50 29.6 -2.1
      baz=21,SNR=25
TPUB  Ta-pu              21.16 343  P        P        20 50 30.2 -2.4
TPUB                                IAmb     IAmb     20 50 50.8
      comp=Z,27nm,0.9s
SSLB  Suanglung          21.53 344  P        P        20 50 35.3 -1.3
SSLB                                IAmb     IAmb     20 50 45.1
      comp=Z,43nm,1.4s
WB0   Warramunga Arr     23.70 163  P        P        20 50 56.7 -2.3
WB0                                 IAmb     IAmb     20 50 58.6
      comp=Z,11nm,0.7s
WRAB  Tennant Creek      23.85 164  P        P        20 50 57.9 -2.5
WRAB                                IAmb     IAmb     20 50 59.8
      comp=Z,11nm,0.8s
WRAB  Tennant Creek      23.85 164  P        P        20 50 58.9 -1.5
WRA   Warramunga Arr     23.85 164  P        P        20 50 58.8 -1.6
      comp=Z,8.9nm,0.6s,baz=342,slow=10,SNR=114
WRA                                 S        S        20 55 14.8 +1.4
      comp=Z,1.5nm,0.3s,baz=331,slow=20,SNR=22
WRA   Warramunga Arr     23.85 164  P        P        20 50 57.5 -2.9
WB2   Warramunga Arr     23.86 164  P        P        20 50 58.8 -1.6
      baz=24
WB2   Warramunga Arr     23.86 164  P        P        20 50 58.6 -1.8
WB2                                 IAmb     IAmb     20 51 00.1
      comp=Z,11nm,0.6s
KLSI                     23.87 251  P        P        20 51 00.8 +0.1
      comp=Z,7.8nm,1.3s
UBPT  Khong Chiam        24.75 301  P        P        20 51 07.7 -1.0
UBPT                                IAmb     IAmb     20 51 52.0
      comp=Z,41nm,1.7s
MBWA  Marble Bar         25.19 197  P        P        20 51 11.9 -0.6
PSA00 Pilbara Seismi     25.55 196  P        P        20 51 14.3 -1.5
PSA00 Pilbara Seismi     25.55 196  P        P        20 51 13.8 -2.0
PSA00                               IAmb     IAmb     20 51 16.8
      comp=Z,6.9nm,0.8s
PSA00 Pilbara Seismi     25.55 196  P        P        20 51 14.8 -1.0
      comp=Z,27nm,0.7s
QIS   Mount Isa          26.36 153  P        P        20 51 22.8 -0.4
      baz=26,SNR=5.8
AS31  Alice Springs      27.31 167  P        P        20 51 29.1 -2.6
ASAR  Alice Springs      27.31 167  P        P        20 51 30.5 -1.2
      comp=Z,2.8nm,0.6s,baz=345,slow=6.4,SNR=46
ASAR                                PcP      PcP      20 54 50.8 +0.2
      comp=Z,1.6nm,0.8s,baz=348,slow=2.3,SNR=9.4
ASAR  Alice Springs      27.31 167  P        P        20 51 29.3 -2.5
ASPA  Alice Springs      27.31 167  P        P        20 51 30.7 -1.0
      baz=27
WRKA  Warakurna          27.93 178  P        P        20 51 36.1 -1.1
      baz=28,SNR=27
WRKA  Warakurna          27.93 178  P        P        20 51 35.8 -1.5
      comp=Z,8.7nm,0.6s
GIRL  Giralia            28.57 206  P        P        20 51 42.0 -0.9
NJ2   Nanjing            29.94 345 eP        P        20 51 56.9 +1.9
NJ2                                 pmax     pmax
      comp=Z,10.0nm,1.2s
GYA   Guiyang            30.59 322 ⇓P        P        20 52 05.3 +4.3
GYA                                 pmax     pmax
      comp=Z,10.0nm,1.1s
MEEK  Meekatharra        30.70 195  P        P        20 52 02.2 +0.5
      baz=31,SNR=8.0
MEEK  Meekatharra        30.70 195  P        P        20 52 01.8  0.0
      comp=Z,14nm,1.1s
OOD   Oodnadatta         31.70 166  P        P        20 52 09.8 -0.7
      comp=Z,8.0nm,1.7s
CMAR  Chiang Mai Arr     31.75 301  P        P        20 52 11.1 -0.2
      comp=Z,0.3nm,0.3s,baz=124,slow=7.4,SNR=5.0
CHTO  Chiang Mai         31.91 301  P        P        20 52 10.3 -2.3
JWT   Wachi              32.93  12  P        P        20 52 21.9 +0.6
FORT  Forrest            33.64 179  P        P        20 52 26.0 -1.6
FORT  Forrest            33.64 179  P        P        20 52 26.4 -1.1
      comp=Z,27nm,0.7s
MORW  Morawa             33.73 198  P        P        20 52 25.6 -2.7
MULG  Mulgathing         33.75 170  P        P        20 52 27.6 -0.9
      comp=Z,11nm,2.0s
KSRS  Korea Array        34.25   1  P        P        20 52 33.5 +0.8
      comp=Z,0.4nm,0.4s,baz=180,slow=10,SNR=1.4
MJAR  Matsushiro Arr     34.80  15  P        P        20 52 36.4 -1.2
      comp=Z,1.3nm,0.7s,baz=185,slow=12,SNR=2.3
BLDU  Ballidu            34.98 196  P        P        20 52 39.3 +0.1
      comp=Z,13nm,1.3s
XAN   Xi'an              35.30 333  P        P        20 52 51.0 +9.0
XAN                                 pP       sP       20 52 59.1 +0.2
XAN                                 pmax     pmax
      comp=Z,4.0nm,0.9s
KLBR  Kellerberrin       35.64 194  P        P        20 52 44.0 -0.8
      baz=36,SNR=4.5
KLBR  Kellerberrin       35.64 194  P        P        20 52 43.6 -1.2
      comp=Z,21nm,0.7s
MUN   Mundaring          36.41 196  P        P        20 52 50.9 -0.4
      baz=36,SNR=3.6
MUN   Mundaring          36.41 196  P        P        20 52 50.8 -0.6
      comp=Z,23nm,2.7s
BBOO  Buckleboo          36.60 168  P        P        20 52 52.0 -1.0
      baz=37,SNR=24
BBOO  Buckleboo          36.60 168  P        P        20 52 50.5 -2.5
BBOO  Buckleboo          36.60 168  P        P        20 52 51.7 -1.3
      comp=Z,14nm,1.5s
STKA  Stephens Creek     37.27 160  P        P        20 52 57.9 -0.9
      comp=Z,3.7nm,0.6s,baz=342,slow=11,SNR=9.6
STKA                                PcP      PcP      20 55 17.9 +0.3
      comp=Z,2.2nm,0.6s,baz=321,slow=3.9,SNR=6.6
STKA  Stephens Creek     37.27 160  P        P        20 52 57.4 -1.4
BJI   Beijing            38.19 346  P        P        20 53 08.4 +2.0
BJI                                 pmax     pmax
      comp=Z,13nm,0.9s
HHC   Hu-ho-hao-te       40.24 341 eP        P        20 53 25.8 +2.2
HHC                                 pmax     pmax
      comp=Z,3.0nm,0.9s
HHC                                 pmax     pmax
      comp=Z,100nm,7.8s
ARMA  Armidale           40.56 147  P        P        20 53 25.3 -1.1
ARMA                                IAmb     IAmb     20 53 25.8
      comp=Z,12nm,1.4s
SHL   Shillong           40.78 307  P        P        20 53 27.1 -1.3
SHL                                 IAmb     IAmb     20 53 29.0
      comp=Z,5.1nm,0.9s
USRK  Ussuriysk Ar.      41.19   5  P        P        20 53 31.6 +0.4
      comp=Z,1.9nm,0.6s,baz=190,slow=9.7,SNR=3.7
USRK  Ussuriysk Ar.      41.19   5  P        P        20 53 31.0 -0.2
GTA   Gaotai             44.00 329 eP        P        20 53 54.8 +0.5
GTA                                 pP       sP       20 54 11.3 -0.2
GTA                                 sP       pwP      20 54 20.4  +11
GTA                                 pmax     pmax
      comp=Z,2.0nm,1.2s
TAPN  Taplejung          44.92 307 eP        P        20 54 01.3 -0.8
ODAN  Odare              44.97 306 eP        P        20 54 01.6 -0.8
      comp=Z,8.3nm,0.7s
KLR   Kul'dur            46.17   4  P        P        20 54 11.6 +0.4
      comp=Z,2.7nm,0.9s,baz=132,slow=11,SNR=3.9
JIRN  Jiri               46.27 306 eP        P        20 54 12.1 -0.8
      comp=Z,4.3nm,0.4s
GUN   Gumba              46.63 306 eP        P        20 54 14.7 -0.9
      comp=Z,8.9nm,0.5s
PKI   Pulchoki           46.87 306 eP        P        20 54 16.1 -1.4
PKIN  Phulchoki          46.88 306 eP        P        20 54 16.1 -1.4
KKN   Kakani             47.06 306 eP        P        20 54 17.7 -1.2
DMN   Daman              47.13 306 eP        P        20 54 18.1 -1.4
GKN   Gorkha             47.67 306 eP        P        20 54 22.4 -1.1
ULN   Ulaanbaatar        47.96 342  P        P        20 54 26.7 +1.3
ULN                                 IAmb     IAmb     20 54 28.7
      comp=Z,7.4nm,0.8s
ULN                                 PcP      PcP      20 55 53.0 -0.1
SONM  Songino Array      48.14 341  P        P        20 54 28.7 +1.9
      comp=Z,2.9nm,0.8s,baz=156,slow=8.3,SNR=14
SONM                                PcP      PcP      20 55 54.7 +0.9
      comp=Z,1.4nm,0.7s,baz=144,slow=4.8,SNR=4.7
SONM  Songino Array      48.14 341  P        P        20 54 27.7 +0.9
SONM                                IAmb     IAmb     20 54 30.0
      comp=Z,3.7nm,1.0s
SONM                                PcP      PcP      20 55 54.8 +1.0
KOLN  Koldanda           48.42 305 eP        P        20 54 28.5 -0.9
DANN  Dangsing           48.52 306 eP        P        20 54 29.3 -0.9
      comp=Z,13nm,0.5s
PYUN  Piuthan            49.05 305 eP        P        20 54 33.2 -1.0
WMQ   Urumqi             53.64 325 eP        P        20 55 10.8 +2.7
PETK  Petropavlovsk-     55.83  22  P        P        20 55 24.8 +1.1
      comp=Z,1.5nm,0.7s,baz=267,slow=3.0,SNR=2.0
MK31  Makanchi Array     58.47 325  P        P        20 55 43.0 +0.5
MK31                                IAmb     IAmb     20 56 31.1
      comp=Z,4.9nm,1.4s
MKAR  Makanchi Array     58.47 325  P        P        20 55 43.0 +0.4
      comp=Z,0.9nm,0.3s,baz=119,slow=7.4,SNR=37
MKAR  Makanchi Array     58.47 325  P        P        20 55 42.7 +0.1
MKAR                                PcP      PcP      20 56 32.7 -0.1
MAKZ  Makanchi           58.66 325  P        P        20 55 44.2 +0.3
MAKZ                                IAmb     IAmb     20 56 00.8
      comp=Z,6.6nm,1.2s
YAK   Yakutsk            58.87   1  P        P        20 55 43.6 -1.4
      comp=Z,2.7nm,0.5s,baz=215,slow=16,SNR=2.4
KDJ   Kajisay            59.27 318  P        P        20 55 47.0 -1.4
KDJ                                 IAmb     IAmb     20 55 52.7
      comp=Z,4.8nm,0.8s
QRZ   Quartz Range       60.01 142  P        P        20 55 50.4 -2.8
LBZ   Lake Benmore       60.77 146  P        P        20 55 57.0 -1.4
ZALV  Zalesovo Beam      61.48 333  P        P        20 56 02.8 -0.2
      comp=Z,0.6nm,0.3s,baz=127,slow=6.1,SNR=4.8
ZALV  Zalesovo Beam      61.48 333  P        P        20 56 02.5 -0.5
SEY   Seymchan           62.56  13  P        P        20 56 10.6 +0.5
      comp=Z,0.8nm,0.3s,baz=301,slow=2.5,SNR=9.8
KURK  Kurchatov          62.65 327  P        P        20 56 11.1 +0.2
KURK                                IAmb     IAmb     20 56 36.3
      comp=Z,3.1nm,0.8s
BRVK  Borovoye           68.30 327  P        P        20 56 48.1 +0.7
BRVK                                IAmb     IAmb     20 56 49.1
      comp=Z,3.3nm,0.9s
NRIK  Noril'sk           71.24 346  P        P        20 57 06.2 +1.0
      comp=Z,4.6nm,0.6s,baz=117,slow=6.8,SNR=8.5
NRIK  Noril'sk           71.24 346  P        P        20 57 05.9 +0.8
NRIK                                IAmb     IAmb     20 57 07.2
      comp=Z,5.4nm,0.7s
VNDA  Vanda              82.67 173  P        P        20 58 09.5 +0.2
      comp=Z,1.9nm,0.8s,baz=307,slow=6.8,SNR=11
ILAR  Eielson Array      85.45  25  P        P        20 58 24.1 +0.4
      comp=Z,0.3nm,0.5s,baz=248,slow=5.2,SNR=8.8
ARCES ARCESS Array B     91.30 340  P        P        20 58 51.0 -0.5
      comp=Z,2.2nm,0.6s,baz=77,slow=6.3,SNR=7.7
TXAR  Lajitas Array     121.52  53  PKP      PKiKP    21 04 41.6 +0.9
      comp=Z,0.2nm,0.6s,baz=322,slow=2.5,SNR=2.3
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IDC ***24*** *20:55:23.8±0.8, 50°.16N×156°.94E, h0^{km}, mb4.1/11, mb1 4.2/16, mb1mx4.0/42, mbtmp4.0/16, ML2.8/4, MS3.3/5, Ms1 3.3/5, ms1mx3.1/52, Error ellipse: s-maj=19.8km s-min=13.6km az=140.0*

BJI ***24*** *20:55:25.5±0.0, 50°.30N×156°.90E, h33^{km}, mB4.8/7, mb4.4/9, Ms4.5/1, Ms7 4.5/1*

KRSC ***24*** *20:55:27.2±2.2, 50°.17N×157°.19E, h42^{km}±25^{km}, ML4.9*

MOS ***24*** *20:55:27.2±0.8, 50°.02N×157°.14E, h42^{km}, mb4.6/7, Error ellipse: s-maj=11.5km s-min=3.9km az=78.0*

MOS Felt (IV) at Severo-Kuril'sk.

NEIC ***24*** *20:55:29.6±3.1, 50°.09N±0°.09×156°.99E±0°.09, h47^{km}±8^{km}, mb4.5/15, Error ellipse: s-maj=14.8km s-min=3.7km az=147.0*

ISC 24 20:55:29.2±1.3**, 50°.14N**±0°.08×**157°.05E**±0°.06**, h41**^{km}±12^{km}**, n124, σ1°.52**/124**, mb4.3**/17**, Kuril Islands**

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Code  Station Name        Δ°   AZ°    Phase ID           Time      Res
                                    Op       ISC       h  m  s    ISC
SKR   Severo-Kuril’s      0.81 313  PN       Pn       20 55 43.0 -1.1
SKR                                 S        Sn       20 55 53.2 -1.7
SKR   Severo-Kuril’s      0.81 313 eP        Pn       20 55 43.0 -1.1
SKR                                eS        Sn       20 55 53.2 -1.7
PAU   Pauzhetka           1.34 354  PN       Pn       20 55 51.0 -0.4
PAU                                 S        Sn       20 56 07.1 -0.9
PAU   Pauzhetka           1.34 354 eP        Pn       20 55 51.0 -0.4
PAU                                eS        Sn       20 56 07.1 -0.9
KDTR  Khodutka, Kamc      1.79  21  PN       Pn       20 55 56.9 -0.7
KDTR                                S        Sn       20 56 17.9 -1.3
KDTR  Khodutka, Kamc      1.79  21 eP        Pn       20 55 56.9 -0.7
KDTR                               eS        Sn       20 56 17.9 -1.3
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MIPR  Malaya Ipel'ka     2.15 355   PN     Pn      20 56 03.4 +0.9
MIPR  Malaya Ipel'ka     2.15 355  eP      Pn      20 56 03.4 +0.9
ASAK  Asacha             2.31  13   PN     Pn      20 56 05.6 +0.8
ASAK  Asacha             2.31  13  eP      Pn      20 56 05.6 +0.8
MTVR  Mutnovka           2.45  16   PN     Pn      20 56 06.8  0.0
MTVR                                S      Sn      20 56 38.5 +2.9
MTVR  Mutnovka           2.45  16  eP      Pn      20 56 06.8  0.0
MTVR                               eS      Sn      20 56 38.5 +2.9
RUS   Russkaya           2.48  21   PN     Pn      20 56 06.6 -0.4
RUS                                 S      Sn      20 56 34.0 -1.9
RUS   Russkaya           2.48  21  eP      Pn      20 56 06.6 -0.4
RUS                                eS      Sn      20 56 34.0 -1.9
APC   Apacha             2.79   1   PN     Pn      20 56 11.8 +0.5
APC   Apacha             2.79   1  eP      Pn      20 56 11.8 +0.5
PEA0B Petropavlovsk-     3.00   8   PN     Pn      20 56 15.6 +1.4
PEA0B Petropavlovsk-     3.00   8          Pn      20 56 15.6 +1.4
PETK  Petropavlovsk-     3.00   8   Pn     Pn      20 56 14.1 -0.1
      7.7nm,0.3s,baz=198,slow=7.5,SNR=52
PETK                                Sn     Sn      20 56 53.2 +4.2
      7.9nm,0.3s,baz=145,slow=17,SNR=1.5
PETK                                LR     LR      20 57 36.7
      comp=Z,178nm,20.0s,baz=157,slow=44
PETK  Petropavlovsk-     3.00   8          Pn      20 56 14.6 +0.4
PET   Petropavlovsk      3.06  18   PN     Pn      20 56 15.9 +0.9
PET                                 S      Sn      20 56 50.2 -0.1
PET   Petropavlovsk      3.06  18  eP      Pn      20 56 15.9 +0.9
PET                                eS      Sn      20 56 50.2 -0.1
PET   Petropavlovsk      3.06  18          Pn      20 56 15.3 +0.3
DALK  Dalny              3.09  19   PN     Pn      20 56 16.1 +0.7
DALK                                S      Sn      20 56 50.9 -0.1
DALK  Dalny              3.09  19  eP      Pn      20 56 16.1 +0.7
DALK                               eS      Sn      20 56 50.9 -0.1
UGLR  Uglovaya           3.27  19   PN     Pn      20 56 19.3 +1.3
UGLR  Uglovaya           3.27  19  eP      Pn      20 56 19.3 +1.3
AVH   Avacha             3.30  18   PN     Pn      20 56 20.4 +2.0
AVH   Avacha             3.30  18  eP      Pn      20 56 20.4 +2.0
KOK   Koryaka            3.31  17   PN     Pn      20 56 20.5 +2.0
KOK                                 S      Sn      20 56 58.7 +2.1
KOK   Koryaka            3.31  17  eP      Pn      20 56 20.5 +2.0
KOK                                eS      Sn      20 56 58.7 +2.1
SMAR  Somma              3.31  19   PN     Pn      20 56 20.6 +1.9
SMAR  Somma              3.31  19  eP      Pn      20 56 20.6 +1.9
KRER  Koryakskii         3.34  18   PN     Pn      20 56 20.9 +1.8
KRER                                S      Sn      20 56 59.9 +2.3
KRER  Koryakskii         3.34  18  eP      Pn      20 56 20.9 +1.8
KRER                               eS      Sn      20 56 59.9 +2.3
SDLR  Sedlovina          3.34  19   PN     Pn      20 56 19.7 +0.6
SDLR  Sedlovina          3.34  19  eP      Pn      20 56 19.7 +0.6
SDLR                               eS      Sn      20 56 56.2 -1.4
NLC   Nalytchevo         3.36  24   PN     Pn      20 56 18.2 -0.9
NLC   Nalytchevo         3.36  24  eP      Pn      20 56 18.2 -0.9
SPN   Mys Shipunski      3.50  31   PN     Pn      20 56 21.1 +0.1
SPN   Mys Shipunski      3.50  31  eP      Pn      20 56 21.1 +0.1
GNL   Ganaly             3.60   8   PN     Pn      20 56 25.0 +2.4
GNL   Ganaly             3.60   8  eP      Pn      20 56 25.0 +2.4
MKZ   Mys Kozlova        5.27  31   PN     Pn      20 56 45.3 -0.1
MKZ   Mys Kozlova        5.27  31  eP      Pn      20 56 45.3 -0.1
KMNR  Kamenistaya        5.95  18   PN     Pn      20 56 56.1 +1.4
KMNR  Kamenistaya        5.95  18  eP      Pn      20 56 56.1 +1.4
KPT   Kopyto             6.14  17   PN     Pn      20 56 59.8 +2.4
KPT   Kopyto             6.14  17  eP      Pn      20 56 59.8 +2.4
BZGR  Bezymyannyi-Gr     6.21  19   PN     Pn      20 57 01.2 +2.8
BZGR  Bezymyannyi-Gr     6.21  19  eP      Pn      20 57 01.2 +2.8
CIRR  Tsirk              6.39  19   PN     Pn      20 57 03.4 +2.6
CIRR  Tsirk              6.39  19  eP      Pn      20 57 03.4 +2.6
KBTR  Krutoberegovo      7.00  27   PN     Pn      20 57 09.6 +0.6
KBTR  Krutoberegovo      7.00  27  eP      Pn      20 57 09.6 +0.6
KUR   Kuril'sk           7.90 235   PN     Pn      20 57 26.7 +5.3
KUR                                 S      Sn      20 58 56.6 +7.1
UGL   Uglegorsk          9.79 270  ePN     Pn      20 57 44.5 -2.8
UGL                                 pmax   pmax
      comp=Z,130nm,1.1s
UGL                                 pmax   pmax
      comp=Z,1µm,3.0s
YSS   Yuzh-Sakhalins    10.00 257  ePN     Pn      20 57 53.6 +3.4
YSS                                 MLR    MLR
      comp=Z,900nm,14.0s
MA2   Magadan           10.12 342   Pn     Pn      20 57 54.0 +2.2
      comp=Z,1.2nm,0.3s,baz=168,slow=18,SNR=4.2
MA2                                 LR     LR      21 02 00.8
      comp=Z,69nm,19.3s,baz=168,slow=39
MA2   Magadan           10.12 342   PN     Pn      20 57 54.0 +2.2
SMY   Shemya            10.96  70   PN     Pn      20 58 03.2  0.0
SMY   Shemya            10.96  70   Pn     Pn      20 58 03.2  0.0
JKA   Kamikawa-asahi    11.53 244          Pn      20 58 12.0 +0.9
ASAJ  Asahikawa         11.53 244   Pn     Pn      20 58 12.6 +1.4
      comp=Z,0.7nm,0.3s,baz=78,slow=14,SNR=8.6
ASAJ  Asahikawa         11.53 244   PN     Pn      20 58 12.0 +0.8
ERM   Erimo             12.60 235   PN     Pn      20 58 25.6  0.0
ERM   Erimo             12.60 235   Pn     Pn      20 58 25.6  0.0
KLR   Kul'dur           16.38 277   Pn     Pn      20 59 15.3 -0.6
      comp=Z,0.1nm,0.3s,baz=60,slow=11,SNR=4.9
USRK  Ussuriysk Ar.     18.00 260   P      Pn      20 59 35.1 -1.0
      baz=56,slow=13,SNR=2.8
USRK                                LR     LR      21 06 13.8
      comp=Z,156nm,21.9s,baz=48,slow=36
ZEA   Zeya              18.65 293  eP      Pn      20 59 44.6 +0.6
ZEA                                 pmax   pmax
      comp=E,10.0nm,0.8s
ZEA                                 pmax   pmax
      comp=Z,10.0nm,1.2s
ZEA                                 MLR    MLR
      comp=Z,200nm,15.0s
YAK   Yakutsk           19.18 319   P      P       20 59 47.8 -1.3
      comp=Z,0.1nm,0.3s,baz=160,slow=18,SNR=14
YAK   Yakutsk           19.18 319  eP      P       20 59 48.0 -1.1
YAK                                 pmax   pmax
      comp=Z,41nm,1.0s
YAK                                 pmax   pmax
      comp=E,13nm,1.1s
YAK                                 pmax   pmax
      comp=N,2.0nm,1.0s
YAK                                 pmax   pmax
      comp=Z,50nm,1.0s
YAK                                 pmax   pmax
      comp=N,7.0nm,1.2s
YAK                                 pmax   pmax
      comp=E,20nm,1.1s
YAK   Yakutsk           19.18 319   P      P       20 59 47.4 -1.6
YAK                                 IAmb   IAmb    21 00 00.4
      comp=Z,42nm,0.9s
MAJO  Matsushiro        19.23 232  iP      Pn      20 59 52.6 +1.6
MAJO                                pmax   pmax
      comp=Z,36nm,2.2s
MJAR  Matsushiro Arr    19.23 232   P      P       20 59 48.7 -1.0
      comp=Z,0.0nm,0.3s,baz=311,slow=11,SNR=3.6
MJAR                                LR     LR      21 07 36.0
      comp=Z,150nm,18.8s,baz=315,slow=38
MJAR  Matsushiro Arr    19.23 232   P      P       20 59 47.4 -2.4
MDJ   Mudanjiang        19.34 264   P      P       20 59 49.2 -1.7
MDJ                                 IAmb   IAmb    21 00 06.5
      comp=Z,34nm,1.0s
KSRS  Korea Array       24.38 250   P      P       21 00 43.8 +0.5
      comp=Z,5.1nm,1.1s,baz=40,slow=10,SNR=5.5
JNU   Nakatsue          25.72 239   P      P       21 00 54.4 -1.2
      comp=Z,15nm,0.8s,baz=27,slow=16,SNR=2.7
IMAR  Indian Mountai    29.48  39   P      P       21 01 28.7 -0.2
H21K  Melozitna Rive    29.83  40   P      P       21 01 32.5 +0.4
H11N2 WAKE ISLAND Hy    31.34 162   T      T       21 35 22.3
      baz=348,slow=76,SNR=68
H11N3 WAKE ISLAND Hy    31.35 162   T      T       21 35 23.5
      baz=348,slow=76,SNR=140
H11N1 WAKE ISLAND Hy    31.35 162   T      T       21 35 23.0
      baz=348,slow=76,SNR=48
TOLK  Toolik Lake Re    31.47  34   P      P       21 01 45.2 -1.4
SML   Sawmill           31.73  47   P      P       21 01 47.5 -1.3
COLA  College           31.86  42  iP      P       21 01 50.1 +0.3
COLA                                pmax   pmax
      comp=Z,8.0nm,1.1s
SCM   Sheep Creek Mo    32.20  47   P      P       21 01 53.1 +0.1
SCM                                 pmax   pmax
      comp=Z,48nm,1.4s
SCM   Sheep Creek Mo    32.20  47   P      P       21 01 53.1 +0.1
ILAR  Eielson Array     32.27  42   P      P       21 01 53.4 -0.1
      comp=Z,0.4nm,0.8s,baz=264,slow=6.5,SNR=5.1
H11S1 WAKE ISLAND Hy    32.49 163   T      T       21 36 44.2
      baz=348,slow=76,SNR=153
H11S3 WAKE ISLAND Hy    32.50 163   T      T       21 36 48.7
      baz=348,slow=76,SNR=224
H11S2 WAKE ISLAND Hy    32.51 163   T      T       21 36 48.9
      baz=348,slow=76,SNR=116
SONM  Songino Array     32.80 286   LR     LR      21 15 29.4
      comp=Z,204nm,21.2s,baz=356,slow=37
BMAR  Burnt Mountain    33.24  37   P      P       21 02 02.1 +0.1
BCAR  Beaver Creek A    34.63  45   P      P       21 02 14.9 +0.7
NRIK  Noril'sk          37.28 327   P      P       21 02 38.2 +1.5
      comp=Z,1.2nm,0.4s,baz=75,slow=3.5,SNR=1.1
NRIK  Noril'sk          37.28 327   P      P       21 02 38.2 +1.5
NRIK                                pmax   pmax
      comp=Z,15nm,0.8s
NRIK  Noril'sk          37.28 327   IAmb   IAmb    21 02 45.8
      comp=Z,15nm,0.8s
INK   Inuvik            37.38  35   P      P       21 02 37.1 -0.3
      comp=Z,2.0nm,0.5s,baz=322,slow=3.6,SNR=11
INK   Inuvik            37.38  35   P      P       21 02 37.2 -0.3
INK                                 pmax   pmax
      comp=Z,8.0nm,1.4s
INK   Inuvik            37.38  35   IAmb   IAmb    21 02 38.3
      comp=Z,7.7nm,1.4s
EUNU  Eureka            45.27  13   P      P       21 03 40.7 -1.4
EUNU                                IAmb   IAmb    21 03 57.3
      comp=Z,7.2nm,1.6s
YKA   Yellowknife Ar    46.64  40   P      P       21 03 52.8 -0.2
      comp=Z,1.0nm,0.8s,baz=304,slow=6.6,SNR=3.7
MK31  Makanchi Array    47.75 296  iP      P       21 04 01.0 -0.9
MK31  Makanchi Array    47.75 296   P      P       21 04 00.0 -1.9
MK31                                IAmb   IAmb    21 04 07.7
      comp=Z,5.5nm,1.4s
MKAR  Makanchi Array    47.75 296   P      P       21 03 59.7 -2.2
      comp=Z,0.7nm,0.9s,baz=49,slow=5.5,SNR=8.6
MKAR  Makanchi Array    47.75 296  iP      P       21 03 59.9 -2.0
MKAR                                pmax   pmax
      comp=Z,1.0nm,0.9s
MKAR  Makanchi Array    47.75 296   P      P       21 03 58.5 -3.4
CHTO  Chiang Mai        55.43 258   P      P       21 04 59.5 -0.1
CHTO                                pmax   pmax
      comp=Z,6.0nm,0.9s
CHTO  Chiang Mai        55.43 258   P      P       21 04 59.5 -0.1
CHTO                                IAmb   IAmb    21 05 00.8
      comp=Z,6.3nm,0.9s
CMAR  Chiang Mai Arr    55.70 257   P      P       21 05 01.9 +0.4
      comp=Z,2.7nm,0.7s,baz=24,slow=7.2,SNR=14
CMAR  Chiang Mai Arr    55.70 257   P      P       21 05 01.4 -0.1
PDAR  Pinedale Array    60.67  57   P      P       21 05 38.0 +1.7
      comp=Z,1.9nm,0.9s,baz=15,slow=6.2,SNR=3.8
WRA   Warramunga Arr    72.61 202   P      P       21 06 52.0 -0.2
      comp=Z,1.0nm,0.8s,baz=15,slow=6.0,SNR=1.8
WRA   Warramunga Arr    72.61 202   P      P       21 06 52.0 -0.2
WRA                                 pmax   pmax
      comp=Z,1.0nm,1.3s
TX31  Lajitas Ar. Si    73.59  64   P      P       21 06 59.0 +0.8
TX32  Lajitas Array     73.59  64   P      P       21 06 58.9 +0.6
TX32                                IAmb   IAmb    21 07 00.1
      comp=Z,2.5nm,0.8s
TXAR  Lajitas Array     73.59  64   P      P       21 06 59.1 +0.9
      comp=Z,1.7nm,0.7s,baz=302,slow=4.9,SNR=18
TXAR  Lajitas Array     73.59  64   P      P       21 06 59.0 +0.7
VNDA  Vanda            127.42 179   PKP    PKiKP   21 14 30.8 +2.4
      comp=Z,0.4nm,0.5s,baz=349,slow=5.2,SNR=2.4
H03N2 Juan Fernandez   136.13  90   T      T       23 46 13.5
      baz=313,slow=77,SNR=18
H03N1 Juan Fernandez   136.14  90   T      T       23 46 15.3
      baz=313,slow=77,SNR=15
H03N3 Juan Fernandez   136.14  90   T      T       23 46 14.1
      baz=313,slow=77,SNR=22
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*NEIC **24** 21:01:31.7±1.4, 20°.2S±0°.1×177°.5W±0°.1, h510^{km}±8^{km}, mb4.3/39, Error ellipse: s-maj=18.6km s-min=15.7km az=133.0*

*IDC **24** 21:01:34.5±1.8, 20°.15S×177°.78W, h533^{km}±19^{km}, mb3.4/12, mb1 3.6/14, mb1mx3.4/42, mbtmp4.3/14, Error ellipse: s-maj=19.4km s-min=13.5km az=142.0*

ISC 24 21:01:31.2±0.4, **20°.15S**±0°.08×**177°.64W**±0°.07, **h500**^{km}, **n74,** σ1^{s}.**56**/80, **mb4.2**/32, **Fiji Islands region**

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Code  Station Name       Δ°   AZ°   Phase ID          Time       Res
                                    Op     ISC      h  m  s      ISC
MSVF  Nonsavu            4.74 300   P      P       21 02 59.4 +3.4
      4.2nm,0.3s,baz=281,slow=22,SNR=4.5
MSVF  Nonsavu            4.74 300          P       21 02 59.7 +3.6
NIUE  Niue               7.34  83   P      P       21 03 21.4 +0.5
NIUE                                S      S       21 04 56.2 +5.4
AFI   Afiamalu           8.36  43   P      P       21 03 30.3 -1.2
      11nm,0.3s,baz=350,slow=7.4,SNR=4.4
AFI                                 S      S       21 05 03.1 -7.1
      6.8nm,0.3s,baz=230,slow=22,SNR=2.0
PINNC Pines Island,     14.11 257   P      P       21 04 33.0 +0.9
DZM   Mont Dzumac       14.98 260   P      P       21 04 43.1 +1.7
      1.1nm,0.3s,baz=92,slow=21,SNR=9.7
DZM   Mont Dzumac       14.98 260   P      P       21 04 42.7 +1.4
URZ   Urewera           18.61 193   P      P       21 05 14.3 -2.6
      5.0nm,0.3s,baz=302,slow=23,SNR=25
URZ   Urewera           18.61 193   P      P       21 05 14.5 -2.5
BKZ   Black Stump Fm    19.62 194   P      P       21 05 22.9 -3.3
BKZ                                 IAmb   IAmb    21 05 32.3
      comp=Z,20nm,1.4s
QRZ   Quartz Range      22.25 200   P      P       21 05 48.9 -1.2
EIDS  Eidsvold          29.27 254   P      P       21 06 51.6 -0.7
EIDS                                IAmb   IAmb    21 07 09.1
      comp=Z,8.8nm,1.1s
ARMA  Armidale          29.53 244   P      P       21 06 55.2 +0.6
ARMA                                IAmb   IAmb    21 06 56.2
      comp=Z,9.5nm,0.8s
CTAO  Charters Tower    33.87 264   P      P       21 07 31.8  0.0
CTAO                                IAmb   IAmb    21 07 33.1
      comp=Z,6.9nm,0.9s
TOO   Toolangi          36.38 234   P      P       21 07 52.2 -0.3
TOO                                 IAmb   IAmb    21 07 53.0
      comp=Z,7.1nm,0.7s
STKA  Stephens Creek    38.25 244   P      P       21 08 08.2 +0.2
      comp=Z,7.8nm,0.6s,baz=91,slow=10,SNR=19
STKA  Stephens Creek    38.25 244   P      P       21 08 08.3 +0.3
BBOO  Buckleboo         43.01 243   P      P       21 08 45.5 -0.5
AS31  Alice Springs     44.93 256   P      P       21 09 01.1  0.0
AS31                                IAmb   IAmb    21 09 02.3
      comp=Z,7.1nm,1.0s
ASAR  Alice Springs     44.93 256   P      P       21 09 00.9 -0.2
      comp=Z,22nm,0.8s,baz=99,slow=8.0,SNR=109
ASAR                                PcP    PcP     21 10 31.9 -0.2
      comp=Z,1.4nm,0.7s,baz=101,slow=4.1,SNR=4.6
ASAR                                S      S       21 14 59.7 -2.9
      comp=Z,0.5nm,0.7s,baz=95,slow=16,SNR=3.7
ASAR  Alice Springs     44.93 256   P      P       21 09 00.6 -0.6
WB0   Warramunga Arr    44.96 262   P      P       21 09 01.0 -0.5
WB0                                 IAmb   IAmb    21 09 01.7
      comp=Z,22nm,1.3s
WRA   Warramunga Arr    44.99 262   P      P       21 09 01.2 -0.4
      comp=Z,3.0nm,0.3s,baz=97,slow=7.5,SNR=91
WRA                                 PcP    PcP     21 10 31.5 -0.9
      comp=Z,1.0nm,0.8s,baz=91,slow=3.2,SNR=4.0
WRA   Warramunga Arr    44.99 262   P      P       21 09 00.8 -0.8
MTN   Manton Dam        49.50 270   P      P       21 09 35.5 -0.2
MTN                                 IAmb   IAmb    21 09 35.9
      comp=Z,5.9nm,0.8s
FORT  Forrest           49.75 246   P      P       21 09 36.6 -0.7
KNRA  Kununurra         51.02 266   P      P       21 09 47.0 +0.1
KNRA                                IAmb   IAmb    21 10 06.0
      comp=Z,12nm,1.2s
SOEI  Soe               56.83 271   P      P       21 10 29.2 +1.0
SOEI                                IAmb   IAmb    21 10 39.9
      comp=Z,20nm,0.8s
PSA00 Pilbara Seismi    58.08 257   P      P       21 10 35.7 -0.8
PSA00                               IAmb   IAmb    21 10 36.7
      comp=Z,7.7nm,0.9s
PSA00 Pilbara Seismi    58.08 257   P      P       21 10 35.8 -0.6
PSA00                               IAmb   IAmb    21 10 36.6
      comp=Z,16nm,0.8s
VNDA  Vanda             58.29 185   P      P       21 10 38.0 +1.1
      comp=Z,2.4nm,0.9s,baz=351,slow=7.6,SNR=11
VNDA  Vanda             58.29 185   P      P       21 10 37.5 +0.6
MORW  Morawa            60.28 247   P      P       21 10 50.7 -0.5
MORW                                IAmb   IAmb    21 11 09.6
      comp=Z,21nm,1.4s
GIRL  Giralia           62.97 254   P      P       21 11 09.4 +0.6
CASY  Casey             64.42 205   P      P       21 11 16.8 -0.5
JHJ2  Mitsune           66.75 322   P      P       21 11 31.7 -0.7
QSPA  South Pole Qui    69.92 180   P      P       21 11 51.5 +0.2
QSPA                                IAmb   IAmb    21 11 52.5
      comp=Z,8.2nm,0.8s
MJAR  Matsushiro Arr    70.13 323   P      P       21 11 53.2 +0.3
      comp=Z,1.2nm,0.5s,baz=162,slow=6.3,SNR=2.7
MJAR  Matsushiro Arr    70.13 323   P      P       21 11 53.3 +0.3
PEA0B Petropavlovsk-    76.02 345   P      P       21 12 26.5 +0.1
PETK  Petropavlovsk-    76.02 345   P      P       21 12 26.9 +0.5
      comp=Z,2.1nm,0.7s,baz=160,slow=9.2,SNR=2.7
PETK  Petropavlovsk-    76.02 345   P      P       21 12 26.6 +0.2
YBH   Yreka Blue Hor    79.81  38   P      P       21 12 48.4 +1.2
      comp=Z,2.5nm,0.7s,baz=207,slow=4.5,SNR=2.7
P18K  Big Mountain,     81.36  11   P      P       21 12 54.6 -0.1
P18K                                IAmb   IAmb    21 12 54.8
      comp=Z,19nm,1.3s
K05A  Summer Lake       81.48  39   P      P       21 12 56.9 +0.9
K05A                                IAmb   IAmb    21 13 03.3
      comp=Z,22nm,1.4s
MAW   Mawson            82.01 200   P      P       21 12 57.7 -0.3
      comp=Z,1.4nm,0.7s,baz=185,slow=2.4,SNR=1.7
MAW   Mawson            82.01 200   P      P       21 12 57.9 -0.1
KULM  Kulim             84.06 278   P      P       21 13 10.3 +0.9
KULM                                IAmb   IAmb    21 13 11.1
      comp=Z,7.1nm,0.8s
GHO   Glory Hole Cre    84.81  13   P      P       21 13 12.5 +0.4
GHO                                 IAmb   IAmb    21 13 28.1
      comp=Z,11nm,1.1s
TRF   Thorofare Moun    86.04  12   P      P       21 13 18.1 +0.1
TRF                                 IAmb   IAmb    21 13 19.8
      comp=Z,9.0nm,1.3s
TXAR  Lajitas Array     86.58  57   P      P       21 13 22.8 +1.4
      comp=Z,0.6nm,0.8s,baz=217,slow=6.0,SNR=6.9
TXAR  Lajitas Array     86.58  57   P      P       21 13 22.0 +0.6
WRH   Wood River Hil    87.39  12   P      P       21 13 23.7 -0.5
WRH                                 IAmb   IAmb    21 13 29.9
      comp=Z,5.9nm,1.3s
CCB   Clear Creek Bu    87.60  12   P      P       21 13 24.8 -0.3
IMAR  Indian Mountai    87.76  10   P      P       21 13 26.0 +0.1
MDM   Murphy Dome       87.80  12   P      P       21 13 25.4 -0.8
IL31                    87.90  13   P      P       21 13 26.0 -0.5
ILAR  Eielson Array     87.90  13   P      P       21 13 26.1 -0.5
      comp=Z,0.6nm,0.6s,baz=217,slow=5.8,SNR=12
ILAR  Eielson Array     87.90  13   P      P       21 13 26.4 -0.2
SNAA  Sanae             88.35 178   P      P       21 13 27.9 -1.0
SNAA  Sanae             88.35 178   P      P       21 13 27.9 -1.0
SNAA                                IAmb   IAmb    21 13 28.6
      comp=Z,5.5nm,1.4s
VNA3  Neumayer Olymp    88.47 176   P      P       21 13 28.6 -0.8
PDAR  Pinedale Array    88.47  43   P      P       21 13 30.6 +0.5
      comp=Z,0.4nm,0.6s,baz=197,slow=2.8,SNR=2.7
VNA2  Neumayer--Watz    88.91 177   P      P       21 13 31.0 -0.5
DAWY  Dawson            89.03  16   P      P       21 13 32.5 +0.5
VNA1  Neumayer--Stat    89.14 176   P      P       21 13 32.8 +0.4
HHC   Hu-ho-hao-te      89.35 314  eP      P       21 13 35.8 +1.7
HHC                                 pmax   pmax
      comp=Z,4.0nm,0.9s
HHC                                 pmax   pmax
      comp=Z,160nm,7.8s
CMAR  Chiang Mai Arr    90.32 289   P      P       21 13 40.5 +1.6
      comp=Z,1.9nm,0.9s,baz=124,slow=3.0,SNR=12
CMAR  Chiang Mai Arr    90.32 289   P      P       21 13 39.5 +0.6
BVAR  Borovoye Array   119.03 320   PKP    PKPdf   21 19 21.3 -1.2
      comp=Z,0.3nm,0.4s,baz=243,slow=6.5,SNR=4.3
AKASG Malin Array Be   142.87 332   PKP    PKPdf   21 20 04.0 -3.2
      comp=Z,1.4nm,0.6s,baz=42,slow=4.8,SNR=10.0
CLL   Collm            147.80 347  ePKPbc  PKiKP   21 20 20.0 -0.7
      comp=Z,6.0nm,0.9s
GERES GERESS Array B   149.96 345   PKPbc  PKPbc   21 20 24.8  0.0
      comp=Z,1.1nm,0.8s,baz=48,slow=2.0,SNR=7.8
TORD  Torodi Ar. Bea   173.01 175   PKP    PKPdf   21 20 42.2 -1.2
      comp=Z,0.7nm,0.8s,baz=211,slow=1.9,SNR=4.4
TORD                                PKPab  PKPab   21 22 12.5 -1.1
      comp=Z,0.9nm,1.1s,baz=176,slow=3.1,SNR=3.7
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*NEIC **24** 21:14:29.5±1.7, 23°.22S±0°.07×67°.1W±0°.1, h215^{km}±14^{km}, Error ellipse: s-maj=15.0km s-min=9.8km az=83.0*

*GUC **24** 21:14:30.9±0.8, 23°.15S×67°.22W, h230^{km}±13^{km}, ML4.1*

*VAO **24** 21:14:34.2±2.8, 22°.86S×66°.80W, h242^{km}±13^{km}, mb4.1*

ISC 24 21:14:28.7±0.7, **23°.19S**±0°.06×**67°.14W**±0°.10, **h223**^{km}±13^{km}, **n68,** σ0^{s}.**94**/88, **Chile-Argentina border region**

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Code  Station Name       Δ°   AZ°   Phase ID          Time       Res
                                    Op     ISC      h  m  s      ISC
LVC   Limon Verde        1.73 289          Pn      21 15 07.8 +0.9
LVC                                 Sn     S       21 15 36.5  0.0
PB15  IPOC Station P     2.15 269          Pn      21 15 11.8 +1.2
PB15                                Sn     S       21 15 43.7 +0.5
PB06  IPOC Station P     2.29 282  eP      Pn      21 15 13.4 +1.3
PB06                               iS      S       21 15 45.9  0.0
PB06                                IAML           21 15 47.2
      comp=N,435nm,0.4s
PB06  IPOC Station P     2.29 282          Pn      21 15 13.2 +1.1
PB06                                Sn     S       21 15 45.8  0.0
PB09  IPOC Station P     2.38 305  eP      Pn      21 15 14.5 +1.4
PB09                               iS      S       21 15 48.3 +0.7
PB09                                IAML           21 15 50.7
      comp=E,151nm,0.5s
PB09  IPOC Station P     2.38 305          Pn      21 15 14.5 +1.4
PB09                                Sn     S       21 15 47.9 +0.3
PB03  IPOC Station P     2.67 295  eP      Pn      21 15 17.2 +1.1
PB03                               iS      S       21 15 52.3 -0.6
PB03                                IAML           21 15 54.6
      comp=E,478nm,0.2s
PB05  IPOC Station P     2.84 276  eP      Pn      21 15 19.1 +1.2
PB05                               iS      S       21 15 56.0 -0.4
PB05                                IAML           21 15 59.6
      comp=N,155nm,0.5s
PB04  IPOC Station P     2.90 286  eP      Pn      21 15 19.9 +1.2
PB04                               iS      S       21 15 57.6  0.0
PB04                                IAML           21 16 05.8
      comp=E,320nm,0.4s
PB04  IPOC Station P     2.90 286          Pn      21 15 19.8 +1.2
PB04                                Sn     S       21 15 57.8 +0.2
PB07  IPOC Station P     2.93 299  eP      Pn      21 15 20.0 +1.1
PB07                               iS      S       21 15 57.4 -0.8
PB07                                IAML           21 15 58.1
      comp=N,566nm,0.3s
PB07  IPOC Station P     2.93 299          Pn      21 15 19.8 +0.8
PB07                                Sn     S       21 15 57.1 -1.0
PB01  IPOC Station P     3.05 314  eP      Pn      21 15 21.0 +0.7
PB01                               iS      S       21 16 00.1 -0.5
PB01                                IAML           21 16 02.4
      comp=N,280nm,0.1s
PB01  IPOC Station P     3.05 314          Pn      21 15 21.0 +0.7
PB01                                Sn     S       21 16 00.3 -0.2
PB10  IPOC Station P     3.15 263  eP      Pn      21 15 22.8 +1.4
PB10                               iS      S       21 16 02.0 -0.5
PB10                                IAML           21 16 04.6
      comp=N,130nm,0.3s
PB10  IPOC Station P     3.15 263          Pn      21 15 22.6 +1.3
PB10                                Sn     S       21 16 01.9 -0.7
PB02  IPOC Station P     3.16 305  eP      Pn      21 15 22.4 +0.9
PB02                               iS      S       21 16 01.2 -1.6
PB02                                IAML           21 16 03.5
      comp=E,307nm,0.5s
PB14  IPOC Station P     3.31 244          Pn      21 15 24.4 +0.9
PB14                                Sn     S       21 16 06.0 -0.3
PB08  IPOC Station P     3.56 328  eP      Pn      21 15 28.2 +1.7
PB08                               iS      S       21 16 12.4 +0.6
PB08                                IAML           21 16 14.2
      comp=N,126nm,0.1s
PB08  IPOC Station P     3.56 328          Pn      21 15 28.0 +1.5
TA01  Diego Aracena      3.84 312  eP      Pn      21 15 29.6 +0.1
TA01                               iS      S       21 16 15.4 -1.8
TA01                                IAML           21 16 19.4
      comp=E,102nm,0.3s
TA01  Diego Aracena      3.84 312          Pn      21 15 30.5 +1.0
TA02  Huaiquique         4.02 316          Pn      21 15 32.6 +1.0
AC02  Maricunga          4.06 206          Pn      21 15 33.4 +0.9
PB11  IPOC Station P     4.13 325  iS      S       21 16 22.4 -1.6
PB11  IPOC Station P     4.13 325   Pn     Pn      21 15 32.3 -0.9
GO03  Copiap             5.21 212   Pn     Pn      21 15 45.4 -0.9
PB16  IPOC Station P     5.31 335          Pn      21 15 48.8 +0.5
PB12  IPOC Station P     5.44 326   Pn     Pn      21 15 49.5 +0.1
LCO   Las Campanas       6.63 208          Pn      21 16 03.9 -0.6
LPAZ  La Paz             6.92 352          Pn      21 16 09.6 +0.8
GO04  Tololo Observa     7.69 204          Pn      21 16 17.8 -0.4
CO03  El Pedregal        8.25 202   Pn     Pn      21 16 24.6 -0.6
CO06  Fray Jorge         8.47 207   Pn     Pn      21 16 26.1 -1.8
MT02  Curacav           10.64 198   Pn     Pn      21 16 54.4 -1.3
PTLB  Pontes e Lacer    10.78  46  eP      Pn      21 16 56.0 -1.6
PTLB  Pontes e Lacer    10.78  46   Pn     Pn      21 16 55.5 -2.1
MT09  Talagante         11.08 197   Pn     Pn      21 17 01.0 -0.4
SALV  Santo Antonio     12.99  58  eP      Pn      21 17 24.2 -1.2
TRCB  Terra Rica        13.37  91  eP      P       21 17 32.4 +0.2
TRCB  Terra Rica        13.37  91          P       21 17 32.7 +0.6
PTGB  Pitanga           13.87  99  eP      P       21 17 39.4 +1.6
ITAB  Concordia         14.17 110   Pn     P       21 17 40.5 -0.5
SAML  Samuel            14.65  16          Pn      21 17 44.5 -1.4
PCMB  Pacaembu          14.77  87  eP      P       21 17 48.8 +1.1
PDRB  Porto dos Gac     15.19  42  eP      P       21 17 52.3 -0.1
TRQA  Tornquist         15.47 165   P      P       21 17 55.5 +0.3
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TRQA				IAmb	IAmb	21 18 05.3	
	comp=Z,10nm,1.5s						
ITRB	Iturama	16.00	81	eP	Pn	21 18 02.2	+0.1
ARAG	Araguaiana, MT	16.25	65	eP	Pn	21 18 04.5	-0.5
CLDB	Colider	16.34	43	eP	P	21 18 05.1	+0.1
BB19B	Bebedouro	17.38	87	eP	Pn	21 18 17.5	-0.8
IPMB	Ipameri, GO	18.46	77	eP	P	21 18 28.4	+0.3
VAO	Valinhos	18.56	93	eP	P	21 18 28.8	-0.4
SNDB	Serra Nova Dou	18.75	56	eP	P	21 18 30.8	-0.5
BDFB	Brasilia	19.52	71	P	P	21 18 39.5	-0.1
NPGB	Novo Progresso	19.65	37	eP	P	21 18 39.9	-0.9
PARB	Paraibuna	19.77	95	eP	P	21 18 42.0	-0.2
PEXB	Peixe	21.04	62	eP	P	21 18 54.8	-0.9
ITTB	Itaituba	21.71	32	eP	P	21 19 01.8	-0.6
DIAM	Diamantina, MG	22.47	82	eP	P	21 19 09.7	+0.1
MC01	Montes Claros	22.72	78	eP	P	21 19 12.4	+0.6
JANB	Januaria	23.01	74	eP	P	21 19 14.6	+0.2
SDBA	SAO DESIDERIO	23.70	67	eP	P	21 19 20.8	+0.2
PRPB	Parauapebas	23.76	47	eP	P	21 19 21.8	+0.6
MALB	Monte Alegre	24.61	32	eP	P	21 19 29.6	+0.9
BOAV	Boa Vista	26.23	15	P	P	21 19 44.6	+1.2
BOAV				IAmb	IAmb	21 20 09.5	
	comp=Z,4.1nm,1.3s						
GUA01	Guaratinga, BA	26.50	81	eP	P	21 19 46.3	+0.4
TORD	Torodi Ar. Bea	76.40	69	P	P	21 25 54.9	+0.9

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*NOU **24** 21:15:02.5, 14°.06S×167°.30E, h154^{km}, mb5.1/41, Vanuatu Islands*
*IDC **24** 21:15:03.3±1.3, 14°.40S×167°.31E, h144^{km}±10^{km}, mb4.4/33, mb1 4.4/36, mb1mx4.3/57, mbtmp4.8/36, MS3.2/1, Ms1 3.2/1, ms1mx2.7/39, Error ellipse: s-maj=12.1km s-min=10.1km az=116.0*
*NEIC **24** 21:15:05.0±1.7, 14°.40S±0°.08×167°.20E±0°.09, h151^{km}±5^{km}, mb4.8/65, Error ellipse: s-maj=13.4km s-min=11.4km az=59.0*
ISC 24 21:15:04.1±0.3**, 14°.38S**±0°.05×**167°.22E**±0°.06**, h150**^{km}**, n226,** σ**1^{s}.12**/234**, mb4.9**/93**, 5C-3D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	1.06	181		Pn	21 15 29.9	+0.5
SANVU				Sn	Sn	21 15 49.5	+0.7
SANVU	Saraoutou	1.06	181	P	Pn	21 15 30.7	+1.3
DVP	Devils Point	3.45	165	P	Pn	21 16 00.3	+3.1
LIFNC	LIFOU	6.36	180	Pn	Pn	21 16 35.1	-0.5
KOUNC	Koumac, New Ca	6.75	204	P	Pn	21 16 44.3	+3.6
DZM	Mont Dzumac	7.68	185	P	Pn	21 16 53.0	-0.3
	2.6nm,0.3s,baz=353,slow=13,SNR=3.0						
DZM				S	Sn	21 18 21.1	+1.9
	5.5nm,0.3s,baz=276,slow=23,SNR=3.4						
DZM	Mont Dzumac	7.68	185	Pn	Pn	21 16 54.6	+1.2
NOUC	Port Laguerre	7.73	186	P	Pn	21 16 56.8	+3.0
ONTNC	Ouen Toro	7.92	185	Pn	Pn	21 16 58.6	+2.2
ONTNC	Ouen Toro	7.92	185	P	Pn	21 17 00.0	+3.6
OUENC	Ouen Island, N	8.00	183	Pn	Pn	21 16 59.7	+2.2
PINNC	Pines Island,	8.19	179	Pn	Pn	21 17 01.5	+1.5
HNR	Honiara	8.65	304	P	Pn	21 17 06.2	-0.1
	15nm,0.3s,baz=235,slow=6.2,SNR=10						
HNR				S	Sn	21 18 45.0	+2.5
	12nm,0.3s,baz=203,slow=21,SNR=1.4						
HNR	Honiara	8.65	304		Pn	21 17 07.5	+1.2
MSVF	Nonsavu	10.93	109	P	Pn	21 17 36.2	-0.3
	0.4nm,0.3s,baz=288,slow=20,SNR=2.0						
RABL	Rabaul	17.97	303	P	P	21 19 03.5	+0.4
RABL				IAmb	IAmb	21 19 09.8	
	comp=Z,40nm,0.6s						
EIDS	Eidsvold	18.68	232	P	P	21 19 12.2	+1.3
EIDS				IAmb	IAmb	21 19 14.0	
	comp=Z,67nm,0.7s						
EIDS	Eidsvold	18.68	232	P	Pn	21 19 12.7	-0.3
	comp=Z,118nm,0.8s						
PMG	Port Moresby	20.24	282	P	P	21 19 28.5	+0.8
	comp=Z,52nm,0.8s,baz=86,slow=6.4,SNR=10						
PMG	Port Moresby	20.24	282		P	21 19 28.3	+0.5
PMG				IAmb	IAmb	21 19 32.4	
	comp=Z,61nm,0.9s						
CTA	Charters Tower	20.81	251	P	P	21 19 34.4	+0.6
	comp=Z,27nm,0.8s,baz=82,slow=14,SNR=18						
CTAO	Charters Tower	20.81	251	P	P	21 19 34.0	+0.2
CTAO				IAmb	IAmb	21 19 36.9	
	comp=Z,34nm,0.8s						
CTAO	Charters Tower	20.81	251	P	P	21 19 34.7	+0.9
ARMA	Armidale	21.47	219	P	P	21 19 41.7	+0.8
ARMA				IAmb	IAmb	21 19 43.8	
	comp=Z,45nm,1.0s						
ARMA	Armidale	21.47	219	P	P	21 19 42.5	+1.6
	comp=Z,49nm,1.0s						
MTSU	Mount Surprise	22.30	257	P	P	21 19 49.4	-0.1
	comp=Z,34nm,0.9s						
PATS	Pohnpei	22.86	337	P	P	21 19 54.8	+0.1
MANU	Manus Island	23.13	300	P	P	21 19 57.1	-0.1
COEN	Coen	23.32	268	P	P	21 19 58.8	-0.1
COEN				IAmb	IAmb	21 20 01.3	
	comp=Z,39nm,0.9s						
COEN	Coen	23.32	268	P	P	21 19 59.2	+0.2
	comp=Z,46nm,0.9s						
KNTN	Kanton	23.77	63	P	P	21 20 03.8	+0.8
MGCD	Mangrove Creek	23.79	215	P	P	21 20 05.0	+2.0
	comp=Z,39nm,1.1s						
QLP	Quilpie	24.67	237	P	P	21 20 11.5	+0.4
	comp=Z,154nm,0.9s						
URZ	Urewera	25.34	162	LR	LR	21 29 22.9	
	comp=Z,56nm,20.8s,baz=212,slow=34						
BKZ	Black Stump Fm	26.00	163	P	P	21 20 22.9	-0.2
BKZ	Black Stump Fm	26.00	163	P	P	21 20 23.5	+0.4
CMSA	Cobar Meteorol	26.08	225	P	P	21 20 23.9	+0.1
	comp=Z,47nm,1.1s						
QIS	Mount Isa	27.03	253	P	P	21 20 32.3	-0.2
	comp=Z,7.8nm,0.9s						
MSWZ	Moikau Station	27.82	167	P	P	21 20 39.0	-0.3
INKA	Innaminka	27.98	237	P	P	21 20 41.0	+0.2
	comp=Z,86nm,1.0s						
STKA	Stephens Creek	29.18	229	P	P	21 20 52.4	+0.9
	comp=Z,52nm,0.6s,baz=50,slow=8.4,SNR=187						
STKA	Stephens Creek	29.18	229	P	P	21 20 52.3	+0.8
STKA				IAmb	IAmb	21 20 53.2	
	comp=Z,11nm,0.6s						
LBZ	Lake Benmore	30.01	176	P	P	21 20 58.8	+0.2
LBZ				IAmb	IAmb	21 21 19.7	
	comp=Z,37nm,1.3s						
TOO	Toolangi	30.10	216	P	P	21 20 60.0	+0.4
TOO				IAmb	IAmb	21 21 04.8	
	comp=Z,36nm,1.4s						
SMPI	Sarmi	30.74	291	P	P	21 21 06.4	+1.1
	comp=Z,67nm,1.4s						
LCRK	Leigh Creek	31.09	234	P	P	21 21 08.0	-0.3
	comp=Z,100nm,0.9s						
WB0	Warramunga Arr	31.80	256	P	P	21 21 13.3	-1.4
WB0				IAmb	IAmb	21 21 14.2	
	comp=Z,22nm,0.9s						
WB2	Warramunga Arr	31.86	255	P	P	21 21 13.9	-1.3
WB2				IAmb	IAmb	21 21 14.7	
	comp=Z,14nm,1.0s						
WRAB	Tennant Creek	31.86	255	P	P	21 21 14.2	-1.0
WRA	Warramunga Arr	31.87	255	P	P	21 21 13.7	-1.6
	comp=Z,4.6nm,0.4s,baz=85,slow=8.9,SNR=54						
WRA				S	S	21 26 09.0	-6.1
	comp=Z,1.5nm,0.9s,baz=87,slow=15,SNR=5.2						
WRA	Warramunga Arr	31.87	255	P	P	21 21 12.7	-2.6
HTT	Hallett	31.91	229	P	P	21 21 15.8	+0.2
	comp=Z,64nm,0.8s						
OOD	Oodnadatta	32.20	240	P	P	21 21 17.7	-0.3
	comp=Z,36nm,1.1s						
AS31	Alice Springs	32.76	249	P	P	21 21 21.4	-1.6
AS31				IAmb	IAmb	21 21 23.9	
	comp=Z,7.9nm,0.5s						
ASAR	Alice Springs	32.76	249	P	P	21 21 21.6	-1.5
	comp=Z,21nm,0.7s,baz=77,slow=9.0,SNR=120						
ASAR				S	S	21 26 24.2	-4.7
	comp=Z,0.8nm,0.8s,baz=80,slow=16,SNR=5.2						
ASAR				ScP	ScP	21 27 33.1	-2.0
	comp=Z,0.4nm,0.6s,baz=77,slow=4.0,SNR=4.2						
BBOO	Buckleboo	33.76	232	P	P	21 21 32.0	+0.5
BBOO	Buckleboo	33.76	232	P	P	21 21 31.4	-0.1
	comp=Z,131nm,0.7s						
KDU	Kakadu	33.81	269	P	P	21 21 31.2	-1.0
	comp=Z,32nm,0.6s						
MULG	Mulgathing	34.36	237	P	P	21 21 35.6	-1.1
	comp=Z,52nm,0.9s						
MTN	Manton Dam	35.09	268	P	P	21 21 43.2	0.0
MTN				IAmb	IAmb	21 21 44.7	
	comp=Z,15nm,0.7s						
FAKI	Fak Fak	36.34	285	P	P	21 21 54.9	+1.0
	comp=Z,19nm,1.0s						
FAKI	Fak Fak	36.34	285	P	P	21 21 53.1	-0.8
FAKI				IAmb	IAmb	21 21 54.6	
	comp=Z,15nm,0.9s						
KNRA	Kununurra	37.13	263	P	P	21 21 59.4	-1.1
KNRA	Kununurra	37.13	263	P	P	21 21 59.5	-1.1
	comp=Z,77nm,0.9s						
SWI	Sorong	38.01	288	P	P	21 22 08.6	+0.7
	comp=Z,44nm,1.2s						
WRKA	Warakurna	38.03	248	P	P	21 22 06.5	-1.6
	comp=Z,62nm,0.6s						
FORT	Forrest	39.44	239	P	P	21 22 19.2	-0.4
FORT	Forrest	39.44	239	P	P	21 22 19.0	-0.7
	comp=Z,135nm,0.7s						
FITZ	Fitzroy Crossi	40.04	259	P	P	21 22 24.1	-0.6
	comp=Z,17nm,0.7s,baz=91,slow=8.0,SNR=56						
LBMI	Labuha	41.58	286	P	P	21 22 39.1	+1.6
	comp=Z,25nm,0.9s						
SOEI	Soe	42.21	271	P	P	21 22 44.4	+1.6
	comp=Z,24nm,1.0s						
SOEI	Soe	42.21	271	P	P	21 22 42.9	+0.1
SOEI				IAmb	IAmb	21 23 08.8	
	comp=Z,19nm,0.9s						
SANI	Sanana	42.52	283	P	P	21 22 44.9	-0.2
	comp=Z,32nm,1.0s						
BATI	Baumata	42.72	270	P	P	21 22 48.1	+1.4
	comp=Z,103nm,0.8s,baz=154,slow=1.4,SNR=29						
BATI	Baumata	42.72	270	P	P	21 22 48.0	+1.3
	comp=Z,71nm,0.9s						
MMRI	Maumere	44.39	272	P	P	21 23 00.6	+0.5
	comp=Z,52nm,0.8s						
MMRI	Maumere	44.39	272	P	P	21 22 59.8	-0.3
MMRI				IAmb	IAmb	21 23 01.3	
	comp=Z,30nm,0.7s						
EDFI	Ende, Flores	44.90	272	P	P	21 23 03.8	-0.5
	comp=Z,20nm,1.1s						
PSA00	Pilbara Seismi	45.49	254	P	P	21 23 07.9	-0.9
PSA00	Pilbara Seismi	45.49	254	P	P	21 23 08.1	-0.6
PSA00				IAmb	IAmb	21 23 09.4	
	comp=Z,24nm,0.9s						
PSA00	Pilbara Seismi	45.49	254	P	P	21 23 08.4	-0.3
	comp=Z,32nm,1.0s						
MBWA	Marble Bar	45.59	254	P	P	21 23 09.7	+0.2
GTOI	Gorontalo	46.23	285	P	P	21 23 16.8	+2.2
	comp=Z,9.1nm,0.7s						
MEEK	Meekatharra	46.88	247	P	P	21 23 18.6	-1.0
	comp=Z,63nm,0.8s						
WBSI	Waikabubak, Su	46.96	270	P	P	21 23 20.7	+0.4
	comp=Z,38nm,0.8s						
MRSI	Marisa	47.17	284	P	P	21 23 34.3	+12
BKSI	Bulukumba	47.19	276	P	P	21 23 22.6	+0.5
	comp=Z,12nm,0.9s						
BNSI	Bone	47.44	277	P	P	21 23 24.9	+0.9
	comp=Z,39nm,1.0s						
KAPI	Kappang	47.62	276	P	P	21 23 25.8	+0.4
	comp=Z,7.8nm,0.5s,baz=153,slow=10,SNR=9.2						
KAPI	Kappang	47.62	276	P	P	21 23 25.4	0.0
KAPI				IAmb	IAmb	21 23 26.9	
	comp=Z,32nm,1.1s						
KLBR	Kellerberrin	48.23	240	P	P	21 23 28.4	-1.5
	comp=Z,40nm,0.8s						
TOLI2	Tolitoli	48.48	285	P	P	21 23 31.0	-1.0
TOLI2				IAmb	IAmb	21 23 32.0	
	comp=Z,11nm,0.9s						
PLAI	Plampang	48.68	271	P	P	21 23 33.4	-0.1
	comp=Z,52nm,1.0s						
PLAI	Plampang	48.68	271	P	P	21 23 32.3	-1.2
NWAO	Narrogin (SRO)	48.89	239	P	P	21 23 33.9	-1.0
BLDU	Ballidu	48.98	242	P	P	21 23 34.4	-1.2
	comp=Z,24nm,2.2s						
MPSI	Mapaga	49.05	283	P	P	21 23 36.2	-0.1
	comp=Z,39nm,0.8s						
MORW	Morawa	49.38	244	P	P	21 23 38.1	-0.5
MORW				IAmb	IAmb	21 23 38.8	
	comp=Z,22nm,0.7s						
MORW	Morawa	49.38	244	P	P	21 23 37.6	-1.1
	comp=Z,31nm,0.7s						
TWSI	Taliwang, Sumb	49.56	271	P	P	21 23 40.3	+0.1
	comp=Z,638nmcomp=Z,64nm,1.0s						
MUN	Mundaring	49.59	240	P	P	21 23 39.9	-0.4
	comp=Z,27nm,0.8s						
GIRL	Giralia	50.70	252	P	P	21 23 49.3	+0.6
IGBI	Denpasar	51.23	270	P	P	21 23 53.4	+0.7
	comp=Z,93nm,0.7s						
MYLDM	Lahad Datu	52.08	288	P	P	21 24 00.3	+1.3
MYLDM				IAmb	IAmb	21 24 02.4	
	comp=Z,13nm,0.9s						
JAGI	Jajag, Banyuwa	52.26	270	P	P	21 23 59.2	-1.2
JAGI				IAmb	IAmb	21 24 00.1	
	comp=Z,17nm,0.8s						
BBKI	Banjar Baru	52.75	277	P	P	21 24 10.1	+6.0
PCJI	Pacitan	55.20	270	P	P	21 24 22.5	+0.7
JOW	Kunigami	55.76	317	P	P	21 24 25.9	+0.3
	comp=Z,16nm,0.6s,baz=154,slow=21,SNR=4.1						
JOW	Kunigami	55.76	317	P	P	21 24 26.4	+0.8
UGM	Wanagama	55.89	270	P	P	21 24 26.8	0.0
UGM	Wanagama	55.89	270	P	P	21 24 25.4	-1.4
SMRI	Semarang	56.15	271	P	P	21 24 28.3	-0.3
SBUM	Sibu	56.99	283	P	P	21 24 34.5	0.0
MJAR	Matsushiro Arr	57.58	332	P	P	21 24 37.0	-1.2
	comp=Z,3.6nm,0.7s,baz=169,slow=8.4,SNR=9.1						
MJAR				PcP	sP	21 25 29.7	+0.8
	comp=Z,1.4nm,0.5s,baz=153,slow=2.7,SNR=4.2						
MJAR	Matsushiro Arr	57.58	332	P	P	21 24 37.2	-1.0
MAT	Matsushiro	57.58	332	P	P	21 24 37.4	-0.8
KSM	Kuching	58.50	281	P	P	21 24 44.6	-0.4
KSM				IAmb	IAmb	21 24 45.9	
	comp=Z,17nm,1.1s						
JHS	Saijyo	58.81	327	P	P	21 24 46.9	0.0
LEM	Lembang	58.94	271	P	P	21 24 48.7	+0.4
	comp=Z,41nm,0.7s,baz=345,slow=23,SNR=9.6						
TPUB	Ta-pu	58.99	309	P	P	21 24 47.6	-0.7
SSLB	Suanglung	59.03	309	P	P	21 24 48.1	-0.4
JTM	Tenmabayashi	60.01	337	P	P	21 24 55.0	+0.1
ERM	Erimo	60.34	340	P	P	21 24 58.2	+1.1
JKA	Kamikawa-asahi	62.40	340	P	P	21 25 12.1	+1.2
ASAJ	Asahikawa	62.40	340	P	P	21 25 12.1	+1.2
	comp=Z,9.4nm,0.5s,baz=191,slow=7.3,SNR=7.3						
MDSI	Maura Dua	62.80	272	P	P	21 25 13.1	-1.1
	comp=Z,9.7nm,0.7s						
VNDA	Vanda	63.21	181	P	P	21 25 15.8	0.0
	comp=Z,1.3nm,0.7s,baz=338,slow=5.8,SNR=12						
VNDA	Vanda	63.21	181	P	P	21 25 15.6	-0.2
KSRS	Korea Array	63.43	326	P	P	21 25 18.0	+0.2
	comp=Z,1.4nm,0.8s,baz=141,slow=6.0,SNR=4.1						
NJ2	Nanjing	65.40	316	eP	P	21 25 32.3	+1.5
NJ2				pmax	pmax		
	comp=Z,15nm,1.2s						
USRK	Ussuriysk Ar.	66.56	333	P	P	21 25 38.4	+0.5
	comp=Z,3.2nm,0.6s,baz=133,slow=7.7,SNR=7.6						
USRK	Ussuriysk Ar.	66.56	333	P	P	21 25 38.2	+0.3
PEA0B	Petropavlovsk-	67.71	354	P	P	21 25 45.5	+0.4
PEA0B				IAmb	IAmb	21 25 46.4	
	comp=Z,25nm,0.9s						
PETK	Petropavlovsk-	67.71	354	P	P	21 25 45.5	+0.5
	comp=Z,13nm,0.8s,baz=181,slow=13,SNR=15						
PETK	Petropavlovsk-	67.71	354	P	P	21 25 45.1	+0.1
UBPT	Khong Chiam	67.79	293	P	P	21 25 46.3	0.0
MDJ	Mudanjiang	67.95	332	P	P	21 25 47.2	+0.5
MDJ				IAmb	IAmb	21 25 48.6	
	comp=Z,12nm,0.8s						
KULM	Kulim	68.83	282	P	P	21 25 52.7	-0.2
KULM				IAmb	IAmb	21 25 60.0	
	comp=Z,16nm,1.1s						
CN2	Changchun	69.33	329	eP	P	21 25 54.3	-0.9
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KLR	Kul'dur	70.67	336	P	P	21 26 04.7	+1.3
	comp=Z,4.3nm,0.6s,baz=161,slow=3.8,SNR=22						
CM31	Chiang Mai Arr	74.77	294	P	P	21 26 28.6	+0.5
CMAR	Chiang Mai Arr	74.77	294	P	P	21 26 29.2	+1.0
	comp=Z,2.5nm,0.7s,baz=128,slow=4.7,SNR=28						
CMAR	Chiang Mai Arr	74.77	294	P	P	21 26 28.5	+0.3
CHTO	Chiang Mai	74.89	294	P	P	21 26 28.5	-0.4
MA2	Magadan	74.90	351	P	P	21 26 27.0	-1.0
	comp=Z,12nm,0.9s,baz=141,slow=8.9,SNR=4.0						
MA2	Magadan	74.90	351	P	P	21 26 27.9	-0.1
MA2				IAmb	IAmb	21 26 42.8	
	comp=Z,34nm,1.3s						
HHC	Hu-ho-hao-te	75.29	320	eP	P	21 26 32.8	+1.9
HHC				pmax	pmax		
	comp=Z,5.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,96nm,8.8s						
HHC				LR	LR		
	comp=N,570nm,15.5s						
HHC				LR	LR		
	comp=E,590nm,19.3s						
HHC				LR	LR		
	comp=Z,610nm,19.7s						
QSPA	South Pole Qui	75.64	180	P	P	21 26 32.3	-0.2
SEY	Seymchan	77.93	353	P	P	21 26 44.4	-0.7
	comp=Z,13nm,0.9s,baz=158,slow=4.6,SNR=19						
LZH	Lanzhou	78.06	312	⇑P	P	21 26 47.8	+1.2
LZH				pP	pP	21 27 24.8	+1.9
LZH				sP	sP	21 27 43.8	+5.2
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
YAK	Yakutsk	81.69	343	P	P	21 27 05.5	+0.2
	comp=Z,20nm,0.7s,baz=143,slow=0.5,SNR=14						
YAK	Yakutsk	81.69	343	P	P	21 27 05.5	+0.2
ULN	Ulaanbaatar	81.83	324	P	P	21 27 06.9	+0.3
MAW	Mawson	82.19	202	P	P	21 27 07.7	-0.2
	comp=Z,2.5nm,0.9s,baz=17,slow=7.2,SNR=3.9						
SONM	Songino Array	82.19	324	P	P	21 27 09.1	+0.7
	comp=Z,2.4nm,0.4s,baz=143,slow=5.5,SNR=39						
SONM	Songino Array	82.19	324	P	P	21 27 09.0	+0.6
BILL	Bilibino	82.20	360	P	P	21 27 07.9	+0.1
BILL				IAmb	IAmb	21 27 08.5	
	comp=Z,8.5nm,0.7s						
GTA	Gaotai	82.40	314	eP	P	21 27 10.0	+0.3
GTA				pP	pwP	21 27 49.4	+0.1
GTA				sP	sP	21 28 11.8	+10
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
YBH	Yreka Blue Hor	85.20	45	P	P	21 27 23.0	-0.9
	comp=Z,3.2nm,0.6s,baz=145,slow=2.8,SNR=7.7						
YBH	Yreka Blue Hor	85.20	45	P	P	21 27 23.9	0.0
YBH				IAmb	IAmb	21 27 35.0	
	comp=Z,13nm,1.4s						
ILAR	Eielson Array	86.21	18	P	P	21 27 26.6	-1.6
	comp=Z,5.8nm,0.7s,baz=235,slow=5.5,SNR=21						
NVAR	Mina Array Bea	87.08	49	P	P	21 27 32.3	-1.0
	comp=Z,1.1nm,0.6s,baz=234,slow=7.7,SNR=2.3						
KVN	Kaiserville	87.45	49	P	P	21 27 34.6	-0.4
E07A	Sunnyside	88.98	41	P	P	21 27 41.9	0.0
E07A				IAmb	IAmb	21 27 42.7	
	comp=Z,6.6nm,0.7s						
TIXI	Tiksi	89.62	349	P	P	21 27 44.0	-0.2
	comp=Z,1.6nm,0.3s,baz=150,slow=8.1,SNR=3.6						
BMO	Blue Mountains	90.03	44	P	P	21 27 46.4	-0.6
ELK	Elko	90.09	48	P	P	21 27 47.3	-0.1
SPR3	Spring Creek 3	90.20	50	P	P	21 27 47.8	-0.3
SPR3				IAmb	IAmb	21 27 48.3	
	comp=Z,3.9nm,0.7s						
WMQ	Urumqi	92.45	315	eP	P	21 27 59.9	+1.8
SNAA	Sanae	93.89	183	P	P	21 28 02.6	-1.7
VNA3	Neumayer Olymp	94.56	181	P	P	21 28 05.5	-1.7
PDAR	Pinedale Array	94.75	47	P	P	21 28 07.5	-1.4
	comp=Z,0.3nm,0.6s,baz=222,slow=1.2,SNR=2.3						
VNA2	Neumayer--Watz	94.82	182	P	P	21 28 07.7	-0.8
TXAR	Lajitas Array	96.15	61	P	P	21 28 14.3	-1.2
	comp=Z,0.2nm,0.6s,baz=197,slow=3.9,SNR=4.6						
MK31	Makanchi Array	96.92	316	P	P	21 28 18.9	+0.5
MK31				IAmb	IAmb	21 28 19.9	
	comp=Z,2.8nm,0.6s						
MKAR	Makanchi Array	96.92	316	P	P	21 28 19.0	+0.5
	comp=Z,2.2nm,0.4s,baz=86,slow=6.6,SNR=29						
MKAR	Makanchi Array	96.92	316	P	P	21 28 18.6	+0.2
ZAA0	Zalesovo Array	97.09	324	P	P	21 28 18.4	-0.5
ZAA0				IAmb	IAmb	21 28 19.2	
	comp=Z,3.8nm,0.7s						
ZALV	Zalesovo Beam	97.09	324	P	P	21 28 18.4	-0.6
	comp=Z,4.1nm,0.7s,baz=114,slow=4.3,SNR=24						
ZALV	Zalesovo Beam	97.09	324	P	P	21 28 18.1	-0.8
YKA	Yellowknife Ar	97.26	27	P	P	21 28 18.1	-1.4
	comp=Z,1.1nm,0.8s,baz=240,slow=3.4,SNR=5.4						
NRIK	Noril'sk	99.73	339	P	Pdif	21 28 30.1	-0.3
	comp=Z,2.6nm,0.6s,baz=94,slow=5.7,SNR=5.8						
KBZ	Khabaz	124.48	313	PKP	PKPdf	21 33 45.9	+0.3
	comp=Z,1.2nm,0.7s,baz=324,slow=2.6,SNR=4.7						
FINES	FINESS Array B	125.39	338	PKP	PKPdf	21 33 46.5	-0.3
	comp=Z,6.2nm,0.8s,baz=39,slow=1.9,SNR=12						
NB2	NORSAR Subarra	130.28	345	PKPdf	PKPdf	21 33 56.3	+0.1
	comp=Z,0.9nm,0.7s,baz=31,slow=1.9						
NOA	NORSAR Array B	130.28	345	PKP	PKPdf	21 33 56.5	+0.2
	comp=Z,1.3nm,0.6s,baz=36,slow=2.2,SNR=7.0						
NOA				SKPbc	SKPab	21 37 06.1	+0.6
	comp=Z,3.9nm,0.9s,baz=30,slow=4.2,SNR=9.7						
AKASG	Malin Array Be	130.42	326	PKP	PKPdf	21 33 56.3	-0.4
	comp=Z,0.8nm,0.4s,baz=47,slow=2.3,SNR=6.5						
AKASG				SKPbc	SKPab	21 37 06.7	+0.4
	comp=Z,2.5nm,0.7s,baz=46,slow=4.3,SNR=14						
AKASG	Malin Array Be	130.42	326		PKPdf	21 33 57.4	+0.7
BURAR	Bucovina Array	134.30	324	⇑P	PKiKP	21 34 06.9	+1.2
MLR	Muntele Rosu	135.01	322	⇓P	PKPdf	21 34 03.8	-1.9
KOLS	Kolonicke sedl	135.13	328	ePKP	PKPdf	21 34 06.9	+1.2
CRVS	Cervenica-Dubn	135.57	328	ePKP	PKPdf	21 34 07.4	+0.9
ARR	Arges	135.86	322	⇓P	PKPdf	21 34 08.1	+0.9
DRGR		136.18	325	⇓P	PKPdf	21 34 08.0	+0.2
MORC	Moravsky Berou	136.91	331	⇑P	PKPdf	21 34 08.9	-0.2
MORC	Moravsky Berou	136.91	331	ePKP	PKPdf	21 34 09.2	+0.2
OSTC	Ostas	136.95	333	ePKPDF	PKiKP	21 34 11.2	+0.3
CHVC	Chvalec	137.00	333	ePKPDF	PKiKP	21 34 11.4	+0.4
DPC	Dobruska-Polom	137.05	333	ePKPDF	PKPdf	21 34 10.8	+1.5
SIRR	Siria	137.07	325	⇑P	PKPdf	21 34 10.0	+0.6
VRAC	Vranov	137.68	332	ePKP	PKPdf	21 34 10.1	-0.3
CLL	Collm	137.72	336	ePKPdf	PKPdf	21 34 12.0	+1.6
KRUC	Moravsky	137.94	331	ePKP	PKPdf	21 34 10.1	-0.8
MODS	Modra-Piesok	138.00	330	ePKP	PKPdf	21 34 11.0	-0.1
PRU	Pruhonice	138.09	334	ePKPDF	PKPdf	21 34 12.2	+1.1
MORH	Mrgy, Hungar	138.75	327	⇑P	PKPdf	21 34 12.0	-0.5
CKRC	Cesky Krumlov	139.07	333	ePKPDF	PKiKP	21 34 15.4	+0.1
KHC	Kasperske Hory	139.15	334	ePKPDF	PKPdf	21 34 13.7	+0.5
GERES	GERESS Array B	139.31	333	PKhKP	PKPpre	21 34 05.9	
	comp=Z,0.8nm,0.7s,baz=46,slow=3.9,SNR=5.3						
GERES				PKP	PKPdf	21 34 13.1	-0.5
	comp=Z,2.3nm,0.7s,baz=56,slow=1.1,SNR=13						
GERES				SKPbc	SKPbc	21 37 34.6	-0.4
	comp=Z,1.4nm,0.9s,baz=36,slow=2.5,SNR=6.6						
GERES	GERESS Array B	139.31	333		PKPdf	21 34 15.3	+1.7
KEST	Kesra	150.91	321	PKPbc	PKPbc	21 34 40.5	+0.9
	comp=Z,18nm,0.6s,baz=261,slow=2.4,SNR=17						
KEST	Kesra	150.91	321		PKPbc	21 34 40.0	+0.5
PBRG	Braganca	152.18	350	ePKPab	PKPab	21 34 52.7	+0.4
POLO	Lamas de Olo	152.76	352	ePKPbc	PKPbc	21 34 43.9	+0.3
POLO	Lamas de Olo	152.76	352	ePKPab	PKPab	21 34 55.8	+1.0
PVRL	Vila Real	152.84	352	ePKPbc	PKPbc	21 34 44.0	+0.3
PVRL	Vila Real	152.84	352	ePKPab	PKPab	21 34 55.9	+0.8
MVO	Moncorvo	152.85	350	ePKPbc	PKPbc	21 34 44.5	+0.8
ESDC	Sonseca Array	153.64	345	PKPbc	PKPbc	21 34 45.5	+0.1
	comp=Z,1.6nm,0.8s,baz=2.5,slow=5.0,SNR=10						
ESDC				PKPab	PKPab	21 34 59.2	+0.7
	comp=Z,3.0nm,0.8s,baz=6.6,slow=4.4,SNR=12						
MTE	Manteigas	153.68	351	ePKPbc	PKPbc	21 34 45.9	+0.3
MTE	Manteigas	153.68	351	ePKPab	PKPab	21 34 59.6	+0.9
PCBR	Castelo Branco	154.22	351	ePKPab	PKPab	21 35 01.7	+0.8
PBAR	Barrancos	155.76	349	ePKPab	PKPab	21 35 08.3	+0.8
PBEJ	Beja	156.05	350	ePKPab	PKPab	21 35 08.1	-0.7
MESJ	Messejana	156.29	351	ePKPab	PKPab	21 35 11.2	+1.4
TORD	Torodi Ar. Bea	165.89	267	PKPab	PKPab	21 35 52.6	0.0
	comp=Z,0.5nm,0.6s,baz=82,slow=3.9,SNR=2.4						

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*IDC **24** 21:19:54.8±0.7, 31°.92S×72°.10W, h0^{km}, mb4.4/9, mb1 4.3/13, mb1mx4.1/35, mbtmp4.2/13, ML3.8/4, MS3.6/1, Ms1 3.6/1, ms1mx3.2/17, Error ellipse: s-maj=25.0km s-min=18.7km az=95.0*
*VAO **24** 21:19:55.5±0.4, 31°.91S×72°.17W, h10^{km}, mb4.5*
*NEIC **24** 21:19:56.1±2.4, 31°.87S±0°.03×72°.20W±0°.08, h10^{km}±1^{km}, mb4.6/22, ML4.4(GUC), Error ellipse: s-maj=11.5km s-min=5.6km az=266.0*
*GUC **24** 21:19:56.5±0.7, 31°.86S×72°.21W, h34^{km}±2^{km}, ML4.4*
ISC 24 21:19:55.3±1.9**, 31°.87S**±0°.03×**72°.22W**±0°.06**, h6**^{km}±11^{km}**, n157,** σ**0^{s}.88**/171**, mb4.6**/20**, 13C-1D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VA06	Catapilco	1.04	132	⇓eP	Pg	21 20 15.6	+0.4
VA06				eS	Sg	21 20 29.2	+0.4
VA06				IAML		21 20 31.5	
	comp=E,34μm,0.5s						
VA01	Torpederas	1.24	157	⇑eP	Pn	21 20 18.5	-0.7
VA01				i S	Sb	21 20 34.7	-0.7
VA01	Torpederas	1.24	157	Pn	Pn	21 20 18.6	-0.7
VA01				Sn	Sb	21 20 34.6	-0.9
CO06	Fray Jorge	1.29	23	⇑iP	Pn	21 20 19.2	-0.7
CO06				eS	Sb	21 20 35.4	-1.5

CO06	Fray Jorge	1.29	23		Pn	21 20 18.9	-0.9
CO06				Sg	Sb	21 20 35.4	-1.5
ROCH	El Roble	1.50	137	⇑*i*P	Pn	21 20 22.7	-0.2
ROCH				⇑*i*P	Pn	21 20 22.6	-0.2
ROCH				*i* S	Sn	21 20 40.7	-2.1
ROCH				*i* S	Sb	21 20 42.0	-1.0
ROCH				IAML		21 20 51.2	
	comp=E,11μm,0.7s						
ROCH				IAML		21 20 51.7	
	comp=E,13μm,0.8s						
MT02	Curacav	1.66	147	⇑*i*P	Pn	21 20 24.8	-0.1
MT02				*i* S	Sn	21 20 45.0	-1.4
MT02	Curacav	1.66	147		Pn	21 20 24.5	-0.4
CO03	El Pedregal	1.66	52		Pn	21 20 25.3	+0.2
VA03	San Esteban	1.67	123	⇑*i*P	Pn	21 20 25.3	+0.1
VA03				*i* S	Sn	21 20 46.7	-0.2
VA03				IAML		21 20 54.3	
	comp=N,5μm,0.7s						
VA03	San Esteban	1.67	123		Pn	21 20 25.0	-0.1
PEL	Peldehue	1.81	135	⇑*i*P	Pn	21 20 27.4	+0.3
PEL				*e*S	Sb	21 20 51.1	-0.8
PEL				IAML		21 20 59.0	
	comp=E,4μm,0.4s						
PEL	Peldehue	1.81	135		Pn	21 20 27.3	+0.2
VA05	Santo Domingo	1.85	164	⇑*e*P	Pn	21 20 27.1	-0.4
VA05	Santo Domingo	1.85	164		Pn	21 20 26.4	-1.1
MT05	Renca	1.96	141	⇑*e*P	Pn	21 20 29.6	+0.5
MT05				*i* S	Sn	21 20 54.1	0.0
MT05				IAML		21 21 05.6	
	comp=N,7μm,0.8s						
MT05	Renca	1.96	141		Pn	21 20 29.3	+0.2
GO04	Tololo Observa	2.08	36	⇑*e*P	Pn	21 20 30.9	-0.1
GO04				*e*S	Sn	21 20 57.5	+0.1
GO04				IAML		21 21 06.4	
	comp=E,13μm,0.5s						
GO04	Tololo Observa	2.08	36		Pn	21 20 30.3	-0.7
CO05	La Serena	2.12	24	*e*P	Pn	21 20 31.5	+0.3
CO05				*i* S	Sn	21 20 58.0	+0.1
CO05				IAML		21 21 11.5	
	comp=N,3μm,0.5s						
CO05	La Serena	2.12	24		Pn	21 20 30.5	-0.7
MT01	Popeta	2.15	158	⇑*i*P	Pn	21 20 31.4	-0.2
MT01				*e*S	Sn	21 20 56.7	-1.9
MT01				IAML		21 21 10.7	
	comp=E,2μm,0.5s						
MT01	Popeta	2.15	158		Pn	21 20 30.9	-0.7
MT09	Talagante	2.16	152	⇑*i*P	Pn	21 20 32.3	+0.3
MT09				*i* S	Sn	21 20 59.0	-0.2
MT09				IAML		21 21 14.3	
	comp=N,2μm,0.5s						
MT09	Talagante	2.16	152		Pn	21 20 32.1	+0.2
BO04	La Punta	2.51	148	⇑*i*P	Pn	21 20 37.5	+0.9
LMEL	Las Melosas	2.60	140	*e*P	Pn	21 20 39.0	+1.0
BO01	Tunca	2.69	160	*e*P	Pn	21 20 39.0	-0.1
BO01	Tunca	2.69	160		Pn	21 20 38.3	-0.7
ZON	Zonda	3.03	85		Pn	21 20 45.0	+1.1
LCO	Las Campanas	3.14	25	Pn	Pn	21 20 45.6	+0.1
GO05	Huala	3.14	176	Pn	Pn	21 20 44.6	-0.7
BO02	Sierra Bellavi	3.15	158	*e*P	Pn	21 20 46.2	+0.7
BO02	Sierra Bellavi	3.15	158		Pn	21 20 45.4	-0.1
AC04	Llanos de Chal	3.79	15	Pn	Pn	21 20 52.9	-1.3
ML02	Panimavida	3.94	171		Pn	21 20 55.8	-0.4
GO03	Copiap	4.60	23	Pn	Pn	21 21 05.3	-0.1
AC02	Maricunga	5.70	29	Pn	Pn	21 21 21.2	+0.3
H03N1	Juan Fernandez	5.86	253	T	T	21 27 59.5	
	baz=81,slow=73						
H03N3	Juan Fernandez	5.87	253	T	T	21 28 08.0	
	baz=81,slow=73						
H03N2	Juan Fernandez	5.88	253	T	T	21 28 05.9	
	baz=81,slow=73						
LC01	Cunco	7.02	178	Pn	Pn	21 21 38.3	-0.3
PB14	IPOC Station P	7.39	13		Pn	21 21 41.7	-2.4
PB10	IPOC Station P	8.46	10	Pn	Pn	21 21 57.1	-1.2
PLCA	Paso Flores	8.94	172	Pn	Pn	21 22 05.1	0.0
	comp=N,0.5nm,0.3s,baz=335,slow=13,SNR=12						
PLCA	Paso Flores	8.94	172	*e*P	Pn	21 22 03.9	-1.2
PLCA	Paso Flores	8.94	172	Pn	Pn	21 22 05.3	+0.2
PB15	IPOC Station P	8.97	16	Pn	Pn	21 22 04.7	-0.9
LVC	Limon Verde	9.68	18	Pn	Pn	21 22 17.5	+2.0
	comp=N,0.3nm,0.3s,baz=226,slow=11,SNR=1.5						
LVC	Limon Verde	9.68	18	*e*P	Pn	21 22 16.0	+0.5
PB07	IPOC Station P	10.32	12	Pn	Pn	21 22 24.6	+0.6
PB09	IPOC Station P	10.38	16	Pn	Pn	21 22 25.1	+0.2
TRQA	Tornquist	10.42	129		Pn	21 22 25.9	+0.7
PB08	IPOC Station P	12.00	14	Pn	Pn	21 22 46.7	-0.6
ITQB	Itaqui	13.59	85	*e*P	Pn	21 23 08.2	-0.3
ITQB	Itaqui	13.59	85	Pn	Pn	21 23 09.9	+1.4
CPUP	Villa Florida	14.13	71	Pn	Pn	21 23 16.8	+0.7
	comp=N,0.2nm,0.3s,baz=248,slow=7.2,SNR=3.6						
CPUP				LR	LR	21 29 03.2	
	comp=N,249nm,18.7s,baz=272,slow=39						
CPUP	Villa Florida	14.13	71	*e*P	Pn	21 23 14.8	-1.2
CPUP	Villa Florida	14.13	71	Pn	Pn	21 23 17.4	+1.4
PLTB	Pedras Altas	15.82	95	Pn	Pn	21 23 37.8	-0.9
LPAZ	La Paz	15.95	14		Pn	21 23 40.8	-0.2
AQDB	Aquidauana	18.64	56	*e*P	P	21 24 13.9	+0.1
AQDB	Aquidauana	18.64	56	P	P	21 24 13.0	-0.8
SIV	San Ignacio	18.78	35	P	P	21 24 14.8	-0.6
	comp=N,0.2nm,0.3s,baz=224,slow=12,SNR=11						
PTGB	Pitanga	19.11	73	*e*P	P	21 24 19.5	+0.5
TRCB	Terra Rica	19.58	67	*e*P	P	21 24 23.3	-0.8
TER01	Tubaro-SC	20.22	87	*e*P	P	21 24 31.0	-0.1
PTLB	Pontes e Lacer	20.23	39	*e*P	P	21 24 30.7	-0.5
PTLB	Pontes e Lacer	20.23	39	P	P	21 24 28.5	-2.7
PP1B	Ponte de Pedra	21.17	52	*e*P	P	21 24 40.6	-0.7
PCMB	Pacaembu	21.29	66	*e*P	P	21 24 42.5	-0.2
VILB	Vilhena	21.83	33	P	P	21 24 46.8	-1.6
VILB				IAmb	IAmb	21 24 51.3	
	comp=Z,22nm,0.9s						
SALV	Santo Antonio	21.88	47	*e*P	P	21 24 47.8	-1.3
EFI	East Falkland	22.35	156	P	P	21 24 54.2	+0.5
ETMB	Extrema	22.64	16	*e*P	P	21 24 57.3	+0.2
ETMB	Extrema	22.64	16	P	P	21 24 55.4	-1.7
ETMB				IAmb	IAmb	21 24 59.3	
	comp=Z,15nm,1.0s						
ITRB	Iturama	23.06	64	*e*P	P	21 25 00.6	-1.0
BB19B	Bebedouro	23.73	69	*e*P	P	21 25 07.7	-0.6
RCLB	Rio Claro- Sao	23.85	73	*e*P	P	21 25 08.7	-0.8
CZSB	Cruzeiro do Su	24.02	359	*e*P	P	21 25 12.6	+1.5
CZSB	Cruzeiro do Su	24.02	359	P	P	21 25 09.7	-1.4
VAO	Valinhos	24.04	75	*e*P	P	21 25 10.6	-0.7
SAML	Samuel	24.30	22	P	P	21 25 12.8	-0.9
SAML				IAmb	IAmb	21 25 27.0	
	comp=Z,4.9nm,0.8s						
ARAG	Araguaiana, MT	24.58	54	*e*P	P	21 25 15.9	-0.3
PDRB	Porto dos Gac	24.71	39	*e*P	P	21 25 16.4	-1.0
IPMB	Ipameri, GO	25.71	63	*e*P	P	21 25 25.3	-1.3
CLDB	Colider	25.82	40	*e*P	P	21 25 27.9	+0.4
VAS01	Vassouras-RJ	27.27	77	*e*P	P	21 25 40.8	+0.2
BDFB	Brasilia	27.32	59	P	P	21 25 41.0	-0.1
	comp=Z,17nm,0.9s,baz=234,slow=9.8,SNR=14						
BDFB	Brasilia	27.32	59	P	P	21 25 40.2	-0.9
BDFB				IAmb	IAmb	21 25 42.5	
	comp=Z,16nm,0.8s						
SNDB	Serra Nova Dou	27.63	49	*e*P	P	21 25 42.7	-1.1
DIAM	Diamantina, MG	29.07	69	*e*P	P	21 25 56.2	-0.5
NPGB	Novo Progresso	29.28	36	*e*P	P	21 25 57.3	-1.2
MC01	Montes Claros	29.75	66	*e*P	P	21 26 02.5	-0.2
SJMB	Sao Joao De Ma	30.85	72	*e*P	P	21 26 11.0	-1.3
BSFB	Barra de Sao F	31.06	73	*e*P	P	21 26 12.8	-1.4
ITTB	Itaituba	31.43	33	*e*P	P	21 26 15.9	-1.6
SDBA	SAO DESIDERIO	31.71	59	*e*P	P	21 26 19.6	-0.5
SMTB	Santa Maria do	32.36	50	*e*P	P	21 26 26.0	+0.3
PRPB	Parauapebas	33.05	44	*e*P	P	21 26 30.9	-0.7
PTGA	Pitinga	33.07	23	P	P	21 26 31.5	-0.4
PTGA				IAmb	IAmb	21 26 32.7	
	comp=Z,9.2nm,1.1s						
PMSA	Palmer Station	33.31	174	*e*P	P	21 26 33.0	-0.4
CMC01	Camacan, BA	34.00	69	*e*P	P	21 26 39.3	-0.7
MALB	Monte Alegre	34.32	33	*e*P	P	21 26 41.9	-0.8
GDU01	Guandu, BA	34.90	66	*e*P	P	21 26 46.4	-1.4
BOAV	Boa Vista	35.84	20	*e*P	P	21 26 56.0	+0.2
BOAV	Boa Vista	35.84	20	P	P	21 26 54.9	-1.0
BOAV				IAmb	IAmb	21 27 07.4	
	comp=Z,6.5nm,1.1s						
NBPN	Ponto Novo - B	36.20	62	*e*P	P	21 26 58.1	-0.9
MCPB	Macapa, AP	36.68	35	*e*P	P	21 27 02.8	-0.3
NBLA	Lagarto - SE	37.94	65	*e*P	P	21 27 13.0	-0.8
NBMA	Muriti-CE	39.55	59	*e*P	P	21 27 26.6	-0.8
NBPS	Pedro II - PI	39.74	53	*e*P	P	21 27 28.0	-1.0
NBAN	Anadia - AL	39.93	64	*e*P	P	21 27 29.0	-1.5
NBPB	Pedra_Branca-C	40.22	56	*e*P	P	21 27 31.8	-1.1
NBPV	Pedro Velho	42.75	62	*e*P	P	21 27 53.2	-0.5
APG	El Apazote	49.79	337	P	P	21 28 50.1	+1.0
	comp=Z,4.6nm,0.9s,baz=235,slow=22,SNR=3.6						
VNA3	Neumayer Olymp	51.38	158	P	P	21 29 00.7	+0.3
VNA2	Neumayer--Watz	52.03	158	P	P	21 29 04.9	-0.3
SNAA	Sanae	53.61	158	P	P	21 29 17.5	+0.5
SNAA	Sanae	53.61	158	P	P	21 29 17.5	+0.5
SNAA				IAmb	IAmb	21 29 19.4	
	comp=Z,17nm,1.4s						
QSPA	South Pole Qui	58.36	180	P	P	21 29 51.5	+0.3
QSPA				IAmb	IAmb	21 29 53.9	
	comp=Z,10nm,1.2s						
VNDA	Vanda	66.16	191	P	P	21 30 44.1	+1.1
	comp=Z,0.4nm,0.8s,baz=151,slow=7.0,SNR=3.0						
VNDA	Vanda	66.16	191	P	P	21 30 44.6	+1.6
TXAR	Lajitas Array	67.81	331	P	P	21 30 55.8	+1.6
	comp=Z,0.6nm,0.6s,baz=146,slow=8.5,SNR=10.0						
TXAR	Lajitas Array	67.81	331	P	P	21 30 54.9	+0.6
TX31	Lajitas Ar. Si	67.81	331	P	P	21 30 55.0	+0.8
TX31				IAmb	IAmb	21 31 02.9	
	comp=Z,8.7nm,1.2s						
TKL	Tuckaleechee C	68.05	350	P	P	21 30 55.5	+0.1
	comp=Z,1.6nm,0.3s,baz=144,slow=6.3,SNR=2.4						
LIC	Lamto	74.25	72	*e*P	P	21 31 33.3	-0.3
	comp=Z,20nm,1.0s						
TIC	Toumodi	74.50	72	*e*P	P	21 31 34.6	-0.5
KIC	Kosan Boka	74.57	72	*e*P	P	21 31 35.4	0.0
	comp=Z,12nm,0.8s						
DBIC	Dimbokro	74.65	72	P	P	21 31 36.0	+0.2
	comp=Z,6.9nm,0.8s,baz=262,slow=5.7,SNR=6.9						
DBIC	Dimbokro	74.65	72	P	P	21 31 35.7	-0.2
DBIC				IAmb	IAmb	21 31 46.1	
	comp=Z,7.7nm,0.8s						
MAW	Mawson	75.26	164	P	P	21 31 38.4	-0.1
	comp=Z,2.0nm,0.8s,baz=190,slow=11,SNR=1.9						
MAW	Mawson	75.26	164	P	P	21 31 38.6	0.0
SMCO	Snowmass	77.72	333	P	P	21 31 53.3	0.0
SMCO				IAmb	IAmb	21 32 00.9	
	comp=Z,3.2nm,0.8s						
E62A	Clayton Lake	78.17	2		P	21 31 56.0	+0.9
KOWA	Kowa	79.90	66	P	P	21 32 05.0	-0.4
BOSA	Boshof	81.19	118	P	P	21 32 11.8	-0.6
	comp=Z,3.6nm,0.9s,baz=262,slow=3.2,SNR=4.6						
BOSA	Boshof	81.19	118	P	P	21 32 12.1	-0.3
TORD	Torodi Ar. Bea	83.63	70	P	P	21 32 25.5	+0.5
	comp=Z,5.8nm,0.8s,baz=263,slow=4.8,SNR=35						
TORD	Torodi Ar. Bea	83.63	70		P	21 32 25.1	+0.1
TORD				IAmb	IAmb	21 32 26.1	
	comp=Z,6.0nm,0.8s						
WRA	Warramunga Arr	122.53	210	PKP	PKPdf	21 38 52.0	-0.3
	comp=Z,0.5nm,0.6s,baz=162,slow=1.7,SNR=9.0						
WRA	Warramunga Arr	122.53	210		PKPdf	21 38 50.4	-1.9
FITZ	Fitzroy Crossi	127.45	202	PKP	PKPdf	21 39 01.7	0.0
	comp=Z,1.7nm,1.0s,baz=233,slow=5.1,SNR=2.2						
BRVK	Borovoye	145.73	41		PKPab	21 39 35.5	+0.5
CHGR	Chuyangaron	147.92	67	PKPbc	PKPdf	21 39 40.1	+1.6
KKAR	Karatay Array	148.61	58	PKPbc	PKPbc	21 39 42.8	-0.3
GAR	Garm	148.82	66	PKPbc	PKPbc	21 39 44.2	+0.3
NIL	Nilore	150.98	77	PKPbc	PKPbc	21 39 48.8	-0.4
AAK	Ala-Archa	151.57	58	PKPbc	PKPbc	21 39 50.9	+0.4
ZAA0	Zalesovo Array	152.49	30	PKPbc	PKPbc	21 39 52.5	+0.5
ZALV	Zalesovo Beam	152.49	30	PKPbc	PKiKP	21 39 52.8	+0.7
	comp=Z,6.1nm,0.8s,baz=308,slow=2.9,SNR=24						
ZALV				PKPab	PKPab	21 40 01.4	-0.8
	comp=Z,5.3nm,0.5s,baz=300,slow=3.4,SNR=14						
ZALV	Zalesovo Beam	152.49	30		PKPbc	21 39 52.3	+0.4
KSH	Kashi	153.16	65	PKPbc	PKPdf	21 39 49.3	+2.6
MKAR	Makanchi Array	155.43	45	PKPab	PKPab	21 40 15.3	+0.3
	comp=Z,1.0nm,0.8s,baz=285,slow=2.8,SNR=4.1						
MKAR	Makanchi Array	155.43	45		PKPdf	21 39 49.4	-0.1
LZH	Lanzhou	174.67	37	*e*PKP	PKPdf	21 40 07.0	+0.7

IDC 24 21:35:45.2±2.1**, 2°00N**×**127°36E, h0**^{km}**, mb3.3**/4**, mb1 3.5**/4**, mb1mx3.1**/39**, mbtmp3.3**/4**, Error ellipse: s-maj=111.2km s-min=27.1km az=69.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	20.05	185	P	P	21 40 20.2	+0.2
	0.6nm,0.6s,baz=354,slow=10,SNR=1.6						
WRA	Warramunga Arr	22.86	163	P	P	21 40 50.4	0.0
	0.4nm,0.3s,baz=342,slow=10.0,SNR=18						
ASAR	Alice Springs	26.30	166	P	P	21 41 22.1	-0.7
	0.2nm,0.4s,baz=348,slow=7.4,SNR=4.5						
MKAR	Makanchi Array	59.33	326	P	P	21 45 49.6	+0.5
	0.2nm,0.5s,baz=119,slow=7.3,SNR=1.7						

IDC ***24*** *21:42:20.3±1.5, 8°23S×116°48E, h0^{km}, mb3.6/4, mb1 3.9/7, mb1mx3.5/41, mbtmp3.8/7, ML3.6/3, Error ellipse: s-maj=26.6km s-min=20.2km az=68.0*

DJA ***24*** *21:42:21.3±0.3, 8°S±3°×11°6E±°, h10^{km}, M3.8/14, MLv3.8/14*

ISC 24 21:42:23.3±0.8**, 8°30S**±0°06×**116°27E**±0°04**, h35**^{km}**, n20, σ1^{s}82**/24**, mb3.7**/3**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWSI	Taliwang, Sumb	0.75	125	P	Pn	21 42 36.9	-0.5
TWSI				S	Sn	21 42 48.9	+1.4
SRBI	Singaraja	1.06	282	P	Pn	21 42 39.9	-1.8
SRBI				S	Sn	21 42 54.6	-0.7
DNP	Denpasar	1.11	250	P	Pn	21 42 42.5	+0.2
IGBI	Denpasar	1.22	245	P	Pn	21 42 43.6	-0.3
PLAI	Plampang	1.58	109	P	Pn	21 42 50.1	+1.2
ABJI	Asem Bagus	2.07	284	P	Pn	21 42 55.9	+0.3
JAGI	Jajag, Banyuwa	2.10	265	P	Pn	21 42 55.0	-1.0
KMMI	Kalianget	2.60	299	P	Pn	21 43 04.0	+1.2
BLJI	Banyuglugur	2.70	282	P	Pn	21 43 04.7	+0.4
GMJI	Gumukmas	2.79	270	P	Pn	21 43 05.2	-0.3
WBSI	Waikabubak, Su	3.36	114	P	Pn	21 43 15.0	+1.6
KAPI	Kappang	4.76	47	Pn	Pn	21 43 31.6	-1.0
	1.2nm,0.3s,baz=214,slow=18,SNR=2.0						
KAPI				Sn	Sn	21 44 24.1	-2.5
	3.2nm,0.3s,baz=55,slow=21,SNR=6.7						
KAPI				Lg	Lg	21 44 45.7	
	1.1nm,0.3s,baz=278,slow=24,SNR=1.7						
BKSI	Bulukumba	4.84	53	P	Pn	21 43 34.5	+0.8
KBKI	Kotabaru	4.97	359	P	Pn	21 43 34.2	-1.3
BATI	Baumata	7.54	105	Pn	Pn	21 44 07.8	-3.1
	7.8nm,0.3s,baz=291,slow=16,SNR=2.2						
FITZ	Fitzroy Crossi	13.34	138	Pn	Pn	21 45 28.7	-1.6
	0.1nm,0.3s,baz=324,slow=13,SNR=5.7						
FITZ				Sn	Sn	21 47 52.9	-4.5
	0.1nm,0.3s,baz=94,slow=19,SNR=2.0						
WRA	Warramunga Arr	20.97	125	P	P	21 47 04.4	+0.7
	4.1nm,0.6s,baz=300,slow=12,SNR=47						
ASAR	Alice Springs	22.78	134	P	P	21 47 23.9	+0.9
	1.6nm,0.6s,baz=310,slow=9.0,SNR=26						
SONM	Songino Array	56.57	352	P	P	21 52 03.3	+0.8
	0.6nm,0.6s,baz=165,slow=8.6,SNR=5.4						
MKAR	Makanchi Array	62.64	334	P	P	21 52 47.8	+3.6
	0.2nm,0.7s,baz=126,slow=7.3,SNR=1.6						

VAO ***24*** *21:42:58.5±0.4, 17°45S×63°30W, h10^{km}, mb4.2*

SCB ***24*** *21:43:04.2±2.8, 17°48S×63°25W, h45^{km}±183^{km}, ML4.9/1, Error ellipse: s-maj=19.0km s-min=15.0km az=1.0*

ISC 24 21:43:00.8±0.8**, 17°48S**±0°06×**63°32W**±0°07**, h35**^{km}**, n29, σ1^{s}65**/31**, Central Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIV	San Ignacio	2.61	56	P	Pn	21 43 41.4	+0.8
SIV				S	Sn	21 44 06.3	-4.8
SIV				IAML		21 44 20.0	
	6μm,0.6s						
MOCB	Mochara	4.34	210	P	Pn	21 44 06.4	+1.7
PTLB	Pontes e Lacer	4.49	64	*e*P	Pn	21 44 06.9	+0.5
BBOE	La Paz, Chanca	4.51	278	P	Pn	21 44 08.0	+0.9
LPAZ	La Paz	4.76	284	P	Pn	21 44 10.2	-0.4
YJA	Yavi	5.11	204	P	Pn	21 44 16.8	+1.6
YJA				S	Sn	21 45 07.8	-5.4
BBOD	La Paz, Gloria	5.12	279	P	Pn	21 44 15.9	+0.4
VILB	Vilhena	5.42	34	*e*P	Pn	21 44 19.1	0.0
PB16	IPOC Station P	5.95	261	P	Pn	21 44 27.3	+0.3
PB08	IPOC Station P	6.13	244	P	Pn	21 44 29.8	+0.6
PB01	IPOC Station P	6.82	238	P	Pn	21 44 39.0	+0.6
PB09	IPOC Station P	7.04	231	P	Pn	21 44 41.5	-0.1
LVC	Limon Verde	7.32	225	*e*P	Pn	21 44 45.7	+0.1
SALV	Santo Antonio	7.47	79	*e*P	Pn	21 44 47.5	+0.1
SLA	San Lorenzo	7.49	195	P	Pn	21 44 48.2	+0.5
PB07	IPOC Station P	7.49	235	P	Pn	21 44 48.3	+0.5
AQDB	Aquidauana	7.80	114	*e*P	Pn	21 44 53.1	+1.3
PP1B	Ponte de Pedra	8.05	92	*e*P	Pn	21 44 55.2	-0.2
PB15	IPOC Station P	8.11	224	P	Pn	21 44 57.0	+0.7
ETMB	Extrema	8.12	339	*e*P	Pn	21 44 54.8	-1.5
PDRB	Porto dos Gac	8.64	48	*e*P	Pn	21 45 02.3	-1.2
ARAG	Araguaiana, MT	11.17	83	*e*P	Pn	21 45 38.3	+0.2
FRTB	Fartura	14.15	117	*e*P	Pn	21 46 18.2	-0.6
IPMB	Ipameri, GO	14.40	94	*e*P	Pn	21 46 22.4	+0.1
BOAV	Boa Vista	19.94	8	*e*P	P	21 47 30.2	+0.3
DUB01	Friburgo-RJ	20.23	106	*e*P	P	21 47 32.8	-0.3
MCPB	Macapa, AP	20.30	34	*e*P	P	21 47 34.6	+0.8
OTAV	Otavalo	23.07	318	*e*P	P	21 48 06.0	+2.2
NBRF	Rio Formoso -	28.79	76	*e*P	P	21 48 57.3	+1.7

THE 24 21:46:50.2, 38°73N×20°60E, h6^{km}±1^{km}**, ML2.0**/1**, Error ellipse: s-maj=1.6km s-min=0.4km az=51.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRAG	Dragano-Lefkad	0.05	207	P	Pg	21 46 51.4	-0.2
DRAG				S	Sg	21 46 52.6	0.0
LKD2	Lefkada island	0.07	35	P	Pg	21 46 51.7	-0.3
LKD2				S	Sg	21 46 53.4	+0.2
NYDR	Nydri-Lefkada	0.07	102	P	Pg	21 46 51.7	-0.2
NYDR				S	Sg	21 46 53.2	+0.1
TSLK	Tsoukalades, L	0.10	23	P	Pg	21 46 52.3	-0.1
TSLK				S	Sg	21 46 54.5	+0.5
EVGI	Lefkada island	0.12	159	P	Pg	21 46 52.5	-0.1
EVGI				S	Sg	21 46 54.8	+0.6
	1μm,0.1s						
FSK	Fiskardo	0.27	187	P	Pg	21 46 55.4	-0.1
FSK				S	Sg	21 46 59.9	+0.8

ATH 24 21:47:36.0, 38°47N×20°48E, h14^{km}±2^{km}**, ML1.5**/1**, Error ellipse: s-maj=3.8km s-min=0.7km az=111.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FSK	Fiskardo	0.06	95	P	Pg	21 47 38.4	-0.3
FSK				S	Sg	21 47 40.2	-0.4
FSK				AML	AML	21 47 40.8	
	comp=N,528μm,0.2s						
FSK				AML	AML	21 47 42.1	
	comp=E,912μm,0.2s						
EVGI	Lefkada island	0.21	41	P	Pg	21 47 40.7	0.0
EVGI				S	Sg	21 47 44.1	+0.3
KEF4	Livadi, Kephal	0.21	192	P	Pg	21 47 40.5	-0.2
KEF4				S	Sg	21 47 44.3	+0.5
DRAG	Dragano-Lefkad	0.23	19	P	Pg	21 47 40.7	-0.4
DRAG				S	Sg	21 47 44.6	+0.1
DMLN	Damoulianata-K	0.24	201	P	Pg	21 47 40.9	-0.3
DMLN				S	Sg	21 47 45.3	+0.6
KEF3	Kipouria, Keph	0.28	202	P	Pg	21 47 41.2	-0.7
KEF3				S	Sg	21 47 45.7	-0.2
VLS	Valsamata	0.30	163	P	Pg	21 47 42.2	-0.1
VLS				S	Sg	21 47 46.6	+0.2
NYDR	Nydri-Lefkada	0.30	34	P	Pg	21 47 42.3	0.0
NYDR				S	Sg	21 47 47.0	+0.5
LKD2	Lefkada island	0.35	23	P	Pg	21 47 42.9	-0.3
LKD2				S	Sg	21 47 48.5	+0.5
TSLK	Tsoukalades, L	0.39	21	P	Pg	21 47 43.6	-0.2

SKHL ***24*** *21:59:13.1±0.2, 43°60N×147°70E, h40^{km}±5^{km}, mb4.4/2*

JMA ***24*** *21:59:13.0±0.3, 43°53N×147°58E, h34^{km}, M3.5*

ISC 24 21:59:11.9±2.7**, 43°6N**±0°1×**147°7E**±0°1**, h45**^{km}**, n15, σ0^{s}79**/25**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK	Yuzh-Kuril'sk	1.43	288	*e*P	Pn	21 59 35.5	+0.2
YUK				AMB	AMB	21 59 36.6	
	141nm,0.7s						
YUK				*e*S	Sn	21 59 52.5	-0.4
YUK				A	A	21 59 54.2	
	500nm,0.3s						
YUK				A	A	21 59 54.2	
	560nm,0.3s						
NEM2	Nemuro 2	1.47	261	P	Pn	21 59 36.3	+0.3
NEM2				*e*S	Sn	21 59 53.4	-0.6
NMR	Nemuro--Hokkai	1.48	262	*e*P	Pn	21 59 36.0	-0.1
NMR				*e*S	Sn	21 59 53.0	-1.3
GLVR	Golovnino	1.62	276	*e*P	Pn	21 59 38.0	+0.1
GLVR				AMB	AMB	21 59 39.0	
	236nm,0.3s						
GLVR				*e*S	Sn	21 59 58.0	+0.4
GLVR				A	A	21 59 59.0	
	221nm,0.2s						
GLVR				A	A	21 59 59.0	
	324nm,0.2s						
KUR	Kuril'sk	1.63	3	*e*S	Sn	21 59 57.0	-1.0
KUR				A	A	21 59 58.3	
	160nm,0.2s						
KUR				A	A	21 59 58.3	
	290nm,0.2s						
JRA	Rausu	1.93	281	P	Pn	21 59 42.9	+0.7
JRA				*e*S	Sn	22 00 05.2	0.0
JKHN	Kushirohamanak	1.95	255	P	Pn	21 59 43.3	+0.8
JNSB	Nemuroshibetsu	1.99	276	P	Pn	21 59 44.0	+0.9
JNSB				*e*S	Sn	22 00 06.8	0.0
AKK	Akkeshi	2.19	256	*e*P	Pn	21 59 46.7	+0.8
AKK				*e*S	Sn	22 00 10.8	-1.0
JNK	Nakash	2.19	271	P	Pn	21 59 46.2	+0.3
JAK	Akkeshi	2.30	256	P	Pn	21 59 47.7	+0.4
JAK				*e*S	Sn	22 00 13.4	-1.0
JAR	Ashorobuto	2.91	265	P	Pn	21 59 56.8	+1.1
JOB	Onbets	2.94	258	P	Pn	21 59 56.8	+0.7
JOB				*e*S	Sn	22 00 29.4	-0.7
JCH	Churui	3.35	254	P	Pn	22 00 02.3	+0.5
JCH				*e*S	Sn	22 00 39.0	-1.3
JNBK	Urakawa-nobuka	3.89	252	P	Pn	22 00 10.1	+0.9

TAP ***24*** *22:12:08.7, 24°52N×122°46E, h9^{km}, ML3.0, D*

JMA ***24*** *22:12:09.4, 24°45N×122°52E, h23^{km}±1^{km}, M2.4*

ISC 24 22:12:08.9±0.9**, 24°49N**±0°02×**122°50E**±0°02**, h16**^{km}±8^{km}**, n67, σ0^{s}55**/125**, 1C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.41	95	P	Pg	22 12 17.5	+0.3
JYNG				S	Sg	22 12 23.1	+0.2
YOJ	Yonaguni jima	0.47	93	P	Pb	22 12 18.9	+0.1
	baz=95						
YOJ				S	Sb	22 12 27.1	+1.7
	baz=95						
YOJ	Yonaguni jima	0.47	93	P	Pg	22 12 18.6	+0.3
YOJ				S	Sg	22 12 24.9	+0.2
TWC	Suao	0.60	282	*i* P	Pg	22 12 20.1	-0.6
	baz=279						
TWC				*i* S	Sg	22 12 28.9	+0.2
	baz=279						
EGS		0.62	305	P	Pg	22 12 21.0	-0.1
	baz=304						
EGS				S	Sg	22 12 29.4	-0.1
	baz=304						
EWUT	Wuta	0.65	266	*i* P	Pg	22 12 21.4	-0.3
	baz=263						
EWUT				S	Sb	22 12 31.4	+0.7
	baz=263						
ENA	Nanau	0.69	265	P	Pg	22 12 22.1	-0.3
	baz=261						
ENA				*i* S	Sb	22 12 32.1	+0.4
	baz=261						
TWB1	Santiao Chiao	0.69	318	*e*P	Pg	22 12 22.2	-0.2
	baz=319						
TWB1				S	Sg	22 12 32.0	+0.3
	baz=319						
NTC	Toucheng	0.71	301	P	Pg	22 12 22.2	-0.5
	baz=300						
NTC				S	Sb	22 12 32.3	+0.1
	baz=300						
NDS	Dongshan	0.72	282	*i* P	Pg	22 12 22.5	-0.5
	baz=279						
NDS				*i* S	Sb	22 12 32.9	+0.2
	baz=279						
ILA	Ilan	0.73	292	*e*P	Pg	22 12 22.4	-0.7
	baz=290						
ILA				*e*S	Sb	22 12 33.3	+0.3
	baz=290						
TIPB	Shuangxi	0.78	308	*i* P	Pg	22 12 23.8	-0.2

	baz=307						
TIPB				iS	Sg	22 12 34.3	+0.1
	baz=307						
TWE	**Neicheng**	**0.79**	**287**	iP	**Pb**	**22 12 23.6**	**-0.5**
	baz=285						
TWE				iS	**Sb**	**22 12 34.2**	**-0.4**
	baz=285						
ENTT	**Nioudou**	**0.86**	**280**	P	**Pb**	**22 12 25.4**	**+0.1**
	baz=278						
ENTT				S	**Sg**	**22 12 37.2**	**+0.3**
	baz=278						
ETL	**Fush Village**	**0.86**	**248**	P	**Pb**	**22 12 25.4**	**0.0**
	baz=244						
ETL				eS	**Sn**	**22 12 38.1**	**-0.5**
	baz=244						
NWF	**Wu-fen Shan**	**0.87**	**312**	⇑iP	**Pb**	**22 12 25.8**	**+0.2**
	baz=311						
NWF				iS	**Sg**	**22 12 37.5**	**+0.2**
	baz=311						
WFSB	**Wu-fen Shan**	**0.87**	**312**	P	**Pb**	**22 12 25.9**	**+0.3**
	baz=311						
WFSB				S	**Sg**	**22 12 37.4**	**+0.2**
	baz=311						
NACB	**Ninganchiao**	**0.88**	**249**	P	**Pb**	**22 12 25.6**	**-0.1**
	baz=246						
NACB				S	**Sn**	**22 12 38.8**	**-0.2**
	baz=246						
NDT	**Datong Townshi**	**0.90**	**277**	P	**Pb**	**22 12 25.5**	**-0.6**
	baz=275						
NDT				S	**Sb**	**22 12 38.2**	**+0.3**
	baz=275						
TWD	**Chiawan**	**0.92**	**244**	eP	**Pb**	**22 12 26.0**	**-0.3**
	baz=240						
TWD				eS	**Sn**	**22 12 39.6**	**-0.2**
	baz=240						
NWLT	**Wulai**	**0.95**	**288**	eP	**Pg**	**22 12 27.3**	**+0.1**
	baz=286						
NWLT				eS	**Sb**	**22 12 39.0**	**-0.2**
	baz=286						
HWA	**Hwalien**	**0.96**	**238**	eP	**Pn**	**22 12 27.8**	**+0.2**
	baz=235						
HWA				eS	**Sn**	**22 12 41.0**	**0.0**
	baz=235						
TWA	**Mucha**	**0.96**	**301**	P	**Pb**	**22 12 26.9**	**-0.2**
	baz=300						
TWA				S	**Sg**	**22 12 40.1**	**-0.1**
	baz=300						
ETLH	**Xiulin Townshi**	**0.97**	**253**	P	**Pb**	**22 12 27.5**	**+0.2**
	baz=250						
ETLH				S	**Sn**	**22 12 41.2**	**-0.1**
	baz=250						
NHDH	**Xindian Distri**	**1.00**	**298**	eP	**Pb**	**22 12 27.5**	**-0.3**
	baz=297						
NHDH				eS	**Sg**	**22 12 41.6**	**+0.2**
	baz=297						
YHNB	**Yeheng**	**1.03**	**280**	P	**Pn**	**22 12 28.8**	**0.0**
	baz=278						
YHNB				S	**Sg**	**22 12 42.4**	**-0.1**
	baz=278						
NSK	**Sanguang**	**1.05**	**280**	iP	**Pb**	**22 12 28.8**	**+0.1**
	baz=278						
NSK				iS	**Sb**	**22 12 42.2**	**-0.1**
	baz=278						
YM01	**YM01**	**1.06**	**308**	P	**Pb**	**22 12 28.8**	**-0.1**
	baz=307						
YM01				S	**Sb**	**22 12 43.0**	**+0.3**
	baz=307						
TWY	**Chenhua**	**1.13**	**314**	P	**Pn**	**22 12 29.7**	**-0.3**
	baz=314						
TWY				S	**Sn**	**22 12 45.1**	**-0.1**
	baz=314						
IRIF	**Iriomote-Funau**	**1.14**	**98**	P	**Pn**	**22 12 29.4**	**-0.7**
IRIF				S	**Sb**	**22 12 44.6**	**0.0**
NTST	**Danshui**	**1.16**	**305**	eS	**Sb**	**22 12 45.7**	**+0.2**
	baz=304						
FUSS	**Fushou**	**1.17**	**258**	eP	**Pb**	**22 12 31.1**	**+0.3**
	baz=256						
FUSS				S	**Sg**	**22 12 46.7**	**0.0**
	baz=256						
WHF	**Hehuan Shan**	**1.17**	**253**	P	**Pn**	**22 12 31.4**	**+0.4**
	baz=250						
WHF				S	**Sg**	**22 12 47.0**	**0.0**
	baz=250						
ESL	**Shilin**	**1.18**	**235**	iP	**Pb**	**22 12 30.9**	**+0.1**
	baz=232						
ESL				S	**Sg**	**22 12 47.8**	**+0.7**
	baz=232						
PCYT	**Pengchaiyu**	**1.20**	**341**	eP	**Pn**	**22 12 30.9**	**0.0**
	baz=342						
PCYT				S	**Sb**	**22 12 46.9**	**+0.4**
	baz=342						
TWT	**Tachien**	**1.23**	**259**	eP	**Pg**	**22 12 32.6**	**0.0**
	baz=257						
TWT				S	**Sg**	**22 12 48.5**	**-0.1**
	baz=257						
TDCB	**Techi**	**1.24**	**259**	P	**Pg**	**22 12 32.9**	**0.0**
	baz=257						
TDCB				S	**Sg**	**22 12 49.6**	**+0.5**
	baz=257						
HATJ	**Hateruma jima**	**1.27**	**110**	P	**Pn**	**22 12 30.9**	**-1.0**
HATJ				eS	**Sb**	**22 12 48.0**	**-0.5**
EGFH	**Guangfu**	**1.27**	**230**	eP	**Pg**	**22 12 33.0**	**-0.4**
	baz=228						
EGFH				eS	**Sg**	**22 12 50.9**	**+0.9**
	baz=228						
CHGB	**Renai**	**1.28**	**251**	eP	**Pb**	**22 12 33.0**	**+0.4**
	baz=248						
CHGB				eS	**Sg**	**22 12 50.2**	**-0.1**
	baz=248						
NCU	**National Centr**	**1.28**	**292**	eP	**Pn**	**22 12 32.1**	**0.0**
	baz=291						
OWD	**Renai**	**1.32**	**246**	P	**Pb**	**22 12 33.2**	**-0.1**
	baz=244						
OWD				eS	**Sg**	**22 12 51.2**	**-0.2**
	baz=244						
LIOB	**Emei**	**1.36**	**277**	eP	**Pb**	**22 12 33.9**	**+0.1**
	baz=275						
LIOB				eS	**Sg**	**22 12 52.3**	**-0.4**
	baz=275						
HGSD	**Ruisui**	**1.40**	**225**	P	**Pn**	**22 12 33.9**	**+0.3**
	baz=222						
HGSD				eS	**Sg**	**22 12 53.4**	**-0.6**
	baz=222						
JKRS	**Kuro-shima**	**1.40**	**100**	P	**Pn**	**22 12 33.8**	**+0.1**
JKRS				S	**Sn**	**22 12 51.7**	**-0.2**
SBCB	**Hsinchu**	**1.41**	**283**	eS	**Sb**	**22 12 52.6**	**+0.2**
	baz=281						
HSN	**Hsinchu**	**1.42**	**283**	eP	**Pn**	**22 12 33.6**	**-0.4**
	baz=283						
WHP	**Taichung City**	**1.43**	**262**	eP	**Pg**	**22 12 36.2**	**-0.2**
	baz=260						
WHP				eS	**Sg**	**22 12 54.6**	**-0.4**
	baz=260						
EHY	**Hungye**	**1.45**	**228**	P	**Pn**	**22 12 34.7**	**+0.2**
	baz=225						
EHY				S	**Sb**	**22 12 54.0**	**+0.2**
	baz=225						
WCS	**Beigang Elemen**	**1.51**	**254**	eP	**Pn**	**22 12 35.7**	**+0.5**
	baz=251						
WCS				eS	**Sb**	**22 12 55.6**	**+0.3**
	baz=251						
JIJ	**Ishigaki jima**	**1.51**	**94**	P	**Pn**	**22 12 34.7**	**-0.5**
JIJ				S	**Sn**	**22 12 53.2**	**-1.3**
YULB	**Yu-li**	**1.55**	**225**	eP	**Pn**	**22 12 35.7**	**0.0**
	baz=223						
YULB				eS	**Sb**	**22 12 56.5**	**0.0**
	baz=223						
EYUL	**Yuli**	**1.56**	**224**	eP	**Pb**	**22 12 37.1**	**-0.3**
	baz=221						
EYUL				eS	**Sb**	**22 12 57.6**	**+0.6**
	baz=221						
SSLB	**Suanglung**	**1.57**	**244**	eP	**Pb**	**22 12 37.2**	**-0.3**
	baz=242						
SSLB				eS	**Sb**	**22 12 58.3**	**+1.1**
	baz=242						
TYC	**Yuchr**	**1.60**	**249**	eP	**Pb**	**22 12 37.9**	**-0.3**
	baz=247						
TYC				eS	**Sb**	**22 12 58.3**	**+0.2**
	baz=247						
JISG	**Ishigakijimahi**	**1.66**	**86**	P	**Pn**	**22 12 37.3**	**+0.1**
JISG				S	**Sn**	**22 12 58.7**	**+0.5**
FULB	**Fuli**	**1.69**	**221**	eP	**Pn**	**22 12 37.9**	**+0.1**
	baz=219						
FULB				eS	**Sb**	**22 13 00.6**	**-0.1**
	baz=219						
ALS	**Alishan**	**1.83**	**238**	eP	**Pb**	**22 12 41.9**	**-0.2**
	baz=236						
ELDTW	**Lidau**	**1.87**	**227**	eP	**Pn**	**22 12 40.5**	**+0.2**
	baz=224						
ELDTW				eS	**Sb**	**22 13 05.1**	**-0.9**
	baz=224						
CHN5	**Tsauling**	**1.88**	**242**	eP	**Pn**	**22 12 41.6**	**+1.2**
	baz=240						
CHN5				eS	**Sn**	**22 13 05.1**	**+1.2**
	baz=240						
LONT	**Longtian**	**2.01**	**219**	eP	**Pn**	**22 12 43.6**	**+1.4**
	baz=217						
JTJ	**Tarama**	**2.02**	**85**	P	**Pn**	**22 12 42.4**	**+0.2**
JTJ				eS	**Sn**	**22 13 06.7**	**-0.3**
STYH	**Taoyuan**	**2.05**	**231**	eP	**Pb**	**22 12 44.6**	**-1.1**
	baz=228						
STYH				eS	**Sb**	**22 13 09.6**	**-1.3**
	baz=228						
TPUB	**Ta-pu**	**2.08**	**236**	eP	**Pb**	**22 12 44.8**	**-1.4**
	baz=234						
TPUB				eS	**Sn**	**22 13 10.1**	**+1.4**
	baz=234						
CHN1	**Nanshi**	**2.22**	**235**	eP	**Pn**	**22 12 46.7**	**+1.7**
	baz=233						
SNST	**Tainan City**	**2.22**	**236**	eP	**Pb**	**22 12 47.0**	**-1.6**
	baz=234						
SGST	**Jiashian**	**2.24**	**232**	eP	**Pn**	**22 12 46.0**	**+0.7**
	baz=230						

KRSC 24 22:17:23.5±1.2**, 51°.00N×157°.95E, h49^{km}±17^{km}, ML3.8, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDTR	**Khodutka, Kamc**	**0.82**	**6**	eP	Pn	22 17 40.1	+1.4
KDTR				eS	Sn	22 17 51.0	+1.2
PAU	**Pauzhetka**	**0.85**	**304**	eP	Pn	22 17 40.7	+1.5
PAU				eS	Sn	22 17 52.4	+1.7
SKR	**Severo-Kuril's**	**1.20**	**256**	eP	Pn	22 17 44.9	+1.0
SKR				eS	Sn	22 17 59.5	+0.5
ASAK	**Asacha**	**1.39**	**359**	eP	Pn	22 17 48.2	+1.7
ASAK				eS	Sn	22 18 05.2	+1.5
MIPR	**Malaya Ipel'ka**	**1.48**	**330**	eP	Pn	22 17 50.2	+2.5
MIPR				eS	Sn	22 18 08.9	+3.0
RUS	**Russkaya**	**1.48**	**14**	eP	Pn	22 17 49.2	+1.5
RUS				eS	Sn	22 18 06.1	+0.3
MTVR	**Mutnovka**	**1.50**	**6**	eP	Pn	22 17 50.0	+2.0
MTVR				eS	Sn	22 18 08.2	+1.8
APC	**Apacha**	**1.99**	**346**	eP	Pn	22 17 57.2	+2.6
PET	**Petropavlovsk**	**2.08**	**12**	eP	Pn	22 17 58.4	+2.6
PET				eS	Sn	22 18 22.8	+2.4
DALK	**Dalny**	**2.10**	**13**	eP	Pn	22 17 58.4	+2.3
DALK				eS	Sn	22 18 22.6	+1.7
UGLR	**Uglovaya**	**2.28**	**13**	eP	Pn	22 18 02.3	+3.6
UGLR				eS	Sn	22 18 29.2	+3.6
AVH	**Avacha**	**2.32**	**12**	eP	Pn	22 18 03.5	+4.2
AVH				eS	Sn	22 18 30.7	+4.1
SMAR	**Somma**	**2.33**	**13**	eP	Pn	22 18 03.5	+4.0
KOK	**Koryaka**	**2.34**	**10**	eP	Pn	22 18 03.2	+3.7
SDLR	**Sedlovina**	**2.36**	**14**	eP	Pn	22 18 02.6	+2.8
KRER	**Koryakskii**	**2.36**	**12**	eP	Pn	22 18 03.2	+3.3
KRER				eS	Sn	22 18 30.4	+2.6
SPN	**Mys Shipunski**	**2.46**	**31**	eP	Pn	22 18 04.6	+3.5
SPN				eS	Sn	22 18 32.7	+2.7
GNL	**Ganaly**	**2.70**	**360**	eP	Pn	22 18 07.8	+3.3
KII	**Karymskiy**	**3.18**	**16**	eP	Pn	22 18 15.3	+4.3
KII				eS	Sn	22 18 50.8	+3.1
MKZ	**Mys Kozlova**	**4.24**	**31**	eP	Pn	22 18 27.6	+2.2
KMNR	**Kamenistaya**	**4.96**	**15**	eP	Pn	22 18 39.1	+3.7
KBTR	**Krutoberegovo**	**5.97**	**27**	eP	Pn	22 18 52.4	+3.2

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*IPEC **24** 22:18:47.7±0.1, 50°.18N×19°.14E, h1^{km}±1^{km}, ML2.8/3, Error ellipse: s-maj=2.5km s-min=0.8km az=168.0*

*VIE **24** 22:18:47.2±0.6, 50°.31N×19°.19E, h0^{km}, mb2.6/3, ml2.5/4, Error ellipse: s-maj=5.4km s-min=5.1km az=179.0 7 km NE of Sosnowice Suspected Mining induced.*

*PRU **24** 22:18:48.1±0.0, 50°.17N×19°.14E, h0^{km}*

ISC 24 22:18:47.8±0.8**, 50°.09N**±0°.03×**19°.16E**±0°.02**, h0^{km}, n45, σ0^s.93**/74**, 6C-3D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.43**	**72**	ePg	**Pg**	**22 18 55.7**	**-0.4**
OJC				eSg	**Sg**	**22 19 01.8**	**0.0**
OKC	**Ostrava-Krasne**	**0.70**	**250**	ePG	**Pg**	**22 19 01.7**	**+0.6**
OKC				eSG	**Sg**	**22 19 11.5**	**+1.3**
	comp=Z,52nm,0.4s						
NIE	**Niedzica**	**1.00**	**132**	ePg	**Pb**	**22 19 08.2**	**+0.2**
NIE				eSg	**Sn**	**22 19 22.9**	**-1.1**
MORC	**Moravsky Berou**	**1.09**	**254**	⇓P	**Pb**	**22 19 09.3**	**-0.2**
MORC				⇑S	**Sb**	**22 19 24.3**	**+0.1**
MORC	**Moravsky Berou**	**1.09**	**254**	ePg	**Pg**	**22 19 08.9**	**+0.3**
	baz=68						
MORC				eSg	**Sg**	**22 19 22.3**	**-0.4**
	118nm,0.6s,baz=68						
STHS	**Stebnicka Huta**	**1.51**	**115**	ePN	**Pg**	**22 19 17.2**	**+0.4**
STHS				eSN	**Sn**	**22 19 38.9**	**+2.4**
KRLC	**Kraliky**	**1.53**	**271**	ePG	**Pn**	**22 19 15.2**	**-1.2**
KRLC				eSG	**Sn**	**22 19 37.1**	**+0.1**
	comp=Z,52nm,0.6s						
JAVC	**Velka Javorina**	**1.56**	**219**	ePn	**Pb**	**22 19 17.6**	**0.0**
	baz=35						
JAVC	**Velka Javorina**	**1.56**	**219**	ePN	**Pg**	**22 19 17.7**	**-0.1**
VYHS	**Vyhne**	**1.61**	**188**	ePN	**Pn**	**22 19 17.3**	**-0.2**
VYHS				eSN	**Sn**	**22 19 39.0**	**+0.1**
VYHS				eLG	Lg	22 19 41.5	
KECS	**Kecovo**	**1.82**	**151**	eSN	**Sn**	**22 19 43.4**	**-0.8**
KECS				eLG	Lg	22 19 48.1	
VRAC	**Vranov**	**1.84**	**246**	⇑P	**Pb**	**22 19 22.2**	**0.0**
VRAC				⇓S	**Sg**	**22 19 47.3**	**+0.5**
VRAC	**Vranov**	**1.84**	**246**	ePn	**Pn**	**22 19 20.9**	**+0.3**
	baz=61						
VRAC				eSg	**Sb**	**22 19 46.2**	**+0.5**
	60nm,1.0s,baz=61						
VRAC	**Vranov**	**1.84**	**246**	ePN	**Pn**	**22 19 21.0**	**+0.3**
VRAC				eSG	**Sb**	**22 19 46.3**	**+0.5**
DPC	**Dobruska-Polom**	**1.84**	**279**	ePG	**Pn**	**22 19 20.4**	**-0.3**
DPC				eSG	**Sg**	**22 19 46.4**	**-0.5**
	comp=Z,63nm,0.7s						
CRVS	**Cervenica-Dubn**	**1.91**	**127**	ePN	**Pb**	**22 19 23.9**	**+0.3**
CRVS				eSN	**Sg**	**22 19 48.7**	**-0.6**
SMOL	**Smolenice**	**1.94**	**216**	eSN	**Sb**	**22 19 47.9**	**-0.8**
OSTC	**Ostas**	**1.94**	**285**	ePG	**Pb**	**22 19 23.2**	**-0.9**
OSTC				eSG	**Sg**	**22 19 50.5**	**+0.3**
	comp=Z,52nm,0.9s						
KSP	**Ksiaz**	**1.98**	**294**	ePg	**Pb**	**22 19 24.5**	**-0.2**
KSP				eSg	**Sb**	**22 19 49.8**	**-0.1**
CHVC	**Chvalec**	**2.05**	**285**	ePG	**Pb**	**22 19 24.8**	**-1.1**
CHVC				eSG	**Sg**	**22 19 53.9**	**+0.3**
	comp=Z,50nm,1.0s						
UPC	**Upice**	**2.06**	**283**	ePG	**Pb**	**22 19 26.0**	**-0.1**
UPC				eSG	**Sg**	**22 19 53.7**	**-0.2**
	comp=Z,53nm,1.1s						
KRUC	**Moravsky**	**2.07**	**241**	ePn	**Pn**	**22 19 24.0**	**+0.3**
	baz=57						
KRUC				eSg	**Sg**	**22 19 53.6**	**-0.6**
	58nm,1.2s,baz=57						
KRUC	**Moravsky**	**2.07**	**241**	ePN	**Pn**	**22 19 24.1**	**+0.3**
KRUC				eSG	**Sg**	**22 19 53.7**	**-0.5**
MODS	**Modra-Piesok**	**2.11**	**216**	ePN	**Pn**	**22 19 24.9**	**+0.5**
MODS				eSN	**Sn**	**22 19 50.4**	**-0.9**
PSZ	**Piszkesteto**	**2.22**	**167**	⇑P	**Pb**	**22 19 28.0**	**-0.9**
PSZ	**Piszkesteto**	**2.22**	**167**	eS	**Sn**	**22 19 53.9**	**-0.3**
KOLS	**Kolonicke sedl**	**2.34**	**118**	ePG	**Pg**	**22 19 33.7**	**+1.1**
KOLS				eSN	**Sn**	**22 19 58.2**	**+1.3**
SRO	**Srobarova**	**2.34**	**194**	eSG	**Sb**	**22 20 00.4**	**+0.1**
TREC	**Trest**	**2.51**	**253**	eSG	**Sg**	**22 20 09.6**	**+1.2**
	comp=Z,23nm,0.7s						
TRPA	**Tarpa**	**2.96**	**130**	⇑P	**Pb**	**22 19 40.5**	**-0.9**
PVCC	**Panska Ves**	**2.97**	**280**	ePG	**Pb**	**22 19 41.8**	**+0.2**
PVCC				eSG	**Sg**	**22 20 22.6**	**-0.7**
	comp=Z,24nm,0.5s						
PRU	**Pruhonice**	**2.98**	**270**	ePG	**Pb**	**22 19 42.9**	**+1.2**
PRU				eSG	**Sg**	**22 20 22.3**	**-1.1**
	comp=Z,15nm,0.8s						
PRA	**Prague**	**3.04**	**272**	eSG	**Sg**	**22 20 24.5**	**-1.0**
	comp=Z,16nm,0.7s						
CONA	**Conrad Observa**	**3.06**	**226**	ePn	**Pn**	**22 19 37.2**	**-0.3**
	0.5nm,0.3s						
CONA				eSn	**Sb**	**22 20 18.5**	**-2.6**
	4.8nm,0.5s						
CKRC	**Cesky Krumlov**	**3.41**	**250**	ePG	**Pb**	**22 19 50.5**	**+1.5**
CKRC				eSG	**Sg**	**22 20 37.3**	**+0.1**
BRG	**Berggiesshubel**	**3.42**	**285**	Pg	**Pb**	**22 19 50.7**	**+1.5**
BRG				Sg	**Sg**	**22 20 37.9**	**+0.2**
BRG				Amp		22 20 42.9	
	comp=Z,14nm,0.6s						
ARSA	**Arzberg**	**3.72**	**222**	eSn	**Sb**	**22 20 36.7**	**-3.3**
	comp=Z,5.3nm,1.0s						
ARSA				Sg	Sg	22 20 57.7	+10
	comp=Z,2.3nm,0.5s						
KHC	**Kasperske Hory**	**3.75**	**257**	ePN	**Pn**	**22 19 46.5**	**-0.4**
KHC				ePG	**Pg**	**22 19 59.5**	**-0.2**
KHC				eSG	**Sg**	**22 20 49.0**	**+0.8**
	comp=Z,18nm,0.6s						
MOA	**Molln**	**3.92**	**237**	ePn	**Pn**	**22 19 48.6**	**-0.6**
	comp=Z,0.3nm,0.1s						
CLL	**Collm**	**4.10**	**290**	eSg	**Sg**	**22 20 58.0**	**-1.4**
	comp=Z,13nm,0.9s						
SIRR	**Siria**	**4.17**	**155**	⇑P	**Pn**	**22 19 53.1**	**+0.4**
NKC	**Novy Kostel**	**4.32**	**275**	eSG	**Sg**	**22 21 06.5**	**+0.1**
	comp=Z,8.2nm,0.4s						
BZS	**Buzias**	**4.77**	**159**	⇓P	**Pn**	**22 20 00.4**	**-0.5**
KBA	**Koelnbreinsper**	**4.89**	**234**	ePn	**Pn**	**22 20 03.3**	**+0.5**
	comp=Z,0.6nm,0.3s						
KBA				eSn	**Sn**	**22 21 02.6**	**+2.5**
	comp=Z,1.4nm,0.6s						
GZR	**Gura Zlata**	**5.29**	**151**	⇑P	**Pn**	**22 20 09.1**	**+1.0**

ATH 24 22:32:42.0, 38°.79N×20°.62E, h8^{km}±3^{km}, ML1.4/1, Error ellipse: s-maj=4.0km s-min=1.4km az=71.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKD2	**Lefkada island**	**0.03**	**95**	P	Pg	22 32 43.3	-0.3
LKD2				S	Sg	22 32 44.2	-0.5
LKD2				AML	AML	22 32 44.5	
	comp=N,1106μm,0.1s						
LKD2				AML	AML	22 32 44.5	
	comp=E,1043μm,0.1s						
TSLK	**Tsoukalades, L**	**0.04**	**37**	P	Pg	22 32 43.7	+0.1
TSLK				S	Sg	22 32 45.2	+0.3
NYDR	**Nydri-Lefkada**	**0.10**	**143**	P	Pg	22 32 44.1	-0.2
NYDR				S	Sg	22 32 46.0	+0.1
DRAG	**Dragano-Lefkad**	**0.11**	**200**	P	Pg	22 32 44.3	-0.3
DRAG				S	Sg	22 32 46.5	+0.1
EVGI	**Lefkada island**	**0.17**	**171**	P	Pg	22 32 45.7	+0.2
EVGI				S	Sg	22 32 48.5	+0.6

THE 24 22:33:24.3, 38°.65N×20°.59E, h9^{km}±1^{km}, ML1.8/1, Error ellipse: s-maj=1.1km s-min=0.4km az=98.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRAG	**Dragano-Lefkad**	**0.03**	**336**	P	Pg	22 33 25.7	-0.4
DRAG				S	Sg	22 33 27.2	-0.1
EVGI	**Lefkada island**	**0.06**	**123**	P	Pg	22 33 26.2	-0.1
EVGI				S	Sg	22 33 27.8	+0.1
	1μm,0.1s						
NYDR	**Nydri-Lefkada**	**0.10**	**54**	P	Pg	22 33 26.5	-0.3
NYDR				S	Sg	22 33 28.6	0.0
LKD2	**Lefkada island**	**0.14**	**21**	P	Pg	22 33 27.2	-0.3
LKD2				S	Sg	22 33 30.0	+0.2
TSLK	**Tsoukalades, L**	**0.18**	**16**	P	Pg	22 33 28.0	-0.1
TSLK				S	Sg	22 33 31.3	+0.6
FSK	**Fiskardo**	**0.20**	**187**	P	Pg	22 33 28.3	0.0
FSK				S	Sg	22 33 31.6	+0.5

NEIC 24 22:38:12.8±0.9**, 36°.09N**±0°.01×**97°.65W**±0°.01**, h5^{km}±7^{km}, mb_Lg2.5**/5**, Error ellipse: s-maj=2.3km s-min=0.9km az=149.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK029	**Liberty Lake**	**0.33**	**152**	Pg	Pg	22 38 19.2	0.0
OK029				Sg	Sg	22 38 24.0	+0.4
BCOK	**Bluff Creek, N**	**0.43**	**176**	Pg	Pg	22 38 21.0	-0.2
BCOK				Sg	Sg	22 38 27.2	+0.4
CROK	**Carrier**	**0.50**	**327**	Pg	Pg	22 38 22.7	+0.3
OK025	**Westminster Rd**	**0.56**	**154**	Pg	Pg	22 38 23.6	0.0
OKCSW	**OKLAHOMA CITY**	**0.70**	**166**	Pg	Pg	22 38 26.3	-0.1
BLOK	**Blackwell**	**0.76**	**27**	Pg	Pg	22 38 27.5	+0.2
QUOK	**Quay**	**0.76**	**84**		Pg	22 38 27.5	0.0
QUOK				Sg	Sg	22 38 38.0	+0.6
GC02	**Grant County #**	**0.78**	**347**	Pg	Pg	22 38 27.9	+0.1
OK032	**Salt Plains WL**	**0.85**	**328**	Pg	Pg	22 38 29.0	-0.1
FNO	**Franklin**	**0.85**	**166**	Pg	Pg	22 38 28.8	-0.4
KAN14	**Manchester OK**	**0.90**	**344**	Pg	Pg	22 38 30.1	-0.1
KAN13	**South Haven SW**	**0.93**	**8**	Pg	Pg	22 38 29.5	-1.2
W35A	**Tecumseh**	**1.13**	**146**	Pg	Pg	22 38 33.2	-1.2
U32A	**Winter Ranch,**	**1.13**	**285**	Pg	Pg	22 38 34.3	-0.3
T35A	**Sooner Cattle**	**1.23**	**48**		Pg	22 38 36.0	-0.5
X34A	**Smith Ranch, M**	**1.49**	**186**	Pn	Pn	22 38 40.6	+0.3
TUL1	**Leonard**	**1.51**	**96**	Pn	Pn	22 38 39.8	-0.9
WMOK	**Wichita Mounta**	**1.64**	**215**		Pn	22 38 42.1	-0.2
HHAR	**Hobbs**	**3.00**	**85**	Pn	Pn	22 39 01.0	-0.1
CBKS	**Cedar Bluff**	**3.19**	**329**		Pn	22 39 05.3	+1.6
MIAR	**Mount Ida**	**3.67**	**114**	Pn	Pn	22 39 11.0	+0.8
S39A	**Bolivar**	**3.82**	**64**		Pn	22 39 12.8	+0.5
X40A	**Basin Creek Fa**	**4.25**	**111**	IAmb_Lg		22 40 27.9	
	comp=Z,12nm,0.9s						
WHAR	**Wooly Hollow**	**4.43**	**99**	IAmb_Lg		22 40 37.4	
	comp=Z,9.8nm,1.2s						
JCT	**Junction City**	**5.88**	**198**	IAmb_Lg		22 41 28.9	
	comp=Z,7.8nm,0.8s						

ATH 24 22:40:44.6, 38°.48N×20°.58E, h5^{km}±2^{km}, ML1.8/1, Error ellipse: s-maj=2.8km s-min=0.7km az=109.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FSK	**Fiskardo**	**0.03**	**204**	P	Pg	22 40 45.7	0.0
FSK				S	Sg	22 40 46.3	-0.1
FSK				AML	AML	22 40 46.9	
	comp=N,3871μm,0.3s						
FSK				AML	AML	22 40 47.0	
	comp=E,4095μm,0.2s						
EVGI	**Lefkada island**	**0.15**	**25**	P	Pg	22 40 47.6	-0.1
EVGI				S	Sg	22 40 50.2	+0.5
DRAG	**Dragano-Lefkad**	**0.20**	**360**	P	Pg	22 40 48.2	-0.4
DRAG				S	Sg	22 40 51.8	+0.5
NYDR	**Nydri-Lefkada**	**0.25**	**23**	P	Pg	22 40 49.2	-0.3
NYDR				S	Sg	22 40 53.0	+0.2
KEF4	**Livadi, Kephal**	**0.26**	**208**	P	Pg	22 40 49.4	-0.2
KEF4				S	Sg	22 40 53.3	+0.4
DMLN	**Damoulianata-K**	**0.29**	**213**	P	Pg	22 40 50.0	-0.3
DMLN				S	Sg	22 40 54.4	+0.2
VLS	**Valsamata**	**0.31**	**178**	P	Pg	22 40 50.5	-0.1
VLS				S	Sg	22 40 55.0	+0.4
KEF3	**Kipouria, Keph**	**0.33**	**213**	P	Pg	22 40 50.4	-0.7
KEF3				S	Sg	22 40 55.5	+0.1

THE 24 22:41:43.4, 38°.79N×20°.69E, h10^{km}±1^{km}, ML1.5/1, Error ellipse: s-maj=1.7km s-min=0.7km az=269.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKD2	**Lefkada island**	**0.03**	**260**	P	Pg	22 41 44.8	-0.4
LKD2				S	Sg	22 41 45.9	-0.6
TSLK	**Tsoukalades, L**	**0.04**	**317**	P	Pg	22 41 45.3	0.0
TSLK				S	Sg	22 41 46.9	+0.3
NYDR	**Nydri-Lefkada**	**0.08**	**177**	P	Pg	22 41 45.7	+0.1
NYDR				S	Sg	22 41 47.5	+0.3
DRAG	**Dragano-Lefkad**	**0.14**	**220**	P	Pg	22 41 46.6	0.0
DRAG				S	Sg	22 41 49.1	+0.3
EVGI	**Lefkada island**	**0.17**	**189**	P	Pg	22 41 47.0	-0.1
EVGI				S	Sg	22 41 50.0	+0.3
	245nm,0.3s						
FSK	**Fiskardo**	**0.35**	**197**	P	Pg	22 41 49.9	-0.4

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*KRNET **24** 22:43:04.5±0.1, 40°.41N×73°.25E, h20^{km}, mb2.9*

*SOME **24** 22:43:05.2, 40°.58N×73°.23E, h0^{km}*

*NNC **24** 22:43:07.9±1.9, 40°.59N×73°.30E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=16.5km s-min=8.9km az=171.0*

ISC 24 22:43:03.0±1.2**, 40°.39N**±0°.03×**73°.45E**±0°.02**, h5^{km}±11^{km}, n39, σ1^s.08**/65**, 26C-6D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**0.38**	**173**	⇑eP	**Pb**	**22 43 13.1**	**+0.7**
	baz=53						
SFK				⇑eS	**Sb**	**22 43 19.6**	**+0.9**

	baz=53						
OHH	Osh	0.52	285	*e*P	Pg	22 43 12.0	-1.0
OHH				*e*S	Sg	22 43 17.0	-2.8
OHH	Osh	0.52	285	⇑*e*P	Pg	22 43 12.3	-0.7
	baz=89						
OHH				⇑*e*S	Sg	22 43 17.6	-2.2
	baz=89						
NAM	Namangan	1.48	294	*e*S	Sg	22 43 51.0	+0.3
DRK	Karamyk	1.56	235	⇑*i*P	Pn	22 43 31.1	-0.5
	baz=31						
DRK				⇑*i*S	Sn	22 43 50.6	-1.8
	baz=31						
AML	Almayashu	1.75	6	⇓*i*P	Pg	22 43 36.7	+0.2
	baz=11						
AML				⇓*i*S	Sg	22 44 00.2	+1.1
	baz=11						
UCH	Uchtor	2.00	23	⇑*i*P	Pg	22 43 41.0	-0.3
	baz=27						
UCH				⇑*e*S	Sg	22 44 07.7	+0.4
	baz=27						
BTK	Batken	2.04	261	*e*P	Pn	22 43 39.0	+0.9
BTK				*e*S	Sb	22 44 06.0	-0.3
BTK	Batken	2.04	261	⇑*i*P	Pn	22 43 38.7	+0.6
	baz=60						
BTK				⇑*i*S	Sn	22 44 03.6	-0.4
	baz=60						
TRKS	Terek-Say	2.08	304	⇓*i*P	Pn	22 43 38.8	+0.1
	baz=5.0						
TRKS				⇓*i*S	Sn	22 44 03.7	-1.5
	baz=5.0						
MNAS	Manas	2.21	342	⇑*i*P	Pb	22 43 42.5	-1.0
	baz=45						
MNAS				⇑*i*S	Sb	22 44 10.0	-1.2
	baz=45						
EKS2	Erkin-Say	2.28	6	⇑*i*P	Pb	22 43 44.2	-0.5
	baz=10.0						
EKS2				⇑*i*S	Sb	22 44 12.8	-0.5
	baz=10.0						
MRKS	Merke	2.36	356	*e*P	Pb	22 43 46.6	+0.6
	3.3nm,0.2s						
MRKS				*e*S	Sb	22 44 16.4	+0.9
	58nm,0.4s						
MRKS	Merke	2.36	356	Pg	Pb	22 43 46.6	+0.6
	6.7nm,0.3s						
MRKS				Lg	Lg	22 44 16.4	
	58nm,0.4s						
AAK	Ala-Archa	2.38	19	Pn	Pg	22 43 48.8	+0.3
	3.7nm,0.3s						
AAK				Lg	Lg	22 44 19.8	
	30nm,0.5s						
AAK	Ala-Archa	2.38	19	⇑*e*P	Pb	22 43 45.8	-0.6
	baz=22						
AAK				⇑*e*S	Sb	22 44 16.0	-0.1
	baz=22						
FRU1	Bishkek	2.57	20	⇑*e*P	Pb	22 43 48.8	-0.9
	baz=22						
FRU1				⇑*i*S	Sb	22 44 21.2	-0.5
	baz=22						
GAR	Garm	2.79	241	⇑*i*P	Pn	22 43 49.2	+0.8
	baz=39						
GAR				⇑*i*S	Sn	22 44 21.9	-0.5
	baz=39						
BOOM	Boomskoye usch	2.81	41	⇑*e*P	Pb	22 43 52.8	-1.0
	baz=43						
BOOM				⇑*i*S	Sb	22 44 27.8	-0.8
	baz=43						
CHMG	Chimgan	2.85	295	*e*P	Pg	22 44 00.0	+2.5
CHMG				*e*S	Sb	22 44 30.0	+0.4
TKM2	Tokmak 2	3.00	32	⇑Pg	Pg	22 43 59.9	-0.5
	0.7nm,0.3s						
TKM2				⇓Lg	Lg	22 44 40.2	
	9.4nm,0.6s						
IUG	Iuzhnay	3.11	305	*e*P	Pb	22 43 59.9	+1.0
	249nm,0.2s						
IUG				*e*S	Sb	22 44 38.7	+1.5
	34nm,0.1s						
IUG	Iuzhnay	3.11	305	Pg	Pb	22 43 59.9	+1.0
	249nm,0.2s						
IUG				Lg	Lg	22 44 38.7	
	39nm,0.5s						
KST	Kastek	3.25	35	*e*P	Pg	22 44 05.8	+0.5
	0.9nm,0.0s						
KST				*e*S	Sg	22 44 49.1	+1.8
	8.9nm,0.2s						
MTBS	Maitube	3.53	38	*e*P	Pg	22 44 11.5	+0.9
	1.3nm,0.0s						
MTBS				*e*S	Sg	22 44 58.5	+2.2
	5.6nm,0.1s						
TNSS	Tian-Shan	3.72	44	*e*P	Pg	22 44 13.8	-0.5
	1.1nm,0.3s						
TNSS				*e*S	Sg	22 45 03.0	+0.5
	3.9nm,0.4s						
TNSS	Tian-Shan	3.72	44	Pg	Pg	22 44 13.5	-0.8
	1.1nm,0.3s						
TNSS				Lg	Lg	22 45 03.0	
	3.9nm,0.4s						
BRLS	Borolday	3.77	315	*e*P	Pb	22 44 10.6	+0.5
	7.9nm,0.1s						
BRLS				*e*S	Sb	22 44 57.0	+0.8
	7.2nm,0.1s						
KNDC	Almaty	3.86	42	⇑Pg	Pg	22 44 15.9	-1.0
	7.2nm,0.6s						
KNDC				⇓Lg	Lg	22 45 09.6	
	21nm,0.7s						
MDOK	Medeo	3.86	43	*e*P	Pg	22 44 17.4	+0.4
	1.6nm,0.2s						
MDOK				*e*S	Sg	22 45 09.2	+2.1
	4.2nm,0.3s						
MDOK	Medeo	3.86	43	Pg	Pg	22 44 16.5	-0.5
	1.5nm,0.6s						
MDOK				Lg	Lg	22 45 06.0	
	5.5nm,0.7s						
MDOK	Medeo	3.86	43	Pg	Pg	22 44 16.8	-0.2
	2.4nm,0.7s						
MDOK				Lg	Lg	22 45 08.6	
	4.8nm,0.6s						
KTBS	Karatobe	4.10	35	*e*P	Pg	22 44 21.2	-0.2
	1.2nm,0.4s						
KTBS				*e*S	Sg	22 45 15.6	+1.0
	10nm,0.5s						
KTBS	Karatobe	4.10	35	Pg	Pg	22 44 21.2	-0.2
	1.2nm,0.4s						
KTBS				Lg	Lg	22 45 15.6	
	10nm,0.5s						
KUU	Kurty	4.11	31	*e*P	Pg	22 44 20.8	-0.8
	1.4nm,0.3s						
KUU				*e*S	Sg	22 45 15.0	+0.2
	6.8nm,0.3s						
KUU	Kurty	4.11	31	Pg	Pg	22 44 20.8	-0.8
	1.5nm,0.8s						
KUU				Lg	Lg	22 45 15.0	
	5.0nm,0.5s						
CHKK	Chushkaly	4.35	36	*e*P	Pg	22 44 26.1	-0.1
	0.7nm,0.1s						
CHKK				*e*S	Sg	22 45 23.8	+1.2
	6.4nm,0.1s						
CHKK	Chushkaly	4.35	36	Pg	Pg	22 44 26.1	-0.1
	0.7nm,0.1s						
CHKK				Lg	Lg	22 45 23.8	
	5.4nm,0.4s						
PDGK	Podgornoye	5.38	55	⇑Pg	Pg	22 44 43.6	-2.5
	1.2nm,0.7s						
PDGK				⇑Lg	Lg	22 45 56.7	
	1.9nm,0.6s						

ARE ***24*** *22:45:25±6.2, 10°.8S±0°.1×71°.4W±0°.1, h636^{km}±5^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=77.0*

MOS ***24*** *22:45:36.6±1.0, 10°.51S×71°.01W, h597^{km}, mb7.0/5, Error ellipse: s-maj=7.2km s-min=5.1km az=84.2 Broadband fault plane solution: P waves. NP1:ϕ_s171.00000°, δ58.00000°, λ91.00000°. NP2:ϕ_s354.00000°, δ32.00000°, λ88.00000°. Principal axes: T Plg13.0000°, Azm262.0000°; N Plg1.0000°, Azm172.0000°; P Plg77.0000°, Azm77.0000°;*

VAO ***24*** *22:45:37.2±0.7, 10°.67S×71°.13W, h597^{km}±4^{km}, mb6.9*

GUC ***24*** *22:45:37.0, 10°.85S×71°.04W, h598^{km}, MW7.5*

BGR ***24*** *22:45:37.7±0.0, 10°.56S×70°.42W, h595^{km}±7^{km}, mb7.1, mB_BB7.5*

BJI ***24*** *22:45:37.0±0.0, 10°.62S×70°.91W, h610^{km}, mB7.2/47*

BDF ***24*** *22:45:38±2.7, 10°.53S±0°.07×70°.90W±0°.08, h600^{km}±3^{km}, Error ellipse: s-maj=10.6km s-min=10.0km az=80.0*

NEIC ***24*** *22:45:38.4, 10°.57S×70°.97W, h605^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{20}Nm; M_{rr}-2.39; $M_{\theta\theta}$0.08; $M_{\phi\phi}$2.31; $M_{r\theta}$-0.46; $M_{\theta\phi}$-0.76; $M_{\phi r}$0.29; Fault plane solution: $M_0$2.53000×10^{20} NP1:ϕ_s351.54000°, δ40.95000°, λ-76.82000°. NP2:ϕ_s154.32000°, δ50.35000°, λ-101.19000°. Principal axes: T 2.5834, Plg5.0000°, Azm252.0000°; N -0.1009, Plg9.0000°, Azm162.0000°; P -2.4825, Plg80.0000°, Azm11.0000°;*

IDC ***24*** *22:45:38.5±0.3, 10°.50S×70°.95W, h603^{km}±3^{km}, mb6.0/32, mb1 6.1/39, mb1mx6.1/40, mbtmp6.9/39 Error ellipse: s-maj=7.0km s-min=5.6km az=72.0*

NEIC ***24*** *22:45:38.9±2.8, 10°.54S±0°.07×70°.94W±0°.08, h606^{km}±3^{km}, mb6.9/596, Mwb7.5/78, Mww7.6, Mwc7.5(GCMT), Error ellipse: s-maj=11.8km s-min=10.4km az=73.0*

NEIC ***24*** *22:45:46, 10°.73S×71°.12W, h611^{km}, Moment Tensor Solution. Duration: 33^{s}2 Moment tensor: Scale 10^{20}Nm; M_{rr}-2.59; $M_{\theta\theta}$0.30; $M_{\phi\phi}$2.29; $M_{r\theta}$-0.46; $M_{\theta\phi}$-0.64; $M_{\phi r}$0.49; Fault plane solution: $M_0$2.62000×10^{20} NP1: ϕ_s350.00000°, δ39.00000°, λ-80.00000°. NP2: ϕ_s157.00000°, δ52.00000°, λ-98.00000°. Principal axes: T 2.5500, Plg7.0000°, Azm253.0000°; N 0.1432, Plg6.0000°, Azm162.0000°; P -2.6932, Plg81.0000°, Azm31.0000°;*

GCMT ***24*** *22:45:46.1±0.2, 10°.73S±0°.01×71°.12W±0°.02, h611^{km}±2^{km}, MW7.5/162, Moment Tensor Solution. s162, c428; Duration: 16^{s}6 Moment tensor: Scale 10^{20}Nm; M_{rr}-2.59±.02; $M_{\theta\theta}$0.30±.01; $M_{\phi\phi}$2.29±.02; $M_{r\theta}$-0.46±.01; $M_{\theta\phi}$-0.64±.02; $M_{\phi r}$0.49±.02; Best double couple: $M_0$2.62200×10^{20} NP1:ϕ_s350.00000°, δ39.00000°, λ-80.00000°. NP2:ϕ_s157.00000°, δ52.00000°, λ-98.00000°. Principal axes: T 2.5500, Plg7.0000°, Azm253.0000°; N 0.1440, Plg6.0000°, Azm162.0000°; P -2.6930, Plg81.0000°, Azm31.0000°; nsta1 refers to body waves. nsta2 refers to mantle waves, cutoff=150s. Triangular moment-rate function*

NEIC ***24*** *22:45:49, 10°.58S×70°.76W, h590^{km}, Moment Tensor Solution. Duration: 22^{s}0 Moment tensor: Scale 10^{20}Nm; M_{rr}-2.76; $M_{\theta\theta}$0.07; $M_{\phi\phi}$2.70; $M_{r\theta}$-0.26; $M_{\theta\phi}$-0.55; $M_{\phi r}$0.48; Fault plane solution: $M_0$2.84000×10^{20} NP1: ϕ_s352.00000°, δ40.00000°, λ-84.00000°. NP2: ϕ_s165.00000°, δ50.00000°, λ-94.00000°. Principal axes: T 2.8536, Plg5.0000°, Azm258.0000°; N -0.0326, Plg3.0000°, Azm168.0000°; P -2.8210, Plg84.0000°, Azm46.0000°;*

ISC 24 22:45:38.3±0.2**, 10°.62S**±0°.02×**70°.94W**±0°.03**, h609**^{km}±1^{km}**, h611**^{km}**:pP-P, n2770, σ1^{s}85**/3288**, mb6.8**/486**, 167C-832D, Fault plane solution: NP1:**ϕ_s7.20812°**,** δ44.49247°, λ-75.95852°. **NP2:**ϕ_s167.88751°**,** δ47.16610°, λ-103.40704°. **Principal axes:** T Plg1.3560°**,** Azm267.3267°**;** N Plg9.7898°**,** Azm177.0927°**;** P Plg80.1149°**,** Azm5.1339°**; Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CZSB	Cruzeiro do Su	3.36	329	*e*P	P	22 46 58.3	-2.2
CZSB	Cruzeiro do Su	3.36	329	P	P	22 46 58.2	-2.2
ETMB	Extrema	4.72	81	*e*P	P	22 47 08.9	-0.8
ETMB	Extrema	4.72	81	P	P	22 47 09.6	-0.2
NNA	Nana	5.94	256	P	P	22 47 17.9	-1.7
	909nm,0.3s,baz=71,slow=6.2,SNR=2074						
NNA				S	S	22 48 39.0	-3.3
	212nm,0.3s,baz=238,slow=22,SNR=5.7						
NNA				P3KPbc		23 23 54.7	
	1.2nm,0.3s,baz=189,slow=2.3,SNR=5.0						
NNA	Nana	5.94	256	⇑P	P	22 47 16.8	-2.8
I08BO	LAS PENAS INFR	6.07	157	P	P	22 47 20.0	-1.2
	baz=342,slow=13,SNR=1.7						
LPAZ	La Paz	6.26	154	P	P	22 47 22.5	-0.5
LPAZ	La Paz	6.26	154	P	P	22 47 22.4	-0.5
TBTG	Tabatinga, AM	6.47	9	⇓*i*P	P	22 47 23.8	-0.4
TBTG	Tabatinga, AM	6.47	9	P	P	22 47 23.8	-0.4
AP01	Chacalluta	7.73	176	⇓*e*P	P	22 47 32.9	-2.6
AP01				*i* S	S	22 49 05.4	-5.9
AP01	Chacalluta	7.73	176	P	P	22 47 32.9	-2.6
PB16	IPOC Station P	7.80	170	⇓*i*P	P	22 47 35.5	-1.3
PB16				*e*S	S	22 49 09.2	-4.4
PB16	IPOC Station P	7.80	170	P	P	22 47 35.3	-1.4
SAML	Samuel	7.83	78	P	P	22 47 36.5	0.0
SAML	Samuel	7.83	78	P	P	22 47 36.5	0.0
PB12	IPOC Station P	7.97	176	⇓*i*P	P	22 47 35.0	-2.8
PB12				*i* S	S	22 49 09.2	-6.5
PB12	IPOC Station P	7.97	176	P	P	22 47 35.0	-2.8
ATAH	Atahualpa	8.13	295	P	P	22 47 39.3	-0.5
	287nm,0.3s,baz=116,slow=7.4,SNR=1978						
ATAH				S	S	22 49 19.4	+0.2
	462nm,0.3s,baz=332,slow=18,SNR=1.6						
ATAH				P3KPbc		23 23 51.8	
	0.8nm,0.3s,baz=336,slow=3.9,SNR=3.8						
PB11	IPOC Station P	9.18	172	⇓*i*P	P	22 47 47.9	-1.5
PB11				*i* S	S	22 49 31.9	-4.9
PB11	IPOC Station P	9.18	172	P	P	22 47 47.8	-1.6
PB08	IPOC Station P	9.62	170	⇓*i*P	P	22 47 53.1	-0.9
PB08				*i* S	S	22 49 40.3	-4.9
PB08	IPOC Station P	9.62	170	P	P	22 47 53.1	-0.9
TA02	Huaiquique	9.63	175	⇓*i*P	P	22 47 52.6	-1.1
TA02				*e*S	S	22 49 40.1	-4.5
TA02	Huaiquique	9.63	175	P	P	22 47 52.5	-1.1
TA01	Diego Aracena	9.92	176	⇓*i*P	P	22 47 55.4	-1.0
TA01				*i* S	S	22 49 42.0	-7.8
TA01	Diego Aracena	9.92	176	P	P	22 47 55.6	-0.8
PB01	IPOC Station P	10.46	172	⇓*i*P	P	22 48 01.0	-0.8
PB01				*i* S	S	22 49 56.2	-3.5
PB01	IPOC Station P	10.46	172	P	P	22 48 01.1	-0.8
PB02	IPOC Station P	10.69	175	⇓*i*P	P	22 48 03.6	-0.6
PB02				*e*S	S	22 49 53.3	-11
VILB	Vilhena	10.77	103	*e*P	P	22 48 05.8	+0.8
VILB	Vilhena	10.77	103	P	P	22 48 05.9	+0.8
SIV	San Ignacio	10.99	120	P	P	22 48 07.5	+0.3
	3µm,0.3s,baz=294,slow=9.4						
SIV				S	S	22 50 09.4	+0.1
	baz=285,slow=15,SNR=7.5						
SIV				P3KPbc		23 23 41.8	
	1.4nm,0.3s,baz=180,slow=2.3,SNR=4.1						
PB07	IPOC Station P	11.09	175	⇓*i*P	P	22 48 07.6	-0.7
PB07				*e*S	S	22 50 05.8	-5.5
PB07	IPOC Station P	11.09	175	P	P	22 48 07.6	-0.7
PB09	IPOC Station P	11.23	172	⇓*i*P	P	22 48 09.4	-0.2
PB09				*e*S	S	22 50 11.8	-2.0
PB09	IPOC Station P	11.23	172	P	P	22 48 09.5	-0.2
PTLC	Puerto Leguiza	11.38	340	*e*P	P	22 48 03.4	-7.7
PB03	IPOC Station P	11.42	174	⇓*i*P	P	22 48 10.8	-0.7
PB03				*e*S	S	22 50 14.2	-3.0
PB04	IPOC Station P	11.68	176	⇓*i*P	P	22 48 13.1	-0.9
PB04				*e*S	S	22 50 17.7	-4.1
PB04	IPOC Station P	11.68	176	P	P	22 48 13.2	-0.8
LVC	Limon Verde	12.08	171	P	P	22 48 17.9	-0.3
	326nm,0.3s,baz=8.5,slow=7.1,SNR=307						
LVC				S	S	22 50 28.1	-1.5
	806nm,0.3s,baz=324,slow=22,SNR=9.8						
LVC				P3KPbc		23 23 37.5	
	0.1nm,0.3s,baz=50,slow=4.9,SNR=3.3						
LVC	Limon Verde	12.08	171	P	P	22 48 18.1	-0.2
LVC	Limon Verde	12.08	171	⇓P	P	22 48 17.9	-0.3
LVC	Limon Verde	12.08	171	P	P	22 48 18.1	-0.2
PB06	IPOC Station P	12.09	174	⇓*i*P	P	22 48 17.3	-0.8
PB06				*e*S	S	22 50 18.1	-11
PB06	IPOC Station P	12.09	174	P	P	22 48 17.3	-0.8
PB05	IPOC Station P	12.19	177	⇓*i*P	P	22 48 18.3	-0.7
PB05				*e*S	S	22 50 28.8	-2.2
PTLB	Pontes e Lacer	12.46	114	*e*P	P	22 48 22.4	+0.6
PTLB	Pontes e Lacer	12.46	114	P	P	22 48 22.4	+0.6
MACA	Manacapuru-AM	12.59	55	*e*P	P	22 48 22.6	-0.4
MACA	Manacapuru-AM	12.59	55	P	P	22 48 22.7	-0.4
PB15	IPOC Station P	12.60	174	⇓*i*P	P	22 48 22.7	-0.5
PB15				*i* S	S	22 50 39.0	+0.4
PB15	IPOC Station P	12.60	174	P	P	22 48 22.5	-0.7
PB10	IPOC Station P	12.83	178	*i* P	P	22 48 24.8	-0.5
PB10				*i* S	S	22 50 37.3	-5.1
PB10	IPOC Station P	12.83	178	P	P	22 48 24.8	-0.5
MACC	Macarena, Meta	13.01	347	⇑*e*P	P	22 48 23.5	-3.7
OTAV	Otavalo	13.12	325	P	P	22 48 27.6	-1.2
OTAV	Otavalo	13.12	325	⇑*i*P	P	22 48 27.9	-0.9
OTAV	Otavalo	13.12	325	⇑P	P	22 48 27.7	-1.2
OTAV	Otavalo	13.12	325	P	P	22 48 27.6	-1.2
CUSE	Cuicocha Este	13.14	325	⇑*i*P	P	22 48 28.4	-0.6
TULM	Tulcn-Chalpat	13.16	328	⇑*i*P	P	22 48 28.9	-0.4
GUVC	San Jose del G	13.18	353	*e*P	P	22 48 27.1	-1.9
CPAS2	Pasto	13.33	332	*e*P	P	22 48 30.8	-0.1
PAC1	Pacto, Paraso	13.34	324	⇑*i*P	P	22 48 29.7	-1.0
CPAS1	Pasto	13.34	331	*e*P	P	22 48 31.3	+0.3
CMBC	Cumbal	13.37	329	*e*P	P	22 48 31.7	+0.3
GCUF	Volcan Galeras	13.38	331	⇑*i*P	P	22 48 30.7	-0.8
CCUFI	Cufio, Nario	13.38	331	⇑*e*P	P	22 48 30.9	-0.6
GARC	Garzon, Huila	13.50	340	*e*P	P	22 48 29.8	-2.7
SOTA	Rioblanco	13.87	336	⇑*i*P	P	22 48 35.1	-1.3
PB14	IPOC Station P	13.94	178	⇓*i*P	P	22 48 36.0	-0.6
PB14				IAmb	IAmb	22 48 44.1	
	comp=Z,13µm,1.2s						
PB14	IPOC Station P	13.94	178	P	P	22 48 36.1	-0.6
BETC	Betania	13.95	341	*e*P	P	22 48 35.1	-1.5
PCON	Cinco Dias	13.96	337	⇑*e*P	P	22 48 35.7	-1.6
PDRB	Porto dos Gac	13.98	95	*e*P	P	22 48 37.5	+0.6
MARP	Paez Belalcaza	14.27	339	⇑*i*P	P	22 48 36.8	-3.1
TUMC	Tumaco	14.59	327	⇑*i*P	P	22 48 41.7	-0.9
TUMC	Tumaco	14.59	327	P	P	22 48 41.4	-1.1
PTGA	Pitinga	14.68	49	P	P	22 48 43.5	+0.1
	comp=Z,946nm,0.3s,baz=239,slow=13,SNR=4033						
PTGA				S	S	22 51 17.1	+2.7
	comp=Z,422nm,0.3s,baz=9.0,slow=24,SNR=8.6						
PTGC	Puerto Gaitan,	14.77	355	*e*P	P	22 48 43.0	-1.2
PRAC	Prado	14.77	344	*e*P	P	22 48 42.2	-2.1
CLDB	Colider	14.89	92	*e*P	P	22 48 45.9	+0.6
VILC	Villavicencio,	14.89	349	*e*P	P	22 48 44.7	-0.7
ORTC	Ortega, Tolima	15.05	343	⇑*i*P	P	22 48 45.3	-1.5
YOTC	Yotoco, Valle	15.47	339	⇑*i*P	P	22 48 49.0	-1.7
ANIL	Santa Ana	15.65	343	*e*P	P	22 48 51.0	-1.6
ROSC	El Rosal	15.72	347	P	P	22 48 54.1	+0.8
	comp=Z,494nm,0.3s,baz=253,slow=4.5,SNR=115						
ROSC				S	S	22 51 35.7	+3.7
	comp=Z,143nm,0.3s,baz=183,slow=21,SNR=2.2						
ROSC				P3KPbc		23 23 30.6	
	comp=Z,4.2nm,0.3s,baz=310,slow=13,SNR=5.3						
ROSC	El Rosal	15.72	347	*e*P	P	22 48 53.5	+0.2
ROSC	El Rosal	15.72	347	P	P	22 48 53.1	-0.1
SALV	Santo Antonio	15.74	111	*e*P	P	22 48 54.8	+1.8
NPGB	Novo Progresso	15.80	78	*e*P	P	22 48 54.5	+0.9
AC02	Maricunga	16.22	174	⇓*i*P	P	22 48 59.0	+1.2
AC02				IAmb	IAmb	22 49 05.8	
	comp=Z,25µm,1.4s						
AC02	Maricunga	16.22	174	P	P	22 48 58.8	+0.9
ITTB	Itaituba	16.30	69	*e*P	P	22 48 59.2	+1.0
PLMC	San Jos del P	16.31	341	*e*P	P	22 48 57.5	-0.8
SPBC	San Pablo de B	16.46	349	⇓*i*P	P	22 48 59.0	-0.7
RUSC	La Rusia	16.54	353	*e*P	P	22 49 00.9	0.0
NORC	Norcasia	16.54	346	⇓*i*P	P	22 48 59.4	-1.1
BOAV	Boa Vista	16.57	39	*e*P	P	22 49 01.7	+1.1
BOAV	Boa Vista	16.57	39	P	P	22 49 01.4	+0.7
PIZC	Pizarro, Choco	16.75	337	*e*P	P	22 49 03.1	+0.8
GO03	Copiap	16.90	178	⇓*i*P	P	22 49 03.5	0.0
GO03				IAmb	IAmb	22 49 16.1	
	comp=Z,3µm,0.6s						
GO03	Copiap	16.90	178	⇓P	P	22 49 03.6	0.0
GO03	Copiap	16.90	178	P	P	22 49 03.5	0.0
GO03				IAmb	IAmb	22 49 16.0	
	comp=Z,3µm,0.7s						
TAMC	Tame, Arauca	16.96	357	⇓*i*P	P	22 49 04.2	0.0
PP1B	Ponte de Pedra	17.05	116	*e*P	P	22 49 06.1	+1.1
CBOC	Ciudad Bolivar	17.13	343	*i* P	P	22 49 04.8	-1.2
HELC	Santa Helena	17.31	345	⇓*i*P	P	22 49 06.3	-1.5
PTBC	PUERTO BERRIO,	17.40	348	⇓*i*P	P	22 49 05.7	-2.5
AC04	Llanos de Chal	17.50	180	⇓*i*P	P	22 49 08.8	-0.1
AC04				IAmb	IAmb	22 49 21.8	
	comp=Z,2µm,0.8s						
AC04	Llanos de Chal	17.50	180	P	P	22 49 08.8	-0.1
ELOV	Elorza	17.56	5	⇓*i*P	P	22 49 09.3	-0.4
AQDB	Aquidauana	17.64	126	*e*P	P	22 49 11.8	+1.5
AQDB	Aquidauana	17.64	126	P	P	22 49 11.4	+1.0
BRRC	Barranca, Sant	17.82	351	⇓*i*P	P	22 49 09.8	-2.2
PAMC	Pamplona, Colo	17.93	354	⇓*e*P	P	22 49 12.5	-1.1
SOLC	Bahia Solano	17.93	339	*e*P	P	22 49 13.5	+0.4
DBBC	Dabeiba	18.29	343	*e*P	P	22 49 16.8	+0.4
LCO	Las Campanas	18.30	179	P	P	22 49 16.8	+0.3
LCO				pmax	pmax		
	comp=Z,7µm,1.1s						
LCO	Las Campanas	18.30	179	⇓*i*P	P	22 49 16.6	+0.1
LCO				IAmb	IAmb	22 49 23.3	
	comp=Z,44µm,1.1s						
LCO	Las Campanas	18.30	179	⇓P	P	22 49 16.7	+0.3
LCO	Las Campanas	18.30	179	P	P	22 49 16.8	+0.3
LCO				IAmb	IAmb	22 49 23.5	
	comp=Z,7µm,1.1s						
ZARC	Zaragoza, Cauc	18.41	348	⇓*i*P	P	22 49 15.6	-1.8
ZARC	Zaragoza, Cauc	18.41	348	P	P	22 49 15.5	-1.9
MALB	Monte Alegre	18.71	63	*e*P	P	22 49 21.2	+1.1
SOCV	Socops	18.78	0	⇓*i*P	P	22 49 19.5	-1.2
UREC	San Jos de Ur	18.81	346	⇓*i*P	P	22 49 19.4	-1.7
OCAC	Ocana	18.88	353	⇓*i*P	P	22 49 19.0	-2.9
OCAC	Ocana	18.88	353	P	P	22 49 19.0	-2.9
PTAC	Punta Ardita,	18.93	339	⇓*i*P	P	22 49 22.5	+0.4
CO05	La Serena	19.21	181	P	P	22 49 24.3	-0.1
CO05				IAmb	IAmb	22 49 31.1	
	comp=Z,3µm,0.8s						
ARAG	Araguaiana, MT	19.30	107	*e*P	P	22 49 26.3	+0.8
SNDB	Serra Nova Dou	19.32	96	*e*P	P	22 49 27.3	+1.6
SDV	Santo Domingo	19.38	1	P	P	22 49 25.6	-0.8
	comp=Z,178nm,0.3s,baz=186,slow=7.6,SNR=162						
SDV				S	S	22 52 39.1	+8.2
	comp=Z,101nm,0.3s,baz=351,slow=23,SNR=1.2						
SDV	Santo Domingo	19.38	1	⇓*i*P	P	22 49 25.6	-0.8
SDV	Santo Domingo	19.38	1	P	P	22 49 25.6	-0.8
SDV				IAmb	IAmb	22 49 43.7	
	comp=Z,3µm,0.8s						
GO04	Tololo Observa	19.46	180	P	P	22 49 27.1	+0.1
GO04				IAmb	IAmb	22 49 52.0	
	comp=Z,3µm,0.6s						
SMLC	San Martn de	19.54	351	⇓*i*P	P	22 49 25.1	-2.6
BAUV	El Baul	19.65	9	P	P	22 49 27.5	-1.1
MOTC	Monteria, Cord	19.83	346	⇓*i*P	P	22 49 29.2	-1.1
MOTC	Monteria, Cord	19.83	346	P	P	22 49 28.9	-1.4
CO06	Fray Jorge	19.97	182	P	P	22 49 31.6	+0.3
LCBC	Los crdobas,	20.09	344	*e*P	P	22 49 33.0	+0.4
LL1C	La Loma 1 Cana	20.20	353	⇓*e*P	P	22 49 32.1	-1.5
CPUP	Villa Florida	20.24	142	P	P	22 49 33.6	-0.2
	comp=Z,2µm,1.1s,baz=325,slow=8.9,SNR=602						
CPUP				P3KPbc		23 23 12.3	
	comp=Z,20nm,1.0s,baz=77,slow=7.2,SNR=3.4						
CPUP	Villa Florida	20.24	142	P	P	22 49 33.6	-0.2
CPUP				pmax	pmax		
	comp=Z,5µm,0.9s						
CPUP	Villa Florida	20.24	142	⇓P	P	22 49 33.5	-0.2
CPUP	Villa Florida	20.24	142	P	P	22 49 33.6	-0.2
LL6C	La Loma 6 Bece	20.35	353	⇓*i*P	P	22 49 31.9	-3.1
ARGC	Ariguani, Magd	20.61	351	⇓*i*P	P	22 49 35.6	-1.6
SJCC	San Jacinto, C	20.81	348	⇓*i*P	P	22 49 37.8	-1.3
SJCC	San Jacinto, C	20.81	348	P	P	22 49 37.8	-1.3
ZON	Zonda	20.93	175	P	P	22 49 40.4	+0.4
ZON				pmax	pmax		
	comp=Z,8µm,1.1s						
ZON	Zonda	20.93	175	P	P	22 49 40.4	+0.4
TRCB	Terra Rica	21.28	127	*e*P	P	22 49 43.8	+0.5
TRCB	Terra Rica	21.28	127	P	P	22 49 43.6	+0.4
PRPB	Parauapebas	21.36	80	*e*P	P	22 49 44.9	+0.9
MCPB	Macapa, AP	21.36	63	*e*P	P	22 49 45.3	+1.2
BIRV	Birongo	21.46	13	P	P	22 49 44.8	-0.1
BCIP	Isla Barro Col	21.55	335	P	P	22 49 45.9	+0.2
BCIP				pmax	pmax		
	comp=Z,2µm,0.7s						
BCIP	Isla Barro Col	21.55	335	*e*P	P	22 49 46.7	+1.0
BCIP	Isla Barro Col	21.55	335	⇓P	P	22 49 46.4	+0.7
BCIP	Isla Barro Col	21.55	335	P	P	22 49 45.9	+0.2
BCIP				IAmb	IAmb	22 49 56.8	
	comp=Z,2µm,0.7s						
PCRV	Puerto La Cruz	21.59	17	P	P	22 49 46.8	+0.7
	comp=Z,234nm,0.4s,baz=216,slow=2.0,SNR=93						
PCRV				P3KPbc		23 23 06.7	
	comp=Z,14nm,0.7s,baz=156,slow=2.2,SNR=7.2						
PAYG	Puerto Ayora	21.61	296	⇑*i*P	P	22 49 46.6	+0.3
PAYG	Puerto Ayora	21.61	296	⇑P	P	22 49 46.7	+0.4
PAYG	Puerto Ayora	21.61	296	P	P	22 49 46.8	+0.5
PAYG				IAmb	IAmb	22 50 00.5	
	comp=Z,4µm,1.1s						
ITRB	Iturama	21.80	117	*e*P	P	22 49 48.8	+0.9
PCMB	Pacaembu	21.81	122	*e*P	P	22 49 48.3	+0.4
SMRC	Santa Marta, M	21.88	351	⇓*i*P	P	22 49 46.4	-2.2
URIC	Uribia, Colomb	22.20	357	⇓*i*P	P	22 49 47.7	-3.8
URIC	Uribia, Colomb	22.20	357	P	P	22 49 47.7	-3.8
URIC				IAmb	IAmb	22 50 01.3	
	comp=Z,2µm,0.8s						
PEXB	Peixe	22.25	96	*e*P	P	22 49 53.4	+1.4
VA01	Torpederas	22.31	182	P	P	22 49 52.6	+0.4

PEL	Peldehue	22.42	179	P	P	22 49 53.8	+0.5
PEL				pmax	pmax		
	comp=Z,7µm,0.6s						
PEL	Peldehue	22.42	179	⇓P	P	22 49 53.8	+0.5
PEL	Peldehue	22.42	179	P	P	22 49 53.8	+0.5
CDITO	Canoas	22.46	328	P	P	22 49 55.6	+1.9
CDITO				IAmb	IAmb	22 50 14.1	
	comp=Z,7µm,1.6s						
MT02	Curacav	22.54	180	P	P	22 49 54.6	+0.4
MT02				IAmb	IAmb	22 50 02.7	
	comp=Z,8µm,1.6s						
BRU2	Volcan	22.55	328	eP	P	22 49 56.2	+1.5
BRU2	Volcan	22.55	328	P	P	22 49 55.9	+1.1
BRU2				IAmb	IAmb	22 50 12.9	
	comp=Z,3µm,1.2s						
MT05	Renca	22.67	180	P	P	22 49 56.1	+0.6
EDSV	San Vito	22.72	328	eP	P	22 49 59.5	+3.3
HATO	Hato, Curacao	22.74	5	P	P	22 49 54.3	-1.9
TPP	Pointe-a-Pierr	22.84	25	eP	P	22 50 00.2	+3.1
BDFB	Brasilia	22.87	105	P	P	22 49 58.7	+1.1
	comp=Z,1µm,0.5s,baz=274,slow=11,SNR=772						
BDFB				S	S	22 53 29.9	+4.0
	comp=Z,1µm,0.9s,baz=178,slow=22,SNR=2.4						
BDFB				P3KPbc		23 23 02.9	
	comp=Z,11nm,0.8s,baz=135,slow=15,SNR=1.6						
BDFB				P3KP		23 24 00.5	
	comp=Z,29nm,0.9s,baz=131,slow=9.0,SNR=3.4						
BDFB	Brasilia	22.87	105	P	P	22 49 58.7	+1.1
BDFB				pmax	pmax		
	comp=Z,5µm,1.4s						
BDFB	Brasilia	22.87	105	P	P	22 49 58.7	+1.1
BDFB				IAmb	IAmb	22 50 08.7	
	comp=Z,5µm,1.4s						
RIOS	Rincon, Osa	22.91	326	P	P	22 49 58.4	+0.6
RIOS				IAmb	IAmb	22 50 11.8	
	comp=Z,4µm,0.9s						
VA05	Santo Domingo	22.94	181	P	P	22 49 58.0	+0.2
VA05				IAmb	IAmb	22 49 59.4	
	comp=Z,3µm,0.8s						
MT09	Talagante	23.05	180	P	P	22 49 59.2	+0.3
SMTB	Santa Maria do	23.08	88	eP	P	22 50 00.9	+1.5
EDPN	Palmar Norte	23.10	327	eP	P	22 50 01.5	+2.1
MT01	Popeta	23.14	181	P	P	22 49 59.5	0.0
MT01				IAmb	IAmb	22 50 07.3	
	comp=Z,2µm,0.7s						
TBH	Brigand Hill	23.15	25	eP	P	22 50 03.5	+3.6
TRN	Trinidad (W)	23.16	24	eP	P	22 50 00.6	+0.6
EDBA	Buenos Aires	23.17	328	eP	P	22 50 02.3	+2.2
ITQB	Itaqui	23.19	147	P	P	22 50 00.1	0.0
IPMB	Ipameri, GO	23.20	111	eP	P	22 50 00.9	+0.5
SRBA	San Rafael, Bu	23.27	328	P	P	22 50 01.9	+0.8
SRBA				IAmb	IAmb	22 50 14.8	
	comp=Z,2µm,0.9s						
EDDO	Dominical	23.56	326	eP	P	22 50 05.4	+1.9
PEZE	Perez Zeledon,	23.57	327	P	P	22 50 05.0	+1.3
BO01	Tunca	23.66	180	P	P	22 50 04.5	+0.3
BO01				IAmb	IAmb	22 50 05.9	
	comp=Z,3µm,0.8s						
CDM	Cerro de Muert	23.75	327	eP	P	22 50 07.3	+1.5
MRVA	Moravia de Chi	23.81	328	eP	P	22 50 08.5	+2.5
H03N1	Juan Fernandez	23.87	197	P	P	22 50 06.9	+1.2
	baz=124,slow=14,SNR=4037						
H03N2	Juan Fernandez	23.87	197	P	P	22 50 07.1	+1.4
	baz=124,slow=14,SNR=5849						
H03N3	Juan Fernandez	23.88	197	P	P	22 50 07.0	+1.1
	baz=124,slow=14,SNR=3734						
RIMA	Rio Macho	23.98	327	eP	P	22 50 09.2	+1.6
RIMA	Rio Macho	23.98	327	P	P	22 50 08.5	+1.0
RIMA				IAmb	IAmb	22 50 21.2	
	comp=Z,2µm,1.0s						
MDP	Montagnes des	24.00	50	P	P	22 50 07.6	+0.1
	comp=Z,866nm,0.7s,baz=237,slow=8.8,SNR=730						
MDP				S	S	22 53 48.3	+4.9
	comp=Z,1µm,1.0s,baz=97,slow=8.5,SNR=3.5						
MDP				P3KP		23 23 57.7	
	comp=Z,65nm,1.1s,baz=36,slow=8.5,SNR=4.2						
FRTB	Fartura	24.00	125	eP	P	22 50 07.0	-0.4
BATAN	Batan	24.01	329	P	P	22 50 09.8	+2.2
BATAN				IAmb	IAmb	22 50 22.0	
	comp=Z,3µm,0.9s						
VA04	Juan Fernndez	24.03	196	⇓iP	P	22 50 08.0	+0.5
VA04				IAmb	IAmb	22 50 09.0	
	comp=Z,9µm,0.7s						
VA04	Juan Fernndez	24.03	196	P	P	22 50 07.9	+0.5
LCR2	La Lucha 2	24.04	327	eP	P	22 50 10.1	+2.1
BO02	Sierra Bellavi	24.06	180	P	P	22 50 08.3	+0.5
BO02				IAmb	IAmb	22 50 16.1	
	comp=Z,4µm,1.0s						
TOSP	Speyside	24.11	26	eP	P	22 50 09.4	+1.1
TOSP	Speyside	24.11	26	P	P	22 50 08.9	+0.5
TOSP				IAmb	IAmb	22 50 20.1	
	comp=Z,3µm,1.2s						
TMAB	Tom-Au,PA,Br	24.12	72	eP	P	22 50 10.2	+1.6
RAFA	San Farael, Vo	24.12	328	eP	P	22 50 11.6	+2.7
CVTR	Volcan Turrial	24.14	328	eP	P	22 50 11.6	+2.4
CVTR	Volcan Turrial	24.14	328	P	P	22 50 10.9	+1.7
CVTR				IAmb	IAmb	22 50 30.4	
	comp=Z,4µm,1.1s						
H03S3	Juan Fernandez	24.23	196	P	P	22 50 09.8	+0.9
	baz=9.7,slow=16,SNR=7831						
ITAB	Concordia	24.23	136	P	P	22 50 09.5	+0.1
H03S1	Juan Fernandez	24.24	196	P	P	22 50 09.7	+0.7
	baz=9.7,slow=16,SNR=9482						
H03S2	Juan Fernandez	24.24	196	P	P	22 50 10.0	+1.0
	baz=9.7,slow=16						
GO05	Huala	24.30	182	P	P	22 50 09.9	+0.1
GO05				IAmb	IAmb	22 50 19.6	
	comp=Z,4µm,0.9s						
GRFF	Grenada Fort F	24.31	22	eP	P	22 50 11.2	+1.1
HDC3	Heredia 3	24.31	327	eP	P	22 50 12.5	+2.2
HDC	Heredia	24.32	327	eP	P	22 50 12.7	+2.3
HDC	Heredia	24.32	327	⇑P	P	22 50 12.8	+2.5
HDC	Heredia	24.32	327	P	P	22 50 11.7	+1.4
JACO	JACO, Garabito	24.33	325	eP	P	22 50 12.2	+1.8
JACO	JACO, Garabito	24.33	325	P	P	22 50 11.0	+0.7
JACO				IAmb	IAmb	22 50 24.0	
	comp=Z,3µm,1.1s						
GRGR	Grenville	24.41	22	eP	P	22 50 11.5	+0.4
GRGR	Grenville	24.41	22	⇓P	P	22 50 10.8	-0.2
GRGR	Grenville	24.41	22	P	P	22 50 10.6	-0.5
GRHS	Sauteurs	24.50	22	eP	P	22 50 13.1	+1.2
CRPO	Crater poas	24.54	327	eP	P	22 50 14.8	+2.3
GRSS	Sisters	24.58	22	eP	P	22 50 13.6	+1.1
SRA1	San Ramn	24.58	326	eP	P	22 50 14.8	+2.1
LAFE	Finca La Fe, P	24.59	325	eP	P	22 50 14.7	+2.0
CAO2	Cobano, Puntar	24.61	325	P	P	22 50 14.3	+1.5
CAO2				IAmb	IAmb	22 50 26.8	
	comp=Z,2µm,0.9s						
GCMP	Grenada, Carri	24.82	23	eP	P	22 50 15.2	+0.6
INDI	Punta indio, G	24.98	324	eP	P	22 50 17.3	+1.2
CASO	Castillo	25.01	326	eP	P	22 50 17.3	+0.9
JTS	Las Juntas de	25.01	326	eP	P	22 50 18.5	+2.1
JTS	Las Juntas de	25.01	326	P	P	22 50 17.9	+1.5
JTS				pmax	pmax		
	comp=Z,2µm,1.0s						
JTS	Las Juntas de	25.01	326	eP	P	22 50 17.7	+1.3
JTS	Las Juntas de	25.01	326	⇑P	P	22 50 17.7	+1.3
JTS	Las Juntas de	25.01	326	P	P	22 50 17.9	+1.5
JTS				IAmb	IAmb	22 50 30.2	
	comp=Z,2µm,1.0s						
ML02	Panimavida	25.04	181	P	P	22 50 16.5	+0.2
ML02				IAmb	IAmb	22 50 25.7	
	comp=Z,4µm,0.8s						
CEDE	Laguna Cedeo	25.04	326	eP	P	22 50 19.1	+2.5
COVE	Coope Vega, Sa	25.07	327	eP	P	22 50 18.3	+1.4
COVE	Coope Vega, Sa	25.07	327	P	P	22 50 18.4	+1.6
GRZA	Playa Garza	25.09	324	eP	P	22 50 18.3	+1.2
SAJU	San Juanillo,	25.26	324	eP	P	22 50 19.7	+1.2
PLVR	Palo Verde	25.28	325	eP	P	22 50 20.4	+1.5
RCLB	Rio Claro- Sao	25.28	121	eP	P	22 50 19.0	+0.2
GUAI	GUAI	25.31	325	eP	P	22 50 20.5	+1.5
ACAL	Aguas Claras	25.34	326	eP	P	22 50 21.4	+2.0
ORTG	Ortega, Santa	25.35	325	P	P	22 50 20.9	+1.5
PTEN	Parque Tenorio	25.38	326	eP	P	22 50 20.9	+1.2
CUI	Cuipilapa	25.43	326	eP	P	22 50 22.0	+1.9
COLC	Colonia	25.46	326	eP	P	22 50 22.2	+1.9
HORNC	Hornillas	25.48	326	eP	P	22 50 22.6	+2.0
GUAB	Guayabo de Bag	25.51	326	eP	P	22 50 23.0	+2.2
LIM1	Limonal	25.51	326	eP	P	22 50 21.5	+0.7
VMAR	Armenia, Volca	25.53	326	eP	P	22 50 23.4	+2.4
SDBA	SAO DESIDERIO	25.58	97	eP	P	22 50 22.7	+1.3
SVB	Belmont	25.61	22	eP	P	22 50 21.2	-0.5
SVB	Belmont	25.61	22	P	P	22 50 20.4	-1.3
LAPC	Finca la Perla	25.67	325	eP	P	22 50 23.8	+1.6
SSV	Crater Summit	25.68	22	eP	P	22 50 22.6	+0.3
GB1A	Borinquen Arri	25.69	326	eP	P	22 50 24.3	+1.9
GB1A				eP	P	22 50 24.3	+1.9
GBS3	Finca Las Img	25.69	325	eP	P	22 50 24.4	+2.0
BUAI	Buenos Aires	25.70	326	eP	P	22 50 24.0	+1.5
HZTE	Horizontes, Gu	25.72	325	eP	P	22 50 24.6	+2.0
PRVC	Isla de Provid	25.98	336	eP	P	22 50 25.1	+0.2
PRVC	Isla de Provid	25.98	336	P	P	22 50 24.8	0.0
VAO	Valinhos	26.00	121	eP	P	22 50 24.9	-0.2
MCLT	Moule a Chique	26.13	23	eP	P	22 50 24.3	-1.9
MCLT	Moule a Chique	26.13	23	P	P	22 50 24.2	-1.9
BBGH	Gun Hill	26.17	26	⇓P	P	22 50 28.9	+2.4
BBGH	Gun Hill	26.17	26	P	P	22 50 28.5	+1.9
ESPN	Las Esperanzas	26.26	329	eP	P	22 50 29.0	+1.7
ESPN	Las Esperanzas	26.26	329	P	P	22 50 27.3	-0.1
ESPN				IAmb	IAmb	22 50 40.2	
	comp=Z,2µm,0.9s						
PET01	Itanhaem-SP	26.30	124	eP	P	22 50 27.5	-0.1
JANB	Januaria	26.33	102	eP	P	22 50 28.7	+0.7
SLCP	Castries, St.	26.39	22	eP	P	22 50 30.3	+1.9
SLBI	Saint Lucia, B	26.40	22	eP	P	22 50 28.2	-0.4
CONN	Concepcion	26.43	326	eP	P	22 50 28.6	-0.2
PLTB	Pedras Altas	26.46	145	P	P	22 50 28.4	-0.5
ACON	Acoyapa	26.52	327	eP	P	22 50 31.3	+1.7
ACON	Acoyapa	26.52	327	P	P	22 50 30.3	+0.7
ACON				IAmb	IAmb	22 50 44.1	
	comp=Z,2µm,1.0s						
BIM	Bigot	26.82	22	eP	P	22 50 30.8	-1.4
BIM	Bigot	26.82	22	P	P	22 50 30.6	-1.7
H05S1	Guadeloupe/Mar	26.82	22	P	P	22 50 30.6	-1.6
MPOM	Morne Pois Mar	26.83	22	eP	P	22 50 30.4	-1.9
MPOM	Morne Pois Mar	26.83	22	P	P	22 50 30.3	-2.0
MC01	Montes Claros	26.91	106	eP	P	22 50 33.5	+0.4
LPA	La Plata	26.93	156	i P	P	22 50 33.6	+0.7
LPA				pP	pP	22 52 14.8	+6.0
LPA				sP	sP	22 53 17.0	-4.0
LPA				PCP	PcP	22 53 32.1	-1.8
LPA				S	S	22 54 35.2	+6.5
LPA				sS	SS	22 57 31.1	-2.4
LPA				PKIKP	PKiKP	23 01 08.7	-2.0
LPA				SKIKP		23 03 41.1	
LPA				PKIKS		23 04 34.7	
LPA				SKIKS		23 07 19.6	
FDF	Fort de France	26.99	21	P	P	22 50 31.6	-2.2
FDF				pmax	pmax		
	comp=Z,2µm,0.6s						
FDF	Fort de France	26.99	21	eP	P	22 50 31.9	-1.9
FDF	Fort de France	26.99	21	⇑P	P	22 50 30.2	-3.5
FDF	Fort de France	26.99	21	P	P	22 50 31.6	-2.2
FDF				IAmb	IAmb	22 50 47.9	
	comp=Z,2µm,0.6s						
ILAM	Ilet Lapin Mar	27.13	22	eP	P	22 50 34.0	-0.8
BOAB	BOACO BROADBAN	27.18	327	⇓P	P	22 50 36.2	+0.9
BOAB	BOACO BROADBAN	27.18	327	P	P	22 50 35.8	+0.4
PARB	Paraibuna	27.26	121	eP	P	22 50 36.2	+0.1
MDN	Morne-Daniel	27.45	20	eP	P	22 50 35.9	-1.8
DIAM	Diamantina, MG	27.46	109	eP	P	22 50 38.7	+0.7
DLPL	La Plaine	27.52	21	eP	P	22 50 36.7	-1.6
DLPL	La Plaine	27.52	21	P	P	22 50 36.7	-1.6
DSLB	Salisbury	27.55	20	eP	P	22 50 36.4	-2.2
ROSB	Rosrio	27.70	76	eP	P	22 50 40.7	+0.8
MDCT	Cottage Hill,	27.71	20	eP	P	22 50 48.0	+8.1
MDVC	Dominica, Viel	27.72	20	eP	P	22 50 38.4	-1.7
CNGN	Cerro Negro	27.79	325	P	P	22 50 41.5	+0.8
TDBA	Terre de Bas,	27.86	19	eP	P	22 50 39.5	-1.8
MAGL	Barre de l'ile	28.08	20	eP	P	22 50 40.7	-2.5
CBE	Ff, Capester	28.08	19	eP	P	22 50 41.6	-1.6
LC01	Cunco	28.17	182	P	P	22 50 43.4	-0.3
TRQA	Tornquist	28.48	165	P	P	22 50 46.2	-0.2
TRQA				pmax	pmax		
	comp=Z,4µm,0.8s						
TRQA	Tornquist	28.48	165	P	P	22 50 46.2	-0.2
H05N1	Guadeloupe/Mar	28.49	20	P	P	22 50 44.1	-2.7
MAN01	Angra dos Reis	28.50	119	eP	P	22 50 47.4	+0.5
MLPR	Magueyes Islan	28.66	8	P	P	22 50 46.8	-1.4
CRPR	Cabo Rojo, PR	28.69	8	P	P	22 50 47.3	-1.1
JAKH	Jacmel	28.71	357	P	P	22 50 48.0	-0.6
VAS01	Vassouras-RJ	28.75	117	eP	P	22 50 49.4	+0.4
OBIP	Obispado Ponce	28.80	9	P	P	22 50 48.1	-1.3
CELP	Cerrillos	28.83	9	P	P	22 50 48.4	-1.3
CDVI	St. Croix	28.84	12	P	P	22 50 47.9	-1.8
YHJ	Yallahs	28.85	349	i P	P	22 50 55.6	+5.7
PDPR	Patillas Dam,	28.87	10	P	P	22 50 48.2	-1.7
PDPR				IAmb	IAmb	22 51 01.2	
	comp=Z,2µm,0.7s						
PRSN	Puerto Rico Se	28.90	7	P	P	22 50 48.7	-1.5
PRSN				IAmb	IAmb	22 51 03.0	
	comp=Z,4µm,0.9s						
SDD	Santo Domingo	28.91	2	P	P	22 50 49.4	-0.9
SDD				IAmb	IAmb	22 50 58.5	
	comp=Z,2µm,0.8s						
LR03	Panguipulli	28.92	182	P	P	22 50 49.7	-0.4
LR03				IAmb	IAmb	22 50 51.4	
	comp=Z,3µm,0.9s						
SJG	San Juan	28.94	9	P	P	22 50 49.0	-1.5
	comp=Z,1µm,0.7s,baz=168,slow=5.2,SNR=146						
SJG				S	S	22 55 00.6	+0.5
	comp=Z,429nm,0.5s,baz=105,slow=23,SNR=2.0						
SJG				P3KPbc		23 22 44.0	
SJG	San Juan	28.94	9	⇓iP	P	22 50 48.9	-1.6
SJG	San Juan	28.94	9	⇓P	P	22 50 48.8	-1.6
SJG	San Juan	28.94	9	P	P	22 50 48.9	-1.6
SJG				IAmb	IAmb	22 51 03.4	
	comp=Z,3µm,0.8s						
ANBD	Bethesda, Anti	28.95	18	eP	P	22 50 47.8	-2.9
ANDO	Antigua, Disas	28.99	18	eP	P	22 50 50.7	-0.3
LGNH	Logne	28.99	357	P	P	22 50 50.3	-0.7
SEUS	St. Eustatius	29.02	16	eP	P	22 50 51.6	+0.3
SEUS	St. Eustatius	29.02	16	P	P	22 50 50.3	-0.9
SABA	Saba	29.07	15	eP	P	22 50 51.3	-0.5
SABA	Saba	29.07	15	P	P	22 50 50.3	-1.4
AOPR	Arecibo Observ	29.08	8	P	P	22 50 50.5	-1.3
GWJ	Greenwich	29.08	349	i P	P	22 50 56.5	+4.6
STH	Stony Hill	29.09	348	i P	P	22 50 51.7	-0.2
LCND	La Caada	29.12	324	eP	P	22 50 52.7	+0.5
LCND				IAML		22 51 09.0	
	comp=Z,2µm,0.5s						
LCND	La Caada	29.12	324	eP	P	22 50 52.7	+0.5
LCND				IAML		22 51 09.0	
	comp=Z,2µm,0.5s						
MCJ	Malvern	29.13	347	i P	P	22 50 53.3	+1.0
GCPR	Guaynabo City	29.14	10	P	P	22 50 50.3	-2.0
AGPR	Aguadilla, PR	29.15	7	P	P	22 50 50.9	-1.4
AGPR				IAmb	IAmb	22 51 06.0	
	comp=Z,3µm,0.9s						
EMPR	Esperanza - Ma	29.24	9	P	P	22 50 52.0	-1.1
EMPR				IAmb	IAmb	22 51 15.6	
	comp=Z,3µm,0.8s						
CUPR	Culebra, Puert	29.28	11	P	P	22 50 51.6	-1.8
CUPR				IAmb	IAmb	22 51 05.0	
	comp=Z,3µm,0.7s						
JUCU	Jucuar¡n	29.28	324	eP	P	22 50 54.6	+1.0
JUCU				IAML		22 51 11.2	
	comp=Z,2µm,0.6s						
JUCU	Jucuar¡n	29.28	324	eP	P	22 50 54.6	+1.0
JUCU				IAML		22 51 11.2	
	comp=Z,2µm,0.6s						
TGUH	Tegucigalpa,Un	29.38	326	eP	P	22 50 55.0	+0.4
TGUH				IAML		22 51 06.6	
	comp=Z,110µm,1.2s						
TGUH	Tegucigalpa,Un	29.38	326	eP	P	22 50 55.0	+0.4
TGUH				IAML		22 51 06.6	
	comp=Z,110µm,1.2s						
TGUH	Tegucigalpa,Un	29.38	326	⇓eP	P	22 50 54.6	0.0
TGUH	Tegucigalpa,Un	29.38	326	⇓P	P	22 50 54.5	0.0
TGUH	Tegucigalpa,Un	29.38	326	P	P	22 50 54.3	-0.3
TGUH				IAmb	IAmb	22 51 07.5	
	comp=Z,5µm,1.1s						
STVI	Saint Thomas	29.39	12	P	P	22 50 51.8	-2.6
MTDJ	Mount Denham	29.39	347	⇓eP	P	22 50 53.3	-1.3
MTDJ	Mount Denham	29.39	347	⇓P	P	22 50 53.4	-1.1
MTDJ	Mount Denham	29.39	347	P	P	22 50 53.7	-0.9
SDDR	Presa de Saban	29.41	359	⇓iP	P	22 50 53.4	-1.3
SDDR	Presa de Saban	29.41	359	⇓P	P	22 50 53.3	-1.4
SDDR	Presa de Saban	29.41	359	P	P	22 50 53.5	-1.3
SDDR				IAmb	IAmb	22 51 16.6	
	comp=Z,3µm,1.1s						
ANWB	Willy Bob	29.53	18	eP	P	22 50 52.7	-2.9
ANWB	Willy Bob	29.53	18	⇑P	P	22 50 52.5	-3.1
ANWB	Willy Bob	29.53	18	P	P	22 50 52.8	-2.8
SMRT	St. Maarten	29.53	15	eP	P	22 50 53.6	-2.0
SMRT	St. Maarten	29.53	15	P	P	22 50 53.7	-2.0
ALJI	Alcalda de J	29.53	323	eP	P	22 50 56.7	+1.0
ALJI	Alcalda de J	29.53	323	eP	P	22 50 56.7	+1.0
DUB01	Friburgo-RJ	29.63	116	eP	P	22 50 56.9	+0.3
COEB	Comit de Eme	29.64	324	eP	P	22 50 58.2	+1.4
COEB				IAML		22 51 15.5	
	comp=Z,976nm,0.5s						
COEB	Comit de Eme	29.64	324	eP	P	22 50 58.2	+1.4
COEB				IAML		22 51 15.5	
	comp=Z,976nm,0.5s						
CAHU	Cacacuatique	29.68	324	eP	P	22 50 56.3	-0.9
SJMB	Sao Joao De Ma	29.86	109	eP	P	22 50 58.6	+0.1
SC01	Santiago de lo	29.86	0	P	P	22 50 57.9	-0.5
NBPS	Pedro II - PI	29.88	80	eP	P	22 50 59.8	+1.0
SCLA	Alcaldia de Sa	29.92	323	eP	P	22 51 00.2	+1.1
SCLA	Alcaldia de Sa	29.92	323	eP	P	22 51 00.2	+1.1
COEG	Centro de Oper	29.94	323	eP	P	22 51 00.6	+1.2
COEG				IAML		22 51 13.0	
	comp=Z,2µm,0.5s						
COEG	Centro de Oper	29.94	323	eP	P	22 51 00.6	+1.2
COEG				IAML		22 51 13.0	
	comp=Z,2µm,0.5s						
PLCA	Paso Flores	30.00	179	P	P	22 50 59.6	+0.1
	comp=Z,2µm,0.7s,baz=355,slow=9.1,SNR=2993						
PLCA				PcP	PcP	22 53 43.5	+1.7
	comp=Z,2µm,0.8s,baz=351,slow=4.4,SNR=12						
PLCA				S	S	22 55 15.2	-0.9
	comp=Z,367nm,0.8s,baz=111,slow=20,SNR=1.9						
PLCA				P3KPbc		23 22 39.4	
	comp=Z,49nm,0.9s,baz=213,slow=3.2,SNR=12						
PLCA	Paso Flores	30.00	179	⇓P	P	22 50 59.5	+0.1
PLCA				⇑s	PcP	22 53 43.9	+2.1
PLCA				⇑S	ScP	22 56 19.5	-7.6
PLCA				⇑S	ScP	22 56 19.6	-7.6
PLCA				⇓S	ScP	22 56 22.5	-4.7
PLCA	Paso Flores	30.00	179	P	P	22 50 59.9	+0.4
PLCA				IAmb	IAmb	22 51 06.6	
	comp=Z,3µm,0.7s						
SJTE	Alcalda de S	30.01	323	eP	P	22 51 00.9	+1.0
SJTE	Alcalda de S	30.01	323	eP	P	22 51 00.9	+1.0
PAVA	Las Pavas	30.05	323	eP	P	22 51 02.1	+1.8
PAVA				IAML		22 51 18.9	
	comp=Z,1µm,0.4s						
PAVA	Las Pavas	30.05	323	eP	P	22 51 02.1	+1.8
PAVA				IAML		22 51 18.9	
	comp=Z,1µm,0.4s						
LFRS	El Faro	30.05	323	eP	P	22 51 01.5	+1.2
LFRS	El Faro	30.05	323	eP	P	22 51 01.5	+1.2
LALI	Alcalda de L	30.10	322	eP	P	22 51 02.8	+2.2
LALI				IAML		22 51 17.3	
	comp=Z,570nm,0.6s						
LALI	Alcalda de L	30.10	322	eP	P	22 51 02.8	+2.2
LALI				IAML		22 51 17.3	
	comp=Z,570nm,0.6s						
LBRS	Las Brisas	30.13	323	eP	P	22 51 02.5	+1.5
LBRS	Las Brisas	30.13	323	eP	P	22 51 02.5	+1.5
LFU	La Fuente	30.18	323	eP	P	22 51 03.6	+2.2
LFU	La Fuente	30.18	323	eP	P	22 51 03.6	+2.2
CAM01	Campos-RJ	30.19	115	eP	P	22 51 01.4	+0.1
BSFB	Barra de Sao F	30.19	109	eP	P	22 51 01.7	+0.3
LL04	Puerto Octay	30.20	182	P	P	22 51 00.7	-0.4
LL04				IAmb	IAmb	22 51 02.1	
	comp=Z,3µm,0.7s						
NBPN	Ponto Novo - B	30.20	93	eP	P	22 51 02.5	+1.0
SNET	Serv Nac Est T	30.20	323	P	P	22 51 02.8	+1.2
SNET				IAmb	IAmb	22 51 17.6	
	comp=Z,5µm,1.2s						
BOQS	Boqueron	30.27	323	eP	P	22 51 04.7	+2.4
BOQS	Boqueron	30.27	323	eP	P	22 51 04.7	+2.4
JAYA	Jayaque - finc	30.31	322	eP	P	22 51 04.5	+1.9
JAYA				IAML		22 51 21.6	
	comp=Z,1µm,0.3s						
JAYA	Jayaque - finc	30.31	322	eP	P	22 51 04.5	+1.9
JAYA				IAML		22 51 21.6	
	comp=Z,1µm,0.3s						
CEDA	San Andres	30.39	323	eP	P	22 51 04.6	+1.4
CEDA				IAML		22 51 16.8	
	comp=Z,1µm,0.5s						
CEDA	San Andres	30.39	323	eP	P	22 51 04.6	+1.4
CEDA				IAML		22 51 16.8	
	comp=Z,1µm,0.5s						
LL03	Petrohue	30.43	182	P	P	22 51 02.9	-0.1
TACO	Tacachico	30.50	323	eP	P	22 51 05.2	+1.1
TACO	Tacachico	30.50	323	eP	P	22 51 05.2	+1.1
CEVE	Cerro Verde	30.55	322	eP	P	22 51 06.8	+2.1
CEVE				IAML		22 51 36.0	
	comp=Z,1µm,0.4s						
CEVE	Cerro Verde	30.55	322	eP	P	22 51 06.8	+2.1
CEVE				IAML		22 51 36.0	
	comp=Z,1µm,0.4s						
RTR	El Retiro	30.62	322	eP	P	22 51 06.9	+1.7
RTR	El Retiro	30.62	322	eP	P	22 51 06.9	+1.7
GTBY	Guantanamo Bay	30.63	352	⇓iP	P	22 51 03.4	-1.6
GTBY	Guantanamo Bay	30.63	352	⇓P	P	22 51 03.6	-1.4
GTBY	Guantanamo Bay	30.63	352	P	P	22 51 04.2	-0.8
GTBY				IAmb	IAmb	22 51 19.9	
	comp=Z,3µm,1.5s						
ALF01	Guarapari-ES	30.70	113	eP	P	22 51 06.0	+0.3
RIB01	Linhares ES	30.71	110	eP	P	22 51 06.2	+0.3
LL05	Los Muermos	30.75	184	P	P	22 51 05.3	-0.5
LL05				IAmb	IAmb	22 51 11.6	
	comp=Z,3µm,1.1s						
SLOZ	Alcaldia de Sa	30.80	322	eP	P	22 51 07.8	+1.2
GDU01	Guandu, BA	30.81	99	eP	P	22 51 07.7	+1.0
GUA01	Guaratinga, BA	30.82	105	eP	P	22 51 07.4	+0.7
MTO3	Montecristo	30.84	323	eP	P	22 51 08.1	+0.9
MTO3				IAML		22 51 21.4	
	comp=Z,527nm,0.6s						
MTO3	Montecristo	30.84	323	eP	P	22 51 08.1	+0.9
MTO3				IAML		22 51 21.4	
	comp=Z,527nm,0.6s						
MTO3	Montecristo	30.84	323	P	P	22 51 07.4	+0.2
MTO3				IAmb	IAmb	22 51 20.1	
	comp=Z,3µm,1.2s						
ESQI	Esquipulas	30.96	324	eP	P	22 51 09.5	+1.4
ESQI				IAML		22 51 19.7	
	comp=Z,1µm,0.5s						
ESQI	Esquipulas	30.96	324	P	P	22 51 08.6	+0.5
CMC01	Camacan, BA	30.96	102	eP	P	22 51 08.7	+0.7
NBIT	Itapeh - BA	31.01	101	eP	P	22 51 09.7	+1.3
LCCY	Blossom Villag	31.41	343	P	P	22 51 11.4	-0.3
NBPB	Pedra_Branca-C	31.44	83	eP	P	22 51 13.3	+1.2
NBMO	Morrinhos-CE	31.50	79	eP	P	22 51 13.3	+0.7
MRL	Marmol	31.57	324	eP	P	22 51 16.0	+2.6
MRL	Marmol	31.57	324	eS	PKiKP	23 01 12.1	-2.4
NBG	Las Nubes	31.58	322	eP	P	22 51 16.5	+3.0
PCG	Pacaya	31.58	321	eP	P	22 51 17.3	+3.8
LL01	San Ignacio de	31.66	182	P	P	22 51 13.0	-0.6
LL01				PcP	PcP	22 53 47.2	+1.0
FUG	Fuego 3	31.77	321	eP	P	22 51 17.0	+2.0
FUG	Fuego 3	31.77	321	eS	PKiKP	23 01 15.0	+0.4
GRTK	Grand Turk	31.93	360	⇑P	P	22 51 15.2	-0.9
GRTK	Grand Turk	31.93	360	P	P	22 51 15.5	-0.5
GRTK				IAmb	IAmb	22 51 28.4	
	comp=Z,4µm,0.8s						
NBMA	Muriti-CE	31.94	87	eP	P	22 51 17.4	+1.0
APG	El Apazote	31.97	322	P	P	22 51 17.3	+0.5
	comp=Z,459nm,0.6s,baz=127,slow=6.0,SNR=298						
LL07	Hotel Espejo d	32.17	184	P	P	22 51 17.4	-0.4
LL07				PcP	PcP	22 53 48.8	+1.3
RTAL	Retalhuleu	32.36	320	P	P	22 51 20.2	+0.4
RTAL				PcP	PcP	22 53 50.3	+1.6
STG3	Santiaguito 3,	32.42	321	eP	P	22 51 22.4	+1.8
LL02	Futaleuf	32.46	181	P	P	22 51 20.1	-0.2
LL02				IAmb	IAmb	22 51 21.4	
	comp=Z,3µm,0.8s						
LL02				PcP	PcP	22 53 49.2	+0.8
GO07	Milladeo Hill,	32.46	184	P	P	22 51 20.2	-0.1
NBLA	Lagarto - SE	32.56	94	eP	P	22 51 21.8	+0.3
HUEH	Huehuetenango	32.84	321	P	P	22 51 24.6	+0.4
HUEH				IAmb	IAmb	22 51 42.5	
	comp=Z,3µm,0.7s						
NBCL	Cascavel-CE	32.98	81	eP	P	22 51 26.0	+0.9
NBCL				epP	pP	22 53 03.1	-0.4
PETF	Flores	33.15	325	P	P	22 51 26.3	-0.1
PETF				PcP	PcP	22 53 51.0	+0.2
NBLV	Livramento - P	33.75	87	eP	P	22 51 32.6	+1.0
NBLV				epP	pP	22 53 09.3	-1.3
NBPA	Parau_RN	33.82	84	eP	P	22 51 32.7	+0.6
CCIG	Comitan	33.97	322	P	P	22 51 33.5	-0.1
CCIG				IAmb	IAmb	22 51 46.0	
	comp=Z,4µm,1.1s						
NBAN	Anadia - AL	34.13	92	eP	P	22 51 35.3	+0.6

COYC	Coyhaique	34.84	181	P	P	22 51 40.2	+0.1
COYC				PcP	PcP	22 53 56.3	+1.0
SOR	Soroa	35.24	340	P	P	22 51 42.9	-0.9
SOR				pmax	pmax		
	comp=Z,9µm,0.8s						
SOR	Soroa	35.24	340	P	P	22 51 42.9	-0.9
NBRF	Rio Formoso -	35.35	90	eP	P	22 51 45.4	+0.5
NBPV	Pedro Velho	35.49	86	eP	P	22 51 46.7	+0.7
CMIG	Matias Romero	36.31	319	P	P	22 51 52.8	+0.2
	comp=Z,4µm,1.2s,baz=129,slow=5.6,SNR=676						
CMIG				S	S	22 56 52.1	+0.4
	comp=Z,452nm,1.1s,baz=50,slow=3.5,SNR=3.6						
TLIG	Tlapa	39.10	315	P	P	22 52 15.5	+0.1
TLIG				IAmb	IAmb	22 52 29.8	
	comp=Z,4µm,1.1s						
RPN	Rapa Nui	39.67	240	P	P	22 52 20.2	+0.5
	comp=Z,12µm,0.8s,baz=62,slow=2.9,SNR=464						
RPN	Rapa Nui	39.67	240	⇑iP	P	22 52 20.2	+0.5
RPN	Rapa Nui	39.67	240	⇑P	P	22 52 20.1	+0.4
RPN	Rapa Nui	39.67	240	P	P	22 52 19.9	+0.2
VA02	Isla de Pascua	39.76	240	⇑iP	P	22 52 20.8	+0.4
VA02				IAmb	IAmb	22 52 22.5	
	comp=Z,16µm,0.9s						
VA02	Isla de Pascua	39.76	240	P	P	22 52 20.8	+0.4
DWPF	Disney Wildern	39.82	345	⇓P	P	22 52 20.1	-0.6
DWPF	Disney Wildern	39.82	345	P	P	22 52 20.4	-0.4
GO09	Cerro Castillo	40.55	181	P	P	22 52 27.4	+1.1
GO09				IAmb	IAmb	22 52 29.0	
	comp=Z,4µm,0.9s						
GO09				ScP	ScP	22 57 06.2	+0.7
UNM	Universidad Na	40.74	317	P	P	22 52 29.8	+1.2
UNM				pmax	pmax		
	comp=Z,9µm,1.2s						
UNM	Universidad Na	40.74	317	⇓P	P	22 52 29.9	+1.2
UNM	Universidad Na	40.74	317	P	P	22 52 29.8	+1.2
MG05	Puerto Natales	40.96	181	P	P	22 52 30.1	+0.6
MG05				IAmb	IAmb	22 54 16.9	
	comp=Z,4µm,0.8s						
MG05				ScP	ScP	22 57 08.3	+1.2
656A	Willston	41.30	345	P	P	22 52 31.8	-0.7
MG02	Cerro Sombrero	42.07	178	P	P	22 52 39.5	+1.3
MG02				IAmb	IAmb	22 52 45.8	
	comp=Z,7µm,1.2s						
MG04	Isla Riesco	42.13	181	P	P	22 52 40.3	+1.7
MG04				PcP	PcP	22 54 18.3	-0.1
MG04				ScP	ScP	22 57 14.1	+2.2
EFI	East Falkland	42.27	168	ceP	P	22 52 40.7	+1.0
EFI				pmax	pmax		
	comp=Z,7µm,1.3s						
EFI	East Falkland	42.27	168	⇓P	P	22 52 40.6	+0.8
EFI				⇑P	PcP	22 54 20.6	+1.7
EFI	East Falkland	42.27	168	P	P	22 52 40.8	+1.0
EFI				PcP	PcP	22 54 20.1	+1.2
EFI				ScP	ScP	22 57 13.1	+0.7
MOIG	Morelia	42.35	315	P	P	22 52 41.5	+0.3
GO10	Punta Arenas	42.42	180	⇓P	P	22 52 43.0	+2.0
GO10				⇑S	ScP	22 57 16.3	+3.2
GO10				⇑S	ScP	22 57 18.8	+5.7
GO10	Punta Arenas	42.42	180	P	P	22 52 42.9	+2.0
GO10				PcP	PcP	22 54 19.5	0.0
GO10				ScP	ScP	22 57 15.0	+1.9
456A	Hilliard	42.46	346	P	P	22 52 41.4	-0.1
553A	Crawfordville	42.60	343	P	P	22 52 42.4	-0.2
BBSR	BB Station	43.16	8	⇓P	P	22 52 45.7	-1.3
BBSR	BB Station	43.16	8	P	P	22 52 45.9	-1.0
451A	Vernon	43.40	341	P	P	22 52 48.5	-0.3
451A				PcP	PcP	22 54 24.2	+1.1
257A	Skidaway Islan	43.44	348	P	P	22 52 48.9	-0.2
TIGA	Tifton	43.54	344	P	P	22 52 49.4	-0.5
	baz=162,SNR=146						
TIGA				S	S	22 58 34.4	-1.7
	baz=162						
352A	Blakely	43.95	343	P	P	22 52 52.2	-0.9
USHA	Ushuaia	44.15	178	P	P	22 52 56.1	+1.9
	comp=Z,2µm,0.8s,baz=12,slow=5.8,SNR=283						
USHA				PcP	PcP	22 54 26.6	+1.3
	comp=Z,817nm,0.8s,baz=349,slow=2.9,SNR=3.7						
USHA				ScP	ScP	22 57 21.3	+1.3
	comp=Z,1µm,0.8s,baz=3.4,slow=1.9,SNR=14						
USHA				S	S	22 58 46.6	+2.7
	comp=Z,227nm,0.6s,baz=110,slow=18,SNR=0.8						
USHA				P4KPbc		23 30 36.8	
	comp=Z,38nm,0.8s,baz=7.1,slow=6.4,SNR=10						
RGRS	Roger Stewart	44.17	349	P	P	22 52 54.3	-0.4
MG01	Puerto William	44.28	177	P	P	22 52 55.9	+0.7
MG01				IAmb	IAmb	22 52 57.4	
	comp=Z,3µm,0.8s						
MG01				PcP	PcP	22 54 26.2	+0.4
MG01				ScP	ScP	22 57 21.7	+1.1
BRAL	Brewton	44.33	340	⇓P	P	22 52 55.3	-0.7
BRAL	Brewton	44.33	340	P	P	22 52 55.3	-0.7
NHSC	New Hope	44.36	349	P	P	22 52 55.9	-0.3
NHSC				PcP	PcP	22 54 27.9	+1.5
154A	Montrose	44.53	345	P	P	22 52 56.5	-1.0
Y57A	Sumter	45.29	349	P	P	22 53 02.4	-0.8
Y57A				PcP	PcP	22 54 31.0	+1.3
GOGA	Godfrey	45.38	345	P	P	22 53 02.9	-1.1
GOGA				pmax	pmax		
	comp=Z,3µm,1.1s						
GOGA	Godfrey	45.38	345	P	P	22 53 02.9	-1.1
GOGA				IAmb	IAmb	22 53 15.7	
	comp=Z,3µm,1.1s						
ZAIG	Zacatecas	45.40	317	P	P	22 53 04.6	0.0
ZAIG				IAmb	IAmb	22 53 16.6	
	comp=Z,5µm,1.4s						
ZAIG				PcP	PcP	22 54 32.5	+1.7
ZAIG				ScP	ScP	22 57 26.8	+0.6
JSC	Jenkinsville	45.72	348	P	P	22 53 05.4	-1.0
JSC				IAmb	IAmb	22 53 14.0	
	comp=Z,7µm,1.6s						
JSC				PcP	PcP	22 54 33.3	+2.1
HODGE	Hodges	45.88	347	P	P	22 53 06.9	-0.8
HODGE				IAmb	IAmb	22 53 19.8	
	comp=Z,2µm,0.9s						
HODGE				PcP	PcP	22 54 32.9	+1.1
KVTX	Kingsville	46.06	326	⇓P	P	22 53 09.9	+0.7
KVTX	Kingsville	46.06	326	P	P	22 53 10.0	+0.7
CNNC	Cliffs of the	46.08	352	⇓P	P	22 53 08.1	-1.2
CNNC	Cliffs of the	46.08	352	P	P	22 53 08.0	-1.2
CNNC				IAmb	IAmb	22 53 17.0	
	comp=Z,10µm,1.8s						
441A	DeRidder	46.35	333	P	P	22 53 11.5	+0.1
146A	Union	46.36	339	P	P	22 53 10.1	-1.3
146A				PcP	PcP	22 54 33.9	+0.3
VBMS	Vicksburg	46.53	337	P	P	22 53 11.5	-1.2
VBMS				PcP	PcP	22 54 36.3	+2.1
KMSC	Kings Mountain	46.56	348	P	P	22 53 12.3	-0.6
	baz=166						
KMSC				S	S	22 59 15.6	-2.6
	baz=166						
BG3	Lake Jocassee	46.76	346	P	P	22 53 13.4	-1.0
BG3				IAmb	IAmb	22 53 25.9	
	comp=Z,3µm,1.0s						
HKT	Hockley	46.92	330	diP	P	22 53 15.4	-0.1
HKT				pmax	pmax		
	comp=Z,3µm,1.5s						
HKT	Hockley	46.92	330	⇓P	P	22 53 15.2	-0.3
HKT	Hockley	46.92	330	P	P	22 53 15.2	-0.3
HKT				IAmb	IAmb	22 53 28.3	
	comp=Z,11µm,1.9s						
HKT				PcP	PcP	22 54 35.3	-0.3
HKT				ScP	ScP	22 57 32.5	+0.5
833A	Chaparral WMA,	47.50	325	P	P	22 53 19.6	-0.4
	baz=141,SNR=938						
833A				S	S	22 59 30.2	-1.2
	baz=141						
W50A	Signal Mountai	47.55	344	P	P	22 53 19.0	-1.4
W50A				IAmb	IAmb	22 53 31.8	
	comp=Z,6µm,1.1s						
W50A				PcP	PcP	22 54 38.9	+1.0
TKL	Tuckaleechee C	47.60	346	P	P	22 53 19.2	-1.4
TKL				pmax	pmax		
	comp=Z,4µm,1.1s						
TKL	Tuckaleechee C	47.60	346	P	P	22 53 19.2	-1.4
TKL				IAmb	IAmb	22 53 32.0	
	comp=Z,4µm,1.1s						
SWET	Sewanee	47.74	343	P	P	22 53 20.0	-1.7
SWET				IAmb	IAmb	22 53 32.9	
	comp=Z,7µm,1.3s						
NATX	Nacogdoches	47.87	332	P	P	22 53 22.7	0.0
NATX				PcP	PcP	22 54 41.1	+2.1
T57A	Hurt	48.00	351	P	P	22 53 22.5	-1.1
T57A				IAmb	IAmb	22 53 35.6	
	comp=Z,4µm,0.9s						
Z41A	Richland Creek	48.35	335	P	P	22 53 25.3	-0.9
	baz=151,SNR=218						
Z41A				S	S	22 59 39.2	-3.6
	baz=151						
TZTN	Tazewell	48.39	346	P	P	22 53 25.1	-1.4
TZTN				IAmb	IAmb	22 53 38.0	
	comp=Z,5µm,1.1s						
BLA	Blacksburg	48.40	350	P	P	22 53 26.0	-0.6
BLA				pmax	pmax		
	comp=Z,5µm,1.1s						
BLA	Blacksburg	48.40	350	P	P	22 53 26.0	-0.6
BLA				IAmb	IAmb	22 53 42.3	
	comp=Z,5µm,1.1s						
435B	Jarrell	48.47	329	P	P	22 53 26.8	-0.4
	baz=144,SNR=108						
435B				S	S	22 59 42.1	-2.5
	baz=144						
435B	Jarrell	48.47	329	P	P	22 53 26.2	-0.9
435B				IAmb	IAmb	22 53 38.5	
	comp=Z,4µm,1.1s						
435B				PcP	PcP	22 54 42.7	+1.4
JSRW	J. Sargeant Re	48.49	353	P	P	22 53 25.8	-1.4
JSRW				PcP	PcP	22 54 43.7	+2.5
CCAR	Cane Creek	48.52	337	P	P	22 53 26.6	-0.8
CLTN	Cedars of Leba	48.67	343	P	P	22 53 26.9	-1.7
CLTN				IAmb	IAmb	22 53 39.5	
	comp=Z,4µm,1.0s						
S57A	Dark Hollow, R	48.70	352	P	P	22 53 28.0	-0.7
R58B	Mineral	48.76	353	P	P	22 53 28.2	-0.9
R58B				IAmb	IAmb	22 53 36.4	
	comp=Z,9µm,2.0s						
R58B				PcP	PcP	22 54 43.5	+1.3
R61A	Willards	48.87	355	P	P	22 53 29.3	-0.6
R61A				IAmb	IAmb	22 53 37.3	
	comp=Z,4µm,0.9s						
CBN	Corbin Frederi	48.94	353	P	P	22 53 29.4	-1.0
CBN				IAmb	IAmb	22 53 37.2	
	comp=Z,2µm,0.5s						
CBN				PcP	PcP	22 54 44.1	+1.3
H06E1	SOCORRO T-PHAS	49.07	306	P	P	22 53 32.8	+0.9
	SNR=99						
H06S1	SOCORRO T	49.07	306	P	P	22 53 32.8	+1.0
S54A	Dingess, Beckl	49.13	349	P	P	22 53 31.4	-0.6
WVT	Waverly	49.15	342	P	P	22 53 29.6	-2.4
WVT				pmax	pmax		
	comp=Z,3µm,0.9s						
WVT	Waverly	49.15	342	⇓P	P	22 53 29.4	-2.6
WVT	Waverly	49.15	342	P	P	22 53 29.6	-2.4
WVT				IAmb	IAmb	22 53 41.8	
	comp=Z,3µm,0.8s						
H06N1	SOCORRO T-PHAS	49.16	306	P	P	22 53 33.4	+1.0
	SNR=116						
WHTX	Lake Whitney,	49.38	330	P	P	22 53 33.6	-0.3
	baz=145,SNR=510						
WHTX				S	S	22 59 55.0	-1.9
	baz=145						
JCT	Junction City	49.39	327	P	P	22 53 33.0	-1.0
JCT				pmax	pmax		
	comp=Z,2µm,0.8s						
JCT	Junction City	49.39	327	⇓P	P	22 53 33.1	-0.9
JCT	Junction City	49.39	327	P	P	22 53 33.0	-1.0
JCT				IAmb	IAmb	22 54 47.9	
	comp=Z,2µm,0.8s						
Q61A	Milford	49.41	355	P	P	22 53 33.0	-0.9
	baz=174,SNR=23						
Q61A				S	S	22 59 54.4	-2.6
	baz=174						
X40A	Basin Creek Fa	49.43	336	P	P	22 53 32.5	-1.7
	baz=151,SNR=293						
X40A				S	S	22 59 53.2	-4.4
	baz=151						
LPAR	Lepanto	49.48	339	P	P	22 53 32.7	-1.7
LNXT	Lenox	49.65	340	P	P	22 53 33.8	-2.0
R53A	Hurricane	49.77	349	P	P	22 53 35.4	-1.1
R53A				IAmb	IAmb	22 53 43.6	
	comp=Z,4µm,0.7s						
MIAR	Mount Ida	49.78	335	⇑P	P	22 53 34.6	-2.1
W41B	Gary Mavity, V	49.81	337	P	P	22 53 35.3	-1.6
	baz=152,SNR=1000						
W41B				S	S	22 59 57.1	-5.4
	baz=152						
WHAR	Wooly Hollow	49.93	337	P	P	22 53 36.2	-1.5
WHAR				IAmb	IAmb	22 53 45.1	
	comp=Z,4µm,1.1s						
WHAR				PcP	PcP	22 54 48.1	+1.5
PVMO	Portageville	50.01	340	P	P	22 53 36.9	-1.4
SDMD	Soldier's Deli	50.07	354	P	P	22 53 36.9	-1.8
SDMD					PcP	22 54 48.6	+1.5
SDMD				ScP	ScP	22 57 45.5	+0.2
PARMO	Parma	50.25	340	P	P	22 53 38.5	-1.5
HPIG		50.29	319	P	P	22 53 39.9	-1.0
HPIG				IAmb	IAmb	22 53 51.6	
	comp=Z,4µm,1.4s						
P60A	Greenville	50.36	355	P	P	22 53 39.5	-1.3
	baz=174,SNR=228						
P60A				S	S	23 00 02.1	-7.7
	baz=174						
W39A	Magazine	50.43	336	P	P	22 53 40.6	-0.9
	baz=150,SNR=966						
W39A				S	S	23 00 07.4	-3.6
	baz=150						
WUPA	West Chester U	50.48	355	P	P	22 53 40.3	-1.4
WUPA				PcP	PcP	22 54 48.6	0.0
WUPA				ScP	ScP	22 57 46.6	-0.4
WCI	Wyandotte Cave	50.67	344	P	P	22 53 41.0	-2.1
WCI				pmax	pmax		
	comp=Z,6µm,1.0s						
WCI	Wyandotte Cave	50.67	344	⇓P	P	22 53 41.0	-2.1
WCI	Wyandotte Cave	50.67	344	P	P	22 53 41.0	-2.1
WCI				IAmb	IAmb	22 53 54.5	
	comp=Z,6µm,0.9s						
MCWV	Mont Chateau	50.70	351	P	P	22 53 42.2	-1.1
MCWV				IAmb	IAmb	22 53 55.6	
	comp=Z,4µm,1.0s						
Q51A	Peebles	50.72	348	P	P	22 53 41.6	-1.9
TX31	Lajitas Ar. Si	50.73	322	⇓P	P	22 53 42.9	-1.0
TX32	Lajitas Array	50.73	322	P	P	22 53 43.4	-0.5
TXAR	Lajitas Array	50.73	322	P	P	22 53 43.0	-0.8
	comp=Z,727nm,1.0s,baz=145,slow=8.6,SNR=448						
TXAR				PcP	PcP	22 54 51.8	+1.9
	comp=Z,270nm,0.6s,baz=151,slow=6.2,SNR=4.7						
TXAR				P4KPbc		23 31 05.2	
	comp=Z,11nm,0.9s,baz=142,slow=9.0,SNR=5.0						
TXAR	Lajitas Array	50.73	322	P	P	22 53 42.7	-1.1
TXAR				PcP	PcP	22 54 52.0	+2.1
LOOK	Love County	50.89	332		P	22 53 44.1	-0.7
ABTX	Abilene, Hawle	50.99	329	P	P	22 53 45.1	-0.5
	baz=143,SNR=716						
ABTX				S	S	23 00 16.2	-2.4
	baz=143						
ABTX	Abilene, Hawle	50.99	329	P	P	22 53 44.9	-0.6
S44A	Carbondale	51.03	341	P	P	22 53 44.2	-1.5
SIUC	Southern Illin	51.04	341	P	P	22 53 44.1	-1.6
P52A	Corning	51.06	349	P	P	22 53 44.6	-1.3
	baz=166,SNR=962						
P52A				S	S	23 00 14.5	-4.9
	baz=166						
P52A	Corning	51.06	349	P	P	22 53 44.5	-1.5
P52A				IAmb	IAmb	22 53 57.8	
	comp=Z,5µm,1.0s						
U40A	Yellville	51.08	337	P	P	22 53 44.6	-1.6
	baz=152,SNR=1000						
U40A				S	S	23 00 14.1	-5.6
	baz=152						
O56A	Blue Knob Stat	51.12	353	P	P	22 53 45.9	-0.5
	baz=170,SNR=436						
O56A				S	S	23 00 17.5	-2.6
	baz=170						
SLBS	Sierra La Lagu	51.15	312	⇓P	P	22 53 47.0	0.0
SLBS	Sierra La Lagu	51.15	312	P	P	22 53 47.0	0.0
SSPA	Standing Stone	51.40	353	⇓P	P	22 53 47.2	-1.1
SSPA	Standing Stone	51.40	353	P	P	22 53 47.6	-0.7
SSPA				IAmb	IAmb	22 53 55.8	
	comp=Z,7µm,1.8s						
SSPA				PcP	PcP	22 54 52.2	+0.2
HOPE	Hope Point	51.42	155	P	P	22 53 49.5	+1.3
HOPE				pmax	pmax		
	comp=Z,13µm,1.0s						
HOPE	Hope Point	51.42	155	⇑P	P	22 53 49.3	+1.0
HOPE	Hope Point	51.42	155	P	P	22 53 49.5	+1.3
N59A	State Game Lan	51.47	355	P	P	22 53 47.8	-1.0
	baz=174,SNR=197						
O53A	New Philadelph	51.50	350	P	P	22 53 48.0	-1.0
	baz=167						
O53A				S	S	23 00 20.8	-4.3
	baz=167						
O53A	New Philadelph	51.50	350	P	P	22 53 48.0	-1.0
O53A				IAmb	IAmb	22 53 57.2	
	comp=Z,7µm,1.2s						
P49A	Miami Univ. Ec	51.51	346	P	P	22 53 47.2	-2.0
	baz=163,SNR=694						
P49A				S	S	23 00 18.8	-6.5
	baz=163						
ODNJ	Ogdensburg	51.55	356	P	P	22 53 47.7	-1.7
MGMO	Mountain Grove	51.57	338	P	P	22 53 48.1	-1.6
MGMO				IAmb	IAmb	22 54 01.3	
	comp=Z,6µm,0.9s						
MGMO				PcP	PcP	22 54 54.6	+1.8
OLIL	Olney	51.64	343	P	P	22 53 47.6	-2.4
OLIL				IAmb	IAmb	22 54 00.5	
	comp=Z,14µm,1.9s						
ACSO	Alum Creek Sta	51.81	348	P	P	22 53 49.7	-1.6
ACSO				IAmb	IAmb	22 54 03.0	
	comp=Z,6µm,1.0s						
TUL1	Leonard	51.88	334	P	P	22 53 50.8	-1.1
	baz=148,SNR=532						
TUL1				S	S	23 00 27.2	-3.2
	baz=148						
TUL1	Leonard	51.88	334		P	22 53 50.7	-1.2
TUL1				IAmb	IAmb	22 54 02.4	
	comp=Z,7µm,1.1s						
M65A	Busby, Falmout	51.92	0	P	P	22 53 50.6	-1.4
	baz=180						
N54A	Moraine State	52.00	351	P	P	22 53 52.3	-0.3
	baz=169,SNR=393						
N54A				S	S	23 00 29.5	-2.2
	baz=169						
M57A	Sunshine Farm,	52.01	354	P	P	22 53 51.8	-0.9
M57A				IAmb	IAmb	22 54 01.2	
	comp=Z,4µm,1.2s						
CCM	Cathedral Cave	52.01	340	P	P	22 53 51.0	-1.8
CCM				pmax	pmax		
	comp=Z,20µm,1.7s						
CCM	Cathedral Cave	52.01	340	⇓P	P	22 53 50.8	-1.9
CCM	Cathedral Cave	52.01	340	P	P	22 53 51.0	-1.8
FNO	Franklin	52.04	332		P	22 53 52.1	-1.0
KSCT	Kent School, K	52.14	358	P	P	22 53 52.5	-1.0
WMOK	Wichita Mounta	52.26	331	⇓P	P	22 53 53.1	-1.6
WMOK	Wichita Mounta	52.26	331		P	22 53 53.3	-1.3
WMOK					PcP	22 54 56.9	+1.4
WMOK				ScP	ScP	22 57 54.3	-0.7
M54A	Oil Creek Stat	52.48	352	P	P	22 53 55.1	-1.0
	baz=169,SNR=382						
M54A				S	S	23 00 35.8	-2.4
	baz=169						
M53A	WI Miller and	52.57	351	P	P	22 53 55.9	-0.7
	baz=168,SNR=1000						
M53A				S	S	23 00 35.8	-3.5
	baz=168						
M53A	WI Miller and	52.57	351	P	P	22 53 55.8	-0.9
N49A	Columbus Grove	52.72	347	P	P	22 53 56.1	-1.6
WES	Weston	52.74	360	P	P	22 53 55.8	-2.1
WES				pmax	pmax		
	comp=Z,2µm,1.1s						
WES	Weston	52.74	360	P	P	22 53 55.8	-2.1
BINY	Binghamton	52.76	355	P	P	22 53 57.3	-0.8
BINY				IAmb	IAmb	22 54 10.5	
	comp=Z,3µm,0.9s						
L61B	Northampton	52.83	358	P	P	22 53 57.2	-1.3
	baz=178						
HRV	Adam Dziewonsk	52.87	359	P	P	22 53 57.7	-1.0
HRV				pmax	pmax		
	comp=Z,3µm,0.9s						
HRV	Adam Dziewonsk	52.87	359	⇓P	P	22 53 57.7	-1.0
HRV	Adam Dziewonsk	52.87	359	P	P	22 53 57.7	-1.0
SFIN	Lafayette	52.90	345	P	P	22 53 56.6	-2.4
	baz=160,SNR=1000						
ERPA	Erie	53.13	352	P	P	22 53 59.7	-0.9
CROK	Carrier	53.34	333		P	22 54 01.4	-0.9
SACV	Santiago Islan	53.35	62	P	P	22 54 03.6	+0.9
MNTX	Cornudas Mount	53.46	323	P	P	22 54 01.7	-1.5
MNTX				IAmb	IAmb	22 54 13.2	
	comp=Z,5µm,1.4s						
KAN13	South Haven SW	53.54	334		P	22 54 02.7	-0.9
HDIL	Hopedale	53.67	343	P	P	22 54 02.0	-2.5
HDIL				IAmb	IAmb	22 54 04.5	
	comp=Z,5µm,0.6s						
MSTX	Muleshoe	53.68	327	P	P	22 54 03.7	-1.1
	baz=140						
MSTX				S	S	23 00 52.0	-2.3
	baz=140						
MSTX	Muleshoe	53.68	327	P	P	22 54 03.4	-1.4
MSTX				IAmb	IAmb	22 54 15.0	
	comp=Z,6µm,1.2s						
J61A	Chester	53.72	359	P	P	22 54 03.7	-1.1
ACCN	Adirondack Com	53.80	358	P	P	22 54 04.3	-1.0
ACCN				IAmb	IAmb	22 54 12.5	
	comp=Z,8µm,2.0s						
ACCN				PcP	PcP	22 55 01.8	+0.7
AMTX	Amarillo	53.81	329	P	P	22 54 04.5	-1.2
AMTX				IAmb	IAmb	22 54 16.5	
	comp=Z,3µm,0.8s						
AAM	Ann Arbor	53.94	348	P	P	22 54 04.6	-1.7
AAM				pmax	pmax		
	comp=Z,2µm,0.6s						
AAM	Ann Arbor	53.94	348	P	P	22 54 04.6	-1.7
AAM				IAmb	IAmb	22 54 17.1	
	comp=Z,2µm,0.6s						
MEDO	Medina	53.96	353	P	P	22 54 04.4	-2.0
MEDO				IAmb	IAmb	22 54 13.4	
	comp=Z,7µm,1.7s						
J57A	Williamstown	53.96	355	P	P	22 54 05.2	-1.2
KAN16	Harper SW Stat	53.97	333		P	22 54 06.1	-0.6
KAN16				IAmb	IAmb	22 54 14.8	
	comp=Z,5µm,0.7s						
J55A	Hilton	53.99	354	P	P	22 54 05.3	-1.3
J55A				IAmb	IAmb	22 54 14.5	
	comp=Z,8µm,1.6s						
KAN12	Harper NE Stat	54.00	333	P	P	22 54 06.1	-0.8
L46A	Eue Claire	54.24	346	P	P	22 54 06.1	-2.3
L46A				IAmb	IAmb	22 54 18.4	
	comp=Z,13µm,1.5s						
N41A	Harden Midland	54.29	341	P	P	22 54 06.4	-2.4
N41A				IAmb	IAmb	22 54 15.9	
	comp=Z,7µm,0.9s						
PMSA	Palmer Station	54.29	176	P	P	22 54 09.8	+1.4
	comp=Z,2µm,0.7s,baz=0.9,slow=5.8,SNR=538						
PMSA				ScP	ScP	22 58 04.4	+1.1
	comp=Z,700nm,0.8s,baz=340,slow=4.7,SNR=7.3						
PMSA				P4KPbc		23 31 19.9	
	comp=Z,43nm,0.7s,baz=353,slow=2.1,SNR=9.0						
PMSA	Palmer Station	54.29	176	⇓P	P	22 54 09.5	+1.1
PMSA	Palmer Station	54.29	176	P	P	22 54 09.7	+1.3
PMSA				PcP	PcP	22 55 04.3	+1.6
PMSA				ScP	ScP	22 58 05.2	+1.9
NCB	Newcomb	54.41	357	P	P	22 54 08.5	-1.1
L44A	Lake County Fo	54.80	345	P	P	22 54 09.7	-2.6
	baz=159,SNR=183						
WVL	Waterville	54.93	1	IAmb	IAmb	22 54 20.9	
	comp=Z,8µm,1.8s						
KSU1	Kansas State U	54.94	336	⇓P	P	22 54 11.6	-1.8
KSU1	Kansas State U	54.94	336	IAmb	IAmb	22 54 23.3	
	comp=Z,4µm,0.7s						
EMMW	East Machias	55.15	3	P	P	22 54 14.0	-0.7
DELO	Deloro Mine	55.21	354	IAmb	IAmb	22 54 21.8	
	comp=Z,11µm,2.0s						
R32A	Long Quarter,	55.25	334	IAmb	IAmb	22 54 28.5	
	comp=Z,5µm,1.0s						
HAL	Halifax	55.40	6	P	P	22 54 15.6	-0.7
HAL				PcP	PcP	22 55 08.6	+1.3
HAL				pP	pP	22 56 10.8	-0.1
HAL				ScP	ScP	22 58 09.4	+0.9
H10S3	ASCENSION HYDR	55.42	94	P	P	22 54 18.4	+1.5
H10S2	ASCENSION HYDR	55.44	94	P	P	22 54 18.5	+1.5
121A	Cookes Peak, D	55.48	322	P	P	22 54 17.6	+0.1
	baz=134,SNR=1000						
121A				S	S	23 01 17.8	-0.3
	baz=134						
121A	Cookes Peak, D	55.48	322	IAmb	IAmb	22 54 28.9	
	comp=Z,6µm,1.3s						
G62A	West of Eustis	55.58	0	IAmb	IAmb	22 54 30.7	
	comp=Z,5µm,0.9s						
GGN	Saint George	55.60	4	P	P	22 54 17.1	-0.7
GGN				PcP	PcP	22 55 08.8	+0.7
GGN				pP	pP	22 56 13.1	+0.7
319A	Douglas	55.62	320	IAmb	IAmb	22 54 29.3	
	comp=Z,7µm,1.1s						
SADO	Sadowa	55.62	353	⇓P	P	22 54 16.3	-1.7
H10N3	ASCENSION HYDR	55.72	92	P	P	22 54 20.4	+1.5

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      baz=264,slow=6.7,SNR=327
H10N2 ASCENSION HYDR55.74  92   P       P       22 54 20.3 +1.3
      baz=264,slow=6.7,SNR=444
H10N1 ASCENSION HYDR55.74  92   P       P       22 54 20.7 +1.6
ASCN  Ascension      55.85  92  P       P       22 54 20.2  0.0
ASCN                            IAmb    IAmb    22 54 30.8
      comp=Z,8µm,1.2s
MNTQ  Montreal, Queb 55.91 358 ⇓P       P       22 54 19.0 -0.9
MNTQ                           ⇑p       pP      22 56 16.2 +1.4
MNTQ  Montreal, Queb 55.91 358  IAmb    IAmb    22 54 32.2
      comp=Z,5µm,0.9s
CBKS  Cedar Bluff    56.03 333  P       P       22 54 20.0 -0.9
CBKS                            *PP     pP      22 56 14.4 -1.5
CBKS                            pmax    pmax
      comp=Z,10µm,1.1s
CBKS  Cedar Bluff    56.03 333 ⇓P       P       22 54 20.1 -0.9
CBKS  Cedar Bluff    56.03 333  P       P       22 54 20.0 -0.9
CBKS                            IAmb    IAmb    22 54 32.5
      comp=Z,10µm,1.1s
CBKS                            pP      pP      22 56 14.4 -1.5
Y22D  IRIS PASSCAL I 56.06 324  P       P       22 54 21.5 +0.1
      baz=136,SNR=35
Y22D                            S       S       23 01 26.0 +0.6
      baz=136
N35A  Tabor          56.07 338  IAmb    IAmb    22 55 13.4
      comp=Z,4µm,0.7s
F62A  Pittston Farm, 56.26   1  P       P       22 54 21.6 -0.8
F62A                            PcP     PcP     22 55 12.0 +1.3
GBN   Guysborough    56.41   8  P       P       22 54 22.7 -0.6
GBN                             PcP     PcP     22 55 13.0 +1.8
GBN                             pP      pP      22 56 19.3 +0.7
ANMO  Albuquerque    56.43 325  P       P       22 54 23.2 -0.8
      comp=Z,796nm,0.9s,baz=135,slow=7.6,SNR=317
ANMO                            P4KPbc          23 31 31.0
      comp=Z,32nm,0.9s,baz=143,slow=5.3,SNR=6.8
ANMO  Albuquerque    56.43 325  P       P       22 54 22.9 -1.1
ANMO                                            22 55 12.0
ANMO                            pmax    pmax
      comp=Z,2µm,1.2s
ANMO  Albuquerque    56.43 325 ⇓P       P       22 54 23.1 -0.9
ANMO  Albuquerque    56.43 325  P       P       22 54 22.9 -1.1
ANMO                            PcP     PcP     22 55 12.0  0.0
LMN   Caledonia Moun 56.48   5  P       P       22 54 23.0 -0.8
LMN                             PcP     PcP     22 55 11.7 +0.1
LMN                             pP      pP      22 56 19.1  0.0
T25A  Trinidad       56.95 328  P       P       22 54 27.5 -0.1
      baz=140
T25A                            S       S       23 01 37.2 +0.4
      baz=140
TUC   Tucson         57.19 320  P       P       22 54 28.6 -0.5
TUC                             pmax    pmax
      comp=Z,1µm,0.9s
TUC   Tucson         57.19 320 ⇓P       P       22 54 28.4 -0.7
TUC   Tucson         57.19 320  P       P       22 54 28.6 -0.5
BGNE  Belgrade       57.52 336  P       P       22 54 30.1 -1.0
      baz=148,SNR=531
BGNE                            S       S       23 01 39.4 -4.0
      baz=148
KSCO  Kaye Shedlock' 57.52 331  P       P       22 54 30.9 -0.3
      baz=142,SNR=426
KSCO                            S       S       23 01 40.5 -3.3
      baz=142
SDCO  Great Sand Dun 57.98 328  P       P       22 54 34.5  0.0
214A  Organ Pipe Nat 58.27 318  P       P       22 54 36.6 +0.2
      baz=130,SNR=1000
214A                            S       S       23 01 54.0 +0.6
      baz=130
W18A  Petrified Fore 58.45 323  P       P       22 54 37.6  0.0
      baz=134,SNR=491
W18A                            S       S       23 01 55.5 -0.3
      baz=134
S22A  4UR Ranch, Cre 58.68 327  P       P       22 54 39.3  0.0
      baz=138,SNR=1000
S22A                            S       S       23 01 58.2 -0.7
      baz=138
H09W1 TRISTAN DA CUN 58.71 127  P       P       22 54 40.0 +0.8
H09N1 TRISTAN DA CUN 58.72 127  P       P       22 54 40.2 +1.0
Q24A  Divide         58.72 329  P       P       22 54 39.4 -0.2
      baz=140,SNR=1000
Q24A                            S       S       23 01 58.7 -0.6
      baz=140
ECSD  EROS Data Cent 58.92 338  P       P       22 54 38.7 -1.7
ECSD                            IAmb    IAmb    22 54 51.3
      comp=Z,10µm,1.5s
SPMN  Marine on St.  58.98 342  P       P       22 54 39.0 -1.7
      baz=155,SNR=245
SPMN                            S       S       23 01 56.6 -5.1
      baz=155
MBO   M'Bour         59.01  66  P       P       22 54 42.9 +1.4
MBO                             IAmb    IAmb    22 54 53.4
      comp=Z,14µm,1.4s
SFX   San Felipe     59.07 316  P       P       22 54 41.3 -0.3
SFX                             PcP     PcP     22 55 22.9 +0.6
SFX                             pP      pP      22 56 37.6 -0.8
Y14A  Wickenburg     59.66 320  P       P       22 54 45.5 -0.1
Y14A                            pP      pP      22 56 44.6 +1.8
WUAZ  Wupatki        59.70 322 ⇑P       P       22 54 46.0 +0.1
WUAZ  Wupatki        59.70 322  P       P       22 54 46.0 +0.1
WUAZ                            IAmb    IAmb    22 54 57.9
      comp=Z,6µm,1.2s
WUAZ                            pP      pP      22 56 43.7 +0.5
F36A  Milaca         59.78 342  P       P       22 54 44.4 -1.6
SMCO  Snowmass       59.82 328 ⇓P       P       22 54 46.6 -0.3
ICQ   Pointe Anglais 59.97   3 ⇓P       P       22 54 46.1 -1.1
GLA   Glamis         60.28 318  P       P       22 54 49.8 +0.2
      baz=128,SNR=120
GLA                             S       S       23 02 20.0 +1.6
      baz=128
SUSD  Miller         60.40 337  P       P       22 54 49.1 -1.1
      baz=148,SNR=144
SUSD                            S       S       23 02 16.4 -3.1
      baz=148
UABX  UABC, Campus M 60.43 317  P       P       22 54 50.7 +0.1
UABX                            IAmb    IAmb    22 55 44.5
      comp=Z,11µm,1.4s
N23A  Red Feather La 60.59 330  P       P       22 54 51.7 -0.1
      baz=140
N23A                            S       S       23 02 22.4  0.0
      baz=140
PDMCI Parker Dam,Lak 60.62 319  P       P       22 54 52.0 +0.2
      baz=130,SNR=794
PDMCI                           S       S       23 02 23.7 +1.2
      baz=130
KAPO  Kapuskasing    60.67 351 ⇓P       P       22 54 49.9 -1.9
DRLN  Deer Lake      60.78  10 ⇓P       P       22 54 51.5 -1.0
DRLN  Deer Lake      60.78  10  P       P       22 54 51.4 -1.0
DRLN                            IAmb    IAmb    22 55 04.4
      comp=Z,6µm,1.0s
DRLN                            pP      pP      22 56 49.4 -1.0
CCX   Cicese         60.80 316  P       P       22 54 53.2 +0.2
CCX                             PcP     PcP     22 55 31.0 +1.7
SWSC  Sam W. Stewart 60.86 317  P       P       22 54 53.6 +0.2
      baz=128,SNR=152
SWSC                            S       S       23 02 28.0 +2.5
      baz=128
IKP   In-Ko-Pah, Jac 60.89 317  P       P       22 54 54.1 +0.3
      baz=127,SNR=257
IKP                             S       S       23 02 28.0 +1.9
      baz=127
W13A  Hualapai Mount 60.97 320  P       P       22 54 54.1 -0.3
W13A                            PcP     PcP     22 55 30.8 +0.6
W13A                            pP      pP      22 56 52.9 +0.6
BC3   Big Chuckawall 61.07 318  P       P       22 54 55.2 +0.3
      baz=128,SNR=202
BC3                             S       S       23 02 30.0 +1.7
      baz=128
IRM   Iron Mountain  61.18 319  P       P       22 54 55.9 +0.4
      baz=129,SNR=1000
IRM                             S       S       23 02 30.7 +1.3
      baz=129
O20A  White River Ci 61.18 328  P       P       22 54 55.7 +0.1
      baz=137,SNR=542
O20A                            S       S       23 02 30.2 +0.6
      baz=137
NEE2  Needles Airpor 61.22 320  P       P       22 54 55.8 +0.1
      baz=129,SNR=145
NEE2                            S       S       23 02 29.8 -0.1
      baz=129
MONP2 Monument Peak  61.25 317  P       P       22 54 56.3 +0.1
      baz=127,SNR=360
MONP2                           S       S       23 02 31.5 +0.8
      baz=127
BELC  Belle Mtn. Jos 61.64 318  P       P       22 54 58.9 +0.3
      baz=128,SNR=274
BELC                            S       S       23 02 36.4 +1.1
      baz=128
TPFO  Pinon Flats    61.70 317  P       P       22 54 59.3 +0.3
      baz=127,SNR=471
TPFO                            S       S       23 02 39.0 +3.0
      baz=127
PFO   Pinyon Flats O 61.70 317  PKPPKP          23 23 52.8
      comp=Z,25nm,0.9s,baz=60,slow=2.0,SNR=3.9
PFO   Pinyon Flats O 61.70 317  P       P       22 54 59.3 +0.3
      baz=127,SNR=133
PFO                             S       S       23 02 38.5 +2.3
      baz=127
PFO   Pinyon Flats O 61.70 317  P       P       22 54 59.1  0.0
PFO                             PcP     PcP     22 55 34.5 +1.4
PFO                             pP      pP      22 56 56.4 -1.1
PFO                             sP      sP      22 57 56.8 -4.9
PFO                             ScP     ScP     22 58 36.3 -0.7
109C  Camp Elliot, M 61.71 316  P       P       22 54 59.0  0.0
      baz=126,SNR=64
109C                            S       S       23 02 36.7 +0.8
      baz=126
MTPU  Mount Pierson  61.88 324  P       P       22 55 00.3 -0.1
MTPU                            IAmb    IAmb    22 55 11.6
      comp=Z,10µm,1.9s
GMRC  Granite Mounta 61.90 319  P       P       22 55 00.7 +0.4
      baz=128,SNR=1000
GMRC                            S       S       23 02 39.2 +0.7
      baz=128
H07S1 FLORES T-PHASE 61.95  34  P       P       22 55 00.8 +0.4
H07S1 FLORES T-PHASE 61.95  34 eP       P       22 55 00.4  0.0
MURC  Murrieta       62.19 317  P       P       22 55 02.3 +0.2
      baz=127,SNR=169
MURC                            S       S       23 02 44.6 +2.7
      baz=127
K22A  Casper         62.21 331  P       P       22 55 01.9 -0.2
      baz=140,SNR=590
K22A                            S       S       23 02 42.1 +0.1
      baz=140
K22A  Casper         62.21 331  P       P       22 55 01.9 -0.2
K22A                            pP      pP      22 57 00.5 -0.4
RSSD  Black Hills    62.21 334 ⇓P       P       22 55 01.9 -0.3
RSSD  Black Hills    62.21 334  P       P       22 55 02.0 -0.2
RSSD                            IAmb    IAmb    22 55 13.5
      comp=Z,5µm,1.1s
RSSD                            pP      pP      22 57 00.5 -0.4
H07N1 FLORES T-PHASE 62.22  34  P       P       22 55 03.0 +0.9
H07N1 FLORES T-PHASE 62.22  34 eP       P       22 55 02.3 +0.2
HEC   Hector,Ludlow  62.36 319  P       P       22 55 03.8 +0.6
      baz=128,SNR=536
HEC                             S       S       23 02 45.9 +1.9
      baz=128
BBRC  Big Bear Solar 62.40 318  P       P       22 55 04.5 +0.8
      baz=127,SNR=34
BBRC                            S       S       23 02 46.6 +1.7
      baz=127
TUQ   Turquoise Moun 62.47 319  P       P       22 55 04.4 +0.4
      baz=128,SNR=102
TUQ                             S       S       23 02 46.8 +1.4
      baz=128
SHPR  Sheep Range    62.66 321  P       P       22 55 05.3  0.0
SHPR                            IAmb    IAmb    22 55 16.6
      comp=Z,5µm,1.2s
AGMN  Agassiz Nation 62.67 342  P       P       22 55 03.5 -1.3
AGMN                            IAmb    IAmb    22 55 15.0
      comp=Z,3µm,0.8s
SCI2  San Clemente I 62.74 316  P       P       22 55 05.9 +0.3
      baz=125,SNR=47
SCI2                            S       S       23 02 50.5 +1.9
      baz=125
PFCBR Castelo Branco 62.78  36 eP       P       22 55 07.1 +1.4
      comp=Z,998nm,1.6s
RRX   Edison Barstow 62.82 318  P       P       22 55 06.9 +0.8
      baz=127,SNR=81
RRX                             S       S       23 02 51.3 +1.8
      baz=127
CALA  Caldeira       62.82  36 eP       P       22 55 07.8 +1.7
      comp=Z,3µm,1.5s
PCED  Cedros         62.86  36 eP       P       22 55 06.8 +0.6
      comp=Z,5µm,1.5s
PCAN  Candelaria     62.87  37 eP       P       22 55 07.4 +1.1
      comp=Z,2µm,1.3s
BFSC  Mount Baldy Ra 62.88 317  P       P       22 55 06.7 +0.1
      baz=126,SNR=537
BFSC                            S       S       23 02 51.6 +1.2
      baz=126
CIS   Catalina Islan 62.90 316  P       P       22 55 06.8 +0.2
      baz=126,SNR=137
CIS                             S       S       23 02 52.1 +1.6
      baz=126
PICO  Pico           62.93  37 eP       P       22 55 07.4 +0.6
      comp=Z,3µm,1.0s
GSC   Goldstone, Bar 62.96 319  P       P       22 55 07.6 +0.5
      baz=128,SNR=864
GSC                             S       S       23 02 53.1 +1.9
      baz=128
GSC   Goldstone, Bar 62.96 319  P       P       22 55 07.5 +0.5
GSC                             IAmb    IAmb    22 55 18.4
      comp=Z,5µm,1.4s
GSC                             PcP     PcP     22 55 41.2 +3.0
GSC                             pP      pP      22 57 05.9 -0.3
SHOC  Shoshone, Teco 62.98 320  P       P       22 55 07.5 +0.3
      baz=128,SNR=80
SHOC                            S       S       23 02 52.9 +1.5
      baz=128
FMP   Fort Macarthur 63.00 317  P       P       22 55 07.7 +0.5
      baz=126,SNR=44
FMP                             S       S       23 02 52.9 +1.4
      baz=126
PPNO  Prainha do Nor 63.01  37 eP       P       22 55 08.5 +1.2
      comp=Z,2µm,1.5s
PID   Ribeirinha     63.07  37 eP       P       22 55 08.8 +1.2
      comp=Z,2µm,1.1s
PRN   Pahroc Range   63.17 322 ⇓P       P       22 55 09.0 +0.5
ROSA  Rosais         63.19  36 eP       P       22 55 08.3  0.0
      comp=Z,3µm,1.3s
ROSA  Rosais         63.19  36 ⇑P       P       22 55 08.9 +0.6
ROSA  Rosais         63.19  36  P       P       22 55 08.9 +0.6
ROSA                            IAmb    IAmb    22 55 17.0
      comp=Z,6µm,1.3s
PMAN  Manadas        63.22  37 eP       P       22 55 09.8 +1.3
      comp=Z,4µm,1.0s
DECC  Green Verdugo  63.34 317  P       P       22 55 09.9 +0.4
      baz=126,SNR=95
DECC                            S       S       23 02 56.6 +0.8
      baz=126
QSM   Queen of Sheba 63.40 319  P       P       22 55 09.8 +0.1
SHEL  Horse Pasture  63.47 103  P       P       22 55 10.8 +0.2
SHEL                            pmax    pmax
      comp=Z,3µm,1.1s
SHEL  Horse Pasture  63.47 103 ⇓P       P       22 55 11.2 +0.5
SHEL  Horse Pasture  63.47 103  P       P       22 55 10.8 +0.2
EDW2  Edwards Air Fo 63.48 318  P       P       22 55 10.4 +0.1
      baz=126,SNR=722
EDW2                            S       S       23 02 57.3 -0.2
      baz=126
SRBC  Serra Branca   63.51  36 eP       P       22 55 11.1 +0.7
      comp=Z,10µm,1.3s
MDND  Maddock        63.53 339  P       P       22 55 10.1 -0.2
      baz=148,SNR=1000
MDND                            S       S       23 02 55.6 -1.9
      baz=148
MDND  Maddock        63.53 339  P       P       22 55 10.0 -0.3
PGRA  Graciosa       63.54  36 eP       P       22 55 10.7 +0.1
      comp=Z,4µm,1.1s
SNCC  San Nicolas Is 63.57 315  P       P       22 55 10.9  0.0
      baz=125,SNR=50
SNCC                            S       S       23 02 59.3 +0.7
      baz=125
LRMC  Laurel Mtn Rad 63.63 318  P       P       22 55 11.8 +0.4
      baz=127,SNR=72
LRMC                            S       S       23 03 01.4 +1.9
      baz=127
FURC  Furnace Creek, 63.71 320  P       P       22 55 12.5 +0.9
      baz=128,SNR=357
FURC                            S       S       23 03 02.3 +2.4
      baz=128
ADH   Angra Heroismo 63.73  37 eP       P       22 55 12.5 +0.7
      comp=Z,2µm,1.7s
PD31  Pinedale Array 63.78 329 ⇓P       P       22 55 11.3 -1.0
PD31  Pinedale Array 63.78 329  P       P       22 55 11.8 -0.5
PDAR  Pinedale Array 63.78 329  P       P       22 55 11.4 -0.9
      comp=Z,503nm,0.7s,baz=125,slow=8.8,SNR=926
PDAR                            pP      pP      22 57 12.0 +0.1
      comp=Z,90nm,0.6s,baz=118,slow=7.3,SNR=2.0
PDAR                            PKPPKP  P'P'df  23 23 48.3 -7.8
      comp=Z,20nm,0.9s,baz=191,slow=0.9,SNR=4.1
PDAR                            P4KPbc          23 31 56.1
      comp=Z,25nm,1.1s,baz=103,slow=2.9,SNR=4.2
PDAR  Pinedale Array 63.78 329  P       P       22 55 11.8 -0.5
PDAR                                    pP      22 57 11.1 -0.8
OSI   Osito Audit: C 63.81 317  P       P       22 55 12.5  0.0
      baz=126,SNR=118
OSI                             S       S       23 03 01.5  0.0
      baz=126
PSCM  Serra do Cume  63.84  37 eP       P       22 55 13.0 +0.5
      comp=Z,2µm,1.6s
PAGU  Agualva, Azore 63.84  37 eP       P       22 55 12.7 +0.2
      comp=Z,3µm,1.1s
MPMC  Manual Prospec 63.86 319  P       P       22 55 13.1 +0.2
      baz=127,SNR=596
MPMC                            S       S       23 03 03.5 +1.2
      baz=127
PSMA  Santa Maria    63.97  40 eP       P       22 55 14.0 +0.7
      comp=Z,2µm,1.4s
PSMN  Pico do Norte, 64.01  40 eP       P       22 55 12.4 -1.2
      comp=Z,2µm,1.5s
SCZ2  Santa Cruz Isl 64.07 316  P       P       22 55 14.2 +0.2
      baz=125,SNR=162
SCZ2                            S       S       23 03 05.2 +0.6
      baz=125
R11A  Troy Canyon, C 64.10 322  P       P       22 55 15.1 +0.8
      baz=130
R11A                            S       S       23 03 06.5 +1.5
      baz=130
PDA   Ponta Delgada  64.10  39 eP       P       22 55 15.1 +1.0
      comp=Z,6µm,1.4s
PSET  Sete Cidades   64.12  39 eP       P       22 55 14.3  0.0
      comp=Z,4µm,1.4s
ARVC  Arvin          64.18 318  P       P       22 55 15.2 +0.5
      baz=126,SNR=181
ARVC                            S       S       23 03 06.5 +0.8
      baz=126
CMLA  Cha da Macela  64.20  39 eP       P       22 55 14.7 -0.1
      comp=Z,4µm,1.5s
PCALD Caldeiras da R 64.24  39 eP       P       22 55 15.6 +0.6
      comp=Z,4µm,1.2s
ISA   Isabella, Lake 64.26 318  P       P       22 55 15.7 +0.4
ISA                             *PP     pP      22 57 14.9 -0.3
ISA                             pmax    pmax
      comp=Z,15µm,2.4s
ISA   Isabella, Lake 64.26 318  P       P       22 55 15.9 +0.6
      baz=126,SNR=1000
ISA                             S       S       23 03 08.3 +1.4
      baz=126
ISA   Isabella, Lake 64.26 318  P       P       22 55 15.7 +0.4
ISA                             IAmb    IAmb    22 55 22.9
      comp=Z,15µm,2.4s
ISA                             pP      pP      22 57 14.8 -0.3
SBC   Santa Barbara  64.38 316  P       P       22 55 16.0  0.0
      baz=125,SNR=19
SBC                             S       S       23 03 08.8 +0.7
      baz=125
ULM   Lac du Bonnet  64.41 343  P       P       22 55 14.1 -1.8
      comp=Z,3µm,0.8s,baz=154,slow=5.9,SNR=1233
ULM                             PKPPKP  P'P'df  23 23 43.1  -11
      comp=Z,33nm,0.8s,baz=325,slow=6.2,SNR=3.7
ULM   Lac du Bonnet  64.41 343 ⇓P       P       22 55 14.0 -1.8
I10CA LAC DU BONNET  64.41 342  P       P       22 55 20.0 +4.2
      baz=155,slow=5.4,SNR=1.1
BART  Pico Bartolome 64.43  39 eP       P       22 55 17.1 +0.8
      comp=Z,6µm,1.0s
CWC   Cottonwood Cre 64.47 319  P       P       22 55 17.0 +0.3
      baz=127
CWC                             S       S       23 03 11.1 +1.6
      baz=127
LCH   Last Change Ra 64.67 320  IAmb    IAmb    22 55 29.1
      comp=Z,6µm,1.5s
PKM   Mcpherson Peak 64.70 317  P       P       22 55 18.5 +0.3
      baz=125,SNR=1000
PKM                             S       S       23 03 12.3 -0.1
      baz=125
VES   Vestal, Richgr 64.77 318  P       P       22 55 19.0 +0.7
      baz=126,SNR=78
VES                             S       S       23 03 14.0 +1.3
      baz=126
REDW  Red Top Meadow 64.87 329  IAmb    IAmb    22 55 30.1
      comp=Z,6µm,1.2s
TIN   Tinemaha, Big  64.93 320  P       P       22 55 20.3 +0.7
      baz=127,SNR=58
TIN                             S       S       23 03 17.4 +2.5
      baz=127
SMMC  Simmler        65.07 317  P       P       22 55 21.1 +0.8
      baz=125,SNR=630
SMMC                            S       S       23 03 18.6 +2.2
      baz=125
LAO   LASA Array     65.19 334  IAmb    IAmb    22 55 29.4
      comp=Z,9µm,1.4s
VOG   Valley Oaks Go 65.24 318  P       P       22 55 20.8 -0.5
      baz=126,SNR=31
VOG                             S       S       23 03 18.5 +0.1
      baz=126
MACI  Morro de la Ar 65.28  52  P       P       22 55 23.9 +1.9
MACI                            IAmb    IAmb    22 55 34.6
      comp=Z,5µm,1.2s
MACI                            pP      pP      22 57 21.9 -0.4
SCHQ  Schefferville  65.29   3  P       P       22 55 20.1 -1.2
      comp=Z,656nm,0.9s,baz=196,slow=4.8,SNR=293
SCHQ                            PKPPKP  P'P'df  23 23 46.4 -5.9
      comp=Z,77nm,0.8s,baz=55,slow=5.0,SNR=5.9
SCHQ  Schefferville  65.29   3 ⇓P       P       22 55 20.0 -1.2
RLMT  Red Lodge      65.37 331  IAmb    IAmb    22 55 33.5
      comp=Z,8µm,1.4s
H17A  Grant Village  65.47 330  P       P       22 55 23.7 +0.8
      baz=136,SNR=607
PAGB  Antelope Grade 65.47 317  IAmb    IAmb    22 55 27.6
      comp=Z,4µm,1.2s
LKWY  Lake           65.51 330  IAmb    IAmb    22 55 38.9
      comp=Z,3µm,1.1s
YMP   Mirror Lake Pl 65.52 330  IAmb    IAmb    22 55 45.3
      comp=Z,4µm,1.0s
MLAC  Mammoth, Mammo65.67 320   P       P       22 55 24.9 +0.6
      baz=127,SNR=76
YUF   Upper Falls    65.67 330  IAmb    IAmb    22 55 37.0
      comp=Z,10µm,1.9s
DGMT  Dagmar         65.77 336  IAmb    IAmb    22 55 35.8
      comp=Z,7µm,1.2s
NVAR  Mina Array Bea 65.81 321  P       P       22 55 25.5 +0.4
      comp=Z,865nm,0.9s,baz=128,slow=6.2,SNR=392
NVAR                            pP      pP      22 57 24.9 -0.9
      comp=Z,160nm,1.0s,baz=178,slow=5.0,SNR=1.6
NVAR                            PKPPKP  P'P'df  23 23 46.1 -7.2
      comp=Z,47nm,0.8s,baz=258,slow=4.4,SNR=7.8
LHV   Little Huntoon 65.83 320  IAmb    IAmb    22 55 36.6
      comp=Z,4µm,1.3s
YMR   Madison River  65.86 330  IAmb    IAmb    22 55 39.0
      comp=Z,6µm,1.0s
YHH   Holmes Hill    65.89 330  IAmb    IAmb    22 55 37.4
      comp=Z,8µm,1.4s
RYN   Ryan           66.07 321  IAmb    IAmb    22 55 34.3
      comp=Z,15µm,2.5s
YHL   Hebgen Lake    66.10 330  IAmb    IAmb    22 55 39.6
      comp=Z,10µm,1.3s
PMPB  Monarch Peak   66.12 317  IAmb    IAmb    22 55 34.5
      comp=Z,7µm,1.5s
BMN   Battle Mountai 66.40 323  IAmb    IAmb    22 55 35.6
      comp=Z,12µm,2.5s
YERR  Yerington      66.73 321  IAmb    IAmb    22 55 44.2
      comp=Z,3µm,0.9s
BOZ   Bozeman (W)    66.86 330  IAmb    IAmb    22 55 42.5
      comp=Z,4µm,1.2s
SAO   San Andreas Ge 66.86 318  P       P       22 55 31.6 +0.2
SAO                             pmax    pmax
      comp=Z,16µm,2.7s
SAO   San Andreas Ge 66.86 318 ⇑P       P       22 55 31.5 +0.1
SAO   San Andreas Ge 66.86 318  P       P       22 55 31.6 +0.2
SAO                             IAmb    IAmb    22 55 39.2
      comp=Z,16µm,2.6s
HLID  Hailey         66.86 327  IAmb    IAmb    22 55 43.6
      comp=Z,4µm,1.2s
MCMT  McKenzie Canyo 66.92 329  P       P       22 55 32.1 +0.3
MCMT                            pP      pP      22 57 32.5 -0.6
PMOZ  Porto Moniz, M 67.00  48 eP       P       22 55 33.1 +0.7
      comp=Z,4µm,0.8s
PMOZ                           epP      pP      22 57 36.4 +2.7
PMOZ                           eS       S       23 03 41.4 +2.0
PMOZ  Porto Moniz, M 67.00  48 ⇓P       P       22 55 33.0 +0.7
PMOZ  Porto Moniz, M 67.00  48  P       P       22 55 32.6 +0.1
PNTR  Pine Nut       67.02 321  IAmb    IAmb    22 55 43.9
      comp=Z,6µm,1.0s
FUL   Funchal        67.13  48 eP       P       22 55 33.7 +0.6
      comp=Z,2µm,1.5s
FUL                            epP      pP      22 57 38.9 +4.5
PMAR  Madeira        67.16  48⇓eP       P       22 55 34.0 +0.5
      comp=Z,3µm,1.4s
PMAR                           epP      pP      22 57 38.5 +3.7
PMAR                           eS       S       23 03 45.0 +3.6
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DLMT	Dillon	67.17	329	IAmb	IAmb	22 55 44.4	
	comp=Z,6µm,1.6s						
VCNR	Virginia City	67.17	321	IAmb	IAmb	22 55 47.0	
	comp=Z,3µm,1.0s						
PAHR	Pah Rah Range	67.25	321	IAmb	IAmb	22 55 45.2	
	comp=Z,4µm,1.0s						
MPK	Martis Peak	67.41	321	IAmb	IAmb	22 55 43.1	
	comp=Z,4µm,1.2s						
LIC	Lamto	67.72	79	ePKP1	P	22 55 38.8	+1.7
	comp=Z,9µm,1.1s						
PMPS	Porto Santo	67.74	48	eP	P	22 55 37.9	+1.1
	comp=Z,4µm,1.5s						
PMPS				epP	pP	22 57 40.2	+1.7
PMPST	Porto Santo, M	67.75	48	eP	P	22 55 37.9	+1.0
	comp=Z,5µm,1.4s						
PMPST				epP	pP	22 57 40.3	+1.7
PMPST				eS	S	23 03 50.6	+2.6
EGMT	Eagleton	67.76	333	IAmb	IAmb	22 55 48.2	
	comp=Z,5µm,1.0s						
TIC	Toumodi	67.83	78	ePKP1	P	22 55 38.3	+0.5
DBIC	Dimbokro	67.99	78	P	P	22 55 38.9	+0.3
	comp=Z,2µm,0.8s,baz=261,slow=4.6,SNR=869						
DBIC				pP	pP	22 57 39.3	-1.1
	comp=Z,678nm,0.9s,baz=278,slow=6.8,SNR=3.5						
DBIC				PKPPKP	P'P'df	23 23 39.1	-13
	comp=Z,25nm,0.7s,baz=140,slow=3.7,SNR=3.5						
DBIC	Dimbokro	67.99	78	P	P	22 55 39.0	+0.3
DBIC				*PP	pP	22 57 40.0	-0.5
DBIC				pmax	pmax		
	comp=Z,3µm,0.8s						
DBIC	Dimbokro	67.99	78	⇓P	P	22 55 38.8	0.0
DBIC	Dimbokro	67.99	78	P	P	22 55 39.0	+0.3
DBIC				IAmb	IAmb	22 55 49.9	
	comp=Z,3µm,0.8s						
DBIC				pP	pP	22 57 40.0	-0.5
KIC	Kosan Boka	68.03	79	ePKP1	P	22 55 39.5	+0.6
	comp=Z,627nm,0.6s						
TAOE	Nuku Hiva Isla	68.10	265	eP	P	22 55 40.4	+0.9
	comp=Z,4µm,1.1s						
TAOE	Nuku Hiva Isla	68.10	265	⇓P	P	22 55 39.9	+0.4
TAOE	Nuku Hiva Isla	68.10	265	P	P	22 55 39.9	+0.4
TAOE				pP	pP	22 57 42.6	+1.1
WVOR	Wild Horse Val	68.48	324	⇓P	P	22 55 41.0	-0.3
ORV	Oroville	68.48	320	IAmb	IAmb	22 55 49.0	
	comp=Z,4µm,1.1s						
MCCM	Marconi Confer	68.57	318	⇓P	P	22 55 41.9	+0.2
MCCM	Marconi Confer	68.57	318	IAmb	IAmb	22 55 52.5	
	comp=Z,3µm,1.0s						
PLID	Pearl Lake	68.73	327	IAmb	IAmb	22 55 46.6	
	comp=Z,2µm,0.9s						
O03E	Paynes Creek	69.10	321	P	P	22 55 44.1	-0.8
	baz=125						
O03E				S	S	23 04 03.4	+0.1
	baz=125						
MOD	Modoc Plateau	69.13	323	IAmb	IAmb	22 55 56.1	
	comp=Z,4µm,0.9s						
TANT	Tantan	69.50	54	P	P	22 55 50.1	+2.6
O02D	Mt. Diablo Mer	69.65	320	P	P	22 55 47.6	-0.6
	baz=124,SNR=320						
O02D				S	S	23 04 09.0	-0.6
	baz=124						
JTMT	Jette	69.67	330	IAmb	IAmb	22 56 07.3	
	comp=Z,3µm,1.2s						
WDC	Whiskeytown Da	69.73	320	⇓P	P	22 55 46.8	-1.7
KCPM	Cahto Peak	69.88	319	IAmb	IAmb	22 56 01.1	
	comp=Z,4µm,1.3s						
F10A	Beach Ranch, E	69.96	328	⇓P	P	22 55 49.8	-0.2
M04C	Macdoel	69.99	322	P	P	22 55 50.5	+0.2
	baz=126,SNR=1000						
M04C				S	S	23 04 14.8	+1.3
	baz=126						
I07A	Izee	70.00	325	IAmb	IAmb	22 56 06.8	
	comp=Z,2µm,0.8s						
N02D	Trinity Center	70.05	321	P	P	22 55 49.5	-1.1
	baz=125,SNR=285						
N02D				S	S	23 04 12.4	-1.7
	baz=125						
FFC	Flin Flon	70.15	341	P	P	22 55 50.0	-0.7
FFC				pmax	pmax		
	comp=Z,2µm,0.9s						
FFC	Flin Flon	70.15	341	P	P	22 55 50.0	-0.7
KMRM	Mail Ridge	70.26	320	IAmb	IAmb	22 56 03.1	
	comp=Z,5µm,1.1s						
M02C	Callahan	70.38	321	P	P	22 55 52.0	-0.5
	baz=125,SNR=331						
M02C				S	S	23 04 16.9	-1.0
	baz=125						
WALA	Waterton Lakes	70.41	332	⇓P	P	22 55 52.1	-0.4
WALA	Waterton Lakes	70.41	332	IAmb	IAmb	22 56 05.2	
	comp=Z,4µm,1.0s						
K04D	Chiloquin, OR	70.43	323	P	P	22 55 53.1	+0.3
	baz=126,SNR=31						
K04D				S	S	23 04 20.1	+1.7
	baz=126						
YBH	Yreka Blue Hor	70.49	321	PKPPKP		23 23 39.5	
	comp=Z,106nm,1.3s,baz=118,slow=7.0,SNR=6.2						
YBH	Yreka Blue Hor	70.49	321	P	P	22 55 52.3	-0.9
YBH				pmax	pmax		
	comp=Z,964nm,0.9s						
YBH	Yreka Blue Hor	70.49	321	P	P	22 55 52.3	-0.9
J05D	Fort Rock, OR	70.51	323	P	P	22 55 53.9	+0.5
	baz=127,SNR=781						
J05D				S	S	23 04 20.4	+1.0
	baz=127						
L04D	Klamath Falls	70.52	322	P	P	22 55 53.2	-0.2
	baz=126,SNR=92						
L04D				S	S	23 04 19.8	+0.3
	baz=126						
KHMM	Horse Mountain	70.64	320	IAmb	IAmb	22 55 59.5	
	comp=Z,4µm,0.9s						
PINE	Pine Mountain	70.65	324	IAmb	IAmb	22 56 05.7	
	comp=Z,5µm,1.1s						
SFNM	Sidi Ifni	70.74	54	P	P	22 55 57.0	+2.3
JCC	Jacoby Creek,	70.80	320	IAmb	IAmb	22 56 00.4	
	comp=Z,3µm,0.9s						
E09A	Wood Farm, Sta	70.80	328	IAmb	IAmb	22 55 59.3	
	comp=Z,3µm,1.0s						
KOWA	Kowa	70.88	71	⇓P	P	22 55 56.0	+0.2
KOWA	Kowa	70.88	71	P	P	22 55 56.0	+0.2
KOWA				IAmb	IAmb	22 56 06.2	
	comp=Z,4µm,1.1s						
KOWA				pP	pP	22 57 59.4	+0.3
VNA3	Neumayer Olymp	70.97	163	P	P	22 55 56.7	+1.3
J04D	Umpqua Nationa	71.00	323	P	P	22 55 56.6	+0.3
	baz=126,SNR=496						
J04D				S	S	23 04 26.2	+1.2
	baz=126						
KRMB	Red Mountain	71.11	321	IAmb	IAmb	22 56 08.0	
	comp=Z,5µm,1.3s						
HUMO	Hull Mountain	71.14	322	⇓P	P	22 55 55.0	-1.9
VNA1	Neumayer--Stat	71.16	162	P	P	22 55 58.1	+1.8
VNA1	Neumayer--Stat	71.16	162	pP	pP	22 58 03.7	+3.0
I05D	Terrebonne, OR	71.20	324	P	P	22 55 58.2	+1.0
	baz=127,SNR=835						
I05D				S	S	23 04 28.9	+2.0
	baz=127						
L02E	Cave Junction	71.28	321	P	P	22 55 58.0	+0.4
	baz=124,SNR=124						
L02E				S	S	23 04 28.4	+0.7
	baz=124						
F07A	Phinny Hill Vi	71.36	326	IAmb	IAmb	22 56 09.9	
	comp=Z,5µm,1.2s						
HAWA	Hanford	71.46	327	⇓P	P	22 55 59.0	+0.4
HAWA	Hanford	71.46	327	IAmb	IAmb	22 56 09.8	
	comp=Z,6µm,1.4s						
I04A	Tendick Farm,	71.50	323	P	P	22 55 58.8	-0.2
	baz=126,SNR=366						
I04A				S	S	23 04 30.0	-0.3
	baz=126						
CGR	Cap Guir	71.51	53	P	P	22 56 02.0	+2.8
VNA2	Neumayer--Watz	71.53	162	P	P	22 55 59.9	+1.3
	baz=296,slow=6.5						
VNA2	Neumayer--Watz	71.53	162	pP	pP	22 58 05.9	+2.8
D08A	Wollman Farm,	71.56	328	IAmb	IAmb	22 56 04.2	
	comp=Z,3µm,1.0s						
K02D	Willamette Mer	71.62	322	P	P	22 56 00.3	+0.6
	baz=124,SNR=224						
K02D				S	S	23 04 32.5	+0.8
	baz=124						
KBO	Bosley Butte	71.69	321	IAmb	IAmb	22 56 11.7	
	comp=Z,9µm,1.7s						
C09A	Chrisman Ranch	71.70	329	IAmb	IAmb	22 56 11.1	
	comp=Z,4µm,1.1s						
G05D	Wamic, OR	71.73	325	P	P	22 56 01.5	+1.3
	baz=127,SNR=86						
G05D				S	SKiKP	23 04 36.2	+2.2
	baz=127						
E07A	Sunnyside	71.74	327	IAmb	IAmb	22 56 05.5	
	comp=Z,3µm,1.0s						
H04A	Detroit Lake	71.90	324	IAmb	IAmb	22 56 11.7	
	comp=Z,4µm,1.2s						
HOOD	Mount Hood Mea	71.97	325	IAmb	IAmb	22 56 09.9	
	comp=Z,6µm,0.9s						
I03D	Drain, OR	72.00	323	P	P	22 56 02.0	+0.3
	baz=125,SNR=322						
I03D				S	S	23 04 36.4	+0.7
	baz=125						
J01E	Myrtle Point	72.05	322	P	P	22 56 02.8	+0.8
	baz=124,SNR=58						
J01E				S	S	23 04 37.3	+1.1
	baz=124						
BUCK	Buck Mountain	72.08	323	IAmb	IAmb	22 56 12.9	
	comp=Z,4µm,1.0s						
H04D	Lebanon	72.12	324	P	P	22 56 02.3	-0.2
	baz=126						
H04D				S	S	23 04 36.7	-0.3
	baz=126						
KEBM	Edson Butte	72.13	322	IAmb	IAmb	22 56 13.9	
	comp=Z,6µm,1.2s						
EAH	EAH	72.16	52	P	P	22 56 05.0	+2.0
F05D	White Salmon	72.20	326	P	P	22 56 03.6	+0.7
	baz=127,SNR=365						
F05D				S	S	23 04 41.0	+3.1
	baz=127						
KUKU	Kukurantumi	72.22	80	⇓iP	P	22 56 03.9	+0.3
KUKU	Kukurantumi	72.22	80	i P	sP	22 59 08.3	-1.9
COR	Corvallis	72.49	324	P	P	22 56 05.6	+1.1
COR				pmax	pmax		
	comp=Z,9µm,1.3s						
COR	Corvallis	72.49	324	⇓P	P	22 56 05.5	+1.0
COR	Corvallis	72.49	324	P	P	22 56 05.6	+1.1
I02E	Swisshome, OR	72.53	323	P	P	22 56 05.9	+1.1
	baz=125,SNR=26						
I02E				S	S	23 04 42.4	+0.9
	baz=125						
TTIG	Tnine Tigouga,	72.60	53	P	P	22 56 07.4	+1.7
F04A	Amboy	72.77	325	IAmb	IAmb	22 56 16.9	
	comp=Z,6µm,1.1s						
G03D	McMinnville, O	72.83	324	P	P	22 56 07.0	+0.6
	baz=126						
G03D				S	S	23 04 47.2	+2.5
	baz=126						
C06D	Leavenworth	73.14	327	P	P	22 56 08.2	-0.1
	baz=128,SNR=86						
C06D				S	S	23 04 49.7	+1.5
	baz=128						
SNAA	Sanae	73.16	162	P	P	22 56 09.3	+1.2
SNAA	Sanae	73.16	162	ceP	P	22 56 08.4	+0.3
SNAA	Sanae	73.16	162	⇓P	P	22 56 08.4	+0.3
SNAA	Sanae	73.16	162	P	P	22 56 08.8	+0.7
SNAA				pP	pP	22 58 15.4	+1.7
F04D	Rainier, OR	73.19	325	P	P	22 56 09.7	+1.1
	baz=126,SNR=12						
F04D				S	S	23 04 51.2	+2.5
	baz=126						
E04D	Cinebar	73.22	326	P	P	22 56 08.8	+0.1
	baz=126,SNR=105						
E04D				S	S	23 04 49.9	+0.9
	baz=126						
OUK	Oukaimeden	73.32	53	P	P	22 56 12.0	+1.9
PNT	Penticton	73.36	329	⇓P	P	22 56 09.6	+0.2
D04E	Lakebay	73.70	326	P	P	22 56 12.5	+1.1
	baz=126,SNR=58						
D04E				S	S	23 04 57.0	+2.8
	baz=126						
E03A	Lebam	73.77	325	IAmb	IAmb	22 56 17.1	
	comp=Z,5µm,1.0s						
SRHM	Skhour des Reh	73.81	52	P	P	22 56 14.0	+1.5
IVI	Ivigtut	73.82	11	⇓iP	P	22 56 11.5	-0.2
IVI				IAmb	IAmb	22 56 18.5	
	comp=Z,2µm,0.8s						
IVI	Ivigtut	73.82	11	⇓P	P	22 56 10.9	-0.7
IVI	Ivigtut	73.82	11	P	P	22 56 11.2	-0.5
IVI				pP	pP	22 58 15.0	-1.4
B06A	Marblemount	73.82	328	IAmb	IAmb	22 56 15.5	
	comp=Z,3µm,0.8s						
B05A	Bryant	73.99	327	P	P	22 56 12.6	-0.4
	baz=127,SNR=448						
B05A				S	S	23 04 57.6	+0.3
	baz=127						
OUZM	OUZ	74.07	54	P	P	22 56 16.0	+1.9
D03D	Eldon	74.09	326	P	P	22 56 14.2	+0.6
	baz=126,SNR=141						
D03D				S	S	23 04 59.6	+1.2
	baz=126						
FRB	Frobisher Bay	74.17	1	⇓P	P	22 56 12.3	-1.3
WISH	Wishkah	74.22	326	IAmb	IAmb	22 56 24.2	
	comp=Z,4µm,0.9s						
NRS	Narsarsuaq	74.33	13	⇓iP	P	22 56 13.9	-0.7
NRS				IAmb	IAmb	22 56 25.7	
	comp=Z,1µm,1.0s						
NRS	Narsarsuaq	74.33	13	P	P	22 56 13.8	-0.8
NRS				IAmb	IAmb	22 56 26.2	
	comp=Z,2µm,1.0s						
NRS				pP	pP	22 58 17.5	-2.1
NLWA	Neilton Lookou	74.43	326	⇓P	P	22 56 16.1	+0.5
NLWA	Neilton Lookou	74.43	326	IAmb	IAmb	22 56 20.9	
	comp=Z,4µm,1.1s						
AVE	Averroes	74.52	51	P	P	22 56 16.8	+0.5
AVE				S	S	23 05 07.9	+4.2
AVE	Averroes	74.52	51	⇓P	P	22 56 18.4	+2.1
AVE	Averroes	74.52	51	P	P	22 56 18.6	+2.2
VAH	Vaihoa	74.55	257	⇓iP	P	22 56 17.9	+1.1
	comp=Z,2µm,1.0s						
VAH				epP	pP	22 58 21.1	-1.0
	comp=Z,1µm,1.5s						
A04D	Lummi Island	74.59	327	P	P	22 56 16.7	+0.4
	baz=127						
A04D				S	S	23 05 05.4	+1.6
	baz=127						
B04A	Port Angeles	74.62	326	IAmb	IAmb	22 56 27.6	
	comp=Z,3µm,0.9s						
MEH	Mehetia	74.66	254	⇓iP	P	22 56 18.4	+0.9
MEH				epP	pP	22 58 22.2	-0.5
	comp=Z,331nm,1.5s						
ZGR	Zagora	74.68	55	P	P	22 56 19.1	+1.7
PMOR	Pomariorio Ree	74.83	257	⇓iP	P	22 56 19.7	+1.3
	comp=Z,3µm,1.0s						
PMOR				epP	pP	22 58 23.0	-0.9
	comp=Z,3µm,1.6s						
PGC	Sidney	74.94	327	IAmb	IAmb	22 56 29.6	
	comp=Z,6µm,1.4s						
TZRR	Tazzarine	74.97	54	P	P	22 56 21.0	+1.9
PFVI	Vila Bisbo	75.08	47	⇓eP	P	22 56 21.1	+1.7
	comp=Z,5µm,1.3s						
PFVI				epP	pP	22 58 24.4	-0.3
PFVI				eS	S	23 05 13.2	+3.6
PFVI	Vila Bisbo	75.08	47	P	P	22 56 19.7	+0.4
PFVI				IAmb	IAmb	22 56 28.4	
	comp=Z,2µm,0.9s						
PFVI				pP	pP	22 58 24.6	-0.1
PFVI	Vila Bisbo	75.08	47	P	P	22 56 20.9	+1.5
C03A	Quillayute Air	75.14	326	IAmb	IAmb	22 56 31.4	
	comp=Z,9µm,1.5s						
ZHG	ZHG	75.17	51	P	P	22 56 21.0	+0.9
MORF	Marmelete	75.29	47	eP	P	22 56 22.0	+1.4
MORF				IAmb	IAmb	22 56 30.1	
	comp=Z,6µm,1.2s						
MORF				eS	S	23 05 13.5	+1.6
MORF	Marmelete	75.29	47	⇓eP	P	22 56 22.3	+1.7
	comp=Z,5µm,1.2s						
MORF				epP	pP	22 58 25.4	-0.6
MORF				eS	S	23 05 15.3	+3.4
MORF	Marmelete	75.29	47	eP	P	22 56 22.0	+1.4
MORF				eS	S	23 05 13.5	+1.6
MORF	Marmelete	75.29	47	⇓P	P	22 56 22.2	+1.6
LLLB	Lillooet	75.31	329	IAmb	IAmb	22 56 30.8	
	comp=Z,6µm,1.4s						
PTEO	Sao Teotonio	75.34	47	eP	P	22 56 22.5	+1.7
	comp=Z,6µm,1.2s						
PTEO				epP	pP	22 58 25.6	-0.6
PMST	Lisbon--Monsan	75.54	45	⇓eP	P	22 56 23.3	+1.4
	comp=Z,3µm,1.4s						
PMST				epP	pP	22 58 27.3	-0.1
LIS	Lisbon	75.56	45	eP	P	22 56 23.4	+1.4
LIS				IAmb	IAmb	22 56 30.5	
	comp=Z,2µm,1.0s						
LIS				eS	S	23 05 16.3	+1.7
LIS	Lisbon	75.56	45	eP	P	22 56 23.3	+1.4
LIS				eS	S	23 05 16.3	+1.7
PMAFR	Mafra	75.57	45	⇓iP	P	22 56 23.2	+1.2
	comp=Z,3µm,1.4s						
PMAFR				epP	pP	22 58 27.5	-0.1
PMAFR				eS	S	23 05 17.5	+2.7
PNCL	Nicolau / Gran	75.72	46	⇓iP	P	22 56 24.3	+1.4
	comp=Z,2µm,1.2s						
PNCL				epP	pP	22 58 28.1	-0.4
PNCL				eS	S	23 05 20.2	+3.8
PBDV	Barranco-do-Ve	75.78	47	⇓eP	P	22 56 25.1	+1.8
	comp=Z,4µm,1.4s						
PBDV				epP	pP	22 58 28.6	-0.3
PBDV				eS	S	23 05 20.4	+3.3
GOLM	Goulmima	75.81	53	P	P	22 56 26.0	+2.3
MESJ	Messejana	75.83	47	eP	P	22 56 24.8	+1.3
MESJ				IAmb	IAmb	22 56 32.2	
	comp=Z,2µm,1.2s						
MESJ				eS	S	23 05 19.1	+1.6
MESJ	Messejana	75.83	47	⇓iP	P	22 56 25.1	+1.6
	comp=Z,2µm,1.3s						
MESJ				epP	pP	22 58 29.0	-0.1
MESJ	Messejana	75.83	47	eP	P	22 56 24.7	+1.3
MESJ				eS	S	23 05 19.1	+1.6
TORD	Torodi Ar. Bea	75.85	73	P	P	22 56 24.6	+0.5
	comp=Z,3µm,0.8s,baz=271,slow=4.4,SNR=3200						
TORD				pP	pP	22 58 29.3	-0.4
	comp=Z,530nm,0.8s,baz=271,slow=5.9,SNR=4.0						
TORD	Torodi Ar. Bea	75.85	73	P	P	22 56 24.1	0.0
TORD					pP	22 58 28.4	-1.3
PCVE	Castro Verde	75.87	47	⇓eP	P	22 56 25.5	+1.8
	comp=Z,4µm,1.3s						
PCVE				epP	pP	22 58 29.3	-0.1
PCVE				eS	S	23 05 21.6	+3.6
NUUK	Nuuk	76.00	9	⇓iP	P	22 56 23.6	-0.2
NUUK				IAmb	IAmb	22 56 27.7	
	comp=Z,1µm,0.9s						
NUUK	Nuuk	76.00	9	⇓P	P	22 56 23.4	-0.4
PVAQ	Vaqueiros	76.00	47	i P	P	22 56 25.9	+1.5
	comp=Z,2µm,2.1s						
PVAQ				epP	pP	22 58 29.8	-0.4
PVAQ				eS	S	23 05 22.5	+3.1
PVAQ	Vaqueiros	76.00	47	P	P	22 56 25.2	+0.8
PVAQ				pP	pP	22 58 29.8	-0.4
PVAQ	Vaqueiros	76.00	47	P	P	22 56 25.9	+1.5
PPTF	Pamatai, Papee	76.11	254	⇓P	P	22 56 27.4	+1.8
PPTF	Pamatai, Papee	76.11	254	P	P	22 56 26.7	+1.1
PPTF				pP	pP	22 58 32.9	+1.3
PAE	Paea	76.12	254	⇓iP	P	22 56 26.6	+1.1
PAE				epP	pP	22 58 30.6	-0.8
	comp=Z,377nm,1.4s						
PPT2	Papeete2	76.12	254	⇓iP	P	22 56 27.0	+1.4
	comp=Z,2µm,1.4s						
PPT2				epP	pP	22 58 30.7	-0.8
	comp=Z,682nm,1.4s						
PPT	Papeete	76.13	254	P	P	22 56 28.1	+2.5
	comp=Z,1µm,1.1s,baz=91,slow=6.5,SNR=37						
PSBE	So Bento	76.16	45	⇓iP	P	22 56 26.6	+1.3
	comp=Z,3µm,1.3s						
PSBE				epP	pP	22 58 30.6	-0.5
PSBE				eS	S	23 05 23.2	+2.1
PBEJ	Beja	76.16	46	⇓eP	P	22 56 26.6	+1.3
	comp=Z,2µm,1.3s						
PBEJ				epP	pP	22 58 30.9	-0.2
OZB	Mount Ozzard	76.22	326	IAmb	IAmb	22 56 30.6	
	comp=Z,3µm,0.9s						
EVO	Evora	76.27	46	P	P	22 56 26.4	+0.5
EVO				S	S	23 05 26.2	+4.0
EVO	Evora	76.27	46	⇓iP	P	22 56 26.9	+1.0
	comp=Z,2µm,1.4s						
EVO				epP	pP	22 58 31.0	-0.8
PMTG	Montargil	76.36	45	⇓iP	P	22 56 27.4	+1.1
	comp=Z,3µm,1.4s						
PMTG				epP	pP	22 58 31.4	-0.8
PMTG				eS	S	23 05 24.9	+1.8
IFR	Ifrane	76.36	52	P	P	22 56 27.2	+0.5
IFR				S	S	23 05 26.9	+3.1
MDT	Midelt	76.50	52	PKKPbc	PKKPbc	23 15 34.3	+0.3
	comp=Z,11nm,0.8s,baz=116,slow=2.6,SNR=7.0						
MDT	Midelt	76.50	52	P	P	22 56 28.9	+1.5
ARNO	Arenosillo	76.58	48	P	P	22 56 28.9	+1.3
ARNO				S	S	23 05 29.8	+4.2
PCAS	Casmilo, Conde	76.60	44	i P	P	22 56 28.8	+1.1
	comp=Z,2µm,1.5s						
PCAS				epP	pP	22 58 33.0	-0.7
PCAS				eS	S	23 05 27.8	+2.1
LCRM	LCR	76.63	52	P	P	22 56 29.5	+1.4
SFS	San Fernando	76.71	49	P	P	22 56 29.1	+0.8
SFS				S	S	23 05 32.6	+5.6
SFS	San Fernando	76.71	49	P	P	22 56 29.2	+0.9
SFS				*PP	pP	22 58 35.0	+0.7
SFS				pmax	pmax		
	comp=Z,5µm,1.0s						
SFS	San Fernando	76.71	49	⇓P	P	22 56 29.2	+0.9
SFS	San Fernando	76.71	49	P	P	22 56 29.2	+0.9
SFS				IAmb	IAmb	22 56 37.9	
	comp=Z,5µm,1.0s						
SFS				pP	pP	22 58 35.0	+0.7
SFS	San Fernando	76.71	49	P	P	22 56 29.7	+1.4
PESTR	Estremoz	76.72	46	⇓iP	P	22 56 29.4	+1.1
	comp=Z,3µm,1.6s						
PESTR				epP	pP	22 58 34.6	+0.2
PESTR				eS	S	23 05 29.6	+2.6
PESTR	Estremoz	76.72	46	⇓P	P	22 56 29.3	+1.0
PESTR	Estremoz	76.72	46	P	P	22 56 29.1	+0.8
PESTR				pP	pP	22 58 33.2	-1.1
PESTR	Estremoz	76.72	46	P	P	22 56 29.4	+1.1
COI	Coimbra	76.73	44	⇓iP	P	22 56 29.5	+1.2
	comp=Z,5µm,1.5s						
COI				epP	pP	22 58 33.5	-0.9
COI				eS	S	23 05 29.3	+2.3
COI	Coimbra	76.73	44	P	P	22 56 29.1	+0.8
COI				IAmb	IAmb	22 56 37.8	
	comp=Z,3µm,0.9s						
COI				pP	pP	22 58 34.2	-0.2
CBB	Campbell River	76.77	327	IAmb	IAmb	22 56 32.8	
	comp=Z,3µm,0.9s						
CNIL	Conil	76.78	49	P	P	22 56 31.0	+2.3
PBAR	Barrancos	76.81	47	⇓iP	P	22 56 30.0	+1.1
	comp=Z,2µm,1.4s						
PBAR				epP	pP	22 58 37.3	+2.3
CHEFC	Chefchaouen	76.81	50	P	P	22 56 31.0	+2.0
PMRV	Marv??o	77.10	45	⇓iP	P	22 56 30.9	+0.5
	comp=Z,1µm,1.3s						
PMRV				epP	pP	22 58 35.3	-1.3
PMRV				eS	S	23 05 32.8	+1.8
CEU	Ceuta	77.10	49	P	P	22 56 32.1	+1.7
CEU				S	S	23 05 36.4	+5.3
PCBR	Castelo Branco	77.21	45	⇓eP	P	22 56 31.5	+0.5
	comp=Z,2µm,1.2s						
PCBR				epP	pP	22 58 37.0	-0.3
PVIS	Viseu	77.31	44	⇓eP	P	22 56 32.1	+0.5
	comp=Z,3µm,1.5s						
PVIS				epP	pP	22 58 37.0	-0.9
MTE	Manteigas	77.41	44	⇓iP	P	22 56 32.7	+0.6
	comp=Z,3µm,1.2s						
MTE				epP	pP	22 58 37.6	-0.9
MTE				eS	S	23 05 33.3	-1.1
MTE	Manteigas	77.41	44	⇓P	P	22 56 32.5	+0.4
MTE	Manteigas	77.41	44	P	P	22 56 32.5	+0.4
MTE				pP	pP	22 58 37.4	-1.1
LIJA	Lijar	77.48	48	P	P	22 56 34.0	+1.4
PGAV	Gavieira, Arco	77.61	43	⇓iP	P	22 56 33.8	+0.6
	comp=Z,3µm,1.6s						
PGAV				epP	pP	22 58 38.0	-1.7
PGAV				eS	S	23 05 38.5	+2.1
PCAB	Cabril	77.66	43	⇓eP	P	22 56 33.6	+0.2
	comp=Z,3µm,1.4s						
PCAB				epP	pP	22 58 38.4	-1.5
NVL	N'lazarevskaya	77.66	160	eP	P	22 56 37.5	+4.7
NVL				pmax	pmax		
	comp=Z,6µm,0.9s						
POLO	Lamas de Olo	77.67	43	⇓iP	P	22 56 34.2	+0.7
	comp=Z,1µm,1.2s						
POLO				epP	pP	22 58 38.8	-1.2
POLO				eS	S	23 05 37.6	+0.5
PVRL	Vila Real	77.67	44	⇓eP	P	22 56 34.2	+0.7
	comp=Z,2µm,1.4s						
PVRL				epP	pP	22 58 39.1	-0.9
AKLM	AKL	77.71	51	P	P	22 56 35.0	+1.2
MVO	Moncorvo	78.09	44	⇓iP	P	22 56 36.5	+0.7
	comp=Z,3µm,1.4s						
MVO				epP	pP	22 58 41.2	-1.3
MVO				eS	S	23 05 42.7	+1.2
EMAL	Malaga-Limoner	78.14	49	P	P	22 56 36.8	+0.8
EMAL				S	S	23 05 46.3	+4.3
PBRG	Braganca	78.56	43	⇓iP	P	22 56 39.1	+0.8

	comp=Z,4µm,1.7s						
PBRG				epP	pP	22 58 43.6	-1.5
PBRG				eS	S	23 05 48.3	+2.0
GOG	Mont Gurugu	78.63	51	P	P	22 56 40.0	+1.2
JBK	JBK	78.64	52	P	P	22 56 40.0	+1.0
SFJD	Kangerlussuaq	78.81	8	P	P	22 56 37.6	-1.3
SFJD				*PP	pP	22 58 45.4	-0.5
SFJD				pmax	pmax		
	comp=Z,2µm,1.0s						
SFJD	Kangerlussuaq	78.81	8	⇓iP	P	22 56 37.5	-1.3
SFJD				IAmb	IAmb	22 56 44.8	
	comp=Z,346nm,0.7s						
SFJD	Kangerlussuaq	78.81	8	⇓P	P	22 56 37.2	-1.7
SFJD	Kangerlussuaq	78.81	8	P	P	22 56 37.6	-1.3
SFJD				pP	pP	22 58 45.4	-0.5
FIGM	Figuig	78.89	54	P	P	22 56 42.0	+1.7
TAF	Taforalt	78.93	51	P	P	22 56 42.0	+1.6
DY2G	Dye2	78.99	10	⇓iP	P	22 56 39.5	-0.7
DY2G				IAmb	IAmb	22 56 47.1	
	comp=Z,28µm,2.3s						
CHAS	Isla Isabel II	79.05	51	P	P	22 56 41.0	+0.1
CHAS				S	S	23 06 00.5	+9.0
PAB	San Pablo	79.29	46	P	P	22 56 43.0	+0.8
PAB				pmax	pmax		
	comp=Z,3µm,1.5s						
PAB	San Pablo	79.29	46	⇓P	P	22 56 42.9	+0.8
PAB	San Pablo	79.29	46	P	P	22 56 43.0	+0.8
PAB	San Pablo	79.29	46	P	P	22 56 43.4	+1.2
BBB	Bella Bella	79.40	328	⇓P	P	22 56 42.5	+0.2
BBB				⇑P	PcP	22 56 48.7	+0.8
BBB	Bella Bella	79.40	328	P	P	22 56 42.8	+0.4
BBB				IAmb	IAmb	22 56 53.0	
	comp=Z,4µm,1.1s						
QSPA	South Pole Qui	79.51	180	PKPPKP		23 23 27.6	
	comp=Z,163nm,1.0s,baz=339,slow=1.9,SNR=9.5						
QSPA	South Pole Qui	79.51	180	P	P	22 56 43.6	+0.7
ESDC	Sonseca Array	79.61	46	P	P	22 56 44.8	+0.9
	comp=Z,683nm,0.9s,baz=252,slow=4.6,SNR=268						
ESDC				pP	pP	22 58 50.9	-0.3
	comp=Z,713nm,1.3s,baz=254,slow=4.6,SNR=6.5						
ESDC				PKKPbc	PKKPbc	23 15 26.8	-0.8
	comp=Z,13nm,0.8s,baz=42,slow=2.4,SNR=7.3						
ESDC				PKPPKP	P'P'df	23 23 19.9	-10
	comp=Z,36nm,1.1s,baz=59,slow=2.4,SNR=5.2						
ESDC	Sonseca Array	79.61	46	P	P	22 56 44.4	+0.6
ESDC				IAmb	IAmb	22 56 48.6	
	comp=Z,6µm,1.8s						
ESDC					pP	22 58 50.9	-0.3
ESBB	Sonseca Array	79.61	46	P	P	22 56 44.8	+0.9
ESBB				IAmb	IAmb	22 56 48.6	
	comp=Z,7µm,1.9s						
ANGG	Ammassalik, Gr	79.95	13	⇓iP	P	22 56 44.0	-0.8
ANGG				IAmb	IAmb	22 56 47.9	
	comp=Z,632nm,0.7s						
ANGG	Ammassalik, Gr	79.95	13	⇓P	P	22 56 43.8	-1.1
ANGG	Ammassalik, Gr	79.95	13	P	P	22 56 44.1	-0.8
ANGG				pP	pP	22 58 51.6	-0.8
YKA	Yellowknife Ar	80.33	341	P	P	22 56 47.0	+0.1
	comp=Z,3µm,0.8s,baz=127,slow=6.3,SNR=2118						
YKA				pP	pP	22 58 53.7	-0.9
	comp=Z,165nm,0.8s,baz=127,slow=6.5,SNR=2.5						
YKA				PKKPbc	PKKPbc	23 15 24.5	-2.5
	comp=Z,21nm,0.6s,baz=70,slow=8.4,SNR=10						
YKA				PKPPKP	P'P'df	23 23 10.1	-16
	comp=Z,24nm,0.9s,baz=327,slow=1.2,SNR=4.6						
YKA	Yellowknife Ar	80.33	341	P	P	22 56 46.2	-0.7
YKA					pP	22 58 52.5	-2.0
OTSS	Djebel Tessala	80.34	51	P	P	22 56 56.0	+8.2
UCM	Universidad Co	80.37	46	P	P	22 56 47.9	+0.1
UCM				S	S	23 06 06.8	+2.0
USTO	Oran	80.68	51	P	P	22 56 52.0	+2.6
ILULI	Ilulissat	80.84	7	P	P	22 56 48.2	-1.2
ILULI				pmax	pmax		
	comp=Z,3µm,1.1s						
ILULI	Ilulissat	80.84	7	⇓iP	P	22 56 48.4	-1.0
ILULI				IAmb	IAmb	22 56 52.0	
	comp=Z,941nm,0.9s						
ILULI	Ilulissat	80.84	7	P	P	22 56 48.2	-1.2
ILULI				IAmb	IAmb	22 56 56.0	
	comp=Z,3µm,1.1s						
ODJA	Bouhanifia	80.85	51	P	P	22 56 54.0	+3.7
CART	Cartagena	80.99	49	P	P	22 56 40.8	-10
CART				S	S	23 06 19.6	+8.5
CART	Cartagena	80.99	49	⇓P	P	22 56 50.2	-0.7
CART	Cartagena	80.99	49	P	P	22 56 50.1	-0.8
CART	Cartagena	80.99	49	P	P	22 56 52.0	+1.1
VAL	Valentia	81.14	33	⇓P	P	22 56 51.5	+0.2
EKNA	AfricaArray -	81.24	84	⇓iP	P	22 56 54.4	+1.6
OJBR	Djebel Berber	81.31	51	P	P	22 56 55.0	+2.2
OJGS	Djebel Guires	81.60	52	P	P	22 56 56.0	+1.8
OKGL	Djebel Kef Gue	81.69	51	P	P	22 56 57.0	+2.4
H02N1	VAN INLET T-PH	82.26	328	P	P	22 56 58.2	+1.1
ICESG	Greenland Ices	82.49	11	⇓iP	P	22 56 57.8	-0.5
ICESG				IAmb	IAmb	22 57 02.0	
	comp=Z,2µm,1.0s						
ICESG	Greenland Ices	82.49	11	⇓P	P	22 56 57.4	-0.9
ICESG				⇓P	P	22 56 57.4	-0.9
NUUG	Nuugaatsiaq	82.83	6	⇓iP	P	22 56 59.0	-0.5
NUUG				IAmb	IAmb	22 57 20.1	
	comp=Z,188nm,0.9s						
CCA1	Carnmenellis	83.13	36	eP	P	22 57 01.5	+0.1
CRAG	Craig	83.64	330	P	P	22 57 03.8	0.0
	baz=119						
CRAG	Craig	83.64	330	⇓P	P	22 57 02.9	-0.9
CRAG				⇓P	P	22 57 03.4	-0.4
CRAG				⇑P	P	22 57 13.4	+10
DLBC	Dease Lake	83.69	333	IAmb	IAmb	22 57 08.8	
	comp=Z,2µm,0.9s						
UPNV	Upernavik	83.78	4	⇓iP	P	22 57 03.5	-0.7
UPNV				IAmb	IAmb	22 57 10.0	
	comp=Z,289nm,0.9s						
BORG	Borgarnes	83.81	19	PKKPbc	PKKPbc	23 15 17.8	-1.2
	comp=Z,149nm,1.1s,baz=355,slow=2.0,SNR=14						
BORG	Borgarnes	83.81	19	P	P	22 57 05.8	+1.4
BORG				*PP	pP	22 59 14.0	+0.4
BORG				pmax	pmax		
	comp=Z,4µm,1.1s						
BORG	Borgarnes	83.81	19	P	P	22 57 05.8	+1.4
BORG				IAmb	IAmb	22 57 13.5	
	comp=Z,4µm,1.1s						
BORG				pP	pP	22 59 13.9	+0.4
WRGLY	Wrigley	83.82	339	P	P	22 57 04.5	0.0
	baz=128						
DSB	Dublin	83.83	33	⇓P	P	22 57 04.4	-0.5
DSB	Dublin	83.83	33	P	P	22 57 04.3	-0.5
HTL	Hartland	83.90	36	eP	P	22 57 05.2	0.0
DYA	Yadsworthy	83.99	36	eP	P	22 57 05.1	-0.6
WTLY	Watson Lake, Y	84.06	335	P	P	22 57 06.2	+0.3
	baz=123						
RSBS	Rosebush, Pemb	84.16	35	eP	P	22 57 06.1	-0.4
WIN	Windhoek	84.21	112	P	P	22 57 06.8	-0.9
WIN				pmax	pmax		
	comp=Z,796nm,0.9s						
WIN	Windhoek	84.21	112	P	P	22 57 06.8	-0.9
WIN	Windhoek	84.21	112	i P	P	22 57 06.0	-1.7
WIN				⇓iP	PcP	22 57 07.0	-3.1
WIN				pP	pP	22 59 08.7	-8.3
WIN	Windhoek	84.21	112	i P	pP	22 59 11.2	-5.8
WIN	Windhoek	84.21	112	eP	SKSac	23 06 39.6	+5.2
GMM	Mts of Mourne	84.51	32	eP	P	22 57 07.9	-0.2
JVM	Valle D.L. Mar	84.52	38	eP	P	22 57 08.0	-0.3
JSA	Saint Aubin	84.53	38	eP	P	22 57 07.7	-0.6
JSA	Saint Aubin	84.53	38	⇑P	P	22 57 08.0	-0.3
JSA				⇑P	P	22 57 08.4	+0.1
TGTN	Hyland Airport	84.63	336	P	P	22 57 09.4	+0.8
	baz=124						
TGTN				S	S	23 06 46.7	+0.7
	baz=124						
CLGH	Cloghs, Cushen	84.80	32	eP	P	22 57 09.1	-0.4
YRC	Rhoscolyn	84.81	34	eP	P	22 57 08.4	-1.2
WPS	Cemaes, Angles	84.92	33	eP	P	22 57 09.3	-0.8
WLF1	Llynfaes	84.92	34	eP	P	22 57 09.0	-1.1
YLL	Llanberis	84.98	34	eP	P	22 57 10.1	-0.3
WME	Myndd Eilian	85.02	33	eP	P	22 57 09.5	-1.1
LLW	Llanuwychllyn	85.14	34	eP	P	22 57 10.3	-0.9
WIM	Isle of Man	85.14	33	eP	P	22 57 10.4	-0.8
RAR	Rarotonga	85.15	249	P	P	22 57 13.1	+1.1
	comp=Z,805nm,0.9s,baz=200,slow=4.1,SNR=50						
RAR				pP	pP	22 59 22.5	-0.1
	comp=Z,60nm,1.0s,baz=67,slow=16,SNR=1.6						
RAR	Rarotonga	85.15	249	⇓P	P	22 57 12.9	+0.9
RAR				⇓P	P	22 57 13.2	+1.1
RAR	Rarotonga	85.15	249	P	P	22 57 11.7	-0.3
RAR				pP	pP	22 59 23.2	+0.6
MCH1	Michaelchurch	85.16	35	eP	P	22 57 10.4	-1.0
MCH1	Michaelchurch	85.16	35	⇓P	P	22 57 10.5	-0.9
MCH1				⇑P	P	22 57 11.1	-0.3
I35NA	TSUMEB INFRASO	85.19	109	P	P	22 57 20.0	+7.5
	baz=268,slow=13,SNR=2.1						
TSUM	Tsumeb	85.20	109	⇓P	P	22 57 12.4	-0.1
TSUM				⇓P	P	22 57 12.4	-0.1
TSUM	Tsumeb	85.20	109	P	P	22 57 12.2	-0.3
TSUM				IAmb	IAmb	22 57 22.1	
	comp=Z,3µm,0.8s						
TSUM				pP	pP	22 59 21.4	-0.7
TSUM	Tsumeb	85.20	109	⇓iP	P	22 57 12.6	+0.1
TSUM				pP	pP	22 59 22.0	-0.1
TSUM	Tsumeb	85.20	109	i P	pP	22 59 21.6	-0.6
TSUM	Tsumeb	85.20	109	eP	SKSac	23 06 43.0	+2.4
IOMK	Kirk Michael	85.25	33	eP	P	22 57 10.8	-0.9
IOMK				IAmb	IAmb	22 57 18.6	
	comp=Z,10µm,1.6s						
OLDB	Oldbury-Upon-S	85.28	36	eP	P	22 57 11.0	-0.9
OLDB				IAmb	IAmb	22 57 18.4	
	comp=Z,1µm,1.2s						
SET	Setif	85.41	52	P	P	22 57 15.0	+2.0
FOEL	Foel Wylfa	85.41	34	eP	P	22 57 11.9	-0.7
GAL1	Galloway	85.43	32	eP	P	22 57 11.0	-1.5
GAL1				IAmb	IAmb	22 57 19.1	
	comp=Z,1µm,1.0s						
HLM1	Long Mynd	85.44	35	eP	P	22 57 12.1	-0.6
HLM1				IAmb	IAmb	22 57 19.2	
	comp=Z,1µm,1.1s						
SIT	Sitka	85.47	330	P	P	22 57 12.7	0.0
SIT				pmax	pmax		
	comp=Z,2µm,1.4s						
SIT	Sitka	85.47	330	P	P	22 57 12.7	0.0
	baz=117						
SIT	Sitka	85.47	330	P	P	22 57 12.7	0.0
STRD	Stroud	85.55	36	eP	P	22 57 12.4	-0.8
STRD				IAmb	IAmb	22 57 19.9	
	comp=Z,2µm,0.8s						
MAHO	Mahon	85.64	48	P	P	22 57 13.4	-0.4
MAHO				S	S	23 06 59.1	+2.7
MAHO	Mahon	85.64	48	⇓P	P	22 57 14.1	+0.2
SWN1	Swindon	85.65	36	eP	P	22 57 12.7	-1.0
SUMG	Summit	85.68	9	P	P	22 57 13.9	0.0
SUMG				*PP	pP	22 59 21.2	-2.7
SUMG				pmax	pmax		
	comp=Z,4µm,0.7s						
SUMG	Summit	85.68	9	⇓iP	P	22 57 14.3	+0.4
SUMG				IAmb	IAmb	22 57 21.1	
	comp=Z,3µm,0.6s						
SUMG	Summit	85.68	9	⇓P	P	22 57 13.7	-0.3
SUMG	Summit	85.68	9	P	P	22 57 13.9	0.0
SUMG				pP	pP	22 59 21.2	-2.7
LAWE	Loch Awe, Argy	85.69	31	eP	P	22 57 12.7	-1.1
LAWE				IAmb	IAmb	22 57 20.4	
	comp=Z,1µm,1.1s						
NEWG	New Galloway	85.79	32	eP	P	22 57 12.9	-1.3
P33M	Teslin, Yukon	85.83	334	P	P	22 57 14.6	+0.2
	baz=120,SNR=963						
LEWI	Lewis, Hebride	85.83	29	eP	P	22 57 13.2	-1.2
SUR	Sutherland	85.87	122	PKKPbc	PKKPbc	23 15 14.9	+2.1
	comp=Z,37nm,0.9s,baz=279,slow=3.7,SNR=2.5						
SUR	Sutherland	85.87	122	P	P	22 57 15.4	-0.1
SUR				IAmb	IAmb	22 57 18.4	
	comp=Z,7µm,2.1s						
SUR				pP	pP	22 59 25.1	-0.4
SUR	Sutherland	85.87	122	⇓iP	P	22 57 15.7	+0.2
SUR				pP	pP	22 59 23.6	-1.9
SUR	Sutherland	85.87	122	i P	pP	22 59 22.5	-3.0
SUR	Sutherland	85.87	122	eP	SKSac	23 06 40.1	-4.2
DFRA	Djebel Bou Aff	85.87	52	P	P	22 57 17.5	+2.2
PGBU	Glenifferbraes	85.96	31	eP	P	22 57 14.4	-0.6
PGBU				IAmb	IAmb	22 57 21.8	
	comp=Z,1µm,0.8s						
I55US	WINDLESS BIGHT	86.04	191	P	P	22 57 20.0	+4.9
	baz=84,slow=16,SNR=1.4						
KPL	Plockton	86.04	30	eP	P	22 57 14.6	-0.8
KPL				IAmb	IAmb	22 57 22.7	
	comp=Z,1µm,1.1s						
STNC	Stoke	86.04	34	eP	P	22 57 15.4	-0.1
STNC				IAmb	IAmb	22 57 22.6	
	comp=Z,3µm,1.1s						
SBA	Scott Base	86.12	190	P	P	22 57 16.8	+1.3
SBA	Scott Base	86.12	190	P	P	22 57 16.8	+1.3
KESW	Keswick, Cumbr	86.16	33	eP	P	22 57 15.1	-0.9
KESW				IAmb	IAmb	22 57 23.0	
	comp=Z,3µm,0.9s						
NEPA	Kaukuwa	86.26	107	⇓iP	P	22 57 17.8	+0.2
NEPA				pP	pP	22 59 28.7	+1.0
NEPA	Kaukuwa	86.26	107	i P	pP	22 59 25.9	-1.8
CASM	Ain Smara	86.27	52	P	P	22 57 17.0	-0.1
KAC	Achnashellach	86.29	30	eP	P	22 57 16.3	-0.3
MMPY	Sheldon Lake,	86.40	336	P	P	22 57 17.6	+0.5
	baz=121						
MMPY				S	S	23 07 01.2	-1.7
	baz=121						
CWF	Charnwood Fore	86.41	35	eP	P	22 57 16.5	-0.7
ESK	Eskdalemuir	86.41	32	eP	P	22 57 16.4	-0.7
ESK	Eskdalemuir	86.41	32	P	P	22 57 16.2	-0.9
ESK				pmax	pmax		
	comp=Z,2µm,1.0s						
ESK	Eskdalemuir	86.41	32	P	P	22 57 16.2	-0.9
ESK				IAmb	IAmb	22 57 24.0	
	comp=Z,2µm,1.0s						
RES	Resolute Bay	86.43	354	⇓P	P	22 57 16.5	-0.3
RES				⇑P	PcP	22 57 23.5	+5.1
RES	Resolute Bay	86.43	354	IAmb	IAmb	22 57 24.5	
	comp=Z,3µm,1.4s						
LBWR	Ladybower, Pea	86.43	34	eP	P	22 57 17.0	-0.4
EKA	Eskdalemuir Ar	86.44	32	PKKPbc	PKKPbc	23 15 11.1	-1.4
	comp=Z,13nm,0.3s,baz=33,slow=3.4,SNR=34						
INVG	Invergeldie, C	86.44	31	eP	P	22 57 16.4	-0.9
INVG				IAmb	IAmb	22 57 23.9	
	comp=Z,1µm,0.9s						
CKFL	Kef-Lekhel	86.49	52	P	P	22 57 17.5	-0.7
SKAG	Skagway	86.58	333	P	P	22 57 18.3	+0.5
	baz=117						
SKAG	Skagway	86.58	333	IAmb	IAmb	22 57 28.8	
	comp=Z,2µm,1.1s						
EBH	Black Hill	86.64	31	eP	P	22 57 17.6	-0.7
HMNX	Herstmonceux	86.66	37	eP	P	22 57 18.4	0.0
HMNX				IAmb	IAmb	22 57 25.3	
	comp=Z,4µm,0.6s						
EDI	Edinburgh	86.67	31	eP	P	22 57 17.4	-0.9
EBL	Broad Law	86.68	32	eP	P	22 57 17.7	-0.7
HPK	Haverah Park	86.70	34	eP	P	22 57 18.3	-0.3
HPK				IAmb	IAmb	22 57 27.6	
	comp=Z,3µm,1.1s						
MDO	Dochfour	86.72	30	eP	P	22 57 17.7	-0.9
CLF	Chambon-Foret	86.85	40	⇓P	P	22 57 19.1	-0.3
CLF	Chambon-Foret	86.85	40	P	P	22 57 18.8	-0.6
CLF				IAmb	IAmb	22 57 27.2	
	comp=Z,2µm,1.1s						
CLF				pP	pP	22 59 28.0	-1.8
EDMD	Edmundbyers	86.86	33	eP	P	22 57 17.9	-1.4
EDMD				IAmb	IAmb	22 57 26.2	
	comp=Z,2µm,0.9s						
XMAS	Kiritimati	86.94	273	⇑P	P	22 57 19.7	-0.9
XMAS	Kiritimati	86.94	273	P	P	22 57 20.4	-0.2
XMAS				IAmb	IAmb	22 59 45.9	
	comp=Z,4µm,1.6s						
WHY	Whitehorse	86.94	334	P	P	22 57 19.8	0.0
	baz=118						
WHY	Whitehorse	86.94	334	IAmb	IAmb	22 57 28.2	
	comp=Z,5µm,1.9s						
ESY	Stoneypath	86.96	32	eP	P	22 57 19.2	-0.6
TULEG	Thule	87.01	0	⇓iP	P	22 57 19.8	+0.2
TULEG				IAmb	IAmb	22 57 26.7	
	comp=Z,2µm,0.8s						
TULEG	Thule	87.01	0	⇑P	PcP	22 57 26.6	+5.7
TULEG				⇑P	P	22 57 15.2	-4.4
TULEG				⇓P	P	22 57 19.5	0.0
TULEG				⇑P	P	22 57 19.6	0.0
EDU	Dundee	87.01	31	eP	P	22 57 19.8	-0.2
FARO	Faro, Yukon	87.05	335	P	P	22 57 20.5	+0.4
	baz=119						
FARO				S	S	23 07 08.5	-0.3
	baz=119						
VNDA	Vanda	87.17	190	P	P	22 57 22.0	+1.5
	comp=Z,2µm,0.9s						
VNDA				PKKPbc	PKKPbc	23 15 12.4	+1.2
	comp=Z,37nm,0.9s,baz=296,slow=5.1,SNR=13						
VNDA	Vanda	87.17	190	P	P	22 57 22.0	+1.5
VNDA	Vanda	87.17	190	P	P	22 57 21.7	+1.2
VNDA				IAmb	IAmb	22 57 23.5	
	comp=Z,2µm,0.9s						
LMK	Market Rasen	87.23	34	eP	P	22 57 20.1	-0.9
ELSH	Elham, Standar	87.23	37	eP	P	22 57 20.9	-0.2
MCD	Coleburn Disti	87.32	30	eP	P	22 57 19.9	-1.5
SYO	Syowa Base	87.33	160	⇓iP	P	22 57 21.4	+0.1
SYO	Syowa Base	87.33	160	⇓iPcP	PcP	22 57 23.8	+1.2
SYO	Syowa Base	87.33	160	⇓ipP	pP	22 59 30.8	-1.1
BIGH	Upper Bighouse	87.38	29	eP	P	22 57 21.1	-0.5
DRUM	Mains of Drumt	87.42	31	eP	P	22 57 21.4	-0.5
SCO	Scoresbysund	87.46	15	P	P	22 57 22.3	+0.5
SCO				pmax	pmax		
	comp=Z,2µm,0.9s						
SCO	Scoresbysund	87.46	15	⇓iP	P	22 57 22.8	+1.0
SCO				IAmb	IAmb	22 57 29.5	
	comp=Z,1µm,0.7s						
SCO	Scoresbysund	87.46	15	P	P	22 57 22.3	+0.5
SCO				IAmb	IAmb	22 57 30.0	
	comp=Z,2µm,0.9s						
M31M	Drury Creek, Y	87.46	335	P	P	22 57 22.4	+0.4
	baz=118,SNR=341						
M31M				S	S	23 07 11.9	-0.7
	baz=118						
SSB	Saint Sauveur	87.46	43	P	P	22 57 22.3	-0.2
SSB				pmax	pmax		
	comp=Z,794nm,1.0s						
SSB	Saint Sauveur	87.46	43	⇓P	P	22 57 22.2	-0.2
SSB	Saint Sauveur	87.46	43	P	P	22 57 22.3	-0.2
ELMS	Elmsett, Ipswi	87.48	36	eP	P	22 57 21.6	-0.6
WACR	West Acre	87.50	35	eP	P	22 57 21.5	-0.8
WACR				IAmb	IAmb	22 57 30.0	
	comp=Z,4µm,1.1s						
MLA1	Latheron	87.57	29	eP	P	22 57 21.8	-0.8
RUSF	Rustrel	87.70	45	⇓P	P	22 57 26.4	+2.8
RUSF				⇓P	P	22 57 26.4	+2.8
N31M	Braeburn, Yuko	87.71	334	P	P	22 57 23.5	+0.3
	baz=117,SNR=610						
N31M				S	S	23 07 14.6	-0.4
	baz=117						
PUH	Pauahi	88.15	290	P	P	22 57 25.6	-0.7
PUH				IAmb	IAmb	22 59 50.6	
	comp=Z,3µm,1.5s						
HYT	Haines Junctio	88.17	333	P	P	22 57 26.2	+0.7
	baz=116						
HYT				S	S	23 07 19.0	-0.4
	baz=116						
HYT	Haines Junctio	88.17	333	P	P	22 57 26.0	+0.5
KKO	Keanakako`i	88.20	290	P	P	22 57 26.2	-0.3
HLP	Hilina Pali	88.22	290	P	P	22 57 26.0	-0.6
MLH	Mauna Loa	88.33	290	P	P	22 57 26.3	-1.0
KEST	Kesra	88.37	53	P	P	22 57 27.0	0.0
	comp=Z,432nm,0.5s,baz=151,slow=2.5,SNR=211						
KEST				pP	pP	22 59 37.5	-0.4
	comp=Z,126nm,0.7s,baz=207,slow=11,SNR=3.2						
KEST				PKKPbc	PKKPbc	23 15 07.5	+0.5
	comp=Z,118nm,0.8s,baz=15,slow=0.9,SNR=11						
KEST				PKPPKP	P'P'df	23 23 10.8	-3.1
	comp=Z,82nm,1.0s,baz=41,slow=3.8,SNR=5.6						
KEST	Kesra	88.37	53	P	P	22 57 27.0	0.0
AIN	Ainahou	88.38	290	P	P	22 57 26.7	-0.7
AIN				IAmb	IAmb	22 57 34.7	
	comp=Z,3µm,1.7s						
HMH	Humu‘ula Sheep	88.44	290	P	P	22 57 27.5	-0.4
MLOA	Mauna Loa Obse	88.52	290	P	P	22 57 27.7	-0.7
MLOA				IAmb	IAmb	22 57 35.5	
	comp=Z,5µm,1.9s						
POHA	Pohakuloa	88.52	290	⇓P	P	22 57 27.0	-1.2
POHA				⇑P	PcP	22 57 27.8	-1.4
POHA	Pohakuloa	88.52	290	P	P	22 57 27.2	-1.0
MWH	Moku‘aweowe	88.53	290	P	P	22 57 27.9	-0.6
PNL	Peninsula	88.54	332	P	P	22 57 27.4	+0.3
	baz=114,SNR=55						
PNL				S	S	23 07 22.6	-0.1
	baz=114						
YUK6	Outpost Mounta	88.60	333	P	P	22 57 28.2	+0.6
	baz=115						
YUK6				S	S	23 07 24.3	+0.7
	baz=115						
M30M	Minto, Yukon	88.63	335	P	P	22 57 27.4	-0.1
	baz=116,SNR=431						
NEEM	North Greenlan	88.65	4	⇓iP	P	22 57 28.0	+0.4
NEEM				IAmb	IAmb	22 57 32.3	
	comp=Z,4µm,0.7s						
HPAH	Hawaii Prepara	88.73	291	P	P	22 57 28.2	-0.8
HPAH				IAmb	IAmb	22 57 39.4	
	comp=Z,3µm,1.6s						
BCPM	Bancas Point	88.76	332	P	P	22 57 28.4	+0.4
HUH	Hualalai	88.79	290	P	P	22 57 28.8	-0.6
KHLU	Kahalu`u	88.82	290	P	P	22 57 28.6	-0.8
BNI	Bardonecchia	88.84	44	P	P	22 57 29.3	+0.3
BNI				pmax	pmax		
	comp=Z,463nm,1.0s						
BNI	Bardonecchia	88.84	44	⇓P	P	22 57 28.9	-0.1
BNI				⇓P	P	22 57 29.1	+0.1
BNI	Bardonecchia	88.84	44	P	P	22 57 29.3	+0.3
YUK4	Talbot Arm	88.89	334	P	P	22 57 29.4	+0.5
	baz=115						
YUK4				S	S	23 07 25.8	-0.3
	baz=115						
SNF	Seneffe	88.90	38	κP	P	22 57 28.4	-0.5
	comp=Z,741nm,1.0s						
DOU	Dourbes	88.97	39	κP	P	22 57 28.7	-0.5
	comp=Z,812nm,1.1s						
UCC	Uccle	89.04	38	κP	P	22 57 29.0	-0.5
	comp=Z,227nm,0.9s						
UCC	Uccle	89.04	38	P	P	22 57 29.0	-0.5
UCC				pmax	pmax		
	comp=Z,346nm,0.9s						
UCC	Uccle	89.04	38	P	P	22 57 29.0	-0.5
PINM	Pinnacle	89.11	332	P	P	22 57 30.1	+0.3
	baz=113,SNR=196						
PINM				S	S	23 07 28.7	+0.9
	baz=113						
BMRD	Maredsous	89.13	38	κP	P	22 57 29.6	-0.5
	comp=Z,749nm,1.0s						
VSL	Villasalto	89.32	50	⇓P	PcP	22 57 38.0	+6.0
VSL				⇓P	P	22 57 31.0	-0.2
VSL				⇑P	P	22 57 32.7	+1.5
VSL	Villasalto	89.32	50	P	P	22 57 30.8	-0.3
VSL				IAmb	IAmb	22 57 39.5	
	comp=Z,3µm,1.8s						
LRW	Lerwick	89.33	28	eP	P	22 57 30.2	-0.5
LRW	Lerwick	89.33	28	⇑P	P	22 57 31.0	+0.3
LRW				⇑P	PcP	22 57 31.3	-0.2
BGES	Gesves	89.35	38	κP	P	22 57 30.6	-0.4
	comp=Z,748nm,0.9s						
RCHB	Rochefort	89.37	39	κP	P	22 57 30.4	-0.7
	comp=Z,583nm,1.2s						
HLK	Haleakala	89.38	291	P	P	22 57 31.7	-0.4
HLK				IAmb	IAmb	22 57 39.2	
	comp=Z,3µm,1.4s						
BCLA	Clavier	89.50	38	κP	P	22 57 31.2	-0.5
	comp=Z,323nm,1.1s						
KHLH	Kahului Airpor	89.57	291	P	P	22 57 32.7	0.0
KHLH				IAmb	IAmb	22 57 39.6	
	comp=Z,2µm,1.1s						
SENIN	Lac Senin/Sane	89.62	43	P	P	22 57 32.5	-0.2
SENIN				IAmb	IAmb	22 57 43.0	
	comp=Z,3µm,2.1s						
TABL	Table Mountain	89.65	332	IAmb	IAmb	22 57 46.1	
	comp=Z,2µm,1.0s						
MONC	Moncucco Torin	89.70	44	⇓P	P	22 57 32.4	-0.3
MONC				⇑P	P	22 57 32.5	-0.3
SOE	Somerset East	89.74	123	⇑iP	P	22 57 33.4	0.0
SOE				pP	pP	22 59 45.6	+0.8
SOE	Somerset East	89.74	123	i P	pP	22 59 40.5	-4.2
A36M	Sachs Harbour	89.74	345	P	P	22 57 32.0	-0.3
	baz=127,SNR=1000						
A36M				S	S	23 07 29.7	-3.3
	baz=127						
A36M	Sachs Harbour	89.74	345	P	P	22 57 32.0	-0.3
PGF	Pioggiola	89.80	47	P	PcP	22 57 39.3	+5.0
PGF				P	P	22 57 33.3	-0.2
PGF				P	P	22 57 33.5	0.0
WLF	Walferdange	89.80	39	κP	P	22 57 32.8	-0.3
	comp=Z,576nm,1.3s						
WLF	Walferdange	89.80	39	P	P	22 57 32.8	-0.3
WLF				pmax	pmax		
	comp=Z,2µm,1.3s						
WLF	Walferdange	89.80	39	eP	P	22 57 32.9	-0.3
	comp=Z,2µm,1.4s,baz=257,slow=4.7						
WLF				eSKSac	SKSac	23 07 06.1	0.0
	baz=256,slow=5.7						
WLF	Walferdange	89.80	39	⇓P	P	22 57 32.9	-0.3
WLF				⇓P	P	22 57 33.0	-0.1

WLF	**Walferdange**	89.80	39	P	P	22 57 32.8	-0.3
WLF				IAmb	IAmb	22 57 44.0	
	comp=Z,2µm,1.3s						
BEBN	**Eben Emael**	89.83	38	κP	P	22 57 33.0	-0.2
	comp=Z,561nm,1.2s						
YUK3	**Moose Creek**	89.86	334	P	P	22 57 33.3	-0.1
	baz=113						
YUK3				S	S	23 07 35.1	+0.3
	baz=113						
BHOU	**Houvegnez**	89.91	39	κP	P	22 57 33.5	-0.2
	comp=Z,398nm,1.2s						
MESA	**MESA**	89.92	332	P	P	22 57 33.8	+0.1
	baz=112,SNR=56						
MESA				S	S	23 07 35.6	+0.2
	baz=112						
MESA	**MESA**	89.92	332	P	P	22 57 33.8	+0.1
MESA				IAmb	IAmb	22 57 46.2	
	comp=Z,845nm,0.8s						
CTG	**Chitna Glacier**	89.94	333	P	P	22 57 33.9	+0.2
	baz=112,SNR=263						
CTG				S	S	23 07 36.1	+0.7
	baz=112						
MEM	**Membach**	89.98	38	κP	P	22 57 33.6	-0.3
	comp=Z,290nm,1.1s						
J29M	**Klondike Camp**	90.02	336	P	P	22 57 34.2	+0.3
	baz=115,SNR=66						
J29M				S	S	23 07 34.4	-1.5
	baz=115						
ECH	**Echery**	90.03	41	P	P	22 57 33.8	-0.5
ECH				pmax	pmax		
	comp=Z,4µm,2.1s						
ECH	**Echery**	90.03	41	⇓P	P	22 57 33.6	-0.7
ECH				⇓P	P	22 57 33.7	-0.5
ECH	**Echery**	90.03	41	P	P	22 57 33.8	-0.5
ECH				IAmb	IAmb	22 57 42.2	
	comp=Z,4µm,2.1s						
BTNL	**Ternell**	90.05	38	κP	P	22 57 33.8	-0.5
	comp=Z,313nm,0.8s						
INK	**Inuvik**	90.09	341	P	P	22 57 33.6	-0.4
INK				pmax	pmax		
	comp=Z,2µm,1.0s						
INK	**Inuvik**	90.09	341	P	P	22 57 34.0	-0.1
	baz=119						
INK				S	S	23 07 34.0	-2.2
	baz=119						
INK	**Inuvik**	90.09	341	P	P	22 57 33.6	-0.4
INK				IAmb	IAmb	22 57 36.9	
	comp=Z,2µm,0.9s						
ISLE	**Juniper Island**	90.26	332	P	P	22 57 34.8	-0.4
ISLE				IAmb	IAmb	22 57 41.8	
	comp=Z,1µm,1.0s						
BVCY	**Beaver Creek**	90.28	334	P	P	22 57 35.1	0.0
	baz=112						
BVCY				S	S	23 07 38.3	+0.1
	baz=112						
EPYK	**Eagle Plains**	90.28	338	P	P	22 57 34.8	-0.3
	baz=116,SNR=77						
EPYK				S	S	23 07 36.5	-1.6
	baz=116						
DAWY	**Dawson**	90.32	336	P	P	22 57 34.9	-0.4
	baz=114,SNR=575						
DAWY				S	S	23 07 36.4	-2.1
	baz=114						
DAWY	**Dawson**	90.32	336	P	P	22 57 34.8	-0.5
SNH	**Sunshine Point**	90.34	332	P	P	22 57 35.7	+0.3
SNH				IAmb	IAmb	22 57 46.0	
	comp=Z,2µm,1.2s						
BOSA	**Boshof**	90.35	119	P	P	22 57 36.3	-0.1
	comp=Z,338nm,0.7s,baz=268,slow=4.8,SNR=281						
BOSA				pP	pP	22 59 46.7	-1.2
	comp=Z,636nm,1.1s,baz=248,slow=8.4,SNR=4.5						
BOSA				PKKPbc	PKKPbc	23 15 01.9	0.0
	comp=Z,94nm,0.7s,baz=106,slow=1.8,SNR=14						
BOSA	**Boshof**	90.35	119	P	P	22 57 34.7	-1.7
BOSA				IAmb	IAmb	22 57 39.2	
	comp=Z,1µm,1.1s						
BOSA	**Boshof**	90.35	119	*i* P	P	22 57 35.9	-0.5
BOSA				pP	pP	22 59 44.1	-3.7
BOSA	**Boshof**	90.35	119	*i* P	pP	22 59 46.2	-1.7
DBG	**Daneborg**	90.39	12	⇓*i*P	P	22 57 35.5	+0.2
DBG				IAmb	IAmb	22 57 40.6	
	comp=Z,220nm,0.8s						
I29M	**Ogilvie Camp,**	90.43	337	P	P	22 57 35.5	-0.2
	baz=115,SNR=1000						
I29M				S	S	23 07 38.4	-1.0
	baz=115						
WAX	**Waxell Ridge**	90.44	332	P	P	22 57 35.9	-0.1
WAX				IAmb	IAmb	22 57 46.9	
	comp=Z,2µm,1.1s						
BGLC	**Bering Glacier**	90.52	332	P	P	22 57 36.8	+0.6
	baz=110						
MSSA	**Maissana**	90.60	45	P	P	22 57 36.5	-0.6
MSSA				IAmb	IAmb	22 57 48.2	
	comp=Z,2µm,1.8s						
AHRW	**Bad Neuenahr-A**	90.62	39	*e*P	P	22 57 36.7	-0.1
	comp=Z,1µm,1.2s,baz=257,slow=4.7						
AHRW				*e*SKSac	SKSac	23 07 12.3	+1.6
	baz=256,slow=5.7						
CRQE	**Cirque**	90.66	332	P	P	22 57 36.8	-0.2
	baz=111,SNR=184						
CRQE				S	S	23 07 40.7	-1.2
	baz=111						
BOB	**Bobbio (Coli)**	90.66	45	⇑P	PcP	22 57 43.6	+5.6
BOB				⇓P	P	22 57 36.8	-0.6
BOB				⇓P	P	22 57 36.9	-0.4
CRQM	**Cirque**	90.68	332	P	P	22 57 36.7	-0.5
CRQM				IAmb	IAmb	22 57 41.8	
	comp=Z,1µm,0.9s						
M27K	**Edge Creek, AK**	90.70	334	P	P	22 57 37.1	-0.1
	baz=112,SNR=44						
M27K				S	S	23 07 41.9	-0.2
	baz=112						
SUCK	**Suckling Hills**	90.74	331	IAmb	IAmb	22 57 43.8	
	comp=Z,1µm,1.1s						
WMR	**Waimanalo Ridg**	90.80	291	P	P	22 57 38.2	-0.2
BERG	**Berg Lake**	90.81	332	IAmb	IAmb	22 57 40.9	
	comp=Z,1µm,0.7s						
BFO	**Black Forest**	90.82	41	P	P	22 57 36.7	-1.2
BFO				pmax	pmax		
	comp=Z,2µm,2.0s						
BFO	**Black Forest**	90.82	41	*e*P	P	22 57 37.1	-0.8
	comp=Z,1µm,2.0s,baz=257,slow=4.7						
BFO	**Black Forest**	90.82	41	P	P	22 57 36.6	-1.2
BFO				IAmb	IAmb	22 57 44.5	
	comp=Z,2µm,2.0s						
MCARA	**McCarthy VSAT**	90.85	333	P	P	22 57 37.8	0.0
	baz=111,SNR=207						
MCARA				S	S	23 07 43.0	-0.2
	baz=111						
DHH	**Diamond Head**	90.90	291	P	P	22 57 39.2	+0.4
DHH	**Diamond Head**	90.90	291	P	P	22 57 39.2	+0.4
BCAR	**Beaver Creek A**	90.92	335	P	P	22 57 37.9	-0.1
L27K	**Beaver Creek,**	90.94	335	P	P	22 57 38.1	0.0
	baz=112,SNR=655						
L27K				S	S	23 07 44.1	0.0
	baz=112						
L27K	**Beaver Creek,**	90.94	335	P	P	22 57 37.9	-0.2
L27K				IAmb	IAmb	22 57 48.2	
	comp=Z,1µm,1.0s						
BUG	**Bochum--Univer**	90.98	38	*e*P	P	22 57 38.1	-0.4
	comp=Z,2µm,1.3s,baz=257,slow=4.7						
VRDI	**Verde Repeater**	90.99	333	IAmb	IAmb	22 57 45.2	
	comp=Z,1µm,1.0s						
KAIM	**Kayak Island**	90.99	331	P	P	22 57 38.0	-0.3
	baz=110,SNR=29						
KAIM				S	S	23 07 44.9	+0.4
	baz=110						
HMT	**Hamilton**	91.06	332	P	P	22 57 38.3	-0.5
HMT				IAmb	IAmb	22 57 49.9	
	comp=Z,2µm,1.1s						
HON	**Honolulu**	91.10	291	P	P	22 57 39.3	-0.4
HON				pmax	pmax		
	comp=Z,2µm,1.0s						
HON	**Honolulu**	91.10	291	P	P	22 57 39.3	-0.4
HON				IAmb	IAmb	22 57 46.1	
	comp=Z,2µm,1.0s						
KIP	**Kipapa**	91.13	291	*ce*P	P	22 57 39.6	-0.3
KIP				pmax	pmax		
	comp=Z,2µm,1.7s						
KIP	**Kipapa**	91.13	291	P	P	22 57 39.3	-0.6
KIP				IAmb	IAmb	22 57 46.2	
	comp=Z,2µm,1.1s						
VLC	**Villacollemand**	91.17	45	⇓P	P	22 57 38.5	-1.1
VLC				⇑P	P	22 57 38.8	-0.9
VLC				⇓P	P	22 57 43.3	+3.7
VLC	**Villacollemand**	91.17	45	P	P	22 57 38.8	-0.9
VLC				IAmb	IAmb	22 57 46.7	
	comp=Z,1µm,1.4s						
M26K	**Nabesna, AK**	91.20	334	P	P	22 57 38.6	-0.8
	baz=111,SNR=95						
M26K				S	S	23 07 45.3	-1.1
	baz=111						
GLB	**Gilahina Butte**	91.22	333	P	P	22 57 39.0	-0.6
PRMA	**PARMA**	91.26	45	P	P	22 57 39.9	-0.1
PRMA				IAmb	IAmb	22 57 54.8	
	comp=Z,3µm,1.9s						
JMIC	**Jan Mayen**	91.37	17	*e*P	P	22 57 40.1	+0.2
JMIC				*e*SKSac	SKSac	23 07 09.4	-4.6
TNS	**Taunus Mts**	91.38	39	*e*P	P	22 57 40.2	-0.3
	comp=Z,954nm,1.1s,baz=257,slow=4.7						
TNS				*e*SKSac	SKSac	23 07 15.7	+0.6
	baz=256,slow=5.7						
LBTB	**Lobatse**	91.41	116	P	P	22 57 41.0	-0.4
LBTB				pmax	pmax		
	comp=Z,1µm,0.8s						
LBTB	**Lobatse**	91.41	116	P	P	22 57 41.0	-0.4
LBTB				IAmb	IAmb	22 57 50.4	
	comp=Z,1µm,0.8s						
LBTB	**Lobatse**	91.41	116	⇓*i*P	P	22 57 41.1	-0.2
LBTB				pP	pP	22 59 50.4	-2.5
LBTB	**Lobatse**	91.41	116	*i* P	pP	22 59 48.6	-4.3
BMRM	**Bremner River**	91.43	332	P	P	22 57 39.7	-0.8
	baz=109,SNR=104						
BMRM				S	S	23 07 46.9	-1.5
	baz=109						
BMRM	**Bremner River**	91.43	332	IAmb	IAmb	22 57 49.8	
	comp=Z,1µm,1.2s						
DAVOX	**Davos/Dischmat**	91.45	43	pP	pP	22 59 52.1	-0.6
	comp=Z,107nm,0.9s,baz=210,slow=11,SNR=4.4						
DAVOX				PKKPbc	PKKPbc	23 14 59.2	-0.8
	comp=Z,68nm,0.6s,baz=190,slow=3.9,SNR=13						
STU	**Stuttgart**	91.48	41	P	P	22 57 40.4	-0.5
STU				pmax	pmax		
	comp=Z,524nm,0.9s						
STU	**Stuttgart**	91.48	41	*e*P	P	22 57 40.3	-0.5
	comp=Z,2µm,1.1s,baz=257,slow=4.7						
STU				*e*SKSac	SKSac	23 07 15.4	-0.2
	baz=256,slow=5.7						
STU	**Stuttgart**	91.48	41	⇓P	PcP	22 57 45.1	+3.7
STU				⇓P	P	22 57 40.5	-0.5
STU				⇑P	P	22 57 41.0	0.0
STU	**Stuttgart**	91.48	41	P	P	22 57 40.4	-0.5
IBBN	**Ibbenburen**	91.50	37	*e*P	P	22 57 40.7	-0.2
	comp=Z,2µm,1.2s,baz=257,slow=4.7						
IBBN				*e*SKSac	SKSac	23 07 16.5	+0.9
	baz=256,slow=5.7						
IBBN	**Ibbenburen**	91.50	37	⇓P	PcP	22 57 45.0	+3.6
IBBN				⇓P	P	22 57 40.8	-0.1
IBBN				⇓P	P	22 57 41.0	+0.1
DAVA	**Damuels**	91.57	42	*e*P	P	22 57 41.4	-0.2
	comp=Z,613nm,1.0s,SNR=146						
DAVA				*e*P	pP	22 59 59.1	+5.9
	comp=Z,191nm,1.0s						
L26K	**Log Cabin Wild**	91.57	334	P	P	22 57 40.3	-0.7
	baz=110,SNR=151						
L26K				S	S	23 07 48.0	-1.6
	baz=110						
SALO	**Salr**	91.61	44	⇓P	P	22 57 40.8	-0.8
SALO				⇓P	P	22 57 40.9	-0.8
SALO				⇑P	P	22 57 47.0	+5.3
SALO	**Salr**	91.61	44	P	P	22 57 41.0	-0.6
SALO				IAmb	IAmb	22 57 51.3	
	comp=Z,2µm,1.1s						
KASTN	**Kahler Asten**	91.61	38	*e*P	P	22 57 41.0	-0.5
	comp=Z,935nm,1.6s,baz=257,slow=4.7						
KASTN				*e*SKSac	SKSac	23 07 15.9	-0.4
	baz=256,slow=5.7						
ZCCA	**Zocca**	91.63	45	P	P	22 57 41.5	-0.3
OSSC	**Osservatorio P**	91.63	46	P	P	22 57 41.1	-0.6
OSSC				IAmb	IAmb	22 57 49.6	
	comp=Z,1µm,1.2s						
N25K	**Chitina, Valde**	91.64	333	P	P	22 57 40.8	-0.7
	baz=109,SNR=40						
MENT	**Mentasta**	91.70	334	P	P	22 57 40.9	-0.7
MENT				IAmb	IAmb	22 57 48.2	
	comp=Z,3µm,2.4s						
Q23K	**Middleton Isla**	91.76	330	P	P	22 57 41.1	-0.8
	baz=108						
MILB	**Miltenberg**	91.81	40	*e*P	P	22 57 41.9	-0.5
	comp=Z,1µm,1.0s,baz=257,slow=4.7						
MILB				*e*pP	pP	22 59 50.0	-4.1
UBR	**Ueberruh**	91.81	42	*e*P	P	22 57 42.3	-0.3
	comp=Z,4µm,2.0s,baz=257,slow=4.7						
UBR				*e*pP	pP	22 59 50.3	-3.9
UBR				*e*SKSac	SKSac	23 07 18.2	+0.5
	baz=256,slow=5.7						
CLTB	**Caltabellotta**	91.82	52	⇓P	P	22 57 42.6	-0.2
CLTB				⇑P	PcP	22 57 43.8	+0.5
CLTB	**Caltabellotta**	91.82	52	P	P	22 57 42.9	+0.1
EYAK	**Cordova Ski Ar**	91.82	332	P	P	22 57 41.4	-0.7
	baz=108,SNR=30						
EYAK	**Cordova Ski Ar**	91.82	332	P	P	22 57 41.5	-0.7
LATE	**Laterza**	91.83	47	P	P	22 57 42.7	0.0
LATE				IAmb	IAmb	22 57 53.6	
	comp=Z,1µm,1.2s						
CORL	**Corleone**	91.95	52	P	P	22 57 44.2	+0.8
DIV	**Divide**	92.02	332	IAmb	IAmb	22 57 53.7	
	comp=Z,1µm,0.8s						
FETA	**Feichten**	92.07	43	*e*P	P	22 57 42.7	-1.2
	comp=Z,600nm,1.1s,SNR=206						
HLG	**Helgoland**	92.07	35	*e*P	P	22 57 43.4	-0.1
	comp=Z,2µm,1.1s,baz=257,slow=4.7						
HLG				*e*SKSac	SKSac	23 07 19.6	+1.0
	baz=256,slow=5.7						
HLG	**Helgoland**	92.07	35	⇓P	P	22 57 44.1	+0.7
HLG				⇑P	PcP	22 57 45.7	+1.9
KMY	**Karmoy**	92.08	30	*e*P	P	22 57 44.3	+0.9
KMY				*e*pP	pP	22 59 58.7	+3.7
KMY				*e*SKSac	SKSac	23 07 15.6	-2.8
DOT	**Dot Lake**	92.09	335	IAmb	IAmb	22 57 53.5	
	comp=Z,2µm,1.4s						
MGAB	**Montegabbione**	92.11	47	⇓P	P	22 57 43.4	-0.5
MGAB				⇓P	P	22 57 43.5	-0.5
HIN	**Hinchinbrook I**	92.13	331	IAmb	IAmb	22 57 53.9	
	comp=Z,1µm,1.2s						
HARP	**HAARP**	92.14	333	P	P	22 57 42.7	-0.9
	baz=109,SNR=28						
SCRK	**Sand Creek**	92.17	335	P	P	22 57 43.2	-0.7
	baz=110,SNR=707						
SCRK				S	S	23 07 53.7	-1.3
	baz=110						
J26L	**Joseph Creek**	92.17	336	P	P	22 57 43.4	-0.5
	baz=110,SNR=456						
J26L				S	S	23 07 53.5	-1.4
	baz=110						
RETA	**Reutte**	92.20	42	*e*P	P	22 57 43.5	-0.9
	comp=Z,865nm,1.3s,SNR=186						
RETA				*e*P	pP	22 59 58.7	+2.7
	comp=Z,226nm,1.4s						
KLU	**Klutina**	92.20	332	P	P	22 57 43.4	-0.6
	baz=108,SNR=286						
KLU	**Klutina**	92.20	332	IAmb	IAmb	22 57 46.6	
	comp=Z,880nm,0.6s						
FID	**Port Fidalgo**	92.23	332	IAmb	IAmb	22 57 53.1	
	comp=Z,674nm,0.7s						
DAG	**Danmarks Havn**	92.27	11	⇓*i*P	P	22 57 43.2	-0.7
DAG				IAmb	IAmb	22 57 49.5	
	comp=Z,234nm,0.6s						
DAG	**Danmarks Havn**	92.27	11	⇓P	P	22 57 42.0	-1.9
DAG				⇓P	P	22 57 43.2	-0.7
TEOL	**Teolo**	92.33	44	P	P	22 57 44.4	-0.5
TEOL				IAmb	IAmb	22 57 52.5	
	comp=Z,1µm,0.8s						
MOTA	**Moosalm**	92.39	42	*e*P	P	22 57 43.6	-1.8
	comp=Z,494nm,1.0s,SNR=234						
MOTA				*e*P	pP	23 00 00.6	+3.5
	comp=Z,224nm,1.1s						
MOTA				*i* P	PKKPbc	23 14 56.2	-1.4
	SNR=4.3						
SUE	**Sulen**	92.40	28	*e*P	P	22 57 45.7	+0.9
SUE				IVmBBB		22 57 52.9	
	comp=Z,13µm,1.8s						
SUE				*e*SKSac	SKSac	23 07 14.9	-5.1
SUE				*e*SS	SS	23 14 28.6	+1.2
ASK	**Askoy**	92.43	29	*e*P	P	22 57 46.2	+1.2
ASK				*e*pP	pP	23 00 00.7	+4.0
ASK				*e*SKSac	SKSac	23 07 18.1	-2.1
SQTA	**Sankt Quirin**	92.43	43	*e*P	P	22 57 43.7	-1.8
	comp=Z,1µm,2.0s,SNR=323						
SQTA				*e*P	pP	22 59 57.8	+0.6
	comp=Z,129nm,0.9s						
SQTA				*i* P	PKKPbc	23 14 56.5	-0.9
	SNR=5.4						
RIDG	**Independent Ri**	92.45	335	P	P	22 57 44.4	-0.7
	baz=109,SNR=288						
RIDG	**Independent Ri**	92.45	335	IAmb	IAmb	22 57 55.4	
	comp=Z,1µm,1.2s						
PAX	**Paxson**	92.47	334	P	P	22 57 43.9	-1.3
	baz=108,SNR=217						
PAX				S	S	23 07 56.0	-1.5
	baz=108						
PAX	**Paxson**	92.47	334	IAmb	IAmb	22 57 54.2	
	comp=Z,1µm,1.2s						
BER	**Bergen**	92.47	29	*e*P	P	22 57 45.3	+0.2
BER				IVmB_BB		22 57 47.9	
	comp=Z,10µm,1.7s						
BER				*e*pP	pP	23 00 00.5	+3.6
BER				*e*SKSac	SKSac	23 07 17.7	-2.7
BER				*e*SP	SP	23 09 13.0	-1.4
BER				*e*SS	SS	23 14 30.8	+2.3
BER				IVMs_BB	IVMs_BB	23 23 54.5	
	comp=Z,14µm,29.3s						
CTI	**Castel Tesino**	92.47	44	P	P	22 57 45.3	-0.4
CTI				pmax	pmax		
	comp=Z,1µm,1.0s						
CTI	**Castel Tesino**	92.47	44	P	P	22 57 45.3	-0.4
CTI				IAmb	IAmb	22 57 53.4	
	comp=Z,1µm,1.0s						
MURB	**Monte Urbino**	92.48	47	P	P	22 57 44.5	-1.2
MURB				IAmb	IAmb	22 57 52.4	
	comp=Z,932nm,0.9s						
UBBA	**Unterbreizbach**	92.49	39	*e*P	P	22 57 45.3	0.0
	comp=Z,2µm,1.9s,baz=257,slow=4.7						
UBBA				*e*SKSac	SKSac	23 07 23.0	+2.2
	baz=256,slow=5.7						
M24K	**Tolsona, Glenn**	92.50	333	P	P	22 57 44.9	-0.5
	baz=108,SNR=113						
GLI	**Glacier Island**	92.56	332	P	P	22 57 44.3	-1.2
	baz=107,SNR=28						
GLI				S	S	23 07 55.8	-2.4
	baz=107						
GTTG	**Gottingen**	92.64	38	*e*P	P	22 57 46.1	0.0
	comp=Z,990nm,1.3s,baz=257,slow=4.7						
GTTG				*e*SKSac	SKSac	23 07 24.4	+2.5
	baz=256,slow=5.7						
RAFF	**Raffo Rosso**	92.64	53	P	P	22 57 46.5	-0.1
RAFF				IAmb	IAmb	22 57 54.7	
	comp=Z,1µm,1.1s						
FUR	**Furstenfeldbru**	92.69	42	*e*P	P	22 57 46.1	-0.4
	comp=Z,2µm,1.1s,baz=257,slow=4.7						
FUR				*e*SKSac	SKSac	23 07 22.4	0.0
	baz=256,slow=5.7						
FOO	**Floro**	92.69	28	*e*P	P	22 57 46.3	+0.2
FOO				IVmBBB		22 57 48.9	
	comp=Z,9µm,3.0s						
FOO				*e*pP	pP	23 00 03.2	+5.3
FOO				*e*SKSac	SKSac	23 07 19.1	-2.6
FOO				*e*SS	SS	23 14 32.0	+0.5
WATA	**Walderalm**	92.70	42	*e*P	P	22 57 45.8	-1.0
	comp=Z,1µm,1.7s,SNR=290						
WATA				*e*P	pP	23 00 01.3	+2.8
	comp=Z,146nm,1.1s						
WTTA	**Wattenberg**	92.73	43	*e*P	P	22 57 46.1	-0.8
	comp=Z,1µm,0.9s,SNR=451						
WTTA				*e*P	pP	23 00 00.2	+1.5
	comp=Z,256nm,1.2s						
VAE	**Valguarnera**	92.73	53	PKKPbc	PKKPbc	23 14 57.3	+1.1
	comp=Z,68nm,0.9s,baz=337,slow=4.4,SNR=6.1						
SNART	**Snartemo**	92.81	31	*e*P	P	22 57 47.3	+0.5
SNART				*e*pP	pP	23 00 03.1	+4.6
SNART				*e*SKSac	SKSac	23 07 18.5	-4.0
NRCA	**Norcia**	92.82	47	P	P	22 57 46.5	-0.8
NRCA				IAmb	IAmb	22 57 56.3	
	comp=Z,3µm,2.1s						
AQU	**L'Aquila**	92.93	48	P	P	22 57 47.7	-0.1
AQU				pmax	pmax		
	comp=Z,1µm,1.0s						
AQU	**L'Aquila**	92.93	48	⇓*i*P	P	22 57 47.8	-0.1
AQU	**L'Aquila**	92.93	48	⇓P	P	22 57 47.7	-0.1
AQU				⇓P	PcP	22 57 47.8	-0.2
AQU	**L'Aquila**	92.93	48	P	P	22 57 47.7	-0.1
AQU				IAmb	IAmb	22 58 02.9	
	comp=Z,1µm,1.0s						
SCM	**Sheep Creek Mo**	92.94	332	P	P	22 57 46.8	-0.6
SCM				pmax	pmax		
	comp=Z,1µm,1.2s						
SCM	**Sheep Creek Mo**	92.94	332	P	P	22 57 46.8	-0.6
	baz=107,SNR=87						
SCM	**Sheep Creek Mo**	92.94	332	P	P	22 57 46.8	-0.6
SCM				IAmb	IAmb	22 57 58.1	
	comp=Z,1µm,1.2s						
NRDL	**Niedersach Rie**	92.94	37	*e*P	P	22 57 47.7	+0.3
	comp=Z,1µm,1.5s,baz=257,slow=4.7						
NRDL				*e*SKSac	SKSac	23 07 24.7	+1.4
	baz=256,slow=5.7						
J25K	**Salcha River,**	92.95	335	P	P	22 57 46.7	-0.7
	baz=108,SNR=370						
J25K				S	S	23 08 02.2	+0.6
	baz=108						
CLZ	**Clausthal**	92.95	38	*e*P	P	22 57 47.6	0.0
	comp=Z,1µm,1.2s,baz=257,slow=4.7						
CLZ				*e*SKSac	SKSac	23 07 26.3	+2.6
	baz=256,slow=5.7						
ODD1	**Odda**	92.95	30	*e*P	P	22 57 48.0	+0.6
ODD1				IVmB_BB		22 57 50.6	
	comp=Z,10µm,1.9s						
ODD1				*e*SKSac	SKSac	23 07 21.2	-2.1
GRFO	**Grafenberg**	92.99	40	P	P	22 57 47.6	-0.2
GRFO				pmax	pmax		
	comp=Z,805nm,1.2s						
GRFO	**Grafenberg**	92.99	40	P	P	22 57 47.6	-0.2
GRA1	**Grafenberg Arr**	92.99	40	P	P	22 57 47.6	-0.2
GRF	**Grafenberg Arr**	92.99	40	P	P	22 57 47.7	-0.2
GRF				pmax	pmax		
	comp=Z,740nm,1.1s						
GRF	**Grafenberg Arr**	92.99	40	*e*P	P	22 57 47.7	-0.2
	comp=Z,1µm,1.4s,baz=257,slow=4.7						
GRF				*e*pP	pP	22 59 56.8	-2.9
GRF				*e*SKSac	SKSac	23 07 24.4	+0.4
	baz=256,slow=5.7						
SKMB	**Sankelmark Bun**	93.08	35	*e*P	P	22 57 48.4	+0.3
	comp=Z,2µm,1.2s,baz=257,slow=4.7						
HYA	**Hoyanger**	93.09	28	*e*P	P	22 57 49.1	+1.1
HYA				*e*SKSac	SKSac	23 07 19.9	-4.0
PWL	**Port Wells**	93.13	331	P	P	22 57 47.0	-1.2
	baz=106,SNR=44						
ASSE	**Asse, Remlinge**	93.20	38	*e*P	P	22 57 48.8	+0.2
	comp=Z,3µm,2.1s,baz=257,slow=4.7						
ASSE				*e*SKSac	SKSac	23 07 27.4	+2.7
	baz=256,slow=5.7						
ABTA	**Abfaltersbach**	93.20	43	*e*P	P	22 57 48.1	-0.9
	comp=Z,700nm,1.1s,SNR=323						
ABTA				*e*P	pP	23 00 02.0	+1.2
	comp=Z,212nm,1.1s						
STAL	**STALIGIAL**	93.24	44	P	P	22 57 48.1	-1.0
STAL				IAmb	IAmb	22 57 56.5	
	comp=Z,728nm,0.9s						
PRP	**Porcupine Dome**	93.30	336	P	P	22 57 48.6	-0.4
	baz=108,SNR=154						
PRP				S	S	23 08 02.5	-2.2
	baz=108						
PRP	**Porcupine Dome**	93.30	336	P	P	22 57 48.3	-0.7
PRP				IAmb	IAmb	22 57 59.6	
	comp=Z,1µm,1.3s						
DHY	**Denali Highway**	93.33	334	P	P	22 57 48.2	-1.1
	baz=107,SNR=68						
DHY				S	S	23 08 05.4	+0.3
	baz=107						
KNK	**Knik Glacier**	93.34	332	P	P	22 57 48.2	-0.9
	baz=106,SNR=88						
WAT6	**Susitna Watana**	93.34	333	P	P	22 57 48.5	-0.9
	baz=106,SNR=421						
WAT6				S	S	23 08 05.7	+0.4
	baz=106						
MUD	**Monsted U'grnd**	93.36	33	⇓*i*P	P	22 57 50.1	+0.8
MUD				IAmb	IAmb	22 57 56.3	
	comp=Z,448nm,0.7s						
SML	**Sawmill**	93.39	332	P	P	22 57 48.5	-0.9
	baz=106,SNR=294						
SML				S	S	23 08 07.1	+1.6
	baz=106						
SML	**Sawmill**	93.39	332	IAmb	IAmb	22 57 52.2	
	comp=Z,1µm,0.7s						
BSEG	**Bad Segeberg**	93.40	36	*e*P	P	22 57 49.4	-0.1
	comp=Z,885nm,1.1s,baz=257,slow=4.7						
MOX	**Moxa**	93.45	39	*e*P	P	22 57 49.8	-0.1
	comp=Z,2µm,1.7s,baz=257,slow=4.7						
MOX				*e*SKSac	SKSac	23 07 28.5	+2.2

	baz=256,slow=5.7						
HOMB	Homborsund	93.46	31	⇓iP	P	22 57 50.2	+0.5
HOMB				IVmB_BB		22 57 57.6	
	comp=Z,9µm,3.5s						
HOMB				eSKSac	SKSac	23 07 22.3	-3.6
HOMB				eSS	SS	23 14 38.4	-4.1
SEW	Seward	93.46	331	P	P	22 57 48.2	-1.5
	baz=105,SNR=59						
SEW	Seward	93.46	331	P	P	22 57 49.4	-0.3
SEW				IAmb	IAmb	22 57 53.5	
	comp=Z,669nm,0.8s						
ZOU	Zoufplan	93.47	43	P	P	22 57 49.7	-0.7
ZOU				IAmb	IAmb	22 57 58.0	
	comp=Z,2µm,1.5s						
GOET	G??ttrup	93.53	33	⇓iP	P	22 57 51.0	+1.0
GOET				IAmb	IAmb	22 57 56.9	
	comp=Z,434nm,0.7s						
PAOL	Paolisi	93.53	49	P	P	22 57 50.0	-0.6
HDA	Harding Lake	93.53	335	P	P	22 57 48.8	-1.2
	baz=107,SNR=205						
BMAR	Burnt Mountain	93.55	338	P	P	22 57 50.0	-0.1
FLTG	Flechtingen	93.58	38	eP	P	22 57 50.0	-0.4
	comp=Z,1µm,1.6s,baz=257,slow=4.7						
FLTG				epP	pP	22 59 59.5	-2.7
FLTG				eSKSac	SKSac	23 07 27.3	+0.4
	baz=256,slow=5.7						
MANZ	Manzenberg	93.61	40	eP	P	22 57 50.8	+0.1
	comp=Z,308nm,1.3s,baz=257,slow=4.7						
MANZ				eSKSac	SKSac	23 07 29.8	+2.5
	baz=256,slow=5.7						
IL31		93.62	335	P	P	22 57 49.3	-1.0
ILAR	Eielson Array	93.62	335	P	P	22 57 49.3	-1.0
	comp=Z,187nm,0.8s,baz=142,slow=3.3,SNR=272						
ILAR				pP	pP	23 00 01.3	-0.8
	comp=Z,72nm,0.9s,baz=134,slow=4.2,SNR=3.4						
ILAR				PP	PP	23 01 43.1	-3.2
	comp=Z,365nm,1.1s,baz=104,slow=6.3,SNR=6.5						
ILAR				PKKPbc	PKKPdf	23 14 51.5	-1.3
	comp=Z,16nm,0.5s,baz=300,slow=3.5,SNR=7.1						
ROTZ	Rotzenmuhle	93.63	40	eP	P	22 57 50.7	0.0
	comp=Z,286nm,1.2s,baz=257,slow=4.7						
ROTZ				epP	pP	23 00 00.7	-1.9
ROTZ				eSKSac	SKSac	23 07 28.0	+0.6
	baz=256,slow=5.7						
GHO	Glory Hole Cre	93.65	332	IAmb	IAmb	22 57 56.0	
	comp=Z,1µm,0.9s						
NEUB	Neuenburg	93.67	39	eP	P	22 57 50.9	0.0
	comp=Z,975nm,1.2s,baz=257,slow=4.7						
BRJN	Brijuni	93.68	45	i P	P	22 57 50.5	-0.5
O22K	Cooper Landing	93.69	331	P	P	22 57 49.6	-1.1
	baz=105,SNR=38						
O22K	Cooper Landing	93.69	331	IAmb	IAmb	22 58 13.1	
	comp=Z,786nm,0.8s						
PMR	Palmer	93.70	332	P	P	22 57 49.7	-1.1
	baz=105,SNR=58						
PMR				S	S	23 08 09.1	+1.1
	baz=105						
PTCC	Patocco-Chiusa	93.70	44	⇓P	P	22 57 50.8	-0.5
AKN	Aaknes	93.75	27	eP	P	22 57 51.9	+0.9
AKN				IVmBBB		22 57 53.9	
	comp=Z,10µm,1.9s						
AKN				eSKSac	SKSac	23 07 26.2	-1.2
AKN				eSS	SS	23 14 40.9	-5.6
PLN	Plauen	93.75	39	eP	P	22 57 51.3	+0.1
	comp=Z,1µm,1.6s,baz=257,slow=4.7						
KBA	Koelnbreinsper	93.83	43	i P	P	22 57 50.8	-1.1
	comp=Z,405nm,0.8s,SNR=178						
KBA				eP	pP	23 00 06.4	+2.6
	comp=Z,164nm,1.5s						
GUNZ	Gunzen	93.83	40	eP	P	22 57 52.3	+0.6
	baz=257,slow=4.7						
TRI	Trieste	93.85	44	P	P	22 57 51.4	-0.4
TRI				pmax	pmax		
	comp=Z,669nm,1.3s						
TRI	Trieste	93.85	44	P	P	22 57 51.4	-0.4
RC01	Rabbit Creek A	93.85	331	P	P	22 57 50.6	-0.8
	baz=105,SNR=89						
RC01	Rabbit Creek A	93.85	331	IAmb	IAmb	22 58 02.5	
	comp=Z,726nm,0.7s						
NKC	Novy Kostel	93.88	40	eP	P	22 57 52.1	+0.2
NKC				eSP	SP	23 09 27.5	-2.8
NKC				ePKKP	PKKPdf	23 14 52.7	+0.7
NKC	Novy Kostel	93.88	40	eP	P	22 57 52.1	+0.2
NKC				eSP	SP	23 09 27.5	-2.8
NKC				e		23 14 52.7	
TANN	Tannenbergstha	93.93	40	eP	P	22 57 52.3	+0.2
	comp=Z,1µm,1.5s,baz=257,slow=4.7						
TANN				epP	pP	22 59 59.9	-4.1
TANN				eSKSac	SKSac	23 07 31.4	+2.4
	baz=256,slow=5.7						
WET	Wettzell	93.93	41	eP	P	22 57 51.9	-0.2
	comp=Z,798nm,1.2s,baz=257,slow=4.7						
WET				eSKSac	SKSac	23 07 29.9	+0.8
	baz=256,slow=5.7						
POKR	Poker Plat Res	93.94	336	P	P	22 57 51.3	-0.5
	baz=107,SNR=606						
POKR				S	S	23 08 08.4	-1.7
	baz=107						
MYKA	Terra Mystica	93.94	43	eP	P	22 57 51.7	-0.6
	comp=Z,482nm,1.0s,SNR=181						
MYKA				eP	pP	23 00 06.9	+2.7
	comp=Z,153nm,1.2s						
CCB	Clear Creek Bu	93.96	335	P	P	22 57 50.8	-1.1
CCB				IAmb	IAmb	22 58 01.7	
	comp=Z,1µm,1.5s						
SKAR	Skarslia	93.96	29	⇓iP	P	22 57 52.6	+0.5
SKAR				eSKSac	SKSac	23 07 25.5	-3.2
SKDS	Skadanscina	93.99	45	eP	P	22 57 52.2	-0.3
SMRN	Sveta Marina	93.99	45	i P	P	22 57 51.8	-0.6
VOJS	Vojsko	93.99	44	eP	P	22 57 52.5	-0.1
BRSE	Bradley Lake S	94.00	330	P	P	22 57 51.1	-1.1
	baz=104,SNR=99						
CEL	Celeste	94.03	52	P	P	22 57 51.7	-1.2
COLA	College	94.04	335	P	P	22 57 51.4	-0.8
COLA				pmax	pmax		
	comp=Z,964nm,0.9s						
COLA	College	94.04	335	S	S	23 08 09.2	-1.6
	baz=106						
COLA	College	94.04	335	P	P	22 57 51.4	-0.8
COLA				IAmb	IAmb	22 58 01.6	
	comp=Z,964nm,0.9s						
TCOL	CIGO, UAF Yank	94.05	335	P	P	22 57 51.4	-0.8
	baz=106,SNR=114						
TCOL				S	S	23 08 09.7	-1.2
	baz=106						
TCOL	CIGO, UAF Yank	94.05	335	IAmb	IAmb	22 58 01.6	
	comp=Z,1µm,0.9s						
RND	Reindeer	94.06	334	IAmb	IAmb	22 58 02.8	
	comp=Z,1µm,1.2s						
BRLK	Bradley Lake	94.07	330	IAmb	IAmb	22 57 54.7	
	comp=Z,656nm,0.8s						
FIS	Fire Island	94.09	331	P	P	22 57 53.1	+0.6
MOL	Molde	94.10	27	⇓iP	P	22 57 52.8	+0.3
MOL				IVmB_BB		22 57 55.5	
	comp=Z,7µm,2.0s						
MOL				epP	pP	23 00 08.8	+4.4
MOL				eSKSac	SKSac	23 07 25.4	-3.8
MOL				eSS	SS	23 14 53.0	+1.7
OVD	Ostervraa, Den	94.11	33	⇓iP	P	22 57 53.0	+0.3
OVD				IAmb	IAmb	22 58 00.5	
	comp=Z,208nm,0.9s						
MCK	McKinley	94.18	334	P	P	22 57 52.3	-0.7
	baz=105,SNR=196						
MCK				S	S	23 08 12.4	+0.2
	baz=105						
MCK	McKinley	94.18	334	IAmb	IAmb	22 57 58.4	
	comp=Z,479nm,0.9s						
M22K	Willow	94.20	332	P	P	22 57 51.9	-1.1
	baz=104,SNR=34						
RIY	Rijeka	94.27	45	⇓iP	P	22 57 53.5	-0.2
RIY	Rijeka	94.27	45	P	P	22 57 53.2	-0.5
CEY	Cerknica	94.31	44	⇓iP	P	22 57 53.9	-0.1
H24K	Noodor Dome	94.32	336	P	P	22 57 53.0	-0.6
	baz=106						
H24K				S	S	23 08 12.0	-1.4
	baz=106						
H24K	Noodor Dome	94.32	336	IAmb	IAmb	22 58 00.4	
	comp=Z,624nm,1.1s						
KONO	Kongsberg	94.34	30	ceP	P	22 57 54.5	+0.8
KONO				pmax	pmax		
	comp=Z,488nm,2.5s						
KONO	Kongsberg	94.34	30	eP	P	22 57 53.9	+0.2
KONO				IVmB_BB		22 58 01.1	
	comp=Z,5µm,1.9s						
KONO				epP	pP	23 00 09.7	+4.1
KONO				eSKSac	SKSac	23 07 28.1	-2.5
KONO				eScS	S	23 08 12.2	-1.4
KONO				eSS	SS	23 14 55.1	+0.3
KONO	Kongsberg	94.34	30	P	P	22 57 53.8	+0.1
RABC	Rab	94.37	45	i P	P	22 57 53.5	-0.7
KHC	Kasperske Hory	94.38	41	eP	P	22 57 53.6	-0.6
KHC				ex	x	22 58 07.0	
KHC				eSP	SP	23 09 33.2	-2.7
KHC				ePKKP	PKKPbc	23 14 51.8	-0.6
KHC	Kasperske Hory	94.38	41	eP	P	22 57 53.6	-0.6
KHC				eSP	SP	23 09 33.2	-2.7
KHC				e		23 14 51.8	
KHC	Kasperske Hory	94.38	41	P	P	22 57 53.6	-0.6
KHC				IAmb	IAmb	22 58 04.3	
	comp=Z,987nm,1.5s						
NVLJ	Novalja	94.40	46	i P	P	22 57 54.1	-0.2
GEC2	GERESS Array S	94.41	41	eP	P	22 57 53.9	-0.5
	comp=Z,815nm,1.3s,baz=257,slow=4.7						
GEC2				eSKSac	SKSac	23 07 31.4	-0.3
	baz=256,slow=5.7						
GEC2	GERESS Array S	94.41	41	P	P	22 57 53.7	-0.7
GEC2				IAmb	IAmb	22 58 01.4	
	comp=Z,758nm,1.3s						
GERES	GERESS Array B	94.41	41	P	P	22 57 54.0	-0.5
	comp=Z,103nm,0.6s,baz=246,slow=2.8,SNR=408						
GERES				pP	pP	23 00 04.7	-1.6
	comp=Z,24nm,0.7s,baz=256,slow=4.0,SNR=3.7						
GERES				PKKPbc	PKKPdf	23 14 50.7	-0.4
	comp=Z,24nm,0.5s,baz=101,slow=2.1,SNR=26						
GERES				PKPPKP		23 23 00.1	
	comp=Z,49nm,1.0s,baz=66,slow=2.7,SNR=8.5						
GERES	GERESS Array B	94.41	41	P	P	22 57 53.8	-0.7
HOM	Homer	94.42	330	P	P	22 57 53.3	-0.8
	baz=103						
CUT	Chulitna	94.43	333	P	P	22 57 53.1	-1.0
	baz=104,SNR=135						
DUGI	Dugi Otok	94.43	46	i P	P	22 57 54.2	-0.3
LJU	Ljubljana	94.43	44	⇓iP	P	22 57 54.4	-0.1
LJU	Ljubljana	94.43	44	eP	P	22 57 53.5	-1.0
CLL	Collm	94.44	39	⇓iP	P	22 57 54.5	+0.1
CLL				e*PP	pP	23 00 09.0	+2.7
CLL				eS	S	23 08 15.0	+0.1
CLL				pmax	pmax		
	comp=Z,725nm,1.2s						
CLL	Collm	94.44	39	eP	P	22 57 54.4	0.0
	comp=Z,725nm,1.2s,baz=257,slow=4.7						
CLL				eSKSac	SKSac	23 07 32.5	+1.0
	baz=256,slow=5.7						
CLL	Collm	94.44	39	P	P	22 57 54.3	-0.1
CAPN	Captain Cook N	94.44	331	P	P	22 57 54.5	+0.4
	baz=104						
CAPN				S	S	23 08 13.5	-0.9
	baz=104						
NEA2	Nenana	94.47	335	P	P	22 57 53.4	-0.8
	baz=105,SNR=324						
NEA2				S	S	23 08 12.8	-1.8
	baz=105						
SGRT	San Giovanni R	94.53	49	P	P	22 57 54.2	-0.9
OBKA	Obir	94.53	44	eP	P	22 57 54.4	-0.6
	comp=Z,639nm,1.6s,SNR=144						
OBKA				eP	pP	23 00 11.1	+4.1
	comp=Z,81nm,0.9s						
MOA	Molln	94.59	42	eP	P	22 57 54.7	-0.5
	comp=Z,575nm,0.8s,SNR=165						
MOA				eP	pP	23 00 09.8	+2.7
	comp=Z,110nm,1.1s						
DOMB	Dombas	94.65	28	eP	P	22 57 55.7	+0.6
DOMB				IVmB_BB		22 57 58.0	
	comp=Z,7µm,1.5s						
DOMB				epP	pP	23 00 07.3	+0.3
DOMB				eSKSac	SKSac	23 07 29.3	-2.9
DOMB				eScS	S	23 08 15.5	-0.8
DOMB				eSS	SS	23 14 52.0	-7.2
TRF	Thorofare Moun	94.70	334	P	P	22 57 54.4	-1.1
	baz=104,SNR=193						
TRF	Thorofare Moun	94.70	334	IAmb	IAmb	22 57 58.4	
	comp=Z,488nm,0.7s						
OHAK	Old Harbor	94.72	327	P	P	22 57 54.7	-0.7
	baz=102,SNR=39						
OHAK	Old Harbor	94.72	327	P	P	22 57 55.0	-0.5
I23K	Minto, Yukon-K	94.73	335	P	P	22 57 54.5	-0.8
	baz=105,SNR=82						
I23K				S	S	23 08 14.8	-1.9
	baz=105						
I23K	Minto, Yukon-K	94.73	335	P	P	22 57 54.8	-0.6
PDKS	Podkum	94.76	44	i P	P	22 57 55.8	-0.2
ZIRJ	Zirje	94.79	47	i P	P	22 57 55.7	-0.4
CKRC	Cesky Krumlov	94.80	41	eP	P	22 57 55.7	-0.4
CKRC				eSP	SP	23 09 38.4	-2.0
CKRC				ePKKP	PKKPdf	23 14 50.0	-0.3
TIP	Timpagrande	94.85	51	⇑P	P	22 57 55.7	-0.9
TIP	Timpagrande	94.85	51	P	P	22 57 55.4	-1.3
TIP				IAmb	IAmb	22 57 58.4	
	comp=Z,1µm,1.7s						
MORI	Morici	94.87	46	i P	P	22 57 56.1	-0.4
SOKA	Soboth	94.89	44	eP	P	22 57 55.9	-0.7
	comp=Z,175nm,0.8s,SNR=84						
SOKA				eP	pP	23 00 12.1	+3.5
	comp=Z,81nm,1.4s						
NIUE	Niue	94.92	250	P	P	22 57 57.9	+0.7
NIUE				IAmb	IAmb	22 58 07.8	
	comp=Z,1µm,1.5s						
BRG	Berggiesshubel	94.94	39	eP	P	22 57 56.7	0.0
	comp=Z,675nm,1.0s,baz=257,slow=4.7						
BRG	Berggiesshubel	94.94	39	⇓iP	P	22 57 56.9	+0.2
BRG				Amp		22 58 07.2	
	comp=Z,551nm,1.0s						
BRG				pP	pP	23 00 11.5	+2.9
BRG				Amp		23 00 18.2	
	comp=Z,306nm,1.4s						
BRG	Berggiesshubel	94.94	39	sP	sP	23 01 08.0	-1.0
BRG	Berggiesshubel	94.94	39	S	S	23 08 21.0	+1.8
BRG	Berggiesshubel	94.94	39	SP	SP	23 09 40.0	-1.8
BRG	Berggiesshubel	94.94	39	SS	SS	23 14 55.0	-8.7
BRG				Amp		23 30 21.0	
	comp=N,26nm,24.2s						
BRG				Amp		23 30 24.0	
	comp=E,17nm,25.6s						
BRG				Amp		23 30 33.0	
	comp=Z,48nm,26.8s						
PERS	Pernice	94.94	44	eP	P	22 57 56.2	-0.6
OSL	Oslo	94.96	30	⇓iP	P	22 57 56.8	+0.4
OSL				IVmB_BB		22 58 04.0	
	comp=Z,9µm,1.0s						
OSL				epP	pP	23 00 10.9	+2.5
OSL				eSKSac	SKSac	23 07 31.5	-2.3
OSL				eSP	SP	23 09 41.3	-0.2
COP	Copenhagen	94.97	34	⇓iP	P	22 57 57.1	+0.5
COP				IAmb	IAmb	22 58 03.7	
	comp=Z,3µm,0.8s						
PLIT	Plitvice	94.98	45	i P	P	22 57 56.9	-0.2
KTH	Kantishna Hill	95.00	334	IAmb	IAmb	22 58 00.6	
	comp=Z,798nm,0.9s						
O20K	Slope Mountain	95.00	330	P	P	22 57 55.7	-1.1
	baz=102,SNR=24						
O20K				S	S	23 08 17.7	-1.8
	baz=102						
OZLJ	Ozalj	95.00	45	i P	P	22 57 56.9	-0.1
UDBI	Udbina	95.02	46	i P	P	22 57 57.5	+0.3
CRES	Cresnjev	95.03	44	⇓iP	P	22 57 57.3	+0.1
MATP	Matopo	95.03	112	PKKPbc	PKKPbc	23 14 49.7	-0.1
	comp=Z,20nm,0.7s,baz=151,slow=23,SNR=3.4						
MATP	Matopo	95.03	112	i P	P	22 57 59.3	+1.3
MATP	Matopo	95.03	112	i P	P	22 57 59.3	+1.3
MATE	Matera	95.06	50	⇑P	P	22 57 56.6	-0.8
MATE	Matera	95.06	50	⇓P	PKKPbc	23 14 49.0	-1.1
SII	Sitkinak Islan	95.07	326	P	P	22 57 56.3	-0.8
	baz=101,SNR=15						
SII	Sitkinak Islan	95.07	326	IAmb	IAmb	22 58 07.1	
	comp=Z,1µm,1.2s						
PRA	Prague	95.10	40	eP	P	22 57 57.9	+0.5
PRA				eSP	SP	23 09 42.7	-0.9
PRA				ePKKP	PKKPdf	23 14 49.3	-0.4
PRA	Prague	95.10	40	eP	P	22 57 57.9	+0.5
PRA				eSP	SP	23 09 42.7	-0.9
RUE	Ruedersdorf	95.14	38	eP	P	22 57 57.9	+0.4
RUE				epP	pP	23 00 12.2	+2.8
RUE	Ruedersdorf	95.14	38	eP	P	22 57 57.3	-0.2
	comp=Z,1µm,1.5s,baz=257,slow=4.7						
RUE				epP	pP	23 00 05.2	-4.2
RUE				eSKSac	SKSac	23 07 36.4	+1.4
	baz=256,slow=5.7						
RUE	Ruedersdorf	95.14	38	eP	P'P'df	23 22 25.1	-35
BPAW	Bear Paw Mtn.	95.15	334	P	P	22 57 56.3	-1.1
	baz=104,SNR=406						
PRU	Pruhonice	95.16	40	eP	P	22 57 57.7	+0.1
PRU				eSP	SP	23 09 41.9	-2.3
PRU				ePKKP	PKKPdf	23 14 49.1	-0.5
PRU	Pruhonice	95.16	40	eP	P	22 57 57.7	+0.1
PRU				eSP	SP	23 09 41.9	-2.3
P19K	Oil Pt	95.20	330	P	P	22 57 56.3	-1.4
	baz=102,SNR=20						
P19K	Oil Pt	95.20	330	IAmb	IAmb	22 58 09.9	
	comp=Z,511nm,0.9s						
LESE	Lesego, Limpop	95.22	116	⇓iP	P	22 57 59.1	+0.4
LESE				⇓pP	pP	23 00 08.3	-2.3
LESE	Lesego, Limpop	95.22	116	i P	pP	23 00 08.2	-2.3
NBO00	NORSAR Array S	95.22	29	P	P	22 57 57.0	-0.7
NBO00				IAmb	IAmb	22 58 04.8	
	comp=Z,1µm,1.2s						
RGN	Rugen	95.25	36	eP	P	22 57 59.8	+1.8
RGN	Rugen	95.25	36	eP	P	22 57 58.3	+0.4
	comp=Z,1µm,1.3s,baz=257,slow=4.7						
RGN				eSKSac	SKSac	23 07 38.4	+2.9
	baz=256,slow=5.7						
RGN	Rugen	95.25	36	P	P	22 57 58.2	+0.3
RGN				IAmb	IAmb	22 58 06.0	
	comp=Z,1µm,1.1s						
RGN	Rugen	95.25	36	eP	PKKPbc	23 14 49.8	-0.4
MAW	Mawson	95.26	164	P	P	22 57 59.0	+1.2
	comp=Z,1µm,0.8s,baz=222,slow=5.7,SNR=690						
MAW				PKKP	PKKPdf	23 14 49.6	+1.1
	comp=Z,39nm,0.6s,baz=103,slow=1.1,SNR=8.2						
MAW	Mawson	95.26	164	P	P	22 57 59.0	+1.2
MAW	Mawson	95.26	164	P	P	22 57 58.2	+0.4
Q19K	Cape Douglas,	95.26	329	P	P	22 57 56.9	-1.1
	baz=102,SNR=35						
MLY	Manley	95.27	335	P	P	22 57 56.6	-1.2
	baz=104,SNR=174						
MLY	Manley	95.27	335	P	P	22 57 56.3	-1.6
MLY				IAmb	IAmb	22 58 06.6	
	comp=Z,794nm,1.5s						
PVCC	Panska Ves	95.27	40	eP	P	22 57 57.8	-0.3
PVCC				eSP	SP	23 09 40.8	-4.6
PVCC	Panska Ves	95.27	40	eP	P	22 57 57.8	-0.3
HVAR	Hvar	95.28	47	i P	P	22 57 58.1	-0.3
ARSA	Arzberg	95.32	43	eP	P	22 57 58.2	-0.4
	comp=Z,293nm,1.3s,SNR=155						
PTJ	Puntijarka	95.40	44	P	P	22 57 58.5	-0.5
ZAG	Zagreb	95.40	45	⇓iP	P	22 57 59.1	+0.3
ZAG	Zagreb	95.40	45	P	P	22 57 59.0	+0.2
PPLA	Purkeypile	95.41	333	P	P	22 57 57.6	-1.0
	baz=102,SNR=134						
PPLA				S	S	23 08 19.9	-3.1
	baz=102						
PPLA	Purkeypile	95.41	333	IAmb	IAmb	22 58 16.4	
	comp=Z,591nm,0.8s						
NB2	NORSAR Subarra	95.43	29	P	P	22 57 59.0	+0.3
	comp=Z,884nm,1.2s,baz=260,slow=4.3						
NOA	NORSAR Array B	95.43	29	P	P	22 57 58.7	0.0
	comp=Z,70nm,0.8s,baz=256,slow=4.3,SNR=79						
NOA				pP	pP	23 00 09.5	-1.2
	comp=Z,14nm,0.8s,baz=256,slow=4.6,SNR=3.3						
NOA				PKKPbc	PKKPdf	23 14 47.5	-2.1
	comp=Z,102nm,0.8s,baz=256,slow=3.1,SNR=27						
NOA				PKPPKP		23 22 59.0	
	comp=Z,30nm,0.9s,baz=263,slow=3.1,SNR=4.8						
TBLU	Trondheim	95.47	27	eP	P	22 57 59.9	+1.2
TBLU				IVmB_BB		22 58 02.4	
	comp=Z,8µm,1.7s						
TBLU				epP	pP	23 00 15.7	+5.0
TBLU				eSKSac	SKSac	23 07 35.2	-1.2
CAST	Castle Rocks	95.47	333	P	P	22 57 57.5	-1.3
	baz=103,SNR=478						
CAST	Castle Rocks	95.47	333	IAmb	IAmb	22 58 01.1	
	comp=Z,534nm,0.8s						
LOBO	Lobor	95.51	44	i P	P	22 57 59.6	+0.3
NC602	NORSAR Array S	95.53	29	i P	P	22 57 59.0	0.0
NC602				IVmB_BB		22 58 05.2	
	comp=Z,7µm,3.0s						
NC602				epP	pP	23 00 15.1	+4.0
NC602				eSKSac	SKSac	23 07 35.7	-1.1
NC602				eSP	SP	23 09 47.8	+0.2
LSTV	Lastovo	95.54	48	i P	P	22 57 59.3	-0.2
NC303	NORSAR Array S	95.54	29	P	P	22 57 59.1	0.0
NOR	Nord	95.55	7	⇓iP	P	22 57 58.2	-0.5
NOR				IAmb	IAmb	22 58 07.6	
	comp=Z,218nm,0.8s						
LNIZ	Loecknitz	95.58	37	eP	P	22 57 59.5	+0.1
	comp=Z,1µm,1.4s,baz=257,slow=4.7						
LNIZ				eSKSac	SKSac	23 07 40.2	+2.9
	baz=256,slow=5.7						
COLD	Coldfoot	95.58	337	P	P	22 57 59.3	+0.1
	baz=104,SNR=262						
COLD				S	S	23 08 19.3	-4.8
	baz=104						
TREC	Trest	95.64	41	eP	P	22 58 00.5	+0.6
TREC				eSP	SP	23 09 43.6	-5.9
TREC				ePKKP	PKKPdf	23 14 47.9	-0.9
TREC	Trest	95.64	41	eP	P	22 58 00.5	+0.6
CONA	Conrad Observa	95.66	42	eP	P	22 57 59.8	-0.3
	comp=Z,264nm,0.8s,SNR=266						
CONA				P	pP	23 00 15.4	+3.3
	comp=Z,169nm,1.5s						
CHUM	Lake Minchumin	95.67	334	P	P	22 57 58.3	-1.4
	baz=102,SNR=19						
KOGS	Kog	95.68	44	eP	P	22 57 59.9	-0.1
TOLK	Toolik Lake Re	95.70	339	P	P	22 57 59.2	-0.5
	baz=104						
TOLK				S	S	23 08 22.3	-2.8
	baz=104						
TOLK	Toolik Lake Re	95.70	339	P	P	22 57 59.3	-0.5
MAKA	Makarska	95.71	47	i P	P	22 57 59.8	-0.5
CHIR	Chirikof Islan	95.72	326	P	P	22 57 59.6	-0.5
	baz=100						
CHIR				S	S	23 08 23.4	-2.2
	baz=100						
CHIR	Chirikof Islan	95.72	326	P	P	22 57 59.5	-0.5
PRIJ	Prijedor	95.77	45	eP	P	22 57 59.8	-0.7
KALN	Kalnik	95.77	44	i P	P	22 58 00.4	-0.2
I21K	Tanana	95.81	335	P	P	22 57 58.9	-1.3
	baz=102,SNR=54						
RICI	Ricice	95.83	47	i P	P	22 58 00.2	-0.6
O19K	Port Alsworth	95.85	330	P	P	22 57 58.6	-1.9
	baz=101						
O19K	Port Alsworth	95.85	330	IAmb	IAmb	22 58 09.2	
	comp=Z,779nm,1.4s						
LSZ	Lusaka	95.89	107	P	P	22 58 02.3	+0.4
LSZ				pmax	pmax		
	comp=Z,3µm,2.1s						
LSZ	Lusaka	95.89	107	P	P	22 58 02.3	+0.4
LSZ	Lusaka	95.89	107	⇓iP	P	22 58 02.2	+0.3
LSZ				pP	pP	23 00 12.6	-1.3
LSZ	Lusaka	95.89	107	i P	pP	23 00 09.7	-4.2
LSZ	Lusaka	95.89	107	i P	SP	23 09 42.5	-11
LSZ				eP	PKKPbc	23 14 58.2	+11
MOSL	Moslavina	95.89	45	i P	P	22 58 00.7	-0.4
MGRS	Mrkonjic Grad	95.94	46	⇓iP	P	22 58 01.4	+0.1
MSNA	Messina	95.97	114	i P	P	22 58 03.7	+1.7
MSNA	Messina	95.97	114	i P	P	22 58 03.7	+1.7
BLY	Banja Luka	96.06	46	⇓iP	P	22 58 01.9	+0.1
L20K	Farewell, AK	96.08	332	P	P	22 57 60.0	-1.6
	baz=101,SNR=154						
L20K				S	S	23 08 25.4	-3.1
	baz=101						
SOP	Sopron	96.08	43	eP	P	22 58 01.6	-0.2
SOP	Sopron	96.08	43	eP	P	22 58 01.9	0.0
STON	Ston	96.14	48	⇓iP	P	22 58 02.0	-0.2
STON	Ston	96.14	48	i P	P	22 58 01.8	-0.4
P18K	Big Mountain,	96.15	329	Pdiff	P	22 58 00.3	-1.7
	baz=100						
UPC	Upice	96.17	40	eP	P	22 58 02.5	+0.3
UPC				eSP	SP	23 09 44.6	-11
UPC				ePKKP	PKKPbc	23 14 46.8	-0.8
UPC	Upice	96.17	40	eP	P	22 58 02.5	+0.3
POGA	Pongola	96.19	119	⇓iP	P	22 58 03.4	+0.5
POGA				pP	pP	23 00 16.5	+1.6
POGA	Pongola	96.19	119	i P	pP	23 00 10.5	-4.4
POGA	Pongola	96.19	119	i P	SP	23 09 48.0	-8.2
POGA				eP	PKKPbc	23 15 01.5	+15
KRUC	Moravsky	96.19	41	⇓iPDIFF	P	22 58 02.3	0.0
KRUC				epP	pP	23 00 14.9	+0.5
KRUC				eSKS	SKSac	23 07 41.2	+0.5
KRUC				e		23 09 54.2	
KRUC				ePKKP	PKKPbc	23 14 46.5	-1.0
KRUC				ePKPPKP		23 22 22.2	
KRUC				e		23 40 03.5	
CHVC	Chvalec	96.21	40	eP	P	22 58 03.1	+0.7
CHVC				eSP	SP	23 09 54.5	-1.1

CHVC				ePKKP	PKKPbc	23 14 46.2	-1.4
H21K	Melozitna Rive	96.25	336	Pdiff	P	22 58 01.0	-1.3
	baz=102						
H21K				S	S	23 08 28.1	-1.7
	baz=102						
BSD	Bornholm Skovb	96.26	35	eP	P	22 58 03.3	+0.8
BSD	Bornholm Skovb	96.26	35	⇓iP	P	22 58 02.5	0.0
BSD				IAmb	IAmb	22 58 08.9	
	comp=Z,104nm,0.8s						
BSD	Bornholm Skovb	96.26	35	eP	PKKPbc	23 14 46.5	-1.1
BSD	Bornholm Skovb	96.26	35	eP	P'P'df	23 22 21.3	-36
SCTE	Santa Cesarea	96.29	51	P	P	22 58 02.9	-0.1
OSTC	Ostas	96.31	40	eP	P	22 58 03.2	+0.3
OSTC				eSP	SP	23 09 56.2	-0.4
OSTC				ePKKP	PKKPbc	23 14 45.5	-1.8
DPC	Dobruska-Polom	96.35	40	eP	P	22 58 03.3	+0.2
DPC				eSP	SP	23 09 44.6	-12
DPC				ePKKP	PKKPbc	23 14 46.7	-0.5
DPC	Dobruska-Polom	96.35	40	eP	P	22 58 03.3	+0.2
VRAC	Vranov	96.36	41	⇓P	P	22 58 04.7	+1.6
VRAC	Vranov	96.36	41	P	P	22 58 03.8	+0.7
	comp=Z,161nm,1.1s,baz=258,slow=5.9,SNR=3.0						
VRAC	Vranov	96.36	41	⇓P	P	22 58 04.7	+1.6
VRAC	Vranov	96.36	41	⇓iPDIFF	P	22 58 03.2	+0.1
VRAC				epP	pP	23 00 15.9	+0.7
VRAC				eSKS	SKSac	23 07 41.2	-0.4
VRAC				e		23 09 57.3	
VRAC				ePKKP	PKKPbc	23 14 46.3	-0.8
VRAC				ePKPPKP	P'P'df	23 22 23.2	-35
VRAC				e		23 40 04.5	
KSP	Ksiaz	96.40	40	eP	P	22 58 04.2	+0.9
KSP				epP	pP	23 00 19.8	+4.4
KSP				eL	L	23 19 35.8	
	comp=Z,83µm,41.8s						
DBRK	Dubrovnik	96.44	48	iP	P	22 58 03.2	-0.3
NSS	Namsos	96.47	26	⇓iP	P	22 58 03.6	+0.5
NSS				IVmB_BB		22 58 09.6	
	comp=Z,13µm,2.6s						
NSS				epP	pP	23 00 18.9	+3.6
NSS				eSKSac	SKSac	23 07 39.1	-2.3
L19K	White Mountain	96.47	332	Pdiff	P	22 58 01.9	-1.4
	baz=100						
L19K				S	S	23 08 29.0	-2.8
	baz=100						
J20K	Nowinta River	96.52	334	Pdiff	P	22 58 02.2	-1.3
	baz=101						
ZST	Bratislava	96.53	42	⇑eP	P	22 58 03.9	+0.1
ZST	Bratislava	96.53	42	ePDIFF	P	22 58 03.9	+0.1
ZST				e		23 20 00.2	
EGYH	Egyhazaskeszo	96.56	43	eP	P	22 58 05.4	+1.4
TREB	Trebinje	96.59	48	eP	P	22 58 04.3	0.0
KRLC	Kraliky	96.60	40	eP	P	22 58 05.1	+0.9
KRLC				eSP	SP	23 09 49.0	-11
KRLC				ePKKP	PKKPbc	23 14 41.1	-5.5
KRLC	Kraliky	96.60	40	eP	P	22 58 05.1	+0.9
HCY	Herceg Novi	96.66	48	⇓iP	P	22 58 04.6	0.0
MPLH	Magyarpolny	96.67	43	eP	P	22 58 04.7	+0.2
MODS	Modra-Piesok	96.67	42	⇑eP	P	22 58 03.4	-1.1
MODS				e	pP	23 00 16.3	-0.3
MODS				e	SKSac	23 07 41.6	-1.7
MODS	Modra-Piesok	96.67	42	ePDIFF	P	22 58 03.4	-1.1
MODS	Modra-Piesok	96.67	42	e	pP	23 00 16.3	-0.3
MODS	Modra-Piesok	96.67	42	e	PKKPbc	23 14 44.7	-1.6
DOB	Doboj	96.70	46	eP	P	22 58 06.4	+1.7
BRY	Bratogost	96.76	48	⇓iP	P	22 58 04.9	-0.3
SMOL	Smolenice	96.79	42	eP	P	22 58 05.1	+0.1
SMOL				e	pP	23 00 20.0	+2.8
SMOL	Smolenice	96.79	42	ePDIFF	P	22 58 05.1	+0.1
SMOL	Smolenice	96.79	42	e	pP	23 00 20.0	+2.8
TIH	Tihany	96.87	44	eP	P	22 58 06.7	+1.3
KOVH	Kovagotottos	96.89	45	eP	P	22 58 05.5	0.0
MOPA	Mopani	96.91	115	iP	P	22 58 07.0	+0.9
MOPA	Mopani	96.91	115	iP	P	22 58 07.0	+0.9
MORC	Moravsky Berou	97.04	41	⇑P	P	22 58 07.5	+1.3
MORC	Moravsky Berou	97.04	41	⇑P	P	22 58 07.5	+1.3
MORC	Moravsky Berou	97.04	41	⇓iPDIFF	P	22 58 06.8	+0.6
MORC				epP	pP	23 00 18.8	+0.4
MORC				eSKS	SKSac	23 07 45.6	+0.5
MORC				e		23 10 00.0	
MORC				ePKKP	PKKPbc	23 14 44.6	-0.7
MORC				ePKPPKP	P'P'df	23 22 20.2	-36
MORC				e		23 40 07.4	
MORC	Moravsky Berou	97.04	41	P	P	22 58 06.3	+0.2
MORC				IAmb	IAmb	22 58 15.0	
	comp=Z,979nm,1.4s						
UPM	Unac-Piva	97.06	47	⇓iP	Pdif	22 58 06.4	-0.2
VLO	Vlora	97.13	50	P	P	22 58 07.5	+0.8
DRME	Dracevica, Mon	97.13	49	⇓iP	P	22 58 07.4	+0.7
TTA	Tatalina	97.13	333	Pdiff	Pdif	22 58 05.0	-1.3
	baz=99						
CSKK	Cskako	97.18	43	eP	P	22 58 07.4	+0.6
PDG	Podgorica	97.22	48	⇑P	P	22 58 07.9	+0.9
PDG	Podgorica	97.22	48	⇓iP	P	22 58 07.4	+0.4
PDG	Podgorica	97.22	48	P	P	22 58 07.2	+0.2
PDG				IAmb	IAmb	22 58 17.1	
	comp=Z,1µm,1.9s						
HAPS	Han Pijesak,Bl	97.22	47	⇓iP	P	22 58 07.7	+0.5
STOK	Stokkvaagen	97.22	24	eP	P	22 58 08.0	+1.5
NBB40	Tonnes	97.25	24	eP	P	22 58 07.2	+0.6
KEK	Kerkira	97.26	51	P	P	22 58 07.7	+0.4
SRO	Srobarova	97.28	43	eP	P	22 58 08.1	+0.9
SRO	Srobarova	97.28	43	ePDIFF	P	22 58 08.1	+0.9
SRO	Srobarova	97.28	43	e	PKKPbc	23 14 43.0	-1.5
KONS	Konsvik	97.29	24	eP	P	22 58 07.4	+0.6
KONS				eSKSac	SKSac	23 07 42.6	-2.9
SRO2	Moca	97.32	43	eP	Pdif	22 58 07.2	-0.2
SRO2	Moca	97.32	43	ePDIFF	Pdif	22 58 07.2	-0.2
SRO2				e	PKKPbc	23 14 42.7	-1.7
GKP	Gorka Klasztor	97.33	37	eP	P	22 58 07.9	+0.7
GKP				epP	pP	23 00 23.9	+4.4
GKP				eL	L	23 15 24.2	
	comp=Z,86µm,28.2s						
GKP	Gorka Klasztor	97.33	37	eP	P	22 58 08.2	+0.9
GKP				epP	pP	23 00 22.6	+3.1
GKP	Gorka Klasztor	97.33	37	eP	PKKPbc	23 14 43.8	-0.8
GKP	Gorka Klasztor	97.33	37	eP	P'P'df	23 22 19.1	-37
CHGN	Chignik	97.34	326	Pdiff	Pdif	22 58 06.3	-0.9
	baz=98						
CHGN	Chignik	97.34	326	IAmb	IAmb	22 58 13.0	
	comp=Z,650nm,1.0s						
NBB13	Alf Garage	97.40	24	⇓iP	P	22 58 08.1	+0.8
SRN	Sarande	97.43	51	P	Pdif	22 58 07.6	-0.5
OKC	Ostrava-Krasne	97.44	41	eP	P	22 58 08.2	+0.3
OKC				eSP	SP	23 10 04.9	-3.8
OKC				ePKKP	PKKPbc	23 14 42.7	-1.5
OKC	Ostrava-Krasne	97.44	41	eP	P	22 58 08.2	+0.3
OKC				eSP	SP	23 10 04.9	-3.8
RUDO	Rudo	97.46	47	eP	Pdif	22 58 07.7	-0.4
KEF3	Kipouria, Keph	97.48	53	P	Pdif	22 58 08.2	-0.1
RAC	Raciborz	97.50	41	eP	P	22 58 08.3	+0.2
RAC				ePP	pP	23 00 16.4	-4.0
RAC	Raciborz	97.50	41	eP	P	22 58 08.3	+0.2
RAC				e*PP	pP	23 00 16.4	-4.0
BBLS	Lazići	97.51	47	⇓iP	P	22 58 09.0	+0.5
TIR	Tirane	97.52	49	⇓P	PKKPbc	23 14 43.8	+0.2
TIR	Tirane	97.52	49	P	P	22 58 09.0	+0.5
BLJ	Bijeljina	97.53	46	eP	P	22 58 08.8	+0.4
KEF4	Livadi, Kephal	97.55	53	P	Pdif	22 58 07.8	-0.8
NBB30	Finnes	97.61	23	⇓iP	P	22 58 08.8	+0.5
IGT	Igoumenitsa	97.64	51	P	P	22 58 09.6	+0.5
PSDA	Pessada-Kefalo	97.66	53	P	Pdif	22 58 08.5	-0.6
VLS	Valsamata	97.67	53	P	Pdif	22 58 08.4	-0.8
NBB17	Glomfjord B¥r	97.67	23	⇓iP	Pdif	22 58 08.1	-0.4
FSK	Fiskardo	97.68	52	P	Pdif	22 58 08.0	-1.2
TEKS	Tekeris	97.69	46	⇓iP	Pdif	22 58 08.6	-0.5
BUD	Budapest	97.71	43	eP	P	22 58 09.8	+0.7
VYHS	Vyhne	97.71	42	⇑eP	P	22 58 09.4	+0.2
VYHS				e	pP	23 00 21.7	+0.3
VYHS				e	SKSac	23 07 49.2	+0.7
VYHS				e	SP	23 10 08.0	-3.7
VYHS	Vyhne	97.71	42	ePDIFF	P	22 58 09.4	+0.2
VYHS	Vyhne	97.71	42	e	pP	23 00 21.7	+0.3
VYHS	Vyhne	97.71	42	e	PKKPbc	23 14 42.6	-0.8
LOF	Lofoten	97.72	22	eP	P	22 58 09.4	+0.7
LOF				IVmB_BB		22 58 16.0	
	comp=Z,6µm,3.9s						
LOF				epP	pP	23 00 23.9	+2.9
LOF				eSKSac	SKSac	23 07 47.9	+0.2
LOF				eSP	SP	23 10 13.7	+2.9
NBB05	Inndyr	97.74	23	eP	P	22 58 09.3	+0.6
MOR8	Moi Rana	97.77	24	⇓iP	P	22 58 10.2	+1.2
MOR8				IVmB_BB		22 58 15.9	
	comp=Z,6µm,2.3s						
MOR8				epP	pP	23 00 25.4	+4.1
MOR8				eSKSac	SKSac	23 07 46.4	-1.7
MOR8				eSP	SP	23 10 09.6	-1.8
MOR8				eSS	SS	23 15 42.8	+0.5
GCSA	Galena City Sc	97.79	334	Pdiff	Pdif	22 58 08.9	-0.1
	baz=98						
AFI	Afiamalu	97.80	254	P	P	22 58 12.4	+2.0
	comp=Z,164nm,0.9s,baz=310,slow=8.4,SNR=9.6						
AFI				PKKPbc	PKKPdf	23 14 44.4	+0.7
	comp=Z,64nm,0.8s,baz=346,slow=5.2,SNR=2.2						
LKD2	Lefkada island	97.80	52	P	P	22 58 10.4	+0.6
LTHK	Lithakia	97.80	53	P	Pdif	22 58 09.1	-0.6
CHNA	Chernabura Isl	97.81	324	Pdiff	Pdif	22 58 08.4	-0.9
	baz=97						
LSK	Leskovik	97.92	51	P	P	22 58 10.6	+0.2
NBB28	Valnes	97.92	23	eP	P	22 58 10.5	+0.9
DIVS	Divibare	97.96	47	⇓iP	P	22 58 10.9	+0.4
FRGS	Fruska Gora	97.96	46	⇑P	P	22 58 11.0	+0.7
FRGS	Fruska Gora	97.96	46	⇓iP	P	22 58 10.4	0.0
PHP	Peshkopia	98.00	49	P	P	22 58 11.0	+0.4
NBB08	Skaug oppvekst	98.02	23	eP	P	22 58 10.7	+0.6
JAN	Janina	98.06	51	P	P	22 58 11.3	+0.4
KBN	Korca	98.12	50	P	P	22 58 12.0	+0.7
OHR	Ohrid	98.19	50	iP	P	22 58 11.9	+0.4
FAUS	Fauske	98.27	23	eP	P	22 58 11.4	+0.2
FAUS				IVmB_BB		22 58 18.9	
	comp=Z,5µm,1.4s						
FAUS				eSKSac	SKSac	23 07 48.1	-2.3
FAUS				eSP	SP	23 10 17.5	+0.8
FAUS				eSS	SS	23 15 49.3	+0.3
NEST	Nestorio	98.30	50	P	P	22 58 12.3	+0.2
STEI	Steigen	98.33	22	⇓iP	Pdif	22 58 11.3	-0.1
STEI				IVmBBB		22 58 20.1	
	comp=Z,4µm,0.9s						
STEI				epP	pP	23 00 28.1	+4.4
STEI				eSKSac	SKSac	23 07 45.8	-4.8
RLS	Riolos of Patr	98.34	53	P	P	22 58 12.8	+0.6
PENT	Pentalofos	98.34	51	P	P	22 58 13.2	+0.9
PSZ	Piszkesteto	98.34	43	⇓P	P	22 58 14.2	+2.1
PSZ	Piszkesteto	98.34	43	eP	P	22 58 12.5	+0.4
PSZ	Piszkesteto	98.34	43	⇓P	P	22 58 14.2	+2.1
UPP	Uppsala	98.38	31	eP	P	22 58 13.1	+1.3
UPP				epP	pP	23 00 28.0	+3.9
UPP	Uppsala	98.38	31	eP	PKKPbc	23 14 39.4	-2.6
SDPT	Sand Point	98.38	325	Pdiff	Pdif	22 58 11.2	-0.7
	baz=96						
N2ST	Straumen	98.38	23	eP	P	22 58 12.2	+0.5
PYL	PYLOS	98.42	54	P	Pdif	22 58 11.7	-0.8
PVO	Paravola	98.45	52	P	P	22 58 13.1	+0.4
KPRO	Kipourio	98.48	51	P	P	22 58 13.0	+0.1
DRO	Drossia	98.52	53	P	P	22 58 13.3	+0.3
BSZH	Besenyszg	98.53	43	⇓P	P	22 58 13.9	+1.2
BSZH	Besenyszg	98.53	43	eP	P	22 58 13.5	+0.7
BSZH	Besenyszg	98.53	43	eP	P	22 58 15.1	+2.3
OJC	Ojcow	98.54	41	eP	P	22 58 13.5	+0.7
OJC				epP	pP	23 00 28.6	+3.4
OJC				eL	L	23 19 55.2	
	comp=Z,169µm,65.5s						
OJC	Ojcow	98.54	41	P	P	22 58 13.1	+0.3
OJC				pmax	pmax		
	comp=Z,410nm,1.1s						
OJC	Ojcow	98.54	41	Pdif	P	22 58 13.1	+0.3
OJC				IAmb	IAmb	22 58 21.7	
	comp=Z,410nm,1.1s						
FNA	Florina	98.59	50	P	Pdif	22 58 13.0	-0.3
N2IH	Innhavet	98.59	22	⇓iP	P	22 58 13.2	+0.6
A21K	Barrow	98.59	341	Pdiff	Pdif	22 58 12.2	-0.2
	baz=98						
ITM	Ithomi	98.60	54	P	Pdif	22 58 12.8	-0.6
ITM	Ithomi	98.60	54	Pdif	P	22 58 13.7	+0.2
EVR	Evrytania	98.71	52	P	P	22 58 14.7	+0.7
EFP	Efpalio	98.72	53	P	Pdif	22 58 13.7	-0.2
AMBH	Ambrzfalva	98.74	44	⇓P	P	22 58 14.8	+1.1
AMBH	Ambrzfalva	98.74	44	eP	P	22 58 15.7	+1.9
ANX	Ano Chora	98.76	52	P	Pdif	22 58 14.1	0.0
LAKA	Lakka	98.76	53	P	P	22 58 14.4	+0.3
SKO	Skopje	98.77	49	⇓iP	P	22 58 14.0	0.0
NIE	Niedzica	98.78	41	eP	P	22 58 16.2	+2.2
NIE				epP	pP	23 00 31.2	+4.9
NIE				eL	L	23 20 21.3	
	comp=Z,46µm,35.9s						
KECS	Kecovo	98.80	42	eP	P	22 58 15.6	+1.6
KECS	Kecovo	98.80	42	ePDIFF	P	22 58 15.6	+1.6
KECS	Kecovo	98.80	42	e	PKKPbc	23 14 39.7	-0.7
KZN	Kozani	98.83	51	P	Pdif	22 58 14.1	-0.3
SERG	Sergoula	98.84	53	P	P	22 58 14.7	+0.2
TRIZ	Trizonia	98.85	53	P	P	22 58 14.9	+0.4
KLV	Kalavryta, Ach	98.87	53	P	Pdif	22 58 13.9	-0.7
BANR	Banloc	98.92	45	⇑P	P	22 58 15.8	+1.2
THL	Klokotos Trika	98.94	51	P	P	22 58 14.8	0.0
MAKR	Makrakomi, Fth	98.97	52	P	Pdif	22 58 15.0	0.0
KBS	Kingsbay	98.98	11	P	Pdif	22 58 14.1	0.0
KBS				pmax	pmax		
	comp=Z,277nm,1.3s						
KBS	Kingsbay	98.98	11	iP	P	22 58 14.2	0.0
KBS	Kingsbay	98.98	11	⇓iP	P	22 58 14.8	+0.6
KBS				IVmB_BB		22 58 21.3	
	comp=Z,4µm,2.0s						
KBS				epP	pP	23 00 30.1	+3.6
KBS				eSKSac	SKSac	23 07 51.4	-2.2
KBS				eSP	SP	23 10 24.8	+0.9
KBS	Kingsbay	98.98	11	Pdif	Pdif	22 58 14.1	0.0
GUR	Goura	99.01	53	P	Pdif	22 58 15.1	-0.2
TIM	Timisoara	99.01	45	⇑P	Pdif	22 58 17.1	+2.1
TIM	Timisoara	99.01	45	⇑P	PKKPbc	23 14 38.5	-1.2
TIM	Timisoara	99.01	45	⇑P	Pdif	22 58 17.1	+2.1
AGG	Agios Georgios	99.12	52	P	Pdif	22 58 14.9	-0.8
BOVS	Bovan	99.14	47	⇓P	Pdif	22 58 16.7	+1.1
MDVR	Moldovita	99.26	46	⇑P	Pdif	22 58 16.3	+0.1
MDVR	Moldovita	99.26	46	⇑P	PKKPbc	23 14 38.8	-0.3
THAL	Thalero	99.28	53	P	Pdif	22 58 16.2	-0.1
BZS	Buzias	99.28	45	⇑P	Pdif	22 58 17.2	+1.1
BZS	Buzias	99.28	45	⇑P	Pdif	22 58 17.2	+1.1
STIP	Stip	99.30	49	iP	Pdif	22 58 17.1	+0.8
BEL	Belsk	99.32	39	eP	Pdif	22 58 17.3	+1.1
BEL				eL	L	23 15 41.6	
	comp=Z,69µm,26.3s						
PRGZ	Paritu Road	99.35	227	P	Pdif	22 58 20.2	+3.5
VLI	Veliai	99.35	54	P	Pdif	22 58 16.5	-0.2
KTHR	Kythira	99.35	55	P	Pdif	22 58 18.2	+1.5
SIRR	Siria	99.37	45	⇑P	Pdif	22 58 17.4	+0.8
GRG	Griva	99.38	50	P	Pdif	22 58 16.8	0.0
PUZ	Puketiti	99.39	228	P	Pdif	22 58 20.3	+3.4
KTHA	Kythira Island	99.40	55	P	Pdif	22 58 16.0	-0.9
HSPB	Hornsund (broa	99.48	13	eP	Pdif	22 58 17.2	+0.9
HSPB				epP	pP	23 00 31.7	+2.9
HSPB				eL	L	23 21 29.5	
	comp=Z,74µm,29.7s						
HSPB	Hornsund (broa	99.48	13	⇓ePdif	Pdif	22 58 12.8	-3.5
HSPB				IVmB_BB		22 58 19.7	
	comp=Z,3µm,3.5s						
HSPB				epP	pP	23 00 32.0	+3.2
HSPB				eSP	SP	23 10 29.1	-0.1
CRVS	Cervenica-Dubn	99.48	42	⇑eP	Pdif	22 58 18.5	+1.5
CRVS				e	pP	23 00 26.1	-3.4
CRVS				e	SKSac	23 07 54.5	-2.7
CRVS	Cervenica-Dubn	99.48	42	ePDIFF	Pdif	22 58 18.5	+1.5
CRVS	Cervenica-Dubn	99.48	42	e	pP	23 00 26.1	-3.4
CRVS	Cervenica-Dubn	99.48	42	e	PKKPbc	23 14 39.4	+0.9
LTK	Loutraki	99.51	53	P	Pdif	22 58 16.9	-0.5
RIGZ	Rimuhau	99.52	228	P	Pdif	22 58 20.8	+3.2
MXZ	Matakaoa Point	99.53	229	P	Pdif	22 58 21.1	+3.6
MXZ	Matakaoa Point	99.53	229	Pdif	Pdif	22 58 19.7	+2.2
MXZ				IAmb	IAmb	22 58 23.7	
	comp=Z,375nm,1.2s						
VAY	Valandovo	99.54	50	⇓iP	Pdif	22 58 17.7	+0.2
ANKY	Antikythira Is	99.55	55	P	Pdif	22 58 18.0	+0.4
TWGZ	Tauwhareparae	99.55	228	P	Pdif	22 58 21.2	+3.5
EPID	Epidavros	99.59	53	P	Pdif	22 58 17.1	-0.7
KRND	KRANIDI	99.59	54	P	Pdif	22 58 17.0	-0.7
AAL	Aland	99.59	30	eP	Pdif	22 58 17.7	+0.6
AAL	Aland	99.59	30	eP	PKKPbc	23 14 36.4	-2.2
LKR	Lokris	99.60	52	P	Pdif	22 58 17.0	-0.8
ATAL	Atalanti	99.62	52	P	Pdif	22 58 17.3	-0.6
SPA0	Spitsbergen Ar	99.77	12	eP	Pdif	22 58 17.9	+0.3
SPA0				IVmBBB		22 58 19.6	
	comp=Z,3µm,2.5s						
SPA0				epP	pP	23 00 30.0	-0.2
SPA0				eSKSac	SKSac	23 07 45.9	-12
SPA0				eSP	SP	23 10 31.0	-1.2
SPA0				eSS	SS	23 16 04.8	-4.5
SPITS	Spitsbergen Ar	99.77	12	PKKPbc	PKKPbc	23 14 35.8	-2.8
	comp=Z,105nm,0.6s,baz=116,slow=4.7,SNR=13						
SPITS	Spitsbergen Ar	99.77	12	P	Pdif	22 58 17.8	+0.1
SPITS				pmax	pmax		
	comp=Z,266nm,1.2s						
SPB2	Spitsbergen Ar	99.77	12	Pdif	Pdif	22 58 17.7	+0.1
HERR	Herculane	99.77	46	⇓P	Pdif	22 58 19.8	+1.4
THE	Thessaloniki	99.77	50	P	Pdif	22 58 18.4	-0.1
KNT	Kendrikon	99.78	50	P	Pdif	22 58 18.5	0.0
KNDR	Palaiochora Ch	99.79	56	P	Pdif	22 58 18.6	-0.1
VILL	Villia	99.80	53	P	Pdif	22 58 18.0	-0.7
XOR	Xorichti	99.82	52	P	Pdif	22 58 17.5	-1.3
DJES	Djerdap	99.83	46	⇑P	Pdif	22 58 21.2	+2.6
MWZ	Matawai	99.83	228	P	Pdif	22 58 22.1	+3.2
TRO	Tromso	99.83	21	eP	Pdif	22 58 18.3	+0.3
TRO				IVmB_BB		22 58 25.5	
	comp=Z,6µm,1.1s						
TRO				epP	pP	23 00 36.4	+5.9
TRO				eSKSac	SKSac	23 07 57.1	-0.8
TRO				eSP	SP	23 10 30.4	-2.8
NEO	Neokhori	99.84	52	P	Pdif	22 58 18.1	-0.8
BFZ	Birch Farm	99.84	225	Pdif	Pdif	22 58 19.9	+1.0
BFZ				IAmb	IAmb	22 58 24.7	
	comp=Z,823nm,2.1s						
HAZ	Te Kaha	99.85	229	P	Pdif	22 58 22.0	+3.0
RUGZ	Raukumara Rang	99.85	228	P	Pdif	22 58 22.6	+3.4
HORT	Hortiatis	99.87	50	P	Pdif	22 58 18.6	-0.4
MCHZ	McNeill Hill	100.01	227	P	Pdif	22 58 23.0	+3.4
UZH	Uzhgorod	100.01	42	eP	Pdif	22 58 19.1	-0.2
UZH				e		23 00 31.0	
FALS	False Pass	100.02	324	Pdiff	Pdif	22 58 18.2	-0.9
	baz=94						
FALS	False Pass	100.02	324	Pdif	Pdif	22 58 18.6	-0.6
FALS				IAmb	IAmb	22 58 29.4	
	comp=Z,388nm,0.7s						
KOLS	Kolonicke sedl	100.02	42	eP	Pdif	22 58 20.3	+0.9
KOLS	Kolonicke sedl	100.02	42	ePDIFF	Pdif	22 58 20.3	+0.9
KOLS	Kolonicke sedl	100.02	42	e	SP	23 10 23.8	-12
KOLS	Kolonicke sedl	100.02	42	e	PKKPbc	23 14 36.6	-0.4
KOLS	Kolonicke sedl	100.02	42	e		23 19 49.4	
IMMV	Iera Moni Meta	100.06	56	P	Pdif	22 58 19.2	-0.7
KNTN	Kanton	100.07	265	Pdif	Pdif	22 58 20.4	+0.1
GZR	Gura Zlata	100.07	46	⇑P	Pdif	22 58 20.6	+0.8
GZR	Gura Zlata	100.07	46	⇑P	Pdif	22 58 20.6	+0.8
GVD	Gavdhos	100.08	56	P	Pdif	22 58 19.8	-0.2
PUNG	Punghina	100.08	47	⇓P	PKKPbc	23 14 36.8	+0.2
SOH	Sokhos	100.09	50	P	Pdif	22 58 20.0	+0.1
ATH	Athens Observa	100.10	53	P	Pdif	22 58 19.2	-0.8
PLG	Polygyros	100.11	51	P	Pdif	22 58 19.9	-0.2
RTZ	Ruatahuna	100.12	228	P	Pdif	22 58 23.3	+3.1
MTHZ	Maungataniwha	100.13	227	P	Pdif	22 58 23.8	+3.6
TRPA	Tarpa	100.13	43	⇑P	Pdif	22 58 20.5	+0.7
BJO1	Bjornoya	100.14	16	eP	Pdif	22 58 19.9	+0.5
BJO1				IVmB_BB		22 58 25.6	
	comp=Z,5µm,2.5s						
BJO1				ePP	PP	23 02 35.5	+0.3
BJO1				eSKSac	SKSac	23 07 51.5	-7.7
BJO1				eSP	SP	23 10 37.7	+1.5
BJO1				eSS	SS	23 16 14.9	+0.5
DRGR		100.14	44	⇓P	Pdif	22 58 21.5	+1.4
DRGR		100.14	44	⇓P	Pdif	22 58 21.5	+1.4
VLY	Voula,Athens	100.14	53	P	Pdif	22 58 19.3	-0.9
ATHU	Athens Univers	100.15	53	P	Pdif	22 58 19.6	-0.6
URZ	Urewera	100.16	228	P	Pdif	22 58 21.5	+1.2
	comp=Z,92nm,0.8s,baz=118,slow=23,SNR=52						
URZ				PKiKP	PKiKP	23 02 44.9	+1.1
	comp=Z,34nm,1.0s,baz=113,slow=8.3,SNR=3.1						
URZ				PKKPbc	PKKPbc	23 14 33.6	-2.8
	comp=Z,86nm,0.7s,baz=188,slow=3.5,SNR=5.6						
URZ	Urewera	100.16	228	P	Pdif	22 58 22.7	+2.4
URZ	Urewera	100.16	228	Pdif	Pdif	22 58 21.2	+0.9
VTS	Vitosha	100.16	48	⇓P	Pdif	22 58 21.2	+0.9
VTS	Vitosha	100.16	48	⇓P	PKKPbc	23 14 35.5	-1.1
VTS	Vitosha	100.16	48	⇓P	Pdif	22 58 21.2	+0.9
KRHZ	Kereru	100.16	226	P	Pdif	22 58 22.3	+1.9
DEV	Deva	100.20	45	⇓P	Pdif	22 58 21.3	+1.1
DEV	Deva	100.20	45	⇓P	Pdif	22 58 21.3	+1.1
KWHZ	Kaweka Forest	100.21	227	P	Pdif	22 58 25.2	+4.6
PTL	Penteli	100.22	53	P	Pdif	22 58 19.6	-1.0
VAM	Vamos	100.23	56	P	Pdif	22 58 20.8	+0.2
MSWZ	Moikau Station	100.24	224	Pdif	Pdif	22 58 21.9	+1.2
PAIG	Paliouri	100.25	51	P	Pdif	22 58 20.2	-0.4
BKZ	Black Stump Fm	100.26	227	P	Pdif	22 58 25.1	+4.3
BKZ	Black Stump Fm	100.26	227	Pdif	Pdif	22 58 22.0	+1.1
DION	Dionisos Attik	100.28	53	P	Pdif	22 58 19.8	-1.0
SRS	Serrai	100.29	50	P	Pdif	22 58 20.1	-0.7
SRE	Strehaia	100.31	46	⇑P	Pdif	22 58 22.3	+1.5
SRE	Strehaia	100.31	46	⇓P	PKKPbc	23 14 36.8	+0.8
SRE	Strehaia	100.31	46	⇑P	Pdif	22 58 22.3	+1.5
PBUR	Paburge	100.32	35	eP	PKKPbc	23 14 35.7	-0.7
PBUR	Paburge	100.32	35	eP	P'P'df	23 22 08.9	-41
MESR	Meseseni	100.33	44	⇑P	Pdif	22 58 22.8	+2.0
JETT	Jettan, Norway	100.34	21	eP	Pdif	22 58 21.7	+1.3
KWP	Kalwaria Pacla	100.36	41	eP	Pdif	22 58 21.9	+1.0
KWP				epP	pP	23 00 37.9	+4.5
KWP				eL	L	23 20 42.5	
	comp=Z,107µm,32.8s						
BAIL	Bailesti	100.36	47	⇑P	Pdif	22 58 21.3	+0.3
BAIL	Bailesti	100.36	47	⇑P	PKKPbc	23 14 35.9	0.0
BHHZ	Black Hill Sta	100.44	226	P	Pdif	22 58 24.1	+2.4
KYMI	Kymi, Euboea I	100.46	52	P	Pdif	22 58 20.6	-1.0
RDOG	Red Dog Mine	100.50	338	Pdiff	Pdif	22 58 26.8	+5.7
	baz=92						
NVR	Nevrokopi	100.52	50	P	Pdif	22 58 21.0	-0.8
MHLO	Agia Marina, M	100.52	54	P	Pdif	22 58 21.2	-0.7
OUR	Ouranopolis	100.52	51	P	Pdif	22 58 21.3	-0.5
SLIT	Slitere, Latvi	100.61	33	eP	P'P'df	23 22 09.0	-40
SLIT	Slitere, Latvi	100.61	33	eP	PKKPbc	23 14 33.8	-1.9
TMBK	Timbaki Herakl	100.66	56	P	Pdif	22 58 22.5	0.0
KARY	Karystos	100.67	53	P	Pdif	22 58 21.7	-0.8
MOVZ	Moawhango	100.69	226	P	Pdif	22 58 25.1	+2.3
CBBR	Cluj-Babes-Bol	100.71	44	⇓P	Pdif	22 58 24.9	+2.3
TETE	Tete	100.74	109	⇓iP	Pdif	22 58 24.3	+1.0
TETE				pP	pP	23 00 38.1	+2.3
TETE	Tete	100.74	109	iP	pPdif	23 00 33.0	-2.6
TETE	Tete	100.74	109	iP	SP	23 10 33.1	-12
BMR	Baia Mare	100.74	43	⇑P	Pdif	22 58 25.0	+2.4
BMR	Baia Mare	100.74	43	⇑P	Pdif	22 58 25.0	+2.4
CJR	Cluj-Napoca	100.74	44	⇑P	Pdif	22 58 24.9	+2.2
CJR	Cluj-Napoca	100.74	44	⇑P	Pdif	22 58 24.9	+2.2
OMRZ	Omania	100.75	228	P	Pdif	22 58 25.3	+2.3
LOT	Lotru	100.77	46	⇓P	Pdif	22 58 23.9	+1.0
IDI	Anoyia	100.78	56	pP	pP	23 00 34.3	-1.3
	comp=Z,66nm,0.7s,baz=337,slow=5.0,SNR=3.2						
IDI				PKiKP	PKiKP	23 02 46.5	+1.4
	comp=Z,178nm,0.9s,baz=320,slow=1.2,SNR=4.2						
IDI				PKKPbc	PKKPbc	23 14 34.7	+0.3
	comp=Z,141nm,1.0s,baz=333,slow=8.8,SNR=8.8						
IDI				PKPPKP		23 22 48.2	
	comp=Z,111nm,1.0s,baz=74,slow=10,SNR=3.1						
IDI	Anoyia	100.78	56	P	Pdif	22 58 22.9	-0.3
TUVZ	Tukino	100.82	226	P	Pdif	22 58 22.1	-1.4
ETVZ	East Tongariro	100.83	227	P	Pdif	22 58 26.5	+3.1
WNVZ	Wahianoa	100.83	226	P	Pdif	22 58 26.0	+2.5
TMVZ	Te Maari	100.84	227	P	Pdif	22 58 26.7	+3.2
OTVZ	Oturere	100.85	227	P	Pdif	22 58 25.3	+1.7
WHVZ	Whangaehu Hut	100.86	226	P	Pdif	22 58 26.6	+2.8
SNVZ	South Ngauruho	100.86	227	P	Pdif	22 58 26.2	+2.6
DRZ	Dome Shelter	100.88	226	P	Pdif	22 58 27.3	+3.4
TRVZ	Turoa	100.88	226	P	Pdif	22 58 26.4	+2.6
NGZ	Ngauruhoe	100.89	227	P	Pdif	22 58 27.0	+3.2
FWVZ	Far West T-bar	100.90	226	P	Pdif	22 58 26.2	+2.3
NNVZ	North Ngauruho	100.90	227	P	Pdif	22 58 26.9	+3.1
SUW	Suwalki	100.92	37	eP	Pdif	22 58 23.9	+0.7
SUW				epP	pP	23 00 37.9	+2.1
SUW				eL	L	23 16 06.3	
	comp=Z,61µm,27.4s						
SUW	Suwalki	100.92	37	eP	Pdif	22 58 24.6	+1.3
SUW	Suwalki	100.92	37	P	Pdif	22 58 23.3	+0.1
SUW	Suwalki	100.92	37	Pdif	Pdif	22 58 23.3	+0.1
SUW	Suwalki	100.92	37	eP	PKKPbc	23 14 33.4	-1.2
SUW	Suwalki	100.92	37	eP	P'P'df	23 22 09.1	-40
KSTL	Kastelli Herak	100.93	56	P	Pdif	22 58 25.2	+1.5
KAVA	Kavala	100.98	50	P	Pdif	22 58 24.2	+0.4
PKVZ	Pokaka	101.03	226	P	Pdif	22 58 27.1	+2.9
TWVZ	Taurewa	101.05	227	P	Pdif	22 58 26.6	+2.2
WAZ	Wanganui	101.10	226	P	Pdif	22 58 28.4	+3.9
THAS	Thassos island	101.10	51	P	Pdif	22 58 23.6	-0.8
VLAD	Vladila	101.12	47	⇑P	Pdif	22 58 25.3	+0.9

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MYRZ  Mayor Island      101.17 229   P        Pdif     22 58 27.8 +3.0
LVV   L'vov             101.23  41  eP        Pdif     22 58 24.9 +0.2
LVV                                 e         PP       23 02 42.9 -1.0
LVV                                 e         SKSac    23 08 04.8 -0.7
LVV                                 eS        Sdif     23 09 10.9 -1.1
LVV                                 ePS       SP       23 10 51.1 +2.3
LVV                                  pmax     pmax
      comp=Z,130nm,1.7s
MDB   Medias            101.25  45 ⇑P        Pdif     22 58 25.5 +0.6
MDB   Medias            101.25  45 ⇑P        Pdif     22 58 25.5 +0.6
ARCR  ARCALIA           101.28  44 ⇑P        Pdif     22 58 27.1 +2.1
ARCR  ARCALIA           101.28  44 ⇓P        PKKPbc   23 14 33.4 +0.1
THR6  Thira Island,     101.29  55   P        Pdif     22 58 25.2 -0.1
CMBO  Columbo, Santo    101.30  55   P        Pdif     22 58 25.3 -0.1
THT2  Imerovigli        101.31  55   P        Pdif     22 58 25.5 +0.1
SANT  Santorini         101.34  55 ⇑P        Pdif     22 58 26.3 +0.7
SANT  Santorini         101.34  55 ⇑P        PKKPbc   23 14 32.0 -0.9
SANT  Santorini         101.34  55   P        Pdif     22 58 24.9 -0.7
SANT  Santorini         101.34  55   Pdif     Pdif     22 58 25.0 -0.6
KTK1  Kautokeino        101.34  21⇓iP        Pdif     22 58 25.2 +0.5
KTK1                                eSKSac    SKSac    23 08 05.0 -0.2
KTK1                                eSP       SP       23 10 50.4 +1.4
AKUT  Akutan            101.34 323   Pdif     Pdif     22 58 25.2 +0.2
THR8  Santorini-Mono    101.36  55   P        Pdif     22 58 26.0 +0.4
NPS   Neapolis          101.37  56   P        Pdif     22 58 25.5 -0.2
TGMR  Targu Mures       101.37  45 ⇑P        PKKPbc   23 14 33.3 +0.2
MBAR  Mbarara           101.37  93   P        Pdif     22 58 26.7 +0.3
MBAR  Mbarara           101.37  93   Pdif     Pdif     22 58 26.7 +0.3
MBAR  Mbarara           101.37  93⇓iP        Pdif     22 58 26.9 +0.5
MBAR                                 pP       pP       23 00 41.2 +2.3
MBAR  Mbarara           101.37  93  i P       pPdif    23 00 33.8 -4.9
MBAR  Mbarara           101.37  93  i P       SP       23 10 38.0  -14
ARR   Arges             101.37  46 ⇑P        Pdif     22 58 26.5 +1.0
ARR   Arges             101.37  46 ⇑P        PKKPbc   23 14 32.9 -0.3
LIA   Limnos Island     101.40  51   P        Pdif     22 58 25.8 +0.1
ANM   Nome              101.42 334   Pdiff    Pdif     22 58 25.4 +0.2
      baz=90
PABE  Paberze           101.45  35  eP        Pdif     22 58 26.5 +1.0
PABE  Paberze           101.45  35   Pdif     Pdif     22 58 26.1 +0.6
PABE  Paberze           101.45  35  eP        P'P'df   23 22 06.8  -41
PABE  Paberze           101.45  35  eP        PKKPbc   23 14 32.3 -0.9
APE   Apeiranthos       101.45  54 ⇑P        Pdif     22 58 26.7 +0.6
APE   Apeiranthos       101.45  54 ⇑P        PKKPbc   23 14 31.5 -1.1
APE   Apeiranthos       101.45  54   P        Pdif     22 58 25.2 -0.9
APE   Apeiranthos       101.45  54 ⇑P        Pdif     22 58 26.7 +0.6
MTSE  Matsula           101.46  32  eP        PKKPbc   23 14 31.8 -1.4
MTSE  Matsula           101.46  32  eP        P'P'df   23 22 07.9  -40
HAMF  Hammerfest        101.48  20  eP        Pdif     22 58 25.5 +0.2
HAMF                                 IVmB_BB           22 58 37.3
      comp=Z,4µm,3.9s
HAMF                                ePP       PKiKP    23 02 45.5 +0.3
HAMF                                eSKSac    SKSac    23 08 02.8 -3.0
HAMF                                eSS       SS       23 16 34.1 +1.2
TOZ   Tahuroa Road      101.53 228   P        Pdif     22 58 28.8 +2.4
HUMR  Humele            101.57  47 ⇓P        Pdif     22 58 27.3 +1.0
STFAR Stefanesti-Arg    101.57  46 ⇑P        PKKPbc   23 14 31.9 -0.6
HOPEN Hopen             101.65  14  eP        Pdif     22 58 27.7 +1.7
HOPEN                                IVmB_BB           22 58 33.0
      comp=Z,2µm,2.0s
HOPEN                               ePP       PP       23 02 45.9 -0.4
HOPEN                               eSKSac    SKSac    23 08 00.8 -5.6
HOPEN                               eSP       SP       23 10 52.9 +1.0
HOPEN                               eSS       SS       23 16 36.5 +1.6
MTUR  Matau             101.67  46 ⇓P        Pdif     22 58 28.7 +1.8
MTUR  Matau             101.67  46 ⇓P        Pdif     22 58 28.7 +1.8
VOIR                    101.67  46 ⇑P        Pdif     22 58 28.0 +1.1
VOIR                    101.67  46 ⇑P        Pdif     22 58 28.0 +1.1
HIZ   Hauiti            101.69 227   P        Pdif     22 58 30.5 +3.4
SMTH  Samothraki Isl    101.71  51   P        Pdif     22 58 26.2 -0.9
COPA  Copaceanca        101.71  47 ⇓P        Pdif     22 58 28.3 +1.3
COPA  Copaceanca        101.71  47 ⇑P        PKKPbc   23 14 31.1 -0.9
STIA  Sitia Lasithi     101.75  56   P        Pdif     22 58 27.5 +0.1
KUZ   Kuaotunu          101.76 229   P        Pdif     22 58 31.4 +4.0
RDO   Rodhopi           101.76  50   P        Pdif     22 58 26.7 -0.6
UNV   Unalaska Valle    101.77 323   Pdiff    Pdif     22 58 26.5 -0.5
      baz=92
ZKR   Zakros            101.85  56   P        Pdif     22 58 28.0 +0.2
BUR08 Bucovina Ar. S    101.89  43   Pdif     Pdif     22 58 28.4 +0.6
BURAR Bucovina Array    101.90  43 ⇑P        Pdif     22 58 29.5 +1.5
BURAR Bucovina Array    101.90  43   Pdif     Pdif     22 58 27.6 -0.3
DOPR  Dopca             101.94  45 ⇓P        Pdif     22 58 28.4 +0.4
CHOS  Chios island      101.97  53   P        Pdif     22 58 27.4 -1.0
GADA  Gvkgeada          101.97  51   P        Pdif     22 58 28.2  0.0
ALN   Alexandroupoli    102.13  50   P        Pdif     22 58 29.2 +0.3
ARA0  ARCESS Array S    102.14  21  eP        Pdif     22 58 28.4 +0.1
ARCES ARCESS Array B    102.14  21   P        Pdif     22 58 28.0 -0.3
      comp=Z,84nm,0.6s,baz=276,slow=3.5,SNR=348
ARCES                                pP       pPdif    23 00 38.4 -2.2
      comp=Z,17nm,0.7s,baz=270,slow=4.4,SNR=2.5
ARCES                                PKiKP    PKiKP    23 02 46.5  0.0
      comp=Z,79nm,1.1s,baz=267,slow=4.5,SNR=2.8
ARCES                                PKKPbc   PKKPbc   23 14 29.3 -2.4
      comp=Z,238nm,0.7s,baz=99,slow=3.5,SNR=21
ARCES ARCESS Array B    102.14  21   Pdif     Pdif     22 58 28.2 -0.1
PRK   Paraskevi         102.19  52   P        Pdif     22 58 29.9 +0.6
ENEZ  Enez              102.20  50   P        Pdif     22 58 27.3 -1.9
OZUR                    102.22  45 ⇓P        Pdif     22 58 31.5 +2.2
MLR   Muntele Rosu      102.30  46 ⇑P        Pdif     22 58 30.3 +0.5
MLR   Muntele Rosu      102.30  46 ⇑P        PKKPbc   23 14 29.7 -0.9
MLR                                ⇓P        PKKPdf   23 14 29.9 -6.8
MLR   Muntele Rosu      102.30  46   P        Pdif     22 58 29.5 -0.3
      comp=Z,76nm,0.7s,baz=227,slow=3.0,SNR=112
MLR                                  PKiKP    PKiKP    23 02 48.1 +0.5
      comp=Z,98nm,1.0s,baz=144,slow=2.6,SNR=3.2
MLR                                  PKPPKP   P'P'df   23 22 46.0 -1.2
      comp=Z,72nm,1.1s,baz=355,slow=5.0,SNR=4.1
MLR   Muntele Rosu      102.30  46   Pdif     Pdif     22 58 29.6 -0.2
PLAR  PLOIESTI          102.33  46 ⇓P        PKKPbc   23 14 30.0 -0.3
SECR                    102.37  46 ⇓P        Pdif     22 58 30.2 +0.3
SULR                    102.48  46 ⇑P        Pdif     22 58 32.0 +1.6
SULR                    102.48  46 ⇓P        PKKPbc   23 14 29.8  0.0
COVR  Voineasa-Covas    102.50  45 ⇑P        Pdif     22 58 31.7 +1.1
COVR  Voineasa-Covas    102.50  45 ⇓P        PKKPbc   23 14 28.8 -1.1
SMG   Samos             102.54  54   P        Pdif     22 58 30.1 -0.8
NEHR  Nehoiu            102.55  46 ⇓P        Pdif     22 58 30.9 +0.2
PRAR  RASCA             102.57  44 ⇓P        Pdif     22 58 32.9 +2.1
ZOMB  Zomba             102.58 108⇓iP        Pdif     22 58 30.8 -0.8
ZOMB                                 pP       pPdif    23 00 42.9 -1.1
ZOMB  Zomba             102.58 108  i P       pPdif    23 00 36.2 -7.7
ZOMB  Zomba             102.58 108  i P       SP       23 10 45.2  -19
KOSK  Kos Island        102.58  55   P        Pdif     22 58 30.1 -0.9
FINES FINESS Array B    102.61  29   Pdiff    Pdif     22 58 31.8 +1.3
      comp=Z,48nm,0.9s,baz=228,slow=2.3,SNR=16
FINES                                PKiKP    PKiKP    23 02 48.4 +0.9
      comp=Z,15nm,0.6s,baz=269,slow=1.7,SNR=1.5
FINES                                PKKPbc   PKKPbc   23 14 27.9 -2.1
      comp=Z,181nm,0.5s,baz=95,slow=4.1,SNR=24
FINES                                PKPPKP            23 22 44.9
      comp=Z,52nm,0.7s,baz=96,slow=4.2,SNR=5.1
FINES FINESS Array B    102.61  29   P        Pdif     22 58 31.1 +0.6
FINES FINESS Array B    102.61  29   Pdif     Pdif     22 58 31.1 +0.6
RAZG  Razgrad           102.61  48 ⇑P        Pdif     22 58 32.5 +1.4
ISAL  Salakas           102.67  35  eP        Pdif     22 58 33.6 +2.6
ISAL  Salakas           102.67  35  eP        PKKPbc   23 14 29.2 -0.4
ISAL  Salakas           102.67  35  eP        P'P'df   23 22 04.8  -41
NISR  Nisiros           102.70  55   P        Pdif     22 58 30.1 -1.5
EDRB  Edirne            102.71  49   P        Pdif     22 58 30.2 -1.3
ISR   Istrita           102.71  46 ⇓P        Pdif     22 58 32.2 +0.7
ISR   Istrita           102.71  46 ⇓P        Pdif     22 58 32.2 +0.7
NIS1  Nisyros Isl.      102.74  55   P        Pdif     22 58 30.6 -1.2
BLCB  Balcova           102.74  53   P        Pdif     22 58 31.4 -0.3
PLOR  Plostina          102.81  45 ⇓P        Pdif     22 58 32.3 +0.4
PLOR  Plostina          102.81  45 ⇓P        Pdif     22 58 32.3 +0.4
TESR  Tescani           102.83  45 ⇓P        Pdif     22 58 33.7 +1.8
VRI   Vrincioaia        102.87  45 ⇓P        Pdif     22 58 32.8 +0.6
VRI   Vrincioaia        102.87  45 ⇑P        PKiKP    23 02 50.8 +2.3
VRI   Vrincioaia        102.87  45 ⇓P        Pdif     22 58 32.8 +0.6
BODT  Bodrum            102.87  54   P        Pdif     22 58 30.1 -2.3
VSU   Vasula            102.99  32  eP        Pdif     22 58 33.1 +0.8
VSU   Vasula            102.99  32  eP        PKKPbc   23 14 27.7 -1.1
VSU   Vasula            102.99  32  eP        P'P'df   23 22 02.9  -42
NACGM Naroch            103.05  36  i P       Pdif     22 58 33.8 +1.1
DAT   Datca             103.06  55   P        Pdif     22 58 31.8 -1.6
NIKH  Nikolski High     103.16 322   Pdiff    Pdif     22 58 32.0 -1.2
      baz=90
CASY  Casey             103.31 181   Pdif     Pdif     22 58 34.4 +0.7
ARG   Arkhangelos       103.47  55   P        Pdif     22 58 34.5 -0.5
TUDR                    103.52  46 ⇓P        PKKPbc   23 14 26.8 -0.1
ICOR  Ion Corvin        103.57  47 ⇓P        Pdif     22 58 36.7 +1.5
IZVR  Izvoarele         103.58  46 ⇑P        Pdif     22 58 35.0 -0.3
SLCR  Slobozia Conac    103.59  46 ⇑P        PKKPbc   23 14 26.2 -0.4
VASR  Vaslui            103.62  44 ⇓P        Pdif     22 58 36.7 +1.3
YER   Yerkesik          103.65  54   P        Pdif     22 58 35.2 -0.7
HARR  Harsova           103.68  46 ⇓P        Pdif     22 58 36.7 +1.0
HARR  Harsova           103.68  46 ⇓P        PKKPbc   23 14 26.2 -0.1
MNK   Minsk             103.69  36  i P       Pdif     22 58 36.6 +1.1
MNK                                 i                  23 03 00.7
MNK                                 i PPP     PPP      23 05 19.0
MNK                                 i                  23 08 14.6
MNK                                 i SS      SS       23 17 04.2 +0.6
MNK                                  pmax     pmax
      comp=Z,169nm,1.0s
MNK                                  pmax     pmax
      comp=E,11nm,1.0s
MNK                                  pmax     pmax
      comp=N,58nm,1.0s
MNK   Minsk             103.69  36  i P       Pdif     22 58 36.6 +1.1
      comp=E,11nm,1.0s
MNK                                 i P       Pdif     22 58 36.6 +1.1
      comp=N,58nm,1.0s
MNK                                 i P       Pdif     22 58 36.6 +1.1
      comp=Z,169nm,1.0s,baz=271
MNK                                 i pP      pPdif    23 00 52.4 +4.6
MNK                                 i PP      PP       23 03 00.7 -1.1
MNK                                 i PPP     PPP      23 05 19.0
MNK                                 i SKS              23 08 14.6
MNK                                 i SKKS    SKKSac   23 09 43.9  +41
MNK                                 i SS      SS       23 17 04.2 +0.6
MNK                                 i SSS     SSS      23 22 18.6
MNK   Minsk             103.69  36  i P       PKiKP    23 02 50.6 +0.9
      comp=E,10.0nm,1.0s
MNK                                 i P       PKiKP    23 02 50.6 +0.9
      comp=N,93nm,1.0s
MNK                                 i P       PKiKP    23 02 50.6 +0.9
      comp=Z,233nm,1.0s,baz=271
MNK                                 i pP               23 05 38.4
MNK                                 i PPP     PPP      23 10 30.8
MNK                                 i SKS              23 14 43.2
MNK                                 i SKKS    SS       23 16 33.2  -30
MNK                                 i SSS     SSS      23 26 06.3
CVDA  Cernavoda         103.75  47 ⇑P        PKKPbc   23 14 25.6 -0.5
SCTR  Scanteiesti       103.75  45 ⇑P        PKiKP    23 02 51.0 +0.9
TLBR  Topalu            103.76  47 ⇑P        Pdif     22 58 37.5 +1.4
TLBR  Topalu            103.76  47 ⇓P        PKiKP    23 02 51.6 +1.5
TLBR  Topalu            103.76  47 ⇑P        PKKPbc   23 14 24.6 -1.4
TATR  Tatarca           103.78  46 ⇓P        PKiKP    23 02 51.7 +1.6
TATR  Tatarca           103.78  46 ⇑P        PKKPbc   23 14 25.8 -0.2
VLDR  Vladesti          103.81  45 ⇓P        Pdif     22 58 37.0 +0.7
CFR   Carcaliu          103.84  46 ⇓P        Pdif     22 58 36.5 +0.1
CFR   Carcaliu          103.84  46 ⇓P        PKiKP    23 02 51.6 +1.4
CFR   Carcaliu          103.84  46 ⇓P        Pdif     22 58 36.5 +0.1
KULA  Kula-Manisa       104.02  53   P        Pdif     22 58 37.2 -0.3
TIRR  Tirgusor          104.02  47 ⇓P        Pdif     22 58 39.4 +2.2
TIRR  Tirgusor          104.02  47 ⇑P        PKiKP    23 02 52.4 +1.8
TIRR  Tirgusor          104.02  47 ⇓P        PKKPbc   23 14 24.8 -0.5
TIRR  Tirgusor          104.02  47 ⇓P        Pdif     22 58 39.4 +2.2
MFTR  Murfatlar         104.02  47 ⇓P        PKKPbc   23 14 25.1 -0.2
SORM  Soroca            104.02  43 ⇓P        Pdif     22 58 38.6 +1.4
SORM  Soroca            104.02  43 ⇑P        PKKPbc   23 14 24.2 -1.2
SORM  Soroca            104.02  43 ⇓P        Pdif     22 58 38.6 +1.4
TPGR  Topolog           104.03  46 ⇑P        Pdif     22 58 38.4 +1.0
MANR  Mangalia          104.13  47 ⇑P        PKKPbc   23 14 24.0 -0.9
GAMB  Gambell           104.22 333   Pdiff    Pdif     22 58 37.9 +0.3
      baz=85
FETY  Fethiye           104.27  55   P        Pdif     22 58 38.0 -0.6
TLCR                    104.32  46 ⇑P        Pdif     22 58 39.9 +1.4
TLCR                    104.32  46 ⇑P        PKiKP    23 02 52.1 +1.0
TLCR                    104.32  46 ⇓P        PKKPbc   23 14 24.0 -0.4
TLCR                    104.32  46 ⇑P        Pdif     22 58 39.9 +1.4
MILM  Milestii Mici     104.33  44 ⇑P        Pdif     22 58 39.1 +0.6
MILM  Milestii Mici     104.33  44  i P       Pdif     22 58 38.0 -0.6
MILM                                i                  23 08 16.0
MILM                                 pmax     pmax
      comp=Z,1µm,2.2s
KIS   Kishinev          104.33  44⇓iP        Pdif     22 58 38.0 -0.6
      comp=Z,800nm,3.2s
KIS                                 i pP      pPdif    23 00 51.0 +0.1
KIS                                 esP       sPdif    23 02 08.0  +17
KIS   Kishinev          104.33  44  ePP       PP       23 03 02.0 -4.8
KIS                                 eSKS               23 08 15.0
KIS                                 eSKKS     SKKSac   23 09 04.0 -3.4
KIS   Kishinev          104.33  44 ⇓P        Pdif     22 58 39.7 +1.1
KIS   Kishinev          104.33  44d iP        Pdif     22 58 38.0 -0.6
KIS                                 e                  23 08 15.0
KIS                                 e                  23 09 04.0
KIS                                 i                  23 09 44.0
KIS                                 i                  23 11 24.0
KIS                                  pmax     pmax
      comp=Z,800nm,3.2s
ISK   Istanbul-Kandi    104.41  50   P        Pdif     22 58 37.9 -1.2
AKASG Malin Array Be    104.58  40   Pdiff    Pdif     22 58 39.7 +0.2
      comp=Z,9.9nm,0.8s,baz=267,slow=4.4,SNR=20
AKASG                                PKiKP    PKiKP    23 02 51.5  0.0
      comp=Z,66nm,0.7s,baz=278,slow=2.8,SNR=15
AKASG                                PKKPbc   PKKPbc   23 14 21.3 -2.6
      comp=Z,57nm,0.6s,baz=68,slow=3.8,SNR=14
AKASG Malin Array Be    104.58  40   P        Pdif     22 58 39.2 -0.3
AKASG Malin Array Be    104.58  40            Pdif     22 58 39.2 -0.3
KSL   Kastellorizon     104.65  55   P        Pdif     22 58 40.6 +0.3
PUL   Pulkovo           104.78  31  eP        PKKPbc   23 14 22.2 -1.3
PURM  Purcari           105.06  45 ⇓P        Pdif     22 58 43.0 +1.2
PURM  Purcari           105.06  45 ⇑P        PKKPbc   23 14 21.9 -0.4
DODT  Dodoma, Tanzan    105.14  99  i P       Pdif     22 58 44.3 +1.2
DODT                                 pP       pPdif    23 00 57.2 +1.8
DODT  Dodoma, Tanzan    105.14  99  i P       pPdif    23 00 52.5 -3.0
APA   Apatity           105.22  23⇓iP        Pdif     22 58 43.2 +1.1
APA                                 i                  23 08 22.0
APA                                 i                  23 09 06.0
APA                                 i PS      PS       23 12 32.0  -11
APA                                  pmax     pmax
      comp=Z,59nm,1.1s
KOND  Kondoa            105.45  98  i P       Pdif     22 58 38.9 -5.7
KOND                                e                  22 58 39.3
      baz=52,slow=3.6
MSVF  Nonsavu           106.29 248   Pdiff    Pdif     22 58 52.0 +3.9
      comp=Z,72nm,0.9s,baz=137,slow=14,SNR=17
MSVF                                 PKiKP    PKiKP    23 02 56.1 +0.4
      comp=Z,80nm,0.8s,baz=136,slow=8.4,SNR=6.8
MSVF                                 PKKPbc   PKKPbc   23 14 20.0 +1.9
      comp=Z,88nm,0.8s,baz=276,slow=9.2,SNR=7.7
MSVF  Nonsavu           106.29 248   P        Pdif     22 58 48.9 +0.8
MSVF  Nonsavu           106.29 248   Pdif     Pdif     22 58 48.9 +0.8
GIDAE Health Center,    106.79  84  i P       Pdif     22 58 50.7 +0.1
GIDAE                                pP       pPdif    23 01 06.7 +3.9
GIDAE Health Center,    106.79  84  i P       pPdif    23 01 01.3 -1.6
GIDAE Health Center,    106.79  84  i P       SP       23 11 39.2 -8.9
SHERE Police Station    107.19  82  i P       Pdif     22 58 51.4 -0.7
SHERE                                pP       pPdif    23 01 01.6 -2.8
SHERE Police Station    107.19  82  i P       pPdif    23 01 00.5 -3.9
SHERE Police Station    107.19  82  i P       SP       23 11 48.2 -3.6
SHERE                               eP        SKKPbc   23 17 02.8 +2.6
NBI   Nairobi           107.19  95  i P       Pdif     22 58 53.9 +1.6
NBI                                  pP       pPdif    23 01 07.9 +3.2
NBI   Nairobi           107.19  95  i P       pPdif    23 01 04.0 -0.7
NBI   Nairobi           107.19  95  i P       SP       23 11 41.0  -11
NBI                                 eP        SKKPbc   23 17 03.1 +3.1
LEF   Lefka             107.31  56 ⇑P        PKKPbc   23 14 15.0 -0.1
MEND  High School, M    107.39  83  i P       Pdif     22 58 54.0 +0.8
MEND                                 pP       pPdif    23 01 06.7 +1.2
MEND  High School, M    107.39  83  i P       pPdif    23 01 03.0 -2.5
MEND  High School, M    107.39  83  i P       SP       23 11 40.0  -14
MEND                                eP        SKKPbc   23 16 35.4  -24
GOREE District Admin    107.57  85  i P       Pdif     22 58 54.8 +0.7
GOREE                              ⇓pP       pPdif    23 01 15.7 +9.3
GOREE District Admin    107.57  85  i P       pPdif    23 01 06.6 +0.2
GOREE District Admin    107.57  85  i P       SP       23 11 50.0 -5.7
KMBO  Kilima Mbogo      107.66  95   Pdiff    Pdif     22 58 57.5 +3.0
      comp=Z,1.5nm,0.7s,baz=251,slow=5.8,SNR=19
KMBO                                 PKiKP    PKiKP    23 02 58.2 -0.4
      comp=Z,23nm,1.0s,baz=101,slow=0.8,SNR=6.0
KMBO                                 PKKPbc   PKKPbc   23 14 14.8 +1.0
      comp=Z,60nm,0.9s,baz=65,slow=5.1,SNR=9.0
KMBO  Kilima Mbogo      107.66  95   PKiKP    PKiKP    23 03 00.4 +1.8
KMBO  Kilima Mbogo      107.66  95   P        Pdif     22 58 53.8 -0.7
KMBO  Kilima Mbogo      107.66  95   Pdif     Pdif     22 58 53.8 -0.7
KMBO  Kilima Mbogo      107.66  95  i P       Pdif     22 58 56.6 +2.1
KMBO                                 pP       pPdif    23 01 11.4 +4.6
KMBO                                 ScS               23 11 34.7
KMBO  Kilima Mbogo      107.66  95  i P       pPdif    23 01 05.0 -1.8
KMBO  Kilima Mbogo      107.66  95  i P       SP       23 11 47.8 -8.8
GUBA  Police Station    107.77  82  i P       Pdif     22 58 55.6 +0.9
GUBA                                 pP       pPdif    23 01 15.7 +8.7
GUBA  Police Station    107.77  82  i P       pPdif    23 01 05.1 -1.9
GUBA  Police Station    107.77  82  i P       SP       23 11 49.4 -8.0
GUBA                                eP        SKKPbc   23 17 03.4 +4.8
BRTR  Keskin Array B    107.91  52   Pdiff    Pdif     22 58 56.3 +1.5
      comp=Z,8.7nm,0.8s,baz=228,slow=2.7,SNR=12
BRTR                                 PKiKP    PKiKP    23 02 59.4 +1.2
      comp=Z,49nm,0.8s,baz=198,slow=3.6,SNR=14
BRTR                                 PKKPbc   PKKPbc   23 14 11.4 -2.2
      comp=Z,49nm,0.9s,baz=134,slow=4.4,SNR=5.6
DEBR  School, Debre     108.05  82  i P       Pdif     22 58 57.2 +1.0
DEBR                                 pP       pPdif    23 01 15.7 +7.2
DEBR  School, Debre     108.05  82  i P       pPdif    23 01 06.4 -2.1
ABMD  Abulta/Almeha     108.12  81⇓iP        Pdif     22 58 57.8 +1.6
ABMD                                 pP       pPdif    23 01 07.6 -1.0
ABMD  Abulta/Almeha     108.12  81  i P       pPdif    23 01 06.9 -1.6
BZK   Bozkurt           108.12  49   P        PKiKP    23 03 00.4 +2.1
MELAE School, Dubaba    108.56  80  i P       Pdif     22 58 58.5 +0.3
MELAE                                pP       pPdif    23 01 11.8 +1.3
MELAE School, Dubaba    108.56  80  i P       pPdif    23 01 09.1 -1.4
MELAE School, Dubaba    108.56  80  i P       SP       23 11 53.2  -11
MELAE                               eP        SKKPdf   23 17 09.9 +7.4
HARO  School, Haroo     108.57  83  i P       Pdif     22 59 00.2 +1.7
HARO                                 pP       pPdif    23 01 08.7 -2.1
HARO  School, Haroo     108.57  83  i P       SP       23 11 52.8  -12
HARO                                eP        SKKPbc   23 16 59.3 +2.8
OBN   Obninsk           108.65  35 ⇑P        PKiKP    23 02 59.0 +0.1
OBN   Obninsk           108.65  35 ⇑P        PKKPbc   23 14 10.6 -1.0
OBN   Obninsk           108.65  35   Pdiff    Pdif     22 58 58.7 +1.1
      comp=Z,2.8nm,0.4s,baz=211,slow=4.4,SNR=8.3
OBN                                  PKiKP    PKiKP    23 02 59.0 +0.1
      comp=Z,30nm,0.3s,baz=74,slow=3.3,SNR=18
OBN                                  PKKPbc   PKKPbc   23 14 10.7 -0.8
      comp=Z,91nm,0.8s,baz=200,slow=9.3,SNR=8.7
OBN   Obninsk           108.65  35  i P       Pdif     22 58 57.3 -0.3
OBN                                 i                  23 03 35.5
OBN                                  pmax     pmax
      comp=Z,68nm,1.2s
OBN   Obninsk           108.65  35            Pdif     22 58 58.4 +0.8
SKRH  Sakahara          108.81 119  i P       Pdif     22 59 01.9 +2.7
SKRH                                 pP       pPdif    23 01 12.5 +1.0
SKRH  Sakahara          108.81 119  i P       pPdif    23 01 10.9 -0.6
SKRH  Sakahara          108.81 119  i P       SP       23 11 54.3  -12
SKRH                                eP        SKKPdf   23 17 08.1 +6.5
CHGE  School, Chagni    108.92  82  i P       Pdif     22 59 00.1 +0.2
CHGE                                 pP       pPdif    23 01 19.8 +7.5
CHGE  School, Chagni    108.92  82  i P       pPdif    23 01 09.3 -2.9
MUKA  Police Camp, M    108.92  81  i P       Pdif     22 59 00.7 +0.9
MUKA                                 pP       pPdif    23 01 14.6 +2.4
MUKA  Police Camp, M    108.92  81  i P       pPdif    23 01 09.2 -2.9
MUKA  Police Camp, M    108.92  81  i P       SP       23 11 53.1  -15
MUKA                                eP        SKKPdf   23 17 16.0  +14
EIL   Elat              108.94  62   PKiKP    PKiKP    23 03 01.7 +1.5
      comp=Z,91nm,0.8s,baz=136,slow=2.3,SNR=19
EIL                                  PKKPbc   PKKPbc   23 14 09.2 -0.7
      comp=Z,29nm,0.7s,baz=83,slow=10,SNR=2.0
DIKM  Dikmen            109.07  50   P        PKiKP    23 03 01.0 +0.9
KIRE  School, Kiremu    109.13  83  i P       Pdif     22 59 02.5 +1.5
KIRE                                 pP       pPdif    23 01 14.6 +1.3
KIRE  School, Kiremu    109.13  83  i P       pPdif    23 01 10.7 -2.6
KIRE  School, Kiremu    109.13  83  i P       SP       23 11 49.9  -20
KIRE                                eP        SKKPdf   23 17 09.3 +7.7
KLMR  Klimovskoe        109.14  29  eP        Pdif     22 58 58.8 -0.8
KLMR                                e                  23 03 46.3
KLMR                                eSP       SP       23 12 03.1 -4.2
KLMR                                eSS       SS       23 18 17.9 +2.0
KLMR                                eSSS      SSS      23 22 38.4
KLMR                                 pmax     pmax
      comp=Z,76nm,1.1s
KLMR  Klimovskoe        109.14  29  ePdif     Pdif     22 58 58.8 -0.8
KLMR                                 AMP               22 59 08.0
      comp=Z,76nm,1.1s
KLMR                                ePKiKP    PKiKP    23 02 58.9 -0.7
KLMR                                ePP       PP       23 03 46.4 +5.6
KLMR                                eSP       SP       23 12 03.2 -4.1
KLMR                                ePKKPbc   PKKPbc   23 14 06.4 -3.8
KLMR                                eSS       SS       23 18 18.0 +2.0
KLMR                                eSS       SS       23 18 18.0 +2.0
KLMR                                eSSS      SSS      23 22 38.5
KLMR                                eSSS      SSS      23 22 38.5
MOS   Moscow            109.15  35  i P       Pdif     22 58 53.2 -6.6
MOS                                  pmax     pmax
      comp=Z,69nm,1.3s
MMAI  Mount Meron Ar    109.38  59   PKiKP    PKiKP    23 03 02.4 +1.3
      comp=Z,108nm,0.8s,baz=69,slow=4.6,SNR=31
MMAI                                 PKKPbc   PKKPbc   23 14 06.3 -2.4
      comp=Z,60nm,0.5s,baz=83,slow=6.1,SNR=18
MMAI                                 PKKP     PKKPdf   23 14 24.1 +0.9
      comp=Z,182nm,0.9s,baz=89,slow=6.8,SNR=9.5
SHAW  Medical Clinic    109.39  81  i P       Pdif     22 59 02.9 +0.8
SHAW                                 pP       pPdif    23 01 19.4 +5.0
SHAW  Medical Clinic    109.39  81  i P       pPdif    23 01 14.0 -0.5
SHAW  Medical Clinic    109.39  81  i P       SP       23 12 03.1 -9.4
SHAW                                eP        SKKPdf   23 17 11.3  +10
GHAJ  Ghor Haditha      109.50  61   Pdif     Pdif     22 59 01.5 -0.4
DQRL  Deir Qamar        109.52  58  eP        PKiKP    23 03 02.1 +0.8
BHL   Bhannes           109.58  58  eP        PKiKP    23 03 01.6 +0.1
BNN   Bunyan            109.64  53   Pdif     Pdif     22 59 03.5 +0.9
SHBL  Chebaa            109.66  58  eP        PKiKP    23 03 01.7  0.0
RCY   Rachaya           109.74  58  eP        PKiKP    23 03 02.5 +0.7
BAHR  High School, B    109.84  81⇓iP        Pdif     22 59 04.9 +0.8
BAHR                                 pP       pPdif    23 01 17.5 +1.1
BAHR  High School, B    109.84  81  i P       pPdif    23 01 16.4 +0.1
GOND  University, Go    110.03  80  i P       Pdif     22 59 06.2 +1.2
GOND                                 pP       pPdif    23 01 19.0 +1.7
GOND  University, Go    110.03  80  i P       pPdif    23 01 17.6 +0.3
GOND  University, Go    110.03  80  i P       SP       23 12 16.2 -2.2
LPSR  Galich'ya Gora    110.42  38  ePKIKP    PKiKP    23 03 03.5 +1.2
LPSR                                ePPP      PPP      23 06 25.3
LPSR                                 pmax     pmax
      comp=Z,590nm,0.8s
ANN   Anapa             110.44  46d iPKIKP    PKiKP    23 03 01.6 -1.0
ANN                                 i                  23 03 46.3
ANN                                 e                  23 08 42.9
ANN                                 i SS      SS       23 18 30.9 -3.2
ANN                                 i SSS     SSS      23 22 46.6
ANN                                  pmax     pmax
      comp=Z,436nm,1.3s
SILA  Clinic, Silare    110.57  80  i P       Pdif     22 59 06.9 -0.4
SILA                                 pP       pPdif    23 01 21.5 +1.9
SILA  Clinic, Silare    110.57  80  i P       pPdif    23 01 17.6 -1.9
SILA  Clinic, Silare    110.57  80  i P       SP       23 12 15.3 -7.9
SILA                                eP        PKKSbc   23 17 35.6  -14
MERTO Secondary Scho    110.61  82  i P       Pdif     22 59 10.1 +2.4
MERTO                                pP       pPdif    23 01 20.1 +0.1
MERTO Secondary Scho    110.61  82  i P       pPdif    23 01 19.6 -0.4
MERTO Secondary Scho    110.61  82  i P       SP       23 12 07.6  -16
MERTO                               eP        PKKSbc   23 17 19.7  -30
ASF   Jabal al Asfar    110.64  60   PKiKP    PKiKP    23 03 05.3 +1.7
      comp=Z,202nm,0.9s,baz=221,slow=1.3,SNR=36
ASF                                  PKKPbc   PKKPbc   23 14 04.0 -0.7
      comp=Z,19nm,0.6s,baz=114,slow=12,SNR=1.6
ASF                                  PKKP     PKKPab   23 14 17.9 +1.1
      comp=Z,229nm,1.0s,baz=110,slow=2.8,SNR=13
FURI  Furi              110.75  84  i P       Pdif     22 59 11.0 +2.7
FURI                                 pP       pPdif    23 01 22.2 +1.6
FURI  Furi              110.75  84  i P       pPdif    23 01 20.4 -0.2
VSR   Storozhevoye      110.79  39  ePKIKP    PKiKP    23 03 02.2 -0.9
VSR                                  pmax     pmax
      comp=Z,440nm,1.3s
WADE  Clinic, Wadera    110.91  88⇓iP        Pdif     22 59 13.1 +4.2
WADE                                 pP       pPdif    23 01 24.6 +3.4
WADE  Clinic, Wadera    110.91  88  i P       pPdif    23 01 18.3 -2.9
WADE  Clinic, Wadera    110.91  88  i P       SP       23 12 09.0  -18
WADE                                eP        SKKPdf   23 17 21.2  +23
VORD  Divnogorie        110.91  39  ePKIKP    PKiKP    23 03 03.1 -0.2
VORD                                 pmax     pmax
      comp=Z,260nm,1.2s
VOI   Vohitsoka         110.92 118   Pdif     Pdif     22 59 09.1 +0.4
NGLE  Hospital, Nege    111.10  88  i P       Pdif     22 59 11.0 +1.3
NGLE  Hospital, Nege    111.10  88  i P       pPdif    23 01 18.6 -3.3
NGLE  Hospital, Nege    111.10  88  i P       SP       23 12 13.4  -15
NGLE                                eP        SKKPdf   23 17 26.0  +28
BILL  Bilibino          111.71 340  i P       Pdif     22 59 09.9 -1.0
BILL                                i                  23 03 03.2
BILL                                i                  23 03 57.4
BILL                                i                  23 08 58.8
BILL                                i PS      SP       23 12 36.6 +6.2
BILL                                 pmax     pmax
      comp=Z,135nm,1.3s
BILL                                 pmax     pmax
      comp=Z,83nm,1.2s
PRGR  Permogore         111.77  27  eP        Pdif     22 59 12.6 +1.3
PRGR                                e                  23 03 05.6
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PRGR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SOC	Sochi	112.20	47	i P	Pdif	22 59 14.5	+0.8
SOC				pmax	pmax		
	comp=Z,33nm,1.2s						
ABPO	Ambohimpanom	112.32	116	i P	Pdif	22 59 13.9	-1.1
ABPO	Ambohimpanom	112.32	116	i P	PP	23 04 06.9	+2.5
VRH	Novokhopyorsk	112.37	39	ePKIKP	PKiKP	23 03 04.9	-1.2
VRH				pmax	pmax		
	comp=Z,510nm,1.2s						
GINR	Hospital, Gini	112.50	87	i P	Pdif	22 59 18.5	+2.6
GINR				pP	pPdif	23 01 38.0	+10
GINR	Hospital, Gini	112.50	87	i P	SP	23 12 20.6	-21
GINR				eP	PKKSbc	23 17 30.8	-13
KTUT	Trabzon	112.51	50	⇓P	PKiKP	23 03 08.5	+1.8
BCA	Borcka	113.85	49	⇓P	PKiKP	23 03 11.0	+1.7
BCA	Borcka	113.85	49	⇓P	PKKPbc	23 13 53.6	-0.8
CHVG	Ch'k'valeri	114.03	48	⇓P	PKiKP	23 03 11.5	+1.9
CHVG	Ch'k'valeri	114.03	48	⇓PKIKP	PKiKP	23 03 11.5	+1.9
KIV	Kislovodsk	114.28	47	i PKIKP	PKPdf	23 03 09.9	-0.2
KIV				e		23 04 17.2	
KIV				ePPP	PPP	23 06 49.6	
KIV				ePS	PS	23 14 09.5	+2.7
KIV				eSS	SS	23 19 26.4	+1.9
KIV				pmax	pmax		
	comp=Z,201nm,1.0s						
SHA1	Shidzhatmaz	114.29	47	i PKIKP	PKiKP	23 03 10.5	+0.2
GOF	Gofitskoye	114.36	45	⇑iPKIKP	PKiKP	23 03 11.3	+1.2
GOF				pmax	pmax		
	comp=Z,587nm,0.9s						
KBZ	Khabaz	114.47	47	Pdiff	Pdif	22 59 24.9	+1.2
	comp=Z,5.8nm,0.9s,baz=269,slow=6.5,SNR=9.7						
KBZ				PKP	PKiKP	23 03 10.6	+0.3
	comp=Z,300nm,0.8s,baz=239,slow=2.4,SNR=62						
GURO	Guroymak-BITLI	114.49	52		PKiKP	23 03 11.1	+0.3
OUENC	Ouen Island, N	114.55	239		PKiKP	23 03 11.2	0.0
PYA1	Pyatigorsk	114.56	46	i PKIKP	PKPdf	23 03 09.8	-0.8
KIRV	Kirov	114.60	30	PKP	PKiKP	23 03 10.6	+0.5
	comp=Z,472nm,0.7s,baz=89,slow=0.4,SNR=27						
KIRV				PKKPbc	PKKPbc	23 13 50.9	-1.5
	comp=Z,140nm,0.6s,baz=73,slow=1.1,SNR=8.2						
KIRV	Kirov	114.60	30	i PKIKP	PKiKP	23 03 10.7	+0.6
LIFNC	LIFOU	114.86	241		PKiKP	23 03 12.2	+0.4
SIRT	Sirnak	114.92	54		PKiKP	23 03 12.1	+0.6
ONTNC	Ouen Toro	114.92	239		PKiKP	23 03 12.6	+0.7
NCK	Nalchik	115.00	47	i PKIKP	PKPdf	23 03 08.2	-3.2
DZM	Mont Dzumac	115.03	240	PKP	PKiKP	23 03 13.5	+1.2
	comp=Z,302nm,0.7s,baz=204,slow=3.1,SNR=144						
DZM				PKKPbc	PKKPbc	23 13 52.0	+1.6
	comp=Z,26nm,0.8s,baz=270,slow=22,SNR=2.3						
DZM	Mont Dzumac	115.03	240	PKPdf	PKiKP	23 03 13.1	+0.9
ATD	Arta Tunnel	115.15	82	PKP	PKiKP	23 03 14.3	+1.7
	comp=Z,333nm,0.9s,baz=256,slow=1.4,SNR=99						
ATD				PKKPbc	PKKPbc	23 13 50.0	+0.5
	comp=Z,52nm,0.9s,baz=292,slow=5.1,SNR=4.4						
ATD	Arta Tunnel	115.15	82	i P	Pdif	22 59 29.0	+1.5
ATD				pP	pPdif	23 01 40.0	+0.2
ATD	Arta Tunnel	115.15	82	i P	PKiKP	23 03 13.7	+1.1
AKH	Akhalkalaki	115.25	49	⇓P	PKiKP	23 03 14.4	+2.2
AKH	Akhalkalaki	115.25	49	⇓P	PKKPab	23 13 58.3	+1.9
ZEI	Tsey	115.34	48	i PKIKP	PKiKP	23 03 13.0	+0.7
ZEI				pmax	pmax		
	comp=Z,117nm,0.8s						
BELG	Belogornoye	115.64	37	PKP	PKPdf	23 03 11.9	-0.4
	comp=Z,504nm,0.8s,baz=268,slow=0.6,SNR=30						
BELG				PKKPbc	PKKPbc	23 13 47.7	-0.9
	comp=Z,939nm,0.9s,baz=341,slow=2.2,SNR=12						
TARA	Tarawa	115.92	266		PKiKP	23 03 14.5	+0.4
TAU	Tasmania Unive	116.29	210	PKIKP	PKiKP	23 03 14.6	+0.6
TAU	Tasmania Unive	116.29	210	PKPdf	PKiKP	23 03 14.6	+0.6
GNI	Garni	116.37	50	PKP	PKiKP	23 03 14.6	+0.3
	comp=Z,358nm,0.8s,baz=335,slow=1.6,SNR=50						
GNI	Garni	116.37	50	PKPdf	PKiKP	23 03 14.4	0.0
GNI	Garni	116.37	50	PKIKP	PKiKP	23 03 15.0	+0.6
GNI	Garni	116.37	50	Pdiff	Pdif	22 59 30.8	-1.7
GNI	Garni	116.37	50	PKPdf	PKiKP	23 03 15.0	+0.6
LHI	Lord Howe Isla	116.38	227	PKPdf	PKiKP	23 03 15.0	+0.5
GROC	Groznyy	116.64	47	eP	Pdif	22 59 34.1	+0.7
GROC				i		23 03 14.1	
GROC				e		23 04 38.1	
GROC				pmax	pmax		
	comp=Z,138nm,0.5s						
SANVU	Saraoutou	116.86	247	PKPdf	PKPdf	23 03 14.7	-1.0
TIXI	Tiksi	117.81	353	PKKPbc	PKKPbc	23 13 39.1	-2.5
	comp=Z,286nm,0.8s,baz=163,slow=0.4,SNR=15						
TIXI	Tiksi	117.81	353	PKIKP	PKPdf	23 03 15.4	-0.6
TIXI	Tiksi	117.81	353	PKPdf	PKPdf	23 03 15.4	-0.6
MAK	Makhachkala	117.91	47	d iP	Pdif	22 59 35.2	-3.9
MAK				i		23 03 18.8	
MAK				e		23 04 38.2	
MAK				e		23 05 31.4	
MAK				ePPP	PPP	23 07 16.6	
MAK				e		23 09 14.3	
MAK				eSS	SS	23 20 08.4	-2.5
MAK				eSSS	SSS	23 24 42.0	
MAK				pmax	pmax		
	comp=Z,565nm,0.8s						
RAYN	Ar Rayn	118.33	69	i PKiKP	PKiKP	23 03 18.6	+0.1
	SNR=61						
RAYN	Ar Rayn	118.33	69	PKIKP	PKPdf	23 03 18.2	-0.2
RAYN	Ar Rayn	118.33	69	PKPdf	PKPdf	23 03 18.2	-0.2
RER	Riviere de l'E	118.85	121	PKPdf	PKiKP	23 03 20.6	+0.9
MIB	Mutribah	119.70	62	eP	PKPdf	23 03 20.3	-0.5
NRIK	Noril'sk	119.72	9	Pdiff	Pdif	22 59 47.4	+0.9
	comp=Z,1.1nm,0.4s,baz=315,slow=10.0,SNR=1.9						
NRIK				PKP	PKiKP	23 03 20.4	+0.5
	comp=Z,76nm,0.7s,baz=7.8,slow=3.0,SNR=26						
NRIK				PKKPbc	PKKPbc	23 13 33.0	-1.8
	comp=Z,542nm,0.8s,baz=117,slow=5.2,SNR=26						
NRIK	Noril'sk	119.72	9	PKPdf	PKiKP	23 03 20.1	+0.3
RDF	Al-Radifah	119.95	63	eP	PKPdf	23 03 20.9	-0.4
ARU	Arti	119.98	30	PKP	PKiKP	23 03 20.7	+0.1
	comp=Z,168nm,0.6s,baz=294,slow=1.5,SNR=77						
ARU				PKKPbc	PKKPbc	23 13 31.7	-1.8
	comp=Z,72nm,0.8s,baz=25,slow=4.7,SNR=5.7						
UMR	Umm Al-Rimmam	120.04	62	eP	PKPdf	23 03 21.0	-0.5
KBD	Kabd	120.06	62	eP	PKPdf	23 03 20.3	-1.3
QRN	Al-Qurain	120.28	63	eP	PKPdf	23 03 21.0	-0.9
CAN	Canberra	120.73	218	PKIKP	PKiKP	23 03 22.9	-0.1
CAN	Canberra	120.73	218	PKPdf	PKiKP	23 03 22.9	-0.1
SVE	Sverdlovsk	120.77	29	c iPKIKP	PKPdf	23 03 21.7	-0.4
SVE				pmax	pmax		
	comp=Z,470nm,0.9s						
TOO	Toolangi	121.15	213	PKIKP	PKiKP	23 03 23.8	+0.1
TOO	Toolangi	121.15	213	PKPdf	PKiKP	23 03 23.8	+0.1
PET	Petropavlovsk	122.06	327	i PKIKP	PKPdf	23 03 22.4	-2.2
PET	Petropavlovsk	122.06	327		PKPdf	23 03 23.8	-0.8
MA2	Magadan	122.08	336	PKIKP	PKPdf	23 03 23.8	-0.7
MA2	Magadan	122.08	336	PKPdf	PKPdf	23 03 23.8	-0.7
ARMA	Armidale	122.22	224	PKPdf	PKiKP	23 03 26.2	+0.1
KWAJ	Kwajalein Atol	122.32	274	PKIKP	PKiKP	23 03 27.6	+1.1
KWAJ	Kwajalein Atol	122.32	274	PKPdf	PKiKP	23 03 27.6	+1.1
AKTO	Aktyubinsk	122.42	36	PKP	PKiKP	23 03 25.9	+0.2
	comp=Z,686nm,0.8s,baz=312,slow=1.5,SNR=113						
AKTO				PKKPbc	PKKPab	23 13 23.4	-1.0
	comp=Z,338nm,0.7s,baz=102,slow=4.8,SNR=10						
PEA0B	Petropavlovsk-	122.53	328	PKIKP	PKiKP	23 03 25.8	0.0
PEA0B	Petropavlovsk-	122.53	328	PKPdf	PKiKP	23 03 25.8	0.0
PETK	Petropavlovsk-	122.53	328	PKP	PKPdf	23 03 25.4	-0.2
	comp=Z,250nm,0.9s,baz=82,slow=6.4,SNR=52						
PETK				PP	PP	23 05 14.1	+1.2
	comp=Z,174nm,1.0s,baz=71,slow=12,SNR=4.0						
PETK				PKKPbc	PKKPab	23 13 23.5	-0.4
	comp=Z,57nm,0.7s,baz=313,slow=0.4,SNR=4.6						
PETK	Petropavlovsk-	122.53	328	PKIKP	PKiKP	23 03 26.1	+0.3
PETK	Petropavlovsk-	122.53	328		PKiKP	23 03 26.1	+0.3
PETK				PP	PP	23 05 10.9	-2.0
SAKB	Bahrain	122.81	66	PKPdf	PKPdf	23 03 26.3	-0.6
SHMA	Al-Shehemyia	123.20	66	PKPdf	PKPdf	23 03 26.7	-0.9
TRNA	Turayna	123.50	67	PKPdf	PKPdf	23 03 27.7	-0.6
AIS	Amsterdam Isla	123.53	150	PKPdf	PKPdf	23 03 28.1	+0.1
H11N3	WAKE ISLAND Hy	123.66	287	PKP	PKiKP	23 03 30.0	+1.3
	baz=214,slow=5.7,SNR=53						
H11N2	WAKE ISLAND Hy	123.67	287	PKP	PKiKP	23 03 29.5	+0.7
	baz=214,slow=5.7,SNR=31						
H11N1	WAKE ISLAND Hy	123.67	287	PKP	PKiKP	23 03 29.9	+1.2
	baz=214,slow=5.7,SNR=126						
KHOR	Al-Khor Airpor	123.71	66	PKPdf	PKPdf	23 03 28.1	-0.5
H11S2	WAKE ISLAND Hy	123.84	285	PKP	PKiKP	23 03 29.5	+0.3
	baz=224,slow=5.6,SNR=9.8						
H11S1	WAKE ISLAND Hy	123.85	285	PKP	PKiKP	23 03 29.5	+0.3
	baz=224,slow=5.6,SNR=13						
H11S3	WAKE ISLAND Hy	123.86	285	PKP	PKiKP	23 03 29.9	+0.7
	baz=224,slow=5.6,SNR=14						
WAKE	Wake Island	123.90	286		PKiKP	23 03 29.4	-0.1
SLWR	Sila	123.98	68	PKPdf	PKPdf	23 03 28.6	-0.6
ABKAR	Akbulak array	124.05	37	PKPdf	PKiKP	23 03 29.3	+0.3
ABKAR	Akbulak array	124.05	37	PKPdf	PKiKP	23 03 29.4	+0.5
MSEY	Mahe Island	124.54	103	i PKiKP	PKiKP	23 03 30.9	-0.1
	SNR=14						
MSEY	Mahe Island	124.54	103	PKIKP	PKiKP	23 03 31.0	-0.1
MSEY	Mahe Island	124.54	103	PKPdf	PKiKP	23 03 31.0	0.0
SKR	Severo-Kuril's	124.56	326	ePKIKP	PKPdf	23 03 27.5	-2.0
SKR				e		23 05 23.0	
SKR				eSS	SS	23 21 29.4	-4.2
SKR				eSSS	SSS	23 26 19.7	
SKR				MLR	MLR		
	comp=Z,9µm,21.0s						
SKR				MLR	MLR		
	comp=Z,8µm,18.0s						
GHWR	Ruwais	125.06	68	PKPdf	PKPdf	23 03 30.6	-0.6
HNR	Honiara	125.60	250	PKP	PKPdf	23 03 31.8	-0.8
	comp=Z,590nm,0.7s,baz=151,slow=2.5,SNR=29						
HNR	Honiara	125.60	250		PKPdf	23 03 31.5	-1.0
EIDS	Eidsvold	125.64	228		PKPdf	23 03 32.1	-0.3
MZWR	Madinat Zayed	126.00	68	PKiKP	PKiKP	23 03 34.5	+1.0
SOCY	Socotra	126.07	83	PKPdf	PKPdf	23 03 33.7	+0.2
WHFO	Wadi Hawf	126.09	76	PKiKP	PKPdf	23 03 33.4	0.0
WHFO				PKiKP	PKPdf	23 03 33.5	0.0
	SNR=35						
YAK	Yakutsk	126.53	348	ePKIKP	PKPdf	23 03 32.0	-0.9
YAK				e		23 05 34.4	
YAK				pmax	pmax		
	comp=Z,2µm,1.1s						
YAK				pmax	pmax		
	comp=E,101nm,1.4s						
YAK				pmax	pmax		
	comp=N,187nm,1.4s						
YAK				pmax	pmax		
	comp=Z,2µm,2.3s						
YAK				pmax	pmax		
	comp=N,2µm,2.3s						
YAK				pmax	pmax		
	comp=E,412nm,2.1s						
YAK	Yakutsk	126.53	348	PKPdf	PKPdf	23 03 32.6	-0.3
AJN	Ajban	126.94	67	i PKPdf	PKPdf	23 03 34.7	-0.1
	SNR=32						
AJN	Ajban	126.94	67	PKiKP	PKiKP	23 03 35.8	+0.4
	SNR=11						
GEYT	Alibeck	127.01	50	PKhKP	PKPpre	23 03 19.3	
	comp=E,4.5nm,0.4s,baz=232,slow=7.3,SNR=5.2						
GEYT				PKP	PKiKP	23 03 35.0	-0.2
	comp=E,266nm,0.8s,baz=251,slow=4.5,SNR=52						
GEYT				pPKP	pPKPdf	23 05 54.2	-1.1
	comp=E,87nm,0.8s,baz=56,slow=3.6,SNR=3.2						
GEYT	Alibeck	127.01	50		PKiKP	23 03 35.2	-0.1
GYA0B	ALIBECK ARRAY	127.01	50		PKiKP	23 03 35.1	-0.2
ASUD	Al Ashush, Dub	127.24	67	i PKiKP	PKiKP	23 03 35.8	-0.3
	SNR=26						
UMQ	Umm Al-Quwin	127.45	66	i PKiKP	PKiKP	23 03 36.4	0.0
	SNR=30						
FAQ	Al Faqa, Dubai	127.47	67	i PKPdf	PKPdf	23 03 35.6	-0.3
	SNR=84						
BRVK	Borovoye	127.49	28	PKIKP	PKPdf	23 03 34.9	-0.2
BRVK	Borovoye	127.49	28	PKPdf	PKPdf	23 03 34.9	-0.2
STKA	Stephens Creek	127.51	215	PKhKP	PKPpre	23 03 20.5	
	comp=E,29nm,0.8s,baz=95,slow=4.0,SNR=8.0						
STKA				PKP	PKiKP	23 03 36.6	+0.2
	comp=E,3µm,0.7s,baz=109,slow=2.4,SNR=265						
STKA				pPKP	pPKPdf	23 05 57.3	+0.8
	comp=E,181nm,0.6s,baz=153,slow=4.1,SNR=4.1						
STKA	Stephens Creek	127.51	215	PKPdf	PKiKP	23 03 36.4	-0.1
NAZ	Nazwa, Dubai	127.51	67	i PKPdf	PKPdf	23 03 35.6	-0.3
	SNR=30						
BVAR	Borovoye Array	127.56	28	PKP	PKiKP	23 03 36.1	+0.2
	comp=E,302nm,0.9s,baz=230,slow=8.1,SNR=50						
BVAR				pPKP	pPKPdf	23 05 56.5	+0.7
	comp=E,326nm,0.9s,baz=251,slow=7.5,SNR=7.1						
BVAR				SKKP		23 16 32.6	
	comp=E,38nm,0.7s,baz=180,slow=5.9,SNR=2.7						
ALNE	Al Ain	127.68	68	i PKPdf	PKPdf	23 03 36.3	0.0
	SNR=40						
SHME	Shamm	127.82	65	i PKPdf	PKPdf	23 03 36.0	-0.5
	SNR=16						
SHME	Shamm	127.82	65	PKiKP	PKiKP	23 03 37.8	+0.7
	SNR=16						
SHAO	Shalim	127.85	75	i PKPdf	PKPdf	23 03 36.4	-0.3
	SNR=19						
ASHO	Ashiyiah	127.90	67	i PKPdf	PKPdf	23 03 36.2	-0.6
	SNR=30						
MSFE	Esma-Masafi	127.92	66	i PKPdf	PKPdf	23 03 36.2	-0.6
	SNR=40						
HATD	Hatta, Dubai	127.95	67	i PKPdf	PKPdf	23 03 36.6	-0.2
	SNR=45						
BANOM	Banah	127.98	65	i PKPdf	PKPdf	23 03 36.5	-0.4
	SNR=40						
UOSS	Minazif	128.00	67	i PKPdf	PKPdf	23 03 35.9	-1.0
	SNR=24						
UOSS	Minazif	128.00	67	PKiKP	PKiKP	23 03 37.3	-0.3
UOSS	Minazif	128.00	67	PKPdf	PKiKP	23 03 37.2	-0.3
MDH	Madha	128.05	66	i PKPdf	PKPdf	23 03 36.1	-0.9
	SNR=32						
SOHO	SOHO	128.38	68	i PKPdf	PKPdf	23 03 36.6	-1.0
	SNR=74						
SOHO	SOHO	128.38	68	PKPdf	PKPdf	23 03 37.6	-0.1
BBOO	Buckleboo	129.71	210	PKPdf	PKPdf	23 03 40.4	+0.4
WSAR	Wadi Sarin	130.38	69	PKhKP	PKPpre	23 03 30.4	
	comp=E,20nm,0.8s,baz=249,slow=9.8,SNR=10						
WSAR				PKP	PKiKP	23 03 42.7	+0.2
	comp=E,1µm,1.0s,baz=254,slow=2.1,SNR=88						
WSAR				SKPbc	SKPab	23 06 10.0	+0.4
	comp=E,1µm,0.8s,baz=282,slow=4.1,SNR=18						
NKL	Nikolayevsk	130.57	335	i PKIKP	PKiKP	23 03 41.7	-0.1
NKL				e		23 06 04.7	
NKL				MLR	MLR		
	comp=E,93nm,20.0s						
NKL				MLR	MLR		
	comp=N,34nm,12.0s						
NKL				MLR	MLR		
	comp=Z,15µm,26.0s						
BRZS	Berezniki	130.60	30	ePKP	PKPpre	23 03 29.7	
	baz=30						
BRZS				ePP	pPKPdf	23 06 02.2	+0.5
	baz=30						
BRZS	Berezniki	130.60	30	ePKHKP	PKPpre	23 03 29.6	
BRZS				e		23 06 02.1	
PATS	Pohnpei	131.21	270		PKiKP	23 03 44.6	+0.3
HRA	Herat	131.25	53		PKPdf	23 03 43.4	+0.3
KUR	Kuril'sk	132.13	323	i PKHKP	PKPpre	23 03 22.6	
KUR				e		23 06 20.1	
KUR				i		23 17 17.2	
KUR				i SSS	SSS	23 28 17.8	
KUR				pmax	pmax		
	comp=Z,11µm,2.0s						
KUR				pmax	pmax		
	comp=Z,4µm,1.5s						
CTA	Charters Tower	132.34	230	PKhKP	PKPpre	23 03 27.7	
	comp=Z,20nm,0.5s,baz=116,slow=3.7,SNR=22						
CTA				PKP	PKPdf	23 03 45.6	+0.3
	comp=Z,597nm,0.8s,baz=174,slow=1.0,SNR=50						
CTA				pPKP	pPKPdf	23 06 04.6	-1.4
	comp=Z,76nm,0.5s,baz=120,slow=3.0,SNR=3.1						
CTA				SKPbc	SKPbc	23 06 14.4	-1.8
	comp=Z,488nm,0.9s,baz=137,slow=3.2,SNR=13						
CTAO	Charters Tower	132.34	230	PKIKP	PKPdf	23 03 45.5	+0.3
CTAO	Charters Tower	132.34	230	PKPdf	PKPdf	23 03 45.5	+0.3
ZAA0	Zalesovo Array	132.65	19	PKPdf	PKPdf	23 03 45.1	+0.3
ZALV	Zalesovo Beam	132.65	19	PKhKP	PKPpre	23 03 28.8	
	comp=Z,18nm,0.4s,baz=308,slow=2.1,SNR=20						
ZALV				PKP	PKiKP	23 03 46.8	+0.8
	comp=Z,2µm,0.7s,baz=272,slow=2.5,SNR=37						
ZALV				pPKP	pPKPdf	23 06 03.9	-1.6
	comp=Z,1µm,1.1s,baz=299,slow=3.0,SNR=6.3						
ZALV				SKPbc	SKPbc	23 06 16.0	0.0
	comp=Z,876nm,1.0s,baz=340,slow=3.8,SNR=5.5						
ZALV	Zalesovo Beam	132.65	19	PKPdf	PKiKP	23 03 46.3	+0.2
BOD	Bodaibo	132.75	356	ePKHKP	PKPpre	23 03 26.6	
BOD				pmax	pmax		
	comp=Z,147nm,1.1s						
UGL	Uglegorsk	132.84	331	ePKIKP	PKPdf	23 03 45.4	+0.1
UGL				e		23 06 14.5	
UGL				e		23 17 19.3	
UGL				pmax	pmax		
	comp=Z,8µm,2.0s						
UGL				pmax	pmax		
	comp=Z,1µm,1.6s						
UGL				pmax	pmax		
	comp=Z,14µm,5.5s						
UGL				pmax	pmax		
	comp=E,32µm,14.0s						
UGL				pmax	pmax		
	comp=N,18µm,13.0s						
UGL				pmax	pmax		
	comp=Z,870nm,1.3s						
KURK	Kurchatov	132.86	26	PKIKP	PKPdf	23 03 45.8	+0.5
KURK	Kurchatov	132.86	26		PKPdf	23 03 45.8	+0.5
KURBB	Kurchatov Arra	132.89	26	SKPbc	SKPbc	23 06 17.7	+0.8
	comp=Z,241nm,0.7s,baz=318,slow=3.9,SNR=2.7						
KURBB				SKKP		23 16 16.8	
	comp=Z,97nm,1.0s,baz=130,slow=4.1,SNR=3.4						
BRLS	Borolday	133.07	39	ePKP	PKPpre	23 03 36.2	
	baz=40						
BRLS				ePP	PP	23 06 19.3	-1.9
	baz=40						
BRLS	Borolday	133.07	39	ePKHKP	PKPpre	23 03 36.1	
BRLS				e		23 06 19.3	
KKAR	Karatay Array	133.46	39	PKIKP	PKiKP	23 03 47.7	-0.4
KKAR	Karatay Array	133.46	39		PKiKP	23 03 47.7	-0.4
TAS	Tashkent	133.60	42	PKIKP	PKiKP	23 03 47.8	-0.6
TAS	Tashkent	133.60	42		PKiKP	23 03 47.8	-0.6
IUG	Iuzhnay	133.66	40	ePKP	PKPpre	23 03 33.4	
	baz=40						
IUG				ePP	PP	23 06 20.9	-4.2
	baz=40						
IUG	Iuzhnay	133.66	40	ePKHKP	PKPpre	23 03 33.4	
IUG				e		23 06 20.8	
SEM	Semipalatinsk	133.78	25	ePKP	PKPpre	23 03 34.1	
	baz=25						
SEM				ePP	PP	23 06 20.6	-4.7
	baz=25						
SEM	Semipalatinsk	133.78	25	ePKHKP	PKPpre	23 03 34.0	
YSS	Yuzh-Sakhalins	133.92	328	d iPKIKP	PKPdf	23 03 48.0	+0.6
YSS				eSS	SS	23 23 33.5	+6.6
YSS				pmax	pmax		
	comp=Z,10µm,6.3s						
YSS	Yuzh-Sakhalins	133.92	328		PKPdf	23 03 47.6	+0.3
YUK	Yuzh-Kuril'sk	133.99	323	d iPKIKP	PKPdf	23 03 47.2	-0.4
YUK				i		23 06 31.8	
YUK				eSS	SS	23 23 26.6	-1.4
YUK				pmax	pmax		
	comp=Z,4µm,1.3s						
YUK				pmax	pmax		
	comp=E,802nm,1.4s						
YUK				pmax	pmax		
	comp=N,1µm,0.7s						
DZA	Taraz	134.08	39	ePKP	PKPpre	23 03 34.1	
	baz=39						
DZA				ePP	PP	23 06 21.5	-6.0
	baz=39						
DZA	Taraz	134.08	39	ePKHKP	PKPpre	23 03 34.0	
BTLS	Baital	134.43	35	ePKP	PKPpre	23 03 36.5	
	baz=35						
BTLS				ePP	PP	23 06 23.8	-5.7
	baz=35						
H01W2	Cape Leeuwin H	134.48	186	PKP	PKPpre	23 03 35.6	
	baz=160,slow=4.5,SNR=175						
H01W1	Cape Leeuwin H	134.48	186	PKP	PKPpre	23 03 35.2	
	baz=160,slow=4.5,SNR=180						
H01W3	Cape Leeuwin H	134.49	186	PKP	PKPpre	23 03 37.1	
	baz=160,slow=4.5,SNR=120						
ZEA	Zeya	134.59	345	ePKHKP	PKPpre	23 03 36.0	
ZEA				pmax	pmax		
	comp=E,90nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,440nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,4µm,2.7s						
RABL	Rabaul	134.63	253		PKiKP	23 03 50.6	-0.7
CHGR	Chuyangaron	134.78	45		PKPdf	23 03 49.5	+0.1
FORT	Forrest	134.97	203	PKPdf	PKPdf	23 03 49.7	-0.2
BTK	Batken	135.24	42	PKIKP	PKiKP	23 03 51.1	-0.8
BTK	Batken	135.24	42		PKiKP	23 03 51.1	-0.8
GAR	Garm	135.42	44		PKiKP	23 03 51.8	-0.5
EKS2	Erkin-Say	135.69	38	P	PKPpre	23 03 39.0	
	SNR=14						
USP	Ospenovka	135.76	36	P	PKPpre	23 03 39.9	
	SNR=10						
JKA	Kamikawa-asahi	135.82	325		PKPdf	23 03 51.8	+0.7
ASAJ	Asahikawa	135.82	325	PKIKP	PKPdf	23 03 51.8	+0.8
AML	Almayashu	135.95	38	P	PKPpre	23 03 40.4	
	SNR=28						
AML	Almayashu	135.95	38	i PKPdf	PKPpre	23 03 39.9	
	SNR=43						
CHMS	Chumysh	136.07	37	P	PKiKP	23 03 54.5	+1.1
	SNR=12						
FRU1	Bishkek	136.11	37	PKIKP	PKiKP	23 03 52.9	-0.7
FRU1	Bishkek	136.11	37		PKiKP	23 03 52.9	-0.7
AAK	Ala-Archa	136.13	37	SKPbc	SKPbc	23 06 29.9	+2.2
	comp=Z,520nm,0.7s,baz=284,slow=2.4,SNR=8.9						
AAK	Ala-Archa	136.13	37	P	PKPpre	23 03 40.6	
	SNR=15						
AAK	Ala-Archa	136.13	37	i PKPdf	PKPpre	23 03 40.7	
	SNR=26						
AAK	Ala-Archa	136.13	37	PKIKP	PKiKP	23 03 53.1	-0.6
AAK	Ala-Archa	136.13	37		PKiKP	23 03 53.1	-0.6
DRK	Karamyk	136.18	43		PKPdf	23 03 53.0	+0.8
UCH	Uchtor	136.39	38	P	PKPpre	23 03 43.6	
	SNR=18						
KBK	Karagaybulak	136.39	37	P	PKPpre	23 03 41.3	
	SNR=14						
KUU	Kurty	136.42	35	ePKP	PKPpre	23 03 42.5	
	baz=34						
KUU				ePP	PP	23 06 39.9	-1.9
	baz=34						
KUU	Kurty	136.42	35	ePKHKP	PKPpre	23 03 42.5	
KUU				e		23 06 39.9	
KBL	Kabul	136.46	50	PKIKP	PKPdf	23 03 53.1	+0.3
KBL	Kabul	136.46	50		PKPdf	23 03 53.1	+0.3
TKM2	Tokmak 2	136.61	36	P	PKPpre	23 03 42.7	
	SNR=15						
JEM	Erimo	136.78	322		PKPdf	23 03 50.0	-2.8
ERM	Erimo	136.78	322	i PKIKP	PKPdf	23 03 50.2	-2.7
ERM	Erimo	136.78	322		PKPdf	23 03 50.1	-2.7
TDK	Taldyqorghan	136.81	32	ePKP	PKPpre	23 03 42.1	
	baz=32						
TDK	Taldyqorghan	136.81	32	ePKHKP	PKPpre	23 03 42.0	
CHKK	Chushkaly	136.81	34	ePKP	PKPpre	23 03 43.6	
	baz=34						
ARXS	Arharly	137.03	33	ePKHKP	PKPpre	23 03 42.6	
BOOM	Boomskoye usch	137.07	36	PKIKP	PKPdf	23 03 54.3	+0.6
BOOM	Boomskoye usch	137.07	36		PKPdf	23 03 54.3	+0.6
DGZ	Jazzator, Alta	137.11	21	i PKIKP	PKPdf	23 03 54.2	+0.7
KLR	Kul'dur	137.12	338	SKPbc	SKPbc	23 06 29.3	-0.8
	comp=Z,60nm,0.5s,baz=48,slow=4.1,SNR=1.6						
KLR	Kul'dur	137.12	338	i PKIKP	PKPdf	23 03 53.5	+0.2
AAA	Alma-Ata	137.18	35	ePKP	PKPpre	23 03 46.3	
	baz=35						
AAA	Alma-Ata	137.18	35	ePKHKP	PKPpre	23 03 46.2	
PMG	Port Moresby	137.19	244	PKhKP	PKPpre	23 03 43.5	
	comp=Z,241nm,0.7s,baz=60,slow=4.3,SNR=12						
PMG				PKP	PKiKP	23 03 55.5	-1.0
	comp=Z,2µm,1.0s,baz=59,slow=5.6,SNR=39						
PMG				pPKP	pPKPdf	23 06 13.9	-1.2
	comp=Z,908nm,1.1s,baz=50,slow=2.1,SNR=6.4						
PMG				SKPbc	SKPbc	23 06 30.9	-0.5
	comp=Z,845nm,1.1s,baz=168,slow=2.5,SNR=4.9						
PMG	Port Moresby	137.19	244		PKPdf	23 03 54.6	+0.2
MAKZ	Makanchi	137.25	27	PKIKP	PKPdf	23 03 53.0	-0.7
MAKZ	Makanchi	137.25	27		PKPdf	23 03 53.0	-0.7
JEW	Eniwo	137.27	324		PKPdf	23 03 54.4	+0.7
MDOK	Medeo	137.29	35	ePKP	PKPpre	23 03 45.7	
	baz=35						
MDOK	Medeo	137.29	35	ePKHKP	PKPpre	23 03 45.6	
MK31	Makanchi Array	137.40	27	PKIKP	PKPdf	23 03 53.1	-0.9
MK31	Makanchi Array	137.40	27		PKPdf	23 03 53.1	-0.9
MKAR	Makanchi Array	137.40	27	PKhKP	PKPpre	23 03 43.4	
	comp=Z,45nm,0.7s,baz=352,slow=3.2,SNR=78						
MKAR				PKP	PKPdf	23 03 54.8	+0.9
	comp=Z,459nm,0.8s,baz=349,slow=1.9,SNR=42						
MKAR				SKPbc	SKPbc	23 06 31.4	+0.4
	comp=Z,186nm,0.7s,baz=335,slow=3.8,SNR=5.6						
MKAR	Makanchi Array	137.40	27		PKPdf	23 03 53.2	-0.7
ULHL	Ulahol	137.40	36	P	PKPpre	23 03 45.6	
	SNR=9.8						
KPKS	Kokpek	137.99	33	ePKP	PKPpre	23 03 47.1	
	baz=33						
KPKS	Kokpek	137.99	33	ePKHKP	PKPpre	23 03 47.0	
ZSN	Zaisan	138.00	25	ePKP	PKPpre	23 03 46.9	
	baz=24						
ZSN	Zaisan	138.00	25	ePKHKP	PKPpre	23 03 46.9	
KDJ	Kajisay	138.02	36	PKIKP	PKPdf	23 03 55.2	-0.2
KDJ	Kajisay	138.02	36		PKPdf	23 03 55.2	-0.2
SATY	Saty	138.11	34	ePKP	PKPpre	23 03 47.3	
	baz=34						

SATY	**Saty**	**138.11**	**34**	*e*PKHKP	PKPpre	23 03 47.3	
AS31	**Alice Springs**	**138.15**	**215**		**PKPdf**	**23 03 55.9**	**-0.2**
ASAR	**Alice Springs**	**138.15**	**215**	PKhKP	PKPpre	23 03 45.5	
	comp=Z,97nm,0.4s,baz=135,slow=3.6,SNR=235						
ASAR				PKP	**PKPdf**	**23 03 56.8**	**+0.7**
	comp=Z,2µm,0.8s,baz=126,slow=2.0,SNR=30						
ASAR				SKPbc	**SKPbc**	**23 06 33.0**	**-0.9**
	comp=Z,406nm,0.7s,baz=135,slow=2.9,SNR=8.3						
ASAR	**Alice Springs**	**138.15**	**215**		**PKPdf**	**23 03 56.1**	**0.0**
COEN	**Coen**	**138.27**	**235**		**PKPdf**	**23 03 56.6**	**+0.2**
IRK	**Irkutsk**	**138.31**	**4**	*e*PKHKP	PKPpre	23 03 47.0	
IRK				*e*		23 03 56.2	
IRK				pmax	pmax		
	comp=Z,329nm,2.9s						
TEY	**Ternei**	**138.34**	**330**⇑	*e*PKHKP	PKPpre	23 03 46.1	
TEY				pmax	pmax		
	comp=E,300nm,2.6s						
UZB	**Uzynbulak**	**138.39**	**33**	*e*PKP	PKPpre	23 03 49.4	
	baz=34						
UZB	**Uzynbulak**	**138.39**	**33**	*e*PKHKP	PKPpre	23 03 49.3	
MOY	**Mondy**	**138.54**	**8**	*e*PKHKP	PKPpre	23 03 49.5	
MOY				pmax	pmax		
	comp=Z,2µm,2.5s						
CIT	**Chita**	**138.55**	**356**	*e*PKIKP	**PKPdf**	**23 03 56.8**	**+0.9**
CIT				*e*	**PP**	**23 06 52.5**	**-1.6**
CIT				*e*		23 07 10.4	
CIT				pmax	pmax		
	comp=Z,3µm,2.3s						
SHLS	**Shalkode**	**138.62**	**33**	*e*PKP	PKPpre	23 03 48.6	
	baz=33						
SHLS	**Shalkode**	**138.62**	**33**	*e*PKHKP	PKPpre	23 03 48.5	
JTM	**Tenmabayashi**	**138.77**	**322**		**PKPdf**	**23 03 55.8**	**-0.8**
TLY	**Talaya**	**138.82**	**5**	SKPbc	**SKPbc**	**23 06 36.1**	**+1.3**
	comp=Z,66nm,0.7s,baz=272,slow=2.7,SNR=3.9						
TLY	**Talaya**	**138.82**	**5**	*i* PKIKP	**PKPdf**	**23 03 53.2**	**-3.2**
TLY	**Talaya**	**138.82**	**5**		**PKPdf**	**23 03 56.5**	**+0.2**
H08S1	**Diego Carcia H**	**139.32**	**115**	PKP	**PKPdf**	**23 03 54.4**	**-3.6**
	baz=334,slow=6.3,SNR=44						
H08S3	**Diego Garcia H**	**139.33**	**115**	PKP	**PKPdf**	**23 03 53.9**	**-4.1**
	baz=334,slow=6.3,SNR=238						
H08S2	**Diego Garcia H**	**139.33**	**115**	PKP	**PKPdf**	**23 03 53.3**	**-4.7**
	baz=334,slow=6.3,SNR=156						
DGAR	**Diego Garcia**	**139.40**	**115**	PKHKP	PKPpre	23 03 52.6	
DGAR	**Diego Garcia**	**139.40**	**115**		PKPpre	23 03 52.6	
MANU	**Manus Island**	**139.86**	**254**	PKPdf	**PKPdf**	**23 03 56.6**	**-2.8**
MORW	**Morawa**	**139.97**	**190**		**PKPdf**	**23 03 59.0**	**-0.2**
NIL	**Nilore**	**140.00**	**49**	PKIKP	**PKPdf**	**23 03 59.6**	**+0.5**
NIL	**Nilore**	**140.00**	**49**		**PKPdf**	**23 03 59.6**	**+0.5**
ZAK	**Zakamensk**	**140.07**	**6**	*e*PKIKP	**PKPdf**	**23 03 54.2**	**-4.6**
ZAK				pmax	pmax		
	comp=Z,964nm,1.3s						
HIA	**Hailar**	**140.46**	**349**	PKIKP	**PKPdf**	**23 03 59.5**	**+0.1**
HIA	**Hailar**	**140.46**	**349**		**PKPdf**	**23 03 59.5**	**+0.1**
JASL	**Jaisalmer**	**140.59**	**60**	*e*x	**PKPdf**	**23 03 55.8**	**-4.5**
JMM	**Marumori**	**140.68**	**319**		**PKPdf**	**23 03 59.7**	**-0.4**
WB2	**Warramunga Arr**	**140.72**	**219**	PKPdf	**PKPdf**	**23 04 00.6**	**-0.2**
WRA	**Warramunga Arr**	**140.73**	**219**	PKhKP	PKPpre	23 03 54.9	
	comp=Z,1µm,0.6s,baz=142,slow=3.1,SNR=2012						
WRA				PKP	**PKPdf**	**23 04 02.0**	**+1.3**
	comp=Z,3µm,0.6s,baz=150,slow=1.7,SNR=44						
WRA				pPKP	pPKPdf	23 06 21.1	-0.5
	comp=Z,290nm,0.7s,baz=141,slow=1.6,SNR=4.5						
WRA				SKPbc	**SKPbc**	**23 06 40.5**	**-0.4**
	comp=Z,767nm,0.7s,baz=143,slow=2.3,SNR=5.2						
WRA	**Warramunga Arr**	**140.73**	**219**		**PKPdf**	**23 04 00.8**	**0.0**
WRAB	**Tennant Creek**	**140.73**	**219**	PKIKP	**PKPdf**	**23 04 00.7**	**-0.1**
WRAB	**Tennant Creek**	**140.73**	**219**		**PKPdf**	**23 04 00.7**	**-0.1**
WB0	**Warramunga Arr**	**140.83**	**220**		**PKPdf**	**23 04 01.6**	**+0.6**
USRK	**Ussuriysk Ar.**	**141.11**	**333**	PKhKP	PKPpre	23 03 56.3	
	comp=Z,484nm,0.7s,baz=15,slow=2.0,SNR=147						
USRK				SKPbc	**SKPbc**	**23 06 40.7**	**-0.4**
	comp=Z,135nm,0.6s,baz=351,slow=2.5,SNR=4.6						
MDJ	**Mudanjiang**	**141.78**	**336**	PKP	**PKPdf**	**23 03 57.2**	**-4.7**
MDJ				PP	**PP**	**23 07 15.7**	**+1.9**
MDJ				SS	SS	23 25 00.4	+2.5
MDJ				AMB	AMB		
	comp=Z,19µm,17.0s						
MDJ	**Mudanjiang**	**141.78**	**336**		**PKPdf**	**23 04 01.9**	**0.0**
MDJ	**Mudanjiang**	**141.78**	**336**	SS	SS	23 25 00.4	+2.5
MDJ	**Mudanjiang**	**141.78**	**336**	SS	SS	23 25 00.4	+2.5
JYT	**Yasato**	**142.01**	**317**	P	**PKPdf**	**23 03 58.6**	**-3.9**
WMQ	**Urumqi**	**142.09**	**25**	PKP	**PKPdf**	**23 03 59.9**	**-2.7**
WMQ				AMB	AMB		
	comp=Z,23µm,11.1s						
KAAM	**Kaadhehdhoo**	**142.77**	**103**	PKPdf	**PKPdf**	**23 04 02.9**	**-1.6**
ULN	**Ulaanbaatar**	**142.84**	**2**	PKIKP	**PKPdf**	**23 04 02.7**	**-1.2**
ULN	**Ulaanbaatar**	**142.84**	**2**	PKPdf	**PKPdf**	**23 04 02.7**	**-1.2**
SONM	**Songino Array**	**142.84**	**3**	PKP	**PKPdf**	**23 04 01.8**	**-2.0**
	comp=Z,2µm,0.8s,baz=327,slow=2.9,SNR=972						
SONM				SKPbc	**SKiKP**	**23 06 46.2**	**-0.2**
	comp=Z,204nm,0.7s,baz=322,slow=1.6,SNR=7.1						
SONM				SKKPbc	**SKKPab**	**23 15 00.1**	**-1.6**
	comp=Z,274nm,1.0s,baz=183,slow=4.6,SNR=6.3						
DHRM	**DHARAMSHALA**	**142.92**	**49**	*e*P	**PKPdf**	**23 04 02.4**	**-2.2**
JRY	**Ryogami san**	**142.99**	**318**	P	**PKPdf**	**23 04 01.5**	**-2.8**
MJAR	**Matsushiro Arr**	**143.13**	**319**	PKP	PKPab	23 04 02.1	-0.5
	comp=Z,4µm,0.9s,baz=77,slow=1.6,SNR=492						
MJAR				SKPbc	**SKiKP**	**23 06 46.8**	**-0.5**
	comp=Z,102nm,0.5s,baz=110,slow=2.4,SNR=6.3						
MJAR				SKKPbc	**SKKPbc**	**23 15 00.3**	**-0.1**
	comp=Z,102nm,1.0s,baz=212,slow=3.2,SNR=4.2						
MJAR	**Matsushiro Arr**	**143.13**	**319**	PKPdf	PKPab	23 04 02.0	-0.6
MAJO	**Matsushiro**	**143.13**	**319**	PKIKP	PKPab	23 04 02.3	-0.3
MAJO	**Matsushiro**	**143.13**	**319**	PKPdf	PKPab	23 04 02.3	-0.3
MAT	**Matsushiro**	**143.13**	**319**	PKP	PKPab	23 04 01.3	-1.3
MAT	**Matsushiro**	**143.13**	**319**	P	PKPab	23 04 01.3	-1.3
MJB9	**Matsu-Tunnel**	**143.13**	**319**		PKPab	23 04 02.2	-0.4
JOD2	**Odawara 2**	**143.29**	**317**	P	PKPab	23 04 02.2	-1.1
BHK	**Bhakra**	**143.39**	**51**	*e*P	PKPab	23 04 02.1	-1.7
JGN	**Niukaw**	**143.89**	**319**	P	PKPbc	23 04 04.6	-0.8
AJM	**Ajmer**	**143.91**	**59**	*e*P	PKPbc	23 04 05.4	-0.3
ANA2	**Anatahan**	**143.94**	**283**		PKPbc	23 04 04.4	-1.6
JHJ2	**Mitsune**	**143.96**	**313**	P	PKPbc	23 04 04.2	-1.4
JHJ2	**Mitsune**	**143.96**	**313**		PKPbc	23 04 04.5	-1.1
CN2	**Changchun**	**144.01**	**340**	*e*PKP	PKPbc	23 04 03.0	-2.4
CN2				pPKP	pPKPdf	23 06 21.0	-5.7
CN2				PP	**PP**	**23 07 27.6**	**+0.7**
CN2				SKS	**SKSdf**	**23 10 14.7**	**-3.6**
CN2				SKKS	**SKKSac**	**23 13 16.4**	**-2.9**
CN2				SS	**SS**	**23 25 22.9**	**-0.2**
CN2				AMB	AMB		
	comp=Z,14µm,15.0s						
CN2	**Changchun**	**144.01**	**340**	*e*SS	SS	23 25 22.9	-0.2
CN2	**Changchun**	**144.01**	**340**	*e*SS	SS	23 25 22.9	-0.2
SMLA	**Simla**	**144.09**	**51**	*e*P	PKPbc	23 04 05.8	-0.2
JSG	**Sagara**	**144.24**	**317**	P	PKPbc	23 04 06.4	0.0
JSG	**Sagara**	**144.24**	**317**	PKPbc	PKPbc	23 04 06.4	0.0
JGF	**Kuroka**	**144.24**	**319**	P	PKPbc	23 04 05.2	-1.2
JGF	**Kuroka**	**144.24**	**319**		PKPbc	23 04 05.6	-0.8
KKR	**Kurukshetra**	**144.35**	**53**	*e*P	**PKPab**	**23 04 08.2**	**+0.8**
MNCY	**Minicoy**	**144.40**	**91**	*e*x	x	23 04 24.4	
INU	**Inuyama**	**144.62**	**319**	PKPdf	**PKPdf**	**23 04 07.0**	**-0.1**
CBIJ	**Chichi jima**	**144.78**	**302**	P	**PKPdf**	**23 04 06.4**	**-1.2**
JCJ	**Chichijima**	**144.78**	**302**	PKPdf	**PKPdf**	**23 04 06.5**	**-1.1**
KUDL	**Kundal**	**144.84**	**56**	*e*P	PKPbc	23 04 08.5	+0.1
GUMO	**Guam**	**144.88**	**279**	PKP	**PKPdf**	**23 04 07.7**	**-0.4**
	comp=Z,6µm,0.9s,baz=172,slow=5.8,SNR=142						
GUMO				pPKP	**pPKPdf**	**23 06 27.4**	**-1.6**
	comp=Z,2µm,1.0s,baz=135,slow=4.3,SNR=5.1						
GUMO				SKPbc	**SKiKP**	**23 06 53.9**	**+2.5**
	comp=Z,3µm,0.9s,baz=174,slow=14,SNR=4.9						
GUMO	**Guam**	**144.88**	**279**	PKIKP	**PKPdf**	**23 04 07.7**	**-0.4**
GUMO						23 06 26.4	
GUMO	**Guam**	**144.88**	**279**	PKPdf	**PKPdf**	**23 04 07.7**	**-0.4**
GUMO				pPKPdf	**pPKPdf**	**23 06 26.4**	**-2.6**
POO	**Poona**	**145.08**	**73**	*e*P	**PKPdf**	**23 04 08.1**	**-0.3**
NDI	**New Delhi**	**145.21**	**54**	*e*P	**PKPbc**	**23 04 09.1**	**-0.4**
AYAN	**Aya Nagar**	**145.22**	**55**	*e*P	**PKPbc**	**23 04 09.8**	**+0.3**
SONA	**Sohna**	**145.28**	**55**	*e*P	**PKPbc**	**23 04 09.8**	**+0.1**
GOA	**Goa**	**145.37**	**78**	*e*P	**PKPbc**	**23 04 09.8**	**-0.4**
JIE	**Ise**	**145.39**	**317**	P	**PKPdf**	**23 04 08.7**	**+0.2**
BISR	**Bishrakh**	**145.43**	**54**	*e*P	**PKPbc**	**23 04 10.7**	**+0.6**
MERT	**Meerut**	**145.50**	**54**	*e*P	**PKPab**	**23 04 11.1**	**-0.8**
KAD	**Karad**	**145.55**	**75**	*e*P	**PKPdf**	**23 04 09.7**	**+0.4**
ASOR	**Ausora**	**145.62**	**54**	*e*P	**PKPbc**	**23 04 11.4**	**+0.7**
JWT	**Wachi**	**145.69**	**320**	P	**PKPdf**	**23 04 09.2**	**+0.3**
JWT	**Wachi**	**145.69**	**320**	PKPdf	**PKPdf**	**23 04 09.4**	**+0.4**
JAY	**Jayapura**	**145.91**	**249**	pPKPbc	pPKPbc	23 06 30.6	+0.7
	comp=Z,878nm,1.1s,baz=261,slow=5.0,SNR=4.5						
PSA00	**Pilbara Seismi**	**146.30**	**198**	PKPdf	**PKPdf**	**23 04 10.3**	**-0.1**
PSA00				pPKPdf	pPKPab	23 06 29.1	-1.4
PSA00	**Pilbara Seismi**	**146.30**	**198**	PKPdf	**PKPdf**	**23 04 10.1**	**-0.3**
PSA00				pPKPdf	pPKPab	23 06 28.5	-2.0
SNY	**Shenyang**	**146.40**	**340**	⇓PKPbc	**PKPdf**	**23 04 10.5**	**+0.6**
GIRL	**Giralia**	**146.56**	**189**	PKPdf	**PKPdf**	**23 04 11.3**	**+0.5**
JAD	**Aida**	**146.69**	**321**	P	**PKPdf**	**23 04 10.4**	**-0.2**
FITZ	**Fitzroy Crossi**	**147.10**	**210**	PKPbc	**PKPbc**	**23 04 15.6**	**+0.6**
	comp=Z,14µm,0.7s,baz=188,slow=2.3,SNR=1025						
FITZ				pPKPbc	**pPKPdf**	**23 06 32.0**	**-0.7**
	comp=Z,2µm,0.9s,baz=158,slow=2.7,SNR=4.3						
JHS	**Saijyo**	**147.30**	**322**	P	**PKPdf**	**23 04 11.5**	**-0.2**
JHS	**Saijyo**	**147.30**	**322**	PKPdf	**PKPdf**	**23 04 11.9**	**+0.2**
BHPL	**Bhopal**	**147.33**	**63**	*e*P	**PKPdf**	**23 04 13.0**	**+0.9**
KSSKC	**Sokcho**	**147.39**	**331**	P	**PKiKP**	**23 04 16.1**	**-0.6**
	SNR=14						
KNRA	**Kununurra**	**147.39**	**217**	PKPdf	**PKPdf**	**23 04 12.2**	**-0.1**
SEHB	**SEOHWA**	**147.53**	**331**	P	**PKPdf**	**23 04 13.2**	**+1.2**
	SNR=33						
KSJMJ	**Jumunjin**	**147.60**	**330**	P	**PKiKP**	**23 04 16.7**	**-0.5**
	SNR=23						
JMN	**Monobe**	**147.65**	**319**	P	**PKPdf**	**23 04 12.9**	**+0.6**
JMN	**Monobe**	**147.65**	**319**	PKPdf	**PKPdf**	**23 04 13.1**	**+0.8**
KSDGY	**Daegwallycong**	**147.79**	**330**	P	**PKiKP**	**23 04 18.0**	**+0.3**
	SNR=16						
IMWB	**Imwonan-gil**	**147.81**	**329**	P	**PKiKP**	**23 04 17.0**	**-0.6**
	SNR=17						
KSIJA	**INJE**	**147.83**	**331**	P	**PKPdf**	**23 04 13.3**	**+0.9**
	SNR=118						
MTN	**Manton Dam**	**148.00**	**224**	PKPdf	**PKPdf**	**23 04 13.4**	**+0.1**
KSCWO	**Cheorwon**	**148.03**	**332**	P	**PKPbc**	**23 04 17.4**	**+0.6**
	SNR=18						
KSTBA	**Taebaek**	**148.09**	**329**	P	**PKiKP**	**23 04 18.0**	**-0.3**
	SNR=20						
KSCHC	**Chuncheon**	**148.13**	**331**	P	**PKPbc**	**23 04 17.0**	**-0.1**
	SNR=35						
KSULJ	**Uljin**	**148.18**	**328**	P	**PKPbc**	**23 04 17.0**	**-0.1**
	SNR=49						
CHYB	**Chungyang**	**148.25**	**329**	P	**PKPbc**	**23 04 18.0**	**+0.6**
	SNR=39						
TRD	**Trivandrum**	**148.29**	**91**	*e*P	**PKPdf**	**23 04 15.0**	**+1.2**
KSYOW	**Yeongwol**	**148.30**	**330**	P	**PKiKP**	**23 04 18.3**	**-0.3**
	SNR=17						
YODB	**Yeongdeok**	**148.31**	**328**	P	**PKPbc**	**23 04 18.0**	**+0.5**
	SNR=37						
KSWJU	**Wonju**	**148.32**	**330**	P	**PKiKP**	**23 04 18.3**	**-0.4**
	SNR=17						
KSWJU	**Wonju**	**148.32**	**330**	P	**PKPdf**	**23 04 14.0**	**+0.8**
	SNR=195						
KS19	**Wonju Array Si**	**148.33**	**331**	PKPdf	**PKPdf**	**23 04 13.3**	**+0.1**
KSRS	**Korea Array**	**148.34**	**331**	PKP	**PKPdf**	**23 04 13.3**	**+0.1**
	comp=Z,467nm,0.8s,baz=31,slow=1.0,SNR=423						
KSRS				PKPbc	**PKiKP**	**23 04 18.5**	**-0.1**
	comp=Z,3µm,0.9s,baz=17,slow=2.3,SNR=67						
KSRS				pPKPbc	**pPKPdf**	**23 06 35.1**	**+0.8**
	comp=Z,140nm,0.7s,baz=35,slow=3.4,SNR=3.5						
KSRS				SKPbc	**SKiKP**	**23 07 02.4**	**+4.5**
	comp=Z,308nm,0.6s,baz=3.7,slow=2.3,SNR=5.5						
KSAR	**Wonju Array Be**	**148.37**	**331**	PKHKP	PKPpre	23 04 13.1	
KSAR	**Wonju Array Be**	**148.37**	**331**	PKPdf	**PKPdf**	**23 04 13.1**	**-0.2**
JECH	**Jecheon**	**148.44**	**330**	P	**PKiKP**	**23 04 19.0**	**0.0**
	SNR=17						
JECH	**Jecheon**	**148.44**	**330**	P	**PKPdf**	**23 04 15.1**	**+1.6**
	SNR=102						
YOJB	**Youngju**	**148.51**	**329**	P	**PKiKP**	**23 04 19.0**	**-0.1**
	SNR=13						
KSCHJ	**Chungju**	**148.78**	**330**	P	**PKPbc**	**23 04 19.0**	**+0.4**
	SNR=13						
KSCHJ	**Chungju**	**148.78**	**330**	P	**PKPdf**	**23 04 15.0**	**+1.0**
	SNR=213						
KSGAH	**Ganghwa**	**148.82**	**333**	P	**PKPbc**	**23 04 18.4**	**-0.3**
	SNR=15						
EMSB	**Eumseong**	**148.87**	**330**	P	**PKiKP**	**23 04 20.0**	**+0.2**
	SNR=16						
EMSB	**Eumseong**	**148.87**	**330**	P	**PKPdf**	**23 04 15.0**	**+0.9**
	SNR=277						
KSMGY	**Mungyeong**	**148.90**	**330**	P	**PKiKP**	**23 04 19.8**	**-0.1**
	SNR=79						
INCN	**Inchon**	**148.92**	**332**	PKIKP	**PKPdf**	**23 04 13.6**	**-0.6**
INCN	**Inchon**	**148.92**	**332**	PKPdf	**PKPdf**	**23 04 13.6**	**-0.6**
KSUSN	**Ulsan**	**149.09**	**327**	P	**PKiKP**	**23 04 20.4**	**+0.1**
	SNR=35						
KSBON	**Boeun**	**149.16**	**330**	P	**PKiKP**	**23 04 20.2**	**-0.2**
	SNR=22						
KSBON	**Boeun**	**149.16**	**330**	P	**PKPdf**	**23 04 15.5**	**+0.9**
	SNR=206						
KSDAG	**Daegu**	**149.16**	**327**	P	**PKiKP**	**23 04 21.0**	**+0.5**
	SNR=15						
KSCEA	**Cheonan**	**149.16**	**331**	P	**PKPbc**	**23 04 19.0**	**-0.6**
	SNR=18						
YPDB	**Yeonpyeongdo**	**149.23**	**334**	P	**PKPdf**	**23 04 15.3**	**+0.6**
	SNR=16						
OKCB	**Cheongsan-myeo**	**149.28**	**329**	P	**PKPbc**	**23 04 20.0**	**+0.1**
	SNR=32						
OKCB	**Cheongsan-myeo**	**149.28**	**329**	P	**PKPdf**	**23 04 16.2**	**+1.4**
	SNR=76						
KSCPR	**CHUPUNGNYEONG**	**149.29**	**329**	P	**PKiKP**	**23 04 21.0**	**+0.2**
	SNR=28						
KSBAR	**Backryungdo**	**149.34**	**335**	P	**PKPbc**	**23 04 20.0**	**0.0**
	SNR=15						
KSDEI	**Deokjeokdo**	**149.35**	**333**	P	**PKiKP**	**23 04 20.4**	**-0.4**
	SNR=26						
DACB	**Daecheong-do R**	**149.47**	**335**	P	**PKPbc**	**23 04 20.0**	**-0.3**
	SNR=21						
HYB	**Hyderabad**	**149.67**	**74**	*i* PKP	**PKPdf**	**23 04 15.5**	**-0.5**
HYB				*e*pPKP	**pPKPdf**	**23 06 35.0**	**-2.1**
HYB				*e*sPKP		23 07 42.0	
HYB				*e*PP	**PP**	**23 08 00.0**	**-1.6**
HYB				*e*SKKS		23 13 50.0	
HYB	**Hyderabad**	**149.67**	**74**	*e*P	**PKPdf**	**23 04 16.0**	**0.0**
DL2	**Dalian**	**149.67**	**340**	PKPbc	**PKPdf**	**23 04 14.9**	**-0.4**
DL2				PKPab	**PKPab**	**23 04 31.6**	**+3.0**
DL2				pPKP	**pPKPdf**	**23 06 34.7**	**-1.7**
DL2				sPKP		23 07 36.0	
DL2				PP	**PP**	**23 08 00.9**	**+1.3**
DL2				SS	SS	23 26 28.0	+2.0
DL2				AMB	AMB		
	comp=Z,15µm,4.0s						
KSKCH	**Geochang**	**149.79**	**328**	P	**PKiKP**	**23 04 21.9**	**+0.1**
	SNR=11						
JTU	**Tsushima**	**149.81**	**325**	P	**PKPdf**	**23 04 15.3**	**-0.4**
JTU	**Tsushima**	**149.81**	**325**	PKPdf	**PKPdf**	**23 04 15.9**	**+0.3**
EURB	**Uiryeong-eup**	**149.82**	**328**	P	**PKiKP**	**23 04 22.0**	**+0.2**
	SNR=12						
KSJEO	**Jeonju**	**149.85**	**330**	P	**PKPbc**	**23 04 21.0**	**-0.3**
	SNR=40						
JNU	**Nakatsue**	**149.93**	**321**	P	**PKPdf**	**23 04 15.3**	**-0.7**
JNU	**Nakatsue**	**149.93**	**321**		**PKPdf**	**23 04 15.5**	**-0.4**
HAMB	**Hamyang**	**149.95**	**329**	P	**PKiKP**	**23 04 22.0**	**-0.1**
	SNR=24						
PYUN	**Piuthan**	**149.99**	**51**	*e*P	**PKPdf**	**23 04 15.2**	**-1.2**
BJI	**Beijing**	**150.02**	**349**	PKPbc	**PKPdf**	**23 04 15.9**	**+0.1**
BJI				pPKP	**pPKPdf**	**23 06 38.3**	**+1.3**
BJI				PP	**PP**	**23 08 07.2**	**+5.8**
BJI				SKKS		23 13 49.4	
BJI				AMB	AMB		
	comp=Z,24µm,12.6s						
BJT	**Baijiatuau**	**150.05**	**349**	PKIKP	**PKPdf**	**23 04 16.0**	**+0.1**
BJT	**Baijiatuau**	**150.05**	**349**		**PKPdf**	**23 04 16.0**	**+0.1**
GTA	**Gaotai**	**150.17**	**14**	PKPbc	**PKPdf**	**23 04 16.8**	**+0.5**
GTA				pPKP	pPKPdf	23 06 37.9	+0.5
GTA				sPKP		23 07 34.4	
GTA				SS	SS	23 26 31.8	+0.3
GTA				AMB	AMB		
	comp=Z,15µm,9.8s						
OYDB	**Oeyeondo**	**150.20**	**332**	P	**PKPbc**	**23 04 22.0**	**-0.1**
	SNR=52						
YKDB	**Yokjido**	**150.36**	**327**	P	**PKiKP**	**23 04 23.0**	**+0.1**
	SNR=10						
SUCA	**Sunchang**	**150.37**	**329**	P	**PKiKP**	**23 04 23.0**	**0.0**
	SNR=9.8						
SUCA	**Sunchang**	**150.37**	**329**	P	**PKPdf**	**23 04 17.0**	**+0.5**
	SNR=151						
KSJEU	**Jeongeup**	**150.38**	**330**	P	**PKPbc**	**23 04 22.4**	**-0.1**
	SNR=32						
MNYD	**Munyeodo**	**150.38**	**331**	P	**PKiKP**	**23 04 23.0**	**+0.1**
	SNR=9.9						
SMKB	**Mukjeong-gil**	**150.41**	**330**	P	**PKPbc**	**23 04 22.3**	**-0.2**
	SNR=15						
DANN	**Dangsing**	**150.45**	**50**	*e*P	**PKPdf**	**23 04 16.3**	**-0.9**
KSKWJ	**Gwangju**	**150.61**	**329**	P	**PKPdf**	**23 04 16.8**	**-0.1**
	SNR=23						
KSKWJ	**Gwangju**	**150.61**	**329**	P	**PKPdf**	**23 04 17.1**	**+0.2**
	SNR=14						
KSKWJ	**Gwangju**	**150.61**	**329**	P	**PKPdf**	**23 04 17.1**	**+0.2**
	SNR=14						
KSKWJ	**Gwangju**	**150.61**	**329**	P	**PKPbc**	**23 04 22.6**	**-0.5**
	SNR=28						
KSKWJ	**Gwangju**	**150.61**	**329**	P	**PKPbc**	**23 04 23.0**	**-0.1**
	SNR=13						
KOLN	**Koldanda**	**150.62**	**51**	*e*P	**PKPdf**	**23 04 16.2**	**-1.2**
GOCB	**Gochang-gun**	**150.66**	**330**	P	**PKPbc**	**23 04 23.0**	**-0.1**
	SNR=24						
YNDB	**Yeoundo**	**150.75**	**327**	P	**PKiKP**	**23 04 24.0**	**+0.2**
	SNR=23						
BOSB	**Boseong-gun**	**150.81**	**328**	P	**PKiKP**	**23 04 24.0**	**+0.1**
	SNR=12						
ANMD	**Anmado**	**150.94**	**331**	P	**PKPbc**	**23 04 23.0**	**-0.8**
	SNR=39						
SAUI	**Saumlaki**	**151.16**	**231**	PKPdf	**PKPdf**	**23 04 19.4**	**+1.1**
GKN	**Gorkha**	**151.29**	**50**	*e*P	**PKPdf**	**23 04 17.0**	**-1.3**
JSU	**Suzuyama**	**151.29**	**320**	P	**PKPdf**	**23 04 17.6**	**-0.5**
JSU	**Suzuyama**	**151.29**	**320**	PKPdf	**PKPdf**	**23 04 17.6**	**-0.5**
HANB	**Haenam**	**151.30**	**329**	P	**PKPdf**	**23 04 19.0**	**+1.0**
	SNR=32						
HANB	**Haenam**	**151.30**	**329**	P	**PKPbc**	**23 04 24.6**	**0.0**
	SNR=41						
GMDB	**Geomundo**	**151.33**	**327**	P	**PKiKP**	**23 04 25.0**	**0.0**
	SNR=9.6						
WAN2	**Wando-Q330s**	**151.36**	**328**	P	**PKiKP**	**23 04 25.0**	**-0.1**
	SNR=11						
KSJDO	**Jindo**	**151.50**	**329**	P	**PKPdf**	**23 04 18.8**	**+0.5**
	SNR=64						
JFU	**Fukue jima 2**	**151.54**	**323**	P	**PKPdf**	**23 04 17.9**	**-0.4**
MDRS	**Chennai**	**151.71**	**82**	*e*P	**PKPdf**	**23 04 19.6**	**+0.5**
HUK2	**Heuksan-myeon**	**151.75**	**331**	P	**PKiKP**	**23 04 26.0**	**+0.2**
	SNR=26						
PALK	**Pallekele**	**151.80**	**94**	PKP	**PKPdf**	**23 04 19.6**	**+0.3**
	comp=Z,510nm,0.9s,baz=25,slow=3.1,SNR=170						
PALK	**Pallekele**	**151.80**	**94**	PKPdf	**PKPdf**	**23 04 19.3**	**0.0**
DMN	**Daman**	**151.85**	**50**	*e*P	**PKPdf**	**23 04 18.4**	**-0.9**
KKN	**Kakani**	**151.88**	**49**	*e*P	**PKPdf**	**23 04 18.5**	**-0.8**
CJD	**Chujado**	**151.91**	**328**	P	**PKiKP**	**23 04 26.3**	**+0.1**
	SNR=23						
PKIN	**Phulchoki**	**152.08**	**50**	*e*P	**PKPdf**	**23 04 18.6**	**-1.1**
PKI	**Pulchoki**	**152.09**	**50**	*e*P	**PKPdf**	**23 04 18.1**	**-1.7**
GUN	**Gumba**	**152.26**	**48**	*e*P	**PKPdf**	**23 04 19.1**	**-0.9**
HALB	**Hallimjungang-**	**152.36**	**328**	P	**PKiKP**	**23 04 29.0**	**+1.9**
	SNR=5.8						
GOS1	**Gosan-ri**	**152.47**	**328**	P	**PKiKP**	**23 04 29.6**	**+2.2**
	SNR=6.9						
GOS2	**Gosang-Q330s**	**152.47**	**328**	P	**PKiKP**	**23 04 29.0**	**+1.6**
	SNR=6.2						
JIRN	**Jiri**	**152.62**	**49**	*e*P	**PKPdf**	**23 04 19.4**	**-1.2**
TIY	**Taiyuan**	**152.85**	**354**	⇓PKPbc	**PKPdf**	**23 04 20.3**	**+0.1**
TIY				AMB	AMB		
	comp=Z,13µm,4.1s						
FAKI	**Fak Fak**	**153.28**	**241**	PKPdf	**PKPdf**	**23 04 21.6**	**+0.1**
FAKI				PKPbc	**PKiKP**	**23 04 29.7**	**+0.1**
RAMN	**Ramite**	**153.32**	**49**	*e*P	**PKPdf**	**23 04 20.1**	**-1.3**
TIA	**Tai'an**	**153.49**	**345**	PKPbc	**PKPdf**	**23 04 20.9**	**-0.2**
TIA				pPKP	**pPKPdf**	**23 06 40.5**	**-2.0**
TIA				PP	**PP**	**23 08 24.2**	**+3.3**
TIA				AMB	AMB		
	comp=Z,18µm,15.3s						
TAPN	**Taplejung**	**153.91**	**47**	*e*P	**PKPdf**	**23 04 20.9**	**-1.4**
ODAN	**Odare**	**153.96**	**49**	*e*P	**PKPdf**	**23 04 21.1**	**-1.2**
JMZ	**Minamidaito 2**	**154.15**	**309**	P	**PKPdf**	**23 04 22.2**	**-0.1**
JMZ	**Minamidaito 2**	**154.15**	**309**	PKPdf	**PKPdf**	**23 04 22.2**	**-0.1**
LZH	**Lanzhou**	**154.21**	**10**	⇓PKPbc	**PKPdf**	**23 04 23.1**	**+0.8**
LZH				PKPab	**PKPab**	**23 04 50.3**	**+2.2**
LZH				pPKP	pPKPdf	23 06 43.2	-0.5
LZH				PKS	**PKSdf**	**23 07 55.4**	**-1.3**
LZH				PP	**PP**	**23 08 26.9**	**+1.9**
LZH				SKS	**SKSdf**	**23 10 31.0**	**-1.5**
LZH				SS	**SS**	**23 27 18.0**	**+2.9**
LZH				AMB	AMB		
	comp=Z,16µm,9.0s						
COCO	**West Island**	**154.29**	**152**	PKIKP	**PKPdf**	**23 04 23.4**	**+0.6**
COCO						23 04 50.7	
COCO	**West Island**	**154.29**	**152**	PKPdf	**PKPdf**	**23 04 23.4**	**+0.6**
COCO				PKPab	**PKPab**	**23 04 50.7**	**+2.0**
GTK	**Tadong**	**154.57**	**46**	*e*P	**PKPdf**	**23 04 24.0**	**+1.0**
LSA	**Lhasa**	**154.71**	**39**	PKPbc	**PKPdf**	**23 04 24.8**	**+1.2**
LSA	**Lhasa**	**154.71**	**39**	PKIKP	**PKPdf**	**23 04 24.3**	**+0.7**
LSA	**Lhasa**	**154.71**	**39**	PKPdf	**PKPdf**	**23 04 24.3**	**+0.7**
BATI	**Baumata**	**154.72**	**216**	PKP	**PKPdf**	**23 04 24.5**	**+1.1**
	comp=Z,1µm,1.0s,baz=166,slow=0.9,SNR=247						
BATI				PKPbc	**PKPbc**	**23 04 34.0**	**+1.4**
	comp=Z,2µm,0.7s,baz=230,slow=2.8,SNR=26						
SOEI	**Soe**	**154.73**	**217**	PKPdf	**PKPdf**	**23 04 24.6**	**+1.0**
JOW	**Kunigami**	**155.74**	**314**	PKPdf	**PKPdf**	**23 04 24.7**	**+0.3**
XAN	**Xi'an**	**156.69**	**0**	PKP	**PKPdf**	**23 04 25.4**	**-0.1**
XAN				PKPab	**PKPab**	**23 05 04.2**	**+5.5**
XAN				pPKP	pPKPdf	23 06 46.0	-1.0
XAN				sPKP		23 07 40.4	
XAN				SKS	**SKSdf**	**23 10 30.8**	**-4.2**
XAN				SS	**SS**	**23 27 44.7**	**+3.6**
MMRI	**Maumere**	**156.81**	**215**	PKPdf	**PKPdf**	**23 04 25.3**	**-0.8**
NJ2	**Nanjing**	**156.83**	**338**	⇓PKP	**PKPdf**	**23 04 24.4**	**-1.2**
NJ2				PKPab	**PKPab**	**23 04 57.0**	**-2.3**
NJ2				pPKP	**pPKPdf**	**23 06 42.0**	**-5.2**
NJ2				PKS	**PKSdf**	**23 07 56.6**	**-2.9**
NJ2				SKKS		23 14 32.9	
NJ2				SS	**SS**	**23 27 43.9**	**+0.9**
NJ2				AMB	AMB		
	comp=Z,17µm,3.5s						
SHL	**Shillong**	**157.96**	**45**	PKIKP	**PKPdf**	**23 04 26.9**	**-0.6**
SHL						23 05 04.5	
SHL	**Shillong**	**157.96**	**45**	*e*P	**PKPdf**	**23 04 28.0**	**+0.5**
SHL	**Shillong**	**157.96**	**45**	PKPdf	**PKPdf**	**23 04 26.9**	**-0.6**
SHL				PKPab	**PKPab**	**23 05 04.5**	**-0.3**
ITAN	**ITANAGAR**	**158.11**	**39**	*e*P	**PKPdf**	**23 04 28.3**	**+0.9**
ITAN				*i* x	**PKPab**	**23 05 07.1**	**+2.0**
XMIS	**Christmas Isla**	**158.77**	**171**	PKPdf	**PKPdf**	**23 04 28.5**	**0.0**
XMIS				PKPab	**PKPab**	**23 05 08.9**	**+0.9**
MOKO	**MOKOCHONG**	**159.20**	**39**	*e*P	**PKPdf**	**23 04 30.1**	**+1.3**
LKP	**Lekhapani**	**159.24**	**35**	*e*P	**PKPdf**	**23 04 29.6**	**+0.9**
TNTI	**Ternate**	**159.34**	**243**	PKPdf	**PKPdf**	**23 04 27.9**	**-1.3**
KOHI	**KOHIMA**	**159.36**	**41**	*e*P	**PKPdf**	**23 04 30.1**	**+1.1**
WHN	**Wuhan**	**159.57**	**347**	⇓*i*PKP	**PKPdf**	**23 04 28.9**	**0.0**
WHN				AMB	AMB		
	comp=Z,41µm,11.8s						
JAGI	**Jajag, Banyuwa**	**160.37**	**195**	PKPdf	**PKPdf**	**23 04 29.2**	**-1.1**
JAGI				PKPab	**PKPab**	**23 05 15.0**	**-0.1**
ENH	**Enshi**	**160.44**	**359**		**PKPdf**	**23 04 29.9**	**-0.1**
YOJ	**Yonaguni jima**	**160.88**	**318**	PKIKP	**PKPdf**	**23 04 29.9**	**-0.6**
YOJ	**Yonaguni jima**	**160.88**	**318**	PKPdf	**PKPdf**	**23 04 29.9**	**-0.6**
KAPI	**Kappang**	**161.17**	**215**	PKP	**PKPdf**	**23 04 31.6**	**+0.5**
	comp=Z,1µm,1.0s,baz=217,slow=0.9,SNR=404						
KAPI				PKPab	**PKPab**	**23 05 19.6**	**+0.9**
	comp=Z,1µm,1.0s,baz=242,slow=3.5,SNR=13						
KAPI	**Kappang**	**161.17**	**215**	PKPdf	**PKPdf**	**23 04 31.4**	**+0.2**
KAPI					**PKPab**	**23 05 19.4**	**+0.7**
UGM	**Wanagama**	**161.53**	**185**	PKPdf	**PKPdf**	**23 04 30.9**	**-0.7**
UGM				PKPab	**PKPab**	**23 05 21.9**	**+1.7**
LEM	**Lembang**	**162.61**	**175**	PKP	**PKPdf**	**23 04 33.3**	**+0.5**
	comp=Z,1µm,0.9s,baz=123,slow=1.4,SNR=403						
LEM				PKPab	**PKPab**	**23 05 26.7**	**+1.6**
	comp=Z,2µm,0.9s,baz=200,slow=3.7,SNR=12						
SSLB	**Suanglung**	**162.68**	**321**		**PKPdf**	**23 04 32.3**	**-0.1**
YULB	**Yu-li**	**162.74**	**319**		**PKPdf**	**23 04 31.5**	**-0.9**
QZH	**Quanzhou**	**163.12**	**329**	⇓*i*PKP	**PKPdf**	**23 04 33.2**	**+0.5**
QZH				PKPab	**PKPab**	**23 05 23.9**	**-3.1**
QZH				sPKP2		23 08 43.4	
QZH				PP	**PP**	**23 09 11.4**	**-1.6**
QZH				SS	SS	23 28 50.3	+1.5
QZH				AMB	AMB		
	comp=Z,32µm,7.8s						
DAV	**Davao City (W)**	**163.30**	**259**	PKP	**PKPdf**	**23 04 33.5**	**+0.3**
	comp=Z,1µm,1.0s,baz=73,slow=1.8,SNR=53						
DAV				PKPab	**PKPab**	**23 05 29.7**	**+1.3**
	comp=Z,2µm,1.0s,baz=212,slow=0.4,SNR=6.3						
MNAI	**Manna**	**163.93**	**157**		**PKPdf**	**23 04 34.1**	**+0.2**
MNAI				PKPab	**PKPab**	**23 05 32.2**	**+1.5**
PBA	**Port Blair**	**163.96**	**85**	*e*P	**PKPdf**	**23 04 33.7**	**0.0**
DGPR	**DIGLIPUR**	**164.02**	**79**	*e*P	**PKPdf**	**23 04 33.7**	**-0.1**
GYA	**Guiyang**	**164.08**	**8**	⇓PKP	**PKPdf**	**23 04 33.7**	**-0.1**
GYA				PKPab	**PKPab**	**23 05 34.2**	**+2.9**
GYA				sPKP		23 07 49.0	
GYA				PP	**PP**	**23 09 20.6**	**+3.0**
GYA				AMB	AMB		
	comp=Z,38µm,15.8s						
KMI	**Kunming**	**164.38**	**22**	⇓PKP	**PKPdf**	**23 04 34.0**	**-0.2**
KMI				PKPab	**PKPab**	**23 05 34.1**	**+1.3**
KMI				pPKP	pPKPdf	23 06 52.1	-4.1
KMI				sPKP		23 07 47.8	
KMI				PP	**PP**	**23 09 19.8**	**+0.3**
KMI				AMB	AMB		
	comp=Z,37µm,17.8s						
TOLI2	**Tolitoli**	**165.00**	**232**		**PKPdf**	**23 04 34.0**	**-0.7**
TOLI2				PKPab	**PKPab**	**23 05 35.1**	**-0.6**
LHMI	**Lhok Sumawe**	**166.87**	**113**		**PKPdf**	**23 04 35.2**	**-1.0**

GZH	**Guangzhou**	**166.94**	**342**	PKP	**PKPdf**	**23 04 36.4**	**+0.4**
GZH				pPKP	**pPKPdf**	**23 06 57.8**	**-0.2**
GZH				PP	**PP**	**23 09 35.4**	**+3.3**
GZH				SS	SS	23 29 24.0	-2.3
BKNI	**Bangkinang**	**167.04**	**142**		**PKPdf**	**23 04 34.8**	**-1.6**
BKNI				PKPab	**PKPab**	**23 05 46.0**	**+1.3**
CHTO	**Chiang Mai**	**167.28**	**49**	PKIKP	**PKPdf**	**23 04 36.0**	**-0.4**
CHTO						23 05 46.5	
CHTO	**Chiang Mai**	**167.28**	**49**		**PKPdf**	**23 04 36.0**	**-0.4**
CHTO				PKPab	**PKPab**	**23 05 46.5**	**+0.8**
PSI	**Prapat**	**167.29**	**127**	PKP	**PKPdf**	**23 04 35.7**	**-1.0**
	comp=Z,683nm,0.9s,baz=233,slow=1.9,SNR=344						
PSI				PKPab	**PKPab**	**23 05 47.2**	**+1.1**
	comp=Z,375nm,0.8s,baz=33,slow=11,SNR=8.3						
HKC	**Hong Kong Obse**	**167.39**	**338**	⇑P	**PKPdf**	**23 04 37.0**	**+0.7**
CMAR	**Chiang Mai Arr**	**167.49**	**50**	PKP	**PKPdf**	**23 04 36.5**	**-0.1**
	comp=Z,461nm,0.9s,baz=282,slow=1.6,SNR=872						
CMAR				PKPab	**PKPab**	**23 05 48.1**	**+1.5**
	comp=Z,249nm,0.8s,baz=289,slow=4.7,SNR=8.6						
TGY	**Tagaytay City**	**167.89**	**288**	PKP	**PKPdf**	**23 04 37.4**	**+0.5**
	comp=Z,1µm,0.9s,baz=274,slow=2.4,SNR=49						
MYLDM	**Lahad Datu**	**169.20**	**241**		**PKPdf**	**23 04 38.2**	**+0.5**
MYKOM	**Kota Tinggi**	**169.82**	**149**	P	**PKPdf**	**23 04 39.0**	**+0.9**
MYKOM	**Kota Tinggi**	**169.82**	**149**		**PKPdf**	**23 04 37.3**	**-0.8**
MYKOM				PKPab	**PKPab**	**23 05 57.0**	**+0.1**
IPM	**Ipoh**	**169.97**	**127**	P	**PKPdf**	**23 04 38.0**	**-0.3**
IPM	**Ipoh**	**169.97**	**127**		**PKPdf**	**23 04 37.4**	**-0.9**
IPM				PKPab	**PKPab**	**23 05 58.2**	**+0.4**
KULM	**Kulim**	**170.14**	**122**		**PKPdf**	**23 04 37.5**	**-0.8**
KULM				PKPab	**PKPab**	**23 05 58.7**	**+0.1**
SRIT	**Nakonsritamara**	**170.46**	**101**		**PKPdf**	**23 04 37.4**	**-1.1**
SRIT				PKPab	**PKPab**	**23 06 01.2**	**+1.1**
JRMM	**Jerantut**	**170.66**	**135**	P	**PKPdf**	**23 04 38.0**	**-0.6**
KSM	**Kuching**	**170.83**	**188**	P	**PKPdf**	**23 04 39.0**	**+0.3**
KSM	**Kuching**	**170.83**	**188**		**PKPdf**	**23 04 38.2**	**-0.5**
KSM				PKPab	**PKPab**	**23 06 02.2**	**+1.0**
SBUM	**Sibu**	**171.30**	**201**	P	**PKPdf**	**23 04 40.0**	**+1.1**
SBUM	**Sibu**	**171.30**	**201**		**PKPdf**	**23 04 38.4**	**-0.5**
SBUM				PKPab	**PKPab**	**23 06 04.6**	**+1.2**
QIZ	**Qiongzhong**	**171.60**	**355**	PKP	**PKPdf**	**23 04 39.4**	**+0.5**
QIZ				PKPab	**PKPab**	**23 06 01.5**	**-3.0**
QIZ				SS	SS	23 30 14.6	+3.0
QIZ				AMB	AMB		
	comp=Z,24µm,15.2s						
UBPT	**Khong Chiam**	**174.20**	**37**		**PKPdf**	**23 04 39.7**	**-0.3**
UBPT				PKPab	**PKPab**	**23 06 15.8**	**-0.5**

*NNC **24** 22:47:06.9±3.1, 50°.80N×88°.04E, h0^{km}±14^{km}, mb3.2, mpv2.8 Error ellipse: s-maj=25.3km s-min=9.8km az=96.0*

ISC 24 22:47:05.8±0.8**, 50°.73N**±0°.03×**88°.24E**±0°.04**, h10**^{km}**, n18, σ1^{s}68**/34**, 9C-5D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULGR	**Ulagan, Altay**	**0.21**	**238**	Pg	**Pg**	**22 47 10.8**	**+0.6**
ULGR				Sg	**Sg**	**22 47 13.9**	**+0.8**
AKAR	**Aktash**	**0.57**	**224**	Pg	**Pg**	**22 47 15.5**	**-1.4**
AKAR				Sg	**Sg**	**22 47 23.6**	**-0.8**
CHBI	**Chibit, Altay**	**0.63**	**228**	Pg	**Pg**	**22 47 18.1**	**+0.1**
CHBI				Sg	**Sg**	**22 47 26.7**	**+0.5**
CUR	**Chagan-Uzun**	**0.64**	**173**	Pg	**Pg**	**22 47 16.3**	**-1.9**
CUR				Sg	**Sg**	**22 47 24.3**	**-2.3**
DGZ	**Jazzator, Alta**	**1.16**	**207**	Pg	**Pb**	**22 47 26.3**	**-1.6**
DGZ				Sg	**Sb**	**22 47 41.6**	**-1.5**
ARTR	**Artybash**	**1.22**	**331**	Pg	**Pb**	**22 47 28.0**	**-1.0**
ARTR				Sg	**Sn**	**22 47 44.8**	**-0.7**
TASR	**Tashtagol**	**2.04**	**354**	Pg	**Pb**	**22 47 42.3**	**-0.6**
TASR				Sg	**Sg**	**22 48 09.8**	**-1.6**
UKR	**Ust'-Kan**	**2.21**	**277**	Pg	**Pg**	**22 47 46.1**	**-2.0**
UKR				Sg	**Sg**	**22 48 16.7**	**+0.1**
DJO	**Djoy, Khakassi**	**2.77**	**41**	Pg	**Pb**	**22 47 57.0**	**+1.8**
DJO				Sg	**Sb**	**22 48 31.0**	**+1.8**
ELT	**Eltsovka**	**2.82**	**335**	Pg	**Pb**	**22 47 56.2**	**+0.1**
ELT				Sg	**Sg**	**22 48 34.1**	**-2.1**
CERR	**Cheremushki**	**2.90**	**42**	Pg	**Pb**	**22 47 57.6**	**0.0**
CERR				Sg	**Sb**	**22 48 34.4**	**+1.4**
LUZB	**Luzhba, Kemero**	**2.96**	**8**	Sg	**Sb**	**22 48 37.2**	**+2.4**
ZAA0	**Zalesovo Array**	**3.84**	**328**	⇑Pg	**Pb**	**22 48 13.8**	**+0.2**
	0.3nm,0.5s						
ZAA0				⇓Sn	**Sn**	**22 48 51.6**	**+1.6**
	0.6nm,0.4s						
ZAA0				⇑Lg	Lg	22 49 09.8	
	1.9nm,0.8s						
SHRR	**Shira**	**3.94**	**17**	Pg	**Pb**	**22 48 14.8**	**-0.5**
SHRR				Sg	**Sg**	**22 49 09.7**	**-2.7**
MK31	**Makanchi Array**	**5.57**	**227**	⇑Pn	**Pn**	**22 48 30.0**	**+1.4**
	1.2nm,0.5s,baz=50,slow=13,SNR=25						
MK31				⇑Sn	**Sn**	**22 49 38.1**	**+5.5**
	0.9nm,0.5s,baz=56,slow=27,SNR=5.7						
MK31				⇓Lg	Lg	22 50 03.8	
	2.0nm,0.5s						
MAKZ	**Makanchi**	**5.70**	**229**	⇓Pn	**Pn**	**22 48 31.6**	**+1.1**
	1.0nm,0.6s						
MAKZ				⇑Lg	Lg	22 50 09.6	
	1.5nm,0.5s						
KURK	**Kurchatov**	**6.11**	**274**	⇑Pn	**Pn**	**22 48 36.2**	**+0.2**
	0.4nm,0.5s						
KURK				⇓Sn	**Sn**	**22 49 45.8**	**-0.1**
	2.2nm,0.6s						
KURK				⇑Lg	Lg	22 50 18.3	
	3.4nm,0.7s						
KURBB	**Kurchatov Arra**	**6.17**	**273**	⇑Pn	**Pn**	**22 48 36.2**	**-0.6**
	1.1nm,0.4s						
KURBB				⇓Sn	**Sn**	**22 49 47.1**	**-0.4**
	1.6nm,0.3s						
KURBB				⇑Lg	Lg	22 50 18.6	
	8.1nm,0.8s						

*VAO **24** 22:50:50.0±1.9, 10°.16S×71°.47W, h595^{km}±5^{km}, mb7.1*

*BJI **24** 22:50:52.1±0.0, 9°.90S×71°.00W, h610^{km}, mB7.3/52*

*BDF **24** 22:50:52±2.2, 10°.07S±0°.07×70°.98W±0°.08, h606^{km}±3^{km}, Error ellipse: s-maj=11.2km s-min=9.6km az=58.0*

*MOS **24** 22:50:52.5±0.9, 10°.07S×71°.07W, h621^{km}, mb7.0/10, Error ellipse: s-maj=10.2km s-min=6.8km az=106.6*

*NEIC **24** 22:50:53.8, 10°.05S×71°.02W, h624^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{20}Nm; M_{rr}-4.12; $M_{\theta\theta}$0.54; $M_{\phi\phi}$3.58; $M_{r\theta}$-0.45; $M_{\theta\phi}$-0.69; $M_{\phi r}$1.33; Fault plane solution: $M_0$4.18000×10^{20} NP1:ϕ_s349.63000°, δ35.25000°, λ-86.82000°. NP2:ϕ_s165.74000°, δ54.81000°, λ-92.24000°. Principal axes: T 3.9723, Plg10.0000°, Azm257.0000°; N 0.3949, Plg2.0000°, Azm167.0000°; P -4.3672, Plg80.0000°, Azm67.0000°;*

*GUC **24** 22:50:54.0, 10°.53S×71°.09W, h604^{km}, MW7.7*

*BGR **24** 22:50:54.6±0.0, 10°.12S×70°.63W, h622^{km}±4^{km}, mb7.2, mB_BB7.7*

*IDC **24** 22:50:54.3±0.2, 10°.04S×71°.08W, h622^{km}±2^{km}, mb6.1/42, mb1 6.2/49, mb1mx6.2/50, mbtmp7.0/49, Error ellipse: s-maj=6.4km s-min=5.0km az=64.0*

*NEIC **24** 22:50:54.4±2.0, 10°.06S±0°.07×71°.02W±0°.08, h621^{km}±3^{km}, mb7.0/348, Mwb7.7/63, Mww7.6, Mwc7.6(GCMT), Error ellipse: s-maj=12.1km s-min=10.0km az=72.0*

*GCMT **24** 22:50:59.8±0.1, 10°.11S±0°.01×71°.28W±0°.01, h627^{km}±1^{km}, MW7.7/162, Moment Tensor Solution. s161,c445; s162,c437; Duration: 16^{s}6 Moment tensor: Scale 10^{20} Nm; M_{rr}-3.27±.01; $M_{\theta\theta}$0.40±.01; $M_{\phi\phi}$2.87±.02; $M_{r\theta}$-0.82±.01; $M_{\theta\phi}$-0.67±.01; $M_{\phi r}$1.75±.01; Best double couple: $M_0$3.70000×10^{20} NP1:ϕ_s350.00000°, δ30.00000°, λ-81.00000°. NP2:ϕ_s160.00000°, δ61.00000°, λ-95.00000°. Principal axes: T 3.5710, Plg16.0000°, Azm254.0000°; N 0.2520, Plg4.0000°, Azm163.0000°; P -3.8280, Plg74.0000°, Azm58.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to mantle waves, cutoff=150s. Triangular moment-rate function*

*NEIC **24** 22:50:59, 10°.10S×70°.97W, h630^{km}, Moment Tensor Solution. Duration: 12^{s}0 Moment tensor: Scale 10^{20}Nm; M_{rr}-2.58; $M_{\theta\theta}$0.25; $M_{\phi\phi}$2.33; $M_{r\theta}$-0.97; $M_{\theta\phi}$-0.52; $M_{\phi r}$1.69; Fault plane solution: $M_0$3.19000×10^{20} NP1: ϕ_s355.00000°, δ27.00000°, λ-73.00000°. NP2: ϕ_s157.00000°, δ64.00000°, λ-98.00000°. Principal axes: T 3.0789, Plg19.0000°, Azm253.0000°; N 0.2051, Plg7.0000°, Azm161.0000°; P -3.2841, Plg70.0000°, Azm50.0000°;*

*NEIC **24** 22:51:00, 10°.11S×71°.28W, h627^{km}, Moment Tensor Solution. Duration: 33^{s}2 Moment tensor: Scale 10^{20}Nm; M_{rr}-3.27; $M_{\theta\theta}$0.40; $M_{\phi\phi}$2.87; $M_{r\theta}$-0.82; $M_{\theta\phi}$-0.67; $M_{\phi r}$1.75; Fault plane solution: $M_0$3.71000×10^{20} NP1: ϕ_s350.00000°, δ30.00000°, λ-81.00000°. NP2: ϕ_s160.00000°, δ61.00000°, λ-95.00000°. Principal axes: T 3.5726, Plg16.0000°, Azm254.0000°; N 0.2541, Plg4.0000°, Azm163.0000°; P -3.8267, Plg74.0000°, Azm58.0000°;*

ISC 24 22:50:53.3±0.2**, 10°.11S**±0°.02×**71°.10W**±0°.03**, h621**^{km}±1^{km}**, h623**^{km}**:pP-P, n2202, σ1^{s}86**/2949**, mb6.9**/354**, 129C-574D, Fault plane solution: NP1:**ϕ_s39.33593°**,** δ47.57297°**,** λ-28.76900°. **NP2:**ϕ_s149.66142°**,** δ69.19122°**,** λ-133.80266°. **Principal axes:** T Plg13.0529°**,** Azm269.8220°**;** N Plg40.3178°**,** Azm168.4756°**;** P Plg46.7399°**,** Azm14.0846°**; Fault plane solution: NP1:**ϕ_s154.05728°**,** δ60.67005°**,** λ-69.61382°. **NP2:** ϕ_s296.87103°**,** δ35.19371°**,** λ-121.79832°. **Principal axes:** T Plg13.3845°**,** Azm229.3906°**;** N Plg17.6795°**,** Azm323.7404°**;** P Plg67.5512°**,** Azm104.2269°**;**

Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CZSB	**Cruzeiro do Su**	**2.85**	**326**	P	**P**	**22 52 12.0**	**-1.5**
ETMB	**Extrema**	**4.82**	**87**	*e*P	**P**	**22 52 25.7**	**-0.5**
ETMB	**Extrema**	**4.82**	**87**	P	**P**	**22 52 25.4**	**-0.8**
NNA	**Nana**	**5.94**	**251**	P	**P**	**22 52 35.0**	**-0.2**
	1µm,0.3s,baz=117,slow=9.3,SNR=17						
NNA				S	**S**	**22 53 54.7**	**-3.8**
	281nm,0.3s,baz=340,slow=20,SNR=0.9						
NNA				P3KPbc		23 29 02.0	
	baz=288,slow=6.0,SNR=5.4						
NNA	**Nana**	**5.94**	**251**	⇑P	**P**	**22 52 35.0**	**-0.2**
NNA	**Nana**	**5.94**	**251**	P	**P**	**22 52 34.6**	**-0.6**
TBTG	**Tabatinga, AM**	**6.00**	**11**	*e*P	**P**	**22 52 35.9**	**+0.2**
TBTG	**Tabatinga, AM**	**6.00**	**11**	P	**P**	**22 52 35.1**	**-0.6**
I08BO	**LAS PENAS INFR**	**6.59**	**157**	P	**P**	**22 52 40.0**	**-1.3**
	baz=347,slow=14,SNR=3.3						
LPAZ	**La Paz**	**6.79**	**155**	P	**P**	**22 52 42.4**	**-0.7**
LPAZ	**La Paz**	**6.79**	**155**	P	**P**	**22 52 42.4**	**-0.7**
ATAH	**Atahualpa**	**7.80**	**292**	P	**P**	**22 52 52.1**	**0.0**
	721nm,0.3s,baz=141,slow=9.1,SNR=10						
ATAH				S	**S**	**22 54 30.3**	**+1.1**
	411nm,0.3s,baz=93,slow=24,SNR=67						
ATAH				P3KPbc		23 28 58.3	
	0.6nm,0.3s,baz=9.4,slow=6.1,SNR=4.0						
SAML	**Samuel**	**7.89**	**82**	P	**P**	**22 52 52.0**	**-0.5**
SAML	**Samuel**	**7.89**	**82**	P	**P**	**22 52 52.0**	**-0.5**
AP01	**Chacalluta**	**8.24**	**175**	*e*P	**P**	**22 52 53.8**	**-1.8**
AP01				*i*S	**S**	**22 54 29.7**	**-6.2**
AP01	**Chacalluta**	**8.24**	**175**	P	**P**	**22 52 53.9**	**-1.8**
PB16	**IPOC Station P**	**8.32**	**170**	*e*P	**P**	**22 52 56.3**	**-0.7**
PB16				*i*S	**S**	**22 54 33.9**	**-4.4**
PB16	**IPOC Station P**	**8.32**	**170**	P	**P**	**22 52 55.5**	**-1.5**
PB12	**IPOC Station P**	**8.49**	**175**	*e*P	**P**	**22 52 56.3**	**-1.7**
PB12				*i*S	**S**	**22 54 33.4**	**-6.9**
PB12	**IPOC Station P**	**8.49**	**175**	P	**P**	**22 52 57.3**	**-0.7**
PB11	**IPOC Station P**	**9.70**	**172**	*e*P	**P**	**22 53 08.5**	**-1.2**
PB11				*i*S	**S**	**22 54 56.2**	**-5.4**
PB11	**IPOC Station P**	**9.70**	**172**	P	**P**	**22 53 09.2**	**-0.5**
TA02	**Huaiquique**	**10.14**	**175**	*e*P	**P**	**22 53 14.1**	**+0.1**
TA02				*i*S	**S**	**22 55 04.5**	**-4.8**
TA02	**Huaiquique**	**10.14**	**175**	P	**P**	**22 53 13.3**	**-0.6**
PB08	**IPOC Station P**	**10.15**	**170**	*e*P	**P**	**22 53 15.3**	**+1.0**
PB08				*i*S	**S**	**22 55 05.0**	**-5.1**
PB08	**IPOC Station P**	**10.15**	**170**	P	**P**	**22 53 15.0**	**+0.6**
TA01	**Diego Aracena**	**10.43**	**175**	*e*P	**P**	**22 53 16.4**	**-0.4**
TA01				*i*S	**S**	**22 55 10.4**	**-4.1**
TA01	**Diego Aracena**	**10.43**	**175**	P	**P**	**22 53 16.4**	**-0.4**
PTLC	**Puerto Leguiza**	**10.86**	**340**	*e*P	**P**	**22 53 17.4**	**-3.7**
PB01	**IPOC Station P**	**10.98**	**172**	*e*P	**P**	**22 53 23.2**	**+0.9**
PB01				*i*S	S	22 55 15.2	-9.2
PB01	**IPOC Station P**	**10.98**	**172**	P	**P**	**22 53 22.9**	**+0.6**
VILB	**Vilhena**	**11.04**	**106**	P	**P**	**22 53 22.7**	**-0.2**
PB02	**IPOC Station P**	**11.21**	**174**	*e*P	**P**	**22 53 25.8**	**+1.3**
SIV	**San Ignacio**	**11.38**	**122**	P	**P**	**22 53 26.0**	**-0.1**
	2µm,0.3s,baz=289,slow=7.0,SNR=22						
SIV				S	**S**	**22 55 34.5**	**+3.0**
	302nm,0.3s,baz=295,slow=13,SNR=3.9						
SIV				P3KPbc		23 28 54.7	
	1.3nm,0.3s,baz=199,slow=3.3,SNR=6.3						
PB07	**IPOC Station P**	**11.61**	**174**	*e*P	**P**	**22 53 28.4**	**0.0**
PB07	**IPOC Station P**	**11.61**	**174**	P	**P**	**22 53 28.5**	**0.0**
PB09	**IPOC Station P**	**11.76**	**172**	*e*P	**P**	**22 53 29.7**	**-0.1**
PB09	**IPOC Station P**	**11.76**	**172**	P	**P**	**22 53 30.8**	**+0.9**
PB03	**IPOC Station P**	**11.94**	**174**	*e*P	**P**	**22 53 32.1**	**+0.5**
PB04	**IPOC Station P**	**12.19**	**176**	*e*P	**P**	**22 53 34.5**	**+0.4**
PB04	**IPOC Station P**	**12.19**	**176**	P	**P**	**22 53 33.9**	**-0.1**
MACA	**Manacapuru-AM**	**12.43**	**57**	*e*P	**P**	**22 53 36.0**	**-0.3**
MACA	**Manacapuru-AM**	**12.43**	**57**	P	**P**	**22 53 35.8**	**-0.6**
MACC	**Macarena, Meta**	**12.48**	**347**	*e*P	**P**	**22 53 37.7**	**+0.9**
LVC	**Limon Verde**	**12.61**	**171**	P	**P**	**22 53 40.6**	**+2.3**
	623nm,0.3s,baz=344,slow=5.3,SNR=13						
LVC				S	**S**	**22 55 54.4**	**+0.9**
	301nm,0.3s,baz=293,slow=14,SNR=11						
LVC				P3KPbc		23 28 52.9	
	0.9nm,0.3s,baz=222,slow=1.6,SNR=5.5						
LVC	**Limon Verde**	**12.61**	**171**	*e*P	**P**	**22 53 40.3**	**+2.0**
LVC				*i*S	**S**	**22 55 53.1**	**-0.4**
LVC	**Limon Verde**	**12.61**	**171**	P	**P**	**22 53 39.1**	**+0.8**
PB06	**IPOC Station P**	**12.61**	**174**	*e*P	**P**	**22 53 39.3**	**+1.2**
PB06	**IPOC Station P**	**12.61**	**174**	P	**P**	**22 53 38.9**	**+0.8**
OTAV	**Otavalo**	**12.62**	**324**	P	**P**	**22 53 39.1**	**+0.4**
OTAV	**Otavalo**	**12.62**	**324**	*e*P	**P**	**22 53 40.9**	**+2.2**
OTAV	**Otavalo**	**12.62**	**324**	⇓P	**P**	**22 53 41.9**	**+3.2**
OTAV	**Otavalo**	**12.62**	**324**	P	**P**	**22 53 39.1**	**+0.4**
CUSE	**Cuicocha Este**	**12.64**	**325**	*e*P	**P**	**22 53 42.3**	**+3.5**
TULM	**Tulcn-Chalpat**	**12.65**	**328**	*e*P	**P**	**22 53 41.5**	**+2.5**
PB05	**IPOC Station P**	**12.70**	**176**	*e*P	**P**	**22 53 39.6**	**+0.6**
PTLB	**Pontes e Lacer**	**12.81**	**116**	P	**P**	**22 53 40.1**	**+0.1**
CPAS2	**Pasto**	**12.81**	**331**	*e*P	**P**	**22 53 42.2**	**+1.7**
CPAS1	**Pasto**	**12.82**	**331**	*e*P	P	22 53 47.7	+7.1
PAC1	**Pacto, Paraso**	**12.84**	**323**	*e*P	**P**	**22 53 43.0**	**+2.5**
CMBC	**Cumbal**	**12.86**	**328**	*e*P	**P**	**22 53 43.3**	**+2.3**
GCUF	**Volcan Galeras**	**12.86**	**331**	*e*P	**P**	**22 53 42.6**	**+1.5**
CCUFI	**Cufio, Nario**	**12.87**	**331**	*e*P	**P**	**22 53 43.3**	**+2.2**
PB15	**IPOC Station P**	**13.12**	**173**	*e*P	**P**	**22 53 44.0**	**+0.9**
PB15	**IPOC Station P**	**13.12**	**173**	P	**P**	**22 53 43.6**	**+0.5**
PB10	**IPOC Station P**	**13.34**	**178**	*e*P	**P**	**22 53 44.8**	**-0.3**
PB10	**IPOC Station P**	**13.34**	**178**	P	**P**	**22 53 45.8**	**+0.8**
SOTA	**Rioblanco**	**13.35**	**335**	*e*P	**P**	**22 53 47.4**	**+1.6**
BETC	**Betania**	**13.42**	**341**	*e*P	**P**	**22 53 48.5**	**+2.4**
PCON	**Cinco Dias**	**13.44**	**337**	*e*P	**P**	**22 53 51.0**	**+4.3**
MARP	**Paez Belalcaza**	**13.75**	**339**	*e*P	**P**	**22 53 50.9**	**+1.4**
TUMC	**Tumaco**	**14.08**	**327**	*e*P	**P**	**22 53 53.9**	**+1.6**
TUMC	**Tumaco**	**14.08**	**327**	P	**P**	**22 53 52.6**	**+0.3**
PDRB	**Porto dos Gac**	**14.19**	**97**	*e*P	**P**	**22 53 54.2**	**+0.8**
PRAC	**Prado**	**14.24**	**344**	*e*P	**P**	**22 53 55.0**	**+1.1**
PTGC	**Puerto Gaitan,**	**14.25**	**356**	*e*P	**P**	**22 53 54.9**	**+1.0**
VILC	**Villavicencio,**	**14.36**	**350**	*e*P	**P**	**22 53 56.6**	**+1.5**
PB14	**IPOC Station P**	**14.45**	**177**	⇑*i*P	**P**	**22 53 57.4**	**+1.4**
PB14				IAmb	IAmb	22 53 60.0	
	comp=Z,7µm,1.1s						
PB14	**IPOC Station P**	**14.45**	**177**	P	**P**	**22 53 56.9**	**+0.9**
PTGA	**Pitinga**	**14.47**	**51**	P	**P**	**22 53 56.2**	**+0.2**
	comp=Z,4µm,0.3s,baz=226,slow=23,SNR=25						
PTGA				S	**S**	**22 56 28.2**	**+3.3**
	comp=Z,4µm,0.3s,baz=306,slow=15,SNR=9.3						
PTGA				P3KPbc		23 28 45.6	
	comp=Z,0.4nm,0.3s,baz=343,slow=3.9,SNR=3.7						
PTGA	**Pitinga**	**14.47**	**51**	P	**P**	**22 53 56.4**	**+0.5**
ORTC	**Ortega, Tolima**	**14.53**	**343**	*e*P	**P**	**22 53 57.7**	**+1.2**
YOTC	**Yotoco, Valle**	**14.94**	**339**	*e*P	**P**	**22 54 01.1**	**+0.8**
CLDB	**Colider**	**15.07**	**94**	*e*P	**P**	**22 54 02.2**	**+0.8**
ANIL	**Santa Ana**	**15.12**	**343**	*e*P	**P**	**22 54 03.6**	**+1.4**
ROSC	**El Rosal**	**15.19**	**348**	P	**P**	**22 54 05.0**	**+2.0**
	comp=Z,961nm,0.3s,baz=305,slow=7.7,SNR=15						
ROSC				S	**S**	**22 56 41.1**	**+3.7**
	baz=253,slow=21,SNR=4.4						
ROSC				P3KPbc		23 28 43.6	
	comp=Z,2.5nm,0.3s,baz=76,slow=19,SNR=3.2						
ROSC	**El Rosal**	**15.19**	**348**	P	**P**	**22 54 05.0**	**+2.0**
ROSC	**El Rosal**	**15.19**	**348**	*e*P	**P**	**22 54 05.2**	**+2.3**
ROSC	**El Rosal**	**15.19**	**348**	P	**P**	**22 54 04.3**	**+1.3**
PLMC	**San Jos del P**	**15.79**	**341**	*e*P	**P**	**22 54 08.9**	**+0.9**
NPGB	**Novo Progresso**	**15.86**	**80**	*e*P	**P**	**22 54 09.2**	**+0.6**
SPBC	**San Pablo de B**	**15.94**	**349**	*e*P	**P**	**22 54 10.8**	**+1.5**
NORC	**Norcasia**	**16.02**	**346**	*e*P	**P**	**22 54 10.1**	**0.0**
RUSC	**La Rusia**	**16.02**	**353**	*e*P	**P**	**22 54 12.2**	**+1.6**
SALV	**Santo Antonio**	**16.07**	**113**	*e*P	**P**	**22 54 12.6**	**+2.1**
PIZC	**Pizarro, Choco**	**16.22**	**337**	*e*P	**P**	**22 54 14.1**	**+2.2**
ITTB	**Itaituba**	**16.27**	**71**	*e*P	**P**	**22 54 14.1**	**+1.8**
BOAV	**Boa Vista**	**16.29**	**41**	*e*P	**P**	**22 54 13.2**	**+0.8**
BOAV	**Boa Vista**	**16.29**	**41**	P	**P**	**22 54 13.1**	**+0.6**
BOAV				IAmb	IAmb	22 54 20.3	
	comp=Z,10µm,0.9s						
TAMC	**Tame, Arauca**	**16.45**	**358**	*e*P	**P**	**22 54 15.3**	**+1.3**
CBOC	**Ciudad Bolivar**	**16.61**	**343**	*e*P	**P**	**22 54 16.5**	**+0.9**
AC02	**Maricunga**	**16.74**	**174**	*e*P	**P**	**22 54 20.1**	**+3.1**
AC02				IAmb	IAmb	22 54 25.7	
	comp=Z,5µm,1.0s						
AC02	**Maricunga**	**16.74**	**174**	P	**P**	**22 54 19.2**	**+2.2**
AC02				IAmb	IAmb	22 54 26.0	
	comp=Z,5µm,0.9s						
HELC	**Santa Helena**	**16.78**	**345**	*e*P	**P**	**22 54 18.1**	**+0.7**
PTBC	**PUERTO BERRIO,**	**16.88**	**348**	*e*P	**P**	**22 54 17.4**	**-0.5**
BRRC	**Barranca, Sant**	**17.30**	**351**	*e*P	**P**	**22 54 21.2**	**-0.5**
SOLC	**Bahia Solano**	**17.40**	**339**	*e*P	**P**	**22 54 24.8**	**+2.2**
PAMC	**Pamplona, Colo**	**17.41**	**355**	*e*P	**P**	**22 54 23.8**	**+0.6**
PP1B	**Ponte de Pedra**	**17.41**	**117**	*e*P	**P**	**22 54 23.8**	**+1.1**
GO03	**Copiap**	**17.41**	**177**	*e*P	**P**	**22 54 24.6**	**+1.9**
GO03				IAmb	IAmb	22 54 33.5	
	comp=Z,4µm,1.2s						
GO03	**Copiap**	**17.41**	**177**	P	**P**	**22 54 24.0**	**+1.3**
AHML	**Horco Molle**	**17.46**	**163**	*e*P	**P**	**22 54 24.8**	**+1.7**
AHML				IAmb	IAmb	22 54 41.0	
	comp=Z,3µm,1.0s						
ZARC	**Zaragoza, Cauc**	**17.88**	**348**	*e*P	**P**	**22 54 26.8**	**-0.2**
ZARC	**Zaragoza, Cauc**	**17.88**	**348**	P	**P**	**22 54 26.6**	**-0.5**
AC04	**Llanos de Chal**	**18.00**	**180**	P	**P**	**22 54 28.7**	**+0.8**
AC04				IAmb	IAmb	22 54 46.3	
	comp=Z,3µm,0.7s						
AQDB	**Aquidauana**	**18.06**	**127**	*e*P	**P**	**22 54 29.2**	**+0.6**
AQDB	**Aquidauana**	**18.06**	**127**	P	**P**	**22 54 29.9**	**+1.3**
AQDB				IAmb	IAmb	22 54 38.0	
	comp=Z,7µm,0.9s						
UREC	**San Jos de Ur**	**18.29**	**346**	*e*P	**P**	**22 54 30.4**	**-0.3**
OCAC	**Ocana**	**18.36**	**353**	*e*P	**P**	**22 54 31.0**	**-0.6**
OCAC	**Ocana**	**18.36**	**353**	P	**P**	**22 54 31.6**	**0.0**
OCAC				IAmb	IAmb	22 54 44.2	
	comp=Z,2µm,0.6s						
PTAC	**Punta Ardita,**	**18.40**	**338**	*e*P	**P**	**22 54 33.8**	**+2.1**
MALB	**Monte Alegre**	**18.63**	**65**	*e*P	**P**	**22 54 35.1**	**+1.3**
LCO	**Las Campanas**	**18.81**	**179**	⇓P	**P**	**22 54 37.4**	**+1.9**
SDV	**Santo Domingo**	**18.88**	**1**	P	**P**	**22 54 37.1**	**+0.9**
	comp=Z,352nm,0.3s,baz=103,slow=4.0,SNR=7.6						
SDV				S	**S**	**22 57 35.6**	**-1.1**
	comp=Z,270nm,0.3s,baz=270,slow=24,SNR=53						
SDV				P3KPbc		23 28 30.8	
	comp=Z,2.5nm,0.3s,baz=338,slow=3.7,SNR=6.0						
SDV	**Santo Domingo**	**18.88**	**1**	*e*P	**P**	**22 54 36.4**	**+0.2**
SDV	**Santo Domingo**	**18.88**	**1**	P	**P**	**22 54 36.6**	**+0.4**
SDV				IAmb	IAmb	22 54 48.7	
	comp=Z,9µm,1.2s						
SMLC	**San Martn de**	**19.02**	**351**	*e*P	**P**	**22 54 36.2**	**-1.1**
BAUV	**El Baul**	**19.17**	**9**	P	**P**	**22 54 39.3**	**+0.6**
MOTC	**Monteria, Cord**	**19.31**	**346**	*e*P	**P**	**22 54 40.9**	**+0.9**
MOTC	**Monteria, Cord**	**19.31**	**346**	P	**P**	**22 54 40.7**	**+0.7**
MOTC				IAmb	IAmb	22 54 45.8	
	comp=Z,7µm,0.9s						
SNDB	**Serra Nova Dou**	**19.52**	**97**	*e*P	**P**	**22 54 43.3**	**+1.3**
LCBC	**Los crdobas,**	**19.56**	**344**	*e*P	**P**	**22 54 44.4**	**+2.2**
LL1C	**La Loma 1 Cana**	**19.68**	**353**	*e*P	**P**	**22 54 43.1**	**-0.2**
CO05	**La Serena**	**19.71**	**180**	P	**P**	**22 54 44.7**	**+1.3**
CO05				IAmb	IAmb	22 54 50.4	
	comp=Z,3µm,0.7s						
LL6C	**La Loma 6 Bece**	**19.83**	**354**	*e*P	**P**	**22 54 43.1**	**-1.5**
ARGC	**Ariguani, Magd**	**20.08**	**351**	*e*P	**P**	**22 54 47.5**	**+0.6**
SJCC	**San Jacinto, C**	**20.29**	**348**	*e*P	**P**	**22 54 49.1**	**+0.3**
SJCC	**San Jacinto, C**	**20.29**	**348**	P	**P**	**22 54 48.8**	**0.0**
CO03	**El Pedregal**	**20.63**	**179**	P	**P**	**22 54 52.5**	**+0.7**
CO03				IAmb	IAmb	22 55 00.8	
	comp=Z,4µm,0.7s						
CPUP	**Villa Florida**	**20.74**	**143**	P	**P**	**22 54 53.1**	**+0.4**
	comp=Z,1µm,0.6s,baz=319,slow=8.9,SNR=16						
CPUP				ScP	**ScP**	**23 01 15.7**	**+2.5**
	comp=Z,304nm,0.6s,baz=327,slow=2.3,SNR=5.3						
CPUP				P3KPbc		23 28 23.9	
	comp=Z,17nm,1.0s,baz=174,slow=2.4,SNR=6.8						
CPUP	**Villa Florida**	**20.74**	**143**	*e*P	**P**	**22 54 54.4**	**+1.7**
CPUP	**Villa Florida**	**20.74**	**143**	⇑P	**P**	**22 54 53.8**	**+1.2**
CPUP	**Villa Florida**	**20.74**	**143**	P	**P**	**22 54 52.1**	**-0.5**
CPUP				IAmb	IAmb	22 54 58.9	
	comp=Z,3µm,0.9s						
BIRV	**Birongo**	**21.01**	**13**	P	**P**	**22 54 55.8**	**+0.6**
BCIP	**Isla Barro Col**	**21.03**	**335**	P	**P**	**22 54 57.0**	**+1.5**
BCIP				pmax	pmax		
	comp=Z,3µm,0.9s						
BCIP	**Isla Barro Col**	**21.03**	**335**	*e*P	**P**	**22 54 57.6**	**+2.2**
BCIP	**Isla Barro Col**	**21.03**	**335**	⇓P	**P**	**22 54 58.1**	**+2.7**
BCIP	**Isla Barro Col**	**21.03**	**335**	P	**P**	**22 54 57.0**	**+1.5**
BCIP				IAmb	IAmb	22 55 06.2	
	comp=Z,3µm,0.9s						
PCRV	**Puerto La Cruz**	**21.15**	**18**	P	**P**	**22 54 58.3**	**+1.7**
	comp=Z,1µm,0.4s,baz=116,slow=6.3,SNR=10						
PCRV				P3KPbc		23 28 21.2	
	comp=Z,13nm,0.8s,baz=97,slow=15,SNR=2.2						
PAYG	**Puerto Ayora**	**21.26**	**295**	*e*P	**P**	**22 54 59.1**	**+1.6**
PAYG	**Puerto Ayora**	**21.26**	**295**	⇑P	**P**	**22 54 59.3**	**+1.7**
PAYG				⇓S	**ScP**	**23 01 15.7**	**+1.0**
PAYG	**Puerto Ayora**	**21.26**	**295**	P	**P**	**22 54 59.1**	**+1.6**
PAYG				IAmb	IAmb	22 55 00.6	
	comp=Z,4µm,0.8s						
MCPB	**Macapa, AP**	**21.27**	**64**	*e*P	**P**	**22 54 58.9**	**+1.3**
SMRC	**Santa Marta, M**	**21.36**	**352**	*e*P	**P**	**22 54 57.2**	**-1.2**
ZON	**Zonda**	**21.45**	**174**	P	**P**	**22 55 00.1**	**+1.1**
ZON				pmax	pmax		
	comp=Z,7µm,1.2s						
ZON	**Zonda**	**21.45**	**174**	P	**P**	**22 55 00.1**	**+1.1**
ZON				IAmb	IAmb	22 55 03.9	
	comp=Z,7µm,1.2s						
URIC	**Uribia, Colomb**	**21.69**	**358**	*e*P	**P**	**22 54 59.5**	**-1.7**
URIC	**Uribia, Colomb**	**21.69**	**358**	P	**P**	**22 54 58.7**	**-2.6**
URIC				IAmb	IAmb	22 55 00.5	
	comp=Z,4µm,1.0s						
TRCB	**Terra Rica**	**21.71**	**128**	P	**P**	**22 55 01.1**	**-0.3**
TRCB				IAmb	IAmb	22 55 34.8	
	comp=Z,4µm,0.5s						
BRU2	**Volcan**	**22.04**	**328**	P	**P**	**22 55 03.1**	**-1.5**
BRU2				IAmb	IAmb	22 55 25.1	
	comp=Z,9µm,1.7s						
ITRB	**Iturama**	**22.17**	**118**	*e*P	**P**	**22 55 06.9**	**+1.3**
EDSV	**San Vito**	**22.21**	**327**	*e*P	**P**	**22 55 07.9**	**+1.8**
HATO	**Hato, Curacao**	**22.25**	**6**	P	**P**	**22 55 05.1**	**-1.1**
RIOS	**Rincon, Osa**	**22.41**	**326**	P	**P**	**22 55 09.2**	**+1.5**
RIOS				IAmb	IAmb	22 55 17.4	
	comp=Z,4µm,0.7s						
TPP	**Pointe-a-Pierr**	**22.45**	**26**	*e*P	**P**	**22 55 11.3**	**+3.2**
VA03	**San Esteban**	**22.55**	**179**	P	**P**	**22 55 10.5**	**+1.6**
TBH	**Brigand Hill**	**22.76**	**26**	*e*P	**P**	**22 55 14.7**	**+3.9**
SRBA	**San Rafael, Bu**	**22.76**	**327**	P	**P**	**22 55 12.6**	**+1.6**
TRN	**Trinidad (W)**	**22.76**	**25**	*e*P	**P**	**22 55 12.6**	**+1.8**
VA01	**Torpederas**	**22.81**	**181**	P	**P**	**22 55 12.2**	**+1.2**
PEL	**Peldehue**	**22.93**	**179**	P	**P**	**22 55 13.6**	**+1.5**
PEL				pmax	pmax		
	comp=Z,7µm,0.9s						
PEL	**Peldehue**	**22.93**	**179**	⇓P	**P**	**22 55 14.2**	**+2.1**
PEL	**Peldehue**	**22.93**	**179**	P	**P**	**22 55 13.6**	**+1.5**
MT02	**Curacav**	**23.04**	**180**	P	**P**	**22 55 13.9**	**+0.8**
MT02				IAmb	IAmb	22 55 33.0	
	comp=Z,3µm,1.0s						
PEZE	**Perez Zeledon,**	**23.06**	**327**	*e*P	**P**	**22 55 15.6**	**+2.0**
PEZE	**Perez Zeledon,**	**23.06**	**327**	P	**P**	**22 55 15.3**	**+1.7**
BDFB	**Brasilia**	**23.16**	**106**	P	**P**	**22 55 16.9**	**+2.4**
	comp=Z,3µm,0.8s,baz=273,slow=8.7,SNR=7.9						
BDFB				S	**S**	**22 58 44.7**	**+0.6**
	comp=Z,883nm,0.7s,baz=50,slow=20,SNR=1.7						
BDFB				P3KPbc		23 28 17.8	
	comp=Z,11nm,0.7s,baz=102,slow=6.2,SNR=3.6						
BDFB	**Brasilia**	**23.16**	**106**	P	**P**	**22 55 15.1**	**+0.6**
BDFB				IAmb	IAmb	22 55 27.1	
	comp=Z,3µm,0.8s						
MT05	**Renca**	**23.17**	**179**	P	**P**	**22 55 15.8**	**+1.5**
VA05	**Santo Domingo**	**23.44**	**181**	P	**P**	**22 55 17.4**	**+0.9**
VA05				IAmb	IAmb	22 55 33.5	
	comp=Z,3µm,0.9s						
RIMA	**Rio Macho**	**23.48**	**327**	*e*P	**P**	**22 55 18.7**	**+1.2**
RIMA	**Rio Macho**	**23.48**	**327**	P	**P**	**22 55 19.5**	**+2.1**
BATAN	**Batan**	**23.50**	**328**	P	**P**	**22 55 19.2**	**+1.9**
BATAN				IAmb	IAmb	22 55 27.6	
	comp=Z,6µm,1.0s						
IPMB	**Ipameri, GO**	**23.52**	**112**	*e*P	**P**	**22 55 18.3**	**+0.7**
LCR2	**La Lucha 2**	**23.54**	**327**	*e*P	**P**	**22 55 19.5**	**+1.5**
MT09	**Talagante**	**23.55**	**180**	P	**P**	**22 55 18.7**	**+0.9**

CVTR	Volcan Turrial	23.64	327	P	P	22 55 20.3	+1.2
CVTR				IAmb	IAmb	22 55 34.8	
	comp=Z,4µm,1.0s						
ITQB	Itaqui	23.70	147	P	P	22 55 18.9	-0.1
TOSP	Speyside	23.72	27	*e*P	P	22 55 21.2	+1.9
TOSP	Speyside	23.72	27	P	P	22 55 20.2	+0.9
TOSP				IAmb	IAmb	22 55 31.4	
	comp=Z,4µm,1.1s						
MDP	Montagnes des	23.80	51	P	P	22 55 22.1	+2.0
	comp=Z,756nm,0.6s,baz=260,slow=7.5,SNR=12						
MDP				S	S	22 58 56.8	+2.8
	comp=Z,922nm,0.7s,baz=236,slow=14,SNR=4.0						
HDC	Heredia	23.81	327	*e*P	P	22 55 23.0	+2.8
HDC	Heredia	23.81	327	⇑P	P	22 55 23.1	+2.8
HDC	Heredia	23.81	327	P	P	22 55 22.3	+2.0
HDC				IAmb	IAmb	22 55 30.7	
	comp=Z,4µm,0.7s						
JACO	JACO, Garabito	23.83	325	P	P	22 55 21.9	+1.6
JACO				IAmb	IAmb	22 55 29.6	
	comp=Z,3µm,1.1s						
GRFF	Grenada Fort F	23.90	23	*e*P	P	22 55 21.9	+1.0
GRGR	Grenville	24.01	23	*e*P	P	22 55 22.5	+0.6
GRGR	Grenville	24.01	23	⇑P	P	22 55 22.9	+1.0
GRGR	Grenville	24.01	23	P	P	22 55 22.6	+0.7
SRA1	San Ramn	24.08	326	*e*P	P	22 55 23.6	+0.9
LAFE	Finca La Fe, P	24.09	325	*e*P	P	22 55 23.9	+1.3
GRHS	Sauteurs	24.09	23	*e*P	P	22 55 23.8	+1.2
TMAB	Tom-Au,PA,Br	24.11	73	*e*P	P	22 55 24.0	+1.2
CAO2	Cobano, Puntar	24.11	324	P	P	22 55 24.6	+1.8
CAO2				IAmb	IAmb	22 55 32.0	
	comp=Z,5µm,1.4s						
BO01	Tunca	24.17	180	P	P	22 55 24.0	+0.9
BO01				IAmb	IAmb	22 55 28.6	
	comp=Z,4µm,1.0s						
GRSS	Sisters	24.17	23	*e*P	P	22 55 24.5	+1.2
H03N1	Juan Fernandez	24.31	196	P	P	22 55 25.7	+1.8
	baz=129,slow=14,SNR=159						
H03N2	Juan Fernandez	24.31	196	P	P	22 55 26.1	+2.1
	baz=129,slow=14,SNR=179						
H03N3	Juan Fernandez	24.32	196	P	P	22 55 25.7	+1.6
	baz=129,slow=14,SNR=87						
GCMP	Grenada, Carri	24.42	23	*e*P	P	22 55 26.1	+0.6
VA04	Juan Fernndez	24.48	196	P	P	22 55 27.2	+1.4
INDI	Punta indio, G	24.48	324	*e*P	P	22 55 26.9	+0.9
JTS	Las Juntas de	24.51	325	*e*P	P	22 55 29.3	+3.0
JTS	Las Juntas de	24.51	325	P	P	22 55 27.7	+1.4
JTS				pmax	pmax		
	comp=Z,3µm,1.1s						
JTS	Las Juntas de	24.51	325	*e*P	P	22 55 27.6	+1.2
JTS	Las Juntas de	24.51	325	⇑P	P	22 55 29.4	+3.0
JTS	Las Juntas de	24.51	325	P	P	22 55 27.7	+1.4
JTS				IAmb	IAmb	22 55 37.6	
	comp=Z,3µm,1.1s						
COVE	Coope Vega, Sa	24.56	327	*e*P	P	22 55 28.5	+1.7
BO02	Sierra Bellavi	24.57	179	P	P	22 55 28.4	+1.7
BO02				IAmb	IAmb	22 56 17.4	
	comp=Z,7µm,1.3s						
H03S3	Juan Fernandez	24.67	196	P	P	22 55 28.7	+1.5
	baz=8.5,slow=16,SNR=243						
H03S2	Juan Fernandez	24.69	196	P	P	22 55 28.9	+1.6
	baz=8.5,slow=16,SNR=281						
H03S1	Juan Fernandez	24.69	196	P	P	22 55 28.7	+1.4
	baz=8.5,slow=16,SNR=258						
ITAB	Concordia	24.70	136	P	P	22 55 27.8	0.0
GO05	Huala	24.80	182	P	P	22 55 29.1	+0.5
GO05				IAmb	IAmb	22 55 42.3	
	comp=Z,3µm,0.8s						
VMAR	Armenia, Volca	25.03	326	*e*P	P	22 55 33.2	+2.3
SVOC	Richmond Hill,	25.11	23	*e*P	P	22 55 31.9	+0.4
SVB	Belmont	25.20	23	*e*P	P	22 55 32.0	-0.4
SVB	Belmont	25.20	23	P	P	22 55 31.9	-0.4
HZTE	Horizontes, Gu	25.22	325	*e*P	P	22 55 32.5	0.0
HZTE	Horizontes, Gu	25.22	325	P	P	22 55 34.1	+1.6
SVV	Soufriere Volc	25.26	23	*e*P	P	22 55 33.7	+0.8
SSV	Crater Summit	25.27	23	*e*P	P	22 55 34.1	+1.0
PRVC	Isla de Provid	25.46	336	*e*P	P	22 55 36.5	+1.9
PRVC	Isla de Provid	25.46	336	P	P	22 55 35.6	+0.9
ML02	Panimavida	25.54	181	P	P	22 55 35.7	+0.7
ML02				IAmb	IAmb	22 56 08.6	
	comp=Z,7µm,1.2s						
RCLB	Rio Claro- Sao	25.67	121	*e*P	P	22 55 37.0	+0.5
MCLT	Moule a Chique	25.72	23	*e*P	P	22 55 35.6	-1.4
MCLT	Moule a Chique	25.72	23	P	P	22 55 35.4	-1.5
ESPN	Las Esperanzas	25.75	329	P	P	22 55 38.6	+1.4
ESPN				IAmb	IAmb	22 55 51.0	
	comp=Z,6µm,1.5s						
BBGH	Gun Hill	25.79	27	P	P	22 55 39.1	+1.6
SDBA	SAO DESIDERIO	25.79	98	*e*P	P	22 55 40.0	+2.4
SLB	Belfond	25.79	23	*e*P	P	22 55 34.5	-3.1
SLCP	Castries, St.	25.98	23	*e*P	P	22 55 39.4	+0.2
SLBI	Saint Lucia, B	26.00	23	*e*P	P	22 55 38.0	-1.3
ACON	Acoyapa	26.02	327	P	P	22 55 40.2	+0.7
ACON				IAmb	IAmb	22 55 50.1	
	comp=Z,4µm,1.0s						
VAO	Valinhos	26.39	122	*e*P	P	22 55 42.6	-0.3
BIM	Bigot	26.41	22	*e*P	P	22 55 42.0	-1.1
BIM	Bigot	26.41	22	P	P	22 55 41.6	-1.4
BIM				IAmb	IAmb	22 55 57.9	
	comp=Z,3µm,0.6s						
H05S1	Guadeloupe/Mar	26.41	23	P	P	22 55 42.2	-0.8
	SNR=364						
MPOM	Morne Pois Mar	26.42	23	*e*P	P	22 55 42.1	-0.9
MPOM	Morne Pois Mar	26.42	23	P	P	22 55 41.8	-1.2
MPOM				IAmb	IAmb	22 55 51.1	
	comp=Z,4µm,0.6s						
FDF	Fort de France	26.58	22	P	P	22 55 42.7	-1.8
FDF				pmax	pmax		
	comp=Z,4µm,1.0s						
FDF	Fort de France	26.58	22	*e*P	P	22 55 43.6	-0.9
FDF	Fort de France	26.58	22	P	P	22 55 42.6	-1.8
FDF				IAmb	IAmb	22 55 49.3	
	comp=Z,4µm,1.0s						
JANB	Januaria	26.59	103	*e*P	P	22 55 45.8	+1.1
SVN	Savane Anatole	26.67	22	P	P	22 55 43.5	-1.8
BOAB	BOACO BROADBAN	26.68	327	⇑P	P	22 55 47.8	+2.5
BOAB	BOACO BROADBAN	26.68	327	P	P	22 55 46.7	+1.4
PET01	Itanhaem-SP	26.71	125	*e*P	P	22 55 45.5	0.0
ILAM	Ilet Lapin Mar	26.72	22	*e*P	P	22 55 44.5	-1.1
PLTB	Pedras Altas	26.96	146	*e*P	P	22 55 46.9	-0.8
PLTB	Pedras Altas	26.96	146	P	P	22 55 46.8	-0.8
PLTB				IAmb	IAmb	22 55 53.6	
	comp=Z,6µm,1.0s						
PLTB				ScP	ScP	23 01 30.3	-0.1
MDN	Morne-Daniel	27.03	21	*e*P	P	22 55 46.8	-1.6
DLPL	La Plaine	27.10	21	*e*P	P	22 55 47.7	-1.3
DLPL	La Plaine	27.10	21	P	P	22 55 47.4	-1.6
DSLB	Salisbury	27.13	21	*e*P	P	22 55 47.6	-1.7
MDCT	Cottage Hill,	27.28	21	*e*P	P	22 55 58.4	+7.8
MDVC	Dominica, Viel	27.30	21	*e*P	P	22 55 49.4	-1.3
MDPV	Dominica, Penn	27.31	21	*e*P	P	22 55 50.5	-0.3
TDBA	Terre de Bas,	27.44	20	*e*P	P	22 55 49.5	-2.4
BSCB	Bom Sucesso	27.53	116	*e*P	P	22 55 53.1	+0.3
MAGL	Barre de l'ile	27.66	21	*e*P	P	22 55 51.6	-2.2
PARB	Paraibuna	27.66	122	*e*P	P	22 55 54.3	+0.4
CBE	Ff, Capester	27.66	20	*e*P	P	22 55 53.1	-0.7
ROSB	Rosrio	27.72	77	*e*P	P	22 55 55.3	+0.8
DIAM	Diamantina, MG	27.77	110	*e*P	P	22 55 56.5	+1.4
H05N1	Guadeloupe/Mar	28.07	21	P	P	22 55 55.1	-2.3
	SNR=215						
MLPR	Magueyes Islan	28.19	8	P	P	22 55 57.7	-0.7
JAKH	Jacmel	28.20	357	P	P	22 55 58.3	-0.2
CRPR	Cabo Rojo, PR	28.21	8	P	P	22 55 58.2	-0.4
OBIP	Obispado Ponce	28.32	9	P	P	22 55 58.8	-0.8
CELP	Cerrillos	28.36	9	P	P	22 55 59.6	-0.2
CDVI	St. Croix	28.38	13	P	P	22 55 59.3	-0.7
PDPR	Patillas Dam,	28.39	10	P	P	22 55 59.6	-0.5
PDPR				IAmb	IAmb	22 56 04.6	
	comp=Z,4µm,0.7s						
SJG	San Juan	28.46	10	P	P	22 56 00.5	-0.3
	comp=Z,2µm,0.4s,baz=111,slow=7.1,SNR=20						
SJG				S	S	23 00 03.7	-2.8
	comp=Z,2µm,0.5s,baz=0.1,slow=24,SNR=74						
SJG				P3KPbc		23 28 01.1	
	comp=Z,18nm,0.6s,baz=353,slow=23,SNR=3.1						
SJG	San Juan	28.46	10	*e*P	P	22 56 00.7	-0.1
SJG	San Juan	28.46	10	⇑P	P	22 56 00.7	-0.1
SJG				⇓S	S	23 00 06.2	-0.4
SJG	San Juan	28.46	10	P	P	22 55 59.8	-1.0
LGNH	Logne	28.48	357	P	P	22 56 01.4	+0.5
SKI	Saint Kitts	28.49	17	*e*P	P	22 56 02.3	+1.2
ANBD	Bethesda, Anti	28.52	19	*e*P	P	22 55 59.6	-1.6
ANDO	Antigua, Disas	28.56	19	*e*P	P	22 56 00.6	-1.0
CNCH	Conchagua	28.56	324	*e*P	P	22 56 03.4	+1.5
CNCH	Conchagua	28.56	324	*e*P	P	22 56 03.4	+1.5
SEUS	St. Eustatius	28.57	16	*e*P	P	22 56 02.2	+0.5
SEUS	St. Eustatius	28.57	16	P	P	22 56 03.0	+1.2
AOPR	Arecibo Observ	28.60	9	P	P	22 56 01.6	-0.4
SABA	Saba	28.62	16	*e*P	P	22 56 02.1	-0.1
SABA	Saba	28.62	16	P	P	22 56 01.9	-0.3
AGPR	Aguadilla, PR	28.67	8	P	P	22 56 02.3	-0.2
AGPR				IAmb	IAmb	22 56 12.7	
	comp=Z,3µm,0.8s						
GCPR	Guaynabo City	28.67	10	P	P	22 56 01.6	-1.0
CBYP	Canovanas	28.67	10	P	P	22 56 02.2	-0.5
LC01	Cunco	28.68	181	P	P	22 56 03.3	+0.9
LC01				IAmb	IAmb	22 56 06.8	
	comp=Z,5µm,0.9s						
EMPR	Esperanza - Ma	28.76	9	P	P	22 56 03.0	-0.3
DR12	Loma Pena Alta	28.76	3	P	P	22 56 02.6	-0.8
CUPR	Culebra, Puert	28.81	12	P	P	22 56 02.7	-1.1
MTDJ	Mount Denham	28.86	347	*e*P	P	22 56 04.7	+0.3
MTDJ	Mount Denham	28.86	347	⇑P	P	22 56 04.7	+0.3
MTDJ	Mount Denham	28.86	347	P	P	22 56 04.3	0.0
MTDJ				IAmb	IAmb	22 56 16.4	
	comp=Z,4µm,0.8s						
TGUH	Tegucigalpa,Un	28.88	326	*e*P	P	22 56 06.8	+2.2
TGUH	Tegucigalpa,Un	28.88	326	⇑P	P	22 56 06.7	+2.1
TGUH	Tegucigalpa,Un	28.88	326	P	P	22 56 06.4	+1.8
TGUH				IAmb	IAmb	22 56 14.3	
	comp=Z,5µm,1.0s						
SDDR	Presa de Saban	28.91	360	*e*P	P	22 56 05.2	+0.5
SDDR	Presa de Saban	28.91	360	⇓P	P	22 56 05.6	+0.9
SDDR	Presa de Saban	28.91	360	P	P	22 56 04.7	0.0
SDDR				IAmb	IAmb	22 56 19.1	
	comp=Z,3µm,0.8s						
STVI	Saint Thomas	28.92	12	P	P	22 56 04.4	-0.3
STVI				IAmb	IAmb	22 56 14.2	
	comp=Z,2µm,0.7s						
TRQA	Tornquist	29.01	165	P	P	22 56 05.6	+0.3
TRQA				pmax	pmax		
	comp=Z,3µm,0.9s						
TRQA	Tornquist	29.01	165	P	P	22 56 05.6	+0.3
TRQA				IAmb	IAmb	22 56 11.2	
	comp=Z,3µm,0.9s						
ALJI	Alcalda de J	29.04	323	*e*P	P	22 56 07.6	+1.8
ALJI	Alcalda de J	29.04	323	*e*P	P	22 56 07.6	+1.8
SMRT	St. Maarten	29.08	16	*e*P	P	22 56 05.1	-1.1
SMRT	St. Maarten	29.08	16	P	P	22 56 04.8	-1.3
ANWB	Willy Bob	29.09	18	*e*P	P	22 56 03.6	-2.6
ANWB	Willy Bob	29.09	18	⇓P	P	22 56 04.0	-2.2
ANWB	Willy Bob	29.09	18	P	P	22 56 04.2	-2.0
COEB	Comit de Eme	29.15	323	*e*P	P	22 56 08.6	+1.7
COEB	Comit de Eme	29.15	323	*e*P	P	22 56 08.6	+1.7
SC01	Santiago de lo	29.35	1	P	P	22 56 09.1	+0.6
LR03	Panguipulli	29.42	182	P	P	22 56 10.1	+1.4
LR03				IAmb	IAmb	22 56 14.9	
	comp=Z,3µm,1.1s						
COEG	Centro de Oper	29.45	323	*e*P	P	22 56 11.2	+1.8
COEG	Centro de Oper	29.45	323	*e*P	P	22 56 11.2	+1.8
SNET	Serv Nac Est T	29.71	322	P	P	22 56 13.4	+1.7
SNET				IAmb	IAmb	22 56 22.3	
	comp=Z,4µm,1.0s						
BOQS	Boqueron	29.78	322	*e*P	P	22 56 16.0	+3.5
BOQS	Boqueron	29.78	322	*e*P	P	22 56 16.0	+3.5
NBPS	Pedro II - PI	29.94	81	*e*P	P	22 56 14.8	+1.0
GTBY	Guantanamo Bay	30.11	352	*e*P	P	22 56 15.1	+0.2
GTBY	Guantanamo Bay	30.11	352	⇓P	P	22 56 15.1	+0.2
GTBY	Guantanamo Bay	30.11	352	P	P	22 56 14.9	0.0
GTBY				IAmb	IAmb	22 56 26.6	
	comp=Z,3µm,1.2s						
MTO3	Montecristo	30.35	323	P	P	22 56 17.9	+0.6
MTO3				IAmb	IAmb	22 56 27.2	
	comp=Z,3µm,0.9s						
NBPN	Ponto Novo - B	30.39	94	*e*P	P	22 56 18.3	+0.9
ESQI	Esquipulas	30.46	323	*e*P	P	22 56 19.2	+1.0
PLCA	Paso Flores	30.50	179	P	P	22 56 18.9	+0.8
	comp=Z,2µm,0.7s,baz=352,slow=9.1,SNR=29						
PLCA				PcP	PcP	22 58 57.9	+0.9
	comp=Z,2µm,1.0s,baz=334,slow=3.5,SNR=3.6						
PLCA				S	S	23 00 37.4	-0.2
	comp=Z,331nm,0.8s,baz=156,slow=18,SNR=5.2						
PLCA				ScP	ScP	23 01 42.6	+1.0
	comp=Z,721nm,0.9s,baz=41,slow=3.2,SNR=4.3						
PLCA				P3KPbc		23 27 48.4	
	comp=Z,125nm,0.8s,baz=186,slow=3.8,SNR=40						
PLCA				PKP2ab		23 31 46.1	
	comp=Z,20nm,1.1s,baz=144,slow=1.3,SNR=3.1						
PLCA	Paso Flores	30.50	179	P	P	22 56 18.6	+0.5
PLCA				PcP	PcP	22 58 56.9	0.0
PLCA				ScP	ScP	23 01 42.7	+1.0
LL04	Puerto Octay	30.70	182	P	P	22 56 20.0	+0.3
LL04				IAmb	IAmb	22 56 33.4	
	comp=Z,7µm,1.4s						
LL04				PcP	PcP	22 58 57.5	+0.1
LL04				ScP	ScP	23 01 43.0	+0.8
LCCY	Blossom Villag	30.89	343	P	P	22 56 21.2	-0.3
LL03	Petrohue	30.93	182	P	P	22 56 21.6	0.0
RIB01	Linhares ES	31.03	111	*e*P	P	22 56 22.5	-0.3
ALF01	Guarapari-ES	31.04	113	*e*P	P	22 56 23.8	+1.0
ALF01				*e*pP	pP	22 57 59.0	-2.2
GDU01	Guandu, BA	31.04	100	*e*P	P	22 56 23.9	+1.0
MRL	Marmol	31.08	323	⇓*e*P	P	22 56 25.5	+2.0
MRL	Marmol	31.08	323	*e*S	PcP	22 59 00.4	+1.3
MRL	Marmol	31.08	323	*e*P	S	23 00 50.9	+3.8
NBG	Las Nubes	31.09	322	*e*P	P	22 56 26.9	+3.2
PCG	Pacaya	31.09	321	*e*P	P	22 56 27.2	+3.5
PCG	Pacaya	31.09	321	*e*P	S	23 00 54.9	+7.3
LL05	Los Muermos	31.24	183	P	P	22 56 24.6	+0.3
LL05				PcP	PcP	22 59 00.0	+1.2
NBIT	Itapeh - BA	31.26	102	*e*P	P	22 56 26.2	+1.4
NBIT				*e*pP	pP	22 58 01.5	-1.8
FUG	Fuego 3	31.28	321	⇓*i*P	P	22 56 28.2	+3.0
FUG	Fuego 3	31.28	321	*e*P	PP	22 58 10.1	+3.6
FUG				*e*S	PcP	22 58 59.7	+0.1
FUG	Fuego 3	31.28	321	*e*P	S	23 00 54.3	+4.1
GRTK	Grand Turk	31.42	360	P	P	22 56 26.2	+0.1
GRTK	Grand Turk	31.42	360	⇓S	P	22 56 25.9	-0.1
APG	El Apazote	31.48	322	P	P	22 56 28.3	+1.4
	comp=Z,987nm,0.7s,baz=128,slow=5.8,SNR=28						
APG				S	S	23 00 54.0	+0.7
	comp=Z,420nm,1.2s,baz=22,slow=20,SNR=6.3						
APG				P3KPbc		23 27 48.3	
	comp=Z,34nm,1.1s,baz=310,slow=6.2,SNR=3.0						
RTAL	Retalhuleu	31.88	320	P	P	22 56 31.2	+1.2
RTAL				PcP	PcP	22 59 02.2	+1.1
STG3	Santiaguito 3,	31.94	320	*e*P	P	22 56 30.8	+0.1
STG3	Santiaguito 3,	31.94	320	*e*P	PP	22 58 17.2	+4.5
NBMA	Muriti-CE	32.07	88	*e*P	P	22 56 32.9	+1.1
NBMA				*e*pP	pP	22 58 08.0	-2.8
LL01	San Ignacio de	32.16	182	P	P	22 56 31.9	-0.1
LL01				PcP	PcP	22 59 01.9	+0.5
HUEH	Huehuetenango	32.36	321	*e*P	P	22 56 36.1	+1.8
HUEH	Huehuetenango	32.36	321	P	P	22 56 35.8	+1.5
LL07	Hotel Espejo d	32.66	183	P	P	22 56 36.2	-0.1
LL07				IAmb	IAmb	22 56 46.1	
	comp=Z,4µm,0.8s						
GO07	Milladeo Hill,	32.95	183	P	P	22 56 39.3	+0.6
CCIG	Comitan	33.48	321	P	P	22 56 44.8	+1.1
CCIG				IAmb	IAmb	22 57 02.2	
	comp=Z,3µm,0.7s						
NBAN	Anadia - AL	34.30	92	*e*P	P	22 56 51.3	+0.9
CMIG	Matias Romero	35.83	319	P	P	22 57 04.0	+1.1
	comp=Z,3µm,0.6s,baz=113,slow=6.2,SNR=37						
CMIG				S	S	23 01 58.9	+0.7
	comp=Z,580nm,1.0s,baz=13,slow=23,SNR=20						
CMIG				P3KPbc		23 27 28.7	
	comp=Z,12nm,0.8s,baz=330,slow=5.1,SNR=5.2						
TLIG	Tlapa	38.63	315	P	P	22 57 27.4	+1.5
TLIG				IAmb	IAmb	22 57 30.7	
	comp=Z,12µm,1.6s						
DWPF	Disney Wildern	39.29	346	⇓P	P	22 57 31.1	+0.3
DWPF	Disney Wildern	39.29	346	P	P	22 57 30.8	+0.1
RPN	Rapa Nui	39.79	240	P	P	22 57 35.9	+1.0
	comp=Z,9µm,1.0s,baz=62,slow=3.4,SNR=81						
RPN				ScP	ScP	23 02 17.5	+1.6
	comp=Z,1µm,1.1s,baz=24,slow=3.4,SNR=3.8						
RPN	Rapa Nui	39.79	240	P	P	22 57 35.7	+0.9
RPN					ScP	23 02 16.6	+0.7
VA02	Isla de Pascua	39.88	240	P	P	22 57 36.6	+1.0
UNM	Universidad Na	40.27	317	P	P	22 57 40.7	+1.6
UNM				pmax	pmax		
	comp=Z,5µm,0.9s						
UNM	Universidad Na	40.27	317	⇑P	P	22 57 41.5	+2.4
UNM	Universidad Na	40.27	317	P	P	22 57 40.7	+1.6
UNM				IAmb	IAmb	22 57 57.0	
	comp=Z,5µm,0.9s						
GO09	Cerro Castillo	41.05	181	P	P	22 57 45.6	+1.2
GO09				IAmb	IAmb	22 57 52.1	
	comp=Z,5µm,1.2s						
GO09				ScP	ScP	23 02 21.0	+0.6
MG05	Puerto Natales	41.46	181	P	P	22 57 49.1	+1.5
MG05				ScP	ScP	23 02 22.2	+0.2
MOIG	Morelia	41.89	315	P	P	22 57 53.5	+1.8
MOIG				IAmb	IAmb	22 57 56.5	
	comp=Z,13µm,1.5s						
553A	Crawfordville	42.07	343	P	P	22 57 53.0	+0.3
553A				PcP	PcP	22 59 33.9	+1.4
553A				ScP	ScP	23 02 24.8	-0.1
MG02	Cerro Sombrero	42.58	178	P	P	22 57 57.9	+1.6
MG02				IAmb	IAmb	22 58 03.8	
	comp=Z,3µm,0.8s						
MG04	Isla Riesco	42.63	180	P	P	22 57 58.5	+1.8
MG04				IAmb	IAmb	22 58 14.5	
	comp=Z,3µm,0.7s						
BBSR	BB Station	42.68	8	⇓P	P	22 57 56.7	-0.7
BBSR	BB Station	42.68	8	P	P	22 57 56.7	-0.7
BBSR				IAmb	IAmb	22 58 05.9	
	comp=Z,2µm,0.7s						
EFI	East Falkland	42.79	168	*i* P	P	22 57 58.0	0.0
EFI				pmax	pmax		
	comp=Z,7µm,1.3s						
EFI	East Falkland	42.79	168	⇓P	P	22 57 59.4	+1.4
EFI	East Falkland	42.79	168	P	P	22 57 58.9	+0.9
EFI				IAmb	IAmb	22 58 03.1	
	comp=Z,7µm,1.2s						
EFI				PcP	PcP	22 59 35.5	+1.0
EFI				ScP	ScP	23 02 28.2	+0.9
257A	Skidaway Islan	42.91	348	P	P	22 57 59.3	+0.1
GO10	Punta Arenas	42.93	180	P	P	22 58 00.9	+1.9
GO10				IAmb	IAmb	22 58 07.6	
	comp=Z,9µm,1.4s						
TIGA	Tifton	43.01	344	P	P	22 58 00.1	+0.1
	baz=162						
TIGA				S	S	23 03 39.3	-2.8
	baz=162						
BRAL	Brewton	43.80	340	⇑P	P	22 58 06.4	+0.3
BRAL	Brewton	43.80	340	P	P	22 58 06.0	-0.1
Y58A	Scranton	44.52	350	P	P	22 58 11.4	-0.2
Y58A				PcP	PcP	22 59 41.5	+0.7
USHA	Ushuaia	44.66	178	P	P	22 58 13.7	+1.4
	comp=Z,1µm,0.8s,baz=7.2,slow=4.6,SNR=6.9						
USHA				ScP	ScP	23 02 35.8	+0.8
	comp=Z,744nm,0.8s,baz=7.7,slow=3.7,SNR=6.9						
USHA				S	S	23 04 07.3	+2.6
	comp=Z,197nm,1.0s,baz=114,slow=21,SNR=6.0						
USHA				P4KPbc		23 35 50.7	
	comp=Z,29nm,0.9s,baz=342,slow=8.3,SNR=7.3						
Y57A	Sumter	44.76	349	P	P	22 58 13.3	-0.1
MG01	Puerto William	44.79	177	P	P	22 58 14.2	+0.9
346A	Big Creek Wild	44.86	338	P	P	22 58 13.9	-0.3
346A				IAmb	IAmb	22 58 16.5	
	comp=Z,4µm,0.8s						
ZAIG	Zacatecas	44.92	317	P	P	22 58 16.4	+1.1
ZAIG				PcP	PcP	22 59 44.2	+1.3
344A	Westbrook Farm	45.41	336	P	P	22 58 18.6	+0.2
344A				IAmb	IAmb	22 58 27.2	
	comp=Z,6µm,1.0s						
344A				PcP	PcP	22 59 45.2	+1.2
344A				ScP	ScP	23 02 38.9	+0.4
CNNC	Cliffs of the	45.56	352	⇓P	P	22 58 19.1	-0.3
CNNC	Cliffs of the	45.56	352	P	P	22 58 19.1	-0.3
CNNC				IAmb	IAmb	22 58 21.6	
	comp=Z,4µm,1.1s						
CNNC				PcP	PcP	22 59 45.5	+1.0
KVTX	Kingsville	45.56	326	⇑P	P	22 58 21.8	+2.3
KVTX	Kingsville	45.56	326	P	P	22 58 20.5	+1.0
KVTX				IAmb	IAmb	22 58 24.8	
	comp=Z,4µm,0.7s						
441A	DeRidder	45.83	333	P	P	22 58 22.6	+1.0
441A				IAmb	IAmb	22 58 31.5	
	comp=Z,8µm,1.3s						
146A	Union	45.84	339	P	P	22 58 20.9	-0.6
146A				PcP	PcP	22 59 46.3	+0.8
146A				ScP	ScP	23 02 39.6	-0.7
342A	Flagon Creek P	45.99	334	P	P	22 58 23.4	+0.6
342A				PcP	PcP	22 59 47.9	+1.8
VBMS	Vicksburg	46.00	337	S	S	23 04 19.4	-4.7
	baz=153						
KMSC	Kings Mountain	46.04	348	P	P	22 58 23.2	+0.1
	baz=166						
KMSC				S	S	23 04 22.5	-2.0
	baz=166						
X51A	Calhoun	46.31	344	P	P	22 58 24.7	-0.4
X51A				IAmb	IAmb	22 58 26.4	
	comp=Z,7µm,1.5s						
HKT	Hockley	46.40	330	*d i*P	P	22 58 25.7	-0.1
HKT				pmax	pmax		
	comp=Z,4µm,1.5s						
HKT	Hockley	46.40	330	⇑P	P	22 58 27.0	+1.2
735A	Kenedy	46.54	327	P	P	22 58 27.7	+0.8
833A	Chaparral WMA,	47.00	325	P	P	22 58 31.3	+0.9
	baz=140						
833A				S	S	23 04 36.7	-1.3
	baz=140						
TKL	Tuckaleechee C	47.07	346	P4KPbc		23 36 01.5	
	comp=Z,12nm,0.8s,baz=165,slow=7.0,SNR=6.0						
TKL	Tuckaleechee C	47.07	346	P	P	22 58 30.4	-0.4
TKL				pmax	pmax		
	comp=Z,4µm,1.1s						
TKL	Tuckaleechee C	47.07	346	P	P	22 58 30.4	-0.4
TKL				IAmb	IAmb	22 58 31.8	
	comp=Z,4µm,1.1s						
SWET	Sewanee	47.21	343	P	P	22 58 31.2	-0.8
SWET				IAmb	IAmb	22 58 32.2	
	comp=Z,4µm,0.5s						
NATX	Nacogdoches	47.35	332	P	P	22 58 34.0	+1.0
T57A	Hurt	47.48	351	P	P	22 58 33.7	-0.2
T57A				IAmb	IAmb	22 58 35.4	
	comp=Z,5µm,0.7s						
S61A	Accomac	47.73	355	P	P	22 58 35.8	+0.1
S61A				PcP	PcP	22 59 53.0	+0.8
Z41A	Richland Creek	47.83	335	P	P	22 58 36.2	-0.3
	baz=151						
Z41A				S	S	23 04 46.1	-3.1
	baz=151						
TZTN	Tazewell	47.86	346	S	S	23 04 46.3	-3.3
	baz=163						
BLA	Blacksburg	47.88	350	S	S	23 04 49.1	-0.7
	baz=168						
435B	Jarrell	47.96	329	P	P	22 58 38.0	+0.4
	baz=144						
435B				S	S	23 04 50.2	-0.9
	baz=144						
435B	Jarrell	47.96	329	P	P	22 58 38.2	+0.7
435B				IAmb	IAmb	23 00 04.2	
	comp=Z,3µm,0.7s						
W45A	Hickory Valley	48.16	340	P	P	22 58 37.5	-1.5
R61A	Willards	48.35	356	P	P	22 58 40.3	+0.1
R61A				IAmb	IAmb	22 58 42.0	
	comp=Z,7µm,0.9s						
MET	Memphis--Engin	48.39	339	P	P	22 58 39.4	-1.3
CBN	Corbin Frederi	48.42	353	S	S	23 04 54.8	-2.2
	baz=172						
CBN	Corbin Frederi	48.42	353	P	P	22 58 40.2	-0.6
CBN				IAmb	IAmb	22 58 41.5	
	comp=Z,3µm,0.6s						
CBN				PcP	PcP	22 59 55.6	+0.8
HDBT	Hernando Brdge	48.46	339	P	P	22 58 40.2	-0.9
HDBT				IAmb	IAmb	22 58 41.3	
	comp=Z,4µm,0.5s						
HDBT				PcP	PcP	22 59 55.5	+0.5
S54A	Dingess, Beckl	48.61	349	P	P	22 58 42.3	+0.1
WVT	Waverly	48.62	342	S	S	23 04 53.7	-6.2
	baz=158						
WVT	Waverly	48.62	342	⇑P	P	22 58 41.2	-1.1
H06E1	SOCORRO T-PHAS	48.65	306	P	P	22 58 43.3	+0.4
	SNR=55						
H06S1	SOCORRO T	48.65	306	P	P	22 58 44.6	+1.8
H06N1	SOCORRO T-PHAS	48.74	306	P	P	22 58 44.1	+0.6
	SNR=54						
WHTX	Lake Whitney,	48.87	330	P	P	22 58 44.7	+0.5
	baz=144						
WHTX				S	S	23 05 03.0	-0.5
	baz=144						
JCT	Junction City	48.88	327	P	P	22 58 45.0	+0.6
JCT				pmax	pmax		
	comp=Z,3µm,0.6s						
JCT	Junction City	48.88	327	S	S	23 05 02.2	-1.6
	baz=141						
JCT	Junction City	48.88	327	⇓P	P	22 58 45.5	+1.1
JCT	Junction City	48.88	327	P	P	22 58 45.0	+0.6

JCT				PcP	PcP	22 59 57.5	+0.8
JCT				IAmb	IAmb	23 00 00.6	
	comp=Z,3µm,0.6s						
Q61A	Milford	48.90	356	P	P	22 58 44.2	0.0
	baz=174						
Q61A				S	S	23 05 01.3	-2.2
	baz=174						
X40A	Basin Creek Fa	48.91	336	P	P	22 58 43.7	-0.8
	baz=151						
X40A				S	S	23 04 59.3	-4.6
	baz=151						
HBAR	Harrisburg	49.03	339	P	P	22 58 45.1	-0.3
HBAR				IAmb	IAmb	22 58 56.7	
	comp=Z,6µm,0.9s						
HBAR				PcP	PcP	22 59 56.9	-0.2
T47A	Sharon Grove	49.20	343	P	P	22 58 45.6	-0.9
T47A				IAmb	IAmb	22 58 47.1	
	comp=Z,6µm,0.7s						
T47A				PcP	PcP	22 59 57.6	-0.1
GLAT	Glass	49.21	341	P	P	22 58 45.8	-0.8
PEBM	Pemiscott Bayo	49.26	340	P	P	22 58 46.5	-0.5
MIAR	Mount Ida	49.26	335	S	S	23 05 03.5	-5.1
	baz=150						
MIAR	Mount Ida	49.26	335	⇓P	P	22 58 46.9	-0.1
W41B	Gary Mavity, V	49.28	337	P	P	22 58 46.5	-0.7
	baz=152						
W41B				S	S	23 05 03.7	-5.2
	baz=152						
PVMO	Portageville	49.48	340	P	P	22 58 48.0	-0.6
PVMO				PcP	PcP	22 59 58.8	+0.1
LCAR	Lake Charles	49.67	339	P	P	22 58 48.9	-1.1
LCAR				PcP	PcP	23 00 00.1	+0.7
HPIG		49.81	318	P	P	22 58 51.6	+0.1
P60A	Greenville	49.84	355	P	P	22 58 50.7	-0.5
	baz=174						
P60A				S	S	23 05 12.7	-3.7
	baz=174						
W39A	Magazine	49.91	336	P	P	22 58 51.7	-0.1
	baz=150						
W39A				S	S	23 05 14.3	-3.1
	baz=150						
PBMO	Poplar Bluff	50.06	340	P	P	22 58 52.3	-0.5
PBMO				IAmb	IAmb	22 59 00.8	
	comp=Z,5µm,0.8s						
MVL	Millersville	50.09	355	P	P	22 58 52.8	-0.2
WCI	Wyandotte Cave	50.14	344	S	S	23 05 15.0	-5.4
	baz=160						
WCI	Wyandotte Cave	50.14	344	⇓P	P	22 58 52.3	-1.1
MCWV	Mont Chateau	50.18	351	S	S	23 05 20.8	0.0
	baz=169						
TXAR	Lajitas Array	50.24	322	P	P	22 58 54.8	+0.4
	comp=Z,534nm,0.7s,baz=160,slow=8.1,SNR=32						
TXAR				PcP	PcP	23 00 04.0	+2.1
	comp=Z,637nm,0.6s,baz=144,slow=5.5,SNR=8.3						
TXAR				ScP	ScP	23 03 01.4	+2.1
	comp=Z,134nm,0.7s,baz=138,slow=9.6,SNR=3.2						
TXAR				S	S	23 05 23.4	+1.1
	comp=Z,58nm,0.9s,baz=144,slow=8.5,SNR=1.4						
TXAR				SKKP		23 23 38.4	
	comp=Z,17nm,1.0s,baz=252,slow=3.6,SNR=3.5						
TXAR				P3KPbc		23 26 33.8	
	comp=Z,5.1nm,0.8s,baz=294,slow=0.9,SNR=2.4						
TXAR				PKPPKP	P'P'df	23 29 34.3	+3.9
	comp=Z,23nm,0.9s,baz=332,slow=3.1,SNR=5.1						
TXAR				P4KPbc		23 36 17.2	
	comp=Z,5.7nm,0.6s,baz=140,slow=6.0,SNR=15						
TXAR	Lajitas Array	50.24	322	P	P	22 58 55.0	+0.6
TXAR				PcP	PcP	23 00 02.6	+0.7
TX31	Lajitas Ar. Si	50.24	322	⇑P	P	22 58 55.2	+0.8
ABTX	Abilene, Hawle	50.48	328	P	P	22 58 56.3	+0.4
	baz=142						
ABTX				S	S	23 05 24.3	-1.0
	baz=142						
ABTX	Abilene, Hawle	50.48	328	P	P	22 58 56.4	+0.4
ABTX				IAmb	IAmb	22 59 05.2	
	comp=Z,3µm,0.8s						
P52A	Corning	50.54	349	P	P	22 58 55.8	-0.4
	baz=166						
P52A				S	S	23 05 21.8	-4.0
	baz=166						
U40A	Yellville	50.56	337	P	P	22 58 55.6	-0.9
	baz=152						
U40A				S	S	23 05 21.5	-4.6
	baz=152						
O56A	Blue Knob Stat	50.60	353	P	P	22 58 56.9	+0.2
	baz=170						
O56A				S	S	23 05 24.7	-1.9
	baz=170						
BRNJ	Basking Ridge	50.64	357	P	P	22 58 56.8	-0.1
BRNJ				IAmb	IAmb	22 58 58.1	
	comp=Z,2µm,0.6s						
BRNJ				PcP	PcP	23 00 03.4	+0.4
SLBS	Sierra La Lagu	50.70	312	⇑P	P	22 58 59.0	+1.1
SLBS	Sierra La Lagu	50.70	312	P	P	22 58 59.0	+1.1
SSPA	Standing Stone	50.88	353	S	S	23 05 27.8	-2.4
	baz=171						
SSPA	Standing Stone	50.88	353	⇑P	P	22 58 58.6	-0.1
PAL	Palisades	50.92	357	S	S	23 05 27.3	-3.4
	baz=176						
N59A	State Game Lan	50.95	355	P	P	22 58 59.0	-0.3
	baz=174						
N59A				S	S	23 05 28.4	-2.9
	baz=174						
O53A	New Philadelph	50.97	350	P	P	22 58 59.1	-0.3
	baz=167						
O53A				S	S	23 05 28.5	-3.0
	baz=167						
P49A	Miami Univ. Ec	50.99	346	P	P	22 58 58.2	-1.3
	baz=163						
P49A				S	S	23 05 26.1	-5.6
	baz=163						
WSPT	Westport, CT	51.06	358	P	P	22 58 59.5	-0.5
WSPT				IAmb	IAmb	22 59 01.1	
	comp=Z,5µm,1.1s						
FVM	French Village	51.15	340	P	P	22 59 00.4	-0.3
FVM	French Village	51.15	340	P	P	22 59 00.4	-0.3
ACSO	Alum Creek Sta	51.28	348	S	S	23 05 30.7	-5.0
	baz=165						
TUL1	Leonard	51.36	334	P	P	22 59 02.1	-0.2
	baz=148						
TUL1				S	S	23 05 34.6	-2.2
	baz=148						
TUL1	Leonard	51.36	334	P	P	22 59 02.5	+0.2
TUL1				IAmb	IAmb	22 59 14.0	
	comp=Z,4µm,0.8s						
M65A	Busby, Falmout	51.42	0	P	P	22 59 02.0	-0.5
	baz=180						
M65A				S	S	23 05 33.1	-4.3
	baz=180						
M65A	Busby, Falmout	51.42	0	P	P	22 59 02.5	0.0
N54A	Moraine State	51.47	351	P	P	22 59 03.3	+0.3
	baz=169						
N54A				S	S	23 05 37.0	-1.2
	baz=169						
N54A	Moraine State	51.47	351	P	P	22 59 03.5	+0.5
CCM	Cathedral Cave	51.49	340	S	S	23 05 33.1	-5.3
	baz=154						
CCM	Cathedral Cave	51.49	340	⇓P	P	22 59 02.4	-0.7
UCCT	U. Connecticut	51.66	359	P	P	22 59 03.1	-1.2
WMOK	Wichita Mounta	51.74	331	P	P	22 59 05.3	+0.2
WMOK				pmax	pmax		
	comp=Z,2µm,0.7s						
WMOK	Wichita Mounta	51.74	331	S	S	23 05 40.8	-1.2
	baz=144						
WMOK	Wichita Mounta	51.74	331	⇓P	P	22 59 03.4	-1.7
WMOK	Wichita Mounta	51.74	331	P	P	22 59 05.3	+0.2
HOPE	Hope Point	51.94	155	⇓P	P	22 59 07.7	+1.6
HOPE	Hope Point	51.94	155	P	P	22 59 07.0	+0.9
HOPE				IAmb	IAmb	22 59 13.8	
	comp=Z,7µm,1.0s						
HOPE				PcP	PcP	23 00 08.9	+1.2
HOPE				ScP	ScP	23 03 07.3	+1.2
BCOK	Bluff Creek, N	51.95	333	P	P	22 59 06.5	+0.1
M54A	Oil Creek Stat	51.96	352	P	P	22 59 06.3	-0.1
	baz=169						
M54A				S	S	23 05 42.7	-2.0
	baz=169						
M53A	WI Miller and	52.05	351	P	P	22 59 07.0	0.0
	baz=168						
M53A				S	S	23 05 43.0	-2.7
	baz=168						
ALLY	Alegheny Colle	52.17	351	P	P	22 59 07.7	-0.2
ALLY				IAmb	IAmb	22 59 09.4	
	comp=Z,12µm,1.1s						
BINY	Binghamton	52.24	355	S	S	23 05 45.8	-2.6
	baz=174						
L61B	Northampton	52.32	359	P	P	22 59 08.4	-0.5
	baz=178						
L61B				S	S	23 05 45.0	-4.4
	baz=178						
LCCO2	Lakeland CC 2,	52.35	350	P	P	22 59 09.2	-0.1
HRV	Adam Dziewonsk	52.36	360	P	P	22 59 09.2	0.0
HRV				pmax	pmax		
	comp=Z,4µm,0.8s						
HRV	Adam Dziewonsk	52.36	360	S	S	23 05 46.9	-2.9
	baz=179						
HRV	Adam Dziewonsk	52.36	360	⇓P	P	22 59 09.0	-0.2
HRV	Adam Dziewonsk	52.36	360	P	P	22 59 09.2	0.0
HRV				IAmb	IAmb	22 59 10.7	
	comp=Z,4µm,0.8s						
SFIN	Lafayette	52.37	345	P	P	22 59 07.6	-1.7
	baz=160						
SFIN				S	S	23 05 42.8	-7.3
	baz=160						
K62A	Royalston	52.53	359	P	P	22 59 10.0	-0.4
K62A				PcP	PcP	23 00 10.2	+0.1
ERPA	Erie	52.61	352	S	S	23 05 51.7	-1.5
	baz=169						
ERPA	Erie	52.61	352	P	P	22 59 10.8	-0.2
MNTX	Cornudas Mount	52.97	323	S	S	23 05 57.5	-0.7
	baz=136						
HDIL	Hopedale	53.15	343	S	S	23 05 53.2	-7.1
	baz=157						
MSTX	Muleshoe	53.17	327	P	P	22 59 15.1	-0.2
	baz=140						
MSTX				S	S	23 05 59.1	-2.0
	baz=140						
SACV	Santiago Islan	53.25	63	P	P	22 59 16.3	+0.2
ACCN	Adirondack Com	53.29	358	P	P	22 59 16.0	+0.1
AMTX	Amarillo	53.30	329	S	S	23 06 00.6	-2.1
	baz=141						
J58A	Remsen	53.35	356	P	P	22 59 15.9	-0.4
AAM	Ann Arbor	53.41	348	S	S	23 05 58.7	-5.0
	baz=164						
HNH	Hanover	53.57	359	P	P	22 59 18.0	+0.2
HNH				PcP	PcP	23 00 14.7	+0.7
I63A	Otisfield	53.90	0	P	P	22 59 20.2	+0.1
LBNH	Lisbon	54.10	359	S	S	23 06 10.9	-1.7
	baz=179						
L44A	Lake County Fo	54.27	345	P	P	22 59 20.9	-1.8
	baz=159						
L44A				S	S	23 06 06.6	-8.3
	baz=159						
KSU1	Kansas State U	54.41	336	S	S	23 06 13.2	-3.7
	baz=149						
KSU1	Kansas State U	54.41	336	⇓P	P	22 59 23.2	-0.6
WVL	Waterville	54.43	1	P	P	22 59 23.9	+0.1
SRIG	Santa Rosalia	54.54	314	P	P	22 59 25.6	+0.7
LONY	Lake Ozonia	54.56	357	S	S	23 06 16.1	-2.6
	baz=176						
EMMW	East Machias	54.66	3	P	P	22 59 25.3	0.0
FRNY	Flat Rock	54.73	358	P	P	22 59 25.9	0.0
PMSA	Palmer Station	54.81	176	P	P	22 59 27.8	+1.7
	comp=Z,934nm,0.6s,baz=8.2,slow=5.2,SNR=23						
PMSA				ScP	ScP	23 03 20.2	+1.8
	comp=Z,463nm,0.9s,baz=4.6,slow=5.5,SNR=4.0						
PMSA				P4KPbc		23 36 34.1	
	comp=Z,28nm,0.8s,baz=339,slow=6.5,SNR=5.2						
PMSA	Palmer Station	54.81	176	⇓P	P	22 59 27.8	+1.7
PMSA	Palmer Station	54.81	176	P	P	22 59 27.6	+1.5
PMSA				PcP	PcP	23 00 19.6	+1.1
HAL	Halifax	54.91	7	P	P	22 59 26.9	-0.2
HAL				PcP	PcP	23 00 20.2	+0.9
121A	Cookes Peak, D	54.99	322	P	P	22 59 29.1	+0.9
	baz=134						
121A				S	S	23 06 25.1	+0.1
	baz=134						
121A	Cookes Peak, D	54.99	322	P	P	22 59 29.2	+1.0
GGN	Saint George	55.10	4	P	P	22 59 28.6	+0.2
GGN				IAmb	IAmb	22 59 30.4	
	comp=Z,7µm,1.3s						
GGN				PcP	PcP	23 00 20.9	+0.9
SADO	Sadowa	55.10	353	P4KPbc		23 36 37.0	
	comp=Z,72nm,0.9s,baz=215,slow=1.3,SNR=7.3						
SADO	Sadowa	55.10	353	⇓P	P	22 59 27.7	-0.8
319A	Douglas	55.13	320	P	P	22 59 30.1	+1.0
PKME	Peaks-Kenny Pk	55.14	2	S	S	23 06 24.4	-1.6
	baz=182						
G65A	Princeton	55.14	3	P	P	22 59 29.1	+0.4
G65A				IAmb	IAmb	22 59 30.6	
	comp=Z,7µm,0.9s						
MNTQ	Montreal, Queb	55.40	358	⇑P	P	22 59 30.4	-0.1
CBKS	Cedar Bluff	55.51	333	P	P	22 59 32.0	+0.5
CBKS				pmax	pmax		
	comp=Z,6µm,1.1s						
CBKS	Cedar Bluff	55.51	333	S	S	23 06 30.0	-1.2
	baz=145						
CBKS	Cedar Bluff	55.51	333	⇑P	P	22 59 31.9	+0.5
CBKS	Cedar Bluff	55.51	333	P	P	22 59 32.0	+0.5
CBKS				IAmb	IAmb	22 59 40.6	
	comp=Z,6µm,1.1s						
Y22D	IRIS PASSCAL I	55.57	324	P	P	22 59 33.3	+1.2
	baz=136						
Y22D				S	S	23 06 32.4	+0.1
	baz=136						
F63A	Nahmakanta, Br	55.58	2	P	P	22 59 32.1	+0.3
JFWS	Jewell Farm	55.59	343	S	S	23 06 25.6	-6.5
	baz=157						
SCIA	State Center	55.61	340	S	S	23 06 26.2	-6.1
	baz=153						
H10S3	ASCENSION HYDR	55.61	94	P	P	22 59 32.4	+0.1
	baz=10.0,slow=74,SNR=26						
H10S2	ASCENSION HYDR	55.63	94	P	P	22 59 32.5	+0.1
	baz=210,slow=74,SNR=43						
GAC	Glen Almond	55.69	356	⇓P	P	22 59 32.1	-0.4
F64A	Sherman	55.77	2	P	P	22 59 33.2	+0.1
H10N3	ASCENSION HYDR	55.89	93	P	P	22 59 34.5	+0.3
	baz=263,slow=6.7,SNR=52						
H10N2	ASCENSION HYDR	55.91	93	P	P	22 59 35.1	+0.8
H10N1	ASCENSION HYDR	55.91	93	P	P	22 59 34.7	+0.4
	baz=263,slow=6.7,SNR=54						
ANMO	Albuquerque	55.93	325	P	P	22 59 34.8	+0.2
	comp=Z,587nm,0.7s,baz=114,slow=6.0,SNR=19						
ANMO				PKPPKP	P'P'df	23 29 23.6	+1.3
	baz=321,slow=0.9						
ANMO				P4KPbc		23 36 42.9	
	comp=Z,38nm,1.0s,baz=143,slow=5.9,SNR=22						
ANMO	Albuquerque	55.93	325	P	P	22 59 35.1	+0.5
ANMO				pmax	pmax		
	comp=Z,1µm,0.9s						
ANMO	Albuquerque	55.93	325	S	S	23 06 33.8	-3.2
	baz=137						
ANMO	Albuquerque	55.93	325	⇑P	P	22 59 35.6	+1.0
ANMO	Albuquerque	55.93	325	P	P	22 59 35.1	+0.5
GBN	Guysborough	55.93	8	P	P	22 59 34.1	0.0
LMN	Caledonia Moun	55.99	5	P	P	22 59 34.3	-0.2
LMN				PcP	PcP	23 00 24.1	+0.5
I50GB	ASCENSION ISLA	56.01	93	P	P	22 59 40.0	+4.7
	baz=230,slow=8.7,SNR=1.9						
ASCN	Ascension	56.02	93	P	P	22 59 35.6	+0.2
ASCN				IAmb	IAmb	22 59 40.0	
	comp=Z,17µm,1.6s						
GLMI	Grayling	56.03	348	S	S	23 06 31.6	-6.0
	baz=164						
TRQ	Mont Tremblant	56.16	357	P	P	22 59 35.5	-0.2
T25A	Trinidad	56.45	328	P	P	22 59 38.8	+0.6
	baz=140						
T25A				S	S	23 06 44.0	+0.3
	baz=140						
TUC	Tucson	56.71	320	P	P	22 59 40.6	+0.7
TUC				pmax	pmax		
	comp=Z,2µm,1.0s						
TUC	Tucson	56.71	320	S	S	23 06 45.4	-1.6
	baz=131						
TUC	Tucson	56.71	320	⇑P	P	22 59 40.8	+0.9
TUC	Tucson	56.71	320	P	P	22 59 40.5	+0.7
BGNE	Belgrade	56.99	336	P	P	22 59 41.4	-0.1
	baz=148						
BGNE				S	S	23 06 46.8	-3.3
	baz=148						
KSCO	Kaye Shedlock’	57.01	331	P	P	22 59 42.4	+0.6
	baz=142						
KSCO				S	S	23 06 49.3	-1.3
	baz=142						
BATG	Bathurst New B	57.30	4	P	P	22 59 43.6	+0.1
SDCO	Great Sand Dun	57.47	328	S	S	23 06 57.0	+0.1
	baz=139						
SDCO	Great Sand Dun	57.47	328	P	P	22 59 46.1	+0.9
SDCO				IAmb	IAmb	22 59 49.4	
	comp=Z,4µm,0.6s						
214A	Organ Pipe Nat	57.80	318	P	P	22 59 48.2	+1.1
	baz=129						
214A				S	S	23 07 01.2	+0.5
	baz=129						
214A	Organ Pipe Nat	57.80	318	P	P	22 59 48.3	+1.1
214A				IAmb	IAmb	22 59 51.2	
	comp=Z,10µm,1.6s						
W18A	Petrified Fore	57.95	323	P	P	22 59 49.2	+0.8
	baz=134						
W18A				S	S	23 07 03.7	+0.8
	baz=134						
S22A	4UR Ranch, Cre	58.17	327	P	P	22 59 50.6	+0.7
	baz=137						
S22A				S	S	23 07 05.6	-0.2
	baz=137						
Q24A	Divide	58.21	329	P	P	22 59 50.7	+0.5
	baz=140						
Q24A				S	S	23 07 06.4	+0.2
	baz=140						
ECSD	EROS Data Cent	58.40	338	S	S	23 07 02.9	-4.9
	baz=150						
SPMN	Marine on St.	58.46	342	P	P	22 59 50.5	-0.8
	baz=155						
SPMN				S	S	23 07 04.4	-4.0
	baz=155						
MVCO	Mesa Verde	58.70	325	S	S	23 07 12.9	+0.6
	baz=136						
MBO	M'Bour	58.95	66	P	P	22 59 55.7	+0.6
MBO				IAmb	IAmb	22 59 58.7	
	comp=Z,18µm,1.2s						
ISCO	Idaho Springs	59.08	329	S	S	23 07 17.9	+0.8
	baz=139						
H09W1	TRISTAN DA CUN	59.13	127	P	P	22 59 56.9	+0.9
	SNR=197						
H09N1	TRISTAN DA CUN	59.14	127	P	P	22 59 57.5	+1.4
	SNR=102						
WUAZ	Wupatki	59.20	322	S	S	23 07 20.3	+1.7
	baz=132						
WUAZ	Wupatki	59.20	322	⇓P	P	22 59 58.2	+1.5
SMCO	Snowmass	59.31	328	⇑P	P	22 59 59.1	+1.5
SMCO	Snowmass	59.31	328	P	P	22 59 58.8	+1.2
GUVIX	Guadalupe Vict	59.52	317	P	P	23 00 00.6	+2.0
GLA	Glamis	59.81	318	P	P	23 00 02.2	+1.6
	baz=128						
GLA				S	S	23 07 27.7	+1.8
	baz=128						
SUSD	Miller	59.88	337	P	P	23 00 00.5	-0.3
	baz=148						
SUSD				S	S	23 07 24.2	-2.1
	baz=148						
UABX	UABC, Campus M	59.96	317	P	P	23 00 03.4	+1.8
UABX				IAmb	IAmb	23 00 52.8	
	comp=Z,9µm,1.3s						
N23A	Red Feather La	60.07	330	P	P	23 00 03.3	+0.8
	baz=140						
N23A				S	S	23 07 30.0	+0.6
	baz=140						
PDMCI	Parker Dam,Lak	60.14	319	P	P	23 00 03.5	+0.8
	baz=129						
PDMCI				S	S	23 07 31.0	+1.2
	baz=129						
KAPO	Kapuskasing	60.15	351	⇓P	P	23 00 01.3	-1.1
DRLN	Deer Lake	60.31	10	⇓P	P	23 00 03.1	-0.4
DRLN	Deer Lake	60.31	10	P	P	23 00 03.0	-0.4
DRLN				IAmb	IAmb	23 00 04.6	
	comp=Z,10µm,0.9s						
RMX	La Rumorosa	60.37	317	P	P	23 00 05.3	+0.9
SWSC	Sam W. Stewart	60.39	317	P	P	23 00 06.0	+1.7
	baz=127						
SWSC				S	S	23 07 36.4	+3.5
	baz=127						
IKP	In-Ko-Pah, Jac	60.42	317	P	P	23 00 06.5	+1.8
	baz=127						
IKP				S	S	23 07 36.4	+2.8
	baz=127						
EYMN	Ely	60.57	344	S	S	23 07 29.6	-5.0
	baz=157						
EYMN	Ely	60.57	344	P	P	23 00 04.3	-0.9
EYMN				IAmb	IAmb	23 00 05.7	
	comp=Z,5µm,0.6s						
BC3	Big Chuckawall	60.59	318	P	P	23 00 07.3	+1.4
	baz=128						
BC3				S	S	23 07 38.3	+2.6
	baz=128						
O20A	White River Ci	60.67	328	P	P	23 00 07.2	+0.9
	baz=137						
O20A				S	S	23 07 38.0	+1.3
	baz=137						
IRM	Iron Mountain	60.70	319	P	P	23 00 07.9	+1.4
	baz=128						
IRM				S	S	23 07 39.0	+2.2
	baz=128						
NEE2	Needles Airpor	60.74	319	P	P	23 00 07.9	+1.2
	baz=129						
NEE2				S	S	23 07 38.5	+1.3
	baz=129						
MONP2	Monument Peak	60.78	317	P	P	23 00 08.3	+1.1
	baz=127						
MONP2				S	S	23 07 40.1	+1.8
	baz=127						
BELC	Belle Mtn. Jos	61.16	318	P	P	23 00 11.0	+1.4
	baz=128						
BELC				S	S	23 07 45.1	+2.3
	baz=128						
TPFO	Pinon Flats	61.23	317	P	P	23 00 11.2	+1.3
	baz=127						
TPFO				S	S	23 07 47.1	+3.5
	baz=127						
PFO	Pinyon Flats O	61.23	317	P	P	23 00 12.0	+2.0
	comp=Z,893nm,1.0s,baz=116,slow=7.2						
PFO				pP	pP	23 02 12.3	+2.4
	comp=Z,443nm,1.0s,baz=133,slow=12,SNR=4.3						
PFO				S	S	23 07 44.6	+0.9
	comp=Z,28nm,0.9s,baz=318,slow=15,SNR=15						
PFO	Pinyon Flats O	61.23	317	P	P	23 00 11.2	+1.1
	baz=127						
PFO				S	S	23 07 47.1	+3.5
	baz=127						
PFO	Pinyon Flats O	61.23	317	P	P	23 00 11.0	+1.0
PFO					pP	23 02 11.1	+1.2
109C	Camp Elliot, M	61.24	316	P	P	23 00 11.1	+1.2
	baz=126						
RWWY	Rawlins	61.30	330	P	P	23 00 10.7	+0.3
RWWY				pP	pP	23 02 11.2	+0.8
GMRC	Granite Mounta	61.42	319	P	P	23 00 12.8	+1.6
	baz=128						
GMRC				S	S	23 07 48.1	+2.2
	baz=128						
P17A	Butcher Ranch,	61.55	326	P	P	23 00 12.8	+0.8
P17A				IAmb	IAmb	23 00 16.2	
	comp=Z,7µm,1.3s						
P17A				pP	pP	23 02 12.5	+0.4
H07S1	FLORES T-PHASE	61.62	34	P	P	23 00 12.7	+0.4
	SNR=184						
H07S1	FLORES T-PHASE	61.62	34	*e*P	P	23 00 13.0	+0.7
H07S1				*e*S	S	23 07 46.6	-1.3
K22A	Casper	61.69	331	P	P	23 00 13.2	+0.3
	baz=140						
K22A				S	S	23 07 48.8	-0.2
	baz=140						
RSSD	Black Hills	61.69	334	P	P	23 00 13.7	+0.8
RSSD				*PP	pP	23 02 11.8	-1.3
RSSD				pmax	pmax		
	comp=Z,3µm,0.6s						
RSSD	Black Hills	61.69	334	S	S	23 07 50.2	+1.1
	baz=142						
RSSD	Black Hills	61.69	334	⇓P	P	23 00 13.9	+0.9
RSSD	Black Hills	61.69	334	P	P	23 00 13.7	+0.8
RSSD				IAmb	IAmb	23 00 17.2	
	comp=Z,3µm,0.6s						
RSSD				pP	pP	23 02 11.8	-1.3
MURC	Murrieta	61.72	317	P	P	23 00 14.7	+1.6
	baz=126						
MURC				S	S	23 07 51.9	+2.5
	baz=126						
H07N1	FLORES T-PHASE	61.88	34	P	P	23 00 15.6	+1.6
H07N1	FLORES T-PHASE	61.88	34	*e*P	P	23 00 14.1	+0.1
H07N1				*e*S	S	23 07 50.8	-0.4
HEC	Hector,Ludlow	61.88	319	P	P	23 00 15.8	+1.6
	baz=128						
HEC				S	S	23 07 54.4	+2.9
	baz=128						
BBRC	Big Bear Solar	61.93	318	P	P	23 00 16.3	+1.7
	baz=127						
BBRC				S	S	23 07 55.5	+3.1
	baz=127						
TUQ	Turquoise Moun	61.99	319	P	P	23 00 15.9	+1.0
	baz=128						
TUQ				S	S	23 07 54.3	+1.4

	baz=128						
AGMN	Agassiz Nation	62.15	342	S	S	23 07 49.1	-4.8
	baz=152						
AGMN	Agassiz Nation	62.15	342	P	P	23 00 15.0	-0.4
AGMN				IAmb	IAmb	23 00 24.3	
	comp=Z,6µm,0.8s						
SCI2	San Clemente I	62.28	316	P	P	23 00 18.0	+1.4
	baz=125						
SCI2				S	S	23 07 59.3	+3.2
	baz=125						
RRX	Edison Barstow	62.34	318	P	P	23 00 18.9	+1.8
	baz=127						
RRX				S	S	23 07 59.6	+2.6
	baz=127						
BFSC	Mount Baldy Ra	62.41	317	P	P	23 00 19.0	+1.4
	baz=126						
BFSC				S	S	23 08 00.7	+2.8
	baz=126						
CIS	Catalina Islan	62.43	316	P	P	23 00 19.0	+1.4
	baz=125						
CIS				S	S	23 08 00.6	+2.5
	baz=125						
PFCBR	Castelo Branco	62.46	37	eP	P	23 00 18.0	+0.3
	comp=Z,1µm,1.3s						
GSC	Goldstone, Bar	62.48	319	P	P	23 00 19.6	+1.6
	baz=127						
GSC				S	S	23 08 01.8	+3.1
	baz=127						
SHOC	Shoshone, Teco	62.50	320	P	P	23 00 19.3	+1.2
	baz=128						
SHOC				S	S	23 08 01.4	+2.6
	baz=128						
CALA	Caldeira	62.51	37	eP	P	23 00 18.6	+0.5
	comp=Z,6µm,1.1s						
CALA				eS	S	23 08 00.0	+1.1
HOR	Horta	62.51	37	eS	S	23 07 58.9	+0.1
FMP	Fort Macarthur	62.52	316	P	P	23 00 19.6	+1.4
	baz=126						
FMP				S	S	23 08 01.8	+2.7
	baz=126						
PCED	Cedros	62.54	37	eP	P	23 00 18.6	+0.4
	comp=Z,7µm,1.2s						
PCED				eS	S	23 08 05.4	+6.3
PCAN	Candelaria	62.56	37	eP	P	23 00 17.3	-1.0
	comp=Z,3µm,0.7s						
PCAN				eS	S	23 08 01.5	+2.1
PICO	Pico	62.62	37	eP	P	23 00 17.7	-1.1
	comp=Z,6µm,1.2s						
PICO				eS	S	23 08 00.8	+0.6
PRN	Pahroc Range	62.68	322	⇑P	P	23 00 21.2	+1.9
PPNO	Prainha do Nor	62.69	37	eP	P	23 00 19.2	-0.1
	comp=Z,6µm,1.3s						
PPNO				eS	S	23 08 03.9	+2.8
PID	Ribeirinha	62.76	37	eP	P	23 00 20.3	+0.6
	comp=Z,4µm,0.6s						
PID				eS	S	23 08 03.4	+1.5
DECC	Green Verdugo	62.87	317	P	P	23 00 21.8	+1.4
	baz=126						
DECC				S	S	23 08 06.2	+2.8
	baz=126						
ROSA	Rosais	62.87	37	eP	P	23 00 19.4	-0.9
	comp=Z,8µm,1.3s						
ROSA				eS	S	23 08 05.3	+2.2
ROSA	Rosais	62.87	37	⇓P	P	23 00 21.2	+0.9
ROSA	Rosais	62.87	37	P	P	23 00 21.0	+0.7
ROSA				IAmb	IAmb	23 00 31.2	
	comp=Z,9µm,1.4s						
PMAN	Manadas	62.90	37	eP	P	23 00 21.3	+0.8
	comp=Z,7µm,1.3s						
PMAN				eS	S	23 08 03.4	-0.1
MDND	Maddock	63.00	339	P	P	23 00 21.5	+0.5
	baz=148						
MDND				S	S	23 08 03.1	-1.4
	baz=148						
EDW2	Edwards Air Fo	63.01	318	P	P	23 00 22.5	+1.1
	baz=126						
EDW2				S	S	23 08 05.2	+0.1
	baz=126						
SNCC	San Nicolas Is	63.10	315	P	P	23 00 23.2	+1.2
	baz=124						
SNCC				S	S	23 08 09.3	+3.1
	baz=124						
LRMC	Laurel Mtn Rad	63.16	318	P	P	23 00 23.6	+1.2
	baz=127						
LRMC				S	S	23 08 10.2	+3.2
	baz=127						
SRBC	Serra Branca	63.20	37	eP	P	23 00 23.2	+0.8
	comp=Z,12µm,1.4s						
SRBC				eS	S	23 08 11.1	+4.0
DUG	Dugway, Tooele	63.20	325	S	S	23 08 07.9	+0.5
	baz=133						
DUG	Dugway, Tooele	63.20	325	P	P	23 00 23.9	+1.3
DUG				pP	pP	23 02 23.4	-0.3
FURC	Furnace Creek,	63.22	320	P	P	23 00 24.2	+1.6
	baz=128						
FURC				S	S	23 08 10.7	+3.3
	baz=128						
PGRA	Graciosa	63.23	37	eP	P	23 00 21.8	-0.8
	comp=Z,8µm,1.1s						
PGRA				eS	S	23 08 07.9	+0.5
BW06	Boulder Array	63.27	329	S	S	23 08 07.3	-1.0
	baz=137						
PD31	Pinedale Array	63.27	329	⇓P	P	23 00 23.3	+0.2
PDAR	Pinedale Array	63.27	329	P	P	23 00 23.4	+0.3
	comp=Z,1µm,0.5s,baz=122,slow=9.9,SNR=69						
PDAR				S	S	23 08 08.1	-0.2
	comp=Z,138nm,1.2s,baz=98,slow=3.7,SNR=7.1						
PDAR				PKPPKP	P'P'df	23 29 08.8	-1.8
	comp=Z,23nm,0.9s,baz=270,slow=0.6,SNR=3.2						
PDAR				P4KPbc		23 37 14.3	
	comp=Z,11nm,0.9s,baz=139,slow=5.6,SNR=10						
PDAR	Pinedale Array	63.27	329	P	P	23 00 23.3	+0.2
PDAR				pP	pP	23 02 24.2	0.0
OSI	Osito Audit: C	63.34	317	P	P	23 00 24.5	+1.0
	baz=126						
OSI				S	S	23 08 10.5	+1.4
	baz=126						
MPMC	Manual Prospec	63.38	319	P	P	23 00 24.9	+1.0
	baz=127						
MPMC				S	S	23 08 11.6	+1.8
	baz=127						
ADH	Angra Heroismo	63.42	37	eP	P	23 00 24.8	+1.0
	comp=Z,9µm,0.9s						
ADH				eS	S	23 08 12.2	+2.4
PSCM	Serra do Cume	63.52	37	eS	S	23 08 11.1	0.0
PAGU	Agualva, Azore	63.53	37	eP	P	23 00 23.0	-1.5
	comp=Z,7µm,1.2s						
SCZ2	Santa Cruz Isl	63.60	316	P	P	23 00 26.2	+1.1
	baz=124						
SCZ2				S	S	23 08 14.6	+2.4
	baz=124						
R11A	Troy Canyon, C	63.60	322	P	P	23 00 26.9	+1.7
	baz=130						
R11A				S	S	23 08 15.3	+2.9
	baz=130						
PSMA	Santa Maria	63.67	40	eP	P	23 00 25.6	+0.1
	comp=Z,4µm,1.0s						
PSMA				eS	S	23 08 10.8	-2.1
ARVC	Arvin	63.71	317	P	P	23 00 27.2	+1.5
	baz=126						
ARVC				S	S	23 08 15.6	+2.2
	baz=126						
PSMN	Pico do Norte,	63.72	40	eP	P	23 00 25.3	-0.5
	comp=Z,2µm,1.0s						
PSMN				eS	S	23 08 10.7	-2.8
SHEL	Horse Pasture	63.73	103	P	P	23 00 26.3	0.0
SHEL				pmax	pmax		
	comp=Z,23µm,2.4s						
SHEL	Horse Pasture	63.73	103	⇓P	P	23 00 27.0	+0.7
SHEL	Horse Pasture	63.73	103	P	P	23 00 26.3	0.0
SHEL				IAmb	IAmb	23 00 31.0	
	comp=Z,23µm,2.4s						
ISA	Isabella, Lake	63.78	318	P	P	23 00 27.7	+1.4
	baz=126						
ISA				S	S	23 08 17.5	+3.0
	baz=126						
PDA	Ponta Delgada	63.80	39	eS	S	23 08 14.5	+0.1
PSET	Sete Cidades	63.82	39	eP	P	23 00 25.5	-0.9
	comp=Z,4µm,1.6s						
PSET				eS	S	23 08 13.4	-1.2
ULM	Lac du Bonnet	63.88	343	P	P	23 00 25.9	-0.6
	comp=Z,5µm,0.5s,baz=155,slow=4.8,SNR=182						
ULM				S	S	23 08 09.4	-5.5
	comp=Z,395nm,0.9s,baz=62,slow=22,SNR=9.5						
ULM				PKPPKP	P'P'df	23 29 07.7	-0.9
	comp=Z,158nm,1.0s,baz=345,slow=2.5,SNR=5.3						
ULM				P4KPbc		23 37 16.2	
	comp=Z,58nm,0.9s,baz=151,slow=3.4,SNR=23						
ULM	Lac du Bonnet	63.88	343	⇓P	P	23 00 25.6	-0.8
ULM	Lac du Bonnet	63.88	343	P	P	23 00 25.8	-0.7
I10CA	LAC DU BONNET	63.88	342	P	P	23 00 30.0	+3.5
	baz=145,slow=7.0,SNR=1.9						
GRON	Grota Negra	63.90	39	eS	S	23 08 20.3	+4.6
CMLA	Cha da Macela	63.90	39	eP	P	23 00 26.4	-0.5
	comp=Z,5µm,0.7s						
CMLA				eS	S	23 08 17.4	+1.8
SBC	Santa Barbara	63.91	316	P	P	23 00 28.1	+1.1
	baz=125						
SBC				S	S	23 08 18.0	+2.2
	baz=125						
PCALD	Caldeiras da R	63.95	39	eP	P	23 00 26.4	-0.8
	comp=Z,7µm,0.8s						
PCALD				eS	S	23 08 17.1	+1.0
CWC	Cottonwood Cre	63.99	319	P	P	23 00 29.1	+1.4
	baz=127						
CWC				S	S	23 08 19.6	+2.6
	baz=127						
BART	Pico Bartolome	64.13	39	eS	S	23 08 18.9	+0.4
LCH	Last Change Ra	64.19	320	P	P	23 00 30.0	+1.1
LCH				IAmb	IAmb	23 00 38.4	
	comp=Z,12µm,2.1s						
PKM	Mcpherson Peak	64.23	317	P	P	23 00 30.7	+1.5
	baz=125						
PKM				S	S	23 08 22.2	+2.1
	baz=125						
VES	Vestal, Richgr	64.29	318	P	P	23 00 30.9	+1.5
	baz=126						
VES				S	S	23 08 23.4	+3.1
	baz=126						
TPH	Tonopah	64.44	321	P	P	23 00 31.7	+1.2
TPH				IAmb	IAmb	23 00 35.3	
	comp=Z,8µm,1.0s						
TPH				pP	pP	23 02 33.6	+1.3
TIN	Tinemaha, Big	64.45	319	P	P	23 00 31.9	+1.4
	baz=127						
TIN				S	S	23 08 26.1	+3.6
	baz=127						
SMMC	Simmler	64.59	317	P	P	23 00 33.0	+1.7
	baz=125						
SMMC				S	S	23 08 27.2	+3.1
	baz=125						
LAO	LASA Array	64.67	334	S	S	23 08 24.7	+0.2
	baz=141						
VOG	Valley Oaks Go	64.77	318	P	P	23 00 32.9	+0.5
	baz=126						
VOG				S	S	23 08 26.1	+0.2
	baz=126						
SCHQ	Schefferville	64.79	3	P	P	23 00 31.6	-0.5
	comp=Z,2µm,0.8s,baz=194,slow=4.7,SNR=24						
SCHQ				PKPPKP	P'P'df	23 29 08.4	+1.6
	comp=Z,136nm,1.0s,baz=29,slow=4.8,SNR=6.5						
SCHQ				P4KPbc		23 37 18.6	
	comp=Z,16nm,0.9s,baz=209,slow=2.9,SNR=4.3						
SCHQ	Schefferville	64.79	3	⇓P	P	23 00 31.6	-0.5
SCHQ	Schefferville	64.79	3	P	P	23 00 31.5	-0.7
SCHQ				IAmb	IAmb	23 00 40.6	
	comp=Z,7µm,1.5s						
RLMT	Red Lodge	64.86	331	S	S	23 08 26.1	-1.1
	baz=138						
H17A	Grant Village	64.96	330	P	P	23 00 35.3	+1.6
	baz=136						
H17A				S	S	23 08 30.6	+2.0
	baz=136						
MACI	Morro de la Ar	65.09	52	P	P	23 00 35.4	+0.6
MACI				IAmb	IAmb	23 00 38.6	
	comp=Z,10µm,1.1s						
MACI				pP	pP	23 02 37.0	+0.1
MLAC	Mammoth, Mammo	65.18	320	P	P	23 00 36.4	+1.1
	baz=127						
MLAC				S	S	23 08 34.2	+2.8
	baz=127						
NV11	Mina Array Sit	65.24	321	P	P	23 00 36.0	+0.5
DGMT	Dagmar	65.24	336	S	S	23 08 32.7	+1.5
	baz=144						
NVAR	Mina Array Bea	65.33	321	P	P	23 00 37.1	+1.0
	comp=Z,477nm,0.7s,baz=356,slow=24,SNR=30						
NVAR				pP	pP	23 02 40.7	+2.3
	comp=Z,96nm,0.7s,baz=108,slow=4.7,SNR=1.9						
NVAR				PKPPKP	P'P'df	23 29 06.6	-1.2
	comp=Z,135nm,1.0s,baz=263,slow=2.4,SNR=7.0						
NVAR				P4KPbc		23 37 23.3	
	comp=Z,1.6nm,0.5s,baz=144,slow=3.3,SNR=4.8						
NVAR	Mina Array Bea	65.33	321	P	P	23 00 37.6	+1.4
NVAR					pP	23 02 39.5	+1.1
YERR	Yerington	66.25	321	P	P	23 00 43.1	+1.3
BOZ	Bozeman (W)	66.34	330	S	S	23 08 45.2	+0.6
	baz=136						
BOZ	Bozeman (W)	66.34	330	P	P	23 00 42.5	+0.3
BOZ				pP	pP	23 02 45.1	+0.1
BOZ				IAmb	IAmb	23 02 51.4	
	comp=Z,6µm,1.6s						
HLID	Hailey	66.36	327	S	S	23 08 47.9	+3.0
	baz=132						
SAO	San Andreas Ge	66.38	318	⇑P	P	23 00 43.9	+1.5
SAO	San Andreas Ge	66.38	318	P	P	23 00 43.0	+0.6
SAO				pP	pP	23 02 45.2	-0.1
PMOZ	Porto Moniz, M	66.77	48	⇓eP	P	23 00 45.8	+0.8
	comp=Z,7µm,0.8s						
PMOZ				epP	pP	23 02 49.6	+1.6
PMOZ				i S	S	23 08 53.1	+3.1
PMOZ	Porto Moniz, M	66.77	48	⇓P	P	23 00 45.9	+0.8
PMOZ	Porto Moniz, M	66.77	48	P	P	23 00 45.3	+0.3
PMOZ	Porto Moniz, M	66.77	48	P	P	23 00 46.2	+1.2
FUL	Funchal	66.91	48	⇓eP	P	23 00 46.1	+0.4
	comp=Z,4µm,1.9s						
FUL				epP	pP	23 02 50.1	+1.3
FUL				eS	S	23 08 53.1	+1.8
PMAR	Madeira	66.93	48	⇓iP	P	23 00 46.7	+0.6
	comp=Z,6µm,1.5s						
PMAR				epP	pP	23 02 49.6	+0.4
PMAR				i S	S	23 08 54.2	+2.2
EGMT	Eagleton	67.24	333	S	S	23 08 55.6	+0.8
	baz=138						
EGMT	Eagleton	67.24	333	P	P	23 00 47.9	+0.4
EGMT				pP	pP	23 02 49.2	-1.6
PMPS	Porto Santo	67.52	48	⇓iP	P	23 00 50.5	+1.1
	comp=Z,7µm,1.6s						
PMPS				epP	pP	23 02 54.4	+1.6
PMPS				i S	S	23 09 02.1	+3.7
PMPST	Porto Santo, M	67.53	48	⇓iP	P	23 00 50.5	+1.0
	comp=Z,8µm,1.5s						
PMPST				epP	pP	23 02 53.9	+1.0
PMPST				i S	S	23 09 02.7	+4.1
LIC	Lamto	67.77	79	ePKP1	P	23 00 52.3	+0.9
	comp=Z,26µm,2.0s						
TIC	Toumodi	67.88	79	ePKP1	P	23 00 53.1	+1.1
WVOR	Wild Horse Val	67.98	324	⇓P	P	23 00 53.1	+0.9
TAOE	Nuku Hiva Isla	68.00	264	⇑iP	P	23 00 54.0	+1.1
	comp=Z,7µm,1.5s						
TAOE				epP	pP	23 02 57.1	+0.4
	comp=Z,3µm,1.2s						
TAOE	Nuku Hiva Isla	68.00	264	⇑P	P	23 00 53.9	+1.1
TAOE	Nuku Hiva Isla	68.00	264	P	P	23 00 53.6	+0.8
TAOE				pP	pP	23 02 56.1	-0.6
I17CI	DIMBOKRO INFRA	68.04	79	P	P	23 00 55.0	+2.0
	baz=259,slow=6.5,SNR=8.4						
DBIC	Dimbokro	68.04	79	P	P	23 00 53.5	+0.5
	comp=Z,4µm,1.0s,baz=263,slow=6.2,SNR=32						
DBIC				pP	pP	23 02 58.1	+1.4
	comp=Z,1µm,0.9s,baz=266,slow=7.0,SNR=6.0						
DBIC				S	S	23 09 03.8	-1.4
	comp=Z,148nm,0.8s,baz=79,slow=22,SNR=6.9						
DBIC				PKPPKP	P'P'df	23 28 55.5	-10
	comp=Z,36nm,0.8s,baz=124,slow=3.2,SNR=6.4						
DBIC	Dimbokro	68.04	79	⇓P	P	23 00 53.2	+0.2
DBIC	Dimbokro	68.04	79	P	P	23 00 52.8	-0.1
DBIC				IAmb	IAmb	23 00 57.8	
	comp=Z,11µm,1.4s						
DBIC				pP	pP	23 02 57.5	+0.9
KIC	Kosan Boka	68.08	79	ePKP1	P	23 00 53.5	+0.3
	comp=Z,1µm,0.9s						
MCCM	Marconi Confer	68.10	318	⇓P	P	23 00 54.2	+1.5
MSO	Missoula	68.35	330	S	S	23 09 09.9	+2.2
	baz=134						
O03E	Paynes Creek	68.61	321	P	P	23 00 56.1	+0.1
	baz=125						
O03E				S	S	23 09 11.6	+0.6
	baz=125						
MOD	Modoc Plateau	68.64	323	P	P	23 00 57.2	+1.0
MOD				IAmb	IAmb	23 00 58.8	
	comp=Z,3µm,0.7s						
O02D	Mt. Diablo Mer	69.17	320	P	P	23 00 59.7	+0.3
	baz=124						
O02D				S	S	23 09 17.4	0.0
	baz=124						
WDC	Whiskeytown Da	69.24	320	⇑P	P	23 00 59.1	-0.6
TANT	Tantan	69.33	55	P	P	23 01 02.0	+1.5
F10A	Beach Ranch, E	69.46	328	⇓P	P	23 01 02.5	+1.5
F10A				⇓p	pP	23 03 07.1	+1.7
M04C	Macdoel	69.50	322	P	P	23 01 02.2	+0.9
	baz=126						
M04C				S	S	23 09 22.4	+1.2
	baz=126						
N02D	Trinity Center	69.57	321	P	P	23 01 01.4	-0.3
	baz=124						
N02D				S	S	23 09 20.8	-1.0
	baz=124						
WALA	Waterton Lakes	69.89	332	⇑P	P	23 01 04.2	+0.8
WALA				⇓p	pP	23 03 09.4	+1.2
M02C	Callahan	69.90	321	P	P	23 01 03.9	+0.3
	baz=125						
M02C				S	S	23 09 24.4	-1.1
	baz=125						
K04D	Chiloquin, OR	69.94	323	P	P	23 01 04.9	+1.0
	baz=126						
K04D				S	S	23 09 28.3	+2.2
	baz=126						
YBH	Yreka Blue Hor	70.00	321	P	P	23 01 04.3	+0.1
	comp=Z,679nm,0.7s,baz=98,slow=3.3,SNR=10						
YBH				pP	pP	23 03 10.4	+1.4
	comp=Z,258nm,1.0s,baz=151,slow=5.2,SNR=2.7						
YBH				S	S	23 09 23.7	-3.1
	comp=Z,463nm,1.2s,baz=254,slow=22,SNR=41						
YBH	Yreka Blue Hor	70.00	321	P	P	23 01 04.2	0.0
YBH				*PP	pP	23 03 08.5	-0.5
YBH				pmax	pmax		
	comp=Z,759nm,0.7s						
YBH	Yreka Blue Hor	70.00	321	P	P	23 01 04.2	0.0
YBH					pP	23 03 08.5	-0.5
J05D	Fort Rock, OR	70.02	323	P	P	23 01 05.7	+1.3
	baz=126						
J05D				S	S	23 09 28.8	+1.7
	baz=126						
L04D	Klamath Falls	70.03	322	P	P	23 01 05.1	+0.6
	baz=125						
L04D				S	S	23 09 28.3	+1.1
	baz=125						
PINE	Pine Mountain	70.15	324	P	P	23 01 06.9	+1.7
PINE				IAmb	IAmb	23 01 20.9	
	comp=Z,4µm,1.0s						
J04D	Umpqua Nationa	70.51	323	P	P	23 01 08.3	+0.9
	baz=126						
J04D				S	S	23 09 34.6	+2.0
	baz=126						
SFNM	Sidi Ifni	70.56	54	P	P	23 01 10.0	+2.3
HUMO	Hull Mountain	70.65	322	⇓P	P	23 01 07.0	-1.0
I05D	Terrebonne, OR	70.71	324	P	P	23 01 10.0	+1.7
	baz=127						
I05D				S	S	23 09 37.7	+3.2
	baz=127						
L02E	Cave Junction	70.79	321	P	P	23 01 10.0	+1.3
	baz=124						
L02E				S	S	23 09 37.6	+2.1
	baz=124						
KOWA	Kowa	70.85	71	⇓P	P	23 01 10.0	+0.4
KOWA	Kowa	70.85	71	P	P	23 01 09.1	-0.6
KOWA				IAmb	IAmb	23 01 11.9	
	comp=Z,4µm,0.8s						
KOWA				pP	pP	23 03 14.6	-0.2
KOWA	Kowa	70.85	71	P	P	23 01 10.1	+0.4
NEW	Newport	70.91	329	S	S	23 09 37.9	+1.3
	baz=131						
HAWA	Hanford	70.96	327	⇓P	P	23 01 11.2	+1.5
I04A	Tendick Farm,	71.01	323	P	P	23 01 10.6	+0.5
	baz=126						
I04A				S	S	23 09 38.1	+0.2
	baz=126						
DBO	Dodson Butte	71.11	322	P	P	23 01 11.6	+0.8
DBO				pP	pP	23 03 16.1	0.0
K02D	Willamette Mer	71.13	322	P	P	23 01 12.0	+1.2
	baz=124						
K02D				S	S	23 09 41.5	+2.1
	baz=124						
E07A	Sunnyside	71.23	327	P	P	23 01 12.4	+1.2
G05D	Wamic, OR	71.23	325	P	P	23 01 13.4	+2.1
	baz=127						
G05D				S	SKiKP	23 09 45.5	-0.5
	baz=127						
CGR	Cap Guir	71.32	53	P	P	23 01 14.0	+1.9
VNA3	Neumayer Olymp	71.50	163	P	P	23 01 13.2	+0.8
VNA3	Neumayer Olymp	71.50	163	PP	PP	23 04 05.1	+2.6
VNA3	Neumayer Olymp	71.50	163	pP	pP	23 03 15.3	-2.9
I03D	Drain, OR	71.51	323	P	P	23 01 13.8	+1.0
	baz=125						
I03D				S	SKiKP	23 09 45.1	-1.2
	baz=125						
J01E	Myrtle Point	71.55	322	P	P	23 01 14.7	+1.6
	baz=124						
J01E				S	SKiKP	23 09 46.2	-0.2
	baz=124						
H04D	Lebanon	71.62	324	P	P	23 01 14.1	+0.6
	baz=126						
H04D				S	S	23 09 45.0	+0.3
	baz=126						
VNA1	Neumayer--Stat	71.68	162	P	P	23 01 14.8	+1.4
VNA1	Neumayer--Stat	71.68	162	PP	PP	23 04 05.6	+1.5
VNA1	Neumayer--Stat	71.68	162	pP	pP	23 03 19.4	0.0
F05D	White Salmon	71.70	325	P	P	23 01 15.6	+1.6
	baz=127						
F05D				S	SKiKP	23 09 49.0	+2.4
	baz=127						
EAH	EAH	71.97	52	P	P	23 01 17.6	+1.7
COR	Corvallis	71.99	324	⇑P	P	23 01 17.5	+1.9
I02E	Swisshome, OR	72.04	323	P	P	23 01 17.7	+1.7
	baz=124						
I02E				S	S	23 09 51.7	+2.5
	baz=124						
VNA2	Neumayer--Watz	72.05	162	P	P	23 01 16.4	+0.8
	baz=294,slow=6.2						
VNA2				S	S	23 09 51.3	+2.6
VNA2	Neumayer--Watz	72.05	162	pP	pP	23 03 21.3	-0.3
F04A	Amboy	72.27	325	P	P	23 01 18.0	+0.8
F04A				IAmb	IAmb	23 01 19.7	
	comp=Z,4µm,0.8s						
KUKU	Kukurantumi	72.28	80	i P	P	23 01 17.4	-0.6
KUKU				eP	pP	23 03 22.4	-1.5
G03D	McMinnville, O	72.33	324	P	P	23 01 19.0	+1.4
	baz=125						
G03D				S	S	23 09 54.8	+2.3
	baz=125						
TTIG	Tnine Tigouga,	72.42	53	P	P	23 01 20.3	+1.7
C06D	Leavenworth	72.64	327	P	P	23 01 20.1	+0.8
	baz=128						
C06D				S	S	23 09 58.2	+2.4
	baz=128						
F04D	Rainier, OR	72.69	325	P	P	23 01 21.4	+1.8
	baz=126						
F04D				S	S	23 10 00.1	+3.7
	baz=126						
E04D	Cinebar	72.72	326	P	P	23 01 20.8	+1.1
	baz=126						
E04D				S	S	23 09 58.9	+2.2
	baz=126						
PNT	Penticton	72.85	329	⇓P	P	23 01 22.1	+1.6
OUK	Oukaimeden	73.14	53	P	P	23 01 25.0	+2.1
D04E	Lakebay	73.20	326	P	P	23 01 24.2	+1.7
	baz=126						
D04E				S	S	23 10 04.9	+3.1
	baz=126						
IVI	Ivigtut	73.35	11	⇓iP	P	23 01 22.9	-0.1
IVI				IAmb	IAmb	23 01 26.0	
	comp=Z,6µm,0.7s						
IVI	Ivigtut	73.35	11	⇓P	P	23 01 22.9	-0.1
IVI	Ivigtut	73.35	11	P	P	23 01 22.9	-0.1
IVI				pP	pP	23 03 29.5	0.0
B05A	Bryant	73.48	327	P	P	23 01 24.4	+0.4
	baz=127						
B05A				S	S	23 10 05.7	+0.8
	baz=127						
D03D	Eldon	73.58	326	P	P	23 01 26.0	+1.3
	baz=126						
D03D				S	S	23 10 08.8	+2.6
	baz=126						
FRB	Frobisher Bay	73.66	1	⇓P	P	23 01 24.1	-0.7
SNAA	Sanae	73.69	162	P	P	23 01 25.8	+0.8
SNAA				S	S	23 10 07.8	+1.1
SNAA	Sanae	73.69	162	PKKPbc	PKKPbc	23 20 58.3	+3.1
	comp=Z,9.4nm,0.6s,baz=169,slow=7.9,SNR=1.7						
SNAA				PKPPKP	P'P'df	23 28 43.7	-10

	comp=Z,46nm,1.0s,baz=146,slow=3.1,SNR=5.8						
SNAA	Sanae	73.69	162	d iP	P	23 01 25.1	+0.1
SNAA				pmax	pmax		
	comp=Z,10µm,1.6s						
SNAA	Sanae	73.69	162	⇑P	P	23 01 25.8	+0.8
SNAA	Sanae	73.69	162	P	P	23 01 25.4	+0.4
SNAA				IAmb	IAmb	23 01 30.4	
	comp=Z,7µm,1.2s						
SNAA				pP	pP	23 03 32.9	+1.2
NRS	Narsarsuaq	73.87	13	⇓iP	P	23 01 25.5	-0.5
NRS				IAmb	IAmb	23 01 28.4	
	comp=Z,4µm,0.6s						
NRS	Narsarsuaq	73.87	13	⇓P	P	23 01 25.5	-0.5
NRS	Narsarsuaq	73.87	13	P	P	23 01 25.6	-0.3
NRS				IAmb	IAmb	23 01 27.1	
	comp=Z,6µm,1.0s						
NRS				pP	pP	23 03 32.7	0.0
NLWA	Neilton Lookou	73.93	326	⇓P	P	23 01 28.4	+1.6
A04D	Lummi Island	74.08	327	P	P	23 01 28.8	+1.4
	baz=127						
A04D				S	S	23 10 13.7	+2.3
	baz=127						
AVE	Averroes	74.32	51	P	P	23 01 28.6	-0.6
AVE				S	S	23 10 18.6	+3.9
AVE	Averroes	74.32	51	⇓P	P	23 01 31.6	+2.5
AVE	Averroes	74.32	51	P	P	23 01 31.4	+2.3
ZGR	Zagora	74.51	55	P	P	23 01 32.1	+1.6
VAH	Vaihoa	74.52	257	⇑iP	P	23 01 32.5	+1.9
	comp=Z,3µm,1.3s						
VAH				epP	pP	23 03 38.5	+0.5
	comp=Z,1µm,1.4s						
MEH	Mehetia	74.65	254	⇑iP	P	23 01 33.2	+1.8
MEH				epP	pP	23 03 39.5	+0.8
	comp=Z,206nm,1.2s						
LLLB	Lillooet	74.80	329	P	P	23 01 31.8	+0.3
LLLB				pP	pP	23 03 38.4	-0.2
TZRR	Tazzarine	74.80	54	P	P	23 01 34.0	+2.0
PMOR	Pomariorio Ree	74.80	257	⇑iP	P	23 01 34.1	+1.9
	comp=Z,5µm,1.2s						
PMOR				epP	pP	23 03 40.1	+0.4
	comp=Z,2µm,1.2s						
PFVI	Vila Bisbo	74.85	47	⇓iP	P	23 01 33.9	+1.9
	comp=Z,9µm,1.3s						
PFVI				epP	pP	23 03 41.3	+2.1
PFVI				i S	S	23 10 23.8	+3.5
PFVI	Vila Bisbo	74.85	47	P	P	23 01 32.5	+0.4
PFVI				IAmb	IAmb	23 01 35.7	
	comp=Z,6µm,1.1s						
PFVI				pP	pP	23 03 40.7	+1.5
PFVI	Vila Bisbo	74.85	47	P	P	23 01 34.1	+2.1
ZHG	ZHG	74.97	51	P	P	23 01 34.0	+1.2
MORF	Marmelete	75.05	47	eP	P	23 01 34.6	+1.3
MORF				IAmb	IAmb	23 01 37.2	
	comp=Z,9µm,1.1s						
MORF				eS	S	23 10 24.5	+1.9
MORF	Marmelete	75.05	47	⇓iP	P	23 01 35.0	+1.8
	comp=Z,11µm,1.2s						
MORF				epP	pP	23 03 42.1	+1.6
MORF				i S	S	23 10 26.8	+4.2
MORF	Marmelete	75.05	47	eP	P	23 01 34.5	+1.3
MORF				eS	S	23 10 24.5	+1.9
MORF	Marmelete	75.05	47	⇓P	P	23 01 35.1	+1.8
PTEO	Sao Teotonio	75.10	47	⇓iP	P	23 01 35.6	+2.2
	comp=Z,10µm,1.4s						
PTEO				epP	pP	23 03 43.2	+2.5
PTEO				i S	S	23 10 26.9	+3.9
PMST	Lisbon--Monsan	75.29	46	⇓iP	P	23 01 35.9	+1.5
	comp=Z,5µm,1.4s						
PMST				epP	pP	23 03 43.9	+2.1
PMST				i S	S	23 10 28.6	+3.6
LIS	Lisbon	75.31	46	eP	P	23 01 36.1	+1.5
LIS				IAmb	IAmb	23 01 45.4	
	comp=Z,5µm,1.1s						
LIS				eS	S	23 10 27.1	+2.0
LIS	Lisbon	75.31	46	eP	P	23 01 36.0	+1.5
LIS				eS	S	23 10 27.1	+2.0
PMAFR	Mafra	75.32	45	⇓iP	P	23 01 36.0	+1.4
	comp=Z,7µm,1.1s						
PMAFR				epP	pP	23 03 43.6	+1.6
PMAFR				i S	S	23 10 28.4	+3.1
PNCL	Nicolau / Gran	75.48	46	⇓iP	P	23 01 37.1	+1.6
	comp=Z,5µm,1.2s						
PNCL				epP	pP	23 03 45.6	+2.6
PNCL				i S	S	23 10 30.4	+3.4
NUUK	Nuuk	75.52	9	⇓iP	P	23 01 35.3	+0.2
NUUK				IAmb	IAmb	23 01 37.8	
	comp=Z,3µm,0.7s						
NUUK	Nuuk	75.52	9	⇓P	P	23 01 35.2	+0.2
PBDV	Barranco-do-Ve	75.55	47	⇓iP	P	23 01 37.7	+1.8
	comp=Z,6µm,1.3s						
PBDV				epP	pP	23 03 44.9	+1.5
PBDV				i S	S	23 10 31.9	+4.1
MESJ	Messejana	75.59	47	eP	P	23 01 37.5	+1.4
MESJ				IAmb	IAmb	23 01 39.5	
	comp=Z,2µm,1.1s						
MESJ				eS	S	23 10 30.0	+1.8
MESJ	Messejana	75.59	47	⇓iP	P	23 01 37.6	+1.4
	comp=Z,4µm,1.3s						
MESJ				epP	pP	23 03 46.3	+2.7
MESJ				i S	S	23 10 32.4	+4.2
MESJ	Messejana	75.59	47	eP	P	23 01 37.5	+1.4
MESJ				eS	S	23 10 30.0	+1.8
GOLM	Goulmima	75.63	54	P	P	23 01 39.4	+2.8
PCVE	Castro Verde	75.63	47	⇓iP	P	23 01 38.1	+1.8
	comp=Z,7µm,1.3s						
PCVE				epP	pP	23 03 46.4	+2.5
PCVE				i S	S	23 10 32.2	+3.5
PVAQ	Vaqueiros	75.77	47	⇓iP	P	23 01 38.7	+1.6
	comp=Z,3µm,2.0s						
PVAQ				epP	pP	23 03 47.1	+2.4
PVAQ				i S	S	23 10 33.9	+3.8
PVAQ	Vaqueiros	75.77	47	P	P	23 01 38.3	+1.2
PVAQ				pP	pP	23 03 46.2	+1.5
PVAQ	Vaqueiros	75.77	47	P	P	23 01 39.6	+2.5
TORD	Torodi Ar. Bea	75.86	74	P	P	23 01 38.0	0.0
	comp=Z,6µm,1.0s,baz=243,slow=4.5,SNR=111						
TORD				pP	pP	23 03 46.9	+1.2
	comp=Z,828nm,0.8s,baz=271,slow=7.2,SNR=4.9						
TORD				S	S	23 10 24.5	-7.3
	comp=Z,59nm,0.9s,baz=261,slow=11,SNR=3.6						
TORD				PKPPKP	P'P'df	23 28 38.1	-13
	comp=Z,22nm,0.9s,baz=71,slow=1.6,SNR=3.7						
TORD	Torodi Ar. Bea	75.86	74	P	P	23 01 37.5	-0.5
TORD				IAmb	IAmb	23 01 39.9	
	comp=Z,7µm,1.0s						
TORD				pP	pP	23 03 46.1	+0.5
PSBE	So Bento	75.91	45	⇓iP	P	23 01 39.4	+1.5
	comp=Z,6µm,1.2s						
PSBE				epP	pP	23 03 47.7	+2.2
PSBE				i S	S	23 10 34.3	+2.7
PBEJ	Beja	75.92	47	⇓iP	P	23 01 39.4	+1.5
	comp=Z,3µm,1.4s						
PBEJ				epP	pP	23 03 48.4	+2.8
PBEJ				eS	S	23 10 34.8	+3.1
EVO	Evora	76.03	46	P	P	23 01 38.8	+0.3
EVO				S	S	23 10 36.1	+3.3
EVO	Evora	76.03	46	⇓iP	P	23 01 39.8	+1.3
	comp=Z,3µm,1.3s						
EVO				epP	pP	23 03 47.9	+1.6
EVO				i S	S	23 10 36.5	+3.6
PPTF	Pamatai, Papee	76.11	254	⇑P	P	23 01 41.8	+2.3
PPTF	Pamatai, Papee	76.11	254	P	P	23 01 40.4	+1.0
PPTF				IAmb	IAmb	23 01 49.4	
	comp=Z,5µm,1.6s						
PPTF				pP	pP	23 03 49.5	+2.0
PMTG	Montargil	76.11	46	⇓iP	P	23 01 40.0	+1.1
	comp=Z,6µm,1.3s						
PMTG				epP	pP	23 03 48.4	+1.7
PMTG				i S	S	23 10 36.4	+2.7
PAE	Paea	76.11	254	⇑iP	P	23 01 41.6	+2.2
PAE				epP	pP	23 03 48.0	+0.6
	comp=Z,246nm,1.3s						
PPT2	Papeete2	76.12	254	⇑iP	P	23 01 41.8	+2.3
	comp=Z,2µm,1.4s						
PPT2				epP	pP	23 03 48.2	+0.7
	comp=Z,681nm,1.3s						
PPT	Papeete	76.12	254	P	P	23 01 41.3	+1.8
	comp=Z,373nm,0.6s,baz=105,slow=6.8,SNR=14						
IFR	Ifrane	76.17	52	P	P	23 01 38.8	-0.8
IFR				S	S	23 10 37.5	+2.6
MDT	Midelt	76.31	53	pP	pP	23 03 51.0	+2.9
	comp=Z,441nm,1.0s,baz=265,slow=5.1,SNR=3.6						
MDT				PKKPbc	PKKPbc	23 20 46.6	-1.6
	comp=Z,12nm,0.9s,baz=152,slow=4.0,SNR=5.9						
MDT	Midelt	76.31	53	P	P	23 01 42.0	+1.7
PCAS	Casmilo, Conde	76.35	45	⇓iP	P	23 01 41.2	+1.0
	comp=Z,4µm,1.2s						
PCAS				epP	pP	23 03 49.8	+1.7
PCAS				i S	S	23 10 38.0	+1.8
ARNO	Arenosillo	76.36	48	P	P	23 01 41.6	+1.3
ARNO				S	S	23 10 38.7	+2.3
LCRM	LCR	76.44	52	P	P	23 01 43.0	+1.9
PESTR	Estremoz	76.47	46	⇓iP	P	23 01 42.3	+1.4
	comp=Z,5µm,1.4s						
PESTR				epP	pP	23 03 51.0	+2.1
PESTR				i S	S	23 10 40.4	+2.8
PESTR	Estremoz	76.47	46	⇓P	P	23 01 42.4	+1.4
PESTR	Estremoz	76.47	46	P	P	23 01 42.1	+1.2
PESTR				pP	pP	23 03 51.2	+2.3
PESTR	Estremoz	76.47	46	P	P	23 01 43.2	+2.3
COI	Coimbra	76.47	44	⇓iP	P	23 01 42.2	+1.3
	comp=Z,11µm,1.2s						
COI				epP	pP	23 03 50.6	+1.8
COI				i S	S	23 10 39.6	+2.1
COI	Coimbra	76.47	44	P	P	23 01 42.1	+1.2
COI				IAmb	IAmb	23 01 44.2	
	comp=Z,8µm,1.1s						
COI				pP	pP	23 03 49.5	+0.7
SFS	San Fernando	76.49	49	P	P	23 01 42.6	+1.5
SFS				S	S	23 10 42.2	+4.4
SFS	San Fernando	76.49	49	P	P	23 01 42.6	+1.5
SFS				*PP	pP	23 03 50.0	+1.0
SFS				pmax	pmax		
	comp=Z,8µm,1.1s						
SFS	San Fernando	76.49	49	⇓P	P	23 01 43.4	+2.3
SFS	San Fernando	76.49	49	P	P	23 01 42.6	+1.5
SFS				IAmb	IAmb	23 01 45.7	
	comp=Z,8µm,1.1s						
SFS				pP	pP	23 03 50.0	+1.0
SFS	San Fernando	76.49	49	P	P	23 01 43.7	+2.6
CNIL	Conil	76.56	49	P	P	23 01 44.5	+3.0
PBAR	Barrancos	76.58	47	⇓eP	P	23 01 42.8	+1.3
	comp=Z,3µm,1.4s						
PBAR				epP	pP	23 03 51.4	+1.9
CHEFC	Chefchaouen	76.61	50	P	P	23 01 45.0	+3.1
PMRV	Marv??o	76.85	45	⇓iP	P	23 01 43.5	+0.5
	comp=Z,2µm,1.2s						
PMRV				epP	pP	23 03 51.1	0.0
PMRV				i S	S	23 10 43.1	+1.5
CEU	Ceuta	76.89	49	P	P	23 01 45.6	+2.4
CEU				S	S	23 10 46.5	+4.5
PCBR	Castelo Branco	76.96	45	⇓iP	P	23 01 44.4	+0.8
	comp=Z,4µm,1.2s						
PCBR				epP	pP	23 03 52.6	+0.9
PCBR				i S	S	23 10 43.3	+0.6
PVIS	Viseu	77.05	44	⇓iP	P	23 01 44.9	+0.8
	comp=Z,5µm,1.3s						
PVIS				epP	pP	23 03 54.1	+1.8
PVIS				i S	S	23 10 44.7	+1.0
MTE	Manteigas	77.15	45	⇓iP	P	23 01 45.6	+0.9
	comp=Z,5µm,1.1s						
MTE				epP	pP	23 03 55.3	+2.3
MTE				i S	S	23 10 46.0	+1.2
MTE	Manteigas	77.15	45	⇓P	P	23 01 45.6	+0.9
MTE	Manteigas	77.15	45	P	P	23 01 46.1	+1.4
MTE				IAmb	IAmb	23 01 49.6	
	comp=Z,3µm,0.9s						
LIJA	Lijar	77.25	48	P	P	23 01 48.0	+2.7
PGAV	Gavieira, Arco	77.34	43	⇓iP	P	23 01 46.4	+0.7
	comp=Z,4µm,1.4s						
PGAV				epP	pP	23 03 55.4	+1.4
PGAV				i S	S	23 10 47.9	+1.1
PCAB	Cabril	77.39	43	⇓iP	P	23 01 46.7	+0.8
	comp=Z,7µm,1.1s						
PCAB				epP	pP	23 03 55.9	+1.6
PCAB				eS	S	23 10 48.2	+1.0
POLO	Lamas de Olo	77.40	44	⇓iP	P	23 01 47.1	+1.1
	comp=Z,2µm,1.2s						
POLO				epP	pP	23 03 55.6	+1.2
POLO				eS	S	23 10 48.6	+1.1
PVRL	Vila Real	77.41	44	⇓iP	P	23 01 46.9	+0.9
	comp=Z,5µm,1.3s						
PVRL				epP	pP	23 03 56.6	+2.2
PVRL				eS	S	23 10 48.5	+1.0
AKLM	AKL	77.51	51	P	P	23 01 48.2	+1.4
MVO	Moncorvo	77.83	44	⇓iP	P	23 01 49.3	+1.0
	comp=Z,6µm,1.2s						
MVO				epP	pP	23 03 58.9	+2.0
MVO				i S	S	23 10 53.0	+1.1
EMAL	Malaga-Limoner	77.92	49	P	P	23 01 49.9	+1.2
EMAL				S	S	23 10 57.1	+4.3
NVL	N'lazarevskaya	78.19	160	eP	P	23 01 54.9	+5.3
NVL				pmax	pmax		
	comp=Z,7µm,1.3s						
PBRG	Braganca	78.30	43	⇓iP	P	23 01 51.9	+1.1
	comp=Z,4µm,1.3s						
PBRG				epP	pP	23 03 59.4	-0.2
SFJD	Kangerlussuaq	78.33	8	⇓iP	P	23 01 49.5	-0.8
SFJD				IAmb	IAmb	23 01 57.6	
	comp=Z,983nm,0.8s						
SFJD	Kangerlussuaq	78.33	8	⇓P	P	23 01 49.5	-0.8
SFJD	Kangerlussuaq	78.33	8	P	P	23 01 49.5	-0.8
SFJD				pP	pP	23 03 57.6	-1.5
GOG	Mont Gurugu	78.43	51	P	P	23 01 54.0	+2.3
JBK	JBK	78.44	52	P	P	23 01 53.8	+1.9
DY2G	Dye2	78.52	10	⇓iP	P	23 01 51.3	-0.3
DY2G				IAmb	IAmb	23 01 52.0	
	comp=Z,5µm,0.7s						
FIGM	Figuig	78.72	54	P	P	23 01 55.0	+1.7
TAF	Taforalt	78.73	51	P	P	23 01 55.1	+1.9
CHAS	Isla Isabel II	78.85	51	P	P	23 01 53.7	-0.1
CHAS				S	SKSac	23 11 12.0	+1.0
BBB	Bella Bella	78.89	328	⇑P	P	23 01 54.7	+1.1
PAB	San Pablo	79.05	46	P	P	23 01 55.8	+1.0
PAB				pmax	pmax		
	comp=Z,7µm,1.8s						
PAB	San Pablo	79.05	46	⇓P	P	23 01 56.1	+1.3
PAB	San Pablo	79.05	46	P	P	23 01 55.8	+1.0
PAB				IAmb	IAmb	23 01 58.2	
	comp=Z,7µm,1.8s						
PAB	San Pablo	79.05	46	P	P	23 01 55.9	+1.0
ESDC	Sonseca Array	79.37	46	P	P	23 01 57.7	+1.2
	comp=Z,1µm,1.0s,baz=250,slow=4.9,SNR=55						
ESDC				pP	pP	23 04 08.2	+2.4
	comp=Z,364nm,0.9s,baz=287,slow=1.1,SNR=7.1						
ESDC				PKKPbc	PKKPbc	23 20 40.4	-1.4
	comp=Z,4.4nm,0.6s,baz=41,slow=2.4,SNR=5.2						
ESDC				SKKP		23 23 03.6	
	comp=Z,16nm,1.1s,baz=44,slow=2.5,SNR=4.4						
ESDC				PKPPKP	P'P'df	23 28 30.9	-13
	comp=Z,6.7nm,0.9s,baz=57,slow=2.4,SNR=4.2						
ESDC	Sonseca Array	79.37	46	P	P	23 01 57.1	+0.6
ESDC				pP	pP	23 04 07.1	+1.3
ANGG	Ammassalik, Gr	79.49	13	⇓iP	P	23 01 55.8	-0.7
ANGG				IAmb	IAmb	23 01 58.5	
	comp=Z,1µm,0.8s						
ANGG	Ammassalik, Gr	79.49	13	P	P	23 01 55.7	-0.7
ANGG				pP	pP	23 04 04.4	-1.4
YKA	Yellowknife Ar	79.80	341	P	P	23 01 59.3	+1.2
YKA				S	S	23 11 09.1	-2.0
	comp=Z,19nm,0.9s,baz=114,slow=24,SNR=1.9						
YKA				PKKPbc	PKKPbc	23 20 39.2	-2.7
	comp=Z,6.6nm,0.3s,baz=359,slow=2.5,SNR=17						
QSPA	South Pole Qui	80.02	180	P	P	23 02 00.5	+1.1
	comp=Z,5µm,0.8s						
QSPA				pP	pP	23 04 10.9	+1.0
	comp=Z,427nm,0.7s,baz=199,slow=6.3,SNR=2.7						
QSPA				PKKPbc	PKKPbc	23 20 37.1	-4.9
	comp=Z,85nm,0.7s,baz=306,slow=1.7,SNR=11						
QSPA	South Pole Qui	80.02	180	P	P	23 01 59.7	+0.2
QSPA				IAmb	IAmb	23 02 05.0	
	comp=Z,6µm,0.8s						
QSPA					pP	23 04 09.8	-0.1
UCM	Universidad Co	80.12	46	P	P	23 02 00.9	+0.5
UCM				S	S	23 11 17.6	+2.1
OTSS	Djebel Tessala	80.14	51	P	P	23 02 00.0	-0.7
ILULI	Ilulissat	80.36	7	P	P	23 02 00.6	-0.3
ILULI				*PP	pP	23 04 10.1	-0.5
ILULI				pmax	pmax		
	comp=Z,5µm,1.0s						
ILULI	Ilulissat	80.36	7	⇓iP	P	23 02 00.3	-0.6
ILULI				IAmb	IAmb	23 02 00.9	
	comp=Z,2µm,0.7s						
ILULI	Ilulissat	80.36	7	P	P	23 02 00.6	-0.3
ILULI				IAmb	IAmb	23 02 01.9	
	comp=Z,5µm,1.0s						
ILULI				pP	pP	23 04 10.1	-0.5
USTO	Oran	80.48	51	P	P	23 02 04.0	+1.8
ODJA	Bouhanifia	80.65	52	P	P	23 01 57.0	-6.3
CART	Cartagena	80.77	49	P	P	23 02 02.8	-0.9
CART				S	S	23 11 19.9	-2.1
CART	Cartagena	80.77	49	P	P	23 02 03.3	-0.4
OJBR	Djebel Berber	81.12	51	P	P	23 02 06.0	+0.3
EKNA	AfricaArray -	81.34	84	⇑iP	P	23 02 08.9	+1.7
OJGS	Djebel Guires	81.40	52	P	P	23 02 09.0	+1.9
OKGL	Djebel Kef Gue	81.49	51	P	P	23 02 08.0	+0.5
DIB	Dawson Inlet,	81.70	328	P	P	23 02 08.2	+0.2
DIB				pP	pP	23 04 16.9	-1.4
H02S1	DAWSON INLET T	81.70	328	P	P	23 02 08.7	+0.7
	SNR=864						
H02N1	VAN INLET T-PH	81.75	328	P	P	23 02 09.2	+0.7
	SNR=488						
EANR	'Ain N'Sour	81.82	51	P	P	23 02 13.0	+3.8
IGLA	Glengowla, Co	81.98	32	eP	P	23 02 09.8	+0.3
ICESG	Greenland Ices	82.02	11	⇓iP	P	23 02 09.6	-0.2
ICESG				IAmb	IAmb	23 02 12.4	
	comp=Z,4µm,0.7s						
ECHA	Ech Chlef	82.08	51	P	P	23 02 10.0	-0.4
NUUG	Nuugaatsiaq	82.34	6	⇓iP	P	23 02 10.7	-0.2
NUUG				IAmb	IAmb	23 02 14.3	
	comp=Z,494nm,0.7s						
CCA1	Carnmenellis	82.81	36	eP	P	23 02 14.0	+0.3
CCA1				IAmb	IAmb	23 02 15.9	
	comp=Z,7µm,0.9s						
IWEX	Carrickbyrne,	82.89	34	eP	P	23 02 14.0	0.0
CRAG	Craig	83.13	330	P	P	23 02 16.0	+0.8
	baz=119						
CRAG				S	S	23 11 45.1	+0.6
	baz=119						
UPNV	Upernavik	83.29	4	⇓iP	P	23 02 15.2	-0.4
UPNV				IAmb	IAmb	23 02 23.3	
	comp=Z,707nm,0.8s						
WRGLY	Wrigley	83.29	339	P	P	23 02 16.3	+0.5
	baz=128						
WRGLY				S	S	23 11 45.2	-0.7
	baz=128						
BORG	Borgarnes	83.38	19	P	P	23 02 17.6	+1.3
	comp=Z,3µm,0.9s,baz=227,slow=3.7,SNR=6.5						
BORG				pP	pP	23 04 27.7	+0.4
	comp=Z,1µm,0.9s,baz=227,slow=5.9,SNR=12						
BORG				PKKPbc	PKKPbc	23 20 32.5	-1.3
	comp=Z,39nm,0.8s,baz=194,slow=4.1,SNR=4.8						
BORG	Borgarnes	83.38	19	P	P	23 02 17.9	+1.6
BORG				IAmb	IAmb	23 02 19.7	
	comp=Z,5µm,1.0s						
BORG					pP	23 04 27.3	0.0
DSB	Dublin	83.49	33	P	P	23 02 16.9	-0.2
DSB				pP	pP	23 04 27.8	-0.4
WTLY	Watson Lake, Y	83.54	335	P	P	23 02 18.2	+1.0
	baz=123						
HTL	Hartland	83.58	36	eP	P	23 02 17.6	+0.1
HTL				IAmb	IAmb	23 02 19.5	
	comp=Z,2µm,1.0s						
DYA	Yadsworthy	83.67	36	eP	P	23 02 17.8	-0.2
DYA				IAmb	IAmb	23 02 19.7	
	comp=Z,3µm,1.3s						
RSBS	Rosebush, Pemb	83.83	35	eP	P	23 02 18.5	-0.3
RSBS				IAmb	IAmb	23 02 19.5	
	comp=Z,3µm,1.4s						
ILTH	Belurgan, Co L	83.86	32	eP	P	23 02 18.7	-0.2
TGTN	Hyland Airport	84.10	336	P	P	23 02 21.5	+1.5
	baz=124						
TGTN				S	S	23 11 55.4	+1.4
	baz=124						
GMM	Mts of Mourne	84.16	32	eP	P	23 02 20.1	-0.2
JSA	Saint Aubin	84.22	38	eP	P	23 02 20.8	0.0
JSA				IAmb	IAmb	23 02 21.8	
	comp=Z,2µm,0.8s						
CLGH	Cloghs, Cushen	84.45	32	eP	P	23 02 21.2	-0.6
CLGH				IAmb	IAmb	23 02 22.6	
	comp=Z,1µm,1.1s						
YRC	Rhoscolyn	84.47	34	eP	P	23 02 21.2	-0.7
WIN	Windhoek	84.54	112	P	P	23 02 22.5	-0.7
WIN				pmax	pmax		
	comp=Z,424nm,0.7s						
WIN	Windhoek	84.54	112	P	P	23 02 22.5	-0.7
WIN	Windhoek	84.54	112	i P	P	23 02 17.3	-5.9
WPS	Cemaes, Angles	84.58	34	eP	P	23 02 21.4	-0.9
WLF1	Llynfaes	84.59	34	eP	P	23 02 22.0	-0.4
YLL	Llanberis	84.65	34	eP	P	23 02 22.3	-0.4
WME	Myndd Eilian	84.68	34	eP	P	23 02 21.9	-0.9
WIM	Isle of Man	84.80	33	eP	P	23 02 23.2	-0.2
LLW	Llanuwychllyn	84.81	34	eP	P	23 02 22.9	-0.6
MCH1	Michaelchurch	84.84	35	eP	P	23 02 23.1	-0.6
MCH1				IAmb	IAmb	23 02 24.2	
	comp=Z,1µm,0.9s						
IOMK	Kirk Michael	84.90	33	eP	P	23 02 23.9	-0.1
IOMK				IAmb	IAmb	23 02 24.9	
	comp=Z,4µm,0.9s						
OLDB	Oldbury-Upon-S	84.96	36	eP	P	23 02 23.6	-0.6
SIT	Sitka	84.96	330	P	P	23 02 24.8	+0.7
	baz=117						
SIT				S	S	23 12 03.1	+0.8
	baz=117						
FOEL	Foel Wylfa	85.08	34	eP	P	23 02 24.4	-0.5
FOEL				IAmb	IAmb	23 02 25.4	
	comp=Z,1µm,0.9s						
GAL1	Galloway	85.08	32	eP	P	23 02 24.4	-0.3
GAL1				IAmb	IAmb	23 02 25.4	
	comp=Z,1µm,0.9s						
RAR	Rarotonga	85.18	249	P	P	23 02 27.6	+1.5
	comp=Z,442nm,0.9s,baz=190,slow=2.3,SNR=21						
RAR				pP	pP	23 04 40.8	+2.9
	comp=Z,218nm,1.3s,baz=166,slow=3.9,SNR=3.4						
RAR				PKKPbc	PKKPbc	23 20 27.9	+0.3
	comp=Z,28nm,0.7s,baz=89,slow=19,SNR=2.3						
RAR	Rarotonga	85.18	249	⇓P	P	23 02 27.9	+1.8
RAR	Rarotonga	85.18	249	P	P	23 02 26.8	+0.7
RAR				pP	pP	23 04 39.3	+1.3
SUMG	Summit	85.21	9	P	P	23 02 26.2	+0.6
SUMG				*PP	pP	23 04 37.2	-0.2
SUMG				pmax	pmax		
	comp=Z,5µm,0.8s						
SUMG	Summit	85.21	9	⇓iP	P	23 02 26.1	+0.6
SUMG				IAmb	IAmb	23 02 37.3	
	comp=Z,3µm,0.7s						
SUMG	Summit	85.21	9	P	P	23 02 26.2	+0.6
SUMG				IAmb	IAmb	23 02 37.8	
	comp=Z,5µm,0.8s						
SUMG				pP	pP	23 04 37.2	-0.2
STRD	Stroud	85.22	36	eP	P	23 02 25.0	-0.5
STRD				IAmb	IAmb	23 02 26.1	
	comp=Z,3µm,1.1s						
P33M	Teslin, Yukon	85.31	334	P	P	23 02 26.6	+0.7
	baz=120						
P33M				S	S	23 12 05.5	-0.1
	baz=120						
LAWE	Loch Awe, Argy	85.33	31	eP	P	23 02 25.3	-0.6
LAWE				IAmb	IAmb	23 02 26.4	
	comp=Z,2µm,1.3s						
SWN1	Swindon	85.33	36	eP	P	23 02 25.6	-0.4
SWN1				IAmb	IAmb	23 02 27.3	
	comp=Z,7µm,1.5s						
MAHO	Mahon	85.41	48	P	P	23 02 25.9	-0.8
MAHO				S	S	23 12 08.3	+1.0
MAHO	Mahon	85.41	48	⇓P	P	23 02 27.1	+0.5
NEWG	New Galloway	85.44	32	eP	P	23 02 26.1	-0.4
NEWG				IAmb	IAmb	23 02 27.7	
	comp=Z,2µm,0.9s						
LEWI	Lewis, Hebride	85.46	29	eP	P	23 02 26.3	-0.2
TSUM	Tsumeb	85.50	109	⇓P	P	23 02 28.3	+0.5
TSUM				⇓P	PcP	23 02 28.5	-1.1
TSUM	Tsumeb	85.50	109	P	P	23 02 27.4	-0.4
TSUM				IAmb	IAmb	23 02 31.5	
	comp=Z,4µm,1.4s						
TSUM				pP	pP	23 04 40.1	+0.3
TSUM	Tsumeb	85.50	109	i P	P	23 02 24.7	-3.1
PGBU	Glenifferbraes	85.60	31	eP	P	23 02 27.0	-0.2
KPL	Plockton	85.68	30	eP	P	23 02 27.1	-0.4
DFRA	Djebel Bou Aff	85.68	52	P	P	23 02 29.5	+1.3
STNC	Stoke	85.71	34	eP	P	23 02 28.0	+0.2
STNC				IAmb	IAmb	23 02 29.5	
	comp=Z,4µm,0.9s						
KESW	Keswick, Cumbr	85.82	33	eP	P	23 02 28.2	-0.1
KESW				IAmb	IAmb	23 02 29.7	
	comp=Z,4µm,0.9s						
MMPY	Sheldon Lake,	85.88	336	P	P	23 02 29.5	+1.0
	baz=121						
MMPY				S	S	23 12 11.3	+0.3
	baz=121						
RES	Resolute Bay	85.91	354	P	P	23 02 29.1	+0.8

RES				pmax	pmax		
	comp=Z,2µm,1.1s						
RES	Resolute Bay	85.91	354	⇑P	P	23 02 28.9	+0.5
RES	Resolute Bay	85.91	354	P	P	23 02 29.1	+0.8
RES				IAmb	IAmb	23 02 29.9	
	comp=Z,2µm,1.1s						
KAC	Achnashellach	85.92	30	eP	P	23 02 28.2	-0.6
ESK	Eskdalemuir	86.06	32	eP	P	23 02 28.8	-0.7
ESK	Eskdalemuir	86.06	32	⇓P	P	23 02 29.0	-0.4
ESK	Eskdalemuir	86.06	32	P	P	23 02 29.2	-0.2
ESK				pP	pP	23 04 41.2	-0.4
SKAG	Skagway	86.06	333	P	P	23 02 30.4	+1.1
	baz=117						
SKAG				S	S	23 12 13.5	+0.8
	baz=117						
SKAG	Skagway	86.06	333	⇑P	P	23 02 30.6	+1.2
CASM	Ain Smara	86.08	52	P	P	23 02 30.7	+0.6
CWF	Charnwood Fore	86.08	35	eP	P	23 02 29.1	-0.4
CWF				IAmb	IAmb	23 02 30.8	
	comp=Z,2µm,1.1s						
INVG	Invergeldie, C	86.08	31	eP	P	23 02 28.4	-1.1
INVG				IAmb	IAmb	23 02 30.1	
	comp=Z,1µm,1.0s						
EKA	Eskdalemuir Ar	86.09	32	P	P	23 02 29.0	-0.5
	comp=Z,1µm,0.8s,baz=239,slow=5.3,SNR=80						
EKA				pP	pP	23 04 41.6	-0.2
	comp=Z,255nm,0.9s,baz=242,slow=4.6,SNR=6.2						
LBWR	Ladybower, Pea	86.10	34	eP	P	23 02 29.5	-0.2
LBWR				IAmb	IAmb	23 02 31.6	
	comp=Z,4µm,0.9s						
SUR	Sutherland	86.26	122	⇓P	P	23 02 31.8	+0.5
SUR				⇑P	P	23 02 32.1	+0.9
SUR	Sutherland	86.26	122	P	P	23 02 31.6	+0.3
SUR				pP	pP	23 04 44.4	+0.8
SUR	Sutherland	86.26	122	i P	P	23 02 31.2	-0.1
CKFL	Kef-Lekhel	86.30	52	P	P	23 02 30.7	-0.5
EDI	Edinburgh	86.31	32	eP	P	23 02 29.9	-0.7
EBL	Broad Law	86.33	32	eP	P	23 02 29.3	-1.4
HMNX	Herstmonceux	86.34	37	eP	P	23 02 30.7	-0.1
HMNX				IAmb	IAmb	23 02 32.5	
	comp=Z,5µm,0.9s						
MDO	Dochfour	86.35	30	eP	P	23 02 30.2	-0.5
HPK	Haverah Park	86.37	34	eP	P	23 02 30.9	0.0
HPK				IAmb	IAmb	23 02 32.3	
	comp=Z,3µm,0.8s						
WHY	Whitehorse	86.42	334	P	P	23 02 31.8	+0.7
	baz=118						
WHY				S	S	23 12 14.9	-1.4
	baz=118						
WHY	Whitehorse	86.42	334	⇓P	P	23 02 31.9	+0.7
TULEG	Thule	86.50	1	⇓iP	P	23 02 31.7	+0.6
TULEG				IAmb	IAmb	23 02 32.3	
	comp=Z,4µm,0.7s						
TULEG	Thule	86.50	1	⇑P	P	23 02 31.6	+0.6
TULEG	Thule	86.50	1	P	P	23 02 31.7	+0.6
EDMD	Edmundbyers	86.52	33	eP	P	23 02 31.0	-0.6
FARO	Faro, Yukon	86.52	335	P	P	23 02 32.5	+1.0
	baz=119						
FARO				S	S	23 12 16.2	-0.8
	baz=119						
NEPA	Kaukuwa	86.55	107	i P	P	23 02 31.8	-1.0
CLF	Chambon-Foret	86.56	40	⇑P	P	23 02 32.3	+0.4
CLF				⇓p	pP	23 04 45.7	+1.3
CLF	Chambon-Foret	86.56	40	P	P	23 02 32.1	+0.2
CLF				pP	pP	23 04 44.5	+0.1
CLF				IAmb	IAmb	23 04 47.5	
	comp=Z,6µm,1.2s						
SBA	Scott Base	86.59	190	P	P	23 02 32.6	+1.0
SBA				pP	pP	23 04 46.3	+1.8
EDU	Dundee	86.66	31	eP	P	23 02 31.8	-0.4
XMAS	Kiritimati	86.76	273	⇑P	P	23 02 35.5	+1.8
XMAS	Kiritimati	86.76	273	P	P	23 02 33.9	+0.2
XMAS				pP	pP	23 04 46.6	+0.4
LMK	Market Rasen	86.89	34	eP	P	23 02 33.3	-0.1
LMK				IAmb	IAmb	23 02 34.9	
	comp=Z,8µm,1.1s						
ELSH	Elham, Standar	86.92	37	eP	P	23 02 33.5	-0.1
M31M	Drury Creek, Y	86.94	335	P	P	23 02 34.5	+1.0
	baz=118						
M31M				S	S	23 12 19.8	-1.1
	baz=118						
MCD	Coleburn Disti	86.96	30	eP	P	23 02 32.7	-0.9
SCO	Scoresbysund	87.01	15	⇓iP	P	23 02 34.6	+1.1
SCO				IAmb	IAmb	23 02 35.7	
	comp=Z,2µm,0.8s						
SCO	Scoresbysund	87.01	15	⇓P	P	23 02 34.6	+1.1
SCO	Scoresbysund	87.01	15	P	P	23 02 34.5	+1.0
SCO				IAmb	IAmb	23 02 36.2	
	comp=Z,4µm,0.9s						
SCO				pP	pP	23 04 45.0	-1.2
BIGH	Upper Bighouse	87.01	29	eP	P	23 02 33.8	0.0
BIGH				IAmb	IAmb	23 02 35.3	
	comp=Z,5µm,0.9s						
DRUM	Mains of Drumt	87.07	31	eP	P	23 02 33.9	-0.2
DRUM				IAmb	IAmb	23 02 39.0	
	comp=Z,1µm,0.8s						
ELMS	Elmsett, Ipswi	87.16	36	eP	P	23 02 34.3	-0.3
WACR	West Acre	87.17	35	eP	P	23 02 33.9	-0.7
WACR				IAmb	IAmb	23 02 37.3	
	comp=Z,7µm,0.9s						
N31M	Braeburn, Yuko	87.19	334	P	P	23 02 35.8	+1.1
	baz=117						
N31M				S	S	23 12 22.0	-1.2
	baz=117						
SSB	Saint Sauveur	87.19	43	⇓P	P	23 02 35.3	+0.2
SSB	Saint Sauveur	87.19	43	P	P	23 02 35.5	+0.4
SSB				pP	pP	23 04 48.5	+0.7
RUSF	Rustrel	87.45	45	⇓P	P	23 02 39.4	+3.1
VNDA	Vanda	87.64	190	P	P	23 02 38.3	+1.8
	comp=Z,624nm,0.8s,baz=129,slow=4.6,SNR=23						
VNDA				pP	pP	23 04 52.5	+3.0
	comp=Z,358nm,1.0s,baz=152,slow=4.6,SNR=5.9						
VNDA				PKKPbc	PKKPdf	23 20 19.6	+3.8
	comp=Z,28nm,0.6s,baz=304,slow=4.2,SNR=13						
VNDA				PKPPKP	P'P'df	23 28 15.6	-12
	comp=Z,18nm,0.9s,baz=295,slow=3.3,SNR=7.1						
VNDA	Vanda	87.64	190	P	P	23 02 38.2	+1.6
VNDA				pP	pP	23 04 51.4	+1.9
HYT	Haines Junctio	87.65	333	P	P	23 02 38.3	+1.3
	baz=115						
HYT				S	S	23 12 26.9	-0.8
	baz=115						
NPOC	North of Pu‘u	87.74	290	P	P	23 02 38.6	+0.4
NPOC				pP	pP	23 04 50.5	-0.6
NPOC				IAmb	IAmb	23 04 59.1	
	comp=Z,3µm,1.2s						
PUH	Pauahi	87.84	290	P	P	23 02 39.0	+0.3
SYO	Syowa Base	87.86	160	⇓iP	P	23 02 37.8	+0.1
SYO	Syowa Base	87.86	160	⇑ipP	pP	23 04 50.8	+0.2
KKO	Keanakako`i	87.89	290	P	P	23 02 39.9	+0.9
HLP	Hilina Pali	87.91	290	P	P	23 02 39.7	+0.7
HLP				IAmb	IAmb	23 05 12.6	
	comp=Z,3µm,1.4s						
PNL	Peninsula	88.02	332	P	P	23 02 39.4	+0.8
	baz=114						
AIN	Ainahou	88.06	290	P	P	23 02 40.8	+0.9
AIN				pP	pP	23 04 52.5	-0.4
YUK6	Outpost Mounta	88.08	333	P	P	23 02 40.4	+1.3
	baz=115						
YUK6				S	S	23 12 29.4	-2.5
	baz=115						
M30M	Minto, Yukon	88.11	335	P	P	23 02 39.5	+0.6
	baz=116						
M30M				S	S	23 12 27.6	-4.0
	baz=116						
NEEM	North Greenlan	88.15	4	⇓iP	P	23 02 40.0	+0.8
NEEM				IAmb	IAmb	23 02 44.7	
	comp=Z,7µm,0.8s						
NEEM	North Greenlan	88.15	4	⇓P	P	23 02 40.0	+0.8
KEST	Kesra	88.19	53	P	P	23 02 40.4	+0.4
	comp=Z,974nm,0.8s,baz=160,slow=3.8,SNR=21						
KEST				pP	pP	23 04 55.5	+2.5
	comp=Z,357nm,0.9s,baz=86,slow=3.4,SNR=3.7						
KEST				PKKPbc	PKKPbc	23 20 21.7	+0.5
	comp=Z,72nm,0.9s,baz=324,slow=4.1,SNR=8.5						
KEST				PKPPKP	P'P'df	23 28 24.9	-3.1
	comp=Z,62nm,1.2s,baz=206,slow=3.0,SNR=3.8						
KEST	Kesra	88.19	53	P	P	23 02 40.2	+0.3
MLOA	Mauna Loa Obse	88.20	290	P	P	23 02 41.5	+0.7
POHA	Pohakuloa	88.20	290	⇑P	P	23 02 41.5	+0.9
YUK4	Talbot Arm	88.37	334	P	P	23 02 41.5	+1.1
	baz=114						
YUK4				S	S	23 12 33.2	-1.3
	baz=114						
HPAH	Hawaii Prepara	88.41	291	P	P	23 02 42.5	+1.1
HPAH				IAmb	IAmb	23 02 45.6	
	comp=Z,2µm,1.4s						
BNI	Bardonecchia	88.58	44	P	P	23 02 42.2	+0.5
BNI				pmax	pmax		
	comp=Z,530nm,0.9s						
BNI	Bardonecchia	88.58	44	⇓P	P	23 02 42.5	+0.8
BNI	Bardonecchia	88.58	44	P	P	23 02 42.2	+0.5
PINM	Pinnacle	88.59	332	P	P	23 02 42.2	+1.0
	baz=113						
PINM				S	S	23 12 34.2	-2.0
	baz=113						
SNF	Seneffe	88.60	38	dP	P	23 02 41.2	-0.1
	comp=Z,2µm,1.0s						
DOU	Dourbes	88.66	39	κP	P	23 02 41.6	-0.1
	comp=Z,2µm,1.0s						
UCC	Uccle	88.73	38	κP	P	23 02 41.7	-0.3
	comp=Z,354nm,1.0s						
UCC	Uccle	88.73	38	P	P	23 02 42.3	+0.3
UCC				pP	pP	23 04 55.2	-0.1
BMRD	Maredsous	88.83	38	κP	P	23 02 42.4	-0.1
	comp=Z,2µm,1.1s						
LRW	Lerwick	88.96	28	eP	P	23 02 42.4	-0.4
LRW	Lerwick	88.96	28	⇓P	P	23 02 43.3	+0.5
BGES	Gesves	89.05	38	κP	P	23 02 43.3	-0.2
	comp=Z,1µm,1.0s						
HLK	Haleakala	89.06	291	P	P	23 02 44.9	+0.4
HLK				IAmb	IAmb	23 02 48.5	
	comp=Z,2µm,1.2s						
RCHB	Rochefort	89.07	39	dP	P	23 02 43.4	-0.2
	comp=Z,1µm,1.1s						
VSL	Villasalto	89.11	50	⇓P	P	23 02 44.4	+0.4
VSL	Villasalto	89.11	50	P	P	23 02 44.5	+0.4
VSL				IAmb	IAmb	23 02 47.7	
	comp=Z,2µm,1.0s						
VSL				pP	pP	23 04 58.1	+0.7
BCLA	Clavier	89.19	38	bP	P	23 02 44.2	0.0
	comp=Z,636nm,0.9s						
A36M	Sachs Harbour	89.22	345	P	P	23 02 44.0	+0.2
	baz=127						
A36M				S	S	23 12 38.2	-3.0
	baz=127						
A36M	Sachs Harbour	89.22	345	P	P	23 02 44.2	+0.4
A36M				pP	pP	23 04 55.8	-1.4
YUK3	Moose Creek	89.34	334	P	P	23 02 45.6	+0.7
	baz=113						
YUK3				S	S	23 12 39.9	-3.4
	baz=113						
SENIN	Lac Senin/Sane	89.35	43	P	P	23 02 44.6	-0.7
MESA	MESA	89.41	332	P	P	23 02 45.9	+0.7
	baz=112						
MESA				S	S	23 12 41.8	-2.1
	baz=112						
CTG	Chitna Glacier	89.42	333	P	P	23 02 45.9	+0.8
	baz=112						
CTG				S	S	23 12 40.5	-3.3
	baz=112						
MONC	Moncucco Torin	89.44	44	⇓P	P	23 02 45.8	+0.3
J29M	Klondike Camp	89.49	336	P	P	23 02 46.0	+0.7
	baz=115						
J29M				S	S	23 12 40.6	-3.6
	baz=115						
WLF	Walferdange	89.50	39	κP	P	23 02 45.8	+0.1
	comp=Z,1µm,1.2s						
WLF	Walferdange	89.50	39	P	P	23 02 45.8	+0.1
WLF				*PP	pP	23 04 59.9	+0.8
WLF				pmax	pmax		
	comp=Z,3µm,1.1s						
WLF	Walferdange	89.50	39	eP	P	23 02 45.3	-0.4
	comp=Z,4µm,1.2s,baz=258,slow=4.7						
WLF				epP	pP	23 04 57.7	-1.4
WLF				eSKSac	SKSac	23 12 17.0	-0.3
	baz=257,slow=6.0						
WLF	Walferdange	89.50	39	⇓P	P	23 02 45.8	+0.1
WLF	Walferdange	89.50	39	P	P	23 02 45.8	+0.1
WLF				IAmb	IAmb	23 02 47.7	
	comp=Z,3µm,1.1s						
WLF				pP	pP	23 04 59.9	+0.8
BEBN	Eben Emael	89.53	38	dP	P	23 02 45.6	-0.1
	comp=Z,1µm,1.0s						
PGF	Pioggiola	89.56	47	P	P	23 02 46.4	+0.2
INK	Inuvik	89.57	341	P	P	23 02 45.9	+0.5
	comp=Z,3µm,0.8s,baz=90,slow=4.9,SNR=73						
INK	Inuvik	89.57	341	P	P	23 02 45.7	+0.2
INK				*PP	pP	23 04 58.3	-0.7
INK				pmax	pmax		
	comp=Z,5µm,1.0s						
INK	Inuvik	89.57	341	P	P	23 02 46.0	+0.5
	baz=119						
INK				S	S	23 12 39.8	-4.7
	baz=119						
INK	Inuvik	89.57	341	⇓P	P	23 02 46.0	+0.5
INK	Inuvik	89.57	341	P	P	23 02 45.7	+0.2
INK				pP	pP	23 04 58.3	-0.7
BHOU	Houvegnez	89.61	39	κP	P	23 02 46.1	0.0
	comp=Z,824nm,1.1s						
MEM	Membach	89.68	38	κP	P	23 02 46.3	-0.1
	comp=Z,518nm,1.0s						
BTNL	Ternell	89.75	38	κP	P	23 02 46.6	-0.2
	comp=Z,600nm,1.0s						
ECH	Echery	89.75	41	P	P	23 02 46.7	-0.2
ECH				*PP	pP	23 05 00.4	0.0
ECH				pmax	pmax		
	comp=Z,2µm,1.2s						
ECH	Echery	89.75	41	⇓P	P	23 02 46.5	-0.3
ECH	Echery	89.75	41	P	P	23 02 46.7	-0.2
ECH				IAmb	IAmb	23 02 48.6	
	comp=Z,2µm,1.2s						
ECH				pP	pP	23 05 00.3	0.0
EPYK	Eagle Plains	89.76	338	P	P	23 02 46.9	+0.4
	baz=116						
EPYK				S	S	23 12 41.8	-4.7
	baz=116						
BVCY	Beaver Creek	89.76	334	P	P	23 02 47.4	+0.8
	baz=112						
BVCY				S	S	23 12 43.7	-2.9
	baz=112						
DAWY	Dawson	89.80	336	P	P	23 02 47.1	+0.3
	baz=114						
DAWY				S	S	23 12 43.9	-3.0
	baz=114						
DAWY	Dawson	89.80	336	P	P	23 02 47.0	+0.3
DAWY				IAmb	IAmb	23 02 47.9	
	comp=Z,1µm,0.8s						
I29M	Ogilvie Camp,	89.91	337	P	P	23 02 47.4	+0.2
	baz=115						
I29M				S	S	23 12 43.3	-4.5
	baz=115						
DBG	Daneborg	89.93	12	⇓iP	P	23 02 47.4	+0.3
DBG				IAmb	IAmb	23 02 53.4	
	comp=Z,280nm,0.6s						
DBG	Daneborg	89.93	12	⇓P	P	23 02 47.7	+0.6
BGLC	Bering Glacier	90.01	332	P	P	23 02 49.2	+1.5
	baz=110						
BGLC				S	S	23 12 44.6	-4.2
	baz=110						
CRQE	Cirque	90.14	332	P	P	23 02 48.9	+0.4
	baz=110						
CRQE				S	S	23 12 44.9	-5.4
	baz=110						
SOE	Somerset East	90.14	123	i P	P	23 02 46.4	-2.8
M27K	Edge Creek, AK	90.18	334	P	P	23 02 49.0	+0.4
	baz=112						
M27K				S	S	23 12 46.5	-4.1
	baz=112						
SUCK	Suckling Hills	90.22	331	P	P	23 02 49.7	+0.9
SUCK				IAmb	IAmb	23 02 51.1	
	comp=Z,1µm,0.8s						
AHRW	Bad Neuenahr-A	90.32	39	eP	P	23 02 49.2	-0.2
	comp=Z,3µm,1.3s,baz=258,slow=4.7						
AHRW				epP	pP	23 05 01.8	-1.2
AHRW				eSKSac	SKSac	23 12 23.6	+1.8
	baz=257,slow=6.0						
MCARA	McCarthy VSAT	90.33	333	P	P	23 02 50.0	+0.8
	baz=110						
MCARA				S	S	23 12 47.2	-4.5
	baz=110						
MSSA	Maissana	90.35	45	P	P	23 02 49.1	-0.7
EUNU	Eureka	90.38	357	P	P	23 02 50.1	+0.9
BCAR	Beaver Creek A	90.40	335	P	P	23 02 50.4	+0.9
BCAR				pP	pP	23 05 02.3	-0.9
BOB	Bobbio (Coli)	90.41	45	⇑P	P	23 02 50.4	+0.3
L27K	Beaver Creek,	90.42	335	P	P	23 02 50.0	+0.4
	baz=112						
L27K				S	S	23 12 48.4	-4.1
	baz=112						
VRDI	Verde Repeater	90.47	333	P	P	23 02 50.3	+0.2
VRDI				IAmb	IAmb	23 02 51.6	
	comp=Z,1µm,0.8s						
KAIM	Kayak Island	90.48	331	P	P	23 02 50.2	+0.3
	baz=109						
KAIM				S	S	23 12 51.4	-1.6
	baz=109						
KAIM	Kayak Island	90.48	331	P	P	23 02 50.7	+0.8
KAIM				IAmb	IAmb	23 02 52.5	
	comp=Z,2µm,0.8s						
WMR	Waimanalo Ridg	90.48	291	P	P	23 02 51.7	+0.9
BFO	Black Forest	90.53	41	P	P	23 02 50.1	-0.4
BFO				pmax	pmax		
	comp=Z,3µm,2.2s						
BFO	Black Forest	90.53	41	eP	P	23 02 49.6	-0.9
	comp=Z,763nm,1.3s,baz=258,slow=4.7						
BFO				epP	pP	23 05 02.8	-1.3
BFO	Black Forest	90.53	41	P	P	23 02 50.0	-0.5
BFO				P	PcP	23 02 50.7	-0.4
BFO	Black Forest	90.53	41	P	P	23 02 50.1	-0.4
BFO				IAmb	IAmb	23 03 03.3	
	comp=Z,3µm,2.2s						
BUG	Bochum--Univer	90.67	38	eP	P	23 02 50.5	-0.5
	comp=Z,2µm,1.2s,baz=258,slow=4.7						
BUG				epP	pP	23 05 03.7	-0.9
M26K	Nabesna, AK	90.68	334	P	P	23 02 50.8	0.0
	baz=110						
M26K				S	S	23 12 49.8	-5.0
	baz=110						
BOSA	Boshof	90.73	119	P	P	23 02 52.5	+0.4
	comp=Z,816nm,1.0s,baz=260,slow=3.5,SNR=14						
BOSA				PKKPbc	PKKPbc	23 20 14.8	0.0
	comp=Z,155nm,0.6s,baz=164,slow=1.7,SNR=46						
BOSA				PKPPKP	P'P'df	23 28 19.1	-5.4
	comp=Z,5.6nm,0.8s,baz=41,slow=4.8,SNR=3.8						
BOSA	Boshof	90.73	119	⇓P	P	23 02 52.0	-0.1
BOSA	Boshof	90.73	119	P	P	23 02 51.7	-0.3
BOSA				IAmb	IAmb	23 02 53.6	
	comp=Z,2µm,1.4s						
BOSA	Boshof	90.73	119	i P	P	23 02 51.1	-0.9
HON	Honolulu	90.77	291	P	P	23 02 52.8	+0.7
HON				pmax	pmax		
	comp=Z,1µm,0.9s						
HON	Honolulu	90.77	291	P	P	23 02 52.8	+0.7
HON				IAmb	IAmb	23 02 56.1	
	comp=Z,1µm,0.9s						
KIP	Kipapa	90.80	291	P	P	23 02 52.7	+0.5
KIP				pmax	pmax		
	comp=Z,1µm,1.0s						
KIP	Kipapa	90.80	291	P	P	23 02 52.7	+0.5
KIP				IAmb	IAmb	23 02 56.2	
	comp=Z,1µm,0.9s						
BMRM	Bremner River	90.91	332	P	P	23 02 51.6	-0.3
	baz=109						
BMRM				S	S	23 12 50.1	-6.9
	baz=109						
VLC	Villacollemand	90.92	45	⇓P	P	23 02 51.5	-0.9
VLC	Villacollemand	90.92	45	P	P	23 02 52.0	-0.3
JMIC	Jan Mayen	90.93	17	P	P	23 02 52.6	+0.9
	comp=Z,221nm,0.3s,baz=120,slow=5.6,SNR=6.8						
JMIC	Jan Mayen	90.93	17	⇓eP	P	23 02 53.1	+1.4
JMIC				IVmB_BB		23 02 55.1	
	comp=Z,26µm,3.0s						
JMIC				eSKSac	SKSac	23 12 22.6	-1.9
JMIC				eSS	SS	23 19 15.8	-4.1
PRMA	PARMA	91.01	45	P	P	23 02 52.3	-0.4
L26K	Log Cabin Wild	91.05	334	P	P	23 02 52.6	+0.1
	baz=110						
L26K				S	S	23 12 51.8	-6.2
	baz=110						
TNS	Taunus Mts	91.08	39	eP	P	23 02 52.7	-0.3
	comp=Z,1µm,1.0s,baz=258,slow=4.7						
TNS				eSKSac	SKSac	23 12 27.4	+1.1
	baz=257,slow=6.0						
N25K	Chitina, Valde	91.12	333	P	P	23 02 53.0	0.0
	baz=109						
N25K				S	S	23 12 52.7	-6.1
	baz=109						
DAVOX	Davos/Dischmat	91.18	43	P	P	23 02 54.5	+0.7
	comp=Z,786nm,0.8s,baz=257,slow=4.4,SNR=20						
DAVOX				pP	pP	23 05 08.2	+0.8
	comp=Z,338nm,0.9s,baz=261,slow=6.9,SNR=6.4						
DAVOX				S	SKSac	23 12 27.5	+0.1
	comp=Z,28nm,0.7s,baz=284,slow=17,SNR=2.3						
DAVOX				PKKPbc	PKKPdf	23 20 09.6	-1.0
	comp=Z,13nm,0.4s,baz=281,slow=5.2,SNR=2.5						
IBBN	Ibbenburen	91.19	37	eP	P	23 02 53.0	-0.3
	comp=Z,2µm,1.2s,baz=258,slow=4.7						
IBBN				epP	pP	23 05 06.6	-0.5
IBBN	Ibbenburen	91.19	37	⇓P	P	23 02 53.5	+0.2
STU	Stuttgart	91.20	41	P	P	23 02 53.3	-0.2
STU				pmax	pmax		
	comp=Z,919nm,1.0s						
STU	Stuttgart	91.20	41	eP	P	23 02 52.9	-0.6
	comp=Z,3µm,1.1s,baz=258,slow=4.7						
STU	Stuttgart	91.20	41	P	P	23 02 53.3	-0.2
Q23K	Middleton Isla	91.25	330	P	P	23 02 53.0	-0.4
	baz=108						
DAVA	Damuels	91.30	42	eP	P	23 02 53.7	-0.5
	comp=Z,1µm,1.1s						
DAVA				eP	pP	23 05 07.1	-0.9
	comp=Z,469nm,1.1s						
DAVA				eS	SKKPbc	23 23 00.9	+5.1
	comp=Z,249nm,1.1s						
DAVA				eP	P'P'df	23 28 16.5	-5.0
	comp=Z,183nm,1.4s						
KASTN	Kahler Asten	91.31	38	eP	P	23 02 53.5	-0.5
	comp=Z,1µm,1.5s,baz=258,slow=4.7						
KASTN				epP	pP	23 05 06.7	-1.0
EYAK	Cordova Ski Ar	91.31	332	P	P	23 02 53.6	-0.1
	baz=108						
EYAK				S	S	23 12 54.1	-6.2
	baz=108						
SALO	Salr	91.35	44	⇓P	P	23 02 54.0	-0.4
SALO	Salr	91.35	44	P	P	23 02 53.9	-0.4
ZCCA	Zocca	91.38	45	P	P	23 02 55.1	+0.6
ZCCA				IAmb	IAmb	23 03 02.2	
	comp=Z,2µm,0.9s						
OSSC	Osservatorio P	91.39	46	P	P	23 02 54.4	-0.1
DIV	Divide	91.50	332	P	P	23 02 54.8	+0.1
DIV				IAmb	IAmb	23 02 55.8	
	comp=Z,2µm,0.8s						
MILB	Miltenberg	91.51	40	eP	P	23 02 54.4	-0.6
	comp=Z,2µm,1.2s,baz=258,slow=4.7						
UBR	Ueberruh	91.54	42	eP	P	23 02 54.9	-0.3
	comp=Z,3µm,1.4s,baz=258,slow=4.7						
UBR				eSKSac	SKSac	23 12 29.4	+0.3
	baz=257,slow=6.0						
LATE	Laterza	91.59	47	P	P	23 02 55.8	+0.3
LATE				IAmb	IAmb	23 03 03.6	
	comp=Z,1µm,0.9s						
CLTB	Caltabellotta	91.63	52	⇓P	P	23 02 56.4	+0.5
CLTB	Caltabellotta	91.63	52	P	P	23 02 56.1	+0.2
CLTB				IAmb	IAmb	23 03 04.3	
	comp=Z,882nm,0.9s						
HARP	HAARP	91.63	333	P	P	23 02 55.4	+0.2
	baz=109						
HARP				S	S	23 12 56.3	-6.7
	baz=109						
SCRK	Sand Creek	91.64	335	P	P	23 02 55.2	-0.1
	baz=110						
SCRK				S	S	23 12 58.4	-5.0
	baz=110						
J26L	Joseph Creek	91.65	336	P	P	23 02 55.5	+0.2
	baz=110						
J26L				S	S	23 12 57.6	-5.8
	baz=110						
KLU	Klutina	91.68	332	P	P	23 02 55.3	-0.3
	baz=108						
KMY	Karmoy	91.72	30	⇓iP	P	23 02 56.0	+0.5
KMY				epP	pP	23 05 05.9	-3.5
HLG	Helgoland	91.75	35	eP	P	23 02 55.7	-0.2
	comp=Z,2µm,1.1s,baz=258,slow=4.7						
HLG				epP	pP	23 05 09.3	-0.4
HLG				eSKSac	SKSac	23 12 30.6	+0.9
	baz=257,slow=6.0						
HLG	Helgoland	91.75	35	⇓P	P	23 02 56.3	+0.5
CORL	Corleone	91.76	52	P	P	23 02 56.6	+0.2
CORL				IAmb	IAmb	23 03 09.2	
	comp=Z,2µm,0.9s						
LBTB	Lobatse	91.77	116	⇓P	P	23 02 57.0	+0.1
LBTB				⇑P	PcP	23 02 57.2	-0.1
LBTB	Lobatse	91.77	116	P	P	23 02 56.4	-0.5
LBTB				IAmb	IAmb	23 03 00.1	
	comp=Z,2µm,1.5s						
LBTB				pP	pP	23 05 09.7	-0.9

LBTB	**Lobatse**	**91.77**	**116**	*i* P	**P**	**23 02 52.7**	**-4.1**
FETA	**Feichten**	**91.80**	**43**	*e*P	**P**	**23 02 56.7**	**+0.2**
	comp=Z,779nm,1.1s						
FETA				*e*P	**pP**	**23 05 09.4**	**-0.9**
	comp=Z,336nm,1.1s						
FETA				*e*S	**SKKPbc**	**23 23 00.8**	**+6.2**
	comp=Z,99nm,1.2s						
FETA				*e*P	**P'P'df**	**23 28 15.7**	**-4.9**
	comp=Z,149nm,1.2s						
DAG	**Danmarks Havn**	**91.80**	**11**	*i* P	**P**	**23 02 54.6**	**-1.0**
DAG				IAmb	IAmb	23 03 04.7	
	comp=Z,575nm,0.7s						
DAG	**Danmarks Havn**	**91.80**	**11**	⇓P	**P**	**23 02 55.4**	**-0.3**
MGAB	**Montegabbione**	**91.88**	**47**	⇓P	**P**	**23 02 56.5**	**-0.3**
RETA	**Reutte**	**91.92**	**42**	*e*P	**P**	**23 02 56.6**	**-0.4**
	comp=Z,970nm,1.3s						
RETA				*e*P	**pP**	**23 05 09.6**	**-1.2**
	comp=Z,366nm,1.1s						
RETA				*e*S	**SKKPbc**	**23 23 00.2**	**+5.9**
	comp=Z,68nm,1.3s						
RETA				*e*P	**P'P'df**	**23 28 15.4**	**-4.8**
	comp=Z,45nm,1.2s						
RIDG	**Independent Ri**	**91.93**	**335**	P	**P**	**23 02 56.6**	**+0.1**
	baz=109						
RIDG				S	**S**	**23 12 58.8**	**-6.9**
	baz=109						
PAX	**Paxson**	**91.94**	**334**	P	**P**	**23 02 56.0**	**-0.8**
	baz=108						
PAX				S	**S**	**23 12 57.5**	**-8.5**
	baz=108						
M24K	**Tolsona, Glenn**	**91.99**	**333**	P	**P**	**23 02 56.9**	**0.0**
	baz=108						
M24K				S	**S**	**23 12 58.8**	**-7.5**
	baz=108						
SUE	**Sulen**	**92.03**	**28**	⇓*i*P	**P**	**23 02 57.7**	**+0.8**
SUE				IVmB_BB		23 02 58.6	
	comp=Z,30µm,6.0s						
SUE				*e*SS	SS	23 19 34.4	-1.3
GLI	**Glacier Island**	**92.04**	**332**	P	**P**	**23 02 56.4**	**-0.7**
	baz=107						
ASK	**Askoy**	**92.06**	**29**	⇓*i*P	**P**	**23 02 57.7**	**+0.6**
ASK				*e*pP	**pP**	**23 05 11.2**	**+0.2**
ASK				*e*SKSac	**SKSac**	**23 12 29.9**	**-1.2**
TEOL	**Teolo**	**92.08**	**44**	P	**P**	**23 02 57.6**	**0.0**
TEOL				IAmb	IAmb	23 03 00.5	
	comp=Z,2µm,0.9s						
BER	**Bergen**	**92.10**	**29**	⇓*i*P	**P**	**23 02 58.0**	**+0.7**
BER				*e*SKSac	**SKSac**	**23 12 30.6**	**-0.7**
MOTA	**Moosalm**	**92.12**	**42**	*e*P	**P**	**23 02 57.4**	**-0.6**
	comp=Z,1µm,1.1s						
MOTA				*e*P	**pP**	**23 05 10.6**	**-1.2**
	comp=Z,259nm,1.0s						
MOTA				*e*P	**PP**	**23 06 46.1**	**-3.5**
	comp=Z,420nm,1.5s						
MOTA				*e*S	**SKKPbc**	**23 22 59.0**	**+5.1**
	comp=Z,105nm,0.9s						
MOTA				*e*P	**P'P'df**	**23 28 14.4**	**-5.6**
	comp=Z,100nm,1.1s						
SQTA	**Sankt Quirin**	**92.16**	**43**	*e*P	**P**	**23 02 57.5**	**-0.6**
	comp=Z,1µm,1.1s						
SQTA				*e*P	**pP**	**23 05 10.9**	**-1.1**
	comp=Z,733nm,1.1s						
SQTA				*e*P	**PP**	**23 06 46.7**	**-3.3**
	comp=Z,270nm,1.2s						
SQTA				*e*S	**SKKPbc**	**23 22 58.1**	**+4.3**
	comp=Z,190nm,1.2s						
SQTA				*e*P	**P'P'df**	**23 28 14.2**	**-5.6**
	comp=Z,258nm,1.3s						
UBBA	**Unterbreizbach**	**92.19**	**39**	*e*P	**P**	**23 02 57.8**	**-0.1**
	comp=Z,2µm,1.6s,baz=258,slow=4.7						
CTI	**Castel Tesino**	**92.21**	**44**		**P**	**23 02 58.8**	**+0.4**
CTI				IAmb	IAmb	23 03 00.1	
	comp=Z,2µm,1.2s						
CTI				pP	**pP**	**23 05 12.4**	**+0.2**
RETH	**Rethem/Aller,**	**92.25**	**37**	*e*P	**P**	**23 02 58.4**	**+0.2**
	baz=258,slow=4.7						
FOO	**Floro**	**92.31**	**28**	IVmB_BB		23 02 58.9	
	comp=Z,13µm,2.0s						
FOO				⇓*i*P	**P**	**23 02 59.0**	**+0.7**
FOO				*e*SKSac	**SKSac**	**23 12 33.4**	**+0.9**
FOO				*e*SS	**SS**	**23 19 40.6**	**+0.8**
GTTG	**Gottingen**	**92.33**	**38**	*e*P	**P**	**23 02 58.5**	**-0.1**
	comp=Z,2µm,1.4s,baz=258,slow=4.7						
GTTG				*e*pP	**pP**	**23 05 12.2**	**-0.3**
GTTG				*e*SKSac	**SKSac**	**23 12 35.1**	**+2.1**
	baz=257,slow=6.0						
FUR	**Furstenfeldbru**	**92.41**	**42**	*e*P	**P**	**23 02 58.7**	**-0.4**
	comp=Z,2µm,1.1s,baz=258,slow=4.7						
J25K	**Salcha River,**	**92.42**	**335**	P	**P**	**23 02 59.2**	**+0.3**
	baz=108						
J25K				S	**S**	**23 13 03.5**	**-6.5**
	baz=108						
SCM	**Sheep Creek Mo**	**92.42**	**333**	P	**P**	**23 02 59.0**	**+0.1**
	baz=107						
SCM				S	**S**	**23 13 03.0**	**-7.2**
	baz=107						
WATA	**Walderalm**	**92.43**	**42**	*e*P	**P**	**23 02 59.1**	**-0.3**
	comp=Z,1µm,1.3s						
WATA				*e*P	**pP**	**23 05 12.0**	**-1.3**
	comp=Z,505nm,1.2s						
WATA				*e*P	**PP**	**23 06 50.9**	**-1.1**
	comp=Z,546nm,1.2s						
WATA				*e*S	**SKKPbc**	**23 22 58.4**	**+5.3**
	comp=Z,112nm,0.8s						
WATA				*e*P	**P'P'df**	**23 28 13.9**	**-5.5**
	comp=Z,192nm,1.3s						
RAFF	**Raffo Rosso**	**92.45**	**53**	P	**P**	**23 02 59.2**	**-0.3**
WTTA	**Wattenberg**	**92.46**	**43**	*e*P	**P**	**23 02 59.0**	**-0.5**
	comp=Z,2µm,1.0s						
WTTA				*e*P	**pP**	**23 05 12.5**	**-0.9**
	comp=Z,874nm,1.2s						
WTTA				*e*S	**SKKPbc**	**23 22 58.3**	**+5.2**
	comp=Z,176nm,1.0s						
WTTA				*e*P	**P'P'df**	**23 28 14.1**	**-5.3**
	comp=Z,242nm,1.0s						
SNART	**Snartemo**	**92.46**	**31**	*i* P	**P**	**23 02 59.5**	**+0.5**
SNART	**Snartemo**	**92.46**	**31**	⇓*i*P	**P**	**23 02 59.6**	**+0.5**
SNART				IVmB_BB		23 03 00.4	
	comp=Z,65µm,7.9s						
SNART				*e*SKSac	**SKSac**	**23 12 29.4**	**-4.0**
VAE	**Valguarnera**	**92.54**	**53**	P	**P**	**23 03 00.9**	**+0.9**
	comp=Z,520nm,1.0s,baz=24,slow=10,SNR=7.6						
ODD1	**Odda**	**92.59**	**30**	⇓*i*P	**P**	**23 03 00.9**	**+1.2**
ODD1				*e*pP	**pP**	**23 05 11.9**	**-1.6**
PWL	**Port Wells**	**92.61**	**331**	P	**P**	**23 02 59.1**	**-0.6**
	baz=106						
NRDL	**Niedersach Rie**	**92.63**	**37**	*e*P	**P**	**23 03 00.2**	**+0.4**
	comp=Z,1µm,1.4s,baz=258,slow=4.7						
NRDL				*e*pP	**pP**	**23 05 12.9**	**-0.8**
NRDL				*e*SKSac	**SKSac**	**23 12 37.1**	**+2.6**
	baz=257,slow=6.0						
CLZ	**Clausthal**	**92.65**	**38**	*e*P	**P**	**23 03 00.1**	**0.0**
	comp=Z,2µm,1.5s,baz=258,slow=4.7						
CLZ				*e*SKSac	**SKSac**	**23 12 38.4**	**+3.5**
	baz=257,slow=6.0						
AQU	**L'Aquila**	**92.70**	**48**	⇓*i*P	**P**	**23 03 00.8**	**+0.2**
AQU	**L'Aquila**	**92.70**	**48**	⇑P	**P**	**23 03 00.8**	**+0.2**
GRFO	**Grafenberg**	**92.70**	**40**	P	**P**	**23 03 00.9**	**+0.5**
GRFO				pmax	pmax		
	comp=Z,1µm,1.3s						
GRFO	**Grafenberg**	**92.70**	**40**	P	**P**	**23 03 00.9**	**+0.5**
GRFO				IAmb	IAmb	23 03 02.5	
	comp=Z,1µm,1.3s						
GRA1	**Grafenberg Arr**	**92.70**	**40**	P	**P**	**23 03 00.7**	**+0.3**
GRA1				IAmb	IAmb	23 03 02.6	
	comp=Z,1µm,1.2s						
GRF	**Grafenberg Arr**	**92.70**	**40**	P	**P**	**23 03 00.7**	**+0.3**
GRF				pmax	pmax		
	comp=Z,1µm,1.2s						
GRF	**Grafenberg Arr**	**92.70**	**40**	*e*P	**P**	**23 03 00.2**	**-0.2**
	comp=Z,1µm,1.2s,baz=258,slow=4.7						
GRF				*e*pP	**pP**	**23 05 13.4**	**-0.9**
GRF				*e*SKSac	**SKSac**	**23 12 38.8**	**+3.6**
	baz=257,slow=6.0						
HYA	**Hoyanger**	**92.72**	**28**	*e*P	**P**	**23 03 00.9**	**+0.8**
SKMB	**Sankelmark Bun**	**92.76**	**35**	*e*P	**P**	**23 03 00.7**	**+0.2**
	comp=Z,3µm,1.2s,baz=258,slow=4.7						
PRP	**Porcupine Dome**	**92.77**	**336**	P	**P**	**23 03 00.5**	**-0.1**
	baz=108						
PRP				S	**S**	**23 13 07.8**	**-5.4**
	baz=108						
PRP	**Porcupine Dome**	**92.77**	**336**	P	**P**	**23 03 01.0**	**+0.5**
PRP				IAmb	IAmb	23 03 10.0	
	comp=Z,1µm,1.1s						
DHY	**Denali Highway**	**92.81**	**334**	P	**P**	**23 03 00.2**	**-0.5**
	baz=107						
KNK	**Knik Glacier**	**92.82**	**332**	P	**P**	**23 03 00.6**	**-0.1**
	baz=106						
KNK				S	**S**	**23 13 05.9**	**-7.7**
	baz=106						
KNK	**Knik Glacier**	**92.82**	**332**	P	**P**	**23 03 01.0**	**+0.3**
WAT6	**Susitna Watana**	**92.82**	**333**	P	**P**	**23 03 00.6**	**-0.3**
	baz=106						
WAT6				S	S	23 13 04.5	-9.3
	baz=106						
SML	**Sawmill**	**92.87**	**332**	P	**P**	**23 03 00.4**	**-0.5**
	baz=106						
SML				S	**S**	**23 13 06.7**	**-7.4**
	baz=106						
ASSE	**Asse, Remlinge**	**92.89**	**38**	*e*P	**P**	**23 03 01.3**	**+0.3**
	comp=Z,1µm,1.6s,baz=258,slow=4.7						
ASSE				*e*pP	**pP**	**23 05 14.3**	**-0.6**
ABTA	**Abfaltersbach**	**92.94**	**43**	*e*P	**P**	**23 03 01.0**	**-0.7**
	comp=Z,2µm,1.1s						
ABTA				*e*P	**pP**	**23 05 14.7**	**-0.9**
	comp=Z,933nm,1.2s						
ABTA				*e*P	**P'P'df**	**23 28 15.0**	**-3.5**
	comp=Z,145nm,1.3s						
SEW	**Seward**	**92.94**	**331**	P	**P**	**23 03 00.6**	**-0.6**
	baz=105						
HDA	**Harding Lake**	**93.01**	**335**	P	**P**	**23 03 01.0**	**-0.4**
	baz=107						
HDA				S	**S**	**23 13 07.3**	**-7.8**
	baz=107						
HDA				S	**S**	**23 13 07.3**	**-7.8**
	baz=107						
HDA	**Harding Lake**	**93.01**	**335**	P	**P**	**23 03 01.5**	**+0.1**
HDA				IAmb	IAmb	23 05 16.3	
	comp=Z,1µm,1.3s						
MUD	**Monsted U'grnd**	**93.02**	**33**	*i* P	**P**	**23 03 01.8**	**+0.2**
MUD				IAmb	IAmb	23 03 03.1	
	comp=Z,732nm,0.7s						
BMAR	**Burnt Mountain**	**93.03**	**338**	P	**P**	**23 03 02.6**	**+1.0**
BSEG	**Bad Segeberg**	**93.08**	**36**	*e*P	**P**	**23 03 01.7**	**-0.2**
	comp=Z,1µm,1.0s,baz=258,slow=4.7						
BSEG				*e*pP	**pP**	**23 05 15.3**	**-0.6**
BSEG				*e*SKSac	**SKSac**	**23 12 38.7**	**+1.8**
	baz=257,slow=6.0						
IL31		**93.09**	**335**	P	**P**	**23 03 02.1**	**+0.3**
IL31				IAmb	IAmb	23 05 16.8	
	comp=Z,1µm,1.4s						
ILAR	**Eielson Array**	**93.09**	**335**	P	**P**	**23 03 01.9**	**+0.1**
	comp=Z,232nm,0.8s,baz=131,slow=3.8,SNR=23						
ILAR				pP	**pP**	**23 05 15.9**	**+0.1**
	comp=Z,249nm,1.1s,baz=110,slow=3.2,SNR=5.6						
ILAR				PP	PP	23 06 47.9	-8.6
	comp=Z,58nm,0.6s,baz=126,slow=4.6,SNR=5.4						
ILAR				S	**SKSac**	**23 12 36.5**	**-0.1**
	comp=Z,47nm,1.1s,baz=112,slow=6.9,SNR=8.5						
ILAR				PKKPbc	**PKKPdf**	**23 20 06.5**	**-0.9**
	comp=Z,9.3nm,0.4s,baz=296,slow=3.6,SNR=12						
ILAR				PKPPKP	**P'P'df**	**23 28 15.2**	**-1.6**
	comp=Z,15nm,1.1s,baz=319,slow=4.0,SNR=4.0						
ILAR	**Eielson Array**	**93.09**	**335**	P	**P**	**23 03 02.1**	**+0.2**
ILAR					**pP**	**23 05 14.5**	**-1.3**
HOMB	**Homborsund**	**93.10**	**31**	*i* P	**P**	**23 03 02.2**	**+0.3**
HOMB	**Homborsund**	**93.10**	**31**	⇓*i*P	**P**	**23 03 02.3**	**+0.3**
MOX	**Moxa**	**93.15**	**39**	*e*P	**P**	**23 03 02.4**	**0.0**
	comp=Z,787nm,1.2s,baz=258,slow=4.7						
MOX				*e*SKSac	**SKSac**	**23 12 40.8**	**+3.2**
	baz=257,slow=6.0						
O22K	**Cooper Landing**	**93.17**	**331**	P	**P**	**23 03 01.9**	**-0.3**
	baz=105						
GOET	**G??ttrup**	**93.18**	**33**	*i* P	**P**	**23 03 02.7**	**+0.3**
PMR	**Palmer**	**93.18**	**332**	P	**P**	**23 03 01.9**	**-0.3**
	baz=105						
FLTG	**Flechtingen**	**93.27**	**38**	*e*P	**P**	**23 03 02.5**	**-0.4**
	comp=Z,962nm,1.2s,baz=258,slow=4.7						
FLTG				*e*SKSac	**SKSac**	**23 12 40.5**	**+2.4**
	baz=257,slow=6.0						
FLTG	**Flechtingen**	**93.27**	**38**	P	**P**	**23 03 02.8**	**-0.1**
PAOL	**Paolisi**	**93.31**	**49**	P	**P**	**23 03 03.2**	**-0.2**
MANZ	**Manzenberg**	**93.33**	**40**	*e*P	**P**	**23 03 03.3**	**0.0**
	comp=Z,383nm,1.1s,baz=258,slow=4.7						
RC01	**Rabbit Creek A**	**93.33**	**331**	P	**P**	**23 03 02.8**	**-0.2**
	baz=105						
ROTZ	**Rotzenmuhle**	**93.34**	**40**	*e*P	**P**	**23 03 03.3**	**0.0**
	comp=Z,393nm,1.0s,baz=258,slow=4.7						
ROTZ				*e*pP	**pP**	**23 05 17.1**	**-0.2**
ROTZ				*e*SKSac	**SKSac**	**23 12 40.8**	**+2.1**
	baz=257,slow=6.0						
AKN	**Aaknes**	**93.36**	**27**	⇓*i*P	**P**	**23 03 04.3**	**+1.2**
AKN				*e*SP	SP	23 14 32.1	-5.2
AKN				*e*SS	**SS**	**23 19 53.6**	**-1.1**
AKN				IVMs_BB	IVMs_BB	23 32 12.4	
	comp=Z,12µm,42.4s						
NEUB	**Neuenburg**	**93.37**	**39**	*e*P	**P**	**23 03 03.3**	**0.0**
	comp=Z,2µm,1.2s,baz=258,slow=4.7						
NEUB				*e*SKSac	**SKSac**	**23 12 41.9**	**+3.2**
	baz=257,slow=6.0						
POKR	**Poker Plat Res**	**93.42**	**336**	P	**P**	**23 03 03.6**	**+0.3**
	baz=106						
PTCC	**Patocco-Chiusa**	**93.44**	**44**	⇓P	**P**	**23 03 03.9**	**0.0**
PLN	**Plauen**	**93.46**	**39**	*e*P	**P**	**23 03 03.8**	**0.0**
	comp=Z,1µm,1.4s,baz=258,slow=4.7						
PLN				*e*pP	**pP**	**23 05 17.6**	**-0.2**
PLN				*e*SKSac	**SKSac**	**23 12 41.2**	**+2.0**
	baz=257,slow=6.0						
BRSE	**Bradley Lake S**	**93.48**	**330**	P	**P**	**23 03 03.4**	**-0.3**
	baz=104						
BRSE				S	**S**	**23 13 13.2**	**-6.1**
	baz=104						
COLA	**College**	**93.52**	**335**	*i* P	**P**	**23 03 03.3**	**-0.4**
COLA				pmax	pmax		
	comp=Z,2µm,1.0s						
COLA	**College**	**93.52**	**335**	S	**S**	**23 13 10.9**	**-8.4**
	baz=106						
COLA	**College**	**93.52**	**335**	⇓P	**P**	**23 03 03.7**	**0.0**
TCOL	**CIGO, UAF Yank**	**93.52**	**335**	P	**P**	**23 03 03.6**	**-0.1**
	baz=106						
TCOL				S	**S**	**23 13 11.5**	**-7.9**
	baz=106						
KBA	**Koelnbreinsper**	**93.56**	**43**	*e*P	**P**	**23 03 04.2**	**-0.4**
	comp=Z,581nm,1.0s						
KBA				*e*P	**pP**	**23 05 17.7**	**-0.9**
	comp=Z,270nm,1.1s						
KBA				*e*P	**PP**	**23 07 04.2**	**+3.4**
	comp=Z,210nm,0.9s						
KBA				*e*P	**P'P'df**	**23 28 15.8**	**-1.6**
	comp=Z,59nm,1.0s						
FIS	**Fire Island**	**93.58**	**331**	P	**P**	**23 03 05.2**	**+1.1**
NKC	**Novy Kostel**	**93.59**	**40**	*e*P	**P**	**23 03 05.0**	**+0.6**
NKC				*e*PKKP	**PKKPdf**	**23 20 06.4**	**+0.1**
NKC				*e*PKPPKP	**P'P'df**	**23 28 14.7**	**-2.2**
NKC	**Novy Kostel**	**93.59**	**40**	*e*P	**P**	**23 03 05.0**	**+0.6**
NKC				*e*		23 20 06.4	
TRI	**Trieste**	**93.59**	**44**	⇑P	**P**	**23 03 04.5**	**0.0**
SKAR	**Skarslia**	**93.59**	**29**	⇓*i*P	**P**	**23 03 05.1**	**+0.8**
TANN	**Tannenbergstha**	**93.63**	**40**	*e*P	**P**	**23 03 04.9**	**+0.2**
	comp=Z,1µm,1.3s,baz=258,slow=4.7						
WET	**Wettzell**	**93.65**	**41**	*e*P	**P**	**23 03 04.5**	**-0.2**
	comp=Z,1µm,1.1s,baz=258,slow=4.7						
WET				*e*pP	**pP**	**23 05 18.5**	**-0.3**
WET				*e*SKSac	**SKSac**	**23 12 41.5**	**+1.2**
	baz=257,slow=6.0						
MCK	**McKinley**	**93.66**	**334**	P	**P**	**23 03 03.6**	**-0.9**
	baz=105						
MCK				S	**S**	**23 13 14.0**	**-6.7**
	baz=105						
MYKA	**Terra Mystica**	**93.68**	**43**	*e*P	**P**	**23 03 04.8**	**-0.2**
	comp=Z,428nm,0.8s						
MYKA				*e*P	**pP**	**23 05 18.3**	**-0.7**
	comp=Z,266nm,1.0s						
MYKA				*e*P	**PP**	**23 07 04.4**	**+2.9**
	comp=Z,378nm,1.3s						
MYKA				*e*S	**SKKPbc**	**23 22 53.4**	**+3.4**
	comp=Z,34nm,0.9s						
MYKA				*e*P	**P'P'df**	**23 28 12.0**	**-5.1**
	comp=Z,32nm,1.0s						
M22K	**Willow**	**93.68**	**332**	P	**P**	**23 03 04.4**	**-0.1**
	baz=104						
MDM	**Murphy Dome**	**93.70**	**335**	P	**P**	**23 03 04.7**	**+0.1**
MDM				pP	**pP**	**23 05 17.4**	**-1.3**
MOL	**Molde**	**93.72**	**27**	IVmB_BB		23 03 05.3	
	comp=Z,11µm,1.9s						
MOL				⇓*i*P	**P**	**23 03 05.4**	**+0.7**
MOL				*e*pP	pP	23 05 14.8	-3.9
MOL				*e*SKSac	**SKSac**	**23 12 38.8**	**-1.2**
MOL				*e*SS	**SS**	**23 19 58.0**	**-1.5**
SKDS	**Skadanscina**	**93.73**	**45**	*e*P	**P**	**23 03 05.0**	**-0.2**
SKDS				*e*		23 08 13.8	
SKDS				*e*		23 09 34.4	
SKDS				*e*S	**S**	**23 13 22.6**	**+0.4**
OVD	**Ostervraa, Den**	**93.77**	**33**	*i* P	**P**	**23 03 05.7**	**+0.7**
H24K	**Noodor Dome**	**93.80**	**336**	P	**P**	**23 03 04.7**	**-0.4**
	baz=106						
H24K				S	**S**	**23 13 16.8**	**-5.1**
	baz=106						
CEL	**Celeste**	**93.83**	**52**	⇓P	**P**	**23 03 04.2**	**-1.6**
CEL	**Celeste**	**93.83**	**52**	P	**P**	**23 03 04.6**	**-1.3**
HOM	**Homer**	**93.91**	**330**	P	**P**	**23 03 05.6**	**0.0**
	baz=103						
CUT	**Chulitna**	**93.91**	**333**	P	**P**	**23 03 05.2**	**-0.4**
	baz=104						
CAPN	**Captain Cook N**	**93.93**	**331**	P	**P**	**23 03 05.5**	**-0.1**
	baz=104						
NEA2	**Nenana**	**93.95**	**335**	P	**P**	**23 03 05.8**	**0.0**
	baz=105						
NEA2				S	**S**	**23 13 15.0**	**-8.1**
	baz=105						
KONO	**Kongsberg**	**93.98**	**30**	P	**P**	**23 03 06.3**	**+0.4**
KONO				pmax	pmax		
	comp=Z,962nm,1.4s						
KONO	**Kongsberg**	**93.98**	**30**	IVmB_BB		23 03 06.2	
	comp=Z,7µm,2.3s						
KONO				⇓*i*P	**P**	**23 03 06.4**	**+0.4**
KONO				*e*SKSac	**SKSac**	**23 12 39.7**	**-1.8**
KONO				*e*SS	**SS**	**23 20 03.8**	**+0.5**
KONO	**Kongsberg**	**93.98**	**30**	⇑P	**P**	**23 03 05.9**	**-0.1**
KONO	**Kongsberg**	**93.98**	**30**	P	**P**	**23 03 06.3**	**+0.4**
KONO				IAmb	IAmb	23 03 08.1	
	comp=Z,962nm,1.4s						
RIY	**Rijeka**	**94.02**	**45**	⇓*i*P	**P**	**23 03 06.4**	**-0.1**
CEY	**Cerknica**	**94.05**	**44**	⇓*i*P	**P**	**23 03 06.7**	**0.0**
KHC	**Kasperske Hory**	**94.10**	**41**	*e*P	**P**	**23 03 06.8**	**0.0**
KHC				*e*x	x	23 04 55.5	
KHC				*e*x	x	23 05 21.0	
KHC				*e*PKKP	**PKKPbc**	**23 20 07.2**	**+0.3**
KHC				*e*PKPPKP	**P'P'df**	**23 28 09.3**	**-6.7**
KHC	**Kasperske Hory**	**94.10**	**41**	*e*P	**P**	**23 03 06.8**	**0.0**
KHC				*e*		23 05 21.0	
KHC	**Kasperske Hory**	**94.10**	**41**	⇓P	**P**	**23 03 06.8**	**0.0**
KHC	**Kasperske Hory**	**94.10**	**41**	P	**P**	**23 03 07.1**	**+0.2**
KHC				IAmb	IAmb	23 03 08.8	
	comp=Z,1µm,1.4s						
GEC2	**GERESS Array S**	**94.13**	**41**	*e*P	**P**	**23 03 06.5**	**-0.5**
	comp=Z,885nm,1.0s,baz=258,slow=4.7						
GEC2	**GERESS Array S**	**94.13**	**41**	P	**P**	**23 03 07.3**	**+0.3**
GEC2				IAmb	IAmb	23 03 08.6	
	comp=Z,886nm,1.0s						
GERES	**GERESS Array B**	**94.13**	**41**	P	**P**	**23 03 07.4**	**+0.3**
	comp=Z,475nm,0.8s,baz=242,slow=2.9,SNR=26						
GERES				pP	**pP**	**23 05 20.4**	**-0.7**
	comp=Z,56nm,0.8s,baz=258,slow=2.9,SNR=3.4						
GERES				PKKPbc	**PKKPdf**	**23 20 05.5**	**+0.1**
	comp=Z,10nm,0.4s,baz=104,slow=2.1,SNR=17						
GERES				PKPPKP	**P'P'df**	**23 28 11.1**	**-5.0**
	comp=Z,22nm,0.9s,baz=79,slow=2.1,SNR=11						
GERES	**GERESS Array B**	**94.13**	**41**	P	**P**	**23 03 07.0**	**0.0**
CLL	**Collm**	**94.14**	**39**	⇓*i*P	**P**	**23 03 07.2**	**+0.3**
	comp=Z,936nm,1.1s						
CLL				*i* pP	**pP**	**23 05 21.3**	**+0.4**
CLL				*e*sP	**sP**	**23 06 23.0**	**+0.6**
CLL				*e*PP	**PP**	**23 07 03.0**	**-1.8**
CLL				*e*PKiKP	**PKiKP**	**23 07 46.0**	**-0.5**
CLL				*e*pPP		23 08 55.0	
CLL				*e*PPP	PPP	23 09 10.0	
CLL				*e*SKSac	**SKSac**	**23 12 36.0**	**-6.8**
CLL				*e*S	**S**	**23 13 24.0**	**-1.3**
CLL				*e*SP	SP	23 14 51.0	+4.8
CLL				*e*sS	**sS**	**23 17 23.0**	**-3.4**
CLL				*e*sSP		23 18 43.0	
CLL				*e*PKKPdf	**PKKPdf**	**23 20 06.0**	**+0.8**
CLL				*e*SS	**PKKPdf**	**23 20 06.0**	**+0.8**
CLL				*e*PKKPbc	**PKKPbc**	**23 20 07.0**	**+0.2**
CLL				*e*SS	**SS**	**23 20 12.0**	**+6.0**
CLL				*e*SS	**SS**	**23 20 12.0**	**+6.0**
CLL				*e*		23 20 13.0	
CLL				*e*		23 22 54.0	
CLL				*e*		23 23 06.0	
CLL				*e*sSS		23 23 30.0	
CLL				*e*		23 28 10.0	
CLL				*e*PKPPKPdf	**P'P'df**	**23 28 19.0**	**+3.3**
CLL				*e*		23 30 30.0	
CLL				*e*SKPPKPdf		23 30 49.0	
CLL				*e*		23 34 18.0	
CLL				*e*3PKPdf		23 49 00.0	
CLL	**Collm**	**94.14**	**39**	⇓*i*P	**P**	**23 03 07.2**	**+0.3**
CLL				*i* *PP	**pP**	**23 05 21.3**	**+0.4**
CLL				*e*S	**S**	**23 13 24.0**	**-1.3**
CLL				pmax	pmax		
	comp=Z,936nm,1.1s						
CLL	**Collm**	**94.14**	**39**	*e*P	**P**	**23 03 06.9**	**0.0**
	comp=Z,937nm,1.1s,baz=258,slow=4.7						
CLL				*e*pP	**pP**	**23 05 19.9**	**-1.0**
CLL				*e*SKSac	**SKSac**	**23 12 44.7**	**+1.9**
	baz=257,slow=6.0						
CLL	**Collm**	**94.14**	**39**	P	**P**	**23 03 07.4**	**+0.5**
LJU	**Ljubljana**	**94.17**	**44**	⇓*i*P	**P**	**23 03 07.4**	**+0.2**
LJU	**Ljubljana**	**94.17**	**44**	*e*P	**P**	**23 03 07.5**	**+0.2**
LJU				*e*pP	**pP**	**23 05 21.8**	**+0.5**
LJU				*e*		23 08 54.0	
LJU				*e*		23 09 38.5	
LJU				*e*S	**S**	**23 13 26.3**	**+0.4**
LJU				*e*SP	SP	23 14 43.0	-3.9
LJU				*e*		23 18 33.8	
LJU				*e*		23 29 54.2	
TRF	**Thorofare Moun**	**94.18**	**334**	P	**P**	**23 03 06.3**	**-0.7**
	baz=104						
TRF				S	S	23 13 16.3	-9.2
	baz=104						
I23K	**Minto, Yukon-K**	**94.21**	**335**	P	**P**	**23 03 06.4**	**-0.4**
	baz=105						
I23K				S	**S**	**23 13 17.3**	**-8.0**
	baz=105						
OHAK	**Old Harbor**	**94.22**	**327**	P	**P**	**23 03 06.8**	**-0.2**
	baz=102						
OHAK				S	**S**	**23 13 17.9**	**-7.8**
	baz=102						
OBKA	**Obir**	**94.27**	**44**	*e*P	**P**	**23 03 07.4**	**-0.4**
	comp=Z,240nm,0.7s						
OBKA				*e*P	**pP**	**23 05 21.5**	**-0.3**
	comp=Z,406nm,1.6s						
OBKA				*e*P	**P'P'df**	**23 28 11.2**	**-4.7**
	comp=Z,51nm,1.4s						
DOMB	**Dombas**	**94.27**	**28**	⇓*i*P	**P**	**23 03 08.2**	**+0.9**
SGRT	**San Giovanni R**	**94.31**	**49**	P	**P**	**23 03 06.9**	**-1.1**
SGRT				pP	**pP**	**23 05 21.9**	**-0.2**
MOA	**Molln**	**94.32**	**42**	*e*P	**P**	**23 03 07.6**	**-0.2**
	comp=Z,1µm,1.1s						
MOA				*e*P	**pP**	**23 05 21.1**	**-0.8**
	comp=Z,287nm,1.1s						
MOA				*e*P	**PP**	**23 07 09.7**	**+3.4**
	comp=Z,338nm,1.2s						
MOA				*e*S	**SKKPbc**	**23 22 54.1**	**+5.7**
	comp=Z,57nm,1.6s						
MOA				*e*P	**P'P'df**	**23 28 14.2**	**-1.5**
	comp=Z,42nm,1.4s						
O20K	**Slope Mountain**	**94.48**	**330**	P	**P**	**23 03 08.0**	**-0.3**
	baz=102						
O20K				S	**S**	**23 13 19.3**	**-8.7**
	baz=102						
PDKS	**Podkum**	**94.50**	**44**	*e*P	**P**	**23 03 08.7**	**0.0**
PDKS				*e*		23 08 55.9	
PDKS				*e*		23 09 41.7	
PDKS				*e*SP	SP	23 14 45.9	-4.6
CKRC	**Cesky Krumlov**	**94.52**	**41**	*e*P	**P**	**23 03 08.3**	**-0.4**
CKRC				*e*PKKP	**PKKPdf**	**23 20 04.7**	**+0.2**
CKRC				*e*PKPPKP		23 28 11.3	
SPCR	**Spurr Chakacha**	**94.53**	**331**	S	S	23 13 19.0	-9.4
	baz=102						
MRVN	**Minervino Murg**	**94.53**	**49**	⇓P	**P**	**23 03 07.9**	**-1.1**
SII	**Sitkinak Islan**	**94.57**	**327**	P	**P**	**23 03 08.7**	**-0.1**
	baz=101						
SII				S	**S**	**23 13 20.0**	**-8.8**
	baz=101						
SII	**Sitkinak Islan**	**94.57**	**327**	P	**P**	**23 03 08.3**	**-0.4**
SII				IAmb	IAmb	23 03 17.9	
	comp=Z,1µm,1.2s						
GID	**Gilleleje**	**94.58**	**34**	*i* P	**P**	**23 03 10.2**	**+1.5**
OSL	**Oslo**	**94.60**	**30**	⇓*i*P	**P**	**23 03 09.4**	**+0.7**
OSL				IVmB_BB		23 03 10.2	
	comp=Z,18µm,1.1s						
OSL				*e*PP	**PP**	**23 07 07.5**	**-0.5**
OSL				*e*SP	SP	23 14 48.1	-2.6
OSL				*e*SS	**SS**	**23 20 12.6**	**+0.7**

SOKA	Soboth	94.63	44	eP	P	23 03 09.1	-0.3
	comp=Z,383nm,1.3s						
SOKA				P	pP	23 05 22.5	-0.9
	comp=Z,225nm,1.2s						
SOKA				eP	PP	23 07 12.8	+4.0
	comp=Z,136nm,1.2s						
SOKA				eS	SKKPbc	23 22 53.8	+6.1
	comp=Z,152nm,1.8s						
SOKA				P	P'P'df	23 28 11.4	-3.9
	comp=Z,47nm,1.1s						
BPAW	Bear Paw Mtn.	94.63	334	P	P	23 03 08.3	-0.6
	baz=103						
BPAW				S	S	23 13 21.1	-8.0
	baz=103						
BPAW	Bear Paw Mtn.	94.63	334	P	P	23 03 08.6	-0.3
BPAW				IAmb	IAmb	23 03 09.8	
	comp=Z,1µm,0.8s						
STRU	Stroemstad	94.64	31	i P	P	23 03 09.4	+0.5
COP	Copenhagen	94.64	34	i P	P	23 03 09.5	+0.5
COP				IAmb	IAmb	23 03 10.9	
	comp=Z,4µm,0.8s						
BRG	Berggiesshubel	94.64	39	eP	P	23 03 09.2	0.0
	comp=Z,1µm,1.1s,baz=258,slow=4.7						
BRG				eSKSac	SKSac	23 12 48.2	+2.7
	baz=257,slow=6.0						
BRG	Berggiesshubel	94.64	39	i P	P	23 03 10.6	+1.4
BRG				Amp		23 03 11.6	
	comp=Z,1µm,1.0s						
BRG				pP	pP	23 05 24.8	+1.5
BRG				Amp		23 05 26.6	
	comp=Z,567nm,1.4s						
BRG				PP	PP	23 07 08.3	-0.4
BRG				Amp		23 07 10.6	
	comp=Z,599nm,1.4s						
TIP	Timpagrande	94.65	51	⇓P	P	23 03 09.0	-0.6
TIP	Timpagrande	94.65	51	⇓P	P	23 03 08.2	-1.4
TIP	Timpagrande	94.65	51	P	P	23 03 08.5	-1.1
TJOU	Tjoern	94.66	32	i P	P	23 03 09.8	+0.7
ONAU	Onsala	94.69	33	i P	P	23 03 08.9	-0.3
P19K	Oil Pt	94.69	330	P	P	23 03 08.7	-0.5
	baz=102						
P19K				S	S	23 13 20.8	-9.0
	baz=102						
MLY	Manley	94.75	335	P	P	23 03 08.5	-0.9
	baz=104						
MLY				S	S	23 13 21.4	-8.7
	baz=104						
Q19K	Cape Douglas,	94.75	329	P	P	23 03 09.0	-0.6
	baz=102						
Q19K				S	S	23 13 22.2	-8.1
	baz=102						
CRES	Cresnjev	94.78	44	⇓iP	P	23 03 10.1	+0.2
PRA	Prague	94.81	40	eP	P	23 03 09.5	-0.5
PRA				ePKKP	PKKPdf	23 20 03.8	-0.2
PRA				ePKPPKP	P'P'df	23 28 11.8	-2.7
PRA	Prague	94.81	40	eP	P	23 03 09.5	-0.5
RUE	Ruedersdorf	94.83	38	eP	P	23 03 09.8	-0.2
RUE				eP	SP	23 14 49.5	-4.1
RUE				eP	PKKPdf	23 20 03.9	-0.1
RUE	Ruedersdorf	94.83	38	eP	P	23 03 09.8	-0.2
	comp=Z,759nm,1.1s,baz=258,slow=4.7						
MATE	Matera	94.84	50	⇑P	P	23 03 10.2	-0.1
MATE	Matera	94.84	50	⇓P	P	23 03 08.9	-1.4
NBO00	NORSAR Array S	94.85	29	P	P	23 03 09.9	0.0
PRU	Pruhonice	94.87	40	eP	P	23 03 10.5	+0.3
PRU				ePKKP	PKKPdf	23 20 02.8	-1.1
PRU				ePKPPKP	P'P'df	23 28 07.3	-7.2
PRU	Pruhonice	94.87	40	eP	P	23 03 10.5	+0.3
PPLA	Purkeypile	94.89	333	P	P	23 03 09.8	-0.4
	baz=102						
RGN	Rugen	94.93	36	eP	P	23 03 11.2	+0.8
RGN				eP	PKKPdf	23 20 04.2	+0.3
RGN	Rugen	94.93	36	eP	P	23 03 10.6	+0.2
	comp=Z,2µm,1.2s,baz=258,slow=4.7						
RGN				eSKSac	SKSac	23 12 50.7	+4.0
	baz=257,slow=6.0						
RGN	Rugen	94.93	36	⇓P	P	23 03 11.3	+1.0
RGN	Rugen	94.93	36	P	P	23 03 11.7	+1.4
CAST	Castle Rocks	94.95	334	P	P	23 03 09.4	-1.0
	baz=102						
CAST				S	S	23 13 24.7	-7.1
	baz=102						
PVCC	Panska Ves	94.98	40	eP	P	23 03 11.4	+0.7
PVCC				ePKKP	PKKPdf	23 20 02.4	-1.3
PVCC				ePKPPKP	P'P'df	23 28 10.9	-3.3
PVCC	Panska Ves	94.98	40	eP	P	23 03 11.4	+0.7
BJUU	Bjuv	95.04	34	i P	P	23 03 11.2	+0.4
FABU	Falkenberg	95.04	33	i P	P	23 03 10.8	0.0
ARSA	Arzberg	95.06	43	eP	P	23 03 10.8	-0.3
	comp=Z,537nm,1.1s						
ARSA				eP	pP	23 05 24.7	-0.6
	comp=Z,306nm,1.4s						
ARSA				S	SKKPbc	23 22 53.9	+7.3
	comp=Z,24nm,0.9s						
ARSA				eP	P'P'df	23 28 13.0	-1.3
	comp=Z,40nm,1.1s						
COLD	Coldfoot	95.06	337	P	P	23 03 11.5	+0.8
	baz=104						
COLD				S	S	23 13 27.7	-4.9
	baz=104						
NB2	NORSAR Subarra	95.06	29	P	P	23 03 11.8	+0.9
	comp=Z,938nm,1.1s,baz=257,slow=4.4						
NB2	NORSAR Subarra	95.06	29	P	pP	23 05 24.1	-0.9
	comp=Z,515nm,1.7s,baz=259,slow=4.6						
NOA	NORSAR Array B	95.06	29	P	P	23 03 11.7	+0.9
	comp=Z,434nm,1.0s,baz=257,slow=4.4,SNR=23						
NOA				pP	pP	23 05 24.8	-0.2
	comp=Z,231nm,1.1s,baz=257,slow=4.6,SNR=6.6						
NOA				PKKPbc	PKKPdf	23 20 02.3	-1.6
	comp=Z,16nm,0.5s,baz=91,slow=4.0,SNR=12						
NOA				PKPPKP	P'P'df	23 28 08.8	-4.6
	comp=Z,16nm,1.0s,baz=263,slow=3.0,SNR=7.6						
NOR	Nord	95.06	7	i P	P	23 03 10.1	-0.3
NOR				IAmb	IAmb	23 03 14.0	
	comp=Z,516nm,0.8s						
NOR	Nord	95.06	7	⇑P	P	23 03 10.3	-0.2
NOR				⇑P	PcP	23 03 11.1	+0.6
TBLU	Trondheim	95.08	27	⇓iP	P	23 03 12.2	+1.3
TBLU				IVmB_BB		23 03 13.1	
	comp=Z,17µm,2.4s						
TBLU				eSKSac	SKSac	23 12 46.1	-1.1
TBLU				eSS	SS	23 20 18.2	-0.3
ZAG	Zagreb	95.14	45	⇓iP	P	23 03 11.3	-0.2
CHUM	Lake Minchumin	95.16	334	P	P	23 03 10.3	-0.9
	baz=102						
NC602	NORSAR Array S	95.16	29	⇓iP	P	23 03 11.9	+0.6
TOLK	Toolik Lake Re	95.17	339	P	P	23 03 11.2	0.0
	baz=104						
TOLK				S	S	23 13 27.9	-5.7
	baz=104						
BORU	Boraas	95.19	32	i P	P	23 03 11.3	-0.1
CHIR	Chirikof Islan	95.22	326	P	P	23 03 11.7	+0.1
	baz=100						
CHIR				S	S	23 13 28.4	-6.0
	baz=100						
LNIZ	Loecknitz	95.26	37	eP	P	23 03 11.9	0.0
	comp=Z,3µm,2.0s,baz=258,slow=4.7						
LNIZ				eSKSac	SKSac	23 12 52.8	+4.4
	baz=257,slow=6.0						
I21K	Tanana	95.29	335	P	P	23 03 10.9	-0.9
	baz=102						
I21K				S	S	23 13 26.2	-8.4
	baz=102						
O19K	Port Alsworth	95.34	330	P	P	23 03 10.6	-1.5
	baz=101						
O19K				S	S	23 13 25.9	-9.2
	baz=101						
TREC	Trest	95.36	41	eP	P	23 03 12.8	+0.3
TREC				ePKKP	PKKPdf	23 20 01.4	-1.6
TREC				ePKPPKP	P'P'df	23 28 11.9	-1.7
TREC	Trest	95.36	41	eP	P	23 03 12.8	+0.3
MATP	Matopo	95.36	112	P	P	23 03 13.9	+0.5
	comp=Z,204nm,0.7s,baz=263,slow=9.6,SNR=23						
MATP				pP	pP	23 05 28.8	+1.3
	comp=Z,134nm,1.0s,baz=268,slow=8.4,SNR=5.3						
MATP				PKKPbc	PKKPbc	23 20 03.1	+0.3
	comp=Z,19nm,0.5s,baz=117,slow=3.2,SNR=16						
CONA	Conrad Observa	95.39	42	eP	P	23 03 12.9	+0.2
	comp=Z,766nm,1.1s						
CONA				eP	pP	23 05 26.9	0.0
	comp=Z,277nm,1.2s						
CONA				P	PP	23 07 12.8	-1.7
	comp=Z,292nm,1.1s						
CONA				eS	SKKPbc	23 22 54.1	+8.2
	comp=Z,56nm,1.3s						
CONA				eP	P'P'df	23 28 11.5	-2.3
	comp=Z,41nm,1.3s						
KOGS	Kog	95.42	44	eP	P	23 03 13.1	+0.3
PRIJ	Prijedor	95.52	45	⇓iP	P	23 03 14.1	+0.8
L20K	Farewell, AK	95.56	332	P	P	23 03 12.3	-0.8
	baz=101						
DEL	Delary	95.57	34	i P	P	23 03 13.3	0.0
LESE	Lesego, Limpop	95.58	116	i P	P	23 03 14.2	0.0
P18K	Big Mountain,	95.64	329	P	P	23 03 12.4	-1.1
	baz=100						
P18K				S	S	23 13 27.5	-10
	baz=100						
P18K	Big Mountain,	95.64	329	P	P	23 03 12.9	-0.7
MGRS	Mrkonjic Grad	95.69	46	⇓iP	P	23 03 14.5	+0.4
H21K	Melozitna Rive	95.73	336	P	P	23 03 12.8	-1.0
	baz=102						
H21K				S	S	23 13 30.9	-7.5
	baz=102						
MAW	Mawson	95.79	164	P	P	23 03 15.0	+1.0
	comp=Z,773nm,0.9s,baz=226,slow=7.1,SNR=14						
MAW				PKKPbc	PKKPdf	23 20 00.0	-1.3
	comp=Z,50nm,0.8s,baz=84,slow=1.1,SNR=8.3						
MAW	Mawson	95.79	164	P	P	23 03 15.0	+1.0
MAW	Mawson	95.79	164	⇓P	P	23 03 14.7	+0.6
MAW	Mawson	95.79	164	P	P	23 03 14.8	+0.8
BLY	Banja Luka	95.81	46	⇓iP	P	23 03 15.4	+0.8
BLY	Banja Luka	95.81	46	⇓P	P	23 03 14.8	+0.2
SOP	Sopron	95.82	43	eP	P	23 03 14.7	+0.2
SOP	Sopron	95.82	43	eP	P	23 03 15.5	+1.0
SOP				ePP	pP	23 05 28.4	-0.4
UPC	Upice	95.88	40	eP	P	23 03 15.3	+0.5
UPC				ePKKP	PKKPdf	23 20 00.9	-1.2
UPC				ePKPPKP	P'P'df	23 28 06.8	-5.7
UPC	Upice	95.88	40	eP	P	23 03 15.3	+0.5
KRUC	Moravsky	95.91	41	⇓iPDIFF	P	23 03 15.1	+0.1
KRUC				epP	pP	23 05 28.7	-0.5
KRUC				ePKKP	PKKPdf	23 20 00.8	-1.2
KRUC				e		23 45 14.5	
STON	Ston	95.91	48	⇓iP	P	23 03 15.0	-0.1
CHVC	Chvalec	95.92	40	eP	P	23 03 15.1	+0.1
CHVC				ePKKP	PKKPdf	23 20 01.4	-0.7
CHVC				ePKPPKP	P'P'df	23 28 07.0	-5.5
BSD	Bornholm Skovb	95.94	35	eP	P	23 03 14.8	-0.1
BSD				eP	PKKPdf	23 20 00.9	-1.1
BSD	Bornholm Skovb	95.94	35	i P	P	23 03 14.9	+0.1
BSD				IAmb	IAmb	23 03 15.8	
	comp=Z,139nm,0.7s						
BSD	Bornholm Skovb	95.94	35	⇓P	P	23 03 15.0	+0.1
L19K	White Mountain	95.96	332	P	P	23 03 13.9	-0.9
	baz=100						
L19K				S	S	23 13 29.6	-11
	baz=100						
L19K	White Mountain	95.96	332	P	P	23 03 14.8	0.0
J20K	Nowinta River	96.00	334	P	P	23 03 14.2	-0.8
	baz=100						
J20K				S	S	23 13 31.0	-10
	baz=100						
OSTC	Ostas	96.02	40	eP	P	23 03 16.3	+0.9
OSTC				ePKKP	PKKPbc	23 20 00.9	-1.0
OSTC				ePKPPKP	P'P'df	23 28 07.1	-5.2
DPC	Dobruska-Polom	96.06	40	eP	P	23 03 16.5	+0.9
DPC				ePKKP	PKKPbc	23 20 00.7	-1.1
DPC				ePKPPKP	P'P'df	23 28 07.0	-5.3
DPC	Dobruska-Polom	96.06	40	eP	P	23 03 16.5	+0.9
NSS	Namsos	96.08	26	⇓iP	P	23 03 16.0	+0.7
NSS				eSKSac	SKSac	23 12 52.4	+0.2
NSS				eSS	SS	23 20 32.4	+0.1
VRAC	Vranov	96.08	41	⇑P	P	23 03 17.2	+1.5
VRAC	Vranov	96.08	41	P	P	23 03 16.6	+0.9
	comp=Z,666nm,1.1s,baz=257,slow=5.5,SNR=18						
VRAC				pP	pP	23 05 30.6	+0.7
	comp=Z,140nm,1.0s,baz=248,slow=6.1,SNR=4.2						
VRAC	Vranov	96.08	41	⇑P	P	23 03 17.2	+1.5
VRAC	Vranov	96.08	41	⇓iPDIFF	P	23 03 16.1	+0.4
VRAC				epP	pP	23 05 29.6	-0.3
VRAC				ePKKP	PKKPbc	23 20 00.7	-1.0
VRAC				e		23 45 15.4	
SCTE	Santa Cesarea	96.09	51	P	P	23 03 16.9	+1.0
SCTE				IAmb	IAmb	23 03 18.2	
	comp=Z,1µm,1.1s						
HFS	Hagfors	96.10	30	P	P	23 03 15.8	+0.3
	comp=Z,120nm,0.6s,baz=132,slow=2.2,SNR=11						
HFS				PKKPbc	PKKPdf	23 19 59.5	-2.4
	comp=Z,34nm,0.7s,baz=66,slow=3.6,SNR=6.0						
KSP	Ksiaz	96.11	40	eP	P	23 03 16.7	+0.9
KSP	Ksiaz	96.11	40	⇓P	P	23 03 16.4	+0.6
IMAR	Indian Mountai	96.18	336	P	P	23 03 15.9	+0.2
LSZ	Lusaka	96.18	107	P	P	23 03 17.1	0.0
LSZ				pmax	pmax		
	comp=Z,1µm,1.7s						
LSZ	Lusaka	96.18	107	P	P	23 03 17.1	0.0
LSZ				IAmb	IAmb	23 03 22.3	
	comp=Z,1µm,1.6s						
ZST	Bratislava	96.25	42	eP	P	23 03 17.1	+0.6
ZST				e		23 05 33.2	
ZST	Bratislava	96.25	42	ePDIFF	P	23 03 17.1	+0.6
ZST	Bratislava	96.25	42	e		23 05 33.2	
EGYH	Egyhazaskeszo	96.30	43	eP	P	23 03 16.9	+0.2
EGYH	Egyhazaskeszo	96.30	43	eP	P	23 03 18.3	+1.6
KRLC	Kraliky	96.31	40	eP	P	23 03 17.5	+0.7
KRLC				ePKKP	PKKPbc	23 19 59.3	-1.8
KRLC				ePKPPKP		23 28 05.8	
KRLC	Kraliky	96.31	40	eP	P	23 03 17.5	+0.7
TREB	Trebinje	96.37	48	eP	P	23 03 17.1	0.0
MODS	Modra-Piesok	96.39	42	eP	P	23 03 17.1	-0.1
MODS	Modra-Piesok	96.39	42	ePDIFF	P	23 03 17.1	-0.1
MODS	Modra-Piesok	96.39	42	e		23 19 58.9	
MPLH	Magyarpolny	96.40	43	eP	P	23 03 17.2	0.0
MPLH	Magyarpolny	96.40	43	eP	P	23 03 18.6	+1.5
MPLH				ePP	pP	23 05 31.4	-0.1
HCY	Herceg Novi	96.43	48	⇓iP	P	23 03 17.6	+0.1
HCY	Herceg Novi	96.43	48	⇓iP	P	23 03 18.2	+0.7
DOB	Doboj	96.46	46	eP	P	23 03 18.8	+1.3
SMOL	Smolenice	96.51	42	eP	P	23 03 18.7	+1.0
SMOL				e		23 05 33.6	
SMOL	Smolenice	96.51	42	ePDIFF	P	23 03 18.7	+1.0
SMOL	Smolenice	96.51	42	e		23 05 33.6	
SMOL	Smolenice	96.51	42	e		23 19 59.4	
BRY	Bratogost	96.53	48	⇓iP	P	23 03 17.9	-0.1
BRY	Bratogost	96.53	48	⇓iP	P	23 03 18.8	+0.8
TIH	Tihany	96.61	44	eP	P	23 03 19.7	+1.6
TIH	Tihany	96.61	44	eP	P	23 03 20.3	+2.2
TIH				ePP	pP	23 05 31.9	-0.4
TTA	Tatalina	96.61	333	Pdiff	P	23 03 17.0	-0.9
	baz=99						
TTA				S	S	23 13 34.3	-12
	baz=99						
BLEU	Blekinge	96.62	34	i P	P	23 03 17.8	-0.1
KOVH	Kovagotottos	96.64	44	eP	P	23 03 18.8	+0.6
KOVH	Kovagotottos	96.64	44	eP	P	23 03 19.5	+1.3
KOVH				ePP	pP	23 05 32.5	-0.1
BUM	Brajici-Budva	96.71	48	⇓iP	P	23 03 19.8	+1.0
JAVC	Velka Javorina	96.72	42	⇓iPDIFF	P	23 03 20.0	+1.4
JAVC				ePKPPKP		23 22 22.3	
JAVC				e		23 45 16.5	
MORC	Moravsky Berou	96.75	41	⇑P	P	23 03 20.2	+1.4
MORC	Moravsky Berou	96.75	41	⇑P	P	23 03 20.2	+1.4
MORC	Moravsky Berou	96.75	41	⇓iPDIFF	P	23 03 19.5	+0.7
MORC				epP	pP	23 05 32.8	-0.3
MORC				ePKKP	PKKPbc	23 19 58.9	-1.0
MORC				e		23 45 18.7	
MORC	Moravsky Berou	96.75	41	⇓P	P	23 03 19.5	+0.7
MORC	Moravsky Berou	96.75	41	P	P	23 03 19.8	+1.0
MORC				IAmb	IAmb	23 03 21.5	
	comp=Z,2µm,1.2s						
CEME	Cevo	96.76	48	⇓iP	P	23 03 19.3	+0.3
NKME	Niksic	96.81	48	⇓iP	P	23 03 20.0	+0.8
STOK	Stokkvaagen	96.82	24	eP	P	23 03 19.2	+0.6
UPM	Unac-Piva	96.83	47	⇓iP	P	23 03 19.8	+0.3
UPM	Unac-Piva	96.83	47	⇓iP	P	23 03 20.6	+1.1
CHGN	Chignik	96.84	326	Pdiff	P	23 03 18.2	-0.6
	baz=98						
CHGN				S	S	23 13 38.3	-10
	baz=98						
NKY	Niksic	96.85	48	⇓iP	P	23 03 20.7	+1.3
NBB40	Tonnes	96.85	24	⇓iP	P	23 03 19.8	+1.1
KONS	Konsvik	96.89	24	eP	P	23 03 19.6	+0.7
DRME	Dracevica, Mon	96.91	48	⇓iP	P	23 03 20.3	+0.7
DRME	Dracevica, Mon	96.91	48	⇓iP	P	23 03 20.8	+1.2
CSKK	Cskako	96.92	43	eP	P	23 03 20.7	+1.3
VLO	Vlora	96.92	50	P	P	23 03 20.3	+0.7
VLO	Vlora	96.92	50	P	P	23 03 20.3	+0.7
VLO				pmax	pmax		
	comp=Z,1µm,1.2s						
VLO	Vlora	96.92	50	P	P	23 03 20.3	+0.7
VLO				IAmb	IAmb	23 05 50.3	
	comp=Z,1µm,1.2s						
ULC	Ulcinj	96.92	49	⇓iP	P	23 03 20.8	+1.1
HAPS	Han Pijesak,Bl	96.98	47	⇓iP	P	23 03 20.5	+0.5
PDG	Podgorica	96.99	48	⇑P	P	23 03 21.1	+1.2
PDG	Podgorica	96.99	48	⇓iP	P	23 03 20.6	+0.7
PDG	Podgorica	96.99	48	⇓P	P	23 03 20.7	+0.7
PDG	Podgorica	96.99	48	IAmb	IAmb	23 03 22.3	
	comp=Z,752nm,1.1s						
PDG				P	P	23 03 20.5	+0.7
TTG	Podgorica	96.99	48	⇓iP	P	23 03 20.1	+0.2
NBB13	Alf Garage	96.99	24	⇓iP	P	23 03 20.3	+1.0
SRO	Srobarova	97.01	43	eP	P	23 03 20.3	+0.5
SRO	Srobarova	97.01	43	ePDIFF	P	23 03 20.3	+0.5
GKP	Gorka Klasztor	97.02	37	eP	P	23 03 21.0	+1.2
GKP	Gorka Klasztor	97.02	37	eP	P	23 03 20.9	+1.2
GKP				eP	PKKPbc	23 19 58.0	-1.2
SRO2	Moca	97.06	43	eP	P	23 03 20.3	+0.2
SRO2				e		23 05 33.6	
SRO2	Moca	97.06	43	ePDIFF	P	23 03 20.3	+0.2
SRO2	Moca	97.06	43	e	pP	23 05 33.6	-0.8
KEK	Kerkira	97.06	51	P	Pdif	23 03 20.4	+0.1
KEK	Kerkira	97.06	51	⇑P	Pdif	23 03 21.1	+0.7
KEK				⇑P	P	23 03 21.3	+1.0
OKC	Ostrava-Krasne	97.15	41	eP	P	23 03 21.3	+0.8
OKC				ePKKP	PKKPbc	23 19 55.5	-3.3
OKC				ePKPPKP		23 28 06.4	
OKC	Ostrava-Krasne	97.15	41	eP	P	23 03 21.3	+0.8
KOLL	Kolacno	97.16	42	ePDIFF	P	23 03 21.7	+1.2
KOLL				e		23 05 35.5	
KOLL				e		23 14 43.3	
KOLL				e		23 19 57.8	
PLE	Pljevlja	97.20	47	⇓iP	P	23 03 21.8	+0.8
NBB30	Finnes	97.21	23	⇓iP	P	23 03 20.8	+0.6
RAC	Raciborz	97.21	40	eP	P	23 03 22.0	+1.3
RAC				ePP	pP	23 05 33.1	-2.0
RAC	Raciborz	97.21	40	eP	P	23 03 22.0	+1.3
RAC				e*PP	pP	23 05 33.1	-2.0
RAC				MLR	MLR		
	comp=Z,27µm,19.7s						
RUDO	Rudo	97.22	47	eP	P	23 03 21.2	+0.2
SRN	Sarande	97.23	51	P	Pdif	23 03 19.8	-1.2
GCSA	Galena City Sc	97.27	334	Pdiff	Pdif	23 03 20.4	-0.2
	baz=98						
NBB17	Glomfjord B¥r	97.27	23	⇓iP	P	23 03 21.4	+0.8
BBLS	Lazići	97.28	47	⇓iP	P	23 03 22.0	+0.7
BLJ	Bijeljina	97.29	46	eP	Pdif	23 03 20.8	-0.4
KEF3	Kipouria, Keph	97.30	53	P	Pdif	23 03 21.1	-0.3
LOF	Lofoten	97.31	22	⇓iP	P	23 03 20.8	+0.1
LOF				IVmB_BB		23 03 22.2	
	comp=Z,5µm,0.9s						
LOF				ePP	PP	23 07 26.9	-1.5
LOF				eSP	SP	23 15 20.6	+1.1
LOF				eSS	SS	23 20 50.7	+1.5
TIR	Tirane	97.31	49	P	P	23 03 22.1	+0.7
TIR	Tirane	97.31	49	P	P	23 03 22.1	+0.7
TIR				pmax	pmax		
	comp=Z,631nm,0.9s						
TIR	Tirane	97.31	49	P	P	23 03 22.1	+0.7
TIR				IAmb	IAmb	23 03 33.5	
	comp=Z,631nm,0.9s						
CHNA	Chernabura Isl	97.31	324	Pdiff	Pdif	23 03 19.9	-1.1
	baz=97						
DMLN	Damoulianata-K	97.32	53	P	P	23 03 21.8	+0.3
NBB05	Inndyr	97.33	23	⇓iP	P	23 03 21.5	+0.7
KEF4	Livadi, Kephal	97.36	53	P	P	23 03 21.8	+0.1
MOR8	Moi Rana	97.37	24	⇓iP	P	23 03 22.0	+1.0
MOR8				IVmB_BB		23 03 24.4	
	comp=Z,11µm,2.7s						
MOR8				eSKSac	SKSac	23 12 57.8	-1.1
MOR8				eSP	SP	23 15 19.1	-1.3
VYHS	Vyhne	97.44	42	eP	P	23 03 22.7	+0.9
VYHS	Vyhne	97.44	42	ePDIFF	P	23 03 22.7	+0.9
VYHS	Vyhne	97.44	42	e	PKKPbc	23 19 56.8	-1.2
BUD	Budapest	97.44	43	eP	Pdif	23 03 21.0	-0.8
BUD	Budapest	97.44	43	eP	P	23 03 23.7	+1.9
BUD				ePP	pP	23 05 35.8	-0.4
IGT	Igoumenitsa	97.44	51	P	P	23 03 22.3	+0.3
TEKS	Tekeris	97.45	46	⇓iP	Pdif	23 03 21.6	-0.3
PSDA	Pessada-Kefalo	97.47	53	P	Pdif	23 03 21.6	-0.5
VLS	Valsamata	97.48	53	P	Pdif	23 03 21.8	-0.4
FSK	Fiskardo	97.49	52	P	Pdif	23 03 22.0	-0.2
IVA	Berane	97.51	48	⇓iP	P	23 03 23.3	+0.9
NBB28	Valnes	97.52	23	⇓iP	P	23 03 22.8	+1.1
PVY	Plav	97.53	48	⇓iP	P	23 03 23.5	+1.0
EVGI	Lefkada island	97.58	52	P	Pdif	23 03 22.7	0.0
LKD2	Lefkada island	97.61	52	P	Pdif	23 03 22.6	-0.2
NBB08	Skaug oppvekst	97.61	23	⇓iP	P	23 03 23.0	+0.9
LTHK	Lithakia	97.62	53	P	Pdif	23 03 22.2	-0.6
FRGS	Fruska Gora	97.72	46	⇓iP	Pdif	23 03 23.0	-0.1
LSK	Leskovik	97.72	51	P	P	23 03 24.1	+0.7
DIVS	Divibare	97.72	47	⇓iP	P	23 03 23.7	+0.4
DIVS	Divibare	97.72	47	⇓P	Pdif	23 03 23.0	-0.3
PHP	Peshkopia	97.78	49	P	Pdif	23 03 23.5	0.0
AFI	Afiamalu	97.79	254	pP	pP	23 05 41.3	+2.7
	comp=Z,435nm,1.0s,baz=234,slow=1.2,SNR=11						
AFI				PKKPbc	PKKPdf	23 20 00.1	+2.7
	comp=Z,68nm,0.8s,baz=291,slow=9.1,SNR=3.8						
JAN	Janina	97.86	51	P	P	23 03 24.7	+0.8
FAUS	Fauske	97.86	23	eP	P	23 03 23.5	+0.3
FAUS				ePP	PP	23 07 32.2	-0.3
FAUS				eSP	SP	23 15 23.3	-2.2
SDPT	Sand Point	97.88	325	Pdiff	Pdif	23 03 23.2	-0.3
	baz=96						
STEI	Steigen	97.92	22	⇓iP	Pdif	23 03 23.3	-0.1
STEI				ePP	PP	23 07 32.1	-0.7
STEI				eSP	SP	23 15 23.7	-2.4
KBN	Korca	97.92	50	P	P	23 03 25.2	+1.0
KBN	Korca	97.92	50	P	P	23 03 25.2	+1.0
KBN				pmax	pmax		
	comp=Z,778nm,1.1s						
KBN	Korca	97.92	50	Pdif	P	23 03 25.2	+1.0
KBN				IAmb	IAmb	23 03 27.0	
	comp=Z,778nm,1.1s						
N2ST	Straumen	97.98	23	⇓iP	P	23 03 24.0	+0.3
OHR	Ohrid	97.98	50	i P	P	23 03 25.4	+0.9
UPP	Uppsala	98.02	31	eP	Pdif	23 03 23.5	-0.6
UPP				eP	PKKPbc	23 19 54.1	-2.6
A21K	Barrow	98.07	341	Pdiff	P	23 03 24.3	+0.2
	baz=97						
PSZ	Piszkesteto	98.08	43	eP	P	23 03 27.1	+2.4
PSZ	Piszkesteto	98.08	43	⇓P	P	23 03 24.9	+0.1
PSZ	Piszkesteto	98.08	43	ePP	Pdif	23 03 20.9	-3.8
NEST	Nestorio	98.09	50	P	P	23 03 25.6	+0.6
PENT	Pentalofos	98.14	51	P	P	23 03 26.3	+1.0
RLS	Riolos of Patr	98.15	53	P	Pdif	23 03 24.9	-0.3
N2IH	Innhavet	98.18	22	⇓iP	P	23 03 25.0	+0.4
PYL	PYLOS	98.24	54	P	Pdif	23 03 24.3	-1.3
OJC	Ojcow	98.25	40	eP	P	23 03 26.4	+1.1
OJC	Ojcow	98.25	40	P	P	23 03 26.5	+1.1
OJC				pmax	pmax		
	comp=Z,813nm,1.2s						
OJC	Ojcow	98.25	40	⇓P	P	23 03 26.4	+1.1
OJC				⇑P	Pdif	23 03 27.2	+1.8
OJC	Ojcow	98.25	40	Pdif	P	23 03 26.5	+1.1
OJC				IAmb	IAmb	23 03 28.2	
	comp=Z,813nm,1.2s						
PVO	Paravola	98.26	52	P	Pdif	23 03 24.7	-1.0
BSZH	Besenyszg	98.26	43	eP	Pdif	23 03 22.5	-2.9
BSZH	Besenyszg	98.26	43	eP	P	23 03 27.7	+2.3
BSZH				ePP	pP	23 05 39.2	-0.7
KPRO	Kipourio	98.28	51	P	P	23 03 26.0	+0.1
DRO	Drossia	98.33	53	P	P	23 03 27.3	+1.2
FNA	Florina	98.38	50	P	Pdif	23 03 25.8	-0.4
FNA	Florina	98.38	50	⇑P	Pdif	23 03 25.6	-0.6
ITM	Ithomi	98.42	54	P	P	23 03 26.7	+0.2
AMBH	Ambrzfalva	98.48	44	⇑P	P	23 03 28.0	+1.6
AMBH	Ambrzfalva	98.48	44	eP	P	23 03 26.8	+0.3
AMBH	Ambrzfalva	98.48	44	eP	P	23 03 28.6	+2.1
AMBH				ePP	pP	23 05 41.5	+0.6
NIE	Niedzica	98.50	41	eP	P	23 03 29.0	+2.4
KBS	Kingsbay	98.51	11	P	P	23 03 27.0	+1.0
KBS				pmax	pmax		
	comp=Z,203nm,1.0s						
KBS	Kingsbay	98.51	11	⇓iP	P	23 03 27.0	+1.0
KBS				IVmBBB		23 03 27.8	
	comp=Z,8µm,5.3s						
KBS				esP	sP	23 06 43.9	+2.1
KBS				eSP	SP	23 15 31.2	-0.8

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KBS                              eSS      SS      23 21 06.7 +1.2
KBS   Kingsbay          98.51  11  Pdif   P       23 03 27.0 +1.0
EVR   Evrytania         98.51  52  P      P       23 03 27.4 +0.4
KECS  Kecovo            98.53  42 eP      P       23 03 27.6 +0.9
KECS                             e                23 05 41.7
KECS  Kecovo            98.53  42 ePDIFF  P       23 03 27.6 +0.9
KECS  Kecovo            98.53  42 e               23 05 41.7
EFP   Efpalio           98.54  52  P      P       23 03 27.4 +0.5
SKO   Skopje            98.55  49 i P     P       23 03 27.1 +0.2
ANX   Ano Chora         98.57  52  P      P       23 03 27.8 +0.6
LAKA  Lakka             98.58  53  P      P       23 03 27.9 +0.7
KZN   Kozani            98.63  51  P      Pdif    23 03 27.3 -0.1
SERG  Sergoula          98.65  53  P      Pdif    23 03 27.5  0.0
TRIZ  Trizonia          98.66  53  P      P       23 03 28.3 +0.8
BANR  Banloc            98.67  45 ⇑P      P       23 03 29.2 +1.9
KLV   Kalavryta, Ach    98.69  53  P      Pdif    23 03 27.7  0.0
THL   Klokotos Trika    98.74  51  P      Pdif    23 03 27.2 -0.6
TIM   Timisoara         98.76  45 ⇑P      P       23 03 30.4 +2.6
MAKR  Makrakomi, Fth    98.77  52  P      Pdif    23 03 27.4 -0.6
GUR   Goura             98.83  53  P      Pdif    23 03 27.9 -0.5
AGG   Agios Georgios    98.93  52  P      Pdif    23 03 28.4 -0.3
HSPB  Hornsund (broa    99.02  13 eP      Pdif    23 03 28.8 +0.6
HSPB  Hornsund (broa    99.02  13 eP      Pdif    23 03 28.7 +0.6
MDVR  Moldovita         99.02  46 ⇓P      Pdif    23 03 28.9 -0.1
BEL   Belsk             99.03  39 eP      Pdif    23 03 30.0 +1.2
BEL   Belsk             99.03  39 ⇓P      Pdif    23 03 29.0 +0.3
BEL                               ⇓P      Pdif    23 03 31.1 +2.4
BZS   Buzias            99.03  45 ⇑P      Pdif    23 03 30.7 +1.8
BZS   Buzias            99.03  45 ⇑P      PKKPbc  23 19 51.4 -2.0
BZS   Buzias            99.03  45 ⇑P      Pdif    23 03 30.7 +1.8
THAL  Thalero           99.09  53  P      Pdif    23 03 28.9 -0.5
SIRR  Siria             99.12  45 ⇑P      Pdif    23 03 30.9 +1.6
GRG   Griva             99.17  50  P      Pdif    23 03 29.8 +0.1
VLI   Veliai            99.18  54  P      Pdif    23 03 30.4 +0.6
KTHR  Kythira           99.19  55  P      Pdif    23 03 29.5 -0.4
CRVS  Cervenica-Dubn    99.21  42 eP      Pdif    23 03 30.5 +0.8
CRVS  Cervenica-Dubn    99.21  42 ePDIFF  Pdif    23 03 30.5 +0.8
CRVS  Cervenica-Dubn    99.21  42 ePP     PP      23 07 36.0 -7.1
AAL   Aland             99.23  30 eP      Pdif    23 03 29.1 -0.4
KTHA  Kythira Island    99.23  55  P      Pdif    23 03 30.3 +0.2
SPA0  Spitsbergen Ar    99.30  12⇓iP      Pdif    23 03 29.4 -0.1
SPA0                              eSP     SP      23 15 41.9 +1.4
SPITS Spitsbergen Ar    99.30  12  P      Pdif    23 03 30.1 +0.6
      comp=Z,238nm,0.9s,baz=153,slow=5.6,SNR=8.4
SPITS                              PKKPbc PKKPbc  23 19 50.8 -2.8
      comp=Z,60nm,0.5s,baz=79,slow=7.5,SNR=15
SPITS Spitsbergen Ar    99.30  12  P      Pdif    23 03 30.1 +0.6
SPITS                              pmax   pmax
      comp=Z,431nm,1.0s
SPB2  Spitsbergen Ar    99.31  12         Pdif    23 03 29.8 +0.3
LTK   Loutraki          99.33  53  P      Pdif    23 03 29.8 -0.7
VAY   Valandovo         99.33  50 i P     Pdif    23 03 30.7 +0.4
ANKY  Antikythira Is    99.39  55  P      Pdif    23 03 30.3 -0.4
EPID  Epidavros         99.41  53  P      Pdif    23 03 30.6 -0.2
KRND  KRANIDI           99.41  54  P      Pdif    23 03 29.9 -0.9
TRO   Tromso            99.41  21⇓iP      Pdif    23 03 30.6 +0.6
TRO                                IVmB_BB        23 03 34.9
      comp=Z,7μm,0.9s
TRO                               epP     pP      23 05 45.8 +1.1
TRO                               eSP     SP      23 15 43.9 +2.1
LKR   Lokris            99.41  52  P      Pdif    23 03 30.3 -0.5
ATAL  Atalanti          99.43  52  P      Pdif    23 03 30.2 -0.7
FALS  False Pass        99.52 324  Pdiff  Pdif    23 03 30.4 -0.4
      baz=94
HERR  Herculane         99.53  46 ⇑P      PKKPbc  23 19 51.2 -0.8
KNT   Kendrikon         99.56  50  P      Pdif    23 03 31.9 +0.5
THE   Thessaloniki      99.57  50  P      Pdif    23 03 31.6 +0.2
VILL  Villia            99.61  53  P      Pdif    23 03 31.0 -0.8
XOR   Xorichti          99.63  52  P      Pdif    23 03 30.8 -1.0
KNDR  Palaiochora Ch    99.64  56  P      Pdif    23 03 31.8  0.0
NEO   Neokhori          99.65  52  P      Pdif    23 03 31.6 -0.3
HORT  Hortiatis         99.67  50  P      Pdif    23 03 31.9 -0.1
BJO1  Bjornoya          99.70  16⇓iP      Pdif    23 03 31.8 +0.6
BJO1                              eSP     SP      23 15 47.2 +2.6
PUNG  Punghina          99.85  47 ⇑P      PKKPbc  23 19 49.9 -1.2
TRPA  Tarpa             99.86  43 ⇑P      Pdif    23 03 34.0 +1.4
TRPA  Tarpa             99.86  43 eP      Pdif    23 03 32.8 +0.3
TRPA  Tarpa             99.86  43 eP      Pdif    23 03 34.5 +1.9
TRPA                              ePP     pP      23 05 45.1 -2.1
SOH   Sokhos            99.88  50  P      Pdif    23 03 32.5 -0.4
PLG   Polygyros         99.91  51  P      Pdif    23 03 33.5 +0.5
ATH   Athens Observa    99.91  53  P      Pdif    23 03 32.9 -0.1
GVD   Gavdhos           99.92  56  P      Pdif    23 03 33.4 +0.2
JETT  Jettan, Norway    99.93  21 eP      Pdif    23 03 33.6 +1.2
VTS   Vitosha           99.94  48 ⇓P      PKKPbc  23 19 49.8 -1.3
VLY   Voula,Athens      99.96  53  P      Pdif    23 03 32.6 -0.7
ATHU  Athens Univers    99.97  53  P      Pdif    23 03 32.7 -0.6
RDOG  Red Dog Mine      99.98 338  Pdiff  Pdif    23 03 32.3 -0.3
      baz=92
PBUR  Paburge           99.99  35 eP      Pdif    23 03 33.0  0.0
PBUR                              eP      PKKPbc  23 19 50.0 -1.1
PTL   Penteli          100.04  53  P      Pdif    23 03 33.5 -0.1
PAIG  Paliouri         100.05  51  P      Pdif    23 03 33.1 -0.5
KWP   Kalwaria Pacla   100.08  41 eP      Pdif    23 03 34.8 +1.3
KWP   Kalwaria Pacla   100.08  41 ⇑P      Pdif    23 03 35.0 +1.5
SRS   Serrai           100.08  50  P      Pdif    23 03 32.9 -0.8
DION  Dionisos Attik   100.09  53  P      Pdif    23 03 33.6 -0.3
BAIL  Bailesti         100.12  47  P      Pdif    23 03 34.1 +0.3
BAIL  Bailesti         100.12  47 ⇑P      PKKPbc  23 19 50.5 +0.2
KYMI  Kymi, Euboea I   100.27  52  P      Pdif    23 03 33.5 -1.1
SLIT  Slitere, Latvi   100.27  33 eP      Pdif    23 03 32.7 -1.4
SLIT                              eP      PKKPbc  23 19 48.2 -2.1
NVR   Nevrokopi        100.30  50  P      Pdif    23 03 34.2 -0.6
OUR   Ouranopolis      100.32  51  P      Pdif    23 03 34.4 -0.3
URZ   Urewera          100.38 228  PKiKP  PKiKP   23 07 57.9 -0.1
      comp=Z,114nm,1.1s,baz=317,slow=8.1,SNR=2.9
URZ                                S      SKSac   23 13 14.3 -0.7
      comp=Z,20nm,0.7s,baz=294,slow=22,SNR=1.5
URZ                                PKKPbc PKKPbc  23 19 47.1 -2.5
      comp=Z,154nm,0.7s,baz=209,slow=4.2,SNR=16
KARY  Karystos         100.48  53  P      Pdif    23 03 34.9 -0.7
LOT   Lotru            100.53  46 ⇑P      PKKPbc  23 19 47.9 -1.5
SUW   Suwalki          100.61  37 eP      Pdif    23 03 36.0 +0.3
SUW   Suwalki          100.61  37 eP      Pdif    23 03 35.8  0.0
SUW                               eP      PKKPbc  23 19 47.8 -1.6
SUW   Suwalki          100.61  37 ⇓P      Pdif    23 03 36.3 +0.6
IDI   Anoyia           100.62  56  P      Pdif    23 03 36.2 -0.1
      comp=Z,534nm,0.9s,baz=285,slow=6.7,SNR=10
IDI                                PKiKP  PKiKP   23 07 59.6 +1.0
      comp=Z,320nm,0.9s,baz=202,slow=1.6,SNR=6.7
IDI                                S      SKSac   23 13 15.7 -0.6
      comp=Z,131nm,1.1s,baz=113,slow=22,SNR=8.4
IDI                                PKPPKP         23 28 02.0
      comp=Z,24nm,0.9s,baz=167,slow=9.3,SNR=4.4
IDI   Anoyia           100.62  56  P      Pdif    23 03 36.3 -0.1
SKY   Skiros Island    100.64  52  P      Pdif    23 03 36.4 +0.1
KAVA  Kavala           100.77  50  P      Pdif    23 03 36.7 -0.1
ANM   Nome             100.89 334  Pdiff  Pdif    23 03 37.2 +0.4
      baz=90
THAS  Thassos island   100.90  50  P      Pdif    23 03 37.3  0.0
KTK1  Kautokeino       100.92  21⇓iP      Pdif    23 03 37.4 +0.6
ARCR  ARCALIA          101.03  44  P      Pdif    23 03 39.9 +2.1
ARCR  ARCALIA          101.03  44 ⇑P      PKKPbc  23 19 48.2 +0.3
TETE  Tete             101.04 109 eP      SP      23 15 50.0  -11
HAMF  Hammerfest       101.06  20⇓iP      Pdif    23 03 37.5 +0.1
HAMF                              ePP     PP      23 07 53.8 -2.4
MTSE  Matsula          101.11  32 eP      Pdif    23 03 38.0 +0.2
MTSE                              eP      PKKPbc  23 19 45.9 -2.1
PABE  Paberze          101.12  35 eP      Pdif    23 03 38.0 +0.1
PABE                              eP      PKKPbc  23 19 46.8 -1.1
PABE  Paberze          101.12  35  Pdif   Pdif    23 03 39.2 +1.2
ARR   Arges            101.13  46  P      Pdif    23 03 39.7 +1.3
SANT  Santorini        101.17  55 ⇓P      PKKPbc  23 19 44.3 -2.8
HOPEN Hopen            101.19  14⇓iP      Pdif    23 03 37.8 -0.1
HOPEN                              IVmB_BB        23 03 41.7
      comp=Z,5μm,2.6s
HOPEN                             ePP     PP      23 07 54.2 -2.9
HOPEN                             eSS     SS      23 21 35.4 -6.8
LIA   Limnos Island    101.20  51  P      Pdif    23 03 38.5 -0.2
UNV   Unalaska Valle   101.27 323  Pdiff  Pdif    23 03 38.3 -0.3
      baz=92
APE   Apeiranthos      101.28  54 ⇑P      PKKPbc  23 19 45.9 -1.0
APE   Apeiranthos      101.28  54  P      Pdif    23 03 38.0 -1.2
STFAR Stefanesti-Arg   101.33  46 ⇑P      PKKPbc  23 19 46.6 -0.4
VOIR                   101.42  46 ⇓P      Pdif    23 03 41.2 +1.5
COPA  Copaceanca       101.48  47 ⇑P      PKKPbc  23 19 46.1 -0.4
SMTH  Samothraki Isl   101.50  51  P      Pdif    23 03 38.8 -1.3
MBAR  Mbarara          101.54  93 eP      SP      23 15 47.0  -20
RDO   Rodhopi          101.55  50  P      Pdif    23 03 39.8 -0.4
RDO   Rodhopi          101.55  50 ⇓P      Pdif    23 03 40.6 +0.4
STIA  Sitia Lasithi    101.59  56  P      Pdif    23 03 40.8 +0.2
BUR08 Bucovina Ar. S   101.62  43  Pdif   Pdif    23 03 40.8 +0.2
BURAR Bucovina Array   101.64  43 ⇑P      PKKPbc  23 19 46.4  0.0
BURAR                             ⇓P      PKKPdf  23 19 47.9 -3.7
BURAR Bucovina Array   101.64  43  Pdif   Pdif    23 03 40.6  0.0
SIGR  SIGRI            101.68  52  P      Pdif    23 03 40.6 -0.2
ARA0  ARCESS Array S   101.72  21⇓iP      Pdif    23 03 40.6 +0.3
ARCES ARCESS Array B   101.72  21  P      Pdif    23 03 40.6 +0.2
      comp=Z,429nm,0.8s,baz=269,slow=4.2,SNR=28
ARCES                              PKiKP  PKiKP   23 07 59.2 -0.3
      comp=Z,146nm,1.0s,baz=282,slow=4.5,SNR=3.7
ARCES                              PKKPbc PKKPbc  23 19 44.1 -2.5
      comp=Z,39nm,0.4s,baz=130,slow=2.1,SNR=17
ARCES                              SKKPbc SKKPbc  23 22 35.1 +4.3
      comp=Z,30nm,0.7s,baz=103,slow=3.1,SNR=3.7
ARCES                              PKPPKP         23 27 54.8
      comp=Z,15nm,0.8s,baz=157,slow=0.7,SNR=4.6
GADA  Gvkgeada         101.77  51  P      Pdif    23 03 41.0 -0.2
CHOS  Chios island     101.78  53  P      Pdif    23 03 41.3 -0.1
NNZ   Nelson           101.86 224  Pdif   Pdif    23 03 44.1 +2.4
ALN   Alexandroupoli   101.92  50  P      Pdif    23 03 41.6 -0.3
THZ   Tophouse         101.96 223  Pdif   Pdif    23 03 44.4 +2.2
PRK   Paraskevi        102.00  52  P      Pdif    23 03 43.0 +0.7
MLR   Muntele Rosu     102.06  46 ⇑P      Pdif    23 03 43.0 +0.4
MLR   Muntele Rosu     102.06  46  P      Pdif    23 03 43.2 +0.6
      comp=Z,174nm,0.8s,baz=180,slow=5.9,SNR=5.8
MLR                                PKiKP  PKiKP   23 08 00.6 -0.4
      comp=Z,235nm,1.0s,baz=320,slow=3.6,SNR=3.0
MLR                                PKKPbc PKKPbc  23 19 44.2 -0.9
      comp=Z,72nm,0.8s,baz=158,slow=5.7,SNR=9.0
MLR                                PKPPKP         23 27 55.3
      comp=Z,50nm,1.2s,baz=178,slow=9.3,SNR=3.9
EZN   Ezine            102.08  51  P      Pdif    23 03 41.7 -0.9
KEV   Kevo             102.23  21  P      Pdif    23 03 42.6  0.0
KEV   Kevo             102.23  21 ⇓P      Pdif    23 03 43.1 +0.5
KEV   Kevo             102.23  21  Pdif   Pdif    23 03 42.6  0.0
FINES FINESS Array B   102.24  29  P      Pdif    23 03 44.3 +1.5
      comp=Z,109nm,1.0s,baz=228,slow=1.7,SNR=2.9
FINES                              PKiKP  PKiKP   23 08 01.0 +0.4
      comp=Z,143nm,1.0s,baz=260,slow=5.6,SNR=5.3
FINES                              PKKPbc PKKPbc  23 19 40.7 -4.2
      comp=Z,70nm,0.5s,baz=83,slow=3.5,SNR=19
FINES                              PKPPKP         23 27 56.4
      comp=Z,41nm,0.7s,baz=90,slow=4.2,SNR=15
FINES FINESS Array B   102.24  29  Pdif   Pdif    23 03 43.5 +0.7
FIA1  FINESS Array S   102.24  29  Pdif   Pdif    23 03 44.3 +1.5
SULR                   102.25  46 ⇑P      PKKPbc  23 19 44.4 +0.1
ISAL  Salakas          102.35  35 eP      Pdif    23 03 43.9 +0.5
ISAL                              eP      PKKPbc  23 19 43.1 -1.3
SMG   Samos            102.36  54  P      Pdif    23 03 42.3 -1.6
BLCB  Balcova          102.56  53  P      Pdif    23 03 44.8  0.0
TESR  Tescani          102.58  45 ⇓P      PKKPbc  23 19 43.1 -0.4
QRZ   Quartz Range     102.61 224  Pdif   Pdif    23 03 46.8 +1.7
VSU   Vasula           102.64  32 eP      Pdif    23 03 44.4 -0.2
VSU                               eP      PKKPbc  23 19 42.5 -1.1
NIKH  Nikolski High    102.67 322  Pdiff  Pdif    23 03 44.2 -0.7
      baz=90
BODT  Bodrum           102.70  54  P      Pdif    23 03 44.8 -0.7
ZOMB  Zomba            102.88 108 eP      SP      23 15 50.1  -31
ARG   Arkhangelos      103.31  55  P      Pdif    23 03 47.6 -0.6
MNK   Minsk            103.37  36 i PP    PP      23 08 12.8 -0.8
MNK   Minsk            103.37  36 i SS    SS      23 22 14.7 +1.9
SPIA  Saint Paul Isl   103.39 326  Pdiff  Pdif    23 03 48.1 +0.1
      baz=88
TLBR  Topalu           103.52  47 ⇑P      PKKPbc  23 19 39.6 -1.0
GAMB  Gambell          103.69 333  Pdiff  Pdif    23 03 48.9 -0.3
      baz=85
SORM  Soroca           103.75  43 ⇑P      PKKPbc  23 19 38.8 -1.2
TIRR  Tirgusor         103.78  47 ⇓P      PKKPbc  23 19 39.0 -0.8
MFTR  Murfatlar        103.78  47 ⇑P      PKKPbc  23 19 39.7 -0.1
CASY  Casey            103.81 181  Pdif   Pdif    23 03 51.4 +1.6
MILM  Milestii Mici    104.07  44 eP      Pdif    23 03 50.0 -1.3
MILM                              e               23 13 37.0
KIS   Kishinev         104.08  44 eP      Pdif    23 03 51.0 -0.3
      comp=Z,2μm,7.7s
KIS                               epP     pPdif   23 06 01.0 -4.8
KIS                               esP     sPdif   23 07 07.0  0.0
KIS                               eSKS            23 13 35.0
KIS                               eSKKS   SKKSac  23 13 57.0  -22
KIS   Kishinev         104.08  44 eP      Pdif    23 03 51.0 -0.3
KIS                               e               23 13 25.0
KIS                                pmax   pmax
      comp=Z,2μm,7.7s
AKASG Malin Array Be   104.29  40  PKiKP  PKiKP   23 08 04.3 -0.3
      comp=Z,67nm,0.5s,baz=273,slow=2.8,SNR=20
AKASG                              Sdiff          23 13 30.9
      comp=Z,111nm,1.1s,baz=260,slow=5.8,SNR=7.5
AKASG                              PKKPbc PKKPbc  23 19 37.1 -1.4
      comp=Z,18nm,0.4s,baz=72,slow=3.7,SNR=19
AKASG                              SKKPbc SKKPbc  23 22 19.9 -3.0
      comp=Z,8.7nm,0.5s,baz=69,slow=3.4,SNR=4.1
AKASG                              PKPPKP         23 27 50.1
      comp=Z,2.8nm,0.6s,baz=77,slow=2.3,SNR=4.5
PUL   Pulkovo          104.42  31 eP      PKKPbc  23 19 36.5 -1.9
PURM  Purcari          104.81  45  P      PKKPbc  23 19 35.9 -0.9
APA   Apatity          104.81  23⇓iP      Pdif    23 03 54.1  0.0
APA                               i               23 13 38.0
APA                               i               23 14 48.0
APA                               i SS    SS      23 22 48.0  +17
APA                                pmax   pmax
      comp=Z,141nm,0.9s
LVZ   Lovozero         105.22  22  P      Pdif    23 03 56.6 +0.6
LVZ   Lovozero         105.22  22  Pdif   Pdif    23 03 56.6 +0.6
DODT  Dodoma, Tanzan   105.37  99 eP      PKiKP   23 08 16.7 +8.7
DODT                              i P     pPdif   23 06 07.0 -5.5
MSVF  Nonsavu          106.34 248  PKiKP  PKiKP   23 08 09.8 +0.3
      comp=Z,64nm,0.8s,baz=128,slow=8.2,SNR=3.1
MSVF                               PKKPbc PKKPbc  23 19 33.1 +1.4
      comp=Z,83nm,0.8s,baz=244,slow=6.0,SNR=8.5
BRTR  Keskin Array B   107.71  52  PKiKP  PKiKP   23 08 11.6  0.0
      comp=Z,16nm,0.5s,baz=205,slow=33,SNR=10
BRTR                               PKKPbc PKKPbc  23 19 27.4 -0.6
      comp=Z,36nm,0.8s,baz=140,slow=4.7,SNR=9.7
KMBO  Kilima Mbogo     107.85  94  PKiKP  PKiKP   23 08 12.8 +0.1
      comp=Z,37nm,1.0s,baz=234,slow=8.0,SNR=3.7
KMBO                               PKKPbc PKKPbc  23 19 28.0 +0.9
      comp=Z,39nm,0.8s,baz=63,slow=5.3,SNR=7.8
KMBO  Kilima Mbogo     107.85  94  PKiKP  PKiKP   23 08 12.0 -0.7
DEBR  School, Debre    108.12  82 i P     pPdif   23 06 28.4 +3.4
OBN   Obninsk          108.33  35  P      PKKPbc  23 19 23.8 -2.6
OBN   Obninsk          108.33  35  PKiKP  PKiKP   23 08 12.5 +0.4
      comp=Z,62nm,0.4s,baz=68,slow=1.7,SNR=20
OBN                                PKKPbc PKKPbc  23 19 24.6 -1.8
      comp=Z,29nm,0.7s,baz=37,slow=3.4,SNR=8.0
OBN                                PKPPKP         23 27 47.1
      comp=Z,15nm,0.9s,baz=120,slow=5.8,SNR=5.2
KLMR  Klimovskoe       108.77  29 eP      Pdif    23 04 16.8 +4.9
KLMR                              e               23 09 02.6
KLMR                               pmax   pmax
      comp=Z,295nm,1.3s
KLMR  Klimovskoe       108.77  29 ePdif   Pdif    23 04 16.9 +5.0
KLMR                               AMP            23 04 29.6
      comp=Z,295nm,1.3s
KLMR                              ePKiKP  PKiKP   23 08 12.7  0.0
KLMR                              ePP     PP      23 09 02.6  +10
KLMR                              eSdif   Sdif    23 15 47.9  +20
KLMR                              eSdif   Sdif    23 15 47.9  +20
KLMR                              ePKKPbc PKKPbc  23 19 19.6 -5.6
KLMR                              ePKKP   PKKPdf  23 19 34.3 -4.2
KLMR                              eSKKPbc SKKPbc  23 21 51.8  -19
MOS   Moscow           108.82  34 i P     Pdif    23 04 07.2 -5.0
MOS                               ePPP    PPP     23 11 20.6
MOS                               eSSS    SSS     23 27 40.0
EIL   Elat             108.83  62  PKiKP  PKiKP   23 08 14.6 +0.8
      comp=Z,96nm,0.7s,baz=144,slow=1.6,SNR=24
EIL                                SKiKP  SKiKP   23 10 52.2 +1.0
      comp=Z,84nm,0.8s,baz=151,slow=1.6,SNR=7.2
EIL                                PKKPbc PKKPbc  23 19 24.3 +0.3
      comp=Z,25nm,1.1s,baz=160,slow=6.8,SNR=4.6
MMAI  Mount Meron Ar   109.24  59  PKiKP  PKiKP   23 08 15.3 +0.7
      comp=Z,101nm,0.6s,baz=69,slow=4.6,SNR=33
MMAI                               SKiKP  SKiKP   23 10 54.6 +2.6
      comp=Z,82nm,0.7s,baz=43,slow=2.6,SNR=7.4
MMAI                               PKKPbc PKKPbc  23 19 20.7 -2.3
      comp=Z,16nm,0.4s,baz=90,slow=4.4,SNR=24
ANN   Anapa            110.20  46d iP     Pdif    23 04 17.9 -0.7
ANN                               i               23 08 15.6
ANN                               i               23 08 59.6
ANN                               ePPP    PPP     23 11 26.9
ANN                               e               23 13 57.9
ANN                               ePS     SP      23 17 29.3 -1.7
ANN                               eSS     SS      23 23 47.9 +3.6
ANN                                pmax   pmax
      comp=Z,303nm,0.7s
VSR   Storozhevoye     110.49  39 ePKIKP  PKiKP   23 08 16.0 -0.3
VSR                               e               23 14 00.1
VSR                                pmax   pmax
      comp=Z,400nm,0.6s
ASF   Jabal al Asfar   110.51  59  PKiKP  PKiKP   23 08 17.8 +0.7
      comp=Z,215nm,0.9s,baz=196,slow=1.1,SNR=31
ASF                                SKiKP  SKiKP   23 10 56.1 +1.6
      comp=Z,147nm,0.9s,baz=12,slow=4.0,SNR=7.9
ASF                                PKKPbc PKKPbc  23 19 19.1 +0.2
      comp=Z,17nm,0.8s,baz=0.7,slow=1.2,SNR=7.5
ASF                                PKKP   PKKPdf  23 19 33.8 -0.9
      comp=Z,87nm,0.8s,baz=67,slow=2.2,SNR=10
VORD  Divnogorie       110.61  39 ePKIKP  PKiKP   23 08 15.3 -1.2
VORD                              e               23 14 01.0
VORD                               pmax   pmax
      comp=Z,160nm,0.7s
PRGR  Permogore        111.39  27 i PKIKP PKiKP   23 08 18.1 +0.5
PRGR                              e               23 14 00.3
PRGR                               pmax   pmax
      comp=Z,416nm,0.8s
SOC   Sochi            111.97  47 i PKIKP PKiKP   23 08 19.2 -0.1
SOC                               e               23 09 15.0
SOC                               e               23 10 37.9
SOC                               ePPP    PPP     23 11 39.2
SOC                               ePS     PS      23 18 52.8 -7.4
SOC                                pmax   pmax
      comp=Z,463nm,0.7s
VRH   Novokhopyorsk    112.07  39 ePKIKP  PKiKP   23 08 19.3  0.0
VRH                                pmax   pmax
      comp=Z,630nm,1.2s
KIV   Kislovodsk       114.04  46 i PKIKP PKPdf   23 08 23.0 -0.4
KIV                               e               23 09 27.8
KIV                               eSS     SS      23 24 31.6 -3.2
KIV                                pmax   pmax
      comp=Z,320nm,1.0s
SHA1  Shidzhatmaz      114.06  47 i PKIKP PKPdf   23 08 23.3 -0.3
GOF   Gofitskoye       114.11  45⇑ePKIKP  PKiKP   23 08 24.1 +0.7
GOF                                pmax   pmax
      comp=Z,756nm,0.9s
KBZ   Khabaz           114.23  47  PKP    PKiKP   23 08 24.3 +0.7
      comp=Z,378nm,0.6s,baz=219,slow=3.7,SNR=28
KBZ                                SKiKP  SKiKP   23 11 04.1 +2.8
      comp=Z,239nm,0.9s,baz=272,slow=1.9,SNR=4.1
KBZ                                PKKPbc PKKPbc  23 19 04.8 -2.2
      comp=Z,40nm,0.9s,baz=339,slow=2.5,SNR=5.1
KIRV  Kirov            114.23  30  PKP    PKiKP   23 08 23.2  0.0
      comp=Z,657nm,0.6s,baz=316,slow=0.5,SNR=48
KIRV                               PKKPbc PKKPbc  23 19 04.9 -2.5
      comp=Z,55nm,0.4s,baz=148,slow=1.0,SNR=12
OUENC Ouen Island, N   114.68 240  PKPdf  PKiKP   23 08 25.3 +0.2
SIRT  Sirnak           114.74  53  PKPdf  PKiKP   23 08 25.4 +0.4
NCK   Nalchik          114.77  47 i PKIKP PKiKP   23 08 25.2 +0.4
KARS  Kars             114.84  50  PKIKP  PKiKP   23 08 26.1 +1.0
KARS  Kars             114.84  50  PKPdf  PKiKP   23 08 26.1 +1.0
LIFNC LIFOU            114.97 241  PKPdf  PKiKP   23 08 26.0 +0.2
ONTNC Ouen Toro        115.05 240  PKPdf  PKiKP   23 08 26.4 +0.5
ZEI   Tsey             115.11  47 i PKIKP PKiKP   23 08 26.0 +0.3
ZEI                                pmax   pmax
      comp=Z,117nm,0.8s
DZM   Mont Dzumac      115.15 240  PKP    PKiKP   23 08 27.6 +1.3
      comp=Z,132nm,0.7s,baz=228,slow=5.2,SNR=19
DZM                                PKKPbc PKKPbc  23 19 03.4 -0.3
      comp=Z,80nm,1.0s,baz=318,slow=0.8,SNR=6.3
DZM   Mont Dzumac      115.15 240  PKPdf  PKiKP   23 08 26.7 +0.4
ATD   Arta Tunnel      115.23  82  PKP    PKiKP   23 08 28.6 +2.2
      comp=Z,386nm,1.0s,baz=255,slow=1.8,SNR=28
ATD                                PKKPbc PKKPbc  23 19 02.1 -0.9
      comp=Z,21nm,0.9s,baz=116,slow=13,SNR=2.0
ATD   Arta Tunnel      115.23  82  PKPdf  PKiKP   23 08 27.7 +1.2
BELG  Belogornoye      115.33  36  PKP    PKiKP   23 08 25.5  0.0
      comp=Z,986nm,0.9s,baz=349,slow=1.1,SNR=17
BELG                               PKKPbc PKKPbc  23 19 01.3 -2.3
      comp=Z,250nm,0.8s,baz=270,slow=1.8,SNR=16
TARA  Tarawa           115.81 267  PKPdf  PKiKP   23 08 27.9 +0.3
GNI   Garni            116.17  50  PKP    PKiKP   23 08 28.5 +0.7
      comp=Z,402nm,0.6s,baz=300,slow=1.9,SNR=45
GNI   Garni            116.17  50  PKiKP  PKiKP   23 08 28.5 +0.7
GNI   Garni            116.17  50  PKPdf  PKiKP   23 08 27.9 +0.2
GROC  Groznyy          116.40  47 i PKIKP PKPdf   23 08 27.6 -0.3
GROC                              e               23 09 45.7
GROC                              e               23 10 45.1
GROC                              ePS     PS      23 19 31.2 -8.6
GROC                               pmax   pmax
      comp=Z,358nm,0.6s
LHI   Lord Howe Isla   116.62 227  PKPdf  PKiKP   23 08 29.1 +0.4
TAU   Tasmania Unive   116.65 211  PKIKP  PKiKP   23 08 28.6 +0.2
TAU   Tasmania Unive   116.65 211  PKPdf  PKiKP   23 08 28.6 +0.2
SANVU Saraoutou        116.92 247  PKPdf  PKPdf   23 08 28.3 -1.3
TIXI  Tiksi            117.30 353  PKKPbc PKKPbc  23 18 54.3 -3.0
      comp=Z,183nm,0.6s,baz=75,slow=0.8,SNR=11
TIXI  Tiksi            117.30 353  PKIKP  PKPdf   23 08 28.6 -0.1
TIXI  Tiksi            117.30 353  PKPdf  PKPdf   23 08 28.6 -0.1
MAK   Makhachkala      117.68  47 i P     Pdif    23 04 52.7 +0.8
MAK                               i               23 08 30.3
MAK                               e               23 09 52.6
MAK                               e               23 10 49.6
MAK                               ePPP    PPP     23 12 32.0
MAK                               e               23 14 27.7
MAK                               ePS     PS      23 19 56.3 +5.3
MAK                               eSS     SS      23 25 25.0 +3.7
MAK                                pmax   pmax
      comp=Z,688nm,0.6s
RAYN  Ar Rayn          118.29  69 i PKiKP PKiKP   23 08 32.5 +0.3
      SNR=47
RAYN  Ar Rayn          118.29  69  PKIKP  PKiKP   23 08 32.5 +0.3
RAYN  Ar Rayn          118.29  69  PKPdf  PKiKP   23 08 32.5 +0.3
NRIK  Noril'sk         119.24   9  PKP    PKiKP   23 08 32.8 +0.2
      comp=Z,161nm,0.9s,baz=106,slow=4.4,SNR=8.7
NRIK                               PKKPbc PKKPbc  23 18 47.5 -2.8
      comp=Z,378nm,0.7s,baz=101,slow=5.8,SNR=14
RER   Riviere de l'E   119.24 121  PKPdf  PKiKP   23 08 34.7 +0.5
MIB   Mutribah         119.59  62 eP      PKPdf   23 08 34.1 -0.3
ARU   Arti             119.61  29  PKP    PKiKP   23 08 33.9 +0.2
      comp=Z,335nm,0.6s,baz=306,slow=2.1,SNR=52
ARU                                PKKPbc PKKPbc  23 18 46.7 -2.0
      comp=Z,10nm,0.3s,baz=359,slow=0.9,SNR=9.3
ARU   Arti             119.61  29 i PKIKP PKiKP   23 08 33.9 +0.2
ARU                                               23 10 06.0
ARU                                PPP    PPP     23 12 48.4
ARU                                               23 14 49.2
ARU                                SP     SP      23 18 54.9 -0.3
ARU                                SS     SS      23 25 50.9 +6.1
RDF   Al-Radifah       119.85  62 eP      PKPdf   23 08 34.5 -0.5
UMR   Umm Al-Rimmam119.94  62 eP          PKPdf   23 08 34.7 -0.4
KBD   Kabd             119.95  62 eP      PKPdf   23 08 34.3 -0.8
QRN   Al-Qurain        120.19  63 eP      PKPdf   23 08 35.5 -0.1
SVE   Sverdlovsk       120.40  28c iPKIKP PKiKP   23 08 35.5 +0.2
SVE                                pmax   pmax
      comp=Z,407nm,0.9s
CAN   Canberra         121.04 218  PKIKP  PKiKP   23 08 37.4 +0.1
CAN   Canberra         121.04 218  PKPdf  PKiKP   23 08 37.4 +0.1
TOO   Toolangi         121.49 214  PKIKP  PKiKP   23 08 38.5 +0.4
TOO   Toolangi         121.49 214  PKPdf  PKiKP   23 08 38.5 +0.4
PET   Petropavlovsk    121.55 327 i PKIKP PKPdf   23 08 37.2 -0.2
PET                               e               23 10 22.5
PET                               eSP     SP      23 19 09.7 -2.8
PET                               eSS     SS      23 26 05.7 -3.7
PET                                pmax   pmax
      comp=Z,830nm,0.8s
PET                                pmax   pmax
      comp=Z,23μm,13.2s
PET   Petropavlovsk    121.55 327  PKPdf  PKPdf   23 08 37.2 -0.2
MA2   Magadan          121.56 337  PKIKP  PKPdf   23 08 37.2 -0.1
MA2   Magadan          121.56 337  PKPdf  PKPdf   23 08 37.2 -0.1
PEA0B Petropavlovsk-   122.02 328  PKIKP  PKiKP   23 08 38.7 +0.1
PEA0B Petropavlovsk-   122.02 328  PKPdf  PKiKP   23 08 38.7 +0.1
PETK  Petropavlovsk-   122.02 328  PKP    PKiKP   23 08 38.8 +0.2
      comp=Z,270nm,0.7s,baz=162,slow=2.1,SNR=20
PETK                               PKKPbc PKKPbc  23 18 39.3 -0.6
      comp=Z,99nm,0.8s,baz=214,slow=15,SNR=13
PETK  Petropavlovsk-   122.02 328  PKIKP  PKiKP   23 08 38.5 -0.1
PETK  Petropavlovsk-   122.02 328  PKPdf  PKiKP   23 08 38.5 -0.1
AKTO  Aktyubinsk       122.09  36  PKP    PKiKP   23 08 39.1 +0.3
      comp=Z,969nm,0.7s,baz=81,slow=1.0,SNR=57
AKTO                               PKKPbc PKKPbc  23 18 38.4 -1.2
      comp=Z,109nm,0.7s,baz=109,slow=3.2,SNR=28
AKTO                               SKKPbc SKKPbc  23 21 31.5 +1.6
      comp=Z,46nm,0.8s,baz=93,slow=4.1,SNR=5.7
KWAJ  Kwajalein Atol   122.14 274  PKIKP  PKPdf   23 08 39.2 -0.5
KWAJ  Kwajalein Atol   122.14 274  PKPdf  PKPdf   23 08 39.2 -0.5
ARMA  Armidale         122.48 224  PKPdf  PKiKP   23 08 40.6 +0.2
H11N3 WAKE ISLAND Hy123.36 287     PKP    PKiKP   23 08 42.5 +0.6
      baz=208,slow=6.1,SNR=32
H11N2 WAKE ISLAND Hy123.38 287     PKP    PKiKP   23 08 42.7 +0.7
      baz=208,slow=6.1,SNR=11
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H11N1	WAKE ISLAND Hy	123.38	287	PKP	PKiKP	23 08 42.9	+1.0
	baz=208,slow=6.1,SNR=42						
H11S2	WAKE ISLAND Hy	123.57	285	PKP	PKiKP	23 08 42.5	+0.1
	baz=239,slow=3.6,SNR=9.1						
H11S1	WAKE ISLAND Hy	123.57	285	PKP	PKiKP	23 08 42.6	+0.2
	baz=239,slow=3.6,SNR=8.5						
H11S3	WAKE ISLAND Hy	123.58	285	PKP	PKiKP	23 08 42.6	+0.1
	baz=239,slow=3.6,SNR=8.2						
WAKE	Wake Island	123.61	286	PKPdf	PKiKP	23 08 42.7	0.0
ABKAR	Akbulak array	123.73	36	PKPdf	PKiKP	23 08 42.7	+0.6
ABKAR	Akbulak array	123.73	36	PKPdf	PKiKP	23 08 42.9	+0.8
AIS	Amsterdam Isla	124.05	150	PKPdf	PKiKP	23 08 43.3	+0.2
SKR	Severo-Kuril's	124.06	326	*i* PKIKP	PKPdf	23 08 42.4	+0.1
MSEY	Mahe Island	124.80	103	*i* PKiKP	PKiKP	23 08 46.1	+0.8
	SNR=9.5						
MSEY	Mahe Island	124.80	103	PKIKP	PKiKP	23 08 45.2	-0.1
MSEY	Mahe Island	124.80	103	PKPdf	PKiKP	23 08 45.2	-0.1
HNR	Honiara	125.62	251	PKP	PKPdf	23 08 46.3	-0.1
	comp=Z,303nm,0.6s,baz=261,slow=2.2,SNR=4.1						
HNR	Honiara	125.62	251	PKPdf	PKPdf	23 08 45.6	-0.8
EIDS	Eidsvold	125.86	229	PKPdf	PKPdf	23 08 46.5	-0.2
YAK	Yakutsk	126.00	348	*de*PKIKP	PKPdf	23 08 45.5	-0.2
YAK				pmax	pmax		
	comp=N,140nm,1.0s						
YAK				pmax	pmax		
	comp=Z,2µm,0.8s						
YAK				pmax	pmax		
	comp=E,99nm,1.3s						
YAK				pmax	pmax		
	comp=Z,8µm,4.1s						
YAK				pmax	pmax		
	comp=N,3µm,3.8s						
YAK				pmax	pmax		
	comp=E,3µm,4.5s						
YAK	Yakutsk	126.00	348	PKPdf	PKiKP	23 08 46.0	-0.2
SOCY	Socotra	126.16	82	PKPdf	PKiKP	23 08 48.0	0.0
GEYT	Alibeck	126.80	50	PKP	PKiKP	23 08 48.9	+0.2
	comp=E,372nm,0.7s,baz=250,slow=7.7,SNR=25						
GEYT				SKKPbc	SKKPbc	23 21 12.5	-1.1
	comp=E,16nm,0.7s,baz=149,slow=3.4,SNR=4.7						
GEYT	Alibeck	126.80	50	PKPdf	PKiKP	23 08 48.6	0.0
GYA0B	ALIBECK ARRAY	126.80	50	PKPdf	PKiKP	23 08 48.5	-0.1
AJN	Ajban	126.88	67	*i* PKiKP	PKiKP	23 08 49.5	+0.4
	SNR=16						
BRVK	Borovoye	127.11	28	*i* PKIKP	PKiKP	23 08 49.4	+0.7
BRVK	Borovoye	127.11	28	PKPdf	PKiKP	23 08 48.9	+0.2
BVAR	Borovoye Array	127.18	28	PKP	PKiKP	23 08 49.6	+0.7
	comp=E,398nm,0.6s,baz=192,slow=3.3,SNR=20						
BVAR				PKKP	PKKPdf	23 19 01.9	-1.4
	comp=E,46nm,0.8s,baz=210,slow=11,SNR=5.2						
BVAR				SKKPbc	SKKPbc	23 21 09.2	-3.9
	comp=E,42nm,0.7s,baz=210,slow=8.3,SNR=5.8						
BVAR				SKKP	SKKPdf	23 21 52.8	+12
	comp=E,69nm,0.9s,baz=200,slow=12,SNR=3.8						
ASUD	Al Ashush, Dub	127.19	67	*i* PKiKP	PKiKP	23 08 50.2	+0.5
	SNR=20						
UMQ	Umm Al-Quwin	127.39	66	*i* PKiKP	PKiKP	23 08 51.1	+1.1
	SNR=13						
FAQ	Al Faqa, Dubai	127.41	67	*i* PKiKP	PKiKP	23 08 50.1	-0.1
	SNR=11						
NAZ	Nazwa, Dubai	127.45	66	*i* PKiKP	PKiKP	23 08 50.0	-0.2
	SNR=8.5						
ALNE	Al Ain	127.63	67	*i* PKiKP	PKiKP	23 08 50.5	-0.1
	SNR=8.2						
SHME	Shamm	127.75	65	*i* PKiKP	PKiKP	23 08 51.1	+0.3
	SNR=11						
STKA	Stephens Creek	127.83	216	PKP	PKiKP	23 08 50.9	0.0
	comp=E,2µm,0.8s,baz=101,slow=2.3,SNR=30						
STKA				pPKP	pPKPdf	23 11 12.3	-0.9
	comp=E,434nm,1.0s,baz=147,slow=3.3,SNR=6.1						
STKA	Stephens Creek	127.83	216	PKPdf	PKiKP	23 08 50.7	-0.1
ASHO	Ashiyiah	127.84	67	*i* PKiKP	PKPdf	23 08 50.7	+0.3
	SNR=13						
MSFE	Esma-Masafi	127.85	66	*i* PKiKP	PKiKP	23 08 50.9	-0.2
	SNR=12						
SHAO	Shalim	127.87	75	*i* PKiKP	PKPdf	23 08 50.8	+0.2
	SNR=14						
HATD	Hatta, Dubai	127.89	66	*i* PKPdf	PKPdf	23 08 50.6	+0.2
	SNR=9.7						
BANOM	Banah	127.91	65	*i* PKiKP	PKiKP	23 08 51.0	-0.2
	SNR=13						
UOSS	Minazif	127.94	66	*i* PKPdf	PKPdf	23 08 50.5	0.0
	SNR=10						
UOSS	Minazif	127.94	66	PKPdf	PKPdf	23 08 50.1	-0.4
MDH	Madha	127.98	66	*i* PKiKP	PKiKP	23 08 51.0	-0.3
	SNR=10						
SOHO	SOHO	128.33	67	*i* PKPdf	PKPdf	23 08 51.5	+0.2
	SNR=12						
BBOO	Buckleboo	130.07	210	PKPdf	PKPdf	23 08 54.2	-0.3
BRZS	Berezniki	130.24	30	*e*PKP	PKPdf	23 08 53.5	-0.7
	baz=30						
BRZS				*e*PP	PP	23 11 13.7	-3.3
	baz=30						
BRZS	Berezniki	130.24	30	*e*PKIKP	PKPdf	23 08 53.5	-0.7
BRZS				*e*		23 11 13.7	
WSAR	Wadi Sarin	130.34	68	PKP	PKPdf	23 08 54.6	-0.6
	comp=E,713nm,0.8s,baz=236,slow=2.3,SNR=18						
WSAR				pPKP	pPKPdf	23 11 17.3	-0.8
	comp=E,673nm,0.9s,baz=300,slow=3.7,SNR=6.4						
WSAR				SKKPbc	SKKPbc	23 21 01.2	+0.6
	comp=E,107nm,1.3s,baz=101,slow=5.2,SNR=3.6						
PATS	Pohnpei	131.06	270	PKPdf	PKiKP	23 08 57.8	+0.1
HRA	Herat	131.07	53	PKPdf	PKPdf	23 08 56.9	+0.4
KUR	Kuril'sk	131.64	324	*d i*PKIKP	PKPdf	23 08 57.2	+0.3
KUR				*i*		23 11 24.9	
KUR				*e*SS	SS	23 28 12.9	-0.3
ZAA0	Zalesovo Array	132.22	19	PKPdf	PKiKP	23 08 58.6	-0.4
ZALV	Zalesovo Beam	132.22	19	PKhKP	PKPpre	23 08 50.9	
	comp=E,485nm,0.7s,baz=273,slow=1.4,SNR=13						
ZALV				PKP	PKiKP	23 08 58.7	-0.2
	comp=E,3µm,0.6s,baz=314,slow=2.4,SNR=33						
ZALV				pPKP	pPKPdf	23 11 19.6	-1.2
	comp=E,828nm,0.8s,baz=307,slow=2.8,SNR=9.3						
ZALV				PKKP	PKKPdf	23 18 49.8	-3.7
	comp=E,17nm,0.5s,baz=164,slow=5.7,SNR=2.0						
ZALV				SKKPbc	SKKPbc	23 20 53.4	-2.0
	comp=E,21nm,0.8s,baz=182,slow=5.2,SNR=2.5						
ZALV				SKKP		23 21 24.2	
	comp=E,57nm,0.8s,baz=137,slow=3.1,SNR=5.4						
BOD	Bodaibo	132.24	356	*e*PKHKP	PKPpre	23 08 44.1	
BOD				pmax	pmax		
	comp=Z,1µm,1.8s						
KURK	Kurchatov	132.47	26	PKIKP	PKiKP	23 08 59.5	-0.1
KURK	Kurchatov	132.47	26	PKPdf	PKiKP	23 08 59.0	-0.5
KURBB	Kurchatov Arra	132.50	26	PKhKP	PKPpre	23 08 52.0	
	comp=Z,137nm,1.0s,baz=310,slow=2.2,SNR=4.9						
KURBB				PKP	PKiKP	23 08 59.5	-0.1
	comp=Z,97nm,0.3s,baz=277,slow=7.4,SNR=48						
KURBB				pPKP	pPKPdf	23 11 21.6	+0.1
	comp=Z,241nm,0.9s,baz=308,slow=2.8,SNR=6.5						
KURBB				PKKP	PKKPdf	23 18 50.2	-2.8
	comp=Z,35nm,0.9s,baz=104,slow=1.2,SNR=3.6						
KURBB				SKKPbc	SKKPbc	23 20 50.4	-3.8
	baz=138,slow=3.4						
KURBB				SKKP		23 21 39.9	
	comp=Z,84nm,1.0s,baz=138,slow=3.9,SNR=4.0						
CTA	Charters Tower	132.54	231	PKhKP	PKPpre	23 08 48.3	
	comp=Z,69nm,0.7s,baz=58,slow=6.4,SNR=2.9						
CTA				PKP	PKiKP	23 09 00.2	-0.4
	comp=Z,413nm,0.6s,baz=113,slow=2.1,SNR=28						
CTA				pPKP	pPKPdf	23 11 21.4	-1.0
	comp=Z,256nm,1.1s,baz=171,slow=2.2,SNR=6.1						
CTA				PKKP	PKKPdf	23 18 52.5	+0.2
	comp=Z,67nm,0.8s,baz=327,slow=2.1,SNR=5.9						
CTA				SKKPbc	SKKPbc	23 20 51.3	-0.8
	comp=Z,32nm,1.0s,baz=307,slow=20,SNR=2.4						
CTAO	Charters Tower	132.54	231	PKIKP	PKPdf	23 08 59.7	+0.3
CTAO	Charters Tower	132.54	231	PKPdf	PKPdf	23 08 59.7	+0.3
KKAR	Karatay Array	133.16	39	PKIKP	PKPdf	23 09 00.5	+0.6
KKAR	Karatay Array	133.16	39	PKPdf	PKPdf	23 09 00.5	+0.6
TAS	Tashkent	133.32	41	PKIKP	PKiKP	23 09 01.3	-0.3
TAS	Tashkent	133.32	41	PKPdf	PKiKP	23 09 01.3	-0.3
IUG	Iuzhnay	133.37	40	*e*PKP	PKPdf	23 08 59.3	-1.1
	baz=40						
IUG				*e*PP	PP	23 11 32.8	-4.5
	baz=40						
IUG	Iuzhnay	133.37	40	*e*PKIKP	PKPdf	23 08 59.3	-1.1
IUG				*e*		23 11 32.7	
SEM	Semipalatinsk	133.39	25	*e*PKP	PKPdf	23 08 59.8	-0.7
	baz=25						
SEM				*e*PP	PP	23 11 30.2	-6.7
	baz=25						
SEM	Semipalatinsk	133.39	25	*e*PKIKP	PKPdf	23 08 59.7	-0.7
YSS	Yuzh-Sakhalins	133.41	328	*d i*PKIKP	PKPdf	23 09 00.0	-0.2
YSS				*e*		23 14 43.8	
YSS				pmax	pmax		
	comp=Z,14µm,5.8s						
YSS	Yuzh-Sakhalins	133.41	328	PKPdf	PKiKP	23 09 01.0	-0.6
DZA	Taraz	133.78	38	*e*PKP	PKPdf	23 09 01.5	+0.4
	baz=38						
DZA	Taraz	133.78	38	*e*PKIKP	PKPdf	23 09 01.5	+0.4
ZEA	Zeya	134.07	345	*e*PKHKP	PKPpre	23 08 45.7	
ZEA				*e*		23 09 01.6	
ZEA				pmax	pmax		
	comp=N,320nm,0.6s						
ZEA				pmax	pmax		
	comp=Z,420nm,0.7s						
BTLS	Baital	134.09	34	*e*PKP	PKPdf	23 09 01.4	-0.2
	baz=34						
BTLS				*e*PP	PP	23 11 35.0	-6.4
	baz=34						
BTLS	Baital	134.09	34	*e*PKIKP	PKPdf	23 09 01.4	-0.2
RABL	Rabaul	134.63	254	PKPdf	PKPdf	23 09 03.5	0.0
RABL				pPKPdf	pPKPdf	23 11 23.7	-2.9
H01W2	Cape Leeuwin H	134.97	186	PKP	PKPpre	23 08 49.9	
H01W1	Cape Leeuwin H	134.97	186	PKP	PKPpre	23 08 49.9	
H01W3	Cape Leeuwin H	134.98	186	PKP	PKPpre	23 08 50.0	
FORT	Forrest	135.38	204	PKPdf	PKPdf	23 09 04.0	-0.4
EKS2	Erkin-Say	135.38	37	P	PKiKP	23 09 06.7	+0.8
	SNR=14						
USP	Ospenovka	135.44	36	P	PKiKP	23 09 06.4	+0.5
	SNR=11						
AML	Almayashu	135.64	38	P	PKiKP	23 09 07.0	+0.2
	SNR=7.4						
AML	Almayashu	135.64	38	*i* PKiKP	PKiKP	23 09 06.6	-0.2
	SNR=7.3						
CHMS	Chumysh	135.75	36	P	PKPdf	23 09 05.3	+0.5
	SNR=8.0						
FRU1	Bishkek	135.80	36	PKIKP	PKiKP	23 09 06.4	-0.3
FRU1	Bishkek	135.80	36	PKPdf	PKiKP	23 09 06.4	-0.3
AAK	Ala-Archa	135.82	37	PKP	PKPdf	23 09 05.4	+0.3
	comp=Z,2µm,1.1s,baz=230,slow=3.5,SNR=12						
AAK				SKPbc	SKPbc	23 11 41.2	+1.7
	comp=Z,1µm,1.0s,baz=226,slow=1.5,SNR=15						
AAK				SKKPbc	SKKPbc	23 20 38.2	-3.7
	comp=Z,60nm,0.9s,baz=110,slow=2.6,SNR=6.7						
AAK				SKKP		23 21 23.2	
	comp=Z,90nm,0.9s,baz=199,slow=4.8,SNR=2.2						
AAK	Ala-Archa	135.82	37	P	PKiKP	23 09 07.0	+0.2
	SNR=12						
AAK	Ala-Archa	135.82	37	PKiKP	PKiKP	23 09 06.7	-0.1
AAK	Ala-Archa	135.82	37	PKIKP	PKPdf	23 09 05.9	+0.8
AAK	Ala-Archa	135.82	37	PKPdf	PKPdf	23 09 05.9	+0.8
UCH	Uchtor	136.08	37	P	PKiKP	23 09 08.6	+0.8
	SNR=16						
KUU	Kurty	136.09	34	*e*PKP	PKPdf	23 09 05.0	-0.4
	baz=34						
KUU				*e*PP	PP	23 11 53.2	-0.6
	baz=34						
KUU	Kurty	136.09	34	*e*PKIKP	PKPdf	23 09 05.0	-0.4
KUU				*e*		23 11 53.1	
KBL	Kabul	136.25	50	PKIKP	PKPdf	23 09 06.1	-0.1
KBL	Kabul	136.25	50	PKPdf	PKPdf	23 09 06.1	-0.1
TKM2	Tokmak 2	136.29	36	P	PKiKP	23 09 08.0	+0.1
	SNR=9.1						
TDK	Taldyqorghan	136.46	32	*e*PKP	PKPdf	23 09 00.7	-5.3
	baz=32						
TDK	Taldyqorghan	136.46	32	*e*PKIKP	PKPdf	23 09 00.7	-5.3
KLR	Kul'dur	136.60	338	PKhKP	PKPpre	23 08 55.4	
	comp=Z,139nm,0.8s,baz=14,slow=3.9,SNR=11						
KLR				PKP	PKPdf	23 09 06.8	+0.7
	comp=Z,588nm,0.6s,baz=61,slow=2.1,SNR=14						
KLR				SKPbc	SKPbc	23 11 40.0	-1.4
	comp=Z,282nm,0.6s,baz=102,slow=2.9,SNR=7.1						
KLR				SKKPbc	SKKPbc	23 20 33.4	-5.7
	comp=Z,44nm,1.0s,baz=324,slow=2.6,SNR=3.8						
BOOM	Boomskoye usch	136.76	36	PKIKP	PKPdf	23 09 06.3	-0.6
BOOM	Boomskoye usch	136.76	36	PKPdf	PKPdf	23 09 06.3	-0.6
BOOM				pPKPdf	pPKPdf	23 11 30.9	+1.0
AAA	Alma-Ata	136.85	34	*e*PKP	PKPdf	23 09 02.8	-4.1
	baz=34						
AAA	Alma-Ata	136.85	34	*e*PKIKP	PKPdf	23 09 02.7	-4.1
MAKZ	Makanchi	136.87	27	PKIKP	PKPdf	23 09 06.7	0.0
MAKZ	Makanchi	136.87	27	PKPdf	PKPdf	23 09 06.7	0.0
MDOK	Medeo	136.96	34	*e*PKP	PKPdf	23 09 05.6	-1.6
	baz=34						
MDOK	Medeo	136.96	34	*e*PKIKP	PKPdf	23 09 05.5	-1.6
MK31	Makanchi Array	137.02	27	PKIKP	PKPdf	23 09 07.6	+0.6
MK31	Makanchi Array	137.02	27	PKPdf	PKPdf	23 09 07.6	+0.6
MKAR	Makanchi Array	137.02	27	PKhKP	PKPpre	23 08 57.5	
	comp=Z,100nm,0.7s,baz=1.5,slow=3.0,SNR=6.1						
MKAR				PKP	PKPdf	23 09 07.8	+0.8
	comp=Z,620nm,0.6s,baz=358,slow=1.9,SNR=20						
MKAR				SKP		23 11 42.9	
	comp=Z,345nm,0.8s,baz=316,slow=4.0,SNR=5.3						
MKAR				SKKPbc	SKKPbc	23 20 37.9	+0.4
	comp=Z,91nm,0.8s,baz=140,slow=5.0,SNR=9.0						
MKAR				SKKP		23 21 17.0	
	comp=Z,66nm,0.8s,baz=132,slow=6.4,SNR=4.2						
MKAR	Makanchi Array	137.02	27	PKPdf	PKPdf	23 09 07.1	+0.1
ULHL	Ulahol	137.08	36	P	PKiKP	23 09 10.1	+0.6
	SNR=13						
PMG	Port Moresby	137.28	244	PKP	PKiKP	23 09 09.8	-0.6
	comp=Z,1µm,1.0s,baz=14,slow=1.5,SNR=8.8						
PMG				pPKP	pPKPdf	23 11 31.7	+0.2
	comp=Z,1µm,1.1s,baz=230,slow=1.7,SNR=9.2						
PMG				SKPbc	SKPbc	23 11 45.5	+1.1
	comp=Z,2µm,1.1s,baz=51,slow=2.9,SNR=15						
PMG	Port Moresby	137.28	244	PKPdf	PKPdf	23 09 09.1	+0.7
ZSN	Zaisan	137.60	24	*e*PKP	PKPdf	23 09 08.0	0.0
	baz=24						
ZSN	Zaisan	137.60	24	*e*PKIKP	PKPdf	23 09 08.0	0.0
KPKS	Kokpek	137.65	33	*e*PKP	PKPdf	23 09 01.9	-6.4
	baz=33						
KPKS	Kokpek	137.65	33	*e*PKHKP	PKPpre	23 09 01.9	
SATY	Saty	137.77	34	*e*PKP	PKPdf	23 09 02.2	-6.4
	baz=34						
SATY	Saty	137.77	34	*e*PKHKP	PKPpre	23 09 02.2	
IRK	Irkutsk	137.82	4	*e*PKHKP	PKPpre	23 09 00.3	
IRK				*e*		23 09 07.5	
IRK				pmax	pmax		
	comp=Z,1µm,2.3s						
CIT	Chita	138.04	356	*e*PKIKP	PKiKP	23 09 09.9	-1.0
CIT				*e*		23 11 32.2	
CIT				*e*		23 12 03.0	
CIT				pmax	pmax		
	comp=Z,3µm,3.4s						
UZB	Uzynbulak	138.05	33	*e*PKP	PKPdf	23 09 04.0	-5.2
	baz=33						
UZB	Uzynbulak	138.05	33	*e*PKIKP	PKPdf	23 09 04.0	-5.2
MOY	Mondy	138.06	7	*e*PKIKP	PKiKP	23 09 10.9	-0.2
MOY				pmax	pmax		
	comp=Z,3µm,2.3s						
PRZ	Przheval'sk	138.15	34	PKIKP	PKiKP	23 09 10.9	-0.8
PRZ	Przheval'sk	138.15	34	PKPdf	PKiKP	23 09 10.9	-0.8
SHLS	Shalkode	138.28	33	*e*PKP	PKPdf	23 09 06.6	-3.0
	baz=32						
SHLS	Shalkode	138.28	33	*e*PKIKP	PKPdf	23 09 06.5	-3.0
TLY	Talaya	138.33	5	PKhKP	PKPpre	23 09 01.7	
	comp=Z,174nm,0.8s,baz=349,slow=4.5,SNR=5.4						
TLY				PKP	PKPdf	23 09 10.2	+1.0
	comp=Z,534nm,0.6s,baz=288,slow=3.1,SNR=12						
TLY				SKPbc	SKPbc	23 11 47.5	+1.3
	comp=Z,129nm,0.7s,baz=251,slow=1.1,SNR=5.0						
TLY				SKKPbc	SKKPbc	23 20 29.9	-2.9
	comp=Z,26nm,0.8s,baz=230,slow=4.7,SNR=2.9						
TLY	Talaya	138.33	5	*e*PKIKP	PKPdf	23 09 08.6	-0.6
TLY				*e*SS	SS	23 30 08.4	+38
TLY				pmax	pmax		
	comp=Z,444nm,0.5s						
TLY	Talaya	138.33	5	PKPdf	PKPdf	23 09 08.2	-1.1
COEN	Coen	138.43	235	PKPdf	PKPdf	23 09 10.6	+0.1
COEN				pPKPdf	pPKPdf	23 11 32.8	-0.8
COEN				SKPdf	SKPdf	23 11 47.1	-0.4
AS31	Alice Springs	138.47	216	PKPdf	PKPdf	23 09 10.2	-0.2
AS31				pPKPdf	pPKPdf	23 11 32.4	-1.1
AS31				SKPdf	SKPdf	23 11 47.0	-0.5
ASAR	Alice Springs	138.47	216	PKhKP	PKPpre	23 09 00.8	
	comp=Z,198nm,0.6s,baz=140,slow=3.6,SNR=9.7						
ASAR				pPKP	pPKPdf	23 11 33.1	-0.5
	comp=Z,557nm,0.9s,baz=151,slow=2.4,SNR=9.3						
ASAR				SKPbc	SKPbc	23 11 47.2	-0.4
	comp=Z,483nm,0.7s,baz=136,slow=3.4,SNR=9.0						
ASAR				SKKPbc	SKKPbc	23 20 29.9	-0.3
	comp=Z,96nm,0.9s,baz=322,slow=3.4,SNR=5.8						
ASAR	Alice Springs	138.47	216	PKPdf	PKPdf	23 09 10.0	-0.4
ASAR					pPKPdf	23 11 32.4	-1.1
KSH	Kashi	138.58	39	PKP	PKPpre	23 09 01.1	
KSH				PP	pPKPdf	23 11 48.8	+15
KSH				sPKP		23 12 21.6	
KSH				SKS	SKSdf	23 15 00.8	-22
KSH				AMB	AMB		
	comp=Z,30µm,6.9s						
ZAK	Zakamensk	139.58	6	*e*PKHKP	PKPpre	23 09 05.9	
ZAK				pmax	pmax		
	comp=Z,885nm,1.1s						
H08S1	Diego Carcia H	139.66	115	PKP	PKPdf	23 09 07.7	-4.7
	baz=112,slow=75,SNR=20						
H08S3	Diego Garcia H	139.68	115	PKP	PKPdf	23 09 08.0	-4.5
	baz=112,slow=75,SNR=37						
H08S2	Diego Garcia H	139.68	115	PKP	PKPdf	23 09 07.9	-4.5
	baz=112,slow=75,SNR=24						
DGAR	Diego Garcia	139.74	114	PKIKP	PKPdf	23 09 13.4	+0.6
DGAR	Diego Garcia	139.74	114	PKPdf	PKPdf	23 09 13.4	+0.6
MANU	Manus Island	139.85	255	PKPdf	PKPdf	23 09 14.0	+0.9
MANU				pPKPdf	pPKPdf	23 11 35.6	-0.7
MANU				SKPbc	SKPbc	23 11 52.1	+0.5
MORW	Morawa	140.45	190	PKPdf	PKPdf	23 09 13.5	-0.3
JASL	Jaisalmer	140.47	60	*e*P	PKPdf	23 09 14.6	+0.8
USRK	Ussuriysk Ar.	140.59	334	PKhKP	PKPpre	23 09 09.2	
	comp=Z,759nm,0.6s,baz=14,slow=2.1,SNR=37						
USRK				SKPbc	SKPbc	23 11 53.2	+0.7
	comp=Z,226nm,0.7s,baz=85,slow=1.6,SNR=4.2						
USRK				SKKPbc	SKKPbc	23 20 22.9	-0.6
	comp=Z,58nm,1.0s,baz=222,slow=3.9,SNR=5.4						
WB2	Warramunga Arr	141.02	220	PKPdf	PKPdf	23 09 15.1	0.0
WB2				pPKPdf	pPKPdf	23 11 37.9	-0.3
WRA	Warramunga Arr	141.03	220	PKhKP	PKPpre	23 09 10.0	
	comp=Z,513nm,0.4s,baz=142,slow=2.8,SNR=19						
WRA				pPKP	pPKPdf	23 11 38.5	+0.3
	comp=Z,1µm,1.0s,baz=145,slow=1.3,SNR=10						
WRA				SKPbc	SKPbc	23 11 53.4	-1.0
	comp=Z,519nm,0.5s,baz=133,slow=2.7,SNR=9.0						
WRA				PKKP	PKKPdf	23 18 35.5	-0.5
	comp=Z,11nm,0.5s,baz=323,slow=1.8,SNR=5.6						
WRA				SKKPbc	SKKPbc	23 20 20.5	+0.2
	comp=Z,96nm,0.9s,baz=334,slow=4.1,SNR=8.1						
WRA	Warramunga Arr	141.03	220	PKPdf	PKPdf	23 09 14.7	-0.4
WRA					pPKPdf	23 11 37.5	-0.7
WRA				SKPdf	SKPbc	23 11 53.7	-0.8
MDJ	Mudanjiang	141.26	336	AMB	AMB		
	comp=Z,19µm,17.0s						
MDJ	Mudanjiang	141.26	336	AMB	AMB		
	comp=Z,19µm,17.0s						
MDJ	Mudanjiang	141.26	336	PKP	PKPdf	23 09 10.3	-4.4
MDJ				PP	PP	23 12 24.4	-0.3
MDJ				SKKS		23 18 11.9	
MDJ				SS	SS	23 30 02.3	-2.9
WMQ	Urumqi	141.70	25	PKP	PKPdf	23 09 12.8	-2.8
WMQ				PP	PP	23 12 29.8	+2.3
WMQ				PKS	sPKPdf	23 12 54.5	+16
WMQ				SKS	SKSdf	23 15 22.0	-5.7
WMQ				AMB	AMB		
	comp=Z,27µm,5.5s						
ULN	Ulaanbaatar	142.34	2	PKIKP	PKPdf	23 09 15.1	-1.6
ULN	Ulaanbaatar	142.34	2	PKPdf	PKPdf	23 09 15.1	-1.6
SONM	Songino Array	142.34	3	PKP	PKPdf	23 09 14.7	-2.0
	comp=Z,2µm,0.8s,baz=324,slow=2.2,SNR=105						
SONM				SKPbc	SKiKP	23 11 58.4	+0.2
	comp=Z,271nm,0.6s,baz=324,slow=0.7,SNR=4.4						
SONM				SKKPbc	SKKPab	23 20 14.0	-2.9
	comp=Z,152nm,0.8s,baz=170,slow=3.2,SNR=18						
SONM	Songino Array	142.34	3	PKPdf	PKPdf	23 09 14.9	-1.8
MAJO	Matsushiro	142.65	319	PKIKP	PKPdf	23 09 15.6	-1.9
MAJO	Matsushiro	142.65	319	PKPdf	PKPdf	23 09 15.6	-1.9
MAT	Matsushiro	142.65	319	PKP	PKPdf	23 09 14.3	-3.2
MAT	Matsushiro	142.65	319	P	PKPdf	23 09 14.4	-3.1
MJAR	Matsushiro Arr	142.65	319	PKhKP	PKPpre	23 09 14.6	
	comp=Z,3µm,0.9s,baz=104,slow=3.1,SNR=117						
MJAR				SKKPbc	SKKPbc	23 20 13.5	-1.6
	comp=Z,48nm,0.9s,baz=215,slow=2.9,SNR=6.5						
DHRM	DHARAMSHALA	142.70	49	*e*P	PKPdf	23 09 16.7	-1.2
KAAM	Kaadhehdhoo	143.03	103	PKPdf	PKPbc	23 09 17.9	+0.7
BHK	Bhakra	143.19	50	*e*P	PKPab	23 09 16.8	0.0
JGN	Niukaw	143.41	320	P	PKPab	23 09 17.4	-0.2
CN2	Changchun	143.49	340	AMB	AMB		
	comp=Z,14µm,15.0s						
CN2	Changchun	143.49	340	AMB	AMB		
	comp=Z,14µm,15.0s						
CN2	Changchun	143.49	340	*e*PKP	PKPab	23 09 16.0	-1.5
CN2				pPKP	pPKPdf	23 11 33.4	-8.5
CN2				PP	PP	23 12 38.5	+0.7
CN2				SKS	SKSdf	23 15 27.5	-2.8
CN2				SKKS	SKKSac	23 18 27.6	-1.5
JHJ2	Mitsune	143.50	314	P	PKPab	23 09 17.1	-0.8
JHJ2	Mitsune	143.50	314	PKPbc	PKPab	23 09 17.4	-0.5
ANA2	Anatahan	143.68	284	PKPbc	PKPbc	23 09 17.9	-1.1
JGF	Kuroka	143.76	319	P	PKPbc	23 09 17.6	-1.2
JGF	Kuroka	143.76	319	PKPbc	PKPbc	23 09 18.4	-0.3
JSG	Sagara	143.77	317	PKPbc	PKPdf	23 09 19.2	-0.2
AJM	Ajmer	143.78	59	*e*P	PKPbc	23 09 18.9	-0.2
SMLA	Simla	143.89	50	*e*P	PKPdf	23 09 20.0	+0.3
INU	Inuyama	144.14	319	PKPbc	PKPbc	23 09 19.8	-0.1
KKR	Kurukshetra	144.16	52	*e*P	PKPab	23 09 20.9	+0.4
JCJ	Chichijima	144.38	303	PKPdf	PKPdf	23 09 19.8	-0.9
JCJ				pPKPdf	pPKPdf	23 11 38.7	-5.3
GUMO	Guam	144.65	279	PKIKP	PKPdf	23 09 21.3	-0.2
GUMO						23 11 42.0	
GUMO	Guam	144.65	279	PKPdf	PKPdf	23 09 21.3	-0.2
GUMO				pPKPdf	pPKPdf	23 11 42.0	-2.8
KUDL	Kundal	144.68	55	*e*P	PKPab	23 09 22.5	-0.1
JIE	Ise	144.92	318	P	PKPbc	23 09 22.2	-0.1
NDI	New Delhi	145.03	54	*e*P	PKPbc	23 09 22.4	-0.4
NDI	New Delhi	145.03	54	*e*P	PKPdf	23 09 22.0	+0.2
AYAN	Aya Nagar	145.05	54	*e*P	PKPbc	23 09 22.9	+0.1
POO	Poona	145.07	72	*e*P	PKPbc	23 09 23.1	-0.1
POO	Poona	145.07	72	⇑*i*P	PKPdf	23 09 20.0	-2.2
	comp=Z,1µm,1.0s						
SONA	Sohna	145.11	54	*e*P	PKPbc	23 09 22.8	-0.2
JWT	Wachi	145.21	320	P	PKPbc	23 09 22.8	-0.3
BISR	Bishrakh	145.26	54	*e*P	PKPbc	23 09 23.2	-0.2
MERT	Meerut	145.31	53	*e*P	PKPbc	23 09 23.9	+0.4
GOA	Goa	145.41	77	*e*P	PKPbc	23 09 23.7	-0.5
ASOR	Ausora	145.44	53	*e*P	PKPbc	23 09 24.1	+0.1
KAD	Karad	145.56	74	*e*P	PKPdf	23 09 22.5	-0.5
JAY	Jayapura	145.94	250	PKPbc	PKPbc	23 09 24.9	-0.9
	comp=Z,1µm,1.0s,baz=198,slow=3.5,SNR=34						
JAY				pPKPbc	pPKPdf	23 11 47.6	+0.5
	comp=Z,2µm,1.1s,baz=167,slow=6.1,SNR=10						
JAD	Aida	146.20	321	P	PKPdf	23 09 24.1	+0.5
ULDB	Ullung-do Bore	146.30	328	P	PKiKP	23 09 27.7	-0.6
	SNR=7.0						
PSA00	Pilbara Seismi	146.73	199	PKPdf	PKPdf	23 09 25.0	+0.1
PSA00	Pilbara Seismi	146.73	199	PKPdf	PKPdf	23 09 24.8	0.0
JHS	Saijyo	146.81	322	P	PKPdf	23 09 25.0	+0.4
JHS	Saijyo	146.81	322	PKPdf	PKPdf	23 09 25.1	+0.4
JHS				PKPbc	PKPbc	23 09 28.4	+0.8
KSSKC	Sokcho	146.88	331	P	PKPbc	23 09 28.3	+0.7
	SNR=18						
SEHB	SEOHWA	147.02	331	P	PKiKP	23 09 29.0	-0.7
	SNR=19						
GIRL	Giralia	147.03	189	PKPdf	PKPdf	23 09 26.1	+0.7
KSJMJ	Jumunjin	147.09	330	P	PKPdf	23 09 26.0	+1.0
	SNR=25						
JMN	Monobe	147.17	320	P	PKPdf	23 09 26.3	+1.0
OKEB	Okgye-meyeon	147.18	330	P	PKiKP	23 09 29.5	-0.6
	SNR=11						
BHPL	Bhopal	147.23	63	*e*P	PKPdf	23 09 26.7	+1.0
BHPL				*e*x	x	23 11 46.7	
KSDGY	Daegwallycong	147.28	330	P	PKiKP	23 09 30.0	-0.4
	SNR=14						
IMWB	Imwonan-gil	147.29	329	P	PKPbc	23 09 29.4	+0.7
	SNR=34						
FITZ	Fitzroy Crossi	147.46	211	PKPbc	PKPbc	23 09 30.4	+0.7
	comp=Z,8µm,0.8s,baz=189,slow=3.1,SNR=130						
FITZ				pPKP	pPKPbc	23 11 50.2	-0.4
	comp=Z,5µm,1.0s,baz=149,slow=2.3,SNR=22						
FITZ				SKKPbc		23 19 53.7	
	comp=Z,101nm,1.0s,baz=273,slow=2.0,SNR=4.4						
KSCWO	Cheorwon	147.51	332	P	PKPbc	23 09 29.9	+0.7
	SNR=14						
KSTBA	Taebaek	147.58	329	P	PKPbc	23 09 30.2	+0.7
	SNR=21						
KSCHC	Chuncheon	147.62	331	P	PKPbc	23 09 30.0	+0.4
	SNR=32						
KSULJ	Uljin	147.67	328	P	PKPbc	23 09 30.0	+0.3
	SNR=50						
KNRA	Kununurra	147.70	218	PKPdf	PKPdf	23 09 26.4	-0.1
GAPB	Gapyeong	147.72	332	P	PKPbc	23 09 30.0	+0.2
	SNR=15						
CHYB	Chungyang	147.74	329	P	PKPbc	23 09 30.0	+0.1
	SNR=42						
KSYOW	Yeongwol	147.79	330	P	PKiKP	23 09 30.9	-0.5
	SNR=28						
YODB	Yeongdeok	147.80	328	P	PKPbc	23 09 30.1	+0.1

	SNR=42						
KSWJU	Wonju	147.80	331	P	PKiKP	23 09 31.0	-0.4
	SNR=16						
KS19	Wonju Array Si	147.81	331	PKPdf	PKPdf	23 09 27.1	+0.9
KS19				PKPbc	PKiKP	23 09 30.9	-0.5
KSRS	Korea Array	147.83	331	PKPbc	PKiKP	23 09 30.9	-0.5
	comp=Z,4µm,0.7s,baz=14,slow=2.3,SNR=106						
KSRS				pPKPbc	pPKPab	23 11 51.6	-0.2
	comp=Z,1µm,1.1s,baz=24,slow=2.9,SNR=10						
KSRS				SKKPbc		23 19 56.5	
	comp=Z,19nm,0.7s,baz=208,slow=3.7,SNR=4.8						
KSAR	Wonju Array Be	147.85	331	PKHKP	PKPpre	23 09 27.0	
KSAR						23 09 30.9	
KSAR	Wonju Array Be	147.85	331	PKPdf	PKPdf	23 09 26.9	+0.7
KSAR				PKPbc	PKiKP	23 09 30.9	-0.6
JECH	Jecheon	147.93	330	P	PKPbc	23 09 31.0	+0.6
	SNR=20						
YOJB	Youngju	147.99	329	P	PKPbc	23 09 31.0	+0.4
	SNR=22						
KSMUS	Musan	148.02	333	P	PKPbc	23 09 30.8	+0.2
	SNR=7.1						
KSPHA	Pohang	148.08	328	P	PKPbc	23 09 31.0	+0.3
	SNR=12						
KSADO	Andong	148.13	328	P	PKiKP	23 09 31.5	-0.5
	SNR=11						
KSICN	Icheon	148.20	331	P	PKiKP	23 09 32.0	-0.2
	SNR=10						
MTN	Manton Dam	148.26	225	PKPdf	PKPdf	23 09 28.2	+0.7
KSCHJ	Chungju	148.26	330	P	PKiKP	23 09 32.0	-0.4
	SNR=15						
KSGAH	Ganghwa	148.31	333	P	PKPbc	23 09 30.5	-0.8
	SNR=20						
EUSB	Uiseong	148.31	329	P	PKiKP	23 09 32.0	-0.5
	SNR=13						
EMSB	Eumseong	148.35	331	P	PKiKP	23 09 32.0	-0.6
	SNR=24						
KSMGY	Mungyeong	148.39	330	P	PKPdf	23 09 28.4	+1.3
	SNR=11						
INCN	Inchon	148.41	332	PKHKP	PKPpre	23 09 27.7	
INCN	Inchon	148.41	332	PKPdf	PKPdf	23 09 27.7	+0.5
KSSWO	Suwon	148.43	332	P	PKiKP	23 09 32.2	-0.4
	SNR=8.2						
TRD	Trivandrum	148.44	90	*e*P	PKPdf	23 09 29.5	+1.6
TRD				*e*x	x	23 11 51.9	
YOCB	Yeongcheon	148.46	328	P	PKiKP	23 09 32.6	-0.2
	SNR=10.0						
SHHB	Siheung-si	148.48	332	P	PKPbc	23 09 32.0	+0.3
	SNR=8.2						
KSUSN	Ulsan	148.58	327	P	PKiKP	23 09 32.8	-0.2
	SNR=51						
KSBON	Boeun	148.64	330	P	PKiKP	23 09 32.8	-0.3
	SNR=24						
KSCEA	Cheonan	148.65	331	P	PKiKP	23 09 32.8	-0.3
	SNR=23						
KSDAG	Daegu	148.65	328	P	PKiKP	23 09 33.2	0.0
	SNR=16						
HAWB	Hwaseong-si	148.67	332	P	PKPbc	23 09 32.0	-0.2
	SNR=23						
YPDB	Yeonpyeongdo	148.71	334	P	PKPdf	23 09 28.2	+0.6
	SNR=18						
OKCB	Cheongsan-myeo	148.77	330	P	PKiKP	23 09 33.0	-0.4
	SNR=32						
KSCPR	CHUPUNGNYEONG	148.78	329	P	PKPbc	23 09 31.2	-1.2
	SNR=18						
KSBAR	Backryungdo	148.82	335	P	PKPbc	23 09 32.8	+0.3
	SNR=20						
KSDEI	Deokjeokdo	148.83	333	P	PKPbc	23 09 32.7	+0.2
	SNR=18						
KSBUS	Busan	148.93	327	P	PKiKP	23 09 34.0	+0.2
	SNR=14						
DACB	Daecheong-do R	148.95	335	P	PKPbc	23 09 32.0	-0.8
	SNR=13						
DL2	Dalian	149.15	340	PKPbc	PKPdf	23 09 28.5	+0.3
DL2				PKPab	PKPab	23 09 44.3	+4.1
DL2				pPKP	pPKPdf	23 11 48.9	-2.8
DL2				PP	PP	23 13 09.5	-1.0
DL2				SKKS		23 18 57.3	
DL2				AMB	AMB		
	comp=Z,34µm,7.1s						
KSKCH	Geochang	149.28	329	P	PKiKP	23 09 34.6	+0.1
	SNR=13						
HHC	Hu-ho-hao-te	149.29	356	*e*PKPbc	PKPdf	23 09 27.9	-0.7
HHC				PP	PP	23 13 14.3	+3.0
HHC				SS	SS	23 31 38.4	+3.6
EURB	Uiryeong-eup	149.31	328	P	PKPbc	23 09 33.0	-0.7
	SNR=16						
JTU	Tsushima	149.31	326	PKPdf	PKPdf	23 09 28.0	-0.6
JTU				PKPbc	PKiKP	23 09 34.6	0.0
KSJEO	Jeonju	149.34	330	P	PKPbc	23 09 34.0	+0.1
	SNR=22						
HAMB	Hamyang	149.44	329	P	PKPbc	23 09 34.2	+0.1
	SNR=31						
JNU	Nakatsue	149.44	322	PKPbc	PKPbc	23 09 34.1	-0.1
	comp=Z,3µm,0.9s,baz=62,slow=4.4,SNR=43						
JNU				pPKPbc	pPKPbc	23 11 55.2	-0.8
	comp=Z,1µm,1.1s,baz=25,slow=4.3,SNR=5.7						
JNU	Nakatsue	149.44	322	P	PKPbc	23 09 33.7	-0.5
BJI	Beijing	149.50	349	PKPbc	PKPdf	23 09 29.4	+0.6
BJI				pPKP	pPKPbc	23 11 54.5	-1.3
BJI				SKS	SKSdf	23 15 34.8	-4.1
BJI				SKKS	SKKSac	23 19 02.1	-0.6
BJT	Baijiatuau	149.52	349	PKHKP	PKPpre	23 09 34.9	
BJT	Baijiatuau	149.52	349	PKPdf	PKPdf	23 09 29.8	+1.0
BJT				PKPbc	PKiKP	23 09 34.9	+0.1
HYB	Hyderabad	149.67	73	*i* PKP	PKPdf	23 09 30.0	+0.3
HYB				*e*pPKP	pPKPdf	23 11 55.0	+1.8
HYB	Hyderabad	149.67	73	*e*P	PKPdf	23 09 30.2	+0.5
HYB				*e*x	x	23 11 52.6	
OYDB	Oeyeondo	149.69	332	P	PKPdf	23 09 30.0	+0.8
	SNR=9.7						
NAWB	Namwon	149.69	329	P	PKPbc	23 09 35.0	+0.3
	SNR=21						
GTA	Gaotai	149.72	14	⇓PKPbc	PKPdf	23 09 30.3	+1.0
GTA				pPKP	pPKPdf	23 11 53.8	+0.9
GTA				sPKP		23 12 46.8	
PYUN	Piuthan	149.79	50	*e*P	PKPdf	23 09 30.5	+0.6
ECDB	Euchungdo	149.82	332	P	PKiKP	23 09 35.6	0.0
	SNR=7.9						
YKDB	Yokjido	149.85	327	P	PKPdf	23 09 30.5	+1.0
	SNR=7.7						
SUCA	Sunchang	149.86	329	P	PKPbc	23 09 35.0	0.0
	SNR=17						
MNYD	Munyeodo	149.87	331	P	PKPbc	23 09 35.0	0.0
	SNR=12						
KSJEU	Jeongeup	149.87	330	P	PKPbc	23 09 34.5	-0.6
	SNR=32						
SMKB	Mukjeong-gil	149.90	331	P	PKPbc	23 09 35.0	-0.2
	SNR=24						
GWYB	Gwangyang	149.91	328	P	PKiKP	23 09 36.0	+0.2
	SNR=18						
KSKWJ	Gwangju	150.10	329	P	PKPbc	23 09 35.3	-0.3
	SNR=40						
KSKWJ	Gwangju	150.10	329	P	PKPbc	23 09 35.0	-0.7
	SNR=40						
KSKWJ	Gwangju	150.10	329	P	PKPbc	23 09 35.3	-0.3
	SNR=20						
GOCB	Gochang-gun	150.15	330	P	PKPbc	23 09 35.1	-0.6
	SNR=12						
DANN	Dangsing	150.23	49	*e*P	PKPdf	23 09 31.7	+1.0
YNDB	Yeoundo	150.25	327	P	PKPbc	23 09 36.2	+0.2
	SNR=22						
BOSB	Boseong-gun	150.30	329	P	PKPbc	23 09 36.0	-0.1
	SNR=16						
KOHB	KOHEUNG	150.38	328	P	PKiKP	23 09 37.4	+0.6
	SNR=8.3						
KOLN	Koldanda	150.42	50	*e*P	PKPdf	23 09 31.0	+0.1
ANMD	Anmado	150.43	331	P	PKPbc	23 09 36.0	-0.4
	SNR=23						
HANB	Haenam	150.79	329	P	PKPbc	23 09 37.0	-0.3
	SNR=37						
GMDB	Geomundo	150.82	328	P	PKPbc	23 09 37.5	+0.2
	SNR=15						
KSWAN	Wando	150.85	329	P	PKPbc	23 09 37.1	-0.3
	SNR=27						
GKN	Gorkha	151.07	49	*e*P	PKPdf	23 09 32.1	+0.3
HUK2	Heuksan-myeon	151.24	331	P	PKPbc	23 09 38.3	0.0
	SNR=31						
SAUI	Saumlaki	151.36	232	PKPdf	PKPdf	23 09 33.3	+1.0
SAUI				PKPbc	PKiKP	23 09 41.0	+1.6
CJD	Chujado	151.40	329	P	PKPbc	23 09 38.4	-0.3
	SNR=53						
DMN	Daman	151.63	49	*e*P	PKPdf	23 09 32.3	-0.5
KKN	Kakani	151.66	48	*e*P	PKPdf	23 09 31.9	-0.8
KSJJU	Jeju	151.68	328	P	PKiKP	23 09 40.1	+0.6
	SNR=8.9						
MDRS	Chennai	151.78	81	*e*P	PKPdf	23 09 33.9	+1.0
HALB	Hallimjungang-	151.85	328	P	PKiKP	23 09 40.1	+0.2
	SNR=9.6						
PKIN	Phulchoki	151.86	49	*e*P	PKPdf	23 09 33.1	0.0
PKI	Pulchoki	151.88	49	*e*P	PKPdf	23 09 32.7	-0.5
GGDB	Gageodo	151.91	330	P	PKiKP	23 09 40.0	+0.1
	SNR=13						
GOS1	Gosan-ri	151.96	328	P	PKiKP	23 09 40.6	+0.5
	SNR=13						
GOS2	Gosang-Q330s	151.96	328	P	PKiKP	23 09 40.6	+0.5
	SNR=12						
PALK	Pallekele	151.99	93	PKP	PKPdf	23 09 34.0	+0.7
	comp=Z,388nm,0.8s,baz=37,slow=2.0,SNR=15						
PALK				pPKPbc	pPKPbc	23 12 02.3	-0.5
	comp=Z,720nm,1.1s,baz=46,slow=2.3,SNR=5.8						
PALK	Pallekele	151.99	93	PKPdf	PKPdf	23 09 33.5	+0.1
GUN	Gumba	152.03	48	*e*P	PKPdf	23 09 33.3	-0.2
TIY	Taiyuan	152.33	354	⇑PKPbc	PKPdf	23 09 34.4	+1.1
TIY				PKPab	PKPab	23 09 54.3	+0.5
TIY				PP	PP	23 13 28.6	+0.2
TIY				AMB	AMB		
	comp=Z,30µm,7.5s						
JIRN	Jiri	152.40	48	*e*P	PKPdf	23 09 34.2	+0.2
TIA	Tai'an	152.97	345	PKPbc	PKPdf	23 09 34.4	+0.3
TIA				pPKP	pPKPdf	23 11 57.3	-0.5
TIA				AMB	AMB		
	comp=Z,30µm,9.6s						
RAMN	Ramite	153.10	48	*e*P	PKPdf	23 09 35.4	+0.5
FAKI	Fak Fak	153.39	242	PKPdf	PKPdf	23 09 35.9	+0.5
FAKI				PKPbc	PKiKP	23 09 44.6	+1.0
TAPN	Taplejung	153.68	46	*e*P	PKPdf	23 09 36.5	+0.7
JMZ	Minamidaito 2	153.71	309	PKPdf	PKPdf	23 09 35.7	+0.3
ODAN	Odare	153.73	48	*e*P	PKPdf	23 09 35.4	-0.4
LZH	Lanzhou	153.74	9	⇓PKPbc	PKPdf	23 09 36.8	+1.4
LZH				PKPab	PKPab	23 10 00.4	+0.5
LZH				pPKP	pPKPdf	23 12 00.3	+1.1
LZH				PP	PP	23 13 36.8	+0.5
LZH				AMB	AMB		
	comp=Z,26µm,9.3s						
LSA	Lhasa	154.41	38	PKPbc	PKPdf	23 09 38.3	+1.4
LSA	Lhasa	154.41	38	PKIKP	PKPdf	23 09 37.9	+1.0
LSA	Lhasa	154.41	38	PKPdf	PKPdf	23 09 37.9	+1.0
COCO	West Island	154.81	151	PKP2	PKPab	23 10 06.1	+1.3
COCO						00 09 37.2	
COCO	West Island	154.81	151	PKPdf	PKPdf	23 09 37.2	0.0
COCO				PKPab	PKPab	23 10 06.1	+1.3
SOEI	Soe	155.04	218	PKPdf	PKPdf	23 09 38.6	+0.9
BATI	Baumata	155.04	216	PKP	PKPdf	23 09 39.3	+1.7
	comp=Z,980nm,0.9s,baz=158,slow=4.2,SNR=5.5						
SIJI	Sorong	155.22	245	PKP	PKPdf	23 09 37.4	-0.5
	comp=Z,576nm,1.1s,baz=18,slow=3.3,SNR=12						
JOW	Kunigami	155.28	315	PKPdf	PKPdf	23 09 38.3	+0.8
XAN	Xi'an	156.18	360	PKP	PKPdf	23 09 39.3	+0.7
XAN				PKPab	PKPab	23 10 10.3	0.0
XAN				pPKP	pPKPdf	23 11 58.8	-3.7
XAN				sPKP		23 12 57.8	
XAN				PKS	PKSdf	23 13 10.9	-1.7
XAN				PP	PP	23 13 46.6	-2.9
XAN				SKS	SKSdf	23 15 43.3	-3.9
XAN				SKKS	SKKSac	23 19 43.3	+4.3
XAN				SS	SS	23 32 53.6	+4.7
XAN				AMB	AMB		
	comp=Z,52µm,11.0s						
SSE	Sheshan	156.20	333	PKP	PKPdf	23 09 38.8	+0.2
SSE				PP	PP	23 13 51.4	+1.4
SSE				SS	SS	23 32 51.8	+1.9
SSE				AMB	AMB		
	comp=Z,6µm,7.4s						
NJ2	Nanjing	156.30	339	⇓PKP	PKPdf	23 09 38.1	-0.6
NJ2				PKPab	PKPab	23 10 09.4	-1.5
NJ2				SKKS		23 19 35.9	
NJ2				AMB	AMB		
	comp=Z,20µm,5.7s						
MMRI	Maumere	157.13	216	PKPdf	PKPdf	23 09 39.7	-0.6
SHL	Shillong	157.71	44	PKIKP	PKPdf	23 09 40.9	0.0
SHL	Shillong	157.71	44	*e*P	PKPdf	23 09 41.6	+0.7
SHL				*i* x	x	23 10 17.5	
SHL	Shillong	157.71	44	PKPdf	PKPdf	23 09 40.9	0.0
CD2	Chengdu	158.76	12	PKP	PKPdf	23 09 41.0	-0.9
CD2				pPKP	pPKPdf	23 12 02.8	-3.1
CD2				sPKP		23 13 01.5	
CD2				PP	PP	23 14 03.8	+0.3
CD2				SKS	SKSdf	23 15 49.5	-0.4
CD2				SS	SS	23 33 18.1	+2.0
CD2				AMB	AMB		
	comp=Z,58µm,7.7s						
WHN	Wuhan	159.04	347	*i* PKP	PKPdf	23 09 42.3	+0.2
WHN				PKPab	PKPab	23 10 22.3	-0.5
WHN				pPKP	pPKPdf	23 12 07.8	+1.6
WHN				PP	PP	23 14 03.9	-1.1
WHN				SKKS		23 19 55.8	
WHN				AMB	AMB		
	comp=Z,40µm,9.0s						
XMIS	Christmas Isla	159.29	171	PKPdf	PKPdf	23 09 42.6	-0.3
TNTI	Ternate	159.43	244	PKPdf	PKPdf	23 09 42.4	-0.6
ENH	Enshi	159.93	359	PKPdf	PKPdf	23 09 43.5	+0.3
ENH				PKPab	PKPab	23 10 26.6	-0.1
JAGI	Jajag, Banyuwa	160.82	196	PKPdf	PKPdf	23 09 43.7	-0.9
JAGI				PKPab	PKPab	23 10 31.5	+0.5
KAPI	Kappang	161.49	216	PKP	PKPdf	23 09 46.2	+0.9
	comp=Z,855nm,1.1s,baz=237,slow=1.4,SNR=7.6						
KAPI				PKPab	PKPab	23 10 34.5	+0.5
	comp=Z,507nm,1.1s,baz=270,slow=2.2,SNR=2.3						
KAPI	Kappang	161.49	216	PKPdf	PKPdf	23 09 45.6	+0.4
KAPI					PKPab	23 10 34.9	+0.9
QZH	Quanzhou	162.61	329	PKP	PKPdf	23 09 46.6	+0.6
QZH				PKPab	PKPab	23 10 37.6	-1.0
QZH				pPKP	pPKPdf	23 12 09.8	-0.5
QZH				PP	PP	23 14 23.8	-0.5
QZH				SKKS		23 20 13.8	
QZH				AMB	AMB		
	comp=Z,26µm,9.7s						
LEM	Lembang	163.13	176	PKP	PKPdf	23 09 47.5	+0.5
	comp=Z,1µm,0.9s,baz=268,slow=0.5,SNR=5.2						
LEM				PKPab	PKPab	23 10 43.2	+2.0
	comp=Z,1µm,0.8s,baz=37,slow=4.6,SNR=5.7						
DAV	Davao City (W)	163.24	261	PKP	PKPdf	23 09 47.2	+0.3
	comp=Z,1µm,1.0s,baz=181,slow=1.6,SNR=5.1						
GYA	Guiyang	163.60	7	⇓*i*PKP	PKPdf	23 09 47.5	+0.4
GYA				PKPab	PKPab	23 10 43.6	+0.6
GYA				sPKP		23 13 03.3	
GYA				PP	PP	23 14 29.9	+0.9
GYA				SKKS		23 20 17.8	
GYA				AMB	AMB		
	comp=Z,38µm,14.4s						
PBA	Port Blair	164.06	83	*e*P	PKPdf	23 09 48.0	+0.4
DGPR	DIGLIPUR	164.06	77	*e*P	PKPdf	23 09 48.4	+0.8
DGPR				*i* x	x	23 10 45.8	
CMAR	Chiang Mai Arr	167.28	48	PKP	PKPdf	23 09 50.9	+0.8
	comp=Z,492nm,0.9s,baz=284,slow=1.8,SNR=21						
CMAR				PKPab	PKPab	23 10 59.8	+0.3
	comp=Z,728nm,1.0s,baz=302,slow=5.7,SNR=14						
CMAR				pPKP	pPKPdf	23 12 14.7	+0.1
	comp=Z,531nm,1.2s,baz=307,slow=1.9,SNR=4.5						
CMAR	Chiang Mai Arr	167.28	48	PKPdf	PKPdf	23 09 50.3	+0.2
CMAR				PKPab	PKPab	23 10 59.9	+0.4
TGY	Tagaytay City	167.58	290	PKP	PKPdf	23 09 51.1	+0.7
	comp=Z,1µm,0.9s,baz=223,slow=3.6,SNR=5.2						
TGY				PKPab	PKPab	23 11 01.6	+0.4
	comp=Z,1µm,1.0s,baz=137,slow=9.5,SNR=2.3						
PSI	Prapat	167.72	126	PKP	PKPdf	23 09 50.3	-0.5
	comp=Z,520nm,1.0s,baz=232,slow=3.0,SNR=9.1						
PSI				PKPab	PKPab	23 11 02.2	+0.4
	comp=Z,315nm,0.8s,baz=338,slow=4.2,SNR=7.2						
QIZ	Qiongzhong	171.09	354	PKP	PKPdf	23 09 53.5	+1.1
QIZ				PKPab	PKPab	23 11 14.4	-1.7
QIZ				pPKP	pPKPdf	23 12 12.6	-4.4
QIZ				PP	PP	23 15 06.0	-0.4
QIZ				SS	SS	23 35 16.8	-2.9

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*IDC **24** 23:42:03.5±1.5, 31°.83S×71°.65W, h0^{km}, mb4.5/2, mb1 4.0/5, mb1mx3.8/35, mbtmp4.0/5, ML3.7/3 Error ellipse: s-maj=70.4km s-min=30.6km az=107.0*

*NEIC **24** 23:42:07.0±1.3, 31°.73S±0°.04×71°.9W±0°.1, h15^{km}±5^{km}, mb4.7/3, ML4.1(GUC), Error ellipse: s-maj=12.8km s-min=5.8km az=91.0*

*GUC **24** 23:42:08.5±0.8, 31°.75S×71°.69W, h41^{km}±3^{km}, ML4.1*

ISC 24 23:42:08.9±0.7, **31°.75S**±0°.03×**71°.84W**±0°.08, **h39**^{km}±2^{km}, **n64, σ0^{s}.90**/63, **mb4.7**/5, **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VA06	Catapilco	0.94	151	*e*P	Pn	23 42 24.9	-0.6
VA06				*i* S	Sn	23 42 36.5	-1.3
VA06				IAML		23 42 39.3	
	comp=E,19µm,0.6s						
CO06	Fray Jorge	1.08	9	*e*P	Pn	23 42 27.5	-0.1
CO06				*i* S	Sn	23 42 42.4	+1.1
CO06				IAML		23 42 45.2	
	comp=N,4µm,0.6s						
CO06	Fray Jorge	1.08	9		Pn	23 42 27.5	-0.1
VA01	Torpederas	1.28	173	*e*P	Pn	23 42 31.1	+0.8
VA01	Torpederas	1.28	173	Pn	Pn	23 42 30.7	+0.4
CO03	El Pedregal	1.34	48		Pn	23 42 30.1	-1.0
ROCH	El Roble	1.41	150	*e*P	Pn	23 42 32.1	-0.2
ROCH				*e*P	Pn	23 42 31.9	-0.4
ROCH				*i* S	Sn	23 42 50.2	+0.5
ROCH				*i* S	Sn	23 42 50.4	+0.6
ROCH				IAML		23 42 53.2	
	comp=N,4µm,0.2s						
ROCH				IAML		23 42 54.2	
	comp=N,5µm,0.6s						
VA03	San Esteban	1.49	133	*e*P	Pn	23 42 33.1	-0.2
VA03				*i* S	Sn	23 42 51.4	-0.2
VA03				IAML		23 42 53.6	
	comp=N,9µm,0.4s						
VA03	San Esteban	1.49	133		Pn	23 42 33.3	0.0
MT02	Curacav	1.62	159	*e*P	Pn	23 42 35.2	+0.2
MT02				*i* S	Sn	23 42 56.0	+1.3
MT02	Curacav	1.62	159	Pn	Pn	23 42 35.5	+0.5
PEL	Peldehue	1.70	145	*e*P	Pn	23 42 36.3	+0.1
PEL				*i* S	Sn	23 42 57.3	+0.6
PEL				IAML		23 42 59.2	
	comp=E,4µm,0.2s						
PEL	Peldehue	1.70	145		Pn	23 42 36.5	+0.3
GO04	Tololo Observa	1.81	30	*e*P	Pn	23 42 37.6	-0.2
GO04				*i* S	Sn	23 43 01.1	+1.6
GO04	Tololo Observa	1.81	30	Pn	Pn	23 42 37.7	0.0
MT05	Renca	1.89	151	*i* S	Sn	23 43 03.0	+1.7
MT05	Renca	1.89	151	Pn	Pn	23 42 39.6	+0.9
CO05	La Serena	1.89	16	*e*P	Pn	23 42 39.3	+0.6
CO05				*i* S	Sn	23 43 03.3	+2.0
CO05	La Serena	1.89	16	Pn	Pn	23 42 39.1	+0.4
VA05	Santo Domingo	1.92	174	Pn	Pn	23 42 39.4	+0.4
FCH	Farellones	2.05	141	*e*P	Pn	23 42 41.7	+0.6
FCH				*i* S	Sn	23 43 06.7	+1.0
MT09	Talagante	2.15	161	Pn	Pn	23 42 43.6	+1.2
MT01	Popeta	2.17	167	Pn	Pn	23 42 43.1	+0.6
BO04	La Punta	2.47	155	*e*P	Pn	23 42 47.4	+0.8
BO04				*i* S	Sn	23 43 16.9	+1.4
BO04				IAML		23 43 28.0	
	comp=E,2µm,0.5s						
LMEL	Las Melosas	2.51	147	*e*P	Pn	23 42 48.6	+1.3
ZON	Zonda	2.71	87	Pn	Pn	23 42 51.7	+1.8
BO01	Tunca	2.71	167	*e*P	Pn	23 42 51.3	+1.3
BO01	Tunca	2.71	167	Pn	Pn	23 42 50.9	+0.9
BO02	Sierra Bellavi	3.17	164	Pn	Pn	23 42 57.6	+1.4
GO05	Huala	3.26	181	Pn	Pn	23 42 57.5	0.0
AC04	Llanos de Chal	3.59	11	Pn	Pn	23 43 01.4	-0.6
GO03	Copiap	4.37	19	Pn	Pn	23 43 12.7	-0.2
AC02	Maricunga	5.44	27	Pn	Pn	23 43 28.1	+0.2
H03N1	Juan Fernandez	6.20	252	T	T	23 50 21.8	
	baz=80,slow=73						
H03N3	Juan Fernandez	6.21	252	T	T	23 50 19.4	
	baz=80,slow=73						
H03N2	Juan Fernandez	6.22	252	T	T	23 50 23.2	
	baz=80,slow=73						
LC01	Cunco	7.14	180	Pn	Pn	23 43 50.4	-0.4
PLCA	Paso Flores	9.03	174	Pn	Pn	23 44 15.2	-1.5
	comp=E,0.3nm,0.3s,baz=339,slow=13,SNR=1.5						
PLCA	Paso Flores	9.03	174	Pn	Pn	23 44 16.1	-0.6
LL04	Puerto Octay	9.16	183	Pn	Pn	23 44 17.9	-0.6
LVC	Limon Verde	9.47	17	Pn	Pn	23 44 21.6	-1.5
	comp=E,0.3nm,0.3s,baz=199,slow=11,SNR=1.7						
PB04	IPOC Station P	9.50	10	Pn	Pn	23 44 22.2	-1.1
TRQA	Tornquist	10.25	131	Pn	Pn	23 44 33.2	-0.3
PB11	IPOC Station P	12.10	10	Pn	Pn	23 44 58.3	-0.6
SIV	San Ignacio	18.50	35	P	Pn	23 46 22.7	+0.4
	comp=E,0.4nm,0.3s,baz=194,slow=10.0,SNR=2.4						
VNA3	Neumayer Olymp	51.38	159	P	P	23 51 03.7	-5.7
VNA1	Neumayer--Stat	51.68	158	P	P	23 51 05.7	-5.9
VNA2	Neumayer--Watz	52.03	158	P	P	23 51 08.6	-5.5
	baz=282,slow=6.1						
SNAA	Sanae	53.61	158	P	P	23 51 18.3	-7.6
SNAA	Sanae	53.61	158	P	P	23 51 26.9	+1.0
SNAA				IAmb	IAmb	23 51 29.0	
	comp=Z,10nm,1.2s						
TLIG	Tlapa	55.33	329	P	P	23 51 39.8	+0.8
TLIG				IAmb	IAmb	23 51 45.6	
	comp=Z,7.9nm,1.0s						
QSPA	South Pole Qui	58.48	180	P	P	23 52 02.6	+1.6
QSPA				IAmb	IAmb	23 52 09.3	
	comp=Z,12nm,1.3s						
DBIC	Dimbokro	74.31	72	P	P	23 53 41.9	-0.8
	comp=Z,1.7nm,0.5s,baz=229,slow=8.5,SNR=3.8						
TORD	Torodi Ar. Bea	83.29	70	P	P	23 54 31.2	-0.8
	comp=Z,6.4nm,1.0s,baz=270,slow=5.1,SNR=1.7						
WRA	Warramunga Arr	122.80	210	PKP	PKiKP	00 01 01.4	-0.1
	comp=Z,0.9nm,0.9s,baz=166,slow=1.7,SNR=5.6						
H11S2	WAKE ISLAND Hy	125.94	271	T	T	02 20 06.4	
	baz=117,slow=75,SNR=29						
H11S1	WAKE ISLAND Hy	125.95	271	T	T	02 20 06.1	
	baz=117,slow=75,SNR=19						
H11S3	WAKE ISLAND Hy	125.96	271	T	T	02 20 06.0	
	baz=117,slow=75,SNR=23						
H11N3	WAKE ISLAND Hy	126.30	272	T	T	02 20 28.9	
	baz=117,slow=74						
H11N1	WAKE ISLAND Hy	126.31	272	T	T	02 20 31.3	
	baz=117						
H11N2	WAKE ISLAND Hy	126.31	272	T	T	02 20 34.0	
	baz=117,slow=74						
AAK	Ala-Archa	151.24	58	PKPbc	PKiKP	00 01 58.6	-0.2
	comp=Z,1.8nm,0.7s,baz=219,slow=6.5,SNR=4.7						
ZALV	Zalesovo Beam	152.22	30	PKPbc	PKiKP	00 02 00.6	+0.5
	comp=Z,2.3nm,0.5s,baz=316,slow=3.9,SNR=11						
ZALV	Zalesovo Beam	152.22	30		PKiKP	00 02 00.1	-0.1

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*IDC **24** 23:44:14.1±0.9, 10°.54S×71°.02W, h604^{km}±11^{km}, mb3.6/16, mb1 3.8/22, mb1mx3.7/40, mbtmp4.6/22, Error ellipse: s-maj=12.5km s-min=9.7km az=47.0*

*VAO **24** 23:44:14.1±0.3, 10°.61S×71°.10W, h595^{km}, mb4.4*

*NEIC **24** 23:44:14.0±2.2, 10°.56S±0°.06×71°.0W±0°.1, h595^{km}±6^{km}, mb4.6/193, Error ellipse: s-maj=17.1km s-min=9.1km az=81.0*

ISC 24 23:44:13.9±0.3, **10°.55S**±0°.05×**71°.05W**±0°.06, **h602**^{km}, **n420, σ0^{s}.83**/349, **mb4.6**/107, **1D, Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CZSB	Cruzeiro do Su	3.24	330	*e*P	P	23 45 34.8	+0.1
CZSB	Cruzeiro do Su	3.24	330	P	P	23 45 34.6	-0.2
ETMB	Extrema	4.82	82	*e*P	P	23 45 46.2	+0.7
ETMB	Extrema	4.82	82	P	P	23 45 46.2	+0.7
NNA	Nana	5.86	255	P	P	23 45 54.6	+0.5
	2.1nm,0.3s,baz=56,slow=7.3,SNR=11						
NNA				S	S	23 47 15.5	-0.3
	2.6nm,0.3s,baz=348,slow=23,SNR=13						
LPAZ	La Paz	6.38	154	P	P	23 45 59.1	0.0
TBTG	Tabatinga, AM	6.42	10	*e*P	P	23 46 00.0	+1.1
TBTG	Tabatinga, AM	6.42	10	*e*P	P	23 46 00.2	+1.3
TBTG	Tabatinga, AM	6.42	10	P	P	23 45 59.8	+0.8
PB16	IPOC Station P	7.89	169	P	P	23 46 12.0	-0.8
SAML	Samuel	7.92	79	P	P	23 46 12.4	-0.2
ATAH	Atahualpa	8.01	294	P	P	23 46 15.8	+1.9
	1.4nm,0.3s,baz=94,slow=13,SNR=9.3						
ATAH				S	S	23 47 53.4	+1.3
	1.2nm,0.3s,baz=90,slow=17,SNR=7.8						
PB12	IPOC Station P	8.05	175	P	P	23 46 11.9	-2.0
PB11	IPOC Station P	9.26	172	P	P	23 46 24.3	-1.3
TA02	Huaiquique	9.71	175	P	P	23 46 28.6	-1.2
PB08	IPOC Station P	9.71	169	P	P	23 46 29.8	-0.5
TA01	Diego Aracena	10.00	175	P	P	23 46 32.1	-0.5
PB01	IPOC Station P	10.54	172	P	P	23 46 37.9	-0.3
VILB	Vilhena	10.89	104	*e*P	P	23 46 42.5	+0.8
VILB	Vilhena	10.89	104	P	P	23 46 42.4	+0.8
SIV	San Ignacio	11.12	120	P	P	23 46 44.3	+0.4
	9.2nm,0.3s,baz=293,slow=9.2,SNR=81						
SIV				S	S	23 48 46.8	-0.3
	0.3nm,0.3s,baz=314,slow=16,SNR=4.9						
PB04	IPOC Station P	11.75	176	P	P	23 46 45.4	-4.9
LVC	Limon Verde	12.17	171	S	S	23 49 06.9	+0.1
	0.7nm,0.3s,baz=315,slow=13,SNR=2.3						
PTLB	Pontes e Lacer	12.59	114	*e*P	P	23 46 59.0	+0.4

PTLB	Pontes e Lacer	12.59	114	P	P	23 46 58.5	-0.1
MACA	Manacapuru-AM	12.63	55	*e*P	P	23 46 59.2	+0.1
MACA	Manacapuru-AM	12.63	55	P	P	23 46 58.7	-0.4
OTAV	Otavalo	13.00	325	*e*P	P	23 47 04.8	+1.5
OTAV	Otavalo	13.00	325	P	P	23 47 06.0	+2.8
SOTA	Rioblanco	13.76	336	*e*P	P	23 47 11.6	+0.6
PCON	Cinco Dias	13.85	337	*e*P	P	23 47 10.3	-1.7
PDRB	Porto dos Gac	14.10	96	*e*P	P	23 47 14.0	+0.2
MARP	Paez Belalcaza	14.17	340	*e*P	P	23 47 15.4	+0.7
PRAC	Prado	14.67	345	*e*P	P	23 47 18.1	-1.1
PTGA	Pitinga	14.71	49	P	P	23 47 19.9	+0.4
	9.7nm,0.3s,baz=224,slow=16,SNR=106						
PTGA				S	S	23 49 51.8	+0.7
	0.5nm,0.3s,baz=237,slow=20,SNR=14						
ORTC	Ortega, Tolima	14.96	344	*e*P	P	23 47 21.5	-0.2
CLDB	Colider	14.99	93	*e*P	P	23 47 22.3	+0.2
YOTC	Yotoco, Valle	15.37	340	*e*P	P	23 47 25.6	-0.1
ROSC	El Rosal	15.63	348	P	P	23 47 29.8	+1.5
	2.7nm,0.3s,baz=164,slow=20,SNR=3.0						
ROSC	El Rosal	15.63	348	P	P	23 47 29.8	+1.5
ROSC				IAmb	IAmb	23 47 30.2	
	comp=Z,12nm,0.6s						
SALV	Santo Antonio	15.87	111	*e*P	P	23 47 31.8	+1.8
NPGB	Novo Progresso	15.89	79	*e*P	P	23 47 30.7	+0.3
PLMC	San Jos del P	16.21	341	*e*P	P	23 47 32.8	-0.5
SPBC	San Pablo de B	16.37	349	*e*P	P	23 47 34.1	-0.7
ITTB	Itaituba	16.38	69	*e*P	P	23 47 35.5	+0.8
NORC	Norcasia	16.45	346	*e*P	P	23 47 35.8	+0.3
RUSC	La Rusia	16.45	353	*e*P	P	23 47 37.0	+1.0
BOAV	Boa Vista	16.59	40	*e*P	P	23 47 37.8	+1.1
BOAV	Boa Vista	16.59	40	P	P	23 47 37.6	+0.9
CBOC	Ciudad Bolivar	17.03	343	*e*P	P	23 47 41.1	+0.2
CBOC				*e*P	P	23 47 41.4	+0.5
BARC	Barichara	17.16	353	*e*P	P	23 47 41.8	-0.4
PP1B	Ponte de Pedra	17.18	116	*e*P	P	23 47 42.9	+0.9
HELC	Santa Helena	17.21	345	*e*P	P	23 47 42.8	0.0
PTBC	PUERTO BERRIO,	17.31	349	*e*P	P	23 47 41.7	-1.5
AQDB	Aquidauana	17.77	126	*e*P	P	23 47 48.1	+0.7
PAMC	Pamplona, Colo	17.84	355	*e*P	P	23 47 48.6	-0.1
DBBC	Dabeiba	18.19	343	*e*P	P	23 47 52.4	+1.0
ZARC	Zaragoza, Cauc	18.32	348	*e*P	P	23 47 52.0	-0.4
ZARC	Zaragoza, Cauc	18.32	348	P	P	23 47 52.0	-0.4
SOCV	Socops	18.71	1	*e*P	P	23 47 54.5	-1.5
UREC	San Jos de Ur	18.72	346	*e*P	P	23 47 55.1	-1.0
MALB	Monte Alegre	18.78	64	*e*P	P	23 47 57.6	+1.0
SDV	Santo Domingo	19.31	1	P	P	23 48 01.8	+0.1
	comp=Z,1.4nm,0.3s,baz=209,slow=9.7,SNR=5.3						
SDV	Santo Domingo	19.31	1	*e*P	P	23 48 01.1	-0.5
SDV	Santo Domingo	19.31	1	*e*P	P	23 48 01.8	+0.1
ARAG	Araguaiana, MT	19.42	107	*e*P	P	23 48 03.2	+0.8
SNDB	Serra Nova Dou	19.43	96	*e*P	P	23 48 03.8	+1.2
SMLC	San Martn de	19.45	351	*e*P	P	23 48 00.7	-2.1
BAUV	El Baul	19.59	9	P	P	23 48 04.2	+0.2
MOTC	Monteria, Cord	19.74	346	*e*P	P	23 48 04.7	-0.6
MOTC	Monteria, Cord	19.74	346	P	P	23 48 05.6	+0.3
MOTC				IAmb	IAmb	23 48 07.3	
	comp=Z,10nm,0.6s						
CPUP	Villa Florida	20.36	142	*e*P	P	23 48 11.4	+0.6
SJCC	San Jacinto, C	20.72	348	P	P	23 48 13.8	-0.4
TRCB	Terra Rica	21.41	127	*e*P	P	23 48 21.6	+1.3
BIRV	Birongo	21.42	13	P	P	23 48 21.1	+0.7
MCPB	Macapa, AP	21.42	63	*e*P	P	23 48 21.6	+1.1
PRPB	Parauapebas	21.45	80	*e*P	P	23 48 21.1	+0.3
ITRB	Iturama	21.93	117	*e*P	P	23 48 24.3	-0.7
URIC	Uribia, Colomb	22.12	358	P	P	23 48 24.0	-2.7
URIC				IAmb	IAmb	23 48 27.4	
	comp=Z,9.3nm,0.9s						
PEXB	Peixe	22.36	96	*e*P	P	23 48 30.5	+1.7
PTGB	Pitanga	22.89	130	*e*P	P	23 48 33.5	0.0
MT09	Talagante	23.12	180	P	P	23 48 35.7	+0.2
MT09				IAmb	IAmb	23 48 36.6	
	comp=Z,12nm,0.8s						
SMTB	Santa Maria do	23.19	88	*e*P	P	23 48 37.8	+1.5
ITQB	Itaqui	23.31	147	*e*P	P	23 48 36.8	-0.2
IPMB	Ipameri, GO	23.32	111	*e*P	P	23 48 37.8	+0.4
BB19B	Bebedouro	24.03	119	*e*P	P	23 48 45.0	+1.4
MDP	Montagnes des	24.04	51	P	P	23 48 43.6	-0.1
	comp=Z,9.2nm,1.0s,baz=237,slow=9.0,SNR=6.6						
TMAB	Tom-Au,PA,Br	24.19	72	*e*P	P	23 48 47.2	+2.1
GO05	Huala	24.37	182	P	P	23 48 46.6	+0.3
GO05				IAmb	IAmb	23 49 05.8	
	comp=Z,19nm,1.2s						
RCLB	Rio Claro- Sao	25.41	121	*e*P	P	23 48 57.9	+2.1
SVB	Belmont	25.58	23	P	P	23 48 56.5	-0.9
SDBA	SAO DESIDERIO	25.69	97	*e*P	P	23 48 59.6	+1.2
VAO	Valinhos	26.12	121	*e*P	P	23 49 01.8	-0.3
JANB	Januaria	26.45	103	*e*P	P	23 49 05.2	+0.2
CNLB	Canela	26.55	138	*e*P	P	23 49 05.4	-0.3
PLTB	Pedras Altas	26.58	145	*e*P	P	23 49 05.5	-0.4
MPOM	Morne Pois Mar	26.81	22	P	P	23 49 07.8	-0.2
BSCB	Bom Sucesso	27.30	116	*e*P	P	23 49 12.2	-0.2
DIAM	Diamantina, MG	27.59	109	*e*P	P	23 49 15.5	+0.5
ROSB	Rosrio	27.78	76	*e*P	P	23 49 17.3	+0.7
CRPR	Cabo Rojo, PR	28.64	8	P	P	23 49 23.3	-0.6
CRPR				IAmb	IAmb	23 49 24.1	
	comp=Z,36nm,1.4s						
PDPR	Patillas Dam,	28.81	10	P	P	23 49 24.4	-1.0
PDPR				IAmb	IAmb	23 49 25.2	
	comp=Z,20nm,1.2s						
SJG	San Juan	28.88	10	P	P	23 49 25.0	-1.0
	comp=Z,9.4nm,0.6s,baz=169,slow=5.2,SNR=4.5						
CBYP	Canovanas	29.09	10	P	P	23 49 26.8	-1.1
CBYP				IAmb	IAmb	23 49 27.5	
	comp=Z,17nm,0.7s						
CUPR	Culebra, Puert	29.23	11	P	P	23 49 27.5	-1.5
CUPR				IAmb	IAmb	23 49 28.2	
	comp=Z,12nm,0.6s						
ANWB	Willy Bob	29.49	18	P	P	23 49 28.8	-2.4
NBPS	Pedro II - PI	29.97	80	*e*P	P	23 49 36.7	+1.1
SJMB	Sao Joao De Ma	29.98	109	*e*P	P	23 49 36.5	+1.0
PLCA	Paso Flores	30.07	179	P	P	23 49 36.2	+0.1
	comp=Z,3.7nm,0.6s,baz=360,slow=9.7,SNR=8.9						
PLCA	Paso Flores	30.07	179	*e*P	P	23 49 36.6	+0.5
PLCA	Paso Flores	30.07	179	P	P	23 49 35.7	-0.4
NBPN	Ponto Novo - B	30.31	93	*e*P	P	23 49 38.9	+0.4
BSFB	Barra de Sao F	30.32	109	*e*P	P	23 49 38.6	+0.2
NAN01	Guarapari, ES	30.81	107	*e*P	P	23 49 43.1	+0.5
ALF01	Guarapari-ES	30.83	113	*e*P	P	23 49 41.9	-0.8
RIB01	Linhares ES	30.83	110	*e*P	P	23 49 42.5	-0.3
GDU01	Guandu, BA	30.92	99	*e*P	P	23 49 44.4	+0.8
CMC01	Camacan, BA	31.08	102	*e*P	P	23 49 46.3	+1.3
NBIT	Itapeh - BA	31.13	101	*e*P	P	23 49 46.9	+1.6
NBPB	Pedra_Branca-C	31.54	83	*e*P	P	23 49 51.0	+2.1
APG	El Apazote	31.85	323	P	P	23 49 52.6	+0.8
	comp=Z,3.4nm,0.5s,baz=141,slow=6.8,SNR=6.1						
NBMA	Muriti-CE	32.04	87	*e*P	P	23 49 54.2	+1.0
NBLA	Lagarto - SE	32.67	94	*e*P	P	23 49 58.7	+0.2
NBCL	Cascavel-CE	33.07	82	*e*P	P	23 50 03.2	+1.4
NBAN	Anadia - AL	34.24	92	*e*P	P	23 50 12.3	+0.6
SOR	Soroa	35.14	341	P	P	23 50 17.7	-1.2
CMIG	Matias Romero	36.18	319	P	P	23 50 28.2	+0.7
	comp=Z,6.1nm,0.5s,baz=116,slow=8.1,SNR=13						
DWPF	Disney Wildern	39.72	346	P	P	23 50 56.3	+0.2
	baz=164						
656A	Willston	41.20	345	P	P	23 51 07.1	-0.6
456A	Hilliard	42.37	346	P	P	23 51 17.2	+0.4
BRAL	Brewton	44.23	340	P	P	23 51 31.3	+0.1
	baz=157						
NHSC	New Hope	44.27	349	P	P	23 51 31.8	+0.2
	baz=167						
NHSC	New Hope	44.27	349	P	P	23 51 31.8	+0.2
152A	Waverly Hall	44.91	344	IAmb	IAmb	23 51 36.8	
	comp=Z,27nm,0.8s						
GOGA	Godfrey	45.28	345	P	P	23 51 39.0	-0.2
	baz=163						
BIRD	Birdtown, Kers	45.82	349	P	P	23 51 43.0	-0.3
W57A	Gilead	46.23	350	P	P	23 51 45.9	-0.5
W57A				IAmb	IAmb	23 51 46.8	
	comp=Z,20nm,0.7s						
PAULI	Pauline	46.26	348	IAmb	IAmb	23 51 47.2	
	comp=Z,13nm,0.5s						
VBMS	Vicksburg	46.42	337	P	P	23 51 47.5	-0.4
	baz=153						
Z47A	Carrollton	46.43	340	P	P	23 51 46.9	-1.0
KMSC	Kings Mountain	46.47	348	P	P	23 51 48.3	+0.1
	baz=166						
FPAL	Fort Paine	46.92	343	IAmb	IAmb	23 51 52.0	
	comp=Z,11nm,0.7s						
X48A	Hartselle	47.26	342	IAmb	IAmb	23 51 54.0	
	comp=Z,19nm,0.8s						
833A	Chaparral WMA,	47.38	325	P	P	23 51 55.4	+0.2
	baz=141						
U56A	King	47.46	350	IAmb	IAmb	23 51 56.7	
	comp=Z,24nm,0.8s						
TKL	Tuckaleechee C	47.50	346	IAmb	IAmb	23 51 55.9	
	comp=Z,9.8nm,0.8s						
Y45A	Yeager Farm, C	47.54	339	IAmb	IAmb	23 51 56.4	
	comp=Z,27nm,0.8s						
V52A	Sevierville	47.63	346	P	P	23 51 55.8	-1.2
V52A				IAmb	IAmb	23 51 57.1	
	comp=Z,23nm,0.8s						
SWET	Sewanee	47.64	343	IAmb	IAmb	23 51 56.7	
	comp=Z,20nm,0.6s						
T59A	Double "B" Far	47.66	353	P	P	23 51 56.6	-0.5
T59A				IAmb	IAmb	23 51 57.3	
	comp=Z,18nm,0.7s						
NATX	Nacogdoches	47.76	333	P	P	23 51 58.7	+0.8
	baz=148						
NATX	Nacogdoches	47.76	333	P	P	23 51 58.9	+1.0
U54A	Nelsons Funny	47.90	348	IAmb	IAmb	23 51 59.6	
	comp=Z,28nm,1.1s						
PLAL	Pickwick Lake	48.07	341	IAmb	IAmb	23 51 59.4	
	comp=Z,15nm,0.8s						
Z41A	Richland Creek	48.24	335	P	P	23 52 01.1	-0.4
	baz=151						
TZTN	Tazewell	48.29	347	P	P	23 52 01.2	-0.6
	baz=163						
BLA	Blacksburg	48.31	350	P	P	23 52 02.4	+0.4
	baz=168						
V48A	Smith Brothers	48.39	343	IAmb	IAmb	23 52 02.3	
	comp=Z,24nm,0.8s						
CLTN	Cedars of Leba	48.57	343	IAmb	IAmb	23 52 04.1	
	comp=Z,16nm,0.8s						
S57A	Dark Hollow, R	48.62	352	IAmb	IAmb	23 52 04.8	
	comp=Z,15nm,0.8s						
WLAR	White Oak Lake	48.74	335	IAmb	IAmb	23 52 06.2	
	comp=Z,27nm,0.8s						
U49A	Red Boiling Sp	48.82	344	IAmb	IAmb	23 52 05.2	
	comp=Z,15nm,0.7s						
CBN	Corbin Frederi	48.85	353	P	P	23 52 05.4	-0.5
	baz=172						
WVT	Waverly	49.05	342	P	P	23 52 06.0	-1.4
	baz=158						
WHTX	Lake Whitney,	49.27	330	P	P	23 52 09.3	+0.2
	baz=145						
JCT	Junction City	49.27	327	P	P	23 52 09.2	0.0
	baz=142						
R55A	Marlinton	49.31	351	P	P	23 52 09.2	-0.1
R55A				IAmb	IAmb	23 52 10.2	
	comp=Z,9.2nm,0.7s						
X40A	Basin Creek Fa	49.33	336	P	P	23 52 08.8	-0.7
	baz=151						
MIAR	Mount Ida	49.67	335	P	P	23 52 11.4	-0.6
	baz=150						
MIAR	Mount Ida	49.67	335	IAmb	IAmb	23 52 12.0	
	comp=Z,13nm,0.8s						
W41B	Gary Mavity, V	49.70	337	P	P	23 52 11.1	-1.1
	baz=152						
WHAR	Wooly Hollow	49.82	337	IAmb	IAmb	23 52 12.9	
	comp=Z,19nm,1.0s						
LCAR	Lake Charles	50.09	339	IAmb	IAmb	23 52 14.6	
	comp=Z,12nm,0.9s						
Q54A	Coxs Mills	50.11	350	IAmb	IAmb	23 52 15.5	
	comp=Z,26nm,0.8s						
R50A	Paris	50.13	346	IAmb	IAmb	23 52 14.8	
	comp=Z,12nm,0.6s						
P60A	Greenville	50.28	355	P	P	23 52 15.7	-0.6
	baz=174						
FCAR	Ozark Folk Cen	50.29	338	IAmb	IAmb	23 52 15.8	
	comp=Z,20nm,0.6s						
W39A	Magazine	50.32	336	P	P	23 52 16.6	-0.2
	baz=150						
W39A	Magazine	50.32	336	IAmb	IAmb	23 52 17.3	
	comp=Z,28nm,1.2s						
Q52A	Bidwell	50.35	349	IAmb	IAmb	23 52 17.0	
	comp=Z,23nm,0.8s						
X37A	Clayton	50.47	334	IAmb	IAmb	23 52 18.7	
	comp=Z,17nm,0.7s						
WCI	Wyandotte Cave	50.57	344	P	P	23 52 17.2	-1.3
	baz=160						
WCI	Wyandotte Cave	50.57	344	P	P	23 52 16.8	-1.6
TXAR	Lajitas Array	50.61	322	P	P	23 52 19.1	0.0
	comp=Z,1.9nm,0.6s,baz=165,slow=9.1,SNR=25						
MCWV	Mont Chateau	50.61	351	P	P	23 52 19.0	+0.3
	baz=169						
TX31	Lajitas Ar. Si	50.61	322	IAmb	IAmb	23 52 20.1	
	comp=Z,26nm,1.2s						
ABTX	Abilene, Hawle	50.87	329	P	P	23 52 20.9	+0.1
	baz=143						
U40A	Yellville	50.97	337	P	P	23 52 20.4	-1.0
	baz=152						
P52A	Corning	50.97	349	P	P	23 52 20.4	-0.9
	baz=166						
P52A	Corning	50.97	349	IAmb	IAmb	23 52 21.3	
	comp=Z,32nm,0.8s						
P51A	Williamsport	51.01	348	IAmb	IAmb	23 52 21.2	
	comp=Z,13nm,0.8s						
O56A	Blue Knob Stat	51.03	353	P	P	23 52 21.8	0.0
	baz=170						
SSPA	Standing Stone	51.31	353	P	P	23 52 23.5	-0.3
	baz=171						
SSPA	Standing Stone	51.31	353	P	P	23 52 23.3	-0.5
HHAR	Hobbs	51.33	336	P	P	23 52 22.9	-1.1
HHAR				IAmb	IAmb	23 52 23.8	
	comp=Z,16nm,1.0s						
N59A	State Game Lan	51.39	355	P	P	23 52 23.9	-0.4
	baz=174						
O53A	New Philadelph	51.41	350	P	P	23 52 24.0	-0.5
	baz=167						
P49A	Miami Univ. Ec	51.42	346	P	P	23 52 23.1	-1.5
	baz=163						
P49A	Miami Univ. Ec	51.42	346	IAmb	IAmb	23 52 23.3	
	comp=Z,20nm,0.6s						
MGMO	Mountain Grove	51.46	338	IAmb	IAmb	23 52 24.8	
	comp=Z,28nm,0.9s						
P48A	Milroy	51.52	346	IAmb	IAmb	23 52 24.1	
	comp=Z,14nm,0.7s						
X34A	Smith Ranch, M	51.59	332	IAmb	IAmb	23 52 26.9	
	comp=Z,30nm,0.8s						
ACSO	Alum Creek Sta	51.72	348	P	P	23 52 26.0	-0.7
	baz=165,SNR=6.8						
ACSO	Alum Creek Sta	51.72	348	IAmb	IAmb	23 52 26.5	
	comp=Z,27nm,1.0s						
TUL1	Leonard	51.77	334	P	P	23 52 26.9	-0.2
	baz=148						
TUL1	Leonard	51.77	334	IAmb	IAmb	23 52 27.4	
	comp=Z,19nm,0.7s						
N53A	Lisbon	51.89	351	IAmb	IAmb	23 52 28.3	
	comp=Z,27nm,0.7s						
CCM	Cathedral Cave	51.91	340	P	P	23 52 27.2	-0.9
	baz=154						
CCM	Cathedral Cave	51.91	340	P	P	23 52 27.0	-1.1
CCM				IAmb	IAmb	23 52 28.5	
	comp=Z,21nm,0.7s						
N54A	Moraine State	51.91	351	P	P	23 52 28.0	-0.1
	baz=169						
WMOK	Wichita Mounta	52.15	331	P	P	23 52 29.5	-0.4
	baz=145,SNR=8.0						
N51A	Ashland	52.26	349	IAmb	IAmb	23 52 30.2	
	comp=Z,25nm,0.7s						
S39A	Bolivar	52.33	338	IAmb	IAmb	23 52 30.7	
	comp=Z,29nm,0.7s						
QUOK	Quay	52.38	334	IAmb	IAmb	23 52 32.0	
	comp=Z,28nm,0.7s						
M54A	Oil Creek Stat	52.40	352	P	P	23 52 31.0	-0.6
	baz=169						
R40A	Maddies Statio	52.47	339	IAmb	IAmb	23 52 31.7	
	comp=Z,22nm,0.7s						
M53A	WI Miller and	52.48	351	P	P	23 52 31.7	-0.4
	baz=168,SNR=6.8						
BINY	Binghamton	52.68	355	P	P	23 52 33.3	-0.3
	baz=174						
BINY	Binghamton	52.68	355	P	P	23 52 32.9	-0.7
BINY				IAmb	IAmb	23 52 33.9	
	comp=Z,13nm,0.6s						
L61B	Northampton	52.76	358	P	P	23 52 33.4	-0.7
	baz=178						
HRV	Adam Dziewonsk	52.79	360	P	P	23 52 34.1	-0.2
	baz=179						
SFIN	Lafayette	52.80	345	P	P	23 52 32.5	-1.9
	baz=160,SNR=9.0						
M50A	Fremont	52.86	349	IAmb	IAmb	23 52 34.5	
	comp=Z,23nm,0.8s						
T35A	Sooner Cattle	52.93	334	IAmb	IAmb	23 52 35.8	
	comp=Z,15nm,0.8s						
O44A	Mansfield	52.96	343	IAmb	IAmb	23 52 34.2	
	comp=Z,31nm,0.6s						
ERPA	Erie	53.04	352	P	P	23 52 35.9	-0.2
	baz=169						
CROK	Carrier	53.23	333	IAmb	IAmb	23 52 38.5	
	comp=Z,26nm,0.7s						
MNTX	Cornudas Mount	53.34	323	P	P	23 52 37.9	-0.5
	baz=136,SNR=7.8						
MMNY	Mt. Morris Dam	53.39	354	IAmb	IAmb	23 52 38.4	
	comp=Z,16nm,0.5s						
P40A	Paris	53.51	340	IAmb	IAmb	23 52 39.0	
	comp=Z,30nm,0.8s						
MSTX	Muleshoe	53.56	327	P	P	23 52 39.5	-0.6
	baz=140						
HDIL	Hopedale	53.57	343	P	P	23 52 38.0	-1.9
	baz=158,SNR=6.7						
OK032	Salt Plains WL	53.58	333	IAmb	IAmb	23 52 40.5	
	comp=Z,24nm,0.8s						
L48A	N Adams	53.66	348	P	P	23 52 39.0	-1.5
AMTX	Amarillo	53.69	329	P	P	23 52 40.6	-0.4
	baz=142						
K50A	Casco	54.11	349	IAmb	IAmb	23 52 43.0	
	comp=Z,39nm,0.8s						
P38A	Dawn	54.11	339	IAmb	IAmb	23 52 43.1	
	comp=Z,23nm,0.7s						
PMSA	Palmer Station	54.37	176	*e*P	P	23 52 46.3	+1.2
KSU1	Kansas State U	54.83	336	P	P	23 52 47.9	-0.8
	baz=149						
KSU1	Kansas State U	54.83	336	IAmb	IAmb	23 52 48.4	
	comp=Z,19nm,0.7s						
LONY	Lake Ozonia	55.00	357	P	P	23 52 49.7	-0.1
	baz=176						
121A	Cookes Peak, D	55.36	322	P	P	23 52 53.2	+0.4
	baz=134						
319A	Douglas	55.49	320	P	P	23 52 54.3	+0.6
319A				IAmb	IAmb	23 52 54.9	
	comp=Z,25nm,1.1s						
PKME	Peaks-Kenny Pk	55.57	2	P	P	23 52 52.9	-0.8
	baz=182						
MNTQ	Montreal, Queb	55.83	358	IAmb	IAmb	23 52 55.9	
	comp=Z,25nm,0.7s						
CBKS	Cedar Bluff	55.92	333	P	P	23 52 56.3	0.0
	baz=145						
CBKS	Cedar Bluff	55.92	333	IAmb	IAmb	23 52 57.1	
	comp=Z,19nm,0.8s						
JFWS	Jewell Farm	56.02	343	P	P	23 52 55.7	-1.2
	baz=157,SNR=11						
JFWS	Jewell Farm	56.02	343	IAmb	IAmb	23 52 56.3	
	comp=Z,40nm,0.7s						
SCIA	State Center	56.03	340	P	P	23 52 55.7	-1.2
	baz=153						
ANMO	Albuquerque	56.31	325	P	P	23 52 59.4	+0.1
	baz=137						
ANMO	Albuquerque	56.31	325	P	P	23 52 59.3	+0.1
N33A	J Bar K, Exete	56.56	336	P	P	23 53 00.0	-0.6
N33A				IAmb	IAmb	23 53 00.6	
	comp=Z,55nm,0.8s						
H43A	Windswept, Lux	56.82	346	IAmb	IAmb	23 53 01.5	
	comp=Z,28nm,0.6s						
T25A	Trinidad	56.84	328	P	P	23 53 03.5	+0.6
	baz=140,SNR=6.7						
I40A	Norwalk	57.03	343	IAmb	IAmb	23 53 03.1	
	comp=Z,27nm,0.5s						
TUC	Tucson	57.07	320	P	P	23 53 04.4	0.0
	baz=132						
TUC	Tucson	57.07	320	P	P	23 53 04.4	0.0
KSCO	Kaye Shedlock'	57.41	331	P	P	23 53 06.3	-0.3
	baz=142						
BGNE	Belgrade	57.41	336	P	P	23 53 06.1	-0.3
	baz=148						
SDCO	Great Sand Dun	57.86	328	P	P	23 53 10.4	+0.5
	baz=139,SNR=24						
SDCO	Great Sand Dun	57.86	328	IAmb	IAmb	23 53 11.1	
	comp=Z,17nm,0.6s						
214A	Organ Pipe Nat	58.15	318	P	P	23 53 12.2	+0.6
	baz=130,SNR=8.4						
W18A	Petrified Fore	58.32	323	P	P	23 53 13.4	+0.4
	baz=134						
E43A	Lone Tree Farm	58.44	347	IAmb	IAmb	23 53 12.8	
	comp=Z,24nm,0.6s						
S22A	4UR Ranch, Cre	58.56	327	P	P	23 53 14.8	+0.2
	baz=138,SNR=5.4						
Q24A	Divide	58.60	329	P	P	23 53 15.3	+0.4
	baz=140						
ECSD	EROS Data Cent	58.82	339	P	P	23 53 14.5	-1.4
	baz=150,SNR=6.0						
ECSD	EROS Data Cent	58.82	339	P	P	23 53 14.8	-1.0
MVCO	Mesa Verde	59.08	326	P	P	23 53 18.5	+0.5
	baz=136,SNR=8.0						
D41A	Chassel	59.44	346	IAmb	IAmb	23 53 19.6	
	comp=Z,34nm,0.6s						
ISCO	Idaho Springs	59.48	330	P	P	23 53 20.8	+0.1
	baz=140,SNR=5.7						
WUAZ	Wupatki	59.57	322	P	P	23 53 22.1	+0.9
	baz=132,SNR=5.2						
GLA	Glamis	60.16	318	P	P	23 53 25.4	+0.4
	baz=128						
N23A	Red Feather La	60.47	330	P	P	23 53 27.4	+0.2
	baz=140						
PDMCI	Parker Dam,Lak	60.50	319	P	P	23 53 27.6	+0.5
	baz=130						
F33A	5 Mile Ranch,	60.54	340	IAmb	IAmb	23 53 26.9	
	comp=Z,27nm,0.6s						
IKP	In-Ko-Pah, Jac	60.77	317	P	P	23 53 28.7	-0.3
	baz=127						
BC3	Big Chuckawall	60.94	318	P	P	23 53 30.7	+0.5
	baz=128						
EYMN	Ely	61.00	344	P	P	23 53 29.0	-1.2
	baz=157,SNR=6.3						
EYMN	Ely	61.00	344	P	P	23 53 28.6	-1.5
EYMN				IAmb	IAmb	23 53 29.6	
	comp=Z,22nm,0.6s						
IRM	Iron Mountain	61.05	319	P	P	23 53 31.6	+0.8
	baz=129,SNR=7.0						
O20A	White River Ci	61.06	328	P	P	23 53 31.3	+0.3
	baz=137,SNR=6.1						
MONP2	Monument Peak	61.12	317	P	P	23 53 32.0	+0.4
	baz=127						
KNB	Kanab	61.45	323	IAmb	IAmb	23 53 35.7	
	comp=Z,29nm,0.9s						
GMRC	Granite Mounta	61.77	319	P	P	23 53 36.8	+1.1
	baz=128,SNR=12						
Q16A	Castle Valley	61.78	325	P	P	23 53 36.4	+0.7
B35A	Bob, Littlefor	61.99	343	IAmb	IAmb	23 53 36.0	
	comp=Z,28nm,0.6s						
K22A	Casper	62.09	331	P	P	23 53 38.1	+0.5
	baz=140						
RSSD	Black Hills	62.10	334	P	P	23 53 38.3	+0.6
	baz=143						
HEC	Hector,Ludlow	62.24	319	P	P	23 53 39.7	+1.1
	baz=128						
SHPR	Sheep Range	62.54	321	P	P	23 53 40.5	0.0
AGMN	Agassiz Nation	62.57	342	P	P	23 53 39.6	-0.7
	baz=152,SNR=15						
AGMN	Agassiz Nation	62.57	342	IAmb	IAmb	23 53 40.2	
	comp=Z,30nm,0.7s						
GSC	Goldstone, Bar	62.83	319	P	P	23 53 42.8	+0.4
	baz=128						
EDW2	Edwards Air Fo	63.36	318	P	P	23 53 46.1	+0.4
	baz=127						
MDND	Maddock	63.42	339	P	P	23 53 46.2	+0.4
	baz=148,SNR=10						
DUG	Dugway, Tooele	63.58	325	P	P	23 53 48.0	+0.9
	baz=133						
FURC	Furnace Creek,	63.58	320	P	P	23 53 48.0	+1.1
	baz=128						
ISA	Isabella, Lake	64.14	318	P	P	23 53 51.7	+1.1
	baz=126,SNR=5.4						
ULM	Lac du Bonnet	64.31	343	P	P	23 53 50.3	-1.0
	comp=Z,25nm,0.6s,baz=153,slow=6.6,SNR=39						
ULM	Lac du Bonnet	64.31	343	P	P	23 53 50.0	-1.3
ULM				IAmb	IAmb	23 53 50.8	
	comp=Z,23nm,0.7s						
CWC	Cottonwood Cre	64.34	319	P	P	23 53 52.9	+0.8
	baz=127						
LCH	Last Change Ra	64.55	320	P	P	23 53 54.2	+0.9
PKM	Mcpherson Peak	64.58	317	P	P	23 53 54.5	+0.9
	baz=125,SNR=5.2						
RLMT	Red Lodge	65.26	331	P	P	23 53 58.1	+0.4
	baz=138						
DGMT	Dagmar	65.66	336	P	P	23 54 00.5	+0.6
	baz=144,SNR=5.3						
DGMT	Dagmar	65.66	336	IAmb	IAmb	23 54 01.2	
	comp=Z,22nm,0.6s						
NVAR	Mina Array Bea	65.69	321	P	P	23 54 01.2	+0.6
	comp=Z,2.7nm,0.7s,baz=133,slow=6.7,SNR=9.2						
BOZ	Bozeman (W)	66.74	330	P	P	23 54 07.4	+0.6
	baz=136						
PNTR	Pine Nut	66.90	321	IAmb	IAmb	23 54 10.1	
	comp=Z,15nm,0.8s						
VCNR	Virginia City	67.05	321	IAmb	IAmb	23 54 10.9	
	comp=Z,9.7nm,0.7s						
MFID	Camas Ranch	67.41	326	IAmb	IAmb	23 54 12.8	

	comp=Z,31nm,0.8s						
EGMT	Eagleton	67.64	333	P	P	23 54 12.5	+0.4
	baz=138,SNR=11						
EGMT	Eagleton	67.64	333	IAmb	IAmb	23 54 13.2	
	comp=Z,23nm,0.7s						
LIC	Lamto	67.81	79	*e*P	P	23 54 13.4	-0.4
	comp=Z,24nm,0.9s						
TIC	Toumodi	67.92	78	*e*P	P	23 54 14.1	-0.3
DBIC	Dimbokro	68.08	78	P	P	23 54 15.3	-0.1
	comp=Z,8.9nm,0.6s,baz=264,slow=5.9,SNR=15						
DBIC	Dimbokro	68.08	78	P	P	23 54 15.0	-0.4
DBIC				IAmb	IAmb	23 54 15.5	
	comp=Z,9.9nm,0.7s						
KIC	Kosan Boka	68.12	79	*e*P	P	23 54 15.4	-0.2
	comp=Z,34nm,0.7s						
PLID	Pearl Lake	68.61	327	P	P	23 54 18.5	+0.2
PLID				IAmb	IAmb	23 54 19.3	
	comp=Z,10nm,0.8s						
MSO	Missoula	68.75	330	P	P	23 54 19.8	+0.9
	baz=134						
MSO	Missoula	68.75	330	IAmb	IAmb	23 54 20.8	
	comp=Z,22nm,1.3s						
M04C	Macdoel	69.87	322	P	P	23 54 26.2	+0.6
	baz=126						
N02D	Trinity Center	69.93	321	P	P	23 54 26.2	+0.2
	baz=125						
M02C	Callahan	70.26	321	P	P	23 54 28.0	0.0
	baz=125						
J05D	Fort Rock, OR	70.39	323	P	P	23 54 29.6	+0.8
	baz=127						
E09A	Wood Farm, Sta	70.68	328	IAmb	IAmb	23 54 32.0	
	comp=Z,12nm,0.9s						
J04D	Umpqua Nationa	70.88	323	P	P	23 54 32.5	+0.8
	baz=126						
VNA3	Neumayer Olymp	71.07	163	P	P	23 54 32.5	+0.4
I05D	Terrebonne, OR	71.08	324	P	P	23 54 34.2	+1.5
	baz=127,SNR=5.8						
VNA1	Neumayer--Stat	71.26	162	P	P	23 54 34.1	+1.0
K02D	Willamette Mer	71.50	322	P	P	23 54 35.8	+0.6
	baz=125						
C09A	Chrisman Ranch	71.58	329	IAmb	IAmb	23 54 37.1	
	comp=Z,10nm,0.8s						
G05D	Wamic, OR	71.61	325	P	P	23 54 37.1	+1.4
	baz=127						
E07A	Sunnyside	71.62	327	IAmb	IAmb	23 54 38.4	
	comp=Z,15nm,1.0s						
VNA2	Neumayer--Watz	71.63	162	P	P	23 54 35.6	+0.3
	baz=283,slow=4.8						
HOOD	Mount Hood Mea	71.85	325	IAmb	IAmb	23 54 39.9	
	comp=Z,16nm,0.8s						
F05D	White Salmon	72.08	326	P	P	23 54 39.7	+1.3
	baz=127						
E04D	Cinebar	73.10	326	P	P	23 54 43.2	-1.0
	baz=126						
SNAA	Sanae	73.26	162	P	P	23 54 45.1	+0.3
SNAA	Sanae	73.26	162	P	P	23 54 45.0	+0.2
	comp=Z,4.7nm,0.7s,baz=268,slow=2.3,SNR=18						
SNAA	Sanae	73.26	162	P	P	23 54 45.2	+0.3
B05A	Bryant	73.87	327	P	P	23 54 48.6	+0.1
	baz=127						
TORD	Torodi Ar. Bea	75.94	74	P	P	23 54 59.8	-0.9
	comp=Z,16nm,0.7s,baz=259,slow=5.7,SNR=77						
TORD	Torodi Ar. Bea	75.94	74	P	P	23 55 00.3	-0.4
TORD				IAmb	IAmb	23 55 01.1	
	comp=Z,14nm,0.8s						
MDT	Midelt	76.53	53	P	P	23 55 05.0	+1.2
	comp=Z,3.4nm,0.7s,baz=221,slow=5.5						
ESDC	Sonseca Array	79.64	46	P	P	23 55 20.9	+0.8
	comp=Z,2.8nm,0.9s,baz=240,slow=6.7,SNR=10						
ESDC	Sonseca Array	79.64	46	P	P	23 55 20.5	+0.3
YKA	Yellowknife Ar	80.22	341	P	P	23 55 22.4	-0.1
	comp=Z,9.8nm,0.7s,baz=128,slow=6.4,SNR=58						
TGTN	Hyland Airport	84.52	336	P	P	23 55 45.4	+1.1
	baz=124,SNR=7.0						
SUMG	Summit	85.63	9	P	P	23 55 49.9	+0.1
SUMG				IAmb	IAmb	23 55 50.8	
	comp=Z,15nm,0.9s						
P33M	Teslin, Yukon	85.71	334	P	P	23 55 50.9	+0.8
	baz=120						
MMPY	Sheldon Lake,	86.29	336	P	P	23 55 53.4	+0.6
	baz=121,SNR=5.4						
WHY	Whitehorse	86.83	334	P	P	23 55 55.6	+0.2
	baz=118						
FARO	Faro, Yukon	86.94	335	P	P	23 55 56.6	+0.8
	baz=119,SNR=5.8						
M31M	Drury Creek, Y	87.35	335	P	P	23 55 57.9	+0.2
	baz=118						
N31M	Braeburn, Yuko	87.60	334	P	P	23 55 59.5	+0.6
	baz=117						
M30M	Minto, Yukon	88.52	335	P	P	23 56 03.2	0.0
	baz=116						
YUK4	Talbot Arm	88.78	334	P	P	23 56 04.8	+0.2
	baz=115						
BCLA	Clavier	89.50	38	*d*P	P	23 56 06.8	-1.2
A36M	Sachs Harbour	89.65	345	P	P	23 56 08.1	0.0
	baz=127,SNR=6.7						
INK	Inuvik	89.99	341	P	P	23 56 09.9	+0.1
	baz=119,SNR=10						
EPYK	Eagle Plains	90.18	338	P	P	23 56 11.0	+0.3
	baz=116						
DAWY	Dawson	90.21	336	P	P	23 56 11.0	0.0
	baz=114						
I29M	Ogilvie Camp,	90.33	337	P	P	23 56 11.3	-0.2
	baz=115,SNR=5.7						
L27K	Beaver Creek,	90.83	335	P	P	23 56 14.2	+0.4
	baz=112						
SCRK	Sand Creek	92.06	335	P	P	23 56 19.4	-0.2
	baz=110						
J26L	Joseph Creek	92.06	336	P	P	23 56 19.5	-0.1
	baz=110						
KLU	Klutina	92.09	332	P	P	23 56 19.5	-0.2
	baz=108						
RIDG	Independent Ri	92.34	335	P	P	23 56 20.8	0.0
	baz=109						
PAX	Paxson	92.35	334	P	P	23 56 20.7	-0.2
	baz=108						
J25K	Salcha River,	92.84	335	P	P	23 56 22.9	-0.1
	baz=108						
WAT6	Susitna Watana	93.23	333	P	P	23 56 24.7	-0.4
	baz=106						
SML	Sawmill	93.28	332	P	P	23 56 24.7	-0.5
	baz=106						
ILAR	Eielson Array	93.51	335	P	P	23 56 25.4	-0.7
	comp=Z,0.5nm,0.6s,baz=106,slow=3.4,SNR=6.0						
POKR	Poker Plat Res	93.83	336	P	P	23 56 27.6	0.0
	baz=107						
NEA2	Nenana	94.36	335	P	P	23 56 29.4	-0.6
	baz=105						
GERES	GERESS Array B	94.42	41	P	P	23 56 30.4	-0.3
	comp=Z,0.7nm,0.6s,baz=188,slow=2.7,SNR=6.2						
TRF	Thorofare Moun	94.58	334	P	P	23 56 30.6	-0.6
	baz=104						
BPAW	Bear Paw Mtn.	95.04	334	P	P	23 56 31.9	-1.1
	baz=104						
CAST	Castle Rocks	95.36	333	P	P	23 56 33.6	-0.9
	baz=103						
TOLK	Toolik Lake Re	95.60	339	P	P	23 56 35.5	0.0
	baz=104						
O19K	Port Alsworth	95.74	330	P	P	23 56 35.2	-1.0
	baz=101						
SDPT	Sand Point	98.26	325	P	Pdif	23 56 47.1	-0.4
	baz=96						
AKTO	Aktyubinsk	122.42	36	PKP	PKiKP	00 02 02.0	0.0
	comp=Z,3.0nm,0.7s,baz=342,slow=3.2						
ABKAR	Akbulak array	124.06	37	PKPdf	PKiKP	00 02 05.2	0.0
STKA	Stephens Creek	127.51	215	PKP	PKPdf	00 02 12.0	-0.1
	comp=Z,3.8nm,0.7s,baz=317,slow=2.4,SNR=7.1						
STKA	Stephens Creek	127.51	215		PKPdf	00 02 12.4	+0.2
ZALV	Zalesovo Beam	132.62	19	PKP	PKPdf	00 02 21.0	0.0
	comp=Z,5.9nm,0.6s,baz=304,slow=2.4,SNR=16						
ZALV	Zalesovo Beam	132.62	19	PKPpre	PKPpre	00 02 10.4	
ZALV				PKPdf	PKPdf	00 02 20.7	-0.3
AAK	Ala-Archa	136.14	37	PKP	PKPdf	00 02 28.8	+0.6
	comp=Z,2.4nm,0.8s,baz=199,slow=1.9,SNR=4.6						
AAK	Ala-Archa	136.14	37	PKPdf	PKPdf	00 02 29.0	+0.8
KLR	Kul'dur	137.02	338	PKP	PKPdf	00 02 29.4	0.0
	comp=Z,1.2nm,0.5s,baz=72,slow=1.2,SNR=5.0						
MKAR	Makanchi Array	137.38	27	PKP	PKPdf	00 02 29.7	-0.5
	comp=Z,1.3nm,0.6s,baz=338,slow=2.0,SNR=7.4						
MKAR	Makanchi Array	137.38	27	PKPpre	PKPpre	00 02 19.2	
MKAR					PKPdf	00 02 29.9	-0.3
ASAR	Alice Springs	138.15	215	PKhKP	PKPpre	00 02 20.2	
	comp=Z,0.2nm,0.4s,baz=144,slow=3.4,SNR=1.7						
ASAR				PKP	PKPdf	00 02 31.8	-0.5
	comp=Z,1.8nm,0.6s,baz=121,slow=1.9,SNR=12						
WRA	Warramunga Arr	140.72	220	PKhKP	PKPpre	00 02 30.7	
	comp=Z,0.8nm,0.5s,baz=134,slow=2.8,SNR=22						
WRA				PKP	PKPdf	00 02 36.7	-0.4
	comp=Z,2.2nm,0.3s,baz=142,slow=1.6,SNR=8.5						
USRK	Ussuriysk Ar.	141.00	333	PKhKP	PKPpre	00 02 32.2	
	comp=Z,2.6nm,0.7s,baz=1.3,slow=3.8,SNR=4.8						
USRK	Ussuriysk Ar.	141.00	333		PKPpre	00 02 31.6	
ULN	Ulaanbaatar	142.77	2	PKPdf	PKPdf	00 02 38.2	-1.9
SONM	Songino Array	142.77	3	PKP	PKPdf	00 02 38.0	-2.0
	comp=Z,7.5nm,0.7s,baz=324,slow=2.4,SNR=33						
MAT	Matsushiro	143.00	319	PKP	PKPab	00 02 38.4	+0.1
MJAR	Matsushiro Arr	143.00	319	PKP	PKPbc	00 02 39.0	+0.1
	comp=Z,13nm,0.8s,baz=80,slow=2.7,SNR=18						
MJAR	Matsushiro Arr	143.00	319	PKPdf	PKPbc	00 02 38.8	0.0
KSRS	Korea Array	148.23	331	PKP	PKPdf	00 02 49.0	-0.4
	comp=Z,13nm,0.7s,baz=27,slow=2.2,SNR=4.8						
KSRS				PKPbc	PKPbc	00 02 53.7	+0.1
	comp=Z,12nm,0.7s,baz=20,slow=2.5,SNR=21						
KSAR	Wonju Array Be	148.25	331	PKPdf	PKPdf	00 02 49.3	-0.1
KSAR				PKPbc	PKPbc	00 02 53.6	0.0
BJT	Baijiatuau	149.96	349		PKPbc	00 02 57.4	-0.2
PYUN	Piuthan	150.03	51	*e*P	PKPbc	00 02 58.3	-0.2
	comp=Z,96nm,0.7s						
GTA	Gaotai	150.12	14	*e*PKPbc	PKPdf	00 02 53.1	+0.6
GTA				pPKP	pPKPbc	00 05 16.1	-0.2
GTA				sPKP		00 06 14.8	
DANN	Dangsing	150.48	50	*e*P	PKPbc	00 02 59.7	+0.1
	comp=Z,121nm,0.9s						
KOLN	Koldanda	150.66	51	*e*P	PKPbc	00 02 59.7	-0.2
GKN	Gorkha	151.32	49	*e*P	PKPbc	00 03 00.9	-0.5
	comp=Z,28nm,0.5s						
DMN	Daman	151.88	50	*e*P	PKPbc	00 03 02.8	0.0
KKN	Kakani	151.91	49	*e*P	PKPbc	00 03 02.5	-0.3
JIRN	Jiri	152.66	48	*e*P	PKPbc	00 03 02.6	-2.0
RAMN	Ramite	153.35	49	*e*P	PKPbc	00 03 04.5	-1.5
TAPN	Taplejung	153.94	47	*e*P	PKPbc	00 03 05.6	-1.7
ODAN	Odare	153.99	48	*e*P	PKPbc	00 03 05.7	-1.6
CMAR	Chiang Mai Arr	167.53	50	PKP	PKPdf	00 03 12.3	-0.5
	comp=Z,0.4nm,0.3s,baz=298,slow=0.8,SNR=4.6						

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*DJA **24** 23:46:05.7±0.2, 9°S±3°×11°9E±°, h86^{km}±4^{km}, M4.5/24, mb4.5/5, MLv4.5/24*

*IDC **24** 23:46:08.3±4.6, 8.°71S×118.°82E, h132^{km}±37^{km}, mb3.7/4, mb1 3.8/7, mb1mx3.3/57, mbtmp4.1/7, Error ellipse: s-maj=59.0km s-min=11.3km az=64.0*

ISC 24 23:46:04.2±0.8, **8.°94S**±0.°05×**118.°55E**±0.°04, **h100**^{km}, **n29**, σ**1.^{s}79**/35, **mb4.0**/3, **Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLAI	Plampang	0.77	278	P	Pn	23 46 23.3	+1.0
PLAI				S	Sn	23 46 36.8	+1.0
WBSI	Waikabubak, Su	1.09	130	P	Pn	23 46 26.5	+0.8
WBSI				S	Sn	23 46 42.9	+1.1
TWSI	Taliwang, Sumb	1.66	277	P	Pn	23 46 34.2	+1.8
TWSI				S	Sn	23 46 54.8	+0.9
BASI	Baing, Sumba	2.37	123	P	Pn	23 46 43.9	+2.2
EDFI	Ende, Flores	3.11	87	P	Pn	23 46 53.6	+2.0
DNP	Denpasar	3.31	274	P	Pn	23 46 57.0	+2.9
IGBI	Denpasar	3.36	272	P	Pn	23 46 56.6	+1.8
BSSI	Bau Bau, Buton	3.38	35	P	Pn	23 46 55.8	+0.7
SRBI	Singaraja	3.41	284	P	Pn	23 46 56.9	+1.5
MMRI	Maumere	3.66	86	P	Pn	23 47 00.8	+2.0
BKSI	Bulukumba	3.92	24	P	Pn	23 47 03.3	+1.0
KAPI	Kappang	4.08	17	P	Pn	23 47 06.0	+1.5
	4.2nm,0.3s,baz=220,slow=14,SNR=5.8						
KAPI				S	Sn	23 47 49.7	-1.4
	11nm,0.3s,baz=286,slow=24,SNR=18						
JAGI	Jajag, Banyuwa	4.37	276	P	Pn	23 47 08.0	-0.4
ABJI	Asem Bagus	4.42	285	P	Pn	23 47 10.5	+1.5
BNSI	Bone	4.76	19	P	Pn	23 47 16.1	+2.3
KMMI	Kalianget	4.91	292	P	Pn	23 47 18.0	+2.3
BLJI	Banyuglugur	5.04	283	P	Pn	23 47 18.1	+0.6
SPSI	Sidrap Palu	5.09	14	P	Pn	23 47 19.2	+1.1
	0.6nm22nm,0.7s						
GMJI	Gumukmas	5.09	277	P	Pn	23 47 17.5	-0.6
	0.5nm39nm,0.5s						
BATI	Baumata	5.20	104	P	Pn	23 47 21.3	+1.5
	27nm,0.3s,baz=295,slow=5.7,SNR=16						
BATI				S	Sn	23 48 19.2	+0.7
	24nm,0.3s,baz=45,slow=21,SNR=7.9						
BATI	Baumata	5.20	104	P	Pn	23 47 21.2	+1.5
	0.4nm72nm,0.6s						
SOEI	Soe	5.70	99	P	Pn	23 47 27.9	+1.3
	0.8nm61nm,0.6s						
TTSI	Tana Toraja	5.99	12	P	Pn	23 47 31.7	+1.3
FITZ	Fitzroy Crossi	11.42	144	P	Pn	23 48 44.0	-0.2
	0.3nm,0.3s,baz=336,slow=13,SNR=17						
FITZ				S	Sn	23 50 44.2	-5.6
	0.9nm,0.3s,baz=183,slow=22,SNR=9.8						
WRA	Warramunga Arr	18.79	127	P	P	23 50 16.5	+0.6
	0.7nm,0.3s,baz=303,slow=12,SNR=24						
ASAR	Alice Springs	20.75	137	P	P	23 50 38.4	+1.3
	7.4nm,0.6s,baz=314,slow=9.3,SNR=30						
STKA	Stephens Creek	31.29	140	P	P	23 52 16.1	+1.3
	3.3nm,0.5s,baz=304,slow=11,SNR=8.8						
USRK	Ussuriysk Ar.	54.27	12	P	P	23 55 18.7	-1.2
	0.5nm,0.3s,baz=194,slow=6.1,SNR=4.3						
SONM	Songino Array	57.54	350	P	P	23 55 42.4	-0.9
	0.5nm,0.6s,baz=166,slow=8.9,SNR=1.5						

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*VAO **24** 23:55:20.4±0.3, 10.°36S×70.°92W, h617^{km}, mb4.2*

*IDC **24** 23:55:21.0±0.9, 10.°30S×70.°92W, h636^{km}±12^{km}, mb3.4/13, mb1 3.5/18, mb1mx3.3/48, mbtmp4.4/18, Error ellipse: s-maj=13.5km s-min=10.4km az=32.0*

*NEIC **24** 23:55:20.2±2.5, 10.°29S±0.°07×70.°9W±0.°1, h619^{km}±8^{km}, mb4.1/79, Error ellipse: s-maj=15.4km s-min=9.6km az=102.0*

ISC 24 23:55:19.1±0.4, **10.°24S**±0.°05×**70.°91W**±0.°06, **h600**^{km}, **n208**, σ**1.^{s}55**/209, **mb4.2**/46, **Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CZSB	Cruzeiro do Su	3.06	324	*e*P	P	23 56 42.9	+4.2
CZSB	Cruzeiro do Su	3.06	324	P	P	23 56 42.7	+4.0
ETMB	Extrema	4.64	85	*e*P	P	23 56 53.6	+4.4
ETMB	Extrema	4.64	85	P	P	23 56 53.6	+4.4
NNA	Nana	6.08	253	P	P	23 57 04.0	+3.0
	6.8nm,0.3s,baz=60,slow=5.8,SNR=29						
NNA				S	S	23 58 27.4	+3.1
	1.3nm,0.3s,baz=347,slow=19,SNR=1.3						
NNA	Nana	6.08	253	P	P	23 57 03.5	+2.5
TBTG	Tabatinga, AM	6.10	9	*e*P	P	23 57 06.0	+4.8
TBTG	Tabatinga, AM	6.10	9	P	P	23 57 05.5	+4.4
LPAZ	La Paz	6.59	156	P	P	23 57 09.0	+3.0
SAML	Samuel	7.72	81	P	P	23 57 19.5	+3.7
ATAH	Atahualpa	8.02	292	P	P	23 57 23.5	+4.4
	1.0nm,0.3s,baz=140,slow=7.9,SNR=11						
ATAH				S	S	23 59 02.0	+4.7
	0.7nm,0.3s,baz=306,slow=16,SNR=8.3						
PB16	IPOC Station P	8.16	171	P	P	23 57 21.9	+1.4
PB12	IPOC Station P	8.34	176	P	P	23 57 21.9	+0.2
PB11	IPOC Station P	9.54	173	P	P	23 57 34.2	+0.7
PB08	IPOC Station P	9.99	170	P	P	23 57 39.0	+1.0
TA02	Huaiquique	10.00	176	P	P	23 57 38.2	+0.5
TA01	Diego Aracena	10.29	176	P	P	23 57 41.2	+0.6
PB01	IPOC Station P	10.83	173	P	P	23 57 46.5	+0.4
VILB	Vilhena	10.83	105	*e*P	P	23 57 49.3	+3.2
VILB	Vilhena	10.83	105	P	P	23 57 48.8	+2.7
SIV	San Ignacio	11.15	122	P	P	23 57 51.7	+2.3
	5.2nm,0.3s,baz=293,slow=9.2,SNR=65						
SIV				S	S	23 59 55.5	+2.7
	0.2nm,0.3s,baz=297,slow=16,SNR=2.0						
PB07	IPOC Station P	11.46	175	P	P	23 57 53.3	+0.8
PB09	IPOC Station P	11.60	172	P	P	23 57 55.1	+1.2
PB04	IPOC Station P	12.05	177	P	P	23 57 59.3	+0.8
MACA	Manacapuru-AM	12.35	56	*e*P	P	23 58 03.9	+2.5
MACA	Manacapuru-AM	12.35	56	P	P	23 58 03.9	+2.5
LVC	Limon Verde	12.45	171	P	P	23 58 04.1	+1.4
	9.5nm,0.3s,baz=357,slow=9.8,SNR=64						
LVC				S	S	00 00 18.5	+1.4
	0.3nm,0.3s,baz=135,slow=19,SNR=2.0						
LVC	Limon Verde	12.45	171	*e*P	P	23 58 03.6	+0.9
PB06	IPOC Station P	12.46	174	P	P	23 58 03.1	+0.5
PTLB	Pontes e Lacer	12.59	115	*e*P	P	23 58 05.9	+2.2
PTLB	Pontes e Lacer	12.59	115	P	P	23 58 06.1	+2.4
OTAV	Otavalo	12.83	324	*e*P	P	23 58 09.0	+2.2
OTAV	Otavalo	12.83	324	*e*P	P	23 58 07.5	+0.7
OTAV	Otavalo	12.83	324	P	P	23 58 10.1	+3.3
PB15	IPOC Station P	12.97	174	P	P	23 58 08.4	+0.6
PAC1	Pacto, Paraso	13.06	323	*e*P	P	23 58 11.0	+2.2
GCUF	Volcan Galeras	13.07	330	*e*P	P	23 58 10.0	+0.8
GARC	Garzon, Huila	13.16	339	*e*P	P	23 58 10.7	+0.8
PB10	IPOC Station P	13.20	179	P	P	23 58 10.5	+0.6
SOTA	Rioblanco	13.54	335	*e*P	P	23 58 16.1	+2.1
PCON	Cinco Dias	13.63	336	*e*P	P	23 58 16.4	+1.4
MARP	Paez Belalcaza	13.94	339	*e*P	P	23 58 19.6	+1.9
PDRB	Porto dos Gac	13.99	97	*e*P	P	23 58 19.8	+1.9
PB14	IPOC Station P	14.31	178	P	P	23 58 22.1	+0.9
PTGA	Pitinga	14.41	50	P	P	23 58 24.1	+2.1
	2.6nm,0.3s,baz=234,slow=12,SNR=26						
PTGA				S	S	00 00 53.5	+2.2
	baz=236,slow=17,SNR=7.9						
PRAC	Prado	14.42	344	*e*P	P	23 58 23.6	+1.5
ORTC	Ortega, Tolima	14.71	343	*e*P	P	23 58 25.3	+0.6
CLDB	Colider	14.87	94	*e*P	P	23 58 27.4	+1.2
YOTC	Yotoco, Valle	15.13	339	*e*P	P	23 58 29.5	+0.8
ANIL	Santa Ana	15.30	343	*e*P	P	23 58 31.4	+0.9
ROSC	El Rosal	15.36	347	P	P	23 58 33.3	+2.2
	3.9nm,0.3s,baz=193,slow=14,SNR=5.5						
NPGB	Novo Progresso	15.70	80	*e*P	P	23 58 34.9	+1.1
SALV	Santo Antonio	15.85	112	*e*P	P	23 58 35.9	+0.8
PLMC	San Jos del P	15.97	340	*e*P	P	23 58 37.4	+1.0
SPBC	San Pablo de B	16.10	349	*e*P	P	23 58 38.4	+0.8
ITTB	Itaituba	16.14	70	*e*P	P	23 58 39.4	+1.6
RUSC	La Rusia	16.17	352	*e*P	P	23 58 40.5	+1.9
NORC	Norcasia	16.19	346	*e*P	P	23 58 39.5	+1.2
BOAV	Boa Vista	16.26	40	*e*P	P	23 58 41.1	+2.2
BOAV	Boa Vista	16.26	40	P	P	23 58 40.6	+1.7
TAMC	Tame, Arauca	16.59	357	*e*P	P	23 58 44.0	+2.0
AC02	Maricunga	16.59	174	P	P	23 58 43.5	+1.2
AC02				IAmb	IAmb	23 58 46.1	
	comp=Z,7.0nm,0.6s						
CBOC	Ciudad Bolivar	16.79	342	*e*P	P	23 58 44.8	+0.8
BARC	Barichara	16.88	352	*e*P	P	23 58 45.3	+0.5
HELC	Santa Helena	16.96	344	*e*P	P	23 58 46.9	+1.2
PTBC	PUERTO BERRIO,	17.04	348	*e*P	P	23 58 45.4	-0.7
PAMC	Pamplona, Colo	17.56	354	*e*P	P	23 58 52.1	+0.8
AQDB	Aquidauana	17.83	127	P	P	23 58 55.6	+2.4
AQDB				IAmb	IAmb	23 58 55.8	
	comp=Z,9.3nm,1.1s						
DBBC	Dabeiba	17.94	343	*e*P	P	23 58 55.7	+1.3
ZARC	Zaragoza, Cauc	18.05	347	*e*P	P	23 58 55.4	+0.1
ZARC	Zaragoza, Cauc	18.05	347	P	P	23 58 55.5	+0.1
SOCV	Socops	18.40	0	*e*P	P	23 58 58.1	-0.4
UREC	San Jos de Ur	18.46	345	*e*P	P	23 58 58.8	-0.2
OCAC	Ocana	18.52	352	P	P	23 59 00.1	+0.4
SMLC	San Martn de	19.18	350	*e*P	P	23 59 04.6	-0.9
BAUV	El Baul	19.27	9	P	P	23 59 07.5	+1.2
SNDB	Serra Nova Dou	19.32	97	*e*P	P	23 59 07.3	+0.5
ARAG	Araguaiana, MT	19.38	108	*e*P	P	23 59 07.9	+0.6
MOTC	Monteria, Cord	19.48	346	*e*P	P	23 59 08.8	+0.6
MOTC	Monteria, Cord	19.48	346	P	P	23 59 08.2	0.0
LL6C	La Loma 6 Bece	19.98	353	*e*P	P	23 59 10.5	-2.3
CO06	Fray Jorge	20.34	182	P	P	23 59 15.6	-0.2
SJCC	San Jacinto, C	20.45	348	*e*P	P	23 59 17.4	+0.3
SJCC	San Jacinto, C	20.45	348	P	P	23 59 17.6	+0.6
CO03	El Pedregal	20.50	179	P	P	23 59 17.4	+0.1
CPUP	Villa Florida	20.52	143	*e*P	P	23 59 17.4	-0.1
MCPB	Macapa, AP	21.16	64	*e*P	P	23 59 25.0	+1.6
BCIP	Isla Barro Col	21.23	335	P	P	23 59 25.9	+1.9
PRPB	Parauapebas	21.26	81	*e*P	P	23 59 25.0	+0.7
URIC	Uribia, Colomb	21.83	357	P	P	23 59 26.9	-2.4
URIC				IAmb	IAmb	23 59 27.6	
	comp=Z,11nm,1.1s						
PEXB	Peixe	22.25	97	*e*P	P	23 59 34.3	+1.2
VA03	San Esteban	22.42	179	P	P	23 59 35.1	+0.6
MT02	Curacav	22.91	180	P	P	23 59 38.6	-0.1
MT02				IAmb	IAmb	00 00 01.7	
	comp=Z,3.7nm,0.9s						
BDFB	Brasilia	22.94	106	P	P	23 59 39.8	+0.4
	comp=Z,1.6nm,0.4s,baz=301,slow=7.8,SNR=4.5						
BDFB	Brasilia	22.94	106	P	P	23 59 39.2	-0.2
BDFB				IAmb	IAmb	23 59 56.1	
	comp=Z,3.4nm,1.1s						
SRBA	San Rafael, Bu	22.98	327	P	P	23 59 42.0	+2.3
SRBA				IAmb	IAmb	00 00 00.3	
	comp=Z,9.3nm,1.0s						
SMTB	Santa Maria do	23.04	89	*e*P	P	23 59 41.8	+1.7
IPMB	Ipameri, GO	23.30	112	*e*P	P	23 59 42.7	+0.3
MT09	Talagante	23.43	180	P	P	23 59 43.3	-0.1
MT09				IAmb	IAmb	23 59 44.3	
	comp=Z,8.1nm,0.9s						
MT01	Popeta	23.52	181	P	P	23 59 43.7	-0.4
MT01				IAmb	IAmb	23 59 51.7	
	comp=Z,3.6nm,0.9s						
MDP	Montagnes des	23.73	51	P	P	23 59 47.0	+0.7
	comp=Z,17nm,1.1s,baz=242,slow=5.5,SNR=8.9						
BO01	Tunca	24.04	180	P	P	23 59 48.7	0.0
BO01				IAmb	IAmb	23 59 49.1	
	comp=Z,2.6nm,0.7s						
BO02	Sierra Bellavi	24.44	180	P	P	23 59 52.4	+0.1
GO05	Huala	24.67	182	P	P	23 59 54.2	-0.1
SDBA	SAO DESIDERIO	25.59	97	*e*P	P	00 00 03.3	+0.6
JANB	Januaria	26.38	103	*e*P	P	00 00 10.1	+0.5
BSCB	Bom Sucesso	27.30	116	*e*P	P	00 00 17.8	+0.2
DIAM	Diamantina, MG	27.55	110	*e*P	P	00 00 19.9	0.0
ROSB	Rosrio	27.57	76	*e*P	P	00 00 20.4	+0.4
MLPR	Magueyes Islan	28.29	8	P	P	00 00 26.1	0.0
MLPR				IAmb	IAmb	00 00 51.9	
	comp=Z,8.7nm,0.9s						
CRPR	Cabo Rojo, PR	28.32	8	P	P	00 00 25.4	-1.0
CRPR				IAmb	IAmb	00 00 26.9	
	comp=Z,9.3nm,0.9s						
CELP	Cerrillos	28.46	9	P	P	00 00 27.3	-0.3
CELP				IAmb	IAmb	00 00 51.7	
	comp=Z,11nm,1.1s						
PDPR	Patillas Dam,	28.49	10	P	P	00 00 27.4	-0.4
PDPR				IAmb	IAmb	00 00 28.5	
	comp=Z,6.5nm,0.9s						
LC01	Cunco	28.55	182	P	P	00 00 27.1	-1.1
LC01				IAmb	IAmb	00 00 28.3	
	comp=Z,6.7nm,0.9s						
GCPR	Guaynabo City	28.77	10	P	P	00 00 30.7	+0.4
GCPR				IAmb	IAmb	00 00 50.4	
	comp=Z,6.7nm,0.8s						
CBYP	Canovanas	28.77	10	P	P	00 00 29.2	-1.1
TRQA	Tornquist	28.84	165	P	P	00 00 29.5	-1.2
TRQA				IAmb	IAmb	00 00 42.0	
	comp=Z,2.1nm,0.8s						
CUPR	Culebra, Puert	28.91	11	P	P	00 00 30.4	-1.0
CUPR				IAmb	IAmb	00 00 35.1	
	comp=Z,5.2nm,0.8s						
NBPS	Pedro II - PI	29.78	81	*e*P	P	00 00 39.8	+0.6
NBPN	Ponto Novo - B	30.19	94	*e*P	P	00 00 43.3	+0.6
BSFB	Barra de Sao F	30.29	110	*e*P	P	00 00 43.3	-0.1
PLCA	Paso Flores	30.37	179	P	P	00 00 43.7	-0.2
	comp=Z,2.5nm,0.6s,baz=341,slow=9.3,SNR=9.1						
PLCA	Paso Flores	30.37	179	*e*P	P	00 00 43.2	-0.7
PLCA	Paso Flores	30.37	179	P	P	00 00 43.4	-0.5
MTO3	Montecristo	30.56	323	P	P	00 00 47.1	+1.0
MTO3				IAmb	IAmb	00 01 05.2	
	comp=Z,4.1nm,0.9s						
NAN01	Guarapari, ES	30.77	108	*e*P	P	00 00 47.4	-0.2
RIB01	Linhares ES	30.81	111	*e*P	P	00 00 47.6	-0.3
GDU01	Guandu, BA	30.83	100	*e*P	P	00 00 47.4	-0.8
GUA01	Guaratinga, BA	30.88	105	*e*P	P	00 00 48.5	0.0
NBIT	Itapeh - BA	31.05	102	*e*P	P	00 00 50.4	+0.4
NBPB	Pedra_Branca-C	31.36	84	*e*P	P	00 00 53.9	+1.2
NBMA	Muriti-CE	31.88	88	*e*P	P	00 00 57.5	+0.4
NBLA	Lagarto - SE	32.55	94	*e*P	P	00 01 02.6	-0.1
NBCL	Cascavel-CE	32.88	82	*e*P	P	00 01 06.0	+0.5
NBLV	Livramento - P	33.70	88	*e*P	P	00 01 13.2	+0.7
NBAN	Anadia - AL	34.11	92	*e*P	P	00 01 15.8	+0.1
SOR	Soroa	34.90	340	P	P	00 01 22.3	+0.1
NBRF	Rio Formoso -	35.32	91	*e*P	P	00 01 26.2	+0.4
CMIG	Matias Romero	36.05	319	P	P	00 01 32.4	+0.7
	comp=Z,9.4nm,0.7s,baz=136,slow=9.1,SNR=11						
BIRD	Birdtown, Kers	45.55	349	P	P	00 02 46.2	-0.4
BIRD				IAmb	IAmb	00 03 03.9	
	comp=Z,6.8nm,1.1s						
Z47A	Carrollton	46.19	340	P	P	00 02 50.1	-1.3
Z47A				IAmb	IAmb	00 03 11.2	
	comp=Z,5.1nm,0.7s						
Y49A	Blount Mountai	46.27	342	P	P	00 02 50.8	-1.3
Y49A				IAmb	IAmb	00 03 12.1	
	comp=Z,4.4nm,1.1s						
X48A	Hartselle	47.01	342	P	P	00 02 56.5	-1.1
X48A				IAmb	IAmb	00 02 56.7	
	comp=Z,4.1nm,0.6s						
SWET	Sewanee	47.39	343	P	P	00 02 59.2	-1.2
SWET				IAmb	IAmb	00 03 12.5	
	comp=Z,8.8nm,1.2s						
U49A	Red Boiling Sp	48.57	344	P	P	00 03 07.1	-2.0
S54A	Dingess, Beckl	48.77	349	P	P	00 03 10.2	-0.5

S54A				IAmb	IAmb	00 03 13.0	
	comp=Z,5.0nm,0.9s						
WVT	**Waverly**	**48.80**	**342**	P	**P**	**00 03 09.3**	**-1.6**
WVT				IAmb	IAmb	00 03 09.5	
	comp=Z,4.6nm,0.6s						
T47A	**Sharon Grove**	**49.38**	**343**	P	**P**	**00 03 14.1**	**-1.0**
MIAR	**Mount Ida**	**49.46**	**335**	P	**P**	**00 03 14.4**	**-1.3**
MIAR				IAmb	IAmb	00 03 15.2	
	comp=Z,4.2nm,0.7s						
LCAR	**Lake Charles**	**49.86**	**338**	P	**P**	**00 03 16.8**	**-1.8**
LCAR				IAmb	IAmb	00 03 17.5	
	comp=Z,4.0nm,1.0s						
FCAR	**Ozark Folk Cen**	**50.06**	**337**	P	**P**	**00 03 18.4**	**-1.7**
FCAR				IAmb	IAmb	00 03 18.8	
	comp=Z,5.4nm,0.5s						
W39A	**Magazine**	**50.11**	**335**	P	**P**	**00 03 20.4**	**0.0**
PBMO	**Poplar Bluff**	**50.24**	**340**	P	**P**	**00 03 19.4**	**-2.0**
PBMO				IAmb	IAmb	00 03 20.6	
	comp=Z,5.9nm,0.7s						
P53A	**Whipple**	**50.42**	**349**	P	**P**	**00 03 22.5**	**-0.1**
P53A				IAmb	IAmb	00 03 45.6	
	comp=Z,6.3nm,1.1s						
TXAR	**Lajitas Array**	**50.46**	**322**	P	**P**	**00 03 22.7**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=165,slow=8.8,SNR=12						
TXAR				PcP	**PcP**	**00 04 29.6**	**-0.8**
	comp=Z,0.3nm,0.6s,baz=140,slow=4.4,SNR=2.3						
TXAR	**Lajitas Array**	**50.46**	**322**	P	**P**	**00 03 22.5**	**-0.8**
TX31	**Lajitas Ar. Si**	**50.46**	**322**	P	**P**	**00 03 22.8**	**-0.5**
TX32	**Lajitas Array**	**50.46**	**322**	P	**P**	**00 03 22.7**	**-0.5**
S44A	**Carbondale**	**50.69**	**341**	P	**P**	**00 03 23.3**	**-1.3**
SIUC	**Southern Illin**	**50.69**	**341**	P	**P**	**00 03 23.6**	**-1.1**
U40A	**Yellville**	**50.75**	**337**	P	**P**	**00 03 23.8**	**-1.3**
O52A	**Adamsville**	**51.12**	**349**	P	**P**	**00 03 26.7**	**-1.0**
O52A				IAmb	IAmb	00 03 50.9	
	comp=Z,7.9nm,1.1s						
FVM	**French Village**	**51.33**	**340**	P	**P**	**00 03 28.2**	**-1.1**
CCM	**Cathedral Cave**	**51.67**	**340**	P	**P**	**00 03 30.2**	**-1.5**
CCM				IAmb	IAmb	00 03 31.1	
	comp=Z,3.9nm,0.9s						
S39A	**Bolivar**	**52.10**	**337**	P	**P**	**00 03 33.4**	**-1.4**
R40A	**Maddies Statio**	**52.24**	**339**	P	**P**	**00 03 34.6**	**-1.2**
SFIN	**Lafayette**	**52.55**	**344**	P	**P**	**00 03 35.3**	**-2.6**
SFIN				IAmb	IAmb	00 04 02.3	
	comp=Z,12nm,1.1s						
MNTX	**Cornudas Mount**	**53.18**	**323**	P	**P**	**00 03 41.4**	**-1.2**
SDCO	**Great Sand Dun**	**57.68**	**328**	P	**P**	**00 04 13.7**	**-0.2**
214A	**Organ Pipe Nat**	**58.02**	**318**	P	**P**	**00 04 16.2**	**+0.2**
ECSD	**EROS Data Cent**	**58.59**	**338**	P	**P**	**00 04 17.6**	**-2.0**
X16A	**Lo Mia Camp, P**	**58.73**	**321**	P	**P**	**00 04 20.9**	**-0.1**
DRLN	**Deer Lake**	**60.40**	**10**	P	**P**	**00 04 30.4**	**-1.1**
DRLN				IAmb	IAmb	00 04 36.9	
	comp=Z,15nm,1.0s						
EYMN	**Ely**	**60.74**	**344**	P	**P**	**00 04 32.0**	**-1.7**
SRU	**San Rafael Swe**	**61.39**	**326**	P	**P**	**00 04 38.1**	**-0.3**
E28A	**Huff**	**62.52**	**337**	P	**P**	**00 04 44.9**	**-0.5**
E28A				IAmb	IAmb	00 04 46.5	
	comp=Z,5.3nm,0.6s						
ULM	**Lac du Bonnet**	**64.06**	**342**	P	**P**	**00 04 53.2**	**-1.8**
BMN	**Battle Mountai**	**66.12**	**323**	P	**P**	**00 05 07.9**	**-0.5**
DBIC	**Dimbokro**	**67.88**	**78**	P	**P**	**00 05 18.4**	**-1.1**
	comp=Z,5.2nm,0.6s,baz=257,slow=5.2,SNR=9.3						
DBIC	**Dimbokro**	**67.88**	**78**	P	**P**	**00 05 18.1**	**-1.4**
DBIC				IAmb	IAmb	00 05 19.2	
	comp=Z,6.3nm,0.7s						
KOWA	**Kowa**	**70.72**	**71**	P	**P**	**00 05 35.7**	**-0.7**
	comp=Z,5.1nm,0.5s,baz=258,slow=6.0,SNR=15						
KOWA	**Kowa**	**70.72**	**71**	P	**P**	**00 05 33.6**	**-2.8**
KOWA				IAmb	IAmb	00 05 36.1	
	comp=Z,6.1nm,0.6s						
TORD	**Torodi Ar. Bea**	**75.71**	**74**	P	**P**	**00 06 03.7**	**-1.2**
	comp=Z,3.5nm,0.3s,baz=250,slow=4.8,SNR=85						
TORD	**Torodi Ar. Bea**	**75.71**	**74**	P	**P**	**00 06 03.6**	**-1.2**
TORD				IAmb	IAmb	00 06 04.4	
	comp=Z,7.4nm,1.0s						
MDT	**Midelt**	**76.24**	**53**	P	**P**	**00 06 07.8**	**+0.3**
	comp=Z,1.6nm,0.7s,baz=180,slow=3.0,SNR=2.3						
ESDC	**Sonseca Array**	**79.33**	**46**	P	**P**	**00 06 23.6**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=248,slow=5.5,SNR=9.3						
QSPA	**South Pole Qui**	**79.89**	**180**	P	**P**	**00 06 25.5**	**-0.9**
	baz=180,slow=7.1						
QSPA	**South Pole Qui**	**79.89**	**180**	P	**P**	**00 06 25.2**	**-1.1**
QSPA				IAmb	IAmb	00 06 26.0	
	comp=Z,3.9nm,0.8s						
YKA	**Yellowknife Ar**	**79.98**	**341**	P	**P**	**00 06 25.6**	**-1.1**
	comp=Z,0.9nm,0.8s,baz=251,slow=9.7,SNR=4.7						
YKA	**Yellowknife Ar**	**79.98**	**341**	P	**P**	**00 06 26.1**	**-0.6**
DLBC	**Dease Lake**	**83.37**	**333**	P	**P**	**00 06 46.3**	**+2.2**
INK	**Inuvik**	**89.75**	**341**	P	**P**	**00 07 13.0**	**-1.0**
	comp=Z,1.2nm,0.6s,baz=116,slow=3.9,SNR=5.9						
INK	**Inuvik**	**89.75**	**341**	P	**P**	**00 07 12.8**	**-1.2**
BOSA	**Boshof**	**90.50**	**119**	P	**P**	**00 07 17.3**	**-1.3**
	comp=Z,2.5nm,0.9s,baz=260,slow=6.1,SNR=2.5						
BOSA	**Boshof**	**90.50**	**119**	P	**P**	**00 07 16.6**	**-2.0**
BOSA				IAmb	IAmb	00 07 18.0	
	comp=Z,5.7nm,1.1s						
STKA	**Stephens Creek**	**127.84**	**215**	PKP	**PKPdf**	**00 13 16.0**	**-2.1**
	comp=Z,1.2nm,0.6s,baz=196,slow=2.0,SNR=3.7						
STKA	**Stephens Creek**	**127.84**	**215**	PKPdf	**PKPdf**	**00 13 16.5**	**-1.6**
ZALV	**Zalesovo Beam**	**132.29**	**19**	PKP	**PKPdf**	**00 13 24.2**	**-1.5**
	comp=Z,1.7nm,0.5s,baz=274,slow=2.6,SNR=11						
KURBB	**Kurchatov Arra**	**132.53**	**26**	PKP	**PKPdf**	**00 13 25.1**	**-1.2**
	comp=Z,0.6nm,0.4s,baz=314,slow=2.6,SNR=5.6						
MKAR	**Makanchi Array**	**137.05**	**27**	PKP	**PKPdf**	**00 13 33.1**	**-1.8**
	comp=Z,0.9nm,0.7s,baz=326,slow=1.9,SNR=6.6						
ASAR	**Alice Springs**	**138.47**	**215**	PKhKP	PKPpre	00 13 27.9	
	comp=Z,0.3nm,0.4s,baz=148,slow=2.6,SNR=6.0						
ASAR				PKP	**PKPdf**	**00 13 36.0**	**-2.3**
	comp=Z,0.7nm,0.4s,baz=129,slow=2.0,SNR=9.3						
WRA	**Warramunga Arr**	**141.04**	**220**	PKhKP	PKPpre	00 13 35.1	
	comp=Z,0.6nm,0.4s,baz=157,slow=3.0,SNR=16						
WRA	**Warramunga Arr**	**141.04**	**220**	PKPpre	PKPpre	00 13 34.7	
SONM	**Songino Array**	**142.46**	**3**	PKhKP	PKPpre	00 13 34.7	
	comp=Z,0.6nm,0.5s,baz=201,slow=1.2,SNR=3.8						
SONM				PKP	**PKPdf**	**00 13 41.2**	**-3.6**
	comp=Z,0.9nm,0.5s,baz=324,slow=1.8,SNR=14						
SONM	**Songino Array**	**142.46**	**3**	PKPpre	PKPpre	00 13 36.4	
KSRS	**Korea Array**	**148.03**	**331**	PKPbc	**PKPbc**	**00 13 56.8**	**-1.6**
	comp=Z,2.6nm,0.5s,baz=18,slow=2.2,SNR=6.9						
GTA	**Gaotai**	**149.79**	**14**	*e*PKPbc	**PKPbc**	**00 14 01.5**	**-1.3**
GTA				pPKP	pPKPab	00 16 26.8	+3.6
GTA				sPKP		00 17 30.9	
CMAR	**Chiang Mai Arr**	**167.22**	**49**	PKPab	**PKPab**	**00 15 25.6**	**-1.4**
	comp=Z,0.5nm,0.4s,baz=302,slow=6.0,SNR=4.4						

ATH 24 23:58:41.9, 38°.87N×21°.84E, h14km±3km, ML1.8/5, Error ellipse: s-maj=4.0km s-min=1.1km az=313.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EVR	**Evrytania**	**0.05**	**331**	P	Pg	23 58 44.0	-0.6
EVR				S	Sg	23 58 46.1	-0.5
EVR				AML	AML	23 58 46.2	
	comp=N,958µm,0.2s						
EVR				AML	AML	23 58 46.5	
	comp=E,1286µm,0.2s						
MAKR	**Makrakomi, Fth**	**0.27**	**57**	P	Pg	23 58 47.7	+0.2
MAKR				S	Sb	23 58 52.3	-0.7
MAKR				AML	AML	23 58 52.8	
	comp=E,712µm,0.3s						
MAKR				AML	AML	23 58 52.9	
	comp=N,471µm,0.2s						
ANX	**Ano Chora**	**0.28**	**167**	P	Pg	23 58 47.2	-0.6
ANX				S	Sg	23 58 51.7	-0.1
ANX				AML	AML	23 58 52.9	
	comp=N,492µm,0.3s						
ANX				AML	AML	23 58 52.9	
	comp=E,666µm,0.3s						
PVO	**Paravola**	**0.35**	**225**	P	Pg	23 58 49.1	+0.1
PVO				S	Sb	23 58 54.8	-0.6
AGG	**Agios Georgios**	**0.41**	**68**	P	Pg	23 58 49.8	-0.3
AGG				S	Sg	23 58 56.4	+0.7
EFP	**Efpalio**	**0.45**	**174**	P	Pg	23 58 50.1	-0.6
EFP				S	Sb	23 58 57.5	-0.5
EFP				AML	AML	23 58 58.3	
	comp=E,357µm,0.1s						
EFP				AML	AML	23 58 59.9	
	comp=N,314µm,0.3s						
SERG	**Sergoula**	**0.48**	**160**	P	Pg	23 58 50.5	-0.9
SERG				S	Sg	23 58 58.3	+0.4
SERG				AML	AML	23 58 59.7	
	comp=E,351µm,0.2s						
SERG				AML	AML	23 59 00.8	
	comp=N,301µm,0.2s						
TRIZ	**Trizonia**	**0.53**	**160**	P	Pg	23 58 52.2	-0.2
TRIZ				S	Sg	23 58 59.8	+0.3
LAKA	**Lakka**	**0.64**	**170**	P	Pg	23 58 53.3	-1.0

THE 24 23:59:34.5, 38°.72N×20°.59E, h7km±1km, ML1.1/1, Error ellipse: s-maj=1.8km s-min=0.5km az=278.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRAG	**Dragano-Lefkad**	**0.04**	**199**	P	Pg	23 59 35.9	0.0
DRAG				S	Sg	23 59 36.9	-0.1
NYDR	**Nydri-Lefkada**	**0.08**	**94**	P	Pg	23 59 36.3	-0.2
LKD2	**Lefkada island**	**0.09**	**37**	P	Pg	23 59 36.6	0.0
LKD2				S	Sg	23 59 38.2	+0.1
EVGI	**Lefkada island**	**0.11**	**153**	P	Pg	23 59 37.0	+0.1
EVGI				S	Sg	23 59 39.0	+0.4
	145nm,0.1s						

NNC 25 00:06:22.4±14.0, 37°.31N×69°.53E, h0km, mb3.5, mpv3.2, 3C-2D, Error ellipse: s-maj=116.2km s-min=106.5km az=51.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK09	**Karatay Array**	**5.86**	**7**	⇓Pn	Pn	00 07 52.5	+2.0
	0.5nm,0.3s						
KK09				⇑Sn	Sn	00 09 00.3	+2.0
	1.7nm,0.5s,baz=193,slow=24						
AAK	**Ala-Archa**	**6.55**	**34**	⇓Pn	Pn	00 07 59.4	-0.8
	2.3nm,1.0s						
AAK				⇑Sn	Sn	00 09 15.1	-0.5
	5.1nm,0.6s						
TKM2	**Tokmak 2**	**7.28**	**38**	⇑Pn	Pn	00 08 09.3	-0.9
	0.9nm,0.4s						

SNET ***25*** *00:19:13.8±1.0, 12°.27N×86°.37W, h13km±105km, ML4.6*
INET ***25*** *00:19:14.9, 12°.35N×86°.51W, h6km, MW4.7*
IDC ***25*** *00:19:15.4±0.8, 12°.78N×86°.28W, h0km, mb4.1/21, mb1 4.3/25, mb1mx4.2/50, mbtmp4.2/25, ML3.4/3, Error ellipse: s-maj=24.6km s-min=11.4km az=43.0*
UCR ***25*** *00:19:15.8±1.8, 12°.20N×86°.62W, h5km, ML4.3, MW5.0, mb4.7(NEIC)*
NEIC ***25*** *00:19:16.3±2.4, 12°.35N±0°.06×86°.42W±0°.05, h10km±5km, mb4.7/120, Error ellipse: s-maj=9.6km s-min=6.3km az=208.0*

ISC 25 00:19:15.4±1.2, 12°.45N±0°.05×86°.43W±0°.03, h6km±8km, n246, σ1s.44/250, mb4.7/73, 9C-12D, Fault plane solution: NP1: φs199.27957°, δ68.03272°, λ-4.00937°. NP2: φs290.78149°, δ86.28214°, λ-157.98396°. Principal axes: T Plg12.6304°, Azm62.9877°; N Plg67.6877°, Azm299.8921°; P Plg18.0811°, Azm157.1832°; Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNGN	**Cerro Negro**	**0.26**	**281**		**Pb**	**00 19 21.4**	**-1.2**
CNGN				Sg	**Sg**	**00 19 25.3**	**+1.3**
BOAB	**BOACO BROADBAN**	**0.75**	**90**	Pg	**Pg**	**00 19 29.3**	**-0.5**
BOAB				Sg	**Sg**	**00 19 40.5**	**+1.0**
ACON	**Acoyapa**	**1.32**	**111**		**Pn**	**00 19 37.9**	**-2.5**
ACON				Sg	**Sb**	**00 19 55.9**	**-1.9**
CNCH	**Conchagua**	**1.59**	**301**	*e*S	**Sg**	**00 20 07.2**	**+0.6**
CNCH	**Conchagua**	**1.59**	**301**	*e*S	**Sg**	**00 20 07.2**	**+0.6**
LCND	**La Caada**	**1.66**	**301**	*e*P	**Pn**	**00 19 43.9**	**-1.1**
LCND				*e*S	**Sb**	**00 20 07.8**	**+0.3**
LCND				IAML		00 20 10.2	
	comp=Z,19µm,0.5s						
LCND	**La Caada**	**1.66**	**301**	*e*P	**Pn**	**00 19 43.9**	**-1.1**
LCND				*e*S	**Sb**	**00 20 07.8**	**+0.3**
LCND				IAML		00 20 10.2	
	comp=Z,19µm,0.5s						
TGUH	**Tegucigalpa,Un**	**1.79**	**333**	*e*P	**Pn**	**00 19 46.7**	**-0.3**
TGUH	**Tegucigalpa,Un**	**1.79**	**333**	Pn	**Pn**	**00 19 46.5**	**-0.6**
BUAI	**Buenos Aires**	**1.90**	**145**	*i* P	**Pn**	**00 19 46.5**	**-1.9**
HZTE	**Horizontes, Gu**	**1.91**	**154**	*e*P	**Pn**	**00 19 45.6**	**-3.0**
HZTE	**Horizontes, Gu**	**1.91**	**154**	Pn	**Pn**	**00 19 45.9**	**-2.6**
GB1A	**Borinquen Arri**	**1.91**	**148**	*i* P	**Pn**	**00 19 46.6**	**-2.1**
GBS3	**Finca Las Img**	**1.92**	**150**	*i* P	**Pn**	**00 19 46.7**	**-1.9**
LAPC	**Finca la Perla**	**1.94**	**150**	*i* P	**Pn**	**00 19 46.0**	**-2.9**
JUCU	**Jucuar¡n**	**1.94**	**294**	*e*P	**Pn**	**00 19 48.6**	**-0.4**
JUCU	**Jucuar¡n**	**1.94**	**294**	*e*P	**Pn**	**00 19 48.6**	**-0.4**
VMAR	**Armenia, Volca**	**2.08**	**142**	*e*P	**Pn**	**00 19 49.2**	**-1.6**
LIM1	**Limonal**	**2.09**	**146**	*i* P	**Pn**	**00 19 49.8**	**-1.2**
GUAB	**Guayabo de Bag**	**2.10**	**146**	*i* P	**Pn**	**00 19 49.6**	**-1.5**
ESPN	**Las Esperanzas**	**2.10**	**97**		**Pn**	**00 19 49.5**	**-1.6**
PACA	**Pacayal**	**2.10**	**299**	*e*P	**Pn**	**00 19 51.1**	**-0.2**
PACA	**Pacayal**	**2.10**	**299**	*e*P	**Pn**	**00 19 51.1**	**-0.2**
COLC	**Colonia**	**2.15**	**146**	*i* P	**Pn**	**00 19 49.9**	**-1.9**
CUI	**Cuipilapa**	**2.17**	**145**	*i* P	**Pn**	**00 19 50.6**	**-1.6**
PTEN	**Parque Tenorio**	**2.23**	**140**	*i* P	**Pn**	**00 19 52.1**	**-0.9**
ALJI	**Alcalda de J**	**2.26**	**293**	*e*P	**Pn**	**00 19 52.6**	**-0.7**
ALJI				*e*S	**Sn**	**00 20 22.0**	**+0.5**
ALJI				IAML		00 20 30.5	
	comp=Z,3µm,0.4s						
ALJI	**Alcalda de J**	**2.26**	**293**	*e*P	**Pn**	**00 19 52.6**	**-0.7**
ALJI				*e*S	**Sn**	**00 20 22.0**	**+0.5**
ALJI				IAML		00 20 30.5	
	comp=Z,3µm,0.4s						
ORTG	**Ortega, Santa**	**2.29**	**155**		**Pn**	**00 19 51.3**	**-2.4**
COEB	**Comit de Eme**	**2.29**	**297**	*e*P	**Pn**	**00 19 53.4**	**-0.5**
COEB				*e*P	**Pb**	**00 19 53.8**	**-3.4**
COEB				IAML		00 20 27.9	
	comp=Z,3µm,0.5s						
COEB	**Comit de Eme**	**2.29**	**297**	*e*P	**Pn**	**00 19 53.4**	**-0.5**
COEB				*e*P	**Pb**	**00 19 53.8**	**-3.4**
COEB				IAML		00 20 27.9	
	comp=Z,3µm,0.5s						
GUAI	**GUAI**	**2.35**	**157**	*i* P	**Pn**	**00 19 52.8**	**-1.7**
PQSS	**Presa 15 de Se**	**2.38**	**300**	*e*S	**Sb**	**00 20 26.0**	**-2.3**
SAJU	**San Juanillo,**	**2.47**	**163**	*e*P	**Pn**	**00 19 54.3**	**-1.9**
DUNO	**Dulce Nombre,**	**2.53**	**159**		**Pn**	**00 19 55.9**	**-1.2**
SCLA	**Alcaldia de Sa**	**2.56**	**299**	*e*P	**Pn**	**00 19 57.5**	**+0.1**
SCLA				*e*S	**Sb**	**00 20 30.9**	**-2.6**
SCLA				IAML		00 20 37.6	
	comp=Z,830nm,0.6s						
SCLA	**Alcaldia de Sa**	**2.56**	**299**	*e*P	**Pn**	**00 19 57.5**	**+0.1**
SCLA				*e*S	**Sb**	**00 20 30.9**	**-2.6**
SCLA				IAML		00 20 37.6	
	comp=Z,830nm,0.6s						
JTS	**Las Juntas de**	**2.59**	**146**	*e*P	**Pn**	**00 19 55.6**	**-2.3**
JTS	**Las Juntas de**	**2.59**	**146**	Pn	**Pn**	**00 19 55.3**	**-2.6**
SNVI	**San Vicente**	**2.61**	**296**	*e*P	**Pn**	**00 19 58.8**	**+0.4**
SNVI				IAML		00 20 38.9	
SNVI	**San Vicente**	**2.61**	**296**	*e*P	**Pn**	**00 19 58.8**	**+0.4**
SNVI				IAML		00 20 38.9	
COVE	**Coope Vega, Sa**	**2.63**	**131**	*e*P	**Pn**	**00 19 58.8**	**+0.4**
COVE	**Coope Vega, Sa**	**2.63**	**131**		**Pn**	**00 19 58.4**	**0.0**
COEG	**Centro de Oper**	**2.65**	**296**	*e*P	**Pn**	**00 19 57.5**	**-1.3**
COEG				*e*S	**Sn**	**00 20 32.8**	**+1.4**
COEG				IAML		00 20 38.3	
	comp=Z,2µm,0.5s						
COEG	**Centro de Oper**	**2.65**	**296**	*e*P	**Pn**	**00 19 57.5**	**-1.3**
COEG				*e*S	**Sn**	**00 20 32.8**	**+1.4**
COEG				IAML		00 20 38.3	
	comp=Z,2µm,0.5s						
INDI	**Punta indio, G**	**2.73**	**160**	*e*P	**Pn**	**00 19 58.0**	**-1.8**
PAVA	**Las Pavas**	**2.74**	**297**	*e*P	**Pn**	**00 19 59.6**	**-0.5**
PAVA	**Las Pavas**	**2.74**	**297**	*e*P	**Pn**	**00 19 59.6**	**-0.5**
SJTE	**Alcalda de S**	**2.76**	**295**	*e*P	**Pn**	**00 19 59.4**	**-0.9**
SJTE				*e*S	**Sn**	**00 20 36.2**	**+2.1**
SJTE				IAML		00 20 46.4	
	comp=Z,588nm,0.7s						
SJTE	**Alcalda de S**	**2.76**	**295**	*e*P	**Pn**	**00 19 59.4**	**-0.9**
SJTE				*e*S	**Sn**	**00 20 36.2**	**+2.1**
SJTE				IAML		00 20 46.4	
	comp=Z,588nm,0.7s						
LFRS	**El Faro**	**2.81**	**295**	*e*P	**Pn**	**00 20 01.4**	**+0.4**
LFRS	**El Faro**	**2.81**	**295**	*e*P	**Pn**	**00 20 01.4**	**+0.4**
LFU	**La Fuente**	**2.91**	**297**	*e*P	**Pn**	**00 20 02.3**	**0.0**
LFU				*e*S	**Sn**	**00 20 39.4**	**+1.6**
LFU	**La Fuente**	**2.91**	**297**	*e*P	**Pn**	**00 20 02.3**	**0.0**
LFU				*e*S	**Sn**	**00 20 39.4**	**+1.6**
OPAM	**Oficina de Pla**	**2.97**	**295**	*e*S	**Sn**	**00 20 41.1**	**+1.9**
OPAM				IAML		00 20 46.5	
	comp=Z,1µm,0.3s						
OPAM	**Oficina de Pla**	**2.97**	**295**	*e*S	**Sn**	**00 20 41.1**	**+1.9**
OPAM				IAML		00 20 46.5	
	comp=Z,1µm,0.3s						
SNET	**Serv Nac Est T**	**2.99**	**295**	*e*P	**Pn**	**00 20 02.5**	**-1.0**
SNET				IAML		00 20 45.9	
	comp=Z,1µm,0.3s						
SNET	**Serv Nac Est T**	**2.99**	**295**	*e*P	**Pn**	**00 20 02.5**	**-1.0**
SNET				IAML		00 20 45.9	
	comp=Z,1µm,0.3s						
SNET	**Serv Nac Est T**	**2.99**	**295**		**Pn**	**00 20 03.6**	**+0.1**
LALI	**Alcalda de L**	**3.00**	**290**	*e*P	**Pn**	**00 20 02.5**	**-0.9**
LALI	**Alcalda de L**	**3.00**	**290**	*e*P	**Pn**	**00 20 02.5**	**-0.9**
UEES	**Universidad Ev**	**3.01**	**295**	IAML		00 20 50.6	
	comp=Z,2µm,0.3s						
UEES	**Universidad Ev**	**3.01**	**295**	IAML		00 20 50.6	
	comp=Z,2µm,0.3s						
LAFE	**Finca La Fe, P**	**3.02**	**150**	*e*P	**Pn**	**00 20 02.6**	**-1.2**
SRA1	**San Ramn**	**3.03**	**141**	*e*P	**Pn**	**00 20 05.5**	**+1.4**
CAO2	**Cobano, Puntar**	**3.04**	**155**		**Pn**	**00 20 02.4**	**-1.6**
JAYA	**Jayaque - finc**	**3.17**	**292**	*e*P	**Pn**	**00 20 04.9**	**-1.1**
JAYA	**Jayaque - finc**	**3.17**	**292**	*e*P	**Pn**	**00 20 04.9**	**-1.1**
CEDA	**San Andres**	**3.18**	**295**	IAML		00 21 01.4	
	comp=Z,3µm,0.5s						
CEDA	**San Andres**	**3.18**	**295**	IAML		00 21 01.4	
	comp=Z,3µm,0.5s						
JACO	**JACO, Garabito**	**3.27**	**148**	Pn	**Pn**	**00 20 06.5**	**-0.8**
HDC	**Heredia**	**3.33**	**137**	Pn	**Pn**	**00 20 09.0**	**+0.8**
CEVE	**Cerro Verde**	**3.40**	**294**	*e*P	**Pn**	**00 20 09.0**	**-0.1**
CEVE				*e*S	**Sn**	**00 20 52.4**	**+2.4**
CEVE				IAML		00 20 59.7	
	comp=Z,3µm,0.5s						
CEVE	**Cerro Verde**	**3.40**	**294**	*e*P	**Pn**	**00 20 09.0**	**-0.1**
CEVE				*e*S	**Sn**	**00 20 52.4**	**+2.4**
CEVE				IAML		00 20 59.7	
	comp=Z,3µm,0.5s						
SNJE	**San Jose**	**3.40**	**295**	*e*P	**Pn**	**00 20 08.6**	**-0.5**
SNJE	**San Jose**	**3.40**	**295**	*e*P	**Pn**	**00 20 08.6**	**-0.5**
RTR	**El Retiro**	**3.44**	**295**	*e*P	**Pn**	**00 20 09.4**	**-0.3**
RTR	**El Retiro**	**3.44**	**295**	*e*P	**Pn**	**00 20 09.4**	**-0.3**
MTO3	**Montecristo**	**3.44**	**305**		**Pn**	**00 20 08.1**	**-1.7**
ESQI	**Esquipulas**	**3.52**	**307**	Pn	**Pn**	**00 20 12.6**	**+1.8**
CVTR	**Volcan Turrial**	**3.57**	**132**	Pn	**Pn**	**00 20 11.6**	**-0.1**
RAFA	**San Farael, Vo**	**3.57**	**134**	*e*P	**Pn**	**00 20 13.0**	**+1.4**
LCR2	**La Lucha 2**	**3.60**	**138**	*e*P	**Pn**	**00 20 11.3**	**-0.5**
RIMA	**Rio Macho**	**3.67**	**136**	*e*P	**Pn**	**00 20 13.0**	**+0.1**
RIMA	**Rio Macho**	**3.67**	**136**	Pn	**Pn**	**00 20 12.4**	**-0.5**
BATAN	**Batan**	**3.80**	**128**	Pn	**Pn**	**00 20 14.2**	**-0.3**
PEZE	**Perez Zeledon,**	**4.08**	**138**	*e*P	**Pn**	**00 20 19.4**	**+0.9**
PEZE	**Perez Zeledon,**	**4.08**	**138**		**Pn**	**00 20 18.4**	**0.0**
SRBA	**San Rafael, Bu**	**4.40**	**136**	Pn	**Pn**	**00 20 23.0**	**+0.2**
APG	**El Apazote**	**4.67**	**303**	Pn	**Pn**	**00 20 28.7**	**+2.1**
	comp=Z,2.5nm,0.3s,baz=129,slow=12,SNR=16						
APG				Sn	**Sn**	**00 21 15.5**	**-5.8**
	comp=Z,6.3nm,0.3s,baz=92,slow=7.8,SNR=5.0						
APG				Lg	Lg	00 21 38.9	
	comp=Z,4.6nm,0.3s,baz=133,slow=10.0,SNR=3.6						
RIOS	**Rincon, Osa**	**4.70**	**142**	Pn	**Pn**	**00 20 28.6**	**+1.6**
PRVC	**Isla de Provid**	**5.03**	**79**	Pn	**Pn**	**00 20 31.7**	**+0.3**
BRU2	**Volcan**	**5.17**	**134**	Pn	**Pn**	**00 20 33.8**	**+0.3**
CDITO	**Canoas**	**5.21**	**137**	Pn	**Pn**	**00 20 34.8**	**+0.9**
RTAL	**Retalhuleu**	**5.52**	**293**		**Pn**	**00 20 40.9**	**+2.8**
PETF	**Flores**	**5.54**	**324**	Pn	**Pn**	**00 20 40.5**	**+2.0**
HUEH	**Huehuetenango**	**5.69**	**301**	Pn	**Pn**	**00 20 43.2**	**+2.5**
CCIG	**Comitan**	**6.71**	**305**	Pn	**Pn**	**00 20 56.7**	**+1.9**
BCIP	**Isla Barro Col**	**7.25**	**116**	Pn	**Pn**	**00 21 00.6**	**-1.5**
CMIG	**Matias Romero**	**9.38**	**300**	Pn	**Pn**	**00 21 33.2**	**+1.9**
	comp=Z,1.2nm,0.3s,baz=134,slow=9.0,SNR=11						
CMIG				Sn	**Sn**	**00 23 18.7**	**+1.5**
	comp=Z,0.8nm,0.3s,baz=98,slow=13,SNR=1.5						
TLIG	**Tlapa**	**12.77**	**295**	Pn	**Pn**	**00 22 19.3**	**+1.5**
URIC	**Uribia, Colomb**	**14.14**	**91**	P	**P**	**00 22 44.5**	**+0.4**
ROSC	**El Rosal**	**14.16**	**121**	Pn	**Pn**	**00 22 39.5**	**+2.6**
	comp=Z,1.3nm,0.3s,baz=279,slow=19,SNR=1.5						
ROSC	**El Rosal**	**14.16**	**121**	P	**Pn**	**00 22 39.3**	**+2.3**
OTAV	**Otavalo**	**14.49**	**146**	P	**P**	**00 22 46.3**	**-2.1**
SDV	**Santo Domingo**	**15.93**	**101**	Pn	**Pn**	**00 23 01.8**	**+1.3**
	baz=315,slow=10.0,SNR=1.4						
SDV				Sn	**Sn**	**00 25 60.0**	**+2.4**
	comp=Z,0.5nm,0.3s,baz=56,slow=23,SNR=1.5						
SDV	**Santo Domingo**	**15.93**	**101**	Pn	**Pn**	**00 22 58.8**	**-1.7**
344A	**Westbrook Farm**	**19.32**	**349**	P	**Pn**	**00 23 45.4**	**+3.0**
344A				IAmb	IAmb	00 23 52.0	
	comp=Z,26nm,0.9s						
HKT	**Hockley**	**19.48**	**335**	P	**Pn**	**00 23 44.9**	**+0.7**
342A	**Flagon Creek P**	**19.60**	**345**	P	**Pn**	**00 23 46.1**	**+0.3**
342A				IAmb	IAmb	00 23 51.8	
	comp=Z,98nm,1.4s						
VBMS	**Vicksburg**	**20.03**	**350**	P	Pn	00 23 50.7	-0.1
VBMS				IAmb	IAmb	00 23 56.9	
	comp=Z,57nm,0.9s						
152A	**Waverly Hall**	**20.18**	**4**	P	Pn	00 23 53.8	+1.2
146A	**Union**	**20.23**	**354**	P	Pn	00 23 52.5	-0.7
146A				IAmb	IAmb	00 24 02.6	
	comp=Z,56nm,1.1s						
SJG	**San Juan**	**20.35**	**71**	P	**P**	**00 23 51.1**	**-1.6**
	comp=Z,3.7nm,0.4s,baz=329,slow=12,SNR=1.1						
NATX	**Nacogdoches**	**20.66**	**340**	P	**P**	**00 23 56.6**	**+0.7**
Z51A	**Franklin**	**20.80**	**3**	P	**P**	**00 23 58.0**	**+0.5**
435B	**Jarrell**	**20.95**	**332**	P	**P**	**00 23 59.7**	**+0.6**
435B				IAmb	IAmb	00 24 09.9	
	comp=Z,19nm,0.8s						
ATAH	**Atahualpa**	**21.04**	**157**	P	**P**	**00 24 05.0**	**+4.5**
	comp=Z,7.8nm,0.8s,baz=344,slow=9.4,SNR=5.4						
GOGA	**Godfrey**	**21.04**	**7**	P	**P**	**00 24 00.8**	**+0.8**
GOGA				IAmb	IAmb	00 24 06.5	
	comp=Z,30nm,1.2s						
Y49A	**Blount Mountai**	**21.31**	**0**	P	**P**	**00 24 04.2**	**+1.2**
Y52A	**Lilburn**	**21.43**	**5**	P	**P**	**00 24 05.7**	**+1.4**
Y52A				IAmb	IAmb	00 24 10.8	
	comp=Z,39nm,1.1s						
PCRV	**Puerto La Cruz**	**21.49**	**94**	P	**P**	**00 24 06.9**	**+1.7**
	comp=Z,12nm,0.9s,baz=258,slow=9.3,SNR=2.1						
Y45A	**Yeager Farm, C**	**21.50**	**353**	P	**P**	**00 24 06.2**	**+1.2**
JCT	**Junction City**	**21.79**	**327**	P	**P**	**00 24 09.1**	**+0.9**
JCT				IAmb	IAmb	00 24 16.5	
	comp=Z,38nm,1.5s						
X48A	**Hartselle**	**21.91**	**359**	P	**P**	**00 24 10.8**	**+1.4**
WHTX	**Lake Whitney,**	**21.93**	**334**	P	**P**	**00 24 11.2**	**+1.5**
FPAL	**Fort Paine**	**22.00**	**2**	P	**P**	**00 24 12.6**	**+2.1**
FPAL				IAmb	IAmb	00 24 21.8	
	comp=Z,23nm,1.1s						
HODGE	**Hodges**	**22.01**	**9**	P	**P**	**00 24 13.3**	**+2.8**
Z38A	**Mt. Pleasant**	**22.14**	**341**	P	**P**	**00 24 14.3**	**+2.5**
JSC	**Jenkinsville**	**22.24**	**11**	P	**P**	**00 24 14.9**	**+2.0**
PLAL	**Pickwick Lake**	**22.48**	**356**	P	**P**	**00 24 16.6**	**+1.0**
SWET	**Sewanee**	**22.67**	**1**	P	**P**	**00 24 18.8**	**+1.2**
SWET				IAmb	IAmb	00 24 26.2	
	comp=Z,49nm,1.5s						
W50A	**Signal Mountai**	**22.67**	**2**	P	**P**	**00 24 19.7**	**+2.1**
W50A				IAmb	IAmb	00 24 45.3	
	comp=Z,34nm,1.5s						
W45A	**Hickory Valley**	**22.74**	**354**	P	**P**	**00 24 18.9**	**+0.6**
MIAR	**Mount Ida**	**22.93**	**345**	P	**P**	**00 24 21.1**	**+0.7**
CPCT	**Cooper Cave**	**22.96**	**4**	P	**P**	**00 24 22.9**	**+2.2**
CPCT				IAmb	IAmb	00 24 32.0	
	comp=Z,14nm,0.9s						
Z35A	**Perchaven, San**	**23.02**	**336**	P	**P**	**00 24 23.2**	**+2.0**
Z35A				IAmb	IAmb	00 24 29.1	
	comp=Z,39nm,1.1s						
HPIG		**23.09**	**311**	P	**P**	**00 24 23.1**	**+0.9**
HPIG				IAmb	IAmb	00 24 26.6	
	comp=Z,33nm,1.5s						
TXAR	**Lajitas Array**	**23.21**	**319**	P	**P**	**00 24 22.6**	**-0.9**
	comp=Z,5.4nm,1.0s,baz=148,slow=10,SNR=20						
TXAR	**Lajitas Array**	**23.21**	**319**	P	**P**	**00 24 22.7**	**-0.7**
TX31	**Lajitas Ar. Si**	**23.22**	**319**	P	**P**	**00 24 21.2**	**-2.2**
TX31				IAmb	IAmb	00 24 28.2	
	comp=Z,37nm,1.1s						
TX32	**Lajitas Array**	**23.22**	**319**	P	**P**	**00 24 21.5**	**-1.9**
TKL	**Tuckaleechee C**	**23.23**	**5**	P	**P**	**00 24 20.5**	**-2.8**
	comp=Z,1.9nm,0.8s,baz=193,slow=18,SNR=1.5						
LPAR	**Lepanto**	**23.31**	**352**	P	**P**	**00 24 23.7**	**-0.5**
HBAR	**Harrisburg**	**23.32**	**351**	P	**P**	**00 24 24.7**	**+0.5**
ABTX	**Abilene, Hawle**	**23.45**	**331**	P	**P**	**00 24 25.9**	**+0.2**
X37A	**Clayton**	**23.49**	**341**	P	**P**	**00 24 27.9**	**+1.9**
X37A				IAmb	IAmb	00 24 33.2	
	comp=Z,40nm,1.2s						
HALT	**Halls**	**23.50**	**354**	P	**P**	**00 24 27.1**	**+1.0**
CLTN	**Cedars of Leba**	**23.54**	**0**	P	**P**	**00 24 27.8**	**+1.4**
CLTN				IAmb	IAmb	00 24 32.2	
	comp=Z,39nm,1.4s						
LOOK	**Love County**	**23.57**	**337**	P	**P**	**00 24 28.4**	**+1.6**
WVT	**Waverly**	**23.61**	**357**	P	**P**	**00 24 27.6**	**+0.5**
WVT				IAmb	IAmb	00 24 32.8	
	comp=Z,34nm,1.4s						
GNAR	**Gosnell**	**23.64**	**353**	P	**P**	**00 24 28.8**	**+1.5**
PEBM	**Pemiscott Bayo**	**23.76**	**353**	P	**P**	**00 24 29.3**	**+0.7**

V55A	Taylorsville	23.77	11	P	P	00 24 30.3	+1.6
V55A				IAmb	IAmb	00 24 43.4	
	comp=Z,21nm,1.2s						
GLAT	Glass	23.86	354	P	P	00 24 28.8	-0.7
UTMT	University of	23.89	355	P	P	00 24 30.5	+0.7
FCAR	Ozark Folk Cen	23.90	349	P	P	00 24 29.9	0.0
LCAR	Lake Charles	23.90	351	P	P	00 24 31.2	+1.3
U49A	Red Boiling Sp	23.97	1	P	P	00 24 31.4	+0.8
U49A				IAmb	IAmb	00 24 39.5	
	comp=Z,36nm,1.3s						
HICK	Hickman	24.12	354	P	P	00 24 32.9	+0.8
X34A	Smith Ranch, M	24.36	337	P	P	00 24 34.8	+0.5
T47A	Sharon Grove	24.44	359	P	P	00 24 35.9	+1.0
PBMO	Poplar Bluff	24.49	352	P	P	00 24 35.1	-0.3
PBMO				IAmb	IAmb	00 24 53.5	
	comp=Z,15nm,1.0s						
U40A	Yellville	24.50	347	P	P	00 24 35.0	-0.5
W35A	Tecumseh	24.50	339	P	P	00 24 35.6	+0.1
W35A				IAmb	IAmb	00 24 40.2	
	comp=Z,41nm,1.2s						
T50A	Nancy	24.51	3	P	P	00 24 36.2	+0.6
T50A				IAmb	IAmb	00 24 44.9	
	comp=Z,13nm,1.0s						
FNO	Franklin	24.78	338	P	P	00 24 38.8	+0.6
TUL1	Leonard	24.84	342	P	P	00 24 38.5	-0.2
TUL1				IAmb	IAmb	00 24 43.9	
	comp=Z,31nm,1.1s						
WMOK	Wichita Mounta	24.86	335	P	P	00 24 39.9	+1.0
OK025	Westminster Rd	25.05	339	P	P	00 24 40.8	+0.3
S51A	Beattyville	25.21	5	P	P	00 24 42.4	+0.4
S51A				IAmb	IAmb	00 24 50.9	
	comp=Z,14nm,0.8s						
S44A	Carbondale	25.26	355	P	P	00 24 42.5	+0.1
S44A				IAmb	IAmb	00 24 51.9	
	comp=Z,13nm,0.8s						
OK029	Liberty Lake	25.29	339	P	P	00 24 42.2	-0.4
OK029				IAmb	IAmb	00 24 49.0	
	comp=Z,29nm,1.0s						
WCI	Wyandotte Cave	25.67	0	P	P	00 24 46.7	+0.6
WCI				IAmb	IAmb	00 24 53.4	
	comp=Z,27nm,1.0s						
R49A	Shelbyville	25.76	2	P	P	00 24 47.5	+0.6
CCM	Cathedral Cave	25.86	351	P	P	00 24 47.3	-0.5
CCM				IAmb	IAmb	00 24 52.2	
	comp=Z,18nm,1.2s						
MSTX	Muleshoe	26.09	328	P	P	00 24 49.0	-1.1
AMTX	Amarillo	26.27	331	P	P	00 24 51.4	-0.3
U32A	Winter Ranch,	26.38	337	P	P	00 24 52.1	-0.5
U32A				IAmb	IAmb	00 24 57.6	
	comp=Z,30nm,1.1s						
Q51A	Peebles	26.61	5	P	P	00 24 55.4	+0.8
Q51A				IAmb	IAmb	00 25 00.2	
	comp=Z,22nm,0.9s						
P38A	Dawn	27.79	348	P	P	00 25 04.4	-0.7
P38A				IAmb	IAmb	00 25 10.9	
	comp=Z,20nm,1.4s						
ACSO	Alum Creek Sta	27.84	6	P	P	00 25 06.6	+0.9
N49A	Columbus Grove	28.43	4	P	P	00 25 10.5	-0.4
N49A				IAmb	IAmb	00 25 15.8	
	comp=Z,16nm,0.9s						
CBKS	Cedar Bluff	28.80	338	P	P	00 25 13.6	-0.7
CBKS				IAmb	IAmb	00 25 19.6	
	comp=Z,18nm,1.2s						
ANMO	Albuquerque	28.83	324	P	P	00 25 13.3	-1.5
	comp=Z,0.3nm,0.3s,baz=127,slow=10,SNR=1.7						
PTGA	Pitinga	29.35	115	P	P	00 25 19.4	0.0
	comp=Z,0.9nm,0.4s,baz=267,slow=12,SNR=1.1						
T25A	Trinidad	29.40	330	P	P	00 25 20.5	+0.6
T25A				IAmb	IAmb	00 25 25.4	
	comp=Z,19nm,1.5s						
ETMB	Extrema	29.88	137	P	P	00 25 21.4	-2.7
ETMB				IAmb	IAmb	00 25 25.6	
	comp=Z,5.6nm,0.7s						
MACA	Manacapuru-AM	29.92	120	P	P	00 25 22.3	-2.1
MACA				IAmb	IAmb	00 25 28.9	
	comp=Z,16nm,0.9s						
X16A	Lo Mia Camp, P	31.53	318	P	P	00 25 38.9	+0.1
SMCO	Snowmass	32.25	329	P	P	00 25 46.2	+1.0
SMCO				IAmb	IAmb	00 25 59.6	
	comp=Z,13nm,1.4s						
ECSD	EROS Data Cent	32.38	346	P	P	00 25 47.6	+1.7
O20A	White River Ci	33.61	329	P	P	00 25 57.6	+0.8
O20A				IAmb	IAmb	00 26 02.5	
	comp=Z,27nm,1.4s						
SRU	San Rafael Swe	34.07	325	P	P	00 26 01.2	+0.3
SRU				IAmb	IAmb	00 26 05.7	
	comp=Z,15nm,1.3s						
RWWY	Rawlins	34.31	332	P	P	00 26 03.5	+0.4
RWWY				IAmb	IAmb	00 26 08.2	
	comp=Z,14nm,1.0s						
F33A	5 Mile Ranch,	34.32	348	P	P	00 26 03.2	+0.5
F33A				IAmb	IAmb	00 26 09.8	
	comp=Z,5.1nm,0.7s						
P17A	Butcher Ranch,	34.45	326	P	P	00 26 05.3	+1.2
P17A				IAmb	IAmb	00 26 08.9	
	comp=Z,12nm,1.2s						
K22A	Casper	34.77	334	P	P	00 26 08.4	+1.5
K22A				IAmb	IAmb	00 26 12.0	
	comp=Z,9.6nm,1.0s						
RSSD	Black Hills	35.00	338	P	P	00 26 10.2	+1.4
RSSD				IAmb	IAmb	00 26 14.4	
	comp=Z,13nm,1.2s						
MPU	Maple Canyon	35.32	326	P	P	00 26 12.8	+1.2
MPU				IAmb	IAmb	00 26 16.6	
	comp=Z,10nm,1.0s						
PSUT	Pine Spring	35.62	322	P	P	00 26 14.8	+0.5
SPR3	Spring Creek 3	36.20	322	P	P	00 26 19.6	+0.1
BW06	Boulder Array	36.25	331	P	P	00 26 20.8	+1.1
PDAR	Pinedale Array	36.25	331	P	P	00 26 19.0	-0.7
	comp=Z,2.0nm,0.9s,baz=126,slow=9.2,SNR=3.7						
HWUT	Hardware Ranch	36.40	328	IAmb	IAmb	00 26 25.6	
	comp=Z,19nm,1.1s						
SPUT	South Promonto	36.66	326	P	P	00 26 23.4	+0.2
SPUT				IAmb	IAmb	00 26 28.1	
	comp=Z,17nm,1.4s						
BGU	Big Grassy Mou	36.72	325	IAmb	IAmb	00 26 28.7	
	comp=Z,11nm,1.2s						
AHID	Auburn Hatcher	37.00	329	IAmb	IAmb	00 26 30.6	
	comp=Z,12nm,1.1s						
HVU	Hansel Valley	37.16	327	IAmb	IAmb	00 26 33.2	
	comp=Z,12nm,1.1s						
ECR	Eagle Creek	37.35	329	P	P	00 26 28.4	-0.6
LOHW	Long Hollow	37.39	331	IAmb	IAmb	00 26 34.4	
	comp=Z,15nm,1.2s						
TPAW	Teton Pass	37.47	330	IAmb	IAmb	00 26 39.2	
	comp=Z,23nm,1.1s						
FXWY	Fox Creek	37.61	330	P	P	00 26 30.6	-0.7
SIV	San Ignacio	37.79	138	P	P	00 26 32.9	+0.2
	comp=Z,8.3nm,0.5s,baz=307,slow=10.0,SNR=34						
FLWY	Flagg Ranch	37.79	331	P	P	00 26 32.6	-0.1
FLWY				IAmb	IAmb	00 26 37.8	
	comp=Z,19nm,1.2s						
RLMT	Red Lodge	37.94	333	P	P	00 26 33.9	-0.1
NV11	Mina Array Sit	38.27	318	P	P	00 26 37.5	+0.7
NVAR	Mina Array Bea	38.36	318	P	P	00 26 38.6	+1.0
	comp=Z,2.6nm,0.8s,baz=119,slow=5.6,SNR=7.5						
YHH	Holmes Hill	38.40	332	P	P	00 26 38.3	+0.4
ULM	Lac du Bonnet	38.48	350	P	P	00 26 36.3	-1.9
	comp=Z,2.5nm,0.6s,baz=130,slow=11,SNR=1.7						
YHL	Hebgen Lake	38.60	331	IAmb	IAmb	00 26 46.8	
	comp=Z,24nm,1.3s						
LVC	Limon Verde	38.85	154	P	P	00 26 45.6	+3.6
	comp=Z,2.0nm,0.5s,baz=335,slow=16,SNR=1.9						
BCYI	Bear Canyon	39.28	329	P	P	00 26 44.3	-0.9
MCMT	McKenzie Canyo	39.37	330	P	P	00 26 46.1	0.0
LRM	Limekiln Ridge	39.92	331	P	P	00 26 49.5	-1.1
PLID	Pearl Lake	41.15	328	P	P	00 26 59.6	-1.1
PLID				IAmb	IAmb	00 27 04.7	
	comp=Z,12nm,1.2s						
E07A	Sunnyside	44.14	327	P	P	00 27 24.5	-0.3
E07A				IAmb	IAmb	00 27 29.1	
	comp=Z,27nm,1.2s						
YKA	Yellowknife Ar	53.88	344	P	P	00 28 38.2	-1.0
	comp=Z,2.8nm,0.8s,baz=130,slow=9.2,SNR=12						
RES	Resolute Bay	62.40	357	P	P	00 29 37.3	-1.4
	comp=Z,2.5nm,0.8s,baz=191,slow=9.7,SNR=5.4						
RES	Resolute Bay	62.40	357	IAmb	IAmb	00 29 42.0	
	comp=Z,11nm,1.4s						
INK	Inuvik	63.51	342	P	P	00 29 44.8	-1.3
	comp=Z,8.5nm,1.1s,baz=127,slow=7.3,SNR=6.9						
INK	Inuvik	63.51	342	P	P	00 29 45.2	-0.9
A36M	Sachs Harbour	63.87	347	P	P	00 29 46.8	-1.6
IL31		66.42	336	P	P	00 30 04.9	-0.3
IL31				IAmb	IAmb	00 30 09.2	
	comp=Z,14nm,1.4s						
ILAR	Eielson Array	66.42	336	P	P	00 30 03.6	-1.6
	comp=Z,0.9nm,0.8s,baz=95,slow=4.8,SNR=13						
ILAR	Eielson Array	66.42	336	P	P	00 30 04.2	-1.0
EKA	Eskdalemuir Ar	76.04	36	P	P	00 31 04.1	+0.5
	comp=Z,3.0nm,0.8s,baz=282,slow=4.1,SNR=4.7						
ESDC	Sonseca Array	76.41	52	P	P	00 31 05.2	-1.0
	comp=Z,3.0nm,0.9s,baz=287,slow=5.8,SNR=12						
ESDC	Sonseca Array	76.41	52	P	P	00 31 04.8	-1.3
NOA	NORSAR Array B	82.88	29	P	P	00 31 40.3	-0.6
	comp=Z,2.0nm,0.9s,baz=280,slow=5.4,SNR=3.3						
TORD	Torodi Ar. Bea	85.44	78	P	P	00 31 55.5	+0.8
	comp=Z,0.7nm,0.9s,baz=272,slow=6.7,SNR=1.0						
GERES	GERESS Array B	87.29	41	P	P	00 32 02.3	-1.0
	comp=Z,0.4nm,0.4s,baz=288,slow=10,SNR=4.0						
ASAR	Alice Springs	140.19	248	PKhKP	PKPpre	00 38 38.6	
	comp=Z,0.2nm,0.5s,baz=97,slow=2.9,SNR=1.6						
ASAR	Alice Springs	140.19	248		PKPpre	00 38 38.4	
WRA	Warramunga Arr	140.22	254	PKP	PKPdf	00 38 46.6	+0.4
	comp=Z,0.5nm,0.6s,baz=90,slow=1.9,SNR=7.1						
WRA	Warramunga Arr	140.22	254		PKPpre	00 38 36.9	

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*IDC **25** 00:28:16.9±0.6, 10°.99S×70°.81W, h606km±7km, mb3.9/24, mb1 4.0/31, mb1mx4.0/39, mbtmp4.8/31 Error ellipse: s-maj=10.0km s-min=6.9km az=59.0*

*NEIC **25** 00:28:16.8±1.7, 11°.03S±0°.09×70°.9W±0°.1, h597km±5km, mb4.7/171, Error ellipse: s-maj=15.7km s-min=12.3km az=72.0*

*VAO **25** 00:28:17.0±0.2, 11°.15S×70°.92W, h601km, mb4.6*

*BDF **25** 00:28:17±1.9, 11°.09S±0°.09×70°.9W±0°.1, h607km±5km, Error ellipse: s-maj=15.3km s-min=11.9km az=70.0*

ISC 25 00:28:17.2±0.5**, 11°.05S**±0°.04×**70°.87W**±0°.05**, h611**km±6km**, n545, σ0s.80**/527**, mb4.6**/123**, 2D, Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CZSB	Cruzeiro do Su	3.77	331	*e*P	P	00 29 41.7	-0.4
CZSB	Cruzeiro do Su	3.77	331	P	P	00 29 41.3	-0.7
ETMB	Extrema	4.74	75	*e*P	P	00 29 49.6	+0.7
ETMB	Extrema	4.74	75	P	P	00 29 48.9	0.0
LPAZ	La Paz	5.84	153	P	P	00 29 58.5	+0.1
NNA	Nana	5.93	260	P	P	00 29 57.9	-0.6
	8.1nm,0.3s,baz=60,slow=5.4,SNR=20						
NNA				S	S	00 31 19.9	-1.3
	3.8nm,0.3s,baz=346,slow=22,SNR=17						
NNA	Nana	5.93	260	P	P	00 29 57.5	-1.0
TBTG	Tabatinga, AM	6.89	8	*e*P	P	00 30 07.9	+1.0
TBTG	Tabatinga, AM	6.89	8	P	P	00 30 07.1	+0.2
AP01	Chacalluta	7.29	176	P	P	00 30 09.3	-1.1
PB16	IPOC Station P	7.36	170	P	P	00 30 10.5	-1.1
PB12	IPOC Station P	7.54	176	P	P	00 30 11.3	-1.4
SAML	Samuel	7.85	75	P	P	00 30 16.0	+0.4
ATAH	Atahualpa	8.39	297	P	P	00 30 22.5	+1.3
	2.5nm,0.3s,baz=107,slow=7.4,SNR=31						
ATAH				S	S	00 32 04.2	+1.7
	2.2nm,0.3s,baz=119,slow=14,SNR=13						
PB11	IPOC Station P	8.74	172	P	P	00 30 23.3	-0.8
PB08	IPOC Station P	9.19	170	P	P	00 30 28.4	-0.3
TA01	Diego Aracena	9.48	176	P	P	00 30 30.2	-0.9
PB01	IPOC Station P	10.02	173		P	00 30 36.4	-0.2
VILB	Vilhena	10.61	101	*e*P	P	00 30 43.3	+1.0
VILB	Vilhena	10.61	101	P	P	00 30 43.1	+0.8
PB07	IPOC Station P	10.66	175	P	P	00 30 42.2	-0.6
SIV	San Ignacio	10.71	118	P	P	00 30 43.8	+0.4
	15nm,0.3s,baz=296,slow=9.4,SNR=135						
SIV				S	S	00 32 44.2	+0.9
	baz=284,slow=14,SNR=4.8						
PB09	IPOC Station P	10.80	172	P	P	00 30 43.9	-0.4
LVC	Limon Verde	11.64	171	P	P	00 30 52.7	-0.2
	2.7nm,0.3s,baz=0.8,slow=9.1,SNR=8.4						
LVC				S	S	00 32 58.6	-1.9
	0.9nm,0.3s,baz=317,slow=8.1,SNR=2.5						
LVC	Limon Verde	11.64	171	*e*P	P	00 30 51.1	-1.7
LVC	Limon Verde	11.64	171	P	P	00 30 52.9	0.0
PB15	IPOC Station P	12.16	174	P	P	00 30 57.1	-0.6
PTLB	Pontes e Lacer	12.23	112	*e*P	P	00 30 59.1	+0.9
PTLB	Pontes e Lacer	12.23	112	P	P	00 30 58.6	+0.3
MACA	Manacapuru-AM	12.79	53	*e*P	P	00 31 03.7	-0.2
MACA	Manacapuru-AM	12.79	53	P	P	00 31 03.7	-0.2
OTAV	Otavalo	13.51	326	*e*P	P	00 31 13.6	+2.0
PDRB	Porto dos Gac	13.88	94	*e*P	P	00 31 15.3	+0.6
SOTA	Rioblanco	14.29	336	*e*P	P	00 31 19.3	+0.1
CLDB	Colider	14.80	91	*e*P	P	00 31 24.0	+0.7
PTGA	Pitinga	14.91	47	P	P	00 31 24.5	+0.1
	12nm,0.3s,baz=222,slow=11,SNR=105						
PTGA				S	S	00 33 57.2	+0.2
	0.3nm,0.3s,baz=213,slow=19,SNR=23						
PTGA	Pitinga	14.91	47	P	P	00 31 25.2	+0.8
ORTC	Ortega, Tolima	15.49	343	*e*P	P	00 31 29.8	+0.1
SALV	Santo Antonio	15.52	110	*e*P	P	00 31 31.1	+1.3
AC02	Maricunga	15.79	174	P	P	00 31 34.3	+1.6
NPGB	Novo Progresso	15.82	77	*e*P	P	00 31 33.2	+0.5
YOTC	Yotoco, Valle	15.90	340	*e*P	P	00 31 32.6	-0.9
ROSC	El Rosal	16.16	348	P	P	00 31 39.0	+2.9
	3.1nm,0.3s,baz=165,slow=20,SNR=4.7						
ROSC				S	S	00 34 20.0	+2.0
	2.1nm,0.3s,baz=264,slow=21,SNR=7.6						
ROSC	El Rosal	16.16	348	P	P	00 31 34.3	-1.8
ROSC				IAmb	IAmb	00 31 41.4	
	comp=Z,13nm,0.5s						
ITTB	Itaituba	16.39	67	*e*P	P	00 31 39.2	+1.3
PLMC	San Jos del P	16.74	341	*e*P	P	00 31 40.2	-0.9
PP1B	Ponte de Pedra	16.80	115	*e*P	P	00 31 43.1	+1.6
BOAV	Boa Vista	16.86	38	*e*P	P	00 31 43.6	+1.5
BOAV	Boa Vista	16.86	38	P	P	00 31 43.2	+1.1
SPBC	San Pablo de B	16.90	349	*e*P	P	00 31 41.2	-1.4
RUSC	La Rusia	16.98	352	*e*P	P	00 31 44.0	+0.3
NORC	Norcasia	16.98	346	*e*P	P	00 31 42.1	-1.1
AQDB	Aquidauana	17.33	125	*e*P	P	00 31 47.7	+1.3
AQDB	Aquidauana	17.33	125	P	P	00 31 46.5	+0.2
AQDB				IAmb	IAmb	00 31 49.1	
	comp=Z,32nm,0.8s						
TAMC	Tame, Arauca	17.40	357	*e*P	P	00 31 47.8	+0.8
CBOC	Ciudad Bolivar	17.57	343	*e*P	P	00 31 48.8	0.0
HELC	Santa Helena	17.75	345	*e*P	P	00 31 48.8	-1.8
PTBC	PUERTO BERRIO,	17.84	348	*e*P	P	00 31 48.8	-2.3
MALB	Monte Alegre	18.84	62	*e*P	P	00 32 01.4	+1.2
ZARC	Zaragoza, Cauc	18.85	348	*e*P	P	00 31 59.2	-0.9
ZARC	Zaragoza, Cauc	18.85	348	P	P	00 31 59.5	-0.7
ARAG	Araguaiana, MT	19.10	106	*e*P	P	00 32 02.8	+0.3
SNDB	Serra Nova Dou	19.20	95	*e*P	P	00 32 04.6	+1.1
SOCV	Socops	19.21	0	*e*P	P	00 32 02.1	-1.4
UREC	San Jos de Ur	19.25	346	*e*P	P	00 32 03.0	-0.8
SDV	Santo Domingo	19.81	1	P	P	00 32 08.5	-0.6
	comp=Z,0.8nm,0.3s,baz=180,slow=1.0,SNR=4.3						
SDV	Santo Domingo	19.81	1	*e*P	P	00 32 09.5	+0.4
CPUP	Villa Florida	19.86	142	P	P	00 32 08.8	-0.5
	comp=Z,1.4nm,0.3s,baz=335,slow=9.0,SNR=15						
CPUP				S	S	00 35 17.1	+0.7
	comp=Z,0.1nm,0.3s,baz=313,slow=11,SNR=2.9						
CPUP				PcP	PcP	00 35 57.5	0.0
	comp=Z,0.4nm,0.3s,baz=330,slow=2.1,SNR=3.5						
CPUP	Villa Florida	19.86	142	*e*P	P	00 32 09.3	+0.2
CPUP	Villa Florida	19.86	142	P	P	00 32 08.7	-0.5
CPUP				IAmb	IAmb	00 32 09.7	
	comp=Z,14nm,0.7s						
SMLC	San Martn de	19.98	351	*e*P	P	00 32 08.8	-1.7
BAUV	El Baul	20.06	8	P	P	00 32 11.7	+0.5
MOTC	Monteria, Cord	20.27	346	P	P	00 32 12.9	-0.2
TRCB	Terra Rica	20.96	126	*e*P	P	00 32 19.1	-0.1
TRCB	Terra Rica	20.96	126	P	P	00 32 19.2	0.0
TRCB				PcP	PcP	00 35 59.8	0.0
SJCC	San Jacinto, C	21.25	348	*e*P	P	00 32 19.2	-2.7
SJCC	San Jacinto, C	21.25	348	P	P	00 32 21.6	-0.3
PRPB	Parauapebas	21.37	79	*e*P	P	00 32 23.3	+0.4
MCPB	Macapa, AP	21.50	62	*e*P	P	00 32 25.1	+1.0
PCMB	Pacaembu	21.52	122	*e*P	P	00 32 24.3	+0.1
ITRB	Iturama	21.55	116	*e*P	P	00 32 25.0	+0.5
VA03	San Esteban	21.61	179	P	P	00 32 26.0	+1.1
VA03				IAmb	IAmb	00 32 26.9	
	comp=Z,28nm,1.1s						
PAYG	Puerto Ayora	21.87	297	P	P	00 32 28.7	+1.3
PAYG				IAmb	IAmb	00 32 42.8	
	comp=Z,34nm,1.1s						
PEXB	Peixe	22.13	95	*e*P	P	00 32 31.0	+1.2
PTGB	Pitanga	22.43	130	*e*P	P	00 32 32.5	+0.2
BDFB	Brasilia	22.69	104	P	P	00 32 35.2	+0.5
	comp=Z,5.5nm,0.6s,baz=273,slow=8.5,SNR=10						
BDFB	Brasilia	22.69	104	P	P	00 32 35.3	+0.5
ITQB	Itaqui	22.79	146	*e*P	P	00 32 35.2	-0.2
ITQB	Itaqui	22.79	146	P	P	00 32 35.3	-0.1
IPMB	Ipameri, GO	22.98	110	*e*P	P	00 32 37.4	+0.2
SMTB	Santa Maria do	23.03	87	*e*P	P	00 32 38.9	+1.2
BB19B	Bebedouro	23.64	118	*e*P	P	00 32 43.1	+0.1
ITAB	Concordia	23.87	135	P	P	00 32 44.8	-0.1
ITAB				IAmb	IAmb	00 32 45.4	
	comp=Z,20nm,0.8s						
TMAB	Tom-Au,PA,Br	24.18	71	*e*P	P	00 32 48.6	+0.7
MDP	Montagnes des	24.22	49	P	P	00 32 48.4	+0.1
	comp=Z,4.8nm,0.8s,baz=216,slow=8.1,SNR=7.6						
RCLB	Rio Claro- Sao	25.00	120	*e*P	P	00 32 55.1	0.0
CPSB	Cacapava Do Su	25.16	143	*e*P	P	00 32 55.7	-0.6
SDBA	SAO DESIDERIO	25.46	96	*e*P	P	00 32 59.8	+0.6
VAO	Valinhos	25.71	121	*e*P	P	00 33 01.4	+0.1
SVB	Belmont	25.98	22	P	P	00 33 03.1	-0.6
PET01	Itanhaem-SP	25.99	124	*e*P	P	00 33 03.3	-0.4
CNLB	Canela	26.06	137	*e*P	P	00 33 04.2	-0.1
PLTB	Pedras Altas	26.06	145	*e*P	P	00 33 03.6	-0.6
PLTB	Pedras Altas	26.06	145	P	P	00 33 03.6	-0.6
PLTB				IAmb	IAmb	00 33 04.3	
	comp=Z,21nm,0.8s						
JANB	Januaria	26.17	102	*e*P	P	00 33 06.0	+0.5
BSCB	Bom Sucesso	26.92	115	*e*P	P	00 33 11.9	-0.1
PARB	Paraibuna	26.98	120	*e*P	P	00 33 12.3	-0.1
DIAM	Diamantina, MG	27.25	109	*e*P	P	00 33 15.3	+0.3
ROSB	Rosrio	27.73	75	*e*P	P	00 33 19.5	+0.4
LC01	Cunco	27.74	182	P	P	00 33 18.4	-0.4
TRQA	Tornquist	28.05	165	P	P	00 33 21.2	-0.3
TRQA				IAmb	IAmb	00 33 33.1	
	comp=Z,25nm,1.1s						
MAN01	Angra dos Reis	28.23	118	*e*P	P	00 33 23.5	+0.2
MLPR	Magueyes Islan	29.08	8	P	P	00 33 30.1	-0.5
MLPR				IAmb	IAmb	00 33 31.6	
	comp=Z,23nm,1.0s						
CRPR	Cabo Rojo, PR	29.11	7	P	P	00 33 30.2	-0.7
CRPR				IAmb	IAmb	00 33 33.7	
	comp=Z,23nm,1.0s						
OBIP	Obispado Ponce	29.21	8	P	P	00 33 30.9	-0.8
OBIP				IAmb	IAmb	00 33 50.4	
	comp=Z,27nm,1.1s						
CELP	Cerrillos	29.25	8	P	P	00 33 31.2	-0.8
CELP				IAmb	IAmb	00 33 34.0	
	comp=Z,10nm,0.8s						
SJG	San Juan	29.35	9	P	P	00 33 31.9	-1.1
	comp=Z,6.0nm,0.5s,baz=146,slow=7.3,SNR=5.5						
SJG	San Juan	29.35	9	P	P	00 33 31.8	-1.1
SJG				IAmb	IAmb	00 33 33.3	
	comp=Z,12nm,0.9s						
DUB01	Friburgo-RJ	29.37	116	*e*P	P	00 33 33.7	+0.5
CBYP	Canovanas	29.55	10	P	P	00 33 33.8	-1.0
CBYP				IAmb	IAmb	00 33 34.4	
	comp=Z,23nm,0.8s						
GCPR	Guaynabo City	29.55	9	P	P	00 33 34.5	-0.2
GCPR				IAmb	IAmb	00 33 36.2	
	comp=Z,23nm,1.1s						
PLCA	Paso Flores	29.56	180	P	P	00 33 35.0	+0.4
	comp=Z,5.5nm,0.5s,baz=353,slow=9.7,SNR=19						
PLCA				PcP	PcP	00 36 20.0	+0.6
	comp=Z,7.3nm,0.7s,baz=353,slow=4.4,SNR=11						
PLCA	Paso Flores	29.56	180	*e*P	P	00 33 34.7	+0.1
PLCA	Paso Flores	29.56	180	P	P	00 33 34.5	-0.1
PLCA				IAmb	IAmb	00 33 35.7	
	comp=Z,6.6nm,0.6s						
SJMB	Sao Joao De Ma	29.65	108	*e*P	P	00 33 36.4	+0.9
CUPR	Culebra, Puert	29.69	11	P	P	00 33 34.4	-1.4
CUPR				IAmb	IAmb	00 33 35.4	
	comp=Z,19nm,1.1s						
NBPS	Pedro II - PI	29.88	80	*e*P	P	00 33 38.3	+0.7
SMRT	St. Maarten	29.92	15	P	P	00 33 36.2	-1.6
CAM01	Campos-RJ	29.94	115	*e*P	P	00 33 37.9	-0.1
BSFB	Barra de Sao F	29.98	109	*e*P	P	00 33 37.8	-0.6
NBPN	Ponto Novo - B	30.11	93	*e*P	P	00 33 40.0	+0.5
ALF01	Guarapari-ES	30.47	112	*e*P	P	00 33 42.8	+0.3
RIB01	Linhares ES	30.50	109	*e*P	P	00 33 42.8	0.0
NAN01	Guarapari, ES	30.50	106	*e*P	P	00 33 43.3	+0.5
GUA01	Guaratinga, BA	30.64	104	*e*P	P	00 33 44.3	+0.3
GDU01	Guandu, BA	30.67	98	*e*P	P	00 33 44.9	+0.6
CMC01	Camacan, BA	30.80	101	*e*P	P	00 33 45.6	+0.2
NBIT	Itapeh - BA	30.86	101	*e*P	P	00 33 46.4	+0.5
NBPB	Pedra_Branca-C	31.42	83	*e*P	P	00 33 52.2	+1.4
NBMA	Muriti-CE	31.89	86	*e*P	P	00 33 55.9	+1.1
NBLA	Lagarto - SE	32.46	93	*e*P	P	00 33 59.3	-0.3
NBCL	Cascavel-CE	32.97	81	*e*P	P	00 34 04.7	+0.9
NBLV	Livramento - P	33.70	87	*e*P	P	00 34 11.0	+1.0
NBPA	Parau_RN	33.79	84	*e*P	P	00 34 11.3	+0.6
NBAN	Anadia - AL	34.05	91	*e*P	P	00 34 13.4	+0.5
COYC	Coyhaique	34.41	182	P	P	00 34 15.6	+0.2
COYC				IAmb	IAmb	00 34 16.4	
	comp=Z,19nm,0.7s						
NBRF	Rio Formoso -	35.28	89	*e*P	P	00 34 23.1	+0.1
CMIG	Matias Romero	36.68	319	P	P	00 34 35.2	+0.7
	comp=Z,2.5nm,0.5s,baz=113,slow=7.5,SNR=5.8						
061Z	Ochoppi	37.98	345	P	P	00 34 45.4	+0.6
DWPF	Disney Wildern	40.25	345	P	P	00 35 03.2	+0.2
	baz=164						
656A	Willston	41.73	345	P	P	00 35 14.5	-0.2
EFI	East Falkland	41.83	168	P	P	00 35 15.8	+0.7
EFI				IAmb	IAmb	00 35 18.4	
	comp=Z,43nm,1.1s						
456A	Hilliard	42.90	346	P	P	00 35 24.2	+0.5
USHA	Ushuaia	43.71	178	P	P	00 35 30.8	+1.1
	comp=Z,12nm,0.7s,baz=9.0,slow=4.0,SNR=5.5						
451A	Vernon	43.83	341	P	P	00 35 30.5	-0.4
TIGA	Tifton	43.98	344	P	P	00 35 31.7	-0.3
	baz=162						
352A	Blakely	44.39	343	P	P	00 35 35.0	-0.2
BRAL	Brewton	44.76	340	P	P	00 35 37.9	-0.2
	baz=157						
BRAL	Brewton	44.76	340	P	P	00 35 37.9	-0.2
NHSC	New Hope	44.80	349	P	P	00 35 38.5	+0.1
	baz=167,SNR=6.5						
NHSC	New Hope	44.80	349	P	P	00 35 38.4	+0.1
154A	Montrose	44.97	345	P	P	00 35 39.2	-0.4
250A	Grady	45.26	341	P	P	00 35 41.5	-0.4
250A				PcP	PcP	00 37 08.8	+0.4
Y60A	Bolivia	45.35	351	P	P	00 35 42.2	-0.2
Y60A				IAmb	IAmb	00 36 01.3	
	comp=Z,28nm,1.0s						
152A	Waverly Hall	45.44	344	P	P	00 35 42.7	-0.6
Y57A	Sumter	45.73	349	P	P	00 35 45.3	-0.1
GOGA	Godfrey	45.82	345	P	P	00 35 45.4	-0.7
	baz=163						
GOGA	Godfrey	45.82	345	P	P	00 35 45.1	-0.9
GOGA				IAmb	IAmb	00 35 45.9	
	comp=Z,14nm,1.1s						
JSC	Jenkinsville	46.15	348	P	P	00 35 48.0	-0.6
JSC				IAmb	IAmb	00 35 53.5	
	comp=Z,15nm,1.2s						
BIRD	Birdtown, Kers	46.35	349	P	P	00 35 49.9	-0.1
W57A	Gilead	46.76	350	P	P	00 35 52.5	-0.6
W57A				IAmb	IAmb	00 35 53.5	
	comp=Z,31nm,1.0s						
PAULI	Pauline	46.79	348	P	P	00 35 53.2	-0.1
PAULI				IAmb	IAmb	00 35 53.6	
	comp=Z,11nm,0.6s						
VBMS	Vicksburg	46.95	337	P	P	00 35 54.0	-0.6
	baz=153						
Z47A	Carrollton	46.96	340	P	P	00 35 53.8	-0.9
KMSC	Kings Mountain	47.00	348	P	P	00 35 55.0	+0.1
	baz=166						
Y49A	Blount Mountai	47.05	342	P	P	00 35 54.0	-1.3
FPAL	Fort Paine	47.45	343	P	P	00 35 57.1	-1.3
FPAL				IAmb	IAmb	00 35 57.7	
	comp=Z,11nm,0.7s						
V55A	Taylorsville	47.66	349	P	P	00 35 59.9	0.0
V55A				IAmb	IAmb	00 36 00.9	
	comp=Z,24nm,0.8s						
V53A	Saluda	47.82	347	P	P	00 36 00.5	-0.6
V53A				IAmb	IAmb	00 36 01.5	
	comp=Z,13nm,0.9s						
833A	Chaparral WMA,	47.89	325	P	P	00 36 01.9	+0.2
	baz=141,SNR=6.2						
U56A	King	47.99	350	P	P	00 36 02.7	+0.4
U56A				IAmb	IAmb	00 36 02.9	
	comp=Z,21nm,0.6s						
W50A	Signal Mountai	47.99	344	P	P	00 36 01.3	-1.1
W50A				IAmb	IAmb	00 36 02.5	
	comp=Z,30nm,1.1s						
CPCT	Cooper Cave	48.02	345	P	P	00 36 01.5	-1.0
CPCT				IAmb	IAmb	00 36 02.2	
	comp=Z,11nm,0.8s						
TKL	Tuckaleechee C	48.03	346	P	P	00 36 01.7	-0.9
TKL				IAmb	IAmb	00 36 02.7	
	comp=Z,19nm,0.9s						
Y45A	Yeager Farm, C	48.07	339	IAmb	IAmb	00 36 03.1	

	comp=Z,32nm,0.8s						
V52A	Sevierville	48.16	346	IAmb	IAmb	00 36 03.8	
	comp=Z,24nm,0.8s						
NATX	Nacogdoches	48.29	333	P	P	00 36 05.3	+0.7
	baz=148,SNR=7.4						
U54A	Nelsons Funny	48.43	348	IAmb	IAmb	00 36 06.3	
	comp=Z,30nm,1.0s						
T57A	Hurt	48.44	351	IAmb	IAmb	00 36 06.8	
	comp=Z,25nm,1.1s						
Z41A	Richland Creek	48.77	335	P	P	00 36 08.3	+0.1
	baz=151						
TZTN	Tazewell	48.83	346	P	P	00 36 07.8	-0.7
	baz=163						
TZTN	Tazewell	48.83	346	IAmb	IAmb	00 36 08.6	
	comp=Z,13nm,0.9s						
BLA	Blacksburg	48.84	350	P	P	00 36 08.6	0.0
	baz=168						
S57A	Dark Hollow, R	49.14	352	IAmb	IAmb	00 36 11.4	
	comp=Z,11nm,0.8s						
WLAR	White Oak Lake	49.27	335	P	P	00 36 11.5	-0.3
WLAR				IAmb	IAmb	00 36 12.8	
	comp=Z,30nm,0.8s						
U49A	Red Boiling Sp	49.35	344	P	P	00 36 11.1	-1.2
U49A				IAmb	IAmb	00 36 11.8	
	comp=Z,17nm,0.6s						
S54A	Dingess, Beckl	49.57	349	P	P	00 36 13.5	-0.5
WVT	Waverly	49.58	342	P	P	00 36 12.4	-1.6
	baz=158						
JCT	Junction City	49.79	327	P	P	00 36 15.4	-0.4
	baz=142						
WHTX	Lake Whitney,	49.80	330	P	P	00 36 16.1	+0.4
	baz=145,SNR=5.5						
R55A	Marlinton	49.83	350	P	P	00 36 16.1	+0.2
R55A					PcP	00 37 25.5	+0.5
X40A	Basin Creek Fa	49.86	336	P	P	00 36 15.2	-0.9
	baz=151						
S51A	Beattyville	49.88	347	P	P	00 36 15.1	-1.1
S51A				IAmb	IAmb	00 36 16.1	
	comp=Z,14nm,0.8s						
R53A	Hurricane	50.21	349	IAmb	IAmb	00 36 18.9	
	comp=Z,24nm,0.6s						
MIAR	Mount Ida	50.21	335	P	P	00 36 17.8	-0.8
	baz=150,SNR=5.9						
W41B	Gary Mavity, V	50.23	337	P	P	00 36 17.7	-1.0
	baz=152,SNR=5.9						
WHAR	Wooly Hollow	50.35	337	P	P	00 36 18.5	-1.1
WHAR				IAmb	IAmb	00 36 19.4	
	comp=Z,17nm,1.0s						
Q56A	Snyder Ridge,	50.43	352	P	P	00 36 19.9	-0.3
Q56A				IAmb	IAmb	00 36 21.3	
	comp=Z,14nm,0.8s						
Q54A	Coxs Mills	50.64	350	IAmb	IAmb	00 36 22.1	
	comp=Z,28nm,1.0s						
P60A	Greenville	50.80	355	P	P	00 36 21.8	-0.9
	baz=174						
W39A	Magazine	50.86	336	P	P	00 36 23.4	+0.1
	baz=151,SNR=7.3						
Q52A	Bidwell	50.88	349	IAmb	IAmb	00 36 23.2	
	comp=Z,22nm,0.8s						
HOPE	Hope Point	51.00	155	P	P	00 36 25.0	+1.0
X37A	Clayton	51.00	334		P	00 36 24.2	-0.2
X37A				IAmb	IAmb	00 36 24.9	
	comp=Z,16nm,0.6s						
WCI	Wyandotte Cave	51.10	344	P	P	00 36 23.7	-1.3
	baz=160						
TXAR	Lajitas Array	51.12	323	P	P	00 36 25.2	-0.2
	comp=Z,1.8nm,0.6s,baz=154,slow=8.2,SNR=27						
TXAR				PcP	PcP	00 37 30.4	+0.2
	comp=Z,3.0nm,0.5s,baz=138,slow=5.6,SNR=18						
TXAR	Lajitas Array	51.12	323	P	P	00 36 24.8	-0.7
TX31	Lajitas Ar. Si	51.12	323	P	P	00 36 24.9	-0.5
MCWV	Mont Chateau	51.14	351	P	P	00 36 25.1	-0.1
	baz=169						
P53A	Whipple	51.22	350	P	P	00 36 25.5	-0.4
ABTX	Abilene, Hawle	51.40	329	P	P	00 36 27.2	-0.1
	baz=143,SNR=6.3						
S44A	Carbondale	51.46	341	P	P	00 36 26.5	-1.1
SIUC	Southern Illin	51.47	341	P	P	00 36 26.6	-1.1
P52A	Corning	51.50	349	P	P	00 36 27.0	-0.8
	baz=166,SNR=8.4						
U40A	Yellville	51.51	337	P	P	00 36 26.9	-1.0
	baz=152,SNR=16						
U40A	Yellville	51.51	337	P	P	00 36 26.7	-1.3
U40A				IAmb	IAmb	00 36 27.8	
	comp=Z,17nm,0.7s						
O56A	Blue Knob Stat	51.56	352	P	P	00 36 28.3	0.0
	baz=170						
SSPA	Standing Stone	51.84	353	P	P	00 36 30.1	-0.2
	baz=171						
PAL	Palisades	51.87	357	P	P	00 36 30.6	+0.1
	baz=176						
O52A	Adamsville	51.91	349	P	P	00 36 29.9	-0.9
O52A				IAmb	IAmb	00 36 31.0	
	comp=Z,34nm,0.9s						
O53A	New Philadelph	51.93	350	P	P	00 36 30.6	-0.3
	baz=167,SNR=6.0						
P49A	Miami Univ. Ec	51.95	346	P	P	00 36 29.4	-1.7
	baz=163,SNR=8.4						
MGMO	Mountain Grove	52.00	338	P	P	00 36 30.1	-1.4
MGMO				IAmb	IAmb	00 36 31.4	
	comp=Z,31nm,0.8s						
P48A	Milroy	52.05	346	P	P	00 36 29.8	-2.0
P48A				IAmb	IAmb	00 36 30.3	
	comp=Z,14nm,0.6s						
FVM	French Village	52.10	340	P	P	00 36 31.2	-1.0
W35A	Tecumseh	52.13	333	P	P	00 36 31.8	-0.7
W35A				IAmb	IAmb	00 36 32.7	
	comp=Z,21nm,0.7s						
ACSO	Alum Creek Sta	52.25	348	P	P	00 36 32.1	-1.0
	baz=165,SNR=9.5						
TUL1	Leonard	52.30	334	P	P	00 36 33.2	-0.4
	baz=149,SNR=5.8						
TUL1	Leonard	52.30	334	P	P	00 36 33.1	-0.6
TUL1				IAmb	IAmb	00 36 34.0	
	comp=Z,27nm,1.1s						
N53A	Lisbon	52.41	350	P	P	00 36 33.8	-0.6
N53A				IAmb	IAmb	00 36 34.9	
	comp=Z,44nm,1.1s						
N54A	Moraine State	52.43	351	P	P	00 36 34.5	0.0
	baz=169						
CCM	Cathedral Cave	52.44	340	P	P	00 36 33.7	-0.9
	baz=154						
CCM	Cathedral Cave	52.44	340	P	P	00 36 33.2	-1.4
CCM				IAmb	IAmb	00 36 34.4	
	comp=Z,36nm,1.0s						
Q44A	Meyer Farm, Va	52.50	342	P	P	00 36 33.2	-1.8
WMOK	Wichita Mounta	52.67	331	P	P	00 36 35.5	-0.8
	baz=145,SNR=7.2						
S39A	Bolivar	52.86	338	P	P	00 36 36.2	-1.4
M54A	Oil Creek Stat	52.92	352	P	P	00 36 37.7	-0.3
	baz=169						
M53A	WI Miller and	53.01	351	P	P	00 36 38.1	-0.4
	baz=168,SNR=9.5						
R40A	Maddies Statio	53.01	339	P	P	00 36 37.3	-1.3
R40A				IAmb	IAmb	00 36 38.1	
	comp=Z,27nm,0.7s						
N49A	Columbus Grove	53.16	347	P	P	00 36 38.0	-1.6
BINY	Binghamton	53.20	355	P	P	00 36 39.2	-0.7
	baz=174						
L61B	Northampton	53.27	358	P	P	00 36 39.4	-1.0
	baz=178						
HRV	Adam Dziewonsk	53.30	359	P	P	00 36 40.3	-0.3
	baz=179						
SFIN	Lafayette	53.34	345	P	P	00 36 38.9	-2.0
	baz=160,SNR=8.8						
ERPA	Erie	53.57	352	P	P	00 36 42.3	-0.2
	baz=169						
MNTX	Cornudas Mount	53.85	323	P	P	00 36 44.1	-0.6
	baz=137,SNR=9.4						
MSTX	Muleshoe	54.08	327	P	P	00 36 45.2	-1.2
	baz=140,SNR=7.1						
HDIL	Hopedale	54.11	343	P	P	00 36 44.4	-1.9
	baz=158,SNR=6.7						
AMTX	Amarillo	54.22	329	P	P	00 36 46.8	-0.5
	baz=142						
AAM	Ann Arbor	54.37	348	P	P	00 36 47.2	-0.9
	baz=164						
LBNH	Lisbon	55.04	359	P	P	00 36 52.8	+0.1
	baz=179						
KSU1	Kansas State U	55.36	336	P	P	00 36 54.1	-1.0
	baz=149						
LONY	Lake Ozonia	55.51	357	P	P	00 36 55.6	-0.4
	baz=176						
121A	Cookes Peak, D	55.87	322	P	P	00 36 59.2	+0.3
	baz=135						
G62A	West of Eustis	56.01	0	P	P	00 36 59.5	+0.1
G62A				IAmb	IAmb	00 37 00.8	
	comp=Z,30nm,0.9s						
PKME	Peaks-Kenny Pk	56.07	1	P	P	00 36 59.6	-0.2
	baz=182						
CBKS	Cedar Bluff	56.45	333	P	P	00 37 02.7	+0.1
	baz=145						
JFWS	Jewell Farm	56.56	343	P	P	00 37 01.8	-1.4
	baz=157,SNR=8.0						
SCIA	State Center	56.56	340	P	P	00 37 01.9	-1.4
	baz=154						
ANMO	Albuquerque	56.82	325	P	P	00 37 05.5	+0.1
	baz=137						
ANMO	Albuquerque	56.82	325	P	P	00 37 05.3	-0.1
T25A	Trinidad	57.36	328	P	P	00 37 09.4	+0.3
	baz=140,SNR=8.2						
TUC	Tucson	57.57	320	P	P	00 37 10.3	-0.1
	baz=132						
TUC	Tucson	57.57	320	P	P	00 37 10.4	0.0
BGNE	Belgrade	57.94	336	P	P	00 37 12.2	-0.4
	baz=148,SNR=5.0						
SDCO	Great Sand Dun	58.38	328	P	P	00 37 16.6	+0.6
	baz=139,SNR=28						
SDCO	Great Sand Dun	58.38	328	IAmb	IAmb	00 37 17.3	
	comp=Z,17nm,0.6s						
X18A	Snowflake	58.56	322	P	P	00 37 17.8	+0.7
214A	Organ Pipe Nat	58.64	318	P	P	00 37 18.3	+0.7
	baz=130,SNR=7.3						
W18A	Petrified Fore	58.83	323	P	P	00 37 19.5	+0.5
	baz=134						
S22A	4UR Ranch, Cre	59.08	327	P	P	00 37 21.3	+0.5
	baz=138,SNR=7.2						
Q24A	Divide	59.13	329	P	P	00 37 21.6	+0.6
	baz=140,SNR=6.6						
ECSD	EROS Data Cent	59.35	339	P	P	00 37 21.3	-0.8
	baz=150,SNR=9.8						
X16A	Lo Mia Camp, P	59.38	321	P	P	00 37 23.3	+0.7
SPMN	Marine on St.	59.42	342	P	P	00 37 21.2	-1.2
	baz=155						
MVCO	Mesa Verde	59.60	326	P	P	00 37 24.6	+0.5
	baz=136,SNR=6.9						
113A	Mohawk Valley,	59.78	318	P	P	00 37 25.4	+0.4
ISCO	Idaho Springs	60.00	330	P	P	00 37 27.4	+0.6
	baz=140,SNR=9.3						
ISCO	Idaho Springs	60.00	330	P	P	00 37 27.0	+0.2
Y14A	Wickenburg	60.04	320	P	P	00 37 27.2	+0.3
WUAZ	Wupatki	60.08	322	P	P	00 37 28.0	+0.7
	baz=133,SNR=5.8						
SMCO	Snowmass	60.22	328	P	P	00 37 28.9	+0.5
GLA	Glamis	60.65	318	P	P	00 37 31.1	+0.2
	baz=129						
PDMCI	Parker Dam,Lak	61.00	320	P	P	00 37 33.7	+0.6
	baz=130						
W13A	Hualapai Mount	61.35	320	P	P	00 37 36.4	+0.8
EYMN	Ely	61.53	344	P	P	00 37 35.1	-1.1
	baz=157,SNR=6.0						
IRM	Iron Mountain	61.55	319	P	P	00 37 37.5	+0.8
	baz=129,SNR=7.8						
O20A	White River Ci	61.59	328	P	P	00 37 37.5	+0.5
	baz=137,SNR=11						
KNB	Kanab	61.95	323	P	P	00 37 40.6	+1.1
KNB				IAmb	IAmb	00 37 41.8	
	comp=Z,49nm,0.9s						
BELC	Belle Mtn. Jos	62.01	318	P	P	00 37 41.0	+1.2
	baz=128						
TPFO	Pinon Flats	62.07	318	P	P	00 37 41.0	+0.8
	baz=128						
GMRC	Granite Mounta	62.27	319	P	P	00 37 42.3	+0.8
	baz=129,SNR=14						
MURC	Murrieta	62.56	317	P	P	00 37 44.2	+1.0
	baz=127						
MSU	Marysvale	62.59	324	P	P	00 37 44.8	+1.2
K22A	Casper	62.62	331	P	P	00 37 44.1	+0.5
	baz=140						
CCUT	Cedar City	62.63	323	P	P	00 37 45.0	+1.1
CCUT				IAmb	IAmb	00 37 46.3	
	comp=Z,15nm,0.9s						
RSSD	Black Hills	62.63	334	P	P	00 37 44.4	+0.7
	baz=143						
RSSD	Black Hills	62.63	334	P	P	00 37 44.1	+0.4
RSSD				IAmb	IAmb	00 37 45.0	
	comp=Z,17nm,0.5s						
HEC	Hector,Ludlow	62.74	319	P	P	00 37 45.6	+1.2
	baz=128						
AGMN	Agassiz Nation	63.10	342	P	P	00 37 45.5	-0.8
	baz=152,SNR=13						
BFSC	Mount Baldy Ra	63.25	317	P	P	00 37 48.4	+0.7
	baz=127						
CIS	Catalina Islan	63.26	316	P	P	00 37 48.8	+1.1
	baz=126						
GSC	Goldstone, Bar	63.33	319	P	P	00 37 49.2	+1.0
	baz=128,SNR=6.5						
GSC	Goldstone, Bar	63.33	319	P	P	00 37 49.4	+1.2
PSUT	Pine Spring	63.58	323	IAmb	IAmb	00 37 51.8	
	comp=Z,15nm,0.7s						
JLU	Jordanelle	63.63	326	IAmb	IAmb	00 37 51.4	
	comp=Z,12nm,0.6s						
EDW2	Edwards Air Fo	63.85	318	P	P	00 37 52.0	+0.5
	baz=127,SNR=5.2						
MDND	Maddock	63.96	339	P	P	00 37 51.8	0.0
	baz=148,SNR=14						
MDND	Maddock	63.96	339	P	P	00 37 51.9	0.0
TCUT	Toone Canyon	63.97	327		P	00 37 52.9	+0.6
TCUT				IAmb	IAmb	00 37 53.9	
	comp=Z,20nm,0.9s						
DUG	Dugway, Tooele	64.10	325	P	P	00 37 53.9	+0.9
	baz=133,SNR=19						
DUG	Dugway, Tooele	64.10	325	IAmb	IAmb	00 37 54.9	
	comp=Z,20nm,0.8s						
PDAR	Pinedale Array	64.19	329	P	P	00 37 53.6	-0.1
	comp=Z,4.7nm,0.4s,baz=124,slow=9.1,SNR=51						
PDAR				PcP	PcP	00 38 21.4	-0.6
	comp=Z,1.7nm,0.5s,baz=122,slow=5.4,SNR=7.6						
BW06	Boulder Array	64.19	329	P	P	00 37 53.5	-0.2
	baz=137,SNR=10						
MPMC	Manual Prospec	64.23	319	P	P	00 37 54.5	+0.5
	baz=128,SNR=5.8						
R11A	Troy Canyon, C	64.48	322	P	P	00 37 56.7	+1.2
	baz=130,SNR=6.9						
ISA	Isabella, Lake	64.63	318	P	P	00 37 57.0	+0.6
	baz=127,SNR=5.9						
ISA	Isabella, Lake	64.63	318	P	P	00 37 56.8	+0.4
ULM	Lac du Bonnet	64.84	343	P	P	00 37 56.1	-1.2
	comp=Z,29nm,0.5s,baz=153,slow=5.5,SNR=56						
LCH	Last Change Ra	65.05	320	P	P	00 37 59.9	+0.8
PKM	Mcpherson Peak	65.07	317	P	P	00 38 00.1	+0.9
	baz=125						
SMMC	Simmler	65.43	317	P	P	00 38 02.5	+1.2
	baz=125						
FXWY	Fox Creek	65.56	329	P	P	00 38 02.3	+0.1
LAO	LASA Array	65.61	334	P	P	00 38 02.8	+0.5
	baz=142						
FLWY	Flagg Ranch	65.72	330	IAmb	IAmb	00 38 05.1	
	comp=Z,28nm,1.1s						
SCHQ	Schefferville	65.72	3	P	P	00 38 01.8	-0.9
	comp=Z,3.6nm,0.5s,baz=205,slow=16,SNR=6.8						
SCHQ				PcP	PcP	00 38 26.9	-0.9
	comp=Z,3.2nm,0.4s,baz=170,slow=2.0,SNR=7.8						
RLMT	Red Lodge	65.78	331	P	P	00 38 03.9	+0.4
	baz=138,SNR=9.0						
H17A	Grant Village	65.88	330	P	P	00 38 05.9	+1.6
	baz=137,SNR=5.3						
H17A	Grant Village	65.88	330	P	P	00 38 05.6	+1.3
DGMT	Dagmar	66.19	336	P	P	00 38 06.7	+0.9
	baz=144,SNR=8.5						
DGMT	Dagmar	66.19	336	IAmb	IAmb	00 38 07.2	
	comp=Z,34nm,0.8s						
NVAR	Mina Array Bea	66.19	321	P	P	00 38 07.1	+0.8
	comp=Z,3.7nm,0.7s,baz=132,slow=6.2,SNR=15						
NVAR				PcP	PcP	00 38 30.7	+0.1
	comp=Z,3.8nm,0.5s,baz=121,slow=4.8,SNR=12						
YMR	Madison River	66.27	330	IAmb	IAmb	00 38 08.9	
	comp=Z,24nm,0.8s						
YHH	Holmes Hill	66.30	330	P	P	00 38 07.7	+0.8
HLID	Hailey	67.27	327	P	P	00 38 13.6	+0.9
	baz=133,SNR=24						
HLID	Hailey	67.27	327	IAmb	IAmb	00 38 14.7	
	comp=Z,14nm,0.9s						
BOZ	Bozeman (W)	67.27	330	P	P	00 38 13.2	+0.6
	baz=136,SNR=12						
VCNR	Virginia City	67.56	321	IAmb	IAmb	00 38 16.7	
	comp=Z,15nm,0.9s						
LIC	Lamto	67.73	79	*e*P	P	00 38 15.7	-0.2
	comp=Z,54nm,0.6s						
TIC	Toumodi	67.84	78	*e*P	P	00 38 16.4	-0.2
PMPS	Porto Santo	67.98	48	*e*P	P	00 38 18.1	+1.1
DBIC	Dimbokro	68.01	78	P	P	00 38 17.5	0.0
	comp=Z,27nm,0.4s,baz=263,slow=5.1,SNR=88						
DBIC	Dimbokro	68.01	78	P	P	00 38 16.9	-0.6
KIC	Kosan Boka	68.04	79	*e*P	P	00 38 17.4	-0.4
	comp=Z,128nm,0.6s						
EGMT	Eagleton	68.17	333	P	P	00 38 18.6	+0.6
	baz=138,SNR=18						
PLID	Pearl Lake	69.14	328	P	P	00 38 23.6	-0.4
PLID				IAmb	IAmb	00 38 25.2	
	comp=Z,20nm,0.8s						
MSO	Missoula	69.27	330	P	P	00 38 25.5	+0.9
	baz=134,SNR=8.4						
MSO	Missoula	69.27	330	IAmb	IAmb	00 38 26.7	
	comp=Z,17nm,1.1s						
MOD	Modoc Plateau	69.52	323	IAmb	IAmb	00 38 27.9	
	comp=Z,24nm,0.7s						
BMO	Blue Mountains	69.68	327	IAmb	IAmb	00 38 28.4	
	comp=Z,12nm,0.7s						
F10A	Beach Ranch, E	70.37	328	IAmb	IAmb	00 38 33.2	
	comp=Z,17nm,1.0s						
M04C	Macdoel	70.37	322	P	P	00 38 31.8	+0.6
	baz=126,SNR=5.5						
I07A	Izee	70.40	325	IAmb	IAmb	00 38 33.4	
	comp=Z,11nm,0.8s						
N02D	Trinity Center	70.44	321	P	P	00 38 31.2	-0.4
	baz=125						
VNA3	Neumayer Olymp	70.53	163	P	P	00 38 32.0	+0.4
VNA1	Neumayer--Stat	70.72	162	P	P	00 38 33.6	+1.0
M02C	Callahan	70.77	321	P	P	00 38 33.6	0.0
	baz=125						
K04D	Chiloquin, OR	70.82	323	P	P	00 38 34.5	+0.6
	baz=126						
J05D	Fort Rock, OR	70.90	323	P	P	00 38 35.2	+0.8
	baz=127						
L04D	Klamath Falls	70.91	322	P	P	00 38 34.8	+0.3
	baz=126						
VNA2	Neumayer--Watz	71.09	162	P	P	00 38 35.2	+0.4
	baz=297,slow=6.3						
E09A	Wood Farm, Sta	71.20	328	IAmb	IAmb	00 38 37.4	
	comp=Z,13nm,0.8s						
J04D	Umpqua Nationa	71.39	323	P	P	00 38 37.9	+0.6
	baz=126						
I05D	Terrebonne, OR	71.60	324	P	P	00 38 39.6	+1.3
	baz=127,SNR=5.6						
F07A	Phinny Hill Vi	71.76	326	IAmb	IAmb	00 38 41.1	
	comp=Z,14nm,0.7s						
HAWA	Hanford	71.86	327	IAmb	IAmb	00 38 41.8	
	comp=Z,11nm,0.6s						
I04A	Tendick Farm,	71.89	323	P	P	00 38 40.5	+0.5
	baz=126						
D08A	Wollman Farm,	71.96	328	IAmb	IAmb	00 38 42.2	
	comp=Z,14nm,0.8s						
K02D	Willamette Mer	72.01	322	P	P	00 38 41.6	+0.9
	baz=125						
C09A	Chrisman Ranch	72.11	329	P	P	00 38 41.5	+0.4
C09A				IAmb	IAmb	00 38 42.8	
	comp=Z,22nm,1.1s						
G05D	Wamic, OR	72.13	325	P	P	00 38 42.9	+1.6
	baz=127,SNR=5.1						
E07A	Sunnyside	72.14	327	IAmb	IAmb	00 38 43.6	
	comp=Z,12nm,0.9s						
HOOD	Mount Hood Mea	72.37	325	IAmb	IAmb	00 38 47.4	
	comp=Z,20nm,0.7s						
I03D	Drain, OR	72.39	323	P	P	00 38 43.6	+0.8
	baz=125						
F05D	White Salmon	72.60	326	P	P	00 38 45.3	+1.3
	baz=127						
SNAA	Sanae	72.73	162	P	P	00 38 44.8	+0.4
SNAA	Sanae	72.73	162	P	P	00 38 44.8	+0.4
	comp=Z,25nm,0.6s,baz=286,slow=6.8,SNR=232						
SNAA				PcP	PcP	00 38 57.7	+0.2
	comp=Z,5.2nm,0.7s,baz=345,slow=2.9,SNR=4.7						
SNAA	Sanae	72.73	162	P	P	00 38 44.0	-0.4
SNAA				IAmb	IAmb	00 38 45.7	
	comp=Z,27nm,0.8s						
F04A	Amboy	73.17	325	IAmb	IAmb	00 38 48.7	
	comp=Z,25nm,0.8s						
B05A	Bryant	74.39	327	P	P	00 38 53.9	0.0
	baz=127						
D03D	Eldon	74.49	326	P	P	00 38 55.0	+0.5
	baz=126						
MORF	Marmelete	75.53	47	*e*P	P	00 39 02.0	+1.3
MORF				IAmb	IAmb	00 39 03.5	
	comp=Z,32nm,0.9s						
MORF	Marmelete	75.53	47	*e*P	P	00 39 02.5	+1.8
	comp=Z,61nm,1.7s						
TORD	Torodi Ar. Bea	75.91	73	P	P	00 39 01.3	-1.9
	comp=Z,33nm,0.5s,baz=265,slow=4.3,SNR=319						
TORD	Torodi Ar. Bea	75.91	73	P	P	00 39 02.6	-0.5
PNCL	Nicolau / Gran	75.97	46	*e*P	P	00 39 04.4	+1.4
	comp=Z,41nm,1.8s						
MESJ	Messejana	76.07	46	*e*P	P	00 39 05.0	+1.4
MESJ				IAmb	IAmb	00 39 05.7	
	comp=Z,18nm,1.0s						
MESJ	Messejana	76.07	46	*e*P	P	00 39 05.1	+1.5
PCVE	Castro Verde	76.11	47	*e*P	P	00 39 05.6	+1.8
PVAQ	Vaqueiros	76.24	47	*e*P	P	00 39 05.9	+1.4
PBEJ	Beja	76.40	46	*e*P	P	00 39 06.9	+1.5
PSBE	So Bento	76.41	45	*e*P	P	00 39 06.7	+1.3
EVO	Evora	76.52	46	*e*P	P	00 39 06.7	+0.7
PMTG	Montargil	76.61	45	*e*P	P	00 39 07.5	+1.0
PCBR	Castelo Branco	77.47	45	*e*P	P	00 39 12.8	+1.7
	comp=Z,21nm,1.7s						
PVIS	Viseu	77.57	44	*e*P	P	00 39 12.6	+0.9
PCAB	Cabril	77.92	43	*e*P	P	00 39 14.4	+0.8
	comp=Z,38nm,1.7s						
POLO	Lamas de Olo	77.93	43	*e*P	P	00 39 14.5	+0.8
	comp=Z,17nm,1.5s						
PVRL	Vila Real	77.94	43	*e*P	P	00 39 14.5	+0.8
MVO	Moncorvo	78.35	44	*e*P	P	00 39 16.9	+1.0
PBRG	Braganca	78.83	43	*e*P	P	00 39 19.2	+0.8
DY2G	Dye2	79.41	10	*i* P	P	00 39 19.6	-1.5
DY2G				IAmb	IAmb	00 39 20.9	
	comp=Z,26nm,0.6s						
ESDC	Sonseca Array	79.86	46	P	P	00 39 24.8	+0.9
	comp=Z,10.0nm,0.8s,baz=256,slow=4.9,SNR=46						
ESDC	Sonseca Array	79.86	46	P	P	00 39 24.1	+0.3
YKA	Yellowknife Ar	80.76	341	P	P	00 39 27.6	-0.3
	comp=Z,21nm,0.7s,baz=128,slow=6.3,SNR=104						
ICESG	Greenland Ices	82.90	11	*i* P	P	00 39 37.8	-1.3
ICESG				IAmb	IAmb	00 39 38.9	
	comp=Z,26nm,0.8s						
WRAK	Wrangell Islan	84.14	331	P	P	00 39 45.7	+0.7
	baz=120						
WTLY	Watson Lake, Y	84.48	335	P	P	00 39 47.6	+0.9
	baz=123						
TGTN	Hyland Airport	85.05	336	P	P	00 39 50.4	+0.9
	baz=124,SNR=14						
SIT	Sitka	85.89	330	P	P	00 39 54.0	+0.7
	baz=117						
SUMG	Summit	86.10	9	P	P	00 39 54.8	+0.1
P33M	Teslin, Yukon	86.25	334	P	P	00 39 55.7	+0.6
	baz=120,SNR=6.9						
VNDA	Vanda	86.76	190	P	P	00 39 58.3	+1.0
	comp=Z,4.9nm,0.8s,baz=130,slow=4.6,SNR=16						
VNDA	Vanda	86.76	190	P	P	00 39 58.2	+0.9
VNDA				IAmb	IAmb	00 39 59.4	
	comp=Z,8.6nm,1.1s						
EKA	Eskdalemuir Ar	86.76	32	P	P	00 39 56.9	-0.7
	comp=Z,1.8nm,0.4s,baz=232,slow=5.3,SNR=19						
MMPY	Sheldon Lake,	86.83	336	P	P	00 39 58.4	+0.5
	baz=121,SNR=12						
SYO	Syowa Base	86.90	160	⇓*e*P	P	00 39 58.2	+0.2
SKAG	Skagway	87.00	333	P	P	00 39 59.2	+0.7
	baz=118						
WHY	Whitehorse	87.36	334	P	P	00 40 00.8	+0.4
	baz=118						
FARO	Faro, Yukon	87.47	335	P	P	00 40 01.5	+0.6
	baz=119,SNR=8.1						
SCO	Scoresbysund	87.86	15	*i* P	P	00 40 02.2	-0.1
SCO				IAmb	IAmb	00 40 03.2	
	comp=Z,9.7nm,0.6s						
M31M	Drury Creek, Y	87.88	335	P	P	00 40 02.9	+0.2
	baz=118						
N31M	Braeburn, Yuko	88.13	334	P	P	00 40 04.6	+0.7
	baz=117						
KEST	Kesra	88.57	53	P	P	00 40 05.9	-0.7
	comp=Z,6.9nm,0.7s,baz=280,slow=6.1,SNR=4.3						
M30M	Minto, Yukon	89.05	335	P	P	00 40 08.3	+0.1
	baz=116						
YUK4	Talbot Arm	89.31	333	P	P	00 40 09.9	+0.3
	baz=115						
PINM	Pinnacle	89.52	332	P	P	00 40 11.0	+0.6
	baz=113						
BOSA	Boshof	90.08	119	P	P	00 40 12.9	-1.0
	comp=Z,2.9nm,0.7s,baz=259,slow=4.1,SNR=9.5						
BOSA	Boshof	90.08	119	P	P	00 40 13.3	-0.6
A36M	Sachs Harbour	90.18	345	P	P	00 40 13.2	+0.1
	baz=127,SNR=17						
YUK3	Moose Creek	90.28	334	P	P	00 40 14.7	+0.6

	baz=113						
MESA	MESA	90.34	332	P	P	00 40 15.0	+0.6
	baz=112						
INK	Inuvik	90.53	341	P	P	00 40 14.8	0.0
	baz=119,SNR=21						
INK	Inuvik	90.53	341	P	P	00 40 14.5	-0.3
EPYK	Eagle Plains	90.71	338	P	P	00 40 15.8	+0.1
	baz=116						
DAWY	Dawson	90.75	336	P	P	00 40 15.9	-0.1
	baz=114						
I29M	Ogilvie Camp,	90.86	337	P	P	00 40 16.5	0.0
	baz=115,SNR=8.7						
L27K	Beaver Creek,	91.36	334	P	P	00 40 18.9	0.0
	baz=112						
DAVOX	Davos/Dischmat	91.71	43	P	P	00 40 20.6	-0.4
	comp=Z,5.1nm,0.7s,baz=255,slow=16,SNR=11						
DAVA	Damuels	91.84	42	eP	P	00 40 21.6	0.0
	comp=Z,4.0nm,0.8s						
SCRK	Sand Creek	92.59	335	P	P	00 40 24.2	-0.3
	baz=110						
J26L	Joseph Creek	92.60	336	P	P	00 40 24.4	-0.2
	baz=110						
KLU	Klutina	92.62	332	P	P	00 40 24.6	-0.1
	baz=108						
MOTA	Moosalm	92.66	42	i P	P	00 40 25.0	-0.3
	comp=Z,6.6nm,1.0s						
SQTA	Sankt Quirin	92.70	43	i P	P	00 40 25.3	-0.1
	comp=Z,1.9nm,0.6s						
RIDG	Independent Ri	92.87	335	P	P	00 40 26.0	+0.2
	baz=109						
PAX	Paxson	92.89	334	P	P	00 40 25.7	-0.2
	baz=109						
WTTA	Wattenberg	93.00	43	i P	P	00 40 27.0	+0.1
	comp=Z,9.6nm,0.9s						
J25K	Salcha River,	93.37	335	P	P	00 40 27.7	-0.4
	baz=109						
ABTA	Abfaltersbach	93.47	43	i P	P	00 40 28.7	-0.2
	comp=Z,11nm,1.0s						
SML	Sawmill	93.81	332	P	P	00 40 29.6	-0.5
	baz=106						
ILAR	Eielson Array	94.04	335	P	P	00 40 29.4	-1.6
	comp=Z,0.9nm,0.8s,baz=116,slow=3.8,SNR=9.0						
KBA	Koelnbreinsper	94.09	43	eP	P	00 40 31.4	-0.5
	comp=Z,3.7nm,0.7s						
MYKA	Terra Mystica	94.20	43	eP	P	00 40 32.2	-0.1
	comp=Z,2.6nm,0.5s						
POKR	Poker Plat Res	94.36	336	P	P	00 40 32.5	0.0
	baz=107						
MCK	McKinley	94.60	334	P	P	00 40 33.3	-0.3
	baz=106						
GERES	GERESS Array B	94.68	41	P	P	00 40 34.0	-0.5
	comp=Z,2.1nm,0.7s,baz=244,slow=3.1,SNR=17						
H24K	Noodor Dome	94.75	336	P	P	00 40 34.2	-0.1
	baz=106						
OBKA	Obir	94.79	44	i P	P	00 40 34.4	-0.6
	comp=Z,9.9nm,1.2s						
MAW	Mawson	94.83	164	P	P	00 40 34.7	+0.2
	comp=Z,6.2nm,0.7s,baz=207,slow=7.1,SNR=12						
MAW	Mawson	94.83	164	P	P	00 40 34.9	+0.4
MOA	Molln	94.86	42	eP	P	00 40 34.9	-0.2
	comp=Z,2.2nm,0.6s						
NEA2	Nenana	94.89	335	P	P	00 40 34.2	-0.6
	baz=105						
TRF	Thorofare Moun	95.12	334	P	P	00 40 35.6	-0.5
	baz=104						
BRG	Berggiesshubel	95.23	39	eP	P	00 40 37.1	+0.4
BRG				Amp		00 40 38.4	
	comp=Z,2.2nm,0.8s						
BPAW	Bear Paw Mtn.	95.57	334	P	P	00 40 37.3	-0.7
	baz=104						
MLY	Manley	95.69	335	P	P	00 40 37.9	-0.6
	baz=104						
PPLA	Purkeypile	95.82	333	P	P	00 40 38.4	-0.9
	baz=103						
CAST	Castle Rocks	95.89	333	P	P	00 40 38.5	-1.0
	baz=103						
CONA	Conrad Observa	95.93	42	eP	P	00 40 40.1	+0.1
	comp=Z,2.7nm,0.7s						
COLD	Coldfoot	96.01	337	P	P	00 40 40.4	+0.5
	baz=104						
TOLK	Toolik Lake Re	96.13	339	P	P	00 40 40.7	+0.2
	baz=104						
N19K	Bonanza Creek	96.46	331	P	P	00 40 41.1	-1.1
	baz=101						
L20K	Farewell, AK	96.50	332	P	P	00 40 41.2	-0.9
	baz=101						
ARCES	ARCESS Array B	102.51	21	P	Pdif	00 41 08.4	-0.3
	comp=Z,5.1nm,1.1s,baz=260,slow=4.5,SNR=4.0						
FINES	FINESS Array B	102.95	29	PKKPbc	PKKPbc	00 57 04.8	-2.9
	comp=Z,1.5nm,0.5s,baz=102,slow=3.7,SNR=9.9						
MMAI	Mount Meron Ar	109.53	59	PKiKP	PKiKP	00 45 39.8	-0.3
	comp=Z,1.0nm,0.5s,baz=77,slow=3.6,SNR=8.1						
KBZ	Khabaz	114.71	47	PKP	PKiKP	00 45 49.6	+0.1
	comp=Z,1.8nm,0.4s,baz=301,slow=5.9,SNR=9.8						
BELG	Belogornoye	115.94	37	PKP	PKPdf	00 45 50.6	-1.0
	comp=Z,3.0nm,0.5s,baz=270,slow=9.1,SNR=4.2						
GNI	Garni	116.59	51	PKP	PKPdf	00 45 53.4	-0.2
	comp=Z,2.3nm,0.5s,baz=30,slow=3.8,SNR=4.9						
NRIK	Noril'sk	120.14	9	PKKPbc	PKKPbc	00 56 09.6	-2.4
	comp=Z,2.0nm,0.5s,baz=148,slow=4.3,SNR=5.4						
ARU	Arti	120.31	30	PKP	PKPdf	00 45 59.7	-0.2
	comp=Z,2.4nm,0.3s,baz=129,slow=3.5,SNR=17						
AKTO	Aktyubinsk	122.72	36	PKP	PKiKP	00 46 05.0	0.0
	comp=Z,5.6nm,0.6s,baz=313,slow=1.9,SNR=29						
PETK	Petropavlovsk-	122.93	327	PKP	PKiKP	00 46 05.3	-0.1
	comp=Z,1.0nm,0.3s,baz=164,slow=3.3,SNR=6.6						
ABKAR	Akbulak array	124.35	37		PKiKP	00 46 08.2	0.0
STKA	Stephens Creek	127.20	215	PKP	PKPdf	00 46 13.9	0.0
	comp=Z,15nm,0.6s,baz=120,slow=3.5,SNR=37						
STKA	Stephens Creek	127.20	215		PKPdf	00 46 13.4	-0.5
GEYT	Alibeck	127.23	51	PKP	PKPdf	00 46 13.8	0.0
	comp=Z,1.6nm,0.3s,baz=238,slow=32,SNR=3.5						
ZALV	Zalesovo Beam	133.03	19	PKhKP	PKPpre	00 46 18.2	
	comp=Z,1.8nm,0.6s,baz=301,slow=1.2,SNR=8.2						
ZALV				PKP	PKPdf	00 46 24.5	+0.2
	comp=Z,23nm,0.6s,baz=281,slow=2.5,SNR=95						
ZALV				SKPbc	SKPbc	00 48 55.7	-0.2
	comp=Z,3.0nm,0.7s,baz=332,slow=4.9,SNR=9.4						
KURK	Kurchatov	133.21	26	PKPdf	PKPdf	00 46 23.9	-0.8
BTK	Batken	135.50	43		PKPdf	00 46 29.5	+0.1
EKS2	Erkin-Say	135.99	38	P	PKiKP	00 46 31.9	-0.2
	SNR=7.2						
USP	Ospenovka	136.06	37	P	PKiKP	00 46 31.3	-0.8
	SNR=5.3						
AML	Almayashu	136.24	39	P	PKiKP	00 46 32.6	-0.4
	SNR=7.4						
UCH	Uchtor	136.68	38	P	PKiKP	00 46 33.5	-0.5
	SNR=7.9						
MAKZ	Makanchi	137.60	28		PKPpre	00 46 25.0	
MAKZ				PKPdf	PKPdf	00 46 32.8	-0.2
MKAR	Makanchi Array	137.75	27	PKhKP	PKPpre	00 46 22.7	
	comp=Z,0.5nm,0.5s,baz=340,slow=2.9,SNR=2.6						
MKAR				PKP	PKPdf	00 46 33.0	-0.3
	comp=Z,3.9nm,0.6s,baz=320,slow=2.1,SNR=24						
MKAR	Makanchi Array	137.75	27	PKPpre	PKPpre	00 46 23.4	
MKAR					PKPdf	00 46 33.2	-0.1
ASAR	Alice Springs	137.84	215	PKhKP	PKPpre	00 46 22.7	
	comp=Z,1.7nm,0.5s,baz=138,slow=2.6,SNR=13						
ASAR				PKP	PKPdf	00 46 33.5	-0.7
	comp=Z,4.6nm,0.6s,baz=143,slow=2.5,SNR=21						
ASAR				SKPbc	SKPbc	00 49 09.8	-1.9
	comp=Z,2.2nm,0.7s,baz=134,slow=3.3,SNR=9.7						
KSH	Kashi	139.15	40	PKP	PKPpre	00 46 27.8	
WB2	Warramunga Arr	140.44	219	PKPpre	PKPpre	00 46 32.5	
WRA	Warramunga Arr	140.44	219	PKhKP	PKPpre	00 46 32.5	
	comp=Z,2.3nm,0.3s,baz=149,slow=2.7,SNR=65						
WRA				PKP	PKPdf	00 46 38.7	-0.3
	comp=Z,14nm,0.4s,baz=134,slow=2.1,SNR=31						
WRA				SKP		00 49 17.2	
	comp=Z,6.2nm,0.7s,baz=142,slow=2.4,SNR=16						
WRAB	Tennant Creek	140.44	219		PKPpre	00 46 32.6	
WB0	Warramunga Arr	140.54	219		PKPpre	00 46 32.3	
USRK	Ussuriysk Ar.	141.53	333	PKhKP	PKPpre	00 46 36.2	
	comp=Z,4.1nm,0.5s,baz=36,slow=4.3,SNR=10						
SONM	Songino Array	143.26	3	PKP	PKPbc	00 46 42.2	+0.2
	comp=Z,37nm,0.7s,baz=327,slow=3.2,SNR=224						
SONM				SKPbc	SKPbc	00 49 25.3	+0.3
	comp=Z,1.7nm,0.5s,baz=315,slow=1.5,SNR=6.7						
ULN	Ulaanbaatar	143.26	2		PKPbc	00 46 42.3	+0.3
MAJO	Matsushiro	143.50	319		PKPab	00 46 42.3	-0.4
MAT	Matsushiro	143.50	319	PKP	PKPab	00 46 42.3	-0.5
MJAR	Matsushiro Arr	143.50	319	PKP	PKPab	00 46 41.6	-1.1
	comp=Z,55nm,1.0s,baz=45,slow=2.8,SNR=49						
MJAR	Matsushiro Arr	143.50	319	PKPdf	PKPab	00 46 42.0	-0.7
INU	Inuyama	144.99	318	PKPdf	PKPdf	00 46 46.3	-0.2
PSA00	Pilbara Seismi	145.91	198		PKPbc	00 46 50.0	-0.5
PSA00	Pilbara Seismi	145.91	198	PKPdf	PKPdf	00 46 48.2	-0.3
KNRA	Kununurra	147.09	217		PKPbc	00 46 53.5	-0.1
MTN	Manton Dam	147.74	223	PKPdf	PKPdf	00 46 51.8	+0.1
MTN				PKPbc	PKPbc	00 46 55.3	-0.2
JMN	Monobe	148.03	319		PKPbc	00 46 55.9	+0.2
KSRS	Korea Array	148.75	330	PKP	PKPdf	00 46 53.1	+0.5
	comp=Z,25nm,0.7s,baz=55,slow=1.7,SNR=8.8						
KSRS				PKPbc	PKPbc	00 46 57.5	+0.2
	comp=Z,26nm,0.7s,baz=18,slow=2.1,SNR=32						
KSAR	Wonju Array Be	148.78	330	PKPdf	PKPdf	00 46 53.0	+0.3
KSAR				PKPbc	PKPbc	00 46 57.1	-0.2
KSAR				PKPab	PKPab	00 47 03.4	-0.3
HYB	Hyderabad	149.72	74	i PKP	PKPdf	00 46 55.0	+0.2
PYUN	Piuthan	150.20	52	eP	PKPdf	00 46 55.6	+0.1
	comp=Z,158nm,0.5s						
GTA	Gaotai	150.57	15	⇓PKPbc	PKPdf	00 46 56.3	+0.7
GTA				pPKP	pPKPbc	00 49 20.5	-1.2
GTA				sPKP		00 50 16.9	
DANN	Dangsing	150.66	50	eP	PKPdf	00 46 56.7	+0.4
	comp=Z,93nm,0.6s						
KOLN	Koldanda	150.84	52	eP	PKPdf	00 46 56.4	-0.1
	comp=Z,23nm,0.6s						
GKN	Gorkha	151.51	50	eP	PKPdf	00 46 57.7	+0.3
	comp=Z,72nm,0.5s						
DMN	Daman	152.07	50	eP	PKPdf	00 46 58.4	0.0
	comp=Z,13nm,0.4s						
KKN	Kakani	152.10	50	eP	PKPdf	00 46 58.4	0.0
	comp=Z,4.2nm,0.2s						
PKIN	Phulchoki	152.30	50	eP	PKPdf	00 46 58.5	-0.2
	comp=Z,5.4nm,0.4s						
PKI	Pulchoki	152.31	50	eP	PKPdf	00 46 58.7	-0.1
	comp=Z,2.5nm,0.3s						
GUN	Gumba	152.49	49	eP	PKPdf	00 46 59.3	+0.2
	comp=Z,6.5nm,0.4s						
JIRN	Jiri	152.85	49	eP	PKPdf	00 46 59.0	-0.7
	comp=Z,4.7nm,0.4s						
RAMN	Ramite	153.54	50	eP	PKPdf	00 47 00.7	+0.2
	comp=Z,28nm,0.5s						
ODAN	Odare	154.18	49	eP	PKPdf	00 47 00.9	-0.5
	comp=Z,23nm,0.7s						
XAN	Xi'an	157.12	0	PKP	PKPdf	00 47 04.6	-0.2
CMAR	Chiang Mai Arr	167.70	52	PKP	PKPdf	00 47 15.5	+0.1
	comp=Z,2.0nm,0.7s,baz=283,slow=1.8,SNR=14						
CMAR				PKPab	PKPab	00 48 25.6	-0.7
	comp=Z,1.0nm,0.3s,baz=302,slow=5.2,SNR=6.0						

INET 25 00:35:57.0, 12°.36N×86°.49W, h17^{km}, MW3.5, Nicaragua

*NNC **25** 00:36:20.1±2.0, 42°.04N×67°.79E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=13.7km s-min=7.5km az=58.0*

SOME 25 00:36:17.6, 41°.90N×67°.75E, h0^{km}, 3C-2D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	Iuzhnay	1.72	81	eP	Pg	00 36 51.7	+1.2
	190nm,0.2s						
IUG				eS	Sg	00 37 16.2	+3.4
	101nm,0.3s						
BRLS	Borolday	1.91	53	eP	Pn	00 36 50.0	-1.5
	10nm,0.2s						
BRLS				eS	Sn	00 37 13.6	-2.7
	72nm,0.2s						
KK09	Karatay Array	2.37	58	⇑Pg	Pb	00 37 01.7	+0.5
	5.5nm,0.8s,baz=245,slow=16						
KK09				⇑Lg	Lg	00 37 32.6	
	36nm,0.8s,baz=242,slow=27						
DZA	Taraz	2.83	68	eP	Pg	00 37 12.1	+0.2
	15nm,0.1s						
DZA				eS	Sg	00 37 50.9	+2.3
	50nm,0.0s						
MRKS	Merke	4.15	76	eP	Pg	00 37 35.8	-1.3
	0.8nm,0.2s						
MRKS				eS	Sg	00 38 31.3	+0.4
	9.5nm,0.5s						
AAK	Ala-Archa	5.06	79	Pg	Pg	00 37 51.6	-2.9
	4.3nm,1.2s						
AAK				⇑Lg	Lg	00 38 59.9	
	2.5nm,0.6s						
BTLS	Baital	5.55	53	eP	Pg	00 38 02.9	-1.1
	1.2nm,0.2s						
BTLS				eS	Sg	00 39 18.1	+2.2
	2.4nm,0.6s						
TKM2	Tokmak 2	5.90	77	⇓Pg	Pb	00 38 05.4	+4.0
	3.7nm,1.4s						
TKM2				⇓Lg	Lg	00 39 26.0	
	3.3nm,0.7s						
DGS	Degeres	6.07	75	eP	Pg	00 38 09.9	-4.0
	0.6nm,0.3s						
DGS				eS	Sg	00 39 30.5	-2.1
	2.1nm,0.4s						
DGS	Degeres	6.07	75	Pg	Pg	00 38 09.9	-4.0
	0.6nm,0.3s						
DGS				Lg	Lg	00 39 30.5	
	2.1nm,0.4s						
KST	Kastek	6.18	77	eP	Pg	00 38 11.2	-4.8
	1.4nm,0.3s						
KST				eS	Sg	00 39 33.0	-3.1
	2.9nm,0.3s						
KST	Kastek	6.18	77	Pg	Pg	00 38 11.2	-4.8
	1.4nm,0.3s						
KST				Lg	Lg	00 39 33.0	
	2.9nm,0.3s						
KUU	Kurty	6.62	70	eP	Pg	00 38 19.3	-5.0
	0.9nm,0.4s						
KUU				eS	Sg	00 39 46.5	-3.5
	5.5nm,0.3s						
KUU	Kurty	6.62	70	Pg	Pg	00 38 19.3	-5.0
	0.9nm,0.4s						
KUU				Lg	Lg	00 39 46.5	
	5.5nm,0.3s						

*PRU **25** 00:41:26.8±0.0, 51°.48N×16°.09E, h0^{km}*
*BGR **25** 00:41:26.7±0.8, 51°.49N×16°.14E, h1^{km}, ML3.0/6, Error ellipse: s-maj=11.1km s-min=4.4km az=24.0*
*VIE **25** 00:41:26.9±0.6, 51°.42N×16°.14E, h0^{km}, mb2.6/5, ml2.8/4, Error ellipse: s-maj=5.2km s-min=3.5km az=31.0 71 km WNW of Wroclaw Suspected Mining induced.*
*IDC **25** 00:41:27.9±1.0, 51°.45N×16°.03E, h0^{km}, mb1 3.4/5, mb1mx3.2/53, mbtmp3.2/5, ML2.6/5, Error ellipse: s-maj=15.4km s-min=8.3km az=120.0*
*DNK **25** 00:41:28.2±1.5, 51°.42N×16°.52E, h49^{km}±23^{km}, ML2.0*

ISC 25 00:41:24.9±0.7, **51°.57N**±0°.03×**16°.15E**±0°.03, **h0^{km}, n44,** σ**1ˢ.36**/78, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.73	173	ePg	Pg	00 41 39.1	+0.3
KSP				eSg	Sg	00 41 47.8	-0.6
KSP	Ksiaz	0.73	173	ePg	Pg	00 41 39.3	+0.4
CHVC	Chvalec	0.98	183	ePG	Pg	00 41 44.1	+0.4
CHVC				eSG	Sg	00 41 56.2	-0.2
OSTC	Ostas	1.01	177	ePG	Pg	00 41 44.7	+0.4
OSTC				eSG	Sg	00 41 57.0	-0.4
	comp=Z,49nm,0.4s						
UPC	Upice	1.07	185	ePG	Pg	00 41 45.5	+0.2
UPC				eSG	Sg	00 41 58.6	-0.5
	comp=Z,108nm,0.4s						
DPC	Dobruska-Polom	1.23	175	ePG	Pg	00 41 48.1	-0.2
DPC				eSG	Sg	00 42 02.8	-1.4
	comp=Z,33nm,0.5s						
DPC	Dobruska-Polom	1.23	175	ePg	Pg	00 41 48.1	-0.2
DPC				eSg	Sg	00 42 02.6	-1.5
PVCC	Panska Ves	1.44	224	ePG	Pg	00 41 52.4	-0.1
PVCC				eSG	Sb	00 42 11.6	+0.2
	comp=Z,177nm,0.4s						
KRLC	Kraliky	1.55	165	ePG	Pn	00 41 53.6	-0.1
KRLC				eSG	Sn	00 42 13.6	-1.0
	comp=Z,31nm,0.4s						
BRG	Berggiesshubel	1.55	244	ePn	Pn	00 41 53.5	-0.2
BRG				eSg	Sg	00 42 15.0	+0.4
BRG	Berggiesshubel	1.55	244	Pg	Pg	00 41 55.0	+0.4
BRG				Sg	Sg	00 42 15.3	+0.7
BRG				Amp		00 42 16.6	
	comp=Z,78nm,0.4s						
PRA	Prague	1.85	217	ePG	Pn	00 41 57.9	0.0
FBE	Freiberg	1.87	251	eSg	Sg	00 42 24.9	0.0
PRU	Pruhonice	1.88	213	ePG	Pb	00 41 59.8	-0.3
PRU				eSG	Sb	00 42 23.5	-0.6
	comp=Z,38nm,0.4s						
CLL	Collm	1.98	264	ePn	Pn	00 41 59.0	-0.7
CLL				ePg	Pb	00 42 02.0	+0.2
CLL				e		00 42 06.0	
CLL				eSg	Sg	00 42 28.0	-0.6
	comp=Z,64nm,1.3s						
CLL	Collm	1.98	264	ePn	Pn	00 41 59.1	-0.6
CLL				eSg	Sg	00 42 29.4	+0.8
MORC	Moravsky Berou	2.00	153	ePN	Pn	00 41 59.6	-0.4
MORC				eSG	Sn	00 42 23.6	-2.1
MORC	Moravsky Berou	2.00	153	ePn	Pn	00 41 59.8	-0.2
OKC	Ostrava-Krasne	2.15	143	eSG	Sb	00 42 31.7	-0.1
	comp=Z,45nm,0.8s						
VRAC	Vranov	2.28	173	Pn	Pn	00 42 04.1	+0.3
	comp=Z,1.0nm,0.3s,baz=336,slow=16,SNR=2.6						
VRAC				Pg	Pg	00 42 08.7	+0.2
	comp=Z,3.1nm,0.3s,baz=32,slow=18,SNR=7.5						
VRAC				Lg	Lg	00 42 36.0	
	comp=Z,3.5nm,0.3s,baz=272,slow=23,SNR=6.7						
VRAC	Vranov	2.28	173	ePN	Pn	00 42 04.1	+0.3
VRAC				eSG	Sb	00 42 35.2	-0.4
KRUC	Moravsky	2.52	176	ePN	Pn	00 42 07.7	+0.7
KRUC				eSG	Sg	00 42 44.5	-1.1
TANN	Tannenbergstha	2.60	245	ePn	Pn	00 42 08.9	+0.7
OJC	Ojcow	2.68	119	ePg	Pg	00 42 17.0	+0.8
OJC				eSg	Sg	00 42 51.9	+1.0
NKC	Novy Kostel	2.70	242	ePN	Pn	00 42 10.2	+0.7
NKC				eSG	Sg	00 42 51.5	+0.1
	comp=Z,85nm,0.8s						
KHC	Kasperske Hory	2.94	215	ePN	Pn	00 42 13.3	+0.4
KHC				ePG	Pb	00 42 18.7	+0.5
KHC				eSN	Sn	00 42 47.0	-1.9
KHC				eSG	Sg	00 42 58.0	-1.4
	comp=Z,15nm,0.6s						
CKRC	Cesky Krumlov	2.99	204	ePG	Pb	00 42 20.2	+1.1
CKRC				eSG	Sb	00 42 58.1	+1.9
	comp=Z,12nm,0.4s						
GEC2	GERESS Array S	3.15	211	ePn	Pn	00 42 16.7	+0.9
GERES	GERESS Array B	3.15	211	Pn	Pn	00 42 16.7	+0.9
	comp=Z,0.9nm,0.3s,baz=31,slow=12,SNR=18						
GERES				Pg	Pb	00 42 23.1	+1.4
	comp=Z,2.8nm,0.3s,baz=28,slow=17,SNR=20						
GERES				Lg	Lg	00 43 04.8	
	comp=Z,4.1nm,0.3s,baz=30,slow=30,SNR=9.1						
WET	Wettzell	3.21	222	ePn	Pn	00 42 16.6	+0.1
MODS	Modra-Piesok	3.28	167	ePG	Pg	00 42 26.0	-1.7
MODS				eSG	Sg	00 43 09.6	-0.6
NIE	Niedzica	3.42	127	ePg	Pg	00 42 30.9	+0.6
NIE				eSg	Sg	00 43 16.0	+1.4
ZST	Bratislava	3.43	169	eSG	Sg	00 43 16.3	+1.2
BSD	Bornholm Skovb	3.63	349	i S	Sn	00 43 06.1	+0.4
BSD				IAML		00 43 08.3	
	comp=Z,2.5nm,0.3s						
CONA	Conrad Observa	3.65	183	ePn	Pn	00 42 23.3	+0.7
	comp=Z,1.7nm,0.4s						
CONA				eSn	Sn	00 43 09.0	+2.6
	comp=Z,6.1nm,0.4s						
MOA	Molln	3.92	199	ePn	Pn	00 42 23.9	-2.4
	comp=Z,0.3nm,0.2s						
MOA				Sg	Sg	00 43 31.4	+0.8
	comp=Z,15nm,0.6s						
ARSA	Arzberg	4.34	186	ePn	Pn	00 42 31.1	-1.0
	comp=Z,1.2nm,0.4s						
ARSA				Sg	Sg	00 43 50.1	+5.8
	comp=Z,9.9nm,0.5s						
BLEU	Blekinge	4.75	358	i P	Pn	00 42 39.3	+1.7
BLEU				i S	Sn	00 43 31.2	-2.1
BLEU				IAML		00 43 33.7	
	comp=Z,0.3nm,0.4s						
KBA	Koelnbreinsper	4.85	203	ePn	Pn	00 42 39.9	+0.6
	comp=Z,1.6nm,0.4s						
BJUU	Bjuv	4.88	339	i P	Pn	00 42 42.8	+3.4
BJUU				i S	Sn	00 43 35.0	-1.5
DEL	Delary	5.09	346	i P	Pn	00 42 43.4	+1.1
DEL				i S	Sn	00 43 40.7	-1.1
DEL				IAML		00 43 43.0	
	comp=Z,1.8nm,0.4s						
DAVOX	Davos/Dischmat	6.31	223	Pn	Pn	00 42 58.9	-0.4
	comp=Z,0.1nm,0.3s,baz=52,slow=18,SNR=2.2						
DAVOX				Lg	Lg	00 44 43.9	
	comp=Z,0.2nm,0.3s,baz=208,slow=21,SNR=1.6						
AKASG	Malin Array Be	8.27	91	Pn	Pn	00 43 27.1	+1.1
	comp=Z,0.6nm,0.3s,baz=277,slow=12,SNR=5.0						
FINES	FINESS Array B	11.30	25	Pn	Pn	00 44 07.9	+0.5
	comp=Z,0.1nm,0.3s,baz=213,slow=9.9,SNR=1.5						
FINES				Sn	Sn	00 46 09.3	-5.0
	comp=Z,0.2nm,0.3s,baz=220,slow=22,SNR=4.1						

*IDC **25** 00:43:50.5±0.6, 36°.95N×98°.31W, h0^{km}, mb4.1/8, mb1 4.2/15, mb1mx3.9/67, mbtmp4.0/15, ML3.8/7, MS5.1/1, Ms1 5.1/1, ms1mx4.3/45, Error ellipse: s-maj=10.6km s-min=9.2km az=152.0*
*TUL **25** 00:43:50.8±1.1, 36°.84N±0°.02×98°.27W±0°.04, h5^{km}±4^{km}, ML3.7, mb4.1/4(NEIC), mb_Lg4.0/106(NEIC), Error ellipse: s-maj=4.6km s-min=3.3km az=73.0*
*NEIC **25** 00:43:51.0±1.0, 36°.83N±0°.02×98°.25W±0°.04, h5^{km}±1^{km}, Error ellipse: s-maj=5.6km s-min=3.8km az=262.0*
*ANF **25** 00:43:52.5±1.0, 36°.83N×98°.24W, h17^{km}±7^{km}, ML4.9/16, Error ellipse: s-maj=2.4km s-min=2.2km az=38.0*

ISC 25 00:43:51.1±0.8, **36°.83N**±0°.02×**98°.25W**±0°.02, **h10^{km}**±5^{km}, **n224,** σ**0ˢ.83**/246, **mb4.2**/8, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK032	Salt Plains WL	0.04	137	Pg	Pg	00 43 52.6	-0.4
OK032				Sg	Sg	00 43 53.8	-0.5
KAN14	Manchester OK	0.26	61		Pg	00 43 56.6	+0.3
KAN14				Sg	Sg	00 44 00.6	+0.8
GC02	Grant County #	0.31	87	Pg	Pg	00 43 57.5	+0.2
GC02				Sg	Sg	00 44 02.4	+0.9
KAN10	Anthony SW Sta	0.31	22	Pg	Pg	00 43 57.5	+0.1
CROK	Carrier	0.39	147	Pg	Pg	00 43 59.0	+0.2
CROK				Sg	Sg	00 44 04.7	+0.8
KAN05	Bluff City Nor	0.41	47		Pg	00 43 59.2	+0.1
KAN05				Sg	Sg	00 44 05.3	+0.9
KAN16	Harper SW Stat	0.42	20	Pg	Pg	00 43 59.4	+0.1
KAN16				Sg	Sg	00 44 05.4	+0.6
KAN17	Caldwell West	0.44	61	Pg	Pg	00 43 59.9	+0.2
KAN17				Sg	Sg	00 44 06.2	+0.7
KAN08	Anthony NE Sta	0.45	29		Pg	00 43 59.9	0.0
KAN08				Sg	Sg	00 44 06.5	+0.6
KAN01	Argonia South	0.50	51	Pg	Pg	00 44 01.1	+0.1
KAN01				Sg	Sg	00 44 08.1	+0.5
KAN12	Harper NE Stat	0.50	23		Pg	00 44 00.9	0.0
KAN12				Sg	Sg	00 44 08.2	+0.6
KAN06	Argonia West S	0.52	37		Pg	00 44 01.3	+0.1
KAN06				Sg	Sg	00 44 08.2	+0.2
KAN09	Caldwell North	0.58	59		Pg	00 44 02.6	+0.1
KAN09				Sg	Sg	00 44 10.2	0.0
KAN13	South Haven SW	0.64	74	Pg	Pg	00 44 03.4	-0.1
U32A	Winter Ranch,	0.76	234		Pg	00 44 05.0	-0.7
U32A	Winter Ranch,	0.76	234	P	Pg	00 44 05.2	-0.5
	baz=52,SNR=289						
U32A				S	Sg	00 44 15.6	0.0
	baz=52						
BLOK	Blackwell	0.83	95	Pg	Pg	00 44 07.0	-0.1
OK029	Liberty Lake	1.22	148		Pg	00 44 13.5	-1.0
BCOK	Bluff Creek, N	1.28	156		Pn	00 44 14.7	-0.5
OK033	Mehan	1.32	126	Pn	Pn	00 44 15.4	-0.2
T35A	Sooner Cattle	1.39	86	Pn	Pn	00 44 16.9	+0.2
T35A				IAmb_Lg		00 44 39.3	
	comp=Z,707nm,0.8s						
T35B	Sooner Cattle	1.39	86	P	Pn	00 44 17.0	+0.4
	baz=267,SNR=385						
T35B				S	Sb	00 44 35.7	+0.6
	baz=267						
QUOK	Quay	1.40	118		Pn	00 44 17.1	+0.3
OK031	S. Brethren Rd	1.44	127		Pn	00 44 17.5	+0.2
OK025	Westminster Rd	1.45	149		Pn	00 44 17.7	+0.3
OK025				IAmb_Lg		00 44 39.7	
	comp=Z,1µm,0.7s						
OK005	Luther M Schoo	1.45	144	Pn	Pn	00 44 18.2	+0.8
OK034	N. Norfolk Rd.	1.48	123	Pn	Pn	00 44 18.3	+0.4
OK030	Cody Creek RV	1.49	127	Pn	Pn	00 44 18.5	+0.5
OKCFA	Oklahoma City	1.56	155		Pn	00 44 19.2	+0.3
OKCFA				IAmb_Lg		00 44 43.1	
	comp=Z,1µm,0.7s						
OKCFA	Oklahoma City	1.56	155	P	Pn	00 44 19.4	+0.5
	baz=335,SNR=31						
OKCFA				S	Sb	00 44 40.5	+0.7
	baz=335						
OKCSW	OKLAHOMA CITY	1.57	155		Pn	00 44 19.5	+0.4
R32A	Long Quarter,	1.63	347		Pn	00 44 20.7	+0.8
R32A	Long Quarter,	1.63	347	P	Pn	00 44 20.8	+0.8

	baz=167,SNR=296						
R32A				S	Sb	00 44 42.5	+0.6
	baz=167						
FNO	Franklin	1.72	156	Pn	Pn	00 44 21.7	+0.6
W35A	Tecumseh	2.01	146	Pn	Pn	00 44 25.8	+0.6
W35A				IAmb_Lg		00 44 57.9	
	comp=Z,782nm,0.8s						
WMOK	Wichita Mounta	2.14	192	P	Pn	00 44 27.2	+0.3
	baz=11						
WMOK				S	Sb	00 44 56.0	-0.5
	baz=11						
WMOK	Wichita Mounta	2.14	192	Pn	Pn	00 44 27.2	+0.3
WMOK	Wichita Mounta	2.14	192	P	Pn	00 44 27.4	+0.5
	baz=11,SNR=237						
TUL1	Leonard	2.18	114	P	Pn	00 44 28.0	+0.5
	baz=296,SNR=106						
TUL1				S	Sb	00 44 58.3	+0.4
	baz=296						
TUL1	Leonard	2.18	114		Pn	00 44 28.1	+0.5
TUL1	Leonard	2.18	114	P	Pn	00 44 28.1	+0.5
	baz=296,SNR=66						
TUL1				S	Sb	00 44 59.1	+1.2
	baz=296						
CBKS	Cedar Bluff	2.30	330	P	Pn	00 44 30.0	+0.8
	baz=149						
CBKS				S	Sn	00 44 59.4	+1.7
	baz=149						
CBKS	Cedar Bluff	2.30	330	Pn	Pn	00 44 29.6	+0.3
CBKS				IAmb_Lg		00 45 06.4	
	comp=Z,558nm,0.8s						
CBKS	Cedar Bluff	2.30	330	P	Pn	00 44 30.4	+1.1
	baz=149,SNR=87						
CBKS				S	Sn	00 44 59.7	+2.0
	baz=149						
KSU1	Kansas State U	2.61	29	P	Pn	00 44 34.0	+0.6
	baz=211						
KSU1	Kansas State U	2.61	29	Pn	Pn	00 44 34.1	+0.8
KSU1				IAmb_Lg		00 45 14.6	
	comp=Z,627nm,1.1s						
KSU1	Kansas State U	2.61	29	P	Pn	00 44 34.0	+0.6
	baz=211,SNR=15						
LOOK	Love County	2.96	163		Pn	00 44 39.4	+1.1
LOOK				IAmb_Lg		00 45 31.3	
	comp=Z,353nm,0.8s						
U38A	Gravette	3.13	96		Pn	00 44 41.2	+0.6
U38A				IAmb_Lg		00 45 38.3	
	comp=Z,588nm,1.1s						
U38A	Gravette	3.13	96	P	Pn	00 44 41.6	+1.1
	baz=278,SNR=91						
X37A	Clayton	3.24	133		Pn	00 44 42.9	+0.8
X37A				IAmb_Lg		00 45 41.6	
	comp=Z,376nm,0.8s						
X37A	Clayton	3.24	133	P	Pn	00 44 43.1	+1.0
	baz=315,SNR=80						
AMTX	Amarillo	3.40	236	P	Pn	00 44 45.3	+0.9
	baz=54						
AMTX				Sb	Sb	00 45 35.3	+2.3
	baz=54						
AMTX	Amarillo	3.40	236	Pn	Pn	00 44 45.6	+1.2
AMTX				IAmb_Lg		00 45 39.3	
	comp=Z,547nm,0.9s						
AMTX	Amarillo	3.40	236	P	Pn	00 44 46.0	+1.7
	baz=54,SNR=29						
HHAR	Hobbs	3.51	98	Pn	Pn	00 44 46.6	+0.8
HHAR				IAmb_Lg		00 45 50.1	
	comp=Z,371nm,0.9s						
HHAR	Hobbs	3.51	98	P	Pn	00 44 46.8	+1.0
	baz=280						
Z35A	Perchaven, San	3.59	167	Pn	Pn	00 44 47.3	+0.5
Z35A				IAmb_Lg		00 45 52.3	
	comp=Z,333nm,1.1s						
Z35A	Perchaven, San	3.59	167	P	Pn	00 44 47.5	+0.7
	baz=347,SNR=18						
Z35A				S	Sn	00 45 31.2	+1.9
	baz=347						
N33B	J Bar K, Exete	3.95	9	P	Pn	00 44 51.9	0.0
	baz=190,SNR=15						
N33B				S	Sn	00 45 37.9	-0.3
	baz=190						
N33A	J Bar K, Exete	3.95	9	Pn	Pn	00 44 51.6	-0.2
W39A	Magazine	3.97	113	P	Pn	00 44 53.1	+1.0
	baz=296,SNR=23						
W39A				S	Sn	00 45 39.3	+0.6
	baz=296						
W39A	Magazine	3.97	113	Pn	Pn	00 44 53.0	+0.9
W39A				IAmb_Lg		00 46 06.4	
	comp=Z,366nm,0.7s						
W39A	Magazine	3.97	113	P	Pn	00 44 53.4	+1.3
	baz=296,SNR=15						
S39A	Bolivar	4.02	76	Pn	Pn	00 44 53.3	+0.5
S39A				IAmb_Lg		00 46 04.8	
	comp=Z,228nm,0.8s						
S39A	Bolivar	4.02	76	P	Pn	00 44 53.5	+0.7
	baz=259,SNR=63						
KSCO	Kaye Shedlock’	4.09	303	P	Pn	00 44 55.0	+1.1
	baz=121						
KSCO				S	Sn	00 45 41.7	-0.3
	baz=121						
KSCO	Kaye Shedlock’	4.09	303	Pn	Pn	00 44 54.3	+0.5
KSCO				IAmb_Lg		00 46 02.5	
	comp=Z,407nm,0.7s						
KSCO	Kaye Shedlock’	4.09	303	P	Pn	00 44 55.0	+1.1
	baz=121,SNR=17						
ABTX	Abilene, Hawle	4.36	196	P	Pn	00 44 57.1	-0.3
	baz=15,SNR=14						
ABTX				S	Sn	00 45 48.8	+0.5
	baz=15						
ABTX	Abilene, Hawle	4.36	196		Pn	00 44 57.0	-0.4
ABTX				IAmb_Lg		00 46 11.6	
	comp=Z,360nm,1.1s						
ABTX	Abilene, Hawle	4.36	196	P	Pn	00 44 58.0	+0.5
	baz=15,SNR=5.5						
U40A	Yellville	4.36	95	P	Pn	00 44 58.0	+0.5
	baz=278,SNR=35						
U40A	Yellville	4.36	95	Pn	Pn	00 44 58.0	+0.5
U40A				IAmb_Lg		00 46 11.1	
	comp=Z,299nm,0.9s						
U40A	Yellville	4.36	95	P	Pn	00 44 58.2	+0.7
	baz=278,SNR=36						
U40A				P	Pn	00 44 58.2	+0.7
	baz=278,SNR=36						
MIAR	Mount Ida	4.43	120	P	Pn	00 44 59.1	+0.6
	baz=302						
MIAR	Mount Ida	4.43	120	Pn	Pn	00 44 59.5	+1.0
MIAR				IAmb_Lg		00 46 17.5	
	comp=Z,260nm,0.7s						
MIAR	Mount Ida	4.43	120	P	Pn	00 44 59.2	+0.8
	baz=302,SNR=36						
Z38A	Mt. Pleasant	4.46	142	Pn	Pn	00 44 59.2	+0.4
Z38A				IAmb_Lg		00 46 18.2	
	comp=Z,426nm,0.7s						
Z38A	Mt. Pleasant	4.46	142	P	Pn	00 44 59.7	+0.9
	baz=324,SNR=6.4						
N35A	Tabor	4.50	26	Pn	Pn	00 45 00.2	+0.8
BGNE	Belgrade	4.57	1	P	Pn	00 45 01.0	+0.6
	baz=181,SNR=18						
BGNE				S	Sn	00 45 53.4	-0.1
	baz=181						
BGNE	Belgrade	4.57	1	Pn	Pn	00 45 00.7	+0.3
BGNE	Belgrade	4.57	1	P	Pn	00 45 01.1	+0.8
	baz=181,SNR=43						
P38A	Dawn	4.64	52	Pn	Pn	00 45 02.3	+1.0
P38A				IAmb_Lg		00 46 27.4	
	comp=Z,275nm,0.8s						
P38A	Dawn	4.64	52	P	Pn	00 45 02.1	+0.8
	baz=235,SNR=24						
MSTX	Muleshoe	4.67	234	P	Pn	00 45 02.5	+0.6
	baz=51,SNR=14						
MSTX				S	Sn	00 45 56.6	+0.3
	baz=51						
MSTX	Muleshoe	4.67	234	Pn	Pn	00 45 02.5	+0.6
MSTX	Muleshoe	4.67	234	P	Pn	00 45 02.6	+0.7
	baz=51,SNR=23						
MGMO	Mountain Grove	4.79	84	Pn	Pn	00 45 04.4	+1.0
WHTX	Lake Whitney,	4.87	172	P	Pn	00 45 05.1	+0.5
	baz=352,SNR=28						
WHTX				Sb	Sb	00 46 20.7	+5.4
	baz=352						
WHTX	Lake Whitney,	4.87	172		Pn	00 45 04.9	+0.4
WHTX	Lake Whitney,	4.87	172	P	Pn	00 45 04.9	+0.4
	baz=352,SNR=39						
T25A	Trinidad	4.95	275	P	Pn	00 45 06.1	+0.4
	baz=92,SNR=8.8						
T25A	Trinidad	4.95	275	Pn	Pn	00 45 06.1	+0.4
T25A				IAmb_Lg		00 46 30.5	
	comp=Z,324nm,0.7s						
R40A	Maddies Statio	4.97	71	Pn	Pn	00 45 06.0	+0.2
R40A	Maddies Statio	4.97	71	P	Pn	00 45 06.2	+0.5
	baz=255,SNR=63						
X40A	Basin Creek Fa	4.99	116	P	Pn	00 45 06.9	+0.7
	baz=300,SNR=48						
X40A				S	Sn	00 46 04.6	+0.7
	baz=300						
X40A	Basin Creek Fa	4.99	116	Pn	Pn	00 45 06.8	+0.7
X40A				IAmb_Lg		00 46 35.2	
	comp=Z,185nm,0.8s						
X40A	Basin Creek Fa	4.99	116	P	Pn	00 45 06.8	+0.7
	baz=300,SNR=65						
X40A				P	Pn	00 45 06.8	+0.7
	baz=300,SNR=65						
FCAR	Ozark Folk Cen	5.03	99		Pn	00 45 06.9	+0.3
WHAR	Wooly Hollow	5.07	106	Pn	Pn	00 45 07.6	+0.5
WHAR				IAmb_Lg		00 46 38.1	
	comp=Z,222nm,0.8s						
W41B	Gary Mavity, V	5.14	107	P	Pn	00 45 08.7	+0.5
	baz=291,SNR=13						
W41B				S	Sn	00 46 07.5	0.0
	baz=291						
W41B	Gary Mavity, V	5.14	107	P	Pn	00 45 08.6	+0.5
	baz=291,SNR=17						
237A	Washetta, Mont	5.22	157		Pn	00 45 08.8	-0.5
237A				IAmb_Lg		00 46 40.7	
	comp=Z,316nm,1.0s						
237A	Washetta, Mont	5.22	157	P	Pn	00 45 09.1	-0.2
	baz=338,SNR=30						
WLAR	White Oak Lake	5.24	125	Pn	Pn	00 45 10.1	+0.5
WLAR				IAmb_Lg		00 46 47.1	
	comp=Z,189nm,0.8s						
L34A	Svendsen Farm,	5.33	15	Pn	Pn	00 45 10.6	-0.2
L34A				IAmb_Lg		00 46 46.6	
	comp=Z,366nm,1.0s						
N38A	Joes South For	5.56	43	Pn	Pn	00 45 14.1	+0.2
N38A	Joes South For	5.56	43	P	Pn	00 45 14.5	+0.6
	baz=226,SNR=8.9						
P40A	Paris	5.57	59	Pn	Pn	00 45 14.4	+0.3
CCM	Cathedral Cave	5.70	76	P	Pn	00 45 16.0	+0.1
	baz=260						
CCM	Cathedral Cave	5.70	76		Pn	00 45 15.4	-0.5
CCM				IAmb_Lg		00 46 53.1	
	comp=Z,165nm,0.8s						
Z41A	Richland Creek	5.71	127	P	Pn	00 45 16.1	0.0
	baz=310,SNR=7.8						
Z41A				S	Sn	00 46 19.8	-2.0
	baz=310						
LCAR	Lake Charles	5.77	95	Pn	Pn	00 45 16.9	+0.1
K31A	O'Neill	5.79	356	Pn	Pn	00 45 17.7	+0.5
SDCO	Great Sand Dun	5.86	281	P	Pn	00 45 19.0	+0.7
	baz=97						
SDCO	Great Sand Dun	5.86	281	P	Pn	00 45 19.8	+1.5
	baz=97,SNR=9.1						
Q24A	Divide	5.86	293	P	Pn	00 45 18.4	+0.1
	baz=109						
Q24A				S	Sn	00 46 24.7	-1.1
	baz=109						
NATX	Nacogdoches	5.87	149	Pn	Pn	00 45 18.2	0.0
CCAR	Cane Creek	6.04	117	Pn	Pn	00 45 20.9	+0.5
CCAR				IAmb_Lg		00 47 15.3	
	comp=Z,177nm,0.7s						
CCAR	Cane Creek	6.04	117	P	Pn	00 45 21.3	+0.8
	baz=301,SNR=6.7						
435B	Jarrell	6.06	175	P	Pn	00 45 20.9	+0.1
	baz=355						
435B	Jarrell	6.06	175		Pn	00 45 20.8	0.0
HBAR	Harrisburg	6.27	99	IAmb_Lg		00 47 08.8	
	comp=Z,218nm,0.9s						
PBMO	Poplar Bluff	6.27	88		Pn	00 45 24.0	+0.3
FVM	French Village	6.33	77	Pn	Pn	00 45 24.6	+0.1
SCIA	State Center	6.39	36	IAmb_Lg		00 47 20.7	
	comp=Z,253nm,0.8s						
JCT	Junction City	6.47	192	P	Pn	00 45 25.9	-0.6
	baz=11						
JCT	Junction City	6.47	192		Pn	00 45 26.5	0.0
ISCO	Idaho Springs	6.51	299	P	Pn	00 45 27.3	0.0
	baz=115						
ISCO	Idaho Springs	6.51	299	P	Pn	00 45 27.7	+0.5
	baz=115,SNR=16						
LPAR	Lepanto	6.54	98	IAmb_Lg		00 47 31.3	
	comp=Z,250nm,1.1s						
SLM	Saint Louis	6.60	72	Pn	Pn	00 45 27.8	-0.4
PVMO	Portageville	6.88	91	IAmb_Lg		00 47 38.7	
	comp=Z,216nm,0.8s						
ANMO	Albuquerque	6.93	257	Pn	Pn	00 45 34.8	+1.9
	comp=Z,0.7nm,0.3s,baz=81,slow=16,SNR=14						
ANMO				Pg	Pg	00 45 58.3	-5.5
	comp=Z,4.0nm,0.3s,baz=71,slow=19,SNR=11						
ANMO				Lg	Lg	00 47 25.0	
	comp=Z,8.7nm,0.3s,baz=133,slow=23,SNR=9.1						
PENMO	Penman	6.94	91	IAmb_Lg		00 47 38.1	
	comp=Z,238nm,0.7s						
N41A	Harden Midland	6.95	54	Pn	Pn	00 45 33.4	+0.4
N41A				IAmb_Lg		00 47 33.8	
	comp=Z,273nm,0.7s						
MET	Memphis--Engin	6.95	102	IAmb_Lg		00 47 43.7	
	comp=Z,196nm,0.8s						
143A	Socs Landing,	6.97	124	Pn	Pn	00 45 33.0	-0.3
143A				IAmb_Lg		00 47 44.6	
	comp=Z,160nm,1.0s						
ECSD	EROS Data Cent	7.00	10	P	Pn	00 45 32.9	-0.9
	baz=191						
ECSD	EROS Data Cent	7.00	10		Pn	00 45 32.2	-1.6
HKT	Hockley	7.16	163	Pn	Pn	00 45 35.3	-0.5
S44A	Carbondale	7.22	80	Pn	Pn	00 45 37.2	+0.5
S44A				IAmb_Lg		00 47 44.5	
	comp=Z,227nm,0.8s						
GLAT	Glass	7.23	92	IAmb_Lg		00 47 53.7	
	comp=Z,252nm,0.8s						
N23A	Red Feather La	7.25	306	P	Pn	00 45 38.1	+0.8
	baz=122						
HICK	Hickman	7.25	90	Pn	Pn	00 45 37.8	+0.6
SIUC	Southern Illin	7.25	80	Pn	Pn	00 45 37.3	+0.1
SIUC				IAmb_Lg		00 47 41.3	
	comp=Z,183nm,0.7s						
BNM	Barren Site	7.34	251	Pn	Pn	00 45 39.0	+0.3
P43A	Skaggs, Pawnee	7.42	65	Pn	Pn	00 45 39.5	+0.1
W45A	Hickory Valley	7.53	100	IAmb_Lg		00 47 50.5	
	comp=Z,220nm,0.7s						
L40A	Anamosa	7.53	44	Pn	Pn	00 45 40.3	-0.7
Q44A	Meyer Farm, Va	7.59	71	Pn	Pn	00 45 42.6	+0.8
Q44A				IAmb_Lg		00 47 59.5	
	comp=Z,201nm,1.0s						
Y22D	IRIS PASSCAL I	7.60	251	IAmb_Lg		00 48 03.1	
	comp=Z,201nm,0.8s						
SUSD	Miller	7.62	356	P	Pn	00 45 42.1	-0.2
	baz=176						
SUSD	Miller	7.62	356	IAmb_Lg		00 48 12.7	
	comp=Z,127nm,0.8s						
Y45A	Yeager Farm, C	7.70	110		Pn	00 45 43.3	-0.1
MNTX	Cornudas Mount	7.82	231	P	Pn	00 45 45.0	0.0
	baz=47						
MNTX	Cornudas Mount	7.82	231	Pn	Pn	00 45 45.0	0.0
MNTX	Cornudas Mount	7.82	231	P	Pn	00 45 45.3	+0.3
	baz=47,SNR=33						
HDIL	Hopedale	7.92	59	P	Pn	00 45 46.9	+0.5
	baz=245						
HDIL	Hopedale	7.92	59	Pn	Pn	00 45 46.8	+0.5
HDIL				IAmb_Lg		00 48 01.9	
	comp=Z,224nm,0.8s						
735A	Kenedy	7.96	177	IAmb_Lg		00 48 24.3	
	comp=Z,109nm,0.8s						
I37A	Lemond, Waseca	8.07	26	IAmb_Lg		00 48 15.4	
	comp=Z,107nm,0.8s						
L42A	Oliver, Polo	8.41	49	Pn	Pn	00 45 52.8	-0.2
L42A				IAmb_Lg		00 48 18.0	
	comp=Z,146nm,0.8s						
WVT	Waverly	8.42	92		Pn	00 45 52.4	-0.8
PLAL	Pickwick Lake	8.46	100	Pn	Pn	00 45 52.9	-0.8
RWWY	Rawlins	8.47	308	IAmb_Lg		00 48 29.2	
	comp=Z,145nm,1.1s						
RSSD	Black Hills	8.51	331	P	Pn	00 45 55.8	+1.2
	baz=147						
RSSD	Black Hills	8.51	331	IAmb_Lg		00 48 28.3	
	comp=Z,134nm,0.9s						
RSSD	Black Hills	8.51	331	P	Pn	00 45 56.4	+1.8
	baz=147,SNR=18						
833A	Chaparral WMA,	8.54	187	P	Pn	00 45 54.7	-0.2
	baz=6.0						
K22A	Casper	8.62	315	Pn	Pn	00 45 56.2	0.0
K22A				IAmb_Lg		00 48 39.3	
	comp=Z,141nm,0.8s						
JFWS	Jewell Farm	8.64	43	P	Pn	00 45 55.9	-0.3
	baz=228						
JFWS	Jewell Farm	8.64	43	Pn	Pn	00 45 55.6	-0.6
JFWS	Jewell Farm	8.64	43	P	Pn	00 45 56.1	-0.1
	baz=228,SNR=11						
146A	Union	8.64	116	Pn	Pn	00 45 56.2	-0.1
TX31	Lajitas Ar. Si	8.75	213	Pn	Pn	00 45 57.5	-0.4
TX31	Lajitas Ar. Si	8.75	213	P	Pn	00 45 57.7	-0.2
	baz=30,SNR=20						
TX32	Lajitas Array	8.75	213		Pn	00 45 57.2	-0.7
TXAR	Lajitas Array	8.75	213	Pn	Pn	00 45 57.5	-0.4
	comp=Z,1.6nm,0.3s,baz=31,slow=11,SNR=72						
TXAR				Lg	Lg	00 48 23.8	
	comp=Z,6.9nm,0.3s,baz=30,slow=25,SNR=10						
T47A	Sharon Grove	8.92	86	Pn	Pn	00 46 00.6	+0.4
Z47A	Carrollton	9.10	110	Pn	Pn	00 46 02.6	+0.1
F33A	5 Mile Ranch,	9.12	9		Pn	00 46 02.2	-0.6
P46A	Rosedale	9.12	69	Pn	Pn	00 46 02.4	-0.4
I40A	Norwalk	9.14	37	Pn	Pn	00 46 03.4	+0.4
I40A				IAmb_Lg		00 48 49.2	
	comp=Z,111nm,1.0s						
SPMN	Marine on St.	9.33	24	Pn	Pn	00 46 04.9	-0.8
SPMN				IAmb_Lg		00 49 07.1	
	comp=Z,109nm,1.2s						
SFIN	Lafayette	9.42	65	P	Pn	00 46 07.2	+0.4
	baz=252						
BLO	Bloomington	9.54	72	Pn	Pn	00 46 07.8	-0.8
E28A	Huff	9.90	350	Pn	Pn	00 46 12.7	-0.9
E28A				IAmb_Lg		00 49 19.8	
	comp=Z,103nm,0.8s						
SWET	Sewanee	10.10	96	Pn	Pn	00 46 16.4	0.0
G40A	Rib Lake	10.38	33	Pn	Pn	00 46 19.1	-1.0
PD31	Pinedale Array	10.52	308	Pn	Pn	00 46 21.6	-0.8
PDAR	Pinedale Array	10.52	308	Pn	Pn	00 46 21.5	-0.8
	comp=Z,0.3nm,0.3s,baz=122,slow=15,SNR=6.0						
PDAR				Lg	Lg	00 49 14.3	
	comp=Z,1.3nm,0.3s,baz=121,slow=28,SNR=3.7						
CPCT	Cooper Cave	11.18	93	Pn	Pn	00 46 30.6	-0.5
V51A	Loudon	11.26	91	Pn	Pn	00 46 32.7	+0.6
V51A	Loudon	11.26	91	P	Pn	00 46 33.1	+1.0
	baz=279,SNR=10						
TKL	Tuckaleechee C	11.74	91	Pn	Pn	00 46 38.8	0.0
	comp=Z,2.5nm,0.3s,baz=218,slow=12,SNR=36						
TKL				Sn	Sn	00 48 48.0	-1.9
	comp=Z,0.7nm,0.3s,baz=252,slow=14,SNR=2.2						
TKL				Lg	Lg	00 49 56.5	
	comp=Z,1.8nm,0.3s,baz=170,slow=19,SNR=2.5						
TKL	Tuckaleechee C	11.74	91		Pn	00 46 38.2	-0.6
TKL	Tuckaleechee C	11.74	91	P	Pn	00 46 39.1	+0.3
	baz=280,SNR=5.7						
V52A	Sevierville	11.86	90	Pn	Pn	00 46 40.1	-0.2
DGMT	Dagmar	12.42	341	Pn	Pn	00 46 46.6	-1.4
M50A	Fremont	12.65	64	Pn	Pn	00 46 50.2	-1.0
S54A	Dingess, Beckl	13.52	81	Pn	Pn	00 47 00.9	-2.0
ULM	Lac du Bonnet	13.52	7	Pn	Pn	00 46 58.1	-4.8
	comp=Z,0.8nm,0.3s,baz=184,slow=13,SNR=5.1						
ULM				Sn	Sn	00 49 19.9	-13
	comp=Z,1.7nm,0.3s,baz=271,slow=22,SNR=5.6						
ULM				Lg	Lg	00 50 47.9	
	comp=Z,1.1nm,0.3s,baz=268,slow=15,SNR=3.7						
T57A	Hurt	15.20	84	Pn	Pn	00 47 24.6	-1.2
Q56A	Snyder Ridge,	15.20	76	Pn	Pn	00 47 24.6	-1.2
Q56A				IAmb	IAmb	00 47 26.9	
	comp=Z,12nm,1.2s						
NVAR	Mina Array Bea	15.97	282	Pn	Pn	00 47 36.4	+0.2
	comp=Z,0.2nm,0.3s,baz=96,slow=9.2,SNR=1.8						
SADO	Sadowa	16.47	55	Pn	Pn	00 47 40.8	-1.5
	comp=Z,0.3nm,0.3s,baz=266,slow=16,SNR=2.4						
J58A	Remsen	18.71	63	P	P	00 48 08.6	-1.1
ODNJ	Ogdensburg	18.85	70	P	P	00 48 10.7	-0.6
ODNJ				IAmb	IAmb	00 48 16.0	
	comp=Z,15nm,1.3s						
CMIG	Matias Romero	19.89	171	P	Pn	00 48 26.5	+2.1
	comp=Z,2.1nm,0.5s,baz=2.6,slow=12,SNR=2.4						
SDV	Santo Domingo	37.43	131	LR	LR	01 09 54.5	
	comp=Z,3µm,19.1s,baz=195,slow=42						
ILAR	Eielson Array	39.96	330	P	P	00 51 26.4	+1.0
	comp=Z,1.4nm,0.8s,baz=105,slow=6.9,SNR=19						
ILAR				PcP	PcP	00 53 31.8	+1.3
	comp=Z,0.3nm,0.8s,baz=138,slow=2.6,SNR=4.7						
EKA	Eskdalemuir Ar	63.30	40	P	P	00 54 19.0	-0.9
	comp=Z,2.0nm,0.8s,baz=300,slow=5.4,SNR=4.5						
ARCES	ARCESS Array B	66.30	19	P	P	00 54 37.8	-1.5
	comp=Z,11nm,1.2s,baz=312,slow=6.8,SNR=2.6						
FINES	FINESS Array B	72.17	25	P	P	00 55 15.5	-0.3
	comp=Z,2.8nm,0.9s,baz=303,slow=2.8,SNR=5.0						
FINES	FINESS Array B	72.17	25	P	P	00 55 15.7	0.0
GERES	GERESS Array B	75.52	39	P	P	00 55 36.7	+1.0
	comp=Z,0.4nm,0.6s,baz=327,slow=7.0,SNR=2.0						
AKASG	Malin Array Be	81.36	31	P	P	00 56 07.5	-0.2
	comp=Z,1.1nm,0.6s,baz=308,slow=4.5,SNR=5.7						
ZALV	Zalesovo Beam	89.55	358	P	P	00 56 49.3	+0.7
	comp=Z,0.2nm,0.4s,baz=18,slow=5.0,SNR=4.3						
HHC	Hu-ho-hao-te	98.00	338	*e*P	P	00 57 26.3	-1.5
HHC				pmax	pmax		
	comp=Z,6.0nm,1.4s						
HHC				pmax	pmax		
	comp=Z,1µm,7.3s						
MAW	Mawson	147.38	167	PKPbc	PKPbc	01 03 34.4	+0.3
	comp=Z,2.7nm,0.7s,baz=198,slow=3.2,SNR=6.4						
MAW	Mawson	147.38	167		PKPbc	01 03 33.6	-0.5

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*IDC **25** 01:05:00.9±0.9, 9°.74S×71°.22W, h616km±12km, mb3.1/12, mb1 3.3/16, mb1mx3.2/36, mbtmp4.1/16, Error ellipse: s-maj=15.5km s-min=10.6km az=47.0*

*VAO **25** 01:05:01.0±0.5, 9°.87S×71°.23W, h615km, mb4.1*

ISC 25 01:04:59.9±0.4, **9°.81S**±0°.07×**71°.27W**±0°.06, **h600**km, **n73**, σ**1s.34**/79, **mb3.6**/13, **Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CZSB	Cruzeiro do Su	2.50	325	*e*P	P	01 06 19.0	+2.4
ETMB	Extrema	4.98	91	*e*P	P	01 06 34.4	+1.7
TBTG	Tabatinga, AM	5.74	14	*e*P	P	01 06 42.0	+3.0
NNA	Nana	5.89	248	P	P	01 06 42.5	+2.3
	4.3nm,0.3s,baz=58,slow=6.3,SNR=15						
NNA				S	S	01 08 04.2	+2.1
	0.8nm,0.3s,baz=139,slow=20,SNR=3.7						
ATAH	Atahualpa	7.53	290	P	P	01 06 59.0	+3.6
	1.4nm,0.3s,baz=126,slow=6.5,SNR=12						
ATAH				S	S	01 08 34.7	+4.9
	0.5nm,0.3s,baz=19,slow=9.9,SNR=4.0						
VILB	Vilhena	11.29	107	*e*P	P	01 07 32.9	+1.2
SIV	San Ignacio	11.68	123	P	P	01 07 36.4	+0.8
	2.1nm,0.3s,baz=293,slow=9.5,SNR=20						
SIV				S	S	01 09 44.4	+1.0
	0.1nm,0.3s,baz=306,slow=18,SNR=4.4						
MACA	Manacapuru-AM	12.41	59	*e*P	P	01 07 43.1	+0.1
PTLB	Pontes e Lacer	13.10	117	*e*P	P	01 07 50.4	+0.6
PDRB	Porto dos Gac	14.40	98	*e*P	P	01 08 02.2	-0.6
PTGA	Pitinga	14.41	52	P	P	01 08 03.2	+0.4
	3.9nm,0.3s,baz=228,slow=11,SNR=43						
PTGA				S	S	01 10 36.5	+4.3
	0.2nm,0.3s,baz=215,slow=16,SNR=2.2						
CLDB	Colider	15.26	95	*e*P	P	01 08 10.9	+0.3
NPGB	Novo Progresso	15.98	81	*e*P	P	01 08 17.1	-0.1
BOAV	Boa Vista	16.17	42	*e*P	P	01 08 20.2	+1.2
ITTB	Itaituba	16.33	72	*e*P	P	01 08 20.4	-0.1
SALV	Santo Antonio	16.34	113	*e*P	P	01 08 21.4	+0.9
MALB	Monte Alegre	18.66	66	*e*P	P	01 08 42.2	+0.5
SNDB	Serra Nova Dou	19.73	98	*e*P	P	01 08 52.3	+0.9
ARAG	Araguaiana, MT	19.85	109	*e*P	P	01 08 52.2	-0.3
PCMB	Pacaembu	22.52	124	*e*P	P	01 09 16.1	-0.2
PEXB	Peixe	22.66	98	*e*P	P	01 09 18.2	+0.6
SMTB	Santa Maria do	23.39	90	*e*P	P	01 09 24.8	+0.7
BDFB	Brasilia	23.40	107	P	P	01 09 24.6	+0.3
	1.9nm,0.4s,baz=296,slow=11,SNR=4.6						
MDP	Montagnes des	23.74	52	P	P	01 09 26.9	-0.4
	5.8nm,0.8s,baz=229,slow=3.9,SNR=6.9						
IPMB	Ipameri, GO	23.79	112	*e*P	P	01 09 27.2	-0.5
RCLB	Rio Claro- Sao	25.98	122	*e*P	P	01 09 46.4	-0.5
SDBA	SAO DESIDERIO	26.00	98	*e*P	P	01 09 47.5	+0.3
CPSB	Cacapava Do Su	26.39	143	*e*P	P	01 09 50.0	-0.3
JANB	Januaria	26.82	104	*e*P	P	01 09 54.4	0.0
BSCB	Bom Sucesso	27.81	117	*e*P	P	01 10 03.0	0.0
ROSB	Rosrio	27.82	78	*e*P	P	01 10 03.3	+0.2
PARB	Paraibuna	27.96	122	*e*P	P	01 10 04.3	+0.1
DIAM	Diamantina, MG	28.04	111	*e*P	P	01 10 05.0	-0.1
NBPS	Pedro II - PI	30.07	82	*e*P	P	01 10 22.7	+0.2
BSFB	Barra de Sao F	30.77	110	*e*P	P	01 10 28.0	-0.4
PLCA	Paso Flores	30.81	179	P	P	01 10 28.7	+0.2
	1.0nm,0.5s,baz=359,slow=11,SNR=4.2						
PLCA	Paso Flores	30.81	179	*e*P	P	01 10 28.1	-0.4
CAM01	Campos-RJ	30.83	116	*e*P	P	01 10 28.5	-0.3
NAN01	Guarapari, ES	31.24	108	*e*P	P	01 10 32.3	-0.2
GDU01	Guandu, BA	31.26	100	*e*P	P	01 10 32.8	+0.2
RIB01	Linhares ES	31.29	111	*e*P	P	01 10 32.5	-0.4

ALF01	Guarapari-ES	31.31	114	*e*P	P	01 10 33.2	+0.2
GUA01	Guaratinga, BA	31.34	106	*e*P	P	01 10 33.2	-0.1
CMC01	Camacan, BA	31.45	103	*e*P	P	01 10 34.2	0.0
NBIT	Itapeh - BA	31.49	103	*e*P	P	01 10 34.3	-0.3
NBPB	Pedra_Branca-C	31.68	85	*e*P	P	01 10 36.4	+0.2
NBMA	Muriti-CE	32.22	88	*e*P	P	01 10 41.0	0.0
NBLA	Lagarto - SE	32.94	95	*e*P	P	01 10 46.1	-0.7
NBLV	Livramento - P	34.04	89	*e*P	P	01 10 55.6	-0.5
NBAN	Anadia - AL	34.48	93	*e*P	P	01 10 59.8	0.0
NBRF	Rio Formoso -	35.68	91	*e*P	P	01 11 09.6	-0.1
TXAR	Lajitas Array	49.90	322	P	P	01 12 59.5	-0.6
	0.2nm,0.3s,baz=163,slow=8.9,SNR=12						
TXAR				PcP	PcP	01 14 08.7	-0.6
	0.2nm,0.6s,baz=129,slow=6.0,SNR=5.0						
TXAR				S	S	01 19 22.1	-4.9
	0.3nm,0.8s,baz=113,slow=11,SNR=4.2						
PMSA	Palmer Station	55.12	176	*e*P	P	01 13 35.9	-0.5
PDAR	Pinedale Array	62.92	329	P	P	01 14 28.6	-0.6
	0.7nm,0.4s,baz=122,slow=8.8,SNR=11						
PDAR				PcP	PcP	01 14 59.7	-0.8
	0.3nm,0.5s,baz=108,slow=4.8,SNR=2.2						
ULM	Lac du Bonnet	63.54	343	P	P	01 14 31.0	-1.6
	4.1nm,0.3s,baz=153,slow=4.9,SNR=14						
NVAR	Mina Array Bea	64.99	321	P	P	01 14 43.4	+1.1
	0.4nm,0.4s,baz=155,slow=7.5,SNR=1.8						
YBH	Yreka Blue Hor	69.66	321	P	P	01 15 09.7	-0.9
	1.5nm,0.5s,baz=211,slow=5.9,SNR=1.8						
VNA3	Neumayer Olymp	71.83	163	P	P	01 15 22.4	-0.4
VNA2	Neumayer--Watz	72.39	162	P	P	01 15 24.9	-1.1
SNAA	Sanae	74.03	162	P	P	01 15 34.6	-0.8
SNAA	Sanae	74.03	162	P	P	01 15 35.0	-0.3
	1.0nm,0.5s,baz=274,slow=7.7,SNR=15						
TORD	Torodi Ar. Bea	75.93	74	P	P	01 15 46.1	-0.8
	0.7nm,0.7s,baz=252,slow=3.8,SNR=1.6						
YKA	Yellowknife Ar	79.46	341	P	P	01 16 03.9	-0.9
	0.8nm,0.5s,baz=134,slow=5.0,SNR=10						
INK	Inuvik	89.23	341	P	P	01 16 52.1	-0.4
	baz=123,slow=8.2						
ILAR	Eielson Array	92.75	335	P	P	01 17 08.1	-0.7
	0.4nm,1.0s,baz=156,slow=3.8,SNR=2.3						
MAW	Mawson	96.13	164	P	P	01 17 25.1	+1.1
	1.2nm,0.8s,baz=180,slow=16,SNR=3.7						
ZALV	Zalesovo Beam	132.00	19	PKP	PKPdf	01 23 05.2	-0.8
	0.8nm,0.5s,baz=254,slow=2.9,SNR=6.3						
MKAR	Makanchi Array	136.83	27	PKP	PKPdf	01 23 14.1	-1.3
	1.9nm,1.1s,baz=325,slow=2.6,SNR=2.1						
ASAR	Alice Springs	138.62	216	PKhKP	PKPpre	01 23 11.2	
	0.3nm,0.5s,baz=155,slow=3.4,SNR=4.6						
ASAR				PKP	PKPdf	01 23 17.9	-1.5
	0.4nm,0.4s,baz=123,slow=2.1,SNR=5.7						
WRA	Warramunga Arr	141.15	220	PKhKP	PKPpre	01 23 16.9	
	0.5nm,0.4s,baz=140,slow=2.8,SNR=18						
WRA				PKP	PKPdf	01 23 23.2	-0.8
	0.8nm,0.3s,baz=124,slow=2.3,SNR=19						
SONM	Songino Array	142.05	3	PKhKP	PKPpre	01 23 21.1	
	0.3nm,0.3s,baz=306,slow=1.3,SNR=4.4						
KSRS	Korea Array	147.48	331	PKPbc	PKPbc	01 23 37.0	-0.9
	3.1nm,0.6s,baz=30,slow=2.9,SNR=6.2						
FITZ	Fitzroy Crossi	147.63	211	PKPbc	PKPbc	01 23 38.2	-0.6
	baz=175,slow=4.6						

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*IDC **25** 01:55:44.9±0.7, 9°.43S×115°.04E, h0^{km}, mb4.0/10, mb1 4.1/10, mb1mx3.8/35, mbtmp4.0/10, Error ellipse: s-maj=29.4km s-min=17.5km az=52.0*

*DJA **25** 01:55:53.0±0.7, 10°S±3°×11°5E±°, h25^{km}±7^{km}, M4.5/23, mb4.4/7, mB5.2/1, MLv4.5/23, Mw(mB)4.6/1*

*NEIC **25** 01:55:54.0±1.3, 9°.5S±0°.1×115°.07E±0°.06, h64^{km}±7^{km}, mb3.9/11, Error ellipse: s-maj=16.4km s-min=6.8km az=199.0*

ISC 25 01:55:50.7±0.5**, 9°.76S**±0°.06×**115°.06E**±0°.05**, h35**^{km}**, n62,** σ**2^{s}20**/69**, mb3.9**/14**, South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IGBI	Denpasar	0.94	5	P	Pn	01 56 07.9	+0.5
IGBI				S	Sn	01 56 19.6	0.0
DNP	Denpasar	1.08	8	P	Pn	01 56 10.7	+1.3
DNP				S	Sn	01 56 24.7	+1.5
JAGI	Jajag, Banyuwa	1.56	325	P	Pn	01 56 16.8	+0.9
JAGI				S	Sn	01 56 34.2	-0.8
JAGI	Jajag, Banyuwa	1.56	325		Pn	01 56 16.9	+0.9
JAGI				Sn	Sn	01 56 34.1	-0.8
SRBI	Singaraja	1.67	5	P	Pn	01 56 19.3	+1.8
SRBI				S	Sn	01 56 40.0	+2.4
TWSI	Taliwang, Sumb	2.06	61	P	Pn	01 56 24.8	+1.9
ABJI	Asem Bagus	2.11	337	P	Pn	01 56 26.4	+2.8
GMJI	Gumukmas	2.17	313	P	Pn	01 56 26.0	+1.6
BLJI	Banyuglugur	2.47	324	P	Pn	01 56 31.1	+2.6
PLAI	Plampang	2.84	71	P	Pn	01 56 36.4	+2.8
KMMI	Kalianget	2.90	338	P	Pn	01 56 34.7	+0.3
PCJI	Pacitan	4.14	292	P	Pn	01 56 54.0	+2.6
WBSI	Waikabubak, Su	4.27	89	P	Pn	01 56 57.5	+4.1
BWJI	Bawean	4.55	328	P	Pn	01 56 59.2	+2.1
UGM	Wanagama	4.84	292	P	Pn	01 57 01.5	+0.3
UGM	Wanagama	4.84	292	Pn	Pn	01 57 03.1	+2.0
YOGI	Yogyakarta	5.09	292	P	Pn	01 57 06.6	+2.1
BSSI	Bau Bau, Buton	6.47	57	P	Pn	01 57 24.8	+1.3
	0.2nm2µm27nm,0.8s						
KAPI	Kappang	6.62	45	Pn	Pn	01 57 25.6	0.0
	4.6nm,0.3s,baz=218,slow=3.0,SNR=11						
KAPI				Sn	Sn	01 58 38.3	-1.6
	5.1nm,0.3s,baz=270,slow=20,SNR=13						
KAPI	Kappang	6.62	45	Pn	Pn	01 57 26.7	+1.1
EDFI	Ende, Flores	6.62	82	P	Pn	01 57 29.0	+3.3
	0.1nm15nm,0.6s						
BKSI	Bulukumba	6.68	49	P	Pn	01 57 28.3	+1.9
	0.1nm28nm,0.6s						
CMJI	Cimerak	6.82	286	P	Pn	01 57 29.1	+0.8
	0.1nm14nm,0.6s						
MMRI	Maumere	7.17	82	P	Pn	01 57 42.2	+9.0
MMRI	Maumere	7.17	82	Pn	Pn	01 57 33.7	+0.5
BNSI	Bone	7.31	44	P	Pn	01 57 37.4	+2.4
SPSI	Sidrap Palu	7.41	39	P	Pn	01 57 39.4	+2.9
	0.1nm9.8nm,0.8s						
BATI	Baumata	8.49	94	Sn	Sn	01 59 22.4	-3.5
	8.7nm,0.3s,baz=340,slow=18,SNR=2.3						
MTKI	Muara Teweh, K	8.76	359	P	Pn	01 58 00.2	+5.2
SOEI	Soe	9.08	91	P	Pn	01 58 03.6	+4.2
SOEI	Soe	9.08	91	Pn	Pn	01 58 02.7	+3.2
FITZ	Fitzroy Crossi	13.20	130	Pn	Pn	01 58 54.3	-1.4
	0.3nm,0.3s,baz=316,slow=3.5,SNR=3.7						
FITZ				Sn	Sn	02 01 14.5	-6.8
	baz=336,slow=18						
KNRA	Kununurra	14.60	115		Pn	01 59 17.6	+2.7
MTN	Manton Dam	16.06	103	P	P	01 59 39.8	+2.7
MTN				IAmb	IAmb	01 59 57.5	
	comp=Z,10.0nm,1.1s						
WB0	Warramunga Arr	21.16	120	P	P	02 00 34.2	+1.2
WB0				IAmb	IAmb	02 00 54.7	
	comp=Z,3.5nm,0.8s						
WRA	Warramunga Arr	21.19	121	P	P	02 00 34.3	+0.9
	comp=Z,2.7nm,0.9s,baz=294,slow=12,SNR=18						
WRA				S	S	02 04 24.0	-3.3
	comp=Z,0.3nm,0.6s,baz=275,slow=23,SNR=3.4						
WRA				PcP	PcP	02 04 38.4	+0.1
	comp=Z,0.3nm,0.6s,baz=260,slow=4.7,SNR=4.6						
WRA				pPcP		02 04 56.5	
	comp=Z,0.2nm,0.6s,baz=351,slow=4.5,SNR=4.8						
WRA	Warramunga Arr	21.19	121	P	P	02 00 35.0	+1.6
WRAB	Tennant Creek	21.19	121	P	P	02 00 34.9	+1.5
WRAB				IAmb	IAmb	02 00 56.4	
	comp=Z,4.9nm,0.9s						
WB2	Warramunga Arr	21.20	121	P	P	02 00 34.9	+1.5
WB2				IAmb	IAmb	02 00 56.3	
	comp=Z,4.2nm,0.9s						
AS31	Alice Springs	22.70	130		P	02 00 51.4	+1.8
ASAR	Alice Springs	22.70	130	P	P	02 00 50.2	+0.6
	comp=Z,3.4nm,0.6s,baz=303,slow=8.5,SNR=43						
ASAR				PcP	PcP	02 04 42.4	+1.1
	comp=Z,0.6nm,0.8s,baz=287,slow=0.7,SNR=3.9						
ASAR				pPcP		02 04 59.6	
	comp=Z,0.4nm,0.6s,baz=311,slow=1.3,SNR=5.0						
ASAR	Alice Springs	22.70	130		P	02 00 51.9	+2.3
JAY	Jayapura	26.48	76	P	P	02 01 23.3	-1.7
	comp=Z,9.9nm,0.5s,baz=342,slow=20,SNR=4.8						
STKA	Stephens Creek	32.99	136	P	P	02 02 24.1	+1.5
	comp=Z,1.8nm,0.5s,baz=305,slow=14,SNR=3.5						
STKA	Stephens Creek	32.99	136		P	02 02 24.6	+2.1
STKA				IAmb	IAmb	02 02 38.2	
	comp=Z,3.4nm,1.5s						
EIDS	Eidsvold	37.54	119	P	P	02 03 01.3	-0.4
H08S2	Diego Garcia H	42.11	269	T	T	02 48 55.5	
	baz=96,slow=74,SNR=3.2						
H08S3	Diego Garcia H	42.12	269	T	T	02 48 49.4	
	baz=208,slow=74,SNR=6.0						
SONM	Songino Array	57.85	353	P	P	02 05 36.3	-2.6
	comp=Z,0.5nm,0.7s,baz=178,slow=8.5,SNR=4.6						
MK31	Makanchi Array	63.44	335	P	P	02 06 15.1	-1.8
MK31				IAmb	IAmb	02 06 31.3	
	comp=Z,3.7nm,1.2s						
MKAR	Makanchi Array	63.44	335	P	P	02 06 14.6	-2.3
	comp=Z,0.4nm,0.3s,baz=151,slow=6.9,SNR=12						
MKAR	Makanchi Array	63.44	335	P	P	02 06 15.0	-2.0
MAW	Mawson	67.23	199	P	P	02 06 42.8	+1.7
	comp=Z,2.7nm,0.8s,baz=7.6,slow=11,SNR=2.9						
ZALV	Zalesovo Beam	68.43	341	P	P	02 06 46.1	-2.8
	comp=Z,0.6nm,0.5s,baz=193,slow=6.1,SNR=4.2						
ZALV	Zalesovo Beam	68.43	341	P	P	02 06 46.2	-2.7
GYA0B	ALIBECK ARRAY	71.21	316	P	P	02 07 04.2	-2.2
VNDA	Vanda	71.87	170	P	P	02 07 11.1	+1.4
	comp=Z,0.3nm,0.6s,baz=310,slow=7.5,SNR=1.5						
VNDA	Vanda	71.87	170	P	P	02 07 11.7	+2.0
VNDA				IAmb	IAmb	02 07 21.1	
	comp=Z,3.2nm,1.2s						
ABKAR	Akbulak array	75.98	326	P	P	02 07 33.0	-1.1
KMBO	Kilima Mbogo	77.79	271	P	P	02 07 44.2	-1.3
	comp=Z,0.6nm,0.4s,baz=65,slow=12,SNR=1.9						
BDFB	Brasilia	149.70	214	PKPbc	PKPbc	02 15 38.8	+0.8
	comp=Z,1.6nm,0.5s,baz=111,slow=4.9,SNR=3.5						
BDFB	Brasilia	149.70	214		PKPdf	02 15 35.8	+2.4
BDFB				PKPab	PKPbc	02 15 39.6	+1.6

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*IDC **25** 02:22:51.2±1.1, 13°.18N×144°.30E, h127^{km}±8^{km}, mb3.3/6, mb1 3.6/6, mb1mx3.3/41, mbtmp3.7/6, Error ellipse: s-maj=37.3km s-min=23.7km az=107.0*

*NEIC **25** 02:22:52.0±2.0, 13°.2N±0°.1×144°.3E±0°.2, h127^{km}±7^{km}, mb3.8/8, Error ellipse: s-maj=29.0km s-min=12.4km az=114.0*

ISC 25 02:22:51.7±0.7**, 13°.2N**±0°.1×**144°.2E**±0°.1**, h127**^{km}**, n25,** σ**0^{s}98**/21**, mb3.6**/10**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	0.78	59	P	Pn	02 23 12.6	+0.2
	92nm,0.3s,baz=179,slow=22,SNR=39						
GUMO				S	Sn	02 23 27.4	-0.6
	448nm,0.3s,baz=7.8,slow=21,SNR=25						
H11S3	WAKE ISLAND Hy	22.27	73	T	T	02 50 32.2	
	baz=259,slow=75,SNR=5.0						
H11S1	WAKE ISLAND Hy	22.29	73	T	T	02 50 33.9	
	baz=259,slow=75,SNR=7.0						
H11S2	WAKE ISLAND Hy	22.29	73	T	T	02 50 35.1	
	baz=259,slow=75,SNR=2.8						
H11N1	WAKE ISLAND Hy	22.71	70	T	T	02 51 05.5	
	baz=256,slow=75,SNR=11						
H11N2	WAKE ISLAND Hy	22.72	70	T	T	02 51 06.4	
	baz=256,slow=75,SNR=3.6						
H11N3	WAKE ISLAND Hy	22.73	70	T	T	02 51 06.7	
	baz=256,slow=75,SNR=8.3						
WB0	Warramunga Arr	34.13	197	P	P	02 29 23.5	-1.1
WB0				IAmb	IAmb	02 29 38.2	
	comp=Z,2.2nm,1.0s						
WB2	Warramunga Arr	34.31	197	P	P	02 29 24.9	-1.2
WB2				IAmb	IAmb	02 29 26.6	
	comp=Z,3.3nm,1.1s						
WRA	Warramunga Arr	34.31	197	P	P	02 29 25.3	-0.9
	comp=Z,0.6nm,0.8s,baz=22,slow=9.6,SNR=5.7						
ARMA	Armidale	43.94	171	P	P	02 30 46.8	+0.6
SONM	Songino Array	46.68	325	P	P	02 31 08.5	+0.8
	comp=Z,0.6nm,0.7s,baz=139,slow=6.0,SNR=4.2						
SONM	Songino Array	46.68	325	P	P	02 31 08.9	+1.2
MKAR	Makanchi Array	61.32	316	P	P	02 32 53.2	-0.7
	comp=Z,0.4nm,0.6s,baz=82,slow=10,SNR=2.5						
IMAR	Indian Mountai	66.83	23	P	P	02 33 28.2	-1.2
H21K	Melozitna Rive	67.08	24		P	02 33 31.5	+0.4
IL31		69.22	25	P	P	02 33 42.6	-1.7
IL31				IAmb	IAmb	02 34 05.7	
	comp=Z,1.2nm,1.1s						
ILAR	Eielson Array	69.22	25	P	P	02 33 42.7	-1.8
	comp=Z,0.3nm,0.4s,baz=254,slow=5.5,SNR=8.4						
TOLK	Toolik Lake Re	69.23	21	P	P	02 33 44.7	+0.2
TOLK				IAmb	IAmb	02 34 04.8	
	comp=Z,0.8nm,0.9s						
BMAR	Burnt Mountain	70.73	23	P	P	02 33 53.9	+0.2
BMAR				PcP	PcP	02 34 14.4	+0.6
INK	Inuvik	74.99	22	P	P	02 34 18.5	-0.2
ABKAR	Akbulak array	76.39	318	P	P	02 34 26.7	-0.4
CASY	Casey	83.06	193	P	P	02 35 03.6	+1.0
YKA	Yellowknife Ar	83.52	27	P	P	02 35 04.6	-0.5
	comp=Z,0.3nm,0.6s,baz=287,slow=16,SNR=1.7						
NVAR	Mina Array Bea	87.69	51	P	P	02 35 27.5	+0.9
	comp=Z,0.3nm,0.3s,baz=281,slow=5.4,SNR=2.5						

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*AEIC **25** 02:23:16.3±4.2, 52°.7N±0°.3×174°.6W±0°.1, h212^{km}±8^{km}, Error ellipse: s-maj=38.3km s-min=9.2km az=168.0*

NEIC 25 02:23:16.1±1.5**, 53°.0N**±0°.5×**174°.6W**±0°.2**, h210**^{km}±22^{km}**, mb3.5**/7**, ML2.5**/9(AEIC)**, Error ellipse: s-maj=70.6km s-min=10.1km az=167.0, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOKL	Mount Kliuchef	0.71	159		Pn	02 23 45.8	+0.5
ATKA	Atka Island	0.83	161		Pn	02 23 45.2	-0.6
ATKA					S	02 24 09.1	+0.3
GSTR	Great Sitkin T	1.25	225	Pn	Pn	02 23 46.9	-1.9
GSMY	Great Sitkin M	1.29	223		Pn	02 23 49.2	+0.3
GSTD	Great Sitkin T	1.31	226		Pn	02 23 49.6	+0.3
GSTD					S	02 24 14.8	+0.1
ADK	Adak	1.68	230	Pn	Pn	02 23 52.4	+0.1
ADK					S	02 24 20.1	+0.2
KIWB	Kanaga Island	1.92	235	Pn	Pn	02 23 54.8	+0.2
TAFP	Tanaga Falls P	2.33	243		Pn	02 23 59.4	+0.6
AMKA	Amchitka	4.07	249	Pn	Pn	02 24 18.4	-0.7
CHIR	Chirikof Islan	11.43	68	Pn	Pn	02 25 54.6	+1.4
SVW2	Sparrevohn	13.13	44	P	P	02 26 17.0	-0.4
KDAK	Kodiak Island	13.39	60	Pn	Pn	02 26 14.9	-3.0
CAST	Castle Rocks	15.72	40	P	Pn	02 26 47.4	+1.0
CAST				IAmb	IAmb	02 26 56.7	
	comp=Z,0.4nm,0.4s						
KTH	Kantishna Hill	16.24	40	P	P	02 26 51.5	-0.3
KTH				IAmb	IAmb	02 26 54.3	
	comp=Z,3.0nm,1.0s						
BPAW	Bear Paw Mtn.	16.49	38	P	P	02 26 54.1	-0.4
DHY	Denali Highway	17.46	44	P	P	02 27 04.3	-1.0
DHY				IAmb	IAmb	02 27 07.1	
	comp=Z,3.8nm,0.9s						
I23K	Minto, Yukon-K	17.64	37	P	P	02 27 06.9	-0.1
CCB	Clear Creek Bu	17.97	39	P	Pn	02 27 11.9	-0.9
CCB				IAmb	IAmb	02 27 12.4	
	comp=Z,1.3nm,1.0s						
N25K	Chitina, Valde	18.22	50	P	Pn	02 27 15.6	-0.4
SCRK	Sand Creek	19.21	43	P	P	02 27 22.3	-1.9
SCRK				IAmb	IAmb	02 27 36.2	
	comp=Z,2.3nm,1.2s						

ATH 25 02:30:25.0, 38°.65N×20°.58E, h10^{km}±2^{km}**, ML1.9**/3**, Error ellipse: s-maj=2.4km s-min=0.8km az=79.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRAG	Dragano-Lefkad	0.03	350	P	Pg	02 30 26.7	-0.3
DRAG				S	Sg	02 30 28.0	-0.3
EVGI	Lefkada island	0.07	118	P	Pg	02 30 27.0	-0.2
EVGI				S	Sg	02 30 28.7	-0.1
NYDR	Nydri-Lefkada	0.11	56	P	Pg	02 30 27.4	-0.4
NYDR				S	Sg	02 30 29.4	-0.3
LKD2	Lefkada island	0.15	24	P	Pg	02 30 28.3	-0.1
LKD2				S	Sg	02 30 30.9	+0.2
LKD2				AML	AML	02 30 31.3	
	comp=E,1159µm,0.2s						
LKD2				AML	AML	02 30 31.3	
	comp=N,1627µm,0.2s						
TSLK	Tsoukalades, L	0.18	18	P	Pg	02 30 29.0	+0.1
TSLK				S	Sg	02 30 32.2	+0.6
FSK	Fiskardo	0.19	185	P	Pg	02 30 29.2	+0.1
FSK				S	Sg	02 30 32.5	+0.6
FSK				AML	AML	02 30 33.0	
	comp=N,1017µm,0.4s						
FSK				AML	AML	02 30 34.4	
	comp=E,1553µm,0.2s						
KEF4	Livadi, Kephal	0.41	197	P	Pg	02 30 32.9	-0.3
DMLN	Damoulianata-K	0.45	202	P	Pg	02 30 33.3	-0.4
DMLN				S	Sg	02 30 40.3	+0.7
VLS	Valsamata	0.47	179	P	Pg	02 30 33.5	-0.7
VLS				S	Sg	02 30 41.0	+0.5
VLS				AML	AML	02 30 42.2	
	comp=E,284µm,0.1s						
VLS				AML	AML	02 30 42.6	
	comp=N,448µm,0.2s						
KEF3	Kipouria, Keph	0.48	202	P	Pg	02 30 33.6	-0.8
KEF3				S	Sg	02 30 40.4	-0.5
PVO	Paravola	0.74	92	P	Pg	02 30 39.3	0.0

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*SKO **25** 02:30:52.2, 41°.38N×20°.96E, h15^{km}*

*TIR **25** 02:30:54.0, 41°.67N×21°.67E, h5^{km}, Md2.9*

*ATH **25** 02:30:54.4, 41°.44N×21°.05E, h10^{km}±3^{km}, ML3.1/7, Error ellipse: s-maj=3.3km s-min=1.4km az=242.0*

*BEO **25** 02:30:55.9±0.3, 41°.38N×20°.97E, h5^{km}±3^{km}, ML2.9/11*

*THE **25** 02:30:55.0, 41°.38N×20°.99E, h1^{km}±2^{km}, ML3.1/8, Error ellipse: s-maj=2.0km s-min=0.6km az=337.0*

*PDG **25** 02:30:55.2±0.6, 41°.39N×21°.02E, h7^{km}±1^{km}, ML3.2/8, Error ellipse: s-maj=0.8km s-min=1.1km az=0.0*

ISC 25 02:30:55.0±1.0**, 41°.39N**±0°.01×**21°.01E**±0°.02**, h8**^{km}±9^{km}**, n129,** σ**1^{s}18**/180**, 29C-6D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHR	Ohrid	0.32	209	*e*Pg	Pg	02 31 01.1	-0.2
OHR				*e*Sg	Sg	02 31 06.4	+0.8
OHR	Ohrid	0.32	209	*i* Pg	Pg	02 31 01.3	-0.1
OHR				*i* Sg	Sg	02 31 06.3	+0.7
OHR				*e*Lg	Lg	02 31 06.6	
	comp=N,2µm,0.4s						
PHP	Peshkopia	0.52	305	P	Pg	02 31 04.2	-0.8
PHP				S	Sg	02 31 12.1	+0.3
SKO	Skopje	0.67	29	*i* Pg	Pb	02 31 08.6	-0.4
SKO				*i* Sg	Sb	02 31 17.9	-0.5
SKO				*e*Lg	Lg	02 31 18.0	
	comp=N,65nm,0.4s						
FNA	Florina	0.67	155	P	Pg	02 31 07.7	-0.2
FNA				S	Sg	02 31 16.8	+0.2
	comp=N,4µm,0.5s						
FNA	Florina	0.67	155	P	Pg	02 31 07.6	-0.3
FNA				S	Sb	02 31 17.7	-0.8
FNA				AML	AML	02 31 20.5	
	comp=E,8503µm,0.4s						
FNA				AML	AML	02 31 22.0	
	comp=N,6896µm,0.5s						
FNA	Florina	0.67	155	*i* Pg	Pg	02 31 07.8	-0.2
FNA				*i* Sg	Sg	02 31 17.2	+0.6
TIR	Tirane	0.86	268	⇓P	Pg	02 31 11.2	-0.4
TIR				⇑S	Sg	02 31 23.1	+0.4
TIR	Tirane	0.86	268	*e*Pg	Pg	02 31 10.8	-0.8
TIR				*e*Sg	Sg	02 31 23.5	+0.7
TIR	Tirane	0.86	268	P	Pg	02 31 10.6	-0.9
TIR				S	Sg	02 31 23.4	+0.7
	comp=N,452nm,0.6s						
TIR	Tirane	0.86	268	P	Pg	02 31 10.7	-0.8
TIR				S	Sb	02 31 23.8	-0.1
TIR				AML	AML	02 31 25.0	
	comp=N,2780µm,0.4s						
TIR				AML	AML	02 31 30.4	
	comp=E,1828µm,0.7s						
TIR	Tirane	0.86	268	*i* Pg	Pg	02 31 11.0	-0.6
STIP	Stip	0.94	71	*i* Pg	Pn	02 31 17.0	+2.5
STIP				*i* Sg	Sn	02 31 32.8	+4.6
STIP				*e*Lg	Lg	02 31 32.9	
	comp=N,74nm,0.4s						
NEST	Nestorio	0.97	178	P	Pg	02 31 12.8	-1.0
NEST				S	Sb	02 31 27.7	+0.3
	comp=N,2µm,0.6s						
NEST	Nestorio	0.97	178	P	Pg	02 31 12.9	-0.8
NEST				S	Sb	02 31 27.9	+0.5
NEST				AML	AML	02 31 30.9	
	comp=E,3162µm,0.3s						
NEST				AML	AML	02 31 32.4	
	comp=N,5155µm,0.4s						
GRG	Griva	1.14	112	P	Pb	02 31 16.9	-0.1
GRG				S	Sb	02 31 32.4	+0.4
	comp=N,748nm,0.5s						
GRG	Griva	1.14	112	*i* Pg	Pb	02 31 17.0	-0.1
GRG				*i* Sg	Sn	02 31 33.0	-0.2
VAY	Valandovo	1.18	93	*e*Pg	Pn	02 31 17.8	-0.1
VAY				*e*Sg	Sn	02 31 34.1	0.0
VAY	Valandovo	1.18	93	*i* Pg	Pn	02 31 17.8	-0.1
VAY				*i* Sg	Sn	02 31 34.3	+0.1
VAY				*e*Lg	Lg	02 31 35.0	
	comp=N,209nm,0.5s						
PENT	Pentalofos	1.20	175	P	Pg	02 31 17.4	-0.6
PENT				S	Sn	02 31 34.4	-0.4
PENT	Pentalofos	1.20	175	P	Pg	02 31 17.5	-0.6
PENT				S	Sg	02 31 33.2	-0.3
PENT				AML	AML	02 31 39.6	
	comp=E,2231µm,0.8s						
PENT				AML	AML	02 31 40.6	
	comp=N,2034µm,0.4s						
BCI	Bajram Curri	1.20	325	P	Pg	02 31 16.9	-1.1
	baz=325						
BCI				S	Sn	02 31 35.5	+0.7
	baz=325						
KZN	Kozani	1.23	152	P	Pg	02 31 18.0	-0.6
KZN				S	Sn	02 31 36.1	+0.6
	comp=N,665nm,0.7s						
KZN	Kozani	1.23	152	P	Pg	02 31 17.7	-0.9
KZN				AML	AML	02 31 39.2	
	comp=E,1234µm,0.8s						
KZN				AML	AML	02 31 44.6	
	comp=N,1442µm,0.5s						
LSK	Leskovik	1.28	194	P	Pn	02 31 18.9	-0.4
LSK				S	Sg	02 31 36.4	+0.3
	comp=N,1µm,0.8s						
PVY	Plav	1.43	327	⇑*i*Pg	Pb	02 31 22.0	-0.1
PVY				*i* Sg	Sg	02 31 44.2	+3.0
ULC	Ulcinj	1.44	294	*i* Pg	Pn	02 31 20.7	-0.8
ULC	Ulcinj	1.44	294	⇑*i*Pg	Pn	02 31 20.7	-0.8
ULC				*i* Sg	Sg	02 31 44.4	+3.1
KNT	Kendrikon	1.44	98	P	Pb	02 31 21.8	-0.4
KNT				S	Sg	02 31 41.7	+0.3
	comp=N,238nm,0.6s						
KNT	Kendrikon	1.44	98	P	Pn	02 31 21.5	0.0
KNT	Kendrikon	1.44	98	*i* Pn	Pb	02 31 21.8	-0.4
KPRO	Kipourio	1.46	169	P	Pb	02 31 22.2	-0.3
KPRO				S	Sb	02 31 41.4	+0.1
	comp=N,908nm,0.5s						
KPRO	Kipourio	1.46	169	P	Pb	02 31 22.2	-0.3
BARS	Barje	1.55	23	*e*Pg	Pn	02 31 23.1	+0.1
BARS				*e*Sg	Sg	02 31 46.0	+1.2
BARS	Barje	1.55	23	*i* Pn	Pn	02 31 23.4	+0.4
BOSS	Bosilegrad	1.56	44	*e*Pg	Pb	02 31 24.0	-0.2
BOSS				*e*Sg	Sg	02 31 45.8	+0.7
DRME	Dracevica, Mon	1.58	301	*e*Pn	Pn	02 31 23.8	+0.4
DRME	Dracevica, Mon	1.58	301	⇑*i*Pn	Pn	02 31 23.9	+0.5
DRME				*i* Sn	Sg	02 31 48.1	+2.4
THE	Thessaloniki	1.67	116	*i* Pn	Pn	02 31 24.8	+0.3
PDG	Podgorica	1.67	309	⇑P	Pb	02 31 25.4	-0.6
PDG				⇑S	Sg	02 31 50.6	+1.9
PDG	Podgorica	1.67	309	*e*Pn	Pn	02 31 24.8	+0.2
PDG				*e*Sn	Sb	02 31 47.1	-0.1
PDG	Podgorica	1.67	309	*e*Pn	Pn	02 31 25.2	+0.6
PDG	Podgorica	1.67	309	*i* Pn	Pn	02 31 25.2	+0.6
TTG	Podgorica	1.67	309	⇑*i*Pn	Pb	02 31 26.0	0.0
TTG				*i* Sn	Sg	02 31 50.3	+1.6
BEY	Berane	1.70	331	*i* Pn	Pb	02 31 26.1	-0.5
IVA	Berane	1.70	331	⇑*i*Pn	Pb	02 31 26.0	-0.5
JAN	Janina	1.74	184	P	Pb	02 31 27.2	0.0
HORT	Hortiatis	1.77	116	P	Pn	02 31 26.3	+0.2
BUM	Brajici-Budva	1.82	301	⇑*i*Pn	Pb	02 31 28.1	-0.6
SELS	Selova	1.83	3	*e*Pn	Pb	02 31 28.8	0.0
SELS				*e*Sn	Sg	02 31 52.9	-0.9
SOH	Sokhos	1.86	107	P	Pn	02 31 28.1	+0.7
SOH	Sokhos	1.86	107	P	Pn	02 31 28.1	+0.7
KEK	Kerkira	1.91	209	P	Pn	02 31 29.0	+1.0
KEK				AML	AML	02 32 05.8	
	comp=E,290µm,0.4s						
KEK				AML	AML	02 32 06.0	
	comp=N,284µm,1.1s						
IGT	Igoumenitsa	1.93	196	P	Pb	02 31 30.2	-0.2
IGT				S	Sb	02 31 55.7	+1.0
IGT				AML	AML	02 32 02.4	
	comp=N,527µm,0.7s						
IGT				AML	AML	02 32 02.5	
	comp=E,453µm,0.5s						
CEME	Cevo	1.94	307	⇑*i*Pn	Pn	02 31 29.4	+1.0
CEME				*i* Sn	Sg	02 31 56.6	-0.7

SRS	**Serrai**	1.97	97	P	Pn	02 31 28.9	+0.2
SRS	**Serrai**	1.97	97	P	Pn	02 31 29.0	+0.2
THL	**Klokotos Trika**	1.98	157	P	Pn	02 31 29.5	+0.6
SJES	**Sjenica**	2.02	338	ePn	Pn	02 31 30.5	+0.9
SJES				eSn	Sb	02 31 56.8	-0.7
NKME	**Niksic**	2.06	313	⇑iPn	Pb	02 31 31.6	-1.1
NKY	**Niksic**	2.06	314	⇑iPn	Pb	02 31 32.7	-0.2
VTS	**Vitosha**	2.06	53	⇓P	Pn	02 31 30.8	+0.6
VTS				⇑S	Sb	02 31 58.3	-0.5
VTS	**Vitosha**	2.06	53	ePn	Pb	02 31 31.9	-1.0
PLG	**Polygyros**	2.11	118	P	Pn	02 31 31.2	+0.5
NVR	**Nevrokopi**	2.15	90	P	Pn	02 31 32.4	+1.1
NVR	**Nevrokopi**	2.15	90	P	Pn	02 31 32.1	+0.8
HCY	**Herceg Novi**	2.15	300	ePn	Pb	02 31 33.0	-1.3
HCY	**Herceg Novi**	2.15	300	⇑iPn	Pn	02 31 32.5	+1.2
HCY				iSn	Sb	02 32 01.6	+0.5
PLE	**Pljevlja**	2.28	329	⇓iPn	Pn	02 31 34.8	+1.7
PLE				iSn	Sb	02 32 05.1	+0.2
BOVS	**Bovan**	2.30	13	⇑P	Pb	02 31 35.5	-1.3
BOVS				⇑S	Sg	02 32 08.2	-0.8
BOVS	**Bovan**	2.30	13	ePn	Pn	02 31 35.0	+1.7
BOVS				eSn	Sb	02 32 04.4	-1.1
BRY	**Bratogost**	2.38	310	ePn	Pn	02 31 36.1	+1.6
BRY	**Bratogost**	2.38	310	⇑iPn	Pb	02 31 37.1	-1.1
BRY				iSn	Sb	02 32 07.3	-0.4
TREB	**Trebinje**	2.38	305	ePn	Pb	02 31 36.5	-1.7
TREB				eSn	Sn	02 32 04.3	+0.5
TREB	**Trebinje**	2.38	305	ePn	Pb	02 31 36.5	-1.7
UPM	**Unac-Piva**	2.39	320	ePn	Pb	02 31 37.3	-1.1
UPM	**Unac-Piva**	2.39	320	⇑iPn	Pn	02 31 36.3	+1.6
UPM				iSn	Sb	02 32 08.5	+0.3
DBRK	**Dubrovnik**	2.48	302	ePn	Pn	02 31 36.9	+1.1
GRUS	**Gruza**	2.51	355	ePn	Pn	02 31 36.9	+0.8
GRUS				eSn	Sn	02 32 08.7	+1.8
RUDO	**Rudo**	2.53	332	ePn	Pn	02 31 35.9	-0.6
BLKB	**Belogradchik**	2.55	28	⇑S	Sg	02 32 15.6	-1.3
BBLS	**Lazići**	2.74	335	ePn	Pn	02 31 40.1	+0.7
BBLS	**Lazići**	2.74	335	ePn	Pg	02 31 46.1	-1.5
DIVS	**Divibare**	2.81	345	ePn	Pn	02 31 40.2	-0.2
DIVS				eSn	Sn	02 32 15.0	+0.5
DIVS	**Divibare**	2.81	345	ePn	Pn	02 31 40.0	-0.4
TRUS	**Trudelj**	2.87	351	ePn	Pn	02 31 41.3	+0.2
STON	**Ston**	2.87	302	ePn	Pn	02 31 42.6	+1.5
STON	**Ston**	2.87	302	ePn	Pb	02 31 46.1	-0.4
STON	**Ston**	2.87	302	ePn	Pn	02 31 42.6	+1.5
HAPS	**Han Pijesak,Bl**	3.09	331	ePn	Pn	02 31 45.4	+1.1
MATE	**Matera**	3.34	259	⇑P	Pn	02 31 45.6	-1.9
MATE				⇑S	Sn	02 32 24.2	-3.1
TEKS	**Tekeris**	3.34	342	ePn	Pn	02 31 49.5	+1.9
LSTV	**Lastovo**	3.36	296	ePn	Pn	02 31 48.9	+1.1
MDVR	**Moldovita**	3.43	8	⇑P	Pn	02 31 49.6	+0.7
MDVR				⇑S	Sb	02 32 38.3	+0.4
MAKA	**Makarska**	3.51	304	ePn	Pn	02 31 51.9	+2.0
RICI	**Ricice**	3.56	308	ePn	Pn	02 31 49.9	-0.7
HERR	**Herculane**	3.64	16	⇓P	Pn	02 31 52.9	+1.3
HERR				⇑S	Sb	02 32 41.1	-2.8
HVAR	**Hvar**	3.82	299	ePn	Pn	02 31 55.2	+0.9
FRGS	**Fruska Gora**	3.87	347	⇑P	Pn	02 31 54.7	-0.1
FRGS	**Fruska Gora**	3.87	347	ePn	Pn	02 31 54.5	-0.3
TIP	**Timpagrande**	3.93	237	⇑P	Pn	02 31 54.8	-1.0
MGRS	**Mrkonjic Grad**	4.18	318	ePn	Pn	02 32 00.5	+1.4
GZR	**Gura Zlata**	4.20	17	⇑P	Pn	02 32 01.2	+1.7
GZR				⇑S	Sn	02 32 46.6	-2.2
BZS	**Buzias**	4.25	6	⇓P	Pn	02 31 59.4	-0.7
BZS	**Buzias**	4.25	6	ePn	Pn	02 32 00.2	+0.1
BLY	**Banja Luka**	4.37	321	ePn	Pn	02 32 03.2	+1.5
ZIRJ	**Zirje**	4.56	302	ePn	Pn	02 32 05.6	+1.2
MORI	**Morici**	4.63	304	ePn	Pn	02 32 07.2	+2.0
SIRR	**Siria**	4.90	5	⇓P	Pn	02 32 09.1	+0.1
UDBI	**Udbina**	4.96	311	ePn	Pn	02 32 11.9	+1.9
DUGI	**Dugi Otok**	5.10	303	ePn	Pn	02 32 12.5	+0.7
MORH	**Mrgy, Hungar**	5.12	341	ePn	Pn	02 32 11.5	-0.5
MOSL	**Moslavina**	5.23	325	ePn	Pn	02 32 15.2	+1.6
PLIT	**Plitvice**	5.26	313	ePn	Pn	02 32 16.1	+2.2
MLR	**Muntele Rosu**	5.45	40	⇑P	Pn	02 32 19.2	+2.5
NVLJ	**Novalja**	5.50	307	ePn	Pn	02 32 17.8	+0.5
RABC	**Rab**	5.66	308	ePn	Pn	02 32 21.2	+1.7
AQU	**L'Aquila**	5.76	282	ePn	Pn	02 32 21.2	+0.3
CRES	**Cresnjev**	5.99	320	ePn	Pn	02 32 23.6	-0.4
BRJN	**Brijuni**	6.36	306	ePn	Pn	02 32 29.6	+0.5
CEY	**Cerknica**	6.46	314	ePn	Pn	02 32 31.6	+1.1
SOKA	**Soboth** comp=E,0.8nm,0.3s	6.81	323	ePn	Pn	02 32 36.0	+0.6
OBKA	**Obir** comp=E,0.8nm,0.3s	6.92	320	ePn	Pn	02 32 39.2	+2.4
ARSA	**Arzberg** comp=E,1.0nm,0.3s	7.05	328	ePn	Pn	02 32 40.9	+2.3
KBA	**Koelnbreinsper** comp=E,1.1nm,0.4s	7.91	319	ePn	Pn	02 32 53.3	+2.8
ABTA	**Abfaltersbach** comp=E,3.3nm,0.6s	8.13	314	ePn	Pn	02 32 55.4	+2.1
WTTA	**Wattenberg** comp=E,0.5nm,0.2s	8.92	314	ePn	Pn	02 33 06.2	+1.9
SQTA	**Sankt Quirin** comp=E,1.0nm,0.4s	9.12	313	ePn	Pn	02 33 09.6	+2.5
FETA	**Feichten** comp=E,0.7nm,0.5s	9.28	311	ePn	Pn	02 33 11.4	+2.2

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*IDC **25** 02:39:10.1±4.7, 36°.17N×70°.65E, h175^{km}±43^{km}, mb3.4/5, mb1 3.4/7, mb1mx3.1/33, mbtmp3.8/7, Error ellipse: s-maj=35.3km s-min=22.7km az=161.0*

*NNC **25** 02:39:15.1±8.8, 37°.01N×70°.26E, h0^{km}, mb4.4, mpv4.0, Error ellipse: s-maj=70.1km s-min=63.6km az=25.0*

ISC 25 02:39:14.0±1.2**, 36°.6N**±0°.1×**70°.5E**±0°.1**, h204**^{km}**, n18, σ1^{s}.54**/20**, mb3.7**/4**, 5C, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu** SNR=42	6.05	23	P	Pn	02 40 42.9	+0.5
UCH	**Uchtor** SNR=27	6.42	28	P	Pn	02 40 47.7	+0.6
KK09	**Karatay Array** 3.1nm,0.3s,baz=181,slow=14	6.52	360	⇑Pn	Pn	02 40 48.6	+0.6
KK09	4.6nm,0.3s,baz=186,slow=26			⇑Sn	S	02 41 58.7	-3.7
EKS2	**Erkin-Say** SNR=8.7	6.56	21	P	Pn	02 40 49.8	+1.1
AAK	**Ala-Archa** SNR=9.5	6.77	26	P	Pn	02 40 52.2	+0.9
AAK	**Ala-Archa** 3.6nm,0.5s	6.77	26	⇑Pn	Pn	02 40 51.6	+0.2
AAK	7.2nm,0.5s			⇑Sn	S	02 42 07.2	-1.3
KBK	**Karagaybulak** SNR=5.1	6.95	28	P	Pn	02 40 54.7	+0.9
CHMS	**Chumysh** SNR=5.5	7.18	26	P	Pn	02 40 57.4	+0.8
USP	**Ospenovka** SNR=5.7	7.33	23	P	Pn	02 40 58.8	+0.3
TKM2	**Tokmak 2** SNR=11	7.43	30	P	Pn	02 41 00.8	+0.9
TKM2	**Tokmak 2** 11nm,0.5s	7.43	30	⇑Pn	Pn	02 41 00.3	+0.3
GEYT	**Alibeck** 0.4nm,0.3s,baz=132,slow=14,SNR=1.9	9.98	281	P	Pn	02 41 32.2	-0.7
MKAR	**Makanchi Array** 0.3nm,0.3s,baz=217,slow=13,SNR=11	13.44	37	P	Pn	02 42 17.6	+0.9
ZALV	**Zalesovo Beam** 0.8nm,0.4s,baz=218,slow=12,SNR=5.4	19.99	25	P	P	02 43 31.8	+1.0
FINES	**FINESS Array B** 3.5nm,1.0s,baz=127,slow=16,SNR=1.4	37.19	326	P	P	02 46 07.6	+2.3
ARCES	**ARCESS Array B** 2.8nm,0.9s,baz=106,slow=9.5,SNR=2.0	40.91	338	P	P	02 46 38.7	+2.7
TORD	**Torodi Ar. Bea** 0.5nm,0.4s,baz=48,slow=5.9,SNR=9.9	65.34	268	P	P	02 49 34.1	-0.6
WRA	**Warramunga Arr** 0.4nm,0.8s,baz=322,slow=5.0,SNR=2.3	82.36	122	P	P	02 51 11.3	-2.0

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*TAP **25** 02:40:31.7, 24°.04N×122°.44E, h31^{km}, ML3.4, D*

*JMA **25** 02:40:31.3±0.1, 24°.00N×122°.43E, h20^{km}±3^{km}, M3.1*

ISC 25 02:40:31.2±1.1**, 23°.99N**±0°.02×**122°.44E**±0°.02**, h24**^{km}±13^{km}**, n87, σ0^{s}.79**/157**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	0.66	45	P	Pb	02 40 43.8	-0.2
JYNG				S	Sb	02 40 52.1	-0.6
YOJ	**Yonaguni jima** baz=50	0.70	48	P	Pb	02 40 44.7	-0.1
YOJ	baz=50			S	Sn	02 40 55.7	-0.2
YOJ	**Yonaguni jima**	0.70	48	P	Pb	02 40 44.8	-0.1
YOJ				eS	Sb	02 40 53.5	-0.7
EWUT	**Wuta** baz=304	0.76	307	iP	Pb	02 40 45.5	-0.3
EWUT	baz=304			iS	Sn	02 40 56.4	-0.7
ETL	**Fush Village** baz=266	0.77	283	eP	Pn	02 40 46.4	-0.2
ETL	baz=266			S	Sn	02 40 57.2	-0.2
ENA	**Nanau** baz=311	0.78	305	iP	Pb	02 40 46.0	-0.1
ENA	baz=311			iS	Sn	02 40 56.7	-0.9
TWD	**Chiawan** baz=273	0.78	277	P	Pb	02 40 46.3	+0.3
TWD	baz=273			iS	Sb	02 40 56.6	+0.4
NACB	**Ninganchiao** baz=267	0.79	284	P	Pb	02 40 46.4	0.0
NACB	baz=267			S	Sb	02 40 57.2	+0.5
TWC	**Suao** baz=317	0.82	319	iP	Pb	02 40 46.0	-0.9
TWC	baz=317			iS	Sb	02 40 57.2	-0.4
ETLH	**Xiulin Townshi** baz=269	0.90	284	P	Pb	02 40 48.1	-0.2
ETLH	baz=269			S	Sn	02 41 00.4	-0.4
NDS	**Dongshan** baz=312	0.92	315	iP	Pn	02 40 48.5	-0.2
NDS	baz=312			iS	Sn	02 41 01.2	0.0
ESL	**Shilin** baz=256	0.94	260	iP	Pn	02 40 48.2	-0.7
EGS	baz=318	0.97	332	P	Pn	02 40 48.2	-1.2
EGS	baz=318			S	Sn	02 41 01.7	-0.8
EGFH	**Guangfu** baz=248	0.98	251	P	Pn	02 40 49.2	-0.3
EGFH	baz=248			S	Sb	02 41 00.7	-1.3
TWE	**Neicheng** baz=314	1.02	316	iP	Pb	02 40 49.9	-0.2
TWE	baz=314			S	Sn	02 41 03.1	-0.5
NTC	**Toucheng** baz=325	1.03	327	iP	Pb	02 40 50.5	+0.1
NTC	baz=325			iS	Sn	02 41 03.4	-0.4
ENTT	**Nioudou** baz=293	1.03	309	iP	Pb	02 40 50.3	-0.1
ENTT	baz=293			iS	Sn	02 41 04.7	+0.8
NDT	**Datong Townshi** baz=291	1.04	306	iP	Pb	02 40 51.2	+0.6
NDT	baz=291			S	Sn	02 41 04.7	+0.4
HGSD	**Ruisui** baz=239	1.05	242	P	Pn	02 40 50.1	-0.4
HGSD	baz=239			S	Sb	02 41 05.0	+0.9
NNS	**Nan Shan** baz=281	1.07	295	iP	Pn	02 40 50.8	-0.1
NNS	baz=281			S	Sb	02 41 04.7	-0.2
WHF	**Hehuan Shan** baz=264	1.08	279	iP	Pn	02 40 51.2	-0.1
WHF	baz=264			iS	Sb	02 41 05.1	-0.4
TWB1	**Santiao Chiao** baz=352	1.10	338	P	Pn	02 40 50.8	-0.4
TWB1	baz=352			S	Sb	02 41 05.4	0.0
FUSS	**Fushou** baz=280	1.12	284	iP	Pn	02 40 50.2	-1.5
FUSS	baz=280			iS	Sb	02 41 06.9	+0.5
EHY	**Hungye** baz=256	1.13	245	iP	Pn	02 40 51.6	+0.1
EHY	baz=256			iS	Sn	02 41 06.1	-0.3
CHGB	**Renai** baz=260	1.16	274	P	Pn	02 40 52.5	+0.3
CHGB	baz=260			S	Sb	02 41 08.2	+0.8
NWLT	**Wulai** baz=310	1.16	313	iP	Pb	02 40 52.5	-0.1
NWLT	baz=310			iS	Sb	02 41 07.6	+0.2
TWT	**Tachien** baz=269	1.19	283	iP	Pn	02 40 52.2	-0.3
TWT	baz=269			S	Sb	02 41 09.2	+1.1
YHNB	**Yeheng** baz=291	1.19	305	P	Pb	02 40 52.7	-0.4
YHNB	baz=291			S	Sb	02 41 07.7	-0.4
TDCB	**Techi** baz=269	1.20	283	P	Pn	02 40 52.0	-0.7
TDCB	baz=269			S	Sb	02 41 08.5	-0.1
NSK	**Sanguang** baz=290	1.20	305	iP	Pn	02 40 52.6	0.0
NSK	baz=290			iS	Sb	02 41 09.3	+0.8
YULB	**Yu-li** baz=227	1.20	241	P	Pn	02 40 52.5	-0.1
YULB	baz=227			S	Sn	02 41 07.7	-0.5
EYUL	**Yuli** baz=236	1.21	238	iP	Pn	02 40 52.7	0.0
EYUL	baz=236			iS	Sn	02 41 08.3	+0.1
VWDT	**VWDT** baz=256	1.21	259	eS	Sn	02 41 07.7	-0.6
IRIF	**Iriomote-Funau**	1.23	73	P	Pb	02 40 53.9	+0.1
IRIF				S	Sb	02 41 09.7	+0.5
NWF	**Wu-fen Shan** baz=329	1.24	331	iP	Pn	02 40 53.1	0.0
NWF	baz=329			iS	Sb	02 41 10.3	+0.8
HATJ	**Hateruma jima**	1.25	86	P	Pb	02 40 54.0	-0.1
HATJ				S	Sb	02 41 10.7	+0.9
TWA	**Mucha** baz=338	1.26	322	iP	Pb	02 40 53.7	-0.6
TWA	baz=338			iS	Sb	02 41 11.3	+1.1
NHDH	**Xindian Distri** baz=317	1.28	320	eS	Sb	02 41 11.4	+0.7
FULB	**Fuli** baz=220	1.31	234	iP	Pn	02 40 53.7	-0.4
FULB	baz=220			iS	Sn	02 41 10.8	0.0
CHKT	**Chengkung** baz=216	1.32	228	S	Sn	02 41 10.0	-1.1
SSLB	**Suanglung** baz=259	1.37	262	P	Pb	02 40 56.2	0.0
SSLB	baz=259			S	Sn	02 41 11.0	-1.4
WHP	**Taichung City** baz=269	1.40	282	iP	Pb	02 40 57.1	+0.5
WHP	baz=269			S	Sb	02 41 15.3	+1.2
WCS	**Beigang Elemen** baz=263	1.40	273	iP	Pb	02 40 56.3	-0.4
WCS	baz=263			S	Sn	02 41 13.1	+0.1
YM01	**YM01** baz=339	1.40	326	P	Pn	02 40 54.9	-0.4
YM01	baz=339			S	Sb	02 41 13.9	-0.3
SMLT	**Sun Moon Lake** baz=263	1.41	266	iP	Pn	02 40 56.3	+0.8
SMLT	baz=263			S	Sb	02 41 14.6	0.0
TWS1	**Kuangyinshan** baz=335	1.45	320	P	Pb	02 40 56.5	-1.0
TWS1	baz=335			S	Sb	02 41 15.6	+0.1
EDH	**Donghe** baz=216	1.45	226	iP	Pn	02 40 56.2	+0.2
EDH	baz=216			iS	Sn	02 41 12.8	-1.4
TYC	**Yuchr** baz=264	1.45	267	iP	Pn	02 40 56.7	+0.7
TYC	baz=264			S	Sn	02 41 14.8	+0.6
JKRS	**Kuro-shima**	1.46	80	P	Pb	02 40 57.1	-0.6
JKRS				eS	Sb	02 41 16.7	+0.9
LIOB	**Emei** baz=294	1.46	297	iP	Pb	02 40 57.8	+0.2
LIOB	baz=294			eS	Sb	02 41 17.4	+1.6
NSTT	**Nanjuang** baz=294	1.46	296	iP	Pb	02 40 57.5	-0.3
NSTT	baz=294			S	Sb	02 41 17.0	+1.0
ELDTW	**Lidau** baz=236	1.53	239	P	Pn	02 40 55.4	-1.8
ELDTW	baz=236			S	Sn	02 41 14.8	-1.5
ALS	**Alishan** baz=250	1.57	253	iP	Pn	02 40 57.6	-0.3
ALS	baz=250			iS	Sn	02 41 18.6	+1.0
WJS	**Zhushan** baz=261	1.57	264	iS	Sb	02 41 21.8	+2.7
LDUT	**Ludao** baz=212	1.58	215	iP	Pn	02 40 57.2	-0.5
LDUT	baz=212			iS	Sn	02 41 15.7	-1.7
JIJ	**Ishigaki jima**	1.60	76	P	Pn	02 40 58.3	+0.3
JIJ				eS	Sb	02 41 19.7	-0.2
WNT	**Mingjian** baz=263	1.61	267	iS	Sb	02 41 20.9	+0.8
LONT	**Longtian** baz=239	1.61	228	iP	Pn	02 40 57.7	-0.5
LONT	baz=239			iS	Sn	02 41 18.3	+0.1
TCU	**Taichung** baz=273	1.62	276	S	Sb	02 41 21.8	+1.3
CHN5	**Tsauling** baz=244	1.66	257	iP	Pb	02 41 00.7	-0.4
CHN5	baz=244			S	Sb	02 41 22.2	+0.5
TWGBT	**Beinan** baz=237	1.71	227	P	Pn	02 40 58.5	-1.0
TWGBT	baz=237			S	Sn	02 41 19.3	-1.3
WCHH	**Zhanghua** baz=270	1.72	274	S	Sb	02 41 24.5	+1.1
STYH	**Taoyuan** baz=231	1.73	242	iP	Pb	02 41 01.9	-0.4
STYH	baz=231			iS	Sb	02 41 23.5	-0.1
WDLH	**Douliu** baz=257	1.77	261	P	Pb	02 41 01.9	-1.1
WDLH	baz=257			S	Sb	02 41 25.2	+0.6
TPUB	**Ta-pu** baz=245	1.79	248	P	Pb	02 41 02.8	-0.6
TPUB	baz=245			S	Sb	02 41 25.7	+0.2
JISG	**Ishigakijimahi**	1.81	70	P	Pn	02 41 01.3	+0.4
JISG				S	Sn	02 41 23.1	0.0
WTP	**Ta-pu** baz=243	1.83	247	iP	Pb	02 41 03.5	-0.6
WTP	baz=243			iS	Sb	02 41 27.5	+0.9
WRL	**Guolierlin Hig** baz=278	1.89	268	P	Pb	02 41 04.3	-0.7
WRL	baz=278			iS	Sb	02 41 27.9	-0.3
WTK	**Tuku** baz=258	1.90	261	S	Sb	02 41 29.7	+1.2
CHY	**Chiayi** baz=252	1.91	256	S	Sb	02 41 29.9	+1.1
SLGT	**Liugui** baz=230	1.92	239	iP	Pb	02 41 04.7	-0.9
SLGT	baz=230			iS	Sb	02 41 29.1	0.0
CHN1	**Nanshi** baz=243	1.93	246	iP	Pb	02 41 04.9	-0.8
CHN1	baz=243			iS	Sb	02 41 29.8	+0.4
SGST	**Jiashian** baz=232	1.93	243	iS	Sb	02 41 29.0	-0.3
TWK	**Hsinying** baz=245	1.93	249	iP	Pb	02 41 05.0	-0.7
TWK	baz=245			iS	Sb	02 41 29.3	0.0
ECL	**Taimali** baz=222	1.94	225	P	Pn	02 41 03.1	+0.4
ECL	baz=222			S	Sn	02 41 25.7	-0.7
SSD	**Sandimen** baz=226	2.07	234	iP	Pn	02 41 05.8	+1.4
SSD	baz=226			S	Sn	02 41 31.0	+1.5
ICHU	**Yijhu** baz=250	2.08	253	S	Sb	02 41 32.4	-1.2
TSMG	**Majia** baz=226	2.08	233	iP	Pn	02 41 06.1	+1.4
TSMG	baz=226			S	Sn	02 41 30.4	+0.5
LAY	**Lan-yu** baz=201	2.10	203	P	Pn	02 41 04.9	0.0
LAY	baz=201			S	Sn	02 41 28.2	-2.2
MASBT	**Mashibuluo** baz=224	2.15	231	P	Pn	02 41 06.9	+1.3
MASBT	baz=224			S	Sn	02 41 32.6	+1.0
JTJ	**Tarama**	2.17	72	eS	Sn	02 41 33.1	+1.2
SCZT	**Fangliau** baz=218	2.32	227	iP	Pn	02 41 09.7	+1.7
SCZT	baz=218			S	Sn	02 41 37.2	+1.5
SLIU	**Shizi** baz=227	2.32	221	iP	Pn	02 41 08.7	+0.7
SLIU	baz=227			S	Sn	02 41 36.1	+0.4
PHUB	**P'eng-hu** baz=272	2.67	260	S	Sn	02 41 45.7	+1.4
PNG	**Penghu** baz=258	2.67	262	eS	Sn	02 41 45.7	+1.3
PTMZ	**Houxiangcun** baz=286	3.20	290	eS	Sn	02 41 57.1	-0.3
KNMB	**Chin-men Tao** baz=274	3.73	278	S	Sn	02 42 10.3	-0.2

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*IDC **25** 02:44:41.6±1.9, 32°.88S×178°.20W, h0^{km}, mb4.5/3, mb1 4.6/4, mb1mx4.1/24, mbtmp4.5/4, ML4.2/1, Error ellipse: s-maj=52.4km s-min=32.0km az=131.0*

*NEIC **25** 02:44:44.1±0.9, 32°.9S±0°.1×178°.3W±0°.2, h10^{km}±2^{km}, mb4.5/7, Error ellipse: s-maj=36.6km s-min=14.0km az=112.0*

*WEL **25** 02:44:44.5±0.9, 33°S±12°×17°9W±3°1, h33^{km}, M4.3/12, mB4.7/7, ML4.8/13, MLv4.6/12, Mw(mB)4.0/7, Error ellipse: s-maj=0.0km s-min=0.0km az=110.1*

ISC 25 02:44:42.4±1.5**, 32°.91S**±0°.10×**178°.1W**±0°.2**, h10**^{km}**, n36, σ1^{s}.38**/48**, mb4.5**/7**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	3.64	3	P	Pn	02 45 34.0	-4.8
GLKZ				S	Sn	02 46 17.6	-4.2
RAO	**Raoul Island**	3.65	3	Pn	Pn	02 45 39.8	+0.9
MXZ	**Matakaoa Point**	5.48	211	P	Pn	02 46 03.9	-0.2
MXZ				S	Sn	02 47 05.7	-1.5
MXZ	**Matakaoa Point**	5.48	211	Pn	Pn	02 46 05.0	+0.9
WMGZ	**Waiomatatini S**	5.65	209	P	Pn	02 46 07.6	+1.1
WMGZ				S	Sn	02 47 12.7	+1.2
PKGZ	**Pakihiroa**	5.85	211	P	Pn	02 46 09.2	0.0
PKGZ				S	Sn	02 47 14.1	-2.3
HAZ	**Te Kaha**	5.87	213	P	Pn	02 46 09.0	-0.5
PUZ	**Puketiti**	5.93	209	P	Pn	02 46 09.2	-1.1
PUZ				S	Sn	02 47 17.8	-0.6
RUGZ	**Raukumara Rang**	6.09	213	P	Pn	02 46 12.6	0.0
RUGZ				S	Sn	02 47 23.7	+1.2
TWGZ	**Tauwhareparae**	6.13	210	P	Pn	02 46 15.5	+2.4
TWGZ				S	Sn	02 47 22.9	-0.5
CNGZ	**Carnagh Statio**	6.31	207	P	Pn	02 46 15.0	-0.5
CNGZ				S	Sn	02 47 24.6	-3.0
MWZ	**Matawai**	6.46	212	P	Pn	02 46 15.6	-2.0
MWZ				S	Sn	02 47 30.2	-1.3
URZ	**Urewera** 4.5nm,0.3s,baz=123,slow=23,SNR=18	6.59	215	Pn	Pn	02 46 20.5	+1.1

URZ				Sn	Sn	02 47 34.0	-0.7
	11nm,0.3s,baz=52,slow=22,SNR=11						
URZ	Urewera	6.59	215	P	Pn	02 46 17.9	-1.5
URZ				S	Sn	02 47 33.7	-0.9
RIGZ	Rimuhau	6.67	209	P	Pn	02 46 20.6	0.0
RIGZ				S	Sn	02 47 35.0	-1.8
SNGZ	Shannon Statio	6.92	211	P	Pn	02 46 25.2	+1.4
SNGZ				S	Sn	02 47 41.1	-1.5
MTHZ	Maungataniwha	7.20	213	P	Pn	02 46 29.9	+2.1
MTHZ				S	Sn	02 47 47.5	-2.0
ARHZ	Aropaoanui	7.46	210	P	Pn	02 46 31.7	+0.3
ARHZ				S	Sn	02 47 54.3	-1.8
BKZ	Black Stump Fm	7.61	213	Pn	Pn	02 46 32.9	-0.5
CTA	Charters Tower	34.16	283	P	P	02 51 29.6	+1.7
	3.3nm,0.3s,baz=122,slow=5.6,SNR=2.3						
CTAO	Charters Tower	34.16	283	P	P	02 51 29.4	+1.4
CTAO				IAmb	IAmb	02 51 31.6	
	comp=Z,22nm,1.4s						
AS31	Alice Springs	42.91	270	P	P	02 52 42.4	+0.8
AS31				IAmb	IAmb	02 52 42.8	
	comp=Z,2.2nm,1.2s						
ASAR	Alice Springs	42.91	270	P	P	02 52 41.5	0.0
	comp=Z,1.6nm,0.5s,baz=110,slow=7.7,SNR=23						
ASAR	Alice Springs	42.91	270	P	P	02 52 41.0	-0.5
WB2	Warramunga Arr	44.12	275	P	P	02 52 51.0	-0.2
WB2				IAmb	IAmb	02 52 51.9	
	comp=Z,5.3nm,0.6s						
WRAB	Tennant Creek	44.12	275	P	P	02 52 50.9	-0.4
WRAB				IAmb	IAmb	02 52 57.8	
	comp=Z,8.6nm,1.2s						
WRA	Warramunga Arr	44.13	275	P	P	02 52 51.1	-0.2
	comp=Z,3.2nm,0.4s,baz=114,slow=7.7,SNR=95						
WRA	Warramunga Arr	44.13	275	P	P	02 52 50.5	-0.9
WB0	Warramunga Arr	44.16	275	P	P	02 52 51.3	-0.3
WB0				IAmb	IAmb	02 53 04.0	
	comp=Z,9.8nm,1.3s						
FORT	Forrest	45.34	258	P	P	02 53 00.7	-0.1
VNA3	Neumayer Olymp	75.82	176	P	P	02 56 40.4	+12
VNA2	Neumayer--Watz	76.25	177	P	P	02 56 42.8	+12
MKAR	Makanchi Array	119.27	309	PKP	PKiKP	03 03 32.1	+0.4
	comp=Z,1.0nm,1.0s,baz=113,slow=1.9,SNR=2.3						
MKAR	Makanchi Array	119.27	309		PKiKP	03 03 32.6	+1.0
FINES	FINESS Array B	147.44	339	PKPbc	PKPbc	03 04 26.1	+0.3
	comp=Z,2.3nm,0.4s,baz=40,slow=3.4,SNR=34						
AKASG	Malin Array Be	153.17	320	PKPbc	PKiKP	03 04 40.4	+0.2
	comp=Z,0.2nm,0.3s,baz=45,slow=2.8,SNR=1.6						

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*GII **25** 03:01:22.6±0.3, 33°.60N×35°.13E, h11^{km}, Mm1.5/3*
*GRAL **25** 03:01:22.3±0.3, 33°.70N×35°.13E, h25^{km}±7^{km}, MD2.6*
ISC 25 03:01:21.8±2.2**, 33°.7N**±0°.1×**35°.12E**±0°.08**, h19**^{km}±4^{km}**, n10,** σ**0^{s}.34**/18**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DQRL	Deir Qamar	0.38	85	*e*P	Pg	03 01 29.9	0.0
DQRL				*e*S	Sg	03 01 35.4	+0.2
SHBL	Chebaa	0.62	122	*e*P	Pb	03 01 33.6	-0.4
RCY	Rachaya	0.63	106	*e*P	Pb	03 01 33.9	-0.3
RCY				*e*S	Sg	03 01 42.3	-0.5
GEM	Giv'at Ha'Em	0.65	135	Pg	Pb	03 01 34.4	-0.1
GEM				Sg	Sg	03 01 43.4	0.0
NATI	Neve Ativ	0.66	128	Pg	Pb	03 01 34.5	-0.2
NATI				Sg	Sb	03 01 43.5	0.0
MMA0B	Mount Meron ar	0.70	160	Pg	Pb	03 01 35.3	-0.1
MMA0B				Sg	Sb	03 01 44.6	-0.1
OFRI	\`Ofer	1.06	186	Pg	Pb	03 01 40.9	-0.6
OFRI				Sg	Sb	03 01 55.1	+0.1
MMLI	Mount Malkishu	1.26	168	Pg	Pn	03 01 44.8	+0.3
MMLI				Sg	Sb	03 02 00.4	-0.4
SLTI	Sal'it	1.43	183	Sn	Sb	03 02 06.2	+0.4
HMDT	Nahal Hemdat	1.46	166	Pn	Pn	03 01 47.4	+0.2
HMDT				Sn	Sb	03 02 06.9	+0.4

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*ARE **25** 03:12:24±2.5, 15°.66S±0°.05×71°.86W±0°.08, h13^{km}±4^{km}, Error ellipse: s-maj=11.3km s-min=4.9km az=64.0*
*VAO **25** 03:12:27.6±0.5, 15°.60S×71°.88W, h10^{km}, mb4.3*
*NEIC **25** 03:12:29.2±1.5, 15°.64S±0°.06×71°.94W±0°.08, h28^{km}±5^{km}, mb4.6/43, ML4.5(ARE), Error ellipse: s-maj=11.9km s-min=8.1km az=69.0*
*IDC **25** 03:12:30.4±2.7, 15°.49S×71°.44W, h38^{km}±23^{km}, mb3.9/11, mb1 4.1/15, mb1mx4.0/38, mbtmp4.2/15, ML3.8/4, Error ellipse: s-maj=21.1km s-min=14.4km az=60.0*
ISC 25 03:12:29.8±0.4**, 15°.61S**±0°.05×**71°.91W**±0°.06**, h35**^{km}**, n135,** σ**1^{s}.66**/142**, mb4.5**/26**, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AP01	Chacalluta	3.13	152		Pn	03 13 17.3	+0.7
AP01				Sn	Sn	03 13 54.4	+1.6
PB12	IPOC Station P	3.35	153	*e*P	Pn	03 13 19.5	-0.3
PB12				*i* S	Sn	03 14 05.3	+6.9
PB12	IPOC Station P	3.35	153	Pn	Pn	03 13 19.7	-0.1
PB12				Sn	Sn	03 13 59.8	+1.4
PB16	IPOC Station P	3.55	140		Pn	03 13 22.7	-0.3
LPAZ	La Paz	3.69	101	Pn	Pn	03 13 26.0	+1.0
PB11	IPOC Station P	4.65	153	Pn	Pn	03 13 37.4	-0.4
TA02	Huaiquique	4.93	160		Pn	03 13 41.0	-0.5
TA01	Diego Aracena	5.20	162	*e*P	Pn	03 13 44.6	-0.4
TA01	Diego Aracena	5.20	162	Pn	Pn	03 13 43.4	-1.7
PB08	IPOC Station P	5.21	150	*e*P	Pn	03 13 46.5	+0.8
PB08				*i* S	Sn	03 14 52.5	+7.7
PB08	IPOC Station P	5.21	150		Pn	03 13 45.3	-0.4
PB01	IPOC Station P	5.87	157		Pn	03 13 55.1	+0.6
PB02	IPOC Station P	5.99	162	*e*P	Pn	03 13 55.6	-0.5
NNA	Nana	6.00	306	Pn	Pn	03 13 59.7	+3.6
	4.2nm,0.3s,baz=165,slow=5.9,SNR=9.2						
NNA				Sn	Sn	03 15 19.3	+16
	1.1nm,0.3s,baz=210,slow=20,SNR=1.5						
NNA	Nana	6.00	306		Pn	03 13 57.1	+1.0
PB07	IPOC Station P	6.38	163	*e*P	Pn	03 14 03.6	+2.1
PB07				*i* S	Pn	03 14 03.9	+2.4
PB07	IPOC Station P	6.38	163		Pn	03 13 59.7	-1.8
PB09	IPOC Station P	6.65	158		Pn	03 14 05.9	+0.6
PB03	IPOC Station P	6.72	163	*e*P	Pn	03 14 07.5	+1.3
PB04	IPOC Station P	6.89	166		Pn	03 14 06.2	-2.4
PB06	IPOC Station P	7.40	163		Pn	03 14 13.6	-1.8
LVC	Limon Verde	7.52	158	Pn	Pn	03 14 17.0	-0.4
	5.1nm,0.3s,baz=284,slow=7.0,SNR=41						
LVC				Sn	Sn	03 15 33.8	-7.7
	0.3nm,0.3s,baz=72,slow=20,SNR=1.1						
LVC	Limon Verde	7.52	158	*e*P	Pn	03 14 16.9	-0.4
CZSB	Cruzeiro do Su	7.87	354	Pn	Pn	03 14 20.5	-1.4
PB15	IPOC Station P	7.90	163		Pn	03 14 22.0	-0.5
PB10	IPOC Station P	7.97	171	Pn	Pn	03 14 22.0	-1.2
ETMB	Extrema	8.00	45	*e*P	Pn	03 14 24.9	+1.3
ETMB	Extrema	8.00	45	Pn	Pn	03 14 24.8	+1.1
PB14	IPOC Station P	9.08	171	Pn	Pn	03 14 38.0	-0.7
SIV	San Ignacio	10.44	94	Pn	Pn	03 14 53.4	-3.7
	1.2nm,0.3s,baz=269,slow=12,SNR=37						
SIV				Sn	Sn	03 16 56.7	+3.8
	0.2nm,0.3s,baz=217,slow=15,SNR=1.6						
ATAH	Atahualpa	10.55	322	Pn	Pn	03 15 03.0	+4.0
	0.2nm,0.3s,baz=161,slow=14,SNR=3.2						
ATAH				Sn	Sn	03 17 15.6	+19
	0.2nm,0.3s,baz=46,slow=18,SNR=1.5						
SAML	Samuel	10.79	53	Pn	Pn	03 15 00.5	-1.4
AC02	Maricunga	11.47	167	Pn	Pn	03 15 09.7	-1.9
TBTG	Tabatinga, AM	11.52	10	Pn	Pn	03 15 12.6	+0.7
VILB	Vilhena	11.65	78	*e*P	Pn	03 15 12.2	-1.6
VILB	Vilhena	11.65	78	Pn	Pn	03 15 12.4	-1.4
PTLB	Pontes e Lacer	12.31	91	*e*P	Pn	03 15 23.1	+0.5
PTLB	Pontes e Lacer	12.31	91	Pn	Pn	03 15 22.5	-0.2
AC04	Llanos de Chal	12.56	177	Pn	Pn	03 15 25.0	-1.1
CO03	El Pedregal	15.20	176		Pn	03 16 00.9	-1.1
CO03				IAmb	IAmb	03 16 11.9	
	comp=Z,35nm,1.2s						
PDRB	Porto dos Gac	15.28	77	*e*P	Pn	03 16 03.8	+0.7
SALV	Santo Antonio	15.61	93	*e*P	Pn	03 16 06.9	-0.4
AQDB	Aquidauana	16.15	110	*e*P	Pn	03 16 15.6	+1.4
AQDB	Aquidauana	16.15	110	Pn	Pn	03 16 14.5	+0.2
CLDB	Colider	16.37	75	*e*P	Pn	03 16 16.4	-0.7
MACA	Manacapuru-AM	16.59	43	*e*P	Pn	03 16 20.4	+0.6
MACA	Manacapuru-AM	16.59	43	Pn	Pn	03 16 19.8	0.0
OTAV	Otavalo	17.02	337	P	Pn	03 16 26.2	+0.5
VA03	San Esteban	17.12	176	P	P	03 16 28.2	+0.3
MT02	Curacav	17.59	178	P	Pn	03 16 30.4	-1.8
MT09	Talagante	18.11	178	P	Pn	03 16 37.7	-1.0
MT01	Popeta	18.19	178	P	Pn	03 16 37.2	-2.3
NPGB	Novo Progresso	18.31	64	*e*P	P	03 16 40.8	-0.3
BO01	Tunca	18.72	178	P	P	03 16 43.7	-1.7
PTGA	Pitinga	18.91	40	P	P	03 16 47.1	-0.5
	comp=Z,0.4nm,0.3s,baz=218,slow=12,SNR=9.5						
PTGA	Pitinga	18.91	40	P	P	03 16 48.0	+0.4
BO02	Sierra Bellavi	19.13	177	P	P	03 16 49.4	-0.6
BO02				IAmb	IAmb	03 16 57.5	
	comp=Z,54nm,1.8s						
ITTB	Itaituba	19.43	57	*e*P	P	03 16 53.4	0.0
TRCB	Terra Rica	19.54	114	*e*P	Pn	03 16 55.6	-0.5
ITQB	Itaqui	19.84	137	*e*P	Pn	03 16 59.7	+0.3
ITQB	Itaqui	19.84	137	P	P	03 16 57.1	-0.6
ITQB				IAmb	IAmb	03 17 08.1	
	comp=Z,32nm,0.8s						
ML02	Panimavida	20.07	179		P	03 17 00.5	+0.3
ML02				IAmb	IAmb	03 17 08.3	
	comp=Z,57nm,1.2s						
SNDB	Serra Nova Dou	20.34	82	*e*P	P	03 17 03.8	+0.5
PCMB	Pacaembu	20.45	110	*e*P	P	03 17 04.9	+0.5
PTGB	Pitanga	20.69	119	*e*P	P	03 17 08.2	+1.0
ITRB	Iturama	20.93	104	*e*P	P	03 17 09.7	0.0
BOAV	Boa Vista	21.14	33	*e*P	P	03 17 13.9	+2.0
MALB	Monte Alegre	22.12	54	*e*P	P	03 17 23.1	+0.6
FRTB	Fartura	22.41	114	*e*P	P	03 17 26.6	+1.1
CPSB	Cacapava Do Su	22.44	134	*e*P	P	03 17 25.3	-0.5
BDFB	Brasilia	23.01	93	P	P	03 17 27.7	-4.3
	comp=Z,3.4nm,0.8s,baz=298,slow=8.0,SNR=5.1						
PLTB	Pedras Altas	23.17	137	*e*P	P	03 17 35.5	+2.1
PEXB	Peixe	23.18	84	*e*P	P	03 17 33.5	-0.1
LC01	Cunco	23.20	180	P	P	03 17 31.9	-1.6
LC01				IAmb	IAmb	03 17 37.7	
	comp=Z,11nm,0.8s						
TIJ01	Guaruva-PR	23.50	118	*e*P	P	03 17 37.2	+0.4
CNLB	Canela	23.71	129	*e*P	P	03 17 40.1	+1.5
RCLB	Rio Claro- Sao	24.00	110	*e*P	P	03 17 42.6	+1.1
SDV	Santo Domingo	24.37	3	P	P	03 17 44.7	-0.3
	comp=Z,8.7nm,0.8s,baz=174,slow=4.5,SNR=8.7						
SDV	Santo Domingo	24.37	3	*e*P	P	03 17 46.1	+1.1
SDV	Santo Domingo	24.37	3	P	P	03 17 44.2	-0.8
SDV				IAmb	IAmb	03 17 51.4	
	comp=Z,18nm,1.1s						
VAO	Valinhos	24.64	111	*e*P	P	03 17 48.9	+1.6
SMTB	Santa Maria do	24.68	77	*e*P	P	03 17 48.6	+0.9
MCPB	Macapa, AP	24.77	54	*e*P	P	03 17 48.2	-0.4
PLCA	Paso Flores	25.06	178	P	P	03 17 52.1	+1.1
	comp=Z,9.2nm,0.9s,baz=350,slow=12,SNR=15						
PLCA	Paso Flores	25.06	178	*e*P	P	03 17 51.8	+0.8
PLCA	Paso Flores	25.06	178	P	P	03 17 49.9	-1.1
PLCA				IAmb	IAmb	03 17 57.3	
	comp=Z,17nm,1.2s						
LL04	Puerto Octay	25.21	181	P	P	03 17 51.6	-0.6
LL04				IAmb	IAmb	03 18 06.8	
	comp=Z,19nm,1.1s						
NBMA	Muriti-CE	33.46	80	*e*P	P	03 19 06.8	+0.9
T57A	Hurt	52.78	353	P	P	03 21 41.9	+0.4
T57A				IAmb	IAmb	03 21 46.6	
	comp=Z,15nm,1.1s						
WLAR	White Oak Lake	53.03	338	P	P	03 21 43.8	+0.4
S57A	Dark Hollow, R	53.50	353	P	P	03 21 46.1	-0.7
MIAR	Mount Ida	53.97	338	P	P	03 21 48.7	-1.6
TX32	Lajitas Array	54.19	325	P	P	03 21 51.9	-0.3
TX32				IAmb	IAmb	03 23 08.8	
	comp=Z,9.6nm,1.9s						
TXAR	Lajitas Array	54.19	325	P	P	03 21 52.2	+0.1
	comp=Z,1.1nm,0.8s,baz=143,slow=8.6,SNR=10						
TXAR	Lajitas Array	54.19	325	P	P	03 21 52.4	+0.3
TX31	Lajitas Ar. Si	54.19	325	P	P	03 21 51.9	-0.3
TX31				IAmb	IAmb	03 22 03.6	
	comp=Z,7.5nm,1.3s						
MNTX	Cornudas Mount	56.96	326	P	P	03 22 10.8	-1.1
MNTX				IAmb	IAmb	03 23 00.7	
	comp=Z,11nm,2.0s						
KAN10	Anthony SW Sta	57.97	335	P	P	03 22 19.1	+0.3
CBKS	Cedar Bluff	60.08	335	P	P	03 22 33.2	-0.4
CBKS				IAmb	IAmb	03 22 36.3	
	comp=Z,9.9nm,1.0s						
T25A	Trinidad	60.75	331	P	P	03 22 37.1	-1.2
T25A				IAmb	IAmb	03 22 45.2	
	comp=Z,4.8nm,1.0s						
SDCO	Great Sand Dun	61.75	330	P	P	03 22 44.8	-0.4
SDCO				IAmb	IAmb	03 22 50.9	
	comp=Z,7.0nm,0.9s						
X16A	Lo Mia Camp, P	62.36	324	P	P	03 22 50.2	+1.0
MVCO	Mesa Verde	62.83	328	P	P	03 22 53.0	+0.6
Y14A	Wickenburg	62.93	322	P	P	03 22 52.3	-0.6
Y14A				IAmb	IAmb	03 23 44.3	
	comp=Z,5.5nm,1.6s						
ECSD	EROS Data Cent	63.23	340	P	P	03 22 54.6	-0.1
ECSD				IAmb	IAmb	03 23 11.8	
	comp=Z,10nm,1.4s						
O20A	White River Ci	64.95	330	P	P	03 23 06.1	-0.1
O20A				IAmb	IAmb	03 23 14.2	
	comp=Z,18nm,1.8s						
VNA3	Neumayer Olymp	66.53	162	P	P	03 23 15.5	-0.3
E28A	Huff	67.11	339	P	P	03 23 20.0	+0.2
VNA2	Neumayer--Watz	67.12	161	P	P	03 23 19.5	-0.1
DUG	Dugway, Tooele	67.30	327	P	P	03 23 20.2	-1.1
DUG				IAmb	IAmb	03 23 24.7	
	comp=Z,18nm,1.8s						
R11A	Troy Canyon, C	67.50	324	P	P	03 23 22.9	+0.2
PDAR	Pinedale Array	67.61	331	P	P	03 23 24.7	+1.4
	comp=Z,0.6nm,0.8s,baz=163,slow=6.4,SNR=5.7						
MDND	Maddock	67.85	340	P	P	03 23 24.5	+0.1
SNAA	Sanae	68.74	162	P	P	03 23 29.2	-0.6
NVAR	Mina Array Bea	69.12	323	P	P	03 23 34.2	+1.4
	comp=Z,0.5nm,0.5s,baz=114,slow=5.8,SNR=3.8						
FLWY	Flagg Ranch	69.15	331	P	P	03 23 33.4	+0.5
YMR	Madison River	69.72	331	P	P	03 23 36.1	-0.3
YHH	Holmes Hill	69.76	332	P	P	03 23 36.3	-0.5
YHH				IAmb	IAmb	03 23 44.4	
	comp=Z,3.4nm,0.7s						
DBIC	Dimbokro	69.98	77	P	P	03 23 35.6	-2.8
	comp=Z,2.4nm,0.5s,baz=248,slow=4.5,SNR=4.3						
MFID	Camas Ranch	71.18	328	P	P	03 23 44.5	-0.7
MFID				IAmb	IAmb	03 23 48.9	
	comp=Z,4.2nm,0.9s						
QSPA	South Pole Qui	74.55	180	P	P	03 24 05.8	+0.8
	comp=Z,1.6nm,0.6s,baz=178,slow=1.5						
QSPA	South Pole Qui	74.55	180	P	P	03 24 04.3	-0.6
QSPA				IAmb	IAmb	03 24 09.1	
	comp=Z,3.9nm,0.9s						
TORD	Torodi Ar. Bea	78.20	73	P	P	03 24 23.2	-3.1
	comp=Z,1.2nm,0.5s,baz=271,slow=5.1,SNR=16						
VNDA	Vanda	82.12	190	P	P	03 24 47.6	+1.2
	comp=Z,0.9nm,0.9s,baz=117,slow=4.6,SNR=2.7						
MAW	Mawson	90.75	164	P	P	03 25 29.5	+0.6
	comp=Z,3.8nm,0.9s,baz=240,slow=8.1,SNR=3.6						
ASAR	Alice Springs	133.52	213	PKP	PKiKP	03 31 45.1	+0.4
	comp=Z,0.5nm,0.7s,baz=126,slow=2.4,SNR=5.5						
WRA	Warramunga Arr	136.25	217	PKP	PKPdf	03 31 48.9	+0.3
	comp=Z,2.3nm,1.0s,baz=148,slow=1.6,SNR=9.4						
ZALV	Zalesovo Beam	137.64	20	PKP	PKPdf	03 31 50.1	0.0
	comp=Z,1.4nm,0.7s,baz=298,slow=3.1,SNR=5.7						
MKAR	Makanchi Array	142.22	29	PKP	PKPdf	03 31 59.3	+0.6
	comp=Z,1.0nm,0.9s,baz=289,slow=1.3,SNR=2.8						
USRK	Ussuriysk Ar.	145.03	329	PKPbc	PKPdf	03 32 03.4	-0.1
	comp=Z,2.1nm,0.8s,baz=49,slow=8.8,SNR=5.5						
USRK	Ussuriysk Ar.	145.03	329		PKPbc	03 32 02.7	-0.3
MJAR	Matsushiro Arr	146.08	314	PKPbc	PKPab	03 32 07.3	+0.2
	comp=Z,3.0nm,0.7s,baz=108,slow=2.9,SNR=6.3						
SONM	Songino Array	147.84	2	PKPbc	PKPbc	03 32 09.9	-1.4
	comp=Z,2.3nm,0.7s,baz=343,slow=2.2,SNR=14						
SONM	Songino Array	147.84	2		PKPdf	03 32 09.2	+0.8
KSRS	Korea Array	152.04	325	PKPbc	PKiKP	03 32 22.7	+0.6
	comp=Z,3.8nm,0.8s,baz=358,slow=2.1,SNR=6.6						

VIE 25 03:12:44.1±0.6**, 47°.21N**×**11°.52E, h10**^{km}±4^{km}**, ml0.5**/5**, Error ellipse: s-maj=2.8km s-min=1.7km az=179.0 8 km S of Hall in Tirol, Austria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WTTA	Wattenberg	0.10	57	*i* Pg	Pg	03 12 47.1	+0.2
	2.3nm,0.1s						
WTTA				*i* Sg	Sg	03 12 49.2	+0.3
	1.4nm,0.1s						
WATA	Walderalm	0.13	18	*i* Pg	Pg	03 12 47.5	+0.2
	1.2nm,0.1s						
WATA				*i* Sg	Sg	03 12 49.9	+0.2
	1.8nm,0.1s						
SQTA	Sankt Quirin	0.21	273	*e*Pg	Pg	03 12 48.6	+0.1
	0.2nm,0.1s						
SQTA				*e*Sg	Sg	03 12 51.9	+0.4
	1.2nm,0.2s						
MOTA	Moosalm	0.31	296	*e*Pg	Pg	03 12 50.1	-0.3
	0.3nm,0.3s						
MOTA				*e*Sg	Sg	03 12 55.1	+0.5
	0.4nm,0.2s						

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*TIR **25** 03:14:46.5, 38°.49N×20°.43E, h12^{km}, Md4.0*
*NEIC **25** 03:14:47.9±1.4, 38°.52N±0°.03×20°.53E±0°.04, h14^{km}±4^{km}, Error ellipse: s-maj=4.9km s-min=4.4km az=154.0*
*PDG **25** 03:14:47.5±0.8, 38°.53N×20°.48E, h15^{km}±1^{km}, ML3.9/13, Error ellipse: s-maj=1.1km s-min=1.4km az=0.0*
*ATH **25** 03:14:47.9, 38°.53N×20°.55E, h14^{km}, ML4.2/15, Error ellipse: s-maj=1.5km s-min=0.6km az=286.0*
*THE **25** 03:14:48.0, 38°.53N×20°.52E, h12^{km}, ML4.3/14, Error ellipse: s-maj=1.0km s-min=0.5km az=283.0*
*MOS **25** 03:14:48.0±1.5, 38°.59N×20°.39E, h28^{km}, mb4.7/9, Error ellipse: s-maj=7.5km s-min=4.4km az=78.1*
*IDC **25** 03:14:52.1±1.3, 38°.62N×20°.55E, h42^{km}±13^{km}, mb4.0/25, mb1 4.0/41, mb1mx3.9/67, mbtmp4.1/41, ML3.6/14, MS3.8/1, Ms1 3.8/1, ms1mx3.1/37, Error ellipse: s-maj=11.7km s-min=10.0km az=30.0*
ISC 25 03:14:47.7±0.6**, 38°.55N**±0°.01×**20°.52E**±0°.02**, h16**^{km}±3^{km}**, n330,** σ**1^{s}.72**/429**, mb4.3**/35**, 39C-12D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FSK	Fiskardo	0.09	157	P	Pg	03 14 50.5	-0.5
FSK				S	Pg	03 14 52.4	+1.4
	271µm,0.4s						
FSK	Fiskardo	0.09	157	P	Pg	03 14 50.5	-0.5
FSK				S	Sg	03 14 52.2	-0.9
FSK				AML	AML	03 14 53.1	
FSK				AML	AML	03 14 54.8	
FSK	Fiskardo	0.09	157		Pg	03 14 52.4	+1.4
EVGI	Lefkada island	0.13	55	P	Pg	03 14 51.3	-0.2
EVGI				S	Sg	03 14 53.8	-0.2
	251µm,0.3s						
EVGI	Lefkada island	0.13	55	P	Pg	03 14 51.2	-0.2
EVGI				S	Sg	03 14 54.0	0.0
EVGI	Lefkada island	0.13	55		Pg	03 14 51.3	-0.2
EVGI					Sg	03 14 53.8	-0.2
DRAG	Dragano-Lefkad	0.15	18	P	Pg	03 14 51.6	-0.1
DRAG				S	Sg	03 14 54.5	+0.2
	860µm,0.2s						
DRAG	Dragano-Lefkad	0.15	18	P	Pg	03 14 51.5	-0.1
DRAG				S	Sg	03 14 54.7	+0.4
DRAG	Dragano-Lefkad	0.15	18		Pg	03 14 51.6	-0.1
DRAG					Sg	03 14 54.5	+0.2
NYDR	Nydri-Lefkada	0.22	40	P	Pg	03 14 52.6	-0.1
NYDR				S	Sg	03 14 56.5	+0.4
	163µm,0.5s						
NYDR	Nydri-Lefkada	0.22	40	P	Pg	03 14 52.7	0.0
NYDR				S	Sg	03 14 56.5	+0.4
NYDR	Nydri-Lefkada	0.22	40		Pg	03 14 52.6	-0.1
NYDR					Sg	03 14 56.5	+0.4
LKD2	Lefkada island	0.27	25	P	Pg	03 14 53.6	+0.1
LKD2				S	Sg	03 14 57.5	0.0
	62µm,0.6s						
LKD2	Lefkada island	0.27	25	P	Pg	03 14 53.6	+0.1
LKD2				S	Sg	03 14 57.9	+0.4
LKD2				AML	AML	03 14 59.4	
LKD2				AML	AML	03 14 60.0	
	comp=E,72571µm,0.4s						
LKD2	Lefkada island	0.27	25		Pg	03 14 53.6	+0.1
LKD2					Sg	03 14 57.5	0.0
LKD2	Lefkada island	0.27	25	P	Pg	03 14 53.8	+0.2
	baz=31						
LKD2				S	Sg	03 14 57.4	-0.2
	baz=31						
KEF4	Livadi, Kephal	0.29	194	P	Pg	03 14 53.8	-0.1
KEF4				S	Sb	03 14 58.8	-0.5
KEF4	Livadi, Kephal	0.29	194	P	Pg	03 14 53.6	-0.4
KEF4				S	Sg	03 14 58.6	+0.4
KEF4	Livadi, Kephal	0.29	194		Pg	03 14 53.8	-0.1
KEF4					Sb	03 14 58.8	-0.5
TSLK	Tsoukalades, L	0.30	21	P	Pg	03 14 54.4	+0.3
TSLK				S	Sb	03 14 59.6	+0.1
	comp=E,68µm,0.8s						
TSLK	Tsoukalades, L	0.30	21	P	Pg	03 14 54.3	+0.2
TSLK				S	Sb	03 14 59.1	-0.4
TSLK				AML	AML	03 15 00.7	
TSLK				AML	AML	03 15 01.1	
TSLK	Tsoukalades, L	0.30	21		Pg	03 14 54.4	+0.3
TSLK					Sb	03 14 59.6	+0.1
DMLN	Damoulianata-K	0.33	200	P	Pg	03 14 54.2	-0.3
DMLN				S	Sg	03 14 59.5	+0.4
	comp=E,141µm,0.4s						
DMLN	Damoulianata-K	0.33	200	P	Pg	03 14 54.3	-0.2
DMLN				S	Sg	03 14 59.5	+0.4
DMLN	Damoulianata-K	0.33	200		Pg	03 14 54.2	-0.3
DMLN					Sg	03 14 59.5	+0.4
LXRA	Lixouri, Kepha	0.35	190	P	Pg	03 14 54.6	-0.3
KEF3	Kipouria, Keph	0.37	201	P	Pg	03 14 54.4	-0.8
KEF3				S	Sg	03 15 00.3	0.0
	comp=E,132µm,0.3s						
KEF3	Kipouria, Keph	0.37	201	P	Pg	03 14 54.4	-0.8
KEF3				S	Sg	03 15 00.2	0.0
KEF3	Kipouria, Keph	0.37	201		Pg	03 14 54.4	-0.8
VLS	Valsamata	0.37	171	P	Pg	03 14 54.8	-0.5
VLS				S	Sb	03 15 01.1	-0.4
	comp=E,87µm,0.2s						
VLS	Valsamata	0.37	171	P	Pg	03 14 54.8	-0.5
VLS				S	Sg	03 15 00.7	+0.2
VLS				AML	AML	03 15 02.1	
VLS				AML	AML	03 15 02.6	
VLS	Valsamata	0.37	171	P	Pg	03 14 54.8	-0.5
VLS	Valsamata	0.37	171		Pg	03 14 54.8	-0.5
PSDA	Pessada-Kefalo	0.43	173	P	Pg	03 14 55.9	-0.5
PSDA				S	Sb	03 15 03.0	-0.3
	comp=E,20µm,0.2s						
PSDA	Pessada-Kefalo	0.43	173	P	Pg	03 14 55.6	-0.8
PSDA	Pessada-Kefalo	0.43	173		Pg	03 14 55.9	-0.5
PVO	Paravola	0.80	85	P	Pb	03 15 02.9	-0.3
PVO				S	Sn	03 15 15.3	-0.5
	comp=E,14µm,0.5s						
PVO	Paravola	0.80	85	P	Pb	03 15 02.9	-0.3
PVO				AML	AML	03 15 21.9	
	comp=N,23699µm,0.6s						
PVO				AML	AML	03 15 24.7	
	comp=E,30353µm,0.5s						
PVO	Paravola	0.80	85		Pb	03 15 02.9	-0.3
PVO					Sn	03 15 15.3	-0.5
VTN	Vitineika	0.82	140	P	Pg	03 15 03.6	0.0
LTHK	Lithakia	0.87	163	P	Pb	03 15 03.4	-1.0
LTHK				S	Sn	03 15 17.1	-0.6
	comp=E,15µm,0.2s						
LTHK	Lithakia	0.87	163	P	Pb	03 15 03.5	-1.0
LTHK	Lithakia	0.87	163		Pb	03 15 03.4	-1.0
LTHK					Sn	03 15 17.1	-0.6
RLS	Riolos of Patr	0.89	123	P	Pb	03 15 04.4	-0.4
RLS				S	Sn	03 15 18.4	+0.2
	comp=E,8µm,0.3s						
RLS	Riolos of Patr	0.89	123	P	Pb	03 15 04.0	-0.8
RLS				AML	AML	03 15 20.2	
	comp=N,21019µm,0.3s						
RLS				AML	AML	03 15 23.8	
	comp=E,12824µm,0.3s						
RLS	Riolos of Patr	0.89	123		Pb	03 15 04.4	-0.4
RLS					Sn	03 15 18.4	+0.2
IGT	Igoumenitsa	1.00	352	P	Pb	03 15 06.1	-0.5
IGT	Igoumenitsa	1.00	352	P	Pb	03 15 06.1	-0.5
IGT				AML	AML	03 15 25.4	
	comp=E,25656µm,1.0s						
IGT				AML	AML	03 15 26.3	
	comp=N,15884µm,0.4s						
IGT	Igoumenitsa	1.00	352	P	Pb	03 15 06.8	+0.2
	baz=356						
IGT				S	Sn	03 15 23.1	+2.3
	baz=356						
EVR	Evrytania	1.08	69	P	Pb	03 15 07.6	-0.5
EVR	Evrytania	1.08	69	P	Pb	03 15 07.4	-0.6
EVR				AML	AML	03 15 32.6	
	comp=N,17056µm,1.4s						
EVR				AML	AML	03 15 36.3	
	comp=E,11957µm,0.8s						
EFP	Efpalio	1.10	96	P	Pb	03 15 07.3	-1.0
ANX	Ano Chora	1.10	87	P	Pb	03 15 08.0	-0.5
ANX	Ano Chora	1.10	87	P	Pb	03 15 07.7	-0.8
ANX				AML	AML	03 15 32.2	
	comp=E,25595µm,0.6s						
ANX				AML	AML	03 15 32.7	
	comp=N,30141µm,1.0s						

DRO	Drossia	1.11	122	P	Pb	03 15 08.2	-0.4
DRO	Drossia	1.11	122	P	Pb	03 15 08.0	-0.5
DRO				AML	AML	03 15 26.9	
	comp=N,45338µm,0.5s						
DRO				AML	AML	03 15 28.0	
	comp=E,42518µm,0.3s						
JAN	Janina	1.14	13	P	Pg	03 15 10.0	+0.3
JAN	Janina	1.14	13	P	Pb	03 15 09.4	+0.3
JAN				AML	AML	03 15 30.8	
	comp=N,14314µm,0.4s						
JAN				AML	AML	03 15 31.4	
	comp=E,10086µm,0.4s						
LAKA	Lakka	1.19	104	P	Pn	03 15 09.1	-0.6
LAKA				S	Sg	03 15 25.9	-0.3
	comp=E,17µm,0.7s						
LAKA	Lakka	1.19	104	P	Pn	03 15 08.9	-0.8
LAKA				AML	AML	03 15 36.9	
	comp=E,7384µm,0.8s						
LAKA				AML	AML	03 15 38.5	
	comp=N,6361µm,0.7s						
SERG	Sergoula	1.22	96	P	Pn	03 15 09.4	-0.7
SERG	Sergoula	1.22	96	P	Pn	03 15 09.4	-0.7
SERG				AML	AML	03 15 33.8	
	comp=E,16082µm,0.8s						
SERG				AML	AML	03 15 34.4	
	comp=N,9037µm,0.4s						
TRIZ	Trizonia	1.24	98	P	Pn	03 15 09.9	-0.5
TRIZ	Trizonia	1.24	98	P	Pn	03 15 09.8	-0.5
KASA	Kassiopi	1.28	340	P	Pg	03 15 12.7	+0.3
ALIK	Aliki, Aigiali	1.29	102	P	Pn	03 15 10.7	-0.3
KEK	Kerkira	1.29	335	P	Pg	03 15 12.5	-0.1
KEK	Kerkira	1.29	335	P	Pb	03 15 11.9	+0.3
MAKR	Makrakomi, Fth	1.35	69	P	Pb	03 15 12.7	+0.1
MAKR	Makrakomi, Fth	1.35	69	P	Pb	03 15 12.6	+0.1
MAKR				AML	AML	03 15 37.8	
	comp=N,27579µm,0.9s						
MAKR				AML	AML	03 15 40.9	
	comp=E,30234µm,0.6s						
KLV	Kalavryta, Ach	1.38	111	P	Pn	03 15 12.3	-0.1
KLV	Kalavryta, Ach	1.38	111	P	Pn	03 15 12.0	-0.4
SRN	Sarande	1.39	343	P	Pg	03 15 14.4	-0.1
	baz=347						
SRN				S	Sg	03 15 33.7	+1.1
	baz=347						
AGG	Agios Georgios	1.50	71	P	Pb	03 15 15.1	-0.1
AGG	Agios Georgios	1.50	71	P	Pb	03 15 14.9	-0.2
AGG				AML	AML	03 15 44.1	
	comp=E,14943µm,0.6s						
AGG				AML	AML	03 15 44.5	
	comp=N,9381µm,0.9s						
AGG	Agios Georgios	1.50	71	P	Pb	03 15 14.9	-0.2
AGG	Agios Georgios	1.50	71	Pn	Pb	03 15 14.9	-0.2
KPRO	Kipourio	1.55	25	P	Pg	03 15 17.0	-0.6
LSK	Leskovik	1.60	2	P	Pg	03 15 18.3	-0.3
	baz=4.0						
LSK				S	Sg	03 15 41.6	+2.2
	baz=4.0						
ITM	Ithomi	1.76	140	Pn	Pb	03 15 18.9	-0.7
VLO	Vlora	2.08	338	P	Pn	03 15 23.1	+1.2
VLO	Vlora	2.08	338		Pn	03 15 23.1	+1.2
VLO	Vlora	2.08	338	P	Pb	03 15 24.1	-0.9
	baz=341						
VLO				S	Sg	03 15 56.1	+1.6
	baz=341						
SCTE	Santa Cesarea	2.20	314	Pn	Pn	03 15 24.5	+0.9
FNA	Florina	2.33	16	P	Pn	03 15 26.9	+1.4
FNA	Florina	2.33	16	Pn	Pn	03 15 26.9	+1.4
FNA	Florina	2.33	16	P	Pb	03 15 28.3	-1.1
	baz=17						
FNA				S	Sg	03 16 01.3	-1.4
	baz=17						
OHR	Ohrid	2.57	5	i Pn	Pb	03 15 32.2	-1.3
TIR	Tirane	2.84	350	⇓P	Pn	03 15 34.7	+2.2
TIR	Tirane	2.84	350	P	Pn	03 15 34.0	+1.6
TIR	Tirane	2.84	350		Pn	03 15 34.0	+1.6
TIR	Tirane	2.84	350	P	Pn	03 15 34.8	+2.4
	baz=352						
TIR				S	Sb	03 16 13.8	+1.1
	baz=352						
TIP	Timpagrande	3.00	283	⇓S	Sn	03 16 12.4	+2.0
TIP	Timpagrande	3.00	283	Pn	Pn	03 15 35.9	+1.2
TIP	Timpagrande	3.00	283	⇑P	Pn	03 15 35.9	+1.2
PHP	Peshkopia	3.14	359	P	Pn	03 15 39.0	+2.5
	baz=0.0						
PHP				S	Sb	03 16 19.5	-1.7
	baz=0.0						
VAY	Valandovo	3.19	29	i Pn	Pn	03 15 39.4	+2.1
STIP	Stip	3.40	22	i Pn	Pb	03 15 43.9	-3.7
SKO	Skopje	3.50	11	i Pn	Pn	03 15 43.9	+2.5
ULC	Ulcinj	3.55	345	⇓iPn	Pn	03 15 42.8	+0.6
ULC				i Sn	Sn	03 16 24.7	+0.8
MATE	Matera	3.62	307	⇑P	Pn	03 15 44.3	+1.2
MATE				⇑S	Sn	03 16 24.5	-1.0
CEL	Celeste	3.64	267		Pn	03 15 44.0	+0.5
DRME	Dracevica, Mon	3.78	345	ePn	Pn	03 15 46.2	+0.9
DRME	Dracevica, Mon	3.78	345	⇑iPn	Pn	03 15 46.5	+1.2
DRME				i Sn	Sn	03 16 30.7	+1.3
BCI	Bajram Curri	3.83	355	P	Pn	03 15 48.8	+2.7
	baz=357						
BCI				S	Sb	03 16 37.4	-3.8
	baz=357						
BUM	Brajici-Budva	3.95	342	⇑iPn	Pn	03 15 48.4	+0.7
BUM				i Sn	Sn	03 16 31.8	-2.0
PDG	Podgorica	4.00	346	⇑P	Pn	03 15 49.4	+1.0
PDG				⇓S	Sn	03 16 35.1	+0.3
PDG	Podgorica	4.00	346	ePn	Pn	03 15 49.0	+0.7
PDG	Podgorica	4.00	346	Pn	Pn	03 15 49.3	+1.0
TTG	Podgorica	4.00	346	⇑iPn	Pn	03 15 49.4	+1.0
TTG				i Sn	Sn	03 16 34.3	-0.5
PVY	Plav	4.07	354	⇓iPn	Pn	03 15 51.4	+2.0
PVY				i Sn	Sn	03 16 39.8	+3.0
CEME	Cevo	4.18	344	⇑iPn	Pn	03 15 51.3	+0.4
CEME				i Sn	Sn	03 16 38.7	-0.7
HCY	Herceg Novi	4.19	339	ePn	Pn	03 15 51.0	0.0
HCY	Herceg Novi	4.19	339	⇑iPn	Pn	03 15 50.8	-0.2
HCY				i Sn	Sn	03 16 37.6	-2.0
APE	Apeiranthos	4.24	109	⇓P	Pn	03 15 55.5	+3.9
APE				⇑S	Sb	03 16 48.7	-4.1
IVA	Berane	4.35	354	⇑iPn	Pn	03 15 55.0	+1.8
IVA				i Sn	Sn	03 16 44.2	+0.6
NKME	Niksic	4.38	345	⇑iPn	Pn	03 15 54.2	+0.6
NKME				i Sn	Sn	03 16 45.2	+0.8
NKY	Niksic	4.42	345	⇑iPn	Pn	03 15 55.1	+0.9
NKY				i Sn	Sn	03 16 46.2	+0.8
TREB	Trebinje	4.48	339	ePn	Pn	03 15 54.7	-0.3
SANT	Santorini	4.49	117	⇑P	Pn	03 15 60.0	+4.8
SANT	Santorini	4.49	117	Pn	Pn	03 15 57.2	+2.0
DBRK	Dubrovnik	4.50	337	ePn	Pn	03 15 54.9	-0.3
DBRK				Sn	Sn	03 16 42.7	-4.5
VTS	Vitosha	4.56	26	⇑P	Pn	03 15 58.6	+2.4
VTS				⇑S	Sn	03 16 51.4	+2.3
VTS	Vitosha	4.56	26	P	Pn	03 15 58.1	+1.8
VTS	Vitosha	4.56	26	Pn	Pn	03 15 58.1	+1.8
BRY	Bratogost	4.60	342	ePn	Pn	03 15 56.8	0.0
BRY	Bratogost	4.60	342	⇑iPn	Pn	03 15 56.9	+0.1
BRY				i Sn	Sn	03 16 50.2	+0.2
IDI	Anoyia	4.78	132	P	Pn	03 16 02.8	+3.7
	comp=N,1.2nm,0.3s,baz=285,slow=5.6,SNR=12						
IDI				S	Sn	03 16 56.0	+1.8
	comp=N,8.0nm,0.3s,baz=315,slow=20,SNR=6.2						
UPM	Unac-Piva	4.81	346	ePn	Pn	03 16 00.5	+0.8
UPM	Unac-Piva	4.81	346	⇑iPn	Pn	03 16 00.7	+1.0
UPM				i Sn	Sn	03 16 55.3	+0.1
STON	Ston	4.82	335	ePn	Pn	03 15 58.8	-0.8
STON	Ston	4.82	335	ePn	Pn	03 15 59.7	+0.1
STON				Sn	Sn	03 16 51.2	-4.0
PLE	Pljevlja	4.86	350	⇓iPn	Pn	03 16 01.8	+1.6
PLE				i Sn	Sn	03 16 56.4	+0.2
SGRT	San Giovanni R	4.86	313	Pn	Pn	03 16 00.3	0.0
VAE	Valguarnera	4.94	259	P	Pn	03 16 05.3	+4.1
	comp=N,1.5nm,0.3s,baz=308,slow=17,SNR=2.9						
VAE				S	Sn	03 16 57.4	-0.8
	comp=N,2.4nm,0.3s,baz=114,slow=11,SNR=2.1						
LSTV	Lastovo	5.04	328	i Pn	Pn	03 16 02.6	0.0
LSTV				Sn	Sn	03 16 57.3	-3.2
RUDO	Rudo	5.14	351	ePn	Pn	03 16 04.1	0.0
BOVS	Bovan	5.16	10	⇑P	Pn	03 16 05.3	+1.0
BBLS	Lazići	5.38	351	ePn	Pn	03 16 07.3	-0.1
MAKA	Makarska	5.43	332	ePn	Pn	03 16 08.0	+0.1
MAKA				Sn	Sn	03 17 07.2	-2.8
HVAR	Hvar	5.56	328	ePn	Pn	03 16 09.7	-0.1
HVAR				Sn	Sn	03 17 09.8	-3.6
DIVS	Divibare	5.56	356	ePn	Pn	03 16 09.9	0.0
DIVS	Divibare	5.56	356	Pn	Pn	03 16 10.3	+0.4
RICI	Ricice	5.57	334	ePn	Pn	03 16 10.1	+0.2
HAPS	Han Pijesak,BI	5.66	348	ePn	Pn	03 16 11.8	+0.5
BALB	Balikesir	5.83	77	Pn	Pn	03 16 16.8	+3.3
TEKS	Tekeris	6.04	353	ePn	Pn	03 16 14.7	-1.8
ZIRJ	Zirje	6.29	326	ePn	Pn	03 16 19.7	-0.1
MDVR	Moldovita	6.30	8	⇓P	Pn	03 16 20.7	+0.8
BLJ	Bijeljina	6.30	352	ePn	Pn	03 16 16.0	-4.0
MGRS	Mrkonjic Grad	6.41	337	ePn	Pn	03 16 22.3	+0.9
MORI	Morici	6.43	327	ePn	Pn	03 16 22.6	+0.8
DOB	Doboj	6.44	344	ePn	Pn	03 16 20.5	-1.4
HERR	Herculane	6.49	12	⇑P	Pn	03 16 23.6	+1.1
AQU	L'Aquila	6.62	307	P	Pn	03 16 26.1	+1.6
AQU	L'Aquila	6.62	307	ePn	Pn	03 16 27.1	+2.6
AQU	L'Aquila	6.62	307		Pn	03 16 26.1	+1.6
FRGS	Fruska Gora	6.63	356	⇑P	Pn	03 16 24.5	0.0
FRGS	Fruska Gora	6.63	356	ePn	Pn	03 16 24.3	-0.2
BLY	Banja Luka	6.68	339	ePn	Pn	03 16 25.5	+0.3
DUGI	Dugi Otok	6.82	325	ePn	Pn	03 16 27.6	+0.5
HUMR	Humele	6.85	28	⇑P	Pn	03 16 28.9	+1.4
UDBI	Udbina	6.96	331	ePn	Pn	03 16 30.3	+1.3
PRIJ	Prijedor	7.03	337	ePn	Pn	03 16 29.4	-0.5
GZR	Gura Zlata	7.05	13	⇑P	Pn	03 16 31.2	+0.9
GZR				⇑S	Sn	03 17 51.6	+1.5
NRCA	Norcia	7.07	310		Pn	03 16 32.5	+1.9
BZS	Buzias	7.11	6	⇓P	Pn	03 16 31.3	+0.2
PLIT	Plitvice	7.31	332	ePn	Pn	03 16 34.8	+0.9
NVLJ	Novalja	7.35	327	ePn	Pn	03 16 34.8	+0.4
ARR	Arges	7.47	23	⇑P	Pn	03 16 38.0	+1.8
RABC	Rab	7.54	327	ePn	Pn	03 16 37.4	+0.5
MOSL	Moslavina	7.60	340	ePn	Pn	03 16 36.9	-0.8
MURB	Monte Urbino	7.67	310	Pn	Pn	03 16 39.7	+0.9
VOIR		7.67	25	⇓P	Pn	03 16 41.2	+2.4
KOVH	Kovagotottos	7.75	347	ePN	Pn	03 16 38.9	-0.9
KOVH	Kovagotottos	7.75	347	eP	Pn	03 16 40.3	+0.5
KOVH	Kovagotottos	7.75	347	eSN	Sn	03 18 02.5	-4.7
SIRR	Siria	7.76	6	⇑P	Pn	03 16 41.0	+0.9
MORH	Mrgy, Hungar	7.79	350	ePn	Pn	03 16 39.4	-0.9
ISR	Istrita	7.96	32	⇑P	Pn	03 16 45.3	+2.5
OZLJ	Ozalj	8.00	334	ePn	Pn	03 16 43.8	+0.6
ZAG	Zagreb	8.01	337	ePn	Pn	03 16 40.8	-2.6
MLR	Muntele Rosu	8.03	28	⇓P	Pn	03 16 46.3	+2.5
MLR	Muntele Rosu	8.03	28	P	Pn	03 16 46.3	+2.5
	comp=N,0.5nm,0.3s,baz=259,slow=14,SNR=14						
MLR				S	Sn	03 18 22.2	+7.9
	comp=N,0.3nm,0.3s,baz=298,slow=23,SNR=1.0						
MLR				LR	LR	03 20 24.9	
	comp=N,669nm,20.3s,baz=328,slow=42						
MLR	Muntele Rosu	8.03	28	Pn	Pn	03 16 43.9	+0.1
SMRN	Sveta Marina	8.04	326	ePn	Pn	03 16 43.8	+0.1
PTJ	Puntijarka	8.09	337	ePn	Pn	03 16 43.7	-0.9
NEHR	Nehoiu	8.11	30	⇑P	Pn	03 16 47.3	+2.5
BRJN	Brijuni	8.12	324	ePn	Pn	03 16 45.1	+0.3
RIY	Rijeka	8.13	328	ePn	Pn	03 16 45.1	+0.1
RIY	Rijeka	8.13	328	ePn	Pn	03 16 45.4	+0.3
KALN	Kalnik	8.15	340	ePn	Pn	03 16 44.6	-0.8
CRES	Cresnjev	8.19	334	ePn	Pn	03 16 45.7	-0.1
DOPR	Dopca	8.25	24	⇑P	Pn	03 16 49.2	+2.5
LOBO	Lobor	8.29	338	ePn	Pn	03 16 46.4	-0.8
BISRR	Bisoca	8.38	31	⇑P	Pn	03 16 51.2	+2.7
COVR	Voineasa-Covas	8.43	28	⇑P	Pn	03 16 51.2	+2.0
MDUB	Mudurnu	8.48	74		Pn	03 16 49.8	-0.1
CEY	Cerknica	8.49	330	ePn	Pn	03 16 50.6	+0.6
PLOR	Plostina	8.60	30	⇑P	Pn	03 16 54.0	+2.4
VRI	Vrincioaia	8.64	30	⇑P	Pn	03 16 54.6	+2.4
LJU	Ljubljana	8.71	331	ePn	Pn	03 16 53.1	+0.1
CFR	Carcaliu	8.73	38	⇑P	Pn	03 16 54.6	+1.4
MPLH	Magyarpolny	8.89	347	ePN	Pn	03 16 55.6	+0.1
MPLH	Magyarpolny	8.89	347	eP	Pn	03 16 56.0	+0.5
MPLH	Magyarpolny	8.89	347	eSN	Sn	03 18 35.8	+0.5
SOKA	Soboth	9.07	335	i Pn	Pn	03 16 57.9	-0.2
	comp=N,20nm,0.7s,SNR=10						
SOKA				eSn	Sn	03 18 35.3	-4.6
	comp=N,5.9nm,0.5s						
OBKA	Obir	9.09	333	ePn	Pn	03 16 58.4	+0.1
	comp=N,3.5nm,0.3s,SNR=9.3						
OBKA				eSn	Sn	03 18 36.8	-3.6
	comp=N,31nm,0.7s						
VLDR	Vladesti	9.20	35	⇑P	Pn	03 17 01.2	+1.5
KEST	Kesra	9.35	256	P	Pn	03 17 06.0	+4.1
	comp=N,0.3nm,0.3s,baz=250,slow=2.0,SNR=5.3						
KEST				S	Sn	03 18 46.9	+0.1
	comp=N,0.1nm,0.3s,baz=273,slow=16,SNR=1.2						
KEST	Kesra	9.35	256		Pn	03 17 01.7	-0.2
PSZ	Piszkesteto	9.38	357	⇑P	Pn	03 17 02.1	-0.2
PSZ	Piszkesteto	9.38	357	ePN	Pn	03 17 03.4	+1.1
PSZ	Piszkesteto	9.38	357	eP	Pn	03 17 04.6	+2.4
PSZ	Piszkesteto	9.38	357	eSN	Sn	03 18 39.9	-7.5
PSZ	Piszkesteto	9.38	357	Pn	Pn	03 17 01.9	-0.3
ARSA	Arzberg	9.44	339	ePn	Pn	03 17 02.3	-0.7
	comp=N,3.9nm,0.5s,SNR=5.9						
ARSA				eSn	Sn	03 18 44.2	-4.6
	comp=N,2.2nm,0.5s						
TEOL	Teolo	9.47	319	Pn	Pn	03 17 03.5	0.0
MYKA	Terra Mystica	9.53	330	ePn	Pn	03 17 04.6	+0.3
	comp=N,2.5nm,0.4s						
STAL	STALIGIAL	9.63	326	Pn	Pn	03 17 05.6	0.0
BURAR	Bucovina Array	9.69	19	⇑P	Pn	03 17 09.1	+2.5
TRPA	Tarpa	9.69	8	⇑P	Pn	03 17 07.2	+0.7
ZOU	Zoufplan	9.74	328		Pn	03 17 07.5	+0.2
CTI	Castel Tesino	9.96	322	P	Pn	03 17 09.8	-0.5
CTI	Castel Tesino	9.96	322	Pn	Pn	03 17 09.8	-0.5
CONA	Conrad Observa	9.97	342	ePn	Pn	03 17 11.2	+0.8
	comp=N,1.4nm,0.5s						
CONA				eSn	Sn	03 18 55.5	-6.4
	comp=N,1.4nm,0.4s						
KBA	Koelnbreinsper	10.02	331	ePn	Pn	03 17 11.3	+0.2
	comp=N,2.8nm,0.5s,SNR=9.4						
KBA				eSn	Sn	03 19 00.3	-3.0
	comp=N,8.8nm,0.8s						
VYHS	Vyhne	10.02	354	eP	Pn	03 17 09.9	-1.1
VYHS				e		03 19 00.1	
VYHS	Vyhne	10.02	354	ePN	Pn	03 17 09.9	-1.1
VYHS				eSN	Sn	03 19 00.1	-2.9
ABTA	Abfaltersbach	10.09	327	ePn	Pn	03 17 11.6	-0.4
	comp=N,4.9nm,0.8s,SNR=8.2						
ABTA				eSn	Sn	03 19 01.3	-3.5
	comp=N,20nm,0.9s						
MODS	Modra-Piesok	10.10	348	eP	Pn	03 17 11.6	-0.5
MODS				e		03 19 00.2	
MODS	Modra-Piesok	10.10	348	ePN	Pn	03 17 11.6	-0.5
MODS				eSN	Sn	03 19 00.2	-4.8
KOLL	Kolacno	10.15	352	eSN	Sn	03 19 01.7	-4.4
SALO	Salr	10.25	317	Pn	Pn	03 17 14.7	+0.6
BRTR	Keskin Array B	10.27	79	P	Pn	03 17 18.1	+3.6
	comp=N,0.2nm,0.3s,baz=268,slow=12,SNR=2.1						
MOA	Molln	10.35	336	i Pn	Pn	03 17 15.6	0.0
	comp=N,4.6nm,0.3s,SNR=21						
MOA				eSn	Sn	03 19 07.3	-3.9
	comp=N,2.9nm,0.4s						
CRVS	Cervenica-Dubn	10.38	3	eP	Pn	03 17 18.0	+2.1
CRVS	Cervenica-Dubn	10.38	3	ePN	Pn	03 17 17.9	+2.1
WTTA	Wattenberg	10.87	326	ePn	Pn	03 17 23.3	+0.5
	comp=N,4.9nm,0.3s,SNR=8.7						
WTTA				eSn	Sn	03 19 18.9	-5.2
	comp=N,14nm,0.7s						
WATA	Walderalm	10.95	326	ePn	Pn	03 17 23.9	0.0
	comp=N,11nm,0.5s,SNR=6.7						
WATA				eSn	Sn	03 19 24.4	-1.7
	comp=N,16nm,0.5s						
SQTA	Sankt Quirin	11.03	325	ePn	Pn	03 17 25.9	+1.0
	comp=N,4.2nm,0.4s,SNR=6.3						
SQTA				eSn	Sn	03 19 26.2	-1.7
	comp=N,12nm,0.5s						
FETA	Feichten	11.10	323	ePn	Pn	03 17 26.7	+0.7
	comp=N,1.2nm,0.4s						
VRAC	Vranov	11.12	347	P	Pn	03 17 26.7	+0.7
	comp=N,0.2nm,0.3s,baz=143,slow=9.2,SNR=4.0						
MOTA	Moosalm	11.17	325	ePn	Pn	03 17 27.9	+1.1
	comp=N,8.8nm,0.7s,SNR=14						
MOTA				eSn	Sn	03 19 28.7	-2.7
	comp=N,15nm,0.7s						
CKRC	Cesky Krumlov	11.21	338	ePN	Pn	03 17 26.4	-0.8
DAVOX	Davos/Dischmat	11.35	320	P	Pn	03 17 30.9	+1.5
	baz=120,slow=20						
DAVOX				S	Sn	03 19 34.6	-1.3
	comp=N,1.6nm,0.3s,baz=189,slow=19,SNR=5.3						
GERES	GERESS Array B	11.41	337	P	Pn	03 17 29.6	-0.5
	comp=N,0.7nm,0.3s,baz=157,slow=13,SNR=19						
GERES				S	Sn	03 19 32.5	-4.7
	comp=N,0.7nm,0.3s,baz=152,slow=24,SNR=5.5						
GERES	GERESS Array B	11.41	337	Pn	Pn	03 17 29.3	-0.8
RETA	Reutte	11.43	325	ePn	Pn	03 17 31.3	+1.0
	comp=N,0.7nm,0.3s						
RETA				eSn	Sn	03 19 36.0	-1.6
	comp=N,5.1nm,0.5s						
DAVA	Damuels	11.70	322	ePn	Pn	03 17 36.1	+2.0
	comp=N,1.1nm,0.2s						
DAVA				eSn	Sn	03 19 40.6	-3.8
	comp=N,8.3nm,0.5s						
KHC	Kasperske Hory	11.70	337	ePN	Pn	03 17 32.1	-1.9
KHC				eSN	Sn	03 19 38.0	-6.2
KHC	Kasperske Hory	11.70	337	eP	Pn	03 17 32.1	-1.9
KHC				e		03 19 38.0	
SENIN	Lac Senin/Sane	12.49	313	Pn	Pn	03 17 45.5	+0.6
MMAI	Mount Meron Ar	13.28	110	P	Pn	03 17 58.2	+2.5
	comp=N,0.6nm,0.3s,baz=289,slow=13,SNR=2.0						
MMAI				S	Sn	03 20 19.1	-4.0
	comp=N,0.6nm,0.3s,baz=309,slow=26,SNR=1.9						
AKASG	Malin Array Be	13.63	24	P	Pn	03 18 01.3	+1.1
	comp=N,0.5nm,0.3s,baz=211,slow=12,SNR=5.0						
CLL	Collm	13.81	340	e(PP)		03 18 13.0	
CLL				e		03 18 22.0	
ASF	Jabal al Asfar	14.79	110	P	P	03 18 20.1	-2.1
	comp=N,0.1nm,0.3s,baz=345,slow=14,SNR=1.2						
ASF				S	Sn	03 20 55.9	-4.1
	comp=N,0.1nm,0.3s,baz=258,slow=14,SNR=1.8						
EIL	Elat	14.86	122	P	Pn	03 18 19.4	+2.2
	comp=N,0.2nm,0.3s,baz=2.4,slow=21,SNR=2.1						
EIL				S	Sn	03 20 49.8	-12
	comp=N,0.3nm,0.3s,baz=32,slow=18,SNR=2.0						
MNK	Minsk	16.73	15	i P	Pn	03 18 37.3	-4.0
MNK				i S	Sn	03 21 42.4	-4.2
MNK				pmax	pmax		
	comp=E,1.0nm,0.7s						
MNK				pmax	pmax		
	comp=N,22nm,0.7s						
MNK				pmax	pmax		
	comp=Z,17nm,0.7s						
MNK				MLR	MLR		
	comp=E,14nm,16.0s						
MNK				MLR	MLR		
	comp=Z,232nm,16.0s						
MNK				MLR	MLR		
	comp=N,55nm,16.0s						
MNK	Minsk	16.73	15	i P	Pn	03 18 37.4	-3.9
	comp=E,1.0nm,0.7s						
MNK				i P	Pn	03 18 37.4	-3.9
	comp=N,22nm,0.7s						
MNK				i P	Pn	03 18 37.4	-3.9
	comp=Z,17nm,0.7s,baz=201						
MNK				i PP	pP	03 18 46.6	-1.2
MNK				i S	Sn	03 21 42.5	-4.2
MNK				i LQ	LQ	03 23 31.5	
MNK				i LR	LR	03 24 24.3	
MNK				i LRM	MLR	03 25 55.7	
	comp=E,14nm,16.4s						
MNK				i LRM	MLR	03 25 55.7	
	comp=N,55nm,16.4s						
MNK				i LRM	MLR	03 25 55.7	
	comp=Z,232nm,16.4s						
GURO	Guroymak-BITLI	16.83	83	P	Pn	03 18 41.1	-1.8
NACGM	Naroch	16.91	13	i P	P	03 18 45.6	+0.1
SHA1	Shidzhatmaz	17.45	66	i P	P	03 18 53.6	+1.8
KIV	Kislovodsk	17.51	65	eP	P	03 18 52.5	+0.2
KIV				eS	Sn	03 22 09.4	+3.6
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KBZ	Khabaz	17.62	66	P	P	03 18 55.6	+2.3
	comp=Z,0.1nm,0.3s,baz=309,slow=4.9,SNR=6.9						
NCK	Nalchik	18.08	67	i P	P	03 19 00.1	+1.5
NCK				pmax	pmax		
	comp=Z,6.0nm,0.5s						
ZEI	Tsey	18.22	69	eP	P	03 19 03.9	+3.6
ZEI				pmax	pmax		
	comp=Z,5.0nm,1.7s						
VSR	Storozhevoye	18.24	40	eP	P	03 19 01.8	+1.6
VSR				pmax	pmax		
	comp=Z,20nm,1.7s						
GNI	Garni	18.80	77	P	Pn	03 19 09.2	+2.1
	comp=Z,0.6nm,0.3s,baz=251,slow=19,SNR=5.4						
GNI	Garni	18.80	77	P	Pn	03 19 06.9	-0.1
GNI				IAmb	IAmb	03 19 12.8	
	comp=Z,29nm,1.5s						
LPSR	Galich'ya Gora	18.99	36	eP	P	03 19 06.8	-1.6
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ESDC	Sonseca Array	19.02	281	P	Pn	03 19 10.3	+0.6
	comp=Z,0.0nm,0.3s,baz=77,slow=10.0,SNR=9.8						
ESDC	Sonseca Array	19.02	281	P	P	03 19 07.7	-1.2
VRH	Novokhopyorsk	19.56	43	eP	P	03 19 14.5	-0.1
VRH				pmax	pmax		
	comp=Z,20nm,1.6s						
OBN	Obninsk	19.80	28	P	P	03 19 18.0	+0.8
	comp=Z,0.3nm,0.3s,baz=116,slow=18,SNR=3.9						
OBN	Obninsk	19.80	28	⇓eP	P	03 19 17.5	+0.3
OBN				pmax	pmax		
	comp=Z,41nm,1.9s						
OBN				MLR	MLR		
	comp=Z,458nm,20.0s						
VSU	Vasula	20.34	9	i P	P	03 19 21.8	-1.2
MOS	Moscow	20.67	28	eP	P	03 19 25.4	-1.2
MOS				pmax	pmax		
	comp=Z,34nm,0.7s						
HFS	Hagfors	22.04	351	P	P	03 19 41.1	-0.2
	comp=Z,8.7nm,0.6s,baz=169,slow=11,SNR=12						
EKA	Eskdalemuir Ar	23.13	324	P	P	03 19 53.6	+0.7
	comp=Z,7.8nm,0.9s,baz=125,slow=8.5,SNR=9.8						
FINES	FINESS Array B	23.18	7	P	P	03 19 53.1	-0.4
	comp=Z,8.7nm,0.5s,baz=166,slow=11,SNR=43						
FINES				PcP	PcP	03 23 41.6	+0.5
	comp=Z,3.0nm,0.9s,baz=174,slow=1.9,SNR=3.4						
FINES	FINESS Array B	23.18	7	P	P	03 19 53.0	-0.4
FINES					PcP	03 23 41.9	+0.8
NOA	NORSAR Array B	23.26	349	P	P	03 19 54.8	+0.5
	comp=Z,0.5nm,0.5s,baz=294,slow=17,SNR=13						
NBO00	NORSAR Array S	23.32	348	P	P	03 19 54.8	0.0
NBO00				IAmb	IAmb	03 20 12.3	
	comp=Z,19nm,1.0s						
BELG	Belogornoye	23.34	45	P	P	03 19 56.6	+1.5
	comp=Z,21nm,0.7s,baz=24,slow=4.0,SNR=9.6						
KLMR	Klimovskoe	25.30	22	eP	P	03 20 12.2	-1.0
KLMR				pmax	pmax		
	comp=Z,30nm,1.1s						
KLMR	Klimovskoe	25.30	22	eP	P	03 20 12.2	-1.0
KLMR				AMP		03 20 14.8	
	comp=Z,30nm,1.1s						
KIRV	Kirov	27.35	33	P	P	03 20 31.9	+0.2
	comp=Z,4.5nm,0.5s,baz=176,slow=15,SNR=2.0						
PRGR	Permogore	27.83	26	eP	P	03 20 30.1	-5.9
PRGR				pmax	pmax		
	comp=Z,9.0nm,1.1s						
AKTO	Aktyubinsk	28.96	54	P	P	03 20 46.2	-0.1
	comp=Z,0.7nm,0.3s,baz=297,slow=12,SNR=4.4						
TORD	Torodi Ar. Bea	30.31	219	P	P	03 20 59.7	+1.2
	comp=Z,0.9nm,0.8s,baz=30,slow=8.7,SNR=6.7						
TORD	Torodi Ar. Bea	30.31	219	P	P	03 20 58.6	+0.1
ARU	Arti	30.79	42c	iP	P	03 21 00.6	-1.7
ARU				S	S	03 26 05.7	+0.8
ARU				pmax	pmax		
	comp=Z,5.0nm,1.2s						
ARCES	ARCESS Array B	31.17	3	P	P	03 21 05.4	-0.1
	comp=Z,2.9nm,0.8s,baz=205,slow=2.6,SNR=11						
ARCES				PcP	PcP	03 24 00.1	0.0
	comp=Z,6.0nm,1.1s,baz=104,slow=2.9,SNR=1.9						
ARCES	ARCESS Array B	31.17	3	P	P	03 21 05.7	+0.1
BRVK	Borovoye	36.82	50	P	P	03 21 55.6	+0.8
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BRVK	Borovoye	36.82	50	P	P	03 21 55.6	+0.8
BRVK				IAmb	IAmb	03 21 56.2	
	comp=Z,4.3nm,0.8s						
BVAR	Borovoye Array	36.89	50	P	P	03 21 55.7	+0.4
	comp=Z,1.7nm,0.7s,baz=232,slow=14,SNR=8.1						
CHGR	Chuyangaron	37.65	74	P	P	03 22 02.6	+0.4
CHGR				IAmb	IAmb	03 22 08.9	
	comp=Z,11nm,1.0s						
DBIC	Dimbokro	39.16	222	P	P	03 22 16.1	+1.3
	comp=Z,3.7nm,1.0s,baz=304,slow=3.6,SNR=2.5						
SPITS	Spitsbergen Ar	39.78	359	P	P	03 22 20.8	+1.4
	comp=Z,7.5nm,1.1s,baz=172,slow=12,SNR=1.0						
FRU1	Bishkek	40.67	66	P	P	03 22 27.5	+0.2
FRU1				pmax	pmax		
	comp=Z,42nm,0.6s						
FRU1	Bishkek	40.67	66	P	P	03 22 27.5	+0.2
KURBB	Kurchatov Arra	42.02	54	P	P	03 22 38.2	+0.1
	comp=Z,1.0nm,0.6s,baz=279,slow=9.3,SNR=6.4						
KURK	Kurchatov	42.06	54	P	P	03 22 38.5	0.0
KURK				pmax	pmax		

	comp=Z,4.0nm,1.1s						
KURK	Kurchatov	42.06	54	P	P	03 22 38.5	0.0
KURK				IAmb	IAmb	03 22 45.7	
	comp=Z,3.7nm,1.1s						
MK31	Makanchi Array	45.11	59	P	P	03 23 03.0	-0.2
MK31				pmax	pmax		
	comp=Z,7.0nm,1.5s						
MK31	Makanchi Array	45.11	59	P	P	03 23 03.0	-0.2
MK31				IAmb	IAmb	03 23 05.7	
	comp=Z,7.4nm,1.5s						
MKAR	Makanchi Array	45.11	59	P	P	03 23 02.9	-0.3
	comp=Z,1.2nm,0.4s,baz=280,slow=7.1,SNR=15						
MKAR	Makanchi Array	45.11	59	P	P	03 23 03.1	-0.1
MKAR	Makanchi Array	45.11	59	P	P	03 23 03.1	-0.1
ZAA0	Zalesovo Array	45.45	48	P	P	03 23 04.6	-1.1
ZALV	Zalesovo Beam	45.45	48	P	P	03 23 05.7	0.0
	comp=Z,7.8nm,0.5s,baz=278,slow=8.8,SNR=49						
ZALV	Zalesovo Beam	45.45	48	P	P	03 23 05.6	-0.1
NRIK	Noril'sk	46.47	27	P	P	03 23 14.4	+0.8
	comp=Z,1.0nm,0.3s,baz=310,slow=7.9,SNR=2.1						
DGZ	Jazzator, Alta	47.81	54	*i* P	P	03 23 24.3	-0.2
DGZ				pmax	pmax		
	comp=Z,8.0nm,2.0s						
SCHQ	Schefferville	58.19	317	P	P	03 24 42.1	+1.4
	comp=Z,3.9nm,0.6s,baz=72,slow=6.4,SNR=8.6						
SCHQ	Schefferville	58.19	317	P	P	03 24 41.5	+0.7
SCHQ				IAmb	IAmb	03 24 51.2	
	comp=Z,7.1nm,1.0s						
SONM	Songino Array	60.23	51	P	P	03 24 54.6	-0.6
	comp=Z,0.3nm,0.5s,baz=283,slow=7.2,SNR=5.9						
CMAR	Chiang Mai Arr	69.84	82	P	P	03 25 57.0	-0.9
	comp=Z,0.7nm,0.3s,baz=321,slow=7.0,SNR=1.4						
KLR	Kul'dur	73.59	40	P	P	03 26 20.8	+0.8
	comp=Z,0.7nm,0.5s,baz=288,slow=10,SNR=4.1						
ILAR	Eielson Array	76.54	354	P	P	03 26 38.3	+1.6
	comp=Z,1.0nm,1.1s,baz=0.2,slow=4.6,SNR=5.5						
ILAR	Eielson Array	76.54	354	P	P	03 26 38.0	+1.3
USRK	Ussuriysk Ar.	77.02	43	P	P	03 26 40.0	+0.3
	comp=Z,2.0nm,0.7s,baz=326,slow=2.1,SNR=5.5						
MJAR	Matsushiro Arr	85.73	46	P	P	03 27 26.4	+0.3
	comp=Z,1.9nm,0.7s,baz=6.9,slow=2.2,SNR=3.5						
PDAR	Pinedale Array	87.24	326	P	P	03 27 34.5	+0.7
	comp=Z,0.2nm,0.6s,baz=58,slow=6.9,SNR=2.3						
TXAR	Lajitas Array	94.72	314	P	P	03 28 07.8	-0.8
	comp=Z,0.3nm,0.8s,baz=96,slow=4.5,SNR=2.7						
WRA	Warramunga Arr	120.56	92	PKP	PKiKP	03 33 39.0	-0.1
	comp=Z,0.3nm,0.7s,baz=320,slow=1.9,SNR=1.8						
QSPA	South Pole Qui	128.40	180	PKP	PKiKP	03 33 54.6	+1.4
	comp=Z,2.0nm,0.5s,baz=308,slow=0.1,SNR=8.6						
QSPA	South Pole Qui	128.40	180		PKiKP	03 33 54.0	+0.8

IDC ***25*** *03:18:18.1±1.4, 39°.74N×53°.91E, h0km, mb3.7/1, mb1 3.7/6, mb1mx3.4/50, mbtmp3.7/6, ML3.5/5, Error ellipse: s-maj=16.3km s-min=12.2km az=19.0*

TEH ***25*** *03:18:26.1, 39°.09N×54°.31E, h10km, ML3.5*

ISC 25 03:18:18.1±0.7**, 39°.86N**±0°.05×**54°.10E**±0°.05**, h10**km**, n27, σ1s.55**/31**, 3C-1D, Turkmenistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IMND	Minoodasht	2.79	158	*e*Pn	Pn	03 19 03.0	+0.1
IMND				*e*Sg	Sn	03 19 33.9	-2.7
IGLO	Ghaloghah	3.36	184	*e*Pn	Pn	03 19 10.0	-0.9
IGLO				*e*		03 19 50.3	
	comp=Z,2μm,0.4s						
GEYT	Alibeck	3.68	120	Pn	Pn	03 19 15.7	+0.6
	comp=Z,4.6nm,0.3s,baz=303,slow=13,SNR=24						
GEYT				Pg	Pg	03 19 27.0	-1.6
	comp=Z,5.0nm,0.3s,baz=301,slow=15,SNR=8.4						
GEYT				Sn	Sn	03 19 58.4	-0.1
	comp=Z,3.9nm,0.3s,baz=158,slow=4.3,SNR=5.5						
GEYT				Lg	Lg	03 20 16.4	
	comp=Z,5.0nm,0.3s,baz=297,slow=19,SNR=3.3						
IPRN	Peran	3.87	202	*e*Pn	Pn	03 19 16.8	-1.0
ISHM	Shahmirzad	4.10	189	*e*Pn	Pn	03 19 21.3	+0.2
ISFR	Sfrayin	4.15	131	*e*Pn	Pn	03 19 22.8	+1.0
ISFR				*e*		03 20 16.2	
	comp=Z,1μm,0.4s						
IEMG	Emamgholi	4.32	123	*e*		03 20 50.9	
	comp=Z,616nm,0.3s						
IFIR	Firoozkooh	4.34	195	*e*Pn	Pn	03 19 24.8	+0.3
IANJ	Anjilo	4.39	182	*e*	Sn	03 20 18.6	+2.3
	comp=Z,1μm,0.3s						
SBZV	Sabzevar	4.43	140	*e*Pn	Pn	03 19 26.8	+1.1
ILAS	Lasjerd	4.56	192	*e*Pn	Pn	03 19 26.8	-0.6
ILAS				*e*		03 19 30.8	
	comp=Z,989nm,0.2s						
IDMV	Damavand	4.58	202	*e*Pn	Pn	03 19 28.6	+0.9
IDMV				*e*		03 20 22.3	
	comp=Z,399nm,0.4s						
IAKL	Akhelmad	4.90	130	*e*Pn	Pn	03 19 33.3	+1.2
IAKL				*e*		03 20 33.5	
	comp=Z,561nm,0.3s						
IMHD	Mahdasht	4.98	214	*e*Pn	Pn	03 19 34.0	+1.0
IVRN	Varamin	5.21	202	*e*Pn	Pn	03 19 37.3	+1.1
ISFB	Sefidab	5.70	196	*e*Pn	Pn	03 19 43.0	+0.1
ISFB				*e*		03 19 44.1	
	comp=Z,164nm,0.2s						
KRSH	Karshahi	6.09	196	*e*Pn	Pn	03 19 48.3	0.0
ANAR	Anarak	6.66	183	*e*Pn	Pn	03 19 56.5	+0.3
ITEG	Tejag	7.89	150	*e*Pn	Pn	03 20 13.3	+0.2
IKOO	Kooshah	8.41	150	*e*Pn	Pn	03 20 21.0	+0.7
KBZ	Khabaz	9.22	298	Pn	Pn	03 20 32.1	+1.1
	comp=Z,0.2nm,0.3s,baz=102,slow=9.3,SNR=7.4						
KBZ				Sn	Sn	03 22 12.1	-2.7
	comp=Z,0.1nm,0.3s,baz=108,slow=20,SNR=1.6						
AB31	Akbulak array	10.27	22	⇑P	Pn	03 20 44.2	-1.3
	comp=Z,0.6nm,0.3s,baz=182,slow=12,SNR=39						
AB31				⇑S	Sn	03 22 24.4	-16
	comp=Z,0.8nm,0.2s,baz=178,slow=24,SNR=7.3						
AKTO	Aktyubinsk	10.93	13	Pn	Pn	03 20 56.1	+1.7
	comp=Z,0.4nm,0.3s,baz=204,slow=10.0,SNR=7.5						
AKTO				Sn	Sn	03 22 52.9	-3.9
	comp=Z,1.9nm,0.3s,baz=198,slow=20,SNR=10.0						
AKTO	Aktyubinsk	10.93	13	⇓P	Pn	03 21 01.3	+6.9
	comp=Z,3.8nm,0.8s						
AKTO				⇑S	Sn	03 22 55.7	-1.1
	comp=Z,4.2nm,0.3s						
BVAR	Borovoye Array	17.25	35	P	P	03 22 24.0	+3.5
	comp=Z,0.4nm,0.3s,baz=228,slow=17,SNR=3.1						
OBN	Obninsk	19.23	328	P	P	03 22 42.6	+0.4
	comp=Z,0.3nm,0.3s,baz=157,slow=9.8,SNR=3.0						
AKASG	Malin Array Be	20.49	310	P	P	03 22 56.7	+0.7
	comp=Z,1.9nm,0.4s,baz=106,slow=9.7,SNR=7.1						

IDC ***25*** *03:18:57.6±2.8, 32°.90S×178°.26W, h0km, mb4.3/3, mb1 4.4/4, mb1mx3.7/33, mbtmp4.2/4, ML3.7/1, Error ellipse: s-maj=62.0km s-min=35.9km az=121.0*

ISC 25 03:18:59.6±3.3**, 33°.0S**±0°.2×**177°.8W**±0°.5**, h35**km**, n5, σ0s.60**/6**, mb4.3**/3**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	6.69	217	Pn	Pn	03 20 35.6	+0.2
	1.4nm,0.3s,baz=300,slow=24,SNR=3.2						
URZ				Sn	Sn	03 21 50.2	-0.2
	3.9nm,0.3s,baz=108,slow=19,SNR=4.8						
CTA	Charters Tower	34.47	283	P	P	03 25 44.9	+0.6
	3.0nm,0.4s,baz=106,slow=8.4,SNR=2.1						
ASAR	Alice Springs	43.21	270	P	P	03 26 57.0	-0.5
	1.4nm,0.6s,baz=109,slow=7.7,SNR=17						
WRA	Warramunga Arr	44.43	275	P	P	03 27 06.7	-0.6
	2.4nm,0.5s,baz=115,slow=7.6,SNR=55						
FINES	FINESS Array B	147.63	339	PKPbc	PKPab	03 38 41.8	-0.1
	3.9nm,0.8s,baz=50,slow=4.4,SNR=14						

IDC ***25*** *03:23:52.7±2.8, 32°.84S×178°.29W, h0km, mb4.1/3, mb1 4.3/4, mb1mx3.9/36, mbtmp4.1/4, ML3.8/1, Error ellipse: s-maj=66.6km s-min=35.8km az=121.0*

ISC 25 03:23:54.7±2.9**, 33°.0S**±0°.2×**177°.8W**±0°.4**, h35**km**, n5, σ0s.28**/6**, mb4.2**/3**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	6.71	216	Pn	Pn	03 25 30.4	-0.2
	2.1nm,0.3s,baz=301,slow=23,SNR=2.5						
URZ				Sn	Sn	03 26 46.0	+0.2
	3.6nm,0.3s,baz=120,slow=23,SNR=5.1						
ASAR	Alice Springs	43.17	270	P	P	03 31 52.5	+0.3
	1.1nm,0.6s,baz=109,slow=7.2,SNR=14						
WRA	Warramunga Arr	44.39	275	P	P	03 32 02.0	0.0
	2.1nm,0.5s,baz=114,slow=7.7,SNR=48						
FITZ	Fitzroy Crossi	52.53	272	P	P	03 33 04.6	-0.2
	2.5nm,0.8s,baz=130,slow=9.4,SNR=1.4						
FINES	FINESS Array B	147.57	339	PKPbc	PKiKP	03 43 36.7	+0.2
	2.8nm,0.8s,baz=31,slow=3.6,SNR=16						

IDC ***25*** *03:35:28.4±1.0, 15°.64S×174°.91W, h253km±10km, mb4.0/13, mb1 4.2/15, mb1mx3.9/33, mbtmp4.6/15, Error ellipse: s-maj=16.9km s-min=9.4km az=143.0*

NEIC ***25*** *03:35:29.2±1.2, 15°.65S±0°.09×174°.83W±0°.04, h259km±7km, mb4.3/62, Error ellipse: s-maj=13.6km s-min=6.1km az=183.0*

NOU ***25*** *03:35:30.3, 15°.42S×174°.75W, h291km, mb4.5/24, Tonga Islands*

ISC 25 03:35:28.9±0.4**, 15°.59S**±0°.07×**174°.83W**±0°.06**, h262**km**, n117, σ1s.06**/119**, mb4.3**/45**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	3.39	61	P	Pn	03 36 27.0	+0.5
	68nm,0.3s,baz=241,slow=10,SNR=39						
AFI				S	S	03 37 12.5	+0.2
	115nm,0.3s,baz=163,slow=19,SNR=8.5						
NIUE	Niue	5.82	127	Pn	Pn	03 36 55.0	-0.2
NIUE					S	03 38 03.0	-1.2
NIUE	Niue	5.82	127	P	Pn	03 36 58.3	+3.2
MSVF	Nonsavu	7.15	252	P	Pn	03 37 14.4	+2.7
	3.2nm,0.3s,baz=86,slow=16,SNR=9.3						
MSVF	Nonsavu	7.15	252	Pn	Pn	03 37 12.8	+1.1
MSVF	Nonsavu	7.15	252	P	Pn	03 37 15.1	+3.4
FUNA	Funafuti	9.13	320	Pn	Pn	03 37 36.8	+0.2
RAR	Rarotonga	15.34	114	P	Pn	03 38 52.3	-0.5
	0.7nm,0.3s,baz=341,slow=18,SNR=1.9						
MARNC	Mare, Loyalty	17.27	248	P	P	03 39 12.4	-0.5
DZM	Mont Dzumac	18.85	247	P	P	03 39 28.0	-2.2
	0.4nm,0.3s,baz=62,slow=20,SNR=1.5						
DZM	Mont Dzumac	18.85	247	P	P	03 39 28.9	-1.2
DZM				IAmb	IAmb	03 39 36.9	
	comp=Z,6.4nm,0.8s						
OUZ	Omahuta	22.13	206	P	P	03 40 04.9	+1.9
OUZ				IAmb	IAmb	03 40 06.4	
	comp=Z,13nm,0.7s						
OUZ	Omahuta	22.13	206	P	P	03 40 05.6	+2.6
URZ	Urewera	23.67	196	P	P	03 40 15.7	-1.3
	comp=Z,8.8nm,0.3s,baz=121,slow=23,SNR=16						
URZ	Urewera	23.67	196	P	P	03 40 15.8	-1.3
URZ	Urewera	23.67	196	P	P	03 40 16.7	-0.4
BKZ	Black Stump Fm	24.69	196	P	P	03 40 25.6	-0.8
BKZ	Black Stump Fm	24.69	196	P	P	03 40 27.0	+0.7
HNR	Honiara	25.36	281	P	P	03 40 34.0	+1.4
	comp=Z,100nm,0.4s,baz=203,slow=5.7,SNR=2.0						
QRZ	Quartz Range	27.44	201	P	P	03 40 50.7	-0.1
QRZ				IAmb	IAmb	03 40 55.1	
	comp=Z,14nm,1.2s						
KHZ	Kahutara	28.54	198	P	P	03 41 01.1	+0.6
CTAO	Charters Tower	37.26	257	P	P	03 42 16.1	0.0
CNB	Canberra Magne	37.55	232	P	P	03 42 17.9	-0.5
PMG	Port Moresby	37.58	275	P	P	03 42 19.3	+0.5
	comp=Z,13nm,0.3s,baz=90,slow=6.1,SNR=3.5						
COEN	Coen	40.59	267	P	P	03 42 44.0	+0.3
COEN	Coen	40.59	267	P	P	03 42 44.1	+0.3
STKA	Stephens Creek	42.75	240	P	P	03 43 00.1	-0.8
	comp=Z,2.5nm,0.4s,baz=90,slow=10,SNR=13						
STKA	Stephens Creek	42.75	240	P	P	03 43 00.3	-0.6
QIS	Mount Isa	43.49	256	P	P	03 43 06.1	-1.0
HTT	Hallett	45.27	238	P	P	03 43 21.2	+0.2
LCRK	Leigh Creek	45.35	243	P	P	03 43 20.5	-1.1
JAY	Jayapura	45.67	282	P	P	03 43 24.8	+0.4
	comp=Z,10nm,0.5s,baz=116,slow=6.8,SNR=4.7						
OOD	Oodnadatta	47.27	246	P	P	03 43 36.0	-0.5
BBOO	Buckleboo	47.52	240	P	P	03 43 37.2	-1.2
WB0	Warramunga Arr	48.42	257	P	P	03 43 44.3	-1.1
WB2	Warramunga Arr	48.45	257	P	P	03 43 44.6	-1.0
WRAB	Tennant Creek	48.45	257	P	P	03 43 45.0	-0.6
WRAB	Tennant Creek	48.45	257	P	P	03 43 44.5	-1.1
WRA	Warramunga Arr	48.46	257	P	P	03 43 45.4	-0.3
	comp=Z,17nm,0.5s,baz=90,slow=6.9,SNR=97						
WRA	Warramunga Arr	48.46	257	P	P	03 43 44.1	-1.6
AS31	Alice Springs	48.74	252	P	P	03 43 47.5	-0.3
ASAR	Alice Springs	48.74	252	P	P	03 43 47.2	-0.6
	comp=Z,151nm,0.7s,baz=86,slow=8.2,SNR=1240						
MULG	Mulgathing	48.90	243	P	P	03 43 47.5	-1.4
MTN	Manton Dam	52.34	266	P	P	03 44 14.4	-0.3
MTN				IAmb	IAmb	03 44 14.7	
	comp=Z,16nm,0.8s						
WRKA	Warakurna	53.83	250	P	P	03 44 24.4	-1.1
FORT	Forrest	54.10	243	P	P	03 44 26.3	-1.0
FORT	Forrest	54.10	243	P	P	03 44 25.7	-1.5
PSA00	Pilbara Seismi	61.83	254	P	P	03 45 20.0	-0.9
MEEK	Meekatharra	62.47	248	P	P	03 45 24.2	-0.9
VNDA	Vanda	63.05	186	P	P	03 45 29.8	+1.9
	comp=Z,1.8nm,0.9s,baz=20,slow=5.0,SNR=8.0						
TOLI2	Tolitoli	65.71	278	P	P	03 45 46.0	-0.2
TOLI2				IAmb	IAmb	03 45 49.7	
	comp=Z,4.6nm,0.7s						
TOLI2	Tolitoli	65.71	278	P	P	03 45 46.8	+0.6
JAGI	Jajag, Banyuwa	69.56	267	P	P	03 46 09.1	-1.2
PETK	Petropavlovsk-	72.40	343	P	P	03 46 25.6	-0.8
	comp=Z,2.9nm,0.9s,baz=172,slow=11,SNR=2.3						
CMB	Columbia Colle	73.82	42	P	P	03 46 35.6	+0.5
GSC	Goldstone, Bar	74.71	46	P	P	03 46 41.3	+1.0
GSC				IAmb	IAmb	03 46 42.1	
	comp=Z,4.8nm,0.9s						
NVAR	Mina Array Bea	75.40	43	P	P	03 46 46.1	+1.8
	comp=Z,4.7nm,0.8s,baz=228,slow=9.6,SNR=16						
NVAR	Mina Array Bea	75.40	43	P	P	03 46 45.1	+0.7
NV11	Mina Array Sit	75.50	43	P	P	03 46 45.8	+1.0
TPH	Tonopah	75.91	43	P	P	03 46 47.7	+0.4
MOD	Modoc Plateau	76.13	39	P	P	03 46 49.2	+0.9
MOD				IAmb	IAmb	03 46 50.6	
	comp=Z,5.3nm,0.8s						
SHPR	Sheep Range	76.47	46	P	P	03 46 51.1	+0.7
SHPR				IAmb	IAmb	03 46 53.0	
	comp=Z,5.3nm,0.9s						
Y14A	Wickenburg	76.71	49	P	P	03 46 52.7	+1.1
Y14A				IAmb	IAmb	03 46 54.1	
	comp=Z,5.9nm,0.9s						
PRN	Pahroc Range	77.02	45	P	P	03 46 53.6	+0.2
PRN				IAmb	IAmb	03 46 56.8	
	comp=Z,6.0nm,1.2s						
BMN	Battle Mountai	77.20	41	P	P	03 46 55.4	+1.1
BMN				IAmb	IAmb	03 46 56.5	
	comp=Z,6.0nm,0.7s						
TUC	Tucson	77.58	51	P	P	03 46 57.4	+0.9
TUC				IAmb	IAmb	03 46 59.4	
	comp=Z,4.5nm,0.9s						
J08A	Circle Bar Ran	78.07	38	P	P	03 47 00.1	+1.1
J08A				IAmb	IAmb	03 47 00.6	
	comp=Z,4.4nm,0.8s						
X16A	Lo Mia Camp, P	78.08	49	P	P	03 47 00.7	+1.4
X16A				IAmb	IAmb	03 47 02.3	
	comp=Z,7.8nm,1.0s						
CCUT	Cedar City	78.24	45	P	P	03 47 01.1	+0.8
319A	Douglas	78.30	53	P	P	03 47 02.0	+1.5
319A				IAmb	IAmb	03 47 03.4	
	comp=Z,6.9nm,0.9s						
PSUT	Pine Spring	78.41	44	P	P	03 47 02.1	+1.0
PSUT				IAmb	IAmb	03 47 03.3	
	comp=Z,9.4nm,1.1s						
ELK	Elko	78.64	42	P	P	03 47 02.5	+0.2
G08A	Pilot Rock	78.90	37	P	P	03 47 04.2	+0.7
G08A				IAmb	IAmb	03 47 05.2	
	comp=Z,4.4nm,0.9s						
MFID	Camas Ranch	79.70	39	P	P	03 47 08.9	+1.1
F10A	Beach Ranch, E	80.29	37	P	P	03 47 11.6	+0.7
F10A				IAmb	IAmb	03 47 12.5	
	comp=Z,5.7nm,0.8s						
PLID	Pearl Lake	80.51	38	P	P	03 47 13.0	+0.7
TMUT	Trail Mountain	80.58	45	P	P	03 47 14.4	+1.6
TMUT				IAmb	IAmb	03 47 15.6	
	comp=Z,5.8nm,0.9s						
HLID	Hailey	80.65	40	P	P	03 47 13.1	+0.1
HLID				IAmb	IAmb	03 47 15.4	
	comp=Z,5.4nm,0.8s						
HVU	Hansel Valley	80.77	42	P	P	03 47 13.9	+0.3
SRU	San Rafael Swe	80.95	45	P	P	03 47 15.1	+0.4
TX31	Lajitas Ar. Si	81.86	57	P	P	03 47 19.7	+0.1
TX32	Lajitas Array	81.86	57	P	P	03 47 19.1	-0.5
TXAR	Lajitas Array	81.87	57	P	P	03 47 21.3	+1.8
	comp=Z,2.2nm,1.0s,baz=219,slow=7.6,SNR=16						
TXAR	Lajitas Array	81.87	57	P	P	03 47 20.7	+1.2
ANMO	Albuquerque	81.98	50	P	P	03 47 20.5	+0.3
ANMO				IAmb	IAmb	03 47 22.7	
	comp=Z,7.4nm,1.1s						
MCMT	McKenzie Canyo	82.27	39	P	P	03 47 22.2	+0.7
DLMT	Dillon	82.70	39	P	P	03 47 23.9	+0.3
DLMT				IAmb	IAmb	03 47 25.8	
	comp=Z,4.6nm,0.8s						
REDW	Red Top Meadow	82.78	41	P	P	03 47 23.6	-0.6
REDW				IAmb	IAmb	03 47 26.9	
	comp=Z,5.2nm,0.9s						
TPAW	Teton Pass	82.78	41	P	P	03 47 24.3	+0.1
FXWY	Fox Creek	82.81	41	P	P	03 47 23.7	-0.6
FXWY				IAmb	IAmb	03 47 27.3	
	comp=Z,3.5nm,0.8s						
SNOW	Snow King Moun	82.90	41	P	P	03 47 24.4	-0.3
IL31		82.91	12	P	P	03 47 24.2	+0.3
IL31				IAmb	IAmb	03 47 25.6	
	comp=Z,6.8nm,1.1s						
ILAR	Eielson Array	82.91	12	P	P	03 47 23.9	-0.1
	comp=Z,1.4nm,0.4s,baz=220,slow=5.4,SNR=50						
LOHW	Long Hollow	83.06	41	P	P	03 47 25.9	+0.3
POKR	Poker Plat Res	83.11	11	P	P	03 47 25.3	+0.2
POKR				IAmb	IAmb	03 47 25.5	
	comp=Z,5.0nm,0.6s						
FLWY	Flagg Ranch	83.23	41	P	P	03 47 26.9	+0.5
YHL	Hebgen Lake	83.31	40	P	P	03 47 27.2	+0.4
BW06	Boulder Array	83.33	42	P	P	03 47 27.3	+0.4
BW06				IAmb	IAmb	03 47 28.4	
	comp=Z,5.5nm,0.8s						
PD31	Pinedale Array	83.33	42	P	P	03 47 27.0	0.0
PD31				IAmb	IAmb	03 47 28.4	
	comp=Z,4.9nm,0.8s						
PDAR	Pinedale Array	83.33	42	P	P	03 47 27.7	+0.7
	comp=Z,4.4nm,0.7s,baz=213,slow=3.2,SNR=42						
PDAR	Pinedale Array	83.33	42	P	P	03 47 27.1	+0.2
YMR	Madison River	83.35	40	P	P	03 47 27.5	+0.5
YMR				IAmb	IAmb	03 47 29.9	
	comp=Z,8.1nm,0.9s						
BOZ	Bozeman (W)	83.41	39	P	P	03 47 28.2	+1.0
BOZ				IAmb	IAmb	03 47 29.5	
	comp=Z,4.6nm,1.0s						
SMCO	Snowmass	83.44	46	P	P	03 47 27.4	-0.4
SMCO				IAmb	IAmb	03 47 31.4	
	comp=Z,5.0nm,0.9s						
YHH	Holmes Hill	83.48	40	P	P	03 47 28.5	+0.8
SDCO	Great Sand Dun	83.87	48	P	P	03 47 29.5	-0.4
MAW	Mawson	87.17	199	P	P	03 47 44.1	-1.1
	comp=Z,3.0nm,0.2s,baz=20,slow=16,SNR=16						
INK	Inuvik	88.79	14	P	P	03 47 52.5	0.0
	comp=Z,0.3nm,0.4s,baz=157,slow=11,SNR=1.8						
OK030	Cody Creek RV	89.66	53	P	P	03 47 55.5	-2.0
A36M	Sachs Harbour	93.41	14	P	P	03 48 14.5	+0.6
A36M				IAmb	IAmb	03 48 15.1	
	comp=Z,4.0nm,0.9s						
ARCES	ARCESS Array B	124.60	351	PKP	PKPdf	03 53 56.4	-0.2
	comp=Z,1.6nm,0.5s,baz=48,slow=1.8,SNR=10						
ARCES	ARCESS Array B	124.60	351		PKPdf	03 53 56.7	+0.1
FINES	FINESS Array B	131.82	347	PKP	PKPdf	03 54 10.8	+0.3
	comp=Z,3.4nm,0.9s,baz=5.0,slow=3.2,SNR=7.4						
GERES	GERESS Array B	146.11	350	PKPbc	PKPbc	03 54 37.8	-0.6
	comp=Z,1.5nm,0.7s,baz=44,slow=2.9,SNR=11						
GERES	GERESS Array B	146.11	350		PKPbc	03 54 38.6	+0.2
TORD	Torodi Ar. Bea	175.85	125	PKP	PKPdf	03 55 06.6	-1.9
	comp=Z,0.8nm,0.9s,baz=278,slow=2.5,SNR=2.7						
TORD	Torodi Ar. Bea	175.85	125		PKPdf	03 55 05.9	-2.6

MAN 25 03:45:12.7, 9°.12N×126°.73E, h98km, mb4.5, ML3.4, MS3.2, Mindanao

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NEIC ***25*** *04:04:10.6±0.9, 19°.95S±0°.04×69°.13W±0°.08, h100km±5km, mb4.3/11, ML4.0(GUC), Error ellipse: s-maj=10.6km s-min=5.2km az=85.0*

GUC ***25*** *04:04:11.4±0.7, 19°.96S×69°.19W, h105km±2km, ML4.0*

VAO ***25*** *04:04:12.5±0.6, 19°.86S×69°.21W, h126km±5km, mb4.2*

IDC ***25*** *04:04:27.2±14.0, 20°.52S×68°.35W, h236km±111km, mb3.5/3, mb1 3.5/4, mb1mx3.2/19, mbtmp4.1/4, Error ellipse: s-maj=156.4km s-min=8.5km az=133.0*

ISC 25 04:04:10.7±0.6**, 19°.97S**±0°.03×**69°.22W**±0°.05**, h107**km±5km**, n102, σ1s.08**/118**, mb4.3**/6**, 9C-3D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB08	IPOC Station P	0.18	160	*e*P	Pn	04 04 26.6	+0.4
PB08				*i* S	Sn	04 04 38.1	+0.2
PB08				IAML		04 04 39.6	
	comp=N,10μm,0.1s						
PB08	IPOC Station P	0.18	160		Pn	04 04 25.5	-0.7
PB08				Sn	Sn	04 04 35.9	-2.0
PB11	IPOC Station P	0.46	296	⇓*i*P	Pn	04 04 27.3	+0.1
PB11				*i* S	Sn	04 04 39.2	-0.3
PB11	IPOC Station P	0.46	296	Pn	Pn	04 04 26.7	-0.5
PB11				Sn	Sn	04 04 39.1	-0.4
TA02	Huaiquique	0.91	250	⇑*i*P	Pn	04 04 30.9	+0.2
TA02				*i* S	Sn	04 04 45.9	+0.1
TA02				IAML		04 04 47.7	
	comp=E,10μm,0.1s						
TA02	Huaiquique	0.91	250		Pn	04 04 30.9	+0.2
TA02				Sn	Sn	04 04 46.1	+0.3
TA01	Diego Aracena	1.08	236	⇑*i*P	Pn	04 04 32.5	0.0
TA01				*i* S	Sn	04 04 49.0	0.0
TA01				IAML		04 04 50.1	
	comp=E,2μm,0.2s						
TA01	Diego Aracena	1.08	236		Pn	04 04 32.1	-0.4
PB01	IPOC Station P	1.10	193	⇑*i*P	Pn	04 04 33.3	+0.5
PB01				*i* S	Sn	04 04 49.9	+0.3
PB01	IPOC Station P	1.10	193		Pn	04 04 32.3	-0.5
PB01				Sn	Sn	04 04 49.6	+0.1
PB02	IPOC Station P	1.49	205	⇑*i*P	Pn	04 04 37.5	+0.2
PB02				*i* S	Sn	04 04 57.9	+0.4
PB02				IAML		04 05 02.2	
	comp=N,3μm,0.3s						
PB16	IPOC Station P	1.65	350		Pn	04 04 40.6	+0.9
PB12	IPOC Station P	1.70	322	⇓*i*P	Pn	04 04 40.1	+0.1
PB12				*i* S	Sn	04 05 02.6	+0.5
PB12				IAML		04 05 04.0	
	comp=N,2μm,0.5s						
PB12	IPOC Station P	1.70	322		Pn	04 04 40.1	+0.1
PB09	IPOC Station P	1.82	181	⇑*e*P	Pn	04 04 42.4	+0.9
PB09				*i* S	Sn	04 05 05.8	+0.9
PB09				IAML		04 05 08.0	
	comp=E,1μm,0.3s						
PB09	IPOC Station P	1.82	181		Pn	04 04 42.0	+0.5
PB07	IPOC Station P	1.86	199	⇑*i*P	Pn	04 04 42.4	+0.4
PB07				*i* S	Sn	04 05 05.5	-0.2
PB07				IAML		04 05 08.9	
	comp=E,2μm,0.3s						
PB07	IPOC Station P	1.86	199		Pn	04 04 41.8	-0.1
AP01	Chacalluta	1.91	326	*e*P	Pn	04 04 42.6	+0.2
AP01				*i* S	Sn	04 05 07.4	+0.9
AP01	Chacalluta	1.91	326		Pn	04 04 42.6	+0.2
PB03	IPOC Station P	2.13	193	⇑*i*P	Pn	04 04 45.5	+0.1
PB03				*i* S	Sn	04 05 11.6	-0.3
PB03				IAML		04 05 11.9	
	comp=E,751nm,0.5s						
PB04	IPOC Station P	2.51	200	⇑*e*P	Pn	04 04 50.4	+0.1
PB04	IPOC Station P	2.51	200		Pn	04 04 50.3	+0.1
LVC	Limon Verde	2.65	174	*e*P	Pn	04 04 53.4	+1.1
LVC				*i* S	Sn	04 05 25.1	+0.9
LVC	Limon Verde	2.65	174	*e*P	Pn	04 04 54.4	+2.1
LVC	Limon Verde	2.65	174		Pn	04 04 53.1	+0.8
PB06	IPOC Station P	2.75	187	⇑*e*P	Pn	04 04 53.6	+0.2
PB06				*i* S	Sn	04 05 24.8	-1.5
PB06				IAML		04 05 25.1	
	comp=E,819nm,0.4s						
PB06	IPOC Station P	2.75	187		Pn	04 04 53.0	-0.3
PB05	IPOC Station P	3.01	197	⇓*i*P	Pn	04 04 56.8	-0.2
PB05				*i* S	Sn	04 05 23.2	-9.4
PB15	IPOC Station P	3.23	184	*e*P	Pn	04 05 00.7	+0.7
PB15				*i* S	Sn	04 05 32.0	-5.9
PB15	IPOC Station P	3.23	184		Pn	04 04 59.9	0.0
PB10	IPOC Station P	3.74	199	*e*P	Pn	04 05 05.7	-0.8
PB10				IAML		04 06 13.0	
	comp=N,91nm,0.4s						
PB10	IPOC Station P	3.74	199		Pn	04 05 05.4	-1.1
LPAZ	La Paz	3.80	16		Pn	04 05 06.8	-1.1
AC02	Maricunga	6.84	179		Pn	04 05 48.1	-0.7
ETMB	Extrema	10.50	16	*e*P	Pn	04 06 39.0	+0.8
PTLB	Pontes e Lacer	10.61	67		Pn	04 06 36.6	-2.9
VILB	Vilhena	11.11	52	*e*P	Pn	04 06 45.0	-1.4
VILB	Vilhena	11.11	52		Pn	04 06 45.3	-1.1
CPUP	Villa Florida	12.64	122	*e*P	Pn	04 07 09.1	+2.6
AQDB	Aquidauana	12.70	95	*e*P	Pn	04 07 10.4	+2.9
SALV	Santo Antonio	13.49	75	*e*P	Pn	04 07 18.1	+0.3

BO01	Tunca	14.46	186	P	P	04 07 34.7	+0.8
PDRB	Porto dos Gac	14.60	57	eP	Pn	04 07 33.2	+1.0
BO02	Sierra Bellavi	14.83	185	P	P	04 07 39.0	+0.9
ITQB	Itaqui	14.96	133	eP	P	04 07 39.6	+0.1
TBTG	Tabatinga, AM	15.70	357	eP	Pn	04 07 46.8	+0.9
TRCB	Terra Rica	15.70	103	eP	Pn	04 07 46.4	+0.4
CLDB	Colider	15.78	57	eP	P	04 07 48.2	-0.4
ML02	Panimavida	15.86	187	P	P	04 07 50.2	+0.9
ML02				IAmb	IAmb	04 07 52.2	
	comp=Z,16nm,0.6s						
PTGB	Pitanga	16.56	110	eP	P	04 07 59.1	+1.8
PCMB	Pacaembu	16.87	99	eP	P	04 08 01.3	+0.6
ARAG	Araguaiana, MT	17.11	78	eP	Pn	04 08 04.8	+1.5
CPSB	Cacapava Do Su	17.64	129	eP	Pn	04 08 10.7	+1.0
MACA	Manacapuru-AM	18.67	28	eP	P	04 08 18.9	-1.5
MACA	Manacapuru-AM	18.67	28	P	P	04 08 18.7	-1.7
MACA				IAmb	IAmb	04 08 22.1	
	comp=Z,21nm,0.6s						
SNDB	Serra Nova Dou	18.97	68	eP	P	04 08 22.3	-1.4
TIJ01	Guaruva-PR	19.40	110	eP	P	04 08 28.8	+0.3
BB19B	Bebedouro	19.41	97	eP	P	04 08 28.0	-0.6
IPMB	Ipameri, GO	19.97	88	eP	P	04 08 34.1	-0.5
ITTB	Itaituba	20.32	42	eP	P	04 08 37.0	-1.4
BDFB	Brasilia	20.64	81	P	P	04 08 41.6	-0.3
	comp=Z,1.0nm,0.3s,baz=259,slow=9.9,SNR=8.8						
BDFB	Brasilia	20.64	81	P	P	04 08 41.3	-0.7
BDFB				IAmb	IAmb	04 08 44.6	
	comp=Z,4.2nm,0.5s						
PLCA	Paso Flores	20.73	183	P	Pn	04 08 44.7	-1.3
	comp=Z,2.1nm,0.6s,baz=2.7,slow=13,SNR=9.2						
PLCA	Paso Flores	20.73	183	eP	Pn	04 08 44.2	-1.8
PLCA	Paso Flores	20.73	183	P	P	04 08 43.0	+0.4
PTGA	Pitinga	21.16	26	P	P	04 08 45.3	-2.0
PTGA				IAmb	IAmb	04 08 49.3	
	comp=Z,12nm,1.4s						
PEXB	Peixe	21.55	72	eP	P	04 08 50.9	-0.8
BSCB	Bom Sucesso	22.92	97	eP	P	04 09 04.9	-0.9
MALB	Monte Alegre	23.19	41	eP	P	04 09 06.3	-2.0
PRPB	Parauapebas	23.31	57	eP	P	04 09 08.1	-1.3
SMTB	Santa Maria do	23.65	65	eP	P	04 09 12.6	+0.1
MAN01	Angra dos Reis	23.68	102	eP	P	04 09 12.8	+0.1
BOAV	Boa Vista	23.81	22	eP	P	04 09 13.8	0.0
BOAV	Boa Vista	23.81	22	P	P	04 09 13.6	-0.3
BOAV				IAmb	IAmb	04 09 14.4	
	comp=Z,9.2nm,0.7s						
DIAM	Diamantina, MG	24.19	90	eP	P	04 09 17.5	+0.1
JANB	Januaria	24.24	82	eP	P	04 09 17.1	-0.7
SDBA	SAO DESIDERIO	24.51	76	eP	P	04 09 19.8	-0.5
MCPB	Macapa, AP	25.73	43	eP	P	04 09 31.4	+0.1
CAM01	Campos-RJ	25.80	99	eP	P	04 09 32.4	+0.4
SJMB	Sao Joao De Ma	26.47	92	eP	P	04 09 38.2	+0.2
BSFB	Barra de Sao F	26.78	92	eP	P	04 09 40.6	-0.1
GUA01	Guaratinga, BA	28.12	88	eP	P	04 09 53.0	+0.3
NBIT	Itapeh - BA	28.83	85	eP	P	04 09 58.6	-0.5
GDU01	Guandu, BA	29.02	82	eP	P	04 10 00.3	-0.4
NBPN	Ponto Novo - B	29.37	76	eP	P	04 10 03.8	0.0
SJCC	San Jacinto, C	30.25	348	P	P	04 10 11.5	-0.1
SJCC				IAmb	IAmb	04 10 14.5	
	comp=Z,9.2nm,1.1s						
NBPS	Pedro II - PI	31.17	64	eP	P	04 10 20.0	+0.3
NBLA	Lagarto - SE	31.53	78	eP	P	04 10 22.2	-0.6
NBMA	Muriti-CE	32.06	71	eP	P	04 10 28.0	+0.4
JACO	JACO, Garabito	33.13	331	P	P	04 10 36.5	-0.3
NBAN	Anadia - AL	33.39	77	eP	P	04 10 39.6	+0.4
NBLV	Livramento - P	33.72	73	eP	P	04 10 41.4	-0.6
VNA3	Neumayer Olymp	61.62	162	P	P	04 14 18.1	+1.6
VNA2	Neumayer--Watz	62.19	161	P	P	04 14 22.0	+1.6
SNAA	Sanae	63.82	161	P	P	04 14 32.7	+1.5
SNAA	Sanae	63.82	161	P	P	04 14 32.1	+0.9
SNAA				IAmb	IAmb	04 14 45.0	
	comp=Z,9.1nm,1.5s						
DBIC	Dimbokro	68.59	74	P	P	04 15 01.6	-0.9
	comp=Z,5.0nm,1.1s,baz=259,slow=4.0,SNR=3.1						
TORD	Torodi Ar. Bea	77.12	71	P	P	04 15 52.0	-1.0
	comp=Z,0.5nm,0.4s,baz=255,slow=5.4,SNR=16						
TORD	Torodi Ar. Bea	77.12	71	P	P	04 15 51.8	-1.2
ASAR	Alice Springs	131.12	209	PKP	PKiKP	04 23 11.1	-0.6
	comp=Z,0.2nm,0.4s,baz=68,slow=2.3,SNR=2.3						
WRA	Warramunga Arr	134.11	212	PKP	PKiKP	04 23 17.1	-0.7
	comp=Z,0.5nm,0.7s,baz=146,slow=1.6,SNR=1.5						

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*INET **25** 04:09:43.2, 12°.37N×86°.50W, h8^{km}, MW4.0*
*UCR **25** 04:09:44.3±1.7, 12°.26N×86°.60W, h2^{km}±6^{km}, ML3.4, MW4.5*
*SNET **25** 04:09:44.5±1.3, 12°.42N×86°.27W, h34^{km}±999^{km}, ML3.6*
ISC 25 04:09:43.8±1.4**, 12°.3N**±0°.2×**86°.5W**±0°.2**, h10^{km}, n32, σ1^{s}.82**/54**, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	Conchagua	1.61	307	eP	Pn	04 10 12.6	+0.1
CNCH				eS	Sn	04 10 34.3	+0.9
CNCH	Conchagua	1.61	307	eP	Pn	04 10 12.6	+0.1
CNCH				eS	Sn	04 10 34.3	+0.9
LCND	La Caada	1.67	307	eS	Sn	04 10 35.5	+0.7
LCND				IAML		04 10 41.2	
	comp=Z,1μm,0.4s						
CNRM	Centro Naciona	1.99	306	eS	Sn	04 10 44.4	+1.8
CNRM	Centro Naciona	1.99	306	eS	Sn	04 10 44.4	+1.8
COLC	Colonia	2.07	142	i P	Pb	04 10 19.4	-2.2
COLC				i S	Sb	04 10 48.2	+0.7
CUI	Cuipilapa	2.10	141	i P	Pb	04 10 20.1	-2.1
PACA	Pacayal	2.11	304	eP	Pn	04 10 20.6	+1.2
PACA				eS	Sn	04 10 48.3	+2.6
PACA	Pacayal	2.11	304	eP	Pn	04 10 20.6	+1.2
PACA				eS	Sn	04 10 48.3	+2.6
ACAL	Aguas Claras	2.20	139	i P	Pb	04 10 23.1	-0.8
GUAI	GUAI	2.25	154	i P	Pn	04 10 21.1	0.0
GUAI				i S	Sn	04 10 51.4	+2.4
ALJI	Alcalda de J	2.25	297	eP	Pn	04 10 21.6	+0.5
ALJI				eS	Sn	04 10 50.9	+2.0
ALJI				IAML		04 10 55.7	
	comp=Z,421nm,0.5s						
ALJI	Alcalda de J	2.25	297	eP	Pn	04 10 21.6	+0.5
ALJI				eS	Sn	04 10 50.9	+2.0
ALJI				IAML		04 10 55.7	
	comp=Z,421nm,0.5s						
COEB	Comit de Eme	2.30	301	eP	Pn	04 10 22.7	+0.8
COEB				eS	Sn	04 10 52.6	+2.3
COEB				IAML		04 10 56.7	
	comp=Z,242nm,0.3s						
COEB	Comit de Eme	2.30	301	eP	Pn	04 10 22.7	+0.8
COEB				eS	Sn	04 10 52.6	+2.3
COEB				IAML		04 10 56.7	
	comp=Z,242nm,0.3s						
SCLA	Alcaldia de Sa	2.57	303	eP	Pn	04 10 26.5	+0.9
SCLA				eS	Sn	04 10 58.8	+1.9
SCLA	Alcaldia de Sa	2.57	303	eP	Pn	04 10 26.5	+0.9
SCLA				eS	Sn	04 10 58.8	+1.9
PAVA	Las Pavas	2.75	301	eP	Pn	04 10 29.2	+1.1
PAVA				eS	Sn	04 11 03.0	+1.6
PAVA	Las Pavas	2.75	301	eP	Pn	04 10 29.2	+1.1
PAVA				eS	Sn	04 11 03.0	+1.6
SJTE	Alcalda de S	2.76	299	eP	Pn	04 10 28.2	0.0
SJTE				eS	Sn	04 11 03.8	+2.1
SJTE				IAML		04 11 05.6	
	comp=Z,71nm,0.6s						
SJTE	Alcalda de S	2.76	299	eP	Pn	04 10 28.2	0.0
SJTE				eS	Sn	04 11 03.8	+2.1
SJTE				IAML		04 11 05.6	
	comp=Z,71nm,0.6s						
LFRS	El Faro	2.81	298	eP	Pn	04 10 30.6	+1.6
LFRS				eS	Sn	04 11 05.1	+2.2
LFRS	El Faro	2.81	298	eP	Pn	04 10 30.6	+1.6
LFRS				eS	Sn	04 11 05.1	+2.2
IGN	Direccin Gen	2.94	299	eS	Sn	04 11 09.0	+2.8
IGN				eS	Sb	04 11 09.2	-3.4
IGN	Direccin Gen	2.94	299	eS	Sn	04 11 09.0	+2.8
IGN				eS	Sb	04 11 09.2	-3.4
OPAM	Oficina de Pla	2.97	298	eS	Sn	04 11 09.6	+2.8
OPAM	Oficina de Pla	2.97	298	eS	Sn	04 11 09.6	+2.8
SNET	Serv Nac Est T	2.98	298	eS	Sn	04 11 09.4	+2.2
SNET				IAML		04 11 14.2	
	comp=Z,212nm,0.3s						
SNET	Serv Nac Est T	2.98	298	eS	Sn	04 11 09.4	+2.2
SNET				IAML		04 11 14.2	
	comp=Z,212nm,0.3s						
JAYA	Jayaque - finc	3.16	296	eP	Pn	04 10 34.0	+0.2
JAYA				eS	Sn	04 11 12.8	+1.1
JAYA	Jayaque - finc	3.16	296	eP	Pn	04 10 34.0	+0.2
JAYA				eS	Sn	04 11 12.8	+1.1
SLOZ	Alcaldia de Sa	3.62	299	eP	Pn	04 10 41.1	+1.1

KRSC 25 04:16:30.9±2.1**, 48°.50N×156°.89E, h31^{km}**±28^{km}**, ML4.1, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	2.25	347	eP	Pn	04 17 06.6	+0.7
SKR				eS	Sn	04 17 33.8	+1.3
PAU	Pauzhetka	2.98	359	eP	Pn	04 17 19.4	+3.5
PAU				eS	Sb	04 17 55.1	-3.9
KDTR	Khodutka, Kamc	3.40	13	eP	Pn	04 17 26.0	+4.2
KDTR				eS	Sb	04 18 06.8	-4.5
ASAK	Asacha	3.95	9	eP	Pn	04 17 34.2	+4.9
MTVR	Mutnovka	4.08	11	eP	Pn	04 17 36.0	+4.8
RUS	Russkaya	4.08	14	eP	Pn	04 17 35.0	+4.0
RUS				eS	Sn	04 18 23.0	+5.3
DALK	Dalny	4.69	14	eP	Pn	04 17 41.8	+2.3
UGLR	Uglovaya	4.88	14	eP	Pn	04 17 47.0	+4.9
AVH	Avacha	4.92	13	eP	Pn	04 17 49.0	+6.3
SMAR	Somma	4.92	14	eP	Pn	04 17 48.5	+5.6
NLC	Nalytchevo	4.93	17	eS	Sn	04 18 44.3	+5.5
SDLR	Sedlovina	4.95	14	eP	Pn	04 17 47.6	+4.4
SPN	Mys Shipunski	5.02	22	eP	Pn	04 17 49.7	+5.7
SPN				eS	Sn	04 18 47.3	+6.4
GNL	Ganaly	5.25	7	eP	Pn	04 17 52.8	+5.5
MKZ	Mys Kozlova	6.78	25	eP	Pn	04 18 12.9	+4.8

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*IDC **25** 04:30:29.5±1.1, 10°.16S×71°.11W, h615^{km}±18^{km}, mb3.1/7, mb1 3.4/11, mb1mx3.2/29, mbtmp4.1/11, Error ellipse: s-maj=33.8km s-min=14.7km az=24.0*
*NEIC **25** 04:30:29.4±1.8, 10°.08S±0°.10×71°.1W±0°.1, h590^{km}±9^{km}, mb4.3/15, Error ellipse: s-maj=21.0km s-min=11.3km az=60.0*
*VAO **25** 04:30:30.2±0.3, 10°.07S×71°.03W, h599^{km}±5^{km}, mb3.9*
ISC 25 04:30:29.0±0.4**, 10°.08S**±0°.06×**71°.09W**±0°.06**, h599^{km}, n84, σ0^{s}.99**/92**, mb3.7**/9**, Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CZSB	Cruzeiro do Su	2.83	326	eP	P	04 31 48.2	+0.9
CZSB	Cruzeiro do Su	2.83	326	P	P	04 31 46.9	-0.3
CZSB				S	S	04 32 49.8	-1.0
ETMB	Extrema	4.81	87	eP	P	04 32 01.8	+1.4
ETMB	Extrema	4.81	87	P	P	04 32 00.9	+0.5
ETMB				S	S	04 33 13.1	-1.9
NNA	Nana	5.95	251	P	P	04 32 11.0	+1.2
	1.3nm,0.3s,baz=43,slow=9.5,SNR=5.7						
NNA				S	S	04 33 32.0	-0.1
	0.5nm,0.3s,baz=275,slow=17,SNR=4.0						
TBTG	Tabatinga, AM	5.98	11	eP	P	04 32 10.9	+0.9
LPAZ	La Paz	6.81	155	P	P	04 32 17.4	-0.5
LPAZ				S	S	04 33 45.4	-1.5
ATAH	Atahualpa	7.79	292	P	P	04 32 29.5	+2.7
	1.8nm,0.3s,baz=64,slow=4.2,SNR=22						
ATAH				S	S	04 34 06.4	+3.2
	0.7nm,0.3s,baz=322,slow=21,SNR=5.8						
SAML	Samuel	7.88	82	P	P	04 32 28.4	+1.1
PB16	IPOC Station P	8.35	170	P	P	04 32 31.7	-0.5
PB16					S	04 34 11.9	-1.1
PB12	IPOC Station P	8.51	175	P	P	04 32 32.3	-0.9
PB11	IPOC Station P	9.72	172	P	P	04 32 44.3	-0.8
PB08	IPOC Station P	10.17	170	P	P	04 32 49.6	-0.3
PB01	IPOC Station P	11.01	172	P	P	04 32 57.3	-0.5
VILB	Vilhena	11.05	106	eP	P	04 32 59.5	+1.2
VILB	Vilhena	11.05	106	P	P	04 32 59.5	+1.2
SIV	San Ignacio	11.39	122	P	P	04 33 02.1	+0.4
	4.5nm,0.3s,baz=292,slow=9.4,SNR=99						
SIV				S	S	04 35 07.3	+0.1
	baz=292,slow=15,SNR=3.3						
MACA	Manacapuru-AM	12.41	57	eP	P	04 33 11.8	-0.2
MACA	Manacapuru-AM	12.41	57	P	P	04 33 12.2	+0.2
OTAV	Otavalo	12.60	324	eP	P	04 33 15.4	+1.1
LVC	Limon Verde	12.63	171	eP	P	04 33 14.8	+0.4
PTLB	Pontes e Lacer	12.82	116	eP	P	04 33 16.6	+0.6
PTLB	Pontes e Lacer	12.82	116	P	P	04 33 16.6	+0.6
PDRB	Porto dos Gac	14.19	97	eP	P	04 33 30.4	+0.5
PTGA	Pitinga	14.45	51	P	P	04 33 32.9	+0.7
	1.8nm,0.3s,baz=322,slow=23,SNR=18						
PTGA	Pitinga	14.45	51	P	P	04 33 33.0	+0.7
CLDB	Colider	15.06	94	eP	P	04 33 38.4	+0.5
NPGB	Novo Progresso	15.85	80	eP	P	04 33 45.4	+0.2
SALV	Santo Antonio	16.08	113	eP	P	04 33 48.2	+1.1
ITTB	Itaituba	16.26	71	eP	P	04 33 49.6	+0.7
BOAV	Boa Vista	16.26	41	eP	P	04 33 50.3	+1.3
BOAV	Boa Vista	16.26	41	P	P	04 33 50.1	+1.2
BOAV				IAmb	IAmb	04 33 52.2	
	comp=Z,8.1nm,1.0s						
PP1B	Ponte de Pedra	17.42	117	eP	P	04 34 00.6	+1.1
ZARC	Zaragoza, Cauc	17.86	348	P	P	04 34 03.2	-0.3
ZARC				IAmb	IAmb	04 34 04.5	
	comp=Z,7.7nm,0.4s						
AQDB	Aquidauana	18.07	127	eP	P	04 34 06.0	+0.7
AQDB	Aquidauana	18.07	127	P	P	04 34 06.1	+0.7
AQDB				IAmb	IAmb	04 34 07.7	
	comp=Z,3.8nm,0.5s						
MALB	Monte Alegre	18.62	65	eP	P	04 34 11.3	+0.9
SDV	Santo Domingo	18.85	1	eP	P	04 34 13.7	+1.0
BAUV	El Baul	19.14	9	P	P	04 34 15.9	+0.7
BAUV				IAmb	IAmb	04 34 17.2	
	comp=Z,12nm,1.1s						
MOTC	Monteria, Cord	19.28	346	P	P	04 34 16.6	+0.1
SNDB	Serra Nova Dou	19.52	97	eP	P	04 34 19.7	+1.1
ARAG	Araguaiana, MT	19.60	109	eP	P	04 34 19.4	+0.1
SJCC	San Jacinto, C	20.26	348	P	P	04 34 25.8	+0.5
SJCC				IAmb	IAmb	04 34 37.0	
	comp=Z,11nm,1.1s						
CPUP	Villa Florida	20.75	143	eP	P	04 34 31.0	+1.5
BIRV	Birongo	20.98	13	P	P	04 34 32.6	+0.8
BIRV				IAmb	IAmb	04 34 33.5	
	comp=Z,9.4nm,0.8s						
MCPB	Macapa, AP	21.26	64	eP	P	04 34 35.0	+0.8
PRPB	Parauapebas	21.42	81	eP	P	04 34 36.0	+0.3
PEXB	Peixe	22.46	97	eP	P	04 34 46.0	+1.0
SMTB	Santa Maria do	23.22	89	eP	P	04 34 52.5	+0.7
PTGB	Pitanga	23.22	131	eP	P	04 34 51.8	+0.1
IPMB	Ipameri, GO	23.53	112	eP	P	04 34 54.3	-0.2
ITQB	Itaqui	23.72	147	eP	P	04 34 57.0	+1.1
TMAB	Tom-Au,PA,Br	24.10	73	eP	P	04 35 00.2	+0.8
BO01	Tunca	24.20	180	P	P	04 35 01.3	+1.3
BO01				IAmb	IAmb	04 35 04.2	
	comp=Z,4.1nm,0.7s						
SDBA	SAO DESIDERIO	25.79	98	eP	P	04 35 15.2	+0.7
TIJ01	Guaruva-PR	25.87	129	eP	P	04 35 15.9	+0.9
CPSB	Cacapava Do Su	26.06	143	eP	P	04 35 18.4	+1.9
JANB	Januaria	26.59	103	eP	P	04 35 21.6	+0.1
BSCB	Bom Sucesso	27.54	116	eP	P	04 35 30.5	+0.8
CELP	Cerrillos	28.33	9	P	P	04 35 36.4	-0.1
CELP				IAmb	IAmb	04 35 51.0	
	comp=Z,9.8nm,1.1s						
SJMB	Sao Joao De Ma	30.17	110	eP	P	04 35 53.2	+0.8
NBPN	Ponto Novo - B	30.39	94	eP	P	04 35 54.5	+0.2
NAN01	Guarapari, ES	30.99	108	eP	P	04 36 00.0	+0.6
NBIT	Itapeh - BA	31.26	102	eP	P	04 36 02.4	+0.6
NBMA	Muriti-CE	32.06	88	eP	P	04 36 08.9	+0.3
GOGA	Godfrey	44.83	345	P	P	04 37 50.6	-0.5
TXAR	Lajitas Array	50.22	322	P	P	04 38 31.4	-0.1
	comp=Z,0.1nm,0.3s,baz=164,slow=8.9,SNR=8.0						
TXAR				PcP	PcP	04 39 38.9	-0.7
	comp=Z,0.3nm,0.5s,baz=133,slow=5.0,SNR=6.7						
TXAR	Lajitas Array	50.22	322	P	P	04 38 31.7	+0.2
S44A	Carbondale	50.48	341	P	P	04 38 32.3	-0.8
SIUC	Southern Illin	50.49	341	P	P	04 38 32.3	-0.8
FVM	French Village	51.12	340	P	P	04 38 36.8	-1.0
SDCO	Great Sand Dun	57.45	328	P	P	04 39 22.4	0.0
PDAR	Pinedale Array	63.25	329	P	P	04 40 00.1	-0.3
	comp=Z,0.4nm,0.4s,baz=127,slow=8.7,SNR=7.2						
ULM	Lac du Bonnet	63.86	343	P	P	04 40 02.5	-1.2
	comp=Z,4.5nm,0.4s,baz=155,slow=4.2,SNR=11						
TORD	Torodi Ar. Bea	75.85	74	P	P	04 41 15.0	-0.6
	comp=Z,1.3nm,0.3s,baz=248,slow=4.5,SNR=33						
ESDC	Sonseca Array	79.35	46	P	P	04 41 34.2	+0.2
	comp=Z,0.7nm,0.7s,baz=245,slow=5.4,SNR=3.3						
YKA	Yellowknife Ar	79.78	341	P	P	04 41 35.0	-0.5
	comp=Z,2.1nm,0.7s,baz=134,slow=4.2,SNR=11						
ILAR	Eielson Array	93.07	335	P	P	04 42 38.3	-1.1
	comp=Z,0.2nm,0.8s,baz=98,slow=2.0,SNR=2.3						
ZALV	Zalesovo Beam	132.20	19	PKP	PKPdf	04 48 34.9	-0.8
	comp=Z,1.0nm,0.5s,baz=264,slow=0.9,SNR=4.8						
ASAR	Alice Springs	138.49	216	PKP	PKPdf	04 48 46.9	-1.4
	comp=Z,0.5nm,0.5s,baz=131,slow=1.8,SNR=5.2						
ASAR	Alice Springs	138.49	216		PKPdf	04 48 47.2	-1.2
WRA	Warramunga Arr	141.05	220	PKhKP	PKPpre	04 48 46.9	
	comp=Z,0.2nm,0.4s,baz=130,slow=2.0,SNR=5.0						
WRA				PKP	PKPdf	04 48 53.0	0.0
	comp=Z,0.5nm,0.3s,baz=228,slow=1.2,SNR=21						
SONM	Songino Array	142.31	3	PKP	PKPdf	04 48 51.5	-3.1
	comp=Z,0.4nm,0.3s,baz=288,slow=1.4,SNR=7.2						
KSRS	Korea Array	147.81	331	PKPbc	PKPbc	04 49 07.4	-0.5
	comp=Z,2.8nm,0.6s,baz=27,slow=2.1,SNR=6.4						

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*BJI **25** 04:46:43.4±0.0, 31°.30N×140°.91E, h141^{km}, mB4.9/35, mb4.7/58*
*MOS **25** 04:46:48.8±1.1, 31°.44N×139°.96E, h127^{km}, mb4.9/47, Error ellipse: s-maj=8.4km s-min=4.4km az=110.4*
*NEIC **25** 04:46:50.8±1.9, 31°.43N±0°.05×140°.15E±0°.09, h125^{km}±5^{km}, mb5.0/295, Error ellipse: s-maj=11.8km s-min=7.1km az=75.0*
*IDC **25** 04:46:51.0±0.5, 31°.43N×139°.91E, h128^{km}±4^{km}, mb4.4/30, mb1 4.5/35, mb1mx4.5/44, mbtmp4.8/35, Error ellipse: s-maj=10.6km s-min=6.3km az=81.0*
*JMA **25** 04:46:52.0±0.2, 31°.57N×140°.15E, h133^{km}±1^{km}, M4.8*
*NIED **25** 04:46:52.1, 31°.57N×140°.15E, h133^{km}, MW4.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.57; M$_{\theta\theta}$0.09; M$_{\phi\phi}$-1.65; M$_{r\theta}$0.33; M$_{\theta\phi}$-0.64; M$_{\phi r}$-1.72; Fault plane solution: M$_0$2.46000×10^{16} NP1: φ$_s$178.00000°, δ69.00000°, λ72.00000°. NP2:φ$_s$39.00000°, δ27.00000°, λ128.00000°.*
ISC 25 04:46:51.2±0.4**, 31°.44N**±0°.03×**140°.01E**±0°.04**, h133^{km}**±2^{km}**, h133^{km}:pP-P, n748, σ1^{s}.48**/706**, mb4.9**/228**, 57C-57D, Fault plane solution: NP1:**φ$_s$339.79996°**,**δ88.80857°**,** λ-67.01459°. **NP2:**φ$_s$72.60631°**,**δ23.01460°**,** λ-176.95139°. **Principal axes:** T Plg39.5033°**,** Azm48.8309°**;** N Plg22.9802°**,** Azm159.2946°**;** P Plg41.7228°**,** Azm271.5127°**; Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAOM	Aogashimamukai	1.04	349	P	Pn	04 47 14.9	+0.1
JHCJ	Hachijojimakas	1.64	354	P	Pn	04 47 21.0	0.0
JHJ2	Mitsune	1.67	355	P	Pn	04 47 21.4	-0.1
JHJ2				S	Sn	04 47 43.3	-1.3
JHJ2	Mitsune	1.67	355		Pn	04 47 21.2	-0.3
JHJ2				Sn	Sn	04 47 43.5	-1.1
JHJ	Hachijo jima 2	1.68	354	P	Pn	04 47 21.9	+0.4
	1μm,0.3s,baz=103,slow=12,SNR=51						
JHJ				S	Sn	04 47 42.9	-2.0
	778nm,0.3s,baz=241,slow=22,SNR=4.3						
JHJ				LR	LR	04 47 59.2	
	comp=Z,2μm,19.0s,baz=40,slow=41						
JMKN	Mikurajimanish	2.47	352	P	Pn	04 47 31.0	-0.1
JMKN				S	Sn	04 48 00.4	-1.5
JKO	Kozu shima	2.83	345	P	Pn	04 47 36.4	+0.6
TK02	Tokai 2	3.14	323	P	Pn	04 47 40.9	+1.5
BSO1	Boso 1	3.31	14	P	Pn	04 47 40.2	-1.1
BSO1				eS	Sn	04 48 17.3	-2.9
TTO1	TONANKAI O.B.S	3.48	309	P	Pn	04 47 45.3	+1.4
JSG	Sagara	3.57	335		Pn	04 47 45.9	+0.6
JSG				Sn	Sn	04 48 28.5	+1.3
JOD2	Odawara 2	3.89	349	P	Pn	04 47 49.5	0.0
JOD2				eS	Sn	04 48 34.2	-0.6
JIE	Ise	4.04	318	P	Pn	04 47 52.7	+1.1
JIE				eS	Sn	04 48 38.7	+0.2
JYN	Shimob	4.23	344	P	Pn	04 47 54.7	+0.7
JTNC	Tanabenakahech	4.40	304	P	Pn	04 47 57.6	+1.3
JTNC				eS	Sn	04 48 47.7	+0.7
INU	Inuyama	4.63	328	Pn	Pn	04 48 00.5	+1.1
INU	Inuyama	4.63	328	P	Pn	04 48 01.1	+1.8
JRY	Ryogami san	4.66	349	P	Pn	04 47 59.4	-0.3
JGF	Kuroka	4.70	333		Pn	04 48 00.4	0.0
CBIJ	Chichi jima	4.73	156	P	Pn	04 47 59.2	-1.5
CBIJ				eS	Sn	04 48 51.5	-3.3
JCJ	Chichijima	4.73	156	P	Pn	04 47 59.6	-1.2
	210nm,0.3s,baz=10.0,slow=14,SNR=117						
JCJ				S	Sn	04 48 52.2	-2.7
	643nm,0.3s,baz=293,slow=20,SNR=12						
JCJ	Chichijima	4.73	156	Pn	Pn	04 47 59.2	-1.6
JCJ				Sn	Sn	04 48 51.5	-3.4
JYT	Yasato	4.78	2	Pn	Pn	04 47 58.9	-2.4
MJAR	Matsushiro Arr	5.30	344	P	Pn	04 48 07.1	-1.3
	2.5nm,0.3s,baz=167,slow=9.7,SNR=32						
MJAR	Matsushiro Arr	5.30	344	P	Pn	04 48 07.6	-0.8
MJAR	Matsushiro Arr	5.30	344	Pn	Pn	04 48 07.5	-0.8
MAJO	Matsushiro	5.30	344	P	Pn	04 48 08.2	-0.2
MAJO	Matsushiro	5.30	344	Pn	Pn	04 48 08.2	-0.2
MAJO	Matsushiro	5.30	344	P	Pn	04 48 09.0	+0.6
MAT	Matsushiro	5.30	344	P	Pn	04 48 08.5	+0.1
MAT				S	Sn	04 49 08.9	+0.4
JWT	Wachi	5.43	316	Pn	Pn	04 48 11.3	+1.2
JMN	Monobe	5.65	295	Pn	Pn	04 48 14.9	+1.8
JTO	Tosashimizu	6.27	285	P	Pn	04 48 23.4	+2.1
JMM	Marumori	6.44	6		Pn	04 48 20.5	-3.1
JSD	Sado	6.74	348	Pn	Pn	04 48 24.2	-3.3
JHS	Saijyo	6.78	303	P	Pn	04 48 30.2	+2.1
JHS	Saijyo	6.78	303	Pn	Pn	04 48 30.1	+1.9
JOI	OKI	7.41	313	P	Pn	04 48 38.3	+1.6
JMK	Ichinoseki	7.56	7	P	Pn	04 48 35.7	-2.9
JNU	Nakatsue	7.91	285	P	Pn	04 48 45.9	+2.4
	17nm,0.3s,baz=93,slow=7.5,SNR=52						
JNU	Nakatsue	7.91	285		Pn	04 48 44.6	+1.2
JNU	Nakatsue	7.91	285	P	Pn	04 48 46.8	+3.4
JSU	Suzuyama	8.16	273	Pn	Pn	04 48 47.9	+1.1
JTM	Tenmabayashi	9.37	5	Pn	Pn	04 48 59.5	-3.3
KSUSN	Ulsan	10.02	298	P	Pn	04 49 13.5	+1.8
	SNR=13						
KSDAG	Daegu	10.22	298	P	Pn	04 49 17.0	+2.6
	SNR=10						
KSYOC	YEONGCHEON	10.26	299	P	Pn	04 49 17.1	+2.3
	SNR=8.8						
YOCB	Yeongcheon	10.26	299	P	Pn	04 49 17.0	+2.1
	SNR=9.4						
KSMAS	Masan	10.27	294	P	Pn	04 49 18.7	+3.7
	SNR=7.7						
YKDB	Yokjido	10.35	291	P	Pn	04 49 19.0	+3.0
	SNR=6.8						
UJN	ULJIN	10.37	305	P	Pn	04 49 18.3	+2.0
	SNR=6.5						
KSADO	Andong	10.44	301	P	Pn	04 49 20.0	+2.8
	SNR=6.4						
EURB	Uiryeong-eup	10.53	295	P	Pn	04 49 22.0	+3.5
	SNR=13						
EUSB	Uiseong	10.60	301	P	Pn	04 49 22.0	+2.5
	SNR=8.0						
KSEUS	ULSEONG	10.60	301	P	Pn	04 49 21.8	+2.4
	SNR=9.0						
KSNAH	Namhae	10.67	292	P	Pn	04 49 23.1	+2.7
	SNR=11						
CHYB	Chungyang	10.70	304	P	Pn	04 49 23.0	+2.3
	SNR=9.1						
KSTBA	Taebaek	10.76	305	P	Pn	04 49 23.8	+2.2
	SNR=12						
ERM	Erimo	10.85	13	i P	Pn	04 49 20.2	-2.5
KSGWL	Sabuk	10.89	305	P	Pn	04 49 26.0	+2.8
	SNR=6.1						
GWYB	Gwangyang	10.89	292	P	Pn	04 49 27.0	+3.7
	SNR=8.7						
KSSAJ	Sangju	11.02	300	P	Pn	04 49 27.6	+2.7
	SNR=5.3						
GMDB	Geomundo	11.02	287	P	Pn	04 49 29.0	+4.0
	SNR=6.4						
KSCPR	CHUPUNGNYEONG	11.08	299	P	Pn	04 49 28.9	+3.0
	SNR=7.6						
KSYOW	Yeongwol	11.13	304	P	Pn	04 49 29.1	+2.7
	SNR=19						
KSMGY	Mungyeong	11.19	301	P	Pn	04 49 30.0	+2.8
	SNR=9.3						
KSDGY	Daegwallycong	11.23	307	P	Pn	04 49 32.0	+4.2
	SNR=5.6						
KSSCH	SUNCHEON	11.28	292	P	Pn	04 49 32.0	+3.5
	SNR=5.2						
JECH	Jecheon	11.31	303	P	Pn	04 49 32.0	+3.1
	SNR=7.9						
KSBON	Boeun	11.32	300	P	Pn	04 49 32.3	+3.3
	SNR=8.2						
KSCHJ	Chungju	11.34	302	P	Pn	04 49 32.2	+2.9
	SNR=6.2						
KSWJU	Wonju	11.52	304	P	Pn	04 49 34.5	+2.9
	SNR=25						
KSRS	Korea Array	11.63	304	P	Pn	04 49 33.8	+0.7
	3.0nm,0.3s,baz=117,slow=14,SNR=113						
KSJEU	Jeongeup	11.64	294	P	P	04 49 37.5	-3.6

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           SNR=9.5
KSAR  Wonju Array Be  11.66 304  P     Pn     04 49 34.5 +1.1
KSAR  Wonju Array Be  11.66 304  Pn    Pn     04 49 34.5 +1.1
KS19  Wonju Array Si  11.70 304        Pn     04 49 36.1 +2.2
HANB  Haenam           11.70 289  P     P      04 49 38.1  -3.7
           SNR=6.2
KSIJA INJE             11.76 307  P     Pn     04 49 38.4 +3.6
           SNR=6.1
KSCEA Cheonan          11.85 300  P     Pn     04 49 39.3 +3.4
           SNR=8.0
KSCHC Chuncheon        11.86 306  P     P      04 49 40.0  -3.6
           SNR=6.0
KSICN Icheon           11.92 303  P     Pn     04 49 40.3 +3.4
           SNR=8.5
PYTK  Pyeongtaek       12.02 301  P     Pn     04 49 41.6 +3.5
           SNR=6.9
KSSWO Suwon            12.24 302  P     Pn     04 49 44.2 +3.2
           SNR=6.5
HAWB  Hwaseong-si      12.30 301  P     Pn     04 49 45.0 +3.2
           SNR=10.0
INCN  Inchon           12.57 302  P     Pn     04 49 45.7 +0.3
INCN  Inchon           12.57 302        Pn     04 49 45.7 +0.3
ASAJ  Asahikawa        12.82   8  P     Pn     04 49 44.6  -3.8
           4.9nm,0.3s,baz=205,slow=14,SNR=6.3
ASAJ                              S     Sn     04 51 57.8   -12
           2.4nm,0.3s,baz=12,slow=28,SNR=1.8
USA0B Ussuriysk Arra   14.21 336  P     Pn     04 50 05.0  -1.3
USA0B Ussuriysk Arra   14.21 336  Pn    Pn     04 50 05.0  -1.3
USRK  Ussuriysk Ar.    14.21 336  P     Pn     04 50 04.7  -1.6
           baz=154,slow=12,SNR=28
USRK  Ussuriysk Ar.    14.21 336  P     Pn     04 50 05.5  -0.9
USRK  Ussuriysk Ar.    14.21 336        Pn     04 50 05.5  -0.9
MDJ   Mudanjiang       15.48 331  P     Pn     04 50 21.3  -1.0
MDJ                               pmax  pmax
           comp=Z,37nm,0.7s
MDJ                               pmax  pmax
           comp=Z,420nm,11.0s
MDJ   Mudanjiang       15.48 331  P     Pn     04 50 21.3  -1.0
MDJ                               IAmb  IAmb   04 50 23.4
           comp=Z,35nm,0.7s
YSS   Yuzh-Sakhalins   15.63   7 eP     Pn     04 50 22.3  -1.8
YSS                               pmax  pmax
           comp=Z,120nm,0.5s
YSS   Yuzh-Sakhalins   15.63   7  P     Pn     04 50 21.8  -2.3
YSS                               IAmb  IAmb   04 50 25.2
           comp=Z,88nm,0.6s
DL2   Dalian           16.75 301  P     Pn     04 50 40.1 +2.2
DL2                               pmax  pmax
           comp=Z,110nm,0.7s
CN2   Changchun        16.86 321 eP     Pn     04 50 40.3 +1.2
CN2                               pmax  pmax
           comp=Z,20nm,0.7s
YHNB  Yeheng           17.76 252  P     Pn     04 50 50.7 +0.5
YHNB                              IAmb  IAmb   04 50 55.0
           comp=Z,132nm,1.4s
NJ2   Nanjing          18.00 277 ⇑P     Pn     04 50 54.8 +1.9
NJ2                               pmax  pmax
           comp=Z,26nm,1.1s
YULB  Yu-li            18.43 249  P     Pn     04 50 57.9  -0.2
YULB                              IAmb  IAmb   04 51 11.9
           comp=Z,56nm,1.1s
SSLB  Suanglung        18.51 250  P     P      04 50 57.6 +0.3
SSLB                              IAmb  IAmb   04 51 09.4
           comp=Z,56nm,0.9s
KLR   Kul'dur          18.83 343  P     P      04 50 58.9  -1.6
           comp=Z,5.1nm,0.3s,baz=154,slow=9.7,SNR=92
TPUB  Ta-pu            19.01 250  P     Pn     04 51 04.5  -0.4
TPUB                              IAmb  IAmb   04 51 09.8
           comp=Z,87nm,1.0s
GRNR  Gornyy           19.49 353⇓iP     P      04 51 08.6 +0.9
GRNR                              pmax  pmax
           comp=N,30nm,0.8s
GRNR                              pmax  pmax
           comp=Z,40nm,0.9s
GRNR                              MLR   MLR
           comp=E,310nm,17.0s
GRNR                              MLR   MLR
           comp=N,520nm,16.0s
GRNR                              MLR   MLR
           comp=Z,510nm,20.0s
TYV   Tymovskoe        19.50   5 eP     Pn     04 51 12.1 +1.7
TYV                              eS     Sn     04 54 46.2  -3.9
TYV                               pmax  pmax
           comp=Z,500nm,3.3s
TYV                               pmax  pmax
           comp=Z,63nm,0.8s
TYV                               smax  smax
           comp=E,19nm,1.8s
TYV                               smax  smax
           comp=N,900nm,4.6s
TYV                               smax  smax
           comp=E,1µm,4.6s
TIA   Tai'an           19.58 290  P     Pn     04 51 14.3 +2.8
TIA                               pmax  pmax
           comp=E,13nm,0.9s
BJT   Baijiatuau       21.11 300  P     P      04 51 25.4 +0.2
BJT                               pmax  pmax
           comp=Z,11nm,0.6s
BJT   Baijiatuau       21.11 300  P     P      04 51 25.4 +0.2
BJI   Beijing          21.12 301  P     P      04 51 24.3  -0.9
BJI                               PP    pwP    04 51 58.1 +5.5
BJI                               S     S      04 55 08.4  -4.1
BJI                               pmax  pmax
           comp=Z,17nm,0.6s
WHN   Wuhan            22.00 274 ⇓P     P      04 51 36.4 +1.7
HIA   Hailar           23.45 325  P     P      04 51 48.2  -0.2
HIA                               pmax  pmax
           comp=Z,33nm,0.6s
HIA   Hailar           23.45 325  P     P      04 51 48.2  -0.2
HIA                               IAmb  IAmb   04 51 49.5
           comp=Z,34nm,0.6s
ZEA   Zeya             24.11 341 eP     P      04 51 54.7 +0.5
ZEA                               pmax  pmax
           comp=N,70nm,0.5s
ZEA                               pmax  pmax
           comp=Z,200nm,0.7s
ZEA                               pmax  pmax
           comp=E,60nm,0.8s
HHC   Hu-ho-hao-te     24.72 300 eP     P      04 52 00.8 +0.6
HHC                               pP    pwP    04 52 30.8 +0.9
HHC                               PP    sP     04 52 44.0 +0.8
HHC                               S     S      04 56 13.1 +0.7
HHC                               pmax  pmax
           comp=E,9.0nm,0.9s
HHC                               pmax  pmax
           comp=E,160nm,4.8s
PETK  Petropavlovsk-   25.17  26  P     P      04 52 02.8  -1.1
           comp=E,7.4nm,0.7s,baz=212,slow=5.3,SNR=9.3
PETK  Petropavlovsk-   25.17  26  P     P      04 52 03.7  -0.2
PETK  Petropavlovsk-   25.17  26  P     P      04 52 03.6  -0.2
ENH   Enshi            26.19 275  P     P      04 52 13.1  -0.3
XAN   Xi'an            26.23 284 ⇑P     P      04 52 13.3  -0.4
XAN                               pP    pP     04 52 41.5 +0.1
XAN                               sP    sP     04 52 57.8 +1.1
XAN                               pmax  pmax
           comp=E,27nm,1.0s
H11S3 WAKE ISLAND Hy   27.32 112  T     T      05 21 14.9
           baz=304,slow=75,SNR=43
H11S1 WAKE ISLAND Hy   27.33 112  T     T      05 21 20.9
           baz=304,slow=75,SNR=51
H11S2 WAKE ISLAND Hy   27.34 112  T     T      05 21 16.2
           baz=304,slow=75,SNR=62
GYA   Guiyang          29.53 269 ⇓P     P      04 52 43.9 +0.6
GYA                               pmax  pmax
           comp=E,12nm,0.7s
ULN   Ulaanbaatar      29.92 313  P     P      04 52 46.5  -0.1
ULN                               pmax  pmax
           comp=Z,21nm,0.7s
ULN   Ulaanbaatar      29.92 313  P     P      04 52 46.5  -0.1
ULN                               IAmb  IAmb   04 52 47.5
           comp=Z,20nm,0.7s
LZH   Lanzhou          30.31 289 eP     P      04 52 50.0  -0.1
LZH                               sP    sP     04 53 35.3 +2.1
LZH                               pmax  pmax
           comp=Z,26nm,1.1s
LZH                               pmax  pmax
           comp=Z,100nm,5.4s
SONM  Songino Array    30.33 312  P     P      04 52 50.3 +0.2
           comp=Z,14nm,0.6s,baz=110,slow=8.5,SNR=51
SONM                              ScP   ScP    04 59 16.6  -0.4
           comp=Z,2.5nm,0.8s,baz=144,slow=3.7,SNR=9.9
SONM  Songino Array    30.33 312  P     P      04 52 49.5  -0.6
SONM                              pmax  pmax
           comp=Z,13nm,0.6s
SONM  Songino Array    30.33 312  P     P      04 52 49.5  -0.6
SONM                              IAmb  IAmb   04 52 51.4
           comp=Z,13nm,0.6s
SONM                                    ScP    04 59 17.0   0.0
CD2   Chengdu          30.93 279 eP     P      04 52 56.5 +1.0
CD2                               pmax  pmax
           comp=Z,10.0nm,0.5s
YAK   Yakutsk          31.33 351  P     P      04 52 58.6 +0.1
           comp=Z,27nm,0.7s,baz=346,slow=1.2,SNR=7.5
YAK   Yakutsk          31.33 351 eP     P      04 52 58.5   0.0
YAK                               pmax  pmax
           comp=Z,45nm,0.9s
YAK                               pmax  pmax
           comp=N,12nm,1.2s
YAK                               pmax  pmax
           comp=E,8.0nm,0.9s
YAK   Yakutsk          31.33 351  P     P      04 52 58.4  -0.1
BOD   Bodaibo          31.83 334 eP     P      04 53 02.9  -0.1
BOD                               pmax  pmax
           comp=Z,24nm,1.0s
SEY   Seymchan         32.49  11  P     P      04 53 09.6 +0.9
           comp=Z,1.1nm,0.3s,baz=196,slow=12,SNR=4.5
MYLDM Lahad Datu       33.01 222  P     P      04 53 14.5 +0.8
MYLDM                             IAmb  IAmb   04 53 16.9
           comp=Z,19nm,0.9s
TLY   Talaya           33.41 318  P     P      04 53 17.5 +0.6
           comp=Z,10.0nm,0.6s,baz=224,slow=12,SNR=6.3
TLY   Talaya           33.41 318  P     P      04 53 16.6  -0.3
TLY                               IAmb  IAmb   04 53 18.2
           comp=Z,10nm,0.6s
GTA   Gaotai           33.48 295 eP     P      04 53 17.1  -0.7
GTA                               pP    pP     04 53 46.9 +0.8
GTA                               sP    sP     04 54 02.8 +1.6
GTA                               pmax  pmax
           comp=Z,5.0nm,1.0s
GTA                               pmax  pmax
           comp=Z,130nm,5.2s
GTA                               LR    LR
           comp=Z,210nm,14.2s
GTA                               LR    LR
           comp=Z,150nm,14.2s
GTA                               LR    LR
           comp=Z,280nm,15.3s
SLVN  Son La           33.74 262  P     P      04 53 21.0 +0.8
GTOI  Gorontalo        34.61 211  P     P      04 53 28.5 +1.0
           comp=Z,6.9nm,0.7s
AMKA  Amchitka         35.01  44  P     P      04 53 30.4  -0.2
TOLI2 Tolitoli         35.22 215  P     P      04 53 31.5  -1.4
SANI  Sanana           35.87 204  P     P      04 53 37.0  -1.4
           comp=Z,42nm,0.6s
MPSI  Mapaga           36.33 215  P     P      04 53 42.9 +0.6
           comp=Z,1µmcomp=Z,12nm,0.7s
APSI  Ampana           36.59 212  P     P      04 53 41.6  -2.9
           comp=Z,28nm,0.6s
KIWB  Kanaga Island    37.26  44  P     P      04 53 51.3 +1.5
SBUM  Sibu             38.97 228  P     P      04 54 05.0 +0.5
CHTO  Chiang Mai       39.03 261  P     P      04 54 05.6 +0.6
CHTO                              pmax  pmax
           comp=Z,8.0nm,0.8s
CHTO  Chiang Mai       39.03 261  P     P      04 54 05.6 +0.6
CMAR  Chiang Mai Arr   39.19 261  P     P      04 54 07.0 +0.6
           comp=Z,6.1nm,0.7s,baz=49,slow=7.7,SNR=25
CMAR                              ScP   ScP    04 59 49.8 +0.6
           comp=Z,2.9nm,0.7s,baz=30,slow=3.1,SNR=20
CMAR  Chiang Mai Arr   39.19 261  P     P      04 54 05.8  -0.6
BILL  Bilibino         39.71  15⇑eP     P      04 54 09.5  -0.5
BILL                             e             04 55 48.0
BILL                             eS     S      05 00 04.1 +0.7
BILL                              pmax  pmax
           comp=Z,6.0nm,0.6s
BILL  Bilibino         39.71  15  P     P      04 54 10.4 +0.3
BNSI  Bone             40.38 212  P     P      04 54 17.9 +1.8
           comp=Z,994nmcomp=Z,16nm,0.9s
TIXI  Tiksi            40.71 355  P     P      04 54 18.2   0.0
           comp=Z,13nm,0.5s,baz=139,slow=7.9,SNR=16
TIXI  Tiksi            40.71 355  P     P      04 54 17.8  -0.4
TIXI                              IAmb  IAmb   04 54 18.6
           comp=Z,12nm,0.5s
KAPI  Kappang          41.08 212  P     P      04 54 22.2 +0.3
           comp=Z,8.3nm,0.8s,baz=37,slow=8.3,SNR=6.6
KAPI  Kappang          41.08 212  P     P      04 54 21.7  -0.2
NIKH  Nikolski High    42.46  44  P     P      04 54 34.0 +1.3
           baz=260
WMQ   Urumqi           42.58 302 eP     P      04 54 34.4 +0.5
WMQ                               pP    pP     04 55 03.8 +0.6
WMQ                               pmax  pmax
           comp=Z,15nm,0.7s
WMQ                               pmax  pmax
           comp=Z,200nm,4.7s
DGZ   Jazzator, Alta   42.94 311 i P    P      04 54 35.1  -1.8
DGZ                               pmax  pmax
           comp=Z,25nm,0.7s
MTN   Manton Dam       44.85 192  P     P      04 54 51.2  -1.0
MTN                               IAmb  IAmb   04 54 52.8
           comp=Z,19nm,0.8s
ZAA0  Zalesovo Array   45.00 317  P     P      04 54 52.3  -0.7
ZALV  Zalesovo Beam    45.00 317  P     P      04 54 52.4  -0.6
           comp=Z,3.4nm,0.4s,baz=120,slow=9.4,SNR=12
ZALV                              PcP   PcP    04 56 32.2 +0.4
           comp=Z,3.9nm,0.6s,baz=100,slow=2.3,SNR=4.7
ZALV                              ScP   ScP    05 00 10.8  -1.0
           comp=Z,3.1nm,0.6s,baz=108,slow=4.4,SNR=9.0
ZALV  Zalesovo Beam    45.00 317  P     P      04 54 52.0  -1.0
ZALV                              ScP   ScP    05 00 10.7  -1.1
KULM  Kulim            45.12 243  P     P      04 54 54.0  -0.4
TAPN  Taplejung        45.40 279 eP     P      04 54 56.3  -0.6
           comp=Z,13nm,0.4s
TAPN  Taplejung        45.40 279 eP     ScP    05 00 15.1 +0.8
           comp=Z,49nm,1.3s
ODAN  Odare            45.83 278 eP     P      04 54 59.3  -0.9
           comp=Z,23nm,0.5s
ODAN  Odare            45.83 278 eP     ScP    05 00 17.2 +1.2
           comp=Z,43nm,0.9s
MK31  Makanchi Array   46.31 307  P     P      04 55 02.9  -0.6
MK31                              pmax  pmax
           comp=Z,8.0nm,0.8s
MK31  Makanchi Array   46.31 307  P     P      04 55 02.9  -0.6
MKAR  Makanchi Array   46.31 307  P     P      04 55 02.6  -0.8
           comp=Z,6.9nm,0.4s,baz=88,slow=9.1,SNR=58
MKAR                              ScP   ScP    05 00 16.8  -0.6
           comp=Z,5.4nm,0.7s,baz=82,slow=5.6,SNR=15
MKAR  Makanchi Array   46.31 307  P     P      04 55 02.9  -0.6
RAMN  Ramite           46.46 279 eP     P      04 55 04.3  -0.9
           comp=Z,21nm,0.5s
RAMN  Ramite           46.46 279 eP     ScP    05 00 19.7 +1.0
           comp=Z,18nm,0.7s
MAKZ  Makanchi         46.52 307  P     P      04 55 04.5  -0.6
MAKZ                              pmax  pmax
           comp=Z,11nm,0.5s
MAKZ  Makanchi         46.52 307  P     P      04 55 04.5  -0.6
MAKZ                              IAmb  IAmb   04 55 04.8
           comp=Z,11nm,0.5s
JIRN  Jiri             46.59 280 eP     P      04 55 05.6  -0.7
           comp=Z,27nm,0.5s
JIRN  Jiri             46.59 280 eP     ScP    05 00 20.5 +1.1
           comp=Z,50nm,1.1s
GUN   Gumba            46.77 280 eP     P      04 55 07.2  -0.5
           comp=Z,24nm,0.5s
GUN   Gumba            46.77 280 eP     ScP    05 00 20.3 +0.2
           comp=Z,90nm,1.3s
PKI   Pulchoki         47.27 280 eP     P      04 55 10.4  -1.2
           comp=Z,8.8nm,0.6s
PKI   Pulchoki         47.27 280 eP     ScP    05 00 22.1  -0.1
           comp=Z,32nm,1.1s
PKIN  Phulchoki        47.28 280 eP     P      04 55 10.9  -0.7
           comp=Z,10nm,0.7s
PKIN  Phulchoki        47.28 280 eP     ScP    05 00 21.6  -0.5
           comp=Z,44nm,1.3s
KKN   Kakani           47.31 280 eP     P      04 55 11.8 +0.1
KKN   Kakani           47.31 280 eP     ScP    05 00 22.9 +0.7
DMN   Daman            47.51 280 eP     P      04 55 13.2  -0.2
SDPT  Sand Point       47.64  42  P     P      04 55 14.0 +0.4
           baz=265
GKN   Gorkha           47.78 281 eP     P      04 55 14.8  -0.5
GKN   Gorkha           47.78 281 eP     ScP    05 00 23.5  -0.6
NRIK  Noril'sk         47.92 338  P     P      04 55 15.1  -0.5
           comp=Z,24nm,0.4s,baz=111,slow=8.8,SNR=46
NRIK                              ScP   ScP    05 00 22.8  -0.9
           comp=Z,6.1nm,0.9s,baz=108,slow=1.9,SNR=4.7
NRIK  Noril'sk         47.92 338  P     P      04 55 16.1 +0.5
NRIK                              pmax  pmax
           comp=Z,71nm,1.1s
NRIK  Noril'sk         47.92 338  P     P      04 55 16.1 +0.5
CHNA  Chernabura Isl   48.12  43  P     P      04 55 18.1 +0.9
           baz=266
DANN  Dangsing         48.41 282 eP     P      04 55 20.0  -0.3
           comp=Z,20nm,0.6s
DANN  Dangsing         48.41 282 eP     ScP    05 00 27.0   0.0
           comp=Z,79nm,1.1s
PDGK  Podgornoye       48.56 302  P     P      04 55 18.6  -2.4
KURK  Kurchatov        48.63 312  P     P      04 55 20.3  -1.0
KURK                              pmax  pmax
           comp=Z,38nm,0.8s
KURK  Kurchatov        48.63 312  P     P      04 55 20.3  -1.0
KURK                              IAmb  IAmb   04 55 21.5
           comp=Z,38nm,0.8s
KURBB Kurchatov Arra   48.69 312  ScP   ScP    05 00 25.7  -1.6
           comp=Z,0.3nm,0.3s,baz=83,slow=3.4,SNR=4.2
KURBB                             S     S      05 02 12.7  -1.1
           comp=Z,0.4nm,0.4s,baz=88,slow=16,SNR=4.2
KOLN  Koldanda         48.73 281 eP     P      04 55 22.2  -0.4
           comp=Z,13nm,0.7s
KOLN  Koldanda         48.73 281 eP     ScP    05 00 28.0  -0.2
           comp=Z,51nm,1.3s
RDOG  Red Dog Mine     49.03  25  P     P      04 55 32.5 +8.4
           baz=252,SNR=11
PYUN  Piuthan          49.13 282 eP     P      04 55 25.4  -0.3
           comp=Z,34nm,0.5s
PYUN  Piuthan          49.13 282 eP     ScP    05 00 29.3  -0.6
           comp=Z,44nm,1.1s
KLSI                   49.21 229  P     P      04 55 27.5 +1.4
           comp=Z,6.9nm,1.2s
MDSI  Maura Dua        49.42 230  P     P      04 55 28.2 +0.5
ARXS  Arharly          49.64 303 eP     P      04 55 27.6  -1.6
GCSA  Galena City Sc   50.60  30  P     P      04 55 37.1 +1.2
           baz=260
TTA   Tatalina         50.72  32  P     P      04 55 38.3 +1.3
TTA                               pmax  pmax
           comp=Z,12nm,0.9s
TTA   Tatalina         50.72  32  P     P      04 55 38.5 +1.5
           baz=263,SNR=5.5
TTA   Tatalina         50.72  32  P     P      04 55 38.3 +1.3
TTA                               IAmb  IAmb   04 55 39.6
           comp=Z,12nm,0.9s
SVW2  Sparrevohn       50.73  34  P     P      04 55 38.5 +1.5
SVW2                              IAmb  IAmb   04 55 40.1
           comp=Z,45nm,1.3s
P18K  Big Mountain,    50.77  37  P     P      04 55 38.9 +1.5
           baz=266
P18K  Big Mountain,    50.77  37  P     P      04 55 37.6 +0.3
L19K  White Mountain   51.17  33  P     P      04 55 42.2 +1.9
           baz=264,SNR=8.4
L19K  White Mountain   51.17  33  P     P      04 55 41.9 +1.6
L19K                              IAmb  IAmb   04 55 44.1
           comp=Z,24nm,1.1s
WB0   Warramunga Arr   51.20 187  P     P      04 55 39.9  -1.1
WB0                               IAmb  IAmb   04 55 41.5
           comp=Z,20nm,0.7s
SII   Sitkinak Islan   51.23  40  P     P      04 55 41.7 +0.8
           baz=269
N19K  Bonanza Creek    51.24  35  P     P      04 55 42.9 +1.9
           baz=266,SNR=5.1
N19K  Bonanza Creek    51.24  35  P     P      04 55 41.2 +0.3
N19K                              IAmb  IAmb   04 55 43.9
           comp=Z,20nm,0.9s
O19K  Port Alsworth    51.28  36  P     P      04 55 43.0 +1.9
           baz=266
M19K  Big River Lodg   51.36  34  P     P      04 55 43.9 +2.1
           baz=265
M19K  Big River Lodg   51.36  34  P     P      04 55 42.9 +1.1
M19K                              IAmb  IAmb   04 55 52.7
           comp=Z,18nm,0.6s
WRAB  Tennant Creek    51.37 187ceP     P      04 55 41.4  -0.8
WRAB                              pmax  pmax
           comp=Z,8.0nm,0.7s
WR0   Warramunga Arr   51.38 187  P     P      04 55 41.1  -1.1
WR0                               IAmb  IAmb   04 55 42.9
           comp=Z,20nm,0.7s
WB2   Warramunga Arr   51.38 187  P     P      04 55 41.8  -0.5
WB2                               IAmb  IAmb   04 55 42.9
           comp=Z,17nm,0.7s
WRA   Warramunga Arr   51.38 187  P     P      04 55 41.9  -0.4
           comp=Z,5.5nm,0.3s,baz=171,slow=6.2,SNR=311
WRA                               pP    pP     04 56 12.7 +0.1
           comp=Z,9.5nm,0.6s,baz=6.2,slow=7.7,SNR=6.3
WRA                               ScP   ScP    05 00 39.6 +0.5
           comp=Z,6.0nm,1.3s,baz=356,slow=3.7,SNR=5.9
WRA   Warramunga Arr   51.38 187  P     P      04 55 40.6  -1.7
TKM2  Tokmak 2         51.44 302 i P    P      04 55 41.8  -1.1
TKM2                              pmax  pmax
           comp=Z,3.0nm,0.6s
K20K  Telida           51.65  32  P     P      04 55 46.3 +2.4
           baz=264
K20K  Telida           51.65  32  P     P      04 55 46.0 +2.2
L20K  Farewell, AK     51.65  33  P     P      04 55 46.0 +2.0
           baz=265,SNR=10
J20K  Nowinta River    51.70  31  P     P      04 55 46.4 +2.2
           baz=263,SNR=22
J20K  Nowinta River    51.70  31  P     P      04 55 45.0 +0.8
KSH   Kashi            51.80 298  P     P      04 55 48.3 +2.8
KSH                               pP    pwP    04 56 20.6 +2.1
KSH                               pmax  pmax
           comp=Z,8.0nm,0.5s
P19K  Oil Pt           51.80  36  P     P      04 55 46.5 +1.4
           baz=268
A21K  Barrow           52.06  21  P     P      04 55 48.8 +2.1
           baz=255
RSO   Redoubt South    52.07  35  P     P      04 55 47.4 +0.1
IMAR  Indian Mountai   52.08  28  P     P      04 55 47.9 +0.9
KDAK  Kodiak Island    52.11  39  P     P      04 55 47.9 +0.6
KDAK                              pmax  pmax
           comp=Z,104nm,1.1s
KDAK  Kodiak Island    52.11  39  P     P      04 55 48.3 +1.0
           baz=270
KDAK  Kodiak Island    52.11  39  P     P      04 55 47.9 +0.6
O20K  Slope Mountain   52.12  36  P     P      04 55 49.1 +1.7
           baz=268
BTLS  Baital           52.20 305 eP     P      04 55 46.2  -2.0
BTLS                              pmax  pmax
           comp=Z,2.0nm,0.6s
AAK   Ala-Archa        52.28 302  P     P      04 55 48.1  -1.0
           comp=Z,3.1nm,0.6s,baz=125,slow=8.1,SNR=8.5
AAK   Ala-Archa        52.28 302  P     P      04 55 48.1  -1.0
SPCR  Spurr Chakacha   52.36  34  P     P      04 55 51.1 +1.8
           baz=267,SNR=7.8
H21K  Melozitna Rive   52.43  29  P     P      04 55 51.8 +2.2
           baz=263,SNR=28
H21K  Melozitna Rive   52.43  29  P     P      04 55 50.9 +1.3
SPU   Mount Spurr      52.44  35  P     P      04 55 50.1 +0.3
PPLA  Purkeypile       52.46  32  P     P      04 55 52.3 +2.2
           baz=266
CHUM  Lake Minchumin   52.47  31  P     P      04 55 52.2 +2.4
           baz=265,SNR=9.0
BRZS  Berezniki        52.48 311 eP     P      04 55 47.1  -3.1
BRZS                              pmax  pmax
           comp=Z,3.0nm,0.6s
CAST  Castle Rocks     52.54  32  P     P      04 55 52.6 +2.2
           baz=266,SNR=15
CAST  Castle Rocks     52.54  32  P     P      04 55 51.4 +0.9
CAST                              IAmb  IAmb   04 55 53.5
           comp=Z,35nm,1.0s
I21K  Tanana           52.72  29  P     P      04 55 54.0 +2.3
           baz=265,SNR=11
I21K  Tanana           52.72  29  P     P      04 55 52.0 +0.3
I21K                              IAmb  IAmb   04 55 54.9
           comp=Z,46nm,1.4s
OTUK  Ortayu           52.90 309  P     P      04 55 51.9  -1.5
KTH   Kantishna Hill   53.07  32  P     P      04 55 54.3  -0.1
KTH                               IAmb  IAmb   04 55 57.2
           comp=Z,12nm,0.8s
BPAW  Bear Paw Mtn.    53.07  31  P     P      04 55 56.0 +1.7
           baz=266,SNR=8.7
BPAW  Bear Paw Mtn.    53.07  31  P     P      04 55 53.9  -0.4
BPAW                              IAmb  IAmb   04 55 57.2
           comp=Z,12nm,0.8s
MLY   Manley           53.24  30  P     P      04 55 57.6 +2.0
           baz=266,SNR=21
MLY   Manley           53.24  30  P     P      04 55 55.7 +0.2
MLY                               IAmb  IAmb   04 55 58.5
           comp=Z,24nm,1.0s
CUT   Chulitna         53.32  33  P     P      04 55 57.0 +0.9
           baz=268
CUT   Chulitna         53.32  33  P     P      04 55 56.1   0.0
CUT                               IAmb  IAmb   04 55 57.5
           comp=Z,22nm,0.8s
TRF   Thorofare Moun   53.35  32  P     P      04 55 57.7 +1.2
           baz=267
TRF   Thorofare Moun   53.35  32  P     P      04 55 56.6 +0.1
TRF                               IAmb  IAmb   04 56 00.7
           comp=Z,17nm,0.9s
M22K  Willow           53.38  34  P     P      04 55 57.5 +1.0
           baz=269,SNR=5.3
RC01  Rabbit Creek A   53.56  35  P     P      04 55 58.8 +0.9
           baz=270
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O22K  Cooper Landing    53.57  35  P         P        04 55 58.7 +0.8
      baz=270
COLD  Coldfoot          53.62  27  P         P        04 56 00.1 +1.7
      baz=265
COLD  Coldfoot          53.62  27  P         P        04 55 58.1 -0.2
BRVK  Borovoye          53.66 315  P         P        04 55 58.5 -0.2
BRVK                               pmax      pmax
      comp=Z,9.0nm,0.9s
BRVK  Borovoye          53.66 315  P         P        04 55 58.5 -0.2
SEW   Seward            53.71  36  P         P        04 55 60.0 +1.0
      baz=271
BWN   Browne            53.74  31  P         P        04 56 00.2 +1.0
I23K  Minto, Yukon-K    53.83  30  P         P        04 56 01.6 +1.8
      baz=267,SNR=9.0
I23K  Minto, Yukon-K    53.83  30  P         P        04 55 59.8 +0.1
I23K                               IAmb      IAmb     04 56 02.7
      comp=Z,17nm,1.1s
PMR   Palmer            53.85  34  P         P        04 56 00.2 +0.2
PMR                                pmax      pmax
      comp=Z,48nm,1.2s
PMR   Palmer            53.85  34  P         P        04 56 00.7 +0.7
      baz=270,SNR=13
PMR   Palmer            53.85  34  P         P        04 56 00.2 +0.2
NEA2  Nenana            53.93  30  P         P        04 56 02.2 +1.6
      baz=268,SNR=44
NEA2  Nenana            53.93  30  P         P        04 56 00.5 -0.1
GHO   Glory Hole Cre    53.95  34  P         P        04 56 01.5 +0.7
GHO                                IAmb      IAmb     04 56 03.0
      comp=Z,31nm,0.8s
MCK   McKinley          53.96  31  P         P        04 56 01.4 +0.6
MCK                                pmax      pmax
      comp=Z,64nm,1.3s
MCK   McKinley          53.96  31  P         P        04 56 02.0 +1.1
      baz=268,SNR=18
MCK   McKinley          53.96  31  P         P        04 56 01.4 +0.6
TOLK  Toolik Lake Re    53.99  25  P         P        04 56 02.8 +1.8
      baz=264,SNR=25
TOLK  Toolik Lake Re    53.99  25  P         P        04 56 01.4 +0.4
RND   Reindeer          53.99  32  P         P        04 56 01.4 +0.3
RND                                pmax      pmax
      comp=Z,30nm,0.8s
RND   Reindeer          53.99  32  P         P        04 56 01.4 +0.3
KNK   Knik Glacier      54.18  34  P         P        04 56 03.5 +1.1
      baz=271,SNR=16
KNK   Knik Glacier      54.18  34  P         P        04 56 02.8 +0.4
SML   Sawmill           54.23  34  P         P        04 56 04.0 +1.2
      baz=270,SNR=11
SML   Sawmill           54.23  34  P         P        04 56 03.3 +0.5
PWL   Port Wells        54.25  35  P         P        04 56 03.8 +0.9
      baz=271,SNR=8.2
PWL   Port Wells        54.25  35  P         P        04 56 03.7 +0.8
MDM   Murphy Dome       54.30  30  P         P        04 56 03.9 +0.6
WRH   Wood River Hil    54.35  30  P         P        04 56 04.4 +0.8
WRH                                IAmb      IAmb     04 56 06.8
      comp=Z,19nm,0.7s
TCOL  CIGO, UAF Yank    54.45  30  P         P        04 56 05.9 +1.6
      baz=269
TCOL  CIGO, UAF Yank    54.45  30  IAmb      IAmb     04 56 07.5
      comp=Z,26nm,0.8s
COLA  College           54.46  30  P         P        04 56 04.1 -0.2
COLA                               pmax      pmax
      comp=Z,27nm,0.8s
COLA  College           54.46  30  P         P        04 56 05.7 +1.4
      baz=269
COLA  College           54.46  30  P         P        04 56 04.1 -0.2
COLA                               IAmb      IAmb     04 56 07.5
      comp=Z,27nm,0.8s
H24K  Noodor Dome       54.47  29  P         P        04 56 06.7 +2.2
      baz=268
H24K  Noodor Dome       54.47  29  P         P        04 56 05.1 +0.6
H24K                               IAmb      IAmb     04 56 07.6
      comp=Z,19nm,0.9s
CCB   Clear Creek Bu    54.47  30  P         P        04 56 04.1 -0.4
CCB                                IAmb      IAmb     04 56 08.1
      comp=Z,12nm,0.7s
WAT6  Susitna Watana    54.50  33  P         P        04 56 05.8 +0.9
      baz=270,SNR=9.4
POKR  Poker Plat Res    54.64  30  P         P        04 56 07.2 +1.5
      baz=269,SNR=24
POKR  Poker Plat Res    54.64  30  P         P        04 56 06.2 +0.5
DHY   Denali Highway    54.66  32  P         P        04 56 06.8 +0.8
      baz=270,SNR=6.6
DHY   Denali Highway    54.66  32  P         P        04 56 05.4 -0.6
DHY                                IAmb      IAmb     04 56 10.4
      comp=Z,8.9nm,0.8s
SCM   Sheep Creek Mo    54.71  34  P         P        04 56 05.5 -0.8
SCM                                pmax      pmax
      comp=Z,55nm,0.8s
SCM   Sheep Creek Mo    54.71  34  P         P        04 56 07.8 +1.5
      baz=271,SNR=8.1
SCM   Sheep Creek Mo    54.71  34  P         P        04 56 05.5 -0.8
HDA   Harding Lake      54.84  31  P         P        04 56 07.8 +0.6
      baz=270,SNR=24
HDA   Harding Lake      54.84  31  P         P        04 56 07.5 +0.4
GLI   Glacier Island    54.85  35  P         P        04 56 08.4 +1.1
      baz=272
IL31                    54.87  30  P         P        04 56 06.5 -0.8
IL31                               IAmb      IAmb     04 56 08.8
      comp=Z,19nm,0.8s
ILAR  Eielson Array     54.87  30  P         P        04 56 07.8 +0.5
      comp=Z,12nm,0.7s,baz=267,slow=6.1,SNR=147
ILAR  Eielson Array     54.87  30  P         P        04 56 06.0 -1.3
KKAR  Karatay Array     55.06 303  P         P        04 56 08.4 -0.7
KKAR  Karatay Array     55.06 303  P         P        04 56 08.4 -0.7
AS31  Alice Springs     55.10 187  P         P        04 56 07.9 -1.6
ASAR  Alice Springs     55.11 187  P         P        04 56 09.4 -0.1
      comp=Z,4.2nm,0.8s,baz=15,slow=13,SNR=66
ASAR                               pP        pP       04 56 39.2 -1.0
      comp=Z,3.9nm,0.6s,baz=354,slow=5.0,SNR=6.6
ASAR                               ScP       ScP      05 00 54.8 -0.6
      comp=Z,1.3nm,0.9s,baz=6.7,slow=5.7,SNR=5.2
ASAR  Alice Springs     55.11 187  P         P        04 56 08.3 -1.2
M24K  Tolsona, Glenn    55.24  33  P         P        04 56 11.8 +1.7
      baz=272
M24K  Tolsona, Glenn    55.24  33  P         P        04 56 10.7 +0.5
M24K                               IAmb      IAmb     04 56 12.6
      comp=Z,21nm,0.6s
KLU   Klutina           55.39  34  P         P        04 56 12.9 +1.6
      baz=273,SNR=7.1
KLU   Klutina           55.39  34  P         P        04 56 11.3  0.0
KLU                                IAmb      IAmb     04 56 13.9
      comp=Z,18nm,0.8s
NIL   Nilore            55.41 291  P         P        04 56 11.7 -0.1
NIL                                pmax      pmax
      comp=Z,29nm,0.7s
NIL   Nilore            55.41 291  P         P        04 56 11.7 -0.1
PRP   Porcupine Dome    55.44  29  P         P        04 56 12.0 +0.4
      baz=270,SNR=12
PRP   Porcupine Dome    55.44  29  P         P        04 56 11.8 +0.2
PRP                                IAmb      IAmb     04 56 13.9
      comp=Z,11nm,0.6s
DIV   Divide            55.48  35  P         P        04 56 12.4 +0.5
J25K  Salcha River,     55.52  30  P         P        04 56 13.5 +1.4
      baz=271,SNR=5.7
EYAK  Cordova Ski Ar    55.53  35  P         P        04 56 13.9 +1.8
      baz=274
PAX   Paxson            55.53  32  P         P        04 56 12.6 +0.4
PAX                                pmax      pmax
      comp=Z,16nm,0.9s
PAX   Paxson            55.53  32  P         P        04 56 13.5 +1.2
      baz=272,SNR=10
PAX   Paxson            55.53  32  P         P        04 56 12.6 +0.4
PAX                                IAmb      IAmb     04 56 14.6
      comp=Z,16nm,0.9s
IUG   Iuzhnay           55.62 302 eP         P        04 56 11.5 -1.7
HARP  HAARP             55.70  33  P         P        04 56 15.2 +1.9
      baz=273
RIDG  Independent Ri    55.78  31  P         P        04 56 14.7 +0.7
      baz=272,SNR=5.9
RIDG  Independent Ri    55.78  31  IAmb      IAmb     04 56 15.3
      comp=Z,13nm,0.6s
N25K  Chitina, Valde    56.02  34  P         P        04 56 17.4 +1.7
      baz=274
N25K  Chitina, Valde    56.02  34  IAmb      IAmb     04 56 24.5
      comp=Z,10.0nm,0.8s
BMRM  Bremner River     56.06  35  P         P        04 56 17.7 +1.7
      baz=274,SNR=12
PSA00 Pilbara Seismi    56.15 203  P         P        04 56 16.5 -0.5
SCRK  Sand Creek        56.15  31  P         P        04 56 17.6 +0.9
      baz=273,SNR=32
SCRK  Sand Creek        56.15  31  P         P        04 56 17.6 +0.9
GAR   Garm              56.19 298  IAmb      IAmb     04 56 17.3
      comp=Z,9.3nm,0.7s
J26L  Joseph Creek      56.31  30  P         P        04 56 18.6 +0.8
      baz=273,SNR=36
L26K  Log Cabin Wild    56.50  32  P         P        04 56 20.9 +1.9
      baz=274,SNR=16
M26K  Nabesna, AK       56.71  33  P         P        04 56 22.3 +1.8
      baz=275,SNR=11
M26K  Nabesna, AK       56.71  33  IAmb      IAmb     04 56 23.5
      comp=Z,22nm,0.9s
MCARA McCarthy VSAT     56.79  34  P         P        04 56 23.1 +2.0
      baz=275,SNR=19
CRQE  Cirque            56.82  35  P         P        04 56 23.2 +1.7
      baz=276,SNR=13
L27K  Beaver Creek,     57.18  32  P         P        04 56 25.9 +2.0
      baz=275,SNR=21
L27K  Beaver Creek,     57.18  32  IAmb      IAmb     04 56 26.8
      comp=Z,25nm,0.9s
M27K  Edge Creek, AK    57.23  33  P         P        04 56 26.2 +1.8
      baz=276,SNR=9.4
M27K  Edge Creek, AK    57.23  33  IAmb      IAmb     04 56 27.2
      comp=Z,26nm,0.8s
MESA  MESA              57.45  35  P         P        04 56 27.7 +1.8
      baz=277
EIDS  Eidsvold          57.47 168  P         P        04 56 26.2 -0.1
EIDS                               IAmb      IAmb     04 56 28.8
      comp=Z,18nm,1.1s
CTG   Chitna Glacier    57.65  34  P         P        04 56 29.0 +1.8
      baz=277,SNR=9.1
BVCY  Beaver Creek      57.70  33  P         P        04 56 29.3 +1.8
      baz=276,SNR=9.1
LOGN  Logan Glacier     57.83  35  IAmb      IAmb     04 56 37.9
      comp=Z,14nm,0.8s
YUK3  Moose Creek       57.96  33  P         P        04 56 31.2 +1.6
      baz=277,SNR=16
DAWY  Dawson            58.16  31  P         P        04 56 32.2 +1.5
      baz=277,SNR=9.0
PINM  Pinnacle          58.30  35  P         P        04 56 33.4 +1.6
      baz=278
KBL   Kabul             58.46 294  P         P        04 56 32.5 -1.0
KBL                                pmax      pmax
      comp=Z,9.0nm,0.7s
KBL   Kabul             58.46 294  P         P        04 56 32.5 -1.0
KBL                                IAmb      IAmb     04 56 33.2
      comp=Z,9.2nm,0.7s
I29M  Ogilvie Camp,     58.46  29  P         P        04 56 34.4 +1.7
      baz=277,SNR=12
SVE   Sverdlovsk        58.65 321 eP         P        04 56 34.1  0.0
SVE                                pmax      pmax
      comp=Z,21nm,0.8s
PNL   Peninsula         58.79  36  P         P        04 56 36.9 +1.8
      baz=279
YUK4  Talbot Arm        58.88  34  P         P        04 56 38.2 +2.3
      baz=279,SNR=14
DZM   Mont Dzumac       58.94 151  P         P        04 56 35.6 -1.0
DZM                                IAmb      IAmb     04 56 40.0
      comp=Z,12nm,0.7s
EPYK  Eagle Plains      58.98  28  P         P        04 56 38.2 +1.9
      baz=278,SNR=53
YUK6  Outpost Mounta    59.09  34  P         P        04 56 39.8 +2.4
      baz=280,SNR=5.8
HYT   Haines Junctio    59.52  34  P         P        04 56 42.6 +2.3
      baz=280,SNR=14
HYT   Haines Junctio    59.52  34  IAmb      IAmb     04 56 46.5
      comp=Z,19nm,0.8s
M30M  Minto, Yukon      59.54  32  P         P        04 56 42.5 +2.3
      baz=280,SNR=18
ARU   Arti              59.85 321c iP        P        04 56 41.6 -0.8
ARU                                S         S        05 04 43.1 -0.3
ARU                                pmax      pmax
      comp=Z,20nm,0.6s
ARU   Arti              59.85 321  P         P        04 56 41.6 -0.8
INK   Inuvik            59.90  25  P         P        04 56 43.6 +1.1
      comp=Z,13nm,0.5s,baz=295,slow=6.1,SNR=114
INK   Inuvik            59.90  25  P         P        04 56 43.7 +1.1
      baz=279,SNR=20
INK   Inuvik            59.90  25  IAmb      IAmb     04 56 44.1
      comp=Z,14nm,0.6s
N31M  Braeburn, Yuko    60.21  33  P         P        04 56 47.2 +2.4
      baz=281,SNR=14
M31M  Drury Creek, Y    60.71  32  P         P        04 56 50.1 +1.9
      baz=282,SNR=24
AB31  Akbulak array     60.74 312 i P        P        04 56 47.6 -1.0
ABKAR Akbulak array     60.74 312  P         P        04 56 47.9 -0.7
ABKAR Akbulak array     60.74 312  P         P        04 56 48.2 -0.4
ABKAR                              IAmb      IAmb     04 56 48.8
      comp=Z,22nm,0.7s
WHY   Whitehorse        60.81  34  P         P        04 56 51.2 +2.2
      baz=282,SNR=9.5
WHY   Whitehorse        60.81  34  IAmb      IAmb     04 56 51.7
      comp=Z,12nm,0.7s
SKAG  Skagway           60.86  36  P         P        04 56 51.5 +2.3
      baz=283
FARO  Faro, Yukon       61.18  32  P         P        04 56 53.3 +1.9
      baz=283,SNR=21
BESE  Bessie Mountai    61.31  37  IAmb      IAmb     04 56 55.4
      comp=Z,25nm,1.2s
JIS   Juneau Island     61.62  37  IAmb      IAmb     04 56 57.2
      comp=Z,21nm,1.0s
AKTO  Aktyubinsk        61.63 314  P         P        04 56 54.1 -0.5
      comp=Z,9.3nm,0.7s
A36M  Sachs Harbour     61.88  21  P         P        04 56 57.4 +1.6
      baz=285
A36M  Sachs Harbour     61.88  21  P         P        04 56 56.7 +0.9
P33M  Teslin, Yukon     61.92  34  P         P        04 56 58.4 +2.0
      baz=284,SNR=9.9
ARMA  Armidale          62.50 169  P         P        04 56 59.8 -0.8
ARMA                               IAmb      IAmb     04 57 03.5
      comp=Z,11nm,0.8s
STKA  Stephens Creek    62.99 178  P         P        04 57 03.6  0.0
      comp=Z,2.9nm,0.7s,baz=336,slow=10.0,SNR=4.3
STKA                               pP        pP       04 57 35.8 +0.5
      comp=Z,1.9nm,0.5s,baz=324,slow=6.6,SNR=2.2
CRAG  Craig             63.05  40  P         P        04 57 06.1 +2.3
      baz=287
WRAK  Wrangell Islan    63.19  38  P         P        04 57 06.8 +2.0
      baz=287
TGTN  Hyland Airport    63.69  32  P         P        04 57 10.1 +2.1
      baz=287,SNR=25
DLBC  Dease Lake        63.78  36  P         P        04 57 08.3 -0.5
DLBC                               IAmb      IAmb     04 57 11.8
      comp=Z,12nm,0.9s
HRA   Herat             63.79 296  P         P        04 57 08.9 -0.5
KIRV  Kirov             64.05 324ceP         P        04 57 10.3 -0.1
PRGR  Permogore         64.86 328 eP         P        04 57 15.1 -0.5
PRGR                               pmax      pmax
      comp=Z,10.0nm,0.5s
WRGLY Wrigley           65.24  30  P         P        04 57 19.9 +1.8
      baz=290,SNR=12
SPA0  Spitsbergen Ar    65.78 349 eP         P        04 57 19.9 -1.4
EUNU  Eureka            65.88   8  IAmb      IAmb     04 57 23.9
      comp=Z,22nm,0.7s
BELG  Belogornoye       67.14 318 i P        P        04 57 28.9 -1.5
BELG                               pmax      pmax
      comp=Z,6.0nm,0.7s
APA   Apatity           67.32 337⇑iP         P        04 57 31.1 -0.1
APA                               i *PP      pP       04 58 04.0 +0.7
APA                                pmax      pmax
      comp=Z,18nm,0.9s
APA                                MLR       MLR
      comp=Z,1µm,23.0s
KLMR  Klimovskoe        67.89 329 eP         P        04 57 33.7 -1.1
KLMR                              e*SP       sP       04 58 19.7 -1.6
KLMR                               pmax      pmax
      comp=Z,19nm,0.7s
KLMR  Klimovskoe        67.89 329 eP         P        04 57 33.8 -1.1
KLMR                               AMP                04 57 35.4
      comp=Z,19nm,0.7s
KLMR                              esP        sP       04 58 19.7 -1.6
RES   Resolute Bay      68.30  14  P         P        04 57 37.7 +0.5
RES                                pmax      pmax
      comp=Z,15nm,0.8s
RES   Resolute Bay      68.30  14  P         P        04 57 37.7 +0.5
RES                                IAmb      IAmb     04 57 39.2
      comp=Z,16nm,0.8s
HAMF  Hammerfest        68.72 341 eP         P        04 57 40.4 +0.5
ARA0  ARCESS Array S    68.82 340 eP         P        04 57 41.2 +0.6
ARCES ARCESS Array B    68.82 340  P         P        04 57 41.3 +0.7
      comp=Z,11nm,0.6s,baz=72,slow=8.8,SNR=78
ARCES ARCESS Array B    68.82 340  P         P        04 57 40.9 +0.3
ARCES                              IAmb      IAmb     04 57 42.0
      comp=Z,18nm,0.8s
YKA   Yellowknife Ar    69.24  29  P         P        04 57 43.9 +0.6
      comp=Z,10nm,0.8s,baz=299,slow=4.6,SNR=19
KTK1  Kautokeino        69.79 340 eP         P        04 57 47.4 +0.9
JETT  Jettan, Norway    70.27 341 eP         P        04 57 51.4 +1.9
TRO   Tromso            70.62 341 eP         P        04 57 51.6  0.0
LLLB  Lillooet          71.14  42  IAmb      IAmb     04 57 57.9
      comp=Z,17nm,0.8s
D03D  Eldon             71.81  45  P         P        04 58 01.8 +2.7
      baz=297,SNR=7.4
OBN   Obninsk           71.90 324deP         P        04 57 56.9 -2.6
OBN                               e*PP       pP       04 58 29.7 -2.2
OBN                               e                   05 00 35.5
OBN                               eS         SKiKP    05 07 17.5 -5.8
OBN                                pmax      pmax
      comp=Z,14nm,0.5s
B05A  Bryant            72.08  44  P         P        04 58 03.0 +2.3
      baz=297,SNR=8.1
D04E  Lakebay           72.17  45  P         P        04 58 03.7 +2.5
      baz=297
E04D  Cinebar           72.58  46  P         P        04 58 06.2 +2.5
      baz=297,SNR=5.0
STEI  Steigen           72.76 341 eP         P        04 58 02.6 -1.7
C06D  Leavenworth       72.95  44  P         P        04 58 08.2 +2.3
      baz=298
F04A  Amboy             72.95  46  IAmb      IAmb     04 58 09.0
      comp=Z,36nm,0.8s
LOF   Lofoten           73.08 342 eP         P        04 58 04.9 -1.4
FAUS  Fauske            73.12 341 eP         P        04 58 07.3 +0.8
FINES FINESS Array B    73.22 333  P         P        04 58 07.3  0.0
      comp=Z,9.5nm,0.4s,baz=66,slow=5.1,SNR=141
FINES                              PP        PP       05 00 52.2 +0.7
      comp=Z,3.1nm,0.7s,baz=57,slow=9.9,SNR=3.3
NCK   Nalchik           73.35 311 i P        P        04 58 07.1 -1.3
NCK                                pmax      pmax
      comp=Z,14nm,0.4s
LTY   Liberty           73.40  45  IAmb      IAmb     04 58 10.7
      comp=Z,13nm,0.7s
I03D  Drain, OR         73.41  49  P         P        04 58 11.3 +2.6
      baz=298
H04D  Lebanon           73.41  48  P         P        04 58 11.1 +2.4
      baz=298
F05D  White Salmon      73.57  46  P         P        04 58 12.0 +2.4
      baz=298
K02D  Willamette Mer    73.66  50  P         P        04 58 12.5 +2.2
      baz=298
H04A  Detroit Lake      73.68  47  IAmb      IAmb     04 58 13.3
      comp=Z,30nm,0.9s
KBZ   Khabaz            73.69 311  P         P        04 58 10.9 +0.6
      comp=Z,13nm,0.9s,baz=59,slow=4.0,SNR=26
HOOD  Mount Hood Mea    73.72  47  IAmb      IAmb     04 58 13.8
      comp=Z,36nm,0.8s
KIV   Kislovodsk        73.72 312 eP         P        04 58 09.3 -1.3
KIV                                pmax      pmax
      comp=Z,24nm,1.0s
KIV                                MLR       MLR
      comp=Z,55nm,18.0s
SHA1  Shidzhatmaz       73.84 312 i P        P        04 58 11.2 -0.3
L02E  Cave Junction     73.96  50  P         P        04 58 14.4 +2.4
      baz=298
I04A  Tendick Farm,     73.96  48  P         P        04 58 14.1 +2.1
      baz=298
G05D  Wamic, OR         73.96  47  P         P        04 58 14.2 +2.3
      baz=298
MOR8  Moi Rana          74.20 340 eP         P        04 58 12.3 -0.5
E07A  Sunnyside         74.22  45  IAmb      IAmb     04 58 16.4
      comp=Z,17nm,0.8s
KONS  Konsvik           74.35 341 eP         P        04 58 14.5 +0.9
I05D  Terrebonne, OR    74.38  47  P         P        04 58 16.4 +2.0
      baz=299
J04D  Umpqua Nationa    74.42  49  P         P        04 58 17.0 +2.1
      baz=298,SNR=5.5
EDM   Edmonton          74.48  37  IAmb      IAmb     04 58 16.9
      comp=Z,17nm,0.8s
HAWA  Hanford           74.50  45  IAmb      IAmb     04 58 17.4
      comp=Z,12nm,0.7s
F07A  Phinny Hill Vi    74.50  46  IAmb      IAmb     04 58 18.0
      comp=Z,29nm,0.8s
D08A  Wollman Farm,     74.54  44  IAmb      IAmb     04 58 17.8
      comp=Z,24nm,0.8s
C09A  Chrisman Ranch    74.55  43  IAmb      IAmb     04 58 17.9
      comp=Z,21nm,0.8s
E08A  Dider Farm, El    74.74  45  IAmb      IAmb     04 58 19.1
      comp=Z,20nm,0.7s
YBH   Yreka Blue Hor    74.74  50  P         P        04 58 16.0 -0.6
YBH                                pmax      pmax
      comp=Z,14nm,1.2s
YBH   Yreka Blue Hor    74.74  50  P         P        04 58 16.0 -0.6
L04D  Klamath Falls     74.78  50  P         P        04 58 19.0 +2.1
      baz=299
M02C  Callahan          74.81  51  P         P        04 58 19.4 +2.4
      baz=298
PINE  Pine Mountain     74.90  48  P         P        04 58 16.2 -1.4
K04D  Chiloquin, OR     74.94  49  P         P        04 58 20.0 +2.3
      baz=299
J05D  Fort Rock, OR     74.95  48  P         P        04 58 20.2 +2.3
      baz=299,SNR=5.7
NEW   Newport           74.99  42  P         P        04 58 19.5 +1.7
      baz=300,SNR=8.6
N02D  Trinity Center    75.11  51  P         P        04 58 20.5 +1.8
      baz=299,SNR=6.3
E09A  Wood Farm, Sta    75.27  44  IAmb      IAmb     04 58 22.3
      comp=Z,26nm,0.8s
M04C  Macdoel           75.29  50  P         P        04 58 22.0 +2.2
      baz=299,SNR=6.1
O02D  Mt. Diablo Mer    75.44  52  P         P        04 58 22.9 +2.3
      baz=299
O03E  Paynes Creek      76.04  51  P         P        04 58 25.3 +1.3
      baz=299
NSS   Namsos            76.10 339 eP         P        04 58 23.7 -0.1
SUMG  Summit            76.26 360  P         P        04 58 24.9 -0.2
SUMG                               pmax      pmax
      comp=Z,14nm,1.1s
SUMG  Summit            76.26 360  P         P        04 58 24.9 -0.2
WALA  Waterton Lakes    76.39  41  IAmb      IAmb     04 58 28.6
      comp=Z,16nm,0.8s
MNK   Minsk             76.47 326 i P        P        04 58 24.5 -1.6
MNK                               i                   04 58 35.1
MNK                               i *PP      pP       04 59 00.3 +1.4
MNK                               i                   05 01 18.3
MNK                               i PPP      PPP      05 03 05.8
MNK                               i S        S        05 07 59.3 -1.3
MNK                               i                   05 08 33.4
MNK                                pmax      pmax
      comp=N,10.0nm,1.0s
MNK                                pmax      pmax
      comp=E,2.0nm,1.0s
MNK                                pmax      pmax
      comp=Z,25nm,1.0s
MNK   Minsk             76.47 326 i P        P        04 58 24.5 -1.5
      comp=E,2.0nm,1.0s
MNK                               i P        P        04 58 24.5 -1.5
      comp=N,10.0nm,1.0s
MNK                               i P        P        04 58 24.5 -1.5
      comp=Z,25nm,1.0s,baz=54
MNK                               i pP       pP       04 59 00.3 +1.4
MNK                               i sP       sP       04 59 24.8 +12
MNK                               i PP       PP       05 01 18.4 -0.7
MNK                               i PPP      PPP      05 03 05.8
MNK                               i S        S        05 07 59.3 -1.2
MNK                               i S        S        05 07 59.3 -1.2
MNK                               i sS       sS       05 09 08.8 +12
MNK                               i SS       SS       05 13 19.0 +22
MNK                               i SSS      SSS      05 16 42.3
ANN   Anapa             76.58 314 eP         P        04 58 26.3 -0.5
ANN                                pmax      pmax
      comp=Z,116nm,1.1s
BMO   Blue Mountains    76.62  46  IAmb      IAmb     04 58 29.6
      comp=Z,13nm,0.7s
ISAL  Salakas           76.66 328 eP         P        04 58 26.6 -0.5
J08A  Circle Bar Ran    76.67  47  IAmb      IAmb     04 58 30.6
      comp=Z,38nm,1.2s
NACGM Naroch            76.76 327 i P        P        04 58 28.4 +0.8
UPP   Uppsala           77.46 334 eP         P        04 58 29.8 -1.6
URZ   Urewera           77.49 151  P         P        04 58 31.5 -0.3
URZ                                IAmb      IAmb     04 58 33.4
      comp=Z,25nm,1.1s
MSO   Missoula          77.58  43  P         P        04 58 33.5 +0.9
      baz=303,SNR=5.1
PABE  Paberze           77.68 328 eP         P        04 58 32.4 -0.4
PABE  Paberze           77.68 328  P         P        04 58 33.0 +0.2
PABE                               IAmb      IAmb     04 58 34.2
      comp=Z,62nm,1.4s
FWVZ  Far West T-bar    77.71 152  P         P        04 58 35.4 +2.1
PAHR  Pah Rah Range     77.94  51  IAmb      IAmb     04 58 37.4
      comp=Z,15nm,0.9s
QRZ   Quartz Range      77.94 155  P         P        04 58 36.0 +1.7
VCNR  Virginia City     77.97  51  IAmb      IAmb     04 58 37.8
      comp=Z,13nm,0.8s
AKASG Malin Array Be    78.01 323  P         P        04 58 34.4 -0.3
      comp=Z,7.0nm,0.6s,baz=50,slow=6.3,SNR=36
AKBB  Malin Array Si    78.01 323ceP         P        04 58 33.5 -1.2
AKBB  Malin Array Si    78.01 323  IAmb      IAmb     04 58 35.2
      comp=Z,13nm,0.8s
BKZ   Black Stump Fm    78.01 152  P         P        04 58 34.7  0.0
BKZ                                IAmb      IAmb     04 58 38.7
      comp=Z,17nm,1.0s
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PNTR	**Pine Nut**	**78.11**	**51**	IAmb	IAmb	04 58 38.8	
	comp=Z,19nm,0.8s						
BHHZ	**Black Hill Sta**	**78.11**	**152**	P	**P**	**04 58 36.7**	**+1.4**
CMB	**Columbia Colle**	**78.12**	**53**	IAmb	IAmb	04 58 38.3	
	comp=Z,15nm,0.9s						
KWHZ	**Kaweka Forest**	**78.20**	**152**	P	**P**	**04 58 37.2**	**+1.4**
MFID	**Camas Ranch**	**78.28**	**46**	IAmb	IAmb	04 58 39.0	
	comp=Z,14nm,0.7s						
KRHZ	**Kereru**	**78.37**	**152**	P	**P**	**04 58 38.2**	**+1.5**
YERR	**Yerington**	**78.41**	**51**	IAmb	IAmb	04 58 40.2	
	comp=Z,21nm,0.9s						
NC405	**NORSAR Array S**	**78.66**	**337**	IAmb	IAmb	04 58 37.8	
	comp=Z,29nm,0.8s						
KAHZ	**Kahuranaki**	**78.70**	**152**	P	**P**	**04 58 39.6**	**+1.1**
DOMB	**Dombas**	**78.82**	**339**	*e*P	**P**	**04 58 39.0**	**0.0**
NC204	**NORSAR Array S**	**78.86**	**338**	IAmb	IAmb	04 58 40.1	
	comp=Z,34nm,0.7s						
NB2	**NORSAR Subarra**	**78.88**	**337**	P	**P**	**04 58 38.7**	**-0.7**
	comp=Z,7.8nm,0.6s,baz=43,slow=5.3						
NOA	**NORSAR Array B**	**78.88**	**337**	P	**P**	**04 58 39.5**	**+0.1**
	comp=Z,10nm,0.9s,baz=43,slow=5.3,SNR=25						
NOA				pP	**pP**	**04 59 13.5**	**+1.0**
	comp=Z,6.7nm,0.8s,baz=43,slow=5.4,SNR=6.7						
NOA				PP	**PP**	**05 01 38.2**	**-0.8**
	comp=Z,1.6nm,0.8s,baz=46,slow=8.7,SNR=3.3						
THZ	**Tophouse**	**78.90**	**156**	P	**P**	**04 58 39.6**	**0.0**
NC602	**NORSAR Array S**	**79.00**	**337**	*e*P	**P**	**04 58 39.0**	**-0.9**
FFC	**Flin Flon**	**79.05**	**31**	P	**P**	**04 58 40.9**	**+0.6**
FFC				pmax	pmax		
	comp=Z,15nm,0.8s						
FFC	**Flin Flon**	**79.05**	**31**	P	**P**	**04 58 40.9**	**+0.6**
FFC				IAmb	IAmb	04 58 42.1	
	comp=Z,15nm,0.8s						
HLID	**Hailey**	**79.07**	**45**	P	**P**	**04 58 42.9**	**+1.9**
	baz=303,SNR=19						
HLID	**Hailey**	**79.07**	**45**	P	**P**	**04 58 41.1**	**+0.1**
DLMT	**Dillon**	**79.17**	**43**	IAmb	IAmb	04 58 44.1	
	comp=Z,27nm,1.2s						
EGMT	**Eagleton**	**79.27**	**40**	P	**P**	**04 58 43.1**	**+1.3**
	baz=305,SNR=8.4						
EGMT	**Eagleton**	**79.27**	**40**	IAmb	IAmb	04 58 44.2	
	comp=Z,28nm,1.1s						
LHV	**Little Huntoon**	**79.28**	**52**	IAmb	IAmb	04 58 45.3	
	comp=Z,18nm,0.8s						
NVAR	**Mina Array Bea**	**79.32**	**52**	P	**P**	**04 58 44.4**	**+1.9**
	comp=Z,10nm,0.6s,baz=286,slow=5.6,SNR=46						
PAGB	**Antelope Grade**	**79.39**	**55**	IAmb	IAmb	04 58 45.7	
	comp=Z,46nm,1.4s						
BOZ	**Bozeman (W)**	**79.60**	**43**	P	**P**	**04 58 45.2**	**+1.5**
	baz=304,SNR=9.3						
KHZ	**Kahutara**	**79.70**	**155**	P	**P**	**04 58 41.7**	**-2.0**
OSL	**Oslo**	**79.86**	**337**	*e*P	**P**	**04 58 44.1**	**-0.5**
SORM	**Soroca**	**79.97**	**321**	⇑P	**P**	**04 58 45.0**	**-0.4**
ELK	**Elko**	**80.09**	**48**	IAmb	IAmb	04 58 49.5	
	comp=Z,19nm,1.1s						
TIN	**Tinemaha, Big**	**80.09**	**53**	P	**P**	**04 58 48.4**	**+1.9**
	baz=302						
SKAR	**Skarslia**	**80.10**	**338**	*e*P	**P**	**04 58 46.0**	**0.0**
PKM	**Mcpherson Peak**	**80.13**	**55**	P	**P**	**04 58 48.9**	**+2.0**
	baz=301						
VES	**Vestal, Richgr**	**80.14**	**54**	P	**P**	**04 58 47.4**	**+0.8**
	baz=302,SNR=5.7						
FOO	**Floro**	**80.38**	**340**	*e*P	**P**	**04 58 46.5**	**-0.8**
YMR	**Madison River**	**80.51**	**43**	IAmb	IAmb	04 58 52.0	
	comp=Z,14nm,0.9s						
CWC	**Cottonwood Cre**	**80.52**	**53**	P	**P**	**04 58 50.3**	**+1.4**
	baz=302						
ISA	**Isabella, Lake**	**80.66**	**54**	P	**P**	**04 58 50.2**	**+0.7**
	baz=302,SNR=5.3						
ARVC	**Arvin**	**80.69**	**55**	P	**P**	**04 58 50.8**	**+1.2**
	baz=302						
BNN	**Bunyan**	**80.73**	**310**	IAmb	IAmb	04 58 52.5	
	comp=Z,16nm,0.8s						
H17A	**Grant Village**	**80.90**	**43**	P	**P**	**04 58 54.5**	**+3.6**
	baz=305,SNR=17						
FLWY	**Flagg Ranch**	**81.00**	**44**	IAmb	IAmb	04 58 55.2	
	comp=Z,15nm,0.9s						
HVU	**Hansel Valley**	**81.06**	**46**	IAmb	IAmb	04 58 54.7	
	comp=Z,16nm,0.8s						
MPMC	**Manual Prospec**	**81.13**	**53**	P	**P**	**04 58 53.7**	**+1.6**
	baz=302,SNR=14						
R11A	**Troy Canyon, C**	**81.17**	**50**	IAmb	IAmb	04 59 08.3	
	comp=Z,10nm,0.6s						
RLMT	**Red Lodge**	**81.23**	**42**	P	**P**	**04 58 54.4**	**+1.9**
	baz=306,SNR=10						
FURC	**Furnace Creek,**	**81.33**	**53**	P	**P**	**04 58 54.8**	**+1.9**
	baz=303						
EDW2	**Edwards Air Fo**	**81.41**	**54**	P	**P**	**04 58 55.2**	**+1.7**
	baz=302,SNR=15						
TLCR		**81.46**	**318**	⇓P	**P**	**04 58 53.9**	**+0.5**
DECC	**Green Verdugo**	**81.50**	**55**	P	**P**	**04 58 55.6**	**+1.7**
	baz=302						
QSM	**Queen of Sheba**	**81.60**	**53**	IAmb	IAmb	04 58 57.0	
	comp=Z,34nm,0.8s						
GWY	**Greenwater Val**	**81.62**	**53**	IAmb	IAmb	04 58 57.1	
	comp=Z,28nm,0.9s						
BRTR	**Keskin Array B**	**81.68**	**312**	P	**P**	**04 58 55.3**	**+0.4**
	comp=Z,5.5nm,0.7s,baz=111,slow=4.4,SNR=14						
RAYN	**Ar Rayn**	**81.70**	**292**	P	**P**	**04 58 55.4**	**+0.2**
RAYN				pmax	pmax		
	comp=Z,12nm,1.3s						
RAYN	**Ar Rayn**	**81.70**	**292**	P	**P**	**04 58 55.4**	**+0.2**
MWC	**Mount Wilson**	**81.71**	**55**	IAmb	IAmb	04 58 57.6	
	comp=Z,15nm,0.9s						
CFR	**Carcaliu**	**81.85**	**318**	⇑P	**P**	**04 58 55.7**	**+0.3**
TESR	**Tescani**	**81.87**	**320**	⇑P	**P**	**04 58 55.3**	**-0.3**
TPGR	**Topolog**	**81.88**	**318**	⇑P	**P**	**04 58 56.0**	**+0.3**
HWUT	**Hardware Ranch**	**81.91**	**46**	IAmb	IAmb	04 58 59.2	
	comp=Z,28nm,0.9s						
DUG	**Dugway, Tooele**	**81.93**	**48**	P	**P**	**04 58 58.2**	**+2.0**
	baz=304,SNR=25						
DUG	**Dugway, Tooele**	**81.93**	**48**	IAmb	IAmb	04 58 59.2	
	comp=Z,20nm,0.8s						
DGMT	**Dagmar**	**81.96**	**37**	P	**P**	**04 58 57.6**	**+1.5**
	baz=309						
DGMT	**Dagmar**	**81.96**	**37**	IAmb	IAmb	04 58 58.0	
	comp=Z,22nm,1.3s						
BURAR	**Bucovina Array**	**81.97**	**322**	⇑P	**P**	**04 58 56.5**	**+0.3**
BFSC	**Mount Baldy Ra**	**81.98**	**55**	P	**P**	**04 58 57.8**	**+1.2**
	baz=302,SNR=5.3						
LAO	**LASA Array**	**81.99**	**40**	P	**P**	**04 58 58.1**	**+1.8**
	baz=308						
GSC	**Goldstone, Bar**	**82.00**	**54**	P	**P**	**04 58 58.1**	**+1.5**
	baz=303,SNR=7.9						
GSC	**Goldstone, Bar**	**82.00**	**54**	IAmb	IAmb	04 58 59.1	
	comp=Z,20nm,1.1s						
SHOC	**Shoshone, Teco**	**82.04**	**53**	P	**P**	**04 58 58.3**	**+1.6**
	baz=303						
VRI	**Vrincioaia**	**82.22**	**320**	⇓P	**P**	**04 58 57.7**	**+0.2**
HARR	**Harsova**	**82.26**	**318**	⇓P	**P**	**04 58 57.9**	**+0.3**
PLOR	**Plostina**	**82.28**	**320**	⇓P	**P**	**04 58 58.1**	**+0.3**
CTU	**Camp Tracy**	**82.32**	**47**	IAmb	IAmb	04 59 01.0	
	comp=Z,14nm,0.8s						
BW06	**Boulder Array**	**82.45**	**44**	P	**P**	**04 59 00.0**	**+1.1**
	baz=306,SNR=9.4						
PDAR	**Pinedale Array**	**82.45**	**44**	P	**P**	**04 59 00.0**	**+1.0**
	comp=Z,4.0nm,0.8s,baz=281,slow=3.0,SNR=37						
TUQ	**Turquoise Moun**	**82.53**	**53**	P	**P**	**04 59 01.1**	**+1.6**
	baz=303						
JLU	**Jordanelle**	**82.56**	**47**	IAmb	IAmb	04 59 02.5	
	comp=Z,13nm,0.8s						
HEC	**Hector,Ludlow**	**82.58**	**54**	P	**P**	**04 59 01.3**	**+1.7**
	baz=303						
KOLS	**Kolonicke sedl**	**82.65**	**324**	*e*P	**P**	**04 59 00.4**	**+0.8**
KOLS	**Kolonicke sedl**	**82.65**	**324**	*e*P	**P**	**04 59 00.4**	**+0.8**
MURC	**Murrieta**	**82.65**	**55**	P	**P**	**04 59 01.3**	**+1.4**
	baz=303,SNR=6.3						
MPU	**Maple Canyon**	**82.78**	**47**	IAmb	IAmb	04 59 03.1	
	comp=Z,14nm,0.7s						
MLR	**Muntele Rosu**	**82.89**	**320**	⇓P	**P**	**04 59 01.7**	**+0.7**
DOPR	**Dopca**	**82.90**	**320**	⇓P	**P**	**04 59 01.0**	**0.0**
TRPA	**Tarpa**	**83.03**	**323**	⇓P	**P**	**04 59 01.9**	**+0.4**
GMRC	**Granite Mounta**	**83.07**	**53**	P	**P**	**04 59 03.8**	**+1.6**
	baz=304,SNR=12						
CRVS	**Cervenica-Dubn**	**83.08**	**324**	*e*P	**P**	**04 59 02.5**	**+0.7**
CRVS	**Cervenica-Dubn**	**83.08**	**324**	*e*P	**P**	**04 59 02.5**	**+0.7**
109C	**Camp Elliot, M**	**83.10**	**56**	P	**P**	**04 59 03.7**	**+1.5**
	baz=303						
PFO	**Pinyon Flats O**	**83.16**	**55**	P	**P**	**04 59 02.8**	**+0.1**
PFO				pmax	pmax		
	comp=Z,20nm,0.8s						
PFO	**Pinyon Flats O**	**83.16**	**55**	P	**P**	**04 59 04.2**	**+1.5**
	baz=303,SNR=6.9						
PFO	**Pinyon Flats O**	**83.16**	**55**	P	**P**	**04 59 02.8**	**+0.1**
PFO				IAmb	IAmb	04 59 05.1	
	comp=Z,20nm,0.8s						
TPFO	**Pinon Flats**	**83.17**	**55**	P	**P**	**04 59 04.3**	**+1.6**
	baz=303,SNR=7.9						
BELC	**Belle Mtn. Jos**	**83.27**	**54**	P	**P**	**04 59 04.5**	**+1.3**
	baz=303,SNR=5.7						
VOIR		**83.42**	**320**	⇓P	**P**	**04 59 03.8**	**+0.1**
LCMT	**Little Creek M**	**83.46**	**50**	IAmb	IAmb	04 59 07.8	
	comp=Z,14nm,0.9s						
BAR	**Barrett**	**83.52**	**56**	IAmb	IAmb	04 59 06.7	
	comp=Z,12nm,0.8s						
MONP2	**Monument Peak**	**83.58**	**55**	P	**P**	**04 59 06.5**	**+1.6**
	baz=303						
P17A	**Butcher Ranch,**	**83.66**	**47**	IAmb	IAmb	04 59 08.1	
	comp=Z,37nm,0.9s						
ARR	**Arges**	**83.69**	**320**	⇑P	**P**	**04 59 05.5**	**+0.5**
Q16A	**Castle Valley**	**83.70**	**48**	IAmb	IAmb	04 59 08.5	
	comp=Z,35nm,1.3s						
KNB	**Kanab**	**83.73**	**50**	IAmb	IAmb	04 59 09.5	
	comp=Z,26nm,0.9s						
IRM	**Iron Mountain**	**83.77**	**54**	P	**P**	**04 59 07.2**	**+1.5**
	baz=304						
NEE2	**Needles Airpor**	**83.79**	**53**	P	**P**	**04 59 07.5**	**+1.7**
	baz=304						
BC3	**Big Chuckawall**	**83.84**	**54**	P	**P**	**04 59 07.8**	**+1.7**
	baz=304						
IKP	**In-Ko-Pah, Jac**	**83.93**	**55**	P	**P**	**04 59 08.3**	**+1.7**
	baz=303,SNR=6.3						
K22A	**Casper**	**84.30**	**43**	P	**P**	**04 59 09.6**	**+1.2**
	baz=308,SNR=8.5						
K22A	**Casper**	**84.30**	**43**	IAmb	IAmb	04 59 10.5	
	comp=Z,14nm,0.8s						
PDMCI	**Parker Dam,Lak**	**84.38**	**53**	P	**P**	**04 59 09.9**	**+1.2**
	baz=304						
U15A	**North Rim**	**84.42**	**51**	IAmb	IAmb	04 59 13.3	
	comp=Z,17nm,1.0s						
OSTC	**Ostas**	**84.46**	**328**	*e*P	**P**	**04 59 12.5**	**+3.7**
CHVC	**Chvalec**	**84.51**	**328**	*e*P	**P**	**04 59 09.7**	**+0.6**
KRLC	**Kraliky**	**84.54**	**327**	*e*P	**P**	**04 59 10.0**	**+0.8**
KRLC	**Kraliky**	**84.54**	**327**	*e*P	**P**	**04 59 10.0**	**+0.8**
DPC	**Dobruska-Polom**	**84.56**	**328**	*e*P	**P**	**04 59 10.0**	**+0.7**
DPC	**Dobruska-Polom**	**84.56**	**328**	*e*P	**P**	**04 59 10.0**	**+0.7**
CSS	**Mathiatis**	**84.57**	**308**	IAmb	IAmb	04 59 10.4	
	comp=Z,13nm,0.7s						
UPC	**Upice**	**84.59**	**328**	*e*P	**P**	**04 59 10.4**	**+1.0**
UPC	**Upice**	**84.59**	**328**	*e*P	**P**	**04 59 10.4**	**+1.0**
GLA	**Glamis**	**84.61**	**55**	P	**P**	**04 59 11.7**	**+1.8**
	baz=304,SNR=6.8						
VYHS	**Vyhne**	**84.65**	**325**	*e*P	**P**	**04 59 11.2**	**+1.4**
VYHS	**Vyhne**	**84.65**	**325**	*e*P	**P**	**04 59 11.2**	**+1.4**
MDND	**Maddock**	**84.70**	**36**	P	**P**	**04 59 11.0**	**+1.0**
	baz=312						
MDND	**Maddock**	**84.70**	**36**	IAmb	IAmb	04 59 12.2	
	comp=Z,26nm,1.1s						
RSSD	**Black Hills**	**84.80**	**41**	P	**P**	**04 59 10.7**	**-0.2**
RSSD				pmax	pmax		
	comp=Z,7.0nm,0.9s						
RSSD	**Black Hills**	**84.80**	**41**	P	**P**	**04 59 12.0**	**+1.1**
	baz=309						
RSSD	**Black Hills**	**84.80**	**41**	P	**P**	**04 59 10.7**	**-0.2**
O20A	**White River Ci**	**84.81**	**46**	P	**P**	**04 59 12.5**	**+1.5**
	baz=307,SNR=21						
O20A	**White River Ci**	**84.81**	**46**	IAmb	IAmb	04 59 13.4	
	comp=Z,33nm,0.9s						
ULM	**Lac du Bonnet**	**84.82**	**32**	P	**P**	**04 59 10.7**	**+0.1**
	comp=Z,2.6nm,0.6s,baz=295,slow=4.8,SNR=2.7						
VRAC	**Vranov**	**85.16**	**327**	⇑P	**P**	**04 59 11.2**	**-1.1**
VRAC	**Vranov**	**85.16**	**327**	*e*P	**P**	**04 59 12.9**	**+0.6**
SMOL	**Smolenice**	**85.31**	**326**	*e*P	**P**	**04 59 14.2**	**+1.1**
SMOL	**Smolenice**	**85.31**	**326**	*e*P	**P**	**04 59 14.2**	**+1.1**
CLL	**Collm**	**85.34**	**330**	*e*P	**P**	**04 59 13.0**	**-0.2**
	comp=Z,6.0nm,0.8s						
CLL				*i* pP	**pP**	**04 59 45.9**	**-0.7**
CLL	**Collm**	**85.34**	**330**	*e*P	**P**	**04 59 13.0**	**-0.2**
CLL				*i* *PP	**pP**	**04 59 45.9**	**-0.7**
CLL				pmax	pmax		
	comp=Z,6.0nm,0.8s						
Y14A	**Wickenburg**	**85.36**	**53**	IAmb	IAmb	04 59 16.2	
	comp=Z,18nm,1.0s						
KRUC	**Moravsky**	**85.42**	**327**	*e*P	**P**	**04 59 13.9**	**+0.3**
113A	**Mohawk Valley,**	**85.50**	**54**	IAmb	IAmb	04 59 16.8	
	comp=Z,14nm,0.8s						
WUAZ	**Wupatki**	**85.55**	**51**	P	**P**	**04 59 16.2**	**+1.4**
	baz=306						
PRU	**Pruhonice**	**85.62**	**328**	*e*P	**P**	**04 59 15.3**	**+0.7**
PRU	**Pruhonice**	**85.62**	**328**	*e*P	**P**	**04 59 15.3**	**+0.7**
N23A	**Red Feather La**	**85.73**	**44**	P	**P**	**04 59 17.6**	**+1.9**
	baz=308,SNR=15						
X16A	**Lo Mia Camp, P**	**86.14**	**52**	IAmb	IAmb	04 59 20.6	
	comp=Z,12nm,1.1s						
SMCO	**Snowmass**	**86.17**	**46**	IAmb	IAmb	04 59 20.9	
	comp=Z,22nm,1.2s						
NKC	**Novy Kostel**	**86.37**	**329**	*e*P	**P**	**04 59 18.5**	**+0.2**
NKC	**Novy Kostel**	**86.37**	**329**	*e*P	**P**	**04 59 18.5**	**+0.2**
NKC				pmax	pmax		
	comp=Z,51nm,0.6s						
MVCO	**Mesa Verde**	**86.42**	**48**	P	**P**	**04 59 20.4**	**+1.3**
	baz=307,SNR=6.7						
MVCO	**Mesa Verde**	**86.42**	**48**	IAmb	IAmb	04 59 21.4	
	comp=Z,13nm,1.2s						
ISCO	**Idaho Springs**	**86.61**	**45**	P	**P**	**04 59 21.7**	**+1.7**
	baz=309,SNR=7.3						
214A	**Organ Pipe Nat**	**86.63**	**54**	P	**P**	**04 59 21.6**	**+1.7**
	baz=305,SNR=11						
214A	**Organ Pipe Nat**	**86.63**	**54**	IAmb	IAmb	04 59 22.7	
	comp=Z,15nm,1.0s						
KHC	**Kasperske Hory**	**86.67**	**328**	*e*P	**P**	**04 59 19.8**	**0.0**
KHC	**Kasperske Hory**	**86.67**	**328**	*e*P	**P**	**04 59 19.8**	**0.0**
GERES	**GERESS Array B**	**86.83**	**328**	P	**P**	**04 59 19.9**	**-0.8**
	comp=Z,1.6nm,0.8s,baz=42,slow=6.1,SNR=4.9						
GERES				PP	**PP**	**05 02 42.6**	**-1.7**
	comp=Z,0.7nm,0.6s,baz=106,slow=9.8,SNR=4.1						
S22A	**4UR Ranch, Cre**	**87.14**	**47**	P	**P**	**04 59 24.4**	**+1.8**
	baz=308,SNR=8.0						
SUSD	**Miller**	**87.33**	**38**	P	**P**	**04 59 23.9**	**+0.9**
	baz=313,SNR=5.5						
Q24A	**Divide**	**87.41**	**45**	P	**P**	**04 59 25.1**	**+1.1**
	baz=309						
SOKA	**Soboth**	**87.76**	**326**	*e*P	**P**	**04 59 24.9**	**-0.3**
	comp=Z,1.5nm,0.6s						
TUC	**Tucson**	**87.82**	**53**	P	**P**	**04 59 24.2**	**-1.5**
TUC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TUC	**Tucson**	**87.82**	**53**	P	**P**	**04 59 27.1**	**+1.4**
	baz=306						
TUC	**Tucson**	**87.82**	**53**	P	**P**	**04 59 24.2**	**-1.5**
SDCO	**Great Sand Dun**	**87.96**	**46**	P	**P**	**04 59 28.1**	**+1.5**
	baz=309,SNR=8.5						
KBA	**Koelnbreinsper**	**88.27**	**327**	*e*P	**P**	**04 59 27.4**	**-0.3**
	comp=Z,0.6nm,0.4s						
EYMN	**Ely**	**88.48**	**32**	P	**P**	**04 59 29.9**	**+1.5**
	baz=318						
KSCO	**Kaye Shedlock’**	**88.89**	**44**	P	**P**	**04 59 31.8**	**+1.1**
	baz=310						
KSCO	**Kaye Shedlock’**	**88.89**	**44**	IAmb	IAmb	04 59 32.4	
	comp=Z,17nm,1.1s						
ABTA	**Abfaltersbach**	**88.91**	**327**	*e*P	**P**	**04 59 29.6**	**-1.0**
	comp=Z,2.8nm,0.8s						
T25A	**Trinidad**	**89.02**	**46**	P	**P**	**04 59 33.1**	**+1.6**
	baz=310,SNR=8.6						
T25A	**Trinidad**	**89.02**	**46**	IAmb	IAmb	04 59 34.0	
	comp=Z,11nm,0.9s						
ECSD	**EROS Data Cent**	**89.04**	**37**	P	**P**	**04 59 32.1**	**+0.9**
	baz=314						
ANMO	**Albuquerque**	**89.11**	**49***c*	*e*P	**P**	**04 59 30.3**	**-1.6**
ANMO				pmax	pmax		
	comp=Z,12nm,2.5s						
ANMO	**Albuquerque**	**89.11**	**49**	P	**P**	**04 59 34.0**	**+2.1**
	baz=308						
E38A	**The Farm, Brul**	**89.45**	**33**	P	**P**	**04 59 33.3**	**+0.3**
FETA	**Feichten**	**89.52**	**328**	*e*P	**P**	**04 59 33.3**	**-0.2**
	comp=Z,1.7nm,0.6s						
121A	**Cookes Peak, D**	**89.72**	**51**	P	**P**	**04 59 36.9**	**+2.1**
	baz=308						
BGNE	**Belgrade**	**89.84**	**40**	P	**P**	**04 59 36.0**	**+1.1**
	baz=313						
SPMN	**Marine on St.**	**89.88**	**34**	P	**P**	**04 59 36.1**	**+1.1**
	baz=317						
SPMN	**Marine on St.**	**89.88**	**34**	IAmb	IAmb	04 59 36.9	
	comp=Z,16nm,0.9s						
I37A	**Lemond, Waseca**	**90.47**	**35**	IAmb	IAmb	04 59 40.8	
	comp=Z,18nm,1.0s						
CBKS	**Cedar Bluff**	**90.71**	**42**	P	**P**	**04 59 39.7**	**+0.6**
	baz=312,SNR=5.5						
SCHQ	**Schefferville**	**91.02**	**15**	P	**P**	**04 59 42.2**	**+2.1**
	comp=Z,6.5nm,0.8s,baz=8.9,slow=4.0,SNR=4.1						
G40A	**Rib Lake**	**91.08**	**33**	IAmb	IAmb	04 59 42.6	
	comp=Z,12nm,0.9s						
R32A	**Long Quarter,**	**91.57**	**42**	IAmb	IAmb	04 59 45.8	
	comp=Z,9.5nm,0.7s						
MNTX	**Cornudas Mount**	**91.83**	**51**	P	**P**	**04 59 45.9**	**+1.5**
	baz=309,SNR=9.5						
MNTX	**Cornudas Mount**	**91.83**	**51**	IAmb	IAmb	04 59 47.0	
	comp=Z,11nm,1.1s						
MSTX	**Muleshoe**	**92.08**	**48**	P	**P**	**04 59 46.6**	**+1.0**
	baz=310						
SCIA	**State Center**	**92.10**	**37**	P	**P**	**04 59 46.9**	**+1.6**
	baz=317						
AMTX	**Amarillo**	**92.16**	**46**	P	**P**	**04 59 47.6**	**+1.6**
	baz=311						
KSU1	**Kansas State U**	**92.29**	**41**	P	**P**	**04 59 47.2**	**+0.9**
	baz=314,SNR=8.3						
JFWS	**Jewell Farm**	**92.83**	**34**	P	**P**	**04 59 49.9**	**+1.2**
	baz=319						
SLBS	**Sierra La Lagu**	**93.51**	**60**	P	**P**	**04 59 51.9**	**-0.4**
T35A	**Sooner Cattle**	**93.87**	**42**	IAmb	IAmb	04 59 55.7	
	comp=Z,13nm,0.8s						
WMOK	**Wichita Mounta**	**94.03**	**45**	P	**P**	**04 59 55.7**	**+1.2**
	baz=313,SNR=6.3						
WMOK	**Wichita Mounta**	**94.03**	**45**	IAmb	IAmb	04 59 56.5	
	comp=Z,8.6nm,0.8s						
TXAR	**Lajitas Array**	**94.47**	**52**	P	**P**	**04 59 58.4**	**+1.8**
	comp=Z,18nm,0.6s,baz=298,slow=3.1,SNR=271						
TXAR				pP	**pwP**	**05 00 32.0**	**-0.7**
	comp=Z,3.1nm,0.6s,baz=298,slow=3.4,SNR=4.1						
HPIG		**94.61**	**55**	IAmb	IAmb	05 00 00.4	
	comp=Z,6.0nm,0.5s						
ABTX	**Abilene, Hawle**	**94.93**	**47**	P	**P**	**05 00 00.2**	**+1.6**
	baz=312						
TUL1	**Leonard**	**94.99**	**42**	P	**P**	**04 59 60.0**	**+1.2**
	baz=315						
HDIL	**Hopedale**	**95.08**	**35**	P	**P**	**04 59 59.8**	**+0.8**
	baz=319						
S39A	**Bolivar**	**95.10**	**40**	IAmb	IAmb	05 00 00.2	
	comp=Z,7.1nm,0.8s						
CCM	**Cathedral Cave**	**95.95**	**38**	P	**P**	**05 00 03.3**	**+0.2**
CCM				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CCM	**Cathedral Cave**	**95.95**	**38**	P	**P**	**05 00 03.9**	**+0.8**
	baz=318						
CCM	**Cathedral Cave**	**95.95**	**38**	P	**P**	**05 00 03.3**	**+0.2**
CCM				IAmb	IAmb	05 00 04.1	
	comp=Z,7.0nm,0.8s						
MGMO	**Mountain Grove**	**96.07**	**39**	IAmb	IAmb	05 00 04.8	
	comp=Z,5.5nm,0.8s						
JCT	**Junction City**	**96.26**	**49**	P	**P**	**05 00 05.7**	**+0.9**
	baz=312						
SFIN	**Lafayette**	**96.28**	**34**	P	**P**	**05 00 05.3**	**+0.7**
	baz=321						
U40A	**Yellville**	**96.33**	**40**	P	**P**	**05 00 05.5**	**+0.6**
	baz=317						
U40A	**Yellville**	**96.33**	**40**	IAmb	IAmb	05 00 06.1	
	comp=Z,6.2nm,0.9s						
W39A	**Magazine**	**96.64**	**42**	P	**P**	**05 00 07.2**	**+0.9**
	baz=316						
MIAR	**Mount Ida**	**97.23**	**42**	P	Pdif	05 00 10.2	+1.2
	baz=316						
MIAR	**Mount Ida**	**97.23**	**42**	IAmb	IAmb	05 00 10.4	
	comp=Z,6.6nm,0.8s						
W41B	**Gary Mavity, V**	**97.53**	**41**	P	Pdif	05 00 11.4	+1.1
	baz=317						
P49A	**Miami Univ. Ec**	**98.08**	**33**	P	Pdif	05 00 13.5	+0.8
	baz=322						
ACSO	**Alum Creek Sta**	**98.32**	**32**	P	Pdif	05 00 14.9	+1.1
	baz=324						
TORD	**Torodi Ar. Bea**	**120.30**	**311**	PKP	**PKPdf**	**05 05 26.8**	**-0.4**
	comp=Z,0.8nm,0.5s,baz=359,slow=0.9,SNR=17						
TORD	**Torodi Ar. Bea**	**120.30**	**311**		**PKPdf**	**05 05 27.1**	**-0.2**
QSPA	**South Pole Qui**	**121.20**	**180**		**PKiKP**	**05 05 27.9**	**+0.3**
BOSA	**Boshof**	**124.19**	**255**	PKP	**PKiKP**	**05 05 35.8**	**+1.1**
	comp=Z,1.1nm,0.6s,baz=192,slow=1.2,SNR=5.3						
BOSA	**Boshof**	**124.19**	**255**	PKPdf	**PKiKP**	**05 05 34.8**	**+0.1**
DBIC	**Dimbokro**	**129.38**	**312**	PKP	**PKiKP**	**05 05 45.6**	**+0.2**
	comp=Z,2.2nm,0.6s,baz=14,slow=1.3,SNR=4.2						
DBIC				SKPbc	SKPab	05 08 52.8	-0.5
	comp=Z,4.9nm,1.0s,baz=34,slow=3.6,SNR=5.4						
SDV	**Santo Domingo**	**130.32**	**41**	PKP	**PKiKP**	**05 05 47.5**	**0.0**
	comp=Z,6.5nm,0.6s,baz=62,slow=2.4,SNR=5.6						
SNAA	**Sanae**	**135.07**	**196**	PKiKP	**PKiKP**	**05 05 54.9**	**-0.3**
SNAA	**Sanae**	**135.07**	**196**	SKPdf	**SKPbc**	**05 09 11.6**	**-0.3**
SNAA	**Sanae**	**135.07**	**196**	*i* PKIKP	**PKPdf**	**05 05 53.2**	**-0.5**
VNA2	**Neumayer--Watz**	**136.63**	**195**	PKiKP	**PKiKP**	**05 05 58.2**	**-0.1**
VNA2	**Neumayer--Watz**	**136.63**	**195**	SKPdf	**SKPbc**	**05 09 17.3**	**+0.6**
VNA3	**Neumayer Olymp**	**136.87**	**194**	PKiKP	**PKiKP**	**05 05 59.1**	**+0.2**
VNA3	**Neumayer Olymp**	**136.87**	**194**	SKPdf	**SKPbc**	**05 09 17.6**	**+0.1**
NNA	**Nana**	**140.93**	**69***c*	*i*PKIKP	**PKiKP**	**05 06 09.1**	**+0.3**
NNA				pmax	pmax		
	comp=Z,37nm,1.3s						
PTGA	**Pitinga**	**144.08**	**36**	PKP	PKPbc	05 06 10.3	+0.2
	comp=Z,27nm,0.8s,baz=343,slow=3.9,SNR=65						
PTGA	**Pitinga**	**144.08**	**36**		**PKPdf**	**05 06 11.3**	**-0.5**
LVC	**Limon Verde**	**152.84**	**78**	PKPbc	**PKiKP**	**05 06 35.1**	**+1.5**
	comp=Z,6.7nm,0.8s,baz=342,slow=3.2,SNR=6.3						
LVC				PKPab	**PKPab**	**05 06 47.2**	**+2.3**
	comp=Z,9.3nm,0.7s,baz=284,slow=5.3,SNR=8.3						
LVC	**Limon Verde**	**152.84**	**78**	PKPbc	**PKPbc**	**05 06 32.4**	**-1.0**
PLCA	**Paso Flores**	**153.73**	**119**	PKPbc	**PKiKP**	**05 06 35.6**	**+1.2**
	comp=Z,2.8nm,0.5s,baz=295,slow=1.5,SNR=13						
PLCA	**Paso Flores**	**153.73**	**119**	PKIKP	**PKPbc**	**05 06 34.1**	**-0.3**
PLCA	**Paso Flores**	**153.73**	**119**		**PKPbc**	**05 06 34.0**	**-0.3**
SIV	**San Ignacio**	**155.39**	**56**	PKP	**PKPdf**	**05 06 30.2**	**+0.8**
	comp=Z,1.1nm,0.8s,baz=330,slow=1.5,SNR=6.0						
SIV				PKPbc	PKPbc	05 06 40.6	
	comp=Z,1.8nm,0.6s,baz=302,slow=3.9,SNR=8.2						
SIV				PKPab	**PKPab**	**05 06 55.3**	**-0.1**
	comp=Z,7.6nm,0.7s,baz=290,slow=4.6,SNR=22						
BDFB	**Brasilia**	**162.65**	**27**	PKPab	**PKPab**	**05 07 27.8**	**+0.9**
	comp=Z,4.1nm,0.7s,baz=330,slow=6.5,SNR=8.1						
CPUP	**Villa Florida**	**163.99**	**76**	PKPab	**PKPab**	**05 07 32.8**	**+0.1**
	comp=Z,4.9nm,0.9s,baz=314,slow=1.8,SNR=4.7						

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*BJI **25** 05:02:02.2±0.0, 29°.71N×90°.02E, h38km, mB4.8/7, mb4.6/20, ML4.8/4*

*MOS **25** 05:02:05.0±0.8, 29°.62N×89°.90E, h90km, mb4.5/13, Error ellipse: s-maj=9.7km s-min=5.9km az=110.1*

*NDI **25** 05:02:05.7±3.8, 29°.61N×90°.02E, h143km±41km, ML4.6, mb4.7(NEIC)*

*NEIC **25** 05:02:06.2±1.2, 29°.69N±0°.08×89°.87E±0°.09, h77km±6km, mb4.7/51, Error ellipse: s-maj=11.1km s-min=10.8km az=177.0*

*IDC **25** 05:02:08.2±0.7, 29°.62N×89°.95E, h104km±6km, mb3.9/21, mb1 4.0/24, mb1mx3.8/42, mbtmp4.2/24, MS3.5/1, Ms1 3.5/1, ms1mx3.1/30, Error ellipse: s-maj=14.4km s-min=9.6km az=56.0*

*DMN **25** 05:02:08.8±0.4, 29°.81N×89°.75E, h60km, Ml4.7/11, Error ellipse: s-maj=9.5km s-min=7.7km az=164.0*

ISC 25 05:02:06.3±0.5, **29°.66N**±0°.04×**89°.91E**±0°.03, **h85**km±5km, **h85**km**:pP-P, n168,** σ1°**.66**/194, **mb4.6**/47, **4C-2D, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSA	**Lhasa**	**1.08**	**88**	Pn	**Pn**	**05 02 28.1**	**+0.9**
LSA				Sn	**Sn**	**05 02 43.0**	**+0.2**
LSA				smax	smax		
	comp=N,7µm,0.6s						
LSA				smax	smax		
	comp=E,8µm,0.7s						
LSA	**Lhasa**	**1.08**	**88**	P	**Pn**	**05 02 27.4**	**+0.2**
LSA	**Lhasa**	**1.08**	**88**		**Pn**	**05 02 27.4**	**+0.2**
GTK	**Tadong**	**2.60**	**206**	*e*P	**Pn**	**05 02 46.5**	**0.0**
GTK				*e*S	**Sn**	**05 03 21.3**	**+3.9**
GTK				*e*S	**Sn**	**05 03 21.6**	**+4.2**
GTK				IAML		05 03 23.3	
	comp=N,2µm,0.3s						
GTK				IAML		05 03 23.4	
	comp=E,2µm,0.2s						
TAPN	**Taplejung**	**3.01**	**221**	*e*Pn	**Pn**	**05 02 54.7**	**+2.5**
TAPN				*e*Sn	**Sn**	**05 03 29.1**	**+1.7**
	comp=E,387nm,0.2s						
ODAN	**Odare**	**3.57**	**219**	*e*Pn	**Pn**	**05 03 01.3**	**+1.6**
ODAN				*e*Sn	**Sn**	**05 03 41.9**	**+1.0**
	comp=E,618nm,0.3s						
JIRN	**Jiri**	**3.83**	**239**	*e*Pn	**Pn**	**05 03 05.5**	**+2.2**
JIRN				*e*Sn	**Sn**	**05 03 46.7**	**-0.7**
	comp=E,214nm,0.2s						
GUN	**Gumba**	**3.94**	**245**	*e*Pn	**Pn**	**05 03 07.0**	**+2.1**
GUN				*e*Sn	**Sn**	**05 03 49.5**	**-0.6**
	comp=E,584nm,0.3s						
RAMN	**Ramite**	**3.97**	**228**	*e*Pn	**Pn**	**05 03 06.1**	**+0.9**
RAMN				*e*Sn	**Sn**	**05 03 50.0**	**-0.8**
ITAN	**ITANAGAR**	**4.19**	**126**	*e*P	**Pn**	**05 03 08.9**	**+0.9**
ITAN				*e*S	**Sn**	**05 03 55.0**	**-0.9**

SHL	Shillong	4.44	156	P	Pn	05 03 11.5	0.0
SHL	Shillong	4.44	156		Pn	05 03 11.5	0.0
PKI	Pulchoki	4.47	243	ePn	Pn	05 03 13.7	+1.7
PKI				eSn	Sn	05 04 00.5	-2.5
	comp=E,134nm,0.3s						
KKN	Kakani	4.47	246	ePn	Pn	05 03 13.4	+1.5
KKN				eSn	Sn	05 04 00.3	-2.5
	comp=E,178nm,0.2s						
PKIN	Phulchoki	4.47	243	ePn	Pn	05 03 13.7	+1.7
PKIN				eSn	Sn	05 04 01.4	-1.6
DMN	Daman	4.69	245	ePn	Pn	05 03 16.4	+1.5
DMN				eSn	Sn	05 04 05.5	-2.7
	comp=E,161nm,0.3s						
JORH	JORHAT	4.81	126	eS	Sn	05 04 07.3	-3.6
GKN	Gorkha	4.91	252	ePn	Pn	05 03 18.3	+0.5
GKN				eSn	Sn	05 04 11.4	-2.1
	comp=E,185nm,0.2s						
MOKO	MOKOCHONG	5.26	128	eP	Pn	05 03 22.7	0.0
MOKO				eS	Sn	05 04 18.5	-3.6
KOHI	KOHIMA	5.41	136	eP	Pn	05 03 24.6	-0.1
KOHI				eS	Sn	05 04 22.9	-2.8
DANN	Dangsing	5.54	258	ePn	Pn	05 03 26.6	+0.1
DANN				eSn	Sn	05 04 25.4	-3.6
	comp=E,115nm,0.2s						
KOLN	Koldanda	5.85	253	ePn	Pn	05 03 30.5	-0.2
KOLN				eSn	Sn	05 04 32.3	-4.2
	comp=E,127nm,0.2s						
IMP	Imphal	6.01	142	eP	Pn	05 03 32.8	0.0
PYUN	Piuthan	6.26	257	ePn	Pn	05 03 35.8	-0.5
PYUN				eSn	Sn	05 04 42.7	-3.8
	comp=E,231nm,0.3s						
BRDH	Bariadhala	7.13	167	P	Pn	05 03 47.8	-0.2
	comp=E,0.7nm,0.3s,baz=264,slow=24,SNR=12						
BRDH				S	Sn	05 05 04.9	-2.6
	comp=E,0.2nm,0.3s,baz=156,slow=24,SNR=11						
SMLA	Simla	11.10	281	eP	Pn	05 04 40.9	-1.2
SMLA				ix	x	05 04 51.9	
SMLA				eS	Sn	05 06 33.5	-11
SMLA				IAML		05 06 41.2	
	comp=E,197nm,0.6s						
SMLA				IAML		05 06 41.4	
	comp=N,163nm,0.6s						
NDI	New Delhi	11.13	268	eP	Pn	05 04 42.7	+0.1
NDI				ex	x	05 04 44.3	
NDI				ex	Sn	05 06 36.0	-9.1
SONA	Sohna	11.32	266	eP	Pn	05 04 44.8	-0.3
SONA				eS	Sn	05 06 41.0	-8.6
KUDL	Kundal	11.85	266	eP	Pn	05 04 50.9	-1.4
KUDL				eS	Sn	05 06 53.3	-9.3
DHRM	DHARAMSHALA	11.96	286	eP	Pn	05 04 52.5	-1.4
DHRM				eS	Sn	05 06 56.3	-9.3
DHRM				IAML		05 06 59.9	
	comp=E,145nm,0.4s						
DHRM				IAML		05 07 01.8	
	comp=N,115nm,0.6s						
KMI	Kunming	12.27	109	⇑P	Pn	05 04 59.3	+1.2
KMI				sP	P	05 05 15.0	+8.0
KMI				pmax	pmax		
	comp=N,11nm,0.5s						
BHPL	Bhopal	12.88	243	eP	Pn	05 05 02.8	-3.3
BHPL				eS	Sn	05 07 14.1	-14
CHTO	Chiang Mai	13.58	141	P	Pn	05 05 14.0	-1.4
CHTO	Chiang Mai	13.58	141	Pn	Pn	05 05 14.0	-1.4
AJM	Ajmer	13.84	260	eP	Pn	05 05 17.6	-1.3
AJM				ex	x	05 05 22.3	
AJM				ex	Sn	05 07 40.8	-10
AJM				ex	x	05 07 42.1	
CM31	Chiang Mai Arr	13.87	142	Pn	Pn	05 05 17.0	-2.2
CMAR	Chiang Mai Arr	13.87	142	P	Pn	05 05 16.6	-2.6
	comp=N,2.4nm,0.3s,baz=319,slow=14,SNR=81						
CMAR	Chiang Mai Arr	13.87	142	P	Pn	05 05 16.8	-2.4
CMAR	Chiang Mai Arr	13.87	142	Pn	Pn	05 05 16.8	-2.4
WMQ	Urumqi	14.24	353	eP	P	05 05 29.4	+0.7
WMQ				smax	smax		
	comp=N,40nm,0.9s						
WMQ				smax	smax		
	comp=E,36nm,0.9s						
NIL	Nilore	14.73	290	P	Pn	05 05 26.6	-3.6
NIL	Nilore	14.73	290	Pn	Pn	05 05 26.6	-3.6
KSH	Kashi	15.09	314	P	Pn	05 05 35.5	+0.6
KSH				pP	P	05 05 43.9	+5.7
KSH				S	Sn	05 08 23.0	+1.7
KSH				sS	S	05 08 36.4	+3.1
KSH				pmax	pmax		
	comp=E,7.0nm,0.7s						
SLVN	Son La	15.11	120		Pn	05 05 34.9	-0.3
TARG	Taragay, Kyrgy	15.52	324	Pn	Pn	05 05 40.2	-0.5
XAN	Xi'an	16.73	70	P	Pn	05 05 51.8	-3.7
XAN				pP	P	05 06 01.6	+5.2
XAN				pmax	pmax		
	comp=E,13nm,1.1s						
AAK	Ala-Archa	17.92	320	P	P	05 06 09.2	-0.3
	comp=E,0.2nm,0.3s,baz=168,slow=14,SNR=5.8						
AAK	Ala-Archa	17.92	320	iP	Pn	05 06 11.7	+1.7
AAK				pmax	pmax		
	comp=Z,17nm,1.1s						
AAK	Ala-Archa	17.92	320	P	Pn	05 06 09.9	-0.2
MK31	Makanchi Array	18.10	343	P	P	05 06 11.0	-0.3
MK31				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MK31	Makanchi Array	18.10	343	P	P	05 06 11.0	-0.3
MKAR	Makanchi Array	18.10	343	P	P	05 06 11.5	+0.1
	comp=Z,1.4nm,0.3s,baz=155,slow=9.7,SNR=46						
KBL	Kabul	18.32	291	P	P	05 06 13.0	-1.1
KBL				pmax	pmax		
	comp=Z,11nm,0.6s						
KBL	Kabul	18.32	291		P	05 06 13.0	-1.1
GAR	Garm	18.64	305	P	P	05 06 15.9	-1.4
BTK	Batken	18.75	309	P	Pn	05 06 19.6	-0.3
BTK				pmax	pmax		
	comp=Z,31nm,0.7s						
BTK	Batken	18.75	309	P	Pn	05 06 19.6	-0.3
BTK				IAmb	IAmb	05 06 23.3	
	comp=Z,31nm,0.7s						
CHGR	Chuyangaron	19.34	303	P	P	05 06 24.3	-0.7
CHGR				IAmb	IAmb	05 06 27.2	
	comp=Z,24nm,0.7s						
DGZ	Jazzator, Alta	20.10	355	iP	P	05 06 34.4	+1.2
DGZ				pmax	pmax		
	comp=Z,16nm,0.7s						
KKAR	Karatay Array	20.52	316	P	Pn	05 06 39.7	-0.9
KKAR	Karatay Array	20.52	316	P	Pn	05 06 39.7	-0.9
SONM	Songino Array	22.16	30	P	P	05 06 54.8	-0.4
	comp=Z,13nm,0.8s,baz=215,slow=12,SNR=45						
SONM	Songino Array	22.16	30	P	P	05 06 54.7	-0.6
SONM				IAmb	IAmb	05 06 57.7	
	comp=Z,17nm,0.9s						
ULN	Ulaanbaatar	22.48	31	P	P	05 06 58.7	+0.1
ULN				pmax	pmax		
	comp=Z,20nm,0.9s						
ULN	Ulaanbaatar	22.48	31	P	P	05 06 58.7	+0.1
ULN				IAmb	IAmb	05 07 00.5	
	comp=Z,20nm,0.8s						
KURBB	Kurchatov Arra	22.62	341	P	P	05 06 59.5	-0.4
	comp=Z,5.5nm,0.7s,baz=155,slow=10,SNR=31						
KURBB				pP	pP	05 07 22.3	+3.7
	comp=Z,5.5nm,0.9s,baz=145,slow=12,SNR=6.3						
KURK	Kurchatov	22.68	341	P	P	05 06 59.5	-1.0
KURK				*PP	pP	05 07 22.3	+3.1
KURK	Kurchatov	22.68	341	P	P	05 07 00.8	+0.3
SRIT	Nakonsritamara	22.85	155	P	P	05 07 03.9	+1.3
SRIT				IAmb	IAmb	05 07 05.8	
	comp=Z,29nm,0.9s						
ZAK	Zakamensk	23.02	22	eP	P	05 07 03.1	-1.0
ZAK				pmax	pmax		
	comp=Z,18nm,1.3s						
MOY	Mondy	23.48	17	eP	P	05 07 10.7	+2.3
ZAA0	Zalesovo Array	24.55	353	P	P	05 07 17.4	-0.5
ZALV	Zalesovo Beam	24.55	353	P	P	05 07 18.2	+0.4
	comp=Z,3.5nm,0.5s,baz=176,slow=9.6,SNR=15						
ZALV	Zalesovo Beam	24.55	353	P	P	05 07 17.4	-0.5
BVAR	Borovoye Array	27.38	334	P	P	05 07 44.5	+1.0
	comp=Z,1.0nm,0.5s,baz=173,slow=13,SNR=8.1						
BRVK	Borovoye	27.45	334	ceP	P	05 07 44.8	+0.7
BRVK				pmax	pmax		
	comp=Z,11nm,2.5s						
HIA	Hailar	29.93	41	P	P	05 08 06.5	+0.3
HIA				pmax	pmax		
	comp=Z,12nm,0.8s						
HIA	Hailar	29.93	41	P	P	05 08 06.5	+0.3
HIA				IAmb	IAmb	05 08 07.8	
	comp=Z,12nm,0.8s						
ABKAR	Akbulak array	30.00	319	P	P	05 08 07.3	+0.6
ABKAR				IAmb	IAmb	05 08 08.7	
	comp=Z,3.4nm,0.5s						
AKTO	Aktyubinsk	31.66	320	P	P	05 08 21.4	+0.1
	comp=Z,0.6nm,0.4s,baz=122,slow=9.5,SNR=3.9						
KSRS	Korea Array	32.45	66	P	P	05 08 26.4	-2.0
	comp=Z,1.5nm,0.7s,baz=259,slow=8.8,SNR=4.3						
KSRS	Korea Array	32.45	66	eP	P	05 08 29.3	+0.9
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ARU	Arti	34.68	329	d iP	P	05 08 47.3	-0.2
ARU				S	S	05 14 13.8	+2.9
ARU				SS	SnSn	05 16 24.5	-7.4
ARU				pmax	pmax		
	comp=Z,17nm,2.1s						
USRK	Ussuriysk Ar.	36.23	55	P	P	05 09 01.2	+0.3
	comp=Z,3.2nm,0.7s,baz=258,slow=8.0,SNR=7.7						
KLR	Kul'dur	37.17	46	P	P	05 09 09.3	+0.4
	comp=Z,3.5nm,0.6s,baz=272,slow=9.9,SNR=9.7						
NRIK	Noril'sk	39.74	359	P	P	05 09 30.9	+0.8
	comp=Z,9.7nm,0.6s,baz=155,slow=6.4,SNR=17						
NRIK	Noril'sk	39.74	359	P	P	05 09 30.6	+0.5
NRIK				IAmb	IAmb	05 09 31.7	
	comp=Z,11nm,0.7s						
KVAR	Kislovodsk Arr	39.86	304	LR	LR	05 30 26.4	
	comp=Z,75nm,21.9s,baz=197,slow=42						
KIRV	Kirov	39.99	328	iP	P	05 09 33.2	+0.9
MJAR	Matsushiro Arr	40.70	67	P	P	05 09 37.9	-0.7
	comp=Z,1.2nm,0.4s,baz=271,slow=11,SNR=4.9						
MJA0	Matsu Arr-Jizo	40.73	67	eP	P	05 09 39.8	+0.9
MJA0				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ASAJ	Asahikawa	43.82	56	P	P	05 10 02.7	-1.1
ASAJ				pmax	pmax		
	comp=Z,186nm,1.9s						
JKA	Kamikawa-asahi	43.82	56	P	P	05 10 02.7	-1.1
ERM	Erimo	44.24	59	P	P	05 10 06.7	-0.5
ERM				pmax	pmax		
	comp=Z,93nm,1.4s						
ERM	Erimo	44.24	59	P	P	05 10 06.7	-0.5
KLMR	Klimovskoe	45.49	328	eP	P	05 10 17.1	+0.3
KLMR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KLMR	Klimovskoe	45.49	328	eP	P	05 10 17.2	+0.4
KLMR				AMP		05 10 18.5	
	comp=Z,10.0nm,0.8s						
TIXI	Tiksi	47.05	16	P	P	05 10 28.6	-0.3
TIXI				pmax	pmax		
	comp=Z,8.0nm,0.7s						
TIXI	Tiksi	47.05	16	P	P	05 10 28.6	-0.3
TIXI				IAmb	IAmb	05 10 29.3	
	comp=Z,7.8nm,0.7s						
AKASG	Malin Array Be	49.38	313	P	P	05 10 46.9	-0.2
	comp=Z,1.0nm,0.4s,baz=81,slow=6.7,SNR=8.2						
AKASG	Malin Array Be	49.38	313	P	P	05 10 46.9	-0.2
AKASG				pmax	pmax		
	comp=Z,2.0nm,1.1s						
AKASG	Malin Array Be	49.38	313	IAmb	IAmb	05 10 49.6	
	comp=Z,1.9nm,1.1s						
AKBB	Malin Array Si	49.38	313	ceP	P	05 10 47.2	+0.1
ELL	Elmali	49.99	295	P	P	05 10 52.7	+0.5
ELL				pmax	pmax		
	comp=Z,36nm,0.7s						
ELL	Elmali	49.99	295	P	P	05 10 52.7	+0.5
MLR	Muntele Rosu	51.78	306	P	P	05 11 04.7	-0.7
MLR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MLR	Muntele Rosu	51.78	306	P	P	05 11 04.7	-0.7
MLR				IAmb	IAmb	05 11 07.8	
	comp=Z,5.7nm,0.8s						
FIA1	FINESS Array S	51.95	327	P	P	05 11 06.1	-0.2
FINES	FINESS Array B	51.96	327	P	P	05 11 06.5	+0.2
	comp=Z,3.4nm,0.7s,baz=114,slow=8.4,SNR=12						
FINES	FINESS Array B	51.96	327	P	P	05 11 06.9	+0.6
FINES	FINESS Array B	51.96	327	P	P	05 11 06.9	+0.6
BURAR	Bucovina Array	52.10	309	P	P	05 11 08.0	+0.3
KEV	Kevo	53.16	337	P	P	05 11 15.7	+0.7
KEV				pmax	pmax		
	comp=Z,111nm,1.6s						
KEV	Kevo	53.16	337	P	P	05 11 15.7	+0.7
ARA0	ARCESS Array S	53.62	337	eP	P	05 11 19.4	+1.0
ARCES	ARCESS Array B	53.62	337	P	P	05 11 19.4	+0.9
	comp=Z,1.8nm,0.3s,baz=103,slow=7.9,SNR=57						
ARCES	ARCESS Array B	53.62	337	P	P	05 11 19.4	+0.9
ARCES				pmax	pmax		
	comp=Z,46nm,1.5s						
KTK1	Kautokeino	54.30	336	eP	P	05 11 24.2	+0.8
HAMF	Hammerfest	54.46	338	eP	P	05 11 25.8	+1.3
JETT	Jettan, Norway	55.38	336	eP	P	05 11 33.6	+2.4
TRO	Tromso	55.91	336	eP	P	05 11 35.2	+0.3
BJO1	Bjornoya	56.58	342	eP	P	05 11 40.7	+1.0
FAUS	Fauske	57.09	334	eP	P	05 11 44.1	+0.8
STEI	Steigen	57.12	334	eP	P	05 11 44.5	+1.0
MOR8	Moi Rana	57.41	332	eP	P	05 11 45.2	-0.4
BILL	Bilibino	57.77	26	⇓eP	P	05 11 47.0	-1.1
BILL				e*PP	sP	05 12 19.2	-2.4
BILL				e		05 13 54.1	
BILL				eS	S	05 19 56.9	+17
BILL				pmax	pmax		
	comp=Z,15nm,2.5s						
LOF	Lofoten	57.77	335	eP	P	05 11 48.0	0.0
SPA0	Spitsbergen Ar	57.81	346	eP	P	05 11 49.1	+0.8
SPITS	Spitsbergen Ar	57.81	346	P	P	05 11 48.5	+0.2
SPITS				pmax	pmax		
	comp=Z,213nm,1.8s						
KONS	Konsvik	57.94	333	eP	P	05 11 50.0	+0.7
STOK	Stokkvaagen	57.98	332	eP	P	05 11 50.4	+0.8
NSS	Namsos	58.49	330	eP	P	05 11 53.7	+0.5
NC602	NORSAR Array S	59.00	326	eP	P	05 11 57.3	+0.6
NC303	NORSAR Array S	59.03	326	P	P	05 11 57.2	+0.2
NB201	NORSAR Array S	59.08	326	P	P	05 11 57.5	0.0
NB2	NORSAR Subarra	59.12	326	P	P	05 11 57.4	-0.3
	comp=Z,3.4nm,0.7s,baz=83,slow=6.9						
NOA	NORSAR Array B	59.12	326	P	P	05 11 57.7	0.0
	comp=Z,4.6nm,0.9s,baz=84,slow=6.9,SNR=8.3						
NAO01	NORSAR Array S	59.30	326	P	P	05 11 59.0	+0.1
NC204	NORSAR Array S	59.31	327	P	P	05 11 59.1	0.0
GEC2	GERESS Array S	59.55	312	P	P	05 12 01.1	+0.2
GEC2				IAmb	IAmb	05 12 01.8	
	comp=Z,3.5nm,0.6s						
GERES	GERESS Array B	59.55	312	P	P	05 12 01.6	+0.6
	comp=Z,2.8nm,0.6s,baz=93,slow=6.7,SNR=15						
GERES				pP	pP	05 12 26.6	+2.5
	comp=Z,1.3nm,0.7s,baz=66,slow=6.6,SNR=4.2						
DOMB	Dombas	60.03	328	eP	P	05 12 04.5	+0.6
KONO	Kongsberg	60.09	325	ceP	P	05 12 02.5	-1.8
KONO				pmax	pmax		
	comp=Z,105nm,2.5s						
WB0	Warramunga Arr	65.21	133	P	P	05 12 39.1	+0.2
WB0				IAmb	IAmb	05 14 43.0	
	comp=Z,15nm,1.6s						
WRA	Warramunga Arr	65.31	134	P	P	05 12 39.4	-0.1
	comp=Z,0.6nm,0.4s,baz=324,slow=6.4,SNR=25						
WRA				pP	pP	05 13 05.1	+2.4
	comp=Z,1.1nm,0.9s,baz=324,slow=6.6,SNR=2.6						
WB2	Warramunga Arr	65.31	134	P	P	05 12 39.9	+0.4
WB2				IAmb	IAmb	05 14 16.9	
	comp=Z,23nm,1.9s						
ASAR	Alice Springs	67.82	137	P	P	05 12 56.0	+0.6
	comp=Z,0.7nm,0.6s,baz=320,slow=6.6,SNR=9.3						
ASAR				pP	PcP	05 13 21.7	+0.2
	comp=Z,0.9nm,0.8s,baz=320,slow=5.7,SNR=3.0						
EUNU	Eureka	70.50	359	P	P	05 13 11.4	+0.1
EUNU				IAmb	IAmb	05 14 42.8	
	comp=Z,27nm,1.9s						
TOLK	Toolik Lake Re	72.77	19	P	P	05 13 25.5	+0.4
TOLK				IAmb	IAmb	05 14 02.9	
	comp=Z,32nm,1.9s						
IMAR	Indian Mountai	73.07	23	P	P	05 13 27.1	+0.3
COLD	Coldfoot	73.46	21	P	P	05 13 29.9	+0.8
COLD				IAmb	IAmb	05 13 30.9	
	comp=Z,8.9nm,1.2s						
H21K	Melozitna Rive	73.58	23	P	P	05 13 30.5	+0.6
H21K				IAmb	IAmb	05 16 07.5	
	comp=Z,37nm,1.9s						
J20K	Nowinta River	73.99	24	P	P	05 13 33.2	+0.9
J20K				IAmb	IAmb	05 13 34.5	
	comp=Z,8.5nm,0.8s						
K20K	Telida	74.50	25	P	P	05 13 37.0	+1.7
K20K				IAmb	IAmb	05 14 09.6	
	comp=Z,23nm,1.6s						
MLY	Manley	74.65	23	P	P	05 13 36.9	+0.7
MLY				IAmb	IAmb	05 14 02.8	
	comp=Z,16nm,1.7s						
BMAR	Burnt Mountain	74.99	19	P	P	05 13 39.1	+1.0
A36M	Sachs Harbour	75.73	11	P	P	05 13 42.6	+0.5
A36M				IAmb	IAmb	05 13 43.2	
	comp=Z,7.0nm,0.7s						
ILAR	Eielson Array	76.08	22	P	P	05 13 43.9	-0.4
	comp=Z,1.4nm,0.9s,baz=299,slow=4.3,SNR=9.6						
ILAR				PP	PP	05 16 36.2	+0.7
	comp=Z,0.3nm,0.9s,baz=299,slow=7.5,SNR=6.8						
INK	Inuvik	77.17	15	P	P	05 13 50.2	-0.1
INK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
INK	Inuvik	77.17	15	P	P	05 13 50.2	-0.1
SML	Sawmill	77.54	24	P	P	05 13 53.6	+1.0
SML				IAmb	IAmb	05 16 13.4	
	comp=Z,38nm,1.5s						
BCAR	Beaver Creek A	78.89	21	P	P	05 14 00.1	0.0
TORD	Torodi Ar. Bea	82.08	281	P	P	05 14 17.0	-0.9
	comp=Z,1.1nm,0.7s,baz=63,slow=4.5,SNR=7.6						
KOWA	Kowa	86.28	284	P	P	05 14 39.9	+0.7
	comp=Z,2.5nm,0.4s,baz=51,slow=4.7,SNR=6.6						
KOWA	Kowa	86.28	284	IAmb	IAmb	05 15 06.7	
	comp=Z,27nm,1.8s						
DBIC	Dimbokro	90.86	278	P	P	05 15 01.3	+0.4
	comp=Z,0.8nm,0.4s,baz=37,slow=5.1,SNR=1.1						
TXAR	Lajitas Array	119.92	14	PKP	PKPdf	05 20 47.2	-0.2
	comp=Z,0.4nm,0.6s,baz=331,slow=0.3,SNR=5.5						
CPUP	Villa Florida	150.93	269	PKPbc	PKPbc	05 21 49.4	-0.2
	comp=Z,5.0nm,0.8s,baz=76,slow=2.0,SNR=6.9						

IDC ***25*** *05:02:49.5±4.2, 40°.64S×92°.31W, h0km, mb4.0/3, mb1 4.4/3, mb1mx3.9/25, mbtmp4.0/3, Error ellipse: s-maj=160.9km s-min=54.6km az=128.0*

ISC 25 05:02:51.5±1.1**, 40°.6S**±0°.2×**92°.4W**±0°.4**, h10**km**, n13, σ0ˢ.43**/7**, mb4.2**/3**, Southeast of Easter Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H03S2	Juan Fernandez	12.68	62	T	T	05 18 20.4	
	baz=233,slow=73,SNR=15						
H03S1	Juan Fernandez	12.69	62	T	T	05 18 22.3	
	baz=233,slow=73,SNR=12						
H03S3	Juan Fernandez	12.69	62	T	T	05 18 20.5	
	baz=233,slow=73,SNR=15						
H03N3	Juan Fernandez	12.90	61	T	T	05 18 33.5	
	baz=235,slow=71,SNR=468						
H03N2	Juan Fernandez	12.91	61	T	T	05 18 31.8	
	baz=235,slow=71,SNR=529						
H03N1	Juan Fernandez	12.92	61	T	T	05 18 32.2	
	baz=235,slow=71,SNR=595						
ATAH	Atahualpa	35.57	24	P	P	05 09 49.3	-0.2
	2.3nm,0.6s,baz=216,slow=8.7,SNR=4.3						
VNA3	Neumayer Olymp	49.91	155	P	P	05 11 45.0	+0.2
VNA2	Neumayer--Watz	50.70	155	P	P	05 11 51.1	+0.3
	baz=281,slow=9.0						
SNAA	Sanae	51.97	156	P	P	05 12 00.1	-0.3
TXAR	Lajitas Array	70.32	350	P	P	05 14 05.3	+0.1
	0.6nm,0.8s,baz=167,slow=7.7,SNR=6.4						
PDAR	Pinedale Array	84.38	347	P	P	05 15 24.2	+0.4
	1.3nm,0.8s,baz=152,slow=6.7,SNR=9.6						
KSRS	Korea Array	148.68	278	PKPbc	PKPbc	05 22 38.1	-0.6
	2.1nm,0.9s,baz=126,slow=6.4,SNR=4.2						

TUL ***25*** *05:13:12.5±1.4, 36°.83N±0°.01×97°.88W±0°.01, h4km±6km, ML2.7, mb_Lg2.5/14(NEIC), Error ellipse: s-maj=1.9km s-min=0.8km az=138.0*

NEIC 25 05:13:12.7±0.8**, 36°.805N**±0°.010×**97°.85W**±0°.02**, h3**km±7km**, Error ellipse: s-maj=2.1km s-min=1.4km az=109.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GC02	Grant County #	0.05	354	Pg	Pg	05 13 13.7	0.0
KAN14	Manchester OK	0.17	330	Sg	Sg	05 13 18.5	0.0
KAN17	Caldwell West	0.25	17	Pg	Pg	05 13 17.6	0.0
KAN17				Sg	Sg	05 13 21.2	+0.4
OK032	Salt Plains WL	0.29	270	Pg	Pg	05 13 18.0	-0.2
KAN05	Bluff City Nor	0.30	357		Pg	05 13 18.2	-0.4
CROK	Carrier	0.32	199	Pg	Pg	05 13 19.2	+0.4
CROK				Sg	Sg	05 13 23.7	+0.7
KAN01	Argonia South	0.36	12	Pg	Pg	05 13 19.5	-0.1
KAN01				Sg	Sg	05 13 24.7	+0.4
KAN13	South Haven SW	0.37	55	Pg	Pg	05 13 20.0	+0.2
KAN13				Sg	Sg	05 13 25.6	+1.1
KAN10	Anthony SW Sta	0.37	329	Pg	Pg	05 13 19.3	-0.6
KAN09	Caldwell North	0.38	30	Pg	Pg	05 13 20.1	0.0
KAN08	Anthony NE Sta	0.43	347		Pg	05 13 20.8	-0.2
KAN06	Argonia West S	0.44	360		Pg	05 13 21.1	-0.1
KAN16	Harper SW Stat	0.45	338	Pg	Pg	05 13 20.4	-1.0
KAN12	Harper NE Stat	0.51	347		Pg	05 13 22.0	-0.5
BLOK	Blackwell	0.52	95	Pg	Pg	05 13 22.8	+0.2
U32A	Winter Ranch,	1.02	246	Pg	Pg	05 13 31.6	-0.6
OK029	Liberty Lake	1.06	162	Pg	Pg	05 13 32.8	-0.1
T35A	Sooner Cattle	1.08	84	Pg	Pg	05 13 33.2	-0.3
QUOK	Quay	1.12	124	Pg	Pg	05 13 34.0	-0.1
BCOK	Bluff Creek, N	1.16	170	Pg	Pg	05 13 34.5	-0.5
OK031	S. Brethren Rd	1.18	136	Pg	Pg	05 13 35.2	-0.2
OK034	N. Norfolk Rd.	1.22	130	Pn	Pg	05 13 35.7	-0.3
OK025	Westminster Rd	1.29	161		Pg	05 13 36.9	-0.6
OKCFA	Oklahoma City	1.43	167		Pn	05 13 39.5	-0.1
OKCSW	OKLAHOMA CITY	1.44	166	Pn	Pn	05 13 39.7	0.0
FNO	Franklin	1.59	166	Pn	Pn	05 13 41.5	-0.3
R32A	Long Quarter,	1.75	337		Pn	05 13 44.3	+0.2
W35A	Tecumseh	1.83	154	Pn	Pn	05 13 45.9	+0.8
TUL1	Leonard	1.89	118	Pn	Pn	05 13 46.9	+1.0
TUL1				IAmb_Lg		05 14 15.8	
	comp=Z,22nm,0.8s						
WMOK	Wichita Mounta	2.20	200	Pn	Pn	05 13 51.0	+0.8
X34A	Smith Ranch, M	2.20	180		Pb	05 13 51.7	-1.5
KSU1	Kansas State U	2.49	23		Pn	05 13 54.9	+0.7
KSU1				IAmb_Lg		05 14 36.4	
	comp=Z,32nm,1.3s						
U38A	Gravette	2.81	96	Pn	Pn	05 14 00.9	+2.2
HHAR	Hobbs	3.19	98		Pn	05 14 04.8	+0.8
S39A	Bolivar	3.72	75	IAmb_Lg		05 15 11.6	
	comp=Z,8.1nm,0.8s						
MIAR	Mount Ida	4.15	122	IAmb_Lg		05 15 24.6	
	comp=Z,7.5nm,1.1s						
KSCO	Kaye Shedlock'	4.37	302	IAmb_Lg		05 15 31.8	
	comp=Z,12nm,0.8s						
PBMO	Poplar Bluff	5.96	88	IAmb_Lg		05 16 28.3	
	comp=Z,9.4nm,0.8s						
JCT	Junction City	6.51	195	IAmb_Lg		05 16 46.8	
	comp=Z,4.5nm,0.7s						
OLIL	Olney	7.96	73	IAmb_Lg		05 17 39.7	
	comp=Z,7.5nm,1.0s						

IDC ***25*** *05:59:27.8±0.9, 0°.34S×20°.13W, h0km, mb4.2/7, mb1 4.4/8, mb1mx4.0/49, mbtmp4.2/8, ML4.2/1, MS3.9/8, Ms1 3.9/8, ms1mx3.6/35, Error ellipse: s-maj=32.2km s-min=20.2km az=149.0*

ISC 25 05:59:30.8±0.9**, 0°.3S**±0°.2×**20°.1W**±0°.2**, h19**km**, n20, σ1ˢ.52**/10**, mb4.3**/7**, MS4.0**/7**, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10N2	ASCENSION HYDR	9.34	143	T	T	06 11 10.3	
	baz=322,slow=74,SNR=37						
H10N3	ASCENSION HYDR	9.34	143	T	T	06 11 05.8	
	baz=322,slow=74,SNR=47						
H10N1	ASCENSION HYDR	9.36	143	T	T	06 11 21.2	
	baz=322,slow=74,SNR=59						
H10S3	ASCENSION HYDR	10.16	148	T	T	06 12 26.1	
	baz=210,slow=74,SNR=46						
H10S2	ASCENSION HYDR	10.17	148	T	T	06 12 50.9	
	baz=9.7,slow=74,SNR=28						
DBIC	Dimbokro	16.75	65	Pn	Pn	06 03 23.9	-0.7
	0.9nm,0.3s,baz=267,slow=12,SNR=17						
DBIC				Sn	Sn	06 06 14.7	-16
	1.4nm,0.3s,baz=164,slow=17,SNR=7.2						
DBIC				LR	LR	06 08 38.2	
	comp=Z,306nm,20.1s,baz=240,slow=33						
KOWA	Kowa	21.70	47	P	P	06 04 19.8	-1.2
	28nm,1.1s,baz=229,slow=9.1,SNR=30						
KOWA				LR	LR	06 12 27.0	
	comp=Z,308nm,21.6s,baz=150,slow=36						
TORD	Torodi Ar. Bea	25.44	57	P	P	06 04 57.0	-0.8
	7.2nm,0.7s,baz=243,slow=6.5,SNR=31						
TORD				LR	LR	06 14 13.5	
	comp=Z,208nm,18.9s,baz=10.0,slow=35						
ESDC	Sonseca Array	42.47	19	P	P	06 07 24.9	0.0
	1.0nm,0.9s,baz=226,slow=8.4,SNR=4.6						
SIV	San Ignacio	43.28	247	P	P	06 07 31.6	-0.2
	1.7nm,0.8s,baz=87,slow=9.3,SNR=8.2						
BOSA	Boshof	51.67	127	P	P	06 08 38.1	+1.1
	3.5nm,0.9s,baz=293,slow=7.4,SNR=4.1						

NNA	Nana	57.44	256	LR	LR	06 33 15.4	
	comp=Z,170nm,20.7s,baz=240,slow=35						
SADO	Sadowa	68.73	319	LR	LR	06 36 30.1	
	comp=Z,80nm,18.3s,baz=153,slow=32						
TKL	Tuckaleechee C	69.00	309	LR	LR	06 35 58.9	
	comp=Z,75nm,18.3s,baz=40,slow=32						
KBZ	Khabaz	71.04	43	P	P	06 10 50.0	+2.3
	3.6nm,1.0s,baz=269,slow=2.8,SNR=4.5						
APG	El Apazote	71.11	286	LR	LR	06 39 26.6	
	comp=Z,62nm,20.1s,baz=104,slow=34						
ULM	Lac du Bonnet	81.15	321	LR	LR	06 43 55.5	
	comp=Z,84nm,18.2s,baz=48,slow=33						
TXAR	Lajitas Array	84.52	299	P	P	06 12 03.3	0.0
	1.3nm,0.8s,baz=113,slow=6.3,SNR=14						
ASAR	Alice Springs	145.29	135	PKPbc	PKPbc	06 19 06.8	-1.4
	7.5nm,0.8s,baz=227,slow=2.6,SNR=48						
WRA	Warramunga Arr	147.89	130	PKPbc	PKPbc	06 19 13.5	-2.3
	1.2nm,1.0s,baz=230,slow=2.5,SNR=3.8						

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*IDC **25** 06:03:34.2±3.1, 35°.85N×70°.85E, h47^{km}±27^{km}, mb3.7/12, mb1 3.8/17, mb1mx3.6/49, mbtmp4.0/17, ML4.1/4, MS3.7/1, Ms1 3.7/1, ms1mx3.0/28, Error ellipse: s-maj=23.3km s-min=16.8km az=170.0*

*NNC **25** 06:03:47.9±4.2, 37°.22N×70°.31E, h0^{km}, mb4.6, mpv4.2, Error ellipse: s-maj=33.7km s-min=24.3km az=177.0*

ISC 25 06:03:40.2±0.7, **36°.10N**±0°.08×**71°.00E**±0°.09, **h100**^{km}, **n38**, σ**1^{s}27**/38, **mb4.0**/11, **4C-4D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	6.38	18	P	Pn	06 05 12.0	0.0
	SNR=157						
UCH	Uchtor	6.70	23	P	Pn	06 05 16.6	+0.2
	SNR=13						
EKS2	Erkin-Say	6.90	17	P	Pn	06 05 18.7	-0.1
	SNR=13						
KK09	Karatay Array	7.02	357	⇑P	Pn	06 05 18.6	-1.8
	17nm,0.5s						
KK09				⇓S	Sn	06 06 25.5	-13
AAK	Ala-Archa	7.07	21	P	Pn	06 05 20.5	-0.6
	3.9nm,0.3s,baz=170,slow=7.0,SNR=34						
AAK				S	Sn	06 06 38.8	-1.1
	1.7nm,0.3s,baz=151,slow=23,SNR=11						
USP	Ospenovka	7.65	20	P	Pn	06 05 29.1	+0.2
	SNR=9.0						
TKM2	Tokmak 2	7.68	26	P	Pn	06 05 30.2	+0.7
	SNR=11						
TKM2	Tokmak 2	7.68	26	⇓P	Pn	06 05 29.7	+0.1
	5.3nm,0.6s						
TKM2				⇓S	Sn	06 06 53.8	-1.2
	14nm,0.8s						
GEYT	Alibeck	10.46	284	P	Pn	06 06 02.5	-4.7
	0.8nm,0.3s,baz=48,slow=9.3,SNR=1.5						
GEYT				S	Sn	06 07 52.9	-10
	0.9nm,0.3s,baz=16,slow=42,SNR=2.1						
DANN	Dangsing	13.27	122	*e*P	Pn	06 06 44.1	-0.9
	12nm,0.3s						
KOLN	Koldanda	13.54	124	*e*P	Pn	06 06 48.3	0.0
	7.7nm,0.3s						
MKAR	Makanchi Array	13.62	35	P	Pn	06 06 47.2	-1.9
	0.0nm,0.3s,baz=52,slow=42,SNR=2.6						
DMN	Daman	14.66	121	*e*P	Pn	06 07 02.5	-0.4
	6.9nm,0.2s						
KKN	Kakani	14.67	120	*e*P	Pn	06 07 03.0	0.0
	3.8nm,0.2s						
PKIN	Phulchoki	14.88	121	*e*P	Pn	06 07 06.0	+0.2
	4.9nm,0.2s						
PKI	Pulchoki	14.90	121	*e*P	Pn	06 07 06.2	+0.2
	8.4nm,0.3s						
GUN	Gumba	15.02	119	*e*P	Pn	06 07 07.0	-0.6
	8.0nm,0.4s						
JIRN	Jiri	15.39	119	*e*P	Pn	06 07 11.7	-0.6
	14nm,0.4s						
AB31	Akbulak array	15.43	332	⇑P	Pn	06 07 09.4	-2.8
	7.5nm,0.5s,baz=144,slow=11,SNR=266						
AB31				⇑S	Sn	06 09 48.0	-15
	1.7nm,0.4s,baz=152,slow=24,SNR=7.1						
KURBB	Kurchatov Arra	15.50	18	P	Pn	06 07 09.5	-3.5
	0.0nm,0.3s,baz=215,slow=12,SNR=2.7						
RAMN	Ramite	16.11	120	*e*P	Pn	06 07 21.6	+0.4
TAPN	Taplejung	16.66	117	*e*P	P	06 07 28.7	0.0
	7.8nm,0.3s						
BVAR	Borovoye Array	16.93	359	P	Pn	06 07 29.1	-1.7
	0.5nm,0.3s,baz=194,slow=17,SNR=6.1						
AKTO	Aktyubinsk	17.13	331	P	Pn	06 07 33.4	+0.2
	1.5nm,0.3s,baz=99,slow=16,SNR=18						
AKTO	Aktyubinsk	17.13	331	⇑P	Pn	06 07 33.0	-0.2
	11nm,0.9s						
AKTO				⇓S	Sn	06 10 30.0	-13
	7.0nm,1.1s						
ZALV	Zalesovo Beam	20.28	24	P	P	06 08 08.0	+0.3
	5.2nm,0.5s,baz=221,slow=11,SNR=23						
ARU	Arti	22.01	341	P	P	06 08 28.1	+1.9
	2.0nm,0.2s,baz=153,slow=5.4,SNR=6.0						
BRTR	Keskin Array B	29.56	288	LR	LR	06 24 31.7	
	comp=Z,121nm,18.2s,baz=84,slow=43						
AKASG	Malin Array Be	33.20	309	P	P	06 10 07.5	+0.2
	1.5nm,0.5s,baz=82,slow=7.0,SNR=6.2						
NRIK	Noril'sk	34.52	10	P	P	06 10 21.4	+3.0
	2.6nm,0.6s,baz=203,slow=6.0,SNR=5.3						
FINES	FINESS Array B	37.81	326	P	P	06 10 47.2	+0.6
	2.4nm,0.8s,baz=126,slow=8.0,SNR=4.8						
ARCES	ARCESS Array B	41.51	338	P	P	06 11 18.2	+1.1
	3.2nm,0.9s,baz=111,slow=6.9,SNR=6.7						
NOA	NORSAR Array B	44.70	323	P	P	06 11 42.3	-0.7
	0.5nm,0.7s,baz=95,slow=8.5,SNR=1.6						
TORD	Torodi Ar. Bea	65.71	269	P	P	06 14 12.9	-1.6
	0.6nm,0.3s,baz=46,slow=6.2,SNR=5.4						
KOWA	Kowa	69.59	273	P	P	06 14 37.3	-1.6
	1.8nm,0.6s,baz=52,slow=8.7,SNR=3.8						
INK	Inuvik	74.30	9	P	P	06 15 06.6	+0.5
	0.4nm,0.4s,baz=319,slow=4.3,SNR=7.0						
WRA	Warramunga Arr	81.78	122	P	P	06 15 47.9	-0.3
	0.4nm,0.4s,baz=324,slow=4.9,SNR=8.5						
ASAR	Alice Springs	84.03	125	P	P	06 16 00.3	+0.5
	0.5nm,0.8s,baz=300,slow=5.4,SNR=4.8						

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*TUL **25** 06:08:29.7±1.1, 36°.66N±0°.02×98°.45W±0°.04, h7^{km}±7^{km}, ML2.5, mb_Lg2.3/3(NEIC), Error ellipse: s-maj=4.6km s-min=2.8km az=92.0*

NEIC 25 06:08:31.6±1.0, **36°.68N**±0°.03×**98°.29W**±0°.02, **h10**^{km}±7^{km}, **Error ellipse: s-maj=3.7km s-min=3.0km az=171.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK032	Salt Plains WL	0.14	27		Pg	06 08 34.8	-0.2
CROK	Carrier	0.30	125	Pg	Pg	06 08 37.8	+0.1
CROK				Sg	Sg	06 08 41.8	0.0
KAN14	Manchester OK	0.38	43	Pg	Pg	06 08 39.4	+0.1
GC02	Grant County #	0.39	63	Pg	Pg	06 08 39.7	+0.3
KAN16	Harper SW Stat	0.58	18	Pg	Pg	06 08 41.5	-1.4
KAN08	Anthony NE Sta	0.60	25	Pg	Pg	06 08 42.7	-0.8
BLOK	Blackwell	0.87	84	Pg	Pg	06 08 48.3	-0.1
OK029	Liberty Lake	1.11	142		Pb	06 08 51.9	-1.0
OK025	Westminster Rd	1.34	145	Pn	Pn	06 08 56.1	-0.3
T35A	Sooner Cattle	1.45	80		Pb	06 08 58.3	-0.4
FNO	Franklin	1.59	153	Pn	Pn	06 08 59.2	-0.6
R32A	Long Quarter,	1.77	349		Pn	06 09 02.0	-0.4
W35A	Tecumseh	1.91	143		Pn	06 09 04.2	0.0
WMOK	Wichita Mounta	1.98	192		Pn	06 09 03.7	-1.5
WMOK				IAmb_Lg		06 09 34.9	
	comp=Z,12nm,1.1s						
TUL1	Leonard	2.16	110	Pn	Pn	06 09 08.8	+1.2
U38A	Gravette	3.15	93	Pn	Pn	06 09 24.4	+3.1
AMTX	Amarillo	3.29	238		Pb	06 09 26.9	-3.1
FCAR	Ozark Folk Cen	5.04	97	IAmb_Lg		06 11 28.5	
	comp=Z,1.6nm,0.9s						
Y22D	IRIS PASSCAL I	7.51	252	IAmb_Lg		06 12 44.3	
	comp=Z,32nm,0.9s						

NEIC 25 06:25:18.2±1.4, **35°.01N**±0°.01×**97°.64W**±0°.03, **h7**^{km}±6^{km}, **mb_Lg2.6**/29, **Error ellipse: s-maj=3.4km s-min=1.2km az=112.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FNO	Franklin	0.32	39	Pg	Pg	06 25 24.7	+0.2
OKCSW	OKLAHOMA CITY	0.43	23	Pg	Pg	06 25 26.6	+0.1
OKCSW				Sg	Sg	06 25 32.1	-0.1
OKCFA	Oklahoma City	0.43	21		Pg	06 25 26.5	-0.1
X34A	Smith Ranch, M	0.44	201	Pg	Pg	06 25 27.5	+0.8
X34A				Sg	Sg	06 25 32.0	-0.4
OK025	Westminster Rd	0.62	23	Pg	Pg	06 25 30.1	-0.2
W35A	Tecumseh	0.64	77	Pg	Pg	06 25 30.2	-0.4
BCOK	Bluff Creek, N	0.65	2	Pg	Pg	06 25 30.4	-0.2
OK029	Liberty Lake	0.80	11	Pg	Pg	06 25 33.2	-0.4
WMOK	Wichita Mounta	0.98	254	Pg	Pg	06 25 36.0	-0.9
LOOK	Love County	1.08	159	Pg	Pg	06 25 38.8	-0.2
LOOK				Sg	Sg	06 25 52.4	-0.7
OK031	S. Brethren Rd	1.15	35	Pg	Pg	06 25 38.7	-1.6
OK030	Cody Creek RV	1.15	37	Sg	Sg	06 25 54.6	-0.7
OK033	Mehan	1.18	29	Sg	Sg	06 25 55.6	-0.7
OK034	N. Norfolk Rd.	1.25	37	Sn	Sg	06 25 58.3	-0.2
QUOK	Quay	1.39	33	Pn	Pn	06 25 43.3	-0.7
CROK	Carrier	1.52	350	Pn	Pn	06 25 45.7	-0.2
TUL1	Leonard	1.76	59	Pn	Pn	06 25 49.5	+0.3
U32A	Winter Ranch,	1.76	321	Pn	Pn	06 25 49.8	+0.6
BLOK	Blackwell	1.78	11	Pn	Pn	06 25 49.9	+0.4
BLOK				IAmb_Lg		06 26 15.0	
	comp=Z,26nm,1.2s						
GC02	Grant County #	1.85	355		Pn	06 25 50.6	+0.2
OK032	Salt Plains WL	1.85	346		Pn	06 25 51.0	+0.5
X37A	Clayton	1.91	102	Pn	Pn	06 25 52.1	+0.8
T35A	Sooner Cattle	2.11	25	Pn	Pn	06 25 54.3	+0.3
KAN10	Anthony SW Sta	2.14	350	IAmb_Lg		06 26 28.8	
	comp=Z,30nm,0.8s						
KAN06	Argonia West S	2.24	356	IAmb_Lg		06 26 30.4	
	comp=Z,28nm,1.1s						
KAN12	Harper NE Stat	2.30	353	IAmb_Lg		06 26 29.3	
	comp=Z,29nm,1.2s						
Z38A	Mt. Pleasant	2.81	128	IAmb_Lg		06 26 49.8	
	comp=Z,19nm,0.8s						
U38A	Gravette	3.01	61	Pn	Pn	06 26 07.2	+0.9
HHAR	Hobbs	3.27	66	Pn	Pn	06 26 10.3	+0.4
MIAR	Mount Ida	3.38	97	Pn	Pn	06 26 12.7	+1.3
X40A	Basin Creek Fa	3.99	96	Pn	Pn	06 26 21.3	+1.4
X40A				IAmb_Lg		06 27 30.0	
	comp=Z,16nm,0.9s						
U40A	Yellville	4.12	70	Pn	Pn	06 26 21.5	-0.2
U40A				IAmb_Lg		06 27 34.5	
	comp=Z,17nm,0.8s						
CBKS	Cedar Bluff	4.15	337	IAmb_Lg		06 27 35.1	
	comp=Z,12nm,0.9s						
KSU1	Kansas State U	4.17	11	IAmb_Lg		06 27 38.3	
	comp=Z,15nm,1.0s						
435B	Jarrell	4.22	179	IAmb_Lg		06 27 35.7	
	comp=Z,14nm,0.8s						
S39A	Bolivar	4.39	51	IAmb_Lg		06 27 50.3	
	comp=Z,9.1nm,0.9s						
FCAR	Ozark Folk Cen	4.59	77	Pn	Pn	06 26 28.5	+0.5
JCT	Junction City	4.87	203	IAmb_Lg		06 28 06.6	
	comp=Z,17nm,0.8s						
KSCO	Kaye Shedlock’	5.64	316	IAmb_Lg		06 28 28.3	
	comp=Z,13nm,1.0s						
T42A	Van Buren	5.68	67	IAmb_Lg		06 28 20.0	
	comp=Z,14nm,1.1s						

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*IDC **25** 06:26:51.7±1.1, 17°.46N×65°.13W, h0^{km}, mb3.7/3, mb1 4.2/8, mb1mx3.8/42, mbtmp4.1/8, ML3.6/5, Error ellipse: s-maj=28.9km s-min=17.4km az=49.0*

*NEIC **25** 06:26:55.6±1.2, 17°.39N±0°.02×65°.29W±0°.04, h20^{km}±6^{km}, Error ellipse: s-maj=6.3km s-min=1.2km az=68.0*

*TRN **25** 06:26:55.4, 17°.37N×65°.26W, h49^{km}, MD4.4*

*RSPR **25** 06:26:58.2, 17°.41N×65°.26W, h28^{km}±15^{km}, MD3.9/15*

ISC 25 06:26:55.7±1.2, **17°.33N**±0°.03×**65°.29W**±0°.02, **h30**^{km}±9^{km}, **n147**, σ**1^{s}43**/167, **mb3.9**/5, **19C-2D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CDVI	St. Croix	0.65	50	⇓*e*P	Pb	06 27 08.8	+0.1
CDVI	St. Croix	0.65	50	*e*P	Pb	06 27 08.8	+0.1
CDVI				*e*S	Sb	06 27 16.9	-0.5
CDVI	St. Croix	0.65	50		Pb	06 27 08.8	+0.1
CDVI					Sb	06 27 16.8	-0.7
CDVI	St. Croix	0.65	50	IAML		06 27 17.6	
	comp=E,32μm,0.5s						
CUPR	Culebra, Puert	0.97	0	⇑*e*P	Pn	06 27 13.0	-0.3
CUPR	Culebra, Puert	0.97	0	*e*S	Sn	06 27 24.3	-1.8
CUPR	Culebra, Puert	0.97	0		Pn	06 27 13.1	-0.3
CUPR	Culebra, Puert	0.97	0		Sn	06 27 24.3	-1.8
PDPR	Patillas Dam,	0.98	314	⇑*e*P	Pn	06 27 13.1	-0.3
PDPR	Patillas Dam,	0.98	314		Pn	06 27 13.2	-0.3
IGPR	InterUniversit	1.00	309	⇑*e*P	Pn	06 27 13.8	0.0
IGPR	InterUniversit	1.00	309	*e*S	Sn	06 27 26.6	-0.4
STVI	Saint Thomas	1.06	17	⇑*e*P	Pn	06 27 14.5	-0.2
STVI	Saint Thomas	1.06	17	*e*S	Sn	06 27 26.4	-2.0
STVI	Saint Thomas	1.06	17		Pn	06 27 14.4	-0.2
STVI				IAML		06 27 27.0	
	comp=N,6μm,0.1s						
STVI	Saint Thomas	1.06	17		Sn	06 27 26.4	-2.0
CBYP	Canovanas	1.08	330	⇑*e*P	Pn	06 27 14.7	-0.2
CBYP	Canovanas	1.08	330	*e*S	Sn	06 27 28.2	-0.7
CBYP	Canovanas	1.08	330		Pn	06 27 14.7	-0.2
CBYP					Sn	06 27 28.2	-0.7
SJG	San Juan	1.13	313	Pn	Pn	06 27 15.4	-0.1
	comp=N,136nm,0.3s,baz=357,slow=22,SNR=179						
SJG				Sn	Sn	06 27 28.2	-1.8
	comp=N,499nm,0.3s,baz=23,slow=23,SNR=32						
SJG	San Juan	1.13	313	*e*P	Pn	06 27 15.7	+0.1
SJG				*e*S	Sn	06 27 30.2	+0.2
SJG	San Juan	1.13	313		Pn	06 27 15.7	+0.1
SJG				IAML		06 27 30.2	
	comp=N,3μm,0.4s						
SJG				IAML		06 27 31.0	
	comp=N,4μm,0.2s						
GCPR	Guaynabo City	1.23	322	⇑*e*P	Pn	06 27 17.0	0.0
GCPR	Guaynabo City	1.23	322	*e*S	Sn	06 27 31.8	-0.9
GCPR	Guaynabo City	1.23	322		Pn	06 27 17.0	0.0
GCPR	Guaynabo City	1.23	322		Sn	06 27 31.8	-0.9
TBVI	Tortola	1.25	31	⇓*e*P	Pn	06 27 16.8	-0.5
TBVI	Tortola	1.25	31	*e*S	Sn	06 27 30.9	-2.2
CELP	Cerrillos	1.44	301	⇑*e*P	Pn	06 27 19.9	+0.2
CELP	Cerrillos	1.44	301	*e*S	Sn	06 27 37.9	+0.3
CELP	Cerrillos	1.44	301		Pn	06 27 20.0	+0.2
CELP	Cerrillos	1.44	301		Sn	06 27 37.9	+0.3
OBIP	Obispado Ponce	1.44	300	⇑*e*P	Pn	06 27 19.9	+0.1
OBIP	Obispado Ponce	1.44	300	*e*S	Sn	06 27 37.6	-0.2
OBIP	Obispado Ponce	1.44	300		Pn	06 27 19.9	+0.1
OBIP					Sn	06 27 37.6	-0.2
EMPR	Esperanza - Ma	1.64	314	⇑*e*P	Pn	06 27 23.5	+0.9
EMPR	Esperanza - Ma	1.64	314	*e*S	Sn	06 27 43.8	+1.1
EMPR	Esperanza - Ma	1.64	314		Pn	06 27 23.5	+0.9
EMPR	Esperanza - Ma	1.64	314		Sn	06 27 43.8	+1.1
GBPR	Guanica, Bosqu	1.65	293	⇑*e*P	Pn	06 27 23.5	+0.8
GBPR	Guanica, Bosqu	1.65	293	*e*S	Sn	06 27 42.6	-0.2
AOPR	Arecibo Observ	1.72	306	⇑*e*P	Pn	06 27 24.4	+0.6
AOPR	Arecibo Observ	1.72	306	*e*P	Pn	06 27 24.3	+0.6
AOPR				*e*S	Sn	06 27 45.2	+0.4
AOPR	Arecibo Observ	1.72	306		Pn	06 27 24.3	+0.6
AOPR				IAML		06 27 46.9	
	comp=N,3μm,0.3s						
AOPR	Arecibo Observ	1.72	306		Sn	06 27 45.2	+0.4
MLPR	Magueyes Islan	1.79	291	⇑*e*P	Pn	06 27 25.4	+0.7
MLPR	Magueyes Islan	1.79	291	*e*S	Sn	06 27 46.0	-0.4
MLPR	Magueyes Islan	1.79	291	Pn	Pn	06 27 25.1	+0.5
MLPR	Magueyes Islan	1.79	291		Sn	06 27 46.0	-0.4
CRPR	Cabo Rojo, PR	1.86	291	⇑*e*P	Pn	06 27 25.6	0.0
CRPR	Cabo Rojo, PR	1.86	291	*e*S	Sn	06 27 47.5	-0.6
CRPR	Cabo Rojo, PR	1.86	291	Pn	Pn	06 27 25.9	+0.3
CRPR				IAML		06 27 49.0	
	comp=E,710nm,0.3s						
CRPR	Cabo Rojo, PR	1.86	291		Sn	06 27 47.5	-0.6
LSP	Las Mesas	1.91	296	⇑*e*P	Pn	06 27 27.2	+0.9
LSP	Las Mesas	1.91	296	*e*S	Sn	06 27 50.6	+1.2
SABA	Saba	1.97	81	⇑*e*P	Pn	06 27 29.0	+1.9
SABA	Saba	1.97	81	*e*S	Sn	06 27 52.6	+1.7
SABA	Saba	1.97	81	*e*P	Pn	06 27 29.1	+1.9
SABA	Saba	1.97	81		Pn	06 27 29.0	+1.9
SABA				IAML		06 27 58.5	
	comp=N,3μm,0.4s						
SABA	Saba	1.97	81		Sn	06 27 52.6	+1.7
PRSN	Puerto Rico Se	1.98	297		Pn	06 27 27.6	+0.4
PRSN				IAML		06 28 00.1	
	comp=E,2μm,0.2s						
AGPR	Aguadilla, PR	2.07	303	⇑*e*P	Pn	06 27 29.8	+1.3
AGPR	Aguadilla, PR	2.07	303	*e*S	Sn	06 27 53.8	+0.5
AGPR	Aguadilla, PR	2.07	303		Pn	06 27 29.4	+0.9
AGPR	Aguadilla, PR	2.07	303		Sn	06 27 53.8	+0.5
SEUS	St. Eustatius	2.21	86	⇑*e*P	Pb	06 27 34.5	-0.5
SEUS	St. Eustatius	2.21	86	*e*S	Sn	06 27 59.6	+2.9
SEUS	St. Eustatius	2.21	86	*e*P	Pn	06 27 31.9	+1.6
SEUS	St. Eustatius	2.21	86	*e*P	Pb	06 27 33.4	-1.6
SEUS	St. Eustatius	2.21	86		Pb	06 27 34.5	-0.5
SEUS	St. Eustatius	2.21	86	IAML		06 28 08.4	
	comp=N,620nm,0.3s						
SEUS				IAML		06 28 11.0	
	comp=E,523nm,0.6s						
SMRT	St. Maarten	2.23	71	⇑*e*P	Pn	06 27 31.3	+0.7
SMRT	St. Maarten	2.23	71	*e*P	Pn	06 27 31.4	+0.8
SMRT				*e*S	Sn	06 27 55.5	-1.7
SMRT	St. Maarten	2.23	71		Pn	06 27 31.1	+0.4
SMRT				IAML		06 27 57.4	
	comp=N,1μm,0.2s						
SMRT				IAML		06 27 57.6	
	comp=E,1μm,0.1s						
SMRT	St. Maarten	2.23	71		Sn	06 27 55.3	-1.9
IDE	Isla Desecheo	2.33	297	⇑*e*P	Pn	06 27 33.3	+1.2
IDE	Isla Desecheo	2.33	297	*e*S	Sn	06 28 00.2	+0.5
SKI	Saint Kitts	2.43	90	*e*P	Pn	06 27 35.8	+2.3
SKI				*e*S	Sn	06 28 02.2	-0.1
ANDO	Antigua, Disas	3.31	93	*e*P	Pn	06 27 47.3	+1.7
ANDO				*e*S	Sn	06 28 22.8	-1.2
ANWB	Willy Bob	3.36	84	*e*P	Pn	06 27 47.6	+1.4
ANWB				*e*S	Sn	06 28 24.0	-1.1
ANWB	Willy Bob	3.36	84	Pn	Pn	06 27 47.1	+0.9
ANBD	Bethesda, Anti	3.38	94	*e*P	Pn	06 27 48.2	+1.7
ANBD				*e*S	Sn	06 28 24.4	-1.2
CBE	Ff, Capester	3.74	109	*e*P	Pn	06 27 53.3	+1.8
CBE				*e*S	Sn	06 28 33.5	-1.1
TBG	Guadaloupe-3	3.79	112	*e*P	Pn	06 27 53.8	+1.7
TDBA	Terre de Bas,	3.80	112	*e*P	Pn	06 27 53.8	+1.5
TDBA				*e*S	Sn	06 28 34.1	-1.8
MDPV	Dominica, Penn	4.08	114	*e*P	Pn	06 27 58.3	+2.2
MDPV				*e*S	Sn	06 28 42.4	-0.4
MAGL	Barre de l’ile	4.08	109	*e*P	Pn	06 27 58.2	+2.1
MAGL				*e*S	Sn	06 28 42.1	-0.8
MDVC	Dominica, Viel	4.10	114	*e*P	Pn	06 27 58.2	+1.8
MDVC				*e*S	Sn	06 28 41.7	-1.6
DR12	Loma Pena Alta	4.16	291		Pn	06 27 58.2	+1.0
DSLB	Salisbury	4.16	116	*e*P	Pn	06 27 58.6	+1.3
H05N1	Guadeloupe/Mar	4.17	103	Pn	Pn	06 27 58.5	+1.1
H05N1				Sn	Sn	06 28 42.1	-3.2
	SNR=16						
MDN	Morne-Daniel	4.24	118	*e*P	Pn	06 28 00.2	+1.8
MDN	Morne-Daniel	4.24	118	*e*S	Sn	06 28 45.2	-1.7
PCM	Pelee Case Pet	4.65	122	*e*P	Pn	06 28 05.0	+1.0
SVN	Savane Anatole	4.67	121	*e*P	Pn	06 28 05.8	+1.4
SVN	Savane Anatole	4.67	121		Pn	06 28 05.4	+1.1
CXM	Morne La Croix	4.69	122	*e*P	Pn	06 28 06.3	+1.7
PML	Morne Lenard	4.69	122	*e*P	Pn	06 28 06.2	+1.6
GBMF	Grand Be	4.70	122	*e*P	Pn	06 28 05.6	+0.9
BAMF	Morne Balai	4.70	122	*e*P	Pn	06 28 05.8	+1.1
FDF	Fort de France	4.74	122	*e*P	Pn	06 28 06.3	+1.0
FDF	Fort de France	4.74	122		Pn	06 28 06.2	+0.9
FDF				IAML		06 28 60.0	
	comp=E,85nm,0.5s						
FDF				IAML		06 29 02.2	
	comp=N,112nm,0.6s						
BIM	Bigot	4.93	124	*e*P	Pn	06 28 09.0	+1.2
BIM	Bigot	4.93	124	*e*S	Sn	06 29 01.7	-2.2
BIM	Bigot	4.93	124		Pn	06 28 09.1	+1.2
ZAM	Aeronautique	4.93	123	*e*P	Pn	06 28 08.8	+1.0
TRMF	Trois Ilets	4.93	124	*e*P	Pn	06 28 08.2	+0.3
ILAM	Ilet Lapin Mar	4.95	120	*e*P	Pn	06 28 09.7	+1.7
ILAM	Ilet Lapin Mar	4.95	120	Pn	Pn	06 28 10.2	+2.1
ILAM				IAML		06 29 16.8	
	comp=E,88nm,1.9s						
ILAM				IAML		06 30 30.7	
	comp=N,91nm,0.7s						
LPMF	Morne Lapointe	4.98	123	*e*P	Pn	06 28 09.2	+0.7
MVM	Montagne Vaucl	5.05	123	*e*P	Pn	06 28 11.5	+2.0
MPOM	Morne Pois Mar	5.14	123	*e*P	Pn	06 28 12.2	+1.6
MPOM	Morne Pois Mar	5.14	123	*e*S	Sn	06 29 08.1	-0.9
MPOM	Morne Pois Mar	5.14	123	Pn	Pn	06 28 12.0	+1.3
MPOM				IAML		06 29 10.1	
	comp=E,65nm,1.1s						
MPOM				IAML		06 29 10.8	
	comp=N,58nm,1.0s						
H05S1	Guadeloupe/Mar	5.17	123	Pn	Pn	06 28 13.0	+1.9
	SNR=30						
H05S1				Sn	Sn	06 29 06.7	-3.1
	SNR=14						
SLCP	Castries, St.	5.30	128	*e*P	Pn	06 28 13.7	+0.9
SLCP	Castries, St.	5.30	128	*e*S	Sn	06 29 11.4	-1.5
SLBI	Saint Lucia, B	5.30	128	*e*P	Pn	06 28 13.6	+0.7
SLBI	Saint Lucia, B	5.30	128	*e*S	Sn	06 29 10.3	-2.7
SVB	Belmont	5.61	135	*e*P	Pn	06 28 18.1	+0.9
SVOC	Richmond Hill,	5.71	136	*e*P	Pn	06 28 19.1	+0.4
GRSS	Sisters	6.14	144	*e*P	Pn	06 28 26.1	+1.7
GRHS	Sauteurs	6.18	145	*e*P	Pn	06 28 26.8	+1.7
GRGR	Grenville	6.25	145	*e*P	Pn	06 28 27.0	+1.0
GRGR	Grenville	6.25	145	Pn	Pn	06 28 27.2	+1.2
GRFF	Grenada Fort F	6.28	146	*e*P	Pn	06 28 27.1	+0.8
BBGH	Gun Hill	6.92	126	*e*P	Pn	06 28 37.9	+2.7
BBGH	Gun Hill	6.92	126	Pn	Pn	06 28 38.7	+3.5
BBSP	Saint Philip	7.02	126	*e*P	Pn	06 28 38.1	+1.5
PCRV	Puerto La Cruz	7.14	175	Pn	Pn	06 28 38.7	+0.4
	comp=N,2.5nm,0.3s,baz=327,slow=2.9,SNR=18						
PCRV				Sn	Sn	06 29 51.9	-6.6
	comp=N,1.5nm,0.3s,baz=349,slow=1.0,SNR=3.1						
PLCV	Puerto La Cruz	7.16	174		Pn	06 28 38.7	+0.2
TOSP	Speyside	7.56	142	*e*P	Pn	06 28 43.8	-0.2
TRN	Trinidad (W)	7.64	150	*e*P	Pn	06 28 47.5	+2.5
SDV	Santo Domingo	9.88	212	Pn	Pn	06 29 16.8	+0.9
	comp=N,2.5nm,0.3s,baz=66,slow=10,SNR=15						
SDV				Sn	Sn	06 31 00.7	-5.3
	comp=N,1.4nm,0.3s,baz=335,slow=18,SNR=1.7						
OCAC	Ocana	11.96	222		Pn	06 29 44.1	-0.3
ROSC	El Rosal	15.24	217	Pn	Pn	06 30 30.5	+1.1
	comp=N,0.8nm,0.3s,baz=59,slow=22,SNR=2.8						
BOAV	Boa Vista	15.56	162	Pn	Pn	06 30 33.3	+0.1
BOAV				IAmb	IAmb	06 30 34.6	
	comp=Z,9.2nm,1.3s						
MDP	Montagnes des	17.35	133	P	Pn	06 30 55.5	-0.4
	comp=Z,0.4nm,0.3s,baz=348,slow=11,SNR=4.0						
PTGA	Pitinga	18.70	163	P	Pn	06 31 14.0	+1.6
	comp=Z,0.6nm,0.3s,baz=344,slow=18,SNR=5.9						
OTAV	Otavalo	21.37	219	P	P	06 31 40.9	-0.5
OTAV				IAmb	IAmb	06 31 59.2	
	comp=Z,9.1nm,1.1s						
CZSB	Cruzeiro do Su	25.96	197	P	P	06 32 26.1	+0.2
SIV	San Ignacio	33.37	173	P	P	06 33 33.0	+1.4
	comp=Z,0.7nm,0.5s,baz=322,slow=7.5,SNR=8.4						
TXAR	Lajitas Array	37.05	296	P	P	06 34 04.2	+0.8
	comp=Z,0.5nm,0.6s,baz=112,slow=11,SNR=6.5						
TXAR				PcP	PcP	06 36 25.5	+1.7
	comp=Z,0.3nm,0.6s,baz=126,slow=5.9,SNR=4.8						
PDAR	Pinedale Array	45.25	314	PcP	PcP	06 36 50.7	+0.2
	comp=Z,0.3nm,0.5s,baz=126,slow=5.9,SNR=2.5						
WDC	Whiskeytown Da	54.17	308	P	P	06 36 18.8	+0.3
WDC				IAmb	IAmb	06 36 40.6	
	comp=Z,5.9nm,1.2s						
TORD	Torodi Ar. Bea	64.48	83	P	P	06 37 29.2	-0.9
	comp=Z,0.7nm,0.6s,baz=284,slow=6.7,SNR=5.1						
WRA	Warramunga Arr	161.22	259	PKP	PKPdf	06 46 53.7	-0.5
	comp=Z,0.4nm,0.7s,baz=109,slow=0.8,SNR=4.7						

MAN 25 06:40:02.0, 10°.56N×123°.66E, h1^{km}, mb4.0, ML2.8, MS2.4, Cebu

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*SLM **25** 06:51:34.3±1.3, 36°.533N±0°.010×89°.61W±0°.01, h8^{km}±1^{km}, Md2.6/12, mb_Lg2.3/3(NEIC), Error ellipse: s-maj=1.6km s-min=1.2km az=45.0*

NEIC 25 06:51:34.9±1.2, **36°.537N**±0°.006×**89°.608W**±0°.009, **h7**^{km}±6^{km}, **Error ellipse: s-maj=1.2km s-min=0.9km az=121.0, New Madrid region, Missouri**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NMEM	New Madrid Sch	0.04	27		Pg	06 51 38.0	+1.6
MARMO	Marston	0.05	261		Pg	06 51 38.2	+1.7
WALK	Watson Lake	0.05	88		Pg	06 51 38.0	+1.4
NMMO	New Madrid	0.07	42		Pg	06 51 38.6	+1.9
CATM	Catron	0.08	337		Pg	06 51 36.9	0.0
CATM					Sg	06 51 39.0	+0.6
PENMO	Penman	0.09	191	Pg	Pg	06 51 36.7	-0.3
PGVM	Portageville	0.12	232		Pg	06 51 37.4	-0.1
PGVM					Sg	06 51 39.9	+0.5
PPLM	Point Pleasant	0.14	171		Pg	06 51 37.5	-0.2
PPLM					Sg	06 51 40.1	+0.4
POBM	Portage Bay	0.14	199		Pg	06 51 37.5	-0.2
POBM					Sg	06 51 40.2	+0.5
SJMO	Saint John’s B	0.14	49		Pg	06 51 37.7	-0.1

SJMO					Sg	06 51 40.5	+0.6
PVMO	**Portageville**	**0.14**	**211**	Pg	Pg	06 51 37.2	-0.6
KEWM	**Kewanee**	**0.16**	**4**		Pg	06 51 38.1	-0.1
KEWM					Sg	06 51 41.0	+0.5
PARMO	**Parma**	**0.17**	**317**	Pg	Pg	06 51 37.9	-0.5
COKM	**Charter Oak**	**0.20**	**331**		Pg	06 51 38.9	0.0
COKM					Sg	06 51 42.2	+0.7
HENM	**Henderson Moun**	**0.21**	**32**	Pg	Pg	06 51 38.9	-0.2
WYBT	**Wynnburg**	**0.21**	**155**		Pg	06 51 38.8	-0.2
TOPM	**Tallapoosa**	**0.23**	**267**		Sg	06 51 43.1	+0.7
WADM	**Wardell**	**0.23**	**222**		Pg	06 51 39.2	-0.2
MATM	**Matthews**	**0.24**	**1**		Sg	06 51 43.3	+0.5
FLPT	**Flippin**	**0.26**	**119**		Pg	06 51 39.8	-0.3
FLPT					Sg	06 51 44.0	+0.4
EPRM	**East Prairie**	**0.27**	**48**		Pg	06 51 39.9	-0.3
DWDM	**Dogwood**	**0.27**	**20**		Sg	06 51 44.4	+0.4
GNAR	**Gosnell**	**0.66**	**210**	Pg	Pg	06 51 47.1	-0.5
PBMO	**Poplar Bluff**	**0.70**	**290**	Pg	Pg	06 51 47.6	-0.8
HHAR	**Hobbs**	**3.50**	**267**		Pn	06 52 31.4	+1.7
P40A	**Paris** comp=Z,6.2nm,0.9s	**3.56**	**328**	IAmb_Lg		06 53 33.4	
T35A	**Sooner Cattle** comp=Z,6.2nm,0.8s	**5.56**	**276**	IAmb_Lg		06 54 26.8	
X34A	**Smith Ranch, M** comp=Z,3.6nm,1.1s	**6.97**	**256**	IAmb_Lg		06 55 26.7	

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*IDC **25** 06:52:13.4±4.1, 36°.13N×71°.39E, h51^{km}±34^{km}, mb3.7/6, mb1 3.9/12, mb1mx3.6/48, mbtmp4.0/12, ML3.9/6, Error ellipse: s-maj=36.3km s-min=24.6km az=179.0*

*NNC **25** 06:52:19.9±4.8, 36°.97N×71°.04E, h0^{km}, mb4.5, mpv4.3, Error ellipse: s-maj=38.1km s-min=28.1km az=169.0*

ISC 25 06:52:18.4±0.7, **36°.42N**±0°.05×**71°.52E**±0°.09, **h100^{km}, n44, σ2^s.45**/49, **mb3.5**/5, **5C-5D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**2.61**	**173**	P	**Pn**	**06 53 00.7**	**+1.6**
CEP				S	**Sn**	**06 53 33.0**	**+2.6**
CHCP	**Chirah Chowk**	**3.10**	**152**	P	Pn	06 53 07.7	+2.1
THW	**Thamme Wali**	**3.62**	**177**	P	**Pn**	**06 53 13.5**	**+0.9**
SARP	**Sargodha**	**4.59**	**168**	P	**Pn**	**06 53 25.4**	**-0.2**
AML	**Almayashu** SNR=61	**5.95**	**16**	P	**Pn**	**06 53 45.0**	**+0.7**
UCH	**Uchtor** SNR=18	**6.25**	**21**	P	**Pn**	**06 53 49.2**	**+0.8**
EKS2	**Erkin-Say** SNR=15	**6.47**	**15**	P	**Pn**	**06 53 53.2**	**+2.0**
AAK	**Ala-Archa** 7.1nm,0.3s,baz=186,slow=6.1,SNR=81	**6.62**	**19**	P	**Pn**	**06 53 54.4**	**+1.1**
AAK	2.6nm,0.3s,baz=333,slow=23,SNR=11			S	**Sn**	**06 55 05.9**	**-1.4**
AAK	**Ala-Archa** SNR=30	**6.62**	**19**	P	**Pn**	**06 53 54.5**	**+1.2**
AAK	**Ala-Archa** 15nm,0.5s	**6.62**	**19**	⇑P	**Pn**	**06 53 54.3**	**+1.1**
AAK	42nm,0.7s			S	**Sn**	**06 55 05.5**	**-1.8**
KK09	**Karatay Array** 28nm,0.3s	**6.74**	**354**	⇑P	**Pn**	**06 53 54.8**	**+0.1**
KK09	54nm,0.7s			⇓S	**Sn**	**06 55 06.2**	**-3.8**
CHMS	**Chumysh** SNR=8.3	**7.03**	**20**	P	**Pn**	**06 53 59.8**	**+1.1**
USP	**Ospenovka** SNR=9.2	**7.21**	**18**	P	**Pn**	**06 54 02.3**	**+1.1**
TKM2	**Tokmak 2** SNR=22	**7.21**	**25**	P	**Pn**	**06 54 03.1**	**+1.8**
TKM2	**Tokmak 2** 8.9nm,0.5s	**7.21**	**25**	⇑P	**Pn**	**06 54 02.5**	**+1.2**
TKM2	7.3nm,0.5s			⇓S	**Sn**	**06 55 21.4**	**-0.4**
MDOK	**Medeo** 5.2nm,0.7s	**7.96**	**31**	P	**Pn**	**06 54 13.8**	**+2.3**
MDOK	12nm,0.8s			S	**Sn**	**06 55 43.5**	**+3.5**
GEYT	**Alibeck** 1.7nm,0.3s,baz=112,slow=12,SNR=6.5	**10.80**	**282**	P	Pn	06 54 44.6	-5.4
GEYT	3.5nm,0.3s,baz=22,slow=43,SNR=5.6			S	Sn	06 56 40.0	-8.8
OTUK	**Ortayu** 6.9nm,1.2s	**11.83**	**3**	⇓P	**Pn**	**06 55 01.0**	**-2.8**
OTUK	3.1nm,0.7s			⇑S	**Sn**	**06 57 12.0**	**-1.8**
PYUN	**Piuthan** 76nm,0.4s	**12.76**	**127**	*e*P	**Pn**	**06 55 13.3**	**-3.0**
DANN	**Dangsing** 33nm,0.4s	**13.10**	**124**	*e*P	**Pn**	**06 55 16.7**	**-4.1**
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=212,slow=12,SNR=7.5	**13.12**	**34**	P	**Pn**	**06 55 19.8**	**-1.0**
KOLN	**Koldanda** 9.5nm,0.3s	**13.38**	**127**	*e*P	**Pn**	**06 55 21.3**	**-3.2**
GKN	**Gorkha** 22nm,0.3s	**13.91**	**123**	*e*P	**Pn**	**06 55 27.0**	**-4.3**
DMN	**Daman** 28nm,0.5s	**14.48**	**124**	*e*P	**Pn**	**06 55 35.5**	**-3.3**
KKN	**Kakani** 15nm,0.3s	**14.48**	**123**	*e*P	**Pn**	**06 55 35.1**	**-3.6**
PKIN	**Phulchoki** 24nm,0.4s	**14.70**	**123**	*e*P	**Pn**	**06 55 38.3**	**-3.2**
PKI	**Pulchoki** 9.7nm,0.2s	**14.71**	**123**	*e*P	**Pn**	**06 55 37.9**	**-3.9**
GUN	**Gumba** 12nm,0.3s	**14.81**	**121**	*e*P	**Pn**	**06 55 39.0**	**-4.1**
KURBB	**Kurchatov Arra** 0.2nm,0.3s,baz=208,slow=11,SNR=8.2	**15.07**	**17**	P	**Pn**	**06 55 47.5**	**+1.7**
JIRN	**Jiri** 29nm,0.4s	**15.19**	**121**	*e*P	**Pn**	**06 55 43.6**	**-4.3**
AB31	**Akbulak array** 1.6nm,0.3s,baz=155,slow=12,SNR=122	**15.36**	**330**	P	**Pn**	**06 55 47.0**	**-2.5**
AB31	13nm,1.1s,baz=153,slow=23,SNR=6.7			⇓S	Sn	06 58 31.2	-7.8
RAMN	**Ramite** 19nm,0.4s	**15.92**	**122**	*e*P	**Pn**	**06 55 53.3**	**-3.6**
TAPN	**Taplejung**	**16.44**	**119**	*e*P	**Pn**	**06 55 59.9**	**-3.5**
ODAN	**Odare** 17nm,0.4s	**16.52**	**121**	*e*P	**Pn**	**06 56 01.0**	**-3.3**
BVAR	**Borovoye Array** 0.3nm,0.3s,baz=195,slow=17,SNR=4.5	**16.62**	**358**	P	**Pn**	**06 56 06.9**	**+1.7**
AKTO	**Aktyubinsk** 1.1nm,0.3s,baz=142,slow=12,SNR=9.8	**17.06**	**329**	P	**P**	**06 56 10.1**	**-0.7**
AKTO	**Aktyubinsk** 7.9nm,0.8s	**17.06**	**329**	⇓P	**P**	**06 56 09.8**	**-0.9**
AKTO	6.1nm,0.7s			⇑S	Sn	06 59 13.2	-6.8
ZALV	**Zalesovo Beam** 2.6nm,0.3s,baz=210,slow=10,SNR=13	**19.82**	**24**	P	**P**	**06 56 41.8**	**+0.9**
KBZ	**Khabaz** 1.6nm,0.6s,baz=225,slow=6.7,SNR=3.9	**23.01**	**297**	P	**P**	**06 57 13.9**	**-0.7**
FINES	**FINESS Array B** 0.9nm,0.5s,baz=114,slow=8.8,SNR=4.4	**37.78**	**326**	P	**P**	**06 59 26.4**	**+1.9**
ARCES	**ARCESS Array B** 5.8nm,1.1s,baz=112,slow=8.8,SNR=4.7	**41.38**	**337**	P	**P**	**06 59 56.0**	**+1.7**
NB2	**NORSAR Subarra** comp=Z,0.5nm,0.4s,baz=93,slow=7.9	**44.70**	**323**	P	**P**	**07 00 22.2**	**+1.1**
NOA	**NORSAR Array B** comp=Z,0.3nm,0.5s,baz=90,slow=7.1,SNR=3.8	**44.70**	**323**	P	**P**	**07 00 22.5**	**+1.4**
WRA	**Warramunga Arr** comp=Z,0.3nm,0.5s,baz=324,slow=4.9,SNR=2.2	**81.59**	**122**	P	**P**	**07 04 26.0**	**+0.6**

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*IASPEI **25** 07:08:52.9±0.8, 36°.54N±0°.02×89°.60W±0°.02, h16^{km}±4^{km}, Error ellipse: s-maj=3.6km s-min=2.7km az=113.4, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*SLM **25** 07:08:53.1±1.5, 36°.54N±0°.01×89°.60W±0°.05, h9^{km}±5^{km}, Md3.0/51, mb_Lg3.3/132(NEIC), Error ellipse: s-maj=5.8km s-min=1.5km az=78.0*

*NEIC **25** 07:08:53.5±1.5, 36°.54N±0°.01×89°.61W±0°.05, h9^{km}±5^{km}, Error ellipse: s-maj=5.8km s-min=1.5km az=78.0*

*ANF **25** 07:08:53.0±1.0, 36°.48N×89°.55W, h7^{km}±7^{km}, ML3.9/10, Error ellipse: s-maj=3.2km s-min=2.2km az=157.0*

ISC 25 07:08:53.5±0.7, **36°.53N**±0°.02×**89°.61W**±0°.02, **h17^{km}**±3^{km}, **n169, σ1^s.29**/148, **New Madrid region, Missouri**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARMO	**Marston**	**0.05**	**271**		**Pg**	**07 08 57.1**	**+0.4**
NMEM	**New Madrid Sch**	**0.05**	**22**		**Pg**	**07 08 56.8**	**+0.1**
WALK	**Watson Lake**	**0.05**	**79**		**Pg**	**07 08 56.8**	**+0.1**
NMMO	**New Madrid**	**0.07**	**37**		**Pg**	**07 08 55.5**	**-1.4**
NMMO					**Sg**	**07 08 57.5**	**-1.6**
PENMO	**Penman**	**0.08**	**192**		**Pg**	**07 08 55.6**	**-1.3**
PENMO					**Sg**	**07 08 57.7**	**-1.5**
CATM	**Catron**	**0.09**	**339**		**Pg**	**07 08 55.8**	**-1.2**
CATM					**Sg**	**07 08 57.9**	**-1.4**
PGVM	**Portageville**	**0.12**	**235**		**Pg**	**07 08 56.3**	**-1.0**
PGVM					**Sg**	**07 08 59.0**	**-0.8**
PPLM	**Point Pleasant**	**0.13**	**171**		**Pg**	**07 08 56.4**	**-1.0**
PPLM					**Sg**	**07 08 59.1**	**-0.9**
POBM	**Portage Bay**	**0.13**	**200**		**Pg**	**07 08 56.4**	**-1.0**
POBM					**Sg**	**07 08 59.1**	**-0.9**
PVMO	**Portageville**	**0.14**	**213**		**Pg**	**07 08 56.5**	**-1.0**
SJMO	**Saint John's B**	**0.15**	**47**		**Pg**	**07 08 56.5**	**-1.1**
SJMO					**Sg**	**07 08 59.2**	**-1.2**
KEWM	**Kewanee**	**0.17**	**4**		**Pg**	**07 08 57.0**	**-1.0**
KEWM					**Sg**	**07 08 59.9**	**-1.1**
PARMO	**Parma**	**0.18**	**319**		**Pg**	**07 08 57.2**	**-0.9**
PARMO					**Sg**	**07 09 00.2**	**-0.9**
WYBT	**Wynnburg**	**0.20**	**154**		**Pg**	**07 08 57.7**	**-0.7**
WYBT					**Sg**	**07 09 01.3**	**-0.4**
COKM	**Charter Oak**	**0.20**	**332**		**Pg**	**07 08 57.7**	**-0.8**
COKM					**Sg**	**07 09 01.1**	**-0.7**
HENM	**Henderson Moun**	**0.22**	**30**	Pg	**Pg**	**07 08 57.7**	**-1.0**
WADM	**Wardell**	**0.22**	**223**		**Pg**	**07 08 58.0**	**-0.7**
WADM					**Sg**	**07 09 02.0**	**-0.3**
TOPM	**Tallapoosa**	**0.23**	**269**		**Pg**	**07 08 58.0**	**-0.7**
TOPM					**Sg**	**07 09 02.0**	**-0.4**
MATM	**Matthews**	**0.24**	**1**		**Pg**	**07 08 58.3**	**-0.8**
MATM					**Sg**	**07 09 02.1**	**-0.8**
FLPT	**Flippin**	**0.26**	**117**		**Pg**	**07 08 58.6**	**-0.7**
MLDM	**Malden**	**0.27**	**291**		**Pg**	**07 08 58.8**	**-0.7**
EPRM	**East Prairie**	**0.28**	**47**		**Pg**	**07 08 58.7**	**-0.9**
DWDM	**Dogwood**	**0.28**	**19**		**Pg**	**07 08 58.9**	**-0.8**
DWDM					**Sg**	**07 09 03.2**	**-0.7**
HICK	**Hickman**	**0.30**	**88**		**Pg**	**07 08 59.3**	**-0.8**
GLAT	**Glass**	**0.37**	**135**		**Pg**	**07 09 00.6**	**-0.5**
LNXT	**Lenox**	**0.44**	**168**		**Pg**	**07 09 02.1**	**-0.3**
LNXT	**Lenox** baz=348	**0.44**	**168**	P	**Pg**	**07 09 02.2**	**-0.2**
PEBM	**Pemiscott Bayo**	**0.46**	**206**		**Pg**	**07 09 02.3**	**-0.6**
UTMT	**University of**	**0.63**	**107**		**Pg**	**07 09 05.2**	**-0.7**
GNAR	**Gosnell**	**0.65**	**211**		**Pg**	**07 09 06.0**	**-0.4**
HALT	**Halls**	**0.65**	**161**		**Pg**	**07 09 05.8**	**-0.6**
PBMO	**Poplar Bluff**	**0.71**	**291**		**Pg**	**07 09 06.5**	**-0.9**
PBMO	**Poplar Bluff** baz=110,SNR=149	**0.71**	**291**	P	**Pg**	**07 09 06.5**	**-0.9**
CGM3	**Cape Girardeau**	**0.77**	**357**		**Pg**	**07 09 07.4**	**-1.2**
T45B	**Paducah** baz=238,SNR=30	**0.91**	**58**	P	**Pg**	**07 09 09.8**	**-1.4**
T45B	baz=238			S	**Sg**	**07 09 22.0**	**-1.3**
T45A	**Paducah**	**0.92**	**57**		**Pg**	**07 09 09.9**	**-1.5**
LPAR	**Lepanto**	**1.08**	**211**		**Pg**	**07 09 13.3**	**-1.1**
S44A	**Carbondale**	**1.20**	**14**		**Pb**	**07 09 14.8**	**-0.9**
S44A	**Carbondale** baz=194	**1.20**	**14**	S	**Sb**	**07 09 30.5**	**-0.4**
SFTN	**Shelby Forest**	**1.22**	**196**		**Pn**	**07 09 15.8**	**+0.2**
SIUC	**Southern Illin**	**1.22**	**15**		**Pb**	**07 09 15.1**	**-1.0**
HBAR	**Harrisburg**	**1.29**	**221**		**Pn**	**07 09 16.8**	**+0.1**
HBAR	**Harrisburg** baz=41,SNR=46	**1.29**	**221**	P	**Pn**	**07 09 17.0**	**+0.2**
HBAR	baz=41			S	**Sn**	**07 09 35.1**	**+1.6**
LCAR	**Lake Charles**	**1.33**	**250**		**Pn**	**07 09 17.2**	**0.0**
LCAR	comp=Z,261nm,0.8s			IAmb_Lg		07 09 38.6	
LCAR	**Lake Charles** baz=69,SNR=102	**1.33**	**250**	P	**Pn**	**07 09 17.3**	**0.0**
W45A	**Hickory Valley**	**1.41**	**166**		**Pn**	**07 09 18.9**	**+0.5**
W45A	**Hickory Valley** baz=346,SNR=58	**1.41**	**166**	P	**Pn**	**07 09 18.6**	**+0.2**
W45A	baz=346			S	**Sb**	**07 09 38.0**	**+0.9**
MET	**Memphis--Engin**	**1.43**	**191**		**Pn**	**07 09 18.9**	**+0.3**
WVT	**Waverly** baz=286	**1.49**	**105**	P	**Pn**	**07 09 19.6**	**+0.1**
WVT	baz=286			S	**Sn**	**07 09 39.2**	**+0.7**
WVT	**Waverly**	**1.49**	**105**		**Pn**	**07 09 19.6**	**+0.1**
WVT	**Waverly** baz=286,SNR=161	**1.49**	**105**	P	**Pn**	**07 09 19.6**	**+0.1**
WVT	baz=286			S	**Sn**	**07 09 39.3**	**+0.7**
FVM	**French Village**	**1.59**	**336**		**Pn**	**07 09 21.5**	**+0.6**
FVM	**French Village** baz=155,SNR=83	**1.59**	**336**	P	**Pn**	**07 09 21.4**	**+0.6**
FVM	baz=155			S	**Sn**	**07 09 42.0**	**+1.0**
PLAL	**Pickwick Lake**	**1.98**	**141**		**Pn**	**07 09 27.2**	**+1.0**
PWLA	**Pickwick Lake**	**1.99**	**140**		**Pn**	**07 09 26.5**	**+0.2**
CCM	**Cathedral Cave** baz=139	**2.01**	**320**	P	**Pn**	**07 09 28.0**	**+1.4**
CCM	baz=139			S	**Sb**	**07 09 55.5**	**+1.3**
CCM	**Cathedral Cave**	**2.01**	**320**		**Pn**	**07 09 28.0**	**+1.4**
CCM	**Cathedral Cave** baz=139,SNR=188	**2.01**	**320**	P	**Pn**	**07 09 28.0**	**+1.4**
T47A	**Sharon Grove**	**2.06**	**76**		**Pn**	**07 09 28.7**	**+1.3**
T47A	**Sharon Grove** baz=258,SNR=77	**2.06**	**76**	P	**Pn**	**07 09 28.6**	**+1.3**
T47A	baz=258			S	**Sb**	**07 09 55.7**	**-0.1**
NHIN	**New Harmony**	**2.08**	**39**		**Pb**	**07 09 29.7**	**-1.1**
FCAR	**Ozark Folk Cen**	**2.13**	**253**		**Pn**	**07 09 29.3**	**+1.0**
SLM	**Saint Louis** comp=Z,152nm,0.8s	**2.16**	**347**	IAmb_Lg		07 10 03.6	
SLM	**Saint Louis** baz=166	**2.16**	**347**	S	**Sb**	**07 09 58.7**	**0.0**
MGMO	**Mountain Grove**	**2.22**	**287**		**Pn**	**07 09 31.1**	**+1.5**
V48A	**Smith Brothers**	**2.39**	**108**		**Pn**	**07 09 33.0**	**+1.2**
V48A	**Smith Brothers** baz=290,SNR=81	**2.39**	**108**	P	**Pn**	**07 09 33.0**	**+1.2**
Q44A	**Meyer Farm, Va**	**2.42**	**11**		**Pn**	**07 09 34.5**	**+2.3**
Q44A	**Meyer Farm, Va** baz=191,SNR=40	**2.42**	**11**	P	**Pn**	**07 09 34.2**	**+2.0**
WHAR	**Wooly Hollow**	**2.50**	**241**	Pn	**Pn**	**07 09 34.3**	**+0.9**
WHAR	comp=Z,84nm,0.7s			IAmb_Lg		07 10 11.6	
OLIL	**Olney**	**2.51**	**28**		**Pn**	**07 09 35.1**	**+1.7**
OLIL	**Olney** baz=209,SNR=13	**2.51**	**28**	P	**Pn**	**07 09 35.4**	**+1.9**
W41B	**Gary Mavity, V** baz=57	**2.54**	**239**	P	**Pn**	**07 09 35.0**	**+1.1**
W41B	baz=57			Sb	**Sb**	**07 10 11.2**	**+1.8**
W41B	**Gary Mavity, V** baz=57,SNR=97	**2.54**	**239**	P	**Pn**	**07 09 34.8**	**+1.0**
W41B	baz=57			Sb	**Sb**	**07 10 11.3**	**+1.9**
U40A	**Yellville**	**2.62**	**267**		**Pn**	**07 09 37.0**	**+2.0**
Y45A	**Yeager Farm, C**	**2.66**	**179**	Pn	**Pn**	**07 09 36.4**	**+0.9**
Y45A	**Yeager Farm, C** baz=359,SNR=21	**2.66**	**179**	P	**Pn**	**07 09 36.4**	**+0.9**
Y45A	baz=359			Sb	**Sg**	**07 10 16.4**	**-2.5**
CLTN	**Cedars of Leba**	**2.68**	**98**		**Pn**	**07 09 37.5**	**+1.7**
R40A	**Maddies Statio**	**2.75**	**310**		**Pn**	**07 09 38.2**	**+1.4**
R40A	**Maddies Statio** baz=129,SNR=33	**2.75**	**310**	P	**Pn**	**07 09 38.3**	**+1.5**
X48A	**Hartselle**	**2.94**	**134**		**Pn**	**07 09 40.4**	**+1.0**
X48A	**Hartselle** baz=316,SNR=83	**2.94**	**134**	P	**Pn**	**07 09 40.3**	**+0.8**
U49A	**Red Boiling Sp**	**3.08**	**89**		**Pn**	**07 09 42.8**	**+1.4**
U49A	comp=Z,66nm,0.9s			IAmb_Lg		07 10 31.2	
U49A	**Red Boiling Sp** baz=272,SNR=42	**3.08**	**89**	P	**Pn**	**07 09 42.8**	**+1.4**
P43A	**Skaggs, Pawnee** comp=Z,70nm,0.8s	**3.11**	**1**	IAmb_Lg		07 10 32.5	
WCI	**Wyandotte Cave** baz=238	**3.14**	**56**	Pb	**Pb**	**07 09 49.0**	**+0.2**
WCI	**Wyandotte Cave**	**3.14**	**56**	Pn	**Pn**	**07 09 43.5**	**+1.4**
CCAR	**Cane Creek**	**3.15**	**215**		**Pn**	**07 09 43.4**	**+1.1**
CCAR	comp=Z,107nm,1.1s			IAmb_Lg		07 10 40.6	
S39A	**Bolivar**	**3.19**	**292**		**Pn**	**07 09 44.4**	**+1.6**
S39A	comp=Z,75nm,1.1s			IAmb_Lg		07 10 39.6	
S39A	**Bolivar** baz=110,SNR=20	**3.19**	**292**	P	**Pn**	**07 09 44.3**	**+1.5**
SWET	**Sewanee**	**3.26**	**113**	Pn	**Pn**	**07 09 45.8**	**+1.9**
X40A	**Basin Creek Fa** baz=51	**3.33**	**233**	P	**Pn**	**07 09 45.6**	**+0.9**
X40A	**Basin Creek Fa**	**3.33**	**233**		**Pn**	**07 09 45.5**	**+0.9**
X40A	comp=Z,92nm,1.1s			IAmb_Lg		07 10 39.2	
X40A	**Basin Creek Fa** baz=51,SNR=15	**3.33**	**233**	P	**Pn**	**07 09 45.6**	**+0.9**
X40A	baz=51,SNR=15			P	**Pn**	**07 09 45.6**	**+0.9**
Z47A	**Carrollton**	**3.56**	**159**	Pn	**Pn**	**07 09 49.3**	**+1.5**
Z47A	comp=Z,77nm,0.7s			IAmb_Lg		07 10 48.6	
P40A	**Paris**	**3.56**	**328**		**Pn**	**07 09 49.0**	**+1.0**
P40A	comp=Z,61nm,0.8s			IAmb_Lg		07 10 51.2	
P46A	**Rosedale** comp=Z,80nm,0.9s	**3.62**	**31**	IAmb_Lg		07 10 48.4	
W39A	**Magazine** baz=67	**3.64**	**250**	Sb	**Sg**	**07 10 46.8**	**-3.7**
W39A	**Magazine**	**3.64**	**250**		**Pn**	**07 09 50.1**	**+1.1**
O44A	**Mansfield** comp=Z,60nm,0.8s	**3.73**	**14**	IAmb_Lg		07 10 52.2	
W50A	**Signal Mountai**	**3.73**	**110**	Pn	**Pn**	**07 09 52.0**	**+1.7**
W50A	comp=Z,68nm,0.7s			IAmb_Lg		07 10 56.2	
Y49A	**Blount Mountai**	**3.73**	**135**		**Pn**	**07 09 50.1**	**-0.3**
MIAR	**Mount Ida** baz=57	**3.79**	**240**	P	**Pn**	**07 09 52.5**	**+1.3**
MIAR	baz=57			Sb	**Sg**	**07 10 51.2**	**-4.1**
MIAR	**Mount Ida**	**3.79**	**240**		**Pn**	**07 09 52.1**	**+0.9**
MIAR	comp=Z,74nm,0.8s			IAmb_Lg		07 10 57.3	
MIAR	**Mount Ida** baz=57,SNR=23	**3.79**	**240**	P	**Pn**	**07 09 52.4**	**+1.3**
FPAL	**Fort Paine**	**3.81**	**120**	Pn	**Pn**	**07 09 52.9**	**+1.5**
U38A	**Gravette**	**3.85**	**270**		**Pn**	**07 09 53.6**	**+1.7**
T50A	**Nancy** comp=Z,58nm,0.7s	**3.86**	**81**	IAmb_Lg		07 11 01.0	
146A	**Union** comp=Z,65nm,0.8s	**3.91**	**173**	IAmb_Lg		07 11 00.0	
R49A	**Shelbyville**	**3.95**	**62**	Pn	**Pn**	**07 09 55.2**	**+1.9**
HDIL	**Hopedale** baz=184	**4.03**	**3**	Pb	**Pb**	**07 10 04.7**	**+0.8**
HDIL	baz=184			Sb	**Sg**	**07 10 58.5**	**-4.3**
WLAR	**White Oak Lake**	**4.04**	**226**	Pn	**Pn**	**07 09 54.6**	**+0.1**
143A	**Socs Landing,** comp=Z,59nm,0.9s	**4.09**	**202**	IAmb_Lg		07 11 11.0	
CPCT	**Cooper Cave**	**4.26**	**103**	Pn	**Pn**	**07 09 59.7**	**+2.1**
CPCT	comp=Z,50nm,0.7s			IAmb_Lg		07 11 09.9	
N41A	**Harden Midland**	**4.29**	**347**		**Pn**	**07 09 59.9**	**+2.0**
V51A	**Loudon**	**4.31**	**98**	Pn	**Pn**	**07 10 00.4**	**+2.1**
V51A	comp=Z,82nm,0.9s			IAmb_Lg		07 11 13.7	
SFIN	**Lafayette** baz=208	**4.32**	**26**	Pb	**Pb**	**07 10 09.8**	**+0.9**
SFIN	**Lafayette**	**4.32**	**26**	Pn	**Pn**	**07 09 59.0**	**+0.7**
X51A	**Calhoun** comp=Z,68nm,0.9s	**4.34**	**115**	IAmb_Lg		07 11 18.7	
P38A	**Dawn**	**4.38**	**316**	Pn	**Pn**	**07 10 00.0**	**+0.9**
P38A	comp=Z,78nm,0.7s			IAmb_Lg		07 11 14.5	
P38A	**Dawn** baz=134,SNR=23	**4.38**	**316**	P	**Pn**	**07 09 60.0**	**+0.9**
R50A	**Paris** comp=Z,42nm,1.0s	**4.55**	**66**	IAmb_Lg		07 11 19.6	
TZTN	**Tazewell**	**4.88**	**88**	Pn	**Pn**	**07 10 08.3**	**+2.2**
V52A	**Sevierville**	**4.91**	**96**	Pn	**Pn**	**07 10 09.3**	**+2.8**
V52A	comp=Z,72nm,0.8s			IAmb_Lg		07 11 30.4	
S51A	**Beattyville** comp=Z,72nm,0.8s	**4.94**	**75**	IAmb_Lg		07 11 28.9	
M44A	**Midewin, Midew** comp=Z,70nm,1.2s	**5.00**	**14**	IAmb_Lg		07 11 40.2	
TUL1	**Leonard** baz=81	**5.04**	**265**	P	**Pn**	**07 10 09.0**	**+0.8**
WSNC	**Winespring Bal**	**5.08**	**104**		**Pn**	**07 10 09.9**	**+0.9**
346A	**Big Creek Wild** comp=Z,38nm,0.9s	**5.13**	**179**	IAmb_Lg		07 11 44.1	
N47A	**Urbana** comp=Z,56nm,0.8s	**5.31**	**34**	IAmb_Lg		07 11 46.5	
Q51A	**Peebles** comp=Z,32nm,0.9s	**5.55**	**61**	IAmb_Lg		07 11 55.9	
T35A	**Sooner Cattle** comp=Z,61nm,0.8s	**5.56**	**276**	IAmb_Lg		07 11 53.2	
V53A	**Saluda** comp=Z,53nm,0.8s	**5.57**	**97**	IAmb_Lg		07 11 50.8	
BG3	**Lake Jocassee** comp=Z,50nm,0.9s	**5.64**	**104**	IAmb_Lg		07 11 52.8	
QUOK	**Quay** comp=Z,44nm,0.7s	**5.74**	**269**	IAmb_Lg		07 12 09.5	
OK030	**Cody Creek RV** comp=Z,54nm,0.8s	**5.83**	**266**	IAmb_Lg		07 12 12.0	
OK033	**Mehan** comp=Z,42nm,0.7s	**5.94**	**268**	IAmb_Lg		07 12 18.9	
P51A	**Williamsport** comp=Z,46nm,0.7s	**5.95**	**58**	IAmb_Lg		07 11 56.8	
L46A	**Eue Claire** comp=Z,41nm,0.8s	**6.05**	**24**	IAmb_Lg		07 12 10.9	
SCIA	**State Center** comp=Z,35nm,0.7s	**6.06**	**334**	IAmb_Lg		07 12 17.6	
W35A	**Tecumseh** comp=Z,48nm,1.1s	**6.06**	**259**	IAmb_Lg		07 12 16.3	
KSU1	**Kansas State U**	**6.11**	**297**		**Pn**	**07 10 23.5**	**+0.5**
KSU1	comp=Z,55nm,1.1s			IAmb_Lg		07 12 16.7	
BLOK	**Blackwell** comp=Z,47nm,0.9s	**6.12**	**274**	IAmb_Lg		07 12 06.9	
K43A	**Burlington** comp=Z,46nm,0.9s	**6.25**	**9**	IAmb_Lg		07 12 16.4	
R53A	**Hurricane** comp=Z,42nm,0.8s	**6.35**	**71**	IAmb_Lg		07 12 15.8	
ACSO	**Alum Creek Sta** comp=Z,33nm,0.8s	**6.38**	**53**	IAmb_Lg		07 12 17.5	
JFWS	**Jewell Farm** comp=Z,40nm,0.8s	**6.40**	**356**	IAmb_Lg		07 12 13.1	
N35A	**Tabor**	**6.40**	**314**	Pn	**Pn**	**07 10 27.5**	**+0.5**
PAULI	**Pauline** comp=Z,34nm,0.9s	**6.57**	**103**	IAmb_Lg		07 12 23.4	
K38A	**Parkersburg** comp=Z,26nm,0.7s	**6.58**	**339**	IAmb_Lg		07 12 30.6	
LOOK	**Love County** comp=Z,32nm,1.0s	**6.69**	**250**	IAmb_Lg		07 12 34.3	
L48A	**N Adams** comp=Z,39nm,0.7s	**6.73**	**35**	IAmb_Lg		07 12 28.3	
V55A	**Taylorsville** comp=Z,28nm,0.7s	**6.82**	**93**	IAmb_Lg		07 12 33.6	
KMSC	**Kings Mountain** comp=Z,32nm,0.8s	**6.86**	**99**	IAmb_Lg		07 12 33.2	
X34A	**Smith Ranch, M** comp=Z,45nm,1.2s	**6.97**	**256**	IAmb_Lg		07 12 45.9	
O52A	**Adamsville** comp=Z,44nm,0.8s	**7.08**	**57**	IAmb_Lg		07 12 44.8	
P53A	**Whipple** comp=Z,38nm,1.0s	**7.13**	**63**	IAmb_Lg		07 12 39.1	
N51A	**Ashland** comp=Z,28nm,0.7s	**7.15**	**50**	IAmb_Lg		07 12 42.6	
Q54A	**Coxs Mills** comp=Z,32nm,0.7s	**7.37**	**68**	IAmb_Lg		07 12 49.7	
R32A	**Long Quarter,** comp=Z,31nm,1.0s	**7.48**	**287**	IAmb_Lg		07 13 07.6	
U32A	**Winter Ranch,** comp=Z,30nm,0.8s	**7.57**	**272**	IAmb_Lg		07 13 13.1	
WMOK	**Wichita Mounta** comp=Z,23nm,1.0s	**7.68**	**259**	IAmb_Lg		07 13 03.0	
I37A	**Lemond, Waseca** comp=Z,22nm,0.7s	**8.02**	**340**	IAmb_Lg		07 13 12.1	
N53A	**Lisbon** comp=Z,22nm,0.7s	**8.08**	**55**	IAmb_Lg		07 13 17.1	
O54A	**Avella** comp=Z,25nm,0.8s	**8.12**	**61**	IAmb_Lg		07 13 17.4	
M52A	**Chesterland** comp=Z,34nm,0.8s	**8.14**	**50**	IAmb_Lg		07 13 15.2	
M53A	**WI Miller and** comp=Z,25nm,0.9s	**8.51**	**52**	IAmb_Lg		07 13 18.4	
SPMN	**Marine on St.** comp=Z,21nm,0.8s	**9.02**	**345**	IAmb_Lg		07 13 36.9	
K31A	**O'Neill** comp=Z,23nm,0.7s	**9.32**	**314**	IAmb_Lg		07 13 58.6	

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*NNC **25** 07:24:56.7±0.4, 45°.44N×81°.13E, h0^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=7.8km s-min=2.0km az=127.0*

*SOME **25** 07:24:57.5, 45°.32N×81°.15E, h15^{km}*

ISC 25 07:24:54.7±0.9, **45°.27N**±0°.04×**81°.53E**±0°.05, **h10^{km}, n44, σ1^s.53**/64, **12C-4D, Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPS	**Kapalarasan**	**1.54**	**271**	*e*P	**Pn**	**07 25 21.4**	**-0.8**
	14nm,0.3s						
KAPS				*e*S	**Sn**	**07 25 38.6**	**-3.7**
	162nm,0.2s						
KAPS	**Kapalarasan**	**1.54**	**271**	P	**Pn**	**07 25 21.4**	**-0.8**
	14nm,0.3s						
KAPS				S	**Sn**	**07 25 38.6**	**-3.7**
	162nm,0.2s						
DJR	**Jarkent**	**1.56**	**234**	*e*P	**Pb**	**07 25 24.1**	**+0.5**
	53nm,0.3s						
DJR				*e*S	**Sn**	**07 25 42.9**	**+0.1**
	110nm,0.5s						
DJR	**Jarkent**	**1.56**	**234**	P	**Pb**	**07 25 24.1**	**+0.5**
	53nm,0.3s						
DJR				S	**Sn**	**07 25 42.9**	**+0.1**
	110nm,0.5s						
MAKZ	**Makanchi**	**1.57**	**11**	⇓P	**Pg**	**07 25 24.5**	**-0.3**
	18nm,0.5s						
MAKZ				⇑S	**Sb**	**07 25 44.4**	**+0.7**
	25nm,0.3s						
MK31	**Makanchi Array**	**1.61**	**19**	⇑P	**Pg**	**07 25 25.8**	**+0.2**
	39nm,0.4s,baz=207,slow=14,SNR=856						
MK31				⇑S	**Sg**	**07 25 46.9**	**+0.4**
	40nm,0.3s,baz=205,slow=29,SNR=17						
KTMS	**Ketmen**	**2.01**	**205**	*e*P	**Pg**	**07 25 33.2**	**-0.1**
	12nm,0.3s						
KTMS				*e*S	**Sb**	**07 25 58.4**	**+1.8**
	211nm,0.2s						
PDGK	**Podgornoye**	**2.43**	**218**	Pg	**Pb**	**07 25 39.8**	**+1.2**
	7.1nm,0.3s						
PDGK				Lg	Lg	07 26 09.8	
	95nm,0.4s						
PDGK	**Podgornoye**	**2.43**	**218**	⇑Pn	**Pb**	**07 25 38.6**	**0.0**
	16nm,0.7s						
PDGK				⇓Sn	**Sb**	**07 26 10.0**	**+1.3**
	72nm,0.3s						
UZB	**Uzynbulak**	**2.79**	**221**	*e*P	**Pb**	**07 25 45.6**	**+1.0**
	7.9nm,0.2s						
UZB				*e*S	**Sb**	**07 26 19.9**	**+1.0**
	48nm,0.4s						
UZB	**Uzynbulak**	**2.79**	**221**	Pg	**Pb**	**07 25 45.6**	**+1.0**
	7.9nm,0.2s						
UZB				Lg	Lg	07 26 19.9	
	48nm,0.4s						
ARXS	**Arharly**	**2.84**	**249**	*e*P	**Pb**	**07 25 46.2**	**+0.6**
	3.3nm,0.3s						
ARXS				*e*S	**Sb**	**07 26 20.8**	**+0.3**
	49nm,0.2s						
ARXS	**Arharly**	**2.84**	**249**	Pg	**Pb**	**07 25 46.2**	**+0.6**
	3.3nm,0.3s						
ARXS				Lg	Lg	07 26 20.8	
	49nm,0.2s						
KURS	**Kuram**	**3.00**	**235**	*e*P	**Pb**	**07 25 48.2**	**0.0**
	3.5nm,0.5s						
KURS				*e*S	**Sb**	**07 26 24.7**	**-0.2**
	32nm,0.5s						
KURS	**Kuram**	**3.00**	**235**	Pg	**Pb**	**07 25 48.2**	**0.0**
	3.5nm,0.5s						
KURS				Lg	Lg	07 26 24.7	
	32nm,0.5s						
SATY	**Saty**	**3.15**	**227**	*e*P	**Pb**	**07 25 52.2**	**+1.3**
	12nm,0.2s						
SATY				*e*S	**Sb**	**07 26 31.2**	**+1.7**
	143nm,0.4s						
SATY	**Saty**	**3.15**	**227**	Pg	**Pb**	**07 25 52.2**	**+1.3**
	12nm,0.2s						
SATY				Lg	Lg	07 26 31.2	
	143nm,0.4s						
ZSN	**Zaisan**	**3.17**	**45**	*e*P	**Pg**	**07 25 55.0**	**-0.4**
	4.0nm,0.4s						
ZSN				*e*S	**Sg**	**07 26 36.0**	**-0.6**
	18nm,0.3s						
CHKK	**Chushkaly**	**3.54**	**248**	*e*P	**Pb**	**07 25 58.1**	**+0.7**
	1.3nm,0.1s						
CHKK				*e*S	**Sb**	**07 26 41.2**	**+0.7**
	33nm,0.4s						
CHKK	**Chushkaly**	**3.54**	**248**	Pg	**Pb**	**07 25 58.1**	**+0.7**
	1.3nm,0.1s						
CHKK				Lg	Lg	07 26 41.2	
	33nm,0.4s						
KOTS	**Kotyrbulak**	**3.77**	**239**	*e*P	**Pb**	**07 26 02.1**	**+0.6**
	1.5nm,0.3s						
KOTS				*e*S	**Sb**	**07 26 47.9**	**+0.6**
	46nm,0.7s						
KOTS	**Kotyrbulak**	**3.77**	**239**	Pg	**Pb**	**07 26 02.1**	**+0.6**
	1.5nm,0.3s						
KOTS				Lg	Lg	07 26 47.9	
	46nm,0.7s						
KTBS	**Karatobe**	**3.81**	**248**	*e*P	**Pb**	**07 26 02.4**	**+0.5**
	2.9nm,0.5s						
KTBS				*e*S	**Sb**	**07 26 48.7**	**+0.6**
	50nm,0.5s						
KTBS	**Karatobe**	**3.81**	**248**	Pg	**Pb**	**07 26 02.4**	**+0.5**
	2.9nm,0.5s						
KTBS				Lg	Lg	07 26 48.7	
	50nm,0.5s						
MDOK	**Medeo**	**3.85**	**238**	*e*P	**Pb**	**07 26 02.6**	**-0.2**
	5.5nm,0.4s						
MDOK				*e*S	**Sb**	**07 26 49.2**	**-0.4**
	18nm,0.6s						
MDOK	**Medeo**	**3.85**	**238**	Pg	**Pg**	**07 26 06.6**	**-1.9**
	3.0nm,0.4s						
MDOK				Lg	Lg	07 26 55.0	
	26nm,0.6s						
MDOK	**Medeo**	**3.85**	**238**	Pg	**Pb**	**07 26 02.6**	**-0.2**
	5.5nm,0.4s						
MDOK				Lg	Lg	07 26 49.2	
	18nm,0.6s						
KUU	**Kurty**	**3.96**	**251**	*e*P	**Pb**	**07 26 06.1**	**+1.6**
	1.2nm,0.2s						
KUU				*e*S	**Sb**	**07 26 54.9**	**+2.4**
	26nm,0.3s						
KUU	**Kurty**	**3.96**	**251**	Pg	**Pb**	**07 26 06.1**	**+1.6**
	1.2nm,0.2s						
KUU				Lg	Lg	07 26 54.9	
	26nm,0.3s						
TNSS	**Tian-Shan**	**3.98**	**238**	Pg	**Pb**	**07 26 05.5**	**+0.3**
	1.1nm,0.3s						
TNSS				Lg	Lg	07 26 54.0	
	28nm,0.7s						
MTBS	**Maitube**	**4.25**	**242**	*e*P	**Pb**	**07 26 09.7**	**+0.2**
	1.6nm,0.3s						
MTBS				*e*S	**Sb**	**07 27 01.0**	**+0.2**
	34nm,0.3s						
MTBS	**Maitube**	**4.25**	**242**	Pg	**Pb**	**07 26 09.7**	**+0.2**
	1.6nm,0.3s						
MTBS				Lg	Lg	07 27 01.0	
	34nm,0.3s						
KRBS	**Karabastau**	**4.48**	**251**	*e*P	**Pb**	**07 26 14.8**	**+1.4**
	1.2nm,0.2s						
KRBS				*e*S	**Sb**	**07 27 09.9**	**+2.5**
	14nm,0.4s						
KRBS	**Karabastau**	**4.48**	**251**	Pg	**Pb**	**07 26 14.8**	**+1.4**
	1.2nm,0.2s						
KRBS				Lg	Lg	07 27 10.0	
	14nm,0.4s						
KST	**Kastek**	**4.58**	**243**	*e*P	**Pb**	**07 26 15.5**	**+0.2**
	3.4nm,0.5s						
KST				*e*S	**Sb**	**07 27 11.1**	**+0.5**
	21nm,0.5s						
KST	**Kastek**	**4.58**	**243**	Pg	**Pb**	**07 26 15.5**	**+0.2**
	3.4nm,0.5s						
KST				Lg	Lg	07 27 11.1	
	21nm,0.5s						
DGS	**Degeres**	**4.61**	**246**	*e*P	**Pb**	**07 26 18.3**	**+2.6**
	1.8nm,0.2s						
DGS				*e*S	**Sb**	**07 27 15.9**	**+4.6**
	19nm,0.4s						
TKM2	**Tokmak 2**	**4.88**	**243**	⇑Pg	**Pb**	**07 26 24.8**	**+4.5**
	3.2nm,0.6s						
TKM2				⇑Lg	Lg	07 27 27.0	
	7.0nm,0.5s						
BTLS	**Baital**	**5.30**	**270**	*e*P	**Pb**	**07 26 29.5**	**+2.2**
	1.3nm,0.1s						
BTLS				*e*S	**Sb**	**07 27 34.9**	**+3.8**
	2.4nm,0.3s						
AAK	**Ala-Archa**	**5.72**	**245**	⇑Pg	Pb	07 26 40.1	+5.5
	1.7nm,0.6s						
AAK				⇑Lg	Lg	07 27 53.1	
	5.5nm,0.5s						
KURBB	**Kurchatov Arra**	**5.72**	**340**	⇑Pn	**Pn**	**07 26 19.1**	**-0.5**
	1.1nm,0.2s						
KURBB				⇑Lg	Lg	07 27 50.9	
	29nm,0.5s						
KURK	**Kurchatov**	**5.79**	**341**	⇑Pn	**Pn**	**07 26 19.5**	**-1.0**
	1.0nm,0.3s						
KURK				⇓Lg	Lg	07 27 52.7	
	9.9nm,0.5s						
OTUK	**Ortayu**	**6.98**	**298**	⇓Lg	Lg	07 28 30.1	
	19nm,0.9s						
KK09	**Karatay Array**	**8.21**	**259**	⇑Lg	Lg	07 29 11.4	
	2.2nm,0.6s						

IDC 25 07:31:25.5±5.1**, 22°.79S**×**178°.99W, h0**^{km}**, mb3.5**/2**, mb1 3.7**/2**, mb1mx3.6**/19**, mbtmp3.5**/2**, Error ellipse: s-maj=269.6km s-min=76.7km az=159.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.15**	**259**	P	P	07 39 28.9	+0.8
	0.7nm,1.0s,baz=96,slow=7.7,SNR=4.2						
WRA	**Warramunga Arr**	**43.42**	**265**	P	P	07 39 29.6	-0.8
	0.4nm,0.6s,baz=103,slow=7.9,SNR=9.3						
AKASG	**Malin Array Be**	**144.53**	**329**	PKP	PKPdf	07 51 03.2	-0.5
	0.2nm,0.4s,baz=46,slow=4.0,SNR=6.0						

IASPEI ***25*** *07:36:28.7±0.8, 38°.52N±0°.02×20°.55E±0°.03, h15*^{km}*±4*^{km}*, mb3.9/3, Error ellipse: s-maj=4.1km s-min=2.2km az=96.1, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

THE ***25*** *07:36:29.4, 38°.52N×20°.55E, h9*^{km}*, ML3.2/15, Error ellipse: s-maj=0.9km s-min=0.4km az=274.0*

ATH ***25*** *07:36:29.4, 38°.52N×20°.57E, h13*^{km}*±1*^{km}*, ML3.1/21, Error ellipse: s-maj=1.7km s-min=0.6km az=285.0*

IDC ***25*** *07:36:57.1±58.0, 41°.26N×24°.40E, h0*^{km}*, mb3.6/3, mb1 3.7/3, mb1mx3.3/33, mbtmp3.7/3, Error ellipse: s-maj=1054.0km s-min=28.5km az=45.0*

ISC 25 07:36:28.7±0.7**, 38°.53N**±0°.02×**20°.54E**±0°.03**, h17**^{km}±4^{km}**, n71, σ0**^{s}**.82**/101**, mb3.8**/3**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FSK	**Fiskardo**	**0.07**	**166**	P	**Pg**	**07 36 31.6**	**-0.2**
FSK				S	**Sg**	**07 36 33.5**	**-0.5**
	50µm,0.2s						
FSK	**Fiskardo**	**0.07**	**166**	P	**Pg**	**07 36 31.6**	**-0.2**
FSK				S	**Sg**	**07 36 33.7**	**-0.3**
FSK				AML	AML	07 36 33.7	
	comp=N,52327µm,0.3s						
FSK				AML	AML	07 36 33.7	
EVGI	**Lefkada island**	**0.13**	**43**	P	**Pg**	**07 36 32.3**	**-0.2**
EVGI				S	**Sg**	**07 36 35.0**	**-0.1**
	comp=N,23µm,0.3s						
EVGI	**Lefkada island**	**0.13**	**43**	P	**Pg**	**07 36 32.4**	**-0.2**
EVGI				S	**Sg**	**07 36 35.1**	**0.0**
DRAG	**Dragano-Lefkad**	**0.16**	**9**	P	**Pg**	**07 36 32.6**	**-0.3**
DRAG				S	**Sg**	**07 36 35.4**	**-0.4**
	comp=N,73µm,0.4s						
DRAG	**Dragano-Lefkad**	**0.16**	**9**	P	**Pg**	**07 36 32.6**	**-0.3**
DRAG				S	**Sg**	**07 36 36.1**	**+0.3**
NYDR	**Nydri-Lefkada**	**0.22**	**33**	P	**Pg**	**07 36 33.6**	**-0.2**
NYDR				S	**Sg**	**07 36 37.4**	**0.0**
	comp=N,17µm,0.4s						
NYDR	**Nydri-Lefkada**	**0.22**	**33**	P	**Pg**	**07 36 33.7**	**-0.2**
NYDR				S	**Sg**	**07 36 37.7**	**+0.4**
LKD2	**Lefkada island**	**0.28**	**19**	P	**Pg**	**07 36 34.8**	**0.0**
LKD2				S	**Sg**	**07 36 39.3**	**+0.3**
	comp=N,5µm,0.4s						
LKD2	**Lefkada island**	**0.28**	**19**	P	**Pg**	**07 36 34.8**	**0.0**
LKD2				S	**Sg**	**07 36 39.2**	**+0.3**
LKD2				AML	AML	07 36 40.3	
	comp=N,9683µm,0.4s						
LKD2				AML	AML	07 36 44.5	
	comp=E,8464µm,0.4s						
KEF4	**Livadi, Kephal**	**0.28**	**199**	P	**Pg**	**07 36 34.8**	**0.0**
KEF4				S	**Sg**	**07 36 39.8**	**+0.9**
	comp=E,59µm,0.2s						
KEF4	**Livadi, Kephal**	**0.28**	**199**	P	**Pg**	**07 36 34.9**	**+0.1**
KEF4				S	**Sg**	**07 36 40.0**	**+1.0**
TSLK	**Tsoukalades, L**	**0.31**	**17**	P	**Pg**	**07 36 35.4**	**0.0**
TSLK				S	**Sg**	**07 36 40.9**	**+1.0**
	comp=E,6µm,0.6s						
TSLK	**Tsoukalades, L**	**0.31**	**17**	P	**Pg**	**07 36 35.3**	**0.0**
TSLK				S	**Sg**	**07 36 40.6**	**+0.7**
TSLK				AML	AML	07 36 41.4	
	comp=E,10658µm,0.3s						
TSLK				AML	AML	07 36 46.5	
	comp=N,12433µm,0.6s						
DMLN	**Damoulianata-K**	**0.32**	**205**	P	**Pg**	**07 36 35.3**	**-0.1**
DMLN				S	**Sg**	**07 36 40.5**	**+0.6**
	comp=N,12µm,0.2s						
DMLN	**Damoulianata-K**	**0.32**	**205**	P	**Pg**	**07 36 35.5**	**+0.1**
DMLN				S	**Sg**	**07 36 40.7**	**+0.8**
LXRA	**Lixouri, Kepha**	**0.34**	**194**	P	**Pg**	**07 36 35.8**	**+0.1**
LXRA				S	**Sg**	**07 36 41.4**	**+1.0**
VLS	**Valsamata**	**0.35**	**174**	P	**Pg**	**07 36 35.9**	**-0.1**
VLS				S	**Sg**	**07 36 41.7**	**+0.7**
	comp=N,9µm,0.1s						
VLS	**Valsamata**	**0.35**	**174**	P	**Pg**	**07 36 36.0**	**-0.1**
VLS				S	**Sg**	**07 36 41.6**	**+0.7**
VLS				AML	AML	07 36 42.1	
	comp=N,18809µm,0.1s						
VLS				AML	AML	07 36 42.4	
	comp=E,18112µm,0.1s						
KEF3	**Kipouria, Keph**	**0.36**	**205**	P	**Pg**	**07 36 35.5**	**-0.5**
KEF3				S	**Sg**	**07 36 40.9**	**-0.1**
	comp=E,17µm,0.2s						
KEF3	**Kipouria, Keph**	**0.36**	**205**	P	**Pg**	**07 36 35.5**	**-0.5**
KEF3				S	**Sg**	**07 36 41.0**	**-0.1**
PSDA	**Pessada-Kefalo**	**0.41**	**175**	P	**Pg**	**07 36 37.0**	**-0.1**
PSDA				S	**Sg**	**07 36 43.7**	**+1.0**
	comp=E,1µm,0.2s						
PSDA	**Pessada-Kefalo**	**0.41**	**175**	P	**Pg**	**07 36 37.0**	**-0.1**
PSDA				S	**Sb**	**07 36 43.9**	**+0.4**
PVO	**Paravola**	**0.78**	**83**	P	**Pg**	**07 36 44.1**	**+0.2**
PVO	**Paravola**	**0.78**	**83**	P	**Pg**	**07 36 44.1**	**+0.2**
PVO				AML	AML	07 37 03.7	
	comp=E,3301µm,0.5s						
PVO				AML	AML	07 37 07.4	
	comp=N,2445µm,0.6s						
VTN	**Vitineika**	**0.79**	**140**	P	**Pg**	**07 36 44.1**	**0.0**
LTHK	**Lithakia**	**0.85**	**164**	P	**Pg**	**07 36 44.6**	**-0.6**
LTHK				S	**Sb**	**07 36 57.5**	**+1.5**
	comp=N,1µm,0.2s						
LTHK	**Lithakia**	**0.85**	**164**	P	**Pg**	**07 36 44.6**	**-0.6**
LTHK				S	**Sg**	**07 36 56.6**	**+0.3**
LTHK				AML	AML	07 36 59.2	
	comp=E,2541µm,0.2s						
LTHK				AML	AML	07 37 02.2	
	comp=N,2917µm,0.2s						
RLS	**Riolos of Patr**	**0.86**	**122**	P	**Pg**	**07 36 45.4**	**-0.1**
RLS				S	**Sb**	**07 36 58.5**	**+1.9**
	comp=N,742nm,0.3s						
RLS	**Riolos of Patr**	**0.86**	**122**	P	**Pg**	**07 36 45.3**	**-0.1**
RLS				AML	AML	07 37 00.9	
	comp=N,1801µm,0.3s						
RLS				AML	AML	07 37 04.5	
	comp=E,1187µm,0.4s						
IGT	**Igoumenitsa**	**1.02**	**351**	P	**Pg**	**07 36 47.9**	**-0.5**
IGT				S	**Sn**	**07 37 04.0**	**+1.8**
	comp=E,710nm,0.6s						
IGT	**Igoumenitsa**	**1.02**	**351**	P	**Pg**	**07 36 47.5**	**-0.9**
IGT				AML	AML	07 37 06.1	
	comp=E,1527µm,0.7s						
IGT				AML	AML	07 37 06.9	
	comp=N,1313µm,0.5s						
EVR	**Evrytania**	**1.07**	**68**	P	**Pg**	**07 36 48.9**	**-0.4**
EVR	**Evrytania**	**1.07**	**68**	P	**Pg**	**07 36 48.9**	**-0.4**
EFP	**Efpalio**	**1.08**	**95**	P	**Pg**	**07 36 48.5**	**-1.0**
EFP				AML	AML	07 37 10.7	
	comp=N,1473µm,0.6s						
EFP				AML	AML	07 37 11.3	
	comp=E,1681µm,0.5s						
ANX	**Ano Chora**	**1.08**	**86**	P	**Pg**	**07 36 49.0**	**-0.7**
ANX	**Ano Chora**	**1.08**	**86**	P	**Pg**	**07 36 48.9**	**-0.8**
ANX				AML	AML	07 37 12.5	
	comp=E,1556µm,0.4s						
ANX				AML	AML	07 37 12.7	
	comp=N,2870µm,0.6s						
DRO	**Drossia**	**1.08**	**122**	P	**Pg**	**07 36 49.3**	**-0.3**
DRO				AML	AML	07 37 08.4	
	comp=E,4711µm,0.3s						
DRO				AML	AML	07 37 09.2	
	comp=N,3872µm,0.4s						
JAN	**Janina**	**1.16**	**12**	P	**Pg**	**07 36 51.7**	**+0.6**
JAN	**Janina**	**1.16**	**12**	P	**Pg**	**07 36 51.6**	**+0.6**
JAN				AML	AML	07 37 13.0	
	comp=E,1152µm,0.6s						
JAN				AML	AML	07 37 13.3	
	comp=N,970µm,0.5s						
LAKA	**Lakka**	**1.17**	**104**	P	**Pb**	**07 36 50.1**	**-0.4**
LAKA	**Lakka**	**1.17**	**104**	P	**Pb**	**07 36 50.0**	**-0.4**
LAKA				AML	AML	07 37 12.8	
	comp=E,4539µm,0.7s						
LAKA				AML	AML	07 37 20.0	
	comp=N,2778µm,0.8s						
SERG	**Sergoula**	**1.20**	**95**	P	**Pb**	**07 36 50.8**	**-0.2**
SERG	**Sergoula**	**1.20**	**95**	P	**Pb**	**07 36 50.7**	**-0.2**
SERG				AML	AML	07 37 14.8	
	comp=E,1232µm,0.8s						
SERG				AML	AML	07 37 22.4	
	comp=N,1254µm,0.7s						
TRIZ	**Trizonia**	**1.21**	**97**	P	**Pb**	**07 36 51.0**	**-0.2**
TRIZ	**Trizonia**	**1.21**	**97**	P	**Pb**	**07 36 50.6**	**-0.5**
KASA	**Kassiopi**	**1.31**	**339**	P	**Pb**	**07 36 54.3**	**+1.5**
KEK	**Kerkira**	**1.32**	**334**	P	**Pn**	**07 36 54.0**	**+1.6**
KEK				S	**Sg**	**07 37 12.5**	**+1.2**
	comp=N,400nm,0.7s						
KEK	**Kerkira**	**1.32**	**334**	P	**Pn**	**07 36 53.5**	**+1.1**
KEK				AML	AML	07 37 22.9	
	comp=N,619µm,0.6s						
KEK				AML	AML	07 37 23.8	
	comp=E,923µm,0.6s						
MAKR	**Makrakomi, Fth**	**1.33**	**68**	P	**Pn**	**07 36 53.9**	**+1.3**
MAKR	**Makrakomi, Fth**	**1.33**	**68**	P	**Pn**	**07 36 53.9**	**+1.3**
MAKR				AML	AML	07 37 20.0	
	comp=E,1218µm,0.8s						
MAKR				AML	AML	07 37 26.0	
	comp=N,854µm,1.3s						
KLV	**Kalavryta, Ach**	**1.35**	**110**	P	**Pn**	**07 36 53.0**	**+0.1**
KLV	**Kalavryta, Ach**	**1.35**	**110**	P	**Pn**	**07 36 53.3**	**+0.4**
KLV				AML	AML	07 37 24.7	
	comp=E,393µm,0.7s						
KLV				AML	AML	07 37 29.4	
	comp=N,400µm,0.9s						
AGG	**Agios Georgios**	**1.48**	**70**	P	**Pn**	**07 36 56.4**	**+1.7**
AGG	**Agios Georgios**	**1.48**	**70**	P	**Pn**	**07 36 56.2**	**+1.6**
AGG				AML	AML	07 37 24.3	
	comp=E,1181µm,0.5s						
AGG				AML	AML	07 37 30.1	
	comp=N,981µm,0.6s						
GUR	**Goura**	**1.54**	**112**	P	**Pn**	**07 36 55.9**	**+0.5**
GUR				AML	AML	07 37 26.2	
	comp=E,1036µm,0.5s						
GUR				AML	AML	07 37 27.2	
	comp=N,1226µm,0.5s						
THL	**Klokotos Trika**	**1.55**	**47**	P	**Pb**	**07 36 58.1**	**+1.2**
THL				AML	AML	07 37 24.9	
	comp=E,940µm,0.6s						
THL				AML	AML	07 37 27.2	
	comp=N,887µm,0.6s						
ITM	**Ithomi**	**1.73**	**140**	P	**Pb**	**07 37 01.3**	**+1.2**
VIL2	**Platees**	**2.17**	**97**	P	**Pb**	**07 37 08.2**	**+0.7**
VIL2				AML	AML	07 37 52.2	
	comp=E,551µm,0.9s						
VIL2				AML	AML	07 37 54.1	
	comp=N,246µm,0.9s						
DBRK	**Dubrovnik**	**4.52**	**337**	*e*Pn	**Pn**	**07 37 36.1**	**-0.3**
STON	**Ston**	**4.85**	**334**	*e*Pn	**Pn**	**07 37 40.5**	**-0.3**
LSTV	**Lastovo**	**5.07**	**328**	*e*Pn	**Pn**	**07 37 43.5**	**-0.4**
LSTV				Sn	**Sn**	**07 38 38.5**	**-3.5**
HVAR	**Hvar**	**5.59**	**328**	*e*Pn	**Pn**	**07 37 51.3**	**+0.3**
RICI	**Ricice**	**5.59**	**334**	*e*Pn	**Pn**	**07 37 50.8**	**-0.3**
RICI				Sn	**Sn**	**07 38 53.4**	**-1.6**
ZIRJ	**Zirje**	**6.32**	**326**	*e*Pn	**Pn**	**07 38 01.1**	**+0.1**
MORI	**Morici**	**6.46**	**327**	*e*Pn	**Pn**	**07 38 03.5**	**+0.5**
DUGI	**Dugi Otok**	**6.85**	**325**	*e*Pn	**Pn**	**07 38 08.6**	**+0.3**
NVLJ	**Novalja**	**7.38**	**327**	*e*Pn	**Pn**	**07 38 15.6**	**0.0**
FINES	**FINESS Array B**	**23.20**	**7**	P	**P**	**07 41 33.5**	**-0.9**
	comp=N,3.5nm,0.9s,baz=168,slow=9.8,SNR=5.2						
MKAR	**Makanchi Array**	**45.11**	**59**	P	**P**	**07 44 43.1**	**-0.9**
	comp=N,0.2nm,0.6s,baz=282,slow=8.1,SNR=1.7						
ZALV	**Zalesovo Beam**	**45.45**	**48**	P	**P**	**07 44 44.8**	**-1.7**
	comp=N,0.7nm,0.5s,baz=280,slow=7.7,SNR=1.8						

MOS ***25*** *07:49:40.8±1.3, 56°.37N×163°.01E, h10*^{km}*, mb3.7/6, Error ellipse: s-maj=8.9km s-min=4.6km az=60.7*

KRSC ***25*** *07:49:41.8±1.2, 56°.14N×163°.04E, h12*^{km}*±6*^{km}*, ML4.3*

IDC ***25*** *07:49:42.0±0.9, 56°.55N×162°.54E, h0*^{km}*, mb3.6/9, mb1 3.8/10, mb1mx3.6/58, mbtmp3.6/10, ML2.8/1, Error ellipse: s-maj=29.1km s-min=18.9km az=151.0*

ISC 25 07:49:41.7±1.0**, 56°.33N**±0°.04×**163°.03E**±0°.03**, h10**^{km}±6^{km}**, n99, σ1**^{s}**.50**/117**, mb3.7**/12**, 7C-5D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.17**	**224**	PN	**Pg**	**07 49 45.8**	**+0.4**
KBTR	**Krutoberegovo**	**0.17**	**224**	*e*P	**Pg**	**07 49 45.8**	**+0.4**
KBG	**Krutoberegovo**	**0.20**	**247**	PN	**Pg**	**07 49 46.4**	**+0.6**
KBG				S	**Sg**	**07 49 49.2**	**+0.6**
KBG	**Krutoberegovo**	**0.20**	**247**	*e*P	**Pg**	**07 49 46.4**	**+0.6**
KBG				*e*S	**Sg**	**07 49 49.2**	**+0.6**
SMKR	**Semkarok**	**0.90**	**287**	PN	**Pb**	**07 49 59.2**	**-0.3**
SMKR				S	**Sn**	**07 50 13.5**	**-0.2**
SMKR	**Semkarok**	**0.90**	**287**	*e*P	**Pb**	**07 49 59.2**	**-0.3**
SMKR				*e*S	**Sn**	**07 50 13.5**	**-0.2**
BDR	**Baidarnaya**	**1.04**	**284**	PN	**Pb**	**07 50 01.8**	**-0.1**
BDR				S	**Sn**	**07 50 18.3**	**+1.2**
BDR	**Baidarnaya**	**1.04**	**284**	*e*P	**Pb**	**07 50 01.8**	**-0.1**
BDR				*e*S	**Sn**	**07 50 18.3**	**+1.2**
SRKR	**Sorokina**	**1.08**	**288**	PN	**Pb**	**07 50 02.5**	**-0.1**
SRKR				S	**Sn**	**07 50 18.6**	**+0.5**
SRKR	**Sorokina**	**1.08**	**288**	*e*P	**Pb**	**07 50 02.5**	**-0.1**
SRKR				*e*S	**Sn**	**07 50 18.6**	**+0.5**
ZLN	**Zelenaya**	**1.29**	**257**	PN	**Pn**	**07 50 05.5**	**-0.4**
ZLN	**Zelenaya**	**1.29**	**257**	*e*P	**Pn**	**07 50 05.5**	**-0.4**
CIRR	**Tsirk**	**1.29**	**261**	PN	**Pn**	**07 50 05.6**	**-0.4**
CIRR	**Tsirk**	**1.29**	**261**	*e*P	**Pn**	**07 50 05.6**	**-0.4**
KLY	**Klyuchi**	**1.33**	**270**	PN	**Pn**	**07 50 04.1**	**-2.2**
KLY	**Klyuchi**	**1.33**	**270**	*e*P	**Pn**	**07 50 04.1**	**-2.2**
LGNR	**Loginova**	**1.33**	**260**	PN	**Pn**	**07 50 06.3**	**-0.4**
LGNR	**Loginova**	**1.33**	**260**	*e*P	**Pn**	**07 50 06.3**	**-0.4**
BZGR	**Bezymyannyi-Gr**	**1.37**	**254**	PN	**Pn**	**07 50 06.4**	**-0.6**
BZGR	**Bezymyannyi-Gr**	**1.37**	**254**	*e*P	**Pn**	**07 50 06.4**	**-0.6**
BZWR	**Bezymyannyi-We**	**1.47**	**256**	PN	**Pn**	**07 50 08.1**	**-0.3**
BZWR	**Bezymyannyi-We**	**1.47**	**256**	*e*P	**Pn**	**07 50 08.1**	**-0.3**
KIRR	**Kirishev**	**1.55**	**257**	PN	**Pn**	**07 50 09.3**	**-0.3**
KIRR	**Kirishev**	**1.55**	**257**	*e*P	**Pn**	**07 50 09.3**	**-0.3**
KPT	**Kopyto**	**1.61**	**258**	PN	**Pn**	**07 50 10.4**	**0.0**
KPT	**Kopyto**	**1.61**	**258**	*e*P	**Pn**	**07 50 10.4**	**0.0**
KMNR	**Kamenistaya**	**1.67**	**251**	PN	**Pn**	**07 50 11.5**	**+0.3**
KMNR	**Kamenistaya**	**1.67**	**251**	*e*P	**Pn**	**07 50 11.5**	**+0.3**
KOZ	**Kozyrevsk**	**1.79**	**262**	PN	**Pn**	**07 50 13.5**	**+0.8**
KOZ				S	**Sb**	**07 50 37.4**	**+0.4**
KOZ	**Kozyrevsk**	**1.79**	**262**	*e*P	**Pn**	**07 50 13.5**	**+0.8**
KOZ				*e*S	**Sb**	**07 50 37.4**	**+0.4**
TUMD	**Tumrok D**	**1.87**	**234**	*e*P	**Pn**	**07 50 13.4**	**-0.4**
MKZ	**Mys Kozlova**	**1.93**	**203**	PN	**Pn**	**07 50 13.9**	**-0.7**
MKZ				S	**Sn**	**07 50 38.0**	**-0.8**
MKZ	**Mys Kozlova**	**1.93**	**203**	*e*P	**Pn**	**07 50 13.9**	**-0.7**
MKZ				*e*S	**Sn**	**07 50 38.0**	**-0.8**
TUMR	**Tumrok**	**1.94**	**238**	PN	**Pn**	**07 50 15.3**	**+0.5**
TUMR	**Tumrok**	**1.94**	**238**	*e*P	**Pn**	**07 50 15.3**	**+0.5**
BKI	**Bering**	**2.01**	**123**	PN	**Pn**	**07 50 15.3**	**-0.4**
BKI				S	**Sn**	**07 50 41.0**	**+0.2**
BKI	**Bering**	**2.01**	**123**	*e*P	**Pn**	**07 50 15.3**	**-0.4**
BKI				*e*S	**Sn**	**07 50 41.0**	**+0.2**
ESO	**Esso**	**2.46**	**262**	PN	**Pg**	**07 50 28.3**	**-0.5**
ESO	**Esso**	**2.46**	**262**	*e*P	**Pg**	**07 50 28.3**	**-0.5**
OSSR	**Ossora**	**2.93**	**0**	PN	**Pb**	**07 50 30.8**	**-3.1**
OSSR	**Ossora**	**2.93**	**0**	*e*P	**Pb**	**07 50 30.8**	**-3.1**
KII	**Karymskiy**	**3.08**	**223**	PN	**Pn**	**07 50 31.3**	**+0.7**
KII	**Karymskiy**	**3.08**	**223**	*e*P	**Pn**	**07 50 31.3**	**+0.7**
PALN	**Palana**	**3.22**	**331**	PN	**Pb**	**07 50 39.2**	**+0.3**
PALN	**Palana**	**3.22**	**331**	*e*P	**Pb**	**07 50 39.2**	**+0.3**
SPN	**Mys Shipunski**	**3.68**	**210**	PN	**Pn**	**07 50 38.2**	**-0.5**
SPN	**Mys Shipunski**	**3.68**	**210**	*e*P	**Pn**	**07 50 38.2**	**-0.5**
SPN				*e*S	**Sn**	**07 51 19.1**	**-3.0**
NLC	**Nalytchevo**	**3.82**	**216**	PN	**Pn**	**07 50 41.0**	**+0.4**
NLC	**Nalytchevo**	**3.82**	**216**	*e*P	**Pn**	**07 50 41.0**	**+0.4**
SDLR	**Sedlovina**	**3.89**	**220**	PN	**Pn**	**07 50 42.2**	**+0.6**
SDLR	**Sedlovina**	**3.89**	**220**	*e*P	**Pn**	**07 50 42.2**	**+0.6**
KRER	**Koryakskii**	**3.92**	**221**	PN	**Pn**	**07 50 44.9**	**+2.8**

KRER	Koryakskii	3.92	221	eP	Pn	07 50 44.9	+2.8
SMAR	Somma	3.93	220	PN	Pn	07 50 43.4	+1.1
SMAR	Somma	3.93	220	eP	Pn	07 50 43.4	+1.1
GNL	Ganaly	3.95	230	PN	Pn	07 50 44.0	+1.6
GNL	Ganaly	3.95	230	eP	Pn	07 50 44.0	+1.6
AVH	Avacha	3.95	221	PN	Pn	07 50 44.1	+1.6
AVH	Avacha	3.95	221	eP	Pn	07 50 44.1	+1.6
UGLR	Uglovaya	3.97	220	PN	Pn	07 50 44.0	+1.3
UGLR	Uglovaya	3.97	220	eP	Pn	07 50 44.0	+1.3
KOK	Koryaka	3.97	222	PN	Pn	07 50 44.4	+1.7
KOK	Koryaka	3.97	222	eP	Pn	07 50 44.4	+1.7
DALK	Dalny	4.14	219	PN	Pn	07 50 45.8	+0.9
DALK	Dalny	4.14	219	eP	Pn	07 50 45.8	+0.9
DALK				eS	Sn	07 51 33.1	-0.2
PET	Petropavlovsk	4.18	219	PN	Pn	07 50 46.8	+1.3
PET	Petropavlovsk	4.18	219	eP	Pn	07 50 46.8	+1.3
PET				eS	Sn	07 51 34.9	+0.6
PEA0B	Petropavlovsk-	4.47	226	⇓ePN	Pn	07 50 49.9	+0.4
PETK	Petropavlovsk-	4.47	226	Pn	Pn	07 50 50.2	+0.6
	2.7nm,0.3s,baz=60,slow=15,SNR=12						
PETK				Sn	Sb	07 51 48.6	-5.6
	1.0nm,0.3s,baz=40,slow=21,SNR=1.5						
RUS	Russkaya	4.72	216	PN	Pn	07 50 53.0	+0.1
RUS	Russkaya	4.72	216	eP	Pn	07 50 53.0	+0.1
RUS				eS	Sn	07 51 46.3	-1.3
MTVR	Mutnovka	4.79	218	PN	Pn	07 50 55.9	+1.9
MTVR	Mutnovka	4.79	218	eP	Pn	07 50 55.9	+1.9
APC	Apacha	4.83	227	PN	Pn	07 50 56.5	+2.1
APC	Apacha	4.83	227	eP	Pn	07 50 56.5	+2.1
ASAK	Asacha	4.97	219	PN	Pn	07 50 59.6	+3.2
ASAK	Asacha	4.97	219	eP	Pn	07 50 59.6	+3.2
YSS	Yuzh-Sakhalins	15.65	242	⇑eP	Pn	07 53 20.2	-1.9
YSS				pmax	pmax		
	comp=Z,22nm,1.1s						
YAK	Yakutsk	17.86	302	⇓eP	Pn	07 53 48.1	-1.9
YAK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ERM	Erimo	19.24	230	⇓eP	P	07 54 03.5	-2.4
KLR	Kul'dur	20.08	263	⇑eP	P	07 54 14.6	-0.5
TIXI	Tiksi	20.97	330	P	P	07 54 22.8	-1.8
	comp=Z,1.3nm,0.3s,baz=37,slow=2.6,SNR=3.6						
TIXI	Tiksi	20.97	330	⇑eP	P	07 54 23.6	-1.0
TIXI				pmax	pmax		
	comp=Z,12nm,3.4s						
MSHR	Mys Shultsa	24.60	250	⇓eP	P	07 54 59.4	-2.4
COLA	College	24.95	50	⇑eP	P	07 55 01.5	-3.3
COLA				pmax	pmax		
	comp=Z,2.0nm,1.6s						
ILAR	Eielson Array	25.37	50	P	P	07 55 10.7	+2.1
	comp=Z,0.8nm,0.7s,baz=266,slow=8.1,SNR=10						
INK	Inuvik	30.28	41	P	P	07 55 55.2	+2.7
	comp=Z,0.4nm,0.5s,baz=309,slow=6.0,SNR=5.3						
NRIK	Noril'sk	34.30	322	⇑eP	P	07 56 28.2	+0.5
NRIK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
DGZ	Jazzator, Alta	43.81	295	⇑eP	P	07 57 46.2	-1.5
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURK	Kurchatov	47.50	301	P	P	07 58 16.2	-0.3
KURBB	Kurchatov Arra	47.60	301	P	P	07 58 16.2	-1.1
	comp=Z,0.3nm,0.4s,baz=55,slow=8.0,SNR=5.0						
MK31	Makanchi Array	48.31	295	⇑eP	P	07 58 21.0	-2.0
MKAR	Makanchi Array	48.31	295	P	P	07 58 21.9	-1.1
	comp=Z,0.5nm,0.7s,baz=62,slow=6.7,SNR=3.2						
BRVK	Borovoye	49.75	308	⇓eP	P	07 58 32.1	-1.8
BRVK				pmax	pmax		
	comp=Z,1.0nm,1.3s						
PDAR	Pinedale Array	54.52	65	P	P	07 59 12.4	+2.7
	comp=Z,0.3nm,0.6s,baz=306,slow=2.8,SNR=3.8						
CMAR	Chiang Mai Arr	60.50	259	eP	P	08 00 03.7	+12
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
TXAR	Lajitas Array	67.86	70	P	P	08 00 43.1	+2.9
	comp=Z,0.5nm,0.6s,baz=290,slow=4.3,SNR=10						
WRA	Warramunga Arr	79.75	207	P	P	08 01 52.6	+3.0
	comp=Z,0.5nm,1.1s,baz=16,slow=6.0,SNR=1.7						
ASAR	Alice Springs	83.42	207	P	P	08 02 11.3	+2.2
	comp=Z,0.2nm,0.4s,baz=10,slow=5.7,SNR=1.6						

IDC 25 07:55:26.3±36.0, 4°04N×126°89E, h0^{km}, mb3.4/3, mb1 3.6/3, mb1mx3.1/47, mbtmp3.4/3, Error ellipse: s-maj=610.5km s-min=198.0km az=159.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.93	163	P	P	08 00 51.3	-0.2
	0.3nm,0.6s,baz=343,slow=10.0,SNR=1.1						
ASAR	Alice Springs	28.37	166	P	P	08 01 22.6	+0.1
	0.3nm,0.6s,baz=344,slow=7.3,SNR=5.1						
STKA	Stephens Creek	38.36	160	P	P	08 02 49.2	-0.1
	0.9nm,0.5s,baz=358,slow=10.0,SNR=3.2						

IDC 25 08:04:38.7±28.0, 22°50S×171°46W, h0^{km}, mb4.0/4, mb1 4.2/4, mb1mx3.6/33, mbtmp4.0/4, Error ellipse: s-maj=530.3km s-min=170.9km az=79.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	39.38	265	P	P	08 12 10.5	+0.1
	2.9nm,0.4s,baz=91,slow=5.3,SNR=1.6						
STKA	Stephens Creek	42.52	247	P	P	08 12 34.6	-1.5
	2.6nm,1.0s,baz=78,slow=9.3,SNR=4.2						
ASAR	Alice Springs	50.01	257	P	P	08 13 35.4	+0.1
	0.3nm,0.3s,baz=94,slow=7.2,SNR=9.4						
WRA	Warramunga Arr	50.36	262	P	P	08 13 38.5	+0.6
	0.8nm,0.4s,baz=99,slow=6.9,SNR=9.1						

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*IDC **25** 08:11:41.8±2.7, 36°31N×70°77E, h177^{km}±25^{km}, mb3.6/9, mb1 3.7/15, mb1mx3.3/53, mbtmp4.1/15, MS3.9/2, Ms1 3.9/2, ms1mx2.9/48, Error ellipse: s-maj=20.0km s-min=14.9km az=30.0*

*NNC **25** 08:11:43.2±3.4, 36°92N×70°30E, h0^{km}, mb4.8, mpv4.8, Error ellipse: s-maj=27.8km s-min=21.4km az=175.0*

ISC 25 08:11:44.1±0.6, 36°50N±0°05×70°71E±0°07, h200^{km}, n49, σ1^{s}65/55, mb3.8/8, 8C-1D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	Cherat	2.84	159	P	Pn	08 12 33.0	+0.9
CEP				S	Sn	08 13 09.0	-0.6
CHCP	Chirah Chowk	3.52	143	P	Pn	08 12 40.7	+0.6
THW	Thamme Wali	3.79	167	P	Pn	08 12 43.8	+0.4
KSH	Kashi	5.13	52	Pn	Pn	08 12 56.8	-3.5
KSH				Sn	Sn	08 13 51.0	-9.4
KSH				pmax	pmax		
	comp=Z,120nm,0.3s						
KSH				smax	smax		
	comp=N,250nm,0.5s						
KSH				smax	smax		
	comp=E,180nm,0.6s						
AML	Almayashu	6.08	21	P	Pn	08 13 13.4	+0.7
	SNR=575						
UCH	Uchtor	6.43	26	P	Pn	08 13 18.2	+0.8
	SNR=175						
EKS2	Erkin-Say	6.59	20	P	Pn	08 13 20.2	+1.0
	SNR=40						
KK09	Karatay Array	6.62	359	⇓P	Pn	08 13 17.3	-2.0
	comp=E,34nm,0.5s						
KK09				⇑S	Sn	08 14 28.9	-6.0
	comp=E,38nm,0.5s						
AAK	Ala-Archa	6.79	24	P	Pn	08 13 22.7	+1.0
	comp=E,13nm,0.3s,baz=196,slow=6.9,SNR=120						
AAK				S	Sn	08 14 37.3	-1.8
	comp=E,6.8nm,0.3s,baz=140,slow=24,SNR=23						
AAK	Ala-Archa	6.79	24	P	Pn	08 13 22.8	+1.0
	SNR=52						
AAK	Ala-Archa	6.79	24	⇑P	Pn	08 13 22.3	+0.6
	comp=E,23nm,0.5s						
AAK				⇑S	Sn	08 14 37.5	-1.6
	comp=E,72nm,0.8s						
KBK	Karagaybulak	6.96	27	P	Pn	08 13 25.2	+1.2
	SNR=20						
ULHL	Ulahol	7.16	35	P	Pn	08 13 27.9	+1.3
	SNR=6.6						
CHMS	Chumysh	7.20	24	P	Pn	08 13 28.1	+1.2
	SNR=8.3						
USP	Ospenovka	7.36	22	P	Pn	08 13 29.5	+0.5
	SNR=31						
TKM2	Tokmak 2	7.44	29	P	Pn	08 13 31.1	+0.9
	SNR=35						
TKM2	Tokmak 2	7.44	29	⇑P	Pn	08 13 30.3	+0.2
	comp=E,48nm,0.5s						
TKM2				⇑S	Sn	08 14 54.3	-0.1
	comp=E,12nm,0.8s						
MDOK	Medeo	8.25	34	⇑P	Pn	08 13 41.4	+0.7
	comp=E,29nm,0.6s						
GEYT	Alibeck	10.15	282	P	Pn	08 14 04.5	-0.7
	comp=E,0.9nm,0.3s,baz=100,slow=17,SNR=5.1						
PYUN	Piuthan	13.33	125	eP	Pn	08 14 44.1	-1.9
	comp=E,48nm,0.3s						
MKAR	Makanchi Array	13.43	36	P	Pn	08 14 46.7	-0.2
	comp=E,0.5nm,0.3s,baz=222,slow=17,SNR=12						
DANN	Dangsing	13.68	123	eP	Pn	08 14 48.7	-1.8
	comp=E,24nm,0.3s						
KOLN	Koldanda	13.95	125	eP	Pn	08 14 52.2	-1.5
	comp=E,18nm,0.3s						
GKN	Gorkha	14.50	122	eP	Pn	08 14 59.6	-0.8
	comp=E,50nm,0.3s						
AB31	Akbulak array	14.97	332	P	P	08 15 08.9	+2.4
	comp=E,2.0nm,0.5s,baz=151,slow=12,SNR=31						
AB31				S	S	08 17 49.5	-2.5
	comp=E,4.0nm,0.7s,baz=156,slow=24,SNR=6.4						
DMN	Daman	15.07	122	eP	Pn	08 15 07.0	-0.5
KKN	Kakani	15.08	121	eP	Pn	08 15 06.7	-0.8
	comp=E,45nm,0.4s						
KURBB	Kurchatov Arra	15.20	19	P	Pn	08 15 07.5	-1.1
	comp=E,0.3nm,0.3s,baz=209,slow=11,SNR=11						
PKIN	Phulchoki	15.29	121	eP	Pn	08 15 09.3	-0.9
	comp=E,57nm,0.6s						
PKI	Pulchoki	15.30	121	eP	Pn	08 15 09.4	-1.0
	comp=E,54nm,0.6s						
GUN	Gumba	15.42	119	eP	Pn	08 15 10.7	-1.1
	comp=E,16nm,0.3s						
JIRN	Jiri	15.79	120	eP	Pn	08 15 16.2	-0.1
	comp=E,56nm,0.4s						
RAMN	Ramite	16.52	121	eP	Pn	08 15 24.5	-0.4
	comp=E,46nm,0.3s						
BVAR	Borovoye Array	16.53	359	P	Pn	08 15 25.5	+0.9
	comp=E,1.4nm,0.3s,baz=189,slow=18,SNR=14						
AKTO	Aktyubinsk	16.67	331	P	Pn	08 15 27.3	+1.0
	comp=E,0.7nm,0.3s,baz=139,slow=8.8,SNR=13						
AKTO				S	S	08 18 24.5	-4.5
	comp=E,0.1nm,0.3s,baz=158,slow=19,SNR=1.8						
AKTO	Aktyubinsk	16.67	331	⇑P	Pn	08 15 28.7	+2.5
	comp=E,9.3nm,1.1s						
AKTO				⇑S	Sn	08 18 33.8	+0.2
	comp=E,5.9nm,0.9s						
TAPN	Taplejung	17.05	118	eP	Pn	08 15 31.7	+0.4
	comp=E,25nm,0.6s						
ODAN	Odare	17.12	119	eP	Pn	08 15 32.7	+0.6
	comp=E,42nm,0.6s						
ZALV	Zalesovo Beam	20.01	25	P	P	08 16 02.6	+1.3
	comp=E,5.1nm,0.3s,baz=214,slow=11,SNR=12						
CMAR	Chiang Mai Arr	30.66	118	P	P	08 17 40.2	+0.2
	comp=E,0.6nm,0.3s,baz=296,slow=9.0,SNR=6.1						
NRIK	Noril'sk	34.17	11	P	P	08 18 11.1	+1.2
	comp=E,1.8nm,0.4s,baz=183,slow=2.7,SNR=4.3						
FINES	FINESS Array B	37.35	326	P	P	08 18 38.8	+1.8
	comp=E,2.6nm,0.7s,baz=121,slow=10,SNR=6.5						
ARCES	ARCESS Array B	41.06	338	P	P	08 19 09.5	+1.9
	comp=E,3.7nm,1.0s,baz=97,slow=5.0,SNR=6.4						
TIXI	Tiksi	45.86	22	LR	LR	08 41 08.0	
	comp=E,475nm,19.7s,baz=355,slow=38						
KMBO	Kilima Mbogo	48.66	227	LR	LR	08 42 23.4	
	comp=E,36nm,18.7s,baz=86,slow=38						
TORD	Torodi Ar. Bea	65.48	268	P	P	08 22 05.6	-0.6
	comp=E,0.8nm,0.5s,baz=45,slow=5.2,SNR=6.7						
YKA	Yellowknife Ar	81.26	2	P	P	08 23 38.9	+1.5
	comp=E,0.8nm,0.8s,baz=346,slow=5.6,SNR=5.0						
WRA	Warramunga Arr	82.19	122	P	P	08 23 41.9	-1.1
	comp=E,0.8nm,0.5s,baz=324,slow=4.9,SNR=17						
ASAR	Alice Springs	84.44	125	P	P	08 23 53.4	-1.0
	comp=E,0.6nm,0.6s,baz=308,slow=5.1,SNR=11						

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*IASPEI **25** 08:26:02.9±0.9, 36°54N±0°02×89°61W±0°02, h17^{km}±4^{km}, Error ellipse: s-maj=3.5km s-min=2.9km az=107.9, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*ANF **25** 08:26:02.5±0.5, 36°53N×89°61W, h4^{km}±3^{km}, ML2.7/9, Error ellipse: s-maj=3.1km s-min=2.9km az=100.0*

*NEIC **25** 08:26:03.2±0.9, 36°534N±0°010×89°61W±0°01, h12^{km}±3^{km}, Error ellipse: s-maj=1.6km s-min=1.4km az=105.0*

*SLM **25** 08:26:03.0±1.4, 36°536N±0°008×89°604W±0°007, h8^{km}±3^{km}, Md2.6/30, mb_Lg2.4/11(NEIC), Error ellipse: s-maj=1.2km s-min=0.7km az=160.0*

ISC 25 08:26:03.4±0.8, 36°54N±0°02×89°60W±0°02, h15^{km}±4^{km}, n71, σ0^{s}90/83, New Madrid region, Missouri

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NMEM	New Madrid Sch	0.04	22		Pg	08 26 06.7	+0.5
WALK	Watson Lake	0.05	87		Pg	08 26 06.8	+0.6
MARMO	Marston	0.05	263		Pg	08 26 07.0	+0.8
NMMO	New Madrid	0.07	39		Pg	08 26 07.3	+0.9
CATM	Catron	0.08	335		Pg	08 26 05.7	-0.9
CATM					Sg	08 26 07.7	-0.9
PENMO	Penman	0.09	193		Pg	08 26 05.5	-1.1
PENMO					Sg	08 26 07.6	-1.0
PGVM	Portageville	0.13	233		Pg	08 26 06.2	-0.8
PGVM					Sg	08 26 08.7	-0.6
PPLM	Point Pleasant	0.13	173		Pg	08 26 06.3	-0.9
PPLM					Sg	08 26 08.9	-0.6
POBM	Portage Bay	0.14	200		Pg	08 26 06.3	-0.9
POBM					Sg	08 26 09.0	-0.6
SJMO	Saint John’s B	0.14	48		Pg	08 26 06.4	-0.8
SJMO					Sg	08 26 09.1	-0.6
KEWM	Kewanee	0.16	3		Pg	08 26 06.8	-0.7
KEWM					Sg	08 26 09.8	-0.4
PARMO	Parma	0.17	317		Pg	08 26 07.1	-0.6
PARMO					Sg	08 26 10.2	-0.3
COKM	Charter Oak	0.20	330		Pg	08 26 07.5	-0.5
COKM					Sg	08 26 10.9	-0.3
WYBT	Wynnburg	0.21	156		Pg	08 26 07.6	-0.6
WYBT					Sg	08 26 11.1	-0.2
HENM	Henderson Moun	0.21	31		Pg	08 26 07.5	-0.8
TOPM	Tallapoosa	0.23	267		Pg	08 26 08.0	-0.6
TOPM					Sg	08 26 11.9	-0.1
WADM	Wardell	0.23	222		Pg	08 26 08.0	-0.6
WADM					Sg	08 26 11.8	-0.2
MATM	Matthews	0.24	360		Pg	08 26 08.2	-0.5
MATM					Sg	08 26 12.0	-0.2
FLPT	Flippin	0.26	119		Pg	08 26 08.5	-0.6
EPRM	East Prairie	0.27	48		Pg	08 26 08.5	-0.7
EPRM					Sg	08 26 12.8	-0.2
MLDM	Malden	0.27	289		Pg	08 26 08.7	-0.5
DWDM	Dogwood	0.27	19		Pg	08 26 08.8	-0.6
DWDM					Sg	08 26 13.1	-0.2
HICK	Hickman	0.30	89		Pg	08 26 09.3	-0.5
GLAT	Glass	0.37	136		Pg	08 26 10.3	-0.6
LNXT	Lenox	0.44	168		Pg	08 26 11.9	-0.4
LNXT	Lenox	0.44	168	P	Pg	08 26 12.0	-0.4
	baz=348						
PEBM	Pemiscott Bayo	0.47	206		Pg	08 26 12.3	-0.5
UTMT	University of	0.63	108		Pg	08 26 15.6	-0.1
HALT	Halls	0.66	161		Pg	08 26 15.8	-0.5
GNAR	Gosnell	0.66	211		Pg	08 26 15.9	-0.5
PBMO	Poplar Bluff	0.71	290		Pg	08 26 16.5	-0.7
PBMO	Poplar Bluff	0.71	290	P	Pg	08 26 16.4	-0.8
	baz=110,SNR=38						
PBMO				S	Sg	08 26 25.7	-0.9
	baz=110						
CGM3	Cape Girardeau	0.76	357		Pg	08 26 17.2	-1.1
T45B	Paducah	0.91	58	S	Sg	08 26 31.7	-1.2
	baz=238						
LPAR	Lepanto	1.09	211		Pb	08 26 23.1	-0.9
S44A	Carbondale	1.19	13	Pg	Pb	08 26 24.9	-0.8
S44A	Carbondale	1.19	13	P	Pb	08 26 24.9	-0.8
	baz=194,SNR=13						
SIUC	Southern Illin	1.22	15	Pn	Pn	08 26 24.5	-1.4
SFTN	Shelby Forest	1.22	196		Pn	08 26 25.8	-0.2
HBAR	Harrisburg	1.30	221		Pn	08 26 27.2	+0.2
HBAR	Harrisburg	1.30	221	P	Pn	08 26 26.7	-0.3
	baz=41,SNR=13						
HBAR				S	Sg	08 26 45.3	-0.1
	baz=41						
LCAR	Lake Charles	1.34	250		Pn	08 26 27.8	+0.3
LCAR	Lake Charles	1.34	250	P	Pn	08 26 27.2	-0.3
	baz=69,SNR=29						
W45A	Hickory Valley	1.42	166	Pn	Pb	08 26 29.9	+0.3
W45A	Hickory Valley	1.42	166	P	Pn	08 26 28.8	+0.1
	baz=346,SNR=9.5						
W45A				S	Sb	08 26 47.9	+0.4
	baz=346						
WVT	Waverly	1.49	105		Pn	08 26 29.5	-0.2
WVT	Waverly	1.49	105	P	Pn	08 26 29.5	-0.2
	baz=286,SNR=24						
FVM	French Village	1.59	336	Pn	Pn	08 26 31.9	+0.9
FVM	French Village	1.59	336	P	Pn	08 26 31.3	+0.3
	baz=155,SNR=20						
FVM				S	Sn	08 26 51.9	+0.6
	baz=155						
PLAL	Pickwick Lake	1.99	141		Pn	08 26 37.3	+0.8
PLAL				IAmb_Lg		08 27 11.7	
	comp=Z,16nm,1.1s						
PWLA	Pickwick Lake	2.00	141		Pn	08 26 37.6	+1.0
CCM	Cathedral Cave	2.00	320		Pn	08 26 38.2	+1.5
CCM	Cathedral Cave	2.00	320	P	Pn	08 26 37.9	+1.1
	baz=139,SNR=39						
T47A	Sharon Grove	2.06	77		Pn	08 26 39.0	+1.5
T47A	Sharon Grove	2.06	77	S	Sb	08 27 06.1	+0.2
	baz=258						
SLM	Saint Louis	2.15	347	IAmb_Lg		08 27 13.8	
	comp=Z,15nm,0.8s						
SLM	Saint Louis	2.15	347	S	Sb	08 27 09.1	+0.4
	baz=166						
MGMO	Mountain Grove	2.23	287		Pn	08 26 41.4	+1.6
V48A	Smith Brothers	2.39	109		Pn	08 26 43.0	+0.9
U40A	Yellville	2.63	267	Pn	Pn	08 26 47.1	+1.8
Y45A	Yeager Farm, C	2.67	179	Pn	Pn	08 26 46.4	+0.5
R40A	Maddies Statio	2.75	310	Pn	Pn	08 26 48.4	+1.4
R40A	Maddies Statio	2.75	310	P	Pn	08 26 48.3	+1.2
	baz=129,SNR=11						
X48A	Hartselle	2.95	134		Pn	08 26 52.3	+2.6
S39A	Bolivar	3.19	292	Pn	Pn	08 26 56.6	+3.5
MIAR	Mount Ida	3.80	240	IAmb_Lg		08 28 03.9	
	comp=Z,8.2nm,0.8s						
S51A	Beattyville	4.93	75	IAmb_Lg		08 28 48.9	
	comp=Z,8.4nm,1.1s						
T35A	Sooner Cattle	5.56	276	IAmb_Lg		08 29 07.8	
	comp=Z,5.9nm,0.8s						
BG3	Lake Jocassee	5.64	104		Pn	08 27 21.2	-5.5
J47A	Sunmer	7.63	27	IAmb_Lg		08 30 11.6	
	comp=Z,4.0nm,0.8s						
BIRD	Birdtown, Kers	7.68	102	IAmb_Lg		08 30 02.1	
	comp=Z,4.4nm,1.0s						

IDC 25 08:39:21.8±3.0, 32°51S×178°54W, h0^{km}, mb3.6/2, mb1 3.8/3, mb1mx3.7/29, mbtmp3.6/3, ML3.4/1, Error ellipse: s-maj=69.9km s-min=45.4km az=120.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	6.74	211	Pn	Pn	08 41 00.8	-1.1
	0.7nm,0.3s,baz=122,slow=23,SNR=9.0						
URZ				Sn	Sn	08 42 11.1	-8.3
	0.5nm,0.3s,baz=307,slow=20,SNR=1.4						
ASAR	Alice Springs	42.58	269	P	P	08 47 19.6	-0.1
	0.5nm,0.7s,baz=112,slow=7.0,SNR=5.8						
WRA	Warramunga Arr	43.76	275	P	P	08 47 29.2	0.0
	0.5nm,0.4s,baz=113,slow=8.0,SNR=18						
FINES	FINESS Array B	146.95	338	PKPbc	PKPbc	08 59 04.9	-0.6
	3.3nm,0.9s,baz=46,slow=6.0,SNR=6.6						

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*KRSC **25** 08:43:56.9±0.9, 54°34N×160°84E, h122^{km}±11^{km}, ML4.2*

*IDC **25** 08:43:58.6±3.2, 54°73N×160°28E, h119^{km}±52^{km}, mb3.2/4, mb1 3.4/5, mb1mx3.0/45, mbtmp3.4/5, Error ellipse: s-maj=60.0km s-min=34.3km az=173.0*

ISC 25 08:43:58.0±0.8, 54°36N±0°04×160°77E±0°05, h123^{km}±7^{km}, n45, σ0^{s}79/61, mb3.7/5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	Mys Kozlova	0.60	70	eP	Pn	08 44 17.2	+0.3
MKZ				eS	Sn	08 44 31.1	0.0
KII	Karymskiy	0.84	248	eP	Pn	08 44 19.1	+0.2
KII				eS	Sn	08 44 34.7	0.0
TUMD	Tumrok D	0.87	346	eP	Pn	08 44 18.6	-0.5
TUMD				eS	Sn	08 44 34.2	-1.0
TUMR	Tumrok	0.99	339	eP	Pn	08 44 20.6	+0.2
SPN	Mys Shipunski	1.34	200	eP	Pn	08 44 23.6	-0.2
SPN				eS	Sn	08 44 42.6	-0.7
KMNR	Kamenistaya	1.44	348	eP	Pn	08 44 25.2	+0.2
NLC	Nalytchevo	1.46	216	eP	Pn	08 44 25.3	+0.2
NLC				eS	Sn	08 44 45.4	-0.3
SDLR	Sedlovina	1.55	227	eP	Pn	08 44 26.9	+0.5
SDLR				eS	Sn	08 44 47.8	-0.1
BZGR	Bezymyannyi-Gr	1.59	359	eP	Pn	08 44 26.6	-0.1
KRER	Koryakskii	1.59	229	eP	Pn	08 44 27.5	+0.6
SMAR	Somma	1.60	228	eP	Pn	08 44 27.6	+0.6
SMAR				eS	Sn	08 44 49.3	+0.3
BZWR	Bezymyannyi-We	1.62	355	eP	Pn	08 44 27.3	+0.2
KIRR	Kirishev	1.62	351	eP	Pn	08 44 27.1	0.0
AVH	Avacha	1.63	229	eP	Pn	08 44 28.0	+0.8
AVH				eS	Sn	08 44 50.7	+1.3
UGLR	Uglovaya	1.63	226	eP	Pn	08 44 28.0	+0.8
UGLR				eS	Sn	08 44 48.9	-0.6
KPT	Kopyto	1.64	349	eP	Pn	08 44 27.0	-0.3
KOK	Koryaka	1.65	231	eP	Pn	08 44 28.1	+0.6
ZLN	Zelenaya	1.66	1	eP	Pn	08 44 28.1	+0.5
LGNR	Loginova	1.73	359	eP	Pn	08 44 29.1	+0.5
CIRR	Tsirk	1.76	360	eP	Pn	08 44 29.3	+0.5
DALK	Dalny	1.79	223	eP	Pn	08 44 29.3	+0.3
DALK				eS	Sn	08 44 52.7	+0.1
GNL	Ganaly	1.79	249	eP	Pn	08 44 29.5	+0.3
PET	Petropavlovsk	1.83	224	eP	Pn	08 44 30.0	+0.5
PET				eS	Sn	08 44 53.2	-0.4
KRSR	Krestovskiy	1.87	357	eP	Pn	08 44 29.7	-0.3
KLY	Klyuchi	1.96	358	eP	Pn	08 44 31.1	+0.1
KLY				eS	Sn	08 44 57.1	+0.7
ESO	Esso	1.97	324	eP	Pn	08 44 36.1	+4.9
KBTR	Krutoberegovo	2.19	31	eP	Pn	08 44 34.6	+0.6
KBTR				eS	Sn	08 45 01.3	-0.3
KBG	Krutoberegovo	2.20	29	eP	Pn	08 44 34.6	+0.6
KBG				eS	Sn	08 45 01.4	-0.3
PETK	Petropavlovsk-	2.21	237	P	Pn	08 44 33.8	-0.4
	1.4nm,0.3s,baz=75,slow=17,SNR=16						
PETK				S	Sn	08 45 03.7	+1.7
	5.7nm,0.3s,baz=83,slow=18,SNR=4.9						
BDR	Baidarnaya	2.23	6	eP	Pn	08 44 34.8	+0.3
BDR				eS	Sn	08 45 02.1	-0.4
SMKR	Semkarok	2.27	10	eP	Pn	08 44 35.1	+0.2
SRKR	Sorokina	2.31	5	eP	Pn	08 44 35.8	+0.3
RUS	Russkaya	2.35	216	eP	Pn	08 44 36.0	0.0
RUS				eS	Sn	08 45 03.6	-1.5
MTVR	Mutnovka	2.43	221	eP	Pn	08 44 37.9	+0.7
MTVR				eS	Sn	08 45 07.2	0.0
ASAK	Asacha	2.62	222	eP	Pn	08 44 40.4	+0.9
KDTR	Khodutka, Kamc	3.02	214	eP	Pn	08 44 44.3	-0.3
KDTR				eS	Sn	08 45 18.1	-2.5
BKI	Bering	3.13	72	eP	Pn	08 44 46.6	+0.6
BKI				eS	Sn	08 45 21.5	-1.6
ILAR	Eielson Array	27.65	47	P	P	08 49 34.2	+0.6
	0.2nm,0.6s,baz=271,slow=8.7,SNR=5.4						
INK	Inuvik	32.63	39	P	P	08 50 18.1	+0.7
	0.4nm,0.3s,baz=315,slow=2.9,SNR=5.4						
H11N2	WAKE ISLAND Hy	34.88	170	T	T	09 28 11.5	
	baz=355,slow=76,SNR=13						
H11N3	WAKE ISLAND Hy	34.90	170	T	T	09 28 12.5	
	baz=355,slow=76,SNR=12						
H11N1	WAKE ISLAND Hy	34.90	170	T	T	09 28 12.7	
	baz=355,slow=76,SNR=13						
SUMG	Summit	52.65	7	iP	P	08 52 59.0	-0.2
SUMG				IAmb	IAmb	08 52 59.9	
	comp=Z,4.0nm,0.8s						
FINES	FINESS Array B	59.12	337	P	P	08 53 42.6	-2.2
	comp=Z,2.3nm,1.0s,baz=40,slow=7.2,SNR=5.2						
TXAR	Lajitas Array	69.78	68	P	P	08 54 56.5	+1.7
	comp=Z,0.1nm,0.4s,baz=303,slow=5.0,SNR=3.7						

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*JMA **25** 08:55:34.6±0.5, 43°40N×148°85E, h30^{km}, M3.8*

*SKHL **25** 08:55:35.5±0.5, 43°20N×148°70E, h40^{km}±9^{km}, mb4.4/3*

ISC 25 08:55:30.1±2.7, 42°96N±0°08×149°1E±0°1, h35^{km}, n21, σ2^{s}53/31, Off southeast coast of Hokkaido

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

KUR	Kuril'sk	2.43	340	*e*P	Pn	08 56 08.1	+0.8
KUR				AMB	AMB	08 56 11.2	
	140nm,0.8s						
KUR				*e*S	Sn	08 56 33.0	-2.8
KUR				A	A	08 56 34.3	
	70nm,0.3s						
KUR				A	A	08 56 34.3	
	70nm,0.3s						
NEM2	Nemuro 2	2.46	281	P	Pn	08 56 09.0	+1.4
NEM2				*e*S	Sn	08 56 34.7	-1.7
NMR	Nemuro--Hokkai	2.47	281	*i* P	Pn	08 56 09.0	+1.2
NMR				*i* S	Sn	08 56 35.0	-1.7
YUK	Yuzh-Kuril'sk	2.56	296	*e*P	Pn	08 56 11.5	+2.5
YUK				AMB	AMB	08 56 12.9	
	60nm,0.4s						
YUK				*e*S	Sn	08 56 36.7	-2.3
YUK				A	A	08 56 41.5	
	140nm,0.4s						
YUK				A	A	08 56 41.5	
	70nm,0.4s						
GRPR	Tuman	2.60	295	*e*P	Pn	08 56 10.0	+0.4
GRPR				AMB	AMB	08 56 13.0	
	38nm,0.3s						
GRPR				*e*S	Sn	08 56 37.0	-3.0
GRPR				A	A	08 56 38.0	
	232nm,0.3s						
GRPR				A	A	08 56 38.0	
	191nm,0.3s						
GLVR	Golovnino	2.69	288	*e*S	Sn	08 56 41.0	-1.3
JAK	Akkeshi	3.20	272	*e*S	Sn	08 56 53.1	-1.6
JOB	Onbets	3.83	271	P	Pn	08 56 29.0	+2.5
JTKR	Abashiri--Toko	3.88	287	P	Pn	08 56 29.7	+2.5
JAR	Ashorobuto	3.88	277	P	Pn	08 56 29.5	+2.3
JAR				*e*S	Sn	08 57 10.0	-1.6
JCH	Churui	4.21	267	P	Pn	08 56 34.3	+2.7
JCH				*e*S	Sn	08 57 18.0	-1.5
JMP	Maruseppu	4.28	286	P	Pn	08 56 35.4	+2.7
JFR	Furan	4.74	275	P	Pn	08 56 42.2	+3.2
JFR				*e*S	Sn	08 57 32.3	-0.4
JBT2	Biratori 2	4.92	270	P	Pn	08 56 43.8	+2.3
JNB	Noboribetsu	5.93	268	P	Pn	08 56 58.3	+3.0
JNB				*e*S	Sn	08 58 00.4	-1.5
JKB	Kayabe	6.03	263	P	Pn	08 57 00.1	+3.3
JKB				*e*S	Sn	08 58 02.2	-2.4
JTH	Tanohata	6.19	243	*e*S	Sn	08 58 04.8	-3.6
JANG	Nango	6.21	248	*e*S	Sn	08 58 04.9	-4.0
JTM	Tenmabayashi	6.34	253	*e*S	Sn	08 58 10.1	-2.1
OFUJ	Ofunato	6.80	238	*e*S	Sn	08 58 20.8	-2.6
JIO	Ouri	7.38	235	*e*S	Sn	08 58 33.7	-4.0

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*TUL **25** 09:00:08.7±1.5, 36°.61N±0°.02×99°.01W±0°.04, h7km±7km, ML2.8, mb_Lg2.6/22(NEIC), Error ellipse: s-maj=4.7km s-min=2.5km az=112.0*

*ANF **25** 09:00:09.1±0.8, 36°.61N×99°.02W, h4km±7km, ML3.1/6, Error ellipse: s-maj=8.6km s-min=3.3km az=65.0*

*NEIC **25** 09:00:09.1±1.2, 36°.62N±0°.02×98°.99W±0°.04, h5km±2km, Error ellipse: s-maj=5.6km s-min=3.1km az=297.0*

ISC 25 09:00:09.5±1.3**, 36°.61N**±0°.03×**98°.95W**±0°.04**, h4**km±13km**, n45, σ0s.52**/44**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
U32A	Winter Ranch,	0.23	190	Pg	Pg	09 00 13.6	-0.4
U32A				Sg	Sg	09 00 17.2	+0.1
U32A	Winter Ranch,	0.23	190	P	Pg	09 00 13.6	-0.4
	baz=359						
OK032	Salt Plains WL	0.63	72		Pg	09 00 21.4	-0.1
CROK	Carrier	0.79	97	Pg	Pg	09 00 24.4	-0.2
CROK				Sg	Sg	09 00 35.7	+1.0
KAN10	Anthony SW Sta	0.86	53	Pg	Pg	09 00 25.5	-0.5
KAN10				Sg	Sg	09 00 37.7	+0.6
KAN14	Manchester OK	0.87	66	Pg	Pg	09 00 25.9	-0.2
GC02	Grant County #	0.91	74		Pg	09 00 26.6	-0.4
GC02				Sg	Sg	09 00 39.4	+0.6
KAN16	Harper SW Stat	0.94	49	Pg	Pg	09 00 27.1	-0.5
KAN05	Bluff City Nor	1.00	60	Pg	Pg	09 00 28.8	+0.2
KAN05				IAmb_Lg		09 00 40.9	
	comp=Z,87nm,0.9s						
KAN08	Anthony NE Sta	1.00	52	Pg	Pg	09 00 28.1	-0.5
KAN08				Sg	Sb	09 00 42.5	-0.4
KAN12	Harper NE Stat	1.03	48	Pg	Pg	09 00 28.8	-0.4
KAN17	Caldwell West	1.05	65	Pg	Pg	09 00 29.2	-0.4
KAN06	Argonia West S	1.08	54	Pg	Pg	09 00 29.7	-0.6
KAN09	Caldwell North	1.19	63		Pg	09 00 31.6	-0.7
KAN13	South Haven SW	1.25	71		Pg	09 00 32.6	-0.8
BLOK	Blackwell	1.40	83		Pn	09 00 35.4	-0.5
BCOK	Bluff Creek, N	1.44	131		Pn	09 00 36.2	-0.2
OK029	Liberty Lake	1.46	123		Pn	09 00 36.2	-0.4
OK025	Westminster Rd	1.66	128		Pn	09 00 39.5	+0.1
OKCFA	Oklahoma City	1.70	134	Pn	Pn	09 00 40.2	+0.2
OKCFA	Oklahoma City	1.70	134	S	Sb	09 01 03.4	+0.2
	baz=315						
R32A	Long Quarter,	1.82	6		Pn	09 00 41.8	0.0
R32A	Long Quarter,	1.82	6	P	Pn	09 00 41.7	0.0
	baz=188,SNR=37						
R32A				S	Sb	09 01 06.0	-0.6
	baz=188						
OK031	S. Brethren Rd	1.83	110	Pn	Pn	09 00 41.9	+0.1
QUOK	Quay	1.86	103		Pn	09 00 41.9	-0.3
WMOK	Wichita Mounta	1.87	176		Pn	09 00 42.1	-0.2
WMOK	Wichita Mounta	1.87	176	P	Pn	09 00 42.0	-0.4
	baz=355						
OK030	Cody Creek RV	1.88	111	IAmb_Lg		09 01 11.2	
	comp=Z,28nm,0.7s						
OK034	N. Norfolk Rd.	1.90	108	Pn	Pn	09 00 43.2	+0.4
T35A	Sooner Cattle	1.98	80		Pn	09 00 44.0	+0.2
T35A				IAmb_Lg		09 01 13.0	
	comp=Z,22nm,0.9s						
T35B	Sooner Cattle	1.98	80	P	Pn	09 00 44.0	+0.1
	baz=263,SNR=22						
T35B				S	Sb	09 01 11.9	+0.7
	baz=263						
X34A	Smith Ranch, M	2.20	155		Pn	09 00 48.1	+1.2
X34A				IAmb_Lg		09 01 18.4	
	comp=Z,24nm,0.7s						
W35A	Tecumseh	2.23	130		Pn	09 00 46.4	-0.8
CBKS	Cedar Bluff	2.29	344		Pn	09 00 48.9	+0.8
CBKS	Cedar Bluff	2.29	344	P	Pn	09 00 49.0	+0.8
	baz=165,SNR=18						
CBKS				Sb	Sb	09 01 19.7	-0.4
	baz=165						
AMTX	Amarillo	2.81	233	IAmb_Lg		09 01 42.8	
	comp=Z,15nm,0.8s						
X37A	Clayton	3.54	124	IAmb_Lg		09 02 07.7	
	comp=Z,18nm,0.7s						
KSCO	Kaye Shedlock'	3.77	311	IAmb_Lg		09 02 15.7	
	comp=Z,13nm,0.8s						
W39A	Magazine	4.42	107	P	Pn	09 01 17.4	-0.1
	baz=290,SNR=6.3						
S39A	Bolivar	4.62	75	P	Pn	09 01 19.8	-0.4
	baz=259,SNR=8.5						
U40A	Yellville	4.92	91	IAmb_Lg		09 02 49.5	
	comp=Z,10nm,0.9s						
WHAR	Wooly Hollow	5.56	102	IAmb_Lg		09 03 11.9	
	comp=Z,15nm,1.1s						
435B	Jarrell	5.92	169	IAmb_Lg		09 03 23.0	
	comp=Z,13nm,1.1s						
JCT	Junction City	6.15	187	IAmb_Lg		09 03 33.2	
	comp=Z,7.5nm,0.8s						
PBMO	Poplar Bluff	6.85	86	IAmb_Lg		09 03 48.8	
	comp=Z,8.6nm,1.1s						

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*IDC **25** 09:04:03.2±1.1, 13°.65S×167°.63E, h0km, mb3.9/8, mb1 4.0/8, mb1mx3.9/31, mbtmp3.9/8, Error ellipse: s-maj=37.8km s-min=25.7km az=122.0*

ISC 25 09:04:08.9±1.2**, 13°.7S**±0°.2×**167°.6E**±0°.3**, h35km, n9, σ1s.05**/9**, mb3.8**/8**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	29.91	228	P	P	09 10 15.0	+1.3
	2.0nm,0.5s,baz=30,slow=9.1,SNR=8.4						
WRA	Warramunga Arr	32.38	254	P	P	09 10 35.3	-0.3
	0.2nm,0.4s,baz=87,slow=9.4,SNR=4.8						
ASAR	Alice Springs	33.34	248	P	P	09 10 43.2	-0.7
	0.6nm,0.5s,baz=74,slow=9.2,SNR=17						
CMAR	Chiang Mai Arr	74.79	294	P	P	09 15 45.3	-0.8
	0.6nm,0.4s,baz=110,slow=3.8,SNR=4.2						
QSPA	South Pole Qui	76.36	180	P	P	09 15 54.0	-0.4
	1.0nm,0.5s,baz=241,slow=0.5,SNR=10						
SONM	Songino Array	81.82	323	P	P	09 16 25.4	+0.8
	0.3nm,0.4s,baz=140,slow=5.2,SNR=2.7						
ILAR	Eielson Array	85.42	18	P	P	09 16 43.1	+0.7
	0.3nm,0.6s,baz=233,slow=5.5,SNR=7.5						
MKAR	Makanchi Array	96.64	316	P	P	09 17 35.5	0.0
	0.5nm,0.6s,baz=91,slow=6.8,SNR=4.6						
ARCES	ARCESS Array B	119.30	346	PKP	PKPdf	09 22 52.5	-1.4
	2.7nm,0.9s,baz=54,slow=2.0,SNR=9.7						

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*IDC **25** 09:13:59.4±2.2, 6°.26S×148°.23E, h0km, mb3.9/4, mb1 4.1/6, mb1mx3.8/40, mbtmp3.9/6, ML3.9/1, Error ellipse: s-maj=60.0km s-min=25.1km az=97.0*

ISC 25 09:14:06.8±2.5**, 6°.3S**±0°.1×**148°.0E**±0°.5**, h51km, n7, σ0s.89**/8**, mb3.9**/4**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.21	195	Pn	Pn	09 14 53.6	-1.2
	24nm,0.3s,baz=29,slow=8.7,SNR=15						
PMG				Sn	Sn	09 15 33.1	+1.4
	12nm,0.3s,baz=356,slow=22,SNR=4.0						
WRA	Warramunga Arr	19.00	223	P	P	09 18 23.8	-0.6
	0.4nm,0.3s,baz=52,slow=10,SNR=19						
ASAR	Alice Springs	21.97	217	P	P	09 18 56.5	-0.1
	3.4nm,0.7s,baz=52,slow=8.8,SNR=35						
FITZ	Fitzroy Crossi	24.79	240	P	P	09 19 24.1	-0.1
	2.8nm,0.5s,baz=54,slow=8.5,SNR=19						
STKA	Stephens Creek	26.15	192	P	P	09 19 36.8	+0.4
	2.7nm,0.7s,baz=3.1,slow=8.0,SNR=11						
MKAR	Makanchi Array	78.37	320	P	P	09 26 02.3	+0.3
	0.2nm,0.6s,baz=101,slow=7.5,SNR=1.9						
TORD	Torodi Ar. Bea	146.15	284	PKPbc	PKPab	09 33 43.6	+0.4
	0.5nm,0.6s,baz=68,slow=4.7,SNR=3.7						

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*SNET **25** 09:17:05.4±0.8, 13°.33N×90°.24W, h32km±4km, ML2.8*

*GCG **25** 09:17:07.3±0.6, 13°.45N×90°.60W, h14km±8km, MD3.3*

ISC 25 09:17:04.8±2.7**, 13°.3N**±0°.1×**90°.29W**±0°.07**, h33**km±6km**, n13, σ0s.59**/18**, 1D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEVE	Cerro Verde	0.82	52	*e*P	Pb	09 17 20.8	-0.1
SLOZ	Alcaldia de Sa	0.86	35	*e*P	Pn	09 17 20.9	+0.3
SLOZ				*e*S	Sb	09 17 32.3	-0.3
SLOZ				IAML		09 17 35.8	
	comp=Z,194nm,0.5s						
JAYA	Jayaque - finc	0.88	68	*e*P	Pn	09 17 21.2	+0.1
JAYA				*e*S	Sb	09 17 33.1	-0.3
JAYA				IAML		09 17 34.6	
	comp=Z,1μm,0.2s						
UEES	Universidad Ev	1.09	69	IAML		09 17 41.3	
	comp=Z,209nm,0.2s						
PCG	Pacaya	1.11	344	*e*S	Sn	09 17 39.0	+0.3
TACO	Tacachico	1.11	54	*e*P	Pn	09 17 24.6	+0.4
TACO				*e*S	Sb	09 17 39.5	-0.4
OPAM	Oficina de Pla	1.13	70	IAML		09 17 43.6	
	comp=Z,225nm,0.2s						
FUG	Fuego 3	1.25	334	⇓*e*P	Pn	09 17 26.3	+0.2
FUG				*e*S	Sn	09 17 40.3	-1.5
NBG	Las Nubes	1.26	357	*e*P	Pb	09 17 28.2	-0.1
NBG				*e*S	Sb	09 17 45.3	+0.9
ALJI	Alcalda de J	1.67	89	*e*P	Pn	09 17 31.6	-0.2
COEB	Comit de Eme	1.72	84	*e*P	Pn	09 17 32.9	+0.3
COEB				*e*S	Sn	09 17 53.9	+0.5
COEB				IAML		09 17 55.6	
	comp=Z,57nm,0.3s						
STG3	Santiaguito 3,	1.86	318	*e*P	Pn	09 17 35.1	+0.5
STG3				*e*S	Sn	09 17 56.6	-0.5
LCND	La Caada	2.33	90	*e*P	Pn	09 17 41.1	+0.2

MAN 25 09:21:45.3, 13°.76N×119°.82E, h23km, mb4.0, ML2.8, MS2.5, Philippine Islands region

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IDC 25 09:22:39.0±1.5**, 5°.02S×128°.34E, h0km, mb3.9**/2**, mb1 3.7**/5**, mb1mx3.3**/53**, mbtmp3.5**/5**, ML3.2**/3**, Error ellipse: s-maj=52.8km s-min=24.6km az=77.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	5.05	35	Pn	Pn	09 23 57.5	+1.4
	1.1nm,0.3s,baz=65,slow=12,SNR=17						
SIJI				Sn	Sn	09 24 43.1	-12
	3.1nm,0.3s,baz=218,slow=22,SNR=11						
WRA	Warramunga Arr	15.94	159	Pn	Pn	09 26 24.1	-0.8
	0.1nm,0.3s,baz=346,slow=13,SNR=2.2						
WRA				Sn	Sn	09 29 08.6	-14
	0.2nm,0.3s,baz=335,slow=22,SNR=6.9						
ASAR	Alice Springs	19.30	164	P	P	09 27 05.3	-0.4
	0.1nm,0.3s,baz=350,slow=11,SNR=5.2						
STKA	Stephens Creek	29.47	157	P	P	09 28 45.4	+0.7
	2.3nm,0.8s,baz=330,slow=16,SNR=2.8						
MKAR	Makanchi Array	65.67	327	P	P	09 33 24.9	-0.4
	0.3nm,0.4s,baz=113,slow=8.3,SNR=5.4						

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*IDC **25** 09:23:52.4±20.0, 36°.02N×72°.01E, h100km±115km, mb3.0/1, mb1 3.4/4, mb1mx3.1/49, mbtmp3.8/4, ML3.3/3, Error ellipse: s-maj=329.0km s-min=50.3km az=156.0*

*NNC **25** 09:24:09.2±16.0, 37°.96N×71°.46E, h0km, mb4.1, mpv3.9, Error ellipse: s-maj=170.1km s-min=83.4km az=153.0*

ISC 25 09:24:03.1±2.1**, 37°.3N**±0°.2×**71°.4E**±0°.1**, h109km, n14, σ1s.22**/17**, 1C-5D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	5.14	20	P	Pn	09 25 19.2	+1.2
	SNR=40						
UCH	Uchtor	5.47	25	P	Pn	09 25 23.9	+1.3
	SNR=9.3						
EKS2	Erkin-Say	5.66	18	P	Pn	09 25 26.7	+1.9
	SNR=22						
AAK	Ala-Archa	5.83	23	P	Pn	09 25 28.7	+1.5
	SNR=12						
AAK	Ala-Archa	5.83	23	P	Pn	09 25 28.6	+1.4
	4.7nm,0.4s						
AAK				⇓S	Sn	09 26 32.5	-0.4
	7.7nm,0.7s						
KK09	Karatay Array	5.85	354	⇓P	Pn	09 25 29.1	+1.8
	9.9nm,0.3s						
USP	Ospenovka	6.41	21	P	Pn	09 25 35.8	+0.9
	SNR=11						
TKM2	Tokmak 2	6.47	29	P	Pn	09 25 36.8	+0.9
	SNR=7.9						
TKM2	Tokmak 2	6.47	29	⇓P	Pn	09 25 36.5	+0.6
	9.1nm,1.1s						
TKM2				⇓S	Sn	09 26 46.4	-1.9
	1.4nm,0.5s						
GEYT	Alibeck	10.55	277	P	Pn	09 26 30.5	-0.5
	0.8nm,0.3s,baz=180,slow=13,SNR=1.9						
MKAR	Makanchi Array	12.46	37	P	Pn	09 26 56.0	-0.4
	0.1nm,0.3s,baz=219,slow=14,SNR=8.4						
KURBB	Kurchatov Arra	14.26	19	P	P	09 27 23.7	0.0
	0.1nm,0.3s,baz=207,slow=11,SNR=4.2						
AB31	Akbulak array	14.54	329	⇑P	P	09 27 26.4	-0.4
	0.6nm,0.5s,baz=133,slow=13,SNR=28						
AB31				⇓S	Sn	09 30 03.3	-0.4
	0.6nm,0.5s,baz=125,slow=24,SNR=4.3						
ZALV	Zalesovo Beam	19.05	25	P	P	09 28 17.2	+0.6
	0.7nm,0.4s,baz=228,slow=9.8,SNR=5.6						

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*NEIC **25** 09:26:22.7±1.7, 8°.53S±0°.08×71°.4W±0°.1, h629km±5km, mb4.7/288, Error ellipse: s-maj=14.8km s-min=11.5km az=73.0*

*VAO **25** 09:26:22.7±0.3, 8°.67S×71°.42W, h651km±3km, mb4.9*

*IDC **25** 09:26:23.1±0.3, 8°.53S×71°.36W, h646km±3km, mb4.0/30, mb1 4.2/37, mb1mx4.1/46, mbtmp5.0/37, Error ellipse: s-maj=7.9km s-min=5.8km az=72.0*

*BDF **25** 09:26:23±1.9, 8°.59S±0°.08×71°.4W±0°.1, h651km±4km, Error ellipse: s-maj=14.8km s-min=11.2km az=73.0*

ISC 25 09:26:22.8±0.3**, 8°.54S**±0°.04×**71°.41W**±0°.05**, h644**km±3km**, h645km:pP-P, n769, σ0s.96**/828**, mb4.6**/160**, 2D, Western Brazil**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CZSB	Cruzeiro do Su	1.52	302	*e*P	P	09 27 39.6	0.0
CZSB	Cruzeiro do Su	1.52	302	P	P	09 27 39.4	-0.2
CZSB				S	S	09 28 39.9	-2.0
TBTG	Tabatinga, AM	4.58	19	*e*P	P	09 27 57.4	+1.9
TBTG	Tabatinga, AM	4.58	19	*e*P	P	09 27 56.4	+1.0
TBTG	Tabatinga, AM	4.58	19	P	P	09 27 56.6	+1.1
TBTG				S	S	09 29 11.5	+0.6
ETMB	Extrema	5.28	104	*e*P	P	09 28 01.4	+0.8
ETMB	Extrema	5.28	104	P	P	09 28 01.2	+0.6
ETMB					S	09 29 20.5	0.0
NNA	Nana	6.35	237	P	P	09 28 09.4	+0.2
	34nm,0.3s,baz=41,slow=6.8,SNR=283						
NNA				S	S	09 29 35.2	-1.0
	2.6nm,0.3s,baz=159,slow=19,SNR=9.3						
ATAH	Atahualpa	7.06	281	P	P	09 28 17.4	+1.6
	11nm,0.3s,baz=118,slow=5.4,SNR=176						
ATAH				S	S	09 29 49.1	+1.0
	2.3nm,0.3s,baz=359,slow=20,SNR=12						
SAML	Samuel	8.14	93	P	P	09 28 25.7	+0.7
LPAZ	La Paz	8.34	158	P	P	09 28 27.4	0.0
PTLC	Puerto Leguiza	9.29	339	*e*P	P	09 28 30.4	-5.4
PB16	IPOC Station P	9.91	169	P	P	09 28 40.4	-1.8
PB12	IPOC Station P	10.07	174	P	P	09 28 41.1	-2.1
MACC	Macarena, Meta	10.89	347	*e*P	P	09 28 49.2	-2.0
TULM	Tulcn-Chalpat	11.18	325	*e*P	P	09 28 53.8	-0.7
OTAV	Otavalo	11.19	321	*e*P	P	09 28 55.9	+1.3
OTAV	Otavalo	11.19	321	*e*P	P	09 28 55.9	+1.3
OTAV	Otavalo	11.19	321	P	P	09 28 56.0	+1.4
CUSE	Cuicocha Este	11.21	321	*e*P	P	09 28 55.6	+0.9
PB11	IPOC Station P	11.28	172	P	P	09 28 53.1	-1.8
GCUF	Volcan Galeras	11.37	328	*e*P	P	09 28 58.2	+1.9
GARC	Garzon, Huila	11.41	339	*e*P	P	09 28 56.5	+0.1
PAC1	Pacto, Paraso	11.43	320	*e*P	P	09 28 56.8	+0.3
TA02	Huaiquique	11.72	174	P	P	09 28 58.7	-0.2
PB08	IPOC Station P	11.73	170	P	P	09 28 58.7	-0.7
SOTA	Rioblanco	11.81	334	*e*P	P	09 28 58.6	-1.7
BETC	Betania	11.85	340	*e*P	P	09 29 00.9	+0.7
VILB	Vilhena	11.85	113	*e*P	P	09 29 00.7	+0.5
VILB	Vilhena	11.85	113	P	P	09 29 01.0	+0.8
PCON	Cinco Dias	11.89	335	*e*P	P	09 29 02.6	+1.4
MACA	Manacapuru-AM	11.93	64	*e*P	P	09 29 01.4	+0.5
MACA	Manacapuru-AM	11.93	64	P	P	09 29 01.4	+0.5
TA01	Diego Aracena	12.01	174	P	P	09 29 01.0	-0.6
MARP	Paez Belalcaza	12.19	338	*e*P	P	09 29 03.2	-0.4
SIV	San Ignacio	12.52	127	P	P	09 29 07.0	+0.6
	3.6nm,0.3s,baz=301,slow=9.6,SNR=89						
SIV				S	S	09 31 21.5	+1.4
	0.9nm,0.3s,baz=303,slow=18,SNR=9.8						
PB01	IPOC Station P	12.57	172	P	P	09 29 07.0	+0.2
TUMC	Tumaco	12.62	324	P	P	09 29 08.9	+1.6
PTGC	Puerto Gaitan,	12.68	357	*e*P	P	09 29 06.4	-1.5
ORTC	Ortega, Tolima	12.95	343	*e*P	P	09 29 11.0	+0.5
PB07	IPOC Station P	13.19	174	P	P	09 29 12.8	+0.1
PB09	IPOC Station P	13.34	171	P	P	09 29 14.7	+0.6
YOTC	Yotoco, Valle	13.38	338	*e*P	P	09 29 15.2	+0.6
ANIL	Santa Ana	13.55	343	*e*P	P	09 29 16.8	+0.6
ROSC	El Rosal	13.61	348	P	P	09 29 19.0	+2.0
	9.6nm,0.3s,baz=181,slow=20,SNR=16						
ROSC	El Rosal	13.61	348	*e*P	P	09 29 18.1	+1.1
ROSC	El Rosal	13.61	348	P	P	09 29 18.9	+1.9
PB04	IPOC Station P	13.77	175	P	P	09 29 17.9	-0.1
PTGA	Pitinga	13.79	56	P	P	09 29 19.9	+1.7
	103nm,0.3s,baz=247,slow=16,SNR=1858						
PTGA				S	S	09 31 44.5	+3.1
	baz=232,slow=12,SNR=7.6						
PTLB	Pontes e Lacer	13.82	121	*e*P	P	09 29 19.8	+1.3
PTLB	Pontes e Lacer	13.82	121	P	P	09 29 19.8	+1.3
LVC	Limon Verde	14.19	171	P	P	09 29 23.2	+1.1
	11nm,0.3s,baz=350,slow=6.9,SNR=104						
LVC				S	S	09 31 50.6	+2.1
	1.2nm,0.3s,baz=188,slow=19,SNR=14						
LVC	Limon Verde	14.19	171	*e*P	P	09 29 23.3	+1.1
PB06	IPOC Station P	14.19	173	P	P	09 29 22.0	0.0
PLMC	San Jos del P	14.21	340	*e*P	P	09 29 22.7	+0.5
SPBC	San Pablo de B	14.35	349	*e*P	P	09 29 23.9	+0.5
NORC	Norcasia	14.43	346	*e*P	P	09 29 24.6	+0.5
PB15	IPOC Station P	14.70	173	P	P	09 29 27.1	+0.4
PDRB	Porto dos Gac	14.77	103	*e*P	P	09 29 28.0	+0.8
TAMC	Tame, Arauca	14.88	359	*e*P	P	09 29 27.8	-0.5
PB10	IPOC Station P	14.91	177	P	P	09 29 28.6	+0.2
CBOC	Ciudad Bolivar	15.03	342	*e*P	P	09 29 30.8	+1.0
HELC	Santa Helena	15.20	344	*e*P	P	09 29 31.6	0.0
PTBC	PUERTO BERRIO,	15.29	348	*e*P	P	09 29 30.7	-1.2
BOAV	Boa Vista	15.36	45	*e*P	P	09 29 34.3	+1.7
BOAV	Boa Vista	15.36	45	P	P	09 29 34.3	+1.7
ELOV	Elorza	15.56	7	*e*P	P	09 29 35.8	+1.4
CLDB	Colider	15.56	100	*e*P	P	09 29 35.6	+1.1
BRRC	Barranca, Sant	15.71	352	*e*P	P	09 29 35.5	-0.3
PAMC	Pamplona, Colo	15.83	355	*e*P	P	09 29 37.8	+0.3
SOLC	Bahia Solano	15.84	338	*e*P	P	09 29 38.5	+1.5
NPGB	Novo Progresso	15.97	86	*e*P	P	09 29 39.0	+0.7
PB14	IPOC Station P	16.02	177	P	P	09 29 38.9	0.0
ITTB	Itaituba	16.12	76	*e*P	P	09 29 41.0	+1.4
DBBC	Dabeiba	16.18	343	*e*P	P	09 29 41.4	+1.2
ZARC	Zaragoza, Cauc	16.30	348	*e*P	P	09 29 39.5	-1.7
ZARC	Zaragoza, Cauc	16.30	348	P	P	09 29 41.1	-0.1
UREC	San Jos de Ur	16.70	346	*e*P	P	09 29 44.4	-0.5
SOCV	Socops	16.73	2	*e*P	P	09 29 43.4	-1.7
OCAC	Ocana	16.78	353	P	P	09 29 45.3	-0.4
OCAC				IAmb	IAmb	09 29 47.1	
	comp=Z,13nm,0.6s						
SALV	Santo Antonio	17.00	117	*e*P	P	09 29 48.1	+0.5
SDV	Santo Domingo	17.33	3	P	P	09 29 51.7	+0.9
	comp=Z,8.5nm,0.3s,baz=284,slow=21,SNR=16						
SDV				S	S	09 32 37.5	-2.1
	comp=Z,1.0nm,0.3s,baz=286,slow=17,SNR=3.6						
SDV	Santo Domingo	17.33	3	*e*P	P	09 29 49.2	-1.6
SDV	Santo Domingo	17.33	3	*e*P	P	09 29 51.4	+0.6
SDV	Santo Domingo	17.33	3	P	P	09 29 51.6	+0.8
SDV				IAmb	IAmb	09 29 56.2	
	comp=Z,33nm,0.8s						
SMLC	San Martn de	17.43	351	*e*P	P	09 29 49.2	-2.3
BAUV	El Baul	17.69	11	*e*P	P	09 29 55.4	+1.5
MOTC	Monteria, Cord	17.72	346	P	P	09 29 54.5	+0.4
MOTC				IAmb	IAmb	09 29 57.5	
	comp=Z,18nm,0.7s						
MALB	Monte Alegre	18.31	70	*e*P	P	09 30 00.7	+1.1
AC02	Maricunga	18.32	174	P	P	09 30 01.3	+1.3
AC02				IAmb	IAmb	09 30 02.4	
	comp=Z,46nm,0.6s						
SJCC	San Jacinto, C	18.70	348	*e*P	P	09 30 01.9	-1.2
SJCC	San Jacinto, C	18.70	348	P	P	09 30 03.8	+0.7
GO03	Copiap	18.98	177	P	P	09 30 05.6	+0.2
GO03				IAmb	IAmb	09 30 06.8	
	comp=Z,32nm,0.8s						
AQDB	Aquidauana	19.27	130	*e*P	P	09 30 09.1	+1.0
AQDB	Aquidauana	19.27	130	P	P	09 30 08.8	+0.7
AQDB				IAmb	IAmb	09 30 09.8	
	comp=Z,20nm,0.8s						
AC04	Llanos de Chal	19.56	179	P	P	09 30 10.6	-0.1
AC04				IAmb	IAmb	09 30 11.9	
	comp=Z,20nm,0.7s						
TINO	Tinogasta	19.75	170	*i* P	P	09 30 14.5	+2.0
PCRV	Puerto La Cruz	19.78	20	P	P	09 30 14.6	+1.8
	comp=Z,32nm,0.3s,baz=197,slow=5.7,SNR=109						
SNDB	Serra Nova Dou	20.08	101	*e*P	P	09 30 16.0	+0.5
VCA	Vinchina	20.31	172	*i* P	P	09 30 19.2	+1.6
LCO	Las Campanas	20.37	178	P	P	09 30 19.0	+0.8
ARAG	Araguaiana, MT	20.43	112	*e*P	P	09 30 19.1	+0.5
CYA	Choya	20.49	166	*i* P	P	09 30 19.2	+0.2
MCPB	Macapa, AP	20.92	68	*e*P	P	09 30 24.5	+1.4
ACLC	CERRO LA CRUZ	21.19	169	*i* P	P	09 30 26.2	+0.8
TPP	Pointe-a-Pierr	21.20	28	*e*P	P	09 30 29.5	+4.1
TRN	Trinidad (W)	21.51	28	*e*P	P	09 30 29.8	+1.6
TBH	Brigand Hill	21.52	29	*e*P	P	09 30 32.6	+4.3
GO04	Tololo Observa	21.53	179	P	P	09 30 28.5	+0.1
PRPB	Parauapebas	21.54	85	*e*P	P	09 30 28.8	+0.2
AROD	Rodeo	21.59	175	*i* P	P	09 30 31.1	+2.0
ACDV	Cuesta del Vie	21.62	175	*i* P	P	09 30 30.9	+1.7
CO06	Fray Jorge	22.02	181	P	P	09 30 32.9	+0.4
ACCO	Cerro Coronel	22.04	175	*i* P	P	09 30 34.3	+1.1
CPUP	Villa Florida	22.17	145	P	P	09 30 33.2	-0.7
	comp=Z,10nm,0.7s,baz=330,slow=11,SNR=13						
CPUP				PcP	PcP	09 34 04.7	+0.3
	comp=Z,3.8nm,0.4s,baz=333,slow=3.4,SNR=4.3						
CPUP				ScP	ScP	09 36 41.6	-0.7
	comp=Z,6.8nm,0.6s,baz=309,slow=2.1,SNR=8.6						
CPUP	Villa Florida	22.17	145	*e*P	P	09 30 33.2	-0.7
CPUP	Villa Florida	22.17	145	P	P	09 30 33.1	-0.9
CPUP				IAmb	IAmb	09 30 34.1	
	comp=Z,18nm,0.9s						
APLL	PUNTA DE LOS L	22.21	169	*i* P	P	09 30 34.7	+0.4
AVFE	Valle Fertil	22.31	171	*i* P	P	09 30 35.9	+0.7
GRFF	Grenada Fort F	22.60	25	*e*P	P	09 30 39.5	+1.6
GRGR	Grenville	22.71	25	*e*P	P	09 30 39.7	+0.9
GRGR	Grenville	22.71	25	P	P	09 30 39.8	+0.9

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TRCB  Terra Rica        22.93 130 eP   P     09 30 40.6 -0.2
TRCB  Terra Rica        22.93 130 P    P     09 30 40.6 -0.2
ACHE  Chepes            22.94 170 iP   P     09 30 41.5 +0.7
PEXB  Peixe             23.00 101 eP   P     09 30 42.5 +1.0
ZON   Zonda             23.03 174 P    P     09 30 42.3 +0.8
ZON   Zonda             23.03 174 iP   P     09 30 42.4 +0.8
MDP   Montagnes des     23.11  55 P    P     09 30 43.0 +0.5
      comp=Z,64nm,0.5s,baz=240,slow=8.7,SNR=83
GCMP  Grenada, Carri    23.13  26 eP   P     09 30 42.9 +0.3
ITRB  Iturama           23.20 121 eP   P     09 30 42.9 -0.4
RTLS  Leoncito          23.22 175 iP   P     09 30 44.7 +1.2
PCMB  Pacaembu          23.35 126 eP   P     09 30 44.3 -0.2
RTCV  Cerro Valdivia    23.36 174 iP   P     09 30 45.2 +0.8
SMTB  Santa Maria do    23.55  93 eP   P     09 30 47.5 +1.1
TCA   Tanti             23.55 165 iP   P     09 30 45.8 -0.4
AUSP  Uspallata         23.64 176 iP   P     09 30 48.7 +1.5
BDFB  Brasilia          23.92 109 P    P     09 30 50.8 +1.0
      comp=Z,20nm,0.5s,baz=279,slow=11,SNR=28
BDFB  Brasilia          23.92 109 P    P     09 30 50.3 +0.6
BDFB                              IAmb IAmb  09 30 51.5
      comp=Z,21nm,0.7s
SVV   Soufriere Volc    23.96  25 eP   P     09 30 50.4 +0.5
TMAB  Tom-Au,PA,Br      23.99  77 eP   P     09 30 51.7 +1.5
ASAL  Salagasta         24.05 175 iP   P     09 30 51.9 +1.4
VA03  San Esteban       24.12 178 P    P     09 30 52.1 +1.0
ROC1  El Roble          24.32 179 iP   P     09 30 53.6 +0.5
MRA   San Martin        24.34 168 iP   P     09 30 53.4 +0.2
VA01  Torpederas        24.36 180 P    P     09 30 53.9 +0.7
IPMB  Ipameri, GO       24.42 115 eP   P     09 30 54.0 -0.1
PTGB  Pitanga           24.48 133 eP   P     09 30 53.9 -0.7
PEL   Peldehue          24.49 179 P    P     09 30 55.0 +0.6
AAGR  Agrelo            24.54 175 iP   P     09 30 56.1 +1.2
BBGH  Gun Hill          24.55  29 eP   P     09 30 58.1 +3.0
BBSP  Saint Philip      24.57  29 eP   P     09 30 58.4 +3.1
MT02  Curacav           24.60 179 P    P     09 30 55.5 +0.2
MT02                              IAmb IAmb  09 30 57.9
      comp=Z,17nm,0.9s
SLBI  Saint Lucia, B    24.70  25 eP   P     09 30 56.1 -0.2
MT05  Renca             24.74 179 P    P     09 30 57.3 +0.7
VA05  Santo Domingo     24.99 180 P    P     09 30 59.3 +0.5
VA05                              IAmb IAmb  09 31 00.1
      comp=Z,34nm,0.9s
BIM   Bigot             25.10  24 eP   P     09 30 59.1 -0.9
BIM   Bigot             25.10  24 P    P     09 30 59.1 -0.9
MT09  Talagante         25.11 179 P    P     09 31 00.9 +0.9
MPOM  Morne Pois Mar    25.12  25 eP   P     09 30 58.7 -1.4
MPOM  Morne Pois Mar    25.12  25 P    P     09 30 58.9 -1.2
ITQB  Itaqui            25.18 149 eP   P     09 30 59.3 -1.2
ITQB  Itaqui            25.18 149 P    P     09 30 59.9 -0.6
MT01  Popeta            25.20 180 P    P     09 31 00.8 +0.2
MT01                              IAmb IAmb  09 31 01.6
      comp=Z,18nm,0.9s
FDF   Fort de France    25.26  24 eP   P     09 30 59.6 -1.8
FDF   Fort de France    25.26  24 P    P     09 31 00.3 -1.1
BB19B Bebedouro         25.34 122 eP   P     09 31 01.9 -0.2
SVN   Savane Anatole    25.36  24 P    P     09 31 01.3 -0.9
ILAM  Ilet Lapin Mar    25.41  24 eP   P     09 30 58.6 -4.1
FRTB  Fartura           25.59 128 eP   P     09 31 03.1 -1.1
MDN   Morne-Daniel      25.70  23 eP   P     09 31 04.3 -0.9
BO01  Tunca             25.73 179 P    P     09 31 05.8 +0.5
BO01                              IAmb IAmb  09 31 06.5
      comp=Z,35nm,0.8s
DSLB  Salisbury         25.80  23 eP   P     09 31 05.0 -1.1
MDVC  Dominica, Viel    25.97  22 eP   P     09 31 06.8 -0.7
MDPV  Dominica, Penn    25.97  22 eP   P     09 31 04.9 -2.7
ITAB  Concordia         26.05 138 P    P     09 31 07.5 -0.7
TDBA  Terre de Bas,     26.10  22 eP   P     09 31 07.5 -1.2
BO02  Sierra Bellavi    26.13 179 P    P     09 31 09.5 +0.6
RFA   San Rafael        26.24 175 iP   P     09 31 10.8 +1.0
CBE   Ff, Capester      26.31  22 eP   P     09 31 09.7 -0.9
MAGL  Barre de l’ile    26.32  22 eP   P     09 31 09.0 -1.6
SDBA  SAO DESIDERIO     26.34 101 eP   P     09 31 11.2 +0.2
GO05  Huala             26.35 181 P    P     09 31 11.1 +0.4
MLPR  Magueyes Islan    26.69   9 P    P     09 31 14.2 +0.3
CRPR  Cabo Rojo, PR     26.72   9 P    P     09 31 14.5 +0.5
RCLB  Rio Claro- Sao    26.77 124 eP   P     09 31 13.7 -0.9
OBIP  Obispado Ponce    26.84  10 P    P     09 31 15.3 +0.2
CELP  Cerrillos         26.88  10 P    P     09 31 15.7 +0.2
PRSN  Puerto Rico Se    26.92   9 P    P     09 31 16.2 +0.4
PDPR  Patillas Dam,     26.92  11 P    P     09 31 15.7 -0.1
CDVI  St. Croix         26.94  14 P    P     09 31 15.8 -0.1
SJG   San Juan          26.99  11 P    P     09 31 16.3 -0.1
      comp=Z,56nm,0.5s,baz=167,slow=5.9,SNR=26
SJG                               S    S     09 35 08.0 -3.1
      comp=Z,12nm,0.4s,baz=294,slow=19,SNR=10
SJG   San Juan          26.99  11 eP   P     09 31 12.8 -3.6
SJG   San Juan          26.99  11 P    P     09 31 16.1 -0.2
SJG                               pP   pP    09 32 51.3 -2.8
TIJ01 Guaruva-PR        27.09 131 eP   P     09 31 16.6 -0.8
ML02  Panimavida        27.09 180 P    P     09 31 17.2 +0.1
AOPR  Arecibo Observ    27.11  10 P    P     09 31 17.6 +0.1
AOPR                                   PP    09 32 56.0 -0.5
ANBD  Bethesda, Anti    27.16  21 eP   P     09 31 16.5 -1.4
SEUS  St. Eustatius     27.18  18 eP   P     09 31 19.8 +1.8
SEUS  St. Eustatius     27.18  18 P    P     09 31 18.5 +0.4
ANDO  Antigua, Disas    27.19  20 eP   P     09 31 16.9 -1.3
GCPR  Guaynabo City     27.19  11 P    P     09 31 18.2 +0.1
CBYP  Canovanas         27.20  12 P    P     09 31 18.0 -0.3
SABA  Saba              27.22  17 eP   P     09 31 18.8 +0.4
SABA  Saba              27.22  17 P    P     09 31 18.5  0.0
EMPR  Esperanza - Ma    27.28  10 P    P     09 31 18.5 -0.4
JANB  Januaria          27.29 106 eP   P     09 31 19.3 +0.1
CUPR  Culebra, Puert    27.36  13 P    P     09 31 19.1 -0.5
CUPR                              pP   pP    09 32 58.0 +0.5
STVI  Saint Thomas      27.47  13 P    P     09 31 19.7 -0.8
CPSB  Cacapava Do Su    27.49 145 eP   P     09 31 19.4 -1.2
VAO   Valinhos          27.50 124 eP   P     09 31 20.3 -0.7
SMRT  St. Maarten       27.68  17 eP   P     09 31 21.4 -1.0
SMRT  St. Maarten       27.68  17 P    P     09 31 21.7 -0.7
ROSB  Rosrio            27.71  80 eP   P     09 31 23.3 +0.5
ANWB  Willy Bob         27.73  20 eP   P     09 31 21.0 -1.8
ANWB  Willy Bob         27.73  20 P    P     09 31 21.8 -1.0
PET01 Itanhaem-SP       27.87 127 eP   P     09 31 23.0 -1.0
CNLB  Canela            28.28 140 eP   P     09 31 26.7 -0.8
PLTB  Pedras Altas      28.43 147 eP   P     09 31 27.6 -1.2
PLTB  Pedras Altas      28.43 147 P    P     09 31 27.8 -0.9
BSCB  Bom Sucesso       28.52 119 eP   P     09 31 29.1 -0.6
DIAM  Diamantina, MG    28.63 113 eP   P     09 31 30.9  0.0
PARB  Paraibuna         28.76 124 eP   P     09 31 31.0 -0.8
TER01 Tubaro-SC         28.91 136 eP   P     09 31 31.9 -1.1
NBPS  Pedro II - PI     30.05  84 eP   P     09 31 43.2 +0.2
APG   El Apazote        30.07 321 P    P     09 31 45.1 +1.8
      comp=Z,1.3nm,0.4s,baz=145,slow=10,SNR=4.0
VAS01 Vassouras-RJ      30.15 120 eP   P     09 31 42.9 -0.8
LC01  Cunco             30.23 181 P    P     09 31 43.9 -0.1
TRQA  Tornquist         30.59 165 eP   P     09 31 46.0 -1.2
TRQA  Tornquist         30.59 165 P    P     09 31 46.9 -0.3
NBPN  Ponto Novo - B    30.84  97 eP   P     09 31 50.0 +0.3
DUB01 Friburgo-RJ       30.99 119 eP   P     09 31 49.8 -1.1
SJMB  Sao Joao De Ma    31.01 112 eP   P     09 31 50.6 -0.4
BSFB  Barra de Sao F    31.35 112 eP   P     09 31 53.8 -0.2
NBMO  Morrinhos-CE      31.62  82 eP   P     09 31 56.3 +0.1
GDU01 Guandu, BA        31.64 102 eP   P     09 31 57.2 +0.8
NAN01 Guarapari, ES     31.78 110 eP   P     09 31 56.9 -0.7
GUA01 Guaratinga, BA    31.83 108 eP   P     09 31 57.9 -0.1
RIB01 Linhares ES       31.89 113 eP   P     09 31 58.0 -0.4
CMC01 Camacan, BA       31.90 105 eP   P     09 31 58.0 -0.5
NBIT  Itapeh - BA       31.92 104 eP   P     09 31 59.6 +0.9
PLCA  Paso Flores       32.06 179 P    P     09 31 60.0 +0.3
      comp=Z,36nm,0.5s,baz=352,slow=9.1,SNR=199
PLCA                              PcP  PcP   09 34 29.1 +0.5
      comp=Z,12nm,0.6s,baz=350,slow=3.6,SNR=12
PLCA                              ScP  ScP   09 37 12.4 -0.1
      comp=Z,7.9nm,0.7s,baz=359,slow=4.6,SNR=14
PLCA  Paso Flores       32.06 179 eP   P     09 31 59.1 -0.6
PLCA  Paso Flores       32.06 179 P    P     09 31 59.9 +0.3
LL04  Puerto Octay      32.24 181 P    P     09 32 00.9 -0.2
NBMA  Muriti-CE         32.35  90 eP   P     09 32 02.2 -0.2
LL03  Petrohue          32.47 181 P    P     09 32 03.2 +0.2
NBCL  Cascavel-CE       33.18  85 eP   P     09 32 10.1 +0.7
NBLA  Lagarto - SE      33.21  97 eP   P     09 32 08.9 -0.7
NBPA  Parau_RN          34.14  88 eP   P     09 32 17.2 -0.1
NBLV  Livramento - P    34.17  91 eP   P     09 32 17.2 -0.5
CMIG  Matias Romero     34.46 318 P    P     09 32 21.5 +1.6
      comp=Z,8.3nm,0.6s,baz=111,slow=6.9,SNR=18
CMIG                              PcP  PcP   09 34 36.5 +0.7
      comp=Z,11nm,0.6s,baz=56,slow=1.8,SNR=9.0
CMIG                              ScP  ScP   09 37 21.1 -0.2
      comp=Z,9.8nm,0.7s,baz=105,slow=2.6,SNR=11
GO07  Milladeo Hill,    34.49 183 P    P     09 32 19.8  0.0
LL02  Futaleuf          34.51 181 P    P     09 32 19.8 -0.2
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LL02                              IAmb IAmb  09 32 20.6
      comp=Z,32nm,0.9s
NBAN  Anadia - AL       34.70  95 eP   P     09 32 21.9 -0.1
NBPV  Pedro Velho       35.87  89 eP   P     09 32 31.5  0.0
NBRF  Rio Formoso -     35.87  93 eP   P     09 32 31.2 -0.3
COYC  Coyhaique         36.90 181 P    P     09 32 39.0 -0.5
NHSC  New Hope          42.25 349 P    P     09 33 22.8 +0.6
      baz=167
GO09  Cerro Castillo    42.60 181 P    P     09 33 25.7 +1.1
MG05  Puerto Natales    43.01 181 P    P     09 33 29.1 +1.4
MG05                              IAmb IAmb  09 33 29.8
      comp=Z,51nm,0.9s
Y57A  Sumter            43.17 349 P    P     09 33 30.1 +0.8
EFI   East Falkland     44.38 168 P    P     09 33 38.9 +0.6
GO10  Punta Arenas      44.48 180 P    P     09 33 41.2 +2.0
Y49A  Blount Mountai    44.51 342 P    P     09 33 39.3 -0.3
Y49A                              IAmb IAmb  09 35 08.6
      comp=Z,13nm,0.8s
TKL   Tuckaleechee C    45.48 346 P    P     09 33 48.8 +1.9
      comp=Z,2.5nm,0.7s,baz=169,slow=5.2,SNR=1.7
833A  Chaparral WMA,    45.55 325 P    P     09 33 48.3 +0.7
      baz=140
NATX  Nacogdoches       45.83 332 P    P     09 33 51.2 +1.5
      baz=147
USHA  Ushuaia           46.23 178 P    P     09 33 53.0 +0.9
      comp=Z,40nm,0.6s,baz=3.1,slow=7.2,SNR=28
Z41A  Richland Creek    46.28 335 P    P     09 33 52.8 -0.2
      baz=150
BLA   Blacksburg        46.29 350 P    P     09 33 53.6 +0.6
      baz=168
WLAR  White Oak Lake    46.79 335 P    P     09 33 57.0 +0.2
WLAR                              IAmb IAmb  09 33 58.0
      comp=Z,21nm,0.8s
CBN   Corbin Frederi    46.84 354 P    P     09 33 57.2 +0.2
      baz=172
WVT   Waverly           47.05 342 P    P     09 34 00.1 +1.4
      baz=158
X40A  Basin Creek Fa    47.36 336 P    P     09 34 01.5 +0.4
      baz=151
WHTX  Lake Whitney,     47.37 330 P    P     09 34 01.8 +0.7
      baz=144
WHTX  Lake Whitney,     47.37 330 P    P     09 34 01.8 +0.7
WHTX                              IAmb IAmb  09 34 02.7
      comp=Z,20nm,0.8s
JCT   Junction City     47.42 326 P    P     09 34 02.1 +0.5
      baz=140
JCT   Junction City     47.42 326 P    P     09 34 02.0 +0.4
JCT                               IAmb IAmb  09 35 19.5
      comp=Z,31nm,1.3s
MIAR  Mount Ida         47.72 335 P    P     09 34 03.1 -0.5
      baz=150,SNR=5.1
MIAR  Mount Ida         47.72 335 P    P     09 34 03.4 -0.3
MIAR                              IAmb IAmb  09 35 21.0
      comp=Z,13nm,0.8s
W41B  Gary Mavity, V    47.73 337 P    P     09 34 03.0 -0.7
      baz=152
P60A  Greenville        48.27 356 P    P     09 34 07.7 +0.1
      baz=174
FCAR  Ozark Folk Cen    48.31 337 P    P     09 34 07.3 -0.8
FCAR                              IAmb IAmb  09 35 22.4
      comp=Z,16nm,0.8s
Z35A  Perchaven, San    48.35 331 P    P     09 34 09.0 +0.6
Z35A                              IAmb IAmb  09 34 10.2
      comp=Z,37nm,1.0s
W39A  Magazine          48.37 335 P    P     09 34 08.6 +0.1
      baz=150,SNR=6.4
W39A  Magazine          48.37 335 P    P     09 34 08.8 +0.4
W39A                              IAmb IAmb  09 35 23.5
      comp=Z,28nm,0.8s
HPIG                    48.45 318 P    P     09 34 09.4 -0.1
PBMO  Poplar Bluff      48.49 340 P    P     09 34 08.6 -0.7
PBMO                              IAmb IAmb  09 35 22.8
      comp=Z,27nm,0.7s
X37A  Clayton           48.53 333      P     09 34 10.3 +0.6
X37A                              IAmb IAmb  09 34 12.0
      comp=Z,13nm,0.6s
MCWV  Mont Chateau      48.59 351 P    P     09 34 10.8 +0.8
      baz=169
P53A  Whipple           48.67 350 P    P     09 34 11.0 +0.4
P53A                              IAmb IAmb  09 35 24.1
      comp=Z,20nm,0.7s
TXAR  Lajitas Array     48.82 322 P    P     09 34 12.2 +0.2
      comp=Z,2.2nm,0.4s,baz=139,slow=7.4,SNR=61
TXAR                              PcP  PcP   09 35 24.7 +0.6
      comp=Z,3.4nm,0.7s,baz=146,slow=7.0,SNR=11
TXAR                              pP   pP    09 36 07.2 +0.9
      comp=Z,1.6nm,0.8s,baz=150,slow=8.7,SNR=3.0
TXAR                              ScP  ScP   09 38 18.5 -0.3
      comp=Z,1.2nm,0.5s,baz=139,slow=8.5,SNR=7.0
TX31  Lajitas Ar. Si    48.82 322 P    P     09 34 12.4 +0.3
TX31                              IAmb IAmb  09 34 13.3
      comp=Z,18nm,0.9s
TX32  Lajitas Array     48.82 322 P    P     09 34 12.4 +0.3
S44A  Carbondale        48.93 341 P    P     09 34 12.2 -0.4
S44A                              IAmb IAmb  09 35 24.6
      comp=Z,23nm,0.6s
SIUC  Southern Illin    48.94 341 P    P     09 34 12.2 -0.3
SIUC                              IAmb IAmb  09 35 24.6
      comp=Z,22nm,0.6s
P52A  Corning           48.95 349 P    P     09 34 12.4 -0.3
      baz=166
ABTX  Abilene, Hawle    48.99 328 P    P     09 34 13.7 +0.5
      baz=142,SNR=5.3
ABTX  Abilene, Hawle    48.99 328 P    P     09 34 13.8 +0.7
ABTX                              IAmb IAmb  09 34 14.5
      comp=Z,16nm,0.6s
U40A  Yellville         49.00 337 P    P     09 34 12.4 -0.8
      baz=151,SNR=7.7
U40A  Yellville         49.00 337 P    P     09 34 12.5 -0.6
U40A                              IAmb IAmb  09 35 25.1
      comp=Z,10nm,0.6s
SSPA  Standing Stone    49.30 353 P    P     09 34 15.4 +0.2
      baz=172
HHAR  Hobbs             49.37 336 P    P     09 34 14.7 -1.1
HHAR                              IAmb IAmb  09 35 26.3
      comp=Z,20nm,0.9s
N59A  State Game Lan    49.38 356 P    P     09 34 16.0 +0.2
      baz=174
O53A  New Philadelph    49.39 350 P    P     09 34 16.0 +0.1
      baz=167
MGMO  Mountain Grove    49.48 338 P    P     09 34 16.4 -0.2
MGMO                              IAmb IAmb  09 35 27.3
      comp=Z,20nm,0.9s
FVM   French Village    49.58 340 P    P     09 34 17.1 -0.1
FVM                               IAmb IAmb  09 34 18.1
      comp=Z,40nm,1.1s
X34A  Smith Ranch, M    49.67 331      P     09 34 19.0 +0.9
W35A  Tecumseh          49.67 332 P    P     09 34 18.2 +0.2
TUL1  Leonard           49.83 334 P    P     09 34 19.2  0.0
      baz=148
TUL1  Leonard           49.83 334      P     09 34 19.0 -0.1
TUL1                              IAmb IAmb  09 34 19.9
      comp=Z,17nm,0.8s
N54A  Moraine State     49.89 352 P    P     09 34 19.6 +0.1
      baz=169
CCM   Cathedral Cave    49.92 340 P    P     09 34 19.3 -0.5
      baz=154
CCM   Cathedral Cave    49.92 340 P    P     09 34 19.6 -0.1
CCM                               IAmb IAmb  09 35 28.5
      comp=Z,26nm,0.8s
FNO   Franklin          50.00 332      P     09 34 20.7 +0.3
WMOK  Wichita Mounta    50.23 330 P    P     09 34 22.4 +0.2
      baz=144,SNR=17
WMOK  Wichita Mounta    50.23 330      P     09 34 22.1  0.0
WMOK                              IAmb IAmb  09 34 23.2
      comp=Z,10.0nm,0.5s
OK025 Westminster Rd    50.24 332      P     09 34 21.8 -0.4
OK025                             IAmb IAmb  09 34 23.4
      comp=Z,20nm,0.5s
S39A  Bolivar           50.35 337 P    P     09 34 22.5 -0.4
S39A                              IAmb IAmb  09 35 30.1
      comp=Z,22nm,0.8s
M54A  Oil Creek Stat    50.38 352 P    P     09 34 23.3 +0.2
      baz=169
BCOK  Bluff Creek, N    50.43 332      P     09 34 23.8 +0.3
BCOK                              IAmb IAmb  09 34 24.2
      comp=Z,37nm,0.5s
OK033 Mehan             50.44 333 P    P     09 34 24.0 +0.4
OK033                             IAmb IAmb  09 34 24.4
      comp=Z,56nm,1.3s
QUOK  Quay              50.45 333      P     09 34 23.8 +0.1
QUOK                              IAmb IAmb  09 34 24.6
      comp=Z,34nm,0.9s
M53A  WI Miller and     50.46 351 P    P     09 34 23.8 +0.2
      baz=168
OK029 Liberty Lake      50.47 332      P     09 34 24.3 +0.4
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OK029                             IAmb IAmb  09 34 24.6
      comp=Z,53nm,0.8s
R40A  Maddies Statio    50.49 339 P    P     09 34 23.3 -0.6
R40A                              IAmb IAmb  09 34 23.7
      comp=Z,14nm,0.6s
BINY  Binghamton        50.67 356 P    P     09 34 25.5 +0.3
      baz=174
HRV   Adam Dziewonsk    50.80 360 P    P     09 34 26.1  0.0
      baz=180
T35A  Sooner Cattle     50.98 334      P     09 34 27.7 +0.2
T35A                              IAmb IAmb  09 35 33.2
      comp=Z,18nm,0.8s
ERPA  Erie              51.02 352 P    P     09 34 28.1 +0.5
      baz=169
BLOK  Blackwell         51.16 333      P     09 34 29.3 +0.5
BLOK                              IAmb IAmb  09 34 29.8
      comp=Z,42nm,1.3s
CROK  Carrier           51.30 332      P     09 34 30.2 +0.5
CROK                              IAmb IAmb  09 34 30.7
      comp=Z,44nm,0.6s
P40A  Paris             51.52 340 P    P     09 34 30.6 -0.7
MNTX  Cornudas Mount    51.54 323 P    P     09 34 31.1 -0.5
      baz=135,SNR=15
MNTX  Cornudas Mount    51.54 323 P    P     09 34 31.6  0.0
OK032 Salt Plains WL    51.65 333      P     09 34 32.5 +0.3
OK032                             IAmb IAmb  09 34 33.2
      comp=Z,36nm,0.6s
U32A  Winter Ranch,     51.67 332      P     09 34 33.2 +0.8
U32A                              IAmb IAmb  09 34 33.6
      comp=Z,25nm,0.8s
MSTX  Muleshoe          51.70 327 P    P     09 34 32.6 -0.2
      baz=139,SNR=11
MSTX  Muleshoe          51.70 327 P    P     09 34 32.8 -0.1
MSTX                              IAmb IAmb  09 34 33.5
      comp=Z,14nm,0.7s
AMTX  Amarillo          51.81 328 P    P     09 34 33.4 -0.2
      baz=141
AMTX  Amarillo          51.81 328 P    P     09 34 33.6  0.0
AMTX                              IAmb IAmb  09 34 34.3
      comp=Z,18nm,0.9s
KAN08 Anthony NE Sta    51.88 333 P    P     09 34 34.7 +0.7
KAN08                             IAmb IAmb  09 34 35.0
      comp=Z,20nm,0.7s
KAN16 Harper SW Stat    51.93 333      P     09 34 34.9 +0.7
KAN16                             IAmb IAmb  09 34 35.3
      comp=Z,31nm,0.7s
P38A  Dawn              52.13 338 P    P     09 34 35.0 -0.6
P38A                              IAmb IAmb  09 34 35.5
      comp=Z,15nm,0.5s
KSU1  Kansas State U    52.87 335 P    P     09 34 40.2 -0.7
      baz=148,SNR=6.5
KSU1  Kansas State U    52.87 335 P    P     09 34 40.3 -0.6
KSU1                              IAmb IAmb  09 34 41.0
      comp=Z,24nm,0.9s
R32A  Long Quarter,     53.20 333 P    P     09 34 43.7 +0.4
R32A                              IAmb IAmb  09 34 44.1
      comp=Z,38nm,1.3s
HOPE  Hope Point        53.48 155 P    P     09 34 45.5 +0.6
121A  Cookes Peak, D    53.58 321 P    P     09 34 47.1 +0.9
      baz=133,SNR=9.1
121A  Cookes Peak, D    53.58 321 P    P     09 34 47.3 +1.0
PKME  Peaks-Kenny Pk    53.59   2 P    P     09 34 46.4 +0.6
      baz=183
319A  Douglas           53.75 319 P    P     09 34 48.5 +1.1
319A                              IAmb IAmb  09 34 49.0
      comp=Z,34nm,1.1s
MNTQ  Montreal, Queb    53.83 358 P    P     09 34 47.8 +0.4
MNTQ                              IAmb IAmb  09 36 46.1
      comp=Z,74nm,1.6s
CBKS  Cedar Bluff       53.98 333 P    P     09 34 49.1 +0.3
      baz=145,SNR=11
CBKS  Cedar Bluff       53.98 333 P    P     09 34 49.3 +0.5
CBKS                              IAmb IAmb  09 34 49.9
      comp=Z,26nm,0.6s
N35A  Tabor             53.99 337 P    P     09 34 48.0 -0.7
BNM   Barren Site       54.01 324 P    P     09 34 50.0 +0.7
JFWS  Jewell Farm       54.02 343 P    P     09 34 48.0 -0.9
      baz=157
SCIA  State Center      54.04 340 P    P     09 34 48.3 -0.7
      baz=153
LENM  Lemitar           54.22 324 P    P     09 34 52.2 +1.5
ANMO  Albuquerque       54.48 325 P    P     09 34 52.7 +0.2
      baz=136
ANMO  Albuquerque       54.48 325 P    P     09 34 52.8 +0.4
N33A  J Bar K, Exete    54.60 336 P    P     09 34 52.8 -0.2
N33A                              IAmb IAmb  09 34 53.3
      comp=Z,34nm,0.8s
T25A  Trinidad          54.96 328 P    P     09 34 56.3 +0.5
      baz=139,SNR=5.5
T25A  Trinidad          54.96 328 P    P     09 34 56.8 +0.9
I40A  Norwalk           55.02 343 P    P     09 34 55.2 -0.6
I40A                              IAmb IAmb  09 34 55.2
      comp=Z,32nm,1.3s
L34A  Svendsen Farm,    55.23 337 P    P     09 34 56.5 -0.7
L34A                              IAmb IAmb  09 34 57.1
      comp=Z,38nm,0.8s
TUC   Tucson            55.33 319 P    P     09 34 58.7 +0.4
      baz=130
TUC   Tucson            55.33 319 P    P     09 34 58.6 +0.4
BGNE  Belgrade          55.45 336 P    P     09 34 58.9 +0.1
      baz=147
KSCO  Kaye Shedlock’    55.50 331 P    P     09 34 59.6 +0.3
      baz=142,SNR=5.4
KSCO  Kaye Shedlock’    55.50 331 P    P     09 34 60.0 +0.6
KSCO                              IAmb IAmb  09 35 01.5
      comp=Z,48nm,1.4s
SDCO  Great Sand Dun    55.99 328 P    P     09 35 03.8 +0.8
      baz=138,SNR=30
SDCO  Great Sand Dun    55.99 328 P    P     09 35 03.8 +0.8
SDCO                              IAmb IAmb  09 35 04.6
      comp=Z,18nm,0.7s
X18A  Snowflake         56.26 322 P    P     09 35 06.0 +1.2
PMSA  Palmer Station    56.38 176 P    P     09 35 03.4 -1.4
      comp=Z,45nm,0.9s,baz=331,slow=3.2,SNR=6.7
PMSA                              PcP  PcP   09 35 52.7 +0.6
      comp=Z,24nm,0.9s,baz=40,slow=3.5,SNR=4.0
PMSA  Palmer Station    56.38 176 eP   P     09 35 03.1 -1.6
214A  Organ Pipe Nat    56.43 318 P    P     09 35 06.6 +0.8
      baz=128,SNR=7.4
214A  Organ Pipe Nat    56.43 318 P    P     09 35 06.7 +0.8
W18A  Petrified Fore    56.53 322 P    P     09 35 07.2 +0.6
      baz=133
S22A  4UR Ranch, Cre    56.70 327 P    P     09 35 08.5 +0.6
      baz=137,SNR=12
K31A  O'Neill           56.71 336 P    P     09 35 09.6 +2.1
K31A                              IAmb IAmb  09 35 54.5
      comp=Z,29nm,1.0s
Q24A  Divide            56.72 329 P    P     09 35 08.2 +0.3
      baz=139,SNR=6.1
ECSD  EROS Data Cent    56.84 338 P    P     09 35 07.3 -1.0
      baz=150
SPMN  Marine on St.     56.88 342 P    P     09 35 07.7 -0.8
      baz=154,SNR=5.5
SPMN  Marine on St.     56.88 342 P    P     09 35 07.7 -0.8
X16A  Lo Mia Camp, P    57.11 321 P    P     09 35 11.6 +1.0
MVCO  Mesa Verde        57.25 325 P    P     09 35 11.9 +0.4
      baz=135,SNR=15
MVCO  Mesa Verde        57.25 325 P    P     09 35 12.1 +0.6
ISCO  Idaho Springs     57.58 329 P    P     09 35 14.5 +0.8
      baz=139,SNR=13
ISCO  Idaho Springs     57.58 329 P    P     09 35 14.3 +0.5
F36A  Milaca            57.67 342 P    P     09 35 13.3 -0.6
WUAZ  Wupatki           57.79 322 P    P     09 35 16.0 +1.0
      baz=131
Y14A  Wickenburg        57.80 319 P    P     09 35 15.8 +0.8
SMCO  Snowmass          57.83 328 P    P     09 35 16.7 +1.1
GLA   Glamis            58.45 317 P    P     09 35 20.1 +0.7
      baz=127
F33A  5 Mile Ranch,     58.55 340 P    P     09 35 19.2 -0.6
N23A  Red Feather La    58.57 330 P    P     09 35 20.8 +0.4
      baz=139
PDMCI Parker Dam,Lak    58.76 319 P    P     09 35 22.1 +0.8
      baz=128
U15A  North Rim         58.95 322 P    P     09 35 24.5 +1.5
SWSC  Sam W. Stewart    59.04 317 P    P     09 35 23.6 +0.3
      baz=126
W13A  Hualapai Mount    59.09 320 P    P     09 35 25.4 +1.5
O20A  White River Ci    59.19 328 P    P     09 35 25.0 +0.7
      baz=136,SNR=10
O20A  White River Ci    59.19 328 P    P     09 35 25.1 +0.7
BC3   Big Chuckawall    59.23 318 P    P     09 35 25.2 +0.5
      baz=127
IRM   Iron Mountain     59.33 318 P    P     09 35 26.0 +0.8
      baz=127,SNR=13
KNB   Kanab             59.65 322 P    P     09 35 29.0 +1.5
KNB                               IAmb IAmb  09 35 29.9
```

	comp=Z,31nm,0.8s						
SRU	**San Rafael Swe**	**59.71**	**325**	P	**P**	**09 35 28.4**	**+0.5**
SRU				IAmb	IAmb	09 35 29.1	
	comp=Z,19nm,0.7s						
BELC	**Belle Mtn. Jos**	**59.80**	**318**	P	**P**	**09 35 29.4**	**+1.0**
	baz=127						
TPFO	**Pinon Flats**	**59.87**	**317**	P	**P**	**09 35 29.5**	**+0.5**
	baz=126						
LCMT	**Little Creek M**	**59.91**	**322**	P	**P**	**09 35 30.3**	**+1.2**
P18A	**Preston Nutter**	**59.92**	**326**	P	**P**	**09 35 30.5**	**+1.1**
D32A	**Dogwood Acres,**	**59.93**	**340**	P	**P**	**09 35 28.4**	**-0.4**
D32A				IAmb	IAmb	09 35 29.0	
	comp=Z,30nm,0.7s						
Q16A	**Castle Valley**	**59.95**	**325**	P	**P**	**09 35 30.2**	**+0.8**
B35A	**Bob, Littlefor**	**59.98**	**343**	P	**P**	**09 35 28.5**	**-0.7**
B35A				IAmb	IAmb	09 35 28.7	
	comp=Z,23nm,0.4s						
GMRC	**Granite Mounta**	**60.05**	**318**	P	**P**	**09 35 30.9**	**+0.8**
	baz=127,SNR=18						
P17A	**Butcher Ranch,**	**60.09**	**326**	P	**P**	**09 35 31.1**	**+0.8**
P17A				IAmb	IAmb	09 35 31.4	
	comp=Z,19nm,0.6s						
RSSD	**Black Hills**	**60.16**	**333**	P	**P**	**09 35 31.4**	**+0.7**
	baz=142						
RSSD	**Black Hills**	**60.16**	**333**	P	**P**	**09 35 31.5**	**+0.8**
RSSD				IAmb	IAmb	09 35 32.3	
	comp=Z,22nm,0.5s						
K22A	**Casper**	**60.18**	**331**	P	**P**	**09 35 31.4**	**+0.5**
	baz=139,SNR=6.3						
K22A	**Casper**	**60.18**	**331**	P	**P**	**09 35 31.5**	**+0.7**
K22A				IAmb	IAmb	09 35 32.2	
	comp=Z,16nm,0.7s						
RDMU	**Red Mountain**	**60.21**	**327**	P	**P**	**09 35 31.7**	**+0.5**
RDMU				IAmb	IAmb	09 35 32.4	
	comp=Z,25nm,0.7s						
TMUT	**Trail Mountain**	**60.23**	**325**	P	**P**	**09 35 32.1**	**+0.7**
TMUT				IAmb	IAmb	09 35 32.7	
	comp=Z,13nm,0.6s						
MSU	**Marysvale**	**60.26**	**324**	P	**P**	**09 35 32.9**	**+1.4**
MURC	**Murrieta**	**60.37**	**317**	P	**P**	**09 35 33.1**	**+1.0**
	baz=126						
TCRU	**Three Creeks R**	**60.48**	**324**	P	**P**	**09 35 34.4**	**+1.4**
HEC	**Hector,Ludlow**	**60.52**	**318**	P	**P**	**09 35 34.5**	**+1.4**
	baz=127						
AGMN	**Agassiz Nation**	**60.57**	**341**	P	**P**	**09 35 32.5**	**-0.6**
	baz=152,SNR=11						
AGMN	**Agassiz Nation**	**60.57**	**341**	P	**P**	**09 35 32.9**	**-0.2**
AGMN				IAmb	IAmb	09 35 33.3	
	comp=Z,20nm,0.6s						
E28A	**Huff**	**60.77**	**337**	P	**P**	**09 35 35.2**	**+0.8**
SHPR	**Sheep Range**	**60.78**	**320**	P	**P**	**09 35 36.0**	**+1.1**
MPU	**Maple Canyon**	**60.96**	**325**	P	**P**	**09 35 36.8**	**+0.7**
BFSC	**Mount Baldy Ra**	**61.05**	**317**	P	**P**	**09 35 37.1**	**+0.4**
	baz=125						
GSC	**Goldstone, Bar**	**61.11**	**318**	P	**P**	**09 35 38.0**	**+1.0**
	baz=126,SNR=6.0						
GSC	**Goldstone, Bar**	**61.11**	**318**	P	**P**	**09 35 38.1**	**+1.2**
NLU	**North Lily Min**	**61.17**	**325**	P	**P**	**09 35 38.4**	**+1.0**
JLU	**Jordanelle**	**61.26**	**326**	P	**P**	**09 35 39.2**	**+1.2**
JLU				IAmb	IAmb	09 35 39.6	
	comp=Z,14nm,0.6s						
PRN	**Pahroc Range**	**61.27**	**321**	P	**P**	**09 35 39.8**	**+1.7**
MWC	**Mount Wilson**	**61.32**	**317**	P	**P**	**09 35 39.6**	**+1.2**
MWC				IAmb	IAmb	09 35 40.2	
	comp=Z,24nm,1.1s						
MDND	**Maddock**	**61.44**	**339**	P	**P**	**09 35 39.2**	**+0.4**
	baz=148,SNR=6.4						
MDND	**Maddock**	**61.44**	**339**	P	**P**	**09 35 39.5**	**+0.7**
CTU	**Camp Tracy**	**61.49**	**326**	P	**P**	**09 35 40.3**	**+0.9**
DECC	**Green Verdugo**	**61.52**	**317**	P	**P**	**09 35 40.5**	**+1.0**
	baz=125						
TCUT	**Toone Canyon**	**61.59**	**326**	P	**P**	**09 35 41.3**	**+1.2**
TCUT				IAmb	IAmb	09 35 41.8	
	comp=Z,23nm,0.7s						
EDW2	**Edwards Air Fo**	**61.65**	**317**	P	**P**	**09 35 41.1**	**+0.7**
	baz=125,SNR=6.2						
DUG	**Dugway, Tooele**	**61.75**	**325**	P	**P**	**09 35 41.8**	**+0.7**
	baz=132,SNR=17						
DUG	**Dugway, Tooele**	**61.75**	**325**	P	**P**	**09 35 42.0**	**+0.9**
DUG				IAmb	IAmb	09 35 43.0	
	comp=Z,15nm,0.8s						
BW06	**Boulder Array**	**61.78**	**329**	P	**P**	**09 35 41.1**	**-0.2**
	baz=136,SNR=13						
BW06	**Boulder Array**	**61.78**	**329**	P	**P**	**09 35 41.2**	**-0.2**
PD31	**Pinedale Array**	**61.78**	**329**	P	**P**	**09 35 41.5**	**+0.2**
PDAR	**Pinedale Array**	**61.78**	**329**	P	**P**	**09 35 41.2**	**-0.1**
	comp=Z,5.9nm,0.5s,baz=123,slow=9.2,SNR=78						
PDAR				PcP	**PcP**	**09 36 14.1**	**-0.6**
	comp=Z,3.6nm,0.5s,baz=131,slow=6.7,SNR=8.5						
PDAR	**Pinedale Array**	**61.78**	**329**	P	**P**	**09 35 41.0**	**-0.3**
LRMC	**Laurel Mtn Rad**	**61.79**	**318**	P	**P**	**09 35 42.2**	**+0.8**
	baz=126,SNR=7.8						
FURC	**Furnace Creek,**	**61.84**	**319**	P	**P**	**09 35 42.7**	**+1.2**
	baz=127						
SPR3	**Spring Creek 3**	**61.84**	**323**	P	**P**	**09 35 42.7**	**+0.7**
OSI	**Osito Audit: C**	**61.99**	**317**	P	**P**	**09 35 43.2**	**+0.6**
	baz=125						
MPMC	**Manual Prospec**	**62.00**	**319**	P	**P**	**09 35 43.5**	**+0.6**
	baz=126,SNR=7.7						
HWUT	**Hardware Ranch**	**62.01**	**327**	P	**P**	**09 35 43.0**	**+0.2**
SPUT	**South Promonto**	**62.29**	**326**	P	**P**	**09 35 45.4**	**+0.8**
ULM	**Lac du Bonnet**	**62.30**	**343**	P	**P**	**09 35 43.5**	**-0.7**
	comp=Z,28nm,0.6s,baz=155,slow=6.3,SNR=38						
ULM	**Lac du Bonnet**	**62.30**	**343**	P	**P**	**09 35 43.9**	**-0.3**
ULM				IAmb	IAmb	09 35 44.1	
	comp=Z,24nm,0.6s						
ARVC	**Arvin**	**62.35**	**317**	P	**P**	**09 35 46.0**	**+1.1**
	baz=125						
BGU	**Big Grassy Mou**	**62.36**	**325**	P	**P**	**09 35 45.5**	**+0.5**
ISA	**Isabella, Lake**	**62.42**	**318**	P	**P**	**09 35 46.4**	**+1.1**
	baz=125,SNR=8.3						
ISA	**Isabella, Lake**	**62.42**	**318**	P	**P**	**09 35 46.5**	**+1.1**
AHID	**Auburn Hatcher**	**62.57**	**328**	P	**P**	**09 35 46.6**	**+0.3**
CWC	**Cottonwood Cre**	**62.61**	**319**	P	**P**	**09 35 47.6**	**+0.9**
	baz=126						
HVU	**Hansel Valley**	**62.79**	**326**	P	**P**	**09 35 48.2**	**+0.5**
LCH	**Last Change Ra**	**62.80**	**320**	P	**P**	**09 35 48.9**	**+1.0**
REDW	**Red Top Meadow**	**62.86**	**329**	P	**P**	**09 35 48.6**	**+0.3**
SNOW	**Snow King Moun**	**62.89**	**329**	P	**P**	**09 35 49.3**	**+0.9**
PKM	**Mcpherson Peak**	**62.89**	**316**	P	**P**	**09 35 49.5**	**+1.0**
	baz=124,SNR=5.1						
LOHW	**Long Hollow**	**62.91**	**329**	P	**P**	**09 35 49.1**	**+0.5**
VES	**Vestal, Richgr**	**62.93**	**318**	P	**P**	**09 35 49.3**	**+0.8**
	baz=125,SNR=9.8						
TPAW	**Teton Pass**	**63.01**	**329**	P	**P**	**09 35 49.8**	**+0.5**
TPH	**Tonopah**	**63.04**	**321**	P	**P**	**09 35 50.5**	**+1.0**
TPH				IAmb	IAmb	09 35 51.4	
	comp=Z,39nm,0.9s						
MOOW	**Moose Ponds**	**63.08**	**329**	P	**P**	**09 35 50.0**	**+0.3**
FXWY	**Fox Creek**	**63.15**	**329**	P	**P**	**09 35 50.5**	**+0.4**
SMMC	**Simmler**	**63.25**	**317**	P	**P**	**09 35 52.1**	**+1.5**
	baz=124,SNR=5.5						
SCHQ	**Schefferville**	**63.25**	**3**	P	**P**	**09 35 49.5**	**-0.8**
	comp=Z,3.6nm,0.9s,baz=246,slow=20,SNR=1.6						
SCHQ				PcP	**PcP**	**09 36 20.0**	**-0.2**
	comp=Z,4.2nm,0.6s,baz=218,slow=5.5,SNR=6.2						
SCHQ				pP	**pP**	**09 37 55.4**	**+0.9**
	comp=Z,12nm,1.0s,baz=181,slow=9.7,SNR=4.0						
SCHQ	**Schefferville**	**63.25**	**3**	P	**P**	**09 35 50.0**	**-0.2**
SCHQ				IAmb	IAmb	09 37 56.8	
	comp=Z,46nm,1.6s						
FLWY	**Flagg Ranch**	**63.30**	**329**	P	**P**	**09 35 51.9**	**+0.9**
FLWY				IAmb	IAmb	09 35 52.9	
	comp=Z,24nm,1.2s						
RLMT	**Red Lodge**	**63.34**	**331**	P	**P**	**09 35 52.1**	**+0.8**
	baz=137						
H17A	**Grant Village**	**63.46**	**330**	P	**P**	**09 35 53.7**	**+1.7**
	baz=136						
YMP	**Mirror Lake Pl**	**63.50**	**330**	P	**P**	**09 35 52.3**	**-0.1**
ELK	**Elko**	**63.50**	**324**	P	**P**	**09 35 53.2**	**+0.8**
PAGB	**Antelope Grade**	**63.65**	**317**	P	**P**	**09 35 54.7**	**+1.5**
PAGB				IAmb	IAmb	09 35 55.2	
	comp=Z,20nm,0.8s						
DGMT	**Dagmar**	**63.69**	**336**	P	**P**	**09 35 53.9**	**+0.8**
	baz=143,SNR=8.7						
DGMT	**Dagmar**	**63.69**	**336**	P	**P**	**09 35 54.1**	**+1.0**
DGMT				IAmb	IAmb	09 35 54.5	
	comp=Z,27nm,0.6s						
YNR	**Norris Junctio**	**63.74**	**330**	P	**P**	**09 35 55.5**	**+1.6**
NV11	**Mina Array Sit**	**63.84**	**320**	P	**P**	**09 35 55.3**	**+0.8**
YMR	**Madison River**	**63.85**	**330**	P	**P**	**09 35 56.0**	**+1.5**
YMR				IAmb	IAmb	09 35 56.8	
	comp=Z,23nm,0.8s						
YHH	**Holmes Hill**	**63.88**	**330**	P	**P**	**09 35 56.1**	**+1.3**
NVAR	**Mina Array Bea**	**63.93**	**320**	P	**P**	**09 35 56.0**	**+0.9**
	comp=Z,2.3nm,0.5s,baz=155,slow=6.4,SNR=20						
NVAR				PcP	**PcP**	**09 36 23.7**	**0.0**
	comp=Z,3.8nm,0.6s,baz=131,slow=5.1,SNR=12						
NVAR				pP	**pP**	**09 38 01.4**	**+1.5**
	comp=Z,3.0nm,0.8s,baz=124,slow=6.9,SNR=8.3						
NVAR	**Mina Array Bea**	**63.93**	**320**	P	**P**	**09 35 55.8**	**+0.7**
GCMT	**Greycliff**	**64.03**	**331**	P	**P**	**09 35 56.3**	**+0.8**
KVN	**Kaiserville**	**64.17**	**321**	P	**P**	**09 35 57.2**	**+0.6**
QLMT	**Earthquake Lak**	**64.20**	**329**	P	**P**	**09 35 58.4**	**+1.8**
BOZ	**Bozeman (W)**	**64.84**	**330**	P	**P**	**09 36 01.3**	**+0.7**
	baz=135,SNR=12						
BOZ	**Bozeman (W)**	**64.84**	**330**	P	**P**	**09 36 01.4**	**+0.7**
YERR	**Yerington**	**64.85**	**320**	P	**P**	**09 36 02.2**	**+1.3**
YERR				IAmb	IAmb	09 36 02.9	
	comp=Z,18nm,0.6s						
BCYI	**Bear Canyon**	**64.85**	**328**	P	**P**	**09 36 01.6**	**+0.8**
HLID	**Hailey**	**64.88**	**327**	P	**P**	**09 36 01.9**	**+1.0**
	baz=132,SNR=9.7						
HLID	**Hailey**	**64.88**	**327**	P	**P**	**09 36 01.8**	**+0.9**
MCMT	**McKenzie Canyo**	**64.92**	**329**	P	**P**	**09 36 02.4**	**+1.2**
CMB	**Columbia Colle**	**65.03**	**319**	P	**P**	**09 36 02.7**	**+0.9**
PNTR	**Pine Nut**	**65.14**	**320**	P	**P**	**09 36 04.5**	**+1.8**
PNTR				IAmb	IAmb	09 36 05.0	
	comp=Z,20nm,0.8s						
DLMT	**Dillon**	**65.16**	**329**	P	**P**	**09 36 03.4**	**+0.8**
VCNR	**Virginia City**	**65.29**	**320**	P	**P**	**09 36 05.3**	**+1.7**
VCNR				IAmb	IAmb	09 36 05.8	
	comp=Z,13nm,0.7s						
PAHR	**Pah Rah Range**	**65.36**	**321**	P	**P**	**09 36 05.6**	**+1.6**
PAHR				IAmb	IAmb	09 36 06.1	
	comp=Z,14nm,0.9s						
LRM	**Limekiln Ridge**	**65.41**	**330**	P	**P**	**09 36 05.1**	**+0.8**
MFID	**Camas Ranch**	**65.56**	**326**	P	**P**	**09 36 06.2**	**+1.1**
MFID				IAmb	IAmb	09 36 07.2	
	comp=Z,27nm,0.9s						
EGMT	**Eagleton**	**65.71**	**333**	P	**P**	**09 36 06.3**	**+0.5**
	baz=138,SNR=13						
EGMT	**Eagleton**	**65.71**	**333**	P	**P**	**09 36 06.4**	**+0.5**
EGMT				IAmb	IAmb	09 36 07.2	
	comp=Z,23nm,0.7s						
HRY	**Holter Researc**	**65.73**	**331**	P	**P**	**09 36 07.3**	**+1.3**
WVOR	**Wild Horse Val**	**66.55**	**324**	P	**P**	**09 36 11.9**	**+0.7**
ORV	**Oroville**	**66.61**	**320**	P	**P**	**09 36 12.6**	**+1.1**
ORV				IAmb	IAmb	09 36 13.8	
	comp=Z,18nm,1.1s						
PLID	**Pearl Lake**	**66.75**	**327**	P	**P**	**09 36 12.8**	**+0.3**
MSO	**Missoula**	**66.85**	**330**	P	**P**	**09 36 13.9**	**+0.9**
	baz=133,SNR=10						
MSO	**Missoula**	**66.85**	**330**	P	**P**	**09 36 14.3**	**+1.3**
MSO				IAmb	IAmb	09 36 15.0	
	comp=Z,16nm,1.1s						
J08A	**Circle Bar Ran**	**67.02**	**325**	P	**P**	**09 36 15.0**	**+0.9**
MOD	**Modoc Plateau**	**67.22**	**322**	P	**P**	**09 36 16.6**	**+1.3**
MOD				IAmb	IAmb	09 36 17.1	
	comp=Z,29nm,0.7s						
O03E	**Paynes Creek**	**67.22**	**320**	P	**P**	**09 36 15.6**	**+0.3**
	baz=124						
BMO	**Blue Mountains**	**67.30**	**326**	P	**P**	**09 36 16.7**	**+0.9**
LIC	**Lamto**	**67.79**	**80**	*e*P	**P**	**09 36 19.0**	**-0.2**
	comp=Z,17nm,0.7s						
WDC	**Whiskeytown Da**	**67.85**	**320**	P	**P**	**09 36 18.3**	**-0.7**
TIC	**Toumodi**	**67.88**	**79**	*e*P	**P**	**09 36 19.5**	**-0.3**
F10A	**Beach Ranch, E**	**67.98**	**327**	P	**P**	**09 36 21.3**	**+1.5**
F10A				IAmb	IAmb	09 36 21.9	
	comp=Z,10nm,0.8s						
DBIC	**Dimbokro**	**68.05**	**79**	P	**P**	**09 36 20.9**	**+0.1**
	comp=Z,7.3nm,0.4s,baz=275,slow=4.6,SNR=20						
DBIC				pP	**pP**	**09 38 27.8**	**0.0**
	comp=Z,4.6nm,0.6s,baz=226,slow=5.8,SNR=2.8						
DBIC	**Dimbokro**	**68.05**	**79**	P	**P**	**09 36 21.1**	**+0.4**
FFC	**Flin Flon**	**68.05**	**341**	P	**P**	**09 36 20.0**	**+0.1**
I07A	**Izee**	**68.05**	**325**	P	**P**	**09 36 21.8**	**+1.4**
I07A				IAmb	IAmb	09 38 35.9	
	comp=Z,18nm,0.8s						
K05A	**Summer Lake**	**68.06**	**323**	P	**P**	**09 36 22.1**	**+1.7**
K05A				IAmb	IAmb	09 36 23.6	
	comp=Z,20nm,1.0s						
M04C	**Macdoel**	**68.08**	**322**	P	**P**	**09 36 21.5**	**+0.9**
	baz=125,SNR=8.1						
KIC	**Kosan Boka**	**68.09**	**80**	*e*P	**P**	**09 36 20.8**	**-0.2**
	comp=Z,16nm,0.5s						
N02D	**Trinity Center**	**68.17**	**320**	P	**P**	**09 36 21.0**	**0.0**
	baz=124						
WALA	**Waterton Lakes**	**68.38**	**331**	P	**P**	**09 36 22.5**	**+0.3**
WALA				IAmb	IAmb	09 36 23.0	
	comp=Z,13nm,0.6s						
G08A	**Pilot Rock**	**68.49**	**326**	P	**P**	**09 36 24.1**	**+1.2**
M02C	**Callahan**	**68.49**	**321**	P	**P**	**09 36 23.1**	**+0.1**
	baz=124						
J05D	**Fort Rock, OR**	**68.58**	**323**	P	**P**	**09 36 24.5**	**+0.9**
	baz=126						
YBH	**Yreka Blue Hor**	**68.59**	**321**	P	**P**	**09 36 23.1**	**-0.5**
	comp=Z,4.8nm,0.5s,baz=164,slow=3.4,SNR=27						
YBH	**Yreka Blue Hor**	**68.59**	**321**	P	**P**	**09 36 23.2**	**-0.3**
L04D	**Klamath Falls**	**68.62**	**322**	P	**P**	**09 36 24.3**	**+0.5**
	baz=125						
PINE	**Pine Mountain**	**68.71**	**324**	P	**P**	**09 36 26.3**	**+1.9**
PINE				IAmb	IAmb	09 36 26.8	
	comp=Z,24nm,0.8s						
E09A	**Wood Farm, Sta**	**68.81**	**327**	P	**P**	**09 36 25.7**	**+1.0**
J04D	**Umpqua Nationa**	**69.08**	**323**	P	**P**	**09 36 27.6**	**+1.0**
	baz=125,SNR=5.3						
I05D	**Terrebonne, OR**	**69.26**	**324**	P	**P**	**09 36 29.0**	**+1.5**
	baz=126,SNR=8.0						
L02E	**Cave Junction**	**69.38**	**321**	P	**P**	**09 36 28.9**	**+0.7**
	baz=124						
F07A	**Phinny Hill Vi**	**69.40**	**326**	P	**P**	**09 36 30.2**	**+2.1**
F07A				IAmb	IAmb	09 36 30.6	
	comp=Z,23nm,1.1s						
NEW	**Newport**	**69.41**	**329**	P	**P**	**09 36 29.0**	**+0.7**
	baz=131						
NEW	**Newport**	**69.41**	**329**	P	**P**	**09 36 28.5**	**+0.2**
HAWA	**Hanford**	**69.48**	**327**	P	**P**	**09 36 30.0**	**+1.3**
HAWA				IAmb	IAmb	09 36 30.9	
	comp=Z,9.4nm,0.6s						
D08A	**Wollman Farm,**	**69.57**	**327**	P	**P**	**09 36 30.5**	**+1.4**
D08A				IAmb	IAmb	09 36 31.3	
	comp=Z,16nm,0.7s						
I04A	**Tendick Farm,**	**69.58**	**323**	P	**P**	**09 36 29.9**	**+0.5**
	baz=125						
C09A	**Chrisman Ranch**	**69.70**	**328**	P	**P**	**09 36 30.5**	**+0.6**
C09A				IAmb	IAmb	09 36 31.9	
	comp=Z,14nm,0.8s						
C09A					**pP**	**09 38 34.8**	**-3.2**
K02D	**Willamette Mer**	**69.72**	**322**	P	**P**	**09 36 31.3**	**+1.1**
	baz=124						
G05D	**Wamic, OR**	**69.78**	**325**	P	**P**	**09 36 32.3**	**+1.8**
	baz=126						
H04A	**Detroit Lake**	**69.96**	**324**	P	**P**	**09 36 32.5**	**+1.0**
H04A				IAmb	IAmb	09 36 32.6	
	comp=Z,12nm,0.5s						
HOOD	**Mount Hood Mea**	**70.02**	**325**	P	**P**	**09 36 33.9**	**+1.9**
HOOD				IAmb	IAmb	09 36 37.0	
	comp=Z,21nm,0.8s						
I03D	**Drain, OR**	**70.08**	**323**	P	**P**	**09 36 33.5**	**+1.3**
	baz=124						
H04D	**Lebanon**	**70.19**	**324**	P	**P**	**09 36 34.0**	**+1.2**
	baz=125						
F05D	**White Salmon**	**70.25**	**325**	P	**P**	**09 36 34.6**	**+1.4**
	baz=126						
B08A	**Colville Reser**	**70.60**	**328**	P	**P**	**09 36 35.6**	**+0.3**
LTY	**Liberty**	**70.63**	**327**	P	**P**	**09 36 36.7**	**+1.2**
LTY				IAmb	IAmb	09 38 47.3	
	comp=Z,39nm,1.9s						
KOWA	**Kowa**	**70.64**	**71**	S	**S**	**09 44 59.4**	**-1.6**
	comp=Z,6.2nm,1.0s,baz=134,slow=23,SNR=22						
KOWA	**Kowa**	**70.64**	**71**	P	**P**	**09 36 36.6**	**+0.5**
KOWA				IAmb	IAmb	09 36 37.0	
	comp=Z,13nm,0.6s						
G03D	**McMinnville, O**	**70.89**	**324**	P	**P**	**09 36 37.9**	**+1.0**
	baz=125						
EDM	**Edmonton**	**71.07**	**335**	P	**P**	**09 36 37.8**	**-0.1**
EDM				IAmb	IAmb	09 36 38.4	
	comp=Z,34nm,0.6s						
EDM				pP	**pP**	**09 38 44.1**	**-2.5**
D05A	**Enumclaw**	**71.31**	**326**	P	**P**	**09 36 40.6**	**+1.3**
D05A				IAmb	IAmb	09 36 41.0	
	comp=Z,27nm,0.9s						
B05A	**Bryant**	**72.01**	**327**	P	**P**	**09 36 43.5**	**+0.2**
	baz=126						
D03D	**Eldon**	**72.12**	**326**	P	**P**	**09 36 45.0**	**+1.0**
	baz=125						
VNA3	**Neumayer Olymp**	**73.08**	**163**	P	**P**	**09 36 49.2**	**+0.1**
VNA1	**Neumayer--Stat**	**73.26**	**162**	P	**P**	**09 36 50.6**	**+0.5**
LLLB	**Lillooet**	**73.30**	**329**	P	**P**	**09 36 50.9**	**+0.2**
LLLB				IAmb	IAmb	09 36 52.2	
	comp=Z,52nm,1.7s						
LLLB				pP	**pP**	**09 38 59.5**	**-1.2**
VNA2	**Neumayer--Watz**	**73.63**	**162**	P	**P**	**09 36 52.2**	**0.0**
	baz=301,slow=6.0						
SNAA	**Sanae**	**75.27**	**162**	P	**P**	**09 37 01.5**	**+0.1**
SNAA	**Sanae**	**75.27**	**162**	P	**P**	**09 37 01.5**	**+0.1**
	comp=Z,43nm,0.6s,baz=277,slow=6.2,SNR=169						
SNAA	**Sanae**	**75.27**	**162**	P	**P**	**09 37 01.8**	**+0.4**
TORD	**Torodi Ar. Bea**	**75.72**	**74**	P	**P**	**09 37 05.0**	**0.0**
	comp=Z,3.3nm,0.5s,baz=259,slow=5.1,SNR=34						
TORD				pP	**pP**	**09 39 16.4**	**+0.3**
	comp=Z,6.9nm,0.8s,baz=274,slow=6.3,SNR=7.3						
TORD				S	**S**	**09 45 54.0**	**-2.7**
	comp=Z,2.2nm,0.7s,baz=257,slow=14,SNR=6.6						
TORD	**Torodi Ar. Bea**	**75.72**	**74**	P	**P**	**09 37 03.9**	**-1.0**
TORD				pP	**pP**	**09 39 15.9**	**-0.2**
DY2G	**Dye2**	**77.04**	**10**	*i* P	**P**	**09 37 11.6**	**+0.2**
DY2G				IAmb	IAmb	09 37 12.7	
	comp=Z,6.0nm,0.8s						
YKA	**Yellowknife Ar**	**78.22**	**341**	P	**P**	**09 37 17.6**	**+0.2**
	comp=Z,4.3nm,0.5s,baz=97,slow=23,SNR=43						
YKA				pP	**pP**	**09 39 28.6**	**-1.3**
	comp=Z,0.6nm,0.5s,baz=129,slow=6.7,SNR=2.4						
YKA	**Yellowknife Ar**	**78.22**	**341**	P	**P**	**09 37 17.8**	**+0.4**
ESDC	**Sonseca Array**	**78.53**	**47**	P	**P**	**09 37 20.9**	**+1.2**
	comp=Z,0.6nm,0.6s,baz=252,slow=6.4,SNR=5.0						
ESDC				pP	**pP**	**09 39 33.9**	**+1.6**
	comp=Z,2.6nm,0.8s,baz=267,slow=5.6,SNR=4.5						
ICESG	**Greenland Ices**	**80.55**	**11**	*i* P	**P**	**09 37 29.5**	**-0.5**
ICESG				IAmb	IAmb	09 37 30.3	
	comp=Z,5.9nm,0.7s						
QSPA	**South Pole Qui**	**81.57**	**180**	P	**P**	**09 37 35.3**	**+0.3**
	comp=Z,65nm,0.7s,baz=165,slow=1.5,SNR=387						
QSPA	**South Pole Qui**	**81.57**	**180**	P	**P**	**09 37 35.4**	**+0.4**
CRAG	**Craig**	**81.63**	**330**	P	**P**	**09 37 36.0**	**+0.8**
	baz=118						
DLBC	**Dease Lake**	**81.64**	**333**	P	**P**	**09 37 36.3**	**+0.9**
DLBC				IAmb	IAmb	09 37 37.1	
	comp=Z,18nm,0.8s						
WRAK	**Wrangell Islan**	**81.70**	**331**	P	**P**	**09 37 36.2**	**+0.6**
	baz=119						
WRGLY	**Wrigley**	**81.73**	**339**	P	**P**	**09 37 36.1**	**+0.6**
	baz=128						
TGTN	**Hyland Airport**	**82.56**	**336**	P	**P**	**09 37 41.0**	**+1.1**
	baz=123,SNR=14						
JIS	**Juneau Island**	**83.56**	**332**	P	**P**	**09 37 46.1**	**+1.3**
JIS				IAmb	IAmb	09 40 01.2	
	comp=Z,24nm,1.3s						
SUMG	**Summit**	**83.72**	**9**	*i* P	**P**	**09 37 46.1**	**+0.2**
SUMG				IAmb	IAmb	09 37 46.3	
	comp=Z,8.4nm,0.5s						
SUMG	**Summit**	**83.72**	**9**	IAmb	IAmb	09 37 46.3	
	comp=Z,8.4nm,0.5s						
SUMG				*i* P	pP	09 40 01.6	+0.8
SUMG	**Summit**	**83.72**	**9**	P	**P**	**09 37 46.2**	**+0.4**
SUMG				IAmb	IAmb	09 40 02.5	
	comp=Z,43nm,1.0s						
P33M	**Teslin, Yukon**	**83.77**	**334**	P	**P**	**09 37 46.5**	**+0.5**
	baz=119,SNR=6.6						
BESE	**Bessie Mountai**	**83.92**	**332**	P	**P**	**09 37 47.9**	**+1.2**
BESE				IAmb	IAmb	09 37 48.6	
	comp=Z,13nm,1.0s						
RES	**Resolute Bay**	**84.33**	**354**	P	**P**	**09 37 48.9**	**+0.6**
SKAG	**Skagway**	**84.54**	**333**	P	**P**	**09 37 50.5**	**+0.9**
	baz=117						
WHY	**Whitehorse**	**84.89**	**334**	P	**P**	**09 37 51.9**	**+0.5**
	baz=117						
TULEG	**Thule**	**84.95**	**1**	*i* P	**P**	**09 37 51.2**	**0.0**
TULEG				IAmb	IAmb	09 37 51.6	
	comp=Z,9.0nm,0.5s						
TULEG	**Thule**	**84.95**	**1**	IAmb	IAmb	09 37 51.6	
	comp=Z,9.0nm,0.5s						
TULEG				*i* P	pP	09 40 06.4	-0.4
TULEG	**Thule**	**84.95**	**1**	P	**P**	**09 37 51.8**	**+0.5**
TULEG				IAmb	IAmb	09 40 07.5	
	comp=Z,12nm,0.8s						
FARO	**Faro, Yukon**	**84.98**	**335**	P	**P**	**09 37 52.5**	**+0.8**
	baz=119,SNR=9.4						
M31M	**Drury Creek, Y**	**85.39**	**335**	P	**P**	**09 37 54.4**	**+0.6**
	baz=118,SNR=6.2						
N31M	**Braeburn, Yuko**	**85.65**	**334**	P	**P**	**09 37 55.6**	**+0.6**
	baz=117,SNR=8.6						
HYT	**Haines Junctio**	**86.12**	**333**	P	**P**	**09 37 58.2**	**+0.9**
	baz=115						
HYT	**Haines Junctio**	**86.12**	**333**	P	**P**	**09 37 58.5**	**+1.2**
HYT				IAmb	IAmb	09 38 03.7	
	comp=Z,9.6nm,0.8s						
TSUM	**Tsumeb**	**86.29**	**109**	P	**P**	**09 37 59.2**	**+0.1**
	comp=Z,14nm,0.8s,baz=278,slow=4.2,SNR=9.1						
TSUM				pP	**pP**	**09 40 15.1**	**-0.1**
	comp=Z,4.5nm,0.9s,baz=325,slow=5.5,SNR=3.4						
TSUM	**Tsumeb**	**86.29**	**109**	IAmb	IAmb	09 38 00.1	
	comp=Z,14nm,0.8s						
YUK6	**Outpost Mounta**	**86.55**	**333**	P	**P**	**09 38 00.5**	**+1.1**
	baz=114						
M30M	**Minto, Yukon**	**86.56**	**335**	P	**P**	**09 37 59.7**	**+0.4**
	baz=116,SNR=9.2						
NEEM	**North Greenlan**	**86.62**	**4**	*i* P	**P**	**09 38 00.1**	**+0.6**
NEEM				IAmb	IAmb	09 38 00.5	
	comp=Z,18nm,0.8s						
NEEM	**North Greenlan**	**86.62**	**4**	IAmb	IAmb	09 38 00.5	
	comp=Z,18nm,0.8s						
NEEM				*i* P	pP	09 40 15.4	-0.5
YUK4	**Talbot Arm**	**86.84**	**334**	P	**P**	**09 38 01.9**	**+1.1**
	baz=114,SNR=7.0						
SUR	**Sutherland**	**87.35**	**122**	P	**P**	**09 38 04.0**	**+0.1**
	comp=Z,13nm,0.9s,baz=219,slow=3.5,SNR=11						
A36M	**Sachs Harbour**	**87.63**	**345**	P	**P**	**09 38 04.2**	**+0.3**
	baz=127,SNR=60						
A36M	**Sachs Harbour**	**87.63**	**345**	P	**P**	**09 38 04.5**	**+0.5**
YUK3	**Moose Creek**	**87.81**	**334**	P	**P**	**09 38 05.8**	**+0.5**
	baz=112						
MESA	**MESA**	**87.89**	**332**	P	**P**	**09 38 06.5**	**+0.8**
	baz=111						
CTG	**Chitna Glacier**	**87.89**	**333**	P	**P**	**09 38 06.2**	**+0.6**
	baz=112						
J29M	**Klondike Camp**	**87.94**	**336**	P	**P**	**09 38 06.6**	**+0.9**
	baz=114						
INK	**Inuvik**	**88.00**	**341**	P	**P**	**09 38 06.2**	**+0.4**
	comp=Z,18nm,0.6s,baz=96,slow=4.3,SNR=177						
INK				pP	**pP**	**09 40 21.4**	**-1.1**
	comp=Z,5.3nm,0.8s,baz=99,slow=4.9,SNR=8.7						
INK	**Inuvik**	**88.00**	**341**	P	**P**	**09 38 05.9**	**+0.2**
	baz=119,SNR=25						
INK	**Inuvik**	**88.00**	**341**	P	**P**	**09 38 06.1**	**+0.4**
INK				IAmb	IAmb	09 38 06.9	
	comp=Z,20nm,0.6s						
EPYK	**Eagle Plains**	**88.20**	**339**	P	**P**	**09 38 07.0**	**+0.2**
	baz=116,SNR=8.0						
EPYK	**Eagle Plains**	**88.20**	**339**	P	**P**	**09 38 07.1**	**+0.3**
EPYK				IAmb	IAmb	09 38 08.1	
	comp=Z,16nm,1.1s						
DAWY	**Dawson**	**88.25**	**336**	P	**P**	**09 38 07.2**	**+0.1**
	baz=114,SNR=10						
DAWY	**Dawson**	**88.25**	**336**	P	**P**	**09 38 07.4**	**+0.3**
DAWY				IAmb	IAmb	09 38 08.2	
	comp=Z,14nm,0.8s						
I29M	**Ogilvie Camp,**	**88.36**	**337**	P	**P**	**09 38 07.8**	**+0.3**
	baz=114,SNR=23						
M27K	**Edge Creek, AK**	**88.64**	**334**	P	**P**	**09 38 09.7**	**+0.6**
	baz=111						
BCAR	**Beaver Creek A**	**88.86**	**335**	P	**P**	**09 38 10.5**	**+0.5**
L27K	**Beaver Creek,**	**88.88**	**335**	P	**P**	**09 38 10.5**	**+0.5**
	baz=111,SNR=12						
L27K	**Beaver Creek,**	**88.88**	**335**	P	**P**	**09 38 10.6**	**+0.5**
L27K				IAmb	IAmb	09 38 11.5	
	comp=Z,12nm,0.7s						
VNDA	**Vanda**	**89.12**	**190**	P	**P**	**09 38 12.2**	**+1.3**
	comp=Z,8.3nm,0.8s,baz=135,slow=4.7,SNR=37						
VNDA				pP	**pP**	**09 40 26.9**	**-1.2**
	comp=Z,2.9nm,0.9s,baz=131,slow=4.5,SNR=5.2						
VNDA	**Vanda**	**89.12**	**190**	P	**P**	**09 38 11.9**	**+0.9**
VNDA				IAmb	IAmb	09 38 12.9	
	comp=Z,17nm,1.1s						
DOT	**Dot Lake**	**90.03**	**335**	P	**P**	**09 38 15.7**	**+0.4**
DOT				IAmb	IAmb	09 38 16.3	
	comp=Z,11nm,0.8s						
SCRK	**Sand Creek**	**90.10**	**335**	P	**P**	**09 38 15.9**	**+0.1**
	baz=109,SNR=14						
SCRK	**Sand Creek**	**90.10**	**335**	P	**P**	**09 38 16.0**	**+0.1**
SCRK				IAmb	IAmb	09 38 17.2	
	comp=Z,17nm,1.1s						
J26L	**Joseph Creek**	**90.11**	**336**	P	**P**	**09 38 15.9**	**+0.2**
	baz=110,SNR=11						
KLU	**Klutina**	**90.16**	**332**	P	**P**	**09 38 15.9**	**-0.1**
	baz=108						

RIDG	Independent Ri	90.39	335	P	P	09 38 17.1	+0.1
	baz=108						
PAX	Paxson	90.41	334	P	P	09 38 17.5	+0.3
	baz=108						
PAX	Paxson	90.41	334	P	P	09 38 17.1	0.0
PAX				IAmb	IAmb	09 40 36.4	
	comp=Z,14nm,1.1s						
J25K	Salcha River,	90.88	336	P	P	09 38 19.3	+0.1
	baz=108,SNR=18						
PRP	Porcupine Dome	91.22	336	P	P	09 38 21.1	+0.1
	baz=108						
PRP	Porcupine Dome	91.22	336	P	P	09 38 21.5	+0.5
PRP				IAmb	IAmb	09 38 22.1	
	comp=Z,14nm,1.1s						
WAT6	Susitna Watana	91.30	333	P	P	09 38 21.3	-0.1
	baz=106						
SML	Sawmill	91.35	332	P	P	09 38 21.5	0.0
	baz=106						
FYU	Fort Yukon	91.44	337	P	P	09 38 22.7	+1.0
BMAR	Burnt Mountain	91.47	338	P	P	09 38 22.8	+0.8
HDA	Harding Lake	91.47	335	P	P	09 38 21.6	-0.3
	baz=107,SNR=6.3						
HDA	Harding Lake	91.47	335	P	P	09 38 22.0	+0.1
HDA				IAmb	IAmb	09 40 40.5	
	comp=Z,7.9nm,0.7s						
IL31		91.55	335	P	P	09 38 21.6	-0.6
IL31				IAmb	IAmb	09 40 41.0	
	comp=Z,10nm,1.4s						
ILAR	Eielson Array	91.55	335	P	P	09 38 21.9	-0.3
	comp=Z,1.8nm,0.6s,baz=138,slow=3.4,SNR=52						
ILAR				pP	pP	09 40 38.5	-1.5
	comp=Z,1.6nm,0.6s,baz=156,slow=3.6,SNR=14						
ILAR				PKKP	PKKPdf	09 55 37.0	-0.4
	comp=Z,0.4nm,0.4s,baz=290,slow=3.4,SNR=9.2						
BOSA	Boshof	91.75	119	P	P	09 38 23.7	-0.5
	comp=Z,4.8nm,0.8s,baz=270,slow=4.5,SNR=7.0						
BOSA				PKKPbc	PKKPbc	09 55 39.1	-0.5
	comp=Z,3.2nm,1.0s,baz=75,slow=0.9,SNR=6.2						
POKR	Poker Plat Res	91.87	336	P	P	09 38 24.0	+0.2
	baz=106,SNR=13						
POKR	Poker Plat Res	91.87	336	P	P	09 38 23.9	+0.2
POKR				IAmb	IAmb	09 38 24.7	
	comp=Z,15nm,0.8s						
CCB	Clear Creek Bu	91.89	335	P	P	09 38 23.6	-0.2
CCB				IAmb	IAmb	09 38 24.4	
	comp=Z,11nm,0.6s						
WRH	Wood River Hil	91.96	335	P	P	09 38 24.2	0.0
WRH				IAmb	IAmb	09 38 24.8	
	comp=Z,9.3nm,0.6s						
COLA	College	91.97	335	P	P	09 38 24.2	0.0
	baz=106						
COLA	College	91.97	335	P	P	09 38 23.9	-0.2
BRSE	Bradley Lake S	91.98	330	P	P	09 38 24.1	-0.3
	baz=104						
TCOL	CIGO, UAF Yank	91.98	335	P	P	09 38 24.3	+0.1
	baz=106						
TCOL	CIGO, UAF Yank	91.98	335	P	P	09 38 24.6	+0.4
MCK	McKinley	92.13	334	P	P	09 38 24.9	-0.1
	baz=105						
MCK	McKinley	92.13	334	P	P	09 38 25.2	+0.2
MCK				IAmb	IAmb	09 38 25.7	
	comp=Z,12nm,1.0s						
MDM	Murphy Dome	92.15	336	P	P	09 38 24.9	-0.1
H24K	Noodor Dome	92.25	336	P	P	09 38 25.7	+0.2
	baz=106						
H24K	Noodor Dome	92.25	336	P	P	09 38 25.6	+0.1
H24K				IAmb	IAmb	09 38 26.6	
	comp=Z,6.5nm,0.8s						
NEA2	Nenana	92.40	335	P	P	09 38 25.7	-0.5
	baz=105,SNR=9.0						
NEA2	Nenana	92.40	335	P	P	09 38 25.9	-0.3
TRF	Thorofare Moun	92.64	334	P	P	09 38 27.1	-0.5
	baz=104						
TRF	Thorofare Moun	92.64	334	P	P	09 38 27.4	-0.1
I23K	Minto, Yukon-K	92.67	336	P	P	09 38 27.0	-0.3
	baz=104,SNR=9.0						
I23K	Minto, Yukon-K	92.67	336	P	P	09 38 27.1	-0.3
I23K				IAmb	IAmb	09 38 27.9	
	comp=Z,7.7nm,0.7s						
LBTB	Lobatse	92.72	116	P	P	09 38 28.1	-0.6
	comp=Z,5.4nm,0.7s,baz=256,slow=4.9,SNR=5.4						
KTH	Kantishna Hill	92.94	334	P	P	09 38 29.4	+0.6
KTH				IAmb	IAmb	09 38 30.7	
	comp=Z,8.7nm,0.8s						
BPAW	Bear Paw Mtn.	93.10	334	P	P	09 38 28.8	-0.6
	baz=103,SNR=10						
BPAW	Bear Paw Mtn.	93.10	334	P	P	09 38 29.0	-0.4
GERES	GERESS Array B	93.16	41	P	P	09 38 29.9	-0.3
	comp=Z,0.3nm,0.4s,baz=268,slow=4.5,SNR=2.1						
GERES				pP	pP	09 40 47.4	-0.6
	comp=Z,2.5nm,0.9s,baz=242,slow=2.9,SNR=5.3						
MLY	Manley	93.20	335	P	P	09 38 29.2	-0.8
	baz=103,SNR=7.7						
MLY	Manley	93.20	335	P	P	09 38 29.5	-0.4
MLY				IAmb	IAmb	09 38 30.4	
	comp=Z,7.6nm,1.0s						
CAST	Castle Rocks	93.42	334	P	P	09 38 30.6	-0.3
COLD	Coldfoot	93.50	338	P	P	09 38 31.7	+0.6
	baz=104,SNR=5.8						
COLD	Coldfoot	93.50	338	P	P	09 38 32.1	+0.9
COLD				IAmb	IAmb	09 38 32.9	
	comp=Z,7.7nm,0.8s						
TOLK	Toolik Lake Re	93.61	339	P	P	09 38 31.8	+0.1
	baz=104						
L20K	Farewell, AK	94.04	333	P	P	09 38 33.1	-0.7
	baz=101						
H21K	Melozitna Rive	94.18	336	P	P	09 38 34.2	-0.2
	baz=101						
K20K	Telida	94.29	333	P	P	09 38 34.3	-0.6
	baz=100						
J20K	Nowinta River	94.47	334	P	P	09 38 35.2	-0.4
	baz=100						
GCSA	Galena City Sc	95.73	335	P	P	09 38 41.9	+0.7
	baz=98						
MAW	Mawson	97.37	164	P	P	09 38 48.8	+0.2
	comp=Z,4.9nm,0.9s,baz=259,slow=5.1,SNR=4.7						
ARCES	ARCESS Array B	100.37	21	PKKPbc	PKKPbc	09 55 14.6	-3.3
	comp=Z,1.1nm,0.3s,baz=124,slow=1.3,SNR=17						
FINES	FINESS Array B	101.03	29	PKKPbc	PKKPbc	09 55 12.6	-3.2
	comp=Z,3.2nm,0.9s,baz=145,slow=4.7,SNR=6.1						
KBZ	Khabaz	113.38	46	PKiKP	PKiKP	09 43 49.7	+0.4
	comp=Z,3.2nm,0.7s,baz=222,slow=2.2,SNR=7.0						
DZM	Mont Dzumac	115.66	241	PKP	PKiKP	09 43 54.7	+0.2
	comp=Z,15nm,1.2s,baz=225,slow=7.1,SNR=2.0						
NRIK	Noril'sk	117.75	8	PKP	PKiKP	09 43 58.6	+1.6
	comp=Z,3.5nm,0.7s,baz=112,slow=5.4,SNR=3.5						
ARU	Arti	118.40	29	PKP	PKPdf	09 43 58.5	-0.1
	comp=Z,2.1nm,0.4s,baz=233,slow=4.6,SNR=7.1						
PETK	Petropavlovsk-	120.54	328	PKP	PKiKP	09 44 03.0	0.0
	comp=Z,1.8nm,0.6s,baz=163,slow=3.7,SNR=8.0						
AKTO	Aktyubinsk	121.01	35	PKP	PKiKP	09 44 04.0	0.0
	comp=Z,3.9nm,0.5s,baz=303,slow=2.8,SNR=16						
AKTO				PKKPbc	PKKPbc	09 54 08.8	-2.3
	comp=Z,2.6nm,0.6s,baz=149,slow=1.2,SNR=9.1						
ABKAR	Akbulak array	122.66	36		PKiKP	09 44 07.2	0.0
ABKAR	Akbulak array	122.66	36	PKPdf	PKiKP	09 44 07.5	+0.2
BRVK	Borovoye	125.88	28	PKPdf	PKPdf	09 44 13.3	+0.2
BVAR	Borovoye Array	125.95	27	PKP	PKiKP	09 44 13.7	0.0
	comp=Z,2.4nm,0.5s,baz=236,slow=11,SNR=12						
GEYT	Alibeck	126.02	49	PKP	PKiKP	09 44 14.2	-0.2
	comp=Z,4.3nm,0.6s,baz=12,slow=3.5,SNR=4.3						
STKA	Stephens Creek	128.91	217	PKP	PKPdf	09 44 19.7	+0.1
	comp=Z,14nm,0.7s,baz=87,slow=2.8,SNR=25						
STKA	Stephens Creek	128.91	217		PKPdf	09 44 19.3	-0.3
WSAR	Wadi Sarin	130.03	67	PKP	PKPdf	09 44 22.2	+0.3
	comp=Z,9.4nm,0.7s,baz=308,slow=2.1,SNR=4.9						
WSAR				SKPab	SKPbc	09 46 45.3	-0.9
	comp=Z,16nm,0.8s,baz=268,slow=7.4,SNR=9.1						
ZAA0	Zalesovo Array	130.85	18	PKPdf	PKPdf	09 44 22.4	0.0
ZALV	Zalesovo Beam	130.85	18	PKP	PKPdf	09 44 22.9	+0.4
	comp=Z,14nm,0.7s,baz=300,slow=2.9,SNR=46						
ZALV				SKPbc	SKPbc	09 46 47.4	-0.8
	comp=Z,14nm,0.4s,baz=328,slow=4.1,SNR=44						
ZALV	Zalesovo Beam	130.85	18	PKPdf	PKPdf	09 44 22.4	0.0
KURK	Kurchatov	131.19	25	PKPdf	PKPdf	09 44 23.5	+0.3
KURBB	Kurchatov Arra	131.23	25	PKP	PKPdf	09 44 23.8	+0.5
	comp=Z,5.1nm,0.4s,baz=310,slow=2.7,SNR=27						
KURBB				SKPbc	SKPbc	09 46 48.2	-1.4
	comp=Z,3.0nm,0.5s,baz=312,slow=4.3,SNR=20						
CTA	Charters Tower	133.28	232	PKP	PKPdf	09 44 28.4	+0.3
	comp=Z,5.8nm,0.5s,baz=108,slow=3.9,SNR=6.7						
CTAO	Charters Tower	133.28	232	PKPdf	PKPdf	09 44 27.9	-0.2
CHGR	Chuyangaron	133.62	43		PKiKP	09 44 29.2	-0.6
ASAJ	Asahikawa	133.86	326	PKP	PKiKP	09 44 29.4	-0.5
	comp=Z,11nm,0.8s,baz=321,slow=6.5,SNR=9.2						
BTK	Batken	134.00	41		PKPdf	09 44 29.6	+0.6
AAK	Ala-Archa	134.75	36	PKP	PKiKP	09 44 31.6	-0.4
	comp=Z,3.9nm,0.6s,baz=256,slow=2.9,SNR=11						
AAK				SKP		09 47 02.2	
	comp=Z,9.4nm,0.7s,baz=282,slow=1.4,SNR=18						
AAK	Ala-Archa	134.75	36	PKPdf	PKiKP	09 44 31.4	-0.6
MAKZ	Makanchi	135.61	26	PKPdf	PKPdf	09 44 31.5	-0.2
BOOM	Boomskoye usch	135.66	35	PKPdf	PKiKP	09 44 33.1	-0.8
MK31	Makanchi Array	135.76	26	PKPdf	PKPdf	09 44 31.9	-0.1
MKAR	Makanchi Array	135.76	26	PKhKP	PKPpre	09 44 20.4	
	comp=Z,0.5nm,0.6s,baz=12,slow=3.3,SNR=5.7						
MKAR				PKP	PKPdf	09 44 32.2	+0.2
	comp=Z,4.6nm,0.6s,baz=334,slow=1.5,SNR=33						
MKAR				pPKP	pPKPdf	09 47 00.1	+0.7
	comp=Z,1.8nm,0.6s,baz=1.9,slow=1.9,SNR=9.4						
MKAR	Makanchi Array	135.76	26	PKPdf	PKPdf	09 44 31.6	-0.4
TLY	Talaya	136.80	4	PKP	PKPdf	09 44 34.6	+0.8
	comp=Z,2.7nm,0.5s,baz=217,slow=5.1,SNR=3.6						
TARG	Taragay, Kyrgy	137.21	34	PKPdf	PKPdf	09 44 33.6	-1.7
KSH	Kashi	137.56	38	PKP	PKPdf	09 44 32.5	-3.2
USRK	Ussuriysk Ar.	139.06	334	PKP	PKPdf	09 44 38.5	+0.4
	comp=Z,5.9nm,0.7s,baz=249,slow=2.5,SNR=7.2						
USRK				SKPbc	SKPbc	09 47 13.8	-0.2
	comp=Z,9.6nm,0.8s,baz=55,slow=1.6,SNR=12						
ASAR	Alice Springs	139.54	217	PKhKP	PKPpre	09 44 30.4	
	comp=Z,4.7nm,0.4s,baz=136,slow=3.6,SNR=61						
ASAR				PKP	PKiKP	09 44 41.1	-1.1
	comp=Z,12nm,0.5s,baz=135,slow=1.6,SNR=18						
ASAR				SKPbc	SKPbc	09 47 14.4	-1.6
	comp=Z,5.7nm,0.5s,baz=133,slow=3.6,SNR=12						
ASAR				SKKPbc	SKKPbc	09 55 50.8	-1.1
	comp=Z,0.8nm,0.6s,baz=324,slow=3.5,SNR=10						
SONM	Songino Array	140.80	2	PKhKP	PKPpre	09 44 36.4	
	comp=Z,2.3nm,0.4s,baz=325,slow=2.4,SNR=21						
SONM				SKPbc	SKPbc	09 47 17.6	-1.1
	comp=Z,2.7nm,0.5s,baz=316,slow=2.1,SNR=12						
MAJO	Matsushiro	141.25	321		PKPdf	09 44 39.7	-2.6
MAT	Matsushiro	141.25	321	PKP	PKPdf	09 44 36.7	-5.6
MJAR	Matsushiro Arr	141.25	321	PKhKP	PKPpre	09 44 37.4	
	comp=Z,7.9nm,0.8s,baz=88,slow=2.8,SNR=12						
MJAR				SKPbc	SKPbc	09 47 19.1	-0.9
	comp=Z,1.3nm,0.5s,baz=58,slow=1.5,SNR=4.0						
WRA	Warramunga Arr	142.00	222	PKhKP	PKPpre	09 44 39.8	
	comp=Z,16nm,0.5s,baz=139,slow=2.7,SNR=364						
WRA				SKPbc	SKPbc	09 47 21.1	-1.2
	comp=Z,7.1nm,0.5s,baz=133,slow=2.7,SNR=12						
WRA				SKKPbc	SKKPbc	09 55 40.4	-1.8
	comp=Z,2.2nm,0.9s,baz=321,slow=4.8,SNR=12						
JCJ	Chichijima	143.26	304	PKP	PKPab	09 44 43.2	-1.3
	comp=Z,46nm,0.5s,baz=299,slow=19,SNR=6.5						
GUMO	Guam	144.07	281	PKP	PKPbc	09 44 46.7	-0.9
	comp=Z,61nm,0.4s,baz=65,slow=7.5,SNR=5.0						
JHS	Saijyo	145.38	323	PKPdf	PKPdf	09 44 49.9	+0.4
JAY	Jayapura	146.15	252	PKPbc	PKPbc	09 44 52.9	-0.9
	comp=Z,12nm,0.5s,baz=156,slow=10.0,SNR=2.2						
KS19	Wonju Array Si	146.30	332		PKPdf	09 44 51.9	+0.9
KS19				PKPbc	PKPbc	09 44 54.2	+0.8
KSRS	Korea Array	146.31	332	PKP	PKPdf	09 44 51.4	+0.4
	comp=Z,45nm,0.8s,baz=36,slow=3.2,SNR=71						
KSRS				PKPbc	PKPbc	09 44 54.0	+0.6
	comp=Z,40nm,0.7s,baz=36,slow=3.2,SNR=72						
KSRS				pPKP	pPKPab	09 47 15.8	-1.9
	comp=Z,3.4nm,0.8s,baz=41,slow=4.3,SNR=5.7						
KSAR	Wonju Array Be	146.34	332	PKPdf	PKPdf	09 44 51.4	+0.4
KSAR				PKPbc	PKPbc	09 44 54.0	+0.5
BJT	Baijiatuau	147.93	349		PKPdf	09 44 54.0	+0.5
BJT				PKPbc	PKPbc	09 44 57.6	0.0
JNU	Nakatsue	148.02	323	PKPbc	PKPbc	09 44 57.9	-0.2
	comp=Z,14nm,0.5s,baz=243,slow=1.3,SNR=8.0						
JNU				pPKPbc	pPKPdf	09 47 21.4	-0.4
	comp=Z,16nm,0.9s,baz=252,slow=1.7,SNR=2.9						
JNU	Nakatsue	148.02	323		PKPdf	09 44 54.9	+0.9
PSA00	Pilbara Seismi	148.10	200	PKPdf	PKPdf	09 44 53.7	-0.7
PSA00				PKPbc	PKPbc	09 44 58.2	-0.3
PSA00				PKPab	PKPab	09 45 03.6	-0.2
PSA00	Pilbara Seismi	148.10	200	PKPdf	PKPdf	09 44 53.2	-1.2
PSA00				PKPbc	PKPbc	09 44 58.2	-0.3
PSA00				PKPab	PKPab	09 45 03.4	-0.4
GTA	Gaotai	148.27	13	⇓PKPbc	PKPdf	09 44 54.8	+0.4
GTA				pPKP	pPKPdf	09 47 22.0	-0.1
GTA				sPKP		09 48 25.0	
FITZ	Fitzroy Crossi	148.63	212	PKP	PKPdf	09 44 55.6	+0.3
	comp=Z,39nm,0.5s,baz=298,slow=2.4,SNR=181						
FITZ				PKPbc	PKPbc	09 45 00.0	+0.1
	comp=Z,39nm,0.5s,baz=296,slow=1.1,SNR=61						
FITZ				pPKPbc	pPKPbc	09 47 24.8	-0.8
	comp=Z,12nm,0.9s,baz=235,slow=4.6,SNR=6.6						
KNRA	Kununurra	148.72	220	PKPdf	PKPdf	09 44 54.9	-0.6
KNRA				PKPbc	PKPbc	09 45 00.2	0.0
MTN	Manton Dam	149.13	227	PKPdf	PKPdf	09 44 55.7	-0.5
MTN				PKPbc	PKPbc	09 45 01.0	-0.2
JSU	Suzuyama	149.40	321		PKPbc	09 45 01.2	-0.3
LZH	Lanzhou	152.24	8	⇓PKPbc	PKiKP	09 45 08.5	+0.4
LZH				pPKP	pPKPbc	09 47 35.5	+1.0
LZH				sPKP		09 48 30.0	
RAMN	Ramite	152.27	46	*e*P	PKPdf	09 45 01.0	0.0
	comp=Z,116nm,0.6s						
TAPN	Taplejung	152.80	44	*e*P	PKPdf	09 45 02.0	+0.2
	comp=Z,36nm,0.5s						
LSA	Lhasa	153.34	36	PKPdf	PKPdf	09 45 02.2	-0.5
LSA					PKiKP	09 45 11.5	+0.5
FAKI	Fak Fak	153.81	245	PKPdf	PKPdf	09 45 03.4	+0.2
FAKI					PKPbc	09 45 11.7	-0.1
FAKI				PKPab	PKPab	09 45 29.4	+1.1
SIJI	Sorong	155.54	249	PKPab	PKPab	09 45 35.5	-0.3
	comp=Z,8.4nm,0.7s,baz=53,slow=5.1,SNR=5.2						
LEM	Lembang	164.70	176	PKPab	PKPab	09 46 17.0	+1.3
	comp=Z,26nm,0.7s,baz=4.1,slow=14,SNR=5.4						
CMAR	Chiang Mai Arr	166.40	43	PKP	PKPdf	09 45 16.9	+0.1
	comp=Z,6.9nm,0.8s,baz=277,slow=1.6,SNR=41						
CMAR	Chiang Mai Arr	166.40	43		PKPdf	09 45 16.7	0.0
IPM	Ipoh	171.47	118	P	PKPdf	09 45 19.0	-1.1
KULM	Kulim	171.48	112	P	PKPdf	09 45 19.0	-1.0
JRMM	Jerantut	172.36	127	P	PKPdf	09 45 20.0	-0.4
KSM	Kuching	172.77	194	P	PKPdf	09 45 20.0	-0.6
SBUM	Sibu	172.95	211	P	PKPdf	09 45 21.0	+0.3

NOU 25 09:32:48.2, 17°.69S×168°.20E, h34km, MLv3.2/4, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	Devils Point	0.04	199	P	Pb	09 32 54.2	+0.3
RTV	Rentapao	0.24	115	P	Pb	09 32 56.7	+1.4

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*IDC **25** 09:35:27.9±6.9, 6°.21S×148°.75E, h0km, mb3.9/3, mb1 4.0/5, mb1mx3.7/43, mbtmp3.9/5, ML3.3/2, Error ellipse: s-maj=102.5km s-min=57.7km az=46.0*

ISC 25 09:35:42.9±3.5, **6°.8S**±0°.2×**148°.0E**±0°.4, **h54km, n8,** σ**0^s.83**/9, **mb3.7**/3, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	2.75	198	Pn	Pn	09 36 24.5	-0.1
	22nm,0.3s,baz=3.1,slow=9.4,SNR=15						
PMG				Sn	Sn	09 36 56.4	-0.3
	16nm,0.3s,baz=330,slow=17,SNR=5.9						
PMG	Port Moresby	2.75	198	P	Pn	09 36 25.8	+1.1
PMG	Port Moresby	2.75	198	P	Pn	09 36 25.8	+1.1
COEN	Coen	8.59	213	P	Pn	09 37 44.7	0.0
	6.8nm,2.8s						
WRA	Warramunga Arr	18.65	224	P	P	09 39 56.3	-0.2
	0.4nm,0.3s,baz=50,slow=10,SNR=22						
ASAR	Alice Springs	21.59	217	P	P	09 40 28.4	0.0
	0.5nm,0.4s,baz=55,slow=9.4,SNR=20						
FITZ	Fitzroy Crossi	24.55	241	P	P	09 40 58.2	+0.4
	1.8nm,0.4s,baz=50,slow=8.9,SNR=28						
STKA	Stephens Creek	25.69	193	P	P	09 41 07.0	-1.1
	0.9nm,0.4s,baz=350,slow=11,SNR=6.1						

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*IDC **25** 09:38:11.6±0.7, 0°.07S×29°.74E, h0km, mb4.1/14, mb1 4.2/16, mb1mx4.0/65, mbtmp4.2/16, ML4.6/2, MS4.0/14, Ms1 3.9/14, ms1mx3.7/56, Error ellipse: s-maj=16.1km s-min=10.6km az=42.0*

*EAF **25** 09:38:11.1±2.3, 0°.14S×29°.19E, h76km±25km, MD3.5*

*NEIC **25** 09:38:12.6±1.4, 0°.16S±0°.09×29°.73E±0°.06, h10km±1km, mb4.7/13, Error ellipse: s-maj=15.9km s-min=7.6km az=203.0*

ISC 25 09:38:13.1±0.5, **0°.20S**±0°.06×**29°.85E**±0°.05, **h16km, n57,** σ**1^s.72**/53, **mb4.3**/21, **MS4.0**/12, **Zaire**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MBAR	Mbarara	0.98	114	Pg	Pn	09 38 33.8	+1.4
	13µm,0.3s,baz=112,slow=23,SNR=8713						
MBAR				Lg	Lg	09 38 47.3	
	22µm,0.3s,baz=163,slow=19,SNR=17						
MBAR	Mbarara	0.98	114	*e*P	Pn	09 38 34.1	+1.7
MBAR				*e*S	Sn	09 38 47.5	+1.6
MBAR	Mbarara	0.98	114		Pn	09 38 34.1	+1.7
MBAR				Sg	Sn	09 38 47.6	+1.6
TEBE	Entebbe	2.63	85	*e*P	Pb	09 38 58.3	-1.8
TEBE				*e*S	Sg	09 39 36.3	-1.6
LODK	Lodwar	6.58	57	Pn	Pn	09 39 49.3	-0.1
I32KE	NAIROBI INFRAS	7.06	98	Lg	Lg	09 41 51.9	
	baz=235,slow=33,SNR=3.3						
KMBO	Kilima Mbogo	7.46	97	Pn	Pn	09 40 04.0	+2.4
	9.7nm,0.3s,baz=257,slow=17,SNR=44						
KMBO				Sn	Sn	09 41 24.6	-1.6
	5.4nm,0.3s,baz=324,slow=22,SNR=3.7						
KMBO				Lg	Lg	09 42 08.4	
	37nm,0.3s,baz=221,slow=20,SNR=11						
KMBO	Kilima Mbogo	7.46	97	Pn	Pn	09 40 03.6	+2.0
KOND	Kondoa	7.56	128	*i* P	Pn	09 40 02.3	-0.6
KOND				*e*		09 40 02.9	
	baz=310,slow=4.3						
KOND				*i* S	Sn	09 41 23.4	-5.0
KIBK	Kibwezi	8.47	105	Pn	Pn	09 40 16.8	+1.5
LSZ	Lusaka	15.07	186	Pn	Pn	09 41 45.6	-0.1
	0.5nm,0.3s,baz=5.6,slow=13,SNR=6.4						
LSZ				Sn	Sn	09 44 29.0	-3.5
	0.3nm,0.3s,baz=326,slow=14,SNR=2.1						
LSZ				Lg	Lg	09 45 58.1	
	1.4nm,0.3s,baz=85,slow=20,SNR=7.2						
LSZ				LR	LR	09 47 53.5	
	comp=Z,625nm,20.1s,baz=359,slow=38						
LSZ	Lusaka	15.07	186		Pn	09 41 45.6	-0.1
ATD	Arta Tunnel	17.39	48	LR	LR	09 49 05.3	
	comp=Z,515nm,20.3s,baz=216,slow=38						
MATP	Matopo	20.15	184	Lg	Lg	09 48 37.5	
	2.0nm,0.5s,baz=286,slow=20,SNR=1.5						
TSUM	Tsumeb	22.39	212	P	P	09 43 13.8	+2.6
	1.0nm,0.3s,baz=78,slow=15,SNR=1.9						
TSUM				Lg	Lg	09 49 46.2	
	6.4nm,0.8s,baz=93,slow=14,SNR=2.2						
TSUM				LR	LR	09 51 33.7	
	comp=Z,246nm,18.2s,baz=334,slow=36						
TSUM	Tsumeb	22.39	212	P	P	09 43 10.5	-0.7
LBTB	Lobatse	25.01	189	P	P	09 43 37.3	+0.7
	3.2nm,0.7s,baz=353,slow=9.7,SNR=4.5						
LBTB				LR	LR	09 52 56.2	
	comp=Z,276nm,21.5s,baz=13,slow=35						
LBTB	Lobatse	25.01	189		P	09 43 33.8	-2.9
LBTB				IAmb	IAmb	09 43 45.8	
	comp=Z,11nm,0.8s						
BOSA	Boshof	28.60	188	P	P	09 44 11.1	+2.2
	comp=Z,2.2nm,1.0s,baz=42,slow=16,SNR=2.2						
BOSA				LR	LR	09 55 42.1	
	comp=Z,560nm,18.1s,baz=14,slow=37						
BOSA	Boshof	28.60	188	P	P	09 44 09.0	+0.1
BOSA				IAmb	IAmb	09 44 14.5	
	comp=Z,17nm,1.5s						
EIL	Elat	30.10	9	LR	LR	09 55 27.1	
	comp=Z,108nm,19.8s,baz=138,slow=34						
TORD	Torodi Ar. Bea	30.90	296	P	P	09 44 28.0	-1.3
	comp=Z,1.8nm,0.5s,baz=108,slow=8.4,SNR=14						
TORD				LR	LR	09 56 32.9	
	comp=Z,412nm,20.3s,baz=120,slow=36						
TORD	Torodi Ar. Bea	30.90	296		P	09 44 28.0	-1.3
RER	Riviere de l'E	32.77	131	P	P	09 44 45.7	0.0
SUR	Sutherland	33.13	194	P	P	09 44 49.7	+0.8
MMAI	Mount Meron Ar	33.45	8	LR	LR	09 57 44.1	
	comp=Z,98nm,18.5s,baz=20,slow=35						
DBIC	Dimbokro	35.29	282	LR	LR	09 59 51.1	
	comp=Z,254nm,18.5s,baz=120,slow=37						
BRTR	Keskin Array B	39.88	5	LR	LR	10 05 36.3	
	comp=Z,102nm,18.4s,baz=206,slow=41						
BRTR	Keskin Array B	39.88	5	P	P	09 45 45.0	-1.4
KEST	Kesra	40.53	334	LR	LR	10 04 33.5	
	comp=Z,203nm,18.6s,baz=233,slow=39						
KBZ	Khabaz	45.26	13	LR	LR	10 04 34.4	
	comp=Z,131nm,18.1s,baz=214,slow=35						
AKASG	Malin Array Be	50.71	359	P	P	09 47 11.7	-0.3
	comp=Z,0.6nm,0.4s,baz=184,slow=7.0,SNR=4.7						
AKTO	Aktyubinsk	55.87	21	P	P	09 47 49.6	-0.3
	comp=Z,2.1nm,0.8s,baz=206,slow=7.8,SNR=4.0						
FINES	FINESS Array B	61.55	358	P	P	09 48 28.2	-1.0
	comp=Z,5.0nm,1.1s,baz=132,slow=2.8,SNR=4.4						
FINES	FINESS Array B	61.55	358	P	P	09 48 29.5	+0.3
MAKZ	Makanchi	65.22	37	P	P	09 48 54.6	+0.7
MAKZ				IAmb	IAmb	09 49 07.2	
	comp=Z,8.8nm,1.4s						
KURBB	Kurchatov Arra	65.30	32	P	P	09 48 56.2	+2.0
	comp=Z,1.8nm,0.2s,baz=251,slow=5.8,SNR=6.9						
KURK	Kurchatov	65.40	32	P	P	09 48 54.6	-0.3
KURK				IAmb	IAmb	09 49 25.4	
	comp=Z,3.2nm,1.1s						
MK31	Makanchi Array	65.40	37	P	P	09 48 55.7	+0.6
MK31				IAmb	IAmb	09 49 05.7	
	comp=Z,2.8nm,0.8s						
MKAR	Makanchi Array	65.40	37	P	P	09 48 56.4	+1.3
	comp=Z,1.1nm,0.5s,baz=240,slow=7.5,SNR=7.8						
MKAR	Makanchi Array	65.40	37	P	P	09 48 55.8	+0.7
LSA	Lhasa	65.41	57	P	P	09 48 53.9	-2.1
LSA				IAmb	IAmb	09 49 05.9	
	comp=Z,4.2nm,0.5s						
ROSA	Rosais	65.71	313	P	P	09 48 56.0	-1.2
WMQ	Urumqi	67.49	42	*e*P	P	09 49 10.8	+2.2
ARCES	ARCESS Array B	69.67	358	P	P	09 49 21.4	-0.2
	comp=Z,5.3nm,1.1s,baz=129,slow=2.4,SNR=7.7						
ARCES	ARCESS Array B	69.67	358	P	P	09 49 21.4	-0.2
ARCES				IAmb	IAmb	09 49 45.8	
	comp=Z,14nm,1.3s						
CMAR	Chiang Mai Arr	70.27	70	P	P	09 49 28.2	+1.9
	comp=Z,0.7nm,0.3s,baz=269,slow=7.2,SNR=4.9						
CMAR	Chiang Mai Arr	70.27	70	P	P	09 49 25.5	-0.8
ZALV	Zalesovo Beam	70.33	31	P	P	09 49 26.1	+0.1
	comp=Z,0.6nm,0.5s,baz=262,slow=5.4,SNR=2.1						
MAW	Mawson	71.07	167	P	P	09 49 33.2	+3.1
	comp=Z,4.2nm,0.9s,baz=343,slow=6.8,SNR=4.6						
MAW				LR	LR	10 18 23.9	
	comp=Z,100nm,19.4s,baz=242,slow=34						
GTA	Gaotai	74.74	49	*e*P	P	09 49 55.0	+2.3
GTA				pP	sP	09 50 01.3	+1.0
GTA				sP	PcP	09 50 04.0	-2.8
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
SONM	Songino Array	81.13	42	P	P	09 50 29.6	+1.5
	comp=Z,0.8nm,0.6s,baz=250,slow=4.1,SNR=4.9						
HHC	Hu-ho-hao-te	83.85	49	*e*P	P	09 50 44.8	+2.4
HHC				pmax	pmax		
	comp=Z,11nm,1.3s						
HHC				pmax	pmax		
	comp=Z,120nm,6.0s						
NJ2	Nanjing	89.26	58	*e*P	P	09 51 09.0	+0.1
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
SIV	San Ignacio	90.83	254	LR	LR	10 28 53.3	
	comp=Z,173nm,20.0s,baz=106,slow=34						
NVAR	Mina Array Bea	132.01	326	PKP	PKiKP	09 57 27.9	+0.1
	comp=Z,0.7nm,0.8s,baz=123,slow=5.5,SNR=4.3						
NVAR	Mina Array Bea	132.01	326		PKPdf	09 57 24.6	-2.1

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*IDC **25** 09:43:29.6±1.3, 14°.36N×55°.04E, h0km, mb3.9/5, mb1 4.0/5, mb1mx3.6/57, mbtmp3.9/5, MS3.3/1, Ms1 3.3/1, ms1mx2.7/55, Error ellipse: s-maj=44.7km s-min=29.6km az=1.0*

*NEIC **25** 09:43:33.0±1.6, 14°.49N±0°.08×55°.05E±0°.06, h10km±1km, mb4.2/15, Error ellipse: s-maj=14.7km s-min=9.4km az=158.0*

ISC 25 09:43:31.7±0.6, **14°.33N**±0°.09×**55°.0E**±0°.1, **h14km, n30,** σ**1^s.15**/26, **mb4.1**/10, **Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCY	Socotra	2.33	205		Pn	09 44 09.0	-0.8
WSAR	Wadi Sarin	9.52	21	LR	LR	09 49 03.4	
	comp=Z,159nm,19.3s,baz=218,slow=35						
RAYN	Ar Rayn	12.80	317	Pn	Pn	09 46 31.2	-2.2
MSEY	Mahe Island	18.88	178	P	P	09 47 53.1	+1.2
MSEY				IAmb	IAmb	09 48 19.7	
	comp=Z,35nm,1.2s						
KAAM	Kaadhehdhoo	22.51	126	P	P	09 48 29.9	-1.3
GAZ	Gaziantep	27.72	328	P	P	09 49 19.6	-0.2
BTK	Batken	29.15	25	P	P	09 49 33.3	+0.8
BTK				IAmb	IAmb	09 49 39.3	
	comp=Z,3.3nm,0.9s						

ABKAR	Akbulak array	35.07	6	P	P	09 50 22.6	-1.6
AKTO	Aktyubinsk	36.10	3	P	P	09 50 31.2	-1.9
	comp=Z,0.8nm,0.6s,baz=180,slow=8.1,SNR=2.1						
FNA	Florina	39.37	319	P	P	09 51 01.1	+0.1
FNA				IAmb	IAmb	09 51 02.6	
	comp=Z,14nm,1.3s						
MAKZ	Makanchi	39.47	29	P	P	09 51 01.7	0.0
MAKZ				IAmb	IAmb	09 51 22.6	
	comp=Z,5.9nm,1.3s						
MKAR	Makanchi Array	39.61	30	P	P	09 51 02.3	-0.5
VLO	Vlora	40.44	317	P	P	09 51 09.9	+0.2
ARU	Arti	42.11	3	P	P	09 51 23.7	+0.5
ARU				IAmb	IAmb	09 51 39.1	
	comp=Z,4.8nm,1.1s						
CMAR	Chiang Mai Arr	42.30	78	P	P	09 51 26.2	+0.8
	comp=Z,2.3nm,0.8s,baz=280,slow=9.5,SNR=10						
CMAR	Chiang Mai Arr	42.30	78	P	P	09 51 26.4	+1.0
ZALV	Zalesovo Beam	45.95	24	P	P	09 51 54.8	+0.7
ZCCA	Zocca	47.82	318	P	P	09 52 10.1	+1.1
CTI	Castel Tesino	48.12	320	P	P	09 52 12.8	+1.4
GEC2	GERESS Array S	48.26	324	P	P	09 52 13.1	+0.7
GEC2				IAmb	IAmb	09 52 22.5	
	comp=Z,2.0nm,0.7s						
TORD	Torodi Ar. Bea	51.68	276	P	P	09 52 40.1	+1.4
	comp=Z,1.0nm,0.8s,baz=69,slow=6.4,SNR=4.1						
TORD	Torodi Ar. Bea	51.68	276	P	P	09 52 40.0	+1.3
SONM	Songino Array	53.92	41	P	P	09 52 55.3	+0.3
	comp=Z,0.5nm,0.4s,baz=242,slow=8.0,SNR=3.6						
SONM	Songino Array	53.92	41	P	P	09 52 55.6	+0.6
SONM				IAmb	IAmb	09 53 11.0	
	comp=Z,3.5nm,1.2s						
ESK	Eskdalemuir	60.41	326	P	P	09 53 41.4	+0.8
H01W3	Cape Leeuwin H	74.42	133	T	T	11 16 33.6	
	baz=301,slow=75,SNR=14						
H01W2	Cape Leeuwin H	74.43	133	T	T	11 16 36.7	
	baz=301,slow=75,SNR=12						
H01W1	Cape Leeuwin H	74.44	133	T	T	11 16 37.6	
	baz=301,slow=75,SNR=11						
ASAR	Alice Springs	85.84	116	P	P	09 56 09.7	-1.9
	comp=Z,0.8nm,0.9s,baz=306,slow=5.8,SNR=5.5						
NVAR	Mina Array Bea	127.15	353	PKP	PKPdf	10 02 36.2	-0.2
	comp=Z,0.5nm,0.7s,baz=50,slow=1.4,SNR=3.4						

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*IDC **25** 09:45:41.7±0.6, 8°.80N×40°.35W, h0^{km}, mb4.4/17, mb1 4.5/18, mb1mx4.2/49, mbtmp4.4/18, ML3.9/1, MS3.8/11, Ms1 3.9/11, ms1mx3.5/50, Error ellipse: s-maj=19.6km s-min=13.5km az=151.0*

*NEIC **25** 09:45:44.2±1.0, 8°.8N±0°.1×40°.3W±0°.1, h10^{km}±1^{km}, mb4.9/78, Error ellipse: s-maj=20.2km s-min=16.6km az=156.0*

ISC 25 09:45:43.4±0.4**, 8°.83N**±0°.06×**40°.37W**±0°.07**, h10^{km}, n160,** σ**0^{s}.74**/148**, mb4.8**/53**, MS3.9**/10**, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NBMO	Morrinhos-CE	12.07	178	*e*P	Pn	09 48 34.6	-1.0
ROSB	Rosrio	12.24	198	*e*P	Pn	09 48 37.4	-0.5
MDP	Montagnes des	12.73	254	Pn	Pn	09 48 42.5	-2.1
	0.6nm,0.3s,baz=59,slow=14,SNR=11						
MDP				Sn	Sn	09 50 51.6	-15
	0.9nm,0.3s,baz=151,slow=8.1,SNR=4.1						
MDP				LR	LR	09 52 36.4	
	comp=Z,237nm,21.2s,baz=100,slow=33						
NBCL	Cascavel-CE	13.13	171	*e*P	Pn	09 48 47.5	-2.7
NBPS	Pedro II - PI	13.18	185	*e*P	Pn	09 48 50.1	-0.8
TMAB	Tom-Au,PA,Br	13.53	215	*e*P	Pn	09 48 54.9	-0.7
MCPB	Macapa, AP	14.79	232	*e*P	Pn	09 49 11.4	-1.5
NBPA	Parau_RN	14.85	167	*e*P	Pn	09 49 14.6	+0.9
NBPV	Pedro Velho	15.97	161	*e*P	Pn	09 49 29.6	+1.1
NBMA	Muriti-CE	16.17	174	*e*P	Pn	09 49 31.2	+0.2
NBLV	Livramento - P	16.45	168	*e*P	Pn	09 49 35.5	+1.0
MALB	Monte Alegre	17.45	233	*e*P	Pn	09 49 46.9	-0.2
PRPB	Parauapebas	17.63	213	*e*P	Pn	09 49 49.9	+0.5
NBRF	Rio Formoso -	18.16	163	*e*P	P	09 49 57.0	+0.8
SMTB	Santa Maria do	18.99	202	*e*P	P	09 50 05.6	+0.2
NBPN	Ponto Novo - B	19.55	179	*e*P	P	09 50 11.3	-0.2
NBLA	Lagarto - SE	19.86	173	*e*P	Pn	09 50 16.3	-0.2
ITTB	Itaituba	20.16	230	*e*P	P	09 50 18.3	+0.1
H05S1	Guadeloupe/Mar	20.79	287	T	T	10 11 47.0	
	SNR=48						
BOAV	Boa Vista	21.04	253	*e*P	P	09 50 28.0	+0.3
BOAV	Boa Vista	21.04	253	P	P	09 50 27.9	+0.3
BOAV				IAmb	IAmb	09 50 29.2	
	comp=Z,64nm,0.9s						
GRGR	Grenville	21.18	281	P	P	09 50 29.8	+0.5
H05N1	Guadeloupe/Mar	21.50	292	T	T	10 12 38.6	
	SNR=18						
SDBA	SAO DESIDERIO	21.58	192	*e*P	P	09 50 33.0	-0.5
PTGA	Pitinga	21.71	245	P	P	09 50 34.8	-0.1
	comp=Z,62nm,1.0s,baz=67,slow=12,SNR=60						
PTGA				LR	LR	09 59 07.2	
	comp=Z,105nm,19.8s,baz=52,slow=37						
PTGA	Pitinga	21.71	245	P	P	09 50 35.1	+0.2
NPGB	Novo Progresso	21.72	224	*e*P	P	09 50 34.6	-0.4
PEXB	Peixe	22.24	201	*e*P	P	09 50 40.9	+0.3
GDU01	Guandu, BA	22.42	178	*e*P	P	09 50 43.0	+0.5
SNDB	Serra Nova Dou	23.35	208	*e*P	P	09 50 52.3	+0.1
MACA	Manacapuru-AM	23.50	240	*e*P	P	09 50 54.4	+0.7
MACA	Manacapuru-AM	23.50	240	P	P	09 50 54.3	+0.6
NBIT	Itapeh - BA	23.63	178	*e*P	P	09 50 55.4	+0.5
SMRT	St. Maarten	23.88	295	P	P	09 50 58.2	+0.8
SMRT				IAmb	IAmb	09 51 16.3	
	comp=Z,79nm,1.6s						
CMC01	Camacan, BA	24.05	178	*e*P	P	09 50 59.1	+0.1
JANB	Januaria	24.05	189	*e*P	P	09 50 58.2	-0.9
CLDB	Colider	24.87	218	*e*P	P	09 51 06.7	+0.1
GUA01	Guaratinga, BA	25.26	179	*e*P	P	09 51 10.6	+0.6
CDVI	St. Croix	25.31	293	P	P	09 51 10.2	-0.3
BDFB	Brasilia	25.47	197	P	P	09 51 10.6	-1.4
	comp=Z,6.5nm,0.7s,baz=26,slow=13,SNR=6.7						
BDFB				LR	LR	10 00 43.6	
	comp=Z,645nm,18.4s,baz=355,slow=36						
BDFB	Brasilia	25.47	197	P	P	09 51 12.2	+0.2
BDFB				IAmb	IAmb	09 51 14.8	
	comp=Z,22nm,1.4s						
PDRB	Porto dos Gac	26.02	219	*e*P	P	09 51 17.4	+0.4
CBYP	Canovanas	26.46	293	P	P	09 51 20.7	-0.3
CBYP				IAmb	IAmb	09 51 34.4	
	comp=Z,30nm,1.4s						
NAN01	Guarapari, ES	26.51	179	*e*P	P	09 51 22.3	+1.0
PDPR	Patillas Dam,	26.54	293	P	P	09 51 22.2	+0.6
PDPR				IAmb	IAmb	09 51 23.6	
	comp=Z,25nm,1.5s						
ARAG	Araguaiana, MT	26.89	205	*e*P	P	09 51 25.5	+0.7
CELP	Cerrillos	27.06	293	P	P	09 51 26.4	0.0
CELP				IAmb	IAmb	09 51 28.1	
	comp=Z,22nm,1.1s						
DIAM	Diamantina, MG	27.15	187	*e*P	P	09 51 27.8	+0.5
BAUV	El Baul	27.34	272	P	P	09 51 29.2	+0.4
BAUV				IAmb	IAmb	09 51 31.0	
	comp=Z,31nm,1.1s						
SJMB	Sao Joao De Ma	27.37	182	*e*P	P	09 51 29.8	+0.7
SAML	Samuel	28.78	233	P	P	09 51 42.1	+0.4
SALV	Santo Antonio	28.88	212	*e*P	P	09 51 43.5	+0.9
VILB	Vilhena	29.26	223	*e*P	P	09 51 46.9	+0.9
VILB	Vilhena	29.26	223	P	P	09 51 46.5	+0.5
VILB				IAmb	IAmb	09 51 52.4	
	comp=Z,26nm,1.4s						
PP1B	Ponte de Pedra	29.92	209	*e*P	P	09 51 52.7	+0.9
PTLB	Pontes e Lacer	30.46	218	*e*P	P	09 51 58.0	+1.4
PTLB	Pontes e Lacer	30.46	218	P	P	09 51 55.6	-1.0
H10N3	ASCENSION HYDR	30.64	122	T	T	10 24 03.5	
	baz=302,slow=75,SNR=226						
H10N2	ASCENSION HYDR	30.65	122	T	T	10 24 03.8	
	baz=302,slow=75,SNR=178						
H10N1	ASCENSION HYDR	30.66	122	T	T	10 24 05.0	
	baz=302,slow=75,SNR=193						
H10S3	ASCENSION HYDR	31.11	124	T	T	10 24 38.7	
	baz=299,slow=74,SNR=360						
H10S2	ASCENSION HYDR	31.13	124	T	T	10 24 40.0	
	baz=281,slow=74,SNR=171						
SDDR	Presa de Saban	31.61	292	P	P	09 52 06.0	-0.9
ROSA	Rosais	31.69	18	P	P	09 52 05.7	-1.6
ETMB	Extrema	31.70	235	*e*P	P	09 52 08.4	+0.8
ETMB	Extrema	31.70	235	P	P	09 52 07.7	+0.1
ETMB				IAmb	IAmb	09 52 09.3	
	comp=Z,11nm,1.1s						
SIV	San Ignacio	32.07	220	P	P	09 52 12.0	+1.2
	comp=Z,6.0nm,1.0s,baz=55,slow=8.1,SNR=14						
PCMB	Pacaembu	32.08	199	*e*P	P	09 52 11.5	+0.7
TBTG	Tabatinga, AM	32.16	247	*e*P	P	09 52 12.2	+0.5
TBTG	Tabatinga, AM	32.16	247	P	P	09 52 10.9	-0.8
JAKH	Jacmel	32.57	290	P	P	09 52 16.1	+0.9
OCAC	Ocana	32.58	271	P	P	09 52 15.3	-0.2
TRCB	Terra Rica	33.65	201	P	P	09 52 25.3	+0.7
ROSC	El Rosal	33.93	266	P	P	09 52 27.7	+0.1
	comp=Z,5.9nm,0.3s,baz=322,slow=3.4,SNR=8.7						
ROSC				LR	LR	10 06 25.9	
	comp=Z,186nm,19.1s,baz=71,slow=37						
ROSC	El Rosal	33.93	266	P	P	09 52 27.6	+0.1
ROSC				IAmb	IAmb	09 52 30.9	
	comp=Z,11nm,0.8s						
ZARC	Zaragoza, Cauc	34.16	270	P	P	09 52 28.1	-1.0
DBIC	Dimbokro	35.25	91	P	P	09 52 37.6	-1.0
	comp=Z,5.2nm,0.8s,baz=274,slow=8.8,SNR=5.1						
DBIC	Dimbokro	35.25	91	P	P	09 52 37.8	-0.8
DBIC				IAmb	IAmb	09 52 52.2	
	comp=Z,23nm,1.3s						
KOWA	Kowa	36.02	78	P	P	09 52 45.4	+0.2
	comp=Z,4.6nm,0.7s,baz=256,slow=7.7,SNR=10						
KOWA	Kowa	36.02	78	P	P	09 52 44.3	-0.9
CZSB	Cruzeiro do Su	36.18	244	*e*P	P	09 52 46.5	0.0
CZSB	Cruzeiro do Su	36.18	244	P	P	09 52 46.4	-0.2
LPAZ	La Paz	37.12	228	P	P	09 52 55.2	0.0
CPUP	Villa Florida	38.64	205	LR	LR	10 09 05.4	
	comp=Z,364nm,19.1s,baz=32,slow=36						
OTAV	Otavalo	38.87	259	*e*P	P	09 53 11.0	+1.0
OTAV	Otavalo	38.87	259	P	P	09 53 09.4	-0.5
TORD	Torodi Ar. Bea	41.48	80	P	P	09 53 30.2	-0.8
	comp=Z,3.7nm,0.8s,baz=281,slow=8.0,SNR=17						
TORD				LR	LR	10 08 39.9	
	comp=Z,160nm,20.5s,baz=25,slow=33						
TORD	Torodi Ar. Bea	41.48	80	P	P	09 53 30.3	-0.8
CDITO	Canoas	41.99	273	P	P	09 53 35.3	0.0
PB15	IPOC Station P	42.72	221	P	P	09 53 40.7	-0.5
RIMA	Rio Macho	42.91	275	P	P	09 53 43.4	+0.4
RIMA				IAmb	IAmb	09 53 45.2	
	comp=Z,30nm,1.3s						
CBN	Corbin Frederi	44.29	317	P	P	09 53 53.8	+0.3
CBN				IAmb	IAmb	09 54 19.4	
	comp=Z,11nm,0.8s						
BOAB	BOACO BROADBAN	44.62	279	P	P	09 53 56.6	+0.1
ESDC	Sonseca Array	44.70	41	P	P	09 53 56.2	-0.6
	comp=Z,1.3nm,1.0s,baz=226,slow=10,SNR=4.5						
M54A	Oil Creek Stat	47.53	320	P	P	09 54 18.0	-1.1
M54A				IAmb	IAmb	09 54 24.3	
	comp=Z,18nm,1.2s						
P53A	Whipple	47.65	317	P	P	09 54 20.1	+0.1
P53A				IAmb	IAmb	09 54 35.4	
	comp=Z,20nm,1.4s						
Q52A	Bidwell	48.01	316	P	P	09 54 23.0	+0.2
O52A	Adamsville	48.25	317	P	P	09 54 25.8	+1.1
O52A				IAmb	IAmb	09 54 46.5	
	comp=Z,15nm,1.1s						
ACSO	Alum Creek Sta	49.08	317	P	P	09 54 32.0	+0.9
ACSO				IAmb	IAmb	09 54 34.6	
	comp=Z,16nm,1.1s						
SCHQ	Schefferville	50.48	340	P	P	09 54 40.4	-1.1
	comp=Z,6.8nm,0.9s,baz=108,slow=6.4,SNR=3.0						
SCHQ				LR	LR	10 13 12.2	
	comp=Z,196nm,19.4s,baz=112,slow=33						
BO02	Sierra Bellavi	52.06	212	P	P	09 54 53.6	0.0
BO02				IAmb	IAmb	09 54 54.3	
	comp=Z,10nm,1.1s						
SIUC	Southern Illin	52.50	311	P	P	09 54 57.6	+0.7
SIUC				IAmb	IAmb	09 55 05.0	
	comp=Z,27nm,1.5s						
H09W1	TRISTAN DA CUN	52.71	152	T	T	10 51 37.1	
	SNR=4.1						
HBAR	Harrisburg	52.90	308	P	P	09 55 01.3	+1.4
WHAR	Wooly Hollow	54.10	307	P	P	09 55 09.7	+1.0
WHAR				IAmb	IAmb	09 55 20.4	
	comp=Z,13nm,1.4s						
WLAR	White Oak Lake	54.33	305	P	P	09 55 11.8	+1.4
LC01	Cunco	55.80	210	P	P	09 55 20.0	-0.9
LC01				IAmb	IAmb	09 55 20.6	
	comp=Z,10nm,0.9s						
PLCA	Paso Flores	56.63	207	P	P	09 55 25.7	-1.1
	comp=Z,7.1nm,1.0s,baz=23,slow=7.2,SNR=6.5						
PLCA	Paso Flores	56.63	207	*e*P	P	09 55 25.5	-1.4
PLCA	Paso Flores	56.63	207	P	P	09 55 26.3	-0.6
PLCA				IAmb	IAmb	09 55 27.5	
	comp=Z,14nm,1.1s						
Z35A	Perchaven, San	57.62	304	P	P	09 55 34.6	+0.6
Z35A				IAmb	IAmb	09 55 37.2	
	comp=Z,12nm,0.8s						
OK033	Mehan	57.95	307	P	P	09 55 35.6	-0.7
OK033				IAmb	IAmb	09 55 37.2	
	comp=Z,16nm,1.2s						
JCT	Junction City	59.27	300	P	P	09 55 45.9	+0.2
ECSD	EROS Data Cent	59.79	316	P	P	09 55 48.8	-0.2
ECSD				IAmb	IAmb	09 55 49.6	
	comp=Z,7.7nm,1.3s						
CBKS	Cedar Bluff	60.75	310	P	P	09 55 55.0	-0.6
CBKS				IAmb	IAmb	09 56 03.8	
	comp=Z,8.9nm,1.0s						
ULM	Lac du Bonnet	61.56	323	P	P	09 55 60.0	-0.9
	comp=Z,8.1nm,1.0s,baz=52,slow=1.3,SNR=5.4						
ULM	Lac du Bonnet	61.56	323	P	P	09 56 00.3	-0.5
TX32	Lajitas Array	62.47	298	P	P	09 56 07.9	+0.4
TXAR	Lajitas Array	62.47	298	P	P	09 56 08.1	+0.5
	comp=Z,1.0nm,0.8s,baz=103,slow=6.5,SNR=14						
TXAR	Lajitas Array	62.47	298	P	P	09 56 07.5	0.0
TX31	Lajitas Ar. Si	62.47	298	P	P	09 56 07.8	+0.2
TX31				IAmb	IAmb	09 56 28.3	
	comp=Z,14nm,1.4s						
KSCO	Kaye Shedlock'	62.99	309	P	P	09 56 11.5	+0.6
MDND	Maddock	63.04	320	P	P	09 56 11.0	+0.1
SUMG	Summit	63.70	1	*i* P	P	09 56 15.0	-0.3
SUMG				IAmb	IAmb	09 56 16.7	
	comp=Z,3.3nm,0.9s						
HPIG		64.06	296	P	P	09 56 18.7	+0.5
MNTX	Cornudas Mount	64.17	301	P	P	09 56 19.0	+0.3
MNTX				IAmb	IAmb	09 56 21.5	
	comp=Z,5.1nm,0.9s						
NOA	NORSAR Array B	64.40	25	P	P	09 56 19.8	+0.2
	comp=Z,2.8nm,0.9s,baz=239,slow=6.4,SNR=3.8						
NOA				LR	LR	10 18 54.0	
	comp=Z,78nm,21.7s,baz=225,slow=31						
SDCO	Great Sand Dun	65.01	307	P	P	09 56 24.5	+0.1
ISCO	Idaho Springs	65.41	310	P	P	09 56 27.6	+0.6
ISCO				IAmb	IAmb	09 56 37.8	
	comp=Z,7.4nm,1.3s						
121A	Cookes Peak, D	66.28	302	P	P	09 56 32.3	-0.3
121A				IAmb	IAmb	09 56 36.3	
	comp=Z,5.7nm,1.1s						
FFC	Flin Flon	66.62	326	P	P	09 56 34.7	+0.7
FFC				IAmb	IAmb	09 56 43.5	
	comp=Z,12nm,1.2s						
X18A	Snowflake	68.24	304	P	P	09 56 45.5	+0.5
TUC	Tucson	68.80	301	P	P	09 56 48.3	0.0
EGMT	Eagleton	69.72	318	P	P	09 56 53.7	-0.1
EGMT				IAmb	IAmb	09 56 56.4	
	comp=Z,12nm,1.2s						
SPUT	South Promonto	70.77	311	P	P	09 57 00.9	+0.5
SPUT				IAmb	IAmb	09 57 02.2	
	comp=Z,12nm,1.4s						
DUG	Dugway, Tooele	70.95	309	P	P	09 57 01.8	+0.2
FINES	FINESS Array B	71.12	28	P	P	09 57 02.6	+0.7
	comp=Z,7.5nm,1.1s,baz=231,slow=8.8,SNR=2.8						
BGU	Big Grassy Mou	71.17	310	P	P	09 57 03.0	+0.1
LSZ	Lusaka	72.02	109	LR	LR	10 25 30.8	
	comp=Z,21nm,19.3s,baz=137,slow=33						
HLID	Hailey	72.41	313	P	P	09 57 10.1	-0.2
RES	Resolute Bay	72.57	347	P	P	09 57 10.8	+0.4
RES				IAmb	IAmb	09 57 13.5	
	comp=Z,8.3nm,1.1s						
EDM	Edmonton	72.79	323	P	P	09 57 12.7	+0.5
EDM				IAmb	IAmb	09 57 22.1	
	comp=Z,18nm,1.2s						
ELK	Elko	72.83	310	P	P	09 57 13.8	+0.8
MATP	Matopo	73.67	114	LR	LR	10 26 00.1	
	comp=Z,36nm,18.1s,baz=2.0,slow=33						
EUNU	Eureka	74.37	353	P	P	09 57 21.7	+0.7
EUNU				IAmb	IAmb	09 57 24.9	
	comp=Z,10nm,1.1s						
YKA	Yellowknife Ar	74.94	332	P	P	09 57 24.2	-0.3
	comp=Z,3.4nm,0.9s,baz=97,slow=6.7,SNR=5.6						
A36M	Sachs Harbour	80.07	342	P	P	09 57 53.1	+0.1
A36M				IAmb	IAmb	09 57 56.2	
	comp=Z,17nm,1.0s						
DLBC	Dease Lake	82.36	328	P	P	09 58 06.9	+1.3
VNA3	Neumayer Olymp	82.50	170	P	P	09 58 06.1	+0.2
INK	Inuvik	83.03	338	P	P	09 58 09.6	+0.8
SNAA	Sanae	84.07	169	P	P	09 58 13.7	-0.3
SNAA	Sanae	84.07	169	LR	LR	10 27 11.0	
	comp=Z,86nm,19.2s,baz=354,slow=30						
DAWY	Dawson	86.05	334	P	P	09 58 25.0	+0.8
DAWY				IAmb	IAmb	09 58 34.9	
	comp=Z,17nm,1.5s						
BMAR	Burnt Mountain	87.30	338	P	P	09 58 31.0	+0.7
BCAR	Beaver Creek A	87.32	333	P	P	09 58 31.1	+0.6
AKTO	Aktyubinsk	88.56	39	P	P	09 58 37.5	+0.9
	comp=Z,0.5nm,0.5s,baz=277,slow=3.6,SNR=3.6						
IL31		89.00	336	P	P	09 58 38.7	+0.4
IL31				IAmb	IAmb	09 58 41.4	
	comp=Z,8.7nm,1.3s						
ILAR	Eielson Array	89.00	336	P	P	09 58 39.2	+0.8
	comp=Z,2.6nm,1.0s,baz=63,slow=4.0,SNR=14						
ILAR	Eielson Array	89.00	336	P	P	09 58 38.9	+0.6
ABKAR	Akbulak array	90.04	40	P	P	09 58 43.7	+0.1

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*IDC **25** 10:15:18.1±0.8, 14°.50N×55°.04E, h0^{km}, mb4.0/11, mb1 4.2/11, mb1mx3.8/70, mbtmp4.0/11, MS3.8/24, Ms1 3.8/24, ms1mx3.6/58, Error ellipse: s-maj=23.6km s-min=20.0km az=14.0*

*NEIC **25** 10:15:21.0±1.1, 14°.69N±0°.07×55°.0E±0°.1, h10^{km}±1^{km}, mb4.4/29, Error ellipse: s-maj=17.0km s-min=11.6km az=285.0*

ISC 25 10:15:20.5±0.5**, 14°.60N**±0°.07×**54°.99E**±0°.08**, h14^{km}, n68,** σ**0^{s}.93**/49**, mb4.2**/23**, MS3.8**/22**, Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCY	Socotra	2.59	202		Pn	10 15 59.3	-2.8
WSAR	Wadi Sarin	9.25	21	LR	LR	10 20 51.8	
	comp=Z,913nm,20.7s,baz=196,slow=36						
ATD	Arta Tunnel	12.22	257	LR	LR	10 21 43.3	
	comp=Z,725nm,20.4s,baz=84,slow=31						
RAYN	Ar Rayn	12.61	316		Pn	10 18 18.6	-1.0
HRA	Herat	20.76	17	P	P	10 20 00.3	-0.9
LODK	Lodwar	22.32	242	P	P	10 20 19.2	+1.2
LODK				IAmb	IAmb	10 20 24.4	
	comp=Z,9.7nm,1.2s						
KAAM	Kaadhehdhoo	22.66	127	P	P	10 20 22.6	+1.1
GEYT	Alibeck	23.40	6	LR	LR	10 31 44.1	
	comp=Z,197nm,18.1s,baz=35,slow=42						
GEYT	Alibeck	23.40	6	P	P	10 20 28.4	-0.6
GEYT				IAmb	IAmb	10 20 37.0	
	comp=Z,6.6nm,0.8s						
GYA0B	ALIBECK ARRAY	23.40	6	P	P	10 20 28.2	-0.8
GYA0B				IAmb	IAmb	10 20 29.6	
	comp=Z,7.7nm,0.7s						
KMBO	Kilima Mbogo	23.51	230	P	P	10 20 30.9	+0.4
	comp=Z,1.1nm,0.4s,baz=31,slow=14,SNR=6.3						
KMBO				LR	LR	10 30 05.5	
	comp=Z,222nm,19.5s,baz=101,slow=38						
KMBO	Kilima Mbogo	23.51	230	P	P	10 20 31.5	+1.0
KBL	Kabul	23.56	30	P	P	10 20 31.0	+0.1
KBL				IAmb	IAmb	10 20 43.6	
	comp=Z,20nm,1.6s						
KIBK	Kibwezi	23.77	226	P	P	10 20 34.1	+1.2
EIL	Elat	23.80	312	LR	LR	10 30 23.1	
	comp=Z,190nm,21.4s,baz=149,slow=38						
GHAJ	Ghor Haditha	24.35	316	P	P	10 20 36.3	-1.8
NIL	Nilore	25.17	38	P	P	10 20 44.4	-1.1
NIL				IAmb	IAmb	10 21 03.5	
	comp=Z,14nm,1.1s						
SIRT	Sirnak	25.39	336	P	P	10 20 48.0	+0.4
MMAI	Mount Meron Ar	25.55	319	LR	LR	10 31 41.8	
	comp=Z,96nm,21.9s,baz=85,slow=38						
PALK	Pallekele	26.25	103	LR	LR	10 29 46.1	
	comp=Z,126nm,19.6s,baz=53,slow=33						
PALK	Pallekele	26.25	103	P	P	10 20 56.3	+0.7
GNI	Garni	26.99	343	P	P	10 21 03.4	+1.3
	comp=Z,3.1nm,0.3s,baz=214,slow=15,SNR=1.6						
GNI				LR	LR	10 33 39.4	
	comp=Z,350nm,19.4s,baz=148,slow=41						
CHGR	Chuyangaron	27.03	25	P	P	10 21 01.2	-1.2
CHGR				IAmb	IAmb	10 21 11.3	
	comp=Z,12nm,1.1s						
GAZ	Gaziantep	27.49	328	P	P	10 21 06.6	+0.1
GAZ				IAmb	IAmb	10 21 22.5	
	comp=Z,8.2nm,1.0s						
BTK	Batken	28.90	26	P	P	10 21 18.6	-0.5
BTK				IAmb	IAmb	10 21 27.2	
	comp=Z,3.6nm,0.9s						
KBZ	Khabaz	30.82	343	LR	LR	10 35 58.7	
	comp=Z,231nm,18.5s,baz=165,slow=40						
KVAR	Kislovodsk Arr	31.08	343	LR	LR	10 35 39.0	
	comp=Z,194nm,18.2s,baz=67,slow=39						
BRTR	Keskin Array B	31.26	327	LR	LR	10 35 39.4	
	comp=Z,154nm,20.7s,baz=136,slow=39						
ELL	Elmali	31.41	319	P	P	10 21 40.4	-1.0
IDI	Anoyia	33.98	313	LR	LR	10 36 14.0	
	comp=Z,47nm,21.8s,baz=174,slow=37						
ABKAR	Akbulak array	34.79	6	P	P	10 22 10.5	-0.1
ABKAR				IAmb	IAmb	10 22 17.9	
	comp=Z,3.1nm,0.9s						
ABKAR	Akbulak array	34.79	6	P	P	10 22 10.9	+0.3
AKTO	Aktyubinsk	35.82	3	P	P	10 22 19.6	+0.2
	comp=Z,2.5nm,0.8s,baz=190,slow=8.8,SNR=8.2						
AKTO				LR	LR	10 38 04.3	
	comp=Z,201nm,21.1s,baz=200,slow=38						
MKAR	Makanchi Array	39.36	30	LR	LR	10 40 51.7	
	comp=Z,168nm,20.0s,baz=248,slow=39						
MKAR	Makanchi Array	39.36	30	P	P	10 22 48.3	-1.2
LSZ	Lusaka	39.80	223	P	P	10 22 54.5	+1.0
KURK	Kurchatov	40.78	23	P	P	10 23 00.9	-0.3
BUR08	Bucovina Ar. S	41.18	329	P	P	10 23 04.7	+0.1
BUR08				IAmb	IAmb	10 23 21.4	
	comp=Z,13nm,1.6s						
PDG	Podgorica	41.39	319	P	P	10 23 06.3	0.0
AKASG	Malin Array Be	41.60	335	P	P	10 23 08.0	0.0
	comp=Z,0.3nm,0.4s,baz=146,slow=7.1,SNR=1.3						
AKASG				LR	LR	10 44 07.2	
	comp=Z,39nm,18.7s,baz=310,slow=41						
CM31	Chiang Mai Arr	42.23	79	P	P	10 23 12.3	-1.3
CM31				IAmb	IAmb	10 23 21.2	
	comp=Z,10nm,1.1s						
CMAR	Chiang Mai Arr	42.23	79	P	P	10 23 13.9	+0.4
	comp=Z,3.2nm,0.7s,baz=276,slow=8.5,SNR=19						
CMAR				LR	LR	10 41 31.1	
	comp=Z,32nm,18.0s,baz=24,slow=37						
CMAR	Chiang Mai Arr	42.23	79	P	P	10 23 12.9	-0.7
ZALV	Zalesovo Beam	45.69	24	LR	LR	10 45 02.1	
	comp=Z,150nm,18.2s,baz=305,slow=39						
ZALV	Zalesovo Beam	45.69	24	P	P	10 23 40.5	-0.3
STAL	STALIGIAL	47.36	321	P	P	10 23 54.7	+0.5
LBTB	Lobatse	48.71	216	P	P	10 24 06.2	+1.3
FINES	FINESS Array B	51.18	343	P	P	10 24 23.0	0.0
	comp=Z,5.6nm,1.0s,baz=132,slow=8.0,SNR=3.7						
FINES				LR	LR	10 49 01.5	
	comp=Z,198nm,18.7s,baz=185,slow=39						
FINES	FINESS Array B	51.18	343	P	P	10 24 22.9	-0.1
TORD	Torodi Ar. Bea	51.67	275	P	P	10 24 27.7	+0.3
	comp=Z,1.7nm,0.9s,baz=87,slow=7.0,SNR=8.5						
TORD				LR	LR	10 46 03.7	
	comp=Z,91nm,18.5s,baz=350,slow=36						
TORD	Torodi Ar. Bea	51.67	275	P	P	10 24 27.7	+0.3
BOSA	Boshof	51.70	214	LR	LR	10 44 41.8	
	comp=Z,91nm,20.8s,baz=9.5,slow=34						
SONM	Songino Array	53.70	41	P	P	10 24 43.7	+1.6
	comp=Z,0.7nm,0.7s,baz=252,slow=8.8,SNR=2.0						
SONM				LR	LR	10 50 27.9	
	comp=Z,112nm,21.9s,baz=244,slow=39						
LEM	Lembang	56.36	109	LR	LR	10 46 12.0	
	comp=Z,48nm,19.3s,baz=286,slow=33						
ESDC	Sonseca Array	57.00	308	P	P	10 25 06.8	+0.8
	comp=Z,0.8nm,0.8s,baz=331,slow=13,SNR=1.2						
NRIK	Noril'sk	58.41	13	LR	LR	10 54 44.9	
	comp=Z,142nm,18.9s,baz=200,slow=40						
H01W3	Cape Leeuwin H	74.60	133	T	T	11 48 22.9	
	baz=301,slow=75,SNR=56						
H01W2	Cape Leeuwin H	74.61	133	T	T	11 48 23.4	
	baz=301,slow=75,SNR=58						
H01W1	Cape Leeuwin H	74.62	133	T	T	11 48 24.2	
	baz=301,slow=75,SNR=70						
FAKI	Fak Fak	78.43	96	P	P	10 27 21.5	0.0
FAKI				IAmb	IAmb	10 27 25.4	
	comp=Z,8.5nm,1.1s						
MAW	Mawson	82.18	177	LR	LR	10 57 14.8	
	comp=Z,134nm,19.2s,baz=254,slow=31						
WRA	Warramunga Arr	85.21	112	P	P	10 27 56.2	-1.0
	comp=Z,1.6nm,0.9s,baz=296,slow=4.2,SNR=9.3						
WRA	Warramunga Arr	85.21	112	P	P	10 27 57.0	-0.2
PETK	Petropavlovsk-	85.90	36	P	P	10 28 00.9	+0.9
ASAR	Alice Springs	85.94	116	P	P	10 27 59.5	-1.3
	comp=Z,1.3nm,0.8s,baz=282,slow=4.7,SNR=8.5						

ASAR	Alice Springs	85.94	116	P	P	10 27 59.9	-0.9
NVAR	Mina Array Bea comp=Z,1.6nm,0.8s,baz=59,slow=0.9,SNR=4.7	126.87	353	PKP	PKPdf	10 34 24.2	-0.5
NVAR	Mina Array Bea	126.87	353		PKiKP	10 34 25.1	-0.1

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*IDC **25** 10:16:15.1±6.8, 43.°29N×84.°58E, h20^{km}±33^{km}, mb1 3.3/5, mb1mx3.1/72, mbtmp3.4/5, ML3.1/5, Error ellipse: s-maj=50.0km s-min=31.5km az=148.0*

*SOME **25** 10:16:16.3, 43.°65N×84.°72E, h5^{km}*

*NNC **25** 10:16:19.4±1.2, 43.°64N×84.°60E, h0^{km}, mb4.2, mpv3.9, Error ellipse: s-maj=10.0km s-min=5.3km az=131.0*

ISC 25 10:16:12.3±1.4**, 43.°47N**±0.°06×**84.°81E**±0.°06**, h10**^{km}**, n49, σ1^{s}59**/65**, 8C-7D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	Ketmen 21nm,0.3s	3.24	271	*e*P	Pg	10 17 13.5	-0.9
KTMS	156nm,0.4s			*e*S	Sg	10 17 55.2	-1.2
KTMS	Ketmen 21nm,0.3s	3.24	271	Pg	Pg	10 17 13.5	-0.9
KTMS	156nm,0.4s			Lg	Lg	10 17 55.3	
DJR	Jarkent 18nm,0.3s	3.73	285	*e*P	Pg	10 17 23.1	-0.6
DJR	85nm,0.5s			*e*S	Sg	10 18 11.4	-0.5
DJR	Jarkent 18nm,0.3s	3.73	285	Pg	Pg	10 17 23.1	-0.6
DJR	85nm,0.5s			Lg	Lg	10 18 11.9	
MK31	Makanchi Array 0.6nm,0.3s,baz=152,slow=15,SNR=200	3.77	333	Pn	Pb	10 17 15.4	-3.6
MK31	5.6nm,0.3s,baz=154,slow=15,SNR=54			⇑Pg	Pg	10 17 24.8	+0.3
MK31	115nm,0.7s,baz=158,slow=29,SNR=12			⇓Lg	Lg	10 18 12.0	
MKAR	Makanchi Array 0.9nm,0.3s,baz=150,slow=14,SNR=24	3.77	333	Pn	Pb	10 17 15.7	-3.3
MKAR	6.0nm,0.3s,baz=150,slow=17,SNR=54			Pg	Pg	10 17 24.9	+0.4
MKAR	39nm,0.3s,baz=147,slow=31,SNR=17			Lg	Lg	10 18 10.9	
PDGK	Podgornoye 10nm,0.4s	3.88	270	Pg	Pg	10 17 25.4	-1.2
PDGK	60nm,0.5s			Lg	Lg	10 18 15.8	
PDGK	Podgornoye 5.0nm,0.3s	3.88	270	⇑Pn	Pb	10 17 19.2	-1.7
PDGK	47nm,0.5s			⇓Lg	Lg	10 18 17.8	
MAKZ	Makanchi 11nm,0.4s	3.89	330	⇑Pg	Pg	10 17 27.3	+0.5
MAKZ	61nm,0.5s			⇑Lg	Lg	10 18 15.7	
ZSN	Zaisan 7.7nm,0.3s	3.98	1	*e*P	Pg	10 17 27.5	-1.1
ZSN	140nm,0.7s			*e*S	Sg	10 18 18.8	-1.2
ZSN	Zaisan 7.7nm,0.3s	3.98	1	Pg	Pg	10 17 27.5	-1.1
ZSN	140nm,0.7s			Lg	Lg	10 18 18.8	
UZB	Uzynbulak 13nm,0.5s	4.23	268	*e*P	Pg	10 17 32.3	-1.1
UZB	73nm,0.6s			*e*S	Sg	10 18 27.4	-0.9
UZB	Uzynbulak 13nm,0.5s	4.23	268	Pg	Pg	10 17 32.3	-1.1
UZB	73nm,0.6s			Lg	Lg	10 18 27.4	
KAPS	Kapalarasan 18nm,0.4s	4.31	297	*e*P	Pg	10 17 35.3	+0.5
KAPS	84nm,0.5s			*e*S	Sg	10 18 32.4	+1.8
KAPS	Kapalarasan 18nm,0.4s	4.31	297	Pg	Pg	10 17 35.3	+0.5
KAPS	84nm,0.5s			Lg	Lg	10 18 32.4	
SATY	Saty 22nm,0.3s	4.69	267	*e*P	Pg	10 17 41.2	-1.0
SATY	86nm,0.4s			*e*S	Sg	10 18 42.6	-0.3
SATY	Saty 22nm,0.3s	4.69	267	Pg	Pg	10 17 41.2	-1.0
SATY	86nm,0.4s			Lg	Lg	10 18 42.6	
KURS	Kuram 6.3nm,0.3s	4.83	272	*e*P	Pg	10 17 45.7	+0.9
KURS	47nm,0.6s			*e*S	Sg	10 18 49.8	+2.5
KURS	Kuram 6.3nm,0.3s	4.83	272	Pg	Pg	10 17 45.7	+0.9
KURS	47nm,0.6s			Lg	Lg	10 18 49.8	
TDK	Taldyqorghan 129nm,0.4s	4.85	291	*e*P	Pg	10 17 45.7	+0.6
TDK	288nm,0.6s			*e*S	Sg	10 18 49.4	+1.5
TDK	Taldyqorghan 129nm,0.4s	4.85	291	Pg	Pg	10 17 45.7	+0.6
TDK	288nm,0.6s			Lg	Lg	10 18 49.4	
ARXS	Arharly 19nm,0.6s	5.10	281	*e*P	Pg	10 17 50.1	+0.1
ARXS	61nm,0.7s			*e*S	Sg	10 18 57.9	+1.8
ARXS	Arharly 19nm,0.6s	5.10	281	Pg	Pg	10 17 50.1	+0.1
ARXS	61nm,0.7s			Lg	Lg	10 18 57.9	
KOTS	Kotyrbulak 12nm,0.5s	5.62	270	*e*P	Pg	10 17 59.7	-0.2
KOTS	60nm,0.7s			*e*S	Sg	10 19 14.3	+1.7
KOTS	Kotyrbulak 12nm,0.5s	5.62	270	Pg	Pg	10 17 59.7	-0.2
KOTS	60nm,0.7s			Lg	Lg	10 19 14.3	
MDOK	Medeo 4.9nm,0.3s	5.67	270	*e*P	Pg	10 18 01.1	+0.3
MDOK	25nm,0.8s			*e*S	Sg	10 19 16.2	+1.9
MDOK	Medeo 5.1nm,0.6s	5.67	270	⇑Pn	Pn	10 17 43.1	+6.4
MDOK	6.8nm,0.5s			⇓Pg	Pg	10 18 02.3	+1.5
MDOK	28nm,0.6s			⇓Lg	Lg	10 19 16.8	
MDOK	Medeo 4.9nm,0.3s	5.67	270	Pg	Pg	10 18 01.1	+0.3
MDOK	25nm,0.8s			Lg	Lg	10 19 16.2	
CHKK	Chushkaly 7.0nm,0.3s	5.69	277	*e*P	Pg	10 17 59.8	-1.4
CHKK	53nm,0.3s			*e*S	Sg	10 19 15.0	+0.3
CHKK	Chushkaly 7.0nm,0.3s	5.69	277	Pg	Pg	10 17 59.8	-1.4
CHKK	53nm,0.3s			Lg	Lg	10 19 15.0	
KTBS	Karatobe 7.5nm,0.7s	5.91	275	*e*P	Pg	10 18 03.8	-1.6
KTBS	45nm,0.9s			*e*S	Sg	10 19 21.6	-0.2
KTBS	Karatobe 7.5nm,0.7s	5.91	275	Pg	Pg	10 18 03.8	-1.6
KTBS	45nm,0.9s			Lg	Lg	10 19 21.6	
IZV	Izvestkoviy 6.4nm,0.5s	6.00	269	*e*P	Pg	10 18 05.7	-1.5
IZV	49nm,0.6s			*e*S	Sg	10 19 24.1	-0.7
IZV	Izvestkoviy 6.4nm,0.5s	6.00	269	Pg	Pg	10 18 05.7	-1.5
IZV	49nm,0.6s			Lg	Lg	10 19 24.1	
MTBS	Maitube 4.4nm,0.3s	6.12	270	*e*P	Pg	10 18 09.9	+0.4
MTBS	24nm,0.4s			*e*S	Sg	10 19 31.4	+2.5
KUU	Kurty 3.5nm,0.2s	6.16	277	*e*P	Pg	10 18 07.6	-2.6
KUU	24nm,0.5s			*e*S	Sg	10 19 27.3	-2.5
KST	Kastek 11nm,0.7s	6.47	269	*e*P	Pg	10 18 14.7	-1.6
KST	22nm,0.7s			*e*S	Sg	10 19 40.2	+0.2
KST	Kastek 11nm,0.7s	6.47	269	Pg	Pg	10 18 14.7	-1.6
KST	22nm,0.7s			Lg	Lg	10 19 40.2	
KRBS	Karabastau 2.2nm,0.4s	6.64	275	*e*P	Pg	10 18 16.8	-2.5
KRBS	14nm,0.5s			*e*S	Sg	10 19 43.4	-1.8
KRBS	Karabastau 2.2nm,0.4s	6.64	275	Pg	Pg	10 18 16.8	-2.5
KRBS	14nm,0.5s			Lg	Lg	10 19 43.4	
TKM2	Tokmak 2 2.4nm,0.6s	6.75	268	⇑Pn	Pn	10 18 00.1	+8.4
TKM2	17nm,0.8s			⇑Lg	Lg	10 19 50.6	
AAK	Ala-Archa 0.2nm,0.3s,baz=117,slow=18,SNR=1.9	7.60	267	Pn	Pn	10 18 05.0	+1.7
AAK	0.4nm,0.3s,baz=158,slow=19,SNR=2.4			Lg	Lg	10 20 16.4	
KURBB	Kurchatov Arra 0.1nm,0.3s,baz=151,slow=13,SNR=5.8	8.34	331	Pn	Pn	10 18 16.8	+3.6
KURBB	0.3nm,0.3s,baz=150,slow=30,SNR=4.8			Lg	Lg	10 20 35.6	
KURBB	Kurchatov Arra 85nm,0.7s	8.34	331	⇓Lg	Lg	10 20 37.3	
KURK	Kurchatov 22nm,0.5s	8.38	332	⇓Lg	Lg	10 20 37.7	
OTUK	Ortayu 9.8nm,0.9s	9.92	303	⇓Lg	Lg	10 21 27.9	
KK07	Karatay Array 3.8nm,0.7s	10.44	273	⇑Lg	Lg	10 21 48.2	
ZALV	Zalesovo Beam 1.4nm,0.3s,baz=182,slow=14,SNR=15	10.49	0	Pn	Pn	10 18 44.6	+2.0
ZALV	1.3nm,0.3s,baz=174,slow=22,SNR=11			Sn	Sn	10 20 36.7	-3.3
SONM	Songino Array 0.2nm,0.3s,baz=258,slow=13,SNR=2.8	15.70	66	Pn	P	10 19 59.0	+1.4

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*IDC **25** 10:20:20.3±3.8, 14.°35N×54.°58E, h0^{km}, mb3.7/7, mb1 3.8/7, mb1mx3.5/62, mbtmp3.7/7, Error ellipse: s-maj=91.0km s-min=36.2km az=68.0*

ISC 25 10:20:23.0±3.3**, 14.°4N**±0.°3×**54.°6E**±0.°5**, h17**^{km}**, n10, σ0^{s}96**/7**, mb3.7**/7**, Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKTO	Aktyubinsk 0.9nm,0.5s,baz=166,slow=7.6,SNR=3.8	36.08	4	P	P	10 27 23.2	-0.5
MKAR	Makanchi Array 0.3nm,0.5s,baz=218,slow=11,SNR=3.1	39.76	30	P	P	10 27 54.7	-0.2
KURBB	Kurchatov Arra 0.3nm,0.2s,baz=224,slow=8.0,SNR=2.9	41.04	23	P	P	10 28 05.5	+0.1
CMAR	Chiang Mai Arr 0.8nm,0.5s,baz=274,slow=9.3,SNR=5.5	42.66	78	P	P	10 28 18.4	-0.8
ZALV	Zalesovo Beam 0.6nm,0.4s,baz=224,slow=6.0,SNR=3.6	46.06	24	P	P	10 28 45.1	-0.7
SONM	Songino Array 0.4nm,0.5s,baz=236,slow=6.9,SNR=4.4	54.13	41	P	P	10 29 48.9	+1.5
H01W3	Cape Leeuwin H baz=302,slow=75,SNR=11	74.73	133	T	T	11 53 25.8	
H01W2	Cape Leeuwin H baz=302,slow=75,SNR=9.0	74.73	133	T	T	11 53 26.0	
H01W1	Cape Leeuwin H baz=302,slow=75,SNR=10.0	74.75	133	T	T	11 53 26.1	
ASAR	Alice Springs 0.3nm,0.6s,baz=292,slow=4.3,SNR=4.5	86.20	115	P	P	10 33 04.2	+0.2

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*INET **25** 10:22:54.2, 14.°01N×91.°25W, h89^{km}, MW4.6*

*SNET **25** 10:23:00.3±1.2, 14.°05N×91.°23W, h17^{km}±5^{km}, ML4.7*

*GCG **25** 10:23:01.9±0.6, 14.°15N×91.°40W, h45^{km}, MD4.7*

*UCR **25** 10:23:01.5±1.9, 14.°14N×91.°17W, h18^{km}±7^{km}, ML4.5, mb4.7(NEIC)*

*NEIC **25** 10:23:02.6±1.5, 14.°15N±0.°07×91.°22W±0.°06, h78^{km}±5^{km}, mb4.7/251, Error ellipse: s-maj=11.2km s-min=6.8km az=220.0*

*IDC **25** 10:23:05.4±1.2, 14.°40N×90.°76W, h105^{km}±8^{km}, mb4.2/23, mb1 4.3/25, mb1mx4.2/42, mbtmp4.5/25, MS3.9/15, Ms1 3.9/15, ms1mx3.7/36, Error ellipse: s-maj=23.7km s-min=9.3km az=49.0*

ISC 25 10:23:00.7±0.7**, 14.°08N**±0.°05×**91.°33W**±0.°04**, h75**^{km}±6^{km}**, n579, σ1^{s}31**/540**, mb4.7**/122**, 1C-4D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTAL	Retalhuleu	0.56	322	*e*P	Pn	10 23 12.2	-2.4
RTAL				*e*S	Sn	10 23 21.8	-3.1
RTAL	Retalhuleu	0.56	322		Pn	10 23 12.2	-2.4
RTAL				Sn	Sn	10 23 21.9	-2.9
FUG	Fuego 3	0.60	52	⇓*i*P	Pn	10 23 14.7	-0.4
STG3	Santiaguito 3,	0.67	340	⇓*i*P	Pn	10 23 14.6	-1.3
PCG	Pacaya	0.77	66	⇓*e*P	Pn	10 23 17.0	0.0
NBG	Las Nubes	1.08	62	⇓*e*P	Pn	10 23 22.2	+1.5
HUEH	Huehuetenango	1.24	352	*e*P	Pn	10 23 23.4	+0.7
HUEH				*e*S	Sn	10 23 41.9	+2.7
HUEH	Huehuetenango	1.24	352		Pn	10 23 23.8	+1.1
APG	El Apazote 1µm,0.3s,baz=238,slow=12,SNR=6659	1.25	42	P	Pn	10 23 23.8	+1.0
APG	1µm,0.3s,baz=169,slow=23,SNR=21			S	Sn	10 23 43.0	+3.7
SLOZ	Alcaldia de Sa	1.50	92	*e*P	Pn	10 23 25.6	-0.3
SLOZ				*e*S	Sn	10 23 44.2	-0.8
SLOZ	comp=Z,7µm,0.3s			IAML		10 23 49.9	
RTR	El Retiro	1.65	96	*e*P	Pn	10 23 28.1	+0.2
RTR	El Retiro	1.65	96	*e*P	Pn	10 23 28.1	+0.2
CEVE	Cerro Verde	1.68	98	*e*P	Pn	10 23 27.7	-0.7
CEVE				*e*S	Sn	10 23 49.6	+0.3
CEVE	Cerro Verde	1.68	98	*e*P	Pn	10 23 27.7	-0.7
CEVE				*e*S	Sn	10 23 49.6	+0.3
SNJE	San Jose	1.69	97	*e*P	Pn	10 23 28.2	-0.3
SNJE	San Jose	1.69	97	*e*P	Pn	10 23 28.2	-0.3
UNIC	Universidad Ca comp=Z,4µm,0.5s	1.73	93	IAML		10 23 54.2	
UNIC	Universidad Ca comp=Z,4µm,0.5s	1.73	93	IAML		10 23 54.2	
JAYA	Jayaque - finc	1.88	103	*e*P	Pn	10 23 30.1	-0.9
JAYA				*e*S	Sn	10 23 52.4	-1.6
JAYA	comp=Z,14µm,0.2s			IAML		10 23 58.3	
JAYA	Jayaque - finc	1.88	103	*e*P	Pn	10 23 30.1	-0.9
JAYA				*e*S	Sn	10 23 52.4	-1.6
JAYA	comp=Z,14µm,0.2s			IAML		10 23 58.3	
MRL	Marmol	1.88	58	⇑*i*P	Pn	10 23 32.8	+1.8
CEDA	San Andres	1.90	98	*e*P	Pn	10 23 30.3	-0.9
CEDA				*e*S	Sn	10 23 53.6	-0.8
CEDA	San Andres	1.90	98	*e*P	Pn	10 23 30.3	-0.9
CEDA				*e*S	Sn	10 23 53.6	-0.8
TACO	Tacachico	1.92	93	*e*P	Pn	10 23 31.1	-0.4
TACO				*e*S	Sn	10 23 53.7	-1.2
TACO	Tacachico	1.92	93	*e*P	Pn	10 23 31.1	-0.4
TACO				*e*S	Sn	10 23 53.7	-1.2
MTO3	Montecristo	1.94	80	*e*P	Pn	10 23 31.8	-0.1
MTO3				*e*S	Sn	10 23 56.7	+1.2
MTO3	Montecristo	1.94	80	*e*P	Pn	10 23 31.8	-0.1
MTO3				*e*S	Sn	10 23 56.7	+1.2
MTO3	Montecristo	1.94	80		Pn	10 23 31.8	-0.1
ESQI	Esquipulas	1.99	76	*e*P	Pn	10 23 32.9	+0.4
ESQI	Esquipulas	1.99	76		Pn	10 23 32.9	+0.4
ITCA	Escuela Especi	2.04	101	*e*S	Sn	10 23 57.6	-0.1
ITCA	Escuela Especi	2.04	101	*e*S	Sn	10 23 57.6	-0.1
LALI	Alcalda de L	2.04	107	*e*P	Pn	10 23 32.0	-1.0
LALI				*e*S	Sn	10 23 56.1	-1.6
LALI	Alcalda de L	2.04	107	*e*P	Pn	10 23 32.0	-1.0
LALI				*e*S	Sn	10 23 56.1	-1.6
UEES	Universidad Ev comp=Z,8µm,0.5s	2.06	100	IAML		10 24 08.5	
UEES	Universidad Ev comp=Z,8µm,0.5s	2.06	100	IAML		10 24 08.5	
SNET	Serv Nac Est T comp=Z,8µm,0.2s	2.08	101	IAML		10 24 03.7	
SNET	Serv Nac Est T comp=Z,8µm,0.2s	2.08	101	IAML		10 24 03.7	
SNET	Serv Nac Est T	2.08	101		Pn	10 23 34.5	+0.9
SEMO	Seminario San	2.08	100	*e*P	Pn	10 23 33.9	+0.3
OPAM	Oficina de Pla	2.10	100	*e*S	Sn	10 23 59.1	-0.2
OPAM	comp=Z,7µm,0.4s			IAML		10 24 09.1	
OPAM	Oficina de Pla	2.10	100	*e*S	Sn	10 23 59.1	-0.2
OPAM	comp=Z,7µm,0.4s			IAML		10 24 09.1	
IGN	Direccin Gen	2.13	100	*e*P	Pn	10 23 34.0	-0.3
IGN	Direccin Gen	2.13	100	*e*P	Pn	10 23 34.0	-0.3
LFU	La Fuente	2.18	98	*e*P	Pn	10 23 34.8	-0.2
LFU	La Fuente	2.18	98	*e*P	Pn	10 23 34.8	-0.2
SJTE	Alcalda de S	2.31	101	*e*P	Pn	10 23 37.0	+0.4
SJTE	Alcalda de S	2.31	101	*e*P	Pn	10 23 37.0	+0.4
LLGN	La Laguna	2.32	88	*e*P	Pn	10 23 35.7	-1.1
LLGN	comp=Z,2µm,0.5s			IAML		10 24 12.1	
LLGN	La Laguna	2.32	88	*e*P	Pn	10 23 35.7	-1.1
LLGN	comp=Z,2µm,0.5s			IAML		10 24 12.1	
CCIG	Comitan	2.32	341		Pn	10 23 38.7	+1.7
PAVA	Las Pavas	2.35	99	*e*S	Sn	10 24 06.0	+0.6
PAVA	Las Pavas	2.35	99	*e*S	Sn	10 24 06.0	+0.6
SNVI	San Vicente	2.47	101	*e*P	Pn	10 23 38.2	-0.7
SNVI	San Vicente	2.47	101	*e*P	Pn	10 23 38.2	-0.7
UESV	Universidad de	2.51	100	*e*P	Pn	10 23 38.7	-0.7
UESV	Universidad de	2.51	100	*e*P	Pn	10 23 38.7	-0.7
SCLA	Alcaldia de Sa	2.56	98	*e*P	Pn	10 23 39.7	-0.3
SCLA	Alcaldia de Sa	2.56	98	*e*P	Pn	10 23 39.7	-0.3
COEB	Comit de Eme	2.78	102	*e*P	Pn	10 23 42.5	-0.6
COEB	comp=Z,6µm,0.3s			IAML		10 24 26.0	
COEB	Comit de Eme	2.78	102	*e*P	Pn	10 23 42.5	-0.6
COEB	comp=Z,6µm,0.3s			IAML		10 24 26.0	
ALJI	Alcalda de J	2.79	105	*e*S	Sn	10 24 15.5	-0.2
ALJI	comp=Z,4µm,0.3s			IAML		10 24 26.5	
ALJI	Alcalda de J	2.79	105	*e*S	Sn	10 24 15.5	-0.2
ALJI	comp=Z,4µm,0.3s			IAML		10 24 26.5	
CNRM	Centro Naciona	3.13	101	*e*S	Sn	10 24 24.7	+0.6
CNRM	Centro Naciona	3.13	101	*e*S	Sn	10 24 24.7	+0.6
PETF	Flores	3.15	26	*e*P	Pn	10 23 49.6	+1.6
PETF	Flores	3.15	26		Pn	10 23 49.8	+1.7
TGUH	Tegucigalpa,Un	3.94	90	Pn	Pn	10 23 58.7	-0.2
CMIG	Matias Romero comp=Z,20nm,0.3s,baz=139,slow=11,SNR=164	4.55	312	P	Pn	10 24 06.2	-0.9
CMIG	comp=Z,52nm,0.3s,baz=181,slow=16,SNR=6.3			S	Sn	10 24 57.7	-1.0
CMIG	comp=Z,800nm,21.5s,baz=127,slow=43			LR	LR	10 26 31.5	
CNGN	Cerro Negro	4.78	109		Pn	10 24 11.2	+0.9
BOAB	BOACO BROADBAN	5.75	106	Pn	Pn	10 24 23.0	-0.6
ACON	Acoyapa	6.36	109		Pn	10 24 31.9	+0.1
HZTE	Horizontes, Gu	6.53	120	*e*P	Pn	10 24 35.9	+1.8
HZTE	Horizontes, Gu	6.53	120	Pn	Pn	10 24 36.0	+1.8
SAJU	San Juanillo,	6.79	125	*e*P	Pn	10 24 38.5	+0.7
ORTG	Ortega, Santa	6.83	122	Pn	Pn	10 24 39.8	+1.4
DUNO	Dulce Nombre,	6.96	124		Pn	10 24 41.3	+1.3
INDI	Punta indio, G	7.08	126	*e*P	Pn	10 24 42.7	+1.0
ESPN	Las Esperanzas	7.10	104		Pn	10 24 43.0	+1.0
JTS	Las Juntas de	7.29	120	*e*P	Pn	10 24 47.2	+2.7
JTS	Las Juntas de	7.29	120	Pn	Pn	10 24 46.3	+1.7
CEDE	Laguna Cedeo	7.40	118	*e*P	Pn	10 24 49.1	+3.0
CAO2	Cobano, Puntar	7.50	125		Pn	10 24 48.8	+1.4
COVE	Coope Vega, Sa	7.55	115		Pn	10 24 48.7	+0.6
LAFE	Finca La Fe, P	7.58	123	*e*P	Pn	10 24 49.9	+1.3
TLIG	Tlapa	7.78	297		Pn	10 24 52.3	+1.0
SRA1	San Ramn	7.79	120	*e*P	Pn	10 24 55.5	+3.9
JACO	JACO, Garabito	7.87	123		Pn	10 24 54.9	+2.4
HDC	Heredia	8.14	119	*e*P	Pn	10 25 01.8	+5.5
HDC	Heredia	8.14	119		Pn	10 24 57.1	+0.7
LCR2	La Lucha 2	8.37	120	*e*P	Pn	10 25 01.6	+2.1
CVTR	Volcan Turrial	8.44	118		Pn	10 25 00.8	+0.2
RIMA	Rio Macho	8.47	120	*e*P	Pn	10 25 02.5	+1.6
RIMA	Rio Macho	8.47	120		Pn	10 25 01.9	+1.0
EDDO	Dominical	8.75	122	*e*P	Pn	10 25 07.7	+3.3
PEZE	Perez Zeledon,	8.83	121	*e*P	Pn	10 25 08.8	+3.1
PEZE	Perez Zeledon,	8.83	121		Pn	10 25 06.5	+0.8
SRBA	San Rafael, Bu	9.17	121	Pn	Pn	10 25 10.9	+0.5
EDPN	Palmar Norte	9.24	123	*e*P	Pn	10 25 14.1	+2.8
DRK0	Durika	9.25	120		Pn	10 25 13.1	+1.5
EDBA	Buenos Aires	9.28	121	*e*P	Pn	10 25 14.8	+3.0
RIOS	Rincon, Osa	9.34	124		Pn	10 25 13.5	+0.9
PRVC	Isla de Provid	9.71	93	Pn	Pn	10 25 17.8	+0.1
EDSV	San Vito	9.72	122	*e*P	Pn	10 25 20.5	+2.6
CDITO	Canoas	9.94	123		Pn	10 25 21.5	+0.7
BRU2	Volcan	9.97	121		Pn	10 25 22.4	+1.1
MOIG	Morelia	10.95	302	Pn	Pn	10 25 37.1	+2.3
SOR	Soroa	11.72	41	Pn	Pn	10 25 45.6	+0.6
BCIP	Isla Barro Col	12.27	112	Pn	Pn	10 25 53.0	+0.4
ZAIG	Zacatecas	13.72	311		Pn	10 26 14.7	+2.5
PAYG	Puerto Ayora	14.70	176	Pn	Pn	10 26 25.7	+0.9
833A	Chaparral WMA, baz=150,SNR=6.6	16.03	333	P	P	10 26 43.1	-0.7
MOTC	Monteria, Cord	16.23	107	*e*P	Pn	10 26 43.4	-0.9
MOTC	Monteria, Cord	16.23	107		Pn	10 26 44.3	0.0
HKT	Hockley	16.33	346	Pn	Pn	10 26 45.6	+0.3
SJCC	San Jacinto, C	16.34	103	P	P	10 26 47.1	-0.2
DBBC	Dabeiba	16.43	114	*e*P	P	10 26 47.8	-0.6
060A	Indiantown	16.47	37	Pn	Pn	10 26 47.0	-0.1
GTBY	Guantanamo Bay	16.56	67	Pn	Pn	10 26 46.2	-2.1
GTBY	comp=Z,98nm,1.4s			IAmb	IAmb	10 27 05.3	
UREC	San Jos de Ur	16.73	110	*e*P	Pn	10 26 50.9	+0.4
CBOC	Ciudad Bolivar	17.15	117	*e*P	P	10 26 57.3	+0.9
342A	Flagon Creek P	17.24	357	P	Pn	10 26 56.2	-0.3
656A	Willston	17.26	27	P	P	10 26 57.5	+0.2
PLMC	San Jos del P	17.41	120	*e*P	Pn	10 26 59.0	+0.1
ZARC	Zaragoza, Cauc	17.45	110	*e*P	Pn	10 26 58.5	-0.9
ZARC	Zaragoza, Cauc	17.45	110	P	Pn	10 26 58.7	-0.6
BRAL	Brewton baz=194,SNR=5.4	17.46	12	P	P	10 27 00.6	+1.1
BRAL	Brewton	17.46	12	P	P	10 27 00.9	+1.4
435B	Jarrell baz=159	17.59	342	P	P	10 27 03.1	+2.1
435B	Jarrell	17.59	342	P	P	10 27 02.2	+1.2
SMLC	San Martn de	17.71	105	*e*P	P	10 27 01.2	-1.2
NATX	Nacogdoches baz=169	17.86	351	P	Pn	10 27 05.0	+0.9
NATX	Nacogdoches	17.86	351	P	P	10 27 04.0	0.0
NATX	comp=Z,36nm,0.9s			IAmb	IAmb	10 27 08.6	
YOTC	Yotoco, Valle	17.87	123	*e*P	Pn	10 27 06.0	+1.5
GUY2C	Guyana, Caldas	18.02	118	*e*P	Pn	10 27 07.8	+1.0
VBMS	Vicksburg baz=182,SNR=6.5	18.07	2	P	Pn	10 27 08.7	+2.0
VBMS	Vicksburg	18.07	2	P	P	10 27 06.4	+0.2
JCT	Junction City baz=152	18.09	336	P	Pn	10 27 10.2	+3.1
JCT	Junction City	18.09	336		Pn	10 27 08.7	+1.6
PTBC	PUERTO BERRIO,	18.21	113	*e*P	Pn	10 27 08.5	0.0
NORC	Norcasia	18.28	116	*e*P	Pn	10 27 09.7	+0.2
352A	Blakely	18.29	18	P	Pn	10 27 09.7	+0.3
237A	Washetta, Mont	18.30	348	P	Pn	10 27 10.0	+0.5
237A	comp=Z,48nm,1.1s			IAmb	IAmb	10 27 14.5	
ANIL	Santa Ana	18.37	120	*e*P	Pn	10 27 12.2	+1.4
250A	Grady	18.41	14	P	P	10 27 10.1	+0.1
250A	comp=Z,57nm,0.9s			IAmb	IAmb	10 27 15.2	
HPIG		18.52	316	P	Pn	10 27 13.2	+0.8
143A	Socs Landing,	18.54	360	P	P	10 27 11.8	+0.5
143A	comp=Z,65nm,1.1s			IAmb	IAmb	10 27 16.5	
146A	Union	18.59	6	P	Pn	10 27 12.8	-0.2
OCAC	Ocana	18.59	106	*e*P	P	10 27 11.4	-0.9
OCAC	Ocana	18.59	106	P	P	10 27 11.4	-0.9
TIGA	Tifton baz=204	18.68	21	P	Pn	10 27 15.3	+1.2
TIGA	Tifton	18.68	21	P	Pn	10 27 13.8	-0.2
WHTX	Lake Whitney, baz=161	18.69	344	P	Pn	10 27 14.4	+0.2
WHTX	Lake Whitney,	18.69	344	P	P	10 27 12.8	-0.2
WHTX	comp=Z,26nm,0.8s			IAmb	IAmb	10 27 42.9	
OTAV	Otavalo	18.75	136	P	P	10 27 14.2	-0.2
SOTA	Rioblanco	18.78	128	*e*P	Pn	10 27 16.4	+0.5
ORTC	Ortega, Tolima	18.81	121	*e*P	Pn	10 27 17.5	+1.7
PCON	Cinco Dias	18.82	127	*e*P	Pn	10 27 18.0	+1.6
GCUF	Volcan Galeras	18.83	132	*e*P	Pn	10 27 19.5	+3.0
MARP	Paez Belalcaza	18.85	125	*e*P	Pn	10 27 19.0	+2.5
TXAR	Lajitas Array comp=Z,1.1nm,0.3s,baz=152,slow=12,SNR=111	18.99	325	P	Pn	10 27 19.4	+1.4

TXAR				PcP	PcP	10 31 41.4	+2.1
	comp=Z,0.2nm,0.3s,baz=159,slow=3.6,SNR=8.7						
TX31	Lajitas Ar. Si	19.00	325		Pn	10 27 19.4	+1.5
TX31				IAmb	IAmb	10 27 20.9	
	comp=Z,32nm,0.8s						
TX32	Lajitas Array	19.00	325	P	Pn	10 27 18.7	+0.7
ROSC	El Rosal	19.11	117	P	P	10 27 18.1	-0.1
	comp=Z,3.2nm,0.3s,baz=80,slow=0.8,SNR=9.9						
ROSC	El Rosal	19.11	117		P	10 27 18.2	-0.1
ROSC				IAmb	IAmb	10 27 24.6	
	comp=Z,42nm,1.1s						
Z41A	Richland Creek	19.14	356	P	Pn	10 27 20.2	+0.7
	baz=175,SNR=5.8						
Z47A	Carrollton	19.26	8		Pn	10 27 20.2	-0.8
BARC	Barichara	19.33	111	*e*P	P	10 27 20.2	-0.2
Z38A	Mt. Pleasant	19.38	351	P	P	10 27 21.3	+0.7
Z38A				IAmb	IAmb	10 27 26.9	
	comp=Z,53nm,1.1s						
152A	Waverly Hall	19.46	17	P	Pn	10 27 23.4	+0.1
WLAR	White Oak Lake	19.59	356	P	P	10 27 23.7	+0.9
RUSC	La Rusia	19.71	113	*e*P	P	10 27 24.4	-0.5
CCAR	Cane Creek	19.75	359	P	Pn	10 27 26.1	-0.7
CCAR				IAmb	IAmb	10 27 48.6	
	comp=Z,42nm,0.9s						
Y45A	Yeager Farm, C	19.77	4	P	P	10 27 24.5	-0.2
SDDR	Presa de Saban	19.82	73	P	P	10 27 25.5	0.0
Z35A	Perchaven, San	19.91	345	P	P	10 27 26.9	+0.6
Z35A				IAmb	IAmb	10 27 50.5	
	comp=Z,29nm,0.8s						
154A	Montrose	19.92	21	P	P	10 27 27.3	+0.9
Z51A	Franklin	19.95	15	P	Pn	10 27 28.1	-1.0
Z51A				IAmb	IAmb	10 27 33.0	
	comp=Z,26nm,0.6s						
ABTX	Abilene, Hawle	19.96	339	P	Pn	10 27 28.4	-0.8
	baz=156,SNR=8.7						
ABTX	Abilene, Hawle	19.96	339	P	Pn	10 27 28.4	-0.8
ABTX				IAmb	IAmb	10 27 30.1	
	comp=Z,32nm,0.8s						
Y49A	Blount Mountai	20.19	12	P	P	10 27 30.1	+0.7
Y49A				IAmb	IAmb	10 27 37.2	
	comp=Z,44nm,0.8s						
X40A	Basin Creek Fa	20.36	356	P	Pn	10 27 33.8	-0.1
	baz=176						
X40A	Basin Creek Fa	20.36	356	P	Pn	10 27 33.0	-0.9
SC01	Santiago de lo	20.43	72	P	P	10 27 33.2	+1.1
MIAR	Mount Ida	20.48	355	P	P	10 27 33.3	+0.9
	baz=173						
MIAR	Mount Ida	20.48	355	P	P	10 27 33.2	+0.7
MIAR				IAmb	IAmb	10 27 53.3	
	comp=Z,25nm,1.0s						
LOOK	Love County	20.52	346	P	P	10 27 33.5	+0.5
LOOK				IAmb	IAmb	10 27 57.3	
	comp=Z,36nm,0.9s						
GOGA	Godfrey	20.53	19	P	P	10 27 34.2	+1.2
	baz=202,SNR=6.3						
GOGA	Godfrey	20.53	19	P	P	10 27 32.9	-0.1
GOGA				IAmb	IAmb	10 27 56.0	
	comp=Z,33nm,0.8s						
X48A	Hartselle	20.65	10	P	Pn	10 27 35.8	-1.4
X48A				IAmb	IAmb	10 27 42.8	
	comp=Z,38nm,0.8s						
X37A	Clayton	20.74	351		P	10 27 35.9	+0.5
X37A				IAmb	IAmb	10 28 03.8	
	comp=Z,38nm,0.9s						
Y52A	Lilburn	20.77	17	P	P	10 27 36.3	+0.6
SDV	Santo Domingo	20.93	102	P	P	10 27 36.1	-1.6
	comp=Z,12nm,0.4s,baz=285,slow=6.1,SNR=12						
SDV	Santo Domingo	20.93	102	*e*P	P	10 27 34.5	-3.1
SDV	Santo Domingo	20.93	102	P	P	10 27 35.9	-1.8
SDV				IAmb	IAmb	10 27 43.2	
	comp=Z,29nm,0.8s						
MACC	Macarena, Meta	20.96	123	*e*P	P	10 27 39.3	+1.4
FPAL	Fort Paine	21.02	13	P	P	10 27 39.3	+1.0
FPAL				IAmb	IAmb	10 27 58.3	
	comp=Z,42nm,0.8s						
PLAL	Pickwick Lake	21.02	7	P	P	10 27 37.4	-0.9
PLAL				IAmb	IAmb	10 27 59.5	
	comp=Z,30nm,1.2s						
W41B	Gary Mavity, V	21.02	358	P	P	10 27 39.2	+1.0
	baz=177,SNR=5.3						
WHAR	Wooly Hollow	21.14	358	P	P	10 27 40.1	+0.6
WHAR				IAmb	IAmb	10 27 45.3	
	comp=Z,19nm,0.8s						
W39A	Magazine	21.14	354	P	P	10 27 40.7	+1.1
	baz=173						
W39A	Magazine	21.14	354	P	P	10 27 39.9	+0.3
W39A				IAmb	IAmb	10 27 50.9	
	comp=Z,37nm,1.2s						
X34A	Smith Ranch, M	21.26	345	P	P	10 27 42.4	+1.5
X34A				IAmb	IAmb	10 28 08.3	
	comp=Z,41nm,1.1s						
LPAR	Lepanto	21.45	2	P	P	10 27 42.4	-0.4
SWET	Sewanee	21.60	12	P	P	10 27 45.0	+0.5
SWET				IAmb	IAmb	10 27 53.7	
	comp=Z,34nm,0.8s						
WMOK	Wichita Mounta	21.64	343	P	P	10 27 45.5	+0.6
	baz=160,SNR=7.5						
WMOK	Wichita Mounta	21.64	343	P	P	10 27 45.2	+0.3
FCAR	Ozark Folk Cen	21.73	358	P	P	10 27 45.6	-0.2
FCAR				IAmb	IAmb	10 27 49.5	
	comp=Z,20nm,0.7s						
MNTX	Cornudas Mount	21.75	326	P	P	10 27 47.4	+1.2
	baz=140,SNR=30						
MNTX	Cornudas Mount	21.75	326	P	P	10 27 47.1	+0.9
FNO	Franklin	21.78	347		P	10 27 47.4	+0.9
FNO				IAmb	IAmb	10 28 13.3	
	comp=Z,35nm,0.9s						
LCAR	Lake Charles	21.90	0	P	P	10 27 47.5	-0.1
OK025	Westminster Rd	22.08	347		P	10 27 49.3	-0.4
OK025				IAmb	IAmb	10 28 10.3	
	comp=Z,36nm,1.0s						
JSC	Jenkinsville	22.08	23	P	P	10 27 49.0	-0.7
JSC				IAmb	IAmb	10 28 16.7	
	comp=Z,23nm,0.9s						
TUL1	Leonard	22.10	350	P	P	10 27 50.9	+1.1
	baz=168						
TUL1	Leonard	22.10	350	P	P	10 27 51.2	+1.3
TUL1				IAmb	IAmb	10 28 12.5	
	comp=Z,31nm,1.0s						
CPCT	Cooper Cave	22.14	15	P	P	10 27 50.6	+0.3
CPCT				IAmb	IAmb	10 28 08.8	
	comp=Z,28nm,0.9s						
BG3	Lake Jocassee	22.16	19	P	P	10 27 49.7	-0.8
BG3				IAmb	IAmb	10 28 10.3	
	comp=Z,22nm,0.8s						
WVT	Waverly	22.18	8	P	P	10 27 51.0	+0.4
	baz=189						
WVT	Waverly	22.18	8	P	P	10 27 50.2	-0.5
WVT				IAmb	IAmb	10 28 10.0	
	comp=Z,19nm,0.9s						
BCOK	Bluff Creek, N	22.21	346		P	10 27 50.6	-0.5
BCOK				IAmb	IAmb	10 28 13.6	
	comp=Z,39nm,0.9s						
U40A	Yellville	22.23	357	P	P	10 27 51.5	+0.3
	baz=176,SNR=10						
U40A	Yellville	22.23	357	P	P	10 27 52.0	+0.8
HHAR	Hobbs	22.23	354	P	P	10 27 50.7	-0.6
MSTX	Muleshoe	22.35	334	P	P	10 27 52.2	-0.6
	baz=149,SNR=11						
MSTX	Muleshoe	22.35	334	P	P	10 27 52.4	-0.4
U38A	Gravette	22.43	354	P	P	10 27 53.1	-0.4
HICK	Hickman	22.45	4	P	P	10 27 52.5	-1.0
PARMO	Parma	22.53	3	P	P	10 27 54.9	+0.4
TKL	Tuckaleechee C	22.54	16	P	P	10 27 55.9	+1.3
	comp=Z,17nm,0.6s,baz=180,slow=11,SNR=40						
TKL				PcP	PcP	10 31 46.9	+1.2
	comp=Z,3.1nm,0.6s,baz=223,slow=7.3,SNR=2.1						
TKL	Tuckaleechee C	22.54	16	P	P	10 27 55.4	+0.8
TKL				IAmb	IAmb	10 28 19.0	
	comp=Z,35nm,0.9s						
PBMO	Poplar Bluff	22.62	2	P	P	10 27 55.0	-0.4
PBMO				IAmb	IAmb	10 28 19.8	
	comp=Z,34nm,0.8s						
BIRD	Birdtown, Kers	22.71	24	P	P	10 27 56.7	+0.3
BIRD				IAmb	IAmb	10 28 18.4	
	comp=Z,18nm,0.8s						
AMTX	Amarillo	22.72	338	P	P	10 27 56.2	-0.4
	baz=153						
AMTX	Amarillo	22.72	338	IAmb	IAmb	10 27 59.8	
	comp=Z,29nm,0.8s						
KMSC	Kings Mountain	22.83	22	P	P	10 27 58.1	+0.6
	baz=205,SNR=5.6						
U49A	Red Boiling Sp	22.89	12	P	P	10 27 58.4	+0.2
U49A				IAmb	IAmb	10 28 08.9	
	comp=Z,38nm,0.8s						
T45A	Paducah	22.97	6	P	P	10 28 00.6	+1.6
MGMO	Mountain Grove	22.99	358	P	P	10 27 59.4	+0.1
MGMO				IAmb	IAmb	10 28 01.3	
	comp=Z,24nm,0.9s						
T47A	Sharon Grove	23.12	9	P	P	10 28 00.5	0.0
W57A	Gilead	23.34	24	P	P	10 28 02.6	+0.1
W57A				IAmb	IAmb	10 28 24.5	
	comp=Z,27nm,1.2s						
BAUV	El Baul	23.38	100	P	P	10 27 59.1	-4.0
BAUV				IAmb	IAmb	10 28 04.6	
	comp=Z,17nm,0.8s						
TZTN	Tazewell	23.43	16	P	P	10 28 04.0	+0.6
	baz=199						
TZTN	Tazewell	23.43	16	P	P	10 28 03.8	+0.4
TZTN				IAmb	IAmb	10 28 22.1	
	comp=Z,44nm,1.1s						
V55A	Taylorsville	23.51	21	P	P	10 28 04.7	+0.6
V55A				IAmb	IAmb	10 28 27.2	
	comp=Z,23nm,0.9s						
SRIG	Santa Rosalia	23.53	307	P	P	10 28 06.2	+1.8
SRIG				IAmb	IAmb	10 28 08.2	
	comp=Z,30nm,0.9s						
T50A	Nancy	23.57	13	P	P	10 28 04.9	+0.3
S39A	Bolivar	23.58	356	P	P	10 28 04.1	-0.6
S39A				IAmb	IAmb	10 28 08.0	
	comp=Z,23nm,0.7s						
S44A	Carbondale	23.59	4	P	P	10 28 05.0	+0.2
SIUC	Southern Illin	23.61	4	P	P	10 28 05.3	+0.3
121A	Cookes Peak, D	23.73	324	P	P	10 28 08.5	+2.2
	baz=137,SNR=11						
121A	Cookes Peak, D	23.73	324	P	P	10 28 08.5	+2.2
121A				IAmb	IAmb	10 28 11.7	
	comp=Z,29nm,1.1s						
319A	Douglas	23.82	319	P	P	10 28 09.4	+2.3
FVM	French Village	23.82	2	P	P	10 28 06.8	0.0
CCM	Cathedral Cave	23.88	0	P	P	10 28 07.7	+0.3
	baz=180						
CCM	Cathedral Cave	23.88	0	P	P	10 28 07.2	-0.2
U54A	Nelsons Funny	23.91	19	P	P	10 28 07.8	0.0
R40A	Maddies Statio	24.13	358	P	P	10 28 09.2	-0.4
R40A				IAmb	IAmb	10 28 12.3	
	comp=Z,27nm,0.8s						
U56A	King	24.25	22	P	P	10 28 11.3	+0.6
U56A				IAmb	IAmb	10 28 38.5	
	comp=Z,18nm,0.6s						
CNNC	Cliffs of the	24.30	28	P	P	10 28 11.6	+0.4
BNM	Barren Site	24.32	328	P	P	10 28 14.1	+2.4
S51A	Beattyville	24.45	15	P	P	10 28 12.8	+0.2
S51A				IAmb	IAmb	10 28 32.6	
	comp=Z,25nm,1.0s						
WCI	Wyandotte Cave	24.46	10	P	P	10 28 13.0	+0.4
	baz=192						
WCI	Wyandotte Cave	24.46	10	P	P	10 28 12.4	-0.2
ATAH	Atahualpa	24.68	148	P	P	10 28 17.6	+2.3
	comp=Z,10.0nm,0.8s,baz=325,slow=11,SNR=5.4						
OLIL	Olney	24.72	6	P	P	10 28 15.8	+0.8
Q44A	Meyer Farm, Va	24.81	4	P	P	10 28 16.1	+0.3
Q44A				IAmb	IAmb	10 28 34.4	
	comp=Z,18nm,0.8s						
ANMO	Albuquerque	24.86	329	P	P	10 28 18.9	+2.3
	comp=Z,5.5nm,0.6s,baz=143,slow=12,SNR=36						
ANMO				PcP	PcP	10 31 52.2	+1.3
	comp=Z,1.4nm,0.7s,baz=203,slow=4.2,SNR=3.9						
ANMO	Albuquerque	24.86	329	P	P	10 28 18.1	+1.6
	baz=143						
ANMO	Albuquerque	24.86	329	P	P	10 28 18.1	+1.6
R50A	Paris	24.89	13	P	P	10 28 16.1	-0.4
R50A				IAmb	IAmb	10 28 34.8	
	comp=Z,19nm,0.9s						
BLA	Blacksburg	25.01	21	P	P	10 28 18.6	+0.9
	baz=205						
R32A	Long Quarter,	25.11	346	P	P	10 28 19.1	+0.5
T57A	Hurt	25.24	23	P	P	10 28 20.2	+0.4
S54A	Dingess, Beckl	25.25	19	P	P	10 28 19.5	-0.4
S54A				IAmb	IAmb	10 28 41.6	
	comp=Z,16nm,0.8s						
KSU1	Kansas State U	25.35	350	P	P	10 28 21.7	+0.9
	baz=168						
KSU1	Kansas State U	25.35	350	P	P	10 28 21.5	+0.7
TUC	Tucson	25.40	319	P	P	10 28 23.6	+2.3
	baz=131						
TUC	Tucson	25.40	319	P	P	10 28 23.3	+1.9
P38A	Dawn	25.52	356	P	P	10 28 23.3	+1.0
P38A				IAmb	IAmb	10 28 28.4	
	comp=Z,12nm,0.6s						
R53A	Hurricane	25.55	17	P	P	10 28 22.5	0.0
R53A				IAmb	IAmb	10 28 43.9	
	comp=Z,31nm,1.1s						
P46A	Rosedale	25.70	7	P	P	10 28 25.3	+1.5
P46A				IAmb	IAmb	10 28 29.2	
	comp=Z,19nm,0.8s						
T25A	Trinidad	25.76	335	P	P	10 28 26.2	+1.5
	baz=150						
P48A	Milroy	25.81	11	P	P	10 28 25.1	+0.2
P48A				IAmb	IAmb	10 28 44.8	
	comp=Z,20nm,1.2s						
Q52A	Bidwell	26.05	16	P	P	10 28 27.2	+0.2
Q52A				IAmb	IAmb	10 28 49.0	
	comp=Z,20nm,0.9s						
T60A	Surry	26.40	27	P	P	10 28 30.3	+0.1
X18A	Snowflake	26.41	324	P	P	10 28 32.4	+1.7
Q54A	Coxs Mills	26.48	19	P	P	10 28 31.2	+0.2
Q54A				IAmb	IAmb	10 28 53.7	
	comp=Z,27nm,0.9s						
214A	Organ Pipe Nat	26.51	316	P	P	10 28 32.9	+1.6
	baz=127,SNR=5.5						
214A	Organ Pipe Nat	26.51	316	P	P	10 28 32.0	+0.7
R58B	Mineral	26.62	24	P	P	10 28 31.8	-0.4
N38A	Joes South For	26.66	357	P	P	10 28 33.4	+0.9
N38A				IAmb	IAmb	10 28 37.8	
	comp=Z,25nm,0.8s						
W18A	Petrified Fore	26.72	325	P	P	10 28 35.6	+2.3
	baz=137						
SDCO	Great Sand Dun	26.73	334	P	P	10 28 35.5	+2.0
	baz=148						
SDCO	Great Sand Dun	26.73	334	P	P	10 28 34.2	+0.7
ACSO	Alum Creek Sta	27.06	14	P	P	10 28 36.5	+0.4
	baz=198						
O52A	Adamsville	27.24	16	IAmb	IAmb	10 29 00.3	
	comp=Z,25nm,1.1s						
S22A	4UR Ranch, Cre	27.30	332	P	P	10 28 40.5	+1.8
	baz=145						
O53A	New Philadelph	27.54	17	P	P	10 28 40.9	+0.5
	baz=201						
MVCO	Mesa Verde	27.66	329	P	P	10 28 43.6	+1.8
	baz=142,SNR=5.3						
O54A	Avella	27.72	18	IAmb	IAmb	10 28 43.0	
	comp=Z,12nm,0.7s						
L40A	Anamosa	27.88	0	IAmb	IAmb	10 28 46.4	
	comp=Z,19nm,0.9s						
P57A	Homestead Farm	27.89	22	IAmb	IAmb	10 28 45.4	
	comp=Z,12nm,0.7s						
TBTG	Tabatinga, AM	27.95	129	*e*P	P	10 28 45.6	+1.2
O56A	Blue Knob Stat	28.39	21	P	P	10 28 48.1	0.0
	baz=206						
GLA	Glamis	28.53	315	P	P	10 28 51.4	+2.0
	baz=126						
ISCO	Idaho Springs	28.53	337	P	P	10 28 50.9	+1.2
	baz=150						
N54A	Moraine State	28.55	18	P	P	10 28 49.8	+0.4
	baz=203						
N54A	Moraine State	28.55	18	IAmb	IAmb	10 28 51.8	
	comp=Z,14nm,0.7s						
JFWS	Jewell Farm	28.75	2	P	P	10 28 53.0	+1.8
	baz=182						
M53A	WI Miller and	28.79	17	P	P	10 28 51.9	+0.3
	baz=202						
M53A	WI Miller and	28.79	17	IAmb	IAmb	10 29 13.2	
	comp=Z,14nm,0.8s						
PDMCI	Parker Dam,Lak	28.83	318	P	P	10 28 54.2	+2.3
	baz=129,SNR=7.4						
SSPA	Standing Stone	28.95	21	P	P	10 28 53.3	+0.3
	baz=208						
P60A	Greenville	29.11	25	P	P	10 28 54.6	+0.2
	baz=212						
SWSC	Sam W. Stewart	29.13	314	P	P	10 28 56.6	+1.9
	baz=124						
BC3	Big Chuckawall	29.30	316	P	P	10 28 58.2	+1.9
	baz=126						
IRM	Iron Mountain	29.39	317	P	P	10 28 59.5	+2.4
	baz=127						
ERPA	Erie	29.61	17	P	P	10 28 59.5	+0.7
	baz=202						
KNB	Kanab	29.82	324	IAmb	IAmb	10 29 04.8	
	comp=Z,9.1nm,0.8s						
M57A	Sunshine Farm,	29.84	22	IAmb	IAmb	10 29 04.1	
	comp=Z,11nm,0.8s						
BELC	Belle Mtn. Jos	29.87	316	P	P	10 29 02.3	+0.9
	baz=126						
ECSD	EROS Data Cent	29.90	352	P	P	10 29 03.3	+2.0
	baz=170						
PFO	Pinyon Flats O	29.96	315	P	P	10 29 06.1	+3.9
	comp=Z,2.4nm,0.7s,baz=108,slow=9.6,SNR=3.5						
N59A	State Game Lan	29.99	24	P	P	10 29 02.3	+0.1
	baz=211						
GMRC	Granite Mounta	30.11	317	P	P	10 29 05.9	+2.4
	baz=127						
MTPU	Mount Pierson	30.20	326	IAmb	IAmb	10 29 09.7	
	comp=Z,14nm,0.7s						
BRNJ	Basking Ridge	30.28	26	P	P	10 29 04.1	-0.6
BRNJ				IAmb	IAmb	10 29 06.4	
	comp=Z,14nm,0.7s						
Q16A	Castle Valley	30.31	328	P	P	10 29 06.0	+0.7
MURC	Murrieta	30.47	314	P	P	10 29 09.3	+2.7
	baz=123						
CCUT	Cedar City	30.50	324	P	P	10 29 08.1	+1.1
CCUT				IAmb	IAmb	10 29 13.5	
	comp=Z,10nm,0.9s						
P17A	Butcher Ranch,	30.52	330	P	P	10 29 08.3	+1.2
MVU	Marysvale	30.55	327	P	P	10 29 09.0	+1.6
HEC	Hector,Ludlow	30.58	317	P	P	10 29 10.3	+2.7
	baz=126						
TMUT	Trail Mountain	30.62	329	P	P	10 29 09.5	+1.4
TCRU	Three Creeks R	30.75	326	P	P	10 29 11.4	+2.1
TCRU				IAmb	IAmb	10 29 16.9	
	comp=Z,13nm,0.8s						
PAL	Palisades	30.83	26	P	P	10 29 09.5	-0.1
	baz=214						
RDMU	Red Mountain	30.83	332	P	P	10 29 11.2	+1.3
SHPR	Sheep Range	30.87	321	P	P	10 29 11.9	+1.7
BINY	Binghamton	31.01	22	P	P	10 29 11.3	+0.1
	baz=210						
BINY	Binghamton	31.01	22	IAmb	IAmb	10 29 12.2	
	comp=Z,11nm,0.7s						
SPMN	Marine on St.	31.07	358	P	P	10 29 11.4	-0.3
	baz=177						
SPMN	Marine on St.	31.07	358	IAmb	IAmb	10 29 12.4	
	comp=Z,9.9nm,0.6s						
SCI2	San Clemente I	31.10	312	P	P	10 29 15.3	+3.2
	baz=121						
BFSC	Mount Baldy Ra	31.14	315	P	P	10 29 15.2	+2.6
	baz=124						
CIS	Catalina Islan	31.22	313	P	P	10 29 15.7	+2.5
	baz=122						
K22A	Casper	31.34	338	P	P	10 29 16.4	+2.1
	baz=151						
L59A	Walton	31.36	24	IAmb	IAmb	10 29 15.0	
	comp=Z,12nm,0.8s						
MPU	Maple Canyon	31.38	329	P	P	10 29 16.2	+1.5
PSUT	Pine Spring	31.46	325	P	P	10 29 16.3	+0.8
PSUT				IAmb	IAmb	10 29 23.1	
	comp=Z,7.7nm,0.8s						
NLU	North Lily Min	31.55	329	P	P	10 29 17.2	+0.9
KSCT	Kent School, K	31.60	26	P	P	10 29 16.3	-0.1
EDW2	Edwards Air Fo	31.73	315	P	P	10 29 19.6	+2.0
	baz=124						
MPMC	Manual Prospec	32.07	318	P	P	10 29 23.0	+2.2
	baz=126						
DUG	Dugway, Tooele	32.11	328	P	P	10 29 23.6	+2.5
	baz=138						
TCUT	Toone Canyon	32.12	331	IAmb	IAmb	10 29 30.3	
	comp=Z,17nm,1.4s						
J58A	Remsen	32.27	22	IAmb	IAmb	10 29 24.9	
	comp=Z,14nm,0.8s						
R11A	Troy Canyon, C	32.33	323	P	P	10 29 25.6	+2.5
	baz=132						
DELO	Deloro Mine	32.51	18	IAmb	IAmb	10 29 47.5	
	comp=Z,13nm,0.9s						
L61B	Northampton	32.54	26	P	P	10 29 24.4	-0.2
	baz=215						
PDAR	Pinedale Array	32.62	335	P	P	10 29 27.0	+1.4
	comp=Z,1.1nm,0.8s,baz=153,slow=9.6,SNR=7.3						
PDAR				PcP	PcP	10 32 10.6	+0.3
	comp=Z,2.2nm,0.8s,baz=134,slow=5.3,SNR=9.9						
BW06	Boulder Array	32.62	335	P	P	10 29 26.9	+1.3
	baz=146						
BGU	Big Grassy Mou	32.76	329	IAmb	IAmb	10 29 29.9	
	comp=Z,5.4nm,0.7s						
PKM	Mcpherson Peak	32.99	314	P	P	10 29 30.4	+1.5
	baz=122						
VES	Vestal, Richgr	33.00	316	P	P	10 29 31.8	+3.1
	baz=124						
HVU	Hansel Valley	33.28	330	IAmb	IAmb	10 29 34.5	
	comp=Z,15nm,1.4s						
LONY	Lake Ozonia	33.61	22	P	P	10 29 33.6	-0.4
	baz=210						
LONY	Lake Ozonia	33.61	22	IAmb	IAmb	10 29 34.7	
	comp=Z,16nm,1.0s						
REDW	Red Top Meadow	33.65	334	IAmb	IAmb	10 29 37.3	
	comp=Z,7.2nm,0.8s						
ELK	Elko	33.78	326	IAmb	IAmb	10 29 39.9	
	comp=Z,5.7nm,0.7s						
TPAW	Teton Pass	33.80	334	IAmb	IAmb	10 29 59.9	
	comp=Z,13nm,1.5s						
NV11	Mina Array Sit	33.93	321	IAmb	IAmb	10 29 42.6	
	comp=Z,12nm,0.9s						
NVAR	Mina Array Bea	34.02	320	P	P	10 29 41.0	+3.2
	comp=Z,11nm,0.8s,baz=138,slow=8.4,SNR=39						
NVAR				PcP	PcP	10 32 16.3	+2.1
	comp=Z,5.9nm,0.7s,baz=135,slow=3.8,SNR=17						
NVAR				LR	LR	10 44 51.5	
	comp=Z,175nm,18.8s,baz=102,slow=38						
MDPB	Devils Postpil	34.03	319	IAmb	IAmb	10 29 43.6	
	comp=Z,7.4nm,0.8s						
LHV	Little Huntoon	34.03	320	IAmb	IAmb	10 29 57.2	
	comp=Z,12nm,0.8s						
FRNY	Flat Rock	34.16	23	IAmb	IAmb	10 29 42.4	
	comp=Z,6.3nm,0.9s						
KVN	Kaiserville	34.28	321	IAmb	IAmb	10 29 58.7	
	comp=Z,11nm,1.0s						
LBNH	Lisbon	34.32	25	P	P	10 29 40.0	-0.1
	baz=215						
AGMN	Agassiz Nation	34.32	355	P	P	10 29 39.9	-0.2
	baz=172						
PTGA	Pitinga	34.37	113	P	P	10 29 39.2	-1.6
	comp=Z,14nm,0.7s,baz=299,slow=13,SNR=33						
PTGA	Pitinga	34.37	113	P	P	10 29 39.7	-1.2
ETMB	Extrema	34.42	132	*e*P	P	10 29 42.6	+1.3
RLMT	Red Lodge	34.48	337	P	P	10 29 42.8	+1.1
	baz=148						
BMN	Battle Mountai	34.66	324	IAmb	IAmb	10 29 51.0	
	comp=Z,5.9nm,0.9s						
MACA	Manacapuru-AM	34.89	117	*e*P	P	10 29 44.3	-1.0
MACA	Manacapuru-AM	34.89	117	P	P	10 29 44.9	-0.4
YERR	Yerington	34.94	320	IAmb	IAmb	10 29 53.0	
	comp=Z,11nm,1.3s						
PNTR	Pine Nut	35.22	320	IAmb	IAmb	10 30 08.2	
	comp=Z,7.3nm,0.8s						
HLID	Hailey	35.42	331	P	P	10 29 51.5	+1.7
	baz=139,SNR=11						
HLID	Hailey	35.42	331	IAmb	IAmb	10 29 54.5	
	comp=Z,7.5nm,0.9s						
PAHR	Pah Rah Range	35.47	321	IAmb	IAmb	10 29 55.3	
	comp=Z,6.9nm,1.0s						
BOZ	Bozeman (W)	35.80	335	P	P	10 29 54.7	+1.8
	baz=145						
MFID	Camas Ranch	36.00	329	IAmb	IAmb	10 30 00.6	
	comp=Z,7.7nm,0.8s						
PKME	Peaks-Kenny Pk	36.26	27	P	P	10 29 57.4	+0.7
	baz=218						
ULM	Lac du Bonnet	36.26	355	P	P	10 29 55.3	-1.3
	comp=Z,5.5nm,0.9s,baz=189,slow=11,SNR=4.8						
ULM				PcP	PcP	10 32 19.1	-1.1
	comp=Z,4.5nm,0.5s,baz=236,slow=2.2,SNR=5.7						
ULM				LR	LR	10 47 03.4	
	comp=Z,170nm,18.3s,baz=162,slow=40						
WVOR	Wild Horse Val	36.79	325	IAmb	IAmb	10 30 05.8	
	comp=Z,7.5nm,0.8s						
EGMT	Eagleton	37.14	339	P	P	10 30 04.5	+0.2
	baz=149						
MSO	Missoula	37.74	334	P	P	10 30 11.4	+2.0
	baz=142						
M04C	Macdoel	38.21	322	P	P	10 30 15.1	+1.6
	baz=127						
I07A	Izee	38.37	327	IAmb	IAmb	10 30 16.5	
	comp=Z,13nm,1.4s						
M02C	Callahan	38.59	321	P	P	10 30 17.7	+1.1
	baz=126						
L04D	Klamath Falls	38.75	322	P	P	10 30 19.2	+1.2
	baz=127						
MDP	Montagnes des	39.12	99	PcP	PcP	10 32 31.0	+1.2
	comp=Z,6.4nm,0.6s,baz=260,slow=3.9,SNR=4.4						
J04D	Umpqua Nationa	39.26	324	P	P	10 30 23.6	+1.3
	baz=128						

I05D	Terrebonne, OR	39.53	326	P	P	10 30 25.8	+1.5
	baz=130						
I04A	Tendick Farm,	39.78	324	P	P	10 30 27.8	+1.4
	baz=128						
ITTB	Itaituba	39.78	115	*e*P	P	10 30 25.3	-1.4
MALB	Monte Alegre	40.00	110	*e*P	P	10 30 28.6	+0.1
G05D	Wamic, OR	40.10	327	P	P	10 30 30.7	+1.7
	baz=131						
H04A	Detroit Lake	40.21	325	P	P	10 30 31.8	+1.8
NEW	Newport	40.21	333	P	P	10 30 30.7	+0.8
	baz=139						
NEW	Newport	40.21	333	P	P	10 30 31.1	+1.2
J01E	Myrtle Point	40.28	322	P	P	10 30 32.1	+1.7
	baz=126						
C09A	Chrisman Ranch	40.38	332	P	P	10 30 32.0	+0.7
H04D	Lebanon	40.42	325	P	P	10 30 32.8	+1.2
	baz=129						
F05D	White Salmon	40.60	327	P	P	10 30 35.5	+2.4
	baz=132						
VILB	Vilhena	40.90	130	*e*P	P	10 30 36.4	+0.4
VILB	Vilhena	40.90	130	P	P	10 30 35.6	-0.3
LTY	Liberty	41.13	330	IAmb	IAmb	10 31 03.4	
	comp=Z,18nm,1.4s						
NPGB	Novo Progresso	41.41	118	*e*P	P	10 30 38.1	-2.1
F04D	Rainier, OR	41.55	327	P	P	10 30 42.9	+2.0
	baz=130						
SIV	San Ignacio	42.28	134	P	P	10 30 47.0	-0.2
	comp=Z,14nm,0.7s,baz=309,slow=8.9,SNR=8.5						
SIV				PcP	PcP	10 32 40.2	+0.3
	comp=Z,3.2nm,0.7s,baz=315,slow=2.9,SNR=2.6						
B05A	Bryant	42.52	330	P	P	10 30 49.3	+0.6
	baz=133						
D03D	Eldon	42.53	328	P	P	10 30 50.2	+1.3
	baz=131						
LVC	Limon Verde	42.57	149	*e*P	P	10 30 51.1	+1.2
PDRB	Porto dos Gac	42.76	125	*e*P	P	10 30 51.6	+0.5
EDM	Edmonton	42.77	341	P	P	10 30 50.6	-0.2
EDM				IAmb	IAmb	10 30 53.2	
	comp=Z,13nm,1.0s						
CLDB	Colider	43.09	123	*e*P	P	10 30 52.7	-1.1
B04A	Port Angeles	43.09	328	P	P	10 30 55.4	+2.1
PTLB	Pontes e Lacer	43.29	131	*e*P	P	10 30 55.4	+0.1
SCHQ	Schefferville	44.92	20	P	P	10 31 05.3	-2.7
	comp=Z,8.5nm,0.6s,baz=232,slow=7.6,SNR=15						
SCHQ				PcP	PcP	10 32 47.8	-0.4
	comp=Z,7.8nm,0.8s,baz=231,slow=4.4,SNR=4.9						
SCHQ				LR	LR	10 49 58.6	
	comp=Z,305nm,21.9s,baz=246,slow=36						
TMAB	Tom-Au,PA,Br	45.86	108	*e*P	P	10 31 16.6	+0.6
SALV	Santo Antonio	46.13	129	*e*P	P	10 31 17.8	-0.2
PP1B	Ponte de Pedra	47.80	130	*e*P	P	10 31 30.9	0.0
ARAG	Araguaiana, MT	49.01	126	*e*P	P	10 31 40.0	-0.4
SMTB	Santa Maria do	49.02	115	*e*P	P	10 31 39.1	-1.4
PEXB	Peixe	49.96	119	*e*P	P	10 31 47.1	-0.5
YKA	Yellowknife Ar	51.10	346	P	P	10 31 55.6	+0.2
	comp=Z,3.7nm,0.6s,baz=152,slow=7.8,SNR=47						
YKA				PcP	PcP	10 33 10.6	+0.4
	comp=Z,3.7nm,0.7s,baz=135,slow=4.6,SNR=12						
YKA				LR	LR	10 56 02.7	
	comp=Z,73nm,21.3s,baz=0.0,slow=39						
CPUP	Villa Florida	52.03	140	P	P	10 32 01.6	-1.3
	comp=Z,5.5nm,1.0s,baz=0.0,slow=7.1,SNR=4.6						
CPUP				LR	LR	10 53 03.8	
	comp=Z,105nm,21.6s,baz=228,slow=35						
CPUP	Villa Florida	52.03	140	*e*P	P	10 32 02.3	-0.6
CPUP	Villa Florida	52.03	140	IAmb	IAmb	10 32 02.4	
	comp=Z,9.0nm,1.1s						
ITRB	Iturama	52.47	129	*e*P	P	10 32 07.3	+1.0
DLBC	Dease Lake	52.85	336	P	P	10 32 10.4	+1.8
	comp=Z,2.8nm,0.5s,baz=162,slow=4.0,SNR=12						
DLBC				PcP	PcP	10 33 18.0	+1.0
	comp=Z,2.4nm,0.7s,baz=96,slow=4.8,SNR=2.6						
DLBC	Dease Lake	52.85	336	IAmb	IAmb	10 32 12.1	
	comp=Z,14nm,1.4s						
SDBA	SAO DESIDERIO	53.00	118	*e*P	P	10 32 09.2	-1.1
IPMB	Ipameri, GO	53.14	126	*e*P	P	10 32 10.1	-1.2
WRGLY	Wrigley	54.01	343	P	P	10 32 16.8	-0.1
	baz=140						
SIT	Sitka	54.27	332	P	P	10 32 19.0	0.0
	baz=124						
TGTN	Hyland Airport	54.28	339	P	P	10 32 19.7	+0.7
	baz=134						
BB19B	Bebedouro	54.65	129	*e*P	P	10 32 21.9	-0.4
WHY	Whitehorse	56.17	336	P	P	10 32 33.5	+0.8
	baz=126						
NBPN	Ponto Novo - B	56.43	113	*e*P	P	10 32 34.5	-0.6
FARO	Faro, Yukon	56.55	338	P	P	10 32 35.8	+0.6
	baz=129						
M31M	Drury Creek, Y	56.91	338	P	P	10 32 38.8	+0.9
	baz=128						
DIAM	Diamantina, MG	56.94	123	*e*P	P	10 32 39.4	+0.5
N31M	Braeburn, Yuko	57.01	336	P	P	10 32 39.6	+1.0
	baz=126						
PET01	Itanhaem-SP	57.49	131	*e*P	P	10 32 44.2	+1.8
BSCB	Bom Sucesso	57.50	126	*e*P	P	10 32 42.7	0.0
PLCA	Paso Flores	57.84	161	LR	LR	10 52 19.7	
	comp=Z,158nm,18.8s,baz=200,slow=30						
M30M	Minto, Yukon	58.04	337	P	P	10 32 46.6	+0.9
	baz=125						
GDU01	Guandu, BA	58.21	116	*e*P	P	10 32 47.7	0.0
NBIT	Itapeh - BA	58.88	117	*e*P	P	10 32 52.9	+0.6
CMC01	Camacan, BA	59.00	118	*e*P	P	10 32 52.9	-0.1
SJMB	Sao Joao De Ma	59.18	122	*e*P	P	10 32 54.7	+0.3
NBAN	Anadia - AL	59.49	110	*e*P	P	10 32 54.8	-1.8
DAWY	Dawson	59.85	338	P	P	10 32 59.1	+0.8
	baz=123						
M27K	Edge Creek, AK	59.91	335	P	P	10 33 00.3	+1.5
	baz=120						
RIB01	Linhares ES	60.13	122	*e*P	P	10 33 00.8	0.0
NBRF	Rio Formoso -	60.17	109	*e*P	P	10 33 01.7	+0.5
L27K	Beaver Creek,	60.24	336	P	P	10 33 01.9	+1.0
	baz=120,SNR=6.7						
L27K	Beaver Creek,	60.24	336	IAmb	IAmb	10 33 04.0	
	comp=Z,6.6nm,0.8s						
CAM01	Campos-RJ	60.39	125	*e*P	P	10 33 04.0	+1.4
ALF01	Guarapari-ES	60.51	124	*e*P	P	10 33 04.1	+0.7
Q23K	Middleton Isla	60.52	331	P	P	10 33 04.0	+1.2
	baz=114						
INK	Inuvik	60.55	343	P	P	10 33 02.9	+0.1
	comp=Z,5.6nm,0.6s,baz=128,slow=6.4,SNR=44						
INK				PcP	PcP	10 33 47.1	+0.5
	comp=Z,3.5nm,0.7s,baz=108,slow=7.4,SNR=5.6						
INK	Inuvik	60.55	343	P	P	10 33 02.9	+0.1
	baz=131,SNR=8.2						
INK	Inuvik	60.55	343	IAmb	IAmb	10 33 04.3	
	comp=Z,5.7nm,0.7s						
RES	Resolute Bay	60.63	359	P	P	10 33 02.0	-1.4
	comp=Z,4.6nm,0.8s,baz=168,slow=12,SNR=11						
RES	Resolute Bay	60.63	359	IAmb	IAmb	10 33 04.3	
	comp=Z,4.9nm,0.9s						
N25K	Chitina, Valde	60.67	334	P	P	10 33 05.2	+1.2
	baz=117						
N25K	Chitina, Valde	60.67	334	IAmb	IAmb	10 33 06.8	
	comp=Z,6.3nm,0.8s						
KLU	Klutina	61.19	333	P	P	10 33 09.0	+1.4
	baz=115						
A36M	Sachs Harbour	61.30	349	P	P	10 33 07.4	-0.5
	baz=142						
A36M	Sachs Harbour	61.30	349	IAmb	IAmb	10 33 08.4	
	comp=Z,6.1nm,0.7s						
SCRK	Sand Creek	61.53	336	P	P	10 33 10.4	+0.6
	baz=118						
J26L	Joseph Creek	61.63	337	P	P	10 33 11.6	+1.2
	baz=119						
PAX	Paxson	61.66	335	P	P	10 33 11.6	+1.0
	baz=117						
PAX	Paxson	61.66	335	IAmb	IAmb	10 33 13.2	
	comp=Z,5.8nm,0.6s						
RIDG	Independent Ri	61.76	336	P	P	10 33 12.4	+1.1
	baz=118						
SCM	Sheep Creek Mo	61.95	334	P	P	10 33 13.6	+1.0
	baz=114						
J25K	Salcha River,	62.37	337	P	P	10 33 15.7	+0.3
	baz=118						
WAT6	Susitna Watana	62.43	334	P	P	10 33 16.0	+0.1
	baz=114						
PMR	Palmer	62.64	333	P	P	10 33 18.2	+1.1
	baz=112						
BRSE	Bradley Lake S	62.71	331	P	P	10 33 19.0	+1.4
	baz=110						
RC01	Rabbit Creek A	62.72	332	P	P	10 33 18.6	+0.9
	baz=112						
PRP	Porcupine Dome	62.85	338	P	P	10 33 20.5	+1.9
	baz=118						
HDA	Harding Lake	62.89	336	P	P	10 33 19.3	+0.6
	baz=116						
HDA	Harding Lake	62.89	336	IAmb	IAmb	10 33 35.2	
	comp=Z,12nm,1.4s						
KDAK	Kodiak Island	62.99	328	P	P	10 33 21.2	+1.7
	baz=107						
IL31		63.02	337	IAmb	IAmb	10 33 24.9	
	comp=Z,5.3nm,0.8s						
ILAR	Eielson Array	63.02	337	P	P	10 33 20.1	+0.5
	comp=Z,3.5nm,0.8s,baz=122,slow=5.1,SNR=58						
ILAR				PcP	PcP	10 33 57.5	+0.7
	comp=Z,2.0nm,0.7s,baz=124,slow=2.1,SNR=7.3						
ILAR				LR	LR	11 04 10.4	
	comp=Z,65nm,18.0s,baz=134,slow=39						
RND	Reindeer	63.23	335	P	P	10 33 22.3	+1.2
POKR	Poker Plat Res	63.38	337	P	P	10 33 22.9	+0.9
	baz=116						
MCK	McKinley	63.40	335	P	P	10 33 23.0	+0.9
	baz=114						
TCOL	CIGO, UAF Yank	63.44	337	P	P	10 33 23.4	+1.1
	baz=115						
ICESG	Greenland Ices	63.79	18	*i* P	P	10 33 22.9	-2.2
ICESG				IAmb	IAmb	10 33 25.3	
	comp=Z,11nm,0.5s						
H24K	Noodor Dome	63.86	338	P	P	10 33 26.2	+1.0
	baz=116						
H24K	Noodor Dome	63.86	338	IAmb	IAmb	10 33 29.7	
	comp=Z,7.9nm,1.0s						
P19K	Oil Pt	63.87	330	P	P	10 33 26.1	+0.7
	baz=108						
SPCR	Spurr Chakacha	63.88	332	P	P	10 33 26.0	+0.6
	baz=109						
I23K	Minto, Yukon-K	64.14	337	P	P	10 33 28.0	+1.1
	baz=114						
I23K	Minto, Yukon-K	64.14	337	IAmb	IAmb	10 33 29.6	
	comp=Z,5.4nm,0.7s						
KTH	Kantishna Hill	64.14	335	IAmb	IAmb	10 33 28.5	
	comp=Z,12nm,1.0s						
BPAW	Bear Paw Mtn.	64.38	335	P	P	10 33 28.7	+0.2
	baz=112						
BPAW	Bear Paw Mtn.	64.38	335	IAmb	IAmb	10 33 30.0	
	comp=Z,13nm,1.2s						
O19K	Port Alsworth	64.56	330	P	P	10 33 29.8	0.0
	baz=107,SNR=5.3						
CAST	Castle Rocks	64.58	334	IAmb	IAmb	10 33 31.0	
	comp=Z,10nm,1.1s						
MLY	Manley	64.63	336	P	P	10 33 30.6	+0.4
	baz=112,SNR=12						
MLY	Manley	64.63	336	IAmb	IAmb	10 33 32.7	
	comp=Z,6.5nm,0.5s						
P18K	Big Mountain,	64.78	329	P	P	10 33 31.5	+0.3
	baz=106						
O18K	Koktuh Hills	64.89	330	P	P	10 33 32.1	+0.2
	baz=106						
L20K	Farewell, AK	65.05	333	P	P	10 33 33.2	+0.3
	baz=108,SNR=12						
I21K	Tanana	65.17	336	P	P	10 33 33.9	+0.2
	baz=111						
COLD	Coldfoot	65.29	338	P	P	10 33 34.5	+0.1
	baz=114						
L19K	White Mountain	65.39	332	P	P	10 33 35.7	+0.5
	baz=107						
K20K	Telida	65.41	334	P	P	10 33 35.9	+0.6
	baz=108						
H21K	Melozitna Rive	65.66	336	P	P	10 33 36.8	0.0
	baz=110						
TOLK	Toolik Lake Re	65.67	340	P	P	10 33 37.6	+0.7
	baz=115						
J20K	Nowinta River	65.70	335	P	P	10 33 37.3	+0.2
	baz=109						
J20K	Nowinta River	65.70	335	P	P	10 33 37.4	+0.3
CHGN	Chignik	65.71	326	P	P	10 33 37.9	+0.7
	baz=101						
SUMG	Summit	65.99	15	*i* P	P	10 33 38.0	-1.2
SUMG				IAmb	IAmb	10 33 40.5	
	comp=Z,5.6nm,0.5s						
SUMG	Summit	65.99	15	P	P	10 33 38.8	-0.5
SUMG				IAmb	IAmb	10 33 40.9	
	comp=Z,5.5nm,0.5s						
EUNU	Eureka	66.04	1	P	P	10 33 38.8	-0.3
EUNU				IAmb	IAmb	10 33 40.1	
	comp=Z,6.9nm,0.8s						
TTA	Tatalina	66.12	333	P	P	10 33 39.9	0.0
	baz=106,SNR=5.3						
TTA	Tatalina	66.12	333	P	P	10 33 40.3	+0.4
TTA				IAmb	IAmb	10 33 40.9	
	comp=Z,10.0nm,0.8s						
IMAR	Indian Mountai	66.14	337	P	P	10 33 39.7	-0.2
DAG	Danmarks Havn	72.44	13	*i* P	P	10 34 16.8	-1.8
DAG				IAmb	IAmb	10 34 17.8	
	comp=Z,4.6nm,0.5s						
NOR	Nord	73.92	8	*i* P	P	10 34 26.0	-1.3
NOR				IAmb	IAmb	10 34 27.8	
	comp=Z,1.8nm,0.6s						
ESDC	Sonseca Array	79.16	52	P	P	10 34 55.7	-2.0
	comp=Z,1.1nm,0.7s,baz=283,slow=5.0,SNR=6.2						
BILL	Bilibino	81.63	338	P	P	10 35 10.6	+0.3
BILL				IAmb	IAmb	10 35 12.4	
	comp=Z,5.2nm,0.8s						
NOA	NORSAR Array B	83.77	29	P	P	10 35 20.8	-0.8
	comp=Z,0.8nm,0.6s,baz=290,slow=4.7,SNR=3.6						
NOA				LR	LR	11 10 57.4	
	comp=Z,40nm,20.6s,baz=300,slow=34						
DBIC	Dimbokro	85.00	84	P	P	10 35 26.6	-2.1
	comp=Z,2.4nm,0.6s,baz=315,slow=6.2,SNR=4.5						
DBIC	Dimbokro	85.00	84	P	P	10 35 27.2	-1.5
DBIC				IAmb	IAmb	10 35 27.9	
	comp=Z,5.8nm,1.1s						
HFS	Hagfors	85.22	29	LR	LR	11 15 31.7	
	comp=Z,157nm,18.6s,baz=302,slow=37						
ARCES	ARCESS Array B	85.86	18	P	P	10 35 31.1	-0.7
	comp=Z,3.7nm,0.9s,baz=290,slow=3.6,SNR=8.7						
ARCES				LR	LR	11 14 38.9	
	comp=Z,104nm,18.2s,baz=230,slow=36						
DAVOX	Davos/Dischmat	87.37	42	LR	LR	11 14 29.8	
	comp=Z,63nm,19.9s,baz=262,slow=36						
GERES	GERESS Array B	89.13	40	LR	LR	11 14 26.1	
	comp=Z,26nm,19.0s,baz=291,slow=35						
TORD	Torodi Ar. Bea	89.73	77	P	P	10 35 49.9	-1.6
	comp=Z,0.7nm,0.5s,baz=296,slow=5.1,SNR=8.7						
TORD	Torodi Ar. Bea	89.73	77	P	P	10 35 50.3	-1.1
FINES	FINESS Array B	90.15	25	LR	LR	11 15 26.8	
	comp=Z,43nm,18.1s,baz=328,slow=35						
TIXI	Tiksi	90.31	348	P	P	10 35 52.5	-0.5
	comp=Z,4.3nm,0.6s,baz=101,slow=1.0,SNR=7.2						
TIXI	Tiksi	90.31	348	P	P	10 35 52.3	-0.8
TIXI				IAmb	IAmb	10 35 54.0	
	comp=Z,3.5nm,0.5s						
PETK	Petropavlovsk-	90.94	326	P	P	10 35 57.9	+1.5
	comp=Z,6.3nm,0.8s,baz=94,slow=8.0,SNR=6.4						
NRIK	Noril'sk	96.79	0	LR	LR	11 23 27.1	
	comp=Z,123nm,20.0s,baz=341,slow=38						
ZALV	Zalesovo Beam	112.17	2	PKiKP	PKiKP	10 41 27.8	+0.2
	comp=Z,1.0nm,0.5s,baz=300,slow=2.8,SNR=4.5						
ZALV	Zalesovo Beam	112.17	2		PKiKP	10 41 28.0	+0.4
SONM	Songino Array	116.36	347	PKP	PKiKP	10 41 36.5	+0.4
	comp=Z,1.0nm,0.7s,baz=32,slow=2.1,SNR=5.0						
KSRS	Korea Array	116.84	326	PKP	PKiKP	10 41 38.2	+1.2
	comp=Z,2.4nm,0.7s,baz=0.4,slow=1.9,SNR=9.0						
MKAR	Makanchi Array	119.14	5	PKP	PKPdf	10 41 40.9	-0.4
	comp=Z,1.6nm,0.7s,baz=358,slow=1.8,SNR=15						
BOSA	Boshof	119.80	115	PKP	PKPdf	10 41 43.1	-0.1
	comp=Z,3.7nm,0.7s,baz=248,slow=2.6,SNR=12						
BOSA	Boshof	119.80	115		PKPdf	10 41 42.2	-1.0
HHC	Hu-ho-hao-te	121.37	340	*e*P	PKPdf	10 41 46.0	+0.1
KSH	Kashi	125.38	12	PKP	PKiKP	10 41 54.0	0.0
LZH	Lanzhou	128.08	344	*e*PKP	PKPdf	10 41 57.5	-1.5
LZH				pPKP	pPKPdf	10 42 19.3	-0.9
XAN	Xi'an	128.41	338	PKP	PKPdf	10 41 59.8	+0.3
XAN				sPKP		10 42 16.3	
WRA	Warramunga Arr	136.04	256	PKP	PKPdf	10 42 14.8	+0.6
	comp=Z,1.3nm,0.7s,baz=83,slow=2.4,SNR=9.7						
ASAR	Alice Springs	136.30	250	PKP	PKPdf	10 42 15.2	+0.6
	comp=Z,0.9nm,0.8s,baz=87,slow=2.1,SNR=7.8						
ASAR	Alice Springs	136.30	250		PKPdf	10 42 13.3	-1.2
DANN	Dangsing	137.55	6	*e*P	PKPdf	10 42 14.3	-2.9
	comp=Z,35nm,0.7s						
PYUN	Piuthan	137.71	7	*e*P	PKPdf	10 42 14.0	-3.3
	comp=Z,16nm,0.5s						
KOLN	Koldanda	138.11	7	*e*P	PKPdf	10 42 14.7	-3.4
GUN	Gumba	138.17	4	*e*P	PKPdf	10 42 14.9	-3.5
	comp=Z,17nm,0.6s						
JIRN	Jiri	138.44	3	*e*P	PKPdf	10 42 14.8	-4.1
PKIN	Phulchoki	138.47	4	*e*P	PKPdf	10 42 14.2	-4.6
	comp=Z,12nm,0.6s						
PKI	Pulchoki	138.48	4	*e*P	PKPdf	10 42 14.6	-4.3
	comp=Z,13nm,0.6s						
FITZ	Fitzroy Crossi	144.29	259	PKP	PKPbc	10 42 28.4	+0.9
	comp=Z,3.1nm,0.8s,baz=54,slow=3.6,SNR=5.3						
CMAR	Chiang Mai Arr	146.12	342	PKPbc	PKPab	10 42 34.1	+0.3
	comp=Z,25nm,0.6s,baz=338,slow=3.5,SNR=113						
CMAR	Chiang Mai Arr	146.12	342		PKPab	10 42 33.9	0.0

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*IDC **25** 10:26:36.1±1.8, 14°.44S×73°.19W, h55^{km}±18^{km}, mb3.7/4, mb1 4.0/8, mb1mx3.7/30, mbtmp4.1/8, ML4.2/5, Error ellipse: s-maj=30.2km s-min=12.2km az=42.0*

*NEIC **25** 10:26:37.2±2.0, 14°.41S±0°.07×73°.28W±0°.09, h62^{km}±5^{km}, mb4.3/23, Error ellipse: s-maj=13.9km s-min=8.6km az=54.0*

ISC 25 10:26:35.5±0.5**, 14°.43S**±0°.06×**73°.30W**±0°.07**, h50**^{km}**, n66,** σ**1^{s}.46**/66**, mb4.2**/11**, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	4.22	305	P	Pn	10 27 39.7	+2.2
	62nm,0.3s,baz=122,slow=9.7,SNR=59						
NNA				S	Sn	10 28 29.5	+4.0
	47nm,0.3s,baz=359,slow=9.4,SNR=4.9						
NNA	Nana	4.22	305	Pn	Pn	10 27 39.8	+2.4
AP01	Chacalluta	4.84	145	Pn	Pn	10 27 48.1	+2.3
AP01				Sn	Sn	10 28 43.7	+3.1
PB12	IPOC Station P	5.04	146	Pn	Pn	10 27 51.0	+2.2
LPAZ	La Paz	5.31	111	Pn	Pn	10 27 58.0	+5.1
PB16	IPOC Station P	5.32	137		Pn	10 27 57.5	+4.5
PB11	IPOC Station P	6.34	147	Pn	Pn	10 28 08.6	+2.0
TA02	Huaiquique	6.55	153		Pn	10 28 11.3	+2.0
CZSB	Cruzeiro do Su	6.68	5	Pn	Pn	10 28 12.5	+1.3
TA01	Diego Aracena	6.79	154	Pn	Pn	10 28 13.7	+1.1
PB08	IPOC Station P	6.92	146		Pn	10 28 17.1	+2.3
PB01	IPOC Station P	7.51	152		Pn	10 28 23.8	+1.2
PB07	IPOC Station P	7.95	156		Pn	10 28 30.1	+1.4
PB09	IPOC Station P	8.28	153		Pn	10 28 35.5	+2.3
ETMB	Extrema	8.30	57	Pn	Pn	10 28 34.6	+1.2
PB04	IPOC Station P	8.41	160	Pn	Pn	10 28 35.1	+0.1
ATAH	Atahualpa	8.81	325	P	Pn	10 28 41.1	+0.4
	1.6nm,0.3s,baz=201,slow=4.1,SNR=13						
ATAH				S	Sn	10 30 19.2	+0.4
	0.9nm,0.3s,baz=273,slow=17,SNR=2.2						
PB06	IPOC Station P	8.96	157	Pn	Pn	10 28 43.3	+0.8
LVC	Limon Verde	9.14	154	P	Pn	10 28 46.5	+1.4
	0.9nm,0.3s,baz=13,slow=7.7,SNR=14						
LVC				S	Sn	10 30 24.2	-2.6
	2.1nm,0.3s,baz=106,slow=23,SNR=11						
LVC	Limon Verde	9.14	154	Pn	Pn	10 28 45.7	+0.6
PB10	IPOC Station P	9.40	164	Pn	Pn	10 28 47.8	-0.6
SAML	Samuel	11.30	62		Pn	10 29 13.5	-0.9
SIV	San Ignacio	11.90	99	P	Pn	10 29 22.2	-0.5
	2.7nm,0.3s,baz=296,slow=10,SNR=34						
VILB	Vilhena	12.81	85	Pn	Pn	10 29 34.1	-1.0
PTLB	Pontes e Lacer	13.72	96	Pn	Pn	10 29 47.3	-0.2
AQDB	Aquidauana	17.82	112		Pn	10 30 39.4	-0.7
AQDB				IAmb	IAmb	10 30 43.6	
	comp=Z,14nm,1.4s						
PTGA	Pitinga	18.95	45	P	Pn	10 30 53.8	+0.1
	comp=Z,0.6nm,0.3s,baz=210,slow=16,SNR=1.2						
PTGA	Pitinga	18.95	45	P	P	10 30 52.4	-0.3
CPUP	Villa Florida	19.06	131	P	Pn	10 30 57.4	+2.4
	comp=Z,0.2nm,0.3s,baz=320,slow=10,SNR=5.5						
CPUP	Villa Florida	19.06	131	P	P	10 30 52.3	-1.5
MT09	Talagante	19.38	174	P	P	10 30 55.9	-1.5
MT01	Popeta	19.44	175	P	P	10 30 56.8	-1.2
MT01				IAmb	IAmb	10 31 19.9	
	comp=Z,9.9nm,1.3s						
H03N1	Juan Fernandez	19.61	194	T	T	10 49 52.3	
	baz=18,slow=74,SNR=64						
H03N2	Juan Fernandez	19.61	194	T	T	10 49 51.4	
	baz=18,slow=74,SNR=37						
H03N3	Juan Fernandez	19.62	194	T	T	10 49 50.6	
	baz=18,slow=74,SNR=55						
BOAV	Boa Vista	20.96	38	P	P	10 31 14.8	+0.2
ZARC	Zaragoza, Cauc	21.83	356	P	P	10 31 23.0	-0.8
ZARC				IAmb	IAmb	10 31 39.5	
	comp=Z,6.2nm,0.7s						
BAUV	El Baul	23.80	13	P	P	10 31 43.3	-0.5
BAUV				IAmb	IAmb	10 32 06.3	
	comp=Z,19nm,1.2s						
LC01	Cunco	24.41	177	P	P	10 31 50.0	+0.8
LC01				IAmb	IAmb	10 31 53.0	
	comp=Z,10.0nm,1.1s						
JANB	Januaria	28.03	95	*e*P	P	10 32 22.7	+0.4
ACON	Acoyapa	28.75	335	P	P	10 32 27.7	-0.8
ACON				IAmb	IAmb	10 32 49.0	
	comp=Z,23nm,1.4s						
AGPR	Aguadilla, PR	33.25	11	P	P	10 33 08.3	+0.2
SDDR	Presa de Saban	33.26	3	P	P	10 33 08.4	+0.1
CBYP	Canovanas	33.31	13	P	P	10 33 08.9	+0.1
CMIG	Matias Romero	37.88	325	P	P	10 33 48.7	+0.8
	comp=Z,0.9nm,0.3s,baz=165,slow=10,SNR=2.0						
MIAR	Mount Ida	52.38	339	P	P	10 35 42.6	-0.1
MIAR				IAmb	IAmb	10 35 49.1	
	comp=Z,6.3nm,1.3s						
TXAR	Lajitas Array	52.47	326	P	P	10 35 43.9	+0.2
	comp=Z,0.6nm,0.8s,baz=154,slow=9.6,SNR=8.1						
TXAR	Lajitas Array	52.47	326	P	P	10 35 42.9	-0.7
GNAR	Gosnell	52.56	343	P	P	10 35 42.6	-1.4
R49A	Shelbyville	53.61	348	P	P	10 35 50.5	-1.2
MCWV	Mont Chateau	54.15	354	P	P	10 35 56.0	+0.3
MWC	Mount Wilson	64.44	320	P	P	10 37 06.0	-1.1
SNAA	Sanae	70.28	162	P	P	10 37 44.3	+1.0
SNAA	Sanae	70.28	162	P	P	10 37 44.0	+0.7
SNAA				IAmb	IAmb	10 37 45.3	
	comp=Z,8.4nm,1.3s						
F10A	Beach Ranch, E	71.99	329	P	P	10 37 53.9	-0.2
F10A				IAmb	IAmb	10 38 05.2	
	comp=Z,6.3nm,1.3s						
TORD	Torodi Ar. Bea	79.14	73	P	P	10 38 34.1	-1.4
	comp=Z,1.6nm,0.5s,baz=269,slow=6.1,SNR=11						
TORD	Torodi Ar. Bea	79.14	73	P	P	10 38 34.1	-1.4
TORD				IAmb	IAmb	10 38 34.9	
	comp=Z,2.6nm,1.0s						
ESDC	Sonseca Array	83.89	47	P	P	10 39 00.1	-0.2
	comp=Z,0.3nm,0.3s,baz=258,slow=7.0,SNR=5.0						
ESDC	Sonseca Array	83.89	47	P	P	10 38 59.9	-0.3
ASAR	Alice Springs	133.73	215	PKP	PKPdf	10 45 47.4	-0.2
	comp=Z,0.4nm,0.7s,baz=116,slow=2.2,SNR=3.2						
WRA	Warramunga Arr	136.35	219	PKP	PKPdf	10 45 52.3	-0.3
	comp=Z,1.1nm,0.8s,baz=143,slow=2.0,SNR=9.7						
WRA	Warramunga Arr	136.35	219		PKPdf	10 45 51.6	-1.0
ZALV	Zalesovo Beam	136.98	19	PKP	PKPdf	10 45 53.1	+0.4
	comp=Z,3.3nm,0.8s,baz=299,slow=1.9,SNR=12						
ZALV	Zalesovo Beam	136.98	19		PKPdf	10 45 52.4	-0.3
MKAR	Makanchi Array	141.82	27	PKP	PKPdf	10 46 01.6	-0.2
	comp=Z,0.5nm,0.6s,baz=298,slow=2.5,SNR=4.0						
SONM	Songino Array	146.69	0	PKPbc	PKPbc	10 46 12.0	0.0
	comp=Z,1.8nm,0.7s,baz=318,slow=2.2,SNR=9.5						

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*NEIC **25** 10:28:01.0±1.4, 27°.86N±0°.07×51°.72E±0°.10, h10^{km}±2^{km}, Error ellipse: s-maj=15.3km s-min=11.1km az=120.0*

*THR **25** 10:28:03.7±0.6, 27°.80N×51°.80E, h35^{km}±6^{km}, ML3.6*

*IDC **25** 10:28:03.1±1.2, 27°.93N×51°.89E, h0^{km}, mb4.0/14, mb1 4.1/18, mb1mx3.9/58, mbtmp4.0/18, ML3.9/4, Error ellipse: s-maj=25.6km s-min=16.9km az=159.0*

*TEH **25** 10:28:04.0, 27°.89N×51°.80E, h24^{km}, ML4.0*

*OMAN **25** 10:28:08.1±1.0, 28°.02N×52°.20E, h160^{km}±31^{km}, mb4.5/3, ml3.7/6, Error ellipse: s-maj=19.1km s-min=9.8km az=39.0*

ISC 25 10:28:04.1±0.5**, 27°.96N**±0°.04×**51°.92E**±0°.04**, h10**^{km}**, n124,** σ**1^{s}.56**/132**, mb4.0**/18**, 1D, Persian Gulf**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AHBU	AHRAM	1.06	329	*e*Pg	Pg	10 28 24.9	+0.4
QIR1	Qir	1.12	62	*e*Pg	Pb	10 28 26.4	+0.7
QIR1				*e*		10 28 29.6	
	comp=Z,50μm,0.3s						
QIR1				*e*Sg	Sn	10 28 44.8	+3.3
JHRM	Jahrom	1.56	69	*e*Pg	Pb	10 28 34.7	+1.5
JHRM				*e*		10 28 59.5	
	comp=Z,32μm,0.4s						
KAZ1	Kazerun	1.68	352	*e*Pn	Pn	10 28 33.4	-0.3
KAZ1				*e*		10 29 09.1	
	comp=Z,23μm,0.7s						
SHI	Shiraz	1.76	17	*e*Pg	Pb	10 28 36.8	+0.2
SHI				*e*		10 29 12.4	
	comp=Z,8μm,0.7s						
LAR1	LAR	2.19	97	*e*Pn	Pn	10 28 41.8	+1.1
LAR1				*e*		10 29 40.2	
	comp=Z,14μm,0.6s						
SHMA	Al-Shehemyia	2.26	202	P	Pg	10 28 47.9	+0.5
SAKB	Bahrain	2.32	212	P	Pg	10 28 52.4	+3.8
KLNJ	Kolanjah	3.06	355	*e*Pn	Pn	10 28 53.4	+0.6

GENO	Geno	3.81	97	ePn	Pn	10 29 05.5	+2.4
GENO				e		10 29 57.2	
	comp=N,1μm,0.5s						
IRAM	Ramesheh	3.86	6	ePn	Pn	10 29 04.8	+1.0
KBD	Kabd	3.91	289	eP	Pn	10 29 06.0	+1.8
RDF	Al-Radifah	3.97	285	eP	Pn	10 29 06.2	+1.2
IBRJ	Brojen	3.98	352	ePn	Pn	10 29 05.9	+0.4
SHME	Shamm	4.22	116	P	Pn	10 29 09.5	+1.0
SHME				S	Sn	10 29 57.6	-0.2
ISAD	Sadrabad	4.23	21	ePn	Pn	10 29 10.3	+1.4
AMIS	Naft Sefid	4.35	329	ePn	Pn	10 29 10.7	+0.4
BANOM	Banah	4.40	116	P	Pn	10 29 12.2	+1.2
	SNR=18						
BANOM				S	Sn	10 30 00.8	-1.6
MIB	Mutribah	4.42	296	⇓eP	Pn	10 29 12.6	+1.4
IGAR	Gharneh	4.43	1	ePn	Pn	10 29 13.1	+1.4
SHK1	Shahrekord	4.45	349	ePn	Pn	10 29 11.2	-0.7
ASUD	Al Ashush, Dub	4.51	137	P	Pn	10 29 14.6	+2.1
	SNR=13						
NGRK	Negar Kerman	4.55	67	ePn	Pn	10 29 14.7	+1.4
NGRK				e		10 29 17.0	
	comp=Z,621nm,0.2s						
MASF	Masafi	4.58	123	P	Pn	10 29 14.3	+0.7
MASF				S	Sn	10 30 04.9	-2.1
KHGB	Koh Gabri	4.66	58	ePn	Pn	10 29 16.6	+1.8
KHGB				e		10 29 18.8	
	comp=Z,832nm,0.5s						
TVBK	TV Kerman	4.70	63	ePn	Pn	10 29 17.4	+2.0
TVBK				e		10 30 20.4	
	comp=Z,1μm,0.3s						
MDH	Madha	4.73	123	P	Pn	10 29 15.6	+0.1
IPIR	Pirpir	4.80	350	ePn	Pn	10 29 17.0	+0.3
UOSS	Minazif	4.87	127	S	Sn	10 30 11.6	-2.4
UOSS	Minazif	4.87	127	Pn	Pn	10 29 14.7	-2.8
NASN	Na'in	4.89	9	ePn	Pn	10 29 19.0	+1.0
NASN	Na'in	4.89	9	ePn	Pn	10 29 19.0	+1.0
HATD	Hatta, Dubai	4.90	129	P	Pn	10 29 18.1	+0.3
HATD				S	Sn	10 30 15.1	+0.4
IZEF	Zefreh	4.94	4	ePn	Pn	10 29 19.6	+1.0
YZKH	Yazd	4.99	27	ePn	Pn	10 29 21.0	+1.9
YZKH	Yazd	4.99	27	ePn	Pn	10 29 21.1	+1.9
YZKH	Yazd	4.99	27	ePn	Pn	10 29 21.1	+1.9
KHNJ	Kahnooj	5.12	89	ePn	Pn	10 29 22.4	+1.5
CHMN	Cheshme madani	5.28	68	ePn	Pn	10 29 24.5	+1.1
CHMN				e		10 29 28.8	
	comp=Z,662nm,0.6s						
IKLH	Kolahrood	5.35	357	ePn	Pn	10 29 24.8	+0.5
ANAR	Anarak	5.45	16	ePn	Pn	10 29 26.7	+1.2
SOHO	SOHO	5.63	131	P	Pn	10 29 28.8	+0.9
QAMS	Qamsar	5.78	356	ePn	Pn	10 29 30.9	+0.7
KBAM	BAM	5.87	77	ePn	Pn	10 29 33.2	+2.0
KBAM				e		10 29 36.1	
	comp=Z,1μm,0.5s						
KRSH	Karshahi	6.00	2	ePn	Pn	10 29 33.9	+0.8
KHMZ	Khomeyn	6.01	344	ePn	Pn	10 29 34.4	+1.2
KHMZ	Khomeyn	6.01	344	ePn	Pn	10 29 34.5	+1.2
KHMZ	Khomeyn	6.01	344	ePn	Pn	10 29 34.5	+1.2
ARQ	Araqi	6.20	137	P	Pn	10 29 36.2	+0.5
	SNR=8.1						
ISFB	Sefidab	6.38	2	ePn	Pn	10 29 38.4	+0.1
TPRV	Parvadeh(Tabas	6.52	38	ePn	Pn	10 29 41.9	+1.7
GHVR	GHOM	6.53	355	ePn	Pn	10 29 42.2	+1.9
GHVR	GHOM	6.53	355	ePn	Pn	10 29 42.2	+1.9
HOQ	Hoqain	6.53	131	P	Pn	10 29 40.1	-0.1
HOQ				S	Sn	10 30 53.7	-1.1
IKFM	Kafar-mosalman	6.56	329	ePn	Pn	10 29 41.0	+0.3
IDOB	Doab	6.64	332	ePn	Pn	10 29 42.0	0.0
ASAO	Ashtian	6.77	347	ePn	Pn	10 29 44.7	+0.9
ASAO				IAML		10 31 04.9	
	comp=E,12nm,0.8s						
ASAO				IAML		10 31 07.6	
	comp=N,18nm,0.7s						
ASAO	Ashtian	6.77	347	ePn	Pn	10 29 44.9	+1.2
ASAO	Ashtian	6.77	347	ePn	Pn	10 29 44.9	+1.2
HSAM	Samen	6.85	336	ePn	Pn	10 29 46.4	+1.5
IQOM	Qom	6.90	354	ePn	Pn	10 29 45.1	-0.5
IVRN	Varamin	7.02	359	ePn	Pn	10 29 47.4	+0.3
BSY	Bisya	7.05	136	P	Pn	10 29 47.1	-0.4
BSY				S	Sn	10 31 04.4	-3.4
TKDS	Koohdasht(Taba	7.20	37	ePn	Pn	10 29 50.5	+0.9
TNSJ	Nastanj	7.22	33	ePn	Pn	10 29 51.0	+1.2
HAGD	Aghdareh	7.25	342	ePn	Pn	10 29 50.4	+0.1
RAYN	Ar Rayn	7.28	234		Pn	10 29 44.9	-5.6
SMDO	Samad	7.38	130	P	Pn	10 29 52.3	+0.2
SMDO				S	Sn	10 31 13.7	-2.2
BSRN	Basiran	7.42	56	ePn	Pn	10 29 54.6	+2.0
BSRN	Basiran	7.42	56	ePn	Pn	10 29 54.6	+2.0
IALM	Almabolaq	7.59	336	ePn	Pn	10 29 55.5	+0.4
DAMV	Damavand	7.65	0	ePn	Pn	10 29 56.0	+0.1
DAMV	Damavand	7.65	0	ePn	Pn	10 29 56.0	+0.1
WSAR	Wadi Sarin	7.67	126	Pn	Pn	10 29 56.7	+0.8
	comp=N,1.8nm,0.3s,baz=309,slow=9.1,SNR=8.4						
WSAR				Sn	Sn	10 31 20.8	-2.1
	comp=N,1.2nm,0.3s,baz=143,slow=20,SNR=2.3						
IGHG	Ghaleghazi	7.83	326	ePn	Pn	10 29 58.9	+0.5
ZHSF	Zahedan	7.95	76	eP	Pn	10 30 01.3	+1.4
ZHSF	Zahedan	7.95	76	ePn	Pn	10 30 01.3	+1.4
CHTH	Charan	7.96	355	ePn	Pn	10 30 01.3	+1.2
CHTH	Charan	7.96	355	ePn	Pn	10 30 01.3	+1.2
CHBR	Chabahar	8.01	105	ePn	Pn	10 30 00.9	+0.4
CHBR	Chabahar	8.01	105	ePn	Pn	10 30 00.9	+0.4
NGCH	Negor - Chabah	8.64	105	ePn	Pn	10 30 10.3	+1.0
SHRO	Shahrood	8.73	22	ePn	Pn	10 30 12.6	+2.0
SHRO	Shahrood	8.73	22	ePn	Pn	10 30 12.6	+2.0
SHRT	Shahrakht	9.16	50	ePn	Pn	10 30 19.8	+3.3
SHRT	Shahrakht	9.16	50	ePn	Pn	10 30 19.8	+3.3
SRVN	Saravan	9.31	91	ePn	Pn	10 30 20.4	+1.9
SBZV	Sabzevar	9.69	28	ePn	Pn	10 30 25.7	+1.9
WHFO	Wadi Hawf	10.13	170	P	Pn	10 30 30.3	+0.5
GEYT	Alibeck	11.22	26	Pn	Pn	10 30 44.0	-0.7
	comp=N,0.7nm,0.3s,baz=357,slow=2.9,SNR=1.8						
GEYT	Alibeck	11.22	26		Pn	10 30 43.8	-0.9
EIL	Elat	14.97	281	Pn	Pn	10 31 34.3	-1.6
	comp=N,0.4nm,0.3s,baz=90,slow=12,SNR=2.3						
KBL	Kabul	16.04	62	Pn	Pn	10 31 48.6	-1.4
KBL				IAmb	IAmb	10 31 54.4	
	comp=Z,9.8nm,1.1s						
BNN	Bunyan	17.24	313	P	Pn	10 32 01.9	-3.3
CSS	Mathiatis	17.32	298		Pn	10 32 02.7	-3.3
CSS				IAmb	IAmb	10 32 30.1	
	comp=Z,17nm,1.3s						
KBZ	Khabaz	17.34	338	P	P	10 32 09.6	+2.1
	comp=Z,0.1nm,0.3s,baz=190,slow=12,SNR=4.0						
CHGR	Chuyangaron	17.90	49		Pn	10 32 12.7	-0.7
CHGR				IAmb	IAmb	10 32 16.2	
	comp=Z,31nm,1.3s						
BRTR	Keskin Array B	19.15	312	P	Pn	10 32 29.1	+0.6
	comp=Z,0.4nm,0.3s,baz=134,slow=12,SNR=4.2						
NIL	Nilore	19.17	68	P	P	10 32 27.7	-0.2
BZK	Bozkurt	20.21	318	P	P	10 32 37.1	-2.0
KKAR	Karatay Array	21.32	40	P	P	10 32 49.0	-2.1
ABKAR	Akbulak array	22.15	14	P	P	10 32 57.7	-2.2
AKTO	Aktyubinsk	22.93	10	P	P	10 33 10.2	+2.0
	comp=Z,1.9nm,0.6s,baz=178,slow=11,SNR=7.3						
AAK	Ala-Archa	23.44	45	P	P	10 33 12.0	-1.7
AAK				IAmb	IAmb	10 33 26.7	
	comp=Z,4.6nm,0.9s						
IDI	Anoyia	24.10	294	P	P	10 33 20.8	+0.8
	comp=Z,3.0nm,0.5s,baz=61,slow=13,SNR=1.4						
BOOM	Boomskoye usch	24.29	47	P	P	10 33 19.6	-2.2
BOOM				IAmb	IAmb	10 33 24.8	
	comp=Z,5.1nm,1.0s						
BELG	Belogornoye	24.62	354	P	P	10 33 25.6	+1.1
	comp=Z,14nm,0.7s,baz=327,slow=2.9,SNR=9.2						
BRVK	Borovoye	28.53	23	P	P	10 33 57.0	-2.8
BRVK				IAmb	IAmb	10 33 59.2	
	comp=Z,3.3nm,1.2s						
BVAR	Borovoye Array	28.54	24	P	P	10 34 00.1	+0.3
	comp=Z,0.6nm,0.6s,baz=229,slow=15,SNR=3.3						
MK31	Makanchi Array	30.32	43	P	P	10 34 12.3	-3.4
MK31				IAmb	IAmb	10 34 18.6	
	comp=Z,2.3nm,0.8s						
MKAR	Makanchi Array	30.32	43	P	P	10 34 16.7	+0.9
	comp=Z,1.4nm,0.8s,baz=231,slow=7.7,SNR=10						
MKAR	Makanchi Array	30.32	43	P	P	10 34 12.8	-3.0
ZALV	Zalesovo Beam	35.40	34	P	P	10 35 00.3	+0.4
	comp=Z,1.4nm,0.3s,baz=252,slow=7.6,SNR=9.3						
ZALV	Zalesovo Beam	35.40	34	P	P	10 34 58.0	-1.9
GERES	GERESS Array B	35.98	316	P	P	10 35 05.7	+0.5
	comp=Z,0.3nm,0.4s,baz=96,slow=9.0,SNR=1.9						
FINES	FINESS Array B	37.67	340	P	P	10 35 19.2	-0.1
	comp=Z,2.7nm,0.5s,baz=146,slow=9.9,SNR=17						
NB2	NORSAR Subarra	42.80	332	P	P	10 36 02.1	+0.3
	comp=Z,1.7nm,0.6s,baz=121,slow=8.6						
NOA	NORSAR Array B	42.80	332	P	P	10 36 01.7	-0.1
	comp=Z,0.8nm,0.4s,baz=127,slow=9.0,SNR=8.0						
ARCES	ARCESS Array B	44.34	347	P	P	10 36 15.7	+1.6
	comp=Z,5.2nm,1.0s,baz=146,slow=6.7,SNR=8.5						
SONM	Songino Array	46.30	49	P	P	10 36 30.7	+0.6
	comp=Z,0.3nm,0.3s,baz=260,slow=8.6,SNR=2.3						
SONM	Songino Array	46.30	49	P	P	10 36 27.6	-2.5
TORD	Torodi Ar. Bea	48.95	263	P	P	10 36 51.1	+0.2
	comp=Z,1.3nm,0.6s,baz=61,slow=8.3,SNR=11						
DBIC	Dimbokro	57.64	260	P	P	10 37 55.3	+0.5
	comp=Z,3.0nm,0.5s,baz=52,slow=5.3,SNR=4.9						
ILAR	Eielson Array	86.42	8	P	P	10 40 47.7	+1.2
	comp=Z,0.3nm,0.8s,baz=336,slow=3.9,SNR=2.8						

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*NOU **25** 10:28:58.9, 38°.57S×175°.70E, h192km, MLv3.8/9, North Island, New Zealand*

WEL 25 10:29:05.1±0.6**, 39°S**±4°×**17°6E**±°**, h134km**±5km**, M2.9**/59**, ML2.7**/33**, MLv2.9**/59**, Error ellipse: s-maj=0.0km s-min=0.0km az=142.4, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WATZ	Wairara	0.08	209	P	Pn	10 29 24.5	+1.2
KUTZ	Kaahu Road	0.15	12	P	Pn	10 29 24.6	+1.2
RATZ	Rangitukua	0.23	182	P	Pn	10 29 24.5	+0.9
WPRZ	Whakapapatarin	0.32	68	P	Pn	10 29 24.7	+0.9
KATZ	Kakaramea	0.34	191	P	Pn	10 29 25.0	+1.0
RITZ	Rihia Road	0.34	170	P	Pn	10 29 25.2	+1.3
TLZ	Tolley Road	0.36	328	P	Pn	10 29 25.0	+1.0
GRRZ	Galatos Road	0.39	42	P	Pn	10 29 25.1	+1.0
ALRZ	Allen Road	0.45	80	P	Pn	10 29 25.0	+0.7
ALRZ				S	Sn	10 29 41.5	+2.7
HRRZ	Handcock Road	0.47	58	P	Pn	10 29 25.4	+0.9
NTVZ	North Tongarir	0.47	190	P	Pn	10 29 25.7	+1.1
KRVZ	Karewarewa	0.47	193	P	Pn	10 29 25.5	+0.9
TMVZ	Te Maari	0.48	187	P	Pn	10 29 25.5	+0.9
HSRZ	Hossack Road	0.49	48	P	Pn	10 29 25.5	+0.9
WTVZ	West Tongariro	0.50	197	P	Pn	10 29 25.6	+0.8
WTVZ				S	Sn	10 29 42.1	+2.5
ETVZ	East Tongariro	0.50	186	P	Pn	10 29 25.6	+0.8
PRRZ	Plateau Road	0.50	74	P	Pn	10 29 25.3	+0.7
TWVZ	Taurewa	0.51	212	P	Pn	10 29 25.5	+0.8
NNVZ	North Ngauruho	0.51	195	P	Pn	10 29 25.6	+0.7
OTVZ	Oturere	0.53	190	P	Pn	10 29 25.7	+0.7
MRHZ	Matea Rd	0.53	111	P	Pn	10 29 25.4	+0.5
MRHZ				S	Sn	10 29 41.1	+1.3
NGZ	Ngauruhoe	0.55	195	P	Pn	10 29 25.8	+0.7
UTU	Utuhina	0.56	35	P	Pn	10 29 26.0	+1.0
HLRZ	Highlands Stat	0.59	49	P	Pn	10 29 26.5	+1.3
TUVZ	Tukino	0.64	189	P	Pn	10 29 26.4	+0.8
TUVZ				S	Sn	10 29 43.1	+2.0
FWVZ	Far West T-bar	0.64	196	P	Pn	10 29 26.2	+0.5
FWVZ				S	Sn	10 29 43.4	+2.0
RRRZ	Republican Roa	0.65	63	P	Pn	10 29 26.1	+0.6
DRZ	Dome Shelter	0.66	195	P	Pn	10 29 26.6	+0.7
WHVZ	Whangaehu Hut	0.66	193	P	Pn	10 29 26.4	+0.5
TRVZ	Turoa	0.68	195	P	Pn	10 29 26.8	+0.7
TRVZ				S	Sn	10 29 43.4	+1.5
TARZ	Mount Tarawera	0.70	55	P	Pn	10 29 26.6	+0.7
WNVZ	Wahianoa	0.70	192	P	Pn	10 29 26.8	+0.7
WNVZ				S	Sn	10 29 43.4	+1.4
OMRZ	Omania	0.71	41	P	Pn	10 29 26.6	+0.6
KARZ	Kaharoa	0.72	31	P	Pn	10 29 26.7	+0.6
PKVZ	Pokaka	0.73	207	P	Pn	10 29 26.7	+0.6
PKVZ				S	Sn	10 29 44.3	+2.1
MKRZ	Makatiti	0.73	47	P	Pn	10 29 27.3	+1.1
HIZ	Hauiti	0.74	280	P	Pn	10 29 26.8	+0.7
HIZ				S	Sn	10 29 44.7	+2.6
HIZ	Hauiti	0.74	280	P	Pn	10 29 26.8	+0.7
BKZ	Black Stump Fm	0.76	134	P	Pn	10 29 27.0	+0.6
BKZ				S	Sn	10 29 43.8	+1.2
BKZ	Black Stump Fm	0.76	134	P	Pn	10 29 26.9	+0.5
MOVZ	Moawhango	0.77	182	P	Pn	10 29 26.8	+0.3
MOVZ				S	Sn	10 29 43.2	+0.4
MTVZ	Mangateitei	0.78	198	P	Pn	10 29 27.2	+0.6
MUGZ	Murupara	0.79	79	P	Pn	10 29 26.7	+0.1
MUGZ				S	Sn	10 29 44.0	+1.2
KMRZ	Kaimai	0.80	9	P	Pn	10 29 27.3	+0.6
MTHZ	Maungataniwha	0.86	105	P	Pn	10 29 27.7	+0.6
MTHZ				S	Sn	10 29 45.5	+1.6
BHHZ	Black Hill Sta	0.88	166	P	Pn	10 29 27.6	+0.3
BHHZ				S	Sn	10 29 44.7	+0.5
EDRZ	Edgecumbe	0.92	55	P	Pn	10 29 27.9	+0.1
NMHZ	Naumai	0.92	120	P	Pn	10 29 29.0	+1.3
KWHZ	Kaweka Forest	0.93	148	P	Pn	10 29 28.4	+0.6
TOZ	Tahuroa Road	0.93	346	P	Pn	10 29 28.4	+0.6
VRZ	Vera Road	0.93	238	P	Pn	10 29 28.1	+0.4
RTZ	Ruatahuna	0.94	89	P	Pn	10 29 28.2	+0.3
MARZ	Manawahe	0.96	47	P	Pn	10 29 28.3	+0.3
TGRZ	Tauranga	0.98	23	P	Pn	10 29 28.5	+0.3
OPRZ	Ohinepanea	1.00	38	P	Pn	10 29 28.5	+0.1
RAHZ	Arahi	1.06	106	P	Pn	10 29 29.7	+0.8
MCHZ	McNeill Hill	1.07	139	P	Pn	10 29 30.2	+1.1
KRHZ	Kereru	1.10	156	P	Pn	10 29 29.7	+0.4
URZ	Urewera	1.11	70	P	Pn	10 29 29.0	-0.3
URZ	Urewera	1.11	70	P	Pn	10 29 29.0	-0.4
ARHZ	Aropaoanui	1.13	124	P	Pn	10 29 30.4	+0.8
WHHZ	Waihua	1.22	112	P	Pn	10 29 31.0	+0.6
MHEZ	Mangahewa	1.22	249	P	Pn	10 29 30.9	+0.5
SNGZ	Shannon Statio	1.23	97	P	Pn	10 29 31.0	+0.4
WAZ	Wanganui	1.27	209	P	Pn	10 29 30.9	-0.2
RAGZ	Rawiri	1.29	84	P	Pn	10 29 31.3	0.0
PNHZ	Pukenui	1.31	166	P	Pn	10 29 31.3	-0.1
DREZ	Durham Road	1.35	246	P	Pn	10 29 32.0	+0.2
LREZ	Lake Rotokare	1.35	232	P	Pn	10 29 32.0	+0.2
MWZ	Matawai	1.40	78	P	Pn	10 29 32.0	-0.4
MYRZ	Mayor Island	1.41	15	P	Pn	10 29 32.6	+0.1
TSZ	Takapari Road	1.42	174	P	Pn	10 29 32.4	-0.3
CKHZ	Cape Kidnapper	1.43	136	P	Pn	10 29 33.1	+0.4
KAHZ	Kahuranaki	1.43	144	P	Pn	10 29 33.1	+0.3
PREZ	Palmer Road	1.45	240	P	Pn	10 29 33.0	+0.1
NEZ	North Egmont	1.46	244	P	Pn	10 29 33.1	0.0
PKE	Pukeiti	1.50	248	P	Pn	10 29 33.3	-0.2
WPHZ	Waipukurau	1.51	160	P	Pn	10 29 33.4	-0.2
KHEZ	Kahui Hut	1.52	244	P	Pn	10 29 33.6	-0.2
KNZ	Kokohu	1.53	105	P	Pn	10 29 33.6	-0.1
RIGZ	Rimuhau	1.55	93	P	Pn	10 29 33.9	-0.1
OHWZ	Ohakea	1.60	193	P	Pn	10 29 34.4	-0.2
NBEZ	Newall Road No	1.62	247	P	Pn	10 29 34.4	-0.4
PXZ	Pawanui	1.62	149	P	Pn	10 29 34.5	-0.3
TKGZ	Te Karaka	1.63	84	P	Pn	10 29 34.9	0.0
RUGZ	Raukumara Rang	1.64	66	P	Pn	10 29 33.6	-1.5
PRGZ	Paritu Road	1.67	100	P	Pn	10 29 35.1	-0.2
NMEZ	Namu Road	1.67	242	P	Pn	10 29 34.9	-0.4
DVHZ	Dannevirke	1.68	170	P	Pn	10 29 34.6	-1.0
MHGZ	Mahia Peninsul	1.74	108	P	Pn	10 29 36.2	0.0
POWZ	Post Office Ro	1.75	180	P	Pn	10 29 35.2	-1.1
PRHZ	Porangahau	1.75	158	P	Pn	10 29 35.8	-0.6
TWGZ	Tauwhareparae	1.79	76	P	Pn	10 29 36.6	-0.2
HAZ	Te Kaha	1.81	61	P	Pn	10 29 35.5	-1.4
AWAZ	Awhitu Peninsu	1.81	330	P	Pn	10 29 36.8	-0.3
ETAZ	East Tamaki Re	1.81	338	P	Pn	10 29 36.6	-0.4
KUZ	Kuaotunu	1.89	359	P	Pn	10 29 37.4	-0.6
CNGZ	Carnagh Statio	1.91	86	P	Pn	10 29 37.9	-0.2
WIAZ	Waiheke Island	1.91	344	P	Pn	10 29 37.8	-0.5
PRWZ	Pori Road	1.92	176	P	Pn	10 29 37.2	-1.1
WTAZ	Waiatarua	1.95	330	P	Pn	10 29 38.7	0.0
PKGZ	Pakihiroa	1.96	68	P	Pn	10 29 37.9	-0.9
MBAZ	Motutapu North	2.00	339	P	Pn	10 29 38.6	-0.6
MRZ	Mangatainoka R	2.02	184	P	Pn	10 29 37.9	-1.7
PUZ	Puketiti	2.03	75	P	Pn	10 29 38.4	-1.2
BFZ	Birch Farm	2.07	170	P	Pn	10 29 38.6	-1.5
BFZ	Birch Farm	2.07	170	P	Pn	10 29 38.7	-1.4
TIWZ	Tintock	2.13	178	P	Pn	10 29 39.4	-1.6
ABAZ	Army Bay	2.17	339	P	Pn	10 29 40.8	-0.6
OGWZ	Otaki Gorge	2.23	192	P	Pn	10 29 40.1	-1.9
WMGZ	Waiomatatini S	2.23	69	P	Pn	10 29 40.9	-1.2
MXZ	Matakaoa Point	2.26	62	P	Pn	10 29 41.6	-0.9
CPWZ	Castlepoint	2.29	172	P	Pn	10 29 41.5	-1.3
KIW	Kapiti Island	2.32	197	P	Pn	10 29 40.8	-2.4
GRZ	Great Barrier	2.40	354	P	Pn	10 29 43.5	-0.7
TMWZ	Te Maipa	2.47	178	P	Pn	10 29 42.7	-2.4
CAW	Cannon Point	2.52	192	P	Pn	10 29 43.2	-2.6
MTW	Mount Morrison	2.52	185	P	Pn	10 29 43.0	-2.7
DUWZ	D'Urville Isla	2.59	213	P	Pn	10 29 43.9	-2.8
PAWZ	Paruwai Farm	2.75	186	P	Pn	10 29 45.6	-3.1
TRWZ	Traveller	2.76	181	P	Pn	10 29 45.8	-2.9
SNZO	South Karori	2.79	197	P	Pn	10 29 46.0	-3.1
MSWZ	Moikau Station	2.80	188	P	Pn	10 29 46.2	-3.1
TCW	Tory Channel	2.82	204	P	Pn	10 29 46.4	-3.1
BHW	Baring Head	2.85	194	P	Pn	10 29 46.7	-3.2
PLWZ	Palliser	2.95	188	P	Pn	10 29 47.8	-3.5
TUWZ	Tuamarina	3.12	206	P	Pn	10 29 49.9	-3.5
NNZ	Nelson	3.17	215	P	Pn	10 29 50.4	-3.6
QRZ	Quartz Range	3.33	228	P	Pn	10 29 51.9	-4.1
QRZ	Quartz Range	3.33	228	P	Pn	10 29 51.8	-4.2
CMWZ	Cape Campbell	3.33	201	P	Pn	10 29 53.6	-2.6
BSWZ	Blackbirch Sta	3.40	205	P	Pn	10 29 53.4	-3.6
THZ	Tophouse	3.82	214	P	Pn	10 29 58.2	-4.4
KHZ	Kahutara	4.14	204	P	Pn	10 30 02.7	-4.0
KHZ	Kahutara	4.14	204	P	Pn	10 30 02.4	-4.3
DSZ	Denniston Nort	4.35	223	P	Pn	10 30 04.4	-5.1
GVZ	Greta Valley S	4.80	205	P	Pn	10 30 10.8	-4.8
LTZ	Lake Taylor	4.92	212	P	Pn	10 30 11.5	-5.7
AMCZ	Amberley	5.12	207	P	Pn	10 30 14.3	-5.4
INZ	Inchbonnie	5.25	218	P	Pn	10 30 16.0	-5.5
OKCZ	Okains Bay	5.48	201	P	Pn	10 30 19.1	-5.5
MQZ	McQueen's Vall	5.58	204	P	Pn	10 30 19.6	-6.4
AKCZ	Akaroa Harbour	5.66	202	P	Pn	10 30 21.3	-5.7
RACZ	Rakaia	5.78	207	P	Pn	10 30 22.3	-6.3
MHCZ	Mount Hutt	5.83	212	P	Pn	10 30 23.8	-5.6
WACZ	Wakanui South	6.07	208	P	Pn	10 30 26.3	-6.2
RPZ	Rata Peaks	6.20	214	P	Pn	10 30 28.7	-5.5
RPZ	Rata Peaks	6.20	214	P	Pn	10 30 29.0	-5.3
ARCZ	Arundel	6.33	212	P	Pn	10 30 30.3	-5.8
FOZ	Fox Glacier	6.65	221	P	Pn	10 30 33.8	-6.4
TMZ	Timaru	6.76	210	P	Pn	10 30 35.2	-6.7
LBZ	Lake Benmore	7.11	214	P	Pn	10 30 40.2	-6.4
ODZ	Otahua Downs	7.46	209	P	Pn	10 30 44.7	-6.4
ODZ	Otahua Downs	7.46	209	P	Pn	10 30 45.3	-5.9

IDC 25 10:35:24.6±3.8**, 4°.47S**×**151°.10E, h0km, mb3.7**/3**,**
mb1 3.9/3**, mb1mx3.4**/31**, mbtmp3.7**/3**, Error ellipse:**
s-maj=123.2km s-min=53.5km az=118.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.28	218	Sn	Sn	10 38 10.7	-0.2
	3.5nm,0.3s,baz=84,slow=9.8,SNR=3.6						
WRA	Warramunga Arr	22.43	225	P	P	10 40 25.7	+0.4
	1.5nm,0.5s,baz=51,slow=10,SNR=4.0						
ASAR	Alice Springs	25.29	219	P	P	10 40 52.5	-0.6
	0.3nm,0.4s,baz=49,slow=9.9,SNR=1.9						
FITZ	Fitzroy Crossi	28.35	239	P	P	10 41 20.4	-0.1
	1.3nm,0.7s,baz=55,slow=8.5,SNR=2.2						
TORD	Torodi Ar. Bea	148.60	288	PKPbc	PKPbc	10 55 14.4	-0.3
	0.2nm,0.4s,baz=86,slow=1.7,SNR=2.5						

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*SOME **25** 10:46:02.4, 44°.40N×82°.97E, h10km*
*NNC **25** 10:46:03.5±5.0, 44°.32N×82°.79E, h0km, mb2.5, mpv2.2,*
Error ellipse: s-maj=53.2km s-min=13.2km az=118.0
ISC 25 10:46:03.5±3.4**, 44°.0N**±0°.1×**83°.4E**±0°.2**, h10km, n6,** σ**0ˢ.64**/9**,**
5C-1D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen	2.26	257	eP	Pn	10 46 41.0	0.0
	2.4nm,0.2s						
KTMS				eS	Sn	10 47 09.1	0.0
	8.3nm,0.2s						
DJR	Jarkent	2.60	278	eP	Pn	10 46 45.6	-0.1
	3.1nm,0.2s						
DJR				eS	Sn	10 47 17.0	-0.3
	5.9nm,0.2s						
MK31	Makanchi Array	2.89	345	⇑Pg	Pn	10 46 48.6	-1.0
	0.2nm,0.3s,baz=174,slow=15,SNR=34						
MK31				⇑Lg	Lg	10 47 21.1	
	0.4nm,0.2s,baz=167,slow=27,SNR=12						
PDGK	Podgornoye	2.90	258	⇓Pg	Pn	10 46 50.0	+0.2
	0.7nm,0.4s						
PDGK				⇑Lg	Lg	10 47 27.1	
	1.9nm,0.4s						
MAKZ	Makanchi	2.97	341	⇑Pg	Pn	10 46 51.8	+1.1
	0.9nm,0.5s						
MAKZ				⇑Lg	Lg	10 47 23.9	
	0.6nm,0.3s						
KAPS	Kapalarasan	3.14	295	eP	Pn	10 46 53.3	+0.3
	1.0nm,0.0s						
KAPS				eS	Sn	10 47 30.4	-0.1
	3.1nm,0.1s						

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*SOME **25** 10:51:24.3, 37°.73N×71°.72E, h10km*
*IDC **25** 10:51:30.9±9.2, 36°.84N×70°.43E, h209km±57km, mb2.8/1,*
mb1 3.0/6, mb1mx2.8/64, mbtmp3.7/6, Error ellipse:
s-maj=79.6km s-min=61.6km az=32.0
*NNC **25** 10:51:30.6±6.8, 37°.17N×70°.15E, h0km, mb4.7, mpv4.3,*
Error ellipse: s-maj=53.4km s-min=50.5km az=148.0
ISC 25 10:51:27.0±1.7**, 36°.51N**±0°.09×**70°.5E**±0°.2**, h200km, n28,**
σ**1ˢ.58**/33**, 3C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	Iuzhnay	5.65	356	eP	Pn	10 52 51.8	+2.1
	394nm,0.2s						
IUG				eS	Sn	10 53 51.8	-3.3
	78nm,0.7s						
AML	Almayashu	6.13	23	P	Pn	10 52 56.7	+0.5
	SNR=92						
UCH	Uchtor	6.49	27	P	Pn	10 53 02.0	+1.0
	SNR=81						
MRKS	Merke	6.57	18	eP	Pn	10 53 04.1	+2.5
	20nm,0.4s						
MRKS				eS	Sn	10 54 13.2	-3.5
	24nm,0.4s						
KK09	Karatay Array	6.61	360	⇑Pn	Pn	10 53 01.5	-0.5
	9.3nm,0.4s,baz=180,slow=12						
KK09				⇑Sn	Sn	10 54 09.0	-8.5
	6.5nm,0.6s						
EKS2	Erkin-Say	6.64	21	P	Pn	10 53 03.4	+0.8
	SNR=20						
AAK	Ala-Archa	6.85	25	P	Pn	10 53 06.5	+1.2
	4.4nm,0.3s,baz=212,slow=7.5,SNR=40						
AAK				S	Sn	10 54 21.9	-1.4
	2.4nm,0.3s,baz=2.0,slow=20,SNR=12						
AAK	Ala-Archa	6.85	25	P	Pn	10 53 06.5	+1.2
	SNR=17						
AAK	Ala-Archa	6.85	25	⇑Pn	Pn	10 53 06.2	+0.9
	8.9nm,0.5s						
AAK				Sn	Sn	10 54 23.0	-0.2
	18nm,0.7s						
KBK	Karagaybulak	7.03	28	P	Pn	10 53 09.3	+1.6
	SNR=6.2						
ULHL	Ulahol	7.24	36	P	Pn	10 53 11.9	+1.5
	SNR=8.8						
USP	Ospenovka	7.41	23	P	Pn	10 53 13.2	+0.7
	SNR=19						
TKM2	Tokmak 2	7.50	30	P	Pn	10 53 15.3	+1.5
	SNR=8.8						
TKM2	Tokmak 2	7.50	30	⇓Pn	Pn	10 53 14.4	+0.6
	24nm,0.7s						
TKM2				⇓Sn	Sn	10 54 38.4	-0.4
	9.1nm,0.8s						
PYUN	Piuthan	13.46	125	eP	Pn	10 54 27.9	-2.5
	19nm,0.4s						
MKAR	Makanchi Array	13.51	37	P	Pn	10 54 29.9	-0.8
	0.2nm,0.3s,baz=210,slow=11,SNR=5.1						
DANN	Dangsing	13.81	122	eP	Pn	10 54 33.5	-1.4
	19nm,0.7s						
KOLN	Koldanda	14.08	125	eP	Pn	10 54 35.1	-3.0
GKN	Gorkha	14.63	121	eP	Pn	10 54 44.5	-0.4
	24nm,0.5s						
KURBB	Kurchatov Arra	15.24	20	P	Pn	10 54 50.9	-1.0
	0.1nm,0.3s,baz=210,slow=11,SNR=8.2						
PKIN	Phulchoki	15.42	121	eP	Pn	10 54 54.2	-0.4
	24nm,0.6s						
PKI	Pulchoki	15.43	121	eP	Pn	10 54 54.5	-0.3
	31nm,0.7s						
GUN	Gumba	15.55	119	eP	P	10 54 56.5	+0.1
	36nm,0.9s						
JIRN	Jiri	15.92	119	eP	Pn	10 55 01.3	+0.5
	25nm,0.5s						
BVAR	Borovoye Array	16.52	360	P	P	10 55 06.1	-0.3
	0.3nm,0.3s,baz=192,slow=18,SNR=7.0						
RAMN	Ramite	16.64	120	eP	Pn	10 55 08.9	-0.4
	12nm,0.4s						
ZALV	Zalesovo Beam	20.07	25	P	P	10 55 45.8	+0.9
	0.4nm,0.3s,baz=234,slow=12,SNR=5.0						
SONM	Songino Array	28.64	55	P	P	10 57 07.1	+2.1
	0.2nm,0.5s,baz=279,slow=9.6,SNR=1.4						

ATH ***25*** *10:51:35.7, 36°.19N×23°.33E, h72^{km}±3^{km}, ML3.6/6, Error ellipse: s-maj=4.1km s-min=1.8km az=238.0*
ISK ***25*** *10:51:38.1, 36°.21N×23°.38E, h60^{km}±2^{km}, ML3.4/11*
THE ***25*** *10:51:38.8, 36°.15N×23°.34E, h59^{km}±1^{km}, ML3.4/17, Error ellipse: s-maj=2.0km s-min=0.6km az=237.0*
ISC 25 10:51:38.5±1.3**, 36°.17N**±0°.03×**23°.32E**±0°.04**, h61**^{km}±9^{km}**, n65,** σ**1ˢ.14**/91**, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTHA	Kythira Island	0.23	294	P	Pn	10 51 48.2	0.0
KTHA				S	Sn	10 51 55.1	-0.1
	8µm,0.5s						
KTHA	Kythira Island	0.23	294	P	Pn	10 51 48.3	+0.2
KTHA				S	Sn	10 51 55.6	+0.4
KTHA				AML	AML	10 51 56.5	
	comp=N,16978µm,0.5s						
KTHA				AML	AML	10 51 57.5	
	comp=E,17356µm,0.2s						
KTHR	Kythira	0.27	291	P	Pn	10 51 48.7	+0.3
KTHR				S	Sn	10 51 56.5	+0.8
	comp=E,14µm,0.4s						
ANKY	Antikythira Is	0.30	183	P	Pn	10 51 48.8	+0.2
ANKY				S	Sn	10 51 56.2	+0.2
	comp=E,4µm,0.3s						
ANKY	Antikythira Is	0.30	183	P	Pn	10 51 48.7	+0.1
ANKY				S	Sn	10 51 56.4	+0.5
ANKY				AML	AML	10 51 57.0	
	comp=N,8961µm,0.4s						
ANKY				AML	AML	10 52 00.9	
	comp=E,7264µm,0.4s						
MNVA	Monemvasia	0.57	337	P	Pn	10 51 51.4	+0.2
MNVA				S	Sn	10 52 00.7	+0.2
MNVA				AML	AML	10 52 01.2	
	comp=N,3722µm,0.3s						
MNVA				AML	AML	10 52 01.5	
	comp=E,6940µm,0.3s						
VLI	Veliai	0.63	331	P	Pn	10 51 52.0	0.0
VLI				S	Sn	10 52 01.8	0.0
	comp=E,2µm,0.4s						
VLI	Veliai	0.63	331	P	Pn	10 51 52.0	0.0
VLI				S	Sn	10 52 02.1	+0.4
VLI				AML	AML	10 52 02.8	
	comp=E,4316µm,0.4s						
VLI				AML	AML	10 52 03.7	
	comp=N,5270µm,0.4s						
RODP	Rodopos	0.70	149	P	Pn	10 51 53.0	+0.3
RODP				S	Sn	10 52 03.2	-0.1
	comp=N,1µm,0.3s						
RODP	Rodopos	0.70	149	PG	Pn	10 51 53.1	+0.3
RODP				SG	Sn	10 52 04.1	+0.8
IMMV	Iera Moni Meta	0.89	142	P	Pn	10 51 55.1	+0.1
IMMV				S	Sn	10 52 06.3	-1.0
	comp=N,3µm,0.3s						
IMMV	Iera Moni Meta	0.89	142	P	Pn	10 51 55.2	+0.1
IMMV	Iera Moni Meta	0.89	142	PG	Pn	10 51 55.2	+0.1
IMMV				SG	Sn	10 52 07.9	+0.6
KNDR	Palaiochora Ch	0.98	162	PG	Pn	10 51 56.9	+0.7
KNDR				SG	Sn	10 52 10.4	+1.1
MHLO	Agia Marina, M	1.02	59	P	Pn	10 51 56.8	0.0
MHLO				S	Sn	10 52 10.8	+0.5
	comp=N,7µm,0.5s						
MHLO	Agia Marina, M	1.02	59	P	Pn	10 51 57.0	+0.2
MHLO				S	Sn	10 52 10.9	+0.5
MHLO				AML	AML	10 52 12.2	
	comp=E,13602µm,0.6s						
MHLO				AML	AML	10 52 12.5	
	comp=N,14948µm,0.5s						
VAM	Vamos	1.04	136	P	Pn	10 51 57.0	-0.1
VAM	Vamos	1.04	136	P	Pn	10 51 57.1	0.0
KRND	KRANIDI	1.22	354	P	Pn	10 51 59.9	+0.5
KRND				S	Sn	10 52 16.6	+1.5
	comp=N,2µm,0.3s						
KRND	KRANIDI	1.22	354	P	Pn	10 52 00.0	+0.6
KRND				AML	AML	10 52 18.0	
	comp=N,4268µm,0.2s						
KRND				AML	AML	10 52 18.3	
	comp=E,4732µm,0.3s						
EPID	Epidavros	1.46	354	P	Pn	10 52 03.2	+0.6
EPID				S	Sn	10 52 21.9	+1.2
	comp=E,2µm,0.3s						
EPID	Epidavros	1.46	354	P	Pn	10 52 03.3	+0.7
PYL	PYLOS	1.46	300	P	Pn	10 52 02.2	-0.5
PYL	PYLOS	1.46	300	P	Pn	10 52 02.3	-0.3
GVD	Gavdhos	1.47	154	P	Pn	10 52 02.1	-0.6
GVD	Gavdhos	1.47	154	PN	Pn	10 52 03.4	+0.7
GVD				SN	Sn	10 52 22.0	+1.1
ITM	Ithomi	1.51	313	P	Pn	10 52 04.0	+0.7
ITM	Ithomi	1.51	313	P	Pn	10 52 04.1	+0.7
ITM	Ithomi	1.51	313	PN	Pn	10 52 03.9	+0.7
IDI	Anoyia	1.55	124	P	Pn	10 52 02.6	-1.3
IDI				S	Sn	10 52 22.3	-0.8
	comp=E,465nm,0.3s						
IDI	Anoyia	1.55	124	P	Pn	10 52 03.3	-0.6
THR5	Thira Island,	1.66	81	P	Pn	10 52 05.4	+0.1
HRKL	Herakleio	1.68	120	PN	Pn	10 52 06.1	+0.5
THR6	Thira Island,	1.69	83	P	Pn	10 52 06.2	+0.5
THR3	Thira Island,	1.70	81	P	Pn	10 52 06.1	+0.3
VLY	Voula,Athens	1.73	13	P	Pn	10 52 06.2	0.0
VLY	Voula,Athens	1.73	13	P	Pn	10 52 06.4	+0.2
SANT	Santorini	1.74	83	P	Pn	10 52 06.5	0.0
SANT	Santorini	1.74	83	PN	Pn	10 52 06.5	0.0
THR8	Santorini-Mono	1.76	82	P	Pn	10 52 07.0	+0.3
LTK	Loutraki	1.88	352	P	Pn	10 52 08.8	+0.5
LTK				S	Sn	10 52 32.8	+1.9
	comp=E,342nm,0.3s						
LTK	Loutraki	1.88	352	P	Pn	10 52 08.7	+0.4
PTL	Penteli	1.93	13	P	Pn	10 52 09.0	0.0
PTL				S	Sn	10 52 32.1	-0.1
	comp=E,545nm,0.2s						
GUR	Goura	1.93	336	P	Pn	10 52 09.9	+0.8
GUR				S	Sn	10 52 32.7	+0.3
	comp=E,645nm,0.4s						
GUR	Goura	1.93	336	P	Pn	10 52 09.9	+0.8
DION	Dionisos Attik	1.97	14	P	Pn	10 52 09.9	+0.3
DION				S	Sn	10 52 33.2	0.0
	comp=E,2µm,0.4s						
VILL	Villia	2.00	360	P	Pn	10 52 10.2	+0.3
VILL				S	Sn	10 52 34.4	+0.6
	comp=E,545nm,0.3s						
APE	Apeiranthos	2.00	62	P	Pn	10 52 09.9	0.0
APE				S	Sn	10 52 34.0	+0.2
	comp=E,230nm,0.3s						
APE	Apeiranthos	2.00	62	PN	Pn	10 52 09.9	0.0
KLV	Kalavryta, Ach	2.09	334	P	Pn	10 52 12.3	+1.0
KLV				S	Sn	10 52 37.9	+1.6
	comp=E,152nm,0.4s						
STIA	Sitia Lasithi	2.45	112	P	Pn	10 52 16.4	+0.3
SERG	Sergoula	2.46	336	P	Pn	10 52 17.5	+1.3
KYMI	Kymi, Euboea I	2.54	14	P	Pn	10 52 17.6	+0.3
ZKR	Zakros	2.58	113	PN	Pn	10 52 18.3	+0.4
AGG	Agios Georgios	2.96	345	PN	Pn	10 52 23.8	+0.8
CHOS	Chios island	3.11	44	PN	Pn	10 52 25.2	0.0
DBRK	Dubrovnik	7.63	330	*e*Pn	Pn	10 53 24.0	-2.9
DBRK				Sn	Sn	10 54 38.3	-14
STON	Ston	7.98	329	*e*Pn	Pn	10 53 28.5	-3.2
STON				Sn	Sn	10 54 49.5	-11
LSTV	Lastovo	8.25	325	*e*Pn	Pn	10 53 30.9	-4.5
MAKA	Makarska	8.61	328	*e*Pn	Pn	10 53 38.3	-2.0
RICI	Ricice	8.73	329	*e*Pn	Pn	10 53 39.8	-2.1
HVAR	Hvar	8.78	325	*e*Pn	Pn	10 53 39.4	-3.1
ZIRJ	Zirje	9.52	324	*e*Pn	Pn	10 53 49.3	-3.4
MORI	Morici	9.65	325	*e*Pn	Pn	10 53 51.4	-3.2
DUGI	Dugi Otok	10.05	324	*e*Pn	Pn	10 53 58.0	-2.1

IDC ***25*** *10:51:49.6±1.5, 7°.34S×154°.83E, h0^{km}, mb3.8/8, mb1 4.0/8, mb1mx3.8/48, mbtmp3.8/8, Error ellipse: s-maj=57.1km s-min=24.1km az=127.0*
NEIC ***25*** *10:51:51.8±1.5, 7°.17S±0°.10×154°.7E±0°.1, h10^{km}±1^{km}, mb4.4/25, Error ellipse: s-maj=19.1km s-min=15.1km az=54.0*
ISC 25 10:51:51.3±0.5**, 7°.24S**±0°.09×**154°.76E**±0°.09**, h10**^{km}**, n41,** σ**0ˢ.79**/41**, mb4.2**/19**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	3.98	319		Pn	10 52 51.3	-1.2
SANVU	Saraoutou	14.67	125	Pn	Pn	10 55 18.9	-0.1
CTAO	Charters Tower	15.20	212	Pn	Pn	10 55 26.6	+0.4
CTAO				IAmb	IAmb	10 55 34.9	
	comp=Z,16nm,1.4s						
EIDS	Eidsvold	18.36	191	P	Pn	10 56 04.1	-2.1
WR0	Warramunga Arr	23.32	235	P	P	10 56 59.7	-0.1
WB0	Warramunga Arr	23.35	236	P	P	10 57 00.3	+0.2
WB0				IAmb	IAmb	10 57 28.0	
	comp=Z,6.0nm,1.2s						
WRAB	Tennant Creek	23.47	235	P	P	10 57 02.4	+1.1
WRAB				IAmb	IAmb	10 57 13.2	
	comp=Z,2.9nm,0.8s						
WB2	Warramunga Arr	23.47	235	P	P	10 57 01.8	+0.5
WB2				IAmb	IAmb	10 57 13.2	
	comp=Z,3.5nm,0.9s						
WRA	Warramunga Arr	23.48	235	P	P	10 57 00.9	-0.5
	comp=Z,1.4nm,0.6s,baz=58,slow=9.7,SNR=17						
WRA	Warramunga Arr	23.48	235	P	P	10 57 01.0	-0.5
MTN	Manton Dam	23.91	255	P	P	10 57 04.7	-0.9
MTN				IAmb	IAmb	10 57 33.8	
	comp=Z,11nm,1.1s						
AS31	Alice Springs	25.83	229	P	P	10 57 23.2	+0.1
ASAR	Alice Springs	25.83	229	P	P	10 57 23.1	0.0
	comp=Z,0.5nm,0.7s,baz=58,slow=9.8,SNR=8.4						
ASAR	Alice Springs	25.83	229	P	P	10 57 22.2	-0.9
KNRA	Kununurra	26.79	249	P	P	10 57 31.0	-0.8
KNRA				IAmb	IAmb	10 57 41.9	
	comp=Z,14nm,1.3s						
KNTN	Kanton	33.68	84	P	P	10 58 31.9	-0.9
FORT	Forrest	34.24	223	P	P	10 58 37.6	+0.1
PSA00	Pilbara Seismi	36.57	243	P	P	10 58 58.0	+0.2
PSA00				IAmb	IAmb	10 59 04.9	
	comp=Z,17nm,1.4s						
WHZ	Wether Hill Ro	40.16	166	P	P	10 59 27.5	0.0
SONM	Songino Array	69.42	327	P	P	11 03 00.8	+1.1
	comp=Z,1.0nm,0.8s,baz=133,slow=6.2,SNR=4.4						
SONM	Songino Array	69.42	327	P	P	11 03 00.1	+0.3
SONM				IAmb	IAmb	11 03 13.5	
	comp=Z,4.3nm,1.4s						
SBA	Scott Base	70.85	177	P	P	11 03 09.5	+1.6
SBA				IAmb	IAmb	11 03 27.9	
	comp=Z,7.8nm,1.1s						
KTH	Kantishna Hill	81.54	22	P	P	11 04 09.9	+1.0
GLI	Glacier Island	81.56	25	P	P	11 04 10.1	+1.1
KAAM	Kaadhehdhoo	81.89	272	P	P	11 04 12.0	+0.2
MCK	McKinley	82.38	22	P	P	11 04 13.6	+0.4
MCK				IAmb	IAmb	11 04 38.1	
	comp=Z,8.2nm,1.4s						
MK31	Makanchi Array	83.43	319	P	P	11 04 19.3	+0.1
MK31				IAmb	IAmb	11 04 41.9	
	comp=Z,2.4nm,1.1s						
MKAR	Makanchi Array	83.43	319	P	P	11 04 20.4	+1.2
	comp=Z,0.4nm,0.5s,baz=112,slow=5.8,SNR=7.2						
MKAR	Makanchi Array	83.43	319	P	P	11 04 20.1	+1.0
IL31		83.69	22	P	P	11 04 19.8	-0.2
ILAR	Eielson Array	83.69	22	P	P	11 04 20.0	-0.1
	comp=Z,0.5nm,0.9s,baz=239,slow=4.9,SNR=8.7						
ILAR	Eielson Array	83.69	22	P	P	11 04 19.9	-0.1
ZAA0	Zalesovo Array	84.25	326	P	P	11 04 22.7	-0.4
ZAA0				IAmb	IAmb	11 04 30.1	
	comp=Z,4.6nm,1.4s						
ZALV	Zalesovo Beam	84.25	326	P	P	11 04 22.4	-0.8
	comp=Z,1.3nm,0.5s,baz=115,slow=4.6,SNR=5.4						
ZALV	Zalesovo Beam	84.25	326	P	P	11 04 22.1	-1.0
HYT	Haines Junctio	85.70	27	P	P	11 04 30.2	-0.2
HYT				IAmb	IAmb	11 04 53.1	
	comp=Z,8.9nm,1.4s						
KURBB	Kurchatov Arra	86.91	322	P	P	11 04 37.6	+1.2
	comp=Z,0.2nm,0.3s,baz=105,slow=4.9,SNR=1.3						
PGC	Sidney	89.99	41	P	P	11 04 50.9	-0.1
NVAR	Mina Array Bea	92.06	52	P	P	11 05 01.6	+0.4
	comp=Z,0.7nm,0.9s,baz=263,slow=5.8,SNR=3.5						
TORD	Torodi Ar. Bea	152.86	285	PKPbc	PKPbc	11 11 50.0	+0.2
	comp=Z,0.7nm,0.7s,baz=75,slow=3.1,SNR=5.2						
TORD	Torodi Ar. Bea	152.86	285		PKPdf	11 11 42.1	-0.5

IDC ***25*** *10:54:51.8±3.3, 13°.47N×125°.53E, h0^{km}, mb3.5/4, mb1 3.7/4, mb1mx3.4/71, mbtmp3.5/4, Error ellipse: s-maj=199.6km s-min=29.4km az=67.0*
MAN 25 10:55:20.0, 10°.54N×126°.59E, h12^{km}, mb4.4, ML3.2, MS3.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	28.47	182	P	P	11 01 14.8	-0.4
	1.1nm,0.7s,baz=0.0,slow=7.1,SNR=2.5						
WRA	Warramunga Arr	31.24	166	P	P	11 01 40.3	+0.6
	1.0nm,1.1s,baz=344,slow=9.1,SNR=3.3						
ASAR	Alice Springs	34.74	168	P	P	11 02 09.6	-0.7
	0.1nm,0.3s,baz=352,slow=7.7,SNR=4.8						

IDC ***25*** *11:06:13.6±0.9, 14°.57N×55°.12E, h0^{km}, mb3.8/11, mb1 4.0/11, mb1mx3.6/66, mbtmp3.8/11, MS3.5/4, Ms1 3.5/4, ms1mx3.0/50, Error ellipse: s-maj=26.1km s-min=20.4km az=136.0*
NEIC ***25*** *11:06:16.3±1.5, 14°.70N±0°.10×55°.1E±0°.1, h10^{km}±1^{km}, mb4.4/21, Error ellipse: s-maj=20.3km s-min=14.2km az=303.0*
ISC 25 11:06:15.7±0.5**, 14°.61N**±0°.08×**55°.1E**±0°.1**, h14**^{km}**, n47,** σ**0ˢ.82**/39**, mb4.1**/19**, MS3.4**/3**, Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCY	Socotra	2.63	204	Pn	Pn	11 06 56.2	-1.7
ATD	Arta Tunnel	12.30	257	LR	LR	11 12 47.4	
	comp=Z,126nm,20.2s,baz=50,slow=32						
HRA	Herat	20.73	17	P	P	11 10 56.0	-0.1
LODK	Lodwar	22.39	242	P	P	11 11 12.6	-1.5
GEYT	Alibeck	23.38	6	P	P	11 11 23.8	-0.3
	1.2nm,0.4s,baz=167,slow=7.1,SNR=1.1						
GEYT	Alibeck	23.38	6	P	P	11 11 24.2	+0.1
GEYT				IAmb	IAmb	11 11 32.0	
	comp=Z,26nm,1.9s						
GYA0B	ALIBECK ARRAY	23.38	6	P	P	11 11 23.0	-1.1
GYA0B				IAmb	IAmb	11 12 05.5	
	comp=Z,7.1nm,0.8s						
KBL	Kabul	23.51	30	P	P	11 11 24.4	-1.2
KMBO	Kilima Mbogo	23.57	230	P	P	11 11 27.3	+0.9
	comp=Z,0.8nm,0.3s,baz=50,slow=8.5,SNR=4.1						
KMBO	Kilima Mbogo	23.57	230	IAmb	IAmb	11 11 30.5	
	comp=Z,13nm,1.9s						
MMAI	Mount Meron Ar	25.60	319	LR	LR	11 22 02.7	
	comp=Z,32nm,18.6s,baz=350,slow=37						
PALK	Pallekele	26.18	103	P	P	11 11 49.9	-0.3
PALK				IAmb	IAmb	11 12 30.6	
	comp=Z,52nm,2.0s						
GNI	Garni	27.00	342	LR	LR	11 24 41.1	
	comp=Z,90nm,19.0s,baz=306,slow=41						
ELL	Elmali	31.45	319	P	P	11 12 37.6	+0.7
AAK	Ala-Archa	32.55	27	P	P	11 12 47.5	+0.9
AAK				IAmb	IAmb	11 13 10.4	
	comp=Z,7.1nm,1.6s						
BOOM	Boomskoye usch	33.09	29	P	P	11 12 50.6	-0.8
BOOM				IAmb	IAmb	11 13 40.8	
	comp=Z,6.3nm,1.6s						
ABKAR	Akbulak array	34.78	6	P	P	11 13 06.5	+0.8
RER	Riviere de l'E	35.55	179	P	P	11 13 14.0	+1.3
AKTO	Aktyubinsk	35.81	3	P	P	11 13 15.1	+0.5
	comp=Z,1.0nm,0.6s,baz=178,slow=11,SNR=3.7						
MKAR	Makanchi Array	39.32	30	P	P	11 13 45.5	+1.1
	comp=Z,0.5nm,0.7s,baz=225,slow=6.7,SNR=4.8						
MKAR	Makanchi Array	39.32	30	P	P	11 13 43.8	-0.6
KURBB	Kurchatov Arra	40.63	23	P	P	11 13 55.2	0.0
	comp=Z,0.3nm,0.3s,baz=222,slow=8.2,SNR=1.4						
KURK	Kurchatov	40.74	23	P	P	11 13 55.3	-0.8
KURK				IAmb	IAmb	11 14 39.2	
	comp=Z,7.2nm,1.6s						
CMAR	Chiang Mai Arr	42.16	79	P	P	11 14 06.9	-1.3
	comp=Z,1.7nm,0.7s,baz=275,slow=9.0,SNR=11						
CMAR	Chiang Mai Arr	42.16	79	P	P	11 14 07.2	-1.0
RAFF	Raffo Rosso	42.54	310	P	P	11 14 10.5	-0.6
ZAA0	Zalesovo Array	45.65	24	P	P	11 14 34.6	-1.1
ZAA0				IAmb	IAmb	11 15 09.0	
	comp=Z,6.5nm,1.6s						
ZALV	Zalesovo Beam	45.65	24	P	P	11 14 35.4	-0.3
	comp=Z,0.5nm,0.4s,baz=233,slow=7.0,SNR=2.1						
ZALV	Zalesovo Beam	45.65	24	P	P	11 14 35.6	-0.2
SLVN	Son La	46.78	74	P	P	11 14 45.3	0.0
TSUM	Tsumeb	49.91	229	LR	LR	11 35 32.3	
	comp=Z,340nm,19.1s,baz=86,slow=35						
TORD	Torodi Ar. Bea	51.74	275	P	P	11 15 22.8	-0.4
	comp=Z,1.6nm,0.9s,baz=88,slow=6.5,SNR=7.3						
TORD	Torodi Ar. Bea	51.74	275	P	P	11 15 23.4	+0.2
TORD				IAmb	IAmb	11 16 17.1	
	comp=Z,8.3nm,2.0s						
BOSA	Boshof	51.76	214	P	P	11 15 24.7	+1.6
BOSA				IAmb	IAmb	11 17 06.6	
	comp=Z,46nm,2.0s						
SONM	Songino Array	53.64	41	P	P	11 15 37.4	+0.5
	comp=Z,0.7nm,0.8s,baz=270,slow=7.2,SNR=4.3						
USRK	Ussuriysk Ar.	70.62	48	P	P	11 17 31.3	+0.5
H01W3	Cape Leeuwin H	74.55	133	T	T	12 39 22.8	
	baz=301,slow=75,SNR=20						
H01W2	Cape Leeuwin H	74.56	133	T	T	12 39 19.8	
	baz=301,slow=75,SNR=20						
H01W1	Cape Leeuwin H	74.57	133	T	T	12 39 21.8	
	baz=301,slow=75,SNR=20						
WRA	Warramunga Arr	85.15	112	P	P	11 18 52.0	-0.1
	comp=Z,0.5nm,0.8s,baz=298,slow=4.6,SNR=6.9						
WRA	Warramunga Arr	85.15	112	P	P	11 18 51.8	-0.3
WRAB	Tennant Creek	85.15	112	P	P	11 18 53.0	+0.9
WRAB				IAmb	IAmb	11 20 55.2	
	comp=Z,4.0nm,0.9s						
WR0	Warramunga Arr	85.33	112	P	P	11 18 53.6	+0.5
ASAR	Alice Springs	85.88	116	P	P	11 18 55.8	+0.1
	comp=Z,0.9nm,0.7s,baz=290,slow=4.5,SNR=13						
ASAR	Alice Springs	85.88	116	P	P	11 18 55.5	-0.2
NVAR	Mina Array Bea	126.87	353	PKP	PKPdf	11 25 20.0	+0.1
	comp=Z,0.4nm,0.7s,baz=266,slow=0.3,SNR=5.3						
NVAR	Mina Array Bea	126.87	353		PKPdf	11 25 19.8	-0.1

IDC ***25*** *11:11:47.9±0.8, 15°.23S×173°.37W, h0^{km}, mb4.2/8, mb1 4.5/8, mb1mx4.0/41, mbtmp4.2/8, MS3.7/12, Ms1 3.7/12, ms1mx3.5/36, Error ellipse: s-maj=44.2km s-min=17.4km az=140.0*
NEIC ***25*** *11:11:50.0±2.2, 15°.09S±0°.05×172°.94W±0°.08, h10^{km}±1^{km}, mb4.8/53, Error ellipse: s-maj=14.2km s-min=5.9km az=245.0*
ISC 25 11:11:48.8±0.5**, 15°.13S**±0°.06×**173°.05W**±0°.08**, h10**^{km}**, n96,** σ**1ˢ.65**/74**, mb4.7**/32**, MS3.8**/11**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	1.72	46	Pn	Pn	11 12 18.3	-0.7
	419nm,0.3s,baz=180,slow=0.9,SNR=369						
AFI				LR	LR	11 12 33.2	
	comp=Z,330nm,19.9s,baz=169,slow=22						
AFI				Sn	Sn	11 12 36.0	-5.0
	877nm,0.3s,baz=240,slow=15,SNR=19						
NIUE	Niue	4.93	143	Pn	Pn	11 13 04.2	+1.1
NIUE				Sn	Sn	11 13 55.3	-4.9
MSVF	Nonsavu	8.93	252	LR	LR	11 17 01.6	
	comp=Z,729nm,19.8s,baz=149,slow=36						
KNTN	Kanton	12.34	6	Pn	Pn	11 14 42.4	-2.4
RAR	Rarotonga	13.99	118	LR	LR	11 19 39.1	
	comp=Z,104nm,18.9s,baz=280,slow=33						
RAR	Rarotonga	13.99	118	Pn	Pn	11 15 09.3	+2.2
SANVU	Saraoutou	19.06	266	P	Pn	11 16 11.3	-0.9
SANVU				IAmb	IAmb	11 16 22.5	
	comp=Z,50nm,1.0s						
DZM	Mont Dzumac	20.62	247	*e*LR	LR	11 21 33.5	
	comp=Z,484nm,26.2s						
DZM	Mont Dzumac	20.62	247	LR	LR	11 22 54.2	
	comp=Z,354nm,21.9s,baz=13,slow=33						
PPT	Papeete	22.65	99	LR	LR	11 23 10.7	
	comp=Z,76nm,21.7s,baz=246,slow=30						
PAE	Paea	22.65	100	*e*T	T	11 40 12.6	
	comp=Z,2.3nm,0.2s						
PPT2	Papeete2	22.65	99	*e*LR	LR	11 22 18.0	
	comp=Z,205nm,25.2s						
PPT2	Papeete2	22.65	99	*e*T	T	11 40 13.4	
	comp=Z,3.5nm,0.3s						
OUZ	Omahuta	23.33	209	P	P	11 16 56.5	-0.7
PMOR	Pomariorio Ree	24.29	93	*e*T	T	11 42 13.5	
	comp=Z,4.5nm,0.4s						
URZ	Urewera	24.63	199	P	P	11 17 08.1	-1.4
	comp=Z,5.7nm,0.5s,baz=300,slow=23,SNR=14						
BKZ	Black Stump Fm	25.65	199	P	P	11 17 18.5	-0.3
BKZ				IAmb	IAmb	11 17 24.6	
	comp=Z,17nm,1.4s						
QRZ	Quartz Range	28.52	203	P	P	11 17 44.2	-0.2
TAOE	Nuku Hiva Isla	32.75	83	*e*LR	LR	11 26 56.8	
	comp=Z,258nm,25.8s						
H11S2	WAKE ISLAND Hy	38.91	328	T	T	12 00 45.6	
	baz=146,slow=76,SNR=37						
H11S3	WAKE ISLAND Hy	38.92	328	T	T	12 00 47.3	
	baz=146,slow=76,SNR=34						
H11S1	WAKE ISLAND Hy	38.92	328	T	T	12 00 43.3	
	baz=146,slow=76,SNR=31						
H11N3	WAKE ISLAND Hy	39.84	330	T	T	12 01 57.2	
	baz=150,slow=76,SNR=11						
H11N1	WAKE ISLAND Hy	39.85	330	T	T	12 01 57.9	
	baz=150,slow=76,SNR=7.5						
H11N2	WAKE ISLAND Hy	39.86	330	T	T	12 01 58.0	
	baz=150,slow=76,SNR=8.0						
MANU	Manus Island	41.15	285	P	P	11 19 35.7	+2.0
MANU				IAmb	IAmb	11 19 53.7	
	comp=Z,19nm,1.4s						
STKA	Stephens Creek	44.47	240	P	P	11 19 58.8	-1.6
	comp=Z,2.0nm,0.6s,baz=104,slow=9.7,SNR=4.2						
STKA	Stephens Creek	44.47	240	P	P	11 19 59.5	-0.9
MCQ	Macquarie Isla	44.92	203	P	P	11 20 05.1	+1.4
WR0	Warramunga Arr	50.05	256	P	P	11 20 44.2	+0.1
WR0				IAmb	IAmb	11 20 55.0	
	comp=Z,8.6nm,1.3s						
WB0	Warramunga Arr	50.20	257	P	P	11 20 44.4	-0.9
WB2	Warramunga Arr	50.23	257	P	P	11 20 43.2	-2.3
WB2				IAmb	IAmb	11 21 10.6	
	comp=Z,10nm,1.5s						
WRAB	Tennant Creek	50.23	257	P	P	11 20 42.8	-2.7
WRA	Warramunga Arr	50.24	257	P	P	11 20 43.0	-2.5
	comp=Z,0.6nm,0.5s,baz=91,slow=6.8,SNR=22						
WRA				PcP	PcP	11 22 05.4	+0.7
	comp=Z,0.3nm,0.7s,baz=91,slow=4.7,SNR=1.2						
WRA	Warramunga Arr	50.24	257	P	P	11 20 43.7	-1.9
AS31	Alice Springs	50.52	252	P	P	11 20 45.3	-2.4
ASAR	Alice Springs	50.52	252	P	P	11 20 45.1	-2.6
	comp=Z,2.3nm,0.7s,baz=85,slow=8.0,SNR=24						
ASAR	Alice Springs	50.52	252	P	P	11 20 44.9	-2.8
MJAR	Matsushiro Arr	68.95	320	LR	LR	11 46 37.2	
	comp=Z,42nm,21.6s,baz=105,slow=30						
MJB9	Matsu-Tunnel	68.96	320	P	P	11 22 54.4	0.0
JSD	Sado	69.86	321	P	P	11 23 00.5	+0.6
JNU	Nakatsue	71.86	313	P	P	11 23 13.0	+0.7
SRIG	Santa Rosalia	72.50	55	P	P	11 23 16.6	+0.5
ORV	Oroville	72.55	39	P	P	11 23 17.0	+0.8
RYN	Ryan	73.87	42	P	P	11 23 24.8	+0.6
NVAR	Mina Array Bea	73.90	42	P	P	11 23 27.6	+3.1
	comp=Z,1.1nm,0.7s,baz=229,slow=9.1,SNR=8.5						
NVAR				LR	LR	11 48 46.1	
	comp=Z,124nm,20.2s,baz=266,slow=30						
NV11	Mina Array Sit	73.99	42	P	P	11 23 25.7	+0.7
214A	Organ Pipe Nat	74.28	50	P	P	11 23 25.4	-1.2
214A				IAmb	IAmb	11 23 52.5	
	comp=Z,7.2nm,1.3s						
QSPA	South Pole Qui	74.92	180	P	P	11 23 29.9	0.0
QSPA				IAmb	IAmb	11 23 33.5	
	comp=Z,24nm,1.5s						
WVOR	Wild Horse Val	76.01	38	P	P	11 23 37.6	+1.1
WVOR				IAmb	IAmb	11 23 56.9	
	comp=Z,14nm,1.4s						
WISH	Wishkah	76.06	32	P	P	11 23 38.0	+1.6
N19K	Bonanza Creek	77.13	9	P	P	11 23 43.2	+0.9
N19K				IAmb	IAmb	11 23 43.5	
	comp=Z,16nm,1.2s						
ELK	Elko	77.15	41	P	P	11 23 45.0	+1.9
G08A	Pilot Rock	77.51	36	P	P	11 23 46.1	+1.2
G08A				IAmb	IAmb	11 23 48.6	
	comp=Z,9.9nm,1.2s						
M19K	Big River Lodg	78.18	9	P	P	11 23 49.2	+1.1
M19K				IAmb	IAmb	11 23 49.2	
	comp=Z,15nm,1.4s						
D08A	Wollman Farm,	78.59	34	P	P	11 23 52.1	+1.4
TTA	Tatalina	78.94	8	P	P	11 23 54.2	+1.9
TTA				IAmb	IAmb	11 23 55.6	
	comp=Z,15nm,1.3s						
GHO	Glory Hole Cre	78.99	11	P	P	11 23 53.4	+0.8
PLID	Pearl Lake	79.10	37	P	P	11 23 54.6	+0.8
SCM	Sheep Creek Mo	79.36	12	P	P	11 23 55.8	+1.2
SCM				IAmb	IAmb	11 23 56.6	
	comp=Z,13nm,0.8s						
SRU	San Rafael Swe	79.41	45	P	P	11 23 58.8	+3.2
SRU				IAmb	IAmb	11 23 59.7	
	comp=Z,7.6nm,1.2s						
N25K	Chitina, Valde	79.74	13	P	P	11 23 58.1	+1.4
N25K				IAmb	IAmb	11 23 59.3	
	comp=Z,11nm,1.0s						
TXAR	Lajitas Array	80.18	56	P	P	11 24 02.3	+2.4

	comp=Z,2.9nm,1.0s,baz=238,slow=4.3,SNR=16						
TXAR				LR	LR	11 54 26.1	
	comp=Z,41nm,18.0s,baz=0.0,slow=32						
TXAR	Lajitas Array	80.18	56	P	P	11 24 02.6	+2.7
WHY	Whitehorse	81.47	18	P	P	11 24 02.5	-3.5
WHY				IAmb	IAmb	11 24 08.7	
	comp=Z,9.0nm,1.2s						
WRH	Wood River Hil	81.62	11	P	P	11 24 07.6	+1.0
DOT	Dot Lake	81.66	13	P	P	11 24 08.0	+1.0
DOT				IAmb	IAmb	11 24 09.0	
	comp=Z,8.0nm,0.9s						
MLY	Manley	81.69	9	P	P	11 24 07.8	+0.8
MLY				IAmb	IAmb	11 24 08.9	
	comp=Z,6.4nm,1.0s						
HDA	Harding Lake	81.77	11	P	P	11 24 08.4	+1.0
HDA				IAmb	IAmb	11 24 09.2	
	comp=Z,12nm,1.1s						
CCB	Clear Creek Bu	81.83	11	P	P	11 24 08.5	+0.8
CCB				IAmb	IAmb	11 24 09.4	
	comp=Z,13nm,0.9s						
PDAR	Pinedale Array	81.83	42	P	P	11 24 09.9	+1.3
	comp=Z,1.9nm,0.9s,baz=225,slow=3.4,SNR=13						
PDAR				LR	LR	11 55 44.6	
	comp=Z,60nm,18.5s,baz=266,slow=32						
SMCO	Snowmass	81.88	46	P	P	11 24 07.6	-1.5
SMCO				IAmb	IAmb	11 24 12.6	
	comp=Z,12nm,1.2s						
TCOL	CIGO, UAF Yank	82.03	11	P	P	11 24 09.7	+0.9
COLA	College	82.03	11	P	P	11 24 09.7	+0.9
IL31		82.11	11	P	P	11 24 09.8	+0.7
IL31				IAmb	IAmb	11 24 11.1	
	comp=Z,8.9nm,1.2s						
ILAR	Eielson Array	82.11	11	P	P	11 24 09.8	+0.6
	comp=Z,3.2nm,1.0s,baz=232,slow=6.1,SNR=25						
IMAR	Indian Mountai	82.16	8	P	P	11 24 10.5	+1.1
SDCO	Great Sand Dun	82.28	48	P	P	11 24 14.0	+3.0
SDCO				IAmb	IAmb	11 24 14.4	
	comp=Z,12nm,1.4s						
POKR	Poker Plat Res	82.33	11	P	P	11 24 11.2	+0.9
DAWY	Dawson	83.07	14	P	P	11 24 14.8	+0.5
AMTX	Amarillo	83.91	52	P	P	11 24 19.0	-0.4
ABTX	Abilene, Hawle	84.62	54	P	P	11 24 21.9	-1.0
BMAR	Burnt Mountain	84.92	11	P	P	11 24 23.3	-0.3
H03S2	Juan Fernandez	85.07	124	T	T	12 58 53.7	
	baz=256						
H03S1	Juan Fernandez	85.08	124	T	T	12 58 52.8	
	baz=256						
H03S3	Juan Fernandez	85.08	124	T	T	12 58 52.4	
	baz=256						
INK	Inuvik	87.92	14	P	P	11 24 39.3	+1.0
INK				IAmb	IAmb	11 24 40.1	
	comp=Z,4.9nm,1.1s						
MAW	Mawson	88.16	199	LR	LR	12 02 43.5	
	comp=Z,97nm,18.4s,baz=234,slow=35						
MAW	Mawson	88.16	199	P	P	11 24 41.0	+1.3
YKA	Yellowknife Ar	89.71	23	LR	LR	11 59 46.5	
	comp=Z,67nm,19.4s,baz=0.0,slow=32						
CNGN	Cerro Negro	89.75	77	P	P	11 24 46.5	-1.7
A36M	Sachs Harbour	92.56	13	P	P	11 25 00.9	+1.1
A36M				IAmb	IAmb	11 25 02.4	
	comp=Z,5.9nm,0.9s						
ULM	Lac du Bonnet	93.50	39	LR	LR	12 02 33.6	
	comp=Z,90nm,19.4s,baz=289,slow=32						
AKASG	Malin Array Be	140.22	338	PKhKP	PKPpre	11 31 14.3	
	comp=Z,1.1nm,0.5s,baz=68,slow=2.1,SNR=5.4						
GERES	GERESS Array B	145.92	352	PKPbc	PKPab	11 31 29.5	+0.3
	comp=Z,2.9nm,0.9s,baz=25,slow=4.4,SNR=10						
BRTR	Keskin Array B	146.16	322	PKPbc	PKPab	11 31 31.0	+0.5
	comp=Z,6.1nm,0.8s,baz=146,slow=2.4,SNR=13						

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*IDC **25** 11:16:26.0±0.7, 58°.09S×25°.66W, h0km, mb4.4/6, mb1 4.4/7, mb1mx4.0/23, mbtmp4.4/7, ML4.2/1, MS3.5/2, Ms1 3.5/2, ms1mx3.0/23, Error ellipse: s-maj=27.8km s-min=24.6km az=108.0*

*NEIC **25** 11:16:32.0±1.8, 58°.21S±0°.03×25°.3W±0°.2, h35km±1km, mb4.6/28, Error ellipse: s-maj=19.5km s-min=4.2km az=258.0*

ISC 25 11:16:31.3±0.4**, 58°.10S**±0°.08×**25°.24W**±0°.08**, h35km, n60, σ1ˢ13**/53**, mb4.5**/14**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	7.34	297		Pn	11 18 15.8	-0.2
VNA1	Neumayer--Stat	14.49	157	P	Pn	11 19 55.2	+1.7
VNA3	Neumayer Olymp	14.70	160	P	Pn	11 19 57.7	+1.4
VNA3				S	Sn	11 22 24.9	-13
VNA2	Neumayer--Watz	14.89	157	P	Pn	11 19 59.9	+1.0
	baz=320,slow=14						
VNA2				S	Sn	11 22 30.7	-12
SNAA	Sanae	16.43	155	P	Pn	11 20 20.6	+1.8
SNAA				S	Sn	11 23 09.3	-11
SNAA	Sanae	16.43	155	Pn	Pn	11 20 19.6	+0.7
	0.9nm,0.3s,baz=320,slow=16,SNR=35						
SNAA				Sn	Sn	11 23 06.1	-14
	0.1nm,0.3s,baz=345,slow=21,SNR=1.5						
SNAA	Sanae	16.43	155		Pn	11 20 16.7	-2.2
PMSA	Palmer Station	19.45	234	P	P	11 20 54.3	-0.2
PMSA				IAmb	IAmb	11 20 58.1	
	comp=Z,47nm,1.4s						
EFI	East Falkland	19.80	275	P	P	11 20 58.0	-0.4
EFI				IAmb	IAmb	11 21 01.5	
	comp=Z,49nm,1.1s						
MG01	Puerto William	23.31	259	P	P	11 21 36.0	+0.2
QSPA	South Pole Qui	32.15	180	P	P	11 22 54.9	-0.3
QSPA				IAmb	IAmb	11 22 56.5	
	comp=Z,16nm,1.4s						
GO07	Milladeo Hill,	33.37	275	P	P	11 23 07.0	+1.1
PLCA	Paso Flores	33.43	281	P	P	11 23 04.0	-2.5
	comp=Z,5.0nm,1.0s,baz=138,slow=11,SNR=6.7						
PLCA	Paso Flores	33.43	281	P	P	11 23 06.9	+0.4
PLCA				IAmb	IAmb	11 23 07.4	
	comp=Z,7.7nm,1.1s						
BO01	Tunca	38.52	288	P	P	11 23 52.1	+2.0
BO01				IAmb	IAmb	11 24 07.1	
	comp=Z,8.9nm,1.3s						
MT09	Talagante	38.96	288	P	P	11 23 55.6	+1.7
SUR	Sutherland	40.23	71	P	P	11 24 02.8	-1.8
SUR				IAmb	IAmb	11 24 04.5	
	comp=Z,13nm,1.0s						
GO03	Copiap	43.64	295	P	P	11 24 32.7	+0.4
AC02	Maricunga	43.74	296	P	P	11 24 34.2	+0.6
SBA	Scott Base	44.10	184	P	P	11 24 34.8	-0.6
SBA				IAmb	IAmb	11 24 35.8	
	comp=Z,17nm,1.4s						
VNDA	Vanda	44.57	182	P	P	11 24 39.4	+0.3
	comp=Z,2.0nm,0.8s,baz=176,slow=6.0,SNR=3.6						
VNDA	Vanda	44.57	182	P	P	11 24 38.4	-0.7
BDFB	Brasilia	45.67	329	P	P	11 24 49.8	+1.2
BDFB				IAmb	IAmb	11 25 04.9	
	comp=Z,10nm,1.3s						
PB07	IPOC Station P	48.46	299	P	P	11 25 10.1	-0.4
LBTB	Lobatse	48.66	70	LR	LR	11 41 38.2	
	comp=Z,64nm,19.8s,baz=198,slow=31						
PTLB	Pontes e Lacer	49.51	315	P	P	11 25 18.2	0.0
H10S2	ASCENSION HYDR	49.70	14	T	T	12 19 33.9	
	baz=187,slow=74,SNR=10						
H10S3	ASCENSION HYDR	49.70	14	T	T	12 19 53.1	
	baz=33,slow=74,SNR=33						
H10N1	ASCENSION HYDR	50.82	14	T	T	12 21 12.9	
	baz=195,slow=73,SNR=22						
H10N3	ASCENSION HYDR	50.82	14	T	T	12 21 08.0	
	baz=195,slow=73,SNR=37						
H10N2	ASCENSION HYDR	50.84	14	T	T	12 21 12.3	
	baz=195,slow=73,SNR=41						
ETMB	Extrema	57.41	310	P	P	11 26 15.1	-1.1
LSZ	Lusaka	58.18	66	P	P	11 26 19.9	-2.0
LSZ				IAmb	IAmb	11 26 25.6	
	comp=Z,2.1nm,0.5s						
NNA	Nana	60.16	298	LR	LR	11 51 27.6	
	comp=Z,24nm,19.9s,baz=145,slow=35						
PTGA	Pitinga	63.44	320	P	P	11 26 58.3	+0.9
PTGA				IAmb	IAmb	11 27 24.6	
	comp=Z,5.6nm,1.2s						
BOAV	Boa Vista	66.55	321	P	P	11 27 17.3	-0.3
BOAV				IAmb	IAmb	11 27 36.2	
	comp=Z,8.9nm,1.4s						
DBIC	Dimbokro	66.63	22	P	P	11 27 19.2	+1.2
	comp=Z,1.9nm,0.4s,baz=189,slow=6.2,SNR=5.8						
DBIC	Dimbokro	66.63	22	P	P	11 27 19.7	+1.7
DBIC				IAmb	IAmb	11 27 36.8	
	comp=Z,6.6nm,0.7s						
MCQ	Macquarie Isla	67.71	183	P	P	11 27 24.1	-0.3
TORD	Torodi Ar. Bea	74.36	27	P	P	11 28 06.2	+1.1
	comp=Z,1.0nm,0.3s,baz=199,slow=5.8,SNR=18						
TORD	Torodi Ar. Bea	74.36	27	P	P	11 28 07.9	+2.8
TORD				IAmb	IAmb	11 28 24.2	
	comp=Z,5.0nm,0.9s						
KMBO	Kilima Mbogo	74.83	67	P	P	11 28 09.3	+1.0
	comp=Z,2.4nm,0.3s,baz=225,slow=20,SNR=9.6						
KMBO	Kilima Mbogo	74.83	67	P	P	11 28 08.1	-0.2
KMBO				IAmb	IAmb	11 28 16.7	
	comp=Z,2.0nm,0.5s						
SRBA	San Rafael, Bu	81.85	302	P	P	11 28 45.1	-1.8
SJG	San Juan	83.12	321	P	P	11 28 53.5	+0.3
CELP	Cerrillos	83.23	321	P	P	11 28 54.0	+0.3
STKA	Stephens Creek	89.69	169	P	P	11 29 26.0	+0.5
	comp=Z,1.7nm,0.8s,baz=315,slow=7.1,SNR=3.3						
PDAR	Pinedale Array	122.31	300	PKP	PKPdf	11 35 21.4	-0.6
	comp=Z,0.4nm,0.5s,baz=120,slow=5.6,SNR=5.7						
PDAR	Pinedale Array	122.31	300		PKPdf	11 35 20.9	-1.0
NVAR	Mina Array Bea	123.15	290	PKP	PKPdf	11 35 23.3	-0.3
	comp=Z,0.5nm,0.6s,baz=122,slow=3.3,SNR=4.8						
YKA	Yellowknife Ar	138.40	316	PKP	PKPdf	11 35 51.6	+0.3
	comp=Z,0.9nm,0.6s,baz=140,slow=2.0,SNR=10						
YKA	Yellowknife Ar	138.40	316		PKiKP	11 35 53.0	-0.5
INK	Inuvik	148.06	318	PKPbc	PKPbc	11 36 10.7	-0.7
	comp=Z,11nm,0.7s,baz=97,slow=3.4,SNR=42						
INK	Inuvik	148.06	318		PKPbc	11 36 12.1	+0.7
SONM	Songino Array	149.75	89	PKPbc	PKPbc	11 36 15.8	-0.7
	comp=Z,1.6nm,0.4s,baz=216,slow=3.2,SNR=9.6						
SONM	Songino Array	149.75	89		PKiKP	11 36 17.4	-0.1
NRIK	Noril'sk	149.91	41	PKPbc	PKPbc	11 36 15.2	-0.8
	comp=Z,1.6nm,0.3s,baz=168,slow=8.3,SNR=1.4						
ILAR	Eielson Array	152.25	308	PKPbc	PKPbc	11 36 21.5	-0.1
	comp=Z,6.9nm,0.9s,baz=138,slow=2.3,SNR=30						
ILAR	Eielson Array	152.25	308		PKiKP	11 36 22.5	+0.6
KSRS	Korea Array	152.90	128	PKPbc	PKiKP	11 36 24.9	+0.8
	comp=Z,0.8nm,0.5s,baz=185,slow=0.6,SNR=3.8						

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*IDC **25** 11:16:35.1±1.3, 59°.03S×148°.48E, h0km, mb4.2/5, mb1 4.3/6, mb1mx3.9/40, mbtmp4.2/6, ML3.4/1, MS4.0/11, Ms1 4.0/11, ms1mx3.8/27, Error ellipse: s-maj=72.2km s-min=18.0km az=84.0*

*NEIC **25** 11:16:37.9±1.3, 59°.17S±0°.04×148°.5E±0°.3, h10km±1km, mb4.5/23, Error ellipse: s-maj=25.5km s-min=6.5km az=88.0*

ISC 25 11:16:37.5±0.6**, 59°.14S**±0°.08×**148°.5E**±0°.1**, h10km, n53, σ1ˢ03**/38**, mb4.4**/13**, MS4.0**/10**, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	19.01	171	P	P	11 20 57.5	-1.4
	0.1nm,0.3s,baz=340,slow=12,SNR=11						
VNDA				LR	LR	11 27 48.5	
	comp=Z,415nm,18.3s,baz=344,slow=35						
VNDA	Vanda	19.01	171	P	P	11 20 57.9	-1.1
SBA	Scott Base	19.75	169	P	P	11 21 07.3	+0.2
SBA				IAmb	IAmb	11 21 16.7	
	comp=Z,18nm,1.1s						
LBZ	Lake Benmore	19.82	51	P	P	11 21 08.2	+0.1
LBZ				IAmb	IAmb	11 21 21.4	
	comp=Z,31nm,1.3s						
TOO	Toolangi	21.67	354	P	P	11 21 28.1	0.0
TOO				IAmb	IAmb	11 21 44.9	
	comp=Z,21nm,1.1s						
BHW	Baring Head	24.21	55	P	P	11 21 54.0	-0.1
URZ	Urewera	27.79	54	LR	LR	11 32 32.5	
	comp=Z,384nm,21.5s,baz=211,slow=34						
URZ	Urewera	27.79	54	P	P	11 22 26.4	+0.1
URZ				IAmb	IAmb	11 22 45.2	
	comp=Z,16nm,1.1s						
QSPA	South Pole Qui	30.96	180	P	P	11 22 55.5	+1.0
	comp=Z,5.8nm,0.9s,baz=33,slow=5.8,SNR=26						
H01W1	Cape Leeuwin H	33.09	302	T	T	11 58 37.3	
	baz=146,slow=75,SNR=171						
H01W2	Cape Leeuwin H	33.09	302	T	T	11 58 35.2	
	baz=146,slow=75,SNR=172						
H01W3	Cape Leeuwin H	33.11	302	T	T	11 58 38.5	
	baz=146,slow=75,SNR=163						
MAW	Mawson	36.24	220	P	P	11 23 39.6	-0.6
	comp=Z,2.2nm,0.9s,baz=117,slow=4.7,SNR=4.4						
MAW				LR	LR	11 38 55.9	
	comp=Z,246nm,18.3s,baz=73,slow=37						
MAW	Mawson	36.24	220	P	P	11 23 40.3	+0.2
ASAR	Alice Springs	36.93	337	P	P	11 23 43.9	-2.6
	comp=Z,1.0nm,0.8s,baz=160,slow=8.8,SNR=5.6						
ASAR				PcP	PcP	11 26 06.2	-1.5
	comp=Z,0.4nm,0.6s,baz=161,slow=3.6,SNR=4.5						
ASAR	Alice Springs	36.93	337	P	P	11 23 46.1	-0.4
AS31	Alice Springs	36.93	337	P	P	11 23 46.3	-0.2
MORW	Morawa	37.35	309	P	P	11 23 49.4	-0.6
MORW				IAmb	IAmb	11 23 51.0	
	comp=Z,25nm,1.4s						
OUENC	Ouen Island, N	38.95	28	P	P	11 24 03.9	+0.4
WR0	Warramunga Arr	40.42	340	P	P	11 24 16.4	+0.6
WR0				IAmb	IAmb	11 24 17.0	
	comp=Z,14nm,1.5s						
WB2	Warramunga Arr	40.47	339	P	P	11 24 15.5	-0.6
WB2				IAmb	IAmb	11 24 35.3	
	comp=Z,5.8nm,0.8s						
WRA	Warramunga Arr	40.47	339	P	P	11 24 14.3	-1.9
	comp=Z,3.3nm,1.1s,baz=168,slow=7.5,SNR=9.9						
WRA				PcP	PcP	11 26 18.3	-0.5
	comp=Z,0.6nm,0.6s,baz=160,slow=2.7,SNR=2.1						
WRA	Warramunga Arr	40.47	339	P	P	11 24 16.5	+0.3
WRAB	Tennant Creek	40.48	339	P	P	11 24 15.3	-0.9
WRAB				IAmb	IAmb	11 24 16.9	
	comp=Z,7.5nm,1.1s						
PSA00	Pilbara Seismi	42.75	319	P	P	11 24 35.7	+0.8
PSA00				IAmb	IAmb	11 24 52.7	
	comp=Z,17nm,1.2s						
GIRL	Giralia	43.82	311	P	P	11 24 44.0	+0.6
FITZ	Fitzroy Crossi	44.24	328	LR	LR	11 41 31.9	
	comp=Z,168nm,19.9s,baz=162,slow=34						
COEN	Coen	45.28	353	P	P	11 24 56.2	+1.0
KNRA	Kununurra	45.77	333	P	P	11 25 00.6	+1.6
SNAA	Sanae	47.95	192	P	P	11 25 17.1	+1.4
SNAA	Sanae	47.95	192	P	P	11 25 15.2	-0.4
	comp=Z,12nm,1.1s,baz=179,slow=8.4,SNR=9.2						
SNAA				LR	LR	11 45 40.0	
	comp=Z,204nm,18.1s,baz=186,slow=36						
SNAA	Sanae	47.95	192	P	P	11 25 17.0	+1.4
VNA3	Neumayer Olymp	49.00	189	P	P	11 25 24.7	+1.0
VNA2	Neumayer--Watz	49.11	190	P	P	11 25 25.7	+1.2
VNA1	Neumayer--Stat	49.46	190	P	P	11 25 28.4	+1.3
JAY	Jayapura	56.80	351	LR	LR	11 49 20.7	
	comp=Z,169nm,21.9s,baz=150,slow=35						
KAPI	Kappang	58.36	326	LR	LR	11 49 17.7	
	comp=Z,83nm,19.7s,baz=194,slow=34						
UGM	Wanagama	58.69	314	P	P	11 26 35.6	+0.5
LEM	Lembang	60.78	312	LR	LR	11 49 32.1	
	comp=Z,125nm,19.7s,baz=168,slow=33						
IPM	Ipoh	73.69	310	P	P	11 28 11.4	+0.1
IPM	Ipoh	73.69	310	P	P	11 28 11.2	-0.1
KULM	Kulim	74.58	310	P	P	11 28 14.9	-1.6
H08S2	Diego Garcia H	76.30	278	T	T	12 52 42.8	
	baz=148,slow=76,SNR=33						
H08S1	Diego Carcia H	76.31	278	T	T	12 52 43.3	
	baz=148,slow=76,SNR=30						
H08S3	Diego Garcia H	76.32	278	T	T	12 52 44.3	
	baz=148,slow=76,SNR=40						
H03S1	Juan Fernandez	79.36	141	T	T	12 56 32.5	
	baz=201,slow=74,SNR=9.5						
H03S2	Juan Fernandez	79.36	141	T	T	12 56 34.6	
	baz=201,slow=74,SNR=8.9						
H03S3	Juan Fernandez	79.37	141	T	T	12 56 32.0	
	baz=201,slow=74,SNR=9.6						
BOSA	Boshof	80.81	228	LR	LR	12 01 16.5	
	comp=Z,65nm,18.7s,baz=186,slow=33						
JCJ	Chichijima	86.07	354	LR	LR	12 03 17.4	
	comp=Z,52nm,19.9s,baz=102,slow=33						
AC02	Maricunga	88.85	147	P	P	11 29 31.3	-1.0
AC02				IAmb	IAmb	11 29 42.7	
	comp=Z,2.8nm,1.4s						
JHJ	Hachijo jima 2	92.20	353	LR	LR	12 09 01.5	
	comp=Z,72nm,19.3s,baz=305,slow=34						
TORD	Torodi Ar. Bea	127.87	222	PKP	PKPdf	11 35 42.5	-0.8
	comp=Z,0.7nm,1.0s,baz=113,slow=3.3,SNR=2.6						

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*MAN **25** 11:22:59.6, 4°.10N×125°.87E, h127km, mb5.6, ML4.6, MS5.0*

*MOS **25** 11:23:00.9±1.1, 4°.26N×125°.72E, h156km, mb4.9/43, Error ellipse: s-maj=9.7km s-min=5.1km az=110.6*

*KLM **25** 11:23:01, 4°.34N×126°.04E, h140km, mb5.2*

*BJI **25** 11:23:01.0±0.0, 4°.30N×125°.90E, h150km, mB5.0/29, mb4.8/57*

*NEIC **25** 11:23:02.0±1.6, 4°.22N±0°.05×125°.77E±0°.07, h141km±5km, mb5.0/126, Error ellipse: s-maj=10.5km s-min=7.4km az=80.0*

*IDC **25** 11:23:02.4±0.9, 4°.24N×125°.74E, h153km±7km, mb4.4/43, mb1 4.5/47, mb1mx4.4/59, mbtmp4.9/47, MS3.4/4, Ms1 3.4/4, ms1mx2.9/37, Error ellipse: s-maj=10.3km s-min=6.1km az=78.0*

*DJA **25** 11:23:03.1±0.4, 4°N±3°×12°6E±°, h127km±3km, M4.8/37, mb5.1/37, mB5.3/31, MLv5.3/19, Mw(mB)4.7/31*

ISC 25 11:23:02.3±0.4**, 4°.18N**±0°.03×**125°.81E**±0°.05**, h152km**±3km**, h153km:pP-P, n502, σ1ˢ31**/542**, mb4.9**/168**, 13C-11D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	0.56	210	P	Pn	11 23 22.4	-1.9
SGSI				S	Sn	11 23 37.6	-3.4
DAV	Davao City (W)	2.88	355	P	Pn	11 23 48.1	-0.3
	188nm,0.3s,baz=78,slow=6.1,SNR=6.3						
DAV				S	Sn	11 24 24.0	0.0
	446nm,0.3s,baz=265,slow=18,SNR=6.3						
DAV	Davao City (W)	2.88	355		Pn	11 23 48.1	-0.3
DAV				Sn	Sn	11 24 22.8	-1.2
DAV	Davao City (W)	2.88	355	P	Pn	11 23 50.3	+1.9
TNTI	Ternate	3.72	155	P	Pn	11 23 57.8	-1.3
TNTI				S	Sn	11 24 39.7	-3.5
TNTI	Ternate	3.72	155		Pn	11 23 58.0	-1.1
TNTI				Sn	Sn	11 24 39.5	-3.6
TNTI	Ternate	3.72	155	P	Pn	11 23 57.5	-1.6
KMSI	Cibinong	4.02	207	P	Pn	11 24 04.3	+1.4
GTOI	Gorontalo	4.49	219	P	Pn	11 24 09.7	+0.6
LBMI	Labuha	5.07	161	P	Pn	11 24 16.1	-0.7
	6.2nm8μm236nm,0.8s						
MRSI	Marisa	5.33	227	P	Pn	11 24 21.9	+1.7
	4.4nm10μm1μm,0.8s						
TOLI2	Tolitoli	5.87	239	Pn	Pn	11 24 28.0	+0.6
TOLI2	Tolitoli	5.87	239	P	Pn	11 24 27.3	-0.1
	228nm,1.6s						
LUWI	Luwuk	6.01	210	P	Pn	11 24 31.7	+2.6
	3.0nm5μm571nm,0.8s						
LUWI	Luwuk	6.01	210		Pn	11 24 31.8	+2.6
LUWI	Luwuk	6.01	210	P	Pn	11 24 31.2	+2.0
SANI	Sanana	6.19	178	P	Pn	11 24 28.6	-3.0
SANI	Sanana	6.19	178	P	Pn	11 24 28.7	-2.9
APSI	Ampana	6.54	220	P	Pn	11 24 39.4	+3.0
	1.6nm5μm477nm,1.1s						
MPSI	Mapaga	7.03	237	P	Pn	11 24 44.4	+1.6
	0.4nm1μm112nm,0.9s						
MYLDM	Lahad Datu	7.35	278	Pn	Pn	11 24 50.1	+2.9
SWI	Sorong	7.40	132	P	Pn	11 24 46.9	-0.8
	0.6nm2μm138nm,0.7s						
SIJI	Sorong	7.41	132	P	Pn	11 24 45.8	-2.1
	12nm,0.3s,baz=337,slow=12,SNR=30						
SIJI				S	Sn	11 26 05.5	-5.2
	15nm,0.3s,baz=163,slow=22,SNR=9.8						
SIJI				LR	LR	11 27 46.8	
	comp=Z,431nm,18.1s,baz=297,slow=38						
MSAI	Masohi	8.10	157	P	Pn	11 24 58.9	+1.8
	0.1nm482nm15nm,0.8s						
AAI	Ambon	8.17	163	P	Pn	11 24 57.2	-0.8
	1.1nm2μm114nm,0.5s						
SPMM	Sapulut	9.33	274	P	Pn	11 25 16.0	+2.4
TTSI	Tana Toraja	9.34	220	P	Pn	11 25 16.0	+2.3
	3μm321nm,1.2s						
FAKI	Fak Fak	9.54	138	P	Pn	11 25 16.2	-0.1
	981nm96nm,0.9s						
FAKI	Fak Fak	9.54	138	Pn	Pn	11 25 16.2	-0.1
FAKI	Fak Fak	9.54	138	P	Pn	11 25 16.4	+0.1
KKM	Kota Kinabalu	9.74	281	Pn	Pn	11 25 18.2	-0.8
KKM	Kota Kinabalu	9.74	281	P	Pn	11 25 23.9	+4.9
SPSI	Sidrap Palu	10.09	217	P	Pn	11 25 25.2	+1.6
	3μm117nm,0.7s						
BNSI	Bone	10.25	214	P	Pn	11 25 28.3	+2.6
	721nm74nm,0.8s						
BKB	Balikpapan	10.42	239	P	Pn	11 25 32.2	+4.3
	4μm349nm,1.2s						
BKB	Balikpapan	10.42	239	Pn	Pn	11 25 26.2	-1.7
KAPI	Kappang	10.95	214	P	Pn	11 25 35.4	+0.5
	2.8nm,0.3s,baz=40,slow=5.7,SNR=50						
KAPI	Kappang	10.95	214	P	Pn	11 25 35.6	+0.6
KAPI	Kappang	10.95	214	Pn	Pn	11 25 35.5	+0.6
KAPI	Kappang	10.95	214	P	Pn	11 25 36.6	+1.7
BKSI	Bulukumba	11.01	211	P	Pn	11 25 36.7	+1.0
	473nm41nm,1.0s						
BSSI	Bau Bau, Buton	11.54	207	P	P	11 26 00.4	+10
MTKI	Muara Teweh, K	12.03	245	P	P	11 25 52.9	-2.6
KBKI	Kotabaru	12.17	233	P	P	11 25 57.7	+0.7
	113nm,0.9s						
MMRI	Maumere	13.22	196	P	P	11 26 14.3	+5.6
MMRI	Maumere	13.22	196	Pn	Pn	11 26 04.1	-0.2
MMRI	Maumere	13.22	196		Pn	11 26 04.1	-0.2
SAUI	Saumlaki	13.26	156	Pn	Pn	11 26 04.2	-0.6
BBKI	Banjar Baru	13.33	235	P	P	11 26 09.0	-0.9
	3μm115nm,0.9s						
SBUM	Sibu	13.68	263	P	P	11 26 13.0	-0.8
SBUM	Sibu	13.68	263		Pn	11 26 11.1	+0.9
SOEI	Soe	13.93	186	P	P	11 26 19.9	+3.2
SOEI	Soe	13.93	186	Pn	Pn	11 26 12.5	-0.9
BATI	Baumata	14.45	188	P	P	11 26 21.4	-1.0
	22nm,0.3s,baz=70,slow=2.5,SNR=17						
BATI	Baumata	14.45	188	P	P	11 26 21.9	-0.5
	1μm114nm,0.8s						
STKI	Sintang	14.89	254	P	P	11 26 28.5	+1.2
	7μm115nm,1.3s						
PLAI	Plampang	15.20	212	P	P	11 26 30.9	+0.2
	2μm108nm,0.8s						
PLAI	Plampang	15.20	212	P	P	11 26 30.5	-0.2
TWSI	Taliwang, Sumb	15.62	215	P	P	11 26 37.0	+1.7
	2μm251nm,0.9s						
PBKI	Pangkalan Bun	15.70	244	P	P	11 26 38.3	+2.1
	8μm1μm,1.0s						
KSM	Kuching	15.71	261	P	P	11 26 38.0	+1.6
KSM	Kuching	15.71	261	P	P	11 26 36.5	+0.1
KSM	Kuching	15.71	261	P	P	11 26 39.4	+3.0
SRBI	Singaraja	16.13	221	P	P	11 26 41.8	+0.8
	918nm88nm,1.1s						
KMMI	Kalianget	16.25	227	P	P	11 26 43.3	+1.0
	153nm,0.8s						
JAY	Jayapura	16.30	114	P	P	11 26 43.4	+0.4
	4.5nm,0.3s,baz=248,slow=6.4,SNR=11						
JAY	Jayapura	16.30	114	P	P	11 26 45.0	+2.0
	575nm50nm,1.2s						
JAGI	Jajag, Banyuwa	17.12	223	P	Pn	11 26 55.5	+2.9
	2μm134nm,0.4s						
JAGI	Jajag, Banyuwa	17.12	223	P	P	11 26 50.5	-1.3
JAGI	Jajag, Banyuwa	17.12	223	P	Pn	11 26 54.1	+1.5
DRS	Darwin Rock St	17.26	163	P	P	11 26 53.7	+0.3
	57nm,0.7s						
MTN	Manton Dam	17.72	163	P	P	11 26 57.8	-0.6
MTN				IAmb	IAmb	11 27 04.2	
	comp=Z,33nm,0.6s						
KDU	Kakadu	18.01	159	P	P	11 27 02.0	+0.3
	comp=Z,129nm,0.7s						
SMRI	Semarang	18.96	234	P	P	11 27 11.9	-0.2
SMRI				IAmb	IAmb	11 27 20.0	
	comp=Z,95nm,0.9s						
TWG	Pinlang	19.09	347	P	P	11 27 10.0	-3.4
TWG				IAmb	IAmb	11 27 11.0	
	comp=Z,52nm,0.5s						
UGM	Wanagama	19.41	232	P	P	11 27 16.9	-0.1
UGM	Wanagama	19.41	232	P	Pn	11 27 19.6	-0.1
TPUB	Ta-pu	19.66	346	P	P	11 27 16.8	-2.7
TPUB				IAmb	IAmb	11 27 21.1	
	comp=Z,96nm,1.3s						
KNRA	Kununurra	19.94	172	P	P	11 27 23.2	+0.6
KNRA				IAmb	IAmb	11 27 23.8	
	comp=Z,67nm,0.6s						
KNRA	Kununurra	19.94	172	P	P	11 27 22.4	-0.2
	comp=Z,91nm,0.6s						
SSLB	Suanglung	20.05	347	P	P	11 27 21.0	-2.8
SSLB				IAmb	IAmb	11 27 48.1	
	comp=Z,91nm,1.5s						
PPBI	Pangkal Pinang	20.64	253	P	P	11 27 31.7	+1.5
GUMO	Guam	21.00	62	P	P	11 27 33.3	-0.7
	comp=Z,72nm,0.7s,baz=249,slow=7.5,SNR=5.7						
LEM	Lembang	21.20	239	P	P	11 27 36.2	-0.1
	comp=Z,65nm,0.8s,baz=18,slow=10.0,SNR=11						
QIZ	Qiongzhong	21.47	315	P	P	11 27 40.8	+1.8
QIZ				S	S	11 31 28.5	+0.6
QIZ				sS	sS	11 32 17.5	+3.3
QIZ				pmax	pmax		
	comp=Z,470nm,4.1s						
QIZ				LR	LR		

	comp=Z,370nm,19.1s						
QIZ				LR	LR		
	comp=Z,330nm,16.3s						
CBJI	Citeko	21.66	241	P	P	11 27 44.5	+3.5
	comp=Z,199nm,0.9s						
DSRI	Dabo	21.71	258	P	P	11 27 43.2	+1.6
	comp=Z,30nm,1.1s						
MYKOM	Kota Tinggi	22.06	264	P	P	11 27 47.0	+1.9
MYKOM	Kota Tinggi	22.06	264	P	P	11 27 44.2	-1.0
MYKOM				IAmb	IAmb	11 27 47.7	
	comp=Z,83nm,1.4s						
FITZ	Fitzroy Crossi	22.13	180	P	P	11 27 46.2	+0.4
	comp=Z,46nm,0.6s,baz=360,slow=7.2,SNR=189						
FITZ				PcP	PcP	11 31 37.1	-0.1
	comp=Z,13nm,0.8s,baz=176,slow=18,SNR=8.4						
FITZ				ScP	ScP	11 35 00.7	+0.1
	comp=Z,6.8nm,0.8s,baz=35,slow=1.4,SNR=6.2						
JMZ	Minamidaito 2	22.14	13	P	P	11 27 45.5	-0.3
SBJI	Serang	22.15	243	P	P	11 27 44.0	-2.1
MANU	Manus Island	22.41	106	P	P	11 27 48.9	+0.3
MANU				IAmb	IAmb	11 27 51.5	
	comp=Z,35nm,0.8s						
JOW	Kunigami	22.65	6	P	P	11 27 50.5	-0.2
	comp=Z,38nm,0.7s,baz=126,slow=14,SNR=4.2						
JOW	Kunigami	22.65	6	IAmb	IAmb	11 27 53.5	
	comp=Z,103nm,1.2s						
UBPT	Khong Chiam	22.85	300	P	P	11 27 52.5	-0.2
UBPT				IAmb	IAmb	11 27 54.6	
	comp=Z,98nm,1.1s						
JRMM	Jerantut	23.28	270	P	P	11 27 59.0	+2.4
MNAI	Manna	24.36	250	P	P	11 28 05.7	-0.7
IPM	Ipoh	24.71	272	P	P	11 28 10.0	+0.3
IPM	Ipoh	24.71	272	P	P	11 28 09.2	-0.5
IPM				IAmb	IAmb	11 28 13.2	
	comp=Z,50nm,1.0s						
COEN	Coen	24.93	137	P	P	11 28 11.3	-0.3
COEN	Coen	24.93	137	P	P	11 28 11.4	-0.2
	comp=Z,34nm,1.1s						
BKNI	Bangkinang	25.04	262	P	P	11 28 12.1	-0.6
KULM	Kulim	25.10	274	P	P	11 28 16.0	+2.8
KULM	Kulim	25.10	274	P	P	11 28 13.0	-0.2
KULM				IAmb	IAmb	11 28 17.7	
	comp=Z,49nm,1.1s						
PMG	Port Moresby	25.20	122	P	P	11 28 14.5	+0.4
	comp=Z,31nm,0.6s,baz=40,slow=4.1,SNR=8.2						
PMG	Port Moresby	25.20	122	P	P	11 28 13.6	-0.4
PMG				pmax	pmax		
	comp=Z,106nm,1.4s						
PMG	Port Moresby	25.20	122	P	P	11 28 13.6	-0.4
PMG				IAmb	IAmb	11 28 15.5	
	comp=Z,106nm,1.4s						
WB0	Warramunga Arr	25.25	161	P	P	11 28 14.2	-0.2
WRAB	Tennant Creek	25.39	161	*ce*P	P	11 28 15.7	0.0
WRAB				pmax	pmax		
	comp=Z,133nm,1.0s						
WRAB	Tennant Creek	25.39	161	P	P	11 28 15.6	0.0
WRAB	Tennant Creek	25.39	161	P	P	11 28 16.2	+0.5
WRA	Warramunga Arr	25.39	161	P	P	11 28 15.8	0.0
	comp=Z,90nm,0.7s,baz=330,slow=11,SNR=270						
WRA				PcP	PcP	11 31 43.3	-1.0
	comp=Z,3.1nm,0.7s,baz=320,slow=2.5,SNR=3.6						
WRA				S	S	11 32 27.1	-4.1
	comp=Z,7.4nm,1.1s,baz=328,slow=15,SNR=7.4						
WRA				ScP	ScP	11 35 09.3	-0.1
	comp=Z,5.8nm,0.8s,baz=340,slow=2.7,SNR=8.5						
WRA	Warramunga Arr	25.39	161	P	P	11 28 15.2	-0.5
WRA				pmax	pmax		
	comp=Z,11nm,0.8s						
WRA	Warramunga Arr	25.39	161	P	P	11 28 15.2	-0.5
WB2	Warramunga Arr	25.40	161	P	P	11 28 15.4	-0.4
WR0	Warramunga Arr	25.47	161	P	P	11 28 16.2	-0.2
MBWA	Marble Bar	25.88	193	P	P	11 28 21.0	+0.9
PSA00	Pilbara Seismi	26.25	193	P	P	11 28 23.7	+0.3
PSA00				IAmb	IAmb	11 28 24.9	
	comp=Z,26nm,0.7s						
PSA00	Pilbara Seismi	26.25	193	P	P	11 28 23.2	-0.3
PSA00				IAmb	IAmb	11 28 27.1	
	comp=Z,16nm,1.1s						
PSA00	Pilbara Seismi	26.25	193	P	P	11 28 23.5	+0.1
	comp=Z,44nm,0.8s						
SRIT	Nakonsritamara	26.41	281	P	P	11 28 25.6	+0.6
PSI	Prapat	26.87	268	P	P	11 28 28.2	-1.1
	comp=Z,5.8nm,0.7s,baz=94,slow=4.4,SNR=7.2						
PSI				ScP	ScP	11 35 12.9	-1.2
	comp=Z,9.4nm,1.0s,baz=190,slow=4.9,SNR=7.6						
PSI				LR	LR	11 41 46.6	
	comp=Z,48nm,20.5s,baz=66,slow=42						
RABL	Rabaul	27.61	107	P	P	11 28 37.5	+1.7
RABL	Rabaul	27.61	107	P	P	11 28 38.0	+2.2
JCJ	Chichijima	27.64	33	P	P	11 28 34.9	-1.0
	comp=Z,92nm,0.4s,baz=269,slow=14,SNR=19						
JCJ	Chichijima	27.64	33	P	P	11 28 34.9	-1.0
QIS	Mount Isa	28.06	152	P	P	11 28 40.1	+0.4
	comp=Z,29nm,0.9s						
GSI	Gunungsitoli	28.34	265	P	P	11 28 40.8	-1.4
NJ2	Nanjing	28.49	348	*e*P	P	11 28 45.0	+1.7
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA	Guiyang	28.75	322	⇓P	P	11 28 47.0	+1.1
GYA				pmax	pmax		
	comp=Z,15nm,1.0s						
AS31	Alice Springs	28.78	164	P	P	11 28 46.2	+0.2
AS31				IAmb	IAmb	11 28 48.1	
	comp=Z,12nm,0.5s						
ASAR	Alice Springs	28.78	164	P	P	11 28 46.4	+0.4
	comp=Z,17nm,0.5s,baz=344,slow=7.6,SNR=387						
ASAR				PcP	PcP	11 31 52.4	0.0
	comp=Z,4.8nm,0.8s,baz=342,slow=2.6,SNR=5.1						
ASAR				S	S	11 33 23.6	-0.9
	comp=Z,3.7nm,0.9s,baz=357,slow=20,SNR=5.6						
ASAR				ScP	ScP	11 35 19.8	+0.2
	comp=Z,5.7nm,0.9s,baz=345,slow=2.4,SNR=13						
GIRL	Giralia	28.96	203	P	P	11 28 49.2	+1.7
	comp=Z,145nm,1.3s						
WRKA	Warakurna	29.14	175	P	P	11 28 49.4	+0.2
	comp=Z,18nm,1.3s						
CM31	Chiang Mai Arr	29.86	300	P	P	11 28 55.8	+0.2
CMAR	Chiang Mai Arr	29.86	300	P	P	11 28 56.2	+0.6
	comp=Z,11nm,0.8s,baz=116,slow=7.1,SNR=50						
CMAR				PcP	PcP	11 31 55.9	+0.7
	comp=Z,3.0nm,0.6s,baz=142,slow=1.5,SNR=10						
CMAR				ScP	ScP	11 35 24.2	+1.0
	comp=Z,9.3nm,0.9s,baz=139,slow=1.9,SNR=39						
CMAR				LR	LR	11 41 20.7	
	comp=Z,41nm,18.6s,baz=125,slow=37						
CMAR	Chiang Mai Arr	29.86	300	P	P	11 28 55.8	+0.2
CHTO	Chiang Mai	30.01	301	P	P	11 28 57.0	+0.1
CHTO				pmax	pmax		
	comp=Z,14nm,0.7s						
CHTO	Chiang Mai	30.01	301	P	P	11 28 57.0	+0.1
CHTO				IAmb	IAmb	11 28 59.0	
	comp=Z,14nm,0.7s						
ENH	Enshi	30.19	331	P	P	11 28 57.2	-1.2
ENH				IAmb	IAmb	11 28 59.9	
	comp=Z,19nm,0.7s						
KMI	Kunming	30.42	315	⇑P	P	11 29 01.8	+1.1
KMI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KMI				LR	LR		
	comp=Z,260nm,18.0s						
KMI				LR	LR		
	comp=Z,250nm,23.7s						
KMI				LR	LR		
	comp=Z,170nm,19.4s						
CTA	Charters Tower	31.38	141	P	P	11 29 10.2	+1.2
	comp=Z,3.5nm,0.3s,baz=326,slow=13,SNR=8.8						
CTAO	Charters Tower	31.38	141	P	P	11 29 10.6	+1.6
CTAO				pmax	pmax		
	comp=Z,23nm,0.9s						
CTAO	Charters Tower	31.38	141	P	P	11 29 10.6	+1.6
CTAO				IAmb	IAmb	11 29 11.4	
	comp=Z,23nm,0.9s						
MEEK	Meekatharra	31.41	192	P	P	11 29 08.9	-0.3
	comp=Z,26nm,0.5s						
JWT	Wachi	32.20	15	P	P	11 29 16.0	0.0
JWT				IAmb	IAmb	11 29 24.0	
	comp=Z,69nm,1.5s						
KSAR	Wonju Array Be	33.16	3	P	P	11 29 25.1	+0.8
KSAR	Wonju Array Be	33.16	3	P	P	11 29 25.1	+0.8
KSRS	Korea Array	33.18	3	P	P	11 29 24.4	0.0
	comp=Z,8.2nm,0.5s,baz=183,slow=9.5,SNR=34						
OOD	Oodnadatta	33.18	164	P	P	11 29 24.6	0.0
	comp=Z,82nm,0.9s						
KS19	Wonju Array Si	33.22	3	P	P	11 29 25.0	+0.2
KS19				IAmb	IAmb	11 29 27.7	
	comp=Z,21nm,0.8s						
XAN	Xi'an	33.61	334	⇑P	P	11 29 26.8	-1.5
XAN				pP	pwP	11 30 03.8	+0.8
XAN				sP	sP	11 30 22.5	+5.1
XAN				ScP	ScP	11 35 37.3	+1.6
XAN				pmax	pmax		
	comp=Z,29nm,1.2s						
CD2	Chengdu	33.75	324	*e*P	P	11 29 31.0	+1.5
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
MAJO	Matsushiro	34.17	18	⇓*e*P	P	11 29 33.3	+0.2
MAJO				pmax	pmax		
	comp=Z,3.0nm,0.4s						
MAJO	Matsushiro	34.17	18	P	P	11 29 32.6	-0.4
MAT	Matsushiro	34.17	18	P	P	11 29 31.6	-1.5
MJAR	Matsushiro Arr	34.17	18	P	P	11 29 31.7	-1.4
	comp=Z,6.1nm,1.0s,baz=184,slow=9.5,SNR=7.3						
MJAR	Matsushiro Arr	34.17	18	P	P	11 29 32.5	-0.5
MJAR				pmax	pmax		
	comp=Z,3.0nm,1.3s						
MJAR	Matsushiro Arr	34.17	18	P	P	11 29 32.5	-0.5
MORW	Morawa	34.36	195	P	P	11 29 34.7	-0.1
MORW	Morawa	34.36	195	P	P	11 29 34.5	-0.3
	comp=Z,19nm,1.5s						
FORT	Forrest	34.83	177	P	P	11 29 39.1	+0.4
FORT				IAmb	IAmb	11 29 40.1	
	comp=Z,31nm,0.6s						
FORT	Forrest	34.83	177	P	P	11 29 38.7	0.0
	comp=Z,44nm,0.6s						
INKA	Innaminka	34.85	156	P	P	11 29 40.0	+1.0
	comp=Z,71nm,1.1s						
MULG	Mulgathing	35.16	168	P	P	11 29 42.2	+0.6
	comp=Z,51nm,1.0s						
QLP	Quilpie	35.40	151	P	P	11 29 44.6	+0.9
	comp=Z,50nm,1.1s						
BLDU	Ballidu	35.67	194	P	P	11 29 45.6	-0.4
	comp=Z,24nm,0.9s						
JMM	Marumori	36.22	20	P	P	11 29 50.7	+0.2
KLBR	Kellerberrin	36.39	192	P	P	11 29 52.2	+0.1
	comp=Z,53nm,0.5s						
LCRK	Leigh Creek	36.42	162	P	P	11 29 52.7	+0.4
	comp=Z,160nm,1.0s						
RK1H	Rockhampton Ha	36.48	140	P	P	11 29 53.6	+0.7
	comp=Z,89nm,0.8s						
MUN	Mundaring	37.10	194	P	P	11 29 58.1	0.0
	comp=Z,27nm,0.5s						
LZH	Lanzhou	37.66	330	*e*P	P	11 30 03.0	0.0
LZH				PcP	PcP	11 32 19.0	+1.7
LZH				pmax	pmax		
	comp=Z,32nm,1.2s						
NWAO	Narrogin (SRO)	37.79	192	P	P	11 30 04.6	+0.8
BBOO	Buckleboo	38.05	166	P	P	11 30 06.6	+0.6
BBOO	Buckleboo	38.05	166	P	P	11 30 06.3	+0.3
	comp=Z,141nm,1.0s						
EIDS	Eidsvold	38.27	141	P	P	11 30 08.1	+0.1
EIDS	Eidsvold	38.27	141	P	P	11 30 07.9	-0.1
	comp=Z,81nm,0.8s						
MSHR	Mys Shultsa	38.53	6	⇓*e*P	P	11 30 07.9	-2.1
MSHR				pmax	pmax		
	comp=Z,22nm,1.2s						
WHYH	Whyalla	38.65	164	P	P	11 30 12.1	+1.1
	comp=Z,104nm,0.7s						
HHC	Hu-ho-hao-te	38.70	343	*e*P	P	11 30 10.8	-0.7
HHC				pP	pP	11 30 46.3	+2.0
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,130nm,4.1s						
STKA	Stephens Creek	38.88	158	P	P	11 30 14.0	+1.0
	comp=Z,72nm,0.7s,baz=333,slow=8.5,SNR=100						
STKA	Stephens Creek	38.88	158	P	P	11 30 14.1	+1.2
STKA				pmax	pmax		
	comp=Z,17nm,0.8s						
STKA	Stephens Creek	38.88	158	P	P	11 30 14.1	+1.2
STKA				IAmb	IAmb	11 30 14.9	
	comp=Z,18nm,0.8s						
HTT	Hallett	39.41	163	P	P	11 30 18.5	+1.1
	comp=Z,38nm,0.9s						
CN2	Changchun	39.46	360	*e*P	P	11 30 17.3	-0.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
USA0B	Ussuriysk Arra	40.23	7	P	P	11 30 24.2	+0.2
USA0B				pmax	pmax		
	comp=Z,15nm,0.9s						
USA0B	Ussuriysk Arra	40.23	7	P	P	11 30 24.2	+0.2
USRK	Ussuriysk Ar.	40.23	7	P	P	11 30 24.2	+0.2
	comp=Z,12nm,0.6s,baz=192,slow=6.6,SNR=26						
USRK	Ussuriysk Ar.	40.23	7	P	P	11 30 24.3	+0.3
USRK	Ussuriysk Ar.	40.23	7	P	P	11 30 24.3	+0.3
CMSA	Cobar Meteorol	40.25	153	P	P	11 30 25.4	+1.0
	comp=Z,21nm,1.3s						
MDJ	Mudanjiang	40.41	4	P	P	11 30 27.0	+1.5
MDJ				pmax	pmax		
	comp=Z,49nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,240nm,4.8s						
MDJ	Mudanjiang	40.41	4	P	P	11 30 25.7	+0.2
MDJ				IAmb	IAmb	11 30 28.2	
	comp=Z,35nm,0.7s						
ERM	Erimo	40.74	20	P	P	11 30 29.1	+0.9
ERM				pmax	pmax		
	comp=Z,74nm,1.4s						
ERM	Erimo	40.74	20	P	P	11 30 29.1	+0.9
ERM				IAmb	IAmb	11 30 35.0	
	comp=Z,74nm,1.4s						
LSA	Lhasa	41.46	312	P	P	11 30 34.8	-0.1
LSA				pmax	pmax		
	comp=Z,140nm,0.9s						
LSA	Lhasa	41.46	312	P	P	11 30 34.9	+0.1
LSA				pmax	pmax		
	comp=Z,28nm,0.6s						
LSA	Lhasa	41.46	312	P	P	11 30 34.9	+0.1
LSA				IAmb	IAmb	11 30 37.1	
	comp=Z,28nm,0.6s						
GTA	Gaotai	42.25	330	⇑P	P	11 30 39.8	-0.9
GTA				pP	pP	11 31 13.5	+0.3
GTA				sP	sP	11 31 31.3	+1.4
GTA				PcP	PcP	11 32 33.0	+1.1
GTA				ScP	ScP	11 36 08.5	+0.1
GTA				ScS	ScS	11 40 25.3	-1.5
GTA				pmax	pmax		
	comp=Z,7.0nm,1.3s						
ARMA	Armidale	42.34	146	P	P	11 30 43.1	+1.6
ARMA				IAmb	IAmb	11 30 44.0	
	comp=Z,47nm,1.2s						
ARMA	Armidale	42.34	146	P	P	11 30 42.9	+1.3
	comp=Z,38nm,1.3s						
ASAJ	Asahikawa	42.44	18	P	P	11 30 41.8	-0.2
	comp=Z,5.4nm,0.3s,baz=245,slow=9.2,SNR=22						
TAPN	Taplejung	43.01	306	*e*P	P	11 30 46.6	-0.7
	comp=Z,24nm,0.5s						
TAPN	Taplejung	43.01	306	*e*P	ScP	11 36 12.5	+0.5
ODAN	Odare	43.06	306	*e*P	P	11 30 47.3	-0.4
	comp=Z,35nm,0.7s						
ODAN	Odare	43.06	306	*e*P	ScP	11 36 12.5	+0.4
	comp=Z,27nm,0.9s						
ARPS	Mount Arapiles	43.40	161	P	P	11 30 50.8	+1.0
	comp=Z,191nm,0.9s						
RAMN	Ramite	43.74	305	*e*P	P	11 30 52.4	-0.7
	comp=Z,14nm,0.4s						
RAMN	Ramite	43.74	305	*e*P	ScP	11 36 15.2	+0.3
	comp=Z,8.0nm,0.4s						
YNG	Young	43.80	153	P	P	11 30 54.8	+1.7
	comp=Z,35nm,1.3s						
JIRN	Jiri	44.37	306	*e*P	P	11 30 57.5	-0.7
	comp=Z,31nm,0.8s						
JIRN	Jiri	44.37	306	*e*P	ScP	11 36 18.1	+0.5
GUN	Gumba	44.72	306	*e*P	P	11 31 00.1	-0.9
	comp=Z,44nm,0.6s						
GUN	Gumba	44.72	306	*e*P	ScP	11 36 20.0	+1.0
	comp=Z,23nm,0.8s						
CAN	Canberra	44.92	153	P	P	11 31 02.1	+0.1
CAN				pmax	pmax		
	comp=Z,44nm,0.9s						
CAN	Canberra	44.92	153	P	P	11 31 02.1	+0.1
CAN				IAmb	IAmb	11 31 05.2	
	comp=Z,44nm,0.9s						
CAN	Canberra	44.92	153	P	P	11 31 04.4	+2.3
PKI	Pulchoki	44.96	305	*e*P	P	11 31 01.9	-1.0
	comp=Z,31nm,1.0s						
PKI	Pulchoki	44.96	305	*e*P	ScP	11 36 20.0	0.0
	comp=Z,45nm,1.0s						
PALK	Pallekele	44.97	276	PcP	PcP	11 32 42.2	+0.6
	comp=Z,6.0nm,0.9s,baz=187,slow=3.1,SNR=6.0						
PALK				LR	LR	11 50 58.6	
	comp=Z,45nm,18.8s,baz=162,slow=37						
PKIN	Phulchoki	44.98	305	*e*P	P	11 31 01.8	-1.1
	comp=Z,12nm,0.7s						
PKIN	Phulchoki	44.98	305	*e*P	ScP	11 36 20.1	+0.2
	comp=Z,28nm,0.7s						
CNB	Canberra Magne	45.08	153	P	P	11 31 05.3	+1.9
	comp=Z,39nm,1.0s						
KKN	Kakani	45.16	306	*e*P	P	11 31 03.4	-0.9
	comp=Z,42nm,0.9s						
KKN	Kakani	45.16	306	*e*P	ScP	11 36 21.0	+0.4
	comp=Z,29nm,0.8s						
KLR	Kul'dur	45.17	5	P	P	11 31 03.8	0.0
	comp=Z,5.2nm,0.5s,baz=189,slow=8.2,SNR=25						
KLR	Kul'dur	45.17	5	*ce*P	P	11 31 04.5	+0.7
HIA	Hailar	45.22	354	P	P	11 31 04.3	+0.1
HIA				pmax	pmax		
	comp=Z,17nm,0.8s						
HIA	Hailar	45.22	354	P	P	11 31 04.3	+0.1
TOO	Toolangi	45.39	158	P	P	11 31 07.7	+2.0
TOO				pmax	pmax		
	comp=Z,79nm,1.3s						
TOO	Toolangi	45.39	158	P	P	11 31 07.7	+2.0
TOO				IAmb	IAmb	11 31 09.2	
	comp=Z,79nm,1.2s						
TOO	Toolangi	45.39	158	P	P	11 31 07.8	+2.0
	comp=Z,52nm,1.2s						
GKN	Gorkha	45.76	306	*e*P	P	11 31 08.0	-1.0
	comp=Z,29nm,0.7s						
GKN	Gorkha	45.76	306	*e*P	ScP	11 36 23.0	-0.1
	comp=Z,30nm,0.9s						
ULN	Ulaanbaatar	46.42	343	*ce*P	P	11 31 12.9	-0.8
ULN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ULN	Ulaanbaatar	46.42	343	P	P	11 31 12.4	-1.4
KOLN	Koldanda	46.52	305	*e*P	P	11 31 14.5	-0.4
	comp=Z,84nm,0.6s						
KOLN	Koldanda	46.52	305	*e*P	ScP	11 36 26.1	-0.2
	comp=Z,23nm,1.0s						
SONM	Songino Array	46.59	342	P	P	11 31 13.9	-1.2
	comp=Z,4.7nm,0.7s,baz=155,slow=8.9,SNR=28						
SONM				PcP	PcP	11 32 47.9	+1.3
	comp=Z,13nm,0.8s,baz=162,slow=3.7,SNR=19						
SONM	Songino Array	46.59	342	P	P	11 31 14.1	-0.9
SONM				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SONM	Songino Array	46.59	342	P	P	11 31 14.1	-0.9
DANN	Dangsing	46.61	306	*e*P	P	11 31 15.0	-0.8
	comp=Z,126nm,0.6s						
DANN	Dangsing	46.61	306	*e*P	ScP	11 36 26.9	+0.1
	comp=Z,29nm,0.9s						
PYUN	Piuthan	47.14	305	*e*P	P	11 31 19.2	-0.6
	comp=Z,83nm,0.7s						
PYUN	Piuthan	47.14	305	*e*P	ScP	11 36 28.6	-0.3
	comp=Z,28nm,0.8s						
DZM	Mont Dzumac	47.54	125	P	P	11 31 23.4	+0.6
DZM				IAmb	IAmb	11 31 25.1	
	comp=Z,39nm,0.8s						
DZM	Mont Dzumac	47.54	125	P	P	11 31 24.3	+1.5
YATNC	Mamie plateau,	47.90	125	P	P	11 31 27.3	+1.8
	comp=Z,113nm,1.1s						
HYB	Hyderabad	48.10	290	*i* P	P	11 31 28.0	+0.9
MARNC	Mare, Loyalty	48.58	123	P	P	11 31 32.5	+1.9
GLAD	Gladstone	49.32	158	P	P	11 31 37.3	+1.4
	comp=Z,38nm,0.8s						
ZEA	Zeya	49.42	1	*e*P	P	11 31 37.0	+0.5
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
TLY	Talaya	50.83	342	P	P	11 31 46.4	-0.8
	comp=Z,6.1nm,0.6s,baz=227,slow=6.3,SNR=5.8						
TLY	Talaya	50.83	342	⇓*i*P	P	11 31 46.6	-0.6
TLY				pmax	pmax		
	comp=Z,8.0nm,0.7s						
TLY	Talaya	50.83	342	P	P	11 31 46.9	-0.3
MOY	Mondy	51.65	341	*e*P	P	11 31 52.9	-0.6
WMQ	Urumqi	51.84	325	*e*P	P	11 31 54.8	-0.1
WMQ				sP	sP	11 32 49.0	+3.9
WMQ				pmax	pmax		
	comp=Z,20nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,190nm,5.1s						
SKR	Severo-Kuril's	52.87	24	⇓*e*P	P	11 32 00.2	-2.1
BOD	Bodaibo	54.30	352	*e*P	P	11 32 12.7	+0.1
BOD				pmax	pmax		
	comp=Z,16nm,1.6s						
PEA0B	Petropavlovsk-	55.37	23	P	P	11 32 20.5	+0.1
PEA0B				pmax	pmax		
	comp=Z,20nm,1.0s						
PEA0B	Petropavlovsk-	55.37	23	P	P	11 32 20.5	+0.1
PEA0B				IAmb	IAmb	11 32 22.5	
	comp=Z,20nm,0.9s						
PETK	Petropavlovsk-	55.37	23	P	P	11 32 20.6	+0.2
	comp=Z,9.2nm,0.7s,baz=191,slow=2.3,SNR=25						
PETK	Petropavlovsk-	55.37	23	P	P	11 32 19.8	-0.6
PETK	Petropavlovsk-	55.37	23	P	P	11 32 19.8	-0.6
PET	Petropavlovsk	55.68	23	P	P	11 32 22.0	-0.5
DGZ	Jazzator, Alta	55.76	331	*c i*P	P	11 32 22.2	-1.2
DGZ				pmax	pmax		
	comp=Z,12nm,1.8s						
MK31	Makanchi Array	56.67	326	P	P	11 32 28.9	-0.9
MK31				pmax	pmax		
	comp=Z,13nm,0.8s						
MK31	Makanchi Array	56.67	326	P	P	11 32 28.9	-0.9
MK31				IAmb	IAmb	11 32 31.5	
	comp=Z,13nm,0.8s						
MKAR	Makanchi Array	56.67	326	P	P	11 32 29.0	-0.8
	comp=Z,13nm,0.4s,baz=120,slow=7.1,SNR=112						
MKAR				ScP	ScP	11 37 09.3	-0.2
	comp=Z,5.6nm,0.5s,baz=106,slow=5.6,SNR=22						
MKAR	Makanchi Array	56.67	326	P	P	11 32 29.1	-0.7
MKAR	Makanchi Array	56.67	326	P	P	11 32 29.1	-0.7
UZB	Uzynbulak	56.69	320	*e*P	P	11 32 27.9	-2.3
UZB				pmax	pmax		
	comp=Z,9.0nm,0.9s						
PRZ	Przheval'sk	56.77	319	P	P	11 32 31.1	+0.3
PRZ				pmax	pmax		
	comp=Z,56nm,1.3s						
PRZ	Przheval'sk	56.77	319	P	P	11 32 31.1	+0.3
TARG	Taragay, Kyrgy	56.81	318	P	P	11 32 31.3	0.0
TARG				IAmb	IAmb	11 32 41.7	
	comp=Z,29nm,1.4s						
MAKZ	Makanchi	56.85	325	P	P	11 32 30.3	-0.8
MAKZ				pmax	pmax		
	comp=Z,21nm,0.9s						
MAKZ	Makanchi	56.85	325	P	P	11 32 30.3	-0.8
MAKZ				IAmb	IAmb	11 32 32.7	
	comp=Z,21nm,0.8s						
NIL	Nilore	56.93	308	P	P	11 32 31.5	-0.4
NIL				pmax	pmax		
	comp=Z,28nm,1.2s						
NIL	Nilore	56.93	308	P	P	11 32 31.5	-0.4
NIL				IAmb	IAmb	11 32 32.9	
	comp=Z,28nm,1.1s						
KSH	Kashi	57.08	315	P	P	11 32 33.5	+0.5
KSH				pP	pwP	11 33 11.5	-1.2
KSH				sP	PcP	11 33 28.0	+1.9
KSH				pmax	pmax		
	comp=Z,21nm,1.2s						
KDJ	Kajisay	57.41	319	P	P	11 32 34.9	-0.4
KDJ				pmax	pmax		
	comp=Z,22nm,1.0s						
KDJ	Kajisay	57.41	319	P	P	11 32 34.9	-0.4
KDJ				IAmb	IAmb	11 32 36.0	
	comp=Z,22nm,0.9s						
YAK	Yakutsk	57.80	2	P	P	11 32 37.2	-0.1
	comp=Z,25nm,0.6s,baz=3.2,slow=2.7,SNR=17						
YAK	Yakutsk	57.80	2	*e*P	P	11 32 37.7	+0.4
YAK				*e*		11 33 25.4	
YAK				pmax	pmax		
	comp=Z,72nm,0.9s						
YAK				pmax	pmax		
	comp=N,17nm,1.0s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.4s						
YAK	Yakutsk	57.80	2	P	P	11 32 37.5	+0.2
ARXS	Arharly	57.97	321	*e*P	P	11 32 37.9	-1.1
ARXS				pmax	pmax		
	comp=Z,13nm,1.3s						
ULHL	Ulahol	58.08	318	P	P	11 32 39.7	-0.3
	SNR=11						
BOOM	Boomskoye usch	58.39	318	P	P	11 32 41.7	-0.4
BOOM				pmax	pmax		
	comp=Z,11nm,1.1s						
BOOM	Boomskoye usch	58.39	318	P	P	11 32 41.7	-0.4
TKM2	Tokmak 2	58.81	319	P	P	11 32 44.6	-0.4
	SNR=18						
UCH	Uchtor	59.23	318	P	P	11 32 48.3	+0.1
	SNR=41						
CHMS	Chumysh	59.40	318	P	pP	11 33 27.4	+3.7

	SNR=5.3						
AAK	Ala-Archa	59.41	318	P	P	11 32 48.4	-0.7
	comp=Z,3.4nm,0.8s,baz=135,slow=5.6,SNR=12						
AAK	Ala-Archa	59.41	318	P	P	11 32 49.2	+0.1
AAK				pmax	pmax		
	comp=Z,18nm,1.5s						
AAK	Ala-Archa	59.41	318	P	P	11 32 49.2	+0.1
AAK				IAmb	IAmb	11 32 50.0	
	comp=Z,18nm,1.4s						
USP	Ospenovka	59.68	319	P	P	11 32 50.2	-0.6
	SNR=24						
AML	Almayashu	59.74	317	P	P	11 32 51.7	0.0
	SNR=37						
ZAA0	Zalesovo Array	59.78	333	P	P	11 32 49.1	-2.0
ZALV	Zalesovo Beam	59.78	333	P	P	11 32 49.4	-1.8
	comp=Z,4.5nm,0.4s,baz=116,slow=6.1,SNR=19						
ZALV	Zalesovo Beam	59.78	333	P	P	11 32 49.6	-1.6
ZALV	Zalesovo Beam	59.78	333	P	P	11 32 49.5	-1.6
EKS2	Erkin-Say	59.90	318	P	P	11 32 52.2	-0.2
	SNR=16						
DRK	Karamyk	60.04	314	P	P	11 32 53.3	-0.4
KBL	Kabul	60.52	308	P	P	11 32 56.2	-0.7
KBL				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KBL	Kabul	60.52	308	P	P	11 32 56.2	-0.7
KBL				IAmb	IAmb	11 32 57.4	
	comp=Z,10nm,0.7s						
BTLS	Baital	60.75	320	eP	P	11 32 55.2	-2.8
BTLS				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KURK	Kurchatov	60.87	328	ceP	P	11 32 57.7	-1.0
KURK				pmax	pmax		
	comp=Z,69nm,1.0s						
KURK	Kurchatov	60.87	328	P	P	11 32 57.6	-1.0
GAR	Garm	60.95	313	P	P	11 32 58.6	-1.0
BTK	Batken	60.95	314	P	P	11 32 59.1	-0.5
BTK				pmax	pmax		
	comp=Z,23nm,1.1s						
BTK	Batken	60.95	314	P	P	11 32 59.1	-0.5
BTK				IAmb	IAmb	11 33 00.1	
	comp=Z,23nm,1.1s						
DCZ	Deep Cove	61.60	148	P	P	11 33 03.8	+0.1
CHGR	Chuyangaron	61.69	312	P	P	11 33 03.6	-0.9
CHGR				IAmb	IAmb	11 33 05.3	
	comp=Z,37nm,1.3s						
SEY	Seymchan	61.81	13	P	P	11 33 05.3	+0.6
	comp=Z,1.4nm,0.2s,baz=224,slow=9.6,SNR=4.4						
QRZ	Quartz Range	61.85	141	P	P	11 33 06.9	+1.5
WKZ	Wanaka	62.19	147	P	P	11 33 09.1	+1.4
IUG	Iuzhnay	62.26	316	eP	P	11 33 06.6	-1.7
IUG				pmax	pmax		
	comp=Z,146nm,0.7s						
KKAR	Karatay Array	62.28	317	P	P	11 33 07.6	-0.8
KKAR	Karatay Array	62.28	317	P	P	11 33 07.6	-0.8
LBZ	Lake Benmore	62.57	146	P	P	11 33 11.4	+1.3
THZ	Tophouse	62.62	142	P	P	11 33 11.2	+0.6
RPZ	Rata Peaks	62.65	145	P	P	11 33 12.1	+1.4
RPZ	Rata Peaks	62.65	145	P	P	11 33 11.8	+1.1
LTZ	Lake Taylor	62.82	143	P	P	11 33 12.8	+0.9
LTZ				IAmb	IAmb	11 33 13.7	
	comp=Z,27nm,1.0s						
OXZ	Oxford	63.00	144	P	P	11 33 13.8	+0.9
OXZ				IAmb	IAmb	11 33 14.1	
	comp=Z,21nm,0.7s						
ODZ	Otahua Downs	63.23	146	P	P	11 33 15.7	+1.2
KHZ	Kahutara	63.37	142	P	P	11 33 15.9	+0.5
SNZO	South Karori	63.49	141	P	P	11 33 16.3	+0.1
URZ	Urewera	63.49	137	P	P	11 33 16.3	0.0
	comp=Z,11nm,0.6s,baz=121,slow=24,SNR=13						
URZ	Urewera	63.49	137	P	P	11 33 17.0	+0.7
URZ				IAmb	IAmb	11 33 18.2	
	comp=Z,11nm,0.7s						
URZ	Urewera	63.49	137	P	P	11 33 17.1	+0.7
BKZ	Black Stump Fm	63.53	138	P	P	11 33 17.4	+0.7
BKZ	Black Stump Fm	63.53	138	P	P	11 33 17.5	+0.9
BRZS	Berezniki	63.80	325	eP	P	11 33 16.0	-2.2
BRZS				pmax	pmax		
	comp=Z,13nm,1.0s						
BVAR	Borovoye Array	66.45	327	P	P	11 33 34.0	-1.2
	comp=Z,24nm,0.9s,baz=185,slow=13,SNR=68						
BVAR	Borovoye Array	66.45	327	P	P	11 33 34.0	-1.2
BRVK	Borovoye	66.52	327	P	P	11 33 34.9	-0.7
BRVK				pmax	pmax		
	comp=Z,41nm,1.0s						
BRVK	Borovoye	66.52	327	P	P	11 33 34.9	-0.7
TIXI	Tiksi	67.41	1	P	P	11 33 40.5	-0.5
	comp=Z,16nm,0.5s,baz=117,slow=1.2,SNR=26						
TIXI	Tiksi	67.41	1	ceP	P	11 33 40.8	-0.1
TIXI	Tiksi	67.41	1	P	P	11 33 40.5	-0.5
TIXI				IAmb	IAmb	11 33 41.9	
	comp=Z,33nm,1.2s						
BILL	Bilibino	69.36	15	⇑eP	P	11 33 50.8	-2.3
BILL				e		11 34 14.1	
BILL				e*PP	pwP	11 34 32.3	+0.5
BILL				e		11 36 24.3	
BILL				eS	PnS	11 43 42.2	+6.5
BILL				eSS	SS	11 47 24.1	+6.7
BILL				pmax	pmax		
	comp=Z,3.0nm,1.1s						
BILL	Bilibino	69.36	15	P	P	11 33 52.7	-0.4
NRIK	Noril'sk	69.78	346	P	P	11 33 55.5	-0.1
	comp=Z,12nm,0.5s,baz=125,slow=6.4,SNR=18						
NRIK	Noril'sk	69.78	346	ceP	P	11 33 55.4	-0.3
NRIK	Noril'sk	69.78	346	P	P	11 33 55.2	-0.5
NRIK				IAmb	IAmb	11 33 56.5	
	comp=Z,14nm,0.6s						
GEYT	Alibeck	69.90	309	P	P	11 33 56.8	-0.3
	comp=Z,6.6nm,0.8s,baz=82,slow=11,SNR=4.6						
GEYT	Alibeck	69.90	309	P	P	11 33 56.5	-0.6
GYA0B	ALIBECK ARRAY	69.90	309	P	P	11 33 57.2	+0.1
ABKAR	Akbulak array	71.23	321	P	P	11 34 03.8	-1.1
ABKAR	Akbulak array	71.23	321	P	P	11 34 03.6	-1.2
ABKAR				IAmb	IAmb	11 34 05.6	
	comp=Z,13nm,0.8s						
SOCY	Socotra	71.37	281	P	P	11 34 04.5	-1.9
SOCY				IAmb	IAmb	11 34 06.6	
	comp=Z,26nm,0.8s						
SVE	Sverdlovsk	73.10	329	⇑eP	P	11 34 15.0	-0.8
SVE				pmax	pmax		
	comp=Z,37nm,1.0s						
ARU	Arti	74.07	328	P	P	11 34 20.0	-1.5
	comp=Z,5.0nm,0.5s,baz=128,slow=4.0,SNR=19						
ARU	Arti	74.07	328	d iP	P	11 34 19.6	-1.9
ARU						11 37 07.9	
ARU				S	S	11 43 42.0	+0.3
ARU				pmax	pmax		
	comp=Z,13nm,0.6s						
ARU	Arti	74.07	328	P	P	11 34 20.3	-1.1
ARU				IAmb	IAmb	11 34 22.7	
	comp=Z,34nm,1.2s						
AKUT	Akutan	74.08	35	P	P	11 34 21.7	+0.2
SDPT	Sand Point	77.34	34	P	P	11 34 40.4	+0.4
	baz=259						
KIRV	Kirov	79.37	329	P	P	11 34 50.1	-1.0
	comp=Z,19nm,0.5s,baz=75,slow=2.5,SNR=8.0						
RAYN	Ar Rayn	79.46	293	P	P	11 34 51.1	-1.4
RAYN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
RAYN	Ar Rayn	79.46	293	P	P	11 34 51.1	-1.4
BELG	Belogornoye	79.50	322	d iP	P	11 34 50.3	-1.6
BELG				pmax	pmax		
	comp=Z,4.0nm,1.0s						
OPO	Ambohidratompo	80.58	251	P	P	11 34 58.0	-0.7
	comp=Z,2.5nm,0.6s,baz=60,slow=9.8,SNR=3.0						
GCSA	Galena City Sc	80.83	25	P	P	11 35 00.3	+1.4
	baz=260						
TTA	Tatalina	80.92	27	P	P	11 35 00.8	+1.3
TTA				pmax	pmax		
	comp=Z,17nm,1.3s						
TTA	Tatalina	80.92	27	P	P	11 35 01.1	+1.6
	baz=261						
TTA	Tatalina	80.92	27	P	P	11 35 00.8	+1.3
ZEI	Tsey	81.24	312	eP	P	11 34 59.8	-2.0
ZEI				pmax	pmax		
	comp=Z,2.0nm,0.8s						
L19K	White Mountain	81.34	28	P	P	11 35 03.3	+1.6
	baz=262						
L19K	White Mountain	81.34	28	P	P	11 35 02.9	+1.2
VOI	Vohitsoka	81.39	247	P	P	11 35 02.5	-0.4
PRGR	Permogore	81.68	332	eP	P	11 35 00.1	-3.3
K20K	Telida	81.85	27	P	P	11 35 06.8	+2.4
	baz=263						
K20K	Telida	81.85	27	P	P	11 35 05.2	+0.8
K20K				IAmb	IAmb	11 35 07.1	
	comp=Z,32nm,1.4s						
J20K	Nowinta River	81.92	26	P	P	11 35 06.5	+1.9
	baz=263						
J20K	Nowinta River	81.92	26	P	P	11 35 06.3	+1.7
J20K				IAmb	IAmb	11 35 07.5	
	comp=Z,38nm,1.4s						
KDAK	Kodiak Island	82.00	32	P	P	11 35 06.1	+0.9
KDAK				pmax	pmax		
	comp=Z,83nm,1.5s						
KDAK	Kodiak Island	82.00	32	P	P	11 35 06.1	+0.9
KBZ	Khabaz	82.01	313	P	P	11 35 05.2	-0.3
	comp=Z,2.5nm,0.8s,baz=138,slow=3.7,SNR=3.2						
KBZ	Khabaz	82.01	313	⇓eP	P	11 35 06.2	+0.7
KBZ				pmax	pmax		
	comp=Z,4.0nm,1.2s						
IMAR	Indian Mountai	82.31	24	P	P	11 35 07.5	+0.9
GURO	Guroymak-BITLI	82.55	308	P	P	11 35 08.7	+0.1
SPU	Mount Spurr	82.56	29	P	P	11 35 08.2	+0.1
H21K	Melozitna Rive	82.66	24	P	P	11 35 10.4	+2.0
	baz=264						
H21K	Melozitna Rive	82.66	24	P	P	11 35 09.3	+0.9
H21K				IAmb	IAmb	11 35 11.2	
	comp=Z,21nm,1.2s						
CHUM	Lake Minchumin	82.69	26	P	P	11 35 10.4	+1.8
	baz=265						
CAST	Castle Rocks	82.75	27	P	P	11 35 10.2	+1.2
	baz=265						
CAST	Castle Rocks	82.75	27	P	P	11 35 10.1	+1.1
I21K	Tanana	82.95	25	P	P	11 35 11.4	+1.4
	baz=265						
I21K	Tanana	82.95	25	P	P	11 35 11.3	+1.4
I21K				IAmb	IAmb	11 35 12.5	
	comp=Z,23nm,1.0s						
BRSE	Bradley Lake S	83.11	30	P	P	11 35 12.0	+1.1
	baz=266						
SUA	Susitna One	83.22	29	P	P	11 35 12.0	+0.5
	baz=266						
SUA	Susitna One	83.22	29	P	P	11 35 11.4	-0.1
SUA				IAmb	IAmb	11 35 12.5	
	comp=Z,40nm,1.0s						
BPAW	Bear Paw Mtn.	83.29	26	P	P	11 35 13.0	+1.3
	baz=266						
MLY	Manley	83.47	25	P	P	11 35 13.7	+1.0
	baz=266						
MLY	Manley	83.47	25	P	P	11 35 12.9	+0.3
MLY				IAmb	IAmb	11 35 14.7	
	comp=Z,14nm,0.8s						
M22K	Willow	83.53	28	P	P	11 35 13.0	0.0
	baz=267						
COLD	Coldfoot	83.84	23	P	P	11 35 16.4	+1.9
	baz=266						
COLD	Coldfoot	83.84	23	P	P	11 35 15.5	+1.1
COLD				IAmb	IAmb	11 35 17.1	
	comp=Z,16nm,0.8s						
MAW	Mawson	83.86	200	P	P	11 35 15.5	+1.1
	comp=Z,1.7nm,0.7s,baz=4.9,slow=11,SNR=2.4						
VNDA	Vanda	83.98	173	P	P	11 35 16.1	+1.1
	comp=Z,12nm,0.8s,baz=316,slow=6.4,SNR=61						
VNDA	Vanda	83.98	173	P	P	11 35 16.0	+1.1
VNDA				pmax	pmax		
	comp=Z,11nm,0.8s						
VNDA	Vanda	83.98	173	P	P	11 35 15.9	+1.0
PMR	Palmer	84.00	29	P	P	11 35 16.1	+0.8
	baz=268						
I23K	Minto, Yukon-K	84.06	25	P	P	11 35 17.0	+1.4
	baz=267						
I23K	Minto, Yukon-K	84.06	25	P	P	11 35 16.6	+1.0
I23K				IAmb	IAmb	11 35 17.7	
	comp=Z,21nm,1.1s						
NEA2	Nenana	84.15	26	P	P	11 35 17.4	+1.3
	baz=267						
NEA2	Nenana	84.15	26	P	P	11 35 16.9	+0.7
TOLK	Toolik Lake Re	84.17	22	P	P	11 35 18.0	+1.8
	baz=266						
TOLK	Toolik Lake Re	84.17	22	P	P	11 35 16.6	+0.5
TOLK				IAmb	IAmb	11 35 18.7	
	comp=Z,19nm,1.0s						
MCK	McKinley	84.17	26	P	P	11 35 16.4	+0.1
MCK				pmax	pmax		
	comp=Z,15nm,1.0s						
MCK	McKinley	84.17	26	P	P	11 35 17.1	+0.8
	baz=268						
MCK	McKinley	84.17	26	P	P	11 35 16.4	+0.1
KNK	Knik Glacier	84.31	29	P	P	11 35 17.4	+0.4
	baz=268						
KNK	Knik Glacier	84.31	29	P	P	11 35 17.7	+0.7
KNK				IAmb	IAmb	11 35 18.7	
	comp=Z,27nm,1.0s						
PWL	Port Wells	84.35	29	P	P	11 35 17.9	+0.7
	baz=268						
WAT6	Susitna Watana	84.68	28	P	P	11 35 19.8	+0.8
	baz=269						
COLA	College	84.69	25	⇓eP	P	11 35 19.0	+0.3
COLA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
H24K	Noodor Dome	84.70	24	P	P	11 35 20.6	+1.7
	baz=268						
H24K	Noodor Dome	84.70	24	P	P	11 35 19.9	+1.0
SCM	Sheep Creek Mo	84.86	28	P	P	11 35 21.2	+1.4
	baz=269						
ILAR	Eielson Array	85.10	25	P	P	11 35 20.5	-0.3
	comp=Z,0.8nm,0.5s,baz=255,slow=4.7,SNR=7.0						
MOS	Moscow	85.55	325	eP	P	11 35 31.2	+8.0
BMAR	Burnt Mountain	86.02	23	P	P	11 35 26.6	+1.1
OBN	Obninsk	86.17	325	⇓iP	P	11 35 25.4	-0.9
OBN				e*PP	pP	11 36 09.7	+5.2
OBN				e		11 38 49.3	
OBN				eS	S	11 45 49.9	+1.8
OBN				pmax	pmax		
	comp=Z,13nm,0.6s						
J26L	Joseph Creek	86.53	26	P	P	11 35 28.2	+0.2
	baz=272						
APA	Apatity	87.09	337	⇓iP	P	11 35 34.7	+4.2
APA				pmax	pmax		
	comp=Z,12nm,0.9s						
APA				MLR	MLR		
	comp=Z,1µm,23.0s						
L27K	Beaver Creek,	87.38	27	P	P	11 35 33.3	+1.2
	baz=274						
KIBK	Kibwezi	87.94	268	P	P	11 35 34.9	-0.9
DAWY	Dawson	88.38	26	P	P	11 35 37.4	+0.6
	baz=276						
KMBO	Kilima Mbogo	88.64	269	P	P	11 35 39.5	+0.2
	comp=Z,1.8nm,0.3s,baz=30,slow=6.2,SNR=9.8						
KMBO	Kilima Mbogo	88.64	269	P	P	11 35 39.0	-0.3
I29M	Ogilvie Camp,	88.69	25	P	P	11 35 39.0	+0.8
	baz=277						
HYT	Haines Junctio	89.65	29	P	P	11 35 43.9	+1.0
	baz=278						
ARCES	ARCESS Array B	89.72	340	P	P	11 35 42.0	-0.9
	comp=Z,9.2nm,0.7s,baz=85,slow=5.1,SNR=18						
ARCES	ARCESS Array B	89.72	340	P	P	11 35 42.2	-0.7
ARCES				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ARCES	ARCESS Array B	89.72	340	P	P	11 35 42.2	-0.7
ARCES				IAmb	IAmb	11 35 42.8	
	comp=Z,10nm,0.8s						
M30M	Minto, Yukon	89.73	27	P	P	11 35 44.5	+1.3
	baz=278						
SPITS	Spitsbergen Ar	89.87	349	P	P	11 35 43.1	-0.4
	comp=Z,19nm,1.0s,baz=92,slow=8.3,SNR=13						
INK	Inuvik	90.08	21	P	P	11 35 44.0	-0.5
	comp=Z,3.2nm,1.0s,baz=304,slow=3.9,SNR=7.5						
INK	Inuvik	90.08	21	P	P	11 35 44.4	-0.2
INK				pmax	pmax		
	comp=Z,10.0nm,0.7s						
INK	Inuvik	90.08	21	P	P	11 35 44.8	+0.2
	baz=282						
INK	Inuvik	90.08	21	P	P	11 35 44.4	-0.2
WHY	Whitehorse	90.94	29	P	P	11 35 50.3	+1.4
	baz=280						
AKASG	Malin Array Be	90.97	321	P	P	11 35 47.1	-2.0
	comp=Z,0.9nm,0.4s,baz=67,slow=4.7,SNR=7.5						
AKBB	Malin Array Si	90.97	321	⇑eP	P	11 35 47.1	-2.0
FINES	FINESS Array B	91.01	332	P	P	11 35 47.8	-1.2
	comp=Z,2.1nm,0.5s,baz=54,slow=4.6,SNR=17						
FINES	FINESS Array B	91.01	332	i P	P	11 35 47.7	-1.3
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MNK	Minsk	91.23	325	i P	P	11 35 49.7	-0.5
MNK				i *PP	pP	11 36 30.9	+2.4
MNK				i		11 39 28.4	
MNK				i PPP	PPP	11 41 33.4	
MNK				i S	SKSac	11 46 07.0	-1.1
MNK				i SS	SS	11 52 44.0	+0.5
MNK				i SSS	SSS	11 56 22.8	
MNK				pmax	pmax		
	comp=N,18nm,0.7s						
MNK				pmax	pmax		
	comp=Z,16nm,0.8s						
MNK				pmax	pmax		
	comp=E,4.0nm,0.9s						
MNK				MLR	MLR		
	comp=N,46nm,9.0s						
MNK				MLR	MLR		
	comp=Z,47nm,8.0s						
MNK				MLR	MLR		
	comp=E,10.0nm,10.0s						
MNK	Minsk	91.23	325	i P	P	11 35 49.8	-0.4
	comp=E,4.0nm,0.8s						
MNK				i P	P	11 35 49.8	-0.4
	comp=N,18nm,0.7s						
MNK				i P	P	11 35 49.8	-0.4
	comp=Z,16nm,0.8s,baz=81						
MNK				i pP	pP	11 36 31.0	+2.5
MNK				i PP	PP	11 39 28.4	-0.7
MNK				i PPP	PPP	11 41 33.5	
MNK				i S	SKSac	11 46 07.1	-1.0
MNK				i sS	pS	11 47 16.4	-6.4
MNK				i SS	SS	11 52 44.0	+0.5
MNK				i SSS	SSS	11 56 22.8	
MNK				i LRM	MLR	12 18 01.6	
	comp=N,46nm,9.1s						
MNK				i LRM	MLR	12 18 05.9	
	comp=Z,47nm,8.0s						
MNK				i LRM	MLR	12 18 06.4	
	comp=E,10.0nm,10.1s						
FARO	Faro, Yukon	91.37	27	P	P	11 35 51.8	+1.0
	baz=282						
P33M	Teslin, Yukon	92.03	29	P	P	11 35 55.1	+1.2
	baz=282						
DLBC	Dease Lake	93.83	31	P	P	11 36 02.5	+0.3
DLBC				IAmb	IAmb	11 36 04.3	
	comp=Z,5.9nm,0.9s						
TGTN	Hyland Airport	93.88	28	P	P	11 36 03.5	+1.1
	baz=286						
BUR08	Bucovina Ar. S	94.06	318	P	P	11 36 03.0	-0.6
QSPA	South Pole Qui	94.08	180	P	P	11 36 04.7	+1.5
QSPA				IAmb	IAmb	11 36 05.4	
	comp=Z,8.1nm,0.9s						
CRVS	Cervenica-Dubn	96.24	320	eP	P	11 36 13.3	-0.1
CRVS	Cervenica-Dubn	96.24	320	ePDIFF	P	11 36 13.2	-0.1
NB2	NORSAR Subarra	97.98	333	P	P	11 36 19.5	-1.5
	comp=Z,2.5nm,0.8s,baz=66,slow=4.6						
NOA	NORSAR Array B	97.98	333	P	P	11 36 19.1	-1.9
	comp=Z,1.0nm,0.6s,baz=66,slow=4.6,SNR=5.1						
YKA	Yellowknife Ar	99.47	24	P	Pdif	11 36 27.1	-0.4
	comp=Z,1.7nm,0.8s,baz=299,slow=4.5,SNR=3.8						
NVAR	Mina Array Bea	107.29	48	PKKPbc	PKKPbc	11 52 29.1	+0.3
	comp=Z,0.3nm,0.6s,baz=118,slow=3.6,SNR=4.2						
NVAR				PKKPab	PKKPab	11 52 42.8	-0.9
	comp=Z,1.8nm,0.7s,baz=129,slow=4.7,SNR=13						
PDAR	Pinedale Array	111.62	41	PKiKP	PKiKP	11 41 19.1	-0.3
	comp=Z,0.2nm,0.5s,baz=219,slow=0.6,SNR=4.3						
PDAR				PKKPab	PKKPab	11 52 21.8	-2.7
	comp=Z,1.4nm,0.6s,baz=123,slow=6.1,SNR=14						
O20A	White River Ci	113.73	43	P	PKiKP	11 41 25.3	+1.9
	baz=298						
ANMO	Albuquerque	117.40	47	P	PKiKP	11 41 32.4	+1.8
	baz=298						
T25A	Trinidad	117.81	44	P	PKiKP	11 41 33.4	+1.9
	baz=300						
ECSD	EROS Data Cent	118.94	34	P	PKiKP	11 41 33.9	+0.7
	baz=310						
MNTX	Cornudas Mount	119.67	50	P	PKiKP	11 41 36.8	+1.8
	baz=297						
SCHQ	Schefferville	120.27	8	PKP	PKPdf	11 41 34.8	-0.6
	comp=Z,1.5nm,0.3s,baz=20,slow=1.3,SNR=6.3						
MSTX	Muleshoe	120.54	46	P	PKiKP	11 41 38.0	+1.2
	baz=300						
AMTX	Amarillo	120.86	45	P	PKiKP	11 41 38.5	+1.2
	baz=301						
TORD	Torodi Ar. Bea	121.91	288	PKP	PKPdf	11 41 39.1	-0.4
	comp=Z,3.2nm,0.7s,baz=42,slow=2.2,SNR=19						
TORD				PKKPbc	PKKPbc	11 51 36.9	-0.9
	comp=Z,0.9nm,0.7s,baz=279,slow=2.9,SNR=5.5						
TORD	Torodi Ar. Bea	121.91	288	PKPdf	PKPdf	11 41 38.9	-0.7
TXAR	Lajitas Array	122.05	52	PKP	PKiKP	11 41 39.9	+0.1
	comp=Z,1.1nm,0.8s,baz=195,slow=0.7,SNR=12						
TXAR				PKKPbc	PKKPbc	11 51 37.2	-0.5
	comp=Z,0.7nm,0.6s,baz=130,slow=6.4,SNR=15						
WMOK	Wichita Mounta	122.95	44	P	PKiKP	11 41 42.4	+1.1
	baz=304						
JCT	Junction City	124.46	48	P	PKiKP	11 41 45.1	+0.7
	baz=300						
S39A	Bolivar	124.73	38	PKPdf	PKiKP	11 41 44.9	+0.2
833A	Chaparral WMA,	125.83	51	P	PKiKP	11 41 48.8	+1.6
	baz=299						
U40A	Yellville	125.87	38	P	PKiKP	11 41 47.3	+0.3
	baz=310						
W39A	Magazine	126.01	40	P	PKiKP	11 41 47.8	+0.4
	baz=308						
MIAR	Mount Ida	126.55	41	P	PKiKP	11 41 49.5	+1.1
	baz=308						
DBIC	Dimbokro	129.59	282	SKPbc	SKPbc	11 45 02.1	-0.3
	comp=Z,11nm,0.9s,baz=56,slow=2.6,SNR=6.4						
PLCA	Paso Flores	140.74	160	PKhKP	PKPpre	11 42 08.5	
	comp=Z,1.4nm,0.8s,baz=202,slow=5.4,SNR=3.3						
PLCA				SKPbc	SKiKP	11 45 38.0	-1.1
	comp=Z,3.5nm,0.8s,baz=224,slow=2.8,SNR=6.2						
VA03	San Esteban	147.70	154	PKPdf	PKPdf	11 42 27.0	+0.2
VA03					PKPbc	11 42 30.7	+0.9
VA03				PKPab	PKPab	11 42 34.2	+1.9
AAGR	Agrelo	148.15	156	i P	PKiKP	11 42 32.4	-0.2
ASAL	Salagasta	148.58	156	i P	PKiKP	11 42 33.4	-0.1
AUSP	Uspallata	148.67	155	i P	PKiKP	11 42 34.1	+0.2
RTLS	Leoncito	149.07	154	i P	PKiKP	11 42 35.0	+0.2
RTCV	Cerro Valdivia	149.34	156	i P	PKiKP	11 42 35.0	0.0
MRA	San Martin	149.90	160	i P	PKiKP	11 42 36.4	+0.1
ACCO	Cerro Coronel	150.21	154	i P	PKiKP	11 42 37.7	+0.5
AROD	Rodeo	150.39	152	i P	PKiKP	11 42 38.5	+0.9
ACHE	Chepes	150.70	158	i P	PKiKP	11 42 38.2	+0.2
AVFE	Valle Fertil	150.84	156	i P	PKiKP	11 42 38.6	+0.5
TCA	Tanti	151.26	161	i P	PKiKP	11 42 39.8	+0.7
ACLC	CERRO LA CRUZ	152.13	156	i P	PKiKP	11 42 41.5	+0.5
ATAH	Atahualpa	155.74	98	PKPab	PKPab	11 43 09.0	+2.1
	comp=Z,6.1nm,0.8s,baz=134,slow=1.4,SNR=4.8						
LVC	Limon Verde	156.79	143	PKPab	PKPab	11 43 11.0	+0.1
	comp=Z,4.0nm,0.8s,baz=221,slow=4.5,SNR=4.7						
CPUP	Villa Florida	157.77	173	PKPab	PKPab	11 43 13.9	-0.6
	comp=Z,4.2nm,0.7s,baz=179,slow=4.8,SNR=5.9						
SIV	San Ignacio	166.45	151	PKP	PKPdf	11 42 50.1	-0.5
	comp=Z,0.9nm,0.5s,baz=256,slow=5.3,SNR=3.5						
SIV				PKPab	PKPab	11 43 52.8	0.0
	comp=Z,2.1nm,0.5s,baz=196,slow=5.7,SNR=8.9						

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*IDC **25** 11:32:37.4±1.3, 36°.22S×53°.00E, h0^{km}, mb3.8/3, mb1 4.0/3, mb1mx3.4/59, mbtmp3.8/3, Error ellipse: s-maj=47.6km s-min=38.5km az=140.0*

*NEIC **25** 11:32:39.3±1.4, 36°.31S±0°.09×53°.0E±0°.2, h10^{km}±1^{km}, mb4.5/16, Error ellipse: s-maj=22.9km s-min=15.4km az=262.0*

ISC 25 11:32:38.6±0.6, **36°.25S**±0°.10×**53°.0E**±0°.1, **h10^{km}, n28,** σ**0^{s}.65**/26, **mb4.3**/10, **South Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VOI	Vohitsoka	15.28	338	Pn	Pn	11 36 14.9	+0.4
MSEY	Mahe Island	31.50	5	P	P	11 39 00.1	-0.6
MAW	Mawson	31.91	173	P	P	11 39 03.7	0.0
TSUM	Tsumeb	35.42	289	P	P	11 39 34.5	-0.5
TSUM				IAmb	IAmb	11 39 34.8	
	comp=Z,9.0nm,1.4s						
KMBO	Kilima Mbogo	37.88	334	P	P	11 39 56.3	+0.2
LODK	Lodwar	42.77	334	P	P	11 40 36.2	-0.3
SNAA	Sanae	45.41	202	P	P	11 40 57.4	+0.3
	comp=Z,1.0nm,0.7s,baz=97,slow=9.1,SNR=5.2						
SNAA	Sanae	45.41	202	P	P	11 40 57.2	+0.1
SNAA				IAmb	IAmb	11 41 22.5	
	comp=Z,5.4nm,1.2s						
H01W2	Cape Leeuwin H	48.99	107	T	T	12 34 02.4	
	baz=250,slow=75,SNR=14						
H01W3	Cape Leeuwin H	49.00	107	T	T	12 33 52.1	
	baz=250,slow=75,SNR=14						
H01W1	Cape Leeuwin H	49.01	107	T	T	12 33 54.8	
	baz=250,slow=75,SNR=11						
PALK	Pallekele	50.50	37	P	P	11 41 36.9	-0.2
MORW	Morawa	52.74	101	P	P	11 41 53.1	-0.6
QSPA	South Pole Qui	53.94	180	P	P	11 42 02.5	+0.3
QSPA				IAmb	IAmb	11 42 18.4	

	comp=Z,3.7nm,1.4s						
GSI	Gunungsitoli	55.77	58	P	P	11 42 16.1	+0.1
ASAR	Alice Springs	69.37	105	P	P	11 43 47.2	+0.4
	comp=Z,0.6nm,0.7s,baz=234,slow=6.3,SNR=7.8						
ASAR	Alice Springs	69.37	105	P	P	11 43 47.6	+0.8
KNRA	Kununurra	69.53	95	P	P	11 43 47.8	0.0
KNRA				IAmb	IAmb	11 44 14.6	
	comp=Z,7.4nm,1.1s						
WRA	Warramunga Arr	71.68	102	P	P	11 44 01.9	+0.9
	comp=Z,0.7nm,0.6s,baz=238,slow=5.8,SNR=11						
WB2	Warramunga Arr	71.69	102	P	P	11 44 01.6	+0.6
WB2				IAmb	IAmb	11 44 18.3	
	comp=Z,9.5nm,1.4s						
WRAB	Tennant Creek	71.70	102	P	P	11 44 02.3	+1.2
WRAB				IAmb	IAmb	11 44 28.9	
	comp=Z,6.7nm,1.2s						
WB0	Warramunga Arr	71.82	101	P	P	11 44 03.0	+1.2
WB0				IAmb	IAmb	11 44 03.8	
	comp=Z,1.8nm,0.8s						
ARMA	Armidale	78.94	120	P	P	11 44 41.4	-1.3
ARMA				IAmb	IAmb	11 44 42.2	
	comp=Z,11nm,1.3s						
KKAR	Karatay Array	80.57	13	P	P	11 44 51.8	+1.0
INK	Inuvik	147.68	5	PKPbc	PKPbc	11 52 22.4	+0.2
	comp=Z,0.2nm,0.3s,baz=345,slow=2.8,SNR=3.1						
INK	Inuvik	147.68	5		PKPdf	11 52 19.1	-0.4
INK				PKPbc	sPKPdf	11 52 23.1	+0.7
ILAR	Eielson Array	149.05	16	PKPbc	PKPbc	11 52 25.7	-0.3
	comp=Z,1.2nm,0.7s,baz=314,slow=3.7,SNR=15						
ILAR	Eielson Array	149.05	16		PKPbc	11 52 26.2	+0.2

IDC 25 11:42:28.5±1.7,**0°.51S**×**131°.47E**,**h0**^{km},**mb3.2**/2, **mb1 3.4**/4,**mb1mx3.3**/40,**mbtmp3.2**/4,**ML3.3**/2,**Error ellipse: s-maj=41.1km s-min=11.3km az=116.0,Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	0.41	209	Pg	Pg	11 42 37.1	+0.7
	217nm,0.3s,baz=16,slow=2.6,SNR=1847						
SIJI				Lg	Lg	11 42 41.5	
	1µm,0.3s,baz=222,slow=22,SNR=161						
FITZ	Fitzroy Crossi	18.40	198	P	Pn	11 46 43.8	-1.4
	0.1nm,0.3s,baz=22,slow=11,SNR=2.2						
FITZ				S	Sn	11 49 54.2	-17
	0.0nm,0.3s,baz=228,slow=14,SNR=1.4						
WRA	Warramunga Arr	19.52	172	P	P	11 46 56.8	-0.8
	0.1nm,0.3s,baz=355,slow=13,SNR=8.0						
WRA				S	Sn	11 50 21.3	-17
	0.1nm,0.3s,baz=358,slow=16,SNR=1.9						
ASAR	Alice Springs	23.14	174	P	P	11 47 36.9	+0.2
	0.1nm,0.3s,baz=353,slow=9.9,SNR=1.8						
MKAR	Makanchi Array	63.72	325	P	P	11 53 01.5	-0.5
	0.3nm,0.6s,baz=126,slow=7.3,SNR=2.9						

IDC ***25*** *11:45:24.2±1.1, 9°.28S×71°.42W, h513^{km}±13^{km}, mb3.1/7, mb1 3.3/12, mb1mx3.2/38, mbtmp4.0/12, Error ellipse: s-maj=19.1km s-min=14.1km az=55.0*

NEIC ***25*** *11:45:25.4±1.6, 9°.30S±0°.10×71°.5W±0°.1, h515^{km}±9^{km}, mb4.3/24, Error ellipse: s-maj=19.7km s-min=13.6km az=72.0*

ISC 25 11:45:24.1±0.4,**9°.28S**±0°.06×**71°.45W**±0°.07,**h500**^{km},**n58**, σ**1s.52**/63,**mb4.1**/16,**Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CZSB	Cruzeiro do Su	1.98	321	P	P	11 46 31.4	+2.2
ETMB	Extrema	5.19	96	P	P	11 46 55.3	+2.5
ETMB				S	S	11 48 07.6	+2.3
TBTG	Tabatinga, AM	5.28	17	P	P	11 46 55.4	+1.6
NNA	Nana	5.95	243	P	P	11 47 01.8	+1.7
	3.5nm,0.3s,baz=8.0,slow=4.1,SNR=8.3						
NNA				S	S	11 48 18.8	+0.4
	0.7nm,0.3s,baz=161,slow=20,SNR=1.8						
NNA	Nana	5.95	243	P	P	11 47 01.6	+1.5
ATAH	Atahualpa	7.20	287	P	P	11 47 14.2	+1.4
	3.5nm,0.3s,baz=22,slow=22,SNR=20						
ATAH				S	S	11 48 44.0	+2.2
	0.2nm,0.3s,baz=340,slow=23,SNR=3.7						
LPAZ	La Paz	7.68	155	P	P	11 47 19.9	+2.0
SAML	Samuel	8.17	88	P	P	11 47 24.5	+2.1
PB16	IPOC Station P	9.20	168	P	P	11 47 34.0	+0.3
PB12	IPOC Station P	9.35	173	P	P	11 47 34.6	-0.1
PB11	IPOC Station P	10.56	171	P	P	11 47 47.6	-0.1
PB08	IPOC Station P	11.03	169	P	P	11 47 53.4	+0.6
TA01	Diego Aracena	11.29	174	P	P	11 47 56.0	+0.9
OTAV	Otavalo	11.75	323	P	P	11 48 04.7	+4.1
PB01	IPOC Station P	11.85	171	P	P	11 48 02.3	+1.1
SIV	San Ignacio	12.12	124	P	P	11 48 03.9	-0.2
	0.5nm,0.3s,baz=232,slow=13,SNR=2.6						
PB07	IPOC Station P	12.47	173	P	P	11 48 09.2	+1.4
PB09	IPOC Station P	12.63	171	P	P	11 48 11.6	+2.1
LVC	Limon Verde	13.48	170	S	S	11 50 41.6	-1.0
	0.2nm,0.3s,baz=271,slow=23,SNR=1.5						
PTGA	Pitinga	14.23	54	P	P	11 48 26.4	-0.1
	0.3nm,0.3s,baz=225,slow=11,SNR=5.5						
PTGA	Pitinga	14.23	54	P	P	11 48 27.4	+0.9
BOAV	Boa Vista	15.90	44	P	P	11 48 45.1	+1.2
BOAV				IAmb	IAmb	11 48 45.8	
	comp=Z,8.8nm,0.8s						
SDV	Santo Domingo	18.06	3	P	P	11 49 04.9	-0.5
	comp=Z,1.1nm,0.3s,baz=170,slow=10,SNR=9.1						
SDV	Santo Domingo	18.06	3	P	P	11 49 05.8	+0.4
BAUV	El Baul	18.42	11	P	P	11 49 09.1	+0.6
CPUP	Villa Florida	21.61	144	P	P	11 49 35.8	-1.5
	comp=Z,1.9nm,0.5s,baz=330,slow=8.3,SNR=3.8						
CPUP	Villa Florida	21.61	144	P	P	11 49 37.3	0.0
CPUP				IAmb	IAmb	11 49 50.8	
	comp=Z,14nm,1.4s						
PLTB	Pedras Altas	27.84	146	P	P	11 50 31.9	-0.8
PLCA	Paso Flores	31.34	179	P	P	11 51 02.8	-0.2
	comp=Z,2.1nm,0.7s,baz=309,slow=8.1,SNR=3.9						
PLCA	Paso Flores	31.34	179	P	P	11 51 03.5	+0.5
Y49A	Blount Mountai	45.19	342	P	P	11 52 54.7	-1.1
Y49A				IAmb	IAmb	11 52 56.6	
	comp=Z,15nm,1.4s						
FPAL	Fort Paine	45.60	344	P	P	11 52 57.8	-1.1
FPAL				IAmb	IAmb	11 53 09.1	
	comp=Z,13nm,1.2s						
U54A	Nelsons Funny	46.59	348	P	P	11 53 06.3	-0.2
U54A				IAmb	IAmb	11 53 32.3	
	comp=Z,17nm,1.1s						
TZTN	Tazewell	46.98	347	P	P	11 53 08.4	-1.0
PBMO	Poplar Bluff	49.16	340	P	P	11 53 24.9	-0.9
PBMO				IAmb	IAmb	11 53 29.9	
	comp=Z,4.6nm,0.8s						
TXAR	Lajitas Array	49.37	322	P	P	11 53 27.1	-0.5
	comp=Z,0.6nm,0.7s,baz=150,slow=8.5,SNR=6.3						
TXAR				ScP	ScP	11 57 45.2	-3.2
	comp=Z,0.2nm,0.8s,baz=141,slow=4.6,SNR=2.5						
TXAR	Lajitas Array	49.37	322	P	P	11 53 27.3	-0.3
P53A	Whipple	49.39	350	P	P	11 53 27.2	-0.1
P53A				IAmb	IAmb	11 53 27.4	
	comp=Z,7.7nm,0.9s						
W35A	Tecumseh	50.30	333	P	P	11 53 33.8	-0.4
W35A				IAmb	IAmb	11 53 33.9	
	comp=Z,9.2nm,0.6s						
S39A	Bolivar	51.01	338	P	P	11 53 38.3	-1.0
E62A	Clayton Lake	55.67	2	P	P	11 54 13.6	+1.3
E62A				IAmb	IAmb	11 54 20.8	
	comp=Z,22nm,1.4s						
D62A	Allapoint, All	56.15	2	P	P	11 54 15.3	-0.3
D62A				IAmb	IAmb	11 54 36.5	
	comp=Z,21nm,1.4s						
B35A	Bob, Littlefor	60.67	343	P	P	11 54 44.8	-1.4
B35A				IAmb	IAmb	11 54 56.7	
	comp=Z,11nm,1.3s						
E28A	Huff	61.43	337	P	P	11 54 51.5	+0.1
PDAR	Pinedale Array	62.38	329	P	P	11 54 57.1	-0.7
	comp=Z,0.4nm,0.5s,baz=126,slow=8.6,SNR=4.8						
ULM	Lac du Bonnet	62.99	343	P	P	11 54 59.5	-1.8
	comp=Z,2.4nm,0.4s,baz=162,slow=9.2,SNR=4.2						
ULM	Lac du Bonnet	62.99	343	P	P	11 55 00.2	-1.1
ULM				IAmb	IAmb	11 55 00.4	
	comp=Z,6.9nm,0.9s						
WALA	Waterton Lakes	69.00	332	P	P	11 55 39.0	-0.1
SNAA	Sanae	74.58	162	P	P	11 56 11.4	+0.2
TORD	Torodi Ar. Bea	75.96	74	P	P	11 56 19.0	-0.8
	comp=Z,0.6nm,0.7s,baz=245,slow=4.2,SNR=4.9						
QSPA	South Pole Qui	80.84	180	P	P	11 56 45.4	+0.2
VNDA	Vanda	88.40	190	P	P	11 57 22.7	+0.8
INK	Inuvik	88.67	341	P	P	11 57 22.1	-1.1
	comp=Z,0.8nm,1.0s,baz=151,slow=3.2,SNR=4.4						
INK	Inuvik	88.67	341	P	P	11 57 23.4	+0.2
ZALV	Zalesovo Beam	131.55	19	SKPbc	SKPbc	12 06 15.0	-3.1
	comp=Z,0.5nm,0.6s,baz=349,slow=5.9,SNR=2.1						
MKAR	Makanchi Array	136.43	26	SKPbc	SKPbc	12 06 31.2	-3.0
	comp=Z,0.4nm,0.8s,baz=315,slow=3.1,SNR=3.2						
ASAR	Alice Springs	138.94	217	PKP	PKPdf	12 03 52.6	-1.6
	comp=Z,0.7nm,0.8s,baz=148,slow=2.0,SNR=4.2						
ASAR				SKPbc	SKPbc	12 06 39.1	-3.0
	comp=Z,0.4nm,0.9s,baz=141,slow=4.5,SNR=1.9						
WRA	Warramunga Arr	141.43	221	PKhKP	PKPpre	12 03 52.9	
	comp=Z,0.3nm,0.6s,baz=146,slow=3.1,SNR=7.1						
WRA				SKPbc	SKPbc	12 06 45.7	-2.9
	comp=Z,0.4nm,0.6s,baz=135,slow=2.7,SNR=6.1						

LVSN ***25*** *12:16:11.7±1.5, 58°.78N×28°.35E, h0^{km}±11^{km}, ML2.1*

EST 25 12:16:10.3±0.1,**59°.21N**×**27°.84E**,**h0**^{km},**ML1.6**(HEL), **Explosion,Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EE04	Vaivara Sinima	0.16	6	*e*P	Pg	12 16 13.1	-0.3
EE04				*e*S	Sg	12 16 15.4	-0.1
EE05	Udria, Vaivara	0.18	13	*e*P	Pg	12 16 13.6	-0.2
EE05				*e*S	Sg	12 16 16.2	0.0
EE03	Tooma soojaam,	0.88	248	*e*P	Pg	12 16 26.0	-1.1
EE03				*e*S	Sg	12 16 37.4	-1.2
VSU	Vasula	0.95	218	*e*P	Pg	12 16 27.5	-0.9
VSU				*e*S	Sg	12 16 39.3	-1.4
VSU				AML	AML	12 16 45.7	
	comp=N,55nm,0.4s						
VSU				AML	AML	12 16 46.8	
	comp=E,46nm,0.5s						
VSU				AML	AML	12 16 50.3	
	comp=Z,20nm,0.8s						
VSU	Vasula	0.95	218	*e*P	Pg	12 16 27.5	-0.9
VSU				*e*S	Sg	12 16 39.6	-1.1
ARBE	Arbavere	0.98	284	*e*PB	Pg	12 16 28.4	-0.6
VJF	Virojoki	1.34	354	*e*P	Pg	12 16 34.2	-1.7
EE02	Kiisa, Saku	1.62	271	*e*PG	Pn	12 16 39.3	-0.7
EE02				*e*SN	Sn	12 17 01.1	-0.5
PVF	Pernaja	1.67	324	*e*PN	Pn	12 16 40.6	-0.2
PVF				MSG		12 16 59.7	
	comp=Z,6.2nm,0.2s						
PVF				*e*SG	Sn	12 17 01.6	-1.1
MEF	Metsahovi	2.02	301	*e*PG	Pn	12 16 46.6	+1.1
MEF				*e*SG	Sn	12 17 12.3	+1.0
MEF				MSG		12 17 13.2	
	comp=Z,3.9nm,0.1s						
NUR	Nurmijrvi	2.07	310	*e*PG	Pb	12 16 47.5	-1.2
NUR				*e*SG	Sn	12 17 13.7	+1.0
NUR				MSG		12 17 15.1	
	comp=Z,1.8nm,0.1s						
MTSE	Matsula	2.15	258	*e*P	Pb	12 16 48.8	-1.2
MTSE				AML	AML	12 16 49.2	
	comp=Z,36nm,0.6s						
MTSE				*e*S	Sb	12 17 15.9	-1.2
MTSE				AML	AML	12 17 17.2	
	comp=N,47nm,0.2s						
MTSE				AML	AML	12 17 19.8	
	comp=E,41nm,0.8s						
MTSE	Matsula	2.15	258	*e*PG	Pn	12 16 48.4	+1.1
MTSE				*e*SB	Sn	12 17 15.6	+1.1
EE01	Perakula, Nova	2.17	272	*e*PB	Pn	12 16 48.7	+1.1
EE01				*e*SG	Sb	12 17 16.8	-1.0
RUFX	Ruokolahti	2.29	13	*e*P	Pn	12 16 49.0	-0.3
RUFX				*e*PB	Pb	12 16 50.1	-2.4
RUFX				*e*SG	Sb	12 17 21.0	-0.3
FIA0	FINESS Array S	2.40	339	*e*P	Pn	12 16 50.7	-0.1
FIA0				*e*PB	Pb	12 16 52.2	-2.2
FIA0				*e*SG	Sb	12 17 24.5	0.0
FIA0				MSG		12 17 25.9	
	comp=Z,1.5nm,0.1s						
FIA1	FINESS Array S	2.40	339	*e*P	Pn	12 16 50.8	0.0
FIA1				*e*PB	Pb	12 16 52.4	-2.0
FIA1				*e*SG	Sb	12 17 24.2	-0.3
FIA1				MSG		12 17 25.9	
	comp=Z,2.8nm,0.1s						
KAF	Kangasniemi	3.00	346	*e*PB	Pb	12 17 02.3	-2.3
KAF				*e*SG	Sb	12 17 42.2	+0.4
SLIT	Slitere, Latvi	3.33	244	*e*S	Sn	12 17 41.8	-1.8
RAF	Rauma	3.54	303	*e*P	Pn	12 17 07.2	+0.7
JOF	Joensuu	4.08	23	*e*P	Pn	12 17 13.4	-0.5

AUST ***25*** *13:00:38.7±0.7, 31°.32S×138°.70E, h10^{km}, Error ellipse: s-maj=7.9km s-min=6.1km az=74.0*

IDC ***25*** *13:00:41.2±3.1, 30°.64S×139°.16E, h0^{km}, mb1 3.2/3, mb1mx3.1/34, mbtmp2.9/3, ML2.6/3, Error ellipse: s-maj=83.5km s-min=16.1km az=41.0*

ISC 25 13:00:38.6±0.9,**31°.35S**±0°.05×**138°.63E**±0°.04,**h14**^{km},**n11**, σ**1s.60**/21,**South Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCRK	Leigh Creek	0.97	338	P	Pn	13 00 57.7	-0.1
	baz=1.0,SNR=34						
LCRK				S	Sn	13 01 11.2	-0.1
	baz=1.0						
HTT	Hallett	2.09	173	P	Pn	13 01 15.0	+1.7
	baz=2.1						
HTT				S	Sn	13 01 40.3	+1.1
	baz=2.1						
STKA	Stephens Creek	2.58	103	Pn	Pn	13 01 20.8	+0.8
	0.3nm,0.3s,baz=301,slow=23,SNR=1.6						
STKA				Pg	Pb	13 01 26.6	+1.9
	3.4nm,0.3s,baz=287,slow=14,SNR=27						
STKA				Sn	Sn	13 01 52.1	+0.9
	1.8nm,0.3s,baz=306,slow=19,SNR=3.7						
STKA				Lg	Lg	13 01 58.1	
	7.0nm,0.3s,baz=324,slow=19,SNR=9.3						
BBOO	Buckleboo	2.63	236	P	Pn	13 01 22.6	+2.0
	baz=2.7,SNR=7.2						
BBOO				S	Sb	13 01 56.0	-1.6
	baz=2.7						
INKA	Innaminka	4.04	28	P	Pn	13 01 41.5	+1.4
	baz=4.0,SNR=4.4						
INKA				S	Sn	13 02 28.4	+1.3
	baz=4.0						
MULG	Mulgathing	4.08	284	P	Pn	13 01 41.6	+1.1
	baz=4.1,SNR=4.5						
MULG				S	Sn	13 02 29.6	+1.5
	baz=4.1						
OOD	Oodnadatta	4.37	323	P	Pn	13 01 45.8	+1.2
	baz=4.4						
OOD				S	Sn	13 02 36.1	+0.7
	baz=4.4						
ARPS	Mount Arapiles	6.03	155	P	Pn	13 02 08.2	+0.9
	baz=6.0						
ARPS				S	Sn	13 03 12.6	-3.5
	baz=6.0						
CMSA	Cobar Meteorol	6.04	94	P	Pn	13 02 07.3	-0.2
	baz=6.0						
CMSA				S	Sn	13 03 14.7	-1.7
	baz=6.0						
ASAR	Alice Springs	8.73	330	Pn	Pn	13 02 43.8	-0.7
	0.1nm,0.3s,baz=148,slow=13,SNR=16						
ASAR				Sn	Sn	13 04 12.8	-10
	0.3nm,0.3s,baz=149,slow=22,SNR=3.8						
WRA	Warramunga Arr	12.00	340	Pn	Pn	13 03 27.1	-2.1
	0.1nm,0.3s,baz=159,slow=13,SNR=11						
WRA				Sn	Sn	13 05 34.0	-9.0
	0.1nm,0.3s,baz=161,slow=24,SNR=1.5						

IDC ***25*** *13:05:22.8±1.9, 0°.89N×99°.36E, h110^{km}±12^{km}, mb4.0/19, mb1 4.0/20, mb1mx3.7/55, mbtmp4.3/20, MS2.8/1, Ms1 2.8/1, ms1mx2.4/46, Error ellipse: s-maj=33.6km s-min=11.6km az=52.0*

NEIC ***25*** *13:05:24.0±1.6, 0°.91N±0°.07×99°.34E±0°.07, h112^{km}±6^{km}, mb4.6/21, Error ellipse: s-maj=11.8km s-min=8.6km az=217.0*

DJA ***25*** *13:05:25.0±0.4, 1°N±4°×9°9E±°, h88^{km}±7^{km}, M3.8/10, MLv3.8/10*

ISC 25 13:05:22.0±0.5,**0°.92N**±0°.05×**99°.32E**±0°.06,**h100**^{km},**n75**, σ**1s.56**/77,**mb4.4**/37,**Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNSI	Mandailing Nat	0.29	115	P	Pn	13 05 39.7	+3.2
PPI	Padang Panjang	1.74	142	P	Pn	13 05 54.8	+3.6
GSI	Gunungsitoli	1.79	282	P	Pn	13 05 55.0	+3.2
GSI	Gunungsitoli	1.79	282	Pn	Pn	13 05 54.5	+2.7
RPSI	Rantau Prapat	1.81	347		Pn	13 05 55.3	+3.2
BKNI	Bangkinang	1.82	109	P	Pn	13 05 54.9	+2.7
BKNI	Bangkinang	1.82	109		Pn	13 05 54.6	+2.4
PSI	Prapat	1.91	348	P	Pn	13 05 55.3	+1.7
	17nm,0.3s,baz=337,slow=16,SNR=69						
PSI				S	Sn	13 06 17.6	0.0
	15nm,0.3s,baz=172,slow=12,SNR=12						
PDSI	Padang	2.15	148	P	Pn	13 05 59.8	+3.3
SISI	Saibi	2.24	186	P	Pn	13 05 59.0	+1.3
TSI	Tuntungan	2.67	344	P	Pn	13 06 17.1	+14
TPTI		3.16	317	P	Pn	13 06 12.0	+2.1
MLSI	Meulaboh, Aceh	4.42	319	P	Pn	13 06 28.6	+1.7
KULM	Kulim	4.54	17	Pn	Pn	13 06 31.4	+2.8
MNAI	Manna	6.38	145	Pn	Pn	13 06 55.8	+2.3
CMAR	Chiang Mai Arr	17.44	359	P	P	13 09 17.8	-1.0
	0.2nm,0.3s,baz=191,slow=12,SNR=9.2						
PALK	Pallekele	19.61	289	LR	LR	13 15 49.0	
	comp=Z,32nm,20.8s,baz=165,slow=32						
H08S2	Diego Garcia H	28.07	252	T	T	13 38 28.0	
	baz=68,slow=74						
H08S3	Diego Garcia H	28.08	252	T	T	13 38 28.0	
	baz=68						
H08S1	Diego Carcia H	28.09	252	T	T	13 38 30.8	
	baz=68,slow=74						
ODAN	Odare	28.23	337	*e*P	P	13 11 06.5	+0.6
	16nm,0.5s						
TAPN	Taplejung	28.55	338	*e*P	P	13 11 09.6	+0.8
RAMN	Ramite	28.62	336	*e*P	P	13 11 10.8	+1.4
	4.6nm,0.3s						
JIRN	Jiri	29.42	336	*e*P	P	13 11 17.4	+0.8
	7.1nm,0.5s						
PKIN	Phulchoki	29.68	334	*e*P	P	13 11 19.1	+0.3
	4.4nm,0.5s						
GUN	Gumba	29.77	336	*e*P	P	13 11 20.0	+0.3
	21nm,0.4s						
KKN	Kakani	29.92	334	*e*P	P	13 11 21.5	+0.7
KOLN	Koldanda	30.66	332	*e*P	P	13 11 28.3	+1.0
	11nm,0.6s						
DANN	Dangsing	31.07	333	*e*P	P	13 11 32.0	+0.9
	11nm,0.6s						
PYUN	Piuthan	31.23	331	*e*P	P	13 11 33.3	+1.0
	5.9nm,0.4s						
FITZ	Fitzroy Crossi	32.06	127	P	P	13 11 40.2	+0.7
	0.8nm,0.6s,baz=328,slow=5.1,SNR=1.5						
KNRA	Kununurra	33.44	121	P	P	13 11 51.9	+0.3
WB0	Warramunga Arr	40.06	123	P	P	13 12 46.9	-0.9
WB0				IAmb	IAmb	13 12 54.1	
	comp=Z,15nm,1.6s						
WRA	Warramunga Arr	40.10	123	P	P	13 12 46.6	-1.5
	comp=Z,2.2nm,0.5s,baz=317,slow=10.0,SNR=46						
WRA				PcP	PcP	13 14 50.4	-0.6
	comp=Z,0.4nm,0.5s,baz=314,slow=2.7,SNR=7.9						
WRA				ScP	ScP	13 18 27.7	-3.6
	comp=Z,0.4nm,0.8s,baz=307,slow=3.6,SNR=4.9						
WRA	Warramunga Arr	40.10	123	P	P	13 12 49.6	+1.5
ASAR	Alice Springs	41.55	128	P	P	13 12 58.5	-1.5
	comp=Z,0.3nm,0.4s,baz=304,slow=7.6,SNR=8.3						
ASAR				PcP	PcP	13 14 55.2	-0.5
	comp=Z,0.4nm,0.5s,baz=304,slow=2.7,SNR=7.1						
ASAR				ScP	ScP	13 18 33.4	-3.5
	comp=Z,0.2nm,0.6s,baz=304,slow=4.2,SNR=6.4						
KSRS	Korea Array	44.91	33	P	P	13 13 25.7	-1.0
	comp=Z,0.5nm,0.4s,baz=213,slow=8.9,SNR=1.7						
KDJ	Kajisay	45.61	337	P	P	13 13 34.2	+1.7
KDJ				IAmb	IAmb	13 13 34.8	
	comp=Z,6.9nm,0.8s						
BOOM	Boomskoye usch	46.41	336	P	P	13 13 40.0	+1.2
AAK	Ala-Archa	47.13	335	P	P	13 13 45.2	+0.8
	comp=Z,0.7nm,0.3s,baz=124,slow=7.4,SNR=6.9						
SONM	Songino Array	47.13	7	P	P	13 13 44.9	+0.6
	comp=Z,3.5nm,0.5s,baz=191,slow=9.6,SNR=24						
SONM				PcP	PcP	13 15 14.3	-0.2
	comp=Z,0.6nm,0.4s,baz=198,slow=4.5,SNR=4.9						
SONM	Songino Array	47.13	7	P	P	13 13 45.0	+0.8
MK31	Makanchi Array	48.06	344	P	P	13 13 52.0	+0.7
MK31				IAmb	IAmb	13 13 52.5	
	comp=Z,4.4nm,0.5s						
MKAR	Makanchi Array	48.06	344	P	P	13 13 51.7	+0.4
	comp=Z,3.7nm,0.3s,baz=156,slow=8.0,SNR=104						
MKAR				PcP	PcP	13 15 17.8	+0.2
	comp=Z,0.3nm,0.6s,baz=158,slow=2.1,SNR=1.2						
MKAR	Makanchi Array	48.06	344	P	P	13 13 52.0	+0.7
MAKZ	Makanchi	48.15	344	P	P	13 13 52.3	+0.3
MAKZ				IAmb	IAmb	13 13 53.1	
	comp=Z,3.4nm,0.6s						
KKAR	Karatay Array	49.27	332	P	P	13 14 00.8	+0.2
TLY	Talaya	50.71	3	P	P	13 14 12.8	+1.4
TLY				IAmb	IAmb	13 14 14.1	
	comp=Z,11nm,0.9s						
KURK	Kurchatov	52.64	344	P	P	13 14 26.1	+0.4
KURK				IAmb	IAmb	13 14 26.4	
	comp=Z,2.8nm,0.8s						
ZAA0	Zalesovo Array	54.20	349	P	P	13 14 37.5	+0.4
ZAA0				IAmb	IAmb	13 14 37.5	
	comp=Z,6.4nm,0.5s						
ZALV	Zalesovo Beam	54.20	349	P	P	13 14 37.2	+0.2
	comp=Z,7.3nm,0.5s,baz=168,slow=6.7,SNR=32						
ZALV	Zalesovo Beam	54.20	349	P	P	13 14 37.3	+0.3
BRVK	Borovoye	57.29	340	P	P	13 14 59.1	-0.1
BRVK				IAmb	IAmb	13 14 59.1	
	comp=Z,4.4nm,0.3s						
ABKAR	Akbulak array	58.77	331	P	P	13 15 09.6	0.0
ABKAR				IAmb	IAmb	13 15 10.0	
	comp=Z,4.0nm,0.8s						
AKTO	Aktyubinsk	60.49	331	P	P	13 15 19.5	-1.9
	comp=Z,0.9nm,0.4s,baz=108,slow=6.4,SNR=3.4						
KBZ	Khabaz	65.68	318	P	P	13 15 56.1	+0.4
	comp=Z,1.7nm,0.7s,baz=95,slow=3.7,SNR=5.6						
BELG	Belogornoye	66.90	328	P	P	13 16 02.3	-1.1
	comp=Z,4.8nm,0.5s,baz=100,slow=12,SNR=4.4						
NRIK	Noril'sk	68.76	356	P	P	13 16 15.3	+0.5
	comp=Z,1.8nm,0.4s,baz=108,slow=5.9,SNR=2.5						
BRTR	Keskin Array B	70.87	312	P	P	13 16 27.8	-0.8
	comp=Z,1.2nm,0.6s,baz=100,slow=7.5,SNR=3.9						
TIXI	Tiksi	73.11	9	P	P	13 16 39.6	-1.4
	comp=Z,2.2nm,0.4s,baz=240,slow=2.0,SNR=2.8						
TIXI	Tiksi	73.11	9	P	P	13 16 39.8	-1.2
TIXI				IAmb	IAmb	13 16 40.9	
	comp=Z,4.5nm,1.0s						
AKASG	Malin Array Be	76.78	322	P	P	13 17 01.4	-1.2
	comp=Z,1.0nm,0.4s,baz=85,slow=5.0,SNR=2.8						
BURAR	Bucovina Array	78.64	318	P	P	13 17 14.4	+1.3
BUR08	Bucovina Ar. S	78.66	318	P	P	13 17 14.5	+1.3
BUR08				IAmb	IAmb	13 19 16.9	
	comp=Z,21nm,1.9s						
SUR	Sutherland	80.79	237	P	P	13 17 26.7	+1.5
FIA1	FINESS Array S	81.23	332	P	P	13 17 26.5	-0.1
FINES	FINESS Array B	81.23	332	P	P	13 17 26.8	+0.1
	comp=Z,3.3nm,0.5s,baz=112,slow=6.2,SNR=16						
ARCES	ARCESS Array B	83.52	340	P	P	13 17 38.5	0.0
	comp=Z,1.1nm,0.4s,baz=102,slow=4.6,SNR=29						
ARCES	ARCESS Array B	83.52	340	P	P	13 17 38.4	0.0
HFS	Hagfors	87.02	330	P	P	13 17 56.2	+0.2
	comp=Z,2.2nm,0.5s,baz=124,slow=4.3,SNR=9.2						
SPITS	Spitsbergen Ar	87.66	348	P	P	13 17 58.1	-0.7
	comp=Z,5.4nm,0.8s,baz=98,slow=8.9,SNR=5.4						
ULM	Lac du Bonnet	127.39	12	PKP	PKPdf	13 24 13.8	-1.4
	comp=Z,1.9nm,0.5s,baz=333,slow=4.5,SNR=2.1						
NVAR	Mina Array Bea	127.75	37	PKP	PKPdf	13 24 17.2	+0.7
	comp=Z,0.3nm,0.6s,baz=272,slow=2.4,SNR=2.7						
PDAR	Pinedale Array	129.34	27	PKP	PKPdf	13 24 19.3	-0.2
	comp=Z,0.2nm,0.4s,baz=35,slow=2.2,SNR=2.3						
TXAR	Lajitas Array	142.75	34	PKP	PKPdf	13 24 41.6	-2.9
	comp=Z,0.3nm,0.7s,baz=189,slow=0.4,SNR=4.9						

IDC ***25*** *13:08:26.7±6.5, 4°.84N×126°.90E, h87^{km}±72^{km}, mb3.1/4, mb1 3.3/5, mb1mx2.9/45, mbtmp3.4/5, ML3.3/1, Error ellipse: s-maj=118.4km s-min=28.6km az=72.0*

ISC 25 13:08:27.4±1.6,**4°.9N**±0°.3×**127°.3E**±0°.4,**h100**^{km},**n5**, σ**1s.51**/6,**mb3.1**/4,**Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	6.99	145	P	Pn	13 10 08.7	+1.4
	0.6nm,0.3s,baz=264,slow=23,SNR=1.6						
SIJI				S	Sn	13 11 23.6	-1.9
	0.4nm,0.3s,baz=166,slow=22,SNR=1.7						
FITZ	Fitzroy Crossi	22.93	184	P	P	13 13 23.2	0.0
	1.8nm,0.9s,baz=15,slow=11,SNR=2.4						
WRA	Warramunga Arr	25.67	165	P	P	13 13 49.2	+1.1
	0.3nm,0.5s,baz=343,slow=10,SNR=5.5						
ASAR	Alice Springs	29.14	167	P	P	13 14 18.9	-0.4
	0.3nm,0.7s,baz=344,slow=7.4,SNR=2.3						
MKAR	Makanchi Array	56.90	325	P	P	13 18 01.6	-0.5
	0.2nm,0.7s,baz=128,slow=6.2,SNR=1.5						

JMA ***25*** *13:10:45.6±0.1, 23°.47N×121°.65E, h48^{km}±2^{km}, M3.8*
TAP ***25*** *13:10:46.5, 23°.51N×121°.63E, h48^{km}, ML3.5, C*
ISC 25 13:10:46.7±1.2**, 23°.48N**±0°.02×**121°.68E**±0°.02**, h43**^{km}±5^{km}**,**
n110, σ0^s.94/195**, 1C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HGSD	**Ruisui** baz=264	**0.23**	**272**	P	**Pn**	**13 10 54.5**	**-0.1**
HGSD	baz=264			S	**Sn**	**13 11 00.7**	**+0.5**
TEGC	**Jichi Village** baz=342	**0.26**	**331**	P	**Pn**	**13 10 54.8**	**-0.1**
TEGC	baz=342			S	**Sn**	**13 11 01.6**	**+1.1**
ECBN	**Changbin** baz=212	**0.27**	**231**	*i* P	**Pn**	**13 10 55.1**	**+0.2**
ECBN	baz=212			*i* S	**Sn**	**13 11 01.6**	**+0.9**
EGFH	**Guangfu** baz=300	**0.29**	**309**	P	**Pn**	**13 10 55.0**	**-0.2**
EGFH	baz=300			S	**Sn**	**13 11 01.2**	**+0.1**
EHY	**Hungye** baz=268	**0.33**	**274**	*e*P	**Pn**	**13 10 54.9**	**-0.6**
EHY	baz=268			S	**Sn**	**13 11 01.2**	**-0.6**
EYUL	**Yuli** baz=250	**0.36**	**248**	P	**Pn**	**13 10 56.2**	**+0.3**
EYUL	baz=250			*e*S	**Sn**	**13 11 03.4**	**+1.1**
YULB	**Yu-li** baz=257	**0.36**	**256**	*e*P	**Pn**	**13 10 55.4**	**-0.6**
YULB	baz=257			S	**Sn**	**13 11 01.8**	**-0.7**
TWF1	**Yuli** baz=252	**0.37**	**250**	⇑*i*P	**Pn**	**13 10 55.5**	**-0.5**
TWF1	baz=252			S	**Sn**	**13 11 02.0**	**-0.7**
TEYL	**Yanliau Villag** baz=5.0	**0.39**	**349**	*e*P	**Pn**	**13 10 56.5**	**+0.2**
TEYL	baz=5.0			*e*S	**Sn**	**13 11 04.5**	**+1.5**
ESL	**Shilin** baz=325	**0.40**	**326**	*i* P	**Pn**	**13 10 55.6**	**-0.7**
ESL	baz=325			S	**Sn**	**13 11 02.6**	**-0.5**
FULB	**Fuli** baz=235	**0.45**	**231**	*e*P	**Pn**	**13 10 56.7**	**-0.3**
FULB	baz=235			*e*S	**Sn**	**13 11 06.3**	**+2.0**
CHKT	**Chengkung** baz=202	**0.48**	**217**	*e*P	**Pn**	**13 10 57.7**	**+0.3**
CHKT	baz=202			S	**Sn**	**13 11 05.4**	**+0.6**
HWA	**Hwalien** baz=3.0	**0.50**	**352**	*e*P	**Pn**	**13 10 58.0**	**+0.4**
HWA	baz=3.0			*e*S	**Sn**	**13 11 06.5**	**+1.3**
ETM	**Tongmen** baz=335	**0.51**	**341**	*e*P	**Pn**	**13 10 57.1**	**-0.6**
VWDT	**VWDT** baz=302	**0.56**	**299**	*e*P	**Pn**	**13 10 58.2**	**-0.2**
VWDT	baz=302			*e*S	**Sn**	**13 11 06.7**	**+0.1**
ECS	**Chishang** baz=221	**0.57**	**228**	*e*P	**Pn**	**13 10 58.2**	**-0.4**
TWD	**Chiawan** baz=351	**0.60**	**353**	*i* P	**Pn**	**13 10 58.5**	**-0.5**
TWD	baz=351			*e*S	**Sn**	**13 11 07.6**	**0.0**
EDH	**Donghe** baz=218	**0.61**	**214**	*e*P	**Pn**	**13 10 58.5**	**-0.6**
EDH	baz=218			*e*S	**Sn**	**13 11 07.8**	**-0.1**
OWD	**Renai** baz=321	**0.66**	**316**	*i* P	**Pn**	**13 10 59.2**	**-0.6**
YUS	**Yu-Shan** baz=272	**0.67**	**271**	*i* P	**Pn**	**13 10 59.8**	**-0.4**
YUS	baz=272			*e*S	**Sn**	**13 11 08.8**	**-1.1**
ELDTW	**Lidau** baz=236	**0.67**	**244**	*e*P	**Pn**	**13 10 59.0**	**-1.1**
ELDTW	baz=236			S	**Sn**	**13 11 08.3**	**-1.3**
ETL	**Fush Village** baz=352	**0.67**	**356**	*e*P	**Pn**	**13 10 59.0**	**-0.9**
ETL	baz=352			*e*S	**Sn**	**13 11 09.5**	**+0.1**
NACB	**Ninganchiao** baz=349	**0.69**	**354**	P	**Pn**	**13 10 59.3**	**-0.8**
NACB	baz=349			S	**Sn**	**13 11 09.3**	**-0.5**
SSLB	**Suanglung** baz=294	**0.73**	**295**	P	**Pn**	**13 10 60.0**	**-0.7**
SSLB	baz=294			S	**Sn**	**13 11 10.2**	**-0.5**
CHGB	**Renai** baz=330	**0.74**	**321**	*i* P	**Pn**	**13 11 00.5**	**-0.5**
CHGB	baz=330			*e*S	**Sn**	**13 11 11.0**	**-0.2**
ETLH	**Xiulin Townshi** baz=343	**0.74**	**346**	*e*P	**Pn**	**13 10 59.8**	**-1.1**
ETLH	baz=343			*e*S	**Sn**	**13 11 10.3**	**-0.9**
WHF	**Hehuan Shan** baz=334	**0.76**	**330**	*e*P	**Pn**	**13 11 00.4**	**-1.0**
WHF	baz=334			*e*S	**Sn**	**13 11 11.3**	**-0.8**
LONT	**Longtian** baz=215	**0.76**	**221**	*i* P	**Pn**	**13 10 59.9**	**-1.2**
LONT	baz=215			*e*S	**Sn**	**13 11 10.6**	**-0.9**
ALS	**Alishan** baz=277	**0.80**	**272**	*i* P	**Pn**	**13 11 02.2**	**+0.3**
ALS	baz=277			S	**Sn**	**13 11 12.8**	**-0.1**
SMLT	**Sun Moon Lake** baz=300	**0.82**	**299**	P	**Pn**	**13 11 01.7**	**-0.2**
SMLT	baz=300			*e*S	**Sn**	**13 11 13.2**	**+0.3**
LDUT	**Ludao** baz=182	**0.83**	**193**	*e*P	**Pn**	**13 11 00.9**	**-1.1**
LDUT	baz=182			*e*S	**Sn**	**13 11 11.7**	**-1.4**
FUSS	**Fushou** baz=336	**0.86**	**333**	*i* P	**Pn**	**13 11 02.3**	**-0.3**
FUSS	baz=336			*e*S	**Sn**	**13 11 13.3**	**-0.9**
TWGBT	**Beinan** baz=214	**0.86**	**220**	*e*P	**Pn**	**13 11 01.0**	**-1.4**
TWGBT	baz=214			*e*S	**Sn**	**13 11 12.6**	**-1.3**
TYC	**Yuchr** baz=300	**0.86**	**299**	P	**Pn**	**13 11 02.4**	**0.0**
TYC	baz=300			*e*S	**Sn**	**13 11 14.4**	**+0.5**
TWG	**Pinlang** baz=214	**0.86**	**220**	*e*P	**Pn**	**13 11 01.2**	**-1.3**
TWG	baz=214			*e*S	**Sn**	**13 11 12.6**	**-1.4**
STYH	**Taoyuan** baz=240	**0.89**	**250**	*e*P	**Pn**	**13 11 02.9**	**+0.2**
TWT	**Tachien** baz=333	**0.89**	**329**	*e*P	**Pn**	**13 11 02.8**	**-0.2**
TWT	baz=333			*e*S	**Sn**	**13 11 14.0**	**-0.9**
TDCB	**Techi** baz=333	**0.90**	**328**	P	**Pn**	**13 11 02.9**	**-0.3**
TDCB	baz=333			*e*S	**Sn**	**13 11 14.1**	**-1.0**
WCS	**Beigang Elemen** baz=317	**0.91**	**309**	P	**Pn**	**13 11 02.9**	**-0.1**
CHN5	**Tsauling** baz=275	**0.93**	**277**	P	**Pn**	**13 11 03.5**	**+0.2**
CHN5	baz=275			*e*S	**Sn**	**13 11 16.6**	**+1.1**
WJS	**Zhushan** baz=290	**0.93**	**291**	P	**Pn**	**13 11 04.0**	**+0.6**
WJS	baz=290			*e*S	**Sn**	**13 11 16.7**	**+1.0**
ENA	**Nanau** baz=17	**0.94**	**4**	*e*P	**Pn**	**13 11 03.2**	**-0.4**
EWUT	**Wuta** baz=20	**0.96**	**5**	*e*P	**Pn**	**13 11 03.0**	**-0.8**
EWUT	baz=20			*e*S	**Sn**	**13 11 15.9**	**-0.4**
NNSB	**Datong** baz=349	**0.98**	**344**	P	**Pn**	**13 11 03.7**	**-0.4**
NNSB	baz=349			*e*S	**Sn**	**13 11 15.9**	**-1.0**
TPUB	**Ta-pu** baz=256	**0.98**	**259**	*e*P	**Pn**	**13 11 04.7**	**+0.6**
TPUB	baz=256			*e*S	**Sn**	**13 11 18.1**	**+1.3**
NNS	**Nan Shan** baz=355	**0.99**	**344**	*e*P	**Pn**	**13 11 04.0**	**-0.4**
NNS	baz=355			*e*S	**Sn**	**13 11 16.8**	**-0.5**
WNT	**Mingjian** baz=282	**0.99**	**294**	*e*P	**Pn**	**13 11 05.2**	**+1.0**
WNT	baz=282			*e*S	**Sn**	**13 11 18.2**	**+1.2**
WTP	**Ta-pu** baz=260	**1.01**	**257**	*e*P	**Pn**	**13 11 04.9**	**+0.5**
WTP	baz=260			*e*S	**Sn**	**13 11 18.7**	**+1.2**
WNT1	**Nantou City** baz=295	**1.01**	**295**	*e*P	**Pn**	**13 11 04.9**	**+0.4**
WHP	**Taichung City** baz=322	**1.04**	**320**	*e*P	**Pn**	**13 11 05.2**	**+0.3**
WHP	baz=322			*e*S	**Sn**	**13 11 18.4**	**+0.1**
WGK	**Gukeng** baz=280	**1.04**	**281**	*e*P	**Pn**	**13 11 05.0**	**+0.1**
WWF	**Wufeng** baz=302	**1.06**	**302**	*e*P	**Pn**	**13 11 04.7**	**-0.4**
WDLH	**Douliu** baz=280	**1.06**	**281**	P	**Pn**	**13 11 06.0**	**+0.8**
WDLH	baz=280			*e*S	**Sn**	**13 11 20.5**	**+1.7**
SLGT	**Liugui** baz=238	**1.07**	**243**	*e*P	**Pn**	**13 11 05.9**	**+0.6**
SLGT	baz=238			*e*S	**Sn**	**13 11 20.5**	**+1.6**
SGST	**Jiashian** baz=237	**1.08**	**249**	P	**Pn**	**13 11 05.7**	**+0.3**
SGST	baz=237			*e*S	**Sn**	**13 11 20.7**	**+1.4**
CHN1	**Nanshi** baz=251	**1.10**	**255**	*e*P	**Pn**	**13 11 06.2**	**+0.6**
CHN1	baz=251			*e*S	**Sn**	**13 11 21.3**	**+1.6**
ECL	**Taimali** baz=211	**1.11**	**217**	*e*P	**Pn**	**13 11 04.2**	**-1.6**
ECL	baz=211			*e*S	**Sn**	**13 11 18.2**	**-1.6**
WYL	**Yuanlin Townsh** baz=286	**1.11**	**296**	*e*P	**Pn**	**13 11 06.0**	**+0.1**
WYL	baz=286			*e*S	**Sn**	**13 11 20.4**	**+0.4**
TWK	**Hsinying** baz=256	**1.11**	**259**	*e*P	**Pn**	**13 11 06.3**	**+0.4**
TWK	baz=256			*e*S	**Sn**	**13 11 21.3**	**+1.2**
SNST	**Tainan City** baz=254	**1.12**	**257**	*e*P	**Pn**	**13 11 06.3**	**+0.4**
SNST	baz=254			*e*S	**Sn**	**13 11 21.1**	**+1.0**
NDT	**Datong Townshi** baz=357	**1.12**	**352**	*e*P	**Pn**	**13 11 06.4**	**+0.3**
TCU	**Taichung** baz=306	**1.13**	**306**	*e*P	**Pn**	**13 11 07.0**	**+0.8**
TCU	baz=306			*e*S	**Sn**	**13 11 21.7**	**+1.2**
TWC	**Suao** baz=22	**1.13**	**8**	*e*P	**Pn**	**13 11 06.1**	**0.0**
TWC	baz=22			*e*S	**Sn**	**13 11 20.6**	**+0.1**
NDS	**Dongshan** baz=357	**1.15**	**2**	*e*P	**Pn**	**13 11 05.8**	**-0.5**
CHY	**Chiayi** baz=268	**1.15**	**271**	P	**Pn**	**13 11 06.7**	**+0.3**
CHY	baz=268			*e*S	**Sn**	**13 11 21.3**	**+0.4**
ENTT	**Nioudou** baz=1.0	**1.16**	**355**	*e*P	**Pn**	**13 11 05.9**	**-0.6**
WCHH	**Zhanghua** baz=300	**1.19**	**300**	*e*P	**Pn**	**13 11 07.8**	**+1.0**
WCHH	baz=300			*e*S	**Sn**	**13 11 24.0**	**+2.2**
TWQ1	**Liyutan** baz=317	**1.19**	**316**	*e*P	**Pn**	**13 11 07.6**	**+0.6**
TWQ1	baz=317			*e*S	**Sn**	**13 11 24.0**	**+1.9**
WTK	**Tuku** baz=279	**1.20**	**280**	*e*P	**Pn**	**13 11 06.7**	**-0.3**
WTK	baz=279			*e*S	**Sn**	**13 11 23.2**	**+1.1**
SSD	**Sandimen** baz=227	**1.21**	**233**	*e*P	**Pn**	**13 11 07.9**	**+0.7**
SSD	baz=227			*e*S	**Sn**	**13 11 23.6**	**+1.1**
YHNB	**Yeheng** baz=1.0	**1.21**	**347**	*e*P	**Pn**	**13 11 07.2**	**-0.2**
YHNB	baz=1.0			*e*S	**Sn**	**13 11 22.5**	**-0.1**
NSK	**Sanguang**	**1.22**	**346**	*e*P	**Pn**	**13 11 07.5**	**0.0**
NSK				*e*S	**Sn**	**13 11 22.5**	**-0.3**
TSMG	**Majia** baz=226	**1.23**	**231**	*e*P	**Pn**	**13 11 08.3**	**+0.9**
TSMG	baz=226			*e*S	**Sn**	**13 11 24.2**	**+1.4**
TWE	**Neicheng** baz=357	**1.23**	**360**	*e*P	**Pn**	**13 11 07.2**	**-0.3**
NSY	**Sanyi** baz=319	**1.25**	**318**	*e*P	**Pn**	**13 11 08.4**	**+0.7**
NSY	baz=319			*e*S	**Sn**	**13 11 25.7**	**+2.3**
WRL	**Guolierlin Hig** baz=288	**1.26**	**289**	*e*P	**Pn**	**13 11 08.1**	**+0.2**
WRL	baz=288			*e*S	**Sn**	**13 11 24.4**	**+0.7**
WDJ	**Dajia District** baz=313	**1.28**	**312**	*e*P	**Pn**	**13 11 08.8**	**+0.7**
WDJ	baz=313			*e*S	**Sn**	**13 11 26.3**	**+2.1**
ICHU	**Yijhu** baz=262	**1.29**	**265**	*e*P	**Pn**	**13 11 08.3**	**+0.1**
ICHU	baz=262			*e*S	**Sn**	**13 11 25.2**	**+0.8**
MASBT	**Mashibuluo** baz=219	**1.30**	**228**	*e*P	**Pn**	**13 11 08.3**	**-0.1**
MASBT	baz=219			*e*S	**Sn**	**13 11 26.4**	**+1.8**
NWLT	**Wulai** baz=7.0	**1.30**	**353**	*e*P	**Pn**	**13 11 08.5**	**0.0**
NSTT	**Nanjuang** baz=321	**1.30**	**332**	*e*P	**Pn**	**13 11 08.9**	**+0.5**
LIOB	**Emei** baz=322	**1.31**	**333**	*e*P	**Pn**	**13 11 09.2**	**+0.6**
LIOB	baz=322			*e*S	**Sn**	**13 11 25.9**	**+1.1**
NMLH	**Miaoli** baz=323	**1.33**	**322**	*e*P	**Pn**	**13 11 09.2**	**+0.4**
NMLH	baz=323			*e*S	**Sn**	**13 11 26.4**	**+1.1**
TWM1	**Shoushan** baz=236	**1.33**	**241**	P	**Pn**	**13 11 10.6**	**+1.7**
TWM1	baz=236			S	**Sn**	**13 11 28.5**	**+3.2**
WTCT	**Ta-ch'eng** baz=276	**1.33**	**287**	*e*S	**Sn**	**13 11 26.8**	**+1.4**
EAST	**Anshuo** baz=204	**1.34**	**215**	*e*P	**Pn**	**13 11 08.2**	**-0.7**
CHN8	**Yiju** baz=263	**1.35**	**264**	*e*P	**Pn**	**13 11 09.3**	**+0.1**
CHN8	baz=263			*e*S	**Sn**	**13 11 27.0**	**+1.1**
SSPT	**Xinbi** baz=208	**1.43**	**226**	*e*P	**Pn**	**13 11 11.1**	**+1.0**
LAY	**Lan-yu** baz=173	**1.44**	**185**	*e*P	**Pn**	**13 11 09.5**	**-0.9**
SCZT	**Fangliau** baz=206	**1.48**	**222**	*e*P	**Pn**	**13 11 11.0**	**+0.2**
SCZT	baz=206			*e*S	**Sn**	**13 11 30.1**	**+1.2**
TIPB	**Shuangxi** baz=2.0	**1.49**	**5**	*e*P	**Pn**	**13 11 11.7**	**+0.6**
TIPB	baz=2.0			*e*S	**Sn**	**13 11 29.9**	**+0.6**
YOJ	**Yonaguni jima**	**1.56**	**51**	P	**Pn**	**13 11 12.6**	**+0.6**
NWF	**Wu-fen Shan** baz=359	**1.58**	**3**	*e*P	**Pn**	**13 11 13.2**	**+0.8**
YM01	**YM01** baz=3.0	**1.66**	**357**	*e*P	**Pn**	**13 11 14.2**	**+0.8**
PHUB	**P'eng-hu** baz=269	**1.93**	**271**	*e*P	**Pn**	**13 11 16.7**	**-0.4**
PHUB	baz=269			*e*S	**Sn**	**13 11 39.9**	**-0.3**
PNG	**Penghu** baz=271	**1.95**	**273**	*e*P	**Pn**	**13 11 16.9**	**-0.4**
PNG	baz=271			*e*S	**Sn**	**13 11 39.7**	**-0.9**
HATJ	**Hateruma jima**	**2.03**	**73**	P	**Pn**	**13 11 18.7**	**+0.3**
HATJ				*e*S	**Sn**	**13 11 43.2**	**+0.6**
IRIF	**Iriomote-Funau**	**2.06**	**65**	P	**Pn**	**13 11 19.4**	**+0.6**
IRIF				S	**Sn**	**13 11 44.3**	**+1.0**
JKRS	**Kuro-shima**	**2.26**	**70**	P	**Pn**	**13 11 22.3**	**+0.7**
JKRS				S	**Sn**	**13 11 50.0**	**+1.7**
JIJ	**Ishigaki jima**	**2.42**	**68**	P	**Pn**	**13 11 23.8**	**0.0**
JIJ				S	**Sn**	**13 11 52.0**	**-0.2**
JISG	**Ishigakijimahi**	**2.65**	**65**	P	**Pn**	**13 11 26.7**	**-0.2**
JISG				*e*S	**Sn**	**13 11 56.7**	**-1.1**
PTMZ	**Houxiangcun** baz=301	**2.80**	**304**	*e*P	**Pn**	**13 11 28.2**	**-0.8**
PTMZ	baz=301			*e*S	**Sn**	**13 11 59.2**	**-2.3**
JTJ	**Tarama**	**3.00**	**67**	P	**Pn**	**13 11 31.8**	**+0.1**
JTJ				*e*S	**Sn**	**13 12 07.0**	**+0.6**
MATB	**Ma-tsu** baz=325	**3.09**	**330**	*e*P	**Pn**	**13 11 32.9**	**0.0**
MATB	baz=325			*e*S	**Sn**	**13 12 06.4**	**-2.2**
KNMB	**Chin-men Tao** baz=287	**3.16**	**289**	*e*P	**Pn**	**13 11 32.6**	**-1.4**
KNMB	baz=287			*e*S	**Sn**	**13 12 07.2**	**-3.3**
JIRB	**Irabujima**	**3.46**	**67**	P	**Pn**	**13 11 38.5**	**+0.4**
JIRB				*e*S	**Sn**	**13 12 18.6**	**+0.7**
LYJJ	**Jianjiangzhen** baz=328	**3.51**	**331**	*e*P	**Pn**	**13 11 38.0**	**-0.8**
MHZQ	**Yeshan** baz=316	**3.55**	**318**	*e*P	**Pn**	**13 11 39.6**	**+0.3**
JMJ2	**Miyako jima3**	**3.56**	**69**	P	**Pn**	**13 11 39.7**	**+0.2**
JMJ2				*e*S	**Sn**	**13 12 19.7**	**-0.6**
AXDP	**Jialang** baz=293	**3.67**	**293**	*e*P	**Pn**	**13 11 40.1**	**-0.8**

ISC 25 13:15:58.3±1.5**, 48°.39N**±0°.09×**18°.24E**±0°.04**, h14**^{km}±13^{km}**,**
n6, σ0^s.55/11**, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOLL	**Kolacno**	**0.22**	**30**	*e*PG	**Pg**	**13 16 03.0**	**-0.2**
KOLL				*e*SG	**Sg**	**13 16 07.1**	**+0.6**
VYHS	**Vyhne**	**0.41**	**75**	*e*PG	**Pg**	**13 16 06.4**	**-0.1**
VYHS				*e*SG	**Sb**	**13 16 13.2**	**-0.3**
SMOL	**Smolenice**	**0.55**	**283**	*e*PG	**Pg**	**13 16 08.5**	**-0.7**
JAVC	**Velka Javorina**	**0.60**	**322**	*e*PG	**Pg**	**13 16 10.3**	**+0.2**
JAVC				*e*SG	**Sg**	**13 16 17.6**	**-0.5**
MODS	**Modra-Piesok**	**0.64**	**269**	*e*PG	**Pg**	**13 16 10.5**	**-0.3**
MODS				*e*SG	**Sb**	**13 16 20.4**	**+0.3**
ZST	**Bratislava**	**0.78**	**256**	*e*PG	**Pg**	**13 16 13.4**	**-0.1**
ZST				*e*SG	**Sb**	**13 16 24.9**	**+0.8**

IDC ***25*** *13:19:46.1±3.5, 41°.61S×85°.31W, h0^{km}, mb4.6/1, mb1 4.1/2, mb1mx3.7/17, mbtmp4.1/2, ML4.2/1, Error ellipse: s-maj=76.5km s-min=53.1km az=105.0*
ISC 25 13:19:48.1±2.9**, 41°.6S**±0°.2×**85°.3W**±0°.3**, h14**^{km}**, n9, σ0^s.75**/9**,**
West Chile Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez**	**9.24**	**35**	Pn	**Pn**	**13 22 01.3**	**+0.6**
H03S1	**Juan Fernandez**	**9.25**	**35**	Pn	**Pn**	**13 22 01.6**	**+0.8**
H03S3	**Juan Fernandez**	**9.26**	**35**	Pn	**Pn**	**13 22 01.5**	**+0.5**
H03N3	**Juan Fernandez** SNR=4.5	**9.57**	**34**	Pn	**Pn**	**13 22 04.8**	**-0.5**
H03N2	**Juan Fernandez**	**9.58**	**34**	Pn	**Pn**	**13 22 04.6**	**-0.7**
H03N1	**Juan Fernandez**	**9.59**	**34**	Pn	**Pn**	**13 22 04.6**	**-0.8**
PLCA	**Paso Flores** 0.4nm,0.3s,baz=292,slow=16,SNR=6.5	**11.17**	**90**	Pn	**Pn**	**13 22 27.3**	**-0.1**
PLCA	0.1nm,0.3s,baz=291,slow=13,SNR=3.2			Sn	Sn	13 24 23.3	-8.7
TORD	**Torodi Ar. Bea** 1.3nm,0.9s,baz=240,slow=3.0,SNR=4.8	**96.39**	**78**	P	**P**	**13 33 16.4**	**-0.4**
MKAR	**Makanchi Array** 0.3nm,0.6s,baz=280,slow=4.3,SNR=3.0	**169.69**	**56**	PKPab	**PKPab**	**13 41 09.4**	**+0.7**

IDC ***25*** *13:23:47.4±1.1, 3°.23S×142°.91E, h0^{km}, mb3.9/9, mb1 4.2/10, mb1mx3.9/39, mbtmp4.0/10, ML3.9/1, MS3.3/6, Ms1 3.4/6, ms1mx3.1/31, Error ellipse: s-maj=22.1km s-min=17.1km az=51.0*
DJA ***25*** *13:23:50.8±0.5, 3°S±8°×14°3E±°, h10^{km}, M4.0/6, mB4.6/1, mb4.3/6, MLv3.8/3, Mw(mB)3.8/1*
NEIC ***25*** *13:23:51.3±2.4, 3°.1S±0°.1×142°.76E±0°.07, h16^{km}±5^{km}, mb4.1/11, Error ellipse: s-maj=18.7km s-min=9.5km az=192.0*
ISC 25 13:23:52.1±0.7**, 3°.24S**±0°.10×**142°.88E**±0°.06**, h23**^{km}**, n36,**
σ1^s.66/31**, mb3.9**/10**, MS3.5**/4**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	**Jayapura** 1.0nm,0.3s,baz=304,slow=16,SNR=1.6	**2.29**	**288**	Pn	**Pn**	**13 24 25.9**	**-2.6**
JAY	7.0nm,0.3s,baz=139,slow=10,SNR=4.5			Lg	Lg	13 24 59.7	
JAY	comp=Z,247nm,20.8s,baz=22,slow=32			LR	LR	13 25 01.5	
JAY	**Jayapura**	**2.29**	**288**	P	**Pn**	**13 24 29.5**	**+1.0**
SMPI	**Sarmi**	**4.34**	**287**	P	**Pn**	**13 24 57.8**	**+1.1**
MANU	**Manus Island**	**4.64**	**75**	Pn	**Pn**	**13 25 01.2**	**+0.3**
MTN	**Manton Dam**	**15.03**	**230**	Pn	**Pn**	**13 27 22.4**	**-0.8**
LBMI	**Labuha**	**15.58**	**279**	P	**P**	**13 27 38.2**	**+3.6**
SANI	**Sanana** 13nm,1.1s	**16.91**	**274**	P	**Pn**	**13 27 45.8**	**-1.7**
WB0	**Warramunga Arr**	**18.39**	**206**	P	**Pn**	**13 28 06.5**	**+0.7**
WB0	comp=Z,13nm,1.2s			IAmb	IAmb	13 28 27.5	
WR0	**Warramunga Arr**	**18.50**	**205**	P	**P**	**13 28 06.0**	**-0.9**
WR0	comp=Z,11nm,0.8s			IAmb	IAmb	13 28 11.3	
WRAB	**Tennant Creek**	**18.56**	**206**	P	**P**	**13 28 06.6**	**-0.9**
WRAB	comp=Z,9.1nm,0.8s			IAmb	IAmb	13 28 25.1	
WRA	**Warramunga Arr** comp=Z,0.4nm,0.3s,baz=27,slow=13,SNR=28	**18.57**	**206**	P	**P**	**13 28 05.9**	**-1.8**
WRA	comp=Z,99nm,21.5s,baz=25,slow=37			LR	LR	13 35 18.7	
WRA	**Warramunga Arr**	**18.57**	**206**	P	**Pn**	**13 28 08.3**	**+0.4**
KNRA	**Kununurra**	**18.59**	**227**	P	**P**	**13 28 05.7**	**-2.2**
KNRA	comp=Z,15nm,0.8s			IAmb	IAmb	13 28 16.3	
SOEI	**Soe**	**19.58**	**250**	P	**Pn**	**13 28 22.6**	**+2.3**
BATI	**Baumata** comp=Z,27nm,0.9s,baz=9.8,slow=2.2,SNR=7.5	**20.29**	**249**	P	**P**	**13 28 25.6**	**-0.8**
BATI	**Baumata** comp=Z,23nm,0.9s	**20.29**	**249**	P	**P**	**13 28 27.7**	**+1.2**
APSI	**Ampana**	**21.34**	**276**	P	**P**	**13 28 40.6**	**+2.8**
AS31	**Alice Springs**	**22.08**	**202**	P	**P**	**13 28 46.2**	**+0.5**
ASAR	**Alice Springs** comp=Z,2.0nm,0.8s,baz=29,slow=9.8,SNR=17	**22.08**	**202**	P	**P**	**13 28 45.6**	**-0.1**
ASAR	comp=Z,152nm,18.8s,baz=32,slow=39			LR	LR	13 38 15.7	
FITZ	**Fitzroy Crossi** comp=Z,6.8nm,1.0s,baz=24,slow=6.5,SNR=19	**22.43**	**228**	P	**P**	**13 28 48.2**	**-1.3**
TOLI2	**Tolitoli**	**22.50**	**281**	P	**P**	**13 28 49.5**	**-0.8**
TOLI2	comp=Z,9.9nm,0.8s			IAmb	IAmb	13 29 20.1	
EIDS	**Eidsvold**	**23.38**	**161**	P	**P**	**13 29 01.7**	**+2.5**
EIDS	comp=Z,6.0nm,0.8s			IAmb	IAmb	13 29 10.8	
STKA	**Stephens Creek** comp=Z,3.0nm,0.8s,baz=349,slow=10,SNR=2.3	**28.51**	**182**	P	**P**	**13 29 44.0**	**-1.9**
H11S3	**WAKE ISLAND Hy** baz=229,slow=75,SNR=222	**31.88**	**47**	T	T	14 03 43.0	
H11S2	**WAKE ISLAND Hy** baz=229,slow=75,SNR=218	**31.89**	**47**	T	T	14 03 43.6	
H11S1	**WAKE ISLAND Hy** baz=229,slow=75,SNR=212	**31.90**	**46**	T	T	14 03 44.2	
CMAR	**Chiang Mai Arr** comp=Z,1.0nm,0.9s,baz=121,slow=6.2,SNR=6.2	**48.33**	**298**	P	**P**	**13 32 32.8**	**+0.5**
CMAR	comp=Z,13nm,18.9s,baz=205,slow=38			LR	LR	13 54 31.0	

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	72.78	321	P	P	13 35 19.7	+1.0
	comp=Z,0.5nm,0.7s,baz=99,slow=9.1,SNR=4.3						
ZALV	Zalesovo Beam	74.52	329	P	P	13 35 26.7	-2.1
	comp=Z,0.3nm,0.3s,baz=152,slow=6.5,SNR=3.8						
VNDA	Vanda	74.92	176	P	P	13 35 29.5	-1.2
	comp=Z,0.7nm,0.8s,baz=322,slow=4.0,SNR=3.0						
VNDA	Vanda	74.92	176	P	P	13 35 30.7	0.0
VNDA				IAmb	IAmb	13 35 33.0	
	comp=Z,1.9nm,1.1s						
ILAR	Eielson Array	84.61	24	P	P	13 36 21.2	-2.2
	comp=Z,0.8nm,0.8s,baz=251,slow=4.8,SNR=2.7						
ILAR	Eielson Array	84.61	24	P	P	13 36 24.8	+1.4
QSPA	South Pole Qui	86.71	180	P	P	13 36 34.0	-0.1
BBB	Bella Bella	91.93	38	LR	LR	14 11 12.3	
	comp=Z,44nm,20.7s,baz=268,slow=31						
YBH	Yreka Blue Hor	95.44	49	LR	LR	14 09 23.6	
	comp=Z,24nm,21.9s,baz=264,slow=29						

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*TUL **25** 13:26:43.1±0.5, 35°.02N±0°.02×97°.647W±0°.010, h5^{km}±7^{km}, ML2.6, mb_Lg2.6/27(NEIC), Error ellipse: s-maj=2.3km s-min=1.1km az=188.0*

NEIC 25 13:26:43.9±0.7**, 35°.015N**±0°.008×**97°.64W**±0°.03**, h8**^{km}±4^{km}**, Error ellipse: s-maj=3.2km s-min=0.7km az=106.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FNO	Franklin	0.31	39	Pg	Pg	13 26 49.8	-0.3
FNO				Sg	Sg	13 26 53.8	-0.5
OKCFA	Oklahoma City	0.43	21	Pg	Pg	13 26 52.0	-0.4
OKCFA				Sg	Sg	13 26 57.7	-0.3
X34A	Smith Ranch, M	0.44	201		Pg	13 26 52.6	0.0
OK025	Westminster Rd	0.62	24	Pg	Pg	13 26 55.2	-0.6
OK025				Sg	Sg	13 27 03.4	-0.5
BCOK	Bluff Creek, N	0.64	2	Pg	Pg	13 26 55.8	-0.5
W35A	Tecumseh	0.64	77	Pg	Pg	13 26 55.4	-0.9
W35A				Sg	Sg	13 27 03.9	-0.9
OK029	Liberty Lake	0.80	11	Pg	Pg	13 26 58.2	-1.1
WMOK	Wichita Mounta	0.98	254	Pg	Pg	13 27 01.2	-1.5
LOOK	Love County	1.09	159		Pg	13 27 03.6	-1.2
OK033	Mehan	1.18	29	Pg	Pb	13 27 04.9	-1.6
CROK	Carrier	1.51	349		Pn	13 27 10.9	-0.4
Z35A	Perchaven, San	1.71	169	Pn	Pn	13 27 13.6	-0.4
TUL1	Leonard	1.75	59	Pn	Pn	13 27 14.7	+0.1
BLOK	Blackwell	1.78	11	Pn	Pn	13 27 15.2	+0.3
GC02	Grant County #	1.84	355	Pn	Pn	13 27 14.7	-1.2
X37A	Clayton	1.92	102		Pn	13 27 17.1	+0.3
X37A				IAmb_Lg		13 27 45.0	
	comp=Z,47nm,1.0s						
KAN13	South Haven SW	2.00	4	Pn	Pn	13 27 18.5	+0.5
KAN13				IAmb_Lg		13 27 51.7	
	comp=Z,29nm,0.7s						
KAN17	Caldwell West	2.03	357	Pn	Pn	13 27 18.6	+0.2
T35A	Sooner Cattle	2.11	25	Pn	Pn	13 27 19.6	+0.1
KAN01	Argonia South	2.14	357	Pn	Pn	13 27 20.9	+1.0
KAN16	Harper SW Stat	2.23	351	IAmb_Lg		13 27 58.4	
	comp=Z,14nm,0.9s						
R32A	Long Quarter,	3.51	346	IAmb_Lg		13 28 38.1	
	comp=Z,11nm,0.8s						
X40A	Basin Creek Fa	3.99	96	IAmb_Lg		13 29 00.7	
	comp=Z,11nm,0.8s						
U40A	Yellville	4.12	70	IAmb_Lg		13 28 57.3	
	comp=Z,16nm,0.7s						
CBKS	Cedar Bluff	4.15	337	IAmb_Lg		13 29 05.9	
	comp=Z,11nm,0.7s						
KSU1	Kansas State U	4.16	11	IAmb_Lg		13 29 03.3	
	comp=Z,15nm,1.0s						
S39A	Bolivar	4.39	51	IAmb_Lg		13 29 12.8	
	comp=Z,7.9nm,0.7s						
MGMO	Mountain Grove	4.84	62	IAmb_Lg		13 29 26.7	
	comp=Z,10nm,0.7s						
KSCO	Kaye Shedlock'	5.64	316	IAmb_Lg		13 29 54.0	
	comp=Z,9.6nm,0.8s						
P38A	Dawn	5.65	34	IAmb_Lg		13 29 55.7	
	comp=Z,7.1nm,0.7s						
T25A	Trinidad	5.88	293	IAmb_Lg		13 29 53.4	
	comp=Z,13nm,1.0s						
FVM	French Village	6.52	61	IAmb_Lg		13 30 21.2	
	comp=Z,7.3nm,0.8s						

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*EAF **25** 13:31:10.6±1.6, 26°.00S×29°.95E, h10^{km}, MD3.8*

BUL 25 13:31:12.6±1.1**, 25°.94S**×**29°.82E, h10**^{km}**, MD4.0, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOPA	Mopani	2.80	31	*e*P	Pn	13 31 55.7	-1.9
MOPA				*e*S	Sn	13 32 26.3	-5.2
MOPA	Mopani	2.80	31	*e*P	Pn	13 31 55.7	-1.9
MOPA				*e*S	Sn	13 32 26.3	-5.2
MSNA	Messina	3.58	3	*e*P	Pn	13 32 07.8	-0.5
MSNA				*e*S	Sn	13 32 47.7	-3.0
MSNA	Messina	3.58	3	*e*P	Pn	13 32 07.8	-0.5
MSNA				*e*S	Sn	13 32 47.7	-3.0
LBTB	Lobatse	3.93	283	*e*P	Pn	13 32 11.4	-1.7
LBTB				*e*S	Sn	13 32 57.3	-2.1
LBTB	Lobatse	3.93	283	*e*P	Pn	13 32 11.4	-1.7
LBTB				*e*S	Sn	13 32 57.3	-2.1
BLWY	Bulawayo	5.88	349	*e*P	Pn	13 32 39.2	-0.7
BLWY				*e*S	Sn	13 33 42.3	-5.2
BLWY	Bulawayo	5.88	349	*e*P	Pn	13 32 39.2	-0.7
BLWY				*e*S	Sn	13 33 42.3	-5.2

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*FUNV **25** 13:42:27.1, 8°.47N×71°.44W, h4^{km}, MW3.0*

ISC 25 13:42:26.7±1.6**, 8°.51N**±0°.07×**71°.42W**±0°.04**, h9**^{km}±13^{km}**, n11, σ0^s.96**/22**, 1D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCV	Socops	0.60	112	*e*P	Pg	13 42 37.9	-0.4
SOCV				*e*S	Sg	13 42 46.3	+0.1
SOCV	Socops	0.60	112	⇓*e*P	Pg	13 42 38.2	-0.1
SOCV				*e*S	Sg	13 42 47.2	+1.0
SDV	Santo Domingo	0.86	64	*e*P	Pb	13 42 43.4	-0.5
SDV				*e*S	Sb	13 42 55.2	-0.4
CAPV	Capacho	1.10	234	*e*P	Pb	13 42 47.0	-1.1
CAPV				*e*S	Sb	13 43 02.0	-0.5
OCAC	Ocana	1.90	262	*e*P	Pn	13 43 00.3	+0.8
OCAC				*e*S	Sn	13 43 24.7	+1.0
SMLC	San Martn de	2.64	276	*e*P	Pn	13 43 09.5	0.0
SMLC				*e*S	Sb	13 43 46.6	-0.2
SIQV	Siquisique	2.65	37	*e*P	Pn	13 43 11.2	+1.4
SIQV				*e*S	Sn	13 43 43.0	+1.0
BAUV	El Baul	3.36	82	*e*P	Pn	13 43 20.3	+0.9
BAUV				*e*S	Sn	13 43 58.9	-0.6
PTBC	PUERTO BERRIO,	3.59	237	*e*P	Pn	13 43 24.5	+1.8
PTBC				*e*S	Sb	13 44 13.7	-0.6
MONV	Montecano	3.71	22	*e*P	Pn	13 43 24.9	+0.7
MONV				*e*S	Sn	13 44 07.2	-0.8
BENV	Beln	4.03	69	*e*P	Pn	13 43 29.7	+0.9
BENV				*e*S	Sn	13 44 14.8	-1.4

MAN 25 13:58:27.5, 19°.51N×121°.97E, h49^{km}, mb4.0, ML2.8, MS2.4, Philippine Islands region

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*NEIC **25** 14:02:02.4±0.7, 36°.926N±0°.010×97°.80W±0°.02, h8^{km}±3^{km}, Error ellipse: s-maj=2.4km s-min=1.1km az=118.0*

*TUL **25** 14:02:02.3±0.7, 36°.95N±0°.01×97°.81W±0°.02, h4^{km}±5^{km}, ML3.3, mb_Lg3.1/71(NEIC), Error ellipse: s-maj=2.2km s-min=1.3km az=111.0*

*IDC **25** 14:02:03.7±2.3, 37°.07N×98°.07W, h0^{km}, mb3.6/1, mb1 3.5/4, mb1mx3.4/41, mbtmp3.1/4, ML3.4/3, MS3.4/1, Ms1 3.4/1, ms1mx2.5/35, Error ellipse: s-maj=30.1km s-min=16.7km az=93.0*

ISC 25 14:02:02.6±0.9**, 36°.93N**±0°.02×**97°.81W**±0°.02**, h7**^{km}±6^{km}**, n82, σ0^s.55**/61**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.09	208	Pg	Pg	14 02 04.8	0.0
GC02				Sg	Sg	14 02 06.4	0.0
KAN17	Caldwell West	0.12	16	Pg	Pg	14 02 05.1	-0.1
KAN17				Sg	Sg	14 02 07.0	0.0
KAN14	Manchester OK	0.13	280		Pg	14 02 05.3	-0.1
KAN14				Sg	Sg	14 02 07.3	0.0
KAN05	Bluff City Nor	0.18	343		Pg	14 02 06.2	-0.1
KAN05				Sg	Sg	14 02 08.8	-0.1
KAN01	Argonia South	0.22	10	Pg	Pg	14 02 07.0	0.0
KAN01				Sg	Sg	14 02 10.0	-0.1
KAN09	Caldwell North	0.25	36		Pg	14 02 07.3	-0.3
KAN13	South Haven SW	0.27	73	Pg	Pg	14 02 08.1	+0.1
KAN10	Anthony SW Sta	0.30	309	Pg	Pg	14 02 08.4	-0.1
KAN10				Sg	Sg	14 02 12.2	-0.4
KAN06	Argonia West S	0.32	352		Pg	14 02 08.7	-0.2
KAN08	Anthony NE Sta	0.32	336		Pg	14 02 08.8	-0.1
KAN08				Sg	Sg	14 02 13.1	-0.1
OK032	Salt Plains WL	0.35	248	Pg	Pg	14 02 09.3	-0.2
KAN16	Harper SW Stat	0.36	325	Pg	Pg	14 02 09.4	-0.2
KAN16				Sg	Sg	14 02 13.8	-0.6
KAN12	Harper NE Stat	0.40	337		Pg	14 02 10.0	-0.3
CROK	Carrier	0.45	199	Pg	Pg	14 02 11.4	+0.1
BLOK	Blackwell	0.50	110	Pg	Pg	14 02 12.4	0.0
T35A	Sooner Cattle	1.04	91		Pg	14 02 22.0	-0.5
T35B	Sooner Cattle	1.04	91	P	Pg	14 02 22.1	-0.4
	baz=272						
T35B				S	Sg	14 02 35.7	-0.3
	baz=272						
U32A	Winter Ranch,	1.11	240		Pg	14 02 23.2	-0.8
U32A	Winter Ranch,	1.11	240	P	Pg	14 02 23.1	-0.8
	baz=59						
U32A				S	Sb	14 02 38.9	+0.1
	baz=59						
OK033	Mehan	1.13	142		Pg	14 02 23.9	-0.4
QUOK	Quay	1.17	130		Pg	14 02 24.4	-0.6
OK029	Liberty Lake	1.17	166		Pg	14 02 24.5	-0.6
OK031	S. Brethren Rd	1.25	141		Pg	14 02 26.1	-0.5
OK034	N. Norfolk Rd.	1.27	136		Pg	14 02 26.5	-0.6
BCOK	Bluff Creek, N	1.28	173		Pg	14 02 26.4	-0.8
OK030	Cody Creek RV	1.30	140		Pn	14 02 26.9	-0.3
OK025	Westminster Rd	1.40	164		Pn	14 02 28.7	+0.2
OKCFA	Oklahoma City	1.54	169		Pn	14 02 30.9	+0.3
OKCFA				IAmb_Lg		14 02 54.2	
	comp=Z,136nm,0.8s						
OKCFA	Oklahoma City	1.54	169	P	Pn	14 02 30.9	+0.3
	baz=349						
R32A	Long Quarter,	1.65	334		Pb	14 02 32.8	-0.6
R32A	Long Quarter,	1.65	334	P	Pb	14 02 32.7	-0.6
	baz=154						
R32A				S	Sn	14 02 53.9	+0.4
	baz=154						
FNO	Franklin	1.71	169		Pn	14 02 33.5	+0.8
TUL1	Leonard	1.92	122	P	Pn	14 02 36.8	+1.1
	baz=303						
TUL1				S	Sb	14 03 02.8	+0.8
	baz=303						
W35A	Tecumseh	1.93	157		Pn	14 02 36.4	+0.5
X34A	Smith Ranch, M	2.33	181	IAmb_Lg		14 03 21.0	
	comp=Z,79nm,0.8s						
WMOK	Wichita Mounta	2.33	200	IAmb_Lg		14 03 18.1	
	comp=Z,53nm,0.7s						
WMOK	Wichita Mounta	2.33	200	P	Pn	14 02 42.8	+1.4
	baz=19						
WMOK				S	Sb	14 03 14.1	+0.2
	baz=19						
KSU1	Kansas State U	2.36	23		Pn	14 02 42.5	+0.7
KSU1	Kansas State U	2.36	23	P	Pn	14 02 42.4	+0.6
	baz=204						
KSU1				S	Sb	14 03 14.6	-0.2
	baz=204						
CBKS	Cedar Bluff	2.42	321		Pn	14 02 43.5	+0.9
CBKS				IAmb_Lg		14 03 21.9	
	comp=Z,59nm,0.8s						
CBKS	Cedar Bluff	2.42	321	P	Pn	14 02 43.4	+0.7
	baz=140						
CBKS				S	Sb	14 03 16.7	+0.1
	baz=140						
LOOK	Love County	2.98	170	IAmb_Lg		14 03 41.6	
	comp=Z,46nm,0.9s						
X37A	Clayton	3.06	139	IAmb_Lg		14 03 48.3	
	comp=Z,62nm,0.9s						
S39A	Bolivar	3.65	77		Pn	14 02 59.9	+0.3
S39A	Bolivar	3.65	77	P	Pn	14 02 59.7	+0.1
	baz=260						
AMTX	Amarillo	3.75	238	IAmb_Lg		14 04 08.8	
	comp=Z,58nm,0.7s						
N33A	J Bar K, Exete	3.81	4	IAmb_Lg		14 04 08.9	
	comp=Z,45nm,0.7s						
U40A	Yellville	4.02	97	IAmb_Lg		14 04 12.9	
	comp=Z,45nm,0.7s						
MIAR	Mount Ida	4.18	123	IAmb_Lg		14 04 15.3	
	comp=Z,39nm,1.1s						
P38A	Dawn	4.30	50	IAmb_Lg		14 04 18.1	
	comp=Z,29nm,0.8s						
Z38A	Mt. Pleasant	4.33	147	IAmb_Lg		14 04 22.4	
	comp=Z,51nm,0.9s						
ABTX	Abilene, Hawle	4.56	200	IAmb_Lg		14 04 25.7	
	comp=Z,30nm,1.0s						
FCAR	Ozark Folk Cen	4.70	101	IAmb_Lg		14 04 32.3	
	comp=Z,35nm,0.8s						
X40A	Basin Creek Fa	4.72	120	IAmb_Lg		14 04 42.1	
	comp=Z,27nm,0.8s						
WHAR	Wooly Hollow	4.76	109	IAmb_Lg		14 04 34.4	
	comp=Z,38nm,0.8s						
WHTX	Lake Whitney,	4.94	177	IAmb_Lg		14 04 51.8	
	comp=Z,25nm,0.7s						
WLAR	White Oak Lake	5.02	129	IAmb_Lg		14 04 45.0	
	comp=Z,38nm,0.8s						
P40A	Paris	5.22	58	IAmb_Lg		14 04 46.6	
	comp=Z,26nm,0.8s						
T25A	Trinidad	5.29	274	IAmb_Lg		14 05 04.0	
	comp=Z,20nm,0.9s						
CCM	Cathedral Cave	5.34	76	IAmb_Lg		14 05 06.9	
	comp=Z,21nm,0.8s						
LCAR	Lake Charles	5.43	97	IAmb_Lg		14 04 59.2	
	comp=Z,28nm,1.3s						
SCIA	State Center	6.11	34	IAmb_Lg		14 05 18.8	
	comp=Z,32nm,0.8s						
435B	Jarrell	6.14	178	IAmb_Lg		14 05 19.8	
	comp=Z,30nm,0.9s						
JCT	Junction City	6.65	195	IAmb_Lg		14 05 35.6	
	comp=Z,28nm,0.9s						
S44A	Carbondale	6.86	81	IAmb_Lg		14 05 38.3	
	comp=Z,19nm,0.9s						
SIUC	Southern Illin	6.89	81	IAmb_Lg		14 05 42.6	
	comp=Z,17nm,0.7s						
P43A	Skaggs, Pawnee	7.05	65	IAmb_Lg		14 05 45.4	
	comp=Z,29nm,0.8s						
W45A	Hickory Valley	7.20	102	IAmb_Lg		14 05 58.4	
	comp=Z,26nm,0.8s						
L40A	Anamosa	7.22	43	IAmb_Lg		14 06 07.4	
	comp=Z,23nm,0.8s						
ANMO	Albuquerque	7.29	257	Pn	Pn	14 03 51.2	+1.5
	comp=Z,0.1nm,0.3s,baz=94,slow=18,SNR=1.5						
ANMO				Lg	Lg	14 05 49.2	
	comp=Z,0.9nm,0.3s,baz=335,slow=15,SNR=11						
T45A	Paducah	7.33	87	IAmb_Lg		14 06 06.5	
	comp=Z,28nm,0.7s						
I37A	Lemond, Waseca	7.83	24	IAmb_Lg		14 06 27.4	
	comp=Z,18nm,0.7s						
O44A	Mansfield	7.99	63	IAmb_Lg		14 06 26.9	
	comp=Z,22nm,0.9s						
WVT	Waverly	8.07	93	IAmb_Lg		14 06 17.0	
	comp=Z,12nm,1.1s						
L42A	Oliver, Polo	8.08	49	IAmb_Lg		14 06 24.1	
	comp=Z,25nm,0.8s						
RWWY	Rawlins	8.70	306	IAmb_Lg		14 06 45.3	
	comp=Z,17nm,1.1s						
K22A	Casper	8.81	313	IAmb_Lg		14 06 56.0	
	comp=Z,19nm,1.1s						
TX31	Lajitas Ar. Si	9.03	215	Pn	Pn	14 04 14.3	+0.8
TXAR	Lajitas Array	9.03	215	Pn	Pn	14 04 13.1	-0.4
	comp=Z,0.1nm,0.3s,baz=40,slow=13,SNR=3.6						
TXAR				Pg		14 04 46.3	
	comp=Z,0.3nm,0.3s,baz=38,slow=16,SNR=4.4						
TXAR				Lg	Lg	14 06 43.6	
	comp=Z,0.4nm,0.3s,baz=44,slow=28,SNR=7.7						
PDAR	Pinedale Array	10.75	306	Pn	Pn	14 04 36.2	-0.9
	comp=Z,0.1nm,0.3s,baz=122,slow=15,SNR=1.4						
PDAR				Lg	Lg	14 07 31.0	
	comp=Z,0.2nm,0.3s,baz=107,slow=35,SNR=1.8						
FRB	Frobisher Bay	32.14	24	LR	LR	14 22 15.0	
	comp=Z,78nm,21.2s,baz=3.0,slow=38						
ILAR	Eielson Array	40.05	330	P	P	14 09 38.7	+0.7
	comp=Z,0.6nm,0.7s,baz=107,slow=6.6,SNR=9.6						

NNC 25 14:15:04.8±7.7**, 37°.04N**×**70°.84E, h0**^{km}**, mb4.1, mpv3.8, 2C-2D, Error ellipse: s-maj=61.2km s-min=55.8km az=24.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK09	Karatay Array	6.08	358	⇑Pn	Pn	14 16 35.5	-0.5
	4.6nm,0.3s,baz=173,slow=12						
KK09				⇑Sn	Sn	14 17 46.1	0.0
	1.0nm,0.3s,baz=175,slow=24						
AAK	Ala-Archa	6.25	26	⇓Pn	Pn	14 16 38.6	+0.1
	1.5nm,0.4s						
AAK				Sn	Sn	14 17 53.6	+2.9
	2.7nm,0.9s						
TKM2	Tokmak 2	6.91	30	⇓Pn	Pn	14 16 47.3	-0.2
	4.3nm,0.5s						

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*IDC **25** 15:00:05.0±2.0, 46°.93N×146°.83E, h337^{km}±22^{km}, mb2.8/8, mb1 3.0/12, mb1mx2.9/38, mbtmp3.5/12, Error ellipse: s-maj=26.0km s-min=15.4km az=124.0*

ISC 25 15:00:05.6±0.8**, 46°.9N**±0°.1×**146°.8E**±0°.1**, h346**^{km}**, n12, σ0^s.70**/12**, mb3.0**/8**, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAJ	Asahikawa	4.04	228	P	Pn	15 01 14.0	-0.8
	0.3nm,0.3s,baz=60,slow=11,SNR=7.1						
KLR	Kul'dur	10.34	289	P	Pn	15 02 28.0	+0.5
	0.1nm,0.3s,baz=101,slow=5.9,SNR=3.9						
USRK	Ussuriysk Ar.	10.72	261	P	Pn	15 02 31.9	-0.3
	baz=69,slow=13,SNR=7.3						
MJAR	Matsushiro Arr	12.15	215	P	P	15 02 49.1	+0.1
	0.1nm,0.3s,baz=25,slow=11,SNR=4.6						
ILAR	Eielson Array	39.15	38	P	P	15 07 00.1	-0.5
	0.5nm,1.1s,baz=249,slow=5.6,SNR=6.1						
MKAR	Makanchi Array	42.98	295	P	P	15 07 31.4	-0.2
	0.5nm,0.6s,baz=74,slow=10,SNR=5.2						
INK	Inuvik	43.85	32	P	P	15 07 37.4	-0.8
	0.4nm,0.4s,baz=277,slow=4.6,SNR=1.6						
NVAR	Mina Array Bea	66.15	59	P	P	15 10 16.2	-0.8
	0.2nm,0.7s,baz=289,slow=5.5,SNR=2.6						
WRA	Warramunga Arr	67.45	193	P	P	15 10 24.8	0.0
	0.3nm,0.6s,baz=182,slow=35,SNR=1.7						
PDAR	Pinedale Array	68.10	50	P	P	15 10 29.6	+0.5
	0.3nm,0.5s,baz=243,slow=4.8,SNR=4.0						
ASAR	Alice Springs	71.17	192	P	P	15 10 48.4	+0.9
	0.1nm,0.4s,baz=9.3,slow=6.1,SNR=12						
TXAR	Lajitas Array	81.12	56	P	P	15 11 44.1	+0.9
	0.1nm,0.4s,baz=329,slow=3.4,SNR=3.7						

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*PRE **25** 15:00:27.1±0.7, 26°.99S×28°.21E, h5^{km}, ML2.4*

*BUL **25** 15:00:57.1±20.0, 25°.72S×29°.82E, h165^{km}±833^{km}, MD3.7*

*EAF **25** 15:00:57.4±21.0, 25°.75S×29°.88E, h135^{km}±999^{km}, MD3.6*

ISC 25 15:00:27.3±1.1**, 26°.88S**±0°.06×**28°.20E**±0°.05**, h10**^{km}**, n10, σ2^s.64**/13**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRYS	Parys	0.75	266	*e*P	Pg	15 00 41.6	-0.2
PRYS				*e*S	Sg	15 00 52.0	+0.4
PRYS				IAML		15 00 55.4	
	comp=Z,197nm,1.1s						
SLR	Silverton	1.14	4	*e*P	Pg	15 00 51.7	+2.5
SLR				*e*S	Sn	15 01 08.3	+3.0
SLR				IAML		15 01 17.6	
	comp=Z,65nm,1.5s						
BOSA	Boshof	3.13	236	*e*P	Sg	15 02 08.7	+0.9
POGA	Pongola	3.17	99	*e*P	Pn	15 01 18.0	+0.8
POGA				*e*S	Sn	15 01 55.0	-0.1
POGA				IAML		15 01 58.0	
	comp=Z,18nm,0.4s						
MOPA	Mopani	4.43	42	*e*P	Pn	15 01 31.4	-3.2
MOPA				*e*S	Sn	15 02 08.6	-18
MOPA	Mopani	4.43	42	*e*P	Pn	15 01 31.4	-3.2
MOPA				*e*S	Sn	15 02 08.6	-18
MSNA	Messina	4.81	21	*e*P	Pg	15 02 09.1	+10
MSNA				*e*S	Sn	15 02 21.6	-14
MSNA	Messina	4.81	21	*e*P	Pg	15 02 09.1	+10
MSNA				*e*S	Sn	15 02 21.6	-14
MATP	Matopo	6.43	3	*e*P	Pn	15 02 03.4	+1.2
MATP				*e*S	Sn	15 03 11.9	-3.9
MATP	Matopo	6.43	3	*e*P	Pn	15 02 03.4	+1.2
MATP				*e*S	Sn	15 03 11.9	-3.9

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*SJA **25** 15:04:43±3.4, 24°.20S±0°.07×67°.1W±0°.1, h196^{km}±5^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=177.0*

*NEIC **25** 15:04:43.7±2.4, 24°.24S±0°.04×67°.1W±0°.1, h164^{km}±6^{km}, mb3.9/8, Md4.1(SJA), ML4.4(GUC), Error ellipse: s-maj=14.8km s-min=6.3km az=92.0*

*IDC **25** 15:04:43.6±1.2, 24°.15S×66°.96W, h172^{km}±11^{km}, mb3.6/5, mb1 3.7/10, mb1mx3.5/36, mbtmp4.1/10, Error ellipse: s-maj=22.4km s-min=13.8km az=17.0*

*GUC **25** 15:04:45.5±0.5, 24°.12S×67°.45W, h221^{km}±7^{km}, ML4.4*

*VAO **25** 15:04:51.4±0.8, 24°.04S×66°.96W, h263^{km}±7^{km}, mb4.1*

ISC 25 15:04:43.8±0.6**, 24°.20S**±0°.03×**67°.17W**±0°.03**, h181**^{km}±6^{km}**, n162, σ1^s.59**/209**, mb4.0**/7**, 13C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLA	San Lorenzo	1.60	109	⇓*i*P	Pn	15 05 18.2	+1.1
SLA				*i* S	Sn	15 05 43.8	+1.0
SLA	San Lorenzo	1.60	109	*i* P	Pn	15 05 18.4	+1.3
SLA				*i* S	Sn	15 05 43.7	+0.8
HJA	Humahuaca	1.89	59	*i* P	Pn	15 05 21.2	+0.9
AZAP	Zapla	1.92	91	*i* P	Pn	15 05 20.8	+0.4
FSA	Cafayete	2.19	151	*i* P	Pn	15 05 24.0	+0.7
FSA				*i* S	Sn	15 05 54.0	-0.1
LVC	Limon Verde	2.25	314	P	Pn	15 05 25.7	+1.6
	108nm,0.3s,baz=100,slow=10,SNR=395						
LVC				S	Sn	15 05 56.3	+0.9
	114nm,0.3s,baz=15,slow=21,SNR=24						
LVC	Limon Verde	2.25	314	⇑*i*P	Pn	15 05 25.7	+1.6
LVC				*e*S	Sn	15 05 56.6	+1.2
LVC	Limon Verde	2.25	314	*i* P	Pn	15 05 25.9	+1.8
LVC				*i* S	Sn	15 05 56.8	+1.4
LVC				IAML		15 05 57.7	
	comp=Z,203nm,0.3s						
PB15	IPOC Station P	2.33	295	⇑*i*P	Pn	15 05 26.5	+1.7
PB15				*i* S	Sn	15 05 57.6	+0.9
PB15	IPOC Station P	2.33	295	Pn	Pn	15 05 26.7	+1.9
PB15	IPOC Station P	2.33	295	*i* P	Pn	15 05 26.6	+1.8
PB15				*i* S	Sn	15 05 57.7	+1.0
ASTB	Santa Barbara	2.50	85	*i* P	Pn	15 05 27.1	+0.4
YJA	Yavi	2.52	37	*i* P	Pn	15 05 28.2	+0.8
YJA				*i* S	Sn	15 06 01.0	-0.1
PB06	IPOC Station P	2.66	303	⇑*i*P	Pn	15 05 30.1	+1.5
PB06				*i* S	Sn	15 06 03.7	+0.2
PB06				IAML		15 06 05.1	
	comp=E,2μm,0.2s						
PB06	IPOC Station P	2.66	303		Pn	15 05 30.2	+1.5
PB06	IPOC Station P	2.66	303	*i* P	Pn	15 05 30.2	+1.5
PB06				*i* S	Sn	15 06 03.7	+0.2
PB06				IAML		15 06 06.7	
	comp=Z,701nm,0.3s						
ALOL	LOMAS DE OLMED	2.94	83	*i* P	Pn	15 05 32.1	+0.3
PB14	IPOC Station P	2.98	261	⇑*i*P	Pn	15 05 33.7	+1.1
PB14				*i* S	Sn	15 06 10.0	-0.5
PB14				IAML		15 06 12.4	
	comp=E,337nm,0.4s						
PB14	IPOC Station P	2.98	261		Pn	15 05 33.5	+0.9
PB14	IPOC Station P	2.98	261	*i* P	Pn	15 05 33.7	+1.1
PB14				*i* S	Sn	15 06 10.3	-0.2
PB14				IAML		15 06 15.6	
	comp=Z,298nm,0.5s						
PB09	IPOC Station P	3.06	321	⇑*i*P	Pn	15 05 35.1	+1.7
PB09				*i* S	Sn	15 06 12.7	+0.6
PB09	IPOC Station P	3.06	321	Pn	Pn	15 05 35.2	+1.7
PB09	IPOC Station P	3.06	321	*i* P	Pn	15 05 35.3	+1.8
PB09				*i* S	Sn	15 06 12.6	+0.5
PB09				IAML		15 06 15.9	
	comp=Z,384nm,0.3s						
AHML	Horco Molle	3.06	148	*i* P	Pn	15 05 33.8	+0.5
AHML				*i* S	Sn	15 06 13.2	+1.1
PB05	IPOC Station P	3.09	295	⇑*i*P	Pn	15 05 34.8	+1.0
PB05				*i* S	Sn	15 06 11.6	-1.1
PB05				IAML		15 06 16.1	
	comp=E,720nm,0.2s						
AC02	Maricunga	3.17	214		Pn	15 05 36.6	+1.5
AC02	Maricunga	3.17	214	*i* P	Pn	15 05 36.7	+1.7
AC02				*i* S	Sn	15 06 16.5	+1.4
PB10	IPOC Station P	3.17	282	⇑*e*P	Pn	15 05 35.8	+1.2
PB10				*i* S	Sn	15 06 13.1	-1.2
PB10				IAML		15 06 19.5	
	comp=E,531nm,0.5s						
PB10	IPOC Station P	3.17	282		Pn	15 05 35.9	+1.3
PB10	IPOC Station P	3.17	282	*i* P	Pn	15 05 36.0	+1.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PB10				iS	Sn	15 06 14.0	-0.3
PB10				IAML		15 06 19.0	
	comp=Z,442nm,0.6s						
PB04	IPOC Station P	3.31	303	⇑iP	Pn	15 05 37.3	+0.8
PB04				iS	Sn	15 06 16.5	-1.0
PB04	IPOC Station P	3.31	303	Pn	Pn	15 05 37.3	+0.8
PB04	IPOC Station P	3.31	303	iP	Pn	15 05 37.5	+1.0
PB04				iS	Sn	15 06 16.6	-1.0
PB07	IPOC Station P	3.51	314	⇑iP	Pn	15 05 39.8	+0.8
PB07				eS	Sn	15 06 20.5	-1.6
PB07	IPOC Station P	3.51	314		Pn	15 05 39.7	+0.8
PB07	IPOC Station P	3.51	314	iP	Pn	15 05 39.9	+0.8
PB07				iS	Sn	15 06 20.5	-1.6
PB01	IPOC Station P	3.80	325	⇑iP	Pn	15 05 42.8	+0.3
PB01				iS	Sn	15 06 26.8	-1.7
PB01	IPOC Station P	3.80	325	Pn	Pn	15 05 42.9	+0.3
PB01	IPOC Station P	3.80	325	iP	Pn	15 05 42.9	+0.3
PB01				iS	Sn	15 06 27.0	-1.5
PB01				IAML		15 06 30.0	
	comp=Z,314nm,0.2s						
PB02	IPOC Station P	3.81	318	⇑iP	Pn	15 05 43.0	+0.3
PB02				eS	Sn	15 06 27.3	-1.5
PB02	IPOC Station P	3.81	318	iP	Pn	15 05 43.1	+0.4
PB02				iS	Sn	15 06 27.3	-1.5
GO03	Copiap	4.37	219	⇑eP	Pn	15 05 49.1	-0.6
GO03				eS	Sn	15 06 39.6	-1.8
GO03	Copiap	4.37	219	Pn	Pn	15 05 49.2	-0.5
GO03	Copiap	4.37	219	iP	Pn	15 05 49.2	-0.5
GO03				iS	Sn	15 06 40.0	-1.4
CYA	Choya	4.40	164	iP	Pn	15 05 51.6	+1.5
CYA				iS	Sn	15 06 41.1	-1.1
PB08	IPOC Station P	4.43	335	⇑iP	Pn	15 05 51.8	+0.8
PB08				iS	Sn	15 06 42.7	-0.8
PB08	IPOC Station P	4.43	335	Pn	Pn	15 05 51.6	+0.6
PB08	IPOC Station P	4.43	335	iP	Pn	15 05 51.8	+0.9
PB08				iS	Sn	15 06 42.4	-1.1
PB08				IAML		15 06 44.5	
	comp=Z,257nm,0.5s						
TA01	Diego Aracena	4.56	322	eP	Pn	15 05 52.0	-0.2
TA01				eS	Sn	15 06 42.6	-3.2
TA01	Diego Aracena	4.56	322	Pn	Pn	15 05 52.3	+0.1
TA01	Diego Aracena	4.56	322	iP	Pn	15 05 51.7	-0.5
TA01				iS	Sn	15 06 43.6	-2.2
VCA	Vinchina	4.62	191	iP	Pn	15 05 55.6	+2.6
TA02	Huaiquique	4.77	324	Pn	Pn	15 05 55.1	+0.1
PB11	IPOC Station P	4.98	332	eP	Pn	15 05 56.9	-0.9
PB11				eS	Sn	15 06 52.3	-3.5
PB11	IPOC Station P	4.98	332	Pn	Pn	15 05 57.0	-0.7
PB11	IPOC Station P	4.98	332	iP	Pn	15 05 56.8	-0.9
PB11				iS	Sn	15 06 52.8	-3.0
PB11				IAML		15 06 56.9	
	comp=Z,247nm,0.3s						
AC04	Llanos de Chal	5.31	220	Pn	Pn	15 06 00.7	-1.1
LCO	Las Campanas	5.74	213	iP	Pn	15 06 05.4	-2.4
APLL	PUNTA DE LOS L	6.20	175	iP	Pn	15 06 13.1	-0.4
APLL				iS	Sn	15 07 20.2	-4.1
APLL				IAML		15 07 21.2	
	comp=Z,100nm,4.0s						
PB16	IPOC Station P	6.23	339	eP	Pn	15 06 14.5	+0.1
PB16				eS	Sn	15 07 23.1	-2.6
PB16	IPOC Station P	6.23	339		Pn	15 06 14.7	+0.2
PB16	IPOC Station P	6.23	339	iP	Pn	15 06 14.4	0.0
PB16				iS	Sn	15 07 22.4	-3.3
PB16				IAML		15 07 29.1	
	comp=Z,34nm,0.4s						
PB12	IPOC Station P	6.29	331	eP	Pn	15 06 13.2	-1.5
PB12				eS	Sn	15 07 20.8	-5.6
PB12	IPOC Station P	6.29	331	Pn	Pn	15 06 13.7	-1.0
PB12	IPOC Station P	6.29	331	iP	Pn	15 06 12.6	-2.2
PB12				iS	Sn	15 07 20.7	-5.7
PB12				IAML		15 07 24.9	
	comp=Z,72nm,0.4s						
AVFE	Valle Fertil	6.44	182	iP	Pn	15 06 16.9	+0.2
AVFE				iS	Sn	15 07 26.6	-3.4
AVFE				IAML		15 07 31.1	
	comp=Z,14nm,0.4s						
ACCO	Cerro Coronel	6.59	194	iP	Pn	15 06 19.5	+0.7
ACCO				iS	Sn	15 07 33.2	-0.6
GO04	Tololo Observa	6.77	208	Pn	Pn	15 06 21.4	+0.2
GO04	Tololo Observa	6.77	208	iP	Pn	15 06 20.8	-0.4
GO04				iS	Sn	15 07 34.2	-3.8
ACHE	Chepes	6.95	176	iP	Pn	15 06 22.6	-0.9
ACHE				iS	Sn	15 07 37.4	-4.8
CO03	El Pedregal	7.32	204	Pn	Pn	15 06 26.9	-1.3
TCA	Tanti	7.47	163	iP	Pn	15 06 28.9	-1.3
TCA				iS	Sn	15 07 49.7	-4.7
CO06	Fray Jorge	7.57	211	Pn	Pn	15 06 29.2	-2.3
RTLS	Leoncito	7.80	193	iP	Pn	15 06 35.0	+0.2
AUSP	Uspallata	8.23	193	iP	Pn	15 06 41.2	+0.8
MRA	San Martin	8.29	171	iP	Pn	15 06 38.8	-2.2
MRA				iS	Sn	15 08 07.3	-6.6
MRA				IAML		15 08 30.6	
	comp=Z,7.1nm,0.4s						
ASAL	Salagasta	8.49	190	iP	Pn	15 06 43.5	-0.1
AAGR	Agrelo	8.98	189	iP	Pn	15 06 50.1	+0.2
CPUP	Villa Florida	9.16	105	P	Pn	15 06 49.6	-2.7
	comp=Z,0.3nm,0.3s,baz=286,slow=4.2,SNR=2.9						
SIV	San Ignacio	9.97	36	P	Pn	15 07 00.7	-2.4
	comp=Z,1.7nm,0.3s,baz=214,slow=12,SNR=14						
PTLB	Pontes e Lacer	11.52	42	eP	Pn	15 07 25.1	+1.9
PTLB	Pontes e Lacer	11.52	42	Pn	P	15 07 26.1	-3.3
ML02	Panimavida	12.10	197	Pn	Pn	15 07 31.5	+1.1
TRCB	Terra Rica	13.41	87	eP	P	15 07 50.6	+0.2
TRCB	Terra Rica	13.41	87	P	P	15 07 50.8	+0.4
SALV	Santo Antonio	13.57	55	eP	P	15 07 50.5	-1.6
PTGB	Pitanga	13.77	95	eP	P	15 07 55.1	+0.8
H03N1	Juan Fernandez	13.80	226	T	T	15 20 20.2	
	baz=49						
H03N2	Juan Fernandez	13.81	226	T	T	15 19 58.1	
	baz=49,slow=74						
H03N3	Juan Fernandez	13.82	225	T	T	15 19 52.8	
	baz=49,slow=74						
ITAB	Concordia	13.89	106	P	P	15 07 54.7	-0.9
PLTB	Pedras Altas	14.15	125	P	Pn	15 07 57.1	+0.8
ETMB	Extrema	14.33	4	eP	P	15 08 01.6	+1.0
PCMB	Pacaembu	14.88	83	eP	P	15 08 07.8	+1.1
LC01	Cunco	15.19	194	P	P	15 08 11.3	+1.3
LC01				IAmb	IAmb	15 08 23.6	
	comp=Z,5.5nm,1.1s						
CNLB	Canela	15.44	113	eP	P	15 08 13.1	+0.3
SAML	Samuel	15.63	15	P	Pn	15 08 14.2	-0.5
FRTB	Fartura	16.14	91	eP	Pn	15 08 21.7	+0.9
ITRB	Iturama	16.22	77	eP	Pn	15 08 22.4	+0.6
ARAG	Araguaiana, MT	16.71	62	eP	Pn	15 08 27.0	-0.7
PLCA	Paso Flores	16.73	189	P	P	15 08 28.2	+1.2
	comp=Z,0.2nm,0.3s,baz=12,slow=11,SNR=5.2						
PLCA	Paso Flores	16.73	189	eP	Pn	15 08 31.5	+3.7
PLCA	Paso Flores	16.73	189	P	P	15 08 27.3	+0.3
TER01	Tubaro-SC	16.73	109	eP	Pn	15 08 28.3	+0.4
CLDB	Colider	17.11	41	eP	P	15 08 30.6	-0.6
CZSB	Cruzeiro do Su	17.21	341	eP	Pn	15 08 34.0	+0.3
BB19B	Bebedouro	17.49	83	eP	P	15 08 35.6	+0.2
RCLB	Rio Claro- Sao	18.13	88	eP	P	15 08 41.8	-0.6
PET01	Itanhaem-SP	18.14	94	eP	P	15 08 42.2	-0.3
VAO	Valinhos	18.56	90	eP	P	15 08 46.2	-0.9
IPMB	Ipameri, GO	18.73	74	eP	P	15 08 48.6	-0.4
SNDB	Serra Nova Dou	19.35	54	eP	P	15 08 55.0	-0.7
PARB	Paraibuna	19.74	92	eP	P	15 08 59.6	-0.3
BDFB	Brasilia	19.90	68	P	P	15 09 00.8	-0.9
	comp=Z,1.7nm,0.3s,baz=239,slow=11,SNR=20						
BDFB	Brasilia	19.90	68	P	P	15 09 01.0	-0.7
TBTG	Tabatinga, AM	20.07	352	eP	P	15 09 03.8	+0.4
BSCB	Bom Sucesso	20.92	86	eP	P	15 09 11.8	-0.7
MAN01	Angra dos Reis	21.32	91	eP	P	15 09 14.8	-1.9
PEXB	Peixe	21.56	59	eP	P	15 09 18.0	-1.2
VAS01	Vassouras-RJ	21.88	90	eP	P	15 09 22.0	-0.5
ITTB	Itaituba	22.59	31	eP	P	15 09 27.8	-1.3
DIAM	Diamantina, MG	22.66	80	eP	P	15 09 29.4	-0.6
DUB01	Friburgo-RJ	22.89	90	eP	P	15 09 31.1	-0.9
MC01	Montes Claros	22.98	75	eP	P	15 09 31.3	-1.5
JANB	Januaria	23.34	71	eP	P	15 09 35.0	-1.1
SDBA	SAO DESIDERIO	24.13	65	eP	P	15 09 41.5	-1.8
SMTB	Santa Maria do	24.13	54	eP	P	15 09 41.8	-1.4
PRPB	Parauapebas	24.47	46	eP	P	15 09 44.7	-1.7
ALF01	Guarapari-ES	24.69	87	eP	P	15 09 47.1	-1.1
SJMB	Sao Joao De Ma	24.77	82	eP	P	15 09 48.4	-0.7
BSFB	Barra de Sao F	25.04	83	eP	P	15 09 50.0	-1.4
RIB01	Linhares ES	25.32	84	eP	P	15 09 52.7	-1.3
MALB	Monte Alegre	25.48	31	eP	P	15 09 54.1	-1.3
OTAV	Otavalo	26.64	334	eP	P	15 10 05.9	-0.5
GUA01	Guaratinga, BA	26.71	79	eP	P	15 10 05.1	-1.4
BOAV	Boa Vista	27.21	15	eP	P	15 10 09.5	-1.4
CMC01	Camacan, BA	27.42	76	eP	P	15 10 11.2	-1.6
NBIT	Itapeh - BA	27.67	76	eP	P	15 10 13.8	-1.2
GDU01	Guandu, BA	28.05	73	eP	P	15 10 16.6	-1.8
NBPN	Ponto Novo - B	28.87	67	eP	P	15 10 24.2	-1.5
ROSB	Rosrio	30.72	50	eP	P	15 10 40.4	-1.5
VNA3	Neumayer Olymp	57.02	161	P	P	15 14 11.4	+1.1
VNA1	Neumayer--Stat	57.22	160	P	P	15 14 13.3	+1.7
VNA2	Neumayer--Watz	57.59	160	P	P	15 14 15.2	+1.0
	baz=292,slow=6.8						
SNAA	Sanae	59.22	161	P	P	15 14 26.2	+0.6
SNAA	Sanae	59.22	161	P	P	15 14 26.5	+1.0
SNAA				IAmb	IAmb	15 14 33.5	
	comp=Z,2.9nm,1.1s						
TXAR	Lajitas Array	63.75	325	P	P	15 14 57.8	+1.3
	comp=Z,0.5nm,0.8s,baz=153,slow=5.7,SNR=4.7						
TXAR	Lajitas Array	63.75	325	P	P	15 14 58.1	+1.6
QSPA	South Pole Qui	66.01	180	P	P	15 15 12.0	+1.4
QSPA				IAmb	IAmb	15 15 13.0	
	comp=Z,1.7nm,0.7s						
TORD	Torodi Ar. Bea	76.78	69	P	P	15 16 14.9	-0.9
	comp=Z,1.3nm,0.6s,baz=255,slow=5.2,SNR=7.9						
TORD	Torodi Ar. Bea	76.78	69	P	P	15 16 15.0	-0.9
TORD				IAmb	IAmb	15 16 16.1	
	comp=Z,1.3nm,0.7s						
PDAR	Pinedale Array	77.24	329	P	P	15 16 19.5	+1.5
	comp=Z,0.2nm,0.4s,baz=121,slow=8.3,SNR=2.5						
BOSA	Boshof	80.78	117	P	P	15 16 37.6	-0.1
	comp=Z,2.9nm,0.4s,baz=258,slow=3.1,SNR=17						
BOSA	Boshof	80.78	117	P	P	15 16 38.1	+0.4
MAW	Mawson	81.30	163	P	P	15 16 40.5	+1.1
	comp=Z,1.7nm,0.6s,baz=312,slow=1.3,SNR=3.6						
MAW	Mawson	81.30	163	P	P	15 16 41.2	+1.8
ASAR	Alice Springs	128.21	205	PKP	PKiKP	15 23 29.9	0.0
	comp=Z,0.3nm,0.5s,baz=142,slow=1.7,SNR=8.4						
ASAR	Alice Springs	128.21	205		PKPdf	15 23 29.6	+0.3
WRA	Warramunga Arr	131.38	207	PKP	PKiKP	15 23 36.2	0.0
	comp=Z,0.3nm,0.4s,baz=158,slow=1.7,SNR=11						
WRA				SKPbc	SKPab	15 26 44.5	+0.5
	comp=Z,0.6nm,0.6s,baz=152,slow=3.7,SNR=8.4						
WRA	Warramunga Arr	131.38	207		PKPdf	15 23 35.9	+0.6
MKAR	Makanchi Array	146.77	40	PKPbc	PKPab	15 24 05.4	-0.7
	comp=Z,1.0nm,0.6s,baz=300,slow=2.9,SNR=8.3						
MKAR	Makanchi Array	146.77	40	PKPdf	PKPbc	15 24 03.6	-0.7
MKAR				PKPbc	PKPab	15 24 05.3	-0.7

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*TUL **25** 15:18:13.5±1.2, 36°.86N±0°.01×97°.67W±0°.01, h6^{km}±6^{km}, ML2.8, mb_Lg2.4/8(NEIC), Error ellipse: s-maj=1.7km s-min=1.5km az=174.0*

NEIC 25 15:18:13.7±0.8**, 36°.84N**±0°.01×**97°.66W**±0°.01**, h5**^{km}±6^{km}**, Error ellipse: s-maj=1.6km s-min=1.5km az=146.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GC02	Grant County #	0.17	274		Pg	15 18 16.9	0.0
GC02				Sg	Sg	15 18 19.3	+0.2
KAN17	Caldwell West	0.22	337	Pg	Pg	15 18 17.9	-0.1
KAN17				Sg	Sg	15 18 21.1	+0.1
KAN13	South Haven SW	0.22	39	Pg	Pg	15 18 18.2	+0.1
KAN13				Sg	Sg	15 18 21.4	+0.4
KAN14	Manchester OK	0.27	295	Pg	Pg	15 18 18.9	-0.1
KAN14				Sg	Sg	15 18 22.7	+0.1
KAN09	Caldwell North	0.30	6	Pg	Pg	15 18 19.4	0.0
KAN09				Sg	Sg	15 18 23.6	+0.2
KAN01	Argonia South	0.32	345	Pg	Pg	15 18 19.8	-0.1
BLOK	Blackwell	0.36	103	Pg	Pg	15 18 20.9	+0.3
BLOK				Sg	Sg	15 18 26.0	+0.6
CROK	Carrier	0.43	218		Pg	15 18 22.0	+0.1
CROK				Sg	Sg	15 18 28.1	+0.6
KAN06	Argonia West S	0.44	338	Pg	Pg	15 18 21.8	-0.4
OK032	Salt Plains WL	0.45	265		Pg	15 18 22.3	0.0
OK032					Sg	15 18 28.1	-0.1
KAN10	Anthony SW Sta	0.45	309	Pg	Pg	15 18 22.4	0.0
KAN10				Sg	Sg	15 18 28.4	+0.1
KAN08	Anthony NE Sta	0.46	327	Pg	Pg	15 18 22.4	-0.2
KAN08				Sg	Sg	15 18 28.9	+0.2
KAN16	Harper SW Stat	0.51	320	Pg	Pg	15 18 23.3	-0.2
KAN16				Sg	Sg	15 18 30.3	+0.3
KAN12	Harper NE Stat	0.53	329	Pg	Pg	15 18 23.4	-0.5
KAN12				Sg	Sg	15 18 30.4	-0.5
T35A	Sooner Cattle	0.92	85	Pg	Pg	15 18 31.0	-0.3
T35A				Sg	Sg	15 18 43.3	0.0
OK033	Mehan	0.98	144	Pg	Pg	15 18 32.6	+0.1
OK033				Sg	Sg	15 18 45.4	+0.2
QUOK	Quay	1.01	131	Pg	Pg	15 18 32.6	-0.5
QUOK					Sg	15 18 46.1	-0.2
OK029	Liberty Lake	1.05	171	Pg	Pg	15 18 33.4	-0.5
OK029				Sg	Sg	15 18 47.8	+0.3
OK031	S. Brethren Rd	1.10	143	Pg	Pg	15 18 34.5	-0.4
OK031				Sg	Sg	15 18 49.1	0.0
OK034	N. Norfolk Rd.	1.12	137	Pg	Pg	15 18 35.0	-0.3
OK034				Sg	Sg	15 18 49.8	0.0
OK030	Cody Creek RV	1.15	142		Pg	15 18 35.2	-0.5
U32A	Winter Ranch,	1.18	247	Pg	Pg	15 18 35.5	-0.8
U32A				Sg	Sg	15 18 50.9	-0.6
BCOK	Bluff Creek, N	1.18	178	Pg	Pg	15 18 35.5	-0.9
BCOK				Sg	Sb	15 18 52.1	-0.1
OK025	Westminster Rd	1.28	168		Pg	15 18 37.3	-1.0
OK025				Sg	Sb	15 18 55.0	-0.1
FNO	Franklin	1.59	173	Pn	Pn	15 18 42.6	0.0
TUL1	Leonard	1.77	121	Pn	Pn	15 18 43.2	-1.8
TUL1				IAmb_Lg		15 19 10.8	
	comp=Z,30nm,0.9s						
R32A	Long Quarter,	1.79	332	Pn	Pn	15 18 45.7	+0.4
W35A	Tecumseh	1.80	159		Pn	15 18 45.7	+0.3
X34A	Smith Ranch, M	2.24	184	Pn	Pn	15 18 51.5	0.0
WMOK	Wichita Mounta	2.29	204	Pn	Pn	15 18 52.5	+0.3
WMOK				IAmb_Lg		15 19 30.9	
	comp=Z,9.2nm,0.8s						
KSU1	Kansas State U	2.40	20	IAmb_Lg		15 19 36.2	
	comp=Z,12nm,0.7s						
CBKS	Cedar Bluff	2.57	321	Pn	Pn	15 18 56.0	-0.1
X37A	Clayton	2.92	140		Pn	15 19 00.3	-0.4
HHAR	Hobbs	3.04	99	Pn	Pn	15 19 01.9	-0.7
S39A	Bolivar	3.56	75	Pn	Pn	15 19 10.5	+0.9
U40A	Yellville	3.89	96	Pn	Pn	15 19 14.1	-0.1
MIAR	Mount Ida	4.03	123	Pn	Pn	15 19 14.3	-1.8
MGMO	Mountain Grove	4.32	84	IAmb_Lg		15 20 29.6	
	comp=Z,15nm,0.8s						
R40A	Maddies Statio	4.52	70	Pn	Pn	15 19 22.0	-0.8
SDCO	Great Sand Dun	6.32	281	Pn	Pn	15 19 46.6	-1.2

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*SJA **25** 15:37:19±2.6, 32°.97S±0°.06×69°.04W±0°.08, h17^{km}±8^{km}, Error ellipse: s-maj=10.2km s-min=6.9km az=123.0*

*GUC **25** 15:37:20.4±0.7, 33°.00S×69°.00W, h14^{km}±30^{km}, ML3.4*

*NEIC **25** 15:37:23.2±1.8, 32°.95S±0°.07×69°.0W±0°.1, h30^{km}±19^{km}, Md3.6(SJA), Error ellipse: s-maj=17.0km s-min=6.8km az=116.0*

ISC 25 15:37:18.6±1.9**, 33°.02S**±0°.04×**69°.01W**±0°.06**, h1**^{km}±13^{km}**, n33, σ0.^{s}81**/50**, 2C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMEL	Las Melosas	1.30	230	eP	Pb	15 37 43.9	0.0
LMEL				iS	Sn	15 38 01.8	-0.3
LMEL				IAML		15 38 02.8	
	comp=N,890nm,0.2s						
VA03	San Esteban	1.33	281	eP	Pn	15 37 43.9	-0.4
VA03				iS	Sg	15 38 02.1	+0.9
VA03				IAML		15 38 02.4	
	comp=N,2μm,0.1s						
VA03	San Esteban	1.33	281		Pn	15 37 44.0	-0.4
VA03					Sn	15 38 01.7	-1.0
PEL	Peldehue	1.42	265	eP	Pn	15 37 45.3	-0.2
PEL				iS	Sg	15 38 04.6	+0.5
PEL				IAML		15 38 04.9	
	comp=N,383nm,0.2s						
PEL	Peldehue	1.42	265		Pn	15 37 45.5	-0.1
MT05	Renca	1.50	255	eP	Pg	15 37 47.8	+0.5
MT05	Renca	1.50	255		Pb	15 37 47.6	+0.3
ZON	Zonda	1.50	11		Pn	15 37 46.5	-0.2
BO04	La Punta	1.65	234	eP	Pb	15 37 49.5	-0.3
BO04				iS	Sg	15 38 11.8	+0.2
BO04				IAML		15 38 13.5	
	comp=E,521nm,0.2s						
ROCH	El Roble	1.69	271	eP	Pn	15 37 50.4	+1.0
ROCH				eP	Pb	15 37 50.1	-0.4
ROCH				iS	Sg	15 38 12.7	-0.1
ROCH				iS	Sb	15 38 13.2	+0.8
ROCH				IAML		15 38 14.1	
	comp=E,1μm,0.6s						
ROCH				IAML		15 38 14.2	
	comp=N,1μm,0.5s						
MT02	Curacav	1.80	262	iP	Pb	15 37 52.4	0.0
MT02				eS	Sg	15 38 16.4	-0.2
MT02	Curacav	1.80	262		Pb	15 37 52.1	-0.3
MT09	Talagante	1.82	245	eP	Pb	15 37 52.5	-0.3
MT09				iS	Sg	15 38 16.9	-0.1
MT09	Talagante	1.82	245		Pb	15 37 52.5	-0.3
VA06	Catapilco	1.98	283	eP	Pb	15 37 54.8	-0.7
VA06				iS	Sb	15 38 20.7	-0.1
MT01	Popeta	2.06	245	eP	Pb	15 37 56.0	-0.7
MT01				eS	Sg	15 38 23.8	-0.8
MT01	Popeta	2.06	245	Pn	Pb	15 37 55.6	-1.1
BO01	Tunca	2.21	231	Pn	Pb	15 37 59.3	0.0
VA01	Torpederas	2.22	269	eP	Pb	15 37 58.6	-0.9
VA01				iS	Sb	15 38 27.5	+0.1
VA01				IAML		15 38 29.6	
	comp=N,234nm,0.2s						
VA01	Torpederas	2.22	269	Pn	Pb	15 37 58.2	-1.2
VA05	Santo Domingo	2.27	253	⇑iP	Pb	15 38 00.5	+0.1
VA05				eS	Sg	15 38 31.0	-0.6
VA05				IAML		15 38 36.7	
	comp=E,340nm,0.4s						
VA05	Santo Domingo	2.27	253	Pn	Pb	15 38 00.1	-0.3
BO02	Sierra Bellavi	2.30	219	⇑iP	Pb	15 38 01.7	+0.8
BO02				eS	Sg	15 38 31.6	-1.0
BO02				IAML		15 38 35.7	
	comp=E,280nm,0.3s						
BO02	Sierra Bellavi	2.30	219	Pn	Pb	15 38 01.6	+0.6
CO03	El Pedregal	2.61	326	Pn	Pb	15 38 04.7	-1.5
GO05	Huala	3.13	230	eP	Pb	15 38 14.2	-0.9
GO05				eS	Sg	15 38 56.9	-2.4
GO05				IAML		15 39 00.3	
	comp=N,119nm,0.3s						
GO05	Huala	3.13	230	Pn	Pn	15 38 09.7	+0.6
GO04	Tololo Observa	3.23	331	Pn	Pn	15 38 12.5	+1.8
CO06	Fray Jorge	3.24	316	eP	Pn	15 38 11.6	+1.0
CO06				iS	Sb	15 38 58.4	+1.5
CO06	Fray Jorge	3.24	316	Pn	Pn	15 38 11.3	+0.7
CO05	La Serena	3.64	328	Pn	Pn	15 38 16.8	+0.8
AC04	Llanos de Chal	5.12	339	Pn	Pn	15 38 36.8	+0.3
AC02	Maricunga	6.17	359	Pn	Pn	15 38 51.4	+0.1

IDC 25 15:40:13.9±343.0**, 54°.08N**×**43°.34E, h0**^{km}**, Error ellipse: s-maj=148.9km s-min=86.5km az=135.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	4.38	310	i		16 07 20.0	
	baz=124,slow=340,SNR=1.0						
I31KZ	AKTYUBINSK INF	9.73	106	i		16 34 40.0	
	baz=299,slow=291,SNR=2.6						
I46RU	ZALESOVO INFRA	24.12	73	i		18 10 50.0	
	baz=288,slow=298,SNR=4.8						

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*IDC **25** 15:49:03.8±1.2, 4°.35S×133°.88E, h0^{km}, mb3.9/4, mb1 4.4/9, mb1mx3.9/40, mbtmp4.2/9, ML4.3/5, MS3.3/4, Ms1 3.3/4, ms1mx2.7/48, Error ellipse: s-maj=37.1km s-min=20.8km az=69.0*

*NEIC **25** 15:49:06.3±2.7, 4°.1S±0°.1×133°.8E±0°.1, h33^{km}±9^{km}, mb4.2/10, Error ellipse: s-maj=20.9km s-min=11.6km az=224.0*

*DJA **25** 15:49:07.4±0.3, 4°S±3°×13°4E±°, h10^{km}, M4.4/10, mB5.2/2, mb4.5/10, MLv4.3/6, Mw(mB)4.5/2*

ISC 25 15:49:05.0±0.6**, 4°.36S**±0°.05×**133°.70E**±0°.06**, h10**^{km}**, n44, σ2.^{s}81**/40**, mb4.0**/5**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	Fak Fak	2.04	315	P	Pn	15 49 36.6	-2.8
FAKI	Fak Fak	2.04	315		Pn	15 49 36.4	-3.0
FAKI	Fak Fak	2.04	315	P	Pn	15 49 36.9	-2.5
SRPI	Serui, Papua	3.54	46	P	Pg	15 50 14.7	+1.8
BNDI	Bandanaira	3.79	267	P	Pn	15 50 04.9	+1.4
SIJI	Sorong	4.24	325	Pn	Pn	15 50 05.8	-3.8
	1.5nm,0.3s,baz=231,slow=22,SNR=15						
SIJI				Sn	Sn	15 50 51.0	-8.2
	5.4nm,0.3s,baz=122,slow=9.4,SNR=4.5						
SIJI				LR	LR	15 51 53.7	
	comp=Z,206nm,21.1s,baz=184,slow=39						
SWI	Sorong	4.25	325	P	Pn	15 50 14.5	+4.8
MSAI	Masohi	4.87	282	P	Pb	15 50 33.2	+2.8
AAI	Ambon	5.53	277	P	Pn	15 50 27.8	+0.3
	0.3nm2μm48nm,0.4s						
LBMI	Labuha	7.21	301	P	Pn	15 50 53.5	+2.9
	16nm,0.6s						
SANI	Sanana	8.04	286	P	Pn	15 51 03.0	+1.1
	0.1nm22nm,0.6s						
SANI	Sanana	8.04	286	P	Pn	15 51 00.8	-1.1
KDU	Kakadu	8.36	188	P	Pn	15 51 08.4	+2.1
	32nm,0.5s						
DRS	Darwin Rock St	8.48	199	P	Pn	15 51 10.8	+2.8
MTN	Manton Dam	8.80	197	Pn	Pn	15 51 14.6	+2.2
MTN	Manton Dam	8.80	197	P	Pn	15 51 14.7	+2.3
	87nm,0.5s						
SOEI	Soe	10.79	240	P	Pn	15 51 54.5	+15
BATI	Baumata	11.52	239	Pn	Pn	15 51 52.8	+3.1
	3.4nm,0.3s,baz=151,slow=5.4,SNR=4.2						
BATI				Sn	Sn	15 53 56.0	-2.6
	1.5nm,0.3s,baz=118,slow=12,SNR=2.5						
BATI	Baumata	11.52	239	P	Pn	15 51 58.9	+9.2
	12nm,0.6s						
KNRA	Kununurra	12.25	203	Pn	Pn	15 52 00.5	+0.8
EDFI	Ende, Flores	12.70	249	P	Pn	15 52 13.4	+7.5
	5.1nm,1.0s						
COEN	Coen	13.35	136	Pn	Pn	15 52 13.5	-1.2
PMG	Port Moresby	14.27	111	LR	LR	15 58 35.5	
	comp=Z,52nm,19.2s,baz=308,slow=40						
WB0	Warramunga Arr	15.33	178	Pn	Pn	15 52 40.0	-1.5
WB0				IAmb	IAmb	15 53 06.3	
	comp=Z,16nm,1.1s						
WRAB	Tennant Creek	15.49	178	Pn	Pn	15 52 42.0	-1.8
WRAB				IAmb	IAmb	15 52 52.4	
	comp=Z,11nm,0.7s						
WRA	Warramunga Arr	15.50	178	Pn	Pn	15 52 41.8	-2.0
	comp=Z,0.6nm,0.3s,baz=356,slow=13,SNR=38						
WRA				Sn	Sn	15 55 28.0	-7.7
	comp=Z,0.2nm,0.3s,baz=356,slow=23,SNR=5.4						
WRA	Warramunga Arr	15.50	178	Pn	Pn	15 52 41.0	-2.9
WB2	Warramunga Arr	15.50	178	Pn	Pn	15 52 42.1	-1.7
WB2				IAmb	IAmb	15 52 52.5	
	comp=Z,11nm,0.8s						
WR0	Warramunga Arr	15.53	177	Pn	Pn	15 52 42.7	-1.5
WR0				IAmb	IAmb	15 52 56.6	
	comp=Z,10nm,0.8s						
FITZ	Fitzroy Crossi	15.77	209	Pn	Pn	15 52 46.7	-0.6
	comp=Z,0.9nm,0.3s,baz=32,slow=11,SNR=35						
FITZ				Sn	Sn	15 55 32.7	-10
	comp=Z,1.2nm,0.3s,baz=219,slow=18,SNR=9.3						
AS31	Alice Springs	19.19	179	P	P	15 53 30.6	+1.5
ASAR	Alice Springs	19.19	179	P	P	15 53 30.0	+0.9
	comp=Z,1.5nm,0.3s,baz=3.7,slow=9.4,SNR=117						
ASAR				S	Sn	15 56 54.4	-11
	comp=Z,0.1nm,0.3s,baz=358,slow=29,SNR=4.9						
ASAR				LR	LR	16 01 40.5	
	comp=Z,84nm,20.4s,baz=29,slow=39						
ASAR	Alice Springs	19.19	179	P	P	15 53 30.0	+0.9
KMMI	Kalianget	19.82	261	P	Pn	15 53 48.3	+11
CTA	Charters Tower	19.85	143	P	P	15 53 36.7	+0.5
	comp=Z,1.2nm,0.3s,baz=320,slow=14,SNR=17						
CTAO	Charters Tower	19.85	143		P	15 53 37.3	+1.0
CTAO				IAmb	IAmb	15 53 39.1	
	comp=Z,21nm,0.7s						
PSA00	Pilbara Seismi	21.76	217	P	P	15 53 58.5	+1.5
PSA00				IAmb	IAmb	15 54 07.6	
	comp=Z,32nm,1.4s						
STKA	Stephens Creek	28.36	166	P	P	15 54 59.1	-0.3
	comp=Z,5.6nm,1.1s,baz=76,slow=2.7,SNR=2.8						
BBOO	Buckleboo	28.39	176	P	P	15 55 01.1	+1.5
GSI	Gunungsitoli	36.53	278	P	P	15 56 06.4	-4.8
CMAR	Chiang Mai Arr	41.08	305	P	P	15 56 50.2	+1.0
	comp=Z,0.6nm,0.3s,baz=90,slow=5.7,SNR=5.4						
URZ	Urewera	51.91	137	LR	LR	16 22 30.4	
	comp=Z,88nm,18.3s,baz=31,slow=39						
MKAR	Makanchi Array	68.13	325	P	P	16 00 07.5	+2.2
	comp=Z,0.6nm,0.6s,baz=126,slow=7.8,SNR=2.3						
ILAR	Eielson Array	89.41	25	P	P	16 02 00.5	-1.3
	comp=Z,0.9nm,1.2s,baz=251,slow=5.6,SNR=2.3						

*IDC **25** 15:51:24.6±0.9, 37°.49N×94°.58E, h0km, mb4.1/8, mb1 4.1/14, mb1mx3.8/60, mbtmp4.0/14, ML3.8/6, MS3.0/5, Ms1 3.0/5, ms1mx2.7/55, Error ellipse: s-maj=23.9km s-min=15.7km az=55.0*

*NNC **25** 15:51:33.4±2.4, 38°.21N×94°.13E, h0km, mb4.3, Error ellipse: s-maj=34.6km s-min=19.5km az=42.0*

ISC 25 15:51:26.1±0.8**, 37°.61N**±0°.10×**94°.34E**±0°.09**, h10km, n19, σ2^s.15**/22**, mb4.1**/8**, 5C-1D, Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDGK	Podgornoye	12.66	301	⇓P	Pn	15 54 28.4	+2.0
	1.8nm,0.6s						
PDGK				⇑S	Sn	15 56 47.1	-0.4
	8.5nm,0.7s						
MK31	Makanchi Array	12.80	320	⇑P	Pn	15 54 29.1	+1.0
	5.4nm,0.8s,baz=126,slow=14,SNR=68						
MK31				⇑S	Sn	15 56 47.6	-2.9
	4.9nm,0.7s,baz=130,slow=26,SNR=5.1						
MKAR	Makanchi Array	12.80	320	Pn	Pn	15 54 29.1	+1.0
	1.0nm,0.3s,baz=128,slow=13,SNR=58						
MKAR				Sn	Sn	15 56 46.1	-4.5
	0.6nm,0.3s,baz=130,slow=25,SNR=4.4						
MAKZ	Makanchi	12.97	319	⇑P	Pn	15 54 31.3	+0.9
	6.1nm,0.6s						
MAKZ				⇑S	Sn	15 56 51.0	-3.7
	6.6nm,0.9s						
SONM	Songino Array	13.51	37	Pn	Pn	15 54 39.3	+1.4
	0.5nm,0.3s,baz=219,slow=16,SNR=16						
SONM				Lg	Lg	15 58 35.5	
	0.1nm,0.3s,baz=223,slow=32,SNR=4.9						
SONM				LR	LR	16 00 39.9	
	comp=Z,21nm,18.1s,baz=65,slow=41						
TLY	Talaya	15.53	22	LR	LR	16 01 22.3	
	comp=Z,70nm,20.1s,baz=162,slow=38						
AAK	Ala-Archa	15.98	295	Pn	P	15 55 14.8	+0.1
	0.1nm,0.3s,baz=127,slow=10,SNR=1.7						
AAK				LR	LR	16 01 46.7	
	comp=Z,64nm,19.8s,baz=88,slow=38						
KURBB	Kurchatov Arra	17.22	324	P	Pn	15 55 27.2	+0.6
	0.1nm,0.3s,baz=134,slow=11,SNR=23						
KURBB				S	Sn	15 58 33.9	-4.2
	0.0nm,0.3s,baz=120,slow=27,SNR=1.2						
KURBB				Lg	Lg	16 00 40.0	
	baz=136,slow=30,SNR=1.4						
ZALV	Zalesovo Beam	17.61	341	P	P	15 55 33.8	+1.3
	0.8nm,0.3s,baz=150,slow=12,SNR=5.9						
ZALV				Lg	Lg	16 00 48.0	
	0.2nm,0.3s,baz=135,slow=56,SNR=1.3						
CMAR	Chiang Mai Arr	19.50	167	P	Pn	15 55 52.9	-1.8
	0.5nm,0.3s,baz=338,slow=12,SNR=5.1						
BVAR	Borovoye Array	22.68	321	P	P	15 56 29.5	+1.9
	1.4nm,0.7s,baz=163,slow=11,SNR=9.1						
KSRS	Korea Array	26.56	80	P	P	15 57 02.0	-2.1
	1.7nm,0.8s,baz=278,slow=9.1,SNR=4.2						
KSRS				LR	LR	16 07 54.6	
	comp=Z,32nm,18.3s,baz=227,slow=38						
TIXI	Tiksi	38.41	17	P	P	15 58 47.4	+0.1
	1.6nm,0.3s,baz=205,slow=3.5,SNR=3.5						
FINES	FINESS Array B	47.60	323	P	P	16 00 03.5	+1.7
	1.9nm,0.8s,baz=116,slow=8.7,SNR=4.4						
GUMO	Guam	50.74	104	LR	LR	16 22 40.3	
	comp=Z,44nm,19.2s,baz=351,slow=37						
ILAR	Eielson Array	67.35	24	P	P	16 02 21.1	+0.2
	0.7nm,0.8s,baz=301,slow=5.9,SNR=7.9						
INK	Inuvik	68.53	17	P	P	16 02 28.7	+0.4
	2.0nm,0.8s,baz=328,slow=8.1,SNR=7.1						
ASAR	Alice Springs	71.41	142	P	P	16 02 45.5	-1.1
	0.6nm,0.6s,baz=327,slow=6.2,SNR=11						
DBIC	Dimbokro	93.21	281	P	P	16 04 41.5	+0.4
	5.2nm,0.9s,baz=5.5,slow=8.2,SNR=3.2						

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*IDC **25** 15:59:54.9±1.0, 2°.35S×140°.14E, h0km, mb3.8/4, mb1 4.2/6, mb1mx3.8/42, mbtmp4.1/6, ML4.4/2, MS3.2/1, Ms1 3.2/1, ms1mx2.5/41, Error ellipse: s-maj=24.1km s-min=8.3km az=13.0*

ISC 25 15:59:55.1±1.1**, 2°.4S**±0°.2×**140°.4E**±0°.1**, h10km, n8, σ0^s.82**/7**, mb3.8**/4**, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	0.36	110	Pg	Pn	16 00 06.5	+0.1
	440nm,0.3s,baz=261,slow=13,SNR=4573						
JAY				Lg	Lg	16 00 14.4	
	979nm,0.3s,baz=149,slow=17,SNR=27						
PMG	Port Moresby	9.71	136	LR	LR	16 07 10.2	
	comp=Z,120nm,18.6s,baz=260,slow=44						
BATI	Baumata	18.32	244	P	P	16 04 10.3	+0.7
	5.9nm,0.3s,baz=90,slow=8.1,SNR=8.4						
WRA	Warramunga Arr	18.41	198	P	P	16 04 09.9	-0.7
	0.6nm,0.3s,baz=21,slow=12,SNR=24						
FITZ	Fitzroy Crossi	21.27	222	P	P	16 04 42.4	+0.6
	2.0nm,0.5s,baz=65,slow=12,SNR=6.8						
ASAR	Alice Springs	22.06	196	P	P	16 04 50.0	-0.3
	2.6nm,0.6s,baz=26,slow=10,SNR=33						
CMAR	Chiang Mai Arr	45.72	299	P	P	16 08 16.0	-0.9
	0.9nm,0.8s,baz=118,slow=6.7,SNR=4.5						
MKAR	Makanchi Array	70.55	322	P	P	16 11 11.0	+0.6
	0.8nm,0.4s,baz=96,slow=8.1,SNR=16						

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*IDC **25** 16:02:00.2±0.8, 9°.62N×122°.32E, h0km, mb4.0/13, mb1 4.1/14, mb1mx3.9/59, mbtmp4.0/14, ML4.4/1, MS2.7/1, Ms1 2.7/1, ms1mx2.3/47, Error ellipse: s-maj=42.4km s-min=14.9km az=68.0*

*MAN **25** 16:02:02.2, 9°.57N×122°.11E, h10km, mb4.7, ML3.6, MS3.5*

*NEIC **25** 16:02:10.1±1.9, 9°.38N±0°.05×121°.91E±0°.09, h69km±9km, mb4.2/7, Error ellipse: s-maj=14.1km s-min=4.9km az=110.0*

ISC 25 16:02:01.6±0.6**, 9°.56N**±0°.08×**122°.31E**±0°.10**, h10km, n32, σ0^s.70**/31**, mb4.0**/17**, Negros**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	4.07	127	Pn	Pb	16 03 12.6	-0.8
	baz=232,slow=1.4,SNR=1.0						
DAV				LR	LR	16 04 35.4	
	comp=Z,91nm,20.1s,baz=26,slow=38						
DAV	Davao City (W)	4.07	127	Pn	Pb	16 03 13.0	-0.4
MYLDM	Lahad Datu	5.77	221	Pn	Pn	16 03 28.0	+0.6
KKM	Kota Kinabalu	6.98	240		Pn	16 03 43.5	-0.6
TOLI2	Tolitoli	8.53	190	Pn	Pn	16 04 04.8	-0.6
TNTI	Ternate	10.08	150		Pn	16 04 34.3	+7.8
SBUM	Sibu	12.27	235	Pn	Pn	16 04 55.5	-1.1
BATI	Baumata	19.68	176	P	Pn	16 06 33.6	+1.0
	1.2nm,0.3s,baz=27,slow=2.3,SNR=1.4						
CMAR	Chiang Mai Arr	24.31	294	P	P	16 07 19.8	+0.1
	0.7nm,0.8s,baz=133,slow=9.0,SNR=6.7						
WRA	Warramunga Arr	31.62	158	P	P	16 08 24.7	-0.3
	0.8nm,0.5s,baz=332,slow=11,SNR=3.3						
AS31	Alice Springs	34.91	161		P	16 08 53.7	0.0
AS31				IAmb	IAmb	16 09 13.4	
	comp=Z,1.1nm,0.8s						
ASAR	Alice Springs	34.91	161	P	P	16 08 54.1	+0.4
	comp=Z,1.2nm,0.7s,baz=340,slow=7.1,SNR=13						
ASAR	Alice Springs	34.91	161	P	P	16 08 53.6	-0.2
USRK	Ussuriysk Ar.	35.52	12	P	P	16 08 59.6	+1.0
	comp=Z,2.3nm,0.8s,baz=206,slow=9.6,SNR=3.6						
SONM	Songino Array	40.45	343	P	P	16 09 40.0	-0.4
	comp=Z,1.2nm,0.8s,baz=171,slow=11,SNR=6.6						
SONM	Songino Array	40.45	343	P	P	16 09 40.5	+0.1
STKA	Stephens Creek	45.15	157	P	P	16 10 19.2	+0.7
	comp=Z,6.8nm,1.0s,baz=336,slow=10.0,SNR=4.1						
STKA	Stephens Creek	45.15	157	P	P	16 10 19.4	+0.8
STKA				IAmb	IAmb	16 10 22.3	
	comp=Z,4.8nm,1.4s						
MK31	Makanchi Array	50.30	325	P	P	16 10 58.9	+0.4
MK31				IAmb	IAmb	16 11 12.9	
	comp=Z,1.6nm,0.9s						
MKAR	Makanchi Array	50.30	325	P	P	16 10 58.8	+0.3
	comp=Z,0.6nm,0.6s,baz=136,slow=9.1,SNR=6.1						
MKAR	Makanchi Array	50.30	325	P	P	16 10 59.4	+0.9
MAKZ	Makanchi	50.48	325	P	P	16 11 00.5	+0.7
MAKZ				IAmb	IAmb	16 11 13.7	
	comp=Z,2.0nm,0.6s						
AAK	Ala-Archa	53.12	317	P	P	16 11 21.1	+1.2
	comp=Z,1.3nm,0.7s,baz=144,slow=8.7,SNR=2.9						
ZALV	Zalesovo Beam	53.44	333	P	P	16 11 21.1	-0.6
	comp=Z,0.7nm,0.4s,baz=93,slow=7.1,SNR=4.0						
ZALV	Zalesovo Beam	53.44	333	P	P	16 11 21.6	-0.2
KURK	Kurchatov	54.50	327	P	P	16 11 29.6	+0.1
BRVK	Borovoye	60.14	327	P	P	16 12 10.7	+1.4
BRVK				IAmb	IAmb	16 12 34.2	
	comp=Z,3.7nm,1.4s						
NRIK	Noril'sk	63.78	347	P	P	16 12 32.9	-0.7
	comp=Z,1.7nm,0.6s,baz=154,slow=5.7,SNR=5.2						
BMAR	Burnt Mountain	82.44	23	P	P	16 14 23.8	-0.1
BRTR	Keskin Array B	82.96	309	P	P	16 14 27.6	+0.2
	comp=Z,0.8nm,0.5s,baz=313,slow=38,SNR=2.4						
AKASG	Malin Array Be	84.63	320	P	P	16 14 34.5	-1.0
	comp=Z,1.0nm,0.5s,baz=71,slow=4.8,SNR=6.4						
FINES	FINESS Array B	84.65	331	P	P	16 14 34.8	-0.6
	comp=Z,3.1nm,1.0s,baz=48,slow=5.7,SNR=6.0						

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*IDC **25** 16:10:02.0±8.8, 14°.62N×55°.06E, h0km, mb3.8/6, mb1 3.9/6, mb1mx3.5/56, mbtmp3.8/6, Error ellipse: s-maj=168.1km s-min=62.5km az=177.0*

ISC 25 16:10:04.3±7.9**, 15°N**±1°×**55°.1E**±0°.5**, h14km, n9, σ0^s.38**/6**, mb4.0**/6**, Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GEYT	Alibeck	23.35	6	P	P	16 15 12.3	0.0
	2.3nm,0.5s,baz=215,slow=17,SNR=2.2						
MKAR	Makanchi Array	39.29	30	P	P	16 17 33.2	+0.4
	0.4nm,0.7s,baz=212,slow=7.8,SNR=4.7						
KURBB	Kurchatov Arra	40.60	23	P	P	16 17 43.4	-0.1
	0.4nm,0.8s,baz=225,slow=8.6,SNR=4.0						
ZALV	Zalesovo Beam	45.62	24	P	P	16 18 23.7	-0.4
	0.7nm,0.4s,baz=223,slow=7.1,SNR=5.2						
FINES	FINESS Array B	51.16	343	P	P	16 19 07.0	+0.3
	3.1nm,0.9s,baz=143,slow=8.1,SNR=1.7						
ARCES	ARCESS Array B	57.91	348	P	P	16 19 55.5	-0.2
	9.0nm,1.3s,baz=128,slow=5.8,SNR=4.3						
H01W3	Cape Leeuwin H	74.58	133	T	T	17 43 04.9	
	baz=301,slow=75,SNR=9.3						
H01W2	Cape Leeuwin H	74.58	133	T	T	17 43 06.0	
	baz=301,slow=75,SNR=8.1						
H01W1	Cape Leeuwin H	74.59	133	T	T	17 43 08.3	
	baz=301,slow=75,SNR=13						

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*IDC **25** 16:14:10.5±2.2, 33°.55S×178°.59W, h0km, mb4.1/2, mb1 4.4/3, mb1mx3.8/39, mbtmp4.2/3, ML4.2/1, MS3.6/1, Ms1 3.5/1, ms1mx2.6/25, Error ellipse: s-maj=60.7km s-min=33.5km az=127.0*

*WEL **25** 16:14:16.0±1.2, 34°S±23°×17°8W±3°6, h33km, M4.3/11, mB4.9/7, ML4.7/12, MLv4.4/11, Mw(mB)4.2/7, Error ellipse: s-maj=0.1km s-min=0.0km az=122.4*

*NEIC **25** 16:14:16.1±0.4, 33°.6S±0°.1×179°.1W±0°.2, h10km±1km, mb4.2/8, Error ellipse: s-maj=37.0km s-min=14.4km az=115.0*

ISC 25 16:14:16.4±1.6**, 33°.7S**±0°.1×**178°.6W**±0°.2**, h41km, n33, σ0^s.95**/45**, mb4.2**/6**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	4.43	7	Pn	Pn	16 15 23.4	+2.4
MXZ	Matakaoa Point	4.66	212	P	Pn	16 15 23.4	-0.8
MXZ				S	Sn	16 16 16.2	-0.8
MXZ	Matakaoa Point	4.66	212	Pn	Pn	16 15 23.8	-0.4
WMGZ	Waiomatatini S	4.83	210	P	Pn	16 15 27.3	+0.8
WMGZ				S	Sn	16 16 23.5	+2.3
PKGZ	Pakihiroa	5.03	212	P	Pn	16 15 28.5	-0.8
PKGZ				S	Sn	16 16 26.1	-0.1
HAZ	Te Kaha	5.06	215	P	Pn	16 15 29.2	-0.5
HAZ				S	Sn	16 16 29.1	+2.2
PUZ	Puketiti	5.11	210	P	Pn	16 15 29.3	-1.1
PUZ				S	Sn	16 16 27.9	-0.2
RUGZ	Raukumara Rang	5.28	214	P	Pn	16 15 32.7	-0.1
RUGZ				S	Sn	16 16 34.0	+1.6
TWGZ	Tauwhareparae	5.31	211	P	Pn	16 15 34.0	+0.8
TWGZ				S	Sn	16 16 34.9	+1.7
CNGZ	Carnagh Statio	5.48	208	P	Pn	16 15 35.5	+0.1
TKGZ	Te Karaka	5.59	210	P	Pn	16 15 37.6	+0.7
TKGZ				S	Sn	16 16 39.9	0.0
MWZ	Matawai	5.64	213	P	Pn	16 15 37.0	-0.8
MWZ				S	Sn	16 16 41.2	-0.1
URZ	Urewera	5.78	216	Pn	Pn	16 15 39.3	-0.3
	6.5nm,0.3s,baz=122,slow=23,SNR=47						
URZ				Sn	Sn	16 16 45.0	+0.4
	11nm,0.3s,baz=172,slow=21,SNR=9.4						
URZ	Urewera	5.78	216	P	Pn	16 15 39.4	-0.3
URZ				S	Sn	16 16 44.5	-0.1
URZ	Urewera	5.78	216		Pn	16 15 39.0	-0.7
MARZ	Manawahe	5.80	221	P	Pn	16 15 40.5	+0.6
RIGZ	Rimuhau	5.85	210	P	Pn	16 15 39.8	-0.8
RIGZ				S	Sn	16 16 47.2	+0.8
SNGZ	Shannon Statio	6.09	212	P	Pn	16 15 43.3	-0.7
SNGZ				S	Sn	16 16 52.5	+0.1
STKA	Stephens Creek	33.42	262	LR	LR	16 34 57.9	
	comp=Z,90nm,18.1s,baz=28,slow=37						
CTAO	Charters Tower	34.01	284	P	P	16 20 56.9	+0.5
AS31	Alice Springs	42.58	271	P	P	16 22 07.6	-0.9
ASAR	Alice Springs	42.58	271	P	P	16 22 08.0	-0.6
	1.6nm,0.7s,baz=113,slow=7.5,SNR=30						
ASAR	Alice Springs	42.58	271	P	P	16 22 07.4	-1.1
WR0	Warramunga Arr	43.68	276	P	P	16 22 16.8	-0.6
WR0				IAmb	IAmb	16 22 25.4	
	comp=Z,4.7nm,1.1s						
WB2	Warramunga Arr	43.85	276	P	P	16 22 17.9	-0.9
WB2				IAmb	IAmb	16 22 29.1	
	comp=Z,4.9nm,1.1s						
WRAB	Tennant Creek	43.85	276	P	P	16 22 17.9	-1.0
WRAB				IAmb	IAmb	16 22 38.4	
	comp=Z,8.9nm,1.1s						
WRA	Warramunga Arr	43.86	276	P	P	16 22 18.1	-0.7
	comp=Z,2.0nm,0.6s,baz=117,slow=7.3,SNR=32						
WRA	Warramunga Arr	43.86	276	P	P	16 22 17.7	-1.2
WB0	Warramunga Arr	43.90	276	P	P	16 22 18.4	-0.8
WB0				IAmb	IAmb	16 22 36.1	
	comp=Z,5.6nm,1.2s						
KNRA	Kununurra	50.57	277		P	16 23 10.5	-0.6
KURBB	Kurchatov Arra	122.96	312	PKP	PKiKP	16 33 07.6	-0.2
	comp=Z,0.4nm,0.6s,baz=125,slow=2.0,SNR=4.3						
FINES	FINESS Array B	148.01	338	PKPbc	PKPbc	16 33 56.1	-0.5
	comp=Z,2.4nm,0.6s,baz=38,slow=3.4,SNR=9.3						
FINES	FINESS Array B	148.01	338		PKPbc	16 33 56.4	-0.2

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*DMN **25** 16:15:06.7±0.3, 27°.05N×93°.27E, h10km, Ml5.1/8, Error ellipse: s-maj=25.4km s-min=5.2km az=8.0*

*MOS **25** 16:15:08.5±1.0, 26°.37N×92°.92E, h57km, mb4.8/20, Error ellipse: s-maj=13.7km s-min=4.9km az=117.5*

*IDC **25** 16:15:09.3±0.4, 26°.41N×93°.01E, h46km±4km, mb4.1/20, mb1 4.2/22, mb1mx3.9/56, mbtmp4.4/22, MS3.3/8, Ms1 3.3/8, ms1mx3.1/41, Error ellipse: s-maj=15.0km s-min=7.9km az=74.0*

*NDI **25** 16:15:10.0±2.8, 26°.42N×92°.97E, h36km±20km, mb4.7, ML4.5, mb4.7(NEIC)*

*BJI **25** 16:15:10.6±0.0, 26°.69N×93°.10E, h60km, mB4.9/18, mb4.6/39, ML4.6/5, Ms3.8/3, Ms7 3.6/1*

*NEIC **25** 16:15:10.6±1.6, 26°.41N±0°.06×92°.98E±0°.10, h55km±4km, mb4.7/72, Error ellipse: s-maj=12.8km s-min=8.8km az=76.0*

ISC 25 16:15:09.3±0.4**, 26°.43N**±0°.03×**92°.92E**±0°.03**, h47km**±3km**, n220, σ1^s.24**/255**, mb4.6**/65**, MS3.4**/10**, 20C-6D, Northeastern India**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ITAN	ITANAGAR	1.01	45	*e*P	Pn	16 15 27.9	+0.8
ITAN				*e*S	Sn	16 15 41.2	+1.0
JORH	JORHAT	1.23	75	*e*P	Pn	16 15 30.2	+0.1
JORH				*e*S	Sn	16 15 45.1	-0.5
SHL	Shillong	1.27	227	*e*P	Pn	16 15 32.5	+1.7
SHL				*e*S	Sn	16 15 47.5	+0.8
SHL				IAML		16 15 49.6	
	comp=N,12μm,0.2s						
SHL				IAML		16 15 49.8	
	comp=E,8μm,0.2s						
KOHI	KOHIMA	1.28	123	*e*P	Pn	16 15 31.6	+0.7
KOHI				*e*S	Sn	16 15 46.9	-0.2
MOKO	MOKOCHONG	1.44	94	*e*P	Pn	16 15 33.5	+0.5
MOKO				*e*S	Sn	16 15 50.9	+0.1
SILR	SILCHAR	1.65	184	*e*P	Pn	16 15 38.2	+2.4
DIBR	DIBRUGARH	2.06	59	*e*P	Pn	16 15 42.9	+1.5
LKP	Lekhapani	2.77	70	*e*P	Pn	16 15 51.6	+0.5
LKP				*e*S	Sn	16 16 20.6	-2.6
LSA	Lhasa	3.61	335	P	Pn	16 16 06.5	+3.4
LSA				smax	smax		
	comp=E,950nm,0.8s						
LSA				smax	smax		
	comp=E,530nm,0.6s						
LSA	Lhasa	3.61	335	P	Pn	16 16 06.2	+3.1
LSA	Lhasa	3.61	335	Pn	Pn	16 16 06.2	+3.1
BRDH	Bariadhala	3.92	198	P	Pn	16 16 08.0	+1.1
	comp=E,0.9nm,0.3s,baz=52,slow=24,SNR=7.8						
BRDH				S	Sn	16 16 52.5	+0.9
	comp=E,3.8nm,0.3s,baz=158,slow=24,SNR=36						
GTK	Tadong	3.95	284	*e*P	Pn	16 16 09.5	+1.9
GTK				*e*S	Sn	16 16 53.8	+1.0
TAPN	Taplejung	4.74	282	*e*Pn	Pn	16 16 19.9	+1.4
TAPN				*e*Sn	Sn	16 17 13.7	+1.4
	comp=E,263nm,0.2s						
ODAN	Odare	4.96	276	*e*Pn	Pn	16 16 23.0	+1.5
ODAN				*e*Sn	Sn	16 17 20.4	+2.6
	comp=E,282nm,0.2s						
RAMN	Ramite	5.67	277	*e*Pn	Pn	16 16 33.0	+1.7
RAMN				*e*Sn	Sn	16 17 37.1	+1.8
JIRN	Jiri	6.12	283	*e*Pn	Pn	16 16 38.6	+1.1
JIRN				*e*Sn	Sn	16 17 45.9	-0.6
	comp=E,258nm,0.3s						
GUN	Gumba	6.44	285	*e*Pn	Pn	16 16 42.9	+1.0
GUN				*e*Sn	Sn	16 17 53.2	-1.0
	comp=E,210nm,0.3s						
PKI	Pulchoki	6.79	281	*e*Pn	Pn	16 16 47.0	+0.3
PKI				*e*Sn	Sn	16 18 02.4	-0.5
PKIN	Phulchoki	6.80	281	*e*Pn	Pn	16 16 47.0	+0.2
PKIN				*e*Sn	Sn	16 18 03.1	0.0
	comp=E,121nm,0.2s						
KKN	Kakani	6.94	283	*e*Pn	Pn	16 16 49.2	+0.6
KKN				*e*Sn	Sn	16 18 05.2	-1.2
	comp=E,172nm,0.2s						
DMN	Daman	7.07	281	*e*Pn	Pn	16 16 50.9	+0.5
DMN				*e*Sn	Sn	16 18 09.1	-0.4
	comp=E,123nm,0.2s						
GKN	Gorkha	7.54	284	*e*Pn	Pn	16 16 57.2	+0.5
GKN				*e*Sn	Sn	16 18 19.4	-1.5
DANN	Dangsing	8.36	285	*e*Pn	Pn	16 17 07.1	-1.1
DANN				*e*Sn	Sn	16 18 37.9	-3.5
KOLN	Koldanda	8.41	281	*e*Pn	Pn	16 17 08.4	-0.4
KOLN				*e*Sn	Sn	16 18 41.4	-1.1
	comp=E,202nm,0.3s						
KMI	Kunming	8.95	96	⇑P	Pn	16 17 17.0	+0.8
KMI				PP		16 17 27.8	
KMI				sP		16 17 35.5	
KMI				pmax	pmax		
	comp=E,23nm,0.7s						
PYUN	Piuthan	8.99	283	*e*Pn	Pn	16 17 15.9	-0.8
CHTO	Chiang Mai	9.40	143	P	Pn	16 17 22.4	+0.2
CHTO	Chiang Mai	9.40	143	Pn	Pn	16 17 22.4	+0.2
CM31	Chiang Mai Arr	9.70	144	Pn	Pn	16 17 26.0	-0.2
CMAR	Chiang Mai Arr	9.70	144	P	Pn	16 17 26.2	-0.1
	comp=E,1.6nm,0.3s,baz=321,slow=12,SNR=58						
CMAR				LR	LR	16 22 18.0	
	comp=E,102nm,18.6s,baz=358,slow=44						
CMAR	Chiang Mai Arr	9.70	144	P	Pn	16 17 26.9	+0.6
CMAR	Chiang Mai Arr	9.70	144	Pn	Pn	16 17 26.9	+0.6
SLVN	Son La	11.26	114	Pn	Pn	16 17 46.6	-1.0
GYA	Guiyang	12.32	87	⇓P	Pn	16 18 06.0	+3.8
GYA				pmax	pmax		
	comp=E,12nm,0.8s						
DGPR	DIGLIPUR	13.19	180	*e*P	Pn	16 18 12.9	-1.0
DGPR				IAmb	IAmb	16 18 16.2	
	comp=Z,104nm,0.4s						
LZH	Lanzhou	13.40	41	⇑P	Pn	16 18 15.3	-1.7
LZH				pP	P	16 18 24.5	-0.8
LZH				pmax	pmax		
	comp=Z,62nm,1.1s						
GTA	Gaotai	14.17	22	⇑P	Pn	16 18 24.3	-3.0
GTA				pP	P	16 18 33.8	+0.1
GTA				sP		16 18 40.8	
GTA				ScS	ScS	16 30 49.8	-1.0
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,100nm,4.2s						
BHPL	Bhopal	14.42	261	*e*P	Pn	16 18 28.4	-2.3
ENH	Enshi	15.08	71	Pn	Pn	16 18 36.8	-2.5
ENH				IAmb	IAmb	16 19 03.3	
	comp=Z,45nm,0.8s						
DHRM	DHARAMSHALA	15.60	296	*e*P	Pn	16 18 44.3	-1.9
DHRM				IAmb	IAmb	16 18 45.9	
	comp=Z,27nm,0.5s						
XAN	Xi'an	15.76	57	⇑P	Pn	16 18 45.8	-2.3
XAN				pP	P	16 18 54.3	+3.0
XAN				pmax	pmax		
	comp=Z,11nm,1.3s						
HYB	Hyderabad	16.05	239	*i* P	Pn	16 18 51.0	-0.9
HYB				*e*S	Sn	16 21 50.0	+1.0
UBPT	Khong Chiam	16.13	131	Pn	Pn	16 18 52.1	-0.8
UBPT				IAmb	IAmb	16 18 55.7	
	comp=Z,29nm,0.8s						
QIZ	Qiongzhong	17.25	112	P	P	16 19 08.1	+0.2
QIZ				IAmb	IAmb	16 19 10.2	
	comp=Z,56nm,1.0s						
WMQ	Urumqi	17.86	348	*e*P	P	16 19 16.5	+2.0
WMQ				pP	pP	16 19 22.3	-3.1
WMQ				sP	sP	16 19 34.5	+3.1
WMQ				pmax	pmax		
	comp=Z,25nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,240nm,5.9s						
NIL	Nilore	18.47	298	P	P	16 19 20.0	-1.3
NIL				pmax	pmax		
	comp=Z,18nm,1.0s						
NIL	Nilore	18.47	298	P	P	16 19 20.0	-1.3
KSH	Kashi	19.25	317	P	Pn	16 19 32.8	+1.6
KSH				pP	sP	16 19 46.3	-0.6
KSH				S	S	16 23 01.0	-4.6
KSH				sS	sS	16 23 17.8	-5.5
KSH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
WHN	Wuhan	19.27	73	⇓P	P	16 19 22.3	-7.7
THW	Thamme Wali	19.46	294	P	P	16 19 31.8	-0.3
CEP	Cherat	19.59	297	P	P	16 19 33.4	-0.2
TARG	Taragay, Kyrgy	19.69	325	P	Pn	16 19 36.0	-0.7
PRZ	Przheval'sk	19.94	327	P	Pn	16 19 38.7	-0.8
PRZ				pmax	pmax		
	comp=Z,21nm,0.7s						
PRZ	Przheval'sk	19.94	327	P	Pn	16 19 38.7	-0.8
PRZ				IAmb	IAmb	16 19 52.3	
	comp=Z,21nm,0.7s						
BTO	Baotou	20.03	41	*e*P	P	16 19 37.5	-0.8
PDGK	Podgornoye	20.09	330	P	P	16 19 39.0	0.0
KDJ	Kajisay	20.30	324	P	Pn	16 19 42.6	-1.1
KDJ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KDJ	Kajisay	20.30	324	P	Pn	16 19 42.6	-1.1
HHC	Hu-ho-hao-te	21.10	42	*e*P	P	16 19 49.8	-0.1
HHC				pmax	pmax		
	comp=Z,26nm,0.8s						
HHC				pmax	pmax		
	comp=Z,150nm,5.3s						
BOOM	Boomskoye usch	21.21	323	P	P	16 19 52.1	+1.0
BOOM				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BOOM	Boomskoye usch	21.21	323	P	P	16 19 52.1	+1.0
TKM2	Tokmak 2	21.69	324	P	P	16 19 57.8	+1.4
	SNR=20						
TKM2	Tokmak 2	21.69	324	*i* P	P	16 19 56.8	+0.5
TKM2				pmax	pmax		
	comp=Z,12nm,0.7s						
UCH	Uchtor	21.82	321	P	P	16 20 00.3	+2.3
	SNR=15						
KBK	Karagaybulak	21.86	322	P	P	16 20 02.4	+4.3
	SNR=14						
DRK	Karamyk	21.92	312	P	P	16 19 58.6	-0.3
DRK				IAmb	IAmb	16 20 02.4	
	comp=Z,25nm,0.6s						
MK31	Makanchi Array	22.00	340	P	P	16 19 59.3	-0.1
MK31				pmax	pmax		
	comp=Z,20nm,1.1s						
MK31	Makanchi Array	22.00	340	P	P	16 19 59.3	-0.1
MK31				IAmb	IAmb	16 20 02.8	
	comp=Z,20nm,1.1s						
MKAR	Makanchi Array	22.00	340	P	P	16 19 59.4	-0.1
	comp=Z,9.1nm,0.5s,baz=145,slow=13,SNR=108						
MKAR	Makanchi Array	22.00	340	P	P	16 19 58.9	-0.5
KBL	Kabul	22.07	297	P	P	16 20 01.7	+1.2
KBL				pmax	pmax		
	comp=Z,12nm,0.8s						
KBL	Kabul	22.07	297	P	P	16 20 01.7	+1.2
KBL				IAmb	IAmb	16 20 23.0	
	comp=Z,12nm,0.8s						
AAK	Ala-Archa	22.10	322	P	P	16 20 02.7	+2.1

	comp=Z,8.0nm,0.8s,baz=133,slow=7.2,SNR=33						
AAK	Ala-Archa	22.10	322	P	P	16 20 04.4	+3.8
	SNR=14						
AAK	Ala-Archa	22.10	322	P	P	16 20 03.8	+3.1
AAK	Ala-Archa	22.10	322	P	P	16 20 01.5	+0.9
MAKZ	Makanchi	22.11	340	P	P	16 20 00.3	-0.3
MAKZ				pmax	pmax		
	comp=Z,15nm,0.5s						
MAKZ	Makanchi	22.11	340	P	P	16 20 00.3	-0.3
MAKZ				IAmb	IAmb	16 20 03.7	
	comp=Z,15nm,0.5s						
FRU1	Bishkek	22.14	322	P	P	16 20 02.2	+1.2
FRU1				pmax	pmax		
	comp=Z,10.0nm,0.8s						
FRU1	Bishkek	22.14	322	P	P	16 20 02.2	+1.2
AML	Almayashu	22.23	320	P	P	16 20 06.2	+3.9
	SNR=7.5						
EKS2	Erkin-Say	22.52	321	P	P	16 20 08.4	+3.2
	SNR=18						
GAR	Garm	22.70	309	P	P	16 20 06.8	-0.3
GAR				IAmb	IAmb	16 20 09.9	
	comp=Z,58nm,1.1s						
BTK	Batken	22.86	312	P	P	16 20 09.9	+1.1
BTK				pmax	pmax		
	comp=Z,20nm,0.6s						
BTK	Batken	22.86	312	P	P	16 20 09.8	+1.1
BTK				IAmb	IAmb	16 20 11.2	
	comp=Z,20nm,0.6s						
NJ2	Nanjing	23.29	70	eP	P	16 20 13.3	+0.4
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
CHGR	Chuyangaron	23.37	307	P	P	16 20 13.3	-0.5
CHGR				IAmb	IAmb	16 20 20.5	
	comp=Z,13nm,0.8s						
DGZ	Jazzator, Alta	23.61	351	c iP	P	16 20 17.5	+1.4
DGZ				pmax	pmax		
	comp=Z,19nm,0.7s						
SONM	Songino Array	23.84	23	P	P	16 20 17.8	-0.4
	comp=Z,3.4nm,0.5s,baz=211,slow=10,SNR=20						
SONM				LR	LR	16 30 42.1	
	comp=Z,108nm,18.1s,baz=156,slow=39						
SONM	Songino Array	23.84	23	P	P	16 20 17.9	-0.3
SONM				pmax	pmax		
	comp=Z,6.0nm,1.2s						
SONM	Songino Array	23.84	23	P	P	16 20 17.9	-0.3
ULN	Ulaanbaatar	24.10	24	P	P	16 20 19.8	-0.8
ULN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ULN	Ulaanbaatar	24.10	24	P	P	16 20 19.8	-0.8
ULN					P	16 20 20.2	-0.4
PSI	Prapat	24.20	165	P	P	16 20 21.2	-0.5
	comp=Z,4.5nm,0.7s,baz=341,slow=12,SNR=3.9						
PSI				LR	LR	16 30 50.2	
	comp=Z,34nm,21.4s,baz=335,slow=39						
RPSI	Rantau Prapat	24.30	165	P	P	16 20 21.2	-1.2
KKAR	Karatay Array	24.69	318	P	P	16 20 26.5	+0.6
KKAR	Karatay Array	24.69	318	P	P	16 20 26.5	+0.6
ZAK	Zakamensk	25.20	16	eP	P	16 20 30.6	+0.1
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
GSI	Gunungsitoli	25.38	169	P	P	16 20 32.7	+0.4
GSI				IAmb	IAmb	16 20 50.7	
	comp=Z,17nm,0.7s						
SSLB	Suanglung	25.50	90	P	P	16 20 33.8	+0.3
SSLB				IAmb	IAmb	16 21 03.1	
	comp=Z,44nm,1.4s						
YHNB	Yeheng	25.71	88	P	P	16 20 34.1	-1.3
YULB	Yu-li	25.89	91	P	P	16 20 37.4	+0.4
MNSI	Mandailing Nat	26.28	165	P	P	16 20 41.7	+1.2
	comp=Z,18nm,0.9s						
TLY	Talaya	26.50	15	LR	LR	16 32 15.5	
	comp=Z,68nm,20.0s,baz=188,slow=39						
KURBB	Kurchatov Arra	26.55	339	P	P	16 20 42.9	+0.4
	comp=Z,3.8nm,0.6s,baz=150,slow=9.4,SNR=28						
KURK	Kurchatov	26.60	339	P	P	16 20 43.0	0.0
KURK				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KURK	Kurchatov	26.60	339	P	P	16 20 43.0	0.0
KURK				IAmb	IAmb	16 20 46.7	
	comp=Z,6.7nm,0.6s						
OTUK	Ortayu	27.07	329	P	P	16 20 46.6	-0.8
ZAA0	Zalesovo Array	28.13	350	P	P	16 20 57.6	+0.9
ZAA0				IAmb	IAmb	16 20 58.4	
	comp=Z,11nm,0.6s						
ZALV	Zalesovo Beam	28.13	350	P	P	16 20 57.6	+0.9
	comp=Z,11nm,0.5s,baz=174,slow=8.0,SNR=50						
ZALV				LR	LR	16 32 06.0	
	comp=Z,58nm,18.6s,baz=30,slow=36						
ZALV	Zalesovo Beam	28.13	350	P	P	16 20 57.4	+0.7
KSM	Kuching	29.93	143	P	P	16 21 12.5	-0.5
KSM				IAmb	IAmb	16 21 15.0	
	comp=Z,25nm,1.4s						
SBUM	Sibu	30.20	139	P	P	16 21 15.7	+0.2
SBUM				IAmb	IAmb	16 21 16.9	
	comp=Z,7.8nm,0.7s						
CN2	Changchun	31.49	48	eP	P	16 21 24.8	-1.7
CN2				pmax	pmax		
	comp=Z,10.0nm,1.7s						
BRVK	Borovoye	31.51	334	P	P	16 21 27.7	+1.1
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BRVK	Borovoye	31.51	334	P	P	16 21 27.7	+1.1
STKI	Sintang	31.73	143	P	P	16 21 30.9	+2.0
MYLDM	Lahad Datu	32.31	126	P	P	16 21 35.3	+1.3
AB31	Akbulak array	34.17	321	P	P	16 21 49.9	0.0
ABKAR	Akbulak array	34.17	321	P	P	16 21 51.3	+1.3
MTKI	Muara Teweh, K	34.50	139	P	P	16 21 54.5	+1.4
AKTO	Aktyubinsk	35.84	321	P	P	16 22 05.4	+1.1
	comp=Z,2.2nm,0.4s,baz=104,slow=8.9,SNR=7.3						
AKTO				pP	pP	16 22 17.7	+0.9
	comp=Z,4.8nm,0.8s,baz=125,slow=7.2,SNR=8.0						
BBKI	Banjar Baru	36.51	141	P	P	16 22 11.7	+1.3
TOLI2	Tolitoli	36.77	129	P	P	16 22 12.8	+0.2
TOLI2				IAmb	IAmb	16 22 13.6	
	comp=Z,12nm,0.7s						
ZEA	Zeya	37.25	34	eP	P	16 22 17.6	+1.4
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SVE	Sverdlovsk	38.13	332	⇓eP	P	16 22 24.9	+1.3
SVE				pmax	pmax		
	comp=Z,16nm,0.8s						
ARU	Arti	38.80	330	P	P	16 22 30.0	+0.7
	comp=Z,1.9nm,0.4s,baz=120,slow=6.1,SNR=12						
ARU	Arti	38.80	330	d iP	P	16 22 29.6	+0.4
ARU				S	S	16 28 23.1	-0.2
ARU				SS	SS	16 31 11.5	-3.9
ARU				pmax	pmax		
	comp=Z,13nm,1.6s						
ARU	Arti	38.80	330	P	P	16 22 30.0	+0.7
ARU				IAmb	IAmb	16 22 30.5	
	comp=Z,6.1nm,0.6s						
MJAR	Matsushiro Arr	39.60	64	LR	LR	16 39 38.4	
	comp=Z,33nm,20.5s,baz=230,slow=37						
JMM	Marumori	41.70	62	P	P	16 22 53.5	0.0
BELG	Belogornoye	42.57	320	LR	LR	16 41 51.5	
	comp=Z,63nm,18.3s,baz=160,slow=38						
NRIK	Noril'sk	43.05	357	P	P	16 23 04.5	+0.6
	comp=Z,3.4nm,0.3s,baz=148,slow=6.0,SNR=14						
NRIK				pP	pP	16 23 16.9	+0.1
	comp=Z,3.0nm,0.6s,baz=158,slow=6.5,SNR=3.3						
NRIK	Noril'sk	43.05	357	eP	P	16 23 04.7	+0.7
NRIK				pmax	pmax		
	comp=Z,3.0nm,0.3s						
NRIK	Noril'sk	43.05	357	P	P	16 23 04.6	+0.6
NRIK				IAmb	IAmb	16 23 05.4	
	comp=Z,6.0nm,0.8s						
YAK	Yakutsk	43.19	24	⇑eP	P	16 23 05.4	+0.2
YAK				pmax	pmax		
	comp=Z,13nm,1.7s						
KIRV	Kirov	44.12	329	deP	P	16 23 13.4	+0.6
SOEI	Soe	47.13	136	P	P	16 23 35.2	-2.0
PRGR	Permogore	47.20	331	eP	P	16 23 35.6	-1.4
PRGR				pmax	pmax		
	comp=Z,8.0nm,0.5s						
FAKI	Fak Fak	47.91	121	P	P	16 23 42.0	-1.2
FAKI				IAmb	IAmb	16 23 59.2	
	comp=Z,6.0nm,0.7s						
TIXI	Tiksi	49.47	14	LR	LR	16 46 07.6	
	comp=Z,38nm,18.2s,baz=266,slow=38						
OBN	Obninsk	49.62	321	⇓iP	P	16 23 56.6	+0.8
OBN				e		16 25 19.0	
OBN				e		16 25 49.3	
OBN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
OBN				MLR	MLR		
	comp=Z,151nm,17.0s						
KLMR	Klimovskoe	49.62	329	eP	P	16 23 54.8	-0.9
KLMR				pmax	pmax		
	comp=Z,13nm,0.8s						
KLMR	Klimovskoe	49.62	329	eP	P	16 23 54.8	-0.9
KLMR				AMP		16 23 56.9	
	comp=Z,13nm,0.8s						
AKASG	Malin Array Be	53.53	315	P	P	16 24 24.8	-0.2
	comp=Z,5.1nm,0.4s,baz=80,slow=6.6,SNR=22						
AKASG	Malin Array Be	53.53	315	P	P	16 24 25.3	+0.2
AKASG				pmax	pmax		
	comp=Z,4.0nm,1.5s						
AKASG	Malin Array Be	53.53	315	P	P	16 24 25.2	+0.2
AKBB	Malin Array Si	53.53	315	P	P	16 24 25.0	-0.1
AKBB				pmax	pmax		
	comp=Z,8.0nm,0.9s						
AKBB	Malin Array Si	53.53	315	P	P	16 24 25.0	-0.1
AKBB				IAmb	IAmb	16 24 25.9	
	comp=Z,8.4nm,0.8s						
SORM	Soroca	54.08	312	⇑P	P	16 24 29.2	+0.1
SORM	Soroca	54.08	312	⇑P	P	16 24 29.2	+0.1
PSA00	Pilbara Seismi	54.39	149	P	P	16 24 31.9	+0.3
KNRA	Kununurra	54.46	136	P	P	16 24 31.5	-0.8
MNK	Minsk	54.52	320	i P	P	16 24 31.8	-0.4
MNK				i		16 25 34.2	
MNK				i		16 26 34.6	
MNK				i PPP	PPP	16 27 45.2	
MNK				i S	S	16 32 08.1	+0.2
MNK				i		16 34 16.4	
MNK				i SS	SS	16 35 51.0	+0.4
MNK				pmax	pmax		
	comp=E,19nm,1.1s						
MNK				pmax	pmax		
	comp=Z,14nm,1.0s						
MNK				pmax	pmax		
	comp=E,2.0nm,1.0s						
MNK				MLR	MLR		
	comp=Z,125nm,15.0s						
MNK				MLR	MLR		
	comp=N,128nm,21.0s						
MNK				MLR	MLR		
	comp=E,5.0nm,8.0s						
MNK	Minsk	54.52	320	i P	P	16 24 31.8	-0.4
	comp=E,2.0nm,1.0s						
MNK				i P	P	16 24 31.8	-0.4
	comp=N,19nm,1.1s						
MNK				i P	P	16 24 31.8	-0.4
	comp=Z,14nm,1.0s,baz=95						
MNK				i PcP	PcP	16 25 34.2	-0.8
MNK				i PP	PP	16 26 34.6	0.0
MNK				i PPP	PPP	16 27 45.2	
MNK				i S	S	16 32 08.1	+0.2
MNK				i SS	SS	16 35 51.0	+0.5
MNK				i SSS	SSS	16 37 58.1	
MNK				i LR	LR	16 46 29.0	
MNK				i LRM	MLR	16 50 13.3	
	comp=Z,125nm,15.4s						
MNK				i LRM	MLR	16 50 23.3	
	comp=N,128nm,20.8s						
MNK				i LRM	MLR	16 50 27.8	
	comp=E,5.0nm,7.7s						
VRI	Vrincioaia	55.27	309	⇑P	P	16 24 38.7	+0.8
VRI	Vrincioaia	55.27	309	⇑P	P	16 24 38.7	+0.8
PLOR	Plostina	55.33	309	⇑P	P	16 24 39.6	+1.3
PLOR	Plostina	55.33	309	⇑P	P	16 24 39.6	+1.3
COVR	Voineasa-Covas	55.64	309	⇑P	P	16 24 41.4	+0.9
MLR	Muntele Rosu	55.85	309	⇑P	P	16 24 43.8	+1.7
MLR	Muntele Rosu	55.85	309	⇑P	P	16 24 43.8	+1.7
MLR	Muntele Rosu	55.85	309	P	P	16 24 43.3	+1.2
FIA1	FINESS Array S	56.10	328	P	P	16 24 44.2	+0.7
FINES	FINESS Array B	56.10	328	P	P	16 24 44.0	+0.6
	comp=E,4.6nm,0.6s,baz=103,slow=8.0,SNR=23						
FINES				sP	sP	16 25 02.5	+0.5
	comp=E,3.2nm,0.6s,baz=92,slow=9.5,SNR=2.6						
FINES	FINESS Array B	56.10	328	P	P	16 24 44.1	+0.7
DOPR	Dopca	56.20	309	⇑P	P	16 24 45.7	+1.2
BURAR	Bucovina Array	56.20	311	⇑P	P	16 24 44.9	+0.3
BURAR	Bucovina Array	56.20	311	⇑P	P	16 24 44.9	+0.3
BURAR	Bucovina Array	56.20	311	P	P	16 24 45.1	+0.4
BUR08	Bucovina Ar. S	56.22	311	P	P	16 24 45.2	+0.5
BUR08				IAmb	IAmb	16 25 07.5	
	comp=Z,9.1nm,1.5s						
ARCES	ARCESS Array B	57.62	337	P	P	16 24 55.0	+0.9
	comp=Z,2.7nm,0.8s,baz=98,slow=7.5,SNR=5.6						
ARCES	ARCESS Array B	57.62	337	eP	P	16 24 56.1	+2.0
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARCES	ARCESS Array B	57.62	337	P	P	16 24 54.5	+0.4
TRPA	Tarpa	57.97	312	⇑P	P	16 24 57.9	+1.0
MDVR	Moldovita	58.90	308	⇑P	P	16 25 04.7	+1.1
AGG	Agios Georgios	59.35	301	P	P	16 25 06.0	-0.8
AGG				pmax	pmax		
	comp=Z,36nm,1.3s						
AGG	Agios Georgios	59.35	301	P	P	16 25 06.0	-0.8
BILL	Bilibino	59.55	25	P	P	16 25 08.1	+0.5
BILL				IAmb	IAmb	16 25 19.3	
	comp=Z,7.9nm,1.2s						
ITM	Ithomi	60.02	299	P	P	16 25 10.6	-0.8
WB0	Warramunga Arr	61.06	135	P	P	16 25 18.3	-0.3
WRA	Warramunga Arr	61.16	135	P	P	16 25 18.9	-0.3
	comp=Z,6.0nm,0.7s,baz=322,slow=7.3,SNR=48						
WRA				pP	pP	16 25 31.9	-0.7
	comp=Z,7.0nm,0.8s,baz=322,slow=7.3,SNR=18						
WRA				sP	sP	16 25 37.0	-1.0
	comp=Z,7.0nm,0.8s,baz=322,slow=7.3,SNR=9.1						
WRA	Warramunga Arr	61.16	135	P	P	16 25 18.3	-1.0
WRAB	Tennant Creek	61.16	135	P	P	16 25 19.3	+0.1
WRAB				pmax	pmax		
	comp=Z,8.0nm,0.9s						
WRAB	Tennant Creek	61.16	135	P	P	16 25 19.2	+0.1
WRAB				IAmb	IAmb	16 25 38.1	
	comp=Z,7.5nm,0.8s						
WB2	Warramunga Arr	61.16	135	P	P	16 25 18.9	-0.4
WB2				IAmb	IAmb	16 25 32.6	
	comp=Z,7.1nm,0.7s						
WR0	Warramunga Arr	61.30	135	P	P	16 25 19.5	-0.6
WR0				IAmb	IAmb	16 25 33.4	
	comp=Z,6.7nm,0.8s						
SPB2	Spitsbergen Ar	61.55	347	P	P	16 25 21.2	+0.1
SPITS	Spitsbergen Ar	61.56	347	P	P	16 25 21.8	+0.6
	comp=Z,8.4nm,0.8s,baz=100,slow=9.7,SNR=9.1						
NC405	NORSAR Array S	63.02	327	P	P	16 25 31.3	+0.1
NC602	NORSAR Array S	63.15	327	P	P	16 25 32.5	+0.5
NB2	NORSAR Subarra	63.27	327	P	P	16 25 32.4	-0.5
	comp=Z,2.0nm,0.6s,baz=84,slow=6.5						
NOA	NORSAR Array B	63.27	327	P	P	16 25 32.5	-0.5
	comp=Z,0.8nm,0.5s,baz=101,slow=4.2,SNR=5.7						
NOA				pP	pP	16 25 46.0	-0.3
	comp=Z,0.9nm,0.5s,baz=67,slow=4.7,SNR=3.4						
NC204	NORSAR Array S	63.46	328	P	P	16 25 33.2	-1.0
AS31	Alice Springs	63.65	138	P	P	16 25 35.5	-0.4
ASAR	Alice Springs	63.65	138	P	P	16 25 35.6	-0.3
	comp=Z,4.0nm,0.6s,baz=320,slow=6.8,SNR=60						
ASAR				pP	pP	16 25 48.7	-0.6
	comp=Z,3.1nm,0.8s,baz=323,slow=6.7,SNR=10						
ASAR	Alice Springs	63.65	138	P	P	16 25 35.9	+0.1
GEC2	GERESS Array S	63.69	314	P	P	16 25 37.0	+1.0
GEC2				IAmb	IAmb	16 25 53.0	
	comp=Z,6.9nm,1.4s						
GERES	GERESS Array B	63.69	314	P	P	16 25 36.4	+0.4
	comp=Z,1.3nm,0.5s,baz=77,slow=6.2,SNR=15						
GERES				pP	pP	16 25 50.1	+0.8
	comp=Z,1.2nm,0.5s,baz=69,slow=7.1,SNR=5.6						
GERES	GERESS Array B	63.69	314	eP	P	16 25 36.6	+0.6
GERES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BBOO	Buckleboo	71.81	143	P	P	16 26 26.7	-0.4
STKA	Stephens Creek	74.28	138	P	P	16 26 41.4	-0.3
	comp=Z,4.3nm,1.0s,baz=324,slow=5.3,SNR=7.9						
STKA	Stephens Creek	74.28	138	eP	P	16 26 42.3	+0.7
STKA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
STKA	Stephens Creek	74.28	138	P	P	16 26 41.2	-0.4
TOLK	Toolik Lake Re	74.92	20	P	P	16 26 45.2	+0.3
TOLK				IAmb	IAmb	16 26 49.5	
	comp=Z,5.5nm,1.2s						
SUMG	Summit	75.90	347	P	P	16 26 51.1	+0.1
SUMG	Summit	75.90	347	P	P	16 26 51.0	+0.1
EIDS	Eidsvold	76.16	128	P	P	16 26 53.0	+0.3
CAST	Castle Rocks	77.00	25	P	P	16 26 57.1	+0.2
BMAR	Burnt Mountain	77.15	20	P	P	16 26 58.8	+1.1
ILAR	Eielson Array	78.07	22	P	P	16 27 04.2	+1.4
	comp=Z,0.3nm,0.7s,baz=291,slow=4.7,SNR=2.4						
A36M	Sachs Harbour	78.38	11	P	P	16 27 04.5	+0.2
A36M				IAmb	IAmb	16 27 05.8	
	comp=Z,4.6nm,0.9s						
L27K	Beaver Creek,	80.88	22	P	P	16 27 19.5	+1.3
BCAR	Beaver Creek A	80.89	22	P	P	16 27 19.3	+1.1
LBTB	Lobatse	82.68	238	P	P	16 27 28.6	+0.3
LBTB				pmax	pmax		
	comp=Z,10.0nm,1.3s						
LBTB	Lobatse	82.68	238	P	P	16 27 28.6	+0.3
LBTB				IAmb	IAmb	16 27 53.1	
	comp=Z,10nm,1.2s						
BOSA	Boshof	84.91	235	P	P	16 27 39.9	+0.3
BOSA				pmax	pmax		
	comp=Z,9.0nm,1.4s						
BOSA	Boshof	84.91	235	P	P	16 27 39.9	+0.3
BOSA				IAmb	IAmb	16 28 02.8	
	comp=Z,9.0nm,1.4s						
TORD	Torodi Ar. Bea	85.33	282	P	P	16 27 42.7	+0.8
	comp=Z,1.9nm,0.6s,baz=65,slow=4.4,SNR=15						
TORD				pP	pP	16 27 56.1	+0.3
	comp=Z,2.6nm,0.8s,baz=58,slow=4.4,SNR=10						

IDC 25 16:18:13.0±6.4**, 16°.28S**×**173°.09W, h0**km**, mb3.6**/3**, mb1 3.8**/4**, mb1mx3.5**/45**, mbtmp3.6**/4**, ML3.3**/1**, Error ellipse: s-maj=261.9km s-min=26.9km az=136.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.68	28	Pn	Pn	16 18 57.7	+0.2
	5.5nm,0.3s,baz=206,slow=4.0,SNR=20						
AFI				Sn	Sn	16 19 22.6	-8.1
	41nm,0.3s,baz=142,slow=19,SNR=13						
WRA	Warramunga Arr	49.94	257	P	P	16 27 08.8	-0.4
	0.2nm,0.4s,baz=94,slow=8.4,SNR=1.9						
ASAR	Alice Springs	50.13	253	P	P	16 27 10.7	+0.2
	0.6nm,0.6s,baz=87,slow=8.4,SNR=6.9						
ILAR	Eielson Array	83.25	11	P	P	16 30 40.9	-0.2
	0.3nm,0.8s,baz=228,slow=6.3,SNR=5.6						

NEIC ***25*** *16:19:24.9±1.5, 9°.9S±0°.1×71°.3W±0°.2, h630km±12km, mb4.3/28, Error ellipse: s-maj=23.1km s-min=18.1km az=69.0*

IDC ***25*** *16:19:25.7±1.6, 9°.92S×71°.29W, h663km±29km, mb3.0/5, mb1 3.2/9, mb1mx3.0/37, mbtmp4.1/9, Error ellipse: s-maj=35.0km s-min=19.7km az=33.0*

ISC 25 16:19:25.3±0.6**, 9°.88S**±0°.07×**71°.37W**±0°.10**, h650**km**, n56,** σ**1**s**.05**/56**, mb4.1**/14**, Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CZSB	Cruzeiro do Su	2.51	328	P	P	16 20 45.5	-0.8
ETMB	Extrema	5.08	90	P	P	16 21 00.8	-1.1
NNA	Nana	5.77	248	P	P	16 21 08.4	+1.1
	4.3nm,0.3s,baz=336,slow=5.8,SNR=4.5						
NNA	Nana	5.77	248	P	P	16 21 07.1	-0.2
TBTG	Tabatinga, AM	5.84	15	P	P	16 21 05.5	-2.3
SAML	Samuel	8.13	84	P	P	16 21 26.3	-1.3
PB16	IPOC Station P	8.60	168	P	P	16 21 31.2	-1.3
PB12	IPOC Station P	8.74	173	P	P	16 21 31.6	-1.7
PB11	IPOC Station P	9.97	171	P	P	16 21 43.7	-1.1
TA01	Diego Aracena	10.69	174	P	P	16 21 50.6	-1.1
PB01	IPOC Station P	11.25	171	P	P	16 21 56.3	-0.8
SIV	San Ignacio	11.73	122	P	P	16 22 00.7	-0.9
	0.4nm,0.3s,baz=300,slow=9.8,SNR=6.0						
PB07	IPOC Station P	11.87	173	P	P	16 22 02.3	-0.6
PB04	IPOC Station P	12.44	175	P	P	16 22 08.4	+0.2
LVC	Limon Verde	12.88	170	P	P	16 22 13.2	+0.8
	0.7nm,0.3s,baz=40,slow=5.7,SNR=2.5						
LVC				S	S	16 24 30.6	+1.8
	0.3nm,0.3s,baz=126,slow=21,SNR=2.3						
LVC	Limon Verde	12.88	170	P	P	16 22 12.6	+0.2
PTGA	Pitinga	14.54	52	P	P	16 22 28.0	+0.6
	1.2nm,0.3s,baz=233,slow=11,SNR=17						
PTGA				S	S	16 24 58.4	+2.6
	0.1nm,0.3s,baz=228,slow=21,SNR=7.2						
PTGA	Pitinga	14.54	52	P	P	16 22 28.1	+0.7
BOAV	Boa Vista	16.29	42	P	P	16 22 43.8	+0.3
BOAV				IAmb	IAmb	16 23 07.5	
	comp=Z,11nm,1.4s						
AC02	Maricunga	17.00	173	P	P	16 22 52.1	+1.8
ZARC	Zaragoza, Cauc	17.60	348	P	P	16 22 55.8	+0.5
BAUV	El Baul	18.99	10	P	P	16 23 08.9	+1.0
BAUV				IAmb	IAmb	16 23 10.1	
	comp=Z,24nm,1.2s						
SJCC	San Jacinto, C	20.00	349	P	P	16 23 17.6	+0.5
SJCC				IAmb	IAmb	16 23 31.8	
	comp=Z,16nm,1.2s						
BIRV	Birongo	20.85	14	P	P	16 23 25.7	+1.1
BIRV				IAmb	IAmb	16 23 40.1	
	comp=Z,24nm,1.3s						
CELP	Cerrillos	28.17	10	P	P	16 24 28.5	-0.4
CELP				IAmb	IAmb	16 24 55.6	
	comp=Z,12nm,1.1s						
CBYP	Canovanas	28.49	11	P	P	16 24 31.0	-0.8
CBYP				IAmb	IAmb	16 24 31.9	
	comp=Z,13nm,1.1s						
CUPR	Culebra, Puert	28.64	12	P	P	16 24 31.9	-1.0
Y49A	Blount Mountai	45.78	342	P	P	16 26 51.3	0.0
WVT	Waverly	48.32	342	P	P	16 27 09.9	-0.3
WVT				IAmb	IAmb	16 27 09.9	
	comp=Z,3.5nm,0.6s						
TXAR	Lajitas Array	49.89	322	P	P	16 27 22.4	+0.4
	comp=Z,0.4nm,0.7s,baz=149,slow=10.0,SNR=5.3						
TXAR	Lajitas Array	49.89	322	P	P	16 27 23.0	+1.1
S44A	Carbondale	50.20	342	P	P	16 27 23.9	0.0
SIUC	Southern Illin	50.20	342	P	P	16 27 23.9	0.0
U40A	Yellville	50.24	337	P	P	16 27 25.1	+0.9
FVM	French Village	50.84	341	P	P	16 27 28.3	-0.2
CCM	Cathedral Cave	51.17	340	P	P	16 27 31.3	+0.4
SFIN	Lafayette	52.08	345	P	P	16 27 36.3	-0.9
SFIN				IAmb	IAmb	16 27 57.2	
	comp=Z,9.3nm,1.1s						
MNTX	Cornudas Mount	52.62	323	P	P	16 27 42.0	+0.6
G65A	Princeton	54.93	3	P	P	16 27 57.5	+0.4
G65A				IAmb	IAmb	16 28 19.4	
	comp=Z,17nm,1.4s						
D62A	Allapoint, All	56.74	2	P	P	16 28 10.0	+0.5
D62A				IAmb	IAmb	16 28 10.8	
	comp=Z,23nm,1.5s						
SDCO	Great Sand Dun	57.13	328	P	P	16 28 14.5	+1.7
DRLN	Deer Lake	60.13	10	P	P	16 28 31.6	-0.6
EYMN	Ely	60.27	345	P	P	16 28 32.8	-0.3
EYMN				IAmb	IAmb	16 28 37.4	
	comp=Z,17nm,1.1s						
RSSD	Black Hills	61.37	334	P	P	16 28 42.4	+1.7
E28A	Huff	62.01	338	P	P	16 28 45.3	+0.8
E28A				IAmb	IAmb	16 29 07.5	
	comp=Z,12nm,0.6s						
PDAR	Pinedale Array	62.93	329	P	P	16 28 51.4	+0.6
	comp=Z,0.5nm,0.5s,baz=126,slow=8.7,SNR=6.6						
PDAR	Pinedale Array	62.93	329	P	P	16 28 51.5	+0.8
ULM	Lac du Bonnet	63.58	343	P	P	16 28 54.0	-0.3
	comp=Z,3.3nm,0.4s,baz=157,slow=5.5,SNR=4.9						
FCC	Fort Churchill	70.84	348	P	P	16 29 38.5	+0.2
FCC				IAmb	IAmb	16 29 47.7	
	comp=Z,23nm,1.3s						
TORD	Torodi Ar. Bea	76.05	74	P	P	16 30 08.0	-0.8
	comp=Z,0.8nm,0.6s,baz=244,slow=4.3,SNR=5.8						
TORD	Torodi Ar. Bea	76.05	74	P	P	16 30 08.2	-0.6
SUMG	Summit	85.03	9	P	P	16 30 54.6	+0.5
INK	Inuvik	89.26	341	P	P	16 31 13.8	+0.2
	comp=Z,0.7nm,0.5s,baz=140,slow=7.9,SNR=2.4						
ASAR	Alice Springs	138.50	216	PKhKP	PKPpre	16 37 30.0	
	comp=Z,0.5nm,1.1s,baz=130,slow=3.9,SNR=1.6						
WRA	Warramunga Arr	141.03	220	PKhKP	PKPpre	16 37 38.0	
	comp=Z,0.3nm,0.7s,baz=143,slow=2.7,SNR=1.5						
SONM	Songino Array	142.12	2	PKP	PKPdf	16 37 42.8	-2.7
	comp=Z,0.2nm,0.5s,baz=336,slow=3.2,SNR=2.2						

IDC ***25*** *16:21:31.3±1.5, 36°.13S×75°.50W, h0km, mb4.0/2, mb1 4.2/4, mb1mx3.6/32, mbtmp4.1/4, ML4.6/2, Error ellipse: s-maj=50.8km s-min=32.3km az=98.0*

SJA ***25*** *16:21:59.0, 36°.55S×71°.24W, h159km, ML4.2*

NEIC ***25*** *16:22:00.1±1.6, 36°.54S±0°.06×71°.2W±0°.2, h135km±9km, mb4.1/3, ML4.4(GUC), Error ellipse: s-maj=19.3km s-min=9.1km az=95.0*

GUC ***25*** *16:22:01.9±0.7, 36°.37S×71°.43W, h145km±4km, ML4.5*

ISC 25 16:22:01.1±0.8**, 36°.48S**±0°.04×**71°.21W**±0°.06**, h132**km±8km**, n82,** σ**1**s**.21**/93**, mb3.9**/4**, 4C-7D, Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ML02	Panimavida	0.74	347	⇓iP	Pn	16 22 22.5	+0.5
ML02				iS	Sn	16 22 38.6	+0.9
ML02				IAML		16 22 40.0	
	comp=N,17µm,0.3s						
ML02	Panimavida	0.74	347	Pn	Pn	16 22 22.5	+0.5
ML02				Sn	Sn	16 22 38.4	+0.7
GO05	Huala	1.58	338	⇑iP	Pn	16 22 31.0	+0.7
GO05				iS	Sn	16 22 53.0	+0.5
GO05				IAML		16 22 57.8	
	comp=N,2µm,0.3s						
GO05	Huala	1.58	338	Pn	Pn	16 22 31.1	+0.7
GO05	Huala	1.58	338	iP	Pn	16 22 31.0	+0.7
BI05	Punta Hualpn	1.61	260	⇑iP	Pn	16 22 30.6	0.0
BI05				iS	Sn	16 22 52.2	-0.9
BI05				iS	Sn	16 22 52.2	-0.9
BI05				IAML		16 22 53.9	
	comp=N,2µm,0.6s						
EDS3	Malargue	1.63	65	iP	Pn	16 22 31.0	0.0
BO02	Sierra Bellavi	1.72	12	⇓iP	Pn	16 22 32.8	+0.8
BO02				iS	Sn	16 22 56.9	+1.4
BO02				IAML		16 23 00.7	
	comp=N,4µm,0.5s						
BO02	Sierra Bellavi	1.72	12		Pn	16 22 32.8	+0.8
BO02	Sierra Bellavi	1.72	12	iP	Pn	16 22 32.0	0.0
BO01	Tunca	2.09	3	⇓iP	Pn	16 22 36.5	+0.3
BO01				⇑iP	Pn	16 22 36.5	+0.3
BO01				iS	Sn	16 23 02.2	-1.0
BO01	Tunca	2.09	3		Pn	16 22 36.6	+0.3
BO01	Tunca	2.09	3	iP	Pn	16 22 36.0	-0.3
LC01	Cunco	2.47	192	iP	Pn	16 22 38.9	-2.0
LC01				eS	Sn	16 23 10.7	-1.0
LC01	Cunco	2.47	192	Pn	Pn	16 22 38.9	-2.0
LC01	Cunco	2.47	192	iP	Pn	16 22 39.0	-2.0
BO04	La Punta	2.54	11	⇓iP	Pn	16 22 42.1	+0.2
BO04				iS	Sn	16 23 14.3	+1.1
MT01	Popeta	2.61	359	⇓iP	Pn	16 22 42.7	-0.1
MT01				iS	Sn	16 23 13.9	-1.0
MT01				iS	Sn	16 23 13.9	-1.0
MT01				IAML		16 23 18.5	
	comp=N,2µm,0.1s						
MT01	Popeta	2.61	359		Pn	16 22 42.8	-0.1
MT01	Popeta	2.61	359	iP	Pn	16 22 42.0	-0.8
MT09	Talagante	2.71	4	⇓iP	Pn	16 22 44.1	0.0
MT09				iS	Sn	16 23 16.4	-0.8
MT09				IAML		16 23 21.1	
	comp=N,2µm,0.1s						
MT09	Talagante	2.71	4		Pn	16 22 44.1	0.0
RFA	San Rafael	2.81	53	iP	Pn	16 22 45.0	-0.5
VA05	Santo Domingo	2.84	353	eP	Pn	16 22 45.0	-0.7
VA05				iS	Sn	16 23 17.8	-2.2
VA05				IAML		16 23 23.3	
	comp=N,3µm,0.2s						
VA05	Santo Domingo	2.84	353	Pn	Pn	16 22 45.5	-0.3
MT05	Renca	3.11	7	iP	Pn	16 22 49.5	+0.2
MT05	Renca	3.11	7	Pn	Pn	16 22 49.2	0.0
MT05	Renca	3.11	7	iP	Pn	16 22 50.0	+0.7
MT02	Curacav	3.22	1	eP	Pn	16 22 50.6	0.0
MT02	Curacav	3.22	1		Pn	16 22 50.5	-0.1
MT02	Curacav	3.22	1	iP	Pn	16 22 50.0	-0.6
LR03	Panguipulli	3.27	196	Pn	Pn	16 22 48.5	-2.7
PEL	Peldehue	3.36	8		Pn	16 22 52.2	-0.4
PEL	Peldehue	3.36	8	iP	Pn	16 22 52.0	-0.5
VA01	Torpederas	3.47	354	eP	Pn	16 22 53.7	-0.2
VA01				eS	Sn	16 23 32.8	-1.9
VA01				IAML		16 23 40.1	
	comp=E,665nm,0.7s						
VA01	Torpederas	3.47	354	Pn	Pn	16 22 53.7	-0.2
ROC1	El Roble	3.50	3	iP	Pn	16 22 54.0	-0.6
ROCH	El Roble	3.51	3	eP	Pn	16 22 54.5	-0.2
VA03	San Esteban	3.75	9	⇓iP	Pn	16 22 57.1	-0.6
VA03				eS	Sn	16 23 41.5	0.0
VA03				IAML		16 23 45.4	
	comp=E,918nm,0.2s						
VA03	San Esteban	3.75	9		Pn	16 22 57.2	-0.6
VA03	San Esteban	3.75	9	iP	Pn	16 22 57.0	-0.7
VA06	Catapilco	3.91	359	⇑iP	Pn	16 22 59.3	-0.4
VA06				eS	Sn	16 23 43.8	-1.4
AAGR	Agrelo	3.92	31	iP	Pn	16 23 01.0	+1.1
ARCO	CERRO ARCO	4.09	28	iP	Pn	16 23 03.0	+0.7
PLCA	Paso Flores	4.28	173	Pn	Pn	16 23 03.7	-0.9
	comp=E,8.8nm,0.3s,baz=341,slow=12,SNR=177						
PLCA				Sn	Sn	16 24 05.1	+11
	comp=E,0.3nm,0.3s,baz=252,slow=20,SNR=1.4						
PLCA	Paso Flores	4.28	173	Pn	Pn	16 23 02.7	-1.9
PLCA	Paso Flores	4.28	173	iP	Pn	16 23 02.0	-2.6
ASAL	Salagasta	4.35	27	iP	Pn	16 23 06.0	+0.4
AUSP	Uspallata	4.51	20	iP	Pn	16 23 08.0	0.0
LL04	Puerto Octay	4.52	192		Pn	16 23 04.8	-3.0
RTLS	Leoncito	4.93	19	iP	Pn	16 23 14.0	+0.3
RTCV	Cerro Valdivia	5.11	26	iP	Pn	16 23 15.0	-0.8
ZON	Zonda	5.35	24	Pn	Pn	16 23 18.1	-1.0
CO06	Fray Jorge	5.80	356	Pn	Pn	16 23 24.1	-0.9
LL01	San Ignacio de	5.96	189	Pn	Pn	16 23 24.8	-2.2
LL01	San Ignacio de	5.96	189	iP	Pn	16 23 25.0	-2.0
MRA	San Martin	6.08	50	iP	Pn	16 23 29.0	+0.1
ACCO	Cerro Coronel	6.15	18	iP	Pn	16 23 29.0	-0.9
GO04	Tololo Observa	6.30	3		Pn	16 23 30.8	-1.2
ACDV	Cuesta del Vie	6.53	16	iP	Pn	16 23 35.0	0.0
AVFE	Valle Fertil	6.60	29	iP	Pn	16 23 34.0	-1.8
VA04	Juan Fernndez	6.86	292	Pn	Pn	16 23 41.2	+2.0
GO07	Milladeo Hill,	6.89	195	Pn	Pn	16 23 35.4	-4.1
APLL	PUNTA DE LOS L	7.22	34	iP	Pn	16 23 41.0	-3.2
TCA	Tanti	7.52	49	iP	Pn	16 23 47.0	-1.2
ACLC	CERRO LA CRUZ	7.89	28	iP	Pn	16 23 50.0	-3.3
VCA	Vinchina	8.13	19	iP	Pn	16 23 55.0	-1.5
GO03	Copiap	8.90	6	Pn	Pn	16 24 05.0	-1.7
AC02	Maricunga	9.78	11	Pn	Pn	16 24 16.5	-2.5
PB15	IPOC Station P	13.31	7	Pn	Pn	16 25 04.0	-1.3
LVC	Limon Verde	13.97	9	Pn	Pn	16 25 00.4	-13
	comp=E,0.3nm,0.3s,baz=233,slow=15,SNR=2.4						
LVC	Limon Verde	13.97	9	Pn	Pn	16 25 13.0	-0.7
PB01	IPOC Station P	15.46	6	P	Pn	16 25 30.9	-1.3
PB01				IAmb	IAmb	16 25 37.5	
	comp=Z,8.8nm,0.7s						
SIV	San Ignacio	22.31	26	P	P	16 26 46.6	-1.4
	comp=Z,1.8nm,0.8s,baz=215,slow=10,SNR=5.4						
VNA3	Neumayer Olymp	46.81	157	P	P	16 30 19.0	+1.9
VNA2	Neumayer--Watz	47.47	156	P	P	16 30 23.1	+1.0
	baz=281,slow=8.2						
SNAA	Sanae	49.04	157	P	P	16 30 34.5	+0.2
SNAA	Sanae	49.04	157	P	P	16 30 34.3	0.0
SNAA				IAmb	IAmb	16 30 34.9	
	comp=Z,1.7nm,0.8s						
QSPA	South Pole Qui	53.76	180	P	P	16 31 10.0	+0.4
QSPA				IAmb	IAmb	16 31 11.4	
	comp=Z,4.1nm,0.9s						
BOSA	Boshof	78.33	117	P	P	16 33 49.9	+2.8
	comp=Z,0.9nm,0.4s,baz=219,slow=6.1,SNR=5.3						
ASAR	Alice Springs	115.64	206	PKP	PKiKP	16 40 12.8	-15
	comp=Z,0.4nm,0.5s,baz=135,slow=4.0,SNR=13						
WRA	Warramunga Arr	118.90	208	PKP	PKPdf	16 40 20.7	-14
	comp=Z,0.4nm,0.6s,baz=134,slow=2.3,SNR=5.7						

IDC 25 17:03:05.8±6.0**, 11°.54S×166°.02E, h0^{km}, mb3.4**/3**, mb1 3.7**/3**, mb1mx3.5**/29**, mbtmp3.4**/3**, Error ellipse: s-maj=313.4km s-min=35.2km az=139.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.57	251	P	P	17 09 31.3	+1.0
	0.2nm,0.7s,baz=81,slow=9.5,SNR=1.5						
ASAR	Alice Springs	32.82	244	P	P	17 09 40.4	-0.9
	0.4nm,0.9s,baz=68,slow=10,SNR=5.1						
ILAR	Eielson Array	83.89	18	P	P	17 15 37.1	0.0
	0.3nm,0.8s,baz=237,slow=5.8,SNR=4.9						

MAN 25 17:11:54.9, 10°.45N×123°.58E, h10^{km}, mb4.1, ML2.9, MS2.5, Cebu

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IDC 25 17:14:36.0±4.7**, 11°.89S×167°.04E, h0^{km}, mb3.5**/3**, mb1 3.8**/3**, mb1mx3.4**/39**, mbtmp3.5**/3**, Error ellipse: s-maj=233.3km s-min=33.5km az=140.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	32.40	252	P	P	17 21 08.1	+0.2
	0.4nm,0.4s,baz=83,slow=8.7,SNR=7.1						
ASAR	Alice Springs	33.57	245	P	P	17 21 17.8	-0.3
	0.3nm,0.5s,baz=68,slow=9.2,SNR=11						
ILAR	Eielson Array	83.91	18	P	P	17 27 07.5	0.0
	0.2nm,0.5s,baz=234,slow=5.3,SNR=5.3						

IDC 25 17:19:56.1±2.2**, 31°.69S×178°.79W, h0^{km}, mb3.5**/3**, mb1 3.7**/3**, mb1mx3.4**/30**, mbtmp3.5**/3**, MS3.8**/1**, Ms1 3.8**/1**, ms1mx2.8**/12**, Error ellipse: s-maj=63.8km s-min=40.8km az=40.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	14.18	348	LR	LR	17 27 22.1	
	comp=Z,395nm,20.2s,baz=77,slow=32						
ASAR	Alice Springs	42.38	269	P	P	17 27 52.1	-0.3
	0.2nm,0.5s,baz=107,slow=7.9,SNR=8.4						
WRA	Warramunga Arr	43.49	274	P	P	17 28 01.4	0.0
	0.4nm,0.4s,baz=114,slow=7.6,SNR=12						
QSPA	South Pole Qui	58.43	180	P	P	17 29 53.2	-0.1
	1.1nm,1.0s,baz=45,slow=4.3,SNR=2.2						
FINES	FINESS Array B	146.10	339	PKPbc	PKPdf	17 39 36.6	+0.2
	5.5nm,0.9s,baz=46,slow=4.0,SNR=4.5						

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*ATH **25** 17:32:29.8, 39°.01N×26°.08E, h33^{km}±3^{km}, ML2.7/4, Error ellipse: s-maj=4.0km s-min=1.4km az=72.0*
*ISK **25** 17:32:29.5, 38°.94N×26°.09E, h10^{km}, ML2.8/16*
*DDA **25** 17:32:30.4, 38°.98N×26°.13E, h7^{km}±2^{km}, ML2.4*
ISC 25 17:32:29.7±1.1**, 38°.98N**±0°.02×**26°.07E**±0°.03**, h11**^{km}±10^{km}**, n34, σ0^{s}.48**/51**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIGR	SIGRI	0.29	325	P	Pb	17 32 36.8	0.0
SIGR				S	Sb	17 32 41.5	-0.1
SIGR				AML	AML	17 32 41.9	
	comp=E,3493µm,0.4s						
SIGR				AML	AML	17 32 42.0	
	comp=N,2401µm,0.2s						
SIGR	SIGRI	0.29	325	PG	Pb	17 32 36.7	-0.1
SIGR				SG	Sb	17 32 41.5	-0.1
PRK	Paraskevi	0.31	30	P	Pb	17 32 37.6	+0.3
PRK				S	Sb	17 32 42.2	-0.2
PRK				AML	AML	17 32 45.8	
	comp=E,2024µm,0.5s						
PRK				AML	AML	17 32 46.4	
	comp=N,1174µm,0.5s						
GPNR	Gulpinar-Canak	0.48	6	PG	Pb	17 32 39.8	-0.3
GPNR				SG	Sb	17 32 47.6	+0.4
KOCA	Canakkale, Ayv	0.53	6	iP	Pb	17 32 40.7	-0.2
KOCA				iS	Sn	17 32 51.4	-0.7
KOCA				IAML		17 32 53.0	
	comp=E,250nm,0.3s						
KOCA				IAML		17 32 54.0	
	comp=N,195nm,0.4s						
KRBN	Karaburun	0.54	135	PG	Pg	17 32 39.9	-0.2
KRBN				SG	Sg	17 32 47.2	0.0
FOCM	Foa	0.58	117	PG	Pg	17 32 41.1	+0.2
FOCM				SG	Sg	17 32 48.9	+0.3
AYVA	Ayvalik	0.58	55	iP	Pg	17 32 41.1	+0.1
AYVA				IAML		17 32 49.0	
	comp=N,255nm,0.2s						
AYVA				iS	Sg	17 32 49.2	+0.4
AYVA				IAML		17 32 56.0	
	comp=E,163nm,0.6s						
PSRA	Psara	0.59	223	P	Pb	17 32 42.6	+0.6
PSRA				S	Sb	17 32 50.4	+0.2
PSRA				AML	AML	17 32 54.0	
	comp=N,3274µm,0.2s						
PSRA				AML	AML	17 32 54.6	
	comp=E,3827µm,0.2s						
CHOS	Chios island	0.59	181	P	Pg	17 32 40.8	-0.3
CHOS				S	Sb	17 32 51.3	+0.9
CHOS				AML	AML	17 32 52.4	
	comp=N,1260µm,0.2s						
CHOS				AML	AML	17 32 52.6	
	comp=E,1984µm,0.2s						
CHOS	Chios island	0.59	181	PG	Pg	17 32 40.8	-0.3
DKL	Dikili	0.66	81	PG	Pg	17 32 42.5	+0.1
URLA	Izmir	0.74	146	PG	Pg	17 32 43.1	-0.9
ZEDA	zmir-Bergama	0.79	90	iP	Pb	17 32 45.1	-0.2
ZEDA				iS	Sb	17 32 56.9	+0.9
ZEDA				IAML		17 32 57.0	
	comp=N,323nm,0.4s						
ZEDA				IAML		17 32 57.0	
	comp=E,191nm,0.3s						
BOZC	Bozcaada	0.86	359	iP	Pb	17 32 46.8	+0.1
BOZC				iS	Sb	17 32 59.4	+1.2
BOZC				IAML		17 33 00.0	
	comp=E,225nm,0.2s						
BOZC				IAML		17 33 00.0	
	comp=N,210nm,0.3s						
BOZC	Bozcaada	0.86	359	PG	Pb	17 32 46.7	0.0
BOZC				SG	Sn	17 33 00.1	-0.2
EZN	Ezine	0.87	13	PG	Pb	17 32 46.8	0.0
EZN				SG	Sn	17 33 00.2	-0.3
BUHA	Balikesir, Bur	0.94	56	iP	Pg	17 32 47.6	-0.2
BUHA				iS	Sb	17 33 00.6	+0.1
BUHA				IAML		17 33 02.0	
	comp=E,208nm,0.4s						
BUHA				IAML		17 33 02.0	
	comp=N,166nm,0.3s						
BLCB	Balcova	0.96	128	PG	Pg	17 32 47.8	-0.4
LIA	Limnos Island	1.15	324	P	Pb	17 32 50.7	-0.8
GADA	Gvkgeada	1.22	354	PN	Pn	17 32 52.9	+0.3
STEP	BALIKESIR_Sava	1.34	72	iP	Pb	17 32 54.8	-0.1
STEP				iS	Sb	17 33 11.4	-0.6
STEP				IAML		17 33 14.0	
	comp=E,80nm,0.4s						
STEP				IAML		17 33 15.0	
	comp=N,112nm,0.7s						
SMG	Samos	1.40	154	P	Pn	17 32 54.9	-0.2
BALY	Balya	1.42	57	iP	Pb	17 32 56.1	-0.1
BALY				iS	Sn	17 33 14.0	-0.2
BALY				IAML		17 33 17.0	
	comp=N,76nm,0.3s						
BALY				IAML		17 33 17.0	
	comp=E,45nm,0.7s						
GELI	Tayfur-Gelibol	1.45	12	PN	Pb	17 32 56.8	+0.1
LPK	Lapseki	1.49	21	PN	Pb	17 32 57.2	-0.2
SMTH	Samothraki Isl	1.55	345	P	Pn	17 32 57.8	+0.6
BALB	Balikesir	1.55	64	PN	Pn	17 32 57.1	-0.1
GONE	Gonen-Balikesi	1.64	49	PN	Pb	17 32 59.9	-0.1
KRBG	Karabiga-Canak	1.70	33	PN	Pb	17 33 00.2	-0.7
ERIK	Erikli-Kesan	1.73	11	PN	Pb	17 33 00.9	-0.4
ENEZ	Enez	1.76	2	PN	Pb	17 33 01.2	-0.7
ALN	Alexandroupoli	1.92	359	P	Pn	17 33 02.2	-0.1
ALN	Alexandroupoli	1.92	359	PN	Pn	17 33 03.4	+1.2

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*IDC **25** 17:48:10.8±0.8, 14°.57N×55°.07E, h0^{km}, mb3.8/14, mb1 3.9/14, mb1mx3.7/48, mbtmp3.8/14, MS3.4/21, Ms1 3.4/21, ms1mx3.2/59, Error ellipse: s-maj=22.4km s-min=18.3km az=128.0*
*NEIC **25** 17:48:11.7±1.5, 14°.62N±0°.06×54°.9E±0°.1, h10^{km}±1^{km}, mb4.2/12, Error ellipse: s-maj=21.8km s-min=9.4km az=96.0*
ISC 25 17:48:11.8±0.6**, 14°.56N**±0°.09×**54°.9E**±0°.1**, h14^{km}, n49, σ1^{s}.71**/29**, mb4.0**/18**, MS3.4**/19**, Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCY	Socotra	2.52	201	Pn	Pn	17 48 49.4	-3.1
SOCY				Sn	Sn	17 49 13.4	-10
WSAR	Wadi Sarin	9.33	22	LR	LR	17 53 44.1	
	comp=Z,230nm,21.3s,baz=198,slow=36						
ATD	Arta Tunnel	12.14	257	LR	LR	17 54 34.2	
	comp=Z,167nm,20.3s,baz=40,slow=31						
RAYN	Ar Rayn	12.59	316		Pn	17 51 08.8	-1.9
LODK	Lodwar	22.23	242	P	P	17 53 09.4	+1.0
KMBO	Kilima Mbogo	23.42	230	P	P	17 53 24.4	+3.4
	1.0nm,0.3s,baz=82,slow=7.1,SNR=2.0						
KMBO				LR	LR	18 02 58.0	
	comp=Z,44nm,19.9s,baz=88,slow=38						
KMBO	Kilima Mbogo	23.42	230	P	P	17 53 23.8	+2.8
GEYT	Alibeck	23.45	6	LR	LR	18 03 27.7	
	comp=Z,136nm,20.4s,baz=65,slow=39						
KIBK	Kibwezi	23.69	226	P	P	17 53 24.0	+0.5
KIBK				IAmb	IAmb	17 53 26.9	
	comp=Z,7.5nm,1.5s						
EIL	Elat	23.78	313	LR	LR	18 03 13.1	
	comp=Z,84nm,18.1s,baz=157,slow=38						
SIRT	Sirnak	25.40	336	P	P	17 53 38.1	-0.9
MMAI	Mount Meron Ar	25.54	319	LR	LR	18 04 22.5	
	comp=Z,54nm,19.3s,baz=95,slow=38						
PALK	Pallekele	26.32	103	LR	LR	18 01 51.1	
	comp=Z,58nm,20.4s,baz=29,slow=31						
GNI	Garni	27.01	343	LR	LR	18 06 16.4	
	comp=Z,95nm,18.1s,baz=146,slow=40						
GNI	Garni	27.01	343	P	P	17 53 51.6	-2.0
GNI				IAmb	IAmb	17 54 03.5	
	comp=Z,9.8nm,0.9s						
CHGR	Chuyangaron	27.10	25	P	P	17 53 53.3	-1.1
CHGR				IAmb	IAmb	17 54 08.8	
	comp=Z,12nm,1.5s						
KBZ	Khabaz	30.84	343	LR	LR	18 08 01.8	
	comp=Z,69nm,19.1s,baz=159,slow=39						
BRTR	Keskin Array B	31.26	327	LR	LR	18 08 40.9	
	comp=Z,47nm,20.2s,baz=130,slow=39						
AAK	Ala-Archa	32.67	27	P	P	17 54 45.4	+1.6
	comp=Z,0.5nm,0.6s,baz=240,slow=8.1,SNR=1.6						
AAK	Ala-Archa	32.67	27	IAmb	IAmb	17 54 51.2	
	comp=Z,1.8nm,1.2s						
OPO	Ambohidratompo	33.78	193	LR	LR	18 05 37.1	
	comp=Z,78nm,20.5s,baz=175,slow=31						
ABKAR	Akbulak array	34.85	6	P	P	17 55 01.6	-0.8
AKTO	Aktyubinsk	35.87	3	P	P	17 55 12.7	+1.4
	comp=Z,1.0nm,0.5s,baz=166,slow=9.4,SNR=5.2						
MKAR	Makanchi Array	39.44	30	P	P	17 55 42.2	+0.6
	comp=Z,0.5nm,0.6s,baz=208,slow=8.5,SNR=6.0						
MKAR				LR	LR	18 13 32.0	
	comp=Z,60nm,18.9s,baz=264,slow=39						
AKASG	Malin Array Be	41.62	335	P	P	17 56 00.4	+1.0
	comp=Z,0.2nm,0.4s,baz=139,slow=7.4,SNR=1.9						
CMAR	Chiang Mai Arr	42.32	78	P	P	17 56 06.2	+0.6
	comp=Z,1.7nm,0.7s,baz=279,slow=9.2,SNR=17						
CMAR				LR	LR	18 14 23.4	
	comp=Z,14nm,18.2s,baz=220,slow=37						
CMAR	Chiang Mai Arr	42.32	78	P	P	17 56 04.8	-0.8
KIRV	Kirov	44.14	356	LR	LR	18 16 56.9	
	comp=Z,40nm,18.8s,baz=221,slow=39						
ZAA0	Zalesovo Array	45.77	24	P	P	17 56 30.6	-2.1
ZAA0				IAmb	IAmb	17 56 33.6	
	comp=Z,3.5nm,1.3s						
ZALV	Zalesovo Beam	45.77	24	P	P	17 56 32.3	-0.5
	comp=Z,0.8nm,0.6s,baz=234,slow=8.0,SNR=4.7						
VRAC	Vranov	46.68	326	LR	LR	18 16 59.7	
	comp=Z,21nm,18.6s,baz=42,slow=37						
DAVOX	Davos/Dischmat	49.33	320	LR	LR	18 21 58.2	
	comp=Z,54nm,20.5s,baz=266,slow=41						
FINES	FINESS Array B	51.20	343	P	P	17 57 15.6	+1.1
	comp=Z,1.5nm,0.7s,baz=129,slow=11,SNR=3.3						
TORD	Torodi Ar. Bea	51.59	275	P	P	17 57 19.9	+1.7
	comp=Z,0.8nm,0.8s,baz=85,slow=6.5,SNR=5.0						
TORD	Torodi Ar. Bea	51.59	275	P	P	17 57 17.8	-0.4
TORD				IAmb	IAmb	17 57 32.1	
	comp=Z,3.0nm,1.4s						
BOSA	Boshof	51.62	214	P	P	17 57 21.1	+2.8
	comp=Z,2.3nm,0.8s,baz=91,slow=6.8,SNR=3.8						
BOSA				LR	LR	18 19 26.1	
	comp=Z,33nm,18.2s,baz=188,slow=36						
BOSA	Boshof	51.62	214	P	P	17 57 18.4	+0.2
TLY	Talaya	53.62	36	LR	LR	18 22 22.4	
	comp=Z,36nm,20.3s,baz=170,slow=38						
SONM	Songino Array	53.78	41	P	P	17 57 35.5	+1.4
	comp=Z,0.3nm,0.5s,baz=237,slow=7.9,SNR=4.8						
NOA	NORSAR Array B	56.02	336	LR	LR	18 25 03.5	
	comp=Z,38nm,18.6s,baz=305,slow=40						
ARCES	ARCESS Array B	57.96	348	P	P	17 58 03.8	+0.3
	comp=Z,2.6nm,1.0s,baz=134,slow=7.7,SNR=3.6						
ARCES				LR	LR	18 24 57.5	
	comp=Z,59nm,20.9s,baz=295,slow=38						
YAK	Yakutsk	70.11	29	LR	LR	18 30 22.9	
	comp=Z,50nm,19.8s,baz=116,slow=36						
H01W3	Cape Leeuwin H	74.62	133	T	T	19 21 24.5	
	baz=301,slow=75,SNR=30						
H01W2	Cape Leeuwin H	74.63	133	T	T	19 21 17.5	
	baz=301,slow=75,SNR=32						
H01W1	Cape Leeuwin H	74.64	133	T	T	19 21 20.2	
	baz=301,slow=75,SNR=27						
WRA	Warramunga Arr	85.27	112	P	P	18 00 48.0	-0.8
	comp=Z,0.9nm,0.8s,baz=297,slow=4.1,SNR=5.8						
ASAR	Alice Springs	85.99	116	P	P	18 00 52.1	-0.3
	comp=Z,0.8nm,0.8s,baz=294,slow=4.7,SNR=9.5						
NVAR	Mina Array Bea	126.91	353	PKP	PKiKP	18 07 18.2	+1.6
	comp=Z,0.9nm,0.8s,baz=355,slow=0.9,SNR=5.0						
NVAR	Mina Array Bea	126.91	353		PKPdf	18 07 13.5	-2.5

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*IDC **25** 17:50:21.0±13.0, 38°.82N×20°.53E, h0^{km}, mb3.8/3, mb1 3.7/4, mb1mx3.3/45, mbtmp3.7/4, ML3.4/1, Error ellipse: s-maj=233.2km s-min=39.3km az=32.0*
*THE **25** 17:50:23.4, 38°.71N×20°.60E, h12^{km}, ML3.6/6, Error ellipse: s-maj=0.8km s-min=0.4km az=289.0*
*ATH **25** 17:50:23.8, 38°.71N×20°.63E, h12^{km}±1^{km}, ML3.1/9, Error ellipse: s-maj=1.6km s-min=0.9km az=281.0*
ISC 25 17:50:22.7±0.8**, 38°.73N**±0°.02×**20°.59E**±0°.03**, h16**^{km}±4^{km}**, n75, σ0^{s}.74**/86**, mb3.8**/3**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKD2	Lefkada island	0.08	40	P	Pg	17 50 26.1	+0.2
LKD2				S	Sg	17 50 28.1	+0.1
	53µm,0.2s						
LKD2	Lefkada island	0.08	40	P	Pg	17 50 26.1	+0.2
LKD2				S	Sg	17 50 28.2	+0.1
LKD2				AML	AML	17 50 28.3	
	comp=N,98922µm,0.3s						
LKD2				AML	AML	17 50 28.4	
NYDR	Nydri-Lefkada	0.08	99	P	Pg	17 50 25.9	0.0
NYDR				S	Sg	17 50 27.7	-0.2
	comp=N,56µm,0.2s						
NYDR	Nydri-Lefkada	0.08	99	P	Pg	17 50 25.9	0.0
NYDR				S	Sg	17 50 27.7	-0.2
TSLK	Tsoukalades, L	0.11	27	P	Pb	17 50 26.7	+0.2
TSLK				S	Sb	17 50 28.9	-0.1
	comp=N,41µm,0.4s						
TSLK	Tsoukalades, L	0.11	27	P	Pb	17 50 26.7	+0.2
TSLK				S	Sb	17 50 29.3	+0.3
EVGI	Lefkada island	0.12	154	P	Pb	17 50 26.5	-0.1
EVGI				S	Sg	17 50 28.5	0.0
	comp=N,17µm,0.1s						
EVGI	Lefkada island	0.12	154	P	Pb	17 50 26.5	-0.1
FSK	Fiskardo	0.27	185	P	Pb	17 50 29.2	+0.1
FSK				S	Sb	17 50 33.7	+0.2
FSK				AML	AML	17 50 34.1	
	comp=N,13455µm,0.5s						
FSK				AML	AML	17 50 35.1	
	comp=E,14854µm,0.2s						
KEF4	Livadi, Kephal	0.49	196	P	Pb	17 50 32.8	-0.1
KEF4				S	Sb	17 50 39.6	-0.1
	comp=E,15µm,0.5s						
KEF4	Livadi, Kephal	0.49	196	P	Pb	17 50 32.8	-0.1
LXRA	Lixouri, Kepha	0.54	193	P	Pb	17 50 33.8	+0.1
VLS	Valsamata	0.55	180	P	Pg	17 50 33.6	+0.1
VLS				S	Sb	17 50 41.9	+0.3
	comp=E,2µm,0.4s						
VLS	Valsamata	0.55	180	P	Pg	17 50 33.6	+0.1
VLS				S	Sb	17 50 42.3	+0.7
VLS				AML	AML	17 50 44.2	
	comp=E,3471µm,0.2s						
VLS				AML	AML	17 50 44.2	
	comp=N,3767µm,0.2s						
KEF3	Kipouria, Keph	0.56	200	P	Pg	17 50 33.5	-0.2
KEF3	Kipouria, Keph	0.56	200	P	Pg	17 50 33.5	-0.2
PSDA	Pessada-Kefalo	0.61	181	P	Pb	17 50 35.0	0.0
PSDA	Pessada-Kefalo	0.61	181	P	Pb	17 50 35.0	0.0
PVO	Paravola	0.74	98	P	Pb	17 50 37.6	+0.4
PVO	Paravola	0.74	98	P	Pb	17 50 37.9	+0.7
PVO				AML	AML	17 50 51.4	
	comp=N,3762µm,0.2s						
PVO				AML	AML	17 50 51.5	
	comp=E,5496µm,0.3s						
IGT	Igoumenitsa	0.83	346	P	Pg	17 50 39.4	+0.6
IGT	Igoumenitsa	0.83	346	P	Pg	17 50 39.1	+0.3
VTN	Vitineika	0.93	150	P	Pn	17 50 41.2	0.0
JAN	Janina	0.95	12	P	Pn	17 50 42.7	+1.2
RLS	Riolos of Patr	0.96	134	P	Pb	17 50 41.0	+0.1
RLS	Riolos of Patr	0.96	134	P	Pb	17 50 41.0	+0.1
RLS				AML	AML	17 51 02.4	
	comp=E,1626µm,0.5s						
RLS				AML	AML	17 51 03.7	
	comp=N,1384µm,0.6s						
LTHK	Lithakia	1.03	169	P	Pb	17 50 42.0	-0.2

LTHK	Lithakia	1.03	169	P	Pb	17 50 41.9	-0.2
ANX	Ano Chora	1.05	97	P	Pb	17 50 42.7	+0.2
ANX	Ano Chora	1.05	97	P	Pb	17 50 42.7	+0.2
ANX				AML	AML	17 51 04.5	
	comp=N,2816µm,0.4s						
ANX				AML	AML	17 51 08.7	
	comp=E,1846µm,0.4s						
EFP	Efpalio	1.07	106	P	Pb	17 50 42.9	0.0
EFP	Efpalio	1.07	106	P	Pb	17 50 42.9	0.0
EFP				AML	AML	17 51 03.4	
	comp=E,2553µm,0.2s						
EFP				AML	AML	17 51 03.8	
	comp=N,1931µm,0.2s						
KASA	Kassiopi	1.14	334	P	Pg	17 50 45.5	+0.9
KEK	Kerkira	1.16	328	P	Pg	17 50 46.1	+1.0
KEK	Kerkira	1.16	328	P	Pg	17 50 46.1	+1.0
DRO	Drossia	1.17	131	P	Pn	17 50 44.3	-0.1
DRO	Drossia	1.17	131	P	Pn	17 50 44.3	-0.1
DRO				AML	AML	17 51 09.4	
	comp=N,1769µm,0.5s						
DRO				AML	AML	17 51 17.3	
	comp=E,1680µm,0.6s						
SERG	Sergoula	1.19	105	P	Pb	17 50 45.1	+0.2
SERG	Sergoula	1.19	105	P	Pb	17 50 45.1	+0.2
SERG				AML	AML	17 51 04.7	
	comp=N,1872µm,0.2s						
SERG				AML	AML	17 51 04.9	
	comp=E,1630µm,0.2s						
LAKA	Lakka	1.19	114	P	Pb	17 50 44.9	0.0
TRIZ	Trizonia	1.22	107	P	Pb	17 50 45.5	+0.2
TRIZ	Trizonia	1.22	107	P	Pb	17 50 45.5	+0.2
MAKR	Makrakomi, Fth	1.24	76	P	Pg	17 50 46.8	+0.3
AGG	Agios Georgios	1.39	77	P	Pb	17 50 48.6	+0.3
AGG	Agios Georgios	1.39	77	P	Pg	17 50 49.2	-0.2
OHR	Ohrid	2.39	4	*i* Pn	Pb	17 51 05.3	-0.1
VAY	Valandovo	3.00	30	*i* Pn	Pb	17 51 13.9	-1.9
STIP	Stip	3.21	22	*i* Pn	Pb	17 51 17.2	-2.0
DRME	Dracevica, Mon	3.62	343	*e*Pn	Pn	17 51 19.5	+1.4
PDG	Podgorica	3.84	345	*e*Pn	Pn	17 51 22.7	+1.6
HCY	Herceg Novi	4.04	337	*e*Pn	Pn	17 51 24.5	+0.5
TREB	Trebinje	4.33	338	*e*Pn	Pn	17 51 28.5	+0.6
DBRK	Dubrovnik	4.35	336	*e*Pn	Pn	17 51 29.4	+1.2
BRY	Bratogost	4.45	340	*e*Pn	Pn	17 51 27.9	-1.8
UPM	Unac-Piva	4.65	345	*e*Pn	Pn	17 51 34.0	+1.5
STON	Ston	4.69	333	*e*Pn	Pn	17 51 32.5	-0.2
STON	Ston	4.69	333	*e*Pn	Pn	17 51 33.3	+0.6
LSTV	Lastovo	4.92	326	*e*Pn	Pn	17 51 36.3	+0.4
LSTV				Sn	Sn	17 52 29.9	-2.6
RUDO	Rudo	4.97	350	*e*Pn	Pn	17 51 37.4	+0.7
BBLS	Lazići	5.21	351	*e*Pn	Pb	17 51 47.3	-6.2
DIVS	Divibare	5.39	355	*e*Pn	Pn	17 51 42.5	0.0
RICI	Ricice	5.43	332	*e*Pn	Pn	17 51 43.3	+0.2
HVAR	Hvar	5.44	326	*e*Pn	Pn	17 51 44.2	+1.1
HAPS	Han Pijesak,BI	5.50	348	*e*Pn	Pn	17 51 44.6	+0.6
ZIRJ	Zirje	6.18	324	*e*Pn	Pn	17 51 53.9	+0.7
MORI	Morici	6.32	326	*e*Pn	Pn	17 51 55.6	+0.5
DUGI	Dugi Otok	6.71	323	*e*Pn	Pn	17 52 02.1	+1.6
UDBI	Udbina	6.83	330	*e*Pn	Pn	17 52 04.1	+1.8
MORH	Mrgy, Hungar	7.62	350	*e*Pn	Pn	17 52 13.5	+0.5
CRES	Cresnjev	8.05	333	*e*Pn	Pn	17 52 18.5	-0.4
CEY	Cerknica	8.37	329	*e*Pn	Pn	17 52 24.0	+0.7
GERES	GERESS Array B	11.27	336	Pn	Pn	17 53 03.1	0.0
	comp=E,0.1nm,0.3s,baz=157,slow=13,SNR=4.5						
HFS	Hagfors	21.87	351	P	P	17 55 14.0	-0.5
	comp=E,3.7nm,1.0s,baz=172,slow=11,SNR=1.4						
FINES	FINESS Array B	23.00	7	P	P	17 55 26.1	-0.4
	comp=E,5.5nm,1.0s,baz=172,slow=11,SNR=4.6						
ZALV	Zalesovo Beam	45.28	49	P	P	17 58 39.9	+0.5
	comp=E,0.5nm,0.4s,baz=265,slow=8.2,SNR=3.2						

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*THE **25** 17:51:26.4, 38.°72N×20.°60E, h12km, ML3.7/5, Error ellipse: s-maj=0.9km s-min=0.4km az=294.0*
*ATH **25** 17:51:26.5, 38.°72N×20.°62E, h12km, ML3.4/9, Error ellipse: s-maj=1.8km s-min=0.8km az=296.0*
*IDC **25** 17:51:26.5±10.0, 39.°03N×20.°80E, h0km, mb3.7/4, mb1 3.7/5, mb1mx3.4/45, mbtmp3.7/5, ML3.5/1, Error ellipse: s-maj=195.0km s-min=30.3km az=33.0*
ISC 25 17:51:25.9±0.7**, 38.°72N**±0.°02×**20.°60E**±0.°04**, h14**km±4km**, n59, σ0ˢ46**/70**, mb3.7**/4**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRAG	Dragano-Lefkad	0.04	212	P	Pg	17 51 28.6	0.0
DRAG				S	Sg	17 51 30.2	-0.2
	180µm,0.3s						
DRAG	Dragano-Lefkad	0.04	212	P	Pg	17 51 28.6	0.0
DRAG				S	Sg	17 51 30.7	+0.3
NYDR	Nydri-Lefkada	0.08	93	P	Pg	17 51 28.8	0.0
NYDR				S	Sg	17 51 30.6	-0.2
	144µm,0.2s						
NYDR	Nydri-Lefkada	0.08	93	P	Pg	17 51 28.8	0.0
NYDR				S	Sg	17 51 30.6	-0.2
LKD2	Lefkada island	0.08	32	P	Pg	17 51 29.0	0.0
LKD2				S	Sg	17 51 30.9	-0.1
	46µm,0.2s						
LKD2	Lefkada island	0.08	32	P	Pg	17 51 29.0	0.0
LKD2				S	Sg	17 51 30.9	-0.1
LKD2				AML	AML	17 51 31.1	
	comp=N,92033µm,0.2s						
LKD2				AML	AML	17 51 31.1	
	comp=E,89030µm,0.2s						
EVGI	Lefkada island	0.10	156	P	Pg	17 51 29.4	+0.2
EVGI	Lefkada island	0.10	156	P	Pg	17 51 29.4	+0.2
TSLK	Tsoukalades, L	0.12	21	P	Pg	17 51 29.5	+0.2
TSLK				S	Sg	17 51 32.0	+0.4
	comp=E,40µm,0.3s						
TSLK	Tsoukalades, L	0.12	21	P	Pg	17 51 29.5	+0.2
TSLK				S	Sg	17 51 32.0	+0.4
FSK	Fiskardo	0.26	187	P	Pb	17 51 32.2	-0.1
FSK				S	Sb	17 51 36.5	-0.2
FSK				AML	AML	17 51 37.0	
	comp=N,27627µm,0.3s						
FSK				AML	AML	17 51 38.3	
	comp=E,44385µm,0.2s						
KEF4	Livadi, Kephal	0.48	197	P	Pg	17 51 35.7	+0.3
KEF4	Livadi, Kephal	0.48	197	P	Pg	17 51 35.7	+0.3
DMLN	Damoulianata-K	0.51	201	P	Pg	17 51 36.2	+0.2
DMLN	Damoulianata-K	0.51	201	P	Pg	17 51 36.2	+0.2
LXRA	Lixouri, Kepha	0.53	194	P	Pg	17 51 36.7	+0.3
VLS	Valsamata	0.54	181	P	Pg	17 51 36.6	0.0
VLS				S	Sb	17 51 44.8	+0.1
	comp=E,3µm,0.3s						
VLS	Valsamata	0.54	181	P	Pg	17 51 36.6	0.0
VLS				S	Sb	17 51 45.1	+0.4
VLS				AML	AML	17 51 47.1	
	comp=E,6036µm,0.2s						
VLS				AML	AML	17 51 47.4	
	comp=N,7592µm,0.4s						
ARGA	Argostoli. Kep	0.55	190	P	Pb	17 51 37.9	+0.7
KEF3	Kipouria, Keph	0.55	201	P	Pg	17 51 36.4	-0.4
KEF3	Kipouria, Keph	0.55	201	P	Pg	17 51 36.4	-0.4
PSDA	Pessada-Kefalo	0.60	181	P	Pg	17 51 37.8	+0.1
PSDA	Pessada-Kefalo	0.60	181	P	Pg	17 51 37.8	+0.1
PVO	Paravola	0.73	98	P	Pb	17 51 40.7	+0.3
PVO	Paravola	0.73	98	P	Pb	17 51 40.9	+0.5
PVO				AML	AML	17 51 54.3	
	comp=E,10811µm,0.3s						
PVO				AML	AML	17 51 55.5	
	comp=N,8019µm,0.2s						
IGT	Igoumenitsa	0.84	346	P	Pg	17 51 42.1	-0.1
IGT	Igoumenitsa	0.84	346	P	Pg	17 51 42.1	-0.1
VTN	Vitineika	0.92	150	P	Pg	17 51 44.1	+0.3
VTN	Vitineika	0.92	150	P	Pg	17 51 44.1	+0.3
RLS	Riolos of Patr	0.95	134	P	Pb	17 51 44.1	0.0
RLS	Riolos of Patr	0.95	134	P	Pb	17 51 43.9	-0.1
RLS				AML	AML	17 52 05.2	
	comp=E,2396µm,0.4s						
RLS				AML	AML	17 52 06.0	
	comp=N,1985µm,0.4s						
JAN	Janina	0.96	12	P	Pn	17 51 44.9	0.0
LTHK	Lithakia	1.02	170	P	Pb	17 51 44.6	-0.7
ANX	Ano Chora	1.04	96	P	Pb	17 51 45.6	-0.1
ANX	Ano Chora	1.04	96	P	Pb	17 51 45.6	-0.1
ANX				AML	AML	17 52 04.1	
	comp=N,5060µm,0.3s						
ANX				AML	AML	17 52 04.6	
	comp=E,3145µm,0.3s						
EFP	Efpalio	1.06	105	P	Pb	17 51 45.9	-0.1
EFP	Efpalio	1.06	105	P	Pb	17 51 45.6	-0.4
EFP				AML	AML	17 52 06.2	
	comp=E,4315µm,0.1s						
EFP				AML	AML	17 52 06.5	
	comp=N,5182µm,0.2s						
DRO	Drossia	1.16	131	P	Pb	17 51 47.5	-0.2
DRO	Drossia	1.16	131	P	Pb	17 51 47.5	-0.2
DRO				AML	AML	17 52 11.8	
	comp=E,3554µm,0.3s						
DRO				AML	AML	17 52 12.3	
	comp=N,3589µm,0.5s						
KEK	Kerkira	1.17	328	P	Pg	17 51 48.9	+0.4
SERG	Sergoula	1.18	104	P	Pn	17 51 47.9	-0.1
SERG	Sergoula	1.18	104	P	Pn	17 51 47.9	-0.1
SERG				AML	AML	17 52 08.7	
	comp=N,5111µm,0.3s						
SERG				AML	AML	17 52 09.9	
	comp=E,3924µm,0.2s						
LAKA	Lakka	1.18	113	P	Pn	17 51 47.9	-0.1
TRIZ	Trizonia	1.21	106	P	Pb	17 51 48.4	-0.1
TRIZ	Trizonia	1.21	106	P	Pb	17 51 48.4	-0.1
MAKR	Makrakomi, Fth	1.23	76	P	Pb	17 51 49.1	+0.2
AGG	Agios Georgios	1.38	77	P	Pb	17 51 51.9	+0.3
RICI	Ricice	5.44	332	*e*Pn	Pn	17 52 44.8	-1.8
RICI	Ricice	5.44	332	Sn	Pn	17 52 44.7	-1.9
HVAR	Hvar	5.45	326	*e*Pn	Pn	17 52 46.5	-0.2
ZIRJ	Zirje	6.19	324	*e*Pn	Pn	17 52 56.7	-0.1
MORI	Morici	6.33	326	*e*Pn	Pn	17 52 59.0	+0.3
DUGI	Dugi Otok	6.72	323	*e*Pn	Pn	17 53 05.2	+1.1
NVLJ	Novalja	7.25	326	*e*Pn	Pn	17 53 12.0	+0.7
GERES	GERESS Array B	11.28	336	Pn	Pn	17 54 07.0	+0.3
	comp=E,0.1nm,0.3s,baz=154,slow=14,SNR=4.8						
HFS	Hagfors	21.88	351	P	P	17 56 18.0	0.0
	comp=E,2.8nm,0.8s,baz=171,slow=10,SNR=4.7						
FINES	FINESS Array B	23.00	7	P	P	17 56 28.9	-1.1
	comp=E,3.7nm,0.9s,baz=165,slow=11,SNR=5.1						
MKAR	Makanchi Array	44.97	59	P	P	17 59 41.0	+0.6
	comp=E,0.7nm,1.0s,baz=275,slow=7.5,SNR=2.0						
ZALV	Zalesovo Beam	45.28	49	P	P	17 59 42.8	0.0
	comp=E,0.5nm,0.5s,baz=278,slow=7.6,SNR=2.7						

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*NEIC **25** 17:57:45.8±1.7, 35.°88N±0.°02×96.°90W±0.°02, h5km±2km, Error ellipse: s-maj=4.1km s-min=3.0km az=135.0*
*TUL **25** 17:57:45.8±1.5, 35.°86N±0.°02×96.°87W±0.°02, h5km±6km, ML3.0, mb_Lg2.6/28(NEIC), Error ellipse: s-maj=3.5km s-min=1.6km az=131.0*
*ANF **25** 17:57:46.1±0.2, 35.°91N×96.°89W, h5km, ML2.9/10, Error ellipse: s-maj=2.8km s-min=2.1km az=160.0*
ISC 25 17:57:45.9±0.9**, 35.°89N**±0.°03×**96.°89W**±0.°02**, h11**km±6km**, n53, σ0ˢ72**/55**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK031	S. Brethren Rd	0.08	31	Pg	Pg	17 57 48.1	-0.3
OK031				Sg	Sg	17 57 49.8	-0.4
OK030	Cody Creek RV	0.09	64		Pg	17 57 48.3	-0.3
OK030				Sg	Sg	17 57 50.0	-0.5
OK033	Mehan	0.16	345		Pg	17 57 49.8	+0.2
OK033				Sg	Sg	17 57 52.6	+0.4
OK034	N. Norfolk Rd.	0.19	49		Pg	17 57 50.1	0.0
OK034				Sg	Sg	17 57 53.1	+0.3
QUOK	Quay	0.32	27	Pg	Pg	17 57 52.6	+0.2
OK029	Liberty Lake	0.47	259	Pg	Pg	17 57 55.3	+0.1
OK029				Sg	Sg	17 58 01.9	+0.5
OK025	Westminster Rd	0.48	230	Pg	Pg	17 57 55.2	-0.1
OK025				Sg	Sg	17 58 02.1	+0.4
BCOK	Bluff Creek, N	0.63	249	Pg	Pg	17 57 58.0	-0.2
OKCFA	Oklahoma City	0.66	224		Pg	17 57 58.2	-0.5
OKCFA	Oklahoma City	0.66	224	S	Sg	17 58 07.4	+0.1
	baz=46						
OKCSW	OKLAHOMA CITY	0.66	223	Pg	Pg	17 57 57.3	-1.4
W35A	Tecumseh	0.73	179	IAmb_Lg		17 58 09.9	
	comp=Z,56nm,0.7s						
FNO	Franklin	0.76	214	Pg	Pg	17 57 59.7	-0.8
TUL1	Leonard	0.89	88	Pg	Pg	17 58 02.4	-0.7
TUL1	Leonard	0.89	88	P	Pg	17 58 02.4	-0.7
	baz=267,SNR=69						
TUL1				S	Sg	17 58 14.3	-0.4
	baz=267						
BLOK	Blackwell	0.91	343	Pg	Pg	17 58 02.6	-0.9
T35A	Sooner Cattle	1.07	16	Pg	Pg	17 58 06.2	-0.4
T35B	Sooner Cattle	1.07	16	P	Pg	17 58 06.1	-0.5
	baz=196,SNR=115						
T35B				S	Sg	17 58 20.9	+0.4
	baz=196						
CROK	Carrier	1.08	305	Pg	Pg	17 58 06.6	-0.1
GC02	Grant County #	1.24	321	Pn	Pg	17 58 08.7	-1.1
OK032	Salt Plains WL	1.41	311	Pn	Pn	17 58 11.2	-0.3
X34A	Smith Ranch, M	1.50	211		Pn	17 58 12.7	-0.1
KAN06	Argonia West S	1.57	330		Pg	17 58 15.8	-0.2
U32A	Winter Ranch,	1.78	287	Pn	Pb	17 58 18.2	-0.3
U32A				IAmb_Lg		17 58 47.9	
	comp=Z,25nm,0.7s						
U32A	Winter Ranch,	1.78	287	P	Pb	17 58 18.3	-0.3
	baz=106						
U32A				Sb	Sg	17 58 42.9	-0.3
	baz=106						
X37A	Clayton	1.79	136	Pn	Pn	17 58 17.7	+0.9
X37A	Clayton	1.79	136	P	Pn	17 58 17.8	+0.9
	baz=316,SNR=13						
X37A				S	Sg	17 58 42.8	-0.8
	baz=316						
LOOK	Love County	1.91	187	Pn	Pn	17 58 18.6	+0.2
LOOK				IAmb_Lg		17 58 50.0	
	comp=Z,19nm,0.8s						
WMOK	Wichita Mounta	1.93	234		Pn	17 58 18.9	+0.2
WMOK	Wichita Mounta	1.93	234	P	Pn	17 58 19.9	+1.2
	baz=54,SNR=15						
WMOK				S	Sb	17 58 46.0	+0.8
	baz=54						
U38A	Gravette	2.10	74	Pn	Pn	17 58 21.2	+0.2
U38A	Gravette	2.10	74	P	Pn	17 58 22.5	+1.5
	baz=255,SNR=8.6						
W39A	Magazine	2.62	104		Pn	17 58 28.8	+0.6
W39A	Magazine	2.62	104	P	Pn	17 58 29.7	+1.5
	baz=286,SNR=13						
MIAR	Mount Ida	3.02	115	Pn	Pn	17 58 34.3	+0.5
MIAR	Mount Ida	3.02	115	P	Pn	17 58 34.9	+1.2
	baz=297,SNR=12						
KSU1	Kansas State U	3.21	4	Pn	Pn	17 58 36.6	+0.3
U40A	Yellville	3.30	81	Pn	Pn	17 58 37.2	-0.3
X40A	Basin Creek Fa	3.60	112		Pn	17 58 42.2	+0.6
X40A				IAmb_Lg		17 59 46.9	
	comp=Z,10nm,0.7s						
X40A	Basin Creek Fa	3.60	112	P	Pn	17 58 43.2	+1.5
	baz=294,SNR=5.5						
X40A				P	Pn	17 58 43.2	+1.5
	baz=294,SNR=5.5						
WHAR	Wooly Hollow	3.79	98	Pn	Pn	17 58 44.5	+0.1
W41B	Gary Mavity, V	3.85	99	P	Pn	17 58 46.0	+0.9
	baz=282,SNR=6.0						
FCAR	Ozark Folk Cen	3.87	89		Pn	17 58 44.6	-0.7
AMTX	Amarillo	4.04	257	IAmb_Lg		17 59 58.2	
	comp=Z,19nm,0.9s						
R40A	Maddies Statio	4.40	56	IAmb_Lg		18 00 02.9	
	comp=Z,12nm,0.9s						
P38A	Dawn	4.58	34	Pn	Pn	17 58 55.1	0.0
P38A				IAmb_Lg		18 00 20.7	
	comp=Z,17nm,1.0s						
LCAR	Lake Charles	4.65	86	IAmb_Lg		18 00 14.6	
	comp=Z,8.0nm,0.8s						
CCM	Cathedral Cave	5.01	63	IAmb_Lg		18 00 35.4	
	comp=Z,11nm,0.7s						
N35A	Tabor	5.06	11	IAmb_Lg		18 00 35.7	
	comp=Z,14nm,0.7s						
P40A	Paris	5.29	45	IAmb_Lg		18 00 33.6	
	comp=Z,15nm,0.8s						
PBMO	Poplar Bluff	5.29	78	IAmb_Lg		18 00 44.4	
	comp=Z,16nm,0.8s						
FVM	French Village	5.58	66	IAmb_Lg		18 00 51.6	
	comp=Z,9.0nm,0.8s						
JCT	Junction City	5.92	205	IAmb_Lg		18 01 00.8	
	comp=Z,12nm,0.9s						

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*IDC **25** 17:58:13.1±2.3, 14.°45N×54.°84E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.5/60, mbtmp3.7/6, Error ellipse: s-maj=62.2km s-min=35.5km az=82.0*
ISC 25 17:58:14.9±2.4**, 14.°5N**±0.°3×**54.°8E**±0.°4**, h14**km**, n10, σ0ˢ82**/7**, mb3.8**/6**, Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	39.60	30	P	P	18 05 46.1	+0.1
	0.4nm,0.6s,baz=215,slow=9.5,SNR=13						
CMAR	Chiang Mai Arr	42.48	78	P	P	18 06 10.2	+0.2
	1.4nm,0.8s,baz=279,slow=9.3,SNR=11						
ZALV	Zalesovo Beam	45.91	24	P	P	18 06 35.9	-1.2
	1.2nm,0.7s,baz=223,slow=8.3,SNR=6.9						
SONM	Songino Array	53.95	41	P	P	18 07 39.0	+0.6
	0.3nm,0.5s,baz=252,slow=7.4,SNR=2.4						
H01W3	Cape Leeuwin H	74.66	133	T	T	19 31 48.6	
	baz=301,slow=75,SNR=20						
H01W2	Cape Leeuwin H	74.66	133	T	T	19 31 49.1	
	baz=301,slow=75,SNR=17						
H01W1	Cape Leeuwin H	74.67	133	T	T	19 31 49.9	
	baz=301,slow=75,SNR=18						
WRA	Warramunga Arr	85.36	112	P	P	18 10 52.2	-0.2
	0.5nm,0.9s,baz=304,slow=3.9,SNR=2.6						
ASAR	Alice Springs	86.08	116	P	P	18 10 55.5	-0.5
	0.5nm,0.8s,baz=292,slow=5.2,SNR=6.3						
NVAR	Mina Array Bea	127.00	353	PKP	PKiKP	18 17 20.6	+0.8
	0.2nm,0.5s,baz=180,slow=0.8,SNR=2.4						

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*IDC **25** 17:58:38.5±0.8, 14.°68N×54.°97E, h0km, mb3.9/13, mb1 4.0/13, mb1mx3.8/60, mbtmp3.9/13, MS3.1/3, Ms1 3.1/3, ms1mx2.7/46, Error ellipse: s-maj=24.0km s-min=18.2km az=133.0*
*NEIC **25** 17:58:40.5±1.7, 14.°56N±0.°08×55.°0E±0.°1, h10km±1km, mb4.0/8, Error ellipse: s-maj=20.0km s-min=12.4km az=292.0*
ISC 25 17:58:39.9±0.6**, 14.°55N**±0.°09×**54.°9E**±0.°1**, h14**km**, n30, σ1ˢ28**/23**, mb3.9**/15**, Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOCY	Socotra	2.51	201		Pn	17 59 17.0	-3.4
SOCY				Sn	Sn	17 59 42.3	-8.6
ATD	Arta Tunnel	12.13	257	LR	LR	18 05 02.6	
	comp=Z,117nm,20.9s,baz=30,slow=31						
RAYN	Ar Rayn	12.60	317		Pn	18 01 37.8	-1.0
KMBO	Kilima Mbogo	23.41	230	P	P	18 03 51.1	+2.1
	1.4nm,0.7s,baz=41,slow=12,SNR=4.2						
KMBO	Kilima Mbogo	23.41	230	IAmb	IAmb	18 03 53.5	
	comp=Z,2.6nm,1.0s						
PALK	Pallekele	26.32	103	LR	LR	18 12 47.0	
	comp=Z,38nm,19.9s,baz=32,slow=32						
BRTR	Keskin Array B	31.26	327	LR	LR	18 18 25.2	
	comp=Z,30nm,20.6s,baz=122,slow=38						
ABKAR	Akbulak array	34.86	6	P	P	18 05 30.5	-0.1
MK31	Makanchi Array	39.45	30	P	P	18 06 10.1	+0.4
MK31				IAmb	IAmb	18 06 16.1	
	comp=Z,2.1nm,1.0s						
MKAR	Makanchi Array	39.45	30	P	P	18 06 10.0	+0.3
	comp=Z,0.8nm,0.6s,baz=211,slow=8.7,SNR=6.4						
MKAR	Makanchi Array	39.45	30	P	P	18 06 10.3	+0.6
KURBB	Kurchatov Arra	40.75	23	P	P	18 06 20.3	-0.1
	comp=Z,0.4nm,0.2s,baz=222,slow=8.2,SNR=1.3						
KURK	Kurchatov	40.86	23	P	P	18 06 20.3	-0.9
KURK	Kurchatov	40.86	23	IAmb	IAmb	18 06 22.6	
	comp=Z,1.7nm,0.9s						
AKASG	Malin Array Be	41.62	335	P	P	18 06 26.9	-0.6
	comp=Z,0.1nm,0.2s,baz=134,slow=7.8,SNR=2.1						
CM31	Chiang Mai Arr	42.32	78	P	P	18 06 33.5	-0.2
CM31				IAmb	IAmb	18 06 40.3	
	comp=Z,5.1nm,1.1s						
CMAR	Chiang Mai Arr	42.32	78	P	P	18 06 34.4	+0.7
	comp=Z,2.1nm,0.7s,baz=277,slow=9.4,SNR=13						
CMAR	Chiang Mai Arr	42.32	78	P	P	18 06 33.6	-0.1
ZALV	Zalesovo Beam	45.77	24	P	P	18 06 60.0	-0.9
	comp=Z,1.4nm,0.7s,baz=231,slow=8.2,SNR=6.9						
FINES	FINESS Array B	51.21	343	P	P	18 07 41.8	-0.8
	comp=Z,3.4nm,0.8s,baz=131,slow=8.6,SNR=4.0						
TORD	Torodi Ar. Bea	51.59	275	P	P	18 07 47.7	+1.5
	comp=Z,0.9nm,0.8s,baz=95,slow=6.6,SNR=4.2						
TORD	Torodi Ar. Bea	51.59	275	IAmb	IAmb	18 08 01.0	
	comp=Z,2.8nm,1.4s						
BOSA	Boshof	51.61	214	P	P	18 07 48.7	+2.4
	comp=Z,1.7nm,0.8s,baz=48,slow=5.9,SNR=4.7						
SONM	Songino Array	53.79	41	P	P	18 08 02.8	+0.6
	comp=Z,1.5nm,1.0s,baz=250,slow=7.2,SNR=6.3						
SONM	Songino Array	53.79	41	IAmb	IAmb	18 08 04.2	
	comp=Z,5.0nm,1.4s						
ARCES	ARCESS Array B	57.97	348	P	P	18 08 30.9	-0.7
	comp=Z,2.5nm,0.8s,baz=161,slow=5.7,SNR=4.4						
WRA	Warramunga Arr	85.27	112	P	P	18 11 16.4	-0.5
	comp=Z,0.6nm,0.7s,baz=297,slow=3.8,SNR=3.3						
ASAR	Alice Springs	85.99	116	P	P	18 11 20.1	-0.4
	comp=Z,0.6nm,0.8s,baz=288,slow=4.8,SNR=4.5						
NVAR	Mina Array Bea	126.92	353	PKP	PKiKP	18 17 45.8	+1.2
	comp=Z,0.9nm,0.8s,baz=304,slow=0.5,SNR=5.3						
NVAR	Mina Array Bea	126.92	353	PKPdf	PKiKP	18 17 45.6	+1.0

IDC 25 18:06:25.9±2.2**, 14.°53N**×**54.°97E, h0**km**, mb3.7**/5**, mb1 3.7**/5**, mb1mx3.4**/78**, mbtmp3.7**/5**, Error ellipse: s-maj=62.6km s-min=31.2km az=163.0, Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	39.44	30	P	P	18 13 58.7	+0.9
	0.4nm,0.7s,baz=218,slow=8.2,SNR=3.6						
KURBB	Kurchatov Arra	40.75	23	P	P	18 14 08.1	-0.4
	0.6nm,0.2s,baz=230,slow=7.2,SNR=1.6						
CMAR	Chiang Mai Arr	42.27	78	P	P	18 14 21.4	-0.2
	0.5nm,0.5s,baz=270,slow=9.6,SNR=4.6						
ZALV	Zalesovo Beam	45.77	24	P	P	18 14 48.1	-0.9
	0.3nm,0.3s,baz=205,slow=6.4,SNR=3.6						
TORD	Torodi Ar. Bea	51.65	275	P	P	18 15 34.9	-0.1
	0.5nm,0.8s,baz=90,slow=8.9,SNR=4.1						
H01W3	Cape Leeuwin H	74.57	133	T	T	19 39 31.2	
	baz=301,slow=75,SNR=6.6						
H01W2	Cape Leeuwin H	74.57	133	T	T	19 39 38.6	
	baz=301,slow=75,SNR=6.0						
H01W1	Cape Leeuwin H	74.58	133	T	T	19 39 33.0	
	baz=301,slow=75,SNR=7.3						

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*IDC **25** 18:13:58.9±0.9, 51.°51N×16.°08E, h0km, mb1 3.5/5, mb1mx3.1/65, mbtmp3.4/5, ML2.7/5, Error ellipse: s-maj=14.8km s-min=8.8km az=114.0*
*PRU **25** 18:13:58.8±0.0, 51.°56N×16.°10E, h0km*
*VIE **25** 18:14:00.5, 51.°32N×16.°40E, h0km, ML2.9/2 49 km WNW of Wroclaw Suspected Mining induced.*
ISC 25 18:13:56.1±0.8**, 51.°65N**±0.°04×**16.°13E**±0.°02**, h0**km**, n35, σ1ˢ53**/69**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.81	173	*e*Pg	Pb	18 14 12.4	-0.6
KSP				*e*Sg	Sg	18 14 22.4	+0.3
CHVC	Chvalec	1.06	183	*e*PG	Pb	18 14 17.3	0.0
CHVC				*e*SG	Sg	18 14 30.1	0.0
	comp=Z,58nm,0.6s						
OSTC	Ostas	1.09	177	*e*PG	Pb	18 14 18.0	+0.2
OSTC				*e*SG	Sg	18 14 31.3	+0.2
	comp=Z,122nm,1.0s						
UPC	Upice	1.14	184	*e*PG	Pb	18 14 18.7	0.0
UPC				*e*SG	Sg	18 14 32.7	0.0
	comp=Z,83nm,0.6s						
DPC	Dobruska-Polom	1.30	175	*e*PG	Pg	18 14 21.3	+0.3
DPC				*e*SG	Sg	18 14 36.9	-1.0
	comp=Z,77nm,0.8s						
PVCC	Panska Ves	1.49	222	*e*PG	Pg	18 14 25.2	+0.6
PVCC				*e*SG	Sn	18 14 45.1	+0.8
	comp=Z,157nm,0.2s						
BRG	Berggiesshubel	1.58	241	Pg	Pg	18 14 27.4	+1.1
BRG				Sg	Sg	18 14 47.9	+1.1
BRG				Amp		18 14 50.3	
	comp=Z,61nm,0.5s						
KRLC	Kraliky	1.63	165	*e*PG	Pn	18 14 26.4	+0.4
KRLC				*e*SG	Sn	18 14 46.9	-0.8
	comp=Z,49nm,0.6s						
PRU	Pruhonice	1.94	212	*e*PG	Pg	18 14 33.0	-0.3
PRU				*e*SG	Sb	18 14 56.9	-0.2
	comp=Z,42nm,0.5s						
CLL	Collm	1.99	261	*i* Pn	Pn	18 14 31.6	+0.7
CLL				*e*Pg	Pg	18 14 34.0	-0.1
CLL				*i*		18 14 38.4	
CLL				*e*Sg	Sg	18 15 01.0	+1.2
	comp=Z,32nm,0.8s						
MORC	Moravsky Berou	2.08	154	*e*PN	Pn	18 14 32.2	0.0
MORC				*e*SG	Sb	18 15 00.5	-0.4
OKC	Ostrava-Krasne	2.22	144	*e*PG	Pg	18 14 38.6	+0.1
VRAC	Vranov	2.36	173	Pn	Pn	18 14 37.4	+1.4
	comp=Z,1.5nm,0.3s,baz=350,slow=16,SNR=6.7						
VRAC				Lg	Lg	18 15 09.7	
	comp=Z,3.2nm,0.3s,baz=270,slow=20,SNR=7.6						
VRAC	Vranov	2.36	173	*e*PN	Pn	18 14 37.4	+1.4

VRAC				eSG	Sb	18 15 09.2	+0.1
TREC	Trest	2.39	190	eSG	Sg	18 15 11.8	-1.0
KRUC	Moravsky	2.59	176	ePN	Pn	18 14 40.3	+1.1
KRUC				eSG	Sb	18 15 16.9	+1.1
OJC	Ojcow	2.72	120	ePg	Pg	18 14 48.4	+0.2
OJC				eSg	Sg	18 15 24.4	+0.9
NKC	Novy Kostel	2.73	240	ePN	Pn	18 14 42.5	+1.4
NKC				ePG	Pg	18 14 48.9	+0.6
NKC				eSG	Sg	18 15 25.1	+1.5
	comp=Z,51nm,0.6s						
JAVC	Velka Javorina	2.96	160	ePN	Pn	18 14 45.7	+1.4
KHC	Kasperske Hory	3.00	214	ePN	Pn	18 14 45.6	+0.7
KHC				ePG	Pb	18 14 51.7	+1.3
KHC				eSN	Sn	18 15 20.8	-0.8
KHC				eSG	Sg	18 15 31.5	-1.0
	comp=Z,17nm,0.5s						
CKRC	Cesky Krumlov	3.06	203	ePN	Pn	18 14 47.0	+1.3
CKRC				ePG	Pb	18 14 53.1	+1.7
CKRC				eSG	Sg	18 15 32.6	-1.8
	comp=Z,23nm,0.7s						
GERES	GERESS Array B	3.21	210	Pn	Pn	18 14 48.2	+0.4
	comp=Z,1.0nm,0.3s,baz=29,slow=13,SNR=23						
GERES				Pg	Pb	18 14 55.0	+1.1
	comp=Z,2.7nm,0.3s,baz=33,slow=17,SNR=20						
GERES				Lg	Lg	18 15 36.8	
	comp=Z,3.8nm,0.3s,baz=33,slow=34,SNR=12						
SMOL	Smolenice	3.25	165	ePG	Pg	18 14 58.7	+0.5
SMOL				eSG	Sg	18 15 42.3	+2.0
LANS	Liptovska Anna	3.29	138	ePG	Pg	18 14 58.8	-0.2
LANS				eSG	Sg	18 15 41.1	-0.5
MODS	Modra-Piesok	3.36	167	ePG	Pg	18 15 00.7	+0.3
MODS				eSG	Sg	18 15 45.0	+1.1
NIE	Niedzica	3.47	128	ePg	Pg	18 15 03.5	+1.0
NIE				eSg	Sg	18 15 50.0	+2.5
CONA	Conrad Observa	3.73	183	i Pn	Pn	18 14 56.5	+1.6
	comp=Z,2.3nm,0.5s						
CONA				ePg	Pg	18 15 07.6	+0.2
	comp=Z,8.3nm,0.6s						
CONA				eSn	Sb	18 15 44.5	-4.0
	comp=Z,6.3nm,0.5s						
CONA				eSg	Sg	18 15 53.9	-1.8
	comp=Z,16nm,0.5s						
MOA	Molln	3.99	198	ePn	Pn	18 14 59.3	+0.9
	comp=Z,8.6nm,0.5s						
MOA				eSg	Sg	18 16 03.7	-0.4
	comp=Z,15nm,0.5s						
CRVS	Cervenica-Dubn	4.38	127	ePG	Pg	18 15 22.2	+2.2
CRVS				eSG	Sg	18 16 19.6	+2.8
ARSA	Arzberg	4.42	185	i Pn	Pn	18 15 07.3	+3.0
	comp=Z,2.1nm,0.3s						
ARSA				eSg	Sg	18 16 14.8	-3.2
	comp=Z,15nm,0.9s						
KBA	Koelnbreinsper	4.92	203	Sg	Sg	18 16 33.8	-0.2
	comp=Z,11nm,0.6s						
WTTA	Wattenberg	5.28	216	Sg	Sg	18 16 46.6	+1.2
	comp=Z,12nm,0.7s						
AKASG	Malin Array Be	8.28	91	Pn	Pn	18 15 57.3	-0.1
	comp=Z,0.8nm,0.3s,baz=276,slow=12,SNR=4.6						
HFS	Hagfors	8.62	352	Pn	Pn	18 16 03.5	+1.6
	comp=Z,0.1nm,0.3s,baz=167,slow=13,SNR=2.1						
FINES	FINESS Array B	11.23	25	Pn	Pn	18 16 37.7	+0.1
	comp=Z,0.1nm,0.3s,baz=204,slow=12,SNR=1.2						
FINES				Sn	Sn	18 18 36.9	-6.9
	comp=Z,0.1nm,0.3s,baz=228,slow=20,SNR=1.2						

IDC ***25*** *18:17:53.7±0.6, 45°.90N×154°.24E, h0^{km}, mb4.2/34, mb1 4.4/40, mb1mx4.3/65, mbtmp4.2/40, ML3.6/6, MS3.0/8, Ms1 3.0/8, ms1mx2.8/39, Error ellipse: s-maj=14.8km s-min=11.7km az=149.0*

JMA ***25*** *18:17:54.3±0.7, 46°.30N×154°.20E, h30^{km}, M4.6*

MOS ***25*** *18:17:55.2±1.1, 45°.98N×154°.23E, h20^{km}, mb4.8/20, Error ellipse: s-maj=7.7km s-min=5.2km az=106.1*

BJI ***25*** *18:17:57.8±0.0, 46°.21N×154°.06E, h28^{km}, mB5.0/20, mb4.6/37, Ms4.7/5, Ms7 4.5/5*

NEIC ***25*** *18:17:58.1±2.3, 46°.1N±0°.1×154°.2E±0°.1, h23^{km}±5^{km}, mb4.6/52, Error ellipse: s-maj=17.1km s-min=10.1km az=140.0*

SKHL ***25*** *18:17:58.1±0.0, 46°.00N×154°.10E, h39^{km}±4^{km}, mb4.6/6*

ISC 25 18:17:57.1±0.5**, 46°.00N**±0°.06×**154°.12E**±0°.06**, h20**^{km}**, n254,** σ**1**^{s}**.63**/253**, mb4.6**/91**, MS3.3**/5**, 26C-19D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	4.46	262	c iP	Pn	18 19 03.7	+0.2
KUR				eS	Sn	18 19 53.4	-1.3
KUR				pmax	pmax		
	comp=Z,282nm,0.4s						
KUR				pmax	pmax		
	comp=N,62nm,0.3s						
KUR				pmax	pmax		
	comp=E,39nm,0.4s						
KUR				smax	smax		
	comp=N,227nm,0.3s						
KUR				smax	smax		
	comp=E,183nm,0.5s						
KUR	Kuril'sk	4.46	262	eP	Pn	18 19 04.0	+0.5
KUR				AMB	AMB	18 19 06.4	
	comp=E,30nm,0.8s						
KUR				eS	Sn	18 19 53.4	-1.3
KUR				A	A	18 20 01.6	
	comp=E,230nm,0.4s						
KUR				A	A	18 20 01.6	
	comp=E,180nm,0.4s						
SKR	Severo-Kuril's	4.87	15	eP	Pn	18 19 07.7	-1.5
SKR				eS	Sn	18 19 59.6	-5.3
SKR				smax	smax		
	comp=E,396nm,0.6s						
SKR				smax	smax		
	comp=N,636nm,0.7s						
SKR				MLR	MLR		
	comp=Z,900nm,11.0s						
SKR	Severo-Kuril's	4.87	15	eP	Pn	18 19 08.9	-0.3
SKR				AMB	AMB	18 19 09.7	
	comp=Z,90nm,0.8s						
SKR				eS	Sn	18 20 02.0	-2.9
SKR				A	A	18 20 05.5	
	comp=Z,200nm,0.3s						
SKR				A	A	18 20 05.5	
	comp=Z,220nm,0.3s						
PAU	Pauzhetka	5.75	17	eP	Pn	18 19 19.9	-1.4
PAU				AMB	AMB	18 19 20.9	
	comp=Z,81nm,0.4s						
PAU				eS	Sn	18 20 23.2	-3.5
PAU				A	A	18 20 25.5	
	comp=Z,124nm,0.4s						
PAU				A	A	18 20 25.5	
	comp=Z,142nm,0.4s						
YUK	Yuzh-Kuril'sk	6.18	254	⇓eP	Pn	18 19 28.6	+1.5
YUK	Yuzh-Kuril'sk	6.18	254	eP	Pn	18 19 28.6	+1.5
YUK				AMB	AMB	18 19 32.1	
	comp=Z,60nm,0.5s						
NEM2	Nemuro 2	6.53	249	P	Pn	18 19 29.6	-2.4
NEM2				eS	Sn	18 20 39.9	-5.9
JNK	Nakash	7.11	254	P	Pn	18 19 39.4	-0.6
JNK				eS	Sn	18 20 56.4	-3.8
JAK	Akkeshi	7.38	249	P	Pn	18 19 41.0	-2.6
JAK				eS	Sn	18 21 00.8	-5.9
PEA0B	Petropavlovsk-	7.49	17	P	Pn	18 19 44.2	-0.9
PEA0B	Petropavlovsk-	7.49	17	Pn	Pn	18 19 44.2	-0.9
PETK	Petropavlovsk-	7.49	17	Pn	Pn	18 19 43.0	-2.1
	comp=Z,3.5nm,0.3s,baz=178,slow=10,SNR=68						
PETK				Sn	Sn	18 21 04.5	-4.9
	baz=183,slow=20,SNR=1.4						
PETK				LR	LR	18 22 52.5	
	comp=Z,117nm,19.5s,baz=199,slow=40						
PETK	Petropavlovsk-	7.49	17	Pn	Pn	18 19 43.2	-1.9
JTKR	Abashiri--Toko	7.52	258	P	Pn	18 19 45.5	-0.1
PET	Petropavlovsk	7.62	21	⇑eP	Pn	18 19 44.6	-2.3
PET	Petropavlovsk	7.62	21	Pn	Pn	18 19 44.7	-2.2
JAR	Ashorobuto	7.86	254	P	Pn	18 19 49.8	-0.5
JAR				eS	Sn	18 21 15.5	-3.1
JMP	Maruseppu	7.88	259	P	Pn	18 19 51.3	+0.7
YSS	Yuzh-Sakhalins	7.91	281	deP	Pn	18 19 54.7	+3.8
YSS				pmax	pmax		
	comp=Z,93nm,2.5s						
YSS	Yuzh-Sakhalins	7.91	281	eP	Pn	18 19 51.9	+1.0
YSS				AMB	AMB	18 19 57.6	
	comp=Z,10.0nm,0.5s						
YSS	Yuzh-Sakhalins	7.91	281		Pn	18 19 52.7	+1.9
JKK2	Kamakawa 2	8.35	259	P	Pn	18 19 57.5	+0.6
JKA	Kamikawa-asahi	8.37	261	eP	Pn	18 19 58.4	+1.1
JKA	Kamikawa-asahi	8.37	261	Pn	Pn	18 19 58.4	+1.1
ASAJ	Asahikawa	8.38	261	Pn	Pn	18 19 57.9	+0.5
	comp=Z,2.2nm,0.3s,baz=97,slow=9.2,SNR=13						
ASAJ				LR	LR	18 23 25.6	
	comp=Z,68nm,21.3s,baz=90,slow=39						
ASAJ	Asahikawa	8.38	261	P	Pn	18 19 58.4	+1.1
JCH	Churui	8.43	250	P	Pn	18 19 56.2	-1.8
JFR	Furan	8.70	255	P	Pn	18 20 02.2	+0.3
ERM	Erimo	8.85	247	⇓eP	Pn	18 20 05.3	+1.5
ERM	Erimo	8.85	247	Pn	Pn	18 20 04.6	+0.8
JNBK	Urakawa-nobuka	8.98	250	P	Pn	18 20 03.6	-2.0
JBT2	Biratori 2	9.02	253	P	Pn	18 20 04.7	-1.4
TYV	Tymovskoe	9.04	307	eP	Pn	18 20 10.5	+4.1
TYV				eS	Sn	18 21 49.0	+1.5
TYV				pmax	pmax		
	comp=Z,11nm,0.9s						
TYV				pmax	pmax		
	comp=Z,300nm,2.5s						
TYV				smax	smax		
	comp=N,500nm,3.6s						
TYV				smax	smax		
	comp=N,13nm,1.4s						
TYV				smax	smax		
	comp=E,15nm,1.4s						
TYV	Tymovskoe	9.04	307	eP	Pn	18 20 09.4	+3.0
TYV				AMB	AMB	18 20 12.4	
	comp=E,30nm,0.6s						
TYV				eS	Sn	18 21 45.9	-1.6
TYV				A	A	18 21 48.9	
	comp=E,20nm,0.7s						
TYV				A	A	18 21 48.9	
	comp=E,20nm,0.7s						
JNB	Noboribetsu	10.03	254	P	Pn	18 20 19.3	-0.7
JNB				eS	Sn	18 22 05.9	-6.0
JKB	Kayabe	10.29	251	P	Pn	18 20 21.1	-2.5
JKB				eS	Sn	18 22 09.1	-9.2
JANG	Nango	10.78	243	P	Pn	18 20 26.1	-4.2
JANG				eS	Sn	18 22 18.6	-12
JTH	Tanohata	10.83	240	P	Pn	18 20 26.0	-4.9
JTH				eS	Sn	18 22 19.5	-12
JTM	Tenmabayashi	10.83	246	P	Pn	18 20 27.7	-3.3
JTM				eS	Sn	18 22 20.7	-11
OFUJ	Ofunato	11.49	237	P	Pn	18 20 35.9	-4.1
OFUJ				eS	Sn	18 22 35.4	-12
JIO	Ouri	12.09	236	eS	Sn	18 22 49.4	-13
MA2	Magadan	13.75	353	Pn	Pn	18 21 11.3	+0.6
	comp=E,0.9nm,0.3s,baz=172,slow=12,SNR=5.4						
MA2				LR	LR	18 25 59.5	
	comp=E,79nm,20.2s,baz=211,slow=35						
MJAR	Matsushiro Arr	15.22	237	Pn	Pn	18 21 28.8	-2.1
	comp=E,0.0nm,0.3s,baz=33,slow=13,SNR=4.2						
MJAR				LR	LR	18 28 17.4	
	comp=E,26nm,21.9s,baz=10.0,slow=41						
MJAR	Matsushiro Arr	15.22	237	P	Pn	18 21 28.8	-2.1
MJAR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MAJO	Matsushiro	15.22	237	P	P	18 21 36.7	+1.0
MAJO				pmax	pmax		
	comp=Z,22nm,1.0s						
MAJO	Matsushiro	15.22	237		P	18 21 36.7	+1.0
MAJO				IAmb	IAmb	18 21 37.6	
	comp=Z,22nm,0.9s						
MAT	Matsushiro	15.22	237	P	P	18 21 36.6	+0.9
KLR	Kul'dur	15.42	290	Pn	Pn	18 21 34.8	+1.4
	comp=Z,0.4nm,0.3s,baz=90,slow=12,SNR=6.2						
KLR				LR	LR	18 27 00.4	
	comp=Z,100nm,21.5s,baz=101,slow=35						
KLR	Kul'dur	15.42	290	⇑eP	P	18 21 36.2	-1.6
KLR	Kul'dur	15.42	290	eP	Pn	18 21 31.8	-1.5
USRK	Ussuriysk Ar.	15.73	271	Pn	Pn	18 21 36.3	-1.1
	baz=88,slow=12,SNR=16						
USA0B	Ussuriysk Arra	15.73	271	P	Pn	18 21 36.0	-1.4
USA0B				pmax	pmax		
	comp=Z,16nm,0.9s						
USA0B	Ussuriysk Arra	15.73	271	Pn	Pn	18 21 36.0	-1.4
SEY	Seymchan	17.00	357	P	P	18 21 54.5	-0.6
	comp=Z,0.2nm,0.3s,baz=155,slow=12,SNR=4.7						
SEY				LR	LR	18 28 48.1	
	comp=Z,43nm,19.2s,baz=157,slow=38						
ZEA	Zeya	18.89	304	eP	Pn	18 22 18.0	+1.3
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ZEA	Zeya	18.89	304	eP	Pn	18 22 18.0	+1.3
ZEA				AMB	AMB	18 22 23.5	
	comp=Z,10.0nm,0.9s						
CN2	Changchun	20.39	274	eP	P	18 22 29.3	-3.2
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KSRS	Korea Array	21.26	256	P	P	18 22 42.5	+0.4
	comp=Z,3.2nm,0.9s,baz=61,slow=8.2,SNR=5.4						
KSRS				LR	LR	18 32 41.2	
	comp=Z,28nm,18.8s,baz=60,slow=42						
YAK	Yakutsk	21.33	328	P	P	18 22 40.5	-2.0
	comp=Z,14nm,0.6s,baz=160,slow=2.7,SNR=18						
YAK	Yakutsk	21.33	328	eP	P	18 22 40.4	-2.1
YAK				pmax	pmax		
	comp=Z,22nm,0.7s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.1s						
YAK	Yakutsk	21.33	328	P	P	18 22 38.4	-4.1
YAK				IAmb	IAmb	18 22 44.4	
	comp=Z,41nm,0.9s						
BILL	Bilibino	22.98	12	ceP	P	18 22 58.9	-1.1
BILL				e		18 23 28.5	
BILL				eS	S	18 26 55.4	-14
BILL				pmax	pmax		
	comp=Z,4.0nm,0.4s						
BILL				MLR	MLR		
	comp=Z,45nm,17.0s						
BILL	Bilibino	22.98	12	eP	P	18 22 58.9	-1.1
BILL	Bilibino	22.98	12	P	P	18 22 59.2	-0.8
H11N2	WAKE ISLAND Hy	28.23	154	T	T	18 53 08.8	
	baz=342,slow=74						
H11N1	WAKE ISLAND Hy	28.25	154	T	T	18 53 08.3	
	baz=342,slow=74						
H11N3	WAKE ISLAND Hy	28.25	154	T	T	18 53 08.6	
	baz=342						
TIK	Tiksi	28.37	343	eP	P	18 23 50.8	+1.3
TIXI	Tiksi	28.39	343	P	P	18 23 48.8	-0.8
	comp=Z,1.5nm,0.3s,baz=131,slow=13,SNR=4.6						
TIXI	Tiksi	28.39	343	⇑eP	P	18 23 50.8	+1.2
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.9s						
TIXI	Tiksi	28.39	343	IAmb	IAmb	18 23 52.5	
	comp=Z,2.8nm,0.8s						
H11S1	WAKE ISLAND Hy	29.33	155	T	T	18 54 31.2	
	baz=342,slow=76,SNR=9.6						
H11S3	WAKE ISLAND Hy	29.34	155	T	T	18 54 30.0	
	baz=342,slow=76,SNR=12						
H11S2	WAKE ISLAND Hy	29.35	155	T	T	18 54 31.2	
	baz=342,slow=76,SNR=9.8						
NJ2	Nanjing	30.46	255	eP	P	18 24 10.3	+1.9
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
HHC	Hu-ho-hao-te	31.05	276	eP	P	18 24 16.0	+2.3
HHC				pmax	pmax		
	comp=Z,28nm,0.7s						
HHC				pmax	pmax		
	comp=Z,120nm,4.8s						
ULN	Ulaanbaatar	31.81	291	P	P	18 24 19.6	-0.8
SONM	Songino Array	32.25	291	P	P	18 24 24.6	+0.4
	comp=Z,0.7nm,0.7s,baz=62,slow=9.1,SNR=5.6						
SONM				LR	LR	18 37 45.7	
	comp=Z,58nm,19.0s,baz=286,slow=37						
SONM	Songino Array	32.25	291	P	P	18 24 24.6	+0.4
SONM				pmax	pmax		
	comp=Z,4.0nm,1.3s						
SONM	Songino Array	32.25	291	IAmb	IAmb	18 24 30.7	
	comp=Z,3.9nm,1.3s						
IMAR	Indian Mountai	33.97	35	P	P	18 24 39.1	+0.3
COLD	Coldfoot	35.56	34	P	P	18 24 51.0	-1.6
COLD				IAmb	IAmb	18 25 03.8	
	comp=Z,5.6nm,1.0s						
TOLK	Toolik Lake Re	36.02	31	P	P	18 24 57.8	+1.3
SML	Sawmill	36.04	43	P	P	18 24 56.6	-0.2
COLA	College	36.30	38	⇓eP	P	18 24 59.4	+0.6
COLA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
POKR	Poker Plat Res	36.48	37	P	P	18 25 01.7	+1.2
POKR				IAmb	IAmb	18 25 03.1	
	comp=Z,8.0nm,1.4s						
ILAR	Eielson Array	36.70	38	P	P	18 25 01.9	-0.5
	comp=Z,0.6nm,0.6s,baz=248,slow=6.7,SNR=14						
BMAR	Burnt Mountain	37.75	34	P	P	18 25 11.5	+0.2
L27K	Beaver Creek,	38.99	41	P	P	18 25 22.6	+0.8
BCAR	Beaver Creek A	39.01	41	P	P	18 25 22.6	+0.7
NRIK	Noril'sk	39.76	329	⇓eP	P	18 25 27.9	-0.1
NRIK				pmax	pmax		
	comp=Z,8.0nm,1.7s						
GTA	Gaotai	39.79	281	⇓P	P	18 25 30.5	+1.7
GTA				pP	sP	18 25 34.0	-0.1
GTA				pmax	pmax		
	comp=Z,12nm,1.0s						
GTA				pmax	pmax		
	comp=Z,97nm,4.2s						
GTA				LR	LR		
	comp=Z,110nm,14.2s						
GTA				LR	LR		
	comp=Z,140nm,14.5s						
GTA				LR	LR		
	comp=Z,100nm,13.8s						
INK	Inuvik	41.91	32	P	P	18 25 46.4	+0.7
	comp=Z,1.2nm,0.5s,baz=260,slow=4.6,SNR=6.0						
INK	Inuvik	41.91	32	P	P	18 25 46.4	+0.7
INK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
INK	Inuvik	41.91	32	IAmb	IAmb	18 25 46.8	
	comp=Z,2.6nm,0.8s						
GYA	Guiyang	42.25	259	⇓P	P	18 25 50.0	+0.9
GYA				pmax	pmax		
	comp=Z,14nm,1.1s						
DGZ	Jazzator, Alta	43.58	300	⇑eP	P	18 26 00.6	+0.9
DGZ				pmax	pmax		
	comp=Z,3.0nm,1.6s						
ZAA0	Zalesovo Array	43.62	307	P	P	18 25 59.2	-0.6
ZALV	Zalesovo Beam	43.62	307	P	P	18 25 58.8	-1.0
	comp=Z,2.6nm,0.7s,baz=73,slow=7.7,SNR=13						
ZALV				PcP	PcP	18 27 46.6	-0.3
	comp=Z,0.5nm,0.4s,baz=92,slow=4.3,SNR=2.3						
ZALV	Zalesovo Beam	43.62	307	P	P	18 25 59.2	-0.6
DLBC	Dease Lake	45.62	46	P	P	18 26 17.0	+1.2
	comp=Z,2.8nm,1.0s,baz=321,slow=13,SNR=3.5						
DLBC	Dease Lake	45.62	46	IAmb	IAmb	18 26 31.5	
	comp=Z,6.6nm,1.3s						
WMQ	Urumqi	45.85	292	eP	P	18 26 20.0	+2.2
WMQ				pP	pwP	18 26 30.3	-1.6
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,67nm,4.3s						
MK31	Makanchi Array	47.91	298	ceP	P	18 26 34.1	+0.3
MK31	Makanchi Array	47.91	298	P	P	18 26 33.2	-0.6
MK31				IAmb	IAmb	18 26 38.0	
	comp=Z,6.8nm,1.4s						
MKAR	Makanchi Array	47.91	298	P	P	18 26 34.1	+0.3
	comp=Z,1.4nm,0.5s,baz=67,slow=7.1,SNR=26						
MKAR				PcP	PcP	18 28 02.2	+0.2
	comp=Z,0.5nm,0.6s,baz=64,slow=3.4,SNR=1.6						
MKAR	Makanchi Array	47.91	298	P	P	18 26 33.1	-0.7
MAKZ	Makanchi	48.10	299	P	P	18 26 34.8	-0.5
MAKZ				pmax	pmax		
	comp=Z,4.0nm,1.2s						
MAKZ	Makanchi	48.10	299	P	P	18 26 34.8	-0.5
KURK	Kurchatov	48.36	305	P	P	18 26 37.7	+0.5
KURK	Kurchatov	48.36	305	eP	P	18 26 37.7	+0.5
KURK	Kurchatov	48.36	305	P	P	18 26 36.9	-0.3
KURK				IAmb	IAmb	18 26 39.2	
	comp=Z,7.6nm,0.8s						
KURBB	Kurchatov Arra	48.45	304	P	P	18 26 37.7	-0.2
	comp=Z,6.9nm,0.8s,baz=68,slow=8.6,SNR=27						
YKA	Yellowknife Ar	51.11	37	P	P	18 26 58.0	+0.1
	comp=Z,0.8nm,0.6s,baz=301,slow=5.5,SNR=6.5						
RES	Resolute Bay	51.33	19	P	P	18 27 00.1	+0.8
	comp=Z,1.3nm,0.8s,baz=338,slow=10,SNR=3.7						
RES	Resolute Bay	51.33	19	P	P	18 27 00.1	+0.8
RES				pmax	pmax		
	comp=Z,10.0nm,1.4s						
RES	Resolute Bay	51.33	19	IAmb	IAmb	18 27 08.8	
	comp=Z,10nm,1.4s						
BVAR	Borovoye Array	51.88	310	P	P	18 27 04.3	+0.5
	comp=Z,2.2nm,0.4s,baz=56,slow=3.6,SNR=26						
BRVK	Borovoye	51.92	310	c iP	P	18 27 05.5	+1.4
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BRVK	Borovoye	51.92	310	eP	P	18 27 05.5	+1.4
BRVK	Borovoye	51.92	310	P	P	18 27 05.4	+1.3
BRVK				IAmb	IAmb	18 27 06.2	
	comp=Z,4.7nm,0.6s						
CM31	Chiang Mai Arr	52.88	258	P	P	18 27 11.9	+0.2
CM31				IAmb	IAmb	18 27 13.7	
	comp=Z,4.1nm,0.5s						
CMAR	Chiang Mai Arr	52.88	258	P	P	18 27 12.6	+0.9
	comp=Z,1.5nm,0.6s,baz=37,slow=7.4,SNR=15						
CMAR	Chiang Mai Arr	52.88	258	P	P	18 27 11.9	+0.2
KDJ	Kajisay	53.39	295	P	P	18 27 15.5	+0.1
KDJ				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KDJ	Kajisay	53.39	295	P	P	18 27 15.4	+0.1
KDJ				IAmb	IAmb	18 27 17.6	
	comp=Z,5.1nm,0.9s						
SPITS	Spitsbergen Ar	53.47	350	P	P	18 27 15.6	+0.3
	comp=Z,12nm,1.1s,baz=27,slow=11,SNR=1.7						
FRU1	Bishkek	54.62	297	P	P	18 27 24.9	+0.7
FRU1				pmax	pmax		
	comp=Z,15nm,1.3s						
FRU1	Bishkek	54.62	297	P	P	18 27 24.9	+0.7
FRU1				IAmb	IAmb	18 27 28.5	
	comp=Z,15nm,1.3s						
AAK	Ala-Archa	54.80	297	P	P	18 27 27.2	+1.6
AAK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
AAK	Ala-Archa	54.80	297	eP	P	18 27 27.2	+1.6
AAK	Ala-Archa	54.80	297	P	P	18 27 27.2	+1.6
AAK				IAmb	IAmb	18 27 29.1	
	comp=Z,5.0nm,0.9s						
TAPN	Taplejung	54.85	274	eP	P	18 27 27.1	+0.8
SVE	Sverdlovsk	54.86	318	eP	P	18 27 26.9	+1.3
SVE				pmax	pmax		
	comp=Z,13nm,0.9s						
SVE	Sverdlovsk	54.86	318	eP	P	18 27 26.9	+1.3
KSH	Kashi	55.59	293	P	P	18 27 36.8	+5.5
KSH				pP	pwP	18 27 44.5	-1.0
KSH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
JIRN	Jiri	55.71	276	eP	P	18 27 33.6	+1.0
	comp=Z,12nm,0.8s						
GUN	Gumba	55.77	276	eP	P	18 27 34.4	+1.4
RAMN	Ramite	55.87	275	eP	P	18 27 34.1	+0.5
ARU	Arti	56.04	318	P	P	18 27 34.7	+0.5
	comp=Z,3.9nm,0.5s,baz=70,slow=5.4,SNR=20						
ARU	Arti	56.04	318	d iP	P	18 27 34.6	+0.5
ARU				S	S	18 35 21.7	+0.5
ARU				SS	SS	18 39 02.5	-4.2
ARU				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ARU	Arti	56.04	318	P	P	18 27 34.5	+0.3
KKN	Kakani	56.26	276	eP	P	18 27 37.6	+1.2
	comp=Z,5.6nm,0.5s						
PKI	Pulchoki	56.31	276	eP	P	18 27 38.1	+1.2
	comp=Z,3.5nm,0.4s						
PKIN	Phulchoki	56.31	276	eP	P	18 27 37.9	+1.1
	comp=Z,5.9nm,0.4s						
GKN	Gorkha	56.57	277	eP	P	18 27 39.5	+0.9
	comp=Z,11nm,0.4s						
DANN	Dangsing	56.96	278	eP	P	18 27 43.1	+1.6
	comp=Z,22nm,0.6s						
KKAR	Karatay Array	56.98	300	P	P	18 27 42.1	+1.1
KKAR	Karatay Array	56.98	300	P	P	18 27 42.1	+1.1
KOLN	Koldanda	57.43	278	eP	P	18 27 45.8	+1.1
	comp=Z,19nm,1.0s						
PYUN	Piuthan	57.65	278	eP	P	18 27 47.6	+1.4
	comp=Z,21nm,0.9s						
DRK	Karamyk	58.26	296	P	P	18 27 50.9	+0.5
DRK				IAmb	IAmb	18 27 54.8	
	comp=Z,13nm,1.1s						
PRGR	Permogore	58.38	328	eP	P	18 27 51.3	+0.8
PRGR				pmax	pmax		
	comp=Z,21nm,0.9s						
BTK	Batken	58.53	297	P	P	18 27 53.4	+1.3
BTK				pmax	pmax		
	comp=Z,11nm,0.9s						
BTK	Batken	58.53	297	P	P	18 27 53.4	+1.3
ARCES	ARCESS Array B	58.79	341	P	P	18 27 55.2	+1.9
	comp=Z,5.3nm,1.0s,baz=30,slow=7.3,SNR=6.4						
ARCES	ARCESS Array B	58.79	341	P	P	18 27 55.2	+1.9
ARCES				pmax	pmax		
	comp=Z,30nm,1.5s						
KIRV	Kirov	58.80	324	⇑iP	P	18 27 54.4	+0.9
ABKAR	Akbulak array	59.44	311	P	P	18 27 58.6	+0.5
ABKAR	Akbulak array	59.44	311	P	P	18 27 59.0	+0.9

ABKAR				IAmb	IAmb	18 28 01.5	
	comp=Z,3.8nm,0.8s						
GAR	Garm	59.47	296	P	P	18 27 60.0	+1.3
AKTO	Aktyubinsk	59.75	313	P	P	18 28 01.0	+0.7
	comp=Z,1.9nm,0.6s,baz=80,slow=6.1,SNR=8.5						
CHGR	Chuyangaron	60.40	296	P	P	18 28 05.7	+0.6
NIL	Nilore	60.81	289	P	P	18 28 09.7	+1.9
NIL				pmax	pmax		
	comp=Z,14nm,1.0s						
NIL	Nilore	60.81	289	P	P	18 28 09.7	+1.9
KLMR	Klimovskoe	61.11	329	eP	P	18 28 09.9	+0.6
KLMR				pmax	pmax		
	comp=Z,17nm,1.0s						
KLMR	Klimovskoe	61.11	329	eP	P	18 28 10.0	+0.6
KLMR				AMP		18 28 14.2	
	comp=Z,17nm,1.0s						
BOZ	Bozeman (W)	61.69	53	P	P	18 28 13.6	-0.1
BOZ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BOZ	Bozeman (W)	61.69	53	P	P	18 28 13.6	-0.1
BOZ				IAmb	IAmb	18 28 13.9	
	comp=Z,3.6nm,1.0s						
NVAR	Mina Array Bea	62.16	63	P	P	18 28 16.5	-0.7
	comp=Z,0.1nm,0.4s,baz=301,slow=7.0,SNR=1.8						
KBL	Kabul	63.00	293	P	P	18 28 23.2	+0.4
KBL				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KBL	Kabul	63.00	293	P	P	18 28 23.2	+0.4
KBL				IAmb	IAmb	18 28 25.3	
	comp=Z,6.7nm,0.8s						
BELG	Belogornoye	63.56	319	P	P	18 28 27.1	+1.3
	comp=Z,11nm,0.5s,baz=346,slow=2.2,SNR=12						
TCUT	Toone Canyon	64.62	56	P	P	18 28 33.4	+0.1
PDAR	Pinedale Array	64.62	54	P	P	18 28 32.4	-1.0
	comp=Z,0.3nm,0.5s,baz=305,slow=3.2,SNR=3.6						
FINES	FINESS Array B	65.02	335	P	P	18 28 34.5	-0.7
	comp=Z,2.8nm,0.5s,baz=31,slow=7.7,SNR=19						
RDMU	Red Mountain	66.03	56	P	P	18 28 42.0	-0.6
RDMU				IAmb	IAmb	18 28 43.2	
	comp=Z,5.6nm,0.9s						
OBN	Obninsk	66.32	326	⇑eP	P	18 28 44.5	+0.7
OBN				e		18 29 18.0	
OBN				e		18 31 13.8	
OBN				eS	SKSac	18 38 09.5	-29
OBN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,124nm,15.0s						
OBN	Obninsk	66.32	326	eP	P	18 28 44.5	+0.7
VRH	Novokhopyorsk	67.03	321	eP	P	18 28 46.8	-1.6
VRH				pmax	pmax		
	comp=Z,7.0nm,0.5s						
LPSR	Galich'ya Gora	67.22	323	eP	P	18 28 48.7	-0.9
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HRA	Herat	67.41	296	P	P	18 28 50.6	-0.8
HRA				IAmb	IAmb	18 28 53.8	
	comp=Z,9.7nm,1.4s						
GEYT	Alibeck	67.59	302	P	P	18 28 53.7	+1.5
	comp=Z,4.0nm,0.7s,baz=25,slow=12,SNR=4.2						
WRAB	Tennant Creek	68.03	200	⇓eP	P	18 28 57.8	+2.8
WRAB				pmax	pmax		
	comp=Z,6.0nm,1.4s						
WRA	Warramunga Arr	68.04	200	P	P	18 28 53.6	-1.4
	comp=Z,2.8nm,0.8s,baz=19,slow=6.7,SNR=15						
VSR	Storozhevoye	68.13	322	eP	P	18 28 57.3	+1.9
VSR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
VORD	Divnogorie	68.26	322	eP	P	18 28 57.3	+1.1
VORD				pmax	pmax		
	comp=Z,8.0nm,0.6s						
FITZ	Fitzroy Crossi	68.82	209	P	P	18 28 59.5	-0.3
	comp=Z,1.8nm,0.8s,baz=2.7,slow=8.4,SNR=2.5						
NB2	NORSAR Subarra	69.16	342	P	P	18 29 02.1	+0.4
	comp=Z,0.9nm,0.6s,baz=26,slow=6.5						
NOA	NORSAR Array B	69.16	342	P	P	18 29 02.3	+0.6
	comp=Z,1.4nm,0.7s,baz=26,slow=6.3,SNR=5.4						
X18A	Snowflake	69.81	61	P	P	18 29 07.6	+1.3
GOF	Gofitskoye	70.85	316	⇑eP	P	18 29 13.8	+1.6
GOF				pmax	pmax		
	comp=Z,29nm,0.6s						
ASAR	Alice Springs	71.73	199	P	P	18 29 17.4	-0.2
	comp=Z,2.0nm,0.7s,baz=22,slow=5.5,SNR=25						
KVAR	Kislovodsk Arr	71.82	315	P	P	18 29 20.8	+2.5
	comp=Z,6.5nm,1.0s,baz=130,slow=17,SNR=3.5						
KIV	Kislovodsk	71.82	315	eP	P	18 29 20.3	+2.0
KIV				pmax	pmax		
	comp=Z,14nm,1.0s						
KIV	Kislovodsk	71.82	315	P	P	18 29 18.4	+0.2
KBZ	Khabaz	71.89	315	P	P	18 29 20.4	+1.9
	comp=Z,13nm,0.9s,baz=199,slow=1.7,SNR=24						
ZEI	Tsey	72.07	313	eP	P	18 29 19.7	-0.2
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ONI	Oni	72.44	314	P	P	18 29 23.9	+1.9
ONI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ONI	Oni	72.44	314	P	P	18 29 23.9	+1.9
ONI				IAmb	IAmb	18 29 25.0	
	comp=Z,5.8nm,0.8s						
AKASG	Malin Array Be	72.56	327	P	P	18 29 22.6	+0.1
	comp=Z,3.3nm,0.5s,baz=34,slow=6.2,SNR=18						
AKASG	Malin Array Be	72.56	327	P	P	18 29 21.9	-0.5
AKBB	Malin Array Si	72.56	327	P	P	18 29 22.6	+0.2
AKBB				pmax	pmax		
	comp=Z,6.0nm,0.7s						
AKBB	Malin Array Si	72.56	327	P	P	18 29 22.6	+0.2
AKBB				IAmb	IAmb	18 29 23.4	
	comp=Z,5.8nm,0.7s						
AKH	Akhalkalaki	73.28	313	⇑P	P	18 29 29.5	+2.4
GNI	Garni	73.55	311	P	P	18 29 30.3	+1.7
	comp=Z,3.5nm,0.6s,baz=76,slow=12,SNR=2.4						
GNI	Garni	73.55	311	P	P	18 29 30.4	+1.7
GNI				pmax	pmax		
	comp=Z,10.0nm,1.2s						
GNI	Garni	73.55	311	IAmb	IAmb	18 29 31.6	
	comp=Z,10.0nm,1.1s						
BCA	Borcka	74.20	314	⇑P	P	18 29 33.8	+1.4
SORM	Soroca	74.97	326	⇑P	P	18 29 37.0	+0.4
SORM	Soroca	74.97	326	⇑P	P	18 29 37.0	+0.4
KOLS	Kolonicke sedl	76.57	330	eP	P	18 29 46.1	+0.3
KOLS	Kolonicke sedl	76.57	330	eP	P	18 29 46.1	+0.3
BURAR	Bucovina Array	76.60	327	⇓P	P	18 29 46.2	+0.1
BURAR	Bucovina Array	76.60	327	⇓P	P	18 29 46.2	+0.1
BURAR	Bucovina Array	76.60	327	P	P	18 29 46.6	+0.5
BURAR				IAmb	IAmb	18 29 47.9	
	comp=Z,5.1nm,0.8s						
CRVS	Cervenica-Dubn	76.88	330	eP	P	18 29 48.6	+1.1
CRVS	Cervenica-Dubn	76.88	330	eP	P	18 29 48.6	+1.1
TRPA	Tarpa	77.15	329	⇑P	P	18 29 49.7	+0.7
TX31	Lajitas Ar. Si	77.25	61	P	P	18 29 48.3	-1.7
TX31				IAmb	IAmb	18 29 49.7	
	comp=Z,6.4nm,0.8s						
TX32	Lajitas Array	77.25	61	P	P	18 29 48.2	-1.8
TXAR	Lajitas Array	77.25	61	P	P	18 29 49.3	-0.7
	comp=Z,1.6nm,0.7s,baz=305,slow=4.1,SNR=20						
TXAR	Lajitas Array	77.25	61	P	P	18 29 48.8	-1.3
LANS	Liptovska Anna	77.34	331	eP	P	18 29 51.9	+1.7
LANS				pmax	pmax		
	comp=Z,4.0nm,0.8s						
LANS	Liptovska Anna	77.34	331	eP	P	18 29 51.9	+1.7
MORC	Moravsky Berou	77.43	333	⇓P	P	18 29 51.7	+1.1
MORC	Moravsky Berou	77.43	333	⇓P	P	18 29 51.7	+1.1
MORC	Moravsky Berou	77.43	333	P	P	18 29 50.9	+0.3
MORC				IAmb	IAmb	18 29 52.4	
	comp=Z,6.6nm,1.1s						
CLL	Collm	77.44	336	i P	P	18 29 50.7	+0.1
	comp=Z,17nm,1.3s						
CLL	Collm	77.44	336	P	P	18 29 50.7	+0.1
CLL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CLL	Collm	77.44	336	P	P	18 29 50.7	+0.1
CLL				IAmb	IAmb	18 29 51.6	
	comp=Z,8.3nm,0.9s						
VRI	Vrincioaia	77.46	325	⇑P	P	18 29 59.6	+8.7
VRI	Vrincioaia	77.46	325	⇑P	P	18 29 59.6	+8.7
MLR	Muntele Rosu	78.08	326	⇑P	P	18 29 56.2	+1.8
MLR	Muntele Rosu	78.08	326	⇑P	P	18 29 56.2	+1.8
VRAC	Vranov	78.14	333	⇑P	P	18 29 56.0	+1.4
VRAC	Vranov	78.14	333	⇑P	P	18 29 56.0	+1.4
VOIR		78.47	326	⇑P	P	18 29 59.0	+2.4
VOIR		78.47	326	⇑P	P	18 29 59.0	+2.4
MODS	Modra-Piesok	78.74	332	eP	P	18 29 58.4	+0.5
MODS	Modra-Piesok	78.74	332	eP	P	18 29 58.4	+0.5
KHC	Kasperske Hory	79.22	335	⇓iP	P	18 30 00.8	+0.3
KHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
GZR	Gura Zlata	79.38	327	⇑P	P	18 30 07.2	+5.6
GZR	Gura Zlata	79.38	327	⇑P	P	18 30 07.2	+5.7
BRTR	Keskin Array B	79.42	317	P	P	18 30 02.8	+0.8
	comp=Z,2.1nm,0.9s,baz=64,slow=2.9,SNR=5.0						
BRTR	Keskin Array B	79.42	317	i P	P	18 30 03.2	+1.3
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GERES	GERESS Array B	79.43	335	P	P	18 30 02.2	+0.4
	comp=Z,1.1nm,0.7s,baz=43,slow=6.0,SNR=8.4						
BCLA	Clavier	80.23	340	dPcP	PcP	18 30 13.0	-0.1
BGES	Gesves	80.32	340	dP	P	18 30 06.1	-0.3
BGES				dPcP	PcP	18 30 13.7	+0.2
BMRD	Maredsous	80.47	341	dPcP	PcP	18 30 14.0	-0.2
WLF	Walferdange	80.73	340	dPcP	PcP	18 30 14.9	-0.5
MMAI	Mount Meron Ar	83.83	312	P	P	18 30 26.2	+0.9
	comp=Z,1.3nm,0.5s,baz=54,slow=6.3,SNR=4.2						
PLCA	Paso Flores	147.43	97	PKPbc	PKPbc	18 37 38.4	-0.7
	comp=Z,2.9nm,0.7s,baz=270,slow=1.0,SNR=7.3						

*KRNET **25** 18:18:23.6±0.1, 40°.35N×73°.22E, h17^{km}, mb3.1*

*SOME **25** 18:18:23.5, 40°.35N×73°.20E, h10^{km}*

*ISU **25** 18:18:23, 40°.30N×73°.20E, h5^{km}*

*NNC **25** 18:18:24.9±1.3, 40°.44N×73°.22E, h0^{km}, mb3.7, mpv3.3, Error ellipse: s-maj=11.2km s-min=4.6km az=168.0*

*KNET **25** 18:18:26.8±0.5, 40°.51N×73°.40E, h7^{km}±3^{km}, ml2.7, Error ellipse: s-maj=7.7km s-min=4.2km az=94.0*

ISC 25 18:18:23.7±1.1**, 40°.39N**±0°.03×**73°.33E**±0°.02**, h5**^{km}±10^{km}**, n54, **σ1^{s}.**72**/89**, 31C-23D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	0.40	160	eP	Pg	18 18 31.0	-0.4
SFK				eS	Sg	18 18 37.0	+0.3
SFK	Sufi-Kurgan	0.40	160	⇓eP	Pg	18 18 31.3	-0.1
	baz=47						
SFK				⇓eS	Sg	18 18 37.3	+0.6
	baz=47						
OHH	Osh	0.43	289	eP	Pg	18 18 31.0	-1.2
OHH				eS	Sg	18 18 37.0	-0.9
OHH	Osh	0.43	289	⇑iP	Pg	18 18 30.9	-1.3
	baz=98						
OHH				⇑iS	Sg	18 18 36.2	-1.7
	baz=98						
SALK	Salom-Alik	0.62	37	⇓eP	Pg	18 18 36.9	+1.2
	baz=41						
SALK				⇓eS	Sb	18 18 46.6	+0.3
	baz=41						
ANR	Andizhan	0.82	297	eP	Pg	18 18 39.0	-0.5
ANR				eS	Sg	18 18 52.0	+1.8
FRG	Fergana	1.18	270	eP	Pn	18 18 48.0	+1.1
FRG				eS	Sb	18 19 01.0	-1.1
DRK	Karamyk	1.48	233	⇓iP	Pn	18 18 48.9	-2.4
	baz=32						
DRK				⇓iS	Sn	18 19 08.4	-2.8
	baz=32						
AML	Almayashu	1.77	9	⇑P	Pb	18 18 57.2	+0.3
	34nm,0.2s,SNR=74						
AML				⇑S	Sg	18 19 22.0	+1.4
	425nm,0.7s						
AML	Almayashu	1.77	9	⇑iP	Pb	18 18 57.2	+0.3
	baz=11						
AML				⇑iS	Sg	18 19 21.4	+0.8
	baz=11						
BTK	Batken	1.95	261	eP	Pn	18 18 58.0	+0.5
BTK				eS	Sn	18 19 24.0	+1.6
BTK	Batken	1.95	261	⇓iP	Pn	18 18 57.6	+0.1
	baz=62						
BTK				⇓iS	Sn	18 19 22.0	-0.4
	baz=62						
TRKS	Terek-Say	2.01	305	⇑iP	Pn	18 18 58.1	-0.4
	baz=6.0						
TRKS				⇑iS	Sn	18 19 23.3	-0.8
	baz=6.0						
UCH	Uchtor	2.05	26	⇑P	Pb	18 19 02.4	+0.8
	4.6nm,0.2s,SNR=9.1						
UCH				⇓S	Sg	18 19 30.4	+0.8
	24nm,0.3s						
UCH	Uchtor	2.05	26	⇑iP	Pb	18 19 01.4	-0.3
	baz=27						
UCH				⇑iS	Sg	18 19 28.7	-0.8
	baz=27						
MNAS	Manas	2.19	344	⇑iP	Pn	18 19 02.4	+1.5
	baz=46						
MNAS				⇑iS	Sb	18 19 30.5	-0.9
	baz=46						
EKS2	Erkin-Say	2.30	8	⇑P	Pb	18 19 06.5	+0.7
	3.6nm,0.2s,SNR=12						
EKS2				⇑S	Sg	18 19 37.4	-0.3
	9.0nm,0.2s						
EKS2	Erkin-Say	2.30	8	⇓eP	Pn	18 19 04.4	+2.0
	baz=10.0						
EKS2				⇓iS	Sb	18 19 33.9	-0.7
	baz=10.0						
MRKS	Merke	2.36	358	eP	Pb	18 19 07.8	+1.1
	13nm,0.4s						
MRKS				eS	Sg	18 19 38.8	-0.7
	80nm,0.3s						
AAK	Ala-Archa	2.42	21	⇑P	Pb	18 19 07.7	-0.1
	5.6nm,0.2s,SNR=15						
AAK				⇑S	Sg	18 19 39.7	-1.6
	33nm,0.3s						
AAK	Ala-Archa	2.42	21	⇑Pg	Pb	18 19 09.0	+1.2
	4.1nm,0.4s						
AAK				⇑Lg	Lg	18 19 42.7	
	23nm,0.5s						
AAK	Ala-Archa	2.42	21	⇑iP	Pn	18 19 06.2	+2.2
	baz=22						
AAK				⇑iS	Sb	18 19 37.0	-0.9
	baz=22						
KBK	Karagaybulak	2.58	28	⇑P	Pb	18 19 10.5	0.0
	4.9nm,0.1s,SNR=6.2						
KBK	Karagaybulak	2.58	28	⇓iP	Pn	18 19 08.6	+2.3
	baz=29						
KBK				⇓iS	Sb	18 19 41.0	-1.5
	baz=29						
FRU1	Bishkek	2.61	22	⇓iP	Pb	18 19 09.4	-1.7
	baz=23						
FRU1				⇓iS	Sb	18 19 42.4	-1.1
	baz=23						
GAR	Garm	2.70	240	⇑iP	Pn	18 19 08.2	+0.3
	baz=40						
GAR				⇑iS	Sn	18 19 40.2	-0.9
	baz=40						
CHMS	Chumysh	2.82	22	⇑eP	Pn	18 19 11.8	+2.3
	baz=23						
CHMS				⇑iS	Sb	18 19 46.5	-3.0
	baz=23						
ULHL	Ulahol	2.88	49	⇑eP	Pn	18 19 13.0	+2.6
	baz=49						
ULHL				⇑iS	Sb	18 19 48.6	-2.7
	baz=49						
BOOM	Boomskoye usch	2.88	42	⇓eP	Pn	18 19 13.0	+2.6
	baz=43						
BOOM				⇓iS	Sb	18 19 48.6	-2.7
	baz=43						
USP	Ospenovka	3.01	17	⇑iP	Pn	18 19 14.3	+2.2
	baz=18						
USP				⇑iS	Sb	18 19 51.1	-3.8
	baz=18						
IUG	Iuzhnay	3.04	306	eP	Pb	18 19 19.5	+1.0
	496nm,0.4s						
IUG				eS	Sb	18 19 58.8	+2.8
	71nm,0.2s						
IUG	Iuzhnay	3.04	306	Pg	Pb	18 19 19.0	+0.5
	496nm,0.4s						
IUG				Lg	Lg	18 19 58.8	
	77nm,0.6s						
TKM2	Tokmak 2	3.05	33	⇑P	Pb	18 19 16.3	-2.4
	3.3nm,0.2s,SNR=6.9						
TKM2	Tokmak 2	3.05	33	⇓Pg	Pb	18 19 20.1	+1.5
	2.3nm,0.5s						
TKM2				⇓Lg	Lg	18 20 01.0	
	8.8nm,0.8s						
TKM2	Tokmak 2	3.05	33	⇓iP	Pn	18 19 15.2	+2.4
	baz=34						
TKM2				⇓iS	Sb	18 19 52.6	-3.7
	baz=34						
KST	Kastek	3.31	36	eP	Pg	18 19 27.1	0.0
	2.2nm,0.2s						
KST				eS	Sg	18 20 12.0	+2.0
	9.6nm,0.4s						
KST	Kastek	3.31	36	Pg	Pg	18 19 26.7	-0.5
	2.2nm,0.2s						
KST				Lg	Lg	18 20 12.0	
	7.6nm,0.6s						
DGS	Degeres	3.39	32	eP	Pg	18 19 27.8	-0.9
	6.7nm,0.6s						
DGS				eS	Sg	18 20 13.2	+0.6
	8.8nm,0.7s						
DGS	Degeres	3.39	32	Pg	Pg	18 19 27.3	-1.4
	6.7nm,0.6s						
DGS				Lg	Lg	18 20 13.2	
	8.8nm,0.7s						
KK09	Karatay Array	3.46	323	⇓Pg	Pb	18 19 25.7	+0.2
	2.9nm,0.3s,baz=140,slow=16						
KK09				⇓Lg	Lg	18 20 10.7	
	8.0nm,0.5s,baz=141,slow=29						
MTBS	Maitube	3.59	39	eP	Pg	18 19 32.2	-0.4
	1.8nm,0.2s						
MTBS				eS	Sg	18 20 20.7	+1.5
	7.3nm,0.5s						
BRLS	Borolday	3.72	316	eP	Pb	18 19 30.5	+0.7
	13nm,0.1s						
BRLS				eS	Sb	18 20 18.2	+3.0
	18nm,0.2s						
KRBS	Karabastau	3.74	27	eP	Pg	18 19 33.4	-2.1
	1.1nm,2.6s						
KRBS				eS	Sg	18 20 22.8	-1.2
	6.5nm,0.4s						
KRBS	Karabastau	3.74	27	Pg	Pb	18 19 32.7	+2.3
	1.1nm,0.4s						
KRBS				Lg	Lg	18 20 22.2	
	6.5nm,0.4s						
TNSS	Tian-Shan	3.79	44	eP	Pb	18 19 33.7	+2.3
	2.6nm,0.4s						
TNSS				eS	Sg	18 20 23.6	-1.9
	5.4nm,0.7s						
TNSS	Tian-Shan	3.79	44	Pg	Pb	18 19 33.4	+2.1
	2.6nm,0.4s						
TNSS				Lg	Lg	18 20 24.1	
	5.4nm,0.7s						
MDOK	Medeo	3.93	44	eP	Pg	18 19 37.2	-1.9
	1.5nm,0.3s						
MDOK				eS	Sg	18 20 29.8	-0.2
	9.0nm,0.7s						
MDOK	Medeo	3.93	44	Pg	Pb	18 19 35.9	+2.3
	2.6nm,0.5s						
MDOK				Lg	Lg	18 20 29.6	
	11nm,0.8s						
MDOK	Medeo	3.93	44	Pg	Pg	18 19 37.2	-1.9
	1.5nm,0.3s						
MDOK				Lg	Lg	18 20 29.8	
	9.0nm,0.7s						
KOTS	Kotyrbulak	4.01	44	eP	Pg	18 19 39.2	-1.5
	3.4nm,0.3s						
KOTS				eS	Sg	18 20 33.1	+0.4
	16nm,0.8s						
KOTS	Kotyrbulak	4.01	44	Pg	Pg	18 19 39.2	-1.5
	3.4nm,0.3s						
KOTS				Lg	Lg	18 20 33.1	
	16nm,0.8s						
KTBS	Karatobe	4.16	36	eP	Pg	18 19 40.9	-2.5
	0.3nm,0.2s						
KTBS				eS	Sg	18 20 36.3	-1.0
	8.1nm,0.7s						
KTBS	Karatobe	4.16	36	Pg	Pg	18 19 40.9	-2.5
	0.3nm,0.2s						
KTBS				Lg	Lg	18 20 36.3	
	8.1nm,0.7s						
BTLS	Baital	4.68	6	eP	Pb	18 19 49.9	+3.6
	0.7nm,0.4s						
BTLS				eS	Sg	18 20 51.2	-2.9
	7.9nm,0.3s						

ATH 25 18:27:22.8, 38°.52N×20°.56E, h14^{km}±2^{km}, ML2.3/4, Error ellipse: s-maj=2.5km s-min=0.6km az=111.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FSK	Fiskardo	0.06	175	P	Pg	18 27 25.3	-0.2
FSK				S	Sg	18 27 26.9	-0.5
FSK				AML	AML	18 27 27.3	
	comp=N,4645μm,0.2s						
FSK				AML	AML	18 27 27.5	
	comp=E,9062μm,0.2s						
EVGI	Lefkada island	0.13	39	P	Pg	18 27 26.2	-0.1
EVGI				S	Sg	18 27 28.8	+0.2
NYDR	Nydri-Lefkada	0.22	31	P	Pg	18 27 27.5	-0.1
NYDR				S	Sg	18 27 31.0	+0.1
LKD2	Lefkada island	0.28	17	P	Pg	18 27 28.4	-0.3
LKD2				S	Sg	18 27 33.2	+0.6
LKD2				AML	AML	18 27 33.5	
	comp=N,1590μm,0.2s						
LKD2				AML	AML	18 27 33.8	
	comp=E,1569μm,0.3s						
KEF4	Livadi, Kephal	0.28	201	P	Pg	18 27 28.4	-0.3
KEF4				S	Sg	18 27 33.2	+0.5
TSLK	Tsoukalades, L	0.31	15	P	Pg	18 27 29.2	0.0
TSLK				S	Sg	18 27 33.3	-0.3
TSLK				AML	AML	18 27 34.9	
	comp=N,1920μm,0.4s						
TSLK				AML	AML	18 27 37.4	
	comp=E,1999μm,0.2s						
DMLN	Damoulianata-K	0.32	207	P	Pg	18 27 29.0	-0.3
DMLN				S	Sg	18 27 34.4	+0.7
VLS	Valsamata	0.35	175	P	Pg	18 27 29.5	-0.3
VLS				S	Sg	18 27 35.0	+0.4
VLS				AML	AML	18 27 35.4	
	comp=N,1304μm,0.2s						
VLS				AML	AML	18 27 35.8	
	comp=E,1718μm,0.1s						
KEF3	Kipouria, Keph	0.36	207	P	Pg	18 27 29.2	-0.9
KEF3				S	Sg	18 27 34.6	-0.4
PVO	Paravola	0.77	83	P	Pg	18 27 37.7	0.0
EFP	Efpalio	1.06	95	P	Pb	18 27 42.1	-0.9
DRO	Drossia	1.07	122	P	Pb	18 27 42.7	-0.5

*VAO **25** 18:47:55.5±0.2, 10°.38S×70°.59W, h660^{km}, mb4.7*

*NEIC **25** 18:47:55.6±1.7, 10°.34S±0°.09×70°.6W±0°.1, h643^{km}±6^{km}, Error ellipse: s-maj=16.1km s-min=12.9km az=79.0*

*BDF **25** 18:47:56±2.1, 10°.40S±0°.08×70°.5W±0°.1, h655^{km}±5^{km}, mb4.3/184(NEIC), Error ellipse: s-maj=15.4km s-min=10.1km az=66.0*

*IDC **25** 18:47:56.6±1.0, 10°.37S×70°.53W, h662^{km}±14^{km}, mb3.6/16, mb1 3.9/22, mb1mx3.8/30, mbtmp4.7/22, Error ellipse: s-maj=14.9km s-min=9.5km az=44.0*

ISC 25 18:47:55.8±0.5**, 10°.32S**±0°.05×**70°.55W**±0°.06**, h652**^{km}±5^{km}**, n353, **σ0^{s}.**92**/364**, mb4.2**/105**, Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CZSB	Cruzeiro do Su	3.34	320	eP	P	18 49 21.5	+0.2
CZSB	Cruzeiro do Su	3.34	320	P	P	18 49 21.2	-0.1
ETMB	Extrema	4.30	84	eP	P	18 49 28.1	+1.0
ETMB	Extrema	4.30	84	P	P	18 49 27.6	+0.5
ETMB				S	S	18 50 41.5	+0.1
TBTG	Tabatinga, AM	6.13	6	eP	P	18 49 42.0	+1.0
TBTG	Tabatinga, AM	6.13	6	P	P	18 49 41.9	+1.0
LPAZ	La Paz	6.38	159	S	S	18 51 11.6	0.0
	207nm,0.3s,baz=148,slow=0.0,SNR=9.9						
LPAZ	La Paz	6.38	159	eP	P	18 49 43.3	-0.3
NNA	Nana	6.40	254	P	P	18 49 43.1	0.0
	13nm,0.3s,baz=58,slow=6.0,SNR=41						
NNA				S	S	18 51 09.1	-1.7
	3.9nm,0.3s,baz=344,slow=22,SNR=8.9						
SAML	Samuel	7.39	80	P	P	18 49 52.2	+0.6
SAML				S	S	18 51 25.9	-0.4
AP01	Chacalluta	8.00	179	P	P	18 49 56.0	-1.0
PB16	IPOC Station P	8.03	173	P	P	18 49 57.1	-0.8
PB12	IPOC Station P	8.24	179	P	P	18 49 57.5	-1.8
ATAH	Atahualpa	8.38	292	P	P	18 50 03.0	+2.0
	16nm,0.3s,baz=110,slow=6.8,SNR=89						
ATAH				S	S	18 51 45.8	+2.4
	5.4nm,0.3s,baz=94,slow=19,SNR=3.2						
PB11	IPOC Station P	9.42	175	P	P	18 50 09.1	-1.2
PB08	IPOC Station P	9.85	172	P	P	18 50 13.7	-1.0
TA02	Huaiquique	9.90	178	P	P	18 50 13.0	-1.6
TA01	Diego Aracena	10.19	178	P	P	18 50 16.7	-0.8
VILB	Vilhena	10.47	105	eP	P	18 50 20.3	0.0
VILB	Vilhena	10.47	105	P	P	18 50 20.9	+0.6
PB01	IPOC Station P	10.71	175	P	P	18 50 22.1	-0.4
SIV	San Ignacio	10.81	122	P	P	18 50 23.9	+0.4
	35nm,0.3s,baz=296,slow=9.3,SNR=312						
SIV				S	S	18 52 25.1	+0.7
	baz=296,slow=16,SNR=9.4						
PTLC	Puerto Leguiza	11.25	338	eP	P	18 50 23.4	-4.3

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PB07  IPOC Station P   11.36 177  P     P      18 50 28.4 -0.3
PB09  IPOC Station P   11.48 174  P     P      18 50 30.0 +0.1
PB04  IPOC Station P   11.95 178  P     P      18 50 33.5 -0.7
MACA  Manacapuru-AM    12.10  55  eP    P      18 50 36.1 +0.5
MACA  Manacapuru-AM    12.10  55  P     P      18 50 36.1 +0.5
MACA                                    S      18 52 45.7 -0.3
PTLB  Pontes e Lacer   12.23 116  eP    P      18 50 37.7 +1.1
PTLB  Pontes e Lacer   12.23 116  P     P      18 50 37.6 +1.0
LVC   Limon Verde      12.32 173  P     P      18 50 38.9 +1.1
      12nm,0.3s,baz=32,slow=7.4,SNR=46
LVC                               S     S      18 52 50.7 +0.7
      1.8nm,0.3s,baz=109,slow=18,SNR=13
LVC   Limon Verde      12.32 173  eP    P      18 50 38.7 +0.9
LVC   Limon Verde      12.32 173  P     P      18 50 38.3 +0.5
PB06  IPOC Station P   12.35 176  P     P      18 50 37.9 +0.1
PB15  IPOC Station P   12.86 176  P     P      18 50 42.0 -0.6
OTAV  Otavalo          13.11 323  eP    P      18 50 47.3 +1.9
OTAV  Otavalo          13.11 323  eP    P      18 50 45.7 +0.4
OTAV  Otavalo          13.11 323  P     P      18 50 45.2 -0.2
PB10  IPOC Station P   13.12 180  P     P      18 50 45.5 +0.8
PAC1  Pacto, Paraso    13.34 322  eP    P      18 50 49.6 +2.5
PDRB  Porto dos Gac    13.63  97  eP    P      18 50 51.1 +1.6
SOTA  Rioblanco        13.77 334  eP    P      18 50 53.7 +2.2
PCON  Cinco Dias       13.85 335  eP    P      18 50 54.6 +2.3
MARP  Paez Belalcaza   14.14 337  eP    P      18 50 54.8 +0.1
PTGA  Pitinga          14.19  48  P     P      18 50 56.3 +1.5
      9.6nm,0.3s,baz=234,slow=12,SNR=99
PTGA                              S     S      18 53 22.8 +2.1
      1.5nm,0.3s,baz=222,slow=16,SNR=10.0
CLDB  Colider          14.51  94  eP    P      18 50 57.0 -0.7
YOTC  Yotoco, Valle    15.34 338  eP    P      18 51 06.0 +0.5
NPGB  Novo Progresso   15.36  79  eP    P      18 51 06.0 +0.4
SALV  Santo Antonio    15.49 113  eP    P      18 51 06.9 +0.3
ROSC  El Rosal         15.53 346  P     P      18 51 10.7 +3.3
      3.0nm,0.3s,baz=176,slow=19,SNR=4.4
ITTB  Itaituba         15.83  69  eP    P      18 51 11.2 +1.4
BOAV  Boa Vista        16.10  39  eP    P      18 51 14.2 +2.0
BOAV  Boa Vista        16.10  39  P     P      18 51 13.9 +1.7
PLMC  San Jos del P    16.17 339  eP    P      18 51 14.0 +1.1
GUY2C Guyana, Caldas   16.17 343  eP    P      18 51 15.4 +2.0
NORC  Norcasia         16.36 345  eP    P      18 51 14.7 +0.1
AC02  Maricunga        16.48 176  P     P      18 51 17.1 +1.0
AC02                              IAmb  IAmb   18 51 18.9
      comp=Z,18nm,1.1s
TAMC  Tame, Arauca     16.69 356  eP    P      18 51 19.0 +1.3
PP1B  Ponte de Pedra   16.83 117  eP    P      18 51 18.7 -0.2
CBOC  Ciudad Bolivar   16.98 341  eP    P      18 51 21.2 +0.8
BARC  Barichara        17.01 351  eP    P      18 51 20.9 +0.1
HELC  Santa Helena     17.14 343  eP    P      18 51 22.0 -0.1
AQDB  Aquidauana       17.50 127  eP    P      18 51 26.2 +1.3
AQDB  Aquidauana       17.50 127  P     P      18 51 25.6 +0.7
PAMC  Pamplona, Colo   17.68 353  eP    P      18 51 27.4 +0.3
DBBC  Dabeiba          18.13 342  eP    P      18 51 31.5 +0.7
ZARC  Zaragoza, Cauc   18.21 346  eP    P      18 51 31.1 -0.4
ZARC  Zaragoza, Cauc   18.21 346  P     P      18 51 30.3 -1.1
MALB  Monte Alegre     18.23  64  eP    P      18 51 32.8 +1.1
UREC  San Jos de Ur    18.63 344  eP    P      18 51 34.5 -0.8
SNDB  Serra Nova Dou   18.96  97  eP    P      18 51 39.4 +1.2
ARAG  Araguaiana, MT   19.02 108  eP    P      18 51 39.4 +0.7
SDV   Santo Domingo    19.08 360  eP    P      18 51 39.1 -0.4
SMLC  San Martn de     19.32 349  eP    P      18 51 40.4 -1.0
MOTC  Monteria, Cord   19.65 345  eP    P      18 51 44.1 -0.2
MOTC  Monteria, Cord   19.65 345  P     P      18 51 44.4 +0.1
MOTC                              IAmb  IAmb   18 51 48.0
      comp=Z,7.7nm,0.8s
CPUP  Villa Florida    20.24 144  P     P      18 51 49.2 -0.3
      comp=Z,4.9nm,0.3s,baz=334,slow=9.5,SNR=15
CPUP  Villa Florida    20.24 144  eP    P      18 51 49.0 -0.5
CPUP  Villa Florida    20.24 144  P     P      18 51 48.7 -0.9
CPUP                              IAmb  IAmb   18 51 50.0
      comp=Z,9.1nm,0.6s
SJCC  San Jacinto, C   20.61 347  eP    P      18 51 53.0  0.0
SJCC  San Jacinto, C   20.61 347  P     P      18 51 52.8 -0.2
MCPB  Macapa, AP       20.88  63  eP    P      18 51 56.5 +1.1
PRPB  Parauapebas      20.92  80  eP    P      18 51 56.4 +0.6
TRCB  Terra Rica       21.15 128  eP    P      18 51 57.5 -0.3
TRCB  Terra Rica       21.15 128  P     P      18 51 57.6 -0.1
ZON   Zonda            21.19 176  P     P      18 51 57.5 -0.5
ZON                               IAmb  IAmb   18 52 00.1
      comp=Z,11nm,1.2s
ITRB  Iturama          21.59 118  eP    P      18 52 02.3 +0.6
PCMB  Pacaembu         21.64 124  eP    P      18 52 01.7 -0.4
PEXB  Peixe            21.89  97  eP    P      18 52 05.6 +1.2
BDFB  Brasilia         22.57 106  P     P      18 52 11.4 +0.9
      comp=Z,17nm,0.5s,baz=272,slow=8.2,SNR=18
BDFB  Brasilia         22.57 106  P     P      18 52 10.7 +0.1
PTGB  Pitanga          22.66 132  eP    P      18 52 11.0 -0.2
SMTB  Santa Maria do   22.68  88  eP    P      18 52 12.8 +1.3
IPMB  Ipameri, GO      22.94 112  eP    P      18 52 13.9 +0.2
ITQB  Itaqui           23.23 148  eP    P      18 52 15.7 -0.3
ITQB  Itaqui           23.23 148  P     P      18 52 15.6 -0.4
TMAB  Tom-Au,PA,Br     23.65  72  eP    P      18 52 21.5 +1.5
BB19B Bebedouro        23.70 119  eP    P      18 52 20.5 +0.1
FRTB  Fartura          23.85 126  eP    P      18 52 21.4 -0.3
ITAB  Concordia        24.17 137  P     P      18 52 23.9 -0.5
RCLB  Rio Claro- Sao   25.10 121  eP    P      18 52 33.1 +0.4
SVB   Belmont          25.19  22  P     P      18 52 33.2 -0.3
SDBA  SAO DESIDERIO    25.22  97  eP    P      18 52 34.9 +1.0
TIJ01 Guaruva-PR       25.30 129  eP    P      18 52 33.9 -0.6
CPSB  Cacapava Do Su   25.55 144  eP    P      18 52 36.0 -0.5
VAO   Valinhos         25.82 122  eP    P      18 52 38.7 -0.3
JANB  Januaria         26.01 103  eP    P      18 52 41.3 +0.6
PET01 Itanhaem-SP      26.14 125  eP    P      18 52 41.2 -0.5
CNLB  Canela           26.38 139  eP    P      18 52 43.4 -0.4
PLTB  Pedras Altas     26.48 146  eP    P      18 52 44.3 -0.3
PLTB  Pedras Altas     26.48 146  P     P      18 52 43.7 -0.9
MC01  Montes Claros    26.62 107  eP    P      18 52 46.5 +0.5
BSCB  Bom Sucesso      26.95 116  eP    P      18 52 48.9  0.0
TER01 Tubaro-SC        27.05 135  eP    P      18 52 48.7 -0.9
PARB  Paraibuna        27.08 122  eP    P      18 52 50.2 +0.1
DIAM  Diamantina, MG   27.19 110  eP    P      18 52 51.6 +0.4
ROSB  Rosrio           27.24  76  eP    P      18 52 52.3 +0.8
MAN01 Angra dos Reis   28.30 119  eP    P      18 53 01.0 +0.4
PDPR  Patillas Dam,    28.51   9  P     P      18 53 02.1 -0.2
PDPR                              IAmb  IAmb   18 53 23.6
      comp=Z,8.5nm,1.0s
VAS01 Vassouras-RJ     28.54 118  eP    P      18 53 01.8 -0.8
TRQA  Tornquist        28.67 166  P     P      18 53 03.1 -0.4
CUPR  Culebra, Puert   28.92  10  P     P      18 53 05.0 -0.8
ANWB  Willy Bob        29.13  17  P     P      18 53 05.4 -2.2
SMRT  St. Maarten      29.14  15  P     P      18 53 06.2 -1.6
DUB01 Friburgo-RJ      29.41 117  eP    P      18 53 09.3 -0.8
NBPS  Pedro II - PI    29.44  81  eP    P      18 53 11.3 +0.8
SJMB  Sao Joao De Ma   29.58 110  eP    P      18 53 11.0 -0.6
NBPN  Ponto Novo - B   29.83  94  eP    P      18 53 14.5 +0.7
BSFB  Barra de Sao F   29.92 110  eP    P      18 53 14.0 -0.4
CAM01 Campos-RJ        29.96 116  eP    P      18 53 14.6 -0.1
PLCA  Paso Flores      30.29 180  P     P      18 53 17.6 +0.3
      comp=Z,2.0nm,0.5s,baz=359,slow=8.5,SNR=6.2
PLCA                              PcP   PcP    18 55 56.8 +0.8
      comp=Z,1.7nm,0.6s,baz=339,slow=4.0,SNR=3.6
PLCA  Paso Flores      30.29 180  eP    P      18 53 17.9 +0.6
PLCA  Paso Flores      30.29 180  IAmb  IAmb   18 53 32.3
      comp=Z,8.8nm,1.5s
RIB01 Linhares ES      30.45 111  eP    P      18 53 18.6 -0.3
ALF01 Guarapari-ES     30.45 113  eP    P      18 53 18.6 -0.3
GDU01 Guandu, BA       30.47  99  eP    P      18 53 19.9 +0.8
GUA01 Guaratinga, BA   30.51 105  eP    P      18 53 20.2 +0.7
CMC01 Camacan, BA      30.64 103  eP    P      18 53 21.2 +0.6
NBIT  Itapeh - BA      30.68 102  eP    P      18 53 22.2 +1.2
NBMO  Morrinhos-CE     31.06  79  eP    P      18 53 24.0 -0.2
NBMA  Muriti-CE        31.53  87  eP    P      18 53 29.1 +0.8
NBLA  Lagarto - SE     32.19  94  eP    P      18 53 33.7 -0.1
NBLV  Livramento - P   33.35  88  eP    P      18 53 44.4 +0.9
NBPA  Parau_RN         33.40  85  eP    P      18 53 43.8 -0.1
NBAN  Anadia - AL      33.75  92  eP    P      18 53 47.4 +0.6
NBRF  Rio Formoso -    34.96  90  eP    P      18 53 56.3 -0.5
NBPV  Pedro Velho      35.08  86  eP    P      18 53 58.7 +0.9
HODGE Hodges           45.68 346  P     P      18 55 20.3 -0.8
HODGE                             IAmb  IAmb   18 55 39.8
      comp=Z,23nm,1.4s
BIRD  Birdtown, Kers   45.70 349  P     P      18 55 21.1  0.0
BIRD                              IAmb  IAmb   18 55 22.4
      comp=Z,12nm,0.9s
W57A  Gilead           46.10 349  P     P      18 55 23.9 -0.3
W57A                              IAmb  IAmb   18 55 24.5
      comp=Z,14nm,0.7s
KMSC  Kings Mountain   46.35 348  P     P      18 55 26.3 +0.2
KMSC                              IAmb  IAmb   18 55 26.7
      comp=Z,6.6nm,0.7s
V55A  Taylorsville     47.02 348  P     P      18 55 31.5 +0.5
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V55A                              IAmb  IAmb   18 55 32.2
      comp=Z,9.5nm,0.6s
X48A  Hartselle        47.20 341  P     P      18 55 30.6 -1.8
X48A                              IAmb  IAmb   18 55 34.0
      comp=Z,5.9nm,0.8s
U56A  King             47.34 349  P     P      18 55 33.1 -0.3
T59A  Double "B" Far   47.50 352  P     P      18 55 34.1 -0.5
T59A                              IAmb  IAmb   18 55 35.0
      comp=Z,9.4nm,0.7s
SWET  Sewanee          47.57 343  P     P      18 55 34.6 -0.6
SWET                              IAmb  IAmb   18 55 35.1
      comp=Z,6.7nm,0.6s
U54A  Nelsons Funny    47.79 348  P     P      18 55 36.7 -0.1
U54A                              IAmb  IAmb   18 55 38.9
      comp=Z,25nm,1.2s
V48A  Smith Brothers   48.32 342  P     P      18 55 39.9 -0.8
V48A                              IAmb  IAmb   18 55 41.1
      comp=Z,7.3nm,0.8s
U49A  Red Boiling Sp   48.74 344  P     P      18 55 42.7 -1.1
U49A                              IAmb  IAmb   18 55 43.5
      comp=Z,6.3nm,0.9s
S54A  Dingess, Beckl   48.92 349  P     P      18 55 45.0 -0.1
S54A                              IAmb  IAmb   18 55 46.0
      comp=Z,16nm,0.8s
T50A  Nancy            48.97 345  P     P      18 55 44.6 -0.8
T50A                              IAmb  IAmb   18 55 45.3
      comp=Z,4.3nm,0.6s
WVT   Waverly          48.99 341  P     P      18 55 44.1 -1.5
WVT                               IAmb  IAmb   18 55 44.7
      comp=Z,6.3nm,0.8s
T47A  Sharon Grove     49.57 343  P     P      18 55 48.8 -0.9
T47A                              IAmb  IAmb   18 55 49.6
      comp=Z,13nm,0.6s
MIAR  Mount Ida        49.68 335  P     P      18 55 50.1 -0.6
MIAR                              IAmb  IAmb   18 55 50.9
      comp=Z,6.4nm,0.6s
WHAR  Wooly Hollow     49.81 337  P     P      18 55 50.4 -1.2
WHAR                              IAmb  IAmb   18 55 51.9
      comp=Z,12nm,1.2s
Q54A  Coxs Mills       49.98 350  P     P      18 55 52.0 -0.7
Q54A                              IAmb  IAmb   18 55 53.4
      comp=Z,15nm,1.1s
LCAR  Lake Charles     50.07 338  P     P      18 55 52.0 -1.4
LCAR                              IAmb  IAmb   18 55 53.4
      comp=Z,9.7nm,1.1s
FCAR  Ozark Folk Cen   50.27 337  P     P      18 55 53.9 -1.0
FCAR                              IAmb  IAmb   18 55 54.6
      comp=Z,12nm,0.5s
W39A  Magazine         50.33 335  P     P      18 55 55.0 -0.3
W39A                              IAmb  IAmb   18 55 56.1
      comp=Z,11nm,1.1s
MVL   Millersville     50.35 354  P     P      18 55 54.8 -0.6
PBMO  Poplar Bluff     50.45 339  P     P      18 55 55.1 -1.0
PBMO                              IAmb  IAmb   18 55 56.5
      comp=Z,37nm,1.4s
X37A  Clayton          50.49 333  P     P      18 55 56.6 +0.1
TXAR  Lajitas Array    50.74 322  P     P      18 55 58.9 +0.3
      comp=Z,0.7nm,0.4s,baz=148,slow=7.5,SNR=17
TXAR                              PcP   PcP    18 57 03.8 +0.3
      comp=Z,1.5nm,0.5s,baz=126,slow=5.3,SNR=15
TXAR  Lajitas Array    50.74 322  P     P      18 55 58.6 +0.1
TXAR                              PcP   PcP    18 57 03.0 -0.6
TX31  Lajitas Ar. Si   50.74 322  P     P      18 55 59.0 +0.5
TX31                              PcP   PcP    18 57 03.0 -0.6
TX32  Lajitas Array    50.74 322  P     P      18 55 58.5 -0.1
TX32                              PcP   PcP    18 57 03.4 -0.2
P52A  Corning          50.85 348  P     P      18 55 58.2 -0.8
P52A                              IAmb  IAmb   18 56 19.7
      comp=Z,9.8nm,0.9s
S44A  Carbondale       50.88 341  P     P      18 55 58.4 -0.8
SIUC  Southern Illin   50.89 341  P     P      18 55 58.6 -0.7
U40A  Yellville        50.96 337  P     P      18 55 58.7 -1.2
U40A                              IAmb  IAmb   18 56 00.6
      comp=Z,10nm,0.6s
MGMO  Mountain Grove   51.44 338  P     P      18 56 02.7 -0.7
MGMO                              IAmb  IAmb   18 56 03.6
      comp=Z,10nm,0.8s
FVM   French Village   51.53 340  P     P      18 56 03.2 -0.7
ACSO  Alum Creek Sta   51.60 348  P     P      18 56 03.0 -1.4
ACSO                              IAmb  IAmb   18 56 05.0
      comp=Z,19nm,1.2s
X34A  Smith Ranch, M   51.63 331  P     P      18 56 04.3 -0.4
X34A                              IAmb  IAmb   18 56 06.0
      comp=Z,14nm,0.5s
W35A  Tecumseh         51.64 332  P     P      18 56 04.5 -0.2
W35A                              IAmb  IAmb   18 56 05.3
      comp=Z,12nm,0.6s
N53A  Lisbon           51.75 350  P     P      18 56 05.1 -0.4
M57A  Sunshine Farm,   51.76 354  P     P      18 56 05.7 +0.2
M57A                              IAmb  IAmb   18 56 06.1
      comp=Z,6.4nm,0.7s
KSPA  Keystone Colle   51.84 355  P     P      18 56 05.1 -1.0
KSPA                              IAmb  IAmb   18 56 30.9
      comp=Z,13nm,1.3s
CCM   Cathedral Cave   51.88 339  P     P      18 56 05.6 -0.7
CCM                               IAmb  IAmb   18 56 06.5
      comp=Z,17nm,0.6s
Q44A  Meyer Farm, Va   51.91 342  P     P      18 56 05.2 -1.3
S39A  Bolivar          52.31 337  P     P      18 56 08.4 -1.1
S39A                              IAmb  IAmb   18 56 09.6
      comp=Z,14nm,0.7s
M53A  WI Miller and    52.34 350  P     P      18 56 09.3 -0.4
OK029 Liberty Lake     52.43 332  P     P      18 56 09.5 -0.9
R40A  Maddies Statio   52.45 338  P     P      18 56 09.4 -1.0
R40A                              IAmb  IAmb   18 56 10.3
      comp=Z,11nm,0.7s
ALLY  Alegheny Colle   52.46 351  P     P      18 56 09.6 -0.9
BINY  Binghamton       52.50 355  P     P      18 56 10.6 -0.2
BINY                              IAmb  IAmb   18 56 11.3
      comp=Z,8.9nm,0.6s
N49A  Columbus Grove   52.52 347  P     P      18 56 10.3 -0.5
N49A                              IAmb  IAmb   18 56 10.8
      comp=Z,18nm,0.8s
L56A  Greenwood        52.60 353  P     P      18 56 10.8 -0.6
L56A                              IAmb  IAmb   18 56 11.9
      comp=Z,8.1nm,0.7s
SFIN  Lafayette        52.72 344  P     P      18 56 10.6 -1.7
P43A  Skaggs, Pawnee   52.74 342  P     P      18 56 11.0 -1.5
N47A  Urbana           52.83 346  P     P      18 56 12.0 -1.1
N47A                              IAmb  IAmb   18 56 15.4
      comp=Z,14nm,1.1s
WVNY  West Valley, N   52.99 353  P     P      18 56 14.2 +0.1
WVNY                              IAmb  IAmb   18 56 14.8
      comp=Z,12nm,0.8s
P40A  Paris            53.47 339  P     P      18 56 16.5 -1.1
P40A                              IAmb  IAmb   18 56 18.0
      comp=Z,16nm,0.8s
L48A  N Adams          53.55 347  P     P      18 56 16.6 -1.5
J59A  Piesco           53.65 356  P     P      18 56 18.4 -0.4
J59A                              IAmb  IAmb   18 56 31.2
      comp=Z,15nm,1.3s
P38A  Dawn             54.09 338  P     P      18 56 21.1 -0.8
P38A                              IAmb  IAmb   18 56 21.7
      comp=Z,11nm,0.7s
J47A  Sunmer           54.87 347  P     P      18 56 26.1 -1.2
L42A  Oliver, Polo     54.95 343  P     P      18 56 25.8 -2.1
L42A                              IAmb  IAmb   18 56 27.5
      comp=Z,15nm,1.0s
DELO  Deloro Mine      54.96 354  P     P      18 56 27.3 -0.5
DELO                              IAmb  IAmb   18 56 34.4
      comp=Z,25nm,1.5s
FRNY  Flat Rock        54.97 357  P     P      18 56 28.0 +0.1
G62A  West of Eustis   55.28   0  P     P      18 56 30.3 +0.2
G65A  Princeton        55.33   3  P     P      18 56 30.7 +0.3
G65A                              IAmb  IAmb   18 56 31.2
      comp=Z,14nm,0.5s
PKME  Peaks-Kenny Pk   55.34   1  P     P      18 56 30.4  0.0
PKME                              IAmb  IAmb   18 56 31.3
      comp=Z,7.1nm,0.7s
MNTQ  Montreal, Queb   55.63 357  P     P      18 56 32.1 -0.3
MNTQ                              IAmb  IAmb   18 56 33.3
      comp=Z,15nm,0.8s
CBKS  Cedar Bluff      55.95 333  P     P      18 56 34.6 -0.2
CBKS                              IAmb  IAmb   18 56 36.1
      comp=Z,11nm,0.8s
JFWS  Jewell Farm      55.96 343  P     P      18 56 32.9 -1.8
JFWS                              IAmb  IAmb   18 56 34.5
      comp=Z,20nm,0.6s
F64A  Sherman          55.96   2  P     P      18 56 35.1 +0.4
SCIA  State Center     55.99 340  P     P      18 56 34.1 -0.9
ANMO  Albuquerque      56.41 325  P     P      18 56 38.9 +0.6
E62A  Clayton Lake     56.69   1  P     P      18 56 40.2 +0.5
E62A                              IAmb  IAmb   18 56 41.0
      comp=Z,17nm,1.0s
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T25A  Trinidad         56.91 328  P     P      18 56 41.8 +0.1
D62A  Allapoint, All   57.16   1  P     P      18 56 43.1 +0.3
D62A                              IAmb  IAmb   18 56 44.0
      comp=Z,16nm,0.6s
L34A  Svendsen Farm,   57.19 337  P     P      18 56 42.4 -0.7
BGNE  Belgrade         57.41 336  P     P      18 56 44.6 -0.1
SDCO  Great Sand Dun   57.94 328  P     P      18 56 48.9 +0.2
SDCO                              IAmb  IAmb   18 56 50.4
      comp=Z,7.0nm,0.6s
VLDQ  Val d'Or         58.50 355  P     P      18 56 51.4 -0.4
ECSD  EROS Data Cent   58.80 338  P     P      18 56 53.1 -0.8
X16A  Lo Mia Camp, P   59.02 321  P     P      18 56 55.3 -0.5
MVCO  Mesa Verde       59.19 325  P     P      18 56 56.7 -0.2
ISCO  Idaho Springs    59.54 329  P     P      18 56 59.8 +0.5
F36A  Milaca           59.62 342  P     P      18 56 58.1 -1.3
F36A                              IAmb  IAmb   18 56 59.3
      comp=Z,11nm,0.9s
E38A  The Farm, Brul   59.71 343  P     P      18 56 59.8 -0.1
E38A                              IAmb  IAmb   18 57 01.3
      comp=Z,12nm,0.9s
SMCO  Snowmass         59.78 328  P     P      18 57 00.4 -0.6
W13A  Hualapai Mount   60.99 320  P     P      18 57 08.2 -0.6
O20A  White River Ci   61.14 328  P     P      18 57 09.6 -0.1
KNB   Kanab            61.57 322  P     P      18 57 13.0 +0.5
KNB                               IAmb  IAmb   18 57 15.3
      comp=Z,18nm,0.9s
SRU   San Rafael Swe   61.65 325  P     P      18 57 13.3 +0.3
P18A  Preston Nutter   61.86 326  P     P      18 57 15.2 +0.7
Q16A  Castle Valley    61.88 325  P     P      18 57 16.0 +1.5
B35A  Bob, Littlefor   61.92 343  P     P      18 57 12.8 -1.5
P17A  Butcher Ranch,   62.03 326  P     P      18 57 15.8 +0.5
P17A                              IAmb  IAmb   18 57 16.8
      comp=Z,6.3nm,0.7s
RSSD  Black Hills      62.13 333  P     P      18 57 16.2 +0.2
RSSD                              IAmb  IAmb   18 57 17.7
      comp=Z,12nm,0.5s
RDMU  Red Mountain     62.16 327  P     P      18 57 16.7 +0.4
RDMU                              IAmb  IAmb   18 57 17.8
      comp=Z,8.2nm,0.7s
TMUT  Trail Mountain   62.17 325  P     P      18 57 16.9 +0.4
CCUT  Cedar City       62.25 322  P     P      18 57 17.2 +0.3
TCRU  Three Creeks R   62.41 324  P     P      18 57 18.0  0.0
AGMN  Agassiz Nation   62.52 341  P     P      18 57 17.3 -0.8
AGMN                              IAmb  IAmb   18 57 18.3
      comp=Z,16nm,0.7s
SHPR  Sheep Range      62.68 320  P     P      18 57 20.8 +1.1
E28A  Huff             62.73 337  P     P      18 57 19.7 +0.1
MDND  Maddock          63.40 339  P     P      18 57 23.9 +0.2
QSM   Queen of Sheba   63.44 319  P     P      18 57 25.4 +1.2
GWY   Greenwater Val   63.44 319  P     P      18 57 25.5 +1.0
GWY                               IAmb  IAmb   18 57 26.5
      comp=Z,9.1nm,0.6s
DUG   Dugway, Tooele   63.68 325  P     P      18 57 27.3 +1.4
BW06  Boulder Array    63.73 329  P     P      18 57 26.1 -0.2
PD31  Pinedale Array   63.73 329  P     P      18 57 25.8 -0.5
PDAR  Pinedale Array   63.73 329  P     P      18 57 26.6 +0.3
      comp=Z,2.8nm,0.4s,baz=121,slow=9.6,SNR=46
SPR3  Spring Creek 3   63.77 323  P     P      18 57 26.9 +0.2
HWUT  Hardware Ranch   63.96 327  P     P      18 57 27.7 +0.1
R11A  Troy Canyon, C   64.11 322  P     P      18 57 29.6 +0.9
ULM   Lac du Bonnet    64.25 342  P     P      18 57 28.4 -0.6
      comp=Z,15nm,0.3s,baz=151,slow=5.9,SNR=25
ULM   Lac du Bonnet    64.25 342  P     P      18 57 27.6 -1.4
ULM                               IAmb  IAmb   18 57 28.9
      comp=Z,29nm,1.1s
AHID  Auburn Hatcher   64.52 328  P     P      18 57 30.9 -0.3
LCH   Last Change Ra   64.70 320  P     P      18 57 33.1 +0.8
HVU   Hansel Valley    64.73 326  P     P      18 57 32.6 +0.1
REDW  Red Top Meadow   64.82 329  P     P      18 57 33.6 +0.5
LOHW  Long Hollow      64.87 329  P     P      18 57 33.1 -0.2
TPH   Tonopah          64.94 321  P     P      18 57 34.1 +0.2
SCHQ  Schefferville    64.98   2  P     P      18 57 33.0 -0.5
      comp=Z,4.6nm,0.9s,baz=219,slow=6.5,SNR=2.1
FLWY  Flagg Ranch      65.25 329  P     P      18 57 34.2 -1.6
FLWY                              IAmb  IAmb   18 57 38.0
      comp=Z,8.6nm,1.0s
RLMT  Red Lodge        65.30 331  P     P      18 57 36.8 +0.8
RLMT                              IAmb  IAmb   18 57 37.5
      comp=Z,5.7nm,0.6s
ELK   Elko             65.43 324  P     P      18 57 37.7 +0.8
YNR   Norris Junctio   65.70 330  P     P      18 57 39.8 +1.3
YNR                               IAmb  IAmb   18 57 40.9
      comp=Z,6.1nm,0.7s
YMR   Madison River    65.81 330  P     P      18 57 40.9 +1.7
YMR                               IAmb  IAmb   18 57 41.9
      comp=Z,11nm,0.8s
NVAR  Mina Array Bea   65.83 320  P     P      18 57 40.7 +1.2
      comp=Z,1.5nm,0.6s,baz=142,slow=6.4,SNR=12
NVAR  Mina Array Bea   65.83 320  P     P      18 57 40.4 +0.9
YHH   Holmes Hill      65.83 330  P     P      18 57 40.4 +0.9
LHV   Little Huntoon   65.85 320  P     P      18 57 40.8 +1.5
GCMT  Greycliff        65.99 331  P     P      18 57 40.8 +0.6
QLMT  Earthquake Lak   66.15 329  P     P      18 57 42.6 +1.3
BMN   Battle Mountai   66.40 323  P     P      18 57 42.7 -0.1
YERR  Yerington        66.75 320  P     P      18 57 46.6 +1.5
YERR                              IAmb  IAmb   18 57 47.4
      comp=Z,9.7nm,0.6s
BOZ   Bozeman (W)      66.80 330  P     P      18 57 45.6 +0.5
HLID  Hailey           66.83 327  P     P      18 57 46.5 +1.1
DLMT  Dillon           67.11 329  P     P      18 57 47.8 +0.7
PAHR  Pah Rah Range    67.27 321  P     P      18 57 48.6 +0.5
PAHR                              IAmb  IAmb   18 57 50.7
      comp=Z,7.7nm,0.8s
LRM   Limekiln Ridge   67.36 330  P     P      18 57 48.1 -0.6
MFID  Camas Ranch      67.50 326  P     P      18 57 50.7 +1.3
MFID                              IAmb  IAmb   18 57 52.0
      comp=Z,16nm,0.9s
DBIC  Dimbokro         67.55  78  P     P      18 57 50.0 -0.2
      comp=Z,4.7nm,0.5s,baz=277,slow=6.5,SNR=12
DBIC  Dimbokro         67.55  78  IAmb  IAmb   18 57 56.3
      comp=Z,10.0nm,1.2s
EGMT  Eagleton         67.67 333  P     P      18 57 50.8 +0.5
HRY   Holter Researc   67.69 331  P     P      18 57 51.0 +0.5
ORV   Oroville         68.51 320  P     P      18 57 56.6 +1.2
ORV                               IAmb  IAmb   18 57 58.5
      comp=Z,12nm,1.1s
PLID  Pearl Lake       68.69 327  P     P      18 57 56.9 +0.2
PLID                              IAmb  IAmb   18 57 58.3
      comp=Z,5.6nm,0.7s
MSO   Missoula         68.81 330  P     P      18 57 58.2 +1.0
MSO                               IAmb  IAmb   18 58 00.2
      comp=Z,8.9nm,1.1s
J08A  Circle Bar Ran   68.95 325  P     P      18 57 58.6 +0.5
MOD   Modoc Plateau    69.14 322  P     P      18 57 59.7 +0.4
BMO   Blue Mountains   69.25 326  P     P      18 58 00.5 +0.6
BMO                               IAmb  IAmb   18 58 01.6
      comp=Z,4.6nm,0.7s
WDC   Whiskeytown Da   69.75 320  P     P      18 58 02.0 -0.8
F10A  Beach Ranch, E   69.93 327  P     P      18 58 05.2 +1.4
F10A                              IAmb  IAmb   18 58 06.3
      comp=Z,9.3nm,0.9s
I07A  Izee             69.99 325  P     P      18 58 05.6 +1.3
I07A                              IAmb  IAmb   18 58 07.3
      comp=Z,5.0nm,0.6s
FFC   Flin Flon        70.00 341  P     P      18 58 04.0 +0.1
FFC                               IAmb  IAmb   18 58 04.7
      comp=Z,5.8nm,0.8s
WALA  Waterton Lakes   70.34 331  P     P      18 58 06.4 +0.2
WALA                              IAmb  IAmb   18 58 07.6
      comp=Z,6.4nm,0.8s
KOWA  Kowa             70.41  71        P      18 58 07.4 +0.2
KOWA                              IAmb  IAmb   18 58 08.4
      comp=Z,9.0nm,0.8s
G08A  Pilot Rock       70.43 326  P     P      18 58 07.8 +0.9
G08A                              IAmb  IAmb   18 58 09.0
      comp=Z,6.1nm,0.9s
E09A  Wood Farm, Sta   70.76 327  P     P      18 58 08.3 -0.3
E09A                              IAmb  IAmb   18 58 10.5
      comp=Z,7.6nm,0.8s
VNA3  Neumayer Olymp   71.13 163  P     P      18 58 10.9 +0.5
VNA1  Neumayer--Stat   71.31 162  P     P      18 58 12.6 +1.2
D08A  Wollman Farm,    71.52 327  P     P      18 58 14.2 +1.3
D08A                              IAmb  IAmb   18 58 15.4
      comp=Z,10nm,0.8s
C09A  Chrisman Ranch   71.65 328  P     P      18 58 14.8 +1.0
C09A                              IAmb  IAmb   18 58 15.8
      comp=Z,7.7nm,0.8s
VNA2  Neumayer--Watz   71.69 162  P     P      18 58 14.0 +0.4
      baz=294,slow=6.3
H04A  Detroit Lake     71.89 324  P     P      18 58 15.6 +0.3
H04A                              IAmb  IAmb   18 58 20.7
      comp=Z,11nm,0.9s
B08A  Colville Reser   72.56 328  P     P      18 58 19.2 +0.3
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EDM	Edmonton	73.03	335	P	P	18 58 21.3	-0.3
SNAA	Sanae	73.32	162	P	P	18 58 23.3	+0.3
SNAA	Sanae	73.32	162		P	18 58 22.2	-0.8
SNAA				IAmb	IAmb	18 58 24.4	
	comp=Z,6.1nm,0.8s						
TORD	Torodi Ar. Bea	75.40	73	P	P	18 58 35.5	0.0
	comp=Z,5.8nm,0.3s,baz=241,slow=4.6,SNR=82						
TORD				pP	pP	19 00 47.8	0.0
	comp=Z,1.9nm,0.7s,baz=264,slow=5.8,SNR=6.9						
TORD				S	S	19 07 21.9	-3.2
	comp=Z,0.3nm,0.6s,baz=261,slow=12,SNR=4.1						
TORD	Torodi Ar. Bea	75.40	73	P	P	18 58 35.3	-0.3
TORD				IAmb	IAmb	18 58 36.3	
	comp=Z,9.2nm,0.8s						
TORD				pP	pP	19 00 47.2	-0.6
DY2G	Dye2	78.64	10	*i* P	P	18 58 51.4	-0.8
DY2G				IAmb	IAmb	18 58 52.2	
	comp=Z,15nm,0.5s						
ESDC	Sonseca Array	79.13	46	P	P	18 58 56.4	+1.2
	comp=Z,1.1nm,0.5s,baz=255,slow=5.8,SNR=12						
ESDC	Sonseca Array	79.13	46	IAmb	IAmb	18 58 58.0	
	comp=Z,2.2nm,1.1s						
QSPA	South Pole Qui	79.80	180		P	18 58 58.9	+0.5
QSPA				IAmb	IAmb	18 59 00.0	
	comp=Z,12nm,0.8s						
YKA	Yellowknife Ar	80.17	341	P	P	18 58 60.0	0.0
	comp=Z,1.8nm,0.4s,baz=134,slow=5.2,SNR=41						
YKA	Yellowknife Ar	80.17	341	P	P	18 58 59.4	-0.6
ICESG	Greenland Ices	82.13	11	*i* P	P	18 59 09.4	-0.9
ICESG				IAmb	IAmb	18 59 10.4	
	comp=Z,12nm,0.6s						
DLBC	Dease Lake	83.60	333	P	P	18 59 17.5	0.0
DLBC				IAmb	IAmb	18 59 19.4	
	comp=Z,5.6nm,0.8s						
SUMG	Summit	85.33	9	*i* P	P	18 59 25.2	-0.9
SUMG				IAmb	IAmb	18 59 26.6	
	comp=Z,11nm,0.5s						
SUMG	Summit	85.33	9	P	P	18 59 25.5	-0.5
TULEG	Thule	86.71	0	*i* P	P	18 59 31.3	-0.7
TULEG				IAmb	IAmb	18 59 32.4	
	comp=Z,9.0nm,0.6s						
TULEG	Thule	86.71	0	P	P	18 59 31.8	-0.2
VNDA	Vanda	87.53	190	P	P	18 59 37.4	+1.5
	comp=Z,2.3nm,0.6s,baz=140,slow=4.1,SNR=17						
KEST	Kesra	87.88	53	P	P	18 59 38.7	+0.3
	comp=Z,2.9nm,0.5s,baz=248,slow=7.8,SNR=5.2						
NEEM	North Greenlan	88.33	4	*i* P	P	18 59 39.1	-0.7
NEEM				IAmb	IAmb	18 59 40.5	
	comp=Z,17nm,0.6s						
A36M	Sachs Harbour	89.56	345	P	P	18 59 45.0	-0.3
INK	Inuvik	89.95	341	P	P	18 59 46.9	-0.2
ILAR	Eielson Array	93.51	335	P	P	19 00 03.2	-0.4
	comp=Z,0.4nm,0.4s,baz=144,slow=3.7,SNR=16						
GERES	GERESS Array B	93.93	41	P	P	19 00 05.8	-0.2
	comp=Z,0.6nm,0.5s,baz=264,slow=2.4,SNR=6.8						
NEA2	Nenana	94.37	335	P	P	19 00 07.0	-0.5
ARCES	ARCESS Array B	101.72	21	P	Pdif	19 00 40.3	+0.1
	comp=Z,5.5nm,1.1s,baz=267,slow=4.5,SNR=4.4						
ARCES				PKKPbc	PKKPbc	19 16 43.1	-3.1
	comp=Z,0.5nm,0.4s,baz=104,slow=1.9,SNR=5.3						
KBZ	Khabaz	113.98	47	PKP	PKiKP	19 05 23.0	+0.2
	comp=Z,1.1nm,0.6s,baz=215,slow=7.9,SNR=4.8						
ABKAR	Akbulak array	123.58	37		PKiKP	19 05 41.3	0.0
ABKAR	Akbulak array	123.58	37		PKiKP	19 05 41.0	-0.3
ZAA0	Zalesovo Array	132.25	19		PKPdf	19 05 57.2	-0.2
ZALV	Zalesovo Beam	132.25	19	PKhKP	PKPpre	19 05 49.6	
	comp=Z,0.8nm,0.5s,baz=263,slow=1.9,SNR=5.0						
ZALV				PKP	PKiKP	19 05 57.9	-0.7
	comp=Z,6.3nm,0.5s,baz=280,slow=2.9,SNR=35						
ZALV	Zalesovo Beam	132.25	19		PKPdf	19 05 57.1	-0.3
KURK	Kurchatov	132.42	26		PKPdf	19 05 57.4	-0.4
MKAR	Makanchi Array	136.96	27	PKhKP	PKPpre	19 05 56.0	
	comp=Z,0.3nm,0.3s,baz=339,slow=3.6,SNR=7.6						
MKAR				PKP	PKPdf	19 06 06.6	+0.1
	comp=Z,1.3nm,0.4s,baz=318,slow=2.2,SNR=14						
MKAR	Makanchi Array	136.96	27		PKPdf	19 06 06.2	-0.3
WRA	Warramunga Arr	141.21	219	PKhKP	PKPpre	19 06 10.4	
	comp=Z,5.3nm,0.7s,baz=136,slow=3.4,SNR=1.5						
SONM	Songino Array	142.52	3	PKP	PKPdf	19 06 14.7	-1.9
	comp=Z,2.7nm,0.3s,baz=337,slow=2.4,SNR=33						
MJAR	Matsushiro Arr	143.16	320	PKP	PKPbc	19 06 16.7	+0.1
	comp=Z,12nm,0.7s,baz=54,slow=3.0,SNR=5.2						
MAT	Matsushiro	143.16	320	PKP	PKPab	19 06 16.2	-0.1
FITZ	Fitzroy Crossi	147.55	210	PKPbc	PKPbc	19 06 29.9	+0.3
	comp=Z,40nm,1.0s,baz=183,slow=0.7,SNR=12						
KSRS	Korea Array	148.27	331	PKPbc	PKiKP	19 06 31.1	-0.8
	comp=Z,11nm,0.6s,baz=24,slow=2.3,SNR=16						

BJI **25** *18:57:39.3±0.0, 1°.20N×126°.29E, h49^{km}, mB5.6/59, mb5.5/82, Ms5.0/84, Ms7 5.0/76*

IDC **25** *18:57:40.0±2.2, 1°.44N×126°.23E, h23^{km}±14^{km}, mb5.3/29, mb1 5.3/32, mb1mx5.3/34, mbtmp5.4/32, ML4.7/1, MS4.7/24, Ms1 4.7/24, ms1mx4.6/37, Error ellipse: s-maj=13.2km s-min=8.9km az=74.0*

MOS **25** *18:57:40.1±1.1, 1°.43N×126°.19E, h37^{km}, mb6.0/49, MS4.9/33, Error ellipse: s-maj=7.2km s-min=3.9km az=115.5*

NEIC **25** *18:57:41.6±2.0, 1°.43N±0°.06×126°.29E±0°.06, h33^{km}±3^{km}, mb5.7/220, Ms_20 5.0/60, Mww5.7, Mwc5.7(GCMT), Error ellipse: s-maj=8.8km s-min=8.5km az=187.0*

DJA **25** *18:57:43.9±0.2, 2°N±2°×12°6E±°, h66^{km}±2^{km}, M5.5/105, mB5.9/96, mb5.6/105, MLv5.8/20, Mw(mB)5.5/96, MwMwp5.5/37, Mwp5.6/37*

GCMT **25** *18:57:44.6±0.1, 1°.51N±0°.01×126°.38E±0°.01, h36^{km}, MW5.7/131, Moment Tensor Solution. s124,c220; s131,c268; Duration: 1^{s}7 Moment tensor: Scale 10^{17} Nm; M_{rr}3.55±.07; $M_{\theta\theta}$0.64±.05; $M_{\phi\phi}$-4.19±.05; $M_{r\theta}$-0.74±.07; $M_{\theta\phi}$-1.91±.04; $M_{\phi r}$0.83±.07; Best double couple: $M_0$4.41500×10^{17} NP1:ϕ_s219.00000°,δ45.00000°,λ119.00000°. NP2:ϕ_s1.00000°,δ52.00000°,λ64.00000°. Principal axes: T 3.9410, Plg70.0000°, Azm209.0000°; N 0.9500, Plg20.0000°, Azm17.0000°; P -4.8900, Plg4.0000°, Azm109.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC **25** *18:57:45, 1°.52N×126°.37E, h40^{km}, Moment Tensor Solution. Duration: 6^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}3.92; $M_{\theta\theta}$-0.57; $M_{\phi\phi}$-3.36; $M_{r\theta}$-0.72; $M_{\theta\phi}$-1.16; $M_{\phi r}$0.32; Fault plane solution: $M_0$3.93000×10^{17} NP1: ϕ_s210.00000°,δ45.00000°,λ105.00000°. NP2:ϕ_s9.00000°, δ46.00000°,λ75.00000°. Principal axes: T 4.0709, Plg79.0000°, Azm202.0000°; N -0.2943, Plg11.0000°, Azm20.0000°; P -3.7766, Plg0.0000°, Azm110.0000°;*

NEIC **25** *18:57:46, 1°.48N×126°.39E, h36^{km}, Moment Tensor Solution. Duration: 3^{s}4 Moment tensor: Scale 10^{17}Nm; M_{rr}3.14; $M_{\theta\theta}$1.11; $M_{\phi\phi}$-4.24; $M_{r\theta}$-0.43; $M_{\theta\phi}$-2.09; $M_{\phi r}$0.87; Fault plane solution: $M_0$4.46000×10^{17} NP1: ϕ_s221.00000°,δ45.00000°,λ123.00000°. NP2: ϕ_s359.00000°,δ54.00000°,λ62.00000°. Principal axes: T 3.4810, Plg67.0000°, Azm210.0000°; N 1.5399, Plg22.0000°, Azm17.0000°; P -5.0209, Plg5.0000°, Azm109.0000°;*

KLM **25** *18:57:46, 1°.37N×126°.39E, h80^{km}, mb5.7*

ISC 25 18:57:42.8±0.3, **1°.44N**±0°.03×**126°.31E**±0°.04, **h46**^{km}±2^{km}, **h47**^{km}**:pP-P, n1193, σ1^{s}53**/1267, **mb5.7**/281, **MS4.9**/106, **55C-47D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.25	122	P	Pn	18 58 02.5	-1.4
TNTI	Ternate	1.25	122	Pn	Pn	18 58 02.1	-1.8
SGSI	Sangihe	2.37	341	P	Pn	18 58 19.2	0.0
LBMI	Labuha	2.38	150	P	Pn	18 58 19.2	-0.2
KMSI	Cibinong	2.48	250	P	Pn	18 58 22.1	+1.4
GTOI	Gorontalo	3.39	256	P	Pn	18 58 35.5	+2.3
SANI	Sanana	3.48	185	P	Pn	18 58 34.5	0.0
SANI	Sanana	3.48	185	P	Pn	18 58 35.0	+0.5
LUWI	Luwuk	4.31	235	P	Pn	18 58 48.3	+2.5
LUWI	Luwuk	4.31	235		Pn	18 58 45.5	-0.4
LUWI	Luwuk	4.31	235	P	Pn	18 58 49.0	+3.2
MRSI	Marisa	4.47	258	P	Pn	18 58 49.8	+1.8
APSI	Ampana	5.21	243	P	Pn	18 59 01.0	+2.8
	24nm25µm57µm3µm,0.5s						
MSAI	Masohi	5.43	151	P	Pn	18 59 03.6	+2.4
	0.9nm3µm261nm,0.6s						
AAI	Ambon	5.43	160	P	Pn	18 59 02.6	+1.3
	4.8nm27µm13µm1µm,1.1s						
SWI	Sorong	5.46	115	P	Pn	18 59 01.5	-0.1
	1.8nm56µm8µm419nm,1.0s						
SIJI	Sorong	5.46	115	Pn	Pn	18 59 00.7	-1.1
	22nm,0.3s,baz=318,slow=9.5,SNR=168						
SIJI				LR	LR	19 01 42.1	
	comp=Z,9µm,21.1s,baz=259,slow=44						
TOLI2	Tolitoli	5.53	267	Pn	Pn	18 59 02.3	-0.4
TOLI2	Tolitoli	5.53	267	P	Pn	18 59 03.8	+1.1
DAV	Davao City (W)	5.64	353	Pn	Pn	18 59 05.2	+1.0
	39nm,0.3s,baz=117,slow=2.3,SNR=10.0						
DAV				Sn	Sn	19 00 06.9	-0.9
	160nm,0.3s,baz=105,slow=20,SNR=3.8						
DAV				LR	LR	19 01 27.0	
	comp=Z,12µm,20.8s,baz=82,slow=40						
DAV	Davao City (W)	5.64	353	Pn	Pn	18 59 03.3	-0.9
DAV	Davao City (W)	5.64	353	P	Pn	18 59 07.6	+3.4
MPSI	Mapaga	6.50	260	P	Pn	18 59 17.1	+1.1
	6.4nm64µm14µm848nm,1.2s						
FAKI	Fak Fak	7.35	126	P	Pn	18 59 27.8	+0.2
	4.4nm39µm11µm1µm,0.8s						
FAKI	Fak Fak	7.35	126	Pn	Pn	18 59 27.3	-0.3
FAKI	Fak Fak	7.35	126	P	Pn	18 59 28.6	+1.0
TTSI	Tana Toraja	7.87	236	P	Pn	18 59 36.7	+2.0
	4.5nm21µm14µm1µm,1.0s						
SPSI	Sidrap Palu	8.45	231	P	Pn	18 59 45.4	+2.6
	19µm13µm923nm,0.5s						
BNSI	Bone	8.48	227	P	Pn	18 59 45.0	+1.8
	14µm10µm1000nm,0.8s						
MYLDM	Lahad Datu	8.63	296	Pn	Pn	18 59 46.9	+1.6
SGKI	Sangatta, Kali	8.92	257	P	Pn	18 59 48.6	-0.6
	34µm10µm634nm,1.1s						
BKSI	Bulukumba	9.12	223	P	Pn	18 59 53.5	+1.6
	7µm565nm,0.7s						
KAPI	Kappang	9.16	226	Pn	Pn	18 59 54.0	+1.6
	43nm,0.3s,baz=48,slow=4.9,SNR=129						
KAPI				Sn	Sn	19 01 35.2	+0.9
	14nm,0.3s,baz=45,slow=20,SNR=1.3						
KAPI	Kappang	9.16	226	P	Pn	18 59 55.1	+2.6
KAPI				P	Pn	18 59 55.1	+2.6
KAPI	Kappang	9.16	226	P	Pn	18 59 55.6	+3.1
SMKI	Samarinda	9.29	258	P	Pn	19 00 01.4	+7.2
BSSI	Bau Bau, Buton	9.51	218	P	Pn	18 59 59.1	+1.9
	5µm476nm,0.6s						
BKB	Balikpapan	9.78	254	P	Pn	19 00 01.7	+0.7
	32µm9µm478nm,1.2s						
BKB	Balikpapan	9.78	254		Pn	19 00 01.6	+0.6
BKB	Balikpapan	9.78	254	P	Pn	19 00 01.6	+0.6
I39PW	PALAU INFRASON	10.21	53	*i*		19 45 50.0	
	baz=228,slow=311,SNR=4.7						
SRPI	Serui, Papua	10.46	108	P	Pn	19 00 13.0	+2.7
	15µm9µm215nm,1.5s						
SAUI	Saumlaki	10.60	152	P	Pn	19 00 11.6	-0.6
	14µm5µm381nm,1.1s						
SAUI	Saumlaki	10.60	152		Pn	19 00 10.2	-2.0
MMRI	Maumere	10.80	202	P	Pn	19 00 17.5	+2.6
	6µm477nm,1.0s						
MMRI	Maumere	10.80	202	Pn	Pn	19 00 16.5	+1.7
KKM	Kota Kinabalu	11.06	295	Pn	Pn	19 00 20.4	+1.8
KKM	Kota Kinabalu	11.06	295	P	Pn	19 00 22.0	+3.4
EDFI	Ende, Flores	11.12	204	P	Pn	19 00 21.0	+1.7
	2µm125nm,0.8s						
KBKI	Kotabaru	11.17	245	P	Pn	19 00 22.1	+2.1
	3µm244nm,1.5s						
SOEI	Soe	11.30	190	P	Pn	19 00 27.0	+5.1
	9µm16µm2µm,0.9s						
SOEI	Soe	11.30	190	Pn	Pn	19 00 26.3	+4.4
SOEI	Soe	11.30	190	P	Pn	19 00 25.2	+3.3
MTKI	Muara Teweh, K	11.65	258	P	Pn	19 00 27.0	+0.4
	12µm3µm235nm,1.8s						
BATI	Baumata	11.86	193	Pn	Pn	19 00 32.1	+2.7
	9.5nm,0.3s,baz=28,slow=1.3,SNR=42						
BATI				LR	LR	19 06 17.1	
	comp=Z,3µm,20.1s,baz=15,slow=44						
BATI	Baumata	11.86	193	P	Pn	19 00 32.9	+3.4
	4µm422nm,0.9s						
BBKI	Banjar Baru	12.45	247	P	Pn	19 00 41.2	+3.7
	13µm7µm227nm,1.7s						
SMPI	Sarmi	12.86	105	P	Pn	19 00 45.2	+2.1
	12µm8µm169nm,1.1s						
BASI	Baing, Sumba	12.91	206	P	Pn	19 00 44.8	+1.1
	7µm625nm,1.6s						
WBSI	Waikabubak, Su	12.98	212	P	Pn	19 00 47.5	+2.7
	4µm414nm,0.8s						
PLAI	Plampang	13.28	220	P	Pn	19 00 49.5	+0.7
	16µm863nm,0.9s						
PLAI	Plampang	13.28	220	P	Pn	19 00 50.9	+2.1
TWSI	Taliwang, Sumb	13.80	223	P	Pn	19 00 58.2	+2.3
	8µm915nm,1.3s						
SBUM	Sibu	14.11	274	P	Pn	19 01 03.0	+2.8
SBUM	Sibu	14.11	274	Pn	Pn	19 01 01.4	+1.2
DRS	Darwin Rock St	14.51	162	P	Pn	19 01 04.3	-1.2
	515nm,0.8s						
SRBI	Singaraja	14.55	229	P	Pn	19 01 07.5	+1.4
	8µm552nm,1.4s						
STKI	Sintang	14.89	265	P	Pn	19 01 12.5	+2.0
	11µm435nm,2.0s						
JAY	Jayapura	14.92	105	Pn	Pn	19 01 10.3	-0.7
	baz=293,slow=11,SNR=1.2						
JAY				LR	LR	19 06 31.8	
	comp=Z,5µm,19.9s,baz=288,slow=36						
JAY	Jayapura	14.92	105	P	Pn	19 01 11.0	+0.1
	7µm2µm108nm,0.8s						
KMMI	Kalianget	14.92	235	P	Pn	19 01 12.3	+1.4
	7µm625nm,1.1s						
DNP	Denpasar	14.94	228	P	P	19 01 17.6	+1.7
	42µm4µm,1.3s						
MTN	Manton Dam	14.97	161	Pn	Pn	19 01 09.9	-1.6
IGBI	Denpasar	15.08	227	P	P	19 01 17.3	-0.2
	13µm746nm,1.3s						
ABJI	Asem Bagus	15.14	233	P	P	19 01 15.9	-2.2
	7µm635nm,1.1s						
PBKI	Pangkalan Bun	15.20	254	P	Pn	19 01 15.8	+1.2
	3µm203nm,1.2s						
KDU	Kakadu	15.31	157	P	Pn	19 01 12.8	-3.1
	baz=15,SNR=269						
BWJI	Bawean	15.43	242	P	P	19 01 19.7	-1.7
	5µm396nm,1.5s						
JAGI	Jajag, Banyuwa	15.61	231	P	Pn	19 01 21.6	+1.7
	7µm865nm,1.2s						
JAGI	Jajag, Banyuwa	15.61	231		Pn	19 01 21.3	+1.4
JAGI				IAmb	IAmb	19 01 29.6	
	comp=Z,1µm,1.2s						
JAGI	Jajag, Banyuwa	15.61	231	P	Pn	19 01 21.2	+1.4
BLJI	Banyuglugur	15.62	234	P	P	19 01 25.1	+1.7
	comp=Z,6µmcomp=Z,4µmcomp=Z,263nm,0.9s						
KSM	Kuching	15.99	270	P	P	19 01 30.0	+2.4
KSM	Kuching	15.99	270		Pn	19 01 25.1	+0.4
KSM				IAmb	IAmb	19 01 32.5	
	comp=Z,803nm,1.2s						
KSM	Kuching	15.99	270	P	P	19 01 26.3	-1.3
GMJI	Gumukmas	16.05	233	P	P	19 01 28.2	0.0
	comp=Z,8µmcomp=Z,553nm,1.2s						
MMPI	Merauke	17.14	125	P	P	19 01 42.5	+2.2
	comp=Z,13µmcomp=Z,1µm,0.8s						
KNRA	Kununurra	17.18	172	P	Pn	19 01 39.1	-0.5
	baz=17,SNR=234						
KNRA	Kununurra	17.18	172	Pn	Pn	19 01 38.2	-1.4
KNRA				IAmb	IAmb	19 01 42.2	
	comp=Z,898nm,1.0s						
KNRA	Kununurra	17.18	172	P	Pn	19 01 38.7	-0.9
	comp=Z,1µm,0.9s						
NGJI	Ngawi	17.20	239	P	P	19 01 43.3	+2.3
PCJI	Pacitan	17.86	237	P	P	19 01 50.2	+1.9
	comp=Z,9µmcomp=Z,641nm,1.4s						
SMRI	Semarang	17.94	242	P	P	19 01 51.3	+2.2
SMRI	Semarang	17.94	242		P	19 01 49.4	+0.3
UGM	Wanagama	18.28	239	P	Pn	19 01 55.3	+2.1
	comp=Z,6µmcomp=Z,438nm,1.5s						
UGM	Wanagama	18.28	239		P	19 01 52.7	-0.2
UGM				IAmb	IAmb	19 02 14.2	
	comp=Z,466nm,1.1s						
UGM	Wanagama	18.28	239	P	Pn	19 01 54.8	+1.6
YOGI	Yogyakarta	18.43	240	P	Pn	19 01 54.9	-0.1
	comp=Z,5µmcomp=Z,312nm,1.5s						
FITZ	Fitzroy Crossi	19.42	182	P	P	19 02 04.6	-0.8
	baz=19,slow=9.6						
CMJI	Cimerak	20.03	243	P	P	19 02 10.3	-1.7
	comp=Z,2µmcomp=Z,170nm,1.0s						
LEM	Lembang	20.38	246	P	P	19 02 14.7	-1.3
	comp=Z,64nm,0.9s,baz=54,slow=8.2,SNR=12						
LEM				LR	LR	19 11 34.9	
	comp=Z,4µm,19.7s,baz=71,slow=41						
LEM	Lembang	20.38	246	P	P	19 02 15.8	-0.2
	comp=Z,2µmcomp=Z,109nm,1.0s						
PPBI	Pangkal Pinang	20.48	260	P	P	19 02 14.2	-2.8
	comp=Z,9µmcomp=Z,5µmcomp=Z,111nm,1.3s						
CNJI	Cibinong	21.01	245	P	P	19 02 20.4	-2.3
	comp=Z,3µmcomp=Z,287nm,1.1s						
DBJI	Dramaga	21.07	248	P	P	19 02 21.4	-2.0
	comp=Z,3µmcomp=Z,70nm,1.5s						
MANU	Manus Island	21.34	99	P	P	19 02 22.9	-3.3
DSRI	Dabo	21.81	265	P	P	19 02 32.1	+0.8
	comp=Z,5µmcomp=Z,3µmcomp=Z,195nm,1.5s						
TWG	Pinlang	21.86	347	IAMs_20	IAMs_20	19 11 21.8	
	comp=Z,5µm,21.0s						
GUMO	Guam	21.98	56	P	P	19 02 33.8	+0.7
	comp=Z,67nm,0.6s,baz=202,slow=20,SNR=6.7						
GUMO				LR	LR	19 10 08.6	
	comp=Z,2µm,21.0s,baz=230,slow=34						
GUMO	Guam	21.98	56	P	P	19 02 31.1	-2.0
GUMO				IAmb	IAmb	19 02 45.9	
	comp=Z,467nm,1.4s						
GUMO	Guam	21.98	56	P	P	19 02 34.3	+1.2
KLI	Kotabumi	22.32	254	P	P	19 02 36.3	-0.5
	comp=Z,8µmcomp=Z,3µmcomp=Z,192nm,0.5s						
YULB	Yu-li	22.36	348		P	19 02 32.7	-4.4
KLSI		22.40	254	P	P	19 02 35.7	-1.9
	comp=Z,2µmcomp=Z,1µmcomp=Z,62nm,1.6s						
TPUB	Ta-pu	22.42	346	IAMs_20	IAMs_20	19 12 06.9	
	comp=Z,6µm,22.0s						
TPUB	Ta-pu	22.42	346	P	P	19 02 39.2	+1.4
MYKOM	Kota Tinggi	22.45	271	P	P	19 02 37.5	-0.7
WB0	Warramunga Arr	22.52	160	P	P	19 02 37.3	-1.5
WRAB	Tennant Creek	22.66	160	⇓*e* P	P	19 02 38.9	-1.4
WRAB				pmax	pmax		
	comp=Z,358nm,0.8s						
WRAB				MLR	MLR		
	comp=Z,3µm,22.0s						
WRAB	Tennant Creek	22.66	160	P	P	19 02 39.7	-0.6
COEN	Coen	22.66	133	P	P	19 02 39.6	-0.8
	comp=Z,160nm,1.0s						
WRA	Warramunga Arr	22.66	160	P	P	19 02 38.6	-1.7
	comp=Z,595nm,0.7s,baz=338,slow=10,SNR=488						
WRA				PcP	PcP	19 06 32.7	+0.8
	comp=Z,7.5nm,0.5s,baz=338,slow=1.9,SNR=2.8						
WRA				S	S	19 06 43.6	-1.9
	comp=Z,68nm,1.0s,baz=335,slow=20,SNR=8.0						
WRA				PKiKP	PKiKP	19 14 16.3	-0.9
	comp=Z,1.0nm,0.8s,baz=312,slow=1.2,SNR=1.9						
WRA				P3KPbc		19 36 09.7	
	comp=Z,0.3nm,0.6s,baz=153,slow=3.1,SNR=1.8						
WRA	Warramunga Arr	22.66	160	P	P	19 02 37.7	-2.6
WB2	Warramunga Arr	22.66	160	P	P	19 02 38.1	-2.3
WR0	Warramunga Arr	22.75	160	P	P	19 02 39.1	-2.1
WR0				IAmb	IAmb	19 02 44.8	
	comp=Z,344nm,0.8s						
SSLB	Suanglung	22.82	347	P	P	19 02 39.3	-2.6
SSLB				IAmb	IAmb	19 02 50.8	
	comp=Z,154nm,0.7s						
SSLB				IAMs_20	IAMs_20	19 12 36.3	
	comp=Z,5µm,21.0s						
SSLB	Suanglung	22.82	347	P	P	19 02 40.6	-1.3
KASI	Kota Agung	22.85	252	P	P	19 02 38.4	-4.0
	comp=Z,2µmcomp=Z,208nm,0.9s						
JMBI	JAMBI	22.87	262	P	P	19 02 44.8	+2.3
	comp=Z,3µmcomp=Z,328nm,1.3s						
MDSI	Maura Dua	22.88	255	P	P	19 02 40.0	-2.7
	comp=Z,4µmcomp=Z,1µmcomp=Z,53nm,1.1s						
NACB	Ninganchiao	23.06	349	P	P	19 02 42.0	-2.3
LWLI	Liwa	23.13	254	P	P	19 02 44.5	-0.9
	comp=Z,6µmcomp=Z,315nm,0.7s						
JMJ	Miyako jima 2	23.26	358	P	P	19 02 47.4	+1.1
MBWA	Marble Bar	23.36	196	P	P	19 02 46.5	-0.9
MBWA				P	P	19 02 46.5	-0.9
MBWA	Marble Bar	23.36	196	P	P	19 02 46.2	-1.2
LHSI	Lahat	23.36	257	P	P	19 02 42.0	-5.5
	comp=Z,3µmcomp=Z,102nm,1.5s						
PMG	Port Moresby	23.40	118	P	P	19 02 47.0	-0.7
	comp=Z,93nm,0.7s,baz=18,slow=6.9,SNR=30						
PMG				LR	LR	19 14 23.7	
	comp=Z,5µm,19.7s,baz=325,slow=43						
PMG	Port Moresby	23.40	118	P	P	19 02 47.1	-0.7
PMG				pmax	pmax		
	comp=Z,126nm,0.9s						
PMG	Port Moresby	23.40	118	P	P	19 02 47.1	-0.7
PMG	Port Moresby	23.40	118	P	P	19 02 48.1	+0.3
PMG	Port Moresby	23.40	118	P	P	19 02 48.1	+0.3
YHNB	Yeheng	23.58	349	P	P	19 02 50.5	+1.0
YHNB				IAmb	IAmb	19 02 53.3	
	comp=Z,200nm,0.8s						
YHNB				IAMs_20	IAMs_20	19 13 03.6	
	comp=Z,6µm,21.0s						
XMI	Christmas Isla	23.67	240	P	P	19 02 50.3	-0.1
	comp=Z,267nm,0.8s						
XMIS	Christmas Isla	23.72	240	P	P	19 02 48.7	-2.2
XMIS				IAmb	IAmb	19 02 52.6	
	comp=Z,208nm,0.8s						
XMIS	Christmas Isla	23.72	240	P	P	19 02 50.4	-0.5
	comp=Z,319nm,1.2s						
PSA00	Pilbara Seismi	23.73	195	P	P	19 02 50.0	-0.8
PSA00	Pilbara Seismi	23.73	195	P	P	19 02 50.2	-0.6
PSA00				IAmb	IAmb	19 02 52.7	
	comp=Z,301nm,0.8s						
PSA00	Pilbara Seismi	23.73	195	P	P	19 02 49.7	-1.1
	comp=Z,548nm,0.7s						
QIZ	Qiongzhong	23.79	318	P	P	19 02 51.5	0.0
QIZ				sP	pwP	19 03 05.8	+0.5
QIZ				S	S	19 07 00.3	-3.7
QIZ				pmax	pmax		
	comp=Z,130nm,1.9s						
QIZ				LR	LR		
	comp=Z,2µm,20.6s						
QIZ				LR	LR		
	comp=Z,2µm,15.7s						
QIZ				LR	LR		
	comp=Z,4µm,24.5s						
QIZ	Qiongzhong	23.79	318	IAMs_20	IAMs_20	19 11 08.6	
	comp=Z,5µm,22.0s						
TATO	Taipei	23.86	349	P	P	19 02 52.9	+0.9
TATO	Taipei	23.86	349	P	P	19 02 53.2	+1.2
TATO				IAmb	IAmb	19 02 56.7	
	comp=Z,200nm,0.9s						
JRMM	Jerantut	23.93	276	P	P	19 02 53.0	+0.2
MNAI	Manna	24.03	256	P	P	19 02 54.5	+0.7
MNAI				IAMs_20	IAMs_20	19 13 31.8	
	comp=Z,6µm,21.0s						
MNAI	Manna	24.03	256	P	P	19 02 54.7	+0.9
KNMB	Chin-men Tao	24.14	342	P	P	19 02 52.2	-2.4
KNMB				IAmb	IAmb	19 02 58.9	
	comp=Z,162nm,0.8s						
ANA2	Anatahan	24.18	51	P	P	19 02 50.7	-4.4
ANA2				IAmb	IAmb	19 03 01.1	
	comp=Z,341nm,1.0s						
MASI	Maura Aman, Be	24.48	259	P	P	19 02 59.0	+1.1
	comp=Z,7µmcomp=Z,556nm,1.1s						
QZH	Quanzhou	24.53	343	P	P	19 02 57.3	-0.8
QZH				S	S	19 07 14.5	-1.2
QZH				pmax	pmax		
	comp=Z,110nm,1.0s						
QZH				pmax	pmax		
	comp=Z,740nm,4.1s						
QZH				LR	LR		
	comp=Z,2µm,18.7s						
QZH				LR	LR		
	comp=Z,1µm,16.7s						
QZH				LR	LR		
	comp=Z,2µm,21.7s						
UBPT	Khong Chiam	24.74	305	P	P	19 03 00.1	-0.1
UBPT				IAmb	IAmb	19 03 03.5	
	comp=Z,175nm,1.2s						
BKNI	Bangkinang	25.29	268	P	P	19 03 05.3	+0.1
	comp=Z,6µmcomp=Z,667nm,1.2s						
BKNI	Bangkinang	25.29	268	P	P	19 03 04.1	-1.1
BKNI				IAMs_20	IAMs_20	19 14 01.9	
	comp=Z,6µm,22.0s						
JOW	Kunigami	25.32	4	P	P	19 03 06.0	+0.7
	comp=Z,170nm,0.7s,baz=205,slow=7.5,SNR=14						
JOW				LR	LR	19 14 33.0	
	comp=Z,1µm,18.1s,baz=302,slow=40						
JOW	Kunigami	25.32	4	P	P	19 03 05.5	+0.2
JOW				IAmb	IAmb	19 03 18.1	
	comp=Z,215nm,0.7s						
JOW	Kunigami	25.32	4	P	P	19 03 07.2	+1.9
IPM	Ipoh	25.42	277	P	P	19 03 06.0	-0.5
IPM	Ipoh	25.42	277	P	P	19 03 04.8	-1.6
IPM				IAmb	IAmb	19 03 25.6	
	comp=Z,287nm,1.3s						
IPM	Ipoh	25.42	277	P	P	19 03 06.3	-0.2
QIS	Mount Isa	25.45	150	P	P	19 03 06.7	+0.2
	baz=26,SNR=159						
QIS	Mount Isa	25.45	150	P	P	19 03 06.1	-0.5
	comp=Z,259nm,0.7s						

KULM	Kulim	25.89	279	P	P	19 03 11.0	+0.3
KULM	Kulim	25.89	279	P	P	19 03 09.9	-0.8
KULM				IAmb	IAmb	19 03 30.1	
	comp=Z,398nm,1.4s						
PDSI	Padang	25.95	265	P	P	19 03 11.4	+0.2
	comp=Z,1µmcomp=Z,117nm,1.3s						
PPI	Padang Panjang	25.98	266	P	P	19 03 11.0	-0.4
	comp=Z,652nmcomp=Z,64nm,1.0s						
AS31	Alice Springs	26.02	164	P	P	19 03 10.7	-1.1
ASAR	Alice Springs	26.02	164	P	P	19 03 10.9	-0.8
	comp=Z,46nm,0.6s,baz=346,slow=6.6,SNR=524						
ASAR				PcP	PcP	19 06 39.8	+0.6
	comp=Z,15nm,0.4s,baz=348,slow=2.1,SNR=9.0						
ASAR				S	S	19 07 39.6	-0.1
	comp=Z,22nm,0.9s,baz=348,slow=21,SNR=6.5						
ASAR				ScP	ScP	19 10 16.0	+0.8
	comp=Z,2.2nm,0.6s,baz=356,slow=2.9,SNR=2.3						
ASAR				PKiKP	PKiKP	19 14 18.4	-0.5
	comp=Z,0.4nm,0.5s,baz=3.5,slow=1.0,SNR=5.6						
ASAR				P3KPbc		19 36 00.6	
	comp=Z,0.3nm,0.5s,baz=166,slow=3.7,SNR=5.1						
ASAR	Alice Springs	26.02	164	P	P	19 03 10.7	-1.1
ASAR	Alice Springs	26.02	164		ScP	19 10 16.0	+0.8
MTSU	Mount Surprise	26.32	138	P	P	19 03 13.9	-0.6
	baz=26,SNR=61						
MTSU	Mount Surprise	26.32	138	P	P	19 03 15.1	+0.6
	comp=Z,79nm,1.0s						
WRKA	Warakurna	26.39	176	P	P	19 03 15.4	+0.3
	baz=26,SNR=341						
WRKA	Warakurna	26.39	176	P	P	19 03 15.3	+0.3
	comp=Z,255nm,1.0s						
RABL	Rabaul	26.44	102	P	P	19 03 14.7	-0.9
RABL				IAmb	IAmb	19 03 28.2	
	comp=Z,136nm,0.6s						
RABL	Rabaul	26.44	102	P	P	19 03 16.7	+1.1
GIRL	Giralia	26.67	205	P	P	19 03 18.9	+1.3
	baz=27,SNR=31						
GIRL	Giralia	26.67	205	P	P	19 03 18.0	+0.4
GIRL	Giralia	26.67	205	P	P	19 03 18.4	+0.8
	comp=Z,945nm,1.4s						
MNSI	Mandailing Nat	26.73	269	P	P	19 03 17.3	-0.9
	comp=Z,2µmcomp=Z,91nm,0.7s						
SISI	Saibi	27.35	264	P	P	19 03 23.1	-0.7
	comp=Z,2µmcomp=Z,129nm,0.8s						
PSI	Prapat	27.40	273	P	P	19 03 23.4	-1.0
	comp=Z,157nm,1.2s,baz=99,slow=4.5,SNR=106						
SRIT	Nakonsritamara	27.52	286	P	P	19 03 23.9	-1.4
TSI	Tuntungan	27.79	275	P	P	19 03 28.7	+0.9
GSI	Gunungsitoli	28.72	270	P	P	19 03 33.9	-2.2
	comp=Z,3µmcomp=Z,193nm,1.5s						
GSI	Gunungsitoli	28.72	270	P	P	19 03 34.1	-1.9
GSI				IAmb	IAmb	19 03 36.4	
	comp=Z,277nm,1.2s						
GSI	Gunungsitoli	28.72	270	P	P	19 03 34.6	-1.5
MEEK	Meekatharra	28.88	194	P	P	19 03 37.1	-0.2
	baz=29,SNR=67						
MEEK	Meekatharra	28.88	194	P	P	19 03 36.6	-0.7
	comp=Z,197nm,1.4s						
CTA	Charters Tower	28.99	139	P	P	19 03 39.5	+1.2
	comp=Z,34nm,0.9s,baz=326,slow=12,SNR=19						
CTAO	Charters Tower	28.99	139	P	P	19 03 37.4	-1.0
CTAO				pmax	pmax		
	comp=Z,87nm,1.2s						
CTAO	Charters Tower	28.99	139	P	P	19 03 37.4	-1.0
CTAO	Charters Tower	28.99	139	P	P	19 03 38.6	+0.3
TPTI		29.16	274	P	P	19 03 39.2	-0.7
	comp=Z,354nmcomp=Z,16nm,0.8s						
SLVN	Son La	29.46	314	P	P	19 03 42.3	-0.3
SLVN				IAmb	IAmb	19 03 46.1	
	comp=Z,137nm,1.3s						
LHMI	Lhok Sumawe	29.55	278	P	P	19 03 40.3	-3.1
	comp=Z,5µmcomp=Z,2µmcomp=Z,103nm,1.6s						
LHMI	Lhok Sumawe	29.55	278	P	P	19 03 42.3	-1.1
LHMI	Lhok Sumawe	29.55	278	P	P	19 03 43.6	+0.2
JCJ	Chichijima	29.72	29	P	P	19 03 43.6	-1.1
	comp=Z,77nm,0.5s,baz=269,slow=13,SNR=12						
JCJ				LR	LR	19 15 59.4	
	comp=Z,404nm,19.4s,baz=228,slow=37						
JCJ	Chichijima	29.72	29	P	P	19 03 43.8	-0.9
JCJ	Chichijima	29.72	29	P	P	19 03 44.6	-0.1
	comp=Z,280nm,0.8s						
SSE	Sheshan	29.89	351	P	P	19 03 47.8	+1.6
SSE				S	S	19 08 45.3	+5.0
SSE				pmax	pmax		
	comp=Z,16nm,1.0s						
SSE				pmax	pmax		
	comp=Z,250nm,4.7s						
SSE				LR	LR		
	comp=Z,630nm,25.4s						
SSE				LR	LR		
	comp=Z,540nm,24.7s						
MLSI	Meulaboh, Aceh	29.99	276	P	P	19 03 45.7	-1.7
	comp=Z,79nm,0.5s						
JSU	Suzuyama	30.16	7	P	P	19 03 49.5	+0.8
JSU				IAmb	IAmb	19 04 06.7	
	comp=Z,143nm,1.5s						
OOD	Oodnadatta	30.43	163	P	P	19 03 50.3	-0.7
	comp=Z,101nm,0.6s						
WHN	Wuhan	31.09	340	⇑P	P	19 03 57.0	+0.2
WHN				S	S	19 09 02.8	+3.7
WHN				pmax	pmax		
	comp=Z,92nm,1.2s						
WHN				LR	LR		
	comp=Z,7µm,20.5s						
WHN				LR	LR		
	comp=Z,1µm,10.8s						
WHN				LR	LR		
	comp=Z,7µm,24.8s						
GYA	Guiyang	31.23	324	⇓P	P	19 03 58.8	+0.5
GYA				sP	pwP	19 04 11.8	-0.7
GYA				PcP	PcP	19 06 54.0	+1.8
GYA				S	S	19 09 06.0	+4.2
GYA				sS	sS	19 09 22.0	+0.3
GYA				pmax	pmax		
	comp=Z,86nm,1.0s						
GYA				pmax	pmax		
	comp=Z,230nm,3.5s						
GYA				LR	LR		
	comp=Z,2µm,18.0s						
GYA				LR	LR		
	comp=Z,1µm,25.4s						
GYA				LR	LR		
	comp=Z,2µm,20.0s						
NJ2	Nanjing	31.25	348	*e*P	P	19 03 59.8	+1.6
NJ2				sP	pwP	19 04 13.3	+1.3
NJ2				S	S	19 09 07.0	+5.4
NJ2				pmax	pmax		
	comp=Z,68nm,0.9s						
NJ2				LR	LR		
	comp=Z,970nm,14.2s						
NJ2				LR	LR		
	comp=Z,750nm,12.8s						
NJ2				LR	LR		
	comp=Z,1µm,19.9s						
CM31	Chiang Mai Arr	31.73	304	P	P	19 04 03.3	+0.7
	SNR=27						
CM31	Chiang Mai Arr	31.73	304	P	P	19 04 00.8	-1.8
CMAR	Chiang Mai Arr	31.73	304	P	P	19 04 02.1	-0.5
	comp=Z,17nm,1.0s,baz=131,slow=7.7,SNR=52						
CMAR				PcP	PcP	19 06 55.1	+1.6
	comp=Z,7.6nm,1.0s,baz=118,slow=1.2,SNR=6.4						
CMAR				ScP	ScP	19 10 36.3	+3.0
	comp=Z,2.2nm,0.9s,baz=161,slow=2.6,SNR=4.7						
CMAR				LR	LR	19 18 00.6	
	comp=Z,1µm,21.3s,baz=162,slow=39						
CMAR	Chiang Mai Arr	31.73	304	P	P	19 04 01.5	-1.1
JNU	Nakatsue	31.81	7	P	P	19 04 03.1	-0.1
	comp=Z,75nm,0.8s,baz=153,slow=4.3,SNR=13						
JNU	Nakatsue	31.81	7	P	P	19 04 03.3	+0.1
JNU				IAmb	IAmb	19 04 08.2	
	comp=Z,97nm,0.9s						
MORW	Morawa	31.89	197	P	P	19 04 03.8	0.0
	baz=32,SNR=58						
MORW	Morawa	31.89	197	P	P	19 04 03.4	-0.5
MORW				IAmb	IAmb	19 04 07.6	
	comp=Z,107nm,0.8s						
MORW	Morawa	31.89	197	P	P	19 04 03.5	-0.3
	comp=Z,213nm,1.1s						
CHTO	Chiang Mai	31.90	305	P	P	19 04 03.1	-1.0
CHTO				pmax	pmax		
	comp=Z,72nm,1.1s						
CHTO				MLR	MLR		
	comp=Z,1µm,18.0s						
CHTO	Chiang Mai	31.90	305	P	P	19 04 03.9	-0.2
CHTO	Chiang Mai	31.90	305	P	P	19 04 03.0	-1.0
CHTO				IAmb	IAmb	19 04 06.3	
	comp=Z,72nm,1.1s						
CHTO	Chiang Mai	31.90	305	P	P	19 04 03.7	-0.4
FORT	Forrest	32.08	177	P	P	19 04 05.6	+0.1
	baz=32,SNR=48						
FORT	Forrest	32.08	177	P	P	19 04 05.2	-0.3
FORT	Forrest	32.08	177	P	P	19 04 05.2	-0.3
	comp=Z,252nm,0.7s						
INKA	Innaminka	32.16	155	P	P	19 04 06.4	+0.1
	comp=Z,96nm,1.3s						
COCO	West Island	32.25	244	P	P	19 04 04.8	-2.4
COCO				pmax	pmax		
	comp=Z,257nm,1.3s						
COCO				MLR	MLR		
	comp=Z,3µm,20.0s						
COCO	West Island	32.25	244	P	P	19 04 04.8	-2.4
COCO				IAMs_20	IAMs_20	19 18 33.4	
	comp=Z,3µm,20.0s						
COCO	West Island	32.25	244	P	P	19 04 05.3	-1.9
PATS	Pohnpei	32.36	80	IAMs_20	IAMs_20	19 15 21.5	
	comp=Z,4µm,22.0s						
MULG	Mulgathing	32.40	167	P	P	19 04 07.7	-0.6
	comp=Z,125nm,0.7s						
KMI	Kunming	32.74	318	⇑P	P	19 04 12.3	+0.6
KMI				pP	pP	19 04 23.5	+0.1
KMI				sP	sP	19 04 28.0	-0.7
KMI				PP	PP	19 05 26.3	0.0
KMI				PcP	PcP	19 06 58.5	+2.0
KMI				S	S	19 09 22.0	-3.5
KMI				SS	SnSn	19 11 27.0	+2.6
KMI				pmax	pmax		
	comp=Z,100nm,1.5s						
KMI				pmax	pmax		
	comp=Z,570nm,3.5s						
KMI				LR	LR		
	comp=Z,2µm,22.1s						
KMI				LR	LR		
	comp=Z,2µm,23.4s						
KMI				LR	LR		
	comp=Z,4µm,23.4s						
QLP	Quilpie	32.79	149	P	P	19 04 11.4	-0.5
	baz=33,SNR=12						
QLP	Quilpie	32.79	149	P	P	19 04 11.3	-0.5
	comp=Z,96nm,1.2s						
ENH	Enshi	32.82	332	IAMs_20	IAMs_20	19 19 33.0	
	comp=Z,2µm,20.0s						
JMN	Monobe	32.90	12	P	P	19 04 11.3	-1.4
JMN				IAmb	IAmb	19 04 34.1	
	comp=Z,109nm,1.1s						
BLDU	Ballidu	33.16	195	P	P	19 04 15.0	+0.1
	baz=33,SNR=21						
BLDU	Ballidu	33.16	195	P	P	19 04 14.4	-0.6
	comp=Z,232nm,1.5s						
LCRK	Leigh Creek	33.68	161	P	P	19 04 19.5	0.0
	comp=Z,252nm,0.9s						
KLBR	Kellerberrin	33.84	193	P	P	19 04 21.1	+0.2
	baz=34,SNR=68						
KLBR	Kellerberrin	33.84	193	P	P	19 04 20.6	-0.3
	comp=Z,638nm,0.8s						
JHS	Saijyo	33.99	10	P	P	19 04 22.3	+0.1
JHS				IAmb	IAmb	19 04 38.7	
	comp=Z,68nm,0.9s						
RK1H	Rockhampton Ha	34.10	138	P	P	19 04 23.2	0.0
	comp=Z,213nm,0.8s						
MUN	Mundaring	34.59	195	P	P	19 04 27.8	+0.4
	baz=35,SNR=53						
MUN	Mundaring	34.59	195	P	P	19 04 27.0	-0.3
	comp=Z,141nm,0.8s						
JWT	Wachi	34.72	13	P	P	19 04 28.6	+0.1
JWT				IAmb	IAmb	19 04 39.2	
	comp=Z,85nm,0.7s						
TJN	Taejon	34.78	1	⇓*e*P	P	19 04 29.4	+0.5
INU	Inuyama	35.18	15	P	P	19 04 32.4	0.0
INU				IAmb	IAmb	19 04 53.1	
	comp=Z,69nm,0.8s						
INU	Inuyama	35.18	15	P	P	19 04 33.3	+0.9
RMQ	Roma	35.22	144	P	P	19 04 33.6	+0.7
	baz=35,SNR=12						
RMQ	Roma	35.22	144	P	P	19 04 34.2	+1.3
	comp=Z,24nm,0.6s						
NWAO	Narrogin (SRO)	35.24	193	P	P	19 04 33.5	+0.5
NWAO				P	P	19 04 33.5	+0.5
NWAO	Narrogin (SRO)	35.24	193	P	P	19 04 33.6	+0.7
BBOO	Buckleboo	35.29	166	P	P	19 04 33.2	-0.2
	baz=35,SNR=100						
BBOO	Buckleboo	35.29	166	P	P	19 04 32.6	-0.8
	comp=Z,189nm,0.7s						
JGF	Kuroka	35.51	16	P	P	19 04 35.9	+0.6
TIA	Tai'an	35.63	347	P	P	19 04 35.8	-0.5
TIA				S	S	19 10 05.8	-3.7
TIA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
TIA				pmax	pmax		
	comp=Z,230nm,4.6s						
TIA				LR	LR		
	comp=Z,680nm,17.8s						
TIA				LR	LR		
	comp=Z,890nm,17.8s						
TIA				LR	LR		
	comp=Z,2µm,22.8s						
EIDS	Eidsvold	35.85	140	P	P	19 04 38.8	+0.4
	baz=36,SNR=11						
EIDS	Eidsvold	35.85	140	P	P	19 04 36.9	-1.5
EIDS				IAmb	IAmb	19 04 41.2	
	comp=Z,67nm,0.9s						
KSAR	Wonju Array Be	35.86	2	P	P	19 04 37.1	-1.1
KSAR	Wonju Array Be	35.86	2	P	P	19 04 37.1	-1.1
KSRS	Korea Array	35.87	2	P	P	19 04 39.1	+0.9
	comp=Z,15nm,0.6s,baz=181,slow=9.1,SNR=27						
KSRS				ScP	ScP	19 10 50.2	+2.8
	comp=Z,2.7nm,0.8s,baz=197,slow=4.8,SNR=4.2						
WHYH	Whyalla	35.90	164	P	P	19 04 39.1	+0.5
	comp=Z,141nm,0.7s						
KS19	Wonju Array Si	35.92	2	P	P	19 04 39.9	+1.2
KS19				IAmb	IAmb	19 04 46.8	
	comp=Z,79nm,1.1s						
STKA	Stephens Creek	36.17	158	P	P	19 04 40.9	-0.1
	comp=Z,154nm,0.8s,baz=330,slow=9.5,SNR=117						
STKA	Stephens Creek	36.17	158	P	P	19 04 40.2	-0.7
CD2	Chengdu	36.27	326	P	P	19 04 41.3	-0.6
CD2				pP	pP	19 04 49.8	-3.9
CD2				S	S	19 10 21.5	+2.1
CD2				sS	sS	19 10 38.5	-1.1
CD2				pmax	pmax		
	comp=Z,330nm,0.9s						
CD2				pmax	pmax		
	comp=Z,350nm,4.2s						
CD2				LR	LR		
	comp=Z,3µm,21.1s						
CD2				LR	LR		
	comp=Z,3µm,20.1s						
CD2				LR	LR		
	comp=Z,3µm,22.1s						
XAN	Xi'an	36.28	335	P	P	19 04 40.5	-1.5
XAN				pP	pP	19 04 52.8	-1.1
XAN				sP	sP	19 04 58.3	-0.8
XAN				PcP	PcP	19 07 08.8	+2.5
XAN				S	S	19 10 13.0	-6.6
XAN				ScS	ScS	19 14 56.0	+0.7
XAN				pmax	pmax		
	comp=Z,150nm,1.5s						
XAN				pmax	pmax		
	comp=Z,740nm,4.9s						
XAN				LR	LR		
	comp=Z,870nm,17.9s						
XAN				LR	LR		
	comp=Z,2µm,21.3s						
XAN				LR	LR		
	comp=Z,2µm,22.7s						
MAJO	Matsushiro	36.63	16	P	P	19 04 43.8	-1.0
MAJO				pmax	pmax		
	comp=Z,64nm,0.9s						
MAJO	Matsushiro	36.63	16	P	P	19 04 43.8	-1.0
MAJO				IAmb	IAmb	19 04 59.6	
	comp=Z,64nm,0.8s						
MAJO	Matsushiro	36.63	16	P	P	19 04 44.1	-0.7
MAT	Matsushiro	36.63	16	P	P	19 04 43.7	-1.1
MAT				S	S	19 10 24.6	-0.1
MJAR	Matsushiro Arr	36.63	16	P	P	19 04 43.8	-1.0
	comp=Z,24nm,0.6s,baz=178,slow=10,SNR=34						
MJAR				PcP	PcP	19 07 08.3	+1.1
	comp=Z,3.5nm,0.5s,baz=179,slow=3.7,SNR=2.7						
MJAR				ScP	ScP	19 10 50.5	+0.1
	comp=Z,2.4nm,0.7s,baz=201,slow=5.5,SNR=4.3						
MJAR	Matsushiro Arr	36.63	16	P	P	19 04 43.8	-1.0
MJAR				pmax	pmax		
	comp=Z,39nm,1.0s						
MJAR	Matsushiro Arr	36.63	16	P	P	19 04 43.8	-1.0
HTT	Hallett	36.66	162	P	P	19 04 45.8	+0.6
	baz=37,SNR=18						
HTT	Hallett	36.66	162	P	P	19 04 45.7	+0.5
	comp=Z,70nm,0.7s						
JYT	Yasato	36.93	19	P	P	19 04 45.4	-1.9
JYT				IAmb	IAmb	19 05 08.5	
	comp=Z,180nm,1.4s						
DL2	Dalian	37.54	354	P	P	19 04 53.3	+0.8
DL2				*e*S	S	19 10 41.3	+2.9
DL2				pmax	pmax		
	comp=Z,400nm,0.8s						
DL2				pmax	pmax		
	comp=Z,1µm,3.7s						
DL2				LR	LR		
	comp=Z,2µm,20.3s						
DL2				LR	LR		
	comp=Z,1µm,21.2s						
DL2				LR	LR		
	comp=Z,2µm,23.4s						
CMSA	Cobar Meteorol	37.60	152	P	P	19 04 53.3	+0.1
	baz=38,SNR=12						
CMSA	Cobar Meteorol	37.60	152	P	P	19 04 53.6	+0.4
	comp=Z,58nm,1.4s						
H01W3	Cape Leeuwin H	37.89	196	P	P	19 04 57.5	+2.2
	baz=34,slow=5.8,SNR=6.5						
H01W1	Cape Leeuwin H	37.89	196	P	P	19 04 57.8	+2.5
	baz=34,slow=5.8,SNR=5.9						
H01W2	Cape Leeuwin H	37.90	196	P	P	19 04 57.9	+2.5
	baz=34,slow=5.8,SNR=4.4						
JSD	Sado	38.04	15	P	P	19 04 56.1	-0.7
JSD				IAmb	IAmb	19 05 18.4	
	comp=Z,186nm,1.4s						
TIY	Taiyuan	38.29	342	*e*P	P	19 04 59.5	+0.5
TIY				pmax	pmax		
	comp=Z,72nm,0.7s						
TIY				pmax	pmax		
	comp=Z,260nm,4.5s						
JMM	Marumori	38.62	18	P	P	19 04 58.9	-2.8
LKP	Lekhapani	38.93	314	*e*P	P	19 05 03.3	-1.1
KOHI	KOHIMA	39.30	311	*e*P	P	19 05 06.1	-1.6
MOKO	MOKOCHONG	39.32	312	*e*P	P	19 05 07.4	-0.5
BJI	Beijing	39.51	348	P	P	19 05 08.8	-0.2
BJI				PcS	PcS	19 11 04.0	-1.9
BJI				S	S	19 11 08.8	+0.6
BJI				pmax	pmax		
	comp=Z,100nm,1.0s						
BJI				pmax	pmax		
	comp=Z,610nm,3.6s						
BJI				LR	LR		
	comp=Z,550nm,18.5s						
BJI				LR	LR		
	comp=Z,440nm,18.9s						
BJI				LR	LR		
	comp=Z,660nm,19.8s						
SILR	SILCHAR	39.82	308	*e*P	P	19 05 12.3	+0.5
ARMA	Armidale	39.82	145	P	P	19 05 12.4	+0.5
	baz=40,SNR=40						
ARMA	Armidale	39.82	145	P	P	19 05 12.1	+0.1
ARMA				IAmb	IAmb	19 05 16.1	
	comp=Z,105nm,0.8s						
ARMA	Armidale	39.82	145	P	P	19 05 12.7	+0.8
	comp=Z,146nm,0.8s						
LZH	Lanzhou	40.28	331	⇑P	P	19 05 16.3	+0.6
LZH				sP	pwP	19 05 31.3	+1.4
LZH				S	S	19 11 17.0	-3.1
LZH				sS	sS	19 11 37.3	-3.2
LZH				pmax	pmax		
	comp=Z,210nm,1.3s						
LZH				pmax	pmax		
	comp=Z,370nm,5.6s						
LZH				LR	LR		
	comp=Z,2µm,13.1s						
LZH				LR	LR		
	comp=Z,2µm,14.0s						
LZH				LR	LR		
	comp=Z,2µm,16.6s						
SNY	Shenyang	40.28	357	⇑P	P	19 05 16.0	+0.6
SNY				S	S	19 11 12.8	-6.9
SNY				pmax	pmax		
	comp=Z,190nm,1.3s						
SNY				pmax	pmax		
	comp=Z,1µm,4.2s						
SNY				LR	LR		
	comp=Z,1µm,23.0s						
SNY				LR	LR		
	comp=Z,1µm,24.2s						
SNY				LR	LR		
	comp=Z,2µm,20.0s						
ITAN	ITANAGAR	40.37	312	*e*P	P	19 05 15.8	-0.5
ARPS	Mount Arapiles	40.66	161	P	P	19 05 19.5	+0.8
	baz=41,SNR=115						
ARPS	Mount Arapiles	40.66	161	P	P	19 05 19.0	+0.4
	comp=Z,446nm,1.0s						
SHL	Shillong	40.93	309	*e*P	P	19 05 20.3	-0.9
SHL				IAmb	IAmb	19 05 24.5	
	comp=Z,101nm,0.4s						
YNG	Young	41.16	152	P	P	19 05 24.0	+1.2
	baz=41,SNR=11						
YNG	Young	41.16	152	P	P	19 05 24.9	+2.1
	comp=Z,95nm,1.1s						
MSHR	Mys Shultsa	41.19	5	⇑*e*P	P	19 05 23.8	+0.9
MSHR				pmax	pmax		
	comp=Z,32nm,0.7s						
JTM	Tenmabayashi	41.39	17	P	P	19 05 22.0	-2.5
JTM				IAmb	IAmb	19 05 36.3	
	comp=Z,234nm,1.2s						
HHC	Hu-ho-hao-te	41.44	343	*e*P	P	19 05 25.0	-0.1
HHC				PP	PP	19 06 59.5	-2.1
HHC				PcP	PcP	19 07 21.0	-1.4
HHC				S	S	19 11 39.5	+2.3
HHC				pmax	pmax		
	comp=Z,66nm,1.0s						
HHC				pmax	pmax		
	comp=Z,610nm,4.4s						
HHC				LR	LR		
	comp=Z,1µm,13.9s						
HHC				LR	LR		
	comp=Z,860nm,15.3s						
HHC				LR	LR		
	comp=Z,2µm,14.8s						
MGCD	Mangrove Creek	41.65	148	P	P	19 05 28.3	+1.5
	baz=42,SNR=9.8						
MGCD	Mangrove Creek	41.65	148	P	P	19 05 28.0	+1.2
	comp=Z,57nm,0.7s						
BTO	Baotou	41.69	341	*e*P	P	19 05 29.5	+2.3
BTO				S	S	19 11 46.8	+5.9
BTO				LR	LR		
	comp=Z,6µm,24.5s						
BTO				LR	LR		
	comp=Z,6µm,20.6s						
BRAT	Ballarat	42.09	159	P	P	19 05 31.0	+0.7
CN2	Changchun	42.19	359	*e*P	P	19 05 31.8	+0.8
CN2				SS	SS	19 14 54.3	-3.1
CN2				pmax	pmax		
	comp=Z,20nm,1.1s						
CN2				pmax	pmax		
	comp=Z,500nm,7.0s						
CN2				LR	LR		
	comp=Z,700nm,19.0s						
CN2				LR	LR		
	comp=Z,900nm,19.0s						
CN2				LR	LR		
	comp=Z,1µm,22.0s						
CAN	Canberra	42.28	152	P	P	19 05 31.8	-0.2
CAN				pmax	pmax		
	comp=Z,240nm,1.4s						
CAN	Canberra	42.28	152	P	P	19 05 31.8	-0.2
CAN				IAmb	IAmb	19 05 35.9	
	comp=Z,240nm,1.4s						
CAN	Canberra	42.28	152	P	P	19 05 32.8	+0.8
CNB	Canberra Magne	42.45	152	P	P	19 05 34.5	+1.1
	baz=42,SNR=21						
CNB	Canberra Magne	42.45	152	P	P	19 05 34.4	+1.1
	comp=Z,54nm,1.4s						
TOO	Toolangi	42.69	157	P	P	19 05 35.6	+0.4
	baz=43,SNR=15						
TOO	Toolangi	42.69	157	P	P	19 05 36.6	+1.4
TOO				pmax	pmax		
	comp=Z,57nm,1.0s						
TOO	Toolangi	42.69	157	P	P	19 05 36.6	+1.4
TOO	Toolangi	42.69	157	P	P	19 05 37.0	+1.8
	comp=Z,68nm,1.2s						
USA0B	Ussuriysk Arra	42.88	6	P	P	19 05 36.3	-0.3
USA0B				pmax	pmax		
	comp=Z,73nm,0.9s						

USA0B	Ussuriysk Arra	42.88	6	P	P	19 05 36.3	-0.3
USRK	Ussuriysk Ar.	42.88	6	P	P	19 05 37.5	+0.9
	comp=Z,60nm,0.8s,baz=184,slow=7.1,SNR=59						
USRK				LR	LR	19 24 37.6	
	comp=Z,565nm,19.9s,baz=190,slow=38						
USRK	Ussuriysk Ar.	42.88	6	P	P	19 05 36.6	0.0
MDJ	Mudanjiang	43.09	3	P	P	19 05 39.5	+1.1
MDJ				pP	pP	19 05 49.3	-1.2
MDJ				sP	pwP	19 05 53.5	+0.9
MDJ				S	S	19 12 06.3	+5.1
MDJ				sS	sS	19 12 21.8	+0.1
MDJ				pmax	pmax		
	comp=Z,72nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,430nm,4.9s						
MDJ				LR	LR		
	comp=Z,860nm,24.3s						
MDJ				LR	LR		
	comp=Z,690nm,19.0s						
MDJ				LR	LR		
	comp=Z,2µm,21.6s						
MDJ	Mudanjiang	43.09	3	IAMs_20	IAMs_20	19 25 36.2	
	comp=Z,2µm,21.0s						
KOUNC	Koumac, New Ca	43.13	122	P	P	19 05 39.8	+0.7
ERM	Erimo	43.15	18	⇓eP	P	19 05 41.1	+2.3
ERM				pmax	pmax		
	comp=Z,42nm,0.7s						
ERM				MLR	MLR		
	comp=Z,2µm,22.0s						
ERM	Erimo	43.15	18	P	P	19 05 40.3	+1.5
ERM	Erimo	43.15	18	P	P	19 05 41.3	+2.5
JEW	Eniwo	43.40	16	P	P	19 05 41.8	+1.0
JEW				IAmb	IAmb	19 05 54.7	
	comp=Z,148nm,0.9s						
LSA	Lhasa	43.66	313	P	P	19 05 44.3	+0.5
LSA				pmax	pmax		
	comp=Z,430nm,1.1s						
LSA				LR	LR		
	comp=Z,1µm,12.1s						
LSA				LR	LR		
	comp=Z,2µm,16.4s						
LSA				LR	LR		
	comp=Z,2µm,18.5s						
LSA	Lhasa	43.66	313	P	P	19 05 44.1	+0.3
SANVU	Saraoutou	43.77	114	P	P	19 05 43.2	-1.0
SANVU				IAmb	IAmb	19 05 48.6	
	comp=Z,144nm,0.9s						
SANVU	Saraoutou	43.77	114	P	P	19 05 46.3	+2.0
MILA	Mila	43.78	153	P	P	19 05 45.3	+1.2
	baz=44,SNR=5.8						
GTK	Tadong	44.35	309	eP	P	19 05 48.4	-0.5
TEY	Ternei	44.36	10	⇑eP	P	19 05 47.9	-0.6
TEY				e		19 12 18.4	
TEY				pmax	pmax		
	comp=Z,10.0nm,1.5s						
TEY				pmax	pmax		
	comp=Z,100nm,3.8s						
TEY				pmax	pmax		
	comp=N,100nm,6.3s						
GTA	Gaotai	44.85	331	eP	P	19 05 52.5	-0.3
GTA				pP	pP	19 06 01.0	-3.9
GTA				sP	pwP	19 06 06.0	-1.2
GTA				PcP	PcP	19 07 35.3	+1.3
GTA				S	S	19 12 23.5	-3.8
GTA				SS	ScS	19 15 39.5	-7.0
GTA				ScS	SS	19 15 44.8	-5.1
GTA				pmax	pmax		
	comp=N,37nm,1.5s						
GTA				pmax	pmax		
	comp=N,350nm,4.9s						
GTA				LR	LR		
	comp=N,960nm,20.0s						
GTA				LR	LR		
	comp=N,1µm,20.7s						
GTA				LR	LR		
	comp=N,2µm,23.6s						
ASAJ	Asahikawa	44.90	17	P	P	19 05 52.0	-0.8
ASAJ				pmax	pmax		
	comp=Z,70nm,0.8s						
JKA	Kamikawa-asahi	44.90	17	P	P	19 05 52.0	-0.8
JKA				IAmb	IAmb	19 06 07.0	
	comp=Z,70nm,0.8s						
TAPN	Taplejung	45.06	308	eP	P	19 05 53.4	-1.4
ODAN	Odare	45.09	308	eP	P	19 05 53.9	-1.0
DVP	Devils Point	45.42	117	P	P	19 05 58.9	+1.5
NOUC	Port Laguerre	45.50	123	P	P	19 05 58.8	+0.8
DZM	Mont Dzumac	45.60	123	eP	P	19 06 00.7	+1.8
	comp=Z,127nm,1.1s						
DZM				eS	S	19 12 42.0	+3.4
	comp=Z,2µm,37.6s						
DZM				eLR	LR	19 18 46.7	
	comp=Z,2µm,24.4s						
DZM	Mont Dzumac	45.60	123	P	P	19 05 59.0	+0.1
LIFNC	LIFOU	45.74	121	P	P	19 06 00.2	+0.3
RAMN	Ramite	45.75	307	eP	P	19 05 59.7	-0.6
PALK	Pallekele	45.81	279	P	P	19 05 59.9	-0.8
PALK				pmax	pmax		
	comp=Z,87nm,1.3s						
PALK				MLR	MLR		
	comp=Z,2µm,21.0s						
PALK	Pallekele	45.81	279	P	P	19 06 00.8	+0.1
PALK				P	P	19 06 00.8	+0.1
PALK	Pallekele	45.81	279	P	P	19 05 59.9	-0.8
PALK				IAmb	IAmb	19 06 02.2	
	comp=Z,87nm,1.2s						
PALK	Pallekele	45.81	279	IAMs_20	IAMs_20	19 27 08.9	
	comp=Z,2µm,21.0s						
YUK	Yuzh-Kuril'sk	45.84	20	eP	P	19 05 59.8	-0.5
YUK				e		19 07 36.8	
YUK				e		19 07 47.5	
YUK				ePPP	PPP	19 08 28.7	
YUK				eS	S	19 12 42.6	+1.6
YUK				e		19 15 55.6	
YUK				eSSS	SSS	19 17 00.5	
YUK				pmax	pmax		
	comp=Z,515nm,1.4s						
YUK				pmax	pmax		
	comp=N,446nm,1.3s						
YUK				pmax	pmax		
	comp=E,244nm,0.7s						
YUK				pmax	pmax		
	comp=Z,486nm,1.8s						
YUK				MLR	MLR		
	comp=E,308nm,17.0s						
YUK				MLR	MLR		
	comp=Z,341nm,17.0s						
YUK				MLR	MLR		
	comp=N,752nm,16.0s						
YATNC	Mamie plateau,	45.97	123	P	P	19 06 02.8	+1.1
OUENC	Ouen Island, N	46.09	123	P	P	19 06 01.4	-1.2
OUENC	Ouen Island, N	46.09	123	P	P	19 06 04.1	+1.5
JIRN	Jiri	46.40	308	eP	P	19 06 04.5	-1.0
TARA	Tarawa	46.60	89	P	P	19 06 05.0	-1.9
TARA				IAmb	IAmb	19 06 19.9	
	comp=Z,52nm,0.8s						
GLAD	Gladstone	46.61	157	P	P	19 06 07.6	+1.2
GUN	Gumba	46.76	308	eP	P	19 06 07.3	-1.0
	comp=Z,378nm,1.0s						
PKI	Pulchoki	46.98	307	eP	P	19 06 08.4	-1.6
PKIN	Phulchoki	46.99	307	eP	P	19 06 08.7	-1.3
KKN	Kakani	47.18	308	eP	P	19 06 10.0	-1.4
DMN	Daman	47.24	307	eP	P	19 06 10.8	-1.1
	comp=Z,375nm,1.2s						
YSS	Yuzh-Sakhalins	47.55	15	eP	P	19 06 14.0	+0.4
YSS				e*SP	sP	19 06 30.6	-0.6
YSS				eS	S	19 13 06.4	+1.0
YSS				pmax	pmax		
	comp=Z,60nm,1.0s						
YSS				MLR	MLR		
	comp=Z,900nm,16.0s						
YSS	Yuzh-Sakhalins	47.55	15	P	P	19 06 13.4	-0.3
YSS				IAmb	IAmb	19 06 22.6	
	comp=Z,177nm,1.5s						
YSS	Yuzh-Sakhalins	47.55	15	P	P	19 06 14.3	+0.7
KUR	Kuril'sk	47.58	21	⇑eP	P	19 06 15.1	+1.2
KUR				pmax	pmax		
	comp=Z,201nm,1.3s						
KUR				MLR	MLR		
	comp=Z,519nm,23.0s						
GKN	Gorkha	47.78	307	eP	P	19 06 14.6	-1.4
KLR	Kul'dur	47.84	5	c iP	P	19 06 16.0	+0.1
KLR				MLR	MLR		
	comp=Z,1µm,20.0s						
HIA	Hailar	47.98	354	IAMs_20	IAMs_20	19 26 41.4	
	comp=Z,1µm,22.0s						
TAU	Tasmania Unive	48.03	159	P	P	19 06 18.5	+1.1
KOLN	Koldanda	48.51	307	eP	P	19 06 20.6	-1.1
	comp=Z,950nm,1.3s						
DANN	Dangsing	48.63	307	eP	P	19 06 21.5	-1.2
	comp=Z,319nm,0.6s						
PYUN	Piuthan	49.14	307	eP	P	19 06 25.5	-1.0
	comp=Z,383nm,0.6s						
ULN	Ulaanbaatar	49.16	343	c iP	P	19 06 26.6	+0.3
ULN				pmax	pmax		
	comp=Z,82nm,1.7s						
ULN				MLR	MLR		
	comp=Z,2µm,25.0s						
ULN	Ulaanbaatar	49.16	343	P	P	19 06 26.9	+0.6
ULN	Ulaanbaatar	49.16	343	P	P	19 06 25.9	-0.4
ULN				IAmb	IAmb	19 06 32.9	
	comp=Z,80nm,1.3s						
SONM	Songino Array	49.33	342	P	P	19 06 27.4	-0.2
	comp=Z,41nm,1.0s,baz=157,slow=8.4,SNR=28						
SONM				PcP	PcP	19 07 50.9	+1.2
	comp=Z,12nm,0.8s,baz=169,slow=3.8,SNR=4.1						
SONM				LR	LR	19 30 25.9	
	comp=Z,783nm,21.2s,baz=156,slow=40						
SONM				PKP2bc		19 37 43.2	
	comp=Z,0.7nm,0.9s,baz=289,slow=4.4,SNR=3.5						
SONM	Songino Array	49.33	342	P	P	19 06 27.3	-0.2
UGL	Uglegorsk	49.35	14	eP	P	19 06 29.0	+1.5
UGL				eS	S	19 13 32.4	+1.6
UGL				pmax	pmax		
	comp=Z,110nm,0.9s						
UGL				smax	smax		
	comp=E,2µm,13.0s						
HYB	Hyderabad	49.53	292	i P	P	19 06 28.0	-1.4
	comp=E,130nm,1.0s						
HYB				eS	S	19 13 37.0	+2.7
HYB	Hyderabad	49.53	292	eP	P	19 06 29.1	-0.3
TRD	Trivandrum	49.62	280	eP	P	19 06 29.7	-0.5
GRNR	Gornyy	49.90	8	⇑iP	P	19 06 32.7	+1.1
GRNR				pmax	pmax		
	comp=N,20nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,30nm,1.0s						
GRNR				MLR	MLR		
	comp=E,270nm,15.0s						
GRNR				MLR	MLR		
	comp=N,390nm,19.0s						
GRNR				MLR	MLR		
	comp=Z,540nm,17.0s						
BRCI	Bahraich	50.06	305	eP	P	19 06 33.1	-0.1
TYV	Tymovskoe	51.16	13	eP	P	19 06 43.4	+2.3
TYV				eS	S	19 14 00.7	+4.8
TYV				pmax	pmax		
	comp=Z,23nm,0.6s						
TYV				pmax	pmax		
	comp=Z,500nm,4.9s						
TYV				smax	smax		
	comp=N,2µm,4.7s						
TYV				smax	smax		
	comp=E,1µm,4.7s						
TYV				smax	smax		
	comp=E,17nm,1.9s						
CIT	Chita	51.53	350	eP	P	19 06 44.8	+0.8
CIT				e		19 06 58.2	
CIT				e		19 14 06.1	
CIT				e		19 16 27.7	
CIT				pmax	pmax		
	comp=Z,574nm,1.5s						
BHPL	Bhopal	52.09	299	eP	P	19 06 48.2	-0.4
BHPL				IAmb	IAmb	19 06 57.4	
	comp=Z,49nm,0.6s						
ZEA	Zeya	52.13	1	eP	P	19 06 48.2	-0.1
ZEA				eS	S	19 14 11.9	+2.7
ZEA				pmax	pmax		
	comp=N,20nm,0.7s						
ZEA				pmax	pmax		
	comp=E,10.0nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,50nm,0.8s						
ZEA				pmax	pmax		
	comp=N,200nm,6.1s						
ZEA				pmax	pmax		
	comp=Z,300nm,10.3s						
ZEA				smax	smax		
	comp=N,300nm,16.3s						
ZEA				MLR	MLR		
	comp=E,300nm,21.0s						
ZEA				MLR	MLR		
	comp=N,600nm,20.0s						
ZEA				MLR	MLR		
	comp=Z,700nm,20.0s						
ZAK	Zakamensk	52.54	342	eP	P	19 06 52.9	+1.3
ZAK				pmax	pmax		
	comp=Z,23nm,1.3s						
TLY	Talaya	53.57	343	eP	P	19 07 01.6	+2.6
TLY				eS	S	19 14 34.4	+5.5
TLY				pmax	pmax		
	comp=Z,205nm,1.6s						
TLY				MLR	MLR		
	comp=Z,1µm,18.0s						
TLY	Talaya	53.57	343	P	P	19 07 00.2	+1.2
TLY	Talaya	53.57	343	P	P	19 06 58.3	-0.7
KAD	Karad	53.58	290	eP	P	19 06 58.5	-1.2
GOA	Goa	53.59	288	eP	P	19 06 58.7	-1.0
SONA	Sohna	54.00	304	eP	P	19 07 01.5	-1.1
NDI	New Delhi	54.05	305	eP	P	19 07 01.7	-1.2
AYAN	Aya Nagar	54.05	305	eP	P	19 07 01.9	-1.0
POO	Poona	54.14	292	eP	P	19 07 03.0	-0.8
POO	Poona	54.14	292	⇓iP	P	19 07 03.0	-0.8
	comp=Z,120nm,1.8s						
WMQ	Urumqi	54.37	326	P	P	19 07 05.3	+0.2
WMQ				PcP	PcP	19 08 09.5	+1.0
WMQ				ScS	ScS	19 16 49.0	-1.6
WMQ				pmax	pmax		
	comp=Z,220nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,410nm,5.5s						
WMQ				LR	LR		
	comp=Z,1µm,17.9s						
WMQ				LR	LR		
	comp=Z,2µm,18.9s						
WMQ				LR	LR		
	comp=Z,2µm,21.1s						
MSVF	Nonsavu	54.38	113	P	P	19 07 04.6	-1.0
MSVF				pmax	pmax		
	comp=Z,83nm,1.0s						
MSVF	Nonsavu	54.38	113	P	P	19 07 04.6	-1.0
MSVF				IAmb	IAmb	19 07 09.5	
	comp=Z,83nm,1.0s						
MSVF	Nonsavu	54.38	113	P	P	19 07 08.6	+3.0
MOY	Mondy	54.39	341	eP	P	19 07 06.3	+1.2
MOY				pmax	pmax		
	comp=Z,132nm,3.0s						
KUDL	Kundal	54.46	304	eP	P	19 07 04.3	-1.6
SMLA	Simla	54.99	308	eP	P	19 07 09.1	-0.6
SMLA				IAmb	IAmb	19 07 11.4	
	comp=Z,193nm,1.1s						
SKR	Severo-Kuril's	55.18	23	eP	P	19 07 07.1	-3.6
SKR				pmax	pmax		
	comp=Z,72nm,0.9s						
SKR				pmax	pmax		
	comp=Z,800nm,6.9s						
SKR				pmax	pmax		
	comp=Z,500nm,9.2s						
SKR				MLR	MLR		
	comp=Z,600nm,21.0s						
AJM	Ajmer	55.47	301	eP	P	19 07 12.2	-1.1
BHK	Bhakra	55.70	308	eP	P	19 07 14.6	-0.2
DHRM	DHARAMSHALA	56.11	309	eP	P	19 07 17.2	-0.8
DHRM				IAmb	IAmb	19 07 19.1	
	comp=Z,193nm,1.1s						
BOD	Bodaibo	57.06	352	eP	P	19 07 24.8	+0.8
BOD				pmax	pmax		
	comp=Z,155nm,1.2s						
OUZ	Omahuta	57.26	134	P	P	19 07 24.0	-1.8
PEA0B	Petropavlovsk-	57.70	22	c eP	P	19 07 30.5	+1.9
PEA0B	Petropavlovsk-	57.70	22	P	P	19 07 30.4	+1.8
PEA0B				IAmb	IAmb	19 07 51.2	
	comp=Z,55nm,1.0s						
PETK	Petropavlovsk-	57.70	22	P	P	19 07 29.5	+0.9
	comp=Z,27nm,0.6s,baz=188,slow=5.7,SNR=136						
PETK				LR	LR	19 31 06.5	
	comp=Z,435nm,21.7s,baz=219,slow=35						
PET	Petropavlovsk	57.99	22	eP	P	19 07 32.4	+1.8
PET				e		19 07 43.0	
PET				eS	S	19 15 30.2	+2.5
PET				e		19 17 13.2	
PET				pmax	pmax		
	comp=Z,58nm,1.3s						
PET				pmax	pmax		
	comp=Z,500nm,10.4s						
PET				MLR	MLR		
	comp=Z,1µm,21.0s						
PET				MLR	MLR		
	comp=Z,1µm,21.0s						
PET	Petropavlovsk	57.99	22	P	P	19 07 32.3	+1.6
PET				IAmb	IAmb	19 07 34.1	
	comp=Z,106nm,1.5s						
ZSN	Zaisan	58.20	328	eP	P	19 07 31.4	-0.9
	comp=Z,31nm,1.0s,baz=328						
ZSN	Zaisan	58.20	328	eP	P	19 07 31.4	-0.9
ZSN				pmax	pmax		
	comp=Z,31nm,1.0s						
DGZ	Jazzator, Alta	58.38	331	c iP	P	19 07 33.7	0.0
DGZ				pmax	pmax		
	comp=Z,34nm,1.2s						
DGZ				MLR	MLR		
	comp=Z,2µm,21.0s						
PDGK	Podgornoye	58.92	322	P	P	19 07 36.1	-1.4
NIL	Nilore	59.01	309	P	P	19 07 36.8	-1.4
NIL				pmax	pmax		
	comp=Z,213nm,1.4s						
NIL				MLR	MLR		
	comp=Z,700nm,22.0s						
NIL	Nilore	59.01	309	P	P	19 07 38.4	+0.3
NIL	Nilore	59.01	309	P	P	19 07 36.8	-1.4
DCZ	Deep Cove	59.04	148	P	P	19 07 36.7	-1.3
DCZ				IAmb	IAmb	19 07 58.0	
	comp=Z,64nm,1.2s						
UZB	Uzynbulak	59.12	321	eP	P	19 07 38.2	-0.7
	comp=Z,63nm,1.0s,baz=321						
UZB	Uzynbulak	59.12	321	eP	P	19 07 38.2	-0.7
UZB				pmax	pmax		
	comp=Z,63nm,1.0s						
PRZ	Przheval'sk	59.17	320	P	P	19 07 40.0	+0.6
PRZ				pmax	pmax		
	comp=Z,159nm,0.8s						
PRZ	Przheval'sk	59.17	320	P	P	19 07 40.0	+0.6
MK31	Makanchi Array	59.20	326	i P	P	19 07 38.9	-0.3
MK31				pmax	pmax		
	comp=Z,73nm,0.7s						
MK31	Makanchi Array	59.20	326	P	P	19 07 38.6	-0.6
MKAR	Makanchi Array	59.20	326	P	P	19 07 38.7	-0.6
	comp=Z,41nm,0.4s,baz=120,slow=7.8,SNR=302						
MKAR				S	S	19 15 43.5	-0.2
	comp=Z,2.0nm,0.9s,baz=121,slow=13,SNR=4.0						
MKAR				LR	LR	19 33 35.9	
	comp=Z,2µm,21.6s,baz=113,slow=36						
MKAR				PKP2bc		19 37 20.7	
	comp=Z,0.9nm,0.8s,baz=270,slow=3.6,SNR=5.8						
MKAR				P4KPbc		19 44 46.8	
	comp=Z,0.6nm,0.8s,baz=130,slow=5.8,SNR=5.1						
MKAR	Makanchi Array	59.20	326	P	P	19 07 38.9	-0.3
MKAR	Makanchi Array	59.20	326	P	P	19 07 38.9	-0.3
MKAR					P'P'bc	19 37 17.1	-5.2
KSH	Kashi	59.38	316	P	P	19 07 41.3	+0.6
KSH				pP	pP	19 07 51.5	-1.9
KSH				S	S	19 15 43.8	-2.7
KSH				pmax	pmax		
	comp=Z,93nm,1.0s						
KSH				LR	LR		
	comp=Z,500nm,26.8s						
KSH				LR	LR		
	comp=Z,900nm,26.8s						
KSH				LR	LR		
	comp=Z,1µm,25.1s						
MAKZ	Makanchi	59.38	326	P	P	19 07 39.9	-0.6
MAKZ				pmax	pmax		
	comp=Z,162nm,1.0s						
MAKZ	Makanchi	59.38	326	P	P	19 07 39.9	-0.6
QRZ	Quartz Range	59.43	140	P	P	19 07 41.3	+0.4
SATY	Saty	59.46	321	eP	P	19 07 41.0	-0.3
	comp=Z,92nm,1.0s,baz=321						
SATY	Saty	59.46	321	eP	P	19 07 40.9	-0.3
SATY				pmax	pmax		
	comp=Z,92nm,1.0s						
HIZ	Hauiti	59.75	137	P	P	19 07 44.6	+1.4
KDJ	Kajisay	59.78	319	P	P	19 07 43.5	-0.1
KDJ				pmax	pmax		
	comp=Z,92nm,0.7s						
KDJ	Kajisay	59.78	319	P	P	19 07 43.5	-0.1
TOZ	Tahuroa Road	59.81	136	P	P	19 07 44.9	+1.3
LBZ	Lake Benmore	60.05	145	P	P	19 07 44.8	-0.2
RPZ	Rata Peaks	60.15	144	P	P	19 07 45.7	-0.1
RPZ				IAmb	IAmb	19 07 55.5	
	comp=Z,67nm,1.1s						
RPZ	Rata Peaks	60.15	144	P	P	19 07 49.0	+3.2
THZ	Tophouse	60.17	141	P	P	19 07 45.1	-0.9
THZ				IAmb	IAmb	19 07 50.9	
	comp=Z,33nm,0.6s						
LTZ	Lake Taylor	60.35	142	P	P	19 07 48.5	+1.3
MDOK	Medeo	60.37	320	eP	P	19 07 47.4	-0.1
	baz=320						
MDOK	Medeo	60.37	320	eP	P	19 07 47.4	-0.1
TNSS	Tian-Shan	60.37	320	eP	P	19 07 47.8	-0.1
	baz=320						
ULHL	Ulahol	60.45	319	P	P	19 07 48.7	+0.5
	SNR=9.1						
TDK	Taldyqorghan	60.46	323	eP	P	19 07 47.5	-0.4
	comp=Z,65nm,0.7s,baz=323						
TDK	Taldyqorghan	60.46	323	eP	P	19 07 47.5	-0.4
TDK				pmax	pmax		
	comp=Z,65nm,0.7s						
AAA	Alma-Ata	60.48	320	eP	P	19 07 47.2	-1.0
	baz=320						
AAA	Alma-Ata	60.48	320	eP	P	19 07 47.2	-1.0
YAK	Yakutsk	60.50	2	c iP	P	19 07 48.1	+0.3
YAK				e*PP	sP	19 08 05.2	-0.4
YAK				e		19 09 58.6	
YAK				eS	S	19 15 57.3	-2.4
YAK				e*SS	pS	19 16 13.9	-0.9
YAK				e		19 17 33.9	
YAK				eSS	SS	19 20 00.7	+2.2
YAK				pmax	pmax		
	comp=Z,154nm,1.0s						
YAK				pmax	pmax		
	comp=N,43nm,1.1s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.2s						
YAK				pmax	pmax		
	comp=N,133nm,2.6s						
YAK				pmax	pmax		
	comp=Z,83nm,2.0s						
YAK				pmax	pmax		
	comp=E,109nm,2.1s						
YAK				smax	smax		
	comp=N,338nm,3.2s						
YAK				smax	smax		
	comp=E,62nm,1.9s						
YAK	Yakutsk	60.50	2	P	P	19 07 48.1	+0.3
OXZ	Oxford	60.52	143	P	P	19 07 47.7	-0.6
OXZ				IAmb	IAmb	19 07 52.9	
	comp=Z,28nm,0.7s						
WTVZ	West Tongariro	60.55	137	P	P	19 07 50.3	+1.5
NNVZ	North Ngauruho	60.58	137	P	P	19 07 51.1	+2.1
FWVZ	Far West T-bar	60.59	138	P	P	19 07 50.9	+1.7
OTVZ	Oturere	60.62	137	P	P	19 07 50.3	+1.0
TMVZ	Te Maari	60.63	137	P	P	19 07 50.6	+1.3
ETVZ	East Tongariro	60.64	137	P	P	19 07 50.6	+1.2
TUWZ	Tuamarina	60.65	140	P	P	19 07 48.0	-1.2
WNVZ	Wahianoa	60.66	138	P	P	19 07 51.5	+1.9
ODZ	Otahua Downs	60.70	145	P	P	19 07 50.2	+0.7
CHKK	Chushkaly	60.75	321	eP	P	19 07 48.9	-1.0
	baz=321						
BSWZ	Blackbirch Sta	60.76	141	P	P	19 07 48.3	-1.7
BOOM	Boomskoye usch	60.76	319	P	P	19 07 49.7	-0.6
BOOM				pmax	pmax		
	comp=Z,129nm,1.3s						
BOOM	Boomskoye usch	60.76	319	P	P	19 07 49.7	-0.6
BOOM				IAmb	IAmb	19 07 54.9	
	comp=Z,129nm,1.3s						
MOVZ	Moawhango	60.80	138	P	P	19 07 50.1	-0.4
KHZ	Kahutara	60.93	142	P	P	19 07 50.7	-0.4
KHZ				IAmb	IAmb	19 07 56.1	
	comp=Z,39nm,0.9s						
KHZ	Kahutara	60.93	142	P	P	19 07 50.8	-0.3
MA2	Magadan	61.02	14	deP	P	19 07 53.1	+1.7
MA2				pmax	pmax		
	comp=Z,126nm,1.3s						
MA2	Magadan	61.02	14	P	P	19 07 52.7	+1.3
MA2				IAmb	IAmb	19 08 18.2	
	comp=Z,79nm,0.8s						

BHHZ	Black Hill Sta	61.05	138	P	P	19 07 51.7	-0.4
SNZO	South Karori	61.08	140	P	P	19 07 53.0	+0.9
KUU	Kurty	61.18	321	⇑iP	P	19 07 52.4	-0.4
	baz=321						
KUU	Kurty	61.18	321	c iP	P	19 07 52.4	-0.4
URZ	Urewera	61.18	136	P	P	19 07 52.4	-0.5
URZ	Urewera	61.18	136	P	P	19 07 53.0	0.0
URZ				IAmb	IAmb	19 07 58.4	
	comp=Z,34nm,0.8s						
URZ	Urewera	61.18	136	P	P	19 07 53.6	+0.7
BKZ	Black Stump Fm	61.19	137	P	P	19 07 52.9	-0.1
BKZ	Black Stump Fm	61.19	137	P	P	19 07 52.2	-0.9
BKZ				IAmb	IAmb	19 08 02.7	
	comp=Z,69nm,1.1s						
BKZ	Black Stump Fm	61.19	137	P	P	19 07 52.6	-0.4
TKM2	Tokmak 2	61.19	320	P	P	19 07 53.1	-0.1
	SNR=85						
TKM2	Tokmak 2	61.19	320	i P	P	19 07 53.7	+0.5
TKM2				pmax	pmax		
	comp=Z,158nm,1.3s						
RTZ	Ruatahuna	61.26	136	P	P	19 07 53.8	+0.3
KWHZ	Kaweka Forest	61.27	137	P	P	19 07 53.7	+0.1
KRHZ	Kereru	61.34	138	P	P	19 07 53.8	-0.1
HAZ	Te Kaha	61.42	135	P	P	19 07 54.9	+0.3
RUGZ	Raukumara Rang	61.45	135	P	P	19 07 54.4	-0.5
MCHZ	McNeill Hill	61.46	137	P	P	19 07 54.7	-0.1
KBK	Karagaybulak	61.49	319	P	P	19 07 55.3	+0.2
	SNR=71						
MWZ	Matawai	61.51	136	P	P	19 07 54.8	-0.4
PLWZ	Palliser	61.56	140	P	P	19 07 54.6	-0.9
ARHZ	Aropaoanui	61.58	137	P	P	19 07 55.6	+0.1
UCH	Uchtor	61.58	318	P	P	19 07 56.5	+0.3
	SNR=83						
KAHZ	Kahuranaki	61.75	138	P	P	19 07 56.8	0.0
TWGZ	Tauwhareparae	61.75	135	P	P	19 07 57.7	+0.8
CHMS	Chumysh	61.77	319	P	P	19 07 56.4	-0.5
	SNR=29						
AAK	Ala-Archa	61.78	319	P	P	19 07 57.7	+0.6
	SNR=55						
AAK	Ala-Archa	61.78	319	i P	P	19 07 56.7	-0.4
	SNR=73						
AAK	Ala-Archa	61.78	319	ceP	P	19 07 57.1	0.0
AAK				pmax	pmax		
	comp=Z,405nm,1.9s						
AAK				MLR	MLR		
	comp=Z,4µm,23.0s						
AAK	Ala-Archa	61.78	319	P	P	19 07 57.4	+0.3
AAK	Ala-Archa	61.78	319	P	P	19 07 56.7	-0.4
AAK				IAmb	IAmb	19 08 01.3	
	comp=Z,51nm,0.9s						
RIGZ	Rimuhau	61.84	136	P	P	19 07 58.1	+0.7
MCQ	Macquarie Isla	61.92	159	P	P	19 07 57.9	+0.5
	baz=62,SNR=5.2						
MCQ	Macquarie Isla	61.92	159	P	P	19 07 59.2	+1.7
MCQ				pmax	pmax		
	comp=Z,87nm,0.7s						
MCQ	Macquarie Isla	61.92	159	P	P	19 07 59.2	+1.7
MCQ	Macquarie Isla	61.92	159	P	P	19 07 59.7	+2.2
	comp=Z,148nm,0.7s						
CNGZ	Carnagh Statio	62.05	136	P	P	19 07 58.9	+0.2
USP	Ospenovka	62.06	319	P	P	19 07 58.6	-0.2
	SNR=92						
AML	Almayashu	62.08	318	P	P	19 07 59.6	+0.2
	SNR=83						
AML	Almayashu	62.08	318	i P	P	19 07 59.7	+0.2
	SNR=148						
AML	Almayashu	62.08	318	P	P	19 07 59.6	+0.2
EKS2	Erkin-Say	62.26	319	P	P	19 08 00.5	+0.2
	SNR=51						
DRK	Karamyk	62.29	315	P	P	19 07 59.7	-1.0
SEM	Semipalatinsk	62.42	329	eP	P	19 07 58.9	-2.4
	baz=329						
SEM	Semipalatinsk	62.42	329	eP	P	19 07 58.9	-2.4
ZAA0	Zalesovo Array	62.44	334	P	P	19 07 59.9	-1.2
ZAA0				IAmb	IAmb	19 08 05.3	
	comp=Z,74nm,1.1s						
ZALV	Zalesovo Beam	62.44	334	P	P	19 08 00.1	-0.9
	comp=Z,28nm,0.6s,baz=122,slow=6.4,SNR=46						
ZALV				LR	LR	19 35 30.7	
	comp=Z,504nm,21.6s,baz=136,slow=36						
ZALV				PKP2bc		19 37 12.4	
	comp=Z,0.7nm,0.4s,baz=306,slow=5.0,SNR=5.2						
ZALV	Zalesovo Beam	62.44	334	P	P	19 07 59.5	-1.6
ZALV	Zalesovo Beam	62.44	334	P	P	19 07 59.5	-1.6
KBL	Kabul	62.59	309	P	P	19 08 01.2	-1.6
KBL				pmax	pmax		
	comp=Z,81nm,0.8s						
KBL	Kabul	62.59	309	P	P	19 08 02.0	-0.8
	SNR=70						
KBL	Kabul	62.59	309	P	P	19 08 01.2	-1.6
BTLS	Baital	63.17	321	⇑iP	P	19 08 05.5	-0.7
	comp=Z,28nm,0.9s,baz=321						
BTLS	Baital	63.17	321	c iP	P	19 08 05.4	-0.7
BTLS				pmax	pmax		
	comp=Z,28nm,0.9s						
GAR	Garm	63.17	314	P	P	19 08 05.2	-1.3
BTK	Batken	63.21	315	P	P	19 08 05.8	-0.8
BTK				pmax	pmax		
	comp=Z,183nm,1.4s						
BTK	Batken	63.21	315	P	P	19 08 05.8	-0.8
KURBB	Kurchatov Arra	63.44	328	P	P	19 08 06.8	-1.0
KURK	Kurchatov	63.45	328	d iP	P	19 08 07.3	-0.5
KURK				pmax	pmax		
	comp=Z,172nm,0.8s						
KURK				MLR	MLR		
	comp=Z,357nm,18.0s						
KURK	Kurchatov	63.45	328	P	P	19 08 07.3	-0.5
KURK	Kurchatov	63.45	328	P	P	19 08 07.0	-0.8
CHGR	Chuyangaron	63.89	313	P	P	19 08 10.2	-1.0
IUG	Iuzhnay	64.57	317	eP	P	19 08 14.9	-0.6
	baz=317						
IUG	Iuzhnay	64.57	317	eP	P	19 08 14.9	-0.6
KKAR	Karatay Array	64.62	318	P	P	19 08 14.5	-1.3
KKAR	Karatay Array	64.62	318	P	P	19 08 14.5	-1.3
TAS	Tashkent	64.76	316	P	P	19 08 15.6	-1.1
TAS				pmax	pmax		
	comp=Z,219nm,1.2s						
TAS	Tashkent	64.76	316	P	P	19 08 15.6	-1.1
BRLS	Borolday	65.05	318	eP	P	19 08 17.6	-0.9
	comp=Z,32nm,1.3s,baz=317						
BRLS	Borolday	65.05	318	eP	P	19 08 17.6	-0.9
BRLS				pmax	pmax		
	comp=Z,32nm,1.3s						
OTUK	Ortayu	65.69	324	P	P	19 08 21.0	-1.6
BRZS	Berezniki	66.31	325	eP	P	19 08 25.6	-0.9
	comp=Z,57nm,1.4s,baz=325						
BRZS	Berezniki	66.31	325	eP	P	19 08 25.6	-0.9
BRZS				pmax	pmax		
	comp=Z,57nm,1.4s						
HRA	Herat	67.94	307	P	P	19 08 36.0	-1.5
HRA				IAmb	IAmb	19 08 40.6	
	comp=Z,88nm,1.4s						
WBK	Wadi Bani Khal	68.56	294	P	P	19 08 41.5	+0.2
WSAR	Wadi Sarin	68.96	294	P	P	19 08 43.9	+0.2
BRVK	Borovoye	69.08	328	P	P	19 08 43.7	-0.2
BRVK				pmax	pmax		
	comp=Z,60nm,0.7s						
BRVK				MLR	MLR		
	comp=Z,1µm,21.0s						
BRVK	Borovoye	69.08	328	P	P	19 08 44.2	+0.4
BRVK	Borovoye	69.08	328	P	P	19 08 43.7	-0.2
BRVK				IAmb	IAmb	19 08 53.4	
	comp=Z,60nm,0.7s						
BRVK	Borovoye	69.08	328	IAMs_20	IAMs_20	19 39 40.5	
	comp=Z,1µm,21.0s						
JMDO	Jabal Madar	69.33	293	P	P	19 08 46.0	0.0
BIDO	Bidbid	69.45	294	P	P	19 08 47.0	+0.2
	SNR=5.4						
SMDO	Samad	69.46	294	P	P	19 08 46.9	-0.1
TIXI	Tiksi	70.13	1	c iP	P	19 08 49.2	-0.7
TIXI				pmax	pmax		
	comp=Z,131nm,1.6s						
TIXI	Tiksi	70.13	1	P	P	19 08 48.7	-1.2
TIXI				IAMs_20	IAMs_20	19 43 37.6	
	comp=Z,768nm,20.0s						
BSY	Bisya	70.20	294	P	P	19 08 51.6	+0.1
HOQ	Hoqain	70.20	294	P	P	19 08 51.6	+0.2
	SNR=5.2						
ARQ	Araqi	70.89	294	P	P	19 08 55.9	+0.3
SOHO	SOHO	70.98	295	P	P	19 08 57.4	+1.3
SOHO	SOHO	70.98	295	P	P	19 08 57.1	+1.0
MSEY	Mahe Island	71.02	265	P	P	19 08 56.8	+0.2
MSEY	Mahe Island	71.02	265	IAMs_20	IAMs_20	19 36 48.1	
	comp=Z,1µm,22.0s						
SHAO	Shalim	71.19	288	i P	P	19 08 56.2	-1.3
	SNR=6.6						
UOSS	Minazif	71.38	296	P	P	19 08 57.2	-1.3
UOSS	Minazif	71.38	296	P	P	19 08 58.7	+0.1
UOSS	Minazif	71.38	296	P	P	19 08 58.0	-0.5
BANOM	Banah	71.42	297	P	P	19 08 58.9	+0.1
BANOM	Banah	71.42	297	P	P	19 08 58.9	+0.1
HATD	Hatta, Dubai	71.43	296	P	P	19 08 58.2	-0.6
HATD	Hatta, Dubai	71.43	296	P	P	19 08 58.7	-0.1
SHME	Shamm	71.58	297	P	P	19 08 60.0	+0.3
SHME	Shamm	71.58	297	P	P	19 09 01.0	+1.3
ALNE	Al Ain	71.68	295	i P	P	19 08 59.8	-0.6
	SNR=9.7						
ALNE	Al Ain	71.68	295	P	P	19 09 01.3	+0.9
	SNR=14						
DMTO	DMTO	71.81	288	P	P	19 09 01.5	+0.3
BILL	Bilibino	71.86	15	⇑eP	P	19 09 00.9	+0.3
BILL				e		19 09 19.3	
BILL				e		19 11 39.2	
BILL				ePPP	PPP	19 13 28.9	
BILL				pmax	pmax		
	comp=Z,30nm,1.7s						
BILL	Bilibino	71.86	15	P	P	19 09 00.9	+0.3
FAQ	Al Faqa, Dubai	71.91	295	P	P	19 09 01.3	-0.4
FAQ	Al Faqa, Dubai	71.91	295	P	P	19 09 01.4	-0.3
GEYT	Alibeck	72.00	309	P	P	19 09 01.7	-0.4
	comp=Z,37nm,0.9s,baz=182,slow=7.4,SNR=28						
GEYT	Alibeck	72.00	309	P	P	19 09 01.1	-1.0
GEYT				IAmb	IAmb	19 09 07.0	
	comp=Z,51nm,0.9s						
GYA0B	ALIBECK ARRAY	72.00	309	P	P	19 09 01.6	-0.5
GYA0B				IAmb	IAmb	19 09 06.9	
	comp=Z,70nm,0.9s						
ASUD	Al Ashush, Dub	72.13	295	i P	P	19 09 02.6	-0.4
	SNR=19						
ASUD	Al Ashush, Dub	72.13	295	P	P	19 09 03.0	-0.1
SOCY	Socotra	72.42	282	P	P	19 09 03.3	-1.8
SOCY	Socotra	72.42	282	P	P	19 09 02.8	-2.2
SOCY				IAmb	IAmb	19 09 05.6	
	comp=Z,95nm,1.1s						
SOCY				IAMs_20	IAMs_20	19 41 12.2	
	comp=Z,926nm,19.0s						
RER	Riviere de l'E	72.44	247	P	P	19 09 07.2	+2.1
RER	Riviere de l'E	72.44	247	P	P	19 09 04.0	-1.0
RER				IAmb	IAmb	19 09 18.7	
	comp=Z,77nm,1.0s						
NRIK	Noril'sk	72.54	347	P	P	19 09 05.1	+0.5
	comp=Z,89nm,0.6s,baz=122,slow=4.7,SNR=86						
NRIK				S	S	19 18 24.3	-1.1
	comp=Z,9.7nm,1.1s,baz=347,slow=20,SNR=20						
NRIK				LR	LR	19 46 09.3	
	comp=Z,376nm,18.6s,baz=144,slow=40						
NRIK	Noril'sk	72.54	347	P	P	19 09 04.6	0.0
DOK	Doka	72.66	289	P	P	19 09 04.7	-1.6
	SNR=6.0						
WHFO	Wadi Hawf	72.95	288	P	P	19 09 07.1	-1.0
MZWR	Madinat Zayed	73.35	294	P	P	19 09 10.3	0.0
ABTO	Aybut	73.36	288	P	P	19 09 09.9	-0.6
AB31	Akbulak array	73.65	321	eP	P	19 09 11.3	-0.3
ABKAR	Akbulak array	73.65	321	P	P	19 09 11.0	-0.5
ABKAR	Akbulak array	73.65	321	P	P	19 09 10.9	-0.7
ABKAR				IAmb	IAmb	19 09 16.3	
	comp=Z,49nm,0.8s						
GHWR	Ruwais	74.28	294	P	P	19 09 16.1	+0.3
SLWR	Sila	75.37	294	P	P	19 09 22.9	+0.9
UNV	Unalaska Valle	75.54	34	P	P	19 09 23.2	+0.8
UNV				IAmb	IAmb	19 09 43.4	
	comp=Z,142nm,1.4s						
SVE	Sverdlovsk	75.69	329	d iP	P	19 09 23.4	+0.2
SVE				eS	S	19 19 02.5	+1.4
SVE				pmax	pmax		
	comp=Z,425nm,1.3s						
SVE				MLR	MLR		
	comp=Z,1µm,23.0s						
TRNA	Turayna	75.86	295	P	P	19 09 25.6	+0.7
AKUT	Akutan	76.04	34	P	P	19 09 25.7	+0.5
AKUT				IAmb	IAmb	19 09 40.9	
	comp=Z,129nm,1.0s						
SHMA	Al-Shehemyia	76.19	296	P	P	19 09 27.4	+0.7
SAKB	Bahrain	76.58	296	P	P	19 09 29.7	+0.8
ARU	Arti	76.64	328	c iP	P	19 09 27.9	-0.7
ARU				*PP	pP	19 09 41.4	-0.2
ARU				*SP	sP	19 09 47.1	+0.5
ARU						19 12 14.9	
ARU				S	S	19 19 10.7	-0.9
ARU				*SS	SKSac	19 19 35.1	-1.5
ARU				pmax	pmax		
	comp=Z,275nm,1.1s						
ARU				MLR	MLR		
	comp=Z,754nm,19.0s						
ARU	Arti	76.64	328	P	P	19 09 27.6	-1.0
GAMB	Gambell	76.65	24	P	P	19 09 28.7	+0.2
	baz=245						
SBV	Sambava	77.10	256	P	P	19 09 33.4	+1.4
	SNR=6.4						
FALS	False Pass	77.56	34	P	P	19 09 34.1	+0.3
	baz=254						
FALS	False Pass	77.56	34	P	P	19 09 34.1	+0.3
FALS				IAmb	IAmb	19 10 01.3	
	comp=Z,89nm,0.8s						
TNA	Tin City	78.85	23	P	P	19 09 40.7	0.0
	baz=248						
QRN	Al-Qurain	79.13	299	eP	P	19 09 42.1	-0.9
SDPT	Sand Point	79.32	34	P	P	19 09 45.1	+1.6
	baz=257,SNR=6.6						
SDPT	Sand Point	79.32	34	P	P	19 09 43.4	-0.1
KBD	Kabd	79.36	299	eP	P	19 09 43.2	-1.0
UMR	Umm Al-Rimmam	79.37	300	eP	P	19 09 43.0	-1.3
RDF	Al-Radifah	79.46	299	eP	P	19 09 43.5	-1.4
CHNA	Chernabura Isl	79.70	34	P	P	19 09 45.2	-0.3
	baz=258						
MIB	Mutribah	79.71	300	eP	P	19 09 44.8	-1.4
CHGN	Chignik	80.66	33	P	P	19 09 50.4	-0.3
	baz=258						
VOI	Vohitsoka	80.81	248	P	P	19 09 53.1	+0.6
VOI	Vohitsoka	80.81	248	P	P	19 09 51.2	-1.2
VOI				IAmb	IAmb	19 10 10.2	
	comp=Z,46nm,0.7s						
MAK	Makhachkala	80.83	313	eP	P	19 09 50.1	-1.8
MAK				e*PP	pP	19 10 03.1	-1.9
MAK				e*SP	sP	19 10 08.8	-1.2
MAK				eS	S	19 19 54.3	-2.5
MAK				eSSS	SSS	19 28 39.5	
MAK				pmax	pmax		
	comp=Z,101nm,0.7s						
MAK				MLR	MLR		
	comp=Z,517nm,20.0s						
RAYN	Ar Rayn	80.99	293	i P	P	19 09 53.0	-0.3
	SNR=80						
RAYN	Ar Rayn	80.99	293	P	P	19 09 52.6	-0.7
RAYN				pmax	pmax		
	comp=Z,102nm,1.1s						
RAYN				MLR	MLR		
	comp=Z,900nm,20.0s						
RAYN	Ar Rayn	80.99	293	P	P	19 09 52.7	-0.6
RAYN	Ar Rayn	80.99	293	P	P	19 09 52.6	-0.6
RAYN				IAmb	IAmb	19 09 55.8	
	comp=Z,102nm,1.1s						
RAYN	Ar Rayn	80.99	293	IAMs_20	IAMs_20	19 48 16.7	
	comp=Z,861nm,20.0s						
VNDA	Vanda	81.22	173	P	P	19 09 53.4	+0.1
	comp=Z,38nm,0.7s,baz=320,slow=5.8,SNR=102						
VNDA				LR	LR	19 44 25.1	
	comp=Z,321nm,21.6s,baz=340,slow=34						
VNDA	Vanda	81.22	173	P	P	19 09 52.4	-0.9
MAW	Mawson	81.47	200	P	P	19 09 55.5	+0.8
	comp=Z,18nm,0.8s,baz=80,slow=4.7,SNR=36						
MAW				LR	LR	19 44 07.5	
	comp=Z,258nm,20.6s,baz=64,slow=34						
MAW	Mawson	81.47	200	P	P	19 09 55.6	+0.8
	baz=82,SNR=15						
MAW	Mawson	81.47	200	P	P	19 09 54.9	+0.1
KIRV	Kirov	81.95	329	deP	P	19 09 58.0	+0.5
BELG	Belogornoye	81.96	323	ceP	P	19 09 57.4	-0.2
BELG				pmax	pmax		
	comp=Z,70nm,1.0s						
BELG				MLR	MLR		
	comp=Z,79nm,20.0s						
GROC	Groznyy	82.10	313	eP	P	19 09 56.8	-1.8
GROC				e*PP	pP	19 10 11.5	-0.2
GROC				eS	S	19 20 06.6	-3.4
GROC				pmax	pmax		
	comp=Z,77nm,1.0s						
SBA	Scott Base	82.14	172	P	P	19 09 59.2	+1.1
SBA				pmax	pmax		
	comp=Z,35nm,1.1s						
SBA	Scott Base	82.14	172	P	P	19 09 59.2	+1.1
GNI	Garni	82.62	310	P	P	19 10 02.8	+1.1
GNI	Garni	82.62	310	P	P	19 10 02.6	+0.9
GNI				pmax	pmax		
	comp=Z,130nm,1.1s						
GNI	Garni	82.62	310	P	P	19 10 02.8	+1.1
GNI	Garni	82.62	310	P	P	19 10 02.6	+0.9
P18K	Big Mountain,	82.89	30	P	P	19 10 02.5	+0.1
	baz=261,SNR=6.6						
P18K	Big Mountain,	82.89	30	P	P	19 10 02.3	-0.2
SVW2	Sparrevohn	83.00	29	P	P	19 10 04.7	+1.7
SVW2				IAmb	IAmb	19 10 25.0	
	comp=Z,52nm,1.1s						
GCSA	Galena City Sc	83.09	25	P	P	19 10 04.8	+1.6
	baz=259,SNR=30						
TTA	Tatalina	83.12	27	P	P	19 10 04.3	+0.6
TTA				pmax	pmax		
	comp=Z,131nm,1.4s						
TTA	Tatalina	83.12	27	P	P	19 10 04.5	+0.9
	baz=260,SNR=42						
TTA	Tatalina	83.12	27	P	P	19 10 04.3	+0.6
TTA				IAmb	IAmb	19 10 06.9	
	comp=Z,131nm,1.4s						
ATD	Arta Tunnel	83.31	281	P	P	19 10 07.4	+1.8
	SNR=9.2						
ZEI	Tsey	83.45	313	eP	P	19 10 04.0	-1.9
ZEI				pmax	pmax		
	comp=Z,54nm,0.9s						
O19K	Port Alsworth	83.47	30	P	P	19 10 06.1	+0.7
	baz=262						
O19K	Port Alsworth	83.47	30	P	P	19 10 05.4	0.0
O19K				IAmb	IAmb	19 10 26.2	
	comp=Z,94nm,1.3s						
L19K	White Mountain	83.53	28	P	P	19 10 07.3	+1.6
	baz=261,SNR=30						
L19K	White Mountain	83.53	28	P	P	19 10 06.5	+0.8
L19K				IAmb	IAmb	19 10 09.8	
	comp=Z,116nm,1.3s						
OHAK	Old Harbor	83.60	33	P	P	19 10 06.8	+0.7
	baz=263						
OHAK	Old Harbor	83.60	33	P	P	19 10 05.1	-1.0
OHAK				IAmb	IAmb	19 10 22.1	
	comp=Z,76nm,1.1s						
Q19K	Cape Douglas,	83.63	31	P	P	19 10 06.2	-0.1
	baz=262						
AKH	Akhalkalaki	83.66	311	⇓P	P	19 10 08.4	+1.4
ONI	Oni	83.76	313	P	P	19 10 08.0	+0.6
ONI				pmax	pmax		
	comp=Z,94nm,1.0s						
ONI	Oni	83.76	313	P	P	19 10 08.0	+0.6
ONI				IAmb	IAmb	19 10 17.1	
	comp=Z,94nm,1.0s						
KARS	Kars	83.92	311	P	P	19 10 09.1	+0.7
KARS				pmax	pmax		
	comp=Z,521nm,1.0s						
KARS	Kars	83.92	311	P	P	19 10 09.1	+0.7
P19K	Oil Pt	83.94	30	P	P	19 10 08.2	+0.4
	baz=262						
L20K	Farewell, AK	84.02	27	P	P	19 10 09.1	+0.9
	baz=262,SNR=18						
KDAK	Kodiak Island	84.04	32	P	P	19 10 09.8	+1.4
KDAK				pmax	pmax		
	comp=Z,100nm,1.1s						
KDAK	Kodiak Island	84.04	32	P	P	19 10 08.6	+0.3
	baz=263						
KDAK	Kodiak Island	84.04	32	P	P	19 10 09.8	+1.4
KDAK				IAmb	IAmb	19 10 24.5	
	comp=Z,100nm,1.1s						
K20K	Telida	84.06	26	P	P	19 10 09.7	+1.3
	baz=261,SNR=12						
K20K	Telida	84.06	26	P	P	19 10 09.4	+1.0
K20K				IAmb	IAmb	19 10 30.6	
	comp=Z,53nm,1.2s						
J20K	Nowinta River	84.16	26	P	P	19 10 10.5	+1.7
	baz=261,SNR=16						
J20K	Nowinta River	84.16	26	P	P	19 10 10.2	+1.4
J20K				IAmb	IAmb	19 10 30.9	
	comp=Z,68nm,1.3s						
GOF	Gofitskoye	84.22	315	⇑eP	P	19 10 10.3	+0.7
GOF				pmax	pmax		
	comp=Z,156nm,0.9s						
KBZ	Khabaz	84.24	314	P	P	19 10 09.4	-0.2
	comp=Z,45nm,0.8s,baz=100,slow=2.2,SNR=84						
KBZ	Khabaz	84.24	314	c iP	P	19 10 09.8	+0.1
KBZ				pmax	pmax		
	comp=Z,118nm,1.1s						
KBZ				MLR	MLR		
	comp=Z,398nm,21.0s						
RSO	Redoubt South	84.28	29	P	P	19 10 09.8	0.0
PRGR	Permogore	84.31	332	eP	P	19 10 09.6	0.0
PRGR				eS	pP	19 10 25.1	+2.4
PRGR				pmax	pmax		
	comp=Z,61nm,0.8s						
KIV	Kislovodsk	84.41	314	⇓P	P	19 10 11.3	+0.6
KIV	Kislovodsk	84.41	314	i P	P	19 10 11.0	+0.4
	SNR=18						
KIV	Kislovodsk	84.41	314	eP	P	19 10 10.5	-0.2
KIV				e		19 13 25.4	
KIV				e		19 20 29.2	
KIV				pmax	pmax		
	comp=Z,81nm,1.0s						
KIV				pmax	pmax		
	comp=Z,136nm,5.1s						
KIV				MLR	MLR		
	comp=Z,367nm,20.0s						
KIV	Kislovodsk	84.41	314	P	P	19 10 11.6	+0.9
KIV	Kislovodsk	84.41	314	P	P	19 10 10.1	-0.6
KIV				IAmb	IAmb	19 10 26.3	
	comp=Z,79nm,1.0s						
A21K	Barrow	84.51	18	P	P	19 10 11.8	+1.3
	baz=258,SNR=14						
A21K	Barrow	84.51	18	P	P	19 10 11.9	+1.5
IMAR	Indian Mountai	84.60	24	P	P	19 10 11.8	+0.8
SPCR	Spurr Chakacha	84.64	29	P	P	19 10 11.3	-0.1
	baz=263						
SPU	Mount Spurr	84.71	29	P	P	19 10 10.9	-0.8
CHVG	Ch'k'valeri	84.78	313	⇓P	P	19 10 13.4	+0.9
CHVG	Ch'k'valeri	84.78	313	⇓P	P	19 10 13.4	+0.9
PPT2	Papeete2	84.82	108	eS	S	19 20 37.5	-1.1
	comp=Z,436nm,24.2s						
PPT2	Papeete2	84.82	108	eLQ	LQ	19 33 25.0	
	comp=Z,691nm,25.0s						
PPT2				eLR	LR	19 37 01.0	
	comp=Z,1µm,28.2s						
CNPM	China Poot	84.93	30	P	P	19 10 13.0	+0.2
H21K	Melozitna Rive	84.94	24	P	P	19 10 13.7	+1.0
	baz=262						
H21K	Melozitna Rive	84.94	24	P	P	19 10 14.1	+1.3
H21K				IAmb	IAmb	19 10 33.7	
	comp=Z,59nm,1.4s						
BCA	Borcka	85.06	311	⇑P	P	19 10 14.5	+0.5
BRLK	Bradley Lake	85.13	30	P	P	19 10 13.7	-0.2
BRSE	Bradley Lake S	85.20	30	P	P	19 10 14.2	0.0
	baz=265,SNR=6.3						
I21K	Tanana	85.22	25	P	P	19 10 15.2	+1.1
	baz=263,SNR=8.8						
I21K	Tanana	85.22	25	P	P	19 10 15.2	+1.1
VRH	Novokhopyorsk	85.48	321	eP	P	19 10 15.2	-0.5
VRH				eS	S	19 20 42.0	-1.7
VRH				pmax	pmax		
	comp=Z,580nm,1.5s						
VRH				pmax	pmax		
	comp=Z,380nm,0.8s						
VRH				smax	smax		
	comp=N,240nm,1.5s						
BPAW	Bear Paw Mtn.	85.52	26	P	P	19 10 15.9	+0.2
	baz=264,SNR=7.4						
BPAW	Bear Paw Mtn.	85.52	26	P	P	19 10 15.0	-0.7
M22K	Willow	85.69	28	P	P	19 10 17.0	+0.5
	baz=265						
MLY	Manley	85.72	25	P	P	19 10 16.8	0.0
	baz=264,SNR=15						
MLY	Manley	85.72	25	P	P	19 10 16.7	0.0
O22K	Cooper Landing	85.78	30	P	P	19 10 17.5	+0.5
	baz=266						
RC01	Rabbit Creek A	85.82	29	P	P	19 10 17.4	+0.2
	baz=265						
RC01	Rabbit Creek A	85.82	29	P	P	19 10 17.1	-0.2
RC01				IAmb	IAmb	19 10 33.0	
	comp=Z,89nm,1.4s						
SEW	Seward	85.88	30	P	P	19 10 18.1	+0.6
	baz=266,SNR=6.2						
SEW	Seward	85.88	30	P	P	19 10 17.2	-0.3
PMR	Palmer	86.15	28	P	P	19 10 19.1	+0.3

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PMR                                 pmax     pmax
       comp=Z,55nm,1.2s
PMR    Palmer           86.15  28   P        P         19 10 18.8  0.0
       baz=266,SNR=7.6
PMR    Palmer           86.15  28   P        P         19 10 19.1 +0.3
PMR                                 IAmb     IAmb      19 10 21.4
       comp=Z,55nm,1.2s
COLD   Coldfoot         86.16  23   P        P         19 10 19.6 +0.9
       baz=265,SNR=25
COLD   Coldfoot         86.16  23   P        P         19 10 19.3 +0.5
COLD                                IAmb     IAmb      19 10 42.1
       comp=Z,32nm,1.0s
I23K   Minto, Yukon-K   86.31  25   P        P         19 10 19.8 +0.3
       baz=266,SNR=17
I23K   Minto, Yukon-K   86.31  25   P        P         19 10 19.5  0.0
I23K                                IAmb     IAmb      19 10 21.8
       comp=Z,20nm,0.6s
MCK    McKinley         86.39  26   P        P         19 10 19.8 -0.3
MCK                                 pmax     pmax
       comp=Z,21nm,1.0s
MCK    McKinley         86.39  26   P        P         19 10 19.6 -0.4
       baz=266,SNR=7.1
MCK    McKinley         86.39  26   P        P         19 10 19.8 -0.3
NEA2   Nenana           86.39  25   P        P         19 10 20.3 +0.3
       baz=266
NEA2   Nenana           86.39  25   P        P         19 10 20.1  0.0
RND    Reindeer         86.41  27   P        P         19 10 19.1 -1.1
RND                                 pmax     pmax
       comp=Z,16nm,0.8s
RND    Reindeer         86.41  27   P        P         19 10 19.1 -1.1
KTUT   Trabzon          86.45 311 ⇓P        P         19 10 21.9 +1.1
KNK    Knik Glacier     86.46  29   P        P         19 10 21.5 +1.1
       baz=266,SNR=6.1
PWL    Port Wells       86.48  29   P        P         19 10 21.2 +0.7
       baz=267
PWL    Port Wells       86.48  29   P        P         19 10 20.8 +0.2
PWL                                 IAmb     IAmb      19 10 23.0
       comp=Z,95nm,1.2s
TOLK   Toolik Lake Re   86.52  21   P        P         19 10 21.3 +0.7
       baz=265,SNR=21
TOLK   Toolik Lake Re   86.52  21   P        P         19 10 21.6 +1.0
TOLK                                IAmb     IAmb      19 10 40.4
       comp=Z,26nm,0.8s
SOC    Sochi            86.54 313  eP        P         19 10 19.1 -2.1
SOC                                e                   19 13 40.1
SOC                                ePPP     PPP       19 15 35.1
SOC                                eS       SKSac     19 20 35.5 -8.7
SOC                                eSS      SS        19 26 36.4 +0.7
SOC                                eSSS     SSS       19 30 08.4
SOC                                 pmax     pmax
       comp=Z,89nm,0.7s
SOC                                 MLR      MLR
       comp=Z,418nm,22.0s
SML    Sawmill          86.54  28   P        P         19 10 21.3 +0.4
       baz=267
MDM    Murphy Dome      86.78  25   P        P         19 10 21.5 -0.4
WRH    Wood River Hil   86.81  26   P        P         19 10 21.8 -0.2
WAT6   Susitna Watana   86.86  28   P        P         19 10 22.9 +0.4
       baz=267,SNR=5.8
COLA   College          86.94  25⇑eP        P         19 10 22.8 +0.2
COLA                                pmax     pmax
       comp=Z,2.0nm,1.1s
COLA                                MLR      MLR
       comp=Z,422nm,20.0s
CCB    Clear Creek Bu   86.94  25   P        P         19 10 21.9 -0.7
H24K   Noodor Dome      86.98  24   P        P         19 10 23.7 +0.8
       baz=267,SNR=14
H24K   Noodor Dome      86.98  24   P        P         19 10 23.6 +0.7
VORD   Divnogorie       87.01 321  eP        P         19 10 22.8 -0.4
VORD                                pmax     pmax
       comp=Z,80nm,0.7s
SCM    Sheep Creek Mo   87.02  28   P        P         19 10 22.0 -1.2
SCM                                 pmax     pmax
       comp=Z,31nm,1.0s
SCM    Sheep Creek Mo   87.02  28   P        P         19 10 23.9 +0.7
       baz=268
SCM    Sheep Creek Mo   87.02  28   P        P         19 10 22.0 -1.2
SCM                                 IAmb     IAmb      19 10 49.9
       comp=Z,31nm,1.0s
VORR   Voronezh         87.08 321  eP        P         19 10 22.0 -1.6
VORR                                pmax     pmax
       comp=Z,500nm,2.0s
VSR    Storozhevoye     87.09 321  eP        P         19 10 23.1 -0.6
VSR                                eS       S         19 20 55.3 -4.1
VSR                                 pmax     pmax
       comp=Z,190nm,1.3s
VSR                                 pmax     pmax
       comp=Z,390nm,1.7s
VSR                                 smax     smax
       comp=N,400nm,3.8s
POKR   Poker Plat Res   87.12  25   P        P         19 10 23.4 -0.1
       baz=267
POKR   Poker Plat Res   87.12  25   P        P         19 10 22.7 -0.9
KLMR   Klimovskoe       87.18 331  eP        P         19 10 20.7 -3.1
KLMR                                pmax     pmax
       comp=Z,77nm,0.6s
KLMR   Klimovskoe       87.18 331  eP        P         19 10 20.8 -3.1
KLMR                                AMP                19 10 28.3
       comp=Z,77nm,0.6s
KLMR                               ePP      PP        19 13 41.9 -6.1
KLMR                                LQ       LQ        19 42 26.8
KLMR                                LQ       LQ        19 42 26.8
KLMR                                LR       LR        19 48 58.1
LPSR   Galich'ya Gora   87.27 322  eP        P         19 10 24.0 -0.5
LPSR                               eS       S         19 20 54.4 -6.6
LPSR                                pmax     pmax
       comp=Z,150nm,0.8s
LPSR                                pmax     pmax
       comp=Z,560nm,2.2s
LPSR                                smax     smax
       comp=N,450nm,3.7s
HDA    Harding Lake     87.30  26   P        P         19 10 23.9 -0.5
       baz=268,SNR=7.1
HDA    Harding Lake     87.30  26   P        P         19 10 23.2 -1.2
IL31                    87.34  25   P        P         19 10 23.7 -0.8
ILAR   Eielson Array    87.34  25   P        P         19 10 23.5 -1.1
       comp=N,6.2nm,0.5s,baz=254,slow=4.4,SNR=177
ILAR                                PKKP     PKKPdf    19 28 11.9 +1.0
       comp=N,0.2nm,0.5s,baz=106,slow=0.7,SNR=4.5
ILAR                                LR       LR        19 49 32.9
       comp=N,164nm,18.9s,baz=268,slow=36
ILAR   Eielson Array    87.34  25   P        P         19 10 24.1 -0.5
ILAR   Eielson Array    87.34  25   P        P         19 10 24.1 -0.5
Q23K   Middleton Isla   87.42  31   P        P         19 10 25.0  0.0
       baz=268
FURI   Furi             87.44 279   IAMs_20  IAMs_20   19 48 44.0
       comp=Z,918nm,22.0s
M24K   Tolsona, Glenn   87.57  28   P        P         19 10 26.0 +0.1
       baz=268
KLU    Klutina          87.68  29   P        P         19 10 27.0 +0.6
DIV    Divide           87.74  29   P        P         19 10 26.8 +0.1
DIV                                 IAmb     IAmb      19 10 38.0
       comp=Z,81nm,1.4s
PAX    Paxson           87.92  27   P        P         19 10 28.1 +0.6
PAX                                 pmax     pmax
       comp=Z,33nm,1.4s
PAX    Paxson           87.92  27   P        P         19 10 27.5  0.0
       baz=269,SNR=9.8
PAX    Paxson           87.92  27   P        P         19 10 28.1 +0.6
J25K   Salcha River,    87.99  26   P        P         19 10 26.7 -1.1
       baz=269,SNR=11
HARP   HAARP            88.06  28   P        P         19 10 28.1  0.0
       baz=269
MOS    Moscow           88.08 326  eP        P         19 10 26.2 -2.1
MOS                                e                   19 10 45.5
MOS                                e                   19 13 55.1
MOS                                e                   19 20 50.8
MOS                                eS       S         19 21 05.1 -3.5
MOS                                 pmax     pmax
       comp=Z,106nm,1.0s
ANN    Anapa            88.20 315  eP        P         19 10 28.7 -0.4
ANN                                e*PP     pwP       19 10 43.7 -0.9
ANN                                e                   19 21 06.5
ANN                                 pmax     pmax
       comp=E,87nm,0.9s
ANN                                 pmax     pmax
       comp=N,99nm,1.0s
ANN                                 pmax     pmax
       comp=Z,252nm,0.8s
RIDG   Independent Ri   88.21  26   P        P         19 10 28.0 -0.9
       baz=270,SNR=12
BMRM   Bremner River    88.31  29   P        P         19 10 29.2 -0.1
       baz=270
N25K   Chitina, Valde   88.31  29   P        P         19 10 29.7 +0.3
       baz=270
N25K   Chitina, Valde   88.31  29   P        P         19 10 30.3 +0.9
KIBK   Kibwezi          88.32 268   P        P         19 10 31.9 +1.4
       SNR=36
KIBK   Kibwezi          88.32 268   P        P         19 10 31.2 +0.7
KIBK                                IAmb     IAmb      19 10 38.0
       comp=Z,72nm,1.1s
KIBK                                IAMs_20  IAMs_20   19 47 07.7
       comp=Z,783nm,21.0s
BMAR   Burnt Mountain   88.34  23   P        P         19 10 30.5 +1.1
GAZ    Gaziantep        88.42 307   P        P         19 10 30.3 -0.1
DOT    Dot Lake         88.56  27   P        P         19 10 30.9 +0.4
SCRK   Sand Creek       88.59  26   P        P         19 10 30.5 -0.3
       baz=270,SNR=11
SCRK   Sand Creek       88.59  26   P        P         19 10 30.9 +0.2
OBN    Obninsk          88.68 325ceP        P         19 10 30.2 -0.9
OBN                                e                   19 13 58.8
OBN                                ePPP     PPP       19 15 53.4
OBN                                eS       SKSac     19 21 03.7 +7.1
OBN                                 pmax     pmax
       comp=Z,159nm,1.7s
OBN                                 MLR      MLR
       comp=Z,961nm,22.0s
OBN    Obninsk          88.68 325   P        P         19 10 30.8 -0.3
GLB    Gilahina Butte   88.69  29   P        P         19 10 30.8 -0.4
GLB                                 IAmb     IAmb      19 10 34.0
       comp=Z,29nm,1.2s
MENT   Mentasta         88.72  27   P        P         19 10 31.0 -0.2
MENT                                IAmb     IAmb      19 10 33.2
       comp=Z,17nm,0.6s
J26L   Joseph Creek     88.77  26   P        P         19 10 31.6 +0.1
       baz=271,SNR=19
L26K   Log Cabin Wild   88.89  27   P        P         19 10 32.2 +0.2
       baz=271,SNR=7.1
L26K   Log Cabin Wild   88.89  27   P        P         19 10 31.9 -0.2
CRQE   Cirque           89.05  29   P        P         19 10 33.2 +0.2
       baz=271
M26K   Nabesna, AK      89.06  28   P        P         19 10 33.1 +0.2
       baz=271
M26K   Nabesna, AK      89.06  28   P        P         19 10 32.9  0.0
MCARA  McCarthy VSAT    89.07  29   P        P         19 10 33.5 +0.6
       baz=271
KMBO   Kilima Mbogo     89.08 269   P        P         19 10 35.2 +1.0
       comp=Z,35nm,1.0s,baz=83,slow=5.6,SNR=40
KMBO                                LR       LR        19 47 28.7
       comp=Z,868nm,21.1s,baz=93,slow=34
KMBO   Kilima Mbogo     89.08 269 i P        P         19 10 35.3 +1.0
       SNR=64
KMBO   Kilima Mbogo     89.08 269 i P        P         19 10 35.4 +1.1
KMBO                                pmax     pmax
       comp=Z,35nm,1.0s
KMBO   Kilima Mbogo     89.08 269   P        P         19 10 35.7 +1.5
KMBO   Kilima Mbogo     89.08 269   P        P         19 10 33.3 -1.0
KMBO   Kilima Mbogo     89.08 269   IAMs_20  IAMs_20   19 46 44.8
       comp=Z,966nm,21.0s
BNN    Bunyan           89.47 309   P        P         19 10 34.7 -0.7
L27K   Beaver Creek,    89.58  27   P        P         19 10 35.8 +0.5
       baz=272,SNR=15
L27K   Beaver Creek,    89.58  27   P        P         19 10 36.4 +1.1
L27K                                IAmb     IAmb      19 10 37.5
       comp=Z,34nm,1.3s
M27K   Edge Creek, AK   89.58  28   P        P         19 10 35.9 +0.4
       baz=272
M27K   Edge Creek, AK   89.58  28   P        P         19 10 36.1 +0.7
BCAR   Beaver Creek A   89.60  27   P        P         19 10 36.0 +0.6
BARN   Barnard Glacie   89.74  29   P        P         19 10 37.9 +1.7
APA    Apatity          89.80 337⇓iP        P         19 10 32.4 -3.7
APA                                 pmax     pmax
       comp=Z,15nm,1.0s
APA                                 MLR      MLR
       comp=Z,2µm,22.0s
DIKM   Dikmen           89.84 311 ⇑P        P         19 10 37.7 +0.8
SNOP   Sinop            89.87 312   P        P         19 10 37.2 +0.2
SNOP                                IAmb     IAmb      19 10 39.8
       comp=Z,56nm,0.9s
GHAJ   Ghor Haditha     89.89 301   P        P         19 10 37.9 +0.6
CTG    Chitna Glacier   89.90  29   P        P         19 10 36.9 -0.1
       baz=273,SNR=8.1
CTGM   Chitina Glacie   89.91  29   P        P         19 10 38.4 +1.4
CTGM                                IAmb     IAmb      19 10 39.8
       comp=Z,80nm,1.5s
BVCY   Beaver Creek     90.06  28   P        P         19 10 38.1 +0.6
       baz=273
SYO    Syowa Base       90.15 201⇑iP        P         19 10 38.0 +0.3
SYO    Syowa Base       90.15 201⇓ePcP      PcP       19 10 42.1 +3.2
SYO    Syowa Base       90.15 201⇓esP       sP        19 10 54.0 -1.8
YUK3   Moose Creek      90.28  28   P        P         19 10 39.1 +0.3
       baz=274
PINM   Pinnacle         90.49  30   P        P         19 10 40.0 +0.3
       baz=274
SIM    Simferopol'      90.55 315c iP        P         19 10 41.7 +1.6
SIM                                ePPP     PPP       19 16 13.2
SIM                                 pmax     pmax
       comp=Z,78nm,0.9s
DAWY   Dawson           90.61  26   P        P         19 10 40.2 +0.1
       baz=274,SNR=14
BZK    Bozkurt          90.77 312 ⇑P        P         19 10 42.2 +1.0
BZK    Bozkurt          90.77 312   P        P         19 10 41.1 -0.1
LODK   Lodwar           90.86 273   P        P         19 10 43.1 +0.8
       SNR=18
LODK   Lodwar           90.86 273   P        P         19 10 41.2 -1.1
I29M   Ogilvie Camp,    90.96  25   P        P         19 10 42.3 +0.6
       baz=276
BR131  Keskin Array S   91.15 310   P        P         19 10 43.0 -0.2
BR131                               pmax     pmax
       comp=Z,27nm,0.8s
BR131  Keskin Array S   91.15 310   P        P         19 10 42.9 -0.4
       SNR=7.8
BR131  Keskin Array S   91.15 310   P        P         19 10 43.0 -0.2
BR131                               IAmb     IAmb      19 10 53.5
       comp=Z,27nm,0.8s
BRTR   Keskin Array B   91.15 310   P        P         19 10 41.9 -1.4
       comp=Z,11nm,0.9s,baz=116,slow=5.6,SNR=17
BRTR                                LR       LR        19 57 22.7
       comp=Z,235nm,21.0s,baz=93,slow=39
BRTR   Keskin Array B   91.15 310 i P        P         19 10 42.5 -0.8
BRTR                                pmax     pmax
       comp=Z,12nm,0.9s
BRTR   Keskin Array B   91.15 310   P        P         19 10 42.1 -1.2
YUK4   Talbot Arm       91.18  29   P        P         19 10 43.1 +0.1
       baz=275
YUK6   Outpost Mounta   91.35  29   P        P         19 10 44.4 +0.6
       baz=275
QSPA   South Pole Qui   91.36 180   P        P         19 10 43.4 -0.2
CSS    Mathiatis        91.63 305   P        P         19 10 45.1 -0.3
HYT    Haines Junctio   91.78  29   P        P         19 10 46.5 +0.8
       baz=276
HYT    Haines Junctio   91.78  29   P        P         19 10 44.5 -1.2
ANTO   Ankara           91.79 310   P        P         19 10 44.8 -1.3
ANTO                                pmax     pmax
       comp=Z,25nm,1.1s
ANTO   Ankara           91.79 310   P        P         19 10 44.8 -1.3
ANTO                                IAmb     IAmb      19 10 51.8
       comp=Z,25nm,1.1s
M30M   Minto, Yukon     91.92  27   P        P         19 10 47.0 +0.8
       baz=277,SNR=12
INK    Inuvik           92.44  21   P        P         19 10 47.0 -1.3
INK                                 pmax     pmax
       comp=Z,47nm,1.4s
INK    Inuvik           92.44  21   P        P         19 10 48.5 +0.2
       baz=280
INK    Inuvik           92.44  21   P        P         19 10 47.0 -1.3
INK                                 IAmb     IAmb      19 11 09.0
       comp=Z,47nm,1.4s
ARA0   ARCESS Array S   92.44 340  eP        P         19 10 47.8 -0.6
ARCES  ARCESS Array B   92.44 340   P        P         19 10 47.1 -1.2
       comp=Z,19nm,0.7s,baz=81,slow=6.4,SNR=104
ARCES                               PKKP     PKKPdf    19 28 02.3 +0.2
       comp=Z,1.0nm,0.4s,baz=260,slow=3.3,SNR=22
ARCES                               LR       LR        19 57 56.4
       comp=Z,236nm,20.1s,baz=110,slow=39
ARCES  ARCESS Array B   92.44 340   P        P         19 10 47.4 -1.0
ARCES                               SS       SS        19 28 02.3 +2.4
ARCES                               pmax     pmax
       comp=Z,41nm,1.0s
ARCES  ARCESS Array B   92.44 340   P        P         19 10 47.4 -1.0
ARCES                               IAmb     IAmb      19 10 49.9
       comp=Z,41nm,1.0s
N31M   Braeburn, Yuko   92.53  28   P        P         19 10 49.9 +0.9
       baz=278,SNR=12
SPB2   Spitsbergen Ar   92.63 349   P        P         19 10 49.0 -0.1
SPA0   Spitsbergen Ar   92.63 349  eP        P         19 10 49.5 +0.3
SPITS  Spitsbergen Ar   92.63 349   P        P         19 10 48.9 -0.3
SPITS                               pmax     pmax
       comp=Z,66nm,1.1s
HAMF   Hammerfest       92.83 341  eP        P         19 10 49.2 -0.9
MDUB   Mudurnu          92.97 310   P        P         19 10 50.4 -1.2
SKAG   Skagway          93.03  30   P        P         19 10 52.4 +1.2
       baz=278
SKAG   Skagway          93.03  30   P        P         19 10 52.1 +0.8
SKAG                                IAmb     IAmb      19 10 54.2
       comp=Z,46nm,1.3s
M31M   Drury Creek, Y   93.08  28   P        P         19 10 51.8 +0.2
       baz=279,SNR=9.8
WHY    Whitehorse       93.08  29   P        P         19 10 52.2 +0.5
       baz=278,SNR=13
WHY    Whitehorse       93.08  29   P        P         19 10 51.9 +0.2
WHY                                 IAmb     IAmb      19 10 54.0
       comp=Z,46nm,1.3s
KBS    Kingsbay         93.17 350  eP        P         19 10 51.9 +0.3
BJO1   Bjornoya         93.21 345  eP        P         19 10 51.9 +0.1
KTK1   Kautokeino       93.34 339  eP        P         19 10 52.0 -0.5
SIT    Sitka            93.36  33   P        P         19 10 54.1 +1.2
       baz=278
AKASG  Malin Array Be   93.39 321   P        P         19 10 51.6 -1.5
       comp=Z,16nm,0.9s,baz=68,slow=4.4,SNR=29
AKASG                               PP       PP        19 14 37.2 -0.3
       comp=Z,3.3nm,0.9s,baz=72,slow=7.3,SNR=4.5
AKASG                               LR       LR        19 56 44.7
       comp=Z,547nm,21.4s,baz=90,slow=38
AKASG  Malin Array Be   93.39 321   P        P         19 10 53.4 +0.2
AKASG                               pmax     pmax
       comp=Z,20nm,1.0s
AKASG  Malin Array Be   93.39 321   P        P         19 10 53.4 +0.2
AKASG                               IAmb     IAmb      19 10 56.3
       comp=Z,20nm,0.9s
AKBB   Malin Array Si   93.39 321⇓eP        P         19 10 52.3 -0.8
AKBB   Malin Array Si   93.39 321   P        P         19 10 51.6 -1.6
AKBB                                IAmb     IAmb      19 10 59.0
       comp=Z,18nm,0.9s
BESE   Bessie Mountai   93.40  31   P        P         19 10 53.3 +0.2
BESE                                IAmb     IAmb      19 10 57.5
       comp=Z,64nm,1.4s
PURM   Purcari          93.40 317 ⇑P        P         19 10 53.1 -0.2
FARO   Faro, Yukon      93.56  27   P        P         19 10 54.4 +0.7
       baz=280,SNR=40
FINES  FINESS Array B   93.64 332   P        P         19 10 52.9 -1.1
       comp=Z,3.9nm,0.4s,baz=70,slow=4.5,SNR=54
FINES                               LR       LR        19 56 04.1
       comp=Z,303nm,21.9s,baz=74,slow=37
JIS    Juneau Island    93.69  32   P        P         19 10 55.6 +1.3
JIS                                 IAmb     IAmb      19 10 57.4
       comp=Z,55nm,1.4s
TAOE   Nuku Hiva Isla   93.72  99  eLR      LR        19 41 07.1
       comp=Z,1µm,25.1s
MNK    Minsk            93.74 325 i P        P         19 10 53.8 -0.8
MNK                               i                    19 14 39.4
MNK                               i PPP     PPP       19 16 40.1
MNK                               i                    19 21 30.7
MNK                               i S       S         19 22 05.3 +4.9
MNK                               i PS      PS        19 23 20.4 +0.4
MNK                               i SS      SS        19 28 20.0 +0.9
MNK                                 pmax     pmax
       comp=E,7.0nm,1.0s
MNK                                 pmax     pmax
       comp=Z,52nm,1.0s
MNK                                 pmax     pmax
       comp=N,27nm,0.9s
MNK                                 MLR      MLR
       comp=E,116nm,22.0s
MNK                                 MLR      MLR
       comp=N,216nm,17.0s
MNK                                 MLR      MLR
       comp=Z,1µm,23.0s
MNK    Minsk            93.74 325 i P        P         19 10 53.9 -0.8
       comp=E,7.0nm,1.0s
MNK                               i P        P         19 10 53.9 -0.8
       comp=N,27nm,0.9s
MNK                               i P        P         19 10 53.9 -0.8
       comp=Z,52nm,1.1s,baz=262
MNK                               i PP      PP        19 14 39.5 -0.6
MNK                               i PPP     PPP       19 16 40.2
MNK                               i SKS     SKSac     19 21 30.7 +5.2
MNK                               i S       ScS       19 22 05.4 +3.6
MNK                               i PS      PS        19 23 20.5 +0.5
MNK                               i SS      SS        19 28 20.1 +1.0
MNK                               i SSS     SSS       19 32 08.8
MNK                               i LQ      LQ        19 45 48.6
MNK                               i LR      LR        19 50 33.9
MNK                               i LRM     MLR       19 54 27.2
       comp=E,116nm,21.9s
MNK                               i LRM     MLR       19 54 31.0
       comp=N,216nm,16.8s
MNK                               i LRM     MLR       19 54 32.3
       comp=Z,1µm,23.2s
VSU    Vasula           93.80 329  eP        P         19 10 54.2 -0.5
VSU    Vasula           93.80 329⇑eP        P         19 10 54.3 -0.5
VSU                                 pmax     pmax
       comp=Z,60nm,1.1s
VSU                                 MLR      MLR
       comp=Z,1µm,18.0s
MILM   Milestii Mici    94.08 317 ⇓P        P         19 10 56.8 +0.4
MILM   Milestii Mici    94.08 317 ⇓P        P         19 10 56.8 +0.4
P33M   Teslin, Yukon    94.16  29   P        P         19 10 56.8 +0.2
       baz=280,SNR=5.4
JETT   Jettan, Norway   94.18 340  eP        P         19 10 56.9 +0.4
SORM   Soroca           94.25 318 ⇓P        P         19 10 56.6 -0.5
SORM   Soroca           94.25 318 ⇓P        P         19 10 56.6 -0.5
TLCR                    94.28 315 ⇑P        P         19 10 58.3 +1.0
TLCR                    94.28 315 ⇑P        P         19 10 58.3 +1.0
ELL    Elmali           94.28 307   P        P         19 10 57.4 -0.4
ELL                                 pmax     pmax
       comp=Z,91nm,0.9s
ELL    Elmali           94.28 307   P        P         19 10 57.4 -0.4
A36M   Sachs Harbour    94.29  17   P        P         19 10 57.2 +0.4
       baz=288
A36M   Sachs Harbour    94.29  17   P        P         19 10 56.4 -0.4
A36M                                IAmb     IAmb      19 11 21.0
       comp=Z,20nm,1.0s
NACGM  Naroch           94.31 325 i P        P         19 10 57.3  0.0
TIRR   Tirgusor         94.64 315 ⇑P        P         19 10 59.5 +0.5
TIRR   Tirgusor         94.64 315 ⇑P        P         19 10 59.5 +0.5
TRO    Tromso           94.66 340  eP        P         19 10 58.0 -0.6
CFR    Carcaliu         94.75 315 ⇑P        P         19 11 00.8 +1.3
CFR    Carcaliu         94.75 315 ⇑P        P         19 11 00.8 +1.3
NOR    Nord             95.32 355 i P        P         19 11 00.1 -1.3
NOR                                 IAmb     IAmb      19 11 06.0
       comp=Z,4.1nm,0.8s
ODBI   Odobesti         95.43 316 ⇓P        P         19 11 02.9 +0.3
MBAR   Mbarara          95.58 270   IAMs_20  IAMs_20   19 49 53.0
       comp=Z,649nm,22.0s
BALB   Balikesir        95.58 310   P        P         19 11 01.9 -1.5
TESR   Tescani          95.61 317 ⇓P        P         19 11 03.5  0.0
VRI    Vrincioaia       95.65 316 ⇑P        P         19 11 04.5 +0.8
VRI    Vrincioaia       95.65 316 ⇑P        P         19 11 04.5 +0.8
BISRR  Bisoca           95.70 316 ⇓P        P         19 11 04.8 +0.8
PLOR   Plostina         95.70 316 ⇓P        P         19 11 04.0 +0.1
PLOR   Plostina         95.70 316 ⇓P        P         19 11 04.0 +0.1
PRAR   RASCA            95.78 318 ⇑P        P         19 11 05.0 +0.8
PABE   Paberze          95.80 326  eP        P         19 11 04.8 +0.7
PABE   Paberze          95.80 326   P        P         19 11 03.5 -0.5
DLBC   Dease Lake       95.92  31   P        P         19 11 04.3 -0.3
NEHR   Nehoiu           96.01 316 ⇓P        P         19 11 05.5 +0.1
COVR   Voineasa-Covas   96.01 316 ⇓P        P         19 11 05.1 -0.2
TGTN   Hyland Airport   96.06  28   P        P         19 11 05.9 +0.7
       baz=284,SNR=9.8
MLR    Muntele Rosu     96.24 316 ⇓P        P         19 11 06.8 +0.3
MLR    Muntele Rosu     96.24 316 ⇓P        P         19 11 06.8 +0.3
MLR    Muntele Rosu     96.24 316   P        P         19 11 05.8 -0.8
MLR                                 IAmb     IAmb      19 11 12.2
       comp=Z,22nm,0.8s
BURAR  Bucovina Array   96.42 318 ⇓P        P         19 11 07.6 +0.4
BURAR  Bucovina Array   96.42 318   P        P         19 11 06.7 -0.5
BUR08  Bucovina Ar. S   96.42 318   P        P         19 11 07.1 -0.2
STEI   Steigen          96.47 339  eP        P         19 11 06.7 -0.1
SUW    Suwalki          96.54 325  eP        P         19 11 06.5 -0.9
SUW    Suwalki          96.54 325   P        P         19 11 06.5 -0.9
SUW                                 pmax     pmax
       comp=Z,99nm,0.8s
SUW    Suwalki          96.54 325   P        P         19 11 06.5 -0.9
DOPR   Dopca            96.56 316 ⇑P        P         19 11 07.5 -0.3
FAUS   Fauske           96.64 339  eP        P         19 11 05.9 -1.7
LVV    L'vov            96.82 320  eP        P         19 11 11.6 +2.8
VOIR                    96.88 316 ⇑P        P         19 11 10.2 +0.9
VOIR                    96.88 316 ⇑P        P         19 11 10.2 +0.9
EUNU   Eureka           96.99   5   P        P         19 11 08.6 -0.5
LOF    Lofoten          97.00 340  eP        P         19 11 08.8 -0.5
ARR    Arges            97.18 316 ⇓P        Pdif      19 11 12.0 +1.2
MOR8   Moi Rana         97.38 338  eP        P         19 11 08.9 -2.2
BMR    Baia Mare        97.55 318 ⇓P        Pdif      19 11 12.8 +0.5
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BMR	Baia Mare	97.55	318	⇓P	Pdif	19 11 12.8	+0.5
CJR	Cluj-Napoca	97.66	317	⇓P	P	19 11 12.6	-0.2
CJR	Cluj-Napoca	97.66	317	⇓P	P	19 11 12.6	-0.2
KWP	Kalwaria Pacla	97.70	320	P	P	19 11 12.3	-0.5
KWP				pmax	pmax		
	comp=Z,283nm,1.1s						
KWP	Kalwaria Pacla	97.70	320	P	P	19 11 12.3	-0.5
KONS	Konsvik	97.76	338	*e*P	P	19 11 12.6	-0.1
TRPA	Tarpa	98.10	319	⇑P	Pdif	19 11 15.1	+0.4
TRPA	Tarpa	98.10	319	*e*P	P	19 11 14.6	0.0
KOLS	Kolonicke sedl	98.11	320	*e*P	Pdif	19 11 16.7	+1.9
KOLS	Kolonicke sedl	98.11	320	*e*PDIFF	Pdif	19 11 16.7	+1.9
UZH	Uzhgorod	98.16	319	⇓*i*P	P	19 11 14.3	-0.6
UZH				*i*		19 11 25.6	
DRGR		98.24	318	⇓P	P	19 11 15.5	0.0
DRGR		98.24	318	⇓P	Pdif	19 11 15.5	0.0
GZR	Gura Zlata	98.46	316	⇑P	Pdif	19 11 16.7	+0.3
GZR	Gura Zlata	98.46	316	⇑P	Pdif	19 11 16.7	+0.2
VTS	Vitosha	98.63	313	⇑P	Pdif	19 11 17.4	0.0
VTS	Vitosha	98.63	313	⇑P	Pdif	19 11 17.4	0.0
VTS	Vitosha	98.63	313	P	P	19 11 16.2	-1.1
VTS				IAmb	IAmb	19 11 20.1	
	comp=Z,16nm,1.1s						
CRVS	Cervenica-Dubn	98.64	320	*e*P	Pdif	19 11 18.1	+1.0
CRVS	Cervenica-Dubn	98.64	320	*e*PDIFF	Pdif	19 11 18.1	+1.0
HERR	Herculane	98.81	316	⇓P	Pdif	19 11 17.9	0.0
NSS	Namsos	98.96	336	*e*Pdif	P	19 11 17.3	-0.8
SIRR	Siria	99.06	317	⇓P	Pdif	19 11 19.0	-0.1
BZS	Buzias	99.22	317	⇓P	Pdif	19 11 19.3	-0.4
BZS	Buzias	99.22	317	⇓P	Pdif	19 11 19.3	-0.4
MDVR	Moldovita	99.32	316	⇓P	Pdif	19 11 20.1	-0.1
OJC	Ojcow	99.40	321	P	Pdif	19 11 19.4	-1.1
OJC				pmax	pmax		
	comp=Z,28nm,1.1s						
OJC	Ojcow	99.40	321	P	Pdif	19 11 19.4	-1.1
OJC				IAmb	IAmb	19 11 27.4	
	comp=Z,28nm,1.1s						
DAG	Danmarks Havn	99.45	352	*i* P	Pdif	19 11 18.1	-2.0
DAG				IAmb	IAmb	19 11 21.2	
	comp=Z,6.0nm,0.7s						
BOVS	Bovan	99.55	315	⇑P	Pdif	19 11 22.3	+1.1
LANS	Liptovska Anna	99.87	320	*e*P	Pdif	19 11 24.9	+2.3
LANS	Liptovska Anna	99.87	320	*e*PDIFF	Pdif	19 11 24.8	+2.2
PSZ	Piszkesteto	99.88	319	⇓P	Pdif	19 11 23.1	+0.4
PSZ	Piszkesteto	99.88	319	*e*P	Pdif	19 11 23.2	+0.4
PSZ	Piszkesteto	99.88	319	⇓P	Pdif	19 11 23.1	+0.4
PSZ	Piszkesteto	99.88	319	Pdif	Pdif	19 11 22.4	-0.4
PSZ				IAmb	IAmb	19 11 26.7	
	comp=Z,19nm,1.0s						
RES	Resolute Bay	100.13	10	P	Pdif	19 11 24.3	+1.2
RES	Resolute Bay	100.13	10	Pdif	Pdif	19 11 24.3	+1.2
BOSA	Boshof	100.39	241	PKKPbc	PKKPbc	19 27 43.0	+0.9
	comp=Z,1.8nm,0.7s,baz=266,slow=5.1,SNR=5.7						
VYHS	Vyhne	100.43	320	*e*P	Pdif	19 11 25.8	+0.7
VYHS	Vyhne	100.43	320	*e*PDIFF	Pdif	19 11 25.8	+0.7
OKC	Ostrava-Krasne	100.53	321	*e*PDIFF	Pdif	19 11 30.1	+4.6
OKC	Ostrava-Krasne	100.53	321	*e*P	Pdif	19 11 30.1	+4.6
NC602	NORSAR Array S	100.61	333	*e*Pdif	Pdif	19 11 25.4	-0.2
NB2	NORSAR Subarra	100.64	333	P	Pdif	19 11 24.1	-1.7
	comp=Z,5.4nm,0.8s,baz=72,slow=4.4						
NOA	NORSAR Array B	100.64	333	P	Pdif	19 11 24.2	-1.5
	comp=Z,1.8nm,0.6s,baz=74,slow=5.0,SNR=4.5						
NOA				PP	PP	19 15 32.5	-0.5
	comp=Z,2.3nm,1.0s,baz=71,slow=7.5,SNR=3.4						
MORC	Moravsky Berou	100.92	321	⇑P	Pdif	19 11 27.1	-0.2
MORC	Moravsky Berou	100.92	321	⇑P	Pdif	19 11 27.1	-0.2
MORC	Moravsky Berou	100.92	321	*e*PDIFF	Pdif	19 11 27.5	+0.2
JAVC	Velka Javorina	101.08	320	*e*PDIFF	Pdif	19 11 29.3	+1.2
DOMB	Dombas	101.17	335	*e*Pdif	Pdif	19 11 28.3	+0.2
NEEM	North Greenlan	101.20	359	*i* P	Pdif	19 11 28.2	-0.1
NEEM				IAmb	IAmb	19 11 36.6	
	comp=Z,8.7nm,0.8s						
KRLC	Kraliky	101.32	322	*e*PDIFF	Pdif	19 11 30.5	+1.5
KRLC	Kraliky	101.32	322	*e*P	Pdif	19 11 30.5	+1.5
DPC	Dobruska-Polom	101.52	322	*e*PDIFF	Pdif	19 11 34.8	+4.9
DPC	Dobruska-Polom	101.52	322	*e*P	Pdif	19 11 34.8	+4.9
PDG	Podgorica	101.55	314	IAMs_20	IAMs_20	20 04 11.5	
	comp=Z,407nm,22.0s						
CHVC	Chvalec	101.62	322	*e*PDIFF	Pdif	19 11 34.5	+4.2
VRAC	Vranov	101.65	321	⇑P	Pdif	19 11 29.7	-0.8
VRAC	Vranov	101.65	321	⇑P	Pdif	19 11 29.7	-0.8
VRAC	Vranov	101.65	321	*e*PDIFF	Pdif	19 11 30.4	-0.1
UPC	Upice	101.67	322	*e*PDIFF	Pdif	19 11 35.4	+4.9
UPC	Upice	101.67	322	*e*P	Pdif	19 11 35.4	+4.9
YKA	Yellowknife Ar	101.75	24	P	Pdif	19 11 31.7	+1.1
	comp=Z,1.2nm,0.5s,baz=310,slow=3.1,SNR=21						
YKA				PKiKP	PKiKP	19 15 54.1	+0.4
	comp=Z,0.9nm,0.5s,baz=6.0,slow=0.8,SNR=13						
KRUC	Moravsky	101.84	321	*e*PDIFF	Pdif	19 11 31.3	0.0
KONO	Kongsberg	101.93	332	*e*Pdif	Pdif	19 11 31.9	+0.4
RUE	Ruedersdorf	102.39	325	*e*P	Pdif	19 11 37.6	+4.0
CONA	Conrad Observa	102.50	320	*e*P	Pdif	19 11 40.1	+5.7
	comp=Z,6.0nm,1.2s						
CONA				*e*P	PP	19 15 48.0	+0.5
	comp=Z,13nm,1.5s						
PVCC	Panska Ves	102.54	323	*e*PDIFF	Pdif	19 11 39.1	+4.7
PVCC				AMS	AMS	19 59 50.0	
	comp=Z,800nm,21.4s						
PVCC	Panska Ves	102.54	323	*e*P	Pdif	19 11 39.1	+4.7
PVCC				MLR	MLR		
	comp=Z,800nm,21.4s						
PRU	Pruhonice	102.72	322	*e*PDIFF	Pdif	19 11 39.8	+4.6
PRU				AMS	AMS	19 59 00.0	
	comp=Z,900nm,20.4s						
PRU	Pruhonice	102.72	322	*e*P	Pdif	19 11 39.8	+4.6
PRU				MLR	MLR		
	comp=Z,900nm,20.4s						
BRG	Berggiesshubel	102.81	323	*e*P	Pdif	19 11 37.1	+1.6
BRG				Amp		19 11 39.0	
	comp=Z,4.5nm,1.1s						
BRG	Berggiesshubel	102.81	323	P	Pdif	19 11 40.7	+5.1
BRG				Amp		19 11 43.3	
	comp=Z,8.6nm,0.8s						
SNAA	Sanae	102.90	195	PKKPbc	PKKPbc	19 27 33.4	-2.7
SNAA	Sanae	102.90	195	Pdiff	Pdif	19 11 35.2	-0.5
SNAA	Sanae	102.90	195	PKKPbc	PKKPbc	19 27 33.6	-2.5
	comp=Z,1.3nm,0.5s,baz=267,slow=7.1,SNR=19						
SNAA	Sanae	102.90	195	IAMs_20	IAMs_20	19 56 21.2	
	comp=Z,334nm,20.0s						
CKRC	Cesky Krumlov	103.23	321	*e*PDIFF	Pdif	19 11 39.8	+2.3
CLL	Collm	103.23	324	*e*Pdif	Pdif	19 11 36.0	-1.4
CLL				*e*		19 11 43.0	
CLL				*e*PP	PP	19 15 50.0	-2.7
CLL				*e*pPP		19 16 01.0	
CLL				*e*PPPP		19 19 45.0	
CLL				*e*Sdif	Sdif	19 23 24.0	+2.8
CLL				*e*PS	PS	19 25 00.0	-2.6
CLL				*e*SKKPbc	SKKPbc	19 31 07.0	-5.6
CLL				*e*(SSS)		19 35 24.0	
CLL				*e*(SSSS)		19 38 18.0	
CLL				LmV		20 03 00.0	
	comp=Z,700nm,20.2s						
CLL	Collm	103.23	324	*e*P	Pdif	19 11 36.0	-1.4
CLL				*e*		19 15 50.0	
CLL				MLR	MLR		
	comp=Z,700nm,20.2s						
ASK	Askoy	103.54	334	*e*Pdif	Pdif	19 11 38.2	-0.4
KHC	Kasperske Hory	103.59	321	*e*PDIFF	Pdif	19 11 40.5	+1.3
KHC				AMS	AMS	19 59 30.0	
	comp=Z,600nm,21.0s						
KHC	Kasperske Hory	103.59	321	*e*P	Pdif	19 11 40.5	+1.3
KHC				MLR	MLR		
	comp=Z,600nm,21.0s						
GERES	GERESS Array B	103.60	321	Pdiff	Pdif	19 11 39.3	0.0
	comp=Z,3.7nm,0.8s,baz=76,slow=5.6,SNR=13						
GERES				PKiKP	PKiKP	19 15 58.1	+0.5
	comp=Z,1.7nm,0.9s,baz=48,slow=1.5,SNR=4.2						
GERES				PKKPbc	PKKPbc	19 27 33.9	+0.5
	comp=Z,0.5nm,0.8s,baz=204,slow=2.2,SNR=4.7						
GERES	GERESS Array B	103.60	321	P	Pdif	19 11 38.3	-1.0
GERES	GERESS Array B	103.60	321		Pdif	19 11 38.2	-1.0
OBKA	Obir	103.76	319	*e*P	Pdif	19 11 40.1	0.0
	comp=Z,14nm,1.8s						
VNA2	Neumayer--Watz	104.51	194	PKKPbc	PKKPbc	19 27 28.4	-2.8
VNA2	Neumayer--Watz	104.51	194	Pdiff	Pdif	19 11 42.4	-0.4
L04D	Klamath Falls	104.72	46	Pdiff	Pdif	19 11 44.2	-0.4
	baz=286						
N02D	Trinity Center	104.77	47	Pdiff	Pdif	19 11 44.2	-0.4
	baz=285						
VNA3	Neumayer Olymp	104.84	193	PKKPbc	PKKPbc	19 27 27.3	-3.0
GRF	Grafenberg Arr	104.85	323	*e*Pdiff	Pdif	19 11 45.0	+0.3
	baz=69,slow=4.0						
VNA1	Neumayer--Stat	104.91	194	PKKPbc	PKKPbc	19 27 27.3	-2.6
ABTA	Abfaltersbach	105.03	319	*e*P	PP	19 16 05.4	-0.9
	comp=Z,6.2nm,1.1s						
WTTA	Wattenberg	105.42	320	*e*P	Pdif	19 11 50.7	+3.1
	comp=Z,11nm,1.3s						
WTTA				*e*P	PP	19 16 14.0	+4.6
	comp=Z,12nm,1.1s						
WATA	Walderalm	105.44	320	*e*P	PP	19 16 14.1	+4.7
	comp=Z,25nm,1.6s						
SUMG	Summit	105.48	355	*e*P	Pdif	19 11 48.9	+1.4
SQTA	Sankt Quirin	105.71	320	*e*P	Pdif	19 11 51.8	+3.1
	comp=Z,2.3nm,0.6s						
SQTA				*e*P	PP	19 16 15.6	+4.1
	comp=Z,9.5nm,1.0s						
MOTA	Moosalm	105.74	320	*e*P	Pdif	19 11 52.1	+3.2
	comp=Z,7.7nm,0.7s						
MOTA				*e*P	PP	19 16 14.8	+3.1
	comp=Z,18nm,1.2s						
FETA	Feichten	106.09	320	*e*P	Pdif	19 11 46.9	-3.6
	comp=Z,7.3nm,1.1s						
NVAR	Mina Array Bea	108.74	49	Pdiff	Pdif	19 12 03.8	+1.3
	comp=Z,0.9nm,0.8s,baz=288,slow=4.6,SNR=2.8						
NVAR				PKiKP	PKiKP	19 16 08.6	+1.0
	comp=Z,0.4nm,0.6s,baz=280,slow=2.5,SNR=3.9						
NVAR				PP	PP	19 16 36.1	+2.1
	comp=Z,1.8nm,1.0s,baz=276,slow=9.9,SNR=4.9						
NVAR				PKKPbc	PKKPbc	19 27 19.1	+1.7
	comp=Z,0.5nm,0.7s,baz=99,slow=5.6,SNR=4.0						
NVAR				PKKPab	PKKPab	19 27 29.7	-0.1
	comp=Z,2.9nm,0.9s,baz=114,slow=4.3,SNR=9.5						
NVAR	Mina Array Bea	108.74	49		PKiKP	19 16 06.2	-1.4
NVAR					PKKPbc	19 27 15.1	-2.3
KEST	Kesra	110.75	309	PKiKP	PKiKP	19 16 12.2	+1.0
	comp=Z,8.2nm,1.3s,baz=10,slow=2.0,SNR=4.9						
KEST				PP	PP	19 16 49.5	+1.0
	comp=Z,11nm,0.9s,baz=34,slow=9.0,SNR=3.8						
FXWY	Fox Creek	112.00	41	IAMs_20	IAMs_20	19 55 30.9	
	comp=Z,718nm,21.0s						
PDAR	Pinedale Array	113.34	42	PKiKP	PKiKP	19 16 16.1	-0.1
	comp=Z,0.9nm,0.5s,baz=205,slow=1.6,SNR=6.4						
PDAR				PKKPbc	PKKPbc	19 27 01.6	-0.9
	comp=Z,1.3nm,0.7s,baz=111,slow=4.9,SNR=7.0						
PDAR				SKKP		19 31 04.1	
	comp=Z,0.9nm,0.9s,baz=111,slow=4.3,SNR=3.9						
RSSD	Black Hills	116.25	38	PKIKP	PKPdf	19 16 20.9	-0.8
RSSD	Black Hills	116.25	38		PKPdf	19 16 20.9	-0.8
TUC	Tucson	116.53	53	PKiKP	PKPdf	19 16 22.2	-0.3
	baz=290						
N23A	Red Feather La	116.60	42	PKiKP	PKPdf	19 16 22.2	-0.3
	baz=298						
MDND	Maddock	116.75	33	PKiKP	PKiKP	19 16 22.5	+0.2
	baz=307						
ULM	Lac du Bonnet	117.16	29	PKP	PKPdf	19 16 22.6	-0.4
	comp=Z,5.9nm,0.4s,baz=218,slow=0.3,SNR=11						
ULM	Lac du Bonnet	117.16	29		PKPdf	19 16 21.9	-1.1
ISCO	Idaho Springs	117.33	43	PKiKP	PKPdf	19 16 23.9	-0.2
	baz=298						
CART	Cartagena	117.79	314	IAMs_20	IAMs_20	20 07 58.2	
	comp=Z,543nm,22.0s						
SDCO	Great Sand Dun	118.35	45	IAMs_20	IAMs_20	19 54 23.3	
	comp=Z,546nm,20.0s						
121A	Cookes Peak, D	118.81	51	PKiKP	PKPdf	19 16 27.0	0.0
	baz=293						
ANMO	Albuquerque	118.86	48	PKiKP	PKPdf	19 16 26.7	-0.3
	baz=295						
ESDC	Sonseca Array	118.87	318	PKP	PKiKP	19 16 26.9	+0.1
	comp=Z,0.8nm,0.6s,baz=39,slow=2.3,SNR=6.4						
ESDC				PP	PP	19 17 46.5	+1.0
	comp=Z,3.3nm,0.9s,baz=52,slow=7.1,SNR=7.0						
ESDC				PKKPab	PKKPab	19 26 44.8	0.0
	comp=Z,1.0nm,0.7s,baz=252,slow=3.8,SNR=5.0						
T25A	Trinidad	119.39	45	PKiKP	PKPdf	19 16 27.9	-0.1
	baz=298						
B35A	Bob, Littlefor	119.47	30		PKPdf	19 16 26.3	-1.2
F33A	5 Mile Ranch,	119.78	33		PKPdf	19 16 28.0	-0.2
PGAV	Gavieira, Arco	120.44	322	*e*PKPdf	PKiKP	19 16 30.7	+0.9
EYMN	Ely	120.84	29	PKiKP	PKiKP	19 16 30.4	+0.1
	baz=315						
ECSD	EROS Data Cent	120.90	35	PKiKP	PKPdf	19 16 30.4	0.0
	baz=308						
ECSD	EROS Data Cent	120.90	35		PKPdf	19 16 30.1	-0.3
MNTX	Cornudas Mount	121.01	51	PKiKP	PKiKP	19 16 31.5	+0.4
	baz=294						
PCBR	Castelo Branco	121.11	320	*e*PKPdf	PKiKP	19 16 32.0	+1.0
F36A	Milaca	121.24	32		PKPdf	19 16 28.6	-2.4
BGNE	Belgrade	121.36	38	PKiKP	PKPdf	19 16 31.3	-0.1
	baz=305						
BGNE	Belgrade	121.36	38		PKPdf	19 16 29.4	-2.0
PCAS	Casmilo, Conde	121.65	320	*e*PKPdf	PKiKP	19 16 32.9	+0.8
SPMN	Marine on St.	122.04	32	PKiKP	PKiKP	19 16 33.1	+0.3
	baz=312						
I37A	Lemond, Waseca	122.52	33	PKPdf	PKPdf	19 16 33.4	-0.1
PNCL	Nicolau / Gran	122.73	318	*e*PKPdf	PKiKP	19 16 35.2	+0.9
SCHQ	Schefferville	122.88	9	PKP	PKiKP	19 16 34.4	+0.3
	comp=Z,16nm,0.4s,baz=334,slow=1.6,SNR=43						
SCHQ	Schefferville	122.88	9		PKPdf	19 16 32.8	-1.1
TORD	Torodi Ar. Bea	123.20	287	PKP	PKPdf	19 16 35.4	-0.2
	comp=Z,11nm,0.8s,baz=25,slow=2.9,SNR=39						
TORD				PP	PP	19 18 18.5	+2.5
	comp=Z,15nm,1.3s,baz=60,slow=6.7,SNR=5.2						
TORD				PKKPab	PKKPab	19 26 26.4	+0.2
	comp=Z,2.1nm,0.7s,baz=273,slow=4.2,SNR=10						
COWI	Conover	123.28	29		PKiKP	19 16 35.1	-0.1
TXAR	Lajitas Array	123.32	53	PKP	PKiKP	19 16 36.1	+0.3
	comp=Z,3.7nm,0.7s,baz=258,slow=1.9,SNR=22						
TXAR				PKKPab	PKKPbc	19 26 25.8	-0.1
	comp=Z,0.9nm,0.7s,baz=112,slow=5.6,SNR=8.0						
G40A	Rib Lake	123.35	30		PKPdf	19 16 34.5	-0.6
KSU1	Kansas State U	123.64	40	PKiKP	PKiKP	19 16 36.0	-0.1
	baz=305						
KSU1	Kansas State U	123.64	40	PKPdf	PKiKP	19 16 35.9	-0.1
K38A	Parkersburg	123.76	34		PKPdf	19 16 36.0	+0.1
I40A	Norwalk	124.10	32		PKPdf	19 16 36.7	+0.1
WMOK	Wichita Mounta	124.55	45	PKiKP	PKiKP	19 16 38.0	0.0
	baz=301						
JFWS	Jewell Farm	124.96	32	PKIKP	PKPdf	19 16 37.0	-1.2
JFWS	Jewell Farm	124.96	32	PKiKP	PKPdf	19 16 38.3	0.0
	baz=314						
JFWS	Jewell Farm	124.96	32		PKPdf	19 16 37.0	-1.2
I42A	Draeger Farm,	124.98	31		PKPdf	19 16 37.9	-0.3
L40A	Anamosa	125.01	34		PKPdf	19 16 37.5	-0.9
P38A	Dawn	125.24	37		PKPdf	19 16 37.3	-1.5
JCT	Junction City	125.86	50	PKiKP	PKPdf	19 16 40.4	0.0
	baz=297						
P40A	Paris	126.19	36		PKPdf	19 16 40.4	-0.3
S39A	Bolivar	126.56	39		PKPdf	19 16 40.9	-0.5
R40A	Maddies Statio	126.84	38		PKPdf	19 16 41.3	-0.6
HQIL	Hanson Quary C	127.01	32	IAMs_20	IAMs_20	20 09 54.1	
	comp=Z,449nm,20.0s						
HDIL	Hopedale	127.10	34	PKiKP	PKPdf	19 16 42.6	+0.2
	baz=313						
833A	Chaparral WMA,	127.14	52	PKiKP	PKiKP	19 16 44.0	+0.7
	baz=296						
J47A	Sunmer	127.47	28		PKPdf	19 16 42.7	-0.3
MGMO	Mountain Grove	127.55	39		PKPdf	19 16 42.4	-1.0
CCM	Cathedral Cave	127.62	37	PKIKP	PKiKP	19 16 43.8	-0.2
CCM	Cathedral Cave	127.62	37	PKiKP	PKiKP	19 16 43.9	-0.2
	baz=310						
CCM	Cathedral Cave	127.62	37	PKPdf	PKiKP	19 16 43.8	-0.2
U40A	Yellville	127.66	40	PKiKP	PKiKP	19 16 44.0	-0.2
	baz=307						
U40A	Yellville	127.66	40	PKPdf	PKPdf	19 16 43.5	-0.2
W39A	Magazine	127.74	42	PKiKP	PKiKP	19 16 44.4	+0.1
	baz=306						
W39A	Magazine	127.74	42	PKPdf	PKPdf	19 16 43.7	-0.1
FVM	French Village	128.16	37	PKIKP	PKPdf	19 16 43.4	-1.1
FVM	French Village	128.16	37	PKPdf	PKPdf	19 16 43.4	-1.1
MIAR	Mount Ida	128.25	42	PKiKP	PKiKP	19 16 45.6	+0.2
	baz=305						
SFIN	Lafayette	128.42	32	PKiKP	PKPdf	19 16 45.1	+0.2
	baz=316						
L48A	N Adams	128.64	29		PKPdf	19 16 45.2	-0.1
PBMO	Poplar Bluff	128.93	38		PKPdf	19 16 44.6	-1.4
P49A	Miami Univ. Ec	130.29	32	PKiKP	PKiKP	19 16 48.9	-0.4
	baz=318						
WCI	Wyandotte Cave	130.38	34	PKiKP	PKPdf	19 16 49.1	+0.4
	baz=315						
LONY	Lake Ozonia	130.51	20	PKiKP	PKPdf	19 16 49.2	+0.4
	baz=332						
KIC	Kosan Boka	130.52	280	*e*PKIKP	PKiKP	19 16 51.2	+0.7
	comp=Z,18nm,0.8s						
ERPA	Erie	130.55	26	PKiKP	PKPdf	19 16 49.3	+0.4
	baz=324						
DBIC	Dimbokro	130.60	280	PKP	PKiKP	19 16 50.8	+0.2
	comp=Z,11nm,0.9s,baz=38,slow=1.4,SNR=8.4						
DBIC				SKPab	SKPab	19 20 11.9	+2.0
	comp=Z,23nm,1.1s,baz=62,slow=2.9,SNR=9.7						
DBIC	Dimbokro	130.60	280	PKPdf	PKiKP	19 16 50.4	-0.2
ACSO	Alum Creek Sta	130.65	30	PKiKP	PKiKP	19 16 49.8	-0.2
	baz=320						
TIC	Toumodi	130.76	280	*e*PKIKP	PKiKP	19 16 51.9	+0.9
M53A	WI Miller and	130.80	27	PKiKP	PKiKP	19 16 50.1	-0.2
	baz=323						
LIC	Lamto	130.82	279	*e*PKIKP	PKiKP	19 16 51.3	+0.2
	comp=Z,97nm,1.6s						
WVT	Waverly	130.94	37	PKiKP	PKiKP	19 16 50.4	-0.3
	baz=312						
M54A	Oil Creek Stat	131.19	26	PKiKP	PKiKP	19 16 50.8	-0.3
	baz=325						
M54A	Oil Creek Stat	131.19	26		PKPdf	19 16 50.3	+0.1
PKME	Peaks-Kenny Pk	131.48	15	PKiKP	PKiKP	19 16 51.3	-0.2
	baz=339						
N54A	Moraine State	131.49	27	PKiKP	PKiKP	19 16 51.4	-0.3
	baz=324						
O53A	New Philadelph	131.49	28	PKiKP	PKiKP	19 16 51.5	-0.2
	baz=322						
P52A	Corning	131.53	29	PKiKP	PKiKP	19 16 51.4	-0.5
	baz=321						
PLAL	Pickwick Lake	131.55	38	PKPdf	PKPdf	19 16 51.1	+0.1
M55A	Ridgway	131.61	25		PKPdf	19 16 50.1	-0.9
LBNH	Lisbon	131.69	18	PKiKP	PKiKP	19 16 51.6	-0.4
	baz=335						
BINY	Binghamton	132.12	22	PKiKP	PKiKP	19 16 52.4	-0.5
	baz=329						
MCWV	Mont Chateau	132.60	28	PKiKP	PKPdf	19 16 53.1	+0.3
	baz=323						
SSPA	Standing Stone	132.67	25	PKiKP	PKPdf	19 16 53.2	+0.3
	baz=326						
L61B	Northampton	133.07	19	PKiKP	PKPdf	19 16 54.2	+0.5
	baz=334						
TZTN	Tazewell	133.11	33	PKiKP	PKiKP	19 16 54.7	-0.5
	baz=317						
N59A	State Game Lan	133.30	23	PKiKP	PKiKP	19 16 54.9	-0.5
	baz=329						
W52A	Murphy	133.95	35		PKPdf	19 16 52.1	-3.5
KMSC	Kings Mountain	135.36	33	PKiKP	PKiKP	19 16 59.1	-0.6
	baz=319						
CMIG	Matias Romero	135.41	64	PKP	PKiKP	19 16 59.9	-0.4
	comp=Z,3.5nm,0.6s,baz=5.4,slow=3.5,SNR=6.3						
PLCA	Paso Flores	138.01	161	PKhKP	PKPpre	19 16 57.2	
	comp=Z,3.3nm,0.9s,baz=292,slow=2.8,SNR=7.4						
PLCA				PKP	PKiKP	19 17 04.8	-0.2
	comp=Z,4.0nm,0.5s,baz=265,slow=2.0,SNR=17						
PLCA				SKP		19 20 36.1	
	comp=Z,2.9nm,1.0s,baz=79,slow=3.1,SNR=3.0						
LC01	Cunco	139.18	158		PKPdf	19 17 00.4	-4.7
APG	El Apazote	140.12	64	PKhKP	PKPpre	19 17 07.0	
	comp=Z,4.1nm,0.6s,baz=252,slow=20,SNR=3.8						
GO05	Huala	142.53	155		PKPdf	19 17 08.1	-3.2
TRQA	Tornquist	142.77	169	PKIKP	PKPdf	19 17 08.0	-3.6
TRQA	Tornquist	142.77	169		PKPdf	19 17 08.0	-3.6
BO02	Sierra Bellavi	143.19	156		PKPbc	19 17 10.4	+0.9
BO01	Tunca	143.41	156		PKPbc	19 17 10.2	+0.2
MT01	Popeta	143.79	155		PKPbc	19 17 12.0	+0.8
MT09	Talagante	143.98	155		PKPbc	19 17 12.1	+0.1
MT02	Curacav	144.36	154		PKPbc	19 17 13.1	+0.2
PEL	Peldehue	144.65	155	PKIKP	PKPab	19 17 13.8	0.0
PEL	Peldehue	144.65	155		PKPab	19 17 13.8	0.0
ZON	Zonda	146.87	156	PKP2	PKPdf	19 17 19.0	0.0
ZON	Zonda	146.87	156		PKPdf	19 17 19.0	0.0
RIMA	Rio Macho	147.96	69		PKiKP	19 17 25.6	-0.7
PEZE	Perez Zeledon,	148.26	70		PKiKP	19 17 26.5	-0.3
SRBA	San Rafael, Bu	148.60	70		PKPdf	19 17 20.6	-1.7
RIOS	Rincon, Osa	148.62	71		PKPbc	19 17 24.4	-1.6
AC04	Llanos de Chal	148.62	150		PKPdf	19 17 20.9	-1.0
MTDJ	Mount Denham	149.47	49		PKPab	19 17 31.5	-1.4
GO03	Copiap	149.54	150		PKPbc	19 17 26.4	-1.6
PLTB	Pedras Altas	149.84	180		PKPdf	19 17 21.8	-1.9
LVC	Limon Verde	154.28	146	PKPbc	PKiKP	19 17 41.2	+1.8
	comp=Z,10nm,0.7s,baz=214,slow=1.4,SNR=10						
LVC	Limon Verde	154.28	146	PKIKP	PKPdf	19 17 28.6	-2.5
LVC	Limon Verde	154.28	146		PKPdf	19 17 28.6	-2.5
ATAH	Atahualpa	154.74	104	PKPbc	PKiKP	19 17 42.3	+1.7
	comp=Z,33nm,0.8s,baz=206,slow=2.5,SNR=19						
NNA	Nana	154.76	116	PKPbc	PKiKP	19 17 41.4	+1.3
	comp=Z,18nm,0.8s,baz=262,slow=7.4,SNR=6.6						
NNA	Nana	154.76	116		PKiKP	19 17 43.4	+3.2
CPUP	Villa Florida	155.00	172	PKPbc	PKPdf	19 17 40.9	+9.4
	comp=Z,2.9nm,0.4s,baz=207,slow=2.3,SNR=3.4						
CPUP	Villa Florida	155.00	172	PKIKP	PKPdf	19 17 29.9	-1.6
CPUP	Villa Florida	155.00	172		PKPdf	19 17 29.9	-1.6
PB01	IPOC Station P	155.16	143		PKPdf	19 17 28.6	-3.4
OTAV	Otavalo	155.19	86	IAMs_20	IAMs_20	20 17 55.1	
	comp=Z,309nm,20.0s						
SMRT	St. Maarten	158.54	25	IAMs_20	IAMs_20	20 11 31.5	
	comp=Z,215nm,19.0s						
LPAZ	La Paz	159.50	137	PKP	PKPdf	19 17 38.5	+0.4
	comp=Z,3.0nm,0.7s,baz=180,slow=25,SNR=6.4						
SDV	Santo Domingo	160.25	58	PKP	PKPdf	19 17 38.4	-0.1
	comp=Z,4.3nm,0.4s,baz=297,slow=0.6,SNR=7.8						
SDV				PKPab	PKPab	19 18 20.0	+1.0
	comp=Z,7.9nm,0.4s,baz=355,slow=2.0,SNR=5.4						
SIV	San Ignacio	163.81	154	PKP	PKPdf	19 17 42.6	+0.7
	comp=Z,2.6nm,0.5s,baz=194,slow=3.8,SNR=9.6						
SIV				PKPab	PKPab	19 18 35.0	+0.8
	comp=Z,9.9nm,0.8s,baz=224,slow=4.5,SNR=9.0						
BDFB	Brasilia	164.81	201	PKPab	PKPab	19 18 39.1	+0.5
	comp=Z,7.2nm,0.8s,baz=154,slow=6.9,SNR=2.6						
PTGA	Pitinga	173.69	84	PKP	PKPdf	19 17 48.7	+0.4
	comp=Z,1.8nm,0.7s,baz=304,slow=7.3,SNR=2.3						

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*IDC **25** 19:19:17.3±8.9, 2°.61S×77°.32W, h235^{km}±73^{km}, mb3.5/2, mb1 3.4/3, mb1mx3.0/32, mbtmp4.0/3, MS4.1/1, Ms1 4.2/1, ms1mx2.9/32, Error ellipse: s-maj=134.3km s-min=38.3km az=149.0*

ISC 25 19:19:14.0±1.6**, 2°.3S**±0°.2×**77°.4W**±0°.4**, h200^{km}, n7, σ2^{s}.26**/7**,**
Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAH	Atahualpa	4.92	192	P	Pn	19 20 28.1	+0.3
	1.5nm,0.3s,baz=20,slow=11,SNR=6.3						
ATAH				S	Sn	19 21 25.6	-0.3
	0.8nm,0.3s,baz=295,slow=21,SNR=2.2						
NVAR	Mina Array Bea	55.37	321	LR	LR	19 53 26.5	
	comp=Z,188nm,21.0s,baz=280,slow=37						
KOWA	Kowa	74.49	74	P	P	19 30 31.6	+0.5
	1.4nm,0.5s,baz=273,slow=6.7,SNR=4.2						
TORD	Torodi Ar. Bea	79.88	76	P	P	19 31 00.5	-0.7
	0.5nm,0.4s,baz=280,slow=4.5,SNR=9.9						
ASAR	Alice Springs	140.10	228	PKP	PKPdf	19 38 18.0	-1.7
	0.5nm,0.8s,baz=125,slow=2.6,SNR=2.5						
WRA	Warramunga Arr	141.83	233	PKhKP	PKPpre	19 38 15.3	
	0.3nm,0.7s,baz=120,slow=2.7,SNR=1.1						
WRA				PKP	PKPdf	19 38 20.2	-2.6
	0.6nm,0.9s,baz=120,slow=2.2,SNR=2.0						
FITZ	Fitzroy Crossi	149.60	227	PKPbc	PKPdf	19 38 39.1	+3.2
	1.8nm,0.9s,baz=108,slow=3.2,SNR=2.4						

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*NEIC **25** 19:39:54.1±1.7, 15°.41S±0°.07×167°.6E±0°.1, h101^{km}±3^{km}, mb4.9/57, Error ellipse: s-maj=14.4km s-min=10.2km az=85.0*

*IDC **25** 19:39:54.3±1.9, 15°.38S×167°.62E, h108^{km}±15^{km}, mb4.2/21, mb1 4.3/23, mb1mx4.1/44, mbtmp4.6/23, Error ellipse: s-maj=18.8km s-min=11.4km az=82.0*

*NOU **25** 19:39:54.0, 15°.28S×167°.58E, h103^{km}, mb5.0/46, Vanuatu Islands*

ISC 25 19:39:53.4±0.4**, 15°.41S**±0°.05×**167°.59E**±0°.07**, h100^{km},**
n191, σ1^{s}.35/198**, mb4.8**/63**, 1C-3D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.38	264		Pn	19 40 09.7	+1.3
SANVU	Saraoutou	0.38	264	P	Pn	19 40 09.9	+1.5
DVP	Devils Point	2.37	166	P	Pn	19 40 33.8	+2.9
LIFNC	LIFOU	5.35	184	Pn	Pn	19 41 11.2	+0.3
LIFNC				Sn	Sn	19 42 06.8	-4.4
LIFNC	LIFOU	5.35	184	P	Pn	19 41 11.4	+0.5
KOUNC	Koumac, New Ca	6.00	211	P	Pn	19 41 22.5	+2.7
YATNC	Mamie plateau,	6.65	186	P	Pn	19 41 30.2	+1.7
DZM	Mont Dzumac	6.71	189	*e*Pn	Pn	19 41 31.5	+1.9
	265nm,0.3s						
DZM				*e*Sn	Sn	19 42 46.5	+1.9
	178nm,0.3s						
DZM	Mont Dzumac	6.71	189	P	Pn	19 41 31.5	+1.9
	109nm,0.3s,baz=39,slow=14,SNR=512						
DZM				S	Sn	19 42 43.4	-1.2
	18nm,0.3s,baz=310,slow=22,SNR=1.4						
DZM	Mont Dzumac	6.71	189	Pn	Pn	19 41 31.4	+1.9

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DZM                                 Sn      Sn      19 42 39.3  -5.3
DZM   Mont Dzumac          6.71 189 P       Pn      19 41 31.8  +2.3
NOUC  Port Laguerre        6.77 190 P       Pn      19 41 33.1  +2.9
ONTNC Ouen Toro            6.95 189 Pn      Pn      19 41 33.6  +1.1
ONTNC Ouen Toro            6.95 189 P       Pn      19 41 35.7  +3.1
OUENC Ouen Island, N       7.01 186 Pn      Pn      19 41 35.1  +1.6
OUENC Ouen Island, N       7.01 186 P       Pn      19 41 36.5  +3.1
PINNC Pines Island,        7.17 181         Pn      19 41 37.4  +1.8
PINNC Pines Island,        7.17 181 P       Pn      19 41 38.3  +2.7
HNR   Honiara              9.54 308 P       Pn      19 42 09.5  +1.6
      11nm,0.3s,baz=174,slow=18,SNR=12
HNR                                 S       Sn      19 43 54.6  +1.2
      20nm,0.3s,baz=206,slow=23,SNR=2.0
TARA  Tarawa              17.47  18 P       P       19 43 50.4  -0.2
TARA                                IAmb    IAmb    19 43 56.4
      comp=Z,151nm,1.4s
EIDS  Eidsvold            18.36 235 P       Pn      19 44 01.9  +0.4
      baz=18,SNR=12
EIDS  Eidsvold            18.36 235 P       P       19 44 00.6  +0.3
EIDS  Eidsvold            18.36 235 P       Pn      19 44 02.9  +1.4
      comp=Z,23nm,0.6s
RABL  Rabaul              18.83 305 P       P       19 44 05.1  -0.5
RABL                                IAmb    IAmb    19 44 12.7
      comp=Z,90nm,1.1s
OUZ   Omahuta             20.45 166         P       19 44 24.4  +1.5
OUZ   Omahuta             20.45 166 P       P       19 44 25.3  +2.4
RMQ   Roma                20.73 235 P       Pn      19 44 28.5  -0.8
      baz=21,SNR=4.4
PMG   Port Moresby        20.82 284 P       P       19 44 28.5  +1.4
      comp=Z,13nm,0.8s,baz=79,slow=12,SNR=4.3
PMG   Port Moresby        20.82 284 P       P       19 44 28.7  +1.6
PMG                                 IAmb    IAmb    19 44 29.7
      comp=Z,36nm,1.2s
CTA   Charters Tower      20.84 254 P       P       19 44 28.8  +1.4
      comp=Z,5.9nm,0.6s,baz=83,slow=9.8,SNR=2.5
CTAO  Charters Tower      20.84 254 P       P       19 44 25.8  -1.6
CTAO  Charters Tower      20.84 254 P       P       19 44 28.7  +1.4
ARMA  Armidale            20.92 222 P       P       19 44 27.6  -0.6
MTSU  Mount Surprise      22.45 260 P       P       19 44 45.6  +1.2
      baz=23,SNR=17
TOZ   Tahuroa Road        23.31 164 P       P       19 44 54.6  +2.0
COEN  Coen                23.66 270 P       P       19 44 56.3  +0.3
COEN  Coen                23.66 270 P       P       19 44 56.2  +0.2
      comp=Z,19nm,1.6s
HIZ   Hauiti              23.89 166 P       P       19 44 59.7  +1.9
HIZ   Hauiti              23.89 166 P       P       19 45 00.2  +2.4
MANU  Manus Island        23.96 302 P       P       19 44 58.6  -0.1
MXZ   Matakaoa Point      24.02 159 P       P       19 44 59.8  +0.8
MXZ                                 IAmb    IAmb    19 45 01.6
      comp=Z,56nm,0.8s
RUGZ  Raukumara Rang      24.17 160 P       P       19 45 01.4  +0.8
PKGZ  Pakihiroa           24.24 159 P       P       19 45 02.0  +1.0
URZ   Urewera             24.26 162 P       P       19 45 01.7  +0.5
      comp=Z,11nm,0.3s,baz=301,slow=20,SNR=19
URZ                                 S       S       19 49 12.1  -0.7
      comp=Z,2.4nm,0.7s,baz=301,slow=23,SNR=1.6
URZ   Urewera             24.26 162 P       P       19 45 02.2  +1.0
URZ   Urewera             24.26 162 P       P       19 45 01.6  +0.4
URZ                                 IAmb    IAmb    19 45 02.9
      comp=Z,38nm,1.1s
URZ   Urewera             24.26 162 P       P       19 45 02.2  +1.0
      comp=Z,73nm,1.3s
QLP   Quilpie             24.43 239 P       P       19 45 04.1  +1.2
      baz=25,SNR=8.4
QLP   Quilpie             24.43 239 P       P       19 45 03.6  +0.7
      comp=Z,28nm,0.7s
RATZ  Rangitukua          24.45 164 P       P       19 45 04.5  +1.6
MWZ   Matawai             24.46 161 P       P       19 45 04.0  +0.9
KATZ  Kakaramea           24.53 165 P       P       19 45 05.8  +2.0
TWVZ  Taurewa             24.56 165 P       P       19 45 05.6  +1.6
MRHZ  Matea Rd            24.59 163 P       P       19 45 06.5  +2.2
WTVZ  West Tongariro      24.64 165 P       P       19 45 06.8  +2.1
NGZ   Ngauruhoe           24.70 165 P       P       19 45 07.5  +2.1
FWVZ  Far West T-bar      24.76 165 P       P       19 45 08.0  +1.9
WNVZ  Wahianoa            24.84 165 P       P       19 45 08.8  +2.2
RAHZ  Arahi               24.86 162 P       P       19 45 07.9  +1.2
RIGZ  Rimuhau             24.88 161 P       P       19 45 07.5  +0.7
BKZ   Black Stump Fm      24.92 163 P       P       19 45 07.5  +0.2
BKZ                                 IAmb    IAmb    19 45 09.2
      comp=Z,37nm,0.5s
BKZ   Black Stump Fm      24.92 163 P       P       19 45 08.2  +0.9
MOVZ  Moawhango           24.96 165 P       P       19 45 08.8  +1.2
BHHZ  Black Hill Sta      25.11 164 P       P       19 45 09.8  +0.8
ARHZ  Aropaoanui          25.16 163 P       P       19 45 10.3  +1.0
MCHZ  McNeill Hill        25.24 163 P       P       19 45 11.6  +1.5
KRHZ  Kereru              25.34 164 P       P       19 45 11.7  +0.7
CKHZ  Cape Kidnapper      25.55 163 P       P       19 45 12.6  -0.2
QRZ   Quartz Range        25.69 171 P       P       19 45 14.2  +0.1
QRZ                                 IAmb    IAmb    19 45 16.9
      comp=Z,53nm,1.1s
QRZ   Quartz Range        25.69 171 P       P       19 45 15.7  +1.6
TUWZ  Tuamarina           26.50 169 P       P       19 45 21.4  -0.1
SNZO  South Karori        26.54 168 P       P       19 45 23.0  +1.3
THZ   Tophouse            26.66 171 P       P       19 45 23.5  +0.5
THZ                                 IAmb    IAmb    19 45 24.3
      comp=Z,16nm,0.7s
MSWZ  Moikau Station      26.75 167 P       P       19 45 22.9  -0.8
PLWZ  Palliser            26.90 167 P       P       19 45 24.3  -0.7
QIS   Mount Isa           27.09 255 P       P       19 45 28.0  +1.0
      baz=27,SNR=4.3
KHZ   Kahutara            27.40 170 P       P       19 45 29.5  +0.1
KHZ                                 IAmb    IAmb    19 45 31.3
      comp=Z,15nm,0.6s
KHZ   Kahutara            27.40 170 P       P       19 45 29.0  -0.4
LTZ   Lake Taylor         27.57 173 P       P       19 45 31.3  +0.2
OXZ   Oxford              28.08 173 P       P       19 45 35.2  -0.3
OXZ                                 IAmb    IAmb    19 45 37.4
      comp=Z,30nm,0.7s
RPZ   Rata Peaks          28.37 175 P       P       19 45 39.2  +1.1
RPZ                                 IAmb    IAmb    19 45 40.5
      comp=Z,17nm,0.7s
RPZ   Rata Peaks          28.37 175 P       P       19 45 39.7  +1.6
MQZ   McQueen's Vall      28.53 172 P       P       19 45 39.5   0.0
MQZ                                 IAmb    IAmb    19 45 40.4
      comp=Z,46nm,1.1s
STKA  Stephens Creek      28.80 231 P       P       19 45 43.0  +0.9
      comp=Z,1.7nm,0.5s,baz=33,slow=8.5,SNR=12
STKA                                PcP     PcP     19 48 49.6   0.0
      comp=Z,2.9nm,0.8s,baz=63,slow=2.3,SNR=4.6
STKA                                ScP     ScP     19 52 21.8  -0.3
      comp=Z,2.7nm,0.8s,baz=342,slow=3.2,SNR=3.6
STKA  Stephens Creek      28.80 231 P       P       19 45 42.7  +0.7
LBZ   Lake Benmore        28.97 176 P       P       19 45 44.2  +0.8
LBZ                                 IAmb    IAmb    19 45 55.3
      comp=Z,53nm,1.5s
ODZ   Otahua Downs        29.65 176 P       P       19 45 48.9  -0.5
ODZ                                 IAmb    IAmb    19 46 16.8
      comp=Z,15nm,1.2s
GLAD  Gladstone           30.63 210 P       P       19 45 59.4  +1.3
LCRK  Leigh Creek         30.80 236 P       P       19 46 00.9  +1.1
      comp=Z,24nm,1.2s
WR0   Warramunga Arr      31.78 257 P       P       19 46 06.5  -2.0
WB2   Warramunga Arr      31.96 257 P       P       19 46 08.8  -1.3
WRAB  Tennant Creek       31.96 257 P       P       19 46 08.9  -1.2
WRAB  Tennant Creek       31.96 257 P       P       19 46 09.1  -1.0
WRA   Warramunga Arr      31.97 257 P       P       19 46 08.9  -1.3
      comp=Z,4.5nm,0.7s,baz=85,slow=9.1,SNR=39
WRA                                 S       S       19 51 09.7  -4.9
      comp=Z,0.6nm,0.8s,baz=84,slow=15,SNR=5.3
WRA                                 ScP     ScP     19 52 31.8  -1.0
      comp=Z,1.7nm,1.0s,baz=87,slow=3.2,SNR=5.2
AS31  Alice Springs       32.73 250 P       P       19 46 16.1  -0.7
ASAR  Alice Springs       32.73 250 P       P       19 46 16.2  -0.6
      comp=Z,9.0nm,0.8s,baz=77,slow=9.2,SNR=94
ASAR                                PcP     PcP     19 48 58.2  -2.1
      comp=Z,0.3nm,0.4s,baz=75,slow=5.4,SNR=4.1
ASAR                                ScP     ScP     19 52 34.0  -1.4
      comp=Z,2.4nm,0.8s,baz=84,slow=3.6,SNR=13
ASAR  Alice Springs       32.73 250 P       P       19 46 16.0  -0.9
BBOO  Buckleboo           33.41 233 P       P       19 46 23.8  +1.1
      baz=34,SNR=13
BBOO  Buckleboo           33.41 233 P       P       19 46 22.2  -0.5
BBOO                                IAmb    IAmb    19 46 24.2
      comp=Z,21nm,0.7s
BBOO  Buckleboo           33.41 233 P       P       19 46 23.2  +0.5
MULG  Mulgathing          34.11 238 P       P       19 46 28.7   0.0
      comp=Z,27nm,2.4s
KDU   Kakadu              34.15 270 P       P       19 46 28.5  -0.7
      baz=34,SNR=4.2
MTN   Manton Dam          35.42 269 P       P       19 46 41.6  +1.4
      baz=36,SNR=4.6
MTN   Manton Dam          35.42 269 P       P       19 46 40.1  -0.1
MTN                                 IAmb    IAmb    19 47 03.0
      comp=Z,26nm,1.5s
FAKI  Fak Fak             36.95 286 P       P       19 46 54.0  +0.7
      comp=Z,35nm,0.9s
FAKI  Fak Fak             36.95 286 P       P       19 46 53.3   0.0
FAKI  Fak Fak             36.95 286 P       P       19 46 53.5  +0.2
KNRA  Kununurra           37.37 264 P       P       19 46 56.1  -0.7
      baz=38,SNR=15
KNRA  Kununurra           37.37 264 P       P       19 46 56.1  -0.7
KNRA  Kununurra           37.37 264 P       P       19 46 55.5  -1.3
      comp=Z,33nm,0.8s
WRKA  Warakurna           37.98 249 P       P       19 47 01.6  -0.2
      baz=38,SNR=19
WRKA  Warakurna           37.98 249 P       P       19 47 01.3  -0.6
      comp=Z,7.5nm,0.6s
ANA2  Anatahan            38.23 325 P       P       19 47 02.7  -1.3
SWI   Sorong              38.66 289 P       P       19 47 08.4  +0.8
      comp=Z,50nm,0.6s
FORT  Forrest             39.22 240 P       P       19 47 12.6  +0.5
      comp=Z,35nm,1.0s
MCQ   Macquarie Isla      39.58 188 P       P       19 47 15.9  +1.2
      comp=Z,94nm,1.9s
FITZ  Fitzroy Crossi      40.20 260 P       P       19 47 20.5  +0.1
      baz=40,SNR=14
LBMI  Labuha              42.20 287 P       P       19 47 38.5  +1.6
      comp=Z,16nm,1.0s
SOEI  Soe                 42.60 272 P       P       19 47 39.5  -0.7
SOEI                                IAmb    IAmb    19 48 07.0
      comp=Z,12nm,1.1s
TNTI  Ternate             42.88 288 P       P       19 47 30.2   -12
BATI  Baumata             43.09 271 P       P       19 47 45.2  +1.2
      comp=Z,18nm,0.7s
SANI  Sanana              43.10 284 P       P       19 47 44.3  +0.2
      comp=Z,18nm,1.2s
SANI  Sanana              43.10 284 P       P       19 47 44.4  +0.3
MMRI  Maumere             44.80 273 P       P       19 47 56.8  -0.9
PSA00 Pilbara Seismi      45.56 255 P       P       19 48 03.0  -0.6
PSA00 Pilbara Seismi      45.56 255 P       P       19 48 03.8  +0.2
PSA00                               IAmb    IAmb    19 48 32.8
      comp=Z,42nm,1.5s
MBWA  Marble Bar          45.67 255 P       P       19 48 04.9  +0.4
LUWI  Luwuk               46.46 284 P       P       19 48 11.3  +0.5
LUWI                                IAmb    IAmb    19 48 24.6
      comp=Z,27nm,1.2s
MEEK  Meekatharra         46.81 248 P       P       19 48 14.9  +1.4
      baz=47,SNR=4.2
GTOI  Gorontalo           46.84 286 P       P       19 48 15.8  +2.1
PLAI  Plampang            49.05 272 P       P       19 48 30.6  -0.2
TOLI2 Tolitoli            49.09 285 P       P       19 48 30.5  -0.6
TOLI2                               IAmb    IAmb    19 48 31.3
      comp=Z,7.0nm,0.9s
TOLI2 Tolitoli            49.09 285 P       P       19 48 30.3  -0.8
MORW  Morawa              49.26 245 P       P       19 48 31.7  -0.6
MORW                                IAmb    IAmb    19 48 36.9
      comp=Z,27nm,1.2s
MYLDM Lahad Datu          52.74 289 P       P       19 48 59.5  +1.1
MYLDM                               IAmb    IAmb    19 49 15.2
      comp=Z,14nm,1.0s
KKM   Kota Kinabalu       55.17 289 P       P       19 49 16.3   0.0
KKM                                 IAmb    IAmb    19 49 18.3
      comp=Z,12nm,0.8s
JMN   Monobe              58.49 327 P       P       19 49 39.8  +0.6
MJAR  Matsushiro Arr      58.65 332 P       P       19 49 38.6  -1.7
      comp=Z,2.8nm,0.6s,baz=173,slow=7.4,SNR=11
MAJO  Matsushiro          58.65 332 P       P       19 49 39.8  -0.6
MAJO                                IAmb    IAmb    19 49 41.0
      comp=Z,9.6nm,1.0s
MAJO  Matsushiro          58.65 332 P       P       19 49 39.9  -0.4
MAT   Matsushiro          58.65 332 P       P       19 49 39.4  -0.9
JWT   Wachi               58.94 329 P       P       19 49 42.5  +0.2
KSM   Kuching             59.04 281 P       P       19 49 42.7  -0.7
KSM                                 IAmb    IAmb    19 49 44.3
      comp=Z,8.8nm,0.9s
JNU   Nakatsue            59.65 324 P       P       19 49 47.0  -0.4
      comp=Z,10nm,0.7s,baz=17,slow=1.2,SNR=5.8
JNU   Nakatsue            59.65 324 IAmb    IAmb    19 49 48.0
      comp=Z,14nm,0.8s
NACB  Ninganchiao         59.70 310 P       P       19 49 48.1  +0.3
JHS   Saijyo              59.87 328 P       P       19 49 48.5  -0.3
TPUB  Ta-pu               59.91 309 P       P       19 49 48.4  -0.8
TPUB  Ta-pu               59.91 309 P       P       19 49 48.7  -0.6
SSLB  Suanglung           59.95 310 P       P       19 49 49.1  -0.4
SSLB  Suanglung           59.95 310 P       P       19 49 49.3  -0.2
YHNB  Yeheng              60.16 311 P       P       19 49 51.3  +0.3
VNDA  Vanda               62.19 181 P       P       19 50 04.1  +0.3
      comp=Z,5.5nm,0.6s,baz=354,slow=7.5,SNR=42
VNDA  Vanda               62.19 181 P       P       19 50 03.7  -0.1
VNDA                                IAmb    IAmb    19 50 06.1
      comp=Z,7.7nm,0.8s
SBA   Scott Base          62.46 180 P       P       19 50 06.9  +1.3
SBA                                 IAmb    IAmb    19 50 08.1
      comp=Z,14nm,0.8s
KSRS  Korea Array         64.47 326 P       P       19 50 19.6  +0.1
      comp=Z,2.6nm,0.8s,baz=151,slow=7.8,SNR=5.9
NJ2   Nanjing             66.38 316 eP      P       19 50 34.5  +2.7
NJ2                                 pmax    pmax
      comp=Z,4.0nm,0.6s
USRK  Ussuriysk Ar.       67.63 333 P       P       19 50 40.3  +0.8
      comp=Z,7.1nm,0.7s,baz=145,slow=5.7,SNR=9.6
CN2   Changchun           70.39 329 eP      P       19 50 57.0  +0.4
CN2                                 pmax    pmax
      comp=Z,20nm,0.6s
KLR   Kul'dur             71.75 336 P       P       19 51 05.6  +0.9
      comp=Z,3.9nm,0.6s,baz=134,slow=5.5,SNR=14
GYA   Guiyang             72.35 305 ⇓P      P       19 51 10.0  +1.0
GYA                                 pmax    pmax
      comp=Z,11nm,0.6s
XAN   Xi'an               74.38 313 ⇑P      P       19 51 20.8  +0.2
XAN                                 pP      pP      19 51 50.0  +4.0
XAN                                 pmax    pmax
      comp=Z,12nm,0.9s
QSPA  South Pole Qui      74.62 180 P       P       19 51 21.7   0.0
QSPA                                IAmb    IAmb    19 51 22.7
      comp=Z,31nm,1.1s
CMAR  Chiang Mai Arr      75.51 294 P       P       19 51 28.4  +1.0
      comp=Z,1.3nm,0.7s,baz=135,slow=4.7,SNR=17
CMAR  Chiang Mai Arr      75.51 294 P       P       19 51 26.7  -0.7
HHC   Hu-ho-hao-te        76.30 320 eP      P       19 51 31.3  -0.3
HHC                                 pmax    pmax
      comp=Z,12nm,1.3s
HHC                                 pmax    pmax
      comp=Z,170nm,5.6s
SEY   Seymchan            78.99 353 P       P       19 51 45.8   0.0
      comp=Z,2.9nm,0.9s,baz=90,slow=20,SNR=4.9
LZH   Lanzhou             79.00 312 ⇓P      P       19 51 47.0  +0.2
LZH                                 pP      pP      19 52 06.8  -5.6
LZH                                 sP      sP      19 52 16.5  -6.6
LZH                                 pmax    pmax
      comp=Z,25nm,1.3s
MAW   Mawson              81.37 202 P       P       19 51 59.0  +0.3
      comp=Z,1.7nm,0.5s,baz=142,slow=6.3,SNR=6.7
MAW   Mawson              81.37 202 IAmb    IAmb    19 52 00.1
      comp=Z,1.1nm,1.1s
YAK   Yakutsk             82.77 343 P       P       19 52 06.1  +0.2
      comp=Z,5.9nm,0.5s,baz=126,slow=17,SNR=4.3
SONM  Songino Array       83.22 324 P       P       19 52 09.0  +0.2
      comp=Z,2.5nm,0.4s,baz=149,slow=8.4,SNR=22
GTA   Gaotai              83.36 314 eP      P       19 52 10.8  +1.1
GTA                                 pP      sP      19 52 41.5  -4.2
GTA                                 sP      pP      19 52 55.0   +20
GTA                                 pmax    pmax
      comp=Z,6.0nm,1.2s
ILAR  Eielson Array       87.08  18 P       P       19 52 25.6  -1.8
      comp=Z,0.6nm,0.6s,baz=236,slow=4.9,SNR=12
SYO   Syowa Base          88.14 197⇓eX      P       19 52 27.0  -5.7
TIXI  Tiksi               90.69 349 P       P       19 52 44.0  -0.3
      comp=Z,1.5nm,0.3s,baz=162,slow=9.6,SNR=5.7
TIXI  Tiksi               90.69 349 IAmb    IAmb    19 52 48.0
      comp=Z,5.0nm,1.4s
SNAA  Sanae               92.89 183 P       P       19 52 53.4  -1.4
WMQ   Urumqi              93.42 314 eP      P       19 52 58.8  +1.1
VNA3  Neumayer Olymp      93.54 181 P       P       19 52 56.4  -1.4
VNA2  Neumayer--Watz      93.81 182 P       P       19 52 58.0  -1.0
      baz=183,slow=4.5
VNA1  Neumayer--Stat      94.11 181 P       P       19 52 59.2  -1.2
MKAR  Makanchi Array      97.91 316 P       P       19 53 17.8  -0.2
      comp=Z,1.3nm,0.7s,baz=96,slow=6.0,SNR=13
ZAA0  Zalesovo Array      98.12 324 P       P       19 53 18.0  -0.7
ZAA0                                IAmb    IAmb    19 53 19.7
      comp=Z,1.8nm,0.8s
ZALV  Zalesovo Beam       98.12 324 P       P       19 53 17.5  -1.2
      comp=Z,1.5nm,0.6s,baz=126,slow=3.9,SNR=9.0
ZALV  Zalesovo Beam       98.12 324 P       P       19 53 17.3  -1.4
ARCES ARCESS Array B     120.98 345 PKP     PKPdf   19 58 32.8  -0.8
      comp=Z,1.5nm,0.5s,baz=70,slow=1.9,SNR=16
CRVS  Cervenica-Dubn     136.62 328 ePKP    PKiKP   19 59 07.2  +1.5
GERES GERESS Array B     140.39 333 SKPbc   SKPbc   20 02 36.6  -1.7
      comp=Z,0.4nm,0.6s,baz=74,slow=3.5,SNR=3.9
KEST  Kesra              151.93 320 PKPbc   PKPbc   19 59 37.7  +0.4
      comp=Z,3.7nm,0.7s,baz=119,slow=2.1,SNR=4.7
TORD  Torodi Ar. Bea     166.15 262 PKP     PKPdf   19 59 47.5  -0.2
      comp=Z,0.6nm,0.9s,baz=72,slow=1.1,SNR=2.1
TORD                                PKPab   PKPab   20 00 46.3  -2.7
      comp=Z,0.4nm,0.8s,baz=64,slow=3.0,SNR=2.0
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IDC ***25*** *19:48:00.6±0.9, 45.°93N×154.°25E, h0^{km}, mb3.9/12, mb1 4.1/15, mb1mx3.8/48, mbtmp3.9/15, ML3.3/3, Error ellipse: s-maj=23.6km s-min=17.7km az=115.0*

SKHL ***25*** *19:48:02.7±0.6, 46.°30N×153.°90E, h15^{km}±5^{km}, mb4.6/5*

MOS ***25*** *19:48:03.2±1.5, 46.°00N×154.°09E, h30^{km}, mb4.1/6, Error ellipse: s-maj=13.2km s-min=10.5km az=62.7*

NEIC ***25*** *19:48:04.4±2.1, 46.°0N±0.°1×154.°2E±0.°2, h24^{km}±5^{km}, mb4.4/14, Error ellipse: s-maj=20.8km s-min=11.7km az=136.0*

ISC 25 19:48:03.8±0.8**, 46.°03N**±0.°10×**154.°14E**±0.°09**, h20**^{km}**, n58,** σ1.^{s}61/55**, mb4.1**/19**, 1C-1D, East of Kuril Islands**

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Code  Station Name         Δ°   AZ°    Phase ID          Time     Res
                                    Op      ISC      h  m  s    ISC
KUR   Kuril'sk             4.47 262d iPN    Pn      19 49 10.9  +0.5
KUR                                 pmax    pmax
      comp=Z,114nm,0.4s
KUR                                 pmax    pmax
      comp=N,23nm,0.2s
KUR                                 pmax    pmax
      comp=E,12nm,0.1s
KUR   Kuril'sk             4.47 262 eP      Pn      19 49 08.9  -1.5
KUR                                 AMB     AMB     19 49 12.3
      comp=E,40nm,0.9s
KUR                                 eS      Sn      19 49 58.9  -2.9
KUR                                 A       A       19 50 01.7
      comp=E,20nm,0.6s
KUR                                 A       A       19 50 01.7
      comp=E,54nm,0.6s
SKR   Severo-Kuril's       4.84  15 ePN     Pn      19 49 13.5  -2.0
SKR                                 pmax    pmax
      comp=Z,182nm,0.8s
SKR   Severo-Kuril's       4.84  15 eP      Pn      19 49 13.5  -2.0
SKR                                 AMB     AMB     19 49 18.0
      comp=Z,60nm,0.8s
SKR                                 eS      Sn      19 50 06.3  -4.6
SKR                                 A       A       19 50 10.9
      comp=Z,150nm,0.7s
SKR                                 A       A       19 50 10.9
      comp=Z,150nm,0.7s
PAU   Pauzhetka            5.72  17 eP      Pn      19 49 26.3  -1.3
PAU                                 AMB     AMB     19 49 29.6
      comp=Z,30nm,0.4s
PAU                                 eS      Sn      19 50 29.4  -3.2
PAU                                 A       A       19 50 35.3
      comp=Z,20nm,0.2s
PAU                                 A       A       19 50 35.3
      comp=Z,30nm,0.2s
YUK   Yuzh-Kuril'sk        6.20 254 eP      Pn      19 49 33.7  -0.4
YUK                                 AMB     AMB     19 49 35.1
      comp=Z,30nm,0.4s
YUK                                 eS      Sn      19 50 41.4  -2.9
YUK                                 A       A       19 50 51.7
      comp=Z,80nm,0.5s
YUK                                 A       A       19 50 51.7
      comp=Z,40nm,0.5s
GLVR  Golovnino            6.54 253 ePN     Pn      19 49 37.6  -1.2
GLVR                                pmax    pmax
      comp=Z,94nm,0.5s
GLVR  Golovnino            6.54 253 eP      Pn      19 49 37.6  -1.2
GLVR                                AMB     AMB     19 49 39.3
      comp=Z,94nm,0.5s
NMR   Nemuro--Hokkai       6.56 249⇑iPN     Pn      19 49 36.6  -2.5
PEA0B Petropavlovsk-       7.45  17 Pn      Pn      19 49 51.5  +0.2
PETK  Petropavlovsk-       7.45  17 Pn      Pn      19 49 51.7  +0.4
      comp=Z,1.2nm,0.3s,baz=190,slow=12,SNR=10.0
PETK                                Sn      Sn      19 51 20.3  +5.0
      comp=Z,0.1nm,0.3s,baz=224,slow=28,SNR=1.4
PET   Petropavlovsk        7.59  21 Pn      Pn      19 49 52.5  -0.7
JKA   Kamikawa-asahi       8.39 261 eP      Pn      19 50 05.1  +0.9
JKA   Kamikawa-asahi       8.39 261         Pn      19 50 05.0  +0.9
ASAJ  Asahikawa            8.39 261 Pn      Pn      19 50 05.0  +0.8
      comp=Z,0.9nm,0.3s,baz=79,slow=11,SNR=10.0
ERM   Erimo                8.87 247 PN      Pn      19 50 10.8   0.0
ERM   Erimo                8.87 247 Pn      Pn      19 50 10.8   0.0
USRK  Ussuriysk Ar.       15.74 271 Pn      Pn      19 51 43.5  -0.8
      baz=76,slow=10,SNR=4.3
H11N2 WAKE ISLAND Hy      28.25 154 T       T       20 23 20.0
      baz=342
H11N1 WAKE ISLAND Hy      28.27 154 T       T       20 23 15.6
      baz=342,slow=74
H11N3 WAKE ISLAND Hy      28.27 154 T       T       20 23 16.9
      baz=342,slow=74
TIK   Tiksi               28.35 343 eP      P       19 53 55.5  -0.5
TIXI  Tiksi               28.36 343 P       P       19 53 55.5  -0.6
      comp=Z,0.8nm,0.4s,baz=125,slow=11,SNR=1.7
TIXI  Tiksi               28.36 343 P       P       19 53 55.5  -0.6
TIXI                                pmax    pmax
      comp=Z,6.0nm,1.5s
TIXI  Tiksi               28.36 343 P       P       19 53 55.5  -0.6
TIXI                                IAmb    IAmb    19 53 58.1
      comp=Z,5.7nm,1.5s
H11S1 WAKE ISLAND Hy      29.35 155 T       T       20 24 35.3
      baz=342,slow=76,SNR=4.9
H11S3 WAKE ISLAND Hy      29.36 155 T       T       20 24 35.8
      baz=342,slow=76,SNR=5.5
H11S2 WAKE ISLAND Hy      29.37 155 T       T       20 24 36.4
      baz=342,slow=76,SNR=4.3
TOLK  Toolik Lake Re      35.99  31 P       P       19 55 02.2  -0.7
TOLK                                IAmb    IAmb    19 55 13.1
      comp=Z,4.5nm,1.4s
ILAR  Eielson Array       36.67  38 P       P       19 55 08.8   0.0
      comp=Z,0.2nm,0.6s,baz=248,slow=7.4,SNR=1.7
ZALV  Zalesovo Beam       43.61 307 P       P       19 56 05.8  -0.6
      comp=Z,0.5nm,0.4s,baz=80,slow=6.3,SNR=3.9
MK31  Makanchi Array      47.91 298 P       P       19 56 40.0  -0.5
MK31                                pmax    pmax
      comp=Z,2.0nm,1.2s
MK31  Makanchi Array      47.91 298 P       P       19 56 40.0  -0.5
MK31                                IAmb    IAmb    19 56 48.0
      comp=Z,2.4nm,1.2s
MKAR  Makanchi Array      47.91 298 P       P       19 56 40.8  +0.3
      comp=Z,0.6nm,0.6s,baz=67,slow=7.6,SNR=7.1
KURK  Kurchatov           48.36 305 P       P       19 56 44.0  +0.2
KURK                                pmax    pmax
      comp=Z,4.0nm,1.3s
KURK  Kurchatov           48.36 305 eP      P       19 56 44.0  +0.2
KURK  Kurchatov           48.36 305 P       P       19 56 44.0  +0.2
KURK                                IAmb    IAmb    19 57 05.3
      comp=Z,4.0nm,1.3s
CMAR  Chiang Mai Arr      52.90 258 P       P       19 57 19.8  +1.3
      comp=Z,0.2nm,0.3s,baz=35,slow=8.1,SNR=3.1
AAK   Ala-Archa           54.79 297 P       P       19 57 34.5  +2.2
AAK                                 pmax    pmax
      comp=Z,2.0nm,0.9s
AAK   Ala-Archa           54.79 297 eP      P       19 57 34.5  +2.2
AAK   Ala-Archa           54.79 297 P       P       19 57 34.5  +2.2
ARU   Arti                56.03 318 P       P       19 57 41.3  +0.6
ARU                                 IAmb    IAmb    19 57 43.3
      comp=Z,4.4nm,0.6s
KKAR  Karatay Array       56.97 300 P       P       19 57 49.1  +1.4
KKAR  Karatay Array       56.97 300 P       P       19 57 49.1  +1.4
ARCES ARCESS Array B      58.77 341 P       P       19 58 02.0  +2.2
      comp=Z,4.7nm,0.9s,baz=37,slow=8.2,SNR=2.2
ABKAR Akbulak array       59.44 311 P       P       19 58 03.3  -1.5
GAR   Garm                59.47 296 P       P       19 58 05.6  +0.2
GAR                                 IAmb    IAmb    19 58 13.7
      comp=Z,4.9nm,1.0s
PLID  Pearl Lake          59.50  55 P       P       19 58 05.0  -0.7
PLID                                IAmb    IAmb    19 58 10.8
      comp=Z,7.6nm,1.5s
CHGR  Chuyangaron         60.40 296 P       P       19 58 12.8  +1.1
FINES FINESS Array B      65.00 335 P       P       19 58 42.6  +0.8
      comp=Z,3.9nm,1.0s,baz=46,slow=6.0,SNR=6.0
WRA   Warramunga Arr      68.07 200 P       P       19 59 00.7  -1.3
      comp=Z,0.8nm,0.7s,baz=19,slow=6.4,SNR=8.3
WRA   Warramunga Arr      68.07 200 IAmb    IAmb    19 59 09.2
      comp=Z,0.3nm,1.4s
ASAR  Alice Springs       71.76 200 P       P       19 59 24.9  +0.3
      comp=Z,0.8nm,0.8s,baz=12,slow=5.7,SNR=6.4
KBZ   Khabaz              71.87 315 P       P       19 59 26.9  +1.8
      comp=Z,3.1nm,0.8s,baz=85,slow=4.3,SNR=8.0
AKASG Malin Array Be      72.54 327 P       P       19 59 29.8  +0.8
      comp=Z,0.3nm,0.3s,baz=34,slow=6.1,SNR=5.3
AKASG Malin Array Be      72.54 327 P       P       19 59 29.8  +0.8
AKASG                               pmax    pmax
```

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
	comp=Z,2.0nm,1.4s						
AKASG	Malin Array Be	72.54	327	IAmb	IAmb	19 59 34.9	
	comp=Z,2.1nm,1.4s						
TXAR	Lajitas Array	77.22	61	P	P	19 59 56.5	-0.1
	comp=Z,0.5nm,0.6s,baz=302,slow=3.4,SNR=7.3						

SJA ***25*** *19:55:54.0, 29°.28S×72°.41W, h10km, ML4.4*

NEIC ***25*** *19:55:54.1±1.4, 29°.33S±0°.03×72°.12W±0°.06, h10km±1km, mb4.3/2, ML4.2(GUC), Error ellipse: s-maj=9.4km s-min=4.9km az=280.0*

IDC ***25*** *19:55:55.1±1.7, 29°.55S×71°.81W, h0km, mb4.0/1, mb1 3.9/3, mb1mx3.6/30, mbtmp3.8/3, ML4.0/2, Error ellipse: s-maj=88.8km s-min=36.4km az=101.0*

GUC ***25*** *19:55:55.8±0.6, 29°.38S×72°.05W, h29km±7km, ML4.2*

ISC 25 19:55:55.5±0.8**, 29°.37S**±0°.04×**72°.11W**±0°.07**, h25**km**, n77, σ1s.76**/77**, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	La Serena	0.93	126	eP	Pb	19 56 11.6	-1.4
CO05				i S	Sb	19 56 22.1	-2.8
CO05				IAML		19 56 24.1	
	comp=E,7µm,0.3s						
CO05	La Serena	0.93	126		Pb	19 56 11.7	-1.2
LCO	Las Campanas	1.28	74	eP	Pn	19 56 17.8	-0.2
LCO				i S	Sn	19 56 34.5	-0.1
LCO	Las Campanas	1.28	74	Pn	Pn	19 56 17.8	-0.2
CO06	Fray Jorge	1.36	163	eP	Pn	19 56 19.0	+0.2
CO06	Fray Jorge	1.36	163		Pn	19 56 19.1	+0.2
GO04	Tololo Observa	1.39	125	eP	Pn	19 56 19.2	-0.3
GO04				i S	Sn	19 56 36.9	-0.3
GO04				IAML		19 56 48.5	
	comp=N,12µm,0.6s						
GO04	Tololo Observa	1.39	125		Pn	19 56 19.4	-0.1
GO04	Tololo Observa	1.39	125	i P	Pn	19 56 19.0	-0.5
AC04	Llanos de Chal	1.48	38	eP	Pn	19 56 21.0	+0.6
AC04				i S	Sn	19 56 39.1	+0.1
AC04	Llanos de Chal	1.48	38	Pn	Pn	19 56 21.1	+0.6
AC04	Llanos de Chal	1.48	38	i P	Pn	19 56 21.0	+0.6
GO03	Copiap	2.42	43	Pn	Pn	19 56 33.3	-0.3
GO03	Copiap	2.42	43	i P	Pn	19 56 35.0	+1.5
AROD	Rodeo	2.42	110	i P	Pb	19 56 38.0	-0.6
ACCO	Cerro Coronel	2.91	115	i P	Pb	19 56 44.0	-2.8
VA06	Catapilco	3.25	168	eP	Pn	19 56 46.3	+1.4
RTLS	Leoncito	3.42	136	i P	Pb	19 56 52.0	-3.6
VCA	Vinchina	3.47	80	i P	Pb	19 56 54.0	-2.4
VA03	San Esteban	3.64	159	eP	Pn	19 56 52.0	+1.8
VA03	San Esteban	3.64	159		Pn	19 56 51.5	+1.2
VA03	San Esteban	3.64	159	i P	Pn	19 56 53.0	+2.7
AC02	Maricunga	3.65	47	Pn	Pn	19 56 52.6	+1.8
AC02	Maricunga	3.65	47	i P	Pn	19 56 53.0	+2.2
VA01	Torpederas	3.66	174	Pn	Pn	19 56 49.0	-1.5
ZON	Zonda	3.67	127	Pn	Pn	19 56 52.0	+1.4
ROCH	El Roble	3.71	166	eP	Pn	19 56 52.6	+1.2
ROCH				i S	Sn	19 57 36.7	+2.3
ROCH				IAML		19 57 57.8	
	comp=E,303nm,0.6s						
ROC1	El Roble	3.71	166	i P	Pn	19 56 53.0	+1.5
PEL	Peldehue	3.95	162	eP	Pn	19 56 56.2	+1.6
PEL	Peldehue	3.95	162		Pn	19 56 55.6	+1.0
PEL	Peldehue	3.95	162	i P	Pn	19 56 58.0	+3.4
RTCV	Cerro Valdivia	3.95	130	i P	Pb	19 57 00.0	-4.5
MT02	Curacav	3.96	168		Pn	19 56 55.0	+0.3
MT02	Curacav	3.96	168	i P	Pn	19 56 56.0	+1.3
MT05	Renca	4.17	164	Pn	Pn	19 56 54.9	-2.8
AVFE	Valle Fertil	4.23	109	i P	Pn	19 57 01.0	+2.5
ASAL	Salagasta	4.27	140	i P	Pn	19 57 04.0	+5.1
VA05	Santo Domingo	4.29	174		Pn	19 56 59.2	0.0
ARCO	CERRO ARCO	4.40	143	i P	Pn	19 57 06.0	+5.1
MT09	Talagante	4.49	168		Pn	19 57 02.7	+0.6
ACLC	CERRO LA CRUZ	4.50	92	i P	Pn	19 57 05.0	+2.8
MT01	Popeta	4.54	171		Pn	19 57 03.3	+0.7
MT01	Popeta	4.54	171	i P	Pn	19 57 04.0	+1.4
AAGR	Agrelo	4.65	144	i P	Pn	19 57 10.0	+5.8
LMEL	Las Melosas	4.75	160	eP	Pn	19 57 07.3	+1.7
BO04	La Punta	4.78	165	eP	Pn	19 57 07.3	+1.4
BO04				i S	Sn	19 58 00.7	+0.2
APLL	PUNTA DE LOS L	4.95	103	i P	Pn	19 57 12.0	+3.7
PB14	IPOC Station P	4.96	18	Pn	Pn	19 57 07.9	-0.8
PB14	IPOC Station P	4.96	18	i P	Pn	19 57 09.0	+0.2
BO01	Tunca	5.08	170		Pn	19 57 11.0	+1.0
BO01	Tunca	5.08	170	i P	Pn	19 57 12.0	+2.0
BO02	Sierra Bellavi	5.52	169		Pn	19 57 17.4	+1.2
BO02	Sierra Bellavi	5.52	169	i P	Pn	19 57 18.0	+1.8
GO05	Huala	5.62	179	Pn	Pn	19 57 18.0	+0.4
PB10	IPOC Station P	6.00	14	Pn	Pn	19 57 22.1	-0.6
PB10	IPOC Station P	6.00	14	i P	Pn	19 57 24.0	+1.3
RFA	San Rafael	6.21	151	i P	Pn	19 57 28.0	+2.4
PB15	IPOC Station P	6.58	22		Pn	19 57 30.6	-0.2
PB05	IPOC Station P	6.71	15	i P	Pn	19 57 32.0	-0.6
H03N1	Juan Fernandez	7.09	233	T	T	20 05 18.8	
	baz=64,slow=71,SNR=196						
H03N2	Juan Fernandez	7.10	233	T	T	20 05 22.6	
	baz=64,slow=71,SNR=207						
H03N3	Juan Fernandez	7.11	233	T	T	20 05 21.2	
	baz=64,slow=71,SNR=364						
VA04	Juan Fernndez	7.14	232	Pn	Pn	19 57 38.0	-0.4
LVC	Limon Verde	7.32	24	Pn	Pn	19 57 41.0	-0.2
PB07	IPOC Station P	7.87	15	Pn	Pn	19 57 46.9	-1.7
PB09	IPOC Station P	7.97	20	Pn	Pn	19 57 49.2	-0.8
PB01	IPOC Station P	8.62	17	Pn	Pn	19 57 57.9	-0.9
PLCA	Paso Flores	11.41	174	Pn	Pn	19 58 37.8	+0.9
	comp=E,0.3nm,0.3s,baz=347,slow=14,SNR=7.2						
TRQA	Tornquist	12.08	138	Pn	Pn	19 58 47.5	+1.5
ITQB	Itaqui	13.49	95	Pn	Pn	19 59 06.4	+1.2
LPAZ	La Paz	13.53	17	Pn	P	19 59 11.5	-3.9
	comp=E,0.2nm,0.3s,baz=270,slow=20,SNR=4.9						
ETMB	Extrema	20.22	17	P	P	20 00 28.5	-0.2
ETMB				IAmb	IAmb	20 00 47.5	
	comp=Z,2.6nm,0.9s						
SAML	Samuel	21.98	24	P	P	20 00 47.4	-0.2
SAML				IAmb	IAmb	20 01 01.7	
	comp=Z,49nm,0.8s						
TORD	Torodi Ar. Bea	82.71	71	P	P	20 08 19.8	+2.4
	comp=Z,0.4nm,0.4s,baz=239,slow=4.7,SNR=6.7						
WRA	Warramunga Arr	124.73	211	PKP	PKiKP	20 14 56.5	+2.5
	comp=Z,0.4nm,0.8s,baz=155,slow=1.4,SNR=1.9						
ZALV	Zalesovo Beam	150.26	28	PKPbc	PKiKP	20 15 47.8	+3.0
	comp=Z,3.1nm,0.7s,baz=301,slow=3.3,SNR=12						
ZALV	Zalesovo Beam	150.26	28		PKiKP	20 15 47.2	+2.5

NOU 25 19:58:10.2, 14°.86S×167°.30E, h93km**, MLv4.8**/9**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.59	189	P	Pn	19 58 27.3	+1.3
DVP	Devils Point	2.97	163	P	Pn	19 58 56.1	+0.7
YATNC	Mamie plateau,	7.17	183	P	Pn	19 59 50.5	-1.9
DZM	Mont Dzumac	7.22	186	P	Pn	19 59 51.7	-1.5
NOUC	Port Laguerre	7.26	187	P	Pn	19 59 54.4	+0.7
OUENC	Ouen Island, N	7.53	183	P	Pn	19 59 59.0	+1.7

BJI ***25*** *20:05:10.7±0.0, 46°.27N×154°.27E, h8km, mB5.1/1, mb4.5/14*

IDC ***25*** *20:05:10.0±0.7, 45°.95N×154°.26E, h0km, mb4.0/16, mb1 4.2/21, mb1mx4.0/58, mbtmp4.0/21, ML3.4/5, MS3.3/2, Ms1 3.4/2, ms1mx2.7/42, Error ellipse: s-maj=18.4km s-min=15.2km az=143.0*

MOS ***25*** *20:05:13.1±1.1, 45°.98N×154°.24E, h29km, mb4.6/12, Error ellipse: s-maj=9.5km s-min=7.1km az=106.2*

NEIC ***25*** *20:05:13.6±2.7, 45°.85N±0°.09×154°.4E±0°.1, h23km±2km, mb4.5/31, Error ellipse: s-maj=13.4km s-min=10.2km az=161.0*

SKHL ***25*** *20:05:15.1±0.5, 46°.10N×154°.00E, h30km±9km, mb4.8/5*

ISC 25 20:05:13.5±0.6**, 45°.96N**±0°.07×**154°.29E**±0°.07**, h19**km**, n132, σ1s.34**/130**, mb4.3**/38**, 7C-7D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	4.57	263	d iP	Pn	20 06 20.8	-0.7
KUR				eS	Sn	20 07 10.7	-3.3
KUR				pmax	pmax		
	comp=Z,175nm,0.5s						
KUR				pmax	pmax		
	comp=N,80nm,0.3s						
KUR				pmax	pmax		
	comp=E,40nm,0.7s						
KUR				smax	smax		
	comp=N,128nm,0.5s						
KUR				smax	smax		
	comp=E,84nm,0.7s						
KUR	Kuril'sk	4.57	263	eP	Pn	20 06 20.9	-0.6
KUR				AMB	AMB	20 06 21.4	
	comp=E,220nm,0.5s						
KUR				eS	Sn	20 07 09.8	-4.2
KUR				A	A	20 07 14.2	
	comp=E,90nm,0.6s						
KUR				A	A	20 07 14.2	
	comp=E,40nm,0.6s						
SKR	Severo-Kuril's	4.88	14	eP	Pn	20 06 25.2	-0.6
SKR				eS	Sn	20 07 16.7	-5.1
SKR				smax	smax		
	comp=E,245nm,0.9s						
SKR				smax	smax		
	comp=N,298nm,0.8s						
SKR	Severo-Kuril's	4.88	14	eP	Pn	20 06 25.3	-0.6
SKR				AMB	AMB	20 06 28.8	
	comp=N,50nm,0.8s						
SKR				eS	Sn	20 07 18.2	-3.6
SKR				A	A	20 07 21.6	
	comp=N,60nm,0.5s						
SKR				A	A	20 07 21.6	
	comp=N,30nm,0.5s						
PAU	Pauzhetka	5.76	16	eP	Pn	20 06 38.3	+0.4
PAU				AMB	AMB	20 06 38.7	
	comp=N,23nm,0.4s						
PAU				eS	Sn	20 07 40.8	-2.6
PAU				A	A	20 07 44.4	
	comp=N,30nm,0.3s						
PAU				A	A	20 07 44.4	
	comp=N,40nm,0.3s						
YUK	Yuzh-Kuril'sk	6.28	255	eP	Pn	20 06 46.7	+1.7
YUK				AMB	AMB	20 06 48.2	
	comp=N,170nm,0.6s						
YUK				eS	Sn	20 07 53.3	-2.9
YUK				A	A	20 07 55.3	
	comp=N,290nm,0.5s						
YUK				A	A	20 07 55.3	
	comp=N,190nm,0.5s						
PEA0B	Petropavlovsk-	7.49	16	⇓eP	Pn	20 07 01.7	0.0
PEA0B	Petropavlovsk-	7.49	16	Pn	Pn	20 07 01.5	-0.2
PETK	Petropavlovsk-	7.49	16	Pn	Pn	20 07 00.1	-1.5
	comp=N,1.9nm,0.3s,baz=176,slow=10.0,SNR=39						
PETK	Petropavlovsk-	7.49	16	P	Pn	20 07 01.0	-0.7
PETK	Petropavlovsk-	7.49	16		Pn	20 07 01.0	-0.7
YSS	Yuzh-Sakhalins	8.03	281	eP	Pn	20 07 09.7	+0.7
YSS				AMB	AMB	20 07 11.9	
	comp=N,13nm,0.5s						
JKA	Kamikawa-asahi	8.48	262	eP	Pn	20 07 14.8	-0.5
JKA	Kamikawa-asahi	8.48	262		Pn	20 07 14.8	-0.5
ASAJ	Asahikawa	8.48	262	Pn	Pn	20 07 14.8	-0.5
	comp=N,1.2nm,0.3s,baz=93,slow=12,SNR=11						
ERM	Erimo	8.94	248	i P	Pn	20 07 21.4	-0.1
ERM	Erimo	8.94	248	Pn	Pn	20 07 19.8	-1.7
JTM	Tenmabayashi	10.92	246	Pn	Pn	20 07 44.5	-4.2
KBG	Krutoberegovo	11.58	24	eP	Pn	20 07 57.3	-0.3
MA2	Magadan	13.80	352	Pn	Pn	20 08 27.9	0.0
	comp=N,0.5nm,0.3s,baz=166,slow=8.7,SNR=4.6						
MA2				LR	LR	20 15 16.1	
	comp=N,42nm,18.3s,baz=227,slow=44						
MJAR	Matsushiro Arr	15.30	238	Pn	Pn	20 08 48.4	+0.1
	comp=N,0.1nm,0.3s,baz=94,slow=15,SNR=2.0						
MAJO	Matsushiro	15.30	238	P	P	20 08 53.8	+0.7
MAJO				pmax	pmax		
	comp=Z,16nm,0.9s						
MAJO	Matsushiro	15.30	238		P	20 08 53.8	+0.7
MAJO				IAmb	IAmb	20 08 54.4	
	comp=Z,16nm,0.8s						
MAT	Matsushiro	15.30	238	P	P	20 08 53.7	+0.6
KLR	Kul'dur	15.54	290	Pn	Pn	20 08 51.4	0.0
	comp=Z,0.2nm,0.3s,baz=103,slow=14,SNR=7.1						
KLR	Kul'dur	15.54	290	⇓eP	Pn	20 08 51.8	+0.4
KLR	Kul'dur	15.54	290	eP	Pn	20 08 49.7	-1.7
USA0B	Ussuriysk Arra	15.85	272	P	Pn	20 08 54.8	-0.6
USA0B				pmax	pmax		
	comp=Z,25nm,1.3s						
USA0B	Ussuriysk Arra	15.85	272	Pn	Pn	20 08 54.8	-0.6
USRK	Ussuriysk Ar.	15.85	272	Pn	Pn	20 08 53.9	-1.5
	baz=75,slow=12,SNR=11						
USRK	Ussuriysk Ar.	15.85	272	P	Pn	20 08 54.1	-1.3
USRK	Ussuriysk Ar.	15.85	272	Pn	Pn	20 08 54.1	-1.3
ZEA	Zeya	19.01	304	eP	P	20 09 33.0	-0.9
ZEA	Zeya	19.01	304	eP	Pn	20 09 35.1	+0.4
ZEA				AMB	AMB	20 09 38.2	
	comp=Z,30nm,0.3s						
YAK	Yakutsk	21.43	327	eP	P	20 09 58.6	-1.5
YAK				pmax	pmax		
	comp=Z,13nm,0.8s						
YAK				pmax	pmax		
	comp=E,9.0nm,1.4s						
YAK	Yakutsk	21.43	327	eP	P	20 09 58.6	-1.5
BILL	Bilibino	22.99	12	⇑eP	P	20 10 19.5	+2.8
BILL				e		20 10 41.6	
BILL				eS	S	20 14 11.8	-14
BILL				pmax	pmax		
	comp=Z,20nm,1.7s						
BILL				MLR	MLR		
	comp=Z,58nm,19.0s						
BILL	Bilibino	22.99	12	eP	P	20 10 19.5	+2.8
BILL	Bilibino	22.99	12	P	P	20 10 17.8	+1.1
BILL				IAmb	IAmb	20 10 20.9	
	comp=Z,12nm,1.2s						
H11N2	WAKE ISLAND Hy	28.15	154	T	T	20 40 25.1	
	baz=342,slow=74						
H11N1	WAKE ISLAND Hy	28.16	154	T	T	20 40 24.0	
	baz=342,slow=74						
H11N3	WAKE ISLAND Hy	28.16	154	T	T	20 40 25.0	
	baz=342						
TIXI	Tiksi	28.46	343	⇑eP	P	20 11 06.9	+0.1
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.8s						
TIXI	Tiksi	28.46	343	eP	P	20 11 06.9	+0.1
TIXI	Tiksi	28.46	343	P	P	20 11 06.5	-0.2
H11S1	WAKE ISLAND Hy	29.24	155	T	T	20 41 45.5	
	baz=343,slow=76						
H11S3	WAKE ISLAND Hy	29.25	155	T	T	20 41 47.5	
	baz=343,slow=76						
H11S2	WAKE ISLAND Hy	29.26	155	T	T	20 41 47.8	
	baz=343,slow=76						
ULN	Ulaanbaatar	31.93	291	⇑eP	P	20 11 39.6	+1.6
ULN	Ulaanbaatar	31.93	291	eP	P	20 11 39.6	+1.6
SONM	Songino Array	32.37	291	P	P	20 11 41.1	-0.7
	comp=Z,0.4nm,0.6s,baz=45,slow=8.7,SNR=2.3						
SONM	Songino Array	32.37	291	P	P	20 11 41.1	-0.7
SONM				pmax	pmax		
	comp=Z,1.0nm,1.2s						
ILAR	Eielson Array	36.67	38	P	P	20 12 18.4	-0.1
	comp=Z,0.3nm,0.6s,baz=247,slow=7.5,SNR=5.3						
NRIK	Noril'sk	39.86	329	P	P	20 12 44.8	-0.5
	comp=Z,1.9nm,0.5s,baz=76,slow=4.2,SNR=2.8						
GTA	Gaotai	39.91	281	⇓P	P	20 12 47.5	+1.2
GTA				pP	sP	20 12 51.3	-0.7
GTA				sP	pwP	20 12 53.8	-4.9
GTA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
INK	Inuvik	41.89	32	P	P	20 13 01.4	-0.6
	comp=Z,0.9nm,0.7s,baz=265,slow=7.4,SNR=3.5						
DGZ	Jazzator, Alta	43.70	300	⇓eP	P	20 13 18.2	+1.0
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.7s						
ZAA0	Zalesovo Array	43.74	307	P	P	20 13 16.5	-0.7
ZALV	Zalesovo Beam	43.74	307	P	P	20 13 15.6	-1.6
	comp=Z,1.9nm,0.6s,baz=63,slow=7.7,SNR=11						
ZALV	Zalesovo Beam	43.74	307	i P	P	20 13 16.5	-0.7
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ZALV	Zalesovo Beam	43.74	307	P	P	20 13 16.1	-1.1
MK31	Makanchi Array	48.03	298	c eP	P	20 13 51.0	-0.3
MK31	Makanchi Array	48.03	298	P	P	20 13 50.4	-0.9
MK31				IAmb	IAmb	20 13 53.4	
	comp=Z,2.5nm,0.8s						
MKAR	Makanchi Array	48.03	298	P	P	20 13 50.5	-0.7
	comp=Z,2.6nm,0.8s,baz=69,slow=8.2,SNR=16						
MKAR	Makanchi Array	48.03	298	i P	P	20 13 51.2	-0.1
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MKAR	Makanchi Array	48.03	298	eP	P	20 13 51.2	-0.1
MKAR	Makanchi Array	48.03	298	P	P	20 13 50.3	-1.0
KURK	Kurchatov	48.48	305	⇑eP	P	20 13 54.0	-0.6
KURK				pmax	pmax		
	comp=Z,9.0nm,2.5s						
KURK	Kurchatov	48.48	305	eP	P	20 13 54.0	-0.6
KURK	Kurchatov	48.48	305	P	P	20 13 53.6	-1.0
KURK				IAmb	IAmb	20 13 55.6	
	comp=Z,3.7nm,0.8s						
BRVK	Borovoye	52.03	310	⇑eP	P	20 14 23.1	+1.6
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BRVK	Borovoye	52.03	310	eP	P	20 14 23.1	+1.6
CMAR	Chiang Mai Arr	52.99	258	P	P	20 14 29.1	+0.2
	comp=Z,0.9nm,0.8s,baz=35,slow=7.4,SNR=7.9						
CMAR	Chiang Mai Arr	52.99	258	i P	P	20 14 29.7	+0.7
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
AAK	Ala-Archa	54.92	297	P	P	20 14 44.2	+1.2
AAK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
AAK	Ala-Archa	54.92	297	eP	P	20 14 44.2	+1.2
AAK	Ala-Archa	54.92	297	P	P	20 14 44.2	+1.2
AAK				IAmb	IAmb	20 14 45.2	
	comp=Z,3.7nm,1.1s						
SVE	Sverdlovsk	54.96	318	eP	P	20 14 43.4	+0.5
SVE	Sverdlovsk	54.96	318	eP	P	20 14 43.4	+0.5
KSH	Kashi	55.71	294	P	P	20 14 53.5	+4.8
KSH				pmax	pmax		
	comp=Z,3.0nm,0.5s						
ARU	Arti	56.15	318	c iP	P	20 14 51.8	+0.4
ARU						20 15 42.6	
ARU				S	S	20 22 43.1	+3.8
ARU				SS	SS	20 26 26.7	+1.7
ARU				pmax	pmax		
	comp=Z,8.0nm,0.7s						
ARU	Arti	56.15	318	eP	P	20 14 51.8	+0.4
ARU	Arti	56.15	318	P	P	20 14 50.6	-0.8
ARU				IAmb	IAmb	20 14 53.5	
	comp=Z,7.9nm,0.7s						
KKAR	Karatay Array	57.10	300	P	P	20 14 58.8	+0.3
KKAR	Karatay Array	57.10	300	P	P	20 14 58.8	+0.3
BTK	Batken	58.66	297	P	P	20 15 09.1	-0.4
BTK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BTK	Batken	58.66	297	P	P	20 15 09.1	-0.4
BTK				IAmb	IAmb	20 15 11.6	
	comp=Z,4.3nm,0.9s						
KIRV	Kirov	58.90	324	⇓eP	P	20 15 12.0	+1.3
ABKAR	Akbulak array	59.56	311	P	P	20 15 16.0	+0.5
ABKAR				IAmb	IAmb	20 15 18.1	
	comp=Z,2.6nm,0.7s						
GAR	Garm	59.59	296	P	P	20 15 16.9	+0.9
CHGR	Chuyangaron	60.52	296	P	P	20 15 23.3	+0.9
HRY	Holter Researc	60.83	52	P	P	20 15 23.1	-1.3
NIL	Nilore	60.93	289	P	P	20 15 26.6	+1.4
NIL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
NIL	Nilore	60.93	289	P	P	20 15 26.6	+1.4
NIL				IAmb	IAmb	20 15 27.5	
	comp=Z,7.0nm,0.8s						
EGMT	Eagleton	61.15	50	P	P	20 15 25.8	-0.7
DLMT	Dillon	61.22	53	P	P	20 15 25.6	-1.5
BW06	Boulder Array	64.55	54	P	P	20 15 49.8	+0.4
BW06				IAmb	IAmb	20 15 50.7	
	comp=Z,3.4nm,1.1s						
PDAR	Pinedale Array	64.55	54	P	P	20 15 49.5	+0.1
	comp=Z,0.8nm,0.9s,baz=321,slow=2.3,SNR=5.3						
PDAR	Pinedale Array	64.55	54	P	P	20 15 49.7	+0.3
FINES	FINESS Array B	65.10	335	P	P	20 15 52.0	-0.4
	comp=Z,2.1nm,0.5s,baz=33,slow=8.3,SNR=13						
FINES	FINESS Array B	65.10	335	i P	P	20 15 53.5	+1.1
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
RDMU	Red Mountain	65.96	56	P	P	20 15 59.5	+0.9
RDMU				IAmb	IAmb	20 16 00.3	
	comp=Z,7.1nm,1.1s						
P17A	Butcher Ranch,	65.99	58	P	P	20 15 58.8	0.0
HRA	Herat	67.53	297	P	P	20 16 09.6	+0.9
HRA				IAmb	IAmb	20 16 14.4	
	comp=Z,2.7nm,1.1s						
WB2	Warramunga Arr	68.04	200	P	P	20 16 10.2	-1.3
WB2				IAmb	IAmb	20 16 12.1	
	comp=Z,3.3nm,0.8s						
WRA	Warramunga Arr	68.04	200	P	P	20 16 10.2	-1.4
	comp=Z,2.8nm,0.8s,baz=19,slow=6.6,SNR=11						
WRA	Warramunga Arr	68.04	200	P	P	20 16 10.2	-1.4
WRA				pmax	pmax		
	comp=Z,1.0nm,1.1s						
WRA	Warramunga Arr	68.04	200	IAmb	IAmb	20 16 12.0	
	comp=Z,0.5nm,1.1s						
NOA	NORSAR Array B	69.24	342	P	P	20 16 18.2	-0.4
	comp=Z,1.0nm,0.7s,baz=27,slow=6.3,SNR=4.1						
ASAR	Alice Springs	71.73	200	P	P	20 16 33.8	-0.5
	comp=Z,1.9nm,0.8s,baz=16,slow=5.9,SNR=15						
KIV	Kislovodsk	71.94	315	eP	P	20 16 37.4	+1.9
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KIV	Kislovodsk	71.94	315	eP	P	20 16 37.4	+1.9
KBZ	Khabaz	72.00	315	P	P	20 16 35.3	-0.4
	comp=Z,5.5nm,0.8s,baz=60,slow=3.2,SNR=15						
KBZ	Khabaz	72.00	315	⇓eP	P	20 16 37.1	+1.4
KBZ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KBZ	Khabaz	72.00	315	eP	P	20 16 37.1	+1.4
ONI	Oni	72.55	314	P	P	20 16 39.6	+0.4
ONI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ONI	Oni	72.55	314	P	P	20 16 39.5	+0.4
ONI				IAmb	IAmb	20 16 42.0	
	comp=Z,3.6nm,0.8s						
AKASG	Malin Array Be	72.66	327	P	P	20 16 38.7	-0.8
	comp=Z,2.6nm,0.6s,baz=34,slow=6.3,SNR=7.4						
AKASG	Malin Array Be	72.66	327	i P	P	20 16 39.7	+0.2
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AKASG	Malin Array Be	72.66	327	IAmb	IAmb	20 16 41.6	
	comp=Z,2.2nm,1.1s						
BUR08	Bucovina Ar. S	76.68	327	P	P	20 17 03.6	+0.5
BUR08				IAmb	IAmb	20 17 04.9	
	comp=Z,3.5nm,0.9s						
BURAR	Bucovina Array	76.70	327	P	P	20 17 03.4	+0.3
BURAR				IAmb	IAmb	20 17 04.9	
	comp=Z,3.3nm,0.8s						
TXAR	Lajitas Array	77.17	61	P	P	20 17 06.1	0.0
	comp=Z,0.7nm,0.6s,baz=299,slow=3.7,SNR=10						
TXAR	Lajitas Array	77.17	61	P	P	20 17 06.4	+0.3
TXAR	Lajitas Array	77.17	61	P	P	20 17 06.4	+0.3
CLL	Collm	77.52	336	eP	P	20 17 08.0	+0.4
CLL	Collm	77.52	336	eP	P	20 17 08.0	+0.4
KHC	Kasperske Hory	79.30	335	eP	P	20 17 18.7	+1.2
KHC	Kasperske Hory	79.30	335	eP	P	20 17 18.7	+1.2
GERES	GERESS Array B	79.52	335	P	P	20 17 19.1	+0.3
	comp=Z,0.4nm,0.6s,baz=56,slow=5.2,SNR=5.1						
ESDC	Sonseca Array	92.55	343	LR	LR	21 06 19.4	
	comp=Z,31nm,18.4s,baz=310,slow=40						
PLCA	Paso Flores	147.31	97	PKPbc	PKPbc	20 24 54.9	-0.5
	comp=Z,4.4nm,0.9s,baz=271,slow=6.2,SNR=5.9						

IASPEI ***25*** *20:11:58.0±0.8, 48°.12N±0°.02×121°.21W±0°.02, h12km±6km, Error ellipse: s-maj=3.0km s-min=2.4km az=56.7, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

ANF ***25*** *20:11:58.4±0.2, 48°.07N×121°.26W, h10km±2km, ML3.1/9, Error ellipse: s-maj=2.3km s-min=1.2km az=15.0*

SEA ***25*** *20:11:58.8±2.3, 48°.13N±0°.01×121°.20W±0°.02, h11km±4km, ML3.1/113, ML2.6(OTT), ML2.9/56(NEIC), Error ellipse: s-maj=2.1km s-min=1.8km az=118.0*

NEIC ***25*** *20:11:58.4±1.9, 48°.11N±0°.01×121°.21W±0°.01, h7km±6km, Error ellipse: s-maj=2.0km s-min=1.1km az=194.0*

PGC ***25*** *20:11:59.2±0.4, 48°.12N×121°.22W, h2km, ML3.1, ML2.6/26, 101km Ene of Seattle, Wa Washington*

ISC 25 20:11:58.6±0.8**, 48°.11N**±0°.01×**121°.23W**±0°.01**, h8**km±6km**, n187, σ1s.16**/242**, Washington**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GPW	Glacier Peak	0.06	86		Pg	20 12 00.6	-0.1
GPW	Glacier Peak	0.06	86	P	Pg	20 12 00.7	-0.1
C06D	Leavenworth	0.29	130	P	Pg	20 12 04.0	-0.4
	baz=316,SNR=423						
C06D				S	Sg	20 12 08.2	-0.2
	baz=316						
C06D	Leavenworth	0.29	130		Pg	20 12 04.0	-0.4
C06D					Sg	20 12 08.3	0.0

WRW	**Wenatchee Ridg**	**0.35**	**138**		**Pg**	**20 12 05.1**	**-0.3**
RPW	**Rockport**	**0.39**	**330**		**Pg**	**20 12 05.9**	**-0.2**
RPW	**Rockport**	**0.39**	**330**	P	**Pg**	**20 12 06.0**	**-0.2**
B06A	**Marblemount**	**0.44**	**337**		**Pg**	**20 12 06.8**	**-0.3**
B06A	**Marblemount**	**0.44**	**337**		**Sg**	**20 12 12.7**	**-0.3**
B06A	**Marblemount**	**0.44**	**337**	P	**Pg**	**20 12 06.9**	**-0.2**
B06A				S	**Sg**	**20 12 12.7**	**-0.3**
JCW	**Jim Creek**	**0.48**	**280**		**Pg**	**20 12 07.9**	**0.0**
JCW	**Jim Creek**	**0.48**	**280**	P	**Pg**	**20 12 08.0**	**+0.1**
HTW	**Haystack Looko**	**0.48**	**230**		**Pg**	**20 12 07.7**	**-0.2**
MBPA	**Monroe Substat**	**0.49**	**244**		**Pg**	**20 12 08.3**	**+0.2**
MBPA					**Sg**	**20 12 15.2**	**+0.6**
C05A	**Tolt Reservoir**	**0.52**	**217**		**Pg**	**20 12 08.5**	**-0.2**
C05A					**Sg**	**20 12 15.5**	**0.0**
C05A	**Tolt Reservoir**	**0.52**	**217**	P	**Pg**	**20 12 08.4**	**-0.2**
C05A				S	**Sg**	**20 12 15.5**	**0.0**
TTW	**Tolt Reservoir**	**0.52**	**217**		**Pg**	**20 12 08.5**	**-0.2**
TTW					**Sg**	**20 12 15.5**	**0.0**
SLFW	**Sugar Loaf**	**0.59**	**127**		**Pg**	**20 12 09.4**	**-0.6**
NLW	**Nelson Butte**	**0.60**	**93**		**Pg**	**20 12 09.8**	**-0.4**
B05A	**Bryant**	**0.60**	**285**	P	**Pg**	**20 12 10.1**	**0.0**
	baz=102,SNR=88						
B05A				S	**Sg**	**20 12 18.3**	**+0.2**
	baz=102						
B05A	**Bryant**	**0.60**	**285**		**Pg**	**20 12 10.2**	**0.0**
B05A					**Sg**	**20 12 18.8**	**+0.7**
BLH	**Bald Hill**	**0.61**	**243**		**Pg**	**20 12 10.6**	**+0.3**
CMW	**Cultus Mountai**	**0.67**	**298**		**Pg**	**20 12 12.0**	**+0.5**
CMW	**Cultus Mountai**	**0.67**	**298**	P	**Pg**	**20 12 11.6**	**0.0**
CMW				S	**Sg**	**20 12 20.8**	**+0.5**
ELW	**Echo Lake**	**0.76**	**215**		**Pg**	**20 12 13.0**	**-0.1**
LYNC	**Lynnwood City**	**0.77**	**248**		**Pg**	**20 12 14.4**	**+1.0**
CDMR	**Cedar Moraine**	**0.78**	**208**		**Pg**	**20 12 13.0**	**-0.5**
ETW	**Entiat**	**0.79**	**130**		**Pg**	**20 12 12.8**	**-0.9**
RATT	**Rattlesnake La**	**0.79**	**210**		**Pg**	**20 12 13.2**	**-0.6**
SHUK	**Shuksan-Mt. Ba**	**0.80**	**338**		**Pg**	**20 12 13.0**	**-1.0**
MBW	**Mount Baker**	**0.81**	**327**		**Pg**	**20 12 13.1**	**-1.0**
MBW	**Mount Baker**	**0.81**	**327**	P	**Pg**	**20 12 13.2**	**-0.9**
MBW				S	**Sg**	**20 12 23.9**	**-0.7**
CBSW	**Chelan Butte S**	**0.86**	**111**		**Pg**	**20 12 14.3**	**-0.7**
LTY	**Liberty**	**0.94**	**156**		**Pg**	**20 12 15.6**	**-0.9**
LTY				IAML		20 12 28.6	
	comp=E,353nm,0.4s						
LTY				IAML		20 12 29.2	
	comp=N,288nm,0.4s						
LTY	**Liberty**	**0.94**	**156**	P	**Pg**	**20 12 15.7**	**-0.9**
LTY				S	**Sg**	**20 12 28.0**	**-0.7**
WTV	**Waterville**	**0.95**	**115**		**Pg**	**20 12 16.3**	**-0.6**
DHW2	**Dyer Hill 2**	**0.99**	**97**		**Pg**	**20 12 17.0**	**-0.5**
GSM	**Grass Mountain**	**0.99**	**203**		**Pg**	**20 12 16.8**	**-0.8**
TWW	**Teanaway**	**1.01**	**166**		**Pg**	**20 12 17.9**	**0.0**
TBM	**Table Mountain**	**1.04**	**155**		**Pg**	**20 12 17.8**	**-0.7**
A05A	**Maple Falls**	**1.05**	**328**	P	**Pg**	**20 12 17.8**	**-1.0**
D05A	**Enumclaw**	**1.06**	**209**		**Pg**	**20 12 18.3**	**-0.6**
D05A				IAML		20 12 34.1	
	comp=N,198nm,0.5s						
D05A	**Enumclaw**	**1.06**	**209**	P	**Pg**	**20 12 18.3**	**-0.6**
D05A				S	**Sg**	**20 12 31.9**	**-0.7**
VDB	**Vedder Mountai**	**1.08**	**328**		**Pg**	**20 12 18.4**	**-1.0**
VDB	**Vedder Mountai**	**1.08**	**328**	P	**Pg**	**20 12 18.2**	**-1.1**
VDB				S	**Sg**	**20 12 31.9**	**-1.5**
A04D	**Lummi Island**	**1.16**	**302**	P	**Pb**	**20 12 20.6**	**-0.2**
	baz=120						
A04D				S	**Sg**	**20 12 36.7**	**+0.9**
	baz=120						
A04D	**Lummi Island**	**1.16**	**302**		**Pb**	**20 12 21.1**	**+0.4**
B013	**Quilcene**	**1.17**	**256**		**Pb**	**20 12 19.9**	**-1.1**
B013	**Quilcene**	**1.17**	**256**		**Pb**	**20 12 19.8**	**-1.1**
GMW	**Gold Mountain**	**1.19**	**242**		**Pb**	**20 12 20.2**	**-1.2**
GNW	**Green Mountain**	**1.21**	**244**		**Pn**	**20 12 20.4**	**-1.3**
GNW	**Green Mountain**	**1.21**	**244**	P	**Pn**	**20 12 20.4**	**-1.3**
GNW				S	**Sb**	**20 12 36.2**	**-1.2**
MCW	**Mount Constitu**	**1.21**	**299**	P	**Pb**	**20 12 20.1**	**-1.6**
FMW	**Mount Fremont**	**1.22**	**194**		**Pn**	**20 12 20.7**	**-1.3**
FMW	**Mount Fremont**	**1.22**	**194**	P	**Pn**	**20 12 20.8**	**-1.3**
FMW				S	**Sb**	**20 12 36.3**	**-1.6**
SQM	**Sequim**	**1.22**	**269**		**Pn**	**20 12 21.5**	**-0.3**
C04A	**Brinnon**	**1.24**	**252**		**Pn**	**20 12 20.9**	**-1.2**
SR41	**SR410 Landslid**	**1.25**	**190**		**Pn**	**20 12 21.3**	**-1.1**
RVC	**Mount Rainier-**	**1.27**	**204**		**Pn**	**20 12 21.7**	**-1.1**
OBSR	**Observation Ro**	**1.28**	**198**		**Pn**	**20 12 22.1**	**-0.9**
HOPB	**Hope**	**1.28**	**354**	P	**Pn**	**20 12 21.9**	**-0.9**
HOPB				S	**Sb**	**20 12 38.0**	**-1.6**
GHW	**Garrison Hill**	**1.28**	**214**		**Pn**	**20 12 21.8**	**-0.9**
EBG	**Ellensburg**	**1.28**	**159**		**Pn**	**20 12 22.6**	**-0.3**
PANH	**Panhandle Gap,**	**1.29**	**193**		**Pn**	**20 12 22.0**	**-1.0**
RCS	**Mount Rainier-**	**1.29**	**196**		**Pn**	**20 12 22.1**	**-1.0**
B08A	**Colville Reser**	**1.29**	**78**	Pn	**Pn**	**20 12 22.0**	**-0.9**
B08A	**Colville Reser**	**1.29**	**78**	P	**Pn**	**20 12 22.1**	**-0.9**
B08A				S	**Sb**	**20 12 38.3**	**-1.6**
SAW	**Saint Andrews**	**1.30**	**108**		**Pn**	**20 12 22.9**	**-0.1**
B941	**Kapowsin**	**1.31**	**211**		**Pn**	**20 12 21.9**	**-1.2**
EPH	**Ephrata**	**1.34**	**124**		**Pn**	**20 12 23.2**	**-0.3**
D03D	**Eldon**	**1.38**	**246**	P	**Pn**	**20 12 23.0**	**-1.1**
	baz=64,SNR=9.4						
D03D				S	**Sb**	**20 12 41.3**	**-1.0**
	baz=64						
D03D	**Eldon**	**1.38**	**246**		**Pn**	**20 12 23.0**	**-1.1**
D04E	**Lakebay**	**1.40**	**229**	Pb	**Pn**	**20 12 24.6**	**+0.2**
	baz=48,SNR=14						
D04E				Sg	**Sg**	**20 12 44.2**	**+0.6**
	baz=48						
D04E	**Lakebay**	**1.40**	**229**		**Pn**	**20 12 24.6**	**+0.3**
NAC	**Naches**	**1.41**	**169**		**Pn**	**20 12 24.8**	**+0.3**
LON	**Longmire**	**1.42**	**196**		**Pn**	**20 12 24.1**	**-0.6**
VGZ	**Gonzales**	**1.43**	**283**		**Pn**	**20 12 24.6**	**-0.2**
VGZ	**Gonzales**	**1.43**	**283**	P	**Pn**	**20 12 24.1**	**-0.6**
VGZ				S	**Sn**	**20 12 42.7**	**-1.1**
WPW	**White Pass**	**1.43**	**189**		**Pn**	**20 12 24.5**	**-0.4**
SNB	**Saturna Island**	**1.45**	**298**	P	**Pn**	**20 12 25.1**	**-0.1**
SNB				S	**Sb**	**20 12 45.2**	**+0.8**
HNBB	**Haney**	**1.48**	**323**	P	**Pn**	**20 12 24.6**	**-0.8**
HNBB				S	**Sn**	**20 12 43.9**	**-1.0**
B04A	**Port Angeles**	**1.53**	**269**		**Pn**	**20 12 25.6**	**-0.6**
B04A				IAML		20 12 46.2	
	comp=N,138nm,0.5s						
B04A				IAML		20 12 46.9	
	comp=E,202nm,0.3s						
B04A	**Port Angeles**	**1.53**	**269**		**Pn**	**20 12 25.9**	**-0.3**
GLK	**Glacier Lake**	**1.57**	**190**		**Pn**	**20 12 27.3**	**+0.4**
B011	**North Saanich**	**1.57**	**291**		**Pn**	**20 12 26.6**	**-0.2**
B011	**North Saanich**	**1.57**	**291**	P	**Pn**	**20 12 26.5**	**-0.2**
B011				S	**Sn**	**20 12 47.2**	**0.0**
PA01	**PA01 North**	**1.57**	**291**	P	**Pn**	**20 12 26.6**	**-0.1**
PA01				S	**Sn**	**20 12 47.2**	**0.0**
PA02	**PA02 Ocean**	**1.57**	**291**	P	**Pn**	**20 12 26.6**	**-0.2**
PA02				S	**Sn**	**20 12 47.4**	**+0.1**
PA12	**PA12 Sannich**	**1.57**	**291**	P	**Pn**	**20 12 26.4**	**-0.3**
PA12				S	**Sn**	**20 12 47.1**	**-0.1**
B009	**North Saanich**	**1.58**	**291**	P	**Pn**	**20 12 26.5**	**-0.2**
B009				S	**Sn**	**20 12 47.0**	**-0.3**
B010	**North Saanich**	**1.58**	**291**	P	**Pn**	**20 12 26.6**	**-0.2**
B010				S	**Sn**	**20 12 47.3**	**0.0**
PGC	**Sidney**	**1.58**	**291**	Pn	**Pn**	**20 12 26.4**	**-0.3**
PGC				IAML		20 12 48.6	
	comp=N,162nm,0.3s						
PGC				IAML		20 12 50.2	
	comp=E,115nm,0.2s						
PGC	**Sidney**	**1.58**	**291**	P	**Pn**	**20 12 26.6**	**-0.2**
PGC				S	**Sn**	**20 12 47.1**	**-0.2**
PNT	**Penticton**	**1.61**	**41**		**Pn**	**20 12 27.9**	**+0.6**
PNT	**Penticton**	**1.61**	**41**	P	**Pn**	**20 12 27.4**	**+0.2**
PNT				Sg	**Sn**	**20 12 48.6**	**+0.4**
SMW	**South Mountain**	**1.63**	**242**	S	**Sn**	**20 12 49.4**	**+0.5**
STW	**Striped Peak**	**1.64**	**272**		**Pn**	**20 12 27.2**	**-0.4**
STW	**Striped Peak**	**1.64**	**272**	P	**Pn**	**20 12 27.2**	**-0.4**
STW				S	**Sn**	**20 12 48.5**	**-0.3**
FHE	**Frenchman Hill**	**1.65**	**134**		**Pb**	**20 12 29.0**	**-0.2**
YA2	**Yakima**	**1.66**	**163**		**Pn**	**20 12 24.8**	**-3.1**
OSD	**Olympics--Snow**	**1.69**	**261**	P	**Pn**	**20 12 29.0**	**+0.5**
CPW	**Capitol Peak**	**1.72**	**229**	P	**Pn**	**20 12 29.1**	**+0.2**
CPW				S	**Sn**	**20 12 52.1**	**+1.0**
GOBB	**Galiano Island**	**1.73**	**300**	P	**Pn**	**20 12 29.4**	**+0.5**
GOBB				S	**Sn**	**20 12 52.0**	**+0.9**
MDW	**Midway**	**1.80**	**146**		**Pb**	**20 12 31.8**	**0.0**
E04D	**Cinebar**	**1.80**	**211**	Pb	**Pn**	**20 12 30.5**	**+0.6**
	baz=30,SNR=179						
E04D				Sb	**Sb**	**20 12 54.5**	**0.0**
	baz=30						
E04D	**Cinebar**	**1.80**	**211**		**Pn**	**20 12 30.5**	**+0.6**
E07A	**Sunnyside**	**1.81**	**149**		**Pn**	**20 12 28.2**	**-1.8**
TRW	**Toppenish Ridg**	**1.88**	**165**		**Pb**	**20 12 33.0**	**-0.2**
D08A	**Wollman Farm,**	**1.89**	**123**		**Pn**	**20 12 30.2**	**-0.9**
BIB	**Bowen Island**	**1.89**	**314**	P	**Pn**	**20 12 31.5**	**+0.5**
BIB				S	**Sn**	**20 12 55.2**	**+0.2**
BENWA	**Benson Ranch**	**1.90**	**147**		**Pb**	**20 12 33.3**	**-0.2**
OBC	**Olympics--Boni**	**1.91**	**269**	P	**Pn**	**20 12 32.3**	**+0.8**
NLWA	**Neilton Lookou**	**1.92**	**249**		**Pn**	**20 12 32.7**	**+1.1**
B017	**Montesano**	**1.93**	**236**		**Pn**	**20 12 32.5**	**+0.8**
GBL	**Gable Mountain**	**1.93**	**141**		**Pb**	**20 12 34.5**	**+0.4**
B201	**Coldwater, Mou**	**1.94**	**202**		**Pn**	**20 12 32.7**	**+0.8**
P403	**Sandy Floe Qua**	**1.95**	**270**		**Pn**	**20 12 33.4**	**+1.4**
B202	**Windy Ridge, M**	**1.97**	**199**		**Pn**	**20 12 33.2**	**+1.0**
SOSW	**Source of Smit**	**1.97**	**199**		**Pn**	**20 12 33.5**	**+1.2**
ASR	**Mount Adams--S**	**1.98**	**187**		**Pb**	**20 12 34.4**	**-0.5**
WISH	**Wishkah**	**1.99**	**241**	Pn	**Pn**	**20 12 33.0**	**+0.6**
WISH				IAML		20 12 48.3	
	comp=N,84nm,4.5s						
WISH				IAML		20 13 09.6	
	comp=E,88nm,2.1s						
WISH	**Wishkah**	**1.99**	**241**	P	**Pn**	**20 12 33.8**	**+1.4**
STD	**Studebaker Rid**	**2.00**	**200**		**Pn**	**20 12 33.8**	**+1.1**
BOLM	**Sugar Bowl**	**2.01**	**199**		**Pb**	**20 12 35.3**	**-0.1**
C09A	**Chrisman Ranch**	**2.01**	**98**	Pn	**Pn**	**20 12 32.1**	**-0.6**
C09A	**Chrisman Ranch**	**2.01**	**98**	P	**Pn**	**20 12 33.1**	**+0.3**
VALT	**Mount Saint He**	**2.01**	**199**		**Pn**	**20 12 34.4**	**+1.5**
ESD	**East Dome**	**2.02**	**199**		**Pb**	**20 12 35.0**	**-0.6**
SEPW	**September Lobe**	**2.02**	**199**		**Pb**	**20 12 35.1**	**-0.6**
WPB	**Watts Point**	**2.02**	**320**	P	**Pn**	**20 12 33.9**	**+0.9**
WPB				S	**Sn**	**20 12 59.1**	**+0.7**
SHW	**Mount Saint He**	**2.04**	**200**		**Pn**	**20 12 34.9**	**+1.6**
SWF2	**Southwest Flan**	**2.05**	**200**		**Pn**	**20 12 35.0**	**+1.5**
B926	**Mesachie Lake**	**2.06**	**291**	P	**Pn**	**20 12 33.7**	**+0.3**
B926				S	**Sn**	**20 13 00.0**	**+0.8**
CLRS	**Cowichan Lake**	**2.06**	**291**		**Pn**	**20 12 33.3**	**-0.1**
CLRS	**Cowichan Lake**	**2.06**	**291**	P	**Pn**	**20 12 33.6**	**+0.2**
CLRS				S	**Sn**	**20 12 59.9**	**+0.8**
FL2	**Flat Top 2**	**2.06**	**202**		**Pn**	**20 12 34.8**	**+1.2**
JLK	**June Lake**	**2.07**	**198**		**Pb**	**20 12 35.8**	**-0.6**
HAWA	**Hanford**	**2.07**	**146**		**Pn**	**20 12 33.6**	**0.0**
HAWA				IAML		20 13 04.5	
	comp=E,99nm,0.3s						
HAWA				IAML		20 13 04.7	
	comp=E,81nm,0.5s						
CDFW	**Cedar Flats**	**2.08**	**196**		**Pn**	**20 12 35.5**	**+1.8**
B203	**Quarry, Mount**	**2.09**	**202**		**Pn**	**20 12 35.3**	**+1.5**
BMW	**Boistfort Moun**	**2.13**	**220**		**Pn**	**20 12 35.7**	**+1.2**
NLLB	**Nanaimo Lost L**	**2.14**	**302**		**Pn**	**20 12 35.7**	**+1.1**
NLLB	**Nanaimo Lost L**	**2.14**	**302**	P	**Pn**	**20 12 35.1**	**+0.6**
NLLB				S	**Sn**	**20 13 03.0**	**+1.7**
PFB	**Port Renfrew**	**2.19**	**283**	P	**Pn**	**20 12 35.8**	**+0.5**
PFB				S	**Sn**	**20 13 03.4**	**+0.8**
E08A	**Dider Farm, El**	**2.19**	**137**		**Pn**	**20 12 34.0**	**-1.2**
E08A				IAML		20 13 12.1	
	comp=E,61nm,0.3s						
MTMW	**Mount Mitchell**	**2.19**	**198**		**Pn**	**20 12 37.5**	**+2.1**
LVP	**Lakeview Peak**	**2.20**	**202**		**Pb**	**20 12 37.8**	**-0.8**
B019	**Raymond**	**2.20**	**229**		**Pb**	**20 12 37.6**	**-1.0**
RVW	**Rose Valley**	**2.22**	**208**		**Pn**	**20 12 37.0**	**+1.4**
E03A	**Lebam**	**2.23**	**226**		**Pn**	**20 12 35.8**	**0.0**
E03A				IAML		20 13 09.2	
	comp=N,76nm,0.6s						
E03A				IAML		20 13 11.9	
	comp=E,77nm,0.5s						
E03A	**Lebam**	**2.23**	**226**	P	**Pn**	**20 12 37.0**	**+1.3**
E03A				S	**Sb**	**20 13 05.8**	**-1.0**
F05D	**White Salmon**	**2.23**	**184**	Pb	**Pb**	**20 12 38.6**	**-0.6**
	baz=4.5						
F05D				Sg	**Sg**	**20 13 10.8**	**+0.5**
	baz=4.5						
C03A	**Quillayute Air**	**2.25**	**267**	Pn	**Pn**	**20 12 35.9**	**0.0**
C03A				IAML		20 13 04.9	
	comp=N,89nm,2.7s						
C03A				IAML		20 13 27.1	
	comp=E,85nm,2.9s						
SHB	**Sechelt**	**2.29**	**311**	P	**Pn**	**20 12 37.5**	**+0.8**
SHB				S	**Sn**	**20 13 07.0**	**+1.8**
WSLR	**Whistler**	**2.30**	**332**	P	**Pn**	**20 12 38.8**	**+2.0**
GHNB	**Nanoose**	**2.32**	**302**	S	**Sb**	**20 13 08.1**	**-1.3**
F04A	**Amboy**	**2.33**	**201**		**Pn**	**20 12 37.4**	**+0.3**
F04A				IAML		20 13 12.8	
	comp=N,58nm,0.9s						
B023	**Clatskanie**	**2.37**	**213**		**Pn**	**20 12 39.6**	**+2.0**
F04D	**Rainier, OR**	**2.37**	**212**	Pb	**Pn**	**20 12 39.9**	**+2.3**
	baz=30						
F04D				Sb	**Sb**	**20 13 11.7**	**+0.9**
	baz=30						
F04D	**Rainier, OR**	**2.37**	**212**		**Pn**	**20 12 40.0**	**+2.3**
F07A	**Phinny Hill Vi**	**2.39**	**158**		**Pn**	**20 12 36.6**	**-1.4**
MGB	**Mount Grey**	**2.47**	**292**	P	**Pn**	**20 12 40.3**	**+1.2**
MGB				S	**Sb**	**20 13 12.2**	**-1.5**
LLLB	**Lillooet**	**2.53**	**351**	Pn	**Pn**	**20 12 40.5**	**+0.5**
LLLB				IAML		20 13 20.2	
	comp=E,52nm,0.6s						
LLLB	**Lillooet**	**2.53**	**351**	Pg	**Pb**	**20 12 43.6**	**-0.7**
LLLB				Sg	**Sb**	**20 13 16.9**	**+1.3**
B927	**Port Alberni**	**2.62**	**296**	S	**Sn**	**20 13 15.8**	**+2.8**
E09A	**Wood Farm, Sta**	**2.64**	**126**		**Pn**	**20 12 40.0**	**-1.3**
E09A				IAML		20 13 23.6	
	comp=E,34nm,0.3s						
E09A				IAML		20 13 26.9	
	comp=N,33nm,0.3s						
TXB	**Texada**	**2.64**	**308**	P	**Pn**	**20 12 43.1**	**+1.6**
TXB				S	**Sb**	**20 13 17.6**	**-1.1**
B928	**Bamfield**	**2.70**	**287**	P	**Pn**	**20 12 44.6**	**+2.4**
BFSB	**Bamfield**	**2.70**	**287**	P	**Pn**	**20 12 44.3**	**+2.2**
BFSB				S	**Sb**	**20 13 18.5**	**-1.8**
NEW	**Newport**	**2.75**	**85**	P	**Pn**	**20 12 42.6**	**-0.4**
	baz=269						
NEW				Sb	**Sb**	**20 13 24.6**	**+2.7**
	baz=269						
NEW	**Newport**	**2.75**	**85**		**Pn**	**20 12 41.7**	**-1.3**
G05D	**Wamic, OR**	**2.87**	**181**	Pb	**Pb**	**20 12 49.2**	**-0.9**
	baz=1.6						
G05D				Sb	**Sb**	**20 13 27.3**	**+2.0**
	baz=1.6						
OZB	**Mount Ozzard**	**2.96**	**288**	P	**Pn**	**20 12 49.0**	**+3.2**
BTB	**Buttle Lake**	**3.15**	**297**	P	**Pn**	**20 12 51.4**	**+2.8**
BTB				S	**Sb**	**20 13 31.8**	**-1.5**
G08A	**Pilot Rock**	**3.23**	**150**		**Pn**	**20 12 49.0**	**-0.6**
G08A				IAML		20 13 43.7	
	comp=E,22nm,0.4s						
G08A				IAML		20 13 44.3	
	comp=N,30nm,0.9s						
F10A	**Beach Ranch, E**	**3.47**	**127**		**Pn**	**20 12 53.0**	**+0.1**
SLEB	**Sale Mountain**	**3.66**	**32**	Pg	**Pb**	**20 13 05.0**	**+1.5**
SLEB				Sg	**Sg**	**20 13 52.8**	**-3.3**
BLBC	**Blue River**	**4.14**	**17**	P	**Pn**	**20 13 05.2**	**+3.0**
BMO	**Blue Mountains**	**4.24**	**139**		**Pn**	**20 13 04.0**	**+0.5**
MNB	**Mounoet Dainar**	**4.48**	**23**	P	**Pn**	**20 13 09.2**	**+2.3**
JTMT	**Jette**	**4.68**	**92**	Pn	**Pn**	**20 13 08.7**	**-0.9**
JTMT				IAML		20 14 36.1	
	comp=N,13nm,1.0s						
JTMT				IAML		20 14 46.1	
	comp=E,14nm,1.2s						
PLID	**Pearl Lake**	**4.71**	**128**	Pn	**Pn**	**20 13 10.0**	**0.0**
PLID				IAML		20 14 36.2	
	comp=E,9.1nm,4.7s						
PLID				IAML		20 15 02.7	
	comp=E,7.7nm,4.8s						
HSO	**Harness Mounta**	**4.77**	**197**		**Pn**	**20 13 14.7**	**+4.0**
WALA	**Waterton Lakes**	**4.95**	**76**	Pn	**Pn**	**20 13 12.3**	**-0.9**
WALA				IAML		20 14 46.3	
	comp=N,12nm,4.3s						
WALA	**Waterton Lakes**	**4.95**	**76**	P	**Pn**	**20 13 13.6**	**+0.4**
WALA				Sg	**Sb**	**20 14 31.1**	**+6.0**
MSO	**Missoula**	**5.11**	**102**	Pn	**Pn**	**20 13 14.5**	**-0.9**
MSO				IAML		20 14 20.2	
	comp=N,11nm,4.1s						
UBRB	**Upper Baezaeko**	**5.12**	**340**	Sg	**Sg**	**20 14 39.4**	**-3.4**

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*SJA **25** 20:57:54.8±1.2, 29°.32S×72°.59W, $h10^{km}$, ML4.6, MW4.4*
*NEIC **25** 20:57:58.9±2.6, 29°.44S±0°.04×72°.17W±0°.04, $h10^{km}\pm 1^{km}$, mb4.6/11, ML4.6(GUC), Error ellipse: s-maj=6.8km s-min=6.0km az=17.0*
*IDC **25** 20:58:00.4±0.8, 29°.47S×71°.71W, $h0^{km}$, mb4.4/6, mb1 4.3/11, mb1mx4.1/38, mbtmp4.2/11, ML4.0/5, MS3.6/4, Ms1 3.6/4, ms1mx3.3/24, Error ellipse: s-maj=32.0km s-min=17.7km az=100.0*
*VAO **25** 20:58:00.3±0.5, 29°.48S×72°.01W, $h10^{km}$, mb4.4*
*GUC **25** 20:58:01.4±0.5, 29°.46S×71°.94W, $h39^{km}\pm 3^{km}$, ML4.6*

ISC 25 20:58:01.4±0.8**, 29°.46S**±0°.03×**72°.12W**±0°.05**, $h24^{km}\pm 5^{km}$, n154, $\sigma 1^{s}.78$/**178**, mb4.5/**9**, 9C-3D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	**La Serena**	**0.89**	**121**	⇓iP	**Pn**	**20 58 16.8**	**-1.7**
CO05				eS	**Sb**	**20 58 26.6**	**-3.2**
CO05				IAML		20 58 28.8	
	comp=N,26μm,0.4s						
CO05	**La Serena**	**0.89**	**121**		**Pn**	**20 58 16.8**	**-1.7**
CO05					**Sb**	**20 58 27.5**	**-2.3**
CO06	**Fray Jorge**	**1.28**	**161**	⇑iP	**Pn**	**20 58 23.9**	**0.0**
CO06				eS	**Sn**	**20 58 38.9**	**-1.4**
CO06	**Fray Jorge**	**1.28**	**161**		**Pn**	**20 58 23.7**	**-0.2**
CO06					**Sn**	**20 58 38.4**	**-1.9**
LCO	**Las Campanas**	**1.32**	**71**	⇓iP	**Pn**	**20 58 23.6**	**-1.0**
LCO				eS	**Sn**	**20 58 39.3**	**-2.2**
LCO	**Las Campanas**	**1.32**	**71**	Pn	**Pn**	**20 58 23.6**	**-1.0**
LCO	**Las Campanas**	**1.32**	**71**	i P	**Pn**	**20 58 23.7**	**-0.8**
LCO				eS	**Sn**	**20 58 41.5**	**0.0**
LCO				IAML		20 58 42.9	
	comp=Z,35μm,0.6s						
GO04	**Tololo Observa**	**1.35**	**122**	⇓iP	**Pn**	**20 58 24.4**	**-0.6**
GO04				eS	**Sn**	**20 58 41.7**	**-0.6**
GO04				IAML		20 58 46.5	
	comp=E,27μm,0.4s						
GO04	**Tololo Observa**	**1.35**	**122**		**Pn**	**20 58 24.4**	**-0.6**
AC04	**Llanos de Chal**	**1.55**	**37**	⇑iP	**Pn**	**20 58 27.0**	**-0.5**
AC04				eS	**Sn**	**20 58 45.4**	**-1.4**
AC04	**Llanos de Chal**	**1.55**	**37**	Pn	**Pn**	**20 58 26.9**	**-0.6**
AC04	**Llanos de Chal**	**1.55**	**37**	i P	**Pn**	**20 58 27.2**	**-0.3**
AC04				eS	**Sb**	**20 58 54.4**	**+5.7**
AC04				IAML		20 59 01.1	
	comp=Z,1μm,0.5s						
AROD	**Rodeo**	**2.41**	**108**	i P	**Pn**	**20 58 42.4**	**+2.8**
AROD				eS	**Sb**	**20 59 13.6**	**0.0**
GO03	**Copiap**	**2.49**	**42**	⇑eP	**Pn**	**20 58 40.5**	**0.0**
GO03				eS	**Sn**	**20 59 11.3**	**+1.2**
GO03	**Copiap**	**2.49**	**42**		**Pn**	**20 58 40.3**	**-0.2**
GO03	**Copiap**	**2.49**	**42**	i P	**Pn**	**20 58 40.8**	**+0.3**
GO03				eS	**Sb**	**20 59 14.8**	**-0.9**
ACDV	**Cuesta del Vie**	**2.70**	**106**	i P	**Pb**	**20 58 47.6**	**-1.6**
ACDV				IAML		20 59 26.2	
	comp=Z,1μm,1.1s						
ACCO	**Cerro Coronel**	**2.88**	**114**	i P	**Pb**	**20 58 49.8**	**-2.5**
ACCO				IAML		20 59 34.6	
	comp=Z,726nm,0.9s						
VA06	**Catapilco**	**3.17**	**167**	eP	**Pn**	**20 58 49.9**	**+0.1**
VA06				eS	**Sn**	**20 59 29.1**	**+2.2**
VA06				IAML		20 59 56.3	
	comp=E,2μm,0.4s						
RTLS	**Leoncito**	**3.37**	**135**	i P	**Pn**	**20 58 56.7**	**+3.9**
RTLS				eS	**Sb**	**20 59 45.0**	**+3.6**
RTLS				IAML		20 59 49.9	
	comp=Z,589nm,1.0s						
VA03	**San Esteban**	**3.56**	**158**	eP	**Pn**	**20 58 57.6**	**+2.3**
VA03				i S	**Sn**	**20 59 38.5**	**+1.9**
VA03				IAML		20 59 59.8	
	comp=N,1μm,0.6s						
VA03	**San Esteban**	**3.56**	**158**		**Pn**	**20 58 54.6**	**-0.6**
VA03	**San Esteban**	**3.56**	**158**	i P	**Pn**	**20 58 57.8**	**+2.5**
VA03				IAML		21 00 06.3	
	comp=Z,985nm,0.8s						
VA01	**Torpederas**	**3.58**	**174**		**Pn**	**20 58 55.8**	**+0.4**
AUSP	**Uspallata**	**3.62**	**140**	i P	**Pn**	**20 59 00.1**	**+3.8**
ZON	**Zonda**	**3.63**	**126**		**Pn**	**20 58 59.1**	**+3.0**
ROCH	**El Roble**	**3.63**	**165**	⇑iP	**Pn**	**20 58 57.4**	**+1.0**
ROCH				⇑iP	**Pn**	**20 58 57.3**	**+1.0**
ROCH				i S	**Sn**	**20 59 39.0**	**+0.5**
ROCH				i S	**Sn**	**20 59 39.2**	**+0.6**
ROC1	**El Roble**	**3.63**	**165**	i P	**Pn**	**20 58 57.3**	**+0.9**
AC02	**Maricunga**	**3.71**	**46**	⇑iP	**Pn**	**20 58 58.8**	**+1.1**
AC02				eS	**Sn**	**20 59 41.9**	**+0.9**
AC02	**Maricunga**	**3.71**	**46**		**Pn**	**20 58 58.4**	**+0.7**
AC02	**Maricunga**	**3.71**	**46**	i P	**Pn**	**20 58 58.9**	**+1.2**
AC02				IAML		21 00 07.4	
	comp=Z,681nm,1.1s						
PEL	**Peldehue**	**3.88**	**162**	⇑eP	**Pn**	**20 59 01.0**	**+1.5**
PEL				eS	**Sn**	**20 59 46.6**	**+2.3**
PEL	**Peldehue**	**3.88**	**162**		**Pn**	**20 58 59.5**	**0.0**
MT02	**Curacav**	**3.88**	**168**	eP	**Pn**	**20 59 01.3**	**+1.7**
MT02				eS	**Sn**	**20 59 45.0**	**+0.6**
MT02	**Curacav**	**3.88**	**168**		**Pn**	**20 58 60.0**	**+0.4**
RTCV	**Cerro Valdivia**	**3.91**	**129**	i P	**Pn**	**20 59 04.7**	**+4.7**
RTCV				IAML		21 00 02.7	
	comp=Z,552nm,2.5s						
MT05	**Renca**	**4.10**	**164**	eP	**Pn**	**20 59 04.0**	**+1.4**
MT05				eS	**Sn**	**20 59 53.8**	**+4.0**
MT05	**Renca**	**4.10**	**164**	Pn	**Pn**	**20 59 02.7**	**+0.1**
VA05	**Santo Domingo**	**4.21**	**174**	eP	**Pn**	**20 59 03.3**	**-0.7**
VA05				eS	**Sn**	**20 59 50.8**	**-1.6**
VA05	**Santo Domingo**	**4.21**	**174**		**Pn**	**20 59 04.3**	**+0.2**
ARCO	**CERRO ARCO**	**4.34**	**142**	i P	**Pn**	**20 59 10.7**	**+4.6**
ARCO				IAML		21 00 34.1	
	comp=Z,835nm,1.0s						
MT09	**Talagante**	**4.41**	**168**	⇑iP	**Pn**	**20 59 08.2**	**+1.2**
MT09				i S	**Sn**	**20 59 57.9**	**+0.2**
MT09	**Talagante**	**4.41**	**168**		**Pn**	**20 59 08.1**	**+1.2**
MT01	**Popeta**	**4.46**	**171**	⇑eP	**Pn**	**20 59 08.1**	**+0.6**
MT01				eS	**Sn**	**20 59 56.8**	**-1.8**
MT01	**Popeta**	**4.46**	**171**		**Pn**	**20 59 07.9**	**+0.4**
ACLC	**CERRO LA CRUZ**	**4.51**	**91**	i P	**Pn**	**20 59 10.1**	**+1.7**
ACLC				IAML		21 00 27.1	
	comp=Z,549nm,1.5s						
AAGR	**Agrelo**	**4.58**	**143**	i P	Pn	20 59 14.2	+4.9
AAGR				IAML		21 00 41.9	
	comp=Z,916nm,1.4s						
APLL	**PUNTA DE LOS L**	**4.94**	**102**	i P	**Pn**	**20 59 15.9**	**+1.6**
BO01	**Tunca**	**5.00**	**170**		**Pn**	**20 59 15.4**	**+0.5**
BO01	**Tunca**	**5.00**	**170**	i P	**Pn**	**20 59 15.8**	**+0.8**
BO01				IAML		21 00 42.7	
	comp=Z,163nm,1.1s						
PB14	**IPOC Station P**	**5.05**	**18**	Pn	**Pn**	**20 59 13.9**	**-2.0**
BO02	**Sierra Bellavi**	**5.44**	**168**		**Pn**	**20 59 21.9**	**+0.9**
BO02	**Sierra Bellavi**	**5.44**	**168**	i P	**Pn**	**20 59 22.7**	**+1.6**
BO02				IAML		21 00 53.7	
	comp=Z,289nm,0.9s						
GO05	**Huala**	**5.54**	**178**	Pn	**Pn**	**20 59 21.7**	**-0.7**
PB10	**IPOC Station P**	**6.08**	**14**	Pn	**Pn**	**20 59 27.7**	**-2.2**
ML02	**Panimavida**	**6.32**	**175**	Pn	**Pn**	**20 59 33.2**	**+0.2**
PB15	**IPOC Station P**	**6.66**	**21**		**Pn**	**20 59 35.6**	**-2.4**
H03N1	**Juan Fernandez**	**7.03**	**234**	T	T	21 07 21.9	
	baz=62,slow=71						
H03N2	**Juan Fernandez**	**7.04**	**234**	T	T	21 07 22.4	
	baz=62,slow=71						
H03N3	**Juan Fernandez**	**7.05**	**234**	T	T	21 07 24.9	
	baz=62,slow=71						
VA04	**Juan Fernndez**	**7.08**	**232**		**Pn**	**20 59 42.3**	**-1.3**
PB06	**IPOC Station P**	**7.10**	**19**	Pn	**Pn**	**20 59 40.4**	**-3.6**
PB04	**IPOC Station P**	**7.31**	**14**	Pn	**Pn**	**20 59 44.1**	**-2.8**
LVC	**Limon Verde**	**7.40**	**24**	Pn	**Pn**	**20 59 46.6**	**-1.7**
	comp=Z,1.6nm,0.3s,baz=188,slow=8.9,SNR=6.3						
LVC				Sn	**Sn**	**21 01 08.6**	**-3.2**
	comp=Z,1.6nm,0.3s,baz=210,slow=6.6,SNR=1.2						
LVC				LR	LR	21 02 07.9	
	comp=Z,160nm,21.4s,baz=229,slow=34						
LVC	**Limon Verde**	**7.40**	**24**	eP	**Pn**	**20 59 47.2**	**-1.1**
LVC	**Limon Verde**	**7.40**	**24**	Pn	**Pn**	**20 59 46.2**	**-2.1**
PB07	**IPOC Station P**	**7.96**	**15**	Pn	**Pn**	**20 59 53.1**	**-2.7**
PB09	**IPOC Station P**	**8.06**	**19**	Pn	**Pn**	**20 59 54.9**	**-2.3**
PB01	**IPOC Station P**	**8.71**	**16**	Pn	**Pn**	**21 00 03.5**	**-2.5**
LC01	**Cunco**	**9.42**	**179**	Pn	**Pn**	**21 00 15.1**	**-0.5**
PB08	**IPOC Station P**	**9.66**	**17**	Pn	**Pn**	**21 00 16.0**	**-3.3**
PLCA	**Paso Flores**	**11.32**	**174**	Pn	**Pn**	**21 00 41.6**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=337,slow=11,SNR=7.2						
PLCA	**Paso Flores**	**11.32**	**174**	eP	**Pn**	**21 00 41.1**	**-0.7**
PLCA	**Paso Flores**	**11.32**	**174**	Pn	**Pn**	**21 00 42.1**	**+0.4**
PB16	**IPOC Station P**	**11.33**	**13**	Pn	**Pn**	**21 00 37.8**	**-4.5**
TRQA	**Tornquist**	**12.02**	**138**	eP	**Pn**	**21 00 49.7**	**-1.6**
TRQA	**Tornquist**	**12.02**	**138**	Pn	**Pn**	**21 00 50.2**	**-1.1**
CPUP	**Villa Florida**	**13.45**	**80**	Pn	**Pn**	**21 01 06.9**	**-3.8**
	comp=Z,0.1nm,0.3s,baz=180,slow=8.1,SNR=1.5						
CPUP				LR	LR	21 06 40.5	
	comp=Z,496nm,20.4s,baz=268,slow=40						
ITQB	**Itaqui**	**13.49**	**95**	eP	**Pn**	**21 01 11.0**	**-0.4**
ITQB	**Itaqui**	**13.49**	**95**	Pn	**Pn**	**21 01 10.1**	**-1.2**
LPAZ	**La Paz**	**13.61**	**16**	Pn	**Pn**	**21 01 15.1**	**+1.5**
	comp=Z,0.7nm,0.3s,baz=184,slow=8.1,SNR=24						
LPAZ	**La Paz**	**13.61**	**16**	eP	**Pn**	**21 01 13.1**	**-0.5**
LPAZ	**La Paz**	**13.61**	**16**		**Pn**	**21 01 15.7**	**+2.1**
PLTB	**Pedras Altas**	**16.11**	**103**	eP	**Pn**	**21 01 46.5**	**+0.2**
CPSB	**Cacapava Do Su**	**16.23**	**98**	eP	**Pn**	**21 01 47.4**	**-0.4**

SIV	San Ignacio	16.82	40	Pn	Pn	21 01 53.7	-1.8
	comp=Z,0.6nm,0.3s,baz=225,slow=9.1,SNR=21						
SIV				LR	LR	21 09 30.8	
	comp=Z,296nm,20.5s,baz=286,slow=42						
AQDB	Aquidauana	17.35	63	eP	Pn	21 02 02.4	+0.4
PTLB	Pontes e Lacer	18.37	43	eP	Pn	21 02 14.8	+0.2
PTLB	Pontes e Lacer	18.37	43	P	P	21 02 12.8	-1.7
PTGB	Pitanga	18.47	80	eP	P	21 02 15.5	-0.1
TRCB	Terra Rica	18.70	74	eP	P	21 02 17.5	-0.7
PP1B	Ponte de Pedra	19.70	57	eP	P	21 02 28.9	-0.2
VILB	Vilhena	19.80	36	eP	P	21 02 30.4	+0.2
VILB	Vilhena	19.80	36	P	P	21 02 29.1	-1.1
VILB				IAmb	IAmb	21 02 32.7	
	comp=Z,19nm,0.9s						
TER01	Tubaro-SC	20.13	93	eP	P	21 02 32.2	-1.6
SALV	Santo Antonio	20.26	52	eP	P	21 02 35.7	+0.5
ETMB	Extrema	20.31	17		P	21 02 34.7	-1.0
PCMB	Pacaembu	20.36	72	eP	P	21 02 35.9	-0.4
ITRB	Iturama	22.01	69	eP	P	21 02 53.9	-0.2
SAML	Samuel	22.06	24	P	P	21 02 52.8	-1.8
PET01	Itanhaem-SP	22.73	83	eP	P	21 03 01.3	-0.5
PDRB	Porto dos Gac	22.82	42	eP	P	21 03 02.5	-0.3
BB19B	Bebedouro	22.88	74	eP	P	21 03 02.1	-1.4
ARAG	Araguaiana, MT	23.16	58	eP	P	21 03 06.2	0.0
RCLB	Rio Claro- Sao	23.17	78	eP	P	21 03 06.7	+0.4
VAO	Valinhos	23.43	80	eP	P	21 03 07.9	-1.2
CLDB	Colider	23.96	43	eP	P	21 03 13.9	-0.1
IPMB	Ipameri, GO	24.64	68	eP	P	21 03 19.7	-0.6
USHA	Ushuaia	25.50	175	P	P	21 03 30.7	+3.1
	comp=Z,8.5nm,0.8s,baz=34,slow=7.3,SNR=2.3						
SNDB	Serra Nova Dou	26.04	52	eP	P	21 03 33.7	+0.8
BSCB	Bom Sucesso	26.08	77	eP	P	21 03 32.9	-0.5
BDFB	Brasilia	26.09	63	P	P	21 03 32.8	-0.8
	comp=Z,6.5nm,0.7s,baz=238,slow=11,SNR=8.1						
BDFB				LR	LR	21 14 23.9	
	comp=Z,197nm,19.6s,baz=249,slow=38						
BDFB	Brasilia	26.09	63	P	P	21 03 33.2	-0.4
BDFB				IAmb	IAmb	21 03 34.9	
	comp=Z,27nm,1.4s						
NPGB	Novo Progresso	27.32	39	eP	P	21 03 44.3	-0.2
PEXB	Peixe	28.08	57	eP	P	21 03 52.1	+0.8
DIAM	Diamantina, MG	28.21	73	eP	P	21 03 53.3	+0.7
MACA	Manacapuru-AM	28.32	25	eP	P	21 03 54.5	+1.2
JANB	Januaria	29.36	67	eP	P	21 04 03.1	+0.4
ITTB	Itaituba	29.39	35	eP	P	21 04 03.2	+0.3
SJMB	Sao Joao De Ma	30.12	76	eP	P	21 04 10.2	+0.8
BSFB	Barra de Sao F	30.35	77	eP	P	21 04 11.5	+0.1
SDBA	SAO DESIDERIO	30.44	62	eP	P	21 04 13.0	+0.7
RIB01	Linhares ES	30.52	78	eP	P	21 04 13.1	+0.1
PTGA	Pitinga	30.83	24	P	P	21 04 17.9	+2.3
	comp=Z,5.5nm,0.9s,baz=228,slow=9.1,SNR=6.5						
PTGA	Pitinga	30.83	24	IAmb	IAmb	21 04 18.7	
	comp=Z,6.9nm,1.1s						
MALB	Monte Alegre	32.28	35	eP	P	21 04 28.6	+0.2
BOAV	Boa Vista	33.56	21	eP	P	21 04 41.4	+1.8
GDU01	Guandu, BA	33.92	70	eP	P	21 04 42.8	0.0
NBPN	Ponto Novo - B	35.05	65	eP	P	21 04 53.1	+0.5
PMSA	Palmer Station	35.70	174	eP	P	21 04 58.9	+1.3
NBMA	Muriti-CE	38.29	62	eP	P	21 05 21.0	+0.7
NBAN	Anadia - AL	38.86	67	eP	P	21 05 25.3	+0.3
NBPA	Parau_RN	40.58	61	eP	P	21 05 39.9	+0.6
VNA3	Neumayer Olymp	53.60	159	P	P	21 07 22.2	+2.1
VNA2	Neumayer--Watz	54.23	159	P	P	21 07 26.7	+1.9
	baz=295,slow=8.7						
SNAA	Sanae	55.82	159	P	P	21 07 38.2	+1.8
SNAA	Sanae	55.82	159	P	P	21 07 38.2	+1.8
	comp=Z,4.3nm,0.8s,baz=287,slow=9.1,SNR=23						
SNAA	Sanae	55.82	159	P	P	21 07 37.0	+0.7
SNAA				IAmb	IAmb	21 07 47.7	
	comp=Z,10nm,1.1s						
QSPA	South Pole Qui	60.77	180	P	P	21 08 10.9	-0.1
QSPA				IAmb	IAmb	21 08 22.6	
	comp=Z,10nm,1.1s						
TXAR	Lajitas Array	65.76	330	P	P	21 08 48.2	+3.7
	comp=Z,0.4nm,0.7s,baz=151,slow=8.5,SNR=4.0						
SDCO	Great Sand Dun	73.80	333	P	P	21 09 32.2	-1.8
SDCO				IAmb	IAmb	21 09 34.3	
	comp=Z,7.4nm,1.2s						
HVU	Hansel Valley	80.21	330	P	P	21 10 07.6	-2.3
HVU				IAmb	IAmb	21 10 12.3	
	comp=Z,5.9nm,1.0s						
TORD	Torodi Ar. Bea	82.75	71	P	P	21 10 25.2	+1.5
	comp=Z,6.4nm,0.9s,baz=258,slow=4.7,SNR=33						
TORD	Torodi Ar. Bea	82.75	71	P	P	21 10 25.4	+1.7
WRA	Warramunga Arr	124.66	211	PKP	PKiKP	21 17 01.2	+1.4
	comp=Z,0.7nm,0.8s,baz=176,slow=1.3,SNR=7.0						
WRA	Warramunga Arr	124.66	211		PKPdf	21 16 56.8	-2.8
EKS2	Erkin-Say	149.66	55	P	PKPab	21 17 52.9	-1.4
	SNR=5.2						
USP	Ospenovka	150.01	54	P	PKPab	21 17 53.1	-2.6
	SNR=5.4						
UCH	Uchtor	150.29	56	P	PKPab	21 17 54.7	-2.7
	SNR=7.8						
ZALV	Zalesovo Beam	150.34	28	PKP	PKPbc	21 17 47.9	-2.3
	comp=Z,1.6nm,0.8s,baz=203,slow=3.1,SNR=32						
ZALV				PKPbc	pPKPdf	21 17 53.1	+1.4
	comp=Z,11nm,0.7s,baz=300,slow=3.1,SNR=34						
ZALV	Zalesovo Beam	150.34	28		PKPdf	21 17 47.2	+2.3
ZALV				PKPab	pPKPdf	21 17 53.3	+1.6
TKM2	Tokmak 2	150.88	54	P	PKiKP	21 17 55.6	+2.9
	SNR=6.0						
KSH	Kashi	151.98	60	PKPbc	PKPbc	21 17 51.5	-3.2
MKAR	Makanchi Array	153.63	42	PKP	PKPdf	21 17 52.6	+2.4
	comp=Z,0.6nm,0.9s,baz=298,slow=4.6,SNR=2.6						
MKAR				PKPbc	sPKPdf	21 18 00.5	+1.3
	comp=Z,1.8nm,0.8s,baz=310,slow=2.1,SNR=9.2						

ANF ***25*** *21:14:35.4±0.1, 33.°28N×116.°27W, h15^{km}, ML2.9/25,*
Error ellipse: s-maj=1.3km s-min=1.2km az=51.0
NEIC ***25*** *21:14:36.2±0.8, 33.°26N±0.°01×116.°30W±0.°02, h9^{km}±3^{km},*
Error ellipse: s-maj=2.0km s-min=1.6km az=67.0
PAS ***25*** *21:14:36.3±1.0, 33.°267N±0.°006×116.°28W±0.°02,*
h3^{km}±6^{km}, ML3.0/192, ML2.8/34(NEIC), Error ellipse:
s-maj=2.1km s-min=0.8km az=74.0
ISC 25 21:14:36.1±1.0, **33.°26N**±0.°02×**116.°28W**±0.°02, **h10**^{km}±9^{km},
n46, σ**0^{s}.75**/69, **Southern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PFO	Pinyon Flats O	0.38	337	P	Pg	21 14 43.4	-0.3
	baz=154,SNR=89						
PFO				S	Sg	21 14 48.5	-0.3
	baz=154						
PFO	Pinyon Flats O	0.38	337		Pg	21 14 43.3	-0.5
PFO				Sg	Sg	21 14 48.5	-0.3
PFO				IAML		21 14 48.8	
	1µm,0.5s						
MONP2	Monument Peak	0.39	198	P	Pg	21 14 44.0	+0.2
	baz=18,SNR=42						
MONP2				S	Sg	21 14 49.6	+0.6
	baz=18						
SUP	Superstition M	0.49	129		Pg	21 14 45.9	+0.3
SWSC	Sam W. Stewart	0.51	128	P	Pg	21 14 46.3	+0.2
	baz=310,SNR=36						
SWSC				S	Sg	21 14 53.3	+0.5
	baz=310						
GVDA	Garner Valley	0.52	321		Pg	21 14 46.1	-0.3
GVDA					Sg	21 14 53.1	-0.2
IKP	In-Ko-Pah, Jac	0.63	167	P	Pg	21 14 48.2	-0.1
	baz=348,SNR=35						
IKP				S	Sg	21 14 56.8	+0.3
	baz=348						
BAR	Barrett	0.67	210		Pg	21 14 48.8	-0.3
BAR				Sg	Sg	21 14 57.9	+0.1
BAR				IAML		21 14 58.4	
	comp=E,596nm,0.2s						
BAR				IAML		21 15 01.7	
	comp=N,465nm,0.2s						
RMX	La Rumorosa	0.68	166	Pg	Pb	21 14 50.5	+0.4
RMX				Sg	Sb	21 15 00.5	+0.8
RMX				IAML		21 15 03.3	
	comp=N,434nm,0.4s						
TKX	Tecate	0.74	202		Pg	21 14 50.2	-0.3
BELC	Belle Mtn. Jos	0.77	18	P	Pg	21 14 50.6	-0.5
	baz=198						
BELC				S	Sg	21 15 00.9	-0.3
	baz=198						
109C	Camp Elliot, M	0.79	242	P	Pg	21 14 50.9	-0.4
	baz=61,SNR=12						
109C				S	Sg	21 15 01.2	-0.4
	baz=61						
109C	Camp Elliot, M	0.79	242		Pg	21 14 50.8	-0.4
109C				Sg	Sg	21 15 01.2	-0.4
BC3	Big Chuckawall	0.79	60	P	Pg	21 14 51.0	-0.5
	baz=241						
BC3				S	Sg	21 15 01.6	-0.3
	baz=241						
MURC	Murrieta	0.84	294	P	Pg	21 14 51.9	-0.4
	baz=112,SNR=46						
MURC				S	Sg	21 15 03.2	0.0
	baz=112						
TJX	Tijuana	0.99	221		Pg	21 14 55.1	-0.1
TJX				Sg	Sb	21 15 08.3	-0.3
BBRC	Big Bear Solar	1.13	332	Pg	Pg	21 14 57.4	-0.6
	baz=151						
BBRC				Sb	Sg	21 15 12.5	-0.2
	baz=151						
GLA	Glamis	1.24	99	P	Pn	21 14 57.5	-2.0
	baz=281,SNR=14						
GLA	Glamis	1.24	99	Pg	Pn	21 14 57.8	-1.7
GLA				IAML		21 15 25.2	
	comp=E,180nm,0.5s						
GLA				IAML		21 15 29.0	
	comp=N,128nm,0.6s						
IRM	Iron Mountain	1.30	46	Pg	Pn	21 15 00.2	-0.3
	baz=227						
IRM				S	Sb	21 15 16.5	-1.0
	baz=227						
CCX	Cicese	1.43	193		Pn	21 15 01.8	-0.3
CCX				Sn	Sn	21 15 20.8	-0.2
CCX				IAML		21 15 25.0	
	comp=N,116nm,0.5s						
CCX				IAML		21 15 26.6	
	comp=E,123nm,0.7s						
BFSC	Mount Baldy Ra	1.51	311	Pb	Pn	21 15 03.2	-0.1
	baz=129						
BFSC				Sb	Sn	21 15 23.2	0.0
	baz=129						
HEC	Hector,Ludlow	1.56	358	Sg	Sg	21 15 26.6	+0.1
	baz=178						
GMRC	Granite Mounta	1.60	19	Pg	Pb	21 15 05.6	-0.3
	baz=199						
GMRC				Sg	Sb	21 15 27.2	+0.9
	baz=199						
RRX	Edison Barstow	1.72	340	Pg	Pb	21 15 08.3	+0.5
	baz=159						
RRX				Sb	Sb	21 15 29.7	+0.2
	baz=159						
FMP	Fort Macarthur	1.74	286	Pg	Pg	21 15 09.0	-0.5
	baz=104						
MWC	Mount Wilson	1.77	303		Pn	21 15 07.7	+0.8
MWC				IAML		21 15 34.0	
	comp=E,120nm,0.4s						
MWC				IAML		21 15 34.2	
	comp=N,119nm,0.6s						
CIS	Catalina Islan	1.79	275	Pb	Pb	21 15 08.2	-0.9
	baz=93						
CIS				S	Sn	21 15 29.3	-0.8
	baz=93						
PASC	Pasadena Art C	1.83	300		Pn	21 15 08.6	+0.9
PASC				IAML		21 15 34.3	
	comp=N,73nm,0.6s						
DECC	Green Verdugo	1.98	301	Sb	Sb	21 15 37.7	+0.7
	baz=119						
NEE2	Needles Airpor	2.04	42	Sb	Sb	21 15 39.4	+0.7
	baz=223						
PDMCI	Parker Dam,Lak	2.06	59	Sb	Sb	21 15 39.5	+0.2
	baz=240						
GSC	Goldstone, Bar	2.08	348	Sb	Sb	21 15 41.3	+1.2
	baz=168						
GSC	Goldstone, Bar	2.08	348		Pn	21 15 12.1	+0.9
GSC				IAML		21 15 45.3	
	comp=N,55nm,0.4s						
GSC				IAML		21 15 47.7	
	comp=E,90nm,1.0s						
EDW2	Edwards Air Fo	2.15	319	Pb	Pb	21 15 15.2	-0.1
	baz=138						
EDW2				Sb	Sb	21 15 43.3	+1.2
	baz=138						
TUQ	Turquoise Moun	2.19	8	Pg	Pb	21 15 16.8	+0.8
	baz=188						
TUQ				Sb	Sb	21 15 45.0	+1.8
	baz=188						
OSI	Osito Audit: C	2.44	304	Sb	Sb	21 15 51.6	+1.3
	baz=123						
W13A	Hualapai Mount	2.70	47		Pn	21 15 20.6	+0.7
QSM	Queen of Sheba	2.74	350		Pn	21 15 20.4	+0.1
QSM				IAML		21 16 03.4	
	comp=E,34nm,1.0s						
Y14A	Wickenburg	2.81	75		Pn	21 15 21.0	-0.3
Y14A				IAML		21 16 07.1	
	comp=E,27nm,0.3s						
Y14A				IAML		21 16 09.6	
	comp=N,29nm,0.7s						
GWY	Greenwater Val	2.94	354		Pn	21 15 22.5	-0.6
MPMC	Manual Prospec	2.96	341	Pg	Pb	21 15 31.0	+1.9
	baz=160						
ISA	Isabella, Lake	3.00	323	Pg	Pg	21 15 32.2	-1.5
	baz=142						
ISA	Isabella, Lake	3.00	323		Pn	21 15 22.4	-1.5
ISA				IAML		21 16 14.3	
	comp=E,28nm,0.9s						
SHPR	Sheep Range	3.37	16		Pn	21 15 28.8	-0.1
PRN	Pahroc Range	4.26	13		Pn	21 15 41.9	+0.8
PRN				IAML		21 17 01.1	
	comp=N,12nm,1.0s						

ISN ***25*** *21:17:15.7±1.4, 31.°61N×49.°69E, h17^{km}±129^{km}, ML4.8*
BJI ***25*** *21:17:16.5±0.0, 31.°80N×49.°60E, h10^{km}, mB5.3/43,*
mb5.2/72, Ms5.3/56, Ms7 5.1/54
MOS ***25*** *21:17:16.6±1.1, 31.°87N×49.°54E, h16^{km}, mb5.5/38,*
MS4.5/14, Error ellipse: s-maj=4.4km s-min=3.1km
az=102.8
SGS ***25*** *21:17:16.9, 32.°07N×49.°62E, h0^{km}, Ml5.5*
NEIC ***25*** *21:17:18.0±1.5, 31.°88N±0.°05×49.°51E±0.°05, h10^{km}±1^{km},*
Error ellipse: s-maj=8.3km s-min=6.6km az=167.0
TEH ***25*** *21:17:18.5, 31.°89N×49.°54E, h12^{km}, ML5.3*
THR ***25*** *21:17:18.1±0.9, 31.°85N×49.°49E, h14^{km}±9^{km}, ML5.0*
IDC ***25*** *21:17:21.6±0.9, 31.°93N×49.°47E, h38^{km}±6^{km}, mb4.7/42,*
mb1 4.8/49, mb1mx4.7/57, mbtmp4.9/49, ML3.3/2, MS4.5/40,
Ms1 4.5/40, ms1mx4.3/61, Error ellipse: s-maj=8.7km
s-min=7.4km az=21.0
DSN ***25*** *21:17:23.7±5.2, 31.°17N×49.°46E, h10^{km}, ML5.1/10, Error*
ellipse: s-maj=63.8km s-min=11.5km az=168.0
OMAN ***25*** *21:17:26.9±0.3, 31.°37N×50.°02E, h10^{km}, mb6.8/23,*
ms4.0/7, Error ellipse: s-maj=5.8km s-min=4.2km az=22.0
ISC 25 21:17:18.7±0.4, **31.°87N**±0.°02×**49.°57E**±0.°02, **h18**^{km}±1^{km},
h18^{km}**:pP-P, n1159,** σ**1^{s}.85**/1281, **mb5.4**/294, **MS4.7**/64,
96C-30D, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AMIS	Naft Sefid	0.31	230	ePg	Pg	21 17 25.3	-0.2
AMIS				eSg	Sb	21 17 31.0	+0.6
AHWZ	Ahwaz	0.95	236	ePg	Pb	21 17 36.3	-0.3
AHWZ	Ahwaz	0.95	236	Pg	Pb	21 17 36.3	-0.3
SHK1	Shahrekord	1.21	67	ePg	Pb	21 17 41.4	+0.2
SHK1				e		21 18 03.6	
	comp=Z,25µm,0.8s						
IPIR	Pirpir	1.39	54	ePn	Pg	21 17 45.1	-0.5
IPIR				e		21 17 47.7	
	comp=Z,13µm,0.6s						
IPIR	Pirpir	1.39	54	Pn	Pg	21 17 45.0	-0.5
ABEH	Behbahan	1.39	155	ePg	Pg	21 17 45.6	0.0
IBRJ	Brojen	1.44	88	ePg	Pg	21 17 45.9	-0.6
IBRJ				e		21 18 11.7	
	comp=Z,97µm,0.5s						
IBRJ	Brojen	1.44	88		Pg	21 17 45.8	-0.7
KHMZ	Khomeyn	1.90	10	ePg	Pb	21 17 53.3	+0.4
KHMZ	Khomeyn	1.90	10	ePg	Pb	21 17 53.3	+0.4
BMDN	Meydan	1.91	341	ePn	Pb	21 17 52.3	-0.7
BMDN				e		21 18 34.3	
	comp=Z,24µm,0.8s						
KLNJ	Kolanjah	1.93	116	ePn	Pb	21 17 54.0	+0.5
KLNJ				e		21 18 32.0	
	comp=Z,51µm,0.7s						
KLNJ	Kolanjah	1.93	116	Pn	Pb	21 17 54.0	+0.5
DHL1	Dehloran	2.10	293	ePn	Pb	21 17 54.9	-1.3
IGAR	Gharneh	2.17	75	ePn	Pb	21 17 57.2	-0.3
IGAR				e		21 18 34.1	
	comp=Z,81µm,0.6s						
IKFM	Kafar-mosalman	2.20	319	ePn	Pn	21 17 56.1	+1.8
IKFM	Kafar-mosalman	2.20	319	Pn	Pn	21 17 56.0	+1.8
IKLH	Kolahrood	2.23	49	ePn	Pb	21 17 58.5	-0.2
IKLH				e		21 18 40.0	
	comp=Z,41µm,0.6s						
IKLH	Kolahrood	2.23	49	Pn	Pb	21 17 58.4	-0.2
IDOB	Doab	2.25	329	ePn	Pn	21 17 56.9	+1.8
IDOB				e		21 18 37.3	
	comp=Z,48µm,0.5s						
IDOB	Doab	2.25	329	Pn	Pn	21 17 56.8	+1.7
IRAM	Ramesheh	2.40	91	ePn	Pb	21 18 00.5	-0.9
IRAM				e		21 18 39.1	
	comp=Z,75µm,0.4s						
QAMS	Qamsar	2.42	39	ePn	Pb	21 18 01.4	-0.4
HSAM	Samen	2.48	341	ePn	Pn	21 18 00.3	+1.9
HSAM				e		21 18 45.6	
	comp=Z,73µm,0.6s						
HSAM	Samen	2.48	341	Pn	Pn	21 18 00.3	+1.9
IZEF	Zefreh	2.55	66	e		21 18 14.3	
	comp=Z,70µm,0.5s						
IZEF				ePn	Pb	21 18 02.6	-1.5
ASAO	Ashtian	2.70	8	ePn	Pb	21 18 04.7	-1.9
ASAO				eSg	Sg	21 18 43.6	-2.1
ASAO				IAML		21 18 50.8	
	comp=E,6µm,0.6s						
ASAO				IAML		21 18 58.3	
	comp=N,9µm,0.7s						
ASAO	Ashtian	2.70	8	ePn	Pb	21 18 04.7	-1.9
UMR	Umm Al-Rimmam	2.80	215	eP	Pn	21 18 04.8	+2.2
MIB	Mutribah	2.81	224	eP	Pn	21 18 04.8	+2.2
KAZ1	Kazerun	2.86	141	ePn	Pn	21 18 06.0	+2.6
KAZ1				e		21 19 09.3	
	comp=Z,34µm,0.7s						
NASN	Na'in	2.90	70	ePn	Pb	21 18 07.5	-2.5
NASN				IAML		21 19 00.3	
	comp=N,2µm,0.7s						
NASN				IAML		21 19 03.6	
	comp=E,2µm,0.5s						
NASN	Na'in	2.90	70	ePn	Pb	21 18 07.5	-2.5
IBZA	Bozab	2.96	332	ePn	Pn	21 18 06.4	+1.3
HAGD	Aghdareh	2.97	353	ePn	Pn	21 18 07.2	+2.1
HAGD				e		21 19 00.0	
	comp=Z,13µm,0.5s						
GHVR	GHOM	2.98	29	ePn	Pb	21 18 09.1	-2.2
GHVR				IAML		21 18 58.3	
	comp=E,5µm,0.5s						
GHVR				IAML		21 19 01.1	
	comp=N,6µm,0.8s						
GHVR	GHOM	2.98	29	ePn	Pb	21 18 09.1	-2.2
KRSH	Karshahi	3.01	45	ePn	Pb	21 18 09.3	-2.6
NSR	Nassriya	3.05	255	ePn	Pn	21 18 06.0	0.0
NSR				eSn	Sn	21 18 41.0	-1.0
NSR				AML	AML	21 18 53.6	
	comp=E,4µm,0.4s						
KBD	Kabd	3.13	212	eP	Pn	21 18 09.4	+2.3
KCHF	Cheshme Sefid,	3.21	319	ePn	Pn	21 18 09.5	+1.2
KCHF				e		21 19 04.3	
	comp=Z,82µm,0.6s						
KCHF	Cheshme Sefid,	3.21	319	Pn	Pn	21 18 09.5	+1.2
IALM	Almabolaq	3.21	339	ePn	Pn	21 18 10.5	+2.1
IQOM	Qom	3.22	23	ePn	Pn	21 18 11.9	+3.3
KER	Kermanshah	3.24	322	ePn	Pn	21 18 10.1	+1.4
IBDR	Badra	3.31	293	ePn	Pn	21 18 12.0	+2.4
IBDR				eSn	Sn	21 18 52.0	+3.5
ISFB	Sefidab	3.34	41	ePn	Pn	21 18 13.0	+2.9
AHBU	AHRAM	3.34	153	ePn	Pn	21 18 12.1	+2.1
SHI	Shiraz	3.37	130	ePn	Pn	21 18 13.3	+2.8
RDF	Al-Radifah	3.41	211	eP	Pn	21 18 13.5	+2.5
QRN	Al-Qurain	3.42	205	eP	Pn	21 18 13.2	+2.1
ISAD	Sadrabad	3.50	88	ePn	Pn	21 18 15.7	+3.2
ISAD				e		21 18 16.7	
	comp=Z,48µm,0.7s						
IGHG	Ghaleghazi	3.52	315	ePn	Pn	21 18 13.6	+1.0
IGHG				e		21 19 34.8	
	comp=Z,15µm,1.0s						
IRAZ	Razeghan	3.54	5	ePn	Pn	21 18 16.0	+3.0
IRAZ				e		21 19 27.9	
	comp=Z,61µm,0.8s						
IVRN	Varamin	3.61	29	ePn	Pn	21 18 16.9	+3.2
SNGE	Sanandaj	3.71	331	ePn	Pn	21 18 16.2	+0.9
SNGE				IAML		21 19 27.2	
	comp=N,2µm,0.6s						
SNGE	Sanandaj	3.71	331	ePn	Pn	21 18 16.2	+0.9
ILIN	Lien	3.74	325	ePn	Pn	21 18 17.0	+1.2
ILIN				e		21 19 05.3	
	comp=Z,70µm,0.3s						
ANAR	Anarak	3.75	68	ePn	Pn	21 18 19.1	+3.3
QABG	Abgarm-Qazvin	3.83	0	ePn	Pn	21 18 18.6	+1.6
IHSB	Hasanabad	3.84	21	ePn	Pn	21 18 19.2	+2.3
IDHR	Dehrash	3.88	318	ePn	Pn	21 18 19.5	+1.9
IDHR				e		21 19 08.1	
	comp=Z,57µm,0.4s						
IMHD	Mahdasht	3.92	13	ePn	Pn	21 18 20.6	+2.6
ICHK	Chekchek	4.13	83	ePn	Pn	21 18 23.9	+2.9
TEH	Tehran	4.15	21	ePn	Pn	21 18 24.4	+3.2
TEHA	Amirabad Tehra	4.16	21	ePn	Pn	21 18 24.3	+3.0
THKV	Tehran--Karaj	4.18	15	ePn	Pn	21 18 08.2	-14
THKV	Tehran--Karaj	4.18	15	ePn	Pn	21 18 08.2	-14
IDMV	Damavand	4.23	28	ePn	Pn	21 18 25.3	+2.8
CHTH	Charan	4.24	17	ePn	Pn	21 18 25.0	+2.5
CHTH	Charan	4.24	17	ePn	Pn	21 18 25.0	+2.5
DAMV	Damavand	4.25	27	ePn	Pn	21 18 25.5	+2.7
DAMV				IAML		21 19 39.0	
	comp=N,1µm,0.6s						
DAMV				IAML		21 19 57.5	
	comp=E,1µm,0.2s						
DAMV	Damavand	4.25	27	ePn	Pn	21 18 25.5	+2.7
YZKH	Yazd	4.29	82	ePn	Pn	21 18 26.2	+3.0
YZKH				IAML		21 19 51.5	
	comp=N,804nm,0.7s						
YZKH	Yazd	4.29	82	ePn	Pn	21 18 26.2	+3.0
IMEH	Mehriz	4.33	95	ePn	Pn	21 18 26.5	+2.7
QCNT	Qazvin	4.43	5	ePn	Pn	21 18 25.3	+0.2
ILAS	Lasjerd	4.51	38	ePn	Pn	21 18 29.0	+2.8
IGZV	Ghazvin	4.54	7	ePn	Pn	21 18 28.6	+1.9
BHD	Baghdad	4.60	289	ePn	Pn	21 18 29.0	+1.8
BHD				eSn	Sn	21 19 23.0	+2.8
BHD				AML	AML	21 19 30.3	
	comp=E,2µm,0.4s						
IFIR	Firoozkooh	4.61	34	ePn	Pn	21 18 30.6	+3.0
QYSM	Um Kedad	4.63	211	P	Pn	21 18 29.1	+1.3
QSDN	Sirdan	4.64	356	ePn	Pn	21 18 30.1	+2.1
QALM	Alamut, Qazvin	4.64	11	ePn	Pn	21 18 30.4	+2.3
JHRM	Jahrom	4.82	133	ePn	Pn	21 18 32.9	+2.4
JIR1	Jirandeh	4.83	2	ePn	Pn	21 18 32.6	+1.9
ZNJK	Zanjan	4.85	352	ePn	Pn	21 18 32.7	+1.8
ZNJK				IAML		21 20 01.0	
	comp=E,300nm,0.8s						
ZNJK	Zanjan	4.85	352	ePn	Pn	21 18 32.7	+1.8
IPRN	Peran	4.93	27	ePn	Pn	21 18 36.1	+4.1
ISHM	Shahmirzad	5.00	37	ePn	Pn	21 18 36.1	+3.0
IANJ	Anjilo	5.10	44	ePn	Pn	21 18 36.9	+2.5
IBAF	Bafgh	5.12	92	ePn	Pn	21 18 37.3	+2.7
SRFHA	Rafha	5.13	238	P	Pn	21 18 36.0	+1.4
RST1	Rasht - Gilan	5.35	1	ePn	Pn	21 18 39.9	+2.3
IKRK	Kirkuk	5.61	310	ePn	Pn	21 18 43.0	+1.9
IKRK				eSn	Sn	21 19 49.0	+3.9
CSN1	Caspian	5.70	356	ePn	Pn	21 18 43.2	+0.9
IHSH	Hashtrud	5.75	341	ePn	Pn	21 18 44.4	+1.0
SMAN	Sihmah	5.82	193	P	Pn	21 18 44.7	+0.6
SMAN				S	Sn	21 19 51.5	+1.1
IGLO	Ghaloghah	5.82	36	ePn	Pn	21 18 47.8	+3.5
MAHB	Mahabad	5.84	328	ePn	Pn	21 18 44.9	+0.4
LAR1	LAR	5.91	134	ePn	Pn	21 18 47.8	+2.4
SAKB	Bahrain	5.93	172	P	Pn	21 18 47.1	+1.5
SAKB				S	Sn	21 19 52.6	-0.4
KHGB	Koh Gabri	6.11	102	ePn	Pn	21 18 49.8	+1.5
SHMA	Al-Shehemyia	6.11	168	P	Pn	21 18 50.1	+2.0
TPRV	Parvadeh(Tabas	6.13	77	ePn	Pn	21 18 51.3	+2.9
ISRB	Sarab	6.15	346	ePn	Pn	21 18 49.5	+0.8
IBST	Bostanabad	6.22	340	ePn	Pn	21 18 51.0	+1.2
TNSJ	Nastanj	6.28	69	ePn	Pn	21 18 53.0	+2.5
ASYS		6.29	228	P	Pn	21 18 50.0	-0.5
KHOR	Al-Khor Airpor	6.45	164	P	Pn	21 18 54.5	+1.8
TVBK	TV Kerman	6.46	105	ePn	Pn	21 18 55.2	+2.0
KRBR	Kerman	6.46	105	ePn	Pn	21 18 55.4	+2.3
KRBR	Kerman	6.46	105	ePn	Pn	21 18 55.4	+2.3
IAZR	Azarshahr	6.51	334	ePn	Pn	21 18 55.0	+1.3
NGRK	Negar Kerman	6.55	108	ePn	Pn	21 18 57.3	+2.8
TKDS	Koohdasht(Taba	6.60	73	ePn	Pn	21 18 57.5	+2.6
TABS	Tabas	6.61	72	ePn	Pn	21 18 57.8	+2.8
SARAR	Arar	6.71	259	P	Pn	21 18 56.1	-0.3
SHRO	Shahrood	6.75	51	ePn	Pn	21 19 00.1	+3.1
SHRO	Shahrood	6.75	51	ePn	Pn	21 19 00.1	+3.1
IHRS	Heris	6.76	343	ePn	Pn	21 18 58.2	+1.0
AHAR	Ahar	6.92	343	ePn	Pn	21 19 00.5	+1.2

ITBZ	Tabriz	6.94	337	ePn	Pn	21 19 00.4	+0.7
GRMI	Germi	7.06	349	ePn	Pn	21 19 02.7	+1.5
GRMI	Germi	7.06	349	ePn	Pn	21 19 02.7	+1.5
SLWS		7.11	172	P	Pn	21 19 02.4	+0.6
NHRD	Haradh	7.13	184	P	Pn	21 19 02.5	+0.3
CHMN	Cheshme madani	7.14	104	ePn	Pn	21 19 04.0	+1.5
ISHB	Shabestar	7.17	334	ePn	Pn	21 19 02.9	0.0
HIL04	Ash Shaalaniya	7.19	237	P	Pn	21 19 01.9	-1.0
IMND	Minoodasht	7.22	40	ePn	Pn	21 19 05.6	+2.3
TRNA	Turayna	7.25	168	P	Pn	21 19 05.1	+1.3
TRNA				S	Sn	21 20 25.3	-0.3
BNDS	Bandar-Abbas	7.27	126	ePn	Pn	21 19 04.2	0.0
BNDS	Bandar-Abbas	7.27	126	ePn	Pn	21 19 04.2	0.0
GENO	Geno	7.27	126	ePn	Pn	21 19 04.0	-0.2
IBND	Bandar-abas	7.49	124	ePn	Pn	21 19 08.0	+0.9
IMRD	Marand	7.53	336	ePn	Pn	21 19 10.9	+3.3
ITEG	Tejag	7.83	80	ePn	Pn	21 19 14.3	+2.4
MRVT	Maraveh tapeh	7.88	41	ePn	Pn	21 19 15.0	+2.6
MRVT	Maraveh tapeh	7.88	41	ePn	Pn	21 18 57.8	-15
SLWR	Sila	7.99	166	P	Pn	21 19 14.8	+0.9
SLWR				S	Sn	21 20 41.5	-2.3
IKOO	Kooshah	8.02	84	ePn	Pn	21 19 17.3	+2.7
SBZV	Sabzevar	8.05	54	ePn	Pn	21 19 17.3	+2.4
KHNJ	Kahnooj	8.07	117	ePn	Pn	21 19 16.9	+1.9
AFRZ	Afriz	8.12	76	ePn	Pn	21 19 18.0	+2.2
SIRT	Sirnak	8.13	316	Pn	Pn	21 19 14.5	-1.3
BSRN	Basiran	8.13	87	ePn	Pn	21 19 18.1	+2.2
KBAM	BAM	8.13	107	ePn	Pn	21 19 17.7	+1.8
SHME	Shamm	8.17	134	i P	Pn	21 19 17.1	+0.8
	SNR=23						
SHME	Shamm	8.17	134	P	Pn	21 19 18.3	+2.0
	SNR=23						
SHME				P	Pn	21 19 18.3	+2.0
	SNR=23						
SHME				S	Sn	21 20 44.4	-3.8
SHME				S	Sn	21 20 44.4	-3.8
UMQ	Umm Al-Quwin	8.28	138	P	Pn	21 19 21.5	+3.7
BANOM	Banah	8.36	133	i P	Pn	21 19 18.9	-0.1
	SNR=55						
BANOM	Banah	8.36	133	P	Pn	21 19 20.3	+1.3
	SNR=54						
BANOM				S	Sn	21 20 49.7	-3.2
GHWR	Ruwais	8.40	159	P	Pn	21 19 20.7	+1.3
GHWR				S	Sn	21 20 50.2	-3.6
MAKU	Maku	8.46	333	ePn	Pn	21 19 22.7	+2.2
IMON	Monand	8.63	79	ePn	Pn	21 19 26.0	+3.1
MASF	Masafi	8.68	137	P	Pn	21 19 24.0	+0.6
	SNR=24						
MASF				S	Sn	21 20 55.8	-5.1
BJRD	Bojnurd	8.68	46	ePn	Pn	21 19 26.5	+3.0
BJRD	Bojnurd	8.68	46	ePn	Pn	21 19 26.5	+3.0
MSFE	Esma-Masafi	8.69	137	i P	Pn	21 19 23.9	+0.3
	SNR=25						
NAZ	Nazwa, Dubai	8.70	140	i P	Pn	21 19 24.6	+1.0
	SNR=53						
NAZ	Nazwa, Dubai	8.70	140	P	Pn	21 19 24.7	+1.0
	SNR=21						
NAZ				S	Sn	21 20 57.5	-3.8
AJN	Ajban	8.70	145	i P	Pn	21 19 24.0	+0.3
	SNR=21						
AJN	Ajban	8.70	145	P	Pn	21 19 25.0	+1.3
	SNR=19						
AJN				S	Sn	21 20 57.8	-3.5
IDAH	Dahanechah	8.76	82	ePn	Pn	21 19 27.9	+3.2
MDH	Madha	8.82	136	i P	Pn	21 19 25.0	-0.2
	SNR=29						
MDH	Madha	8.82	136	P	Pn	21 19 25.1	-0.2
	SNR=26						
MDH				S	Sn	21 20 59.0	-5.2
ASUD	Al Ashush, Dub	8.82	143	i P	Pn	21 19 25.2	-0.1
	SNR=132						
FAQ	Al Faqa, Dubai	8.86	142	i P	Pn	21 19 26.5	+0.7
	SNR=13						
FAQ	Al Faqa, Dubai	8.86	142	P	Pn	21 19 28.0	+2.1
	SNR=36						
FAQ				S	Sn	21 20 59.5	-5.7
	SNR=5.7						
MZWR	Madinat Zayed	8.93	154	P	Pn	21 19 27.5	+0.7
MZWR				S	Sn	21 21 02.6	-4.3
UOSS	Minazif	9.04	138	i P	Pn	21 19 27.8	-0.5
	SNR=21						
UOSS	Minazif	9.04	138	P	Pn	21 19 29.1	+0.9
UOSS				S	Sn	21 21 03.7	-5.8
UOSS	Minazif	9.04	138	Pn	Pn	21 19 27.5	-0.7
IPAY	Payeh	9.05	57	ePn	Pn	21 19 30.4	+1.8
RAYN	Ar Rayn	9.06	204	P	Pn	21 19 25.7	-2.9
RAYN	Ar Rayn	9.06	204	P	Pn	21 19 26.8	-1.8
RAYN	Ar Rayn	9.06	204		Pn	21 19 26.8	-1.8
GURO	Guroymak-BITLI	9.08	319	Pn	Pn	21 19 28.2	-0.7
HATD	Hatta, Dubai	9.09	139	i P	Pn	21 19 29.2	+0.2
	SNR=30						
HATD	Hatta, Dubai	9.09	139	P	Pn	21 19 30.0	+1.0
	SNR=30						
GNI	Garni	9.14	336	Pn	Pn	21 19 33.2	+3.4
	comp=E,0.2nm,0.3s,baz=36,slow=18,SNR=3.2						
GNI	Garni	9.14	336	Pn	Pn	21 19 30.1	+0.3
IMOG	Moghan	9.15	60	ePn	Pn	21 19 33.0	+3.0
SHRT	Shahrakht	9.20	76	ePn	Pn	21 19 34.2	+3.6
SHRT	Shahrakht	9.20	76	ePn	Pn	21 19 34.2	+3.6
GEYT	Alibeck	9.27	47	Pn	Pn	21 19 34.9	+3.6
	comp=E,54nm,0.3s,baz=238,slow=14,SNR=280						
GEYT				LR	LR	21 23 41.4	
	comp=E,14µm,18.0s,baz=230,slow=41						
GEYT	Alibeck	9.27	47		Pn	21 19 34.1	+2.7
GYA0B	ALIBECK ARRAY	9.27	47	Pn	Pn	21 19 34.1	+2.7
ALNE	Al Ain	9.51	143	i P	Pn	21 19 34.3	-0.4
	SNR=40						
ALNE	Al Ain	9.51	143	P	Pn	21 19 35.1	+0.4
	SNR=30						
ALNE				S	Sn	21 21 16.0	-5.1
	SNR=8.2						
IKRD	Kardeh	9.57	57	ePn	Pn	21 19 38.1	+2.3
AKT	Akhty	9.71	352c	iP	Pn	21 19 40.5	+3.0
AKT				pmax	pmax		
	comp=Z,88nm,1.2s						
IMYA	Miami	9.81	60	ePn	Pn	21 19 41.2	+2.3
SOHO	SOHO	9.86	140	i P	Pn	21 19 38.5	-1.0
	SNR=23						
SOHO	SOHO	9.86	140	P	Pn	21 19 39.5	0.0
SOHO				P	Pn	21 19 39.5	0.0
SOHO				S	Sn	21 21 24.1	-5.6
SOHO				S	Sn	21 21 24.1	-5.6
ZHSF	Zahedan	9.90	100	ePn	Pn	21 19 43.9	+3.6
ZHSF	Zahedan	9.90	100	ePn	Pn	21 19 43.9	+3.6
ZHDN	Zahedan	9.99	101	ePn	Pn	21 19 45.0	+3.5
KARS	Kars	10.19	331	P	Pn	21 19 44.6	+0.5
KARS	Kars	10.19	331	Pn	Pn	21 19 44.6	+0.5
UMZA	Um Al Zommool	10.38	150	P	Pn	21 19 46.0	-0.7
UMZA				P	Pn	21 19 46.0	-0.7
ARQ	Araqi	10.49	142	P	Pn	21 19 48.4	+0.1
	SNR=40						
GNBR	Gunib	10.71	350	⇑eP	Pn	21 19 52.7	+1.6
HOQ	Hoqain	10.73	138	P	Pn	21 19 50.5	-0.9
	SNR=16						
HOQ				P	Pn	21 19 50.5	-0.9
	SNR=16						
HOQ				S	Sn	21 21 46.1	-4.9
HOQ				S	Sn	21 21 46.1	-4.9
ASF	Jabal al Asfar	10.76	275	Pn	Pn	21 19 50.2	-1.8
	comp=Z,11nm,0.3s,baz=82,slow=6.4,SNR=89						
ASF				Sn	Sn	21 21 42.3	-10
	comp=Z,4.7nm,0.3s,baz=113,slow=14,SNR=5.6						
HRA	Herat	10.92	73	Pn	Pn	21 19 55.5	+1.3
BTLR	Botlikh	11.10	347	⇑eP	Pn	21 19 54.8	-1.7
MAK	Makhachkala	11.20	352	eP	Pn	21 19 56.6	-1.1
MAK				eS	Sn	21 22 01.2	-1.1
MAK				pmax	pmax		
	comp=Z,399nm,1.3s						
MAK				MLR	MLR		
	comp=Z,3µm,13.0s						
BIDO	Bidbid	11.25	136	P	Pn	21 19 59.1	+0.6
	SNR=13						
BIDO				P	Pn	21 19 59.1	+0.6
	SNR=13						
BSY	Bisya	11.34	141	P	Pn	21 19 60.0	+0.2
	SNR=34						
BSY				S	Sn	21 22 02.1	-4.0
CHBR	Chabahar	11.43	120	ePn	Pn	21 19 59.5	-1.6
CHBR	Chabahar	11.43	120	ePn	Pn	21 19 59.5	-1.6
GAZ	Gaziantep	11.48	301	Pn	Pn	21 20 02.6	+0.9
SMDO	Samad	11.56	137	P	Pn	21 20 03.0	+0.1
	SNR=18						
RCY	Rachaya	11.69	282	eP	Pn	21 20 04.9	+0.3
GROC	Groznyy	11.70	346	eP	Pn	21 20 05.9	+1.2
GROC				eS	Sn	21 22 19.4	+4.6
GROC				pmax	pmax		
	comp=Z,17nm,0.6s						
GROC				MLR	MLR		
	comp=Z,252nm,9.0s						
ONI	Oni	11.76	337	P	Pn	21 20 05.2	-0.3
ONI	Oni	11.76	337		Pn	21 20 05.2	-0.3
WSAR	Wadi Sarin	11.76	135	Pn	Pn	21 20 04.2	-1.4
	comp=Z,12nm,0.3s,baz=346,slow=9.0,SNR=82						
WSAR				Sn	Sn	21 22 08.8	-7.6
	comp=Z,15nm,0.3s,baz=174,slow=19,SNR=10						
WSAR				LR	LR	21 25 18.2	
	comp=Z,2µm,20.4s,baz=330,slow=40						
WSAR	Wadi Sarin	11.76	135	P	Pn	21 20 04.5	-1.1
	SNR=31						
ZEI	Tsey	11.79	339	eP	Pn	21 20 10.9	+4.8
ZEI				pmax	pmax		
	comp=Z,16nm,1.0s						
BHL	Bhannes	11.87	284	eP	Pn	21 20 07.4	+0.2
DQRL	Deir Qamar	11.92	283	eP	Pn	21 20 08.0	+0.2
GHAJ	Ghor Haditha	11.95	271	Pn	Pn	21 20 06.3	-1.8
MMAI	Mount Meron Ar	12.02	279	Pn	Pn	21 20 07.7	-1.5
	comp=Z,2.1nm,0.3s,baz=94,slow=18,SNR=6.8						
MMAI				Sn	Sn	21 22 16.1	-6.8
	comp=Z,3.3nm,0.3s,baz=86,slow=20,SNR=1.3						
MMAI				LR	LR	21 26 05.4	
	comp=Z,2µm,20.1s,baz=75,slow=44						
JMDO	Jabal Madar	12.13	139	P	Pn	21 20 12.0	+1.3
	SNR=45						
JMDO				P	Pn	21 20 12.0	+1.3
	SNR=45						
WBK	Wadi Bani Khal	12.44	136	P	Pn	21 20 15.8	+0.9
	SNR=18						
WBK				P	Pn	21 20 15.8	+0.9
	SNR=18						
NCK	Nalchik	12.53	340	⇓eP	Pn	21 20 19.5	+3.5
NCK				pmax	pmax		
	comp=Z,20nm,1.0s						
NEY	Neytrino	12.59	336	⇑eP	Pn	21 20 18.8	+1.9
NEY				pmax	pmax		
	comp=Z,2.0nm,1.0s						
EIL	Elat	12.76	264	Pn	Pn	21 20 17.3	-1.9
	comp=Z,2.8nm,0.3s,baz=112,slow=6.3,SNR=25						
EIL				LR	LR	21 26 26.2	
	comp=Z,4µm,18.4s,baz=86,slow=43						
KBZ	Khabaz	12.96	338	Pn	Pn	21 20 25.1	+3.3
	comp=Z,0.2nm,0.3s,baz=153,slow=8.5,SNR=39						
KBZ				LR	LR	21 25 24.3	
	comp=Z,575nm,20.3s,baz=146,slow=38						
KBZ				ScP	ScP	21 29 25.4	-2.0
	comp=Z,0.1nm,0.3s,baz=347,slow=0.6,SNR=8.9						
BNN	Bunyan	13.18	306	Pn	Pn	21 20 25.8	+0.8
KVAR	Kislovodsk Arr	13.22	338	Pn	P	21 20 31.1	-4.3
	baz=260,slow=23,SNR=13						
KVAR				LR	LR	21 25 06.8	
	comp=Z,2µm,21.0s,baz=70,slow=35						
KVAR				ScS	ScS	21 33 01.4	-3.3
	baz=187,slow=8.1,SNR=12						
KIV	Kislovodsk	13.23	338	eP	Pn	21 20 28.5	+2.9
KIV				eS	Sn	21 22 56.2	+4.0
KIV				pmax	pmax		
	comp=Z,91nm,1.0s						
KIV				MLR	MLR		
	comp=Z,1µm,12.0s						
KIV	Kislovodsk	13.23	338	Pn	Pn	21 20 28.5	+2.9
CSS	Mathiatis	13.91	287	Pn	Pn	21 20 35.5	+0.6
SOC	Sochi	14.04	329	eP	Pn	21 20 35.6	-1.0
SOC				e		21 23 11.3	
SOC				pmax	pmax		
	comp=Z,64nm,0.9s						
SOC				MLR	MLR		
	comp=Z,2µm,13.0s						
GOF	Gofitskoye	14.12	341	⇑eP	Pn	21 20 39.9	+2.2
GOF				pmax	pmax		
	comp=Z,117nm,0.8s						
SHAO	Shalim	14.83	157	P	Pn	21 20 44.0	-3.6
DIKM	Dikmen	15.04	314	⇑P	Pn	21 20 50.4	+0.1
BRTR	Keskin Array B	15.10	306	Pn	P	21 20 56.8	+0.4
	comp=Z,3.0nm,0.3s,baz=126,slow=12,SNR=53						
BRTR				LR	LR	21 28 13.8	
	comp=Z,2µm,19.4s,baz=122,slow=44						
BRTR	Keskin Array B	15.10	306	P	Pn	21 20 52.1	+0.8
BRTR	Keskin Array B	15.10	306	Pn	Pn	21 20 52.0	+0.8
BR131	Keskin Array S	15.11	306	P	Pn	21 20 51.1	-0.1
BR131				pmax	pmax		
	comp=Z,106nm,0.7s						
BR131	Keskin Array S	15.11	306	Pn	Pn	21 20 51.1	-0.1
BR131				IAmb	IAmb	21 21 06.7	
	comp=Z,106nm,0.7s						
SNOP	Sinop	15.29	316	Pn	Pn	21 20 53.0	-0.6
SNOP				IAmb	IAmb	21 21 16.5	
	comp=Z,184nm,1.4s						
ANTO	Ankara	15.75	305	P	P	21 21 03.0	-0.5
ANTO				pmax	pmax		
	comp=Z,326nm,1.2s						
ANTO	Ankara	15.75	305		P	21 21 03.0	-0.5
ANTO				IAmb	IAmb	21 21 11.3	
	comp=Z,326nm,1.1s						
BZK	Bozkurt	15.99	313	⇑P	Pn	21 21 04.1	+1.5
BZK	Bozkurt	15.99	313	Pn	Pn	21 21 02.1	-0.4
BZK				IAmb	IAmb	21 21 28.4	
	comp=Z,360nm,1.3s						
ANN	Anapa	16.02	327	eP	Pn	21 21 03.6	+0.7
ANN				eS	Sn	21 24 01.7	+1.7
ANN				pmax	pmax		
	comp=Z,118nm,1.2s						
ANN				MLR	MLR		
	comp=Z,2µm,13.0s						
ANN				MLR	MLR		
	comp=E,2µm,13.0s						
ANN				MLR	MLR		
	comp=N,1µm,11.0s						
KBL	Kabul	16.52	75	P	P	21 21 12.4	+0.2
KBL				pmax	pmax		
	comp=Z,130nm,1.1s						
KBL	Kabul	16.52	75	P	P	21 21 12.4	+0.2
ISP	Isparta	16.72	296	P	P	21 21 13.4	-0.9
ISP				pmax	pmax		
	comp=Z,564nm,1.4s						
ISP	Isparta	16.72	296		P	21 21 13.4	-0.9
ISP				IAmb	IAmb	21 21 22.7	
	comp=Z,564nm,1.4s						
ELL	Elmali	16.95	292	P	P	21 21 17.5	+0.6
ELL				pmax	pmax		
	comp=Z,473nm,1.0s						
ELL	Elmali	16.95	292	P	P	21 21 17.5	+0.6
MDUB	Mudurnu	17.12	305	P	P	21 21 18.9	+0.3
KDZE	Karadeniz Ereo	17.31	308	⇑P	P	21 21 20.9	+0.1
CHGR	Chuyangaron	17.36	62	P	Pn	21 21 19.0	-1.1
SIM	Simferopol'	17.77	322c	iP	P	21 21 27.0	+1.3
KULA	Kula-Manisa	18.31	297	P	P	21 21 33.2	+1.4
GAR	Garm	18.32	61	P	Pn	21 21 31.6	-0.4
TAS	Tashkent	18.41	54	P	Pn	21 21 33.3	+0.4
TAS				pmax	pmax		
	comp=Z,329nm,0.9s						
TAS	Tashkent	18.41	54		Pn	21 21 33.2	+0.4
TAS				IAmb	IAmb	21 21 35.5	
	comp=Z,329nm,0.9s						
ISK	Istanbul-Kandi	18.84	305	P	Pn	21 21 39.6	+1.5
BTK	Batken	19.02	59	P	Pn	21 21 40.1	-0.2
BTK				pmax	pmax		
	comp=Z,108nm,0.9s						
BTK	Batken	19.02	59	P	Pn	21 21 40.1	-0.2
ABKAR	Akbulak array	19.04	21	P	Pn	21 21 40.1	-0.3
ABKAR	Akbulak array	19.04	21	P	Pn	21 21 40.2	-0.3
BALB	Balikesir	19.21	300		Pn	21 21 43.5	+1.0
BALB				IAmb	IAmb	21 21 49.0	
	comp=Z,257nm,1.3s						
IUG	Iuzhnay	19.25	52	eP	P	21 21 41.3	-0.9
	baz=52						
IUG				eS	S	21 25 21.7	+2.1
	baz=52						
IUG	Iuzhnay	19.25	52	eP	P	21 21 41.2	-0.9
IUG				eS	S	21 25 21.6	+2.1
BRLS	Borolday	19.52	49	eP	P	21 21 42.3	-2.7
	baz=50						
BRLS				eS	S	21 25 23.7	-1.2
	baz=50						
BRLS	Borolday	19.52	49	eP	P	21 21 42.3	-2.7
BRLS				eS	S	21 25 23.6	-1.2
DRK	Karamyk	19.57	61	P	Pn	21 21 47.5	+0.3
DRK				IAmb	IAmb	21 21 53.1	
	comp=Z,92nm,0.7s						
AKTO	Aktyubinsk	19.59	16	P	P	21 21 46.2	+0.6
	comp=Z,5.6nm,0.3s,baz=203,slow=11,SNR=68						
AKTO				ScP	ScP	21 29 37.2	-3.0
	comp=Z,0.3nm,0.3s,baz=190,slow=2.9,SNR=13						
AKTO				ScS	ScS	21 33 18.7	-3.4
	comp=Z,0.1nm,0.3s,baz=131,slow=23,SNR=8.2						
NIL	Nilore	19.99	79	P	P	21 21 50.5	+0.3
NIL				pmax	pmax		
	comp=Z,186nm,0.9s						
NIL	Nilore	19.99	79	P	P	21 21 50.5	+0.3
NIL				IAmb	IAmb	21 21 58.6	
	comp=Z,186nm,0.9s						
KKAR	Karatay Array	20.00	50	P	P	21 21 50.1	-0.1
KKAR	Karatay Array	20.00	50	P	P	21 21 50.1	-0.1
SOCY	Socotra	20.00	167	P	P	21 21 46.9	-3.6
SOCY				IAmb	IAmb	21 21 56.6	
	comp=Z,250nm,1.1s						
VRH	Novokhopyorsk	20.17	346	eP	P	21 21 51.2	-0.7
VRH				eS	Sn	21 25 42.0	+1.7
VRH				pmax	pmax		
	comp=Z,590nm,0.8s						
VRH				smax	smax		
	comp=N,390nm,1.2s						
NPS	Neapolis	20.24	286	P	Pn	21 21 54.5	-0.3
CHOS	Chios island	20.27	295	P	Pn	21 21 54.8	-0.5
MANR	Mangalia	20.35	312	⇑P	P	21 21 53.5	-0.5
SANT	Santorini	20.44	289	P	P	21 21 55.0	-0.1
EFOR	EFORIE	20.45	313	⇑P	P	21 21 55.0	-0.1
APE	Apeiranthos	20.46	291	⇑P	Pn	21 21 58.4	+0.9
APE	Apeiranthos	20.46	291	P	P	21 21 55.9	+0.5
VORD	Divnogorie	20.54	341	eP	P	21 21 55.6	-0.4
VORD				pmax	pmax		
	comp=Z,300nm,0.8s						
BELG	Belogornoye	20.56	357	P	P	21 21 55.9	-0.2
	comp=Z,720nm,0.9s,baz=339,slow=0.6,SNR=82						
BELG				S	S	21 25 34.7	-11
	comp=Z,32nm,1.0s,baz=230,slow=21,SNR=1.4						
BELG				ScP	ScP	21 29 39.4	-3.0
	comp=Z,45nm,1.0s,baz=214,slow=1.8,SNR=5.2						
BELG				LR	LR	21 32 29.4	
	comp=Z,786nm,18.2s,baz=156,slow=44						
BELG				ScS	ScS	21 33 20.4	-4.8
	comp=Z,14nm,0.7s,baz=213,slow=18,SNR=6.2						
MFTR	Murfatlar	20.63	313	⇑P	P	21 21 58.1	+1.0
JURR	Jurilovca	20.65	314	⇑P	P	21 21 57.5	+0.3
EDRB	Edirne	20.75	305	P	P	21 21 58.8	+0.5
TIRR	Tirgusor	20.78	313	⇓P	P	21 21 59.2	+0.6
TIRR	Tirgusor	20.78	313	P	P	21 21 58.6	0.0
TIRR				pmax	pmax		
	comp=Z,447nm,0.9s						
TIRR	Tirgusor	20.78	313	P	P	21 21 58.6	0.0
VSR	Storozhevoye	20.80	341	eP	P	21 21 57.5	-1.3
VSR				eS	S	21 25 46.0	-4.1
VSR				pmax	pmax		
	comp=Z,140nm,0.8s						
VSR				smax	smax		
	comp=N,420nm,1.4s						
IDI	Anoyia	20.83	286	P	P	21 21 59.7	+0.3
	comp=N,119nm,0.9s,baz=70,slow=15,SNR=22						
IDI				S	S	21 25 49.4	-1.6
	comp=N,10nm,0.6s,baz=294,slow=21,SNR=2.3						
IDI				LR	LR	21 33 13.6	
	comp=N,410nm,19.3s,baz=86,slow=46						
IDI				ScS	ScS	21 33 22.8	-4.2
	comp=N,24nm,1.1s,baz=200,slow=19,SNR=3.3						
IDI	Anoyia	20.83	286	P	P	21 22 00.1	+0.8
TLCR		20.91	315	⇑P	P	21 21 59.4	-0.7
ALN	Alexandroupoli	20.92	302	P	P	21 22 01.3	+1.1
ALN	Alexandroupoli	20.92	302	P	P	21 22 00.5	+0.3
ALN				pmax	pmax		
	comp=Z,378nm,1.3s						
ALN	Alexandroupoli	20.92	302	P	P	21 22 00.5	+0.3
TPGR	Topolog	20.98	314	⇑P	P	21 22 00.5	-0.3
ICOR	Ion Corvin	21.00	312	⇑P	P	21 22 01.4	+0.4
TLBR	Topalu	21.05	313	⇑P	P	21 22 01.9	+0.3
PURM	Purcari	21.07	320	⇓P	P	21 22 00.9	-0.8
ATD	Arta Tunnel	21.17	199	P	P	21 22 05.3	+2.2
	comp=Z,99nm,1.1s,baz=352,slow=6.3,SNR=17						
ATD				LR	LR	21 30 45.2	
	comp=Z,2µm,21.1s,baz=14,slow=38						
ATD	Arta Tunnel	21.17	199	P	P	21 22 04.0	+0.9
ATD				IAmb	IAmb	21 22 19.9	
	comp=Z,145nm,0.9s						
HARR	Harsova	21.19	313	⇑P	P	21 22 03.4	+0.3
VORR	Voronezh	21.20	342	eP	P	21 22 05.0	+1.9
VORR				pmax	pmax		
	comp=Z,400nm,1.0s						
CFR	Carcaliu	21.31	315	⇑P	P	21 22 03.9	-0.5
RDO	Rodhopi	21.37	302	P	P	21 22 06.6	+1.6
VAM	Vamos	21.40	286	P	P	21 22 05.7	+0.3
TEND	Ethiopian Broa	21.48	203	eP	P	21 22 03.6	-2.8
AMRR	Amara	21.52	313	⇑P	P	21 22 07.5	+0.9
IMMV	Iera Moni Meta	21.58	287	P	P	21 22 08.9	+1.6
RAZG	Razgrad	21.59	309	⇓P	P	21 22 09.5	+2.2
TATR	Tatarca	21.59	316	⇑P	P	21 22 07.1	-0.2
SCTR	Scanteiesti	21.66	316	⇑P	P	21 22 08.1	0.0
VLDR	Vladesti	21.70	316	⇑P	P	21 22 07.5	-1.0
SLCR	Slobozia Conac	21.75	315	⇑P	P	21 22 10.1	+1.1
AML	Almayashu	21.76	55	P	P	21 22 11.2	+1.6
	SNR=232						
LEHL	Lehliu	21.79	312	⇑P	P	21 22 10.4	+0.9
TUDR		21.81	315	⇓P	P	21 22 09.9	+0.2
DION	Dionisos Attik	21.86	294	P	P	21 22 11.6	+1.2
VARL	Varlezi	21.87	316	⇑P	P	21 22 10.7	+0.4
MILM	Milestii Mici	21.89	319	⇑P	P	21 22 10.3	-0.2
MILM	Milestii Mici	21.89	319	eP	P	21 22 13.0	+2.5
MILM				e		21 22 30.0	
MILM				e		21 26 07.0	
MILM				eS	S	21 26 14.0	+2.5
MILM				pmax	pmax		
	comp=Z,600nm,1.4s						
MILM				MLR	MLR		
	comp=Z,700nm,15.0s						
MILM				MLR	MLR		
	comp=E,800nm,13.5s						
PTL	Penteli	21.91	293	P	P	21 22 12.2	+1.3
KIS	Kishinev	21.93	320	eP	P	21 22 14.0	+3.0
	comp=E,350nm,1.0s						
KIS	Kishinev	21.93	320	eP	P	21 22 14.0	+3.0
KIS				e		21 22 31.0	
KIS				eS	S	21 26 15.0	+2.7
KIS				pmax	pmax		
	comp=Z,350nm,1.0s						
KIS				smax	smax		
	comp=E,550nm,4.0s						
VLY	Voula,Athens	21.94	293	P	P	21 22 12.6	+1.4
EKS2	Erkin-Say	22.00	54	P	P	21 22 13.3	+1.3
	SNR=55						
LPSR	Galich'ya Gora	22.12	343	eP	P	21 22 11.7	-1.3
LPSR				eS	S	21 26 10.5	-5.4
LPSR				pmax	pmax		
	comp=Z,270nm,1.0s						
LPSR				smax	smax		
	comp=N,720nm,1.6s						
GRER		22.12	314	⇑P	P	21 22 14.2	+1.1
BIR	Birlad	22.19	317	⇑P	P	21 22 14.8	+1.0
SGRR	Singureni	22.21	310	⇑P	P	21 22 14.4	+0.3
SULR		22.24	312	⇑P	P	21 22 14.2	-0.1
ODBI	Odobesti	22.27	315	⇑P	P	21 22 15.3	+0.7
VASR	Vaslui	22.30	318	⇑P	P	21 22 15.2	+0.2
UCH	Uchtor	22.36	55	P	P	21 22 17.6	+1.4
	SNR=169						
BISRR	Bisoca	22.37	314	⇑P	P	21 22 16.5	+0.7
AAK	Ala-Archa	22.49	54	P	P	21 22 18.6	+1.4
	comp=N,15nm,0.5s,baz=263,slow=8.5,SNR=50						
AAK				PcP	PcP	21 26 11.6	+0.6
	comp=N,3.7nm,0.6s,baz=333,slow=2.3,SNR=1.7						
AAK				ScP	ScP	21 29 45.6	-2.0
	comp=N,8.1nm,0.7s,baz=215,slow=3.8,SNR=12						
AAK				LR	LR	21 32 27.9	
	comp=N,3µm,21.2s,baz=262,slow=40						
AAK				ScS	ScS	21 33 32.1	-0.9
	comp=N,1.7nm,0.7s,baz=32,slow=6.3,SNR=4.9						
AAK	Ala-Archa	22.49	54	P	P	21 22 18.6	+1.4
	SNR=38						
AAK	Ala-Archa	22.49	54	P	P	21 22 18.0	+0.7
AAK				IAmb	IAmb	21 22 26.6	
	comp=Z,123nm,1.1s						
VRI	Vrincioaia	22.52	315	⇓P	P	21 22 18.1	+0.8
VRI				⇓P	pP	21 22 18.3	-4.5
SECR		22.52	312	⇑P	P	21 22 17.3	0.0
PLOR	Plostina	22.56	315	⇓P	P	21 22 18.1	+0.3
NEHR	Nehoiu	22.56	314	⇓P	P	21 22 18.8	+1.0
DESE	Dese	22.59	206	eP	P	21 22 11.6	-7.1
NVR	Nevrokopi	22.63	302	P	P	21 22 18.4	-0.2

FRU1	Bishkek	22.64	54	P	P	21 22 19.5	+0.7
FRU1				pmax	pmax		
	comp=Z,178nm,1.2s						
FRU1	Bishkek	22.64	54	P	P	21 22 19.5	+0.7
FRU1				IAmb	IAmb	21 22 48.5	
	comp=Z,178nm,1.1s						
COPA	Copaceanca	22.67	310	⇑P	P	21 22 19.5	+0.6
KSH	Kashi	22.71	63	P	P	21 22 17.0	-2.6
KSH				pP	pP	21 22 21.8	-3.3
KSH				sP	sP	21 22 25.8	-1.6
KSH				S	S	21 26 18.0	-9.3
KSH				sS	pS	21 26 25.3	-8.5
KSH				pmax	pmax		
	comp=Z,86nm,1.3s						
KSH				LR	LR		
	comp=Z,2µm,13.7s						
KSH				LR	LR		
	comp=Z,7µm,16.3s						
KSH				LR	LR		
	comp=Z,8µm,17.2s						
USP	Ospenovka	22.72	53	P	P	21 22 20.5	+1.0
	SNR=84						
IAS	Iasi	22.74	319	⇑P	P	21 22 19.4	-0.3
SRS	Serrai	22.76	301	P	P	21 22 21.6	+1.6
CHMS	Chumysh	22.79	54	P	P	21 22 21.8	+1.5
	SNR=78						
KBK	Karagaybulak	22.81	55	P	P	21 22 22.2	+1.6
	SNR=78						
MLR	Muntele Rosu	22.81	313	⇓P	P	21 22 20.9	+0.3
MLR	Muntele Rosu	22.81	313	P	P	21 22 21.4	+0.8
	comp=Z,29nm,1.0s,baz=152,slow=7.8,SNR=20						
MLR				PcP	PcP	21 26 12.0	+0.5
	comp=Z,3.8nm,0.9s,baz=146,slow=3.6,SNR=1.3						
MLR				ScP	ScP	21 29 46.2	-2.2
	comp=Z,13nm,1.1s,baz=250,slow=3.6,SNR=5.2						
MLR				ScS	ScS	21 33 32.2	-1.8
	comp=Z,6.3nm,0.9s,baz=343,slow=11,SNR=6.3						
MLR	Muntele Rosu	22.81	313	P	P	21 22 20.3	-0.3
MLR				IAmb	IAmb	21 22 43.8	
	comp=Z,102nm,0.9s						
COVR	Voineasa-Covas	22.82	314	⇑P	P	21 22 21.6	+1.0
TESR	Tescani	22.90	316	⇑P	P	21 22 20.7	-0.6
HUMR	Humele	22.99	310	⇑P	P	21 22 22.2	-0.1
BTLS	Baital	23.14	48	⇑iP	P	21 22 24.2	+0.3
	comp=Z,78nm,0.7s,baz=49						
BTLS				eS	S	21 26 36.0	+1.6
	baz=49						
BTLS	Baital	23.14	48c	iP	P	21 22 24.1	+0.3
BTLS				eS	S	21 26 36.0	+1.6
BTLS				pmax	pmax		
	comp=Z,78nm,0.7s						
STFAR	Stefanesti-Arg	23.14	311	⇑P	P	21 22 25.6	+1.7
VLAD	Vladila	23.15	309	⇑P	P	21 22 24.9	+1.0
OZUR		23.20	315	⇓P	P	21 22 24.5	0.0
MTUR	Matau	23.24	312	⇑P	P	21 22 27.0	+2.1
AGG	Agios Georgios	23.25	295	P	P	21 22 24.9	-0.2
AGG	Agios Georgios	23.25	295	P	P	21 22 25.2	+0.1
AGG				pmax	pmax		
	comp=Z,155nm,1.2s						
AGG	Agios Georgios	23.25	295	P	P	21 22 25.2	+0.1
AGG				IAmb	IAmb	21 22 43.1	
	comp=Z,155nm,1.2s						
ITM	Ithomi	23.34	291	P	P	21 22 25.1	-0.8
ITM				IAmb	IAmb	21 22 36.5	
	comp=Z,88nm,0.8s						
VOIR		23.34	312	⇓P	P	21 22 26.7	+0.7
TKM2	Tokmak 2	23.35	54	P	P	21 22 27.3	+1.1
	SNR=254						
TKM2	Tokmak 2	23.35	54	iP	P	21 22 27.6	+1.4
TKM2				pmax	pmax		
	comp=Z,181nm,1.0s						
DOPR	Dopca	23.38	314	⇑P	P	21 22 26.2	-0.1
BOOM	Boomskoye usch	23.45	56	P	P	21 22 28.8	+1.7
BOOM				pmax	pmax		
	comp=Z,163nm,1.1s						
BOOM	Boomskoye usch	23.45	56	P	P	21 22 28.8	+1.7
BOOM				IAmb	IAmb	21 22 36.3	
	comp=Z,162nm,1.1s						
VTS	Vitosha	23.46	305	⇓P	P	21 22 28.1	+0.9
VTS	Vitosha	23.46	305	P	P	21 22 25.8	-1.4
VTS				pmax	pmax		
	comp=Z,38nm,1.0s						
VTS	Vitosha	23.46	305	P	P	21 22 25.8	-1.4
ANX	Ano Chora	23.51	294	P	P	21 22 27.6	-0.1
ARR	Arges	23.57	312	⇑P	P	21 22 28.4	+0.2
ULHL	Ulahol	23.59	56	P	P	21 22 30.8	+2.3
	SNR=33						
DRO	Drossia	23.59	293	P	P	21 22 28.2	-0.2
PRAR	RASCA	23.59	318	⇑P	P	21 22 29.9	+1.6
GRG	Griva	23.59	300	P	P	21 22 30.1	+1.7
STIP	Stip	23.94	302	iP	P	21 22 30.0	-1.7
ANKE	Ethiopia-Afar	23.97	204	eP	P	21 22 27.5	-5.0
MDB	Medias	24.08	314	⇑P	P	21 22 34.2	+1.2
AKASG	Malin Array Be	24.11	327	P	P	21 22 31.8	-1.3
	comp=Z,11nm,0.6s,baz=130,slow=9.8,SNR=38						
AKASG				PcP	PcP	21 26 13.9	0.0
	comp=Z,3.8nm,0.6s,baz=91,slow=2.0,SNR=4.5						
AKASG				S	S	21 26 48.2	-1.6
	comp=Z,14nm,1.1s,baz=134,slow=19,SNR=6.3						
AKASG				ScP	ScP	21 29 49.6	-2.0
	comp=Z,9.7nm,0.9s,baz=105,slow=1.7,SNR=18						
AKASG				ScS	ScS	21 33 34.9	-3.6
	comp=Z,0.5nm,0.5s,baz=124,slow=4.6,SNR=5.9						
AKASG	Malin Array Be	24.11	327	P	P	21 22 31.9	-1.3
AKASG				IAmb	IAmb	21 22 38.0	
	comp=Z,71nm,0.9s						
AKBB	Malin Array Si	24.11	327	P	P	21 22 31.9	-1.2
AKBB				pmax	pmax		
	comp=Z,71nm,0.7s						
AKBB	Malin Array Si	24.11	327	P	P	21 22 31.9	-1.2
AKBB				IAmb	IAmb	21 22 39.1	
	comp=Z,71nm,0.7s						
LOT	Lotru	24.16	312	⇑P	P	21 22 33.7	-0.1
KUU	Kurty	24.19	53	⇑iP	P	21 22 35.0	+0.9
	comp=Z,77nm,0.9s,baz=53						
KUU	Kurty	24.19	53c	iP	P	21 22 34.9	+0.9
KUU				pmax	pmax		
	comp=Z,77nm,0.9s						
SRE	Strehaia	24.20	309	⇓P	P	21 22 35.6	+1.4
KDJ	Kajisay	24.22	57	P	P	21 22 35.9	+1.4
KDJ				pmax	pmax		
	comp=Z,85nm,0.9s						
KDJ	Kajisay	24.22	57	P	P	21 22 35.9	+1.4
KDJ				IAmb	IAmb	21 22 46.1	
	comp=Z,85nm,0.8s						
BURAR	Bucovina Array	24.31	317	⇑P	P	21 22 35.4	+0.2
BURAR	Bucovina Array	24.31	317	P	P	21 22 34.3	-0.9
FNA	Florina	24.31	299	P	P	21 22 34.9	-0.3
FNA				pmax	pmax		
	comp=Z,83nm,1.1s						
FNA	Florina	24.31	299	P	P	21 22 34.9	-0.3
FNA				IAmb	IAmb	21 22 54.0	
	comp=Z,83nm,1.1s						
TNSS	Tian-Shan	24.32	55	eP	P	21 22 36.4	+0.7
	baz=55						
BUR08	Bucovina Ar. S	24.33	317	P	P	21 22 34.7	-0.7
AAA	Alma-Ata	24.36	55	eP	P	21 22 35.4	-0.2
	baz=55						
AAA	Alma-Ata	24.36	55	eP	P	21 22 35.4	-0.2
MDOK	Medeo	24.43	55	eP	P	21 22 36.9	+0.4
	baz=55						
MDOK	Medeo	24.43	55	eP	P	21 22 36.8	+0.4
LKD2	Lefkada island	24.51	294	P	P	21 22 36.7	-0.3
TSLK	Tsoukalades, L	24.52	294	P	P	21 22 36.9	-0.1
ARCR	ARCALIA	24.55	316	⇑P	P	21 22 38.4	+1.2
SKO	Skopje	24.55	302	iP	P	21 22 42.2	+4.9
TARG	Taragay, Kyrgy	24.57	58	P	P	21 22 38.5	+0.6
CHKK	Chushkaly	24.62	53	eP	P	21 22 37.6	-0.4
	baz=53						
DMLN	Damoulianata-K	24.67	293	P	P	21 22 43.3	+4.9
KBN	Korca	24.72	299	P	P	21 22 46.1	+7.2
KBN	Korca	24.72	299	P	P	21 22 38.8	-0.1
KBN				pmax	pmax		
	comp=Z,299nm,1.2s						
KBN	Korca	24.72	299	P	P	21 22 38.8	-0.1
GZR	Gura Zlata	24.77	311	⇑P	P	21 22 40.5	+1.1
HERR	Herculane	24.81	309	⇑P	P	21 22 38.8	-0.8
OHR	Ohrid	24.81	300	iP	P	21 22 40.7	+1.0
CJR	Cluj-Napoca	24.83	314	⇑P	P	21 22 40.9	+1.1
AAE	Adis Abeba	24.84	206	eP	P	21 22 43.0	+2.5
AAE	Adis Abeba	24.84	206	eP	P	21 22 39.5	-1.0
BRZS	Berezniki	24.98	37	⇑iP	P	21 22 42.1	+0.9
	comp=Z,41nm,0.7s,baz=37						
BRZS	Berezniki	24.98	37c	iP	P	21 22 42.0	+0.9
BRZS				pmax	pmax		
	comp=Z,41nm,0.7s						
FURI	Furi	24.99	206	eP	P	21 22 44.8	+3.0
FURI	Furi	24.99	206	eP	P	21 22 39.5	-2.4
OBN	Obninsk	25.00	342	⇑P	P	21 22 40.9	-0.2
OBN	Obninsk	25.00	342	P	P	21 22 40.5	-0.6
	comp=Z,18nm,0.7s,baz=306,slow=3.5,SNR=16						
OBN				S	S	21 27 01.7	-2.3
	comp=Z,6.1nm,1.0s,baz=75,slow=23,SNR=1.4						
OBN				ScP	ScP	21 29 51.2	-2.7
	comp=Z,3.7nm,0.6s,baz=97,slow=5.8,SNR=5.4						
OBN				LR	LR	21 34 00.9	
	comp=Z,502nm,18.3s,baz=160,slow=40						
OBN	Obninsk	25.00	342c	iP	P	21 22 40.6	-0.6
OBN				e		21 23 16.5	
OBN				ePPP	PPP	21 23 25.7	
OBN				eS	S	21 27 00.3	-3.7
OBN				eSS	SnSn	21 28 00.4	+7.4
OBN				pmax	pmax		
	comp=Z,106nm,1.0s						
OBN				MLR	MLR		
	comp=Z,2µm,19.0s						
OBN	Obninsk	25.00	342	P	P	21 22 40.2	-1.0
OBN				IAmb	IAmb	21 22 47.8	
	comp=Z,77nm,0.6s						
PRZ	Przheval'sk	25.19	57	P	P	21 22 44.0	+0.7
PRZ				pmax	pmax		
	comp=Z,126nm,0.7s						
PRZ	Przheval'sk	25.19	57	P	P	21 22 44.0	+0.7
PHP	Peshkopia	25.20	301	P	P	21 22 44.2	+0.9
MDVR	Moldovita	25.23	309	⇑P	P	21 22 44.1	+0.6
MOS	Moscow	25.30	344	eP	P	21 22 43.3	-0.6
MOS				e		21 23 24.1	
MOS				eS	S	21 27 05.8	-3.0
MOS				pmax	pmax		
	comp=Z,400nm,1.4s						
MOS				pmax	pmax		
	comp=Z,259nm,1.3s						
ARXS	Arharly	25.31	53	eP	P	21 22 44.7	+0.5
BMR	Baia Mare	25.34	316	⇑P	P	21 22 45.5	+1.1
ARU	Arti	25.35	12	P	P	21 22 44.6	+0.3
	comp=Z,17nm,0.6s,baz=190,slow=5.9,SNR=50						
ARU				ScP	ScP	21 29 52.4	-2.5
	comp=Z,6.4nm,0.8s,baz=198,slow=7.8,SNR=6.4						
ARU				LR	LR	21 34 57.0	
	comp=Z,1µm,20.0s,baz=188,slow=42						
ARU	Arti	25.35	12c	iP	P	21 22 44.6	+0.3
ARU				PPP	PPP	21 23 28.1	
ARU				S	S	21 27 12.8	+3.2
ARU				SS	SnSn	21 28 01.9	+0.3
ARU				pmax	pmax		
	comp=Z,171nm,1.3s						
ARU				MLR	MLR		
	comp=Z,869nm,17.0s						
ARU	Arti	25.35	12	P	P	21 22 44.1	-0.2
ARU				IAmb	IAmb	21 22 54.1	
	comp=Z,107nm,0.9s						
SATY	Saty	25.35	56	⇑iP	P	21 22 46.2	+1.4
	comp=Z,44nm,0.9s,baz=56						
SATY	Saty	25.35	56c	iP	P	21 22 46.1	+1.4
SATY				pmax	pmax		
	comp=Z,45nm,0.9s						
DRGR		25.41	314	⇑P	P	21 22 45.6	+0.5
MESR	Meseseni	25.42	315	⇓P	P	21 22 45.9	+0.7
TIR	Tirane	25.55	300	⇑P	P	21 22 47.1	+0.8
TIR	Tirane	25.55	300	P	P	21 22 46.5	+0.2
TIR				pmax	pmax		
	comp=Z,204nm,0.7s						
TIR	Tirane	25.55	300	P	P	21 22 46.5	+0.2
POO	Poona	25.60	115	⇑iP	P	21 22 48.0	+1.0
	comp=Z,110nm,1.6s						
BZS	Buzias	25.61	310	⇑P	P	21 22 47.0	+0.2
VLO	Vlora	25.66	298	P	P	21 22 48.0	+0.7
VLO				pmax	pmax		
	comp=Z,441nm,1.3s						
VLO	Vlora	25.66	298	P	P	21 22 48.0	+0.7
UZB	Uzynbulak	25.81	56	⇑iP	P	21 22 50.0	+1.1
	comp=Z,61nm,1.3s,baz=56						
UZB	Uzynbulak	25.81	56c	iP	P	21 22 49.9	+1.1
UZB				pmax	pmax		
	comp=Z,61nm,1.3s						
BANR	Banloc	25.83	310	⇑P	P	21 22 50.8	+1.9
SIRR	Siria	25.84	312	⇑P	P	21 22 50.1	+1.1
BRVK	Borovoye	25.94	29c	iP	P	21 22 50.5	+0.7
BRVK				pmax	pmax		
	comp=Z,69nm,0.9s						
BRVK	Borovoye	25.94	29	P	P	21 22 50.3	+0.6
BRVK				IAmb	IAmb	21 22 53.8	
	comp=Z,73nm,0.8s						
BVAR	Borovoye Array	25.96	29	P	P	21 22 50.7	+0.8
	comp=Z,60nm,0.7s,baz=225,slow=17,SNR=191						
BVAR				ScP	ScP	21 29 54.2	-2.6
	comp=Z,8.0nm,0.6s,baz=218,slow=11,SNR=14						
BVAR				ScS	ScS	21 33 40.4	-5.7
	comp=Z,0.3nm,0.4s,baz=355,slow=30,SNR=1.7						
CEI	Carei	25.96	315	⇑P	P	21 22 50.2	+0.2
TDK	Taldyqorghan	25.97	51	eP	P	21 22 50.2	+0.1
	comp=Z,130nm,1.2s,baz=52						
TDK	Taldyqorghan	25.97	51	eP	P	21 22 50.2	+0.1
TDK				pmax	pmax		
	comp=Z,130nm,1.2s						
SVE	Sverdlovsk	26.11	14d	eP	P	21 22 51.8	+0.5
SVE				eS	S	21 27 27.0	+5.3
SVE				pmax	pmax		
	comp=Z,115nm,1.0s						
SVE				MLR	MLR		
	comp=Z,2µm,15.0s						
TRPA	Tarpa	26.13	316	⇑P	P	21 22 51.8	+0.3
TRPA	Tarpa	26.13	316	eP	P	21 22 51.4	-0.1
LVV	L'vov	26.16	321	eP	P	21 22 52.6	+0.8
LVV				eS	S	21 27 22.0	-0.6
LVV				pmax	pmax		
	comp=Z,180nm,1.4s						
DIVS	Divibare	26.17	306	eP	P	21 22 52.7	+0.6
DIVS	Divibare	26.17	306	P	P	21 22 51.4	-0.6
DRME	Dracevica, Mon	26.23	302	eP	P	21 22 53.2	+0.7
PDG	Podgorica	26.23	302	⇑P	P	21 22 53.3	+0.8
PDG	Podgorica	26.23	302	eP	P	21 22 52.3	-0.2
PDG	Podgorica	26.23	302	P	P	21 22 52.7	+0.2
SCTE	Santa Cesarea	26.37	297	P	P	21 22 53.7	0.0
SCTE				IAmb	IAmb	21 23 04.6	
	comp=Z,142nm,1.3s						
RUDO	Rudo	26.46	305	eP	P	21 22 54.2	-0.4
BBLS	Lazići	26.50	305	eP	P	21 22 56.2	+1.1
UZH	Uzhgorod	26.51	317	eP	P	21 22 55.2	+0.2
UZH				e		21 23 01.6	
FRGS	Fruska Gora	26.63	308	⇑P	P	21 22 57.0	+0.8
FRGS	Fruska Gora	26.63	308	eP	P	21 23 01.2	+5.1
KOLS	Kolonicke sedl	26.67	318	eP	P	21 22 57.8	+1.3
KOLS				pmax	pmax		
	comp=Z,207nm,1.2s						
KOLS	Kolonicke sedl	26.67	318	eP	P	21 22 57.8	+1.3
KIRV	Kirov	26.72	360	P	P	21 22 56.8	+0.1
	comp=Z,206nm,0.7s,baz=139,slow=0.7,SNR=80						
KIRV				ScP	ScP	21 29 56.0	-2.8
	comp=Z,29nm,0.8s,baz=257,slow=3.9,SNR=6.0						
KIRV				LR	LR	21 36 14.8	
	comp=Z,2µm,18.2s,baz=184,slow=42						
BRY	Bratogost	26.86	303	eP	P	21 22 57.9	-0.5
HAPS	Han Pijesak,Bl	26.88	306	eP	P	21 22 58.7	+0.2
TREB	Trebinje	26.95	303	eP	P	21 22 59.8	+0.8
DBRK	Dubrovnik	27.09	302	iP	P	21 23 03.0	+2.7
CRVS	Cervenica-Dubn	27.13	317	eP	P	21 23 01.3	+0.8
CRVS				pmax	pmax		
	comp=Z,107nm,1.0s						
CRVS	Cervenica-Dubn	27.13	317	eP	P	21 23 01.3	+0.8
MNK	Minsk	27.39	332	iP	P	21 23 02.1	-0.7
MNK				iPPP	PPP	21 23 54.1	
MNK				i		21 26 21.1	
MNK				iS	S	21 27 42.9	+1.0
MNK				iSS	SnSn	21 28 52.7	+1.3
MNK				pmax	pmax		
	comp=Z,123nm,1.0s						
MNK				pmax	pmax		
	comp=N,75nm,1.2s						
MNK				pmax	pmax		
	comp=E,18nm,1.1s						
MNK				MLR	MLR		
	comp=E,99nm,17.0s						
MNK				MLR	MLR		
	comp=Z,1µm,18.0s						
MNK				MLR	MLR		
	comp=N,967nm,17.0s						
MNK	Minsk	27.39	332	iP	P	21 23 02.2	-0.6
	comp=E,18nm,1.1s						
MNK				iP	P	21 23 02.2	-0.6
	comp=N,75nm,1.2s						
MNK				iP	P	21 23 02.2	-0.6
	comp=Z,123nm,1.0s,baz=317						
MNK				iPP	PP	21 23 46.0	-19
MNK				iPPP	PPP	21 23 54.2	
MNK				iS	S	21 27 43.0	+1.1
MNK				iSS	SnSn	21 28 52.7	+1.3
MNK				iSSS	SSS	21 29 06.9	
MNK				iLQ	LQ	21 31 15.4	
MNK				iLR	LR	21 33 50.1	
MNK				iLRM	MLR	21 35 00.5	
	comp=E,99nm,16.6s						
MNK				iLRM	MLR	21 35 06.2	
	comp=Z,1µm,18.1s						
MNK				iLRM	MLR	21 35 12.0	
	comp=N,967nm,16.6s						
DILA	Dilla	27.41	205	eP	P	21 23 15.4	+12
STON	Ston	27.45	303	eP	P	21 23 07.6	+4.1
STON	Ston	27.45	303	iP	P	21 23 06.6	+3.1
TIP	Timpagrande	27.57	295	⇓P	P	21 23 06.3	+1.6
TIP	Timpagrande	27.57	295	P	P	21 23 05.7	+0.9
TIP				IAmb	IAmb	21 23 10.8	
	comp=Z,103nm,1.3s						
PSZ	Piszkesteto	27.62	314	⇓P	P	21 23 05.0	-0.1
PSZ	Piszkesteto	27.62	314	eP	P	21 23 04.8	-0.3
PSZ	Piszkesteto	27.62	314	P	P	21 23 04.8	-0.3
PSZ				pmax	pmax		
	comp=Z,26nm,0.9s						
PSZ	Piszkesteto	27.62	314	P	P	21 23 04.8	-0.3
MORH	Mrgy, Hungar	27.76	310	⇑P	P	21 23 06.5	+0.2
MORH	Mrgy, Hungar	27.76	310	eP	P	21 23 05.8	-0.4
MORH	Mrgy, Hungar	27.76	310	eP	P	21 23 06.0	-0.2
BUD	Budapest	27.98	313	eP	P	21 23 08.6	+0.4
RICI	Ricice	28.00	304	iP	P	21 23 15.4	+6.9
LSTV	Lastovo	28.01	302	iP	P	21 23 14.7	+6.2
KOVH	Kovagotottos	28.07	309	eP	P	21 23 07.0	-2.1
NACGM	Naroch	28.12	332	iP	P	21 23 08.4	-0.9
MGRS	Mrkonjic Grad	28.26	306	eP	P	21 23 11.2	+0.4
BLY	Banja Luka	28.28	306	eP	P	21 23 12.6	+1.7
LANS	Liptovska Anna	28.41	316	eP	P	21 23 12.9	+0.9
LANS				e		21 23 17.3	
LANS				pmax	pmax		
	comp=Z,11nm,0.9s						
LANS	Liptovska Anna	28.41	316	eP	P	21 23 12.9	+0.9
LANS				e		21 23 17.2	
HVAR	Hvar	28.41	303	iP	P	21 23 15.7	+3.6
CSKK	Cskako	28.42	312	eP	P	21 23 10.2	-1.9
KURBB	Kurchatov Arra	28.45	40	P	P	21 23 13.8	+1.4
	comp=Z,32nm,0.7s,baz=242,slow=9.5,SNR=164						
KURBB				PcP	PcP	21 26 23.6	-0.4
	comp=Z,6.5nm,1.0s,baz=238,slow=3.3,SNR=3.8						
KURBB				ScP	ScP	21 30 01.5	-2.8
	comp=Z,3.8nm,0.9s,baz=244,slow=4.1,SNR=8.8						
SRO2	Moca	28.48	313	eP	P	21 23 12.6	0.0
SRO2	Moca	28.48	313	eP	P	21 23 12.6	0.0
VYHS	Vyhne	28.50	315	eP	P	21 23 18.6	+5.7
VYHS	Vyhne	28.50	315	e	P	21 23 18.6	+5.7
KURK	Kurchatov	28.55	40	P	P	21 23 13.8	+0.6
KURK						21 26 23.6	
KURK	Kurchatov	28.55	40	P	P	21 23 14.3	+1.1
KURK				IAmb	IAmb	21 23 20.5	
	comp=Z,100nm,1.1s						
SRO	Srobarova	28.55	313	eP	P	21 23 14.0	+0.7
SRO				e		21 23 19.1	
SRO				pmax	pmax		
	comp=Z,23nm,1.1s						
SRO	Srobarova	28.55	313	eP	P	21 23 14.0	+0.7
SRO				e		21 23 19.1	
OJC	Ojcow	28.71	318	P	P	21 23 13.7	-0.9
OJC				pmax	pmax		
	comp=Z,34nm,0.9s						
OJC	Ojcow	28.71	318	P	P	21 23 13.7	-0.9
KOLL	Kolacno	28.80	314	eP	P	21 23 15.9	+0.4
MPLH	Magyarpolny	28.80	311	eP	P	21 23 15.2	-0.3
ISAL	Salakas	28.86	332	eP	P	21 23 16.8	+0.9
MAKZ	Makanchi	28.93	50	P	P	21 23 17.6	+0.9
MAKZ				pmax	pmax		
	comp=Z,28nm,0.9s						
MAKZ	Makanchi	28.93	50	P	P	21 23 17.6	+0.9
EGYH	Egyhazaskeszo	29.02	312	eP	P	21 23 20.0	+2.6
SUW	Suwalki	29.08	327	eP	P	21 23 17.6	-0.2
SUW	Suwalki	29.08	327	P	P	21 23 17.2	-0.7
SUW				pmax	pmax		
	comp=Z,133nm,1.0s						
SUW	Suwalki	29.08	327	P	P	21 23 17.2	-0.7
ZIRJ	Zirje	29.09	304	iP	P	21 23 23.7	+5.6
MORI	Morici	29.09	304	iP	P	21 23 18.8	+0.7
MK31	Makanchi Array	29.12	50c	iP	P	21 23 19.5	+1.1
MK31				pmax	pmax		
	comp=Z,20nm,0.5s						
MK31	Makanchi Array	29.12	50	P	P	21 23 19.1	+0.7
MKAR	Makanchi Array	29.12	50	P	P	21 23 19.5	+1.1
	comp=Z,22nm,0.7s,baz=247,slow=11,SNR=195						
MKAR				PcP	PcP	21 26 25.6	-0.3
	comp=Z,2.3nm,0.7s,baz=251,slow=2.7,SNR=2.0						
MKAR				ScP	ScP	21 30 03.6	-2.9
	comp=Z,1.2nm,0.7s,baz=0.0,slow=2.4,SNR=3.7						
MKAR				LR	LR	21 37 00.5	
	comp=Z,2µm,19.9s,baz=241,slow=40						
MKAR	Makanchi Array	29.12	50	P	P	21 23 18.9	+0.5
PYUN	Piuthan	29.13	89	eP	P	21 23 19.8	+1.0
	comp=Z,123nm,0.6s						
SEM	Semipalatinsk	29.31	42	eP	P	21 23 20.3	0.0
	comp=Z,28nm,0.9s,baz=42						
SEM	Semipalatinsk	29.31	42	eP	P	21 23 20.2	0.0
SEM				pmax	pmax		
	comp=Z,28nm,0.9s						
JAVC	Velka Javorina	29.36	315	eP	P	21 23 20.9	+0.4
JAVC				e		21 30 06.3	
SMOL	Smolenice	29.37	314	eP	P	21 23 20.8	+0.3
SMOL	Smolenice	29.37	314	eP	P	21 23 20.8	+0.3
KOGS	Kog	29.40	309	iP	P	21 23 21.1	+0.3
MODS	Modra-Piesok	29.41	313	eP	P	21 23 20.5	-0.4
MODS				pmax	pmax		
	comp=Z,23nm,1.3s						
MODS	Modra-Piesok	29.41	313	eP	P	21 23 20.5	-0.4
ZST	Bratislava	29.45	313	eP	P	21 23 21.0	-0.2
ZST	Bratislava	29.45	313	eP	P	21 23 21.0	-0.2
OKC	Ostrava-Krasne	29.48	317	eP	P	21 23 21.9	+0.4
OKC	Ostrava-Krasne	29.48	317	eP	P	21 23 21.9	+0.4
DUGI	Dugi Otok	29.58	304	iP	P	21 23 26.5	+4.1
SOP	Sopron	29.61	312	eP	P	21 23 22.7	+0.1
PABE	Paberze	29.70	330	eP	P	21 23 23.4	+0.1
PABE	Paberze	29.70	330	P	P	21 23 22.9	-0.4
DANN	Dangsing	29.71	88	eP	P	21 23 25.4	+1.2
	comp=Z,406nm,1.0s						
KOLN	Koldanda	29.74	89	eP	P	21 23 25.0	+0.8
	comp=Z,42nm,0.8s						
KLMR	Klimovskoe	29.74	350	eP	P	21 23 21.5	-2.2
KLMR				e		21 26 25.9	
KLMR				eS	S	21 28 19.3	+0.5
KLMR				pmax	pmax		
	comp=Z,102nm,1.1s						
KLMR	Klimovskoe	29.74	350	eP	P	21 23 21.5	-2.2
KLMR				AMP		21 23 23.8	
	comp=Z,102nm,1.1s						
KLMR				ePcP	PcP	21 26 25.9	-1.2
KLMR				eS	S	21 28 19.3	+0.5
KLMR				eS	S	21 28 19.3	+0.5
KLMR				LQ	LQ	21 32 59.9	
KLMR				LQ	LQ	21 32 59.9	
KLMR				LR	LR	21 35 35.3	
CRES	Cresnjev	29.75	308	eP	P	21 23 29.1	+5.1
BOJS	Bojanci	29.80	307	iP	P	21 23 24.5	+0.1
MORC	Moravsky Berou	29.81	316	⇑P	P	21 23 23.9	-0.6
MORC	Moravsky Berou	29.81	316	P	P	21 23 23.5	-1.0
MORC				pmax	pmax		
	comp=Z,14nm,0.8s						
MORC	Moravsky Berou	29.81	316	eP	P	21 23 23.8	-0.7
MORC				e		21 30 06.9	
MORC	Moravsky Berou	29.81	316	P	P	21 23 23.5	-1.0
PRGR	Permogore	29.89	356	eP	P	21 23 24.0	-1.0
PRGR				e*SP	pP	21 23 28.2	-2.6
PRGR				pmax	pmax		
	comp=Z,57nm,0.4s						
HYB	Hyderabad	29.90	112	iP	P	21 23 26.5	+0.9
ARSA	Arzberg	30.13	311	eP	P	21 23 28.3	+1.0
	comp=Z,17nm,1.1s						
ARSA				eP	PcP	21 26 34.1	+5.7
	comp=Z,4.0nm,0.7s						
CONA	Conrad Observa	30.13	312	eP	P	21 23 24.8	-2.6

	comp=Z,22nm,1.3s						
VRAC	**Vranov**	**30.18**	**315**	⇑P	**P**	**21 23 29.4**	**+1.6**
VRAC	**Vranov**	**30.18**	**315**	P	**P**	**21 23 27.6**	**-0.1**
	comp=Z,8.5nm,0.8s,baz=110,slow=8.6,SNR=9.8						
VRAC	**Vranov**	**30.18**	**315**	*e*P	**P**	**21 23 27.5**	**-0.3**
VRAC				*e*		21 30 08.5	
KRUC	**Moravsky**	**30.21**	**314**	*e*P	**P**	**21 23 27.6**	**-0.4**
KRUC				*e*		21 30 08.5	
SOKA	**Soboth**	**30.27**	**309**	*e*P	**P**	**21 23 28.6**	**-0.1**
	comp=Z,12nm,0.9s						
SOKA				*e*P	**PcP**	**21 26 35.2**	**+6.3**
	comp=Z,4.3nm,0.6s						
KRLC	**Kraliky**	**30.38**	**316**	*e*P	**P**	**21 23 29.0**	**-0.5**
KRLC				*e*pP	**pP**	**21 23 33.3**	**-2.0**
KRLC	**Kraliky**	**30.38**	**316**	*e*P	**P**	**21 23 29.0**	**-0.5**
KRLC				*e*		21 23 33.3	
CEY	**Cerknica**	**30.42**	**307**	*e*P	**P**	**21 23 30.8**	**+0.9**
LJU	**Ljubljana**	**30.43**	**308**	*e*P	**P**	**21 23 30.6**	**+0.6**
LJU	**Ljubljana**	**30.43**	**308**	*e*P	**P**	**21 23 30.4**	**+0.4**
AQU	**L'Aquila**	**30.48**	**300**	P	**P**	**21 23 30.7**	**+0.2**
AQU				pmax	pmax		
	comp=Z,70nm,1.1s						
AQU	**L'Aquila**	**30.48**	**300**	*e*P	P	21 23 36.2	+5.7
AQU	**L'Aquila**	**30.48**	**300**	P	**P**	**21 23 30.7**	**+0.2**
AQU				IAmb	IAmb	21 23 55.2	
	comp=Z,70nm,1.1s						
OBKA	**Obir**	**30.55**	**309**	*e*P	**P**	**21 23 34.5**	**+3.4**
	comp=Z,17nm,1.3s						
GKN	**Gorkha**	**30.55**	**88**	*e*P	**P**	**21 23 32.1**	**+0.7**
	comp=Z,80nm,0.6s						
BRJN	**Brijuni**	**30.69**	**305**	*i* P	**P**	**21 23 36.9**	**+4.6**
NRCA	**Norcia**	**30.76**	**301**	P	**P**	**21 23 32.8**	**-0.2**
NRCA				IAmb	IAmb	21 23 40.1	
	comp=Z,36nm,0.8s						
DPC	**Dobruska-Polom**	**30.76**	**317**	*e*P	**P**	**21 23 32.6**	**-0.3**
DPC				*e*pP	**pP**	**21 23 37.6**	**-1.1**
DPC	**Dobruska-Polom**	**30.76**	**317**	*e*P	**P**	**21 23 32.6**	**-0.3**
DPC				*e*		21 23 37.6	
VSU	**Vasula**	**30.78**	**337**	*e*P	**P**	**21 23 32.8**	**-0.1**
VSU	**Vasula**	**30.78**	**337**	*d i*P	**P**	**21 23 32.6**	**-0.2**
VSU				pmax	pmax		
	comp=Z,155nm,0.9s						
OSTC	**Ostas**	**30.91**	**317**	*e*P	**P**	**21 23 33.7**	**-0.5**
PBUR	**Paburge**	**30.91**	**330**	*e*P	**P**	**21 23 35.2**	**+1.2**
ZSN	**Zaisan**	**31.00**	**50**	*e*P	**P**	**21 23 33.8**	**-1.3**
	baz=50						
ZSN	**Zaisan**	**31.00**	**50**	*e*P	**P**	**21 23 33.7**	**-1.3**
UPC	**Upice**	**31.01**	**317**	*e*P	**P**	**21 23 35.1**	**+0.1**
UPC	**Upice**	**31.01**	**317**	*e*P	**P**	**21 23 35.1**	**+0.1**
CHVC	**Chvalec**	**31.02**	**317**	*e*P	**P**	**21 23 34.8**	**-0.3**
DMN	**Daman**	**31.06**	**89**	*e*P	**P**	**21 23 36.9**	**+0.9**
	comp=Z,240nm,1.1s						
MOA	**Molln**	**31.12**	**311**	*i* P	**P**	**21 23 35.8**	**-0.3**
	comp=Z,31nm,0.9s,SNR=11						
KKN	**Kakani**	**31.16**	**88**	*e*P	**P**	**21 23 37.8**	**+1.0**
	comp=Z,76nm,0.5s						
MYKA	**Terra Mystica**	**31.18**	**309**	*e*P	**P**	**21 23 40.5**	**+3.8**
	comp=Z,23nm,1.5s						
MURB	**Monte Urbino**	**31.25**	**302**	P	**P**	**21 23 37.2**	**-0.1**
LODK	**Lodwar**	**31.29**	**208**	P	**P**	**21 23 38.0**	**+0.1**
PKIN	**Phulchoki**	**31.32**	**88**	*e*P	**P**	**21 23 39.1**	**+0.8**
	comp=Z,126nm,0.7s						
PKI	**Pulchoki**	**31.33**	**88**	*e*P	**P**	**21 23 39.2**	**+0.7**
	comp=Z,108nm,0.8s						
CKRC	**Cesky Krumlov**	**31.41**	**313**	*e*P	**P**	**21 23 38.1**	**-0.5**
CKRC				*e*x	x	21 23 42.6	
CKRC				AMS	AMS	21 39 10.0	
	comp=Z,700nm,14.0s						
KBA	**Koelnbreinsper**	**31.50**	**309**	*i* P	**P**	**21 23 39.7**	**+0.1**
	comp=Z,97nm,0.9s,SNR=23						
ZOU	**Zoufplan**	**31.61**	**308**	P	**P**	**21 23 40.3**	**-0.3**
GUN	**Gumba**	**31.64**	**88**	*e*P	**P**	**21 23 42.3**	**+1.1**
	comp=Z,483nm,1.1s						
PRU	**Pruhonice**	**31.68**	**315**	*e*P	**P**	**21 23 42.5**	**+1.6**
PRU				AMS	AMS	21 39 10.0	
	comp=Z,700nm,15.5s						
PRU	**Pruhonice**	**31.68**	**315**	*e*P	**P**	**21 23 42.5**	**+1.6**
PRU				MLR	MLR		
	comp=Z,700nm,15.5s						
STAL	**STALIGIAL**	**31.71**	**308**	P	**P**	**21 23 40.8**	**-0.5**
STAL				IAmb	IAmb	21 23 46.9	
	comp=Z,38nm,1.0s						
GEC2	**GERESS Array S**	**31.80**	**313**	P	**P**	**21 23 41.1**	**-0.9**
GERES	**GERESS Array B**	**31.80**	**313**	P	**P**	**21 23 41.4**	**-0.7**
	comp=Z,2.2nm,0.7s,baz=110,slow=8.4,SNR=19						
GERES				PcP	**PcP**	**21 26 34.3**	**+1.4**
	comp=Z,2.2nm,0.5s,baz=131,slow=2.9,SNR=8.7						
GERES				ScP	**ScP**	**21 30 13.0**	**-2.4**
	comp=Z,4.0nm,1.0s,baz=116,slow=3.1,SNR=11						
GERES				LR	LR	21 39 42.0	
	comp=Z,652nm,18.2s,baz=106,slow=42						
GERES	**GERESS Array B**	**31.80**	**313**	P	**P**	**21 23 40.7**	**-1.4**
SLIT	**Slitere, Latvi**	**31.82**	**332**	*e*P	**P**	**21 23 46.0**	**+4.0**
ABTA	**Abfaltersbach**	**31.96**	**308**	*i* P	**P**	**21 23 43.8**	**+0.2**
	comp=Z,59nm,0.9s,SNR=17						
KHC	**Kasperske Hory**	**31.97**	**313**	*e*P	**P**	**21 23 43.2**	**-0.3**
KHC				*e*x	x	21 23 47.8	
KHC				AMS	AMS	21 39 40.0	
	comp=Z,700nm,17.6s						
KHC	**Kasperske Hory**	**31.97**	**313**	*e*P	**P**	**21 23 43.2**	**-0.3**
KHC				*e*		21 23 47.8	
KHC				MLR	MLR		
	comp=Z,700nm,17.6s						
KHC	**Kasperske Hory**	**31.97**	**313**	P	**P**	**21 23 42.5**	**-1.0**
KHC				IAmb	IAmb	21 24 03.2	
	comp=Z,45nm,1.4s						
JIRN	**Jiri**	**31.97**	**88**	*e*P	**P**	**21 23 45.2**	**+1.0**
	comp=Z,67nm,0.5s						
MTSE	**Matsula**	**32.00**	**335**	*e*P	**P**	**21 23 43.3**	**-0.2**
WMQ	**Urumqi**	**32.12**	**57**	P	**P**	**21 23 46.3**	**+1.4**
WMQ				pP	sP	21 23 53.5	+0.3
WMQ				sP	pP	21 23 56.0	+5.2
WMQ				S	**S**	**21 28 59.0**	**+2.5**
WMQ				sS	pS	21 29 03.8	+0.8
WMQ				pmax	pmax		
	comp=Z,60nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,240nm,5.9s						
WMQ				LR	LR		
	comp=Z,2µm,12.9s						
WMQ				LR	LR		
	comp=Z,2µm,15.3s						
WMQ				LR	LR		
	comp=Z,1µm,15.3s						
OSSC	**Osservatorio P**	**32.21**	**302**	P	**P**	**21 23 45.7**	**0.0**
BRG	**Berggiesshubel**	**32.36**	**316**	*e*P	**P**	**21 23 46.9**	**-0.1**
BRG				Amp		21 23 55.1	
	comp=Z,4.5nm,0.9s						
BRG	**Berggiesshubel**	**32.36**	**316**	P	P	21 23 59.8	+13
BRG				Amp		21 24 00.6	
	comp=Z,7.6nm,0.9s						
BRG				⇑SP		21 30 16.1	
BRG				Amp		21 30 17.8	
	comp=Z,11nm,1.1s						
BRG				⇑PS	PcS	21 30 27.1	+8.0
BRG				Amp		21 30 28.3	
	comp=Z,7.1nm,1.1s						
BRG				Amp		21 40 17.0	
	comp=Z,0.7nm,15.8s						
BRG				Amp		21 40 18.0	
	comp=N,0.5nm,16.3s						
BRG				Amp		21 40 32.0	
	comp=E,0.2nm,13.4s						
CTI	**Castel Tesino**	**32.38**	**307**	P	**P**	**21 23 46.4**	**-0.8**
CTI				pmax	pmax		
	comp=Z,34nm,0.9s						
CTI	**Castel Tesino**	**32.38**	**307**	P	**P**	**21 23 46.4**	**-0.8**
CTI				IAmb	IAmb	21 23 53.2	
	comp=Z,34nm,0.9s						
RAMN	**Ramite**	**32.53**	**89**	*e*P	**P**	**21 23 49.3**	**+0.4**
	comp=Z,73nm,0.5s						
WTTA	**Wattenberg**	**32.67**	**309**	*i* P	**P**	**21 23 49.3**	**-0.6**
	comp=Z,45nm,0.9s,SNR=26						
WTTA				*e*P	**PcP**	**21 26 41.1**	**+5.7**
	comp=Z,5.2nm,0.5s						
WTTA	**Wattenberg**	**32.67**	**309**	*e*P	**S**	**21 29 02.5**	**-2.8**
	comp=Z,45nm,1.2s						
WTTA	**Wattenberg**	**32.67**	**309**	*e*P	**ScP**	**21 30 16.7**	**-1.8**
	comp=Z,17nm,1.1s						
WATA	**Walderalm**	**32.73**	**309**	*i* P	**P**	**21 23 49.5**	**-0.8**
	comp=Z,63nm,0.7s,SNR=26						
WATA				*e*P	**PcP**	**21 26 41.1**	**+5.6**
	comp=Z,6.7nm,0.6s						
WATA	**Walderalm**	**32.73**	**309**	*e*P	**S**	**21 29 03.1**	**-3.0**
	comp=Z,23nm,1.6s						
VLC	**Villacollemand**	**32.92**	**303**	P	**P**	**21 23 52.0**	**+0.1**
SQTA	**Sankt Quirin**	**32.94**	**309**	*i* P	**P**	**21 23 51.5**	**-0.7**
	comp=Z,83nm,0.6s,SNR=29						
SQTA				*e*P	**PcP**	**21 26 41.6**	**+5.4**
	comp=Z,6.7nm,0.6s						
SQTA	**Sankt Quirin**	**32.94**	**309**	*e*P	**S**	**21 29 06.0**	**-3.4**
	comp=Z,19nm,1.2s						
SQTA	**Sankt Quirin**	**32.94**	**309**	*e*P	**ScP**	**21 30 18.6**	**-0.8**
	comp=Z,14nm,1.1s						
NKC	**Novy Kostel**	**33.02**	**315**	*e*P	**P**	**21 23 52.8**	**0.0**
NKC	**Novy Kostel**	**33.02**	**315**	*e*P	**P**	**21 23 52.8**	**0.0**
MOTA	**Moosalm**	**33.04**	**309**	*i* P	**P**	**21 23 52.1**	**-1.0**
	comp=Z,115nm,0.9s,SNR=31						
MOTA				*e*P	**PcP**	**21 26 41.5**	**+5.1**
	comp=Z,2.6nm,0.4s						
MOTA	**Moosalm**	**33.04**	**309**	*e*P	**S**	**21 29 05.3**	**-5.7**
	comp=Z,17nm,1.1s						
MOTA	**Moosalm**	**33.04**	**309**	*e*P	**ScP**	**21 30 18.8**	**-1.0**
	comp=Z,20nm,1.1s						
CLL	**Collm**	**33.08**	**317**	*e*P	**P**	**21 23 52.0**	**-1.1**
	comp=Z,20nm,1.3s						
CLL				*e*PP	**PnPn**	**21 25 05.0**	**+2.3**
CLL				*e*S	**S**	**21 29 17.0**	**+5.9**
CLL	**Collm**	**33.08**	**317**	*e*P	**P**	**21 23 52.0**	**-1.1**
CLL				*e*S	**S**	**21 29 17.0**	**+5.9**
CLL				pmax	pmax		
	comp=Z,20nm,1.3s						
CLL	**Collm**	**33.08**	**317**	P	**P**	**21 23 52.2**	**-0.9**
RUE	**Ruedersdorf**	**33.09**	**319**	*e*P	**P**	**21 23 53.2**	**0.0**
FETA	**Feichten**	**33.22**	**308**	*i* P	**P**	**21 23 54.1**	**-0.6**
	comp=Z,87nm,0.8s,SNR=24						
FETA				*e*P	**PcP**	**21 26 40.5**	**+3.6**
	comp=Z,7.2nm,1.0s						
FETA	**Feichten**	**33.22**	**308**	*e*P	**S**	**21 29 09.6**	**-4.1**
	comp=Z,14nm,1.0s						
FETA	**Feichten**	**33.22**	**308**	*e*P	**ScP**	**21 30 19.8**	**-0.6**
	comp=Z,12nm,1.1s						
ODAN	**Odare**	**33.23**	**89**	*e*P	**P**	**21 23 55.3**	**+0.3**
	comp=Z,70nm,0.7s						
RETA	**Reutte**	**33.30**	**309**	*i* P	**P**	**21 23 54.0**	**-1.2**
	comp=Z,22nm,1.1s,SNR=9.5						
RETA	**Reutte**	**33.30**	**309**	*e*P	**S**	**21 29 11.1**	**-3.8**
	comp=Z,20nm,1.4s						
RETA	**Reutte**	**33.30**	**309**	*e*P	**ScP**	**21 30 19.4**	**-1.1**
	comp=Z,14nm,1.1s						
DGZ	**Jazzator, Alta**	**33.31**	**47**	*c i*P	**P**	**21 23 56.5**	**+1.1**
DGZ				pmax	pmax		
	comp=Z,28nm,0.9s						
FIA1	**FINESS Array S**	**33.31**	**340**	P	**P**	**21 23 54.4**	**-0.6**
FINES	**FINESS Array B**	**33.31**	**340**	P	**P**	**21 23 54.4**	**-0.6**
	comp=Z,48nm,1.0s,baz=147,slow=9.1,SNR=79						
FINES				PcP	**PcP**	**21 26 37.3**	**+0.6**
	comp=Z,5.3nm,0.6s,baz=132,slow=2.1,SNR=1.8						
FINES				S	**S**	**21 29 11.8**	**-2.7**
	comp=Z,17nm,0.9s,baz=146,slow=14,SNR=6.0						
FINES				ScP	**ScP**	**21 30 17.1**	**-3.1**
	comp=Z,14nm,1.0s,baz=106,slow=2.0,SNR=5.8						
FINES				LR	LR	21 39 10.9	
	comp=Z,1µm,18.6s,baz=130,slow=39						
TAPN	**Taplejung**	**33.35**	**88**	*e*P	**P**	**21 23 56.9**	**+0.7**
ZAA0	**Zalesovo Array**	**33.44**	**38**	P	**P**	**21 23 56.9**	**+0.7**
ZAA0				IAmb	IAmb	21 23 58.0	
	comp=Z,83nm,1.2s						
ZALV	**Zalesovo Beam**	**33.44**	**38**	P	**P**	**21 23 56.8**	**+0.5**
	comp=Z,32nm,0.6s,baz=254,slow=10,SNR=177						
ZALV				PcP	**PcP**	**21 26 35.8**	**-1.3**
	comp=Z,3.7nm,0.5s,baz=216,slow=3.6,SNR=2.8						
ZALV				ScP	**ScP**	**21 30 17.2**	**-3.6**
	comp=Z,2.6nm,0.4s,baz=242,slow=4.1,SNR=6.8						
ZALV				LR	LR	21 39 16.1	
	comp=Z,1µm,20.2s,baz=223,slow=39						
KEST	**Kesra**	**33.48**	**288**	P	**P**	**21 23 58.5**	**+1.5**
	comp=Z,12nm,0.8s,baz=3.0,slow=1.9,SNR=4.5						
KEST	**Kesra**	**33.48**	**288**	P	**P**	**21 23 57.9**	**+0.9**
MSSA	**Maissana**	**33.56**	**303**	P	**P**	**21 23 56.7**	**-0.8**
GRA1	**Grafenberg Arr**	**33.60**	**313**	P	**P**	**21 23 57.6**	**-0.2**
GRA1				IAmb	IAmb	21 24 17.7	
	comp=Z,52nm,1.1s						
GRF	**Grafenberg Arr**	**33.60**	**313**	P	**P**	**21 23 57.6**	**-0.2**
GRF				pmax	pmax		
	comp=Z,52nm,1.1s						
GRFO	**Grafenberg**	**33.60**	**313**	P	**P**	**21 23 57.6**	**-0.2**
GRFO	**Grafenberg**	**33.60**	**313**	P	**P**	**21 23 57.6**	**-0.2**
GRFO				IAmb	IAmb	21 24 17.7	
	comp=Z,45nm,1.1s						
BSD	**Bornholm Skovb**	**33.68**	**324**	*e*P	**P**	**21 23 57.8**	**-0.5**
DAVOX	**Davos/Dischmat**	**33.73**	**308**	P	**P**	**21 23 57.9**	**-1.3**
	comp=Z,10nm,0.8s,baz=109,slow=9.0,SNR=12						
DAVOX				S	**S**	**21 29 17.0**	**-4.8**
	comp=Z,5.0nm,0.9s,baz=256,slow=22,SNR=3.4						
DAVOX				LR	LR	21 39 27.4	
	comp=Z,286nm,18.9s,baz=98,slow=39						
DAVA	**Damuels**	**33.84**	**309**	*i* P	**P**	**21 23 59.3**	**-0.8**
	comp=Z,111nm,0.7s,SNR=33						
DAVA	**Damuels**	**33.84**	**309**	*e*P	**S**	**21 29 19.5**	**-3.8**
	comp=Z,11nm,1.0s						
DAVA	**Damuels**	**33.84**	**309**	*e*P	**ScP**	**21 30 22.3**	**-0.3**
	comp=Z,16nm,1.6s						
BLEU	**Blekinge**	**33.85**	**326**	*i* P	**P**	**21 23 59.0**	**-0.8**
RGN	**Rugen**	**34.23**	**322**	P	**P**	**21 24 03.0**	**-0.1**
AAL	**Aland**	**34.42**	**334**	*e*P	**P**	**21 24 04.5**	**-0.2**
KMBO	**Kilima Mbogo**	**34.83**	**202**	P	**P**	**21 24 09.3**	**+0.3**
	comp=Z,3.3nm,0.9s,baz=13,slow=8.0,SNR=9.6						
KMBO				ScP	**ScP**	**21 30 24.4**	**-2.2**
	comp=Z,0.8nm,0.3s,baz=351,slow=7.0,SNR=5.2						
KMBO				LR	LR	21 38 49.0	
	comp=Z,1µm,20.0s,baz=68,slow=37						
KMBO	**Kilima Mbogo**	**34.83**	**202**	P	**P**	**21 24 09.2**	**+0.3**
DEL	**Delary**	**34.86**	**325**	*i* P	**P**	**21 24 07.3**	**-1.2**
BJUU	**Bjuv**	**35.08**	**324**	*i* P	**P**	**21 24 10.1**	**-0.4**
BFO	**Black Forest**	**35.09**	**310**	P	**P**	**21 24 10.0**	**-0.7**
BFO				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BFO	**Black Forest**	**35.09**	**310**	P	**P**	**21 24 10.0**	**-0.7**
UPP	**Uppsala**	**35.12**	**332**	*e*P	**P**	**21 24 10.1**	**-0.7**
COP	**Copenhagen**	**35.20**	**324**	*e*Pn	**P**	**21 24 15.6**	**+4.2**
SENIN	**Lac Senin/Sane**	**35.41**	**306**	P	**P**	**21 24 13.1**	**-0.6**
LSA	**Lhasa**	**35.64**	**82**	P	**P**	**21 24 18.0**	**+1.9**
LSA				pmax	pmax		
	comp=Z,190nm,1.6s						
LSA	**Lhasa**	**35.64**	**82**	P	**P**	**21 24 16.9**	**+0.8**
LSA				pmax	pmax		
	comp=Z,99nm,1.3s						
LSA	**Lhasa**	**35.64**	**82**	P	**P**	**21 24 16.9**	**+0.8**
LSA				IAmb	IAmb	21 24 26.6	
	comp=Z,99nm,1.3s						
BNI	**Bardonecchia**	**35.66**	**304**	P	**P**	**21 24 14.8**	**-1.0**
BNI				pmax	pmax		
	comp=Z,76nm,1.0s						
BNI	**Bardonecchia**	**35.66**	**304**	P	**P**	**21 24 14.8**	**-1.0**
BNI				IAmb	IAmb	21 24 21.2	
	comp=Z,76nm,1.0s						
FABU	**Falkenberg**	**35.68**	**326**	*i* P	**P**	**21 24 14.9**	**-0.7**
KIBK	**Kibwezi**	**35.73**	**200**	P	**P**	**21 24 17.8**	**+1.2**
ECH	**Echery**	**35.83**	**310**	P	**P**	**21 24 15.8**	**-1.3**
ECH				pmax	pmax		
	comp=Z,30nm,1.0s						
ECH	**Echery**	**35.83**	**310**	P	**P**	**21 24 15.8**	**-1.3**
BORU	**Boraas**	**35.96**	**327**	*i* P	**P**	**21 24 16.7**	**-1.4**
ONAU	**Onsala**	**36.25**	**326**	*i* P	**P**	**21 24 18.9**	**-1.5**
TJOU	**Tjoern**	**36.69**	**327**	*i* P	**P**	**21 24 22.0**	**-2.2**
WLF	**Walferdange**	**36.78**	**312**	*d*P	**P**	**21 24 24.0**	**-1.1**
	comp=Z,25nm,0.9s						
WLF	**Walferdange**	**36.78**	**312**	P	**P**	**21 24 24.9**	**-0.2**
WLF				pmax	pmax		
	comp=Z,34nm,0.9s						
WLF	**Walferdange**	**36.78**	**312**	P	**P**	**21 24 24.9**	**-0.2**
WLF				IAmb	IAmb	21 24 30.3	
	comp=Z,34nm,0.9s						
HFS	**Hagfors**	**36.88**	**331**	P	**P**	**21 24 25.2**	**-0.6**
	comp=Z,23nm,0.4s,baz=134,slow=9.3,SNR=251						
HFS				S	**S**	**21 30 05.7**	**-3.7**
	comp=Z,11nm,1.1s,baz=143,slow=18,SNR=3.6						
HFS				ScP	**ScP**	**21 30 31.2**	**-1.9**
	comp=Z,14nm,1.0s,baz=127,slow=9.8,SNR=4.2						
MBAR	**Mbarara**	**36.89**	**213**	*d i*P	**P**	**21 24 27.1**	**+0.6**
MBAR	**Mbarara**	**36.89**	**213**	P	**P**	**21 24 26.9**	**+0.3**
APA	**Apatity**	**36.99**	**350**	⇓*i*P	**P**	**21 24 23.9**	**-2.7**
APA				*i*		21 25 59.9	
APA				*i* S	**S**	**21 30 03.0**	**-7.9**
APA				pmax	pmax		
	comp=Z,22nm,0.8s						
APA				MLR	MLR		
	comp=Z,2µm,16.0s						
LVZ	**Lovozero**	**37.11**	**351**	P	**P**	**21 24 27.6**	**-0.2**
LVZ				pmax	pmax		
	comp=Z,91nm,1.1s						
LVZ	**Lovozero**	**37.11**	**351**	P	**P**	**21 24 27.6**	**-0.2**
LVZ				IAmb	IAmb	21 24 28.6	
	comp=Z,91nm,1.1s						
MUD	**Monsted U'grnd**	**37.18**	**323**	IAmb	IAmb	21 24 44.5	
	comp=Z,32nm,0.8s						
MUD				*i*	P	21 24 21.1	-7.2
MUD				*i* P	**P**	**21 24 28.0**	**-0.4**
STRU	**Stroemstad**	**37.39**	**328**	*i* P	**P**	**21 24 28.8**	**-1.3**
RCHB	**Rochefort**	**37.47**	**312**	*d*P	**P**	**21 24 30.7**	**-0.3**
	comp=Z,14nm,1.1s						
BCLA	**Clavier**	**37.48**	**313**	*d*P	**P**	**21 24 31.5**	**+0.5**
	comp=Z,7.1nm,1.2s						
DOU	**Dourbes**	**37.85**	**312**	*d*P	**P**	**21 24 34.2**	**0.0**
	comp=Z,13nm,0.9s						
PALK	**Pallekele**	**37.95**	**123**	P	**P**	**21 24 35.2**	**-0.2**
PALK				pmax	pmax		
	comp=Z,22nm,0.9s						
PALK	**Pallekele**	**37.95**	**123**	P	**P**	**21 24 35.2**	**-0.2**
OSL	**Oslo**	**38.04**	**329**	*e*P	**P**	**21 24 35.4**	**-0.2**
NC602	**NORSAR Array S**	**38.10**	**331**	*e*P	**P**	**21 24 35.5**	**-0.7**
NC602	**NORSAR Array S**	**38.10**	**331**	P	**P**	**21 24 35.3**	**-0.9**
NC602				IAmb	IAmb	21 24 46.1	
	comp=Z,37nm,0.8s						
HOMB	**Homborsund**	**38.27**	**326**	*i* P	**P**	**21 24 36.7**	**-0.9**
HOMB	**Homborsund**	**38.27**	**326**	*e*P	**P**	**21 24 36.9**	**-0.7**
KONO	**Kongsberg**	**38.40**	**328**	P	**P**	**21 24 38.1**	**-0.5**
KONO				pmax	pmax		
	comp=Z,54nm,1.1s						
KONO	**Kongsberg**	**38.40**	**328**	*e*P	**P**	**21 24 37.9**	**-0.8**
KONO	**Kongsberg**	**38.40**	**328**	P	**P**	**21 24 38.1**	**-0.5**
KONO				IAmb	IAmb	21 24 44.9	
	comp=Z,54nm,1.1s						
NB2	**NORSAR Subarra**	**38.40**	**331**	P	**P**	**21 24 37.2**	**-1.5**
	comp=Z,36nm,0.7s,baz=124,slow=8.6						
NOA	**NORSAR Array B**	**38.40**	**331**	P	**P**	**21 24 37.5**	**-1.3**
	comp=Z,10.0nm,0.8s,baz=128,slow=8.2,SNR=34						
NOA				PP	**PP**	**21 26 04.8**	**-1.7**
	comp=Z,20nm,1.0s,baz=131,slow=11,SNR=3.9						
NOA				ScP	**S**	**21 30 35.4**	**+2.8**
	comp=Z,11nm,1.1s,baz=108,slow=4.3,SNR=4.3						
NOA				LR	LR	21 41 34.3	
	comp=Z,897nm,20.3s,baz=125,slow=38						
KRAR	**Krasnoyarsk**	**38.52**	**38**	⇓*e*P	**P**	**21 24 38.7**	**-1.0**
SNART	**Snartemo**	**38.92**	**326**	*e*P	**P**	**21 24 43.5**	**+0.4**
SKAR	**Skarslia**	**39.45**	**329**	*e*P	**P**	**21 24 47.8**	**+0.2**
DOMB	**Dombas**	**39.80**	**331**	*e*P	**P**	**21 24 51.3**	**+0.9**
ODD1	**Odda**	**39.85**	**328**	*e*P	**P**	**21 24 51.4**	**+0.5**
TBLU	**Trondheim**	**39.97**	**333**	*e*P	**P**	**21 24 51.6**	**-0.1**
KEV	**Kevo**	**40.00**	**348**	P	**P**	**21 24 51.7**	**-0.2**
KEV				pmax	pmax		
	comp=Z,66nm,1.4s						
KEV	**Kevo**	**40.00**	**348**	P	**P**	**21 24 51.7**	**-0.2**
NSS	**Namsos**	**40.07**	**336**	*e*P	**P**	**21 24 52.3**	**-0.3**
ARCES	**ARCESS Array B**	**40.09**	**347**	P	**P**	**21 24 52.5**	**-0.2**
	comp=Z,13nm,1.0s,baz=156,slow=9.1,SNR=27						
ARCES				PP	**PP**	**21 26 23.5**	**-1.3**
	comp=Z,12nm,0.8s,baz=138,slow=11,SNR=6.0						
ARCES				ScP	**ScP**	**21 30 42.7**	**-2.5**
	comp=Z,14nm,0.7s,baz=154,slow=3.0,SNR=19						
ARCES				LR	LR	21 42 59.0	
	comp=Z,746nm,20.3s,baz=150,slow=38						
ARCES	**ARCESS Array B**	**40.09**	**347**	P	**P**	**21 24 52.3**	**-0.4**
KTK1	**Kautokeino**	**40.11**	**346**	*e*P	**P**	**21 24 52.4**	**-0.4**
KMY	**Karmoy**	**40.21**	**326**	*e*P	**P**	**21 24 55.4**	**+1.6**
MOR8	**Moi Rana**	**40.29**	**339**	*e*P	**P**	**21 24 53.7**	**-0.7**
HYA	**Hoyanger**	**40.60**	**329**	*e*P	**P**	**21 24 58.6**	**+1.7**
BER	**Bergen**	**40.64**	**328**	*e*P	**P**	**21 24 57.7**	**+0.4**
MOL	**Molde**	**40.68**	**332**	*e*P	**P**	**21 24 57.9**	**+0.3**
AKN	**Aaknes**	**40.72**	**331**	*e*P	**P**	**21 24 59.2**	**+1.2**
ASK	**Askoy**	**40.74**	**328**	*e*P	**P**	**21 24 58.4**	**+0.2**
STOK	**Stokkvaagen**	**40.83**	**338**	*e*P	**P**	**21 24 58.4**	**-0.5**
FAUS	**Fauske**	**40.85**	**341**	*e*P	**P**	**21 24 58.9**	**-0.1**
NBB17	**Glomfjord B¥r**	**40.86**	**339**	*e*P	**P**	**21 24 59.0**	**-0.1**
KONS	**Konsvik**	**40.91**	**339**	*e*P	**P**	**21 24 58.7**	**-0.7**
NBB40	**Tonnes**	**40.95**	**339**	*e*P	**P**	**21 24 58.9**	**-0.9**
GTA	**Gaotai**	**41.09**	**65**	⇑P	**P**	**21 25 02.5**	**+1.0**
GTA				pP	pP	21 25 08.0	+0.6
GTA				sP	sP	21 25 11.0	+1.2
GTA				PP	**PnPn**	**21 26 45.0**	**+4.3**
GTA				ScP	**ScP**	**21 30 48.8**	**-1.1**
GTA				PcS	**PcS**	**21 30 50.5**	**-1.6**
GTA				S	**S**	**21 31 15.0**	**+1.5**
GTA				sS	sS	21 31 27.5	+4.4
GTA				ScS	**ScS**	**21 35 03.8**	**-1.6**
GTA				pmax	pmax		
	comp=Z,23nm,1.3s						
GTA				pmax	pmax		
	comp=Z,100nm,5.1s						
GTA				LR	LR		
	comp=Z,730nm,12.7s						
GTA				LR	LR		
	comp=Z,1µm,14.9s						
GTA				LR	LR		
	comp=Z,2µm,14.5s						
JETT	**Jettan, Norway**	**41.15**	**345**	*e*P	**P**	**21 25 02.2**	**+0.6**
SUE	**Sulen**	**41.18**	**329**	*e*P	**P**	**21 25 02.6**	**+0.9**
STEI	**Steigen**	**41.24**	**341**	*e*P	**P**	**21 25 00.6**	**-1.5**
FOO	**Floro**	**41.28**	**329**	*e*P	**P**	**21 25 03.5**	**+0.9**
HAMF	**Hammerfest**	**41.36**	**347**	*e*P	**P**	**21 25 03.3**	**+0.2**
TRO	**Tromso**	**41.55**	**344**	*e*P	**P**	**21 25 04.2**	**-0.5**
LOF	**Lofoten**	**41.85**	**341**	*e*P	**P**	**21 25 08.3**	**+1.2**
MOY	**Mondy**	**42.14**	**47**	*e*P	**P**	**21 25 10.9**	**+0.9**
MOY				pmax	pmax		
	comp=Z,72nm,2.2s						
NRIK	**Noril'sk**	**43.18**	**19**	P	**P**	**21 25 18.8**	**+0.8**
	comp=Z,57nm,1.0s,baz=229,slow=6.3,SNR=50						
NRIK				LR	LR	21 47 15.3	
	comp=Z,1µm,19.0s,baz=215,slow=42						
NRIK	**Noril'sk**	**43.18**	**19**	P	**P**	**21 25 18.5**	**+0.5**
NRIK				IAmb	IAmb	21 25 20.3	
	comp=Z,77nm,1.0s						
ZAK	**Zakamensk**	**43.45**	**49**	*e*P	**P**	**21 25 20.0**	**-0.6**
ZAK				pmax	pmax		
	comp=Z,20nm,1.5s						
EKA	**Eskdalemuir Ar**	**43.48**	**319**	P	**P**	**21 25 20.1**	**-0.5**
	baz=103,slow=8.3						
EKA				PcP	**PcP**	**21 27 07.9**	**-0.5**
	comp=Z,4.5nm,0.8s,baz=104,slow=5.2,SNR=2.2						
ESK	**Eskdalemuir**	**43.50**	**319**	P	**P**	**21 25 21.6**	**+0.8**
ESK				pmax	pmax		
	comp=Z,37nm,1.2s						
ESK	**Eskdalemuir**	**43.50**	**319**	P	**P**	**21 25 21.6**	**+0.8**
ESDC	**Sonseca Array**	**43.58**	**296**	P	**P**	**21 25 21.6**	**-0.1**
	comp=Z,16nm,1.1s,baz=67,slow=7.6,SNR=21						
ESDC				LR	LR	21 44 43.9	
	comp=Z,166nm,19.8s,baz=190,slow=38						
ESDC	**Sonseca Array**	**43.58**	**296**	P	**P**	**21 25 22.8**	**+1.1**
TLY	**Talaya**	**43.78**	**47**	*e*P	P	21 25 30.0	+6.8
TLY				*e*S	**S**	**21 32 01.5**	**+8.7**
TLY				pmax	pmax		
	comp=Z,62nm,1.1s						
TLY				MLR	MLR		
	comp=Z,2µm,11.0s						
PAB	**San Pablo**	**43.89**	**296**	P	**P**	**21 25 26.1**	**+1.9**
PAB				pmax	pmax		
	comp=Z,25nm,1.2s						
PAB	**San Pablo**	**43.89**	**296**	P	**P**	**21 25 26.1**	**+1.9**
IRK	**Irkutsk**	**44.22**	**46**	*e*P	**P**	**21 25 24.9**	**-1.7**
IRK				*e*		21 27 06.3	
IRK				pmax	pmax		
	comp=Z,59nm,1.5s						
LZH	**Lanzhou**	**44.72**	**69**	⇑P	**P**	**21 25 32.0**	**+0.9**
LZH				sP	pP	21 25 37.0	0.0
LZH				S	**S**	**21 32 07.3**	**+0.2**
LZH				sS	sS	21 32 17.5	+0.8
LZH				SS	SS	21 35 15.8	-12
LZH				pmax	pmax		
	comp=Z,36nm,1.3s						
LZH				pmax	pmax		
	comp=Z,460nm,5.6s						
LZH				LR	LR		
	comp=Z,1µm,12.3s						
LZH				LR	LR		
	comp=Z,2µm,12.3s						
LZH				LR	LR		
	comp=Z,2µm,15.0s						
DSB	**Dublin**	**45.07**	**315**	P	**P**	**21 25 33.0**	**-0.3**
DSB				IAmb	IAmb	21 25 38.6	
	comp=Z,33nm,0.9s						
LIJA	**Lijar**	**45.12**	**292**	p	**P**	**21 25 37.5**	**+3.4**
SONM	**Songino Array**	**45.42**	**52**	P	**P**	**21 25 36.9**	**+0.5**
	comp=Z,3.0nm,0.6s,baz=273,slow=8.4,SNR=25						

SONM				PcP	PcP	21 27 15.1	-0.3
	comp=Z,3.1nm,0.9s,baz=270,slow=4.3,SNR=3.5						
SONM				ScP	ScP	21 31 05.1	-2.2
	comp=Z,1.1nm,0.9s,baz=228,slow=5.6,SNR=3.0						
SONM				LR	LR	21 46 02.1	
	comp=Z,439nm,18.3s,baz=264,slow=38						
SONM	Songino Array	45.42	52	P	P	21 25 37.0	+0.5
PBRG	Braganca	45.43	299	eP	P	21 25 41.3	+4.8
	comp=Z,49nm,1.3s						
MVO	Moncorvo	45.72	298	eP	P	21 25 43.4	+4.6
	comp=Z,82nm,1.6s						
CD2	Chengdu	45.86	76	P	P	21 25 40.5	+0.5
CD2				S	S	21 32 24.8	+1.4
CD2				pmax	pmax		
	comp=Z,70nm,0.7s						
CD2				LR	LR		
	comp=Z,940nm,14.7s						
CD2				LR	LR		
	comp=Z,800nm,13.7s						
CD2				LR	LR		
	comp=Z,1µm,14.7s						
ULN	Ulaanbaatar	45.86	52	P	P	21 25 40.7	+0.8
ULN				pmax	pmax		
	comp=Z,27nm,1.2s						
ULN	Ulaanbaatar	45.86	52	P	P	21 25 40.7	+0.8
CHTO	Chiang Mai	46.12	94	P	P	21 25 42.7	+0.6
CHTO				pmax	pmax		
	comp=Z,43nm,0.8s						
CHTO	Chiang Mai	46.12	94	P	P	21 25 42.7	+0.6
CHTO				IAmb	IAmb	21 25 43.8	
	comp=Z,43nm,0.8s						
CHTO	Chiang Mai	46.12	94	P	P	21 25 42.7	+0.6
PBAR	Barrancos	46.17	294	eP	P	21 25 45.3	+3.0
	comp=Z,63nm,1.2s						
HOPEN	Hopen	46.18	352	eP	P	21 25 42.5	+0.7
MTE	Manteigas	46.21	297	eP	P	21 25 47.4	+4.7
	comp=Z,64nm,1.2s						
MTE	Manteigas	46.21	297	P	P	21 25 44.2	+1.5
MTE				IAmb	IAmb	21 25 49.4	
	comp=Z,59nm,1.2s						
PVRL	Vila Real	46.22	299	eP	P	21 25 45.7	+3.0
	comp=Z,76nm,1.3s						
PMRV	Marv??o	46.24	296	eP	P	21 25 44.9	+2.1
	comp=Z,43nm,1.3s						
PCBR	Castelo Branco	46.24	297	eP	P	21 25 43.9	+1.1
	comp=Z,94nm,1.3s						
POLO	Lamas de Olo	46.27	299	eP	P	21 25 47.6	+4.5
	comp=Z,42nm,1.3s						
CM31	Chiang Mai Arr	46.28	95	P	P	21 25 44.2	+0.9
CM31				IAmb	IAmb	21 25 44.9	
	comp=Z,41nm,0.8s						
CMAR	Chiang Mai Arr	46.28	95	P	P	21 25 43.8	+0.4
	comp=Z,29nm,0.7s,baz=292,slow=8.2,SNR=232						
CMAR				ScP	ScP	21 31 10.4	-0.7
	comp=Z,3.1nm,0.9s,baz=289,slow=5.4,SNR=7.1						
CMAR				LR	LR	21 48 38.0	
	comp=Z,270nm,18.1s,baz=331,slow=40						
CMAR	Chiang Mai Arr	46.28	95	P	P	21 25 43.9	+0.6
PVIS	Viseu	46.43	298	eP	P	21 25 48.0	+3.6
	comp=Z,74nm,1.5s						
PESTR	Estremoz	46.48	295	eP	P	21 25 48.0	+3.2
	comp=Z,60nm,1.4s						
PGAV	Gavieira, Arco	46.54	300	eP	P	21 25 46.3	+1.0
	comp=Z,159nm,1.7s						
KMI	Kunming	46.83	84	⇑P	P	21 25 48.5	+0.6
KMI				pP	pP	21 25 52.3	-1.6
KMI				sP	sP	21 25 54.0	-2.2
KMI				PP	PP	21 27 37.8	-0.3
KMI				S	S	21 32 36.8	-1.0
KMI				sS	pS	21 32 44.8	-0.2
KMI				SS	SS	21 35 58.0	-6.4
KMI				pmax	pmax		
	comp=Z,110nm,0.8s						
KMI				pmax	pmax		
	comp=Z,360nm,3.5s						
KMI				LR	LR		
	comp=Z,480nm,16.3s						
KMI				LR	LR		
	comp=Z,550nm,18.2s						
KMI				LR	LR		
	comp=Z,640nm,16.8s						
PBEJ	Beja	46.84	294	eP	P	21 25 48.8	+1.2
	comp=Z,9.6nm,0.8s						
PVAQ	Vaqueiros	46.84	293	eP	P	21 25 50.0	+2.4
	comp=Z,52nm,1.4s						
COI	Coimbra	46.90	297	eP	P	21 25 53.0	+5.1
	comp=Z,87nm,1.9s						
COI	Coimbra	46.90	297	P	P	21 25 48.5	+0.6
COI				pmax	pmax		
	comp=Z,73nm,1.3s						
COI	Coimbra	46.90	297	P	P	21 25 48.5	+0.6
PMTG	Montargil	46.94	296	eP	P	21 25 52.3	+4.0
	comp=Z,34nm,1.3s						
PCAS	Casmilo, Conde	46.98	297	eP	P	21 25 49.6	+0.9
	comp=Z,70nm,1.3s						
PBDV	Barranco-do-Ve	47.04	293	eP	P	21 25 54.2	+5.0
PCVE	Castro Verde	47.05	294	eP	P	21 25 53.8	+4.6
	comp=Z,63nm,1.5s						
PNCL	Nicolau / Gran	47.34	294	eP	P	21 25 52.5	+1.1
	comp=Z,54nm,1.3s						
TORD	Torodi Ar. Bea	47.57	258	P	P	21 25 52.9	-0.5
	comp=Z,42nm,0.9s,baz=52,slow=8.3,SNR=204						
TORD	Torodi Ar. Bea	47.57	258	P	P	21 25 53.0	-0.5
PFVI	Vila Bisbo	47.77	293	eP	P	21 25 57.0	+2.2
SPB2	Spitsbergen Ar	48.63	351	P	P	21 26 01.0	+0.2
SPA0	Spitsbergen Ar	48.63	351	eP	P	21 26 01.2	+0.3
SPITS	Spitsbergen Ar	48.63	351	ScP	ScP	21 31 18.7	-1.3
	comp=Z,21nm,0.8s,baz=121,slow=8.0,SNR=7.3						
SPITS	Spitsbergen Ar	48.63	351	P	P	21 26 01.2	+0.3
SPITS				pmax	pmax		
	comp=Z,142nm,1.1s						
BTO	Baotou	48.69	62	eP	P	21 26 01.3	-0.7
XAN	Xi'an	49.24	71	⇑P	P	21 26 06.5	+0.3
XAN				pP	sP	21 26 15.0	+0.4
XAN				sP	pP	21 26 19.5	+7.2
XAN				PcP	PcP	21 27 33.0	+3.9
XAN				pmax	pmax		
	comp=Z,47nm,1.2s						
XAN				LR	LR		
	comp=Z,1µm,19.2s						
XAN				LR	LR		
	comp=Z,2µm,17.2s						
XAN				LR	LR		
	comp=Z,2µm,17.9s						
SLVN	Son La	49.27	88	P	P	21 26 07.7	+1.0
SLVN				IAmb	IAmb	21 26 24.1	
	comp=Z,39nm,1.0s						
GYA	Guiyang	49.67	81	⇓P	P	21 26 10.3	+0.6
GYA				pmax	pmax		
	comp=Z,110nm,0.5s						
KBS	Kingsbay	49.78	351	⇓eP	P	21 26 09.9	+0.3
KBS				pmax	pmax		
	comp=Z,128nm,2.5s						
KBS	Kingsbay	49.78	351	eP	P	21 26 09.8	+0.1
HHC	Hu-ho-hao-te	49.81	61	eP	P	21 26 11.3	+0.8
HHC				PP	PP	21 28 06.3	+1.2
HHC				S	S	21 33 20.0	+0.7
HHC				pmax	pmax		
	comp=Z,13nm,1.0s						
HHC				pmax	pmax		
	comp=Z,190nm,4.7s						
HHC				LR	LR		
	comp=Z,1µm,14.4s						
HHC				LR	LR		
	comp=Z,1µm,12.7s						
HHC				LR	LR		
	comp=Z,2µm,14.5s						
CIT	Chita	49.93	47	eP	P	21 26 11.7	+0.4
CIT				e		21 27 30.7	
CIT				e		21 28 09.2	
CIT				e		21 29 05.3	
CIT				pmax	pmax		
	comp=Z,102nm,2.0s						
BOD	Bodaibo	50.19	39	eP	P	21 26 13.4	+0.4
BOD				pmax	pmax		
	comp=Z,127nm,1.6s						
ENH	Enshi	50.77	75	P	P	21 26 18.2	+0.4
TIY	Taiyuan	51.11	65	⇑P	P	21 26 21.8	+1.4
TIY				pmax	pmax		
	comp=Z,18nm,0.5s						
TIY				LR	LR		
	comp=Z,410nm,8.5s						
TIY				LR	LR		
	comp=Z,760nm,14.1s						
TIY				LR	LR		
	comp=Z,1µm,18.1s						
LSZ	Lusaka	51.16	207	P	P	21 26 22.2	+1.3
LSZ				pmax	pmax		
	comp=Z,15nm,1.0s						
LSZ	Lusaka	51.16	207	P	P	21 26 22.2	+1.3
KOWA	Kowa	51.69	263	P	P	21 26 24.4	-0.5
KOWA				IAmb	IAmb	21 26 40.2	
	comp=Z,33nm,0.9s						
MLSI	Meulaboh, Aceh	51.73	112	P	P	21 26 25.3	+0.1
	comp=Z,38nm,0.9s						
SRIT	Nakonsritamara	51.80	105	P	P	21 26 25.1	-0.6
SRIT				IAmb	IAmb	21 26 31.2	
	comp=Z,24nm,0.7s						
TPTI		52.96	113	P	P	21 26 41.4	+7.1
	comp=Z,9.9nm,1.0s						
UBPT	Khong Chiam	53.28	94	P	P	21 26 36.4	-0.2
UBPT				IAmb	IAmb	21 26 46.9	
	comp=Z,66nm,1.4s						
BJI	Beijing	53.42	61	P	P	21 26 38.0	+0.6
BJI				pP	pP	21 26 42.0	-1.4
BJI				sP	sP	21 26 44.5	-1.2
BJI				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BJI				LR	LR		
	comp=Z,670nm,16.3s						
BJI				LR	LR		
	comp=Z,1µm,18.8s						
BJI				LR	LR		
	comp=Z,2µm,18.9s						
BJT	Baijiatuau	53.42	61	P	P	21 26 38.0	+0.6
BJT				pmax	pmax		
	comp=Z,12nm,0.8s						
BJT	Baijiatuau	53.42	61	P	P	21 26 38.0	+0.6
VOI	Vohitsoka	53.53	183	P	P	21 26 39.6	+1.2
VOI				IAmb	IAmb	21 26 57.7	
	comp=Z,50nm,1.4s						
DBG	Daneborg	54.16	342	i P	P	21 26 41.9	-0.4
DBG				IAmb	IAmb	21 26 48.1	
	comp=Z,11nm,0.9s						
SCO	Scoresbysund	54.16	337	P	P	21 26 43.1	+0.7
SCO				pmax	pmax		
	comp=Z,36nm,1.5s						
SCO	Scoresbysund	54.16	337	P	P	21 26 43.0	+0.7
SCO				IAmb	IAmb	21 26 59.0	
	comp=Z,36nm,1.5s						
DAG	Danmarks Havn	54.27	345	i P	P	21 26 41.2	-1.8
DAG				IAmb	IAmb	21 27 00.9	
	comp=Z,7.6nm,0.5s						
GSI	Gunungsitoli	54.48	114	P	P	21 26 48.2	+2.7
	comp=Z,36nm,1.0s						
GSI	Gunungsitoli	54.48	114	P	P	21 26 45.9	+0.4
GSI				IAmb	IAmb	21 26 54.8	
	comp=Z,77nm,1.4s						
GSI	Gunungsitoli	54.48	114	P	P	21 26 46.7	+1.2
KULM	Kulim	54.52	108	P	P	21 26 45.6	-0.2
KULM				IAmb	IAmb	21 26 52.1	
	comp=Z,26nm,1.0s						
WHN	Wuhan	54.66	73	⇑P	P	21 26 47.3	+0.7
WHN				S	S	21 34 28.0	+2.1
WHN				pmax	pmax		
	comp=Z,96nm,1.1s						
WHN				LR	LR		
	comp=Z,1µm,4.5s						
WHN				LR	LR		
	comp=Z,3µm,13.3s						
WHN				LR	LR		
	comp=Z,3µm,14.5s						
TIA	Tai'an	55.13	66	P	P	21 26 50.8	+0.8
TIA				pmax	pmax		
	comp=Z,41nm,0.9s						
TIA				pmax	pmax		
	comp=Z,140nm,4.3s						
TIA				LR	LR		
	comp=Z,710nm,13.5s						
TIA				LR	LR		
	comp=Z,980nm,16.4s						
TIA				LR	LR		
	comp=Z,1µm,14.9s						
QIZ	Qiongzhong	55.29	88	P	P	21 26 50.5	-0.8
QIZ				S	S	21 34 39.0	+4.4
QIZ				LR	LR		
	comp=Z,390nm,21.1s						
QIZ				LR	LR		
	comp=Z,510nm,22.6s						
QIZ				LR	LR		
	comp=Z,400nm,23.0s						
QIZ	Qiongzhong	55.29	88	P	P	21 26 51.9	+0.6
QIZ				IAmb	IAmb	21 27 05.0	
	comp=Z,60nm,1.2s						
IPM	Ipoh	55.30	108	P	P	21 26 51.0	-0.4
IPM	Ipoh	55.30	108	P	P	21 26 50.7	-0.7
IPM	Ipoh	55.30	108	P	P	21 26 50.6	-0.8
MNSI	Mandailing Nat	56.36	113	P	P	21 26 59.7	+0.7
	comp=Z,21nm,0.8s						
DBIC	Dimbokro	56.47	256	P	P	21 26 59.3	-0.5
	comp=Z,21nm,0.8s,baz=57,slow=7.1,SNR=19						
DBIC				LR	LR	21 54 27.6	
	comp=Z,2µm,18.5s,baz=66,slow=40						
DBIC	Dimbokro	56.47	256	P	P	21 26 59.6	-0.2
DBIC				pmax	pmax		
	comp=Z,39nm,1.0s						
DBIC	Dimbokro	56.47	256	P	P	21 26 59.6	-0.2
DBIC				IAmb	IAmb	21 27 08.9	
	comp=Z,39nm,0.9s						
KIC	Kosan Boka	56.55	255	eP	P	21 26 59.1	-1.3
	comp=Z,45nm,0.7s						
TIC	Toumodi	56.62	256	eP	P	21 26 59.7	-1.2
TIXI	Tiksi	56.74	22	P	P	21 27 01.1	+0.2
TIXI				pmax	pmax		
	comp=Z,38nm,0.7s						
TIXI	Tiksi	56.74	22	P	P	21 27 01.1	+0.2
TIXI				IAmb	IAmb	21 27 12.5	
	comp=Z,38nm,0.7s						
LIC	Lamto	56.86	255	eP	P	21 27 01.4	-1.2
	comp=Z,146nm,0.8s						
DL2	Dalian	57.78	61	P	P	21 27 09.3	+0.5
DL2				eS	S	21 35 10.5	+3.4
DL2				pmax	pmax		
	comp=Z,29nm,0.7s						
DL2				LR	LR		
	comp=Z,770nm,18.1s						
DL2				LR	LR		
	comp=Z,1µm,16.7s						
DL2				LR	LR		
	comp=Z,2µm,19.3s						
NJ2	Nanjing	57.79	70	⇑P	P	21 27 09.8	+0.9
NJ2				sP	pP	21 27 15.5	+0.4
NJ2				pmax	pmax		
	comp=Z,31nm,0.9s						
BKNI	Bangkinang	57.79	112	P	P	21 27 10.1	+0.9
	comp=Z,1µmcomp=Z,126nm,1.0s						
BKNI	Bangkinang	57.79	112	P	P	21 27 08.5	-0.7
BKNI	Bangkinang	57.79	112	P	P	21 27 09.0	-0.2
YAK	Yakutsk	57.85	33	c iP	P	21 27 08.2	-0.6
YAK				e*PP	pP	21 27 14.0	-0.9
YAK				e		21 27 59.3	
YAK				e		21 29 17.4	
YAK				eS	S	21 35 05.2	-2.0
YAK				e*SS	pS	21 35 14.6	0.0
YAK				pmax	pmax		
	comp=Z,117nm,0.9s						
YAK				pmax	pmax		
	comp=N,5.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,22nm,1.0s						
YAK				pmax	pmax		
	comp=Z,44nm,1.5s						
YAK				pmax	pmax		
	comp=E,55nm,1.5s						
YAK				pmax	pmax		
	comp=N,36nm,2.0s						
YAK				smax	smax		
	comp=N,80nm,1.9s						
YAK				smax	smax		
	comp=E,55nm,1.8s						
YAK	Yakutsk	57.85	33	P	P	21 27 08.3	-0.5
ZEA	Zeya	57.96	43	eP	P	21 27 10.7	+0.9
ZEA				eS	S	21 35 15.2	+6.1
ZEA				pmax	pmax		
	comp=N,10.0nm,0.5s						
ZEA				pmax	pmax		
	comp=E,20nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,30nm,0.8s						
ZEA				smax	smax		
	comp=E,200nm,7.3s						
ZEA				MLR	MLR		
	comp=E,500nm,17.0s						
ZEA				MLR	MLR		
	comp=Z,600nm,16.0s						
PDSI	Padang	58.11	114	P	P	21 27 11.8	+0.4
	comp=Z,32nm,1.1s						
MYKOM	Kota Tinggi	59.15	109	P	P	21 27 18.0	-0.6
CN2	Changchun	59.16	55	eP	P	21 27 17.0	-1.3
CN2				eS	S	21 35 25.0	+0.1
CN2				pmax	pmax		
	comp=Z,20nm,1.4s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,1µm,14.0s						
CN2				LR	LR		
	comp=Z,2µm,14.0s						
CN2				LR	LR		
	comp=Z,2µm,16.0s						
TSUM	Tsumeb	59.32	216	P	P	21 27 19.8	0.0
SUMG	Summit	59.35	340	P	P	21 27 19.4	-0.3
SUMG				pmax	pmax		
	comp=Z,42nm,0.9s						
SUMG	Summit	59.35	340	i P	P	21 27 18.4	-1.2
SUMG				IAmb	IAmb	21 27 45.1	
	comp=Z,24nm,0.9s						
SUMG	Summit	59.35	340	P	P	21 27 19.4	-0.3
KRJI	Kerinci	59.62	114	P	P	21 27 23.7	+1.7
	comp=Z,4µmcomp=Z,323nm,1.0s						
ICESG	Greenland Ices	60.36	336	eP	P	21 27 26.0	-0.6
MASI	Maura Aman, Be	60.88	115	P	P	21 27 38.0	+7.4
	comp=Z,184nm,0.8s						
LBTB	Lobatse	61.02	205	P	P	21 27 31.5	+0.2
LBTB				pmax	pmax		
	comp=Z,31nm,1.0s						
LBTB	Lobatse	61.02	205	P	P	21 27 31.5	+0.2
LBTB				IAmb	IAmb	21 27 37.5	
	comp=Z,31nm,0.9s						
DSRI	Dabo	61.08	111	P	P	21 27 32.9	+1.0
	comp=Z,337nmcomp=Z,27nm,1.2s						
NEEM	North Greenlan	61.42	346	i P	P	21 27 34.0	+0.4
NEEM				IAmb	IAmb	21 27 53.0	
	comp=Z,12nm,0.6s						
KLR	Kul'dur	61.80	47	c iP	P	21 27 35.5	-0.7
KLR				pmax	pmax		
	comp=Z,24nm,0.9s						
KLR				MLR	MLR		
	comp=Z,1µm,15.0s						
MNAI	Manna	62.20	115	P	P	21 27 40.4	+1.0
WIN	Windhoek	62.41	214	P	P	21 27 42.1	+1.3
WIN				pmax	pmax		
	comp=Z,28nm,0.9s						
WIN	Windhoek	62.41	214	P	P	21 27 42.1	+1.3
WIN				IAmb	IAmb	21 27 47.9	
	comp=Z,28nm,0.9s						
YHNB	Yeheng	62.63	77	P	P	21 27 42.5	+0.2
YHNB	Yeheng	62.63	77	P	P	21 27 44.0	+1.7
SSLB	Suanglung	62.65	78	P	P	21 27 45.5	+3.1
KS19	Wonju Array Si	62.89	61	P	P	21 27 43.5	-0.3
TJN	Taejon	62.91	62	⇓eP	P	21 27 42.4	-1.5
KSAR	Wonju Array Be	62.92	61	P	P	21 27 43.8	-0.1
KSAR	Wonju Array Be	62.92	61	P	P	21 27 43.8	-0.1
KSRS	Korea Array	62.95	61	P	P	21 27 43.9	-0.3
	comp=Z,25nm,0.6s,baz=283,slow=6.6,SNR=77						
MDSI	Maura Dua	63.23	114	P	P	21 27 45.1	-1.1
	comp=Z,542nmcomp=Z,37nm,0.9s						
PPBI	Pangkal Pinang	63.34	111	P	P	21 27 48.3	+1.3
	comp=Z,5µmcomp=Z,34nm,0.9s						
LWLI	Liwa	63.47	115	P	P	21 27 48.0	0.0
	comp=Z,234nm,0.8s						
DY2G	Dye2	63.48	333	i P	P	21 27 45.8	-1.7
DY2G				IAmb	IAmb	21 28 10.9	
	comp=Z,11nm,0.8s						
USA0B	Ussuriysk Arra	63.53	53	P	P	21 27 47.5	-0.4
USA0B				pmax	pmax		
	comp=Z,38nm,0.9s						
USA0B	Ussuriysk Arra	63.53	53	P	P	21 27 47.5	-0.4
USRK	Ussuriysk Ar.	63.53	53	P	P	21 27 47.1	-0.7
	comp=Z,23nm,0.8s,baz=274,slow=5.7,SNR=29						
USRK				LR	LR	21 58 18.2	
	comp=Z,740nm,18.9s,baz=289,slow=39						
USRK	Ussuriysk Ar.	63.53	53	P	P	21 27 47.3	-0.6
USRK	Ussuriysk Ar.	63.53	53	P	P	21 27 47.3	-0.6
KLSI		63.78	114	P	P	21 27 48.6	-1.3
	comp=Z,25nm,1.0s						
KASI	Kota Agung	64.12	115	P	P	21 27 53.1	+0.9
	comp=Z,1µmcomp=Z,126nm,0.9s						
BOSA	Boshof	64.44	204	P	P	21 27 53.1	-0.9
	comp=Z,18nm,0.9s,baz=30,slow=6.7,SNR=20						
BOSA				LR	LR	21 56 53.4	
	comp=Z,1µm,18.4s,baz=17,slow=37						
BOSA	Boshof	64.44	204	P	P	21 27 54.3	+0.3
BOSA				pmax	pmax		
	comp=Z,30nm,0.8s						
BOSA	Boshof	64.44	204	P	P	21 27 54.3	+0.3
BOSA				IAmb	IAmb	21 28 00.0	
	comp=Z,30nm,0.8s						
KSM	Kuching	64.59	105	P	P	21 27 54.9	-0.3
KSM				IAmb	IAmb	21 28 02.0	
	comp=Z,42nm,1.1s						
KSM	Kuching	64.59	105	P	P	21 27 55.2	0.0
TULEG	Thule	65.42	347	i P	P	21 27 58.4	-1.3
SBUM	Sibu	65.62	103	P	P	21 28 01.6	-0.4
SBUM				IAmb	IAmb	21 28 08.9	
	comp=Z,26nm,1.0s						
EUNU	Eureka	65.73	352	P	P	21 28 01.5	-0.3
EUNU				IAmb	IAmb	21 28 08.3	
	comp=Z,18nm,0.9s						
STKI	Sintang	66.34	106	P	P	21 28 07.4	+0.8
	comp=Z,45nm,0.9s						
KUM	Kumamoto	66.82	65	P	P	21 26 45.3	-84
KKM	Kota Kinabalu	67.02	97	P	P	21 28 11.7	+0.6
KKM	Kota Kinabalu	67.02	97	P	P	21 28 12.0	+0.9
CNJI	Cibinong	67.27	115	P	P	21 28 25.9	+13
LEM	Lembang	67.35	114	LR	LR	22 00 44.8	
	comp=Z,168nm,18.4s,baz=340,slow=39						
SEY	Seymchan	67.61	29	P	P	21 28 14.5	+0.5
	comp=Z,49nm,0.7s,baz=288,slow=6.0,SNR=110						
SEY				LR	LR	22 00 36.0	
	comp=Z,193nm,21.1s,baz=298,slow=38						
JHS	Saijyo	67.76	62	P	P	21 28 14.2	-1.2
JHS				IAmb	IAmb	21 28 39.0	
	comp=Z,50nm,1.3s						
TYV	Tymovskoe	67.83	43	eP	P	21 28 16.0	+0.5
TYV				eS	S	21 37 14.9	+2.2
TYV				pmax	pmax		
	comp=Z,34nm,1.1s						
TYV				pmax	pmax		
	comp=Z,1µm,3.9s						
TYV				smax	smax		
	comp=E,800nm,4.6s						
TYV				smax	smax		
	comp=E,22nm,1.6s						
PBKI	Pangkalan Bun	68.10	108	P	P	21 28 19.7	+2.0
	comp=E,166nm,1.1s						
MA2	Magadan	68.40	32	P	P	21 28 18.5	-0.5
	comp=E,13nm,0.8s,baz=196,slow=14,SNR=4.7						
MA2	Magadan	68.40	32	P	P	21 28 19.1	+0.1
MA2				pmax	pmax		
	comp=Z,31nm,1.0s						
MA2	Magadan	68.40	32	P	P	21 28 19.1	+0.1
MA2				IAmb	IAmb	21 28 35.0	
	comp=Z,31nm,1.0s						
JMN	Monobe	68.86	63	P	P	21 28 22.1	-0.2
JWT	Wachi	69.35	61	P	P	21 28 25.1	-0.2
MYLDM	Lahad Datu	69.41	97	P	P	21 28 26.5	+0.6
SUR	Sutherland	69.44	206	P	P	21 28 26.4	+0.5
SUR				IAmb	IAmb	21 28 34.8	
	comp=Z,32nm,1.1s						
YSS	Yuzh-Sakhalins	69.49	47	eP	P	21 28 24.9	-1.0
YSS				pmax	pmax		
	comp=Z,70nm,0.9s						
YSS				MLR	MLR		
	comp=Z,1µm,16.0s						
YSS	Yuzh-Sakhalins	69.49	47	P	P	21 28 25.0	-1.0
MTKI	Muara Teweh, K	69.72	104	P	P	21 28 34.2	+6.3
	comp=Z,2µmcomp=Z,12nm,0.6s						
BILL	Bilibino	69.94	21	d iP	P	21 28 28.6	+0.2
BILL				e		21 28 49.3	
BILL				e		21 31 05.4	
BILL				ePPP	PPP	21 32 47.7	
BILL				pmax	pmax		
	comp=Z,35nm,1.0s						
BILL				MLR	MLR		
	comp=Z,666nm,17.0s						
BILL	Bilibino	69.94	21	P	P	21 28 28.2	-0.2

BILL				IAmb	IAmb	21 28 35.1	
	comp=Z,35nm,0.9s						
UGM	**Wanagama**	**70.28**	**113**	P	**P**	**21 28 31.8**	**+0.5**
JEW	**Eniwo**	**70.40**	**51**	P	**P**	**21 28 31.0**	**-0.7**
ASAJ	**Asahikawa**	**70.61**	**50**	P	**P**	**21 28 32.8**	**-0.1**
ASAJ				pmax	pmax		
	comp=Z,25nm,1.0s						
JKA	**Kamikawa-asahi**	**70.61**	**50**	P	**P**	**21 28 32.8**	**0.0**
JKA				IAmb	IAmb	21 28 45.8	
	comp=Z,25nm,1.0s						
MAJO	**Matsushiro**	**70.87**	**58**	P	**P**	**21 28 34.0**	**-0.6**
MAJO				pmax	pmax		
	comp=Z,25nm,1.0s						
MAJO	**Matsushiro**	**70.87**	**58**	P	**P**	**21 28 34.0**	**-0.6**
MAJO				IAmb	IAmb	21 28 35.8	
	comp=Z,25nm,1.0s						
MAT	**Matsushiro**	**70.87**	**58**	P	**P**	**21 28 33.4**	**-1.2**
MAT				*e*S	**S**	**21 37 50.8**	**+1.7**
MJAR	**Matsushiro Arr**	**70.87**	**58**	P	**P**	**21 28 33.5**	**-1.2**
	comp=Z,10nm,1.1s,baz=300,slow=10,SNR=12						
MJAR				LR	LR	22 02 54.8	
	comp=Z,502nm,18.9s,baz=300,slow=38						
MJAR	**Matsushiro Arr**	**70.87**	**58**	P	**P**	**21 28 34.7**	**0.0**
MJAR				pmax	pmax		
	comp=Z,9.0nm,1.1s						
MJAR	**Matsushiro Arr**	**70.87**	**58**	P	**P**	**21 28 34.7**	**0.0**
JTM	**Tenmabayashi**	**71.04**	**53**	P	**P**	**21 28 34.2**	**-1.3**
BBKI	**Banjar Baru**	**71.11**	**107**	P	**P**	**21 28 37.2**	**+0.9**
	comp=Z,39nm,1.1s						
RES	**Resolute Bay**	**71.19**	**351**	P	**P**	**21 28 35.9**	**0.0**
	comp=Z,3.4nm,1.0s,baz=34,slow=5.7,SNR=4.8						
RES	**Resolute Bay**	**71.19**	**351**	P	**P**	**21 28 36.4**	**+0.6**
RES				pmax	pmax		
	comp=Z,10.0nm,1.3s						
RES	**Resolute Bay**	**71.19**	**351**	P	**P**	**21 28 36.4**	**+0.6**
ERM	**Erimo**	**71.90**	**51**	P	**P**	**21 28 40.3**	**-0.4**
ERM				pmax	pmax		
	comp=Z,41nm,1.0s						
ERM	**Erimo**	**71.90**	**51**	P	**P**	**21 28 40.3**	**-0.4**
ERM				IAmb	IAmb	21 29 03.3	
	comp=Z,41nm,0.9s						
KBKI	**Kotabaru**	**72.10**	**106**	P	**P**	**21 28 43.6**	**+1.3**
	comp=Z,743nmcomp=Z,42nm,0.9s						
KMMI	**Kalianget**	**72.49**	**110**	P	P	21 28 49.7	+5.1
	comp=Z,26nm,0.8s						
ABJI	**Asem Bagus**	**73.14**	**111**	P	P	21 28 54.1	+5.6
	comp=Z,57nm,1.0s						
MPSI	**Mapaga**	**73.17**	**100**	P	**P**	**21 28 49.1**	**+0.4**
	comp=Z,598nmcomp=Z,59nm,0.9s						
JAGI	**Jajag, Banyuwa**	**73.48**	**111**	P	**P**	**21 28 50.0**	**-0.4**
JAGI				IAmb	IAmb	21 29 09.0	
	comp=Z,18nm,0.7s						
TOLI2	**Tolitoli**	**73.50**	**99**	P	**P**	**21 28 50.1**	**-0.6**
TOLI2				IAmb	IAmb	21 28 57.1	
	comp=Z,20nm,0.8s						
SRBI	**Singaraja**	**74.09**	**110**	P	P	21 28 59.6	+5.5
	comp=Z,1µmcomp=Z,32nm,0.6s						
MRSI	**Marisa**	**74.81**	**99**	P	**P**	**21 28 59.8**	**+1.5**
	comp=Z,2µmcomp=Z,75nm,0.5s						
PETK	**Petropavlovsk-**	**74.96**	**36**	P	**P**	**21 28 57.0**	**-1.5**
	comp=Z,5.6nm,1.0s,baz=338,slow=3.1,SNR=2.8						
PETK				LR	LR	22 04 50.6	
	comp=Z,637nm,18.8s,baz=300,slow=38						
PETK	**Petropavlovsk-**	**74.96**	**36**	P	**P**	**21 28 57.0**	**-1.5**
TTSI	**Tana Toraja**	**74.97**	**103**	P	**P**	**21 29 03.8**	**+4.6**
	comp=Z,960nmcomp=Z,17nm,0.8s						
A21K	**Barrow**	**75.44**	**8**	P	**P**	**21 29 01.2**	**+0.3**
	baz=337						
A21K	**Barrow**	**75.44**	**8**	P	**P**	**21 29 01.6**	**+0.6**
A21K				IAmb	IAmb	21 29 07.7	
	comp=Z,37nm,0.9s						
BNSI	**Bone**	**75.96**	**104**	P	P	21 29 12.1	+7.2
	comp=Z,15nm,1.5s						
LUWI	**Luwuk**	**76.33**	**100**	P	**P**	**21 29 07.0**	**0.0**
A36M	**Sachs Harbour**	**76.37**	**358**	P	**P**	**21 29 05.8**	**-0.4**
	baz=4.5						
A36M	**Sachs Harbour**	**76.37**	**358**	P	**P**	**21 29 05.8**	**-0.4**
BKSI	**Bulukumba**	**76.49**	**105**	P	**P**	**21 29 07.9**	**0.0**
	comp=Z,292nmcomp=Z,31nm,1.1s						
PLAI	**Plampang**	**76.58**	**109**	P	**P**	**21 29 07.1**	**-1.3**
	comp=Z,31nm,1.0s						
BSSI	**Bau Bau, Buton**	**77.25**	**106**	P	**P**	**21 29 16.7**	**+4.5**
	comp=Z,32nm,0.9s						
SCHQ	**Schefferville**	**77.90**	**328**	P	**P**	**21 29 14.4**	**-0.8**
	comp=Z,17nm,0.9s,baz=36,slow=4.4,SNR=9.0						
SCHQ				LR	LR	22 04 32.0	
	comp=Z,153nm,20.1s,baz=62,slow=36						
SCHQ	**Schefferville**	**77.90**	**328**	P	**P**	**21 29 14.6**	**-0.6**
SCHQ				IAmb	IAmb	21 29 20.3	
	comp=Z,27nm,1.0s						
TOLK	**Toolik Lake Re**	**78.79**	**7**	P	**P**	**21 29 20.6**	**+0.7**
	baz=344						
TOLK	**Toolik Lake Re**	**78.79**	**7**	P	**P**	**21 29 20.6**	**+0.7**
TOLK				IAmb	IAmb	21 29 26.7	
	comp=Z,38nm,0.8s						
TNTI	**Ternate**	**79.23**	**96**	P	**P**	**21 29 25.0**	**+1.8**
	comp=Z,62nm,1.1s						
TNTI	**Ternate**	**79.23**	**96**	P	**P**	**21 29 22.3**	**-0.9**
TNTI				IAmb	IAmb	21 29 31.2	
	comp=Z,43nm,0.8s						
SANI	**Sanana**	**79.57**	**99**	P	**P**	**21 29 23.8**	**-1.2**
	comp=Z,47nm,0.9s						
BASI	**Baing, Sumba**	**79.63**	**109**	P	P	21 29 32.0	+6.7
	comp=Z,68nm,1.0s						
EDFI	**Ende, Flores**	**79.70**	**107**	P	**P**	**21 29 28.5**	**+2.7**
	comp=Z,10nm,0.8s						
MMRI	**Maumere**	**80.08**	**107**	P	**P**	**21 29 31.1**	**+3.3**
	comp=Z,2µmcomp=Z,58nm,1.1s						
MMRI	**Maumere**	**80.08**	**107**	P	**P**	**21 29 25.1**	**-2.7**
MMRI				IAmb	IAmb	21 29 31.9	
	comp=Z,38nm,0.9s						
COLD	**Coldfoot**	**80.08**	**8**	P	**P**	**21 29 27.3**	**+0.4**
	baz=343						
COLD	**Coldfoot**	**80.08**	**8**	P	**P**	**21 29 27.3**	**+0.4**
LBMI	**Labuha**	**80.09**	**97**	P	P	21 29 35.9	+8.0
INK	**Inuvik**	**80.11**	**1**	P	**P**	**21 29 26.3**	**-0.7**
	comp=Z,8.0nm,0.9s,baz=2.5,slow=9.0,SNR=18						
INK	**Inuvik**	**80.11**	**1**	P	**P**	**21 29 26.6**	**-0.4**
INK				pmax	pmax		
	comp=Z,12nm,0.8s						
INK	**Inuvik**	**80.11**	**1**	P	**P**	**21 29 26.7**	**-0.2**
	baz=357						
INK	**Inuvik**	**80.11**	**1**	P	**P**	**21 29 26.6**	**-0.4**
BMAR	**Burnt Mountain**	**80.44**	**5**	P	**P**	**21 29 29.3**	**+0.4**
IMAR	**Indian Mountai**	**80.82**	**9**	P	**P**	**21 29 30.9**	**0.0**
GBN	**Guysborough**	**80.95**	**318**	P	**P**	**21 29 32.4**	**+0.4**
GBN				IAmb	IAmb	21 29 38.3	
	comp=Z,45nm,0.8s						
H21K	**Melozitna Rive**	**81.26**	**9**	P	**P**	**21 29 33.8**	**+0.5**
H21K				IAmb	IAmb	21 29 43.4	
	comp=Z,19nm,0.8s						
H24K	**Noodor Dome**	**81.68**	**7**	P	**P**	**21 29 36.1**	**+0.6**
I21K	**Tanana**	**81.82**	**9**	P	**P**	**21 29 36.8**	**+0.6**
	baz=342						
I21K	**Tanana**	**81.82**	**9**	P	**P**	**21 29 36.6**	**+0.4**
BATI	**Baumata**	**82.12**	**107**	P	**P**	**21 29 38.8**	**+0.2**
	comp=Z,82nm,1.0s						
MLY	**Manley**	**82.13**	**9**	P	**P**	**21 29 38.9**	**+1.0**
	baz=343						
MLY	**Manley**	**82.13**	**9**	P	**P**	**21 29 38.3**	**+0.4**
MLY				IAmb	IAmb	21 29 47.1	
	comp=Z,30nm,1.4s						
I23K	**Minto, Yukon-K**	**82.18**	**8**	P	**P**	**21 29 38.5**	**+0.4**
	baz=344						
BATG	**Bathurst New B**	**82.29**	**322**	P	**P**	**21 29 39.2**	**+0.2**
BATG				IAmb	IAmb	21 29 45.1	
	comp=Z,38nm,0.9s						
SOEI	**Soe**	**82.36**	**106**	P	P	21 29 46.9	+6.9
	comp=Z,88nm,1.0s						
SOEI	**Soe**	**82.36**	**106**	P	**P**	**21 29 39.2**	**-0.9**
POKR	**Poker Plat Res**	**82.43**	**7**	P	**P**	**21 29 39.9**	**+0.4**
	baz=346,SNR=12						
POKR	**Poker Plat Res**	**82.43**	**7**	P	**P**	**21 29 39.5**	**+0.1**
POKR				IAmb	IAmb	21 29 52.8	
	comp=Z,20nm,0.9s						
J20K	**Nowinta River**	**82.47**	**10**	P	**P**	**21 29 39.7**	**+0.1**
	baz=340,SNR=9.7						
MDM	**Murphy Dome**	**82.50**	**8**	P	**P**	**21 29 40.1**	**+0.2**
MDM				IAmb	IAmb	21 29 49.5	
	comp=Z,49nm,1.4s						
LMN	**Caledonia Moun**	**82.51**	**320**	P	**P**	**21 29 40.4**	**+0.2**
LMN				IAmb	IAmb	21 29 46.0	
	comp=Z,21nm,0.8s						
TCOL	**CIGO, UAF Yank**	**82.62**	**7**	P	**P**	**21 29 39.6**	**-0.8**
	baz=345						
COLA	**College**	**82.62**	**7**	P	**P**	**21 29 40.2**	**-0.2**
COLA				pmax	pmax		
	comp=Z,28nm,1.0s						
COLA	**College**	**82.62**	**7**	P	**P**	**21 29 40.2**	**-0.2**
COLA				IAmb	IAmb	21 29 47.1	
	comp=Z,28nm,0.9s						
NEA2	**Nenana**	**82.75**	**8**	P	**P**	**21 29 40.8**	**-0.3**
	baz=344						
NEA2	**Nenana**	**82.75**	**8**	P	**P**	**21 29 40.9**	**-0.3**
IL31		**82.82**	**7**	P	**P**	**21 29 41.1**	**-0.3**
ILAR	**Eielson Array**	**82.82**	**7**	P	**P**	**21 29 40.6**	**-0.8**
	comp=Z,3.4nm,0.7s,baz=324,slow=4.0,SNR=39						
ILAR				PP	**PP**	**21 32 47.7**	**-3.1**
	comp=Z,0.8nm,0.8s,baz=344,slow=7.4,SNR=1.5						
ILAR				PKKPbc	**PKKPbc**	**21 48 04.2**	**-1.2**
	comp=Z,1.0nm,0.8s,baz=202,slow=1.8,SNR=7.4						
ILAR				LR	LR	22 13 30.8	
	comp=Z,99nm,18.8s,baz=341,slow=41						
ILAR	**Eielson Array**	**82.82**	**7**	P	**P**	**21 29 41.0**	**-0.5**
ILAR	**Eielson Array**	**82.82**	**7**	P	**P**	**21 29 41.0**	**-0.5**
CCB	**Clear Creek Bu**	**82.84**	**7**	P	**P**	**21 29 41.0**	**-0.6**
WRH	**Wood River Hil**	**82.98**	**8**	P	**P**	**21 29 41.8**	**-0.5**
BPAW	**Bear Paw Mtn.**	**82.99**	**9**	P	**P**	**21 29 42.1**	**-0.3**
	baz=342,SNR=15						
BPAW	**Bear Paw Mtn.**	**82.99**	**9**	P	**P**	**21 29 42.5**	**+0.2**
BPAW				IAmb	IAmb	21 29 48.5	
	comp=Z,25nm,1.0s						
J25K	**Salcha River,**	**83.13**	**6**	P	**P**	**21 29 42.8**	**-0.4**
	baz=347,SNR=14						
HDA	**Harding Lake**	**83.17**	**7**	P	**P**	**21 29 42.0**	**-1.3**
	baz=346						
HDA	**Harding Lake**	**83.17**	**7**	P	**P**	**21 29 42.4**	**-0.9**
K20K	**Telida**	**83.25**	**10**	P	**P**	**21 29 43.6**	**-0.1**
	baz=340,SNR=5.9						
K20K	**Telida**	**83.25**	**10**	P	**P**	**21 29 43.5**	**-0.3**
TTA	**Tatalina**	**83.34**	**11**	P	**P**	**21 29 43.0**	**-1.2**
	baz=338						
SWI	**Sorong**	**83.39**	**95**	P	**P**	**21 29 45.9**	**+0.6**
	comp=Z,40nm,1.1s						
J26L	**Joseph Creek**	**83.40**	**6**	P	**P**	**21 29 44.2**	**-0.4**
	baz=349,SNR=10						
SIJI	**Sorong**	**83.40**	**95**	P	**P**	**21 29 43.9**	**-1.4**
	comp=Z,19nm,0.9s,baz=334,slow=5.5,SNR=9.6						
CAST	**Castle Rocks**	**83.49**	**10**	P	**P**	**21 29 45.4**	**+0.4**
CAST				IAmb	IAmb	21 29 51.2	
	comp=Z,24nm,0.8s						
MCK	**McKinley**	**83.60**	**8**	P	**P**	**21 29 44.8**	**-0.7**
	baz=344						
PQI	**Presque Isle**	**83.70**	**322**	P	**P**	**21 29 46.2**	**-0.1**
SCRK	**Sand Creek**	**83.88**	**6**	P	**P**	**21 29 47.2**	**+0.1**
	baz=348,SNR=16						
SCRK	**Sand Creek**	**83.88**	**6**	P	**P**	**21 29 47.1**	**+0.1**
SCRK				IAmb	IAmb	21 29 57.2	
	comp=Z,24nm,0.9s						
PPLA	**Purkeypile**	**83.97**	**10**	P	**P**	**21 29 47.5**	**-0.1**
	baz=342						
D62A	**Allapoint, All**	**83.97**	**323**	P	**P**	**21 29 47.4**	**-0.3**
RIDG	**Independent Ri**	**84.03**	**6**	P	**P**	**21 29 47.3**	**-0.6**
	baz=348						
GGN	**Saint George**	**84.08**	**320**	P	**P**	**21 29 48.2**	**-0.1**
GGN				IAmb	IAmb	21 29 53.8	
	comp=Z,16nm,0.9s						
L20K	**Farewell, AK**	**84.11**	**11**	P	**P**	**21 29 48.1**	**-0.1**
	baz=340						
DAWY	**Dawson**	**84.13**	**4**	P	**P**	**21 29 48.0**	**-0.3**
	baz=352,SNR=7.0						
DOT	**Dot Lake**	**84.20**	**6**	P	**P**	**21 29 48.4**	**-0.2**
DOT				IAmb	IAmb	21 30 13.7	
	comp=Z,22nm,1.0s						
L19K	**White Mountain**	**84.23**	**11**	P	**P**	**21 29 49.1**	**+0.3**
F64A	**Sherman**	**84.41**	**322**	P	**P**	**21 29 50.1**	**+0.2**
F64A				IAmb	IAmb	21 29 55.9	
	comp=Z,28nm,0.9s						
DHY	**Denali Highway**	**84.42**	**8**	P	**P**	**21 29 49.3**	**-0.6**
	baz=346						
CUT	**Chulitna**	**84.71**	**9**	P	**P**	**21 29 51.7**	**+0.6**
	baz=343						
PAX	**Paxson**	**84.73**	**7**	P	**P**	**21 29 50.5**	**-0.8**
	baz=347						
WAT6	**Susitna Watana**	**84.86**	**8**	P	**P**	**21 29 51.7**	**-0.5**
	baz=345						
L26K	**Log Cabin Wild**	**84.87**	**6**	P	**P**	**21 29 52.0**	**-0.1**
	baz=349						
BCAR	**Beaver Creek A**	**84.96**	**5**	P	**P**	**21 29 53.2**	**+0.7**
L27K	**Beaver Creek,**	**84.96**	**5**	P	**P**	**21 29 52.5**	**0.0**
	baz=350,SNR=8.0						
L27K	**Beaver Creek,**	**84.96**	**5**	P	**P**	**21 29 53.2**	**+0.8**
L27K				IAmb	IAmb	21 30 02.7	
	comp=Z,38nm,1.4s						
WRGLY	**Wrigley**	**85.07**	**357**	P	**P**	**21 29 53.1**	**+0.1**
	baz=5.9						
YKA	**Yellowknife Ar**	**85.11**	**353**	P	**P**	**21 29 52.3**	**-0.9**
	comp=Z,4.0nm,0.8s,baz=21,slow=5.3,SNR=10						
YKA	**Yellowknife Ar**	**85.11**	**353**	P	**P**	**21 29 53.0**	**-0.2**
YKA	**Yellowknife Ar**	**85.11**	**353**	P	**P**	**21 29 53.0**	**-0.2**
F62A	**Pittston Farm,**	**85.23**	**322**	P	**P**	**21 29 54.1**	**0.0**
F62A				IAmb	IAmb	21 30 00.3	
	comp=Z,29nm,1.1s						
FAKI	**Fak Fak**	**85.31**	**96**	P	P	21 30 02.8	+7.8
FAKI	**Fak Fak**	**85.31**	**96**	P	**P**	**21 29 54.8**	**-0.3**
FAKI				IAmb	IAmb	21 30 01.2	
	comp=Z,23nm,1.0s						
HARP	**HAARP**	**85.32**	**7**	P	**P**	**21 29 54.2**	**-0.1**
	baz=348						
GHO	**Glory Hole Cre**	**85.50**	**9**	P	**P**	**21 29 55.6**	**+0.4**
M24K	**Tolsona, Glenn**	**85.50**	**7**	P	**P**	**21 29 55.0**	**-0.2**
	baz=347						
M24K	**Tolsona, Glenn**	**85.50**	**7**	P	**P**	**21 29 56.3**	**+1.1**
M26K	**Nabesna, AK**	**85.52**	**6**	P	**P**	**21 29 55.5**	**+0.2**
	baz=349						
M26K	**Nabesna, AK**	**85.52**	**6**	P	**P**	**21 29 56.2**	**+0.8**
M26K				IAmb	IAmb	21 30 18.3	
	comp=Z,21nm,1.2s						
SML	**Sawmill**	**85.54**	**8**	P	**P**	**21 29 55.0**	**-0.5**
	baz=345						
SML	**Sawmill**	**85.54**	**8**	P	**P**	**21 29 55.4**	**-0.1**
SCM	**Sheep Creek Mo**	**85.63**	**8**	P	**P**	**21 29 55.8**	**-0.1**
	baz=346						
PMR	**Palmer**	**85.64**	**9**	P	**P**	**21 29 55.6**	**-0.2**
	baz=344						
M27K	**Edge Creek, AK**	**85.65**	**5**	P	**P**	**21 29 56.1**	**0.0**
	baz=350						
BVCY	**Beaver Creek**	**85.67**	**5**	P	**P**	**21 29 56.4**	**+0.4**
	baz=351						
PSA00	**Pilbara Seismi**	**85.69**	**119**	P	**P**	**21 29 58.1**	**+1.5**
MMPY	**Sheldon Lake,**	**85.84**	**0**	P	**P**	**21 29 57.6**	**+0.6**
	baz=359,SNR=6.6						
KNK	**Knik Glacier**	**85.90**	**9**	P	**P**	**21 29 57.0**	**-0.2**
	baz=345						
G62A	**West of Eustis**	**85.98**	**322**	P	**P**	**21 29 58.0**	**+0.1**
G62A				IAmb	IAmb	21 30 03.8	
	comp=Z,20nm,0.8s						
RC01	**Rabbit Creek A**	**86.05**	**9**	P	**P**	**21 29 57.6**	**-0.3**
	baz=344						
RC01	**Rabbit Creek A**	**86.05**	**9**	P	**P**	**21 29 58.1**	**+0.2**
RC01				IAmb	IAmb	21 30 03.2	
	comp=Z,29nm,0.8s						
KLU	**Klutina**	**86.12**	**7**	P	**P**	**21 29 58.5**	**+0.2**
	baz=347,SNR=7.3						
KLU	**Klutina**	**86.12**	**7**	P	**P**	**21 29 58.9**	**+0.5**
KLU				IAmb	IAmb	21 30 23.4	
	comp=Z,36nm,0.9s						
O19K	**Port Alsworth**	**86.19**	**12**	P	**P**	**21 29 58.1**	**-0.4**
	baz=340						
FARO	**Faro, Yukon**	**86.21**	**1**	P	**P**	**21 29 58.9**	**+0.2**
	baz=358,SNR=6.9						
M31M	**Drury Creek, Y**	**86.21**	**2**	P	**P**	**21 29 58.4**	**-0.3**
	baz=357,SNR=5.3						
YUK3	**Moose Creek**	**86.34**	**5**	P	**P**	**21 29 59.9**	**+0.3**
	baz=352,SNR=6.6						
O18K	**Koktuh Hills**	**86.35**	**12**	P	**P**	**21 29 59.9**	**+0.5**
O18K				IAmb	IAmb	21 30 20.2	
	comp=Z,18nm,0.8s						
MCARA	**McCarthy VSAT**	**86.52**	**6**	P	**P**	**21 29 59.9**	**-0.3**
	baz=349						
BMRM	**Bremner River**	**86.78**	**7**	P	**P**	**21 30 01.3**	**-0.2**
	baz=348						
MOQ	**Mont Orford**	**86.81**	**323**	P	**P**	**21 30 01.7**	**-0.3**
N31M	**Braeburn, Yuko**	**86.88**	**3**	P	**P**	**21 30 01.6**	**-0.4**
	baz=355						
YUK4	**Talbot Arm**	**86.88**	**4**	P	**P**	**21 30 02.0**	**-0.3**
	baz=353,SNR=5.1						
TGTN	**Hyland Airport**	**86.92**	**359**	P	**P**	**21 30 02.9**	**+0.7**
	baz=1.8,SNR=5.8						
CTG	**Chitna Glacier**	**87.08**	**5**	P	**P**	**21 30 03.2**	**+0.1**
	baz=351						
LOGN	**Logan Glacier**	**87.24**	**5**	P	**P**	**21 30 04.6**	**+0.6**
TRQ	**Mont Tremblant**	**87.32**	**325**	P	**P**	**21 30 04.3**	**-0.2**
TRQ				IAmb	IAmb	21 30 11.8	
	comp=Z,15nm,1.0s						
LBNH	**Lisbon**	**87.38**	**322**	P	**P**	**21 30 04.8**	**+0.1**
LBNH				pmax	pmax		
	comp=Z,34nm,0.9s						
LBNH	**Lisbon**	**87.38**	**322**	P	**P**	**21 30 04.3**	**-0.4**
	baz=46						
LBNH	**Lisbon**	**87.38**	**322**	P	**P**	**21 30 04.8**	**+0.1**
HYT	**Haines Junctio**	**87.46**	**3**	P	**P**	**21 30 05.1**	**+0.1**
	baz=354,SNR=6.3						
HYT	**Haines Junctio**	**87.46**	**3**	P	**P**	**21 30 05.5**	**+0.5**
HYT				IAmb	IAmb	21 30 28.3	
	comp=Z,38nm,1.2s						
Q19K	**Cape Douglas,**	**87.50**	**12**	P	**P**	**21 30 04.9**	**-0.2**
	baz=340						
FRNY	**Flat Rock**	**87.82**	**323**	P	**P**	**21 30 06.5**	**-0.3**
FRNY				IAmb	IAmb	21 30 12.4	
	comp=Z,27nm,1.0s						
KAIM	**Kayak Island**	**87.82**	**7**	P	**P**	**21 30 06.8**	**+0.3**
	baz=348						
P33M	**Teslin, Yukon**	**88.24**	**1**	P	**P**	**21 30 07.9**	**-0.7**
	baz=358						
LONY	**Lake Ozonia**	**88.47**	**324**	P	**P**	**21 30 09.7**	**-0.2**
	baz=45						
LONY	**Lake Ozonia**	**88.47**	**324**	P	**P**	**21 30 09.9**	**-0.1**
LONY				IAmb	IAmb	21 30 15.8	
	comp=Z,28nm,0.9s						
KDAK	**Kodiak Island**	**88.77**	**12**	P	**P**	**21 30 10.7**	**-0.4**
	baz=341						
J59A	**Piesco**	**89.25**	**323**	P	**P**	**21 30 13.7**	**+0.1**
J59A				IAmb	IAmb	21 30 19.3	
	comp=Z,13nm,0.9s						
KNRA	**Kununurra**	**89.28**	**109**	P	**P**	**21 30 13.6**	**-0.5**
KNRA				IAmb	IAmb	21 30 21.3	
	comp=Z,24nm,1.0s						
DLBC	**Dease Lake**	**90.04**	**360**	P	**P**	**21 30 17.8**	**+0.7**
	comp=Z,5.3nm,1.1s,baz=296,slow=7.8,SNR=6.1						
DLBC	**Dease Lake**	**90.04**	**360**	P	**P**	**21 30 17.8**	**+0.7**
DLBC				IAmb	IAmb	21 30 40.1	
	comp=Z,26nm,1.4s						
NBRF	**Rio Formoso -**	**90.06**	**260**	*e*P	**P**	**21 30 22.2**	**+4.5**
NBAN	**Anadia - AL**	**91.54**	**260**	*e*P	**P**	**21 30 29.3**	**+4.6**
E46A	**Sault Ste Mari**	**91.68**	**330**	P	**P**	**21 30 24.9**	**0.0**
JAY	**Jayapura**	**92.28**	**92**	LR	LR	22 19 25.6	
	comp=Z,108nm,18.0s,baz=324,slow=40						
NBMA	**Muriti-CE**	**92.43**	**263**	*e*P	P	21 30 35.1	+6.2
P60A	**Greenville**	**92.45**	**321**	P	**P**	**21 30 28.0**	**-0.5**
	baz=44						
ULM	**Lac du Bonnet**	**92.70**	**339**	P	**P**	**21 30 27.9**	**-1.6**
	comp=Z,7.3nm,0.9s,baz=71,slow=2.6,SNR=4.1						
ULM				LR	LR	22 14 08.9	
	comp=Z,268nm,19.5s,baz=28,slow=37						
M55A	**Ridgway**	**92.87**	**324**	P	**P**	**21 30 29.7**	**-0.8**
ERPA	**Erie**	**92.99**	**325**	P	**P**	**21 30 30.5**	**-0.5**
	baz=41						
SSPA	**Standing Stone**	**93.04**	**323**	P	**P**	**21 30 30.8**	**-0.5**
	baz=42						
NBPS	**Pedro II - PI**	**93.15**	**267**	*e*P	**P**	**21 30 37.0**	**+4.7**
M54A	**Oil Creek Stat**	**93.29**	**324**	P	**P**	**21 30 32.0**	**-0.4**
	baz=41						
NBLA	**Lagarto - SE**	**93.50**	**259**	*e*P	**P**	**21 30 38.3**	**+4.6**
AGMN	**Agassiz Nation**	**94.40**	**338**	P	**P**	**21 30 37.1**	**-0.3**
	baz=29						
ROSB	**Rosrio**	**94.65**	**269**	*e*P	P	21 30 44.3	+5.2
MCWV	**Mont Chateau**	**94.77**	**323**	P	**P**	**21 30 39.0**	**-0.2**
	baz=41						
NBPN	**Ponto Novo - B**	**95.44**	**261**	*e*P	P	21 30 49.0	+6.3
WRA	**Warramunga Arr**	**96.04**	**110**	P	**P**	**21 30 44.3**	**-1.0**
	comp=Z,0.7nm,0.9s,baz=315,slow=4.0,SNR=3.3						
WRA				PKKP	**PKKPbc**	**21 47 32.9**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=122,slow=2.6,SNR=5.9						
WRA				LR	LR	22 17 00.9	
	comp=Z,42nm,21.6s,baz=285,slow=37						
WRA	**Warramunga Arr**	**96.04**	**110**	*i* P	**P**	**21 30 48.5**	**+3.2**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ASAR	**Alice Springs**	**97.63**	**113**	P	**P**	**21 30 51.6**	**-0.8**
	comp=Z,0.4nm,0.8s,baz=303,slow=4.3,SNR=3.3						
ASAR				PKKP	**PKKPdf**	**21 47 30.8**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=117,slow=3.9,SNR=5.8						
ASAR				LR	LR	22 21 00.9	
	comp=Z,55nm,18.7s,baz=302,slow=39						
MAW	**Mawson**	**99.67**	**175**	LR	LR	22 12 59.7	
	comp=Z,227nm,18.9s,baz=14,slow=34						
NVAR	**Mina Array Bea**	**109.16**	**350**	PKiKP	**PKiKP**	**21 35 49.2**	**+1.3**
	comp=Z,0.8nm,0.4s,baz=0.7,slow=0.3,SNR=5.9						
VNA2	**Neumayer--Watz**	**110.10**	**197**	PKiKP	**PKiKP**	**21 35 53.5**	**+5.4**
VNA3	**Neumayer Olymp**	**110.88**	**197**	PKiKP	**PKiKP**	**21 35 55.9**	**+6.2**
TXAR	**Lajitas Array**	**114.03**	**334**	PKiKP	PKPdf	21 35 57.2	+0.1
	comp=Z,0.7nm,0.6s,baz=41,slow=4.0,SNR=3.4						
TXAR				SKP		21 39 28.3	
	comp=Z,0.6nm,0.9s,baz=169,slow=1.8,SNR=4.0						
CMIG	**Matias Romero**	**120.57**	**320**	PKP	**PKiKP**	**21 36 10.0**	**0.0**
	comp=Z,4.9nm,0.6s,baz=11,slow=1.4,SNR=2.6						
QSPA	**South Pole Qui**	**121.70**	**180**		**PKPdf**	**21 36 10.2**	**-0.3**
LPAZ	**La Paz**	**121.75**	**270**	PKP	**PKiKP**	**21 36 13.2**	**+0.1**
	comp=Z,2.4nm,0.8s,baz=138,slow=2.0,SNR=6.5						
LPAZ	**La Paz**	**121.75**	**270**	PKIKP	**PKiKP**	**21 36 13.6**	**+0.6**
LPAZ	**La Paz**	**121.75**	**270**	*e*P	**PKiKP**	**21 36 15.4**	**+2.5**
LPAZ	**La Paz**	**121.75**	**270**		**PKiKP**	**21 36 13.6**	**+0.6**
DZM	**Mont Dzumac**	**123.58**	**97**	*e*LR	LR	22 14 36.8	
	comp=Z,190nm,24.6s						
VNDA	**Vanda**	**125.66**	**166**	PKP	**PKiKP**	**21 36 19.2**	**+1.0**
	comp=Z,0.8nm,1.0s,baz=256,slow=4.2,SNR=2.5						
PLCA	**Paso Flores**	**131.76**	**242**	PKP	**PKiKP**	**21 36 32.1**	**+0.5**
	comp=Z,8.3nm,1.1s,baz=50,slow=1.5,SNR=2.6						
PLCA				SKPbc	**SKPbc**	**21 39 55.6**	**+0.2**
	comp=Z,14nm,1.1s,baz=102,slow=5.1,SNR=11						
PLCA				PKKP	**PKKPdf**	**21 46 27.2**	**+0.3**
	comp=Z,2.5nm,0.9s,baz=247,slow=5.9,SNR=3.1						
PLCA	**Paso Flores**	**131.76**	**242**	PKIKP	**PKiKP**	**21 36 33.2**	**+1.6**
PLCA	**Paso Flores**	**131.76**	**242**	*e*P	**PKiKP**	**21 36 34.5**	**+2.9**
PLCA	**Paso Flores**	**131.76**	**242**		**PKiKP**	**21 36 33.2**	**+1.6**
TAOE	**Nuku Hiva Isla**	**155.39**	**24**	*e*LR	LR	22 29 15.8	
	comp=Z,332nm,25.2s						
PPT2	**Papeete2**	**157.59**	**55**	*e*LR	LR	22 30 17.2	
	comp=Z,222nm,26.0s						

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*IDC **25** 21:20:30.0±4.9, 48°.94N×121°.73W, h0^{km}, mb3.2/1, mb1 3.5/4, mb1mx3.2/62, mbtmp3.1/4, ML3.6/3, Error ellipse: s-maj=60.0km s-min=23.3km az=149.0*

*IASPEI **25** 21:20:36.7±0.9, 48°.12N±0°.02×121°.21W±0°.02, h13^{km}±6^{km}, Error ellipse: s-maj=3.0km s-min=2.5km az=57.2, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*NEIC **25** 21:20:37.0±1.6, 48°.12N±0°.02×121°.20W±0°.01, h1^{km}±11^{km}, Error ellipse: s-maj=2.7km s-min=1.1km az=158.0*

*ANF **25** 21:20:36.7±0.4, 48°.10N×121°.22W, h10^{km}±3^{km}, ML3.4/10, Error ellipse: s-maj=3.7km s-min=2.4km az=23.0*

*SEA **25** 21:20:37.2±1.6, 48°.12N±0°.02×121°.22W±0°.03, h5^{km}±7^{km}, ML3.5/159, ML3.3/72(NEIC), Error ellipse: s-maj=2.9km s-min=2.3km az=123.0*

*PNSN **25** 21:20:37.2, 48°.12N×121°.22W, h4^{km}, MD3.4, Fault plane solution: NP1:ϕ_s70.00000°, δ50.00000°, λ90.00000°.*

*PGC **25** 21:20:37.7±0.0, 48°.12N×121°.22W, h2^{km}, ML3.5, ML3.0/32, 101km Ene of Seattle, Wa Washington*

ISC 25 21:20:37.3±0.9, **48°.13N**±0°.01×**121°.22W**±0°.01, **h7**^{km}±6^{km}, **n151,** σ1°.**30**/210, **Washington**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GPW	**Glacier Peak**	**0.06**	**102**		**Pg**	**21 20 39.2**	**0.0**
GPW	**Glacier Peak**	**0.06**	**102**	P	**Pg**	**21 20 39.2**	**0.0**
C06D	**Leavenworth**	**0.30**	**133**	P	**Pg**	**21 20 42.5**	**-0.7**
	baz=313,SNR=819						
C06D				S	**Sg**	**21 20 46.8**	**-0.5**
	baz=313						
C06D	**Leavenworth**	**0.30**	**133**		**Pg**	**21 20 42.6**	**-0.7**
C06D					**Sg**	**21 20 46.8**	**-0.5**
WRW	**Wenatchee Ridg**	**0.36**	**140**		**Pg**	**21 20 43.6**	**-0.6**
RPW	**Rockport**	**0.37**	**329**		**Pg**	**21 20 44.5**	**-0.1**
RPW	**Rockport**	**0.37**	**329**	P	**Pg**	**21 20 44.5**	**-0.1**
B06A	**Marblemount**	**0.43**	**336**		**Pg**	**21 20 45.4**	**-0.1**
B06A	**Marblemount**	**0.43**	**336**		**Sg**	**21 20 51.4**	**+0.3**
B06A	**Marblemount**	**0.43**	**336**	P	**Pg**	**21 20 45.5**	**-0.1**
B06A				S	**Sg**	**21 20 51.3**	**+0.2**
JCW	**Jim Creek**	**0.48**	**278**		**Pg**	**21 20 46.4**	**-0.1**
JCW	**Jim Creek**	**0.48**	**278**	P	**Pg**	**21 20 46.5**	**-0.1**

HTW	Haystack Looko	0.49	228		Pg	21 20 46.2	-0.5
MBPA	Monroe Substat	0.50	243		Pg	21 20 46.9	-0.1
MBPA					Sg	21 20 53.8	+0.2
C05A	Tolt Reservoir	0.54	216		Pg	21 20 47.0	-0.6
C05A					Sg	21 20 54.1	-0.6
C05A	Tolt Reservoir	0.54	216	P	Pg	21 20 47.0	-0.6
C05A				S	Sg	21 20 54.0	-0.6
TTW	Tolt Reservoir	0.54	216		Pg	21 20 47.0	-0.6
TTW					Sg	21 20 54.2	-0.5
NLW	Nelson Butte	0.60	95		Pg	21 20 48.2	-0.5
SLFW	Sugar Loaf	0.60	128		Pg	21 20 48.0	-0.8
B05A	Bryant	0.60	283	P	Pg	21 20 48.7	-0.1
	baz=103,SNR=562						
B05A				S	Sg	21 20 57.0	+0.4
	baz=103						
B05A	Bryant	0.60	283		Pg	21 20 48.7	-0.1
B05A					Sg	21 20 57.0	+0.4
BLH	Bald Hill	0.62	242		Pg	21 20 49.1	0.0
CMW	Cultus Mountai	0.67	296		Pg	21 20 50.0	-0.2
CMW	Cultus Mountai	0.67	296	P	Pg	21 20 50.0	-0.2
CMW				S	Sg	21 20 58.9	+0.1
ELW	Echo Lake	0.77	215		Pg	21 20 51.6	-0.5
ELW					Sg	21 21 02.5	+0.4
LYNC	Lynnwood City	0.78	247		Pb	21 20 53.0	-0.2
SHUK	Shuksan-Mt. Ba	0.78	338		Pg	21 20 51.5	-0.8
SHUK					Sg	21 21 03.1	+0.5
MBW	Mount Baker	0.79	326		Pg	21 20 51.7	-0.9
MBW	Mount Baker	0.79	326	P	Pg	21 20 51.7	-0.9
MBW				S	Sg	21 21 01.9	-1.0
CDMR	Cedar Moraine	0.80	207		Pg	21 20 51.6	-1.0
ETW	Entiat	0.80	131		Pg	21 20 51.4	-1.2
RATT	Rattlesnake La	0.81	209		Pg	21 20 51.7	-1.0
CBSW	Chelan Butte S	0.86	112		Pg	21 20 52.7	-1.0
LTY	Liberty	0.95	157		Pg	21 20 54.2	-1.3
LTY	Liberty	0.95	157	IAML		21 21 07.1	
	comp=E,951nm,0.4s						
LTY				IAML		21 21 07.8	
	comp=N,780nm,0.5s						
LTY	Liberty	0.95	157	P	Pg	21 20 54.2	-1.3
LTY				S	Sg	21 21 06.6	-1.3
WTV	Waterville	0.96	116		Pg	21 20 54.7	-1.0
DHW2	Dyer Hill 2	0.99	98		Pg	21 20 55.3	-0.9
GSM	Grass Mountain	1.00	203		Pg	21 20 55.3	-1.2
A05A	Maple Falls	1.04	327	P	Pg	21 20 56.2	-1.0
A05A				S	Sg	21 21 10.4	-0.3
TBM	Table Mountain	1.05	156		Pg	21 20 56.4	-1.1
VDB	Vedder Mountai	1.07	327	P	Pg	21 20 56.8	-1.0
VDB				S	Sg	21 21 10.5	-1.2
D05A	Enumclaw	1.07	209		Pg	21 20 56.9	-1.0
D05A	Enumclaw	1.07	209	IAML		21 21 12.7	
	comp=N,532nm,0.5s						
D05A	Enumclaw	1.07	209	P	Pg	21 20 56.9	-1.0
D05A				S	Sg	21 21 11.8	0.0
A04D	Lummi Island	1.15	301	P	Pg	21 20 58.8	-0.6
	baz=120,SNR=23						
A04D				S	Sb	21 21 15.5	+0.8
	baz=120						
MCW	Mount Constitu	1.21	298	P	Pg	21 20 59.2	-1.2
MCW				S	Sg	21 21 14.0	-2.0
GNW	Green Mountain	1.22	243	P	Pg	21 20 58.9	-1.8
GNW				S	Sg	21 21 14.9	-1.5
FMW	Mount Fremont	1.24	194	P	Pg	21 20 59.2	-1.8
FMW				S	Sg	21 21 14.5	-2.5
HOPB	Hope	1.27	354	P	Pg	21 21 00.4	-1.2
HOPB				S	Sg	21 21 17.0	-0.9
B08A	Colville Reser	1.28	79		Pg	21 21 00.6	-1.3
B08A	Colville Reser	1.28	79	P	Pg	21 21 00.6	-1.3
B08A				S	Sg	21 21 17.3	-1.3
HDW	Hoodsport	1.32	249	P	Pn	21 21 00.6	-1.7
HDW				S	Sg	21 21 17.4	-2.3
D03D	Eldon	1.39	245	P	Pn	21 21 01.5	-1.6
	baz=64,SNR=68						
D03D				S	Sb	21 21 20.0	-1.5
	baz=64						
D04E	Lakebay	1.42	228	Pb	Pn	21 21 03.0	-0.4
	baz=47,SNR=38						
D04E				Sb	Sn	21 21 23.0	+0.7
	baz=47						
VGZ	Gonzales	1.43	282	P	Pn	21 21 02.6	-1.1
VGZ				S	Sb	21 21 21.3	-1.4
SNB	Saturna Island	1.45	297	P	Pn	21 21 03.6	-0.3
SNB				S	Sb	21 21 23.8	+0.6
HNBB	Haney	1.46	323	P	Pn	21 21 03.0	-1.2
HNBB				S	Sb	21 21 22.7	-1.0
B04A	Port Angeles	1.53	268		Pn	21 21 04.1	-0.9
B04A				IAML		21 21 24.8	
	comp=N,371nm,0.5s						
B04A				IAML		21 21 26.0	
	comp=E,508nm,0.3s						
B011	North Saanich	1.57	290	P	Pn	21 21 04.9	-0.7
B011				S	Sn	21 21 25.6	-0.6
PA01	PA01 North	1.57	290	P	Pn	21 21 05.0	-0.6
PA01				S	Sn	21 21 25.7	-0.4
PA02	PA02 Ocean	1.57	290	P	Pn	21 21 05.2	-0.4
PA02				S	Sn	21 21 25.7	-0.5
PA12	PA12 Sannich	1.57	290	P	Pn	21 21 05.0	-0.6
PA12				S	Sn	21 21 25.6	-0.6
B009	North Saanich	1.57	290	P	Pn	21 21 05.1	-0.5
B009				S	Sn	21 21 25.8	-0.4
B010	North Saanich	1.57	290	P	Pn	21 21 05.0	-0.6
B010				S	Sn	21 21 25.8	-0.4
PGC	Sidney	1.57	290	Pn	Pn	21 21 05.0	-0.6
PGC				IAML		21 21 27.2	
	comp=N,425nm,0.3s						
PGC				IAML		21 21 28.8	
	comp=E,260nm,0.3s						
PGC	Sidney	1.57	290	P	Pn	21 21 05.0	-0.6
PGC				S	Sn	21 21 25.6	-0.7
PNT	Penticton	1.59	41	P	Pn	21 21 05.6	-0.4
PNT				Sg	Sn	21 21 27.3	+0.5
STW	Striped Peak	1.64	272	P	Pn	21 21 05.7	-0.8
OSD	Olympics--Snow	1.69	260	P	Pn	21 21 07.6	0.0
GOBB	Galiano Island	1.73	299	P	Pn	21 21 07.8	+0.1
GOBB				S	Sn	21 21 30.1	0.0
CPW	Capitol Peak	1.74	229	P	Pn	21 21 07.5	-0.5
CPW				S	Sn	21 21 30.0	-0.4
E04D	Cinebar	1.82	211	Pb	Pn	21 21 09.1	0.0
	baz=30,SNR=466						
E04D				S	Sn	21 21 32.9	+0.6
	baz=30						
E07A	Sunnyside	1.83	149		Pn	21 21 09.3	+0.1
BIB	Bowen Island	1.88	314	P	Pn	21 21 10.0	+0.2
BIB				S	Sn	21 21 33.0	-0.8
D08A	Wollman Farm,	1.89	124	Pn	Pn	21 21 09.7	-0.3
OBC	Olympics--Boni	1.92	268	P	Pn	21 21 10.8	+0.4
NLWA	Neilton Lookou	1.93	248	Pn	Pn	21 21 11.1	+0.5
NLWA				IAML		21 21 43.6	
	comp=E,158nm,0.7s						
WISH	Wishkah	2.00	240		Pn	21 21 12.7	+1.2
WISH				IAML		21 21 47.6	
	comp=N,175nm,0.6s						
WISH	Wishkah	2.00	240	P	Pn	21 21 12.3	+0.9
C09A	Chrisman Ranch	2.01	98	Pn	Pn	21 21 10.7	-0.9
C09A	Chrisman Ranch	2.01	98	P	Pn	21 21 11.1	-0.6
WPB	Watts Point	2.01	320	P	Pn	21 21 12.2	+0.5
WPB				S	Sn	21 21 37.5	+0.3
B926	Mesachie Lake	2.05	291	P	Pn	21 21 12.1	-0.1
B926				S	Sn	21 21 37.9	-0.3
CLRS	Cowichan Lake	2.05	291		Pn	21 21 12.2	-0.1
CLRS	Cowichan Lake	2.05	291	P	Pn	21 21 12.2	-0.1
CLRS				S	Sn	21 21 38.6	+0.5
HAWA	Hanford	2.08	146	Pn	Pn	21 21 12.6	-0.1
HAWA				IAML		21 21 43.1	
	comp=N,294nm,0.3s						
HAWA				IAML		21 21 43.3	
	comp=N,216nm,0.4s						
NLLB	Nanaimo Lost L	2.14	302	P	Pn	21 21 13.9	+0.5
NLLB				S	Sn	21 21 40.6	+0.4
PFB	Port Renfrew	2.19	283	P	Pn	21 21 14.0	-0.2
PFB				S	Sn	21 21 41.8	+0.3
E08A	Dider Farm, El	2.20	137		Pn	21 21 13.7	-0.6
E08A				IAML		21 21 50.7	
	comp=E,158nm,0.3s						
E08A				IAML		21 21 53.1	
	comp=N,120nm,0.4s						
E03A	Lebam	2.25	226	Pn	Pn	21 21 15.5	+0.7
E03A				IAML		21 21 47.8	
	comp=N,236nm,0.5s						
E03A				IAML		21 21 55.4	
	comp=E,230nm,0.6s						
E03A	Lebam	2.25	226	P	Pn	21 21 15.6	+0.7
E03A				S	Sn	21 21 44.4	+1.6
C03A	Quillayute Air	2.25	267	Pn	Pn	21 21 15.5	+0.6
C03A				IAML		21 21 54.4	
	comp=E,140nm,3.6s						
F05D	White Salmon	2.25	184	Pb	Pb	21 21 17.2	-1.1
	baz=4.2						
OCP	Olym-Cheeka Pk	2.28	275	S	Sn	21 21 45.3	+1.5
SHB	Sechelt	2.29	311	P	Pn	21 21 15.9	+0.4
SHB				S	Sn	21 21 45.4	+1.4
WSLR	Whistler	2.29	331	P	Pn	21 21 17.4	+1.8
GHNB	Nanoose	2.32	302	P	Pn	21 21 16.4	+0.6
GHNB				S	Sn	21 21 46.4	+1.8
F04A	Amboy	2.35	201		Pn	21 21 17.5	+1.2
F04A				IAML		21 21 51.2	
	comp=N,189nm,0.7s						
F04D	Rainier, OR	2.38	211	Pb	Pn	21 21 18.3	+1.5
	baz=30						
F04D				Sb	Sb	21 21 50.0	-0.1
	baz=30						
RADR	Rader Ridge	2.45	227		Pn	21 21 18.7	+0.9
RADR				IAML		21 21 55.1	
	comp=E,177nm,0.7s						
RADR				IAML		21 22 02.9	
	comp=N,142nm,1.0s						
MGB	Mount Grey	2.46	292	P	Pn	21 21 19.0	+1.0
MGB				S	Sn	21 21 50.8	+2.4
LLLB	Lillooet	2.52	350	Pn	Pn	21 21 18.4	-0.3
LLLB				IAML		21 21 58.7	
	comp=E,162nm,0.6s						
LLLB	Lillooet	2.52	350	P	Pn	21 21 18.8	+0.1
LLLB				Sg	Sb	21 21 55.3	+1.2
B927	Port Alberni	2.62	296	S	Sn	21 21 54.6	+2.7
TXB	Texada	2.64	308	P	Pn	21 21 21.2	+0.9
TXB				S	Sn	21 21 55.6	+3.0
E09A	Wood Farm, Sta	2.65	127		Pn	21 21 21.0	+0.6
E09A				IAML		21 22 05.5	
	comp=N,99nm,0.5s						
E09A				IAML		21 22 09.8	
	comp=E,81nm,0.6s						
B928	Bamfield	2.69	287	P	Pn	21 21 23.3	+2.3
BFSB	Bamfield	2.70	287	P	Pn	21 21 23.3	+2.3
BFSB				S	Sn	21 21 56.6	+2.7
NEW	Newport	2.75	86	Pn	Pn	21 21 21.1	-0.7
	comp=E,3.1nm,0.3s,baz=284,slow=13,SNR=24						
NEW				Sn	Sn	21 21 57.9	+2.6
	comp=E,5.5nm,0.3s,baz=212,slow=23,SNR=2.7						
NEW	Newport	2.75	86	P	Pn	21 21 20.8	-1.0
	baz=269						
NEW				Sb	Sb	21 22 02.3	+1.7
	baz=269						
NEW	Newport	2.75	86	Pn	Pn	21 21 21.1	-0.7
HOOD	Mount Hood Mea	2.83	186		Pn	21 21 24.9	+1.9
HOOD				IAML		21 22 12.8	
	comp=E,84nm,1.0s						
HOOD				IAML		21 22 13.3	
	comp=N,70nm,1.0s						
G05D	Wamic, OR	2.89	181	Pb	Pb	21 21 27.6	-1.6
	baz=1.4						
G05D				Sb	Sb	21 22 05.9	+1.2
	baz=1.4						
OZB	Mount Ozzard	2.96	288	Pn	Pn	21 21 27.3	+2.6
OZB				IAML		21 22 14.4	
	comp=N,94nm,0.7s						
OZB				IAML		21 22 38.5	
	comp=E,94nm,2.3s						
OZB	Mount Ozzard	2.96	288	P	Pn	21 21 26.2	+1.5
BTB	Buttle Lake	3.14	297	P	Pn	21 21 29.8	+2.4
BTB				S	Sn	21 22 08.6	+3.4
G08A	Pilot Rock	3.24	150		Pn	21 21 28.5	-0.2
G08A				IAML		21 22 22.1	
	comp=E,57nm,0.5s						
G08A				IAML		21 22 22.9	
	comp=N,78nm,0.9s						
CBB	Campbell River	3.32	307		Pn	21 21 30.9	+1.2
HEBO	Mount Hebo	3.40	212	Pn	Pn	21 21 32.3	+1.5
HEBO				IAML		21 22 12.7	
	comp=N,90nm,4.8s						
F10A	Beach Ranch, E	3.48	127		Pn	21 21 31.9	0.0
H04A	Detroit Lake	3.51	191		Pn	21 21 33.8	+1.4
H04A				IAML		21 22 21.0	
	comp=N,44nm,0.5s						
H04A				IAML		21 22 23.8	
	comp=E,47nm,0.8s						
GDR	Gold River	3.57	299	S	Sn	21 22 18.0	+2.4
SLEB	Sale Mountain	3.64	32	P	Pn	21 21 34.6	+0.3
SLEB				Pg	Pb	21 21 43.4	+1.3
SLEB				Sg	Sg	21 22 31.1	-3.1
H04D	Lebanon	3.76	197	Sb	Sb	21 22 31.1	+1.4
	baz=16						
NCRB	Newcastle Ridg	3.90	308	P	Pn	21 21 39.7	+2.0
WOSB	Woss	4.05	302	P	Pn	21 21 42.5	+2.7
BLBC	Blue River	4.12	17	P	Pn	21 21 40.7	-0.2
BUCK	Buck Mountain	4.12	198	Pn	Pn	21 21 42.5	+1.7
BUCK				IAML		21 23 47.9	
	comp=N,39nm,3.2s						
I07A	Izee	4.22	163		Pn	21 21 42.8	+0.6
I07A				IAML		21 22 57.2	
	comp=N,22nm,1.1s						
I07A				IAML		21 23 02.3	
	comp=E,25nm,3.7s						
BMO	Blue Mountains	4.25	139		Pn	21 21 42.6	+0.1
MNB	Mounoet Dainar	4.46	23	P	Pn	21 21 45.8	+0.2
MAYB	Maynard	4.51	302	P	Pn	21 21 46.3	+0.2
JTMT	Jette	4.68	92	Pn	Pn	21 21 47.5	-1.0
JTMT				IAML		21 23 14.7	
	comp=N,36nm,0.6s						
PLID	Pearl Lake	4.71	128		Pn	21 21 48.4	-0.7
WALA	Waterton Lakes	4.94	76		Pn	21 21 51.5	-0.5
WALA				IAML		21 23 17.6	
	comp=E,24nm,1.1s						
WALA	Waterton Lakes	4.94	76	P	Pn	21 21 51.8	-0.3
WALA				Sg	Sb	21 23 09.2	+5.4
UBRB	Upper Baezaeko	5.10	340	P	Pn	21 21 53.4	-0.9
UBRB				Sg	Sg	21 23 16.5	-4.6
MSO	Missoula	5.11	102		Pn	21 21 53.2	-1.1
J08A	Circle Bar Ran	5.15	157	Pn	Pn	21 21 55.5	+0.6
DBO	Dodson Butte	5.21	197	Pn	Pn	21 21 57.8	+2.2
PRDA	Priddis	5.28	56	Sg	Sg	21 23 21.6	-5.2
MFID	Camas Ranch	6.04	139		Pn	21 22 07.4	+0.3
LRM	Limekiln Ridge	6.43	108	Pn	Pn	21 22 12.1	-0.6
YBH	Yreka Blue Hor	6.48	190	Pn	Pn	21 22 15.9	+2.6
HRY	Holter Researc	6.53	99	Pn	Pn	21 22 15.4	+1.5
HLID	Hailey	6.59	131	Pn	Pn	21 22 15.7	+0.9
MCMT	McKenzie Canyo	6.66	117	Pn	Pn	21 22 16.2	+0.4
PDAR	Pinedale Array	9.79	119	Pn	Pn	21 23 01.9	+3.2
	comp=E,0.1nm,0.3s,baz=313,slow=9.4,SNR=2.4						
NVAR	Mina Array Bea	9.93	167	Pn	Pn	21 23 09.1	+8.5
	comp=E,0.1nm,0.3s,baz=338,slow=12,SNR=3.3						
TXAR	Lajitas Array	23.14	138	P	P	21 25 44.7	+0.6
	comp=E,0.6nm,0.8s,baz=327,slow=6.7,SNR=5.1						

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*IDC **25** 21:33:13.5±0.9, 3°.03S×129°.96E, h0^{km}, mb4.0/7, mb1 4.2/11, mb1mx4.0/32, mbtmp4.1/11, ML4.0/4, MS3.3/2, Ms1 3.3/2, ms1mx2.8/37, Error ellipse: s-maj=34.2km s-min=16.2km az=79.0*

*NEIC **25** 21:33:16.1±1.8, 3°.02S±0°.07×129°.98E±0°.06, h15^{km}±5^{km}, mb4.2/18, Error ellipse: s-maj=10.0km s-min=9.0km az=201.0*

*DJA **25** 21:33:17.8±1.7, 3°S±6°×13°0E±°, h18^{km}±16^{km}, M3.9/7, MLv3.9/7*

ISC 25 21:33:17.0±0.5, **3°.02S**±0°.04×**130°.05E**±0°.04, **h25**^{km}, **n59**, σ**1^{s}.88**/61, **mb4.1**/10, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	1.16	254	P	Pb	21 33 39.0	+0.6
MSAI				S	Sb	21 33 56.2	+3.1
BNDI	Bandanaira	1.50	185	P	Pb	21 33 46.8	+2.6
AAI	Ambon	1.96	250	P	Pn	21 33 50.0	+1.3
AAI				S	Sb	21 34 20.3	+4.1
FAKI	Fak Fak	2.20	88	P	Pn	21 33 54.3	+2.3
FAKI	Fak Fak	2.20	88		Pn	21 33 53.0	+0.9
FAKI	Fak Fak	2.20	88	P	Pb	21 33 54.7	-1.5
SIJI	Sorong	2.46	30	Pn	Pn	21 33 55.6	+0.1
	14nm,0.3s,baz=60,slow=6.5,SNR=75						
SIJI				Sn	Sn	21 34 24.0	-0.8
	26nm,0.3s,baz=234,slow=23,SNR=4.1						
SIJI				LR	LR	21 35 16.2	
	comp=Z,352nm,20.1s,baz=227,slow=49						
SWI	Sorong	2.46	30	P	Pn	21 33 56.1	+0.5
SWI				S	Sn	21 34 25.4	+0.6
LBMI	Labuha	3.47	313	P	Pn	21 34 08.1	-1.4
SANI	Sanana	4.17	283	P	Pn	21 34 17.9	-1.1
SANI				S	Sn	21 35 01.2	-5.7
SANI	Sanana	4.17	283	P	Pn	21 34 17.8	-1.2
TNTI	Ternate	4.62	325	Pn	Pn	21 34 22.8	-2.5
LUWI	Luwuk	7.53	285	Pn	Pn	21 35 03.1	-2.1
GTOI	Gorontalo	7.91	297	P	Pn	21 35 19.6	+9.1
APSI	Ampana	8.65	284	P	Pn	21 35 20.7	+0.1
MRSI	Marisa	8.81	293	P	Pn	21 35 25.0	+2.1
BATI	Baumata	9.55	221	Pn	Pn	21 35 29.7	-3.3
	1.0nm,0.3s,baz=230,slow=16,SNR=1.1						
BATI				LR	LR	21 39 22.1	
	comp=Z,289nm,19.3s,baz=54,slow=39						
BATI	Baumata	9.55	221	P	Pn	21 35 45.7	+13
MMRI	Maumere	9.56	234	Pn	Pn	21 35 33.5	+0.3
TOLI2	Tolitoli	10.13	294		Pn	21 35 40.5	-0.5
BKSI	Bulukumba	10.16	257	P	Pn	21 35 54.5	+13
MPSI	Mapaga	10.68	288	P	Pn	21 36 01.9	+13
KNRA	Kununurra	12.64	186	Pn	Pn	21 36 14.6	-0.7
PLAI	Plampang	13.49	244	P	P	21 36 35.0	-1.0
MYLDM	Lahad Datu	14.12	305	Pn	Pn	21 36 36.7	+1.1
FITZ	Fitzroy Crossi	15.60	196	Pn	Pn	21 36 55.0	-0.4
	0.7nm,0.3s,baz=29,slow=10,SNR=21						
FITZ				Sn	Sn	21 39 42.8	-4.7
	0.1nm,0.3s,baz=96,slow=20,SNR=0.7						
COEN	Coen	16.92	131		P	21 37 13.3	-0.8
COEN				IAmb	IAmb	21 37 27.4	
	comp=Z,13nm,0.9s						
WB0	Warramunga Arr	17.18	166		Pn	21 37 14.6	-0.9
WB0				IAmb	IAmb	21 37 22.2	
	comp=Z,8.1nm,0.8s						
WRAB	Tennant Creek	17.33	166		Pn	21 37 16.7	-0.6
WRA	Warramunga Arr	17.34	166	P	Pn	21 37 16.7	-0.8
	comp=Z,0.8nm,0.3s,baz=351,slow=12,SNR=29						
WRA				S	Sn	21 40 23.7	-6.1
	comp=Z,0.1nm,0.3s,baz=346,slow=23,SNR=2.8						
WRA	Warramunga Arr	17.34	166		Pn	21 37 16.6	-0.8
WB2	Warramunga Arr	17.34	166		Pn	21 37 16.7	-0.8
WR0	Warramunga Arr	17.40	166		Pn	21 37 17.9	-0.3
AS31	Alice Springs	20.86	170	P	P	21 37 58.3	+1.0
AS31				IAmb	IAmb	21 37 59.8	
	comp=Z,7.9nm,0.6s						
ASAR	Alice Springs	20.86	170	P	Pn	21 37 58.5	-1.4
	comp=Z,24nm,0.8s,baz=347,slow=10,SNR=132						
ASAR				S	S	21 41 46.3	-2.7
	comp=Z,2.0nm,0.8s,baz=350,slow=21,SNR=6.4						
ASAR	Alice Springs	20.86	170	P	P	21 37 58.2	+0.9
PSA00	Pilbara Seismi	20.94	207	P	P	21 37 56.8	-1.3
PSA00	Pilbara Seismi	20.94	207	P	P	21 37 56.3	-1.9
PSA00				IAmb	IAmb	21 38 07.6	
	comp=Z,12nm,1.4s						
CTAO	Charters Tower	23.20	138	P	P	21 38 23.9	+1.8
CTAO				IAmb	IAmb	21 38 38.0	
	comp=Z,21nm,1.4s						
STKA	Stephens Creek	30.70	161	P	P	21 39 30.1	+0.2
	comp=Z,1.3nm,0.5s,baz=315,slow=11,SNR=1.9						
CMAR	Chiang Mai Arr	37.33	306	P	P	21 40 28.1	+0.5
	comp=Z,0.7nm,0.4s,baz=135,slow=7.5,SNR=9.1						
CMAR	Chiang Mai Arr	37.33	306	P	P	21 40 27.6	-0.1
JWT	Wachi	38.43	7	P	P	21 40 36.5	-0.2
ASAJ	Asahikawa	48.26	12	LR	LR	22 02 02.8	
	comp=Z,778nm,19.4s,baz=310,slow=36						
SONM	Songino Array	54.71	341	P	P	21 42 44.8	+0.5
	comp=Z,1.4nm,1.0s,baz=144,slow=5.8,SNR=6.3						
SONM	Songino Array	54.71	341	P	P	21 42 44.8	+0.5
SONM				IAmb	IAmb	21 42 45.3	
	comp=Z,2.2nm,1.1s						
YAK	Yakutsk	64.87	360	P	P	21 43 54.9	+1.1
MK31	Makanchi Array	64.96	326	P	P	21 43 54.2	-0.5
MK31				IAmb	IAmb	21 43 55.1	
	comp=Z,2.5nm,1.2s						
MKAR	Makanchi Array	64.96	326	P	P	21 43 54.7	0.0
	comp=Z,0.3nm,0.3s,baz=113,slow=8.2,SNR=9.9						
MKAR	Makanchi Array	64.96	326	P	P	21 43 54.5	-0.2
ZALV	Zalesovo Beam	68.06	333	P	P	21 44 14.0	-0.3
	comp=Z,1.4nm,0.9s,baz=96,slow=7.6,SNR=4.8						
ZALV	Zalesovo Beam	68.06	333	P	P	21 44 13.9	-0.5
KURK	Kurchatov	69.18	328	P	P	21 44 21.4	0.0
VNDA	Vanda	76.37	173	P	P	21 45 03.6	-0.1
	comp=Z,0.5nm,0.6s,baz=297,slow=4.5,SNR=2.4						
VNDA	Vanda	76.37	173	P	P	21 45 06.8	+3.2
VNDA				IAmb	IAmb	21 45 13.0	
	comp=Z,2.7nm,1.2s						
ABKAR	Akbulak array	79.44	321	P	P	21 45 21.2	0.0
ABKAR	Akbulak array	79.44	321	P	P	21 45 21.4	+0.2
ABKAR				IAmb	IAmb	21 45 30.8	
	comp=Z,2.5nm,1.1s						
RAYN	Ar Rayn	86.19	294	P	P	21 45 57.6	+0.7
RAYN				IAmb	IAmb	21 46 04.1	
	comp=Z,2.2nm,0.9s						
TORD	Torodi Ar. Bea	127.98	284	PKP	PKiKP	21 52 22.6	+0.2
	comp=Z,0.3nm,0.6s,baz=198,slow=1.7,SNR=2.0						

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*IDC **25** 21:50:01.4±1.9, 13°.19N×93°.63E, h0^{km}, mb3.7/4, mb1 3.8/5, mb1mx3.5/57, mbtmp3.6/5, ML3.5/1, Error ellipse: s-maj=64.4km s-min=23.6km az=65.0*

ISC 25 21:50:00.4±1.4, **13°.8N**±0°.1×**92°.9E**±0°.1, **h35**^{km}, **n18**, σ**0^{s}.92**/14, **mb3.7**/4, **Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	7.43	50	Pn	Pn	21 51 48.4	+2.0
	0.2nm,0.3s,baz=239,slow=16,SNR=6.7						
CMAR				Sn	Sn	21 53 07.7	-1.8
	0.5nm,0.3s,baz=239,slow=28,SNR=10						
ODAN	Odare	14.02	339	*e*P	Pn	21 53 16.5	-0.3
TAPN	Taplejung	14.37	341	*e*P	Pn	21 53 21.6	0.0
RAMN	Ramite	14.39	337	*e*P	Pn	21 53 22.3	+0.4
JIRN	Jiri	15.19	337	*e*P	Pn	21 53 32.4	-0.3
PKI	Pulchoki	15.42	334	*e*P	Pn	21 53 35.9	+0.1
PKIN	Phulchoki	15.43	334	*e*P	Pn	21 53 35.5	-0.4
GKN	Gorkha	16.13	333	*e*P	Pn	21 53 44.8	0.0
	4.9nm,0.3s						
KOLN	Koldanda	16.42	329	*e*P	Pn	21 53 49.3	+0.8
DANN	Dangsing	16.83	331	*e*P	Pn	21 53 53.6	-0.1
PYUN	Piuthan	17.00	329	*e*P	P	21 53 56.7	-0.7
H08S3	Diego Garcia H	29.39	225	T	T	22 26 02.6	
	baz=43,slow=76,SNR=9.7						
H08S2	Diego Garcia H	29.39	225	T	T	22 26 04.0	
	baz=43,slow=76,SNR=8.7						
H08S1	Diego Carcia H	29.41	225	T	T	22 26 18.8	
	baz=43,slow=76,SNR=6.3						
MKAR	Makanchi Array	34.11	347	P	P	21 56 54.1	+12
	0.6nm,0.8s,baz=176,slow=7.1,SNR=5.1						
ZALV	Zalesovo Beam	40.60	353	P	P	21 57 48.3	+12
	0.7nm,0.7s,baz=169,slow=8.7,SNR=2.8						
WRA	Warramunga Arr	52.75	129	P	P	21 59 11.7	-0.5
	1.6nm,0.7s,baz=302,slow=8.6,SNR=8.6						
ASAR	Alice Springs	54.68	133	P	P	21 59 26.0	-0.3
	0.4nm,0.4s,baz=310,slow=7.1,SNR=5.6						

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*NIED **25** 21:51:20.9, 42°.06N×142°.48E, h68^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}5.43; $M_{\theta\theta}$-1.10; $M_{\phi\phi}$-4.33; $M_{r\theta}$2.19; $M_{\theta\phi}$-1.78; $M_{\phi r}$5.36; Fault plane solution: $M_0$7.83000×10^{14} NP1:ϕ_s23.00000°, δ69.00000°, λ89.00000°. NP2:ϕ_s205.00000°, δ21.00000°, λ92.00000°.*

*JMA **25** 21:51:20.8±0.2, 42°.06N×142°.48E, h68^{km}±2^{km}, M3.9 Broadband fault plane solution: P waves. NP1: ϕ_s115.00000°, δ10.00000°, λ6.00000°. NP2:ϕ_s19.00000°, δ89.00000°, λ100.00000°. Principal axes: T Plg45.0000°, Azm299.0000°; N Plg10.0000°, Azm199.0000°; P Plg43.0000°, Azm100.0000°;*

JMA Felt II J1.

*IDC **25** 21:51:21.1±1.9, 42°.14N×142°.61E, h68^{km}±14^{km}, mb3.7/18, mb1 3.9/22, mb1mx3.7/53, mbtmp4.0/22, MS3.6/1, Ms1 3.6/1, ms1mx2.9/41 Error ellipse: s-maj=19.2km s-min=11.9km az=126.0*

*NEIC **25** 21:51:21.5±1.3, 42°.01N±0°.04×142°.43E±0°.04, h67^{km}±5^{km}, mb4.4/30, Error ellipse: s-maj=6.8km s-min=3.9km az=206.0*

ISC 25 21:51:21.3±0.7, **42°.07N**±0°.03×**142°.48E**±0°.03, **h68**^{km}±5^{km}, **n109**, σ**0^{s}.74**/121, **mb4.4**/40, **6C-10D**, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNBK	Urakawa-nobuka	0.29	45	⇑P	Pn	21 51 31.5	-0.7
JNBK				*e*S	Sn	21 51 39.6	-0.5
JSHD	Hidakashinhida	0.34	359	⇓P	Pn	21 51 32.2	-0.3
JSHD				*e*S	Sn	21 51 41.1	+0.4
ERM	Erimo	0.51	96		Pn	21 51 34.0	0.0
ERM				Sn	Sn	21 51 43.3	+0.1

JEM	Erimo	0.51	96	⇑P	Pn	21 51 33.8	-0.2
JEM				eS	Sn	21 51 43.0	-0.3
JTHR	Tokachihiroo	0.65	70	⇑P	Pn	21 51 35.3	-0.1
JTHR				eS	Sn	21 51 46.0	+0.2
JIAM	Iburiatsuma	0.69	323	⇓P	Pn	21 51 36.3	+0.4
JIAM				eS	Sn	21 51 48.1	+1.5
JBT2	Biratori 2	0.71	353	⇓P	Pn	21 51 35.8	-0.4
JBT2				eS	Sn	21 51 46.9	-0.2
JCH	Churui	0.85	50	⇑P	Pn	21 51 37.6	-0.2
JCH				eS	Sn	21 51 50.3	+0.3
JEW	Eniwo	1.08	316	⇓P	Pn	21 51 40.8	+0.1
JEW				eS	Sn	21 51 55.9	+0.8
JEW	Eniwo	1.08	316		Pn	21 51 40.7	+0.1
JEW				Sn	Sn	21 51 55.5	+0.4
JKB	Kayabe	1.09	261	⇓P	Pn	21 51 40.3	-0.5
JKB				eS	Sn	21 51 54.6	-0.8
JFR	Furan	1.09	4	⇓P	Pn	21 51 40.5	-0.4
JNB	Noboribetsu	1.14	291	⇓P	Pn	21 51 40.5	-0.9
JNB				eS	Sn	21 51 55.4	-1.1
JOT	Ohata	1.27	238	⇓P	Pn	21 51 42.6	-0.6
JOT				eS	Sn	21 51 58.9	-0.6
JOB	Onbets	1.30	50	⇑P	Pn	21 51 44.3	+0.8
JOB				eS	Sn	21 52 02.0	+1.8
JISS	Ishikarishitsu	1.43	327	⇓P	Pn	21 51 45.4	+0.1
JISS				eS	Sn	21 52 03.6	+0.3
JAB	Ashibetsu	1.44	353	P	Pn	21 51 45.7	+0.3
JAR	Ashorobuto	1.55	37	⇑P	Pn	21 51 46.8	0.0
JYM2	Yakumo 2	1.57	272	⇓P	Pn	21 51 46.6	-0.5
JYM2				eS	Sn	21 52 05.9	-0.6
JSR	Shiriuchi	1.63	251	P	Pn	21 51 47.9	0.0
JTM	Tenmabayashi	1.67	220	P	Pn	21 51 48.3	-0.1
JTM				eS	Sn	21 52 09.2	+0.4
JTM	Tenmabayashi	1.67	220		Pn	21 51 48.5	+0.1
JTM				Sn	Sn	21 52 09.2	+0.4
JKA	Kamikawa-asahi	2.04	2		Pn	21 51 54.0	+0.6
ASAJ	Asahikawa	2.04	2	P	Pn	21 51 54.2	+0.8
	51nm,0.3s,baz=209,slow=12,SNR=285						
ASAJ				S	Sn	21 52 15.9	-2.1
	30nm,0.3s,baz=241,slow=13,SNR=4.4						
JMM	Marumori	4.40	198	Pn	Pn	21 52 25.4	-0.1
JSD	Sado	5.17	220	Pn	Pn	21 52 37.0	+1.0
MJAR	Matsushiro Arr	6.44	212	P	Pn	21 52 54.3	+0.8
	0.2nm,0.3s,baz=24,slow=12,SNR=6.3						
MJAR	Matsushiro Arr	6.44	212		Pn	21 52 53.5	+0.1
USRK	Ussuriysk Ar.	7.96	289	P	Pn	21 53 16.5	+2.3
	baz=89,slow=15,SNR=7.6						
USRK	Ussuriysk Ar.	7.96	289		Pn	21 53 14.6	+0.4
JWT	Wachi	8.75	222	Pn	Pn	21 53 26.3	+1.3
JHJ	Hachijo jima 2	9.19	194	LR	LR	21 57 36.6	
	comp=Z,319nm,18.0s,baz=78,slow=40						
KLR	Kul'dur	10.37	317	P	Pn	21 53 47.4	+0.3
	0.1nm,0.3s,baz=119,slow=16,SNR=3.9						
KSRS	Korea Array	12.11	252	P	Pn	21 54 13.3	+2.5
	0.6nm,0.3s,baz=62,slow=14,SNR=5.2						
SEY	Seymchan	21.70	12	P	P	21 56 03.9	-2.3
	1.3nm,0.7s,baz=186,slow=14,SNR=4.7						
SONM	Songino Array	26.01	295	P	P	21 56 47.9	0.0
	1.1nm,0.5s,baz=76,slow=8.9,SNR=10						
SONM	Songino Array	26.01	295	P	P	21 56 47.5	-0.3
H11N2	WAKE ISLAND Hy	30.38	130	T	T	22 28 50.1	
	baz=326,slow=75						
H11N1	WAKE ISLAND Hy	30.39	130	T	T	22 28 55.4	
	baz=326,slow=75						
H11N3	WAKE ISLAND Hy	30.40	130	T	T	22 28 49.4	
	baz=326,slow=75						
H11S1	WAKE ISLAND Hy	31.25	131	T	T	22 29 51.1	
	baz=326,slow=76						
H11S3	WAKE ISLAND Hy	31.25	131	T	T	22 29 51.8	
	baz=326,slow=76						
H11S2	WAKE ISLAND Hy	31.26	131	T	T	22 30 00.1	
	baz=326,slow=76						
ZAA0	Zalesovo Array	39.29	308	P	P	21 58 42.9	-0.3
ZAA0				IAmb	IAmb	21 58 44.2	
	comp=Z,2.9nm,0.8s						
ZALV	Zalesovo Beam	39.29	308	P	P	21 58 43.4	+0.2
	comp=Z,3.0nm,0.7s,baz=95,slow=8.3,SNR=14						
ZALV	Zalesovo Beam	39.29	308	P	P	21 58 42.9	-0.3
J20K	Nowinta River	41.73	36	P	P	21 59 04.2	+1.0
IMAR	Indian Mountai	41.95	33	P	P	21 59 04.9	0.0
MK31	Makanchi Array	42.32	298	P	P	21 59 08.6	+0.3
MKAR	Makanchi Array	42.32	298	P	P	21 59 08.5	+0.2
	comp=Z,1.4nm,0.6s,baz=64,slow=11,SNR=12						
MKAR	Makanchi Array	42.32	298	P	P	21 59 08.3	+0.1
MLY	Manley	43.19	35	P	P	21 59 17.2	+2.1
KURK	Kurchatov	43.62	304	P	P	21 59 18.4	-0.3
KURK				IAmb	IAmb	21 59 19.4	
	comp=Z,4.2nm,0.8s						
KURBB	Kurchatov Arra	43.70	304	P	P	21 59 19.2	-0.1
	comp=Z,5.3nm,0.8s,baz=77,slow=8.7,SNR=17						
CMAR	Chiang Mai Arr	43.75	251	P	P	21 59 20.6	+0.6
	comp=Z,0.5nm,0.3s,baz=36,slow=7.0,SNR=2.1						
IL31		44.85	35	P	P	21 59 28.6	+0.3
IL31				IAmb	IAmb	21 59 35.5	
	comp=Z,4.6nm,1.4s						
ILAR	Eielson Array	44.85	35	P	P	21 59 28.2	0.0
	comp=Z,0.2nm,0.4s,baz=257,slow=5.4,SNR=11						
BMAR	Burnt Mountain	45.56	31	P	P	21 59 34.5	+0.6
SCRK	Sand Creek	46.20	36	P	P	21 59 39.2	+0.1
SCRK				IAmb	IAmb	21 59 52.2	
	comp=Z,9.4nm,1.4s						
TAPN	Taplejung	46.60	270	eP	P	21 59 44.1	+1.2
	comp=Z,5.0nm,0.5s						
ODAN	Odare	47.10	269	eP	P	21 59 47.8	+1.0
BCAR	Beaver Creek A	47.32	37	P	P	21 59 48.8	+1.0
KDJ	Kajisay	47.34	293	P	P	21 59 48.1	-0.3
KDJ				IAmb	IAmb	21 59 49.7	
	comp=Z,5.4nm,0.8s						
JIRN	Jiri	47.56	271	eP	P	21 59 51.4	+0.9
RAMN	Ramite	47.64	270	eP	P	21 59 51.3	+0.3
	comp=Z,4.6nm,0.3s						
GUN	Gumba	47.66	272	eP	P	21 59 51.7	+0.5
	comp=Z,15nm,0.3s						
BVAR	Borovoye Array	47.91	309	P	P	21 59 52.9	+0.5
	comp=Z,3.0nm,0.4s,baz=152,slow=4.3,SNR=60						
BRVK	Borovoye	47.96	309	P	P	21 59 53.4	+0.6
BRVK				IAmb	IAmb	21 59 53.9	
	comp=Z,6.0nm,1.2s						
BOOM	Boomskoye usch	48.05	294	P	P	21 59 54.5	+0.7
KKN	Kakani	48.17	272	eP	P	21 59 55.3	+0.3
PKI	Pulchoki	48.19	272	eP	P	21 59 55.4	+0.1
PKIN	Phulchoki	48.20	272	eP	P	21 59 55.5	+0.2
	comp=Z,3.6nm,0.4s						
GKN	Gorkha	48.53	273	eP	P	21 59 57.9	+0.2
	comp=Z,4.8nm,0.4s						
AAK	Ala-Archa	48.97	295	P	P	22 00 01.1	+0.2
AAK				IAmb	IAmb	22 00 01.4	
	comp=Z,2.3nm,0.4s						
DANN	Dangsing	49.00	274	eP	P	22 00 02.0	+0.5
	comp=Z,18nm,0.5s						
KOLN	Koldanda	49.43	273	eP	P	22 00 05.1	+0.4
	comp=Z,3.4nm,0.3s						
INK	Inuvik	49.56	29	P	P	22 00 04.6	-0.2
	comp=Z,0.4nm,0.4s,baz=278,slow=6.3,SNR=6.8						
INK	Inuvik	49.56	29	P	P	22 00 04.9	+0.1
PYUN	Piuthan	49.70	274	eP	P	22 00 07.3	+0.5
	comp=Z,4.4nm,0.3s						
KKAR	Karatay Array	51.44	297	P	P	22 00 18.9	-0.5
BTK	Batken	52.57	293	P	P	22 00 27.9	0.0
ARU	Arti	53.21	316	P	P	22 00 32.8	+0.5
ARU				IAmb	IAmb	22 01 01.6	
	comp=Z,9.8nm,1.5s						
GAR	Garm	53.41	293	P	P	22 00 33.7	-0.5
GAR				IAmb	IAmb	22 00 35.9	
	comp=Z,4.0nm,0.9s						
CHGR	Chuyangaron	54.37	293	P	P	22 00 41.1	0.0
ABKAR	Akbulak array	55.41	308	P	P	22 00 48.5	+0.1
ABKAR				IAmb	IAmb	22 00 49.0	
	comp=Z,2.0nm,0.6s						
ABKAR	Akbulak array	55.41	308	P	P	22 00 48.3	-0.1
RES	Resolute Bay	57.53	15	P	P	22 01 02.4	-0.6
	comp=Z,1.2nm,0.3s,baz=318,slow=2.4,SNR=11						
RES	Resolute Bay	57.53	15	P	P	22 01 02.7	-0.3
RES				IAmb	IAmb	22 01 28.5	
	comp=Z,5.2nm,1.4s						
ARCES	ARCESS Array B	59.59	339	P	P	22 01 17.1	-0.3
	comp=Z,4.6nm,1.0s,baz=47,slow=9.4,SNR=4.6						
WR0	Warramunga Arr	62.15	188	P	P	22 01 34.8	-0.6
WR0				IAmb	IAmb	22 02 01.7	
	comp=Z,4.1nm,1.3s						
WRA	Warramunga Arr	62.16	189	P	P	22 01 34.7	-0.7
	comp=Z,1.0nm,0.9s,baz=6.1,slow=6.9,SNR=3.7						
WRA	Warramunga Arr	62.16	189	P	P	22 01 34.8	-0.6
FIA1	FINESS Array S	64.76	332	P	P	22 01 51.9	-0.2
FINES	FINESS Array B	64.76	332	P	P	22 01 52.0	-0.1
	comp=Z,3.6nm,0.7s,baz=39,slow=7.3,SNR=11						
FINES	FINESS Array B	64.76	332	P	P	22 01 51.8	-0.3
KBZ	Khabaz	68.28	310	P	P	22 02 14.3	-0.5
	comp=Z,0.6nm,0.5s,baz=45,slow=4.3,SNR=4.6						
NC204	NORSAR Array S	69.81	337	P	P	22 02 23.9	-0.2
NOA	NORSAR Array B	69.87	337	P	P	22 02 24.1	-0.4
	comp=Z,1.4nm,0.7s,baz=37,slow=6.2,SNR=4.7						
AKASG	Malin Array Be	70.83	322	P	P	22 02 30.3	-0.1
	comp=Z,0.5nm,0.3s,baz=44,slow=6.3,SNR=7.2						
NVAR	Mina Array Bea	71.36	55	P	P	22 02 32.1	-2.1
	comp=Z,1.1nm,1.1s,baz=256,slow=9.1,SNR=4.1						
GURO	Guroymak-BITLI	72.03	306	P	P	22 02 39.2	+1.1
GURO				IAmb	IAmb	22 02 40.3	
	comp=Z,3.0nm,0.7s						
BUR08	Bucovina Ar. S	74.86	321	P	P	22 02 54.8	+0.3
BUR08				IAmb	IAmb	22 03 15.1	
	comp=Z,5.7nm,1.3s						
BURAR	Bucovina Array	74.88	321	P	P	22 02 55.0	+0.5
OJC	Ojcow	75.32	326	P	P	22 02 57.2	+0.2
OJC				IAmb	IAmb	22 02 58.4	
	comp=Z,7.0nm,1.0s						
GERES	GERESS Array B	78.86	328	P	P	22 03 15.7	-1.2
	comp=Z,0.4nm,0.7s,baz=35,slow=3.6,SNR=2.3						
GERES	GERESS Array B	78.86	328	P	P	22 03 16.2	-0.7
NRCA	Norcia	83.98	325	P	P	22 03 44.0	0.0
TX31	Lajitas Ar. Si	86.42	53	P	P	22 03 57.1	+0.6
TXAR	Lajitas Array	86.42	53	P	P	22 03 56.8	+0.2

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*TUL **25** 22:00:20.7±1.4, 36°.70N±0°.01×98°.05W±0°.01, h7^{km}±5^{km}, ML2.6, mb_Lg2.2/9(NEIC), Error ellipse: s-maj=2.1km s-min=1.2km az=150.0*

NEIC 25 22:00:21±0.9**, 36°.69N**±0°.01×**98°.04W**±0°.01**, h8**^{km}±3^{km}**, Error ellipse: s-maj=2.3km s-min=1.4km az=144.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK032	Salt Plains WL	0.18	311	Pg	Pg	22 00 24.4	-0.3
OK032				Sg	Sg	22 00 27.1	-0.1
CROK	Carrier	0.19	165	Pg	Pg	22 00 25.0	+0.1
GC02	Grant County #	0.22	42	Pg	Pg	22 00 25.5	0.0
GC02				Sg	Sg	22 00 28.8	+0.3
KAN14	Manchester OK	0.28	13	Pg	Pg	22 00 26.3	-0.2
KAN14				Sg	Sg	22 00 30.3	+0.1
KAN10	Anthony SW Sta	0.44	355	Pg	Pg	22 00 28.6	-1.0
KAN10				Sg	Sg	22 00 35.4	+0.1
KAN16	Harper SW Stat	0.54	358	Pg	Pg	22 00 31.1	-0.3
KAN16				Sg	Sg	22 00 38.6	+0.2
KAN08	Anthony NE Sta	0.54	6	Pg	Pg	22 00 31.1	-0.4
KAN08				Sg	Sg	22 00 38.6	0.0
KAN13	South Haven SW	0.56	54	Pg	Pg	22 00 31.5	-0.3
KAN13				Sg	Sg	22 00 39.3	+0.2
KAN09	Caldwell North	0.56	37	Pg	Pg	22 00 31.6	-0.3
KAN09				Sg	Sg	22 00 39.5	+0.2
KAN06	Argonia West S	0.58	15	Pg	Pg	22 00 31.9	-0.3
KAN06				Sg	Sg	22 00 39.8	0.0
KAN12	Harper NE Stat	0.61	3		Pg	22 00 31.7	-1.1
KAN12				Sg	Sg	22 00 40.9	+0.1
BLOK	Blackwell	0.67	84	Pg	Pg	22 00 33.6	-0.3
U32A	Winter Ranch,	0.83	248	Pg	Pg	22 00 36.3	-0.7
U32A				Sg	Sg	22 00 48.0	+0.2
OK029	Liberty Lake	1.01	152		Pg	22 00 39.9	-0.5
BCOK	Bluff Creek, N	1.09	161	Pg	Pg	22 00 41.0	-0.8
BCOK				Sg	Sb	22 00 56.4	0.0
QUOK	Quay	1.19	115	Pn	Pb	22 00 43.1	-0.8
OK025	Westminster Rd	1.24	152		Pn	22 00 44.0	-0.6
T35A	Sooner Cattle	1.25	79	Pn	Pn	22 00 44.2	-0.6
W35A	Tecumseh	1.80	148		Pn	22 00 53.1	+0.7
W35A				IAmb_Lg		22 01 22.4	
	comp=Z,11nm,0.8s						
R32A	Long Quarter,	1.81	343		Pn	22 00 52.6	+0.2
R32A				IAmb_Lg		22 01 17.3	
	comp=Z,16nm,1.1s						
TUL1	Leonard	1.98	112	Pn	Pn	22 00 55.0	+0.3
WMOK	Wichita Mounta	2.04	197	Pn	Pn	22 00 56.5	+0.9
WMOK				IAmb_Lg		22 01 27.3	
	comp=Z,11nm,0.7s						
X34A	Smith Ranch, M	2.09	175	Pn	Pn	22 00 57.3	+1.0
CBKS	Cedar Bluff	2.51	328	Pn	Pn	22 01 02.4	+0.2
CBKS				IAmb_Lg		22 01 37.8	
	comp=Z,13nm,1.2s						
U38A	Gravette	2.96	94	Pn	Pn	22 01 08.1	-0.1
U38A				IAmb_Lg		22 01 53.7	
	comp=Z,7.4nm,0.9s						
S39A	Bolivar	3.90	74	Pn	Pn	22 01 21.2	0.0

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*IDC **25** 22:14:13.2±1.1, 2°.96S×130°.13E, h0^{km}, mb3.8/6, mb1 4.0/9, mb1mx3.8/34, mbtmp3.8/9, ML3.7/3, MS3.0/3, Ms1 3.0/3, ms1mx2.7/41, Error ellipse: s-maj=35.4km s-min=19.0km az=91.0*

*DJA **25** 22:14:18.6±0.3, 3°S±4°×13°0E±°, h79^{km}±9^{km}, M3.9/7, mb4.0/6, mB4.8/1, MLv3.9/7, Mw(mB)4.0/1, MwMwp5.3/1, Mwp5.5/1*

ISC 25 22:14:15.9±0.7**, 3°.02S**±0°.05×**130°.12E**±0°.05**, h25**^{km}**, n23, σ2^{s}13**/23**, mb3.7**/5**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	1.23	255	P	Pb	22 14 39.1	+0.5
AAI	Ambon	2.03	251	P	Pb	22 14 49.6	-2.6
FAKI	Fak Fak	2.13	87	P	Pb	22 14 54.1	+0.2
SIJI	Sorong	2.42	28	Pn	Pn	22 14 53.9	-0.1
	18nm,0.3s,baz=273,slow=23,SNR=50						
SIJI				Sn	Sn	22 15 23.2	+0.3
	26nm,0.3s,baz=298,slow=20,SNR=10						
SIJI				LR	LR	22 16 14.9	
	comp=Z,244nm,19.7s,baz=104,slow=52						
SWI	Sorong	2.42	28	P	Pb	22 14 55.5	-3.4
LBMI	Labuha	3.52	312	P	Pn	22 15 09.1	-0.1
SANI	Sanana	4.24	283	P	Pn	22 15 16.9	-2.0
GTOI	Gorontalo	7.98	297	P	Pn	22 16 10.4	0.0
	0.0nm9.8nm,1.0s						
APSI	Ampana	8.72	284	P	Pn	22 16 19.6	-1.0
	12μm31nm,0.7s						
EDFI	Ende, Flores	10.13	235	P	Pn	22 16 41.7	+1.6
	5.2nm,1.5s						
MPSI	Mapaga	10.74	288	P	Pn	22 16 47.8	-0.6
	385nm5.0nm,0.8s						
PLAI	Plampang	13.56	244	P	P	22 17 41.5	+5.8
BBKI	Banjar Baru	15.26	268	P	Pn	22 17 40.2	-10
FITZ	Fitzroy Crossi	15.62	196	Pn	Pn	22 17 56.7	+2.1
	0.2nm,0.3s,baz=19,slow=10,SNR=8.5						
FITZ				Sn	Sn	22 20 42.5	-4.5
	0.0nm,0.3s,baz=102,slow=11,SNR=2.1						
WRA	Warramunga Arr	17.32	167	P	Pn	22 18 15.8	-0.4
	0.4nm,0.3s,baz=348,slow=12,SNR=21						
WRA				S	Sn	22 21 22.8	-5.6
	0.1nm,0.3s,baz=339,slow=22,SNR=2.3						
ASAR	Alice Springs	20.85	170	P	P	22 18 58.0	+1.8
	9.4nm,0.7s,baz=348,slow=10,SNR=77						
ASAR				S	S	22 22 48.8	+1.0
	1.2nm,0.9s,baz=348,slow=22,SNR=5.0						
PSI	Prapat	31.71	280	LR	LR	22 34 45.2	
	comp=Z,61nm,19.1s,baz=94,slow=39						
CMAR	Chiang Mai Arr	37.39	306	P	P	22 21 28.2	+1.1
	0.8nm,0.3s,baz=134,slow=7.5,SNR=4.7						
KSRS	Korea Array	40.32	357	LR	LR	22 38 10.2	
	comp=Z,16nm,21.4s,baz=340,slow=36						
USRK	Ussuriysk Ar.	47.03	2	P	P	22 22 46.0	+0.7
	1.1nm,0.8s,baz=194,slow=15,SNR=2.7						
SONM	Songino Array	54.74	341	P	P	22 23 44.2	+0.7
	0.3nm,0.7s,baz=142,slow=7.3,SNR=2.1						
MKAR	Makanchi Array	65.00	326	P	P	22 24 54.1	+0.2
	0.3nm,0.5s,baz=115,slow=7.9,SNR=6.5						
ZALV	Zalesovo Beam	68.10	333	P	P	22 25 14.9	+1.4
	0.2nm,0.3s,baz=104,slow=6.1,SNR=2.0						

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*PRE **25** 22:23:36.2±0.9, 27°.00S×26°.78E, h2^{km}, ML3.2*

*IDC **25** 22:23:38.4±3.0, 26°.89S×26°.65E, h0^{km}, mb3.6/2, mb1 3.8/3, mb1mx3.3/38, mbtmp3.6/3, ML3.6/1, Error ellipse: s-maj=86.8km s-min=25.5km az=107.0*

*EAF **25** 22:23:39.8±1.1, 26°.97S×26°.79E, h10^{km}, MD4.0*

ISC 25 22:23:37.0±1.2**, 27°.00S**±0°.03×**26°.78E**±0°.03**, h12**^{km}±9^{km}**, n34, σ1^{s}78**/65**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRYS	Parys	0.52	82	eP	Pg	22 23 46.1	-1.1
PRYS				eS	Sg	22 23 54.2	0.0
PRYS				IAML		22 23 59.2	
	comp=Z,508nm,0.5s						
KSR	Koster	1.15	5	eP	Pn	22 23 58.0	-1.0
KSR				eS	Sb	22 24 14.3	+0.4
KSR				IAML		22 24 19.1	
	comp=Z,1μm,0.1s						
SWZ	Schweizer	1.31	262	eP	Pn	22 24 01.2	0.0
SWZ				eS	Sb	22 24 19.9	+1.6
SWZ				IAML		22 24 27.6	
	comp=Z,579nm,0.8s						
HRAO	HartRAO	1.37	36	eP	Pn	22 24 02.7	+0.6
HRAO				eS	Sb	22 24 21.2	+1.0
HRAO				IAML		22 24 22.8	
	comp=Z,235nm,0.4s						
SLR	Silverton	1.84	47	eP	Pn	22 24 09.6	+1.0
SLR				eS	Sb	22 24 34.1	+0.3
SLR				IAML		22 24 36.8	
	comp=Z,321nm,0.3s						
BOSA	Boshof	2.10	220	Pn	Pb	22 24 14.8	-0.3
	comp=Z,12nm,0.3s,baz=42,slow=13,SNR=389						
BOSA				Sn	Sg	22 24 43.8	-0.8
	comp=Z,43nm,0.3s,baz=313,slow=14,SNR=20						
BOSA	Boshof	2.10	220	eP	Pn	22 24 12.9	+0.8
BOSA				eS	Sb	22 24 40.8	-0.4
BOSA				IAML		22 24 45.5	
	comp=Z,92nm,0.3s						
BOSA	Boshof	2.10	220	i P	Pb	22 24 14.8	-0.3
BOSA				eS	Sb	22 24 41.3	+0.2
BOSA	Boshof	2.10	220	i P	Pb	22 24 14.8	-0.3
BOSA				eS	Sb	22 24 41.3	+0.2
LBTB	Lobatse	2.25	331	eP	Pn	22 24 15.6	+1.5
LBTB				eS	Sn	22 24 43.5	+1.7
LBTB				IAML		22 24 47.0	
	comp=Z,273nm,0.3s						
LBTB	Lobatse	2.25	331	eP	Pb	22 24 16.9	-0.7
LBTB				eS	Sn	22 24 43.2	+1.4
LBTB	Lobatse	2.25	331	eP	Pb	22 24 16.9	-0.7
LBTB				eS	Sn	22 24 43.2	+1.4
NWCL	Newcastle	2.86	106	eP	Pn	22 24 24.0	+1.5
NWCL				eS	Sn	22 24 58.9	+2.0
NWCL				IAML		22 25 11.7	
	comp=Z,145nm,0.3s						
POGA	Pongola	4.40	96	eP	Pn	22 24 44.4	+0.8
POGA				eS	Sn	22 25 34.1	-0.7
POGA				IAML		22 25 56.0	
	comp=Z,72nm,0.5s						
PKA	Prieska	4.43	232	eP	Pn	22 24 45.5	+1.3
PKA				eS	Sn	22 25 35.5	-0.3
PKA				IAML		22 25 56.7	
	comp=Z,15nm,0.3s						
UPI	Upington	5.09	253	eP	Pn	22 24 54.8	+1.6
UPI				eS	Sn	22 25 52.3	+0.4
UPI				IAML		22 26 20.3	
	comp=Z,19nm,0.3s						
KEIM	Keimoes	5.42	250	eP	Pn	22 24 59.8	+2.1
KEIM				eS	Sn	22 25 59.6	-0.4
KEIM				IAML		22 26 32.3	
	comp=Z,34nm,0.8s						
MOPA	Mopani	5.43	51	eP	Pn	22 24 58.7	+0.9
MOPA				eS	Sn	22 25 59.2	-1.0
MOPA				IAML		22 26 29.5	
	comp=Z,27nm,0.6s						
MOPA	Mopani	5.43	51	eP	Pn	22 24 59.4	+1.6
MOPA				eS	Sn	22 25 58.1	-2.1
MOPA	Mopani	5.43	51	eP	Pn	22 24 59.4	+1.6
MOPA				eS	Sn	22 25 58.1	-2.1
MSNA	Messina	5.49	33	eP	Pn	22 25 01.6	+2.9
MSNA				eS	Sn	22 26 00.3	-1.5
MSNA	Messina	5.49	33	eP	Pn	22 25 01.6	+2.9
MSNA				eS	Sn	22 26 00.3	-1.5
SOE	Somerset East	5.79	190	eP	Pn	22 25 04.7	+2.0
SOE				eS	Sn	22 26 07.7	-1.4
SOE				IAML		22 26 41.7	
	comp=Z,29nm,1.1s						
ARMS	Ukamas	6.34	259	eP	Pn	22 25 11.9	+1.6
ARMS				eS	Sn	22 26 20.9	-1.8
ARMS				IAML		22 26 56.7	
	comp=Z,56nm,0.4s						
GRAN	Grantham	6.63	216	eP	Pn	22 25 15.8	+1.4
GRAN				eS	Sn	22 26 27.9	-2.1
GRAN				IAML		22 26 47.9	
	comp=Z,11nm,0.4s						
MATP	Matopo	6.73	14	eP	Pn	22 25 17.1	+1.2
MATP				eS	Sn	22 26 27.5	-5.0
MATP	Matopo	6.73	14	eP	Pn	22 25 17.1	+1.2
MATP				eS	Sn	22 26 27.5	-5.0
ROSN	Rosenhof	7.34	195	eP	Pn	22 25 25.1	+1.1
ROSN				eS	Sn	22 26 45.0	-2.2
ROSN				IAML		22 26 47.6	
	comp=Z,140nm,1.7s						
CVNA	Calvinia	7.59	232	eP	Pn	22 25 28.6	+1.2
CVNA				eS	Sn	22 26 51.0	-2.4
CVNA				IAML		22 27 42.0	
	comp=Z,33nm,1.5s						
AUSN	Aus	9.41	270	eP	Pn	22 25 53.9	+1.4
AUSN				eS	Sn	22 27 34.7	-3.6
AUSN				IAML		22 27 50.2	
	comp=Z,16nm,1.8s						
ELIM	Elim	9.69	217	eP	Pn	22 25 58.3	+2.1
ELIM				eS	Sn	22 27 41.9	-3.1
ELIM				IAML		22 27 56.2	
	comp=Z,54nm,2.1s						
TORD	Torodi Ar. Bea	46.76	325	P	P	22 32 07.9	+1.6
	comp=Z,0.4nm,0.5s,baz=153,slow=7.6,SNR=6.3						
ESDC	Sonseca Array	72.26	336	P	P	22 35 04.4	+2.2
	comp=Z,0.6nm,0.8s,baz=162,slow=5.4,SNR=2.2						
NVAR	Mina Array Bea	148.67	300	PKPbc	PKPab	22 43 28.2	0.0
	comp=Z,0.3nm,0.5s,baz=97,slow=3.6,SNR=2.9						

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*TUL **25** 22:27:53.1±1.3, 36°.12N±0°.01×97°.060W±0°.009, h7^{km}±5^{km}, ML2.7, mb_Lg2.2/6(NEIC), Error ellipse: s-maj=1.6km s-min=1.0km az=171.0*

NEIC 25 22:27:53.3±0.9**, 36°.131N**±0°.010×**97°.07W**±0°.01**, h7**^{km}±5^{km}**, Error ellipse: s-maj=1.8km s-min=1.0km az=133.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK033	Mehan	0.14	128		Pg	22 27 56.3	+0.1
OK033				Sg	Sg	22 27 58.4	+0.2
OK031	S. Brethren Rd	0.26	133	Pg	Pg	22 27 58.3	-0.1
OK031				Sg	Sg	22 28 02.1	+0.2
QUOK	Quay	0.30	82		Pg	22 27 59.2	+0.1
QUOK				Sg	Sg	22 28 03.5	+0.4
OK030	Cody Creek RV	0.31	131	Pg	Pg	22 27 59.2	-0.1
OK030				Sg	Sg	22 28 03.7	+0.2
OK034	N. Norfolk Rd.	0.32	112	Pg	Pg	22 27 59.3	-0.1
OK034				Sg	Sg	22 28 03.8	+0.1
OK029	Liberty Lake	0.46	223	Pg	Pg	22 28 02.1	0.0
OK029				Sg	Sg	22 28 08.4	+0.3
OK025	Westminster Rd	0.59	202	Pg	Pg	22 28 04.5	-0.1
OK025				Sg	Sg	22 28 12.9	+0.5
BLOK	Blackwell	0.64	350		Pg	22 28 05.4	-0.2
BLOK				Sg	Sg	22 28 14.3	+0.3
BCOK	Bluff Creek, N	0.64	223	Pg	Pg	22 28 05.4	-0.3
BCOK				Sg	Sg	22 28 14.4	+0.4
OKCFA	Oklahoma City	0.78	203		Pg	22 28 07.8	-0.4
OKCSW	OKLAHOMA CITY	0.78	202	Pg	Pg	22 28 07.7	-0.6
CROK	Carrier	0.82	297	Pg	Pg	22 28 08.8	-0.3
T35A	Sooner Cattle	0.90	30		Pg	22 28 10.3	-0.4
FNO	Franklin	0.91	197	Pg	Pg	22 28 09.9	-0.9
GC02	Grant County #	0.96	319	Pg	Pg	22 28 11.3	-0.4
W35A	Tecumseh	0.99	171		Pg	22 28 11.2	-1.1
TUL1	Leonard	1.06	102		Pg	22 28 12.4	-1.3
KAN06	Argonia West S	1.28	331	Pn	Pn	22 28 17.2	-0.5
U32A	Winter Ranch,	1.58	280	Pn	Pn	22 28 21.9	+0.2
X34A	Smith Ranch, M	1.65	202		Pn	22 28 22.9	+0.2
WMOK	Wichita Mounta	1.97	226	Pn	Pn	22 28 27.8	+0.7
WMOK				IAmb_Lg		22 28 54.7	
	comp=Z,8.8nm,0.7s						
X37A	Clayton	2.07	137	Pn	Pn	22 28 29.1	+0.6
X37A				IAmb_Lg		22 29 00.6	
	comp=Z,11nm,0.8s						
U38A	Gravette	2.19	81		Pn	22 28 30.9	+0.7
CBKS	Cedar Bluff	3.42	322	IAmb_Lg		22 29 42.9	
	comp=Z,7.8nm,0.8s						
MGMO	Mountain Grove	4.00	74	IAmb_Lg		22 29 58.6	
	comp=Z,5.7nm,0.8s						

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*NEIC **25** 22:44:27.9±1.4, 6°.55N±0°.10×94°.90E±0°.10, h10^{km}±1^{km}, mb4.4/19, Error ellipse: s-maj=18.0km s-min=13.9km*

az=222.0

*IDC **25** 22:44:45.6±8.3, 6°.64N×95°.13E, h170^{km}±75^{km}, mb3.3/10, mb1 3.5/11, mb1mx3.2/46, mbtmp3.8/11, MS3.5/13, Ms1 3.5/13, ms1mx3.4/20, Error ellipse: s-maj=59.9km s-min=13.6km az=56.0*

ISC 25 22:44:30.8±0.7, **6°.54N**±0°.09×**94°.93E**±0°.08, **h35**^{km}, **n49**, σ**0^{s}.74**/39, **mb4.2**/20, **MS3.5**/9, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	**Lhok Sumawe**	**2.39**	**123**		**Pn**	**22 45 08.0**	**+0.5**
SRIT	**Nakonsritamara**	**5.06**	**66**		**Pn**	**22 45 45.3**	**+1.0**
SRIT				Sn	**Sn**	**22 46 40.7**	**-0.8**
PSI	**Prapat**	**5.45**	**133**	LR	LR	22 49 00.2	
	comp=Z,203nm,19.9s,baz=313,slow=47						
KULM	**Kulim**	**5.82**	**102**		**Pn**	**22 45 54.0**	**-0.7**
IPM	**Ipoh**	**6.40**	**108**		**Pn**	**22 46 01.9**	**-0.8**
CMAR	**Chiang Mai Arr**	**12.47**	**18**	P	**P**	**22 47 36.8**	**-0.5**
	0.5nm,0.3s,baz=204,slow=14,SNR=4.2						
CMAR				S	Sn	22 49 52.7	+9.0
	0.3nm,0.3s,baz=220,slow=16,SNR=1.3						
CMAR				LR	LR	22 52 29.9	
	comp=Z,97nm,20.2s,baz=246,slow=38						
PALK	**Pallekele**	**14.14**	**274**	LR	LR	22 52 31.6	
	comp=Z,200nm,21.8s,baz=199,slow=32						
LEM	**Lembang**	**18.35**	**136**	LR	LR	22 56 35.2	
	comp=Z,250nm,19.3s,baz=336,slow=39						
LSA	**Lhasa**	**23.31**	**352**	P	**P**	**22 49 36.0**	**-0.2**
MYLDM	**Lahad Datu**	**23.48**	**92**	P	**P**	**22 49 38.6**	**+1.0**
H08S3	**Diego Garcia H**	**26.45**	**238**	T	T	23 18 11.2	
	baz=57,slow=75,SNR=21						
H08S2	**Diego Garcia H**	**26.45**	**238**	T	T	23 17 46.6	
	baz=57,slow=75,SNR=23						
H08S1	**Diego Carcia H**	**26.46**	**238**	T	T	23 18 03.7	
	baz=57,slow=75,SNR=10						
LUWI	**Luwuk**	**28.79**	**104**	P	**P**	**22 50 25.6**	**-0.1**
NIL	**Nilore**	**33.63**	**326**	P	**P**	**22 51 07.1**	**-1.1**
DRK	**Karamyk**	**38.85**	**331**	P	**P**	**22 51 52.6**	**-0.5**
DRK				IAmb	IAmb	22 52 01.4	
	comp=Z,12nm,0.7s						
FITZ	**Fitzroy Crossi**	**38.96**	**129**	P	**P**	**22 51 53.3**	**-0.6**
	comp=Z,2.6nm,0.9s,baz=311,slow=9.4,SNR=6.2						
GAR	**Garm**	**39.21**	**329**	P	**P**	**22 51 55.0**	**-0.9**
GAR				IAmb	IAmb	22 52 03.9	
	comp=Z,16nm,1.3s						
CHGR	**Chuyangaron**	**39.56**	**328**	P	**P**	**22 51 58.4**	**-0.4**
CHGR				IAmb	IAmb	22 52 08.1	
	comp=Z,14nm,0.9s						
BTK	**Batken**	**39.77**	**331**	P	**P**	**22 52 00.1**	**-0.4**
BTK				IAmb	IAmb	22 52 12.7	
	comp=Z,7.6nm,0.9s						
MK31	**Makanchi Array**	**41.55**	**347**	P	**P**	**22 52 14.8**	**-0.2**
MKAR	**Makanchi Array**	**41.55**	**347**	P	**P**	**22 52 15.6**	**+0.6**
	comp=Z,0.3nm,0.8s,baz=167,slow=10,SNR=4.7						
MKAR	**Makanchi Array**	**41.55**	**347**	P	**P**	**22 52 15.2**	**+0.2**
MAKZ	**Makanchi**	**41.64**	**347**	P	**P**	**22 52 16.1**	**+0.4**
MAKZ				IAmb	IAmb	22 52 27.2	
	comp=Z,2.7nm,1.0s						
SONM	**Songino Array**	**42.30**	**11**	P	**P**	**22 52 21.4**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=197,slow=9.0,SNR=5.7						
SONM				LR	LR	23 11 13.1	
	comp=Z,41nm,18.4s,baz=230,slow=38						
SONM	**Songino Array**	**42.30**	**11**	P	**P**	**22 52 22.8**	**+1.6**
KKAR	**Karatay Array**	**42.30**	**333**	P	**P**	**22 52 20.4**	**-0.7**
KSRS	**Korea Array**	**42.97**	**39**	LR	LR	23 12 15.9	
	comp=Z,52nm,18.6s,baz=202,slow=39						
GEYT	**Alibeck**	**45.71**	**319**	LR	LR	23 13 20.9	
	comp=Z,58nm,19.7s,baz=320,slow=38						
WB0	**Warramunga Arr**	**46.81**	**125**	P	**P**	**22 52 57.3**	**-0.3**
WB0				IAmb	IAmb	22 53 12.1	
	comp=Z,4.9nm,1.1s						
WRA	**Warramunga Arr**	**46.86**	**125**	P	**P**	**22 52 58.4**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=304,slow=9.0,SNR=9.7						
WRA				LR	LR	23 14 31.4	
	comp=Z,70nm,18.4s,baz=130,slow=38						
WRA	**Warramunga Arr**	**46.86**	**125**	P	**P**	**22 52 58.1**	**+0.3**
ZALV	**Zalesovo Beam**	**47.97**	**352**	P	**P**	**22 53 05.2**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=301,slow=38,SNR=1.6						
ZALV	**Zalesovo Beam**	**47.97**	**352**	P	**P**	**22 53 06.5**	**+0.6**
ASAR	**Alice Springs**	**48.47**	**130**	P	**P**	**22 53 11.6**	**+1.3**
	comp=Z,0.5nm,0.6s,baz=223,slow=38,SNR=2.8						
ASAR				LR	LR	23 16 43.6	
	comp=Z,45nm,18.6s,baz=17,slow=40						
RAYN	**Ar Rayn**	**50.35**	**295**	P	**P**	**22 53 24.2**	**-0.6**
RAYN				IAmb	IAmb	22 53 47.0	
	comp=Z,5.7nm,1.4s						
BRVK	**Borovoye**	**50.56**	**341**	P	**P**	**22 53 26.7**	**+1.0**
BRVK				IAmb	IAmb	22 53 38.3	
	comp=Z,2.8nm,1.1s						
ABKAR	**Akbulak array**	**51.77**	**331**	P	**P**	**22 53 34.2**	**-0.7**
ABKAR	**Akbulak array**	**51.77**	**331**	P	**P**	**22 53 34.4**	**-0.5**
ABKAR				IAmb	IAmb	22 53 44.1	
	comp=Z,5.3nm,1.0s						
STKA	**Stephens Creek**	**58.63**	**134**	LR	LR	23 23 24.1	
	comp=Z,58nm,18.6s,baz=235,slow=40						
BRTR	**Keskin Array B**	**63.89**	**311**	P	**P**	**22 55 00.1**	**-0.3**
	comp=Z,0.8nm,0.5s,baz=126,slow=7.3,SNR=2.5						
AKASG	**Malin Array Be**	**69.68**	**322**	LR	LR	23 29 12.3	
	comp=Z,25nm,19.2s,baz=355,slow=38						
BURAR	**Bucovina Array**	**71.55**	**318**	P	**P**	**22 55 49.0**	**+0.5**
FINES	**FINESS Array B**	**74.25**	**332**	P	**P**	**22 56 03.3**	**-0.7**
	comp=Z,3.4nm,0.9s,baz=102,slow=6.3,SNR=20						
FINES	**FINESS Array B**	**74.25**	**332**	P	**P**	**22 56 03.5**	**-0.5**
BOSA	**Boshof**	**75.55**	**238**	P	**P**	**22 56 13.1**	**+0.7**
BOSA				IAmb	IAmb	22 56 22.1	
	comp=Z,11nm,1.3s						
ARCES	**ARCESS Array B**	**76.78**	**340**	P	**P**	**22 56 18.2**	**-0.2**
	comp=Z,2.5nm,0.9s,baz=8.9,slow=8.6,SNR=1.5						
ARCES				LR	LR	23 33 01.3	
	comp=Z,21nm,19.1s,baz=275,slow=38						
GERES	**GERESS Array B**	**79.34**	**318**	P	**P**	**22 56 34.6**	**+1.5**
	comp=Z,0.7nm,0.7s,baz=100,slow=5.5,SNR=6.0						
NOA	**NORSAR Array B**	**81.27**	**331**	LR	LR	23 37 10.2	
	comp=Z,29nm,18.2s,baz=300,slow=39						

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*MAN **25** 22:56:40.4, 4°.91N×126°.57E, h1^{km}, mb5.0, ML3.9, MS3.9*

*NEIC **25** 22:56:42.7±2.2, 4°.77N±0°.05×126°.35E±0°.07, h57^{km}±7^{km}, mb4.4/30, Error ellipse: s-maj=10.7km s-min=7.2km az=79.0*

*IDC **25** 22:56:43.6±1.4, 4°.69N×126°.20E, h73^{km}±13^{km}, mb3.8/16, mb1 4.0/20, mb1mx3.8/49, mbtmp4.2/20, Error ellipse: s-maj=23.6km s-min=8.8km az=79.0*

*DJA **25** 22:56:46.2±0.7, 4°N±6°×12°6E±°, h59^{km}±6^{km}, M4.5/24, mB5.1/8, mb4.6/24, MLv4.5/15, Mw(mB)4.4/8*

ISC 25 22:56:45.9±0.4, **4°.67N**±0°.04×**126°.24E**±0°.06, **h100**^{km}, **n96**, σ**1^{s}.96**/102, **mb4.2**/30, **Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.21**	**216**	P	**Pn**	**22 57 05.7**	**-2.9**
SGSI				S	**Sn**	**22 57 22.6**	**-3.2**
DAV	**Davao City (W)**	**2.47**	**345**	P	**Pn**	**22 57 21.5**	**-3.2**
	73nm,0.3s,baz=228,slow=15,SNR=4.6						
DAV				S	**Sn**	**22 57 50.6**	**-3.8**
	58nm,0.3s,baz=259,slow=18,SNR=4.5						
DAV	**Davao City (W)**	**2.47**	**345**		Pn	22 57 20.5	-4.2
DAV				Sn	Sn	22 57 45.1	-9.3
TNTI	**Ternate**	**4.03**	**164**	P	**Pn**	**22 57 42.2**	**-3.3**
TNTI	**Ternate**	**4.03**	**164**		**Pn**	**22 57 42.5**	**-3.0**
TNTI				Sn	**Sn**	**22 58 28.3**	**-3.5**
KMSI	**Cibinong**	**4.65**	**209**	P	Pn	22 58 02.8	+8.9
GTOI	**Gorontalo**	**5.14**	**219**	P	**Pn**	**22 57 58.7**	**-1.9**
	0.2nm588nm35nm,0.8s						
LBMI	**Labuha**	**5.42**	**167**	P	**Pn**	**22 58 02.5**	**-1.9**
	0.3nm1µm31nm,0.6s						
MRSI	**Marisa**	**5.98**	**226**	P	**Pn**	**22 58 11.5**	**-0.4**
	1.5nm4µm333nm,0.5s						
TOLI2	**Tolitoli**	**6.50**	**237**		**Pn**	**22 58 16.6**	**-2.3**
TOLI2				Sn	**Sn**	**22 59 30.9**	**-0.8**
LUWI	**Luwuk**	**6.65**	**211**	P	**Pn**	**22 58 23.0**	**+2.0**
	1.4nm9µm490nm,1.0s						
LUWI	**Luwuk**	**6.65**	**211**		**Pn**	**22 58 22.2**	**+1.2**
SANI	**Sanana**	**6.68**	**182**	P	**Pn**	**22 58 17.6**	**-3.9**
	0.2nm2µm32nm,0.6s						
APSI	**Ampana**	**7.19**	**220**	P	**Pn**	**22 58 30.5**	**+2.0**
	0.3nm782nm83nm,0.7s						
SWI	**Sorong**	**7.44**	**137**	P	**Pn**	**22 58 31.1**	**-0.7**
	0.1nm27nm,0.5s						
SIJI	**Sorong**	**7.45**	**137**	P	**Pn**	**22 58 28.4**	**-3.6**
	4.2nm,0.3s,baz=340,slow=23,SNR=8.2						
SIJI				S	**Sn**	**22 59 50.0**	**-5.0**
	0.6nm,0.3s,baz=342,slow=20,SNR=2.0						
MPSI	**Mapaga**	**7.66**	**236**	P	**Pn**	**22 58 33.7**	**-1.0**
	0.1nm779nm15nm,0.5s						
MYLDM	**Lahad Datu**	**7.73**	**274**		**Pn**	**22 58 37.1**	**+1.4**
MSAI	**Masohi**	**8.40**	**161**	P	Pn	22 58 50.8	+5.9
FAKI	**Fak Fak**	**9.64**	**141**	P	Pn	22 58 56.9	-4.8
	40nm,0.8s						
FAKI	**Fak Fak**	**9.64**	**141**		**Pn**	**22 58 59.2**	**-2.5**
TTSI	**Tana Toraja**	**9.99**	**220**	P	**Pn**	**22 59 08.5**	**+1.9**
	44nm,1.0s						
SPSI	**Sidrap Palu**	**10.74**	**217**	P	**Pn**	**22 59 17.6**	**+0.9**
	23nm,0.8s						
BNSI	**Bone**	**10.89**	**214**	P	**Pn**	**22 59 22.2**	**+3.4**
	19nm,0.9s						
BKB	**Balikpapan**	**11.04**	**238**	Pn	**Pn**	**22 59 20.4**	**-0.3**
KAPI	**Kappang**	**11.60**	**214**	P	**Pn**	**22 59 28.1**	**-0.2**
	1.6nm,0.3s,baz=41,slow=6.9,SNR=4.3						
KAPI	**Kappang**	**11.60**	**214**		**Pn**	**22 59 27.3**	**-1.0**
KBKI	**Kotabaru**	**12.80**	**232**	P	**Pn**	**22 59 47.1**	**+2.8**
	18nm,0.8s						
MMRI	**Maumere**	**13.81**	**197**	P	P	23 00 11.3	+8.8
MMRI	**Maumere**	**13.81**	**197**	P	**P**	**23 00 01.7**	**-0.7**
BBKI	**Banjar Baru**	**13.96**	**235**	P	**Pn**	**22 59 59.3**	**-0.1**
	17nm,0.8s						
SOEI	**Soe**	**14.46**	**188**	P	**Pn**	**23 00 06.1**	**+0.1**
	39nm,0.8s						
SOEI	**Soe**	**14.46**	**188**		**Pn**	**23 00 06.8**	**+0.8**
BATI	**Baumata**	**15.00**	**190**	P	**Pn**	**23 00 13.5**	**+0.8**
	1.7nm,0.3s,baz=306,slow=13,SNR=7.7						
BATI				S	**S**	**23 03 05.0**	**-4.3**
	4.1nm,0.3s,baz=86,slow=9.4,SNR=1.8						
BATI	**Baumata**	**15.00**	**190**	P	**Pn**	**23 00 09.7**	**-3.0**
	26nm,0.8s						
STKI	**Sintang**	**15.44**	**253**	P	**P**	**23 00 26.2**	**+5.6**
PLAI	**Plampang**	**15.84**	**212**	P	**P**	**23 00 24.2**	**-0.9**
	38nm,0.9s						
KSM	**Kuching**	**16.22**	**259**		**P**	**23 00 30.0**	**+0.7**
TWSI	**Taliwang, Sumb**	**16.26**	**215**	P	**P**	**23 00 29.2**	**-0.5**
	43nm,0.9s						
KMMI	**Kalianget**	**16.90**	**227**	P	**Pn**	**23 00 33.8**	**-2.5**
TPUB	**Ta-pu**	**19.30**	**344**	P	**P**	**23 01 02.1**	**-0.9**
KNRA	**Kununurra**	**20.37**	**173**	P	**P**	**23 01 14.2**	**-0.5**
KNRA				IAmb	IAmb	23 01 19.6	
	comp=Z,26nm,1.1s						
LEM	**Lembang**	**21.81**	**239**	P	**P**	**23 01 30.1**	**-0.3**
	comp=Z,10nm,0.5s,baz=61,slow=13,SNR=1.6						
FITZ	**Fitzroy Crossi**	**22.63**	**181**	P	**P**	**23 01 38.3**	**-0.3**
	comp=Z,11nm,0.9s,baz=0.7,slow=6.6,SNR=24						
UBPT	**Khong Chiam**	**22.98**	**299**	P	**P**	**23 01 42.0**	**-0.3**
UBPT				IAmb	IAmb	23 01 59.4	
	comp=Z,27nm,1.3s						
COEN	**Coen**	**25.00**	**138**	P	**P**	**23 02 00.9**	**+0.3**
COEN				IAmb	IAmb	23 02 10.5	
	comp=Z,17nm,1.4s						
WRA	**Warramunga Arr**	**25.72**	**162**	P	**P**	**23 02 07.0**	**-0.1**
	comp=Z,6.7nm,0.9s,baz=341,slow=10,SNR=33						
WRA				PcP	**PcP**	**23 05 36.6**	**+1.6**
	comp=Z,0.4nm,0.6s,baz=357,slow=2.0,SNR=1.3						
WRA				S	**S**	**23 06 37.8**	**+8.9**
	comp=Z,0.4nm,1.0s,baz=340,slow=17,SNR=1.6						
WRA	**Warramunga Arr**	**25.72**	**162**	P	**P**	**23 02 07.1**	**0.0**
WB2	**Warramunga Arr**	**25.73**	**162**	P	**P**	**23 02 07.8**	**+0.6**
WB2				IAmb	IAmb	23 02 10.0	
	comp=Z,18nm,1.3s						
PSA00	**Pilbara Seismi**	**26.82**	**193**	P	**P**	**23 02 16.8**	**-0.2**
PSA00				IAmb	IAmb	23 02 19.1	
	comp=Z,20nm,1.1s						
PSA00	**Pilbara Seismi**	**26.82**	**193**	P	**P**	**23 02 17.7**	**+0.7**
PSA00				IAmb	IAmb	23 02 19.2	
	comp=Z,5.2nm,1.0s						
AS31	**Alice Springs**	**29.14**	**165**	P	**P**	**23 02 38.2**	**+0.6**
ASAR	**Alice Springs**	**29.14**	**165**	P	**P**	**23 02 38.1**	**+0.5**
	comp=Z,1.1nm,0.5s,baz=346,slow=7.2,SNR=16						
ASAR				PcP	**PcP**	**23 05 44.8**	**+1.6**
	comp=Z,0.6nm,0.6s,baz=357,slow=2.4,SNR=5.0						
ASAR	**Alice Springs**	**29.14**	**165**	P	**P**	**23 02 37.6**	**0.0**
CMAR	**Chiang Mai Arr**	**29.98**	**299**	P	**P**	**23 02 45.4**	**+0.2**
	comp=Z,0.8nm,0.3s,baz=102,slow=18,SNR=1.8						
KSRS	**Korea Array**	**32.67**	**2**	P	**P**	**23 03 09.8**	**+1.4**
	comp=Z,1.8nm,0.5s,baz=189,slow=9.7,SNR=6.1						
MORW	**Morawa**	**34.95**	**196**	P	**P**	**23 03 29.5**	**+1.2**
FORT	**Forrest**	**35.29**	**177**	P	**P**	**23 03 32.0**	**+0.7**
BBOO	**Buckleboo**	**38.42**	**167**	P	**P**	**23 03 58.7**	**+0.9**
STKA	**Stephens Creek**	**39.18**	**159**	P	**P**	**23 04 05.5**	**+1.3**
	comp=Z,2.3nm,0.4s,baz=335,slow=6.8,SNR=5.9						
STKA	**Stephens Creek**	**39.18**	**159**	P	**P**	**23 04 04.8**	**+0.6**
USRK	**Ussuriysk Ar.**	**39.69**	**6**	P	**P**	**23 04 09.3**	**+1.1**
	comp=Z,1.8nm,0.5s,baz=189,slow=6.0,SNR=7.0						
USRK	**Ussuriysk Ar.**	**39.69**	**6**	P	**P**	**23 04 09.0**	**+0.8**
ARMA	**Armidale**	**42.52**	**147**	P	**P**	**23 04 33.2**	**+1.5**
ARMA				IAmb	IAmb	23 04 42.2	
	comp=Z,9.3nm,0.9s						
SONM	**Songino Array**	**46.26**	**342**	P	**P**	**23 05 00.9**	**-0.4**
	comp=Z,0.4nm,0.4s,baz=164,slow=8.6,SNR=5.4						
SONM				PcP	**PcP**	**23 06 36.2**	**+0.9**
	comp=Z,0.6nm,0.7s,baz=164,slow=4.4,SNR=3.1						
SONM	**Songino Array**	**46.26**	**342**	P	**P**	**23 05 00.9**	**-0.4**
PEA0B	**Petropavlovsk-**	**54.75**	**23**	P	**P**	**23 06 05.6**	**+0.6**
PETK	**Petropavlovsk-**	**54.75**	**23**	P	**P**	**23 06 06.4**	**+1.4**
	comp=Z,1.4nm,0.7s,baz=197,slow=1.5,SNR=1.5						
PETK	**Petropavlovsk-**	**54.75**	**23**	P	**P**	**23 06 05.7**	**+0.7**
MK31	**Makanchi Array**	**56.51**	**325**	P	**P**	**23 06 18.4**	**+0.6**
MK31				IAmb	IAmb	23 06 27.8	
	comp=Z,3.5nm,1.5s						
MKAR	**Makanchi Array**	**56.51**	**325**	P	**P**	**23 06 18.4**	**+0.7**
	comp=Z,0.8nm,0.4s,baz=114,slow=7.7,SNR=35						
MKAR				PcP	**PcP**	**23 07 14.3**	**+1.0**
	comp=Z,0.8nm,0.6s,baz=120,slow=4.2,SNR=4.0						
MAKZ	**Makanchi**	**56.70**	**325**	P	**P**	**23 06 19.7**	**+0.7**
MAKZ				IAmb	IAmb	23 06 28.1	
	comp=Z,1.8nm,0.8s						
KDJ	**Kajisay**	**57.32**	**318**	P	**P**	**23 06 24.8**	**+1.0**
KDJ				IAmb	IAmb	23 06 45.0	
	comp=Z,4.3nm,0.8s						
ZALV	**Zalesovo Beam**	**59.53**	**333**	P	**P**	**23 06 37.5**	**-1.2**
	comp=Z,0.6nm,0.5s,baz=159,slow=4.5,SNR=4.1						
ZALV	**Zalesovo Beam**	**59.53**	**333**	P	**P**	**23 06 38.3**	**-0.3**
KURK	**Kurchatov**	**60.69**	**327**	P	**P**	**23 06 46.1**	**-0.5**
KURK				IAmb	IAmb	23 06 57.1	
	comp=Z,3.0nm,0.7s						
GAR	**Garm**	**60.93**	**312**	P	**P**	**23 06 48.2**	**-0.5**
GAR				IAmb	IAmb	23 06 52.2	
	comp=Z,6.4nm,1.1s						
KKAR	**Karatay Array**	**62.22**	**317**	P	**P**	**23 06 57.0**	**0.0**
NRIK	**Noril'sk**	**69.41**	**346**	P	**P**	**23 07 42.0**	**-0.7**
	comp=Z,1.6nm,0.4s,baz=96,slow=5.4,SNR=4.4						
NRIK	**Noril'sk**	**69.41**	**346**	P	**P**	**23 07 43.5**	**+0.8**
NRIK				IAmb	IAmb	23 08 08.7	
	comp=Z,7.1nm,1.4s						
ABKAR	**Akbulak array**	**71.12**	**321**	P	**P**	**23 07 53.2**	**-0.3**
ABKAR	**Akbulak array**	**71.12**	**321**	P	**P**	**23 07 53.2**	**-0.3**
ABKAR				IAmb	IAmb	23 08 15.7	
	comp=Z,2.1nm,1.1s						
IMAR	**Indian Mountai**	**81.69**	**24**	P	**P**	**23 08 53.9**	**+1.0**
PPLA	**Purkeypile**	**82.02**	**27**	P	**P**	**23 08 56.1**	**+1.2**
H21K	**Melozitna Rive**	**82.04**	**24**		**P**	**23 08 56.3**	**+1.5**
H21K				IAmb	IAmb	23 09 21.2	
	comp=Z,3.6nm,1.2s						
MLY	**Manley**	**82.84**	**25**	P	**P**	**23 08 59.8**	**+0.8**
MLY				IAmb	IAmb	23 09 07.4	
	comp=Z,3.5nm,1.4s						
I23K	**Minto, Yukon-K**	**83.43**	**25**	P	**P**	**23 09 03.3**	**+1.4**
I23K				IAmb	IAmb	23 09 26.1	
	comp=Z,13nm,1.5s						
H24K	**Noodor Dome**	**84.08**	**24**	P	**P**	**23 09 07.3**	**+1.9**
H24K				IAmb	IAmb	23 09 29.4	
	comp=Z,6.3nm,1.2s						
ILAR	**Eielson Array**	**84.47**	**25**	P	**P**	**23 09 07.9**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=242,slow=4.7,SNR=4.7						
BMAR	**Burnt Mountain**	**85.41**	**23**	P	**P**	**23 09 13.7**	**+1.7**
ARCES	**ARCESS Array B**	**89.40**	**340**	P	**P**	**23 09 31.0**	**-0.1**
	comp=Z,1.9nm,0.6s,baz=81,slow=8.0,SNR=11						
ARCES	**ARCESS Array B**	**89.40**	**340**	P	**P**	**23 09 31.3**	**+0.2**
FINES	**FINESS Array B**	**90.78**	**332**	P	**P**	**23 09 37.3**	**-0.3**
	comp=Z,3.2nm,1.0s,baz=94,slow=3.1,SNR=7.7						
TXAR	**Lajitas Array**	**121.41**	**52**	PKP	**PKiKP**	**23 15 29.4**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=49,slow=2.7,SNR=1.9						
TORD	**Torodi Ar. Bea**	**122.16**	**289**	PKP	**PKiKP**	**23 15 30.6**	**+0.4**
	comp=Z,0.4nm,0.7s,baz=53,slow=1.7,SNR=4.1						
TORD	**Torodi Ar. Bea**	**122.16**	**289**		**PKiKP**	**23 15 30.9**	**+0.7**

IDC 25 23:18:04.5±2.5, **7°.78N**×**94°.56E**, **h0**^{km}, **mb3.7**/5, **mb1 3.9**/5, **mb1mx3.6**/36, **mbtmp3.7**/5, **MS2.8**/1, **Ms1 2.8**/1, **ms1mx2.3**/55, **Error ellipse: s-maj=111.9km s-min=24.8km az=60.0**, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	**Prapat**	**6.58**	**138**	LR	LR	23 22 47.2	
	comp=Z,70nm,19.7s,baz=297,slow=42						
H08S3	**Diego Garcia H**	**26.81**	**236**	T	T	23 50 19.1	
	baz=56,slow=75,SNR=10.0						
H08S2	**Diego Garcia H**	**26.81**	**236**	T	T	23 50 19.2	
	baz=56,slow=75,SNR=11						
H08S1	**Diego Carcia H**	**26.82**	**236**	T	T	23 50 20.4	
	baz=56,slow=75,SNR=5.5						
MKAR	**Makanchi Array**	**40.27**	**347**	P	P	23 25 42.6	-0.8
	0.4nm,0.8s,baz=159,slow=7.8,SNR=2.5						
SONM	**Songino Array**	**41.17**	**12**	P	P	23 25 50.7	-0.1
	0.2nm,0.3s,baz=198,slow=9.1,SNR=3.7						
WRA	**Warramunga Arr**	**47.87**	**126**	P	P	23 26 44.9	+0.1
	0.5nm,0.7s,baz=304,slow=8.4,SNR=6.6						
ASAR	**Alice Springs**	**49.54**	**130**	P	P	23 26 57.0	-0.5
	0.5nm,0.7s,baz=295,slow=7.3,SNR=3.7						
ARCES	**ARCESS Array B**	**75.49**	**340**	P	P	23 29 51.1	+0.7
	6.4nm,1.2s,baz=98,slow=6.5,SNR=1.7						

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*ATH **25** 23:21:49.3, 38°.40N×20°.46E, h13^{km}±1^{km}, ML2.4/4, Error ellipse: s-maj=2.2km s-min=0.6km az=282.0*

*THE **25** 23:21:49.0, 38°.40N×20°.43E, h13^{km}±1^{km}, ML2.6/5, Error ellipse: s-maj=1.7km s-min=0.4km az=230.0*

ISC 25 23:21:48.7±0.8, **38°.41N**±0°.02×**20°.44E**±0°.03, **h15**^{km}±5^{km}, **n38**, σ**0^{s}.50**/57, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FSK	**Fiskardo**	**0.11**	**60**	P	**Pg**	**23 21 51.5**	**-0.7**
FSK				S	**Sg**	**23 21 53.4**	**-0.9**
FSK				AML	AML	23 21 55.9	
	comp=E,14160µm,0.2s						
FSK				AML	AML	23 21 56.2	
	comp=N,9031µm,0.4s						
KEF4	**Livadi, Kephal**	**0.15**	**186**	P	**Pg**	**23 21 52.4**	**-0.2**
KEF4				S	**Sg**	**23 21 55.5**	**+0.4**
	comp=N,18µm,0.3s						
KEF4	**Livadi, Kephal**	**0.15**	**186**	P	**Pg**	**23 21 52.6**	**0.0**
KEF4				S	**Sg**	**23 21 55.8**	**+0.7**
DMLN	**Damoulianata-K**	**0.17**	**198**	P	**Pg**	**23 21 53.1**	**+0.1**
DMLN				S	**Sg**	**23 21 56.6**	**+0.8**
LXRA	**Lixouri, Kepha**	**0.20**	**181**	P	**Pg**	**23 21 53.8**	**+0.3**
LXRA				S	**Sb**	**23 21 57.8**	**0.0**
KEF3	**Kipouria, Keph**	**0.21**	**200**	P	**Pg**	**23 21 53.2**	**-0.4**
KEF3				S	**Sg**	**23 21 57.2**	**+0.3**
	comp=N,5µm,0.2s						
KEF3	**Kipouria, Keph**	**0.21**	**200**	P	**Pg**	**23 21 53.2**	**-0.4**
KEF3				S	**Sg**	**23 21 57.1**	**+0.3**
VLS	**Valsamata**	**0.26**	**153**	P	**Pg**	**23 21 54.1**	**-0.1**
VLS				S	**Sg**	**23 21 58.6**	**+0.6**
	comp=N,1µm,0.2s						
VLS	**Valsamata**	**0.26**	**153**	P	**Pg**	**23 21 54.2**	**-0.1**
VLS				S	**Sg**	**23 21 58.2**	**+0.2**
VLS				AML	AML	23 21 59.9	
	comp=E,2229µm,0.1s						
VLS				AML	AML	23 22 04.3	
	comp=N,2215µm,0.3s						
EVGI	**Lefkada island**	**0.27**	**38**	P	**Pg**	**23 21 54.4**	**-0.2**
EVGI				S	**Sg**	**23 21 59.4**	**+0.9**
DRAG	**Dragano-Lefkad**	**0.30**	**20**	P	**Pg**	**23 21 54.9**	**-0.1**
DRAG				S	**Sg**	**23 22 00.2**	**+0.9**
PSDA	**Pessada-Kefalo**	**0.31**	**159**	P	**Pg**	**23 21 54.4**	**-0.8**
PSDA				S	**Sb**	**23 22 00.7**	**-0.2**
NYDR	**Nydri-Lefkada**	**0.37**	**33**	P	**Pg**	**23 21 56.0**	**-0.2**
NYDR				S	**Sg**	**23 22 01.9**	**+0.5**
LKD2	**Lefkada island**	**0.42**	**24**	P	**Pg**	**23 21 57.0**	**-0.2**
LKD2	**Lefkada island**	**0.42**	**24**	P	**Pg**	**23 21 57.0**	**-0.2**
LKD2				S	**Sg**	**23 22 03.7**	**+0.8**
LKD2				AML	AML	23 22 06.8	
	comp=E,860µm,0.3s						
LKD2				AML	AML	23 22 09.3	
	comp=N,1069µm,0.4s						
TSLK	**Tsoukalades, L**	**0.45**	**22**	P	**Pg**	**23 21 57.9**	**+0.2**
TSLK				S	**Sb**	**23 22 05.0**	**+0.1**
TSLK				AML	AML	23 22 06.6	
	comp=E,1568µm,0.3s						
TSLK				AML	AML	23 22 08.4	
	comp=N,1149µm,0.5s						
LTHK	**Lithakia**	**0.76**	**156**	P	**Pg**	**23 22 03.4**	**-0.2**
LTHK				S	**Sb**	**23 22 14.4**	**+0.6**
	comp=N,435nm,0.5s						
LTHK	**Lithakia**	**0.76**	**156**	P	**Pg**	**23 22 03.4**	**-0.2**
LTHK				S	**Sg**	**23 22 13.7**	**+0.2**
VTN	**Vitineika**	**0.76**	**130**	P	**Pg**	**23 22 03.4**	**-0.2**
PVO	**Paravola**	**0.88**	**76**	P	**Pg**	**23 22 05.7**	**0.0**
PVO				S	**Sn**	**23 22 19.1**	**+0.1**
	comp=N,280nm,0.4s						
PVO	**Paravola**	**0.88**	**76**	P	**Pg**	**23 22 05.7**	**0.0**
RLS	**Riolos of Patr**	**0.88**	**113**	P	**Pg**	**23 22 05.6**	**-0.2**
RLS	**Riolos of Patr**	**0.88**	**113**	P	**Pg**	**23 22 05.8**	**0.0**
DRO	**Drossia**	**1.10**	**114**	P	**Pb**	**23 22 09.0**	**-0.5**
IGT	**Igoumenitsa**	**1.13**	**356**	P	**Pb**	**23 22 09.9**	**-0.1**
IGT	**Igoumenitsa**	**1.13**	**356**	P	**Pb**	**23 22 10.3**	**+0.3**
EFP	**Efpalio**	**1.15**	**88**	P	**Pb**	**23 22 09.8**	**-0.5**
ANX	**Ano Chora**	**1.18**	**80**	P	**Pb**	**23 22 10.8**	**-0.1**
EVR	**Evrytania**	**1.19**	**64**	P	**Pn**	**23 22 10.6**	**-0.3**
SERG	**Sergoula**	**1.27**	**89**	P	**Pn**	**23 22 11.8**	**-0.2**
KLV	**Kalavryta, Ach**	**1.39**	**104**	P	**Pn**	**23 22 14.2**	**+0.4**
GUR	**Goura**	**1.57**	**107**	P	**Pn**	**23 22 17.1**	**+0.9**
AGG	**Agios Georgios**	**1.60**	**67**	P	**Pb**	**23 22 18.2**	**+0.2**
DBRK	**Dubrovnik**	**4.60**	**338**	*e*Pn	**Pn**	**23 22 57.5**	**-0.3**
STON	**Ston**	**4.92**	**336**	*e*Pn	**Pn**	**23 23 01.6**	**-0.6**
STON				Sn	**Sn**	**23 23 57.3**	**-1.6**
LSTV	**Lastovo**	**5.13**	**329**	*e*Pn	**Pn**	**23 23 05.2**	**+0.2**
RICI	**Ricice**	**5.67**	**335**	*e*Pn	**Pn**	**23 23 12.4**	**0.0**
UDBI	**Udbina**	**7.05**	**332**	*e*Pn	**Pn**	**23 23 32.6**	**+1.1**

IDC 25 23:31:28.5±2.6, **3°.33N**×**128°.65E**, **h0**^{km}, **mb3.2**/3, **mb1 3.4**/3, **mb1mx3.3**/32, **mbtmp3.2**/3, **MS2.7**/1, **Ms1 2.7**/1, **ms1mx2.4**/12, **Error ellipse: s-maj=172.9km s-min=28.7km az=68.0**, **North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.79**	**167**	P	P	23 36 43.3	+0.2
	0.4nm,0.6s,baz=347,slow=11,SNR=6.3						
ASAR	**Alice Springs**	**27.31**	**169**	P	P	23 37 14.9	-0.2
	0.1nm,0.4s,baz=1.7,slow=8.6,SNR=4.4						
KSRS	**Korea Array**	**33.97**	**359**	LR	LR	23 52 13.6	
	comp=Z,11nm,19.7s,baz=50,slow=37						
MKAR	**Makanchi Array**	**58.99**	**325**	P	P	23 41 30.0	0.0
	0.2nm,0.5s,baz=129,slow=6.3,SNR=1.5						

NOU 25 23:31:50.5, **14°.62S**×**167°.12E**, **h126**^{km}, **MLv4.3**/6, **Vanuatu Islands**, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**0.83**	**174**	P	Pn	23 32 12.2	+0.7
DVP	**Devils Point**	**3.25**	**162**	P	Pn	23 32 40.6	+0.3

MAN 25 23:32:11.2, **10°.28N**×**124°.76E**, **h2**^{km}, **mb4.2**, **ML3.1**, **MS2.8**, **Leyte**

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*IDC **25** 23:48:44.0±1.0, 34°.31N×25°.47E, h0^{km}, mb3.9/9, mb1 4.0/16, mb1mx3.8/58, mbtmp3.9/16, ML3.6/7, Error ellipse: s-maj=20.3km s-min=15.3km az=28.0*

*ATH **25** 23:48:47.6, 34°.24N×25°.32E, h13^{km}±3^{km}, ML3.4/5, Error ellipse: s-maj=4.1km s-min=2.3km az=5.0*

*HLW **25** 23:48:48.9, 34°.26N×25°.54E, h20^{km}±12^{km}, Md3.5, Ml3.7*

*THE **25** 23:48:50.2, 34°.45N×25°.31E, h3^{km}±2^{km}, ML3.2/6, Error ellipse: s-maj=2.3km s-min=0.9km az=147.0*

ISC 25 23:48:47.7±1.2, **34°.28N**±0°.04×**25°.40E**±0°.04, **h31**^{km}±9^{km}, **n42**, σ**1^{s}.82**/56, **mb3.8**/9, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.89**	**327**	P	**Pb**	**23 49 04.2**	**-0.4**
SIVA				S	**Sb**	**23 49 14.2**	**-1.9**
	9µm,0.7s						
SIVA	**Sivas**	**0.89**	**327**	P	**Pb**	**23 49 04.3**	**-0.2**
SIVA				S	**Sb**	**23 49 16.3**	**+0.2**
SIVA				AML	AML	23 49 20.7	
	comp=E,23025µm,0.7s						
SIVA				AML	AML	23 49 23.9	
	comp=N,14198µm,0.7s						

NPS	Neapolis	1.00	10	P	Pn	23 49 06.6	+1.0
NPS				S	Sb	23 49 19.4	+0.1
	comp=N,1μm,0.5s						
ZKR	Zakros	1.07	39	P	Pb	23 49 09.1	+1.4
ZKR				S	Sn	23 49 23.8	+3.4
	comp=N,910nm,0.5s						
ZKR	Zakros	1.07	39	P	Pb	23 49 08.7	+1.0
ZKR				AML	AML	23 49 32.7	
	comp=E,2661μm,0.5s						
ZKR				AML	AML	23 49 34.9	
	comp=N,1009μm,0.5s						
IDI	Anoyia	1.09	337	Pn	Pn	23 49 07.7	+0.7
	comp=N,72nm,0.3s,baz=156,slow=17,SNR=163						
IDI				Sn	Sn	23 49 22.9	+1.9
	comp=N,201nm,0.3s,baz=316,slow=17,SNR=15						
IDI	Anoyia	1.09	337	P	Pn	23 49 07.7	+0.7
IDI				S	Sb	23 49 20.8	-1.3
	comp=N,1μm,0.6s						
IDI	Anoyia	1.09	337	P	Pn	23 49 07.7	+0.7
IDI				S	Sn	23 49 23.0	+2.0
IDI				AML	AML	23 49 29.9	
	comp=E,2415μm,0.6s						
IDI				AML	AML	23 49 32.0	
	comp=N,1351μm,0.3s						
GVD	Gavdhos	1.22	298	P	Pb	23 49 10.0	-0.2
GVD				S	Sn	23 49 26.1	+2.0
	comp=N,2μm,0.5s						
GVD	Gavdhos	1.22	298	P	Pn	23 49 09.6	+1.0
GVD				S	Sb	23 49 25.2	-0.5
GVD				AML	AML	23 49 41.9	
	comp=N,3656μm,0.4s						
GVD				AML	AML	23 49 44.8	
	comp=E,5341μm,0.5s						
VAM	Vamos	1.50	319	P	Pn	23 49 13.9	+1.4
VAM				S	Sn	23 49 31.9	+0.9
	comp=E,1μm,0.9s						
VAM	Vamos	1.50	319	P	Pn	23 49 14.1	+1.6
VAM				AML	AML	23 49 47.7	
	comp=E,2025μm,0.6s						
VAM				AML	AML	23 49 50.6	
	comp=N,1812μm,0.9s						
IMMV	Iera Moni Meta	1.66	316	P	Pn	23 49 16.0	+1.3
IMMV				S	Sb	23 49 37.8	-0.4
SLUM	Salum	2.78	183	P	Pn	23 49 33.0	+2.8
	baz=186						
SLUM				AMP		23 50 00.0	
	baz=186						
SLUM				S	Sn	23 50 03.9	+1.2
	baz=186						
SWA2		5.02	179	P	Pn	23 50 03.5	+2.5
	baz=181						
SWA2				S	Sn	23 50 58.4	+0.5
	baz=181						
RYAN	Fayoum	6.64	140	P	Pn	23 50 25.4	+2.3
	baz=140						
GLL	Jalalah	7.12	129	P	Pn	23 50 29.3	-0.5
	baz=130						
HFRF	Wahat Farafira	7.53	160	P	Pn	23 50 37.4	+1.9
	baz=160						
SUZ	Suez	7.70	123	P	Pn	23 50 39.7	+1.9
	baz=123						
MMAI	Mount Meron Ar	8.43	96	Pn	Pn	23 50 48.9	+1.1
	comp=N,1.1nm,0.3s,baz=291,slow=12,SNR=8.4						
MMAI				Sn	Sn	23 52 19.4	-2.6
	comp=N,2.4nm,0.3s,baz=274,slow=24,SNR=6.9						
EIL	Elat	9.32	117	Pn	Pn	23 51 00.7	+0.7
	comp=N,0.3nm,0.3s,baz=222,slow=4.1,SNR=13						
EIL				Sn	Sn	23 52 39.0	-4.6
	comp=N,0.8nm,0.3s,baz=137,slow=8.1,SNR=4.2						
VAE	Valguarnera	9.47	293	Pn	Pn	23 51 05.0	+2.9
	comp=N,0.6nm,0.3s,baz=165,slow=19,SNR=1.2						
VAE				Sn	Sn	23 52 44.9	-2.6
	comp=N,0.7nm,0.3s,baz=195,slow=9.9,SNR=1.8						
ASF	Jabal al Asfar	9.86	99	Pn	Pn	23 51 08.2	+0.8
	comp=N,0.1nm,0.3s,baz=298,slow=19,SNR=1.8						
ASF				Sn	Sn	23 52 52.3	-4.7
	comp=N,0.2nm,0.3s,baz=36,slow=6.6,SNR=1.5						
DBRK	Dubrovnik	10.12	328	*e*Pn	Pn	23 51 09.4	-1.5
STON	Ston	10.48	327	*e*Pn	Pn	23 51 12.8	-2.9
LSTV	Lastovo	10.78	324	*e*Pn	Pn	23 51 15.8	-4.0
RICI	Ricice	11.23	327	*e*Pn	Pn	23 51 23.0	-3.0
HVAR	Hvar	11.30	324	*e*Pn	Pn	23 51 24.4	-2.6
ZIRJ	Zirje	12.05	324	*e*Pn	Pn	23 51 31.6	-5.6
UDBI	Udbina	12.65	327	*e*Pn	Pn	23 51 40.9	-4.6
KBZ	Khabaz	16.52	50	Pn	P	23 52 39.3	-0.1
	comp=N,0.1nm,0.3s,baz=258,slow=9.2,SNR=8.7						
AKASG	Malin Array Be	16.65	9	Pn	Pn	23 52 39.5	+0.9
	comp=N,1.5nm,0.3s,baz=198,slow=10,SNR=8.8						
GERES	GERESS Array B	16.95	333	Pn	P	23 52 45.1	+0.8
	comp=N,0.2nm,0.3s,baz=145,slow=12,SNR=7.0						
ESDC	Sonseca Array	24.01	292	P	P	23 53 59.8	0.0
	comp=N,1.1nm,1.0s,baz=78,slow=8.9,SNR=3.1						
FINES	FINESS Array B	27.18	1	P	P	23 54 28.0	-0.2
	comp=N,4.0nm,0.9s,baz=170,slow=8.5,SNR=2.1						
TORD	Torodi Ar. Bea	30.09	231	P	P	23 54 55.9	+1.4
	comp=N,0.6nm,0.4s,baz=33,slow=8.8,SNR=9.2						
ARCES	ARCESS Array B	35.31	0	P	P	23 55 39.3	-0.3
	comp=N,3.6nm,1.0s,baz=167,slow=8.3,SNR=2.1						
MKAR	Makanchi Array	44.10	56	P	P	23 56 53.0	0.0
	comp=N,0.7nm,0.8s,baz=280,slow=7.1,SNR=5.0						
ZALV	Zalesovo Beam	45.47	46	P	P	23 57 03.4	-0.4
	comp=N,0.5nm,0.4s,baz=276,slow=9.4,SNR=2.5						
SONM	Songino Array	59.89	50	P	P	23 58 51.5	+0.8
	comp=N,0.5nm,0.8s,baz=285,slow=7.2,SNR=2.6						
TIXI	Tiksi	61.92	20	P	P	23 59 04.8	+1.0
	comp=N,1.7nm,0.3s,baz=310,slow=4.7,SNR=5.4						
KSRS	Korea Array	78.66	52	P	P	00 00 45.6	-1.2
	comp=N,1.1nm,0.6s,baz=330,slow=4.9,SNR=2.0						

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*IDC **25** 23:49:34.0±0.8, 10°.49S×71°.08W, h591^{km}±12^{km}, mb3.2/10, mb1 3.4/15, mb1mx3.2/45, mbtmp4.2/15, Error ellipse: s-maj=18.3km s-min=11.7km az=30.0*

*VAO **25** 23:49:34.4±0.3, 10°.46S×71°.16W, h593^{km}±4^{km}, mb4.2*

*NEIC **25** 23:49:34.4±1.5, 10°.52S±0°.10×71°.1W±0°.1, h592^{km}±7^{km}, mb4.2/25, Error ellipse: s-maj=18.9km s-min=13.9km az=77.0*

ISC 25 23:49:34.5±0.4**, 10°.51S**±0°.06×**71°.13W**±0°.07**, h602**^{km}**, n95, σ0^{s}.84**/100**, mb4.1**/19**, Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CZSB	Cruzeiro do Su	3.17	330	*e*P	P	23 50 54.4	-0.5
CZSB				*e*S	S	23 51 57.3	-2.9
CZSB	Cruzeiro do Su	3.17	330	P	P	23 50 54.3	-0.5
ETMB	Extrema	4.89	82	*e*P	P	23 51 06.5	-0.2
ETMB	Extrema	4.89	82	P	P	23 51 06.3	-0.4
NNA	Nana	5.79	255	P	P	23 51 14.1	+0.1
	1.7nm,0.3s,baz=351,slow=4.8,SNR=9.5						
NNA				S	S	23 52 34.3	-1.1
	2.0nm,0.3s,baz=356,slow=23,SNR=1.6						
NNA	Nana	5.79	255	P	P	23 51 13.6	-0.4
TBTG	Tabatinga, AM	6.40	11	*e*P	P	23 51 20.2	+1.0
TBTG	Tabatinga, AM	6.40	11	P	P	23 51 19.9	+0.6
LPAZ	La Paz	6.44	153	P	P	23 51 20.3	0.0
	1.5nm,0.3s,baz=315,slow=6.6,SNR=30						
LPAZ				S	S	23 52 43.7	-3.0
	0.2nm,0.3s,baz=139,slow=18,SNR=9.1						
LPAZ	La Paz	6.44	153	*e*P	P	23 51 20.2	0.0
LPAZ	La Paz	6.44	153	P	P	23 51 20.1	-0.2
ATAH	Atahualpa	7.92	294	P	P	23 51 34.0	+0.4
	1.2nm,0.3s,baz=22,slow=3.8,SNR=9.5						
ATAH				S	S	23 53 09.0	-2.1
	0.9nm,0.3s,baz=76,slow=9.7,SNR=3.5						
PB16	IPOC Station P	7.94	169	P	P	23 51 32.7	-1.2
SAML	Samuel	7.99	80	P	P	23 51 33.7	-0.1
PB12	IPOC Station P	8.10	175	P	P	23 51 32.9	-2.0
PB11	IPOC Station P	9.31	171	P	P	23 51 45.6	-1.0
PB08	IPOC Station P	9.77	169	P	P	23 51 50.1	-1.3
TA01	Diego Aracena	10.04	175	P	P	23 51 53.6	0.0
PB01	IPOC Station P	10.59	172	P	P	23 51 58.3	-0.9
VILB	Vilhena	10.98	104	*e*P	P	23 52 03.3	+0.2
VILB	Vilhena	10.98	104	P	P	23 52 03.0	0.0
SIV	San Ignacio	11.21	120	P	P	23 52 05.0	-0.3
	4.2nm,0.3s,baz=291,slow=9.5,SNR=83						
PB09	IPOC Station P	11.37	171	P	P	23 52 07.9	+0.8
PB06	IPOC Station P	12.22	173	P	P	23 52 16.1	+0.5
PTLB	Pontes e Lacer	12.68	114	*e*P	P	23 52 19.9	-0.2
PTLB	Pontes e Lacer	12.68	114	P	P	23 52 19.8	-0.2
MACA	Manacapuru-AM	12.68	56	*e*P	P	23 52 19.6	-0.5
MACA	Manacapuru-AM	12.68	56	P	P	23 52 19.5	-0.6
OTAV	Otavalo	12.92	325	*e*P	P	23 52 21.4	-1.7
PDRB	Porto dos Gac	14.18	96	*e*P	P	23 52 34.7	-0.4
PTGA	Pitinga	14.75	50	P	P	23 52 40.5	+0.1
	3.8nm,0.3s,baz=322,slow=22,SNR=31						
PTGA	Pitinga	14.75	50	P	P	23 52 40.3	-0.1
CLDB	Colider	15.07	93	*e*P	P	23 52 43.0	-0.3
SALV	Santo Antonio	15.95	111	*e*P	P	23 52 52.5	+1.1
NPGB	Novo Progresso	15.96	79	*e*P	P	23 52 51.5	-0.1
AC02	Maricunga	16.35	174	P	P	23 52 56.9	+1.5
ITTB	Itaituba	16.43	69	*e*P	P	23 52 56.5	+0.7
BOAV	Boa Vista	16.61	40	*e*P	P	23 52 57.7	+0.3
BOAV	Boa Vista	16.61	40	P	P	23 52 58.4	+0.9
PP1B	Ponte de Pedra	17.26	116	*e*P	P	23 53 04.8	+1.5
ZARC	Zaragoza, Cauc	18.26	348	P	P	23 53 12.5	0.0
ZARC				IAmb	IAmb	23 53 13.5	
	comp=Z,4.8nm,1.1s						
MALB	Monte Alegre	18.83	64	*e*P	P	23 53 18.2	+0.5
SNDB	Serra Nova Dou	19.51	96	*e*P	P	23 53 23.7	-0.2
MCPB	Macapa, AP	21.48	63	*e*P	P	23 53 42.2	+0.6
PEXB	Peixe	22.44	96	*e*P	P	23 53 51.3	+1.1
SMTB	Santa Maria do	23.26	88	*e*P	P	23 53 58.5	+1.0
MDP	Montagnes des	24.07	51	P	P	23 54 04.3	-0.3
	comp=Z,9.6nm,0.9s,baz=236,slow=10,SNR=10						
SDBA	SAO DESIDERIO	25.77	97	*e*P	P	23 54 19.7	+0.1
JANB	Januaria	26.53	103	*e*P	P	23 54 26.0	-0.3
PLTB	Pedras Altas	26.65	145	P	P	23 54 26.1	-1.0
ROSB	Rosrio	27.85	76	*e*P	P	23 54 37.8	0.0
TRQA	Tornquist	28.64	165	P	P	23 54 43.7	-0.6
TRQA				IAmb	IAmb	23 54 51.5	
	comp=Z,7.5nm,1.4s						
NBPS	Pedro II - PI	30.04	81	*e*P	P	23 54 57.4	+0.7
PLCA	Paso Flores	30.11	179	P	P	23 54 57.5	+0.6
	comp=Z,1.6nm,0.5s,baz=353,slow=9.3,SNR=6.6						
PLCA	Paso Flores	30.11	179	*e*P	P	23 54 57.5	+0.6
PLCA	Paso Flores	30.11	179	P	P	23 54 56.9	0.0
PLCA				IAmb	IAmb	23 54 58.0	
	comp=Z,9.3nm,1.4s						
NBPN	Ponto Novo - B	30.39	94	*e*P	P	23 55 00.3	+0.6
NBAN	Anadia - AL	34.32	92	*e*P	P	23 55 33.1	+0.3
BIRD	Birdtown, Kers	45.77	349	P	P	23 57 03.5	0.0
WVT	Waverly	48.99	342	P	P	23 57 27.0	-0.5
S54A	Dingess, Beckl	48.99	349	P	P	23 57 27.0	-0.6
S54A				IAmb	IAmb	23 57 54.0	
	comp=Z,21nm,1.3s						
TXAR	Lajitas Array	50.53	323	P	P	23 57 39.5	+0.4
	comp=Z,0.2nm,0.6s,baz=174,slow=9.2,SNR=5.0						
TXAR				PcP	PcP	23 58 47.1	+1.2
	comp=Z,0.4nm,0.7s,baz=157,slow=5.0,SNR=3.4						
P53A	Whipple	50.65	350	P	P	23 57 39.6	+0.1
S44A	Carbondale	50.87	341	P	P	23 57 40.9	-0.3
SIUC	Southern Illin	50.88	341	P	P	23 57 41.1	-0.1
SIUC				IAmb	IAmb	23 57 41.6	
	comp=Z,13nm,0.7s						
FVM	French Village	51.51	341	P	P	23 57 45.2	-0.6
G65A	Princeton	55.54	3	P	P	23 58 14.5	+0.5
G65A				IAmb	IAmb	23 58 21.6	
	comp=Z,22nm,1.4s						
D62A	Allapoint, All	57.36	2	P	P	23 58 26.9	+0.4
D62A				IAmb	IAmb	23 58 37.1	
	comp=Z,25nm,1.4s						
SDCO	Great Sand Dun	57.79	328	P	P	23 58 30.2	+0.3
EYMN	Ely	60.94	344	P	P	23 58 50.1	-0.2
EYMN				IAmb	IAmb	23 59 10.7	
	comp=Z,28nm,1.4s						
PD31	Pinedale Array	63.59	329	P	P	23 59 08.6	+0.8
PDAR	Pinedale Array	63.59	329	P	P	23 59 08.4	+0.6
	comp=Z,0.4nm,0.5s,baz=126,slow=10,SNR=5.5						
PDAR	Pinedale Array	63.59	329	P	P	23 59 08.3	+0.4
ULM	Lac du Bonnet	64.25	343	P	P	23 59 11.2	-0.3
	comp=Z,3.4nm,0.3s,baz=161,slow=5.5,SNR=5.0						
ULM	Lac du Bonnet	64.25	343	P	P	23 59 11.0	-0.5
ULM				IAmb	IAmb	23 59 11.6	
	comp=Z,5.7nm,0.8s						
NVAR	Mina Array Bea	65.61	321	P	P	23 59 21.4	+0.8
	comp=Z,0.3nm,0.6s,baz=108,slow=4.8,SNR=3.5						
EGMT	Eagleton	67.57	333	P	P	23 59 33.1	+0.9
EGMT				IAmb	IAmb	23 59 57.7	
	comp=Z,7.3nm,1.2s						
DBIC	Dimbokro	68.15	78	P	P	23 59 36.3	-0.1
	comp=Z,2.9nm,0.6s,baz=247,slow=4.4,SNR=3.9						
DBIC	Dimbokro	68.15	78	P	P	23 59 36.0	-0.3
DBIC				IAmb	IAmb	23 59 54.7	
	comp=Z,17nm,1.5s						
KOWA	Kowa	71.01	71	P	P	23 59 53.4	0.0
SNAA	Sanae	73.32	162	P	P	00 00 06.1	+0.4
TORD	Torodi Ar. Bea	76.00	74	P	P	00 00 21.6	0.0
	comp=Z,1.9nm,0.5s,baz=242,slow=4.4,SNR=38						
QSPA	South Pole Qui	79.62	180	P	P	00 00 41.3	+1.1
QSPA				IAmb	IAmb	00 00 42.0	
	comp=Z,3.4nm,0.7s						
YKA	Yellowknife Ar	80.16	341	P	P	00 00 43.1	+0.3
	comp=Z,1.1nm,0.7s,baz=126,slow=6.5,SNR=7.8						
YKA	Yellowknife Ar	80.16	341	P	P	00 00 43.4	+0.6
DLBC	Dease Lake	83.50	333	P	P	00 01 01.2	+1.2
	comp=Z,2.2nm,0.8s,baz=130,slow=4.8,SNR=3.8						
INK	Inuvik	89.93	341	P	P	00 01 30.8	+0.8
INK				IAmb	IAmb	00 01 31.6	
	comp=Z,1.4nm,0.8s						
ZALV	Zalesovo Beam	132.61	19	PKP	PKPdf	00 07 41.8	+0.2
	comp=Z,0.9nm,0.5s,baz=296,slow=2.9,SNR=5.2						
ZALV	Zalesovo Beam	132.61	19		PKPdf	00 07 42.3	+0.7
ASAR	Alice Springs	138.13	216	PKP	PKPdf	00 07 52.2	-0.6
	comp=Z,0.6nm,0.6s,baz=98,slow=1.5,SNR=5.7						
ASAR	Alice Springs	138.13	216		PKPdf	00 07 52.5	-0.4
WRA	Warramunga Arr	140.70	220	PKhKP	PKPpre	00 07 51.4	
	comp=Z,0.5nm,0.5s,baz=138,slow=2.9,SNR=12						
WRA				PKP	PKPdf	00 07 58.2	+0.7
	comp=Z,1.2nm,0.5s,baz=210,slow=1.1,SNR=14						
SONM	Songino Array	142.74	3	PKP	PKPdf	00 07 58.7	-1.8
	comp=Z,0.7nm,0.3s,baz=318,slow=2.2,SNR=7.5						
SONM	Songino Array	142.74	3		PKPdf	00 07 59.1	-1.4
KSRS	Korea Array	148.16	331	PKPbc	PKPbc	00 08 14.5	+0.6
	comp=Z,2.4nm,0.6s,baz=16,slow=2.0,SNR=5.9						

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*MOS **25** 23:50:00.3±0.0, 40°.87N×46°.55E, h2^{km}, MPVA2.8*

*DRS **25** 23:50:02.9±0.0, 40°.48N×46°.27E, h23^{km}*

*DDA **25** 23:50:05.0, 40°.82N×46°.74E, h60^{km}±27^{km}, ML1.8*

ISC 25 23:50:03.8±2.4**, 40°.7N**±0°.1×**46°.65E**±0°.04**, h19**^{km}±4^{km}**, n16, σ1^{s}.68**/31**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDFL	Dedoflistskaro	0.83	331	P	Pn	23 50 21.9	+1.4
DDFL				S	Sn	23 50 35.7	+3.5
DDFL	Dedoflistskaro	0.83	331	*i*P	Pn	23 50 21.9	+1.4
DDFL				*i*S	Sn	23 50 31.8	-0.4
DDFL				IAML		23 50 36.0	
	comp=N,29nm,0.5s						
DDFL				IAML		23 50 47.0	
	comp=E,35nm,0.5s						
AKT	Akhty	1.11	47	*e*Pg	Pb	23 50 23.3	-1.1
AKT				*i*Sg	Sg	23 50 40.3	+0.3
LGD	Lagodekhi	1.15	345	P	Pb	23 50 24.4	-0.7
LGD				S	Sb	23 50 39.6	-0.1
DGRG	David-gareji	1.21	307	P	Pb	23 50 26.2	+0.1
DGRG				S	Sg	23 50 43.3	+0.2
KMKR	Kumukh	1.45	13	*e*Pg	Pn	23 50 29.1	0.0
KMKR				*e*Sg	Sb	23 50 49.4	+1.1
URKR	Urkarakh	1.62	27	*e*Pg	Pn	23 50 32.3	+0.9
URKR				*e*Sg	Sg	23 50 55.3	-0.9
GNBR	Gunib	1.68	8	*e*Pg	Pn	23 50 33.5	+1.3
GNBR				*e*Sg	Sg	23 50 57.5	-0.6
BTNK	Botanikuri	1.70	305	P	Pn	23 50 32.7	+0.3
BTNK				S	Sb	23 50 54.6	-0.7
BTNK	Botanikuri	1.70	305	*i*P	Pn	23 50 33.0	+0.7
BTNK				*i*S	Sn	23 50 54.4	+0.8
XNZR	Khunzakh	1.82	1	*e*Pg	Pn	23 50 34.2	0.0
XNZR				*e*Sg	Sb	23 50 59.7	+0.8
ARKR	Arakani	1.90	8	*e*Pg	Pn	23 50 36.0	+0.8
ARKR				*e*Sg	Sb	23 51 02.2	+1.1
BTLR	Botlikh	1.97	351	*e*Pg	Pn	23 50 36.2	+0.1
BTLR				*e*Sg	Sb	23 51 03.6	+0.5
UNCR	Uncukul	1.99	3	*e*Pg	Pn	23 50 37.6	+1.2
UNCR				*e*Sg	Sb	23 51 04.5	+0.6
DBC	Dubki	2.30	3	*e*Pg	Pn	23 50 42.3	+1.6
DBC				*e*Sg	Sb	23 51 12.4	-0.3
PNSH	Pansheti	2.44	322	P	Pn	23 50 36.8	-6.0
PNSH				S	Sn	23 51 05.6	-6.6

IDC 25 23:58:41.1±3.6**, 7°.23N×94°.06E, h0**^{km}**, mb3.6**/5**, mb1 3.7**/5**, mb1mx3.3**/41**, mbtmp3.6**/5**, Error ellipse: s-maj=153.3km s-min=22.6km az=62.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S3	Diego Garcia H	26.09	236	T	T	00 30 58.5	
	baz=54,slow=76,SNR=11						
H08S2	Diego Garcia H	26.09	236	T	T	00 30 59.8	
	baz=54,slow=76,SNR=14						
H08S1	Diego Carcia H	26.11	236	T	T	00 31 00.1	
	baz=54,slow=76,SNR=12						
MKAR	Makanchi Array	40.69	348	P	P	00 06 21.7	-1.8
	0.1nm,0.4s,baz=159,slow=6.5,SNR=2.0						
SONM	Songino Array	41.80	12	P	P	00 06 32.4	-0.2
	0.4nm,0.7s,baz=192,slow=12,SNR=2.2						
ZALV	Zalesovo Beam	47.18	353	P	P	00 07 16.4	+1.1
	1.4nm,0.3s,baz=171,slow=8.1,SNR=10						
WRA	Warramunga Arr	47.96	125	P	P	00 07 21.8	-0.2
	0.4nm,0.5s,baz=306,slow=8.5,SNR=8.3						
ASAR	Alice Springs	49.57	129	P	P	00 07 34.3	-0.1
	0.5nm,0.5s,baz=298,slow=7.4,SNR=6.4						

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*DJA **26** 00:15:03.7±0.4, 1°N±3°×12°7E±°, h10^{km}, M3.2/5, MLv3.2/5*

*IDC **26** 00:15:03.8±2.2, 0°.89N×127°.39E, h0^{km}, mb3.6/3, mb1 3.9/3, mb1mx3.5/46, mbtmp3.7/3, MS3.5/1, Ms1 3.5/1, ms1mx2.6/43, Error ellipse: s-maj=167.2km s-min=27.4km az=66.0*

ISC 26 00:15:05.3±1.6**, 1°.0N**±0°.1×**127°.5E**±0°.2**, h10**^{km}**, n6, σ0^{s}.55**/6**, mb3.7**/3**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.23	210	P	Pg	00 15 09.7	-0.3
LBMI	Labuha	1.60	179	P	Pn	00 15 33.9	+0.3
LBMI				S	Sb	00 15 55.6	+0.4
WRA	Warramunga Arr	21.85	162	P	P	00 19 57.6	-0.6
	1.5nm,0.6s,baz=341,slow=11,SNR=20						
ASAR	Alice Springs	25.27	166	P	P	00 20 31.5	-0.4
	1.8nm,0.8s,baz=345,slow=8.1,SNR=15						
PETK	Petropavlovsk-	57.70	21	LR	LR	00 47 11.6	
	comp=Z,48nm,21.5s,baz=252,slow=33						
MKAR	Makanchi Array	60.24	326	P	P	00 25 14.1	+0.3
	0.4nm,0.7s,baz=116,slow=8.2,SNR=3.4						

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*BJI **26** 00:17:18.1±0.0, 4°.95S×145°.77E, h197^{km}, mB5.1/34, mb5.2/72*

*IDC **26** 00:17:20.8±0.7, 4°.78S×145°.25E, h179^{km}±6^{km}, mb4.7/37, mb1 4.7/43, mb1mx4.6/58, mbtmp5.2/43, MS4.0/4, Ms1 4.0/4, ms1mx3.2/34, Error ellipse: s-maj=8.9km s-min=6.0km az=97.0*

*MOS **26** 00:17:20.7±0.7, 4°.75S×145°.22E, h190^{km}, mb5.1/39, Error ellipse: s-maj=9.6km s-min=5.0km az=110.1*

*NEIC **26** 00:17:22.8±1.4, 4°.79S±0°.06×145°.15E±0°.07, h187^{km}±5^{km}, mb5.1/135, Error ellipse: s-maj=10.7km s-min=8.8km az=70.0*

*GCMT **26** 00:17:23.8±0.3, 4°.73S±0°.02×145°.21E±0°.03, h202^{km}±3^{km}, MW5.1/93, Moment Tensor Solution. s13,c15; s93,c127; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-4.49±.26; M$_{\theta\theta}$3.97±.24; M$_{\phi\phi}$0.52±.27; M$_{r\theta}$-0.53±.19; M$_{\theta\phi}$-2.73±.22; M$_{\phi r}$-3.03±.20; Best double couple: M$_0$5.89300×10^{16} NP1:φ$_s$93.00000°, δ46.00000°, λ-132.00000°. NP2: φ$_s$326.00000°, δ58.00000°, λ-55.00000°. Principal axes: T 5.5880, Plg6.0000°, Azm32.0000°; N 0.6140, Plg29.0000°, Azm125.0000°; P -6.1990, Plg61.0000°, Azm290.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **26** 00:17:23.8±0.2, 5°S±2°×14°5E±°, h192^{km}±3^{km}, M4.9/80, mb5.3/80, mB5.4/49, MLv5.4/6, Mw(mB)4.9/49*

ISC 26 00:17:22.0±0.5**, 4°.75S**±0°.04×**145°.18E**±0°.05**, h187**^{km}±4^{km}**, h187**^{km}**:pP-P, n446, σ1^{s}.07**/471**, mb5.1**/178**, 3C-13D, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	Manus Island	3.46	39	Pn	Pn	00 18 17.9	+1.3
JAY	Jayapura	4.99	296	P	Pn	00 18 36.7	+0.7
	64nm,0.3s,baz=117,slow=5.8,SNR=120						
JAY				S	Sn	00 19 33.1	-1.1
	62nm,0.3s,baz=145,slow=22,SNR=10						
JAY	Jayapura	4.99	296	P	Pn	00 18 37.3	+1.3
JAY				S	Sn	00 19 30.7	-3.5
PMG	Port Moresby	5.03	157	P	Pn	00 18 35.8	-0.7
	89nm,0.3s,baz=14,slow=5.0,SNR=169						
PMG				S	Sn	00 19 31.5	-3.6
	109nm,0.3s,baz=349,slow=19,SNR=5.9						
MMPI	Merauke	6.03	232	P	Pn	00 18 51.3	+1.8
	10nm47μm3μm,0.8s						
RABL	Rabaul	6.99	86	Pn	Pn	00 19 02.8	+0.7
RABL	Rabaul	6.99	86	P	Pn	00 19 05.3	+3.3
SMPI	Sarmi	7.02	293	P	Pn	00 19 02.8	+0.4
	1.0nm2μm153nm,0.6s						
COEN	Coen	9.36	192	Pn	Pn	00 19 34.5	+1.4
COEN	Coen	9.36	192	P	Pn	00 19 34.9	+1.8
	343nm,0.9s						
FAKI	Fak Fak	13.03	278	P	Pn	00 20 19.4	-1.0
	2μm216nm,0.9s						
FAKI	Fak Fak	13.03	278	Pn	Pn	00 20 19.0	-1.4
SAUI	Saumlaki	14.16	256	P	P	00 20 35.8	-0.8
	7μm425nm,1.1s						
SAUI	Saumlaki	14.16	256	P	P	00 20 35.7	-0.8
SIJI	Sorong	14.42	285	P	Pn	00 20 36.7	-1.1
	12nm,0.3s,baz=91,slow=4.9,SNR=21						
SWI	Sorong	14.43	285	P	Pn	00 20 37.8	0.0
	7μm931nm,0.8s						
CTA	Charters Tower	15.28	176	P	Pn	00 20 47.0	-1.3
	0.9nm,0.3s,baz=354,slow=16,SNR=14						
CTAO	Charters Tower	15.28	176	P	P	00 20 49.0	+0.1
CTAO				pmax	pmax		
	comp=Z,92nm,1.3s						
CTAO	Charters Tower	15.28	176		P	00 20 49.0	+0.1
CTAO				IAmb	IAmb	00 20 50.9	
	comp=Z,92nm,1.2s						
MTN	Manton Dam	16.03	239	P	P	00 20 57.2	-0.1
MTN				IAmb	IAmb	00 20 58.5	
	comp=Z,116nm,0.8s						
MSAI	Masohi	16.27	274	P	P	00 20 59.5	-0.4
	comp=Z,732nmcomp=Z,35nm,0.8s						
AAI	Ambon	16.97	273	P	Pn	00 21 09.0	+0.3
	comp=Z,6μmcomp=Z,700nm,0.7s						
PATS	Pohnpei	17.44	49		Pn	00 21 15.0	+0.7
GUMO	Guam	18.22	359	P	P	00 21 21.2	0.0
	comp=Z,4.0nm,0.3s,baz=194,slow=14,SNR=4.7						
GUMO	Guam	18.22	359	P	Pn	00 21 22.4	-1.0
GUMO				pmax	pmax		
	comp=Z,238nm,1.3s						
GUMO	Guam	18.22	359	P	Pn	00 21 22.4	-1.0
WB0	Warramunga Arr	18.26	214	P	P	00 21 22.1	+0.5
WB0				IAmb	IAmb	00 21 27.8	
	comp=Z,57nm,0.9s						
WR0	Warramunga Arr	18.33	214	P	P	00 21 22.1	-0.2
WR0				IAmb	IAmb	00 21 24.1	
	comp=Z,94nm,0.7s						
WRAB	Tennant Creek	18.41	214	*d* *i*P	P	00 21 23.9	+0.6
WRAB				pmax	pmax		
	comp=Z,80nm,0.7s						
WRA	Warramunga Arr	18.43	214	P	P	00 21 24.0	+0.5
	comp=Z,9.8nm,0.3s,baz=38,slow=11,SNR=421						
WRA				S	S	00 24 44.0	-0.2
	baz=35,slow=21,SNR=6.5						
WRA	Warramunga Arr	18.43	214	*i*P	P	00 21 24.0	+0.5
WRA				pmax	pmax		
	comp=Z,61nm,0.5s						
WRA	Warramunga Arr	18.43	214	P	P	00 21 23.1	-0.4
SANI	Sanana	19.34	277	P	P	00 21 33.2	-0.2
	comp=Z,3μmcomp=Z,244nm,1.4s						
KNRA	Kununurra	19.45	235	P	P	00 21 34.6	+0.1
EIDS	Eidsvold	21.27	165	P	P	00 21 54.5	+0.6
SOEI	Soe	21.33	255	P	P	00 21 54.7	0.0
	comp=Z,3μmcomp=Z,316nm,0.7s						
SOEI	Soe	21.33	255	P	P	00 21 54.0	-0.7
AS31	Alice Springs	21.72	209	P	P	00 21 59.3	+0.6
ASAR	Alice Springs	21.73	209	P	P	00 21 59.0	+0.3
	comp=Z,69nm,0.7s,baz=39,slow=7.8,SNR=579						
ASAR				pP	pP	00 22 29.3	-2.0
	comp=Z,32nm,0.9s,baz=33,slow=11,SNR=4.1						
ASAR				S	S	00 25 48.5	+2.1
	comp=Z,22nm,0.9s,baz=26,slow=14,SNR=9.1						
ASAR	Alice Springs	21.73	209	P	P	00 21 59.1	+0.4
KMSI	Cibinong	21.83	283	P	P	00 22 01.3	+1.5
	comp=Z,387nm,0.7s						
BATI	Baumata	22.00	254	P	P	00 22 02.0	+0.5
	comp=Z,655nm,0.9s,baz=134,slow=1.5,SNR=100						

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BATI                            S      S      00 25 57.7 +6.7
       comp=Z,52nm,0.9s,baz=177,slow=21,SNR=6.0
BATI                            LR     LR     00 33 10.1
       comp=Z,271nm,19.0s,baz=142,slow=43
BATI   Baumata          22.00 254 P      P      00 22 01.9 +0.4
       comp=Z,4µmcomp=Z,426nm,0.9s
LUWI   Luwuk            22.68 279 P      P      00 22 08.6 +0.8
       comp=Z,8µmcomp=Z,688nm,1.2s
LUWI   Luwuk            22.68 279 P      P      00 22 08.6 +0.8
GTOI   Gorontalo        22.78 283 P      P      00 22 10.4 +1.7
       comp=Z,3µmcomp=Z,365nm,1.0s
DAV    Davao City (W)   22.82 301 P      P      00 22 09.3 +0.3
       comp=Z,119nm,0.4s,baz=115,slow=2.4,SNR=5.2
DAV    Davao City (W)   22.82 301 P      P      00 22 09.0  0.0
MMRI   Maumere          23.11 259 P      P      00 22 11.2 -0.4
       comp=Z,152nm,0.5s
MMRI   Maumere          23.11 259 P      P      00 22 10.9 -0.7
FITZ   Fitzroy Crossi   23.26 234 P      P      00 22 13.0 +0.1
       comp=Z,100nm,0.6s,baz=51,slow=8.1,SNR=438
FITZ                            S      S      00 26 11.7 +0.5
       comp=Z,16nm,0.9s,baz=146,slow=23,SNR=3.7
EDFI   Ende, Flores     23.66 259 P      P      00 22 15.1 -1.7
       comp=Z,440nmcomp=Z,38nm,0.8s
MRSI   Marisa           23.79 282 P      P      00 22 17.4 -0.5
       comp=Z,2µmcomp=Z,170nm,1.1s
APSI   Ampana           23.80 278 P      P      00 22 18.9 +0.9
       comp=Z,3µmcomp=Z,280nm,1.2s
BSSI   Bau Bau, Buton   24.62 266 P      P      00 22 26.4 +1.0
       comp=Z,554nmcomp=Z,62nm,0.9s
BKSI   Bulukumba        24.97 268 P      P      00 22 28.6  0.0
       comp=Z,1µmcomp=Z,152nm,1.0s
BASI   Baing, Sumba     24.98 256 P      P      00 22 29.3 +0.6
       comp=Z,2µmcomp=Z,246nm,1.0s
BNSI   Bone             25.00 270 P      P      00 22 29.9 +1.1
       comp=Z,2µmcomp=Z,196nm,0.9s
TOLI2  Tolitoli         25.06 283 P      P      00 22 28.7 -0.7
TOLI2                           IAmb   IAmb   00 22 31.0
       comp=Z,58nm,0.7s
KAPI   Kappang          25.34 268 P      P      00 22 32.1 +0.2
       comp=Z,56nm,0.7s,baz=130,slow=5.7,SNR=12
KAPI   Kappang          25.34 268 P      P      00 22 31.6 -0.3
SPSI   Sidrap Palu      25.35 271 P      P      00 22 31.0 -1.0
       comp=Z,52nm,1.6s
TTSI   Tana Toraja      25.36 273 P      P      00 22 32.5 +0.4
       comp=Z,2µmcomp=Z,146nm,0.9s
MPSI   Mapaga           25.75 281 P      P      00 22 35.0 -0.7
       comp=Z,737nmcomp=Z,91nm,0.8s
WBSI   Waikabubak, Su   26.04 258 P      P      00 22 39.3 +1.1
       comp=Z,1µmcomp=Z,99nm,0.7s
DZM    Mont Dzumac      26.84 132 P      P      00 22 45.1 -0.4
       comp=Z,4.1nm,0.8s,baz=92,slow=6.1,SNR=1.8
STKA   Stephens Creek   27.20 187 P      P      00 22 47.8 -0.6
       comp=Z,12nm,0.8s,baz=350,slow=9.4,SNR=12
STKA                            LR     LR     00 35 23.1
       comp=Z,164nm,18.6s,baz=355,slow=40
STKA   Stephens Creek   27.20 187 P      P      00 22 48.7 +0.4
STKA                            pmax   pmax
       comp=Z,5.0nm,1.0s
STKA   Stephens Creek   27.20 187 P      P      00 22 48.7 +0.4
PLAI   Plampang         27.50 260 P      P      00 22 48.9 -2.4
       comp=Z,426nmcomp=Z,40nm,0.6s
TWSI   Taliwang, Sumb   28.37 260 P      P      00 22 58.5 -0.5
       comp=Z,16nm,0.7s
MYLDM  Lahad Datu       28.41 290 P      P      00 23 00.5 +1.1
BKB    Balikpapan       28.45 276 P      P      00 23 00.9 +1.2
KBKI   Kotabaru         28.98 272 P      P      00 23 05.5 +1.1
       comp=Z,14nm,0.4s
BBOO   Buckleboo        29.19 196 P      P      00 23 06.1 +0.1
BBOO                            IAmb   IAmb   00 23 06.4
       comp=Z,27nm,0.8s
PSA00  Pilbara Seismi   29.72 233 P      P      00 23 10.2 -0.6
PSA00                           IAmb   IAmb   00 24 11.6
       comp=Z,68nm,1.3s
PSA00  Pilbara Seismi   29.72 233 P      P      00 23 09.8 -1.1
PSA00                           IAmb   IAmb   00 24 11.5
       comp=Z,28nm,1.2s
BBKI   Banjar Baru      30.29 271 P      P      00 23 15.0 -1.0
       comp=Z,27nm,1.1s
TGY    Tagaytay City    30.48 308 P      P      00 23 18.4 +0.7
       comp=Z,172nm,0.3s,baz=114,slow=20,SNR=6.1
FORT   Forrest          30.50 210 P      P      00 23 17.8 +0.1
CAN    Canberra         30.63 174 P      P      00 23 19.7 +1.0
CAN                             pmax   pmax
       comp=Z,162nm,1.8s
CAN    Canberra         30.63 174 P      P      00 23 19.7 +1.0
KKM    Kota Kinabalu    30.84 290 P      P      00 23 20.5 -0.4
KKM                             IAmb   IAmb   00 23 21.4
       comp=Z,47nm,1.2s
JAGI   Jajag, Banyuwa   31.04 262 P      P      00 23 19.4 -3.1
       comp=Z,36nm,0.8s
JAGI   Jajag, Banyuwa   31.04 262 P      P      00 23 19.6 -3.0
JAGI                            IAmb   IAmb   00 23 20.2
       comp=Z,20nm,0.6s
JCJ    Chichijima       31.79 355 P      P      00 23 28.2 -0.7
       comp=Z,30nm,0.3s,baz=232,slow=19,SNR=9.7
JCJ    Chichijima       31.79 355 P      P      00 23 27.7 -1.2
BWJI   Bawean           32.40 267 P      P      00 23 35.3 +0.8
       comp=Z,147nm,1.1s
TOO    Toolangi         32.67 180 P      P      00 23 37.7 +1.2
TOO                             pmax   pmax
       comp=Z,64nm,1.4s
TOO    Toolangi         32.67 180 P      P      00 23 37.7 +1.2
TOO                             IAmb   IAmb   00 23 38.4
       comp=Z,64nm,1.4s
SBUM   Sibu             33.70 282 P      P      00 23 47.0 +1.3
SBUM   Sibu             33.70 282 P      P      00 23 45.8 +0.1
SBUM                            IAmb   IAmb   00 23 47.6
       comp=Z,57nm,1.0s
PCJI   Pacitan          33.95 262 P      P      00 23 47.1 -0.8
       comp=Z,157nm,0.9s
STKI   Sintang          34.00 277 P      P      00 23 49.2 +0.8
UGM    Wanagama         34.58 263 P      P      00 23 52.9 -0.4
SMRI   Semarang         34.62 265 P      P      00 23 52.7 -1.0
       comp=Z,71nm,1.0s
SMRI   Semarang         34.62 265 P      P      00 23 52.9 -0.9
SMRI                            IAmb   IAmb   00 23 56.0
       comp=Z,58nm,0.9s
GIRL   Giralia          34.80 236 P      P      00 23 55.4 +0.3
KSM    Kuching          35.38 279 P      P      00 24 01.0 +0.8
KSM    Kuching          35.38 279 P      P      00 24 00.1 -0.1
KSM                             IAmb   IAmb   00 24 01.6
       comp=Z,96nm,1.1s
KPJI   Karang Pucung    36.13 264 P      P      00 24 06.6  0.0
       comp=Z,57nm,0.7s
YULB   Yu-li            36.41 321 P      P      00 24 09.8 +1.0
YULB                            IAmb   IAmb   00 24 11.1
       comp=Z,32nm,0.7s
CMJI   Cimerak          36.63 263 P      P      00 24 09.5 -1.3
MORW   Morawa           36.70 226 P      P      00 24 11.0 -0.2
MORW                            IAmb   IAmb   00 24 12.3
       comp=Z,81nm,1.2s
TPUB   Ta-pu            36.76 320 P      P      00 24 11.7 -0.1
NACB   Ninganchiao      36.80 322 P      P      00 24 12.1  0.0
SSLB   Suanglung        36.91 321 P      P      00 24 13.1  0.0
SSLB                            IAmb   IAmb   00 24 18.6
       comp=Z,95nm,1.3s
LEM    Lembang          37.42 265 P      P      00 24 17.1 -0.5
       comp=Z,47nm,0.8s,baz=75,slow=8.8,SNR=7.0
TATO   Taipei           37.47 323 P      P      00 24 18.3 +0.7
CNJI   Cibinong         37.92 264 P      P      00 24 20.8 -0.8
       comp=Z,2µmcomp=Z,194nm,1.2s
JHJ    Hachijo jima 2   38.01 353 LR     LR     00 40 56.3
       comp=Z,971nm,18.0s,baz=263,slow=37
DBJI   Dramaga          38.28 265 P      P      00 24 23.1 -1.6
PPBI   Pangkal Pinang   39.05 272 P      P      00 24 32.0 +0.9
       comp=Z,13µmcomp=Z,99nm,0.9s
QZH    Quanzhou         39.23 320 P      P      00 24 33.3 +0.9
XMIS   Christmas Isla   39.56 259 P      P      00 24 35.4  0.0
JMN    Monobe           39.73 345 P      P      00 24 37.4 +1.0
JMN                             IAmb   IAmb   00 24 38.1
       comp=Z,63nm,0.9s
OUZ    Omahuta          40.10 143 P      P      00 24 41.0 +1.5
KLSI                    40.31 268 P      P      00 24 42.7 +1.2
       comp=Z,14nm,1.0s
KASI   Kota Agung       40.52 267 P      P      00 24 40.7 -2.5
       comp=Z,919nmcomp=Z,142nm,0.9s
MDSI   Maura Dua        40.87 269 P      P      00 24 45.4 -0.6
       comp=Z,576nmcomp=Z,52nm,1.2s
JWT    Wachi            40.87 348 P      P      00 24 45.5 -0.1
JWT                             IAmb   IAmb   00 24 47.4
       comp=Z,194nm,1.9s
LWLI   Liwa             40.97 268 P      P      00 24 46.9 -0.1
       comp=Z,8µmcomp=Z,122nm,0.7s
JHS    Saijyo           41.13 345 P      P      00 24 48.8 +0.9
LHSI   Lahat            41.55 270 P      P      00 24 52.2 +0.6
       comp=Z,107nm,1.0s
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MJAR   Matsushiro Arr   41.59 352 P      P      00 24 50.9 -0.6
       comp=Z,16nm,1.1s,baz=168,slow=9.0,SNR=14
MJAR                            PcP    PcP    00 26 44.9 -0.3
       comp=Z,3.9nm,0.8s,baz=142,slow=1.8,SNR=4.6
MJAR   Matsushiro Arr   41.59 352 P      P      00 24 52.0 +0.4
MJAR                            pmax   pmax
       comp=Z,10.0nm,1.0s
MJAR   Matsushiro Arr   41.59 352 P      P      00 24 52.0 +0.4
MAJO   Matsushiro       41.59 352 P      P      00 24 51.8 +0.2
MAJO                            pmax   pmax
       comp=Z,63nm,1.3s
MAJO   Matsushiro       41.59 352 P      P      00 24 51.8 +0.2
MAJO                            IAmb   IAmb   00 24 53.2
       comp=Z,63nm,1.3s
MAT    Matsushiro       41.59 352 P      P      00 24 50.8 -0.8
MAT                            eS      S      00 30 53.2 -0.4
QIZ    Qiongzhong       42.06 305 P      P      00 24 55.8 +0.2
QIZ                             IAmb   IAmb   00 24 57.3
       comp=Z,58nm,0.9s
MNAI   Manna            42.09 269 P      P      00 24 55.0 -1.0
JSD    Sado             43.05 352 P      P      00 25 04.5 +1.2
JSD                             IAmb   IAmb   00 25 04.8
       comp=Z,154nm,1.7s
UBPT   Khong Chiam      44.08 298 P      P      00 25 12.4 +0.6
TJN    Taejon           44.18 339⇑eP     P      00 25 12.8 +0.5
NJ2    Nanjing          44.35 327 ⇓P     P      00 25 16.0 +2.2
NJ2                             pmax   pmax
       comp=Z,70nm,1.1s
BKNI   Bangkinang       44.38 275 P      P      00 25 14.9 +0.6
       comp=Z,3µmcomp=Z,176nm,1.1s
BKNI   Bangkinang       44.38 275 P      P      00 25 14.2 -0.1
BKZ    Black Stump Fm   44.47 145 P      P      00 25 15.7 +1.0
PDSI   Padang           44.81 273 P      P      00 25 16.8 -1.0
       comp=Z,13nm,0.4s
KSRS   Korea Array      44.96 340 P      P      00 25 18.9 +0.5
       comp=Z,24nm,0.9s,baz=157,slow=9.3,SNR=30
KSRS                            PcP    PcP    00 26 57.3 +0.9
       comp=Z,4.8nm,1.0s,baz=126,slow=3.7,SNR=3.0
KSAR   Wonju Array Be   44.96 340 P      P      00 25 19.0 +0.5
KSAR   Wonju Array Be   44.96 340 P      P      00 25 19.0 +0.5
IPM    Ipoh             45.05 281 P      P      00 25 20.0 +0.3
IPM    Ipoh             45.05 281 P      P      00 25 19.9 +0.2
IPM                             IAmb   IAmb   00 25 20.7
       comp=Z,159nm,1.6s
JTM    Tenmabayashi     45.47 356 P      P      00 25 23.1 +0.6
KULM   Kulim            45.58 282 P      P      00 25 23.7 -0.1
KULM                            IAmb   IAmb   00 25 24.7
       comp=Z,67nm,0.7s
WHN    Wuhan            45.84 322⇓iP     P      00 25 27.5 +2.0
WHN                             pmax   pmax
       comp=Z,260nm,1.1s
MNSI   Mandailing Nat   45.89 276 P      P      00 25 25.8 -0.4
       comp=Z,1µmcomp=Z,52nm,0.8s
SISI   Saibi            46.14 273 P      P      00 25 28.7 +0.5
       comp=Z,40nm,1.4s
PSI    Prapat           46.82 278 P      P      00 25 32.8 -0.8
       comp=Z,49nm,1.1s,baz=156,slow=3.4,SNR=51
SRIT   Nakonsritamara   47.34 286 P      P      00 25 37.5  0.0
SRIT                            IAmb   IAmb   00 25 38.9
       comp=Z,70nm,0.7s
GSI    Gunungsitoli     47.94 276 P      P      00 25 41.0 -1.1
       comp=Z,71nm,0.8s
GSI    Gunungsitoli     47.94 276 P      P      00 25 41.0 -1.1
GSI                             IAmb   IAmb   00 25 42.0
       comp=Z,39nm,0.6s
SLVN   Son La           48.05 304 P      P      00 25 43.9 +1.0
TIA    Tai'an           48.48 329 ⇓P     P      00 25 45.8  0.0
TIA                             pmax   pmax
       comp=Z,46nm,0.9s
GYA    Guiyang          48.50 312 ⇓P     P      00 25 48.0 +1.6
GYA                             pP     pP     00 26 27.0 -0.7
GYA                             pmax   pmax
       comp=Z,40nm,1.0s
TPTI                    48.61 279 P      P      00 25 46.6 -0.6
       comp=Z,186nmcomp=Z,24nm,0.9s
ASAJ   Asahikawa        48.70 358 P      P      00 25 48.2 +0.9
       comp=Z,28nm,1.1s,baz=222,slow=14,SNR=4.2
ENH    Enshi            48.78 318 P      P      00 25 49.0 +0.7
ENH                             IAmb   IAmb   00 25 50.1
       comp=Z,158nm,1.4s
LHMI   Lhok Sumawe      49.18 281 P      P      00 25 52.3 +0.7
       comp=Z,123nm,0.9s
LHMI   Lhok Sumawe      49.18 281 P      P      00 25 51.5 -0.1
LHMI                            IAmb   IAmb   00 26 03.5
       comp=Z,90nm,0.8s
MLSI   Meulaboh, Aceh   49.54 280 P      P      00 25 53.2 -1.1
       comp=Z,3µmcomp=Z,139nm,0.9s
USA0B  Ussuriysk Arra   50.15 348 P      P      00 25 59.1 +0.8
USA0B                           pmax   pmax
       comp=Z,45nm,0.9s
USA0B  Ussuriysk Arra   50.15 348 P      P      00 25 59.1 +0.8
USA0B                           IAmb   IAmb   00 26 00.2
       comp=Z,45nm,0.8s
USRK   Ussuriysk Ar.    50.15 348 P      P      00 25 59.2 +0.8
       comp=Z,36nm,0.8s,baz=169,slow=7.2,SNR=47
USRK   Ussuriysk Ar.    50.15 348 P      P      00 25 59.0 +0.7
KMI    Kunming          50.80 308 ⇓P     P      00 26 05.8 +1.9
KMI                             pmax   pmax
       comp=Z,46nm,1.2s
CM31   Chiang Mai Arr   51.07 298 P      P      00 26 06.8 +1.1
CM31                            IAmb   IAmb   00 26 08.2
       comp=Z,69nm,0.8s
CMAR   Chiang Mai Arr   51.07 298 P      P      00 26 07.2 +1.6
       comp=Z,40nm,0.7s,baz=122,slow=5.9,SNR=148
CMAR                            LR     LR     00 49 06.8
       comp=Z,9.5nm,19.9s,baz=110,slow=37
CMAR   Chiang Mai Arr   51.07 298 P      P      00 26 06.5 +0.8
CHTO   Chiang Mai       51.20 299 P      P      00 26 07.6 +0.9
CHTO                            pmax   pmax
       comp=Z,42nm,0.9s
CHTO   Chiang Mai       51.20 299 P      P      00 26 07.6 +0.9
CHTO                            IAmb   IAmb   00 26 08.8
       comp=Z,42nm,0.9s
CN2    Changchun        51.50 342 eP     P      00 26 09.5 +1.1
CN2                             pmax   pmax
       comp=Z,20nm,1.2s
YSS    Yuzh-Sakhalins   51.52 358⇑eP     P      00 26 08.0 -0.5
YSS                             pmax   pmax
       comp=Z,51nm,1.8s
BJT    Baijiatuau       51.93 332 P      P      00 26 12.0 +0.3
BJT                             pmax   pmax
       comp=Z,32nm,0.8s
BJT    Baijiatuau       51.93 332 P      P      00 26 12.0 +0.3
BJT                             IAmb   IAmb   00 26 13.2
       comp=Z,32nm,0.8s
BJI    Beijing          51.94 332 P      P      00 26 12.3 +0.6
BJI                             pP     pP     00 26 57.5 +4.2
BJI                             pmax   pmax
       comp=Z,49nm,0.9s
TIY    Taiyuan          52.07 327 eP     P      00 26 13.5 +0.6
TIY                             pmax   pmax
       comp=Z,29nm,0.7s
CD2    Chengdu          53.11 315 eP     P      00 26 21.5 +0.9
CD2                             pmax   pmax
       comp=Z,10.0nm,0.5s
HHC    Hu-ho-hao-te     54.83 329 i P    P      00 26 33.5 +0.6
HHC                             pP     pP     00 27 24.0 +8.8
HHC                             sP     sP     00 27 43.5 +7.7
HHC                             S      S      00 33 55.8 -3.7
HHC                             pmax   pmax
       comp=Z,49nm,0.9s
HHC                             pmax   pmax
       comp=Z,150nm,4.9s
KLR    Kul'dur          55.02 349 P      P      00 26 34.3 +0.4
       comp=Z,28nm,0.9s,baz=172,slow=3.7,SNR=48
KLR                             PcP    PcP    00 27 33.3 +0.1
       comp=Z,7.6nm,0.9s,baz=135,slow=2.9,SNR=4.3
TYV    Tymovskoe        55.44 358 eP     P      00 26 38.4 +1.5
TYV                             pmax   pmax
       comp=Z,29nm,1.1s
TYV                             pmax   pmax
       comp=Z,300nm,4.7s
LZH    Lanzhou          56.09 320 ⇓P     P      00 26 43.8 +1.7
LZH                             pmax   pmax
       comp=Z,130nm,1.3s
HIA    Hailar           58.17 341 P      P      00 26 56.8 +0.6
HIA                             pmax   pmax
       comp=Z,37nm,1.2s
HIA    Hailar           58.17 341 P      P      00 26 56.8 +0.6
HIA                             IAmb   IAmb   00 26 57.9
       comp=Z,37nm,1.2s
PEA0B  Petropavlovsk-   58.60   9 P      P      00 27 00.2 +1.1
PEA0B                           pmax   pmax
       comp=Z,27nm,1.0s
PEA0B  Petropavlovsk-   58.60   9 P      P      00 27 00.2 +1.1
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PEA0B                           IAmb   IAmb   00 27 01.9
       comp=Z,27nm,1.0s
PETK   Petropavlovsk-   58.60   9 P      P      00 26 59.2 +0.1
       comp=Z,11nm,0.8s,baz=180,slow=8.9,SNR=12
PETK   Petropavlovsk-   58.60   9 P      P      00 27 00.1 +0.9
PETK   Petropavlovsk-   58.60   9 P      P      00 27 00.1 +0.9
ZEA    Zeya             60.19 348 eP     P      00 27 10.8 +0.8
ZEA                             pmax   pmax
       comp=N,30nm,1.0s
ZEA                             pmax   pmax
       comp=Z,40nm,1.0s
GTA    Gaotai           60.63 321 ⇓P     P      00 27 14.8 +1.4
GTA                             pP     PcP    00 27 56.0 +0.2
GTA                             pmax   pmax
       comp=Z,58nm,1.0s
GTA                             pmax   pmax
       comp=Z,180nm,7.6s
LSA    Lhasa            62.05 307 P      P      00 27 24.8 +1.3
LSA                             pmax   pmax
       comp=Z,160nm,1.1s
LSA    Lhasa            62.05 307 P      P      00 27 24.2 +0.7
LSA                             pmax   pmax
       comp=Z,31nm,0.8s
LSA    Lhasa            62.05 307 P      P      00 27 24.2 +0.7
LSA                             IAmb   IAmb   00 27 26.1
       comp=Z,32nm,0.8s
ULN    Ulaanbaatar      62.16 332d iP    P      00 27 24.6 +1.1
ULN                             pmax   pmax
       comp=Z,55nm,1.7s
ULN    Ulaanbaatar      62.16 332 P      P      00 27 24.6 +1.1
SONM   Songino Array    62.44 332 P      P      00 27 26.4 +1.0
       comp=Z,9.0nm,0.7s,baz=163,slow=5.4,SNR=67
SONM                            PcP    PcP    00 28 03.0  0.0
       comp=Z,3.3nm,0.7s,baz=151,slow=4.2,SNR=5.9
SONM   Songino Array    62.44 332 P      P      00 27 26.1 +0.7
SONM                            IAmb   IAmb   00 27 27.5
       comp=Z,66nm,1.6s
TAPN   Taplejung        63.95 303 eP     P      00 27 36.8 +0.9
       comp=Z,167nm,1.2s
ODAN   Odare            64.05 303 eP     P      00 27 37.3 +0.8
       comp=Z,165nm,1.0s
MA2    Magadan          64.28   3 P      P      00 27 38.2 +1.2
       comp=Z,4.3nm,0.3s,baz=189,slow=7.8,SNR=5.3
MA2    Magadan          64.28   3 P      P      00 27 38.2 +1.2
MA2                             pmax   pmax
       comp=Z,136nm,1.7s
MA2    Magadan          64.28   3 P      P      00 27 38.2 +1.2
RAMN   Ramite           64.74 303 eP     P      00 27 41.7 +0.7
       comp=Z,22nm,0.5s
JIRN   Jiri             65.33 303 eP     P      00 27 45.7 +0.8
       comp=Z,53nm,0.7s
PALK   Pallekele        65.44 280 P      P      00 27 45.3 -0.2
PALK                            pmax   pmax
       comp=Z,22nm,1.0s
PALK   Pallekele        65.44 280 P      P      00 27 45.3 -0.2
PALK                            IAmb   IAmb   00 27 46.5
       comp=Z,22nm,0.9s
GUN    Gumba            65.67 303 eP     P      00 27 47.8 +0.7
       comp=Z,153nm,0.7s
ZAK    Zakamensk        65.69 332 eP     P      00 27 46.4  0.0
ZAK                             pmax   pmax
       comp=Z,83nm,1.1s
PKI    Pulchoki         65.95 303 eP     P      00 27 49.2 +0.3
       comp=Z,74nm,1.0s
PKIN   Phulchoki        65.96 303 eP     P      00 27 48.9  0.0
       comp=Z,77nm,1.0s
CASY   Casey            65.99 195 P      P      00 27 47.9 -0.1
CASY                            IAmb   IAmb   00 28 32.5
       comp=Z,126nm,1.9s
KKN    Kakani           66.13 303 eP     P      00 27 50.5 +0.6
       comp=Z,135nm,0.8s
DMN    Daman            66.22 303 eP     P      00 27 51.2 +0.7
       comp=Z,221nm,1.0s
TLY    Talaya           66.42 333deP     P      00 27 51.4 +0.5
TLY                             pmax   pmax
       comp=Z,35nm,1.2s
TLY    Talaya           66.42 333 P      P      00 27 51.5 +0.6
TLY                             IAmb   IAmb   00 27 53.2
       comp=Z,35nm,1.2s
GKN    Gorkha           66.74 303 eP     P      00 27 54.1 +0.5
       comp=Z,112nm,0.7s
BOD    Bodaibo          67.24 343 eP     P      00 27 56.2 +0.2
BOD                             pmax   pmax
       comp=Z,28nm,1.1s
KOLN   Koldanda         67.53 303 eP     P      00 27 59.0 +0.3
       comp=Z,131nm,0.8s
DANN   Dangsing         67.58 303 eP     P      00 27 59.2 +0.1
       comp=Z,96nm,0.8s
MOY    Mondy            67.62 332 eP     P      00 27 59.7 +1.0
MOY                             pmax   pmax
       comp=Z,67nm,1.5s
YAK    Yakutsk          67.65 352 P      P      00 27 58.0 -0.5
       comp=Z,7.0nm,0.4s,baz=190,slow=2.5,SNR=5.8
YAK    Yakutsk          67.65 352 eP     P      00 27 58.8 +0.4
YAK                             pmax   pmax
       comp=Z,21nm,0.9s
YAK                             pmax   pmax
       comp=N,14nm,1.1s
YAK    Yakutsk          67.65 352 P      P      00 27 59.0 +0.6
YAK                             IAmb   IAmb   00 28 02.9
       comp=Z,25nm,0.8s
SEY    Seymchan         67.72   4 P      P      00 27 59.3 +0.5
       comp=Z,3.0nm,0.3s,baz=179,slow=6.2,SNR=14
PYUN   Piuthan          68.15 303 eP     P      00 28 02.8 +0.2
       comp=Z,127nm,0.8s
HYB    Hyderabad        69.33 290 i P    P      00 28 09.0 -0.8
HYB                            epP     pP     00 28 56.0 +1.9
WMQ    Urumqi           70.67 320 P      P      00 28 19.0 +1.5
WMQ                             PcP    PcP    00 28 38.0 +0.7
WMQ                             sP     sP     00 29 27.5 +5.5
WMQ                             S      S      00 37 13.0 -3.5
WMQ                             pmax   pmax
       comp=Z,59nm,0.9s
WMQ                             pmax   pmax
       comp=Z,220nm,6.1s
AKUT   Akutan           71.47  28 P      P      00 28 22.7 +0.7
VNDA   Vanda            73.26 176 P      P      00 28 32.3  0.0
       comp=Z,3.8nm,0.7s,baz=321,slow=6.2,SNR=24
VNDA   Vanda            73.26 176 P      P      00 28 32.2  0.0
DGZ    Jazzator, Alta   73.57 325d iP    P      00 28 35.2 +0.5
DGZ                             pmax   pmax
       comp=Z,34nm,1.0s
BILL   Bilibino         74.12   8d iP    P      00 28 38.6 +1.2
BILL                            i             00 28 50.0
BILL                            e             00 31 24.8
BILL                            pmax   pmax
       comp=Z,21nm,1.1s
BILL   Bilibino         74.12   8 P      P      00 28 38.3 +0.9
MK31   Makanchi Array   75.39 321 P      P      00 28 45.6 +0.5
MK31                            pmax   pmax
       comp=Z,27nm,1.0s
MK31   Makanchi Array   75.39 321 P      P      00 28 45.6 +0.5
MK31                            IAmb   IAmb   00 28 46.8
       comp=Z,27nm,1.0s
MKAR   Makanchi Array   75.39 321 P      P      00 28 45.7 +0.6
       comp=Z,27nm,0.8s,baz=106,slow=6.7,SNR=116
MKAR   Makanchi Array   75.39 321 P      P      00 28 45.5 +0.3
MAKZ   Makanchi         75.59 321 P      P      00 28 46.8 +0.6
MAKZ                            pmax   pmax
       comp=Z,74nm,1.3s
MAKZ   Makanchi         75.59 321 P      P      00 28 46.8 +0.6
MAKZ                            IAmb   IAmb   00 28 47.9
       comp=Z,74nm,1.3s
PDGK   Podgornoye       75.93 317 P      P      00 28 47.7 -0.7
UZB    Uzynbulak        76.19 316 eP     P      00 28 50.5 +0.6
PRZ    Przheval'sk      76.39 316 P      P      00 28 52.5 +1.4
PRZ                             pmax   pmax
       comp=Z,86nm,1.0s
PRZ    Przheval'sk      76.39 316 P      P      00 28 52.5 +1.4
TARG   Taragay, Kyrgy   76.56 315 P      P      00 28 52.9 +0.6
ZAA0   Zalesovo Array   77.00 328 P      P      00 28 53.4 -0.6
ZAA0                            IAmb   IAmb   00 28 54.5
       comp=Z,31nm,0.8s
ZALV   Zalesovo Beam    77.00 328 P      P      00 28 53.4 -0.5
       comp=Z,26nm,0.7s,baz=109,slow=5.3,SNR=141
ZALV                            pP     pP     00 29 36.1 -3.1
       comp=Z,2.3nm,0.6s,baz=118,slow=6.1,SNR=1.5
ZALV   Zalesovo Beam    77.00 328 P      P      00 28 53.3 -0.7
TIXI   Tiksi            77.00 355 P      P      00 28 52.5 -1.1
       comp=Z,7.4nm,0.7s,baz=150,slow=1.9,SNR=12
TIXI   Tiksi            77.00 355 P      P      00 28 52.8 -0.8
TIXI                            pmax   pmax
       comp=Z,8.0nm,0.8s
TIXI   Tiksi            77.00 355 P      P      00 28 52.8 -0.8
KDJ    Kajisay          77.13 315 P      P      00 28 55.9 +0.7
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KDJ				pmax	pmax		
	comp=Z,55nm,0.9s						
KDJ	Kajisay	77.13	315	P	P	00 28 55.9	+0.7
KDJ				IAmb	IAmb	00 28 57.3	
	comp=Z,55nm,0.9s						
KSH	Kashi	77.20	312	P	P	00 28 57.5	+1.9
KSH				sP	sP	00 30 03.5	+2.8
KSH				ScS	SKSac	00 38 52.0	+1.1
KSH				pmax	pmax		
	comp=Z,27nm,0.9s						
ARXS	Arharly	77.36	317	eP	P	00 28 56.5	+0.2
MDOK	Medeo	77.55	316	P	P	00 28 57.6	+0.1
NIL	Nilore	77.73	306	P	P	00 28 59.0	+0.4
NIL				pmax	pmax		
	comp=Z,107nm,0.7s						
NIL	Nilore	77.73	306	P	P	00 28 59.0	+0.4
ULHL	Ulahol	77.83	315	P	P	00 29 00.2	+1.0
	SNR=8.0						
BOOM	Boomskoye usch	78.12	315	P	P	00 29 01.6	+0.9
BOOM				pmax	pmax		
	comp=Z,51nm,0.7s						
BOOM	Boomskoye usch	78.12	315	P	P	00 29 01.6	+0.9
BOOM				IAmb	IAmb	00 29 02.5	
	comp=Z,51nm,0.7s						
TKM2	Tokmak 2	78.49	315	P	P	00 29 03.4	+0.7
	SNR=35						
TKM2	Tokmak 2	78.49	315	i P	P	00 29 02.5	-0.2
TKM2				pmax	pmax		
	comp=Z,31nm,0.8s						
KBK	Karagaybulak	78.86	315	P	P	00 29 05.5	+0.7
	SNR=26						
UCH	Uchtor	79.05	314	P	P	00 29 07.1	+1.0
	SNR=54						
OHAK	Old Harbor	79.08	29	P	P	00 29 06.3	+1.0
CHMS	Chumysh	79.10	315	P	P	00 29 06.4	+0.5
	SNR=26						
KURK	Kurchatov	79.13	324	P	P	00 29 06.1	+0.3
KURK				pmax	pmax		
	comp=Z,40nm,0.9s						
KURK	Kurchatov	79.13	324	P	P	00 29 06.1	+0.3
KURK				IAmb	IAmb	00 29 07.1	
	comp=Z,40nm,0.9s						
FRU1	Bishkek	79.13	315	P	P	00 29 06.5	+0.4
FRU1				pmax	pmax		
	comp=Z,29nm,1.1s						
FRU1	Bishkek	79.13	315	P	P	00 29 06.5	+0.4
FRU1				IAmb	IAmb	00 29 07.8	
	comp=Z,29nm,1.1s						
KURBB	Kurchatov Arra	79.15	323	P	P	00 29 05.9	+0.1
	comp=Z,21nm,0.9s,baz=114,slow=4.5,SNR=88						
KURBB	Kurchatov Arra	79.15	323	P	P	00 29 04.8	-1.1
AAK	Ala-Archa	79.18	315	P	P	00 29 06.9	+0.5
	comp=Z,16nm,0.8s,baz=133,slow=5.2,SNR=59						
AAK	Ala-Archa	79.18	315	P	P	00 29 07.2	+0.7
	SNR=24						
AAK	Ala-Archa	79.18	315	P	P	00 29 06.8	+0.3
USP	Ospenovka	79.36	315	P	P	00 29 07.7	+0.4
	SNR=47						
AML	Almayashu	79.61	314	P	P	00 29 09.9	+0.9
	SNR=60						
EKS2	Erkin-Say	79.69	315	P	P	00 29 10.3	+1.1
	SNR=25						
SVW2	Sparrevohn	79.88	25	P	P	00 29 11.1	+1.5
BTLS	Baital	80.19	317	eP	P	00 29 11.9	+0.3
DRK	Karamyk	80.30	311	P	P	00 29 13.0	+0.3
DRK				IAmb	IAmb	00 29 14.5	
	comp=Z,24nm,0.9s						
TTA	Tatalina	80.62	23	P	P	00 29 14.7	+1.1
	baz=240,SNR=5.2						
L19K	White Mountain	80.71	24	P	P	00 29 15.5	+1.4
	baz=241,SNR=6.9						
L19K	White Mountain	80.71	24	P	P	00 29 15.1	+1.0
M19K	Big River Lodg	80.77	25	P	P	00 29 15.7	+1.4
	baz=241						
RDOG	Red Dog Mine	81.09	17	P	P	00 29 23.6	+7.7
	baz=233						
BTK	Batken	81.17	312	P	P	00 29 17.1	0.0
BTK				pmax	pmax		
	comp=Z,21nm,1.1s						
BTK	Batken	81.17	312	P	P	00 29 17.1	0.0
GCSA	Galena City Sc	81.22	22	P	P	00 29 17.7	+1.1
	baz=239						
L20K	Farewell, AK	81.26	24	P	P	00 29 18.0	+1.1
	baz=242,SNR=7.5						
GAR	Garm	81.30	310	P	P	00 29 17.7	-0.1
GAR				IAmb	IAmb	00 29 19.0	
	comp=Z,57nm,1.1s						
KBL	Kabul	81.33	306	P	P	00 29 17.8	-0.4
KBL				pmax	pmax		
	comp=Z,18nm,0.8s						
KBL	Kabul	81.33	306	P	P	00 29 17.8	-0.4
K20K	Telida	81.60	23	P	P	00 29 19.8	+1.2
	baz=242						
K20K	Telida	81.60	23	P	P	00 29 19.6	+0.9
J20K	Nowinta River	81.96	23	P	P	00 29 21.8	+1.2
	baz=241,SNR=12						
J20K	Nowinta River	81.96	23	P	P	00 29 21.6	+1.1
CHGR	Chuyangaron	82.11	310	P	P	00 29 22.0	0.0
KKAR	Karatay Array	82.13	315	P	P	00 29 22.0	+0.1
KKAR	Karatay Array	82.13	315	P	P	00 29 22.0	+0.1
PPLA	Purkeypile	82.14	24	P	P	00 29 21.7	0.0
PPLA				IAmb	IAmb	00 31 51.5	
	comp=Z,68nm,1.8s						
OTUK	Ortayu	82.22	320	P	P	00 29 21.8	-0.5
IUG	Iuzhnay	82.24	313	eP	P	00 29 23.0	+0.3
RC01	Rabbit Creek A	82.41	26	P	P	00 29 23.0	+0.1
RC01				IAmb	IAmb	00 31 15.0	
	comp=Z,50nm,1.3s						
CAST	Castle Rocks	82.42	24	P	P	00 29 22.7	-0.3
	baz=243,SNR=7.1						
BRZS	Berezniki	82.49	322	eP	P	00 29 24.0	+0.3
CHUM	Lake Minchumin	82.54	23	P	P	00 29 24.4	+0.8
	baz=243,SNR=20						
BRLS	Borolday	82.59	314	eP	P	00 29 24.4	+0.1
TAS	Tashkent	82.59	313	P	P	00 29 24.9	+0.6
TAS				pmax	pmax		
	comp=Z,54nm,0.7s						
TAS	Tashkent	82.59	313	P	P	00 29 24.9	+0.6
MAW	Mawson	82.70	203	P	P	00 29 24.0	-0.3
	comp=Z,3.8nm,0.6s,baz=98,slow=8.0,SNR=9.0						
MAW				LR	LR	01 05 21.6	
	comp=Z,49nm,18.6s,baz=80,slow=35						
MAW	Mawson	82.70	203	P	P	00 29 24.3	0.0
MAW				pmax	pmax		
	comp=Z,6.0nm,1.5s						
MAW	Mawson	82.70	203	P	P	00 29 24.3	0.0
CUT	Chulitna	82.72	25	P	P	00 29 24.0	-0.5
	baz=245						
PMR	Palmer	82.88	26	P	P	00 29 25.5	+0.2
	baz=246						
IMAR	Indian Mountai	82.98	21	P	P	00 29 26.4	+0.6
KNK	Knik Glacier	83.10	26	P	P	00 29 26.9	+0.4
	baz=247						
BPAW	Bear Paw Mtn.	83.16	23	P	P	00 29 26.7	0.0
	baz=244,SNR=7.0						
BPAW	Bear Paw Mtn.	83.16	23	P	P	00 29 26.6	-0.1
TRF	Thorofare Moun	83.16	24	P	P	00 29 26.9	-0.1
	baz=245						
H21K	Melozitna Rive	83.17	22	P	P	00 29 27.4	+0.6
	baz=242						
H21K	Melozitna Rive	83.17	22	P	P	00 29 27.3	+0.6
I21K	Tanana	83.25	22	P	P	00 29 28.3	+1.1
	baz=243,SNR=12						
I21K	Tanana	83.25	22	P	P	00 29 28.6	+1.4
SML	Sawmill	83.31	26	P	P	00 29 27.7	0.0
	baz=247						
SML	Sawmill	83.31	26	P	P	00 29 27.7	0.0
SML				IAmb	IAmb	00 29 28.8	
	comp=Z,35nm,1.0s						
NRIK	Noril'sk	83.54	342	P	P	00 29 28.4	-0.2
	comp=Z,77nm,0.8s,baz=120,slow=4.6,SNR=165						
NRIK	Noril'sk	83.54	342	P	P	00 29 28.9	+0.3
NRIK				pmax	pmax		
	comp=Z,90nm,0.9s						
NRIK	Noril'sk	83.54	342	P	P	00 29 28.9	+0.3
MLY	Manley	83.66	23	P	P	00 29 29.7	+0.3
	baz=244						
MLY	Manley	83.66	23	P	P	00 29 29.6	+0.3
MLY				IAmb	IAmb	00 29 30.7	
	comp=Z,29nm,0.9s						
RND	Reindeer	83.73	24	P	P	00 29 29.4	-0.4
RND				pmax	pmax		
	comp=Z,41nm,0.9s						
RND	Reindeer	83.73	24	P	P	00 29 29.4	-0.4
RND				IAmb	IAmb	00 29 30.2	
	comp=Z,41nm,0.9s						
SCM	Sheep Creek Mo	83.76	26	P	P	00 29 30.0	0.0
	baz=248						
MCK	McKinley	83.83	24	P	P	00 29 29.7	-0.5
	baz=246,SNR=16						
WAT6	Susitna Watana	83.87	25	P	P	00 29 30.5	-0.2
	baz=247						
NEA2	Nenana	84.12	23	P	P	00 29 31.5	-0.2
	baz=246,SNR=11						
DIV	Divide	84.20	27	P	P	00 29 33.0	+0.8
DIV				IAmb	IAmb	00 29 33.6	
	comp=Z,26nm,0.9s						
DHY	Denali Highway	84.22	25	P	P	00 29 32.8	+0.4
	baz=248						
I23K	Minto, Yukon-K	84.24	23	P	P	00 29 32.3	+0.1
	baz=246						
I23K	Minto, Yukon-K	84.24	23	P	P	00 29 32.3	+0.1
KLU	Klutina	84.26	27	P	P	00 29 32.7	+0.2
	baz=249						
M24K	Tolsona, Glenn	84.37	26	P	P	00 29 33.8	+0.8
	baz=249						
WRH	Wood River Hil	84.46	24	P	P	00 29 32.7	-0.6
WRH				IAmb	IAmb	00 29 33.6	
	comp=Z,29nm,0.9s						
BMRM	Bremner River	84.68	27	P	P	00 29 34.9	+0.3
	baz=250						
BVAR	Borovoye Array	84.70	324	P	P	00 29 34.7	-0.1
	comp=Z,22nm,0.6s,baz=185,slow=8.7,SNR=120						
TCOL	CIGO, UAF Yank	84.71	23	P	P	00 29 34.1	-0.4
	baz=247						
COLA	College	84.72	23	P	P	00 29 34.1	-0.5
COLA				pmax	pmax		
	comp=Z,30nm,0.8s						
COLA	College	84.72	23	P	P	00 29 34.2	-0.3
	baz=247						
COLA	College	84.72	23	P	P	00 29 34.1	-0.5
COLA				IAmb	IAmb	00 29 35.2	
	comp=Z,30nm,0.8s						
A21K	Barrow	84.76	16	P	P	00 29 35.8	+1.1
	baz=238						
BRVK	Borovoye	84.77	324	P	P	00 29 35.2	+0.1
BRVK				pmax	pmax		
	comp=Z,19nm,0.8s						
BRVK	Borovoye	84.77	324	P	P	00 29 35.2	+0.1
BRVK				IAmb	IAmb	00 29 36.6	
	comp=Z,19nm,0.8s						
COLD	Coldfoot	84.81	21	P	P	00 29 36.0	+1.0
	baz=245						
COLD	Coldfoot	84.81	21	P	P	00 29 35.8	+0.8
HDA	Harding Lake	84.90	24	P	P	00 29 34.7	-0.8
	baz=248,SNR=9.2						
POKR	Poker Plat Res	84.97	23	P	P	00 29 35.2	-0.7
	baz=247,SNR=5.6						
PAX	Paxson	84.98	25	P	P	00 29 36.6	+0.5
	baz=249						
IL31		85.06	23	P	P	00 29 35.2	-1.0
IL31				IAmb	IAmb	00 29 36.5	
	comp=Z,26nm,0.8s						
ILAR	Eielson Array	85.06	23	P	P	00 29 34.4	-1.9
	comp=Z,24nm,0.7s,baz=251,slow=4.9,SNR=202						
ILAR				pP	pP	00 30 21.6	-0.2
	comp=Z,2.5nm,0.8s,baz=254,slow=4.0,SNR=1.7						
ILAR	Eielson Array	85.06	23	P	P	00 29 35.3	-1.1
H24K	Noodor Dome	85.08	22	P	P	00 29 36.5	0.0
	baz=247						
QSPA	South Pole Qui	85.21	180	P	P	00 29 36.6	-0.6
CRQM	Cirque	85.29	28	P	P	00 29 38.5	+0.7
CRQM				IAmb	IAmb	00 32 29.3	
	comp=Z,37nm,1.1s						
CRQE	Cirque	85.31	28	P	P	00 29 38.5	+0.7
	baz=252						
RIDG	Independent Ri	85.52	25	P	P	00 29 38.7	0.0
	baz=250,SNR=7.3						
RIDG	Independent Ri	85.52	25	P	P	00 29 38.7	0.0
RIDG				IAmb	IAmb	00 29 39.7	
	comp=Z,26nm,0.9s						
J25K	Salcha River,	85.61	24	P	P	00 29 38.8	-0.3
	baz=249,SNR=27						
TOLK	Toolik Lake Re	85.62	19	P	P	00 29 40.1	+1.0
	baz=245						
TOLK	Toolik Lake Re	85.62	19	P	P	00 29 40.2	+1.1
MENT	Mentasta	85.73	26	P	P	00 29 40.2	+0.5
DOT	Dot Lake	85.81	25	P	P	00 29 40.5	+0.3
DOT				IAmb	IAmb	00 29 41.3	
	comp=Z,29nm,0.9s						
L26K	Log Cabin Wild	85.92	26	P	P	00 29 41.2	+0.6
	baz=251,SNR=7.5						
SCRK	Sand Creek	85.96	25	P	P	00 29 40.9	0.0
	baz=251,SNR=5.9						
SCRK	Sand Creek	85.96	25	P	P	00 29 41.2	+0.3
BARN	Barnard Glacie	86.07	28	P	P	00 29 42.5	+0.8
BARN				IAmb	IAmb	00 29 43.4	
	comp=Z,21nm,0.8s						
CTG	Chitna Glacier	86.19	28	P	P	00 29 43.1	+0.9
	baz=253						
J26L	Joseph Creek	86.30	24	P	P	00 29 43.0	+0.4
	baz=251,SNR=12						
M27K	Edge Creek, AK	86.35	27	P	P	00 29 43.6	+0.7
	baz=253,SNR=9.5						
PINM	Pinnacle	86.46	29	P	P	00 29 44.2	+0.8
	baz=254						
L27K	Beaver Creek,	86.59	26	P	P	00 29 44.7	+0.7
	baz=253,SNR=11						
BCAR	Beaver Creek A	86.61	26	P	P	00 29 44.5	+0.5
PNL	Peninsula	86.77	29	P	P	00 29 45.8	+0.9
	baz=255						
BVCY	Beaver Creek	86.82	27	P	P	00 29 46.1	+1.0
	baz=254						
YUK3	Moose Creek	86.83	27	P	P	00 29 46.1	+0.7
	baz=254,SNR=8.9						
HRA	Herat	86.84	305	P	P	00 29 45.6	-0.4
HRA				IAmb	IAmb	00 29 47.0	
	comp=Z,41nm,1.1s						
BMAR	Burnt Mountain	86.89	21	P	P	00 29 46.4	+1.1
YUK4	Talbot Arm	87.55	28	P	P	00 29 50.3	+1.5
	baz=256,SNR=8.5						
DAWY	Dawson	87.92	25	P	P	00 29 51.0	+0.7
	baz=255,SNR=20						
DAWY	Dawson	87.92	25	P	P	00 29 50.9	+0.7
DAWY				IAmb	IAmb	00 29 52.0	
	comp=Z,24nm,0.9s						
HYT	Haines Junctio	87.96	29	P	P	00 29 51.7	+1.1
	baz=257,SNR=8.0						
WSAR	Wadi Sarin	88.69	293	P	P	00 29 53.8	-1.0
	comp=Z,12nm,0.8s,baz=122,slow=7.4,SNR=5.6						
M30M	Minto, Yukon	88.69	27	P	P	00 29 54.6	+0.7
	baz=257						
N31M	Braeburn, Yuko	88.92	28	P	P	00 29 55.9	+0.9
	baz=258						
WHY	Whitehorse	89.19	29	P	P	00 29 57.0	+0.6
	baz=259						
FARO	Faro, Yukon	90.20	28	P	P	00 30 01.2	+0.3
	baz=260						
AB31	Akbulak array	90.45	319	i P	P	00 30 01.0	-1.4
ABKAR	Akbulak array	90.45	319	P	P	00 30 01.4	-0.9
ABKAR				IAmb	IAmb	00 30 02.3	
	comp=Z,22nm,0.8s						
ABKAR	Akbulak array	90.45	319	P	P	00 30 01.4	-0.9
GEYT	Alibeck	90.57	308	P	P	00 30 02.0	-1.2
	comp=Z,6.9nm,0.7s,baz=134,slow=6.4,SNR=9.0						
GEYT	Alibeck	90.57	308	P	P	00 30 02.9	-0.4
SVE	Sverdlovsk	90.95	327	eP	P	00 30 03.1	-1.4
SVE				pmax	pmax		
	comp=Z,11nm,0.9s						
INK	Inuvik	91.16	22	P	P	00 30 04.9	-0.3
INK				pmax	pmax		
	comp=Z,15nm,1.1s						
INK	Inuvik	91.16	22	P	P	00 30 05.0	-0.2
	baz=260						
INK	Inuvik	91.16	22	P	P	00 30 04.9	-0.3
INK				IAmb	IAmb	00 30 05.9	
	comp=Z,15nm,1.1s						
MMPY	Sheldon Lake,	91.22	27	P	P	00 30 06.0	+0.3
	baz=262						
AKTO	Aktyubinsk	91.82	320	P	P	00 30 07.6	-1.1
	comp=Z,6.9nm,0.9s,baz=99,slow=5.2,SNR=16						
ARU	Arti	92.05	326	P	P	00 30 08.0	-1.7
	comp=Z,1.2nm,0.3s,baz=90,slow=2.2,SNR=5.6						
ARU	Arti	92.05	326	d iP	P	00 30 07.9	-1.7
ARU				*PP	pP	00 30 55.2	-1.0
ARU						00 33 51.0	
ARU				S	SKSac	00 40 21.2	-3.5
ARU				pmax	pmax		
	comp=Z,21nm,1.1s						
ARU	Arti	92.05	326	P	P	00 30 07.9	-1.7
ARU				IAmb	IAmb	00 30 09.0	
	comp=Z,20nm,1.1s						
A36M	Sachs Harbour	94.35	18	P	P	00 30 19.8	0.0
KIRV	Kirov	97.04	328	⇑ eP	P	00 30 30.8	-1.5
NVAR	Mina Array Bea	98.03	52	P	P	00 30 36.4	-1.2
	comp=Z,1.1nm,0.9s,baz=262,slow=5.3,SNR=7.0						
YKA	Yellowknife Ar	98.91	28	P	P	00 30 39.2	-1.4
	comp=Z,3.0nm,1.1s,baz=277,slow=3.7,SNR=6.7						
YKA	Yellowknife Ar	98.91	28	i P	P	00 30 40.0	-0.6
YKA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KLMR	Klimovskoe	101.74	331	eP	Pdif	00 30 50.6	-2.7
KLMR				e		00 35 03.2	
KLMR				pmax	pmax		
	comp=Z,14nm,1.0s						
KLMR	Klimovskoe	101.74	331	ePdif	Pdif	00 30 50.6	-2.7
KLMR				AMP		00 30 52.7	
	comp=Z,14nm,1.0s						
KLMR				ePP	PP	00 35 03.2	-2.8
KBZ	Khabaz	102.14	314	PP	PP	00 35 10.0	+0.4
	comp=Z,3.6nm,0.9s,baz=83,slow=4.8,SNR=7.1						
PDAR	Pinedale Array	104.41	47	Pdiff	Pdif	00 31 05.1	-0.8
	comp=Z,0.6nm,0.8s,baz=262,slow=1.0,SNR=4.4						
ARCES	ARCESS Array B	104.51	342	Pdiff	Pdif	00 31 03.6	-1.8
	comp=Z,5.6nm,0.8s,baz=12,slow=6.2,SNR=4.7						
FINES	FINESS Array B	107.76	334	Pdiff	Pdif	00 31 16.9	-3.2
	comp=Z,2.0nm,0.7s,baz=79,slow=9.9,SNR=4.6						
AKASG	Malin Array Be	109.93	323	PP	PP	00 36 06.8	+0.3
	comp=Z,1.6nm,0.8s,baz=63,slow=6.5,SNR=6.4						
CLL	Collm	118.95	328	ePKPdf	PKPdf	00 35 48.0	-0.3
CLL				esPKPdf	sPKPdf	00 36 55.0	-1.2
CLL				ePP	PP	00 37 14.0	+4.3
CLL	Collm	118.95	328	ePKIKP	PKPdf	00 35 46.0	-2.3
GERES	GERESS Array B	119.86	325	PKP	PKPdf	00 35 48.3	-2.0
	comp=Z,0.9nm,0.7s,baz=54,slow=2.3,SNR=8.5						
GERES	GERESS Array B	119.86	325	PKIKP	PKPdf	00 35 49.3	-1.0
GERES	GERESS Array B	119.86	325		PKPdf	00 35 49.3	-1.0
SCHQ	Schefferville	123.78	22	PKP	PKPdf	00 35 56.6	-0.9
	comp=Z,3.5nm,0.8s,baz=313,slow=0.8,SNR=2.4						
PLCA	Paso Flores	124.15	148	PKP	PKPdf	00 35 57.8	-1.0
	comp=Z,2.5nm,1.0s,baz=240,slow=8.1,SNR=4.3						
TORD	Torodi Ar. Bea	143.02	286	PKhKP	PKPpre	00 36 30.9	
	comp=Z,6.7nm,0.7s,baz=70,slow=3.4,SNR=41						
TORD				PP	PP	00 39 48.5	+2.1
	comp=Z,0.8nm,1.0s,baz=55,slow=5.6,SNR=3.6						
SDV	Santo Domingo	144.22	81	PKP	PKPab	00 36 34.0	-1.2
	comp=Z,12nm,0.7s,baz=275,slow=4.7,SNR=19						
SJG	San Juan	146.62	64	PKPbc	PKPdf	00 36 39.4	-1.3
	comp=Z,8.9nm,0.6s,baz=292,slow=5.4,SNR=6.2						
PDPR	Patillas Dam,	146.77	64		PKPdf	00 36 41.3	+0.4
SIV	San Ignacio	146.84	129	PKPbc	PKPbc	00 36 42.2	-1.0
	comp=Z,5.9nm,0.8s,baz=230,slow=3.1,SNR=28						
AQDB	Aquidauana	147.61	141		PKPbc	00 36 44.1	-1.1
KOWA	Kowa	148.16	290		PKPbc	00 36 46.0	-0.8
PTLB	Pontes e Lacer	148.65	130		PKPbc	00 36 46.8	-1.2
KIC	Kosan Boka	150.02	274	ePKP1	PKPbc	00 36 51.2	-0.3
	comp=Z,70nm,1.0s						
DBIC	Dimbokro	150.13	275	PKPbc	PKPbc	00 36 51.8	0.0
	comp=Z,36nm,0.8s,baz=86,slow=2.1,SNR=31						
DBIC				PKPab	PKPab	00 36 58.6	+0.3
	comp=Z,9.4nm,0.6s,baz=79,slow=2.1,SNR=7.4						
DBIC	Dimbokro	150.13	275		PKPbc	00 36 51.2	-0.5
DBIC	Dimbokro	150.13	275	P	PKPab	00 36 58.6	+0.3
TIC	Toumodi	150.29	275	ePKP1	PKPbc	00 36 51.8	-0.4
LIC	Lamto	150.31	274	ePKP1	PKPbc	00 36 51.9	-0.3
	comp=Z,168nm,0.9s						

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*IDC **26** 00:24:48.0±2.8, 43.°21S×74.°50W, h0^{km}, mb3.9/3, mb1 4.2/4, mb1mx3.9/32, mbtmp3.9/4, ML3.9/1, MS3.2/1, Ms1 3.2/1, ms1mx2.8/28, Error ellipse: s-maj=67.4km s-min=36.8km az=159.0*

*GUC **26** 00:24:50.9±0.5, 43.°21S×74.°56W, h32^{km}±2^{km}, ML4.0*

*NEIC **26** 00:24:51.7±1.8, 43.°16S±0.°02×74.°45W±0.°06, h16^{km}±5^{km}, mb4.3/9, ML4.0(GUC), Error ellipse: s-maj=6.1km s-min=2.7km az=81.0*

ISC 26 00:24:52.2±1.8**, 43.°20S**±0.°06×**74.°43W**±0.°08**, h26**^{km}±12^{km}**, n44, σ0.^{s}90**/44**, mb4.1**/7**, 2D, Southern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO07	Milladeo Hill,	0.56	81	⇓ iP	Pb	00 25 03.7	+0.1
GO07				eS	Sn	00 25 13.1	0.0
GO07				IAML		00 25 16.9	
	comp=N,20μm,0.5s						
GO07	Milladeo Hill,	0.56	81	Pg	Pb	00 25 03.6	+0.1
GO07					Sb	00 25 10.1	-1.2
LL07	Hotel Espejo d	0.79	62	⇓ iP	Pn	00 25 07.6	-0.1
LL07				i S	Sn	00 25 19.1	+0.5
LL07				IAML		00 25 20.2	
	comp=N,14μm,0.4s						
LL07	Hotel Espejo d	0.79	62		Pn	00 25 07.5	-0.1
LL07					Sn	00 25 19.1	+0.5
LL01	San Ignacio de	1.70	62	eP	Pn	00 25 20.4	+0.3
LL01				eS	Sb	00 25 43.6	0.0
LL01	San Ignacio de	1.70	62	Pn	Pn	00 25 20.0	-0.1
LL02	Futaleuf	1.89	91	eP	Pn	00 25 23.7	+0.9
LL02				eS	Sb	00 25 48.7	-0.4
LL02				IAML		00 25 51.4	
	comp=N,1μm,0.7s						
LL05	Los Muermos	1.93	22	eP	Pn	00 25 23.4	+0.1
LL05				eS	Sn	00 25 48.6	+1.8
LL05				IAML		00 26 02.0	
	comp=N,1μm,0.7s						
LL05	Los Muermos	1.93	22	Pn	Pn	00 25 23.6	+0.3
LL03	Petrohue	2.55	37	eP	Pn	00 25 32.3	+0.4
LL03				eS	Sn	00 26 04.4	+2.2
LL03				IAML		00 26 15.8	
	comp=N,1μm,0.8s						
LL03	Petrohue	2.55	37		Pn	00 25 32.3	+0.4
LL04	Puerto Octay	2.74	34	eP	Pn	00 25 34.5	+0.1
LL04				eS	Sn	00 26 08.2	+1.5
LL04				IAML		00 26 16.0	
	comp=E,336nm,0.2s						
LL04	Puerto Octay	2.74	34		Pn	00 25 34.4	-0.1
COYC	Coyhaique	2.91	145		Pn	00 25 38.2	+1.4
PLCA	Paso Flores	3.80	51	Pn	Pn	00 25 50.3	+1.1
	comp=E,1.9nm,0.3s,baz=228,slow=11,SNR=60						
PLCA				Sn	Sn	00 26 35.0	+1.9
	comp=E,2.8nm,0.3s,baz=244,slow=17,SNR=2.5						
PLCA				LR	LR	00 27 27.4	
	comp=E,372nm,21.3s,baz=251,slow=41						
PLCA	Paso Flores	3.80	51		Pn	00 25 50.5	+1.3
LR03	Panguipulli	3.90	24	Pn	Pn	00 25 50.6	+0.3
LC01	Cunco	4.71	25		Pn	00 26 01.6	0.0
H03S1	Juan Fernandez	9.98	338	T	T	00 37 22.8	
	baz=160,slow=74,SNR=44						
H03S2	Juan Fernandez	9.99	338	T	T	00 37 21.8	
	baz=160,slow=74,SNR=48						
H03S3	Juan Fernandez	10.00	338	T	T	00 37 21.4	
	baz=160,slow=74,SNR=48						
H03N3	Juan Fernandez	10.35	339	Pn	Pn	00 27 19.9	+1.1
H03N1	Juan Fernandez	10.36	339	Pn	Pn	00 27 19.1	+0.3
H03N2	Juan Fernandez	10.37	339	Pn	Pn	00 27 19.9	+0.9
TRQA	Tornquist	10.76	66	Pn	Pn	00 27 25.9	+1.2
AC02	Maricunga	16.89	16		Pn	00 28 47.6	+0.3
CPUP	Villa Florida	21.85	45	P	P	00 29 41.9	-0.9
	comp=E,6.3nm,0.7s,baz=223,slow=11,SNR=9.0						
CPUP	Villa Florida	21.85	45	P	P	00 29 41.9	-0.9
CPUP				IAmb	IAmb	00 29 44.1	
	comp=Z,6.0nm,0.7s						
ITAB	Concordia	24.09	56	P	P	00 30 04.3	-1.3
LPAZ	La Paz	27.36	13	P	P	00 30 35.4	-0.6
	comp=Z,0.9nm,0.6s,baz=205,slow=7.9,SNR=3.9						
LPAZ	La Paz	27.36	13	P	P	00 30 35.1	-0.9
PTLB	Pontes e Lacer	30.60	30	P	P	00 31 04.3	+0.3
PTLB				IAmb	IAmb	00 31 06.0	
	comp=Z,3.2nm,0.9s						
SNAA	Sanae	43.93	154	P	P	00 32 56.7	+0.2
SNAA				IAmb	IAmb	00 32 57.5	
	comp=Z,3.0nm,1.2s						
BOAV	Boa Vista	47.09	19	P	P	00 33 20.9	-1.0
BOAV				IAmb	IAmb	00 33 36.7	
	comp=Z,7.5nm,1.3s						
TXAR	Lajitas Array	77.02	334	P	P	00 36 42.9	+0.2
	comp=Z,0.4nm,0.4s,baz=182,slow=5.3,SNR=1.5						
DBIC	Dimbokro	79.93	71	IAmb	IAmb	00 36 59.2	
	comp=Z,14nm,0.8s						
LBTB	Lobatse	80.13	115	P	P	00 36 59.4	-0.8
LBTB				IAmb	IAmb	00 37 02.5	
	comp=Z,10.0nm,1.2s						
H11S2	WAKE ISLAND Hy	123.37	264	T	T	02 59 05.2	
	baz=128						
H11S1	WAKE ISLAND Hy	123.39	264	T	T	02 58 58.1	
	baz=128						
H11S3	WAKE ISLAND Hy	123.39	264	T	T	02 58 56.5	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=128						
H11N3	WAKE ISLAND Hy	124.00	266	T	T	02 59 42.3	
	baz=130						
H11N1	WAKE ISLAND Hy	124.01	266	T	T	02 59 27.7	
	baz=130						
H11N2	WAKE ISLAND Hy	124.02	266	T	T	02 59 38.2	
	baz=130						
MKAR	Makanchi Array	163.16	70	PKPab	PKPab	00 45 41.8	-0.3
	comp=Z,0.6nm,0.6s,baz=268,slow=3.4,SNR=4.7						

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*IDC **26** 00:32:48.2±1.1, 37°00N×97°86W, h0^{km}, mb3.7/1, mb1 3.9/4, mb1mx3.4/78, mbtmp3.5/4, ML3.8/3, MS3.2/1, Ms1 3.2/1, ms1mx2.5/44, Error ellipse: s-maj=15.2km s-min=12.9km az=170.0*

*TUL **26** 00:32:48.8±0.9, 36°95N±0°03×97°81W±0°05, h5^{km}±7^{km}, ML3.3, mb_Lg3.2/88(NEIC), Error ellipse: s-maj=7.1km s-min=2.8km az=55.0*

*ANF **26** 00:32:48.5±0.4, 36°95N×97°70W, h0^{km}, ML4.2/7, Error ellipse: s-maj=5.2km s-min=3.8km az=79.0*

*NEIC **26** 00:32:49.0±0.9, 36°92N±0°01×97°79W±0°02, h4^{km}±7^{km}, Error ellipse: s-maj=3.1km s-min=1.1km az=130.0*

ISC 26 00:32:49.1±0.8**, 36°94N**±0°02×**97°81W**±0°02**, h9**^{km}±5^{km}**, n125, σ0^{s}75**/124**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.10	207	Pg	Pg	00 32 51.3	-0.2
GC02				Sg	Sg	00 32 52.9	-0.4
KAN17	Caldwell West	0.11	17	Pg	Pg	00 32 51.5	-0.3
KAN17				Sg	Sg	00 32 53.3	-0.4
KAN14	Manchester OK	0.13	279		Pg	00 32 51.7	-0.4
KAN14				Sg	Sg	00 32 53.6	-0.4
KAN05	Bluff City Nor	0.18	343		Pg	00 32 52.7	-0.3
KAN01	Argonia South	0.22	10	Pg	Pg	00 32 53.4	-0.2
KAN01				Sg	Sg	00 32 56.5	-0.2
KAN09	Caldwell North	0.25	37		Pg	00 32 54.0	-0.2
KAN09				Sg	Sg	00 32 57.5	0.0
KAN13	South Haven SW	0.27	74	Pg	Pg	00 32 54.5	-0.1
KAN13				Sg	Sg	00 32 58.6	+0.3
KAN10	Anthony SW Sta	0.30	309		Pg	00 32 54.8	-0.3
KAN10				Sg	Sg	00 32 59.0	-0.1
KAN06	Argonia West S	0.31	352		Pg	00 32 55.2	-0.2
KAN08	Anthony NE Sta	0.32	335		Pg	00 32 55.2	-0.2
OK032	Salt Plains WL	0.35	248	Pg	Pg	00 32 55.8	-0.2
KAN16	Harper SW Stat	0.35	324	Pg	Pg	00 32 55.9	-0.2
KAN12	Harper NE Stat	0.39	337		Pg	00 32 56.5	-0.3
CROK	Carrier	0.46	198	Pg	Pg	00 32 57.9	-0.1
BLOK	Blackwell	0.51	110	Pg	Pg	00 32 58.8	-0.2
T35A	Sooner Cattle	1.04	91		Pg	00 33 08.4	-0.6
T35B	Sooner Cattle	1.04	91	P	Pg	00 33 08.5	-0.5
	baz=270						
T35B				S	Sb	00 33 22.4	-0.6
	baz=270						
U32A	Winter Ranch,	1.11	240		Pg	00 33 09.6	-0.9
U32A	Winter Ranch,	1.11	240	P	Pg	00 33 09.7	-0.9
	baz=61						
OK033	Mehan	1.13	142		Pg	00 33 10.3	-0.6
QUOK	Quay	1.17	131		Pg	00 33 10.8	-0.7
OK029	Liberty Lake	1.17	166		Pg	00 33 10.9	-0.7
OK031	S. Brethren Rd	1.25	141		Pg	00 33 12.2	-0.9
OK034	N. Norfolk Rd.	1.28	136		Pg	00 33 12.7	-1.0
BCOK	Bluff Creek, N	1.29	173	Pn	Pg	00 33 12.8	-1.0
OK009	Oakdale Elemen	1.39	167		Pn	00 33 14.8	+0.1
OK025	Westminster Rd	1.41	164		Pn	00 33 14.9	0.0
OK001	Jones High Sch	1.44	163	Pn	Pn	00 33 15.6	+0.2
OKCFA	Oklahoma City	1.54	169		Pn	00 33 17.1	+0.3
OKCFA				IAmb_Lg		00 33 40.6	
	comp=Z,174nm,0.8s						
OKCFA	Oklahoma City	1.54	169	P	Pn	00 33 17.4	+0.5
	baz=349,SNR=9.5						
OKCFA				Sb	Sg	00 33 38.9	0.0
	baz=349						
OKCSW	OKLAHOMA CITY	1.56	169		Pn	00 33 17.6	+0.5
R32A	Long Quarter,	1.65	334		Pn	00 33 18.9	+0.6
R32A	Long Quarter,	1.65	334	P	Pb	00 33 19.1	-0.6
	baz=154,SNR=37						
R32A				S	Sb	00 33 40.5	-0.2
	baz=154						
FNO	Franklin	1.71	169		Pn	00 33 19.8	+0.6
TUL1	Leonard	1.92	122	P	Pn	00 33 23.1	+1.1
	baz=302						
TUL1				Sb	Sb	00 33 49.3	+0.9
	baz=302						
TUL1	Leonard	1.92	122	Pn	Pn	00 33 22.9	+0.9
TUL1	Leonard	1.92	122	P	Pn	00 33 22.6	+0.6
	baz=302,SNR=26						
W35A	Tecumseh	1.93	157		Pn	00 33 22.7	+0.5
X34A	Smith Ranch, M	2.33	181		Pn	00 33 28.6	+0.9
WMOK	Wichita Mounta	2.33	200	P	Pn	00 33 28.1	+0.3
	baz=20						
WMOK				S	Sb	00 34 00.5	+0.2
	baz=20						
WMOK	Wichita Mounta	2.33	200		Pn	00 33 28.0	+0.2
WMOK				IAmb_Lg		00 34 05.0	
	comp=Z,99nm,0.9s						
WMOK	Wichita Mounta	2.33	200	P	Pn	00 33 28.1	+0.3
	baz=20						
WMOK				S	Sb	00 34 00.5	+0.2
	baz=20						
KSU1	Kansas State U	2.36	23	P	Pn	00 33 28.7	+0.6
	baz=204						
KSU1				Sb	Sb	00 34 01.0	0.0
	baz=204						
KSU1	Kansas State U	2.36	23		Pn	00 33 28.8	+0.8
KSU1	Kansas State U	2.36	23	P	Pn	00 33 28.8	+0.8
	baz=204,SNR=13						
KSU1				S	Sb	00 34 01.0	0.0
	baz=204						
CBKS	Cedar Bluff	2.42	321	P	Pn	00 33 29.7	+0.8
	baz=141						
CBKS				S	Sb	00 34 03.1	+0.3
	baz=141						
CBKS	Cedar Bluff	2.42	321		Pn	00 33 30.0	+1.1
CBKS	Cedar Bluff	2.42	321	P	Pn	00 33 29.8	+0.8
	baz=141,SNR=9.3						
CBKS				S	Sb	00 34 02.9	+0.1
	baz=141						
U38A	Gravette	2.79	99	Pn	Pn	00 33 34.8	+0.8
LOOK	Love County	2.98	170		Pn	00 33 37.4	+0.8
LOOK				IAmb_Lg		00 34 28.3	
	comp=Z,54nm,0.8s						
X37A	Clayton	3.07	139		Pn	00 33 38.5	+0.6
X37A				IAmb_Lg		00 34 34.7	
	comp=Z,85nm,0.9s						
X37A	Clayton	3.07	139	P	Pn	00 33 38.4	+0.6
	baz=320,SNR=14						
HHAR	Hobbs	3.18	101		Pn	00 33 40.2	+0.8
HHAR				IAmb_Lg		00 34 36.4	
	comp=Z,73nm,0.8s						
Z35A	Perchaven, San	3.63	173		Pn	00 33 46.1	+0.6
Z35A	Perchaven, San	3.63	173	P	Pn	00 33 46.0	+0.5
	baz=353,SNR=5.5						
Z35A				S	Sn	00 34 29.8	+1.3
	baz=353						
S39A	Bolivar	3.65	77		Pn	00 33 46.2	+0.3
S39A	Bolivar	3.65	77	P	Pn	00 33 46.1	+0.3
	baz=259,SNR=20						
W39A	Magazine	3.69	117		Pn	00 33 47.3	+0.9
W39A				IAmb_Lg		00 34 48.1	
	comp=Z,81nm,0.8s						
W39A	Magazine	3.69	117	P	Pn	00 33 46.7	+0.3
	baz=299						
AMTX	Amarillo	3.75	238	Sb	Sg	00 34 47.0	-2.7
	baz=56						
AMTX	Amarillo	3.75	238		Pn	00 33 48.9	+1.5
AMTX				IAmb_Lg		00 34 54.8	
	comp=Z,67nm,0.8s						
N33A	J Bar K, Exete	3.81	4	Pn	Pn	00 33 47.3	-0.7
N33A				IAmb_Lg		00 34 51.3	
	comp=Z,64nm,0.9s						
U40A	Yellville	4.02	97	Pn	Pn	00 33 51.2	+0.3
U40A				IAmb_Lg		00 34 57.7	
	comp=Z,79nm,0.8s						
MIAR	Mount Ida	4.19	124		Pn	00 33 53.8	+0.6
MIAR				IAmb_Lg		00 35 05.1	
	comp=Z,44nm,0.8s						
P38A	Dawn	4.30	50	Pn	Pn	00 33 55.3	+0.5
P38A				IAmb_Lg		00 35 04.4	
	comp=Z,41nm,0.8s						
P38A	Dawn	4.30	50	P	Pn	00 33 55.0	+0.3
	baz=232,SNR=12						
KSCO	Kaye Shedlock'	4.34	300		Pn	00 33 55.6	+0.2
KSCO				IAmb_Lg		00 35 17.5	
	comp=Z,34nm,0.7s						
Z38A	Mt. Pleasant	4.34	147		Pn	00 33 55.5	+0.3
Z38A				IAmb_Lg		00 35 15.2	
	comp=Z,47nm,0.8s						
MGMO	Mountain Grove	4.43	86		Pn	00 33 56.9	+0.3
BGNE	Belgrade	4.47	357	P	Pn	00 33 57.6	+0.4
	baz=176						
BGNE	Belgrade	4.47	357		Pn	00 33 56.9	-0.2
ABTX	Abilene, Hawle	4.56	200		Pn	00 33 59.1	+0.7
ABTX				IAmb_Lg		00 35 15.8	
	comp=Z,55nm,1.2s						
R40A	Maddies Statio	4.60	71		Pn	00 33 59.1	+0.2
FCAR	Ozark Folk Cen	4.70	101		Pn	00 34 02.0	+1.8
FCAR				IAmb_Lg		00 35 18.7	
	comp=Z,54nm,0.8s						
X40A	Basin Creek Fa	4.72	120		Pn	00 34 01.1	+0.5
X40A				IAmb_Lg		00 35 28.8	
	comp=Z,36nm,0.8s						
WHAR	Wooly Hollow	4.76	109		Pn	00 34 02.0	+1.0
WHAR				IAmb_Lg		00 35 19.0	
	comp=Z,54nm,0.8s						
WHTX	Lake Whitney,	4.94	177	P	Pn	00 34 03.7	+0.1
	baz=357						
WHTX	Lake Whitney,	4.94	177		Pn	00 34 03.5	-0.1
WHTX				IAmb_Lg		00 35 33.9	
	comp=Z,31nm,1.2s						
WHTX	Lake Whitney,	4.94	177	P	Pn	00 34 03.7	+0.1
	baz=357,SNR=14						
MSTX	Muleshoe	5.02	235	Pn	Pn	00 34 05.7	+0.9
WLAR	White Oak Lake	5.02	129	Pn	Pn	00 34 05.0	+0.3
WLAR				IAmb_Lg		00 35 38.5	
	comp=Z,46nm,0.7s						
L34A	Svendsen Farm,	5.14	12		Pn	00 34 07.8	+1.4
237A	Washetta, Mont	5.19	161	Pn	Pn	00 34 06.5	-0.5
237A				IAmb_Lg		00 35 47.4	
	comp=Z,32nm,0.9s						
P40A	Paris	5.22	59	Pn	Pn	00 34 07.9	+0.5
P40A				IAmb_Lg		00 35 32.9	
	comp=Z,31nm,0.8s						
N38A	Joes South For	5.25	41		Pn	00 34 08.0	+0.2
N38A				IAmb_Lg		00 35 48.0	
	comp=Z,46nm,0.8s						
N38A	Joes South For	5.25	41	P	Pn	00 34 07.8	0.0
	baz=224,SNR=7.3						
T25A	Trinidad	5.29	274	Pn	Pn	00 34 08.4	-0.1
CCM	Cathedral Cave	5.33	76		Pn	00 34 08.2	-0.7
T42A	Van Buren	5.37	87		Pn	00 34 09.7	+0.1
LCAR	Lake Charles	5.43	97	Pn	Pn	00 34 11.8	+1.6
Z41A	Richland Creek	5.50	130	S	Sn	00 35 13.6	-1.1
	baz=313						
K31A	O'Neill	5.73	353		Pn	00 34 15.0	+0.6
CCAR	Cane Creek	5.77	120	IAmb_Lg		00 35 55.5	
	comp=Z,35nm,0.8s						
PBMO	Poplar Bluff	5.92	89	IAmb_Lg		00 36 09.0	
	comp=Z,36nm,0.7s						
FVM	French Village	5.96	78	Pn	Pn	00 34 17.2	-0.4
SCIA	State Center	6.10	34	Pn	Pn	00 34 19.6	+0.1
SCIA				IAmb_Lg		00 36 11.7	
	comp=Z,49nm,0.8s						
435B	Jarrell	6.14	178	IAmb_Lg		00 36 09.9	
	comp=Z,45nm,0.8s						
SDCO	Great Sand Dun	6.18	280	Pn	Pn	00 34 21.7	+0.8
SLM	Saint Louis	6.23	72	IAmb_Lg		00 36 02.7	
	comp=Z,28nm,1.1s						
N41A	Harden Midland	6.60	53	IAmb_Lg		00 36 18.4	
	comp=Z,47nm,0.9s						
JCT	Junction City	6.65	195		Pn	00 34 26.1	-1.0
JCT				IAmb_Lg		00 36 22.1	
	comp=Z,36nm,0.9s						
ECSD	EROS Data Cent	6.85	7	P	Pn	00 34 28.8	-1.0
	baz=188						
ECSD	EROS Data Cent	6.85	7	Pn	Pn	00 34 28.6	-1.2
ECSD				IAmb_Lg		00 36 35.6	
	comp=Z,22nm,1.0s						
S44A	Carbondale	6.86	81	IAmb_Lg		00 36 22.5	
	comp=Z,34nm,0.8s						
SIUC	Southern Illin	6.89	81	IAmb_Lg		00 36 39.9	
	comp=Z,25nm,0.7s						
P43A	Skaggs, Pawnee	7.05	65	IAmb_Lg		00 36 32.2	
	comp=Z,30nm,0.9s						
L40A	Anamosa	7.22	43	IAmb_Lg		00 36 56.4	
	comp=Z,29nm,0.7s						
Q44A	Meyer Farm, Va	7.22	72	IAmb_Lg		00 36 42.2	
	comp=Z,35nm,0.9s						
ANMO	Albuquerque	7.29	257	Pg	Pb	00 34 59.2	+3.1
	comp=Z,0.2nm,0.3s,baz=74,slow=10,SNR=2.7						
ANMO				Lg	Lg	00 36 36.4	
	comp=Z,0.7nm,0.3s,baz=73,slow=11,SNR=11						
T45A	Paducah	7.33	87	IAmb_Lg		00 36 51.4	
	comp=Z,40nm,0.8s						
SUSD	Miller	7.55	354	IAmb_Lg		00 36 50.8	
	comp=Z,32nm,0.8s						
I37A	Lemond, Waseca	7.83	24	IAmb_Lg		00 37 13.4	
	comp=Z,22nm,0.7s						
O44A	Mansfield	7.99	63	IAmb_Lg		00 37 12.2	
	comp=Z,28nm,0.9s						
PLAL	Pickwick Lake	8.13	101	IAmb_Lg		00 37 07.3	
	comp=Z,17nm,1.1s						
JFWS	Jewell Farm	8.32	42	P	Pn	00 34 49.4	-0.6
	baz=226						
JFWS	Jewell Farm	8.32	42	IAmb_Lg		00 37 13.7	
	comp=Z,28nm,1.0s						
RWWY	Rawlins	8.70	306	IAmb_Lg		00 37 42.0	
	comp=Z,15nm,0.9s						
F33A	5 Mile Ranch,	8.97	7	IAmb_Lg		00 37 44.1	
	comp=Z,20nm,1.1s						
TXAR	Lajitas Array	9.03	215	Pn	Pn	00 34 58.5	-1.4
	comp=Z,0.2nm,0.3s,baz=44,slow=10,SNR=16						
TXAR				Pg		00 35 30.3	
	comp=Z,0.3nm,0.3s,baz=45,slow=14,SNR=5.0						
TXAR				Lg	Lg	00 37 29.2	
	comp=Z,0.4nm,0.3s,baz=32,slow=28,SNR=5.3						
TXAR	Lajitas Array	9.03	215		Pn	00 34 59.1	-0.7
TX31	Lajitas Ar. Si	9.03	215	Pn	Pn	00 34 59.5	-0.4
PDAR	Pinedale Array	10.74	306	Pn	Pn	00 35 22.9	-0.5
	comp=Z,0.1nm,0.3s,baz=119,slow=13,SNR=2.6						
PDAR				Lg	Lg	00 38 20.1	
	comp=Z,0.2nm,0.3s,baz=114,slow=30,SNR=2.2						
TKL	Tuckaleechee C	11.40	92	Pn	Pn	00 35 32.1	0.0
	comp=Z,0.3nm,0.3s,baz=286,slow=15,SNR=1.9						
TKL				Lg	Lg	00 38 39.3	
	comp=Z,0.5nm,0.3s,baz=294,slow=18,SNR=5.8						
NEW	Newport	18.12	315	LR	LR	00 43 55.6	
	comp=Z,78nm,21.2s,baz=177,slow=37						
ILAR	Eielson Array	40.05	330	P	P	00 40 25.1	+0.9
	comp=Z,0.9nm,0.7s,baz=108,slow=7.2,SNR=10						

MAN 26 00:35:12.3, 17°90N×120°54E, h20^{km}, mb4.1, ML2.9, MS2.5, Luzon

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*IDC **26** 00:38:12.5±0.3, 18°43N×70°34W, h0^{km}, mb4.4/44, mb1 4.5/47, mb1mx4.4/69, mbtmp4.4/47, ML3.3/3, MS3.9/32, Ms1 3.9/32, ms1mx3.9/46, Error ellipse: s-maj=11.2km s-min=8.3km az=67.0*

*NEIC **26** 00:38:15.9±1.8, 18°44N±0°04×70°44W±0°04, h10^{km}±1^{km}, mb4.8/198, Mwr4.6/35, Error ellipse: s-maj=6.7km s-min=6.2km az=264.0*

*NEIC **26** 00:38:16.2, 18°43N×70°42W, h18^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.19; $M_{\theta\theta}$0.76; $M_{\phi\phi}$-0.95; $M_{r\theta}$-0.31; $M_{\theta\phi}$0.61; $M_{\phi r}$-0.35; Fault plane solution: $M_0$1.16000×10^{16} NP1:ϕ_s299.13000°, δ65.78000°, λ9.83000°. NP2:ϕ_s205.07000°, δ81.04000°, λ155.47000°. Principal axes: T 1.1288, Plg24.0000°, Azm160.0000°; N 0.0619, Plg64.0000°, Azm6.0000°; P -1.1907, Plg10.0000°, Azm254.0000°;*

*GCMT **26** 00:38:17.9±0.3, 18°51N±0°03×70°38W±0°02, h21^{km}±1^{km}, MW4.9/67, Moment Tensor Solution. s15,c16; s67,c91; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.97±.25; $M_{\theta\theta}$0.20±.14; $M_{\phi\phi}$-2.17±.15; $M_{r\theta}$-0.04±.26; $M_{\theta\phi}$1.24±.08; $M_{\phi r}$-0.69±.19; Best double couple: $M_0$2.45000×10^{16} NP1:ϕ_s324.00000°, δ39.00000°, λ71.00000°. NP2: ϕ_s168.00000°, δ54.00000°, λ105.00000°. Principal axes: T 2.1170, Plg76.0000°, Azm126.0000°; N 0.6660, Plg12.0000°, Azm339.0000°; P -2.7820, Plg8.0000°, Azm248.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*OSPL **26** 00:38:17.1±1.6, 18°48N×70°43W, h15^{km}, ML5.0, Fault plane solution: NP1:ϕ_s299.00000°, δ66.00000°, λ10.00000°.*

ISC 26 00:38:14.6±1.2**, 18°39N**±0°03×**70°42W**±0°02**, h11**^{km}±7^{km}**, n541, σ1^{s}28**/518**, mb4.8**/127**, MS3.9**/30**, 13D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LOSC1	San Cristbal	0.30	87	⇓iP	Pb	00 38 22.6	+0.6
LOSC1				IAML		00 38 31.9	
	comp=Z,269µm,0.8s						
SDD	Santo Domingo	0.49	82		Pb	00 38 25.4	+0.2
SDD					Sb	00 38 33.1	+0.7
SDD	Santo Domingo	0.49	82	⇓iP	Pb	00 38 25.4	+0.2
SDD				eS	Sb	00 38 32.5	+0.1
LOBA2	Hotel Casa Bon	0.71	244	⇓iP	Pb	00 38 29.2	+0.3
LOBA2				IAML		00 38 43.5	
	comp=Z,13µm,0.3s						
SDDR	Presa de Saban	1.01	306	Pg	Pb	00 38 33.3	-0.8
SDDR					Sg	00 38 46.7	-0.4
SDDR	Presa de Saban	1.01	306	⇓iP	Pb	00 38 33.2	-0.8
SDDR				eS	Sg	00 38 46.2	-0.9
LONE2	Loma La Sidra	1.01	279	⇓eP	Pb	00 38 33.7	-0.4
LONE2				i P	Pg	00 38 33.9	-0.1
LONE2				IAML		00 38 52.4	
	comp=Z,39µm,0.5s						
DR12	Loma Pena Alta	1.06	68		Pb	00 38 34.4	-0.7
SC01	Santiago de lo	1.07	344		Pb	00 38 34.5	-0.5
SC01				Sn	Sb	00 38 49.0	-0.1
SC01	Santiago de lo	1.07	344	⇓eP	Pb	00 38 34.6	-0.5
LONA1	Toro Cenizo, N	1.11	28	⇓eP	Pb	00 38 34.7	-1.2
LOPE2	Hotel El Peder	1.31	254	⇓iP	Pb	00 38 39.5	+0.3
NQUSE	US Embassy, Po	1.74	276		Pb	00 38 45.7	-0.8
PAPH	Port-au-Prince	1.79	274	⇓iP	Pn	00 38 46.3	+0.9
JAKH	Jacmel	2.00	266		Pn	00 38 49.5	+1.3
JAKH				Sn	Sb	00 39 17.1	+1.3
JAKH	Jacmel	2.00	266	⇓eP	Pn	00 38 49.6	+1.3
LGNH	Logne	2.07	274		Pn	00 38 50.5	+1.1
LGNH	Logne	2.07	274	⇓eP	Pn	00 38 50.7	+1.3
PRSN	Puerto Rico Se	3.12	93		Pn	00 39 06.2	+2.5
AGPR	Aguadilla, PR	3.15	88		Pn	00 39 07.2	+3.1
GRTK	Grand Turk	3.17	348	Pn	Pn	00 39 05.0	+0.5
CRPR	Cabo Rojo, PR	3.17	96	Pn	Pn	00 39 06.4	+1.9
CRPR	Cabo Rojo, PR	3.17	96	⇓eP	Pn	00 39 06.3	+1.9
MLPR	Magueyes Islan	3.24	97	Pn	Pn	00 39 07.8	+2.5
AOPR	Arecibo Observ	3.49	90	eP	Pb	00 39 13.6	-2.8
AOPR				eS	Sb	00 39 57.6	-1.2
AOPR	Arecibo Observ	3.49	90		Pn	00 39 11.8	+3.0
OBIP	Obispado Ponce	3.65	95		Pn	00 39 12.4	+1.5
CELP	Cerrillos	3.67	94		Pn	00 39 13.4	+2.1
EMPR	Esperanza - Ma	3.70	88		Pn	00 39 14.7	+3.0
SJG	San Juan	4.07	93	Pn	Pn	00 39 19.3	+2.5
	comp=Z,147nm,0.3s,baz=296,slow=10,SNR=151						
SJG				Lg	Lg	00 40 14.9	
	comp=Z,339nm,0.3s,baz=135,slow=21,SNR=25						
SJG	San Juan	4.07	93	eP	Pn	00 39 20.3	+3.5
SJG	San Juan	4.07	93	eP	Pn	00 39 21.2	+4.4
SJG	San Juan	4.07	93	eS	Sb	00 40 13.2	-2.4
SJG	San Juan	4.07	93		Pn	00 39 19.7	+2.9
GCPR	Guaynabo City	4.12	90		Pn	00 39 20.2	+2.6
PDPR	Patillas Dam,	4.20	94	Pn	Pn	00 39 21.0	+2.4
CBYP	Canovanas	4.34	91		Pn	00 39 22.9	+2.3
GTBY	Guantanamo Bay	4.69	290	Pn	Pn	00 39 24.7	-0.6
GTBY	Guantanamo Bay	4.69	290	⇓eP	Pn	00 39 25.1	-0.2
CUPR	Culebra, Puert	4.88	90	Pn	Pn	00 39 31.0	+3.0
STVI	Saint Thomas	5.20	90		Pn	00 39 35.0	+2.7
CDVI	St. Croix	5.42	96	eP	Pn	00 39 38.6	+3.2
CDVI	St. Croix	5.42	96	eS	Sn	00 40 41.2	+3.4
CDVI	St. Croix	5.42	96	Pn	Pn	00 39 38.4	+3.0
CMJ	Castle Mountai	5.66	268	i P	Pn	00 39 41.7	+3.0
GWJ	Greenwich	6.00	268	i P	Pn	00 39 42.2	-1.3
HOJ	Hope	6.03	267	i P	Pn	00 39 46.2	+2.5
STH	Stony Hill	6.08	268	i P	Pn	00 39 46.4	+2.0
HATO	Hato, Curacao	6.34	167		Pn	00 39 49.4	+1.4
CVJ	Coleyville	6.76	270	i P	Pn	00 39 46.2	-7.6
MTDJ	Mount Denham	6.76	270	Pn	Pn	00 39 54.8	+1.0
URIC	Uribia, Colomb	6.82	193	eP	Pn	00 39 55.7	+1.0
URIC	Uribia, Colomb	6.82	193	eP	Pn	00 39 57.6	+2.9
URIC	Uribia, Colomb	6.82	193		Pn	00 39 54.9	+0.2
SABA	Saba	6.88	95	eP	Pn	00 40 00.4	+5.0
SABA	Saba	6.88	95		Pn	00 39 56.6	+1.2
SMRT	St. Maarten	6.99	92	eP	Pn	00 40 00.2	+3.1
SMRT	St. Maarten	6.99	92	eS	Sn	00 41 18.5	+1.9
SMRT	St. Maarten	6.99	92		Pn	00 39 58.9	+1.9
SEUS	St. Eustatius	7.14	96	eP	Pn	00 40 04.1	+5.1
SKI	Saint Kitts	7.39	97	eP	Pn	00 40 08.5	+6.0
SMRC	Santa Marta, M	8.07	208	eP	Pn	00 40 11.9	+0.1
SMRC	Santa Marta, M	8.07	208	eP	Pn	00 40 08.1	-3.8
ANWB	Willy Bob	8.25	94	eP	Pn	00 40 17.9	+3.6
ANWB	Willy Bob	8.25	94	eS	Sn	00 41 50.0	+2.4
ANWB	Willy Bob	8.25	94	Pn	Pn	00 40 15.9	+1.7
ANBD	Bethesda, Anti	8.36	98	eP	Pn	00 40 18.8	+3.0
ANBD	Bethesda, Anti	8.36	98	eS	Sn	00 41 51.7	+1.5
CBE	Ff, Capester	8.74	104	eP	Pn	00 40 27.6	+6.6
BIRV	Birongo	8.84	152	Pn	Pn	00 40 23.8	+1.4
MAGL	Barre de l'ile	9.07	104	eP	Pn	00 40 27.7	+2.2
DSLB	Salisbury	9.10	107	eP	Pn	00 40 28.2	+2.2
LCCY	Blossom Villag	9.22	279	Pn	Pn	00 40 29.9	+2.2
SDV	Santo Domingo	9.45	181	Pn	Pn	00 40 31.1	+0.1
	comp=Z,6.5nm,0.3s,baz=358,slow=7.4,SNR=36						
SDV				Sn	Sn	00 42 13.1	-4.3
	comp=Z,7.1nm,0.3s,baz=315,slow=21,SNR=8.1						
SDV				LR	LR	00 44 30.6	
	comp=Z,1µm,19.5s,baz=16,slow=40						
SDV	Santo Domingo	9.45	181	eP	Pn	00 40 31.2	+0.3
SDV	Santo Domingo	9.45	181	Pn	Pn	00 40 32.1	+1.1
SVN	Savane Anatole	9.55	110		Pn	00 40 33.1	+1.0
FDF	Fort de France	9.61	111	eP	Pn	00 40 34.6	+1.7
FDF	Fort de France	9.61	111	Pn	Pn	00 40 33.8	+0.9
SJCC	San Jacinto, C	9.62	209		Pn	00 40 33.6	+0.4
BAUV	El Baul	9.68	166	Pn	Pn	00 40 35.2	+1.3
BIM	Bigot	9.77	112	eP	Pn	00 40 37.1	+2.0
BIM	Bigot	9.77	112		Pn	00 40 36.3	+1.2
PCRV	Puerto La Cruz	9.91	145	Pn	Pn	00 40 37.6	+0.6
	comp=Z,25nm,0.3s,baz=293,slow=1.0,SNR=96						
PLCV	Puerto La Cruz	9.94	145		Pn	00 40 37.6	+0.1
MPOM	Morne Pois Mar	9.98	112	eP	Pn	00 40 40.0	+1.9
MPOM	Morne Pois Mar	9.98	112		Pn	00 40 39.5	+1.5
SOCV	Socops	10.06	182	eP	Pn	00 40 38.6	-0.5
SLBI	Saint Lucia, B	10.06	114	eP	Pn	00 40 40.6	+1.5
SMLC	San Martn de	10.17	201	eP	Pn	00 40 39.6	-1.1
SVB	Belmont	10.19	119		Pn	00 40 40.3	-0.6
MCLT	Moule a Chique	10.23	116	eP	Pn	00 40 41.6	+0.1
OCAC	Ocana	10.48	196		Pn	00 40 45.1	+0.1
GRGR	Grenville	10.50	125	Pn	Pn	00 40 45.2	0.0
MOTC	Monteria, Cord	10.83	209		Pn	00 40 51.0	+1.3
PAMC	Pamplona, Colo	11.21	192	eP	Pn	00 40 53.9	-1.4
PRVC	Isla de Provid	11.64	246	Pn	Pn	00 41 01.7	+0.9
ZARC	Zaragoza, Cauc	11.66	202	eP	Pn	00 41 03.5	+2.4
ZARC	Zaragoza, Cauc	11.66	202		Pn	00 41 01.4	+0.3
BRRC	Barranca, Sant	11.67	196	eP	Pn	00 41 00.6	-0.5
UREC	San Jos de Ur	11.69	206	eP	Pn	00 41 02.5	+1.1
TOSP	Speyside	11.88	125	Pn	Pn	00 41 06.0	+2.0
DBBC	Dabeiba	12.63	207	eP	Pn	00 41 15.9	+1.4
RUSC	La Rusia	12.69	192	eP	Pn	00 41 14.9	-0.7
BCIP	Isla Barro Col	12.95	226	Pn	Pn	00 41 16.9	-1.7
HELC	Santa Helena	13.11	203	eP	Pn	00 41 22.6	+1.3
NORC	Norcasia	13.47	199	eP	Pn	00 41 24.5	-1.4
CBOC	Ciudad Bolivar	13.60	204	eP	Pn	00 41 28.3	+0.6
SOLC	Bahia Solano	13.88	210	eP	Pn	00 41 33.1	+1.7
GUY2C	Guyana, Caldas	13.95	201	eP	Pn	00 41 32.1	-0.7
ROSC	El Rosal	14.00	196	Pn	Pn	00 41 33.5	+0.1
	comp=Z,0.8nm,0.3s,baz=236,slow=23,SNR=1.8						
ROSC				Sn	Sn	00 44 05.3	-3.8
	comp=Z,2.2nm,0.3s,baz=73,slow=23,SNR=1.9						
ROSC	El Rosal	14.00	196	eP	Pn	00 41 35.9	+2.6
ROSC	El Rosal	14.00	196		Pn	00 41 32.8	-0.6
VILC	Villavicencio,	14.55	193	eP	Pn	00 41 37.9	-2.9
PLMC	San Jos del P	14.58	204	eP	Pn	00 41 39.8	-1.3
ORTC	Ortega, Tolima	15.15	199	eP	Pn	00 41 47.4	-1.3
BRU2	Volcan	15.26	233		Pn	00 41 52.0	+1.7
DRK0	Durika	15.40	236		Pn	00 41 54.1	+2.0
YOTC	Yotoco, Valle	15.45	203	eP	Pn	00 41 55.0	+2.3
SRBA	San Rafael, Bu	15.51	236		Pn	00 41 52.5	-1.0
COVE	Coope Vega, Sa	15.53	242		P	00 41 56.1	-1.9
COVE				IAmb	IAmb	00 42 03.0	
	comp=Z,80nm,1.1s						
656A	Willston	15.54	317	Pn	Pn	00 41 51.0	-2.8
RIMA	Rio Macho	15.60	238	Pn	P	00 41 57.5	-1.5
PEZE	Perez Zeledon,	15.67	237	P	P	00 41 58.7	-1.0
BOAB	BOACO BROADBAN	15.83	250		Pn	00 41 59.5	+1.8

MARP	**Paez Belalcaza**	16.38	200	*e*P	Pn	00 42 05.5	+0.7
MACC	**Macarena, Meta**	16.49	192	*e*P	Pn	00 42 04.6	-1.5
HZTE	**Horizontes, Gu**	16.54	245		P	00 42 08.8	-0.5
TGUH	**Tegucigalpa,Un**	16.74	258	P	P	00 42 11.9	+0.3
DUNO	**Dulce Nombre,**	16.77	243		P	00 42 11.5	-0.4
PCON	**Cinco Dias**	17.01	201	*e*P	Pn	00 42 13.2	+0.1
Y60A	**Bolivia**	17.04	337	Pn	Pn	00 42 12.3	-0.5
Y60A				IAmb	IAmb	00 42 17.9	
	comp=Z,136nm,1.0s						
SOTA	**Rioblanco**	17.26	201	*e*P	P	00 42 18.9	+1.2
Y59A	**Loris**	17.27	336	Pn	Pn	00 42 15.9	+0.2
Y59A				IAmb	IAmb	00 42 17.0	
	comp=Z,77nm,0.6s						
255A	**Hazlehurst**	17.32	323	P	P	00 42 18.7	+0.9
255A				IAmb	IAmb	00 42 50.0	
	comp=Z,140nm,1.4s						
TIGA	**Tifton**	17.62	320	P	P	00 42 23.1	+2.0
	baz=134						
X58A	**Rowland**	17.95	335	P	P	00 42 25.0	+0.3
X58A				IAmb	IAmb	00 42 26.4	
	comp=Z,45nm,0.6s						
154A	**Montrose**	18.18	324	P	P	00 42 29.1	+1.7
BIRD	**Birdtown, Kers**	18.49	333	P	P	00 42 30.6	-0.1
ESQI	**Esquipulas**	18.54	261		Pn	00 42 33.3	+1.7
ESQI				IAmb	IAmb	00 42 57.0	
	comp=Z,69nm,1.1s						
JSC	**Jenkinsville**	18.54	331	P	Pn	00 42 32.4	+0.9
PTLC	**Puerto Leguiza**	18.61	194	*e*P	Pn	00 42 38.0	+5.6
BOAV	**Boa Vista**	18.63	147	*e*P	Pn	00 42 33.7	+1.0
BOAV	**Boa Vista**	18.63	147	P	Pn	00 42 33.3	+0.7
W57A	**Gilead**	18.73	335	P	P	00 42 33.2	-0.1
GOGA	**Godfrey**	18.98	325	P	Pn	00 42 44.5	+7.8
	baz=139						
GOGA	**Godfrey**	18.98	325	P	Pn	00 42 37.0	+0.2
GOGA				IAmb	IAmb	00 42 46.0	
	comp=Z,75nm,1.6s						
HODGE	**Hodges**	18.98	329	P	Pn	00 42 36.8	0.0
HODGE				IAmb	IAmb	00 42 42.9	
	comp=Z,78nm,1.6s						
U59A	**Littleton**	19.04	341	P	Pn	00 42 38.8	+1.4
152A	**Waverly Hall**	19.16	321	P	P	00 42 38.6	+0.5
152A				IAmb	IAmb	00 42 53.7	
	comp=Z,72nm,1.6s						
PAULI	**Pauline**	19.25	330	P	Pn	00 42 40.3	+0.3
KMSC	**Kings Mountain**	19.29	332	P	Pn	00 42 41.3	+0.8
	baz=147						
KMSC	**Kings Mountain**	19.29	332	P	Pn	00 42 41.2	+0.7
KMSC				IAmb	IAmb	00 42 47.5	
	comp=Z,62nm,1.4s						
APG	**El Apazote**	19.49	263	P	Pn	00 42 43.0	-0.3
	comp=Z,0.3nm,0.3s,baz=210,slow=14,SNR=2.7						
APG				LR	LR	00 49 37.3	
	comp=Z,150nm,21.6s,baz=98,slow=35						
T59A	**Double "B" Far**	19.54	343	P	Pn	00 42 42.9	-0.6
Y52A	**Lilburn**	19.65	324	P	Pn	00 42 44.7	-0.1
Y52A				IAmb	IAmb	00 42 53.0	
	comp=Z,62nm,1.2s						
OTAV	**Otavalo**	19.69	204	*e*P	Pn	00 42 46.6	+0.7
OTAV	**Otavalo**	19.69	204	*e*P	Pn	00 42 48.0	+2.1
OTAV	**Otavalo**	19.69	204	P	Pn	00 42 47.0	+1.1
OTAV				IAmb	IAmb	00 42 58.0	
	comp=Z,57nm,1.1s						
V55A	**Taylorsville**	19.84	333	P	P	00 42 46.2	+0.8
Z51A	**Franklin**	19.89	321	P	Pn	00 42 47.3	-0.4
Z51A				IAmb	IAmb	00 42 56.4	
	comp=Z,107nm,1.7s						
R58B	**Mineral**	20.56	343	P	Pn	00 42 54.4	-1.1
R58B				IAmb	IAmb	00 43 03.0	
	comp=Z,81nm,1.4s						
U54A	**Nelsons Funny**	20.66	333	P	P	00 42 55.6	+1.1
U54A				IAmb	IAmb	00 43 05.5	
	comp=Z,73nm,1.1s						
BLA	**Blacksburg**	20.70	337	P	Pn	00 42 59.7	+2.4
	baz=152						
BLA	**Blacksburg**	20.70	337		P	00 42 56.0	+1.1
BLA				IAmb	IAmb	00 43 11.5	
	comp=Z,38nm,0.8s						
CCIG	**Comitan**	20.83	268	P	Pn	00 42 58.7	-0.3
CCIG				IAmb	IAmb	00 43 29.1	
	comp=Z,34nm,0.8s						
TKL	**Tuckaleechee C**	20.87	328	P	P	00 42 56.5	-0.2
	comp=Z,11nm,1.0s,baz=284,slow=5.3,SNR=3.4						
TKL				S	S	00 46 36.7	-13
	comp=Z,7.9nm,0.7s,baz=118,slow=12,SNR=3.6						
TKL				LR	LR	00 50 43.3	
	comp=Z,446nm,20.8s,baz=146,slow=36						
TKL	**Tuckaleechee C**	20.87	328	P	P	00 42 57.4	+0.7
TKL				IAmb	IAmb	00 43 17.7	
	comp=Z,68nm,1.5s						
V52A	**Sevierville**	20.93	329	P	P	00 42 56.2	-1.1
V52A				IAmb	IAmb	00 43 09.6	
	comp=Z,58nm,1.4s						
Y49A	**Blount Mountai**	21.01	320	P	P	00 42 58.8	+0.6
Y49A				IAmb	IAmb	00 43 06.3	
	comp=Z,40nm,0.9s						
CPCT	**Cooper Cave**	21.09	326	P	P	00 42 59.0	-0.1
CPCT				IAmb	IAmb	00 43 11.7	
	comp=Z,47nm,1.2s						
TZTN	**Tazewell**	21.46	330	P	P	00 43 04.1	+1.0
	baz=144,SNR=10.0						
TZTN	**Tazewell**	21.46	330	P	P	00 43 03.6	+0.5
TZTN				IAmb	IAmb	00 43 10.9	
	comp=Z,71nm,0.9s						
R55A	**Marlinton**	21.55	339	P	P	00 43 05.2	+1.1
R55A				IAmb	IAmb	00 43 26.3	
	comp=Z,55nm,1.2s						
PTGA	**Pitinga**	21.61	150	P	P	00 43 05.0	+0.2
	comp=Z,18nm,0.9s,baz=341,slow=12,SNR=13						
PTGA				LR	LR	00 51 29.6	
	comp=Z,463nm,21.8s,baz=334,slow=37						
PTGA	**Pitinga**	21.61	150	P	P	00 43 05.7	+0.9
PTGA				IAmb	IAmb	00 43 11.8	
	comp=Z,37nm,1.0s						
SDMD	**Soldier's Deli**	21.67	346	P	P	00 43 05.9	+0.7
SDMD				IAmb	IAmb	00 43 15.0	
	comp=Z,29nm,0.9s						
P60A	**Greenville**	21.82	349	P	P	00 43 07.1	+0.3
P60A				IAmb	IAmb	00 43 18.5	
	comp=Z,35nm,1.0s						
MDP	**Montagnes des**	21.82	125	P	P	00 43 06.8	-0.3
	comp=Z,23nm,0.9s,baz=6.9,slow=15,SNR=3.1						
Q56A	**Snyder Ridge,**	21.94	341	P	P	00 43 08.0	-0.1
P57A	**Homestead Farm**	22.02	344	P	P	00 43 09.6	+0.6
P57A				IAmb	IAmb	00 43 19.1	
	comp=Z,58nm,1.2s						
MVL	**Millersville**	22.13	348	P	P	00 43 10.9	+0.7
MVL				IAmb	IAmb	00 43 22.5	
	comp=Z,57nm,1.1s						
R53A	**Hurricane**	22.27	335	P	P	00 43 12.6	+0.9
R53A				IAmb	IAmb	00 43 25.9	
	comp=Z,40nm,0.9s						
TBTG	**Tabatinga, AM**	22.44	179	*e*P	P	00 43 15.9	+2.2
TBTG	**Tabatinga, AM**	22.44	179	P	P	00 43 14.2	+0.5
PAL	**Palisades**	22.73	353	P	P	00 43 16.6	0.0
	baz=171						
VBMS	**Vicksburg**	22.74	311	P	P	00 43 19.1	+2.4
	baz=122,SNR=5.4						
ODNJ	**Ogdensburg**	22.90	352	IAmb	IAmb	00 43 26.4	
	comp=Z,31nm,0.8s						
O56A	**Blue Knob Stat**	22.90	344	P	P	00 43 19.9	+1.5
	baz=160,SNR=6.2						
TRNY	**Table Rock, Ra**	22.91	353	IAmb	IAmb	00 43 26.5	
	comp=Z,27nm,0.8s						
N59A	**State Game Lan**	22.91	350	P	P	00 43 20.3	+1.8
	baz=167						
N59A	**State Game Lan**	22.91	350	IAmb	IAmb	00 43 28.1	
	comp=Z,55nm,1.2s						
Y45A	**Yeager Farm, C**	23.00	316	P	P	00 43 20.0	+0.5
N58A	**Sunbury**	23.02	348	IAmb	IAmb	00 43 28.2	
	comp=Z,33nm,1.0s						
P53A	**Whipple**	23.07	338	IAmb	IAmb	00 43 29.3	
	comp=Z,56nm,1.1s						
SSPA	**Standing Stone**	23.08	345	P	P	00 43 21.4	+1.2
	baz=162						
SSPA	**Standing Stone**	23.08	345	P	P	00 43 20.9	+0.7
SSPA				IAmb	IAmb	00 43 29.1	
	comp=Z,42nm,1.0s						
R50A	**Paris**	23.23	331	IAmb	IAmb	00 43 30.8	
	comp=Z,49nm,1.1s						
CMIG	**Matias Romero**	23.33	271	P	P	00 43 23.1	+0.1
	comp=Z,2.8nm,0.9s,baz=71,slow=18,SNR=1.8						
WVT	**Waverly**	23.42	322	P	P	00 43 23.8	+0.1
	baz=134						
WVT	**Waverly**	23.42	322	P	P	00 43 24.1	+0.4
WVT				IAmb	IAmb	00 43 31.9	
	comp=Z,29nm,0.8s						
MACA	**Manacapuru-AM**	23.47	155	*e*P	P	00 43 25.6	+1.2
MACA	**Manacapuru-AM**	23.47	155	P	P	00 43 24.5	+0.1
MACA				IAmb	IAmb	00 43 34.7	
	comp=Z,42nm,1.1s						
N54A	**Moraine State**	23.95	342	P	P	00 43 26.7	-2.1
	baz=157						
N54A	**Moraine State**	23.95	342	IAmb	IAmb	00 43 39.7	
	comp=Z,68nm,1.4s						
HRV	**Adam Dziewonsk**	24.05	358	P	P	00 43 30.8	+1.0
	baz=177						
HRV	**Adam Dziewonsk**	24.05	358	P	P	00 43 30.1	+0.3
BINY	**Binghamton**	24.20	350	P	P	00 43 32.5	+1.4
	baz=167,SNR=6.2						
BINY	**Binghamton**	24.20	350	IAmb	IAmb	00 43 38.8	
	comp=Z,34nm,0.9s						
ACSO	**Alum Creek Sta**	24.31	336	P	P	00 43 34.8	+2.6
	baz=150,SNR=6.2						
ACSO	**Alum Creek Sta**	24.31	336	IAmb	IAmb	00 43 39.6	
	comp=Z,43nm,1.1s						
M54A	**Oil Creek Stat**	24.36	343	P	P	00 43 35.0	+2.4
	baz=158						
M54A	**Oil Creek Stat**	24.36	343	IAmb	IAmb	00 43 41.0	
	comp=Z,48nm,1.2s						
P49A	**Miami Univ. Ec**	24.43	333	P	P	00 43 34.8	+1.5
	baz=146,SNR=6.7						
M53A	**WI Miller and**	24.59	341	P	P	00 43 37.7	+2.9
	baz=156,SNR=6.0						
J61A	**Chester**	24.94	356	P	P	00 43 39.6	+1.8
J61A				IAmb	IAmb	00 43 46.1	
	comp=Z,17nm,0.7s						
ERPA	**Erie**	25.01	343	P	P	00 43 38.8	+0.3
	baz=158,SNR=6.1						
ACCN	**Adirondack Com**	25.06	354	IAmb	IAmb	00 43 46.8	
	comp=Z,19nm,1.0s						
LCAR	**Lake Charles**	25.40	318	P	P	00 43 43.2	+1.1
PBMO	**Poplar Bluff**	25.40	320	IAmb	IAmb	00 43 51.2	
	comp=Z,21nm,1.0s						
W41B	**Gary Mavity, V**	25.58	315	P	P	00 43 46.4	+2.6
	baz=125						
X40A	**Basin Creek Fa**	25.59	313	P	P	00 43 45.6	+1.7
	baz=123,SNR=7.4						
MALB	**Monte Alegre**	25.65	140	*e*P	P	00 43 45.2	+0.7
P46A	**Rosedale**	25.66	329	P	P	00 43 46.2	+1.8
WHAR	**Wooly Hollow**	25.67	315	P	P	00 43 46.2	+1.6
WHAR				IAmb	IAmb	00 43 53.4	
	comp=Z,23nm,1.0s						
LBNH	**Lisbon**	25.80	358	P	P	00 43 47.1	+1.4
	baz=177						
LBNH	**Lisbon**	25.80	358	IAmb	IAmb	00 43 53.9	
	comp=Z,20nm,0.9s						
FCAR	**Ozark Folk Cen**	25.91	317	IAmb	IAmb	00 43 55.2	
	comp=Z,18nm,0.9s						
MCPB	**Macapa, AP**	25.95	134	*e*P	P	00 43 47.9	+0.6
CZSB	**Cruzeiro do Su**	26.05	185	*e*P	P	00 43 48.7	+0.5
CZSB	**Cruzeiro do Su**	26.05	185	P	P	00 43 48.7	+0.5
CZSB				IAmb	IAmb	00 43 51.9	
	comp=Z,37nm,1.0s						
H62A	**Milan**	26.11	359	IAmb	IAmb	00 43 56.4	
	comp=Z,19nm,0.8s						
SFIN	**Lafayette**	26.20	330	P	P	00 43 52.7	+3.5
	baz=142,SNR=7.2						
EMMW	**East Machias**	26.35	5	P	P	00 43 51.5	+0.9
EMMW				IAmb	IAmb	00 43 52.7	
	comp=Z,58nm,1.6s						
ATAH	**Atahualpa**	26.56	198	P	P	00 43 54.8	+1.6
	comp=Z,5.1nm,0.9s,baz=337,slow=3.4,SNR=3.4						
ATAH				LR	LR	00 56 13.9	
	comp=Z,202nm,19.5s,baz=12,slow=41						
W39A	**Magazine**	26.63	314	P	P	00 43 56.0	+2.7
	baz=123						
W39A	**Magazine**	26.63	314	P	P	00 43 53.8	+0.5
W39A				IAmb	IAmb	00 44 03.0	
	comp=Z,22nm,0.9s						
U40A	**Yellville**	26.67	317	P	P	00 43 54.6	+0.9
	baz=126						
CCM	**Cathedral Cave**	26.73	321	P	P	00 43 54.9	+0.8
	baz=131						
CCM	**Cathedral Cave**	26.73	321	P	P	00 43 53.8	-0.3
CCM				IAmb	IAmb	00 44 01.7	
	comp=Z,12nm,0.8s						
TLIG	**Tlapa**	26.77	273	P	P	00 43 54.8	0.0
TLIG				IAmb	IAmb	00 44 22.2	
	comp=Z,24nm,1.0s						
MGMO	**Mountain Grove**	26.77	319	IAmb	IAmb	00 44 05.3	
	comp=Z,18nm,0.8s						
HAL	**Halifax**	26.79	11	P	P	00 43 55.6	+1.1
HAL				IAmb	IAmb	00 43 56.7	
	comp=Z,26nm,1.0s						
PKME	**Peaks-Kenny Pk**	26.81	2	P	P	00 43 56.3	+1.6
	baz=182						
PKME	**Peaks-Kenny Pk**	26.81	2	P	P	00 43 55.4	+0.6
PKME				IAmb	IAmb	00 44 02.8	
	comp=Z,26nm,1.0s						
GGN	**Saint George**	26.82	6	P	P	00 43 55.6	+0.9
GGN				IAmb	IAmb	00 43 57.7	
	comp=Z,28nm,1.3s						
G65A	**Princeton**	26.84	4	P	P	00 43 55.9	+0.9
G65A				IAmb	IAmb	00 44 04.3	
	comp=Z,18nm,0.9s						
ITTB	**Itaituba**	26.86	146	*e*P	P	00 43 56.2	+0.8
F63A	**Nahmakanta, Br**	27.25	2	P	P	00 43 59.6	+0.8
SADO	**Sadowa**	27.29	346	LR	LR	00 53 56.0	
	comp=Z,343nm,21.7s,baz=178,slow=35						
F64A	**Sherman**	27.45	3	P	P	00 44 01.4	+0.9
F64A				IAmb	IAmb	00 44 08.1	
	comp=Z,19nm,1.1s						
R40A	**Maddies Statio**	27.49	321	P	P	00 44 02.0	+1.0
R40A				IAmb	IAmb	00 44 12.2	
	comp=Z,17nm,0.7s						
S39A	**Bolivar**	27.77	319	IAmb	IAmb	00 44 15.4	
	comp=Z,23nm,1.4s						
SAML	**Samuel**	28.09	165	P	P	00 44 06.9	+0.3
ETMB	**Extrema**	28.34	171	*e*P	P	00 44 09.5	+0.8
ETMB	**Extrema**	28.34	171	P	P	00 44 09.1	+0.4
BATG	**Bathurst New B**	29.03	6	P	P	00 44 15.7	+1.1
BATG				IAmb	IAmb	00 44 22.5	
	comp=Z,20nm,1.0s						
NPGB	**Novo Progresso**	29.32	148	*e*P	P	00 44 17.9	+0.3
T35A	**Sooner Cattle**	29.42	314	P	P	00 44 18.9	+0.7
T35A				IAmb	IAmb	00 44 26.6	
	comp=Z,12nm,0.7s						
TMAB	**Tom-Au,PA,Br**	30.15	131	*e*P	P	00 44 25.0	+0.2
NNA	**Nana**	30.84	192	P	P	00 44 30.7	-0.3
	comp=Z,7.2nm,0.7s,baz=0.0,slow=9.6,SNR=3.7						
PRPB	**Parauapebas**	31.77	138	*e*P	P	00 44 39.1	0.0
TXAR	**Lajitas Array**	32.19	296	P	P	00 44 42.9	0.0
	comp=Z,0.7nm,0.5s,baz=114,slow=8.3,SNR=15						
TXAR				PcP	PcP	00 47 32.1	+0.4
	comp=Z,1.2nm,0.8s,baz=116,slow=5.7,SNR=5.5						
TXAR				ScP	ScP	00 51 15.2	-0.2
	comp=Z,0.9nm,0.8s,baz=120,slow=7.4,SNR=6.9						
TXAR				LR	LR	00 59 34.2	
	comp=Z,62nm,21.3s,baz=0.0,slow=40						
TXAR	**Lajitas Array**	32.19	296	P	P	00 44 43.7	+0.8
TX32	**Lajitas Array**	32.19	296	P	P	00 44 43.9	+1.0
TX32				IAmb	IAmb	00 45 11.4	
	comp=Z,14nm,1.4s						
CLDB	**Colider**	32.47	152	*e*P	P	00 44 45.8	+0.5
DRLN	**Deer Lake**	32.51	16	P	P	00 44 45.9	+0.6
CBKS	**Cedar Bluff**	32.58	315	P	P	00 44 47.9	+1.8
	baz=120						
PDRB	**Porto dos Gac**	32.73	155	*e*P	P	00 44 48.0	+0.4
VILB	**Vilhena**	32.74	161	*e*P	P	00 44 48.8	+1.2
VILB	**Vilhena**	32.74	161	P	P	00 44 48.2	+0.6
MSTX	**Muleshoe**	32.74	305	P	P	00 44 48.2	+0.6
	baz=110						
ROSB	**Rosrio**	33.44	127	*e*P	P	00 44 53.1	-0.7
ECSD	**EROS Data Cent**	33.52	325	P	P	00 44 54.2	0.0
	baz=131						
ECSD	**EROS Data Cent**	33.52	325	P	P	00 44 54.2	0.0
K31A	**O'Neill**	34.05	321	P	P	00 44 59.3	+0.4
MNTX	**Cornudas Mount**	34.17	300	P	P	00 45 01.3	+1.3
	baz=104,SNR=12						
MNTX	**Cornudas Mount**	34.17	300	P	P	00 45 00.9	+0.8
LPAZ	**La Paz**	34.54	176	P	P	00 45 04.0	0.0
	comp=Z,3.1nm,0.5s,baz=335,slow=4.4,SNR=13						
LPAZ				LR	LR	01 00 13.5	
	comp=Z,358nm,20.0s,baz=359,slow=38						
LPAZ	**La Paz**	34.54	176	*e*P	P	00 45 04.5	+0.6
LPAZ	**La Paz**	34.54	176	P	P	00 45 04.8	+0.9
T25A	**Trinidad**	35.14	309	P	P	00 45 09.8	+1.2
	baz=113						
SMTB	**Santa Maria do**	35.23	138	*e*P	P	00 45 08.9	-0.4
SIV	**San Ignacio**	35.39	164	P	P	00 45 10.5	-0.1
	comp=Z,14nm,0.9s,baz=356,slow=8.9,SNR=48						
SIV				PcP	PcP	00 47 40.7	0.0
	comp=Z,2.0nm,0.7s,baz=110,slow=1.8,SNR=2.5						
PTLB	**Pontes e Lacer**	35.42	161	*e*P	P	00 45 09.6	-1.2
PTLB	**Pontes e Lacer**	35.42	161	P	P	00 45 11.0	+0.2
PTLB				IAmb	IAmb	00 45 11.8	
	comp=Z,25nm,1.4s						
SNDB	**Serra Nova Dou**	35.59	147	*e*P	P	00 45 12.9	+0.5
BNM	**Barren Site**	35.84	303	P	P	00 45 14.4	-0.3
ANMO	**Albuquerque**	35.94	305	P	P	00 45 16.4	+0.9
	comp=Z,1.2nm,0.6s,baz=111,slow=7.8,SNR=5.1						
ANMO				LR	LR	01 02 40.6	
	comp=Z,339nm,18.3s,baz=110,slow=41						
ANMO	**Albuquerque**	35.94	305	P	P	00 45 16.7	+1.2
	baz=108						
SDCO	**Great Sand Dun**	36.18	309	P	P	00 45 18.2	+0.6
	baz=112						
SDCO	**Great Sand Dun**	36.18	309	P	P	00 45 17.6	+0.1
NBPS	**Pedro II - PI**	36.45	126	*e*P	P	00 45 18.8	-1.1
SCHQ	**Schefferville**	36.48	3	P	P	00 45 19.9	+0.4
	comp=Z,20nm,0.9s,baz=200,slow=7.7,SNR=15						
SCHQ				LR	LR	00 59 07.7	
	comp=Z,123nm,20.5s,baz=221,slow=34						
SCHQ	**Schefferville**	36.48	3	P	P	00 45 20.4	+0.8
PB16	**IPOC Station P**	36.51	179	P	P	00 45 19.9	-0.9
PB12	**IPOC Station P**	36.78	180	P	P	00 45 22.4	-0.2
PB12				IAmb	IAmb	00 45 26.8	
	comp=Z,27nm,1.5s						
NBMO	**Morrinhos-CE**	36.89	123	*e*P	P	00 45 22.6	-1.0
SALV	**Santo Antonio**	37.04	156	*e*P	P	00 45 24.8	+0.1
ISCO	**Idaho Springs**	37.08	313	P	P	00 45 26.4	+1.2
	baz=115						
SLBS	**Sierra La Lagu**	37.18	285	P	P	00 45 27.9	+1.9
SLBS				IAmb	IAmb	00 45 35.2	
	comp=Z,17nm,1.1s						
PEXB	**Peixe**	37.35	143	*e*P	P	00 45 27.8	+0.4
319A	**Douglas**	37.35	298	P	P	00 45 28.4	+0.9
319A				IAmb	IAmb	00 45 31.1	
	comp=Z,14nm,0.9s						
E28A	**Huff**	37.55	325	P	P	00 45 30.2	+1.4
E28A				IAmb	IAmb	00 45 36.0	
	comp=Z,14nm,0.8s						
ULM	**Lac du Bonnet**	37.73	333	P	P	00 45 29.6	-0.6
	comp=Z,6.4nm,0.8s,baz=163,slow=9.3,SNR=3.8						
ULM				LR	LR	01 01 24.8	
	comp=Z,140nm,19.3s,baz=140,slow=37						
ULM	**Lac du Bonnet**	37.73	333	P	P	00 45 30.3	0.0
ULM				IAmb	IAmb	00 45 33.3	
	comp=Z,19nm,1.3s						
MDND	**Maddock**	37.79	328	P	P	00 45 32.5	+1.7
	baz=131						
PB11	**IPOC Station P**	37.92	179	P	P	00 45 31.5	-0.8
PB11				IAmb	IAmb	00 45 32.9	
	comp=Z,16nm,0.7s						
PB08	**IPOC Station P**	38.32	178	P	P	00 45 35.9	0.0
PB08				IAmb	IAmb	00 45 36.9	
	comp=Z,18nm,1.1s						
HSIG		38.42	294	P	P	00 45 36.8	+0.4
ARAG	**Araguaiana, MT**	38.52	150	*e*P	P	00 45 37.5	+0.2
TUC	**Tucson**	38.78	299	P	P	00 45 41.3	+1.8
	baz=101						
TUC	**Tucson**	38.78	299	P	P	00 45 40.3	+0.8
NBCL	**Cascavel-CE**	38.83	122	*e*P	P	00 45 38.9	-1.1
PP1B	**Ponte de Pedra**	38.90	156	*e*P	P	00 45 40.6	+0.2
O20A	**White River Ci**	39.06	312	P	P	00 45 44.1	+2.2
	baz=112						
O20A	**White River Ci**	39.06	312	P	P	00 45 43.2	+1.3
PB01	**IPOC Station P**	39.20	179	P	P	00 45 41.9	-1.1
PB01				IAmb	IAmb	00 45 43.1	
	comp=Z,15nm,0.8s						
SDBA	**SAO DESIDERIO**	39.63	139	*e*P	P	00 45 46.2	-0.5
PB07	**IPOC Station P**	39.88	179	P	P	00 45 48.2	-0.5
NBMA	**Muriti-CE**	40.38	127	*e*P	P	00 45 52.7	-0.3
BDFB	**Brasilia**	40.39	145	P	P	00 45 53.1	+0.2
	comp=Z,17nm,0.9s,baz=329,slow=10,SNR=16						
BDFB				LR	LR	01 02 57.8	
	comp=Z,378nm,19.7s,baz=314,slow=37						
BDFB	**Brasilia**	40.39	145	P	P	00 45 53.1	+0.2
BDFB				IAmb	IAmb	00 45 54.4	
	comp=Z,20nm,1.0s						
DGMT	**Dagmar**	40.59	325	P	P	00 45 55.5	+1.3
	baz=126						
DGMT	**Dagmar**	40.59	325	P	P	00 45 54.9	+0.6
DGMT				IAmb	IAmb	00 46 03.0	
	comp=Z,32nm,0.8s						
NBPA	**Parau_RN**	40.68	123	*e*P	P	00 45 54.4	-1.0
LAO	**LASA Array**	40.74	322	P	P	00 45 56.7	+1.1
	baz=122						
LVC	**Limon Verde**	40.78	178	P	P	00 45 55.2	-1.3
	comp=Z,7.8nm,1.0s,baz=8.1,slow=7.5,SNR=5.5						
LVC	**Limon Verde**	40.78	178	*e*P	P	00 45 56.3	-0.2
LVC	**Limon Verde**	40.78	178	P	P	00 45 55.1	-1.3
PDAR	**Pinedale Array**	41.01	315	P	P	00 45 57.8	-0.3
	comp=Z,0.4nm,0.4s,baz=122,slow=11,SNR=6.3						
PDAR				PcP	PcP	00 47 57.5	-0.6
	comp=Z,1.7nm,0.8s,baz=124,slow=6.2,SNR=5.5						
PDAR				ScP	ScP	00 51 47.4	-0.5
	comp=Z,0.2nm,0.6s,baz=316,slow=10,SNR=2.2						
AQDB	**Aquidauana**	41.24	159	*e*P	P	00 46 00.5	+0.7
AQDB	**Aquidauana**	41.24	159	P	P	00 45 59.8	0.0
AQDB				IAmb	IAmb	00 46 01.3	
	comp=Z,40nm,1.2s						
MPU	**Maple Canyon**	41.45	310	P	P	00 46 02.3	+0.6
JLU	**Jordanelle**	41.52	311	P	P	00 46 03.5	+1.2
NBPN	**Ponto Novo - B**	41.64	132	*e*P	P	00 46 03.2	0.0
CTU	**Camp Tracy**	41.76	311	P	P	00 46 04.8	+0.6
RLMT	**Red Lodge**	41.83	318	P	P	00 46 05.3	+0.6
	baz=117,SNR=6.8						
RLMT	**Red Lodge**	41.83	318	P	P	00 46 04.9	+0.1
W13A	**Hualapai Mount**	41.87	302	P	P	00 46 06.8	+1.5
HWUT	**Hardware Ranch**	41.95	312	P	P	00 46 05.9	+0.2
JANB	**Januaria**	42.03	141	*e*P	P	00 46 05.8	-0.7
IPMB	**Ipameri, GO**	42.23	148	*e*P	P	00 46 08.0	-0.1
DUG	**Dugway, Tooele**	42.37	310	P	P	00 46 10.0	+0.9
	baz=108						
DUG	**Dugway, Tooele**	42.37	310	P	P	00 46 09.8	+0.7
PSUT	**Pine Spring**	42.66	307	P	P	00 46 12.7	+1.1
ITRB	**Iturama**	42.68	152	*e*P	P	00 46 12.1	+0.5
IRM	**Iron Mountain**	42.71	301	P	P	00 46 14.0	+2.1
	baz=100						
BGU	**Big Grassy Mou**	42.76	311	P	P	00 46 12.6	+0.3
PB14	**IPOC Station P**	42.76	180	P	P	00 46 12.0	-0.6
PB14				IAmb	IAmb	00 46 13.0	
	comp=Z,22nm,0.9s						
SPR3	**Spring Creek 3**	43.14	308	P	P	00 46 16.8	+1.1
NBLA	**Lagarto - SE**	43.47	130	*e*P	P	00 46 18.1	-0.1
EGMT	**Eagleton**	43.49	322	P	P	00 46 19.2	+1.2
	baz=119,SNR=7.3						
EGMT	**Eagleton**	43.49	322	P	P	00 46 18.5	+0.5
BOZ	**Bozeman (W)**	43.54	318	P	P	00 46 19.4	+0.9
	baz=115						
BOZ	**Bozeman (W)**	43.54	318	P	P	00 46 19.6	+1.0
MC01	**Montes Claros**	43.54	142	*e*P	P	00 46 18.1	-0.7
FFC	**Flin Flon**	43.54	334	P	P	00 46 18.2	0.0
PFO	**Pinyon Flats O**	43.70	300	LR	LR	01 07 53.9	
	comp=Z,62nm,18.7s,baz=184,slow=41						
R11A	**Troy Canyon, C**	43.93	307	P	P	00 46 23.7	+1.9
	baz=104						
PCMB	**Pacaembu**	43.96	154	*e*P	P	00 46 21.8	-0.1
GDU01	**Guandu, BA**	44.08	134	*e*P	P	00 46 22.6	-0.4
HRY	**Holter Researc**	44.14	319	P	P	00 46 23.7	+0.4
ELK	**Elko**	44.30	310	P	P	00 46 25.3	+0.5
	comp=Z,3.1nm,1.0s,baz=148,slow=6.3,SNR=8.2						
ELK				PcP	PcP	00 48 09.9	+0.8
	comp=Z,0.5nm,0.3s,baz=304,slow=5.0,SNR=2.1						
ELK				LR	LR	01 07 22.3	
	comp=Z,99nm,18.8s,baz=111,slow=40						
ELK	**Elko**	44.30	310	P	P	00 46 25.6	+0.7
TRCB	**Terra Rica**	44.48	156	*e*P	P	00 46 26.2	+0.1
TRCB	**Terra Rica**	44.48	156	P	P	00 46 25.8	-0.3
BB19B	**Bebedouro**	44.70	150	*e*P	P	00 46 27.9	0.0
DIAM	**Diamantina, MG**	44.95	143	*e*P	P	00 46 29.5	-0.6
CMC01	**Camacan, BA**	45.30	136	*e*P	P	00 46 32.5	-0.2
FRB	**Frobisher Bay**	45.33	1	P	P	00 46 32.2	-0.2
	comp=Z,9.1nm,0.8s,baz=178,slow=8.3,SNR=3.4						
NV11	**Mina Array Sit**	45.91	306	P	P	00 46 39.1	+1.5
GUA01	**Guaratinga, BA**	46.00	137	*e*P	P	00 46 38.1	-0.1
KVN	**Kaiserville**	46.00	307	P	P	00 46 39.7	+1.4
NVAR	**Mina Array Bea**	46.03	306	P	P	00 46 39.0	+0.4
	comp=Z,2.9nm,0.8s,baz=89,slow=7.2,SNR=15						
NVAR				PP	PP	00 48 22.2	-4.3
	comp=Z,1.5nm,0.7s,baz=114,slow=4.6,SNR=3.6						
NVAR				LR	LR	01 08 36.3	
	comp=Z,236nm,18.0s,baz=96,slow=40						
FRTB	**Fartura**	46.22	153	*e*P	P	00 46 40.0	+0.1

CPUP	Villa Florida	46.24	164	P	P	00 46 38.8	-1.2
	comp=Z,23nm,1.0s,baz=350,slow=8.8,SNR=15						
CPUP				LR	LR	01 07 13.1	
	comp=Z,177nm,18.9s,baz=354,slow=38						
CPUP	Villa Florida	46.24	164	eP	P	00 46 39.3	-0.7
CPUP	Villa Florida	46.24	164	P	P	00 46 39.3	-0.7
RCLB	Rio Claro- Sao	46.33	150	eP	P	00 46 41.2	+0.4
PTGB	Pitanga	46.43	157	eP	P	00 46 41.5	-0.1
BSCB	Bom Sucesso	46.52	146	eP	P	00 46 41.7	-0.7
NAN01	Guarapari, ES	46.73	139	eP	P	00 46 43.6	-0.4
SJMB	Sao Joao De Ma	46.73	141	eP	P	00 46 44.6	+0.6
BSFB	Barra de Sao F	47.04	140	eP	P	00 46 46.5	+0.1
VAO	Valinhos	47.10	150	eP	P	00 46 47.0	+0.1
RIB01	Linhares ES	47.68	140	eP	P	00 46 50.9	-0.5
PARB	Paraibuna	48.03	149	eP	P	00 46 54.6	+0.5
EDM	Edmonton	48.03	327	P	P	00 46 53.8	0.0
NEW	Newport	48.05	319	P	P	00 46 54.1	+0.1
	comp=Z,8.4nm,0.9s,baz=128,slow=8.7,SNR=13						
NEW				LR	LR	01 07 35.6	
	comp=Z,206nm,20.1s,baz=119,slow=37						
NEW	Newport	48.05	319	P	P	00 46 54.4	+0.4
	baz=112,SNR=7.2						
NEW	Newport	48.05	319	P	P	00 46 54.2	+0.1
NEW				IAmb	IAmb	00 46 56.1	
	comp=Z,10nm,0.9s						
PET01	Itanhaem-SP	48.06	151	eP	P	00 46 54.5	+0.3
G08A	Pilot Rock	48.24	315	P	P	00 46 55.7	0.0
MAN01	Angra dos Reis	48.48	147	eP	P	00 46 56.9	-0.7
ALF01	Guarapari-ES	48.48	142	eP	P	00 46 57.4	-0.2
DUB01	Friburgo-RJ	48.70	145	eP	P	00 46 59.1	-0.2
ITAB	Concordia	48.70	158	eP	P	00 46 58.9	-0.2
ITAB	Concordia	48.70	158	P	P	00 46 59.2	0.0
CAM01	Campos-RJ	48.89	144	eP	P	00 47 00.6	-0.1
ITQB	Itaqui	49.60	164	eP	P	00 47 05.2	-0.8
ITQB	Itaqui	49.60	164	P	P	00 47 05.2	-0.8
YBH	Yreka Blue Hor	50.00	309	P	P	00 47 08.3	-0.8
	comp=Z,1.8nm,0.7s,baz=92,slow=7.3,SNR=5.6						
YBH	Yreka Blue Hor	50.00	309	P	P	00 47 08.2	-1.0
SFJD	Kangerlussuaq	50.24	10	P	P	00 47 08.8	-1.6
	comp=Z,5.7nm,0.6s,baz=251,slow=10,SNR=2.2						
SFJD				LR	LR	01 05 36.6	
	comp=Z,224nm,20.5s,baz=200,slow=33						
SFJD	Kangerlussuaq	50.24	10	P	P	00 47 10.1	-0.3
H04A	Detroit Lake	50.28	313	P	P	00 47 11.5	+0.3
H04A				IAmb	IAmb	00 47 19.8	
	comp=Z,8.6nm,0.6s						
DY2G	Dye2	50.58	12	eP	P	00 47 12.0	-1.3
DY2G				IAmb	IAmb	00 47 30.2	
	comp=Z,4.5nm,0.7s						
CNLB	Canela	51.05	158	eP	P	00 47 17.5	+0.4
CPSB	Cacapava Do Su	51.20	161	eP	P	00 47 16.6	-1.5
PLTB	Pedras Altas	52.42	162	eP	P	00 47 26.3	-0.8
CLRS	Cowichan Lake	52.64	318	P	P	00 47 29.1	+0.4
YKA	Yellowknife Ar	53.56	336	P	P	00 47 34.1	-1.2
	comp=Z,3.0nm,0.9s,baz=106,slow=7.9,SNR=10						
YKA				PcP	PcP	00 48 41.8	0.0
	comp=Z,3.3nm,0.9s,baz=109,slow=6.8,SNR=4.4						
YKA				LR	LR	01 10 38.7	
	comp=Z,279nm,18.8s,baz=0.0,slow=36						
BBB	Bella Bella	55.97	321	P	P	00 47 53.0	+0.2
	comp=Z,9.4nm,1.1s,baz=86,slow=16,SNR=1.9						
BBB				LR	LR	01 12 33.5	
	comp=Z,213nm,18.4s,baz=125,slow=37						
TRQA	Tornquist	56.71	172	P	P	00 47 59.6	+1.4
TRQA				IAmb	IAmb	00 48 10.8	
	comp=Z,12nm,1.2s						
LC01	Cunco	57.01	181	P	P	00 47 59.8	-0.5
SUMG	Summit	57.20	11	IAmb	IAmb	00 48 09.2	
	comp=Z,14nm,1.0s						
SUMG	Summit	57.20	11	P	P	00 48 01.8	0.0
SUMG	Summit	57.20	11	i P	P	00 48 01.3	-0.5
RES	Resolute Bay	57.86	353	P	P	00 48 05.2	-0.7
	comp=Z,2.8nm,0.8s,baz=174,slow=11,SNR=6.8						
TULEG	Thule	58.18	0	i P	P	00 48 07.3	-0.8
TULEG				IAmb	IAmb	00 48 14.5	
	comp=Z,9.3nm,0.8s						
DLBC	Dease Lake	58.70	328	P	P	00 48 11.9	-0.3
	comp=Z,4.5nm,0.6s,baz=126,slow=5.2,SNR=8.8						
DLBC	Dease Lake	58.70	328	P	P	00 48 12.8	+0.7
DLBC				IAmb	IAmb	00 48 24.2	
	comp=Z,7.3nm,0.9s						
PLCA	Paso Flores	58.82	180	P	P	00 48 12.6	-0.5
	comp=Z,11nm,0.9s,baz=358,slow=9.1,SNR=16						
PLCA				LR	LR	01 17 44.9	
	comp=Z,146nm,18.4s,baz=278,slow=40						
PLCA	Paso Flores	58.82	180	eP	P	00 48 13.3	+0.2
PLCA	Paso Flores	58.82	180	P	P	00 48 13.5	+0.3
ESDC	Sonseca Array	60.52	54	P	P	00 48 23.8	-1.2
	comp=Z,2.8nm,0.9s,baz=271,slow=7.3,SNR=11						
ESDC				LR	LR	01 10 27.6	
	comp=Z,75nm,20.3s,baz=290,slow=32						
ESDC	Sonseca Array	60.52	54	P	P	00 48 26.2	+1.2
ESBB	Sonseca Array	60.52	54	P	P	00 48 25.4	+0.4
ESBB				IAmb	IAmb	00 49 02.2	
	comp=Z,7.0nm,1.1s						
A36M	Sachs Harbour	62.08	343	P	P	00 48 35.0	+0.1
	baz=118,SNR=24						
A36M	Sachs Harbour	62.08	343	P	P	00 48 35.2	+0.3
EKA	Eskdalemuir Ar	62.16	37	P	P	00 48 34.8	-1.0
	comp=Z,2.3nm,0.8s,baz=269,slow=5.8,SNR=5.7						
N31M	Braeburn, Yuko	62.28	330	P	P	00 48 37.4	+0.9
	baz=103						
M30M	Minto, Yukon	62.98	332	P	P	00 48 41.7	+0.5
	baz=102						
INK	Inuvik	63.20	338	P	P	00 48 40.9	-1.6
	comp=Z,1.1nm,0.8s,baz=45,slow=4.6,SNR=5.3						
INK	Inuvik	63.20	338	P	P	00 48 42.0	-0.5
INK				IAmb	IAmb	00 48 48.7	
	comp=Z,14nm,1.6s						
KOWA	Kowa	63.51	83	P	P	00 48 44.2	-1.2
	comp=Z,4.7nm,0.6s,baz=299,slow=8.5,SNR=19						
KOWA	Kowa	63.51	83	P	P	00 48 45.5	+0.1
KOWA				IAmb	IAmb	00 48 54.2	
	comp=Z,9.7nm,0.8s						
DAG	Danmarks Havn	63.86	12	i P	P	00 48 46.5	-0.2
DAG				IAmb	IAmb	00 48 52.8	
	comp=Z,9.0nm,0.8s						
DAWY	Dawson	64.43	333	P	P	00 48 51.3	+0.5
	baz=101						
TIC	Toumodi	64.62	91	eP	P	00 48 52.6	-0.2
LIC	Lamto	64.73	92	eP	P	00 48 53.2	-0.3
	comp=Z,72nm,1.5s						
DBIC	Dimbokro	64.77	91	P	P	00 48 52.8	-0.9
	comp=Z,4.1nm,0.6s,baz=305,slow=5.6,SNR=7.6						
DBIC				LR	LR	01 12 38.4	
	comp=Z,137nm,21.2s,baz=283,slow=32						
DBIC	Dimbokro	64.77	91	P	P	00 48 53.1	-0.6
KIC	Kosan Boka	64.97	92	eP	P	00 48 55.7	+0.7
	comp=Z,16nm,0.6s						
CLF	Chambon-Foret	65.03	45	P	P	00 48 56.4	+1.5
BCAR	Beaver Creek A	65.33	332	P	P	00 48 57.2	+0.6
L27K	Beaver Creek,	65.35	332	P	P	00 48 57.7	+1.0
	baz=98						
L27K	Beaver Creek,	65.35	332	P	P	00 48 57.3	+0.6
L26K	Log Cabin Wild	66.03	332	P	P	00 49 02.5	+1.3
	baz=97						
GLB	Gilahina Butte	66.08	330	P	P	00 49 02.7	+1.2
J26L	Joseph Creek	66.30	333	P	P	00 49 04.0	+1.1
	baz=97						
SCRK	Sand Creek	66.42	333	P	P	00 49 04.9	+1.1
	baz=96,SNR=11						
SCRK	Sand Creek	66.42	333	P	P	00 49 05.0	+1.2
RIDG	Independent Ri	66.78	332	P	P	00 49 06.6	+0.7
	baz=96						
NOR	Nord	66.87	7	i P	P	00 49 05.3	-0.9
NOR				IAmb	IAmb	00 49 15.1	
	comp=Z,4.8nm,0.8s						
BMAR	Burnt Mountain	67.08	336	P	P	00 49 08.5	+0.7
J25K	Salcha River,	67.09	333	P	P	00 49 08.2	+0.3
	baz=95						
IL31		67.75	333	P	P	00 49 11.6	-0.3
ILAR	Eielson Array	67.75	333	P	P	00 49 10.9	-1.1
	comp=Z,2.0nm,0.8s,baz=102,slow=5.1,SNR=23						
ILAR				LR	LR	01 19 35.2	
	comp=Z,243nm,20.0s,baz=109,slow=37						
ILAR	Eielson Array	67.75	333	P	P	00 49 11.8	-0.2
POKR	Poker Plat Res	68.01	334	P	P	00 49 14.2	+0.6
	baz=94						
H24K	Noodor Dome	68.24	334	P	P	00 49 16.0	+0.9
	baz=94						
H24K	Noodor Dome	68.24	334	P	P	00 49 15.8	+0.7
H24K				IAmb	IAmb	00 49 28.9	
	comp=Z,7.2nm,0.9s						
SENIN	Lac Senin/Sane	68.53	47	P	P	00 49 18.5	+1.0
SENIN				IAmb	IAmb	00 49 29.0	
	comp=Z,12nm,1.2s						
RND	Reindeer	68.54	332	P	P	00 49 18.3	+1.2
MCK	McKinley	68.59	332	P	P	00 49 17.7	+0.3
	baz=92						
NEA2	Nenana	68.68	333	P	P	00 49 18.1	+0.3
	baz=92						
I23K	Minto, Yukon-K	68.82	334	P	P	00 49 19.1	+0.5
	baz=92						
I23K	Minto, Yukon-K	68.82	334	P	P	00 49 19.4	+0.7
I23K				IAmb	IAmb	00 49 23.1	
	comp=Z,6.1nm,0.8s						
TOLK	Toolik Lake Re	69.06	337	P	P	00 49 20.4	+0.1
	baz=93						
TRF	Thorofare Moun	69.19	332	P	P	00 49 21.8	+0.6
	baz=90						
TORD	Torodi Ar. Bea	69.21	83	P	P	00 49 21.1	-1.0
	comp=Z,7.6nm,1.0s,baz=294,slow=6.0,SNR=27						
TORD				LR	LR	01 19 12.6	
	comp=Z,72nm,18.3s,baz=270,slow=36						
TORD	Torodi Ar. Bea	69.21	83	P	P	00 49 22.6	+0.6
TORD				IAmb	IAmb	00 49 22.9	
	comp=Z,8.4nm,1.2s						
COLD	Coldfoot	69.24	336	P	P	00 49 22.3	+1.0
	baz=92						
MLY	Manley	69.40	333	P	P	00 49 22.5	+0.1
	baz=91						
MLY	Manley	69.40	333	IAmb	IAmb	00 49 31.1	
	comp=Z,6.3nm,1.0s						
BPAW	Bear Paw Mtn.	69.50	332	P	P	00 49 23.4	+0.4
	baz=90						
BPAW	Bear Paw Mtn.	69.50	332	IAmb	IAmb	00 49 30.9	
	comp=Z,9.4nm,0.7s						
I21K	Tanana	69.93	334	P	P	00 49 25.8	+0.3
	baz=90						
I21K	Tanana	69.93	334	IAmb	IAmb	00 49 26.6	
	comp=Z,9.5nm,1.1s						
NB2	NORSAR Subarra	70.05	31	P	P	00 49 27.1	+0.7
	comp=Z,1.3nm,0.7s,baz=272,slow=6.5						
NOA	NORSAR Array B	70.05	31	P	P	00 49 25.6	-0.8
	comp=Z,2.2nm,0.9s,baz=69,slow=15,SNR=5.2						
DAVOX	Davos/Dischmat	70.26	46	P	P	00 49 26.2	-1.9
	comp=Z,1.5nm,0.5s,baz=208,slow=9.7,SNR=5.7						
H21K	Melozitna Rive	70.27	334	P	P	00 49 28.0	+0.3
	baz=89						
EFI	East Falkland	70.60	172	P	P	00 49 29.4	-0.2
IMAR	Indian Mountai	70.65	334	P	P	00 49 30.1	+0.1
RETA	Reutte	70.78	45	eP	P	00 49 32.6	+1.3
	comp=Z,3.9nm,0.8s						
FETA	Feichten	70.81	46	eP	P	00 49 33.4	+1.9
	comp=Z,4.3nm,0.7s						
J20K	Nowinta River	70.89	333	P	P	00 49 31.4	0.0
	baz=87,SNR=5.7						
J20K	Nowinta River	70.89	333	P	P	00 49 31.2	-0.2
J20K				IAmb	IAmb	00 49 37.9	
	comp=Z,14nm,1.1s						
K20K	Telida	70.89	332	P	P	00 49 31.1	-0.4
	baz=87						
MOTA	Moosalm	71.03	45	P	P	00 49 32.7	-0.1
O19K	Port Alsworth	71.21	328	P	P	00 49 33.8	+0.4
	baz=86						
WATA	Walderalm	71.35	45	eP	P	00 49 38.4	+3.6
	comp=Z,2.6nm,0.5s						
SPITS	Spitsbergen Ar	71.47	13	P	P	00 49 33.6	-1.1
	comp=Z,18nm,1.1s,baz=160,slow=8.0,SNR=1.9						
STAL	STALIGIAL	72.26	46	P	P	00 49 40.1	0.0
STAL				IAmb	IAmb	00 49 51.4	
	comp=Z,15nm,1.3s						
KHC	Kasperske Hory	72.44	43	eP	P	00 49 42.4	+1.3
KHC				ex	x	00 49 49.3	
KHC	Kasperske Hory	72.44	43	P	P	00 49 42.5	+1.3
KHC				IAmb	IAmb	00 49 50.5	
	comp=Z,7.1nm,1.0s						
GEC2	GERESS Array S	72.56	44	P	P	00 49 42.3	+0.3
GERES	GERESS Array B	72.56	44	P	P	00 49 40.9	-1.1
	comp=Z,1.5nm,0.9s,baz=270,slow=2.7,SNR=9.1						
GERES				LR	LR	01 18 19.7	
	comp=Z,36nm,19.2s,baz=311,slow=33						
GERES	GERESS Array B	72.56	44	P	P	00 49 42.0	0.0
PRU	Pruhonice	72.94	42	eP	P	00 49 52.9	+8.9
CKRC	Cesky Krumlov	72.96	43	eP	P	00 49 52.2	+8.0
OBKA	Obir	73.48	46	eP	P	00 49 52.6	+5.2
	comp=Z,4.6nm,0.8s						
SOKA	Soboth	73.78	46	eP	P	00 49 50.6	+1.4
	comp=Z,1.4nm,0.6s						
CHVC	Chvalec	73.81	41	eP	P	00 49 57.2	+8.0
OSTC	Ostas	73.92	42	eP	P	00 49 58.9	+9.1
DPC	Dobruska-Polom	74.02	42	eP	P	00 49 58.4	+8.0
KRLC	Kraliky	74.35	42	eP	P	00 50 01.2	+8.8
ARCES	ARCESS Array B	74.98	21	P	P	00 49 55.9	+0.3
	comp=Z,6.1nm,1.0s,baz=316,slow=3.3,SNR=7.9						
ARCES	ARCESS Array B	74.98	21	P	P	00 49 56.4	+0.8
VAE	Valguarnera	75.05	55	LR	LR	01 19 21.7	
	comp=Z,96nm,18.2s,baz=350,slow=33						
PSZ	Piszkesteto	76.79	44	P	P	00 50 07.4	+0.9
PSZ				IAmb	IAmb	00 50 16.7	
	comp=Z,13nm,1.3s						
FINES	FINESS Array B	77.09	29	P	P	00 50 08.0	+0.3
	comp=Z,3.0nm,0.6s,baz=259,slow=1.0,SNR=13						
FIA1	FINESS Array S	77.09	29	P	P	00 50 08.9	+1.2
DIVS	Divibare	77.73	48	P	P	00 50 12.5	+0.7
DIVS				IAmb	IAmb	00 50 33.5	
	comp=Z,18nm,1.8s						
BUR08	Bucovina Ar. S	80.32	43	P	P	00 50 27.5	+1.5
BUR08				IAmb	IAmb	00 50 34.7	
	comp=Z,13nm,1.4s						
BURAR	Bucovina Array	80.34	43	P	P	00 50 27.1	+1.0
MLR	Muntele Rosu	81.44	45	P	P	00 50 32.0	0.0
	comp=Z,6.1nm,0.9s,baz=50,slow=1.6,SNR=9.0						
MLR				LR	LR	01 22 00.6	
	comp=Z,45nm,19.5s,baz=322,slow=32						
MLR	Muntele Rosu	81.44	45	P	P	00 50 32.9	+0.8
AKASG	Malin Array Be	81.90	39	LR	LR	01 23 52.6	
	comp=Z,50nm,19.8s,baz=335,slow=34						
KLMR	Klimovskoe	83.40	28	eP	P	00 50 40.0	-1.8
KLMR				AMP		00 50 43.7	
	comp=Z,14nm,1.3s						
IDI	Anoyia	83.78	55	P	P	00 50 44.0	-0.4
	comp=Z,6.5nm,0.6s,baz=307,slow=14,SNR=7.2						
BILL	Bilibino	84.58	342	P	P	00 50 47.9	+0.2
PPT	Papeete	85.62	250	LR	LR	01 20 59.6	
	comp=Z,49nm,20.2s,baz=66,slow=30						
BRTR	Keskin Array B	88.76	48	P	P	00 51 08.6	-0.3
	comp=Z,1.5nm,0.8s,baz=261,slow=4.9,SNR=3.5						
BRTR	Keskin Array B	88.76	48	P	P	00 51 08.7	-0.2
TIXI	Tiksi	89.22	354	P	P	00 51 09.8	-0.3
TIXI				IAmb	IAmb	00 51 17.1	
	comp=Z,8.8nm,1.1s						
NRIK	Noril'sk	91.10	8	P	P	00 51 18.9	-0.1
	comp=Z,1.3nm,0.3s,baz=57,slow=3.1,SNR=4.1						
KBZ	Khabaz	93.24	42	LR	LR	01 30 28.6	
	comp=Z,42nm,21.1s,baz=338,slow=34						
PETK	Petropavlovsk-	97.58	333	LR	LR	01 37 03.2	
	comp=Z,37nm,20.9s,baz=71,slow=36						
LZH	Lanzhou	125.55	6	ePKP	PKiKP	00 57 18.5	+1.5
CD2	Chengdu	130.66	7	PKP	PKPdf	00 57 26.3	-0.1
CMAR	Chiang Mai Arr	141.92	16	PKP	PKPdf	00 57 44.6	-2.8
	comp=Z,0.9nm,0.4s,baz=334,slow=3.5,SNR=9.5						
CMAR	Chiang Mai Arr	141.92	16		PKPdf	00 57 46.8	-0.7
STKA	Stephens Creek	148.19	239	PKPbc	PKPdf	00 57 58.0	+0.2
	comp=Z,7.5nm,1.1s,baz=188,slow=4.5,SNR=4.3						
STKA	Stephens Creek	148.19	239		PKPbc	00 58 00.7	-0.5
WRA	Warramunga Arr	156.56	262	PKP	PKPdf	00 58 09.3	-1.3
	comp=Z,2.6nm,0.9s,baz=90,slow=0.8,SNR=12						
WRA				PKPab	PKPab	00 58 39.5	0.0
	comp=Z,1.9nm,0.6s,baz=86,slow=3.9,SNR=18						
ASAR	Alice Springs	156.71	253	PKP	PKPdf	00 58 08.9	-1.8
	comp=Z,1.3nm,0.9s,baz=121,slow=2.6,SNR=6.9						
ASAR				PKPab	PKPab	00 58 40.0	-0.1
	comp=Z,4.8nm,0.7s,baz=104,slow=4.7,SNR=26						
ASAR	Alice Springs	156.71	253		PKPdf	00 58 09.5	-1.2
ASAR				PKPab	PKPab	00 58 39.3	-0.8

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*IDC **26** 00:41:21.7±0.9, 51°.49N×15°.97E, h0^{km}, mb1 3.5/7, mb1mx3.3/62, mbtmp3.3/7, ML2.9/7, Error ellipse: s-maj=13.4km s-min=8.3km az=112.0*

*PRU **26** 00:41:22.1±0.0, 51°.43N×16°.07E, h0^{km}*

*VIE **26** 00:41:22.0, 51°.43N×16°.15E, h0^{km}, ML2.6/3 71 km WNW of Wroclaw Suspected Mining induced.*

ISC 26 00:41:19.6±0.7**, 51°.53N**±0°.04×**16°.10E**±0°.02**, h0**^{km}**, n37,** σ**1^{s}09**/75**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.70	170	i Pg	Pg	00 41 33.8	+0.8
KSP				eSg	Sg	00 41 42.2	+0.2
CHVC	Chvalec	0.95	182	ePG	Pg	00 41 38.2	+0.5
CHVC				eSG	Sg	00 41 48.4	-1.6
	comp=Z,34nm,0.6s						
OSTC	Ostas	0.98	176	ePG	Pg	00 41 38.7	+0.4
OSTC				eSG	Sg	00 41 50.3	-0.7
	comp=Z,75nm,1.1s						
UPC	Upice	1.03	183	ePG	Pg	00 41 39.4	+0.1
UPC				eSG	Sg	00 41 52.1	-0.5
	comp=Z,92nm,0.4s						
DPC	Dobruska-Polom	1.19	173	ePG	Pg	00 41 42.6	+0.2
DPC				eSG	Sg	00 41 57.2	-0.7
	comp=Z,28nm,0.6s						
PVCC	Panska Ves	1.40	224	ePG	Pb	00 41 46.9	+0.4
PVCC				eSG	Sb	00 42 04.7	-0.1
	comp=Z,110nm,0.3s						
BRG	Berggiesshubel	1.51	245	Pg	Pg	00 41 49.5	+1.0
BRG				Sg	Sn	00 42 09.6	+1.4
BRG				Amp		00 42 10.1	
	comp=Z,39nm,0.5s						
KRLC	Kraliky	1.52	163	ePG	Pn	00 41 48.2	+0.1
KRLC				eSG	Sg	00 42 06.2	-2.3
	comp=Z,66nm,0.9s						
PRA	Prague	1.81	216	ePG	Pn	00 41 52.5	+0.6
PRA				eSG	Sg	00 42 17.4	-0.1
	comp=Z,28nm,0.9s						
PRU	Pruhonice	1.84	213	ePG	Pb	00 41 53.7	-0.3
PRU				eSG	Sg	00 42 18.2	-0.3
	comp=Z,27nm,0.6s						
CLL	Collm	1.95	265	ePn	Pn	00 41 54.0	+0.1
CLL				ePg	Pg	00 41 57.0	+0.1
CLL				i		00 42 00.4	
CLL				eSg	Sg	00 42 22.0	-0.2
	comp=Z,15nm,0.7s						
CLL				LmV		02 25 00.0	
	comp=Z,200nm,18.1s						
MORC	Moravsky Berou	1.98	152	ePN	Pn	00 41 54.6	+0.2
MORC				eSG	Sb	00 42 21.1	-0.7
OKC	Ostrava-Krasne	2.14	142	ePG	Pb	00 41 59.8	+0.6
OKC				eSG	Sb	00 42 26.9	+0.6
	comp=Z,42nm,0.7s						
VRAC	Vranov	2.25	172	Pn	Pn	00 41 59.2	+1.1
	comp=Z,1.2nm,0.3s,baz=346,slow=17,SNR=10						
VRAC				Pg	Pg	00 42 04.4	+1.7
	comp=Z,1.7nm,0.3s,baz=346,slow=14,SNR=7.5						
VRAC				Lg	Lg	00 42 30.5	
	comp=Z,1.9nm,0.3s,baz=288,slow=20,SNR=10						
VRAC	Vranov	2.25	172	ePN	Pn	00 41 58.8	+0.7
VRAC				eSG	Sb	00 42 30.0	+0.5
TREC	Trest	2.28	190	ePG	Pb	00 42 00.1	-1.4
TREC				eSG	Sb	00 42 30.4	+0.2
	comp=Z,16nm,0.5s						
KRUC	Moravsky	2.48	175	ePN	Pn	00 42 01.1	-0.1
KRUC				eSG	Sb	00 42 37.1	+1.0
NKC	Novy Kostel	2.65	242	ePN	Pn	00 42 05.0	+1.4
NKC				ePG	Pg	00 42 09.8	-0.6
NKC				eSG	Sg	00 42 45.0	+0.3
	comp=Z,21nm,0.4s						
OJC	Ojcow	2.69	118	ePg	Pg	00 42 12.6	+1.5
OJC				eSg	Sg	00 42 47.5	+1.6
JAVC	Velka Javorina	2.86	159	ePN	Pn	00 42 08.0	+1.5
KHC	Kasperske Hory	2.90	215	ePN	Pn	00 42 07.8	+0.8
KHC				ePG	Pb	00 42 13.3	+1.2
KHC				eSN	Sn	00 42 42.3	-0.2
KHC				eSG	Sg	00 42 52.0	-0.6
	comp=Z,10nm,0.5s						
CKRC	Cesky Krumlov	2.95	204	ePN	Pn	00 42 08.7	+1.0
CKRC				ePG	Pb	00 42 13.0	0.0
CKRC				eSG	Sb	00 42 51.9	+2.3
	comp=Z,13nm,0.7s						
GERES	GERESS Array B	3.10	211	Pn	Pn	00 42 10.7	+0.8
	comp=Z,0.6nm,0.3s,baz=28,slow=12,SNR=20						
GERES				Pg	Pb	00 42 17.2	+1.6
	comp=Z,2.2nm,0.3s,baz=30,slow=17,SNR=41						
GERES				Sn	Sn	00 42 45.7	-1.9
	comp=Z,1.2nm,0.3s,baz=30,slow=25,SNR=2.2						
GERES				Lg	Lg	00 42 58.1	
	comp=Z,2.4nm,0.3s,baz=33,slow=26,SNR=8.9						
SMOL	Smolenice	3.14	164	ePG	Pg	00 42 19.8	0.0
SMOL				eSG	Sg	00 42 59.7	-0.8
LANS	Liptovska Anna	3.22	137	ePN	Pn	00 42 12.5	+1.1
LANS				ePG	Pg	00 42 21.3	+0.1
LANS				eSG	Sg	00 43 03.4	+0.5
MODS	Modra-Piesok	3.25	166	ePG	Pg	00 42 21.2	-0.7
MODS				eSG	Sg	00 43 02.3	-1.8
NIE	Niedzica	3.42	127	ePg	Pg	00 42 25.3	+0.2
NIE				eSg	Sg	00 43 09.6	+0.3
CONA	Conrad Observa	3.61	183	i Pn	Pn	00 42 18.1	+1.2
	comp=Z,1.5nm,0.3s						
CONA				ePg	Pg	00 42 28.3	-0.4
	comp=Z,3.5nm,0.3s						
CONA				eSg	Sg	00 43 14.5	-1.1
	comp=Z,6.5nm,0.4s						
MOA	Molln	3.88	199	ePn	Pn	00 42 21.8	+1.4
	comp=Z,0.6nm,0.2s						
MOA				ePg	Pg	00 42 33.9	+0.1
	comp=Z,3.1nm,0.5s						
MOA				eSg	Sg	00 43 23.7	-0.2
ARSA	Arzberg	4.30	185	eSg	Sg	00 43 35.0	-2.8
	comp=Z,6.5nm,0.6s						
SOKA	Soboth	4.91	189	Sg	Sg	00 43 58.8	+1.5
	comp=Z,1.8nm,0.7s						
WTTA	Wattenberg	5.17	216	eSg	Sg	00 44 07.3	+1.7
	comp=Z,4.9nm,0.6s						
AKASG	Malin Array Be	8.30	91	Pn	Pn	00 43 21.3	+0.2
	comp=Z,0.4nm,0.3s,baz=277,slow=13,SNR=1.7						
AKASG				Pg	Pb	00 43 43.3	-0.8
	comp=Z,0.5nm,0.3s,baz=266,slow=13,SNR=4.3						
NOA	NORSAR Array B	9.90	346	Pg	Pg	00 44 22.5	
	comp=Z,0.0nm,0.3s,baz=139,slow=20,SNR=2.0						
FINES	FINESS Array B	11.35	25	Pn	Pn	00 44 01.3	-1.4
	comp=Z,0.1nm,0.3s,baz=207,slow=15,SNR=3.7						
EKA	Eskdalemuir Ar	12.09	296	Pn	Pn	00 44 13.9	+1.0
	baz=105,slow=13,SNR=2.9						
ARCES	ARCESS Array B	18.60	10	Pn	P	00 45 35.1	-3.0
	baz=187,slow=14,SNR=1.6						
ARCES				P	Pn	00 45 38.8	+0.6
	baz=194,slow=11,SNR=4.9						

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*NIED **26** 00:43:57.6, 28°.99N×129°.44E, h70^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$0.58; M$_{\theta\theta}$1.14; M$_{\phi\phi}$-1.73; M$_{r\theta}$7.17; M$_{\theta\phi}$-2.45; M$_{\phi r}$3.16; Fault plane solution: M$_0$8.33000×10^{14} NP1:ϕ_s67.00000°, δ87.00000°, λ109.00000°. NP2:ϕ_s165.00000°, δ19.00000°, λ9.00000°.*

*JMA **26** 00:43:57.5±0.3, 28°.99N×129°.44E, h70^{km}±3^{km}, M3.8*

JMA Felt I J1.

*NEIC **26** 00:43:58.3±1.6, 28°.89N±0°.06×129°.6E±0°.1, h81^{km}±9^{km}, mb4.3/15, Error ellipse: s-maj=13.8km s-min=8.8km az=100.0*

*IDC **26** 00:43:58.7±1.1, 28°.94N×129°.45E, h88^{km}±11^{km}, mb3.6/11, mb1 3.8/14, mb1mx3.5/50, mbtmp3.9/14, Error ellipse: s-maj=23.2km s-min=9.0km az=112.0*

ISC 26 00:43:57.7±0.7**, 28°.92N**±0°.04×**129°.48E**±0°.06**, h76**^{km}±6^{km}**, n53,** σ**1^{s}30**/61**, mb4.1**/20**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTAJ	Takarajima	0.33	314	P	Pn	00 44 08.5	-1.3
JTAJ				eS	Sn	00 44 17.0	-1.6
JAM	Amami Oshima	0.52	167	P	Pn	00 44 10.8	-0.5
JAM				eS	Sn	00 44 20.7	-0.5
JAMN	Amaminishikomi	0.72	201	P	Pn	00 44 13.4	+0.1
JAMN				eS	Sn	00 44 25.5	+0.6
JZK	Kikaishima	0.74	144	P	Pn	00 44 15.0	+1.4
JZK				eS	Sn	00 44 28.8	+3.5
JNN	Nakanoshima	0.98	21	P	Pn	00 44 15.3	-1.0
JTK	Tokunoshima	1.22	202	P	Pn	00 44 19.7	+0.4
JYAK	Yakushimahirau	1.59	34	P	Pn	00 44 23.3	-0.8
JKC	Kuchinoerabu	1.66	22	P	Pn	00 44 23.5	-1.5
JKC				eS	Sn	00 44 44.2	-1.4
JOKE	Okinoerabujima	1.75	207	P	Pn	00 44 27.6	+1.4
JMTN	Minamitane	1.93	40	P	Pn	00 44 28.6	+0.1
JOW	Kunigami	2.34	207	P	Pn	00 44 35.0	+1.0
	27nm,0.3s,baz=94,slow=23,SNR=18						
JOW				S	Sn	00 45 03.9	+2.1
	38nm,0.3s,baz=179,slow=29,SNR=8.2						
JSU	Suzuyama	2.71	18		Pn	00 44 39.6	+0.5
JMZ	Minamidaito 2	3.46	153	Pn	Pn	00 44 48.7	-0.6
JMZ				Sn	Sn	00 45 25.7	-3.4
JNU	Nakatsue	4.36	16	P	Pn	00 45 03.5	+2.0
	9.0nm,0.3s,baz=232,slow=7.7,SNR=27						

JNU				S	**Sn**	**00 45 52.0**	**+1.0**
	1.9nm,0.3s,baz=184,slow=22,SNR=1.3						
JMN	**Monobe**	**6.10**	**37**	Pn	**Pn**	**00 45 25.2**	**0.0**
JHS	**Saijyo**	**6.80**	**26**	Pn	**Pn**	**00 45 35.3**	**+0.4**
JWT	**Wachi**	**8.09**	**37**		**Pn**	**00 45 52.1**	**-0.4**
KSRS	**Korea Array**	**8.61**	**352**	P	**Pn**	**00 46 03.0**	**+3.5**
	0.8nm,0.3s,baz=173,slow=14,SNR=3.9						
INU	**Inuyama**	**9.05**	**43**	Pn	**Pn**	**00 46 09.3**	**+3.7**
MJAR	**Matsushiro Arr**	**10.57**	**42**	P	**Pn**	**00 46 28.7**	**+2.4**
	0.3nm,0.3s,baz=189,slow=7.3,SNR=8.1						
SONM	**Songino Array**	**25.99**	**323**	P	**P**	**00 49 23.4**	**0.0**
	0.5nm,0.4s,baz=130,slow=10,SNR=6.0						
TOLI2	**Tolitoli**	**28.87**	**198**	P	**P**	**00 49 48.9**	**-0.4**
CMAR	**Chiang Mai Arr**	**29.76**	**256**	P	**P**	**00 49 56.2**	**-1.0**
	0.9nm,0.4s,baz=23,slow=12,SNR=2.0						
MKAR	**Makanchi Array**	**40.63**	**309**	P	**P**	**00 51 30.5**	**+0.3**
	0.2nm,0.4s,baz=90,slow=9.3,SNR=4.5						
MKAR	**Makanchi Array**	**40.63**	**309**	P	**P**	**00 51 30.1**	**-0.1**
ZAA0	**Zalesovo Array**	**40.83**	**321**	P	**P**	**00 51 31.9**	**+0.3**
ZAA0				IAmb	IAmb	00 51 32.5	
	comp=Z,1.9nm,0.3s						
ZALV	**Zalesovo Beam**	**40.83**	**321**	P	**P**	**00 51 31.8**	**+0.1**
	comp=Z,1.7nm,0.3s,baz=103,slow=9.2,SNR=13						
ZALV	**Zalesovo Beam**	**40.83**	**321**	P	**P**	**00 51 31.6**	**-0.1**
KURK	**Kurchatov**	**43.68**	**314**	P	**P**	**00 51 55.9**	**+1.1**
WRA	**Warramunga Arr**	**48.80**	**174**	P	**P**	**00 52 35.9**	**+0.5**
	comp=Z,0.4nm,0.7s,baz=356,slow=8.4,SNR=7.0						
WRA	**Warramunga Arr**	**48.80**	**174**	P	**P**	**00 52 35.7**	**+0.4**
ABKAR	**Akbulak array**	**55.65**	**312**	P	**P**	**00 53 26.0**	**+0.2**
ABKAR	**Akbulak array**	**55.65**	**312**	P	**P**	**00 53 26.3**	**+0.5**
ABKAR				IAmb	IAmb	00 53 46.7	
	comp=Z,1.6nm,1.1s						
IMAR	**Indian Mountai**	**58.60**	**28**	P	**P**	**00 53 45.5**	**-0.9**
MDM	**Murphy Dome**	**60.96**	**29**	P	**P**	**00 54 02.9**	**+0.3**
MDM				IAmb	IAmb	00 54 04.1	
	comp=Z,3.5nm,0.8s						
H24K	**Noodor Dome**	**61.01**	**28**	P	**P**	**00 54 03.5**	**+0.5**
H24K				IAmb	IAmb	00 54 09.1	
	comp=Z,4.1nm,1.2s						
CCB	**Clear Creek Bu**	**61.18**	**29**	P	**P**	**00 54 03.8**	**-0.3**
CCB				IAmb	IAmb	00 54 28.6	
	comp=Z,6.0nm,1.5s						
POKR	**Poker Plat Res**	**61.28**	**29**	P	**P**	**00 54 05.2**	**+0.4**
POKR				IAmb	IAmb	00 54 15.8	
	comp=Z,6.4nm,1.5s						
ILAR	**Eielson Array**	**61.55**	**29**	P	**P**	**00 54 05.5**	**-1.1**
	comp=Z,0.5nm,0.6s,baz=293,slow=7.0,SNR=9.8						
HDA	**Harding Lake**	**61.58**	**29**	P	**P**	**00 54 06.3**	**-0.5**
BMAR	**Burnt Mountain**	**62.11**	**26**	P	**P**	**00 54 11.2**	**+0.8**
SCRK	**Sand Creek**	**62.93**	**30**	P	**P**	**00 54 15.4**	**-0.5**
DOT	**Dot Lake**	**62.96**	**30**	P	**P**	**00 54 15.6**	**-0.4**
MENT	**Mentasta**	**63.24**	**31**	P	**P**	**00 54 18.8**	**+0.8**
MENT				IAmb	IAmb	00 54 19.6	
	comp=Z,2.9nm,0.6s						
BCAR	**Beaver Creek A**	**64.08**	**30**	P	**P**	**00 54 24.3**	**+0.9**
ARCES	**ARCESS Array B**	**67.92**	**338**	P	**P**	**00 54 46.7**	**-1.2**
	comp=Z,6.0nm,1.1s,baz=78,slow=8.4,SNR=3.7						
FINES	**FINESS Array B**	**71.08**	**330**	P	**P**	**00 55 06.4**	**-1.0**
	comp=Z,2.9nm,0.9s,baz=49,slow=4.7,SNR=8.1						
FINES	**FINESS Array B**	**71.08**	**330**	P	**P**	**00 55 06.0**	**-1.4**
AKASG	**Malin Array Be**	**74.21**	**319**	P	**P**	**00 55 25.5**	**-0.8**
	comp=Z,0.8nm,0.4s,baz=60,slow=6.6,SNR=4.2						
YKA	**Yellowknife Ar**	**75.63**	**26**	P	**P**	**00 55 34.2**	**0.0**
	comp=Z,0.3nm,0.5s,baz=310,slow=4.6,SNR=4.4						
BUR08	**Bucovina Ar. S**	**77.98**	**318**	P	**P**	**00 55 47.4**	**-0.4**
BUR08				IAmb	IAmb	00 55 48.3	
	comp=Z,4.3nm,1.4s						
BURAR	**Bucovina Array**	**77.98**	**318**	P	**P**	**00 55 47.3**	**-0.5**
BURAR				IAmb	IAmb	00 55 50.0	
	comp=Z,2.3nm,1.5s						
GERES	**GERESS Array B**	**83.72**	**323**	P	**P**	**00 56 19.2**	**+0.8**
	comp=Z,0.3nm,0.8s,baz=345,slow=3.4,SNR=2.2						

GUC ***26*** *00:45:29.2±0.9, 31°.45S×71°.22W, h16^{km}±13^{km}, ML3.7*
IDC ***26*** *00:45:32.7±2.7, 32°.01S×72°.33W, h59^{km}±29^{km}, mb3.6/1, mb1 3.7/4, mb1mx3.4/34, mbtmp3.7/4, ML3.5/3, MS3.2/1, Ms1 3.2/1, ms1mx2.8/18, Error ellipse: s-maj=46.5km s-min=29.0km az=110.0*
ISC 26 00:45:26.5±3.2**, 31°.61S**±0°.06×**71°.9W**±0°.2**, h1**^{km}±20^{km}**, n23,** σ**1**^{s}.**52**/22**, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	**Fray Jorge**	**0.95**	**11**	*e*P	**Pb**	**00 45 45.0**	**-0.9**
CO06				*i* S	**Sg**	**00 45 57.1**	**-0.1**
CO06				IAML		00 46 09.8	
	comp=E,3µm,0.3s						
VA06	**Catapilco**	**1.06**	**154**	*e*P	Pb	00 45 40.0	-7.7
VA06				*i* S	**Sb**	**00 46 01.2**	**-0.8**
VA06				IAML		00 46 07.5	
	comp=E,6µm,0.5s						
ROCH	**El Roble**	**1.53**	**152**	*e*P	**Pn**	**00 45 55.7**	**+0.4**
ROCH				*i* S	**Sb**	**00 46 17.0**	**+1.1**
VA03	**San Esteban**	**1.59**	**136**	*e*P	**Pb**	**00 45 55.6**	**-1.3**
VA03				*i* S	**Sg**	**00 46 18.1**	**+0.4**
VA03				IAML		00 46 28.1	
	comp=E,3µm,0.5s						
PEL	**Peldehue**	**1.82**	**147**	*e*P	**Pb**	**00 45 59.9**	**-0.8**
PEL				*i* S	**Sb**	**00 46 22.2**	**-1.8**
PEL				IAML		00 46 37.2	
	comp=N,970nm,0.7s						
MT05	**Renca**	**2.01**	**152**	*i* P	**Pn**	**00 46 02.5**	**+0.9**
MT05				*i* S	**Sb**	**00 46 30.1**	**+0.6**
BO04	**La Punta**	**2.59**	**156**	*e*P	**Pn**	**00 46 12.7**	**+3.0**
BO04				*i* S	**Sb**	**00 46 47.4**	**+1.1**
BO04				IAML		00 46 53.9	
	comp=E,567nm,0.6s						
BO01	**Tunca**	**2.85**	**167**	*e*P	**Pn**	**00 46 16.2**	**+3.0**
BO01				*i* S	**Sb**	**00 46 54.1**	**+0.6**
BO01				IAML		00 47 03.0	
	comp=N,166nm,0.6s						
H03N1	**Juan Fernandez**	**6.23**	**251**	P	Pn	00 46 54.6	-4.9
	baz=213,slow=9.4,SNR=4.0						
H03N1				T	T	00 53 50.7	
	baz=78,slow=72,SNR=622						
H03N3	**Juan Fernandez**	**6.25**	**251**	P	Pn	00 46 54.5	-5.2
	baz=213,slow=9.4,SNR=4.6						
H03N3				T	T	00 53 43.6	
	baz=78,slow=72,SNR=589						
H03N2	**Juan Fernandez**	**6.25**	**251**	P	Pn	00 46 54.4	-5.3
	baz=213,slow=9.4,SNR=5.0						
H03N2				T	T	00 53 54.2	
	baz=78,slow=72,SNR=432						
PLCA	**Paso Flores**	**9.16**	**174**	P	**Pn**	**00 47 38.1**	**-1.9**
	comp=N,0.2nm,0.3s,baz=349,slow=14,SNR=2.0						
LVC	**Limon Verde**	**9.34**	**17**	P	Pn	00 47 52.4	+10
	comp=N,0.3nm,0.3s,baz=207,slow=9.0,SNR=1.7						
CPUP	**Villa Florida**	**13.76**	**71**	LR	LR	00 54 37.1	
	comp=N,110nm,21.8s,baz=228,slow=38						
LPAZ	**La Paz**	**15.63**	**13**	P	**P**	**00 49 15.6**	**+2.5**
	comp=N,0.1nm,0.3s,baz=200,slow=6.1,SNR=2.8						
VNA3	**Neumayer Olymp**	**51.51**	**159**	P	**P**	**00 54 32.9**	**-0.6**
VNA2	**Neumayer--Watz**	**52.15**	**158**	P	**P**	**00 54 37.1**	**-1.2**
	baz=287,slow=7.5						
SNAA	**Sanae**	**53.74**	**159**	P	**P**	**00 54 49.2**	**-0.8**
TORD	**Torodi Ar. Bea**	**83.25**	**70**	P	**P**	**00 57 55.0**	**-0.2**
	comp=N,0.3nm,0.6s,baz=219,slow=3.8,SNR=4.6						
H11S2	**WAKE ISLAND Hy**	**125.93**	**271**	T	T	03 23 31.0	
	baz=115,slow=74,SNR=9.1						
H11S1	**WAKE ISLAND Hy**	**125.94**	**271**	T	T	03 23 30.5	
	baz=115,slow=74,SNR=5.0						
H11S3	**WAKE ISLAND Hy**	**125.95**	**271**	T	T	03 23 32.3	
	baz=115,slow=74,SNR=4.5						
ZALV	**Zalesovo Beam**	**152.11**	**30**	PKPbc	**PKiKP**	**01 05 22.9**	**-0.7**
	comp=N,0.8nm,0.6s,baz=301,slow=3.0,SNR=4.8						

GUC ***26*** *00:51:34.4±0.7, 31°.69S×72°.14W, h36^{km}±2^{km}, ML3.5*
IDC ***26*** *00:51:36.0±2.7, 31°.81S×71°.04W, h0^{km}, mb3.8/1, mb1 3.7/2, mb1mx3.5/27, mbtmp3.6/2, ML3.4/1, Error ellipse: s-maj=133.2km s-min=44.5km az=97.0*
ISC 26 00:51:31.9±1.8**, 31°.69S**±0°.03×**72°.3W**±0°.1**, h13**^{km}±10^{km}**, n24,** σ**1**^{s}.**27**/42**, 3C, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	**Fray Jorge**	**1.17**	**30**	*e*P	**Pn**	**00 51 54.0**	**0.0**
CO06				*i* S	**Sb**	**00 52 08.5**	**-0.5**
VA06	**Catapilco**	**1.23**	**135**	⇑*i*P	**Pn**	**00 51 55.0**	**+0.2**
VA06				*i* S	**Sb**	**00 52 10.3**	**-0.5**
VA06				IAML		00 52 18.9	
	comp=N,2µm,0.6s						
ROCH	**El Roble**	**1.69**	**140**	⇑*i*P	**Pn**	**00 52 02.1**	**+0.7**
ROCH				*e*P	**Pn**	**00 52 02.0**	**+0.7**
ROCH				*e*S	**Sn**	**00 52 23.0**	**0.0**
ROCH				*e*S	**Sb**	**00 52 23.2**	**-1.1**
ROCH				IAML		00 52 32.0	
	comp=E,1µm,0.5s						
ROCH				IAML		00 52 32.1	
	comp=E,1µm,0.4s						
VA03	**San Esteban**	**1.84**	**126**	⇑*i*P	**Pn**	**00 52 04.2**	**+0.8**
VA03				*i* S	**Sn**	**00 52 26.0**	**-0.5**
VA03				IAML		00 52 33.5	
	comp=E,1µm,0.7s						
MT02	**Curacav**	**1.86**	**148**	*i* P	**Pn**	**00 52 04.4**	**+1.0**
MT02				*i* S	**Sn**	**00 52 26.6**	**-0.2**
CO05	**La Serena**	**1.99**	**28**	*e*P	**Pn**	**00 52 06.7**	**+1.3**
CO05				*e*S	**Sn**	**00 52 30.9**	**+0.7**
CO05				IAML		00 52 40.8	
	comp=E,780nm,0.3s						
GO04	**Tololo Observa**	**2.00**	**41**	*e*P	**Pn**	**00 52 06.5**	**+0.9**
GO04				*e*S	**Sn**	**00 52 30.5**	**0.0**
PEL	**Peldehue**	**2.00**	**137**	*e*P	**Pn**	**00 52 06.4**	**+0.9**
PEL				*i* S	**Sn**	**00 52 30.2**	**-0.3**
PEL				IAML		00 52 41.1	
	comp=N,454nm,0.6s						
VA05	**Santo Domingo**	**2.05**	**163**	*e*P	**Pn**	**00 52 07.3**	**+1.2**
VA05				*e*S	**Sn**	**00 52 30.6**	**-1.0**
VA05				IAML		00 52 47.0	
	comp=E,510nm,0.4s						
MT05	**Renca**	**2.16**	**142**	*e*P	**Pn**	**00 52 08.7**	**+1.0**
MT05				*e*S	**Sn**	**00 52 34.7**	**+0.3**
MT05				IAML		00 52 42.3	
	comp=E,725nm,0.4s						
MT01	**Popeta**	**2.35**	**158**	*e*P	**Pn**	**00 52 11.5**	**+1.2**
MT01				*e*S	**Sn**	**00 52 38.4**	**-0.6**
MT01				IAML		00 52 49.9	
	comp=E,205nm,0.5s						
MT09	**Talagante**	**2.36**	**152**	*e*P	**Pn**	**00 52 12.3**	**+1.7**
MT09				*e*S	**Sn**	**00 52 38.6**	**-0.9**
MT09				IAML		00 52 57.9	
	comp=N,303nm,0.6s						
FCH	**Farellones**	**2.37**	**134**	*i* P	**Pn**	**00 52 11.7**	**+0.9**
FCH				*e*S	**Sn**	**00 52 41.7**	**+1.8**
FCH				IAML		00 52 48.9	
	comp=E,252nm,0.6s						
BO04	**La Punta**	**2.71**	**148**	*e*P	**Pn**	**00 52 17.1**	**+1.9**
BO04				*i* S	**Sn**	**00 52 48.6**	**+0.7**
BO04				IAML		00 53 02.4	
	comp=N,261nm,0.3s						
LMEL	**Las Melosas**	**2.79**	**141**	*e*P	**Pn**	**00 52 17.9**	**+1.4**
LMEL				*e*S	**Sn**	**00 52 50.1**	**-0.1**
LMEL				IAML		00 53 05.6	
	comp=N,228nm,0.7s						
BO01	**Tunca**	**2.89**	**159**	*e*P	**Pn**	**00 52 19.2**	**+1.6**
BO01				*e*S	**Sn**	**00 52 51.2**	**-1.1**
BO01				IAML		00 53 14.6	
	comp=E,88nm,0.4s						
LCO	**Las Campanas**	**3.01**	**28**	*e*P	**Pn**	**00 52 20.8**	**+1.2**
LCO				*e*S	**Sn**	**00 52 55.5**	**-0.2**
BO02	**Sierra Bellavi**	**3.35**	**158**	*e*P	**Pn**	**00 52 26.2**	**+2.0**
BO02				*e*S	**Sn**	**00 53 01.8**	**-2.1**
H03N1	**Juan Fernandez**	**5.84**	**251**	T	T	00 59 47.8	
	baz=81,slow=71,SNR=100						
H03N3	**Juan Fernandez**	**5.85**	**251**	T	T	00 59 45.0	
	baz=81,slow=71,SNR=96						
H03N2	**Juan Fernandez**	**5.85**	**251**	T	T	00 59 46.4	
	baz=81,slow=71,SNR=84						
PLCA	**Paso Flores**	**9.14**	**172**	Pn	**Pn**	**00 53 45.6**	**+2.1**
	comp=E,0.1nm,0.3s,baz=352,slow=14,SNR=2.0						
TORD	**Torodi Ar. Bea**	**83.65**	**70**	P	**P**	**01 04 02.1**	**+1.4**
	comp=E,0.3nm,0.7s,baz=241,slow=3.8,SNR=4.1						
ZALV	**Zalesovo Beam**	**152.37**	**30**	PKPbc	**PKPab**	**01 11 33.6**	**-3.7**
	comp=E,0.2nm,0.3s,baz=329,slow=1.7,SNR=2.4						
ZALV				PKPab	**pPKPab**	**01 11 39.7**	**-0.6**
	comp=E,1.1nm,0.7s,baz=300,slow=3.2,SNR=5.7						

ANF ***26*** *00:56:02.6±0.4, 36°.91N×97°.76W, h4^{km}, ML4.3/15, Error ellipse: s-maj=4.2km s-min=3.6km az=31.0*
NEIC ***26*** *00:56:02.8±1.1, 36°.92N±0°.03×97°.78W±0°.05, h5^{km}±7^{km}, Error ellipse: s-maj=7.6km s-min=1.7km az=55.0*
IDC ***26*** *00:56:02.1±0.9, 37°.02N×97°.78W, h0^{km}, mb3.9/1, mb1 4.1/4, mb1mx3.6/42, mbtmp3.8/4, ML3.4/5, Error ellipse: s-maj=12.8km s-min=11.2km az=124.0*
NEIC ***26*** *00:56:02.5, 36°.91N×97°.80W, h4^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{13}Nm; M$_{rr}$-2.52; M$_{\theta\theta}$1.48; M$_{\phi\phi}$1.04; M$_{r\theta}$4.43; M$_{\theta\phi}$3.07; M$_{\phi r}$0.02; Fault plane solution: M$_{0}$5.82000×10^{13} NP1:φ$_{s}$14.00000°, δ33.00000°, λ-152.00000°. NP2:φ$_{s}$260.00000°, δ75.00000°, λ-60.00000°. Principal axes: T 5.8175, Plg24.0000°, Azm327.0000°; N 0.0030, Plg29.0000°, Azm71.0000°; P -5.8206, Plg51.0000°, Azm204.0000°;*
TUL ***26*** *00:56:02.5±1.1, 36°.95N±0°.03×97°.81W±0°.04, h5^{km}±6^{km}, ML3.7, mb_Lg3.5/101(NEIC), Mwr3.1/14(SLM) Error ellipse: s-maj=6.7km s-min=0.6km az=224.0*
ISC 26 00:56:02.8±0.7**, 36°.95N**±0°.02×**97°.84W**±0°.02**, h13**^{km}±4^{km}**, n170,** σ**1**^{s}.**69**/181**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAN14	**Manchester OK**	**0.10**	**272**		**Pg**	**00 56 05.5**	**-0.3**
KAN14				Sg	**Sg**	**00 56 07.5**	**-0.5**
GC02	**Grant County #**	**0.10**	**191**	Pg	**Pg**	**00 56 05.0**	**-0.8**
GC02				Sg	**Sg**	**00 56 06.7**	**-1.3**
KAN17	**Caldwell West**	**0.11**	**32**	Pg	**Pg**	**00 56 05.3**	**-0.6**
KAN17				Sg	**Sg**	**00 56 07.0**	**-1.1**
KAN05	**Bluff City Nor**	**0.16**	**349**		**Pg**	**00 56 06.4**	**-0.1**
KAN05				Sg	**Sg**	**00 56 09.1**	**-0.1**
KAN01	**Argonia South**	**0.21**	**17**	Pg	**Pg**	**00 56 07.2**	**-0.2**
KAN01				Sg	**Sg**	**00 56 10.3**	**-0.2**
KAN09	**Caldwell North**	**0.25**	**44**		**Pg**	**00 56 07.7**	**-0.4**
KAN09				Sg	**Sg**	**00 56 11.2**	**-0.6**
KAN10	**Anthony SW Sta**	**0.27**	**309**	Pg	**Pg**	**00 56 08.6**	**+0.2**
KAN13	**South Haven SW**	**0.29**	**78**	Pg	**Pg**	**00 56 08.3**	**-0.5**
KAN08	**Anthony NE Sta**	**0.29**	**338**		**Pg**	**00 56 09.0**	**+0.2**
KAN06	**Argonia West S**	**0.29**	**356**		**Pg**	**00 56 08.9**	**+0.1**
KAN16	**Harper SW Stat**	**0.33**	**326**	Pg	**Pg**	**00 56 09.7**	**+0.2**
OK032	**Salt Plains WL**	**0.34**	**244**	Pg	**Pg**	**00 56 09.7**	**+0.1**
KAN12	**Harper NE Stat**	**0.37**	**339**		**Pg**	**00 56 10.3**	**+0.1**
CROK	**Carrier**	**0.46**	**195**	Pg	**Pg**	**00 56 11.6**	**-0.3**
BLOK	**Blackwell**	**0.53**	**111**	Pg	**Pg**	**00 56 12.5**	**-0.7**
T35A	**Sooner Cattle**	**1.06**	**92**	Pg	**Pb**	**00 56 22.1**	**-0.8**
T35B	**Sooner Cattle**	**1.06**	**92**	P	**Pb**	**00 56 22.1**	**-0.9**
	baz=270,SNR=216						
T35B				S	**Sb**	**00 56 35.9**	**-0.9**
	baz=270						
U32A	**Winter Ranch,**	**1.10**	**239**		**Pb**	**00 56 23.1**	**-0.5**
U32A	**Winter Ranch,**	**1.10**	**239**	P	**Pb**	**00 56 23.3**	**-0.3**
	baz=61,SNR=13						
OK033	**Mehan**	**1.16**	**141**		**Pb**	**00 56 23.9**	**-0.8**
OK029	**Liberty Lake**	**1.20**	**165**		**Pn**	**00 56 24.6**	**-0.6**
QUOK	**Quay**	**1.20**	**130**		**Pn**	**00 56 24.5**	**-0.7**
OK031	**S. Brethren Rd**	**1.28**	**141**		**Pn**	**00 56 25.9**	**-0.4**
OK034	**N. Norfolk Rd.**	**1.31**	**136**		**Pn**	**00 56 26.3**	**-0.4**
BCOK	**Bluff Creek, N**	**1.31**	**172**		**Pn**	**00 56 26.5**	**-0.3**
OK030	**Cody Creek RV**	**1.33**	**140**		**Pn**	**00 56 26.8**	**-0.3**
OK009	**Oakdale Elemen**	**1.41**	**166**		**Pn**	**00 56 28.5**	**+0.4**
OK025	**Westminster Rd**	**1.43**	**164**		**Pn**	**00 56 28.6**	**+0.2**
OK001	**Jones High Sch**	**1.46**	**162**	Pn	**Pn**	**00 56 29.3**	**+0.5**
OKCFA	**Oklahoma City**	**1.57**	**168**		**Pn**	**00 56 30.8**	**+0.5**
OKCFA				IAmb_Lg		00 56 54.2	
	comp=Z,328nm,0.7s						
OKCFA	**Oklahoma City**	**1.57**	**168**	P	**Pn**	**00 56 31.1**	**+0.8**
	baz=349,SNR=20						
OKCFA				Sb	**Sg**	**00 56 52.5**	**-0.7**
	baz=349						
OKCSW	**OKLAHOMA CITY**	**1.58**	**168**		**Pn**	**00 56 31.1**	**+0.6**
R32A	**Long Quarter,**	**1.62**	**335**		**Pb**	**00 56 32.5**	**-0.1**
R32A	**Long Quarter,**	**1.62**	**335**	P	**Pb**	**00 56 32.7**	**+0.1**
	baz=154,SNR=271						
R32A				S	**Sb**	**00 56 54.3**	**+1.3**
	baz=154						
FNO	**Franklin**	**1.73**	**168**		**Pn**	**00 56 33.4**	**+0.9**
TUL1	**Leonard**	**1.95**	**122**	P	**Pn**	**00 56 36.2**	**+0.7**
	baz=302,SNR=87						
TUL1				Sb	**Sb**	**00 57 02.4**	**0.0**
	baz=302						
TUL1	**Leonard**	**1.95**	**122**		**Pn**	**00 56 36.2**	**+0.7**
TUL1	**Leonard**	**1.95**	**122**	P	**Pn**	**00 56 36.3**	**+0.7**
	baz=302,SNR=127						
TUL1				S	**Sb**	**00 57 03.1**	**+0.7**
	baz=302						
W35A	**Tecumseh**	**1.96**	**156**		**Pn**	**00 56 36.3**	**+0.6**
WMOK	**Wichita Mounta**	**2.34**	**199**	P	**Pn**	**00 56 41.8**	**+0.8**
	baz=20,SNR=45						
WMOK	**Wichita Mounta**	**2.34**	**199**		**Pn**	**00 56 41.7**	**+0.8**
WMOK				IAmb_Lg		00 57 18.8	
	comp=Z,151nm,0.7s						
WMOK	**Wichita Mounta**	**2.34**	**199**	P	**Pn**	**00 56 41.8**	**+0.8**
	baz=20,SNR=80						
WMOK				S	**Sb**	**00 57 14.4**	**+0.7**
	baz=20						
X34A	**Smith Ranch, M**	**2.35**	**180**	Pn	**Pn**	**00 56 42.5**	**+1.4**
X34A				IAmb_Lg		00 57 17.5	
	comp=Z,153nm,0.7s						
KSU1	**Kansas State U**	**2.35**	**24**	P	**Pn**	**00 56 42.4**	**+1.3**
	baz=204,SNR=29						
KSU1	**Kansas State U**	**2.35**	**24**		**Pn**	**00 56 42.5**	**+1.4**
KSU1	**Kansas State U**	**2.35**	**24**	P	**Pn**	**00 56 42.4**	**+1.3**
	baz=204,SNR=43						
KSU1				S	**Sb**	**00 57 14.8**	**+0.8**
	baz=204						
CBKS	**Cedar Bluff**	**2.39**	**322**	P	**Pn**	**00 56 43.3**	**+1.7**
	baz=141,SNR=22						
CBKS				S	**Sb**	**00 57 16.6**	**+1.6**
	baz=141						
CBKS	**Cedar Bluff**	**2.39**	**322**		**Pn**	**00 56 43.2**	**+1.6**
CBKS	**Cedar Bluff**	**2.39**	**322**	P	**Pn**	**00 56 43.3**	**+1.6**
	baz=141,SNR=26						
CBKS				S	**Sb**	**00 57 16.7**	**+1.6**
	baz=141						
U38A	**Gravette**	**2.82**	**99**		**Pn**	**00 56 48.4**	**+0.9**
U38A	**Gravette**	**2.82**	**99**	P	**Pn**	**00 56 48.6**	**+1.1**
	baz=281,SNR=16						
LOOK	**Love County**	**3.00**	**170**		**Pn**	**00 56 51.0**	**+0.9**
LOOK				IAmb_Lg		00 57 42.1	
	comp=Z,105nm,0.8s						
X37A	**Clayton**	**3.10**	**139**		**Pn**	**00 56 52.0**	**+0.7**
X37A				IAmb_Lg		00 57 44.7	
	comp=Z,150nm,0.8s						
X37A	**Clayton**	**3.10**	**139**	P	**Pn**	**00 56 52.2**	**+0.8**
	baz=320,SNR=45						
HHAR	**Hobbs**	**3.21**	**101**		**Pn**	**00 56 54.0**	**+1.1**
HHAR				IAmb_Lg		00 57 50.2	
	comp=Z,113nm,0.8s						
HHAR	**Hobbs**	**3.21**	**101**	P	**Pn**	**00 56 54.1**	**+1.3**
	baz=283						
Z35A	**Perchaven, San**	**3.65**	**172**		**Pn**	**00 56 59.7**	**+0.8**
Z35A	**Perchaven, San**	**3.65**	**172**	P	**Pn**	**00 57 00.1**	**+1.2**
	baz=353						
Z35A				S	**Sn**	**00 57 43.4**	**+1.6**
	baz=353						
S39A	**Bolivar**	**3.67**	**77**	Pn	**Pn**	**00 56 59.5**	**+0.3**
S39A	**Bolivar**	**3.67**	**77**	P	**Pn**	**00 56 59.7**	**+0.5**
	baz=259,SNR=31						
W39A	**Magazine**	**3.72**	**117**	P	**Pn**	**00 57 00.7**	**+0.8**
	baz=299,SNR=17						
W39A				S	**Sn**	**00 57 44.4**	**+0.8**
	baz=299						
W39A	**Magazine**	**3.72**	**117**		**Pn**	**00 57 00.2**	**+0.3**
W39A				IAmb_Lg		00 58 02.1	
	comp=Z,135nm,0.8s						
AMTX	**Amarillo**	**3.74**	**238**	Sb	**Sg**	**00 57 59.7**	**-3.3**
	baz=56						
AMTX	**Amarillo**	**3.74**	**238**	Pn	**Pn**	**00 57 02.7**	**+2.4**
AMTX				IAmb_Lg		00 58 08.5	
	comp=Z,126nm,0.8s						
N33A	**J Bar K, Exete**	**3.79**	**4**		**Pn**	**00 57 01.4**	**+0.5**
N33A				IAmb_Lg		00 58 09.1	
	comp=Z,93nm,0.9s						
U40A	**Yellville**	**4.05**	**97**	P	**Pn**	**00 57 05.2**	**+0.7**
	baz=279,SNR=6.3						
U40A				S	**Sn**	**00 57 51.5**	**-0.2**
	baz=279						
U40A	**Yellville**	**4.05**	**97**		**Pn**	**00 57 05.1**	**+0.7**
U40A				IAmb_Lg		00 58 11.8	
	comp=Z,136nm,0.8s						
U40A	**Yellville**	**4.05**	**97**	P	**Pn**	**00 57 04.9**	**+0.5**
	baz=279,SNR=14						
U40A				P	**Pn**	**00 57 04.9**	**+0.5**
	baz=279,SNR=14						
MIAR	**Mount Ida**	**4.21**	**123**	P	**Pn**	**00 57 08.1**	**+1.4**
	baz=306,SNR=6.6						
MIAR				S	**Sn**	**00 57 57.2**	**+1.4**
	baz=306						
MIAR	**Mount Ida**	**4.21**	**123**	Pn	**Pn**	**00 57 07.1**	**+0.4**
MIAR				IAmb_Lg		00 58 18.4	
	comp=Z,85nm,0.8s						
MIAR	**Mount Ida**	**4.21**	**123**	P	**Pn**	**00 57 07.2**	**+0.5**
	baz=306,SNR=19						
N35A	**Tabor**	**4.26**	**23**		**Pn**	**00 57 08.3**	**+1.0**
N35A	**Tabor**	**4.26**	**23**	P	**Pn**	**00 57 08.7**	**+1.3**
	baz=204,SNR=12						
KSCO	**Kaye Shedlock’**	**4.31**	**300**		**Pn**	**00 57 09.6**	**+1.5**
KSCO				IAmb_Lg		00 58 31.2	
	comp=Z,78nm,0.7s						
P38A	**Dawn**	**4.31**	**50**		**Pn**	**00 57 08.3**	**+0.3**
P38A				IAmb_Lg		00 58 18.2	
	comp=Z,76nm,0.7s						
P38A	**Dawn**	**4.31**	**50**	P	**Pn**	**00 57 08.6**	**+0.6**
	baz=232,SNR=23						
Z38A	**Mt. Pleasant**	**4.36**	**147**	Pn	**Pn**	**00 57 09.2**	**+0.4**
Z38A				IAmb_Lg		00 58 22.6	
	comp=Z,118nm,1.1s						
BGNE	**Belgrade**	**4.46**	**357**	P	**Pn**	**00 57 11.3**	**+1.3**
	baz=176,SNR=6.2						
BGNE				Sb	**Sg**	**00 58 21.5**	**-4.3**
	baz=176						
BGNE	**Belgrade**	**4.46**	**357**		**Pn**	**00 57 11.3**	**+1.3**
BGNE	**Belgrade**	**4.46**	**357**	P	**Pn**	**00 57 11.3**	**+1.3**
	baz=176,SNR=10						
MGMO	**Mountain Grove**	**4.46**	**86**		**Pn**	**00 57 11.1**	**+1.0**
MGMO				IAmb_Lg		00 58 20.2	
	comp=Z,68nm,0.9s						
ABTX	**Abilene, Hawle**	**4.57**	**200**	P	**Pn**	**00 57 13.4**	**+1.8**
	baz=19						
ABTX	**Abilene, Hawle**	**4.57**	**200**		**Pn**	**00 57 13.2**	**+1.6**
ABTX				IAmb_Lg		00 58 29.5	
	comp=Z,104nm,1.1s						
R40A	**Maddies Statio**	**4.62**	**72**		**Pn**	**00 57 12.5**	**+0.3**
R40A	**Maddies Statio**	**4.62**	**72**	P	**Pn**	**00 57 12.9**	**+0.6**
	baz=254,SNR=18						
FCAR	**Ozark Folk Cen**	**4.73**	**101**		**Pn**	**00 57 15.1**	**+1.4**
FCAR				IAmb_Lg		00 58 30.2	
	comp=Z,100nm,0.7s						
X40A	**Basin Creek Fa**	**4.75**	**120**	P	**Pn**	**00 57 14.9**	**+0.8**
	baz=302						
X40A	**Basin Creek Fa**	**4.75**	**120**		**Pn**	**00 57 14.5**	**+0.3**
X40A				IAmb_Lg		00 58 37.4	
	comp=Z,78nm,0.8s						
X40A	**Basin Creek Fa**	**4.75**	**120**	P	**Pn**	**00 57 14.4**	**+0.3**
	baz=302,SNR=17						
X40A				P	**Pn**	**00 57 14.4**	**+0.3**
	baz=302,SNR=17						
WHAR	**Wooly Hollow**	**4.79**	**109**		**Pn**	**00 57 15.1**	**+0.6**
WHAR				IAmb_Lg		00 58 32.8	
	comp=Z,91nm,0.8s						
W41B	**Gary Mavity, V**	**4.86**	**110**	P	**Pn**	**00 57 16.7**	**+1.1**
	baz=293						
W41B				Sn	**Sn**	**00 58 11.2**	**-0.6**
	baz=293						
W41B				Sb	**Sb**	**00 58 31.3**	**+5.2**
	baz=293						
WHTX	**Lake Whitney,**	**4.96**	**176**	P	**Pn**	**00 57 17.4**	**+0.4**
	baz=357,SNR=5.0						
WHTX				Sn	**Sn**	**00 58 12.6**	**-1.6**
	baz=357						
WHTX				Sb	**Sb**	**00 58 34.9**	**+5.9**
	baz=357						
WHTX	**Lake Whitney,**	**4.96**	**176**	Pn	**Pn**	**00 57 17.3**	**+0.4**
WHTX	**Lake Whitney,**	**4.96**	**176**	P	**Pn**	**00 57 17.4**	**+0.4**
	baz=357,SNR=13						
MSTX	**Muleshoe**	**5.01**	**235**	Sb	**Sb**	**00 58 37.6**	**+7.0**
	baz=53						
MSTX	**Muleshoe**	**5.01**	**235**		**Pn**	**00 57 18.2**	**+0.5**
WLAR	**White Oak Lake**	**5.05**	**129**	IAmb_Lg		00 58 50.5	
	comp=Z,92nm,0.9s						
L34A	**Svendsen Farm,**	**5.13**	**12**	Pn	**Pn**	**00 57 19.4**	**+0.1**
237A	**Washetta, Mont**	**5.22**	**161**		**Pn**	**00 57 20.2**	**-0.2**
237A				IAmb_Lg		00 58 59.7	
	comp=Z,73nm,1.0s						
237A	**Washetta, Mont**	**5.22**	**161**	P	**Pn**	**00 57 20.3**	**-0.2**
	baz=342,SNR=6.1						
P40A	**Paris**	**5.23**	**59**		**Pn**	**00 57 22.0**	**+1.3**
P40A				IAmb_Lg		00 58 54.5	
	comp=Z,56nm,0.8s						
N38A	**Joes South For**	**5.25**	**42**		**Pn**	**00 57 21.2**	**+0.2**
N38A				IAmb_Lg		00 59 03.1	
	comp=Z,88nm,0.7s						
N38A	**Joes South For**	**5.25**	**42**	P	**Pn**	**00 57 21.4**	**+0.4**

	baz=224,SNR=16						
T25A	Trinidad	5.26	274	Pn	Pn	00 57 22.2	+0.8
T25A				IAmb_Lg		00 59 03.8	
	comp=Z,50nm,0.8s						
CCM	Cathedral Cave	5.35	76	P	Pn	00 57 23.6	+1.3
	baz=260						
CCM				S	Sn	00 58 23.8	0.0
	baz=260						
CCM	Cathedral Cave	5.35	76		Pn	00 57 23.1	+0.7
T42A	Van Buren	5.40	87		Pn	00 57 23.2	+0.3
LCAR	Lake Charles	5.45	97	Pn	Pn	00 57 23.9	+0.2
LCAR				IAmb_Lg		00 58 56.7	
	comp=Z,56nm,1.0s						
Z41A	Richland Creek	5.53	130	S	Sn	00 58 26.6	-1.7
	baz=313						
K31A	O'Neill	5.71	353	Pn	Pn	00 57 28.4	+1.2
K31A	O'Neill	5.71	353	P	Pn	00 57 28.5	+1.2
	baz=172,SNR=10						
CCAR	Cane Creek	5.80	120	Pn	Pn	00 57 29.7	+1.2
CCAR				IAmb_Lg		00 59 09.2	
	comp=Z,65nm,0.8s						
PBMO	Poplar Bluff	5.94	89	IAmb_Lg		00 59 15.8	
	comp=Z,72nm,0.7s						
FVM	French Village	5.98	78	Pn	Pn	00 57 30.8	-0.2
SCIA	State Center	6.10	34	P	Pn	00 57 33.8	+1.1
	baz=217						
SCIA				S	Sn	00 58 42.7	+0.4
	baz=217						
SCIA	State Center	6.10	34		Pn	00 57 33.6	+1.0
Q24A	Divide	6.12	291	P	Pn	00 57 35.1	+1.9
	baz=107						
Q24A				S	Sn	00 58 45.3	+2.2
	baz=107						
SDCO	Great Sand Dun	6.16	280	P	Pn	00 57 36.0	+2.4
	baz=95						
SDCO				Sb	Sg	00 59 15.9	-4.6
	baz=95						
SDCO	Great Sand Dun	6.16	280	Pn	Pn	00 57 35.8	+2.1
435B	Jarrell	6.16	178	P	Pn	00 57 33.1	-0.3
	baz=358						
435B				S	Sn	00 58 41.4	-2.4
	baz=358						
435B	Jarrell	6.16	178		Pn	00 57 33.1	-0.3
435B	Jarrell	6.16	178	P	Pn	00 57 33.6	+0.1
	baz=358,SNR=5.5						
SLM	Saint Louis	6.25	72	IAmb_Lg		00 59 25.5	
	comp=Z,41nm,0.8s						
JCT	Junction City	6.66	195	P	Pn	00 57 41.3	+0.9
	baz=14						
JCT	Junction City	6.66	195	Pn	Pn	00 57 40.5	+0.1
JCT				IAmb_Lg		00 59 37.2	
	comp=Z,75nm,0.9s						
ISCO	Idaho Springs	6.74	297	P	Pn	00 57 43.8	+2.1
	baz=113						
ISCO				Sb	Sg	00 59 31.0	-8.0
	baz=113						
ISCO	Idaho Springs	6.74	297	Pn	Pn	00 57 42.4	+0.7
ECSD	EROS Data Cent	6.84	7	P	Pn	00 57 42.3	-0.3
	baz=188,SNR=8.4						
ECSD	EROS Data Cent	6.84	7	Pn	Pn	00 57 42.4	-0.3
ECSD				IAmb_Lg		00 59 41.9	
	comp=Z,34nm,0.7s						
ECSD	EROS Data Cent	6.84	7	P	Pn	00 57 42.5	-0.2
	baz=188,SNR=16						
S44A	Carbondale	6.88	81	Pn	Pn	00 57 43.1	-0.2
S44A				IAmb_Lg		00 59 36.6	
	comp=Z,56nm,0.8s						
K38A	Parkersburg	6.89	33	Pn	Pn	00 57 42.9	-0.6
SIUC	Southern Illin	6.91	81	IAmb_Lg		00 59 37.6	
	comp=Z,49nm,0.9s						
P43A	Skaggs, Pawnee	7.07	65	IAmb_Lg		00 59 50.8	
	comp=Z,51nm,0.9s						
L40A	Anamosa	7.22	43	Pn	Pn	00 57 48.2	+0.2
L40A				IAmb_Lg		01 00 02.7	
	comp=Z,50nm,0.7s						
W45A	Hickory Valley	7.23	102	IAmb_Lg		00 59 58.9	
	comp=Z,49nm,0.8s						
Q44A	Meyer Farm, Va	7.24	72	IAmb_Lg		00 59 58.2	
	comp=Z,61nm,0.9s						
ANMO	Albuquerque	7.27	257	Pn	Pn	00 57 52.0	+3.1
	comp=Z,0.1nm,0.3s,baz=72,slow=9.6,SNR=1.7						
ANMO				Pg	Pb	00 58 10.5	+1.5
	comp=Z,0.4nm,0.3s,baz=93,slow=7.6,SNR=5.9						
ANMO				Lg	Lg	00 59 49.6	
	comp=Z,1.3nm,0.3s,baz=62,slow=17,SNR=6.4						
ANMO	Albuquerque	7.27	257	Sb	Sg	00 59 49.0	-7.2
	baz=72						
T45A	Paducah	7.36	87	IAmb_Lg		01 00 02.9	
	comp=Z,47nm,0.8s						
Y45A	Yeager Farm, C	7.44	112	IAmb_Lg		01 00 11.4	
	comp=Z,40nm,0.9s						
N23A	Red Feather La	7.45	304	P	Pn	00 57 53.4	+2.1
	baz=120						
N23A				Sb	Sg	00 59 55.7	-6.0
	baz=120						
SUSD	Miller	7.53	354	IAmb_Lg		01 00 04.5	
	comp=Z,56nm,0.8s						
SMCO	Snowmass	7.54	290	Pn	Pn	00 57 52.9	+0.1
HDIL	Hopedale	7.58	59	P	Pn	00 57 54.0	+1.1
	baz=244						
HDIL	Hopedale	7.58	59		Pn	00 57 53.7	+0.7
I37A	Lemond, Waseca	7.82	24	IAmb_Lg		01 00 26.3	
	comp=Z,45nm,0.8s						
OLIL	Olney	7.91	74	IAmb_Lg		01 00 33.1	
	comp=Z,29nm,0.9s						
O44A	Mansfield	8.00	64	IAmb_Lg		01 00 16.9	
	comp=Z,42nm,0.7s						
L42A	Oliver, Polo	8.08	49	IAmb_Lg		01 00 19.5	
	comp=Z,60nm,0.9s						
MNTX	Cornudas Mount	8.15	232	P	Pn	00 58 03.0	+2.3
	baz=48,SNR=8.1						
JFWS	Jewell Farm	8.33	42	P	Pn	00 58 03.0	-0.2
	baz=226						
JFWS	Jewell Farm	8.33	42	IAmb_Lg		01 00 25.1	
	comp=Z,45nm,0.9s						
RSSD	Black Hills	8.57	329	P	Pn	00 58 09.2	+2.5
	baz=145						
RWWY	Rawlins	8.67	306	IAmb_Lg		01 00 51.9	
	comp=Z,28nm,0.9s						
K22A	Casper	8.78	313	IAmb_Lg		01 00 56.8	
	comp=Z,37nm,0.9s						
I40A	Norwalk	8.85	36	IAmb_Lg		01 00 49.9	
	comp=Z,24nm,0.8s						
F33A	5 Mile Ranch,	8.95	7	IAmb_Lg		01 00 44.0	
	comp=Z,41nm,1.1s						
TXAR	Lajitas Array	9.03	214	Pn	Pn	00 58 13.1	+0.1
	comp=Z,0.5nm,0.3s,baz=41,slow=10,SNR=27						
TXAR				Lg	Lg	01 00 46.1	
	comp=Z,0.9nm,0.3s,baz=40,slow=26,SNR=8.2						
TXAR	Lajitas Array	9.03	214		Pn	00 58 12.4	-0.6
TX31	Lajitas Ar. Si	9.03	214	Pn	Pn	00 58 12.3	-0.7
SFIN	Lafayette	9.07	65	Pn	Pn	00 58 13.9	+0.6
K43A	Burlington	9.29	49	IAmb_Lg		01 00 58.0	
	comp=Z,48nm,0.9s						
I42A	Draeger Farm,	9.71	42	IAmb_Lg		01 01 33.4	
	comp=Z,32nm,1.1s						
E28A	Huff	9.85	348	IAmb_Lg		01 01 17.2	
	comp=Z,34nm,0.8s						
PDAR	Pinedale Array	10.71	306	Pn	Pn	00 58 36.3	+0.2
	comp=Z,0.1nm,0.3s,baz=118,slow=12,SNR=3.0						
PDAR				Lg	Lg	01 01 35.1	
	comp=Z,0.5nm,0.3s,baz=121,slow=26,SNR=5.2						
TKL	Tuckaleechee C	11.42	92	Pn	Pn	00 58 44.4	-1.2
	comp=Z,0.6nm,0.3s,baz=279,slow=13,SNR=7.0						
TKL				Lg	Lg	01 01 55.1	
	comp=Z,0.7nm,0.3s,baz=290,slow=11,SNR=6.5						
ULM	Lac du Bonnet	13.37	5	Pn	Pn	00 59 07.7	-4.4
	comp=Z,0.6nm,0.3s,baz=185,slow=13,SNR=1.8						
ULM				Sn	Sn	01 01 29.4	-11
	comp=Z,0.4nm,0.3s,baz=182,slow=23,SNR=2.2						
ULM				Lg	Lg	01 02 56.6	
	comp=Z,0.3nm,0.3s,baz=122,slow=15,SNR=2.3						
NVAR	Mina Array Bea	16.27	281	Lg	Lg	01 04 24.6	
	comp=Z,0.1nm,0.3s,baz=95,slow=16,SNR=3.6						
ILAR	Eielson Array	40.02	330	P	P	01 03 38.6	+1.6
	comp=Z,1.4nm,0.7s,baz=109,slow=7.1,SNR=21						

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*TAP **26** 01:23:55.8, 24.°06N × 122.°81E, $h12^{km} \pm 1^{km}$, ML2.8, D*

*JMA **26** 01:23:56.9±0.2, 24.°10N × 122.°77E, $h17^{km} \pm 3^{km}$, M2.6*

ISC 26 01:23:56.3±1.0**, 24.°06N**±0.°04 × **122.°79E**±0.°02**,** $h15^{km} \pm 9^{km}$**, n40,** $\sigma 0^{s}.48$/65**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.45	27	eP	Pg	01 24 05.0	-0.2
	baz=22						
YOJ				eS	Sg	01 24 11.2	0.0
	baz=22						
YOJ	Yonaguni jima	0.45	27	eS	Sb	01 24 11.6	-0.7
IRIF	Iriomote-Funau	0.90	72	P	Pg	01 24 14.0	+0.2
IRIF				S	Sn	01 24 26.9	-0.3
HATJ	Hateruma jima	0.93	90	P	Pg	01 24 14.3	0.0
HATJ				S	Sg	01 24 26.9	+0.4
EWUT	Wuta	1.00	293	P	Pb	01 24 14.8	-0.5
	baz=294						
EWUT				eS	Sg	01 24 29.0	+0.4
	baz=294						
TWC	Suao	1.01	303	P	Pb	01 24 15.2	-0.4
	baz=304						
TWC				eS	Sb	01 24 28.7	0.0
	baz=304						
ENA	Nanau	1.02	291	P	Pb	01 24 14.9	-0.8
	baz=303						
ENA				eS	Sg	01 24 29.5	+0.1
	baz=303						
NACB	Ninganchiao	1.09	276	P	Pb	01 24 16.8	-0.2
	baz=290						
NACB				eS	Sn	01 24 32.1	+0.1
	baz=290						
JKRS	Kuro-shima	1.13	81	P	Pg	01 24 18.0	-0.1
JKRS				S	Sn	01 24 33.8	+1.0
NDS	Dongshan	1.13	300	P	Pb	01 24 17.4	-0.2
	baz=293						
NDS				eS	Sb	01 24 31.7	-0.4
	baz=293						
NTC	Toucheng	1.18	312	eP	Pg	01 24 18.8	-0.2
	baz=312						
TWB1	Santiao Chiao	1.19	322	eP	Pg	01 24 19.0	-0.3
	baz=322						
ETLH	Xiulin Townshi	1.20	277	P	Pn	01 24 18.8	+0.2
	baz=261						
ETLH				eS	Sg	01 24 35.7	+0.6
	baz=261						
TWE	Neicheng	1.21	303	P	Pb	01 24 19.1	+0.1
	baz=303						
ENTT	Nioudou	1.25	297	P	Pn	01 24 19.4	+0.1
	baz=299						
ENTT				eS	Sn	01 24 35.8	-0.2
	baz=299						
TIPB	Shuangxi	1.26	316	eP	Pb	01 24 19.8	+0.1
	baz=318						
TIPB				eS	Sn	01 24 36.2	+0.1
	baz=318						
JIJ	Ishigaki jima	1.27	76	P	Pn	01 24 19.6	+0.1
JIJ				S	Sn	01 24 36.3	-0.1
NDT	Datong Townshi	1.28	295	P	Pb	01 24 20.3	+0.2
	baz=297						
NDT				eS	Sn	01 24 36.8	+0.2
	baz=297						
NNSB	Datong	1.33	286	eP	Pb	01 24 21.5	+0.5
	baz=288						
NNSB				eS	Sg	01 24 40.0	+0.6
	baz=288						
NNS	Nan Shan	1.34	286	eP	Pg	01 24 22.0	-0.2
	baz=289						
NNS				eS	Sn	01 24 38.7	+0.4
	baz=289						
NWF	Wu-fen Shan	1.36	318	eP	Pn	01 24 20.9	+0.1
	baz=320						
NWF				eS	Sg	01 24 40.2	+0.1
	baz=320						
NWLT	Wulai	1.37	301	P	Pb	01 24 21.8	+0.1
	baz=303						
NWLT				eS	Sg	01 24 40.6	+0.1
	baz=303						
HGSD	Ruisui	1.37	246	P	Pn	01 24 19.7	-1.3
	baz=247						
HGSD				eS	Sg	01 24 40.7	+0.1
	baz=247						
WHF	Hehuan Shan	1.39	274	P	Pn	01 24 21.7	+0.1
	baz=276						
WHF				eS	Sb	01 24 40.4	+0.4
	baz=276						
FUSS	Fushou	1.42	278	eP	Pb	01 24 22.6	-0.1
	baz=280						
FUSS				eS	Sg	01 24 42.0	-0.3
	baz=280						
YHNB	Yeheng	1.42	295	P	Pb	01 24 22.9	+0.3
	baz=297						
YHNB				eS	Sg	01 24 42.1	-0.1
	baz=297						
NSK	Sanguang	1.44	295	eP	Pb	01 24 23.0	+0.1
	baz=297						
NSK				eS	Sg	01 24 43.3	+0.5
	baz=297						
EHY	Hungye	1.45	248	eP	Pn	01 24 21.4	-0.6
	baz=248						
JISG	Ishigakijimahi	1.48	69	P	Pb	01 24 23.3	-0.3
JISG				S	Sb	01 24 42.2	0.0
YULB	Yu-li	1.52	244	eP	Pn	01 24 22.4	-0.5
	baz=245						
YM01	YM01	1.55	314	eP	Pb	01 24 24.7	0.0
	baz=314						
FULB	Fuli	1.62	238	eP	Pn	01 24 23.3	-1.0
	baz=224						
WHP	Taichung City	1.70	278	eP	Pb	01 24 27.8	+0.6
	baz=265						
SSLB	Suanglung	1.70	261	eP	Pn	01 24 25.5	+0.1
	baz=262						
LIOB	Emei	1.72	290	eP	Pb	01 24 28.0	+0.4
	baz=291						
NSTT	Nanjuang	1.73	289	eP	Pb	01 24 27.2	-0.5
	baz=290						
TYC	Yuchr	1.77	265	eP	Pn	01 24 25.7	-0.7
	baz=266						
CHN5	Tsauling	1.99	257	eP	Pb	01 24 31.9	-0.3
	baz=258						
TPUB	Ta-pu	2.12	249	eP	Pn	01 24 33.0	+1.8
	baz=250						
CHN4	Tsaushan	2.13	251	eP	Pn	01 24 32.2	+0.8
	baz=253						
CHN4				eS	Sb	01 25 00.8	-0.1
	baz=253						

TAP 26 01:24:01.6, 23.°48N × 120.°77E, $h6^{km}$**, ML1.5, A, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALS	Alishan	0.04	45	i P	Pg	01 24 03.4	+0.1
	baz=53						
ALS				i S	Sg	01 24 04.8	+0.3
	baz=53						
CHN5	Tsauling	0.14	323	P	Pg	01 24 05.5	+0.8
	baz=322						
CHN5				S	Sg	01 24 08.4	+1.6
	baz=322						
YUS	Yu-Shan	0.17	87	eP	Pg	01 24 06.0	+0.8
	baz=87						
YUS				S	Sg	01 24 09.4	+1.9
	baz=87						
CHN4	Tsaushan	0.21	232	S	Sg	01 24 10.6	+2.0
	baz=231						
TPUB	Ta-pu	0.22	216	P	Pg	01 24 07.2	+1.1
	baz=216						
TPUB				S	Sg	01 24 11.2	+2.2
	baz=216						
WTP	Ta-pu	0.28	212	P	Pb	01 24 08.1	-0.9
	baz=210						
WTP				S	Sb	01 24 13.0	-0.9
	baz=210						
WDLH	Douliu	0.30	314	eP	Pb	01 24 08.8	-0.6
	baz=313						
WDLH				eS	Sb	01 24 13.9	-0.6
	baz=313						
STYH	Taoyuan	0.31	180	eP	Pb	01 24 08.7	-0.8
	baz=179						
STYH				eS	Sb	01 24 14.5	-0.4
	baz=179						
TWK	Hsinying	0.34	231	P	Pb	01 24 09.2	-0.9
	baz=229						
TWK				S	Sb	01 24 15.4	-0.4
	baz=229						
WJS	Zhushan	0.34	353	eP	Pb	01 24 09.3	-0.9
	baz=352						
SSLB	Suanglung	0.35	29	eP	Pb	01 24 09.6	-0.7
	baz=28						
SSLB				eS	Sb	01 24 16.0	0.0
	baz=28						
ELDTW	Lidau	0.37	142	eP	Pb	01 24 09.8	-0.8
	baz=141						
ELDTW				eS	Sb	01 24 16.6	0.0
	baz=141						
CHN1	Nanshi	0.37	217	P	Pg	01 24 09.5	+0.6
	baz=217						
CHN1				S	Sb	01 24 16.0	-0.6
	baz=217						
YULB	Yu-li	0.49	100	eP	Pb	01 24 12.5	-0.2
	baz=100						
YULB				eS	Sg	01 24 18.8	+1.3
	baz=100						
WSF	Szhu	0.53	287	eP	Pb	01 24 12.9	-0.4
	baz=287						

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*IDC **26** 01:25:28.3±1.0, 29.°32N × 103.°11E, $h0^{km}$, mb4.0/10, mb1 4.1/11, mb1mx3.8/53, mbtmp4.0/11, ML3.9/1, Error ellipse: s-maj=38.1km s-min=18.3km az=55.0*

ISC 26 01:25:29.9±1.2**, 29.°3N**±0.°2 × **103.°1E**±0.°2**,** $h10^{km}$**, n12,** $\sigma 0^{s}.73$/11**, mb4.1**/10**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	11.47	200	Pn	Pn	01 28 22.7	+8.9
	0.5nm,0.3s,baz=20,slow=12,SNR=1.8						
SONM	Songino Array	18.66	7	P	Pn	01 29 49.1	+0.8
	0.3nm,0.3s,baz=188,slow=12,SNR=16						
KSRS	Korea Array	22.18	62	P	P	01 30 25.8	-0.4
	3.1nm,0.7s,baz=245,slow=9.9,SNR=2.0						
MKAR	Makanchi Array	23.83	323	P	P	01 30 43.9	+0.8
	3.2nm,0.6s,baz=128,slow=12,SNR=25						
ZALV	Zalesovo Beam	27.99	337	P	P	01 31 20.7	0.0
	0.7nm,0.5s,baz=130,slow=10,SNR=5.5						
KURBB	Kurchatov Arra	28.20	326	P	P	01 31 22.6	+0.1
	0.8nm,0.2s,baz=133,slow=9.1,SNR=7.9						
WRA	Warramunga Arr	57.49	145	P	P	01 35 18.8	-0.6
	1.2nm,0.6s,baz=332,slow=7.4,SNR=4.8						
ARCES	ARCESS Array B	58.54	336	P	P	01 35 25.6	-0.6
	3.9nm,1.1s,baz=83,slow=8.3,SNR=10						
FINES	FINESS Array B	58.58	327	P	P	01 35 26.4	-0.2
	9.8nm,1.2s,baz=90,slow=6.9,SNR=5.5						
ASAR	Alice Springs	60.43	147	P	P	01 35 40.9	+1.1
	0.8nm,0.6s,baz=326,slow=7.2,SNR=4.2						
NOA	NORSAR Array B	65.71	328	P	P	01 36 13.6	-0.9
	0.5nm,0.6s,baz=72,slow=9.2,SNR=3.8						
INK	Inuvik	74.11	19	P	P	01 37 05.8	-0.1
	1.4nm,0.9s,baz=326,slow=8.8,SNR=4.7						

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*IDC **26** 01:36:06.5±8.0, 34.°51S × 179.°62E, $h189^{km} \pm 84^{km}$, mb3.5/2, mb1 3.7/3, mb1mx3.1/35, mbtmp4.0/3, Error ellipse: s-maj=99.8km s-min=51.3km az=177.0*

*WEL **26** 01:36:09.0±0.8, 35°S±9° × 17°9E±1°3, $h228^{km} \pm 15^{km}$, M4.3/19, mB4.5/2, ML4.3/2, MLv4.3/19, Mw(mB)3.6/2, Error ellipse: s-maj=0.0km s-min=0.0km az=111.9*

ISC 26 01:36:11.5±1.6**, 34.°73S**±0.°09 × **179.°0E**±0.°1**,** $h200^{km}$**, n54,** $\sigma 2^{s}.10$/92**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.89	192	P	Pn	01 36 59.6	-0.1
MXZ				S	Sn	01 37 38.7	+1.1
MXZ	Matakaoa Point	2.89	192	P	Pn	01 36 59.0	-0.8
MXZ				S	Sn	01 37 39.8	+2.2
WMGZ	Waiomatatini S	3.12	189	P	Pn	01 37 03.0	+0.5
WMGZ				S	Sn	01 37 46.0	+3.4
WMGZ	Waiomatatini S	3.12	189	P	Pn	01 37 02.6	+0.1
WMGZ				S	Sn	01 37 46.4	+3.8
HAZ	Te Kaha	3.19	198	P	Pn	01 37 04.5	+1.3
HAZ				S	Sn	01 37 47.6	+3.7
HAZ	Te Kaha	3.19	198	P	Pn	01 37 03.0	-0.2
HAZ				S	Sn	01 37 49.6	+5.7
PKGZ	Pakihiroa	3.25	194	P	Pn	01 37 04.4	+0.3
PKGZ				S	Sn	01 37 48.4	+3.0
PKGZ	Pakihiroa	3.25	194	P	Pn	01 37 04.3	+0.3
PKGZ				S	Sn	01 37 47.7	+2.4
GRZ	Great Barrier	3.29	242	P	Pn	01 37 05.2	+0.6
KUZ	Kuaotunu	3.37	232	P	Pn	01 37 07.2	+1.8
PUZ	Puketiti	3.39	191	P	Pn	01 37 05.7	-0.1
PUZ				S	Sn	01 37 51.1	+2.6
RUGZ	Raukumara Rang	3.41	198	P	Pn	01 37 06.4	+0.3
TWGZ	Tauwhareparae	3.54	194	P	Pn	01 37 08.5	+0.9
TWGZ				S	Sn	01 37 55.9	+4.1
MWZ	Matawai	3.80	198	P	Pn	01 37 11.2	+0.5
MWZ				S	Sn	01 38 00.3	+3.0
CNGZ	Carnagh Statio	3.80	190	P	Pn	01 37 11.2	+0.4
TKGZ	Te Karaka	3.82	194	P	Pn	01 37 10.9	0.0
TKGZ				S	Sn	01 38 01.6	+3.8
URZ	Urewera	3.85	203	P	Pn	01 37 12.1	+0.8
	5.2nm,0.3s,baz=301,slow=23,SNR=34						
URZ				S	Sn	01 38 01.4	+3.0
	14nm,0.3s,baz=254,slow=22,SNR=11						
URZ	Urewera	3.85	203	P	Pn	01 37 11.6	+0.3
URZ				S	Sn	01 38 01.7	+3.3
RAGZ	Rawiri	3.98	199	P	Pn	01 37 13.6	+0.6
RAGZ				S	Sn	01 38 05.1	+3.6
RIGZ	Rimuhau	4.10	194	P	Pn	01 37 13.7	-0.7
RIGZ				S	Sn	01 38 07.0	+3.0
MUGZ	Murupara	4.16	205	P	Pn	01 37 15.9	+0.7
MUGZ				S	Sn	01 38 09.2	+3.8
PRGZ	Paritu Road	4.29	192	P	Pn	01 37 16.3	-0.4
PRGZ				S	Sn	01 38 08.9	+0.6
KNZ	Kokohu	4.42	194	P	Pn	01 37 17.5	-0.9
KNZ				S	Sn	01 38 13.1	+1.9
RAHZ	Arahi	4.46	200	P	Pn	01 37 19.8	+0.8
RAHZ				S	Sn	01 38 15.1	+2.8
MTHZ	Maungataniwha	4.48	203	P	Pn	01 37 20.0	+0.9
MTHZ				S	Sn	01 38 15.8	+3.2
MHGZ	Mahia Peninsul	4.50	191	P	Pn	01 37 19.6	+0.1
NMHZ	Naumai	4.71	202	P	Pn	01 37 22.9	+0.7
NMHZ				S	Sn	01 38 21.1	+3.1
ARHZ	Aropaoanui	4.81	199	P	Pn	01 37 22.9	-0.4
BKZ	Black Stump Fm	4.87	204	P	Pn	01 37 24.5	+0.2
BKZ				S	Sn	01 38 24.5	+2.8
HIZ	Hauiti	5.06	221	P	Pn	01 37 31.9	+5.4
TMVZ	Te Maari	5.13	210	P	Pn	01 37 28.4	+0.9
KWHZ	Kaweka Forest	5.13	203	P	Pn	01 37 27.1	-0.4
KWHZ				S	Sn	01 38 30.2	+2.5
ETVZ	East Tongariro	5.14	210	P	Pn	01 37 28.8	+1.0
OTVZ	Oturere	5.18	210	P	Pn	01 37 29.8	+1.5
OTVZ				S	Sn	01 38 26.1	-2.9
BHHZ	Black Hill Sta	5.31	206	P	Pn	01 37 29.3	-0.5
BHHZ				S	Sn	01 38 34.8	+3.0
KAHZ	Kahuranaki	5.34	198	P	Pn	01 37 29.0	-1.2
KAHZ				S	Sn	01 38 34.2	+1.8
KAHZ	Kahuranaki	5.34	198	S	Sn	01 38 34.5	+2.1
KRHZ	Kereru	5.35	203	P	Pn	01 37 29.0	-1.2
KRHZ				S	Sn	01 38 34.1	+1.5
WNVZ	Wahianoa	5.35	210	P	Pn	01 37 31.9	+1.5
PNHZ	Pukenui	5.65	203	P	Pn	01 37 32.7	-1.4
PNHZ				S	Sn	01 38 39.3	-0.2
PRHZ	Porangahau	5.85	198	P	Pn	01 37 34.8	-1.8
PRHZ				S	Sn	01 38 40.3	-3.8
MRZ	Mangatainoka R	6.52	204	P	Pn	01 37 43.6	-1.8
MRZ				S	Sn	01 38 59.2	-0.8
OGWZ	Otaki Gorge	6.80	206	P	Pn	01 37 47.1	-2.0
OGWZ				S	Sn	01 39 07.2	+0.7
TMWZ	Te Maipa	6.83	200	P	Pn	01 37 47.5	-2.0
TMWZ				S	Sn	01 39 05.0	-2.3
KIW	Kapiti Island	6.94	207	P	Pn	01 37 48.6	-2.2
KIW				S	Sn	01 39 08.9	-0.7
MTW	Mount Morrison	7.00	203	P	Pn	01 37 50.0	-1.6
MTW				S	Sn	01 39 09.9	-1.2
MSWZ	Moikau Station	7.31	203	P	Pn	01 37 53.7	-1.9
MSWZ				S	Sn	01 39 15.3	-3.2
PLWZ	Palliser	7.45	202	P	Pn	01 37 55.2	-2.2
PLWZ				S	Sn	01 39 20.3	-1.5
TCW	Tory Channel	7.48	209	P	Pn	01 37 54.4	-3.5
TCW				S	Sn	01 39 21.1	-1.4
QRZ	Quartz Range	7.97	218	P	Pn	01 38 02.5	-1.8
QRZ				S	Sn	01 39 35.9	+1.8
KHZ	Kahutara	8.80	208	P	Pn	01 38 12.3	-2.7
ASAR	Alice Springs	40.62	273	P	P	01 43 32.0	0.0
	1.1nm,0.5s,baz=114,slow=7.6,SNR=14						
WRA	Warramunga Arr	42.01	279	P	P	01 43 42.6	-0.7
	1.2nm,0.4s,baz=116,slow=7.8,SNR=18						
FINES	FINESS Array B	148.20	336	PKPbc	PKPdf	01 55 28.2	-1.1
	3.4nm,1.0s,baz=34,slow=5.2,SNR=3.4						

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*IDC **26** 01:47:53.2±0.4, 18.°33N × 70.°45W, $h0^{km}$, mb4.5/30, mb1 4.7/33, mb1mx4.7/39, mbtmp4.6/33, ML4.1/3, MS4.0/25, Ms1 4.0/25, ms1mx3.9/36, Error ellipse: s-maj=12.9km s-min=9.2km az=74.0*

*NEIC **26** 01:47:55.4±1.9, 18.°42N±0.°05 × 70.°47W±0.°05, $h10^{km} \pm 1^{km}$,* *mb4.9/185, Mwr4.8/27, Error ellipse: s-maj=8.5km s-min=7.0km az=37.0*

*NEIC **26** 01:47:55.9, 18°40N×70°47W, $h27^{km}$, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-0.22; $M_{\theta\theta}$1.62; $M_{\phi\phi}$-1.40; $M_{r\theta}$-0.66; $M_{\theta\phi}$0.43; $M_{\phi r}$0.18; Fault plane solution: $M_0$1.72000×10^{16} NP1:ϕ_s215.96000°, δ68.80000°, λ176.95000°. NP2:ϕ_s307.06000°, δ87.16000°, λ21.23000°. Principal axes: T 1.8717, Plg17.0000°, Azm174.0000°; N -0.3543, Plg69.0000°, Azm314.0000°; P -1.5175, Plg13.0000°, Azm80.0000°;*

*OSPL **26** 01:47:56.5±1.1, 18°45N×70°45W, $h4^{km}\pm6^{km}$, ML4.8, Fault plane solution: NP1:ϕ_s307.00000°, δ87.00000°, λ21.00000°.*

*GCMT **26** 01:47:59.4±0.3, 18°55N±0°02×70°37W±0°02, $h18^{km}\pm2^{km}$, MW4.9/68, Moment Tensor Solution. s10,c13; s68,c94; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.71±.13; $M_{\theta\theta}$1.03±.10; $M_{\phi\phi}$-1.74±.11; $M_{r\theta}$-1.21±.30; $M_{\theta\phi}$1.25±.07; $M_{\phi r}$-0.77±.23; Best double couple: $M_0$2.41700×10^{16} NP1:ϕ_s301.00000°, δ59.00000°, λ24.00000°. NP2: ϕ_s198.00000°, δ70.00000°, λ147.00000°. Principal axes: T 2.5800, Plg37.0000°, Azm156.0000°; N -0.3240, Plg52.0000°, Azm350.0000°; P -2.2540, Plg7.0000°, Azm251.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 01:47:55.2±1.0, **18°36N**±0°03×**70°46W**±0°02, **$h12^{km}$**$\pm6^{km}$, **n450**, σ**1^{s}65**/393, **mb4.9**/111, **MS4.1**/24, **1C-5D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LOSC1	San Cristbal	0.34	82	⇓iP	Pg	01 48 03.0	+1.0
LOSC1				IAML		01 48 11.9	
	comp=Z,207μm,0.5s						
SDD	Santo Domingo	0.53	79		Pg	01 48 05.7	+0.2
SDD				Sg	Sg	01 48 12.3	-0.1
SDD	Santo Domingo	0.53	79	i P	Pg	01 48 05.7	+0.2
LOBA2	Hotel Casa Bon	0.67	246	i P	Pg	01 48 09.1	+1.0
LOBA2				eS	Sg	01 48 18.9	+2.0
LOBA2				IAML		01 48 25.7	
	comp=Z,21μm,0.4s						
LONE2	Loma La Sidra	0.98	282	⇓iP	Pg	01 48 13.7	-0.5
LONE2				IAML		01 48 31.8	
	comp=Z,57μm,0.5s						
SDDR	Presa de Saban	1.00	308		Pg	01 48 13.2	-1.3
SDDR				Sg	Sg	01 48 25.8	-1.8
SDDR	Presa de Saban	1.00	308	i P	Pg	01 48 13.4	-1.1
SDDR				eS	Sg	01 48 26.4	-1.2
SDDR				IAML		01 48 31.8	
	comp=Z,25μm,0.8s						
SC01	Santiago de lo	1.09	346		Pg	01 48 14.6	-1.7
SC01				Sg	Sg	01 48 28.4	-2.1
SC01	Santiago de lo	1.09	346	⇑iP	Pg	01 48 14.5	-1.7
SC01				eS	Sg	01 48 28.5	-2.1
SC01				IAML		01 48 33.1	
	comp=Z,16μm,0.6s						
DR12	Loma Pena Alta	1.11	67	Pn	Pg	01 48 14.6	-1.9
LONA1	Toro Cenizo, N	1.16	29	⇓iP	Pg	01 48 14.9	-2.6
LONA1				IAML		01 48 38.1	
	comp=Z,17μm,1.2s						
LOPE2	Hotel El Peder	1.27	255	⇓iP	Pn	01 48 19.3	+0.6
LOPE2				IAML		01 48 47.1	
	comp=Z,16μm,0.5s						
NQUSE	US Embassy, Po	1.71	277		Pn	01 48 25.5	+0.7
NQUSE				Sg	Sn	01 48 48.6	+2.0
PAPH	Port-au-Prince	1.76	276	⇓iP	Pn	01 48 25.9	+0.5
JAKH	Jacmel	1.96	267		Pn	01 48 29.5	+1.2
JAKH				Sn	Sn	01 48 53.7	+0.9
JAKH	Jacmel	1.96	267	i P	Pn	01 48 29.4	+1.1
LGNH	Logne	2.04	275		Pn	01 48 30.5	+1.1
LGNH				Sn	Sn	01 48 57.1	+2.2
PRSN	Puerto Rico Se	3.15	92	Pn	Pn	01 48 46.4	+1.7
AGPR	Aguadilla, PR	3.18	88		Pn	01 48 46.4	+1.3
GRTK	Grand Turk	3.20	349	Pn	Pn	01 48 45.3	0.0
CRPR	Cabo Rojo, PR	3.20	96	Pn	Pn	01 48 46.6	+1.3
MLPR	Magueyes Islan	3.27	96	Pn	Pn	01 48 47.4	+1.2
AOPR	Arecibo Observ	3.52	90	eP	Pn	01 48 53.4	+3.7
AOPR	Arecibo Observ	3.52	90	eS	Sb	01 49 41.6	+1.5
AOPR	Arecibo Observ	3.52	90		Pn	01 48 49.2	-0.5
OBIP	Obispado Ponce	3.67	94		Pn	01 48 53.7	+1.8
CELP	Cerrillos	3.70	94	Pn	Pn	01 48 53.9	+1.7
EMPR	Esperanza - Ma	3.73	88	Pn	Pn	01 48 53.6	+1.0
SJG	San Juan	4.10	93	Pn	Pn	01 48 58.7	+1.0
	comp=Z,77nm,0.3s,baz=306,slow=10.0,SNR=88						
SJG				Sn	Sb	01 49 54.6	-2.3
	comp=Z,180nm,0.3s,baz=132,slow=20,SNR=23						
SJG	San Juan	4.10	93	eP	Pn	01 48 59.3	+1.5
SJG	San Juan	4.10	93	eP	Pn	01 49 01.4	+3.7
SJG	San Juan	4.10	93	eS	Sb	01 49 54.0	-2.9
SJG	San Juan	4.10	93		Pn	01 48 59.2	+1.5
GCPR	Guaynabo City	4.16	90		Pn	01 48 59.1	+0.6
PDPR	Patillas Dam,	4.23	94	Pn	Pn	01 49 00.4	+0.9
CBYP	Canovanas	4.37	90		Pn	01 49 03.1	+1.6
GTBY	Guantanamo Bay	4.67	290	Pn	Pn	01 49 04.5	-1.0
CUPR	Culebra, Puert	4.92	90	Pn	Pn	01 49 09.7	+0.7
STVI	Saint Thomas	5.23	89		Pn	01 49 13.2	0.0
CDVI	St. Croix	5.45	95	eP	Pn	01 49 18.1	+1.9
CDVI	St. Croix	5.45	95	eS	Sn	01 50 24.6	+5.8
CDVI	St. Croix	5.45	95	Pn	Pn	01 49 16.8	+0.6
CMJ	Castle Mountai	5.63	269	i P	Pn	01 49 19.0	+0.3
GWJ	Greenwich	5.97	268	i P	Pn	01 49 24.4	+0.9
HOJ	Hope	5.99	268	i P	Pn	01 49 24.6	+0.8
STH	Stony Hill	6.04	268	i P	Pn	01 49 25.7	+1.2
HATO	Hato, Curacao	6.31	167	Pn	Pn	01 49 28.3	+0.2
MTDJ	Mount Denham	6.72	270	eP	Pn	01 49 33.6	-0.3
MTDJ	Mount Denham	6.72	270	Pn	Pn	01 49 34.3	+0.4
URIC	Uribia, Colomb	6.78	193	eP	Pn	01 49 33.6	-1.0
URIC	Uribia, Colomb	6.78	193	eP	Pn	01 49 35.5	+0.9
URIC	Uribia, Colomb	6.78	193	Pn	Pn	01 49 34.1	-0.4
SABA	Saba	6.91	95	eP	Pn	01 49 40.1	+3.8
SABA	Saba	6.91	95	Pn	Pn	01 49 36.8	+0.5
SMRT	St. Maarten	7.02	91	eP	Pn	01 49 39.5	+1.6
SMRT	St. Maarten	7.02	91	eS	Sn	01 50 57.9	+0.1
SMRT	St. Maarten	7.02	91	Pn	Pn	01 49 38.7	+0.8
SEUS	St. Eustatius	7.17	96	eP	Pn	01 49 42.7	+2.8
SKI	Saint Kitts	7.42	97	eP	Pn	01 49 49.0	+5.6
SMRC	Santa Marta, M	8.03	208	eP	Pn	01 49 49.8	-1.8
ANWB	Willy Bob	8.28	93	eP	Pn	01 49 56.3	+1.2
ANWB	Willy Bob	8.28	93	Pn	Pn	01 49 54.8	-0.3
ANBD	Bethesda, Anti	8.39	98	eP	Pn	01 49 58.4	+1.8
ANBD	Bethesda, Anti	8.39	98	eS	Sn	01 51 35.0	+3.7
CBE	Ff, Capester	8.76	104	eP	Pn	01 50 03.5	+1.7
TDBA	Terre de Bas,	8.80	105	eP	Pn	01 50 08.5	+6.2
MAGL	Barre de l'ile	9.09	104	eP	Pn	01 50 08.5	+2.2
DSLB	Salisbury	9.12	107	eP	Pn	01 50 08.3	+1.6
SDV	Santo Domingo	9.42	181	Pn	Pn	01 50 11.3	+0.4
	comp=Z,31nm,0.3s,baz=24,slow=4.3,SNR=112						
SDV				Sn	Sn	01 51 52.7	-4.3
	comp=Z,33nm,0.3s,baz=2.6,slow=22,SNR=17						
SDV				LR	LR	01 54 21.1	
	comp=Z,1μm,18.7s,baz=16,slow=41						
SDV	Santo Domingo	9.42	181	eP	Pn	01 50 11.8	+0.8
SDV	Santo Domingo	9.42	181	eP	Pn	01 50 11.2	+0.2
SDV	Santo Domingo	9.42	181	Pn	Pn	01 50 11.7	+0.7
SJCC	San Jacinto, C	9.58	209	Pn	Pn	01 50 11.3	-1.8
FDF	Fort de France	9.62	111	eP	Pn	01 50 14.2	+0.5
BIM	Bigot	9.78	112	eP	Pn	01 50 15.3	-0.5
BIM	Bigot	9.78	112	Pn	Pn	01 50 17.0	+1.2
PCRV	Puerto La Cruz	9.90	144	Pn	Pn	01 50 18.7	+1.3
	comp=Z,49nm,0.3s,baz=332,slow=4.3,SNR=201						
PCRV				Sn	Sn	01 52 05.7	-2.8
	comp=Z,11nm,0.3s,baz=153,slow=22,SNR=6.3						
PLCV	Puerto La Cruz	9.93	144		Pn	01 50 18.7	+0.8
MPOM	Morne Pois Mar	10.00	112	eP	Pn	01 50 19.4	+0.6
MPOM	Morne Pois Mar	10.00	112	Pn	Pn	01 50 19.9	+1.2
SOCV	Socops	10.02	182	eP	Pn	01 50 17.5	-1.6
SLBI	Saint Lucia, B	10.08	114	eP	Pn	01 50 18.1	-1.7
SMLC	San Martn de	10.13	201	eP	Pn	01 50 20.4	-0.1
OCAC	Ocana	10.44	196	eP	Pn	01 50 27.1	+2.2
OCAC	Ocana	10.44	196		Pn	01 50 25.2	+0.3
GRGR	Grenville	10.51	125	Pn	Pn	01 50 25.5	-0.2
MOTC	Monteria, Cord	10.78	209	Pn	Pn	01 50 30.0	+0.5
PAMC	Pamplona, Colo	11.17	192	eP	Pn	01 50 36.6	+1.4
PRVC	Isla de Provid	11.60	246	Pn	Pn	01 50 41.1	+0.4
ZARC	Zaragoza, Cauc	11.62	202	eP	Pn	01 50 43.3	+2.3
ZARC	Zaragoza, Cauc	11.62	202	Pn	Pn	01 50 41.0	+0.1
BRRC	Barranca, Sant	11.62	196	eP	Pn	01 50 39.5	-1.6
UREC	San Jos de Ur	11.64	206	eP	Pn	01 50 43.3	+2.0
TOSP	Speyside	11.88	125	Pn	Pn	01 50 45.0	+0.4
TAMC	Tame, Arauca	11.92	186	eP	Pn	01 50 45.2	0.0
BARC	Barichara	11.99	193	eP	Pn	01 50 45.2	-1.1
PTBC	PUERTO BERRIO,	12.38	199	eP	Pn	01 50 50.9	-0.4
DBBC	Dabeiba	12.59	207	eP	Pn	01 50 52.8	-1.5
RUSC	La Rusia	12.65	192	eP	Pn	01 50 53.8	-1.8
BCIP	Isla Barro Col	12.90	226	eP	Pn	01 50 56.6	-1.8
BCIP	Isla Barro Col	12.90	226	Pn	Pn	01 50 56.2	-2.2
HELC	Santa Helena	13.07	203	eP	Pn	01 51 00.5	-0.6
SPBC	San Pablo de B	13.11	196	eP	Pn	01 51 00.5	-1.0
PTAC	Punta Ardita,	13.25	214	eP	Pn	01 50 59.5	-3.7
NORC	Norcasia	13.43	199	eP	Pn	01 51 10.0	+4.3
CBOC	Ciudad Bolivar	13.55	204	eP	Pn	01 51 09.1	+1.5
SOLC	Bahia Solano	13.83	210	eP	Pn	01 51 14.8	+3.6
GUY2C	Guyana, Caldas	13.91	201	eP	Pn	01 51 13.8	+1.2
ROSC	El Rosal	13.96	196	Pn	Pn	01 51 14.3	+1.0
	comp=Z,4.6nm,0.3s,baz=69,slow=8.8,SNR=6.0						
ROSC				Sn	Sn	01 53 44.5	-4.0
	comp=Z,9.9nm,0.3s,baz=169,slow=19,SNR=4.2						
ROSC	El Rosal	13.96	196	eP	Pn	01 51 13.8	+0.6
ROSC	El Rosal	13.96	196	Pn	Pn	01 51 12.8	-0.4
PTGC	Puerto Gaitan,	14.17	187	eP	Pn	01 51 12.9	-3.0
VILC	Villavicencio,	14.51	193	eP	Pn	01 51 19.6	-1.1
PLMC	San Jos del P	14.53	204	eP	Pn	01 51 22.4	+1.5
ANIL	Santa Ana	14.61	200	eP	Pn	01 51 23.4	+1.3
ESPN	Las Esperanzas	14.69	247	Pn	Pn	01 51 23.1	+0.1
ORTC	Ortega, Tolima	15.11	199	eP	Pn	01 51 32.0	+3.3
BRU2	Volcan	15.22	233	Pn	Pn	01 51 29.7	-0.4
YOTC	Yotoco, Valle	15.40	203	eP	Pn	01 51 32.9	+0.3
CDITO	Canoas	15.49	233	P	Pn	01 51 36.1	+2.4
CDITO				IAmb	IAmb	01 51 49.9	
	comp=Z,56nm,0.8s						
RIMA	Rio Macho	15.55	238	Pn	Pn	01 51 33.2	-1.4
ACON	Acoyapa	15.56	248	Pn	Pn	01 51 34.5	0.0
BOAB	BOACO BROADBAN	15.79	250	Pn	Pn	01 51 38.0	+0.5
GUVC	San Jose del G	15.86	188	eP	Pn	01 51 35.8	-2.7
RIOS	Rincon, Osa	15.90	235	IAmb	IAmb	01 51 48.7	
	comp=Z,28nm,0.4s						
MARP	Paez Belalcaza	16.33	200	eP	Pn	01 51 47.2	+2.4
MACC	Macarena, Meta	16.45	192	eP	Pn	01 51 45.3	-0.7
TGUH	Tegucigalpa,Un	16.70	258	P	Pn	01 51 49.7	+0.3
TGUH				IAmb	IAmb	01 52 03.3	
	comp=Z,97nm,1.1s						
SOTA	Rioblanco	17.21	201	eP	Pn	01 51 58.7	+2.5
Y59A	Loris	17.29	336	P	Pn	01 51 55.3	-1.1
Y59A				IAmb	IAmb	01 52 04.9	
	comp=Z,161nm,1.4s						
X58A	Rowland	17.97	336	P	Pn	01 52 04.1	-0.7
V61A	Roper	18.19	344	P	Pn	01 52 06.8	-0.8
BIRD	Birdtown, Kers	18.51	333	P	P	01 52 11.5	+0.2
JSC	Jenkinsville	18.56	331	P	P	01 52 11.2	-0.7
PTLC	Puerto Leguiza	18.57	194	eP	Pn	01 52 16.8	+4.4
BOAV	Boa Vista	18.62	147	eP	P	01 52 13.0	+0.4
BOAV	Boa Vista	18.62	147	P	P	01 52 13.4	+0.8
BOAV				IAmb	IAmb	01 52 16.8	
	comp=Z,40nm,0.8s						
W57A	Gilead	18.75	335	P	P	01 52 14.2	+0.2
W57A				IAmb	IAmb	01 52 20.6	
	comp=Z,58nm,1.1s						
GOGA	Godfrey	18.99	325	P	Pn	01 52 22.6	+5.2
	baz=139						
HODGE	Hodges	19.00	329	P	P	01 52 15.7	-1.0
KMSC	Kings Mountain	19.31	332	P	P	01 52 21.1	+0.9
	baz=147,SNR=5.6						
KMSC	Kings Mountain	19.31	332	IAmb	IAmb	01 52 27.5	
	comp=Z,76nm,1.2s						
OTAV	Otavalo	19.65	204	eP	Pn	01 52 29.2	+3.4
OTAV	Otavalo	19.65	204	eP	P	01 52 25.9	+1.5
OTAV	Otavalo	19.65	204	P	P	01 52 24.2	-0.2
OTAV				IAmb	IAmb	01 52 39.0	
	comp=Z,76nm,1.0s						
Y52A	Lilburn	19.66	324	IAmb	IAmb	01 52 32.9	
	comp=Z,96nm,1.4s						
R58B	Mineral	20.58	343	P	P	01 52 33.3	-0.7
BLA	Blacksburg	20.72	337	P	Pn	01 52 40.5	+2.5
	baz=152						
CCIG	Comitan	20.80	268	P	P	01 52 36.8	0.0
CCIG				IAmb	IAmb	01 52 49.0	
	comp=Z,53nm,1.0s						
TKL	Tuckaleechee C	20.88	328	P	P	01 52 38.8	+1.6
	comp=Z,25nm,1.0s,baz=143,slow=8.7,SNR=7.3						
TKL				S	S	01 56 17.1	-13
	comp=Z,15nm,1.1s,baz=88,slow=9.7,SNR=2.6						
TKL				LR	LR	02 00 32.0	
	comp=Z,521nm,20.0s,baz=138,slow=36						
TKL	Tuckaleechee C	20.88	328	P	P	01 52 37.0	-0.3
Y49A	Blount Mountai	21.02	320	P	P	01 52 38.8	0.0
Y49A				IAmb	IAmb	01 52 50.7	
	comp=Z,46nm,0.9s						
CPCT	Cooper Cave	21.10	327	P	P	01 52 39.1	-0.5
CPCT				IAmb	IAmb	01 52 49.3	
	comp=Z,53nm,1.2s						
V51A	Loudon	21.29	327	P	P	01 52 41.3	-0.3
V51A				IAmb	IAmb	01 52 51.9	
	comp=Z,68nm,0.9s						
W50A	Signal Mountai	21.34	325	P	P	01 52 41.5	-0.7
W50A				IAmb	IAmb	01 52 59.9	
	comp=Z,39nm,1.0s						
TZTN	Tazewell	21.48	330	P	P	01 52 47.8	+4.1
	baz=144,SNR=10						
TZTN	Tazewell	21.48	330	P	P	01 52 43.7	0.0
TZTN				IAmb	IAmb	01 52 50.7	
	comp=Z,79nm,1.0s						
PTGA	Pitinga	21.59	150	P	P	01 52 45.1	+0.1
	comp=Z,35nm,0.8s,baz=340,slow=13,SNR=17						
PTGA	Pitinga	21.59	150	P	P	01 52 46.4	+1.4
PTGA				IAmb	IAmb	01 52 51.4	
	comp=Z,40nm,0.9s						
Z47A	Carrollton	21.63	317	P	P	01 52 46.0	+0.7
Z47A				IAmb	IAmb	01 52 52.4	
	comp=Z,42nm,0.9s						
SDMD	Soldier's Deli	21.70	347	P	P	01 52 44.2	-1.7
MDP	Montagnes des	21.83	125	P	P	01 52 47.3	-0.3
	comp=Z,20nm,0.7s,baz=320,slow=12,SNR=9.2						
P60A	Greenville	21.84	349	P	P	01 52 52.0	+4.5
	baz=167						
WUPA	West Chester U	21.95	349	P	P	01 52 49.6	+0.9
Q56A	Snyder Ridge,	21.96	342	P	P	01 52 46.1	-2.7
Q56A				IAmb	IAmb	01 52 59.0	
	comp=Z,68nm,1.0s						
MVL	Millersville	22.16	348	P	P	01 52 53.0	+2.1
MVL				IAmb	IAmb	01 53 02.5	
	comp=Z,83nm,1.2s						
TBTG	Tabatinga, AM	22.41	179	eP	P	01 52 53.5	-0.3
TBTG	Tabatinga, AM	22.41	179	P	P	01 52 53.3	-0.5
BRNJ	Basking Ridge	22.53	352	P	P	01 52 56.1	+1.3
BRNJ				IAmb	IAmb	01 53 03.2	
	comp=Z,64nm,1.0s						
LUPA	Lehigh Univers	22.57	350	P	P	01 52 53.5	-1.8
LUPA				IAmb	IAmb	01 53 03.9	
	comp=Z,50nm,1.0s						
V48A	Smith Brothers	22.57	323	P	P	01 52 53.8	-1.7
V48A				IAmb	IAmb	01 53 04.6	
	comp=Z,58nm,1.2s						
MCWV	Mont Chateau	22.73	341	P	P	01 52 58.7	+1.6
	baz=156						
PAL	Palisades	22.77	353	P	P	01 52 56.8	-0.6
PLAL	Pickwick Lake	22.79	320	P	P	01 52 56.7	-1.0
PLAL				IAmb	IAmb	01 53 04.8	
	comp=Z,54nm,1.2s						
WSPT	Westport, CT	22.87	354	P	P	01 53 00.0	+1.6
WSPT				IAmb	IAmb	01 53 12.2	
	comp=Z,36nm,1.0s						
ODNJ	Ogdensburg	22.93	352	IAmb	IAmb	01 53 06.8	
	comp=Z,42nm,0.9s						
O56A	Blue Knob Stat	22.93	344	P	P	01 53 03.4	+4.2
	baz=160,SNR=7.1						
TRNY	Table Rock, Ra	22.94	353	IAmb	IAmb	01 53 06.8	
	comp=Z,32nm,0.9s						
N59A	State Game Lan	22.94	350	P	P	01 53 03.2	+3.9
	baz=167,SNR=7.0						
N59A	State Game Lan	22.94	350	IAmb	IAmb	01 53 07.5	
	comp=Z,37nm,0.9s						
SSPA	Standing Stone	23.10	345	P	P	01 53 04.5	+3.6
	baz=162						
SSPA	Standing Stone	23.10	345	P	P	01 53 01.0	+0.1
UCCT	U. Connecticut	23.41	357	P	P	01 53 03.1	-0.9
UCCT				IAmb	IAmb	01 53 10.5	
	comp=Z,54nm,1.0s						
WVT	Waverly	23.43	323	P	P	01 53 07.4	+3.1
	baz=135						
WVT	Waverly	23.43	323	P	P	01 53 02.7	-1.6
WVT				IAmb	IAmb	01 53 11.3	
	comp=Z,35nm,0.9s						
MACA	Manacapuru-AM	23.45	155	eP	P	01 53 05.6	+0.9
MACA	Manacapuru-AM	23.45	155	P	P	01 53 04.4	-0.2
P52A	Corning	23.49	337	P	P	01 53 08.7	+3.9
	baz=151,SNR=8.8						
O53A	New Philadelph	23.71	339	P	P	01 53 11.8	+4.9
	baz=154,SNR=6.8						
N54A	Moraine State	23.97	342	P	P	01 53 14.4	+4.9
	baz=157,SNR=6.5						
L59A	Walton	24.07	352	IAmb	IAmb	01 53 18.2	
	comp=Z,28nm,1.1s						
HRV	Adam Dziewonsk	24.09	358	P	P	01 53 12.9	+2.4
	baz=177						
BINY	Binghamton	24.23	350	P	P	01 53 16.0	+4.1
	baz=167,SNR=6.9						
BINY	Binghamton	24.23	350	P	P	01 53 13.1	+1.3
BINY				IAmb	IAmb	01 53 18.7	
	comp=Z,41nm,0.9s						
ACSO	Alum Creek Sta	24.33	336	P	P	01 53 18.5	+5.7
	baz=150,SNR=10						
M54A	Oil Creek Stat	24.38	343	P	P	01 53 15.9	+2.6
	baz=158						
P49A	Miami Univ. Ec	24.45	333	P	P	01 53 18.9	+5.0
	baz=146,SNR=9.1						
M53A	WI Miller and	24.61	341	P	P	01 53 15.5	+0.1
	baz=156						
Z41A	Richland Creek	24.92	311	P	P	01 53 26.6	+8.3
	baz=121,SNR=5.4						
ERPA	Erie	25.04	343	P	P	01 53 24.0	+4.8
	baz=158,SNR=6.1						
S44A	Carbondale	25.33	323	IAmb	IAmb	01 53 29.6	
	comp=Z,34nm,0.8s						
LCAR	Lake Charles	25.40	318	P	P	01 53 21.4	-1.2
LCAR				IAmb	IAmb	01 53 31.2	
	comp=Z,17nm,1.0s						
W41B	Gary Mavity, V	25.58	315	P	P	01 53 29.4	+5.2
	baz=125,SNR=8.1						
X40A	Basin Creek Fa	25.59	313	P	P	01 53 25.4	+1.1
	baz=123,SNR=7.4						
X40A	Basin Creek Fa	25.59	313	IAmb	IAmb	01 53 34.9	
	comp=Z,28nm,0.9s						
MALB	Monte Alegre	25.64	140	eP	P	01 53 24.9	0.0
WHAR	Wooly Hollow	25.67	315	P	P	01 53 23.0	-2.0
WHAR				IAmb	IAmb	01 53 34.7	
	comp=Z,42nm,1.2s						
LBNH	Lisbon	25.83	358	P	P	01 53 31.1	+4.7
	baz=177						
FCAR	Ozark Folk Cen	25.92	317	P	P	01 53 25.1	-2.2
FCAR				IAmb	IAmb	01 53 35.1	
	comp=Z,21nm,0.9s						
MCPB	Macapa, AP	25.95	134	eP	P	01 53 26.9	-0.8
CZSB	Cruzeiro do Su	26.02	185	eP	P	01 53 28.6	+0.3
CZSB	Cruzeiro do Su	26.02	185	P	P	01 53 27.4	-0.9
MIAR	Mount Ida	26.14	313	P	P	01 53 36.6	+7.3
	baz=122,SNR=7.3						
SFIN	Lafayette	26.21	330	P	P	01 53 37.6	+7.7
	baz=142,SNR=6.9						
ATAH	Atahualpa	26.52	198	P	P	01 53 34.9	+1.6
	comp=Z,9.8nm,0.9s,baz=69,slow=7.4,SNR=3.9						
ATAH				LR	LR	02 05 53.0	
	comp=Z,218nm,20.8s,baz=12,slow=41						
W39A	Magazine	26.63	314	P	P	01 53 35.4	+1.6
	baz=123						
W39A	Magazine	26.63	314	IAmb	IAmb	01 53 42.9	
	comp=Z,23nm,0.9s						
U40A	Yellville	26.67	317	P	P	01 53 34.4	+0.3
	baz=126						
U40A	Yellville	26.67	317	IAmb	IAmb	01 53 44.3	
	comp=Z,23nm,1.0s						
CCM	Cathedral Cave	26.73	321	P	P	01 53 34.8	+0.2
	baz=132						
CCM	Cathedral Cave	26.73	321	P	P	01 53 33.2	-1.4
CCM				IAmb	IAmb	01 53 44.1	
	comp=Z,22nm,0.8s						
TLIG	Tlapa	26.74	273	P	P	01 53 36.4	+1.3
TLIG				IAmb	IAmb	01 53 43.8	
	comp=Z,43nm,1.3s						
MGMO	Mountain Grove	26.78	319	IAmb	IAmb	01 53 45.3	
	comp=Z,31nm,0.9s						
ITTB	Itaituba	26.84	146	eP	P	01 53 35.4	-0.4
PKME	Peaks-Kenny Pk	26.84	2	P	P	01 53 41.3	+5.9
	baz=182						
SADO	Sadowa	27.32	346	P	P	01 53 41.1	+1.3
	comp=Z,20nm,1.0s,baz=226,slow=1.1,SNR=4.5						
HHAR	Hobbs	27.34	315	IAmb	IAmb	01 53 51.5	
	comp=Z,25nm,1.0s						
R40A	Maddies Statio	27.50	321	P	P	01 53 41.0	-0.4
R40A				IAmb	IAmb	01 53 52.2	
	comp=Z,30nm,1.2s						
U38A	Gravette	27.73	315	P	P	01 53 43.4	-0.2
U38A				IAmb	IAmb	01 53 55.0	
	comp=Z,19nm,1.3s						
S39A	Bolivar	27.77	319	IAmb	IAmb	01 53 55.3	
	comp=Z,16nm,0.9s						
SAML	Samuel	28.07	165	P	P	01 53 46.4	-0.3
P40A	Paris	28.18	323	IAmb	IAmb	01 53 54.5	
	comp=Z,14nm,0.9s						
ETMB	Extrema	28.31	171	eP	P	01 53 49.3	+0.4
TUL1	Leonard	28.40	313	P	P	01 53 50.0	+0.5
	baz=121						
TUL1	Leonard	28.40	313	IAmb	IAmb	01 53 57.7	
	comp=Z,18nm,0.9s						
NPGB	Novo Progresso	29.31	148	eP	P	01 53 58.1	+0.3
OK025	Westminster Rd	29.32	311	IAmb	IAmb	01 54 05.7	
	comp=Z,24nm,0.8s						
T35A	Sooner Cattle	29.42	314	IAmb	IAmb	01 54 15.3	
	comp=Z,15nm,1.0s						
NNA	Nana	30.80	192	P	P	01 54 11.1	0.0
	comp=Z,4.3nm,0.5s,baz=9.5,slow=9.2,SNR=7.8						
NNA	Nana	30.80	192	P	P	01 54 11.4	+0.3
NNA				IAmb	IAmb	01 54 12.7	
	comp=Z,15nm,0.8s						
PRPB	Parauapebas	31.76	138	eP	P	01 54 18.4	-1.1
TX32	Lajitas Array	32.17	296	P	P	01 54 23.2	0.0
TXAR	Lajitas Array	32.17	296	P	P	01 54 23.7	+0.5
	comp=Z,1.2nm,0.7s,baz=114,slow=8.9,SNR=11						
TXAR				PcP	PcP	01 57 10.5	-1.6
	comp=Z,1.0nm,0.9s,baz=106,slow=6.7,SNR=2.3						
TXAR				LR	LR	02 10 15.1	
	comp=Z,50nm,18.6s,baz=0.0,slow=42						
TX31	Lajitas Ar. Si	32.18	296	IAmb	IAmb	01 54 38.9	
	comp=Z,13nm,0.8s						
CLDB	Colider	32.45	152	eP	P	01 54 25.2	-0.3
PDRB	Porto dos Gac	32.72	155	eP	P	01 54 26.2	-1.6
VILB	Vilhena	32.72	161	eP	P	01 54 28.3	+0.4
VILB	Vilhena	32.72	161	P	P	01 54 28.6	+0.7
MSTX	Muleshoe	32.74	305	P	P	01 54 28.2	+0.1
	baz=110						
ROSB	Rosrio	33.45	127	eP	P	01 54 33.7	-0.6
ECSD	EROS Data Cent	33.53	325	P	P	01 54 34.7	0.0
	baz=131						
MNTX	Cornudas Mount	34.16	300	P	P	01 54 41.1	+0.7
	baz=104,SNR=15						
MNTX	Cornudas Mount	34.16	300	IAmb	IAmb	01 54 47.9	
	comp=Z,9.3nm,1.0s						
LPAZ	La Paz	34.51	176	P	P	01 54 43.8	-0.3
	comp=Z,4.5nm,0.6s,baz=306,slow=4.3,SNR=22						
LPAZ				LR	LR	02 10 04.8	
	comp=Z,403nm,20.1s,baz=341,slow=39						
LPAZ	La Paz	34.51	176	eP	P	01 54 44.5	+0.5
T25A	Trinidad	35.14	309	P	P	01 54 49.7	+0.6
	baz=113						
T25A	Trinidad	35.14	309	IAmb	IAmb	01 54 57.8	
	comp=Z,11nm,1.0s						
SMTB	Santa Maria do	35.23	138	eP	P	01 54 49.3	-0.4
SIV	San Ignacio	35.36	164	P	P	01 54 50.4	-0.5
	comp=Z,20nm,0.8s,baz=359,slow=8.7,SNR=80						
PTLB	Pontes e Lacer	35.40	161	eP	P	01 54 50.3	-0.8
PTLB	Pontes e Lacer	35.40	161	P	P	01 54 50.7	-0.4
PTLB				IAmb	IAmb	01 54 51.5	
	comp=Z,12nm,0.8s						
SNDB	Serra Nova Dou	35.58	146	eP	P	01 54 51.7	-1.1
BNM	Barren Site	35.83	303	P	P	01 54 55.5	+0.5
ANMO	Albuquerque	35.93	305	P	P	01 54 57.0	+1.1
	baz=108						
AGMN	Agassiz Nation	36.30	331	P	P	01 55 00.7	+2.1
	baz=137						
121A	Cookes Peak, D	36.34	300	P	P	01 55 00.5	+1.1
	baz=104						
Q24A	Divide	36.40	312	P	P	01 55 03.2	+3.2
	baz=114						
NBPS	Pedro II - PI	36.45	126	eP	P	01 55 00.1	-0.2
PB16	IPOC Station P	36.48	178	IAmb	IAmb	01 55 00.5	
	comp=Z,12nm,0.9s						
SCHQ	Schefferville	36.51	4	P	P	01 55 00.9	+0.6
	comp=Z,24nm,1.1s,baz=178,slow=5.3,SNR=4.9						
SCHQ				LR	LR	02 08 46.1	
	comp=Z,157nm,20.7s,baz=220,slow=34						
SCHQ	Schefferville	36.51	4	P	P	01 55 00.7	+0.4

SALV	Santo Antonio	37.02	156	eP	P	01 55 03.5	-1.5
ISCO	Idaho Springs	37.08	313	P	P	01 55 06.4	+0.7
	baz=115,SNR=6.6						
SLBS	Sierra La Lagu	37.15	285	P	P	01 55 06.1	-0.2
SLBS				IAmb	IAmb	01 55 09.9	
	comp=Z,29nm,1.3s						
319A	Douglas	37.34	298	IAmb	IAmb	01 55 24.5	
	comp=Z,17nm,0.8s						
PEXB	Peixe	37.34	143	eP	P	01 55 07.2	-0.5
ULM	Lac du Bonnet	37.75	333	P	P	01 55 11.9	+1.1
	comp=Z,9.2nm,0.9s,baz=139,slow=8.7,SNR=7.6						
ULM				LR	LR	02 10 23.4	
	comp=Z,214nm,20.7s,baz=116,slow=36						
PB08	IPOC Station P	38.28	178	IAmb	IAmb	01 55 16.1	
	comp=Z,19nm,1.1s						
ARAG	Araguaiana, MT	38.51	150	eP	P	01 55 16.7	-0.9
TUC	Tucson	38.77	299	P	P	01 55 20.7	+0.8
	baz=101						
TUC	Tucson	38.77	299	P	P	01 55 18.4	-1.5
PP1B	Ponte de Pedra	38.88	156	eP	P	01 55 20.8	+0.1
O20A	White River Ci	39.06	312	P	P	01 55 23.2	+0.9
	baz=113						
PB01	IPOC Station P	39.17	179	IAmb	IAmb	01 55 22.8	
	comp=Z,21nm,0.8s						
SDBA	SAO DESIDERIO	39.63	139	eP	P	01 55 25.9	-1.2
BDFB	Brasilia	40.38	145	P	P	01 55 33.1	-0.2
	comp=Z,21nm,0.8s,baz=312,slow=9.4,SNR=26						
BDFB				LR	LR	02 12 29.6	
	comp=Z,344nm,21.8s,baz=337,slow=37						
BDFB	Brasilia	40.38	145	IAmb	IAmb	01 55 34.1	
	comp=Z,31nm,1.0s						
NBMA	Muriti-CE	40.39	126	eP	P	01 55 32.3	-1.1
DGMT	Dagmar	40.60	325	P	P	01 55 36.0	+1.2
	baz=126,SNR=5.1						
DGMT	Dagmar	40.60	325	P	P	01 55 33.8	-1.0
DGMT				IAmb	IAmb	01 55 42.8	
	comp=Z,28nm,0.9s						
NBPA	Parau_RN	40.69	123	eP	P	01 55 35.0	-0.8
LVC	Limon Verde	40.75	178	P	P	01 55 35.4	-1.1
	comp=Z,11nm,1.0s,baz=1.6,slow=2.9,SNR=6.5						
LVC	Limon Verde	40.75	178	eP	P	01 55 36.7	+0.2
LVC	Limon Verde	40.75	178	P	P	01 55 35.1	-1.4
PDAR	Pinedale Array	41.01	315	P	P	01 55 38.2	-0.3
	comp=Z,0.3nm,0.5s,baz=123,slow=9.9,SNR=4.9						
PDAR				PcP	PcP	01 57 37.3	-1.2
	comp=Z,1.1nm,0.7s,baz=111,slow=6.1,SNR=4.4						
PDAR				LR	LR	02 13 45.2	
	comp=Z,338nm,19.4s,baz=116,slow=38						
AQDB	Aquidauana	41.22	159	eP	P	01 55 39.8	-0.3
AQDB	Aquidauana	41.22	159	P	P	01 55 39.6	-0.5
NBPN	Ponto Novo - B	41.64	132	eP	P	01 55 42.5	-1.2
NBLV	Livramento - P	41.81	125	eP	P	01 55 43.9	-1.3
RLMT	Red Lodge	41.84	318	P	P	01 55 45.3	0.0
	baz=117						
JANB	Januaria	42.03	141	eP	P	01 55 45.9	-1.0
IPMB	Ipameri, GO	42.22	148	eP	P	01 55 47.6	-0.8
DUG	Dugway, Tooele	42.37	310	P	P	01 55 50.2	+0.6
	baz=108						
DUG	Dugway, Tooele	42.37	310	P	P	01 55 47.6	-1.9
GCMT	Greycliff	42.39	319	P	P	01 55 48.0	-1.7
NBPV	Pedro Velho	42.54	122	eP	P	01 55 50.0	-1.1
ITRB	Iturama	42.66	151	eP	P	01 55 51.6	-0.3
IRM	Iron Mountain	42.70	301	P	P	01 55 53.4	+1.2
	baz=100						
SPR3	Spring Creek 3	43.14	308	P	P	01 55 54.3	-1.8
NBLA	Lagarto - SE	43.47	130	eP	P	01 55 57.4	-1.2
EGMT	Eagleton	43.50	322	P	P	01 56 00.2	+1.6
	baz=119						
EGMT	Eagleton	43.50	322	P	P	01 55 57.2	-1.3
MC01	Montes Claros	43.53	142	eP	P	01 55 58.4	-0.7
BOZ	Bozeman (W)	43.54	318	P	P	01 55 59.5	+0.5
	baz=115						
PCMB	Pacaembu	43.94	154	eP	P	01 56 01.7	-0.5
TRCB	Terra Rica	44.46	156	eP	P	01 56 05.5	-0.9
TRCB	Terra Rica	44.46	156	P	P	01 56 06.3	-0.1
AC02	Maricunga	44.94	178	P	P	01 56 10.7	-0.1
AC02				IAmb	IAmb	01 56 11.6	
	comp=Z,31nm,1.4s						
DIAM	Diamantina, MG	44.94	143	eP	P	01 56 09.5	-0.9
NBIT	Itapeh - BA	45.04	135	eP	P	01 56 11.2	+0.1
CMC01	Camacan, BA	45.29	136	eP	P	01 56 12.2	-0.9
NV11	Mina Array Sit	45.91	306	IAmb	IAmb	01 56 30.1	
	comp=Z,9.5nm,0.8s						
GUA01	Guaratinga, BA	46.00	137	eP	P	01 56 18.7	0.0
NVAR	Mina Array Bea	46.02	306	P	P	01 56 19.0	0.0
	comp=Z,2.5nm,0.7s,baz=92,slow=7.0,SNR=13						
NVAR				LR	LR	02 18 23.3	
	comp=Z,351nm,18.1s,baz=96,slow=40						
CPUP	Villa Florida	46.22	164	P	P	01 56 19.1	-1.1
	comp=Z,33nm,1.1s,baz=348,slow=7.5,SNR=24						
CPUP				LR	LR	02 16 23.2	
	comp=Z,195nm,20.1s,baz=348,slow=37						
CPUP	Villa Florida	46.22	164	eP	P	01 56 18.4	-1.9
CPUP	Villa Florida	46.22	164	P	P	01 56 18.6	-1.6
PTGB	Pitanga	46.41	157	eP	P	01 56 21.4	-0.5
BSCB	Bom Sucesso	46.51	146	eP	P	01 56 22.4	-0.3
YERR	Yerington	46.85	307	IAmb	IAmb	01 56 46.3	
	comp=Z,14nm,1.0s						
WVOR	Wild Horse Val	47.21	311	IAmb	IAmb	01 56 34.6	
	comp=Z,11nm,1.1s						
J08A	Circle Bar Ran	47.35	313	IAmb	IAmb	01 56 35.9	
	comp=Z,11nm,1.3s						
PARB	Paraibuna	48.02	149	eP	P	01 56 34.6	+0.2
PET01	Itanhaem-SP	48.04	151	eP	P	01 56 33.9	-0.6
EDM	Edmonton	48.05	327	P	P	01 56 33.7	-0.6
NEW	Newport	48.05	319	P	P	01 56 34.0	-0.5
	baz=112,SNR=9.5						
NEW	Newport	48.05	319	P	P	01 56 33.8	-0.7
NEW				IAmb	IAmb	01 56 41.0	
	comp=Z,13nm,1.0s						
TIJ01	Guaruva-PR	48.18	154	eP	P	01 56 35.6	-0.1
VAS01	Vassouras-RJ	48.27	146	eP	P	01 56 36.0	-0.4
ALF01	Guarapari-ES	48.48	142	eP	P	01 56 37.3	-0.6
ITAB	Concordia	48.68	158	eP	P	01 56 38.9	-0.6
DUB01	Friburgo-RJ	48.69	144	eP	P	01 56 38.5	-1.1
CAM01	Campos-RJ	48.88	144	eP	P	01 56 40.5	-0.5
B08A	Colville Reser	49.47	319	IAmb	IAmb	01 56 48.8	
	comp=Z,7.1nm,0.8s						
ITQB	Itaqui	49.58	164	eP	P	01 56 45.0	-1.3
VA03	San Esteban	50.83	180	P	P	01 56 55.5	-0.3
VA03				IAmb	IAmb	01 56 59.5	
	comp=Z,17nm,0.8s						
TER01	Tubaro-SC	50.97	156	eP	P	01 56 56.3	-0.6
CNLB	Canela	51.03	158	eP	P	01 56 56.8	-0.5
CPSB	Cacapava Do Su	51.18	161	eP	P	01 56 57.0	-1.3
PEL	Peldehue	51.21	180	IAmb	IAmb	01 56 59.3	
	comp=Z,18nm,0.9s						
MT02	Curacav	51.33	181	IAmb	IAmb	01 57 10.7	
	comp=Z,19nm,1.1s						
MT01	Popeta	51.94	181	IAmb	IAmb	01 57 04.0	
	comp=Z,13nm,0.7s						
PLTB	Pedras Altas	52.39	162	eP	P	01 57 06.3	-1.1
PLTB	Pedras Altas	52.39	162	IAmb	IAmb	01 57 06.7	
	comp=Z,24nm,1.0s						
GO05	Huala	53.09	182	IAmb	IAmb	01 57 22.4	
	comp=Z,17nm,1.2s						
YKA	Yellowknife Ar	53.58	336	P	P	01 57 16.4	+0.6
	comp=Z,11nm,0.9s,baz=114,slow=8.3,SNR=22						
YKA				LR	LR	02 20 26.3	
	comp=Z,386nm,18.6s,baz=0.0,slow=36						
BBB	Bella Bella	55.98	321	LR	LR	02 22 12.8	
	comp=Z,225nm,18.6s,baz=114,slow=37						
SUMG	Summit	57.24	11	i P	P	01 57 42.4	-0.1
SUMG	Summit	57.24	11	P	P	01 57 41.1	-1.4
WRGLY	Wrigley	57.46	335	P	P	01 57 50.2	+6.5
	baz=116,SNR=6.5						
TULEG	Thule	58.21	0	i P	P	01 57 49.8	+1.0
TULEG	Thule	58.21	0	P	P	01 57 49.0	+0.2
DLBC	Dease Lake	58.72	328	LR	LR	02 25 11.1	
	comp=Z,156nm,18.3s,baz=104,slow=38						
DLBC	Dease Lake	58.72	328	IAmb	IAmb	01 58 01.1	
	comp=Z,21nm,1.4s						
PLCA	Paso Flores	58.79	180	P	P	01 57 53.2	-0.1
	comp=Z,17nm,0.8s,baz=358,slow=7.9,SNR=38						
PLCA	Paso Flores	58.79	180	eP	P	01 57 53.3	-0.1
MDT	Midelt	60.26	62	P	P	01 58 05.4	+1.5
	comp=Z,1.1nm,0.7s,baz=53,slow=20,SNR=1.7						
ESDC	Sonseca Array	60.57	54	P	P	01 58 06.6	+0.8
	comp=Z,4.5nm,0.8s,baz=277,slow=6.8,SNR=13						
ESDC				LR	LR	02 19 56.4	
	comp=Z,73nm,21.1s,baz=45,slow=32						
P33M	Teslin, Yukon	60.58	329	P	P	01 58 11.7	+6.2
	baz=105						
H10N3	ASCENSION HYDR	61.03	110	T	T	03 05 10.3	
	baz=295,slow=75,SNR=3.9						
H10N2	ASCENSION HYDR	61.04	110	T	T	03 05 11.6	
	baz=295,slow=75,SNR=5.5						
H10N1	ASCENSION HYDR	61.05	110	T	T	03 05 15.5	
	baz=295,slow=75,SNR=5.2						
A36M	Sachs Harbour	62.10	343	P	P	01 58 17.3	+1.8
	baz=119,SNR=32						
A36M	Sachs Harbour	62.10	343	P	P	01 58 15.5	0.0
M30M	Minto, Yukon	63.00	332	P	P	01 58 27.4	+5.6
	baz=102						
INK	Inuvik	63.22	338	LR	LR	02 26 17.2	
	comp=Z,292nm,18.8s,baz=97,slow=36						
INK	Inuvik	63.22	338	P	P	01 58 28.3	+5.2
	baz=108						
KOWA	Kowa	63.54	83	P	P	01 58 26.2	+0.1
	comp=Z,6.8nm,0.7s,baz=295,slow=8.7,SNR=17						
KOWA	Kowa	63.54	83	P	P	01 58 25.6	-0.5
KOWA				IAmb	IAmb	01 58 33.6	
	comp=Z,9.3nm,0.9s						
DAWY	Dawson	64.45	333	P	P	01 58 32.7	+1.4
	baz=101						
DAWY	Dawson	64.45	333	IAmb	IAmb	01 58 38.4	
	comp=Z,11nm,1.2s						
TIC	Toumodi	64.65	91	eP	P	01 58 32.2	-1.2
LIC	Lamto	64.77	92	eP	P	01 58 33.1	-1.0
	comp=Z,61nm,1.3s						
DBIC	Dimbokro	64.80	91	P	P	01 58 33.9	-0.4
	comp=Z,7.8nm,0.7s,baz=287,slow=4.3,SNR=8.5						
DBIC				LR	LR	02 23 09.1	
	comp=Z,90nm,20.5s,baz=278,slow=33						
DBIC	Dimbokro	64.80	91	IAmb	IAmb	01 58 34.5	
	comp=Z,10nm,0.8s						
KIC	Kosan Boka	65.00	91	eP	P	01 58 34.8	-0.9
	comp=Z,24nm,0.7s						
M27K	Edge Creek, AK	65.29	331	P	P	01 58 37.3	+0.4
	baz=98						
L27K	Beaver Creek,	65.36	332	P	P	01 58 37.7	+0.4
	baz=98						
L27K	Beaver Creek,	65.36	332	P	P	01 58 37.8	+0.6
L27K				IAmb	IAmb	01 58 43.2	
	comp=Z,6.2nm,0.9s						
J26L	Joseph Creek	66.32	333	P	P	01 58 44.1	+0.7
	baz=97						
SCRK	Sand Creek	66.44	333	P	P	01 58 45.2	+0.9
	baz=96,SNR=9.8						
HDA	Harding Lake	67.77	333	P	P	01 58 53.5	+0.9
	baz=94						
HDA	Harding Lake	67.77	333	IAmb	IAmb	01 58 59.0	
	comp=Z,10nm,1.1s						
IL31		67.77	333	IAmb	IAmb	01 58 59.8	
	comp=Z,8.4nm,1.1s						
ILAR	Eielson Array	67.77	333	P	P	01 58 51.8	-0.7
	comp=Z,2.5nm,0.9s,baz=96,slow=3.9,SNR=20						
ILAR				LR	LR	02 29 23.6	
	comp=Z,271nm,19.5s,baz=110,slow=37						
POKR	Poker Plat Res	68.02	334	P	P	01 58 55.5	+1.3
	baz=94						
CCB	Clear Creek Bu	68.15	333	IAmb	IAmb	01 59 01.8	
	comp=Z,4.8nm,0.9s						
H24K	Noodor Dome	68.26	334	P	P	01 58 56.6	+0.9
	baz=94						
MDM	Murphy Dome	68.35	333	IAmb	IAmb	01 59 02.7	
	comp=Z,12nm,1.0s						
RND	Reindeer	68.56	332	IAmb	IAmb	01 59 05.5	
	comp=Z,13nm,1.0s						
NEA2	Nenana	68.69	333	P	P	01 58 59.6	+1.2
	baz=92						
NEA2	Nenana	68.69	333	IAmb	IAmb	01 59 03.6	
	comp=Z,6.8nm,0.8s						
I23K	Minto, Yukon-K	68.84	334	P	P	01 58 59.4	+0.2
	baz=92						
TRF	Thorofare Moun	69.20	332	P	P	01 59 02.2	+0.4
	baz=90						
TORD	Torodi Ar. Bea	69.25	83	P	P	01 59 01.6	-1.1
	comp=Z,3.7nm,0.7s,baz=296,slow=5.8,SNR=23						
TORD				LR	LR	02 26 40.6	
	comp=Z,105nm,20.5s,baz=270,slow=34						
TORD	Torodi Ar. Bea	69.25	83	P	P	01 59 01.9	-0.8
TORD				IAmb	IAmb	01 59 02.7	
	comp=Z,6.8nm,1.0s						
COLD	Coldfoot	69.26	336	P	P	01 59 04.6	+2.8
	baz=92						
COLD	Coldfoot	69.26	336	P	P	01 59 01.8	0.0
COLD				IAmb	IAmb	01 59 08.5	
	comp=Z,9.3nm,1.0s						
MLY	Manley	69.42	333	P	P	01 59 03.3	+0.3
	baz=91						
BPAW	Bear Paw Mtn.	69.52	332	P	P	01 59 03.2	-0.3
	baz=90						
BPAW	Bear Paw Mtn.	69.52	332	IAmb	IAmb	01 59 09.2	
	comp=Z,11nm,0.9s						
I21K	Tanana	69.95	334	P	P	01 59 06.0	-0.1
	baz=90						
I21K	Tanana	69.95	334	IAmb	IAmb	01 59 11.9	
	comp=Z,9.3nm,0.9s						
NB2	NORSAR Subarra	70.10	31	P	P	01 59 07.4	+0.3
	comp=Z,14nm,1.4s,baz=272,slow=6.5						
NB2	NORSAR Subarra	70.10	31	PKP		03 10 38.4	
	comp=Z,2.4nm,0.8s,baz=9.8,slow=2.9						
NOA	NORSAR Array B	70.10	31	P	P	01 59 07.3	+0.1
	comp=Z,3.6nm,0.9s,baz=274,slow=6.3,SNR=5.7						
NOA				LR	LR	02 26 52.8	
	comp=Z,50nm,19.2s,baz=275,slow=33						
CHUM	Lake Minchumin	70.11	332	P	P	01 59 07.0	-0.1
	baz=89						
DAVA	Damuels	70.25	45	P	P	01 59 08.3	-0.2
	comp=Z,1.8nm,0.5s						
H21K	Melozitna Rive	70.29	334	P	P	01 59 09.5	+1.3
	baz=89						
H21K	Melozitna Rive	70.29	334	IAmb	IAmb	01 59 14.1	
	comp=Z,7.9nm,1.0s						
IMAR	Indian Mountai	70.67	334	P	P	01 59 10.8	+0.3
FETA	Feichten	70.86	46	eP	P	01 59 12.1	-0.2
	comp=Z,2.3nm,0.7s						
J20K	Nowinta River	70.90	333	P	P	01 59 11.4	-0.5
	baz=87,SNR=7.8						
J20K	Nowinta River	70.90	333	IAmb	IAmb	01 59 17.3	
	comp=Z,11nm,0.8s						
K20K	Telida	70.91	332	P	P	01 59 12.9	+0.9
	baz=87						
K20K	Telida	70.91	332	IAmb	IAmb	01 59 19.2	
	comp=Z,12nm,1.1s						
KEST	Kesra	71.41	58	P	P	01 59 15.9	+0.3
	comp=Z,9.1nm,1.1s,baz=99,slow=15,SNR=2.6						
KHC	Kasperske Hory	72.49	43	eP	P	01 59 20.6	-1.3
KHC				ex	x	01 59 28.7	
GERES	GERESS Array B	72.61	44	P	P	01 59 22.1	-0.5
	comp=Z,0.9nm,0.8s,baz=258,slow=4.0,SNR=5.7						
GERES				LR	LR	02 28 25.3	
	comp=Z,53nm,19.2s,baz=280,slow=34						
DPC	Dobruska-Polom	74.06	42	eP	P	01 59 39.7	+8.6
KRLC	Kraliky	74.40	42	eP	P	01 59 40.9	+7.8
ARCES	ARCESS Array B	75.03	21	P	P	01 59 36.4	+0.1
	comp=Z,3.6nm,0.8s,baz=270,slow=3.5,SNR=6.5						
ARCES				LR	LR	02 26 52.8	
	comp=Z,62nm,21.5s,baz=270,slow=31						
MODS	Modra-Piesok	75.03	44	eP	P	01 59 43.5	+6.8
SMOL	Smolenice	75.10	43	eP	P	01 59 40.7	+3.6
FINES	FINESS Array B	77.14	29	P	P	01 59 48.9	+0.4
	comp=Z,3.4nm,0.6s,baz=244,slow=3.2,SNR=11						
MLR	Muntele Rosu	81.49	45	P	P	02 00 13.3	+0.6
MLR				IAmb	IAmb	02 00 16.7	
	comp=Z,16nm,1.1s						
AKASG	Malin Array Be	81.95	39	P	P	02 00 14.4	-0.4
	comp=Z,0.6nm,0.5s,baz=286,slow=4.4,SNR=4.3						
KLMR	Klimovskoe	83.44	28	eP	P	02 00 21.7	-0.7
KLMR				AMP		02 00 28.9	
	comp=Z,27nm,1.5s						
BILL	Bilibino	84.60	342	P	P	02 00 26.4	-1.8
BRTR	Keskin Array B	88.80	48	P	P	02 00 48.0	-1.5
	comp=Z,1.7nm,0.8s,baz=272,slow=39,SNR=1.4						
BRTR				LR	LR	02 41 40.0	
	comp=Z,35nm,18.0s,baz=309,slow=36						
NRIK	Noril'sk	91.14	8	LR	LR	02 40 39.5	
	comp=Z,120nm,21.7s,baz=333,slow=35						
PETK	Petropavlovsk-	97.60	333	LR	LR	02 48 43.8	
	comp=Z,63nm,19.3s,baz=72,slow=37						
MAW	Mawson	122.61	161	PKP	PKPdf	02 06 48.0	-2.1
	comp=Z,2.7nm,0.6s,baz=10.0,slow=11,SNR=6.1						
MAW	Mawson	122.61	161		PKPdf	02 06 49.0	-1.1
CD2	Chengdu	130.70	7	PKP	PKPdf	02 07 05.3	-1.6
CMAR	Chiang Mai Arr	141.96	16	PKP	PKPdf	02 07 25.2	-2.7
	comp=Z,1.0nm,0.4s,baz=328,slow=4.7,SNR=8.2						
CMAR	Chiang Mai Arr	141.96	16		PKPdf	02 07 26.6	-1.4
STKA	Stephens Creek	148.14	239	PKPbc	PKPdf	02 07 39.9	+1.7
	comp=Z,2.3nm,0.5s,baz=39,slow=1.8,SNR=4.3						
WRA	Warramunga Arr	156.53	262	PKP	PKPdf	02 07 49.4	-1.6
	comp=Z,2.3nm,0.9s,baz=88,slow=0.8,SNR=12						
WRA				PKPab	PKPab	02 08 19.6	-0.2
	comp=Z,0.8nm,0.5s,baz=87,slow=4.1,SNR=12						
ASAR	Alice Springs	156.67	253	PKP	PKPdf	02 07 49.8	-1.3
	comp=Z,1.0nm,0.9s,baz=146,slow=2.0,SNR=6.2						
ASAR				PKPab	PKPab	02 08 19.8	-0.6
	comp=Z,2.3nm,0.5s,baz=107,slow=4.4,SNR=15						

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*NIC **26** 01:50:08.6±0.0, 35°.63N×31°.46E, h11^{km}±1^{km}, Ml2.6/3*
*DDA **26** 01:50:11.2, 35°.68N×31°.61E, h7^{km}±4^{km}, ML2.0*
ISC 26 01:50:10.6±1.3, 35°.54N±0°.04×31°.60E±0°.04, h13^{km}±11^{km}, n14, σ1^{s}.50/25, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKMS	Akamas	0.80	131	P	Pn	01 50 26.1	-1.4
AKMS				S	Sn	01 50 40.3	+1.1
AKMS				AML	AML	01 50 43.2	
	0.6nm,1.1s						
AKMS				AML	AML	01 50 43.2	
	0.6nm,1.1s						
AKMS				AML	AML	01 50 45.5	
	0.6nm,0.3s						
AKMS				AML	AML	01 50 45.5	
	0.6nm,0.3s						
ALFC	Alefka	0.90	115	P	Pn	01 50 28.4	-0.6
ALFC				S	Sn	01 50 43.8	+1.9
ALFC				AML	AML	01 50 46.9	
	0.6nm,0.3s						
ALFC				AML	AML	01 50 46.9	
	0.6nm,0.3s						
ALFC				AML	AML	01 50 47.2	
	0.4nm,0.3s						
ALFC				AML	AML	01 50 47.2	
	0.4nm,0.3s						
GAZI	Gazipasa	0.90	40	i P	Pn	01 50 28.7	-0.3
GAZI				i S	Sg	01 50 38.8	-1.1
NATA	Nata	1.10	133	P	Pn	01 50 31.9	+0.2
NATA				AML	AML	01 50 58.4	
	1.0nm,0.7s						
NATA				AML	AML	01 50 58.8	
	1.1nm,0.4s						
LEF	Lefka	1.14	111	i P	Pb	01 50 31.1	-0.9
LEF				i S	Sn	01 50 49.1	+1.5
LEF				IAML		01 50 59.0	
	comp=N,32nm,0.6s						
LEF				IAML		01 51 00.0	
	comp=E,37nm,0.7s						
AKUM	Antalya-Kumluc	1.28	308	i P	Pg	01 50 34.9	-0.4
AKUM				i S	Sg	01 50 54.9	+2.9
AKUM				IAML		01 51 00.0	
	comp=E,39nm,1.2s						
AKUM				IAML		01 51 01.0	
	comp=N,53nm,0.8s						
KEPZ	Antalya-Kepez	1.36	0	i P	Pn	01 50 34.8	-0.5
KEPZ				i S	Sb	01 50 51.2	-2.0
KEPZ				IAML		01 50 56.0	
	comp=N,30nm,0.4s						
KEPZ				IAML		01 50 59.0	
	comp=E,26nm,0.4s						
ERMK	Ermenek	1.53	44	i P	Pg	01 50 39.7	-0.2
ERMK				i S	Sg	01 51 03.7	+3.8
CSS	Mathiatis	1.53	112	P	Pb	01 50 38.2	-0.6
CSS				S	Sg	01 50 59.9	+0.1
ASGA	Asgata	1.55	119	S	Sg	01 51 00.9	+0.5
MVOU	Mavrovouni	1.74	107	P	Pn	01 50 40.5	0.0
SEDI	Konya, Seydise	1.91	4	i P	Pb	01 50 43.9	-1.5
SEDI				i S	Sb	01 51 09.2	0.0
SEDI				IAML		01 51 20.0	
	comp=N,24nm,0.6s						
SEDI				IAML		01 51 21.0	
	comp=E,21nm,0.7s						
KKBE	Karaman, Kazim	1.99	32	i P	Pb	01 50 46.7	0.0
KKBE				i S	Sg	01 51 16.1	+1.3
KKBE				IAML		01 51 18.0	
	comp=N,18nm,0.7s						
KKBE				IAML		01 51 19.0	
	comp=E,15nm,0.5s						
KERG	Konya-Eregli	2.76	47	i P	Pb	01 50 58.1	-1.9
KERG				i S	Sb	01 51 34.4	+0.6
KERG				IAML		01 51 39.0	
	comp=N,8.6nm,0.3s						
KERG				IAML		01 51 41.0	
	comp=E,13nm,0.4s						

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*ISK **26** 01:54:00.3, 42°.46N×41°.07E, h21^{km}, ML2.3/6*
*MOS **26** 01:54:03.7±0.0, 42°.51N×41°.09E, h7^{km}, MPVA2.9*
*DDA **26** 01:54:04.1, 42°.22N×41°.15E, h7^{km}±3^{km}, ML1.9*
ISC 26 01:54:01.0±1.2, 42°.43N±0°.03×41°.07E±0°.03, h14^{km}±12^{km}, n24, σ1^{s}.06/43, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BCA	Borcka	1.07	157	PN	Pb	01 54 21.1	-0.2
BCA				SN	Sb	01 54 35.7	+0.6
DBOC	Borcka	1.17	157	i P	Pn	01 54 23.4	+0.3
DBOC				i S	Sb	01 54 38.6	+0.5
DBOC				IAML		01 54 39.0	
	comp=E,69nm,0.5s						
CHOM	Cayeli-Rize	1.35	190	PN	Pn	01 54 24.9	-0.6
CHOM				SN	Sn	01 54 43.1	-0.1
ABS	Abastumani	1.47	117	P	Pg	01 54 29.4	+0.2
ABS				S	Sg	01 54 48.9	+0.7
NEY	Neytrino	1.47	56	ePg	Pg	01 54 29.7	+0.4
NEY				eSg	Sg	01 54 49.8	+1.4
DBAD	Bademkaya	1.48	161	i P	Pn	01 54 28.1	+0.7
DBAD				i S	Sn	01 54 46.9	+0.1
DBAD				IAML		01 54 47.0	
	comp=N,30nm,0.1s						
DBAD				IAML		01 54 48.0	
	comp=E,19nm,0.3s						
DAGI	Agillar	1.49	154	i P	Pn	01 54 28.2	+0.7
DAGI				i S	Sn	01 54 46.7	-0.1
DAGI				IAML		01 54 47.0	
	comp=N,18nm,0.4s						
DAGI				IAML		01 54 49.0	
	comp=E,20nm,0.4s						
EPOS	Posof	1.55	126	i P	Pg	01 54 30.4	-0.3
EPOS				i S	Sb	01 54 49.6	+0.5
EPOS				IAML		01 54 54.0	
	comp=E,16nm,0.6s						
EPOS				IAML		01 54 56.0	
	comp=N,27nm,0.4s						
GUZR	Guzeripl'	1.71	337	ePg	Pg	01 54 34.4	+0.5
GUZR				eSg	Sg	01 54 56.6	+0.5
AHMR	Akhmetovskaya	1.73	360	i Pg	Pg	01 54 34.3	+0.1
AHMR				eSg	Sg	01 54 57.4	+0.8
KTUT	Trabzon	1.74	214	PN	Pn	01 54 30.0	-0.8
SHA1	Shidzhatmaz	1.75	41	ePg	Pg	01 54 35.2	+0.5
SHA1				i Sg	Sg	01 54 57.5	+0.1
ONI	Oni	1.77	84	P	Pg	01 54 34.3	-0.7
ONI				S	Sg	01 54 58.1	0.0
KBZ	Khabaz	1.87	45	ePg	Pg	01 54 38.5	+1.6
KBZ				eSg	Sg	01 55 02.4	+1.3
DIGR	Digorskoe uzhe	1.92	75	ePg	Pg	01 54 37.4	-0.3
DIGR				eSg	Sg	01 55 01.9	-0.7
KIV	Kislovodsk	1.93	37	PN	Pn	01 54 32.5	-1.1
KIV	Kislovodsk	1.93	37	ePg	Pg	01 54 37.2	-0.9
KIV				eSg	Sg	01 55 02.4	-0.8
LZRR	Lazarevskoye	1.95	321	ePg	Pg	01 54 37.5	-0.8
LZRR				i Sg	Sg	01 55 02.7	-0.9
KRIK	Erzurum-spir	2.09	183	i P	Pn	01 54 37.9	+2.0
SENK	Senkaya-Erzuru	2.10	152	PN	Pn	01 54 35.4	-0.6
ZEI	Tsey	2.12	79	ePg	Pg	01 54 40.0	-1.8
ZEI				eSg	Sg	01 55 07.5	-1.8
BAYT	Aydıntepe-Bayb	2.15	199	PN	Pn	01 54 36.5	-0.1
LSNR	Lesken	2.20	66	ePg	Pg	01 54 44.8	+1.6
LSNR				i Sg	Sg	01 55 12.5	+0.8
LACR	Lac	2.42	79	ePn	Pb	01 54 44.5	+0.1
LACR				eSn	Sg	01 55 15.2	-3.6

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*NEIC **26** 02:18:50.5±1.1, 59°.86N±0°.03×152°.98W±0°.07, h102^{km}±4^{km}, Error ellipse: s-maj=5.2km s-min=4.6km az=122.0*
*AEIC **26** 02:18:51.7±1.2, 59°.85N±0°.03×152°.97W±0°.07, h96^{km}±4^{km}, ML3.3/100, ML3.5/94(NEIC), Error ellipse: s-maj=4.7km s-min=4.2km az=83.0*
*IDC **26** 02:18:54.2±6.5, 60°.22N×152°.96W, h112^{km}±61^{km}, mb3.6/2, mb1 3.5/6, mb1mx3.1/57, mbtmp3.8/6, Error ellipse: s-maj=53.0km s-min=31.1km az=43.0*

ISC 26 02:18:50.7±0.9**, 59°.85N**±0°.04×**152°.95W**±0°.03**, h102^{km}**±5^{km}**, n182, σ0^{s}76**/174**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ILS	Iliamna Low So	0.12	331		Pn	02 19 04.8	-0.3
ILS					Sn	02 19 15.2	-0.7
ILSW	Iliamna Southw	0.16	324		Pn	02 19 04.7	-0.5
ILSW					Sn	02 19 15.0	-1.0
IVE	Iliamna Volcan	0.17	349		Pn	02 19 04.8	-0.4
IVE					Sn	02 19 15.2	-0.8
OPT	Oil Point	0.25	215	P	Pn	02 19 05.2	-0.1
	baz=33						
OPT	Oil Point	0.25	215		Pn	02 19 05.2	-0.1
O20K	Slope Mountain	0.28	36	P	Pn	02 19 05.4	-0.1
	baz=218						
O20K				S	Sn	02 19 16.6	-0.1
	baz=218						
O20K	Slope Mountain	0.28	36		Pn	02 19 05.4	-0.1
O20K					Sn	02 19 16.6	-0.1
AUL	Augustine Lava	0.53	208		Pn	02 19 07.1	+0.1
AUW	Augustine West	0.55	209		Pn	02 19 07.2	+0.1
AUQ	Augustine Qik'	0.55	205		Pn	02 19 07.2	0.0
AUQ					Sn	02 19 19.2	-0.2
RED	Redoubt Volcan	0.57	9		Pn	02 19 07.1	-0.3
RED					Sn	02 19 18.9	-0.9
RSO	Redoubt South	0.62	9		Pn	02 19 07.7	-0.2
RDWB	Redoubt West	0.64	5		Pn	02 19 07.6	-0.4
RDWB					Sn	02 19 19.9	-1.0
HOM	Homer	0.69	106	P	Pn	02 19 08.5	+0.3
	baz=287						
HOM	Homer	0.69	106		Pn	02 19 08.5	+0.3
HOM	Homer	0.69	106	IAML		02 19 23.0	
	comp=E,2µm,0.7s						
HOM				IAML		02 19 23.0	
	comp=N,4µm,0.8s						
O19K	Port Alsworth	0.77	297	P	Pn	02 19 08.6	-0.3
	baz=116						
O19K				S	Sn	02 19 22.0	-0.5
	baz=116						
O19K	Port Alsworth	0.77	297		Pn	02 19 08.6	-0.3
O19K					Sn	02 19 22.0	-0.5
O19K	Port Alsworth	0.77	297	IAML		02 19 22.4	
	comp=E,3µm,0.4s						
CNPM	China Poot	0.93	110		Pn	02 19 10.5	-0.1
CNPM					Sn	02 19 25.0	-0.6
CNPM	China Poot	0.93	110	IAML		02 19 26.4	
	comp=E,1µm,0.5s						
CNPM				IAML		02 19 26.5	
	comp=N,1µm,0.3s						
Q19K	Cape Douglas,	0.99	201	P	Pn	02 19 11.0	-0.3
	baz=20						
Q19K	Cape Douglas,	0.99	201		Pn	02 19 10.9	-0.3
BRLK	Bradley Lake	1.05	94		Pn	02 19 11.6	-0.3
BRLK	Bradley Lake	1.05	94	IAML		02 19 28.6	
	comp=E,764nm,0.1s						
BRLK				IAML		02 19 29.7	
	comp=N,678nm,0.4s						
BRSE	Bradley Lake S	1.12	95	P	Pn	02 19 12.5	-0.2
	baz=277						
BRSE	Bradley Lake S	1.12	95		Pn	02 19 12.5	-0.2
P18K	Big Mountain,	1.25	249	P	Pn	02 19 13.5	-0.6
	baz=67						
P18K				S	Sn	02 19 30.2	-1.5
	baz=67						
P18K	Big Mountain,	1.25	249		Pn	02 19 13.5	-0.6
P18K					Sn	02 19 30.2	-1.5
CAPN	Captain Cook N	1.28	44	P	Pn	02 19 15.8	+1.4
	baz=225						
CAPN	Captain Cook N	1.28	44		Pn	02 19 15.8	+1.4
CAPN	Captain Cook N	1.28	44	IAML		02 19 37.0	
	comp=E,2µm,0.7s						
SPCR	Spurr Chakacha	1.40	15	P	Pn	02 19 15.9	0.0
	baz=196						
SPCR	Spurr Chakacha	1.40	15		Pn	02 19 15.9	0.0
SPU	Mount Spurr	1.41	18		Pn	02 19 15.9	0.0
SPCN	Chakachatna No	1.43	15		Pn	02 19 16.4	+0.2
SPBG	Spurr Blockage	1.44	11		Pn	02 19 16.6	+0.2
SLKM	Skilak Lake	1.52	63		Pn	02 19 17.2	0.0
SPCG	Spurr Capps Gl	1.52	17		Pn	02 19 17.4	+0.1
O22K	Cooper Landing	1.73	67	P	Pn	02 19 20.0	+0.1
	baz=250						
O22K	Cooper Landing	1.73	67		Pn	02 19 20.0	+0.1
STLK	Strandline Lak	1.74	18		Pn	02 19 20.2	+0.1
SEW	Seward	1.78	80	P	Pn	02 19 20.2	-0.3
	baz=263						
SEW	Seward	1.78	80		Pn	02 19 20.2	-0.3
SVW2	Sparrevohn	1.80	315		Pn	02 19 20.4	-0.4
KABU	Katmai Buttres	1.99	218		Pn	02 19 23.9	+0.6
RC01	Rabbit Creek A	2.02	51	P	Pn	02 19 23.7	+0.2
	baz=234						
RC01	Rabbit Creek A	2.02	51		Pn	02 19 23.7	+0.2
KDAK	Kodiak Island	2.09	175		Pn	02 19 23.7	-0.8
KDAK	Kodiak Island	2.09	175	IAML		02 19 51.2	
	comp=E,329nm,0.2s						
M19K	Big River Lodg	2.17	342	P	Pn	02 19 25.6	0.0
	baz=161						
M19K	Big River Lodg	2.17	342		Pn	02 19 25.6	0.0
M22K	Willow	2.36	35	P	Pn	02 19 28.6	+0.6
	baz=218						
M22K	Willow	2.36	35		Pn	02 19 28.6	+0.6
PWL	Port Wells	2.51	64	P	Pn	02 19 28.9	-1.1
	baz=248						
PWL	Port Wells	2.51	64		Pn	02 19 28.9	-1.1
L19K	White Mountain	2.51	339	P	Pn	02 19 29.9	-0.1
	baz=158						
L19K	White Mountain	2.51	339		Pn	02 19 29.9	-0.1
PMR	Palmer	2.56	45	P	Pn	02 19 29.5	-1.1
	baz=229						
PMR	Palmer	2.56	45		Pn	02 19 29.5	-1.1
PMR	Palmer	2.56	45	IAML		02 20 00.9	
	comp=E,146nm,0.5s						
PMR				IAML		02 20 01.3	
	comp=N,198nm,0.3s						
OHAK	Old Harbor	2.65	184	P	Pn	02 19 30.8	-0.9
	baz=3.4						
OHAK	Old Harbor	2.65	184		Pn	02 19 30.8	-0.9
OHAK	Old Harbor	2.65	184	IAML		02 19 53.8	
	comp=E,115nm,3.7s						
OHAK				IAML		02 20 07.5	
	comp=N,143nm,2.6s						
L20K	Farewell, AK	2.67	351	P	Pn	02 19 32.4	+0.2
	baz=170						
L20K	Farewell, AK	2.67	351		Pn	02 19 32.4	+0.2
KNK	Knik Glacier	2.71	53	P	Pn	02 19 31.9	-0.7
	baz=237						
KNK	Knik Glacier	2.71	53		Pn	02 19 31.9	-0.7
GHO	Glory Hole Cre	2.76	44		Pn	02 19 32.7	-0.6
GHO	Glory Hole Cre	2.76	44	IAML		02 20 08.7	
	comp=N,275nm,0.5s						
CUT	Chulitna	2.87	26		Pn	02 19 35.2	+0.5
CUT				IAML		02 20 12.9	
	comp=N,212nm,0.7s						
CUT				IAML		02 20 16.5	
	comp=E,194nm,0.4s						
SML	Sawmill	2.99	47	P	Pn	02 19 35.6	-0.8
	baz=231						
SML	Sawmill	2.99	47		Pn	02 19 35.6	-0.8
SML	Sawmill	2.99	47	IAML		02 20 17.7	
	comp=N,183nm,0.7s						
SML				IAML		02 20 21.4	
	comp=E,180nm,1.0s						
PPLA	Purkeypile	3.08	7	P	Pn	02 19 38.5	+0.9
	baz=187						
PPLA	Purkeypile	3.08	7		Pn	02 19 38.5	+0.9
GLI	Glacier Island	3.09	68	P	Pn	02 19 36.4	-1.2
	baz=253						
GLI	Glacier Island	3.09	68		Pn	02 19 36.4	-1.2
GLI	Glacier Island	3.09	68	IAML		02 20 11.4	
	comp=N,164nm,0.6s						
FID	Port Fidalgo	3.35	72		Pn	02 19 38.8	-2.3
FID	Port Fidalgo	3.35	72	IAML		02 20 17.7	
	comp=E,179nm,0.2s						
FID				IAML		02 20 17.8	
	comp=N,215nm,0.3s						
SII	Sitkinak Islan	3.37	192	P	Pn	02 19 40.3	-1.1
	baz=10						
SII	Sitkinak Islan	3.37	192		Pn	02 19 40.3	-1.1
Q23K	Middleton Isla	3.38	94	P	Pn	02 19 41.5	0.0
	baz=280						
Q23K	Middleton Isla	3.38	94		Pn	02 19 41.5	0.0
MID	Middleton Isla	3.39	94		Pn	02 19 41.5	0.0
SCM	Sheep Creek Mo	3.40	52	P	Pn	02 19 41.1	-0.7
	baz=237						
SCM	Sheep Creek Mo	3.40	52		Pn	02 19 41.1	-0.7
SCM	Sheep Creek Mo	3.40	52	IAML		02 20 22.7	
	comp=E,127nm,0.6s						
SCM				IAML		02 20 24.2	
	comp=N,110nm,0.9s						
TT01	Tatalina	3.40	336		Pn	02 19 41.5	-0.3
TTA	Tatalina	3.42	336	P	Pn	02 19 41.6	-0.5
	baz=153						
TTA	Tatalina	3.42	336		Pn	02 19 41.6	-0.5
K20K	Telida	3.56	352	P	Pn	02 19 44.0	+0.1
	baz=171						
K20K	Telida	3.56	352		Pn	02 19 44.0	+0.1
WAT7	Susitna Watana	3.58	32		Pn	02 19 44.6	+0.3
CAST	Castle Rocks	3.60	6		Pn	02 19 45.4	+0.8
WAT6	Susitna Watana	3.72	40	P	Pn	02 19 45.6	-0.6
	baz=225						
WAT6	Susitna Watana	3.72	40		Pn	02 19 45.6	-0.6
DIV	Divide	3.78	67		Pn	02 19 45.8	-1.1
TRF	Thorofare Moun	3.83	18		Pn	02 19 48.7	+1.0
TRF				IAML		02 20 36.5	
	comp=E,54nm,0.5s						
TRF				IAML		02 20 56.2	
	comp=N,70nm,0.9s						
KLU	Klutina	3.83	62	P	Pn	02 19 46.6	-1.0
	baz=248						
KLU	Klutina	3.83	62		Pn	02 19 46.6	-1.0
KLU	Klutina	3.83	62	IAML		02 20 31.7	
	comp=E,97nm,0.4s						
M24K	Tolsona, Glenn	4.00	53	P	Pn	02 19 49.8	-0.1
	baz=239						
M24K	Tolsona, Glenn	4.00	53		Pn	02 19 49.8	-0.1
CHUM	Lake Minchumin	4.05	4	P	Pn	02 19 51.1	+0.5
	baz=185						
CHUM	Lake Minchumin	4.05	4		Pn	02 19 51.1	+0.5
RND	Reindeer	4.07	27		Pn	02 19 51.0	+0.2
RND	Reindeer	4.07	27	IAML		02 20 57.2	
	comp=E,40nm,0.9s						
BMRM	Bremner River	4.29	71		Pn	02 19 53.8	0.0
BMRM				IAML		02 20 44.9	
	comp=E,44nm,0.7s						
BMRM				IAML		02 20 55.8	
	comp=N,52nm,2.1s						
MCK	McKinley	4.33	24	P	Pn	02 19 54.9	+0.5
	baz=208						
MCK	McKinley	4.33	24		Pn	02 19 54.9	+0.5
MCK	McKinley	4.33	24	IAML		02 20 48.4	
	comp=N,32nm,1.6s						
MCK				IAML		02 21 14.2	
	comp=E,34nm,4.9s						
BPAW	Bear Paw Mtn.	4.36	11	P	Pn	02 19 54.1	-0.7
	baz=193						
BPAW	Bear Paw Mtn.	4.36	11		Pn	02 19 54.1	-0.7
J20K	Nowinta River	4.38	353	P	Pn	02 19 55.0	+0.2
	baz=172						
J20K	Nowinta River	4.38	353		Pn	02 19 55.0	+0.2
N25K	Chitina, Valde	4.46	63	P	Pn	02 19 55.1	-1.0
	baz=250						
N25K	Chitina, Valde	4.46	63		Pn	02 19 55.1	-1.0
N25K	Chitina, Valde	4.46	63	IAML		02 20 46.5	
	comp=E,61nm,0.5s						
N25K				IAML		02 20 47.2	
	comp=N,64nm,0.5s						
PAX	Paxson	4.76	46	P	Pn	02 19 59.9	-0.4
	baz=232						
PAX	Paxson	4.76	46		Pn	02 19 59.9	-0.4
GLB	Gilahina Butte	4.77	67		Pn	02 19 59.2	-1.1
GLB	Gilahina Butte	4.77	67	IAML		02 20 37.3	
	comp=N,30nm,4.0s						
GLB				IAML		02 22 30.3	
	comp=E,23nm,3.1s						
VRDI	Verde Repeater	4.89	70		Pn	02 20 00.6	-1.4
VRDI	Verde Repeater	4.89	70	IAML		02 20 47.4	
	comp=E,31nm,4.3s						
VRDI				IAML		02 21 24.3	
	comp=N,38nm,3.3s						
WAX	Waxell Ridge	5.08	79		Pn	02 20 04.3	-0.2
NEA2	Nenana	5.09	19	P	Pn	02 20 03.8	-0.7
	baz=203						
NEA2	Nenana	5.09	19		Pn	02 20 03.8	-0.7
NEA2	Nenana	5.09	19	IAML		02 21 23.4	
	comp=E,20nm,4.0s						
MCARA	McCarthy VSAT	5.13	68	P	Pn	02 20 04.2	-0.9
	baz=257						
MCARA	McCarthy VSAT	5.13	68		Pn	02 20 04.2	-0.9
MCARA	McCarthy VSAT	5.13	68	IAML		02 21 46.2	
	comp=E,47nm,3.0s						
WRH	Wood River Hil	5.16	24		Pn	02 20 05.0	-0.5
WRH	Wood River Hil	5.16	24	IAML		02 21 28.9	
	comp=E,19nm,3.7s						
WRH				IAML		02 23 02.7	
	comp=N,23nm,4.5s						
MLY	Manley	5.30	10		Pn	02 20 07.5	+0.1
MLY				IAML		02 21 37.6	
	comp=E,17nm,4.5s						
MLY				IAML		02 23 31.0	
	comp=N,17nm,4.1s						
KIAG	Kiagna River	5.36	74		Pn	02 20 08.3	-0.1
I21K	Tanana	5.37	4		Pn	02 20 08.9	+0.6
I21K				IAML		02 21 33.9	
	comp=N,24nm,3.8s						
I21K				IAML		02 23 11.3	
	comp=E,24nm,3.7s						
HDA	Harding Lake	5.37	29		Pn	02 20 08.0	-0.3
HDA				IAML		02 21 09.0	
	comp=N,45nm,0.6s						
CCB	Clear Creek Bu	5.38	24		Pn	02 20 07.7	-0.7
CCB	Clear Creek Bu	5.38	24	IAML		02 22 05.9	
	comp=N,15nm,4.6s						
CCB				IAML		02 22 12.2	
	comp=E,15nm,3.9s						
M26K	Nabesna, AK	5.46	58		Pn	02 20 10.2	+0.6
RIDG	Independent Ri	5.47	41	Pn	Pn	02 20 10.6	+0.8
RIDG					Sn	02 21 10.4	-1.0
PS08	TAPS Pump Stn8	5.51	29		Pn	02 20 09.8	-0.4
MESA	MESA	5.53	82	P	Pn	02 20 11.0	+0.3
	baz=271						
MESA	MESA	5.53	82		Pn	02 20 11.0	+0.3
I23K	Minto, Yukon-K	5.57	16	P	Pn	02 20 11.2	+0.2
	baz=199						
I23K	Minto, Yukon-K	5.57	16		Pn	02 20 11.2	+0.2
MDM	Murphy Dome	5.57	21		Pn	02 20 10.7	-0.4
YAH	Yahtse	5.63	80		Pn	02 20 12.1	0.0
IL31		5.69	27		Pn	02 20 12.1	-0.5
ILAR	Eielson Array	5.69	27	P	Pn	02 20 12.0	-0.6
	comp=E,1.7nm,0.3s,baz=213,slow=13,SNR=65						
ILAR				S	Sn	02 21 12.3	-4.1
	comp=E,2.4nm,0.3s,baz=222,slow=21,SNR=7.3						
ILAR	Eielson Array	5.69	27		Pn	02 20 12.6	-0.1
BARN	Barnard Glacie	5.72	73		Pn	02 20 13.7	+0.4
H21K	Melozitna Rive	5.83	1	P	Pn	02 20 14.5	0.0
	baz=181						
H21K	Melozitna Rive	5.83	1		Pn	02 20 14.5	0.0
CTG	Chitna Glacier	5.86	74	P	Pn	02 20 15.8	+0.7
	baz=264						
CTGM	Chitina Glacie	5.87	74		Pn	02 20 15.8	+0.6
POKR	Poker Plat Res	5.87	23	P	Pn	02 20 15.0	0.0
	baz=208						
POKR	Poker Plat Res	5.87	23		Pn	02 20 15.0	0.0
SCRK	Sand Creek	5.92	42		Pn	02 20 15.6	-0.2
TABL	Table Mountain	5.93	79		Pn	02 20 16.2	+0.1
J25K	Salcha River,	5.95	33	P	Pn	02 20 15.6	-0.6
	baz=220						
J25K	Salcha River,	5.95	33		Pn	02 20 15.6	-0.6
LOGN	Logan Glacier	6.01	76		Pn	02 20 17.6	+0.3
IM03		6.16	357		Pn	02 20 19.8	+0.8
IMAR	Indian Mountai	6.16	357		Pn	02 20 19.8	+0.7
PCA	Pinnacle	6.38	82		Pn	02 20 22.7	+0.6
H24K	Noodor Dome	6.44	19		Pn	02 20 23.0	+0.1
YUK8	Steele Glacier	6.66	72		Pn	02 20 27.0	+0.9
PNL	Peninsula	6.85	86	P	Pn	02 20 28.1	-0.4
	baz=277						
PNL	Peninsula	6.85	86		Pn	02 20 28.1	-0.4
YUK6	Outpost Mounta	7.31	75	P	Pn	02 20 34.9	0.0
	baz=268						
YUK6	Outpost Mounta	7.31	75		Pn	02 20 34.9	0.0
HYT	Haines Junctio	7.73	76	Pn	Pn	02 20 41.3	+0.8
BM03	Burnt Mountain	8.44	22		Pn	02 20 48.7	-1.4
DLBC	Dease Lake	11.84	87	P	Pn	02 21 38.5	+2.4
	comp=E,1.6nm,0.3s,baz=270,slow=11,SNR=16						
DLBC	Dease Lake	11.84	87	Pn	Pn	02 21 37.9	+1.8
INK	Inuvik	11.94	37	P	Pn	02 21 38.4	+1.2
	comp=E,0.1nm,0.3s,baz=242,slow=12,SNR=5.5						
YKA	Yellowknife Ar	18.49	65	P	P	02 22 58.8	+0.4
	comp=E,0.1nm,0.3s,baz=278,slow=10.0,SNR=4.3						
SONM	Songino Array	54.90	306	P	P	02 28 11.1	+0.7
	comp=E,0.8nm,0.7s,baz=41,slow=6.2,SNR=5.1						
ZALV	Zalesovo Beam	57.51	324	P	P	02 28 29.1	+0.3
	comp=E,1.4nm,0.5s,baz=44,slow=8.5,SNR=4.5						

IDC 26 02:31:07.2±2.1**, 22°.09S**×**179°.53W, h0^{km}, mb4.3**/4**, mb1 4.5**/4**, mb1mx4.0**/24**, mbtmp4.3**/4**, Error ellipse: s-maj=157.4km s-min=33.6km az=160.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	35.83	246	P	P	02 38 08.0	-0.7
	2.4nm,0.6s,baz=107,slow=14,SNR=4.1						
ASAR	Alice Springs	42.79	259	P	P	02 39 06.8	-0.2
	4.2nm,0.8s,baz=100,slow=7.2,SNR=40						
WRA	Warramunga Arr	42.99	264	P	P	02 39 09.0	+0.3
	4.3nm,0.4s,baz=98,slow=8.4,SNR=140						
TXAR	Lajitas Array	89.11	58	P	P	02 44 04.9	0.0
	0.3nm,0.7s,baz=213,slow=7.5,SNR=3.7						

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*NOU **26** 02:49:27.9, 20°.53S×177°.90W, h540^{km}, ML5.1/121, Fiji Islands Region*

*BJI **26** 02:49:27.2±0.0, 20°.16S×177°.52W, h550^{km}, mB5.3/27, mb5.3/56*

*BGR **26** 02:49:28.5±0.0, 20°.60S×177°.35W, h550^{km}±5^{km}*

*IDC **26** 02:49:28.5±0.4, 20°.43S×178°.02W, h545^{km}±4^{km}, mb4.8/40, mb1 4.8/43, mb1mx4.6/49, mbtmp5.6/43, Error ellipse: s-maj=9.3km s-min=6.6km az=168.0*

*NEIC **26** 02:49:28.3±1.4, 20°.48S±0°.09×177°.97W±0°.09, h545^{km}±5^{km}, mb4.9/289, Error ellipse: s-maj=13.1km s-min=11.7km az=158.0*

*GCMT **26** 02:49:30.3±0.3, 20°.35S±0°.04×178°.06W±0°.03, h538^{km}±2^{km}, MW5.4/66, Moment Tensor Solution. s66,c83; Duration: 1^{s}2 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.67±.04; $M_{\theta\theta}$0.13±.07; $M_{\phi\phi}$0.54±.07; $M_{r\theta}$-0.08±.08; $M_{\theta\phi}$-0.18±.06; $M_{\phi r}$-1.22±.07; Best double couple: $M_0$1.37700×10^{17} NP1:ϕ_s149.00000°, δ15.00000°, λ-120.00000°. NP2:ϕ_s0.00000°, δ77.00000°, λ-82.00000°. Principal axes: T 1.3090, Plg31.0000°, Azm84.0000°; N 0.1350, Plg8.0000°, Azm178.0000°; P -1.4440, Plg58.0000°, Azm281.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 26 02:49:27.8±0.3**, 20°.50S**±0°.05×**177°.96W**±0°.04**, h545^{km}**±3^{km}**, h546^{km}:pP-P, n907, σ1^{s}23**/995**, mb5.1**/277**, 96C-122D, Fault plane solution: NP1:**ϕ_s343.84207°, δ67.96930°, λ-66.33826°. **NP2:**ϕ_s114.40765°, δ31.89126°, λ-134.76445°. **Principal axes:** T Plg19.5806°, Azm56.3120°; N Plg21.8410°, Azm154.5084°; P Plg59.9523°, Azm288.3665°; **Fault plane solution: NP1:**ϕ_s220.35942°, δ25.54746°, λ-56.81218°. **NP2:** ϕ_s4.41886°, δ68.84379°, λ-104.66253°. **Principal axes:** T Plg22.5053°, Azm105.5901°; N Plg13.6544°, Azm9.8134°; P Plg63.2750°, Azm250.9653°; **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAVE	Taveuni	4.20	334	P	P	02 50 51.3	+0.3
MSVF	Nonsavu	4.67	305	P	P	02 50 54.9	+0.1
	42nm,0.3s,baz=134,slow=11,SNR=141						
MSVF				S	S	02 52 01.8	-3.9
	baz=105,slow=16,SNR=0.5						
MSVF	Nonsavu	4.67	305	P	P	02 50 55.3	+0.5
MSVF					S	02 52 02.4	-3.2
MSVF	Nonsavu	4.67	305	P	P	02 50 55.1	+0.3
DGTI	Dogotuki	4.71	332	P	P	02 50 55.0	-0.1
NIUE	Niue	7.69	81	P	P	02 51 21.4	-1.0
NIUE					S	02 52 58.4	+2.1
RAO	Raoul Island	8.72	180	S	S	02 53 05.4	-9.4
	120nm,0.3s,baz=290,slow=19,SNR=2.4						
AFI	Afiamalu	8.82	43	P	P	02 51 30.0	-3.8
	19nm,0.3s,baz=239,slow=11,SNR=8.7						
AFI				S	S	02 53 07.3	-10
	61nm,0.3s,baz=197,slow=22,SNR=16						
MARNC	Mare, Loyalty	13.13	263	P	P	02 52 17.8	-0.3
MARNC	Mare, Loyalty	13.13	263	P	P	02 52 18.2	+0.2
RTV	Rentapao	13.15	280	P	P	02 52 20.7	+2.4
	912µm,0.9s						
DVP	Devils Point	13.38	280	P	P	02 52 22.6	+1.9
	883µm,0.8s						
PINNC	Pines Island,	13.74	259	P	P	02 52 24.9	+0.5
PINNC	Pines Island,	13.74	259	P	P	02 52 24.8	+0.4
LIFNC	LIFOU	13.86	266	P	P	02 52 24.6	-1.1
YATNC	Mamie plateau,	14.21	261	P	P	02 52 30.9	+1.6
OUENC	Ouen Island, N	14.28	260	P	P	02 52 29.9	-0.1
OUENC	Ouen Island, N	14.28	260	P	P	02 52 31.1	+1.1
DZM	Mont Dzumac	14.63	261	P	P	02 52 33.4	-0.3
	4.1nm,0.3s,baz=88,slow=14,SNR=38						
DZM				S	S	02 55 05.9	-0.9
	0.3nm,0.3s,baz=260,slow=18,SNR=2.4						
DZM	Mont Dzumac	14.63	261	P	P	02 52 33.7	0.0
DZM	Mont Dzumac	14.63	261	P	P	02 52 33.7	0.0
ONTNC	Ouen Toro	14.63	260	P	P	02 52 33.5	-0.1
ONTNC	Ouen Toro	14.63	260	P	P	02 52 33.6	0.0
NOUC	Port Laguerre	14.76	261	P	P	02 52 34.8	-0.1
SANVU	Saraoutou	14.98	287	P	P	02 52 37.9	+0.6
SANVU	Saraoutou	14.98	287	P	P	02 52 37.7	+0.4
OUZ	Omahuta	16.45	205	P	P	02 52 52.1	+0.5
OUZ				IAmb	IAmb	02 52 57.6	
	comp=Z,28nm,1.2s						
KOUNC	Koumac, New Ca	16.64	267	P	P	02 52 55.2	+1.7
RAR	Rarotonga	17.01	96	P	P	02 52 56.4	-0.6
	comp=Z,5.7nm,0.3s,baz=244,slow=6.7,SNR=7.7						
RAR	Rarotonga	17.01	96	P	P	02 52 56.3	-0.6
RAR	Rarotonga	17.01	96	P	P	02 52 57.2	+0.3
KUZ	Kuaotunu	17.11	198	P	P	02 52 58.5	+1.0
WMGZ	Waiomatatini S	17.55	190	P	P	02 53 03.2	+1.7
WMGZ				S	S	02 56 13.6	+18
HAZ	Te Kaha	17.59	191	P	P	02 53 01.6	-0.4
HAZ				S	S	02 56 17.7	+21
RUGZ	Raukumara Rang	17.82	191	P	P	02 53 04.1	-0.1
RUGZ				S	S	02 56 22.7	+22
PUZ	Puketiti	17.82	190	P	P	02 53 05.4	+1.3
PUZ				S	S	02 56 22.4	+22
TWGZ	Tauwhareparae	17.97	190	P	P	02 53 06.6	+1.1
TWGZ				S	S	02 56 25.2	+23
TOZ	Tahuroa Road	18.09	197	P	P	02 53 04.4	-2.1
MWZ	Matawai	18.20	191	P	P	02 53 07.7	+0.1
URZ	Urewera	18.21	193	P	P	02 53 05.7	-1.9
	comp=Z,5.3nm,0.3s,baz=121,slow=24,SNR=29						
URZ				S	S	02 56 03.2	-3.3
	comp=Z,1.4nm,0.3s,baz=305,slow=23,SNR=2.4						
URZ	Urewera	18.21	193	P	P	02 53 05.8	-1.9
URZ				S	S	02 56 29.4	+23
URZ	Urewera	18.21	193	P	P	02 53 05.7	-1.9
URZ				IAmb	IAmb	02 53 14.5	
	comp=Z,27nm,0.8s						
URZ	Urewera	18.21	193	P	P	02 53 07.3	-0.3
CNGZ	Carnagh Statio	18.23	190	P	P	02 53 08.6	+0.8
KNTN	Kanton	18.64	20	P	P	02 53 10.1	-1.8
KNTN	Kanton	18.64	20	P	P	02 53 12.4	+0.5
	comp=Z,244nm,0.9s						
BKZ	Black Stump Fm	19.21	193	P	P	02 53 15.8	-1.1
BKZ				IAmb	IAmb	02 53 28.3	
	comp=Z,14nm,0.6s						
BKZ	Black Stump Fm	19.21	193	P	P	02 53 17.3	+0.5
ETVZ	East Tongariro	19.36	195	P	P	02 53 17.6	-0.7
QRZ	Quartz Range	21.83	200	P	P	02 53 40.4	0.0
THZ	Tophouse	22.57	198	P	P	02 53 46.1	-1.0
TARA	Tarawa	23.48	337	P	P	02 53 54.5	-1.0
TARA	Tarawa	23.48	337	P	P	02 53 56.1	+0.6
PPT	Papeete	26.97	89	P	P	02 54 26.4	0.0
	comp=Z,234nm,0.7s,baz=239,slow=5.9,SNR=35						
PPTF	Pamatai, Papee	26.98	89	P	P	02 54 26.7	+0.2
PPTF	Pamatai, Papee	26.98	89	P	P	02 54 26.9	+0.4
EIDS	Eidsvold	28.89	254	P	P	02 54 42.7	-0.3
EIDS				IAmb	IAmb	02 54 43.7	
	comp=Z,41nm,0.8s						
EIDS	Eidsvold	28.89	254	P	P	02 54 43.0	0.0
	comp=Z,85nm,1.2s						
ARMA	Armidale	29.11	244	P	P	02 54 45.9	+0.9
ARMA				IAmb	IAmb	02 54 47.0	
	comp=Z,38nm,0.8s						
ARMA	Armidale	29.11	244	P	P	02 54 46.2	+1.3
	comp=Z,57nm,0.9s						
RK1H	Rockhampton Ha	29.38	259	P	P	02 54 47.3	+0.1
	comp=Z,49nm,0.8s						
XMAS	Kiritimati	30.10	44	P	P	02 54 52.9	-0.7

XMAS	Kiritimati	30.10	44	P	P	02 54 53.4	-0.2
MGCD	Mangrove Creek	30.25	239	P	P	02 54 56.7	+2.1
	comp=Z,76nm,1.0s						
SYDH	Sydney Hard Ro	30.70	238	P	P	02 54 59.8	+1.3
	comp=Z,81nm,0.9s						
RMQ	Roma	31.05	253	P	P	02 55 02.5	+0.9
	comp=Z,95nm,1.0s						
CNB	Canberra Magne	32.26	236	P	P	02 55 13.2	+1.3
	comp=Z,104nm,1.2s						
KWAJ	Kwajalein Atol	32.39	333	P	P	02 55 12.6	-0.5
KWAJ	Kwajalein Atol	32.39	333	P	P	02 55 13.8	+0.7
CAN	Canberra	32.55	236	P	P	02 55 14.4	+0.1
CAN				IAmb	IAmb	02 55 16.1	
	comp=Z,60nm,1.0s						
CAN	Canberra	32.55	236	P	P	02 55 14.9	+0.6
RABL	Rabaul	33.28	295	P	P	02 55 21.3	+0.5
CTA	Charters Tower	33.53	264	P	P	02 55 23.4	+0.5
	comp=Z,86nm,0.5s,baz=92,slow=12,SNR=97						
CTA	Charters Tower	33.53	264	P	P	02 55 23.1	+0.3
	comp=Z,210nm,0.8s						
CTAO	Charters Tower	33.53	264	P	P	02 55 22.9	+0.1
CTAO	Charters Tower	33.53	264	P	P	02 55 23.3	+0.5
CMSA	Cobar Meteorol	34.32	244	P	P	02 55 29.5	+0.2
	comp=Z,93nm,0.9s						
QLP	Quilpie	35.10	253	P	P	02 55 35.9	+0.1
	comp=Z,271nm,1.3s						
PMG	Port Moresby	35.38	283	P	P	02 55 38.6	+0.3
	comp=Z,137nm,0.9s,baz=83,slow=4.7,SNR=34						
PMG	Port Moresby	35.38	283	P	P	02 55 37.7	-0.6
PMG	Port Moresby	35.38	283	P	P	02 55 38.8	+0.5
PMG	Port Moresby	35.38	283	P	P	02 55 38.8	+0.5
MTSU	Mount Surprise	35.63	267	P	P	02 55 40.5	+0.1
	comp=Z,147nm,0.8s						
PATS	Pohnpei	35.81	317	P	P	02 55 41.6	-0.2
PATS	Pohnpei	35.81	317	P	P	02 55 43.2	+1.4
TOO	Toolangi	35.93	234	P	P	02 55 43.0	+0.4
TOO				IAmb	IAmb	02 55 44.1	
	comp=Z,48nm,0.8s						
TOO	Toolangi	35.93	234	P	P	02 55 43.4	+0.8
	comp=Z,64nm,1.0s						
BRAT	Ballarat	37.11	234	P	P	02 55 53.7	+1.5
	comp=Z,46nm,0.9s						
COEN	Coen	37.62	274	P	P	02 55 57.4	+0.6
COEN	Coen	37.62	274	P	P	02 55 57.3	+0.5
	comp=Z,174nm,1.0s						
STKA	Stephens Creek	37.83	244	P	P	02 55 58.9	+0.6
	comp=Z,41nm,0.7s,baz=90,slow=9.5,SNR=47						
STKA	Stephens Creek	37.83	244	P	P	02 55 59.0	+0.8
INKA	Innaminka	38.24	251	P	P	02 56 02.8	+1.2
	comp=Z,192nm,1.2s						
TAOE	Nuku Hiva Isla	38.26	78	P	P	02 56 02.2	+0.1
TAOE	Nuku Hiva Isla	38.26	78	P	P	02 56 02.6	+0.5
ARPS	Mount Arapiles	38.52	236	P	P	02 56 04.5	+0.7
	comp=Z,80nm,0.8s						
QIS	Mount Isa	39.66	262	P	P	02 56 12.8	-0.4
	comp=Z,37nm,1.4s						
HTT	Hallett	40.26	242	P	P	02 56 18.2	+0.3
	comp=Z,133nm,1.3s						
LCRK	Leigh Creek	40.58	247	P	P	02 56 20.7	+0.3
	comp=Z,225nm,0.9s						
WHYH	Whyalla	41.34	243	P	P	02 56 26.9	+0.5
	comp=Z,104nm,0.9s						
BBOO	Buckleboo	42.59	244	P	P	02 56 35.9	-0.4
BBOO	Buckleboo	42.59	244	P	P	02 56 36.4	+0.2
	comp=Z,162nm,0.9s						
OOD	Oodnadatta	42.72	251	P	P	02 56 38.2	+0.9
	comp=Z,231nm,1.1s						
JAY	Jayapura	44.08	288	P	P	02 56 48.8	+0.7
	comp=Z,382nm,0.7s,baz=127,slow=3.9,SNR=101						
JAY	Jayapura	44.08	288	P	P	02 56 48.6	+0.5
	comp=Z,3µmcomp=Z,337nm,0.9s						
MULG	Mulgathing	44.16	247	P	P	02 56 48.3	-0.2
	comp=Z,278nm,1.1s						
AS31	Alice Springs	44.56	257	IAmb	IAmb	02 56 53.2	
	comp=Z,72nm,0.9s						
ASAR	Alice Springs	44.56	257	P	P	02 56 51.9	+0.1
	comp=Z,274nm,0.9s,baz=86,slow=8.5,SNR=1253						
ASAR				PcP	PcP	02 58 23.2	+0.2
	comp=Z,18nm,0.7s,baz=105,slow=3.4,SNR=7.5						
ASAR				ScP	ScP	03 01 26.3	+2.8
	comp=Z,2.7nm,0.8s,baz=93,slow=4.9,SNR=2.7						
ASAR				S	S	03 02 46.5	-1.5
	comp=Z,39nm,0.9s,baz=94,slow=15,SNR=46						
ASAR				ScS	ScS	03 05 52.0	+2.7
	comp=Z,2.4nm,1.0s,baz=101,slow=6.6,SNR=4.3						
ASAR				PKP2bc		03 28 44.5	
	comp=Z,1.1nm,1.0s,baz=270,slow=3.6,SNR=4.6						
ASAR	Alice Springs	44.56	257	P	P	02 56 52.0	+0.2
WB2	Warramunga Arr	44.63	262	P	P	02 56 51.9	-0.3
WRAB	Tennant Creek	44.63	262	P	P	02 56 51.8	-0.6
WRAB	Tennant Creek	44.63	262	P	P	02 56 51.7	-0.6
WRA	Warramunga Arr	44.64	262	P	P	02 56 51.9	-0.5
	comp=Z,117nm,0.8s,baz=96,slow=8.8,SNR=443						
WRA				PcP	PcP	02 58 23.8	+0.5
	comp=Z,14nm,1.0s,baz=94,slow=4.7,SNR=5.7						
WRA				ScP	ScP	03 01 26.6	+2.9
	comp=Z,5.8nm,1.0s,baz=101,slow=4.2,SNR=4.7						
WRA				S	S	03 02 47.8	-1.5
	comp=Z,14nm,0.9s,baz=98,slow=13,SNR=11						
WRA				ScS	ScS	03 05 50.9	+0.9
	comp=Z,1.4nm,0.8s,baz=98,slow=6.2,SNR=4.0						
WRA	Warramunga Arr	44.64	262	P	P	02 56 52.1	-0.3
WRA				IAmb	IAmb	02 56 53.0	
	comp=Z,22nm,0.9s						
KHLU	Kahalu`u	45.32	30	P	P	02 56 57.0	-0.6
HMH	Humu‘ula Sheep	45.53	30	P	P	02 56 59.6	+0.2
HPAH	Hawaii Prepara	45.79	30	P	P	02 57 01.0	-0.1
SMPI	Sarmi	46.09	288	P	P	02 57 03.9	+0.4
	comp=Z,2µmcomp=Z,192nm,1.1s						
KDU	Kakadu	47.99	271	P	P	02 57 17.2	-0.6
	comp=Z,305nm,1.0s						
MTN	Manton Dam	49.20	271	P	P	02 57 26.3	-0.4
MTN	Manton Dam	49.20	271	P	P	02 57 26.1	-0.7
	comp=Z,322nm,0.7s						
FORT	Forrest	49.33	247	P	P	02 57 27.1	-0.4
FORT	Forrest	49.33	247	P	P	02 57 27.1	-0.4
	comp=Z,308nm,0.9s						
WRKA	Warakurna	49.51	254	P	P	02 57 28.6	-0.4
	comp=Z,381nm,1.0s						
DRS	Darwin Rock St	49.54	271	P	P	02 57 28.9	-0.3
	comp=Z,111nm,0.9s						
GUMO	Guam	49.83	310	P	P	02 57 31.6	+0.3
	comp=Z,316nm,0.8s,baz=167,slow=8.3,SNR=13						
GUMO	Guam	49.83	310	P	P	02 57 32.0	+0.7
GUMO	Guam	49.83	310	P	P	02 57 32.3	+1.0
SAUI	Saumlaki	50.54	277	P	P	02 57 37.3	+0.7
	comp=Z,580nm,1.0s						
SAUI	Saumlaki	50.54	277	P	P	02 57 35.8	-0.8
SAUI	Saumlaki	50.54	277	P	P	02 57 38.8	+2.2
KNRA	Kununurra	50.70	266	P	P	02 57 37.7	0.0
KNRA	Kununurra	50.70	266	P	P	02 57 37.6	-0.1
	comp=Z,228nm,1.1s						
FAKI	Fak Fak	51.54	283	P	P	02 57 44.2	+0.3
	comp=Z,2µmcomp=Z,188nm,1.2s						
FAKI	Fak Fak	51.54	283	P	P	02 57 43.7	-0.2
FAKI				IAmb	IAmb	02 57 45.5	
	comp=Z,119nm,0.9s						
FAKI	Fak Fak	51.54	283	P	P	02 57 43.7	-0.2
FITZ	Fitzroy Crossi	53.07	262	P	P	02 57 55.0	+0.2
	comp=Z,48nm,0.9s,baz=106,slow=9.2						
BNDI	Bandanaira	53.07	280	P	P	02 57 56.7	+1.9
SIJI	Sorong	53.28	285	P	P	02 57 55.7	-0.6
	comp=Z,513nm,0.8s,baz=91,slow=4.4,SNR=230						
SWI	Sorong	53.28	285	P	P	02 57 56.4	+0.1
	comp=Z,7µmcomp=Z,899nm,0.9s						
MSAI	Masohi	54.41	281	P	P	02 58 04.5	+0.2
	comp=Z,943nmcomp=Z,30nm,0.6s						
AAI	Ambon	54.96	280	P	P	02 58 08.1	-0.1
	comp=Z,2µmcomp=Z,192nm,0.9s						
SOEI	Soe	56.54	272	P	P	02 58 20.8	+1.6
	comp=Z,6µmcomp=Z,825nm,0.9s						
SOEI	Soe	56.54	272	P	P	02 58 19.2	0.0
SOEI	Soe	56.54	272	P	P	02 58 20.8	+1.6
LBMI	Labuha	56.80	283	P	P	02 58 22.0	+1.1
	comp=Z,2µmcomp=Z,212nm,0.9s						
BATI	Baumata	56.97	271	P	P	02 58 23.5	+1.5
	comp=Z,166nm,0.7s,baz=154,slow=0.9,SNR=23						
BATI	Baumata	56.97	271	P	P	02 58 23.8	+1.7
	comp=Z,1µmcomp=Z,131nm,0.9s						
TNTI	Ternate	57.50	285	P	P	02 58 26.2	+0.6
	comp=Z,4µmcomp=Z,309nm,1.0s						
TNTI	Ternate	57.50	285	P	P	02 58 26.8	+1.2
SANI	Sanana	57.62	281	P	P	02 58 26.0	-0.5
	comp=Z,2µmcomp=Z,240nm,1.1s						
SANI	Sanana	57.62	281	P	P	02 58 26.6	+0.1
PSA00	Pilbara Seismi	57.71	257	P	P	02 58 26.7	-0.3
PSA00	Pilbara Seismi	57.71	257	P	P	02 58 26.0	-1.0
PSA00				IAmb	IAmb	02 58 27.7	
	comp=Z,97nm,0.9s						
PSA00	Pilbara Seismi	57.71	257	P	P	02 58 26.5	-0.5
SBA	Scott Base	57.88	184	P	P	02 58 28.4	+1.2
MBWA	Marble Bar	57.89	257	P	P	02 58 27.9	-0.3
VNDA	Vanda	57.92	185	P	P	02 58 29.6	+2.2
	comp=Z,6.6nm,0.9s,baz=4.9,slow=7.6,SNR=22						
VNDA	Vanda	57.92	185	P	P	02 58 27.6	+0.1
MEEK	Meekatharra	57.96	251	P	P	02 58 28.0	-0.7
KLBR	Kellerberrin	58.09	245	P	P	02 58 29.4	-0.1
	comp=Z,438nm,0.9s						
NWAO	Narrogin (SRO)	58.41	243	P	P	02 58 32.4	+0.9
	comp=Z,98nm,1.6s						
MMRI	Maumere	58.79	272	P	P	02 58 34.6	+0.2
	comp=Z,4µmcomp=Z,271nm,1.0s						
MMRI	Maumere	58.79	272	P	P	02 58 34.0	-0.4
MMRI	Maumere	58.79	272	P	P	02 58 35.1	+0.7
BLDU	Ballidu	59.09	246	P	P	02 58 36.2	0.0
	comp=Z,118nm,1.2s						
MUN	Mundaring	59.36	244	P	P	02 58 38.5	+0.5
	comp=Z,130nm,1.1s						
MTKN	Mount Kenneth	59.74	244	P	P	02 58 43.2	+2.8
	comp=Z,298nm,0.9s						
BASI	Baing, Sumba	59.86	270	P	P	02 58 42.3	+0.8
	comp=Z,2µmcomp=Z,189nm,1.2s						
MORW	Morawa	59.87	248	P	P	02 58 40.5	-0.9
MORW				IAmb	IAmb	02 58 42.3	
	comp=Z,56nm,0.8s						
MORW	Morawa	59.87	248	P	P	02 58 41.4	0.0
	comp=Z,90nm,1.0s						
KMSI	Cibinong	60.50	283	P	P	02 58 46.9	+1.1
	comp=Z,207nm,0.7s						
LUWI	Luwuk	60.97	281	P	P	02 58 49.7	+0.8
	comp=Z,4µmcomp=Z,374nm,1.0s						
LUWI	Luwuk	60.97	281	P	P	02 58 48.5	-0.4
LUWI	Luwuk	60.97	281	P	P	02 58 50.6	+1.7
JCJ	Chichijima	61.06	319	P	P	02 58 47.7	-1.5
	comp=Z,109nm,1.0s,baz=195,slow=20,SNR=4.7						
JCJ	Chichijima	61.06	319	P	P	02 58 48.3	-0.8
WBSI	Waikabubak, Su	61.15	270	P	P	02 58 50.4	+0.3
	comp=Z,2µmcomp=Z,136nm,0.8s						
BSSI	Bau Bau, Buton	61.25	274	P	P	02 58 50.5	-0.2
	comp=Z,646nmcomp=Z,63nm,1.2s						
DAV	Davao City (W)	61.87	290	P	P	02 58 55.0	+0.2
	comp=Z,188nm,0.3s,baz=149,slow=1.0,SNR=5.0						
BKSI	Bulukumba	61.87	275	P	P	02 58 54.3	-0.5
	comp=Z,832nmcomp=Z,51nm,1.4s						
APSI	Ampana	62.06	280	P	P	02 58 57.3	+1.3
	comp=Z,1µmcomp=Z,167nm,1.1s						
BNSI	Bone	62.21	276	P	P	02 58 57.0	+0.1
	comp=Z,1µmcomp=Z,148nm,1.1s						
KAPI	Kappang	62.33	275	P	P	02 58 57.5	-0.2
	comp=Z,20nm,0.8s,baz=120,slow=6.5,SNR=18						
KAPI	Kappang	62.33	275	P	P	02 58 57.7	0.0
KAPI				IAmb	IAmb	02 59 09.7	
	comp=Z,36nm,0.9s						
KAPI	Kappang	62.33	275	P	P	02 58 58.4	+0.7
MRSI	Marisa	62.33	282	P	P	02 58 57.6	-0.1
	comp=Z,83nm,1.0s						
GIRL	Giralia	62.59	254	P	P	02 58 59.8	+0.5
GIRL	Giralia	62.59	254	P	P	02 59 00.7	+1.4
	comp=Z,318nm,1.2s						
SPSI	Sidrap Palu	62.68	276	P	P	02 58 59.0	-1.0
	comp=Z,626nmcomp=Z,78nm,1.0s						
PLAI	Plampang	62.91	270	P	P	02 59 01.1	-0.4
	comp=Z,3µmcomp=Z,345nm,1.2s						
PLAI	Plampang	62.91	270	P	P	02 59 01.7	+0.2
TTSI	Tana Toraja	62.96	277	P	P	02 59 02.1	+0.3
	comp=Z,28nm,1.1s						
TOLI2	Tolitoli	63.64	282	P	P	02 59 05.2	-0.9
TOLI2	Tolitoli	63.64	282	P	P	02 59 06.4	+0.2
TWSI	Taliwang, Sumb	63.78	270	P	P	02 59 06.7	-0.4
	comp=Z,2µmcomp=Z,150nm,1.1s						
CASY	Casey	63.98	205	P	P	02 59 07.4	0.0
CASY				IAmb	IAmb	02 59 09.0	
	comp=Z,30nm,0.8s						
MPSI	Mapaga	64.15	281	P	P	02 59 09.0	-0.4
	comp=Z,1µmcomp=Z,146nm,1.0s						
IGBI	Denpasar	65.38	270	P	P	02 59 17.3	+0.1
	comp=Z,2µmcomp=Z,212nm,1.0s						
SRBI	Singaraja	65.55	270	P	P	02 59 18.0	-0.2
	comp=Z,5µmcomp=Z,211nm,1.0s						
KBKI	Kotabaru	66.27	276	P	P	02 59 23.1	+0.4
	comp=Z,64nm,1.2s						
SMKI	Samarinda	66.34	279	P	P	02 59 25.2	+2.0
JAGI	Jajag, Banyuwa	66.42	270	P	P	02 59 21.7	-2.0
	comp=Z,2µmcomp=Z,166nm,0.9s						
JAGI	Jajag, Banyuwa	66.42	270	P	P	02 59 21.7	-2.0
JAGI	Jajag, Banyuwa	66.42	270	P	P	02 59 23.6	-0.1
KMMI	Kalianget	67.06	271	P	P	02 59 27.2	-0.4
	comp=Z,145nm,1.1s						
MYLDM	Lahad Datu	67.37	285	P	P	02 59 29.4	-0.1
MYLDM				IAmb	IAmb	02 59 45.7	
	comp=Z,68nm,0.8s						
BBKI	Banjar Baru	67.45	275	P	P	02 59 30.3	+0.3
	comp=Z,71nm,1.4s						
MTKI	Muara Teweh, K	68.30	277	P	P	02 59 36.1	+0.9
JYT	Yasato	68.91	325	P	P	02 59 38.5	+0.2
SPMM	Sapulut	69.03	284	P	P	02 59 41.0	+1.4
TGY	Tagaytay City	69.19	295	P	P	02 59 41.4	+0.8
	comp=Z,158nm,0.4s,baz=180,slow=6.1,SNR=6.2						
PCJI	Pacitan	69.30	269	P	P	02 59 41.4	+0.2
	comp=Z,4µmcomp=Z,476nm,0.7s						
QSPA	South Pole Qui	69.57	180	P	P	02 59 42.9	+0.8
QSPA				IAmb	IAmb	02 59 44.5	
	comp=Z,34nm,0.9s						
QSPA				pP	pP	03 01 32.0	-1.3
KKM	Kota Kinabalu	69.80	285	P	P	02 59 44.2	-0.1
KKM	Kota Kinabalu	69.80	285	P	P	02 59 45.9	+1.6
JMM	Marumori	69.81	326	P	P	02 59 43.7	0.0
UGM	Wanagama	70.00	269	P	P	02 59 45.9	+0.5
	comp=Z,199nm,1.0s						
UGM	Wanagama	70.00	269	P	P	02 59 44.9	-0.5
UGM	Wanagama	70.00	269	P	P	02 59 46.3	+0.9
JGF	Kuroka	70.04	322	P	P	02 59 45.0	-0.1
JGF				IAmb	IAmb	02 59 46.2	
	comp=Z,32nm,0.7s						
INU	Inuyama	70.05	322	P	P	02 59 45.0	-0.2
INU				IAmb	IAmb	02 59 46.6	
	comp=Z,57nm,1.0s						
INU	Inuyama	70.05	322	P	P	02 59 46.0	+0.8
	comp=Z,69nm,1.3s						
UWJI	Ujung Watu	70.09	270	P	P	02 59 46.8	+0.9
	comp=Z,2µmcomp=Z,218nm,0.8s						
JOW	Kunigami	70.20	310	P	P	02 59 47.2	+1.0
	comp=Z,82nm,0.7s,baz=158,slow=5.4,SNR=7.7						
JOW	Kunigami	70.20	310	P	P	02 59 45.9	-0.3
JOW	Kunigami	70.20	310	P	P	02 59 47.4	+1.2
MJAR	Matsushiro Arr	70.23	324	P	P	02 59 45.6	-0.7
	comp=Z,67nm,0.6s,baz=152,slow=6.6,SNR=145						
MJAR	Matsushiro Arr	70.23	324	P	P	02 59 45.8	-0.4
MJAR				IAmb	IAmb	02 59 47.3	
	comp=Z,73nm,0.7s						
MAJO	Matsushiro	70.23	324	P	P	02 59 46.2	-0.1
MAJO	Matsushiro	70.23	324	P	P	02 59 46.4	+0.1
MAT	Matsushiro	70.23	324	P	P	02 59 46.4	+0.1
SMRI	Semarang	70.36	270	P	P	02 59 48.4	+0.9
	comp=Z,193nm,0.8s						
SMRI	Semarang	70.36	270	P	P	02 59 48.4	+0.9
	comp=Z,188nm,0.9s						
PBKI	Pangkalan Bun	70.68	274	P	P	02 59 50.5	+1.1
	comp=Z,8µmcomp=Z,358nm,1.0s						
JWT	Wachi	70.95	321	P	P	02 59 50.5	0.0
JSD	Sado	71.29	325	P	P	02 59 52.7	+0.3
JSU	Suzuyama	71.55	315	P	P	02 59 54.9	+0.8
KPJI	Karang Pucung	71.68	269	P	P	02 59 54.8	-0.5
	comp=Z,121nm,0.9s						
STKI	Sintang	71.85	277	P	P	02 59 57.5	+1.2
JTM	Tenmabayashi	71.89	328	P	P	02 59 56.6	+0.8
CMJI	Cimerak	71.99	268	P	P	02 59 55.8	-1.2
	comp=Z,88nm,1.0s						
SBUM	Sibu	72.05	280	P	P	02 59 56.7	-0.7
SBUM				IAmb	IAmb	02 59 59.1	
	comp=Z,26nm,0.8s						
JHS	Saijyo	72.13	319	P	P	02 59 57.6	+0.2
JNU	Nakatsue	72.30	317	P	P	02 59 58.2	-0.2
	comp=Z,94nm,0.9s,baz=107,slow=4.6,SNR=18						
JNU	Nakatsue	72.30	317	P	P	02 59 58.1	-0.4
JNU	Nakatsue	72.30	317	P	P	02 59 59.1	+0.6
LEM	Lembang	73.08	269	P	P	03 00 04.4	+0.8
	comp=Z,297nm,0.8s,baz=96,slow=3.8,SNR=34						
JEW	Eniwo	73.28	330	P	P	03 00 04.0	+0.2
CNJI	Cibinong	73.38	268	P	P	03 00 04.0	-1.0
	comp=Z,2µmcomp=Z,222nm,1.0s						
KSM	Kuching	73.45	278	P	P	03 00 07.0	+1.5
KSM	Kuching	73.45	278	P	P	03 00 05.1	-0.3
KSM	Kuching	73.45	278	P	P	03 00 06.4	+0.9
YULB	Yu-li	73.53	303	P	P	03 00 05.3	-0.4
YULB				IAmb	IAmb	03 00 05.8	
	comp=Z,57nm,0.7s						
NACB	Ninganchiao	73.71	304	P	P	03 00 06.4	-0.2
XMI	Christmas Isla	73.72	265	P	P	03 00 08.3	+1.3
	comp=Z,215nm,1.0s						
JKA	Kamikawa-asahi	73.74	332	P	P	03 00 08.1	+1.7
ASAJ	Asahikawa	73.74	332	P	P	03 00 08.2	+1.8
	comp=Z,217nm,0.8s,baz=209,slow=7.2,SNR=76						
XMIS	Christmas Isla	73.75	265	P	P	03 00 07.3	+0.1
XMIS	Christmas Isla	73.75	265	P	P	03 00 08.2	+1.0
	comp=Z,157nm,0.9s						
CBJI	Citeko	73.93	269	P	P	03 00 07.6	-0.6
	comp=Z,312nm,0.8s						
DBJI	Dramaga	73.98	269	P	P	03 00 08.7	+0.2
	comp=Z,310nm,1.0s						
SSLB	Suanglung	74.01	303	P	P	03 00 07.6	-0.8
SSLB	Suanglung	74.01	303	P	P	03 00 08.0	-0.4
TPUB	Ta-pu	74.01	303	P	P	03 00 07.5	-0.9
TPUB	Ta-pu	74.01	303	P	P	03 00 08.0	-0.4
YHNB	Yeheng	74.14	304	P	P	03 00 09.2	0.0
YHNB	Yeheng	74.14	304	P	P	03 00 10.0	+0.8
UNV	Unalaska Valle	74.69	7	P	P	03 00 10.8	-0.7
	baz=191						
UNV	Unalaska Valle	74.69	7	P	P	03 00 11.0	-0.5
UNV				IAmb	IAmb	03 00 11.7	
	comp=Z,43nm,0.8s						
SBJI	Serang	74.71	269	P	P	03 00 13.1	+0.5
	comp=Z,365nm,1.5s						
BLSI	Bandar Lampung	75.79	270	P	P	03 00 18.5	-0.1
	comp=Z,238nm,0.8s						
YSS	Yuzh-Sakhalins	75.91	333	P	P	03 00 18.6	+0.2
YSS	Yuzh-Sakhalins	75.91	333	P	P	03 00 20.2	+1.7
PEA0B	Petropavlovsk-	76.28	345	P	P	03 00 20.8	+0.4
PEA0B				IAmb	IAmb	03 00 21.8	
	comp=Z,115nm,1.1s						
PETK	Petropavlovsk-	76.28	345	P	P	03 00 19.9	-0.4
	comp=Z,67nm,0.9s,baz=157,slow=7.7,SNR=46						
PETK	Petropavlovsk-	76.28	345	P	P	03 00 20.4	0.0
KLI	Kotabumi	76.32	270	P	P	03 00 20.3	-1.2
	comp=Z,238nm,0.9s						
KASI	Kota Agung	76.44	269	P	P	03 00 21.4	-0.8
	comp=Z,2µmcomp=Z,300nm,1.0s						
QZH	Quanzhou	76.44	303	P	P	03 00 22.0	+0.1
QZH				*e*S	S	03 09 24.8	+1.3
QZH				pmax	pmax		
	comp=Z,88nm,0.9s						
KLSI		76.50	270	P	P	03 00 21.7	-0.8
	comp=Z,31nm,0.9s						
TJN	Taejon	76.59	317	P	P	03 00 24.8	+2.3
KSRS	Korea Array	76.91	319	P	P	03 00 25.4	+1.3
	comp=Z,32nm,0.7s,baz=127,slow=5.9,SNR=63						
KSAR	Wonju Array Be	76.93	319	P	P	03 00 24.8	+0.5
KS19	Wonju Array Si	76.98	319	P	P	03 00 24.0	-0.6
KS19				IAmb	IAmb	03 00 26.1	
	comp=Z,52nm,0.9s						
LWLI	Liwa	77.02	269	P	P	03 00 25.4	-0.1
	comp=Z,7µmcomp=Z,291nm,0.9s						
MDSI	Maura Dua	77.08	270	P	P	03 00 24.6	-1.1
	comp=Z,952nmcomp=Z,118nm,0.8s						
INCN	Inchon	77.73	318	P	P	03 00 28.5	-0.2
INCN				IAmb	IAmb	03 00 30.8	
	comp=Z,111nm,1.1s						
INCN	Inchon	77.73	318	P	P	03 00 30.4	+1.7
LHSI	Lahat	77.92	270	P	P	03 00 30.2	0.0
	comp=Z,134nm,1.1s						
DSRI	Dabo	78.09	274	P	P	03 00 32.4	+1.2
	comp=Z,2µmcomp=Z,79nm,1.2s						
JMBI	JAMBI	78.56	273	P	P	03 00 35.3	+1.6
	comp=Z,3µmcomp=Z,235nm,1.3s						
109C	Camp Elliot, M	78.69	49	P	P	03 00 35.5	+1.5
	baz=236						
ARVC	Arvin	78.76	46	P	P	03 00 35.7	+1.5
	baz=235,SNR=5.2						
MWC	Mount Wilson	78.77	47	P	P	03 00 34.4	-0.2
MWC				IAmb	IAmb	03 00 36.5	
	comp=Z,27nm,0.9s						
KSI	Kapahiang	78.85	270	P	P	03 00 34.8	-0.5
	comp=Z,13µmcomp=Z,209nm,0.9s						
USA0B	Ussuriysk Arra	78.98	326	P	P	03 00 36.1	+1.0
USA0B				IAmb	IAmb	03 00 37.7	
	comp=Z,120nm,0.9s						
USRK	Ussuriysk Ar.	78.98	326	P	P	03 00 36.9	+1.7
	comp=Z,91nm,0.8s,baz=125,slow=3.4,SNR=131						
USRK	Ussuriysk Ar.	78.98	326	P	P	03 00 35.7	+0.5
VES	Vestal, Richgr	79.00	45	P	P	03 00 36.5	+1.0
	baz=235,SNR=5.8						
MURC	Murrieta	79.02	48	P	P	03 00 37.0	+1.3
	baz=236						
BFSC	Mount Baldy Ra	79.06	47	P	P	03 00 37.0	+1.0
	baz=236						
MONP2	Monument Peak	79.17	49	P	P	03 00 38.2	+1.5
	baz=237,SNR=7.6						
EDW2	Edwards Air Fo	79.19	46	P	P	03 00 38.2	+1.6
	baz=236,SNR=11						
O02D	Mt. Diablo Mer	79.25	40	P	P	03 00 38.9	+2.0
	baz=231,SNR=8.7						
IKP	In-Ko-Pah, Jac	79.27	49	P	P	03 00 38.6	+1.5
	baz=237,SNR=6.4						
ISA	Isabella, Lake	79.30	46	P	P	03 00 38.4	+1.2
	baz=235,SNR=7.7						
ISA	Isabella, Lake	79.30	46	P	P	03 00 37.5	+0.3
MASI	Maura Aman, Be	79.36	271	P	P	03 00 38.4	+0.4
	comp=Z,326nm,1.2s						
SRIG	Santa Rosalia	79.39	56	P	P	03 00 38.5	+0.8
SRIG				IAmb	IAmb	03 00 39.9	
	comp=Z,31nm,1.0s						
CMB	Columbia Colle	79.43	43	P	P	03 00 38.0	+0.2
SLBS	Sierra La Lagu	79.47	60	P	P	03 00 38.4	+0.1
PFO	Pinyon Flats O	79.54	48	P	P	03 00 40.0	+1.4
	baz=237						
PFO	Pinyon Flats O	79.54	48	P	P	03 00 39.1	+0.5
MYKOM	Kota Tinggi	79.58	276	P	P	03 00 40.0	+1.0
MYKOM	Kota Tinggi	79.58	276	P	P	03 00 38.0	-1.1
MYKOM				IAmb	IAmb	03 00 41.0	
	comp=Z,94nm,0.8s						
SWSC	Sam W. Stewart	79.64	49	P	P	03 00 40.2	+1.2
	baz=237						
WDC	Whiskeytown Da	79.64	40	P	P	03 00 39.2	+0.4
ORV	Oroville	79.65	41	P	P	03 00 39.5	+0.6
N02D	Trinity Center	79.79	39	P	P	03 00 41.4	+1.8
	baz=231,SNR=7.1						
NJ2	Nanjing	79.91	310	⇓P	P	03 00 42.0	+1.7
NJ2				pmax	pmax		
	comp=Z,76nm,1.2s						
O03E	Paynes Creek	79.91	40	P	P	03 00 41.4	+1.1
	baz=232,SNR=7.6						
M02C	Callahan	79.97	39	P	P	03 00 42.5	+1.9
	baz=231,SNR=8.5						
CWC	Cottonwood Cre	80.01	45	P	P	03 00 41.8	+0.8
	baz=235						
MDPB	Devils Postpil	80.03	44	P	P	03 00 41.6	+0.4
BELC	Belle Mtn. Jos	80.07	48	P	P	03 00 42.8	+1.5
	baz=237,SNR=10						
MPMC	Manual Prospec	80.19	46	P	P	03 00 43.0	+1.1
	baz=236,SNR=10						
GSC	Goldstone, Bar	80.23	47	P	P	03 00 43.5	+1.4
	baz=236						
GSC	Goldstone, Bar	80.23	47	P	P	03 00 42.7	+0.7
TIN	Tinemaha, Big	80.26	45	P	P	03 00 44.2	+2.0
	baz=235						
YBH	Yreka Blue Hor	80.26	39	P	P	03 00 43.7	+1.6
	comp=Z,25nm,0.7s,baz=179,slow=4.9,SNR=69						
YBH	Yreka Blue Hor	80.26	39	P	P	03 00 42.0	-0.1
YBH				IAmb	IAmb	03 00 44.7	
	comp=Z,26nm,0.8s						
BC3	Big Chuckawall	80.27	49	P	P	03 00 43.6	+1.2
	baz=237						
HEC	Hector,Ludlow	80.29	47	P	P	03 00 43.6	+1.2
	baz=237,SNR=5.9						
K02D	Willamette Mer	80.32	37	P	P	03 00 43.6	+1.3
	baz=230						
GLA	Glamis	80.39	49	P	P	03 00 44.9	+1.9
	baz=238,SNR=10						
GLA	Glamis	80.39	49	P	P	03 00 43.2	+0.3
GLA				IAmb	IAmb	03 00 45.8	
	comp=Z,41nm,1.1s						
MPK	Martis Peak	80.40	42	P	P	03 00 42.5	-0.6
MPK				IAmb	IAmb	03 00 45.5	
	comp=Z,41nm,1.0s						
MDJ	Mudanjiang	80.54	325	P	P	03 00 44.5	+1.2
MDJ				pmax	pmax		
	comp=Z,97nm,1.3s						

MDJ				pmax	pmax		
	comp=Z,1µm,4.8s						
MDJ	Mudanjiang	80.54	325	P	P	03 00 42.6	-0.7
MDJ	Mudanjiang	80.54	325	P	P	03 00 45.1	+1.8
PNTR	Pine Nut	80.55	42	P	P	03 00 44.1	+0.2
PNTR				IAmb	IAmb	03 00 46.6	
	comp=Z,49nm,0.8s						
VCNR	Virginia City	80.64	42	P	P	03 00 44.5	+0.2
HUMO	Hull Mountain	80.67	38	P	P	03 00 43.9	-0.2
YERR	Yerington	80.72	42	P	P	03 00 44.9	+0.2
YERR				IAmb	IAmb	03 00 46.8	
	comp=Z,27nm,0.9s						
GMRC	Granite Mounta	80.73	48	P	P	03 00 45.9	+1.1
	baz=237,SNR=8.4						
LCH	Last Change Ra	80.74	45	P	P	03 00 44.9	+0.1
IRM	Iron Mountain	80.75	48	P	P	03 00 46.3	+1.5
	baz=238,SNR=10						
LHV	Little Huntoon	80.76	43	P	P	03 00 45.2	+0.5
LHV				IAmb	IAmb	03 00 47.3	
	comp=Z,29nm,1.0s						
L04D	Klamath Falls	80.80	38	P	P	03 00 46.4	+1.4
	baz=232,SNR=8.8						
M04C	Macdoel	80.80	39	P	P	03 00 46.5	+1.5
	baz=232,SNR=9.1						
GWY	Greenwater Val	80.81	46	P	P	03 00 45.8	+0.6
FURC	Furnace Creek,	80.83	46	P	P	03 00 46.4	+1.3
	baz=236						
TUQ	Turquoise Moun	80.90	47	P	P	03 00 46.8	+1.2
	baz=237,SNR=14						
SHOC	Shoshone, Teco	80.92	46	P	P	03 00 46.9	+1.3
	baz=237						
RYN	Ryan	80.97	43	P	P	03 00 45.9	-0.1
NVAR	Mina Array Bea	80.99	43	P	P	03 00 47.3	+1.1
	comp=Z,14nm,0.8s,baz=225,slow=9.3,SNR=101						
NVAR				pP	pwP	03 02 43.9	-1.6
	comp=Z,3.7nm,1.0s,baz=240,slow=7.2,SNR=6.7						
NVAR	Mina Array Bea	80.99	43	P	P	03 00 46.2	+0.1
NVAR				pP	pP	03 02 41.3	-0.8
113A	Mohawk Valley,	81.00	50	P	P	03 00 46.6	+0.6
113A				IAmb	IAmb	03 00 48.6	
	comp=Z,24nm,0.9s						
PAHR	Pah Rah Range	81.05	42	P	P	03 00 46.6	+0.3
NV11	Mina Array Sit	81.09	43	P	P	03 00 46.8	+0.3
NV11				IAmb	IAmb	03 00 48.7	
	comp=Z,22nm,0.9s						
NV11				pP	pP	03 02 42.9	+0.3
I03D	Drain, OR	81.13	37	P	P	03 00 47.6	+1.2
	baz=230						
HSIG		81.22	55	P	P	03 00 47.7	+0.5
214A	Organ Pipe Nat	81.28	51	P	P	03 00 49.4	+1.9
	baz=239,SNR=6.1						
214A	Organ Pipe Nat	81.28	51	P	P	03 00 48.3	+0.8
K04D	Chiloquin, OR	81.37	38	P	P	03 00 49.3	+1.4
	baz=232						
KVN	Kaiserville	81.48	43	P	P	03 00 48.6	0.0
KVN				IAmb	IAmb	03 00 50.5	
	comp=Z,21nm,0.8s						
TPH	Tonopah	81.49	44	P	P	03 00 48.4	-0.3
PDMCI	Parker Dam,Lak	81.54	49	P	P	03 00 50.4	+1.7
	baz=238,SNR=6.6						
J04D	Umpqua Nationa	81.55	38	P	P	03 00 50.7	+1.8
	baz=232						
MAW	Mawson	81.58	200	P	P	03 00 48.6	+0.2
	comp=Z,8.8nm,0.7s,baz=126,slow=7.8,SNR=14						
MAW				pP	pP	03 02 46.5	+1.6
	comp=Z,3.7nm,0.9s,baz=114,slow=8.4,SNR=4.3						
MAW	Mawson	81.58	200	P	P	03 00 49.1	+0.7
MAW					pP	03 02 45.4	+0.5
Q19K	Cape Douglas,	81.64	12	P	P	03 00 49.8	+1.1
	baz=203						
BUCK	Buck Mountain	81.65	37	P	P	03 00 49.2	0.0
BUCK				IAmb	IAmb	03 00 51.8	
	comp=Z,26nm,0.9s						
BKNI	Bangkinang	81.69	273	P	P	03 00 50.3	+0.3
	comp=Z,3µmcomp=Z,124nm,1.1s						
BKNI	Bangkinang	81.69	273	P	P	03 00 51.5	+1.5
I04A	Tendick Farm,	81.72	37	P	P	03 00 50.6	+1.1
	baz=231,SNR=6.2						
P18K	Big Mountain,	81.76	12	P	P	03 00 49.2	-0.1
	baz=201						
P18K	Big Mountain,	81.76	12	P	P	03 00 49.5	+0.2
P18K				IAmb	IAmb	03 00 51.0	
	comp=Z,36nm,0.8s						
MOD	Modoc Plateau	81.79	40	P	P	03 00 50.4	+0.3
MOD				IAmb	IAmb	03 00 52.2	
	comp=Z,29nm,0.9s						
PDSI	Padang	81.80	272	P	P	03 00 49.3	-1.3
	comp=Z,5µmcomp=Z,38nm,0.9s						
K05A	Summer Lake	81.94	39	IAmb	IAmb	03 00 53.4	
	comp=Z,55nm,1.0s						
H04D	Lebanon	81.99	36	P	P	03 00 52.2	+1.4
	baz=231						
PPI	Padang Panjang	82.01	272	P	P	03 00 52.8	+1.1
	comp=Z,14nm,0.7s						
J05D	Fort Rock, OR	82.08	38	P	P	03 00 53.3	+1.8
	baz=232,SNR=41						
G03D	McMinnville, O	82.14	36	P	P	03 00 52.5	+1.0
	baz=230						
CN2	Changchun	82.32	322	*e*P	P	03 00 52.5	0.0
CN2				pmax	pmax		
	comp=Z,70nm,1.5s						
WHN	Wuhan	82.47	306	⇓*i*P	P	03 00 54.5	+0.9
WHN				pmax	pmax		
	comp=Z,180nm,1.1s						
KLR	Kul'dur	82.55	329	P	P	03 00 54.7	+1.2
	comp=Z,30nm,1.0s,baz=105,slow=3.9,SNR=47						
PINE	Pine Mountain	82.56	38	IAmb	IAmb	03 00 56.6	
	comp=Z,44nm,0.8s						
PRN	Pahroc Range	82.56	46	IAmb	IAmb	03 00 56.6	
	comp=Z,31nm,0.9s						
I05D	Terrebonne, OR	82.66	37	P	P	03 00 55.6	+1.3
	baz=232,SNR=9.9						
O19K	Port Alsworth	82.68	12	P	P	03 00 53.9	+0.1
	baz=202						
R11A	Troy Canyon, C	82.72	45	P	P	03 00 55.6	+0.7
	baz=237						
BMN	Battle Mountai	82.82	42	P	P	03 00 56.3	+0.9
BMN				IAmb	IAmb	03 00 57.4	
	comp=Z,28nm,0.9s						
BMN				pP	pP	03 02 52.1	+0.1
E03A	Lebam	82.83	34	IAmb	IAmb	03 00 57.3	
	comp=Z,33nm,0.9s						
TUC	Tucson	82.94	52	P	P	03 00 58.0	+2.0
	baz=240						
TUC	Tucson	82.94	52	P	P	03 00 56.6	+0.6
TUC				IAmb	IAmb	03 00 59.1	
	comp=Z,29nm,1.0s						
BRSE	Bradley Lake S	82.99	13	P	P	03 00 55.1	-0.4
	baz=206						
F04A	Amboy	83.05	35	IAmb	IAmb	03 00 58.1	
	comp=Z,24nm,1.0s						
IPM	Ipoh	83.17	277	P	P	03 00 58.8	+1.3
UBPT	Khong Chiam	83.17	289	IAmb	IAmb	03 00 59.1	
	comp=Z,59nm,0.9s						
NLWA	Neilton Lookou	83.21	34	IAmb	IAmb	03 00 59.2	
	comp=Z,26nm,1.1s						
MNSI	Mandailing Nat	83.22	273	P	P	03 00 56.8	-0.9
	comp=Z,105nm,0.9s						
G05D	Wamic, OR	83.23	36	P	P	03 00 57.6	+0.5
	baz=232						
TIA	Tai'an	83.30	312	⇓P	P	03 00 58.3	+0.7
TIA				pmax	pmax		
	comp=Z,63nm,1.2s						
E04D	Cinebar	83.37	35	P	P	03 00 59.2	+1.6
	baz=231						
X16A	Lo Mia Camp, P	83.51	50	IAmb	IAmb	03 01 01.7	
	comp=Z,20nm,1.0s						
F05D	White Salmon	83.55	36	P	P	03 00 59.6	+1.0
	baz=232						
I07A	Izee	83.56	38	IAmb	IAmb	03 01 01.2	
	comp=Z,24nm,0.9s						
319A	Douglas	83.61	53	IAmb	IAmb	03 01 02.5	
	comp=Z,45nm,0.9s						
D03D	Eldon	83.71	34	P	P	03 01 00.7	+1.4
	baz=230,SNR=5.6						
J08A	Circle Bar Ran	83.74	39	IAmb	IAmb	03 01 02.0	
	comp=Z,27nm,1.2s						
MA2	Magadan	83.79	345	P	P	03 00 59.3	-0.1
	comp=Z,22nm,0.7s,baz=143,slow=7.3,SNR=7.7						
MA2	Magadan	83.79	345	P	P	03 00 59.4	-0.1
MA2				IAmb	IAmb	03 01 01.2	
	comp=Z,50nm,1.1s						
MA2	Magadan	83.79	345	P	P	03 01 00.2	+0.7
U15A	North Rim	83.93	48	IAmb	IAmb	03 01 03.7	
	comp=Z,29nm,0.8s						
SPCR	Spurr Chakacha	84.01	12	P	P	03 01 00.0	-0.6
	baz=204,SNR=6.1						
D05A	Enumclaw	84.07	35	IAmb	IAmb	03 01 04.4	
	comp=Z,28nm,1.1s						
WUAZ	Wupatki	84.11	49	P	P	03 01 03.0	+1.2
	baz=240						
GAMB	Gambell	84.14	3	P	P	03 01 02.1	+1.0
	baz=186						
M19K	Big River Lodg	84.25	11	P	P	03 01 01.6	-0.1
	baz=202						
M19K	Big River Lodg	84.25	11	IAmb	IAmb	03 01 02.6	
	comp=Z,19nm,0.8s						
L19K	White Mountain	84.43	11	P	P	03 01 03.3	+0.7
	baz=202,SNR=9.0						
L19K	White Mountain	84.43	11	IAmb	IAmb	03 01 04.3	
	comp=Z,32nm,1.0s						
PKCU	Pink Cliffs	84.44	47	IAmb	IAmb	03 01 06.7	
	comp=Z,23nm,0.9s						
RPSI	Rantau Prapat	84.50	275	P	P	03 01 03.6	-0.4
PSI	Prapat	84.53	275	P	P	03 01 03.6	-0.7
	comp=Z,55nm,0.9s,baz=167,slow=2.2,SNR=10						
G08A	Pilot Rock	84.59	37	P	P	03 01 04.3	+0.4
G08A				IAmb	IAmb	03 01 06.0	
	comp=Z,19nm,0.9s						
G08A				pP	pP	03 03 02.5	+1.3
B05A	Bryant	84.69	34	P	P	03 01 05.5	+1.3
	baz=231						
LTY	Liberty	84.82	35	P	P	03 01 04.9	0.0
LTY				pP	pP	03 03 03.2	+0.8
L20K	Farewell, AK	84.88	11	P	P	03 01 05.1	+0.3
	baz=202,SNR=5.8						
HAWA	Hanford	84.92	36	P	P	03 01 04.9	-0.4
HAWA				IAmb	IAmb	03 01 08.1	
	comp=Z,21nm,1.1s						
HAWA				pP	pP	03 03 02.1	-0.8
TTA	Tatalina	84.94	10	P	P	03 01 05.9	+0.8
	baz=200,SNR=10.0						
TTA	Tatalina	84.94	10	IAmb	IAmb	03 01 06.9	
	comp=Z,22nm,1.0s						
M22K	Willow	84.94	13	P	P	03 01 05.3	+0.3
	baz=206,SNR=7.9						
KNK	Knik Glacier	84.99	14	P	P	03 01 05.3	0.0
	baz=208						
PMR	Palmer	85.01	13	P	P	03 01 05.2	-0.1
	baz=207,SNR=6.8						
PMR	Palmer	85.01	13	IAmb	IAmb	03 01 07.2	
	comp=Z,24nm,1.1s						
MVU	Marysvale	85.05	46	P	P	03 01 06.0	-0.4
MVU				IAmb	IAmb	03 01 09.0	
	comp=Z,43nm,1.2s						
MVU				pP	pP	03 03 04.6	+0.6
ZAIG	Zacatecas	85.16	64	P	P	03 01 07.4	0.0
GHO	Glory Hole Cre	85.21	13	IAmb	IAmb	03 01 07.7	
	comp=Z,55nm,0.8s						
GSI	Gunungsitoli	85.27	273	P	P	03 01 09.1	+1.3
	comp=Z,2µmcomp=Z,226nm,0.9s						
GSI	Gunungsitoli	85.27	273	P	P	03 01 07.9	+0.1
GSI	Gunungsitoli	85.27	273	P	P	03 01 08.6	+0.8
121A	Cookes Peak, D	85.28	53	P	P	03 01 09.3	+1.6
	baz=242						
121A	Cookes Peak, D	85.28	53	IAmb	IAmb	03 01 10.5	
	comp=Z,19nm,0.9s						
DIV	Divide	85.37	15	IAmb	IAmb	03 01 09.0	
	comp=Z,43nm,1.0s						
CUT	Chulitna	85.50	13	P	P	03 01 07.8	+0.1
	baz=206,SNR=6.8						
BMRM	Bremner River	85.52	16	P	P	03 01 08.3	+0.4
	baz=211						
SCM	Sheep Creek Mo	85.62	14	P	P	03 01 09.0	+0.5
	baz=209,SNR=7.9						
SCM	Sheep Creek Mo	85.62	14	IAmb	IAmb	03 01 09.8	
	comp=Z,61nm,0.8s						
KLU	Klutina	85.65	15	IAmb	IAmb	03 01 09.9	
	comp=Z,20nm,1.0s						
D08A	Wollman Farm,	85.66	36	P	P	03 01 09.5	+0.7
D08A				IAmb	IAmb	03 01 11.0	
	comp=Z,17nm,0.9s						
D08A				pP	pP	03 03 06.3	-0.4
K20K	Telida	85.66	11	P	P	03 01 08.7	+0.1
	baz=202						
K20K	Telida	85.66	11	IAmb	IAmb	03 01 10.5	
	comp=Z,21nm,1.1s						
WRAK	Wrangell Islan	85.70	23	P	P	03 01 10.1	+1.3
	baz=222						
WRAK	Wrangell Islan	85.70	23	IAmb	IAmb	03 01 11.2	
	comp=Z,17nm,0.9s						
YAH	Yahtse	85.76	17	IAmb	IAmb	03 01 22.1	
	comp=Z,28nm,0.8s						
E09A	Wood Farm, Sta	85.77	37	IAmb	IAmb	03 01 11.8	
	comp=Z,20nm,1.1s						
BJT	Baijiatuau	85.91	315	IAmb	IAmb	03 01 11.7	
	comp=Z,35nm,0.9s						
BJI	Beijing	85.92	315	P	P	03 01 11.0	+0.7
BJI				pmax	pmax		
	comp=Z,51nm,0.9s						
SRIT	Nakonsritamara	85.97	281	P	P	03 01 10.7	-0.4
F10A	Beach Ranch, E	85.97	38	IAmb	IAmb	03 01 12.6	
	comp=Z,43nm,0.8s						
TABL	Table Mountain	86.00	17	IAmb	IAmb	03 01 12.1	
	comp=Z,40nm,1.0s						
VRDI	Verde Repeater	86.04	16	IAmb	IAmb	03 01 13.6	
	comp=Z,15nm,1.0s						
CAST	Castle Rocks	86.07	11	P	P	03 01 09.4	-1.0
	baz=204,SNR=12						
CAST	Castle Rocks	86.07	11	IAmb	IAmb	03 01 10.4	
	comp=Z,36nm,0.9s						
N25K	Chitina, Valde	86.07	15	P	P	03 01 10.9	+0.3
	baz=211,SNR=5.6						
COYC	Coyhaique	86.12	137	IAmb	IAmb	03 01 14.0	
	comp=Z,44nm,0.9s						
M24K	Tolsona, Glenn	86.12	14	P	P	03 01 11.6	+0.8
	baz=210						
GLB	Gilahina Butte	86.13	16	P	P	03 01 10.9	+0.1
GLB				IAmb	IAmb	03 01 11.8	
	comp=Z,15nm,0.8s						
GLB					pP	03 03 08.1	-0.8
WAT6	Susitna Watana	86.19	14	P	P	03 01 11.5	+0.3
	baz=208,SNR=9.7						
B08A	Colville Reser	86.20	35	IAmb	IAmb	03 01 12.8	
	comp=Z,15nm,0.9s						
MCARA	McCarthy VSAT	86.28	16	P	P	03 01 12.4	+0.9
	baz=212						
MCARA	McCarthy VSAT	86.28	16	IAmb	IAmb	03 01 13.3	
	comp=Z,46nm,1.2s						
HLID	Hailey	86.30	41	P	P	03 01 13.5	+1.3
	baz=237						
HLID	Hailey	86.30	41	P	P	03 01 11.5	-0.7
HLID				pP	pP	03 03 11.1	+0.8
LOGN	Logan Glacier	86.35	17	IAmb	IAmb	03 01 13.7	
	comp=Z,33nm,1.2s						
BARN	Barnard Glacie	86.37	17	IAmb	IAmb	03 01 13.9	
	comp=Z,26nm,0.9s						
CTG	Chitna Glacier	86.38	17	P	P	03 01 12.8	+0.7
	baz=214						
SEY	Seymchan	86.38	347	P	P	03 01 12.3	+0.4
	comp=Z,35nm,0.7s,baz=148,slow=5.3,SNR=62						
J20K	Nowinta River	86.41	10	P	P	03 01 12.4	+0.4
	baz=202,SNR=7.1						
J20K	Nowinta River	86.41	10	P	P	03 01 11.6	-0.4
J20K				IAmb	IAmb	03 01 12.9	
	comp=Z,16nm,1.1s						
J20K				pP	pP	03 03 11.2	+1.0
TRF	Thorofare Moun	86.44	12	P	P	03 01 12.1	-0.3
	baz=206						
TRF	Thorofare Moun	86.44	12	IAmb	IAmb	03 01 13.0	
	comp=Z,46nm,0.8s						
C09A	Chrisman Ranch	86.45	36	IAmb	IAmb	03 01 14.4	
	comp=Z,14nm,0.8s						
CHUM	Lake Minchumin	86.45	11	P	P	03 01 11.6	-0.6
	baz=204,SNR=7.7						
SRU	San Rafael Swe	86.49	46	P	P	03 01 13.5	+0.2
SRU				IAmb	IAmb	03 01 15.1	
	comp=Z,16nm,0.9s						
SRU					pP	03 03 11.9	+0.6
GCSA	Galena City Sc	86.51	9	P	P	03 01 12.8	+0.4
	baz=200						
P17A	Butcher Ranch,	86.53	46	P	P	03 01 12.5	-0.9
P17A				pP	pP	03 03 11.6	+0.1
TLIG	Tlapa	86.55	70	P	P	03 01 14.0	+0.1
TLIG				IAmb	IAmb	03 01 16.4	
	comp=Z,16nm,0.9s						
GYA	Guiyang	86.68	300	⇑*i*P	P	03 01 15.8	+1.4
GYA				pmax	pmax		
	comp=Z,55nm,0.9s						
MNTX	Cornudas Mount	86.72	55	P	P	03 01 15.6	+1.3
	baz=244						
MNTX	Cornudas Mount	86.72	55	P	P	03 01 15.2	+0.9
MNTX				IAmb	IAmb	03 01 16.7	
	comp=Z,23nm,0.9s						
MNTX				pP	pP	03 03 12.9	+0.5
BNM	Barren Site	86.88	52	P	P	03 01 14.8	-0.6
BNM				pP	pP	03 03 11.8	-1.6
BPAW	Bear Paw Mtn.	86.89	12	P	P	03 01 13.4	-0.9
	baz=205						
BPAW	Bear Paw Mtn.	86.89	12	P	P	03 01 13.5	-0.9
TCUT	Toone Canyon	86.91	44	IAmb	IAmb	03 01 19.7	
	comp=Z,12nm,0.9s						
MCK	McKinley	86.96	12	P	P	03 01 14.6	-0.1
	baz=207,SNR=14						
MCK	McKinley	86.96	12	IAmb	IAmb	03 01 16.1	
	comp=Z,40nm,0.9s						
TX31	Lajitas Ar. Si	87.02	57	IAmb	IAmb	03 01 18.5	
	comp=Z,58nm,0.9s						
TX32	Lajitas Array	87.02	57	IAmb	IAmb	03 01 18.5	
	comp=Z,20nm,0.9s						
TXAR	Lajitas Array	87.02	57	P	P	03 01 17.3	+1.4
	comp=Z,13nm,0.8s,baz=219,slow=6.8,SNR=108						
TXAR				pP	pwP	03 03 16.8	-0.9
	comp=Z,7.8nm,1.1s,baz=212,slow=4.4,SNR=12						
TXAR				PKKPbc	PKKPbc	03 19 06.2	+0.8
	comp=Z,0.8nm,0.8s,baz=112,slow=1.0,SNR=5.2						
TXAR	Lajitas Array	87.02	57	P	P	03 01 16.7	+0.8
TXAR					pP	03 03 14.8	+0.8
PAX	Paxson	87.04	14	P	P	03 01 14.7	-0.5
	baz=210						
M26K	Nabesna, AK	87.15	15	P	P	03 01 16.4	+0.8
	baz=212,SNR=6.3						
M26K	Nabesna, AK	87.15	15	P	P	03 01 15.7	+0.1
M26K				IAmb	IAmb	03 01 17.9	
	comp=Z,17nm,0.9s						
M26K				pP	pP	03 03 15.4	+1.4
LHMI	Lhok Sumawe	87.23	277	P	P	03 01 18.0	+0.9
	comp=Z,253nm,0.9s						
LHMI	Lhok Sumawe	87.23	277	P	P	03 01 18.3	+1.2
BWN	Browne	87.25	12	IAmb	IAmb	03 01 16.8	
	comp=Z,55nm,1.0s						
YUK3	Moose Creek	87.29	17	P	P	03 01 17.2	+0.7
	baz=215,SNR=16						
TIY	Taiyuan	87.31	312	*e*P	P	03 01 18.0	+1.0
TIY				pmax	pmax		
	comp=Z,44nm,0.5s						
NEW	Newport	87.35	36	P	P	03 01 17.6	+0.7
	baz=235						
HYT	Haines Junctio	87.36	19	P	P	03 01 17.9	+1.1
	baz=217						
HYT	Haines Junctio	87.36	19	P	P	03 01 17.2	+0.4
HYT				IAmb	IAmb	03 01 18.3	
	comp=Z,13nm,1.0s						
ANMO	Albuquerque	87.37	51	P	P	03 01 18.4	+0.9
	baz=243						
ANMO	Albuquerque	87.37	51	P	P	03 01 16.4	-1.1
ANMO				pP	pP	03 03 15.9	+0.1
M27K	Edge Creek, AK	87.39	16	P	P	03 01 17.9	+1.0
	baz=214,SNR=12						
M27K	Edge Creek, AK	87.39	16	P	P	03 01 17.4	+0.5
M27K				IAmb	IAmb	03 01 19.0	
	comp=Z,39nm,1.1s						
M27K				pP	pP	03 03 16.1	+0.8
MLSI	Meulaboh, Aceh	87.40	275	P	P	03 01 18.7	+0.8
	comp=Z,95nm,0.9s						
MENT	Mentasta	87.42	15	IAmb	IAmb	03 01 18.6	
	comp=Z,19nm,1.1s						
L26K	Log Cabin Wild	87.59	15	P	P	03 01 17.9	+0.3
	baz=212,SNR=5.3						
L26K	Log Cabin Wild	87.59	15	IAmb	IAmb	03 01 19.4	
	comp=Z,19nm,1.1s						
I21K	Tanana	87.70	11	P	P	03 01 18.5	+0.4
	baz=204,SNR=18						
I21K	Tanana	87.70	11	IAmb	IAmb	03 01 19.2	
	comp=Z,33nm,0.8s						
NEA2	Nenana	87.70	12	P	P	03 01 17.3	-0.8
	baz=207,SNR=11						
NEA2	Nenana	87.70	12	IAmb	IAmb	03 01 19.1	
	comp=Z,13nm,0.8s						
BVCY	Beaver Creek	87.71	16	P	P	03 01 19.1	+0.9
	baz=214,SNR=8.3						
MLY	Manley	87.78	11	P	P	03 01 17.9	-0.6
	baz=205						
MLY	Manley	87.78	11	P	P	03 01 17.8	-0.7
MLY				IAmb	IAmb	03 01 18.9	
	comp=Z,18nm,0.8s						
MLY					pP	03 03 17.6	+0.5
WRH	Wood River Hil	87.79	12	P	P	03 01 18.5	0.0
WRH				IAmb	IAmb	03 01 19.3	
	comp=Z,49nm,0.9s						
WRH				pP	pP	03 03 17.9	+0.7
DOT	Dot Lake	87.95	14	IAmb	IAmb	03 01 20.7	
	comp=Z,22nm,1.0s						
HDA	Harding Lake	87.97	13	P	P	03 01 19.3	0.0
	baz=209,SNR=20						
HDA	Harding Lake	87.97	13	P	P	03 01 19.1	-0.3
HDA				IAmb	IAmb	03 01 20.2	
	comp=Z,30nm,0.7s						
HDA				pP	pP	03 03 17.3	-0.7
L27K	Beaver Creek,	88.00	16	P	P	03 01 20.0	+0.4
	baz=214,SNR=6.5						
L27K	Beaver Creek,	88.00	16	IAmb	IAmb	03 01 21.3	
	comp=Z,16nm,1.1s						
H21K	Melozitna Rive	88.00	10	P	P	03 01 20.0	+0.5
	baz=203						
H21K	Melozitna Rive	88.00	10	IAmb	IAmb	03 01 20.9	
	comp=Z,16nm,0.8s						
CCB	Clear Creek Bu	88.00	12	IAmb	IAmb	03 01 20.1	
	comp=Z,36nm,0.8s						
SNAA	Sanae	88.01	178	P	P	03 01 19.7	0.0
SNAA	Sanae	88.01	178	pP	pP	03 03 16.1	-2.0
SNAA	Sanae	88.01	178	P	P	03 01 19.1	-0.7
DLBC	Dease Lake	88.03	23	IAmb	IAmb	03 01 22.2	
	comp=Z,13nm,1.0s						
WHY	Whitehorse	88.03	20	P	P	03 01 20.9	+1.0
	baz=220						
VNA3	Neumayer Olymp	88.14	176	P	P	03 01 20.1	-0.2
VNA3				S	S	03 11 16.7	-1.7
VNA3	Neumayer Olymp	88.14	176	pP	pP	03 03 21.1	+2.4
I23K	Minto, Yukon-K	88.14	12	P	P	03 01 19.7	-0.5
	baz=207,SNR=8.5						
I23K	Minto, Yukon-K	88.14	12	IAmb	IAmb	03 01 20.8	
	comp=Z,10nm,0.7s						
XAN	Xi'an	88.16	307	P	P	03 01 22.3	+1.2
XAN				pmax	pmax		
	comp=Z,170nm,0.9s						
TCOL	CIGO, UAF Yank	88.19	12	P	P	03 01 20.1	-0.3
	baz=208,SNR=9.9						
COLA	College	88.19	12	P	P	03 01 20.6	+0.2
MDM	Murphy Dome	88.19	12	P	P	03 01 20.0	-0.4
MDM				IAmb	IAmb	03 01 21.0	
	comp=Z,40nm,0.9s						
SCRK	Sand Creek	88.25	14	P	P	03 01 21.3	+0.4
	baz=212,SNR=7.9						
SCRK	Sand Creek	88.25	14	IAmb	IAmb	03 01 22.3	
	comp=Z,16nm,1.1s						
IL31		88.30	13	IAmb	IAmb	03 01 21.6	
	comp=Z,28nm,1.1s						
ILAR	Eielson Array	88.30	13	P	P	03 01 20.6	-0.4
	comp=Z,16nm,0.9s,baz=222,slow=5.0,SNR=120						
ILAR				pP	pP	03 03 19.4	-0.2
	comp=Z,7.1nm,1.0s,baz=226,slow=5.7,SNR=10						
MSO	Missoula	88.34	38	P	P	03 01 22.1	+0.4
	baz=237						
DLMT	Dillon	88.36	40	IAmb	IAmb	03 01 24.0	
	comp=Z,13nm,0.8s						
P33M	Teslin, Yukon	88.36	21	P	P	03 01 22.6	+1.2
	baz=222,SNR=5.5						
S22A	4UR Ranch, Cre	88.39	49	P	P	03 01 23.4	+1.1
	baz=242						
N31M	Braeburn, Yuko	88.40	19	P	P	03 01 22.8	+1.3
	baz=219,SNR=5.7						
REDW	Red Top Meadow	88.40	42	IAmb	IAmb	03 01 24.8	
	comp=Z,18nm,1.1s						
TPAW	Teton Pass	88.41	42	IAmb	IAmb	03 01 24.3	
	comp=Z,9.0nm,0.8s						
J25K	Salcha River,	88.49	13	P	P	03 01 22.1	+0.2
	baz=210,SNR=9.7						
POKR	Poker Plat Res	88.50	12	P	P	03 01 21.3	-0.5
	baz=208,SNR=12						
POKR	Poker Plat Res	88.50	12	IAmb	IAmb	03 01 22.3	
	comp=Z,30nm,1.0s						
O20A	White River Ci	88.53	46	P	P	03 01 23.4	+0.5
	baz=242						
VNA2	Neumayer--Watz	88.58	177	P	P	03 01 22.6	+0.3
	baz=184,slow=3.6						
VNA2	Neumayer--Watz	88.58	177	pP	pP	03 03 23.1	+2.3
MOOW	Moose Ponds	88.67	42	P	P	03 01 23.3	-0.1
HIA	Hailar	88.72	325	IAmb	IAmb	03 01 24.8	
	comp=Z,21nm,0.9s						

J26L	**Joseph Creek**	88.79	14	P	P	03 01 24.4	+1.0
	baz=212,SNR=28						
VNA1	**Neumayer--Stat**	88.81	177	P	P	03 01 24.0	+0.7
VNA1	**Neumayer--Stat**	88.81	177	pP	pP	03 03 24.6	+2.7
FLWY	**Flagg Ranch**	88.86	42	IAmb	IAmb	03 01 26.7	
	comp=Z,21nm,0.8s						
BW06	**Boulder Array**	88.93	43	P	P	03 01 25.4	+0.7
	baz=241						
BW06	**Boulder Array**	88.93	43	IAmb	IAmb	03 01 26.0	
	comp=Z,11nm,0.8s						
PD31	**Pinedale Array**	88.93	43	IAmb	IAmb	03 01 26.0	
	comp=Z,9.8nm,0.8s						
PDAR	**Pinedale Array**	88.93	43	P	P	03 01 25.1	+0.4
	comp=Z,9.2nm,0.7s,baz=210,slow=3.1,SNR=84						
PDAR				pP	pwP	03 03 26.7	0.0
	comp=Z,1.0nm,0.9s,baz=204,slow=4.0,SNR=3.7						
PDAR				PKKPbc	PKKPbc	03 18 60.0	-1.6
	comp=Z,0.7nm,0.9s,baz=106,slow=4.8,SNR=4.4						
M30M	**Minto, Yukon**	88.95	18	P	P	03 01 24.8	+0.8
	baz=218,SNR=24						
YMR	**Madison River**	88.99	41	IAmb	IAmb	03 01 27.6	
	comp=Z,17nm,0.8s						
BILL	**Bilibino**	89.04	354	P	P	03 01 24.4	+0.2
BILL				IAmb	IAmb	03 01 26.8	
	comp=Z,10.0nm,0.9s						
H24K	**Noodor Dome**	89.04	12	P	P	03 01 23.1	-1.3
	baz=208						
BOZ	**Bozeman (W)**	89.06	40	P	P	03 01 26.5	+1.4
	baz=239						
BOZ	**Bozeman (W)**	89.06	40	IAmb	IAmb	03 01 27.3	
	comp=Z,14nm,0.9s						
LC01	**Cunco**	89.14	131	P	P	03 01 26.0	+0.5
LC01				IAmb	IAmb	03 01 27.6	
	comp=Z,21nm,0.9s						
PLCA	**Paso Flores**	89.25	134	P	P	03 01 27.2	+1.1
	comp=Z,4.6nm,1.0s,baz=224,slow=7.0,SNR=6.1						
SDCO	**Great Sand Dun**	89.32	49	P	P	03 01 27.2	+0.5
	baz=243						
M31M	**Drury Creek, Y**	89.37	19	P	P	03 01 26.5	+0.5
	baz=220,SNR=6.2						
HHC	**Hu-ho-hao-te**	89.38	314	*i* P	P	03 01 27.8	+1.2
HHC				pP	pwP	03 03 30.8	+2.1
HHC				sP	sP	03 04 22.3	+2.2
HHC				S	S	03 11 30.3	-0.5
HHC				pmax	pmax		
	comp=Z,45nm,1.1s						
HHC				pmax	pmax		
	comp=Z,140nm,6.3s						
KMI	**Kunming**	89.38	297	⇓P	P	03 01 29.0	+1.8
KMI				pmax	pmax		
	comp=Z,87nm,1.0s						
KMI				pmax	pmax		
	comp=Z,250nm,3.5s						
DAWY	**Dawson**	89.44	16	P	P	03 01 27.0	+0.7
	baz=216,SNR=18						
DAWY	**Dawson**	89.44	16	IAmb	IAmb	03 01 28.0	
	comp=Z,26nm,0.9s						
MSTX	**Muleshoe**	89.68	53	P	P	03 01 28.7	+0.5
	baz=245						
MSTX	**Muleshoe**	89.68	53	IAmb	IAmb	03 01 29.6	
	comp=Z,18nm,0.8s						
FARO	**Faro, Yukon**	89.71	19	P	P	03 01 28.5	+0.9
	baz=221						
COLD	**Coldfoot**	89.87	10	P	P	03 01 28.8	+0.7
	baz=206						
COLD	**Coldfoot**	89.87	10	IAmb	IAmb	03 01 29.9	
	comp=Z,22nm,0.9s						
833A	**Chaparral WMA,**	90.02	60	P	P	03 01 30.6	+0.8
	baz=247						
CM31	**Chiang Mai Arr**	90.15	290	P	P	03 01 30.2	-0.4
CMAR	**Chiang Mai Arr**	90.15	290	P	P	03 01 32.4	+1.8
	comp=Z,53nm,0.9s,baz=121,slow=3.0,SNR=184						
CMAR				pP	pwP	03 03 32.5	-1.2
	comp=Z,2.7nm,0.9s,baz=113,slow=3.2,SNR=3.0						
CMAR				PP	PP	03 05 15.6	+1.3
	comp=Z,1.8nm,0.6s,baz=125,slow=6.6,SNR=5.9						
ISCO	**Idaho Springs**	90.16	47	P	P	03 01 31.5	+1.0
	baz=243						
RLMT	**Red Lodge**	90.27	41	P	P	03 01 32.2	+1.4
	baz=241						
CHTO	**Chiang Mai**	90.28	290	P	P	03 01 30.9	-0.3
CHTO	**Chiang Mai**	90.28	290	P	P	03 01 33.0	+1.8
N23A	**Red Feather La**	90.43	46	P	P	03 01 33.3	+1.6
	baz=243						
JCT	**Junction City**	90.55	58	P	P	03 01 32.8	+0.6
	baz=246						
JCT	**Junction City**	90.55	58	IAmb	IAmb	03 01 33.3	
	comp=Z,9.3nm,0.7s						
I29M	**Ogilvie Camp,**	90.77	16	P	P	03 01 32.7	+0.3
	baz=217						
K22A	**Casper**	90.84	44	P	P	03 01 34.2	+0.7
	baz=243						
K22A	**Casper**	90.84	44	IAmb	IAmb	03 01 35.0	
	comp=Z,9.7nm,0.9s						
TGTN	**Hyland Airport**	90.85	21	P	P	03 01 34.0	+1.1
	baz=226						
AMTX	**Amarillo**	90.88	53	IAmb	IAmb	03 01 37.6	
	comp=Z,6.2nm,0.6s						
TOLK	**Toolik Lake Re**	91.25	10	P	P	03 01 35.2	+0.7
	baz=206						
TOLK	**Toolik Lake Re**	91.25	10	IAmb	IAmb	03 01 35.4	
	comp=Z,7.7nm,1.0s						
ABTX	**Abilene, Hawle**	91.52	56	P	P	03 01 37.2	+0.5
	baz=247						
ABTX	**Abilene, Hawle**	91.52	56	IAmb	IAmb	03 01 38.7	
	comp=Z,11nm,0.8s						
EDM	**Edmonton**	92.09	33	IAmb	IAmb	03 01 40.4	
	comp=Z,8.4nm,1.0s						
YAK	**Yakutsk**	92.12	338	P	P	03 01 38.3	-0.4
	comp=Z,15nm,0.6s,baz=115,slow=0.2,SNR=1.7						
YAK	**Yakutsk**	92.12	338	P	P	03 01 38.2	-0.4
LZH	**Lanzhou**	92.80	307	⇓P	P	03 01 44.0	+1.4
LZH				pP	pwP	03 03 49.0	+3.5
LZH				pmax	pmax		
	comp=Z,45nm,1.4s						
LZH				pmax	pmax		
	comp=Z,140nm,7.8s						
LAO	**LASA Array**	92.88	41	P	P	03 01 43.9	+1.4
	baz=243						
RSSD	**Black Hills**	93.12	44	P	P	03 01 44.2	+0.3
	baz=244						
RSSD	**Black Hills**	93.12	44	P	P	03 01 43.8	-0.2
RSSD				IAmb	IAmb	03 01 45.7	
	comp=Z,6.8nm,0.9s						
INK	**Inuvik**	94.26	15	P	P	03 01 47.8	-0.4
	comp=Z,7.7nm,1.0s,baz=212,slow=5.1,SNR=17						
INK				pP	pP	03 03 47.2	-0.4
	comp=Z,1.5nm,0.9s,baz=232,slow=4.1,SNR=2.7						
INK	**Inuvik**	94.26	15	P	P	03 01 47.9	-0.4
	baz=221						
INK	**Inuvik**	94.26	15	IAmb	IAmb	03 01 49.1	
	comp=Z,9.2nm,1.1s						
R32A	**Long Quarter,**	94.47	51	IAmb	IAmb	03 01 52.2	
	comp=Z,16nm,0.8s						
ULN	**Ulaanbaatar**	95.39	319	P	P	03 01 53.6	-0.5
ULN				IAmb	IAmb	03 02 02.2	
	comp=Z,8.4nm,0.8s						
SONM	**Songino Array**	95.78	319	P	P	03 01 55.1	-0.7
	comp=Z,2.4nm,0.8s,baz=116,slow=3.4,SNR=12						
SONM				PP	PP	03 05 54.7	-2.5
	comp=Z,3.2nm,0.9s,baz=118,slow=6.3,SNR=7.4						
YKA	**Yellowknife Ar**	96.49	25	P	P	03 01 58.6	+0.2
	comp=Z,1.1nm,0.8s,baz=231,slow=4.0,SNR=4.9						
YKA				pP	pP	03 03 58.5	+0.4
	comp=Z,0.6nm,0.7s,baz=231,slow=4.7,SNR=3.3						
YKA				PP	PP	03 06 04.6	+2.5
	comp=Z,0.7nm,0.9s,baz=231,slow=7.0,SNR=3.7						
GTA	**Gaotai**	97.00	309	⇑P	Pdif	03 02 02.5	+1.0
GTA				PP	PP	03 06 05.8	-0.9
GTA				pmax	pmax		
	comp=Z,12nm,1.5s						
TIXI	**Tiksi**	98.75	345	P	Pdif	03 02 07.6	-0.8
	comp=Z,1.7nm,0.3s,baz=110,slow=4.9,SNR=2.2						
ZALV	**Zalesovo Beam**	110.52	321	Pdiff	Pdif	03 03 04.6	+3.5
	comp=Z,0.3nm,0.4s,baz=70,slow=6.3,SNR=1.6						
ZALV				PKiKP	PKiKP	03 06 56.8	-1.3
	comp=Z,4.6nm,0.7s,baz=122,slow=1.5,SNR=22						
ZALV				PP	PP	03 07 47.1	+2.0
	comp=Z,2.2nm,0.9s,baz=98,slow=8.9,SNR=3.7						
MKAR	**Makanchi Array**	111.22	313	Pdiff	Pdif	03 03 07.0	+2.5
	comp=Z,1.1nm,0.9s,baz=95,slow=7.8,SNR=4.7						
MKAR				PKiKP	PKiKP	03 06 58.8	-1.0
	comp=Z,4.9nm,0.7s,baz=79,slow=1.1,SNR=27						
MKAR				PP	PP	03 07 52.5	+2.2
	comp=Z,0.8nm,0.7s,baz=96,slow=7.5,SNR=3.9						
MKAR				PKKPbc	PKKPbc	03 17 57.7	-0.6
	comp=Z,0.6nm,0.7s,baz=278,slow=3.6,SNR=4.0						
KURBB	**Kurchatov Arra**	114.07	317	PKKPbc	PKKPbc	03 17 46.9	-2.0
	comp=Z,0.2nm,0.3s,baz=267,slow=3.7,SNR=3.0						
KURBB				PKKPab	PKKPab	03 17 55.0	-0.4
	comp=Z,0.6nm,0.8s,baz=288,slow=4.5,SNR=3.6						
KSH	**Kashi**	114.92	305	PKP	PKiKP	03 07 08.0	+0.8
AAK	**Ala-Archa**	116.33	308	PKP	PKPdf	03 07 08.7	-1.1
	comp=Z,3.2nm,0.8s,baz=163,slow=11,SNR=8.3						
AAK	**Ala-Archa**	116.33	308	PKPdf	PKPdf	03 07 09.7	-0.1
NEEM	**North Greenlan**	117.57	11	*i* P	PKPdf	03 07 09.9	-1.5
NOR	**Nord**	118.35	3	*e*	Pdif	03 03 32.9	-2.5
	baz=303,slow=9.3						
NOR				IAML		03 04 01.4	
	comp=Z,1.3nm,0.3s						
BVAR	**Borovoye Array**	119.10	320	PKP	PKPdf	03 07 14.1	-0.6
	comp=Z,12nm,0.7s,baz=216,slow=9.1,SNR=61						
BVAR				PKKPab	PKKPab	03 17 33.8	+0.6
	comp=Z,0.7nm,0.6s,baz=243,slow=13,SNR=3.7						
BDFB	**Brasilia**	119.12	122	PKKPbc	PKKPbc	03 17 31.4	+0.1
	comp=Z,4.6nm,0.8s,baz=103,slow=4.1,SNR=6.0						
BRVK	**Borovoye**	119.16	320	PKPdf	PKPdf	03 07 14.2	-0.5
KBL	**Kabul**	119.92	299	PKPdf	PKPdf	03 07 16.5	-0.6
SUMG	**Summit**	123.14	14	*i* P	PKPdf	03 07 22.1	-0.3
DY2G	**Dye2**	124.69	21	*i* P	PKPdf	03 07 23.6	-1.7
ICESG	**Greenland Ices**	125.18	17	*i* P	PKPdf	03 07 24.1	-2.2
ARU	**Arti**	125.22	325	PKPdf	PKPdf	03 07 26.2	0.0
BOSA	**Boshof**	126.28	205	PKP	PKiKP	03 07 29.9	-0.1
	comp=Z,9.9nm,1.1s,baz=293,slow=1.7,SNR=6.6						
GEYT	**Alibeck**	128.82	303	PKP	PKPdf	03 07 33.9	+0.1
	comp=Z,7.6nm,0.8s,baz=11,slow=3.7,SNR=8.1						
ARCES	**ARCESS Array B**	128.93	350	PKP	PKPdf	03 07 32.8	-0.2
	comp=Z,9.8nm,0.9s,baz=44,slow=2.0,SNR=20						
UOSS	**Minazif**	130.11	286	PKPdf	PKPdf	03 07 36.0	-0.5
KLMR	**Klimovskoe**	131.89	336	*e*PKPdf	PKPdf	03 07 38.4	-0.4
KLMR				AMP		03 07 41.0	
	comp=Z,22nm,1.2s						
KLMR				*e*PP	PP	03 10 02.5	-5.3
KLMR				*e*SKP	SKPab	03 10 17.6	+2.1
FINES	**FINESS Array B**	135.78	344	PKhKP	PKPpre	03 07 35.2	
	comp=Z,1.6nm,0.7s,baz=336,slow=4.2,SNR=6.0						
FINES				PKP	PKPdf	03 07 44.1	-1.9
	comp=Z,4.9nm,0.7s,baz=64,slow=3.2,SNR=12						
FINES				SKP	SKPdf	03 10 29.1	-0.4
	comp=Z,5.5nm,0.8s,baz=98,slow=5.8,SNR=6.9						
FINES				PP	PP	03 10 33.4	+1.5
	comp=Z,4.1nm,0.8s,baz=46,slow=6.0,SNR=4.8						
LSZ	**Lusaka**	136.14	218		PKPdf	03 07 47.1	-1.2
KIBK	**Kibwezi**	138.04	241	PKPdf	PKPdf	03 07 51.1	-0.8
KBZ	**Khabaz**	138.92	314	PKhKP	PKPpre	03 07 43.0	
	comp=Z,1.9nm,0.8s,baz=117,slow=5.6,SNR=5.2						
KBZ				PKP	PKPdf	03 07 53.0	+0.6
	comp=Z,4.3nm,0.9s,baz=94,slow=5.6,SNR=5.6						
KBZ				SKPbc	SKPbc	03 10 37.5	+1.3
	comp=Z,4.1nm,1.0s,baz=75,slow=3.4,SNR=5.2						
KIV	**Kislovodsk**	138.98	314	PKPdf	PKPdf	03 07 52.0	-0.6
NB2	**NORSAR Subarra**	138.98	353	PKP	PKPpre	03 07 43.2	
	comp=Z,3.9nm,0.9s,baz=16,slow=3.2						
NOA	**NORSAR Array B**	138.98	353	PKhKP	PKPpre	03 07 42.6	
	comp=Z,3.4nm,0.8s,baz=16,slow=4.6,SNR=9.0						
NOA				SKPbc	SKiKP	03 10 37.9	-1.0
	comp=Z,5.2nm,0.9s,baz=14,slow=4.4,SNR=8.1						
AKH	**Akhalkalaki**	139.28	310	⇓P	PKiKP	03 07 56.2	+0.4
KMBO	**Kilima Mbogo**	139.38	242	PKhKP	PKPpre	03 07 46.2	
	comp=Z,3.3nm,0.9s,baz=69,slow=5.5,SNR=5.7						
KMBO				PKP	PKiKP	03 07 56.6	-0.3
	comp=Z,3.8nm,0.8s,baz=260,slow=2.6,SNR=7.7						
KMBO				SKPbc	SKiKP	03 10 40.9	-0.7
	comp=Z,4.3nm,1.0s,baz=45,slow=6.0,SNR=6.2						
MNK	**Minsk**	140.79	336	*i* PKP	PKPdf	03 07 52.8	-2.6
	comp=E,3.0nm,1.2s						
MNK				*i* PKP	PKPdf	03 07 52.8	-2.6
	comp=N,9.0nm,0.8s						
MNK				*i* PKP	PKPdf	03 07 52.8	-2.6
	comp=Z,44nm,1.2s,baz=220						
MNK				*i* pPKP	pPKPdf	03 10 01.4	-1.8
MNK				*i* SKP		03 10 34.5	
MNK				*i* PP	PP	03 10 59.8	-2.8
MNK				*i* PKS	PKSdf	03 11 30.0	-1.0
MNK				*i* SKS	SKSdf	03 14 04.4	-9.4
MNK				*i* SS	SS	03 28 48.8	+3.3
MNK				*i* LR	LR	04 01 14.7	
MNK				*i* LRM	MLR	04 12 44.3	
	comp=N,296nm,21.6s						
MNK				*i* LRM	MLR	04 13 02.6	
	comp=E,28nm,19.7s						
MNK				*i* LRM	MLR	04 13 03.3	
	comp=Z,193nm,24.9s						
NACGM	**Naroch**	140.89	337	*i* PKP	PKPdf	03 07 50.2	-5.3
PABE	**Paberze**	141.35	340	*e*P	PKPdf	03 07 52.9	-3.4
HOMB	**Homborsund**	141.98	354	*i* P	PKPdf	03 07 53.0	-4.3
BORU	**Boraas**	142.08	351	*i* P	PKPdf	03 07 52.4	-5.2
ONAU	**Onsala**	142.44	351	*i* P	PKPdf	03 07 53.8	-4.4
KAC	**Achnashellach**	142.65	7	*e*P	PKPdf	03 07 56.1	-2.6
FABU	**Falkenberg**	142.70	350	*i* P	PKPdf	03 07 54.3	-4.4
MCD	**Coleburn Disti**	142.76	5	*e*P	PKPdf	03 07 55.8	-3.0
KPL	**Plockton**	142.77	7	*e*P	PKPdf	03 07 56.3	-2.5
BLEU	**Blekinge**	142.80	347	*i* P	PKPdf	03 07 54.3	-4.6
SUW	**Suwalki**	142.85	339	*e*PKP	PKPdf	03 07 57.0	-2.0
SUW	**Suwalki**	142.85	339	*e*P	PKPdf	03 07 57.1	-2.0
SHEL	**Horse Pasture**	142.97	167	PKPdf	PKPdf	03 08 00.1	-0.4
DEL	**Delary**	143.01	349	*i* P	PKPab	03 07 56.0	-0.8
AKASG	**Malin Array Be**	143.03	331	PKhKP	PKPpre	03 07 56.6	
	comp=Z,70nm,0.7s,baz=43,slow=4.6,SNR=381						
AKASG				pPKP	pPKPdf	03 10 08.3	+1.0
	comp=Z,0.6nm,0.4s,baz=34,slow=3.6,SNR=2.8						
AKASG				SKPbc	SKiKP	03 10 47.8	+0.3
	comp=Z,3.2nm,0.8s,baz=44,slow=1.7,SNR=6.6						
GOET	**G??ttrup**	143.13	353	*i*	PKPab	03 07 49.2	-8.0
GOET				*i* P	PKPbc	03 07 57.2	-0.4
GOET				IAmb	IAmb	03 07 58.5	
	comp=Z,82nm,0.7s						
LODK	**Lodwar**	143.38	247	PKPdf	PKPbc	03 08 00.4	+0.5
DRUM	**Mains of Drumt**	143.48	4	*e*P	PKPab	03 07 57.9	-0.7
BJUU	**Bjuv**	143.54	350	*i* P	PKPab	03 07 57.5	-1.3
GID	**Gilleleje**	143.62	350	*i*	PKPab	03 07 49.4	-10
GID				*i* P	PKPbc	03 07 58.9	-0.3
GID				IAmb	IAmb	03 07 59.8	
	comp=Z,138nm,0.8s						
MUD	**Monsted U'grnd**	143.70	353	*i*	PKPab	03 07 51.9	-7.5
MUD				*i* P	PKPbc	03 07 59.0	-0.4
MUD				IAmb	IAmb	03 07 59.6	
	comp=Z,69nm,0.7s						
INVG	**Invergeldie, C**	143.84	6	*e*P	PKPbc	03 07 59.9	0.0
COP	**Copenhagen**	144.01	350	*i*	PKPbc	03 07 49.1	-11
COP				*i* P	PKPab	03 07 59.7	-0.9
COP				IAmb	IAmb	03 08 00.8	
	comp=Z,556nm,0.6s						
BSD	**Bornholm Skovb**	144.09	347	*e*P	PKPbc	03 08 00.7	0.0
BSD	**Bornholm Skovb**	144.09	347	*i*	PKPbc	03 07 49.6	-11
BSD				*i* P	PKPab	03 07 59.3	-1.6
BSD				IAmb	IAmb	03 08 00.9	
	comp=Z,69nm,0.7s						
ESY	**Stoneypath**	144.46	5	*e*P	PKPdf	03 08 01.7	-0.1
EBL	**Broad Law**	144.57	5	*e*P	PKPbc	03 08 02.4	+0.2
DIKM	**Dikmen**	144.91	314	⇑P	PKPdf	03 07 58.6	-4.4
ESK	**Eskdalemuir**	145.01	5	*e*P	PKPdf	03 08 02.6	-0.2
NEWG	**New Galloway**	145.11	6	*e*P	PKPdf	03 08 02.1	-0.9
SORM	**Soroca**	145.22	329	⇑P	PKPdf	03 07 58.7	-4.7
GKP	**Gorka Klasztor**	145.25	344	*e*PKP	PKPbc	03 08 04.6	+0.3
GKP	**Gorka Klasztor**	145.25	344	*e*P	PKPab	03 08 04.9	-0.5
BEL	**Belsk**	145.47	339	*e*PKP	PKPab	03 08 05.7	-0.7
EDMD	**Edmundbyers**	145.59	4	*e*P	PKPdf	03 08 04.5	+0.7
BZK	**Bozkurt**	145.60	316	⇑P	PKPdf	03 08 01.1	-3.1
KESW	**Keswick, Cumbr**	145.74	5	*e*P	PKPbc	03 08 05.9	+0.2
KIS	**Kishinev**	145.75	327	PKPM		03 08 06.0	
	comp=Z,50nm,0.7s						
KIS	**Kishinev**	145.75	327	*i* PKP	PKPbc	03 08 06.5	+0.5
KIS	**Kishinev**	145.75	327	⇑P	PKPdf	03 07 59.5	-4.8
LNIZ	**Loecknitz**	145.76	347	*e*PKPbc	PKPbc	03 08 06.1	+0.3
	baz=15,slow=2.5						
MILM	**Milestii Mici**	145.81	327	⇑P	PKPdf	03 07 59.4	-5.0
WIM	**Isle of Man**	146.02	7	*e*P	PKPbc	03 08 06.3	-0.3
BSEG	**Bad Segeberg**	146.02	351	*e*PKPbc	PKPbc	03 08 07.0	+0.5
	baz=15,slow=2.5						
IAS	**Iasi**	146.26	328	⇑P	PKPdf	03 08 01.1	-4.0
HPK	**Haverah Park**	146.48	4	*e*P	PKPbc	03 08 08.1	+0.3
VASR	**Vaslui**	146.52	327	⇑P	PKPdf	03 08 00.7	-4.9
KWP	**Kalwaria Pacla**	146.60	335	*e*PKP	PKPbc	03 08 08.6	+0.3
WPS	**Cemaes, Angles**	146.77	7	*e*P	PKPdf	03 08 07.1	+1.3
PRAR	**RASCA**	146.79	329	⇑P	PKPdf	03 08 03.1	-3.0
WME	**Myndd Eilian**	146.80	7	*e*P	PKPbc	03 08 08.4	-0.2
RUE	**Ruedersdorf**	146.80	347	*e*P	PKiKP	03 08 09.7	-0.9
RUE	**Ruedersdorf**	146.80	347	*e*PKPbc	PKPbc	03 08 09.2	+0.6
	baz=15,slow=2.5						
BIR	**Birlad**	146.85	327	⇑P	PKPbc	03 08 08.0	-1.1
BRTR	**Keskin Array B**	146.87	312	PKPbc	PKPbc	03 08 08.4	-1.1
	comp=Z,24nm,0.8s,baz=130,slow=3.9,SNR=43						
BRTR				pPKPbc	pPKPab	03 10 16.3	+1.6
	comp=Z,2.9nm,0.8s,baz=150,slow=3.2,SNR=3.1						
BRTR	**Keskin Array B**	146.87	312	PKPdf	PKPdf	03 08 05.7	-1.0
WLF1	**Llynfaes**	146.89	7	*e*P	PKPbc	03 08 08.7	-0.1
VLDR	**Vladesti**	146.90	326	⇑P	PKPdf	03 08 02.2	-4.0
TLCR		146.93	324	⇑P	PKPdf	03 08 03.0	-3.3
LBWR	**Ladybower, Pea**	147.03	4	*e*P	PKPbc	03 08 09.5	+0.2
YLL	**Llanberis**	147.06	7	*e*P	PKPbc	03 08 08.5	-0.9
TATR	**Tatarca**	147.08	326	⇑P	PKPdf	03 08 00.9	-5.6
OJC	**Ojcow**	147.17	339	*e*PKP	PKPbc	03 08 10.1	+0.3
OJC	**Ojcow**	147.17	339	*e*PKPbc	PKPbc	03 08 09.9	+0.1
	baz=15,slow=2.5						
TESR	**Tescani**	147.18	328	⇑P	PKPdf	03 08 02.6	-4.1
CFR	**Carcaliu**	147.31	325	⇑P	PKPdf	03 08 06.7	-0.3
RETH	**Rethem/Aller,**	147.32	352	*e*PKPdf	PKPdf	03 08 07.6	+0.8
	baz=14,slow=1.5						
RETH				*e*PKPbc	PKPbc	03 08 10.4	+0.4
	baz=15,slow=2.5						
KOLS	**Kolonicke sedl**	147.32	335	*e*PKP	PKiKP	03 08 11.3	-0.6
TPGR	**Topolog**	147.36	324	⇑P	PKPdf	03 08 03.0	-4.1
FOEL	**Foel Wylfa**	147.41	6	*e*P	PKPbc	03 08 10.3	0.0
FLTG	**Flechtingen**	147.43	350	*e*PKPdf	PKPdf	03 08 07.3	+0.4
	baz=14,slow=1.5						
FLTG				*e*PKPbc	PKPbc	03 08 10.3	0.0
	baz=15,slow=2.5						
NRDL	**Niedersach Rie**	147.45	351	*e*PKPdf	PKPdf	03 08 07.7	+0.8
	baz=14,slow=1.5						
NRDL				*e*PKPbc	PKPbc	03 08 10.8	+0.5
	baz=15,slow=2.5						
ODBI	**Odobesti**	147.49	327	⇓P	PKiKP	03 08 12.1	-0.2
VRI	**Vrincioaia**	147.59	327	⇑P	PKPdf	03 08 04.1	-3.4
PLOR	**Plostina**	147.64	327	⇑P	PKPdf	03 08 03.8	-3.8
CRVS	**Cervenica-Dubn**	147.67	336	*e*PKP	PKPbc	03 08 11.8	+0.7
NIE	**Niedzica**	147.67	338	*e*PKP	PKiKP	03 08 12.7	+0.1
KSP	**Ksiaz**	147.70	343	*e*PKP	PKiKP	03 08 11.9	-0.7
KSP	**Ksiaz**	147.70	343	*e*PKPbc	PKiKP	03 08 11.9	-0.7
	baz=15,slow=2.5						
CWF	**Charnwood Fore**	147.71	4	*e*P	PKPbc	03 08 10.5	-0.6
ASSE	**Asse, Remlinge**	147.72	350	*e*PKPdf	PKPdf	03 08 07.8	+0.4
	baz=14,slow=1.5						
ASSE				*e*PKPbc	PKPbc	03 08 11.3	+0.3
	baz=15,slow=2.5						
HARR	**Harsova**	147.73	324	⇓P	PKPdf	03 08 03.5	-4.2
BMR	**Baia Mare**	147.80	332	⇑P	PKPdf	03 08 07.9	+0.2
HLM1	**Long Mynd**	147.81	6	*e*P	PKPbc	03 08 11.0	-0.4
WACR	**West Acre**	147.81	2	*e*P	PKPbc	03 08 11.3	0.0
TRPA	**Tarpa**	147.85	334	⇑P	PKPdf	03 08 05.6	-2.1
TRPA	**Tarpa**	147.85	334	*e*P	PKPdf	03 08 08.4	+0.6
ARCR	**ARCALIA**	147.87	331	⇑P	PKiKP	03 08 12.9	-0.2
COVR	**Voineasa-Covas**	147.87	327	⇑P	PKPdf	03 08 07.1	-0.8
MANR	**Mangalia**	147.91	322	⇑P	PKPdf	03 08 05.0	-3.0
IBBN	**Ibbenburen**	147.94	353	*e*PKPdf	PKPdf	03 08 08.4	+0.6
	baz=14,slow=1.5						
IBBN				*e*PKPbc	PKPbc	03 08 11.8	+0.1
	baz=15,slow=2.5						
IBBN				*e*PKPab	PKPab	03 08 16.3	+0.1
	baz=14,slow=4.2						
OSTC	**Ostas**	147.98	343	*e*PKPDF	PKPdf	03 08 08.9	+0.9
OSTC				*e*PKPAB	PKiKP	03 08 13.0	-0.2
CHVC	**Chvalec**	148.00	343	*e*PKP	PKiKP	03 08 12.7	-0.6
OKC	**Ostrava-Krasne**	148.04	340	⇑*e*PKP	PKPbc	03 08 12.4	+0.4
OKC				*e*PKPAB	PKPab	03 08 17.6	+0.8
OKC	**Ostrava-Krasne**	148.04	340	*e*PKPbc	PKPbc	03 08 12.4	+0.4
	baz=15,slow=2.5						
CLZ	**Clausthal**	148.05	350	*e*PKPdf	PKPdf	03 08 08.7	+0.6
	baz=14,slow=1.5						
CLZ				*e*PKPbc	PKiKP	03 08 12.7	-0.6
	baz=15,slow=2.5						
CLZ				*e*PKPab	PKPab	03 08 16.6	-0.2
	baz=14,slow=4.2						
CLL	**Collm**	148.07	347	*e*PKPdf	PKPdf	03 08 09.0	+1.0
CLL				⇓*i*PKPbc	PKPbc	03 08 12.3	+0.3
	comp=Z,118nm,0.9s						
CLL				*i* PKiKP	PKiKP	03 08 14.4	+1.1
CLL				*i* PKPab	PKPab	03 08 16.6	-0.2
	comp=Z,51nm,0.8s						
CLL				*e*pPKPab	pPKPab	03 10 21.0	+1.6
CLL				*i*		03 10 23.0	
CLL	**Collm**	148.07	347	*e*PKPbc	PKPbc	03 08 12.4	+0.3
	baz=15,slow=2.5						
CLL				*e*PKPab	PKPab	03 08 17.3	+0.5
	baz=14,slow=4.2						
CLL				*e*pPKPbc	pPKPab	03 10 20.9	+1.5
UPC	**Upice**	148.08	343	⇑*e*PKP	PKPbc	03 08 12.3	+0.2
DPC	**Dobruska-Polom**	148.13	343	*e*PKPDF	PKPdf	03 08 09.1	+0.8
DPC				⇑*e*PKP	PKiKP	03 08 13.2	-0.4
DPC	**Dobruska-Polom**	148.13	343	*e*PKPbc	PKiKP	03 08 13.1	-0.4
	baz=15,slow=2.5						
DOPR	**Dopca**	148.19	328	⇓P	PKPdf	03 08 09.9	+1.5
LANS	**Liptovska Anna**	148.19	338	*e*PKP	PKiKP	03 08 14.1	+0.4
MLR	**Muntele Rosu**	148.24	327	⇑P	PKPdf	03 08 06.0	-2.7
KRLC	**Kraliky**	148.25	342	*e*PKPDF	PKPdf	03 08 08.6	+0.1
KRLC				⇑*e*PKP	PKPbc	03 08 12.7	+0.1
KRLC				*e*PKPAB	PKPab	03 08 18.5	+0.8
BRG	**Berggiesshubel**	148.27	346	*e*PKPdf	PKPdf	03 08 08.8	+0.4
	baz=14,slow=1.5						
BRG				*e*PKPbc	PKiKP	03 08 13.1	-0.6
	baz=15,slow=2.5						
BRG				*e*PKPab	PKPab	03 08 18.2	+0.5
	baz=14,slow=4.2						
BRG	**Berggiesshubel**	148.27	346	⇓*e*PKPf		03 08 08.9	
BRG				Amp		03 08 10.0	
	comp=Z,20nm,1.3s						
BRG				⇑PKPb		03 08 13.2	
BRG				Amp		03 08 14.2	
	comp=Z,49nm,0.9s						
BRG				PKPab	PKPab	03 08 18.1	+0.5
BRG				Amp		03 08 18.8	
	comp=Z,32nm,0.8s						
MORC	**Moravsky Berou**	148.29	341	⇑P	PKPdf	03 08 05.1	-3.5
MORC	**Moravsky Berou**	148.29	341	*e*PKP	PKPbc	03 08 13.1	+0.4
MORC	**Moravsky Berou**	148.29	341	*e*PKPbc	PKPbc	03 08 13.2	+0.5
	baz=15,slow=2.5						
MCH1	**Michaelchurch**	148.31	6	*e*P	PKPbc	03 08 12.3	-0.3
FBE	**Freiberg**	148.36	346	*e*PKPdf	PKPdf	03 08 09.1	+0.6
	baz=14,slow=1.5						
FBE				*e*PKPbc	PKiKP	03 08 13.5	-0.4
	baz=15,slow=2.5						
FBE				*e*PKPab	PKPab	03 08 18.8	+0.7
	baz=14,slow=4.2						
KECS	**Kecovo**	148.38	336	*e*PKP	PKPab	03 08 19.4	+1.2
GTTG	**Gottingen**	148.40	351	*e*PKPdf	PKPdf	03 08 09.3	+0.7
	baz=14,slow=1.5						
GTTG				*e*PKPbc	PKPbc	03 08 13.3	+0.4
	baz=15,slow=2.5						
GTTG				*e*PKPab	PKPab	03 08 18.6	+0.4
	baz=14,slow=4.2						
NEUB	**Neuenburg**	148.41	348	*e*PKPdf	PKPdf	03 08 09.5	+0.9
	baz=14,slow=1.5						
NEUB				*e*PKPbc	PKPbc	03 08 13.4	+0.5
	baz=15,slow=2.5						
NEUB				*e*PKPab	PKPab	03 08 18.8	+0.6
	baz=14,slow=4.2						
PVCC	**Panska Ves**	148.44	345	*e*PKPDF	PKPdf	03 08 09.9	+1.2
PVCC				⇑*e*PKP	PKPbc	03 08 13.4	+0.4
ELMS	**Elmsett, Ipswi**	148.45	1	*e*P	PKPbc	03 08 13.1	+0.2
CJR	**Cluj-Napoca**	148.49	331	⇑P	PKPdf	03 08 11.1	+2.1
STRD	**Stroud**	148.61	5	*e*P	PKPbc	03 08 13.3	-0.1
VOIR		148.73	328	⇑P	PKPdf	03 08 07.9	-1.5
DRGR		148.82	332	⇑P	PKPdf	03 08 09.5	0.0
BUG	**Bochum--Univer**	148.85	354	*e*PKPbc	PKPbc	03 08 14.1	+0.2
	baz=15,slow=2.5						
BUG				*e*PKPab	PKPab	03 08 20.1	+0.1
	baz=14,slow=4.2						
PRA	**Prague**	148.89	344	⇑*e*PKP	PKPbc	03 08 14.1	0.0
SWN1	**Swindon**	148.90	5	*e*P	PKPbc	03 08 14.3	+0.3
PRU	**Pruhonice**	148.94	344	⇑*e*PKP	PKPbc	03 08 14.2	0.0
PRU				*e*PKPAB	PKPab	03 08 20.8	+0.3
KASTN	**Kahler Asten**	148.95	352	*e*PKPdf	PKPdf	03 08 09.9	+0.4
	baz=14,slow=1.5						
KASTN				*e*PKPbc	PKPbc	03 08 14.7	+0.4
	baz=15,slow=2.5						
KASTN				*e*PKPab	PKPab	03 08 20.4	-0.1
	baz=14,slow=4.2						
KASTN				*e*pPKPbc	pPKPbc	03 10 21.4	+0.9
VYHS	**Vyhne**	148.97	338	*e*PKP	PKiKP	03 08 14.9	-0.4
VYHS				*e*		03 08 21.5	
MOX	**Moxa**	148.98	348	*e*PKPbc	PKPbc	03 08 14.7	+0.4
	baz=15,slow=2.5						
MOX				*e*PKPab	PKPab	03 08 20.9	+0.3
	baz=14,slow=4.2						
ARR	**Arges**	148.99	328	⇑P	PKPdf	03 08 10.6	+0.8

VRAC	Vranov	148.99	341	⇑P	PKPdf	03 08 11.0	+1.3
VRAC	Vranov	148.99	341	*e*PKP	PKPbc	03 08 14.8	+0.4
PLN	Plauen	149.02	347	*e*PKPdf	PKPdf	03 08 09.9	+0.3
	baz=14,slow=1.5						
PLN				*e*PKPbc	PKiKP	03 08 15.0	-0.4
	baz=15,slow=2.5						
PLN				*e*PKPab	PKPab	03 08 20.9	+0.1
	baz=14,slow=4.2						
TANN	Tannenbergstha	149.03	347	*e*PKPdf	PKPdf	03 08 10.4	+0.7
	baz=14,slow=1.5						
TANN				*e*PKPbc	PKiKP	03 08 15.0	-0.4
	baz=15,slow=2.5						
TANN				*e*PKPab	PKPab	03 08 21.2	+0.3
	baz=14,slow=4.2						
WERD	Werda	149.03	347	*e*PKPdf	PKPdf	03 08 10.3	+0.6
	baz=14,slow=1.5						
WERD				*e*PKPbc	PKiKP	03 08 15.2	-0.2
	baz=15,slow=2.5						
WERD				*e*PKPab	PKPab	03 08 21.2	+0.3
	baz=14,slow=4.2						
JAVC	Velka Javorina	149.05	340	*e*PKP	PKiKP	03 08 16.0	+0.5
PSZ	Piszkesteto	149.07	336	⇑P	PKPdf	03 08 06.0	-3.9
PSZ	Piszkesteto	149.07	336	*e*P	PKPbc	03 08 15.0	+0.3
UBBA	Unterbreizbach	149.10	350	*e*PKPbc	PKPbc	03 08 14.7	+0.2
	baz=15,slow=2.5						
UBBA				*e*PKPab	PKPab	03 08 21.7	+0.7
	baz=14,slow=4.2						
GUNZ	Gunzen	149.10	347	*e*PKPdf	PKPdf	03 08 10.7	+0.9
	baz=14,slow=1.5						
GUNZ				*e*PKPbc	PKiKP	03 08 15.3	-0.3
	baz=15,slow=2.5						
GUNZ				*e*PKPab	PKPab	03 08 22.0	+0.9
	baz=14,slow=4.2						
WERN	Wernitzgruen	149.16	347	*e*PKPdf	PKPdf	03 08 10.7	+0.8
	baz=14,slow=1.5						
WERN				*e*PKPbc	PKiKP	03 08 15.5	-0.2
	baz=15,slow=2.5						
WERN				*e*PKPab	PKPab	03 08 22.3	+0.9
	baz=14,slow=4.2						
NKC	Novy Kostel	149.20	347	*e*PKPDF	PKPdf	03 08 10.3	+0.4
NKC				⇑*e*PKP	PKiKP	03 08 15.3	-0.4
LEF	Lefka	149.22	305	⇑P	PKPdf	03 08 08.5	-1.9
KRUC	Moravsky	149.27	341	*e*PKP	PKPbc	03 08 15.4	+0.3
TREC	Trest	149.32	343	⇑*e*PKP	PKPbc	03 08 15.3	+0.1
TREC				*e*PKPAB	PKPab	03 08 22.4	+0.3
LOT	Lotru	149.35	329	⇑P	PKPdf	03 08 09.8	-0.6
ELSH	Elham, Standar	149.40	1	*e*P	PKiKP	03 08 16.2	+0.2
SMOL	Smolenice	149.43	340	*e*PKP	PKiKP	03 08 16.7	+0.5
SMOL				*e*		03 08 23.7	
BSZH	Besenyszg	149.44	335	*e*P	PKiKP	03 08 17.2	+1.0
MANZ	Manzenberg	149.51	347	*e*PKPdf	PKPdf	03 08 11.1	+0.6
	baz=14,slow=1.5						
MANZ				*e*PKPbc	PKiKP	03 08 16.1	-0.3
	baz=15,slow=2.5						
MODS	Modra-Piesok	149.60	340	*e*PKP	PKPbc	03 08 16.0	+0.1
BEBN	Eben Emael	149.63	355	*d*PKiKP	PKiKP	03 08 16.2	-0.3
BEBN				*d*PKPab	PKPab	03 08 22.9	-0.4
SIRR	Siria	149.69	333	⇑P	PKPdf	03 08 11.0	+0.2
ROTZ	Rotzenmuhle	149.69	347	*e*PKPbc	PKiKP	03 08 16.5	-0.3
	baz=15,slow=2.5						
ROTZ				*e*pPKPbc	pPKPbc	03 10 23.9	+1.3
UCC	Uccle	149.71	357	*d*PKiKP	PKPbc	03 08 16.2	+0.2
SRO	Srobarova	149.74	338	*e*PKP	PKiKP	03 08 16.6	-0.3
SRO				*e*		03 08 25.2	
AHRW	Bad Neuenahr-A	149.75	354	*e*PKPdf	PKPdf	03 08 10.9	+0.2
	baz=14,slow=1.5						
AHRW				*e*PKPbc	PKiKP	03 08 16.5	-0.4
	baz=15,slow=2.5						
BUD	Budapest	149.76	337	*e*P	PKiKP	03 08 16.9	0.0
MEM	Membach	149.79	355	*d*PKPdf	PKPdf	03 08 11.2	+0.4
MEM				*d*PKiKP	PKPbc	03 08 16.5	+0.3
BTNL	Ternell	149.80	355	*d*PKiKP	PKPbc	03 08 16.5	+0.2
GZR	Gura Zlata	149.86	330	⇑P	PKPdf	03 08 09.9	-1.3
TNS	Taunus Mts	149.91	352	*e*PKPbc	PKPbc	03 08 16.8	+0.2
	baz=15,slow=2.5						
TNS				*e*PKPab	PKPab	03 08 24.5	0.0
	baz=14,slow=4.2						
GRF	Grafenberg Arr	149.96	348	*e*PKPdf	PKPdf	03 08 11.4	+0.2
	baz=14,slow=1.5						
GRF				*e*PKPbc	PKiKP	03 08 17.4	+0.1
	baz=15,slow=2.5						
GRF				*e*PKPab	PKPab	03 08 25.2	+0.5
	baz=14,slow=4.2						
GRF				*e*pPKPbc	pPKPab	03 10 25.1	-1.7
KHC	Kasperske Hory	149.97	345	*e*PKPDF	PKPdf	03 08 11.2	0.0
KHC				⇑*e*PKP	PKPbc	03 08 16.9	+0.1
KHC				*e*PKPAB	PKPab	03 08 25.2	+0.3
SNF	Seneffe	150.00	357	*d*PKiKP	PKiKP	03 08 17.4	+0.1
SNF				*d*PKPab	PKPab	03 08 24.7	-0.1
AMBH	Ambrzfalva	150.02	334	*e*P	PKiKP	03 08 18.3	+0.9
BCLA	Clavier	150.03	356	*d*PKPdf	PKPdf	03 08 12.9	+1.8
BCLA				*d*PKPab	PKPab	03 08 24.8	-0.1
BHOU	Houvegnez	150.04	355	*d*PKPdf	PKPdf	03 08 11.9	+0.7
BHOU				*d*PKiKP	PKiKP	03 08 17.4	-0.1
VLAD	Vladila	150.07	327	⇑P	PKPdf	03 08 09.9	-1.6
CKRC	Cesky Krumlov	150.07	344	*e*PKP	PKPdf	03 08 11.4	0.0
CKRC				*e*x	x	03 08 17.2	
BGES	Gesves	150.08	356	*d*PKiKP	PKPbc	03 08 17.1	+0.2
BGES				*d*PKPab	PKPab	03 08 24.6	-0.6
WET	Wettzell	150.13	346	*e*PKPbc	PKiKP	03 08 17.4	-0.3
	baz=15,slow=2.5						
WET				*e*PKPab	PKPab	03 08 26.1	+0.6
	baz=14,slow=4.2						
CSKK	Cskako	150.14	338	*e*P	PKiKP	03 08 17.6	-0.2
MILB	Miltenberg	150.17	351	*e*PKPdf	PKPdf	03 08 12.2	+0.7
	baz=14,slow=1.5						
MILB				*e*PKPbc	PKiKP	03 08 17.6	-0.1
	baz=15,slow=2.5						
BMRD	Maredsous	150.18	356	*d*PKiKP	PKPbc	03 08 17.3	+0.1
BMRD				*d*PKPab	PKPab	03 08 25.2	-0.3
SRE	Strehaia	150.20	329	⇑P	PKPdf	03 08 11.8	+0.1
GEC2	GERESS Array S	150.21	344	*e*PKPbc	PKPbc	03 08 17.6	+0.2
	baz=15,slow=2.5						
GEC2				*e*pPKPbc	pPKPbc	03 10 24.0	0.0
GERES	GERESS Array B	150.21	344	PKP	PKPdf	03 08 11.6	0.0
	comp=Z,2.5nm,0.9s,baz=42,slow=3.1,SNR=14						
GERES				PKPbc	PKiKP	03 08 17.9	-0.1
	comp=Z,18nm,0.8s,baz=45,slow=2.3,SNR=77						
GERES				PKPab	PKPab	03 08 26.3	+0.4
	comp=Z,6.0nm,0.8s,baz=18,slow=4.8,SNR=9.7						
GERES				pPKPab	pPKPab	03 10 27.9	0.0
	comp=Z,4.3nm,1.1s,baz=48,slow=2.9,SNR=3.9						
BZS	Buzias	150.22	332	⇑P	PKPdf	03 08 11.6	-0.1
RCHB	Rochefort	150.30	356	*d*PKiKP	PKiKP	03 08 17.7	-0.3
RCHB				*d*PKPab	PKPab	03 08 26.8	+0.7
DOU	Dourbes	150.40	357	*d*PKiKP	PKiKP	03 08 18.3	+0.2
HERR	Herculane	150.41	330	⇑P	PKPdf	03 08 12.5	+0.6
EGYH	Egyhazaskeszo	150.41	339	*e*P	PKiKP	03 08 18.6	+0.3
CONA	Conrad Observa	150.44	341	*i* P	PKiKP	03 08 18.4	-0.1
	comp=Z,57nm,1.4s,SNR=14						
CONA				*e*P	PKPab	03 08 28.2	+1.3
	comp=Z,38nm,1.5s						
CONA				*e*P	pPKPbc	03 10 25.9	+1.3
	comp=Z,2.3nm,0.8s						
DJES	Djerdap	150.52	330	⇑P	PKPdf	03 08 14.3	+2.1
BANR	Banloc	150.61	332	⇑P	PKPbc	03 08 15.6	-2.7
WLF	Walferdange	150.71	355	*d*PKPdf	PKPdf	03 08 12.8	+0.5
WLF				*d*PKiKP	PKiKP	03 08 18.8	0.0
WLF				*d*PKPab	PKPab	03 08 28.2	+0.3
WLF	Walferdange	150.71	355	*e*PKPbc	PKiKP	03 08 19.4	+0.5
	baz=15,slow=2.5						
MDVR	Moldovita	150.81	331	⇑P	PKPdf	03 08 12.0	-0.6
MORH	Mrgy, Hungar	150.96	336	*e*P	PKPdf	03 08 11.3	-1.4
MOA	Molln	150.97	343	*e*P	PKPdf	03 08 12.6	-0.2
	comp=Z,12nm,1.7s						
MOA				*e*P	PKiKP	03 08 19.5	0.0
	comp=Z,12nm,0.7s						
MOA				*e*P	PKPab	03 08 30.1	+1.0
	comp=Z,35nm,1.7s						
ARSA	Arzberg	151.15	341	*e*P	PKiKP	03 08 19.8	0.0
	comp=Z,12nm,0.9s						
STU	Stuttgart	151.21	350	*e*PKPdf	PKPdf	03 08 13.6	+0.6
	baz=14,slow=1.5						
STU				*e*PKPbc	PKiKP	03 08 19.9	0.0
	baz=15,slow=2.5						
KOVH	Kovagotottos	151.28	336	*e*P	PKPbc	03 08 19.7	-0.1
FRGS	Fruska Gora	151.36	333	⇑P	PKPdf	03 08 14.2	+0.7
FRGS	Fruska Gora	151.36	333	*e*P	PKPbc	03 08 19.3	-0.8
FUR	Furstenfeldbru	151.41	347	*e*PKPbc	PKPbc	03 08 20.1	0.0
	baz=15,slow=2.5						
FUR				*e*PKPab	PKPab	03 08 31.4	+0.5
	baz=14,slow=4.2						
VTS	Vitosha	151.65	326	⇑P	PKPdf	03 08 14.0	-0.1
BOVS	Bovan	151.68	329	⇑P	PKPdf	03 08 14.2	+0.3
BFO	Black Forest	151.77	351	*e*PKPdf	PKPdf	03 08 14.2	+0.2
	baz=14,slow=1.5						
BFO				*e*PKPbc	PKPbc	03 08 20.9	0.0
	baz=15,slow=2.5						
BFO				*e*PKPab	PKPab	03 08 32.4	0.0
	baz=14,slow=4.2						
BFO	Black Forest	151.77	351		PKPbc	03 08 20.9	0.0
SOKA	Soboth	151.81	341	*i* P	PKPbc	03 08 20.5	-0.6
	comp=Z,18nm,0.9s,SNR=7.6						
SOKA				*e*P	PKPab	03 08 33.3	+0.6
	comp=Z,21nm,1.0s						
SOKA				*e*P	pPKPab	03 10 32.7	-1.8
	comp=Z,1.6nm,0.6s						
PERS	Pernice	151.82	341	*e*PKPab	PKPab	03 08 33.0	+0.2
KBA	Koelnbreinsper	151.93	343	*e*P	PKPbc	03 08 21.1	-0.4
	comp=Z,18nm,0.8s						
KBA				*e*P	PKPab	03 08 34.7	+1.4
	comp=Z,19nm,0.8s						
TEKS	Tekeris	151.97	333	*e*P	PKPbc	03 08 20.6	-0.8
UBR	Ueberruh	152.10	348	*e*PKPdf	PKPdf	03 08 14.1	-0.4
	baz=14,slow=1.5						
UBR				*e*PKPbc	PKPbc	03 08 21.7	0.0
	baz=15,slow=2.5						
OBKA	Obir	152.11	341	*e*P	PKPdf	03 08 13.2	-1.4
	comp=Z,15nm,1.5s						
OBKA				*i* P	PKPab	03 08 34.6	+0.6
	comp=Z,17nm,0.8s,SNR=7.0						
DIVS	Divibare	152.12	332	*e*P	PKPdf	03 08 16.3	+1.6
WATA	Walderalm	152.13	346	*e*P	PKPdf	03 08 14.4	-0.2
	comp=Z,5.0nm,1.0s						
WATA				*i* P	PKPbc	03 08 21.9	0.0
	comp=Z,16nm,0.9s,SNR=6.4						
WATA				*e*P	PKPab	03 08 34.9	+0.8
	comp=Z,52nm,1.7s						
WATA				*e*P	pPKPab	03 10 34.0	-1.8
	comp=Z,1.9nm,0.5s						
RETA	Reutte	152.16	347	*e*P	PKPdf	03 08 12.8	-1.9
	comp=Z,8.8nm,1.7s						
RETA				*e*P	PKiKP	03 08 22.1	+0.1
	comp=Z,11nm,0.9s						
RETA				*e*P	PKPab	03 08 34.4	+0.3
	comp=Z,21nm,1.0s						
WTTA	Wattenberg	152.18	346	*e*P	PKPdf	03 08 14.8	0.0
	comp=Z,7.1nm,0.9s						
WTTA				*i* P	PKPbc	03 08 22.0	-0.1
	comp=Z,28nm,0.8s,SNR=5.8						
WTTA				*e*P	PKPab	03 08 34.8	+0.5
	comp=Z,37nm,1.1s						
WTTA				*e*P	pPKPab	03 10 33.5	-2.6
	comp=Z,4.7nm,0.7s						
MOTA	Moosalm	152.22	347	*e*P	PKPdf	03 08 14.7	-0.1
	comp=Z,13nm,1.2s						
MOTA				*e*P	PKiKP	03 08 22.2	-0.1
	comp=Z,21nm,0.9s						
MOTA				*e*P	PKPab	03 08 34.9	+0.4
	comp=Z,26nm,0.9s						
MOTA				*e*P	pPKPab	03 10 33.6	-2.6
	comp=Z,3.2nm,0.7s						
MYKA	Terra Mystica	152.26	343	*e*P	PKPbc	03 08 21.7	-0.4
	comp=Z,13nm,0.7s						
MYKA				*e*P	PKPab	03 08 34.5	-0.1
	comp=Z,17nm,0.7s						
SQTA	Sankt Quirin	152.32	346	*e*P	PKPdf	03 08 15.1	+0.2
	comp=Z,13nm,1.2s						
SQTA				*e*P	PKiKP	03 08 22.6	+0.2
	comp=Z,17nm,0.8s						
SQTA				*e*P	PKPab	03 08 35.4	+0.5
	comp=Z,38nm,2.4s						
CRES	Cresnjev	152.43	339	*e*P	PKPbc	03 08 21.9	-0.5
ABTA	Abfaltersbach	152.46	344	*i* P	PKPdf	03 08 14.6	-0.5
	comp=Z,18nm,1.0s,SNR=7.1						
ABTA				*e*P	PKPbc	03 08 22.2	-0.3
	comp=Z,29nm,0.7s						
ABTA				*e*P	PKPab	03 08 35.3	-0.1
	comp=Z,32nm,0.8s						
ABTA				*e*P	pPKPbc	03 10 31.5	+1.9
	comp=Z,3.1nm,0.8s						
DAVA	Damuels	152.53	348	*e*P	PKiKP	03 08 23.3	+0.4
	comp=Z,19nm,1.2s						
DAVA				*i* P	PKPab	03 08 36.0	+0.2
	comp=Z,23nm,1.1s,SNR=4.7						
DAVA				*e*P	pPKPab	03 10 36.4	-1.1
	comp=Z,2.9nm,0.7s						
LJU	Ljubljana	152.53	341	*e*P	PKPbc	03 08 22.2	-0.4
LJU	Ljubljana	152.53	341	*e*PKPbc	PKPbc	03 08 22.4	-0.2
BBLS	Lazići	152.56	332	*e*P	PKPbc	03 08 22.8	0.0
CRNS	Crni Vrh	152.58	341	*i* PKPbc	PKPbc	03 08 22.4	-0.4
HAPS	Han Pijesak,Bl	152.59	333	*e*P	PKiKP	03 08 23.2	+0.1
FETA	Feichten	152.61	347	*e*P	PKPdf	03 08 15.7	+0.3
	comp=Z,15nm,1.0s						
FETA				*e*P	PKPbc	03 08 23.0	0.0
	comp=Z,19nm,1.0s						
FETA				*e*P	PKPab	03 08 36.7	+0.5
	comp=Z,21nm,1.1s						
FETA				*e*P	pPKPab	03 10 35.0	-2.9
	comp=Z,1.8nm,0.7s						
BLY	Banja Luka	152.75	336	*e*P	PKPbc	03 08 22.6	-0.5
RUDO	Rudo	152.78	332	*e*P	PKPbc	03 08 22.4	-0.8
CEY	Cerknica	152.84	341	*e*P	PKPbc	03 08 23.0	-0.3
MGRS	Mrkonjic Grad	153.07	336	*e*P	PKPab	03 08 39.0	+0.9
PDG	Podgorica	153.76	330	*e*P	PKPab	03 08 40.5	-0.5
DRME	Dracevica, Mon	153.98	330	*e*P	PKPab	03 08 41.7	-0.3
HCY	Herceg Novi	154.10	331	*e*P	PKPbc	03 08 22.9	-3.2
AQU	L'Aquila	156.20	339	*e*P	PKPab	03 08 37.4	-14
PBRG	Braganca	157.49	17	*e*PKPab	PKPab	03 08 57.9	+0.7
MVO	Moncorvo	158.00	19	*e*PKPab	PKPab	03 09 00.4	+1.0
PCAS	Casmilo, Conde	158.52	23	*e*PKPab	PKPab	03 09 02.1	+0.4
PCAS				*e*pPKPdf	pPKPdf	03 10 35.5	+4.6
PMTG	Montargil	159.49	23	*e*PKPab	PKPab	03 09 05.0	-0.9
ESDC	Sonseca Array	160.20	14	PKPab	PKPab	03 09 08.6	-0.5
	comp=Z,6.4nm,1.1s,baz=348,slow=4.2,SNR=11						
KEST	Kesra	163.52	339	PKPab	PKPab	03 09 23.0	-0.8
	comp=Z,8.9nm,0.8s,baz=90,slow=2.8,SNR=6.7						
LIC	Lamto	164.24	153	*e*PKP2	PKPab	03 09 28.4	+1.1
	comp=Z,67nm,1.7s						
KIC	Kosan Boka	164.48	154	*e*PKP2	PKPab	03 09 29.5	+1.1
	comp=Z,15nm,0.8s						
TIC	Toumodi	164.62	153	*e*PKP2	PKPab	03 09 30.1	+1.1
DBIC	Dimbokro	164.71	153	PKP	PKPdf	03 08 29.6	-0.6
	comp=Z,9.4nm,1.0s,baz=218,slow=8.5,SNR=4.1						
DBIC				PKPab	PKPab	03 09 29.8	+0.4
	comp=Z,6.4nm,0.8s,baz=185,slow=5.7,SNR=5.4						
KOWA	Kowa	171.69	135		PKPdf	03 08 34.0	-0.8
KOWA					PKPab	03 10 00.5	+0.1
TORD	Torodi Ar. Bea	172.68	177	PKP	PKPdf	03 08 34.1	-1.2
	comp=Z,6.4nm,0.9s,baz=34,slow=0.7,SNR=28						
TORD				PKPab	PKPab	03 10 05.4	+0.8
	comp=Z,2.5nm,0.8s,baz=179,slow=3.6,SNR=9.0						
TORD				pPKP	pPKPdf	03 10 46.0	+2.1
	comp=Z,2.0nm,0.9s,baz=162,slow=5.5,SNR=4.1						
TORD				pPKPab	pPKPab	03 12 05.8	+1.5
	comp=Z,2.7nm,1.0s,baz=195,slow=2.0,SNR=6.4						
TORD				PP	PP	03 13 55.0	-0.3
	comp=Z,0.8nm,0.7s,baz=192,slow=5.3,SNR=7.0						

MAN 26 03:11:20.5, 9°.52N × 122°.11E, h5^{km}, mb4.3, ML3.2, MS2.9, Negros

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*NNC **26** 03:16:31.6±3.5, 37°.19N×70°.80E, h134^{km}±62^{km}, mb3.1, mpv3.7, Error ellipse: s-maj=31.7km s-min=20.4km az=9.0*

ISC 26 03:16:35.0±3.4**, 37°.4N**±0°.2×**70°.9E**±0°.2**, h200^{km}, n10, σ1^{s}.18**/12**, 5D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.18	24	P	Pn	03 17 50.4	-1.6
	SNR=21						
UCH	Uchtor	5.55	29	P	Pn	03 17 56.1	-0.8
	SNR=10						
EKS2	Erkin-Say	5.69	22	P	Pn	03 17 58.1	-0.2
	SNR=5.6						
KK02	Karatay Array	5.69	357	⇓P	Pn	03 17 57.9	-0.3
	2.1nm,0.5s,baz=180,slow=13						
KK02				⇓S	Sn	03 19 03.6	-0.5
	5.3nm,0.5s,baz=179,slow=22						
AAK	Ala-Archa	5.90	27	P	Pn	03 18 00.3	-0.8
	SNR=6.8						
AAK	Ala-Archa	5.90	27	⇓P	Pn	03 17 59.9	-1.2
	3.7nm,0.4s						
TKM2	Tokmak 2	6.57	32	P	Pn	03 18 08.6	-1.2
	SNR=6.3						
TKM2	Tokmak 2	6.57	32	⇓P	Pn	03 18 08.4	-1.4
	4.8nm,0.5s						
TKM2				⇓S	Sn	03 19 26.5	+1.5
	3.2nm,0.7s						
MK31	Makanchi Array	12.61	38	P	Pn	03 19 27.9	+0.4
	0.8nm,0.6s,baz=222,slow=15,SNR=4.3						
AB31	Akbulak array	14.25	330	P	P	03 19 50.4	+1.0
	0.6nm,0.3s,baz=132,slow=14,SNR=57						

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*IDC **26** 03:19:28.2±2.8, 36°.31N×70°.91E, h183^{km}±25^{km}, mb3.6/14, mb1 3.6/20, mb1mx3.4/48, mbtmp4.0/20, Error ellipse: s-maj=17.8km s-min=13.7km az=14.0*

*NNC **26** 03:19:35.7±3.0, 37°.02N×70°.79E, h180^{km}±33^{km}, mb3.3, mpv4.1, Error ellipse: s-maj=26.3km s-min=15.5km az=14.0*

ISC 26 03:19:29.6±0.5**, 36°.59N**±0°.05×**70°.83E**±0°.06**, h188^{km}, n52, σ1^{s}.74**/62**, mb3.8**/13**, 7C-5D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	2.90	162	P	Pn	03 20 19.1	+1.5
CEP				S	Sn	03 20 55.0	0.0
CHCP	Chirah Chowk	3.54	145	P	Pn	03 20 27.0	+1.7
THW	Thamme Wali	3.86	169	P	Pn	03 20 30.3	+1.0
SARP	Sargodha	4.90	161	P	Pn	03 20 42.8	+0.3
AML	Almayashu	5.96	21	P	Pn	03 20 57.4	+0.9
	SNR=38						
UCH	Uchtor	6.31	26	P	Pn	03 21 01.9	+0.9
	SNR=20						
EKS2	Erkin-Say	6.47	20	P	Pn	03 21 04.3	+1.4
	SNR=30						
KK02	Karatay Array	6.51	358	⇑P	Pn	03 21 04.4	+1.2
	5.5nm,0.3s,baz=182,slow=13						
KK02				⇓S	Sn	03 22 13.6	-3.7
	36nm,0.5s,baz=185,slow=25						
AAK	Ala-Archa	6.67	24	P	Pn	03 21 06.7	+1.2
	3.4nm,0.3s,baz=172,slow=3.7,SNR=18						
AAK				S	Sn	03 22 21.0	-0.2
	1.3nm,0.3s,baz=315,slow=23,SNR=9.3						
AAK	Ala-Archa	6.67	24	P	Pn	03 21 06.6	+1.2
	SNR=8.7						
AAK	Ala-Archa	6.67	24	⇑P	Pn	03 21 06.2	+0.7
	5.8nm,0.6s						
AAK				⇑S	Sn	03 22 19.9	-1.4
	16nm,0.7s						
KBK	Karagaybulak	6.84	26	P	Pn	03 21 09.0	+1.3
	SNR=7.7						
TKM2	Tokmak 2	7.31	29	P	Pn	03 21 15.1	+1.2
	SNR=6.5						
TKM2	Tokmak 2	7.31	29	⇓P	Pn	03 21 14.4	+0.5
	14nm,0.6s						
TKM2				⇑S	Sn	03 22 33.4	-3.1
	7.4nm,0.8s						
NDI	New Delhi	9.54	144	*e*P	Pn	03 21 43.0	-0.1
NDI				*e*P	Sn	03 23 20.0	-10
GEYT	Alibeck	10.22	281	P	Pn	03 21 52.7	+0.8
	0.9nm,0.3s,baz=94,slow=12,SNR=2.7						
GEYT				S	Sn	03 23 41.7	-4.1
	0.7nm,0.3s,baz=249,slow=4.1,SNR=1.4						
MAKZ	Makanchi	13.16	36	⇓P	P	03 22 32.8	+0.2
	5.6nm,0.6s						
MK31	Makanchi Array	13.30	36	P	P	03 22 34.1	-0.1
	1.4nm,0.4s,baz=208,slow=9.3,SNR=8.0						
MKAR	Makanchi Array	13.30	36	P	Pn	03 22 32.4	+1.4
	0.3nm,0.3s,baz=215,slow=9.3,SNR=11						
PYUN	Piuthan	13.31	126	*e*P	Pn	03 22 28.3	-3.2
	58nm,0.4s						
DANN	Dangsing	13.65	123	*e*P	Pn	03 22 33.2	-2.7
	54nm,0.5s						
KOLN	Koldanda	13.93	126	*e*P	Pn	03 22 37.0	-2.3
	14nm,0.3s						
GKN	Gorkha	14.47	122	*e*P	Pn	03 22 43.9	-2.0
	45nm,0.3s						
AB31	Akbulak array	14.94	331	⇓P	P	03 22 53.4	+1.0
	4.1nm,0.6s,baz=156,slow=11,SNR=41						
AB31				⇑S	Sn	03 25 33.5	-4.6
	1.8nm,0.7s,baz=261,slow=36,SNR=3.5						
KKN	Kakani	15.04	122	*e*P	Pn	03 22 50.8	-2.2
	54nm,0.5s						
KURBB	Kurchatov Arra	15.08	19	P	P	03 22 54.5	+0.6
	0.1nm,0.3s,baz=209,slow=10,SNR=7.6						
KURBB				S	Sn	03 25 42.7	+1.2
	baz=202,slow=22,SNR=1.4						
KURBB	Kurchatov Arra	15.08	19	⇑P	P	03 22 55.3	+1.4
	2.5nm,0.6s						
PKI	Pulchoki	15.27	122	*e*P	Pn	03 22 54.3	-1.6
	23nm,0.4s						
GUN	Gumba	15.38	120	*e*P	Pn	03 22 55.3	-2.0
	25nm,0.3s						
JIRN	Jiri	15.75	120	*e*P	Pn	03 23 00.3	-1.5
	60nm,0.5s						
BVAR	Borovoye Array	16.44	359	P	Pn	03 23 10.8	+1.3
	0.8nm,0.3s,baz=201,slow=19,SNR=10						
BRVK	Borovoye	16.47	359	⇑P	Pn	03 23 10.6	+0.7
	2.4nm,0.6s						
RAMN	Ramite	16.48	121	*e*P	P	03 23 08.8	-1.0
	34nm,0.4s						
AKTO	Aktyubinsk	16.63	330	P	Pn	03 23 13.3	+1.5
	0.6nm,0.3s,baz=141,slow=9.6,SNR=11						
AKTO				S	S	03 26 15.7	+0.8
	0.1nm,0.3s,baz=164,slow=15,SNR=1.7						
AKTO	Aktyubinsk	16.63	330	⇓P	Pn	03 23 13.1	+1.2
	3.7nm,0.7s						
TAPN	Taplejung	17.01	118	*e*P	P	03 23 15.9	+0.2
	28nm,0.4s						
ODAN	Odare	17.08	120	*e*P	P	03 23 16.9	+0.5
	20nm,0.5s						
ZALV	Zalesovo Beam	19.89	25	P	P	03 23 46.5	+0.2
	3.4nm,0.4s,baz=219,slow=12,SNR=28						
ZALV				S	S	03 27 16.6	-3.0
	0.3nm,0.3s,baz=243,slow=17,SNR=1.8						
ARU	Arti	21.50	341	P	P	03 24 05.3	+1.9
	0.9nm,0.3s,baz=164,slow=5.5,SNR=4.4						
BELG	Belogornoye	22.73	321	P	P	03 24 17.4	+2.2
	6.3nm,0.6s,baz=227,slow=2.7,SNR=5.1						
SONM	Songino Array	28.39	55	P	P	03 25 07.3	+0.9
	0.4nm,0.4s,baz=264,slow=7.1,SNR=3.8						
AKASG	Malin Array Be	32.78	309	P	P	03 25 46.5	+1.8
	0.2nm,0.3s,baz=82,slow=6.7,SNR=4.3						
NRIK	Noril'sk	34.06	11	P	P	03 25 57.1	+1.6
	3.8nm,0.6s,baz=189,slow=6.1,SNR=6.7						
FINES	FINESS Array B	37.33	326	P	P	03 26 24.9	+1.5
	2.4nm,0.6s,baz=126,slow=10.0,SNR=9.3						
ARCES	ARCESS Array B	41.01	338	P	P	03 26 55.1	+1.4
	2.8nm,0.6s,baz=104,slow=6.8,SNR=19						
NB2	NORSAR Subarra	44.23	323	P	P	03 27 20.8	+1.0
	comp=Z,1.1nm,0.6s,baz=95,slow=7.9						
NOA	NORSAR Array B	44.23	323	P	P	03 27 20.8	+1.0
	comp=Z,1.6nm,0.7s,baz=96,slow=7.7,SNR=6.2						
TORD	Torodi Ar. Bea	65.58	268	P	P	03 29 51.8	-1.8
	comp=Z,0.7nm,0.4s,baz=46,slow=5.9,SNR=14						
BOSA	Boshof	77.73	220	P	P	03 31 05.6	-0.1
	comp=Z,1.8nm,0.9s,baz=309,slow=18,SNR=1.8						
YKA	Yellowknife Ar	81.16	3	P	P	03 31 24.1	+0.4
	comp=Z,1.0nm,0.5s,baz=345,slow=5.4,SNR=18						
WRA	Warramunga Arr	82.15	122	P	P	03 31 27.6	-1.9
	comp=Z,1.0nm,0.5s,baz=323,slow=4.9,SNR=24						
ASAR	Alice Springs	84.42	125	P	P	03 31 39.2	-1.8
	comp=Z,1.0nm,0.5s,baz=310,slow=4.9,SNR=22						

IDC 26 03:25:58.2±2.9**, 33°.53S**×**178°.71W, h0^{km}, mb3.8**/2**, mb1 4.1**/3**, mb1mx3.8**/29**, mbtmp3.9**/3**, ML4.0**/1**, Error ellipse: s-maj=68.2km s-min=35.5km az=120.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	5.81	215	Pn	Pn	03 27 26.1	+0.5
	4.6nm,0.3s,baz=122,slow=23,SNR=31						
URZ				Sn	Sn	03 28 32.1	-0.9
	2.2nm,0.3s,baz=299,slow=23,SNR=2.3						
ASAR	Alice Springs	42.44	271	P	P	03 33 55.0	-0.1
	0.7nm,0.7s,baz=111,slow=6.9,SNR=9.5						
WRA	Warramunga Arr	43.71	276	P	P	03 34 05.2	-0.1
	1.0nm,0.5s,baz=117,slow=7.7,SNR=19						
FINES	FINESS Array B	147.84	338	PKPbc	PKPbc	03 45 43.6	-0.8
	1.3nm,0.6s,baz=45,slow=4.1,SNR=10						

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*KRNET **26** 03:31:02.1±0.1, 39°.74N×71°.91E, h13^{km}, mb3.3*

*SOME **26** 03:31:05.3, 39°.88N×71°.93E, h10^{km}*

*NNC **26** 03:31:09.3±1.5, 40°.09N×72°.00E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=12.4km s-min=5.8km az=1.0*

ISC 26 03:31:03.2±1.1**, 39°.69N**±0°.03×**71°.75E**±0°.03**, h4^{km}**±11^{km}**, n40, σ2^{s}.09**/69**, 29C-17D, Tajikistan**

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

DRK	**Karamyk**	**0.22**	**170**	⇑eP	**Pg**	**03 31 07.5**	**0.0**
	baz=97						
DRK				⇑iS	**Sb**	**03 31 11.6**	**+1.2**
	baz=97						
BTK	**Batken**	**0.80**	**297**	⇑iP	**Pn**	**03 31 19.2**	**-2.3**
	baz=91						
BTK				⇑iS	**Sn**	**03 31 31.7**	**-2.3**
	baz=91						
OHH	**Osh**	**1.15**	**43**	⇓iP	**Pn**	**03 31 22.5**	**-3.7**
	baz=40						
OHH				⇓iS	**Sb**	**03 31 36.9**	**-4.2**
	baz=40						
GAR	**Garm**	**1.31**	**239**	⇑iP	**Pg**	**03 31 28.9**	**+0.6**
	baz=40						
GAR				⇑iS	**Sn**	**03 31 48.9**	**+2.4**
	baz=40						
SFK	**Sufi-Kurgan**	**1.39**	**76**	⇓eP	**Pn**	**03 31 26.3**	**-3.3**
	baz=77						
SFK				⇓eS	**Sn**	**03 31 42.9**	**-5.7**
	baz=77						
TRKS	**Terek-Say**	**1.89**	**346**	⇑iP	**Pn**	**03 31 35.9**	**-0.6**
	baz=42						
TRKS				⇑iS	**Sn**	**03 32 00.4**	**-0.6**
	baz=42						
SALK	**Salom-Alik**	**1.98**	**53**	⇓eP	**Pn**	**03 31 36.8**	**-0.9**
	baz=51						
SALK				⇓eS	**Sn**	**03 32 02.0**	**-1.1**
	baz=51						
CHGR	**Chuyangaron**	**2.27**	**244**	⇑eP	**Pg**	**03 31 44.8**	**-1.8**
	baz=44						
CHGR				⇑iS	**Sg**	**03 32 15.8**	**-0.2**
	baz=44						
IUG	**Iuzhnay**	**2.78**	**333**	eP	**Pg**	**03 31 54.9**	**-1.5**
	209nm,0.4s						
IUG				eS	**Sg**	**03 32 32.0**	**-0.4**
	44nm,0.4s						
IUG	**Iuzhnay**	**2.78**	**333**	Pg	**Pg**	**03 31 54.9**	**-1.5**
	209nm,0.4s						
IUG				Lg	Lg	03 32 32.0	
	44nm,0.4s						
AML	**Almayashu**	**2.85**	**31**	⇓iP	**Pn**	**03 31 49.3**	**-0.6**
	baz=29						
AML				⇓iS	**Sn**	**03 32 24.4**	**-0.4**
	baz=29						
MNAS	**Manas**	**2.85**	**11**	⇑eP	**Pn**	**03 31 49.8**	**+0.1**
	baz=9.0						
MNAS				⇑iS	**Sn**	**03 32 25.0**	**+0.5**
	baz=9.0						
MRKS	**Merke**	**3.25**	**20**	eP	**Pb**	**03 32 00.5**	**-1.0**
	3.0nm,0.3s						
MRKS				eS	**Sb**	**03 32 40.4**	**-1.0**
	13nm,0.3s						
MRKS	**Merke**	**3.25**	**20**	Pg	**Pn**	**03 31 57.6**	**+2.5**
MRKS				Lg	Lg	03 32 36.4	
UCH	**Uchtor**	**3.28**	**39**	⇑iP	**Pn**	**03 31 55.3**	**-0.6**
	baz=38						
UCH				⇑iS	**Sn**	**03 32 34.7**	**-1.0**
	baz=38						
EKS2	**Erkin-Say**	**3.34**	**27**	⇓eP	**Pn**	**03 31 56.2**	**-0.2**
	baz=25						
EKS2				⇓iS	**Sn**	**03 32 36.0**	**-0.5**
	baz=25						
KK02	**Karatay Array**	**3.53**	**345**	⇑Pn	**Pn**	**03 32 01.1**	**+2.2**
	0.6nm,0.5s,baz=150,slow=11						
KK02				⇓Pg	**Pb**	**03 32 08.2**	**+1.9**
	2.3nm,0.3s,baz=150,slow=14						
KK02				⇓Lg	Lg	03 32 52.2	
	5.3nm,0.5s,baz=160,slow=32						
AAK	**Ala-Archa**	**3.60**	**34**	⇑Pn	**Pn**	**03 32 01.8**	**+1.8**
	0.8nm,0.4s						
AAK				⇓Pg	**Pb**	**03 32 07.9**	**+0.4**
	5.2nm,0.5s						
AAK				⇑Lg	Lg	03 32 49.5	
	13nm,0.6s						
AAK	**Ala-Archa**	**3.60**	**34**	⇑eP	**Pn**	**03 31 59.7**	**-0.3**
	baz=33						
AAK				⇑iS	**Sn**	**03 32 42.2**	**-0.8**
	baz=33						
BRLS	**Borolday**	**3.63**	**337**	eP	**Pb**	**03 32 07.1**	**-0.9**
	3.5nm,0.4s						
BRLS				eS	**Sb**	**03 32 53.1**	**+0.7**
	10nm,0.5s						
BRLS	**Borolday**	**3.63**	**337**	Pg	**Pb**	**03 32 07.1**	**-0.9**
	3.5nm,0.4s						
BRLS				Lg	Lg	03 32 53.1	
	10nm,0.5s						
KBK	**Karagaybulak**	**3.82**	**38**	⇑eP	**Pn**	**03 32 02.7**	**-0.3**
	baz=37						
KBK				⇑iS	**Sn**	**03 32 47.2**	**-1.3**
	baz=37						
USP	**Ospenovka**	**4.12**	**29**	⇑eP	**Pn**	**03 32 07.1**	**0.0**
	baz=28						
USP				⇑iS	**Sn**	**03 32 54.5**	**-1.3**
	baz=28						
BOOM	**Boomskoye usch**	**4.22**	**47**	⇑eP	**Pn**	**03 32 08.3**	**-0.3**
	baz=47						
BOOM				⇑iS	**Sn**	**03 32 56.8**	**-1.6**
	baz=47						
TKM2	**Tokmak 2**	**4.33**	**41**	⇑Pn	**Pn**	**03 32 10.9**	**+0.7**
	1.1nm,0.9s						
TKM2				⇑Pg	**Pb**	**03 32 21.1**	**+0.9**
	3.3nm,0.6s						
TKM2				⇓Lg	Lg	03 33 13.0	
	5.7nm,0.5s						
TKM2	**Tokmak 2**	**4.33**	**41**	⇑eP	**Pn**	**03 32 09.8**	**-0.3**
	baz=40						
TKM2				⇑iS	**Sn**	**03 32 59.4**	**-1.8**
	baz=40						
KST	**Kastek**	**4.61**	**42**	eP	**Pb**	**03 32 25.2**	**+0.4**
	3.0nm,0.7s						
KST				eS	**Sb**	**03 33 23.2**	**+2.5**
	7.9nm,0.5s						
KST	**Kastek**	**4.61**	**42**	Pg	**Pb**	**03 32 25.3**	**+0.6**
	5.5nm,0.7s						
KST				Lg	Lg	03 33 23.6	
	7.0nm,0.5s						
DGS	**Degeres**	**4.66**	**39**	eP	**Pb**	**03 32 26.8**	**+1.2**
	5.0nm,0.6s						
DGS				eS	**Sb**	**03 33 26.1**	**+4.1**
	11nm,0.6s						
DGS	**Degeres**	**4.66**	**39**	Pg	**Pb**	**03 32 26.7**	**+1.2**
	5.0nm,0.6s						
DGS				Lg	Lg	03 33 26.2	
	11nm,0.6s						
KDJ	**Kajisay**	**4.78**	**58**	⇓eP	**Pn**	**03 32 15.9**	**-0.3**
	baz=58						
KDJ				⇓eS	**Sn**	**03 33 10.2**	**-2.0**
	baz=58						
IZV	**Izvestkoviy**	**4.95**	**46**	eP	**Pb**	**03 32 31.9**	**+1.3**
	3.6nm,0.3s						
IZV				eS	**Sb**	**03 33 35.0**	**+4.4**
	7.9nm,0.6s						
IZV	**Izvestkoviy**	**4.95**	**46**	Pg	**Pb**	**03 32 31.9**	**+1.3**
	3.6nm,0.3s						
IZV				Lg	Lg	03 33 35.0	
	7.9nm,0.6s						
KOTS	**Kotyrbulak**	**5.36**	**47**	eP	**Pb**	**03 32 38.9**	**+1.4**
	3.4nm,0.3s						
KOTS				eS	**Sb**	**03 33 47.6**	**+5.3**
	15nm,0.5s						
KOTS	**Kotyrbulak**	**5.36**	**47**	Pg	**Pb**	**03 32 38.9**	**+1.4**
	3.4nm,0.3s						
KOTS				Lg	Lg	03 33 47.6	
	15nm,0.5s						
KUU	**Kurty**	**5.42**	**38**	eP	**Pb**	**03 32 39.8**	**+1.3**
	0.8nm,0.2s						
KUU				eS	**Sb**	**03 33 48.1**	**+4.2**
	7.2nm,0.5s						
KUU	**Kurty**	**5.42**	**38**	Pg	**Pb**	**03 32 39.9**	**+1.4**
	1.3nm,0.7s						
KUU				Lg	Lg	03 33 48.4	
	10nm,0.6s						
KTBS	**Karatobe**	**5.45**	**41**	eP	**Pb**	**03 32 41.0**	**+2.0**
	1.8nm,0.6s						
KTBS				eS	**Sb**	**03 33 50.4**	**+5.5**
	14nm,0.5s						
KTBS	**Karatobe**	**5.45**	**41**	Pg	**Pb**	**03 32 41.0**	**+2.0**
	1.8nm,0.6s						
KTBS				Lg	Lg	03 33 50.4	
	14nm,0.5s						
PDGK	**Podgornoye**	**6.85**	**55**	⇓Lg	Lg	03 34 34.9	
	6.6nm,1.2s						

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*IDC **26** 03:40:17.1±3.1, 33°.39S×179°.80W, h0^{km}, mb3.7/2, mb1 4.0/3, mb1mx3.4/29, mbtmp3.7/3, ML3.5/1, MS3.4/1, Ms1 3.4/1, ms1mx2.7/29, Error ellipse: s-maj=66.7km s-min=36.1km az=104.0*

*WEL **26** 03:40:20.4±2.1, 34°S±35°×17°9W±5°9, h156^{km}±115^{km}, M4.3/7, mB4.7/4, ML4.7/7, MLv4.4/7, Mw(mB)4.0/4, Error ellipse: s-maj=0.1km s-min=0.0km az=111.4*

ISC 26 03:40:23.2±2.3**, 33°.5S**±0°.1×**179°.7W**±0°.3**, h55**^{km}**, n16, σ**1^{s}**.52**/20**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.42**	**201**	P	**Pn**	**03 41 26.0**	**-1.7**
WMGZ	**Waiomatatini S**	**4.63**	**199**	P	**Pn**	**03 41 31.0**	**+0.4**
WMGZ				S	**Sn**	**03 42 25.4**	**+2.4**
HAZ	**Te Kaha**	**4.77**	**205**	P	**Pn**	**03 41 31.4**	**-1.1**
PKGZ	**Pakihiroa**	**4.79**	**202**	P	**Pn**	**03 41 31.2**	**-1.7**
PKGZ				S	**Sn**	**03 42 26.1**	**-0.9**
RUGZ	**Raukumara Rang**	**4.99**	**205**	P	**Pn**	**03 41 34.8**	**-0.9**
RUGZ				S	**Sn**	**03 42 35.5**	**+3.4**
TWGZ	**Tauwhareparae**	**5.08**	**201**	P	**Pn**	**03 41 36.4**	**-0.5**
TWGZ				S	**Sn**	**03 42 34.6**	**+0.3**
CNGZ	**Carnagh Statio**	**5.31**	**198**	P	**Pn**	**03 41 39.0**	**-0.9**
CNGZ				S	**Sn**	**03 42 38.4**	**-1.3**
URZ	**Urewera**	**5.46**	**207**	Pn	**Pn**	**03 41 39.8**	**-2.2**
	1.6nm,0.3s,baz=300,slow=23,SNR=18						
URZ				Sn	**Sn**	**03 42 44.2**	**+0.8**
	8.4nm,0.3s,baz=107,slow=19,SNR=4.5						
URZ	**Urewera**	**5.46**	**207**	P	**Pn**	**03 41 40.7**	**-1.3**
RIGZ	**Rimuhau**	**5.64**	**201**	P	**Pn**	**03 41 43.4**	**-1.1**
RIGZ				S	**Sn**	**03 42 48.8**	**+0.9**
ASAR	**Alice Springs**	**41.61**	**271**	P	**P**	**03 48 06.2**	**0.0**
	1.0nm,0.7s,baz=110,slow=7.2,SNR=11						
WRA	**Warramunga Arr**	**42.88**	**276**	P	**P**	**03 48 16.6**	**+0.2**
	0.5nm,0.5s,baz=118,slow=7.3,SNR=12						
WRA				LR	LR	04 03 51.4	
	comp=Z,39nm,18.5s,baz=180,slow=33						
H03S2	**Juan Fernandez**	**79.98**	**124**	T	T	05 20 43.8	
	baz=233						
H03S1	**Juan Fernandez**	**79.99**	**124**	T	T	05 20 44.9	
	baz=233						
H03S3	**Juan Fernandez**	**80.00**	**124**	T	T	05 20 41.2	
	baz=233						
FINES	**FINESS Array B**	**147.44**	**337**	PKPbc	**PKPbc**	**04 00 01.2**	**+1.0**
	6.7nm,1.2s,baz=45,slow=4.1,SNR=3.9						

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*JMA **26** 04:48:59.9±0.3, 24°.75N×122°.88E, h130^{km}±3^{km}, M2.4*

*TAP **26** 04:48:60.0, 24°.74N×122°.86E, h134^{km}±1^{km}, ML3.6, C*

ISC 26 04:48:59.6±1.6**, 24°.77N**±0°.05×**122°.89E**±0°.03**, h133**^{km}±9^{km}**, n66, σ**0^{s}**.90**/117**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.33**	**161**	i P	**Pn**	**04 49 18.7**	**+0.4**
	baz=153						
YOJ				S	**Sn**	**04 49 32.6**	**+0.4**
	baz=153						
YOJ	**Yonaguni jima**	**0.33**	**161**	P	**Pn**	**04 49 18.1**	**-0.1**
TWB1	**Santiao Chiao**	**0.85**	**286**	eS	**Sn**	**04 49 38.0**	**-0.1**
	baz=289						
IRIF	**Iriomote-Funau**	**0.88**	**120**	S	**Sn**	**04 49 38.1**	**-0.3**
TWC	**Suao**	**0.96**	**260**	i P	**Pn**	**04 49 22.5**	**+0.1**
	baz=262						
TWC				i S	**Sn**	**04 49 38.8**	**-0.9**
	baz=262						
NTC	**Toucheng**	**0.97**	**275**	P	**Pn**	**04 49 22.9**	**+0.5**
	baz=277						
NTC				S	**Sn**	**04 49 39.9**	**+0.1**
	baz=277						
TIPB	**Shuangxi**	**0.99**	**282**	i P	**Pn**	**04 49 23.1**	**+0.4**
	baz=284						
TIPB				i S	**Sn**	**04 49 40.2**	**0.0**
	baz=284						
NWF	**Wu-fen Shan**	**1.05**	**287**	P	**Pn**	**04 49 23.9**	**+0.6**
	baz=288						
NWF				eS	**Sn**	**04 49 40.1**	**-1.2**
	baz=288						
WFSB	**Wu-fen Shan**	**1.05**	**287**	P	**Pn**	**04 49 23.8**	**+0.5**
	baz=288						
WFSB				S	**Sn**	**04 49 41.5**	**+0.3**
	baz=288						
EWUT	**Wuta**	**1.06**	**252**	P	**Pn**	**04 49 23.5**	**+0.2**
	baz=253						
EWUT				eS	**Sn**	**04 49 41.2**	**-0.2**
	baz=253						
NDS	**Dongshan**	**1.08**	**263**	eP	**Pn**	**04 49 23.9**	**+0.4**
	baz=264						
NDS				eS	**Sn**	**04 49 41.3**	**-0.4**
	baz=264						
HATJ	**Hateruma jima**	**1.10**	**130**	eS	**Sn**	**04 49 42.3**	**+0.3**
ENA	**Nanau**	**1.10**	**252**	eP	**Pn**	**04 49 23.8**	**0.0**
	baz=253						
ENA				eS	**Sn**	**04 49 41.6**	**-0.4**
	baz=253						
TWE	**Neicheng**	**1.11**	**268**	P	**Pn**	**04 49 24.4**	**+0.5**
	baz=269						
TWE				eS	**Sn**	**04 49 41.6**	**-0.6**
	baz=269						
JKRS	**Kuro-shima**	**1.15**	**117**	P	**Pn**	**04 49 24.9**	**+0.7**
JKRS				S	**Sn**	**04 49 42.9**	**0.0**
JIJ	**Ishigaki jima**	**1.21**	**109**	P	**Pn**	**04 49 25.0**	**+0.2**
JIJ				S	**Sn**	**04 49 42.7**	**-1.3**
ENTT	**Nioudou**	**1.21**	**264**	P	**Pn**	**04 49 26.0**	**+1.2**
	baz=265						
ENTT				eS	**Sn**	**04 49 45.2**	**+1.1**
	baz=265						
YM01	**YM01**	**1.25**	**287**	P	**Pn**	**04 49 25.8**	**+0.5**
	baz=289						
YM01				S	**Sn**	**04 49 44.7**	**-0.2**
	baz=289						
NWLT	**Wulai**	**1.26**	**270**	P	**Pn**	**04 49 25.5**	**+0.1**
	baz=271						
NWLT				S	**Sn**	**04 49 45.4**	**+0.4**
	baz=271						
NDT	**Datong Townshi**	**1.27**	**263**	i P	**Pn**	**04 49 26.4**	**+1.0**
	baz=263						
NDT				eS	**Sn**	**04 49 45.3**	**+0.3**
	baz=263						
TATO	**Taipei**	**1.29**	**279**	P	**Pn**	**04 49 26.4**	**+0.7**
	baz=280						
TATO				S	**Sn**	**04 49 44.6**	**-0.8**
	baz=280						
JISG	**Ishigakijimahi**	**1.30**	**98**	P	**Pn**	**04 49 25.8**	**0.0**
JISG				eS	**Sn**	**04 49 44.8**	**-0.9**
ETL	**Fush Village**	**1.31**	**242**	P	**Pn**	**04 49 26.1**	**+0.2**
	baz=243						
ETL				S	**Sn**	**04 49 44.8**	**-1.0**
	baz=243						
NACB	**Ninganchiao**	**1.32**	**243**	P	**Pn**	**04 49 25.7**	**-0.3**
	baz=244						
NACB				S	**Sn**	**04 49 45.1**	**-1.0**
	baz=244						
TWD	**Chiawan**	**1.37**	**240**	P	**Pn**	**04 49 26.4**	**-0.1**
	baz=240						
TWD				eS	**Sn**	**04 49 46.0**	**-0.9**
	baz=240						
YHNB	**Yeheng**	**1.38**	**266**	P	**Pn**	**04 49 27.3**	**+0.6**
	baz=267						
YHNB				S	**Sn**	**04 49 47.2**	**-0.1**
	baz=267						
NSK	**Sanguang**	**1.40**	**266**	P	**Pn**	**04 49 27.3**	**+0.4**
	baz=267						
NSK				S	**Sn**	**04 49 47.2**	**-0.3**
	baz=267						
ETLH	**Xiulin Townshi**	**1.40**	**247**	P	**Pn**	**04 49 26.9**	**-0.1**
	baz=247						
ETLH				S	**Sn**	**04 49 46.7**	**-1.1**
	baz=247						
NNSB	**Datong**	**1.42**	**256**	P	**Pn**	**04 49 27.3**	**+0.2**
	baz=257						
NNSB				S	**Sn**	**04 49 47.8**	**-0.2**
	baz=257						
HWA	**Hwalien**	**1.42**	**236**	S	**Sn**	**04 49 48.2**	**+0.4**
	baz=236						
NNS	**Nan Shan**	**1.42**	**257**	eP	**Pn**	**04 49 25.4**	**-1.8**
	baz=257						
NNS				eS	**Sn**	**04 49 48.6**	**+0.5**
	baz=257						
ETM	**Tongmen**	**1.51**	**238**	P	**Pn**	**04 49 27.8**	**-0.2**
	baz=238						
ETM				S	**Sn**	**04 49 49.0**	**-0.7**
	baz=238						
FUSS	**Fushou**	**1.59**	**251**	P	**Pn**	**04 49 30.2**	**+1.0**
	baz=251						
FUSS				S	**Sn**	**04 49 51.3**	**-0.4**
	baz=251						
WHF	**Hehuan Shan**	**1.61**	**247**	P	**Pn**	**04 49 30.0**	**+0.4**
	baz=247						
WHF				S	**Sn**	**04 49 52.0**	**-0.3**
	baz=247						
ESL	**Shilin**	**1.64**	**235**	i P	**Pn**	**04 49 29.1**	**-0.4**
	baz=234						
ESL				i S	**Sn**	**04 49 50.7**	**-1.5**
	baz=234						
TWT	**Tachien**	**1.65**	**252**	eP	**Pn**	**04 49 31.1**	**+1.3**
	baz=252						
TWT				eS	**Sn**	**04 49 53.2**	**+0.5**
	baz=252						
TDCB	**Techi**	**1.66**	**252**	P	**Pn**	**04 49 30.9**	**+1.0**
	baz=252						
TDCB				S	**Sn**	**04 49 52.5**	**-0.5**
	baz=252						
LIOB	**Emei**	**1.71**	**266**	P	**Pn**	**04 49 31.3**	**+0.9**
	baz=267						
LIOB				S	**Sn**	**04 49 53.2**	**-0.6**
	baz=267						
CHGB	**Renai**	**1.72**	**246**	P	**Pn**	**04 49 31.3**	**+0.7**
	baz=246						
CHGB				S	**Sn**	**04 49 53.9**	**-0.4**
	baz=246						
NSTT	**Nanjuang**	**1.73**	**266**	i P	**Pn**	**04 49 31.1**	**+0.6**
	baz=266						
NSTT				S	**Sn**	**04 49 53.1**	**-0.9**
	baz=266						
EGFH	**Guangfu**	**1.73**	**231**	P	**Pn**	**04 49 30.2**	**-0.4**
	baz=230						
EGFH				S	**Sn**	**04 49 53.3**	**-0.8**
	baz=230						
WHP	**Taichung City**	**1.84**	**255**	P	**Pn**	**04 49 33.2**	**+1.3**
	baz=255						
WHP				eS	**Sn**	**04 49 57.3**	**+0.7**
	baz=255						
HGSD	**Ruisui**	**1.85**	**227**	P	**Pn**	**04 49 32.2**	**+0.3**
	baz=226						
HGSD				S	**Sn**	**04 49 56.3**	**-0.4**
	baz=226						
VWDT	**VWDT**	**1.89**	**238**	eP	**Pn**	**04 49 33.2**	**+0.7**
	baz=238						
VWDT				eS	**Sn**	**04 49 57.3**	**-0.3**
	baz=238						
EHY	**Hungye**	**1.91**	**229**	P	**Pn**	**04 49 32.2**	**-0.5**
	baz=228						
WCS	**Beigang Elemen**	**1.94**	**249**	eP	**Pn**	**04 49 34.8**	**+1.7**
	baz=249						
WCS				eS	**Sn**	**04 49 59.8**	**+1.3**
	baz=249						
YULB	**Yu-li**	**2.00**	**227**	P	**Pn**	**04 49 33.6**	**-0.2**
	baz=226						
YULB				S	**Sn**	**04 49 58.5**	**-1.5**
	baz=226						
SMLT	**Sun Moon Lake**	**2.02**	**244**	eP	**Pn**	**04 49 35.7**	**+1.6**
	baz=244						
SSLB	**Suanglung**	**2.02**	**241**	P	**Pn**	**04 49 34.6**	**+0.5**
	baz=241						
SSLB				eS	**Sn**	**04 50 02.1**	**+1.6**
	baz=241						
TWF1	**Yuli**	**2.03**	**226**	P	**Pn**	**04 49 34.1**	**0.0**
	baz=225						
TWF1				S	**Sn**	**04 49 59.8**	**-0.8**
	baz=225						
TYC	**Yuchr**	**2.05**	**245**	eP	**Pn**	**04 49 35.8**	**+1.5**
	baz=245						
TYC				eS	**Sn**	**04 50 02.1**	**+1.2**
	baz=245						
JMJ	**Miyako jima 2**	**2.18**	**88**	eP	**Pn**	**04 49 37.2**	**+1.3**
	baz=87						
ALS	**Alishan**	**2.28**	**237**	eP	**Pn**	**04 49 39.0**	**+1.5**
	baz=236						
EDH	**Donghe**	**2.31**	**219**	P	**Pn**	**04 49 37.6**	**+0.1**
	baz=219						
EDH				S	**Sn**	**04 50 05.3**	**-1.4**
	baz=219						
CHN5	**Tsauling**	**2.34**	**240**	eP	**Pn**	**04 49 40.6**	**+2.6**
	baz=240						
CHN5				eS	**Sn**	**04 50 08.9**	**+1.5**
	baz=240						
CHN4	**Tsaushan**	**2.53**	**236**	P	**Pn**	**04 49 40.3**	**-0.1**
	baz=236						
CHN4				eS	**Sn**	**04 50 11.2**	**-0.5**
	baz=236						
TWGBT	**Beinan**	**2.56**	**221**	P	**Pn**	**04 49 40.8**	**+0.1**
	baz=220						
TWGBT				S	**Sn**	**04 50 11.0**	**-1.3**
	baz=220						
CHN1	**Nanshi**	**2.68**	**234**	eP	**Pn**	**04 49 44.4**	**+2.1**
	baz=234						
CHN1				eS	**Sn**	**04 50 15.8**	**+0.8**
	baz=234						
SLGT	**Liugui**	**2.71**	**230**	eP	**Pn**	**04 49 44.5**	**+1.8**
	baz=229						
MASBT	**Mashibuluo**	**2.99**	**224**	P	**Pn**	**04 49 47.5**	**+1.3**
	baz=224						
MASBT				S	**Sn**	**04 50 19.9**	**-2.1**
	baz=224						
MATB	**Ma-tsu**	**2.99**	**298**	eP	**Pn**	**04 49 46.0**	**-0.3**
	baz=297						
EAST	**Anshuo**	**3.03**	**219**	P	**Pn**	**04 49 47.9**	**+1.1**
	baz=218						
PHUB	**P'eng-hu**	**3.28**	**248**	eP	**Pn**	**04 49 50.3**	**+0.3**
	baz=247						
PHUB				eS	**Sn**	**04 50 26.9**	**-2.0**
	baz=247						
LYJJ	**Jianjiangzhen**	**3.33**	**303**	eP	**Pn**	**04 49 49.8**	**-0.9**
	baz=302						
PTMZ	**Houxiangcun**	**3.43**	**275**	eP	**Pn**	**04 49 51.6**	**-0.4**
	baz=275						
KNMB	**Chin-men Tao**	**4.11**	**267**	eP	**Pn**	**04 50 00.3**	**-0.6**
	baz=266						

NNC 26 04:57:52.5±1.0**, 54°.24N**×**86°.11E, h0**^{km}±5^{km}**, mb3.9, mpv3.2, 8C-6D, Error ellipse: s-maj=14.1km s-min=5.6km az=158.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**0.81**	**249**	⇑P	Pg	04 58 08.0	-0.1
	0.6nm,0.3s						
ZAA0				⇑S	Sg	04 58 19.7	+1.1
	21nm,0.6s						
KURK	**Kurchatov**	**5.78**	**235**	⇓Pn	Pn	04 59 20.8	+1.4
	2.2nm,0.7s						
KURK				⇑Sn	Sn	05 00 26.7	+0.4
	0.9nm,0.4s						
KURK				⇓Lg	Lg	05 00 55.4	
	7.7nm,0.6s						
KURBB	**Kurchatov Arra**	**5.88**	**235**	⇓Pn	Pn	04 59 21.4	+0.6
	3.5nm,0.4s						
KURBB				⇓Sn	Sn	05 00 29.7	+0.9
	5.1nm,0.4s						
KURBB				⇑Lg	Lg	05 00 58.7	
	16nm,0.6s						
MK31	**Makanchi Array**	**7.84**	**200**	⇑Pn	Pn	04 59 48.9	+1.2
	2.1nm,0.6s,baz=28,slow=13,SNR=44						
MK31				⇑Sn	Sn	05 01 18.2	+1.0
	0.9nm,0.5s,baz=22,slow=26,SNR=6.5						
MK31				⇑Lg	Lg	05 02 01.9	
	7.0nm,0.9s,baz=17,slow=30,SNR=6.9						
MAKZ	**Makanchi**	**7.89**	**201**	⇓Pn	Pn	04 59 48.9	+0.5
	2.9nm,0.8s						
MAKZ				⇑Sn	Sn	05 01 19.2	+0.8
	1.1nm,0.5s						
MAKZ				⇓Lg	Lg	05 02 03.0	
	7.1nm,1.2s						

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*NEIC **26** 05:06:37.4±1.0, 36°.330N±0°.007×97°.72W±0°.02, h5^{km}±2^{km}, Error ellipse: s-maj=3.0km s-min=3.0km az=250.0*

*ANF **26** 05:06:37.5±0.3, 36°.32N×97°.73W, h5^{km}, ML3.8/13, Error ellipse: s-maj=3.7km s-min=2.7km az=171.0*

*TUL **26** 05:06:37.2±1.1, 36°.332N±0°.006×97°.73W±0°.02, h5^{km}±7^{km}, ML3.1, mb_Lg3.1/77(NEIC), Error ellipse: s-maj=2.3km s-min=0.9km az=91.0*

ISC 26 05:06:37.3±1.0**, 36°.33N**±0°.02×**97°.73W**±0°.02**, h10**^{km}±10^{km}**, n103, σ**0^{s}**.80**/101**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CROK	**Carrier**	**0.27**	**310**		**Pg**	**05 06 42.9**	**0.0**
CROK				Sg	**Sg**	**05 06 47.0**	**+0.4**
GC02	**Grant County #**	**0.53**	**348**		**Pg**	**05 06 47.6**	**-0.1**
GC02				Sg	**Sg**	**05 06 55.1**	**+0.3**
OK029	**Liberty Lake**	**0.57**	**157**	Pg	**Pg**	**05 06 48.4**	**-0.2**
OK029				Sg	**Sg**	**05 06 56.4**	**+0.4**
BLOK	**Blackwell**	**0.60**	**43**		**Pg**	**05 06 48.9**	**0.0**

BLOK				Sg	Sg	05 06 56.1	-0.7
OK032	Salt Plains WL	0.61	321		Pg	05 06 49.1	-0.2
OK032				Sg	Sg	05 06 57.4	0.0
KAN14	Manchester OK	0.66	343		Pg	05 06 49.9	-0.2
KAN14				Sg	Sg	05 06 58.8	+0.1
BCOK	Bluff Creek, N	0.68	172	Pg	Pg	05 06 50.2	-0.3
BCOK				IAmb_Lg		05 06 59.5	
	comp=Z,162nm,0.9s						
OK033	Mehan	0.70	114		Pg	05 06 50.9	0.0
KAN13	South Haven SW	0.71	16	Pg	Pg	05 06 50.9	-0.2
KAN13				Sg	Sg	05 07 01.0	+0.5
KAN17	Caldwell West	0.71	358		Pg	05 06 50.9	-0.3
KAN05	Bluff City Nor	0.79	351		Pg	05 06 52.2	-0.3
OK025	Westminster Rd	0.81	157	Pg	Pg	05 06 52.8	-0.2
OK031	S. Brethren Rd	0.81	117		Pg	05 06 52.6	-0.3
OK031				Sg	Sg	05 07 03.8	+0.2
KAN09	Caldwell North	0.81	6		Pg	05 06 52.7	-0.3
KAN09				Sg	Sg	05 07 03.6	0.0
KAN01	Argonia South	0.82	358		Pg	05 06 52.9	-0.4
KAN01				Sg	Sg	05 07 04.0	0.0
QUOK	Quay	0.84	100		Pg	05 06 53.3	-0.2
QUOK				Sg	Sg	05 07 04.2	-0.2
OK001	Jones High Sch	0.84	155	Pg	Pg	05 06 53.7	+0.1
KAN10	Anthony SW Sta	0.85	340		Pg	05 06 53.4	-0.3
OK030	Cody Creek RV	0.86	117		Pg	05 06 53.8	-0.2
OK034	N. Norfolk Rd.	0.88	111		Pg	05 06 54.1	-0.2
KAN08	Anthony NE Sta	0.92	348		Pg	05 06 54.7	-0.4
KAN06	Argonia West S	0.92	353		Pg	05 06 54.8	-0.4
KAN16	Harper SW Stat	0.94	343		Pg	05 06 54.9	-0.5
OKCFA	Oklahoma City	0.94	166		Pg	05 06 55.0	-0.4
OKCFA	Oklahoma City	0.94	166	P	Pg	05 06 55.0	-0.4
	baz=346,SNR=16						
OKCSW	OKLAHOMA CITY	0.95	166	Pg	Pg	05 06 55.3	-0.3
KAN12	Harper NE Stat	0.99	347		Pg	05 06 56.1	-0.4
U32A	Winter Ranch,	1.03	273	Pg	Pg	05 06 56.6	-0.6
U32A	Winter Ranch,	1.03	273	P	Pg	05 06 56.5	-0.6
	baz=93,SNR=47						
U32A				S	Sg	05 07 10.7	+0.1
	baz=93						
FNO	Franklin	1.10	166	Pg	Pg	05 06 58.0	-0.5
T35A	Sooner Cattle	1.14	59		Pg	05 06 58.8	-0.4
T35B	Sooner Cattle	1.14	59	P	Pg	05 06 58.6	-0.6
	baz=239,SNR=148						
T35B				S	Sg	05 07 13.7	-0.3
	baz=239						
W35A	Tecumseh	1.36	149		Pn	05 07 02.3	-0.1
TUL1	Leonard	1.62	104		Pn	05 07 06.7	+0.7
TUL1				IAmb_Lg		05 07 32.4	
	comp=Z,71nm,0.7s						
TUL1	Leonard	1.62	104	P	Pn	05 07 06.5	+0.6
	baz=285,SNR=198						
TUL1				S	Sb	05 07 28.3	+0.5
	baz=285						
X34A	Smith Ranch, M	1.73	183		Pb	05 07 09.1	0.0
WMOK	Wichita Mounta	1.81	209	Pn	Pn	05 07 09.5	+1.0
WMOK	Wichita Mounta	1.81	209	P	Pn	05 07 09.2	+0.7
	baz=28,SNR=84						
WMOK				S	Sb	05 07 33.6	+0.5
	baz=28						
R32A	Long Quarter,	2.23	340		Pn	05 07 15.5	+1.1
R32A	Long Quarter,	2.23	340	P	Pn	05 07 16.4	+2.0
	baz=160,SNR=28						
LOOK	Love County	2.37	169		Pn	05 07 17.2	+0.9
LOOK				IAmb_Lg		05 07 55.6	
	comp=Z,52nm,0.8s						
X37A	Clayton	2.59	131		Pn	05 07 20.2	+1.0
X37A				IAmb_Lg		05 08 05.1	
	comp=Z,63nm,0.9s						
X37A	Clayton	2.59	131	P	Pn	05 07 20.6	+1.3
	baz=313,SNR=36						
U38A	Gravette	2.70	87		Pn	05 07 22.3	+1.6
KSU1	Kansas State U	2.91	17		Pn	05 07 24.5	+0.9
KSU1	Kansas State U	2.91	17	P	Pn	05 07 25.2	+1.6
	baz=198						
CBKS	Cedar Bluff	2.95	328	Pn	Pn	05 07 25.1	+0.8
CBKS	Cedar Bluff	2.95	328	P	Pn	05 07 25.9	+1.6
	baz=147						
Z35A	Perchaven, San	3.02	172	Pn	Pn	05 07 25.0	-0.1
HHAR	Hobbs	3.06	90		Pn	05 07 25.4	-0.3
W39A	Magazine	3.40	108		Pn	05 07 30.1	-0.3
W39A				IAmb_Lg		05 08 31.5	
	comp=Z,41nm,0.8s						
W39A	Magazine	3.40	108	P	Pn	05 07 31.4	+1.0
	baz=290,SNR=8.4						
AMTX	Amarillo	3.53	247	Pn	Pn	05 07 31.9	-0.4
AMTX				IAmb_Lg		05 08 30.7	
	comp=Z,77nm,0.8s						
S39A	Bolivar	3.78	68		Pn	05 07 34.3	-1.3
S39A				IAmb_Lg		05 08 38.2	
	comp=Z,43nm,0.7s						
S39A	Bolivar	3.78	68	P	Pn	05 07 37.0	+1.4
	baz=250,SNR=17						
Z38A	Mt. Pleasant	3.80	143	Pn	Pn	05 07 36.1	+0.1
Z38A				IAmb_Lg		05 08 44.1	
	comp=Z,78nm,0.9s						
MIAR	Mount Ida	3.83	116		Pn	05 07 37.2	+1.0
MIAR	Mount Ida	3.83	116	P	Pn	05 07 38.0	+1.7
	baz=299,SNR=26						
U40A	Yellville	3.93	88		Pn	05 07 38.5	+0.8
U40A				IAmb_Lg		05 08 45.7	
	comp=Z,74nm,0.8s						
ABTX	Abilene, Hawle	4.02	204	Pn	Pn	05 07 39.0	+0.1
WHTX	Lake Whitney,	4.33	177		Pn	05 07 44.3	+1.1
X40A	Basin Creek Fa	4.40	113		Pn	05 07 46.2	+2.1
X40A				IAmb_Lg		05 09 07.1	
	comp=Z,26nm,0.8s						
N33A	J Bar K, Exete	4.41	3	Pn	Pn	05 07 43.3	-1.0
N33A				IAmb_Lg		05 09 04.3	
	comp=Z,39nm,0.8s						
MGMO	Mountain Grove	4.46	78		Pn	05 07 46.2	+1.3
MGMO				IAmb_Lg		05 09 03.0	
	comp=Z,34nm,0.8s						
WHAR	Wooly Hollow	4.54	102		Pn	05 07 47.5	+1.4
WHAR				IAmb_Lg		05 09 08.6	
	comp=Z,34nm,0.9s						
FCAR	Ozark Folk Cen	4.56	94		Pn	05 07 47.5	+1.2
237A	Washetta, Mont	4.60	159	Pn	Pn	05 07 47.3	+0.4
W41B	Gary Mavity, V	4.60	103	P	Pn	05 07 48.3	+1.4
	baz=286						
WLAR	White Oak Lake	4.61	123	Pn	Pn	05 07 48.0	+1.0
WLAR				IAmb_Lg		05 09 16.4	
	comp=Z,24nm,0.7s						
P38A	Dawn	4.67	44		Pn	05 07 48.8	+1.0
P38A				IAmb_Lg		05 09 17.9	
	comp=Z,41nm,0.7s						
KSCO	Kaye Shedlock’	4.72	306		Pn	05 07 49.3	+0.6
MSTX	Muleshoe	4.76	242		Pn	05 07 50.0	+0.8
R40A	Maddies Statio	4.77	64		Pn	05 07 50.0	+0.7
R40A				IAmb_Lg		05 09 11.7	
	comp=Z,32nm,0.7s						
R40A	Maddies Statio	4.77	64	P	Pn	05 07 50.2	+1.0
	baz=247,SNR=15						
N35A	Tabor	4.81	19		Pn	05 07 50.8	+1.0
BGNE	Belgrade	5.08	356		Pn	05 07 53.7	+0.1
T42A	Van Buren	5.38	81	IAmb_Lg		05 09 33.1	
	comp=Z,23nm,0.8s						
T25A	Trinidad	5.43	281		Pn	05 07 59.5	+0.9
T25A				IAmb_Lg		05 09 44.6	
	comp=Z,23nm,1.0s						
CCM	Cathedral Cave	5.45	70	Pn	Pn	05 08 00.3	+1.7
CCM				IAmb_Lg		05 09 40.9	
	comp=Z,27nm,0.7s						
P40A	Paris	5.51	53	IAmb_Lg		05 09 36.1	
	comp=Z,35nm,0.8s						
435B	Jarrell	5.53	179	IAmb_Lg		05 09 32.0	
	comp=Z,21nm,0.9s						
N38A	Joes South For	5.68	37	Pn	Pn	05 08 01.9	+0.2
N38A				IAmb_Lg		05 09 51.4	
	comp=Z,43nm,0.7s						
PBMO	Poplar Bluff	5.89	83	IAmb_Lg		05 09 49.1	
	comp=Z,42nm,0.9s						
JCT	Junction City	6.09	197	IAmb_Lg		05 10 04.8	
	comp=Z,31nm,0.8s						
K31A	O'Neill	6.34	353	Pn	Pn	05 08 11.9	+1.1
SCIA	State Center	6.58	31	Pn	Pn	05 08 14.7	+0.6
SCIA				IAmb_Lg		05 10 06.7	
	comp=Z,35nm,0.8s						
S44A	Carbondale	6.91	76	IAmb_Lg		05 10 33.7	
	comp=Z,20nm,0.7s						
SIUC	Southern Illin	6.95	76	IAmb_Lg		05 10 17.0	
	comp=Z,36nm,1.0s						
W45A	Hickory Valley	7.04	97	IAmb_Lg		05 10 23.2	
	comp=Z,33nm,1.0s						
ISCO	Idaho Springs	7.12	301	Pn	Pn	05 08 22.4	+0.6
P43A	Skaggs, Pawnee	7.27	60	IAmb_Lg		05 10 29.4	
	comp=Z,29nm,0.8s						
ECSD	EROS Data Cent	7.45	6	Pn	Pn	05 08 25.3	-0.7
ECSD				IAmb_Lg		05 10 42.4	
	comp=Z,16nm,1.1s						
L40A	Anamosa	7.63	39	IAmb_Lg		05 10 50.7	
	comp=Z,26nm,0.8s						
Y22D	IRIS PASSCAL I	7.86	256	IAmb_Lg		05 11 02.2	
	comp=Z,30nm,0.9s						
SUSD	Miller	8.16	354	IAmb_Lg		05 11 14.4	
	comp=Z,21nm,0.7s						
O44A	Mansfield	8.22	60	IAmb_Lg		05 11 10.5	
	comp=Z,21nm,0.8s						
L42A	Oliver, Polo	8.44	45	IAmb_Lg		05 11 06.5	
	comp=Z,22nm,0.7s						
TX31	Lajitas Ar. Si	8.58	217	Pn	Pn	05 08 41.2	-0.4
TXAR	Lajitas Array	8.58	217	Pn	Pn	05 08 41.1	-0.6
JFWS	Jewell Farm	8.75	39	Pn	Pn	05 08 43.6	-0.2
JFWS				IAmb_Lg		05 11 21.5	
	comp=Z,15nm,0.7s						
K22A	Casper	9.28	316	IAmb_Lg		05 11 57.8	
	comp=Z,23nm,1.1s						
I40A	Norwalk	9.31	34	IAmb_Lg		05 11 34.2	
	comp=Z,13nm,0.8s						
SPMN	Marine on St.	9.64	21	IAmb_Lg		05 11 55.9	
	comp=Z,14nm,1.1s						

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*IDC **26** 05:08:23.3±1.5, 30°.67S×72°.30W, h0^{km}, mb4.0/2, mb1 3.9/7, mb1mx3.7/39, mbtmp3.8/7, ML3.5/5, Error ellipse: s-maj=46.2km s-min=24.9km az=116.0*

*SJA **26** 05:08:24.2±1.0, 30°.66S×72°.14W, h10^{km}, ML4.1, MW3.9*

*GUC **26** 05:08:25.4±0.7, 30°.69S×72°.05W, h17^{km}±3^{km}, ML4.1*

*NEIC **26** 05:08:28.5±1.5, 30°.71S±0°.03×71°.89W±0°.06, h25^{km}±3^{km}, mb4.6/20, Mwr4.0/22, ML4.0(GUC), Error ellipse: s-maj=7.6km s-min=4.6km az=78.0*

*NEIC **26** 05:08:28.5, 30°.71S×71°.89W, h28^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.23; M$_{\theta\theta}$-0.04; M$_{\phi\phi}$-1.19; M$_{r\theta}$0.13; M$_{\theta\phi}$0.08; M$_{\phi r}$-0.19; Fault plane solution: M$_0$1.24000×10^{15} NP1:ϕ_s170.70000°, δ49.82000°, λ83.26000°. NP2:ϕ_s1.08000°, δ40.64000°, λ97.92000°. Principal axes: T 1.2599, Plg83.0000°, Azm37.0000°; N -0.0499, Plg5.0000°, Azm175.0000°; P -1.2100, Plg5.0000°, Azm265.0000°;*

ISC 26 05:08:27.0±0.8, **30°.73S**±0°.02×**72°.03W**±0°.04, **h19**^{km}±2^{km}, **n83, σ1^s.30**/99, **mb4.5**/8, **9C-9D, Fault plane solution: NP1:**ϕ_s145.28348°, δ48.58398°, λ73.32523°. **NP2:** ϕ_s349.64432°, δ44.07820°, λ108.01891°. **Principal axes:** T Plg77.3551°, Azm347.3335°; N Plg12.4263°, Azm156.4914°; P Plg2.3046°, Azm246.9995°; **Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.35	81	⇓iP	Pg	05 08 34.5	0.0
CO06				i S	Sg	05 08 38.5	-1.1
CO06				IAML		05 08 39.2	
	comp=N,22μm,0.2s						
CO06	Fray Jorge	0.35	81		Pg	05 08 34.3	-0.1
CO06				Sg	Sg	05 08 38.4	-1.1
CO05	La Serena	1.06	41	⇓iP	Pb	05 08 46.2	-0.5
CO05				i S	Sb	05 08 58.6	-1.6
CO05				IAML		05 09 05.8	
	comp=N,3μm,0.8s						
CO05	La Serena	1.06	41		Pb	05 08 46.2	-0.5
CO05					Sb	05 08 59.4	-0.8
CO03	El Pedregal	1.16	96		Pn	05 08 46.7	-1.6
CO03				Sn	Sb	05 09 00.0	-3.2
GO04	Tololo Observa	1.20	63	⇓iP	Pn	05 08 47.9	-1.1
GO04				i S	Sb	05 09 03.4	-1.1
GO04				IAML		05 09 10.8	
	comp=N,16μm,0.6s						
GO04	Tololo Observa	1.20	63		Pn	05 08 47.9	-1.1
VA06	Catapilco	1.93	161	⇑iP	Pn	05 08 59.0	+0.3
VA06				i S	Sb	05 09 25.4	+0.2
VA06				IAML		05 09 29.3	
	comp=E,4μm,0.5s						
LCO	Las Campanas	2.07	34	⇑iP	Pn	05 09 00.9	0.0
LCO				i S	Sn	05 09 27.2	+0.9
LCO	Las Campanas	2.07	34	eP	Pn	05 09 01.3	+0.4
LCO				eS	Sb	05 09 29.6	+0.1
LCO				IAML		05 09 36.8	
	comp=Z,2μm,0.8s						
VA01	Torpederas	2.31	172		Pn	05 09 04.1	+0.1
VA03	San Esteban	2.39	148	⇑iP	Pn	05 09 06.3	+1.1
VA03				i S	Sb	05 09 37.1	-1.4
VA03				IAML		05 09 44.0	
	comp=N,3μm,0.5s						
VA03	San Esteban	2.39	148		Pn	05 09 06.4	+1.3
ROCH	El Roble	2.40	159	eP	Pn	05 09 06.0	+0.6
ROCH				eP	Pn	05 09 06.0	+0.6
ROCH				eS	Sb	05 09 37.7	-1.2
ROCH				eS	Sn	05 09 37.8	+3.5
ROCH				IAML		05 09 45.5	
	comp=N,2μm,0.4s						
ROCH				IAML		05 09 49.8	
	comp=N,2μm,0.4s						
RTLS	Leoncito	2.57	115	eP	Pb	05 09 11.3	-1.4
RTLS				eS	Sb	05 09 44.6	+0.5
RTLS				IAML		05 09 51.1	
	comp=Z,424nm,0.7s						
MT02	Curacav	2.63	163		Pb	05 09 11.1	-2.4
AC04	Llanos de Chal	2.65	19	i P	Pn	05 09 08.6	-0.1
AC04				i S	Sg	05 09 52.6	+0.3
AC04				IAML		05 10 05.0	
	comp=E,280nm,0.6s						
AC04	Llanos de Chal	2.65	19		Pn	05 09 08.5	-0.1
AC04	Llanos de Chal	2.65	19	eP	Pn	05 09 08.6	-0.1
AC04				eS	Sg	05 09 51.5	-0.8
PEL	Peldehue	2.67	155		Pn	05 09 10.2	+1.3
PEL	Peldehue	2.67	155	eP	Pn	05 09 10.2	+1.3
PEL				eS	Sb	05 09 47.6	+1.2
AUSP	Uspallata	2.71	124	eP	Pb	05 09 13.0	-2.0
AUSP				eS	Sb	05 09 46.5	-1.3
MT05	Renca	2.87	158	eP	Pn	05 09 13.1	+1.3
MT05				eS	Sb	05 09 51.6	-0.8
MT05	Renca	2.87	158		Pn	05 09 12.9	+1.2
VA05	Santo Domingo	2.94	173	Pn	Pn	05 09 13.2	+0.6
MT09	Talagante	3.16	164	eP	Pn	05 09 17.3	+1.5
MT09				eS	Sb	05 09 58.0	-2.8
MT09	Talagante	3.16	164		Pn	05 09 17.3	+1.5
MT01	Popeta	3.19	168	eP	Pn	05 09 17.2	+1.1
MT01				eS	Sb	05 10 03.3	+1.7
MT01	Popeta	3.19	168		Pn	05 09 17.3	+1.1
BO04	La Punta	3.46	160	eP	Pn	05 09 21.1	+1.2
BO04				eS	Sb	05 10 05.1	-4.4
BO04				IAML		05 10 14.0	
	comp=E,599nm,0.6s						
GO03	Copiap	3.50	27		Pn	05 09 20.4	0.0
BO01	Tunca	3.74	168		Pn	05 09 24.6	+1.0
BO02	Sierra Bellavi	4.18	166		Pn	05 09 31.3	+1.4
GO05	Huala	4.27	179	Pn	Pn	05 09 30.8	-0.1
AC02	Maricunga	4.64	34		Pn	05 09 37.1	+0.6
ML02	Panimavida	5.04	174		Pn	05 09 41.7	+0.1
CYA	Choya	5.89	69	⇑iP	Pn	05 09 54.9	+1.7
H03N1	Juan Fernandez	6.43	243	T	T	05 16 57.1	
	baz=73,slow=72,SNR=2830						
H03N2	Juan Fernandez	6.45	243	T	T	05 16 59.5	
	baz=73,slow=72,SNR=3146						
H03N3	Juan Fernandez	6.45	243	T	T	05 16 58.2	
	baz=73,slow=72,SNR=2918						
VA04	Juan Fernndez	6.45	241	Pn	Pn	05 10 01.6	+0.8
LC01	Cunco	8.15	179	Pn	Pn	05 10 24.2	+0.1
LVC	Limon Verde	8.56	20	Pn	Pn	05 10 27.9	-2.3
	comp=E,0.2nm,0.3s,baz=163,slow=11,SNR=2.0						
LVC				Sn	Sn	05 12 05.1	-1.3
	comp=E,0.5nm,0.3s,baz=261,slow=5.0,SNR=4.0						
PLCA	Paso Flores	10.05	174	Pn	Pn	05 10 49.7	-0.7
	comp=E,0.1nm,0.3s,baz=211,slow=19,SNR=1.8						
PLCA	Paso Flores	10.05	174		Pn	05 10 51.4	+1.0
TRQA	Tornquist	11.06	134	Pn	Pn	05 11 05.3	+1.2
PB16	IPOC Station P	12.55	11	Pn	Pn	05 11 23.2	-1.9
ITQB	Itaqui	13.37	89	Pn	Pn	05 11 34.8	-1.0
CPUP	Villa Florida	13.65	75	Pn	Pn	05 11 42.4	+2.9
	comp=E,0.2nm,0.3s,baz=299,slow=13,SNR=1.8						
CPUP				Sn	Sn	05 14 14.0	+3.4
	comp=E,0.3nm,0.3s,baz=278,slow=5.7,SNR=2.9						
LPAZ	La Paz	14.81	15	Pn	Pn	05 11 55.9	-0.2
	comp=E,0.2nm,0.3s,baz=185,slow=6.1,SNR=7.6						
SIV	San Ignacio	17.77	37	P	Pn	05 12 33.2	-0.1
	comp=E,0.1nm,0.3s,baz=225,slow=14,SNR=6.8						
ETMB	Extrema	21.50	16	P	P	05 13 14.1	-0.7
MG02	Cerro Sombrero	22.13	175	P	P	05 13 22.2	+1.0
GO10	Punta Arenas	22.42	178	P	P	05 13 25.3	+1.0
TBTG	Tabatinga, AM	26.48	5	P	P	05 14 02.3	-0.8
TBTG				IAmb	IAmb	05 14 05.6	
	comp=Z,17nm,1.1s						
BDFB	Brasilia	26.62	61	P	P	05 14 06.1	+1.6
	comp=Z,1.7nm,0.6s,baz=255,slow=9.1,SNR=1.9						
ZARC	Zaragoza, Cauc	38.10	355	P	P	05 15 43.5	-1.2
SJCC	San Jacinto, C	40.51	355	P	P	05 16 04.1	-0.7
SJCC				IAmb	IAmb	05 16 09.1	
	comp=Z,8.0nm,1.0s						
HATO	Hato, Curacao	42.77	4	P	P	05 16 23.2	-0.1
MATN	Matagalpa	45.42	341	P	P	05 16 42.9	-1.8
MATN				IAmb	IAmb	05 16 47.1	
	comp=Z,4.3nm,0.8s						
MTDJ	Mount Denham	48.96	353	P	P	05 17 12.4	+0.1
SDDR	Presa de Saban	49.43	1	P	P	05 17 15.7	-0.1
BBSR	BB Station	63.14	7	P	P	05 18 53.5	+0.2
346A	Big Creek Wild	63.96	343	P	P	05 18 59.8	+1.1
TX32	Lajitas Array	66.90	330	P	P	05 19 18.3	+0.2
TXAR	Lajitas Array	66.90	330	P	P	05 19 17.9	-0.1
TX31	Lajitas Ar. Si	66.90	330	P	P	05 19 18.9	+0.9
SDMD	Soldier’s Deli	69.93	356	P	P	05 19 37.0	+0.4
SDMD				IAmb	IAmb	05 19 39.1	
	comp=Z,7.6nm,1.1s						
BLO	Bloomington	70.84	348	P	P	05 19 41.8	-0.5
ODNJ	Ogdensburg	71.49	358	P	P	05 19 46.4	+0.3
ODNJ				IAmb	IAmb	05 19 48.3	
	comp=Z,7.1nm,1.2s						
KAN10	Anthony SW Sta	71.78	338	P	P	05 19 49.0	+1.0
F63A	Nahmakanta, Br	76.12	2	P	P	05 20 13.6	+0.5
F63A				IAmb	IAmb	05 20 13.8	
	comp=Z,5.1nm,1.1s						
TORD	Torodi Ar. Bea	83.10	70	P	P	05 20 51.9	+0.1
	comp=Z,0.8nm,0.8s,baz=272,slow=4.4,SNR=4.2						
WRA	Warramunga Arr	123.60	210	PKP	PKPdf	05 27 22.5	-1.3
	comp=Z,0.3nm,0.6s,baz=176,slow=1.8,SNR=5.2						
WRA	Warramunga Arr	123.60	210		PKPdf	05 27 24.0	+0.2
H11S2	WAKE ISLAND Hy	125.76	271	T	T	07 46 14.5	
	baz=115,slow=75,SNR=23						
H11S1	WAKE ISLAND Hy	125.77	272	T	T	07 46 11.8	
	baz=115,slow=75,SNR=41						
H11S3	WAKE ISLAND Hy	125.77	271	T	T	07 46 17.1	
	baz=115,slow=75,SNR=35						
H11N3	WAKE ISLAND Hy	126.09	273	T	T	07 46 36.6	
	baz=116						
H11N1	WAKE ISLAND Hy	126.10	273	T	T	07 46 40.7	
	baz=116						
H11N2	WAKE ISLAND Hy	126.10	273	T	T	07 46 42.3	
	baz=116,SNR=4.8						
ZALV	Zalesovo Beam	151.42	29	PKPbc	PKPbc	05 28 19.3	+0.3
	comp=Z,2.2nm,0.7s,baz=294,slow=3.3,SNR=8.8						
ZALV	Zalesovo Beam	151.42	29	PKPdf	PKPdf	05 28 13.3	+0.5
ZALV					sPKPdf	05 28 20.2	-0.3

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*IDC **26** 05:14:50.3±2.6, 36°.56N×97°.97W, h0^{km}, mb3.3/1, mb1 3.5/3, mb1mx3.3/37, mbtmp3.1/3, ML3.8/2 Error ellipse: s-maj=36.0km s-min=17.0km az=99.0*

*TUL **26** 05:14:50.5±0.9, 36°.33N±0°.02×97°.73W±0°.02, h5^{km}±7^{km}, ML3.0, mb_Lg3.1/82(NEIC), Error ellipse: s-maj=3.1km s-min=1.7km az=55.0*

*NEIC **26** 05:14:50.6±1.0, 36°.32N±0°.02×97°.75W±0°.02, h5^{km}±2^{km}, Error ellipse: s-maj=3.6km s-min=3.0km az=57.0*

ISC 26 05:14:50.8±1.0, **36°.33N**±0°.02×**97°.74W**±0°.03, **h10**^{km}±9^{km}, **n93, σ0^s.80**/86, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CROK	Carrier	0.27	312	Pg	Pg	05 14 55.9	-0.3
CROK				Sg	Sg	05 15 00.2	+0.3
GC02	Grant County #	0.54	349	Pg	Pg	05 15 00.8	-0.4
GC02				Sg	Sg	05 15 08.4	+0.1
OK029	Liberty Lake	0.57	156	Pg	Pg	05 15 01.6	-0.3
OK029				Sg	Sg	05 15 09.7	+0.2
BLOK	Blackwell	0.60	44	Pg	Pg	05 15 02.1	-0.4
BLOK				Sg	Sg	05 15 09.7	-0.8
OK032	Salt Plains WL	0.61	322	Pg	Pg	05 15 02.3	-0.3
OK032				Sg	Sg	05 15 10.7	0.0
KAN14	Manchester OK	0.66	344		Pg	05 15 03.0	-0.5
KAN14				Sg	Sg	05 15 12.0	-0.1
BCOK	Bluff Creek, N	0.68	171	Pg	Pg	05 15 03.4	-0.4
BCOK				IAmb_Lg		05 15 12.7	
	comp=Z,147nm,0.9s						
OK033	Mehan	0.70	113		Pg	05 15 04.3	0.0
OK033				Sg	Sg	05 15 13.8	+0.2
KAN13	South Haven SW	0.72	17	Pg	Pg	05 15 04.4	-0.3
KAN17	Caldwell West	0.72	358	Pg	Pg	05 15 04.2	-0.5
KAN05	Bluff City Nor	0.79	352		Pg	05 15 05.3	-0.7
OK025	Westminster Rd	0.81	156	Pg	Pg	05 15 06.1	-0.3
KAN09	Caldwell North	0.81	7		Pg	05 15 06.0	-0.6
OK031	S. Brethren Rd	0.82	117		Pg	05 15 06.1	-0.4
OK031				Sg	Sg	05 15 17.1	0.0
KAN01	Argonia South	0.83	359	Pg	Pg	05 15 06.2	-0.5
QUOK	Quay	0.85	100	Pg	Pg	05 15 06.6	-0.5
QUOK				Sg	Sg	05 15 17.7	-0.4
KAN10	Anthony SW Sta	0.85	340	Pg	Pg	05 15 06.6	-0.5
KAN10				Sg	Sg	05 15 18.3	+0.1
OK030	Cody Creek RV	0.87	117	Pg	Pg	05 15 07.0	-0.5
OK030				Sg	Sg	05 15 18.7	-0.1
OK034	N. Norfolk Rd.	0.89	110		Pg	05 15 07.3	-0.5
OK034				Sg	Sg	05 15 19.1	-0.3
KAN08	Anthony NE Sta	0.92	348		Pg	05 15 07.9	-0.6
KAN06	Argonia West S	0.93	354		Pg	05 15 08.0	-0.6
KAN16	Harper SW Stat	0.94	344	Pg	Pg	05 15 08.4	-0.5
OKCFA	Oklahoma City	0.94	166		Pg	05 15 07.6	-1.2
OKCSW	OKLAHOMA CITY	0.95	165	Pg	Pg	05 15 08.3	-0.7
KAN12	Harper NE Stat	0.99	348		Pg	05 15 09.5	-0.4
U32A	Winter Ranch,	1.02	273	Pg	Pg	05 15 09.4	-1.1
FNO	Franklin	1.10	166	Pg	Pg	05 15 10.2	-1.7
T35A	Sooner Cattle	1.15	59		Pg	05 15 12.0	-0.8
W35A	Tecumseh	1.36	149	Pn	Pn	05 15 15.5	-0.3
TUL1	Leonard	1.63	104		Pn	05 15 19.9	+0.5
X34A	Smith Ranch, M	1.72	183		Pn	05 15 21.9	+1.2
X34A				IAmb_Lg		05 15 48.3	
	comp=Z,178nm,1.2s						
WMOK	Wichita Mounta	1.80	209	Pn	Pn	05 15 22.3	+0.5
R32A	Long Quarter,	2.23	340		Pn	05 15 29.2	+1.4
LOOK	Love County	2.37	169		Pn	05 15 30.3	+0.6
LOOK				IAmb_Lg		05 16 08.5	
	comp=Z,53nm,0.7s						
X37A	Clayton	2.59	131		Pn	05 15 33.7	+1.0
X37A				IAmb_Lg		05 16 17.1	
	comp=Z,41nm,0.8s						
U38A	Gravette	2.71	87	Pn	Pn	05 15 35.0	+0.7
KSU1	Kansas State U	2.91	18	Pn	Pn	05 15 37.2	+0.1
CBKS	Cedar Bluff	2.95	328	Pn	Pn	05 15 38.2	+0.6
CBKS				IAmb_Lg		05 16 30.8	
	comp=Z,40nm,0.7s						
Z35A	Perchaven, San	3.01	172	Pn	Pn	05 15 37.8	-0.7
HHAR	Hobbs	3.07	90	Pn	Pn	05 15 39.4	+0.1
W39A	Magazine	3.41	108	Pn	Pn	05 15 44.5	+0.6
W39A				IAmb_Lg		05 16 43.8	
	comp=Z,54nm,0.8s						
AMTX	Amarillo	3.52	247	Pn	Pn	05 15 45.2	-0.3
AMTX				IAmb_Lg		05 16 43.9	
	comp=Z,77nm,0.8s						
S39A	Bolivar	3.79	68		Pn	05 15 49.6	+0.5
S39A				IAmb_Lg		05 16 53.5	
	comp=Z,43nm,0.7s						
Z38A	Mt. Pleasant	3.81	143	Pn	Pn	05 15 49.0	-0.3
Z38A				IAmb_Lg		05 16 57.4	
	comp=Z,74nm,0.9s						
MIAR	Mount Ida	3.83	116	Pn	Pn	05 15 50.8	+1.1
MIAR				IAmb_Lg		05 16 58.4	
	comp=Z,27nm,0.9s						
U40A	Yellville	3.94	88	Pn	Pn	05 15 51.7	+0.4
U40A				IAmb_Lg		05 16 59.1	
	comp=Z,76nm,0.8s						
ABTX	Abilene, Hawle	4.01	204		Pn	05 15 53.0	+0.7
WHTX	Lake Whitney,	4.33	177	Pn	Pn	05 15 55.0	-1.6
X40A	Basin Creek Fa	4.40	113		Pn	05 15 59.9	+2.2
X40A				IAmb_Lg		05 17 10.8	
	comp=Z,23nm,0.7s						
N33A	J Bar K, Exete	4.41	3	Pn	Pn	05 15 57.3	-0.4
N33A				IAmb_Lg		05 17 21.7	
	comp=Z,36nm,0.7s						
MGMO	Mountain Grove	4.47	78	Pn	Pn	05 15 59.8	+1.2
MGMO				IAmb_Lg		05 17 16.3	
	comp=Z,37nm,0.7s						
WHAR	Wooly Hollow	4.55	102		Pn	05 15 59.7	+0.1

WHAR				IAmb_Lg		05 17 22.4	
	comp=Z,36nm,0.9s						
FCAR	Ozark Folk Cen	4.56	94		Pn	05 16 01.4	+1.5
FCAR				IAmb_Lg		05 17 19.3	
	comp=Z,30nm,0.9s						
237A	Washetta, Mont	4.60	159	Pn	Pn	05 16 00.7	+0.4
WLAR	White Oak Lake	4.62	123	IAmb_Lg		05 17 24.7	
	comp=Z,26nm,0.8s						
P38A	Dawn	4.68	44		Pn	05 16 02.4	+1.0
P38A				IAmb_Lg		05 17 19.1	
	comp=Z,35nm,1.0s						
KSCO	Kaye Shedlock'	4.72	306		Pn	05 16 03.7	+1.6
MSTX	Muleshoe	4.75	242		Pn	05 16 02.8	+0.3
R40A	Maddies Statio	4.78	64		Pn	05 16 03.5	+0.8
N35A	Tabor	4.82	19		Pn	05 16 02.5	-0.8
BGNE	Belgrade	5.09	356		Pn	05 16 07.1	+0.1
LCAR	Lake Charles	5.33	91	Pn	Pn	05 16 10.2	-0.1
LCAR				IAmb_Lg		05 17 41.8	
	comp=Z,21nm,0.8s						
T42A	Van Buren	5.39	81	IAmb_Lg		05 17 46.5	
	comp=Z,25nm,0.8s						
T25A	Trinidad	5.42	281		Pn	05 16 12.0	+0.2
T25A				IAmb_Lg		05 17 43.0	
	comp=Z,18nm,0.9s						
CCM	Cathedral Cave	5.46	70	Pn	Pn	05 16 12.7	+0.5
CCM				IAmb_Lg		05 17 47.0	
	comp=Z,37nm,0.8s						
P40A	Paris	5.52	53	IAmb_Lg		05 17 53.8	
	comp=Z,35nm,0.8s						
435B	Jarrell	5.53	179	IAmb_Lg		05 17 45.3	
	comp=Z,22nm,0.9s						
N38A	Joes South For	5.69	37		Pn	05 16 14.6	-0.6
PBMO	Poplar Bluff	5.90	83	IAmb_Lg		05 18 00.8	
	comp=Z,45nm,0.9s						
FVM	French Village	6.07	72		Pn	05 16 20.8	+0.3
JCT	Junction City	6.08	197		Pn	05 16 21.8	+1.1
JCT				IAmb_Lg		05 18 05.8	
	comp=Z,36nm,0.9s						
K31A	O'Neill	6.34	353	IAmb_Lg		05 18 18.0	
	comp=Z,43nm,0.9s						
143A	Socs Landing,	6.35	123	IAmb_Lg		05 18 20.0	
	comp=Z,20nm,0.9s						
PARMO	Parma	6.44	85	IAmb_Lg		05 18 21.1	
	comp=Z,40nm,0.7s						
S44A	Carbondale	6.92	76	IAmb_Lg		05 18 36.8	
	comp=Z,36nm,0.9s						
N41A	Harden Midland	6.95	49	IAmb_Lg		05 18 30.1	
	comp=Z,36nm,0.8s						
SIUC	Southern Illin	6.96	76	IAmb_Lg		05 18 30.7	
	comp=Z,33nm,0.8s						
ANMO	Albuquerque	7.23	262	Pg	Pb	05 16 58.5	+2.0
	comp=Z,0.1nm,0.3s,baz=69,slow=17,SNR=2.1						
ANMO				Lg	Lg	05 18 35.7	
	comp=Z,1.3nm,0.3s,baz=64,slow=7.9,SNR=8.3						
P43A	Skaggs, Pawnee	7.28	61	IAmb_Lg		05 18 54.0	
	comp=Z,30nm,0.9s						
ECSD	EROS Data Cent	7.45	6	Pn	Pn	05 16 39.1	-0.4
L40A	Anamosa	7.64	39	IAmb_Lg		05 19 04.1	
	comp=Z,24nm,0.8s						
MNTX	Cornudas Mount	7.85	236	Pn	Pn	05 16 45.4	+0.4
MNTX				IAmb_Lg		05 19 09.0	
	comp=Z,11nm,1.0s						
Y22D	IRIS PASSCAL I	7.85	256	IAmb_Lg		05 19 17.7	
	comp=Z,21nm,0.7s						
HDIL	Hopedale	7.86	55	Pn	Pn	05 16 46.2	+1.2
SUSD	Miller	8.16	354	IAmb_Lg		05 19 28.5	
	comp=Z,24nm,0.9s						
O44A	Mansfield	8.23	60	IAmb_Lg		05 19 30.1	
	comp=Z,21nm,0.8s						
L42A	Oliver, Polo	8.45	45	IAmb_Lg		05 19 29.4	
	comp=Z,23nm,0.7s						
TX31	Lajitas Ar. Si	8.57	217	Pn	Pn	05 16 56.2	+1.3
TXAR	Lajitas Array	8.57	217	Pn	Pn	05 16 54.4	-0.5
	comp=Z,0.1nm,0.3s,baz=37,slow=11,SNR=6.0						
TXAR				Lg	Lg	05 19 21.3	
	comp=Z,0.8nm,0.3s,baz=38,slow=28,SNR=9.2						
JFWS	Jewell Farm	8.75	39	IAmb_Lg		05 19 35.2	
	comp=Z,17nm,0.8s						
F33A	5 Mile Ranch,	9.57	6	IAmb_Lg		05 19 48.2	
	comp=Z,9.4nm,0.7s						
PDAR	Pinedale Array	11.16	309	Pn	Pn	05 17 28.5	-2.0
	comp=Z,0.2nm,0.3s,baz=127,slow=14,SNR=5.2						
ILAR	Eielson Array	40.60	330	P	P	05 22 29.9	-0.3
	comp=Z,0.4nm,0.7s,baz=98,slow=7.8,SNR=4.5						

*RSPR **26** 05:18:11.5, 19°.22N×68°.60W, h35^{km}±31^{km}, MD3.4/5*
*NEIC **26** 05:18:12.8±1.5, 19°.3N±0°.1×68°.41W±0°.02, h36^{km}±74^{km}, Error ellipse: s-maj=21.6km s-min=3.2km az=183.0*
ISC 26 05:18:11.4±1.9**, 19°.1N**±0°.2×**68°.61W**±0°.08**, h35^{km}, n29, σ0^{s}.77**/28**, 5C-1D, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DR12	Loma Pena Alta	0.80	246		Pn	05 18 32.9	+6.7
SDD	Santo Domingo	1.40	243		Sn	05 18 43.8	-7.8
AGPR	Aguadilla, PR	1.56	114	⇑eP	Pn	05 18 36.1	-0.5
AGPR	Aguadilla, PR	1.56	114	eS	Sn	05 18 54.0	-1.6
AGPR	Aguadilla, PR	1.56	114		Pn	05 18 36.2	-0.4
AGPR					Sn	05 18 54.2	-1.4
AGPR				IAML		05 19 03.1	
	comp=N,113nm,3.1s						
AGPR				IAML		05 19 07.6	
	comp=E,95nm,1.6s						
PRSN	Puerto Rico Se	1.65	122	Pn	Pn	05 18 37.7	-0.2
LSP	Las Mesas	1.72	123	⇑eP	Pn	05 18 37.8	-1.1
LSP	Las Mesas	1.72	123	eS	Sn	05 19 00.2	+0.6
CRPR	Cabo Rojo, PR	1.80	127	⇑eP	Pn	05 18 39.3	-0.6
CRPR	Cabo Rojo, PR	1.80	127	eS	Sn	05 19 02.1	+0.6
CRPR	Cabo Rojo, PR	1.80	127		Pn	05 18 40.3	+0.4
CRPR				IAML		05 19 07.0	
	comp=N,54nm,1.1s						
MLPR	Magueyes Islan	1.87	127	eS	Sn	05 19 03.8	+0.5
MLPR	Magueyes Islan	1.87	127	Pn	Pn	05 18 41.2	+0.3
MLPR				IAML		05 19 05.9	
	comp=E,50nm,0.7s						
AOPR	Arecibo Observ	1.92	113	⇑eP	Pn	05 18 41.2	-0.4
AOPR	Arecibo Observ	1.92	113	eS	Sn	05 19 04.0	-0.4
AOPR	Arecibo Observ	1.92	113		Pn	05 18 41.4	-0.2
AOPR				IAML		05 19 17.6	
	comp=N,67nm,0.5s						
OBIP	Obispado Ponce	2.18	119	⇑eP	Pn	05 18 45.7	+0.6
OBIP	Obispado Ponce	2.18	119	eS	Sn	05 19 11.1	+0.2
OBIP	Obispado Ponce	2.18	119		Pn	05 18 45.4	+0.3
CELP	Cerrillos	2.18	118	⇓eP	Pn	05 18 45.4	+0.1
CELP	Cerrillos	2.18	118	eS	Sn	05 19 10.6	-0.5
CELP	Cerrillos	2.18	118		Pn	05 18 45.5	+0.2
CELP				IAML		05 19 13.4	
	comp=E,38nm,0.4s						
CELP				IAML		05 19 16.4	
	comp=N,46nm,0.4s						
GCPR	Guaynabo City	2.52	108	Pn	Pn	05 18 52.2	+2.3
SJG	San Juan	2.53	113	Pn	Pn	05 18 50.1	0.0
SJG				IAML		05 19 24.8	
	comp=N,35nm,0.3s						
SJG				IAML		05 19 25.4	
	comp=N,34nm,0.4s						
SDDR	Presa de Saban	2.54	268	Pn	Pn	05 18 50.2	0.0
SDDR				IAML		05 19 20.4	
	comp=N,30nm,3.2s						
SDDR				IAML		05 19 50.3	
	comp=N,35nm,1.4s						
IGPR	InterUniversit	2.63	115	eS	Sn	05 19 22.5	+0.3
IGPR	InterUniversit	2.63	115		Sn	05 19 22.5	+0.3
PDPR	Patillas Dam,	2.68	113	Pn	Pn	05 18 52.7	+0.6
PDPR				IAML		05 19 52.6	
	comp=E,63nm,2.0s						
CBYP	Canovanas	2.74	107	Pn	Pn	05 18 52.9	-0.1
CBYP				IAML		05 19 33.6	
	comp=N,62nm,0.2s						

*NNC **26** 05:19:22.2±0.4, 42°.53N×70°.44E, h0^{km}, mb3.5, mpv2.8, Error ellipse: s-maj=2.1km s-min=1.4km az=16.0, Suspected Mining explosion.*
*KRNET **26** 05:19:23.4±0.1, 42°.40N×70°.70E, h12^{km}, mb3.0*
ISC 26 05:19:21.5±0.8**, 42°.58N**±0°.04×**70°.63E**±0°.04**, h0^{km}, n18, σ0^{s}.59**/32**, 22C-13D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK07	Karatay Array	0.51	350	⇑P	Pb	05 19 33.4	0.0
KK07				⇑S	Sb	05 19 41.7	+0.2
KK06	Karatay Array	0.52	352	⇓P	Pb	05 19 33.6	+0.1
KK06				⇑S	Sb	05 19 41.9	+0.4
KK02	Karatay Array	0.53	351	⇓P	Pb	05 19 33.6	0.0
	2.2nm,0.3s,baz=186,slow=18						
KK02				⇓S	Sb	05 19 41.5	-0.3
	34nm,0.6s,baz=186,slow=32						
KK03	Karatay Array	0.53	350	⇑P	Pb	05 19 33.6	0.0
KK03				⇑S	Sb	05 19 41.5	-0.3
KK01	Karatay Array	0.53	351	⇓P	Pb	05 19 33.7	0.0
KK01				⇑S	Sb	05 19 41.5	-0.4
KK08	Karatay Array	0.53	349	⇓P	Pb	05 19 33.8	+0.1
KK08				⇑S	Sb	05 19 42.1	+0.1
KK04	Karatay Array	0.53	351	⇑P	Pb	05 19 33.6	-0.1
KK04				⇑S	Sb	05 19 41.8	-0.3
KK05	Karatay Array	0.54	352	⇑P	Pb	05 19 33.7	-0.1
KK05				⇑S	Sb	05 19 41.6	-0.6
KK09	Karatay Array	0.55	350	⇑P	Pb	05 19 34.0	0.0
KK09				⇑S	Sb	05 19 42.4	0.0
TRKS	Terek-Say	1.12	160	⇑iP	Pg	05 19 42.5	-0.4
	baz=59						
TRKS				⇑eS	Sg	05 19 56.5	-1.0
	baz=59						
MNAS	Manas	1.39	93	⇓iP	Pb	05 19 48.9	+0.4
	baz=86						
MNAS				⇓iS	Sb	05 20 07.3	+0.5
	baz=86						
TAS	Tashkent	1.60	219	⇓eP	Pn	05 19 51.6	+0.5
	baz=25						
TAS				⇓eS	Sn	05 20 11.8	-0.7
	baz=25						
EKS2	Erkin-Say	2.33	87	⇑eP	Pb	05 20 04.5	+0.1
	baz=82						
EKS2				⇑iS	Sb	05 20 34.5	+0.8
	baz=82						
BTK	Batken	2.53	177	⇑iP	Pn	05 20 05.2	+1.3
	baz=78						
BTK				⇑iS	Sn	05 20 35.7	+0.3
	baz=78						
AAK	Ala-Archa	2.86	88	⇓Pg	Pg	05 20 16.0	-0.2
	3.0nm,0.3s						
AAK				⇓Lg	Lg	05 20 57.1	
	8.8nm,0.6s						
USP	Ospenovka	2.93	75	⇑eP	Pb	05 20 13.2	-1.4
	baz=72						
USP				⇑eS	Sb	05 20 49.4	-1.5
	baz=72						
TKM2	Tokmak 2	3.68	83	⇓Pg	Pg	05 20 32.4	+0.5
	5.9nm,1.0s						
TKM2				⇓Lg	Lg	05 21 23.1	
	6.7nm,0.6s						
PDGK	Podgornoye	6.55	80	⇑Lg	Lg	05 22 55.2	
	4.2nm,0.9s						

*PRU **26** 05:22:33.6±0.0, 51°.44N×16°.19E, h0^{km}*
*VIE **26** 05:22:34.7±1.6, 51°.33N×16°.08E, h0^{km}, mb2.3/2, ml2.6/3, Error ellipse: s-maj=10.3km s-min=8.2km az=47.0 70 km WNW of Wroclaw Suspected Mining induced.*
ISC 26 05:22:32.8±1.2**, 51°.47N**±0°.05×**16°.20E**±0°.03**, h0^{km}, n23, σ0^{s}.65**/45**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.63	175	ePg	Pg	05 22 45.0	+0.2
KSP				eSg	Sg	05 22 53.5	+0.4
CHVC	Chvalec	0.89	186	ePG	Pg	05 22 49.9	+0.1
CHVC				eSG	Sg	05 23 02.0	+0.7
	comp=Z,35nm,0.3s						
OSTC	Ostas	0.92	179	ePG	Pg	05 22 50.7	+0.4
OSTC				eSG	Sg	05 23 02.6	+0.4
	comp=Z,31nm,0.4s						
UPC	Upice	0.97	187	ePG	Pg	05 22 51.5	+0.1
UPC				eSG	Sg	05 23 04.5	+0.5
	comp=Z,83nm,0.3s						
DPC	Dobruska-Polom	1.13	176	ePG	Pg	05 22 53.8	-0.5
DPC				eSG	Sg	05 23 08.8	-0.1
	comp=Z,25nm,0.3s						
PVCC	Panska Ves	1.40	228	ePG	Pn	05 22 59.3	-0.2
PVCC				eSG	Sb	05 23 18.3	+0.2
	comp=Z,96nm,0.2s						
KRLC	Kraliky	1.45	165	ePG	Pn	05 22 59.8	-0.4
KRLC				eSG	Sg	05 23 18.6	-0.6
	comp=Z,22nm,0.4s						
BRG	Berggiesshubel	1.54	248	Pg	Pn	05 23 01.6	+0.1
BRG				Sg	Sn	05 23 22.1	-0.1
BRG				Amp		05 23 23.1	
	comp=Z,24nm,0.5s						
PRU	Pruhonice	1.82	216	ePG	Pb	05 23 06.4	-0.5
PRU				eSG	Sb	05 23 30.1	-0.2
	comp=Z,10nm,0.3s						
MORC	Moravsky Berou	1.90	153	ePN	Pn	05 23 05.8	-0.7
MORC				eSG	Sb	05 23 32.0	-0.6
CLL	Collm	2.01	267	ePg	Pg	05 23 11.0	-0.2
CLL				eSg	Sg	05 23 37.0	-0.2
	comp=Z,19nm,0.4s						
OKC	Ostrava-Krasne	2.05	142	ePG	Pb	05 23 10.6	-0.3
OKC				eSG	Sb	05 23 37.1	+0.1
	comp=Z,17nm,0.5s						
VRAC	Vranov	2.18	173	ePN	Pn	05 23 10.7	+0.4
VRAC				eSG	Sg	05 23 42.0	-0.8
TREC	Trest	2.23	192	eSG	Sb	05 23 42.7	+0.7
	comp=Z,14nm,0.3s						
KRUC	Moravsky	2.42	177	eSG	Sg	05 23 49.9	-0.4
OJC	Ojcow	2.60	117	ePg	Pg	05 23 22.5	-0.1
OJC				eSg	Sg	05 23 57.0	+0.6
NKC	Novy Kostel	2.68	244	ePG	Pb	05 23 22.2	+0.6
NKC				eSG	Sg	05 23 59.1	+0.3
	comp=Z,19nm,0.3s						
KHC	Kasperske Hory	2.88	217	ePN	Pn	05 23 19.8	-0.2
KHC				ePG	Pb	05 23 25.6	+0.5
KHC				eSN	Sn	05 23 54.8	-0.6
KHC				eSG	Sg	05 24 04.5	-0.8
	comp=Z,7.4nm,0.4s						
CKRC	Cesky Krumlov	2.92	205	ePG	Pb	05 23 26.1	+0.4
CKRC				eSG	Sg	05 24 04.6	-1.9
LANS	Liptovska Anna	3.13	137	ePG	Pg	05 23 33.1	+0.4
LANS				eSG	Sg	05 24 12.3	-1.0
CONA	Conrad Observa	3.56	184	ePg	Pb	05 23 38.5	+1.9
	comp=Z,0.8nm,0.2s						
CONA				eSg	Sg	05 24 26.5	-0.4
	comp=Z,12nm,0.5s						
MOA	Molln	3.84	200	i Pn	Pn	05 23 33.8	+0.7
	comp=Z,0.4nm,0.1s						
MOA				eSg	Sg	05 24 35.1	-0.8
	comp=Z,6.3nm,0.5s						
ARSA	Arzberg	4.25	186	eSg	Sg	05 24 48.4	-0.8
	comp=Z,5.9nm,0.8s						

MAN 26 05:30:31.4, 13°.67N×120°.75E, h16^{km}, mb4.0, ML2.8, MS2.4, Mindoro

*IDC **26** 05:37:07.0±8.3, 36°.99N×71°.32E, h84^{km}±30^{km}, mb3.7/3, mb1 3.6/9, mb1mx3.3/48, mbtmp3.8/9, Error ellipse: s-maj=120.6km s-min=22.5km az=161.0*
*NNC **26** 05:37:12.2±4.8, 37°.44N×71°.24E, h118^{km}±98^{km}, mb3.2, mpv3.9, Error ellipse: s-maj=45.8km s-min=27.4km az=35.0*
ISC 26 05:37:12.2±2.0**, 37°.5N**±0°.1×**71°.21E**±0°.10**, h100^{km}, n25, σ1^{s}.53**/29**, mb4.1**/3**, 6C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	Iuzhnay	4.78	349	Pg	Pn	05 38 24.9	+3.0
	3.3nm,0.1s						
IUG				Lg	Lg	05 39 20.3	
	35nm,0.4s						
AML	Almayashu	5.05	21	P	Pn	05 38 26.4	+0.4
	SNR=82						
UCH	Uchtor	5.41	27	P	Pn	05 38 32.0	+1.2
	SNR=7.6						
MRKS	Merke	5.51	16	Pg	Pn	05 38 32.8	+0.9
	4.9nm,0.3s						
MRKS				Lg	Lg	05 39 34.8	
	21nm,0.3s						
EKS2	Erkin-Say	5.56	20	P	Pn	05 38 33.7	+1.0
	SNR=6.7						
BRLS	Borolday	5.67	350	Pg	Pn	05 38 33.2	-0.8
	3.1nm,0.1s						
BRLS				Lg	Lg	05 39 35.4	
	8.7nm,0.2s						
KK02	Karatay Array	5.67	355	⇑P	Pn	05 38 35.6	+1.6
	3.0nm,0.2s,baz=183,slow=15						
KK02				⇑S	Sn	05 39 39.4	+1.7
	3.7nm,0.4s,baz=184,slow=24						
AAK	Ala-Archa	5.76	25	P	Pn	05 38 35.9	+0.5
	4.3nm,0.3s,baz=186,slow=5.9,SNR=37						
AAK				S	Sn	05 39 40.3	+0.2
	0.9nm,0.3s,baz=318,slow=21,SNR=7.8						
AAK	Ala-Archa	5.76	25	P	Pn	05 38 35.8	+0.5
	SNR=14						
AAK	Ala-Archa	5.76	25	⇑P	Pn	05 38 35.6	+0.2
	4.9nm,0.4s						
USP	Ospenovka	6.33	22	P	Pn	05 38 42.9	-0.1
	SNR=5.9						
TKM2	Tokmak 2	6.41	30	P	Pn	05 38 44.0	-0.3
	SNR=8.7						
TKM2	Tokmak 2	6.41	30	⇑P	Pn	05 38 43.7	-0.5
	3.1nm,0.5s						
TKM2				⇑S	Sn	05 39 57.3	+1.2
	4.4nm,1.1s						
KST	Kastek	6.66	32	P	Pn	05 38 47.0	-0.6
DGS	Degeres	6.75	30	P	Pn	05 38 47.2	-1.6
GEYT	Alibeck	10.39	277	P	Pn	05 39 35.8	-2.4
	0.7nm,0.3s,baz=244,slow=19,SNR=1.3						
GEYT				S	Sn	05 41 30.9	-1.7
	1.8nm,0.3s,baz=65,slow=25,SNR=6.0						
MKAR	Makanchi Array	12.43	38	P	Pn	05 40 03.0	-2.5
	0.0nm,0.3s,baz=222,slow=12,SNR=2.6						
KURBB	Kurchatov Arra	14.17	19	P	Pn	05 40 28.7	+0.6
	0.0nm,0.3s,baz=207,slow=9.9,SNR=2.8						
AB31	Akbulak array	14.34	329	P	Pn	05 40 30.6	+0.2
	0.5nm,0.6s,baz=150,slow=13,SNR=12						
AB31				S	Sn	05 43 05.0	-3.3
	1.0nm,0.5s,baz=153,slow=23,SNR=6.3						
AKTO	Aktyubinsk	16.05	328	P	Pn	05 40 53.3	+1.4
	0.4nm,0.3s,baz=137,slow=8.2,SNR=7.3						
AKTO	Aktyubinsk	16.05	328	⇑P	Pn	05 40 54.2	+2.3
	1.6nm,0.5s						
AKTO				⇓S	Sn	05 43 46.0	-3.5
	3.7nm,1.2s						
ZALV	Zalesovo Beam	18.98	25	P	P	05 41 26.3	+0.7
	0.2nm,0.3s,baz=219,slow=11,SNR=5.3						
FINES	FINESS Array B	36.79	325	P	P	05 44 09.9	0.0
	2.7nm,0.8s,baz=118,slow=12,SNR=5.6						
ARCES	ARCESS Array B	40.33	337	P	P	05 44 39.1	-0.3
	3.0nm,0.9s,baz=115,slow=8.2,SNR=8.3						
NOA	NORSAR Array B	43.73	322	P	P	05 45 06.9	-0.3
	1.0nm,0.9s,baz=83,slow=7.2,SNR=4.6						

*CRAAG **26** 05:40:52.0, 36°.62N×5°.24E, Ml2.7*
*MDD **26** 05:40:53.0±0.6, 36°.89N×5°.37E, h0^{km}, mb4.2/12, Error ellipse: s-maj=9.1km s-min=5.1km az=48.0, PRXIMO*
*LDG **26** 05:40:55.2±0.3, 36°.80N×5°.05E, h30^{km}, Ml3.2/11, Error ellipse: s-maj=6.6km s-min=4.3km az=154.0*
ISC 26 05:40:51.6±1.0**, 36°.94N**±0°.06×**5°.35E**±0°.05**, h10^{km}, n51, σ2^{s}.24**/83**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DFRA	Djebel Bou Aff	0.58	132	P	Pg	05 41 02.9	0.0
DFRA	Djebel Bou Aff	0.58	132	P	Pg	05 41 02.9	0.0
CASM	Ain Smara	1.14	126	P	Pg	05 41 12.3	-1.3
CASM	Ain Smara	1.14	126	P	Pg	05 41 12.3	-1.3
MAHO	Mahon	3.08	344	P	Pn	05 41 41.8	+1.6
MAHO				S	Sn	05 42 16.8	-0.3
MAHO	Mahon	3.08	344	P	Pn	05 41 41.8	+1.6
MAHO				S	Sn	05 42 16.8	-0.3
ETOS	Mallorca	3.46	326	P	Pn	05 41 48.2	+2.6
	4.6nm,0.2s,SNR=5.6						
ETOS				S	Sn	05 42 27.1	+0.5
	14nm,0.2s,SNR=7.9						
AFON	Font Roja	4.97	292	P	Pn	05 42 08.0	+1.5
	4.2nm,0.1s,SNR=7.9						
CART	Cartagena	5.10	279	P	Pn	05 42 08.4	+0.3
CFON	Fontmartina	5.32	336	P	Pn	05 42 13.4	+2.2
	1.8nm,0.2s,SNR=4.0						
CFON				S	Sn	05 43 11.6	-1.0
	2.8nm,0.2s,SNR=7.9						
EMUR	La Murta	5.32	282	P	Pn	05 42 12.2	+1.0
	1.0nm,0.2s,SNR=7.9						
EMUR				S	Sn	05 43 13.0	+0.4
	2.0nm,0.3s,SNR=7.9						
EPOB	Poblet	5.52	324	P	Pn	05 42 16.3	+2.4
	2.5nm,0.3s,SNR=7.9						
EPOB				S	Sn	05 43 16.1	-1.3
	1.3nm,0.4s,SNR=7.9						
EMOS	Mosqueruela	5.70	309	P	Pn	05 42 18.0	+1.5
	0.7nm,0.2s,SNR=7.9						
ETOB	Tobarra	5.72	289	P	Pn	05 42 19.1	+2.4
	2.6nm,0.2s,SNR=16						
ETOB				S	Sn	05 43 21.9	-0.5
	13nm,0.7s,SNR=7.9						
SJAF	Saint Jean de	5.86	342	P	Pn	05 42 21.1	+2.6
	0.2nm,0.1s,SNR=7.9						
SJAF				S	Sn	05 43 25.9	+0.2
	2.1nm,0.4s,SNR=7.9						
ENIJ	Nijar	6.05	273	P	Pn	05 42 20.2	-0.9
	1.3nm,0.1s,SNR=7.9						
ENIJ				S	Sn	05 43 26.0	-4.4
	8.3nm,0.4s,SNR=7.9						
CLLI	Llivia	6.12	336	P	Pn	05 42 25.4	+3.2
	1.2nm,0.2s,SNR=7.9						
CLLI				S	Sn	05 43 34.6	+2.4
	3.1nm,0.4s,SNR=7.9						
PGF	Pioggiola	6.27	26	ePn	Pn	05 42 27.0	+2.7
PGF				eSn	Sn	05 43 35.5	-0.6
	6.1nm,0.2s						
PGF	Pioggiola	6.27	26	Pn	Pn	05 42 27.0	+2.7
PGF				Sn	Sn	05 43 35.5	-0.6
	3.1nm,0.2s						
CSOR	Sort	6.33	330	P	Pn	05 42 28.7	+3.6
	1.4nm,0.2s,SNR=11						
CSOR				S	Sn	05 43 39.2	+1.7
	1.8nm,0.3s,SNR=6.1						
SESP	Santiago Espad	6.38	283	P	Pn	05 42 28.2	+2.4
	6.2nm,0.2s,SNR=7.9						
SESP				S	Sn	05 43 37.7	-1.2
	2.9nm,0.2s,SNR=7.9						
LMR	La Mourre	6.45	8	ePn	Pn	05 42 28.9	+2.2
LMR				eSn	Sn	05 43 38.9	-1.4
	3.0nm,0.2s						
LMR	La Mourre	6.45	8	Pn	Pn	05 42 28.9	+2.2
LMR				Sn	Sn	05 43 38.9	-1.4
	1.5nm,0.2s						
EBER	Berja	6.60	272	P	Pn	05 42 27.9	-1.0
	1.6nm,0.2s,SNR=7.9						
EBER				S	Sn	05 43 41.8	-2.4
	4.5nm,0.5s,SNR=7.9						
FRF	La Foret Royal	6.69	8	ePn	Pn	05 42 31.7	+1.7
FRF				eSn	Sn	05 43 44.7	-1.6
	3.3nm,0.2s						
FRF	La Foret Royal	6.69	8	Pn	Pn	05 42 31.7	+1.7
FRF				Sn	Sn	05 43 44.7	-1.6
	1.7nm,0.2s						
EQES	Quesada	6.76	280	P	Pn	05 42 33.1	+2.1
	1.2nm,0.2s,SNR=11						
EQES				S	Sn	05 43 48.6	+0.5
	2.0nm,0.3s,SNR=7.9						
MTLF	Montolieu	6.83	340	ePn	Pn	05 42 32.5	+0.6
MTLF				eSn	Sn	05 43 45.7	-4.0
	0.8nm,0.3s						
MTLF	Montolieu	6.83	340	Pn	Pn	05 42 32.5	+0.6
SMRF	Simiane la Rot	7.04	1	ePn	Pn	05 42 36.3	+1.6
SMRF	Simiane la Rot	7.04	1	Pn	Pn	05 42 36.3	+1.6
SBF	Sospel	7.10	12	ePn	Pn	05 42 37.9	+2.3
SBF				eSn	Sn	05 43 54.7	-1.7
	7.4nm,0.3s						
SBF	Sospel	7.10	12	Pn	Pn	05 42 37.9	+2.3
SBF				Sn	Sn	05 43 54.7	-1.7
	3.7nm,0.3s						
EPF	Esparros	7.20	329	ePn	Pn	05 42 37.5	+0.5
EPF	Esparros	7.20	329	eP	Pn	05 42 41.2	+4.2
EPF				eSn	Sn	05 43 53.1	-5.7
EPF	Esparros	7.20	329	Pn	Pn	05 42 37.5	+0.5
LASF	Ste Croix	7.22	351	ePn	Pn	05 42 39.1	+1.8
LASF				eSn	Sn	05 43 56.6	-2.7
	0.7nm,0.3s						
LASF	Ste Croix	7.22	351	Pn	Pn	05 42 39.1	+1.8
LASF				Sn	Sn	05 43 56.6	-2.7
	0.3nm,0.3s						
MBDF	Montbardon	7.86	7	ePn	Pn	05 42 49.3	+3.2
MBDF				eSn	Sn	05 44 12.8	-2.4
	0.5nm,0.2s						
MBDF	Montbardon	7.86	7	Pn	Pn	05 42 49.3	+3.2
MBDF				Sn	Sn	05 44 12.8	-2.4
	0.2nm,0.2s						
VIVF	Saint-Julien-l	7.93	357	ePn	Pn	05 42 47.6	+0.6
VIVF				eSn	Sn	05 44 13.7	-3.0

	0.8nm,0.2s						
VIVF	Saint-Julien-l	7.93	357	Pn	Pn	05 42 47.6	+0.6
VIVF				Sn	Sn	05 44 13.7	-3.0
	0.4nm,0.2s						
ORIF	Oris-en-Rattie	7.99	3	ePn	Pn	05 42 48.9	+1.1
ORIF				eSn	Sn	05 44 14.6	-3.6
	0.2nm,0.2s						
ORIF	Oris-en-Rattie	7.99	3	Pn	Pn	05 42 48.9	+1.1
ORIF				Sn	Sn	05 44 14.6	-3.6
	0.1nm,0.2s						
PAB	San Pablo	8.06	292	P	Pn	05 42 50.7	+1.9
	0.6nm,0.3s,SNR=7.9						
LPG	La Plagne	8.62	7	ePn	Pn	05 42 59.3	+2.6
LPG	La Plagne	8.62	7	Pn	Pn	05 42 59.3	+2.6
LPL	La Plagne	8.64	7	ePn	Pn	05 42 59.9	+3.1
LPL	La Plagne	8.64	7	Pn	Pn	05 42 59.9	+3.1
BGF	Bois d'Agland	9.79	350	ePn	Pn	05 43 15.5	+3.0
BGF	Bois d'Agland	9.79	350	Pn	Pn	05 43 15.5	+3.0

BJI ***26*** *05:45:15.3±0.0, 9°.20S×71°.30W, h610^{km}, mB6.5/65*

MOS ***26*** *05:45:17.0±0.9, 9°.13S×71°.30W, h601^{km}, mb6.2/22, Error ellipse: s-maj=7.9km s-min=5.4km az=83.4*

ARE ***26*** *05:45:17±0.0, 9°.69S×71°.65W, h637^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=90.0*

BDF ***26*** *05:45:17±0.0, 9°.27S×71°.34W, h609^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=90.0*

BGR ***26*** *05:45:17.1±0.0, 9°.42S×71°.50W, h613^{km}±13^{km}, mb6.6, mB_BB7.0*

NEIC ***26*** *05:45:18.3, 9°.19S×71°.29W, h602^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M_{rr}-1.05; $M_{\theta\theta}$-0.02; $M_{\phi\phi}$1.07; $M_{r\theta}$-0.04; $M_{\theta\phi}$-0.25; $M_{\phi r}$0.65; Fault plane solution: $M_0$1.27000×10^{19} NP1:ϕ_s342.64000°, δ29.94000°, λ-98.43000°. NP2:ϕ_s172.35000°, δ60.42000°, λ-85.17000°. Principal axes: T 1.3041, Plg15.0000°, Azm259.0000°; N -0.0708, Plg4.0000°, Azm350.0000°; P -1.2333, Plg74.0000°, Azm95.0000°;*

NEIC ***26*** *05:45:18.4±2.1, 9°.18S±0°.08×71°.26W±0°.08, h603^{km}±3^{km}, mb6.1/853, Mwb6.7/122, Mwc6.7/74, Mww6.7, ML6.5(ARE) Error ellipse: s-maj=12.2km s-min=10.8km az=66.0*

VAO ***26*** *05:45:18.0±0.2, 9°.27S×71°.33W, h605^{km}±2^{km}, mb6.2*

IDC ***26*** *05:45:18.5±0.2, 9°.13S×71°.25W, h610^{km}±2^{km}, mb5.4/48, mb1 5.4/56, mb1mx5.4/59, mbtmp6.3/56, Error ellipse: s-maj=5.5km s-min=4.3km az=78.0*

GCMT ***26*** *05:45:20.4±0.1, 9°.14S±0°.01×71°.35W±0°.01, h614^{km}, MW6.7/164, Moment Tensor Solution. s164,c431; s157,c287; Duration: 5s.4 Moment tensor: Scale 10^{19} Nm; M_{rr}-1.09±.01; $M_{\theta\theta}$0.09±.01; $M_{\phi\phi}$1.01±.01; $M_{r\theta}$-0.10±.01; $M_{\theta\phi}$-0.22±.01; $M_{\phi r}$0.79±.01; Best double couple: $M_0$1.33600×10^{19} NP1:ϕ_s344.00000°, δ27.00000°, λ-95.00000°. NP2:ϕ_s170.00000°, δ63.00000°, λ-87.00000°. Principal axes: T 1.3190, Plg18.0000°, Azm258.0000°; N 0.0390, Plg2.0000°, Azm349.0000°; P -1.3520, Plg72.0000°, Azm87.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to mantle waves, cutoff=125s. Triangular moment-rate function*

NEIC ***26*** *05:45:21, 9°.13S×71°.07W, h610^{km}, Moment Tensor Solution. Duration: 6s.2 Moment tensor: Scale 10^{19}Nm; M_{rr}-1.07; $M_{\theta\theta}$0.17; $M_{\phi\phi}$0.90; $M_{r\theta}$-0.14; $M_{\theta\phi}$-0.19; $M_{\phi r}$0.65; Fault plane solution: $M_0$1.21000×10^{19} NP1: ϕ_s345.00000°, δ28.00000°, λ-91.00000°. NP2: ϕ_s167.00000°, δ62.00000°, λ-89.00000°. Principal axes: T 1.1468, Plg17.0000°, Azm256.0000°; N 0.1252, Plg1.0000°, Azm347.0000°; P -1.2719, Plg73.0000°, Azm79.0000°;*

UCR ***26*** *05:45:24.8±1.9, 9°.70S×72°.28W, h692^{km}±900^{km}, mb6.7(NEIC)*

DNK ***26*** *05:45:31.8±3.8, 7°.67S×71°.19W, h700^{km}±33^{km}, mb5.9*

NEIC ***26*** *05:45:34.3, 9°.32S×70°.76W, h601^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M_{rr}-0.98; $M_{\theta\theta}$0.03; $M_{\phi\phi}$0.94; $M_{r\theta}$-0.08; $M_{\theta\phi}$-0.19; $M_{\phi r}$0.71; Fault plane solution: $M_0$1.21000×10^{19} NP1:ϕ_s171.59000°, δ63.10000°, λ-87.32000°. NP2:ϕ_s345.68000°, δ27.02000°, λ-95.27000°. Principal axes: T 1.2147, Plg18.0000°, Azm260.0000°; N -0.0015, Plg2.0000°, Azm350.0000°; P -1.2133, Plg72.0000°, Azm88.0000°;*

ISC 26 05:45:17.8±0.2**, 9°.21S**±0°.02×**71°.25W**±0°.03**, h611**^{km}±1^{km}**, h612**^{km}**:pP-P, n2432, σ1s.85**/2994**, mb6.1**/629**, 154C-690D, Fault plane solution: NP1:**ϕ_s175.89159°**,** δ57.12981°**,** λ-85.35407°. **NP2:**ϕ_s347.37585°**,** δ33.16039°**,** λ-97.14459°. **Principal axes:** T Plg12.0155°**,** Azm262.5346°**;** N Plg3.9009°**,** Azm353.3662°**;** P Plg77.3491°**,** Azm101.0515°**; Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CZSB	Cruzeiro do Su	2.06	316	eP	P	05 46 33.2	-0.2
CZSB				eS	S	05 47 33.3	-1.5
CZSB	Cruzeiro do Su	2.06	316	P	P	05 46 33.0	-0.4
CZSB				S	S	05 47 33.4	-1.3
ETMB	Extrema	5.00	97	eP	P	05 46 52.4	+1.0
ETMB				eS	S	05 48 08.5	+0.7
ETMB	Extrema	5.00	97	P	P	05 46 52.3	+0.9
ETMB				S	S	05 48 08.2	+0.4
TBTG	Tabatinga, AM	5.17	15	eP	P	05 46 54.0	+1.2
TBTG	Tabatinga, AM	5.17	15	P	P	05 46 53.8	+1.0
NNA	Nana	6.15	243	P	P	05 47 00.9	0.0
	618nm,0.3s,baz=47,slow=6.9,SNR=810						
NNA				S	S	05 48 24.2	-1.0
	96nm,0.3s,baz=340,slow=22,SNR=9.4						
NNA	Nana	6.15	243	⇑P	P	05 47 00.9	0.0
NNA	Nana	6.15	243	P	P	05 47 01.1	+0.2
ATAH	Atahualpa	7.37	286	P	P	05 47 13.4	+1.2
	204nm,0.3s,baz=110,slow=7.1,SNR=528						
ATAH				S	S	05 48 46.6	+1.0
	100nm,0.3s,baz=245,slow=19,SNR=15						
I08BO	LAS PENAS INFR	7.47	159	P	P	05 47 15.0	+1.8
	baz=352,slow=10.0,SNR=3.6						
LPAZ	La Paz	7.66	157	P	P	05 47 15.6	+0.6
	178nm,0.3s,baz=333,slow=7.0,SNR=2313						
LPAZ				S	S	05 48 49.8	-1.1
	11nm,0.3s,baz=195,slow=22,SNR=4.3						
LPAZ	La Paz	7.66	157	⇑iP	P	05 47 15.6	+0.6
LPAZ				i S	S	05 48 45.8	-5.1
LPAZ	La Paz	7.66	157	⇑P	P	05 47 15.6	+0.6
LPAZ	La Paz	7.66	157	eP	P	05 47 15.9	+0.9
LPAZ				eS	S	05 48 49.5	-1.4
LPAZ	La Paz	7.66	157	P	P	05 47 16.1	+1.0
SAML	Samuel	7.97	89	P	P	05 47 18.5	+1.2
SAML	Samuel	7.97	89	P	P	05 47 18.5	+1.2
AP01	Chacalluta	9.14	175	eP	P	05 47 27.0	-1.4
AP01				i S	S	05 49 09.4	-6.2
AP01	Chacalluta	9.14	175	P	P	05 47 26.9	-1.6
PB16	IPOC Station P	9.22	170	eP	P	05 47 28.9	-0.9
PB16				i S	S	05 49 13.5	-4.5
PB16	IPOC Station P	9.22	170	P	P	05 47 29.0	-0.9
PB12	IPOC Station P	9.39	175	⇓iP	P	05 47 28.7	-2.2
PB12				i S	S	05 49 13.4	-6.7
PB12	IPOC Station P	9.39	175	P	P	05 47 29.2	-1.7
PB11	IPOC Station P	10.60	172	⇓iP	P	05 47 41.8	-1.1
PB11				i S	S	05 49 36.0	-5.9
PB11	IPOC Station P	10.60	172	P	P	05 47 42.0	-0.9
TA02	Huaiquique	11.04	175	eP	P	05 47 46.5	-0.6
TA02				eS	S	05 49 43.1	-6.5
TA02	Huaiquique	11.04	175	P	P	05 47 47.0	-0.1
PB08	IPOC Station P	11.05	170	eP	P	05 47 44.1	-3.5
PB08				i S	S	05 49 43.3	-7.2
PB08	IPOC Station P	11.05	170	P	P	05 47 47.1	-0.5
TA01	Diego Aracena	11.33	175	⇓iP	P	05 47 49.4	-0.5
TA01				eS	S	05 49 45.7	-9.1
TA01	Diego Aracena	11.33	175	P	P	05 47 49.5	-0.5
VILB	Vilhena	11.46	110	eP	P	05 47 52.6	+1.3
VILB	Vilhena	11.46	110	P	P	05 47 52.6	+1.3
OTAV	Otavalo	11.81	322	P	P	05 47 56.1	+0.8
OTAV	Otavalo	11.81	322	⇑P	P	05 47 55.8	+0.4
OTAV				⇑S	S	05 50 07.5	+3.0
OTAV	Otavalo	11.81	322	eP	P	05 47 55.8	+0.4
OTAV				eS	S	05 50 03.0	-1.6
OTAV	Otavalo	11.81	322	P	P	05 47 56.1	+0.8
PB01	IPOC Station P	11.88	172	⇓iP	P	05 47 54.9	-0.6
PB01	IPOC Station P	11.88	172	P	P	05 47 55.2	-0.3
PB01	IPOC Station P	11.88	172	i P	P	05 47 54.7	-0.8
PB01				eS	S	05 50 01.1	-3.9
PB01				IAML		05 50 08.8	
	comp=Z,3μm,1.0s						
CPAS2	Pasto	11.97	330	eP	P	05 47 57.5	+0.8
CPAS1	Pasto	11.97	329	eP	P	05 48 00.5	+3.6
SIV	San Ignacio	12.00	125	P	P	05 47 57.3	+0.7
	comp=Z,197nm,0.3s,baz=298,slow=9.5,SNR=1488						
SIV				S	S	05 50 10.0	+3.0
	comp=Z,36nm,0.3s,baz=273,slow=21,SNR=5.1						
GCUF	Volcan Galeras	12.02	329	eP	P	05 47 58.3	+0.9
MACA	Manacapuru-AM	12.10	61	eP	P	05 47 58.2	+0.5
MACA	Manacapuru-AM	12.10	61	P	P	05 47 58.1	+0.4
PB02	IPOC Station P	12.11	174	⇓iP	P	05 47 57.5	-0.2
PB02	IPOC Station P	12.11	174	eP	P	05 47 56.5	-1.2
PB02				eS	S	05 50 00.1	-8.8
PB02				IAML		05 50 22.4	
	comp=Z,3μm,0.6s						
PB07	IPOC Station P	12.51	174	⇓iP	P	05 48 01.4	-0.4
PB07	IPOC Station P	12.51	174	P	P	05 48 00.9	-0.9
PB07	IPOC Station P	12.51	174	i P	P	05 48 01.6	-0.2
PB07				eS	S	05 50 14.1	-2.3
PB07				IAML		05 50 27.8	
	comp=Z,3μm,0.8s						
BETC	Betania	12.53	340	eP	P	05 48 02.4	+0.4
PB09	IPOC Station P	12.66	171	⇓iP	P	05 48 03.3	+0.1
PB09	IPOC Station P	12.66	171	P	P	05 48 03.2	-0.1
PB03	IPOC Station P	12.84	174	⇓iP	P	05 48 04.5	-0.5
PB03	IPOC Station P	12.84	174	i P	P	05 48 04.4	-0.7
PB03				eS	S	05 50 20.1	-2.2
PB03				IAML		05 50 30.2	
	comp=Z,2μm,0.8s						
MARP	Paez Belalcaza	12.86	338	eP	P	05 48 04.3	-1.2
PB04	IPOC Station P	13.09	176	⇓iP	P	05 48 06.9	-0.6
PB04	IPOC Station P	13.09	176	P	P	05 48 06.9	-0.6
PB04	IPOC Station P	13.09	176	i P	P	05 48 07.2	-0.3
PB04				eS	S	05 50 24.3	-2.5
CTUM2	Tumaco	13.26	325	eP	P	05 48 09.0	-0.1
TUMC	Tumaco	13.26	325	P	P	05 48 09.4	+0.3
PTGC	Puerto Gaitan,	13.35	356	eP	P	05 48 09.8	-0.3
PTLB	Pontes e Lacer	13.35	119	eP	P	05 48 11.1	+1.1
PTLB	Pontes e Lacer	13.35	119	P	P	05 48 11.0	+0.9
LVC	Limon Verde	13.51	171	P	P	05 48 11.9	-0.1
	comp=Z,114nm,0.3s,baz=4.1,slow=7.0,SNR=426						
LVC				S	S	05 50 36.5	+2.0
	comp=Z,78nm,0.3s,baz=251,slow=16,SNR=20						
LVC				ScP	ScP	05 55 25.6	+0.5
	comp=Z,1.7nm,0.3s,baz=333,slow=0.3,SNR=8.1						
LVC	Limon Verde	13.51	171	⇓iP	P	05 48 11.8	-0.1
LVC	Limon Verde	13.51	171	⇓P	P	05 48 11.7	-0.2
LVC				⇑S	S	05 50 36.6	+2.1
LVC	Limon Verde	13.51	171	eP	P	05 48 11.8	-0.2
LVC	Limon Verde	13.51	171	P	P	05 48 12.0	+0.1
LVC	Limon Verde	13.51	171	i P	P	05 48 11.7	-0.2
LVC				eS	S	05 50 35.1	+0.6
LVC				IAML		05 50 40.3	
	comp=Z,2μm,1.2s						
PB06	IPOC Station P	13.51	173	⇓iP	P	05 48 11.0	-0.7
PB06	IPOC Station P	13.51	173	P	P	05 48 11.1	-0.7
PB06	IPOC Station P	13.51	173	i P	P	05 48 10.0	-1.8
PB06				eS	S	05 50 34.0	-0.1
PB06				IAML		05 50 37.9	
	comp=Z,2μm,1.3s						
PB05	IPOC Station P	13.60	176	⇓iP	P	05 48 11.9	-0.6
ORTC	Ortega, Tolima	13.63	343	eP	P	05 48 09.8	-3.1
PB15	IPOC Station P	14.02	173	⇓iP	P	05 48 16.5	-0.3
PB15	IPOC Station P	14.02	173	P	P	05 48 16.5	-0.3
PB15	IPOC Station P	14.02	173	i P	P	05 48 16.5	-0.3
PTGA	Pitinga	14.04	54	P	P	05 48 17.7	+0.8
	comp=Z,296nm,0.3s,baz=233,slow=12,SNR=605						
PTGA				S	S	05 50 45.1	+1.9
	comp=Z,4μm,0.3s,baz=226,slow=22,SNR=103						
PTGA	Pitinga	14.04	54	P	P	05 48 17.5	+0.6
YOTC	Yotoco, Valle	14.06	339	eP	P	05 48 14.8	-2.4
CIBA1	Ibague, SGC	14.14	344	eP	P	05 48 19.6	+1.6
ANIL	Santa Ana	14.23	343	eP	P	05 48 18.3	-0.7
PB10	IPOC Station P	14.23	177	⇓iP	P	05 48 18.5	0.0
PB10				IAmb	IAmb	05 48 20.5	
	comp=Z,3μm,0.9s						
PB10	IPOC Station P	14.23	177	P	P	05 48 18.4	-0.2
ROSC	El Rosal	14.29	348	P	P	05 48 21.1	+1.5
	comp=Z,147nm,0.3s,baz=216,slow=7.0,SNR=140						
ROSC				S	S	05 50 53.4	+5.3
	comp=Z,25nm,0.3s,baz=206,slow=21,SNR=7.1						
ROSC	El Rosal	14.29	348	eP	P	05 48 18.5	-1.2
ROSC	El Rosal	14.29	348	P	P	05 48 19.8	+0.2
CROSA	EL ROSAL, CUND	14.30	348	eP	P	05 48 21.3	+1.5
PDRB	Porto dos Gac	14.48	101	eP	P	05 48 21.9	+0.9
CMAN1	Manizales, Cal	14.82	343	eP	P	05 48 24.4	0.0
PLMC	San Jos del P	14.90	340	eP	P	05 48 23.8	-1.0
GUY2C	Guyana, Caldas	14.92	344	eP	P	05 48 25.5	0.0
HJA	Humahuaca	15.00	159	i P	P	05 48 26.8	+0.8
NORC	Norcasia	15.12	346	eP	P	05 48 26.3	-0.5
RUSC	La Rusia	15.12	353	eP	P	05 48 27.9	+0.6
CNOCA	NORCASIA, CALD	15.12	346	eP	P	05 48 27.1	+0.3
CLDB	Colider	15.30	97	eP	P	05 48 29.9	+1.4
PIZC	Pizarro, Choco	15.35	336	eP	P	05 48 30.4	+1.6
PB14	IPOC Station P	15.35	177	⇓iP	P	05 48 29.9	+0.8
PB14				IAmb	IAmb	05 48 34.6	
	comp=Z,597nm,0.9s						
PB14	IPOC Station P	15.35	177	P	P	05 48 29.7	+0.6
PB14	IPOC Station P	15.35	177	i P	P	05 48 29.0	0.0
PB14				eS	S	05 51 02.9	-2.0
PB14				IAML		05 51 16.8	
	comp=Z,399nm,1.6s						
TAMC	Tame, Arauca	15.55	358	eP	P	05 48 32.1	+1.3
CBOC	Ciudad Bolivar	15.71	342	eP	P	05 48 31.2	-1.1
BOAV	Boa Vista	15.72	43	eP	P	05 48 33.7	+1.4
BOAV	Boa Vista	15.72	43	P	P	05 48 33.8	+1.4
BARC	Barichara	15.82	353	eP	P	05 48 32.9	-0.5
NPGB	Novo Progresso	15.88	83	eP	P	05 48 34.6	+0.9
HELC	Santa Helena	15.89	344	eP	P	05 48 33.7	-0.5
PTBC	PUERTO BERRIO,	15.97	348	eP	P	05 48 32.1	-2.5
ASTB	Santa Barbara	16.03	157	i P	P	05 48 36.4	+1.3
AZAP	Zapla	16.05	159	i P	P	05 48 36.2	+0.8
ITTB	Itaituba	16.14	74	eP	P	05 48 37.6	+1.6
ELOV	Elorza	16.20	6	eP	P	05 48 37.6	+1.0
SLA	San Lorenzo	16.36	161	i P	P	05 48 39.2	+1.0
SLA				IAML		05 49 59.7	
	comp=Z,352nm,0.9s						
BRRC	Barranca, Sant	16.40	351	eP	P	05 48 37.8	-0.6
PAMC	Pamplona, Colo	16.51	355	eP	P	05 48 41.9	+1.9
SOLC	Bahia Solano	16.52	338	eP	P	05 48 41.1	+1.6
SALV	Santo Antonio	16.57	115	eP	P	05 48 41.9	+2.0
DBBC	Dabeiba	16.86	343	eP	P	05 48 44.4	+1.6
ZARC	Zaragoza, Cauc	16.98	348	P	P	05 48 43.8	0.0
OCAC	Ocana	17.46	353	eP	P	05 48 44.4	-3.9
OCAC	Ocana	17.46	353	P	P	05 48 47.1	-1.3
OCAC				IAmb	IAmb	05 49 44.6	
	comp=Z,328nm,0.6s						
PTAC	Punta Ardita,	17.52	338	eP	P	05 48 48.5	-0.2
FSA	Cafayete	17.53	164	i P	P	05 48 49.6	+0.7
AC02	Maricunga	17.64	174	P	P	05 48 51.2	+0.9
PP1B	Ponte de Pedra	17.96	119	eP	P	05 48 54.8	+2.0
SDV	Santo Domingo	17.99	2	P	P	05 48 54.2	+1.0
	comp=Z,31nm,0.3s,baz=180,slow=8.0,SNR=188						
SDV				S	S	05 51 46.8	-1.2
	comp=Z,33nm,0.3s,baz=43,slow=18,SNR=11						
SDV	Santo Domingo	17.99	2	eP	P	05 48 52.3	-0.9
SDV	Santo Domingo	17.99	2	eP	P	05 48 53.7	+0.5
SDV	Santo Domingo	17.99	2	P	P	05 48 54.2	+1.0
SDV				IAmb	IAmb	05 49 00.8	
	comp=Z,624nm,1.0s						
GO03	Copiap	18.31	177	⇓P	P	05 48 56.5	+0.7
GO03	Copiap	18.31	177	P	P	05 48 56.0	+0.3
GO03				IAmb	IAmb	05 48 58.1	
	comp=Z,317nm,0.8s						
GO03	Copiap	18.31	177	i P	P	05 48 56.4	+0.7
BAUV	El Baul	18.32	10	eP	P	05 48 57.2	+1.2
AHML	Horco Molle	18.35	163	i P	P	05 48 56.6	+0.4
MOTC	Monteria, Cord	18.41	346	eP	P	05 48 55.9	-0.9
MOTC	Monteria, Cord	18.41	346	P	P	05 48 57.0	+0.2
MALB	Monte Alegre	18.41	68	eP	P	05 48 58.5	+1.7
LCBC	Los crdobas,	18.66	344	eP	P	05 49 00.9	+1.8
AQDB	Aquidauana	18.72	128	eP	P	05 49 01.3	+1.7
AQDB	Aquidauana	18.72	128	P	P	05 49 00.8	+1.3
AC04	Llanos de Chal	18.89	180	⇓iP	P	05 49 01.5	+0.5
AC04				IAmb	IAmb	05 49 03.3	
	comp=Z,306nm,0.7s						
AC04	Llanos de Chal	18.89	180	P	P	05 49 01.1	+0.1
AC04				IAmb	IAmb	05 49 03.2	
	comp=Z,306nm,0.7s						
ARGC	Ariguani, Magd	19.18	351	eP	P	05 49 02.5	-1.3
SJCC	San Jacinto, C	19.38	348	eP	P	05 49 05.0	-0.7
SJCC	San Jacinto, C	19.38	348	P	P	05 49 06.0	+0.4
VCA	Vinchina	19.63	172	i P	P	05 49 09.5	+1.6
VCA				IAML		05 51 07.6	
	comp=Z,289nm,0.9s						
CVALL	Valledupar, Ce	19.69	354	eP	P	05 49 06.2	-2.3
LCO	Las Campanas	19.70	179	P	P	05 49 09.3	+0.7
LCO				pmax	pmax		
	comp=Z,1μm,0.9s						
LCO	Las Campanas	19.70	179	⇓P	P	05 49 09.4	+0.7
LCO				⇑S	ScP	05 55 38.4	+0.9
LCO	Las Campanas	19.70	179	P	P	05 49 09.3	+0.7
CYA	Choya	19.80	166	i P	P	05 49 10.0	+0.7
SNDB	Serra Nova Dou	19.80	100	eP	P	05 49 11.4	+2.0
ARAG	Araguaiana, MT	20.04	111	eP	P	05 49 12.9	+1.4
BCIP	Isla Barro Col	20.16	335	P	P	05 49 13.6	+0.9
BCIP				pmax	pmax		
	comp=Z,427nm,0.9s						
BCIP	Isla Barro Col	20.16	335	eP	P	05 49 13.2	+0.5
BCIP	Isla Barro Col	20.16	335	⇑P	P	05 49 14.7	+2.0
BCIP	Isla Barro Col	20.16	335	P	P	05 49 13.6	+0.9
BCIP				IAmb	IAmb	05 49 16.1	
	comp=Z,427nm,0.9s						
PCRV	Puerto La Cruz	20.36	19	P	P	05 49 16.0	+1.5
	comp=Z,206nm,0.4s,baz=199,slow=3.4,SNR=332						
SMRC	Santa Marta, M	20.46	352	eP	P	05 49 14.9	-0.4
CO05	La Serena	20.60	180	P	P	05 49 16.6	+0.2
CO05				IAmb	IAmb	05 49 18.3	
	comp=Z,442nm,0.7s						
PAYG	Puerto Ayora	20.76	293	eP	P	05 49 19.0	+0.9
PAYG	Puerto Ayora	20.76	293	⇑P	P	05 49 19.5	+1.4
PAYG				⇑S	ScP	05 55 40.1	+0.1
PAYG	Puerto Ayora	20.76	293	P	P	05 49 19.5	+1.4
PAYG				IAmb	IAmb	05 49 21.5	
	comp=Z,597nm,1.1s						
URIC	Uribia, Colomb	20.79	358	eP	P	05 49 14.9	-3.4
URIC	Uribia, Colomb	20.79	358	P	P	05 49 16.2	-2.1
URIC				IAmb	IAmb	05 49 18.2	
	comp=Z,734nm,1.2s						
GO04	Tololo Observa	20.86	179	P	P	05 49 19.3	+0.4
GO04				IAmb	IAmb	05 49 23.9	
	comp=Z,423nm,0.7s						
GO04	Tololo Observa	20.86	179	i P	P	05 49 19.4	+0.4
MCPB	Macapa, AP	21.03	66	eP	P	05 49 22.6	+2.1
CDITO	Canoas	21.12	326	P	P	05 49 23.8	+2.5
CDITO				IAmb	IAmb	05 49 25.0	
	comp=Z,562nm,1.4s						
BRU2	Volcan	21.21	327	eP	P	05 49 23.4	+1.1
BRU2	Volcan	21.21	327	P	P	05 49 24.3	+2.0
BRU2				IAmb	IAmb	05 49 32.3	
	comp=Z,534nm,1.2s						
CO06	Fray Jorge	21.36	181	P	P	05 49 23.8	+0.6
HATO	Hato, Curacao	21.38	6	P	P	05 49 23.1	-0.4
EDSV	San Vito	21.38	327	eP	P	05 49 27.0	+3.2
PRPB	Parauapebas	21.45	83	eP	P	05 49 25.5	+1.2
CPUP	Villa Florida	21.54	144	P	P	05 49 24.6	-0.3
	comp=Z,513nm,1.0s,baz=327,slow=8.6,SNR=290						
CPUP				S	S	05 52 40.8	-2.9
	comp=Z,86nm,1.0s,baz=100,slow=17,SNR=1.7						
CPUP				PcP	PcP	05 53 02.9	+1.6
	comp=Z,43nm,0.5s,baz=72,slow=3.8,SNR=3.6						
CPUP				ScP	ScP	05 55 42.1	+0.5
	comp=Z,117nm,0.8s,baz=241,slow=2.8,SNR=6.9						
CPUP	Villa Florida	21.54	144	⇓P	P	05 49 24.6	-0.3
CPUP	Villa Florida	21.54	144	eP	P	05 49 24.4	-0.5
CPUP	Villa Florida	21.54	144	P	P	05 49 24.7	-0.1
RIOS	Rincon, Osa	21.59	325	P	P	05 49 26.8	+1.4
RIOS				IAmb	IAmb	05 49 28.9	
	comp=Z,453nm,0.8s						
AVFE	Valle Fertil	21.63	171	i P	P	05 49 26.7	+1.0
EDPN	Palmar Norte	21.77	326	eP	P	05 49 30.8	+3.8
DRK0	Durika	21.90	327	P	P	05 49 30.9	+2.5
SRBA	San Rafael, Bu	21.94	326	eP	P	05 49 30.7	+2.0
SRBA	San Rafael, Bu	21.94	326	P	P	05 49 30.4	+1.8
SRBA				IAmb	IAmb	05 49 32.3	
	comp=Z,346nm,0.9s						
TRN	Trinidad (W)	22.03	27	eP	P	05 49 30.2	+0.9
EDDO	Dominical	22.23	325	eP	P	05 49 33.6	+2.5
PEZE	Perez Zeledon,	22.24	326	eP	P	05 49 33.3	+2.0
PEZE	Perez Zeledon,	22.24	326	P	P	05 49 33.4	+2.0
PEZE				IAmb	IAmb	05 49 37.3	
	comp=Z,326nm,1.2s						
ACHE	Chepes	22.25	170	i P	P	05 49 32.0	+0.7
ZON	Zonda	22.35	174	P	P	05 49 32.9	+0.8
ZON				pmax	pmax		
	comp=Z,931nm,0.9s						
ZON	Zonda	22.35	174	P	P	05 49 32.9	+0.8
ZON	Zonda	22.35	174	i P	P	05 49 32.7	+0.6
ZON				IAML		05 51 37.6	
	comp=Z,148nm,0.8s						
TRCB	Terra Rica	22.38	129	eP	P	05 49 33.1	+0.7
TRCB	Terra Rica	22.38	129	P	P	05 49 32.8	+0.3
RTLS	Leoncito	22.55	176	i P	P	05 49 34.6	+0.5
RTLS				IAML		05 51 38.2	
	comp=Z,121nm,1.2s						
RIMA	Rio Macho	22.66	326	eP	P	05 49 37.0	+1.9
RIMA	Rio Macho	22.66	326	P	P	05 49 37.1	+1.9
BATAN	Batan	22.67	328	P	P	05 49 36.0	+1.0
BATAN				IAmb	IAmb	05 49 39.4	
	comp=Z,546nm,1.0s						
RTCV	Cerro Valdivia	22.68	174	i P	P	05 49 35.5	+0.5
RTCV				IAML		05 52 19.7	
	comp=Z,127nm,2.8s						
LCR2	La Lucha 2	22.71	326	eP	P	05 49 37.9	+2.2
ITRB	Iturama	22.73	120	eP	P	05 49 36.6	+1.0
PEXB	Peixe	22.73	99	eP	P	05 49 37.7	+2.0
RAFA	San Farael, Vo	22.78	326	eP	P	05 49 39.3	+2.9
CVTR	Volcan Turrial	22.81	327	P	P	05 49 38.6	+1.8
CVTR				IAmb	IAmb	05 49 40.9	
	comp=Z,505nm,1.1s						
PCMB	Pacaembu	22.84	125	eP	P	05 49 37.3	+0.8
AUSP	Uspallata	22.96	176	i P	P	05 49 39.4	+1.6
HDC	Heredia	22.99	326	eP	P	05 49 41.1	+3.1
HDC	Heredia	22.99	326	⇑P	P	05 49 40.7	+2.7
HDC	Heredia	22.99	326	P	P	05 49 40.3	+2.3
HDC				IAmb	IAmb	05 49 42.2	
	comp=Z,429nm,0.7s						
TOSP	Speyside	23.00	28	eP	P	05 49 36.3	-1.6
TOSP	Speyside	23.00	28	P	P	05 49 39.5	+1.6
TOSP				IAmb	IAmb	05 49 42.3	
	comp=Z,610nm,1.0s						
JACO	JACO, Garabito	23.02	324	eP	P	05 49 40.1	+2.0
JACO	JACO, Garabito	23.02	324	P	P	05 49 39.5	+1.4
JACO				IAmb	IAmb	05 49 41.8	
	comp=Z,280nm,0.8s						
GRFF	Grenada Fort F	23.14	24	eP	P	05 49 40.9	+1.6
GRGR	Grenville	23.25	24	eP	P	05 49 41.0	+0.8
GRGR	Grenville	23.25	24	⇑P	P	05 49 41.0	+0.8
GRGR	Grenville	23.25	24	P	P	05 49 40.5	+0.3
SRA1	San Ramn	23.26	325	eP	P	05 49 43.0	+2.6
LAFE	Finca La Fe, P	23.28	324	eP	P	05 49 42.5	+2.0
CAO2	Cobano, Puntar	23.30	323	P	P	05 49 42.3	+1.6
CAO2				IAmb	IAmb	05 49 44.2	
	comp=Z,234nm,0.8s						
SMTB	Santa Maria do	23.37	91	eP	P	05 49 42.9	+1.5
ASAL	Salagasta	23.37	175	i P	P	05 49 42.8	+1.6
MDP	Montagnes des	23.37	53	P	P	05 49 41.8	+0.5
	comp=Z,178nm,0.5s,baz=189,slow=5.3,SNR=183						
MDP				S	S	05 53 12.2	-0.7
	comp=Z,260nm,1.1s,baz=86,slow=17,SNR=6.4						
MDP				ScP	ScP	05 55 45.6	-1.1
	comp=Z,206nm,0.8s,baz=234,slow=4.5,SNR=4.3						
GRSS	Sisters	23.42	24	eP	P	05 49 43.4	+1.7
VA03	San Esteban	23.45	179	P	P	05 49 43.1	+1.3
BDFB	Brasilia	23.56	108	P	P	05 49 44.7	+1.7
	comp=Z,741nm,0.8s,baz=277,slow=10,SNR=662						
BDFB				S	S	05 53 16.4	+0.5
	comp=Z,287nm,1.0s,baz=175,slow=25,SNR=4.0						
BDFB				ScP	ScP	05 55 47.9	+0.5
	comp=Z,202nm,0.9s,baz=243,slow=6.8,SNR=3.2						
BDFB	Brasilia	23.56	108	P	P	05 49 45.0	+1.9
ARCO	CERRO ARCO	23.61	175	i P	P	05 49 45.0	+1.6
MRA	San Martin	23.65	168	i P	P	05 49 44.3	+0.6
GCMP	Grenada, Carri	23.66	25	eP	P	05 49 44.4	+0.5
FORC	Fortuna	23.68	325	eP	P	05 49 47.7	+3.7
INDI	Punta indio, G	23.68	323	eP	P	05 49 46.0	+2.0
CASO	Castillo	23.69	325	eP	P	05 49 47.6	+3.4
VA01	Torpederas	23.70	181	P	P	05 49 44.7	+0.8
ARE1	Arenal 1	23.70	325	⇑iP	P	05 49 47.2	+2.9
CEDE	Laguna Cedeo	23.71	325	eP	P	05 49 47.7	+3.3
COVE	Coope Vega, Sa	23.74	326	eP	P	05 49 47.0	+2.6
COVE	Coope Vega, Sa	23.74	326	P	P	05 49 46.1	+1.6
COVE				IAmb	IAmb	05 49 49.5	
	comp=Z,602nm,0.9s						
PEL	Peldehue	23.82	179	P	P	05 49 46.1	+1.0

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PEL                                   pmax   pmax
       comp=Z,813nm,0.8s
PEL    Peldehue          23.82 179 ⇓P     P      05 49 46.1 +1.0
PEL    Peldehue          23.82 179  P     P      05 49 46.1 +1.0
PEL    Peldehue          23.82 179 i P    P      05 49 45.7 +0.6
DUNO   Dulce Nombre,     23.84 323  P     P      05 49 48.0 +2.6
AAGR   Agrelo            23.86 175 i P    P      05 49 46.6 +1.1
PTGB   Pitanga           23.91 133 eP     P      05 49 46.3 +0.2
MT02   Curacav           23.93 180  P     P      05 49 46.8 +0.8
MT02                                IAmb  IAmb   05 49 51.5
       comp=Z,302nm,0.8s
SAJU   San Juanillo,     23.96 323 eP     P      05 49 47.8 +1.3
GUAI   GUAI              24.00 323 eP     P      05 49 49.7 +2.9
TMAB   Tom-Au,PA,Br      24.00  75 eP     P      05 49 49.2 +2.2
ACAL   Aguas Claras      24.02 325⇑iP     P      05 49 50.0 +2.9
PTEN   Parque Tenorio    24.06 325 eP     P      05 49 48.0 +0.6
MT05   Renca             24.07 179  P     P      05 49 48.0 +0.7
CUI    Cuipilapa         24.11 325 eP     P      05 49 50.3 +2.4
COLC   Colonia           24.14 325 eP     P      05 49 50.6 +2.5
HORNC  Hornillas         24.16 325⇓eP     P      05 49 51.5 +3.1
GUAB   Guayabo de Bag    24.19 325 eP     P      05 49 51.6 +3.1
AVIZ   Vizcacheras       24.27 174 i P    P      05 49 50.5 +1.4
VA05   Santo Domingo     24.33 181  P     P      05 49 50.1 +0.7
VA05                                IAmb  IAmb   05 49 51.8
       comp=Z,466nm,0.8s
SVOC   Richmond Hill,    24.35  24 eP     P      05 49 50.0 +0.1
LAPC   Finca la Perla    24.36 324 eP     P      05 49 51.7 +1.7
BUEV   Buena Vista       24.36 324 eP     P      05 49 52.2 +2.1
GBS3   Finca Las Img     24.38 324 eP     P      05 49 52.4 +2.2
BUAI   Buenos Aires      24.39 325⇑iP     P      05 49 53.1 +2.8
HZTE   Horizontes, Gu    24.41 324 eP     P      05 49 52.2 +1.7
HZTE   Horizontes, Gu    24.41 324  P     P      05 49 52.3 +1.9
HZTE                                IAmb  IAmb   05 49 55.1
       comp=Z,618nm,0.9s
SVB    Belmont           24.45  24 eP     P      05 49 50.6 -0.1
SVB    Belmont           24.45  24  P     P      05 49 50.8  0.0
MT09   Talagante         24.45 179  P     P      05 49 51.5 +0.7
SVV    Soufriere Volc    24.50  24 eP     P      05 49 51.6 +0.4
SSV    Crater Summit     24.52  24 eP     P      05 49 52.0 +0.5
ITQB   Itaqui            24.53 148 eP     P      05 49 51.2 -0.2
ITQB   Itaqui            24.53 148  P     P      05 49 51.2 -0.2
MT01   Popeta            24.53 180  P     P      05 49 51.7 +0.4
MT01                                IAmb  IAmb   05 50 04.4
       comp=Z,244nm,0.8s
PRVC   Isla de Provid    24.59 336 eP     P      05 49 54.4 +2.4
PRVC   Isla de Provid    24.59 336 eP     P      05 49 51.1 -0.9
PRVC   Isla de Provid    24.59 336  P     P      05 49 53.8 +1.8
BB19B  Bebedouro         24.86 121 eP     P      05 49 55.0 +0.6
MCLT   Moule a Chique    24.97  24 eP     P      05 49 53.4 -2.0
MCLT   Moule a Chique    24.97  24  P     P      05 49 54.1 -1.3
BCHC   Barbados, Cave    25.02  28 eP     P      05 49 59.3 +3.5
BO01   Tunca             25.06 180  P     P      05 49 56.6 +0.6
BO01                                IAmb  IAmb   05 49 58.4
       comp=Z,522nm,0.8s
BBGH   Gun Hill          25.06  28 eP     P      05 49 58.8 +2.6
BBGH   Gun Hill          25.06  28 ⇓P     P      05 50 00.2 +4.0
BBSP   Saint Philip      25.07  28 eP     P      05 49 57.6 +1.3
H03N1  Juan Fernandez    25.12 195  P     P      05 49 58.0 +1.8
       baz=131,slow=14,SNR=52
H03N2  Juan Fernandez    25.13 195  P     P      05 49 57.9 +1.6
       baz=131,slow=14,SNR=49
H03N3  Juan Fernandez    25.14 195  P     P      05 49 58.0 +1.6
       baz=131,slow=14,SNR=35
ACON   Acoyapa           25.19 326  P     P      05 49 58.4 +1.1
ACON                                IAmb  IAmb   05 50 07.7
       comp=Z,571nm,1.2s
SLBI   Saint Lucia, B    25.24  24 eP     P      05 49 56.6 -1.1
VA04   Juan Fernndez     25.30 195  P     P      05 49 58.7 +0.7
ITAB   Concordia         25.45 137  P     P      05 49 59.5  0.0
BO02   Sierra Bellavi    25.46 179  P     P      05 50 00.4 +0.8
BO02                                IAmb  IAmb   05 50 02.5
       comp=Z,599nm,1.0s
H03S3  Juan Fernandez    25.49 195  P     P      05 50 00.9 +1.5
       baz=2.3,slow=16,SNR=64
H03S2  Juan Fernandez    25.50 195  P     P      05 50 01.2 +1.7
       baz=2.3,slow=16,SNR=104
H03S1  Juan Fernandez    25.51 195  P     P      05 50 00.8 +1.3
       baz=2.3,slow=16,SNR=59
BIM    Bigot             25.65  23 eP     P      05 49 59.8 -1.6
BIM    Bigot             25.65  23  P     P      05 50 00.2 -1.2
BIM                                 IAmb  IAmb   05 50 03.2
       comp=Z,1µm,1.3s
H05S1  Guadeloupe/Mar    25.66  24  P     P      05 50 00.9 -0.5
MPOM   Morne Pois Mar    25.66  24 eP     P      05 50 00.3 -1.1
MPOM   Morne Pois Mar    25.66  24 eP     P      05 50 00.4 -1.0
MPOM   Morne Pois Mar    25.66  24  P     P      05 50 00.5 -1.0
MPOM                                IAmb  IAmb   05 50 02.4
       comp=Z,1µm,1.6s
GO05   Huala             25.68 181  P     P      05 50 02.1 +0.7
GO05                                IAmb  IAmb   05 50 03.7
       comp=Z,671nm,0.8s
GO05   Huala             25.68 181 i P    P      05 50 02.2 +0.7
FDF    Fort de France    25.81  23  P     P      05 50 01.4 -1.5
FDF                                 pmax  pmax
       comp=Z,1µm,1.4s
FDF    Fort de France    25.81  23 eP     P      05 50 01.8 -1.0
FDF    Fort de France    25.81  23 ⇓P     P      05 50 02.0 -0.8
FDF    Fort de France    25.81  23  P     P      05 50 01.4 -1.5
FDF                                 IAmb  IAmb   05 50 03.6
       comp=Z,1µm,1.4s
BOAB   BOACO BROADBAN25.85 326 ⇑P     P      05 50 04.5 +1.3
BOAB                               ⇓S     ScP    05 55 53.8  0.0
BOAB   BOACO BROADBAN25.85 326  P     P      05 50 03.8 +0.7
SVN    Savane Anatole    25.91  23  P     P      05 50 02.3 -1.4
ILAM   Ilet Lapin Mar    25.96  23 eP     P      05 50 02.4 -1.7
ILAM   Ilet Lapin Mar    25.96  23  P     P      05 50 02.9 -1.2
ILAM                                IAmb  IAmb   05 50 06.2
       comp=Z,1µm,1.5s
SDBA   SAO DESIDERIO     26.07  99 eP     P      05 50 06.8 +1.6
MDN    Morne-Daniel      26.26  22 eP     P      05 50 04.9 -1.8
RCLB   Rio Claro- Sao    26.27 123 eP     P      05 50 07.2 +0.3
DLPL   La Plaine         26.32  22 eP     P      05 50 04.7 -2.6
DLPL   La Plaine         26.32  22  P     P      05 50 06.5 -0.8
DSLB   Salisbury         26.36  22 eP     P      05 50 06.5 -1.0
MATN   Matagalpa         26.39 326  P     P      05 50 08.7 +0.7
MATN                                IAmb  IAmb   05 50 10.8
       comp=Z,484nm,1.0s
ML02   Panimavida        26.43 180  IAmb  IAmb   05 50 11.2
       comp=Z,617nm,0.8s
CNGN   Cerro Negro       26.48 324  P     P      05 50 09.7 +1.0
EDS3   Malargue          26.49 177 i P    P      05 50 10.1 +1.5
TIJ01  Guaruva-PR        26.54 130 eP     P      05 50 10.6 +1.5
TDBA   Terre de Bas,     26.66  21 eP     P      05 50 08.5 -1.7
CPSB   Cacapava Do Su    26.85 144 eP     P      05 50 11.1 -0.7
CBE    Ff, Capester      26.87  21 eP     P      05 50 10.7 -1.4
MAGL   Barre de l'ile    26.88  22 eP     P      05 50 10.3 -1.8
JANB   Januaria          26.95 105 eP     P      05 50 14.8 +1.9
VAO    Valinhos          27.00 123 eP     P      05 50 12.5 -0.7
H05N1  Guadeloupe/Mar    27.30  22  P     P      05 50 14.2 -1.5
JAKH   Jacmel            27.31 357  P     P      05 50 16.6 +0.9
MLPR   Magueyes Islan    27.33   9  P     P      05 50 16.2 +0.2
PET01  Itanhaem-SP       27.35 126 eP     P      05 50 16.2 +0.1
CRPR   Cabo Rojo, PR     27.35   9  P     P      05 50 16.6 +0.4
OBIP   Obispado Ponce    27.47  10  P     P      05 50 17.4 +0.2
CELP   Cerrillos         27.50  10  P     P      05 50 17.6 +0.1
SDD    Santo Domingo     27.53   3  P     P      05 50 18.5 +0.8
PDPR   Patillas Dam,     27.55  11  P     P      05 50 17.8 -0.1
PDPR                                IAmb  IAmb   05 50 19.0
       comp=Z,759nm,1.3s
CDVI   St. Croix         27.55  13  P     P      05 50 17.8 -0.1
CDVI                                IAmb  IAmb   05 50 19.6
       comp=Z,490nm,0.6s
PRSN   Puerto Rico Se    27.56   8  P     P      05 50 18.7 +0.8
LGNH   Logne             27.58 357  P     P      05 50 19.1 +0.9
LGNH                                IAmb  IAmb   05 50 23.3
       comp=Z,778nm,1.3s
MC01   Montes Claros     27.61 108 eP     P      05 50 19.9 +1.3
SJG    San Juan          27.61  11  P     P      05 50 18.5  0.0
       comp=Z,302nm,0.6s,baz=152,slow=6.0,SNR=135
SJG                                 S     S      05 54 17.1 -1.9
       comp=Z,322nm,0.5s,baz=345,slow=20,SNR=10
SJG    San Juan          27.61  11 eP     P      05 50 15.8 -2.7
SJG    San Juan          27.61  11 ⇓P     P      05 50 17.9 -0.6
SJG    San Juan          27.61  11  P     P      05 50 18.4  0.0
SJG                                 IAmb  IAmb   05 50 22.1
       comp=Z,547nm,0.8s
CNLB   Canela            27.67 139 eP     P      05 50 18.5 -0.4
ROSB   Rosrio            27.68  79 eP     P      05 50 19.7 +0.5
SKI    Saint Kitts       27.69  18 eP     P      05 50 19.0 -0.1
ANBD   Bethesda, Anti    27.73  20 eP     P      05 50 17.8 -1.6
AOPR   Arecibo Observ    27.74   9  P     P      05 50 19.7  0.0
CNCH   Conchagua         27.76 323 eP     P      05 50 20.9 +0.9
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CNCH   Conchagua         27.76 323 eP     P      05 50 20.9 +0.9
SEUS   St. Eustatius     27.77  17 eP     P      05 50 19.8  0.0
SEUS   St. Eustatius     27.77  17  P     P      05 50 19.6 -0.2
PLTB   Pedras Altas      27.78 146 eP     P      05 50 19.9 +0.1
PLTB   Pedras Altas      27.78 146  P     P      05 50 19.0 -0.8
AGPR   Aguadilla, PR     27.81   8  P     P      05 50 20.1 -0.1
AGPR                                IAmb  IAmb   05 50 29.3
       comp=Z,623nm,1.2s
SABA   Saba              27.81  17 eP     P      05 50 20.2  0.0
SABA   Saba              27.81  17  P     P      05 50 20.3  0.0
LCND   La Caada          27.82 323 eP     P      05 50 21.2 +0.9
LCND   La Caada          27.82 323 eP     P      05 50 21.2 +0.9
GCPR   Guaynabo City     27.82  11  P     P      05 50 20.1 -0.2
GCPR                                IAmb  IAmb   05 50 24.6
       comp=Z,514nm,0.9s
CBYP   Canovanas         27.82  11  P     P      05 50 20.3 -0.1
CBYP                                IAmb  IAmb   05 50 23.8
       comp=Z,920nm,1.1s
DR12   Loma Pena Alta    27.89   4  P     P      05 50 20.5 -0.4
EMPR   Esperanza - Ma    27.91  10  P     P      05 50 20.6 -0.5
MTDJ   Mount Denham      27.96 347 eP     P      05 50 21.9 +0.3
MTDJ   Mount Denham      27.96 347 ⇓P     P      05 50 22.1 +0.5
MTDJ   Mount Denham      27.96 347  P     P      05 50 22.2 +0.5
MTDJ                                IAmb  IAmb   05 50 24.4
       comp=Z,948nm,1.1s
CUPR   Culebra, Puert    27.97  12  P     P      05 50 21.1 -0.4
CUPR                                IAmb  IAmb   05 50 23.5
       comp=Z,355nm,0.6s
SDDR   Presa de Saban    28.02 360 eP     P      05 50 17.4 -4.7
SDDR   Presa de Saban    28.02 360 ⇓P     P      05 50 22.7 +0.6
SDDR   Presa de Saban    28.02 360  P     P      05 50 22.0  0.0
SDDR                                IAmb  IAmb   05 50 36.8
       comp=Z,637nm,1.4s
TGUH   Tegucigalpa,Un    28.06 325 ⇑P     P      05 50 23.3 +0.7
TGUH   Tegucigalpa,Un    28.06 325  IAmb  IAmb   05 50 31.1
       comp=Z,333nm,0.9s
BSCB   Bom Sucesso       28.06 118 eP     P      05 50 22.8 +0.3
STVI   Saint Thomas      28.09  13  P     P      05 50 22.0 -0.6
STVI                                IAmb  IAmb   05 52 00.1
       comp=Z,368nm,0.8s
DIAM   Diamantina, MG    28.23 112 eP     P      05 50 25.4 +1.3
ALJI   Alcalda de J      28.24 322 eP     P      05 50 25.8 +1.8
ALJI   Alcalda de J      28.24 322 eP     P      05 50 25.8 +1.8
PARB   Paraibuna         28.26 123 eP     P      05 50 24.8 +0.7
SMRT   St. Maarten       28.27  17 eP     P      05 50 23.0 -1.2
SMRT   St. Maarten       28.27  17  P     P      05 50 23.2 -1.0
ANWB   Willy Bob         28.30  19 eP     P      05 50 23.2 -1.2
ANWB   Willy Bob         28.30  19 ⇓P     P      05 50 22.6 -1.8
ANWB                               ⇓S     S      05 54 23.4 -6.2
ANWB   Willy Bob         28.30  19  P     P      05 50 23.0 -1.4
TER01  Tubaro-SC         28.32 136 eP     P      05 50 24.2 -0.3
LPA    La Plata          28.33 156 i P    P      05 50 23.2 -1.3
LPA                                 pP    pP     05 51 55.5 -5.8
LPA                                 PP    PP     05 52 06.9 +3.2
LPA                                 sP    sP     05 53 06.2 -7.1
LPA                                 PCP   PcP    05 53 23.4 +6.6
LPA                                 S     S      05 54 35.0 +5.3
LPA                                 sS    SS     05 57 35.0 -1.3
LPA                                 SS    SS     05 57 52.2  +16
LPA                                 PKIKP PKiKP  06 00 56.9 +6.0
LPA                                 SKIKP        06 03 39.1
LPA                                 PKIKS        06 04 27.5
LPA                                 SKIKS        06 06 53.6
COEB   Comit de Eme      28.35 323 eP     P      05 50 26.8 +1.7
COEB   Comit de Eme      28.35 323 eP     P      05 50 26.8 +1.7
SC01   Santiago de lo    28.46   1  P     P      05 50 25.9 +0.1
SCLA   Alcaldia de Sa    28.62 322 eP     P      05 50 28.5 +1.2
SCLA   Alcaldia de Sa    28.62 322 eP     P      05 50 28.5 +1.2
COEG   Centro de Oper    28.65 322⇑iP     P      05 50 29.6 +2.0
COEG   Centro de Oper    28.65 322⇑iP     P      05 50 29.6 +2.0
SJTE   Alcalda de S      28.73 322 eP     P      05 50 29.7 +1.4
SJTE   Alcalda de S      28.73 322 eP     P      05 50 29.7 +1.4
PAVA   Las Pavas         28.76 322 eP     P      05 50 30.5 +1.9
PAVA   Las Pavas         28.76 322 eP     P      05 50 30.5 +1.9
LALI   Alcalda de L      28.82 321 eP     P      05 50 31.0 +2.0
LALI   Alcalda de L      28.82 321 eP     P      05 50 31.0 +2.0
SNET   Serv Nac Est T    28.92 322  P     P      05 50 30.9 +1.0
UEES   Universidad Ev    28.95 322 eP     P      05 50 31.6 +1.4
UEES   Universidad Ev    28.95 322 eP     P      05 50 31.6 +1.4
JAYA   Jayaque - finc    29.03 321 eP     P      05 50 33.0 +2.0
JAYA   Jayaque - finc    29.03 321 eP     P      05 50 33.0 +2.0
CEDA   San Andres        29.11 322 eP     P      05 50 33.1 +1.6
CEDA   San Andres        29.11 322 eP     P      05 50 33.1 +1.6
GTBY   Guantanamo Bay    29.21 353 eP     P      05 50 30.1 -2.1
GTBY   Guantanamo Bay    29.21 353 ⇓P     P      05 50 32.5 +0.2
GTBY   Guantanamo Bay    29.21 353  P     P      05 50 32.7 +0.5
GTBY                                IAmb  IAmb   05 50 33.9
       comp=Z,557nm,1.4s
TACO   Tacachico         29.21 322 eP     P      05 50 33.6 +1.2
TACO   Tacachico         29.21 322 eP     P      05 50 33.6 +1.2
MAN01  Angra dos Reis    29.45 121 eP     P      05 50 35.1 +0.6
SLOZ   Alcaldia de Sa    29.52 321 eP     P      05 50 37.0 +1.9
MTO3   Montecristo       29.55 322  P     P      05 50 36.1 +0.6
MTO3                                IAmb  IAmb   05 50 38.0
       comp=Z,307nm,0.7s
LC01   Cunco             29.56 181  P     P      05 50 35.2 +0.2
VAS01  Vassouras-RJ      29.68 119 eP     P      05 50 37.1 +0.7
TRQA   Tornquist         29.91 165  P     P      05 50 38.3 +0.2
TRQA                                pmax  pmax
       comp=Z,1µm,0.9s
TRQA   Tornquist         29.91 165 eP     P      05 50 38.0 -0.1
TRQA   Tornquist         29.91 165  P     P      05 50 38.3 +0.2
NBPS   Pedro II - PI     29.97  83 eP     P      05 50 41.1 +2.1
LCCY   Blossom Villag    29.99 343  P     P      05 50 38.9 -0.1
LR03   Panguipulli       30.31 182  P     P      05 50 41.6 +0.2
LR03                                IAmb  IAmb   05 50 43.4
       comp=Z,424nm,0.8s
DUB01  Friburgo-RJ       30.53 118 eP     P      05 50 44.6 +0.8
GRTK   Grand Turk        30.53   0 ⇓P     P      05 50 44.4 +0.8
GRTK   Grand Turk        30.53   0  P     P      05 50 44.1 +0.5
NBPN   Ponto Novo - B    30.61  96 eP     P      05 50 45.4 +1.0
SJMB   Sao Joao De Ma    30.62 111 eP     P      05 50 45.7 +1.3
APG    El Apazote        30.69 321  P     P      05 50 45.7 +0.4
       comp=Z,187nm,0.6s,baz=120,slow=5.5,SNR=240
APG                                 S     S      05 55 09.9 +3.0
       comp=Z,31nm,0.9s,baz=235,slow=19,SNR=7.0
APG                                 ScS   ScS    06 00 07.0 -1.0
       comp=Z,9.5nm,0.9s,baz=276,slow=22,SNR=9.5
BSFB   Barra de Sao F    30.96 111 eP     P      05 50 47.4 +0.1
CAM01  Campos-RJ         31.07 117 eP     P      05 50 49.1 +0.9
RTAL   Retalhuleu        31.10 319  P     P      05 50 49.4 +0.8
GDU01  Guandu, BA        31.35 101 eP     P      05 50 52.0 +1.3
PLCA   Paso Flores       31.40 179  P     P      05 50 51.5 +0.7
       comp=Z,584nm,0.7s,baz=356,slow=9.2,SNR=1053
PLCA                                PcP   PcP    05 53 26.9 +2.0
       comp=Z,75nm,0.5s,baz=2.2,slow=6.2,SNR=3.2
PLCA                                S     S      05 55 16.7 -0.1
       comp=Z,180nm,0.9s,baz=155,slow=16,SNR=6.8
PLCA                                ScP   ScP    05 56 11.8 +0.7
       comp=Z,80nm,0.9s,baz=322,slow=5.5,SNR=3.2
PLCA   Paso Flores       31.40 179 ⇓P     P      05 50 51.5 +0.7
PLCA   Paso Flores       31.40 179 eP     P      05 50 51.7 +0.9
PLCA   Paso Flores       31.40 179  P     P      05 50 51.3 +0.5
NAN01  Guarapari, ES     31.41 109 eP     P      05 50 52.0 +0.8
RIB01  Linhares ES       31.49 112 eP     P      05 50 52.3 +0.4
ALF01  Guarapari-ES      31.53 115 eP     P      05 50 52.0 -0.2
NBMO   Morrinhos-CE      31.55  81 eP     P      05 50 51.7 -0.8
CMC01  Camacan, BA       31.57 104 eP     P      05 50 54.6 +2.0
HUEH   Huehuetenango     31.57 320  P     P      05 50 53.9 +1.1
LL04   Puerto Octay      31.58 182  P     P      05 50 52.4 +0.1
LL04                                IAmb  IAmb   05 50 54.0
       comp=Z,655nm,0.8s
NBIT   Itapeh - BA       31.60 103 eP     P      05 50 55.2 +2.3
LL03   Petrohue          31.81 182  P     P      05 50 54.3 +0.1
PETF   Flores            31.83 325  P     P      05 50 55.5 +0.8
PETF                                IAmb  IAmb   05 50 57.6
       comp=Z,404nm,0.7s
LL05   Los Muermos       32.12 183  P     P      05 50 57.2 +0.4
LL05                                IAmb  IAmb   05 51 01.5
       comp=Z,372nm,0.9s
NBMA   Muriti-CE         32.19  89 eP     P      05 50 58.9 +1.0
CCIG   Comitan           32.70 321  P     P      05 51 03.0 +0.7
CCIG                                IAmb  IAmb   05 51 05.2
       comp=Z,1µm,1.3s
NBLA   Lagarto - SE      32.98  96 eP     P      05 51 04.9 +0.4
LL01   San Ignacio de    33.05 182  P     P      05 51 04.7 +0.1
NBCL   Cascavel-CE       33.09  84 eP     P      05 51 07.8 +2.3
SOR    Soroa             33.83 340  P     P      05 51 11.7 +0.3
SOR                                 pmax  pmax
       comp=Z,906nm,1.1s
SOR    Soroa             33.83 340  P     P      05 51 11.7 +0.3
GO07   Milladeo Hill,    33.84 183  P     P      05 51 10.8 -0.4
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LL02   Futaleuf          33.85 181  P     P      05 51 11.6 +0.2
LL02                                IAmb  IAmb   05 51 13.1
       comp=Z,493nm,0.8s
NBPA   Parau_RN          34.01  87 eP     P      05 51 14.3 +1.2
NBLV   Livramento - P    34.01  90 eP     P      05 51 14.6 +1.4
NBAN   Anadia - AL       34.49  94 eP     P      05 51 18.4 +1.2
CMIG   Matias Romero     35.06 318  P     P      05 51 22.6 +0.9
       comp=Z,576nm,0.6s,baz=136,slow=6.2,SNR=750
CMIG                                PcP   PcP    05 53 37.1 +1.3
       comp=Z,139nm,1.0s,baz=173,slow=8.0,SNR=4.4
CMIG                                S     S      05 56 12.3 -0.2
       comp=Z,69nm,0.7s,baz=14,slow=22,SNR=15
CMIG                                ScS   ScS    06 00 29.3 -1.3
       comp=Z,18nm,1.0s,baz=30,slow=23,SNR=20
NBRF   Rio Formoso -     35.68  92 eP     P      05 51 27.8 +0.9
NBPV   Pedro Velho       35.72  88 eP     P      05 51 29.0 +1.7
061Z   Ochoppi           36.11 345  P     P      05 51 30.6 +0.4
061Z                                IAmb  IAmb   05 51 33.0
       comp=Z,664nm,1.0s
TLIG   Tlapa             37.90 315  P     P      05 51 46.2 +1.1
TLIG                                IAmb  IAmb   05 51 48.1
       comp=Z,278nm,0.7s
DWPF   Disney Wildern    38.39 345  P     P      05 51 49.7 +1.0
       baz=164
DWPF                                S     S      05 57 00.4 -1.0
       baz=164
DWPF   Disney Wildern    38.39 345 ⇑P     P      05 51 49.5 +0.7
DWPF   Disney Wildern    38.39 345  P     P      05 51 49.0 +0.3
656A   Willston          39.87 345  P     P      05 52 00.6 +0.1
RPN    Rapa Nui          40.12 239  P     P      05 52 03.9 +1.2
       comp=Z,2µm,1.1s,baz=29,slow=3.4,SNR=48
RPN                                 pP    pP     05 53 47.5 +1.2
       comp=Z,93nm,0.8s,baz=108,slow=20,SNR=1.6
RPN                                 ScP   ScP    05 56 43.8 +0.2
       comp=Z,258nm,1.1s,baz=46,slow=6.0,SNR=4.1
RPN                                 S     S      05 57 28.2 +1.5
       comp=Z,74nm,1.1s,baz=180,slow=7.1,SNR=1.3
RPN    Rapa Nui          40.12 239 ⇑P     P      05 52 03.9 +1.2
RPN    Rapa Nui          40.12 239  P     P      05 52 03.5 +0.8
VA02   Isla de Pascua    40.22 239  P     P      05 52 03.5 +0.1
456A   Hilliard          41.03 346  P     P      05 52 10.3 +0.5
MOIG   Morelia           41.16 314  P     P      05 52 11.0 -0.2
MOIG                                IAmb  IAmb   05 52 14.1
       comp=Z,468nm,1.0s
553A   Crawfordville     41.18 343  P     P      05 52 11.5 +0.6
BBSR   BB Station        41.82   8 ⇓P     P      05 52 16.4 +0.5
BBSR   BB Station        41.82   8  P     P      05 52 15.9  0.0
BBSR                                IAmb  IAmb   05 52 17.1
       comp=Z,390nm,1.1s
GO09   Cerro Castillo    41.94 181  IAmb  IAmb   05 52 19.9
       comp=Z,916nm,0.9s
451A   Vernon            41.98 341  IAmb  IAmb   05 52 19.6
       comp=Z,1µm,1.6s
TIGA   Tifton            42.12 344  P     P      05 52 18.9 +0.6
       baz=162,SNR=36
TIGA                                S     S      05 57 52.6 -2.6
       baz=162
MG05   Puerto Natales    42.35 181  IAmb  IAmb   05 52 23.0
       comp=Z,567nm,0.8s
BRAL   Brewton           42.92 340  P     P      05 52 25.1 +0.7
       baz=157,SNR=24
BRAL                                S     S      05 58 03.8 -2.8
       baz=157
BRAL   Brewton           42.92 340 ⇓P     P      05 52 24.9 +0.5
NHSC   New Hope          42.94 349  P     P      05 52 26.0 +1.4
       baz=167,SNR=71
NHSC                                S     S      05 58 06.4 -0.4
       baz=167
MG02   Cerro Sombrero    43.47 178  P     P      05 52 29.5 +1.1
MG02                                IAmb  IAmb   05 52 31.7
       comp=Z,825nm,0.9s
MG04   Isla Riesco       43.52 180  P     P      05 52 30.8 +2.0
Y59A   Loris             43.57 351  P     P      05 52 29.3 -0.2
Y59A                                IAmb  IAmb   05 54 05.8
       comp=Z,436nm,0.7s
152A   Waverly Hall      43.59 343  P     P      05 52 29.3 -0.3
152A                                IAmb  IAmb   05 52 33.2
       comp=Z,888nm,0.9s
Y58A   Scranton          43.62 350  P     P      05 52 29.8 -0.1
EFI    East Falkland     43.70 168d iP    P      05 52 31.4 +1.2
EFI                                 pmax  pmax
       comp=Z,2µm,0.8s
EFI    East Falkland     43.70 168 ⇑P     P      05 52 30.7 +0.5
EFI    East Falkland     43.70 168  P     P      05 52 31.2 +1.0
GO10   Punta Arenas      43.82 180 ⇓P     P      05 52 33.5 +2.4
GO10   Punta Arenas      43.82 180  P     P      05 52 33.0 +1.8
Y57A   Sumter            43.86 349  P     P      05 52 32.0 +0.3
GOGA   Godfrey           43.95 345  P     P      05 52 32.7 +0.2
       baz=163,SNR=93
GOGA                                S     S      05 58 18.1 -3.1
       baz=163
346A   Big Creek Wild    43.98 337  P     P      05 52 32.6 -0.1
ZAIG   Zacatecas         44.17 316  P     P      05 52 35.6 +0.9
X58A   Rowland           44.20 350  IAmb  IAmb   05 52 36.6
       comp=Z,2µm,1.5s
JSC    Jenkinsville      44.29 348  IAmb  IAmb   05 52 37.4
       comp=Z,1µm,1.6s
Z51A   Franklin          44.32 343  IAmb  IAmb   05 52 37.3
       comp=Z,2µm,1.8s
344A   Westbrook Farm    44.53 336  IAmb  IAmb   05 52 39.2
       comp=Z,2µm,1.6s
Y52A   Lilburn           44.54 345  IAmb  IAmb   05 52 38.8
       comp=Z,1µm,1.6s
CNNC   Cliffs of the     44.66 352  P     P      05 52 38.2 +0.4
       baz=171,SNR=35
CNNC                                S     S      05 58 28.6 -2.3
       baz=171
CNNC   Cliffs of the     44.66 352 ⇓P     P      05 52 37.5 -0.3
CNNC   Cliffs of the     44.66 352  IAmb  IAmb   05 52 39.9
       comp=Z,2µm,1.7s
KVTX   Kingsville        44.74 326 ⇑P     P      05 52 41.4 +2.8
KVTX   Kingsville        44.74 326  IAmb  IAmb   05 52 43.7
       comp=Z,868nm,1.1s
441A   DeRidder          44.97 333  IAmb  IAmb   05 52 44.6
       comp=Z,1µm,1.6s
VBMS   Vicksburg         45.13 337  P     P      05 52 41.3 -0.1
       baz=153,SNR=37
VBMS                                S     S      05 58 33.9 -3.7
       baz=153
342A   Flagon Creek P    45.13 334  IAmb  IAmb   05 52 45.1
       comp=Z,934nm,0.9s
KMSC   Kings Mountain    45.13 348  P     P      05 52 41.9 +0.4
       baz=166,SNR=126
KMSC                                S     S      05 58 36.1 -1.6
       baz=166
Y49A   Blount Mountai    45.19 342  IAmb  IAmb   05 52 43.5
       comp=Z,2µm,1.8s
BG3    Lake Jocassee     45.34 346  IAmb  IAmb   05 52 45.6
       comp=Z,2µm,1.9s
X51A   Calhoun           45.41 344  IAmb  IAmb   05 52 45.3
       comp=Z,1µm,1.7s
USHA   Ushuaia           45.55 178  P     P      05 52 45.8 +1.5
       comp=Z,495nm,0.7s,baz=5.6,slow=5.8,SNR=270
USHA                                ScP   ScP    05 57 04.9 -0.3
       comp=Z,120nm,0.8s,baz=12,slow=1.5,SNR=7.8
USHA                                S     S      05 58 45.4 +2.4
       comp=Z,74nm,1.0s,baz=102,slow=18,SNR=12
HKT    Hockley           45.56 330d iP    P      05 52 46.0 +1.3
HKT                                 pmax  pmax
       comp=Z,581nm,1.5s
HKT    Hockley           45.56 330 ⇓P     P      05 52 45.9 +1.2
HKT    Hockley           45.56 330  P     P      05 52 44.8 +0.1
HKT                                 IAmb  IAmb   05 52 50.0
       comp=Z,750nm,1.5s
FPAL   Fort Paine        45.59 343  P     P      05 52 44.6 -0.5
FPAL                                IAmb  IAmb   05 52 46.5
       comp=Z,598nm,1.4s
W52A   Murphy            45.67 345  IAmb  IAmb   05 52 47.6
       comp=Z,1µm,1.6s
MG01   Puerto William    45.69 177  IAmb  IAmb   05 52 48.0
       comp=Z,629nm,0.8s
735A   Kenedy            45.71 327  IAmb  IAmb   05 52 50.3
       comp=Z,1µm,1.6s
143A   Socs Landing,     45.90 336  IAmb  IAmb   05 52 49.5
       comp=Z,632nm,0.8s
V53A   Saluda            45.96 347  IAmb  IAmb   05 52 51.5
       comp=Z,812nm,1.6s
W50A   Signal Mountai    46.13 344  IAmb  IAmb   05 52 52.5
       comp=Z,842nm,1.4s
CPCT   Cooper Cave       46.16 345  IAmb  IAmb   05 52 51.2
       comp=Z,1µm,1.8s
TKL    Tuckaleechee C    46.17 346  P     P      05 52 49.2 -0.1
       comp=Z,225nm,0.9s,baz=161,slow=9.1,SNR=128
TKL                                 ScP   ScP    05 57 07.7 -0.5
       comp=Z,85nm,1.0s,baz=186,slow=3.4,SNR=6.4
TKL                                 S     S      05 58 48.8 -3.3
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	comp=Z,79nm,1.2s,baz=247,slow=23,SNR=18						
TKL	Tuckaleechee C	46.17	346	IAmb	IAmb	05 52 50.9	
	comp=Z,1µm,1.6s						
833A	Chaparral WMA,	46.18	325	P	P	05 52 50.0	+0.5
	baz=140,SNR=129						
833A				S	S	05 58 51.5	-1.0
	baz=140						
SWET	Sewanee	46.32	343	IAmb	IAmb	05 52 52.0	
	comp=Z,2µm,1.8s						
V51A	Loudon	46.45	345	IAmb	IAmb	05 52 53.1	
	comp=Z,2µm,1.9s						
NATX	Nacogdoches	46.49	332	P	P	05 52 52.9	+1.1
	baz=147,SNR=105						
NATX				S	S	05 58 56.3	-0.4
	baz=147						
U54A	Nelsons Funny	46.56	348	IAmb	IAmb	05 52 55.8	
	comp=Z,624nm,0.9s						
PLAL	Pickwick Lake	46.75	341	IAmb	IAmb	05 52 54.4	
	comp=Z,1µm,1.8s						
Z41A	Richland Creek	46.96	335	P	P	05 52 55.3	0.0
	baz=150,SNR=138						
Z41A				S	S	05 58 59.9	-3.2
	baz=150						
TZTN	Tazewell	46.96	346	P	P	05 52 55.2	-0.1
	baz=163,SNR=61						
TZTN				S	S	05 58 59.8	-3.3
	baz=163						
TZTN	Tazewell	46.96	346	IAmb	IAmb	05 52 57.1	
	comp=Z,1µm,1.6s						
BLA	Blacksburg	46.97	350	P	P	05 52 56.3	+0.9
	baz=168,SNR=118						
BLA				S	S	05 59 02.5	-0.8
	baz=168						
435B	Jarrell	47.12	329	P	P	05 52 58.0	+1.4
	baz=144,SNR=40						
435B				S	S	05 59 04.8	-0.6
	baz=144						
435B	Jarrell	47.12	329	IAmb	IAmb	05 53 01.2	
	comp=Z,953nm,1.6s						
CLTN	Cedars of Leba	47.25	343	IAmb	IAmb	05 52 58.7	
	comp=Z,1µm,1.8s						
U49A	Red Boiling Sp	47.49	344	IAmb	IAmb	05 53 00.5	
	comp=Z,802nm,1.6s						
CBN	Corbin Frederi	47.52	353	P	P	05 52 59.4	+0.1
	baz=172,SNR=61						
CBN				S	S	05 59 09.0	-1.6
	baz=172						
T50A	Nancy	47.73	345	IAmb	IAmb	05 53 02.5	
	comp=Z,1µm,1.8s						
WVT	Waverly	47.73	342	P	P	05 52 59.4	-1.6
WVT				pmax	pmax		
	comp=Z,1µm,1.7s						
WVT	Waverly	47.73	342	P	P	05 52 59.6	-1.4
	baz=158						
WVT				S	S	05 59 07.2	-6.4
	baz=158						
WVT	Waverly	47.73	342	⇑P	P	05 52 59.6	-1.4
WVT	Waverly	47.73	342	P	P	05 52 59.4	-1.6
WVT				IAmb	IAmb	05 53 01.5	
	comp=Z,1µm,1.6s						
Z38A	Mt. Pleasant	47.90	333	IAmb	IAmb	05 53 06.3	
	comp=Z,915nm,1.1s						
Q61A	Milford	48.00	356	P	P	05 53 03.2	+0.4
	baz=175						
Q61A				S	S	05 59 16.0	-1.1
	baz=175						
H06E1	SOCORRO T-PHAS	48.01	306	P	P	05 53 04.4	+1.0
	SNR=8.1						
H06S1	SOCORRO T	48.01	305	P	P	05 53 04.5	+1.2
	SNR=15						
HALT	Halls	48.01	340	P	P	05 53 01.9	-1.2
HALT				IAmb	IAmb	05 53 05.0	
	comp=Z,1µm,1.1s						
WHTX	Lake Whitney,	48.03	330	P	P	05 53 04.1	+0.8
	baz=144,SNR=65						
WHTX				S	S	05 59 17.5	-0.3
	baz=144						
WHTX	Lake Whitney,	48.03	330	IAmb	IAmb	05 53 07.2	
	comp=Z,472nm,1.1s						
X40A	Basin Creek Fa	48.04	336	P	P	05 53 02.7	-0.6
	baz=151,SNR=146						
X40A				S	S	05 59 12.1	-5.8
	baz=151						
JCT	Junction City	48.06	326	P	P	05 53 03.7	+0.1
	baz=141,SNR=56						
JCT				S	S	05 59 17.2	-1.2
	baz=141						
JCT	Junction City	48.06	326	⇓P	P	05 53 04.0	+0.3
H06N1	SOCORRO T-PHAS	48.10	306	P	P	05 53 05.6	+1.6
	SNR=10						
HBAR	Harrisburg	48.15	339	IAmb	IAmb	05 53 07.2	
	comp=Z,846nm,0.9s						
LNXT	Lenox	48.24	340	IAmb	IAmb	05 53 07.0	
	comp=Z,634nm,0.8s						
GNAR	Gosnell	48.29	340	IAmb	IAmb	05 53 08.0	
	comp=Z,879nm,1.2s						
R53A	Hurricane	48.34	349	IAmb	IAmb	05 53 08.2	
	comp=Z,491nm,0.7s						
MIAR	Mount Ida	48.39	335	P	P	05 53 05.7	-0.3
	baz=150,SNR=220						
MIAR				S	S	05 59 17.4	-5.3
	baz=150						
MIAR	Mount Ida	48.39	335	⇓P	P	05 53 05.5	-0.5
MIAR	Mount Ida	48.39	335	IAmb	IAmb	05 53 08.1	
	comp=Z,338nm,0.8s						
W41B	Gary Mavity, V	48.41	337	P	P	05 53 05.1	-0.9
	baz=152,SNR=153						
W41B				S	S	05 59 17.4	-5.5
	baz=152						
WHAR	Wooly Hollow	48.52	337	IAmb	IAmb	05 53 09.4	
	comp=Z,518nm,0.9s						
PENMO	Penman	48.60	340	IAmb	IAmb	05 53 10.3	
	comp=Z,826nm,0.9s						
Q54A	Coxs Mills	48.77	350	IAmb	IAmb	05 53 12.1	
	comp=Z,1µm,1.1s						
LCAR	Lake Charles	48.79	338	IAmb	IAmb	05 53 09.9	
	comp=Z,2µm,1.9s						
R50A	Paris	48.80	346	IAmb	IAmb	05 53 10.4	
	comp=Z,856nm,1.4s						
T45A	Paducah	48.80	341	IAmb	IAmb	05 53 11.3	
	comp=Z,773nm,0.8s						
P57A	Homestead Farm	48.85	353	IAmb	IAmb	05 53 12.0	
	comp=Z,855nm,1.4s						
P60A	Greenville	48.95	356	P	P	05 53 09.6	-0.2
	baz=174,SNR=55						
P60A				S	S	05 59 26.8	-3.2
	baz=174						
FCAR	Ozark Folk Cen	48.99	337	IAmb	IAmb	05 53 12.4	
	comp=Z,615nm,1.0s						
R49A	Shelbyville	49.01	345	IAmb	IAmb	05 53 11.5	
	comp=Z,1µm,1.6s						
Z35A	Perchaven, San	49.02	331	IAmb	IAmb	05 53 14.7	
	comp=Z,837nm,1.1s						
W39A	Magazine	49.04	335	P	P	05 53 11.0	+0.4
	baz=150,SNR=274						
W39A				S	S	05 59 27.4	-4.1
	baz=150						
W39A	Magazine	49.04	335	IAmb	IAmb	05 53 14.0	
	comp=Z,713nm,1.0s						
PBMO	Poplar Bluff	49.17	340	IAmb	IAmb	05 53 13.4	
	comp=Z,640nm,0.9s						
MVL	Millersville	49.19	355	IAmb	IAmb	05 53 13.1	
	comp=Z,442nm,1.1s						
X37A	Clayton	49.20	334	IAmb	IAmb	05 53 14.6	
	comp=Z,404nm,0.6s						
WCI	Wyandotte Cave	49.24	344	P	P	05 53 11.0	-1.1
WCI				pmax	pmax		
	comp=Z,696nm,1.1s						
WCI	Wyandotte Cave	49.24	344	P	P	05 53 11.3	-0.8
	baz=160						
WCI				S	S	05 59 28.9	-5.2
	baz=160						
WCI	Wyandotte Cave	49.24	344	⇑P	P	05 53 10.4	-1.7
WCI				⇑S	ScP	05 57 20.7	-0.4
WCI	Wyandotte Cave	49.24	344	P	P	05 53 11.0	-1.1
WCI				IAmb	IAmb	05 53 14.2	
	comp=Z,696nm,1.1s						
MCWV	Mont Chateau	49.27	351	P	P	05 53 12.9	+0.6
	baz=169,SNR=136						
MCWV				S	S	05 59 34.6	+0.1
	baz=169						
MCWV	Mont Chateau	49.27	351	IAmb	IAmb	05 53 14.2	
	comp=Z,810nm,1.1s						
TXAR	Lajitas Array	49.45	322	P	P	05 53 13.8	0.0
	comp=Z,52nm,0.6s,baz=148,slow=7.7,SNR=424						
TXAR				PcP	PcP	05 54 25.5	+1.0
	comp=Z,24nm,0.7s,baz=140,slow=6.5,SNR=4.5						
TXAR				pP	pP	05 55 06.0	+1.5
	comp=Z,30nm,0.8s,baz=139,slow=8.4,SNR=3.2						
TXAR				ScP	ScP	05 57 22.1	-0.2
	comp=Z,63nm,0.9s,baz=139,slow=7.6,SNR=8.2						
TXAR				S	S	05 59 36.0	-1.4
	comp=Z,12nm,0.8s,baz=90,slow=4.5,SNR=1.9						
TXAR				P3KP		06 22 48.4	
	comp=Z,0.8nm,1.0s,baz=164,slow=2.2,SNR=3.8						
TXAR				P4KPbc		06 30 40.9	
	comp=Z,0.3nm,0.6s,baz=136,slow=5.6,SNR=6.9						
TXAR	Lajitas Array	49.45	322	P	P	05 53 14.1	+0.2
TX31	Lajitas Ar. Si	49.45	322	⇑P	P	05 53 13.8	-0.1
TX31	Lajitas Ar. Si	49.45	322	IAmb	IAmb	05 53 17.4	
	comp=Z,2µm,1.9s						
PAGS	Pennsylvania G	49.45	354	IAmb	IAmb	05 53 15.7	
	comp=Z,567nm,1.4s						
LOOK	Love County	49.52	331	IAmb	IAmb	05 53 18.3	
	comp=Z,1µm,1.8s						
T42A	Van Buren	49.63	339	IAmb	IAmb	05 53 17.0	
	comp=Z,405nm,0.8s						
P52A	Corning	49.64	349	P	P	05 53 14.6	-0.4
	baz=166,SNR=181						
P52A				S	S	05 59 35.7	-3.8
	baz=166						
P52A	Corning	49.64	349	IAmb	IAmb	05 53 16.5	
	comp=Z,605nm,0.7s						
ABTX	Abilene, Hawle	49.64	328	P	P	05 53 15.7	+0.5
	baz=142,SNR=124						
ABTX				S	S	05 59 38.7	-1.2
	baz=142						
ABTX	Abilene, Hawle	49.64	328	IAmb	IAmb	05 53 18.9	
	comp=Z,929nm,1.4s						
P51A	Williamsport	49.67	348	IAmb	IAmb	05 53 15.8	
	comp=Z,396nm,1.1s						
U40A	Yellville	49.68	337	P	P	05 53 14.6	-0.8
	baz=152,SNR=420						
U40A				S	S	05 59 34.9	-5.2
	baz=152						
U40A	Yellville	49.68	337	IAmb	IAmb	05 53 17.0	
	comp=Z,512nm,0.8s						
O56A	Blue Knob Stat	49.70	353	P	P	05 53 16.1	+0.7
	baz=171,SNR=87						
O56A				S	S	05 59 38.9	-1.4
	baz=171						
O56A	Blue Knob Stat	49.70	353	IAmb	IAmb	05 53 17.3	
	comp=Z,532nm,1.1s						
CPNY	Central Park	49.82	357	IAmb	IAmb	05 53 18.0	
	comp=Z,1µm,1.8s						
N62A	Caumsett State	49.94	358	IAmb	IAmb	05 53 18.5	
	comp=Z,468nm,0.5s						
SSPA	Standing Stone	49.98	353	P	P	05 53 17.7	+0.3
	baz=172						
SSPA				S	S	05 59 42.5	-1.5
	baz=172						
SSPA	Standing Stone	49.98	353	⇑P	P	05 53 17.3	-0.1
SSPA	Standing Stone	49.98	353	P	P	05 53 17.5	+0.1
SSPA				IAmb	IAmb	05 53 19.8	
	comp=Z,2µm,1.8s						
SLBS	Sierra La Lagu	50.00	312	⇑P	P	05 53 18.7	+0.7
SLBS	Sierra La Lagu	50.00	312	P	P	05 53 19.0	+1.0
SLBS				IAmb	IAmb	05 53 20.2	
	comp=Z,474nm,1.4s						
PAL	Palisades	50.03	357	P	P	05 53 17.2	-0.6
PAL				pmax	pmax		
	comp=Z,723nm,1.5s						
PAL	Palisades	50.03	357	P	P	05 53 17.4	-0.3
	baz=177,SNR=51						
PAL				S	S	05 59 41.4	-3.2
	baz=177						
PAL	Palisades	50.03	357	P	P	05 53 17.2	-0.6
PAL				IAmb	IAmb	05 53 19.3	
	comp=Z,723nm,1.5s						
HHAR	Hobbs	50.04	336	P	P	05 53 17.4	-0.6
HHAR				IAmb	IAmb	05 53 21.1	
	comp=Z,1µm,1.3s						
O52A	Adamsville	50.05	349	P	P	05 53 17.6	-0.4
N59A	State Game Lan	50.05	356	P	P	05 53 18.1	+0.1
	baz=174,SNR=50						
N59A				S	S	05 59 42.2	-2.8
	baz=174						
N59A	State Game Lan	50.05	356	P	P	05 53 17.9	-0.1
N59A				IAmb	IAmb	05 53 20.4	
	comp=Z,1µm,2.0s						
N58A	Sunbury	50.06	355	P	P	05 53 18.1	+0.1
N58A				IAmb	IAmb	05 53 20.0	
	comp=Z,350nm,0.8s						
O53A	New Philadelph	50.07	350	P	P	05 53 18.1	-0.1
	baz=167,SNR=170						
O53A				S	S	05 59 42.4	-2.8
	baz=167						
O53A	New Philadelph	50.07	350	P	P	05 53 17.6	-0.5
O53A				IAmb	IAmb	05 53 20.0	
	comp=Z,562nm,0.6s						
P49A	Miami Univ. Ec	50.09	346	P	P	05 53 17.1	-1.2
	baz=163,SNR=77						
P49A				S	S	05 59 40.1	-5.4
	baz=163						
P49A	Miami Univ. Ec	50.09	346	P	P	05 53 17.1	-1.2
P49A				IAmb	IAmb	05 53 19.1	
	comp=Z,2µm,1.7s						
P48A	Milroy	50.18	346	IAmb	IAmb	05 53 19.5	
	comp=Z,1µm,1.8s						
BLO	Bloomington	50.19	345	IAmb	IAmb	05 53 20.8	
	comp=Z,569nm,0.6s						
X34A	Smith Ranch, M	50.33	331	IAmb	IAmb	05 53 22.6	
	comp=Z,584nm,0.6s						
U38A	Gravette	50.36	336	IAmb	IAmb	05 53 21.7	
	comp=Z,844nm,1.7s						
M63A	Gales Ferry	50.37	359	IAmb	IAmb	05 53 22.2	
	comp=Z,1µm,1.7s						
ACSO	Alum Creek Sta	50.38	348	P	P	05 53 20.0	-0.4
	baz=165,SNR=127						
ACSO				S	S	05 59 44.8	-4.7
	baz=165						
ACSO	Alum Creek Sta	50.38	348	IAmb	IAmb	05 53 21.7	
	comp=Z,1µm,1.2s						
TUL1	Leonard	50.49	334	P	P	05 53 21.3	0.0
	baz=148,SNR=250						
TUL1				S	S	05 59 48.3	-2.9
	baz=148						
TUL1	Leonard	50.49	334	IAmb	IAmb	05 53 24.4	
	comp=Z,629nm,0.9s						
M65A	Busby, Falmout	50.53	1	P	P	05 53 21.4	0.0
	baz=181						
M65A				S	S	05 59 48.4	-2.9
	baz=181						
N54A	Moraine State	50.57	351	P	P	05 53 22.4	+0.6
	baz=169,SNR=159						
N54A				S	S	05 59 50.9	-1.1
	baz=169						
N54A	Moraine State	50.57	351	IAmb	IAmb	05 53 23.6	
	comp=Z,1µm,1.2s						
M57A	Sunshine Farm,	50.59	354	IAmb	IAmb	05 53 23.5	
	comp=Z,700nm,1.1s						
CCM	Cathedral Cave	50.60	340	P	P	05 53 21.0	-1.0
CCM				pmax	pmax		
	comp=Z,2µm,1.5s						
CCM	Cathedral Cave	50.60	340	P	P	05 53 21.4	-0.6
	baz=154						
CCM				S	S	05 59 46.4	-6.1
	baz=154						
CCM	Cathedral Cave	50.60	340	⇓P	P	05 53 20.9	-1.0
CCM				⇓S	ScP	05 57 27.3	+0.3
CCM	Cathedral Cave	50.60	340	P	P	05 53 21.0	-1.0
O49A	Covington	50.62	347	IAmb	IAmb	05 53 23.0	
	comp=Z,952nm,1.4s						
FNO	Franklin	50.67	332	IAmb	IAmb	05 53 26.3	
	comp=Z,1µm,1.0s						
KSCT	Kent School, K	50.73	358	IAmb	IAmb	05 53 24.7	
	comp=Z,1µm,1.8s						
UCCT	U. Connecticut	50.76	359	IAmb	IAmb	05 53 23.9	
	comp=Z,1µm,1.8s						
P46A	Rosedale	50.79	344	IAmb	IAmb	05 53 23.2	
	comp=Z,469nm,1.1s						
OKCFA	Oklahoma City	50.82	332	IAmb	IAmb	05 53 25.8	
	comp=Z,455nm,0.6s						
BRYW	Bryant College	50.88	360	IAmb	IAmb	05 53 25.8	
	comp=Z,561nm,0.7s						
WMOK	Wichita Mounta	50.89	331	P	P	05 53 24.2	-0.1
	baz=144,SNR=179						
WMOK				S	S	05 59 55.0	-1.7
	baz=144						
WMOK	Wichita Mounta	50.89	331	⇓P	P	05 53 24.1	-0.2
OK025	Westminster Rd	50.91	332	IAmb	IAmb	05 53 27.9	
	comp=Z,735nm,1.1s						
N51A	Ashland	50.93	349	IAmb	IAmb	05 53 25.5	
	comp=Z,410nm,0.6s						
OK031	S. Brethren Rd	50.99	333	IAmb	IAmb	05 53 26.6	
	comp=Z,716nm,0.7s						
S39A	Bolivar	51.03	337	IAmb	IAmb	05 53 27.5	
	comp=Z,793nm,0.9s						
M54A	Oil Creek Stat	51.06	352	P	P	05 53 25.4	+0.1
	baz=169,SNR=155						
M54A				S	S	05 59 57.4	-1.2
	baz=169						
M54A	Oil Creek Stat	51.06	352	IAmb	IAmb	05 53 26.7	
	comp=Z,812nm,1.1s						
BCOK	Bluff Creek, N	51.09	332		P	05 53 25.5	-0.1
BCOK				IAmb	IAmb	05 53 28.8	
	comp=Z,943nm,1.0s						
OK033	Mehan	51.11	333	P	P	05 53 26.1	+0.3
OK033				IAmb	IAmb	05 53 29.7	
	comp=Z,1µm,1.3s						
QUOK	Quay	51.11	333		P	05 53 26.1	+0.3
QUOK				IAmb	IAmb	05 53 29.0	
	comp=Z,1µm,1.1s						
OK029	Liberty Lake	51.14	333		P	05 53 25.8	-0.1
M53A	WI Miller and	51.14	351	P	P	05 53 25.8	-0.1
	baz=168,SNR=272						
M53A				S	S	05 59 57.0	-2.6
	baz=168						
M53A	WI Miller and	51.14	351	P	P	05 53 25.9	+0.1
R40A	Maddies Statio	51.17	339	P	P	05 53 25.1	-1.0
R40A				IAmb	IAmb	05 53 27.9	
	comp=Z,727nm,0.8s						
QUA2	Belchertown	51.25	359	P	P	05 53 26.3	-0.2
QUA2				IAmb	IAmb	05 53 28.4	
	comp=Z,956nm,1.8s						
L59A	Walton	51.27	356	P	P	05 53 26.7	-0.1
L59A				IAmb	IAmb	05 53 28.8	
	comp=Z,2µm,1.9s						
N49A	Columbus Grove	51.29	347	P	P	05 53 26.2	-0.7
N49A				IAmb	IAmb	05 53 28.0	
	comp=Z,829nm,0.8s						
BCX	Boston College	51.30	0	P	P	05 53 27.1	+0.2
BCX				IAmb	IAmb	05 53 28.9	
	comp=Z,847nm,1.9s						
BINY	Binghamton	51.34	355	P	P	05 53 27.4	+0.1
	baz=174,SNR=238						
BINY				S	S	06 00 00.1	-2.2
	baz=174						
BINY	Binghamton	51.34	355	P	P	05 53 27.6	+0.2
BINY				IAmb	IAmb	05 53 29.4	
	comp=Z,555nm,0.6s						
WES	Weston	51.35	360	IAmb	IAmb	05 53 28.1	
	comp=Z,755nm,1.6s						
M52A	Chesterland	51.35	350	IAmb	IAmb	05 53 28.4	
	comp=Z,630nm,1.1s						
L56A	Greenwood	51.42	354	IAmb	IAmb	05 53 29.2	
	comp=Z,700nm,1.1s						
L61B	Northampton	51.43	359	P	P	05 53 27.6	-0.3
	baz=178,SNR=79						
L61B				S	S	05 59 59.6	-3.8
	baz=178						
HRV	Adam Dziewonsk	51.47	360	P	P	05 53 28.3	+0.2
HRV				pmax	pmax		
	comp=Z,2µm,1.9s						
HRV	Adam Dziewonsk	51.47	360	P	P	05 53 28.4	+0.2
	baz=180						
HRV				S	S	06 00 00.5	-3.4
	baz=180						
HRV	Adam Dziewonsk	51.47	360	⇑P	P	05 53 27.9	-0.3
HRV	Adam Dziewonsk	51.47	360	P	P	05 53 28.3	+0.2
HRV				IAmb	IAmb	05 53 30.1	
	comp=Z,2µm,1.9s						
SFIN	Lafayette	51.47	345	P	P	05 53 26.6	-1.6
	baz=160,SNR=128						
SFIN				S	S	05 59 56.5	-7.5
	baz=160						
SFIN	Lafayette	51.47	345	IAmb	IAmb	05 53 28.4	
	comp=Z,354nm,0.5s						
P43A	Skaggs, Pawnee	51.48	342	IAmb	IAmb	05 53 28.9	
	comp=Z,696nm,0.8s						
N47A	Urbana	51.59	346	IAmb	IAmb	05 53 29.6	
	comp=Z,454nm,0.7s						
K62A	Royalston	51.63	359	IAmb	IAmb	05 53 31.6	
	comp=Z,1µm,1.8s						
O44A	Mansfield	51.64	343	IAmb	IAmb	05 53 29.5	
	comp=Z,2µm,1.8s						
ERPA	Erie	51.70	352	P	P	05 53 30.2	+0.4
	baz=169,SNR=115						
ERPA				S	S	06 00 05.2	-1.9
	baz=169						
TRY	Troy	51.74	358	IAmb	IAmb	05 53 32.2	
	comp=Z,467nm,1.0s						
WVNY	West Valley, N	51.81	353	IAmb	IAmb	05 53 32.1	
	comp=Z,791nm,1.1s						
BLOK	Blackwell	51.83	333	IAmb	IAmb	05 53 35.1	
	comp=Z,554nm,1.0s						
K57A	Scipio Center	51.92	355	IAmb	IAmb	05 53 33.9	
	comp=Z,425nm,0.7s						
CROK	Carrier	51.96	333	IAmb	IAmb	05 53 34.8	
	comp=Z,919nm,0.7s						
MMNY	Mt. Morris Dam	52.05	354	IAmb	IAmb	05 53 33.4	
	comp=Z,731nm,1.1s						
KAN13	South Haven SW	52.16	333	IAmb	IAmb	05 53 37.4	
	comp=Z,1µm,1.4s						
MNTX	Cornudas Mount	52.16	323	P	P	05 53 33.0	-0.5
	baz=136,SNR=270						
MNTX				S	S	06 00 12.4	-1.2
	baz=136						
P40A	Paris	52.20	340	IAmb	IAmb	05 53 35.9	
	comp=Z,1µm,1.0s						
HDIL	Hopedale	52.25	343	P	P	05 53 32.3	-1.5
	baz=157,SNR=78						
HDIL				S	S	06 00 06.7	-7.7
	baz=157						
HDIL	Hopedale	52.25	343	IAmb	IAmb	05 53 33.9	
	comp=Z,370nm,0.6s						
OK032	Salt Plains WL	52.31	333	IAmb	IAmb	05 53 37.3	
	comp=Z,744nm,0.9s						
KAN09	Caldwell North	52.32	333	IAmb	IAmb	05 53 38.6	
	comp=Z,738nm,1.1s						
KAN14	Manchester OK	52.33	333	IAmb	IAmb	05 53 38.5	
	comp=Z,2µm,1.6s						
L48A	N Adams	52.33	348	IAmb	IAmb	05 53 36.0	
	comp=Z,694nm,1.0s						
U32A	Winter Ranch,	52.33	332	IAmb	IAmb	05 53 38.1	
	comp=Z,500nm,0.9s						
MSTX	Muleshoe	52.34	327	P	P	05 53 34.7	-0.1
	baz=140						
MSTX				S	S	06 00 14.7	-1.4
	baz=140						
MSTX	Muleshoe	52.34	327	IAmb	IAmb	05 53 36.8	
	comp=Z,253nm,0.5s						
ACCN	Adirondack Com	52.39	358	IAmb	IAmb	05 53 36.9	
	comp=Z,1µm,1.9s						
KAN05	Bluff City Nor	52.41	333	IAmb	IAmb	05 53 38.6	
	comp=Z,658nm,1.0s						
J58A	Remsen	52.45	356	IAmb	IAmb	05 53 37.2	
	comp=Z,863nm,1.4s						
AMTX	Amarillo	52.46	328	P	P	05 53 35.5	-0.1
	baz=141						
AMTX				S	S	06 00 15.4	-2.3
	baz=141						
AMTX	Amarillo	52.46	328	P	P	05 53 35.3	-0.3
AAM	Ann Arbor	52.51	348	P	P	05 53 34.8	-0.7
	baz=165,SNR=57						
AAM				S	S	06 00 12.3	-5.5
	baz=165						
J59A	Piesco	52.51	357	IAmb	IAmb	05 53 37.6	
	comp=Z,1µm,1.4s						
KAN06	Argonia West S	52.52	333	IAmb	IAmb	05 53 37.9	
	comp=Z,393nm,0.7s						
KAN10	Anthony SW Sta	52.52	333	IAmb	IAmb	05 53 38.2	
	comp=Z,1µm,1.6s						
MEDO	Medina	52.54	353	IAmb	IAmb	05 53 36.7	
	comp=Z,2µm,1.8s						
J57A	Williamstown	52.55	356	IAmb	IAmb	05 53 36.8	
	comp=Z,452nm,1.1s						
KAN08	Anthony NE Sta	52.55	333	IAmb	IAmb	05 53 40.3	
	comp=Z,1µm,1.4s						
J55A	Hilton	52.57	354	IAmb	IAmb	05 53 36.9	
	comp=Z,621nm,1.1s						
KAN16	Harper SW Stat	52.59	333	IAmb	IAmb	05 53 38.4	
	comp=Z,633nm,0.7s						
KAN12	Harper NE Stat	52.62	333	IAmb	IAmb	05 53 40.8	
	comp=Z,1µm,1.2s						
J54A	Appleton	52.67	353	IAmb	IAmb	05 53 38.6	
	comp=Z,2µm,1.9s						
M44A	Midewin, Midew	52.67	344	IAmb	IAmb	05 53 36.9	
	comp=Z,607nm,1.4s						
P38A	Dawn	52.81	338	IAmb	IAmb	05 53 39.6	
	comp=Z,729nm,0.8s						
HOPE	Hope Point	52.81	155	P	P	05 53 38.1	+0.6
HOPE				pmax	pmax		

	comp=Z,2µm,0.9s						
HOPE	Hope Point	52.81	155	⇓P	P	05 53 38.6	+1.1
HOPE	Hope Point	52.81	155	P	P	05 53 38.1	+0.6
L46A	Eue Claire	52.81	346	IAmb	IAmb	05 53 37.4	
	comp=Z,500nm,1.1s						
N41A	Harden Midland	52.87	341	IAmb	IAmb	05 53 38.6	
	comp=Z,673nm,0.8s						
SACV	Santiago Islan	52.98	63	P	P	05 53 39.9	+0.5
SACV				IAmb	IAmb	05 53 42.4	
	comp=Z,408nm,0.8s						
I63A	Otisfield	53.02	1	IAmb	IAmb	05 53 41.8	
	comp=Z,784nm,1.6s						
PECO	Prince Edward	53.15	355	IAmb	IAmb	05 53 41.8	
	comp=Z,843nm,1.2s						
LBNH	Lisbon	53.20	359	P	P	05 53 41.1	+0.6
	baz=179,SNR=78						
LBNH				S	S	06 00 26.0	-0.9
	baz=179						
L44A	Lake County Fo	53.37	345	P	P	05 53 40.2	-1.6
	baz=159,SNR=14						
L44A				S	S	06 00 20.8	-8.3
	baz=159						
L44A	Lake County Fo	53.37	345	IAmb	IAmb	05 53 41.8	
	comp=Z,1µm,1.6s						
KSU1	Kansas State U	53.54	336	P	P	05 53 42.6	-0.4
	baz=148,SNR=72						
KSU1				S	S	06 00 27.9	-3.6
	baz=148						
KSU1	Kansas State U	53.54	336	⇓P	P	05 53 42.5	-0.4
KSU1				⇑S	ScP	05 57 39.8	0.0
KSU1	Kansas State U	53.54	336	IAmb	IAmb	05 53 45.6	
	comp=Z,608nm,0.9s						
WVL	Waterville	53.55	1	P	P	05 53 43.4	+0.5
WVL				IAmb	IAmb	05 53 45.5	
	comp=Z,1µm,1.9s						
LONY	Lake Ozonia	53.66	357	P	P	05 53 43.8	+0.1
	baz=176,SNR=69						
LONY				S	S	06 00 31.8	-1.2
	baz=176						
LONY	Lake Ozonia	53.66	357	IAmb	IAmb	05 53 46.0	
	comp=Z,2µm,2.0s						
N38A	Joes South For	53.73	339	IAmb	IAmb	05 53 45.0	
	comp=Z,541nm,0.8s						
DELO	Deloro Mine	53.79	354	IAmb	IAmb	05 53 46.4	
	comp=Z,2µm,1.8s						
FRNY	Flat Rock	53.84	358	IAmb	IAmb	05 53 47.0	
	comp=Z,2µm,1.9s						
R32A	Long Quarter,	53.87	333	IAmb	IAmb	05 53 49.3	
	comp=Z,781nm,1.2s						
I49A	Point Hope	53.94	350	IAmb	IAmb	05 53 46.5	
	comp=Z,741nm,0.8s						
HSIG		53.95	316	P	P	05 53 46.6	+0.5
K43A	Burlington	53.98	344	IAmb	IAmb	05 53 46.4	
	comp=Z,989nm,1.2s						
HAL	Halifax	54.04	7	IAmb	IAmb	05 53 48.0	
	comp=Z,602nm,1.1s						
G62A	West of Eustis	54.18	1	IAmb	IAmb	05 53 50.0	
	comp=Z,1µm,1.1s						
121A	Cookes Peak, D	54.20	322	P	P	05 53 48.9	+0.9
	baz=134,SNR=92						
121A				S	S	06 00 41.2	+0.5
	baz=134						
SADO	Sadowa	54.20	353	ScP	ScP	05 57 42.0	-0.5
	comp=Z,75nm,0.8s,baz=196,slow=2.6,SNR=5.2						
SADO				S	S	06 00 36.8	-3.1
	comp=Z,221nm,1.2s,baz=281,slow=20,SNR=21						
SADO	Sadowa	54.20	353	⇓P	P	05 53 46.5	-1.0
SADO	Sadowa	54.20	353	IAmb	IAmb	05 53 48.9	
	comp=Z,2µm,1.9s						
L40A	Anamosa	54.21	342	IAmb	IAmb	05 53 48.3	
	comp=Z,2µm,1.4s						
GGN	Saint George	54.23	4	IAmb	IAmb	05 53 50.3	
	comp=Z,3µm,1.9s						
PKME	Peaks-Kenny Pk	54.25	2	P	P	05 53 48.2	+0.4
	baz=182,SNR=144						
PKME				S	S	06 00 39.8	-0.7
	baz=182						
PKME	Peaks-Kenny Pk	54.25	2	P	P	05 53 47.9	+0.1
PKME				IAmb	IAmb	05 53 50.1	
	comp=Z,425nm,0.7s						
PLVO	Plevna	54.26	355	IAmb	IAmb	05 53 49.8	
	comp=Z,2µm,2.0s						
G65A	Princeton	54.26	3	IAmb	IAmb	05 53 50.3	
	comp=Z,804nm,0.6s						
319A	Douglas	54.36	320	IAmb	IAmb	05 55 47.0	
	comp=Z,934nm,1.6s						
MNTQ	Montreal, Queb	54.50	358	⇓P	P	05 53 49.3	-0.2
MNTQ	Montreal, Queb	54.50	358	IAmb	IAmb	05 53 51.5	
	comp=Z,1µm,1.0s						
CBKS	Cedar Bluff	54.65	333	P	P	05 53 51.3	+0.5
	baz=145,SNR=84						
CBKS				S	S	06 00 45.1	-0.9
	baz=145						
CBKS	Cedar Bluff	54.65	333	⇓P	P	05 53 51.3	+0.5
CBKS	Cedar Bluff	54.65	333	IAmb	IAmb	05 53 54.5	
	comp=Z,739nm,1.1s						
N35A	Tabor	54.67	337	IAmb	IAmb	05 54 47.5	
	comp=Z,651nm,0.7s						
F63A	Nahmakanta, Br	54.70	2	IAmb	IAmb	05 53 53.4	
	comp=Z,1µm,1.8s						
JFWS	Jewell Farm	54.70	343	P	P	05 53 49.9	-1.1
	baz=157,SNR=227						
JFWS				S	S	06 00 40.0	-6.4
	baz=157						
JFWS	Jewell Farm	54.70	343	IAmb	IAmb	05 53 51.8	
	comp=Z,795nm,0.8s						
SCIA	State Center	54.72	340	P	P	05 53 50.1	-1.1
	baz=153,SNR=264						
SCIA				S	S	06 00 40.1	-6.6
	baz=153						
SCIA	State Center	54.72	340	IAmb	IAmb	05 53 51.9	
	comp=Z,963nm,0.7s						
Y22D	IRIS PASSCAL I	54.76	324	P	P	05 53 53.2	+1.4
	baz=135						
Y22D				S	S	06 00 48.8	+0.9
	baz=135						
GAC	Glen Almond	54.80	356	⇓P	P	05 53 51.0	-0.5
F64A	Sherman	54.89	2	IAmb	IAmb	05 53 53.9	
	comp=Z,608nm,1.1s						
GBN	Guysborough	55.07	8	IAmb	IAmb	05 53 55.4	
	comp=Z,778nm,1.4s						
ANMO	Albuquerque	55.11	325	P4KPbc		06 31 05.7	
	comp=Z,3.0nm,0.9s,baz=141,slow=6.0,SNR=11						
ANMO	Albuquerque	55.11	325	P	P	05 53 54.6	+0.3
ANMO				pmax	pmax		
	comp=Z,187nm,1.4s						
ANMO	Albuquerque	55.11	325	P	P	05 53 54.8	+0.5
	baz=136						
ANMO				S	S	06 00 50.7	-1.8
	baz=136						
ANMO	Albuquerque	55.11	325	⇓P	P	05 53 54.8	+0.5
ANMO				⇓S	ScP	05 57 48.0	+1.0
ANMO	Albuquerque	55.11	325	P	P	05 53 54.6	+0.3
LMN	Caledonia Moun	55.12	5	IAmb	IAmb	05 53 55.2	
	comp=Z,754nm,1.1s						
GLMI	Grayling	55.13	348	P	P	05 53 53.0	-0.9
	baz=164,SNR=28						
GLMI				S	S	06 00 46.5	-5.4
	baz=164						
GLMI	Grayling	55.13	348	IAmb	IAmb	05 53 54.9	
	comp=Z,729nm,1.1s						
K38A	Parkersburg	55.23	341	IAmb	IAmb	05 53 57.4	
	comp=Z,1µm,1.2s						
N33A	J Bar K, Exete	55.27	336	IAmb	IAmb	05 53 56.4	
	comp=Z,718nm,0.7s						
H43A	Windswept, Lux	55.49	346	IAmb	IAmb	05 53 58.0	
	comp=Z,470nm,0.7s						
G45A	Suttons Bay	55.55	348	IAmb	IAmb	05 53 58.3	
	comp=Z,548nm,0.8s						
E62A	Clayton Lake	55.60	1	IAmb	IAmb	05 53 59.1	
	comp=Z,718nm,1.1s						
T25A	Trinidad	55.61	328	P	P	05 53 58.7	+0.9
	baz=139,SNR=204						
T25A				S	S	06 01 00.4	+1.5
	baz=139						
I40A	Norwalk	55.70	343	IAmb	IAmb	05 53 58.9	
	comp=Z,636nm,0.7s						
PMSA	Palmer Station	55.70	176	P	P	05 53 58.8	+1.2
	comp=Z,486nm,0.8s,baz=359,slow=5.1,SNR=201						
PMSA				PcP	PcP	05 54 49.2	+1.7
	comp=Z,69nm,0.5s,baz=15,slow=2.5,SNR=5.0						
PMSA	Palmer Station	55.70	176	⇓P	P	05 53 59.0	+1.4
PMSA	Palmer Station	55.70	176	*e*P	P	05 53 59.3	+1.7
PMSA	Palmer Station	55.70	176	P	P	05 53 58.8	+1.2
PMSA				IAmb	IAmb	05 54 02.4	
	comp=Z,859nm,1.1s						
PQI	Presque Isle	55.71	3	P	P	05 53 58.4	+0.5
H10S3	ASCENSION HYDR	55.82	95	P	P	05 54 00.9	+1.8
	baz=20,slow=74,SNR=10						
H10S2	ASCENSION HYDR	55.84	95	P	P	05 54 01.1	+1.9
	baz=200,slow=74,SNR=13						
L34A	Svendsen Farm,	55.90	338	P	P	05 53 58.6	-0.8
L34A				IAmb	IAmb	05 54 00.2	
	comp=Z,776nm,0.7s						
TUC	Tucson	55.94	319	P	P	05 53 59.9	0.0
TUC				pmax	pmax		
	comp=Z,446nm,1.6s						
TUC	Tucson	55.94	319	P	P	05 54 00.4	+0.5
	baz=131						
TUC				S	S	06 01 02.1	-0.8
	baz=131						
TUC	Tucson	55.94	319	⇑P	P	05 53 60.0	0.0
TUC	Tucson	55.94	319	P	P	05 53 59.9	0.0
D62A	Allapoint, All	56.08	2	P	P	05 54 00.4	0.0
D62A				IAmb	IAmb	05 54 02.8	
	comp=Z,740nm,0.7s						
H10N3	ASCENSION HYDR	56.09	93	P	P	05 54 02.4	+1.5
	baz=255,slow=6.0,SNR=32						
H10N2	ASCENSION HYDR	56.10	93	P	P	05 54 02.6	+1.7
	baz=255,slow=6.0,SNR=26						
H10N1	ASCENSION HYDR	56.11	93	P	P	05 54 02.6	+1.6
	baz=255,slow=6.0,SNR=43						
BGNE	Belgrade	56.12	336	P	P	05 54 00.7	-0.2
	baz=148,SNR=87						
BGNE				S	S	06 01 01.3	-3.6
	baz=148						
BGNE	Belgrade	56.12	336	P	P	05 54 00.6	-0.3
BGNE				IAmb	IAmb	05 54 02.4	
	comp=Z,1µm,0.8s						
KSCO	Kaye Shedlock'	56.16	331	P	P	05 54 02.1	+0.7
	baz=142,SNR=80						
KSCO				S	S	06 01 05.0	-0.6
	baz=142						
KSCO	Kaye Shedlock'	56.16	331	P	P	05 54 02.1	+0.7
ASCN	Ascension	56.22	93	P	P	05 54 02.9	+0.8
BATG	Bathurst New B	56.43	4	P	P	05 54 03.2	+0.4
LMQ	La Malbaie	56.52	1	P	P	05 54 03.6	+0.1
E46A	Sault Ste Mari	56.55	349	P	P	05 54 02.8	-0.9
E46A				IAmb	IAmb	05 54 04.4	
	comp=Z,581nm,0.8s						
SDCO	Great Sand Dun	56.64	328	P	P	05 54 05.7	+0.8
	baz=138,SNR=316						
SDCO				S	S	06 01 12.5	+0.3
	baz=138						
SDCO	Great Sand Dun	56.64	328	P	P	05 54 05.6	+0.8
I37A	Lemond, Waseca	56.66	341	P	P	05 54 03.5	-1.0
I37A				IAmb	IAmb	05 54 06.4	
	comp=Z,584nm,0.8s						
F42A	Maple Grove Fa	56.78	346	P	P	05 54 04.2	-1.1
F42A				IAmb	IAmb	05 54 06.4	
	comp=Z,2µm,1.8s						
G40A	Rib Lake	56.86	344	P	P	05 54 05.0	-0.8
G40A				IAmb	IAmb	05 54 07.3	
	comp=Z,2µm,1.9s						
X18A	Snowflake	56.88	322	P	P	05 54 07.2	+0.7
214A	Organ Pipe Nat	57.03	318	P	P	05 54 08.3	+0.9
	baz=129,SNR=54						
214A				S	S	06 01 17.4	+0.4
	baz=129						
214A	Organ Pipe Nat	57.03	318	P	P	05 54 07.9	+0.6
E43A	Lone Tree Farm	57.10	347	P	P	05 54 06.3	-1.2
W18A	Petrified Fore	57.15	323	P	P	05 54 09.1	+0.8
	baz=133,SNR=10						
W18A				S	S	06 01 19.2	+0.6
	baz=133						
W18A	Petrified Fore	57.15	323	P	P	05 54 09.1	+0.8
VLDQ	Val d'Or	57.34	355	P	P	05 54 08.8	-0.1
S22A	4UR Ranch, Cre	57.35	327	P	P	05 54 10.6	+0.9
	baz=137,SNR=118						
S22A				S	S	06 01 21.9	+0.6
	baz=137						
COWI	Conover	57.35	345	P	P	05 54 08.5	-0.7
Q24A	Divide	57.37	329	P	P	05 54 10.8	+0.9
	baz=139,SNR=98						
Q24A				S	S	06 01 21.8	+0.3
	baz=139						
K31A	O'Neill	57.38	336	P	P	05 54 09.2	-0.3
K31A				IAmb	IAmb	05 54 12.7	
	comp=Z,504nm,0.6s						
ECSD	EROS Data Cent	57.52	338	P	P	05 54 09.6	-0.7
	baz=150,SNR=234						
ECSD	EROS Data Cent	57.52	338	P	P	05 54 09.8	-0.5
ECSD				IAmb	IAmb	05 54 11.8	
	comp=Z,1µm,1.6s						
SPMN	Marine on St.	57.56	342	P	P	05 54 09.4	-1.1
	baz=155,SNR=190						
SPMN	Marine on St.	57.56	342	P	P	05 54 09.5	-1.1
X16A	Lo Mia Camp, P	57.73	321	P	P	05 54 13.1	+0.9
SFX	San Felipe	57.86	316	P	P	05 54 13.7	+0.9
MVCO	Mesa Verde	57.88	325	P	P	05 54 14.0	+0.7
	baz=135,SNR=151						
MVCO				S	S	06 01 28.3	+0.3
	baz=135						
MVCO	Mesa Verde	57.88	325	P	P	05 54 13.7	+0.4
D41A	Chassel	58.11	346	P	P	05 54 13.3	-0.9
D41A				IAmb	IAmb	05 54 15.4	
	comp=Z,620nm,0.8s						
113A	Mohawk Valley,	58.17	318	P	P	05 54 15.3	+0.3
ISCO	Idaho Springs	58.24	329	P	P	05 54 16.2	+0.5
ISCO				pmax	pmax		
	comp=Z,180nm,1.0s						
ISCO	Idaho Springs	58.24	329	P	P	05 54 16.5	+0.9
	baz=139,SNR=194						
ISCO				S	S	06 01 33.4	+0.9
	baz=139						
ISCO	Idaho Springs	58.24	329	P	P	05 54 16.2	+0.5
F36A	Milaca	58.36	342	P	P	05 54 15.1	-0.8
Y14A	Wickenburg	58.41	319	P	P	05 54 17.1	+0.5
WUAZ	Wupatki	58.41	322	P	P	05 54 17.9	+1.1
	baz=132,SNR=34						
WUAZ				S	S	06 01 36.3	+1.7
	baz=132						
WUAZ	Wupatki	58.41	322	⇓P	P	05 54 17.9	+1.1
WUAZ	Wupatki	58.41	322	P	P	05 54 17.3	+0.6
E38A	The Farm, Brul	58.46	344	P	P	05 54 15.7	-0.9
SMCO	Snowmass	58.47	328	⇓P	P	05 54 18.4	+1.0
SMCO	Snowmass	58.47	328	P	P	05 54 17.6	+0.2
ICQ	Pointe Anglais	58.59	3	⇓P	P	05 54 17.1	-0.3
MBO	M'Bour	58.73	67	P	P	05 54 20.8	+1.8
SUSD	Miller	59.00	337	P	P	05 54 20.1	-0.2
	baz=148,SNR=26						
SUSD				S	S	06 01 38.5	-2.7
	baz=148						
SUSD	Miller	59.00	337	P	P	05 54 19.9	-0.4
SUSD				IAmb	IAmb	05 54 23.9	
	comp=Z,917nm,1.2s						
GLA	Glamis	59.05	318	P	P	05 54 22.0	+1.1
	baz=128						
GLA				S	S	06 01 44.3	+1.9
	baz=128						
N23A	Red Feather La	59.23	330	P	P	05 54 23.1	+0.9
	baz=139,SNR=42						
N23A				S	S	06 01 45.5	+0.7
	baz=139						
F33A	5 Mile Ranch,	59.23	340	P	P	05 54 21.1	-0.7
KAPO	Kapuskasing	59.24	351	⇑P	P	05 54 20.5	-1.3
PDMCI	Parker Dam,Lak	59.37	319	P	P	05 54 23.8	+0.9
	baz=129,SNR=22						
PDMCI				S	S	06 01 47.3	+1.0
	baz=129						
DRLN	Deer Lake	59.46	10	⇓P	P	05 54 22.6	-0.5
DRLN	Deer Lake	59.46	10	P	P	05 54 23.1	-0.1
DRLN				IAmb	IAmb	05 54 24.9	
	comp=Z,732nm,0.8s						
U15A	North Rim	59.57	322	P	P	05 54 25.9	+1.3
CCX	Cicese	59.60	315	P	P	05 54 24.8	+0.4
SWSC	Sam W. Stewart	59.64	317	P	P	05 54 26.1	+1.3
	baz=127						
SWSC				S	S	06 01 52.9	+3.2
	baz=127						
EYMN	Ely	59.67	344	P	P	05 54 24.0	-0.7
	baz=157,SNR=217						
EYMN				S	S	06 01 43.8	-5.7
	baz=157						
EYMN	Ely	59.67	344	P	P	05 54 23.7	-0.9
EYMN				IAmb	IAmb	05 54 25.6	
	comp=Z,643nm,0.8s						
IKP	In-Ko-Pah, Jac	59.67	316	P	P	05 54 26.1	+1.0
	baz=126,SNR=13						
IKP				S	S	06 01 51.9	+1.6
	baz=126						
W13A	Hualapai Mount	59.70	320	P	P	05 54 25.0	-0.4
H09W1	TRISTAN DA CUN	59.79	128	P	P	05 54 26.7	+1.0
	SNR=85						
H09N1	TRISTAN DA CUN	59.80	128	P	P	05 54 26.8	+1.0
	SNR=46						
BC3	Big Chuckawall	59.83	318	P	P	05 54 27.2	+1.0
	baz=127,SNR=62						
BC3				S	S	06 01 54.7	+2.4
	baz=127						
O20A	White River Ci	59.84	328	P	P	05 54 26.9	+0.7
	baz=137,SNR=121						
O20A				S	S	06 01 53.8	+1.5
	baz=137						
O20A	White River Ci	59.84	328	P	P	05 54 26.5	+0.3
IRM	Iron Mountain	59.93	318	P	P	05 54 27.6	+0.9
	baz=128,SNR=86						
IRM				S	S	06 01 55.0	+1.6
	baz=128						
NEE2	Needles Airpor	59.97	319	P	P	05 54 28.2	+1.3
	baz=129,SNR=6.3						
NEE2				S	S	06 01 54.8	+1.1
	baz=129						
MONP2	Monument Peak	60.03	316	P	P	05 54 28.5	+0.9
	baz=126,SNR=15						
MONP2				S	S	06 01 56.6	+1.7
	baz=126						
BELC	Belle Mtn. Jos	60.40	318	P	P	05 54 31.0	+1.1
	baz=127,SNR=43						
BELC				S	S	06 02 01.8	+2.4
	baz=127						
TPFO	Pinon Flats	60.47	317	P	P	05 54 31.3	+1.0
	baz=126,SNR=16						
PFO	Pinyon Flats O	60.48	317	P	P	05 54 30.6	+0.2
PFO				pmax	pmax		
	comp=Z,263nm,1.7s						
PFO	Pinyon Flats O	60.48	317	P	P	05 54 31.5	+1.1
	baz=126,SNR=9.9						
PFO				S	S	06 02 03.2	+2.9
	baz=126						
PFO	Pinyon Flats O	60.48	317	P	P	05 54 30.6	+0.2
109C	Camp Elliot, M	60.49	316	P	P	05 54 31.5	+1.1
	baz=126,SNR=8.6						
109C				S	S	06 02 01.8	+1.6
	baz=126						
109C	Camp Elliot, M	60.49	316	P	P	05 54 31.0	+0.6
D32A	Dogwood Acres,	60.61	340	IAmb	IAmb	05 54 32.1	
	comp=Z,886nm,0.7s						
GMRC	Granite Mounta	60.65	319	P	P	05 54 32.7	+1.2
	baz=128,SNR=122						
GMRC				S	S	06 02 04.1	+1.7
	baz=128						
B35A	Bob, Littlefor	60.67	343	IAmb	IAmb	05 54 32.1	
	comp=Z,620nm,0.7s						
RSSD	Black Hills	60.83	333	P	P	05 54 33.0	+0.3
RSSD				pmax	pmax		
	comp=Z,217nm,0.6s						
RSSD	Black Hills	60.83	333	P	P	05 54 33.7	+1.0
	baz=142						
RSSD				S	S	06 02 05.5	+1.0
	baz=142						
RSSD	Black Hills	60.83	333	⇓P	P	05 54 33.3	+0.6
RSSD	Black Hills	60.83	333	P	P	05 54 33.0	+0.3
K22A	Casper	60.84	331	P	P	05 54 33.6	+0.9
	baz=139,SNR=84						
K22A				S	S	06 02 05.5	+1.0
	baz=139						
MVU	Marysvale	60.90	324	IAmb	IAmb	05 54 36.3	
	comp=Z,558nm,0.7s						
MURC	Murrieta	60.97	317	P	P	05 54 34.6	+1.1
	baz=126,SNR=23						
MURC				S	S	06 02 09.5	+3.3
	baz=126						
HEC	Hector,Ludlow	61.12	318	P	P	05 54 36.1	+1.6
	baz=127,SNR=49						
HEC				S	S	06 02 10.1	+2.0
	baz=127						
BBRC	Big Bear Solar	61.17	317	P	P	05 54 36.9	+1.8
	baz=126,SNR=7.5						
BBRC				S	S	06 02 11.6	+2.6
	baz=126						
TUQ	Turquoise Moun	61.22	319	P	P	05 54 36.5	+1.3
	baz=128,SNR=11						
TUQ				S	S	06 02 11.2	+1.8
	baz=128						
H07N1	FLORES T-PHASE	61.23	35	P	P	05 54 36.7	+1.6
H07N1	FLORES T-PHASE	61.23	35	*e*P	P	05 54 36.1	+1.0
AGMN	Agassiz Nation	61.25	342	P	P	05 54 34.5	-0.5
	baz=152,SNR=395						
AGMN				S	S	06 02 03.9	-5.2
	baz=152						
AGMN	Agassiz Nation	61.25	342	IAmb	IAmb	05 54 36.4	
	comp=Z,721nm,0.8s						
SCI2	San Clemente I	61.54	315	S	S	06 02 16.2	+3.1
	baz=124						
RRX	Edison Barstow	61.58	318	P	P	05 54 39.3	+1.8
	baz=127,SNR=9.8						
RRX				S	S	06 02 16.1	+2.4
	baz=127						
BFSC	Mount Baldy Ra	61.65	317	P	P	05 54 39.2	+1.1
	baz=126,SNR=22						
BFSC				S	S	06 02 17.0	+2.2
	baz=126						
CIS	Catalina Islan	61.69	316	P	P	05 54 39.8	+1.6
	baz=125,SNR=8.6						
CIS				S	S	06 02 17.3	+2.3
	baz=125						
GSC	Goldstone, Bar	61.71	318	P	P	05 54 39.9	+1.5
	baz=127,SNR=56						
GSC				S	S	06 02 18.0	+2.6
	baz=127						
SHOC	Shoshone, Teco	61.73	319	P	P	05 54 40.0	+1.6
	baz=128,SNR=9.3						
SHOC				S	S	06 02 18.0	+2.6
	baz=128						
FMP	Fort Macarthur	61.78	316	P	P	05 54 39.9	+1.2
	baz=125						
FMP				S	S	06 02 18.8	+2.7
	baz=125						
PFCBR	Castelo Branco	61.84	37	*e*P	P	05 54 40.1	+1.1
	comp=Z,449nm,1.9s						
CALA	Caldeira	61.88	37	*e*P	P	05 54 40.2	+0.8
	comp=Z,1µm,1.3s						
PRN	Pahroc Range	61.89	321	⇓P	P	05 54 41.1	+1.5
PRN				⇑p	pP	05 56 38.6	+0.4
HOR	Horta	61.89	37	*e*P	P	05 54 40.5	+1.2
	comp=Z,846nm,1.1s						
PCED	Cedros	61.91	37	*e*P	P	05 54 40.7	+1.2
	comp=Z,1µm,1.9s						
PCAN	Candelaria	61.94	37	*e*P	P	05 54 40.6	+0.9
	comp=Z,786nm,1.3s						
PICO	Pico	61.99	37	*e*P	P	05 54 41.1	+1.0
	comp=Z,1µm,1.7s						
PPNO	Prainha do Nor	62.07	37	*e*P	P	05 54 41.5	+0.9
	comp=Z,1µm,1.1s						
DECC	Green Verdugo	62.12	317	P	P	05 54 42.6	+1.6
	baz=125,SNR=12						
DECC				S	S	06 02 22.2	+1.9
	baz=125						
MDND	Maddock	62.12	339	P	P	05 54 41.2	+0.6
	baz=148,SNR=382						
MDND				S	S	06 02 17.7	-2.0
	baz=148						
PID	Ribeirinha	62.14	37	*e*P	P	05 54 41.9	+0.9
	comp=Z,1µm,1.9s						
ROSA	Rosais	62.25	37	*e*P	P	05 54 42.6	+0.9
	comp=Z,1µm,1.4s						
ROSA	Rosais	62.25	37	⇓P	P	05 54 43.2	+1.6
ROSA	Rosais	62.25	37	IAmb	IAmb	05 54 46.4	
	comp=Z,802nm,1.1s						
EDW2	Edwards Air Fo	62.25	317	P	P	05 54 42.9	+1.0
	baz=126,SNR=67						
EDW2				S	S	06 02 22.5	+0.6
	baz=126						
PMAN	Manadas	62.28	37	*e*P	P	05 54 43.1	+1.2
	comp=Z,1µm,1.7s						
SNCC	San Nicolas Is	62.37	315	S	S	06 02 25.9	+2.6
	baz=124						
DUG	Dugway, Tooele	62.38	325	P	P	05 54 44.1	+1.4
	baz=132,SNR=177						
DUG				S	S	06 02 25.0	+1.5
	baz=132						
DUG	Dugway, Tooele	62.38	325	IAmb	IAmb	05 56 45.1	
	comp=Z,1µm,1.9s						
LRMC	Laurel Mtn Rad	62.39	318	P	P	05 54 44.1	+1.2
	baz=126						
LRMC				S	S	06 02 26.2	+2.5
	baz=126						
BW06	Boulder Array	62.43	329	P	P	05 54 43.4	+0.3
	baz=136,SNR=132						
BW06				S	S	06 02 22.7	-1.4

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      baz=136
PD31  Pinedale Array   62.43 329 ⇑P       P        05 54 43.1  0.0
PDAR  Pinedale Array   62.43 329  P       P        05 54 43.1  0.0
      comp=Z,64nm,0.5s,baz=124,slow=8.8,SNR=510
PDAR                              PcP     PcP      05 55 17.8 +2.4
      comp=Z,41nm,0.5s,baz=132,slow=6.4,SNR=7.4
PDAR                              pP      pP       05 56 41.6 -0.4
      comp=Z,18nm,0.6s,baz=116,slow=6.8,SNR=2.7
PDAR                              S       S        06 02 22.5 -1.6
      comp=Z,8.3nm,0.9s,baz=149,slow=12,SNR=2.4
PDAR                              ScS     SKSac    06 03 31.1 -4.4
      comp=Z,16nm,1.0s,baz=102,slow=14,SNR=4.4
PDAR                              PKPPKP  P'P'df   06 23 20.4  -17
      comp=Z,5.3nm,1.3s,baz=205,slow=4.0,SNR=4.0
PDAR                              P4KPbc           06 31 36.8
      comp=Z,1.6nm,1.0s,baz=150,slow=6.2,SNR=7.3
PDAR  Pinedale Array   62.43 329  P       P        05 54 43.3 +0.2
FURC  Furnace Creek,   62.45 319  P       P        05 54 44.8 +1.8
      baz=127,SNR=89
FURC                              S       S        06 02 26.9 +2.9
      baz=127
SRBC  Serra Branca     62.57  37 eP       P        05 54 44.6 +0.8
      comp=Z,3µm,1.6s
OSI   Osito Audit: C   62.59 317  P       P        05 54 45.2 +1.2
      baz=125,SNR=7.4
OSI                               S       S        06 02 26.8 +0.8
      baz=125
PGRA  Graciosa         62.60  37 eP       P        05 54 45.0 +1.0
      comp=Z,2µm,1.5s
ADH   Angra Heroismo   62.81  38 eP       P        05 54 46.2 +0.9
      comp=Z,1µm,1.1s
R11A  Troy Canyon, C   62.81 322  P       P        05 54 47.1 +1.5
      baz=129,SNR=169
R11A                              S       S        06 02 30.9 +2.0
      baz=129
SCZ2  Santa Cruz Isl   62.86 316  P       P        05 54 47.3 +1.6
      baz=124,SNR=6.2
SCZ2                              S       S        06 02 31.2 +1.9
      baz=124
PSCM  Serra do Cume    62.91  38 eP       P        05 54 47.0 +1.1
      comp=Z,1µm,1.7s
PAGU  Agualva, Azore   62.91  38 eP       P        05 54 46.8 +0.9
      comp=Z,1µm,1.6s
ARVC  Arvin            62.95 317  P       P        05 54 47.9 +1.6
      baz=125,SNR=29
ARVC                              S       S        06 02 31.8 +1.5
      baz=125
ULM   Lac du Bonnet    62.99 343  P       P        05 54 45.1 -1.1
      comp=Z,596nm,0.5s,baz=151,slow=6.0,SNR=462
ULM                               S       S        06 02 20.9 -9.3
      comp=Z,161nm,0.9s,baz=60,slow=22,SNR=28
ULM                               PKPPKP  P'P'df   06 23 38.2 +2.4
      comp=Z,109nm,1.3s,baz=319,slow=1.4,SNR=18
ULM                               P4KPbc           06 31 38.6
      comp=Z,7.6nm,0.8s,baz=133,slow=6.6,SNR=7.8
ULM   Lac du Bonnet    62.99 343 ⇓P       P        05 54 45.0 -1.1
ULM   Lac du Bonnet    62.99 343  IAmb    IAmb     05 54 47.2
      comp=Z,845nm,0.8s
ISA   Isabella, Lake   63.02 318  P       P        05 54 48.2 +1.4
ISA                               pmax    pmax
      comp=Z,83nm,0.7s
ISA   Isabella, Lake   63.02 318  P       P        05 54 48.3 +1.4
      baz=126,SNR=67
ISA                               S       S        06 02 34.0 +2.7
      baz=126
ISA   Isabella, Lake   63.02 318  P       P        05 54 48.2 +1.4
PSMA  Santa Maria      63.09  40 eP       P        05 54 48.0 +0.9
      comp=Z,664nm,1.5s
PSMN  Pico do Norte,   63.14  40 eP       P        05 54 48.4 +1.0
      comp=Z,961nm,1.6s
SBC   Santa Barbara    63.16 316  S       S        06 02 34.6 +1.8
      baz=124
PDA   Ponta Delgada    63.21  39 eP       P        05 54 48.8 +1.0
      comp=Z,2µm,1.9s
CWC   Cottonwood Cre   63.22 319  P       P        05 54 49.5 +1.3
      baz=126
CWC                               S       S        06 02 36.2 +2.4
      baz=126
PSET  Sete Cidades     63.22  39 eP       P        05 54 48.9 +0.9
      comp=Z,2µm,1.9s
GRON  Grota Negra      63.30  39 eP       P        05 54 50.1 +1.6
      comp=Z,1µm,1.1s
CMLA  Cha da Macela    63.31  39 eP       P        05 54 49.4 +0.9
      comp=Z,1µm,2.2s
PCALD Caldeiras da R   63.35  39 eP       P        05 54 49.6 +0.8
      comp=Z,2µm,1.9s
PKM   Mcpherson Peak   63.48 316  P       P        05 54 51.3 +1.4
      baz=124,SNR=51
PKM                               S       S        06 02 38.6 +1.6
      baz=124
VES   Vestal, Richgr   63.53 318  P       P        05 54 51.4 +1.5
      baz=125,SNR=66
VES                               S       S        06 02 39.9 +2.7
      baz=125
BART  Pico Bartolome   63.54  40 eP       P        05 54 51.1 +1.0
      comp=Z,2µm,1.1s
SNOW  Snow King Moun   63.54 329  IAmb    IAmb     05 56 54.0
      comp=Z,817nm,1.9s
LOHW  Long Hollow      63.57 329  IAmb    IAmb     05 56 54.0
      comp=Z,770nm,1.8s
TPH   Tonopah          63.65 321  IAmb    IAmb     05 56 53.9
      comp=Z,2µm,1.7s
TIN   Tinemaha, Big    63.68 319  P       P        05 54 52.8 +1.8
      baz=126,SNR=7.3
TIN                               S       S        06 02 42.4 +3.1
      baz=126
LAO   LASA Array       63.80 334  P       P        05 54 52.0 +0.4
      baz=141,SNR=173
LAO                               S       S        06 02 40.3 +0.1
      baz=141
SMMC  Simmler          63.84 317  P       P        05 54 53.8 +1.8
      baz=124,SNR=44
SMMC                              S       S        06 02 43.9 +2.8
      baz=124
SCHQ  Schefferville    63.91   3  P       P        05 54 51.3 -0.7
      comp=Z,185nm,0.7s,baz=191,slow=4.9,SNR=172
SCHQ                              PcP     PcP      05 55 22.2 +1.3
      comp=Z,49nm,0.5s,baz=232,slow=11,SNR=5.3
SCHQ                              pP      pP       05 56 52.0 +0.2
      comp=Z,125nm,0.9s,baz=192,slow=5.2,SNR=4.0
SCHQ                              S       S        06 02 37.5 -3.7
      comp=Z,38nm,1.1s,baz=63,slow=17,SNR=8.5
SCHQ  Schefferville    63.91   3 ⇑P       P        05 54 51.3 -0.7
RLMT  Red Lodge        64.00 331  P       P        05 54 54.0 +1.0
      baz=138,SNR=165
RLMT                              S       S        06 02 42.2 -0.9
      baz=138
VOG   Valley Oaks Go   64.00 318  P       P        05 54 53.8 +0.9
      baz=125,SNR=6.6
VOG                               S       S        06 02 43.2 +0.3
      baz=125
SHEL  Horse Pasture    64.07 103  P       P        05 54 54.4 +0.5
SHEL                              pmax    pmax
      comp=Z,3µm,1.9s
SHEL  Horse Pasture    64.07 103 ⇓P       P        05 54 54.6 +0.7
SHEL  Horse Pasture    64.07 103  P       P        05 54 54.4 +0.5
H17A  Grant Village    64.11 330  P       P        05 54 56.0 +2.2
      baz=136,SNR=15
H17A                              S       S        06 02 45.8 +1.3
      baz=136
ELK   Elko             64.14 324  P4KPbc           06 31 44.1
      baz=132,slow=3.2
PAGB  Antelope Grade   64.25 317  P       P        05 54 55.8 +1.3
DGMT  Dagmar           64.37 336  P       P        05 54 55.9 +0.9
      baz=144,SNR=98
DGMT                              S       S        06 02 48.6 +1.7
      baz=144
DGMT  Dagmar           64.37 336  IAmb    IAmb     05 54 57.8
      comp=Z,430nm,0.8s
MLAC  Mammoth, Mammo64.41 319     P       P        05 54 57.3 +1.5
      baz=126,SNR=26
MLAC                              S       S        06 02 50.6 +2.4
      baz=126
NV11  Mina Array Sit   64.45 321  IAmb    IAmb     05 56 59.5
      comp=Z,911nm,1.9s
NVAR  Mina Array Bea   64.55 320  P       P        05 54 57.3 +0.7
      comp=Z,29nm,0.6s,baz=136,slow=6.0,SNR=174
NVAR                              PcP     PcP      05 55 25.1 +0.8
      comp=Z,25nm,0.5s,baz=120,slow=5.3,SNR=8.1
NVAR                              pP      pP       05 56 57.6 +0.9
      comp=Z,26nm,0.7s,baz=118,slow=7.0,SNR=5.2
NVAR                              PKPPKP  P'P'df   06 23 25.9 -8.9
      comp=Z,5.4nm,1.1s,baz=256,slow=3.3,SNR=2.7
NVAR  Mina Array Bea   64.55 320  P       P        05 54 57.7 +1.1
MACI  Morro de la Ar   64.67  53  P       P        05 54 58.5 +1.0
PMPB  Monarch Peak     64.89 317  IAmb    IAmb     05 55 04.2
      comp=Z,994nm,1.8s
BOZ   Bozeman (W)      65.50 330  P       P        05 55 02.9 +0.6
      baz=136,SNR=189
BOZ                               S       S        06 03 00.6 -0.1
      baz=136
BOZ   Bozeman (W)      65.50 330  IAmb    IAmb     05 57 06.8
      comp=Z,1µm,1.6s
HLID  Hailey           65.53 327  P       P        05 55 03.4 +0.8
      baz=132,SNR=151
HLID                              S       S        06 03 03.4 +2.2
      baz=132
SAO   San Andreas Ge   65.63 317  P       P        05 55 03.8 +0.7
SAO                               pmax    pmax
      comp=Z,101nm,1.1s
SAO   San Andreas Ge   65.63 317 ⇑P       P        05 55 04.7 +1.6
SAO   San Andreas Ge   65.63 317  P       P        05 55 03.8 +0.7
PAHR  Pah Rah Range    65.98 321  IAmb    IAmb     05 57 12.6
      comp=Z,823nm,1.8s
MPK   Martis Peak      66.14 320  IAmb    IAmb     05 57 11.3
      comp=Z,670nm,1.6s
PMOZ  Porto Moniz, M   66.28  48⇓iP       P        05 55 09.0 +1.6
      comp=Z,982nm,1.9s
PMOZ                             epP      pP       05 57 09.7 +1.2
PMOZ  Porto Moniz, M   66.28  48 ePP      sP       05 58 09.5 -2.6
PMOZ                             i LQ     LQ       06 00 35.4
PMOZ                             i S      S        06 03 13.4 +3.1
PMOZ  Porto Moniz, M   66.28  48 ⇑P       P        05 55 09.2 +1.8
PMOZ  Porto Moniz, M   66.28  48  P       P        05 55 09.8 +2.4
EGMT  Eagleton         66.38 333  P       P        05 55 08.1 +0.5
      baz=138,SNR=238
EGMT                              S       S        06 03 11.2 +0.4
      baz=138
EGMT  Eagleton         66.38 333  IAmb    IAmb     05 55 10.0
      comp=Z,463nm,0.8s
FUL   Funchal          66.42  48⇓eP       P        05 55 09.3 +1.2
      comp=Z,1µm,2.1s
FUL                              epP      pP       05 57 15.8 +6.5
FUL                              esP      sP       05 58 12.9  0.0
FUL                              i LQ     LQ       06 00 41.6
FUL                              eS       S        06 03 16.2 +4.5
PMAR  Madeira          66.44  48⇓iP       P        05 55 10.0 +1.5
      comp=Z,1µm,1.8s
PMAR                             epP      pP       05 57 13.1 +3.5
PMAR  Madeira          66.44  48 ePP      sP       05 58 12.1 -1.1
PMAR                             i LQ     LQ       06 00 36.7
PMAR                             i S      S        06 03 15.0 +2.6
PMPS  Porto Santo      67.03  48 eP       P        05 55 13.1 +1.3
      comp=Z,2µm,1.7s
PMPS                             esP      sP       05 58 18.0 +1.2
PMPS                             eS       S        06 03 23.3 +4.5
PMPST Porto Santo, M   67.04  48⇓iP       P        05 55 13.6 +1.7
      comp=Z,2µm,1.7s
PMPST                            epP      pP       05 57 15.3 +1.9
PMPST Porto Santo, M   67.04  48 ePP      sP       05 58 14.7 -2.2
PMPST                            i LQ     LQ       06 00 46.3
PMPST                            i S      S        06 03 23.2 +4.2
WVOR  Wild Horse Val   67.18 324 ⇑P       P        05 55 12.7  0.0
WVOR                             ⇑p       pP       05 57 13.3 -1.0
ORV   Oroville         67.22 320  IAmb    IAmb     05 57 18.0
      comp=Z,781nm,1.6s
MCCM  Marconi Confer   67.34 318 ⇑P       P        05 55 15.2 +1.7
MCCM                             ⇑p       pP       05 57 14.8 -0.4
MSO   Missoula         67.51 330  P       P        05 55 15.9 +1.4
      baz=134,SNR=215
MSO                               S       S        06 03 24.9 +0.9
      baz=134
MSO   Missoula         67.51 330  IAmb    IAmb     05 57 20.3
      comp=Z,1µm,1.6s
LIC   Lamto            67.75  79 eP       P        05 55 17.0 +0.4
      comp=Z,4µm,1.5s
O03E  Paynes Creek     67.83 320  P       P        05 55 17.0 +0.3
      baz=125,SNR=49
O03E                              S       S        06 03 27.7 -0.4
      baz=125
MOD   Modoc Plateau    67.84 322  IAmb    IAmb     05 55 19.6
      comp=Z,350nm,0.7s
TIC   Toumodi          67.85  79 eP       P        05 55 17.7 +0.5
TAOE  Nuku Hiva Isla   67.94 264 eP       P        05 55 18.5 +0.6
      comp=Z,1µm,1.2s
TAOE  Nuku Hiva Isla   67.94 264 ⇑P       P        05 55 19.0 +1.1
TAOE                             ⇓p       pP       05 57 23.8 +4.0
TAOE  Nuku Hiva Isla   67.94 264  P       P        05 55 18.4 +0.6
TAOE                              IAmb    IAmb     05 55 19.8
      comp=Z,433nm,1.0s
I17CI DIMBOKRO INFRA68.01  79     P       P        05 55 20.0 +1.8
      baz=258,slow=7.9,SNR=2.0
DBIC  Dimbokro         68.01  79  P       P        05 55 18.8 +0.5
      comp=Z,827nm,0.8s,baz=264,slow=4.9,SNR=558
DBIC                              pP      pP       05 57 22.1 +2.0
      comp=Z,84nm,0.8s,baz=287,slow=8.8,SNR=2.8
DBIC                              S       S        06 03 30.0 -0.9
      comp=Z,14nm,0.8s,baz=95,slow=16,SNR=10
DBIC  Dimbokro         68.01  79 ⇓P       P        05 55 18.7 +0.5
KIC   Kosan Boka       68.06  79 eP       P        05 55 18.9 +0.4
      comp=Z,496nm,0.5s
O02D  Mt. Diablo Mer   68.39 320  P       P        05 55 20.4 +0.3
      baz=124,SNR=13
O02D                              S       S        06 03 34.2 -0.3
      baz=124
WDC   Whiskeytown Da   68.46 320 ⇑P       P        05 55 19.5 -0.8
F10A  Beach Ranch, E   68.63 327 ⇓P       P        05 55 22.5 +1.1
K05A  Summer Lake      68.68 323  P       P        05 55 22.9 +1.0
K05A                              IAmb    IAmb     05 57 30.3
      comp=Z,1µm,1.4s
I07A  Izee             68.69 325  P       P        05 55 22.8 +1.0
M04C  Macdoel          68.70 322  P       P        05 55 23.2 +1.2
      baz=125,SNR=58
M04C                              S       S        06 03 39.5 +1.3
      baz=125
FFC   Flin Flon        68.73 341  P       P        05 55 21.7  0.0
FFC                               pmax    pmax
      comp=Z,191nm,0.9s
FFC   Flin Flon        68.73 341 ⇓P       P        05 55 21.3 -0.4
FFC   Flin Flon        68.73 341  P       P        05 55 21.7  0.0
N02D  Trinity Center   68.78 321  P       P        05 55 22.2 -0.2
      baz=124,SNR=56
N02D                              S       S        06 03 37.7 -1.3
      baz=124
TANT  Tantan           68.94  55  P       P        05 55 27.0 +3.5
KMRM  Mail Ridge       69.00 319  P       P        05 55 23.2 -0.5
WALA  Waterton Lakes   69.04 331 ⇓P       P        05 55 24.1 +0.3
WALA  Waterton Lakes   69.04 331  P       P        05 55 24.1 +0.3
M02C  Callahan         69.11 321  P       P        05 55 24.8 +0.4
      baz=124,SNR=40
M02C                              S       S        06 03 41.6 -1.1
      baz=124
K04D  Chiloquin, OR    69.14 322  P       P        05 55 25.9 +1.4
      baz=126,SNR=32
K04D                              S       S        06 03 44.6 +1.6
      baz=126
YBH   Yreka Blue Hor   69.21 321  P       P        05 55 24.6 -0.4
YBH                               pmax    pmax
      comp=Z,59nm,0.6s
YBH   Yreka Blue Hor   69.21 321  P       P        05 55 24.6 -0.4
J05D  Fort Rock, OR    69.21 323  P       P        05 55 26.6 +1.5
      baz=126,SNR=90
J05D                              S       S        06 03 45.4 +1.4
      baz=126
L04D  Klamath Falls    69.24 322  P       P        05 55 26.0 +0.8
      baz=125,SNR=32
L04D                              S       S        06 03 44.8 +0.5
      baz=125
PINE  Pine Mountain    69.34 324  P       P        05 55 27.4 +1.6
PINE                              IAmb    IAmb     05 55 31.0
      comp=Z,311nm,0.8s
KHMM  Horse Mountain   69.38 320  P       P        05 55 27.2 +1.1
E09A  Wood Farm, Sta   69.46 327  IAmb    IAmb     05 57 32.0
      comp=Z,733nm,1.6s
J04D  Umpqua Nationa   69.71 323  P       P        05 55 29.5 +1.5
      baz=125,SNR=7.3
J04D                              S       S        06 03 51.8 +2.1
      baz=125
KRMB  Red Mountain     69.84 321  P       P        05 55 29.4 +0.6
KRMB                              IAmb    IAmb     05 57 35.1
      comp=Z,1µm,1.9s
HUMO  Hull Mountain    69.86 322 ⇓P       P        05 55 28.6  0.0
HUMO  Hull Mountain    69.86 322  P       P        05 55 28.2 -0.4
I05D  Terrebonne, OR   69.90 324  P       P        05 55 30.6 +1.6
      baz=126,SNR=128
I05D                              S       S        06 03 54.3 +2.7
      baz=126
E08A  Dider Farm, El   69.94 327  P       P        05 55 29.6 +0.5
L02E  Cave Junction    70.00 321  P       P        05 55 30.7 +1.1
      baz=124,SNR=29
L02E                              S       S        06 03 53.9 +1.2
      baz=124
NEW   Newport          70.07 329  P       P        05 55 30.4 +0.5
      baz=131,SNR=60
NEW                               S       S        06 03 53.9 +0.6
      baz=131
NEW   Newport          70.07 329  IAmb    IAmb     05 57 35.4
      comp=Z,860nm,1.8s
HAWA  Hanford          70.13 327 ⇑P       P        05 55 31.5 +1.3
HAWA                             ⇑p       pP       05 57 33.3  0.0
HAWA  Hanford          70.13 327  IAmb    IAmb     05 55 33.5
      comp=Z,671nm,1.8s
SFNM  Sidi Ifni        70.17  54  P       P        05 55 34.0 +3.3
I04A  Tendick Farm,    70.21 323  P       P        05 55 31.5 +0.7
      baz=125,SNR=72
I04A                              S       S        06 03 54.7 -0.3
      baz=125
D08A  Wollman Farm,    70.22 328  IAmb    IAmb     05 57 37.2
      comp=Z,1µm,1.8s
K02D  Willamette Mer   70.34 322  P       P        05 55 33.2 +1.5
      baz=124,SNR=46
K02D                              S       S        06 03 57.7 +1.1
      baz=124
C09A  Chrisman Ranch   70.35 328  IAmb    IAmb     05 57 38.0
      comp=Z,1µm,1.6s
E07A  Sunnyside        70.41 327  P       P        05 55 32.6 +0.8
E07A                              IAmb    IAmb     05 57 38.7
      comp=Z,1µm,1.9s
G05D  Wamic, OR        70.42 325  P       P        05 55 34.2 +2.3
      baz=127,SNR=79
G05D                              S       S        06 04 01.4 +4.0
      baz=127
H04A  Detroit Lake     70.59 324  P       P        05 55 33.5 +0.6
HOOD  Mount Hood Mea   70.66 325  P       P        05 55 35.3 +1.8
HOOD                              IAmb    IAmb     05 55 39.4
      comp=Z,369nm,1.0s
KOWA  Kowa             70.70  71  P       P        05 55 34.7 +0.6
      comp=Z,636nm,0.4s,baz=254,slow=7.3
KOWA                              S       S        06 04 00.6 -0.9
      comp=Z,31nm,0.8s,baz=125,slow=23,SNR=22
KOWA                              PKPPKP  P'P'df   06 23 16.7 -9.4
      comp=Z,4.1nm,0.9s,baz=119,slow=2.1,SNR=4.4
KOWA  Kowa             70.70  71 ⇓P       P        05 55 34.8 +0.6
KOWA  Kowa             70.70  71  P       P        05 55 34.9 +0.7
KOWA  Kowa             70.70  71⇓iP       P        05 55 35.3 +1.1
KOWA                              pP      pP       05 57 37.0 -0.5
KOWA                              sP      sP       05 58 37.4 -3.1
I03D  Drain, OR        70.71 323  P       P        05 55 35.0 +1.4
      baz=124,SNR=38
I03D                              S       S        06 04 01.4 +0.9
      baz=124
J01E  Myrtle Point     70.76 322  P       P        05 55 35.8 +1.8
      baz=124,SNR=22
J01E                              S       S        06 04 03.2 +2.0
      baz=124
BUCK  Buck Mountain    70.78 323  P       P        05 55 35.0 +0.9
H04D  Lebanon          70.82 324  P       P        05 55 35.0 +0.7
      baz=125,SNR=23
H04D                              S       S        06 04 01.5 -0.2
      baz=125
KEBM  Edson Butte      70.85 322  P       P        05 55 35.7 +1.2
F05D  White Salmon     70.88 325  P       P        05 55 36.2 +1.6
      baz=127,SNR=24
F05D                              S       S        06 04 05.8 +3.3
      baz=127
CGR   Cap Guir         70.90  53  P       P        05 55 38.0 +3.0
COR   Corvallis        71.19 323  P       P        05 55 38.0 +1.6
COR                               pmax    pmax
      comp=Z,2µm,2.0s
COR   Corvallis        71.19 323 ⇓P       P        05 55 38.2 +1.8
COR                              ⇑p       pP       05 57 39.3 -0.7
COR   Corvallis        71.19 323  P       P        05 55 38.0 +1.6
I02E  Swisshome, OR    71.24 323  P       P        05 55 38.7 +2.0
      baz=124,SNR=15
I02E                              S       S        06 04 08.6 +2.2
      baz=124
B08A  Colville Reser   71.25 328  IAmb    IAmb     05 57 45.0
      comp=Z,1µm,2.0s
LTY   Liberty          71.28 327  IAmb    IAmb     05 57 43.0
      comp=Z,910nm,1.9s
F04A  Amboy            71.45 325  P       P        05 55 38.6 +0.7
G03D  McMinnville, O   71.52 324  P       P        05 55 40.2 +1.8
      baz=125,SNR=13
G03D                              S       SKiKP    06 04 11.5 -1.3
      baz=125
EDM   Edmonton         71.74 335  IAmb    IAmb     05 55 41.1
      comp=Z,869nm,0.9s
C06D  Leavenworth      71.81 327  P       P        05 55 40.9 +0.9
      baz=128,SNR=8.8
C06D                              S       SKiKP    06 04 14.9 +1.8
      baz=128
F04D  Rainier, OR      71.88 325  P       P        05 55 42.2 +1.8
      baz=125,SNR=18
F04D                              S       S        06 04 16.9 +3.4
      baz=125
E04D  Cinebar          71.90 325  P       P        05 55 41.7 +1.2
      baz=126,SNR=24
E04D                              S       S        06 04 14.9 +1.2
      baz=126
D05A  Enumclaw         71.95 326  P       P        05 55 41.5 +0.7
D05A                              IAmb    IAmb     05 55 43.6
      comp=Z,399nm,0.9s
PNT   Penticton        72.01 329 ⇑P       P        05 55 42.1 +1.0
TTIG  Tnine Tigouga,   72.02  54  P       P        05 55 45.0 +3.3
KUKU  Kukurantumi      72.27  80⇓iP       P        05 55 45.0 +1.6
KUKU                              pP      pP       05 57 46.2 -1.3
KUKU                              sP      sP       05 58 48.2 -2.1
D04E  Lakebay          72.38 326  P       P        05 55 45.0 +1.8
      baz=126,SNR=14
D04E                              S       S        06 04 22.2 +3.3
      baz=126
VNA3  Neumayer Olymp   72.39 163  P       P        05 55 43.6 +0.7
VNA3                              S       S        06 04 19.0 +0.5
E03A  Lebam            72.45 325  P       P        05 55 44.5 +0.8
E03A                              IAmb    IAmb     05 57 51.4
      comp=Z,900nm,1.6s
B06A  Marblemount      72.48 328  IAmb    IAmb     05 55 46.0
      comp=Z,337nm,0.8s
IVI   Ivigtut          72.51  11 i P      P        05 55 43.7 +0.1
IVI                               IAmb    IAmb     05 55 45.4
      comp=Z,340nm,0.6s
IVI                              i S      SKiKP    06 04 10.8 -3.0
IVI   Ivigtut          72.51  11 ⇓P       P        05 55 43.8 +0.1
IVI   Ivigtut          72.51  11  IAmb    IAmb     05 55 45.5
      comp=Z,529nm,0.8s
RADR  Rader Ridge      72.52 325  P       P        05 55 45.8 +1.7
RADR                              IAmb    IAmb     05 55 47.8
      comp=Z,403nm,0.9s
VNA1  Neumayer--Stat   72.58 162  P       P        05 55 45.1 +1.1
VNA1                              S       S        06 04 25.2 +4.7
B05A  Bryant           72.65 327  P       P        05 55 45.2 +0.4
      baz=127,SNR=134
B05A                              S       S        06 04 22.1 +0.1
      baz=127
OUK   Oukaimeden       72.72  53  P       P        05 55 49.0 +3.0
D03D  Eldon            72.76 326  P       P        05 55 46.9 +1.5
      baz=126,SNR=63
D03D                              S       S        06 04 25.1 +1.8
      baz=126
FRB   Frobisher Bay    72.78   1 ⇓P       P        05 55 44.2 -0.9
VNA2  Neumayer--Watz   72.95 162  P       P        05 55 46.7 +0.6
      baz=291,slow=6.2
VNA2                              S       S        06 04 25.4 +0.8
NRS   Narsarsuaq       73.04  13 i P      P        05 55 45.8 -0.8
NRS                               IAmb    IAmb     05 55 48.0
      comp=Z,281nm,0.8s
NRS                              i S      SKiKP    06 04 14.8 +0.2
NRS   Narsarsuaq       73.04  13 ⇓P       P        05 55 46.6  0.0
NRS   Narsarsuaq       73.04  13  IAmb    IAmb     05 55 48.2
      comp=Z,354nm,0.8s
NLWA  Neilton Lookou   73.11 326 ⇓P       P        05 55 48.9 +1.4
NLWA  Neilton Lookou   73.11 326  P       P        05 55 48.4 +0.9
SRHM  Skhour des Reh   73.18  52  P       P        05 55 50.1 +1.8
A04D  Lummi Island     73.25 327  P       P        05 55 49.4 +1.3
      baz=126,SNR=18
A04D                              S       S        06 04 30.4 +1.9
      baz=126
B04A  Port Angeles     73.29 326  P       P        05 55 50.1 +1.7
OUZM  OUZ              73.49  54  P       P        05 55 53.0 +2.8
PGC   Sidney           73.61 327  P       P        05 55 51.2 +1.0
PGC                               IAmb    IAmb     05 55 53.5
      comp=Z,334nm,0.9s
C03A  Quillayute Air   73.81 326  P       P        05 55 53.3 +2.0
C03A                              IAmb    IAmb     05 58 02.6
      comp=Z,694nm,1.3s
AVE   Averroes         73.88  51  P       P        05 55 52.9 +0.8
AVE                               S       S        06 04 39.5 +3.4
AVE   Averroes         73.88  51 ⇑P       P        05 55 54.2 +2.1
AVE   Averroes         73.88  51  P       P        05 55 55.0 +2.8
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LLLB   Lillooet          73.95 329   P       P        05 55 52.4 +0.2
LLLB                                 IAmb    IAmb     05 57 59.2
       comp=Z,1000nm,1.6s
CLRS   Cowichan Lake     74.08 327   P       P        05 55 53.9 +1.0
ZGR    Zagora            74.12  55   P       P        05 55 57.0 +3.3
PFVI   Vila Bisbo        74.36  47⇓ iP       P        05 55 57.0 +2.3
       comp=Z,2µm,1.7s
PFVI                               epP       pP       05 58 02.9 +3.1
PFVI   Vila Bisbo        74.36  47 ePP       sP       05 59 02.5 +0.2
PFVI                               i S       S        06 04 45.0 +3.9
PFVI                               i LQ      LQ       06 04 45.5
PFVI   Vila Bisbo        74.36  47   IAmb    IAmb     05 55 58.2
       comp=Z,864nm,1.0s
PFVI   Vila Bisbo        74.36  47   P       P        05 55 57.4 +2.8
TZRR   Tazzarine         74.40  55   P       P        05 55 58.3 +3.1
ZHG    ZHG               74.53  52   P       P        05 55 58.0 +2.1
MORF   Marmelete         74.56  47 eP        P        05 55 57.7 +1.8
MORF                                 IAmb    IAmb     05 56 00.4
       comp=Z,2µm,1.2s
MORF                               eS        S        06 04 46.3 +2.9
MORF   Marmelete         74.56  47⇓ iP       P        05 55 58.1 +2.2
       comp=Z,3µm,1.8s
MORF                               epP       pP       05 58 04.2 +3.1
MORF   Marmelete         74.56  47 ePP       sP       05 59 03.7 +0.1
MORF                               i S       S        06 04 47.0 +3.6
MORF   Marmelete         74.56  47 eP        P        05 55 57.6 +1.8
MORF                               eS        S        06 04 46.3 +2.9
MORF   Marmelete         74.56  47 ⇓P        P        05 55 57.9 +2.0
VAH    Vaihoa            74.58 257 eP        P        05 55 57.8 +1.5
       comp=Z,795nm,1.3s
VAH                                epP       pP       05 58 01.5  -0.1
       comp=Z,451nm,1.4s
SNAA   Sanae             74.58 162   P       P        05 55 56.0 +0.7
SNAA                                 S       S        06 04 42.7 +0.1
SNAA   Sanae             74.58 162   P       P        05 55 55.8 +0.4
       comp=Z,682nm,0.9s,baz=273,slow=8.4
SNAA                                 pP      pP       05 58 02.8 +2.1
       baz=296,slow=10.0
SNAA   Sanae             74.58 162   P       P        05 55 56.1 +0.7
PTEO   Sao Teotonio      74.60  47⇓ iP       P        05 55 58.6 +2.6
       comp=Z,3µm,1.7s
PTEO                               epP       pP       05 58 04.5 +3.2
PTEO   Sao Teotonio      74.60  47 ePP       sP       05 59 02.7  -1.1
PTEO                               eS        S        06 04 48.7 +5.0
NUUK   Nuuk              74.66   9 i P       P        05 55 55.4  -0.4
NUUK                                 IAmb    IAmb     05 55 57.8
       comp=Z,232nm,0.9s
NUUK                               i S       S        06 04 30.7   -12
NUUK   Nuuk              74.66   9 ⇓P        P        05 55 56.4 +0.6
MEH    Mehetia           74.75 254 eP        P        05 55 58.8 +1.4
MEH                                epP       pP       05 58 02.5  -0.4
       comp=Z,78nm,1.3s
PMST   Lisbon--Monsan    74.78  46⇓ iP       P        05 55 59.2 +2.2
       comp=Z,1µm,1.7s
PMST                               epP       pP       05 58 05.2 +2.8
PMST   Lisbon--Monsan    74.78  46 ePP       sP       05 59 05.1 +0.3
PMST                               i S       S        06 04 49.3 +3.7
LIS    Lisbon            74.79  46 eP        P        05 55 58.9 +1.8
LIS                                  IAmb    IAmb     05 56 00.7
       comp=Z,728nm,1.0s
LIS                                eS        S        06 04 48.7 +3.0
LIS    Lisbon            74.79  46 eP        P        05 55 59.2 +2.1
       comp=Z,2µm,2.0s
LIS    Lisbon            74.79  46 eP        P        05 55 58.8 +1.8
LIS                                eS        S        06 04 48.7 +3.0
PMAFR  Mafra             74.80  45⇓ iP       P        05 55 59.0 +1.8
       comp=Z,1µm,2.0s
PMAFR                              epP       pP       05 58 08.3 +5.8
PMAFR  Mafra             74.80  45 ePP       sP       05 59 04.6  -0.4
PMAFR                              i S       S        06 04 48.6 +2.8
PMOR   Pomariorio Ree    74.85 257 eP        P        05 55 59.5 +1.6
       comp=Z,952nm,1.2s
PMOR                               epP       pP       05 58 03.2  -0.3
       comp=Z,857nm,1.4s
OZB    Mount Ozzard      74.89 326   P       P        05 55 58.9 +1.4
OZB                                  IAmb    IAmb     05 56 00.9
       comp=Z,386nm,0.9s
PNCL   Nicolau / Gran    74.98  47⇓ iP       P        05 56 00.1 +2.0
       comp=Z,1µm,1.7s
PNCL                               epP       pP       05 58 06.6 +3.0
PNCL   Nicolau / Gran    74.98  47 ePP       PP       05 59 04.3 +6.6
PNCL                               i S       S        06 04 51.3 +3.5
PBDV   Barranco-do-Ve    75.05  48⇓ iP       P        05 56 01.1 +2.5
       comp=Z,1µm,1.6s
PBDV                               epP       pP       05 58 07.2 +3.1
PBDV   Barranco-do-Ve    75.05  48 ePP       sP       05 59 06.7 +0.2
PBDV                               i S       S        06 04 52.6 +3.9
MESJ   Messejana         75.09  47 eP        P        05 56 00.5 +1.7
MESJ                                 IAmb    IAmb     05 56 02.5
       comp=Z,575nm,1.2s
MESJ                               eS        S        06 04 51.9 +2.9
MESJ   Messejana         75.09  47⇓ iP       P        05 56 00.7 +1.9
       comp=Z,896nm,1.8s
MESJ                               epP       pP       05 58 07.5 +3.3
MESJ   Messejana         75.09  47 ePP       PP       05 59 06.0 +7.4
MESJ                               i S       S        06 04 53.2 +4.3
MESJ   Messejana         75.09  47 eP        P        05 56 00.4 +1.7
MESJ                               eS        S        06 04 51.8 +2.9
PCVE   Castro Verde      75.13  47⇓ iP       P        05 56 01.3 +2.3
       comp=Z,1µm,1.3s
PCVE                               epP       pP       05 58 07.0 +2.5
PCVE   Castro Verde      75.13  47 ePP       sP       05 59 07.2 +0.3
PCVE                               i S       S        06 04 53.7 +4.2
GOLM   Goulmima          75.22  54   P       P        05 56 03.0 +3.2
PVAQ   Vaqueiros         75.27  47⇓ iP       P        05 56 01.9 +2.1
       comp=Z,981nm,2.0s
PVAQ                               epP       pP       05 58 08.3 +2.9
PVAQ   Vaqueiros         75.27  47 ePP       PP       05 59 05.6 +5.4
PVAQ                               i S       S        06 04 54.6 +3.6
PVAQ   Vaqueiros         75.27  47   P       P        05 56 02.3 +2.5
PSBE   So Bento          75.38  45⇓ iP       P        05 56 02.5 +2.1
       comp=Z,1µm,1.6s
PSBE                               epP       pP       05 58 10.7 +4.7
PSBE   So Bento          75.38  45 ePP       PP       05 59 08.3 +7.2
PSBE                               i S       S        06 04 54.3 +2.2
PBEJ   Beja              75.42  47⇓ iP       P        05 56 02.8 +2.2
       comp=Z,1µm,1.8s
PBEJ                               epP       pP       05 58 09.8 +3.5
PBEJ   Beja              75.42  47 ePP       PP       05 59 08.6 +7.2
PBEJ                               eS        S        06 04 56.5 +4.0
CBB    Campbell River    75.43 327   IAmb    IAmb     05 56 03.6
       comp=Z,348nm,0.8s
EVO    Evora             75.52  46   P       P        05 56 01.9 +0.8
EVO                                  S       S        06 04 56.9 +3.2
EVO    Evora             75.52  46⇓ iP       P        05 56 02.9 +1.7
       comp=Z,852nm,1.9s
EVO                                epP       pP       05 58 09.4 +2.5
EVO    Evora             75.52  46 ePP       PP       05 59 08.8 +6.6
EVO                                i S       S        06 04 56.8 +3.2
PMTG   Montargil         75.59  46⇓ iP       P        05 56 03.3 +1.8
       comp=Z,1µm,1.7s
PMTG                               epP       pP       05 58 10.0 +2.7
PMTG   Montargil         75.59  46 ePP       PP       05 59 09.7 +6.9
PMTG                               i S       S        06 04 57.3 +3.0
IFR    Ifrane            75.73  52   P       P        05 56 03.2 +0.5
IFR                                  S       S        06 04 59.1 +2.6
TORD   Torodi Ar. Bea    75.75  74   P       P        05 56 03.0 +0.2
       comp=Z,594nm,0.7s,baz=275,slow=5.1,SNR=1294
TORD                                 pP      pP       05 58 10.8 +2.1
       comp=Z,240nm,1.0s,baz=271,slow=6.7,SNR=9.6
TORD                                 S       S        06 04 51.0  -5.9
       comp=Z,13nm,1.1s,baz=254,slow=10,SNR=4.6
TORD                                 PKPPKP           06 22 55.7
       comp=Z,1.4nm,0.9s,baz=117,slow=1.5,SNR=5.2
TORD   Torodi Ar. Bea    75.75  74   P       P        05 56 03.7 +0.8
PCAS   Casmilo, Conde    75.82  45⇓ iP       P        05 56 04.4 +1.6
       comp=Z,1µm,1.7s
PCAS   Casmilo, Conde    75.82  45 ePP       PP       05 59 11.0 +6.4
PCAS                               i S       S        06 04 58.8 +2.1
ARNO   Arenosillo        75.87  48   P       P        05 56 04.8 +1.8
ARNO                                 S       S        06 05 01.8 +4.5
MDT    Midelt            75.89  53   P       P        05 56 04.6 +1.1
       comp=Z,223nm,0.8s,baz=272,slow=3.7,SNR=288
MDT                                  S       S        06 05 01.6 +3.7
       comp=Z,4.1nm,1.0s,baz=76,slow=18,SNR=6.1
MDT    Midelt            75.89  53   P       P        05 56 06.2 +2.7
COI    Coimbra           75.94  45⇓ iP       P        05 56 05.3 +1.9
       comp=Z,3µm,2.0s
COI                                epP       pP       05 58 12.0 +2.7
COI    Coimbra           75.94  45 ePP       PP       05 59 11.5 +5.9
COI                                i LQ      LQ       06 04 59.2
COI                                i S       S        06 05 00.0 +2.0
COI    Coimbra           75.94  45   P       P        05 56 04.7 +1.3
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COI                                  pmax    pmax
       comp=Z,1µm,1.0s
COI    Coimbra           75.94  45   P       P        05 56 04.7 +1.3
PESTR  Estremoz          75.96  46⇓ iP       P        05 56 05.4 +1.8
       comp=Z,2µm,1.9s
PESTR                              epP       pP       05 58 11.2 +1.7
PESTR  Estremoz          75.96  46 ePP       PP       05 59 11.5 +5.6
PESTR                              i S       S        06 05 01.1 +2.8
PESTR  Estremoz          75.96  46 ⇓P        P        05 56 04.9 +1.3
PESTR  Estremoz          75.96  46   P       P        05 56 04.8 +1.3
PESTR  Estremoz          75.96  46   P       P        05 56 06.3 +2.7
LCRM   LCR               76.00  52   P       P        05 56 07.0 +2.8
SFS    San Fernando      76.02  49   P       P        05 56 05.4 +1.5
SFS                                  S       S        06 05 04.6 +5.7
SFS    San Fernando      76.02  49   P       P        05 56 04.8 +0.9
SFS                                  pmax    pmax
       comp=Z,1µm,1.0s
SFS    San Fernando      76.02  49 ⇓P        P        05 56 06.0 +2.1
SFS    San Fernando      76.02  49   P       P        05 56 04.8 +0.9
SFS    San Fernando      76.02  49   P       P        05 56 07.1 +3.2
PBAR   Barrancos         76.08  47⇓eP        P        05 56 06.2 +2.0
       comp=Z,788nm,1.7s
CNIL   Conil             76.09  49   P       P        05 56 08.0 +3.7
PAE    Paea              76.21 254 eP        P        05 56 07.0 +1.6
PAE                                epP       pP       05 58 11.2  -0.4
       comp=Z,101nm,1.4s
PPT2   Papeete2          76.21 254 eP        P        05 56 07.3 +1.8
       comp=Z,506nm,1.5s
PPT2                               epP       pP       05 58 11.3  -0.5
       comp=Z,275nm,1.5s
PPT    Papeete           76.22 254   P       P        05 56 07.6 +2.2
       comp=Z,260nm,1.2s,baz=76,slow=7.2,SNR=10.0
PMRV   Marv??o           76.33  46⇓ iP       P        05 56 06.6 +1.0
       comp=Z,575nm,1.8s
PMRV                               esP       sP       05 59 14.7 +0.8
PMRV                               i S       S        06 05 03.9 +1.7
CEU    Ceuta             76.42  50   P       P        05 56 08.2 +2.1
CEU                                  S       S        06 05 08.7 +5.5
PCBR   Castelo Branco    76.44  45⇓ iP       P        05 56 07.7 +1.5
       comp=Z,924nm,1.8s
PCBR                               epP       pP       05 58 14.6 +2.3
PCBR   Castelo Branco    76.44  45 ePP       PP       05 59 14.7 +5.0
PCBR                               i S       S        06 05 05.2 +1.9
TLCB   Telegraph Cove    76.50 327   P       P        05 56 06.9 +0.7
TLCB                                 IAmb    IAmb     05 58 16.1
       comp=Z,1µm,1.7s
PVIS   Viseu             76.52  44⇓ iP       P        05 56 08.2 +1.6
       comp=Z,1µm,2.1s
PVIS                               epP       pP       05 58 17.5 +4.7
PVIS                               i S       S        06 05 05.3 +1.1
MTE    Manteigas         76.63  45⇓ iP       P        05 56 08.7 +1.4
       comp=Z,1µm,1.5s
MTE    Manteigas         76.63  45 ePP       PP       05 59 15.2 +3.8
MTE                                i S       S        06 05 06.2 +0.8
MTE                                i LQ      LQ       06 05 09.8
MTE    Manteigas         76.63  45 ⇓P        P        05 56 08.2 +0.9
MTE    Manteigas         76.63  45   IAmb    IAmb     05 56 09.8
       comp=Z,362nm,0.9s
LIJA   Lijar             76.78  49   P       P        05 56 11.0 +2.8
PGAV   Gavieira, Arco    76.79  43⇓ iP       P        05 56 09.4 +1.2
       comp=Z,1µm,1.7s
PGAV   Gavieira, Arco    76.79  43 ePP       PP       05 59 16.1 +3.4
PGAV                               i S       S        06 05 07.1   0.0
PCAB   Cabril            76.84  43⇓ iP       P        05 56 09.9 +1.5
       comp=Z,1µm,1.8s
PCAB                               epP       pP       05 58 16.4 +1.7
PCAB   Cabril            76.84  43 ePP       PP       05 59 14.2 +1.1
POLO   Lamas de Olo      76.86  44⇓ iP       P        05 56 10.1 +1.5
       comp=Z,452nm,1.6s
POLO   Lamas de Olo      76.86  44 ePP       PP       05 59 15.4 +2.1
POLO                               i S       S        06 05 09.0 +1.1
PVRL   Vila Real         76.87  44⇓ iP       P        05 56 10.2 +1.6
       comp=Z,976nm,1.7s
PVRL                               i S       S        06 05 09.7 +1.8
HOLB   Holberg           77.25 327   P       P        05 56 11.3 +1.0
MVO    Moncorvo          77.30  44⇓ iP       P        05 56 12.5 +1.6
       comp=Z,1µm,1.6s
MVO                                epP       pP       05 58 17.8 +0.4
MVO    Moncorvo          77.30  44 ePP       PP       05 59 18.8 +1.9
MVO                                i S       S        06 05 14.1 +1.6
EMAL   Malaga-Limoner    77.45  49   P       P        05 56 13.1 +1.4
EMAL                                 S       S        06 05 18.0 +3.9
SFJD   Kangerlussuaq     77.47   8   P       P        05 56 10.2  -0.9
       comp=Z,126nm,0.5s,baz=207,slow=6.7,SNR=133
SFJD                                 pP      pP       05 58 18.5 +0.7
       comp=Z,38nm,0.6s,baz=227,slow=6.1,SNR=2.9
SFJD   Kangerlussuaq     77.47   8 i P       P        05 56 10.4  -0.8
SFJD                                 IAmb    IAmb     05 56 11.7
       comp=Z,110nm,0.7s
SFJD                               i S       S        06 04 58.6   -14
SFJD   Kangerlussuaq     77.47   8 ⇑P        P        05 56 10.3  -0.9
SFJD   Kangerlussuaq     77.47   8   P       P        05 56 10.3  -0.8
DY2G   Dye2              77.67  10 i P       P        05 56 11.5  -1.0
DY2G                                 IAmb    IAmb     05 56 13.6
       comp=Z,481nm,0.9s
DY2G                               i S       S        06 05 01.6   -14
PBRG   Braganca          77.76  44⇓ iP       P        05 56 14.9 +1.6
       comp=Z,1µm,1.6s
PBRG                               epP       pP       05 58 24.8 +4.8
PBRG   Braganca          77.76  44 ePP       PP       05 59 20.9 +0.3
PBRG                               i S       S        06 05 18.7 +1.5
GOG    Mont Gurugu       77.98  51   P       P        05 56 18.0 +3.2
JBK    JBK               78.01  52   P       P        05 56 17.0 +1.9
BBB    Bella Bella       78.06 328 ⇑P        P        05 56 15.6 +1.0
BBB    Bella Bella       78.06 328   P       P        05 56 15.3 +0.7
BBB                                  IAmb    IAmb     05 58 25.0
       comp=Z,1µm,1.6s
TAF    Taforalt          78.29  52   P       P        05 56 19.0 +2.6
ISOG   Isortoq, Green    78.30  13 i P       P        05 56 15.6 +0.1
ISOG                                 IAmb    IAmb     05 56 16.9
       comp=Z,766nm,0.7s
CHAS   Isla Isabel II    78.41  51   P       P        05 56 17.9 +1.0
CHAS                                 S       S        06 05 26.3 +2.2
PAB    San Pablo         78.54  47   P       P        05 56 18.3 +0.7
PAB                                  pmax    pmax
       comp=Z,2µm,1.9s
PAB    San Pablo         78.54  47 ⇓P        P        05 56 18.8 +1.1
PAB    San Pablo         78.54  47   P       P        05 56 18.3 +0.7
PAB                                  IAmb    IAmb     05 56 22.3
       comp=Z,2µm,1.9s
PAB    San Pablo         78.54  47   P       P        05 56 19.7 +2.0
ANGG   Ammassalik, Gr    78.66  14 i P       P        05 56 17.1  -0.4
ANGG                                 IAmb    IAmb     05 56 18.6
       comp=Z,329nm,0.6s
ANGG   Ammassalik, Gr    78.66  14   IAmb    IAmb     05 56 18.8
       comp=Z,424nm,0.9s
ESDC   Sonseca Array     78.87  47   P       P        05 56 20.7 +1.4
       comp=Z,125nm,0.9s,baz=256,slow=5.2,SNR=297
ESDC                                 pP      pP       05 58 26.8 +0.3
       comp=Z,7.4nm,0.7s,baz=253,slow=5.2,SNR=2.6
ESDC                                 S       S        06 05 31.3 +2.5
       comp=Z,5.6nm,1.2s,baz=255,slow=7.9,SNR=7.0
ESDC                                 PKKPbc  PKKPbc   06 15 08.7 +0.2
       comp=Z,1.1nm,0.8s,baz=47,slow=2.2,SNR=4.1
ESDC                                 PKPPKP  P'P'df   06 23 10.4 +0.2
       comp=Z,3.7nm,1.1s,baz=358,slow=3.0,SNR=6.4
ESDC   Sonseca Array     78.87  47   P       P        05 56 20.5 +1.2
ESDC                                 IAmb    IAmb     05 56 24.5
       comp=Z,2µm,1.9s
ESBB   Sonseca Array     78.87  47   P       P        05 56 20.9 +1.6
ESBB                                 IAmb    IAmb     05 56 24.6
       comp=Z,2µm,1.9s
YKA    Yellowknife Ar    78.91 341   P       P        05 56 18.6  -0.2
       comp=Z,255nm,0.8s,baz=129,slow=6.6,SNR=702
YKA                                  pP      pP       05 58 25.6  -0.6
       comp=Z,22nm,0.6s,baz=128,slow=7.1,SNR=3.2
YKA                                  S       S        06 05 25.2  -3.0
       comp=Z,8.0nm,0.9s,baz=114,slow=14,SNR=5.6
YKA                                  PKKPbc  PKKPbc   06 15 06.3  -3.2
       comp=Z,1.1nm,0.4s,baz=346,slow=2.6,SNR=12
YKA                                  PKPPKP  P'P'df   06 22 51.2   -17
       comp=Z,1.0nm,0.9s,baz=356,slow=3.3,SNR=4.0
NVL    N'lazarevskaya    79.08 160 eP        P        05 56 25.5 +5.8
NVL                                  pmax    pmax
       comp=Z,3µm,1.4s
ILULI  Ilulissat         79.50   7 i P       P        05 56 21.2  -0.6
ILULI                                IAmb    IAmb     05 56 23.0
       comp=Z,448nm,0.6s
ILULI                              i S       S        06 05 19.6   -14
ILULI  Ilulissat         79.50   7   IAmb    IAmb     05 56 23.3
       comp=Z,650nm,0.9s
UCM    Universidad Co    79.61  46   P       P        05 56 24.1 +0.9
UCM                                  S       S        06 05 38.9 +2.5
OTSS   Djebel Tessala    79.70  52   P       P        05 56 27.0 +3.2
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HG4B   Hotspring         79.74 327   IAmb    IAmb     05 58 36.3
       comp=Z,994nm,1.7s
GRNB   Grenville Isla    79.88 329   P       P        05 56 24.4 +0.2
USTO   Oran              80.04  51   P       PcP      05 56 35.0 +4.5
VAL    Valentia          80.13  33 ⇑P        P        05 56 26.2 +0.7
ODJA   Bouhanifia        80.22  52   P       P        05 56 29.0 +2.5
RUBB   Prince Rupert     80.28 329   P       P        05 56 27.0 +0.8
RUBB                                 IAmb    IAmb     05 58 37.3
       comp=Z,651nm,1.6s
CART   Cartagena         80.30  49   P       P        05 56 26.0  -0.8
CART                                 S       S        06 05 42.0  -1.5
CART   Cartagena         80.30  49 ⇓P        P        05 56 26.5  -0.3
CART   Cartagena         80.30  49   P       P        05 56 26.5  -0.3
OJBR   Djebel Berber     80.68  52   P       P        05 56 31.0 +2.1
DIB    Dawson Inlet,     80.86 328   P       P        05 56 30.0 +0.8
DIB                                  IAmb    IAmb     05 58 40.7
       comp=Z,631nm,1.5s
H02S1  DAWSON INLET T    80.86 328   P       P        05 56 30.9 +1.6
       SNR=41
QSPA   South Pole Qui    80.91 180   P       P        05 56 30.1 +0.6
       comp=Z,662nm,0.6s,baz=164,slow=2.6
QSPA                                 S       S        06 05 42.5  -6.3
       comp=Z,24nm,1.1s,baz=79,slow=6.1,SNR=3.7
QSPA                                 PKKP    PKKPdf   06 14 58.9 +5.8
       comp=Z,10nm,0.8s,baz=266,slow=6.5,SNR=12
QSPA   South Pole Qui    80.91 180   P       P        05 56 30.4 +0.9
H02N1  VAN INLET T-PH    80.92 328   P       P        05 56 31.3 +1.6
       SNR=35
ICESG  Greenland Ices    81.17  11 i P       P        05 56 30.3  -0.7
ICESG                                IAmb    IAmb     05 56 32.5
       comp=Z,624nm,0.7s
ICESG                              i S       S        06 05 33.5   -18
EANR   'Ain N'Sour       81.38  51   P       P        05 56 36.0 +3.6
NUUG   Nuugaatsiaq       81.47   6 i P       P        05 56 31.6  -0.4
NUUG                                 IAmb    IAmb     05 56 33.6
       comp=Z,56nm,0.8s
NUUG                               i S       S        06 05 54.5 +0.6
ECHA   Ech Chlef         81.64  51   P       P        05 56 35.7 +2.0
EBNR   Beni Rached       81.81  51   P       P        05 56 38.0 +3.4
CCA1   Carnmenellis      82.18  36 eP        P        05 56 36.1 +0.1
CCA1                                 IAmb    IAmb     05 56 38.5
       comp=Z,1µm,0.9s
CRAG   Craig             82.28 330   P       P        05 56 37.3 +0.9
       baz=119,SNR=9.6
CRAG   Craig             82.28 330 ⇑P        P        05 56 37.3 +0.9
CRAG   Craig             82.28 330   P       P        05 56 36.7 +0.3
CRAG                                 IAmb    IAmb     05 58 50.2
       comp=Z,915nm,1.9s
DLBC   Dease Lake        82.31 333   IAmb    IAmb     05 56 39.5
       comp=Z,310nm,0.9s
WRAK   Wrangell Islan    82.36 331   P       P        05 56 37.8 +1.0
       baz=119,SNR=36
WRGLY  Wrigley           82.41 339   P       P        05 56 37.3 +0.4
       baz=128,SNR=89
UPNV   Upernavik         82.42   4 i P       P        05 56 36.1  -0.7
UPNV                                 IAmb    IAmb     05 56 37.7
       comp=Z,101nm,0.8s
UPNV                               i S       SKSac    06 05 50.5  -9.2
BORG   Borgarnes         82.59  19   P       P        05 56 40.1 +2.3
       comp=Z,373nm,0.9s,baz=224,slow=3.5,SNR=40
BORG                                 pP      pP       05 58 48.3 +1.7
       comp=Z,54nm,0.7s,baz=226,slow=3.8,SNR=3.3
BORG   Borgarnes         82.59  19   P       P        05 56 39.2 +1.4
BORG                                 IAmb    IAmb     05 56 41.0
       comp=Z,963nm,1.2s
WTLY   Watson Lake, Y    82.67 335   P       P        05 56 39.5 +1.2
       baz=123,SNR=21
DSB    Dublin            82.83  33 ⇓P        P        05 56 39.8 +0.5
HTL    Hartland          82.94  36 eP        P        05 56 39.9 +0.1
DYA    Yadsworthy        83.04  36⇓eP        P        05 56 40.4   0.0
DYA                                  IAmb    IAmb     05 56 42.5
       comp=Z,787nm,1.4s
RSBS   Rosebush, Pemb    83.19  35 eP        P        05 56 40.1  -1.0
RSBS                                 IAmb    IAmb     05 56 42.2
       comp=Z,589nm,1.3s
TGTN   Hyland Airport    83.23 336   P       P        05 56 42.5 +1.3
       baz=124,SNR=208
TGTN                                 S       S        06 06 13.1 +1.3
       baz=124
JVM    Valle D.L. Mar    83.60  38 eP        P        05 56 43.5 +0.4
JSA    Saint Aubin       83.61  38 eP        P        05 56 43.1  -0.1
JSA                                  IAmb    IAmb     05 56 45.3
       comp=Z,7µm,2.8s
JSA    Saint Aubin       83.61  38 ⇓P        P        05 56 43.7 +0.5
WPS    Cemaes, Angles    83.92  34 eP        P        05 56 44.5  -0.1
WLF1   Llynfaes          83.93  34⇓eP        P        05 56 44.2  -0.4
WLF1                                 IAmb    IAmb     05 56 46.5
       comp=Z,5µm,2.5s
YLL    Llanberis         83.99  34 eP        P        05 56 45.0   0.0
WME    Myndd Eilian      84.02  34⇓eP        P        05 56 44.5  -0.6
SIT    Sitka             84.11 330   P       P        05 56 46.4 +0.9
       baz=117
SIT                                  S       S        06 06 21.8 +1.5
       baz=117
WIM    Isle of Man       84.13  33⇓eP        P        05 56 46.2 +0.6
MCH1   Michaelchurch     84.19  35⇓eP        P        05 56 45.5  -0.5
MCH1                                 IAmb    IAmb     05 56 47.5
       comp=Z,255nm,1.1s
MCH1   Michaelchurch     84.19  35 ⇓P        P        05 56 46.0  -0.1
MCH1                               ⇓P        PcP      05 56 46.6  -1.8
JIS    Juneau Island     84.22 332   IAmb    IAmb     05 56 48.3
       comp=Z,497nm,1.5s
IOMK   Kirk Michael      84.23  33⇓eP        P        05 56 46.5 +0.4
IOMK                                 IAmb    IAmb     05 56 48.3
       comp=Z,4µm,2.0s
OLDB   Oldbury-Upon-S    84.32  36⇓eP        P        05 56 46.7 +0.1
OLDB                                 IAmb    IAmb     05 56 48.1
       comp=Z,4µm,2.6s
SUMG   Summit            84.36   9 i P       P        05 56 46.8  -0.1
SUMG                                 IAmb    IAmb     05 56 48.7
       comp=Z,514nm,0.8s
SUMG                               i S       SKSac    06 06 12.4  -0.5
SUMG   Summit            84.36   9 ⇓P        P        05 56 47.1 +0.2
GAL1   Galloway          84.41  32⇓eP        P        05 56 47.0   0.0
GAL1                                 IAmb    IAmb     05 56 49.0
       comp=Z,632nm,1.6s
FOEL   Foel Wylfa        84.43  34⇓eP        P        05 56 47.0  -0.1
FOEL                                 IAmb    IAmb     05 56 48.7
       comp=Z,3µm,2.6s
P33M   Teslin, Yukon     84.44 334   P       P        05 56 48.3 +1.1
       baz=119,SNR=73
P33M                                 S       S        06 06 23.8 +0.2
       baz=119
HLM1   Long Mynd         84.46  35 eP        P        05 56 47.2  -0.2
HLM1                                 IAmb    IAmb     05 56 48.3
       comp=Z,396nm,1.1s
BESE   Bessie Mountai    84.58 332   IAmb    IAmb     05 56 50.9
       comp=Z,397nm,1.1s
STRD   Stroud            84.59  36⇓eP        P        05 56 47.7  -0.2
LAWE   Loch Awe, Argy    84.64  31⇓eP        P        05 56 47.5  -0.6
LAWE                                 IAmb    IAmb     05 56 49.9
       comp=Z,863nm,2.0s
SWN1   Swindon           84.70  36⇓eP        P        05 56 48.6 +0.2
SWN1                                 IAmb    IAmb     05 56 50.1
       comp=Z,5µm,2.4s
LEWI   Lewis, Hebride    84.75  29⇓eP        P        05 56 48.9 +0.3
LEWI                                 IAmb    IAmb     05 56 49.8
       comp=Z,712nm,1.4s
NEWG   New Galloway      84.77  32⇓eP        P        05 56 48.8 +0.1
NEWG                                 IAmb    IAmb     05 56 49.6
       comp=Z,234nm,1.2s
PGBU   Glenifferbraes    84.92  31⇓eP        P        05 56 49.5   0.0
PGBU                                 IAmb    IAmb     05 56 51.5
       comp=Z,1µm,1.8s
MAHO   Mahon             84.93  48   P       P        05 56 49.6  -0.3
MAHO                                 S       S        06 06 20.9  -8.1
MAHO   Mahon             84.93  48 ⇑P        P        05 56 50.9 +1.0
KPL    Plockton          84.98  30 eP        P        05 56 49.3  -0.4
KPL                                  IAmb    IAmb     05 56 51.4
       comp=Z,2µm,2.4s
WIN    Windhoek          85.01 112   IAmb    IAmb     05 56 53.0
       comp=Z,1µm,1.9s
WIN    Windhoek          85.01 112 i P       P        05 56 49.2  -1.8
WIN                                  pP      pP       05 58 59.1  -1.7
WIN                                  sP      sP       05 59 55.7  -6.4
RES    Resolute Bay      85.01 354   P       P        05 56 49.8 +0.3
       comp=Z,92nm,0.8s,baz=186,slow=8.5
RES                                  pP      pP       05 58 59.5 +0.1
       comp=Z,28nm,0.7s,baz=190,slow=6.5,SNR=2.7
RES                                  S       SKSac    06 06 13.9  -2.1
       comp=Z,8.8nm,1.2s,baz=66,slow=20,SNR=1.6
RES                                  PKKP    PKKPdf   06 14 50.8 +3.3
       comp=Z,8.8nm,0.8s,baz=116,slow=2.0,SNR=9.6
RES    Resolute Bay      85.01 354 ⇓P        P        05 56 49.6 +0.1
RES    Resolute Bay      85.01 354   IAmb    IAmb     05 56 51.3
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	comp=Z,379nm,1.3s						
KESW	Keswick, Cumbr	85.15	33	⇓eP	P	05 56 50.8	+0.2
KESW				IAmb	IAmb	05 56 52.4	
	comp=Z,4µm,2.6s						
SKAG	Skagway	85.20	333	P	P	05 56 52.0	+1.3
	baz=117,SNR=31						
SKAG				S	S	06 06 31.3	+0.6
	baz=117						
SKAG	Skagway	85.20	333	⇑P	P	05 56 51.5	+0.8
SKAG				⇓P	P	05 56 52.0	+1.3
SKAG	Skagway	85.20	333	IAmb	IAmb	05 56 52.9	
	comp=Z,450nm,1.6s						
KAC	Achnashellach	85.22	30	eP	P	05 56 49.9	-1.0
RAR	Rarotonga	85.36	249	P	P	05 56 53.3	+1.0
	comp=Z,57nm,0.9s,baz=210,slow=5.9,SNR=4.1						
ESK	Eskdalemuir	85.38	32	⇓eP	P	05 56 51.6	-0.1
ESK				IAmb	IAmb	05 56 53.6	
	comp=Z,585nm,1.6s						
ESK	Eskdalemuir	85.38	32	P	P	05 56 51.8	+0.1
ESK				pmax	pmax		
	comp=Z,751nm,1.8s						
ESK	Eskdalemuir	85.38	32	P	P	05 56 51.8	+0.1
ESK				IAmb	IAmb	05 56 55.0	
	comp=Z,751nm,1.8s						
INVG	Invergeldie, C	85.40	31	⇓eP	P	05 56 51.5	-0.3
INVG				IAmb	IAmb	05 56 53.6	
	comp=Z,1µm,2.3s						
EKA	Eskdalemuir Ar	85.41	32	P	P	05 56 51.5	-0.4
	comp=Z,38nm,0.7s,baz=245,slow=4.4,SNR=99						
EKA				pP	pP	05 59 01.5	-0.4
	comp=Z,20nm,0.7s,baz=237,slow=3.9,SNR=8.3						
EKA				PKPPKP	P'P'df	06 22 57.0	-0.1
	comp=Z,4.9nm,0.9s,baz=76,slow=4.4,SNR=5.7						
CWF	Charnwood Fore	85.43	35	⇓eP	P	05 56 51.8	-0.2
CWF				IAmb	IAmb	05 56 53.0	
	comp=Z,314nm,1.1s						
LBWR	Ladybower, Pea	85.45	34	⇓eP	P	05 56 52.6	+0.6
LBWR				IAmb	IAmb	05 56 53.9	
	comp=Z,409nm,0.9s						
WHY	Whitehorse	85.56	334	P	P	05 56 53.3	+0.8
	baz=118,SNR=49						
WHY				S	S	06 06 33.9	-0.4
	baz=118						
WHY	Whitehorse	85.56	334	⇓P	P	05 56 53.2	+0.6
WHY				⇓P	P	05 56 53.4	+0.8
WHY	Whitehorse	85.56	334	IAmb	IAmb	05 56 56.4	
	comp=Z,629nm,1.9s						
EBH	Black Hill	85.60	31	eP	P	05 56 52.6	-0.1
TULEG	Thule	85.61	1	i P	P	05 56 52.2	-0.2
TULEG				IAmb	IAmb	05 56 54.3	
	comp=Z,476nm,0.8s						
EDI	Edinburgh	85.63	32	⇓eP	P	05 56 52.6	-0.2
EDI				IAmb	IAmb	05 56 54.6	
	comp=Z,1µm,2.2s						
EBL	Broad Law	85.65	32	eP	P	05 56 52.8	-0.2
FARO	Faro, Yukon	85.65	335	P	P	05 56 53.9	+1.0
	baz=119,SNR=186						
FARO				S	S	06 06 35.1	+0.1
	baz=119						
HPK	Haverah Park	85.71	34	eP	P	05 56 53.3	0.0
HPK				IAmb	IAmb	05 56 54.5	
	comp=Z,422nm,1.0s						
HMNX	Herstmonceux	85.72	37	⇓eP	P	05 56 54.2	+0.8
HMNX				IAmb	IAmb	05 56 55.0	
	comp=Z,674nm,1.0s						
EDMD	Edmundbyers	85.85	33	⇓eP	P	05 56 53.6	-0.4
EDMD				IAmb	IAmb	05 56 55.6	
	comp=Z,364nm,0.9s						
TSUM	Tsumeb	85.93	109	P	P	05 56 55.7	+0.4
	comp=Z,305nm,0.9s,baz=258,slow=3.7,SNR=233						
TSUM				pP	pP	05 59 05.9	+0.3
	comp=Z,83nm,0.8s,baz=235,slow=6.6,SNR=6.4						
TSUM	Tsumeb	85.93	109	⇑P	P	05 56 55.3	0.0
TSUM	Tsumeb	85.93	109	P	P	05 56 55.6	+0.3
TSUM	Tsumeb	85.93	109	⇓iP	P	05 56 57.5	+2.2
TSUM				pP	pP	05 59 09.6	+4.0
TSUM				sP	sP	06 00 04.3	-2.5
ESY	Stoneypath	85.93	32	⇓eP	P	05 56 54.6	+0.3
EDU	Dundee	85.97	31	⇓eP	P	05 56 55.0	+0.5
CLF	Chambon-Foret	85.97	40	⇓P	P	05 56 55.2	+0.6
M31M	Drury Creek, Y	86.07	335	P	P	05 56 55.9	+1.0
	baz=118,SNR=100						
M31M				S	S	06 06 38.5	-0.4
	baz=118						
SCO	Scoresbysund	86.18	15	i P	P	05 56 56.0	+0.9
SCO				IAmb	IAmb	05 56 58.0	
	comp=Z,164nm,0.9s						
SCO				i S	SKSac	06 06 13.4	-10
SCO	Scoresbysund	86.18	15	⇓P	P	05 56 56.2	+1.2
SCO				⇓P	P	05 56 56.4	+1.2
SCO	Scoresbysund	86.18	15	IAmb	IAmb	05 56 59.5	
	comp=Z,647nm,1.2s						
LMK	Market Rasen	86.25	34	⇓eP	P	05 56 56.3	+0.5
LMK				IAmb	IAmb	05 56 57.7	
	comp=Z,1µm,1.0s						
MCD	Coleburn Disti	86.26	30	eP	P	05 56 55.0	-0.8
ELSH	Elham, Standar	86.29	37	⇓eP	P	05 56 56.2	+0.1
ELSH				IAmb	IAmb	05 56 58.0	
	comp=Z,687nm,0.9s						
BIGH	Upper Bighouse	86.31	29	⇓eP	P	05 56 56.1	+0.1
BIGH				IAmb	IAmb	05 56 57.9	
	comp=Z,4µm,2.6s						
N31M	Braeburn, Yuko	86.32	334	P	P	05 56 57.0	+1.0
	baz=117,SNR=119						
N31M				S	S	06 06 40.6	-0.8
	baz=117						
DRUM	Mains of Drumt	86.38	31	⇓eP	P	05 56 55.7	-0.7
DRUM				IAmb	IAmb	05 56 58.4	
	comp=Z,688nm,1.7s						
MLA1	Latheron	86.50	29	⇓eP	P	05 56 57.1	+0.2
ELMS	Elmsett, Ipswi	86.53	36	⇓eP	P	05 56 57.0	-0.2
ELMS				IAmb	IAmb	05 56 58.7	
	comp=Z,422nm,0.9s						
WACR	West Acre	86.53	35	eP	P	05 56 57.2	+0.1
WACR				IAmb	IAmb	05 56 60.0	
	comp=Z,2µm,0.9s						
SSB	Saint Sauveur	86.65	43	⇑P	P	05 56 58.3	+0.3
HYT	Haines Junctio	86.78	333	P	P	05 56 59.9	+1.6
	baz=115,SNR=48						
HYT				S	S	06 06 47.7	+1.8
	baz=115						
HYT	Haines Junctio	86.78	333	IAmb	IAmb	05 57 00.9	
	comp=Z,506nm,1.6s						
SUR	Sutherland	86.86	122	P	P	05 57 00.4	+0.9
	comp=Z,134nm,0.8s,baz=230,slow=4.6,SNR=102						
SUR				pP	pP	05 59 11.9	+1.8
	comp=Z,66nm,1.1s,baz=264,slow=5.1,SNR=2.9						
SUR	Sutherland	86.86	122	P	P	05 56 59.7	+0.1
SUR	Sutherland	86.86	122	⇓iP	P	05 57 02.7	+3.1
SUR				pP	pP	05 59 10.3	+0.1
RUSF	Rustrel	86.92	45	⇓P	P	05 57 03.0	+3.7
RUSF				⇓P	P	05 57 03.0	+3.7
NEPA	Kaukuwa	86.96	107	i P	P	05 57 02.1	+1.9
NEPA				pP	pP	05 59 14.1	+3.2
NEPA				sP	sP	06 00 07.2	-4.7
PNL	Peninsula	87.17	332	P	P	05 57 01.3	+1.2
	baz=114,SNR=18						
PNL				S	S	06 06 50.0	+0.7
	baz=114						
YUK6	Outpost Mounta	87.21	333	P	P	05 57 02.1	+1.6
	baz=114,SNR=54						
YUK6				S	S	06 06 49.1	-1.1
	baz=114						
M30M	Minto, Yukon	87.23	335	P	P	05 57 00.8	+0.5
	baz=116,SNR=144						
M30M				S	S	06 06 47.4	-2.5
	baz=116						
NEEM	North Greenlan	87.28	4	i P	P	05 57 01.4	+0.9
NEEM				IAmb	IAmb	05 57 03.1	
	comp=Z,1µm,0.8s						
NEEM				i S	SKSac	06 06 20.3	-10
MAYO	Mayo, Yukon	87.32	336	P	P	05 57 02.2	+1.5
	baz=117						
BCPM	Bancas Point	87.39	332	IAmb	IAmb	05 57 04.0	
	comp=Z,324nm,1.1s						
SBA	Scott Base	87.44	190	P	P	05 57 02.6	+1.5
SBA	Scott Base	87.44	190	P	P	05 57 02.6	+1.5
YUK4	Talbot Arm	87.51	334	P	P	05 57 03.0	+1.1
	baz=114,SNR=92						
YUK4				S	S	06 06 53.3	+0.5
	baz=114						
PINM	Pinnacle	87.73	332	P	P	05 57 03.8	+1.0
	baz=113,SNR=21						
PINM				S	S	06 06 55.7	+1.1
	baz=113						
PCA	Pinnacle	87.73	332	IAmb	IAmb	05 57 06.9	
	comp=Z,320nm,1.0s						
MLOA	Mauna Loa Obse	87.76	290	IAmb	IAmb	05 59 17.5	
	comp=Z,620nm,1.5s						
KEST	Kesra	87.78	53	P	P	05 57 04.2	+0.6
	comp=Z,149nm,0.7s,baz=168,slow=2.3,SNR=91						
KEST				pP	pP	05 59 15.8	+1.2
	comp=Z,37nm,1.0s,baz=147,slow=5.7,SNR=3.2						
KEST	Kesra	87.78	53	IAmb	IAmb	05 57 07.5	
	comp=Z,147nm,0.7s						
SNF	Seneffe	87.99	38	bP	P	05 57 05.1	+1.1
	comp=Z,286nm,0.9s						
BNI	Bardonecchia	88.04	44	⇓P	P	05 57 05.6	+1.0
TATN	Tataouine	88.05	57	⇓P	P	05 57 05.6	+0.8
DOU	Dourbes	88.06	39	dP	P	05 57 04.5	0.0
	comp=Z,357nm,0.9s						
UCC	Uccle	88.12	38	bP	P	05 57 05.5	+0.9
	comp=Z,48nm,1.1s						
BMRD	Maredsous	88.23	39	κP	P	05 57 05.0	-0.1
	comp=Z,360nm,1.0s						
LRW	Lerwick	88.24	28	⇑P	P	05 57 06.3	+1.3
LRW				⇓P	P	05 57 06.4	+1.5
A36M	Sachs Harbour	88.32	345	P	P	05 57 05.3	+0.2
	baz=127,SNR=1000						
A36M				S	S	06 06 56.2	-3.1
	baz=127						
BGES	Gesves	88.45	38	bP	P	05 57 06.4	+0.2
	comp=Z,307nm,0.9s						
RCHB	Rochefort	88.47	39	κP	P	05 57 06.0	-0.3
	comp=Z,248nm,1.1s						
YUK3	Moose Creek	88.47	334	P	P	05 57 07.0	+0.6
	baz=113,SNR=61						
YUK3				S	S	06 06 58.9	-2.8
	baz=113						
VNDA	Vanda	88.49	190	P	P	05 57 07.2	+1.3
	comp=Z,94nm,0.8s,baz=134,slow=6.0,SNR=150						
VNDA				pP	pP	05 59 16.7	-0.5
	comp=Z,26nm,0.9s,baz=124,slow=5.9,SNR=4.0						
VNDA				S	SKSac	06 06 39.2	+2.2
	comp=Z,5.1nm,1.1s,baz=298,slow=19,SNR=6.3						
VNDA				PKKP	PKKPdf	06 14 42.6	+2.7
	comp=Z,2.2nm,0.6s,baz=316,slow=5.8,SNR=9.4						
VNDA				PKPPKP	P'P'df	06 22 44.4	-7.2
	comp=Z,1.9nm,1.0s,baz=338,slow=6.3,SNR=5.5						
VNDA	Vanda	88.49	190	IAmb	IAmb	05 57 09.4	
	comp=Z,734nm,1.6s						
MESA	MESA	88.55	332	P	P	05 57 07.5	+0.8
	baz=111						
MESA				S	S	06 07 03.1	+0.7
	baz=111						
MESA	MESA	88.55	332	IAmb	IAmb	05 59 25.6	
	comp=Z,263nm,1.2s						
CTGM	Chitina Glacie	88.56	333	IAmb	IAmb	05 59 22.7	
	comp=Z,532nm,1.5s						
CTG	Chitna Glacier	88.56	333	P	P	05 57 07.6	+0.9
	baz=112,SNR=31						
CTG				S	S	06 07 02.4	0.0
	baz=112						
BCLA	Clavier	88.59	38	κP	P	05 57 07.3	+0.5
	comp=Z,143nm,1.2s						
J29M	Klondike Camp	88.62	336	P	P	05 57 08.2	+1.4
	baz=115,SNR=41						
VSL	Villasalto	88.64	50	⇓P	P	05 57 08.3	+0.9
VSL	Villasalto	88.64	50	IAmb	IAmb	05 57 11.4	
	comp=Z,391nm,1.0s						
INK	Inuvik	88.68	341	PKKP		06 14 42.7	
	comp=Z,6.2nm,0.5s,baz=334,slow=1.8,SNR=12						
INK				PKPPKP	P'P'df	06 22 44.9	-5.5
	comp=Z,2.1nm,0.9s,baz=232,slow=1.1,SNR=3.4						
INK	Inuvik	88.68	341	P	P	05 57 07.3	+0.4
	baz=119,SNR=503						
INK				S	S	06 06 58.7	-4.0
	baz=119						
BARN	Barnard Glacie	88.74	333	IAmb	IAmb	05 59 23.6	
	comp=Z,699nm,1.6s						
SYO	Syowa Base	88.75	160	⇓iP	P	05 57 07.8	+0.5
SYO	Syowa Base	88.75	160	⇓iPcP	PcP	05 57 09.6	+1.3
SYO	Syowa Base	88.75	160	⇑epP	pP	05 59 15.4	-3.2
SENIN	Lac Senin/Sane	88.80	43	IAmb	IAmb	05 57 12.4	
	comp=Z,480nm,1.9s						
ISLE	Juniper Island	88.88	332	IAmb	IAmb	05 59 23.9	
	comp=Z,451nm,1.4s						
BVCY	Beaver Creek	88.89	334	P	P	05 57 09.0	+1.0
	baz=112,SNR=22						
BVCY				S	S	06 07 02.3	-2.8
	baz=112						
MONC	Moncucco Torin	88.90	44	⇓P	P	05 57 08.9	+0.4
WLF	Walferdange	88.91	39	κP	P	05 57 08.5	+0.1
	comp=Z,346nm,1.1s						
WLF	Walferdange	88.91	39	eP	P	05 57 08.9	+0.5
	comp=Z,829nm,1.2s,baz=258,slow=4.7						
WLF				esP	sP	06 00 18.6	-2.0
WLF				eSP	SP	06 08 13.2	-1.7
	baz=261,slow=10						
WLF	Walferdange	88.91	39	⇓P	P	05 57 08.7	+0.3
BEBN	Eben Emael	88.92	38	dP	P	05 57 09.2	+0.8
	comp=Z,206nm,1.1s						
DAWY	Dawson	88.92	336	P	P	05 57 08.5	+0.3
	baz=114,SNR=143						
DAWY				S	S	06 07 01.7	-3.7
	baz=114						
DAWY	Dawson	88.92	336	IAmb	IAmb	05 57 10.4	
	comp=Z,228nm,1.0s						
BHOU	Houvegnez	89.00	39	κP	P	05 57 09.6	+0.8
	comp=Z,183nm,1.1s						
I29M	Ogilvie Camp,	89.03	337	P	P	05 57 08.9	+0.3
	baz=115,SNR=137						
I29M				S	S	06 07 02.3	-3.9
	baz=115						
WAX	Waxell Ridge	89.07	332	IAmb	IAmb	05 59 22.3	
	comp=Z,672nm,1.6s						
MEM	Membach	89.07	38	bP	P	05 57 09.2	+0.1
	comp=Z,88nm,1.0s						
DBG	Daneborg	89.09	12	i P	P	05 57 09.0	+0.4
DBG				IAmb	IAmb	05 57 11.5	
	comp=Z,45nm,1.2s						
BTNL	Ternell	89.14	38	bP	P	05 57 09.6	+0.2
	comp=Z,107nm,1.2s						
TGL	Tana Glacier	89.16	332	IAmb	IAmb	05 59 25.4	
	comp=Z,504nm,1.4s						
ECH	Echery	89.17	41	⇑P	P	05 57 09.7	0.0
ECH	Echery	89.17	41	IAmb	IAmb	05 57 11.8	
	comp=Z,478nm,1.2s						
CRQE	Cirque	89.28	332	P	P	05 57 10.3	+0.3
	baz=110,SNR=9.7						
CRQE				S	S	06 07 09.0	+0.2
	baz=110						
CRQM	Cirque	89.31	332	IAmb	IAmb	05 59 25.9	
	comp=Z,604nm,1.5s						
M27K	Edge Creek, AK	89.31	334	P	P	05 57 10.9	+0.7
	baz=111,SNR=45						
M27K				S	S	06 07 09.2	+0.1
	baz=111						
M27K	Edge Creek, AK	89.31	334	IAmb	IAmb	05 59 28.1	
	comp=Z,314nm,1.4s						
MCARA	McCarthy VSAT	89.47	333	P	P	05 57 11.8	+1.1
	baz=110,SNR=18						
MCARA				S	S	06 07 10.7	+0.4
	baz=110						
EUNU	Eureka	89.48	357	IAmb	IAmb	05 57 12.8	
	comp=Z,286nm,1.3s						
BCAR	Beaver Creek A	89.53	335	P	P	05 57 11.5	+0.5
L27K	Beaver Creek,	89.55	335	P	P	05 57 12.0	+0.9
	baz=111,SNR=108						
L27K				S	S	06 07 11.7	+0.8
	baz=111						
L27K	Beaver Creek,	89.55	335	IAmb	IAmb	05 57 13.7	
	comp=Z,141nm,0.8s						
VRDI	Verde Repeater	89.61	333	IAmb	IAmb	05 59 27.4	
	comp=Z,298nm,1.1s						
AHRW	Bad Neuenahr-A	89.71	39	eP	P	05 57 12.7	+0.7
	comp=Z,430nm,1.2s,baz=258,slow=4.7						
AHRW				epP	pP	05 59 25.1	+1.4
AHRW				esP	sP	06 00 22.0	-2.3
AHRW				esPP		06 03 48.4	
	baz=258,slow=7.7						
AHRW				eSP	SP	06 08 22.4	-1.4
	baz=261,slow=10						
M26K	Nabesna, AK	89.81	334	P	P	05 57 12.6	+0.2
	baz=110,SNR=14						
M26K				S	S	06 07 12.4	-1.0
	baz=110						
M26K	Nabesna, AK	89.81	334	IAmb	IAmb	05 59 30.2	
	comp=Z,268nm,1.9s						
MSSA	Maissana	89.83	45	IAmb	IAmb	05 57 15.9	
	comp=Z,327nm,1.6s						
GLB	Gilahina Butte	89.85	333	IAmb	IAmb	05 59 28.4	
	comp=Z,293nm,1.4s						
BFO	Black Forest	89.96	41	P	P	05 57 13.3	0.0
BFO				pmax	pmax		
	comp=Z,363nm,1.7s						
BFO	Black Forest	89.96	41	eP	P	05 57 13.3	0.0
	comp=Z,1µm,2.4s,baz=258,slow=4.7						
BFO				epP	pP	05 59 25.9	+1.0
BFO				esP	sP	06 00 23.2	-2.5
BFO				esPP		06 03 50.0	
	baz=258,slow=7.7						
BFO				eSP	SP	06 08 26.1	-0.6
	baz=261,slow=10						
BFO	Black Forest	89.96	41	P	P	05 57 13.3	0.0
BFO				IAmb	IAmb	05 57 16.5	
	comp=Z,363nm,1.7s						
BMRM	Bremner River	90.05	332	P	P	05 57 13.7	+0.2
	baz=109,SNR=9.5						
BMRM	Bremner River	90.05	332	IAmb	IAmb	05 59 29.3	
	comp=Z,414nm,1.4s						
BUG	Bochum--Univer	90.06	38	eP	P	05 57 14.0	+0.4
	comp=Z,1µm,2.0s,baz=258,slow=4.7						
BUG				epP	pP	05 59 26.4	+1.1
BUG				esP	sP	06 00 24.4	-1.5
BUG				esPP		06 03 53.0	
	baz=258,slow=7.7						
JMIC	Jan Mayen	90.12	17	eP	P	05 57 14.0	+0.5
JMIC				eSKSac	SKSac	06 06 48.5	+2.2
L26K	Log Cabin Wild	90.18	334	P	P	05 57 14.5	+0.4
	baz=110,SNR=44						
L26K				S	S	06 07 15.6	-1.0
	baz=110						
N25K	Chitina, Valde	90.26	333	P	P	05 57 14.8	+0.4
	baz=109						
N25K				S	S	06 07 14.6	-2.9
	baz=109						
KIP	Kipapa	90.34	292	⇓iP	P	05 57 16.2	+0.6
KIP				pmax	pmax		
	comp=Z,278nm,1.8s						
VLC	Villacollemand	90.41	45	⇑P	P	05 57 15.1	-0.4
VLC	Villacollemand	90.41	45	IAmb	IAmb	05 57 16.8	
	comp=Z,195nm,1.1s						
EYAK	Cordova Ski Ar	90.45	332	P	P	05 57 15.7	+0.5
	baz=108						
EYAK	Cordova Ski Ar	90.45	332	IAmb	IAmb	05 59 33.1	
	comp=Z,547nm,1.9s						
TNS	Taunus Mts	90.49	39	eP	P	05 57 16.2	+0.4
	comp=Z,311nm,1.1s,baz=258,slow=4.7						
TNS				epP	pP	05 59 29.0	+1.6
TNS				esP	sP	06 00 27.1	-1.0
TNS				esPP		06 03 54.8	
	baz=258,slow=7.7						
TNS				eSP	SP	06 08 30.5	-1.9
	baz=261,slow=10						
IBBN	Ibbenburen	90.57	37	eP	P	05 57 16.5	+0.5
	comp=Z,3µm,2.4s,baz=258,slow=4.7						
IBBN				epP	pP	05 59 28.8	+1.1
IBBN				esP	sP	06 00 27.2	-1.1
IBBN				esPP		06 03 56.7	
	baz=258,slow=7.7						
IBBN				eSP	SP	06 08 29.5	-3.6
	baz=261,slow=10						
IBBN	Ibbenburen	90.57	37	⇓P	P	05 57 16.3	+0.3
STU	Stuttgart	90.62	41	eP	P	05 57 16.4	+0.1
	comp=Z,5µm,2.4s,baz=258,slow=4.7						
STU				epP	pP	05 59 29.4	+1.3
STU				esP	sP	06 00 26.6	-2.1
STU				esPP		06 03 56.5	
	baz=258,slow=7.7						
STU				eSP	SP	06 08 32.5	-1.4
	baz=261,slow=10						
STU	Stuttgart	90.62	41	IAmb	IAmb	05 57 17.8	
	comp=Z,225nm,1.1s						
DAVOX	Davos/Dischmat	90.62	43	P	P	05 57 17.4	+0.8
	comp=Z,108nm,0.8s,baz=246,slow=4.8,SNR=139						
DAVOX				pP	pP	05 59 25.9	-2.5
	comp=Z,15nm,0.8s,baz=315,slow=4.3,SNR=2.9						
DAVOX				PKPPKP		06 22 43.6	
	comp=Z,4.3nm,0.8s,baz=111,slow=4.2,SNR=5.0						
DIV	Divide	90.64	332	IAmb	IAmb	05 57 18.7	
	comp=Z,133nm,0.9s						
DOT	Dot Lake	90.70	335	IAmb	IAmb	05 57 18.4	
	comp=Z,161nm,1.0s						
KASTN	Kahler Asten	90.70	38	eP	P	05 57 16.9	+0.2
	comp=Z,438nm,1.8s,baz=258,slow=4.7						
KASTN				epP	pP	05 59 29.4	+1.0
KASTN				esPP		06 03 57.4	
	baz=258,slow=7.7						
KASTN				eSP	SP	06 08 30.8	-3.9
	baz=261,slow=10						
DAVA	Damuels	90.74	42	i P	P	05 57 17.9	+0.8
	comp=Z,177nm,1.1s,SNR=48						
DAVA				eP	pP	05 59 31.0	+2.1
	comp=Z,36nm,0.9s						
SOE	Somerset East	90.75	123	⇓iP	P	05 57 20.3	+2.8
SOE				pP	pP	05 59 34.2	+5.0
SOE				sP	sP	06 00 22.2	-7.7
HARP	HAARP	90.76	333	P	P	05 57 16.8	+0.1
	baz=108						
SCRK	Sand Creek	90.78	335	P	P	05 57 17.1	+0.2
	baz=110,SNR=98						
SCRK				S	S	06 07 21.2	-0.8
	baz=110						
SCRK	Sand Creek	90.78	335	IAmb	IAmb	05 57 20.2	
	comp=Z,124nm,0.9s						
J26L	Joseph Creek	90.78	336	P	P	05 57 16.9	+0.1
	baz=110,SNR=145						
J26L				S	S	06 07 20.5	-1.5
	baz=110						
SALO	Salr	90.81	44	⇓P	P	05 57 17.3	-0.1
KLU	Klutina	90.82	332	P	P	05 57 17.3	+0.2
	baz=108,SNR=28						
KLU	Klutina	90.82	332	IAmb	IAmb	05 57 20.2	
	comp=Z,193nm,1.1s						
FID	Port Fidalgo	90.86	332	IAmb	IAmb	05 57 20.0	
	comp=Z,99nm,0.8s						
OSSC	Osservatorio P	90.88	46	IAmb	IAmb	05 57 19.8	
	comp=Z,168nm,1.1s						
MILB	Miltenberg	90.92	40	eP	P	05 57 17.9	+0.2
	comp=Z,3µm,2.6s,baz=258,slow=4.7						
MILB				epP	pP	05 59 30.2	+0.7
MILB				esPP		06 03 59.0	
	baz=258,slow=7.7						
MILB				eSP	SP	06 08 36.2	-1.0
	baz=261,slow=10						
DAG	Danmarks Havn	90.96	11	i P	P	05 57 16.6	-0.7
DAG	Danmarks Havn	90.96	11	⇓P	P	05 57 17.1	-0.1
UBR	Ueberruh	90.97	42	eP	P	05 57 18.6	+0.5
	comp=Z,2µm,2.1s,baz=258,slow=4.7						
UBR				epP	pP	05 59 31.3	+1.5
UBR				esPP		06 03 59.5	
	baz=258,slow=7.7						
UBR				eSP	SP	06 08 37.7	-0.2
	baz=261,slow=10						
KMY	Karmoy	91.02	30	⇓iP	P	05 57 18.4	+0.6
KMY				IVmBBB		05 57 19.6	
	comp=Z,5µm,2.6s						
KMY				eSKSac	SKSac	06 06 51.9	+0.1
RIDG	Independent Ri	91.06	335	P	P	05 57 18.5	+0.4
	baz=109,SNR=18						
RIDG				S	S	06 07 25.2	+0.8
	baz=109						
PAX	Paxson	91.08	334	P	P	05 57 18.0	-0.3
	baz=108,SNR=44						
PAX				S	S	06 07 24.8	+0.1
	baz=108						
PAX	Paxson	91.08	334	IAmb	IAmb	05 57 19.8	
	comp=Z,130nm,1.0s						
HLG	Helgoland	91.11	35	eP	P	05 57 19.1	+0.7
	comp=Z,880nm,1.4s,baz=258,slow=4.7						
HLG				esP	sP	06 00 29.0	-1.8
HLG				esPP		06 04 01.1	
	baz=258,slow=7.7						
HLG	Helgoland	91.11	35	⇓P	P	05 57 19.8	+1.4
M24K	Tolsona, Glenn	91.12	333	P	P	05 57 18.9	+0.5
	baz=108,SNR=16						
M24K	Tolsona, Glenn	91.12	333	IAmb	IAmb	05 57 22.6	
	comp=Z,291nm,1.1s						
GLI	Glacier Island	91.18	332	P	P	05 57 18.4	-0.2
	baz=107,SNR=5.8						
GLI	Glacier Island	91.18	332	IAmb	IAmb	05 57 21.2	
	comp=Z,135nm,0.9s						
CLTB	Caltabellotta	91.20	52	⇑P	P	05 57 20.4	+1.0
CLTB				⇑P	PcP	05 57 20.9	+1.0
CLTB	Caltabellotta	91.20	52	IAmb	IAmb	05 57 22.1	
	comp=Z,356nm,1.5s						
FETA	Feichten	91.25	43	i P	P	05 57 20.2	+0.8
	comp=Z,290nm,1.3s,SNR=95						
FETA				eP	pP	05 59 32.6	+1.3

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      comp=Z,56nm,1.8s
BOSA  Boshof            91.29 119   P         P         05 57 19.7 -0.4
      comp=Z,160nm,1.0s,baz=258,slow=3.3,SNR=98
BOSA                                pP        pP        05 59 30.0 -1.9
      comp=Z,10nm,0.6s,baz=253,slow=3.5,SNR=2.6
BOSA                                PP        PP        06 01 03.1 -5.5
      comp=Z,157nm,1.2s,baz=256,slow=6.8,SNR=6.7
BOSA                                PKKPbc    PKKPbc    06 14 39.1 +0.2
      comp=Z,9.4nm,0.6s,baz=90,slow=1.4,SNR=16
BOSA  Boshof            91.29 119  eP         P         05 57 20.8 +0.7
BOSA  Boshof            91.29 119  eP         P         05 57 20.8 +0.7
BOSA  Boshof            91.29 119⇓iP          P         05 57 19.9 -0.2
BOSA                                pP        pP        05 59 36.4 +4.5
BOSA                                sP        sP        06 00 29.1 -3.5
SUE   Sulen             91.31  28  eP         P         05 57 20.9 +1.7
SUE                                eSKSac     SKSac     06 06 54.0 +0.7
ASK   Askoy             91.35  29⇓iP          P         05 57 20.4 +1.0
ASK                                eSKSac     SKSac     06 06 54.5 +0.9
RETA  Reutte            91.37  42  i P        P         05 57 21.0 +1.1
      comp=Z,211nm,1.5s,SNR=49
RETA                               eP         pP        05 59 33.8 +2.1
      comp=Z,60nm,1.7s
MGAB  Montegabbione     91.38  47  ⇓P         P         05 57 19.9 -0.1
BER   Bergen            91.39  29⇓iP          P         05 57 20.8 +1.2
BER                                 IVmB_BB             05 57 21.5
      comp=Z,6μm,2.6s
BER                                eSKSac     SKSac     06 06 54.0 +0.2
BER                                eScS       ScS       06 07 29.2 +0.5
J25K  Salcha River,     91.55 335   P         P         05 57 20.5 +0.2
      baz=108,SNR=149
MOTA  Moosalm           91.56  42  i P        P         05 57 22.0 +1.1
      comp=Z,212nm,1.0s,SNR=59
MOTA                               eP         pP        05 59 34.4 +1.6
      comp=Z,42nm,0.9s
SCM   Sheep Creek Mo    91.57 333   P         P         05 57 20.6 +0.1
      baz=107,SNR=6.9
UBBA  Unterbreizbach    91.59  39  eP         P         05 57 21.4 +0.8
      comp=Z,959nm,2.1s,baz=258,slow=4.7
UBBA                               epP        pP        05 59 33.3 +0.8
UBBA                               esP        sP        06 00 32.2 -0.9
UBBA                               esPP                 06 04 03.2
      baz=258,slow=7.7
UBBA                               eSKSac     SKSac     06 06 57.3 +2.1
UBBA                               eSP        SP        06 08 42.2 -2.2
      baz=261,slow=10
FOO   Floro             91.60  28  eP         P         05 57 21.3 +0.9
FOO                                 IVmB_BB             05 57 22.3
      comp=Z,6μm,3.2s
FOO                                eSKSac     SKSac     06 06 55.6 +0.7
FOO                                eSS        SS        06 13 57.6 +2.2
SQTA  Sankt Quirin      91.61  43  i P        P         05 57 22.2 +1.2
      comp=Z,396nm,1.4s,SNR=65
SQTA                               eP         pP        05 59 35.0 +2.1
      comp=Z,74nm,1.2s
GTTG  Gottingen         91.72  38  eP         P         05 57 22.1 +0.8
      comp=Z,430nm,1.6s,baz=258,slow=4.7
GTTG                               epP        pP        05 59 34.5 +1.3
GTTG                               esP        sP        06 00 32.9 -0.9
GTTG                               esPP                 06 04 04.8
      baz=258,slow=7.7
GTTG                               eSP        SP        06 08 43.6 -2.3
      baz=261,slow=10
MURB  Monte Urbino      91.74  47   IAmb      IAmb      05 57 24.1
      comp=Z,211nm,1.1s
PWL   Port Wells        91.76 331   P         P         05 57 21.2 -0.1
      baz=106,SNR=8.4
SNART Snartemo          91.77  31  i P        P         05 57 21.6 +0.2
SNART Snartemo          91.77  31⇓iP          P         05 57 22.2 +0.8
SNART                              eSKSac     SKSac     06 06 58.0 +1.9
FUR   Furstenfeldbru    91.84  42  eP         P         05 57 22.4 +0.4
      comp=Z,543nm,1.3s,baz=258,slow=4.7
FUR                                esP        sP        06 00 32.7 -1.8
FUR                                esPP                 06 04 05.9
      baz=258,slow=7.7
FUR                                eSP        SP        06 08 46.6 -0.8
      baz=261,slow=10
WATA  Walderalm         91.88  42  i P        P         05 57 23.5 +1.1
      comp=Z,408nm,1.7s,SNR=63
WATA                               i P        pP        05 59 35.8 +1.6
      comp=Z,96nm,1.4s,SNR=6.7
ODD1  Odda              91.89  30⇓iP          P         05 57 22.9 +1.0
ODD1                               eSKSac     SKSac     06 06 56.0 -0.8
WTTA  Wattenberg        91.90  43  i P        P         05 57 23.5 +1.0
      comp=Z,518nm,1.5s,SNR=107
WTTA                               i P        pP        05 59 36.5 +2.1
      comp=Z,71nm,0.9s,SNR=6.6
DHY   Denali Highway    91.94 334   P         P         05 57 22.4 +0.1
      baz=106
DHY   Denali Highway    91.94 334   IAmb      IAmb      05 59 40.3
      comp=Z,192nm,1.6s
WAT6  Susitna Watana    91.96 333   P         P         05 57 22.5 +0.1
      baz=106,SNR=41
KNK   Knik Glacier      91.97 332   P         P         05 57 22.2 -0.1
      baz=106,SNR=8.0
KNK                                 S         S         06 07 34.3 +1.9
      baz=106
KNK   Knik Glacier      91.97 332   IAmb      IAmb      05 59 38.2
      comp=Z,453nm,1.8s
HYA   Hoyanger          92.01  28⇓iP          P         05 57 23.3 +1.0
NRDL  Niedersach Rie    92.01  37  eP         P         05 57 23.6 +1.1
      comp=Z,460nm,1.7s,baz=258,slow=4.7
NRDL                               epP        pP        05 59 35.3 +0.9
NRDL                               esPP                 06 04 07.1
      baz=258,slow=7.7
NRDL                               eSKSac     SKSac     06 06 59.3 +1.7
NRDL                               eSP        SP        06 08 47.4 -1.6
      baz=261,slow=10
SML   Sawmill           92.02 332   P         P         05 57 22.5  0.0
      baz=106,SNR=14
SML                                 S         S         06 07 34.4 +1.5
      baz=106
CLZ   Clausthal         92.03  38  eP         P         05 57 23.6 +0.8
      comp=Z,556nm,1.7s,baz=258,slow=4.7
CLZ                                epP        pP        05 59 36.0 +1.3
CLZ                                esPP                 06 04 07.5
      baz=258,slow=7.7
CLZ                                eSKSac     SKSac     06 07 00.1 +2.2
CLZ                                eSP        SP        06 08 47.4 -2.0
      baz=261,slow=10
NRCA  Norcia            92.09  47   IAmb      IAmb      05 57 32.4
      comp=Z,139nm,1.2s
SEW   Seward            92.10 331   P         P         05 57 22.6 -0.2
      baz=105,SNR=7.6
SKMB  Sankelmark Bun    92.11  35  eP         P         05 57 24.0 +1.0
      comp=Z,572nm,1.2s,baz=258,slow=4.7
SKMB                               epP        pP        05 59 36.4 +1.5
SKMB                               eSP        SP        06 08 48.1 -1.9
      baz=261,slow=10
GRFO  Grafenberg        92.12  40   P         P         05 57 23.3 +0.1
GRFO                                pmax      pmax
      comp=Z,274nm,1.5s
GRFO  Grafenberg        92.12  40   P         P         05 57 23.3 +0.1
GRFO                                IAmb      IAmb      05 57 25.0
      comp=Z,274nm,1.5s
GRA1  Grafenberg Arr    92.12  40   P         P         05 57 23.5 +0.3
GRA1                                IAmb      IAmb      05 57 25.0
      comp=Z,252nm,1.4s
GRF   Grafenberg Arr    92.12  40   P         P         05 57 23.5 +0.3
GRF                                 pmax      pmax
      comp=Z,252nm,1.4s
GRF   Grafenberg Arr    92.12  40  eP         P         05 57 23.8 +0.6
      comp=Z,443nm,1.6s,baz=258,slow=4.7
GRF                                epP        pP        05 59 36.7 +1.6
GRF                                esP        sP        06 00 34.3 -1.4
GRF                                ePP        PP        06 01 14.8 +0.2
GRF                                esPP                 06 04 06.4
      baz=258,slow=7.7
GRF                                eSP        SP        06 08 48.3 -2.0
      baz=261,slow=10
GRF                                ePXPXdf              06 22 45.2
VAE   Valguarnera       92.12  53   P         P         05 57 24.9 +1.3
      comp=Z,98nm,1.0s,baz=208,slow=3.7,SNR=8.3
HDA   Harding Lake      92.14 335   P         P         05 57 23.0  0.0
      baz=107,SNR=36
HDA   Harding Lake      92.14 335   IAmb      IAmb      05 59 35.1
      comp=Z,581nm,2.0s
BMAR  Burnt Mountain    92.14 338   P         P         05 57 23.9 +0.9
AQU   L'Aquila          92.21  48⇓iP          P         05 57 24.5 +0.7
AQU   L'Aquila          92.21  48  ⇓P         P         05 57 24.5 +0.7
AQU                                ⇑P         P         05 57 25.3 +1.5
IL31                    92.22 335   IAmb      IAmb      05 57 27.9
      comp=Z,144nm,1.4s
ILAR  Eielson Array     92.22 335   P         P         05 57 22.8 -0.5
      comp=Z,18nm,0.5s,baz=130,slow=3.1,SNR=171
ILAR                                pP        pP        05 59 33.6 -1.6
      comp=Z,16nm,0.7s,baz=124,slow=2.6,SNR=6.7
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ILAR                                PP        PP        06 01 10.0 -5.0
      comp=Z,14nm,1.1s,baz=101,slow=6.0,SNR=2.7
ILAR                                S         SKSac     06 06 57.3 -1.0
      comp=Z,6.2nm,1.1s,baz=132,slow=6.7,SNR=6.3
ILAR                                PKKP      PKKPdf    06 14 34.8 +0.2
      comp=Z,4.0nm,0.4s,baz=296,slow=3.1,SNR=36
ILAR  Eielson Array     92.22 335   P         P         05 57 22.5 -0.8
ASSE  Asse, Remlinge    92.28  38  eP         P         05 57 24.9 +1.1
      comp=Z,1μm,2.3s,baz=258,slow=4.7
ASSE                               epP        pP        05 59 36.2 +0.5
ASSE                               esPP                 06 04 07.8
      baz=258,slow=7.7
ASSE                               eSP        SP        06 08 49.6 -2.3
      baz=261,slow=10
GHO   Glory Hole Cre    92.28 332   IAmb      IAmb      05 59 41.7
      comp=Z,456nm,1.6s
LBTB  Lobatse           92.28 116   P         P         05 57 24.9 +0.3
      comp=Z,134nm,0.9s,baz=258,slow=5.3,SNR=149
LBTB                                PP        PP        06 01 12.6 -3.8
      comp=Z,140nm,1.4s,baz=257,slow=9.7,SNR=9.7
LBTB                                S         SKSac     06 07 02.9 +2.2
      comp=Z,4.9nm,0.8s,baz=37,slow=22,SNR=10.0
LBTB                                PKKPbc    PKKPbc    06 14 36.9 +0.5
      comp=Z,4.9nm,0.6s,baz=131,slow=1.3,SNR=6.4
LBTB  Lobatse           92.28 116   P         P         05 57 25.0 +0.3
LBTB  Lobatse           92.28 116  eP         P         05 57 25.7 +1.0
LBTB  Lobatse           92.28 116  eP         P         05 57 25.7 +1.0
LBTB  Lobatse           92.28 116⇓iP          P         05 57 25.2 +0.5
LBTB                                pP        pP        05 59 37.6 +1.0
LBTB                                sP        sP        06 00 28.9 -8.3
PMR   Palmer            92.33 332   P         P         05 57 23.5 -0.3
      baz=105
PMR                                 S         S         06 07 38.3 +3.0
      baz=105
PMR   Palmer            92.33 332   IAmb      IAmb      05 59 35.6
      comp=Z,240nm,1.7s
MUD   Monsted U'grnd    92.36  33  i P        P         05 57 24.5 +0.4
MUD                                 IAmb      IAmb      05 57 26.4
      comp=Z,138nm,0.8s
ABTA  Abfaltersbach     92.39  43  i P        P         05 57 25.6 +1.0
      comp=Z,300nm,1.1s,SNR=74
ABTA                               i P        pP        05 59 38.6 +2.1
      comp=Z,95nm,1.4s,SNR=6.4
HOMB  Homborsund        92.42  31  i P        P         05 57 25.1 +0.8
HOMB  Homborsund        92.42  31⇓iP          P         05 57 25.5 +1.2
HOMB                               eSKSac     SKSac     06 06 59.3 -0.3
BSEG  Bad Segeberg      92.44  36  eP         P         05 57 25.0 +0.5
      comp=Z,292nm,1.0s,baz=258,slow=4.7
BSEG                               esP        sP        06 00 35.0 -2.1
BSEG                               ePP        PP        06 01 17.6 +0.7
BSEG                               esPP                 06 04 09.6
      baz=258,slow=7.7
RC01  Rabbit Creek A    92.48 332   P         P         05 57 24.6  0.0
      baz=104,SNR=7.2
RC01  Rabbit Creek A    92.48 332   IAmb      IAmb      05 59 42.8
      comp=Z,432nm,1.4s
GOET  G??ttrup          92.51  33  i P        P         05 57 25.8 +1.0
GOET                                IAmb      IAmb      05 57 27.1
      comp=Z,105nm,0.8s
POKR  Poker Plat Res    92.54 336   P         P         05 57 25.0 +0.2
      baz=106,SNR=83
POKR                                S         S         06 07 33.8 -3.4
      baz=106
POKR  Poker Plat Res    92.54 336   IAmb      IAmb      05 57 26.9
      comp=Z,198nm,0.9s
MOX   Moxa              92.56  39  eP         P         05 57 26.0 +0.8
      comp=Z,544nm,1.7s,baz=258,slow=4.7
MOX                                epP        pP        05 59 37.8 +0.7
MOX                                esP        sP        06 00 36.2 -1.5
MOX                                esPP                 06 04 11.2
      baz=258,slow=7.7
MOX                                eSP        SP        06 08 52.1 -3.0
      baz=261,slow=10
BRSE  Bradley Lake S    92.64 330   P         P         05 57 25.3 -0.1
      baz=104,SNR=9.0
AKN   Aaknes            92.64  27  eP         P         05 57 26.5 +1.2
AKN                                eSKSac     SKSac     06 06 59.9 -0.8
COLA  College           92.65 335d iP         P         05 57 25.2  0.0
COLA                               i *PP      pP        05 59 34.8 -2.4
COLA                                pmax      pmax
      comp=Z,218nm,0.9s
COLA  College           92.65 335  ⇓P         P         05 57 25.0 -0.2
COLA                               ⇓P         P         05 57 25.2  0.0
COLA  College           92.65 335   P         P         05 57 25.3  0.0
COLA                                IAmb      IAmb      05 57 27.1
      comp=Z,231nm,0.9s
TCOL  CIGO, UAF Yank    92.65 335   P         P         05 57 25.5 +0.3
      baz=106,SNR=42
TCOL                                S         S         06 07 31.2 -6.8
      baz=106
TCOL  CIGO, UAF Yank    92.65 335   IAmb      IAmb      05 57 27.1
      comp=Z,232nm,0.9s
FLTG  Flechtingen       92.66  38  eP         P         05 57 25.9 +0.4
      comp=Z,307nm,1.6s,baz=258,slow=4.7
FLTG                               epP        pP        05 59 38.0 +0.5
FLTG                               esP        sP        06 00 37.1 -0.9
FLTG                               ePP        PP        06 01 18.1 -0.5
FLTG                               esPP                 06 04 11.5
      baz=258,slow=7.7
FLTG                               eSP        SP        06 08 52.1 -4.0
      baz=261,slow=10
FLTG  Flechtingen       92.66  38   P         P         05 57 25.6  0.0
MANZ  Manzenberg        92.74  40  eP         P         05 57 27.0 +0.9
      comp=Z,615nm,2.6s,baz=258,slow=4.7
MANZ                               epP        pP        05 59 38.7 +0.6
MANZ                               esP        sP        06 00 37.9 -0.6
MANZ                               ePP        PP        06 01 18.1 -1.3
MANZ                               esPP                 06 04 12.6
      baz=258,slow=7.7
MANZ                               eSP        SP        06 08 53.0 -4.1
      baz=261,slow=10
ROTZ  Rotzenmuhle       92.76  40  eP         P         05 57 26.9 +0.8
      comp=Z,76nm,1.2s,baz=258,slow=4.7
ROTZ                               epP        pP        05 59 38.4 +0.3
ROTZ                               esP        sP        06 00 37.9 -0.7
ROTZ                               ePP        PP        06 01 19.2 -0.3
ROTZ                               esPP                 06 04 13.3
      baz=258,slow=7.7
ROTZ                               eSP        SP        06 08 54.8 -2.6
      baz=261,slow=10
NEUB  Neuenburg         92.76  39  eP         P         05 57 26.9 +0.8
      comp=Z,448nm,1.5s,baz=258,slow=4.7
NEUB                               epP        pP        05 59 39.7 +1.6
NEUB                               esP        sP        06 00 38.7 +0.1
NEUB                               ePP        PP        06 01 18.8 -0.7
NEUB                               esPP                 06 04 12.9
      baz=258,slow=7.7
NEUB                               eSP        SP        06 08 53.0 -4.3
      baz=261,slow=10
MCK   McKinley          92.80 334   P         P         05 57 26.1 +0.1
      baz=105,SNR=31
M22K  Willow            92.82 332   P         P         05 57 25.9 -0.2
      baz=104,SNR=8.1
MDM   Murphy Dome       92.83 335   IAmb      IAmb      05 57 27.9
      comp=Z,282nm,1.0s
CNPM  China Poot        92.83 330   IAmb      IAmb      05 59 38.3
      comp=Z,324nm,1.7s
PLN   Plauen            92.86  39  eP         P         05 57 27.4 +0.8
      comp=Z,342nm,1.6s,baz=258,slow=4.7
PLN                                esP        sP        06 00 38.3 -0.8
PLN                                ePP        PP        06 01 20.3  0.0
PLN                                esPP                 06 04 14.2
      baz=258,slow=7.7
PLN                                eSP        SP        06 08 55.5 -3.0
      baz=261,slow=10
SKAR  Skarslia          92.89  29⇓iP          P         05 57 27.3 +0.8
SKAR                                IVmB_BB             05 57 31.5
      comp=Z,5μm,6.7s
SKAR                               eSKSac     SKSac     06 07 03.4 +1.1
SKAR                               eSP        SP        06 08 58.0 -0.2
PTCC  Patocco-Chiusa    92.90  44  ⇑P         P         05 57 26.2 -0.7
PTCC                               ⇑P         P         05 57 27.2 +0.3
BRJN  Brijuni           92.91  45  i P        P         05 57 27.0 +0.1
H24K  Noodor Dome       92.92 336   P         P         05 57 27.2 +0.6
      baz=106
H24K                                S         S         06 07 35.2 -5.4
      baz=106
H24K  Noodor Dome       92.92 336   IAmb      IAmb      05 59 42.6
      comp=Z,172nm,1.2s
GUNZ  Gunzen            92.95  40  eP         P         05 57 28.1 +1.0
      comp=Z,422nm,1.8s,baz=258,slow=4.7
GUNZ                               epP        pP        05 59 39.0  0.0
WERD  Werda             92.95  40  eP         P         05 57 27.8 +0.8
      comp=Z,338nm,1.6s,baz=258,slow=4.7
WERD                               epP        pP        05 59 39.6 +0.6
WERN  Wernitzgruen      92.96  40  eP         P         05 57 28.1 +1.0
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      comp=Z,264nm,1.4s,baz=258,slow=4.7
WERN                               epP        pP        05 59 39.7 +0.6
MOL   Molde             92.99  27  eP         P         05 57 28.3 +1.5
MOL                                 IVmB_BB             05 57 30.4
      comp=Z,3μm,3.1s
MOL                                eSKSac     SKSac     06 07 03.3 +0.8
MOL                                eSS        SS        06 14 13.0 -2.0
NKC   Novy Kostel       93.00  40  eP         P         05 57 28.2 +0.9
NKC                                epP        pP        05 59 35.4 -3.8
NKC   Novy Kostel       93.00  40  eP         P         05 57 28.2 +0.9
NKC                                e                    05 59 35.4
KBA   Koelnbreinsper    93.01  43  i P        P         05 57 28.5 +0.9
      comp=Z,100nm,0.8s,SNR=21
KBA                                eP         pP        05 59 41.7 +2.1
      comp=Z,76nm,1.8s
TANN  Tannenbergstha    93.04  40  eP         P         05 57 28.4 +0.9
      comp=Z,362nm,1.4s,baz=258,slow=4.7
TANN                               esP        sP        06 00 40.3 +0.3
TANN                               ePP        PP        06 01 21.2 -0.5
TANN                               esPP                 06 04 15.6
      baz=258,slow=7.7
TANN                               eSP        SP        06 08 55.0 -5.5
      baz=261,slow=10
CUT   Chulitna          93.05 333   P         P         05 57 27.2  0.0
      baz=104,SNR=8.3
CUT   Chulitna          93.05 333   IAmb      IAmb      05 59 43.0
      comp=Z,363nm,1.2s
WET   Wettzell          93.07  41  eP         P         05 57 28.2 +0.5
      comp=Z,326nm,1.3s,baz=258,slow=4.7
WET                                epP        pP        05 59 40.2 +0.6
WET                                esP        sP        06 00 38.4 -1.7
WET                                esPP                 06 04 14.7
      baz=258,slow=7.7
WET                                eSP        SP        06 08 57.5 -3.4
      baz=261,slow=10
NEA2  Nenana            93.08 335   P         P         05 57 27.0 -0.2
      baz=105,SNR=79
NEA2  Nenana            93.08 335   IAmb      IAmb      05 59 45.4
      comp=Z,215nm,1.1s
CADS  Cadrg             93.13  44  eP         P         05 57 28.6 +0.6
KDAK  Kodiak Island     93.13 328   P         P         05 57 27.4 -0.2
      baz=102
MYKA  Terra Mystica     93.13  43  i P        P         05 57 29.3 +1.3
      comp=Z,124nm,0.8s,SNR=46
MYKA                               i P        pP        05 59 41.7 +1.7
      comp=Z,88nm,1.2s,SNR=7.4
VOJS  Vojsko            93.20  44  eP         P         05 57 29.0 +0.7
SMRN  Sveta Marina      93.22  45  i P        P         05 57 28.4 +0.1
KONO  Kongsberg         93.28  30d iP         P         05 57 29.0 +0.7
KONO                                pmax      pmax
      comp=Z,107nm,1.3s
KONO  Kongsberg         93.28  30⇓iP          P         05 57 29.0 +0.7
KONO                                IVmBBB              05 57 30.1
      comp=Z,3μm,3.1s
KONO                               epP        pP        05 59 37.6 -2.7
KONO                               eSKSac     SKSac     06 07 03.3 -0.9
KONO                               eSP        SP        06 09 00.9 -1.7
KONO  Kongsberg         93.28  30  ⇑P         P         05 57 29.1 +0.7
KONO                               ⇑P         PcP       05 57 29.7 +1.2
KONO  Kongsberg         93.28  30   P         P         05 57 28.8 +0.5
JAVS  Javornik          93.30  44  eP         P         05 57 29.3 +0.5
JAVS                               epP        pP        05 59 41.0 +0.1
TRF   Thorofare Moun    93.31 334   P         P         05 57 28.3 -0.2
      baz=104
I23K  Minto, Yukon-K    93.34 336   P         P         05 57 28.3  0.0
      baz=105,SNR=43
I23K  Minto, Yukon-K    93.34 336   IAmb      IAmb      05 59 42.0
      comp=Z,129nm,1.1s
OHAK  Old Harbor        93.39 327   P         P         05 57 30.2 +1.4
      baz=102,SNR=7.0
OHAK  Old Harbor        93.39 327   IAmb      IAmb      05 59 44.3
      comp=Z,204nm,1.1s
CRNS  Crni Vrh          93.46  44  i P        P         05 57 30.1 +0.6
RIY   Rijeka            93.49  45⇓iP          P         05 57 29.4 -0.2
RIY   Rijeka            93.49  45  i P        P         05 57 29.3 -0.3
CEY   Cerknica          93.52  44⇓iP          P         05 57 30.4 +0.7
KHC   Kasperske Hory    93.52  41  eP         P         05 57 30.3 +0.6
KHC                                ex         x         05 57 44.5
KHC                                epP        pP        05 59 39.1 -2.6
KHC                                ex         x         06 08 56.9
KHC                                eSS        SS        06 14 23.6 +0.2
KHC   Kasperske Hory    93.52  41  eP         P         05 57 30.3 +0.6
KHC                                e                    05 59 39.1
KHC                                eSS        SS        06 14 23.6 +0.2
KHC   Kasperske Hory    93.52  41  ⇑P         P         05 57 29.8 +0.1
KHC                                ⇓P         P         05 57 30.5 +0.8
KHC   Kasperske Hory    93.52  41   IAmb      IAmb      05 57 31.5
      comp=Z,164nm,1.2s
CLL   Collm             93.54  39⇓iP          P         05 57 30.4 +0.8
      comp=Z,2μm,2.7s
CLL                                i pP       pP        05 59 41.4 -0.3
CLL                                esP        sP        06 00 43.0 +0.8
CLL                                ePP        PP        06 01 24.0 -1.4
CLL                                epPP                 06 03 14.0
CLL                                esPP                 06 04 19.0
CLL                                esPPP                06 06 17.0
CLL                                eSKSac     SKSac     06 07 11.0 +5.0
CLL                                eSKKSac    SKKSac    06 07 30.0 +1.0
CLL                                eS         ScS       06 07 47.0 -0.1
CLL                                eSP        SP        06 09 04.0 -1.8
CLL                                epSKKSac             06 10 28.0
CLL                                esSKSac    sS        06 11 16.0  -28
CLL                                esS        sS        06 11 42.0 -1.7
CLL                                esSP                 06 12 49.0
CLL                                eSS        SS        06 14 24.0 +0.6
CLL                                e(PKKPbc)            06 14 32.0
CLL                                eSKKPdf    SKKPdf    06 17 03.0 -6.7
CLL                                eSKKPbc    SKKPbc    06 17 13.0 -3.9
CLL                                esSS                 06 17 42.0
CLL                                eSSS       SSS       06 18 24.0
CLL                                eScSScS              06 20 00.0
CLL                                eSSSS                06 21 18.0
CLL                                ePKPPKPdf  P'P'df    06 22 42.0 -0.5
      comp=Z,101nm,2.5s
CLL                                eSKPPKPdf            06 25 19.0
CLL   Collm             93.54  39⇓iP          P         05 57 30.4 +0.8
CLL                                i *PP      pP        05 59 41.4 -0.3
CLL                                e*SP       sP        06 00 43.0 +0.8
CLL                                e                    06 07 11.0
CLL                                eS         ScS       06 07 47.0 -0.1
CLL                                e                    06 14 32.0
CLL                                 pmax      pmax
      comp=Z,2μm,2.7s
CLL   Collm             93.54  39  eP         P         05 57 30.4 +0.8
      comp=Z,276nm,1.5s,baz=258,slow=4.7
CLL                                epP        pP        05 59 42.1 +0.4
CLL                                esPP                 06 04 18.9
      baz=258,slow=7.7
CLL                                eSP        SP        06 09 00.4 -5.4
      baz=261,slow=10
CLL   Collm             93.54  39   IAmb      IAmb      05 57 33.7
      comp=Z,161nm,1.2s
DOMB  Dombas            93.56  28⇓iP          P         05 57 30.9 +1.4
DOMB                                IVmB_BB             05 57 32.9
      comp=Z,5μm,2.4s
DOMB                               eSKSac     SKSac     06 07 07.0 +1.3
DOMB                               eSP        SP        06 09 08.4 +2.9
DOMB                               eSS        SS        06 14 25.9 +2.8
GEC2  GERESS Array S    93.56  41  eP         P         05 57 30.2 +0.2
      comp=Z,203nm,1.1s,baz=258,slow=4.7
GEC2                               esP        sP        06 00 41.3 -1.2
GEC2                               esPP                 06 04 18.9
      baz=258,slow=7.7
GEC2                               eSP        SP        06 09 04.0 -2.3
      baz=261,slow=10
GEC2  GERESS Array S    93.56  41   IAmb      IAmb      05 57 32.0
      comp=Z,126nm,0.9s
GERES GERESS Array B    93.56  41   P         P         05 57 29.8 -0.1
      comp=Z,98nm,0.9s,baz=249,slow=2.6,SNR=344
GERES                               pP        pP        05 59 41.4 -0.5
      comp=Z,11nm,0.8s,baz=261,slow=2.5,SNR=4.5
GERES                               PKKP      PKKPdf    06 14 32.6 +0.7
      comp=Z,2.3nm,0.5s,baz=110,slow=2.0,SNR=15
GERES                               SKKPbc    SKKPbc    06 17 13.8 -3.0
      comp=Z,1.8nm,0.7s,baz=64,slow=3.1,SNR=8.0
GERES                               PKPPKP              06 22 40.1
      comp=Z,2.5nm,1.0s,baz=212,slow=1.3,SNR=9.5
RABC  Rab               93.61  45  i P        P         05 57 30.0 -0.1
O20K  Slope Mountain    93.64 330   P         P         05 57 30.9 +0.9
      baz=102
LJU   Ljubljana         93.64  44⇓iP          P         05 57 30.8 +0.5
LJU   Ljubljana         93.64  44  eP         P         05 57 30.7 +0.4
LJU                                epP        pP        05 59 42.1 -0.1
LJU                                e                    06 04 17.4
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LJU				*e*SP	SP	06 09 01.5	-5.7
LJU				*e*		06 10 31.8	
LJU				*e*sS	**sS**	**06 11 42.5**	**-2.4**
LJU				*e*		06 17 43.0	
NVLJ	**Novalja**	**93.64**	**46**	*i* P	**P**	**05 57 29.8**	**-0.4**
SPCR	**Spurr Chakacha**	**93.67**	**331**	P	**P**	**05 57 29.9**	**-0.2**
	baz=102,SNR=11						
DUGI	**Dugi Otok**	**93.68**	**46**	*i* P	**P**	**05 57 30.8**	**+0.3**
FBE	**Freiberg**	**93.69**	**39**	*e*P	**P**	**05 57 31.4**	**+1.1**
	comp=Z,338nm,1.4s,baz=258,slow=4.7						
FBE				*e*pP	**pP**	**05 59 42.5**	**+0.1**
OBKA	**Obir**	**93.73**	**44**	*i* P	**P**	**05 57 32.0**	**+1.2**
	comp=Z,113nm,1.2s,SNR=26						
OBKA				*e*P	**pP**	**05 59 43.9**	**+1.1**
	comp=Z,35nm,0.9s						
MOA	**Molln**	**93.76**	**42**	*i* P	**P**	**05 57 31.8**	**+1.0**
	comp=Z,304nm,1.4s,SNR=75						
MOA				*i* P	**pP**	**05 59 44.8**	**+2.0**
	comp=Z,120nm,1.7s,SNR=5.1						
BPAW	**Bear Paw Mtn.**	**93.77**	**334**	P	**P**	**05 57 30.0**	**-0.4**
	baz=103,SNR=67						
BPAW	**Bear Paw Mtn.**	**93.77**	**334**	IAmb	IAmb	05 57 33.1	
	comp=Z,149nm,0.8s						
SGRT	**San Giovanni R**	**93.83**	**48**	IAmb	IAmb	05 57 33.4	
	comp=Z,83nm,0.8s						
MLY	**Manley**	**93.88**	**335**	P	**P**	**05 57 30.7**	**-0.2**
	baz=103						
OSL	**Oslo**	**93.90**	**30**	⇓*i*P	**P**	**05 57 32.0**	**+1.0**
OSL				*e*SKSac	**SKSac**	**06 07 08.1**	**+0.6**
OSL				*e*SP	SP	06 09 10.3	+1.0
Q19K	**Cape Douglas,**	**93.91**	**329**	P	**P**	**05 57 30.9**	**-0.3**
	baz=101						
CKRC	**Cesky Krumlov**	**93.95**	**41**	*e*P	**P**	**05 57 32.4**	**+0.8**
CKRC				*e*x	x	05 59 44.6	
CKRC				*e*SP	SP	06 09 00.6	-10
CKRC				*e*PKKP	**PKKPbc**	**06 14 33.9**	**+1.0**
TJOU	**Tjoern**	**93.99**	**32**	*i* P	**P**	**05 57 31.6**	**+0.2**
COP	**Copenhagen**	**93.99**	**34**	*i* P	**P**	**05 57 32.6**	**+1.0**
COP				IAmb	IAmb	05 57 34.3	
	comp=Z,694nm,0.8s						
ONAU	**Onsala**	**94.02**	**33**	*i* P	**P**	**05 57 31.9**	**+0.3**
PPLA	**Purkeypile**	**94.03**	**333**	P	**P**	**05 57 31.5**	**-0.3**
	baz=102,SNR=20						
PPLA	**Purkeypile**	**94.03**	**333**	IAmb	IAmb	05 59 45.4	
	comp=Z,155nm,1.0s						
ZIRJ	**Zirje**	**94.05**	**47**	*i* P	**P**	**05 57 32.1**	**0.0**
BRG	**Berggiesshubel**	**94.05**	**39**	*e*P	**P**	**05 57 32.8**	**+0.8**
	comp=Z,262nm,1.3s,baz=258,slow=4.7						
BRG				*e*sP	**sP**	**06 00 44.4**	**-0.2**
BRG				*e*sPP		06 04 22.8	
	baz=258,slow=7.7						
BRG				*e*SP	SP	06 09 07.9	-3.5
	baz=261,slow=10						
BRG	**Berggiesshubel**	**94.05**	**39**	⇓*i*P	**P**	**05 57 33.1**	**+1.1**
BRG				Amp		05 57 34.8	
	comp=Z,230nm,1.3s						
BRG				pP	**pP**	**05 59 45.6**	**+1.5**
BRG				Amp		05 59 47.4	
	comp=Z,156nm,1.7s						
BOJS	**Bojanci**	**94.06**	**45**	*e*P	**P**	**05 57 32.7**	**+0.5**
BOJS				*e*pP	**pP**	**05 59 44.7**	**+0.5**
BOJS				*e*SP	SP	06 09 05.9	-5.8
BOJS				*e*		06 10 36.0	
BOJS				*e*sS	**sS**	**06 11 44.1**	**-4.6**
BOJS				*e*		06 17 49.1	
MRVN	**Minervino Murg**	**94.06**	**49**	⇓P	**P**	**05 57 31.7**	**-0.6**
MRVN				⇑P	**PcP**	**05 57 32.2**	**-0.3**
SOKA	**Soboth**	**94.09**	**44**	*i* P	**P**	**05 57 32.8**	**+0.4**
	comp=Z,63nm,1.3s,SNR=18						
SOKA				*e*P	**pP**	**05 59 42.1**	**-2.4**
	comp=Z,25nm,1.7s						
CAST	**Castle Rocks**	**94.09**	**334**	P	**P**	**05 57 31.4**	**-0.5**
	baz=102,SNR=39						
CAST	**Castle Rocks**	**94.09**	**334**	IAmb	IAmb	05 57 34.3	
	comp=Z,114nm,0.7s						
MORI	**Morici**	**94.12**	**46**	*i* P	**P**	**05 57 32.3**	**-0.2**
COLD	**Coldfoot**	**94.18**	**337**	P	**P**	**05 57 33.1**	**+0.9**
	baz=104,SNR=104						
COLD				S	**S**	**06 07 47.1**	**-4.2**
	baz=104						
COLD	**Coldfoot**	**94.18**	**337**	IAmb	IAmb	05 57 36.2	
	comp=Z,167nm,1.0s						
NOR	**Nord**	**94.20**	**7**	*i* P	**P**	**05 57 31.6**	**-0.5**
NOR				IAmb	IAmb	05 57 33.4	
	comp=Z,56nm,0.7s						
TIP	**Timpagrande**	**94.21**	**51**	⇑P	**P**	**05 57 32.8**	**-0.2**
TIP	**Timpagrande**	**94.21**	**51**	⇓P	**P**	**05 57 32.2**	**-0.9**
TIP				⇑P	**P**	**05 57 32.9**	**-0.2**
TIP	**Timpagrande**	**94.21**	**51**	IAmb	IAmb	05 57 35.3	
	comp=Z,85nm,0.8s						
RUE	**Ruedersdorf**	**94.22**	**38**	*e*P	**P**	**05 57 33.7**	**+1.1**
RUE	**Ruedersdorf**	**94.22**	**38**	*e*P	**P**	**05 57 33.1**	**+0.5**
	comp=Z,212nm,1.3s,baz=258,slow=4.7						
RUE				*e*sP	**sP**	**06 00 44.4**	**-0.9**
RUE				*e*sPP		06 04 23.2	
	baz=258,slow=7.7						
RUE				*e*SP	SP	06 09 07.6	-5.4
	baz=261,slow=10						
RUE	**Ruedersdorf**	**94.22**	**38**	⇓P	**P**	**05 57 33.5**	**+0.8**
PLIT	**Plitvice**	**94.22**	**45**	*i* P	**P**	**05 57 33.3**	**+0.4**
OZLJ	**Ozalj**	**94.22**	**45**	*i* P	**P**	**05 57 34.0**	**+1.1**
PRA	**Prague**	**94.23**	**40**	*e*P	**P**	**05 57 34.5**	**+1.7**
PRA				*e*pP	**pP**	**05 59 42.0**	**-2.9**
PRA				*e*SP	SP	06 09 02.9	-10
PRA	**Prague**	**94.23**	**40**	*e*P	**P**	**05 57 34.5**	**+1.7**
PRA				*e*		05 59 42.0	
CRES	**Cresnjev**	**94.25**	**44**	⇓*i*P	**P**	**05 57 33.9**	**+0.9**
UDBI	**Udbina**	**94.27**	**46**	*i* P	**P**	**05 57 34.2**	**+1.0**
PRU	**Pruhonice**	**94.28**	**40**	*e*P	**P**	**05 57 33.7**	**+0.6**
PRU				*e*pP	**pP**	**05 59 43.3**	**-1.9**
PRU				*e*SP	SP	06 09 04.6	-9.4
PRU	**Pruhonice**	**94.28**	**40**	*e*P	**P**	**05 57 33.7**	**+0.6**
PRU				*e*		05 59 43.3	
CHUM	**Lake Minchumin**	**94.29**	**334**	P	**P**	**05 57 32.4**	**-0.4**
	baz=102,SNR=31						
TOLK	**Toolik Lake Re**	**94.29**	**339**	P	**P**	**05 57 33.2**	**+0.4**
	baz=104,SNR=41						
TOLK				S	**S**	**06 07 50.1**	**-2.2**
	baz=104						
TOLK	**Toolik Lake Re**	**94.29**	**339**	IAmb	IAmb	05 59 48.9	
	comp=Z,317nm,1.6s						
RGN	**Rugen**	**94.29**	**36**	*e*P	**P**	**05 57 35.2**	**+2.3**
RGN	**Rugen**	**94.29**	**36**	*e*P	**P**	**05 57 34.0**	**+1.0**
	comp=Z,318nm,1.1s,baz=258,slow=4.7						
RGN				*e*sPP		06 04 25.3	
	baz=258,slow=7.7						
RGN	**Rugen**	**94.29**	**36**	⇓P	**P**	**05 57 34.4**	**+1.4**
RGN				⇑P	**P**	**05 57 35.1**	**+2.3**
TBLU	**Trondheim**	**94.35**	**27**	⇓*i*P	**P**	**05 57 34.5**	**+1.4**
NB2	**NORSAR Subarra**	**94.36**	**29**	P	**P**	**05 57 33.7**	**+0.5**
	comp=Z,226nm,1.2s,baz=258,slow=4.6						
NB2	**NORSAR Subarra**	**94.36**	**29**	P	pP	05 59 42.9	-2.4
	comp=Z,39nm,1.2s,baz=257,slow=4.3						
NOA	**NORSAR Array B**	**94.36**	**29**	P	**P**	**05 57 34.0**	**+0.8**
	comp=Z,65nm,0.9s,baz=257,slow=4.3,SNR=122						
NOA				pP	**pP**	**05 59 44.0**	**-1.3**
	comp=Z,11nm,0.9s,baz=258,slow=4.3,SNR=8.5						
NOA				PKKPbc	**PKKPdf**	**06 14 28.7**	**-2.0**
	comp=Z,3.1nm,0.7s,baz=258,slow=2.9,SNR=8.4						
NOA				PKPPKP		06 22 40.0	
	comp=Z,2.6nm,1.0s,baz=78,slow=1.8,SNR=3.9						
FABU	**Falkenberg**	**94.38**	**33**	*i* P	**P**	**05 57 33.6**	**+0.3**
MATE	**Matera**	**94.38**	**50**	⇓P	**P**	**05 57 33.5**	**-0.2**
MATE	**Matera**	**94.38**	**50**	⇓P	**P**	**05 57 33.1**	**-0.5**
MATE				⇑P	**PcP**	**05 57 33.7**	**-0.1**
BJUU	**Bjuv**	**94.39**	**34**	*i* P	**P**	**05 57 33.8**	**+0.5**
PVCC	**Panska Ves**	**94.39**	**40**	*e*P	**P**	**05 57 35.0**	**+1.5**
PVCC				*e*pP	**pP**	**05 59 42.0**	**-3.6**
PVCC				*e*SP	SP	06 09 09.3	-5.8
PVCC	**Panska Ves**	**94.39**	**40**	*e*P	**P**	**05 57 35.0**	**+1.5**
PVCC				*e*		05 59 42.0	
I21K	**Tanana**	**94.42**	**335**	P	**P**	**05 57 32.8**	**-0.5**
	baz=102						
I21K	**Tanana**	**94.42**	**335**	IAmb	IAmb	06 00 13.8	
	comp=Z,100nm,1.4s						
NC602	**NORSAR Array S**	**94.45**	**29**	⇓*i*P	**P**	**05 57 34.7**	**+1.1**
NC602				*e*SKSac	**SKSac**	**06 07 12.5**	**+2.1**
NC602	**NORSAR Array S**	**94.45**	**29**	IAmb	IAmb	05 57 35.7	
	comp=Z,192nm,1.1s						
NC303	**NORSAR Array S**	**94.46**	**29**	IAmb	IAmb	05 57 37.0	
	comp=Z,132nm,0.9s						
O19K	**Port Alsworth**	**94.49**	**330**	P	**P**	**05 57 32.8**	**-0.9**
	baz=101,SNR=7.0						
O19K	**Port Alsworth**	**94.49**	**330**	IAmb	IAmb	05 59 49.0	
	comp=Z,281nm,1.9s						
ARSA	**Arzberg**	**94.51**	**43**	*i* P	**P**	**05 57 34.8**	**+0.6**
	comp=Z,112nm,1.2s,SNR=34						
ARSA				*i* P	**pP**	**05 59 47.5**	**+1.2**
	comp=Z,60nm,1.7s,SNR=6.8						
BORU	**Boraas**	**94.52**	**32**	*i* P	**P**	**05 57 33.8**	**-0.1**
HVAR	**Hvar**	**94.56**	**47**	*i* P	**P**	**05 57 34.5**	**0.0**
PTJ	**Puntijarka**	**94.61**	**44**	*i* P	**P**	**05 57 35.8**	**+1.0**
LNIZ	**Loecknitz**	**94.64**	**37**	*e*P	**P**	**05 57 35.3**	**+0.7**
	comp=Z,306nm,1.4s,baz=258,slow=4.7						
LNIZ				*e*SP	SP	06 09 10.4	-7.2
	baz=261,slow=10						
L20K	**Farewell, AK**	**94.71**	**332**	P	**P**	**05 57 33.9**	**-0.8**
	baz=101,SNR=25						
LOBO	**Lobor**	**94.72**	**44**	*i* P	**P**	**05 57 36.3**	**+1.2**
TREC	**Trest**	**94.79**	**41**	*e*P	**P**	**05 57 36.2**	**+0.8**
TREC				*e*x	x	05 59 42.0	
TREC				*e*SP	SP	06 09 11.9	-7.6
TREC	**Trest**	**94.79**	**41**	*e*P	**P**	**05 57 36.2**	**+0.8**
TREC				*e*		05 59 42.0	
P18K	**Big Mountain,**	**94.80**	**329**	P	**P**	**05 57 34.4**	**-0.9**
	baz=100						
P18K	**Big Mountain,**	**94.80**	**329**	IAmb	IAmb	05 59 49.6	
	comp=Z,134nm,1.6s						
LSTV	**Lastovo**	**94.82**	**48**	*i* P	**P**	**05 57 36.1**	**+0.5**
CONA	**Conrad Observa**	**94.83**	**42**	*i* P	**P**	**05 57 36.5**	**+0.8**
	comp=Z,173nm,1.0s,SNR=82						
CONA				*i* P	**pP**	**05 59 49.7**	**+1.9**
	comp=Z,137nm,1.7s,SNR=9.0						
M19K	**Big River Lodg**	**94.84**	**332**	P	**P**	**05 57 34.9**	**-0.4**
	baz=100,SNR=13						
M19K	**Big River Lodg**	**94.84**	**332**	IAmb	IAmb	05 59 51.0	
	comp=Z,163nm,1.5s						
H21K	**Melozitna Rive**	**94.86**	**336**	P	**P**	**05 57 34.9**	**-0.4**
	baz=102						
KOGS	**Kog**	**94.88**	**44**	*e*P	**P**	**05 57 36.6**	**+0.7**
KOGS				*e*pP	**pP**	**05 59 46.5**	**-1.5**
KOGS				*e*SP	SP	06 09 11.8	-8.8
KOGS				*e*		06 13 09.6	
DEL	**Delary**	**94.92**	**34**	*i* P	**P**	**05 57 36.1**	**+0.4**
K20K	**Telida**	**94.95**	**333**	P	**P**	**05 57 35.3**	**-0.5**
	baz=101						
K20K	**Telida**	**94.95**	**333**	IAmb	IAmb	05 57 38.3	
	comp=Z,76nm,1.1s						
KALN	**Kalnik**	**94.98**	**44**	*i* P	**P**	**05 57 37.6**	**+1.2**
MAKA	**Makarska**	**94.98**	**47**	*i* P	**P**	**05 57 35.8**	**-0.5**
RICI	**Ricice**	**95.09**	**47**	*i* P	**P**	**05 57 37.3**	**+0.3**
L19K	**White Mountain**	**95.10**	**332**	P	**P**	**05 57 35.4**	**-1.2**
	baz=100,SNR=15						
L19K	**White Mountain**	**95.10**	**332**	IAmb	IAmb	05 59 51.7	
	comp=Z,124nm,1.4s						
MOSL	**Moslavina**	**95.11**	**45**	*i* P	**P**	**05 57 37.8**	**+0.8**
J20K	**Nowinta River**	**95.14**	**334**	P	**P**	**05 57 36.0**	**-0.6**
	baz=100,SNR=25						
MGRS	**Mrkonjic Grad**	**95.18**	**46**	⇑*i*P	**P**	**05 57 39.1**	**+1.8**
SVW2	**Sparrevohn**	**95.26**	**331**	IAmb	IAmb	05 57 39.9	
	comp=Z,101nm,1.4s						
SOP	**Sopron**	**95.26**	**43**	*e*P	**P**	**05 57 38.6**	**+1.0**
BSD	**Bornholm Skovb**	**95.29**	**35**	*e*P	**P**	**05 57 39.2**	**+1.7**
BSD	**Bornholm Skovb**	**95.29**	**35**	*i* P	**P**	**05 57 38.4**	**+0.9**
BSD				IAmb	IAmb	05 57 39.1	
	comp=Z,24nm,0.7s						
UPC	**Upice**	**95.30**	**40**	*e*P	**P**	**05 57 38.6**	**+1.0**
UPC				*e*x	x	05 59 44.6	
UPC				*e*SP	SP	06 09 19.6	-5.3
UPC	**Upice**	**95.30**	**40**	*e*P	**P**	**05 57 38.6**	**+1.0**
UPC				*e*		05 59 44.6	
BLY	**Banja Luka**	**95.30**	**46**	⇓*i*P	**P**	**05 57 38.7**	**+0.9**
BLY	**Banja Luka**	**95.30**	**46**	⇓P	**P**	**05 57 38.6**	**+0.9**
BLY				⇑P	**PcP**	**05 57 39.4**	**+1.5**
IMAR	**Indian Mountai**	**95.30**	**336**	P	**P**	**05 57 36.9**	**-0.4**
CHVC	**Chvalec**	**95.33**	**40**	*e*P	**P**	**05 57 38.6**	**+0.8**
CHVC				*e*x	x	05 59 45.9	
CHVC				*e*SP	SP	06 09 20.1	-5.3
NSS	**Namsos**	**95.34**	**26**	⇓*i*P	**P**	**05 57 38.0**	**+0.6**
NSS				IVmBBB		05 57 40.6	
	comp=Z,4µm,3.1s						
NSS				*e*pP	**pP**	**05 59 50.5**	**+0.9**
NSS				*e*SKSac	**SKSac**	**06 07 15.1**	**+0.3**
NSS				*e*SP	SP	06 09 26.8	+2.2
KRUC	**Moravsky**	**95.34**	**41**	⇓*i*PDIFF	**P**	**05 57 38.7**	**+0.8**
KRUC				*e*pP	**pP**	**05 59 50.4**	**+0.3**
KRUC				*e*PP	**PP**	**06 01 37.2**	**-2.1**
KRUC				*e*S	**S**	**06 08 01.2**	**-0.8**
KRUC				*e*pS	**pS**	**06 10 49.5**	**+1.2**
HFS	**Hagfors**	**95.40**	**30**	P	**P**	**05 57 38.0**	**+0.1**
	comp=Z,11nm,0.5s,baz=209,slow=2.7,SNR=55						
HFS				pP	**pP**	**05 59 49.6**	**-0.5**
	comp=Z,12nm,0.7s,baz=215,slow=1.8,SNR=5.0						
STON	**Ston**	**95.42**	**48**	⇓*i*P	**P**	**05 57 38.9**	**+0.5**
STON	**Ston**	**95.42**	**48**	*i* P	**P**	**05 57 38.4**	**+0.1**
OSTC	**Ostas**	**95.43**	**40**	*e*P	**P**	**05 57 39.1**	**+0.8**
OSTC				*e*x	x	05 59 48.5	
OSTC				*e*SP	SP	06 09 17.6	-8.8
DPC	**Dobruska-Polom**	**95.47**	**40**	*e*P	**P**	**05 57 39.6**	**+1.1**
DPC				*e*x	x	05 59 45.9	
DPC				*e*SP	SP	06 09 17.3	-10
DPC	**Dobruska-Polom**	**95.47**	**40**	*e*P	**P**	**05 57 39.6**	**+1.1**
DPC				*e*		05 59 45.9	
VRAC	**Vranov**	**95.50**	**41**	⇑P	**P**	**05 57 40.3**	**+1.7**
VRAC	**Vranov**	**95.50**	**41**	P	**P**	**05 57 39.2**	**+0.5**
	comp=Z,99nm,1.0s,baz=260,slow=5.4,SNR=87						
VRAC				pP	**pP**	**05 59 50.4**	**-0.5**
	comp=Z,14nm,0.9s,baz=256,slow=7.4,SNR=4.5						
VRAC				PP	**PP**	**06 01 38.8**	**-1.7**
	comp=Z,6.4nm,0.7s,baz=265,slow=9.1,SNR=5.9						
VRAC	**Vranov**	**95.50**	**41**	⇓*i*PDIFF	**P**	**05 57 39.6**	**+1.0**
VRAC				*e*pP	**pP**	**05 59 50.7**	**-0.1**
VRAC				*e*PP	**PP**	**06 01 38.7**	**-1.8**
VRAC				*e*S	**S**	**06 08 02.7**	**-0.7**
VRAC				*e*pS	**pS**	**06 10 51.4**	**+1.6**
KSP	**Ksiaz**	**95.52**	**40**	*e*P	**P**	**05 57 40.0**	**+1.4**
KSP				*e*pP	**pP**	**05 59 51.8**	**+0.9**
KSP				*e*sS	**sS**	**06 12 05.3**	**+3.8**
ZST	**Bratislava**	**95.69**	**42**	*e*P	**P**	**05 57 40.4**	**+0.9**
ZST				*e*		05 59 52.0	
ZST				*e*		06 01 39.6	
ZST				*e*S	**S**	**06 08 02.8**	**-2.2**
ZST	**Bratislava**	**95.69**	**42**	*e*PDIFF	**P**	**05 57 40.4**	**+0.9**
ZST				*e*		05 59 52.0	
ZST				*e*PP	**PP**	**06 01 39.6**	**-2.3**
ZST				*e*S	**S**	**06 08 02.8**	**-2.2**
ZST				*e*		06 09 18.6	
DBRK	**Dubrovnik**	**95.72**	**48**	*i* P	**P**	**05 57 40.0**	**+0.2**
KRLC	**Kraliky**	**95.73**	**40**	*e*P	**P**	**05 57 40.8**	**+1.1**
KRLC				*e*x	x	05 59 47.2	
KRLC				*e*SP	SP	06 09 16.3	-13
KRLC				*e*PKKP	**PKKPdf**	**06 14 27.4**	**-0.6**
KRLC	**Kraliky**	**95.73**	**40**	*e*P	**P**	**05 57 40.8**	**+1.1**
KRLC				*e*		05 59 47.2	
EGYH	**Egyhazaskeszo**	**95.75**	**43**	*e*P	**P**	**05 57 41.6**	**+1.8**
TTA	**Tatalina**	**95.75**	**333**	P	**P**	**05 57 38.7**	**-0.8**
	baz=99,SNR=7.4						
MATP	**Matopo**	**95.83**	**112**	P	**P**	**05 57 41.7**	**+0.7**
	comp=Z,49nm,0.7s,baz=262,slow=9.2,SNR=53						
MATP				PP	**PP**	**06 01 36.1**	**-7.5**
	comp=Z,16nm,1.1s,baz=257,slow=16,SNR=4.5						
MATP	**Matopo**	**95.83**	**112**	*e*P	**P**	**05 57 42.3**	**+1.4**
MATP	**Matopo**	**95.83**	**112**	*e*P	**P**	**05 57 42.3**	**+1.4**
MODS	**Modra-Piesok**	**95.83**	**42**	*e*P	**P**	**05 57 40.5**	**+0.4**
MODS				*e*		05 59 51.1	
MODS				*e*S	**S**	**06 08 00.8**	**-5.5**
MPLH	**Magyarpolny**	**95.86**	**43**	*e*P	**P**	**05 57 41.5**	**+1.3**
TREB	**Trebinje**	**95.88**	**48**	*e*P	**P**	**05 57 41.6**	**+1.1**
SMOL	**Smolenice**	**95.95**	**42**	*e*P	**P**	**05 57 42.0**	**+1.4**
SMOL				*e*		05 59 51.6	
SMOL	**Smolenice**	**95.95**	**42**	*e*PDIFF	**P**	**05 57 42.0**	**+1.4**
SMOL				*e*		05 59 51.6	
HCY	**Herceg Novi**	**95.95**	**48**	*e*P	**P**	**05 57 42.1**	**+1.3**
BLEU	**Blekinge**	**95.96**	**34**	*i* P	**P**	**05 57 40.9**	**+0.5**
BRY	**Bratogost**	**96.04**	**48**	*e*P	**P**	**05 57 42.7**	**+1.3**
LESE	**Lesego, Limpop**	**96.10**	**116**	*i* P	**P**	**05 57 44.1**	**+2.2**
LESE				pP	**pP**	**05 59 54.3**	**+0.1**
LESE				sP	**sP**	**06 00 55.5**	**+0.7**
KOVH	**Kovagotottos**	**96.11**	**44**	*e*P	**P**	**05 57 42.7**	**+1.4**
KONS	**Konsvik**	**96.14**	**24**	*e*Pdif	**P**	**05 57 42.4**	**+1.4**
JAVC	**Velka Javorina**	**96.15**	**42**	⇓*i*PDIFF	**P**	**05 57 43.2**	**+1.6**
JAVC				*e*pP	**pP**	**05 59 54.2**	**+0.3**
MORC	**Moravsky Berou**	**96.18**	**41**	⇓P	**P**	**05 57 43.7**	**+2.0**
MORC	**Moravsky Berou**	**96.18**	**41**	⇓P	**P**	**05 57 43.7**	**+2.0**
MORC	**Moravsky Berou**	**96.18**	**41**	⇓*i*PDIFF	**P**	**05 57 42.7**	**+1.0**
MORC				*e*pP	**pP**	**05 59 53.9**	**-0.1**
MORC				*e*PP	**PP**	**06 01 43.0**	**-2.6**
MORC				*e*S	**S**	**06 08 08.6**	**-0.6**
MORC				*e*pS	**pS**	**06 10 57.7**	**+1.4**
MORC	**Moravsky Berou**	**96.18**	**41**	⇓P	**P**	**05 57 42.6**	**+1.0**
MORC				⇓P	**P**	**05 57 43.2**	**+1.5**
UPM	**Unac-Piva**	**96.34**	**47**	*e*P	**P**	**05 57 44.4**	**+1.6**
CSKK	**Cskako**	**96.37**	**43**	*e*P	**P**	**05 57 44.1**	**+1.6**
GCSA	**Galena City Sc**	**96.40**	**335**	Pdiff	**P**	**05 57 42.8**	**+0.6**
	baz=98						
GKP	**Gorka Klasztor**	**96.40**	**37**	*e*P	**P**	**05 57 44.2**	**+1.7**
GKP	**Gorka Klasztor**	**96.40**	**37**	*e*P	**P**	**05 57 44.6**	**+2.1**
DRME	**Dracevica, Mon**	**96.43**	**48**	⇓*i*P	**P**	**05 57 44.4**	**+1.5**
SRO	**Srobarova**	**96.45**	**43**	*e*PP	**PP**	**06 01 45.7**	**-2.0**
HAPS	**Han Pijesak,Bl**	**96.47**	**46**	⇓*i*P	**P**	**05 57 44.4**	**+1.2**
MORH	**Mrgy, Hungar**	**96.50**	**44**	⇓*i*P	**P**	**05 57 43.9**	**+0.8**
PDG	**Podgorica**	**96.51**	**48**	⇓*i*P	**P**	**05 57 44.1**	**+0.9**
PDG	**Podgorica**	**96.51**	**48**	IAmb	IAmb	05 57 46.1	
	comp=Z,174nm,1.2s						
LOF	**Lofoten**	**96.54**	**22**	*e*Pdif	**P**	**05 57 42.5**	**-0.3**
LOF				IVmBBB		05 57 45.8	
	comp=Z,2µm,3.0s						
LOF				*e*SKSac	**SKSac**	**06 07 22.0**	**+1.1**
LOF				*e*SS	**SS**	**06 15 06.6**	**+2.2**
LSZ	**Lusaka**	**96.58**	**107**	P	**P**	**05 57 45.3**	**+1.0**
	comp=Z,46nm,0.7s,baz=268,slow=4.0,SNR=74						
LSZ				PP	**PP**	**06 01 44.5**	**-4.9**
	comp=Z,78nm,1.2s,baz=267,slow=7.7,SNR=16						
LSZ				PKKPbc	**PKKPdf**	**06 14 26.7**	**+1.4**
	comp=Z,16nm,0.6s,baz=66,slow=2.9,SNR=14						
LSZ	**Lusaka**	**96.58**	**107**	P	**P**	**05 57 45.0**	**+0.7**
LSZ	**Lusaka**	**96.58**	**107**	⇓*i*P	**P**	**05 57 45.9**	**+1.6**
LSZ				pP	**pP**	**05 59 59.9**	**+3.2**
LSZ				sP	**sP**	**06 00 52.2**	**-5.1**
KOLL	**Kolacno**	**96.60**	**42**	*e*PDIFF	**P**	**05 57 45.3**	**+1.8**
MOR8	**Moi Rana**	**96.62**	**24**	*e*Pdif	**P**	**05 57 44.8**	**+1.6**
MOR8				*e*SKSac	**SKSac**	**06 07 22.4**	**+0.9**
MOR8				*e*SS	**SS**	**06 15 09.4**	**+3.8**
MAW	**Mawson**	**96.69**	**164**	P	**P**	**05 57 44.1**	**+0.5**
	comp=Z,97nm,1.1s,baz=223,slow=6.0,SNR=76						
MAW				PKKPbc	**PKKPdf**	**06 14 23.2**	**-2.2**
	comp=Z,3.9nm,0.5s,baz=146,slow=1.9,SNR=4.2						
MAW				SKKPbc	SKKPbc	06 17 04.2	-3.4
	comp=Z,2.6nm,0.8s,baz=18,slow=5.1,SNR=4.1						
RUDO	**Rudo**	**96.72**	**47**	*e*P	**P**	**05 57 45.0**	**+0.8**
BBLS	**Lazići**	**96.78**	**47**	⇓*i*P	**P**	**05 57 45.7**	**+1.2**
MSNA	**Messina**	**96.81**	**114**	*e*P	**P**	**05 57 46.7**	**+1.5**
MSNA	**Messina**	**96.81**	**114**	*e*P	**P**	**05 57 46.7**	**+1.5**
TIR	**Tirane**	**96.84**	**49**	⇑P	**P**	**05 57 47.2**	**+2.4**
TIR	**Tirane**	**96.84**	**49**	⇑P	**P**	**05 57 47.2**	**+2.4**
TIR	**Tirane**	**96.84**	**49**	P	**P**	**05 57 46.0**	**+1.2**
TIR				IAmb	IAmb	05 57 47.3	
	comp=Z,99nm,0.9s						
VYHS	**Vyhne**	**96.88**	**42**	*e*P	**P**	**05 57 46.2**	**+1.4**
VYHS				*e*		05 59 56.9	
VYHS				*e*		06 01 49.5	
VYHS	**Vyhne**	**96.88**	**42**	*e*PDIFF	**P**	**05 57 46.2**	**+1.4**
VYHS				*e*		05 59 56.9	
VYHS				*e*PP	**PP**	**06 01 49.4**	**-1.5**
BUD	**Budapest**	**96.90**	**43**	*e*P	**P**	**05 57 46.4**	**+1.6**
TEKS	**Tekeris**	**96.94**	**46**	⇓*i*P	**P**	**05 57 45.2**	**0.0**
IGT	**Igoumenitsa**	**97.00**	**51**	P	**P**	**05 57 46.2**	**+0.6**
FAUS	**Fauske**	**97.10**	**23**	*e*Pdif	**P**	**05 57 46.0**	**+0.7**
FAUS				*e*SKSac	**SKSac**	**06 07 25.3**	**+1.5**
POGA	**Pongola**	**97.13**	**119**	*i* P	**P**	**05 57 45.1**	**-1.4**
STEI	**Steigen**	**97.15**	**22**	*e*Pdif	**P**	**05 57 46.4**	**+0.9**
A21K	**Barrow**	**97.18**	**341**	Pdiff	**P**	**05 57 46.6**	**+1.0**
	baz=97,SNR=14						
A21K	**Barrow**	**97.18**	**341**	IAmb	IAmb	05 57 49.7	
	comp=Z,156nm,1.2s						
FRGS	**Fruska Gora**	**97.20**	**45**	⇑P	**P**	**05 57 47.8**	**+1.5**
FRGS	**Fruska Gora**	**97.20**	**45**	⇓*i*P	**P**	**05 57 46.9**	**+0.6**
DIVS	**Divibare**	**97.22**	**47**	⇓*i*P	**P**	**05 57 47.4**	**+0.9**
DIVS	**Divibare**	**97.22**	**47**	⇓P	**P**	**05 57 47.5**	**+0.9**
DIVS				⇑P	Pdif	05 57 48.4	+1.8
DIVS	**Divibare**	**97.22**	**47**	IAmb	IAmb	05 57 48.7	
	comp=Z,66nm,1.1s						
UPP	**Uppsala**	**97.33**	**31**	*e*P	**P**	**05 57 47.7**	**+1.2**
LANS	**Liptovska Anna**	**97.36**	**41**	*e*P	**P**	**05 57 49.6**	**+2.6**
LANS				*e*		06 00 00.2	
LANS	**Liptovska Anna**	**97.36**	**41**	*e*PDIFF	**P**	**05 57 49.6**	**+2.6**
LANS	**Liptovska Anna**	**97.36**	**41**	*e*		06 00 00.2	
OHR	**Ohrid**	**97.52**	**50**	*i* P	**P**	**05 57 50.0**	**+2.1**
PSZ	**Piszkesteto**	**97.53**	**43**	⇓P	**P**	**05 57 49.3**	**+1.5**
PSZ	**Piszkesteto**	**97.53**	**43**	*e*P	**P**	**05 57 49.0**	**+1.3**
PSZ	**Piszkesteto**	**97.53**	**43**	⇓P	**P**	**05 57 49.3**	**+1.5**
KRI	**Karoi**	**97.61**	**108**	*e*P	**P**	**05 57 50.7**	**+1.8**
KRI	**Karoi**	**97.61**	**108**	*e*P	**P**	**05 57 50.7**	**+1.8**
NEST	**Nestorio**	**97.64**	**50**	P	**P**	**05 57 49.5**	**+1.0**
KBS	**Kingsbay**	**97.67**	**11**	⇑*e*P	**P**	**05 57 48.1**	**+0.4**
KBS				pmax	pmax		
	comp=Z,125nm,2.0s						
KBS	**Kingsbay**	**97.67**	**11**	IVmB_BB		05 57 48.8	
	comp=Z,2µm,3.6s						
KBS				*e*Pdif	**P**	**05 57 49.8**	**+2.2**
KBS				*e*pP	pP	05 59 59.1	-1.1
KBS				*e*SKSac	**SKSac**	**06 07 27.4**	**+1.0**
KBS				*e*SP	**SP**	**06 09 48.0**	**-1.2**
KBS				*e*SS	**SS**	**06 15 22.1**	**+2.4**
OJC	**Ojcow**	**97.67**	**40**	*e*P	**P**	**05 57 49.7**	**+1.4**
OJC				*e*pP	**pP**	**06 00 01.9**	**+1.1**
OJC				*e*sS	**sS**	**06 12 24.8**	**+4.4**
MOPA	**Mopani**	**97.78**	**115**	*e*P	**P**	**05 57 50.2**	**+0.7**
MOPA	**Mopani**	**97.78**	**115**	*e*P	**P**	**05 57 50.2**	**+0.7**
KPRO	**Kipourio**	**97.84**	**51**	P	Pdif	05 57 49.2	-0.1
FNA	**Florina**	**97.92**	**50**	P	**P**	**05 57 50.0**	**+0.3**
NIE	**Niedzica**	**97.93**	**41**	*e*P	**P**	**05 57 52.0**	**+2.5**
NIE				*e*pP	**pP**	**06 00 04.3**	**+2.4**
NIE				*e*sS	sS	06 12 30.6	+7.8
KECS	**Kecovo**	**97.97**	**42**	*e*P	**P**	**05 57 51.8**	**+2.1**
KECS				*e*		06 00 03.5	
KECS				*e*		06 01 57.7	
KECS	**Kecovo**	**97.97**	**42**	*e*PDIFF	**P**	**05 57 51.8**	**+2.1**
KECS				*e*		06 00 03.5	
KECS				*e*PP	**PP**	**06 01 57.7**	**-1.4**
SKO	**Skopje**	**98.08**	**49**	*i* P	**P**	**05 57 51.9**	**+1.6**
EVR	**Evrytania**	**98.08**	**52**	P	**P**	**05 57 51.2**	**+0.7**
KZN	**Kozani**	**98.18**	**50**	P	**P**	**05 57 51.1**	**+0.2**
HSPB	**Hornsund (broa**	**98.19**	**13**	*e*Pdif	**P**	**05 57 50.3**	**+0.3**
HSPB				*e*pP	**pP**	**06 00 03.4**	**+0.9**
HSPB				*e*SP	SP	06 09 55.3	+0.6
KLV	**Kalavryta, Ach**	**98.27**	**53**	P	**P**	**05 57 51.5**	**+0.1**
THL	**Klokotos Trika**	**98.30**	**51**	P	Pdif	05 57 51.2	-0.1
BOVS	**Bovan**	**98.41**	**47**	⇓P	**P**	**05 57 52.8**	**+1.1**
BOVS	**Bovan**	**98.41**	**47**	⇑P	**PKKPbc**	**06 14 20.1**	**-0.6**
BEL	**Belsk**	**98.43**	**39**	*e*P	**P**	**05 57 53.1**	**+1.5**
SPA0	**Spitsbergen Ar**	**98.46**	**12**	*e*Pdif	**P**	**05 57 51.9**	**+0.6**
SPITS	**Spitsbergen Ar**	**98.46**	**12**	P	**P**	**05 57 51.9**	**+0.6**
	comp=Z,14nm,0.7s,baz=159,slow=2.5,SNR=15						
SPITS				pP	**pP**	**06 00 03.9**	**+0.1**
	comp=Z,13nm,1.0s,baz=270,slow=5.8,SNR=1.9						
AGG	**Agios Georgios**	**98.50**	**52**	P	**P**	**05 57 52.6**	**+0.3**
BZS	**Buzias**	**98.51**	**45**	⇓P	**P**	**05 57 53.5**	**+1.3**
BZS	**Buzias**	**98.51**	**45**	⇓P	**P**	**05 57 53.5**	**+1.3**
MDVR	**Moldovita**	**98.51**	**46**	⇓P	**P**	**05 57 53.6**	**+1.3**
SIRR	**Siria**	**98.59**	**44**	⇑P	**P**	**05 57 54.1**	**+1.6**
STIP	**Stip**	**98.61**	**49**	*i* P	**P**	**05 57 54.6**	**+1.9**
TRO	**Tromso**	**98.63**	**21**	*e*Pdif	**P**	**05 57 53.3**	**+1.2**
TRO				IVmB_BB		05 57 56.1	
	comp=Z,1µm,2.0s						
TRO				*e*pP	**pP**	**06 00 02.8**	**-1.8**
TRO				*e*SKSac	**SKSac**	**06 07 30.1**	**-1.2**
TRO				*e*SP	SP	06 10 00.5	+0.8
TRO				*e*SS	**SS**	**06 15 35.6**	**+2.4**
CRVS	**Cervenica-Dubn**	**98.65**	**42**	*e*P	**P**	**05 57 54.7**	**+2.0**
CRVS				*e*		06 00 06.5	
CRVS				*e*		06 02 02.5	
CRVS	**Cervenica-Dubn**	**98.65**	**42**	*e*PDIFF	**P**	**05 57 54.7**	**+2.0**
CRVS				*e*		06 00 06.5	
CRVS				*e*PP	**PP**	**06 02 02.5**	**-1.7**
FALS	**False Pass**	**98.71**	**324**	Pdiff	**P**	**05 57 53.2**	**+0.5**
	baz=94						
GRG	**Griva**	**98.71**	**50**	P	**P**	**05 57 53.7**	**+0.5**
VAY	**Valandovo**	**98.87**	**50**	*i* P	**P**	**05 57 55.4**	**+1.5**
LKR	**Lokris**	**98.99**	**52**	P	**P**	**05 57 54.7**	**+0.2**
HERR	**Herculane**	**99.02**	**46**	⇓P	**Pdif**	**05 57 55.7**	**+1.3**
RDOG	**Red Dog Mine**	**99.10**	**338**	Pdiff	**Pdif**	**05 58 01.6**	**+7.4**
	baz=92,SNR=8.8						
KNT	**Kendrikon**	**99.10**	**50**	P	**Pdif**	**05 57 55.4**	**+0.5**
JETT	**Jettan, Norway**	**99.15**	**21**	*e*Pdif	**Pdif**	**05 57 56.2**	**+1.7**
JETT				*e*SKSac	**SKSac**	**06 07 35.4**	**+1.3**
UZH	**Uzhgorod**	**99.18**	**42**	*e*P	**Pdif**	**05 57 55.0**	**0.0**
UZH				*e*		06 00 06.4	

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UZH                                eS         S         06 08 32.8  -1.7
UZH                                i                    06 10 56.0
KOLS   Kolonicke sedl     99.18  42 eP        Pdif      05 57 56.7 +1.7
KOLS                               e                    06 02 07.7
KOLS   Kolonicke sedl     99.18  42 ePDIFF    Pdif      05 57 56.7 +1.7
KOLS                               ePP        PP        06 02 07.7  -0.5
NEO    Neokhori           99.21  52  P        Pdif      05 57 54.6  -0.8
HORT   Hortiatis          99.21  50  P        Pdif      05 57 55.4  -0.1
GZR    Gura Zlata         99.31  45 ⇑P        Pdif      05 57 57.3 +1.6
GZR    Gura Zlata         99.31  45 ⇑P        Pdif      05 57 57.3 +1.6
TRPA   Tarpa              99.31  43 ⇑P        Pdif      05 57 56.2 +0.6
TRPA   Tarpa              99.31  43 eP        Pdif      05 57 56.7 +1.2
DRGR                      99.35  44 ⇓P        Pdif      05 57 57.3 +1.4
DRGR                      99.35  44 ⇓P        Pdif      05 57 57.3 +1.4
SOH    Sokhos             99.42  50  P        Pdif      05 57 57.0 +0.6
VTS    Vitosha            99.46  48 ⇑P        Pdif      05 57 57.8 +1.2
VTS    Vitosha            99.46  48 ⇑P        Pdif      05 57 57.8 +1.2
ATH    Athens Observa     99.50  53  P        Pdif      05 57 57.3 +0.6
KWP    Kalwaria Pacla     99.51  41 eP        Pdif      05 57 58.4 +1.9
KWP                                epP        pP        06 00 10.2 +1.1
KWP                                esS        sS        06 12 36.2  -0.1
VLY    Voula,Athens       99.55  53  P        Pdif      05 57 56.5  -0.4
PAIG   Paliouri           99.61  51  P        Pdif      05 57 57.4 +0.3
SRS    Serrai             99.62  50  P        Pdif      05 57 57.5 +0.3
DION   Dionisos Attik     99.67  53  P        Pdif      05 57 56.9  -0.6
OUR    Ouranopolis        99.87  51  P        Pdif      05 57 58.9 +0.7
SUW    Suwalki            99.99  37 eP        Pdif      05 57 59.9 +1.4
KTK1   Kautokeino        100.15  21 ePdif     Pdif      05 57 59.6 +0.7
KTK1                               epP        pP        06 00 12.6 +1.0
KTK1                               ePP        PP        06 02 13.0  -1.8
KTK1                               eSKSac     SKSac     06 07 40.1 +1.2
KTK1                               eSP        SP        06 10 13.0  -2.8
KTK1                               eSS        SS        06 15 55.8 +1.7
IDI    Anoyia            100.24  56  P        Pdif      05 58 01.7 +1.6
       comp=Z,58nm,0.6s,baz=303,slow=5.4,SNR=22
IDI                                 pP        pP        06 00 12.9 +0.1
       comp=Z,44nm,0.9s,baz=303,slow=6.0,SNR=5.6
HAMF   Hammerfest        100.27  20 ePdif     Pdif      05 58 00.6 +1.2
HAMF                                IVmBBB              05 58 02.2
       comp=Z,3µm,3.5s
HAMF                               epP        pP        06 00 12.8 +0.7
HAMF                               ePP        PP        06 02 16.3 +0.7
HAMF                               eSKSac     SKSac     06 07 39.8 +0.5
HAMF                               eSP        SP        06 10 15.3  -1.6
HAMF                               eSS        SS        06 15 58.5 +2.9
KAVA   Kavala            100.31  50  P        Pdif      05 57 59.8  -0.4
HOPEN  Hopen             100.36  14 ePdif     Pdif      05 58 01.1 +1.4
HOPEN                               IVmB_BB             05 58 22.2
       comp=Z,3µm,3.3s
HOPEN                              epP        pP        06 00 12.6 +0.2
HOPEN                              ePP        PP        06 02 15.0  -1.1
HOPEN                              eSP        SP        06 10 15.1  -2.7
LVV    L'vov             100.37  41c iP       Pdif      05 58 01.1 +0.8
LVV                                e                    06 02 18.5
LVV                                e                    06 07 41.7
LVV                                eS         Sdif      06 08 42.4  -1.8
LVV                                eSS        SS        06 15 55.8  -2.3
LVV                                 pmax      pmax
       comp=Z,310nm,2.2s
THAS   Thassos island    100.44  50  P        Pdif      05 58 00.0  -0.8
PABE   Paberze           100.48  35 eP        Pdif      05 58 02.0 +1.5
ARR    Arges             100.61  46 ⇓P        Pdif      05 58 03.3 +1.7
VOIR                     100.91  45 ⇑P        Pdif      05 58 04.4 +1.5
VOIR                     100.91  45 ⇑P        Pdif      05 58 04.4 +1.5
ARA0   ARCESS Array S    100.94  21 ePdif     Pdif      05 58 03.2 +0.8
ARCES  ARCESS Array B    100.94  21  P        Pdif      05 58 03.3 +0.9
       comp=Z,22nm,0.8s,baz=264,slow=4.2,SNR=44
ARCES                               pP        pP        06 00 15.9 +0.8
       comp=Z,6.8nm,0.7s,baz=269,slow=4.1,SNR=3.7
ARCES                               PKKPbc    PKKPbc    06 14 11.6  -2.9
       comp=Z,6.8nm,0.4s,baz=106,slow=2.3,SNR=20
ARCES                               SKKPbc    SKKPbc    06 16 53.5  -5.8
       comp=Z,4.4nm,0.7s,baz=84,slow=2.8,SNR=4.1
ARCES                               PKPPKP              06 22 29.6
       comp=Z,1.9nm,0.8s,baz=116,slow=2.1,SNR=4.7
ARCES  ARCESS Array B    100.94  21  Pdif     Pdif      05 58 03.1 +0.8
COPA   Copaceanca        100.98  47 ⇓P        Pdif      05 58 04.0 +0.9
BURAR  Bucovina Array    101.09  43 ⇑P        Pdif      05 58 05.7 +2.0
BURAR  Bucovina Array    101.09  43 ⇑P        PKKPbc    06 14 14.9 +1.4
BURAR  Bucovina Array    101.09  43 ⇑P        Pdif      05 58 05.7 +2.0
BURAR  Bucovina Array    101.09  43  Pdif     Pdif      05 58 04.5 +0.9
RDO    Rodhopi           101.09  50  P        Pdif      05 58 04.0 +0.3
ALN    Alexandroupoli    101.47  50  P        Pdif      05 58 05.2  -0.1
TETE   Tete              101.47 109 i P       Pdif      05 58 09.1 +3.2
TETE                                PP        PP        06 02 21.8  -4.0
FINES  FINESS Array B    101.54  29  P        Pdif      05 58 06.0 +0.8
       comp=Z,3.9nm,0.7s,baz=222,slow=2.6,SNR=7.9
FINES                               PKiKP     PKiKP     06 02 24.4  -0.5
       comp=Z,5.9nm,0.7s,baz=226,slow=5.0,SNR=5.5
FINES                               PKKPbc    PKKPbc    06 14 10.6  -2.0
       comp=Z,8.5nm,0.4s,baz=105,slow=3.7,SNR=30
FINES                               PKPPKP    P'P'df    06 22 24.2  -2.5
       comp=Z,3.8nm,0.8s,baz=151,slow=4.4,SNR=9.0
FINES  FINESS Array B    101.54  29  Pdif     Pdif      05 58 06.1 +1.0
MLR    Muntele Rosu      101.54  45 ⇓P        Pdif      05 58 06.5 +0.8
MLR    Muntele Rosu      101.54  45 ⇑P        PKKPbc    06 14 09.4  -2.8
MLR    Muntele Rosu      101.54  45  P        Pdif      05 58 06.9 +1.1
       comp=Z,20nm,0.6s,baz=197,slow=4.5,SNR=20
MLR                                 pP        pP        06 00 19.3 +0.8
       comp=Z,11nm,0.7s,baz=156,slow=9.2,SNR=5.2
MLR                                 PP        PKiKP     06 02 21.5  -4.1
       comp=Z,34nm,1.1s,baz=250,slow=6.1,SNR=14
MLR                                 PKKPbc    PKKPbc    06 14 09.3  -2.8
       comp=Z,2.3nm,0.4s,baz=39,slow=11,SNR=4.5
ISAL   Salakas           101.71  35 eP        Pdif      05 58 09.0 +3.0
COVR   Voineasa-Covas    101.73  45 ⇓P        Pdif      05 58 08.1 +1.7
MBAR   Mbarara           101.73  93  P        Pdif      05 58 09.3 +1.9
       comp=Z,4.5nm,0.2s,baz=241,slow=3.3,SNR=10
MBAR                                PP        PP        06 02 24.7  -3.5
       comp=Z,21nm,1.1s,baz=264,slow=7.8,SNR=6.2
MBAR   Mbarara           101.73  93 i P       Pdif      05 58 09.1 +1.7
MBAR                                PP        PKiKP     06 02 20.9  -6.0
PLOR   Plostina          102.04  45 ⇑P        Pdif      05 58 09.2 +1.3
PLOR   Plostina          102.04  45 ⇑P        Pdif      05 58 09.2 +1.3
VRI    Vrincioaia        102.09  45 ⇓P        Pdif      05 58 08.6 +0.5
VRI    Vrincioaia        102.09  45 ⇓P        Pdif      05 58 08.6 +0.5
NACGM  Naroch            102.09  36 i P       Pdif      05 58 09.3 +1.5
MNK    Minsk             102.74  36 eP        Pdif      05 58 12.4 +1.7
MNK    Minsk             102.74  36 i P       Pdif      05 58 12.4 +1.7
MNK                                i P        Pdif      05 58 12.4 +1.7
MNK                                i P        Pdif      05 58 12.4 +1.7
       comp=Z,46nm,1.1s,baz=92
MNK                                i pP       pPdif     06 00 23.0  -0.2
MNK                                i PP       PP        06 02 33.5  -0.8
MNK                                i PPP      PPP       06 04 51.7
MNK                                i SKS                06 06 50.4
MNK                                i S        SKSac     06 07 54.0 +2.4
MNK                                i SP       SP        06 10 45.0 +1.4
MNK                                i SS       SS        06 16 30.6 +0.5
MNK                                i SSS      SSS       06 20 18.0
MNK                                i LR       LR        06 39 37.2
MNK                                i LRM      MLR       06 45 22.0
       comp=Z,964nm,18.4s
MNK                                i LRM      MLR       06 45 56.6
MNK                                i LRM      MLR       06 45 56.6
SORM   Soroca            103.20  43 ⇓P        Pdif      05 58 13.5 +0.6
SORM   Soroca            103.20  43 ⇓P        Pdif      05 58 13.5 +0.6
MILM   Milestii Mici     103.54  44 eP        Pdif      05 58 15.0 +0.6
MILM                               e                    06 02 50.0
MILM                               eS         Sdif      06 09 07.0  -3.6
MILM                                pmax      pmax
       comp=Z,1µm,8.1s
MILM                                MLR       MLR
       comp=Z,2µm,18.0s
KIS    Kishinev          103.54  44 eP        Pdif      05 58 14.6 +0.2
       comp=Z,560nm,7.1s
KIS                                epP        pPdif     06 00 25.0  -1.9
KIS    Kishinev          103.54  44 ePP       PP        06 02 37.0  -3.3
KIS                                eSKKS                06 08 24.0
KIS                                eS         Sdif      06 09 07.0  -3.7
KIS    Kishinev          103.54  44 ePS       PS        06 12 01.0  -6.9
KIS                                 LRM       MLR       06 49 30.0
       comp=Z,700nm,18.0s
KIS    Kishinev          103.54  44 eP        Pdif      05 58 14.6 +0.2
KIS                                e                    06 02 37.0
KIS                                eS         Sdif      06 09 07.0  -3.7
KIS                                e                    06 10 51.0
KIS                                ePS        PS        06 12 01.0  -6.9
KIS                                 pmax      pmax
       comp=Z,560nm,7.1s
KIS                                 MLR       MLR
       comp=Z,700nm,18.0s
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TEBE   Entebbe           103.55  92 i P       Pdif      05 58 14.2  -1.2
AKASG  Malin Array Be    103.70  40  Pdiff    Pdif      05 58 14.8  -0.2
       comp=Z,2.9nm,0.8s,baz=263,slow=4.2,SNR=13
AKASG                               PKiKP     PKiKP     06 02 28.5  -0.7
       comp=Z,2.2nm,0.3s,baz=276,slow=2.7,SNR=18
AKASG                               PKKPbc    PKKPbc    06 14 04.8  -1.1
       comp=Z,4.5nm,0.6s,baz=72,slow=3.3,SNR=14
AKASG                               SKKPbc    SKKPbc    06 16 47.6  -3.3
       comp=Z,7.0nm,0.8s,baz=72,slow=3.3,SNR=9.8
AKASG                               PKPPKP    P'P'df    06 22 21.9  -1.4
       comp=Z,0.8nm,0.5s,baz=67,slow=2.5,SNR=2.5
AKASG  Malin Array Be    103.70  40  P        Pdif      05 58 14.7  -0.4
AKASG  Malin Array Be    103.70  40  Pdif     Pdif      05 58 14.7  -0.4
APA    Apatity           104.05  23⇓iP        Pdif      05 58 16.4 +0.2
APA                                 pmax      pmax
       comp=Z,11nm,0.9s
DODT   Dodoma, Tanzan    105.66  99 i P       Pdif      05 58 27.4 +2.6
DODT                                pP        pPdif     06 00 38.7 +1.4
DODT                                sP        sPdif     06 01 37.1  -0.5
DODT                                PP        PP        06 02 53.6  -3.2
MSVF   Nonsavu           106.53 248  PP       PP        06 02 59.7  -3.0
       comp=Z,2.5nm,0.4s,baz=51,slow=6.5,SNR=1.5
GIDAE  Health Center,    106.93  83 i P       Pdif      05 58 37.0 +6.4
GIDAE                               pP        pPdif     06 00 48.3 +5.2
GIDAE                               sP        sPdif     06 01 49.6 +6.3
GIDAE                               PP        PP        06 03 04.3  -1.8
BRTR   Keskin Array B    107.27  51  Pdiff    Pdif      05 58 32.4 +0.9
       comp=Z,1.9nm,0.8s,baz=276,slow=2.8,SNR=4.3
BRTR                                PKiKP     PKiKP     06 02 37.0 +0.6
       comp=Z,8.4nm,0.7s,baz=207,slow=2.8,SNR=14
BRTR                                SKP                 06 05 15.0
       comp=Z,10.0nm,0.8s,baz=220,slow=3.8,SNR=5.2
BRTR                                PKKPbc    PKKPbc    06 13 55.5 +0.5
       comp=Z,2.2nm,0.6s,baz=149,slow=2.9,SNR=4.6
SHERE  Police Station    107.29  82 i P       Pdif      05 58 35.8 +3.9
SHERE                               PP        PP        06 03 06.8  -1.7
MEND   High School, M    107.52  83⇓iP        Pdif      05 58 34.3 +1.2
MEND                                PP        PP        06 03 08.1  -2.2
OBN    Obninsk           107.68  35  PKiKP    PKiKP     06 02 37.3 +0.9
       comp=Z,14nm,0.3s,baz=343,slow=1.4,SNR=5.2
OBN    Obninsk           107.68  35⇑iP        Pdif      05 58 34.0 +1.4
OBN                                i                    06 03 07.0
OBN                                i                    06 08 53.1
OBN                                i PS       SP        06 11 40.0 +6.5
OBN                                i SS       SS        06 17 31.6  -4.7
OBN                                 pmax      pmax
       comp=Z,79nm,1.9s
GOREE  District Admin    107.73  84 i P       Pdif      05 58 39.3 +5.2
GOREE                               PP        PP        06 03 09.2  -2.7
GUBA   Police Station    107.85  81⇓iP        Pdif      05 58 38.7 +4.3
GUBA                                PP        PP        06 03 10.0  -2.6
KLMR   Klimovskoe        108.06  29 eP        Pdif      05 58 34.4 +0.2
KLMR                               e                    06 03 13.9
KLMR                               ePS        SP        06 11 40.0 +3.4
KLMR                               eSS        SS        06 17 42.0 +1.0
KLMR                                pmax      pmax
       comp=Z,34nm,1.2s
KLMR   Klimovskoe        108.06  29 ePdif     Pdif      05 58 34.5 +0.2
KLMR                                AMP                 05 58 38.1
       comp=Z,34nm,1.2s
KLMR                               ePKiKP     PKiKP     06 02 36.1  -0.9
KLMR                               ePP        PP        06 03 13.9 +1.4
KLMR                               ePS        SP        06 11 40.1 +3.4
KLMR                               ePS        SP        06 11 40.1 +3.4
KLMR                               ePKKPbc    PKKPbc    06 13 50.5  -2.5
KLMR                               ePKKPab    PKKPdf    06 14 06.1 +0.7
KLMR                               eSKKPbc    SKKPbc    06 16 33.5  -6.0
KLMR                               eSS        SS        06 17 42.0 +1.0
KLMR                               eSS        SS        06 17 42.0 +1.0
KLMR                               eSKKS      SKKSdf    06 20 23.5 +2.6
KLMR                               eSKKS      SKKSdf    06 20 23.5 +2.6
KLMR                               ePKPPKP    P'P'df    06 22 13.0  -1.2
KMBO   Kilima Mbogo      108.07  94  Pdiff    Pdif      05 58 39.4 +3.8
       comp=Z,1.2nm,0.5s,baz=242,slow=3.6,SNR=4.5
KMBO                                PKiKP     PKiKP     06 02 41.0 +2.3
       comp=Z,3.7nm,0.9s,baz=180,slow=2.6,SNR=6.1
KMBO                                PP        PP        06 03 13.7  -0.6
       comp=Z,40nm,1.3s,baz=240,slow=9.8,SNR=7.2
KMBO                                PKKPbc    PKKPbc    06 13 54.9 +3.0
       comp=Z,3.6nm,0.7s,baz=62,slow=6.8,SNR=7.9
KMBO   Kilima Mbogo      108.07  94 i P       Pdif      05 58 37.9 +2.3
KMBO                               i P                  05 58 38.9
KMBO                                PP        PP        06 03 09.5  -4.8
DEBR   School, Debre     108.15  82⇓iP        Pdif      05 58 39.1 +3.1
DEBR                                pP        pPdif     06 00 56.9 +8.3
DEBR                                sP        sPdif     06 01 52.5 +3.6
DEBR                                PP        PP        06 03 12.7  -2.3
MOS    Moscow            108.17  34 i P       Pdif      05 58 32.7  -2.1
MOS                                e                    06 03 16.8
MOS                                e                    06 11 33.9
EIL    Elat              108.55  62  PKiKP    PKiKP     06 02 40.3 +1.5
       comp=Z,18nm,0.7s,baz=350,slow=1.7,SNR=12
EIL                                 PP        PP        06 03 13.5  -3.5
       comp=Z,6.1nm,0.7s,baz=53,slow=1.9,SNR=5.2
EIL                                 SKP                 06 05 17.4
       comp=Z,14nm,0.8s,baz=248,slow=5.8,SNR=4.8
MELAE  School, Dubaba    108.62  80 i P       Pdif      05 58 40.5 +2.7
MELAE                               PP        PP        06 03 16.9  -1.1
KIBK   Kibwezi           108.63  96  P        PKiKP     06 02 41.0 +1.4
HARO   School, Haroo     108.69  83 i P       Pdif      05 58 39.9 +1.5
HARO                                PP        PP        06 03 17.3  -1.5
MMAI   Mount Meron Ar    108.90  58  PKiKP    PKiKP     06 02 40.2 +0.7
       comp=Z,17nm,0.5s,baz=32,slow=2.2,SNR=24
MMAI                                SKP                 06 05 18.7
       comp=Z,16nm,1.0s,baz=297,slow=0.7,SNR=4.9
MUKA   Police Camp, M    108.99  80 i P       Pdif      05 58 40.9 +1.4
MUKA                                pP        pPdif     06 00 58.8 +6.8
MUKA                                sP        sPdif     06 01 56.3 +4.0
MUKA                                PP        PP        06 03 19.1  -1.6
CHGE   School, Chagni    109.02  82  P        Pdif      05 58 37.2  -2.6
CHGE                                pP        pPdif     06 00 45.9  -6.4
CHGE                                sP        sPdif     06 02 01.0 +8.4
CHGE                                PP        PP        06 03 15.7  -5.3
KIRE   School, Kiremu    109.25  83 i P       Pdif      05 58 45.8 +4.9
KIRE                                PP        PP        06 03 20.2  -2.6
SHAW   Medical Clinic    109.46  81⇓iP        Pdif      05 58 44.3 +2.5
SHAW                                PP        PP        06 03 22.4  -1.9
LPSR   Galich'ya Gora    109.50  37 eP        Pdif      05 58 41.7 +0.9
LPSR                                pmax      pmax
       comp=Z,20nm,1.4s
ANN    Anapa             109.69  46 eP        Pdif      05 58 44.4 +2.6
ANN                                e                    06 03 22.0
ANN                                eSS        SS        06 17 57.5  -5.9
ANN                                 pmax      pmax
       comp=Z,56nm,0.9s
VSR    Storozhevoye      109.89  39 eP        Pdif      05 58 42.9 +0.3
VSR                                 pmax      pmax
       comp=Z,20nm,1.4s
BAHR   High School, B    109.92  81 i P       Pdif      05 58 46.4 +2.6
BAHR                                pP        pPdif     06 01 01.7 +5.3
BAHR                                sP        sPdif     06 02 00.1 +3.5
BAHR                                PP        PP        06 03 25.3  -2.2
BAHR                                S         SKiKP     06 06 16.1  +56
GOND   University, Go    110.08  80 i P       Pdif      05 58 46.4 +1.8
GOND                                pP        pPdif     06 01 05.5 +8.4
GOND                                sP        sPdif     06 02 00.1 +2.8
GOND                                PP        PP        06 03 26.5  -2.2
ASF    Jabal al Asfar    110.18  59  PKiKP    PKiKP     06 02 42.9 +0.9
       comp=Z,25nm,0.6s,baz=228,slow=0.9,SNR=33
ASF                                 PP        PP        06 03 27.2  -1.5
       comp=Z,24nm,1.1s,baz=267,slow=4.5,SNR=6.1
ASF                                 SKP                 06 05 21.7
       comp=Z,18nm,0.8s,baz=225,slow=1.8,SNR=6.9
BILL   Bilibino          110.29 340⇑iPKIKP    PKiKP     06 02 42.5 +1.5
BILL                               i                    06 08 24.0
BILL                               i PS       PS        06 13 07.4  -1.7
BILL                                pmax      pmax
       comp=Z,11nm,1.3s
SILA   Clinic, Silare    110.62  80⇓iP        Pdif      05 58 51.1 +4.3
SILA                                PP        PP        06 03 31.0  -1.4
PRGR   Permogore         110.66  27 eP        Pdif      05 58 44.5  -1.3
PRGR                               e                    06 02 42.4
PRGR                               e                    06 08 26.9
PRGR                                pmax      pmax
       comp=Z,10.0nm,0.4s
MERTO  Secondary Scho    110.72  82 i P       Pdif      05 58 50.5 +3.0
MERTO                               PP        PP        06 03 29.4  -3.8
FURI   Furi              110.91  84⇓iP        Pdif      05 58 52.8 +4.4
FURI                                pP        pPdif     06 01 09.3 +8.5
FURI                                sP        sPdif     06 02 00.1  -1.0
FURI                                PP        PP        06 03 33.3  -1.3
WADE   Clinic, Wadera    111.15  87⇓iP        Pdif      05 58 55.8 +6.5
WADE                                pP        pPdif     06 01 09.3 +7.5
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WADE                                sP        sPdif     06 02 04.0 +1.9
WADE                                PP        PP        06 03 35.5  -0.7
SOC    Sochi             111.47  47 i P       Pdif      05 58 48.9  -0.9
SOC                                i                    06 02 43.9
SOC                                e                    06 03 35.7
SOC                                ePPP       PPP       06 06 05.8
SOC                                ePS        SP        06 12 07.1  -1.9
SOC                                 pmax      pmax
       comp=Z,12nm,0.6s
SOC                                 pmax      pmax
       comp=Z,55nm,0.5s
VRH    Novokhopyorsk     111.47  38 ePKIKP    PKiKP     06 02 42.9  -0.8
VRH                                 pmax      pmax
       comp=Z,30nm,0.6s
GINR   Hospital, Gini    112.71  86 ⇓P        Pdif      05 59 01.2 +4.9
GINR                                pP        pPdif     06 01 18.9  +10
GINR                                sP        sPdif     06 02 11.6 +2.6
GINR                                PP        PP        06 03 47.4 +0.3
ABPO   Ambohimpanom      113.19 115  P        Pdif      05 59 05.3 +7.0
ABPO                                pP        pPdif     06 01 32.3  +22
ABPO                                sP        sPdif     06 02 14.5 +3.4
ABPO                                PP        PP        06 03 49.4  -0.6
OPO    Ambohidratompo113.30 115  PKiKP    PKiKP     06 02 50.0 +1.6
       comp=Z,6.4nm,0.6s,baz=269,slow=2.2,SNR=14
OPO                                 PP        PP        06 03 43.1  -7.6
       comp=Z,4.4nm,0.9s,baz=244,slow=10,SNR=4.5
KIRV   Kirov             113.53  29  PKiKP    PKiKP     06 02 48.3 +0.9
       comp=Z,38nm,0.5s,baz=285,slow=2.1,SNR=10
KIRV                                PP        PP        06 03 47.1  -3.9
       comp=Z,14nm,0.6s,baz=303,slow=6.7,SNR=7.6
KIRV   Kirov             113.53  29c iPKIKP   PKiKP     06 02 48.5 +1.1
KIV    Kislovodsk        113.53  46 i P       Pdif      05 58 59.1   0.0
KIV                                i                    06 02 48.1
KIV                                e                    06 03 51.2
KIV                                ePPP       PPP       06 06 22.9
KIV                                eSP        SP        06 12 27.7  -0.2
KIV                                ePS        PKKPbc    06 13 38.6 +3.5
KIV                                eSS        SS        06 18 54.1   0.0
KIV                                 pmax      pmax
       comp=Z,42nm,1.1s
KIV    Kislovodsk        113.53  46  P        PKiKP     06 02 49.3 +1.2
KVAR   Kislovodsk Arr    113.54  46  PKiKP    PKiKP     06 02 50.0 +1.9
       comp=Z,10nm,0.6s,baz=270,slow=20,SNR=9.4
GOF    Gofitskoye        113.58  45⇑ePKIKP    PKiKP     06 02 48.8 +0.8
GOF                                 pmax      pmax
       comp=Z,115nm,1.0s
NEY    Neytrino          113.68  47c iPKIKP   PKiKP     06 02 49.8 +1.3
KBZ    Khabaz            113.72  46  Pdiff    Pdif      05 59 00.2 +0.5
       comp=Z,1.6nm,0.4s,baz=243,slow=5.5,SNR=4.5
KBZ                                 PP        PP        06 03 51.8  -1.2
       comp=Z,10.0nm,0.8s,baz=292,slow=8.8,SNR=8.4
KBZ                                 SKP                 06 05 27.5
       comp=Z,38nm,0.8s,baz=245,slow=2.8,SNR=7.9
KBZ    Khabaz            113.72  46d iPKIKP   PKiKP     06 02 49.0 +0.8
NCK    Nalchik           114.27  46c iPKIKP   PKiKP     06 02 50.6 +1.2
ZEI    Tsey              114.62  47 ePKIKP    PKPdf     06 02 49.3  -1.0
ZEI                                 pmax      pmax
       comp=Z,15nm,1.0s
BELG   Belogornoye       114.70  36  PKP      PKiKP     06 02 50.1 +0.3
       comp=Z,83nm,0.9s,baz=331,slow=1.8,SNR=29
BELG                                PP        PP        06 03 57.4  -1.9
       comp=Z,16nm,0.7s,baz=64,slow=1.2,SNR=5.1
BELG                                PKKPbc    PKKPbc    06 13 30.1  -1.2
       comp=Z,35nm,0.9s,baz=14,slow=1.8,SNR=10
BELG                                SKKPbc    SKKPbc    06 16 13.4  -6.2
       comp=Z,26nm,0.9s,baz=160,slow=6.5,SNR=4.0
ATD    Arta Tunnel       115.25  82  PKP      PKiKP     06 02 53.2 +1.1
       comp=Z,64nm,1.0s,baz=314,slow=3.0,SNR=15
ATD                                 PP        PP        06 04 05.1 +0.5
       comp=Z,15nm,0.7s,baz=250,slow=6.7,SNR=4.9
ATD                                 SKP                 06 05 32.0
       comp=Z,49nm,0.9s,baz=321,slow=5.1,SNR=7.4
ATD    Arta Tunnel       115.25  82  P        PKiKP     06 02 53.3 +1.1
       SNR=8.6
ATD    Arta Tunnel       115.25  82 ⇓P        Pdif      05 59 07.3   0.0
ATD                                 pP        pPdif     06 01 31.4  +12
ATD                                 sP        sPdif     06 02 23.1 +3.0
ATD                                 PP        PP        06 04 00.8  -3.7
DZM    Mont Dzumac       115.47 240  PKP      PKiKP     06 02 54.0 +1.5
       comp=Z,11nm,0.6s,baz=216,slow=8.7
DZM                                 PP        PP        06 04 05.3  -0.2
       comp=Z,20nm,1.2s,baz=74,slow=8.5,SNR=5.5
DZM                                 SKP                 06 05 31.0
       comp=Z,22nm,1.0s,baz=132,slow=14,SNR=7.0
GNI    Garni             115.71  50  PKP      PKiKP     06 02 53.6 +1.1
       comp=Z,45nm,0.5s,baz=308,slow=3.0,SNR=17
GNI                                 SKP                 06 05 30.7
       comp=Z,20nm,0.6s,baz=282,slow=2.9,SNR=3.6
GNI    Garni             115.71  50  PKiKP    PKiKP     06 02 53.1 +0.6
GNI    Garni             115.71  50c iPKIKP   PKiKP     06 02 54.1 +1.6
GNI                                 pmax      pmax
       comp=Z,147nm,1.7s
GNI    Garni             115.71  50  PKPdf    PKiKP     06 02 52.6 +0.1
GROC   Groznyy           115.90  46 i PKIKP   PKiKP     06 02 53.2 +0.7
GROC                               e                    06 04 05.7
GROC                               e                    06 09 07.9
GROC                               e                    06 12 57.2
GROC                                pmax      pmax
       comp=Z,31nm,0.5s
TIXI   Tiksi             116.39 353  PKKPbc   PKKPbc    06 13 23.3  -2.7
       comp=Z,18nm,0.9s,baz=155,slow=0.6,SNR=14
TIXI                                SKKPbc    SKKPbc    06 16 08.8  -6.4
       comp=Z,2.3nm,0.3s,baz=22,slow=0.1,SNR=4.7
TIXI   Tiksi             116.39 353  PKIKP    PKPdf     06 02 51.8  -0.8
TIXI   Tiksi             116.39 353  PKPdf    PKPdf     06 02 51.8  -0.8
MAK    Makhachkala       117.17  46 i P       Pdif      05 59 12.2  -2.9
MAK                                i                    06 02 55.1
MAK                                e                    06 04 14.9
MAK                                ePPP       PPP       06 06 57.8
MAK                                e                    06 08 51.4
MAK                                ePS        PS        06 14 13.5 +1.9
MAK                                eSS        SS        06 19 41.1 +0.4
MAK                                eSSS       SSS       06 24 12.2
MAK                                 pmax      pmax
       comp=Z,310nm,1.8s
SBV    Sambava           117.41 110  P        PKiKP     06 02 57.5 +1.3
       SNR=5.5
SEY    Seymchan          117.93 339  PKP      PKiKP     06 02 56.9 +1.1
       comp=Z,42nm,0.9s,baz=79,slow=1.4,SNR=37
SEY                                 PP        PP        06 04 19.2  -1.8
       comp=Z,24nm,0.9s,baz=61,slow=5.7,SNR=11
SEY                                 SKP                 06 05 33.8
       comp=Z,21nm,0.8s,baz=85,slow=2.6,SNR=6.4
SEY                                 PKKPbc    PKKPbc    06 13 19.4  -1.1
       comp=Z,14nm,0.5s,baz=234,slow=3.6,SNR=33
SEY                                 SKKPbc    SKKPbc    06 16 06.6  -3.6
       comp=Z,6.8nm,0.7s,baz=184,slow=4.0,SNR=4.8
RAYN   Ar Rayn           118.10  68 i PKiKP   PKiKP     06 02 58.1 +0.7
       SNR=61
RAYN   Ar Rayn           118.10  68  PKIKP    PKiKP     06 02 57.6 +0.2
RAYN   Ar Rayn           118.10  68  PKPdf    PKiKP     06 02 57.6 +0.2
NRIK   Noril'sk          118.39   8  PKP      PKiKP     06 02 56.9 +0.4
       comp=Z,5.7nm,0.4s,baz=350,slow=2.3,SNR=15
NRIK                                PP        PP        06 04 21.5  -2.3
       comp=Z,15nm,0.9s,baz=348,slow=4.5,SNR=6.0
NRIK                                PKKPbc    PKKPbc    06 13 16.9  -2.2
       comp=Z,33nm,0.5s,baz=112,slow=5.3,SNR=31
NRIK   Noril'sk          118.39   8c iPKIKP   PKiKP     06 02 57.4 +0.8
ARU    Arti              118.91  29  PKP      PKiKP     06 02 58.2 +0.3
       comp=Z,22nm,0.4s,baz=301,slow=2.4,SNR=62
ARU                                 SKP                 06 05 36.4
       comp=Z,3.7nm,0.4s,baz=4.1,slow=1.0,SNR=3.4
ARU                                 PKKPbc    PKKPbc    06 13 15.0  -1.9
       comp=Z,2.9nm,0.2s,baz=112,slow=3.7,SNR=5.2
ARU                                 SKKPbc    SKKPbc    06 16 01.9  -5.0
       baz=166,slow=3.4
ARU    Arti              118.91  29d iPKIKP   PKiKP     06 02 58.5 +0.6
ARU                                 pmax      pmax
       comp=Z,194nm,1.7s
MIB    Mutribah          119.29  61⇓eP        PKPdf     06 02 59.3  -0.2
RDF    Al-Radifah        119.57  62 eP        PKPdf     06 02 59.3  -0.7
UMR    Umm Al-Rimmam119.65  61 eP        PKPdf     06 02 59.0  -1.1
KBD    Kabd              119.67  62 eP        PKPdf     06 02 59.9  -0.2
SVE    Sverdlovsk        119.69  28 i PKIKP   PKiKP     06 02 59.8 +0.4
SVE                                 pmax      pmax
       comp=Z,77nm,1.4s
QRN    Al-Qurain         119.91  62 eP        PKPdf     06 02 59.9  -0.7
MA2    Magadan           120.68 337  PKP      PKiKP     06 03 01.7 +0.3
       comp=Z,15nm,0.7s,baz=10,slow=3.7,SNR=4.5
MA2                                 PP        PP        06 04 39.2  -0.4
       comp=Z,21nm,0.8s,baz=82,slow=6.0,SNR=5.6
MA2                                 PKKPbc    PKKPbc    06 13 07.3  -3.3
       comp=Z,17nm,0.6s,baz=176,slow=13,SNR=2.0
MA2                                 SKKPbc    SKKPbc    06 15 56.8  -4.6
       comp=Z,14nm,0.7s,baz=192,slow=9.3,SNR=4.0
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PET	Petropavlovsk	120.72	327	ePdif	Pdif	05 59 38.9	+8.2
PET				i		06 03 02.0	
PET				e		06 04 37.3	
PET				e		06 09 00.6	
PET				eSP	SP	06 13 30.5	-0.9
PET				eSPP	SPP	06 15 06.4	
PET				e		06 16 10.0	
PET				pmax	pmax		
	comp=Z,64nm,0.7s						
PET	Petropavlovsk	120.72	327		PKiKP	06 03 01.6	0.0
PEA0B	Petropavlovsk-	121.19	328	c iPKIKP	PKiKP	06 03 03.1	+0.6
PETK	Petropavlovsk-	121.19	328	PKP	PKiKP	06 03 03.0	+0.4
	comp=Z,27nm,0.8s,baz=91,slow=5.9,SNR=17						
PETK				PKKPbc	PKKPbc	06 13 07.0	-1.5
	comp=Z,14nm,0.9s,baz=44,slow=3.0,SNR=8.6						
PETK	Petropavlovsk-	121.19	328	PKIKP	PKiKP	06 03 03.0	+0.4
PETK	Petropavlovsk-	121.19	328	PKPdf	PKPdf	06 03 02.3	0.0
AKTO	Aktyubinsk	121.46	35	PKKPbc	PKKPbc	06 13 06.4	-1.1
	comp=Z,14nm,0.8s,baz=110,slow=7.4,SNR=15						
AKTO				SKKPbc	SKKPbc	06 15 54.8	-3.6
	comp=Z,8.1nm,0.8s,baz=90,slow=2.2,SNR=7.2						
AKTO	Aktyubinsk	121.46	35	PKIKP	PKiKP	06 03 03.1	-0.1
SHMA	Al-Shehemyia	122.90	65	P	PKiKP	06 03 07.5	+0.8
AB31	Akbulak array	123.11	36	i PKIKP	PKPdf	06 03 05.1	-1.0
ABKAR	Akbulak array	123.11	36	PKPdf	PKiKP	06 03 06.7	+0.2
TRNA	Turayna	123.23	67	P	PKiKP	06 03 08.2	+0.8
JRN	Qarnain Island	124.69	66	P	PKiKP	06 03 11.2	+1.0
GHWR	Ruwais	124.81	67	P	PKiKP	06 03 11.5	+0.9
YAK	Yakutsk	125.10	348	PKP	PKPdf	06 03 09.8	+0.2
	comp=Z,78nm,0.7s,baz=123,slow=1.1						
YAK				pPKP	pPKPdf	06 05 27.1	-3.3
	comp=Z,35nm,0.6s,baz=203,slow=1.3,SNR=4.6						
YAK	Yakutsk	125.10	348	ePKIKP	PKPdf	06 03 09.2	-0.4
YAK				pmax	pmax		
	comp=Z,202nm,1.0s						
YAK				pmax	pmax		
	comp=N,20nm,1.3s						
YAK				pmax	pmax		
	comp=E,14nm,0.9s						
YAK				pmax	pmax		
	comp=Z,883nm,2.7s						
YAK				pmax	pmax		
	comp=N,481nm,2.6s						
YAK				pmax	pmax		
	comp=E,219nm,2.3s						
MSEY	Mahe Island	125.14	102	i PKiKP	PKiKP	06 03 12.1	+0.5
	SNR=17						
MSEY	Mahe Island	125.14	102	PKIKP	PKiKP	06 03 12.1	+0.5
MSEY	Mahe Island	125.14	102	PKPdf	PKiKP	06 03 12.1	+0.5
ABTO	Aybut	125.58	75	P	PKiKP	06 03 13.5	+1.2
	SNR=10						
WHFO	Wadi Hawf	126.02	75	P	PKiKP	06 03 14.0	+0.8
	SNR=8.9						
EIDS	Eidsvold	126.33	229	PKPdf	PKPdf	06 03 12.6	-0.5
DOK	Doka	126.34	74	P	PKiKP	06 03 14.4	+0.7
	SNR=11						
GEYT	Alibeck	126.34	49	PKP	PKPdf	06 03 12.9	+0.1
	comp=E,63nm,0.7s,baz=256,slow=4.4,SNR=49						
GEYT				pPKP	pPKPdf	06 05 32.1	-1.4
	comp=E,13nm,0.7s,baz=264,slow=2.7,SNR=4.4						
GEYT	Alibeck	126.34	49		PKiKP	06 03 13.3	0.0
GYA0	ALIBECK ARRAY	126.34	49	PKIKP	PKPdf	06 03 12.8	0.0
BRVK	Borovoye	126.40	28	d iPKIKP	PKiKP	06 03 13.2	+0.3
BRVK				pmax	pmax		
	comp=Z,273nm,1.7s						
RBK	Rabkut	126.44	75	P	PKiKP	06 03 14.7	+0.7
	SNR=6.0						
BVAR	Borovoye Array	126.47	28	pPKP	pPKPdf	06 05 32.5	-0.8
	comp=Z,23nm,0.8s,baz=240,slow=12,SNR=6.5						
BVAR				SKKPbc	SKKPbc	06 15 37.5	-4.4
	comp=Z,25nm,0.8s,baz=211,slow=10,SNR=19						
AJN	Ajban	126.67	66	i PKiKP	PKPdf	06 03 13.8	+0.2
	SNR=9.0						
AJN	Ajban	126.67	66	P	PKiKP	06 03 15.4	+1.2
	SNR=9.0						
ASUD	Al Ashush, Dub	126.97	66	i PKiKP	PKPdf	06 03 14.6	+0.3
	SNR=21						
ASUD	Al Ashush, Dub	126.97	66	P	PKiKP	06 03 15.9	+1.1
	SNR=15						
UMZA	Um Al Zommool	127.03	69	P	PKiKP	06 03 16.1	+1.1
DMTO	DMTO	127.14	75	P	PKiKP	06 03 16.1	+0.8
	SNR=8.7						
UMQ	Umm Al-Quwin	127.15	65	i PKiKP	PKiKP	06 03 15.6	+0.4
	SNR=5.3						
FAQ	Al Faqa, Dubai	127.19	66	i PKiKP	PKPdf	06 03 15.0	+0.3
	SNR=20						
FAQ	Al Faqa, Dubai	127.19	66	P	PKiKP	06 03 16.0	+0.7
	SNR=16						
NAZ	Nazwa, Dubai	127.22	66	i PKiKP	PKPdf	06 03 14.7	-0.1
	SNR=10						
NAZ	Nazwa, Dubai	127.22	66	P	PKiKP	06 03 16.2	+0.9
	SNR=11						
ALNE	Al Ain	127.42	67	i PKiKP	PKiKP	06 03 15.6	-0.2
	SNR=7.1						
ALNE	Al Ain	127.42	67	P	PKiKP	06 03 16.6	+0.8
	SNR=36						
SHME	Shamm	127.50	64	i PKiKP	PKiKP	06 03 15.7	-0.2
	SNR=12						
SHME	Shamm	127.50	64	P	PKiKP	06 03 16.7	+0.8
	SNR=8.2						
MASF	Masafi	127.61	65	P	PKiKP	06 03 16.9	+0.7
	SNR=20						
ASHO	Ashiyiah	127.62	66	i PKiKP	PKPdf	06 03 15.6	0.0
	SNR=18						
ASHO	Ashiyiah	127.62	66	P	PKiKP	06 03 16.6	+0.4
	SNR=20						
MSFE	Esma-Masafi	127.62	65	i PKiKP	PKiKP	06 03 15.9	-0.3
	SNR=22						
BANOM	Banah	127.66	64	i PKiKP	PKiKP	06 03 16.0	-0.3
	SNR=19						
BANOM	Banah	127.66	64	P	PKiKP	06 03 16.7	+0.4
	SNR=5.6						
HATD	Hatta, Dubai	127.67	66	i PKiKP	PKPdf	06 03 15.9	+0.2
	SNR=22						
HATD	Hatta, Dubai	127.67	66	P	PKiKP	06 03 16.6	+0.3
	SNR=22						
UOSS	Minazif	127.71	66	i PKiKP	PKPdf	06 03 15.6	-0.1
	SNR=12						
UOSS	Minazif	127.71	66	P	PKiKP	06 03 16.2	-0.1
UOSS	Minazif	127.71	66	PKPdf	PKPdf	06 03 15.6	-0.1
MDH	Madha	127.75	65	i PKPdf	PKPdf	06 03 14.9	-0.9
	SNR=17						
MDH	Madha	127.75	65	P	PKiKP	06 03 16.8	+0.4
	SNR=14						
SHAO	Shalim	127.78	74	i PKiKP	PKPdf	06 03 16.1	+0.1
	SNR=6.9						
SOHO	SOHO	128.12	67	i PKiKP	PKPdf	06 03 16.6	+0.1
	SNR=30						
SOHO	SOHO	128.12	67	P	PKiKP	06 03 17.6	+0.5
ARQ	Araqi	128.21	68	P	PKiKP	06 03 18.0	+0.5
	SNR=10.0						
STKA	Stephens Creek	128.47	216	PKhKP	PKPpre	06 03 07.3	
	comp=Z,2.8nm,0.6s,baz=25,slow=6.9,SNR=4.5						
STKA				PKP	PKPdf	06 03 17.2	+0.2
	comp=Z,100nm,0.7s,baz=108,slow=3.5,SNR=46						
STKA				pPKP	pPKPdf	06 05 37.1	-0.7
	comp=Z,67nm,0.9s,baz=124,slow=4.2,SNR=15						
STKA				SKKPbc	SKKPbc	06 15 32.0	-1.2
	comp=Z,6.0nm,0.7s,baz=326,slow=7.0,SNR=3.7						
STKA	Stephens Creek	128.47	216	PKPdf	PKPdf	06 03 16.6	-0.4
BSY	Bisya	128.89	68	P	PKiKP	06 03 18.5	-0.3
	SNR=22						
HOQ	Hoqain	128.89	67	P	PKiKP	06 03 18.6	-0.2
	SNR=7.4						
NKL	Nikolayevsk	129.17	336	i PKIKP	PKiKP	06 03 18.1	-0.3
NKL				e		06 05 33.1	
NKL				eSS	SS	06 22 12.9	+4.2
NKL				MLR	MLR		
	comp=E,152nm,14.0s						
NKL				MLR	MLR		
	comp=N,24nm,11.0s						
NKL				MLR	MLR		
	comp=Z,1µm,17.0s						
DQM	DQM	129.48	72	P	PKiKP	06 03 20.5	+0.5
	SNR=7.4						
BRZS	Berezniki	129.54	30	⇓iPKP	PKPdf	06 03 18.6	+0.2
	baz=30						
BRZS				i PP	PP	06 05 34.5	-3.4
	baz=30						
BRZS	Berezniki	129.54	30	d iPKIKP	PKPdf	06 03 18.6	+0.2
BRZS				i		06 05 34.4	
SMDO	Samad	129.63	68	P	PKiKP	06 03 20.8	+0.4
	SNR=45						
BIDO	Bidbid	129.64	67	P	PKiKP	06 03 20.0	-0.3
	SNR=22						
JMDO	Jabal Madar	129.77	69	P	PKiKP	06 03 20.2	-0.4
	SNR=7.7						
WSAR	Wadi Sarin	130.14	67	PKP	PKPdf	06 03 20.9	+0.5
	comp=Z,120nm,0.9s,baz=280,slow=2.1,SNR=28						
WSAR				pPKP	pPKPdf	06 05 42.0	+0.8
	comp=Z,36nm,0.8s,baz=290,slow=6.3,SNR=5.5						
WSAR				SKPbc	SKPab	06 05 47.8	-0.1
	comp=Z,192nm,0.7s,baz=277,slow=4.2,SNR=32						
WSAR	Wadi Sarin	130.14	67	P	PKiKP	06 03 21.3	0.0
	SNR=14						
WBK	Wadi Bani Khal	130.53	68	P	PKPdf	06 03 21.3	+0.1
	SNR=19						
KUR	Kuril'sk	130.83	324	d iPKIKP	PKiKP	06 03 21.7	-0.3
KUR				i		06 05 48.9	
KUR				eSS	SS	06 22 33.1	+3.6
KUR				pmax	pmax		
	comp=Z,2µm,1.9s						
KUR				pmax	pmax		
	comp=E,556nm,2.3s						
KUR				pmax	pmax		
	comp=N,136nm,1.4s						
KUR				pmax	pmax		
	comp=Z,13µm,6.2s						
PATS	Pohnpei	130.90	271		PKiKP	06 03 23.6	+0.5
JLN	Jalan Bani Buh	130.99	69	P	PKPdf	06 03 22.1	+0.1
	SNR=19						
BOD	Bodaibo	131.34	356	ePKIKP	PKPdf	06 03 21.8	+0.2
BOD				pmax	pmax		
	comp=Z,285nm,1.9s						
ZALV	Zalesovo Beam	131.43	19	PKhKP	PKPpre	06 03 08.2	
	comp=Z,5.7nm,0.3s,baz=311,slow=3.4,SNR=23						
ZALV				PKP	PKiKP	06 03 23.1	+0.2
	comp=Z,187nm,0.6s,baz=295,slow=3.1,SNR=64						
ZALV				pPKP	pPKPdf	06 05 44.0	+1.3
	comp=Z,58nm,0.8s,baz=283,slow=2.1,SNR=6.7						
ZALV				SKPbc	SKPbc	06 05 51.1	0.0
	comp=Z,259nm,0.7s,baz=314,slow=2.2,SNR=4.3						
ZALV	Zalesovo Beam	131.43	19	PKPdf	PKiKP	06 03 22.6	-0.3
ZALV				pPKPdf	pPKPdf	06 05 41.9	-0.8
UGL	Uglegorsk	131.48	331	d iPKIKP	PKiKP	06 03 23.5	+0.3
UGL				e		06 05 49.6	
UGL				e		06 08 58.5	
UGL				eS	SP	06 15 00.6	-4.2
UGL				eSS	SS	06 22 32.5	-4.3
UGL				pmax	pmax		
	comp=Z,130nm,0.9s						
UGL				pmax	pmax		
	comp=Z,2µm,6.5s						
UGL				pmax	pmax		
	comp=N,1µm,4.0s						
UGL				pmax	pmax		
	comp=E,4µm,4.0s						
UGL				pmax	pmax		
	comp=Z,9µm,6.0s						
KURK	Kurchatov	131.73	25	PKIKP	PKiKP	06 03 23.6	0.0
KURK						06 05 52.8	
KURK	Kurchatov	131.73	25	P	PKPdf	06 03 21.3	-1.2
KURBB	Kurchatov Arra	131.76	25	PKP	PKiKP	06 03 23.6	-0.1
	comp=Z,68nm,0.5s,baz=312,slow=2.5,SNR=9.6						
KURBB				pPKP	pPKPdf	06 05 44.1	+0.7
	comp=Z,12nm,0.8s,baz=313,slow=3.1,SNR=3.6						
KURBB				SKPbc	SKPbc	06 05 52.8	+0.4
	comp=Z,169nm,0.9s,baz=320,slow=4.8,SNR=25						
KURBB				SKKPbc	SKKPbc	06 15 19.4	-3.9
	comp=Z,15nm,0.8s,baz=146,slow=3.0,SNR=22						
KURBB	Kurchatov Arra	131.76	25	PKIKP	PKPdf	06 03 19.6	-3.0
BRLS	Borolday	132.18	38	ePKP	PKPdf	06 03 23.6	-0.1
	baz=39						
BRLS				ePP	PP	06 05 55.5	+0.6
	baz=39						
BRLS	Borolday	132.18	38	ePKIKP	PKPdf	06 03 23.5	-0.1
BRLS				e		06 05 55.5	
KKAR	Karatay Array	132.55	38	PKIKP	PKPdf	06 03 24.6	+0.2
KKAR	Karatay Array	132.55	38	PKPdf	PKPdf	06 03 24.6	+0.2
YSS	Yuzh-Sakhalins	132.57	329	dePKIKP	PKPdf	06 03 24.6	+0.4
YSS	Yuzh-Sakhalins	132.57	329	PKPdf	PKPdf	06 03 24.8	+0.6
SEM	Semipalatinsk	132.64	25	⇓iPKP	PKPdf	06 03 24.5	-0.1
	baz=24						
SEM				i PP	PP	06 05 54.8	-2.8
	baz=24						
SEM	Semipalatinsk	132.64	25	d iPKIKP	PKPdf	06 03 24.4	-0.1
SEM				i		06 05 54.7	
YUK	Yuzh-Kuril'sk	132.69	324	d iPKIKP	PKiKP	06 03 25.3	-0.5
YUK				i		06 05 55.4	
YUK				PPP	PPP	06 09 07.0	
YUK				eSS	SS	06 22 56.0	+4.2
YUK				SSS	SSS	06 28 01.7	
YUK				pmax	pmax		
	comp=Z,565nm,1.2s						
YUK				pmax	pmax		
	comp=E,382nm,1.3s						
IUG	Iuzhnay	132.78	39	⇓iPKP	PKiKP	06 03 25.6	-0.6
	baz=39						
IUG				ePP	PP	06 05 57.0	-1.9
	baz=39						
IUG	Iuzhnay	132.78	39	d iPKIKP	PKiKP	06 03 25.6	-0.6
IUG				e		06 05 56.9	
CTA	Charters Tower	132.99	231	PKP	PKiKP	06 03 26.6	-0.5
	comp=E,38nm,0.4s,baz=136,slow=0.8,SNR=33						
CTA				SKPbc	SKPbc	06 05 57.1	-0.4
	comp=E,158nm,0.9s,baz=134,slow=3.1,SNR=42						
CTA				PKKP	PKKPdf	06 13 17.6	+0.5
	comp=E,11nm,0.7s,baz=290,slow=3.4,SNR=6.8						
DZA	Taraz	133.17	38	ePKP	PKPdf	06 03 26.0	+0.4
	baz=38						
DZA				ePP	PP	06 05 56.6	-4.5
	baz=38						
DZA	Taraz	133.17	38	ePKIKP	PKPdf	06 03 25.9	+0.4
ZEA	Zeya	133.17	345	dePKHKP	PKPpre	06 03 11.5	
ZEA				e		06 03 25.8	
ZEA				e		06 05 57.4	
ZEA				e		06 09 07.7	
ZEA				e		06 17 02.1	
ZEA				pmax	pmax		
	comp=Z,70nm,1.9s						
ZEA				pmax	pmax		
	comp=E,500nm,7.4s						
ZEA				pmax	pmax		
	comp=N,1µm,6.6s						
ZEA				pmax	pmax		
	comp=Z,2µm,6.3s						
BTLS	Baital	133.44	34	⇓iPKP	PKiKP	06 03 27.2	-0.1
	baz=34						
BTLS				i PP	PP	06 05 58.6	-4.0
	baz=34						
BTLS	Baital	133.44	34	d iPKIKP	PKiKP	06 03 27.2	-0.1
ASAJ	Asahikawa	134.50	326	PKhKP	PKPpre	06 03 21.4	
	comp=Z,24nm,0.8s,baz=248,slow=3.4,SNR=6.6						
ASAJ				PKP	PKPdf	06 03 28.6	+0.7
	comp=Z,80nm,0.9s,baz=282,slow=5.2,SNR=12						
ASAJ				SKPbc	SKPbc	06 06 02.3	+0.6
	comp=Z,254nm,0.8s,baz=83,slow=2.3,SNR=14						
EKS2	Erkin-Say	134.76	37	P	PKiKP	06 03 31.2	+0.9
	SNR=21						
USP	Ospenovka	134.81	35	P	PKPdf	06 03 24.6	-4.0
	SNR=12						
AML	Almayashu	135.03	37	P	PKiKP	06 03 32.2	+1.0
	SNR=26						
AML	Almayashu	135.03	37	i PKiKP	PKiKP	06 03 31.0	-0.1
	SNR=26						
AML	Almayashu	135.03	37	P	PKiKP	06 03 31.1	-0.1
CHMS	Chumysh	135.12	36	P	PKiKP	06 03 31.5	+0.6
	SNR=6.5						
AAK	Ala-Archa	135.19	36	PKhKP	PKPpre	06 03 18.6	
	comp=Z,6.6nm,0.7s,baz=131,slow=3.7,SNR=4.5						
AAK				PKP	PKiKP	06 03 31.2	0.0
	comp=Z,80nm,0.7s,baz=187,slow=2.1,SNR=40						
AAK				pPKP	pPKPdf	06 05 52.8	+2.4
	comp=Z,39nm,1.0s,baz=175,slow=2.3,SNR=3.6						
AAK				SKPbc	SKPbc	06 06 04.8	+0.7
	comp=Z,168nm,0.9s,baz=267,slow=1.8,SNR=18						
AAK				SKKPbc	SKKPbc	06 15 08.5	-2.3
	comp=Z,30nm,0.9s,baz=166,slow=4.0,SNR=21						
AAK	Ala-Archa	135.19	36	i PKiKP	PKiKP	06 03 30.9	-0.2
	SNR=41						
KUU	Kurty	135.44	34	⇓iPKP	PKPdf	06 03 29.6	-0.2
	baz=33						
KUU				ePP	SKPbc	06 06 04.3	-0.3
	baz=33						
KUU	Kurty	135.44	34	d iPKIKP	PKPdf	06 03 29.5	-0.2
KBK	Karagaybulak	135.44	36	P	PKiKP	06 03 31.9	+0.1
	SNR=7.7						
UCH	Uchtor	135.46	37	P	PKPdf	06 03 18.4	-12
	SNR=7.1						
ERM	Erimo	135.49	323	dePKIKP	PKiKP	06 03 31.6	+0.1
TKM2	Tokmak 2	135.65	35	P	PKiKP	06 03 32.6	+0.4
	SNR=7.0						
TKM2	Tokmak 2	135.65	35	PKHKP	PKPpre	06 03 18.6	
KLR	Kul'dur	135.72	338	PKhKP	PKPpre	06 03 20.2	
	comp=Z,6.8nm,0.5s,baz=108,slow=3.2,SNR=1.2						
KLR				PKP	PKPdf	06 03 30.2	+0.2
	comp=Z,43nm,0.5s,baz=68,slow=2.4,SNR=7.6						
KLR				SKPbc	SKPbc	06 06 04.9	-0.3
	comp=Z,72nm,0.8s,baz=34,slow=2.7,SNR=17						
KLR				SKKPbc	SKKPbc	06 15 04.1	-4.8
	comp=Z,12nm,1.2s,baz=221,slow=3.5,SNR=4.0						
TDK	Taldyqorghan	135.77	31	i PKP	PKPdf	06 03 29.8	-0.5
	baz=31						
TDK				ePP	PP	06 06 13.4	-3.6
	baz=31						
TDK	Taldyqorghan	135.77	31	i PKIKP	PKPdf	06 03 29.8	-0.5
TDK				e		06 06 13.4	
KBL	Kabul	135.79	49	P	PKPdf	06 03 31.4	+0.5
	SNR=27						
H01W2	Cape Leeuwin H	135.83	186	PKhKP	PKPpre	06 03 21.6	
	baz=176,slow=4.9,SNR=7.4						
H01W1	Cape Leeuwin H	135.84	186	PKhKP	PKPpre	06 03 21.1	
	baz=176,slow=4.9,SNR=8.3						
H01W3	Cape Leeuwin H	135.85	186	PKhKP	PKPpre	06 03 21.6	
	baz=176,slow=4.9,SNR=9.8						
DGZ	Jazzator, Alta	135.90	20	dePKIKP	PKPdf	06 03 31.5	+0.9
ARXS	Arharly	136.02	32	i PKHKP	PKPpre	06 03 20.7	
MAKZ	Makanchi	136.14	27	PKHKP	PKPpre	06 03 18.9	
AAA	Alma-Ata	136.20	34	ePKP	PKPdf	06 03 27.7	-3.6
	baz=34						
AAA	Alma-Ata	136.20	34	ePKIKP	PKPdf	06 03 27.7	-3.6
MK31	Makanchi Array	136.29	26	dePKIKP	PKiKP	06 03 32.7	-0.4
MKAR	Makanchi Array	136.29	26	PKhKP	PKPpre	06 03 19.9	
	comp=Z,8.4nm,0.6s,baz=11,slow=3.1,SNR=33						
MKAR				PKP	PKiKP	06 03 32.4	-0.7
	comp=Z,79nm,0.7s,baz=346,slow=1.4,SNR=41						
MKAR				SKPbc	SKPbc	06 06 07.0	0.0
	comp=Z,196nm,0.8s,baz=337,slow=2.8,SNR=34						
MKAR				PKKP	PKKPdf	06 13 07.8	-3.5
	comp=Z,3.3nm,1.0s,baz=180,slow=1.8,SNR=4.1						
MKAR				SKKPbc	SKKPbc	06 15 02.8	-3.9
	comp=Z,26nm,0.8s,baz=134,slow=5.2,SNR=22						
MKAR	Makanchi Array	136.29	26	PKPdf	PKiKP	06 03 32.2	-0.9
MDOK	Medeo	136.30	34	ePKP	PKPdf	06 03 32.3	+0.7
	baz=34						
MDOK	Medeo	136.30	34	ePKIKP	PKPdf	06 03 32.2	+0.7
TNSS	Tian-Shan	136.33	34	ePKP	PKiKP	06 03 33.4	-0.4
	baz=34						
ULHL	Ulahol	136.45	35	P	PKiKP	06 03 34.6	+0.8
	SNR=6.0						
ZSN	Zaisan	136.84	24	ePKP	PKPdf	06 03 31.6	-0.6
	baz=24						
ZSN				ePP	PP	06 06 20.4	-2.9
	baz=24						
ZSN	Zaisan	136.84	24	ePKIKP	PKPdf	06 03 31.6	-0.6
ZSN				e		06 06 20.4	
IRK	Irkutsk	136.94	4	ePKHKP	PKPpre	06 03 25.7	
IRK				pmax	pmax		
	comp=Z,701nm,2.6s						
TEY	Ternei	136.98	331	dePKIKP	PKPdf	06 03 30.4	-2.1
TEY				pmax	pmax		
	comp=Z,400nm,6.1s						
KPKS	Kokpek	136.98	32	⇓iPKP	PKiKP	06 03 33.8	-0.9
	baz=32						
KPKS				ePP	PP	06 06 23.8	-0.8
	baz=32						
KPKS	Kokpek	136.98	32	d iPKIKP	PKiKP	06 03 33.8	-0.9
KPKS				e		06 06 23.8	
SATY	Saty	137.11	33	⇓iPKP	PKPdf	06 03 33.2	+0.1
	baz=33						
SATY	Saty	137.11	33	d iPKIKP	PKPdf	06 03 33.1	+0.1
CIT	Chita	137.14	356	ePKIKP	PKPdf	06 03 32.9	+0.2
CIT				pmax	pmax		
	comp=Z,660nm,2.3s						
MOY	Mondy	137.20	7	ePKIKP	PKPdf	06 03 30.9	-2.0
MOY				pmax	pmax		
	comp=Z,645nm,2.5s						
UZB	Uzynbulak	137.38	32	⇓ePKP	PKPdf	06 03 33.2	-0.4
	baz=32						
UZB	Uzynbulak	137.38	32	dePKIKP	PKPdf	06 03 33.1	-0.4
TLY	Talaya	137.45	5	PKhKP	PKPpre	06 03 24.6	
	comp=Z,28nm,0.8s,baz=312,slow=3.7,SNR=14						
TLY				PKP	PKPdf	06 03 34.1	+0.9
	comp=Z,28nm,0.6s,baz=229,slow=2.1,SNR=15						
TLY				pPKP	pPKPdf	06 05 55.0	+0.8
	comp=Z,11nm,0.7s,baz=283,slow=1.8,SNR=3.3						
TLY				SKPbc	SKPbc	06 06 10.6	+0.3
	comp=Z,65nm,0.9s,baz=360,slow=2.6,SNR=10						
TLY				SKKPbc	SKKPbc	06 14 59.4	-3.1
	comp=Z,2.2nm,0.5s,baz=225,slow=4.3,SNR=3.7						
TLY	Talaya	137.45	5	ePKHKP	PKPpre	06 03 24.5	
TLY				pmax	pmax		
	comp=Z,377nm,1.8s						
PDGK	Podgornoye	137.50	32	PKHKP	PKPpre	06 03 23.8	
PMG	Port Moresby	137.52	245	PKhKP	PKPpre	06 03 28.0	
	baz=231,slow=6.5						
PMG				PKP	PKiKP	06 03 35.6	-0.9
	comp=Z,54nm,0.8s,baz=52,slow=2.9,SNR=3.9						
PMG				SKPbc	SKPbc	06 06 11.3	-0.3
	comp=Z,523nm,1.0s,baz=59,slow=2.9,SNR=49						
KSH	Kashi	137.98	39	PKP	PKPpre	06 03 23.3	
KSH				PP	PP	06 06 26.8	-4.2
KSH				SKS	SKSdf	06 09 26.0	-23
KSH				SKKS	SKKSac	06 12 00.5	-24
KSH	Kashi	137.98	39	PKP	PKPpre	06 03 25.0	
KSH				SKS	SKSdf	06 09 25.5	-23
ZAK	Zakamensk	138.71	5	ePKIKP	PKiKP	06 03 36.9	-1.1
ZAK				pmax	pmax		
	comp=Z,107nm,1.2s						
ASAR	Alice Springs	139.10	217	PKhKP	PKPpre	06 03 27.4	
	comp=Z,16nm,0.4s,baz=138,slow=3.7,SNR=116						
ASAR				PKP	PKPdf	06 03 37.6	+0.5
	comp=Z,93nm,0.7s,baz=128,slow=2.1,SNR=27						
ASAR				pPKP	pPKPdf	06 05 58.8	+0.7
	comp=Z,38nm,0.9s,baz=127,slow=2.3,SNR=5.2						
ASAR				SKPbc	SKPbc	06 06 14.8	-1.0
	comp=Z,172nm,0.8s,baz=133,slow=2.9,SNR=23						
ASAR				PKKP	PKKPdf	06 13 02.9	-2.4
	comp=Z,2.5nm,0.4s,baz=336,slow=1.5,SNR=8.8						
ASAR				SKKPbc	SKKPbc	06 14 53.8	-0.7
	comp=Z,14nm,0.7s,baz=320,slow=2.9,SNR=16						
USRK	Ussuriysk Ar.	139.73	334	PKhKP	PKPpre	06 03 31.4	
	comp=Z,15nm,0.6s,baz=37,slow=1.4,SNR=25						
USRK				PKP	PKPdf	06 03 38.8	+1.2
	comp=Z,52nm,0.6s,baz=231,slow=1.4,SNR=25						
USRK				SKPbc	SKPbc	06 06 16.8	+0.1
	comp=Z,154nm,0.7s,baz=8.1,slow=1.4,SNR=35						
H08S1	Diego Carcia H	140.16	114	PKhKP	PKPpre	06 03 33.8	
	baz=312,slow=6.9,SNR=10						
H08S3	Diego Garcia H	140.18	114	PKhKP	PKPpre	06 03 33.9	
	baz=312,slow=6.9,SNR=11						
H08S2	Diego Garcia H	140.18	114	PKhKP	PKPpre	06 03 34.2	
	baz=312,slow=6.9,SNR=13						
DGAR	Diego Garcia	140.24	113	PKIKP	PKPdf	06 03 36.9	-2.5
DGAR	Diego Garcia	140.24	113	PKPdf	PKPdf	06 03 36.9	-2.5
MDJ	Mudanjiang	140.38	337	PKP	PKPdf	06 03 33.0	-5.7
MDJ				PP	PP	06 06 47.0	+2.2
MDJ				SS	SS	06 24 21.0	-0.1
MDJ				AMB	AMB		
	comp=Z,2µm,11.8s						
WMQ	Urumqi	140.96	24	PKP	PKPdf	06 03 35.5	-4.4
WMQ				PP	PP	06 06 50.5	+2.1
WMQ				PKS	sPKPdf	06 07 14.8	+15
WMQ				SS	SS	06 24 30.0	+2.0
WMQ				AMB	AMB		
	comp=Z,3µm,5.3s						
MSHR	Mys Shultsa	141.39	333	⇑ePKIKP	PKPdf	06 03 41.8	+1.2
SONM	Songino Array	141.46	3	PKhKP	PKPpre	06 03 36.3	
	comp=Z,32nm,0.3s,baz=320,slow=2.4,SNR=168						
SONM				pPKP	pPKPdf	06 06 02.2	+0.5
	comp=Z,12nm,0.6s,baz=3.5,slow=2.6,SNR=2.5						
SONM				SKPbc	SKPbc	06 06 21.7	+0.4
	comp=Z,101nm,0.8s,baz=321,slow=1.5,SNR=12						
SONM				SKKPbc	SKKPbc	06 14 44.7	-2.4
	comp=Z,25nm,0.8s,baz=168,slow=4.0,SNR=22						
WRA	Warramunga Arr	141.61	221	PKhKP	PKPpre	06 03 36.9	
	comp=Z,67nm,0.4s,baz=142,slow=2.6,SNR=955						
WRA				pPKP	pPKPdf	06 06 03.1	+0.4
	comp=Z,23nm,0.5s,baz=118,slow=1.6,SNR=4.2						
WRA				SKPbc	SKPbc	06 06 21.8	-0.6
	comp=Z,254nm,0.8s,baz=137,slow=2.3,SNR=22						
WRA				PKKP	PKKPdf	06 12 59.3	-1.2
	comp=Z,1.1nm,0.4s,baz=321,slow=1.6,SNR=17						
WRA				SKKPbc	SKKPbc	06 14 44.8	+0.2
	comp=Z,23nm,0.8s,baz=321,slow=4.5,SNR=22						
WRA	Warramunga Arr	141.61	221	PKHKP	PKPpre	06 03 37.0	
WRA	Warramunga Arr	141.61	221	PKPpre	PKPpre	06 03 37.0	
JRY	Ryogami san	141.74	319	P	PKPdf	06 03 37.7	-3.8

MJAR	Matsushiro Arr	141.87	320	PKhKP	PKPpre	06 03 38.0	
	comp=Z,36nm,0.5s,baz=128,slow=1.3,SNR=40						
MJAR				SKPbc	SKPbc	06 06 22.4	-0.2
	comp=Z,20nm,0.7s,baz=97,slow=4.1,SNR=6.8						
MJAR				SKKPbc	SKKPbc	06 14 44.0	-0.7
	comp=Z,22nm,0.9s,baz=215,slow=4.8,SNR=16						
MJAR	Matsushiro Arr	141.87	320	PKHKP	PKPpre	06 03 37.6	
MJAR	Matsushiro Arr	141.87	320	PKPpre	PKPpre	06 03 37.5	
MAT	Matsushiro	141.87	320	PKP	PKPdf	06 03 37.6	-4.1
MAT	Matsushiro	141.87	320	P	PKPdf	06 03 37.3	-4.4
JOD2	Odawara 2	142.06	318	P	PKPdf	06 03 38.4	-3.7
CN2	Changchun	142.60	340	ePKP	PKPdf	06 03 39.5	-3.2
CN2				PP	PP	06 06 57.5	-0.4
CN2				SS	SS	06 24 42.0	-4.3
CN2				AMB	AMB		
	comp=Z,3µm,6.0s						
JGN	Niukaw	142.63	320	P	PKPdf	06 03 40.7	-2.4
BHK	Bhakra	142.72	49	eP	PKPdf	06 03 42.5	-0.9
KAAM	Kaadhehdhoo	143.37	102	P	PKPdf	06 03 44.5	-0.4
	SNR=32						
AJM	Ajmer	143.44	58	eP	PKPab	06 03 43.3	-0.2
CBIJ	Chichi jima	143.76	304	P	PKPbc	06 03 43.8	-0.7
JIE	Ise	144.16	319	P	PKPab	06 03 46.5	+0.6
KUDL	Kundal	144.28	54	eP	PKPdf	06 03 46.2	+0.1
GUMO	Guam	144.35	280	PKIKP	PKPdf	06 03 45.7	-0.8
GUMO	Guam	144.35	280	PKPdf	PKPdf	06 03 45.7	-0.8
BHGR	Bahadurgarh	144.40	53	eP	PKPab	06 03 47.9	+0.9
JWT	Wachi	144.43	321	P	PKPab	06 03 46.8	-0.1
JWT	Wachi	144.43	321	PKPdf	PKPbc	06 03 46.3	0.0
NDI	New Delhi	144.62	53	eP	PKPab	06 03 47.9	0.0
NDI				eP	PKPbc	06 03 48.5	+1.4
NDI				ex	x	06 06 06.0	
AYAN	Aya Nagar	144.64	53	eP	PKPab	06 03 47.9	0.0
SONA	Sohna	144.71	53	eP	PKPbc	06 03 47.6	+0.3
BISR	Bishrakh	144.84	53	eP	PKPab	06 03 49.0	+0.3
SNY	Shenyang	144.98	341	⇓PKPbc	PKPbc	06 03 47.5	-0.3
JAD	Aida	145.41	322	P	PKPbc	06 03 49.3	0.0
KAD	Karad	145.45	73	eP	PKPbc	06 03 49.5	-0.4
JHS	Saijyo	146.01	323	P	PKPdf	06 03 49.9	+1.0
JHS	Saijyo	146.01	323		PKPdf	06 03 49.2	+0.3
JAY	Jayapura	146.09	251	PKPbc	PKPbc	06 03 50.9	-1.0
	baz=266,slow=0.9						
JAY	Jayapura	146.09	251	PKP	PKPdf	06 03 49.2	-0.5
SEHB	SEOHWA	146.16	332	P	PKPbc	06 03 52.1	+0.8
	SNR=15						
JMN	Monobe	146.39	320	P	PKPdf	06 03 50.2	+0.6
JMN	Monobe	146.39	320		PKPdf	06 03 50.4	+0.8
PTH	Pithoragarh	146.49	49	eP	PKPdf	06 03 51.2	+1.1
PTH				ex	x	06 06 11.3	
YNCB	YEONCHEON	146.96	333	P	PKPdf	06 03 51.2	+0.9
	SNR=30						
KS19	Wonju Array Si	146.96	331		PKPdf	06 03 51.1	+0.7
KS19				PKPbc	PKPbc	06 03 54.3	+0.8
KSRS	Korea Array	146.97	331	PKP	PKPdf	06 03 51.4	+1.0
	comp=Z,475nm,0.9s,baz=29,slow=1.3,SNR=84						
KSRS				PKPbc	PKPbc	06 03 54.0	+0.6
	comp=Z,422nm,0.8s,baz=28,slow=2.1,SNR=110						
KSRS				pPKPbc	pPKPbc	06 06 11.8	-0.2
	comp=Z,62nm,0.8s,baz=31,slow=3.0,SNR=8.2						
KSAR	Wonju Array Be	147.00	331	PKIKP	PKPdf	06 03 51.5	+1.1
KSAR						06 06 09.9	
KSAR	Wonju Array Be	147.00	331	PKPdf	PKPdf	06 03 51.5	+1.1
KSAR				pPKPdf	pPKPdf	06 06 09.9	-1.7
KSMUS	Musan	147.16	333	P	PKPbc	06 03 54.0	+0.1
	SNR=10						
KSSEO	Seoul	147.41	333	P	PKPbc	06 03 55.2	+0.6
	SNR=10						
KSSEO	Seoul	147.41	333	P	PKPbc	06 03 55.1	+0.6
	SNR=10						
PSA00	Pilbara Seismi	147.52	199	PKPdf	PKPdf	06 03 51.5	-0.2
PSA00				PKPbc	PKPbc	06 03 55.5	+0.2
PSA00	Pilbara Seismi	147.52	199	PKPdf	PKPdf	06 03 51.8	0.0
PSA00				PKPbc	PKPbc	06 03 55.6	+0.3
KSMGY	Mungyeong	147.54	330	P	PKiKP	06 03 56.1	-0.4
	SNR=7.7						
KSMGY	Mungyeong	147.54	330	P	PKPdf	06 03 52.7	+1.4
	SNR=57						
INCN	Inchon	147.55	333	PKIKP	PKPbc	06 03 55.0	0.0
INCN	Inchon	147.55	333	PKPdf	PKPdf	06 03 51.3	-0.1
INCN				PKPbc	PKPbc	06 03 55.0	0.0
KSSWO	Suwon	147.57	332	P	PKiKP	06 03 56.1	-0.4
	SNR=22						
PYTK	Pyeongtaek	147.74	332	P	PKiKP	06 03 56.3	-0.5
	SNR=6.1						
KSUSN	Ulsan	147.75	328	P	PKPbc	06 03 53.7	-1.8
	SNR=57						
KSBON	Boeun	147.80	330	P	PKiKP	06 03 56.5	-0.5
	SNR=13						
KSCEA	Cheonan	147.80	331	P	PKiKP	06 03 57.0	0.0
	SNR=15						
HAWB	Hwaseong-si	147.81	332	P	PKPbc	06 03 56.1	+0.6
	SNR=10.0						
KSDAG	Daegu	147.81	328	P	PKPbc	06 03 54.0	-1.7
	SNR=44						
YPDB	Yeonpyeongdo	147.85	334	P	PKPbc	06 03 56.0	+0.3
	SNR=15						
GIRL	Giralia	147.89	190	PKPdf	PKPdf	06 03 51.9	-0.5
GIRL				PKPbc	PKiKP	06 03 57.1	-0.5
OKCB	Cheongsan-myeo	147.92	330	P	PKiKP	06 03 57.0	-0.3
	SNR=17						
KSGIC	Gimchen	147.98	330	P	PKiKP	06 03 56.8	-0.5
	SNR=18						
DACB	Daecheong-do R	148.08	336	P	PKiKP	06 03 57.0	-0.5
	SNR=17						
KSBUS	Busan	148.10	327	P	PKiKP	06 03 58.0	+0.3
	SNR=15						
TJN	Taejon	148.10	331	⇑ePKHKP	PKPpre	06 03 54.6	
MIYA	Miryang-si	148.11	328	P	PKiKP	06 03 58.0	+0.3
	SNR=14						
SMPI	Sarmi	148.14	251	PKP	PKPdf	06 03 52.0	-1.0
FITZ	Fitzroy Crossi	148.15	212	PKP	PKPdf	06 03 52.9	0.0
	comp=Z,64nm,0.4s,baz=25,slow=0.4						
FITZ				PKPbc	PKPbc	06 03 57.4	+0.4
	baz=327,slow=0.4						
FITZ				pPKPbc	pPKPbc	06 06 16.3	+0.2
	comp=Z,501nm,0.9s,baz=196,slow=4.6,SNR=20						
DL2	Dalian	148.26	341	⇓iPKPbc	PKPdf	06 03 53.0	+0.6
DL2				PKPab	PKPab	06 04 04.3	+2.2
DL2				pPKP	pPKPdf	06 06 10.8	-2.9
DL2				sPKP		06 07 10.5	
DL2				PP	PKSdf	06 07 29.0	+1.6
DL2				SS	SS	06 25 45.5	-4.2
DL2				AMB	AMB		
	comp=Z,3µm,7.8s						
KNRA	Kununurra	148.31	219	PKPdf	PKPdf	06 03 53.2	+0.1
KNRA				PKPbc	PKPbc	06 03 57.7	+0.3
HHC	Hu-ho-hao-te	148.40	356	ePKPbc	PKPdf	06 03 54.0	+1.2
HHC				pPKP	pPKPdf	06 06 09.5	-4.6
HHC				PP	PP	06 07 31.0	-0.6
HHC				SKKS		06 13 23.5	
HHC				SS	SS	06 25 49.5	-1.5
HHC				AMB	AMB		
	comp=Z,7µm,9.0s						
JTU	Tsushima	148.49	326	P	PKPbc	06 03 57.4	0.0
KSJEO	Jeonju	148.49	330	P	PKiKP	06 03 58.0	-0.5
	SNR=22						
BJI	Beijing	148.60	349	PKPbc	PKPdf	06 03 53.8	+0.9
BJI				pPKP	pPKPdf	06 06 12.5	-1.7
BJI				PKS	PP	06 07 26.0	-6.6
BJI				PP	sPKPab	06 07 36.3	+18
BJI				SKKS		06 13 22.8	
BJI				SS	SS	06 25 55.0	+1.9
BJI				AMB	AMB		
	comp=Z,1µm,10.8s						
BJT	Baijiatuau	148.62	349	PKHKP	PKPpre	06 03 53.4	
BJT	Baijiatuau	148.62	349		PKPdf	06 03 53.4	+0.4
BJT				PKPbc	PKiKP	06 03 58.1	-0.5
JNU	Nakatsue	148.65	323	pPKPbc	pPKPbc	06 06 16.6	-0.6
	comp=Z,114nm,1.0s,baz=21,slow=5.8,SNR=6.7						
JNU	Nakatsue	148.65	323	P	PKPdf	06 03 52.6	-0.7
JNU	Nakatsue	148.65	323		PKPdf	06 03 52.6	-0.7
BTO	Baotou	148.72	358	ePKPbc	PKPdf	06 03 53.5	+0.2
MTN	Manton Dam	148.78	226	PKPdf	PKPdf	06 03 54.0	0.0
MTN				PKPbc	PKPbc	06 03 58.6	0.0
GTA	Gaotai	148.89	13	⇓PKPbc	PKPdf	06 03 54.5	+0.9
GTA				pPKP	pPKPdf	06 06 15.8	+0.9
GTA				SKKS		06 13 23.5	
GTA				SS	SS	06 25 56.5	-0.2
GTA				AMB	AMB		
	comp=Z,2µm,5.8s						
KSJEU	Jeongeup	149.02	330	P	PKiKP	06 03 59.4	-0.2
	SNR=11						
GOCB	Gochang-gun	149.30	331	P	PKiKP	06 03 60.0	-0.1
	SNR=11						
PYUN	Piuthan	149.32	49	eP	PKPdf	06 03 55.2	+0.5
BOSB	Boseong-gun	149.46	329	P	PKiKP	06 04 01.0	+0.6
	SNR=9.4						
HYB	Hyderabad	149.54	71	i PKP	PKPdf	06 03 55.0	-0.1
HYB				epPKP	pPKPbc	06 06 20.0	0.0
HYB				esPKP		06 07 19.5	
HYB				ePP	PP	06 07 40.0	-0.2
HYB				ePPP	PPP	06 11 10.0	
HYB				eSKKS		06 13 28.0	
DANN	Dangsing	149.75	48	eP	PKPdf	06 03 56.2	+0.7
KOLN	Koldanda	149.95	49	eP	PKPdf	06 03 56.1	+0.4
JSU	Suzuyama	150.02	321	PKPdf	PKPdf	06 03 54.8	-0.7
JSU				PKPbc	PKPbc	06 04 01.1	-0.1
JFU	Fukue jima 2	150.23	324	P	PKPbc	06 04 01.7	+0.1
HUK2	Heuksan-myeon	150.38	331	P	PKiKP	06 04 04.0	+1.6
	SNR=5.5						
CJD	Chujado	150.56	329	P	PKiKP	06 04 04.0	+1.2
	SNR=11						
GKN	Gorkha	150.58	47	eP	PKPdf	06 03 57.1	+0.5
DMN	Daman	151.15	48	eP	PKPdf	06 03 58.4	+0.8
KKN	Kakani	151.17	47	eP	PKPdf	06 03 58.0	+0.4
PKI	Pulchoki	151.39	47	eP	PKPdf	06 03 58.0	-0.1
BLSP	Bilaspur	151.40	60	ex	PKPbc	06 04 04.6	0.0
TIY	Taiyuan	151.43	354	⇑iPKPbc	PKPdf	06 03 58.8	+1.3
TIY				PKPab	PKPab	06 04 16.0	+0.6
TIY				pPKP	pPKPdf	06 06 18.0	-1.0
TIY				PP	PP	06 07 49.0	+0.3
TIY				SKKS		06 13 41.0	
TIY				SS	SS	06 26 23.5	-0.7
TIY				AMB	AMB		
	comp=Z,4µm,6.7s						
GUN	Gumba	151.53	46	eP	PKPdf	06 03 58.7	+0.4
JIRN	Jiri	151.90	46	eP	PKPdf	06 03 59.1	+0.2
TIA	Tai'an	152.07	345	PKPbc	PKPdf	06 03 59.0	+0.6
TIA				SKS	SKSdf	06 10 00.0	-8.9
TIA				SKKS	SKKSac	06 13 40.3	-3.0
TIA				AMB	AMB		
	comp=Z,5µm,13.1s						
PALK	Pallekele	152.18	92	PKP	PKPdf	06 03 59.3	+0.1
	comp=Z,62nm,0.9s,baz=30,slow=2.3						
PALK				PKPbc	PKiKP	06 04 07.1	+0.4
	comp=Z,87nm,0.7s,baz=50,slow=3.3,SNR=5.1						
PALK				PKPab	PKPab	06 04 20.4	+1.0
	comp=Z,61nm,0.7s,baz=358,slow=4.8,SNR=4.2						
PALK				pPKPbc	pPKPbc	06 06 25.1	-1.5
	comp=Z,37nm,0.7s,baz=316,slow=3.1,SNR=4.0						
PALK	Pallekele	152.18	92	P	PKPdf	06 03 59.5	+0.2
PALK	Pallekele	152.18	92	PKPdf	PKPdf	06 03 59.4	+0.1
PALK				PKPbc	PKiKP	06 04 06.9	+0.2
PALK				PKPab	PKPab	06 04 19.2	-0.2
RAMN	Ramite	152.61	47	eP	PKPdf	06 04 00.2	+0.4
LZH	Lanzhou	152.88	9	⇓PKPbc	PKPdf	06 04 01.0	+1.2
LZH				PKPab	PKPab	06 04 22.8	+1.0
LZH				pPKP	pPKPdf	06 06 21.5	+0.1
LZH				PP	PP	06 07 56.0	-1.0
LZH				SKKS		06 13 48.3	
LZH				SS	SS	06 26 42.5	+2.4
LZH				AMB	AMB		
	comp=Z,3µm,9.6s						
TAPN	Taplejung	153.16	45	eP	PKPdf	06 04 01.1	+0.5
ODAN	Odare	153.23	46	eP	PKPdf	06 04 00.7	0.0
FAKI	Fak Fak	153.66	244	PKP	PKPdf	06 04 00.8	-0.5
LSA	Lhasa	153.79	37	PKPbc	PKPdf	06 04 02.5	+0.8
LSA	Lhasa	153.79	37	PKPdf	PKPdf	06 04 02.9	+1.3
XAN	Xi'an	155.29	360	PKP	PKPdf	06 04 03.3	+0.2
XAN				PKPab	PKPab	06 04 31.5	-0.5
XAN				pPKP	pPKPdf	06 06 24.5	-0.2
XAN				PP	PP	06 08 09.8	-0.3
XAN				SKKS		06 13 59.0	
XAN				AMB	AMB		
	comp=Z,6µm,9.3s						
SSE	Sheshan	155.34	334	PKP	PKPdf	06 04 04.3	+1.2
SSE				PP	PP	06 08 08.0	-2.7
SSE				SS	SS	06 27 05.5	-1.3
SSE				AMB	AMB		
	comp=Z,2µm,9.8s						
NJ2	Nanjing	155.42	339	⇓PKP	PKPdf	06 04 04.3	+1.1
NJ2				PKPab	PKPab	06 04 32.5	0.0
NJ2				sPKP		06 07 13.5	
NJ2				PP	PP	06 08 11.3	+0.3
NJ2				SKKS		06 13 59.0	
NJ2				SS	SS	06 27 03.3	-4.0
NJ2				AMB	AMB		
	comp=Z,3µm,4.7s						
SIJI	Sorong	155.44	247	PKP	PKPdf	06 04 03.0	-0.8
	comp=Z,25nm,0.7s,baz=35,slow=2.9,SNR=2.3						
SIJI				PKPab	PKPab	06 04 34.5	+1.1
	comp=Z,70nm,0.8s,baz=48,slow=8.7,SNR=5.7						
SWI	Sorong	155.45	247	PKP	PKPdf	06 04 02.9	-0.9
SOEI	Soe	155.63	220	PKP	PKPdf	06 04 04.1	0.0
SOEI	Soe	155.63	220	PKPdf	PKPdf	06 04 04.4	+0.2
BATI	Baumata	155.66	218	PKP	PKPdf	06 04 05.2	+1.2
	comp=Z,26nm,0.5s,baz=223,slow=2.9,SNR=14						
BATI				PKPab	PKPab	06 04 36.5	+2.3
	comp=Z,81nm,0.7s,baz=142,slow=6.6,SNR=5.0						
BATI	Baumata	155.66	218	PKP	PKPdf	06 04 05.0	+1.0
AAI	Ambon	156.77	237	PKP	PKPdf	06 04 04.8	-0.7
BASI	Baing, Sumba	157.39	212	PKP	PKPdf	06 04 07.3	+1.1
MMRI	Maumere	157.75	218	PKP	PKPdf	06 04 05.8	-0.9
MMRI	Maumere	157.75	218	PKPdf	PKPdf	06 04 06.1	-0.6
CD2	Chengdu	157.92	11	PKP	PKPdf	06 04 06.3	-0.2
CD2				pPKP	pPKPdf	06 06 25.5	-2.8
CD2				PP	PP	06 08 23.3	-1.1
CD2				SKKS		06 14 16.0	
CD2				SS	SS	06 27 39.0	+5.6
CD2				AMB	AMB		
	comp=Z,5µm,7.8s						
EDFI	Ende, Flores	157.99	216	PKP	PKPdf	06 04 06.2	-0.9
WHN	Wuhan	158.14	347	⇓PKP	PKPdf	06 04 07.0	+0.4
WHN				PKPab	PKPab	06 04 44.5	+0.1
WHN				pPKP	pPKPdf	06 06 26.5	-2.0
WHN				pPKP2		06 06 55.0	
WHN				PP	PP	06 08 24.5	-1.1
WHN				pPP		06 10 29.8	
WHN				SKKS		06 14 14.8	
WHN				AMB	AMB		
	comp=Z,8µm,11.2s						
WBSI	Waikabubak, Su	158.48	210	PKP	PKPdf	06 04 08.1	+0.5
LBMI	Labuha	158.92	243	PKP	PKPdf	06 04 07.5	-0.6
ENH	Enshi	159.04	358		PKPdf	06 04 07.7	0.0
ENH					PKPab	06 04 47.5	-0.8
SANI	Sanana	159.50	238	PKP	PKPdf	06 04 08.5	-0.2
TNTI	Ternate	159.66	247	PKP	PKPdf	06 04 07.7	-1.2
PLAI	Plampang	159.95	207	PKP	PKPdf	06 04 08.1	-1.1
XMIS	Christmas Isla	160.19	171	PKPdf	PKPdf	06 04 09.1	-0.4
XMIS				PKPab	PKPab	06 04 52.6	-1.1
TWSI	Taliwang, Sumb	160.41	205	PKP	PKPdf	06 04 08.7	-1.0
NACB	Ninganchiao	160.72	322	PKPdf	PKPdf	06 04 08.8	-1.0
NACB					PKPab	06 04 54.2	-1.7
BSSI	Bau Bau, Buton	160.78	218	PKP	PKPdf	06 04 09.8	-0.3
IGBI	Denpasar	160.99	200	PKP	PKPdf	06 04 10.2	-0.1
DNP	Denpasar	161.10	200	PKP	PKPdf	06 04 10.8	+0.4
SSLB	Suanglung	161.40	323	PKPdf	PKPdf	06 04 09.9	-0.6
JAGI	Jajag, Banyuwa	161.63	197	PKP	PKPdf	06 04 09.6	-1.4
JAGI	Jajag, Banyuwa	161.63	197	PKPdf	PKPdf	06 04 09.9	-1.1
JAGI				PKPab	PKPab	06 05 00.5	+0.5
BKSI	Bulukumba	161.64	219	PKP	PKPdf	06 04 10.6	-0.4
SRBI	Singaraja	161.65	201	PKP	PKPdf	06 04 10.2	-0.8
QZH	Quanzhou	161.76	330	i PKP	PKPdf	06 04 11.3	+0.5
QZH				PKPab	PKPab	06 05 00.5	+0.1
QZH				pPKP	pPKPdf	06 06 31.0	-1.8
QZH				PP	PP	06 08 45.5	+0.2
QZH				SKKS		06 14 33.3	
QZH				SS	SS	06 28 14.5	+0.4
QZH				AMB	AMB		
	comp=Z,4µm,7.6s						
GMJI	Gumukmas	162.01	195	PKP	PKPdf	06 04 10.8	-0.5
KAPI	Kappang	162.11	218	PKP	PKPdf	06 04 12.0	+0.6
	comp=Z,149nm,1.2s,baz=233,slow=2.4,SNR=12						
KAPI				PKPab	PKPab	06 05 02.9	+0.7
	comp=Z,21nm,0.5s,baz=51,slow=3.0,SNR=10						
KAPI	Kappang	162.11	218	P	PKPdf	06 04 11.4	-0.1
KAPI	Kappang	162.11	218	PKPdf	PKPdf	06 04 11.6	+0.1
KAPI				PKPab	PKPab	06 05 02.6	+0.4
ABJI	Asem Bagus	162.24	198	PKP	PKPdf	06 04 11.1	-0.5
BNSI	Bone	162.36	220	PKP	PKPdf	06 04 11.3	-0.4
BLJI	Banyuglugur	162.48	196	PKP	PKPdf	06 04 11.5	-0.3
PCJI	Pacitan	162.54	188	PKP	PKPdf	06 04 11.0	-0.9
LUWI	Luwuk	162.71	235	PKP	PKPdf	06 04 13.2	+1.1
GYA	Guiyang	162.73	6	⇓iPKP	PKPdf	06 04 12.0	+0.1
GYA				PKPab	PKPab	06 05 05.3	+0.6
GYA				pPKP	pPKPdf	06 06 31.3	-2.7
GYA				AMB	AMB		
	comp=Z,5µm,11.6s						
UGM	Wanagama	162.90	186	PKP	PKPdf	06 04 11.5	-0.8
UGM	Wanagama	162.90	186		PKPdf	06 04 11.3	-1.0
UGM				PKPab	PKPab	06 05 06.4	+0.8
SPSI	Sidrap Palu	162.91	220	PKP	PKPdf	06 04 12.1	-0.1
YOGI	Yogyakarta	163.01	185	PKP	PKPdf	06 04 10.2	-2.1
KMMI	Kalianget	163.03	198	PKP	PKPdf	06 04 12.1	-0.2
CMJI	Cimerak	163.11	179	PKP	PKPdf	06 04 11.1	-1.3
KMI	Kunming	163.17	19	⇓PKP	PKPdf	06 04 12.8	+0.3
NGJI	Ngawi	163.31	189	PKP	PKPdf	06 04 13.1	+0.5
GTOI	Gorontalo	163.44	240	PKP	PKPdf	06 04 11.7	-1.0
CNJI	Cibinong	163.51	174	PKP	PKPdf	06 04 12.1	-0.7
TTSI	Tana Toraja	163.57	223	PKP	PKPdf	06 04 12.7	-0.2
APSI	Ampana	163.68	233	PKP	PKPdf	06 04 13.6	+0.6
SMRI	Semarang	163.76	186	PKP	PKPdf	06 04 13.2	+0.1
SMRI	Semarang	163.76	186		PKPdf	06 04 13.2	+0.1
SMRI					PKPab	06 05 10.6	+1.3
LEM	Lembang	164.03	176	PKP	PKPdf	06 04 14.3	+0.8
	comp=Z,158nm,0.8s,baz=146,slow=2.8,SNR=54						
LEM				PKPab	PKPab	06 05 12.5	+1.8
	comp=Z,170nm,0.7s,baz=191,slow=5.9,SNR=12						
LEM				PP	PP	06 08 57.8	+1.3
	comp=Z,382nm,1.2s,baz=169,slow=6.8,SNR=8.2						
LEM	Lembang	164.03	176	PKP	PKPdf	06 04 13.2	-0.3
DBJI	Dramaga	164.21	173	PKP	PKPdf	06 04 13.2	-0.2
MRSI	Marisa	164.26	237	PKP	PKPdf	06 04 11.5	-2.0
UWJI	Ujung Watu	164.32	188	PKP	PKPdf	06 04 14.0	+0.5
BWJI	Bawean	164.54	195	PKP	PKPdf	06 04 12.5	-1.2
SBJI	Serang	164.54	170	PKP	PKPdf	06 04 12.5	-1.2
KASI	Kota Agung	164.76	164	PKP	PKPdf	06 04 13.2	-0.7
BLSI	Bandar Lampung	165.10	166	PKP	PKPdf	06 04 13.2	-1.0
LWLI	Liwa	165.11	162	PKP	PKPdf	06 04 13.2	-1.1
PPSI	Pulau Pagai	165.25	143	PKP	PKPdf	06 04 13.8	-0.5
KLI	Kotabumi	165.49	164	PKP	PKPdf	06 04 13.6	-0.9
GZH	Guangzhou	165.52	343	PKP	PKPdf	06 04 13.8	-0.4
GZH				pPKP	pPKPdf	06 06 35.5	-1.0
GZH				PP	PP	06 09 05.5	+1.2
GZH				SKKS		06 14 53.0	
GZH				SS	SS	06 28 48.0	-3.4
GZH				AMB	AMB		
	comp=Z,7µm,4.7s						
KBKI	Kotabaru	165.54	211	PKP	PKPdf	06 04 15.2	+0.7
TOLI2	Tolitoli	165.57	237		PKPdf	06 04 14.0	-0.6
MDSI	Maura Dua	165.65	161	PKP	PKPdf	06 04 13.4	-1.2
SISI	Saibi	165.78	137	PKP	PKPdf	06 04 14.6	-0.1
KSI	Kapahiang	165.82	154	PKP	PKPdf	06 04 13.4	-1.5
MPSI	Mapaga	165.83	232	PKP	PKPdf	06 04 14.4	-0.4
BBKI	Banjar Baru	166.02	206	PKP	PKPdf	06 04 14.4	-0.5
LHSI	Lahat	166.04	158	PKP	PKPdf	06 04 14.4	-0.5
MASI	Maura Aman, Be	166.12	152	PKP	PKPdf	06 04 14.6	-0.5
GSI	Gunungsitoli	166.38	125	PKP	PKPdf	06 04 15.9	+0.7
GSI	Gunungsitoli	166.38	125		PKPdf	06 04 14.8	-0.4
GSI				PKPab	PKPab	06 05 22.0	+0.7
CHTO	Chiang Mai	166.53	44	PKP2	PKPab	06 05 20.8	-0.9
CHTO						07 04 14.9	
CHTO	Chiang Mai	166.53	44	P	PKPdf	06 04 14.8	-0.4
CHTO	Chiang Mai	166.53	44		PKPdf	06 04 14.9	-0.3
CHTO				PKPab	PKPab	06 05 20.8	-0.9
KRJI	Kerinci	166.62	147	PKP	PKPdf	06 04 15.9	+0.4
CM31	Chiang Mai Arr	166.77	45	P	PKPdf	06 04 15.4	+0.1
	SNR=73						
CMAR	Chiang Mai Arr	166.77	45	PKP	PKPdf	06 04 15.6	+0.2
	comp=Z,62nm,0.8s,baz=289,slow=1.7,SNR=255						
CMAR				PKPab	PKPab	06 05 23.6	+0.8
	comp=Z,72nm,0.9s,baz=311,slow=5.9,SNR=27						
CMAR				PP	PP	06 09 14.7	+3.0
	comp=Z,14nm,1.0s,baz=318,slow=7.7,SNR=4.7						
CMAR	Chiang Mai Arr	166.77	45	PKIKP	PKPdf	06 04 15.1	-0.3
CMAR						06 05 22.4	
CMAR	Chiang Mai Arr	166.77	45		PKPdf	06 04 15.1	-0.3
CMAR				PKPab	PKPab	06 05 22.4	-0.4
MLSI	Meulaboh, Aceh	166.79	111	PKP	PKPdf	06 04 13.6	-1.9
BKB	Balikpapan	166.81	218	PKP	PKPdf	06 04 16.3	+0.8
PDSI	Padang	166.99	140	PKP	PKPdf	06 04 13.8	-1.9
TPTI		167.07	116	PKP	PKPdf	06 04 14.8	-0.9
SLVN	Son La	167.08	21	PKPab	PKPab	06 05 22.9	-1.1
SMKI	Samarinda	167.23	222	PKP	PKPdf	06 04 17.4	+1.6
PPI	Padang Panjang	167.29	139	PKP	PKPdf	06 04 15.2	-0.7
MNSI	Mandailing Nat	167.62	132	PKP	PKPdf	06 04 14.4	-1.7
LHMI	Lhok Sumawe	167.64	108	PKP	PKPdf	06 04 15.3	-0.8
LHMI	Lhok Sumawe	167.64	108		PKPdf	06 04 15.3	-0.8
LHMI				PKPab	PKPab	06 05 27.9	+1.0
PBKI	Pangkalan Bun	167.81	194	PKP	PKPdf	06 04 17.8	+1.6
JMBI	JAMBI	168.08	154	PKP	PKPdf	06 04 14.4	-2.0
MTKI	Muara Teweh, K	168.20	212	PKP	PKPdf	06 04 16.1	-0.4
BKNI	Bangkinang	168.30	139	PKP	PKPdf	06 04 14.2	-2.4
BKNI	Bangkinang	168.30	139		PKPdf	06 04 15.1	-1.5
BKNI					PKPab	06 05 29.3	-0.3
PSI	Prapat	168.34	123	PP	PP	06 09 18.6	-1.6
	comp=Z,6.0nm,0.4s,baz=198,slow=7.7,SNR=5.0						
TSI	Tuntungan	168.40	119	PKP	PKPdf	06 04 15.9	-0.7
DSRI	Dabo	169.51	156	PKP	PKPdf	06 04 16.9	-0.4
QIZ	Qiongzhong	170.19	354	PKP	PKPdf	06 04 18.5	+1.0
QIZ				PKPab	PKPab	06 05 38.5	+0.9
QIZ				pPKP	pPKPdf	06 06 38.0	-1.9
QIZ				PP	PP	06 09 26.8	-0.6
QIZ				SS	SS	06 29 33.5	-3.6
QIZ				AMB	AMB		
	comp=Z,5µm,7.5s						
QIZ	Qiongzhong	170.19	354	PKPdf	PKPdf	06 04 17.5	0.0
QIZ					PKPab	06 05 37.3	-0.3
SRIT	Nakonsritamara	170.94	93		PKPdf	06 04 17.4	-0.7
SRIT					PKPab	06 05 41.5	-0.1
IPM	Ipoh	171.00	121		PKPdf	06 04 17.3	-0.8
IPM				PKPab	PKPab	06 05 40.9	-0.9
KULM	Kulim	171.07	115		PKPdf	06 04 17.5	-0.7
KULM				PKPab	PKPab	06 05 39.7	-2.4
MYKOM	Kota Tinggi	171.16	146	PKPdf	PKPdf	06 04 17.9	-0.3
MYKOM					PKPab	06 05 41.6	-0.6
KKM	Kota Kinabalu	171.96	247		PKPdf	06 04 18.6	-0.2
KSM	Kuching	172.16	191		PKPdf	06 04 18.5	-0.2
KSM				PKPab	PKPab	06 05 46.5	0.0
SBUM	Sibu	172.45	207		PKPdf	06 04 18.9	+0.1
SBUM				PKPab	PKPab	06 05 48.0	+0.1

NEIC ***26*** *05:56:05.1±1.7, 9.°07S±0.°07×71.°3W±0.°1, h603^{km}±6^{km}, mb4.9/115, ML5.1(ARE) Error ellipse: s-maj=16.4km s-min=10.7km az=82.0*

IDC ***26*** *05:56:05.3±0.7, 9.°03S×71.°31W, h609^{km}±8^{km}, mb4.0/31, mb1 4.1/39, mb1mx4.0/52, mbtmp4.9/39, Error ellipse: s-maj=10.0km s-min=7.7km az=59.0*

ISC 26 05:56:04.8±0.3**, 9.°05S**±0.°05×**71.°30W**±0.°07**, h603^{km}, n206, σ0.ˢ85**/217**, mb4.8**/82**, Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CZSB	Cruzeiro do Su	1.91	313	P	P	05 57 19.8	+0.6
TBTG	Tabatinga, AM	5.02	16	P	P	05 57 39.8	+1.6
TBTG				S	S	05 58 56.0	+1.8
ETMB	Extrema	5.07	99	P	P	05 57 39.2	+0.7
NNA	Nana	6.19	241	P	P	05 57 48.5	+0.6
	19nm,0.3s,baz=83,slow=8.4,SNR=25						
NNA				S	S	05 59 10.9	-1.1
	5.9nm,0.3s,baz=166,slow=23,SNR=6.0						
NNA	Nana	6.19	241		P	05 57 47.9	+0.1
NNA				S	S	05 59 11.8	-0.2
ATAH	Atahualpa	7.28	285	P	P	05 57 59.9	+1.9
	6.3nm,0.3s,baz=44,slow=2.8,SNR=30						
ATAH				S	S	05 59 32.7	+2.1
	4.7nm,0.3s,baz=290,slow=21,SNR=8.0						
LPAZ	La Paz	7.83	157	P	P	05 58 04.2	+0.8
	13nm,0.3s,baz=320,slow=6.7,SNR=38						
LPAZ	La Paz	7.83	157	P	P	05 58 04.3	+0.9
SAML	Samuel	8.02	90	P	P	05 58 05.5	+1.0
AP01	Chacalluta	9.32	174	P	P	05 58 15.1	-1.8
PB16	IPOC Station P	9.40	170	P	P	05 58 17.2	-1.1
PB12	IPOC Station P	9.56	174	P	P	05 58 18.3	-1.1
PB11	IPOC Station P	10.77	172	P	P	05 58 30.9	-0.6
TA02	Huaiquique	11.22	174	P	P	05 58 35.1	-0.6
PB08	IPOC Station P	11.22	170	P	P	05 58 35.8	-0.4
TA01	Diego Aracena	11.50	175	P	P	05 58 38.1	-0.5
VILB	Vilhena	11.56	111	P	P	05 58 40.5	+1.2
PB01	IPOC Station P	12.06	172	P	P	05 58 43.8	-0.4
MACA	Manacapuru-AM	12.06	62	P	P	05 58 45.0	+0.7
SIV	San Ignacio	12.13	126	P	P	05 58 45.6	+0.6
	4.6nm,0.3s,baz=288,slow=8.6,SNR=9.2						
PB04	IPOC Station P	13.26	175	P	P	05 58 55.7	-0.7
PTLB	Pontes e Lacer	13.48	119	P	P	05 58 59.2	+0.7
LVC	Limon Verde	13.68	171	P	P	05 59 01.0	+0.2

	1.8nm,0.3s,baz=115,slow=9.7,SNR=3.4						
LVC	Limon Verde	13.68	171	P	P	05 58 59.5	-1.4
PB06	IPOC Station P	13.68	173	P	P	05 58 59.2	-1.4
PTGA	Pitinga	13.98	54	P	P	05 59 04.2	+0.6
	10nm,0.3s,baz=333,slow=23,SNR=23						
PTGA	Pitinga	13.98	54	P	P	05 59 04.4	+0.9
ROSC	El Rosal	14.12	348	P	P	05 59 05.2	0.0
	3.3nm,0.3s,baz=22,slow=23,SNR=5.9						
ROSC	El Rosal	14.12	348	P	P	05 59 04.4	-0.9
PB15	IPOC Station P	14.19	173	P	P	05 59 03.9	-1.8
PB10	IPOC Station P	14.40	177	P	P	05 59 07.9	+0.5
BOAV	Boa Vista	15.63	44	P	P	05 59 20.9	+2.0
ZARC	Zaragoza, Cauc	16.81	348	P	P	05 59 29.7	+0.1
ZARC				IAmb	IAmb	05 59 31.5	
	comp=Z,46nm,0.9s						
SDV	Santo Domingo	17.82	2	P	P	05 59 39.3	+0.2
	comp=Z,2.9nm,0.3s,baz=287,slow=19,SNR=1.1						
MOTC	Monteria, Cord	18.23	346	P	P	05 59 43.2	+0.7
AQDB	Aquidauana	18.86	129	P	P	05 59 49.5	+1.3
SJCC	San Jacinto, C	19.21	348	P	P	05 59 52.1	+0.6
BIRV	Birongo	20.03	15	P	P	06 00 00.6	+1.8
PCRV	Puerto La Cruz	20.21	19	P	P	06 00 01.0	+0.5
	comp=Z,55nm,1.0s,baz=136,slow=0.3,SNR=6.1						
URIC	Uribia, Colomb	20.62	358	P	P	06 00 02.0	-2.1
URIC				IAmb	IAmb	06 00 16.2	
	comp=Z,73nm,1.3s						
CPUP	Villa Florida	21.70	144	P	P	06 00 12.4	-1.3
	comp=Z,15nm,0.9s,baz=328,slow=17,SNR=1.5						
CPUP	Villa Florida	21.70	144	P	P	06 00 13.8	+0.2
CPUP				IAmb	IAmb	06 00 14.9	
	comp=Z,78nm,1.4s						
TRCB	Terra Rica	22.52	130	P	P	06 00 21.1	0.0
GRGR	Grenville	23.12	25	P	P	06 00 27.2	+0.8
MDP	Montagnes des	23.31	54	P	P	06 00 28.5	+0.3
	comp=Z,61nm,1.0s,baz=208,slow=5.4,SNR=14						
VA03	San Esteban	23.61	178	P	P	06 00 32.2	+1.5
VA03				IAmb	IAmb	06 00 42.2	
	comp=Z,70nm,1.1s						
BDFB	Brasilia	23.66	108	P	P	06 00 32.5	+1.2
	comp=Z,49nm,0.9s,baz=263,slow=10,SNR=4.5						
BDFB	Brasilia	23.66	108	P	P	06 00 32.3	+1.0
SVB	Belmont	24.31	24	P	P	06 00 36.8	-0.2
MT09	Talagante	24.61	179	P	P	06 00 39.5	-0.1
MT09				IAmb	IAmb	06 00 54.1	
	comp=Z,59nm,1.4s						
MCLT	Moule a Chique	24.83	25	P	P	06 00 40.4	-1.2
ITAB	Concordia	25.60	137	P	P	06 00 48.1	-0.1
GO05	Huala	25.85	181	P	P	06 00 50.6	+0.3
GO05				IAmb	IAmb	06 00 52.8	
	comp=Z,30nm,1.2s						
CRPR	Cabo Rojo, PR	27.20	9	P	P	06 01 02.3	+0.1
OBIP	Obispado Ponce	27.31	10	P	P	06 01 03.3	+0.1
OBIP				IAmb	IAmb	06 01 10.9	
	comp=Z,64nm,1.2s						
LGNH	Logne	27.41	357	P	P	06 01 04.8	+0.6
LGNH				IAmb	IAmb	06 01 07.5	
	comp=Z,33nm,0.8s						
CUPR	Culebra, Puert	27.82	12	P	P	06 01 07.0	-0.7
CUPR				IAmb	IAmb	06 01 07.4	
	comp=Z,29nm,0.6s						
SMRT	St. Maarten	28.12	17	P	P	06 01 09.2	-1.1
ANWB	Willy Bob	28.16	20	P	P	06 01 09.0	-1.6
TRQA	Tornquist	30.08	165	P	P	06 01 26.8	-0.2
TRQA				IAmb	IAmb	06 01 37.3	
	comp=Z,60nm,1.4s						
PLCA	Paso Flores	31.56	179	P	P	06 01 40.1	+0.4
	comp=Z,4.3nm,0.5s,baz=349,slow=10,SNR=6.7						
PLCA				PcP	PcP	06 04 13.2	0.0
	comp=Z,4.5nm,0.8s,baz=354,slow=4.5,SNR=7.0						
PLCA	Paso Flores	31.56	179	P	P	06 01 40.0	+0.3
PLCA				IAmb	IAmb	06 01 45.6	
	comp=Z,38nm,1.4s						
CMIG	Matias Romero	34.91	318	P	P	06 02 08.9	+1.0
	comp=Z,6.2nm,0.5s,baz=123,slow=6.2,SNR=6.8						
656A	Willston	39.70	345	P	P	06 02 46.8	+0.1
456A	Hilliard	40.86	346	P	P	06 02 56.8	+0.9
BBSR	BB Station	41.66	8	P	P	06 03 02.1	0.0
BBSR				IAmb	IAmb	06 03 13.0	
	comp=Z,78nm,1.1s						
NHSC	New Hope	42.76	349	P	P	06 03 11.3	+0.6
154A	Montrose	42.93	345	P	P	06 03 12.3	+0.3
Y60A	Bolivia	43.31	352	P	P	06 03 15.2	+0.2
Y58A	Scranton	43.45	350	P	P	06 03 16.4	+0.3
Y57A	Sumter	43.69	349	P	P	06 03 18.4	+0.5
GOGA	Godfrey	43.78	345	P	P	06 03 18.6	0.0
GOGA				IAmb	IAmb	06 03 32.2	
	comp=Z,35nm,1.4s						
EFI	East Falkland	43.87	168	P	P	06 03 19.8	+0.8
EFI				IAmb	IAmb	06 03 19.9	
	comp=Z,70nm,1.4s						
X58A	Rowland	44.03	350	P	P	06 03 20.4	-0.1
X58A				IAmb	IAmb	06 03 35.6	
	comp=Z,34nm,1.2s						
HODGE	Hodges	44.28	347	P	P	06 03 22.5	0.0
HODGE				IAmb	IAmb	06 03 23.2	
	comp=Z,26nm,0.7s						
BIRD	Birdtown, Kers	44.31	349	P	P	06 03 22.7	+0.1
BIRD				IAmb	IAmb	06 03 23.5	
	comp=Z,35nm,0.8s						
W57A	Gilead	44.72	350	P	P	06 03 25.6	-0.2
W57A				IAmb	IAmb	06 03 26.4	
	comp=Z,35nm,0.8s						
Y49A	Blount Mountai	45.02	342	P	P	06 03 27.2	-0.9
BG3	Lake Jocassee	45.16	346	P	P	06 03 28.5	-0.7
BG3				IAmb	IAmb	06 03 30.5	
	comp=Z,34nm,1.2s						
V55A	Taylorsville	45.62	349	P	P	06 03 33.0	+0.3
V55A				IAmb	IAmb	06 03 33.9	
	comp=Z,26nm,0.7s						
USHA	Ushuaia	45.72	178	P	P	06 03 34.2	+1.1
	comp=Z,5.2nm,0.6s,baz=355,slow=9.3,SNR=1.6						
X48A	Hartselle	45.76	342	P	P	06 03 33.0	-0.7
X48A				IAmb	IAmb	06 03 33.7	
	comp=Z,36nm,1.1s						
TKL	Tuckaleechee C	45.99	346	P	P	06 03 34.6	-0.9
	comp=Z,18nm,0.9s,baz=118,slow=3.9,SNR=5.1						
V52A	Sevierville	46.13	346	P	P	06 03 36.0	-0.6
V52A				IAmb	IAmb	06 03 36.4	
	comp=Z,24nm,0.8s						
SWET	Sewanee	46.14	343	P	P	06 03 35.9	-0.8
SWET				IAmb	IAmb	06 03 36.5	
	comp=Z,32nm,1.1s						
PLAL	Pickwick Lake	46.58	341	P	P	06 03 38.9	-1.0
S57A	Dark Hollow, R	47.11	352	P	P	06 03 43.9	+0.1
S54A	Dingess, Beckl	47.53	349	P	P	06 03 47.1	0.0
S54A				IAmb	IAmb	06 03 47.8	
	comp=Z,50nm,0.8s						
MIAR	Mount Ida	48.22	335	P	P	06 03 51.7	-0.4
MIAR				IAmb	IAmb	06 03 52.6	
	comp=Z,18nm,0.8s						
LCAR	Lake Charles	48.62	338	P	P	06 03 54.0	-1.0
LCAR				IAmb	IAmb	06 04 06.7	
	comp=Z,36nm,1.4s						
WUPA	West Chester U	48.89	356	P	P	06 03 56.6	-0.4
PBMO	Poplar Bluff	49.00	340	P	P	06 03 56.8	-1.0
PBMO				IAmb	IAmb	06 03 57.4	
	comp=Z,19nm,0.6s						
MCWV	Mont Chateau	49.10	351	P	P	06 03 59.1	+0.5
MCWV				IAmb	IAmb	06 03 59.6	
	comp=Z,35nm,0.8s						
P53A	Whipple	49.19	350	P	P	06 03 59.5	+0.4
TXAR	Lajitas Array	49.28	322	P	P	06 04 00.1	-0.2
	comp=Z,0.7nm,0.4s,baz=123,slow=6.7,SNR=5.8						
TXAR				PcP	PcP	06 05 11.7	+0.1
	comp=Z,2.7nm,0.9s,baz=131,slow=5.9,SNR=4.5						
SIUC	Southern Illin	49.45	341	P	P	06 04 00.3	-0.8
ODNJ	Ogdensburg	49.97	357	P	P	06 04 04.1	-0.8
BLO	Bloomington	50.02	345	P	P	06 04 04.3	-0.9
BLO				IAmb	IAmb	06 04 04.8	
	comp=Z,33nm,0.8s						
FVM	French Village	50.08	340	P	P	06 04 05.3	-0.5
N53A	Lisbon	50.38	351	P	P	06 04 08.0	+0.1
N53A				IAmb	IAmb	06 04 08.5	
	comp=Z,70nm,0.8s						
KSPA	Keystone Colle	50.52	356	P	P	06 04 08.4	-0.5
BRYW	Bryant College	50.71	360	P	P	06 04 10.1	-0.2
BRYW				IAmb	IAmb	06 04 10.6	
	comp=Z,34nm,0.7s						
OK033	Mehan	50.94	333	P	P	06 04 12.1	+0.1
OK033				IAmb	IAmb	06 04 12.6	
	comp=Z,23nm,0.7s						
M53A	WI Miller and	50.97	351	P	P	06 04 12.1	0.0
ALLY	Alegheny Colle	51.09	351	P	P	06 04 13.0	0.0
ALLY				IAmb	IAmb	06 04 13.6	
	comp=Z,66nm,0.8s						
BINY	Binghamton	51.17	356	P	P	06 04 13.7	0.0
BINY				IAmb	IAmb	06 04 14.2	
	comp=Z,41nm,0.7s						
WES	Weston	51.18	360	P	P	06 04 12.2	-1.4
SFIN	Lafayette	51.30	345	P	P	06 04 12.7	-1.9
SFIN				IAmb	IAmb	06 04 13.3	
	comp=Z,24nm,0.8s						
WVNY	West Valley, N	51.64	353	P	P	06 04 16.9	0.0
WVNY				IAmb	IAmb	06 04 17.2	
	comp=Z,30nm,0.6s						
BLOK	Blackwell	51.66	333	P	P	06 04 17.2	0.0
BLOK				IAmb	IAmb	06 04 18.8	
	comp=Z,57nm,1.2s						
MNTX	Cornudas Mount	52.00	323	P	P	06 04 19.4	-0.4
MSTX	Muleshoe	52.18	327	P	P	06 04 21.2	+0.1
HOPE	Hope Point	52.98	155	P	P	06 04 26.9	+0.6
HOPE				IAmb	IAmb	06 04 30.0	
	comp=Z,50nm,1.1s						
J47A	Sunmer	53.47	348	P	P	06 04 28.6	-1.4
J47A				IAmb	IAmb	06 04 29.3	
	comp=Z,104nm,0.9s						
LONY	Lake Ozonia	53.50	357	P	P	06 04 29.9	-0.2
HAL	Halifax	53.88	7	P	P	06 04 32.9	+0.1
G62A	West of Eustis	54.02	1	P	P	06 04 34.3	+0.5
G62A				IAmb	IAmb	06 04 35.4	
	comp=Z,37nm,0.9s						
SADO	Sadowa	54.03	353	P	P	06 04 32.9	-0.9
	comp=Z,14nm,0.8s,baz=243,slow=4.6,SNR=6.3						
SADO	Sadowa	54.03	353	P	P	06 04 32.9	-0.9
SADO				IAmb	IAmb	06 04 39.5	
	comp=Z,59nm,1.4s						
GGN	Saint George	54.06	4	P	P	06 04 34.2	+0.2
PLVO	Plevna	54.09	355	P	P	06 04 33.8	-0.5
MNTQ	Montreal, Queb	54.33	358	P	P	06 04 35.9	0.0
MNTQ				IAmb	IAmb	06 04 36.4	
	comp=Z,47nm,0.6s						
JFWS	Jewell Farm	54.53	343	P	P	06 04 36.2	-1.2
JFWS				IAmb	IAmb	06 04 36.8	
	comp=Z,56nm,0.5s						
GBN	Guysborough	54.91	8	P	P	06 04 39.9	0.0
LMN	Caledonia Moun	54.95	6	P	P	06 04 40.0	-0.2
LMN				IAmb	IAmb	06 04 41.2	
	comp=Z,50nm,1.3s						
TRQ	Mont Tremblant	55.09	357	P	P	06 04 40.8	-0.6
PMSA	Palmer Station	55.87	176	P	P	06 04 46.5	+0.2
	comp=Z,10nm,0.8s,baz=22,slow=5.4,SNR=1.7						
PMSA				PcP	PcP	06 05 36.5	+0.6
	comp=Z,7.9nm,0.9s,baz=72,slow=3.2,SNR=1.6						
SPMN	Marine on St.	57.39	342	P	P	06 04 56.2	-0.8
D41A	Chassel	57.94	346	P	P	06 04 59.7	-0.9
D41A				IAmb	IAmb	06 05 08.1	
	comp=Z,107nm,1.4s						
F36A	Milaca	58.18	342	P	P	06 05 01.6	-0.8
DRLN	Deer Lake	59.30	10	P	P	06 05 09.3	-0.4
EYMN	Ely	59.50	344	P	P	06 05 10.5	-0.6
EYMN				IAmb	IAmb	06 05 10.7	
	comp=Z,38nm,0.7s						
PDAR	Pinedale Array	62.26	329	P	P	06 05 29.6	0.0
	comp=Z,3.3nm,0.5s,baz=123,slow=9.4,SNR=21						
PDAR				PcP	PcP	06 06 01.8	-0.6
	comp=Z,2.0nm,0.5s,baz=121,slow=7.6,SNR=6.3						
ULM	Lac du Bonnet	62.81	343	P	P	06 05 31.7	-0.9
	comp=Z,48nm,0.6s,baz=153,slow=6.7,SNR=26						
ULM	Lac du Bonnet	62.81	343	P	P	06 05 31.7	-0.9
ULM				IAmb	IAmb	06 05 32.3	
	comp=Z,42nm,0.6s						
REDW	Red Top Meadow	63.35	329	P	P	06 05 36.7	+0.1
LOHW	Long Hollow	63.40	329	P	P	06 05 37.4	+0.6
SCHQ	Schefferville	63.75	3	P	P	06 05 37.8	-0.8
	comp=Z,7.9nm,0.6s,baz=217,slow=7.6,SNR=2.4						
SCHQ				PcP	PcP	06 06 07.4	-0.5
	comp=Z,10nm,0.9s,baz=146,slow=7.3,SNR=1.8						
NVAR	Mina Array Bea	64.39	320	P	P	06 05 43.8	+0.6
	comp=Z,1.3nm,0.6s,baz=165,slow=7.3,SNR=3.9						
NVAR				PcP	PcP	06 06 10.9	-0.4
	comp=Z,1.7nm,0.6s,baz=123,slow=4.8,SNR=5.5						
NVAR	Mina Array Bea	64.39	320	P	P	06 05 44.3	+1.1
GCMT	Greycliff	64.52	331	P	P	06 05 44.6	+0.9
EGMT	Eagleton	66.21	333	P	P	06 05 54.5	+0.3
EGMT				IAmb	IAmb	06 06 07.7	
	comp=Z,54nm,1.1s						
PLID	Pearl Lake	67.23	327	P	P	06 06 01.0	+0.3
LIC	Lamto	67.77	79	*e*P	P	06 06 03.8	-0.5
	comp=Z,38nm,0.6s						
TIC	Toumodi	67.86	79	*e*P	P	06 06 04.5	-0.4
DBIC	Dimbokro	68.03	79	P	P	06 06 06.0	+0.1
	comp=Z,24nm,0.5s,baz=268,slow=4.7,SNR=28						
DBIC	Dimbokro	68.03	79	P	P	06 06 06.0	+0.1
DBIC				IAmb	IAmb	06 06 06.7	
	comp=Z,42nm,1.0s						
KIC	Kosan Boka	68.07	79	*e*P	P	06 06 05.9	-0.3
	comp=Z,63nm,0.6s						
F10A	Beach Ranch, E	68.46	327	P	P	06 06 09.4	+1.4
I07A	Izee	68.52	325	P	P	06 06 09.8	+1.3
WALA	Waterton Lakes	68.87	331	P	P	06 06 10.8	+0.4
WALA				IAmb	IAmb	06 06 19.2	
	comp=Z,70nm,1.5s						
YBH	Yreka Blue Hor	69.05	321	P	P	06 06 11.2	-0.5
FCC	Fort Churchill	70.05	348	P	P	06 06 16.8	-0.2
BUCK	Buck Mountain	70.61	323	P	P	06 06 21.5	+0.7
KOWA	Kowa	70.69	71	P	P	06 06 22.0	+0.2
	comp=Z,31nm,0.5s,baz=267,slow=7.8,SNR=33						
LTY	Liberty	71.11	327	P	P	06 06 24.7	+1.0
LTY				IAmb	IAmb	06 06 25.3	
	comp=Z,34nm,1.5s						
EDM	Edmonton	71.57	335	P	P	06 06 25.8	-0.4
EDM				IAmb	IAmb	06 06 26.4	
	comp=Z,36nm,0.7s						
D05A	Enumclaw	71.79	326	P	P	06 06 28.6	+1.2
VNA3	Neumayer Olymp	72.56	163	P	P	06 06 31.6	0.0
VNA2	Neumayer--Watz	73.12	162	P	P	06 06 34.6	-0.1
	baz=293,slow=6.3						
SNAA	Sanae	74.76	162	P	P	06 06 44.0	0.0
SNAA	Sanae	74.76	162	P	P	06 06 44.1	+0.1
	baz=274,slow=11						
SNAA	Sanae	74.76	162	P	P	06 06 44.2	+0.1
TORD	Torodi Ar. Bea	75.75	74	P	P	06 06 50.4	-0.2
	comp=Z,19nm,0.7s,baz=262,slow=5.6,SNR=28						
TORD				PKKP	PKKPdf	06 25 30.7	-18
	comp=Z,5.6nm,1.0s,baz=92,slow=2.8,SNR=4.4						
TORD	Torodi Ar. Bea	75.75	74	P	P	06 06 50.4	-0.2
TORD				IAmb	IAmb	06 06 51.2	
	comp=Z,21nm,0.9s						
MDT	Midelt	75.82	53	P	P	06 06 51.4	+0.7
	comp=Z,7.5nm,0.7s,baz=23,slow=0.9,SNR=10						
MDT				PKKP	PKKPdf	06 25 26.8	-22
	comp=Z,4.5nm,1.0s,baz=108,slow=3.2,SNR=3.7						
SFJD	Kangerlussuaq	77.31	8	P	P	06 06 56.6	-1.3
	comp=Z,5.1nm,0.4s,baz=220,slow=0.3,SNR=9.9						
YKA	Yellowknife Ar	78.73	341	P	P	06 07 05.0	-0.7
	comp=Z,11nm,0.8s,baz=120,slow=6.0,SNR=15						
YKA				PKKP	PKKPdf	06 25 31.6	-14
	comp=Z,2.9nm,1.1s,baz=59,slow=5.1,SNR=4.9						
ESDC	Sonseca Array	78.79	47	P	P	06 07 07.5	+1.0
	comp=Z,3.8nm,0.6s,baz=259,slow=5.3,SNR=27						
ESDC				PKKP	PKKPdf	06 25 30.8	-14
	comp=Z,5.7nm,1.0s,baz=50,slow=2.7,SNR=11						
QSPA	South Pole Qui	81.07	180	P	P	06 07 18.2	+0.2
QSPA				IAmb	IAmb	06 07 22.7	
	comp=Z,64nm,1.2s						
DLBC	Dease Lake	82.14	333	P	P	06 07 24.2	+0.7
SUMG	Summit	84.20	9	P	P	06 07 34.0	+0.2
SUMG				IAmb	IAmb	06 07 34.9	
	comp=Z,43nm,1.1s						
RES	Resolute Bay	84.84	354	P	P	06 07 35.6	-0.7
	comp=Z,5.4nm,0.7s,baz=84,slow=3.9,SNR=5.2						
EKA	Eskdalemuir Ar	85.30	32	PKKP	PKKPdf	06 25 21.6	-13
	comp=Z,29nm,0.9s,baz=66,slow=4.0,SNR=28						
TSUM	Tsumeb	86.03	109	P	P	06 07 43.1	-0.3
	comp=Z,4.2nm,0.7s,baz=248,slow=19,SNR=5.2						
SCO	Scoresbysund	86.03	15	P	P	06 07 42.7	+0.6
SCO				IAmb	IAmb	06 07 43.2	
	comp=Z,31nm,1.2s						
SUR	Sutherland	86.99	122	P	P	06 07 47.7	-0.2
	comp=Z,10nm,1.0s,baz=248,slow=11,SNR=2.1						
INK	Inuvik	88.50	341	P	P	06 07 53.9	+0.2
	comp=Z,18nm,0.8s,baz=89,slow=2.7,SNR=9.9						
INK				PKKP	PKKPdf	06 25 30.0	+1.1
	comp=Z,1.9nm,0.9s,baz=8.1,slow=2.7,SNR=4.2						
INK	Inuvik	88.50	341	P	P	06 07 54.0	+0.2
VNDA	Vanda	88.65	190	P	P	06 07 55.7	+1.3
VNDA				IAmb	IAmb	06 07 58.8	
	comp=Z,23nm,1.4s						
DAWY	Dawson	88.75	336	P	P	06 07 55.0	-0.1
DAWY				IAmb	IAmb	06 08 09.8	
	comp=Z,43nm,1.4s						
M27K	Edge Creek, AK	89.14	334	P	P	06 07 57.5	+0.4
BCAR	Beaver Creek A	89.36	335	P	P	06 07 58.5	+0.6
BOSA	Boshof	91.41	119	P	P	06 08 07.6	-0.7
	comp=Z,6.1nm,1.0s,baz=234,slow=3.4,SNR=2.4						
ILAR	Eielson Array	92.05	335	P	P	06 08 09.6	-0.6
	comp=Z,1.4nm,0.6s,baz=144,slow=3.7,SNR=7.7						
LBTB	Lobatse	92.40	116	P	P	06 08 12.2	-0.7
	comp=Z,5.3nm,0.8s,baz=284,slow=4.2,SNR=2.6						
GERES	GERESS Array B	93.46	41	P	P	06 08 16.4	-0.7
	comp=Z,2.1nm,0.6s,baz=266,slow=3.5,SNR=5.6						
GERES				PKKP	PKKPdf	06 25 07.8	-12
	comp=Z,0.8nm,0.7s,baz=92,slow=4.9,SNR=4.1						
NB2	NORSAR Subarra	94.23	29	P	P	06 08 20.7	+0.4
	comp=Z,1.0nm,0.6s,baz=258,slow=4.6						
NOA	NORSAR Array B	94.23	29	P	P	06 08 20.7	+0.4
	comp=Z,1.9nm,0.7s,baz=258,slow=4.4,SNR=4.0						
ARCES	ARCESS Array B	100.80	21	PKKPbc	PKKPbc	06 24 58.5	-4.2
	comp=Z,6.5nm,1.1s,baz=137,slow=4.3,SNR=4.0						
FINES	FINESS Array B	101.41	29	PKKPbc	PKKPbc	06 24 57.0	-3.6
	comp=Z,5.0nm,0.8s,baz=159,slow=4.2,SNR=2.6						
AKTO	Aktyubinsk	121.35	35	PKP	PKPdf	06 13 50.5	0.0
	comp=Z,3.9nm,0.6s,baz=350,slow=6.1,SNR=1.5						
BVAR	Borovoye Array	126.34	28	PKP	PKPdf	06 13 59.6	-0.5
	comp=Z,1.5nm,0.5s,baz=276,slow=7.1,SNR=1.7						
STKA	Stephens Creek	128.58	216	PKP	PKPdf	06 14 04.8	-0.2
	comp=Z,6.2nm,0.6s,baz=141,slow=1.4,SNR=5.3						
ZAA0	Zalesovo Array	131.29	19		PKPdf	06 14 09.3	0.0
ZALV	Zalesovo Beam	131.29	19	PKP	PKPdf	06 14 09.4	+0.1
	comp=Z,5.5nm,0.5s,baz=300,slow=3.3,SNR=5.9						
KURBB	Kurchatov Arra	131.63	25	PKP	PKPdf	06 14 10.2	+0.1
	comp=Z,3.0nm,0.6s,baz=313,slow=2.4,SNR=14						
KURBB				SKPbc	SKPbc	06 16 39.0	-1.4
	comp=Z,0.8nm,0.6s,baz=315,slow=4.5,SNR=4.6						
MKAR	Makanchi Array	136.16	26	PKhKP	PKPpre	06 14 08.0	
	comp=Z,0.7nm,0.7s,baz=29,slow=3.3,SNR=0.9						
MKAR				PKP	PKPdf	06 14 18.4	-0.4
	comp=Z,3.4nm,0.7s,baz=312,slow=1.8,SNR=7.4						
ASAR	Alice Springs	139.21	217	PKhKP	PKPpre	06 14 14.9	
	comp=Z,2.5nm,0.9s,baz=144,slow=2.8,SNR=4.7						
ASAR				PKP	PKPdf	06 14 24.3	-0.8
	comp=Z,2.5nm,0.4s,baz=136,slow=1.8,SNR=7.9						
ASAR				SKPbc	SKPbc	06 17 02.2	-2.3
	comp=Z,3.5nm,0.8s,baz=137,slow=4.3,SNR=8.1						
USRK	Ussuriysk Ar.	139.56	334	PKP	PKiKP	06 14 26.5	-1.0
	comp=Z,3.0nm,0.6s,baz=18,slow=1.1,SNR=2.9						
SONM	Songino Array	141.29	2	PKhKP	PKPpre	06 14 23.8	
	comp=Z,2.5nm,0.4s,baz=311,slow=2.2,SNR=12						
SONM				PKP	PKPdf	06 14 29.3	+1.1
	comp=Z,5.2nm,1.0s,baz=292,slow=0.6,SNR=5.1						
WRA	Warramunga Arr	141.70	221	PKhKP	PKPpre	06 14 24.6	
	comp=Z,2.5nm,0.5s,baz=127,slow=2.3,SNR=13						
WRA				PKP	PKPdf	06 14 28.8	-0.8
	comp=Z,4.4nm,0.3s,baz=123,slow=1.9,SNR=26						
WRA				SKPbc	SKPbc	06 17 08.7	-2.3
	comp=Z,5.5nm,0.6s,baz=140,slow=2.4,SNR=15						
MJAR	Matsushiro Arr	141.71	320	PKhKP	PKPpre	06 14 25.0	
	comp=Z,1.8nm,0.4s,baz=77,slow=1.6,SNR=2.4						
NDI	New Delhi	144.55	52	*e*P	PKPdf	06 14 30.0	-4.3
KSRS	Korea Array	146.81	331	PKP	PKPdf	06 14 38.0	+0.2
	comp=Z,22nm,0.7s,baz=28,slow=2.4,SNR=23						
KSRS				PKPbc	PKPbc	06 14 41.0	+0.3
	comp=Z,22nm,0.7s,baz=27,slow=2.3,SNR=24						
CMAR	Chiang Mai Arr	166.69	44	PKP	PKPdf	06 15 03.2	+0.1
	comp=Z,2.0nm,0.6s,baz=287,slow=1.6,SNR=2.4						

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*TUL **26** 05:57:46.3±0.7, 36°.66N±0°.01×98°.46W±0°.02, $h7^{km}\pm 7^{km}$, ML2.6, ML2.5/38(NEIC), Error ellipse: s-maj=2.6km s-min=1.6km az=93.0*

NEIC 26 05:57:46.4±0.9, 36°.66N±0°.02×98°.45W±0°.02, $h11^{km}\pm 6^{km}$, Error ellipse: s-maj=2.6km s-min=1.8km az=220.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK032	Salt Plains WL	0.24	53	Pg	Pg	05 57 51.4	0.0
OK032				Sg	Sg	05 57 55.2	+0.4
CROK	Carrier	0.41	112	Pg	Pg	05 57 54.4	0.0
CROK				Sg	Sg	05 58 00.3	+0.5
CROK				IAML		05 58 02.8	
	comp=E,549nm,0.3s						
CROK				IAML		05 58 04.8	
	comp=N,460nm,0.3s						
KAN14	Manchester OK	0.49	53	Pg	Pg	05 57 55.9	-0.1
KAN14				Sg	Sg	05 58 02.9	+0.3
KAN14				IAML		05 58 03.5	
	comp=N,366nm,0.1s						
KAN14				IAML		05 58 12.0	
	comp=E,382nm,0.1s						
GC02	Grant County #	0.52	68	Pg	Pg	05 57 56.4	-0.1
GC02				Sg	Sg	05 58 03.6	+0.3
U32A	Winter Ranch,	0.52	238	Pg	Pg	05 57 56.3	-0.3
U32A				Sg	Sg	05 58 03.7	+0.3
KAN10	Anthony SW Sta	0.55	32	Pg	Pg	05 57 56.8	-0.3
KAN10				Sg	Sg	05 58 04.6	+0.3
KAN10				IAML		05 58 04.8	
	comp=N,276nm,0.2s						
KAN16	Harper SW Stat	0.65	29	Pg	Pg	05 57 58.7	-0.3
KAN05	Bluff City Nor	0.65	46	Pg	Pg	05 57 58.9	0.0
KAN05				IAML		05 58 11.1	
	comp=E,246nm,0.2s						
KAN05				IAML		05 58 13.2	
	comp=N,262nm,0.2s						
KAN17	Caldwell West	0.67	55	Pg	Pg	05 57 59.2	-0.2
KAN17				Sg	Sg	05 58 08.4	+0.1
KAN08	Anthony NE Sta	0.69	34	Pg	Pg	05 57 59.5	-0.2
KAN08				Sg	Sg	05 58 08.9	+0.1
KAN08				IAML		05 58 09.1	
	comp=N,174nm,0.3s						
KAN12	Harper NE Stat	0.73	30	Pg	Pg	05 58 00.5	-0.1
KAN12				IAML		05 58 15.9	
	comp=N,268nm,0.3s						
KAN12				IAML		05 58 25.7	
	comp=E,311nm,0.4s						
KAN01	Argonia South	0.74	48	Pg	Pg	05 58 00.5	-0.3
KAN01				IAML		05 58 10.9	
	comp=N,185nm,0.3s						
KAN01				IAML		05 58 20.9	
	comp=E,163nm,3.9s						
KAN06	Argonia West S	0.76	39	Pg	Pg	05 58 00.8	-0.3
KAN06				Sg	Sg	05 58 11.1	+0.1
KAN06				IAML		05 58 11.9	
	comp=N,168nm,0.1s						
KAN06				IAML		05 58 18.5	
	comp=E,149nm,0.1s						
KAN09	Caldwell North	0.82	54	Pg	Pg	05 58 02.1	-0.2
KAN13	South Haven SW	0.86	65	Pg	Pg	05 58 02.5	-0.5
KAN13				IAML		05 58 22.6	
	comp=E,213nm,0.3s						
BLOK	Blackwell	1.00	84	Pg	Pg	05 58 05.1	-0.6
OK029	Liberty Lake	1.18	136	Pg	Pb	05 58 08.3	-0.5
OK029				IAML		05 58 24.4	
	comp=E,142nm,0.4s						
OK029				IAML		05 58 27.1	
	comp=E,138nm,0.5s						
BCOK	Bluff Creek, N	1.21	145		Pg	05 58 09.8	+0.1
BCOK				IAML		05 58 27.8	
	comp=E,104nm,0.2s						
BCOK				IAML		05 58 30.7	
	comp=N,79nm,0.2s						
OK033	Mehan	1.37	116	Pn	Pb	05 58 11.9	-0.2
OK025	Westminster Rd	1.40	140	Pn	Pb	05 58 12.6	-0.1
OK031	S. Brethren Rd	1.48	118	Pn	Pn	05 58 13.5	+0.4
QUOK	Quay	1.49	108	Pn	Pb	05 58 13.7	-0.5
OK030	Cody Creek RV	1.53	118	Pn	Pn	05 58 12.8	-1.0
OK034	N. Norfolk Rd.	1.55	114	Pn	Pn	05 58 13.6	-0.3
T35A	Sooner Cattle	1.58	80	Pn	Pn	05 58 14.5	0.0
R32A	Long Quarter,	1.77	353	Pn	Pn	05 58 16.9	-0.2
W35A	Tecumseh	1.97	139	Pn	Pn	05 58 19.8	-0.1
X34A	Smith Ranch, M	2.11	166	Pn	Pn	05 58 22.0	+0.2
X37A	Clayton	3.25	129	Pn	Pn	05 58 38.0	+0.7
Z35A	Perchaven, San	3.46	163	Pn	Pn	05 58 41.9	+1.6
HHAR	Hobbs	3.66	95	Pn	Pn	05 58 44.1	+1.1

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*NEIC **26** 06:01:23.0±1.5, 9°.20S±0°.09×71°.3W±0°.1, $h602^{km}\pm 6^{km}$, mb4.6/63, Error ellipse: s-maj=17.6km s-min=12.7km az=74.0*

*IDC **26** 06:01:23.2±0.5, 9°.17S×71°.28W, $h609^{km}\pm 5^{km}$, mb3.6/24, mb1 3.8/30, mb1mx3.7/49, mbtmp4.6/30, Error ellipse: s-maj=9.7km s-min=7.3km az=56.0*

*VAO **26** 06:01:23.2±0.4, 9°.27S×71°.27W, $h606^{km}\pm 5^{km}$, mb4.8*

*BDF **26** 06:01:26±5.4, 9°.26S±0°.09×70°.8W±0°.1, h591^{km}±6^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=165.0*

ISC 26 06:01:22.9±0.4**, 9°.18S**±0°.05×**71°.28W**±0°.07**, h608**^{km}±5^{km}**, h610**^{km}**:pP-P, n148,** σ**0^{s}.86**/165**, mb4.4**/51**, Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CZSB	Cruzeiro do Su	2.02	315	*e*P	P	06 02 37.9	-0.2
CZSB	Cruzeiro do Su	2.02	315	P	P	06 02 37.8	-0.4
ETMB	Extrema	5.04	98	*e*P	P	06 02 57.1	+0.5
ETMB	Extrema	5.04	98	P	P	06 02 57.1	+0.5
TBTG	Tabatinga, AM	5.14	15	*e*P	P	06 02 58.6	+1.1
TBTG	Tabatinga, AM	5.14	15	P	P	06 02 58.6	+1.1
NNA	Nana	6.14	242	P	P	06 03 05.8	0.0
	6.2nm,0.3s,baz=48,slow=10,SNR=7.7						
NNA				S	S	06 04 28.0	-1.8
	2.0nm,0.3s,baz=266,slow=15,SNR=8.0						
NNA	Nana	6.14	242	P	P	06 03 06.0	+0.3
ATAH	Atahualpa	7.33	286	P	P	06 03 18.1	+1.2
	10.0nm,0.3s,baz=40,slow=4.1,SNR=20						
ATAH				S	S	06 04 50.9	+1.0
	1.9nm,0.3s,baz=333,slow=19,SNR=6.5						
LPAZ	La Paz	7.70	157	P	P	06 03 20.9	+0.4
	2.7nm,0.3s,baz=316,slow=6.8,SNR=20						
LPAZ	La Paz	7.70	157	P	P	06 03 20.5	+0.1
SAML	Samuel	8.00	89	P	P	06 03 23.2	+0.6
PB16	IPOC Station P	9.26	169	P	P	06 03 34.0	-1.2
PB12	IPOC Station P	9.42	174	P	P	06 03 34.6	-1.7
PB11	IPOC Station P	10.64	172	P	P	06 03 47.1	-1.1
TA02	Huaiquique	11.08	174	P	P	06 03 51.6	-1.0
PB08	IPOC Station P	11.09	170	P	P	06 03 52.5	-0.5
VILB	Vilhena	11.50	110	*e*P	P	06 03 57.0	+0.2
VILB	Vilhena	11.50	110	P	P	06 03 57.4	+0.5
SIV	San Ignacio	12.04	125	P	P	06 04 02.4	+0.2
	4.8nm,0.3s,baz=285,slow=9.1,SNR=15						
MACA	Manacapuru-AM	12.11	61	*e*P	P	06 04 02.9	+0.1
MACA	Manacapuru-AM	12.11	61	P	P	06 04 03.0	+0.1
PB07	IPOC Station P	12.55	174	P	P	06 04 06.7	-0.6
PB04	IPOC Station P	13.12	175	P	P	06 04 12.6	-0.4
PTLB	Pontes e Lacer	13.39	119	P	P	06 04 15.9	+0.2
LVC	Limon Verde	13.55	171	P	P	06 04 18.4	+0.9
	3.4nm,0.3s,baz=359,slow=5.7,SNR=27						
LVC				S	S	06 06 42.8	+2.4
	0.6nm,0.3s,baz=284,slow=19,SNR=6.8						
LVC	Limon Verde	13.55	171	*e*P	P	06 04 16.4	-1.0
LVC	Limon Verde	13.55	171		P	06 04 18.6	+1.1
PB06	IPOC Station P	13.55	173	P	P	06 04 17.4	+0.2
PTGA	Pitinga	14.04	54	P	P	06 04 22.5	+0.4
	4.3nm,0.3s,baz=236,slow=12,SNR=10						
PTGA	Pitinga	14.04	54	P	P	06 04 22.7	+0.5
PB15	IPOC Station P	14.06	173	P	P	06 04 21.8	-0.5
PB10	IPOC Station P	14.27	177	P	P	06 04 23.8	-0.3
PDRB	Porto dos Gac	14.51	101	*e*P	P	06 04 25.6	-0.9
CLDB	Colider	15.34	98	*e*P	P	06 04 34.6	+0.6
BOAV	Boa Vista	15.72	43	*e*P	P	06 04 38.6	+1.1
BOAV	Boa Vista	15.72	43	P	P	06 04 38.7	+1.3
NPGB	Novo Progresso	15.90	84	*e*P	P	06 04 40.0	+0.8
ITTB	Itaituba	16.16	74	*e*P	P	06 04 42.5	+1.0
BAUV	El Baul	18.29	10	P	P	06 05 02.4	+1.5
MOTC	Monteria, Cord	18.37	346	P	P	06 05 02.5	+0.8
AQDB	Aquidauana	18.77	128	P	P	06 05 06.0	+0.9
PCRV	Puerto La Cruz	20.33	19	P	P	06 05 20.6	+1.1
	10.0nm,1.0s,baz=15,slow=17,SNR=3.0						
CPUP	Villa Florida	21.59	144	P	P	06 05 29.6	-0.8
	5.2nm,0.7s,baz=321,slow=9.1,SNR=5.5						
CPUP	Villa Florida	21.59	144	P	P	06 05 30.4	-0.1
MDP	Montagnes des	23.38	53	P	P	06 05 45.8	-0.8
	14nm,0.9s,baz=164,slow=16,SNR=3.2						
BDFB	Brasilia	23.60	108	P	P	06 05 49.5	+0.9
	48nm,1.1s,baz=278,slow=11,SNR=10.0						
BDFB	Brasilia	23.60	108	P	P	06 05 49.5	+0.9
MT05	Renca	24.10	179	P	P	06 05 53.5	+0.7
MT09	Talagante	24.48	179	P	P	06 05 56.6	+0.3
ITQB	Itaqui	24.58	148	P	P	06 05 55.9	-1.0
BO01	Tunca	25.09	180	P	P	06 06 01.7	+0.2
BO01				IAmb	IAmb	06 06 02.5	
	comp=Z,14nm,0.8s						
ITAB	Concordia	25.49	137	P	P	06 06 04.5	-0.6
BO02	Sierra Bellavi	25.50	179	P	P	06 06 05.9	+0.8
BO02				IAmb	IAmb	06 06 06.5	
	comp=Z,13nm,0.8s						
MATN	Matagalpa	26.35	326	P	P	06 06 14.3	+1.4
MATN				IAmb	IAmb	06 06 14.9	
	comp=Z,10.0nm,0.9s						
OBIP	Obispado Ponce	27.44	10	P	P	06 06 22.3	+0.1
PLTB	Pedras Altas	27.83	146	*e*P	P	06 06 24.6	-0.8
PLTB	Pedras Altas	27.83	146	P	P	06 06 24.2	-1.2
LC01	Cunco	29.59	181	P	P	06 06 40.4	-0.3
TRQA	Tornquist	29.95	165	P	P	06 06 43.3	-0.4
TRQA				IAmb	IAmb	06 06 44.1	
	comp=Z,18nm,0.9s						
APG	El Apazote	30.64	321	P	P	06 06 51.1	+1.0
	comp=Z,3.2nm,0.4s,baz=134,slow=5.9,SNR=12						
PLCA	Paso Flores	31.43	179	P	P	06 06 56.4	0.0
	comp=Z,12nm,0.6s,baz=352,slow=11,SNR=43						
PLCA				PcP	PcP	06 09 30.7	+0.3
	comp=Z,3.7nm,0.9s,baz=8.1,slow=6.3,SNR=3.6						
PLCA	Paso Flores	31.43	179	*e*P	P	06 06 56.2	-0.2
PLCA	Paso Flores	31.43	179	P	P	06 06 56.7	+0.4
PLCA				IAmb	IAmb	06 06 56.9	
	comp=Z,14nm,0.7s						
LL01	San Ignacio de	33.08	182	P	P	06 07 09.8	-0.3
LL01				IAmb	IAmb	06 07 10.4	
	comp=Z,12nm,0.8s						
CMIG	Matias Romero	35.02	318	P	P	06 07 27.2	+0.6
	comp=Z,11nm,0.4s,baz=138,slow=5.8,SNR=38						
COYC	Coyhaique	36.27	181	P	P	06 07 36.7	+0.2
GO09	Cerro Castillo	41.97	181	P	P	06 08 23.2	+1.1
GO09				IAmb	IAmb	06 08 24.1	
	comp=Z,19nm,0.9s						
EFI	East Falkland	43.73	168	P	P	06 08 36.3	+0.6
GOGA	Godfrey	43.91	345	P	P	06 08 37.3	-0.1
GOGA				IAmb	IAmb	06 08 44.2	
	comp=Z,39nm,1.4s						
Z47A	Carrollton	45.08	340	P	P	06 08 45.6	-0.7
Z47A				IAmb	IAmb	06 09 10.1	
	comp=Z,26nm,1.2s						
USHA	Ushuaia	45.59	178	P	P	06 08 50.8	+0.9
	comp=Z,4.2nm,0.4s,baz=23,slow=15,SNR=5.9						
V52A	Sevierville	46.26	346	P	P	06 08 55.1	-0.2
V52A				IAmb	IAmb	06 09 17.9	
	comp=Z,18nm,1.2s						
T57A	Hurt	46.54	351	P	P	06 08 57.5	+0.2
T57A				IAmb	IAmb	06 09 15.5	
	comp=Z,12nm,1.1s						
MIAR	Mount Ida	48.35	335	P	P	06 09 10.7	-0.2
MIAR				IAmb	IAmb	06 09 34.6	
	comp=Z,31nm,1.5s						
WHAR	Wooly Hollow	48.48	337	P	P	06 09 11.2	-0.6
WHAR				IAmb	IAmb	06 09 22.6	
	comp=Z,24nm,1.3s						
PBMO	Poplar Bluff	49.13	340	P	P	06 09 15.5	-1.1
PBMO				IAmb	IAmb	06 09 17.4	
	comp=Z,13nm,1.2s						
X37A	Clayton	49.15	334	P	P	06 09 17.1	+0.3
X37A				IAmb	IAmb	06 09 17.2	
	comp=Z,34nm,1.4s						
P53A	Whipple	49.32	350	P	P	06 09 18.2	+0.3
P53A				IAmb	IAmb	06 09 18.3	
	comp=Z,24nm,1.2s						
TXAR	Lajitas Array	49.40	322	P	P	06 09 18.6	-0.2
	comp=Z,1.3nm,0.6s,baz=162,slow=9.3,SNR=18						
TXAR				PcP	PcP	06 10 30.2	+0.6
	comp=Z,0.9nm,0.7s,baz=131,slow=3.5,SNR=3.5						
TXAR				ScP	ScP	06 13 27.5	-0.2
	comp=Z,1.5nm,1.0s,baz=143,slow=6.5,SNR=4.8						
TX32	Lajitas Array	49.40	322	P	P	06 09 18.9	+0.1
TX32				IAmb	IAmb	06 09 19.7	
	comp=Z,16nm,1.4s						
SIUC	Southern Illin	49.58	341	P	P	06 09 19.2	-0.6
SIUC				IAmb	IAmb	06 09 19.5	
	comp=Z,12nm,0.5s						
S39A	Bolivar	50.99	337	P	P	06 09 29.2	-0.8
M53A	WI Miller and	51.10	351	P	P	06 09 30.9	+0.1
M53A				IAmb	IAmb	06 09 40.2	
	comp=Z,27nm,1.2s						
N49A	Columbus Grove	51.25	347	P	P	06 09 31.3	-0.6
BINY	Binghamton	51.31	356	P	P	06 09 32.6	+0.2
SFIN	Lafayette	51.43	345	P	P	06 09 31.6	-1.6
SFIN				IAmb	IAmb	06 09 47.9	
	comp=Z,20nm,1.3s						
MNTX	Cornudas Mount	52.12	323	P	P	06 09 38.2	-0.2
MSTX	Muleshoe	52.30	327	P	P	06 09 39.6	-0.1
J47A	Sunmer	53.61	348	P	P	06 09 47.7	-0.9
J47A				IAmb	IAmb	06 10 01.7	
	comp=Z,48nm,1.4s						
SCIA	State Center	54.68	340	P	P	06 09 55.3	-0.9
PMSA	Palmer Station	55.74	176	P	P	06 10 04.0	+0.9
	comp=Z,9.9nm,0.9s,baz=11,slow=7.4,SNR=5.4						
PMSA	Palmer Station	55.74	176	P	P	06 10 04.0	+0.9
PMSA				IAmb	IAmb	06 10 24.0	
	comp=Z,66nm,1.5s						
D62A	Allapoint, All	56.05	2	P	P	06 10 05.8	+0.3
D62A				IAmb	IAmb	06 10 16.9	
	comp=Z,22nm,1.2s						
BATG	Bathurst New B	56.40	4	P	P	06 10 08.2	+0.3
SDCO	Great Sand Dun	56.59	328	P	P	06 10 10.6	+0.7
DRLN	Deer Lake	59.43	10	P	P	06 10 27.9	-0.4
DRLN				IAmb	IAmb	06 10 44.5	
	comp=Z,66nm,1.5s						
EYMN	Ely	59.63	344	P	P	06 10 28.9	-0.7
E28A	Huff	61.41	337	P	P	06 10 42.1	+0.7
E28A				IAmb	IAmb	06 10 42.5	
	comp=Z,17nm,0.5s						
GWY	Greenwater Val	62.11	319	P	P	06 10 46.8	+0.5
PDAR	Pinedale Array	62.38	329	P	P	06 10 48.0	-0.1
	comp=Z,0.8nm,0.4s,baz=121,slow=9.8,SNR=14						
PDAR				pP	pP	06 12 46.0	-0.6
	comp=Z,4.2nm,1.2s,baz=104,slow=6.3,SNR=4.8						
ULM	Lac du Bonnet	62.95	343	P	P	06 10 50.3	-0.9
	comp=Z,5.0nm,0.4s,baz=152,slow=5.7,SNR=8.0						
ULM	Lac du Bonnet	62.95	343	P	P	06 10 50.2	-0.9
NVAR	Mina Array Bea	64.50	320	P	P	06 11 02.0	+0.4
	comp=Z,0.2nm,0.3s,baz=159,slow=8.7,SNR=5.2						
NVAR				pP	pP	06 13 03.0	+1.6
	comp=Z,0.8nm,0.8s,baz=128,slow=5.9,SNR=3.0						
KVN	Kaiserville	64.75	321	P	P	06 11 03.5	+0.4
EGMT	Eagleton	66.33	333	P	P	06 11 12.9	+0.3
EGMT				IAmb	IAmb	06 11 23.9	
	comp=Z,27nm,1.4s						
DBIC	Dimbokro	68.04	79	P	P	06 11 23.8	+0.2
	comp=Z,6.1nm,0.4s,baz=230,slow=1.6,SNR=20						
DBIC	Dimbokro	68.04	79	P	P	06 11 23.5	-0.1
DBIC				IAmb	IAmb	06 11 23.9	
	comp=Z,11nm,0.7s						
WDC	Whiskeytown Da	68.42	320	P	P	06 11 24.4	-1.0
WALA	Waterton Lakes	69.00	331	P	P	06 11 29.2	+0.4
YBH	Yreka Blue Hor	69.17	321	P	P	06 11 29.4	-0.6
	comp=Z,0.7nm,0.3s,baz=332,slow=2.8,SNR=5.5						
KOWA	Kowa	70.72	71	P	P	06 11 39.9	+0.3
	comp=Z,9.1nm,0.5s,baz=213,slow=3.2,SNR=18						
KOWA	Kowa	70.72	71	P	P	06 11 39.8	+0.2
KOWA				IAmb	IAmb	06 11 40.5	
	comp=Z,12nm,0.9s						
EDM	Edmonton	71.70	335	P	P	06 11 44.9	+0.3
EDM				IAmb	IAmb	06 11 50.1	
	comp=Z,19nm,1.5s						
VNA3	Neumayer Olymp	72.43	163	P	P	06 11 48.4	-0.1
VNA1	Neumayer--Stat	72.62	162	P	P	06 11 50.5	+1.0
VNA2	Neumayer--Watz	72.99	162	P	P	06 11 51.6	-0.1
	baz=294,slow=6.2						
SNAA	Sanae	74.62	162	P	P	06 12 00.8	-0.2
SNAA	Sanae	74.62	162	P	P	06 12 00.9	0.0
SNAA				IAmb	IAmb	06 12 01.9	
	comp=Z,14nm,1.1s						
TORD	Torodi Ar. Bea	75.77	74	P	P	06 12 07.8	-0.5
	comp=Z,7.9nm,0.8s,baz=267,slow=5.3,SNR=26						
TORD				pP	pP	06 14 15.7	+2.0
	comp=Z,2.9nm,0.9s,baz=238,slow=4.9,SNR=2.4						
TORD	Torodi Ar. Bea	75.77	74	IAmb	IAmb	06 12 08.9	
	comp=Z,8.5nm,0.9s						
ESDC	Sonseca Array	78.87	47	P	P	06 12 25.7	+1.1
	comp=Z,0.8nm,0.6s,baz=256,slow=5.7,SNR=5.9						
YKA	Yellowknife Ar	78.87	341	P	P	06 12 23.7	-0.2
	comp=Z,2.2nm,0.8s,baz=130,slow=6.5,SNR=7.0						
YKA				pP	pP	06 14 30.4	-0.4
	comp=Z,1.1nm,0.8s,baz=130,slow=7.2,SNR=2.6						
YKA	Yellowknife Ar	78.87	341	P	P	06 12 24.1	+0.1
QSPA	South Pole Qui	80.94	180	P	P	06 12 35.2	+0.3
	comp=Z,17nm,0.7s,baz=170,slow=1.1,SNR=31						
QSPA	South Pole Qui	80.94	180	P	P	06 12 35.4	+0.4
QSPA				IAmb	IAmb	06 12 35.7	
	comp=Z,18nm,0.8s						
DLBC	Dease Lake	82.26	333	P	P	06 12 42.8	+1.0
DLBC				IAmb	IAmb	06 12 58.3	
	comp=Z,19nm,1.4s						
SUMG	Summit	84.33	9	*i* P	P	06 12 51.0	-1.1
SUMG				*i* P	pP	06 14 57.0	-4.2
SUMG	Summit	84.33	9	P	P	06 12 52.2	+0.2
TSUM	Tsumeb	85.97	109	P	P	06 13 00.7	-0.1
	comp=Z,4.9nm,0.8s,baz=274,slow=3.9,SNR=4.3						
VNDA	Vanda	88.52	190	P	P	06 13 12.5	+1.1
	comp=Z,1.5nm,0.7s,baz=120,slow=5.5,SNR=5.3						
INK	Inuvik	88.64	341	P	P	06 13 12.2	+0.2
	comp=Z,4.4nm,0.9s,baz=88,slow=3.8,SNR=4.6						
LBTB	Lobatse	92.33	116	P	P	06 13 29.2	-1.0
	comp=Z,2.5nm,0.8s,baz=204,slow=10.0,SNR=2.3						
GERES	GERESS Array B	93.55	41	P	P	06 13 34.8	-0.4
	comp=Z,0.7nm,0.6s,baz=256,slow=4.0,SNR=3.7						
STKA	Stephens Creek	128.48	216	PKP	PKiKP	06 19 22.2	-0.8
	comp=Z,2.6nm,0.6s,baz=98,slow=22,SNR=3.7						
ZALV	Zalesovo Beam	131.41	19	PKP	PKPdf	06 19 27.2	0.0
	comp=Z,1.9nm,0.5s,baz=301,slow=2.5,SNR=3.6						
ZALV				pPKP	pPKPdf	06 21 46.9	-0.7
	comp=Z,1.5nm,0.6s,baz=270,slow=1.5,SNR=4.5						
ZALV				SKPbc	SKPbc	06 21 56.1	-0.5
	comp=Z,2.5nm,0.5s,baz=312,slow=2.3,SNR=6.0						
KURBB	Kurchatov Arra	131.74	25	PKP	PKiKP	06 19 28.2	-0.8
	comp=Z,0.8nm,0.4s,baz=314,slow=2.5,SNR=5.9						
KURBB				pPKP	pPKPdf	06 21 47.4	-0.9
	comp=Z,1.4nm,0.9s,baz=265,slow=2.0,SNR=4.8						
KURBB				SKPbc	SKPbc	06 21 57.5	-0.3
	comp=Z,1.4nm,1.0s,baz=309,slow=4.8,SNR=4.4						
MKAR	Makanchi Array	136.27	26	PKP	PKPdf	06 19 36.1	-0.5
	comp=Z,1.0nm,0.6s,baz=312,slow=2.0,SNR=4.4						
MKAR				SKPbc	SKPbc	06 22 11.7	-0.9
	comp=Z,1.2nm,0.7s,baz=294,slow=4.2,SNR=3.6						
MKAR	Makanchi Array	136.27	26	PKPdf	PKPdf	06 19 36.5	0.0
NWAO	Narrogin (SRO)	137.35	191		PKPpre	06 19 30.6	
ASAR	Alice Springs	139.11	217	PKhKP	PKPpre	06 19 33.0	
	comp=Z,0.7nm,0.4s,baz=134,slow=3.0,SNR=5.5						
ASAR				PKP	PKPdf	06 19 41.8	-0.8
	comp=Z,1.2nm,0.4s,baz=119,slow=1.9,SNR=6.4						
ASAR				SKPbc	SKPbc	06 22 19.1	-2.4
	comp=Z,1.7nm,0.9s,baz=136,slow=4.1,SNR=4.1						
USRK	Ussuriysk Ar.	139.69	334	SKPbc	SKPbc	06 22 21.2	-0.9
	comp=Z,1.7nm,0.6s,baz=4.4,slow=3.7,SNR=4.3						
SONM	Songino Array	141.43	3	PKhKP	PKPpre	06 19 41.9	
	comp=Z,0.3nm,0.4s,baz=214,slow=1.9,SNR=4.1						
WRA	Warramunga Arr	141.61	221	PKhKP	PKPpre	06 19 41.9	
	comp=Z,2.3nm,0.6s,baz=136,slow=2.7,SNR=23						
WRA				PKP	PKPdf	06 19 46.1	-1.0
	comp=Z,2.4nm,0.4s,baz=136,slow=2.1,SNR=8.0						
WRA				SKPbc	SKPbc	06 22 26.3	-1.7
	comp=Z,1.8nm,0.8s,baz=130,slow=2.6,SNR=6.1						
KSRS	Korea Array	146.93	331	PKPbc	PKPbc	06 19 58.6	-0.1
	comp=Z,8.4nm,0.8s,baz=33,slow=2.2,SNR=13						
FITZ	Fitzroy Crossi	148.16	212	PKP	PKPdf	06 19 58.0	-0.2
	comp=Z,7.5nm,0.5s,baz=256,slow=8.3						
FITZ				PKPbc	PKPbc	06 20 02.1	-0.2
	baz=203,slow=1.3						
JNU	Nakatsue	148.60	323	PKP	PKPdf	06 19 59.1	+0.6
	comp=Z,4.8nm,0.3s,baz=202,slow=0.5,SNR=2.3						
JNU				PKPbc	PKiKP	06 20 03.5	-0.6
	comp=Z,6.2nm,0.4s,baz=228,slow=1.8,SNR=5.0						
CMAR	Chiang Mai Arr	166.77	45	PKP	PKPdf	06 20 19.2	-1.4
	comp=Z,1.4nm,0.3s,baz=297,slow=2.1,SNR=4.3						

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*IDC **26** 06:05:09.1±0.8, 44°.47S×37°.75E, h0^{km}, mb4.4/9, mb1 4.4/11, mb1mx4.1/62, mbtmp4.4/11, ML3.8/2, Error ellipse: s-maj=38.2km s-min=16.6km az=57.0*

*NEIC **26** 06:05:11.8±1.2, 44°.49S±0°.09×37°.1E±0°.2, h10^{km}±1^{km}, mb4.6/23, Error ellipse: s-maj=18.8km s-min=15.5km az=271.0*

ISC 26 06:05:11.5±0.5**, 44°.51S**±0°.08×**37°.19E**±0°.10**, h10**^{km}**, n39,** σ**1^{s}.18**/37**, mb4.6**/19**, Prince Edward Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRZF	Crozet Islands	10.49	106	Pn	Pn	06 07 43.5	+1.8
SUR	Sutherland	17.60	308	P	P	06 09 18.8	+0.8
	0.6nm,0.3s,baz=154,slow=8.8,SNR=7.6						
SUR	Sutherland	17.60	308	P	Pn	06 09 16.1	-0.9
BOSA	Boshof	18.50	325	P	Pn	06 09 28.8	+0.7
	0.1nm,0.3s,baz=160,slow=9.4,SNR=5.1						
BOSA	Boshof	18.50	325	P	P	06 09 26.5	-1.4
LBTB	Lobatse	21.61	330	P	P	06 10 00.8	-0.9
	2.3nm,0.6s,baz=162,slow=9.1,SNR=2.1						
LBTB	Lobatse	21.61	330	IAmb	IAmb	06 10 06.8	
	comp=Z,1.7nm,0.8s						
VOI	Vohitsoka	23.89	22	P	P	06 10 24.1	-1.3
VOI				IAmb	IAmb	06 10 30.4	
	comp=Z,15nm,1.0s						
MAW	Mawson	26.83	158	P	P	06 10 50.4	-1.2
	comp=Z,3.7nm,0.9s,baz=309,slow=7.2,SNR=2.1						
RER	Riviere de l'E	27.89	39	P	P	06 11 03.3	+1.6
TSUM	Tsumeb	30.07	321	P	P	06 11 24.2	+3.1
	comp=Z,4.6nm,0.9s,baz=146,slow=15,SNR=2.9						
TSUM	Tsumeb	30.07	321	P	P	06 11 19.8	-1.3
TSUM				IAmb	IAmb	06 11 28.2	
	comp=Z,7.9nm,1.1s						
LSZ	Lusaka	30.12	342	P	P	06 11 21.7	+0.2
	comp=Z,7.6nm,0.8s,baz=168,slow=7.7,SNR=6.4						
LSZ	Lusaka	30.12	342	P	P	06 11 21.1	-0.5
LSZ				IAmb	IAmb	06 11 26.8	
	comp=Z,8.2nm,0.9s						
SNAA	Sanae	33.28	202	P	P	06 11 48.7	0.0
SNAA				IAmb	IAmb	06 11 56.9	
	comp=Z,6.1nm,1.1s						
QSPA	South Pole Qui	45.71	180	P	P	06 13 31.6	-0.9
	comp=Z,3.8nm,0.9s,baz=190,slow=3.4,SNR=2.2						
QSPA	South Pole Qui	45.71	180	P	P	06 13 32.2	-0.3
QSPA				IAmb	IAmb	06 13 38.5	
	comp=Z,5.7nm,0.8s						
SBA	Scott Base	54.11	168	P	P	06 14 36.9	+0.9
SBA				IAmb	IAmb	06 14 44.7	
	comp=Z,8.2nm,1.1s						
ATD	Arta Tunnel	56.00	7	P	P	06 14 49.9	-0.4
H10S2	ASCENSION HYDR	56.98	292	T	T	07 16 57.3	
	baz=135,slow=74,SNR=105						
H10S3	ASCENSION HYDR	57.00	292	T	T	07 16 58.5	
	baz=85,slow=74,SNR=180						
NWAO	Narrogin (SRO)	61.19	109	P	P	06 15 27.6	+1.3
TORD	Torodi Ar. Bea	65.82	322	P	P	06 15 57.9	+0.9
	comp=Z,2.8nm,0.8s,baz=166,slow=3.7,SNR=5.9						
COYC	Coyhaique	70.65	225	P	P	06 16 28.0	+0.9
COYC				IAmb	IAmb	06 16 38.2	
	comp=Z,1.9nm,0.7s						
ITAB	Concordia	71.00	250	P	P	06 16 29.7	+0.2
ITAB				IAmb	IAmb	06 16 33.6	
	comp=Z,3.0nm,0.7s						
PLCA	Paso Flores	73.24	229	P	P	06 16 43.8	+0.9
	comp=Z,2.6nm,0.9s,baz=138,slow=5.9,SNR=3.4						
PLCA	Paso Flores	73.24	229	P	P	06 16 42.8	0.0
TOO	Toolangi	75.78	129	P	P	06 16 57.9	+0.4
TOO				IAmb	IAmb	06 17 01.1	
	comp=Z,9.3nm,1.1s						
STKA	Stephens Creek	77.54	122	P	P	06 17 05.3	-2.3
	comp=Z,7.6nm,0.9s,baz=82,slow=2.1,SNR=3.1						
ASAR	Alice Springs	78.34	112	P	P	06 17 09.1	-3.1
	comp=Z,6.5nm,0.9s,baz=232,slow=3.4,SNR=7.8						
ITM	Ithomi	82.47	348	P	P	06 17 34.2	+0.4
KBL	Kabul	83.83	26	P	P	06 17 41.0	-0.1
KBL				IAmb	IAmb	06 17 41.6	
	comp=Z,7.1nm,0.8s						
GYA0B	ALIBECK ARRAY	84.21	16	P	P	06 17 43.0	+0.2
GYA0B				IAmb	IAmb	06 17 46.4	
	comp=Z,5.2nm,0.7s						
AGG	Agios Georgios	84.22	348	P	P	06 17 42.6	-0.2
AGG				IAmb	IAmb	06 17 53.9	
	comp=Z,4.8nm,0.9s						
NIL	Nilore	84.42	30	P	P	06 17 43.3	-0.7
GAR	Garm	88.33	25	P	P	06 18 02.9	-0.2
BKZ	Black Stump Fm	88.99	150	P	P	06 18 06.8	+0.3
BKZ				IAmb	IAmb	06 18 16.7	
	comp=Z,6.3nm,1.1s						
TXAR	Lajitas Array	145.59	257	PKPbc	PKPdf	06 24 49.8	-0.3
	comp=Z,5.3nm,0.9s,baz=140,slow=4.2,SNR=8.5						
A36M	Sachs Harbour	151.18	349	PKPdf	PKPdf	06 24 57.5	-0.2
A36M					PKiKP	06 25 04.6	+0.5

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*IDC **26** 06:21:44.1±0.8, 1°.56N×126°.48E, h0^{km}, mb4.0/7, mb1 4.1/7, mb1mx3.7/53, mbtmp4.0/7, Error ellipse: s-maj=79.9km s-min=17.3km az=69.0*

*NEIC **26** 06:21:49.3±2.8, 1°.70N±0°.10×126°.60E±0°.07, h31^{km}±6^{km}, mb4.2/14, Error ellipse: s-maj=15.3km s-min=8.6km az=210.0*

*DJA **26** 06:21:49.2±0.3, 1°N±4°×12°6E±°, h10^{km}, M4.0/8, mb4.2/3, MLv4.0/8*

ISC 26 06:21:50.5±0.7**, 1°.53N**±0°.09×**126°.46E**±0°.08**, h47**^{km}**, n36,** σ**1^{s}.42**/37**, mb4.1**/15**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.18	130	P	Pn	06 22 10.5	-0.1
TNTI	Ternate	1.18	130		Pn	06 22 10.0	-0.6
LBMI	Labuha	2.39	154	P	Pn	06 22 27.0	-0.3
KMSI	Cibinong	2.65	249	P	Pn	06 22 29.8	-1.0
GTOI	Gorontalo	3.56	256	P	Pn	06 22 43.0	-0.3
LUWI	Luwuk	4.48	235	Pn	Pn	06 22 58.9	+2.9
MRSI	Marisa	4.64	257	P	Pn	06 22 57.5	-0.6
TOLI2	Tolitoli	5.69	266	Pn	Pn	06 23 11.1	-1.5
MPSI	Mapaga	6.67	260	P	Pn	06 23 27.2	+1.3
	0.1nm10.0nm,2.0s						
BNSI	Bone	8.66	227	P	Pn	06 23 49.7	-3.6
	16nm,0.8s						
MYLDM	Lahad Datu	8.73	295		Pn	06 23 54.3	0.0
KAPI	Kappang	9.33	226	Pn	Pn	06 24 04.3	+1.7
WB0	Warramunga Arr	22.55	160	P	P	06 26 46.0	-0.9
WB0				IAmb	IAmb	06 26 48.5	
	comp=Z,6.1nm,0.6s						
COEN	Coen	22.61	133	P	P	06 26 43.8	-3.8
COEN				IAmb	IAmb	06 27 12.3	
	comp=Z,10nm,1.3s						
WRAB	Tennant Creek	22.69	160	P	P	06 26 47.5	-0.8
WRAB				IAmb	IAmb	06 26 52.3	
	comp=Z,5.2nm,0.7s						
WRA	Warramunga Arr	22.70	160	P	P	06 26 47.5	-0.9
	comp=Z,2.6nm,0.3s,baz=337,slow=11,SNR=69						
WRA	Warramunga Arr	22.70	160	P	P	06 26 46.7	-1.7
WB2	Warramunga Arr	22.70	160	P	P	06 26 47.5	-0.9
WB2				IAmb	IAmb	06 26 52.3	
	comp=Z,5.3nm,0.8s						
WR0	Warramunga Arr	22.78	160	P	P	06 26 48.1	-1.2
WR0				IAmb	IAmb	06 26 54.1	
	comp=Z,11nm,1.5s						
PSA00	Pilbara Seismi	23.85	195	P	P	06 26 58.5	-1.2
AS31	Alice Springs	26.07	164	P	P	06 27 21.8	+1.9
ASAR	Alice Springs	26.07	164	P	P	06 27 19.9	0.0
	comp=Z,1.4nm,0.4s,baz=345,slow=11,SNR=19						
ASAR				PcP	PcP	06 30 47.4	+0.5
	comp=Z,0.3nm,0.3s,baz=0.0,slow=2.1,SNR=4.1						
BBOO	Buckleboo	35.34	166	P	P	06 28 41.5	0.0
STKA	Stephens Creek	36.19	158	P	P	06 28 49.0	+0.2
	comp=Z,1.5nm,0.6s,baz=336,slow=13,SNR=5.1						
MK31	Makanchi Array	59.21	326	P	P	06 31 46.9	0.0
MK31				IAmb	IAmb	06 31 54.4	
	comp=Z,1.4nm,0.9s						
MKAR	Makanchi Array	59.21	326	P	P	06 31 46.7	-0.2
	comp=Z,0.6nm,0.3s,baz=126,slow=8.2,SNR=8.4						
MKAR	Makanchi Array	59.21	326	P	P	06 31 46.5	-0.5
MAKZ	Makanchi	59.39	326	P	P	06 31 49.5	+1.3
MAKZ				IAmb	IAmb	06 31 53.3	
	comp=Z,2.4nm,1.1s						
KURBB	Kurchatov Arra	63.44	328	P	P	06 32 15.6	+0.2
	comp=Z,0.9nm,0.5s,baz=125,slow=6.1,SNR=7.2						
KURK	Kurchatov	63.45	328	P	P	06 32 15.5	+0.1
NRIK	Noril'sk	72.49	346	P	P	06 33 12.8	+0.8
	comp=Z,1.6nm,0.6s,baz=109,slow=1.7,SNR=3.6						
ABKAR	Akbulak array	73.68	321	P	P	06 33 19.7	+0.4
RAYN	Ar Rayn	81.10	293	P	P	06 34 01.6	+0.1
RAYN				IAmb	IAmb	06 34 02.1	
	comp=Z,3.8nm,1.1s						
VNDA	Vanda	81.29	173	P	P	06 34 04.1	+2.7
ILAR	Eielson Array	87.19	25	P	P	06 34 31.6	0.0
	comp=Z,0.2nm,0.7s,baz=242,slow=4.4,SNR=5.6						
ILAR	Eielson Array	87.19	25	P	P	06 34 30.4	-1.2

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*INET **26** 06:25:04.3, 12°.87N×88°.94W, h15^{km}, ML3.2, MW3.0*

*SNET **26** 06:25:04.9±0.8, 12°.90N×88°.93W, h32^{km}±2^{km}, ML3.7*

*UCR **26** 06:25:04.8±0.8, 12°.89N×88°.94W, h31^{km}±3^{km}, ML3.7*

ISC 26 06:25:04.4±2.4**, 12°.8N**±0°.1×**88°.93W**±0°.05**, h35**^{km}**, n58,** σ**0^{s}.28**/66**, 2C-27D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALJI	Alcalda de J	0.60	36	⇓*i*P	Pn	06 25 16.5	0.0
ALJI				*e*S	Sn	06 25 25.0	0.0
ALJI				IAML		06 25 25.6	
	comp=Z,2µm,0.2s						

ALJI	Alcalda de J	0.60	36	⇓iP	Pn	06 25 16.5	0.0
ALJI				eS	Sn	06 25 25.0	0.0
ALJI				IAML		06 25 25.6	
	comp=Z,2µm,0.2s						
LALI	Alcalda de L	0.75	330	⇓iP	Pn	06 25 18.3	-0.2
LALI				eS	Sn	06 25 28.1	-0.5
LALI	Alcalda de L	0.75	330	⇓iP	Pn	06 25 18.3	-0.2
LALI				eS	Sn	06 25 28.1	-0.5
COEB	Comit de Eme	0.77	31	⇓iP	Pn	06 25 18.7	-0.1
COEB				IAML		06 25 32.4	
	comp=Z,2µm,0.3s						
COEB	Comit de Eme	0.77	31	⇓iP	Pn	06 25 18.7	-0.1
COEB				IAML		06 25 32.4	
	comp=Z,2µm,0.3s						
SJTE	Alcalda de S	0.78	355	⇓eP	Pn	06 25 18.4	-0.5
SJTE				eS	Sn	06 25 29.5	+0.1
SJTE	Alcalda de S	0.78	355	⇓eP	Pn	06 25 18.4	-0.5
SJTE				eS	Sn	06 25 29.5	+0.1
COEG	Centro de Oper	0.78	4	⇓iP	Pn	06 25 18.6	-0.4
COEG				IAML		06 25 35.2	
	comp=Z,925nm,0.3s						
COEG	Centro de Oper	0.78	4	⇓iP	Pn	06 25 18.6	-0.4
COEG				IAML		06 25 35.2	
	comp=Z,925nm,0.3s						
LFRS	El Faro	0.79	351	iP	Pn	06 25 18.8	-0.4
LFRS	El Faro	0.79	351	iP	Pn	06 25 18.8	-0.4
UESV	Universidad de	0.81	10	⇓iP	Pn	06 25 19.3	-0.1
UESV	Universidad de	0.81	10	⇓iP	Pn	06 25 19.3	-0.1
PQSS	Presa 15 de Se	0.86	25	iP	Pn	06 25 20.5	+0.5
PACA	Pacayal	0.87	43	eP	Pn	06 25 20.3	+0.1
PACA	Pacayal	0.87	43	eP	Pn	06 25 20.3	+0.1
PAVA	Las Pavas	0.87	360	⇓eP	Pn	06 25 20.2	-0.1
PAVA	Las Pavas	0.87	360	⇓eP	Pn	06 25 20.2	-0.1
SCLA	Alcaldia de Sa	0.88	13	⇓eP	Pn	06 25 20.7	+0.3
SCLA	Alcaldia de Sa	0.88	13	⇓eP	Pn	06 25 20.7	+0.3
SNET	Serv Nac Est T	0.89	341	⇓iP	Pn	06 25 20.4	-0.2
SNET				IAML		06 25 20.8	
	comp=Z,2µm,0.2s						
SNET				eS	Sn	06 25 32.2	-0.2
SNET	Serv Nac Est T	0.89	341	⇓iP	Pn	06 25 20.4	-0.2
SNET				IAML		06 25 20.8	
	comp=Z,2µm,0.2s						
SNET				eS	Sn	06 25 32.2	-0.2
ITCA	Escuela Especi	0.90	338	⇑iP	Pn	06 25 20.6	0.0
ITCA	Escuela Especi	0.90	338	⇑iP	Pn	06 25 20.6	0.0
IGN	Direccin Gen	0.90	345	eP	Pn	06 25 20.5	-0.1
IGN	Direccin Gen	0.90	345	eP	Pn	06 25 20.5	-0.1
LBRS	Las Brisas	0.90	353	iP	Pn	06 25 20.9	+0.2
LBRS	Las Brisas	0.90	353	iP	Pn	06 25 20.9	+0.2
OPAM	Oficina de Pla	0.91	344	iP	Pn	06 25 20.7	-0.1
OPAM	Oficina de Pla	0.91	344	iP	Pn	06 25 20.7	-0.1
LFU	La Fuente	0.92	349	iP	Pn	06 25 21.0	+0.1
LFU	La Fuente	0.92	349	iP	Pn	06 25 21.0	+0.1
UEES	Universidad Ev	0.92	341	iP	Pn	06 25 20.9	-0.1
UEES	Universidad Ev	0.92	341	iP	Pn	06 25 20.9	-0.1
JAYA	Jayaque - finc	0.96	328	⇓iP	Pn	06 25 21.3	-0.2
JAYA				IAML		06 25 34.6	
	comp=Z,14µm,0.2s						
JAYA	Jayaque - finc	0.96	328	⇓iP	Pn	06 25 21.3	-0.2
JAYA				IAML		06 25 34.6	
	comp=Z,14µm,0.2s						
CNRM	Centro Naciona	0.98	49	eP	Pn	06 25 21.6	0.0
CNRM	Centro Naciona	0.98	49	eP	Pn	06 25 21.6	0.0
CEDA	San Andres	1.06	335	eP	Pn	06 25 22.8	0.0
CEDA	San Andres	1.06	335	eP	Pn	06 25 22.8	0.0
LCND	La Caada	1.12	65	⇓eP	Pn	06 25 23.5	-0.1
LCND	La Caada	1.12	65	⇓eP	Pn	06 25 23.5	-0.1
CNCH	Conchagua	1.16	68	eP	Pn	06 25 24.3	+0.1
CNCH	Conchagua	1.16	68	eP	Pn	06 25 24.3	+0.1
TACO	Tacachico	1.20	340	⇓eP	Pn	06 25 24.8	0.0
TACO	Tacachico	1.20	340	⇓eP	Pn	06 25 24.8	0.0
SNJE	San Jose	1.22	328	eP	Pn	06 25 25.3	+0.2
SNJE	San Jose	1.22	328	eP	Pn	06 25 25.3	+0.2
RTR	El Retiro	1.26	327	iP	Pn	06 25 26.2	+0.5
RTR	El Retiro	1.26	327	iP	Pn	06 25 26.2	+0.5
UNIC	Universidad Ca	1.29	332	iP	Pn	06 25 26.4	+0.4
UNIC	Universidad Ca	1.29	332	iP	Pn	06 25 26.4	+0.4
LLGN	La Laguna	1.32	360	iP	Pn	06 25 27.0	+0.6
LLGN	La Laguna	1.32	360	iP	Pn	06 25 27.0	+0.6
SLOZ	Alcaldia de Sa	1.44	325	⇓eP	Pn	06 25 28.6	+0.5
MTO3	Montecristo	1.61	345	⇓iP	Pn	06 25 31.0	+0.5
MTO3	Montecristo	1.61	345	⇓iP	Pn	06 25 31.0	+0.5

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*TUL **26** 06:58:36.6±1.2, 36°.17N±0°.01×97°.35W±0°.02, h7^{km}±6^{km}, ML2.6, mb_Lg2.4/13(NEIC), Error ellipse: s-maj=1.9km s-min=1.6km az=83.0*

NEIC 26 06:58:36.6±1.1**, 36°.18N**±0°.01×**97°.36W**±0°.02**, h6**^{km}±6^{km}**, Error ellipse: s-maj=2.0km s-min=1.6km az=84.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK033	Mehan	0.36	112		Pg	06 58 42.9	-0.7
OK029	Liberty Lake	0.39	192		Pg	06 58 44.2	0.0
OK029				Sg	Sg	06 58 49.8	+0.5
OK031	S. Brethren Rd	0.48	118		Pg	06 58 45.7	-0.1
OK031				Sg	Sg	06 58 52.3	+0.4
QUOK	Quay	0.52	91		Pg	06 58 46.6	-0.1
QUOK				Sg	Sg	06 58 53.9	+0.4
OK030	Cody Creek RV	0.53	118	Pg	Pg	06 58 46.8	+0.1
OK030				Sg	Sg	06 58 54.0	+0.4
OK034	N. Norfolk Rd.	0.55	108	Pg	Pg	06 58 47.1	0.0
BCOK	Bluff Creek, N	0.56	202		Pg	06 58 47.4	0.0
BCOK				Sg	Sg	06 58 55.2	+0.5
BLOK	Blackwell	0.59	11	Pg	Pg	06 58 47.9	0.0
BLOK				Sg	Sg	06 58 56.1	+0.4
OK025	Westminster Rd	0.60	179		Pg	06 58 48.1	0.0
OK025				Sg	Sg	06 58 56.4	+0.6
CROK	Carrier	0.60	303		Pg	06 58 48.0	-0.2
CROK				Sg	Sg	06 58 56.7	+0.7
OKCFA	Oklahoma City	0.77	186		Pg	06 58 51.1	-0.2
OKCFA				Sg	Sg	06 59 01.6	+0.4
OKCSW	OKLAHOMA CITY	0.78	185		Pg	06 58 51.2	-0.2
GC02	Grant County #	0.78	329		Pg	06 58 51.7	0.0
GC02				Sg	Sg	06 59 02.3	+0.5
KAN13	South Haven SW	0.84	353	Pg	Pg	06 58 52.5	-0.1
KAN13				IAmb_Lg		06 59 03.2	
	comp=Z,33nm,0.9s						
KAN14	Manchester OK	0.92	328	Pg	Pg	06 58 54.1	-0.1
KAN14				Sg	Sg	06 59 06.3	+0.2
FNO	Franklin	0.92	182		Pg	06 58 53.9	-0.3
KAN17	Caldwell West	0.92	339	Pg	Pg	06 58 53.9	-0.4
OK032	Salt Plains WL	0.93	312		Pg	06 58 54.3	-0.1
KAN09	Caldwell North	0.98	348	Pg	Pg	06 58 55.1	-0.3
T35A	Sooner Cattle	1.00	42		Pg	06 58 55.5	-0.3
W35A	Tecumseh	1.10	159		Pg	06 58 56.7	-0.9
KAN10	Anthony SW Sta	1.11	328	Pg	Pg	06 58 57.8	-0.2
KAN08	Anthony NE Sta	1.16	335	Pg	Pg	06 58 58.2	-0.5
KAN16	Harper SW Stat	1.19	332		Pg	06 58 58.9	-0.5
KAN12	Harper NE Stat	1.23	335	Pn	Pg	06 58 59.5	-0.6
TUL1	Leonard	1.29	102	Pn	Pn	06 58 59.8	-1.4
U32A	Winter Ranch,	1.34	279		Pn	06 59 01.5	-0.5
X34A	Smith Ranch, M	1.62	194		Pn	06 59 06.2	+0.4
WMOK	Wichita Mounta	1.85	219		Pn	06 59 09.4	+0.4
X37A	Clayton	2.27	134	Pn	Pn	06 59 15.3	+0.6
X37A				IAmb_Lg		06 59 53.9	
	comp=Z,15nm,1.0s						
W39A	Magazine	3.07	108	IAmb_Lg		07 00 17.3	
	comp=Z,13nm,0.8s						
S39A	Bolivar	3.57	64		Pb	06 59 40.7	+0.6
S39A				IAmb_Lg		07 00 34.8	
	comp=Z,8.5nm,0.9s						
U40A	Yellville	3.64	86		Pb	06 59 42.0	+0.6
X40A	Basin Creek Fa	4.06	113	IAmb_Lg		07 00 49.1	
	comp=Z,9.3nm,0.9s						
237A	Washetta, Mont	4.36	162		Pg	06 59 59.0	-1.2
KSCO	Kaye Shedlock'	5.05	306	IAmb_Lg		07 01 28.3	
	comp=Z,7.0nm,0.8s						
L34A	Svendsen Farm,	5.83	7	IAmb_Lg		07 01 44.4	
	comp=Z,11nm,0.7s						

NOU 26 07:08:28.6, 21°.61S×170°.42E, h0^{km}**, mb4.0**/7**, Southeast of Loyalty Islands, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	Mare, Loyalty	2.23	273	P	Pn	07 09 07.1	+0.3
PINNC	Pines Island,	2.93	250	P	Pn	07 09 16.5	0.0
LIFNC	LIFOU	3.08	285	P	Pn	07 09 18.6	+0.1
YATNC	Mamie plateau,	3.31	262	P	Pn	07 09 21.5	-0.2
OUENC	Ouen Island, N	3.42	256	P	Pn	07 09 23.1	-0.1
DZM	Mont Dzumac	3.72	262	P	Pn	07 09 27.3	-0.2
KOUNC	Koumac, New Ca	5.82	279	P	Pn	07 09 55.9	-0.4

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*TUL **26** 07:15:54.1±1.1, 36°.59N±0°.02×97°.78W±0°.01, h3^{km}±8^{km}, ML2.6, mb_Lg2.4/16(NEIC), Error ellipse: s-maj=3.2km s-min=1.6km az=187.0*

NEIC 26 07:15:54.4±0.5**, 36°.57N**±0°.02×**97°.79W**±0°.02**, h5**^{km}±7^{km}**, Error ellipse: s-maj=2.9km s-min=1.1km az=46.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CROK	Carrier	0.17	248	Pg	Pg	07 15 58.3	+0.5
GC02	Grant County #	0.29	348	Pg	Pg	07 15 60.0	0.0
KAN14	Manchester OK	0.41	340		Pg	07 16 02.3	-0.1
OK032	Salt Plains WL	0.41	305	Pg	Pg	07 16 02.4	0.0
BLOK	Blackwell	0.50	67	Pg	Pg	07 16 03.9	0.0
KAN13	South Haven SW	0.51	29	Pg	Pg	07 16 04.1	-0.1
KAN01	Argonia South	0.58	2	IAmb_Lg		07 16 13.0	
	comp=Z,42nm,0.9s						
KAN10	Anthony SW Sta	0.60	336	Pg	Pg	07 16 05.8	-0.2
OK029	Liberty Lake	0.82	161	Pg	Pg	07 16 10.2	+0.1
OK033	Mehan	0.86	127		Pg	07 16 11.2	+0.3
BCOK	Bluff Creek, N	0.92	171	Pg	Pg	07 16 12.2	+0.2
QUOK	Quay	0.96	114		Pg	07 16 12.8	+0.1
OK031	S. Brethren Rd	0.98	129	Pg	Pg	07 16 13.3	0.0
OK031				IAmb_Lg		07 16 24.9	
	comp=Z,25nm,0.9s						
U32A	Winter Ranch,	1.00	259		Pg	07 16 13.2	-0.3
OK025	Westminster Rd	1.05	160	Pg	Pg	07 16 14.6	0.0
T35A	Sooner Cattle	1.08	71		Pg	07 16 14.7	-0.5
OKCFA	Oklahoma City	1.18	167		Pg	07 16 17.0	-0.1
OKCSW	OKLAHOMA CITY	1.20	166		Pg	07 16 17.2	-0.2
FNO	Franklin	1.35	166	Pn	Pn	07 16 19.7	-0.2
W35A	Tecumseh	1.60	152		Pn	07 16 23.6	+0.3
TUL1	Leonard	1.74	112		Pn	07 16 25.9	+0.5
TUL1				IAmb_Lg		07 16 52.4	
	comp=Z,23nm,0.9s						
WMOK	Wichita Mounta	2.00	204		Pn	07 16 29.6	+0.7
X37A	Clayton	2.79	134	IAmb_Lg		07 17 24.8	
	comp=Z,10.0nm,0.7s						
Z35A	Perchaven, San	3.26	172	IAmb_Lg		07 17 37.2	
	comp=Z,13nm,0.7s						
MIAR	Mount Ida	3.98	119	IAmb_Lg		07 18 06.1	
	comp=Z,8.6nm,0.8s						
KSCO	Kaye Shedlock'	4.54	304	IAmb_Lg		07 18 27.9	
	comp=Z,7.3nm,0.8s						
JCT	Junction City	6.30	196	IAmb_Lg		07 19 27.0	
	comp=Z,5.6nm,0.8s						

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*TAP **26** 07:16:49.0, 24°.79N×122°.21E, h15^{km}, ML3.1, C*

*JMA **26** 07:16:49.9±0.1, 24°.71N×122°.19E, h12^{km}*

ISC 26 07:16:49.1±0.9**, 24°.76N**±0°.02×**122°.21E**±0°.02**, h12**^{km}±8^{km}**, n69, σ0^s.52**/128**, 2C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EGS		0.27	289	P	Pg	07 16 54.8	+0.1
	baz=277						
EGS				S	Sg	07 16 59.1	+0.7
	baz=277						
TWB1	Santiao Chiao	0.32	321	P	Pg	07 16 54.9	-0.7
	baz=317						
TWB1				S	Sg	07 16 58.7	-1.3
	baz=317						
NTC	Toucheng	0.36	286	P	Pg	07 16 56.5	+0.2
	baz=281						
NTC				S	Sb	07 17 02.8	-0.3
	baz=281						
TWC	Suao	0.36	246	⇑iP	Pg	07 16 56.5	+0.1
	baz=241						
TWC				iS	Sg	07 17 01.3	+0.1
	baz=241						
TIPB	Shuangxi	0.41	302	iP	Pg	07 16 57.0	-0.3
	baz=301						
TIPB				iS	Sg	07 17 03.0	+0.3
	baz=301						
ILA	Ilan	0.42	271	P	Pg	07 16 57.6	+0.1
	baz=267						
ILA				eS	Sg	07 17 03.7	+0.6
	baz=267						
NDS	Dongshan	0.47	255	P	Pg	07 16 58.7	+0.4
	baz=246						
NDS				S	Sg	07 17 04.9	+0.4
	baz=246						
TWE	Neicheng	0.49	266	iP	Pg	07 16 58.9	0.0
	baz=256						
TWE				S	Sg	07 17 05.6	+0.2
	baz=256						
NWF	Wu-fen Shan	0.50	309	P	Pg	07 16 59.3	+0.3
	baz=305						
NWF				iS	Sg	07 17 05.4	-0.2
	baz=305						
WFSB	Wu-fen Shan	0.50	309	P	Pg	07 16 58.9	0.0
	baz=305						
WFSB				S	Sg	07 17 05.8	+0.3
	baz=305						
EWUT	Wuta	0.50	232	P	Pb	07 16 59.5	-0.4
	baz=231						
EWUT				S	Sb	07 17 06.3	-0.9
	baz=231						
ENA	Nanau	0.54	233	P	Pg	07 16 59.9	+0.3
	baz=226						
ENA				S	Sg	07 17 07.0	+0.2
	baz=226						
TNOU	National Taiwa	0.56	315	eP	Pg	07 16 60.0	-0.1
	baz=311						
TNOU				eS	Sb	07 17 08.6	-0.2
	baz=311						
ENTT	Nioudou	0.60	259	P	Pb	07 17 01.7	+0.1
	baz=256						
ENTT				S	Sg	07 17 09.0	+0.3
	baz=256						
TWA	Mucha	0.61	291	iP	Pb	07 17 02.4	+0.6
	baz=279						
TWA				iS	Sb	07 17 10.6	+0.3
	baz=279						
NWLT	Wulai	0.64	272	P	Pg	07 17 01.9	+0.3
	baz=269						
NWLT				S	Sb	07 17 11.8	+0.5
	baz=269						
NDT	Datong Townshi	0.65	256	iP	Pb	07 17 02.4	-0.1
	baz=261						
NDT				iS	Sb	07 17 11.3	-0.3
	baz=261						
NHDH	Xindian Distri	0.65	288	iP	Pb	07 17 03.3	+0.8
	baz=279						
NHDH				S	Sb	07 17 12.4	+0.8
	baz=279						
TAP	Taipei	0.70	294	eP	Pg	07 17 03.1	+0.4
	baz=292						
TAP				eS	Sb	07 17 12.9	0.0
	baz=292						
YM01	YM01	0.70	304	P	Pg	07 17 03.0	+0.3
	baz=301						
YM01				S	Sb	07 17 12.8	-0.1
	baz=301						
TWY	Chenhua	0.76	313	P	Pg	07 17 03.8	0.0
	baz=311						
TWY				S	Sb	07 17 14.5	0.0
	baz=311						
ANP	Anpu	0.76	304	eP	Pg	07 17 03.4	-0.4
	baz=302						
YHNB	Yeheng	0.76	264	P	Pg	07 17 04.0	0.0
	baz=262						
YHNB				eS	Sg	07 17 14.2	+0.2
	baz=262						
NSK	Sanguang	0.78	264	P	Pg	07 17 04.3	+0.1
	baz=263						
NSK				S	Sg	07 17 13.9	-0.5
	baz=263						
YOJ	Yonaguni jima	0.79	112	P	Pg	07 17 04.8	+0.5
	baz=113						
YOJ				S	Sb	07 17 15.8	+0.4
	baz=113						
YOJ	Yonaguni jima	0.79	112	P	Pg	07 17 04.9	+0.5
YOJ				eS	Sg	07 17 15.3	+0.6
TWS1	Kuangyinshan	0.80	296	eP	Pg	07 17 04.5	0.0
	baz=294						
TWS1				eS	Sb	07 17 16.1	+0.4
	baz=294						
ETL	Fush Village	0.80	222	P	Pg	07 17 04.7	+0.1
	baz=222						
ETL				S	Sb	07 17 16.2	+0.4
	baz=222						
NTST	Danshui	0.80	301	eP	Pg	07 17 04.6	0.0
	baz=309						
NTST				eS	Sb	07 17 16.4	+0.6
	baz=309						
NACB	Ninganchiao	0.81	224	⇑P	Pg	07 17 04.8	0.0
	baz=224						
NACB				S	Sb	07 17 15.8	-0.2
	baz=224						
NNSB	Datong	0.82	247	P	Pb	07 17 05.3	-0.1
	baz=237						
NNSB				S	Sb	07 17 16.5	0.0
	baz=237						
NNS	Nan Shan	0.82	248	iP	Pb	07 17 05.4	-0.1
	baz=238						
NNS				iS	Sb	07 17 16.4	-0.3
	baz=238						
ETLH	Xiulin Townshi	0.86	231	P	Pg	07 17 05.8	0.0
	baz=222						
ETLH				S	Sg	07 17 16.9	-0.1
	baz=222						
TWD	Chiawan	0.88	220	P	Pg	07 17 05.6	-0.5
	baz=228						
TWD				eS	Sb	07 17 17.9	-0.1
	baz=228						
PCYT	Pengchaiyu	0.88	352	P	Pg	07 17 04.8	-1.3
	baz=349						
PCYT				iS	Sg	07 17 17.7	+0.1
	baz=349						
NCU	National Centr	0.95	283	eP	Pg	07 17 07.7	+0.1
	baz=282						
NCU				eS	Sg	07 17 20.6	+0.6
	baz=282						
HWA	Hwalien	0.95	215	eP	Pn	07 17 08.0	-0.3
	baz=224						
HWA				eS	Sn	07 17 22.1	+0.2
	baz=224						
FUSS	Fushou	1.02	240	eP	Pn	07 17 09.2	-0.3
	baz=240						
FUSS				eS	Sn	07 17 23.3	-0.5
	baz=240						
WHF	Hehuan Shan	1.05	235	iP	Pg	07 17 09.8	+0.3
	baz=235						
WHF				iS	Sn	07 17 24.3	-0.8
	baz=235						
TWT	Tachien	1.07	242	P	Pn	07 17 10.4	+0.3
	baz=233						
TWT				S	Sn	07 17 24.7	-0.3
	baz=233						
TDCB	Techi	1.08	243	P	Pb	07 17 09.7	-0.2
	baz=233						
TDCB				S	Sg	07 17 24.5	+0.4
	baz=233						
LIOB	Emei	1.09	264	iP	Pg	07 17 10.9	+0.7
	baz=264						
LIOB				eS	Sn	07 17 25.9	+0.5
	baz=264						
NSTT	Nanjuang	1.11	264	P	Pg	07 17 10.8	+0.3
	baz=264						
NSTT				S	Sn	07 17 25.8	+0.1
	baz=264						
HSN	Hsinchu	1.13	273	eP	Pb	07 17 09.3	-1.3
	baz=292						
HSN				eS	Sg	07 17 25.4	-0.1
	baz=292						
CHGB	Renai	1.17	234	P	Pg	07 17 11.8	+0.1
	baz=235						
CHGB				S	Sn	07 17 28.1	+0.5
	baz=235						
ESL	Shilin	1.18	217	eP	Pg	07 17 11.7	-0.1
	baz=225						
ESL				eS	Sg	07 17 27.0	-0.1
	baz=225						
OWD	Renai	1.24	230	eP	Pg	07 17 13.2	+0.3
	baz=231						
OWD				S	Sg	07 17 29.4	+0.4
	baz=231						
WHP	Taichung City	1.25	248	P	Pg	07 17 13.8	+0.7
	baz=248						
WHP				S	Sg	07 17 29.8	+0.4
	baz=248						
NMLH	Miaoli	1.31	261	eP	Pg	07 17 14.3	0.0
	baz=261						
NMLH				eS	Sg	07 17 34.3	+2.9
	baz=261						
TWQ1	Liyutan	1.37	253	eP	Pn	07 17 14.1	-0.1
	baz=254						
TWQ1				eS	Sb	07 17 32.6	+0.4
	baz=254						
WCS	Beigang Elemen	1.37	240	eP	Pn	07 17 14.3	+0.1
	baz=247						
WCS				eS	Sg	07 17 33.1	-0.3
	baz=247						
IRIF	Iriomote-Funau	1.45	107	P	Pn	07 17 15.7	+0.5
IRIF				eS	Sb	07 17 35.0	+0.6
HGSD	Ruisui	1.45	210	eP	Pb	07 17 15.8	-0.3
	baz=197						
HGSD				eS	Sb	07 17 34.9	+0.4
	baz=197						
SMLT	Sun Moon Lake	1.48	234	eP	Pb	07 17 17.1	+0.5
	baz=235						
SMLT				eS	Sg	07 17 37.1	+0.3
	baz=235						
EHY	Hungye	1.49	213	eP	Pn	07 17 15.7	0.0
	baz=215						
EHY				eS	Sg	07 17 36.3	-0.7
	baz=215						
SSLB	Suanglung	1.50	230	P	Pg	07 17 17.7	-0.2
	baz=238						
SSLB				eS	Sb	07 17 36.4	+0.5
	baz=238						
TYC	Yuchr	1.50	236	eP	Pg	07 17 17.9	-0.1
	baz=236						
TYC				eS	Sg	07 17 37.0	-0.4
	baz=236						
YULB	Yu-li	1.59	212	eP	Pb	07 17 18.0	-0.6
	baz=214						
YULB				eS	Sb	07 17 38.2	-0.5
	baz=214						
YUS	Yu-Shan	1.71	223	eP	Pb	07 17 20.6	-0.2
	baz=223						
FULB	Fuli	1.76	209	eP	Pb	07 17 20.8	-0.7
	baz=226						
FULB				eS	Sb	07 17 42.7	-0.9
	baz=226						
ALS	Alishan	1.79	226	eP	Pb	07 17 22.3	+0.3
	baz=210						
JIJ	Ishigaki jima	1.80	102	P	Pb	07 17 21.7	-0.4
JIJ				eS	Sb	07 17 45.0	+0.3
CHN5	Tsauling	1.81	231	eP	Pb	07 17 23.2	+0.8
	baz=230						
EDH	Donghe	1.96	205	eP	Pn	07 17 21.3	-1.0
	baz=194						
CHN4	Tsaushan	2.04	227	eP	Pb	07 17 25.3	-0.8
	baz=226						
TPUB	Ta-pu	2.05	225	eP	Pb	07 17 26.0	-0.3
	baz=210						
WTP	Ta-pu	2.10	224	eP	Pb	07 17 26.6	-0.6
	baz=210						
TWGBT	Beinan	2.19	208	eP	Pn	07 17 25.6	+0.2
	baz=197						
CHN1	Nanshi	2.19	225	eP	Pb	07 17 27.9	-0.9
	baz=224						

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*IDC **26** 07:34:49.5±0.7, 44°.46S×37°.74E, h0^{km}, mb4.4/11, mb1 4.5/13, mb1mx4.2/29, mbtmp4.4/13, ML3.9/2, MS4.3/10, Ms1 4.3/10, ms1mx3.9/43, Error ellipse: s-maj=25.4km s-min=15.6km az=57.0*

*NEIC **26** 07:34:51.9±1.2, 44°.5S±0°.1×37°.7E±0°.2, h10^{km}±1^{km}, mb4.8/31, Error ellipse: s-maj=20.5km s-min=17.1km az=63.0*

ISC 26 07:34:51.5±0.4**, 44°.47S**±0°.07×**37°.6E**±0°.1**, h10**^{km}**, n80, σ0^s.92**/69**, mb4.7**/26**, MS4.2**/8**, 2C, Prince Edward Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUR	Sutherland	17.82	307	P	Pn	07 38 59.2	-0.6
	0.8nm,0.3s,baz=135,slow=14,SNR=10						
SUR				LR	LR	07 44 22.2	
	comp=Z,592nm,21.1s,baz=156,slow=32						
SUR	Sutherland	17.82	307	Pn	Pn	07 38 59.4	-0.4
BOSA	Boshof	18.65	324	P	P	07 39 09.4	-0.1
	0.1nm,0.3s,baz=147,slow=12,SNR=6.2						
BOSA				LR	LR	07 45 03.3	

	comp=Z,1μm,21.0s,baz=152,slow=33						
BOSA	Boshof	18.65	324	P	Pn	07 39 09.7	-0.1
LBTB	Lobatse	21.73	329	P	P	07 39 43.4	+0.4
	5.3nm,0.9s,baz=196,slow=9.2,SNR=4.0						
LBTB				LR	LR	07 47 06.3	
	comp=Z,612nm,19.1s,baz=134,slow=34						
LBTB	Lobatse	21.73	329	P	P	07 39 44.8	+1.8
SYO	Syowa Base	24.63	178	⇑eP	P	07 40 11.4	-0.3
SYO	Syowa Base	24.63	178	⇑ePnPn	PnPn	07 40 42.0	-1.0
MATP	Matopo	25.14	340	LR	LR	07 48 25.7	
	comp=Z,415nm,21.5s,baz=164,slow=32						
MAW	Mawson	26.75	159	P	P	07 40 36.5	+5.6
	4.1nm,0.9s,baz=293,slow=10,SNR=5.4						
MAW				LR	LR	07 48 32.3	
	comp=Z,609nm,21.4s,baz=7.0,slow=31						
OPO	Ambohidratompo	27.04	20	LR	LR	07 49 26.3	
	comp=Z,420nm,19.9s,baz=32,slow=32						
LSZ	Lusaka	30.18	342	P	P	07 41 01.7	-0.3
	4.5nm,0.7s,baz=165,slow=8.1,SNR=7.3						
LSZ	Lusaka	30.18	342	P	P	07 41 01.1	-1.0
LSZ				IAmb	IAmb	07 41 03.4	
	comp=Z,17nm,1.4s						
SNAA	Sanae	33.43	202	P	P	07 41 30.7	+0.6
SNAA	Sanae	33.43	202	P	P	07 41 30.6	+0.6
	comp=Z,2.3nm,0.9s,baz=51,slow=5.8,SNR=8.2						
SNAA	Sanae	33.43	202	P	P	07 41 30.6	+0.6
VNA2	Neumayer--Watz	34.34	204	P	P	07 41 38.8	+0.8
	baz=56,slow=10						
VNA1	Neumayer--Stat	34.48	205	P	P	07 41 38.6	-0.5
VNA3	Neumayer Olymp	35.15	204	P	P	07 41 44.8	-0.1
MSEY	Mahe Island	42.63	27	P	P	07 42 47.5	-0.6
MSEY				IAmb	IAmb	07 43 07.2	
	comp=Z,18nm,1.2s						
KMBO	Kilima Mbogo	43.16	359	LR	LR	07 58 44.0	
	comp=Z,449nm,21.5s,baz=132,slow=33						
QSPA	South Pole Qui	45.75	180	P	P	07 43 11.9	-0.9
	comp=Z,6.1nm,0.9s,baz=254,slow=3.1,SNR=20						
QSPA	South Pole Qui	45.75	180	P	P	07 43 11.9	-0.9
QSPA				IAmb	IAmb	07 43 12.8	
	comp=Z,8.9nm,0.9s						
VNDA	Vanda	53.58	167	P	P	07 44 11.5	-0.5
	comp=Z,2.7nm,1.1s,baz=245,slow=8.8,SNR=4.0						
VNDA				LR	LR	08 06 18.0	
	comp=Z,529nm,18.8s,baz=246,slow=35						
VNDA	Vanda	53.58	167	P	P	07 44 12.2	+0.2
H10S2	ASCENSION HYDR	57.25	292	T	T	08 46 37.9	
	baz=134,slow=74,SNR=83						
H10S3	ASCENSION HYDR	57.27	292	T	T	08 46 39.1	
	baz=86,slow=74,SNR=154						
TORD	Torodi Ar. Bea	65.98	321	P	P	07 45 37.9	-0.2
	comp=Z,3.1nm,1.0s,baz=168,slow=5.7,SNR=7.9						
TORD	Torodi Ar. Bea	65.98	321	P	P	07 45 38.3	+0.2
TORD				IAmb	IAmb	07 45 41.4	
	comp=Z,6.7nm,1.2s						
RAYN	Ar Rayn	68.04	8	P	P	07 45 52.2	+1.2
BBOO	Buckleboo	73.26	120	P	P	07 46 22.4	-0.7
PLCA	Paso Flores	73.50	229	P	P	07 46 24.0	-0.4
	comp=Z,3.2nm,1.0s,baz=96,slow=9.2,SNR=4.3						
PLCA	Paso Flores	73.50	229	IAmb	IAmb	07 46 24.8	
	comp=Z,16nm,1.5s						
BDFB	Brasilia	76.14	262	P	P	07 46 39.7	-0.3
	comp=Z,3.6nm,0.9s,baz=202,slow=5.4,SNR=3.8						
BDFB	Brasilia	76.14	262	IAmb	IAmb	07 46 49.6	
	comp=Z,8.5nm,1.4s						
STKA	Stephens Creek	77.30	122	P	P	07 46 45.8	-0.5
	comp=Z,6.0nm,0.8s,baz=196,slow=3.7,SNR=6.3						
STKA	Stephens Creek	77.30	122	P	P	07 46 45.8	-0.5
ASAR	Alice Springs	78.06	111	P	P	07 46 49.5	-1.2
	comp=Z,5.6nm,0.9s,baz=220,slow=5.4,SNR=28						
ASAR	Alice Springs	78.06	111	P	P	07 46 49.9	-0.8
AS31	Alice Springs	78.07	111	P	P	07 46 49.6	-1.1
ZON	Zonda	78.94	237	P	P	07 46 55.4	0.0
ZON				IAmb	IAmb	07 46 58.4	
	comp=Z,11nm,1.3s						
WRA	Warramunga Arr	80.92	109	P	P	07 47 05.6	-0.6
	comp=Z,5.2nm,1.0s,baz=221,slow=4.6,SNR=20						
WRA	Warramunga Arr	80.92	109	P	P	07 47 05.8	-0.4
WRAB	Tennant Creek	80.93	109	P	P	07 47 06.2	-0.1
WRAB				IAmb	IAmb	07 47 06.7	
	comp=Z,11nm,1.1s						
WB0	Warramunga Arr	81.07	109	P	P	07 47 06.7	-0.4
WB0				IAmb	IAmb	07 47 07.2	
	comp=Z,8.4nm,1.1s						
HRA	Herat	81.61	20	P	P	07 47 09.5	-0.2
HRA				IAmb	IAmb	07 47 10.5	
	comp=Z,8.8nm,0.9s						
SIRT	Sirnak	81.71	4	P	P	07 47 11.0	+1.1
AC02	Maricunga	82.58	240	P	P	07 47 16.4	+0.8
AC02				IAmb	IAmb	07 47 34.9	
	comp=Z,9.3nm,1.3s						
GURO	Guroymak-BITLI	82.73	3	P	P	07 47 16.4	+1.1
GURO				IAmb	IAmb	07 47 17.9	
	comp=Z,11nm,1.4s						
KOLN	Koldanda	83.26	40	eP	P	07 47 18.0	-0.4
KBL	Kabul	83.66	26	P	P	07 47 20.2	-0.1
KBL				IAmb	IAmb	07 47 23.3	
	comp=Z,11nm,1.3s						
DMN	Daman	83.83	41	eP	P	07 47 20.4	-1.0
DANN	Dangsing	83.83	40	eP	P	07 47 20.5	-0.9
	comp=Z,72nm,1.3s						
KEST	Kesra	83.85	337	LR	LR	08 25 20.2	
	comp=Z,406nm,22.0s,baz=160,slow=36						
CMAR	Chiang Mai Arr	83.89	57	P	P	07 47 20.9	-0.7
PKI	Pulchoki	83.94	41	eP	P	07 47 21.4	-0.6
GKN	Gorkha	83.94	41	eP	P	07 47 21.4	-0.4
	comp=Z,12nm,0.5s						
RAMN	Ramite	83.98	43	eP	P	07 47 22.0	-0.2
PTLB	Pontes e Lacer	84.06	254	P	P	07 47 22.6	-0.1
PTLB				IAmb	IAmb	07 47 25.1	
	comp=Z,5.6nm,1.1s						
GEYT	Alibeck	84.09	16	P	P	07 47 22.2	+0.1
CHTO	Chiang Mai	84.16	57	P	P	07 47 22.4	-0.5
CHTO				IAmb	IAmb	07 47 22.6	
	comp=Z,8.8nm,1.2s						
NIL	Nilore	84.24	29	P	P	07 47 22.7	-0.3
ODAN	Odare	84.30	43	eP	P	07 47 23.4	-0.3
JIRN	Jiri	84.38	42	eP	P	07 47 24.2	-0.1
	comp=Z,46nm,1.2s						
GUN	Gumba	84.44	42	eP	P	07 47 24.4	-0.2
CHGR	Chuyangaron	87.51	24	P	P	07 47 39.3	+0.1
KBZ	Khabaz	87.94	4	LR	LR	08 27 11.8	
	comp=Z,99nm,18.6s,baz=326,slow=36						
KKAR	Karatay Array	92.00	23	P	P	07 47 59.9	-0.2
BURAR	Bucovina Array	92.34	352	P	P	07 48 02.6	+1.0
BURAR				IAmb	IAmb	07 48 06.3	
	comp=Z,4.7nm,1.4s						
WMQ	Urumqi	98.57	34	eP	Pdif	07 48 32.0	+1.9
LZH	Lanzhou	100.11	49	eP	Pdif	07 48 37.0	-0.3
LZH				pP	pP	07 48 40.3	+0.1
LZH				pmax	pmax		
	comp=Z,18nm,1.4s						
ABTX	Abilene, Hawle	144.92	265		PKPbc	07 54 28.1	+0.1
I37A	Lemond, Waseca	145.33	287		PKPbc	07 54 28.6	-0.3
WMOK	Wichita Mounta	145.39	269		PKPbc	07 54 29.3	-0.1
HPIG		145.79	252	PKPdf	PKPdf	07 54 30.6	0.0
TX31	Lajitas Ar. Si	145.90	257		PKPdf	07 54 30.8	+0.2
TX32	Lajitas Array	145.90	257		PKPdf	07 54 30.6	0.0
TXAR	Lajitas Array	145.90	257	PKPbc	PKPdf	07 54 30.6	-0.1
	comp=Z,4.9nm,1.0s,baz=136,slow=4.9,SNR=26						
TXAR	Lajitas Array	145.90	257	PKPdf	PKPdf	07 54 30.7	+0.1
MSTX	Muleshoe	147.86	265		PKPbc	07 54 36.5	-0.3

*IDC **26** 07:35:55.8±1.1, 43°.66N×127°.85W, h0^{km}, mb3.8/10, mb1 4.0/18, mb1mx3.9/38, mbtmp3.8/18, ML3.3/7, Error ellipse: s-maj=24.2km s-min=11.0km az=44.0*

*ANF **26** 07:35:58.6±1.5, 43°.59N×127°.75W, h10^{km}, ML3.8/16, Error ellipse: s-maj=14.4km s-min=9.2km az=74.0*

*NEIC **26** 07:36:00.4±2.0, 43°.71N±0°.07×127°.6W±0°.1, h10^{km}±2^{km}, mb4.3/19, Error ellipse: s-maj=16.7km s-min=8.9km az=234.0*

ISC 26 07:35:58.8±0.7**, 43°.63N**±0°.05×**127°.82W**±0°.07**, h10**^{km}**, n163, σ1^{s}40**/167**, mb4.0**/13**, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEBM	Edson Butte	2.66	105		Pn	07 36 38.8	-2.9
J01E	Myrtle Point	2.88	98	P	Pn	07 36 41.8	-2.8
	baz=283,SNR=44						
J01E				S	Sn	07 37 16.7	-2.5
	baz=283						
I02E	Swisshome, OR	2.92	79	P	Pn	07 36 42.6	-2.6
	baz=263,SNR=109						
KBO	Bosley Butte	3.00	117	Pn	Pn	07 36 47.6	+1.2
K02D	Willamette Mer	3.18	106	P	Pn	07 36 45.8	-3.2
	baz=291,SNR=68						
K02D				S	Sn	07 37 25.7	-1.3
	baz=291						
I03D	Drain, OR	3.25	87	P	Pn	07 36 47.3	-2.4
	baz=272,SNR=357						
I03D				S	Sn	07 37 28.5	0.0
	baz=272						
HEBO	Mount Hebo	3.32	60		Pn	07 36 49.3	-1.5
DBO	Dodson Butte	3.38	97		Pn	07 36 49.8	-1.8
COR	Corvallis	3.39	72	Pn	Pn	07 36 50.4	-1.3
L02E	Cave Junction	3.43	114	P	Pn	07 36 50.3	-2.0
	baz=299,SNR=16						
BUCK	Buck Mountain	3.54	79	Pn	Pn	07 36 52.8	-1.1
G03D	McMinnville, O	3.63	63	P	Pn	07 36 53.6	-1.4
	baz=246,SNR=92						
G03D				S	Sn	07 37 39.6	+1.7
	baz=246						
HUMO	Hull Mountain	3.71	104	Pn	Pn	07 36 54.1	-2.0
H04D	Lebanon	3.77	75	P	Pn	07 36 55.9	-1.1
	baz=259,SNR=20						
I04A	Tendick Farm,	3.93	86	P	Pn	07 36 58.2	-0.9
	baz=270,SNR=100						
JCC	Jacoby Creek,	3.98	134	Pn	Pn	07 37 00.0	+0.3
RADR	Rader Ridge	3.99	44		Pn	07 36 58.4	-1.6
H04A	Detroit Lake	4.19	73		Pn	07 37 01.7	-1.1
E03A	Lebam	4.20	44	Pn	Pn	07 37 01.2	-1.6
F04D	Rainier, OR	4.21	53	P	Pn	07 37 02.2	-0.8
	baz=236,SNR=24						
F04D				S	Sn	07 37 53.9	+1.7
	baz=236						
YBH	Yreka Blue Hor	4.22	115	Pn	Pn	07 37 02.4	-0.8
	0.6nm,0.3s,baz=301,slow=13,SNR=17						
YBH				Sn	Sn	07 37 53.0	+0.4
	0.3nm,0.3s,baz=180,slow=11,SNR=1.9						
YBH	Yreka Blue Hor	4.22	115		Pn	07 37 03.0	-0.2
L04D	Klamath Falls	4.29	107	P	Pn	07 37 04.2	-0.1
	baz=293,SNR=42						
L04D				S	Sn	07 37 53.9	-0.5
	baz=293						
F04A	Amboy	4.48	57		Pn	07 37 06.4	-0.4
WISH	Wishkah	4.51	38		Pn	07 37 05.9	-1.2
K04D	Chiloquin, OR	4.55	101	P	Pn	07 37 08.5	+0.7
	baz=286						
KMRM	Mail Ridge	4.58	137	Pn	Pn	07 37 09.3	+1.1
NLWA	Neilton Lookou	4.68	35	Pn	Pn	07 37 08.1	-1.4
HOOD	Mount Hood Mea	4.73	67		Pn	07 37 09.5	-0.8
I05D	Terrebonne, OR	4.73	79	P	Pn	07 37 09.2	-1.0
	baz=264,SNR=16						
E04D	Cinebar	4.74	50	P	Pn	07 37 09.1	-1.1
	baz=233,SNR=57						
E04D				S	Sn	07 38 05.6	+0.5
	baz=233						
M04C	Macdoel	4.78	111	P	Pn	07 37 11.7	+0.7
	baz=296						
J05D	Fort Rock, OR	4.81	92	P	Pn	07 37 11.0	-0.3
	baz=277,SNR=15						
C03A	Quillayute Air	4.88	27	Pn	Pn	07 37 10.6	-1.6
G05D	Wamic, OR	4.93	69	P	Pn	07 37 12.6	-0.4
	baz=253,SNR=53						
WDC	Whiskeytown Da	4.97	126	Pn	Pn	07 37 14.6	+1.1
PINE	Pine Mountain	4.99	86	Pn	Pn	07 37 13.1	-0.9
D04E	Lakebay	5.03	43	P	Pn	07 37 14.0	-0.1
	baz=226,SNR=15						
D04E				S	Sn	07 38 15.1	+2.9
	baz=226						
F05D	White Salmon	5.06	61	P	Pn	07 37 14.6	-0.1
	baz=246,SNR=35						
F05D				S	Sn	07 38 15.8	+2.6
	baz=246						
D03D	Eldon	5.13	39	P	Pn	07 37 14.6	-1.0
	baz=221,SNR=6.4						
D03D				S	Sn	07 38 13.7	-1.1
	baz=221						
K05A	Summer Lake	5.15	98	Pn	Pn	07 37 15.6	-0.5
B04A	Port Angeles	5.36	33		Pn	07 37 17.9	-0.9
D05A	Enumclaw	5.43	47		Pn	07 37 19.7	-0.1
OZB	Mount Ozzard	5.57	16	Pn	Pn	07 37 21.6	-0.1
O03E	Paynes Creek	5.59	125	P	Pn	07 37 25.3	+3.2
	baz=310						
PGC	Sidney	5.87	30		Pn	07 37 24.2	-1.5
I07A	Izee	6.03	83	Pn	Pn	07 37 27.3	-0.8
F07A	Phinny Hill Vi	6.06	65		Pn	07 37 27.2	-1.2
B05A	Bryant	6.12	39	P	Pn	07 37 28.5	-0.7
	baz=222,SNR=8.6						
B05A				S	Sn	07 38 38.6	-0.5
	baz=222						
LTY	Liberty	6.20	52		Pn	07 37 30.5	0.0
ORV	Oroville	6.25	129		Pn	07 37 33.8	+2.8
C06D	Leavenworth	6.47	46	P	Pn	07 37 34.2	+0.1
	baz=231,SNR=14						
C06D				S	Sn	07 38 48.6	+0.6
	baz=231						
HAWA	Hanford	6.49	62	Pn	Pn	07 37 34.2	-0.1
G08A	Pilot Rock	6.56	72	Pn	Pn	07 37 34.3	-1.1
CBB	Campbell River	6.62	14		Pn	07 37 36.1	-0.1
E08A	Dider Farm, El	6.83	62		Pn	07 37 38.6	-0.4
HOLB	Holberg	7.02	358	Pn	Pn	07 37 42.2	+0.6
D08A	Wollman Farm,	7.15	58	Pn	Pn	07 37 43.2	-0.1
B08A	Colville Reser	7.57	48		Pn	07 37 47.8	-1.3
BMO	Blue Mountains	7.65	77		Pn	07 37 49.7	-0.6
PNTR	Pine Nut	7.67	123		Pn	07 37 52.5	+1.8
C09A	Chrisman Ranch	7.88	55		Pn	07 37 52.9	-0.4
YERR	Yerington	7.95	123		Pn	07 37 57.5	+2.9
LLLB	Lillooet	8.07	28	Pn	Pn	07 37 57.2	+1.2
BBB	Bella Bella	8.56	359	Pn	Pn	07 38 01.8	-0.9
	0.9nm,0.3s,baz=195,slow=8.7,SNR=9.1						
BBB	Bella Bella	8.56	359	Pn	Pn	07 38 03.1	+0.4
NEW	Newport	8.78	54	Pn	Pn	07 38 04.9	-0.8
	1.8nm,0.3s,baz=242,slow=12,SNR=23						
NEW	Newport	8.78	54	P	Pn	07 38 04.8	-1.0
	baz=242						
NVAR	Mina Array Bea	8.87	123	Pn	Pn	07 38 07.4	+0.2
	0.1nm,0.3s,baz=298,slow=13,SNR=10						
HG4B	Hotspring	8.96	347	Pn	Pn	07 38 11.0	+2.9
HLID	Hailey	9.73	86	P	Pn	07 38 21.0	+2.1
	baz=275						
ELK	Elko	9.78	103	Pn	Pn	07 38 21.8	+2.2
	0.1nm,0.3s,baz=315,slow=11,SNR=5.4						
VES	Vestal, Richgr	10.28	136	P	Pn	07 38 28.0	+1.7
	baz=323						
MSO	Missoula	10.30	67	P	Pn	07 38 26.4	-0.3
	baz=257						
CWC	Cottonwood Cre	10.36	131	P	Pn	07 38 31.8	+4.3
	baz=318						
DLMT	Dillon	11.02	76	Pn	Pn	07 38 36.9	+0.3
WALA	Waterton Lakes	11.04	56		Pn	07 38 37.0	+0.2
DUG	Dugway, Tooele	11.70	102	P	Pn	07 38 52.9	+7.1
	baz=292						
BOZ	Bozeman (W)	11.71	75	P	Pn	07 38 47.8	+1.8
	baz=266						
BOZ	Bozeman (W)	11.71	75		Pn	07 38 45.7	-0.3
QLMT	Earthquake Lak	11.83	78		Pn	07 38 48.6	+0.9
ECR	Eagle Creek	12.00	87		Pn	07 38 51.2	+1.2
YHL	Hebgen Lake	12.00	78		Pn	07 38 50.5	+0.4
SHPR	Sheep Range	12.02	122		Pn	07 38 52.9	+2.7
YMR	Madison River	12.16	79		Pn	07 38 53.3	+1.1
YHH	Holmes Hill	12.24	79		Pn	07 38 53.9	+0.6
TPAW	Teton Pass	12.25	85	Pn	Pn	07 38 52.8	-0.6
MOOW	Moose Ponds	12.37	84	Pn	Pn	07 38 55.1	+0.1
FLWY	Flagg Ranch	12.37	82	Pn	Pn	07 38 54.9	-0.2
PDAR	Pinedale Array	13.36	87	Pn	Pn	07 39 09.8	+1.2
	0.0nm,0.3s,baz=283,slow=13,SNR=6.8						
DLBC	Dease Lake	14.89	355	Pn	Pn	07 39 28.7	-0.5
	0.1nm,0.3s,baz=195,slow=14,SNR=4.1						
O20A	White River Ci	15.00	97	P	P	07 39 38.1	+1.7
	baz=290						
LAO	LASA Array	15.54	71	P	Pn	07 39 38.6	+0.8
LAO				IAmb	IAmb	07 39 51.0	
	comp=Z,22nm,1.0s						
MVCO	Mesa Verde	16.04	107	P	P	07 39 49.9	+1.9
	baz=300						
W18A	Petrified Fore	16.34	115	P	P	07 39 51.2	-0.1
W18A				IAmb	IAmb	07 39 58.6	
	comp=Z,18nm,1.3s						
N23A	Red Feather La	16.42	92	P	Pn	07 39 49.0	-0.5
	baz=287						
ISCO	Idaho Springs	17.01	95	P	P	07 40 00.5	+1.7
	baz=291						
DGMT	Dagmar	17.08	65	P	P	07 40 00.4	+1.2
	baz=262						
DGMT	Dagmar	17.08	65	P	P	07 39 58.9	-0.3
DGMT				IAmb	IAmb	07 40 09.2	
	comp=Z,56nm,1.4s						
RSSD	Black Hills	17.15	80	P	P	07 40 01.9	+1.6
	baz=277						
RSSD	Black Hills	17.15	80	P	P	07 40 00.6	+0.3
RSSD				IAmb	IAmb	07 40 05.8	
	comp=Z,22nm,1.4s						
Q24A	Divide	17.65	98	P	P	07 40 05.9	0.0
	baz=293						
SDCO	Great Sand Dun	17.90	102	P	P	07 40 09.3	+0.6
	baz=297						
SDCO	Great Sand Dun	17.90	102	P	P	07 40 08.8	+0.1
TGTN	Hyland Airport	17.93	359	P	P	07 40 10.1	+1.5
	baz=178						
ANMO	Albuquerque	18.64	111	P	P	07 40 16.7	0.0
	comp=Z,0.1nm,0.3s,baz=258,slow=8.0,SNR=4.1						
ANMO	Albuquerque	18.64	111	P	Pn	07 40 18.2	+1.2
	baz=305						
ANMO	Albuquerque	18.64	111	P	P	07 40 16.7	0.0
BNM	Barren Site	18.98	113	P	Pn	07 40 22.6	+1.4
M31M	Drury Creek, Y	19.00	351	P	Pn	07 40 20.8	-0.3
	baz=165						
319A	Douglas	19.08	124	P	Pn	07 40 22.6	+0.3
319A				IAmb	IAmb	07 40 29.7	
	comp=Z,10nm,0.9s						
KSCO	Kaye Shedlock’	19.45	95	P	Pn	07 40 28.1	+1.4
	baz=292						
WRGLY	Wrigley	19.80	6	P	Pn	07 40 31.5	+1.0
	baz=189						
FFC	Flin Flon	20.09	47	P	P	07 40 32.9	+0.6
FFC				IAmb	IAmb	07 40 35.6	
	comp=Z,51nm,1.2s						
YKA	Yellowknife Ar	20.42	18	P	P	07 40 34.9	-0.9
	comp=Z,1.4nm,0.8s,baz=200,slow=11,SNR=6.1						
SUSD	Miller	20.73	78	P	Pn	07 40 42.6	+0.9
	baz=278						
BCAR	Beaver Creek A	21.09	342	P	P	07 40 42.5	-0.5
MNTX	Cornudas Mount	21.31	116	P	P	07 40 47.3	+1.5
	baz=311						
MNTX	Cornudas Mount	21.31	116	P	P	07 40 47.8	+2.1
DAWY	Dawson	21.52	346	P	P	07 40 47.8	+0.1
AMTX	Amarillo	21.98	105	P	P	07 40 54.1	+1.2
	baz=302						
R32A	Long Quarter,	22.51	93	P	P	07 40 58.2	-0.3
R32A				IAmb	IAmb	07 41 08.0	
	comp=Z,28nm,1.4s						
ECSD	EROS Data Cent	22.51	79	P	P	07 40 59.6	+1.1
	baz=281						
ULM	Lac du Bonnet	22.68	62	P	P	07 40 58.8	-1.3
	comp=Z,4.8nm,0.9s,baz=260,slow=13,SNR=2.7						
EPYK	Eagle Plains	23.31	351	P	P	07 41 07.1	+0.6
	baz=163						
KAN08	Anthony NE Sta	23.53	96	P	P	07 41 09.1	+0.1
OK032	Salt Plains WL	23.54	97	P	P	07 41 10.2	+1.1
OK032				IAmb	IAmb	07 41 12.8	
	comp=Z,22nm,1.1s						
ILAR	Eielson Array	23.75	340	P	P	07 41 09.8	-1.0
	comp=Z,1.2nm,0.9s,baz=152,slow=8.3,SNR=12						
KSU1	Kansas State U	23.78	90	P	P	07 41 14.8	+3.3
	baz=291						
TX31	Lajitas Ar. Si	23.99	118	P	P	07 41 14.0	+0.4
TX31				IAmb	IAmb	07 41 16.5	
	comp=Z,14nm,1.1s						
TXAR	Lajitas Array	23.99	118	P	P	07 41 14.1	+0.5
	comp=Z,2.4nm,0.9s,baz=302,slow=7.9,SNR=18						
TXAR	Lajitas Array	23.99	118	P	P	07 41 13.8	+0.2
WMOK	Wichita Mounta	24.10	102	P	P	07 41 13.9	-0.6
	baz=301						
NEA2	Nenana	24.18	338	P	P	07 41 14.2	-0.8
	baz=140						
L20K	Farewell, AK	24.23	330	P	P	07 41 13.7	-1.8
	baz=129						
L19K	White Mountain	24.41	329	P	P	07 41 16.6	-0.5
	baz=127						
L19K	White Mountain	24.41	329	P	P	07 41 16.8	-0.3
L19K				IAmb	IAmb	07 41 23.3	
	comp=Z,8.5nm,0.9s						
BCOK	Bluff Creek, N	24.49	99	P	P	07 41 18.5	+0.5
I23K	Minto, Yukon-K	24.69	338	P	P	07 41 19.0	-0.5
	baz=140						
T35A	Sooner Cattle	24.71	95	P	P	07 41 19.9	-0.2
FNO	Franklin	24.83	99	P	P	07 41 21.5	+0.3
K20K	Telida	24.86	332	P	P	07 41 20.1	-1.1
	baz=130						
INK	Inuvik	24.92	355	P	P	07 41 20.3	-1.3
	comp=Z,2.6nm,0.8s,baz=151,slow=9.6,SNR=7.4						
INK	Inuvik	24.92	355	P	P	07 41 19.8	-1.8
	baz=170						
MLY	Manley	24.98	337	P	P	07 41 21.5	-0.8
	baz=138						
TTA	Tatalina	25.29	330	P	P	07 41 24.2	-0.9
	baz=126						
J20K	Nowinta River	25.43	333	P	P	07 41 25.1	-1.1
	baz=131						
I21K	Tanana	25.45	336	P	P	07 41 25.0	-1.4
	baz=136						
A36M	Sachs Harbour	28.46	2	P	P	07 41 53.5	0.0
	baz=184						
H11N3	WAKE ISLAND Hy	58.88	268	T	T	08 49 27.1	
	baz=49,slow=75,SNR=211						
H11N2	WAKE ISLAND Hy	58.88	268	T	T	08 49 27.3	
	baz=49,slow=75,SNR=227						
H11N1	WAKE ISLAND Hy	58.90	268	T	T	08 49 34.8	
	baz=49,slow=75,SNR=191						
H11S1	WAKE ISLAND Hy	59.80	267	T	T	08 50 39.3	
	baz=50,slow=75,SNR=189						
H11S2	WAKE ISLAND Hy	59.81	267	T	T	08 50 37.0	
	baz=50,slow=75,SNR=200						
H11S3	WAKE ISLAND Hy	59.82	267	T	T	08 50 43.2	
	baz=50,slow=75,SNR=180						
SONM	Songino Array	77.17	326	P	P	07 47 50.5	-2.2
	comp=Z,0.6nm,0.6s,baz=11,slow=3.0,SNR=4.5						
SONM	Songino Array	77.17	326	IAmb	IAmb	07 48 14.2	
	comp=Z,1.7nm,1.1s						
ZALV	Zalesovo Beam	78.86	341	P	P	07 47 59.5	-2.3
	comp=Z,0.3nm,0.4s,baz=34,slow=8.7,SNR=1.9						
HHC	Hu-ho-hao-te	80.36	319	eP	P	07 48 12.8	+2.5
LPAZ	La Paz	80.78	123	P	P	07 48 11.9	-1.4
	comp=Z,1.5nm,0.8s,baz=22,slow=12,SNR=7.3						
GERES	GERESS Array B	81.92	25	P	P	07 48 17.6	-0.8
	comp=Z,0.6nm,0.7s,baz=320,slow=4.0,SNR=2.5						
AKASG	Malin Array Be	83.95	14	P	P	07 48 25.5	-3.3
	comp=Z,0.5nm,0.6s,baz=346,slow=4.1,SNR=2.6						
WMQ	Urumqi	87.33	335	eP	P	07 48 49.3	+3.5

*IDC **26** 08:00:24.5±2.5, 33°.60S×178°.55W, h0^{km}, mb3.7/2, mb1 4.0/3, mb1mx3.8/20, mbtmp3.8/3, ML3.7/1, Error ellipse: s-maj=64.7km s-min=35.8km az=123.0*

*WEL **26** 08:00:31.2±1.1, 34°S±21°×17°9W±2°9, h209^{km}±29^{km}, M3.9/11, mB4.3/6, ML4.5/19, MLv4.2/11, Mw(mB)3.4/6, Error ellipse: s-maj=0.0km s-min=0.0km az=124.7*

ISC 26 08:00:30.3±1.8**, 33°.5S**±0°.1×**178°.8W**±0°.3**, h35**^{km}**, n27,** σ**1^{s}18**/39**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	4.70	210	P	Pn	08 01 38.8	+0.1
WMGZ	Waiomatatini S	4.88	207	P	Pn	08 01 42.6	+1.5
WMGZ				S	Sn	08 02 40.0	+3.6
PKGZ	Pakihiroa	5.07	210	P	Pn	08 01 42.9	-1.0
PKGZ				S	Sn	08 02 42.4	+1.1
HAZ	Te Kaha	5.09	213	P	Pn	08 01 44.0	0.0
PUZ	Puketiti	5.16	207	P	Pn	08 01 44.8	-0.2
RUGZ	Raukumara Rang	5.30	212	P	Pn	08 01 46.2	-1.0
RUGZ				S	Sn	08 02 48.9	+1.7
TWGZ	Tauwhareparae	5.36	209	P	Pn	08 01 48.4	+0.6
TWGZ				S	Sn	08 02 49.2	+0.9
CNGZ	Carnagh Statio	5.54	206	P	Pn	08 01 50.8	+0.6
TKGZ	Te Karaka	5.63	208	P	Pn	08 01 51.8	+0.2
TKGZ				S	Sn	08 02 54.7	-0.4
MWZ	Matawai	5.68	211	P	Pn	08 01 52.6	+0.4
URZ	Urewera	5.80	214	Pn	Pn	08 01 52.6	-1.2
	2.0nm,0.3s,baz=121,slow=23,SNR=13						
URZ				Sn	Sn	08 02 58.0	-1.2
	2.9nm,0.3s,baz=126,slow=23,SNR=1.9						
URZ	Urewera	5.80	214	P	Pn	08 01 53.6	-0.2
PRGZ	Paritu Road	6.04	206	P	Pn	08 01 56.3	-0.9
SNGZ	Shannon Statio	6.13	210	P	Pn	08 01 58.6	+0.2
SNGZ				S	Sn	08 03 06.6	-0.8
KNZ	Kokohu	6.21	207	P	Pn	08 01 58.1	-1.3
MHGZ	Mahia Peninsul	6.24	205	P	Pn	08 02 00.5	+0.6
RAHZ	Arahi	6.35	211	P	Pn	08 02 01.4	0.0
RAHZ				S	Sn	08 03 12.9	+0.1
MTHZ	Maungataniwha	6.41	212	P	Pn	08 02 02.6	+0.3
MTHZ				S	Sn	08 03 13.6	-0.6
WPRZ	Whakapapatarin	6.47	218	P	Pn	08 02 03.0	-0.1
BKZ	Black Stump Fm	6.82	213	P	Pn	08 02 07.1	-0.8

KWHZ	**Kaweka Forest**	7.06	212	P	Pn	08 02 09.8	-1.4
KWHZ				S	Sn	08 03 28.3	-2.0
KAHZ	**Kahuranaki**	7.18	208	P	Pn	08 02 11.2	-1.7
WNVZ	**Wahianoa**	7.37	216	P	Pn	08 02 15.5	-0.1
BFZ	**Birch Farm**	8.19	208	P	Pn	08 02 23.9	-2.8
ASAR	**Alice Springs**	42.40	271	P	P	08 08 22.4	+0.7
	0.7nm,0.6s,baz=109,slow=7.6,SNR=11						
ASAR				PcP	PcP	08 10 14.5	0.0
	0.6nm,0.9s,baz=116,slow=3.0,SNR=3.0						
WRA	**Warramunga Arr**	43.67	276	P	P	08 08 32.8	+0.8
	0.9nm,0.5s,baz=116,slow=8.0,SNR=17						
WRA				PcP	PcP	08 10 18.0	-0.7
	0.6nm,1.0s,baz=105,slow=3.2,SNR=2.0						
FINES	**FINESS Array B**	147.81	338	PKPbc	PKPbc	08 20 10.5	-0.2
	4.6nm,0.9s,baz=76,slow=5.9,SNR=5.0						

DNK 26 08:17:16.0±4.4, 69°.35N×31°.89W, h11^{km}±23^{km}, ML3.7, Eastern Kalaallit Nunaat

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ICESG	**Greenland Ices**	2.78	268	*i* P	Pn	08 18 00.3	-0.4
ICESG				*i* S	Sn	08 18 33.5	-0.8
ICESG				IAML		08 18 49.3	
	comp=Z,123nm,0.3s						
SCO	**Scoresbysund**	3.61	67	*i* P	Pn	08 18 12.6	+0.8
SCO				*i* S	Sn	08 18 53.4	-0.9
SCO				IAML		08 19 12.1	
	comp=Z,118nm,0.7s						
SUMG	**Summit**	3.89	329	*i* P	Pn	08 18 17.3	+1.3
SUMG				*i* S	Sn	08 19 02.8	+1.2
SUMG				IAML		08 19 19.8	
	comp=Z,272nm,0.5s						
ANGG	**Ammassalik, Gr**	4.35	213	*e*P	Pb	08 18 28.5	-3.8
ANGG				*i* S	Sn	08 19 13.2	+0.6
ANGG				IAML		08 19 27.2	
	comp=Z,72nm,0.8s						
ISOG	**Isortoq, Green**	4.69	219	*i* P	Pn	08 18 26.0	-0.6
ISOG				*i* S	Sn	08 19 24.0	+3.0
ISOG				IAML		08 19 48.6	
	comp=Z,69nm,0.6s						
DY2G	**Dye2**	6.14	249	*i* P	Pn	08 18 46.9	+0.2
DY2G				*e*P	Pb	08 18 48.3	-15
DY2G				*i* S	Sn	08 19 53.3	-3.6
DY2G				IAML		08 20 25.5	
	comp=Z,67nm,0.7s						
DBG	**Daneborg**	6.16	31	*e*P	Pn	08 18 45.8	-0.9
DBG				*i* S	Sn	08 19 50.6	-6.4
DBG				IAML		08 20 27.1	
	comp=Z,30nm,0.6s						
ILULI	**Ilulissat**	6.81	278	*i* P	Pn	08 18 46.6	-9.1
ILULI				*i* S	Sn	08 20 04.5	-8.6
ILULI				IAML		08 21 02.2	
	comp=Z,45nm,0.8s						
SFJD	**Kangerlussuaq**	7.36	260	*i* P	Pn	08 19 00.0	-3.1
SFJD				*i* S	Sn	08 20 18.6	-7.9
SFJD				IAML		08 21 04.9	
	comp=Z,59nm,0.8s						
DAG	**Danmarks Havn**	8.36	21	*i* P	Pn	08 19 14.2	-2.7
DAG				IAML		08 21 46.5	
	comp=Z,10nm,1.1s						
UPNV	**Upernavik**	8.56	305	*i* P	Pn	08 19 18.8	-0.8
NUUK	**Nuuk**	9.37	246	*i* P	Pn	08 19 28.5	-2.1
NUUK				*i* S	Sn	08 21 02.5	-13
NEEM	**North Greenlan**	9.73	335	*i* P	Pn	08 19 34.4	-1.4
NEEM				*i* S	Sn	08 21 16.8	-8.2
NEEM				IAML		08 22 25.5	
	comp=Z,24nm,0.8s						
IVI	**Ivigtut**	10.60	228	*i* P	Pn	08 19 42.1	-5.4
TULEG	**Thule**	12.74	320	*i* S	Sn	08 22 21.1	-17
TULEG				IAML		08 24 01.0	
	comp=Z,19nm,0.8s						
NOR	**Nord**	12.80	10	*i* P	Pn	08 20 13.4	-4.1
NOR				IAML		08 24 07.5	
	comp=Z,4.1nm,0.7s						

IDC 26 08:30:56.1±1.8, 3°.26S×140°.89E, h0^{km}, mb3.0/1, mb1 3.7/2, mb1mx3.1/28, mbtmp3.4/2, ML3.6/1, Error ellipse: s-maj=63.9km s-min=10.7km az=81.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	0.76	346	Pg	Pg	08 31 11.4	+0.7
	38nm,0.3s,baz=168,slow=9.3,SNR=96						
JAY				Lg	Lg	08 31 20.8	
	65nm,0.3s,baz=68,slow=19,SNR=12						
WRA	**Warramunga Arr**	17.78	201	P	P	08 35 06.0	-0.1
	0.2nm,0.3s,baz=22,slow=12,SNR=13						
ASAR	**Alice Springs**	21.39	198	P	P	08 35 44.7	-0.9
	0.5nm,0.5s,baz=28,slow=11,SNR=8.2						
LPAZ	**La Paz**	145.35	125	PKPbc	PKPbc	08 50 36.7	-1.0
	1.0nm,0.9s,baz=259,slow=2.4,SNR=3.8						

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*DJA **26** 08:32:15.2±0.3, 7°S±3°×12°8E±°, h215^{km}±7^{km}, M4.4/12, mb4.4/6, mB4.9/7, MLv4.6/12, Mw(mB)4.1/7*

*IDC **26** 08:32:15.1±1.4, 7°.30S×127°.67E, h218^{km}±14^{km}, mb3.6/8, mb1 3.8/14, mb1mx3.5/35, mbtmp4.3/14, Error ellipse: s-maj=18.8km s-min=10.5km az=78.0*

*NEIC **26** 08:32:15.9±2.2, 7°.30S±0°.07×127°.69E±0°.09, h222^{km}±5^{km}, mb4.2/14, Error ellipse: s-maj=12.4km s-min=10.3km az=101.0*

ISC 26 08:32:13.6±0.5, 7°.32S±0°.05×127°.70E±0°.06, h200^{km}, n63, σ1^{s}.71/67, mb3.9/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	3.62	101	P	**Pn**	**08 33 13.5**	**+2.7**
SAUI	**Saumlaki**	3.62	101	Pn	**Pn**	**08 33 13.6**	**+2.9**
AAI	**Ambon**	3.64	8	P	**Pn**	**08 33 15.1**	**+4.1**
MSAI	**Masohi**	4.13	17	P	**Pn**	**08 33 20.4**	**+3.3**
SOEI	**Soe**	4.17	234	P	**Pn**	**08 33 20.2**	**+2.5**
SOEI				S	**Sn**	**08 34 09.2**	**+1.2**
SOEI	**Soe**	4.17	234	Pn	**Pn**	**08 33 19.7**	**+2.0**
BATI	**Baumata**	4.92	234	P	**Pn**	**08 33 29.7**	**+2.7**
	77nm,0.3s,baz=127,slow=2.3,SNR=41						
BATI				S	**Sn**	**08 34 23.2**	**-1.7**
	133nm,0.3s,baz=283,slow=21,SNR=32						
BATI	**Baumata**	4.92	234	P	**Pn**	**08 33 29.7**	**+2.7**
DRS	**Darwin Rock St**	5.97	148	P	**Pn**	**08 33 42.0**	**+1.5**
	20nm,0.5s						
EDFI	**Ende, Flores**	6.12	256	P	**Pn**	**08 33 45.2**	**+2.6**
FAKI	**Fak Fak**	6.29	46	P	**Pn**	**08 33 45.3**	**+0.5**
	0.3nm1µm28nm,0.7s						
FAKI	**Fak Fak**	6.29	46	Pn	**Pn**	**08 33 45.5**	**+0.8**
FAKI	**Fak Fak**	6.29	46	P	**Pn**	**08 33 45.2**	**+0.5**
MTN	**Manton Dam**	6.44	149	Pn	**Pn**	**08 33 48.0**	**+1.4**
MTN	**Manton Dam**	6.44	149	P	**Pn**	**08 33 47.5**	**+0.9**
	42nm,0.4s						
KDU	**Kakadu**	7.10	139	P	**Pn**	**08 33 55.8**	**+0.6**
SIJI	**Sorong**	7.33	29	P	**Pn**	**08 33 58.5**	**+0.3**
	10nm,0.3s,baz=27,slow=7.0,SNR=38						
SIJI				S	**Sn**	**08 35 18.3**	**-3.0**
	3.6nm,0.3s,baz=262,slow=23,SNR=7.1						
SWI	**Sorong**	7.33	29	P	**Pn**	**08 33 59.7**	**+1.5**
BASI	**Baing, Sumba**	7.61	247	P	**Pn**	**08 34 02.2**	**+0.4**
	0.4nm2µm56nm,1.0s						
KNRA	**Kununurra**	8.37	173	Pn	**Pn**	**08 34 12.9**	**+1.3**
KNRA	**Kununurra**	8.37	173	P	**Pn**	**08 34 12.2**	**+0.5**
	35nm,0.5s						
WBSI	**Waikabubak, Su**	8.54	254	P	**Pn**	**08 34 14.1**	**+0.1**
	1µm35nm,0.6s						
PLAI	**Plampang**	9.94	261	P	**Pn**	**08 34 31.1**	**-1.1**
	30nm,0.5s						
PLAI	**Plampang**	9.94	261	P	**Pn**	**08 34 31.8**	**-0.4**
FITZ	**Fitzroy Crossi**	10.90	190	P	**Pn**	**08 34 44.6**	**+0.2**
	0.9nm,0.3s,baz=28,slow=12,SNR=6.7						
FITZ				S	**Sn**	**08 36 40.3**	**-5.8**
	3.0nm,0.3s,baz=127,slow=19,SNR=3.7						
JAGI	**Jajag, Banyuwa**	13.47	264	Pn	**Pn**	**08 35 18.1**	**+0.9**
JAGI	**Jajag, Banyuwa**	13.47	264	P	**Pn**	**08 35 17.8**	**+0.7**
WRAB	**Tennant Creek**	14.10	153	P	**Pn**	**08 35 26.1**	**+1.3**
WRAB	**Tennant Creek**	14.10	153	P	**Pn**	**08 35 26.1**	**+1.3**
WRA	**Warramunga Arr**	14.10	154	P	**Pn**	**08 35 24.3**	**-0.6**
	0.5nm,0.3s,baz=330,slow=12,SNR=12						
WRA				S	S	08 37 55.6	-6.2
	1.8nm,0.3s,baz=332,slow=22,SNR=6.7						
PSA00	**Pilbara Seismi**	16.07	207	P	**P**	**08 35 49.6**	**+1.2**
PSA00				IAmb	IAmb	08 35 49.9	
	comp=Z,13nm,0.5s						
PSA00	**Pilbara Seismi**	16.07	207	P	**P**	**08 35 49.0**	**+0.6**
	comp=Z,18nm,1.9s						
COEN	**Coen**	16.57	115		**P**	**08 35 55.3**	**+1.4**
COEN				IAmb	IAmb	08 35 56.7	
	comp=Z,7.4nm,0.7s						
COEN	**Coen**	16.57	115	P	**P**	**08 35 55.1**	**+1.2**
	comp=Z,8.5nm,0.8s						
AS31	**Alice Springs**	17.31	161	Pn	**P**	**08 36 04.2**	**+2.2**
ASAR	**Alice Springs**	17.31	161	P	**P**	**08 36 02.9**	**+0.9**
	comp=Z,3.3nm,0.3s,baz=340,slow=12,SNR=68						
ASAR				S	**S**	**08 39 10.8**	**-0.9**
	comp=Z,0.5nm,0.3s,baz=321,slow=16,SNR=8.3						
ASAR				ScP	**ScP**	**08 43 46.0**	**-4.2**
	comp=Z,0.1nm,0.3s,baz=352,slow=1.9,SNR=4.2						
ASAR	**Alice Springs**	17.31	161	P	**P**	**08 36 03.7**	**+1.7**
QIS	**Mount Isa**	17.49	140	P	**P**	**08 36 05.5**	**+1.5**
	comp=Z,10nm,0.7s						
WRKA	**Warakurna**	17.63	178	P	**P**	**08 36 06.7**	**+1.2**
	comp=Z,14nm,2.8s						
PMG	**Port Moresby**	19.36	98	P	**P**	**08 36 25.5**	**+1.3**
	comp=Z,1.3nm,0.3s,baz=297,slow=9.1,SNR=4.4						
PMG	**Port Moresby**	19.36	98	IAmb	IAmb	08 36 29.1	
	comp=Z,11nm,0.8s						
FORT	**Forrest**	23.34	179	P	**P**	**08 37 04.9**	**+0.9**
BBOO	**Buckleboo**	26.52	164	P	**P**	**08 37 33.6**	**+0.8**
STKA	**Stephens Creek**	27.65	154	P	**P**	**08 37 43.2**	**+0.3**
	comp=Z,2.4nm,0.6s,baz=323,slow=8.7,SNR=9.3						
KSRS	**Korea Array**	44.54	0	P	**P**	**08 40 05.8**	**+0.3**
	comp=Z,1.9nm,0.6s,baz=178,slow=10,SNR=6.3						
USRK	**Ussuriysk Ar.**	51.43	4	P	**P**	**08 40 57.6**	**-0.5**
	comp=Z,1.6nm,0.5s,baz=182,slow=7.4,SNR=6.5						
SONM	**Songino Array**	58.06	343	P	**P**	**08 41 45.6**	**-0.2**
	comp=Z,1.5nm,0.8s,baz=169,slow=7.8,SNR=8.5						
SONM	**Songino Array**	58.06	343	IAmb	IAmb	08 41 47.0	
	comp=Z,1.2nm,0.7s						
PETK	**Petropavlovsk-**	65.36	19	P	**P**	**08 42 34.2**	**-0.1**
MK31	**Makanchi Array**	67.27	328	P	**P**	**08 42 46.3**	**-0.3**
MKAR	**Makanchi Array**	67.27	328	P	**P**	**08 42 45.9**	**-0.8**
	comp=Z,1.7nm,0.5s,baz=122,slow=7.9,SNR=21						
ZAA0	**Zalesovo Array**	70.88	335	P	**P**	**08 43 07.5**	**-1.1**
ZAA0				IAmb	IAmb	08 43 08.0	
	comp=Z,2.8nm,0.6s						
ZALV	**Zalesovo Beam**	70.88	335	P	**P**	**08 43 07.4**	**-1.2**
	comp=Z,2.7nm,0.5s,baz=132,slow=6.1,SNR=12						
KURK	**Kurchatov**	71.62	330	P	**P**	**08 43 12.7**	**-0.4**
KURK				IAmb	IAmb	08 43 13.7	
	comp=Z,6.1nm,1.1s						
VNDA	**Vanda**	72.41	173	P	**P**	**08 43 16.6**	**-0.8**
	comp=Z,0.9nm,0.9s,baz=327,slow=7.3,SNR=2.0						
VNDA	**Vanda**	72.41	173	P	**P**	**08 43 18.2**	**+0.8**
VNDA				IAmb	IAmb	08 43 45.5	
	comp=Z,8.3nm,1.4s						
MAW	**Mawson**	73.83	201	P	**P**	**08 43 26.0**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=71,slow=5.1,SNR=1.7						
MAW	**Mawson**	73.83	201	P	**P**	**08 43 26.7**	**+0.9**
ABKAR	**Akbulak array**	81.35	322	P	**P**	**08 44 07.0**	**-0.8**
QSPA	**South Pole Qui**	82.66	180	P	**P**	**08 44 14.3**	**-0.2**
QSPA				IAmb	IAmb	08 44 15.0	
	comp=Z,2.3nm,0.9s						
TORD	**Torodi Ar. Bea**	126.64	281	PKP	**PKPdf**	**08 50 52.8**	**-1.3**
	comp=Z,0.9nm,0.7s,baz=32,slow=2.9,SNR=4.4						
CPUP	**Villa Florida**	146.19	172	PKPbc	**PKPdf**	**08 51 30.4**	**+0.6**
	comp=Z,5.5nm,0.9s,baz=202,slow=1.1,SNR=6.2						
LPAZ	**La Paz**	151.79	146	PKPbc	**PKPbc**	**08 51 45.9**	**-0.4**
	comp=Z,1.7nm,0.4s,baz=44,slow=3.8,SNR=17						

NNC 26 08:48:04.8±1.6, 37°.71N×78°.54E, h0^{km}, mb4.2, mpv3.8, 4C-2D, Error ellipse: s-maj=13.6km s-min=10.5km az=77.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SATY	**Saty**	5.34	359	Pg	Pb	08 49 42.3	+3.2
	9.1nm,0.6s						
SATY				Lg	Lg	08 50 55.0	
	42nm,1.3s						
UZB	**Uzynbulak**	5.44	4	Pg	Pb	08 49 44.4	+3.7
	6.8nm,0.3s						
UZB				Lg	Lg	08 50 58.1	
	10nm,0.9s						
TNSS	**Tian-Shan**	5.45	348	Pg	Pb	08 49 42.9	+1.8
	7.4nm,0.5s						
TNSS				Lg	Lg	08 50 56.0	
	9.5nm,0.9s						
MDOK	**Medeo**	5.56	349	⇓Pg	Pb	08 49 46.7	+3.9
	6.6nm,0.7s						
MDOK				⇑Lg	Lg	08 51 02.1	
	34nm,1.2s						
PDGK	**Podgornoye**	5.66	7	Pg	Pb	08 49 47.7	+3.3
	2.6nm,0.3s						
PDGK				Lg	Lg	08 51 04.9	
	8.6nm,0.7s						
PDGK	**Podgornoye**	5.66	7	⇑Pg	Pb	08 49 47.5	+3.1
	4.7nm,0.6s						
PDGK				⇓Lg	Lg	08 51 04.4	
	24nm,0.8s						
TKM2	**Tokmak 2**	5.66	338	⇑Pg	Pb	08 49 48.8	+4.2
	5.6nm,1.1s						
TKM2				⇑Lg	Lg	08 51 05.2	
	15nm,1.1s						
AAK	**Ala-Archa**	5.81	329	Lg	Lg	08 51 09.8	
	21nm,1.1s						
BLB	**Baldybastay**	6.38	360	Pg	Pb	08 50 01.3	+4.6
	8.3nm,0.6s						
BLB				Lg	Lg	08 51 27.6	

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*IDC **26** 08:54:33.1±2.1, 58°.09N×10°.33E, h0^{km}, mb1 3.6/3, mb1mx3.2/50, mbtmp3.6/3, ML2.4/4, Error ellipse: s-maj=19.6km s-min=15.3km az=87.0*

*UPP **26** 08:54:36.5±0.2, 58°.18N×11°.26E, h0^{km}, ML2.3, Explosion*

*DNK **26** 08:54:36.1±1.6, 58°.17N×11°.20E, h0^{km}, ML2.4, ML2.4(UPP), Explosion*

*BER **26** 08:54:37.1±0.7, 58°.18N×11°.25E, h0^{km}, ML1.8, ML2.4(UPP), Suspected explosion*

ISC 26 08:54:35.2±0.8, 58°.19N±0°.02×11°.17E±0°.03, h0^{km}, n46, σ1^{s}.07/62, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TJOU	**Tjoern**	0.29	122	P	**Pg**	**08 54 41.4**	**+0.8**
TJOU				S	**Sg**	**08 54 44.7**	**+0.4**
TJOU	**Tjoern**	0.29	122	P	**Pg**	**08 54 41.4**	**+0.8**
TJOU				S	**Sg**	**08 54 44.7**	**+0.4**
TJOU	**Tjoern**	0.29	122	P	**Pg**	**08 54 41.4**	**+0.8**
TJOU				S	**Sg**	**08 54 44.7**	**+0.4**
VANU	**Vaenersborg**	0.57	57	P	**Pg**	**08 54 46.6**	**+0.6**
VANU				S	**Sg**	**08 54 53.6**	**+0.2**
VANU	**Vaenersborg**	0.57	57	P	**Pg**	**08 54 46.6**	**+0.6**
VANU				S	**Sg**	**08 54 53.6**	**+0.2**
VANU	**Vaenersborg**	0.57	57	P	**Pg**	**08 54 46.6**	**+0.6**
VANU				S	**Sg**	**08 54 53.6**	**+0.2**
STRU	**Stroemstad**	0.85	0	P	**Pb**	**08 54 52.5**	**-0.3**
STRU				*e*P	**Pb**	**08 54 52.5**	**-0.3**
STRU				*e*S	**Sn**	**08 55 09.1**	**+1.5**
STRU	**Stroemstad**	0.85	0	P	**Pb**	**08 54 52.5**	**-0.3**
STRU	**Stroemstad**	0.85	0	P	**Pb**	**08 54 52.5**	**-0.3**
STRU				*e*P	**Pb**	**08 54 52.5**	**-0.3**
ONAU	**Onsala**	0.89	153	P	**Pg**	**08 54 52.6**	**+0.5**
ONAU	**Onsala**	0.89	153	P	**Pg**	**08 54 52.6**	**+0.5**
ONAU	**Onsala**	0.89	153	P	**Pg**	**08 54 52.6**	**+0.5**
BORU	**Boraas**	1.02	122	P	**Pg**	**08 54 54.4**	**-0.2**
BORU				S	**Sg**	**08 55 07.1**	**-0.6**
BORU	**Boraas**	1.02	122	P	**Pg**	**08 54 54.4**	**-0.2**
BORU				S	**Sg**	**08 55 07.1**	**-0.6**
BORU	**Boraas**	1.02	122	P	**Pg**	**08 54 54.4**	**-0.2**
BORU				S	**Sg**	**08 55 07.1**	**-0.6**
NASU	**Vaermlandsnaes**	1.29	54	P	**Pg**	**08 54 59.8**	**-0.1**
NASU	**Vaermlandsnaes**	1.29	54	P	**Pg**	**08 54 59.8**	**-0.1**
NASU	**Vaermlandsnaes**	1.29	54	P	**Pg**	**08 54 59.8**	**-0.1**
FKPU	**Falk**	1.35	90	P	**Pg**	**08 55 00.2**	**-0.8**
FKPU	**Falk**	1.35	90	P	**Pg**	**08 55 00.2**	**-0.8**
FKPU	**Falk**	1.35	90	P	**Pg**	**08 55 00.2**	**-0.8**
FINU	**Finntorp**	1.40	29	P	**Pn**	**08 55 01.9**	**0.0**
FINU	**Finntorp**	1.40	29	P	**Pn**	**08 55 01.9**	**0.0**
FINU	**Finntorp**	1.40	29	P	**Pn**	**08 55 01.9**	**0.0**
HOMB	**Homborsund**	1.41	275	*e*P	**Pb**	**08 55 02.3**	**-0.1**
HOMB				IAML		08 55 30.9	
	comp=Z,11nm,0.3s						
HOMB	**Homborsund**	1.41	275	*e*P	**Pb**	**08 55 02.3**	**-0.1**
HOMB				IAML		08 55 30.9	
	comp=Z,11nm,0.3s						
FABU	**Falkenberg**	1.45	144	P	**Pn**	**08 55 02.2**	**-0.4**
FABU	**Falkenberg**	1.45	144	P	**Pn**	**08 55 02.2**	**-0.4**
FABU	**Falkenberg**	1.45	144	P	**Pn**	**08 55 02.2**	**-0.4**
GNOU	**Gnosjoe**	1.65	122	P	**Pn**	**08 55 05.6**	**+0.2**
GNOU	**Gnosjoe**	1.65	122	P	**Pn**	**08 55 05.6**	**+0.2**
GNOU	**Gnosjoe**	1.65	122	P	**Pn**	**08 55 05.6**	**+0.2**
KONO	**Kongsberg**	1.68	332	*e*P	**Pn**	**08 55 05.6**	**-0.2**
KONO				*e*S	**Sg**	**08 55 31.1**	**+2.0**
KONO				IAML		08 55 40.9	
	comp=Z,16nm,0.3s						
KONO	**Kongsberg**	1.68	332	*e*P	**Pn**	**08 55 05.6**	**-0.2**
KONO				IAML		08 55 40.9	
	comp=Z,16nm,0.3s						
SNART	**Snartemo**	2.10	276	*e*P	**Pn**	**08 55 12.0**	**+0.5**
SNART				IAML		08 55 47.4	
	comp=Z,16nm,0.4s						
SNART	**Snartemo**	2.10	276	*e*P	**Pn**	**08 55 12.0**	**+0.5**
SNART				IAML		08 55 47.4	
	comp=Z,16nm,0.4s						
HFS	**Hagfors**	2.35	33	Pn	**Pn**	**08 55 15.7**	**+0.7**
	comp=Z,3.1nm,0.3s,baz=223,slow=14,SNR=142						
HFS				Sn	**Sg**	**08 55 49.3**	**-1.2**
	comp=Z,5.1nm,0.3s,baz=204,slow=28,SNR=16						
HFS				Lg	Lg	08 55 57.6	
	comp=Z,6.3nm,0.3s,baz=217,slow=31,SNR=5.7						
NC602	**NORSAR Array S**	2.57	4	*e*P	**Pn**	**08 55 18.5**	**+0.5**
NC602				IAML		08 56 05.2	
	comp=Z,15nm,0.4s						
NC602	**NORSAR Array S**	2.57	4	*e*P	**Pn**	**08 55 18.5**	**+0.5**
NC602				IAML		08 56 05.2	
	comp=Z,15nm,0.4s						
NAO01	**NORSAR Array S**	2.67	357	*e*P	**Pn**	**08 55 19.8**	**+0.3**
NAO01	**NORSAR Array S**	2.67	357	*e*P	**Pn**	**08 55 19.8**	**+0.3**
NOA	**NORSAR Array B**	2.86	0	Pn	**Pn**	**08 55 19.9**	**-2.3**
	comp=Z,0.1nm,0.3s,baz=186,slow=12,SNR=15						
NOA				Sn	**Sn**	**08 55 56.7**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=281,slow=15,SNR=3.0						
NOA				Lg	Lg	08 56 06.0	
	comp=Z,0.2nm,0.3s,baz=142,slow=8.2,SNR=5.5						
SKAR	**Skarslia**	2.90	331	*e*P	**Pn**	**08 55 23.0**	**+0.4**
SKAR	**Skarslia**	2.90	331	*e*P	**Pn**	**08 55 23.0**	**+0.4**
FINES	**FINESS Array B**	8.19	60	Pn	**Pn**	**08 56 35.8**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=254,slow=13,SNR=14						
FINES				Sn	**Sn**	**08 58 14.0**	**+5.8**
	comp=Z,0.3nm,0.3s,baz=252,slow=20,SNR=5.9						
FINES				Lg	Lg	08 58 52.6	
	comp=Z,0.2nm,0.3s,baz=248,slow=25,SNR=1.6						
ARCES	**ARCESS Array B**	12.97	23	Pn	**Pn**	**08 57 37.4**	**-3.1**
	baz=211,slow=14,SNR=1.6						

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*IDC **26** 08:55:55.5±1.8, 4°.43N×125°.41E, h0^{km}, mb3.7/4, mb1 3.9/4, mb1mx3.4/49, mbtmp3.7/4, Error ellipse: s-maj=124.0km s-min=22.4km az=68.0*

*DJA **26** 08:56:01.1±1.0, 4°N±4°×12°5E±°, h25^{km}±10^{km}, M4.2/10, mb4.2/4, mB4.8/2, MLv4.1/10, Mw(mB)4.0/2*

*MAN **26** 08:56:02.7, 4°.59N×124°.56E, h6^{km}, mb4.2, ML3.1, MS3.1*

ISC 26 08:56:02.2±1.3, 4°.0N±0°.1×124°.77E±0°.06, h35^{km}, n9, σ1^{s}.67/12, mb3.7/4, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	0.80	109	P	**Pn**	**08 56 17.1**	**0.0**
SGSI				S	**Sn**	**08 56 29.4**	**+1.6**
GTOI	**Gorontalo**	3.73	208	P	**Pn**	**08 56 57.7**	**+0.3**
GTOI				S	**Sn**	**08 57 38.8**	**-1.4**
MRSI	**Marisa**	4.46	219	P	**Pn**	**08 57 09.0**	**+1.6**
MRSI				S	**Sn**	**08 57 56.6**	**-1.6**
LBMI	**Labuha**	5.32	149	P	**Pn**	**08 57 16.7**	**-2.5**
	0.2nm1µm37nm,0.6s						
MPSI	**Mapaga**	6.05	234	P	**Pn**	**08 57 29.7**	**+0.5**
	0.1nm427nm7.8nm,0.8s						
FITZ	**Fitzroy Crossi**	21.93	178	P	**P**	**09 00 55.0**	**+2.2**
	1.1nm,0.4s,baz=357,slow=11,SNR=7.1						
WRA	**Warramunga Arr**	25.54	159	P	**P**	**09 01 28.2**	**+0.3**
	1.9nm,0.7s,baz=341,slow=9.9,SNR=13						
ASAR	**Alice Springs**	28.86	162	P	**P**	**09 01 58.7**	**+1.0**
	0.2nm,0.5s,baz=346,slow=6.7,SNR=4.2						
MKAR	**Makanchi Array**	56.27	326	P	**P**	**09 05 37.5**	**-1.8**
	1.2nm,0.5s,baz=123,slow=8.6,SNR=14						

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*IDC **26** 08:56:01.3±1.0, 22°.85S×171°.38E, h0^{km}, mb4.3/9, mb1 4.5/11, mb1mx4.2/36, mbtmp4.3/11, ML4.1/2, MS4.1/21, Ms1 4.1/21, ms1mx3.9/38, Error ellipse: s-maj=32.4km s-min=22.9km az=159.0*

*NEIC **26** 08:56:09.3±2.1, 22°.72S±0°.09×171°.20E±0°.08, h47^{km}±4^{km}, mb4.7/19, Error ellipse: s-maj=12.5km s-min=10.4km az=171.0*

*NOU **26** 08:56:11.9, 22°.48S×170°.64E, h0^{km}, mb6.8/14, Southeast of Loyalty Islands*

ISC 26 08:56:07.8±0.5, 22°.79S±0°.07×171°.23E±0°.06, h35^{km}, n81, σ1^{s}.09/68, mb4.6/18, MS4.1/16, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	3.24	293		**Pn**	**08 56 54.8**	**-1.3**
MARNC	**Mare, Loyalty**	3.24	293	P	**Pn**	**08 56 54.5**	**-1.6**
PINNC	**Pines Island,**	3.50	272		**Pn**	**08 57 00.1**	**+0.4**
PINNC				Sn	**Sn**	**08 57 41.0**	**+1.1**
PINNC	**Pines Island,**	3.50	272	P	**Pn**	**08 56 59.8**	**+0.1**
OUENC	**Ouen Island, N**	4.07	274	Pn	**Pn**	**08 57 08.0**	**+0.4**
OUENC				Sn	**Sn**	**08 57 54.4**	**+0.4**
OUENC	**Ouen Island, N**	4.07	274	P	**Pn**	**08 57 07.7**	**+0.1**
YATNC	**Mamie plateau,**	4.08	279	P	**Pn**	**08 57 06.6**	**-1.1**
LIFNC	**LIFOU**	4.21	298		**Pn**	**08 57 08.9**	**-0.7**
LIFNC	**LIFOU**	4.21	298	P	**Pn**	**08 57 09.0**	**-0.5**
ONTNC	**Ouen Toro**	4.44	275	Pn	**Pn**	**08 57 13.2**	**+0.5**
ONTNC	**Ouen Toro**	4.44	275	P	**Pn**	**08 57 13.1**	**+0.4**
DZM	**Mont Dzumac**	4.48	278	*e*Pn	**Pn**	**08 57 13.1**	**-0.2**
	164nm,0.2s						
DZM				*e*Sn	**Sn**	**08 58 02.2**	**-2.2**
	92nm,0.3s						
DZM				*e*LR	LR	08 58 10.3	
	comp=Z,3µm,24.2s						
DZM	**Mont Dzumac**	4.48	278	Pn	**Pn**	**08 57 13.2**	**-0.2**
	54nm,0.3s,baz=108,slow=14,SNR=898						
DZM				Sn	**Sn**	**08 58 04.2**	**-0.2**
	41nm,0.3s,baz=136,slow=21,SNR=6.6						
DZM				LR	LR	08 58 51.6	
	comp=Z,2µm,20.5s,baz=41,slow=37						
DZM	**Mont Dzumac**	4.48	278	Pn	**Pn**	**08 57 13.6**	**+0.2**
DZM				Sn	**Sn**	**08 58 06.0**	**+1.6**
DZM	**Mont Dzumac**	4.48	278	P	**Pn**	**08 57 13.4**	**0.0**
NOUC	**Port Laguerre**	4.61	278	P	**Pn**	**08 57 15.0**	**0.0**
RTV	**Rentapao**	5.62	332	P	**Pn**	**08 57 30.1**	**+1.2**
	888µm,0.7s						
DVP	**Devils Point**	5.79	330	P	**Pn**	**08 57 32.5**	**+1.3**
	360µm,0.7s						
KOUNC	**Koumac, New Ca**	6.83	288	P	**Pn**	**08 57 45.5**	**0.0**
MSVF	**Nonsavu**	8.14	53	Pn	**Pn**	**08 58 03.4**	**-0.2**
	1.1nm,0.3s,baz=202,slow=14,SNR=16						
MSVF				LR	LR	09 00 40.9	
	comp=Z,3µm,18.1s,baz=218,slow=35						
MSVF	**Nonsavu**	8.14	53	Pn	**Pn**	**08 58 04.6**	**+1.0**
OUZ	**Omahuta**	12.56	171	Pn	**Pn**	**08 59 05.9**	**+1.9**
URZ	**Urewera**	16.23	163	Pn	**Pn**	**08 59 50.3**	**-2.7**
	0.1nm,0.3s,baz=307,slow=20,SNR=1.4						
URZ				LR	LR	09 04 44.3	
	comp=Z,908nm,18.1s,baz=31,slow=32						
URZ	**Urewera**	16.23	163	P	**P**	**08 59 56.6**	**+0.8**
URZ				IAmb	IAmb	08 59 57.8	
	comp=Z,37nm,1.0s						
BKZ	**Black Stump Fm**	16.93	166	P	**P**	**09 00 04.7**	**+1.0**
BKZ				IAmb	IAmb	09 00 07.2	
	comp=Z,43nm,1.1s						
HNR	**Honiara**	17.12	319	LR	LR	09 05 08.1	
	comp=Z,413nm,21.2s,baz=154,slow=32						
BFZ	**Birch Farm**	18.34	168	P	**Pn**	**09 00 20.1**	**+0.8**
BFZ				IAmb	IAmb	09 00 28.0	
	comp=Z,25nm,1.0s						
AFI	**Afiamalu**	18.37	64	LR	LR	09 05 56.3	
	comp=Z,604nm,19.6s,baz=220,slow=33						
BHW	**Baring Head**	18.82	171	P	**Pn**	**09 00 26.4**	**+1.3**
KHZ	**Kahutara**	19.67	175	P	**Pn**	**09 00 35.8**	**+0.5**
CAN	**Canberra**	23.04	232	P	**P**	**09 01 11.1**	**+1.1**
CTAO	**Charters Tower**	23.39	272	P	**P**	**09 01 15.1**	**+1.4**
CTAO				IAmb	IAmb	09 01 25.8	
	comp=Z,32nm,1.7s						
RAR	**Rarotonga**	26.91	92	LR	LR	09 11 56.9	
	comp=Z,194nm,18.4s,baz=282,slow=36						
STKA	**Stephens Creek**	27.77	245	P	**P**	**09 01 52.9**	**-0.5**
	comp=Z,1.9nm,0.7s,baz=96,slow=9.1,SNR=4.1						
STKA				LR	LR	09 12 17.4	

	comp=Z,561nm,18.6s,baz=72,slow=35						
STKA	Stephens Creek	27.77	245	P	P	09 01 54.4	+1.0
COEN	Coen	27.99	283	P	P	09 01 55.9	+0.3
COEN				IAmb	IAmb	09 02 06.8	
	comp=Z,17nm,1.2s						
AS31	Alice Springs	34.25	261	P	P	09 02 50.7	+0.1
ASAR	Alice Springs	34.25	261	P	P	09 02 49.9	-0.8
	comp=Z,4.9nm,0.9s,baz=89,slow=9.7,SNR=24						
ASAR				LR	LR	09 16 21.8	
	comp=Z,486nm,21.2s,baz=104,slow=36						
ASAR	Alice Springs	34.25	261	P	P	09 02 50.2	-0.5
WB2	Warramunga Arr	34.41	268	P	P	09 02 51.0	-1.0
WB2				IAmb	IAmb	09 03 10.3	
	comp=Z,17nm,1.5s						
WRA	Warramunga Arr	34.42	268	P	P	09 02 50.8	-1.3
	comp=Z,0.7nm,0.4s,baz=98,slow=8.0,SNR=6.6						
WRA				LR	LR	09 17 11.7	
	comp=Z,681nm,18.0s,baz=90,slow=37						
WRA	Warramunga Arr	34.42	268	P	P	09 02 51.0	-1.1
PPT	Papeete	37.08	89	LR	LR	09 17 06.5	
	comp=Z,174nm,18.3s,baz=298,slow=34						
FORT	Forrest	39.16	249	P	P	09 03 32.6	+0.2
MTN	Manton Dam	39.32	278	P	P	09 03 33.3	-0.6
MTN				IAmb	IAmb	09 04 03.9	
	comp=Z,26nm,1.3s						
KNRA	Kununurra	40.61	272	P	P	09 03 44.2	-0.3
KNRA				IAmb	IAmb	09 05 08.1	
	comp=Z,17nm,1.2s						
FITZ	Fitzroy Crossi	42.85	268	P	P	09 04 02.9	0.0
	comp=Z,7.7nm,0.7s,baz=116,slow=6.4,SNR=13						
SIJI	Sorong	44.52	294	LR	LR	09 22 36.4	
	comp=Z,314nm,19.9s,baz=147,slow=36						
KAPI	Kappang	52.70	282	LR	LR	09 30 25.3	
	comp=Z,102nm,18.0s,baz=130,slow=39						
DAV	Davao City (W)	53.62	298	LR	LR	09 27 33.1	
	comp=Z,197nm,20.2s,baz=3.5,slow=35						
VNDA	Vanda	54.97	182	P	P	09 05 35.6	+0.6
QSPA	South Pole Qui	67.28	180	P	P	09 06 58.7	-0.1
QSPA				IAmb	IAmb	09 06 59.7	
	comp=Z,18nm,1.1s						
NJ2	Nanjing	74.03	316	*e*P	P	09 07 41.0	+0.9
NJ2				pmax	pmax		
	comp=Z,11nm,0.7s						
MAW	Mawson	75.86	202	P	P	09 07 49.7	-0.4
	comp=Z,1.9nm,0.7s,baz=121,slow=5.7,SNR=5.4						
MAW				LR	LR	09 38 31.3	
	comp=Z,73nm,18.6s,baz=6.5,slow=34						
MAW	Mawson	75.86	202	P	P	09 07 50.2	+0.1
PETK	Petropavlovsk-	76.48	352	LR	LR	09 38 08.4	
	comp=Z,93nm,19.0s,baz=154,slow=33						
KLR	Kul'dur	79.85	335	LR	LR	09 41 43.6	
	comp=Z,19nm,19.7s,baz=337,slow=34						
CMAR	Chiang Mai Arr	81.64	294	P	P	09 08 23.4	+0.6
	comp=Z,1.2nm,0.3s,baz=136,slow=4.7,SNR=7.2						
MA2	Magadan	83.77	350	LR	LR	09 40 48.9	
	comp=Z,91nm,20.6s,baz=165,slow=32						
HHC	Hu-ho-hao-te	84.11	319	*e*P	P	09 08 35.0	-0.2
HHC				pmax	pmax		
	comp=Z,21nm,1.3s						
HHC				pmax	pmax		
	comp=Z,140nm,8.1s						
SNAA	Sanae	85.70	182	P	P	09 08 41.1	-1.7
SNAA	Sanae	85.70	182	P	P	09 08 41.5	-1.3
SNAA				IAmb	IAmb	09 09 16.7	
	comp=Z,15nm,1.6s						
VNA3	Neumayer Olymp	86.22	180	P	P	09 08 43.6	-1.7
VNA2	Neumayer--Watz	86.54	180	P	P	09 08 44.3	-2.6
	baz=186,slow=3.7						
VNA1	Neumayer--Stat	86.82	180	P	P	09 08 46.0	-2.2
YBH	Yreka Blue Hor	88.57	43	P	P	09 08 55.8	-1.3
NVAR	Mina Array Bea	89.77	48	P	P	09 09 01.1	-1.9
	comp=Z,1.3nm,0.7s,baz=226,slow=7.4,SNR=13						
NVAR				LR	LR	09 43 03.9	
	comp=Z,134nm,18.8s,baz=256,slow=31						
SONM	Songino Array	91.16	322	P	P	09 09 09.8	+0.7
	comp=Z,0.6nm,0.7s,baz=142,slow=7.2,SNR=3.7						
SONM	Songino Array	91.16	322	IAmb	IAmb	09 09 19.4	
	comp=Z,5.2nm,1.4s						
H03S2	Juan Fernandez	92.71	128	T	T	10 51 59.7	
	baz=239,slow=74						
H03S1	Juan Fernandez	92.72	128	T	T	10 52 01.2	
	baz=239,slow=74						
H03S3	Juan Fernandez	92.73	128	T	T	10 51 59.8	
	baz=239,slow=74						
H03N3	Juan Fernandez	92.90	128	T	T	10 52 16.9	
	baz=248						
H03N2	Juan Fernandez	92.90	128	T	T	10 52 16.2	
	baz=248						
H03N1	Juan Fernandez	92.92	128	T	T	10 52 25.7	
	baz=248						
ILAR	Eielson Array	93.06	17	P	P	09 09 17.6	+0.2
	comp=Z,0.3nm,0.8s,baz=206,slow=6.0,SNR=2.0						
ILAR				LR	LR	09 42 41.9	
	comp=Z,50nm,20.6s,baz=190,slow=30						
TLY	Talaya	94.72	325	LR	LR	09 49 12.1	
	comp=Z,41nm,19.6s,baz=114,slow=34						
TXAR	Lajitas Array	96.83	61	LR	LR	09 45 07.8	
	comp=Z,98nm,20.6s,baz=0.0,slow=30						
CLL	Collm	146.90	335	*e*PKPbc	PKPdf	09 15 45.0	+0.6
CLL				*e*PKPab	PKPab	09 15 47.0	-0.7
CLL				*e*pPKPdf	pPKPbc	09 15 57.0	+0.6
CLL				*i* pPKiKP	sPKPab	09 16 04.0	+2.7
GERES	GERESS Array B	148.48	331	PKPbc	PKPdf	09 15 48.6	+1.4
	comp=Z,1.3nm,0.6s,baz=41,slow=3.1,SNR=6.3						
TORD	Torodi Ar. Bea	166.19	228	PKPab	PKPab	09 17 09.0	-1.8
	comp=Z,0.9nm,0.9s,baz=109,slow=1.3,SNR=1.9						

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*TIF **26** 09:02:32.9, 41°.83N×42°.10E, h16^{km}±2^{km}*
*NORS **26** 09:02:35.4±0.0, 41°.96N×42°.19E, h4^{km}, MPVA3.0*
ISC 26 09:02:33.4±2.2, **41°.86N**±0°.06×**42°.10E**±0°.09, **h13**^{km}±13^{km},
n9, σ**0^{s}.73**/18, **Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABS	Abastumani	0.54	101	P	Pg	09 02 43.9	-0.1
ABS				S	Sg	09 02 52.0	+0.8
CHVG	Ch'k'valeri	0.86	359	P	Pb	09 02 50.5	+0.2
CHVG				S	Sn	09 03 03.2	-0.7
AKH	Akhalkalaki	1.13	113	P	Pb	09 02 54.7	-0.3
AKH				S	Sg	09 03 10.2	+0.2
ONI	Oni	1.24	53	*e*Pg	Pg	09 02 58.2	+0.9
ONI				*e*Sg	Sn	09 03 14.2	+0.9
NEY	Neytrino	1.47	18	*e*Pg	Pg	09 03 01.1	-0.5
NEY				*e*Sg	Sg	09 03 20.7	0.0
DIGR	Digorskoe uzhe	1.51	46	*e*Pg	Pg	09 03 02.2	-0.3
DIGR				*e*Sg	Sg	09 03 21.6	-0.6
ZEI	Tsey	1.63	54	*e*Pg	Pg	09 03 04.0	-0.6
ZEI				*e*Sg	Sg	09 03 25.5	-0.3
LACR	Lac	1.89	58	*e*Pg	Pb	09 03 08.2	+0.3
LACR				*e*Sg	Sg	09 03 33.2	-1.2
SHA1	Shidzhatmaz	1.92	12	*e*Pg	Pg	09 03 10.1	-0.3
SHA1				*e*Sg	Sg	09 03 36.8	+1.4

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*TUL **26** 09:04:55.7±0.4, 36°.38N±0°.01×98°.28W±0°.02, h3^{km}±6^{km}, ML3.0, mb_Lg2.8/43(NEIC), Error ellipse: s-maj=2.4km s-min=1.6km az=135.0*
*ANF **26** 09:04:55.8±0.6, 36°.35N×98°.26W, h1^{km}±5^{km}, ML3.3/7, Error ellipse: s-maj=4.1km s-min=3.5km az=18.0*
*NEIC **26** 09:04:56.6±0.3, 36°.38N±0°.02×98°.28W±0°.02, h4^{km}±3^{km}, Error ellipse: s-maj=2.3km s-min=1.6km az=150.0*
ISC 26 09:04:56.1±1.2, **36°.37N**±0°.02×**98°.26W**±0°.03, **h3**^{km}±11^{km},
n60, σ**0^{s}.46**/50, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CROK	Carrier	0.26	58	Pg	Pg	09 05 01.6	+0.5
CROK				Sg	Sg	09 05 05.4	+0.8
OK032	Salt Plains WL	0.44	5	Pg	Pg	09 05 04.5	0.0
OK032				Sg	Sg	09 05 10.2	0.0
GC02	Grant County #	0.58	34	Pg	Pg	09 05 07.3	+0.1
GC02				Sg	Sg	09 05 14.6	-0.2
U32A	Winter Ranch,	0.60	271	Pg	Pg	09 05 07.3	-0.2
U32A				Sg	Sg	09 05 15.2	-0.1
U32A	Winter Ranch,	0.60	271	P	Pg	09 05 07.2	-0.4
	baz=90,SNR=118						
U32A				S	Sg	09 05 15.7	+0.4
	baz=90						
KAN14	Manchester OK	0.64	22		Pg	09 05 08.2	-0.1
KAN14				Sg	Sg	09 05 16.3	-0.2
KAN10	Anthony SW Sta	0.77	10	Pg	Pg	09 05 10.5	-0.3
KAN10				Sg	Sg	09 05 20.5	-0.3
KAN17	Caldwell West	0.79	30	Pg	Pg	09 05 11.0	-0.1
KAN17				Sg	Sg	09 05 21.3	0.0
OK029	Liberty Lake	0.86	131	Pg	Pg	09 05 12.7	+0.1
KAN16	Harper SW Stat	0.87	10	Pg	Pg	09 05 12.2	-0.6
BCOK	Bluff Creek, N	0.88	143	Pg	Pg	09 05 13.0	+0.1
KAN08	Anthony NE Sta	0.89	15		Pg	09 05 12.7	-0.4
BLOK	Blackwell	0.93	65		Pg	09 05 13.5	-0.3
KAN12	Harper NE Stat	0.95	13		Pg	09 05 13.9	-0.5
OK025	Westminster Rd	1.08	136	Pg	Pg	09 05 16.5	-0.3
OK033	Mehan	1.12	106	Pg	Pg	09 05 17.2	-0.2
OKCFA	Oklahoma City	1.15	145		Pg	09 05 17.6	-0.5
OKCFA	Oklahoma City	1.15	145	P	Pg	09 05 17.8	-0.4
	baz=325,SNR=22						
OKCSW	OKLAHOMA CITY	1.17	145	Pg	Pg	09 05 17.9	-0.6
OK031	S. Brethren Rd	1.22	109		Pg	09 05 18.9	-0.6
QUOK	Quay	1.27	98		Pg	09 05 19.9	-0.5
OK030	Cody Creek RV	1.27	110		Pg	09 05 20.1	-0.4
OK034	N. Norfolk Rd.	1.30	105		Pn	09 05 20.0	-1.2
FNO	Franklin	1.31	148		Pn	09 05 20.4	-0.9
T35A	Sooner Cattle	1.51	68		Pn	09 05 23.8	-0.2
T35B	Sooner Cattle	1.51	68	P	Pn	09 05 23.7	-0.3
	baz=250,SNR=116						
T35B				S	Sn	09 05 43.7	-0.5
	baz=250						
W35A	Tecumseh	1.65	137		Pn	09 05 25.7	-0.3
WMOK	Wichita Mounta	1.68	195		Pn	09 05 26.0	-0.4
WMOK	Wichita Mounta	1.68	195	P	Pn	09 05 25.9	-0.5
	baz=14,SNR=91						
WMOK				S	Sn	09 05 48.8	+0.4
	baz=14						
X34A	Smith Ranch, M	1.80	169	Pn	Pn	09 05 28.8	+0.8
TUL1	Leonard	2.05	102	Pn	Pn	09 05 31.6	+0.2
TUL1				IAmb_Lg		09 06 05.3	
	comp=Z,44nm,0.9s						
TUL1	Leonard	2.05	102	P	Pn	09 05 31.5	+0.1
	baz=284,SNR=104						
TUL1				S	Sb	09 06 00.4	+0.6
	baz=284						
R32A	Long Quarter,	2.08	350	Pn	Pn	09 05 32.3	+0.3
R32A	Long Quarter,	2.08	350	P	Pn	09 05 32.3	+0.3
	baz=170,SNR=42						
R32A				S	Sb	09 06 01.2	+0.3
	baz=170						
LOOK	Love County	2.53	159	Pn	Pn	09 05 39.0	+0.9
X37A	Clayton	2.95	126	Pn	Pn	09 05 44.5	+0.7
X37A	Clayton	2.95	126	P	Pn	09 05 44.1	+0.3
	baz=308,SNR=17						
KSU1	Kansas State U	3.03	25	IAmb_Lg		09 06 35.4	
	comp=Z,21nm,0.8s						
U38A	Gravette	3.13	88	IAmb_Lg		09 06 41.1	
	comp=Z,23nm,0.8s						
AMTX	Amarillo	3.15	243	IAmb_Lg		09 06 42.8	
	comp=Z,36nm,0.7s						
W39A	Magazine	3.82	106	IAmb_Lg		09 06 59.9	
	comp=Z,34nm,0.8s						
ABTX	Abilene, Hawle	3.90	197	IAmb_Lg		09 07 03.1	
	comp=Z,19nm,0.9s						
Z38A	Mt. Pleasant	4.11	138	IAmb_Lg		09 07 16.0	
	comp=Z,20nm,0.9s						
S39A	Bolivar	4.17	70	IAmb_Lg		09 07 08.0	
	comp=Z,20nm,0.7s						
S39A	Bolivar	4.17	70	P	Pn	09 06 00.7	+0.1
	baz=253,SNR=7.4						
MIAR	Mount Ida	4.23	114	IAmb_Lg		09 07 20.9	
	comp=Z,21nm,0.8s						
KSCO	Kaye Shedlock’	4.36	309	IAmb_Lg		09 07 16.1	
	comp=Z,19nm,0.8s						
U40A	Yellville	4.36	89	IAmb_Lg		09 07 16.0	
	comp=Z,18nm,0.8s						
X40A	Basin Creek Fa	4.81	111	IAmb_Lg		09 07 36.9	
	comp=Z,14nm,0.7s						
P38A	Dawn	4.95	48	IAmb_Lg		09 07 42.8	
	comp=Z,23nm,1.1s						
WHAR	Wooly Hollow	4.97	101	IAmb_Lg		09 07 35.9	
	comp=Z,15nm,0.8s						
WLAR	White Oak Lake	5.00	121	IAmb_Lg		09 07 43.7	
	comp=Z,12nm,0.7s						
T25A	Trinidad	5.00	281	IAmb_Lg		09 07 38.6	
	comp=Z,17nm,0.9s						
BGNE	Belgrade	5.04	1	IAmb_Lg		09 07 47.5	
	comp=Z,23nm,0.7s						
R40A	Maddies Statio	5.15	66	IAmb_Lg		09 07 53.3	
	comp=Z,15nm,1.1s						
T42A	Van Buren	5.80	81	IAmb_Lg		09 08 12.9	
	comp=Z,11nm,1.1s						
CCM	Cathedral Cave	5.85	71	IAmb_Lg		09 08 15.1	
	comp=Z,12nm,0.8s						
PBMO	Poplar Bluff	6.32	84	IAmb_Lg		09 08 14.3	
	comp=Z,10nm,0.7s						
S44A	Carbondale	7.32	77	IAmb_Lg		09 08 49.9	
	comp=Z,12nm,0.7s						
L40A	Anamosa	7.88	42	IAmb_Lg		09 09 09.6	
	comp=Z,14nm,0.8s						

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*NEIC **26** 09:08:44.3±0.8, 36°.94N±0°.01×97°.80W±0°.02, h6^{km}±6^{km}, Error ellipse: s-maj=3.0km s-min=1.7km az=108.0*
*ANF **26** 09:08:44.6±0.2, 36°.93N×97°.84W, h6^{km}, ML3.6/12, Error ellipse: s-maj=3.4km s-min=2.3km az=92.0*
*TUL **26** 09:08:44±0.7, 36°.96N±0°.01×97°.83W±0°.03, h6^{km}±1^{km}, ML3.2, mb_Lg3.0/61(NEIC), Error ellipse: s-maj=3.0km s-min=1.6km az=108.0*
ISC 26 09:08:44.3±1.0, **36°.94N**±0°.02×**97°.81W**±0°.02, **h5**^{km}±8^{km},
n83, σ**0^{s}.54**/75, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.09	204	Pg	Pg	09 08 46.5	+0.2
KAN17	Caldwell West	0.11	20	Pg	Pg	09 08 46.7	+0.1
KAN14	Manchester OK	0.12	279		Pg	09 08 46.7	-0.1
KAN05	Bluff City Nor	0.18	344		Pg	09 08 47.8	0.0
KAN05				Sg	Sg	09 08 50.1	0.0
KAN01	Argonia South	0.22	11	Pg	Pg	09 08 48.6	0.0
KAN01				Sg	Sg	09 08 51.8	+0.3
KAN09	Caldwell North	0.25	38		Pg	09 08 49.3	+0.1
KAN09				Sg	Sg	09 08 52.8	+0.3
KAN13	South Haven SW	0.28	74	Pg	Pg	09 08 49.9	+0.2
KAN13				Sg	Sg	09 08 53.8	+0.4
KAN10	Anthony SW Sta	0.29	309	Pg	Pg	09 08 49.9	-0.1
KAN10				Sg	Sg	09 08 54.1	+0.2
KAN06	Argonia West S	0.31	353		Pg	09 08 50.3	0.0
KAN06				Sg	Sg	09 08 54.6	+0.1
KAN08	Anthony NE Sta	0.32	336		Pg	09 08 50.4	0.0
OK032	Salt Plains WL	0.35	247	Pg	Pg	09 08 50.9	-0.1
OK032				Sg	Sg	09 08 55.8	+0.3
KAN16	Harper SW Stat	0.35	325	Pg	Pg	09 08 51.0	-0.1
KAN12	Harper NE Stat	0.39	338		Pg	09 08 51.7	-0.1
KAN12				Sg	Sg	09 08 57.1	+0.2
CROK	Carrier	0.45	198	Pg	Pg	09 08 53.1	+0.1
CROK				Sg	Sg	09 08 59.6	+0.7
BLOK	Blackwell	0.51	110	Pg	Pg	09 08 54.2	+0.1
T35A	Sooner Cattle	1.04	91		Pg	09 09 03.9	-0.4
T35B	Sooner Cattle	1.04	91	P	Pg	09 09 03.8	-0.4
	baz=272,SNR=82						
U32A	Winter Ranch,	1.11	240		Pg	09 09 04.8	-0.7
U32A	Winter Ranch,	1.11	240	P	Pg	09 09 04.8	-0.7
	baz=59,SNR=17						
OK033	Mehan	1.14	141	Pg	Pg	09 09 05.9	-0.2
QUOK	Quay	1.17	130		Pg	09 09 06.3	-0.5
OK029	Liberty Lake	1.18	166		Pg	09 09 06.3	-0.5
OK031	S. Brethren Rd	1.26	141		Pn	09 09 07.7	-0.8
OK034	N. Norfolk Rd.	1.28	136		Pn	09 09 08.1	-0.8
BCOK	Bluff Creek, N	1.29	173		Pn	09 09 08.1	-0.9
OK030	Cody Creek RV	1.31	140		Pn	09 09 08.4	-0.8
OK025	Westminster Rd	1.41	164		Pn	09 09 10.3	-0.3
OKCFA	Oklahoma City	1.55	169		Pn	09 09 12.4	-0.1
OKCFA	Oklahoma City	1.55	169	P	Pn	09 09 12.8	+0.2
	baz=349,SNR=15						
OKCFA				S	Sg	09 09 34.3	+0.3
	baz=349						
OKCSW	OKLAHOMA CITY	1.56	169		Pn	09 09 12.9	+0.2
R32A	Long Quarter,	1.64	335		Pn	09 09 14.2	+0.3
R32A	Long Quarter,	1.64	335	P	Pn	09 09 14.3	+0.4
	baz=154,SNR=67						
R32A				S	Sb	09 09 35.7	-0.6
	baz=154						
FNO	Franklin	1.71	169		Pn	09 09 15.1	+0.3
TUL1	Leonard	1.93	122		Pn	09 09 17.8	+0.1
TUL1	Leonard	1.93	122	P	Pn	09 09 18.4	+0.7
	baz=303,SNR=76						
W35A	Tecumseh	1.94	157		Pn	09 09 18.0	+0.1
W35A				IAmb_Lg		09 09 49.1	
	comp=Z,59nm,0.8s						
WMOK	Wichita Mounta	2.33	200		Pn	09 09 23.8	+0.5
WMOK				IAmb_Lg		09 10 00.9	
	comp=Z,45nm,0.8s						
WMOK	Wichita Mounta	2.33	200	P	Pn	09 09 24.3	+0.9
	baz=19,SNR=30						
WMOK				S	Sn	09 09 53.4	+1.0
	baz=19						
X34A	Smith Ranch, M	2.33	180		Pb	09 09 25.7	-1.1
KSU1	Kansas State U	2.36	23		Pn	09 09 23.6	-0.1
KSU1	Kansas State U	2.36	23	P	Pn	09 09 24.1	+0.4
	baz=204,SNR=18						
KSU1				S	Sb	09 09 56.4	-0.4
	baz=204						
CBKS	Cedar Bluff	2.41	321		Pn	09 09 24.5	0.0
CBKS	Cedar Bluff	2.41	321	S	Sn	09 09 55.7	+1.2
	baz=140						
U38A	Gravette	2.80	99		Pn	09 09 30.7	+1.0
LOOK	Love County	2.98	170	IAmb_Lg		09 10 23.6	
	comp=Z,31nm,0.8s						
X37A	Clayton	3.07	139		Pn	09 09 33.9	+0.4
X37A				IAmb_Lg		09 10 29.9	
	comp=Z,56nm,0.9s						
X37A	Clayton	3.07	139	P	Pn	09 09 33.9	+0.4
	baz=321,SNR=21						
HHAR	Hobbs	3.18	101		Pn	09 09 34.8	-0.3
Z35A	Perchaven, San	3.63	173	P	Pn	09 09 41.7	+0.5
	baz=353						
Z35A				S	Sn	09 10 25.4	+1.0
	baz=353						
S39A	Bolivar	3.66	77		Pn	09 09 40.9	-0.6
S39A	Bolivar	3.66	77	P	Pn	09 09 41.8	+0.2
	baz=260,SNR=12						
W39A	Magazine	3.70	117	Pn	Pn	09 09 43.5	+1.4
W39A				IAmb_Lg		09 10 46.5	
	comp=Z,49nm,0.8s						
AMTX	Amarillo	3.75	238	IAmb_Lg		09 10 51.9	
	comp=Z,36nm,0.8s						
N33A	J Bar K, Exete	3.81	4	Pn	Pn	09 09 43.1	-0.5
N33A				IAmb_Lg		09 10 52.2	
	comp=Z,36nm,0.8s						
U40A	Yellville	4.03	97	Pn	Pn	09 09 46.8	+0.1
U40A				IAmb_Lg		09 10 55.0	
	comp=Z,38nm,0.7s						
MIAR	Mount Ida	4.19	123	IAmb_Lg		09 10 59.5	
	comp=Z,20nm,0.7s						
P38A	Dawn	4.30	50		Pn	09 09 49.7	-0.7
P38A				IAmb_Lg		09 11 01.6	
	comp=Z,27nm,0.7s						
KSCO	Kaye Shedlock’	4.33	300	Pn	Pn	09 09 51.2	+0.3
KSCO				IAmb_Lg		09 11 11.4	
	comp=Z,20nm,0.8s						
Z38A	Mt. Pleasant	4.34	147	Pn	Pn	09 09 51.1	+0.2
MGMO	Mountain Grove	4.44	86	IAmb_Lg		09 11 06.2	
	comp=Z,20nm,0.8s						
BGNE	Belgrade	4.47	357	Pn	Pn	09 09 52.6	-0.2
BGNE				IAmb_Lg		09 11 17.5	
	comp=Z,38nm,0.8s						
R40A	Maddies Statio	4.60	71	P	Pn	09 09 54.9	+0.3
	baz=255,SNR=25						
FCAR	Ozark Folk Cen	4.71	101	IAmb_Lg		09 11 19.2	
	comp=Z,21nm,0.7s						
X40A	Basin Creek Fa	4.73	120	Pn	Pn	09 09 57.6	+1.3
WHAR	Wooly Hollow	4.76	109	Pn	Pn	09 09 57.5	+0.7
WHTX	Lake Whitney,	4.94	176	P	Pn	09 09 59.2	0.0
	baz=357,SNR=8.4						
WLAR	White Oak Lake	5.03	129	IAmb_Lg		09 11 29.0	
	comp=Z,23nm,0.8s						
P40A	Paris	5.22	59	IAmb_Lg		09 11 36.5	
	comp=Z,22nm,0.9s						
N38A	Joes South For	5.25	41	IAmb_Lg		09 11 38.3	
	comp=Z,34nm,0.7s						
CCM	Cathedral Cave	5.34	76	IAmb_Lg		09 11 39.7	
	comp=Z,19nm,0.8s						
NATX	Nacogdoches	5.79	152	IAmb_Lg		09 12 00.8	
	comp=Z,16nm,0.9s						
PBMO	Poplar Bluff	5.92	89	IAmb_Lg		09 11 57.5	
	comp=Z,24nm,0.8s						
FVM	French Village	5.97	78	IAmb_Lg		09 11 53.3	
	comp=Z,17nm,0.8s						
435B	Jarrell	6.14	178	IAmb_Lg		09 12 05.4	
	comp=Z,22nm,0.8s						
SLM	Saint Louis	6.24	72	IAmb_Lg		09 12 01.5	
	comp=Z,21nm,0.8s						
JCT	Junction City	6.65	195	IAmb_Lg		09 12 31.5	
	comp=Z,21nm,1.1s						
143A	Socs Landing,	6.75	127	IAmb_Lg		09 12 37.8	
	comp=Z,12nm,0.8s						
S44A	Carbondale	6.86	81	IAmb_Lg		09 12 24.0	
	comp=Z,18nm,0.9s						
SIUC	Southern Illin	6.89	81	IAmb_Lg		09 12 24.1	
	comp=Z,21nm,0.8s						
W45A	Hickory Valley	7.21	102	IAmb_Lg		09 12 33.7	
	comp=Z,23nm,0.8s						
T45A	Paducah	7.34	87	IAmb_Lg		09 12 38.6	
	comp=Z,22nm,0.7s						
HDIL	Hopedale	7.57	59	IAmb_Lg		09 12 53.6	
	comp=Z,21nm,0.8s						
K22A	Casper	8.80	313	IAmb_Lg		09 13 46.6	
	comp=Z,10nm,0.9s						

ISC 26 09:36:20.5±1.1, **49°.54N**±0°.08×**17°.99E**±0°.06, **h10**^{km}, **n6,**
σ**0^{s}.52**/9, **Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MORC	Moravsky Berou	0.37	309	*e*PG	Pg	09 36 27.2	-0.7
MORC				*e*SG	Sg	09 36 33.2	+0.4
JAVC	Velka Javorina	0.71	197	*e*PG	Pn	09 36 36.8	+0.1
VRAC	Vranov	0.94	256	*e*PG	Pb	09 36 39.2	+0.4
LANS	Liptovska Anna	1.04	111	*e*PG	Pn	09 36 41.4	+0.2
LANS				*e*SG	Sb	09 36 55.1	+0.7
KRUC	Moravsky	1.15	246	*e*PG	Pb	09 36 42.2	-0.2
VYHS	Vyhne	1.19	152	*e*PG	Pb	09 36 42.6	-0.5
VYHS				*e*SG	Sb	09 36 58.7	+0.2

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*IDC **26** 09:45:45.1±3.4, 32°.73N×139°.75E, h115^{km}±69^{km}, mb3.3/4, mb1 3.4/5, mb1mx3.1/38, mbtmp3.6/5, Error ellipse: s-maj=190.3km s-min=22.6km az=66.0*
*JMA **26** 09:45:46.7±0.1, 33°.00N×140°.17E, h133^{km}±1^{km}, M3.3*
ISC 26 09:45:46.1±1.1, **32°.94N**±0°.06×**140°.1E**±0°.1, **h138**^{km}±7^{km},
n24, σ**0^{s}.63**/25, **mb3.6**/4, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHCJ	Hachijojimakas	0.31	294	P	Pn	09 46 05.2	0.0
JHCJ				S	Sn	09 46 19.4	-0.3
JHJ2	Mitsune	0.32	302	P	Pn	09 46 05.3	+0.1
JHJ2				S	Sn	09 46 19.7	0.0
JAOM	Aogashimamukai	0.57	214	P	Pn	09 46 07.0	+0.5
JAOM				*e*S	Sn	09 46 22.6	+0.7
JMKN	Mikurajimanish	1.05	334	P	Pn	09 46 10.1	-0.1
JMKN				*e*S	Sn	09 46 27.8	-0.7
JKO	Kozu shima	1.50	326	P	Pn	09 46 15.0	+0.3
BSO1	Boso 1	1.84	22	P	Pn	09 46 19.2	+1.2
JIM2	Oshima 3	1.86	342	P	Pn	09 46 19.2	+0.3
JIM2				*e*S	Sn	09 46 43.2	-0.9
BSO3	Boso 3	1.88	9	P	Pn	09 46 19.2	+0.4
JIZS	Izushimoda	2.06	330	P	Pn	09 46 21.6	+0.4
TK04	Tokai 4	2.37	308	P	Pn	09 46 26.1	+1.2
JOD2	Odawara 2	2.47	340	P	Pn	09 46 26.8	+0.5
JOD2				S	Sn	09 46 57.1	-0.2
JYN	Shimob	2.87	333	P	Pn	09 46 32.4	+1.0
JRY	Ryogami san	3.23	342	P	Pn	09 46 36.6	+0.6
MJAR	Matsushiro Arr	3.92	337	P	Pn	09 46 45.0	0.0
	0.3nm,0.3s,baz=56,slow=18,SNR=17						
MJAR				S	Sn	09 47 30.5	-0.3
	baz=144,slow=11,SNR=1.3						
H11N2	WAKE ISLAND Hy	27.26	112	T	T	10 20 33.0	
	baz=306,slow=74						
H11N1	WAKE ISLAND Hy	27.27	112	T	T	10 20 32.8	
	baz=306,slow=74						
H11N3	WAKE ISLAND Hy	27.28	112	T	T	10 20 41.7	
	baz=306						
H11S3	WAKE ISLAND Hy	27.81	115	T	T	10 20 46.7	
	baz=305						
H11S1	WAKE ISLAND Hy	27.81	115	T	T	10 20 54.8	
	baz=305						
H11S2	WAKE ISLAND Hy	27.83	115	T	T	10 20 37.9	
	baz=305						
MKAR	Makanchi Array	45.52	305	P	P	09 53 52.1	+0.3
	0.9nm,0.7s,baz=91,slow=9.2,SNR=4.3						
KURBB	Kurchatov Arra	47.78	311	P	P	09 54 09.5	+0.2
	0.3nm,0.4s,baz=87,slow=7.1,SNR=2.0						
WRA	Warramunga Arr	52.88	187	P	P	09 54 47.1	-0.8
	0.3nm,0.3s,baz=0.8,slow=7.6,SNR=9.4						
ASAR	Alice Springs	56.61	187	P	P	09 55 14.1	-0.6

0.4nm,0.4s,baz=359,slow=6.2,SNR=14

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*NEIC **26** 09:46:36.3±1.1, 37°.17N±0°.03×97°.80W±0°.02, h4^{km}±5^{km}, mb_Lg2.0/4, ML2.1/23, Error ellipse: s-maj=4.5km s-min=1.4km az=209.0*

NEIC 26 09:46:36.3±1.3**, 37°.17N**±0°.02×**97°.80W**±0°.01**, h12**^{km}±3^{km}**, Error ellipse: s-maj=2.9km s-min=1.6km az=194.0, Kansas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAN01	**Argonia South**	**0.04**	**119**		Pg	09 46 38.3	-0.2
KAN05	**Bluff City Nor**	**0.09**	**221**		Pg	09 46 39.8	+0.9
KAN17	**Caldwell West**	**0.13**	**167**		Pg	09 46 39.1	-0.4
KAN17					Sg	09 46 41.2	-0.7
KAN08	**Anthony NE Sta**	**0.14**	**292**		Pg	09 46 39.6	-0.1
KAN08					Sg	09 46 41.9	-0.3
KAN09	**Caldwell North**	**0.15**	**104**		Pg	09 46 39.5	-0.3
KAN09					Sg	09 46 41.8	-0.6
KAN12	**Harper NE Stat**	**0.20**	**309**		Pg	09 46 40.6	0.0
KAN12					Sg	09 46 43.7	+0.1
KAN16	**Harper SW Stat**	**0.22**	**284**		Pg	09 46 40.9	0.0
KAN16					Sg	09 46 44.1	+0.1
KAN10	**Anthony SW Sta**	**0.24**	**258**		Pg	09 46 41.3	0.0
KAN10					Sg	09 46 44.8	+0.1
KAN14	**Manchester OK**	**0.25**	**211**		Pg	09 46 41.5	0.0
KAN14					Sg	09 46 45.0	0.0
KAN13	**South Haven SW**	**0.30**	**122**		Pg	09 46 42.4	-0.1
KAN13					Sg	09 46 46.5	-0.1
GC02	**Grant County #**	**0.32**	**188**	Pg	Pg	09 46 42.5	-0.4
OK032	**Salt Plains WL**	**0.49**	**222**		Pg	09 46 46.0	+0.1
OK032					Sg	09 46 52.7	+0.3
BLOK	**Blackwell**	**0.62**	**131**	Pg	Pg	09 46 47.8	-0.6
T35A	**Sooner Cattle**	**1.06**	**104**	Pg	Pb	09 46 56.1	-0.6
U32A	**Winter Ranch,**	**1.25**	**231**	Pg	Pn	09 46 59.0	-0.6
OK033	**Mehan**	**1.32**	**148**		Pb	09 47 01.1	0.0
QUOK	**Quay**	**1.33**	**138**	Pn	Pn	09 47 01.0	+0.2
OK029	**Liberty Lake**	**1.40**	**168**	Pn	Pb	09 47 02.5	+0.1
R32A	**Long Quarter,**	**1.44**	**330**		Pb	09 47 02.9	-0.2
OK034	**N. Norfolk Rd.**	**1.45**	**143**	Pn	Pb	09 47 03.4	+0.1
BCOK	**Bluff Creek, N**	**1.52**	**174**	Pn	Pn	09 47 03.7	+0.4
BCOK				IAmb_Lg		09 47 27.3	
	comp=Z,14nm,0.8s						
OK025	**Westminster Rd**	**1.63**	**167**	Pn	Pb	09 47 06.6	+0.3
TUL1	**Leonard**	**2.05**	**127**	Pn	Pb	09 47 12.6	-0.9
KSU1	**Kansas State U**	**2.14**	**26**	IAmb_Lg		09 47 44.5	
	comp=Z,5.1nm,0.9s						
W35A	**Tecumseh**	**2.15**	**159**	Pn	Pn	09 47 13.2	+1.2

IDC 26 09:59:19.8±2.7**, 64°.65N**×**30°.37E, h0**^{km}**, mb1 3.0**/2**, mb1mx2.9**/29**, mbtmp2.9**/2**, ML2.0**/2**, Error ellipse: s-maj=46.2km s-min=9.6km az=101.0, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FINES	**FINESS Array B**	**3.77**	**213**	Pn	Pn	10 00 19.4	+0.3
	0.2nm,0.3s,baz=26,slow=13,SNR=6.5						
FINES				Lg	Lg	10 01 17.4	
	1.7nm,0.3s,baz=32,slow=31,SNR=11						
ARCES	**ARCESS Array B**	**5.26**	**341**	Pn	Pn	10 00 37.7	-1.8
	baz=155,slow=14,SNR=23						
ARCES				Sn	Sn	10 01 35.2	-5.6
	baz=155,slow=24,SNR=1.4						
ARCES				Lg	Lg	10 01 57.4	
	baz=152,slow=29,SNR=2.9						
I43RU	**DUBNA INFRASON**	**8.63**	**154**	*i*		10 52 10.0	
	baz=348,slow=330,SNR=2.3						

WEL 26 10:51:11.6±1.1**, 33°S**±22°×**18°0E**±3°9**, h304**^{km}±21^{km}**, M4.2**/7**, mB4.6**/6**, ML5.0**/3**, MLv4.5**/7**, Mw(mB)3.9**/6**, Error ellipse: s-maj=0.1km s-min=0.0km az=118.3, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.47**	**195**	P	Pn	10 52 23.5	+0.4
WMGZ	**Waiomatatini S**	**4.70**	**193**	P	Pn	10 52 26.2	+0.5
WMGZ				S	S	10 53 27.6	+2.4
WMGZ	**Waiomatatini S**	**4.70**	**193**	P	Pn	10 52 26.8	+1.1
WMGZ				S	S	10 53 26.7	+1.5
HAZ	**Te Kaha**	**4.79**	**199**	P	Pn	10 52 29.7	+3.0
HAZ				S	S	10 53 29.5	+2.5
HAZ	**Te Kaha**	**4.79**	**199**	P	Pn	10 52 27.6	+1.0
HAZ				S	S	10 53 27.5	+0.5
PKGZ	**Pakihiroa**	**4.84**	**196**	P	Pn	10 52 26.2	-1.2
PKGZ				S	S	10 53 28.8	+0.6
PKGZ	**Pakihiroa**	**4.84**	**196**	P	Pn	10 52 24.8	-2.6
PKGZ				S	S	10 53 27.1	-1.1
PUZ	**Puketiti**	**4.97**	**194**	P	Pn	10 52 26.9	-2.0
PUZ				S	S	10 53 31.0	-0.1
PUZ	**Puketiti**	**4.97**	**194**	P	Pn	10 52 29.7	+0.7
PUZ				S	S	10 53 31.6	+0.5
RUGZ	**Raukumara Rang**	**5.01**	**199**	P	Pn	10 52 28.4	-1.0
RUGZ				S	S	10 53 32.0	0.0
RUGZ	**Raukumara Rang**	**5.01**	**199**	P	Pn	10 52 29.7	+0.2
RUGZ				S	S	10 53 30.0	-2.0
TWGZ	**Tauwhareparae**	**5.13**	**196**	P	Pn	10 52 33.1	+2.3
TWGZ				S	S	10 53 37.1	+2.7
MARZ	**Manawahe**	**5.36**	**207**	P	Pn	10 52 36.3	+2.9
MARZ				S	S	10 53 43.4	+4.3
CNGZ	**Carnagh Statio**	**5.38**	**193**	P	Pn	10 52 34.5	+0.8
CNGZ				S	S	10 53 43.0	+3.4
MWZ	**Matawai**	**5.40**	**199**	P	Pn	10 52 34.2	+0.4
MWZ	**Matawai**	**5.40**	**199**	P	Pn	10 52 34.1	+0.3
MWZ				S	S	10 53 41.7	+1.7
TKGZ	**Te Karaka**	**5.42**	**196**	P	Pn	10 52 33.6	-0.4
TKGZ				S	S	10 53 41.5	+1.2
URZ	**Urewera**	**5.45**	**202**	P	Pn	10 52 34.7	+0.3
RIGZ	**Rimuhau**	**5.69**	**196**	P	Pn	10 52 39.4	+2.2
RIGZ				S	S	10 53 48.7	+2.4
MUGZ	**Murupara**	**5.76**	**204**	P	Pn	10 52 40.2	+2.1
MUGZ				S	S	10 53 48.0	+0.3
RTZ	**Ruatahuna**	**5.82**	**202**	P	Pn	10 52 37.8	-1.0
RTZ				S	S	10 53 50.9	+1.8
PRGZ	**Paritu Road**	**5.87**	**194**	P	Pn	10 52 41.5	+2.1
PRGZ				S	S	10 53 52.7	+2.5
PRRZ	**Plateau Road**	**5.91**	**206**	P	Pn	10 52 42.5	+2.6
KNZ	**Kokohu**	**6.01**	**196**	P	Pn	10 52 41.0	0.0
RAHZ	**Arahi**	**6.06**	**200**	P	Pn	10 52 43.8	+2.1
RAHZ				S	S	10 53 55.7	+1.3
MTHZ	**Maungataniwha**	**6.08**	**202**	P	Pn	10 52 43.6	+1.7
MTHZ				S	S	10 53 56.7	+2.0
MHGZ	**Mahia Peninsul**	**6.09**	**194**	P	Pn	10 52 43.8	+1.8
MHGZ				S	S	10 53 57.3	+2.4
TLZ	**Tolley Road**	**6.12**	**213**	P	Pn	10 52 47.6	+5.1
WHHZ	**Waihua**	**6.17**	**198**	P	Pn	10 52 44.5	+1.5
WHHZ				S	S	10 53 58.7	+2.0
MRHZ	**Matea Rd**	**6.20**	**205**	P	Pn	10 52 45.0	+1.7
MRHZ				S	S	10 54 01.2	+3.8
ARHZ	**Aropaoanui**	**6.41**	**199**	P	Pn	10 52 46.6	+0.8
BKZ	**Black Stump Fm**	**6.47**	**203**	P	Pn	10 52 47.2	+0.5
HIZ	**Hauiti**	**6.59**	**216**	P	Pn	10 52 53.7	+5.7
MCHZ	**McNeill Hill**	**6.67**	**201**	P	Pn	10 52 48.8	-0.1
NTVZ	**North Tongarir**	**6.71**	**208**	P	Pn	10 52 52.0	+2.4
TMVZ	**Te Maari**	**6.71**	**208**	P	Pn	10 52 52.1	+2.5
ETVZ	**East Tongariro**	**6.73**	**208**	P	Pn	10 52 52.1	+2.3
OTVZ	**Oturere**	**6.77**	**208**	P	Pn	10 52 52.0	+1.7
TWVZ	**Taurewa**	**6.78**	**210**	P	Pn	10 52 53.7	+3.2
BHHZ	**Black Hill Sta**	**6.91**	**204**	P	Pn	10 52 53.0	+1.1
WNVZ	**Wahianoa**	**6.94**	**208**	P	Pn	10 52 54.4	+2.0
KAHZ	**Kahuranaki**	**6.94**	**199**	P	Pn	10 52 53.3	+1.0
VRZ	**Vera Road**	**7.12**	**213**	P	Pn	10 52 58.5	+4.0
PXZ	**Pawanui**	**7.17**	**198**	P	Pn	10 52 55.4	+0.5
PNHZ	**Pukenui**	**7.25**	**202**	P	Pn	10 52 56.5	+0.5
WPHZ	**Waipukurau**	**7.31**	**200**	P	Pn	10 52 57.7	+1.0
PRHZ	**Porangahau**	**7.45**	**199**	P	Pn	10 52 59.1	+0.7
TSZ	**Takapari Road**	**7.46**	**203**	P	Pn	10 52 59.5	+1.0
WAZ	**Wanganui**	**7.55**	**209**	P	Pn	10 53 01.3	+1.7
DVHZ	**Dannevirke**	**7.61**	**201**	P	Pn	10 53 01.3	+0.9
ANWZ	**Angora Road**	**7.67**	**199**	P	Pn	10 53 02.5	+1.5
POWZ	**Post Office Ro**	**7.82**	**203**	P	Pn	10 53 04.1	+1.2
PRWZ	**Pori Road**	**7.90**	**201**	P	Pn	10 53 05.9	+1.9
BFZ	**Birch Farm**	**7.94**	**200**	P	Pn	10 53 05.7	+1.4
MRZ	**Mangatainoka R**	**8.12**	**203**	P	Pn	10 53 07.0	+0.4
HOWZ	**Holdsworth Sta**	**8.36**	**203**	P	Pn	10 53 09.6	+0.1
OGWZ	**Otaki Gorge**	**8.40**	**204**	P	Pn	10 53 08.8	-1.2
OGWZ				S	S	10 54 46.5	+0.3
KIW	**Kapiti Island**	**8.53**	**205**	P	Pn	10 53 11.8	+0.2
KIW				S	S	10 54 52.0	+2.8
MTW	**Mount Morrison**	**8.60**	**202**	P	Pn	10 53 12.3	-0.1
MTW				S	S	10 54 51.9	+1.2
MSWZ	**Moikau Station**	**8.91**	**202**	P	Pn	10 53 15.7	-0.6
MSWZ				S	S	10 54 56.2	-1.6
TCW	**Tory Channel**	**9.07**	**207**	P	Pn	10 53 18.3	+0.1
TCW				S	S	10 55 02.4	+1.1
TUWZ	**Tuamarina**	**9.39**	**208**	P	Pn	10 53 21.7	-0.3
TUWZ				S	S	10 55 08.0	-0.5
BSWZ	**Blackbirch Sta**	**9.66**	**207**	P	Pn	10 53 26.1	+0.7

IDC 26 11:20:36.6±6.0**, 7°.39N**×**94°.44E, h0**^{km}**, mb3.4**/4**, mb1 3.5**/5**, mb1mx3.4**/51**, mbtmp3.4**/5**, ML3.1**/1**, Error ellipse: s-maj=298.0km s-min=23.5km az=59.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	**Prapat**	**6.38**	**135**	Pn	Pn	11 22 14.0	+2.0
	0.4nm,0.3s,baz=322,slow=14,SNR=4.0						
H08S3	**Diego Garcia H**	**26.49**	**236**	T	T	11 52 56.9	
	baz=55,slow=75,SNR=16						
H08S2	**Diego Garcia H**	**26.49**	**236**	T	T	11 52 57.7	
	baz=55,slow=75,SNR=15						
H08S1	**Diego Carcia H**	**26.51**	**236**	T	T	11 52 58.9	
	baz=55,slow=75,SNR=12						
MKAR	**Makanchi Array**	**40.63**	**347**	P	P	11 28 18.3	0.0
	0.5nm,0.7s,baz=163,slow=7.6,SNR=4.7						
ZALV	**Zalesovo Beam**	**47.08**	**352**	P	P	11 29 09.9	-0.1
	0.3nm,0.3s,baz=181,slow=7.6,SNR=1.9						
WRA	**Warramunga Arr**	**47.74**	**125**	P	P	11 29 14.5	-1.3
	0.3nm,0.8s,baz=308,slow=8.4,SNR=1.8						
ASAR	**Alice Springs**	**49.38**	**130**	P	P	11 29 28.9	+0.5
	0.2nm,0.6s,baz=298,slow=7.2,SNR=1.4						

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*TUL **26** 11:24:33.6±1.1, 36°.95N±0°.02×97°.82W±0°.02, h4^{km}±6^{km}, ML2.5, mb_Lg2.3/12(NEIC), Error ellipse: s-maj=3.1km s-min=2.3km az=215.0*

NEIC 26 11:24:33.8±1.1**, 36°.93N**±0°.02×**97°.82W**±0°.03**, h6**^{km}±7^{km}**, Error ellipse: s-maj=3.1km s-min=2.9km az=80.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	**Grant County #**	**0.08**	**205**	Pg	Pg	11 24 36.1	+0.4
KAN14	**Manchester OK**	**0.12**	**285**		Pg	11 24 36.4	0.0
KAN17	**Caldwell West**	**0.13**	**20**	Pg	Pg	11 24 36.3	-0.2
KAN05	**Bluff City Nor**	**0.19**	**347**		Pg	11 24 37.5	-0.1
KAN01	**Argonia South**	**0.23**	**12**	Pg	Pg	11 24 38.2	-0.2
KAN09	**Caldwell North**	**0.26**	**37**		Pg	11 24 38.8	-0.2
KAN13	**South Haven SW**	**0.29**	**72**	Pg	Pg	11 24 39.5	+0.1
KAN10	**Anthony SW Sta**	**0.30**	**312**	Pg	Pg	11 24 39.6	-0.1
KAN06	**Argonia West S**	**0.32**	**354**		Pg	11 24 39.8	-0.4
KAN08	**Anthony NE Sta**	**0.33**	**338**		Pg	11 24 39.9	-0.3
OK032	**Salt Plains WL**	**0.34**	**249**	Pg	Pg	11 24 40.7	+0.3
KAN16	**Harper SW Stat**	**0.36**	**327**	Pg	Pg	11 24 40.3	-0.5
KAN12	**Harper NE Stat**	**0.40**	**339**		Pg	11 24 41.4	-0.2
CROK	**Carrier**	**0.44**	**198**	Pg	Pg	11 24 42.9	+0.5
BLOK	**Blackwell**	**0.51**	**109**	Pg	Pg	11 24 43.3	-0.3
T35A	**Sooner Cattle**	**1.05**	**90**	Pg	Pg	11 24 53.3	-0.6
U32A	**Winter Ranch,**	**1.10**	**241**	Pg	Pg	11 24 54.3	-0.5
OK033	**Mehan**	**1.13**	**141**		Pg	11 24 55.4	-0.1
OK029	**Liberty Lake**	**1.16**	**165**	Pg	Pg	11 24 55.9	-0.2
QUOK	**Quay**	**1.17**	**130**	Pg	Pg	11 24 55.9	-0.3
OK031	**S. Brethren Rd**	**1.25**	**141**	Pn	Pb	11 24 56.4	-1.4
BCOK	**Bluff Creek, N**	**1.28**	**172**	Pn	Pn	11 24 58.0	-0.2
OK030	**Cody Creek RV**	**1.30**	**140**	Pn	Pn	11 24 57.6	-0.8
OK025	**Westminster Rd**	**1.40**	**164**		Pn	11 24 59.8	0.0
OKCFA	**Oklahoma City**	**1.54**	**169**		Pn	11 25 02.0	+0.3
OKCFA				IAmb_Lg		11 25 26.5	
	comp=Z,21nm,0.8s						
OKCSW	**OKLAHOMA CITY**	**1.55**	**168**		Pn	11 25 02.3	+0.4
R32A	**Long Quarter,**	**1.66**	**335**		Pn	11 25 03.9	+0.5
FNO	**Franklin**	**1.70**	**168**		Pn	11 25 04.7	+0.7
FNO				IAmb_Lg		11 25 32.3	
	comp=Z,16nm,0.8s						
TUL1	**Leonard**	**1.92**	**121**		Pb	11 25 08.3	-0.9
TUL1				IAmb_Lg		11 25 37.3	
	comp=Z,19nm,0.7s						
W35A	**Tecumseh**	**1.93**	**156**	Pn	Pn	11 25 07.4	+0.3
W35A				IAmb_Lg		11 25 35.3	
	comp=Z,12nm,1.1s						
WMOK	**Wichita Mounta**	**2.32**	**200**	Pn	Pn	11 25 13.6	+1.1
WMOK				IAmb_Lg		11 25 50.2	
	comp=Z,9.0nm,0.8s						
X34A	**Smith Ranch, M**	**2.32**	**180**	Pn	Pn	11 25 13.6	+1.1
KSU1	**Kansas State U**	**2.37**	**23**	Pn	Pn	11 25 14.3	+1.1
CBKS	**Cedar Bluff**	**2.42**	**322**	IAmb_Lg		11 25 48.2	
	comp=Z,9.5nm,1.2s						
U38A	**Gravette**	**2.80**	**99**	Pn	Pn	11 25 20.1	+1.0
X37A	**Clayton**	**3.06**	**139**	Pn	Pn	11 25 24.8	+2.1
S39A	**Bolivar**	**3.66**	**77**	Pn	Pn	11 25 30.8	-0.2

IDC 26 11:25:13.2±1.5**, 34°.28N**×**25°.19E, h0**^{km}**, mb3.6**/4**, mb1 3.6**/6**, mb1mx3.5**/41**, mbtmp3.6**/6**, ML4.0**/2**, Error ellipse: s-maj=28.9km s-min=22.4km az=79.0, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDI	**Anoyia**	**1.04**	**346**	Pn	Pn	11 25 35.4	+0.2
	9.8nm,0.3s,baz=185,slow=17,SNR=25						
IDI				Sn	Sn	11 25 50.7	+0.2
	26nm,0.3s,baz=277,slow=17,SNR=8.5						
AKASG	**Malin Array Be**	**16.68**	**9**	Pn	Pn	11 29 09.2	+0.9
	0.7nm,0.3s,baz=199,slow=10,SNR=4.8						
GERES	**GERESS Array B**	**16.88**	**333**	Pn	Pn	11 29 11.2	+0.4
	0.2nm,0.3s,baz=144,slow=11,SNR=5.6						
TORD	**Torodi Ar. Bea**	**29.95**	**231**	P	P	11 31 23.3	0.0
	0.6nm,0.7s,baz=37,slow=8.1,SNR=3.0						
MKAR	**Makanchi Array**	**44.24**	**56**	P	P	11 33 23.1	-1.2
	0.3nm,0.5s,baz=274,slow=7.8,SNR=4.7						
ZALV	**Zalesovo Beam**	**45.60**	**46**	P	P	11 33 34.6	-0.3
	1.2nm,0.4s,baz=271,slow=8.2,SNR=5.8						
SONM	**Songino Array**	**60.03**	**50**	P	P	11 35 22.8	+0.9
	0.2nm,0.6s,baz=274,slow=6.3,SNR=1.6						

IDC 26 11:39:35.1±5.6**, 6°.49N**×**93°.85E, h0**^{km}**, mb3.3**/3**, mb1 3.5**/4**, mb1mx3.2**/45**, mbtmp3.4**/4**, ML3.3**/1**, MS3.0**/1**, Ms1 3.0**/1**, ms1mx2.5**/26**, Error ellipse: s-maj=264.9km s-min=28.8km az=56.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	**Prapat**	**6.25**	**126**	Pn	Pn	11 41 10.7	+1.9
	0.7nm,0.3s,baz=337,slow=15,SNR=4.2						
LEM	**Lembang**	**19.07**	**134**	LR	LR	11 51 35.5	
	comp=Z,46nm,18.8s,baz=1.5,slow=38						
H08S3	**Diego Garcia H**	**25.51**	**237**	T	T	12 11 59.7	
	baz=56,slow=75,SNR=7.0						
H08S2	**Diego Garcia H**	**25.51**	**237**	T	T	12 11 55.8	
	baz=56,slow=75,SNR=7.4						
H08S1	**Diego Carcia H**	**25.53**	**237**	T	T	12 11 54.5	
	baz=56,slow=75,SNR=5.2						
MKAR	**Makanchi Array**	**41.37**	**348**	P	P	11 47 23.0	0.0
	0.4nm,0.8s,baz=164,slow=6.8,SNR=3.6						
WRA	**Warramunga Arr**	**47.71**	**124**	P	P	11 48 13.3	-0.8
	0.3nm,0.9s,baz=305,slow=8.6,SNR=1.5						
ASAR	**Alice Springs**	**49.27**	**129**	P	P	11 48 26.1	0.0
	0.5nm,0.9s,baz=301,slow=7.4,SNR=3.2						

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*IDC **26** 11:56:33.3±1.6, 17°.73S×168°.27E, h0^{km}, mb3.7/5, mb1 4.0/6, mb1mx3.8/30, mbtmp3.7/6, ML4.1/1, MS3.0/1, Ms1 3.0/1, ms1mx2.5/39, Error ellipse: s-maj=55.4km s-min=28.3km az=135.0*

*NOU **26** 11:56:39.5, 17°.97S×168°.11E, h15^{km}, MLv4.6/18, Vanuatu Islands*

ISC 26 11:56:39.3±1.1**, 17°.91S**±0°.05×**168°.2E**±0°.1**, h42**^{km}±10^{km}**, n20,** σ**1^{s}01**/21**, mb3.7**/5**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	**Devils Point**	**0.19**	**346**	P	**Pn**	**11 56 47.0**	**+0.2**
RTV	**Rentapao**	**0.21**	**56**	P	**Pn**	**11 56 47.6**	**+0.6**
SANVU	**Saraoutou**	**2.65**	**338**	P	**Pn**	**11 57 20.7**	**+1.2**
LIFNC	**LIFOU**	**3.00**	**198**	P	**Pn**	**11 57 24.6**	**+0.2**
MARNC	**Mare, Loyalty**	**3.55**	**183**	P	**Pn**	**11 57 32.6**	**+0.6**
YATNC	**Mamie plateau,**	**4.31**	**197**	P	**Pn**	**11 57 42.8**	**+0.3**
DZM	**Mont Dzumac**	**4.47**	**202**	*e*Pn	**Pn**	**11 57 45.7**	**+1.1**
	37nm,0.2s						
DZM				*e*Sn	**Sn**	**11 58 34.6**	**-0.8**
	116nm,0.2s						
DZM	**Mont Dzumac**	**4.47**	**202**	Pn	**Pn**	**11 57 44.7**	**+0.1**
	9.0nm,0.3s,baz=75,slow=13,SNR=279						
DZM				Sn	**Sn**	**11 58 34.3**	**-1.1**
	23nm,0.3s,baz=322,slow=23,SNR=23						
DZM	**Mont Dzumac**	**4.47**	**202**	P	**Pn**	**11 57 45.6**	**+1.0**
NOUC	**Port Laguerre**	**4.54**	**203**	P	**Pn**	**11 57 46.5**	**+0.9**
KOUNC	**Koumac, New Ca**	**4.56**	**234**	P	**Pn**	**11 57 46.2**	**+0.3**
OUENC	**Ouen Island, N**	**4.67**	**196**	P	**Pn**	**11 57 49.5**	**+2.2**
ONTNC	**Ouen Toro**	**4.68**	**201**	P	**Pn**	**11 57 48.8**	**+1.3**
PINNC	**Pines Island,**	**4.73**	**189**	P	**Pn**	**11 57 49.3**	**+1.1**
WRA	**Warramunga Arr**	**32.10**	**261**	P	**P**	**12 03 02.9**	**+0.2**
	0.3nm,0.7s,baz=90,slow=9.7,SNR=1.7						
ASAR	**Alice Springs**	**32.55**	**254**	P	**P**	**12 03 07.2**	**+0.5**
	0.6nm,0.6s,baz=82,slow=9.1,SNR=5.4						
GUMO	**Guam**	**38.88**	**322**	LR	LR	12 18 10.4	
	comp=Z,22nm,19.8s,baz=142,slow=34						
SONM	**Songino Array**	**85.60**	**323**	P	**P**	**12 09 13.4**	**+0.1**
	0.7nm,0.6s,baz=131,slow=5.2,SNR=3.8						
NVAR	**Mina Array Bea**	**88.64**	**49**	P	**P**	**12 09 28.7**	**+0.2**
	0.3nm,0.7s,baz=236,slow=6.4,SNR=2.9						
ILAR	**Eielson Array**	**89.26**	**18**	P	**P**	**12 09 29.0**	**-1.4**
	0.5nm,0.9s,baz=230,slow=6.9,SNR=2.7						

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*IDC **26** 12:16:30.0±3.3, 20°.68S×177°.44W, h481^{km}±24^{km}, mb3.5/5, mb1 3.6/8, mb1mx3.3/39, mbtmp4.4/8, Error ellipse: s-maj=70.0km s-min=18.7km az=151.0*

ISC 26 12:16:33.1±0.7**, 19°.88S**±0°.10×**177°.7W**±0°.1**, h500**^{km}**, n32,** σ**2^{s}81**/39**, mb4.1**/5**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.52**	**297**	P	**P**	**12 17 59.5**	**+3.5**
	8.4nm,0.3s,baz=138,slow=3.5,SNR=19						
AFI	**Afiamalu**	**8.23**	**45**	P	**P**	**12 18 32.2**	**+0.1**
	11nm,0.3s,baz=163,slow=1.7,SNR=12						
AFI				S	**S**	**12 20 07.5**	**-2.1**
	13nm,0.3s,baz=13,slow=21,SNR=11						
DZM	**Mont Dzumac**	**14.94**	**259**	P	**P**	**12 19 40.1**	**-2.7**
	0.2nm,0.3s,baz=83,slow=20,SNR=1.5						
MXZ	**Matakaoa Point**	**17.96**	**190**	P	**P**	**12 20 09.3**	**-3.6**
WMGZ	**Waiomatatini S**	**18.19**	**190**	P	**P**	**12 20 14.6**	**-0.4**
WMGZ				S	**S**	**12 23 19.4**	**+3.4**
HAZ	**Te Kaha**	**18.24**	**191**	P	**P**	**12 20 11.2**	**-4.2**
PKGZ	**Pakihiroa**	**18.31**	**191**	P	**P**	**12 20 13.5**	**-2.8**
PKGZ				S	**S**	**12 23 18.3**	**+0.1**
RUGZ	**Raukumara Rang**	**18.46**	**192**	P	**P**	**12 20 11.6**	**-6.1**
PUZ	**Puketiti**	**18.46**	**190**	P	**P**	**12 20 17.0**	**-0.5**
OPRZ	**Ohinepanea**	**18.58**	**194**	P	**P**	**12 20 22.3**	**+3.7**
TWGZ	**Tauwhareparae**	**18.61**	**191**	P	**P**	**12 20 20.0**	**+1.1**
TWGZ				S	**S**	**12 23 24.8**	**+1.8**
MARZ	**Manawahe**	**18.69**	**194**	P	**P**	**12 20 23.8**	**+4.2**
MWZ	**Matawai**	**18.85**	**192**	P	**P**	**12 20 24.6**	**+3.5**
URZ	**Urewera**	**18.86**	**193**	P	**P**	**12 20 15.9**	**-5.2**
CNGZ	**Carnagh Statio**	**18.87**	**190**	P	**P**	**12 20 21.0**	**-0.3**
TKGZ	**Te Karaka**	**18.89**	**191**	P	**P**	**12 20 21.8**	**+0.4**
HLRZ	**Highlands Stat**	**19.02**	**194**	P	**P**	**12 20 27.4**	**+4.8**
RIGZ	**Rimuhau**	**19.16**	**191**	P	**P**	**12 20 20.2**	**-3.8**
SNGZ	**Shannon Statio**	**19.32**	**192**	P	**P**	**12 20 26.7**	**+1.3**
KNZ	**Kokohu**	**19.49**	**191**	P	**P**	**12 20 25.2**	**-1.7**
WHHZ	**Waihua**	**19.62**	**192**	P	**P**	**12 20 28.7**	**+0.6**
PXZ	**Pawanui**	**20.62**	**192**	P	**P**	**12 20 41.7**	**+4.6**
PMG	**Port Moresby**	**35.45**	**282**	P	**P**	**12 22 47.7**	**+0.8**
	12nm,0.8s,baz=98,slow=9.2,SNR=5.9						
ASAR	**Alice Springs**	**44.90**	**256**	P	**P**	**12 24 01.8**	**-1.0**
	5.3nm,0.7s,baz=97,slow=7.9,SNR=73						
ASAR				PcP	**PcP**	**12 25 33.8**	**-0.2**
	1.3nm,0.5s,baz=104,slow=3.9,SNR=7.9						
ASAR				S	**S**	**12 30 00.7**	**-3.3**
	0.4nm,0.6s,baz=90,slow=16,SNR=4.0						
WRA	**Warramunga Arr**	**44.93**	**261**	P	**P**	**12 24 01.9**	**-1.2**
	1.9nm,0.5s,baz=97,slow=7.0,SNR=66						
WRA				PcP	**PcP**	**12 25 34.0**	**0.0**
	0.3nm,0.5s,baz=94,slow=3.3,SNR=5.4						
ILAR	**Eielson Array**	**87.66**	**13**	P	**P**	**12 28 29.2**	**+1.8**
	0.3nm,0.8s,baz=221,slow=5.5,SNR=4.3						
CMAR	**Chiang Mai Arr**	**90.14**	**289**	P	**P**	**12 28 42.5**	**+2.6**
	1.7nm,0.7s,baz=118,slow=3.0,SNR=12						
ZALV	**Zalesovo Beam**	**110.16**	**321**	PKiKP	**PKiKP**	**12 34 06.1**	**-1.2**
	0.3nm,0.4s,baz=117,slow=0.3,SNR=2.0						
MKAR	**Makanchi Array**	**110.95**	**314**	PKiKP	**PKiKP**	**12 34 08.7**	**-0.4**
	0.4nm,0.6s,baz=127,slow=0.4,SNR=5.4						
AKASG	**Malin Array Be**	**142.59**	**332**	PKP	**PKPdf**	**12 35 06.0**	**-2.6**
	0.5nm,0.3s,baz=43,slow=4.2,SNR=4.4						
BRTR	**Keskin Array B**	**146.60**	**313**	PKPbc	**PKiKP**	**12 35 19.6**	**-1.2**
	2.5nm,0.6s,baz=141,slow=5.0,SNR=4.8						
GERES	**GERESS Array B**	**149.67**	**345**	PKPbc	**PKiKP**	**12 35 26.8**	**0.0**
	0.4nm,0.3s,baz=48,slow=2.0,SNR=5.6						

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*JMA **26** 12:27:02.9±0.1, 40°.27N×142°.28E, h38^{km}±1^{km}, M3.7*

JMA Felt I J1.

*IDC **26** 12:27:04.3±2.5, 40°.23N×142°.39E, h66^{km}±23^{km}, mb3.2/6, mb1 3.4/9, mb1mx3.3/38, mbtmp3.5/9, MS2.6/1, Ms1 2.6/1, ms1mx2.2/28, Error ellipse: s-maj=28.6km s-min=16.0km az=102.0*

ISC 26 12:27:03.1±1.2**, 40°.25N**±0°.04×**142°.23E**±0°.08**, h44**^{km}±10^{km}**, n26,** σ**1^{s}24**/29**, mb3.5**/6**, 2C-6D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKEN	**Kujiedanarisaw**	**0.40**	**264**	⇓P	**Pn**	**12 27 12.5**	**-0.3**
JKEN				*e*S	**Sn**	**12 27 19.5**	**-0.2**
JTH	**Tanohata**	**0.42**	**222**	⇑P	**Pn**	**12 27 13.0**	**0.0**
JTH				*e*S	**Sn**	**12 27 20.3**	**+0.2**
JANG	**Nango**	**0.56**	**283**	⇓P	**Pn**	**12 27 14.8**	**0.0**
JANG				S	**Sn**	**12 27 23.2**	**0.0**
JKZ	**Kuzumaki**	**0.74**	**249**	⇓P	**Pn**	**12 27 17.7**	**+0.5**
JKZ				S	**Sn**	**12 27 28.1**	**+0.6**
JARK	**Aomorirokkasho**	**1.00**	**319**	⇓P	**Pn**	**12 27 20.6**	**-0.1**
JARK				S	**Sn**	**12 27 33.7**	**0.0**
JTM	**Tenmabayashi**	**1.04**	**301**	⇓P	**Pn**	**12 27 21.2**	**0.0**
JTM				S	**Sn**	**12 27 35.0**	**+0.5**
JOM	**Ohasama**	**1.06**	**223**	⇑P	**Pn**	**12 27 22.2**	**+0.6**
JOM				S	**Sn**	**12 27 36.0**	**+0.8**
JAH	**Hinai**	**1.23**	**268**	⇓P	**Pn**	**12 27 24.4**	**+0.6**
JAH				*e*S	**Sn**	**12 27 40.2**	**+1.1**
JOT	**Ohata**	**1.44**	**322**	P	**Pn**	**12 27 26.6**	**-0.1**
JRG	**Rokugo**	**1.50**	**236**	P	**Pn**	**12 27 29.0**	**+1.5**
JMK	**Ichinoseki**	**1.52**	**211**	P	**Pn**	**12 27 28.7**	**+1.0**
ASAJ	**Asahikawa**	**3.87**	**4**	P	**Pn**	**12 28 00.5**	**+0.5**
	4.7nm,0.3s,baz=210,slow=9.6,SNR=19						
ASAJ				S	**Sn**	**12 28 46.6**	**+2.4**
	0.6nm,0.3s,baz=180,slow=20,SNR=2.1						
ASAJ				LR	LR	12 29 32.9	
	comp=Z,74nm,19.6s,baz=160,slow=38						
MJAR	**Matsushiro Arr**	**4.87**	**222**	P	**Pn**	**12 28 16.2**	**+2.4**
	0.2nm,0.3s,baz=38,slow=13,SNR=7.8						
USRK	**Ussuriysk Ar.**	**8.56**	**301**	P	**Pn**	**12 29 08.2**	**+3.9**
	baz=107,slow=14,SNR=5.7						
SONM	**Songino Array**	**26.67**	**298**	P	**P**	**12 32 38.6**	**+0.7**
	0.4nm,0.7s,baz=97,slow=7.4,SNR=2.0						
H11N2	**WAKE ISLAND Hy**	**29.40**	**127**	T	T	13 03 49.1	
	baz=318,slow=75,SNR=66						
H11N1	**WAKE ISLAND Hy**	**29.41**	**127**	T	T	13 03 49.6	
	baz=318,slow=75,SNR=59						
H11N3	**WAKE ISLAND Hy**	**29.42**	**127**	T	T	13 03 49.9	
	baz=318,slow=75,SNR=52						
H11S1	**WAKE ISLAND Hy**	**30.22**	**129**	T	T	13 05 10.0	
	baz=321,slow=76,SNR=16						
H11S3	**WAKE ISLAND Hy**	**30.22**	**129**	T	T	13 05 07.4	
	baz=321,slow=76,SNR=16						
H11S2	**WAKE ISLAND Hy**	**30.23**	**129**	T	T	13 05 12.1	
	baz=321,slow=76,SNR=16						
ZALV	**Zalesovo Beam**	**40.29**	**310**	P	**P**	**12 34 35.1**	**-0.6**
	0.4nm,0.3s,baz=90,slow=8.8,SNR=1.7						
MKAR	**Makanchi Array**	**43.03**	**299**	P	**P**	**12 34 57.9**	**-0.4**
	0.7nm,0.6s,baz=84,slow=10,SNR=7.9						
ILAR	**Eielson Array**	**46.45**	**34**	P	**P**	**12 35 24.7**	**-0.5**
	0.5nm,0.9s,baz=272,slow=6.7,SNR=2.8						
WRA	**Warramunga Arr**	**60.33**	**189**	P	**P**	**12 37 05.9**	**-1.6**
	0.3nm,0.8s,baz=5.5,slow=6.9,SNR=7.1						
ASAR	**Alice Springs**	**64.06**	**188**	P	**P**	**12 37 31.2**	**-1.2**
	0.2nm,0.7s,baz=3.4,slow=7.3,SNR=1.8						

KMA 26 12:42:18.3±0.4**, 36°.40N**×**128°.75E, h13**^{km}±3^{km}**, Error ellipse: s-maj=2.8km s-min=2.3km az=162.0, South Korea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EUSB	**Uiseong**	**0.07**	**224**	P	Pg	12 42 21.1	+0.2
	SNR=99						
EUSB				S	Sg	12 42 22.7	0.0
KSEUS	**ULSEONG**	**0.07**	**222**	P	Pg	12 42 21.1	+0.2
	SNR=72						
KSADO	**Andong**	**0.16**	**87**	P	Pg	12 42 22.4	+0.3
	SNR=90						
KSADO				S	Sg	12 42 25.0	+0.2
ADOA	**Andong Acc Bor**	**0.17**	**348**	P	Pg	12 42 22.4	+0.2
CHYB	**Chungyang**	**0.56**	**14**	P	Pg	12 42 29.0	-0.2
KSULJ	**Uljin**	**0.61**	**61**	P	Pg	12 42 30.0	-0.2
	SNR=9.8						
KSDAG	**Daegu**	**0.65**	**169**	P	Pg	12 42 30.9	+0.1
	SNR=8.8						

IDC 26 12:44:53.4±3.1,**3.°27S**×**141.°10E**,**h0**^{km},**mb3.1**/2,**mb1 3.6**/3,**mb1mx3.1**/42,**mbtmp3.3**/3,**ML3.7**/1,**Error ellipse: s-maj=81.9km s-min=12.0km az=74.0,New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	**Jayapura**	**0.84**	**332**	Pg	Pg	12 45 09.8	+0.1
	42nm,0.3s,baz=148,slow=13,SNR=74						
JAY				Lg	Lg	12 45 21.5	
	114nm,0.3s,baz=246,slow=5.4,SNR=18						
WRA	**Warramunga Arr**	**17.84**	**201**	P	Pn	12 49 03.6	+0.3
	0.2nm,0.3s,baz=21,slow=12,SNR=14						
ASAR	**Alice Springs**	**21.44**	**198**	P	P	12 49 43.1	-0.2
	0.3nm,0.4s,baz=27,slow=10,SNR=8.4						
MKAR	**Makanchi Array**	**71.69**	**322**	P	P	12 56 17.3	0.0
	0.2nm,0.6s,baz=115,slow=6.8,SNR=1.9						

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*IDC **26** 12:56:60.0±3.1,36.°13N×71.°45E,h71^{km}±28^{km},mb3.6/13,mb1 3.8/19,mb1mx3.5/80,mbtmp3.9/19,Error ellipse: s-maj=21.8km s-min=15.5km az=4.0*

*NEIC **26** 12:57:04.8±2.5,36.°49N±0.°06×71.°26E±0.°09,h99^{km}±8^{km},mb4.1/5,Error ellipse: s-maj=11.0km s-min=9.0km az=99.0*

*NNC **26** 12:57:04.0±2.2,36.°51N×71.°20E,h116^{km}±41^{km},mb3.5,mpv4.1,Error ellipse: s-maj=24.0km s-min=12.4km az=161.0*

ISC 26 12:57:02.8±0.6,**36.°32N**±0.°05×**71.°37E**±0.°05,**h150**^{km},**n90**,σ**2.^{s}57**/86,**mb3.8**/12,**6C-5D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.53**	**170**	P	**Pn**	**12 57 46.3**	**+1.9**
CEP				S	**Sn**	**12 58 18.0**	**+1.6**
KBL	**Kabul**	**2.60**	**228**		**Pn**	**12 57 47.4**	**+2.1**
GAR	**Garm**	**2.81**	**343**		**Pn**	**12 57 46.9**	**-0.9**
CHGR	**Chuyangaron**	**2.92**	**324**		**Pn**	**12 57 47.7**	**-1.5**
CHCP	**Chirah Chowk**	**3.08**	**149**	P	**Pn**	**12 57 53.5**	**+2.4**
NIL	**Nilore**	**3.08**	**149**		**Pn**	**12 57 53.9**	**+2.7**
DRK	**Karamyk**	**3.18**	**6**		**Pn**	**12 57 52.9**	**+0.2**
THW	**Thamme Wali**	**3.53**	**175**	P	**Pn**	**12 57 59.0**	**+2.1**
BTK	**Batken**	**3.76**	**354**		**Pn**	**12 57 59.7**	**-0.2**
SARP	**Sargodha**	**4.52**	**166**	P	**Pn**	**12 58 11.0**	**+1.2**
DHRM	**DHARAMSHALA**	**5.75**	**133**	*e*P	**Pn**	**12 58 27.6**	**+1.2**
DHRM				*e*S	**Sn**	**12 59 25.3**	**-6.4**
DHRM				IAML		12 59 32.3	
	comp=E,652nm,0.1s						
DHRM				IAML		12 59 32.7	
	comp=N,814nm,0.3s						
AML	**Almayashu**	**6.08**	**17**	P	**Pn**	**12 58 30.7**	**-0.1**
	SNR=142						
UCH	**Uchtor**	**6.39**	**21**	P	**Pn**	**12 58 35.0**	**0.0**
	SNR=14						
MRKS	**Merke**	**6.58**	**12**	Lg	Lg	12 59 47.2	
	comp=N,34nm,0.5s						
EKS2	**Erkin-Say**	**6.60**	**16**	P	**Pn**	**12 58 38.4**	**+0.9**
	SNR=23						
AAK	**Ala-Archa**	**6.76**	**20**	P	**Pn**	**12 58 40.1**	**+0.5**
	comp=N,5.3nm,0.3s,baz=194,slow=5.8,SNR=62						
AAK				S	**Sn**	**12 59 51.9**	**-3.7**
	comp=N,1.7nm,0.3s,baz=331,slow=21,SNR=8.1						
AAK	**Ala-Archa**	**6.76**	**20**	P	**Pn**	**12 58 40.3**	**+0.6**
	SNR=21						
AAK	**Ala-Archa**	**6.76**	**20**	⇑P	**Pn**	**12 58 40.0**	**+0.4**
	comp=N,7.0nm,0.4s						
AAK				⇓S	**Sn**	**12 59 51.8**	**-3.7**
	comp=N,29nm,1.0s						
KK02	**Karatay Array**	**6.81**	**355**	⇓P	**Pn**	**12 58 39.9**	**-0.3**
	comp=N,5.8nm,0.4s						
KK02				⇓S	**Sn**	**12 59 53.7**	**-2.9**
	comp=N,9.4nm,0.5s						
KKAR	**Karatay Array**	**6.81**	**355**		**Pn**	**12 58 40.2**	**0.0**
KBK	**Karagaybulak**	**6.91**	**23**	P	**Pn**	**12 58 43.1**	**+1.5**
	SNR=5.8						
ULHL	**Ulahol**	**7.02**	**31**	P	**Pn**	**12 58 42.9**	**-0.3**
	SNR=6.8						
SMLA	**Simla**	**7.08**	**135**	*e*P	**Pn**	**12 58 44.5**	**+0.7**
SMLA				*e*S	**Sn**	**12 59 57.5**	**-5.6**
SMLA				IAML		13 00 01.6	
	comp=N,283nm,0.4s						
SMLA				IAML		13 00 02.1	
	comp=E,194nm,0.3s						
BOOM	**Boomskoye usch**	**7.11**	**28**		**Pn**	**12 58 44.6**	**+0.3**
CHMS	**Chumysh**	**7.16**	**20**	P	**Pn**	**12 58 45.0**	**0.0**
	SNR=5.9						
USP	**Ospenovka**	**7.35**	**18**	P	**Pn**	**12 58 47.3**	**-0.1**
	SNR=7.5						
TKM2	**Tokmak 2**	**7.36**	**25**	P	**Pn**	**12 58 47.7**	**0.0**
	SNR=15						
TKM2	**Tokmak 2**	**7.36**	**25**	⇑P	**Pn**	**12 58 48.0**	**+0.3**
	comp=E,4.4nm,0.5s						
TARG	**Taragay, Kyrgy**	**7.37**	**41**		**Pn**	**12 58 48.0**	**0.0**
KST	**Kastek**	**7.59**	**26**	P	**Pn**	**12 58 51.0**	**+0.3**
DGS	**Degeres**	**7.70**	**25**	P	**Pn**	**12 58 52.7**	**+0.5**
TNSS	**Tian-Shan**	**7.97**	**31**	P	**Pn**	**12 58 55.4**	**-0.6**
KOTS	**Kotyrbulak**	**8.20**	**31**	P	**Pn**	**12 58 59.3**	**+0.4**
KTBS	**Karatobe**	**8.43**	**27**	P	**Pn**	**12 59 02.4**	**+0.5**
BTLS	**Baital**	**8.95**	**12**	P	**Pn**	**12 59 08.1**	**-0.6**
NDI	**New Delhi**	**9.07**	**145**	*e*S	**Sn**	**13 00 45.8**	**-5.4**
AYAN	**Aya Nagar**	**9.20**	**146**	*e*S	**Sn**	**13 00 49.4**	**-4.9**
KUDL	**Kundal**	**9.23**	**151**	*e*P	**Pn**	**12 59 13.6**	**+1.1**
KUDL				*e*S	**Sn**	**13 00 48.6**	**-6.3**
PDGK	**Podgornoye**	**9.38**	**39**	⇓P	**Pn**	**12 59 13.9**	**-0.7**
	comp=E,3.0nm,0.6s						
SONA	**Sohna**	**9.38**	**147**	*e*S	**Sn**	**13 00 52.1**	**-6.5**
AJM	**Ajmer**	**10.20**	**163**	*e*S	**Sn**	**13 01 12.3**	**-6.0**
GEYT	**Alibeck**	**10.70**	**283**	P	**Pn**	**12 59 31.6**	**-0.4**
	comp=E,2.3nm,0.3s,baz=104,slow=11,SNR=12						
GEYT				S	**Sn**	**13 01 25.6**	**-4.8**
	comp=E,2.2nm,0.3s,baz=266,slow=40,SNR=2.6						
GYA0B	**ALIBECK ARRAY**	**10.70**	**283**	⇓P	**Pn**	**12 59 30.9**	**-1.1**
GYA0B				⇑S	**Sn**	**13 01 25.6**	**-4.8**
GYA0B	**ALIBECK ARRAY**	**10.70**	**283**		**Sn**	**13 01 29.4**	**-1.0**
PYUN	**Piuthan**	**12.80**	**127**	*e*P	**Pn**	**12 59 59.1**	**-0.4**
	comp=E,52nm,0.3s						
PYUN				*e*S	Sn	13 02 10.8	-10
MAKZ	**Makanchi**	**13.14**	**34**	⇑P	**Pn**	**13 00 02.6**	**-1.0**
	comp=E,5.4nm,1.1s						
MAKZ	**Makanchi**	**13.14**	**34**	Pn	**P**	**13 00 07.5**	**-0.6**
DANN	**Dangsing**	**13.14**	**124**	*e*P	**Pn**	**13 00 02.8**	**-1.2**
	comp=E,30nm,0.2s						
DANN				*e*S	Sn	13 02 18.9	-11
MK31	**Makanchi Array**	**13.27**	**35**	P	**Pn**	**13 00 06.3**	**+1.1**
	comp=E,0.8nm,0.6s,baz=211,slow=12,SNR=4.2						
MK31	**Makanchi Array**	**13.27**	**35**	Pn	**Pn**	**13 00 06.5**	**+1.2**
MKAR	**Makanchi Array**	**13.27**	**35**	P	**Pn**	**13 00 06.5**	**+1.2**
	comp=E,0.1nm,0.3s,baz=209,slow=12,SNR=4.4						
KOLN	**Koldanda**	**13.41**	**126**	*e*P	**Pn**	**13 00 07.0**	**-0.5**
	comp=E,33nm,0.3s						
KOLN				*e*S	Sn	13 02 26.4	-10
GKN	**Gorkha**	**13.95**	**123**	*e*P	**Pn**	**13 00 13.4**	**-0.8**
	comp=E,59nm,0.4s						
GKN				*e*S	Sn	13 02 39.0	-10
BHPL	**Bhopal**	**14.05**	**156**	*e*S	Sn	13 02 40.7	-10
DMN	**Daman**	**14.53**	**123**	*e*P	**Pn**	**13 00 21.5**	**0.0**
	comp=E,26nm,0.3s						
KKN	**Kakani**	**14.53**	**122**	*e*P	**Pn**	**13 00 20.8**	**-0.7**
	comp=E,32nm,0.5s						
PKIN	**Phulchoki**	**14.74**	**122**	*e*P	**Pn**	**13 00 24.7**	**+0.5**
	comp=E,30nm,0.3s						
PKI	**Pulchoki**	**14.76**	**122**	*e*P	**Pn**	**13 00 24.7**	**+0.2**
	comp=E,17nm,0.3s						
GUN	**Gumba**	**14.87**	**120**	*e*P	**Pn**	**13 00 25.9**	**0.0**
	comp=E,26nm,0.3s						
KURBB	**Kurchatov Arra**	**15.20**	**18**	P	**P**	**13 00 33.6**	**+2.6**
	comp=E,0.1nm,0.3s,baz=206,slow=11,SNR=12						
JIRN	**Jiri**	**15.24**	**120**	*e*P	**Pn**	**13 00 30.0**	**-0.5**
	comp=E,33nm,0.4s						
KURK	**Kurchatov**	**15.31**	**18**	⇑P	**P**	**13 00 34.2**	**+2.0**
	comp=E,2.4nm,0.8s						
KURK	**Kurchatov**	**15.31**	**18**	Pn	**P**	**13 00 31.7**	**-0.5**
AB31	**Akbulak array**	**15.39**	**331**	P	**Pn**	**13 00 32.4**	**+0.6**
	comp=E,0.9nm,0.5s,baz=141,slow=13,SNR=49						
ABKAR	**Akbulak array**	**15.39**	**331**	Pn	**Pn**	**13 00 33.2**	**+1.4**
RAMN	**Ramite**	**15.97**	**122**	*e*P	**Pn**	**13 00 39.2**	**-0.1**
	comp=E,28nm,0.3s						
TAPN	**Taplejung**	**16.50**	**118**	*e*P	**P**	**13 00 46.5**	**+0.7**
	comp=E,27nm,0.3s						
ODAN	**Odare**	**16.57**	**120**	*e*P	**Pn**	**13 00 47.7**	**+1.0**
	comp=E,21nm,0.5s						
BVAR	**Borovoye Array**	**16.72**	**358**	P	**Pn**	**13 00 51.3**	**+3.2**
	comp=E,0.3nm,0.3s,baz=190,slow=7.3,SNR=4.2						
AKTO	**Aktyubinsk**	**17.09**	**330**	P	**Pn**	**13 00 55.5**	**+3.0**
	comp=E,1.5nm,0.3s,baz=143,slow=5.3,SNR=15						
AKTO				S	**S**	**13 03 54.7**	**-7.4**
	comp=E,0.3nm,0.3s,baz=322,slow=11,SNR=1.9						
AKTO	**Aktyubinsk**	**17.09**	**330**	⇑P	**Pn**	**13 00 54.2**	**+1.8**
	comp=E,24nm,0.8s						
ZAA0	**Zalesovo Array**	**19.96**	**24**		**Pn**	**13 01 26.8**	**+0.6**
ZAA0				IAmb	IAmb	13 01 27.3	
	comp=Z,3.8nm,1.0s						
ZALV	**Zalesovo Beam**	**19.96**	**24**	P	**Pn**	**13 01 26.9**	**+0.7**
	comp=Z,3.2nm,0.3s,baz=208,slow=9.6,SNR=17						
ZALV	**Zalesovo Beam**	**19.96**	**24**		**Pn**	**13 01 27.1**	**+0.8**
GNI	**Garni**	**21.23**	**288**	P	**P**	**13 01 39.9**	**+2.9**
	comp=Z,3.8nm,0.3s,baz=63,slow=11,SNR=1.5						
KBZ	**Khabaz**	**22.95**	**298**	P	**P**	**13 02 00.1**	**+6.3**
	comp=Z,1.1nm,0.6s,baz=128,slow=12,SNR=1.7						
SONM	**Songino Array**	**28.20**	**55**	P	**P**	**13 02 45.2**	**+4.0**
	comp=Z,0.2nm,0.3s,baz=271,slow=11,SNR=1.9						
CMAR	**Chiang Mai Arr**	**30.11**	**119**	P	**P**	**13 03 01.5**	**+3.2**
	comp=Z,0.5nm,0.3s,baz=308,slow=7.8,SNR=2.0						
AKASG	**Malin Array Be**	**33.29**	**309**	P	P	13 03 33.1	+7.3
	comp=Z,1.4nm,0.4s,baz=81,slow=7.1,SNR=4.6						
FINES	**FINESS Array B**	**37.80**	**326**	P	P	13 04 11.8	+7.7
	comp=Z,3.2nm,0.8s,baz=131,slow=10,SNR=5.3						
NB2	**NORSAR Subarra**	**44.70**	**323**	P	P	13 05 07.4	+6.9
	comp=Z,0.9nm,0.5s,baz=97,slow=7.9						
NOA	**NORSAR Array B**	**44.70**	**323**	P	P	13 05 07.2	+6.7
	comp=Z,0.9nm,0.5s,baz=99,slow=8.1,SNR=4.6						
TORD	**Torodi Ar. Bea**	**66.01**	**269**	P	P	13 07 38.9	+5.4
	comp=Z,1.0nm,0.5s,baz=47,slow=5.4,SNR=9.3						
TORD	**Torodi Ar. Bea**	**66.01**	**269**	IAmb	IAmb	13 08 04.7	
	comp=Z,6.0nm,1.8s						
TOLK	**Toolik Lake Re**	**71.02**	**15**	P	P	13 08 10.6	+6.8
INK	**Inuvik**	**74.04**	**9**	P	P	13 08 28.3	+6.8
	comp=Z,0.6nm,0.5s,baz=335,slow=6.1,SNR=7.2						
INK	**Inuvik**	**74.04**	**9**	P	P	13 08 28.3	+6.8
INK				IAmb	IAmb	13 09 30.4	
	comp=Z,12nm,1.8s						
LBTB	**Lobatse**	**74.74**	**222**	P	P	13 08 32.3	+6.0
	comp=Z,2.0nm,0.4s,baz=39,slow=4.6,SNR=4.6						
WRA	**Warramunga Arr**	**81.64**	**122**	P	P	13 09 10.2	+5.9
	comp=Z,0.4nm,0.7s,baz=326,slow=5.0,SNR=2.6						
ASAR	**Alice Springs**	**83.91**	**125**	P	P	13 09 21.8	+5.8
	comp=Z,0.4nm,0.7s,baz=309,slow=5.1,SNR=5.8						

IDC 26 12:57:52.7±16.0,**13.°04S**×**169.°53E**,**h0**^{km},**mb4.0**/5,**mb1 4.1**/5,**mb1mx3.6**/52,**mbtmp4.0**/5,**Error ellipse: s-maj=270.0km s-min=117.5km az=66.0,Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**23.37**	**249**	P	P	13 03 02.7	-0.4
	4.6nm,0.7s,baz=73,slow=4.7,SNR=2.3						
STKA	**Stephens Creek**	**31.75**	**229**	P	P	13 04 17.9	-0.8
	2.4nm,0.9s,baz=41,slow=11,SNR=3.1						
WRA	**Warramunga Arr**	**34.38**	**254**	P	P	13 04 43.0	+1.1
	0.3nm,0.3s,baz=81,slow=7.4,SNR=17						
ASAR	**Alice Springs**	**35.34**	**247**	P	P	13 04 50.4	+0.3
	1.1nm,0.3s,baz=73,slow=9.6,SNR=48						
FITZ	**Fitzroy Crossi**	**42.51**	**257**	P	P	13 05 48.8	-1.4
	1.7nm,1.1s,baz=83,slow=5.9,SNR=1.1						

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*GCMT **26** 12:59:21.8±0.3,44.°42S±0.°02×37.°80E±0.°05,h14^{km}±1^{km},MW5.0/66,Moment Tensor Solution. s20,c22; s66,c94; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.01±.31; $M_{\theta\theta}$3.53±.22; $M_{\phi\phi}$0.48±.17; $M_{r\theta}$1.84±.40; $M_{\theta\phi}$0.27±.13; $M_{\phi r}$0.41±.44; Best double couple: $M_0$4.22500×10^{16} NP1:ϕ_s88.00000°,δ32.00000°,λ-85.00000°. NP2: ϕ_s262.00000°,δ58.00000°,λ-93.00000°. Principal axes: T 3.9900, Plg13.0000°, Azm354.0000°; N 0.4690, Plg3.0000°, Azm264.0000°; P -4.4590, Plg77.0000°, Azm163.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **26** 12:59:21.0±0.4,44.°51S×37.°62E,h0^{km},mb4.6/26,mb1 4.7/28,mb1mx4.5/53,mbtmp4.6/28,ML4.1/2,MS4.1/21,Ms1 4.1/21,ms1mx3.9/48 Error ellipse: s-maj=15.4km s-min=11.2km az=65.0*

*NEIC **26** 12:59:22.8±1.6,44.°54S±0.°09×37.°5E±0.°2,h10^{km}±1^{km},mb4.9/52,Error ellipse: s-maj=18.5km s-min=15.3km az=84.0*

ISC 26 12:59:22.6±0.3,**44.°50S**±0.°07×**37.°55E**±0.°08,**h10**^{km},**n131**,σ**0.^{s}64**/123,**mb4.9**/58,**MS4.1**/19,**5C-1D,Prince Edward Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUR	**Sutherland**	**17.80**	**307**	P	**Pn**	**13 03 29.9**	**-0.7**
	0.8nm,0.3s,baz=145,slow=12,SNR=7.7						
SUR				S	Sn	13 06 37.6	-11
	0.5nm,0.3s,baz=347,slow=8.9,SNR=2.1						
SUR				LR	LR	13 09 05.1	
	comp=Z,662nm,21.0s,baz=140,slow=33						
SUR	**Sutherland**	**17.80**	**307**	P	**Pn**	**13 03 29.6**	**-1.0**
BOSA	**Boshof**	**18.64**	**324**	P	**P**	**13 03 40.5**	**0.0**
	0.4nm,0.3s,baz=160,slow=13,SNR=19						
BOSA				LR	LR	13 09 25.0	
	comp=Z,1µm,21.4s,baz=158,slow=32						
BOSA	**Boshof**	**18.64**	**324**	P	**Pn**	**13 03 41.0**	**+0.2**
LBTB	**Lobatse**	**21.73**	**329**	P	**P**	**13 04 13.8**	**-0.3**
	13nm,1.0s,baz=156,slow=9.6,SNR=11						
LBTB				LR	LR	13 11 19.2	
	comp=Z,945nm,20.6s,baz=158,slow=33						
LBTB	**Lobatse**	**21.73**	**329**	P	**P**	**13 04 14.6**	**+0.5**
LBTB				IAmb	IAmb	13 04 19.7	
	comp=Z,59nm,1.4s						
VOI	**Vohitsoka**	**23.79**	**22**	P	**P**	**13 04 34.5**	**-1.1**
VOI				IAmb	IAmb	13 04 36.4	
	comp=Z,36nm,1.3s						
MATP	**Matopo**	**25.16**	**340**	P	**P**	**13 04 47.5**	**-0.6**
	comp=Z,6.6nm,0.8s,baz=170,slow=15,SNR=9.4						
MATP				LR	LR	13 12 57.7	
	comp=Z,468nm,21.9s,baz=158,slow=32						
MAW	**Mawson**	**26.74**	**159**	P	**P**	**13 05 01.8**	**-0.1**
	comp=Z,5.0nm,1.0s,baz=317,slow=8.8,SNR=7.1						
MAW				LR	LR	13 12 53.0	
	comp=Z,596nm,21.4s,baz=339,slow=30						
MAW	**Mawson**	**26.74**	**159**	P	**P**	**13 05 02.6**	**+0.7**
OPO	**Ambohidratompo**	**27.08**	**20**	P	**P**	**13 05 06.2**	**+0.6**
	comp=Z,3.4nm,0.7s,baz=164,slow=7.5,SNR=4.0						
OPO				LR	LR	13 14 32.3	
	comp=Z,319nm,18.1s,baz=336,slow=34						
LSZ	**Lusaka**	**30.19**	**342**	P	**P**	**13 05 33.5**	**+0.2**
	comp=Z,19nm,0.8s,baz=168,slow=9.5,SNR=31						
LSZ	**Lusaka**	**30.19**	**342**	IAmb	IAmb	13 05 34.4	
	comp=Z,25nm,0.9s						
TSUM	**Tsumeb**	**30.23**	**320**	P	**P**	**13 05 33.3**	**-0.2**
	comp=Z,7.8nm,0.9s,baz=121,slow=7.7,SNR=6.0						
TSUM	**Tsumeb**	**30.23**	**320**	P	**P**	**13 05 33.9**	**+0.3**
TSUM				IAmb	IAmb	13 05 34.9	
	comp=Z,18nm,1.1s						
SNAA	**Sanae**	**33.38**	**202**	P	**P**	**13 06 01.5**	**+0.8**
SNAA	**Sanae**	**33.38**	**202**	PcP	**PcP**	**13 08 41.6**	**-0.3**
SNAA	**Sanae**	**33.38**	**202**	P	**P**	**13 06 00.9**	**+0.2**
	comp=Z,5.6nm,0.9s,baz=46,slow=8.9,SNR=11						
SNAA	**Sanae**	**33.38**	**202**	P	**P**	**13 05 59.7**	**-1.1**
SNAA					**PcP**	**13 08 41.9**	**-0.1**
VNA2	**Neumayer--Watz**	**34.29**	**204**	P	**P**	**13 06 08.9**	**+0.4**
	baz=60,slow=9.4						
VNA2	**Neumayer--Watz**	**34.29**	**204**	PcP	**PcP**	**13 08 44.1**	**-0.3**
VNA1	**Neumayer--Stat**	**34.43**	**205**	P	**P**	**13 06 09.0**	**-0.8**
VNA1	**Neumayer--Stat**	**34.43**	**205**	PcP	**PcP**	**13 08 45.5**	**+0.7**
VNA3	**Neumayer Olymp**	**35.10**	**204**	P	**P**	**13 06 16.0**	**+0.5**
VNA3	**Neumayer Olymp**	**35.10**	**204**	PcP	**PcP**	**13 08 46.6**	**-0.3**
MSEY	**Mahe Island**	**42.68**	**27**	P	**P**	**13 07 20.2**	**+0.6**
KMBO	**Kilima Mbogo**	**43.19**	**360**	LR	LR	13 23 35.1	
	comp=Z,472nm,19.8s,baz=104,slow=34						
MBAR	**Mbarara**	**44.12**	**350**	P	**P**	**13 07 31.9**	**+0.5**
QSPA	**South Pole Qui**	**45.72**	**180**	P	**P**	**13 07 43.0**	**-0.6**
	comp=Z,16nm,0.9s,baz=247,slow=2.8,SNR=52						
QSPA	**South Pole Qui**	**45.72**	**180**	P	**P**	**13 07 43.3**	**-0.3**
QSPA				IAmb	IAmb	13 07 48.0	
	comp=Z,14nm,0.8s						
SHEL	**Horse Pasture**	**46.22**	**294**	P	**P**	**13 07 47.1**	**-0.9**
LODK	**Lodwar**	**47.74**	**357**	P	**P**	**13 07 59.8**	**-0.1**
VNDA	**Vanda**	**53.56**	**167**	P	**P**	**13 08 43.0**	**+0.1**
	comp=Z,4.3nm,0.9s,baz=241,slow=7.7,SNR=14						
VNDA				LR	LR	13 29 28.0	
	comp=Z,542nm,21.6s,baz=222,slow=34						
VNDA	**Vanda**	**53.56**	**167**	P	**P**	**13 08 43.1**	**+0.2**
SBA	**Scott Base**	**54.07**	**168**	P	**P**	**13 08 48.3**	**+1.6**
DBIC	**Dimbokro**	**63.62**	**312**	P	**P**	**13 09 53.9**	**0.0**
	comp=Z,6.6nm,0.8s,baz=147,slow=8.0,SNR=5.3						
DBIC	**Dimbokro**	**63.62**	**312**	P	**P**	**13 09 53.5**	**-0.3**
DBIC				IAmb	IAmb	13 09 54.8	
	comp=Z,12nm,1.0s						
PALK	**Pallekele**	**64.53**	**49**	P	**P**	**13 09 59.8**	**0.0**
TORD	**Torodi Ar. Bea**	**65.97**	**321**	P	**P**	**13 10 10.0**	**+0.8**
	comp=Z,5.5nm,1.0s,baz=160,slow=6.3,SNR=18						
TORD				LR	LR	13 36 24.3	
	comp=Z,166nm,21.4s,baz=225,slow=34						
TORD	**Torodi Ar. Bea**	**65.97**	**321**	P	**P**	**13 10 09.6**	**+0.4**
TORD				IAmb	IAmb	13 10 10.9	
	comp=Z,7.1nm,1.1s						
GO09	**Cerro Castillo**	**67.01**	**220**	P	**P**	**13 10 15.6**	**+0.2**
RAYN	**Ar Rayn**	**68.08**	**8**	P	**P**	**13 10 22.2**	**-0.1**
RAYN				IAmb	IAmb	13 10 24.6	
	comp=Z,7.1nm,1.1s						
MCQ	**Macquarie Isla**	**69.52**	**148**	P	**P**	**13 10 31.7**	**+0.7**
KOWA	**Kowa**	**69.83**	**317**	P	**P**	**13 10 33.2**	**-0.1**
KOWA				IAmb	IAmb	13 10 36.3	
	comp=Z,16nm,1.3s						
WSAR	**Wadi Sarin**	**70.11**	**21**	P	**P**	**13 10 35.5**	**+0.5**
	comp=Z,12nm,0.8s,baz=213,slow=3.6,SNR=5.1						
MDSI	**Maura Dua**	**70.29**	**76**	P	**P**	**13 10 36.8**	**+0.5**
	comp=Z,7.6nm,2.7s						
TRQA	**Tornquist**	**70.41**	**236**	P	**P**	**13 10 37.2**	**+0.3**
RPSI	**Rantau Prapat**	**71.95**	**67**	P	**P**	**13 10 46.1**	**-0.3**
PSI	**Prapat**	**72.03**	**67**	P	**P**	**13 10 46.1**	**-0.9**
	comp=Z,1.9nm,0.3s,baz=4.9,slow=15,SNR=4.3						
PLCA	**Paso Flores**	**73.44**	**229**	P	**P**	**13 10 54.8**	**-0.2**
	comp=Z,5.2nm,0.9s,baz=141,slow=4.3,SNR=9.2						
PLCA				LR	LR	13 37 08.3	
	comp=Z,81nm,20.6s,baz=138,slow=31						
PLCA	**Paso Flores**	**73.44**	**229**	P	**P**	**13 10 55.0**	**0.0**
PLCA				IAmb	IAmb	13 10 56.1	
	comp=Z,9.5nm,1.1s						
KULM	**Kulim**	**75.02**	**67**	P	**P**	**13 11 03.4**	**-1.1**
KULM				IAmb	IAmb	13 11 05.2	
	comp=Z,18nm,1.0s						
CPUP	**Villa Florida**	**75.32**	**248**	P	**P**	**13 11 06.2**	**+0.1**
	comp=Z,8.4nm,0.9s,baz=147,slow=6.3,SNR=6.3						
CPUP				LR	LR	13 38 03.7	
	comp=Z,55nm,19.0s,baz=194,slow=31						
CPUP	**Villa Florida**	**75.32**	**248**	IAmb	IAmb	13 11 07.1	
	comp=Z,11nm,1.0s						
LC01	**Cunco**	**75.46**	**229**	P	**P**	**13 11 06.2**	**-0.5**
LC01				IAmb	IAmb	13 11 09.6	
	comp=Z,13nm,0.9s						
BDFB	**Brasilia**	**76.09**	**262**	P	**P**	**13 11 11.3**	**+0.5**
	comp=Z,5.9nm,0.9s,baz=68,slow=5.4,SNR=4.0						
FITZ	**Fitzroy Crossi**	**76.21**	**102**	P	**P**	**13 11 11.5**	**+0.2**
	comp=Z,6.6nm,0.9s,baz=214,slow=6.9,SNR=9.1						
STKA	**Stephens Creek**	**77.33**	**122**	P	**P**	**13 11 16.9**	**-0.6**
	comp=Z,16nm,0.7s,baz=216,slow=2.8,SNR=27						
STKA	**Stephens Creek**	**77.33**	**122**	P	**P**	**13 11 16.6**	**-0.8**
ASAR	**Alice Springs**	**78.10**	**111**	P	**P**	**13 11 21.2**	**-0.7**
	comp=Z,9.3nm,0.9s,baz=224,slow=5.4,SNR=93						
ASAR	**Alice Springs**	**78.10**	**111**	P	**P**	**13 11 20.4**	**-1.5**
AS31	**Alice Springs**	**78.10**	**111**	P	**P**	**13 11 21.2**	**-0.7**
AQDB	**Aquidauana**	**78.18**	**253**	P	**P**	**13 11 22.2**	**-0.2**
MT09	**Talagante**	**78.64**	**234**	P	P	13 11 19.9	-5.0
MT01	**Popeta**	**78.73**	**233**	P	P	13 11 19.6	-5.6
MT01				IAmb	IAmb	13 11 44.8	
	comp=Z,8.8nm,0.8s						
ZON	**Zonda**	**78.88**	**237**	P	**P**	**13 11 25.4**	**-0.8**
ZON				IAmb	IAmb	13 11 47.0	
	comp=Z,8.7nm,0.9s						
EDFI	**Ende, Flores**	**79.76**	**92**	P	**P**	**13 11 30.7**	**-0.5**
	comp=Z,8.0nm,1.2s						
WRA	**Warramunga Arr**	**80.95**	**109**	P	**P**	**13 11 36.9**	**-0.6**
	comp=Z,6.2nm,0.9s,baz=221,slow=4.4,SNR=30						
WRA	**Warramunga Arr**	**80.95**	**109**	P	**P**	**13 11 36.8**	**-0.7**
WB2	**Warramunga Arr**	**80.96**	**109**	P	**P**	**13 11 37.2**	**-0.3**
WB2				IAmb	IAmb	13 11 38.0	
	comp=Z,22nm,1.2s						
WRAB	**Tennant Creek**	**80.97**	**109**	P	**P**	**13 11 37.1**	**-0.4**
WRAB				IAmb	IAmb	13 11 38.1	
	comp=Z,16nm,1.1s						
BKSI	**Bulukumba**	**81.00**	**89**	P	**P**	**13 11 37.8**	**+0.1**
	comp=Z,15nm,1.0s						
WR0	**Warramunga Arr**	**81.08**	**109**	P	**P**	**13 11 37.5**	**-0.6**
WR0				IAmb	IAmb	13 11 38.0	
	comp=Z,10nm,1.1s						
WB0	**Warramunga Arr**	**81.11**	**109**	P	**P**	**13 11 37.5**	**-0.9**
WB0				IAmb	IAmb	13 11 38.8	
	comp=Z,13nm,1.1s						
HRA	**Herat**	**81.66**	**20**	P	**P**	**13 11 41.2**	**+0.3**
HRA				IAmb	IAmb	13 11 42.0	
	comp=Z,14nm,0.9s						
GURO	**Guroymak-BITLI**	**82.77**	**4**	P	**P**	**13 11 47.8**	**+1.3**
GURO				IAmb	IAmb	13 11 48.9	
	comp=Z,5.2nm,0.7s						
KOLN	**Koldanda**	**83.32**	**40**	*e*P	**P**	**13 11 49.1**	**-0.6**
	comp=Z,67nm,1.2s						
PYUN	**Piuthan**	**83.32**	**39**	*e*P	**P**	**13 11 49.4**	**-0.3**
	comp=Z,66nm,1.0s						
KEST	**Kesra**	**83.86**	**337**	LR	LR	13 50 33.8	
	comp=Z,477nm,20.1s,baz=145,slow=37						
DMN	**Daman**	**83.88**	**41**	*e*P	**P**	**13 11 52.6**	**-0.1**
	comp=Z,162nm,1.6s						
DANN	**Dangsing**	**83.88**	**40**	*e*P	**P**	**13 11 52.2**	**-0.5**
	comp=Z,88nm,1.3s						
BRTR	**Keskin Array B**	**83.91**	**357**	P	**P**	**13 11 52.8**	**+0.3**
	comp=Z,1.8nm,0.9s,baz=178,slow=9.6,SNR=4.9						
BRTR				LR	LR	13 47 35.8	
	comp=Z,76nm,21.8s,baz=190,slow=34						
BRTR	**Keskin Array B**	**83.91**	**357**	P	**P**	**13 11 52.3**	**-0.1**
CM31	**Chiang Mai Arr**	**83.95**	**57**	P	**P**	**13 11 52.6**	**-0.3**
CM31				IAmb	IAmb	13 12 02.1	
	comp=Z,9.7nm,1.2s						
CMAR	**Chiang Mai Arr**	**83.95**	**57**	P	**P**	**13 11 52.7**	**-0.2**
	comp=Z,1.2nm,0.8s,baz=224,slow=6.2,SNR=13						
CMAR				LR	LR	13 43 18.2	
	comp=Z,20nm,20.9s,baz=225,slow=31						
CMAR	**Chiang Mai Arr**	**83.95**	**57**	P	**P**	**13 11 52.2**	**-0.7**
PKIN	**Phulchoki**	**83.99**	**41**	*e*P	**P**	**13 11 52.5**	**-0.8**
	comp=Z,27nm,1.2s						
PKI	**Pulchoki**	**83.99**	**41**	*e*P	**P**	**13 11 52.7**	**-0.7**
	comp=Z,42nm,1.3s						
GKN	**Gorkha**	**83.99**	**41**	*e*P	**P**	**13 11 52.8**	**-0.3**
	comp=Z,55nm,1.1s						
PTLB	**Pontes e Lacer**	**84.00**	**254**	P	**P**	**13 11 53.2**	**-0.2**
PTLB				IAmb	IAmb	13 11 54.5	
	comp=Z,10nm,0.9s						
RAMN	**Ramite**	**84.04**	**43**	*e*P	**P**	**13 11 53.6**	**+0.1**
	comp=Z,12nm,0.7s						
KKN	**Kakani**	**84.11**	**41**	*e*P	**P**	**13 11 53.4**	**-0.4**
	comp=Z,19nm,0.9s						
GEYT	**Alibeck**	**84.13**	**16**	P	**P**	**13 11 53.9**	**+0.4**
	comp=Z,3.2nm,0.8s,baz=178,slow=10,SNR=3.6						
GEYT				LR	LR	13 47 35.1	
	comp=Z,58nm,20.1s,baz=320,slow=34						
GEYT	**Alibeck**	**84.13**	**16**	P	**P**	**13 11 53.7**	**+0.3**
GEYT				IAmb	IAmb	13 12 00.4	
	comp=Z,5.9nm,0.9s						
CHTO	**Chiang Mai**	**84.22**	**57**	P	**P**	**13 11 53.4**	**-0.9**
NIL	**Nilore**	**84.29**	**29**	P	**P**	**13 11 53.7**	**-0.7**
ODAN	**Odare**	**84.35**	**43**	*e*P	**P**	**13 11 55.0**	**-0.1**
	comp=Z,70nm,1.2s						
JIRN	**Jiri**	**84.44**	**42**	*e*P	**P**	**13 11 55.6**	**-0.1**
	comp=Z,48nm,1.0s						
GUN	**Gumba**	**84.50**	**42**	*e*P	**P**	**13 11 55.8**	**-0.2**
	comp=Z,78nm,1.1s						
TAPN	**Taplejung**	**84.92**	**43**	*e*P	**P**	**13 11 58.0**	**0.0**
APSI	**Ampana**	**85.15**	**87**	P	**P**	**13 12 00.2**	**+1.0**
	comp=Z,786nmcomp=Z,81nm,0.8s						
SHL	**Shillong**	**85.58**	**47**	P	**P**	**13 12 00.8**	**-0.4**
CHGR	**Chuyangaron**	**87.55**	**24**	P	**P**	**13 12 10.4**	**-0.1**

KBZ	**Khabaz**	**87.97**	**4**	P	**P**	**13 12 12.8**	**+0.6**
	comp=Z,0.7nm,0.3s,baz=142,slow=7.1,SNR=4.1						
KBZ				LR	LR	13 51 33.6	
	comp=Z,57nm,19.0s,baz=187,slow=36						
GAR	**Garm**	**88.22**	**25**	P	**P**	**13 12 13.6**	**-0.1**
GAR				IAmb	IAmb	13 12 14.6	
	comp=Z,7.2nm,1.0s						
LPAZ	**La Paz**	**89.49**	**248**	LR	LR	13 50 25.2	
	comp=Z,76nm,18.5s,baz=128,slow=34						
MLR	**Muntele Rosu**	**90.19**	**352**	⇑P	**P**	**13 12 22.8**	**0.0**
MLR	**Muntele Rosu**	**90.19**	**352**	P	**P**	**13 12 22.5**	**-0.2**
VOIR		**90.23**	**351**	⇑P	**P**	**13 12 23.0**	**+0.1**
PLOR	**Plostina**	**90.48**	**352**	⇓P	**P**	**13 12 24.6**	**+0.6**
VRI	**Vrincioaia**	**90.49**	**352**	⇑P	**P**	**13 12 24.5**	**+0.5**
KSH	**Kashi**	**90.51**	**29**	P	**P**	**13 12 22.3**	**-2.1**
KSH				sP	pwP	13 12 30.5	+1.1
KSH				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SGSI	**Sangihe**	**91.11**	**86**	P	**P**	**13 12 29.0**	**+1.3**
SIRR	**Siria**	**91.47**	**349**	⇑P	**P**	**13 12 29.6**	**+1.1**
ESDC	**Sonseca Array**	**91.75**	**329**	LR	LR	13 54 14.9	
	comp=Z,250nm,19.5s,baz=175,slow=36						
DRGR		**91.84**	**350**	⇑P	**P**	**13 12 30.7**	**+0.4**
AAK	**Ala-Archa**	**92.83**	**26**	P	**P**	**13 12 35.1**	**-0.1**
	comp=Z,1.0nm,0.7s,baz=149,slow=5.9,SNR=2.8						
AAK	**Ala-Archa**	**92.83**	**26**	P	**P**	**13 12 34.8**	**-0.3**
MDP	**Montagnes des**	**93.67**	**273**	LR	LR	13 48 02.4	
	comp=Z,73nm,19.3s,baz=302,slow=31						
AKASG	**Malin Array Be**	**95.09**	**355**	LR	LR	13 57 29.5	
	comp=Z,35nm,20.1s,baz=125,slow=37						
GERES	**GERESS Array B**	**95.28**	**344**	LR	LR	13 58 48.4	
	comp=Z,99nm,19.6s,baz=162,slow=37						
WMQ	**Urumqi**	**98.62**	**34**	*e*P	Pdif	13 13 03.8	+2.4
MKAR	**Makanchi Array**	**99.11**	**29**	P	**Pdif**	**13 13 02.4**	**-1.0**
	comp=Z,0.8nm,0.9s,baz=228,slow=4.7,SNR=5.1						
LZH	**Lanzhou**	**100.17**	**49**	*e*P	**Pdif**	**13 13 08.5**	**-0.1**
LZH				pP	pwP	13 13 13.5	-0.1
LZH				sP	sP	13 13 16.8	+4.4
LZH				pmax	pmax		
	comp=Z,20nm,1.4s						
SEY	**Seymchan**	**139.34**	**40**	PKP	**PKPdf**	**13 18 49.2**	**+0.4**
	comp=Z,2.9nm,0.7s,baz=207,slow=4.5,SNR=5.0						
TXAR	**Lajitas Array**	**145.85**	**257**	PKPbc	**PKPbc**	**13 19 02.3**	**+0.2**
	comp=Z,12nm,0.8s,baz=140,slow=6.0,SNR=116						
ULM	**Lac du Bonnet**	**148.36**	**297**	PKPbc	**PKPbc**	**13 19 07.4**	**-1.0**
	comp=Z,5.3nm,0.6s,baz=90,slow=5.1,SNR=6.1						
YKA	**Yellowknife Ar**	**155.84**	**328**	PKPab	**PKPab**	**13 19 41.9**	**-0.7**
	comp=Z,1.5nm,0.8s,baz=56,slow=6.4,SNR=4.4						
PDAR	**Pinedale Array**	**156.22**	**277**	PKP	**PKPdf**	**13 19 17.7**	**+0.5**
	comp=Z,0.8nm,0.9s,baz=107,slow=4.8,SNR=4.1						
PDAR				PKPab	**PKPab**	**13 19 45.1**	**-0.1**
	comp=Z,1.3nm,0.9s,baz=117,slow=6.0,SNR=4.6						
ILAR	**Eielson Array**	**159.53**	**5**	PKP	**PKPdf**	**13 19 21.8**	**+1.6**
	comp=Z,0.4nm,0.9s,baz=343,slow=0.9,SNR=2.0						
ILAR				PKPab	**PKPab**	**13 19 57.8**	**-0.6**
	comp=Z,1.4nm,0.9s,baz=326,slow=4.9,SNR=11						
NVAR	**Mina Array Bea**	**160.95**	**260**	PKP	**PKPdf**	**13 19 24.5**	**+1.6**
	comp=Z,0.4nm,0.7s,baz=90,slow=0.1,SNR=2.7						
NVAR				PKPab	**PKPab**	**13 20 05.9**	**0.0**
	comp=Z,1.0nm,0.9s,baz=127,slow=6.0,SNR=5.7						

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*IDC **26** 13:13:30.3±1.3, 8°.23S×125°.48E, h0km, mb3.9/4, mb1 4.0/8, mb1mx3.6/47, mbtmp3.8/8, ML3.6/4, MS3.1/4, Ms1 3.1/4, ms1mx2.6/48, Error ellipse: s-maj=38.0km s-min=19.6km az=86.0*

ISC 26 13:13:34.6±0.9**, 8°.40S**±0°.08×**125°.6E**±0°.1**, h35km, n10, σ2ˢ.26**/12**, mb4.0**/4**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**2.65**	**227**	Pn	**Pn**	**13 14 15.2**	**+0.4**
	14nm,0.3s,baz=225,slow=1.3,SNR=8.9						
BATI				Sn	**Sn**	**13 14 47.3**	**+1.5**
	8.1nm,0.3s,baz=30,slow=22,SNR=2.4						
BATI				LR	LR	13 15 29.8	
	comp=Z,185nm,20.1s,baz=42,slow=45						
SIJI	**Sorong**	**9.35**	**37**	LR	LR	13 20 33.9	
	comp=Z,69nm,18.6s,baz=105,slow=46						
FITZ	**Fitzroy Crossi**	**9.64**	**180**	Pn	**Pn**	**13 15 52.5**	**+1.5**
	0.5nm,0.3s,baz=13,slow=11,SNR=18						
FITZ				Sn	**Sn**	**13 17 34.9**	**-3.2**
	0.6nm,0.3s,baz=103,slow=21,SNR=8.1						
WRA	**Warramunga Arr**	**14.24**	**145**	Pn	**Pn**	**13 16 55.4**	**+1.5**
	0.2nm,0.3s,baz=316,slow=13,SNR=16						
WRA				Sn	**Sn**	**13 19 31.5**	**+0.8**
	0.1nm,0.3s,baz=326,slow=27,SNR=2.9						
ASAR	**Alice Springs**	**17.13**	**153**	P	**P**	**13 17 34.9**	**+2.1**
	0.1nm,0.3s,baz=321,slow=11,SNR=14						
ASAR				S	**Sn**	**13 20 36.5**	**-4.4**
	0.0nm,0.3s,baz=317,slow=18,SNR=3.0						
LEM	**Lembang**	**17.93**	**274**	LR	LR	13 24 41.2	
	comp=Z,64nm,20.2s,baz=34,slow=38						
CMAR	**Chiang Mai Arr**	**37.49**	**316**	P	**P**	**13 20 43.8**	**-1.5**
	1.0nm,0.8s,baz=139,slow=6.0,SNR=3.6						
SONM	**Songino Array**	**58.52**	**345**	P	**P**	**13 23 28.0**	**+0.4**
	1.0nm,0.8s,baz=167,slow=7.2,SNR=5.2						
MKAR	**Makanchi Array**	**67.11**	**329**	P	**P**	**13 24 24.7**	**0.0**
	2.3nm,0.8s,baz=132,slow=8.2,SNR=16						
ZALV	**Zalesovo Beam**	**71.00**	**336**	P	**P**	**13 24 47.3**	**-1.3**
	1.4nm,0.8s,baz=127,slow=4.3,SNR=5.0						
ZALV				LR	LR	13 58 48.2	
	comp=Z,44nm,18.0s,baz=238,slow=38						

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*NNC **26** 13:18:41.4±0.2, 43°.06N×76°.82E, h0km, mb2.4, mpv2.5, Error ellipse: s-maj=3.0km s-min=0.9km az=164.0*

*KRNET **26** 13:18:41.3±0.1, 43°.03N×76°.84E, h19km, mb2.1*

*SOME **26** 13:18:42.1, 43°.05N×76°.82E, h15km*

ISC 26 13:18:40.5±0.8**, 43°.07N**±0°.02×**76°.86E**±0°.02**, h12**km±5km**, n37, σ0ˢ.63**/72**, 16C-7D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNSS	**Tian-Shan**	**0.07**	**114**	*e*P	**Pg**	**13 18 44.0**	**+0.5**
	21nm,0.1s						
TNSS				*e*S	**Sg**	**13 18 45.4**	**-0.3**
	122nm,0.2s						
TNSS	**Tian-Shan**	**0.07**	**114**	P	**Pg**	**13 18 44.0**	**+0.5**
	19nm,0.1s						
TNSS				S	**Sg**	**13 18 45.4**	**-0.3**
	122nm,0.2s						
AAA	**Alma-Ata**	**0.15**	**15**	*e*P	**Pg**	**13 18 44.2**	**+0.1**
	16nm,0.1s						
AAA				*e*S	**Sg**	**13 18 45.8**	**-0.9**
	62nm,0.1s						
MDOK	**Medeo**	**0.17**	**54**	*e*P	**Pb**	**13 18 45.6**	**-0.1**
	8.2nm,0.2s						
MDOK				*e*S	**Sb**	**13 18 48.4**	**+1.0**
	19nm,0.2s						
MDOK	**Medeo**	**0.17**	**54**	⇑P	**Pb**	**13 18 45.5**	**-0.1**
	3.5nm,0.4s						
MDOK				⇑S	**Sb**	**13 18 48.3**	**+1.0**
	16nm,0.5s						
MDOK	**Medeo**	**0.17**	**54**	Pg	**Pb**	**13 18 45.6**	**-0.1**
	8.2nm,0.2s						
MDOK				Lg	Lg	13 18 48.4	
	28nm,0.3s						
KOTS	**Kotyrbulak**	**0.25**	**47**	*e*P	**Pb**	**13 18 47.4**	**+0.4**
	13nm,0.2s						
KOTS				*e*S	**Sb**	**13 18 51.2**	**+1.7**
	29nm,0.2s						
KOTS	**Kotyrbulak**	**0.25**	**47**	P	**Pb**	**13 18 47.4**	**+0.4**
	13nm,0.2s						
KOTS				S	**Sb**	**13 18 51.2**	**+1.7**
	29nm,0.2s						
MTBS	**Maitube**	**0.32**	**282**	*e*P	**Pb**	**13 18 48.1**	**-0.1**
	13nm,0.1s						
MTBS				*e*S	**Sg**	**13 18 52.3**	**+0.8**
	9.2nm,0.1s						
MTBS	**Maitube**	**0.32**	**282**	P	**Pb**	**13 18 48.1**	**-0.1**
	13nm,0.1s						
MTBS				S	**Sg**	**13 18 52.3**	**+0.8**
	9.2nm,0.1s						
ANVS	**Anan'yevo**	**0.66**	**115**	⇑*i*P	**Pb**	**13 18 54.1**	**+0.2**
	baz=12						
ANVS				⇑*i*S	**Sg**	**13 19 02.7**	**+0.8**
	baz=12						
KST	**Kastek**	**0.66**	**268**	*e*P	**Pg**	**13 18 53.9**	**+0.6**
	5.4nm,0.2s						
KST				*e*S	**Sg**	**13 19 02.4**	**+0.3**
	5.2nm,0.2s						
KST	**Kastek**	**0.66**	**268**	P	**Pg**	**13 18 53.9**	**+0.6**
	5.4nm,0.2s						
KST				S	**Sg**	**13 19 02.4**	**+0.3**
	5.2nm,0.2s						
KTBS	**Karatobe**	**0.66**	**349**	*e*P	**Pn**	**13 18 54.5**	**-1.2**
	0.9nm,0.1s						
KTBS				*e*S	**Sb**	**13 19 03.4**	**+0.3**
	13nm,0.3s						
KTBS	**Karatobe**	**0.66**	**349**	P	**Pn**	**13 18 54.5**	**-1.2**
	0.9nm,0.1s						
KTBS				S	**Sb**	**13 19 03.4**	**+0.3**
	13nm,0.3s						
DGS	**Degeres**	**0.82**	**283**	*e*P	**Pb**	**13 18 57.0**	**+0.4**
	2.8nm,0.1s						
DGS				*e*S	**Sb**	**13 19 07.7**	**+0.1**
	1.9nm,0.2s						
DGS	**Degeres**	**0.82**	**283**	P	**Pb**	**13 18 57.0**	**+0.4**
	2.8nm,0.1s						
DGS				S	**Sb**	**13 19 07.7**	**+0.1**
	1.9nm,0.2s						
BOOM	**Boomskoye usch**	**0.89**	**230**	⇑*i*P	**Pg**	**13 18 57.4**	**-0.3**
	baz=31						
BOOM				⇑*i*S	**Sg**	**13 19 08.8**	**-0.5**
	baz=31						
KUU	**Kurty**	**0.91**	**336**	*e*P	**Pn**	**13 18 58.9**	**-0.2**
	0.4nm,0.2s						
KUU				*e*S	**Sn**	**13 19 11.1**	**-1.0**
	5.1nm,0.3s						
KUU	**Kurty**	**0.91**	**336**	P	**Pn**	**13 18 58.9**	**-0.2**
	0.4nm,0.2s						
KUU				S	**Sn**	**13 19 11.1**	**-1.0**
	5.1nm,0.3s						
ULHL	**Ulahol**	**0.94**	**209**	⇑*e*P	**Pb**	**13 18 58.2**	**-0.6**
	baz=9.0						
ULHL				⇑*i*S	**Sb**	**13 19 10.3**	**-0.9**
	baz=9.0						
TKM2	**Tokmak 2**	**0.94**	**262**	⇓P	**Pb**	**13 18 58.6**	**-0.2**
	0.4nm,0.3s						
TKM2				⇑S	**Sb**	**13 19 11.5**	**+0.2**
	0.7nm,0.1s						
TKM2	**Tokmak 2**	**0.94**	**262**	⇓*i*P	**Pb**	**13 18 58.9**	**+0.1**
	baz=63						
TKM2				⇓*i*S	**Sb**	**13 19 11.0**	**-0.2**
	baz=63						
KDJ	**Kajisay**	**0.96**	**166**	⇑*i*P	**Pb**	**13 18 59.1**	**-0.1**
	baz=64						
KDJ				⇑*i*S	**Sb**	**13 19 12.1**	**+0.2**
	baz=64						
SATY	**Saty**	**1.13**	**90**	*e*P	**Pg**	**13 19 02.9**	**+0.6**
	0.9nm,0.1s						
SATY				*e*S	**Sn**	**13 19 17.8**	**+0.1**
	10nm,0.1s						
SATY	**Saty**	**1.13**	**90**	P	**Pg**	**13 19 02.9**	**+0.6**
	0.9nm,0.1s						
SATY				S	**Sn**	**13 19 17.8**	**+0.1**
	10nm,0.1s						
PRZ	**Przheval'sk**	**1.27**	**117**	⇓*i*P	**Pb**	**13 19 04.5**	**0.0**
	baz=14						
PRZ				⇓*i*S	**Sn**	**13 19 21.5**	**+0.2**
	baz=14						
ARXS	**Arharly**	**1.34**	**31**	*e*P	**Pg**	**13 19 06.9**	**+0.6**
	1.8nm,0.2s						
ARXS				*e*S	**Sg**	**13 19 24.8**	**+0.9**
	5.5nm,0.3s						
ARXS	**Arharly**	**1.34**	**31**	P	**Pg**	**13 19 06.9**	**+0.6**
	1.8nm,0.2s						
ARXS				S	**Sg**	**13 19 24.8**	**+0.9**
	5.5nm,0.3s						
KBK	**Karagaybulak**	**1.47**	**254**	⇑*i*P	**Pb**	**13 19 08.0**	**+0.3**
	baz=55						
KBK				⇑*i*S	**Sb**	**13 19 26.8**	**+0.4**
	baz=55						
TARG	**Taragay, Kyrgy**	**1.51**	**152**	⇓*i*P	**Pb**	**13 19 09.2**	**+0.6**
	baz=51						
TARG				⇓*i*S	**Sb**	**13 19 28.6**	**+0.8**
	baz=51						
BLB	**Baldybastay**	**1.56**	**48**	P	**Pg**	**13 19 10.6**	**+0.1**
	0.9nm,0.1s						
BLB				S	**Sg**	**13 19 31.0**	**+0.2**
	3.2nm,0.1s						
UZB	**Uzynbulak**	**1.58**	**86**	*e*P	**Pg**	**13 19 11.1**	**+0.2**
	0.5nm,0.2s						
UZB				*e*S	**Sg**	**13 19 31.8**	**+0.4**
	2.9nm,0.2s						
UZB	**Uzynbulak**	**1.58**	**86**	P	**Pg**	**13 19 11.1**	**+0.2**
	0.5nm,0.2s						
UZB				S	**Sg**	**13 19 31.8**	**+0.4**
	2.9nm,0.2s						
USP	**Ospenovka**	**1.74**	**277**	⇑*e*P	**Pb**	**13 19 12.7**	**+0.4**
	baz=79						
USP				⇑*i*S	**Sb**	**13 19 35.2**	**+1.1**
	baz=79						
PDGK	**Podgornoye**	**1.94**	**81**	P	**Pg**	**13 19 17.5**	**-0.2**
	0.2nm,0.2s						
PDGK				S	**Sg**	**13 19 42.8**	**0.0**
	1.4nm,0.2s						
PDGK	**Podgornoye**	**1.94**	**81**	⇑Sn	**Sg**	**13 19 43.5**	**+0.6**
	3.4nm,0.8s						

MAN 26 13:23:43.9, 10°.07N×123°.57E, h1km, mb3.9, ML2.7, MS2.2, Cebu

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*IDC **26** 13:26:01.7±1.0, 8°.79S×158°.38E, h0km, mb3.7/7, mb1 3.9/7, mb1mx3.7/40, mbtmp3.7/7, MS3.5/3, Ms1 3.5/3, ms1mx2.9/46, Error ellipse: s-maj=26.4km s-min=19.5km az=2.0*

ISC 26 13:26:06.0±0.9**, 8°.9S**±0°.2×**158°.40E**±0°.09**, h29km, n10, σ0ˢ.90**/9**, mb3.8**/7**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.63**	**111**	Pn	**Pn**	**13 26 31.7**	**-1.0**
	146nm,0.3s,baz=262,slow=4.3,SNR=47						
HNR				Sn	**Sb**	**13 26 56.5**	**+0.9**
	219nm,0.3s,baz=229,slow=23,SNR=9.8						
HNR				LR	LR	13 27 29.6	
	comp=Z,563nm,19.3s,baz=287,slow=53						
PMG	**Port Moresby**	**11.12**	**266**	LR	LR	13 32 50.0	
	comp=Z,146nm,19.4s,baz=79,slow=37						
WRA	**Warramunga Arr**	**25.75**	**242**	P	**P**	**13 31 34.3**	**-0.1**
	1.0nm,0.9s,baz=70,slow=9.3,SNR=6.7						
WRA				LR	LR	13 41 43.6	
	comp=Z,168nm,20.9s,baz=240,slow=37						
ASAR	**Alice Springs**	**27.68**	**235**	P	**P**	**13 31 51.2**	**-0.6**
	0.4nm,0.9s,baz=70,slow=9.5,SNR=2.4						
STKA	**Stephens Creek**	**27.73**	**212**	P	**P**	**13 31 53.2**	**+1.1**
	1.2nm,0.5s,baz=44,slow=14,SNR=4.6						
FITZ	**Fitzroy Crossi**	**33.11**	**250**	P	**P**	**13 32 39.4**	**-0.4**
	2.5nm,0.9s,baz=126,slow=3.8,SNR=3.1						
SONM	**Songino Array**	**72.72**	**326**	P	**P**	**13 37 32.5**	**+1.0**
	1.0nm,0.9s,baz=130,slow=6.2,SNR=4.6						
TIXI	**Tiksi**	**82.68**	**351**	LR	LR	14 14 55.5	
	comp=Z,30nm,19.7s,baz=231,slow=36						
ILAR	**Eielson Array**	**83.88**	**21**	P	**P**	**13 38 32.6**	**0.0**
	0.6nm,0.9s,baz=207,slow=7.8,SNR=4.5						
MKAR	**Makanchi Array**	**87.02**	**318**	P	**P**	**13 38 48.3**	**-0.5**
	0.1nm,0.3s,baz=94,slow=5.8,SNR=6.3						

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*IDC **26** 13:37:11.4±1.7, 16°.15S×177°.54W, h457km±17km, mb3.3/8, mb1 3.6/10, mb1mx3.2/40, mbtmp4.1/10, Error ellipse: s-maj=36.1km s-min=17.2km az=145.0*

ISC 26 13:37:10.1±0.8**, 16°.2S**±0°.2×**177°.4W**±0°.1**, h450km, n12, σ1ˢ.54**/13**, mb3.6**/8**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.65**	**251**	P	**P**	**13 38 30.6**	**-0.6**
	5.7nm,0.3s,baz=303,slow=22,SNR=18						
MSVF				S	**S**	**13 39 38.5**	**+1.2**
	baz=99,slow=23,SNR=1.3						
AFI	**Afiamalu**	**5.86**	**68**	P	**P**	**13 38 40.5**	**-2.5**
	8.9nm,0.3s,baz=81,slow=5.7,SNR=9.9						
DZM	**Mont Dzumac**	**16.37**	**247**	P	**P**	**13 40 34.2**	**-1.7**
	0.2nm,0.3s,baz=152,slow=21,SNR=3.0						
URZ	**Urewera**	**22.48**	**191**	P	**P**	**13 41 34.1**	**+0.3**
	6.3nm,0.7s,baz=303,slow=23,SNR=1.6						
STKA	**Stephens Creek**	**40.33**	**240**	P	**P**	**13 44 07.8**	**+0.6**
	6.7nm,1.2s,baz=85,slow=12,SNR=4.7						
WRA	**Warramunga Arr**	**45.95**	**258**	P	**P**	**13 44 50.2**	**-1.4**
	1.2nm,0.4s,baz=93,slow=6.3,SNR=21						
ASAR	**Alice Springs**	**46.24**	**253**	P	**P**	**13 44 54.0**	**+0.2**
	6.2nm,0.5s,baz=86,slow=8.5,SNR=172						
NVAR	**Mina Array Bea**	**77.52**	**44**	P	**P**	**13 48 19.9**	**+1.3**
	0.8nm,0.7s,baz=220,slow=8.5,SNR=5.7						
ILAR	**Eielson Array**	**84.04**	**13**	P	**P**	**13 48 51.0**	**-0.7**
	1.0nm,0.7s,baz=219,slow=5.1,SNR=13						
TXAR	**Lajitas Array**	**84.25**	**57**	P	**P**	**13 48 56.2**	**+2.6**
	0.6nm,0.9s,baz=210,slow=6.6,SNR=4.7						
PDAR	**Pinedale Array**	**85.44**	**43**	P	**P**	**13 49 00.5**	**+1.1**
	0.3nm,0.6s,baz=224,slow=5.0,SNR=2.5						
BRTR	**Keskin Array B**	**144.29**	**317**	PKP	**PKPdf**	**13 55 54.7**	**+0.3**
	1.3nm,0.7s,baz=57,slow=3.4,SNR=3.7						

IDC 26 13:38:32.2±1.9**, 8°.27S×125°.46E, h0km, mb3.6**/1**, mb1 3.5**/5**, mb1mx3.2**/37**, mbtmp3.3**/5**, ML3.2**/4**, MS3.4**/2**, Ms1 3.4**/2**, ms1mx2.6**/42**, Error ellipse: s-maj=40.6km s-min=26.3km az=86.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**2.61**	**223**	Pn	Pn	13 39 16.5	+0.7
	3.6nm,0.3s,baz=329,slow=8.8,SNR=2.1						
BATI				Sn	Sn	13 39 48.9	+0.6
	4.6nm,0.3s,baz=168,slow=24,SNR=1.9						
FITZ	**Fitzroy Crossi**	**9.77**	**179**	Pn	Pn	13 40 53.9	-0.2
	0.2nm,0.3s,baz=353,slow=8.3,SNR=14						
FITZ				Sn	Sn	13 42 34.3	-10
	0.4nm,0.3s,baz=319,slow=21,SNR=6.5						
FITZ				LR	LR	13 45 15.9	
	comp=Z,79nm,19.6s,baz=167,slow=41						
WRA	**Warramunga Arr**	**14.44**	**144**	Pn	Pn	13 41 57.0	-1.0
	0.1nm,0.3s,baz=317,slow=14,SNR=12						
WRA				Sn	Sn	13 44 31.7	-7.4
	0.1nm,0.3s,baz=321,slow=24,SNR=1.5						
ASAR	**Alice Springs**	**17.32**	**153**	P	Pn	13 42 35.9	+0.4
	0.0nm,0.3s,baz=323,slow=10,SNR=3.2						
MKAR	**Makanchi Array**	**66.92**	**329**	P	P	13 49 26.4	0.0
	0.4nm,0.6s,baz=138,slow=7.5,SNR=4.3						
AAK	**Ala-Archa**	**68.69**	**322**	LR	LR	14 23 29.9	
	comp=Z,88nm,20.1s,baz=304,slow=39						

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*IDC **26** 13:40:08.5±0.8, 6°.79N×73°.00W, h157km±15km, mb3.2/6, mb1 3.6/9, mb1mx3.4/34, mbtmp3.8/9, Error ellipse: s-maj=40.5km s-min=7.8km az=134.0*

*RSNC **26** 13:40:09.3±1.1, 6°.83N×73°.11W, h153km±3km, ML3.7, Mw3.9, Fault plane solution: NP1:ϕs98.00000°, δ75.00000°, λ-142.00000°.*

ISC 26 13:40:08.6±0.7**, 6°.83N**±0°.03×**73°.10W**±0°.03**, h159**km±5km**, n50, σ1ˢ.56**/89**, mb3.4**/6**, 1C-5D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.25**	**199**	⇓*i*P	**Pn**	**13 40 30.2**	**-0.1**
BARC				*e*S	**Sn**	**13 40 45.2**	**-1.8**
BARC				*i*		13 40 46.5	
	comp=Z,1μm,0.3s						
PAMC	**Pamplona, Colo**	**0.65**	**38**	⇑*i*P	**Pn**	**13 40 33.1**	**+0.8**
PAMC				*e*S	**Sn**	**13 40 50.1**	**-0.3**
PAMC				*i*		13 40 52.5	
	comp=Z,838nm,0.5s						
BRRC	**Barranca, Sant**	**0.67**	**295**	⇓*e*P	**Pn**	**13 40 32.0**	**+0.2**
BRRC				*e*S	**Sn**	**13 40 48.5**	**-1.1**
BRRC				*i*		13 40 52.2	
	comp=Z,574nm,0.3s						
RUSC	**La Rusia**	**0.93**	**179**	⇓*i*P	**Pn**	**13 40 34.2**	**0.0**
RUSC				*e*S	**Sn**	**13 40 53.1**	**-0.8**
RUSC				*i*		13 40 54.5	
	comp=Z,508nm,0.4s						
TAMC	**Tame, Arauca**	**1.36**	**107**	⇓*i*P	**Pn**	**13 40 38.7**	**+1.3**
TAMC				*e*S	**Sn**	**13 40 58.8**	**-0.8**
TAMC				*i*		13 40 59.6	
	comp=Z,382nm,0.4s						
PTBC	**PUERTO BERRIO,**	**1.38**	**258**	*e*P	**Pn**	**13 40 36.8**	**-0.9**
PTBC				*e*S	**Sn**	**13 40 58.2**	**-1.7**
PTBC				*i*		13 41 04.3	
	comp=Z,429nm,0.4s						
OCAC	**Ocana**	**1.42**	**351**	*e*P	**Pn**	**13 40 38.3**	**0.0**
OCAC				*e*S	**Sn**	**13 41 00.1**	**-1.0**
OCAC				*i*		13 41 08.7	
	comp=Z,1μm,0.3s						
SPBC	**San Pablo de B**	**1.51**	**220**	*e*P	**Pn**	**13 40 39.1**	**-0.1**
SPBC				*e*S	**Sn**	**13 41 01.4**	**-1.2**
SPBC				*i*		13 41 06.0	
	comp=Z,913nm,0.3s						
ZARC	**Zaragoza, Cauc**	**1.87**	**291**	*e*P	**Pn**	**13 40 42.8**	**0.0**
ZARC				*e*S	**Sn**	**13 41 08.0**	**-1.0**
ZARC				*i*		13 41 13.4	
	comp=Z,614nm,0.4s						
NORC	**Norcasia**	**2.16**	**235**	*e*P	**Pn**	**13 40 46.0**	**-0.1**
NORC				*e*S	**Sn**	**13 41 14.9**	**-0.2**
NORC				*i*		13 41 20.2	
	comp=Z,348nm,0.2s						
SMLC	**San Martn de**	**2.19**	**334**	*e*P	**Pn**	**13 40 46.4**	**0.0**
SMLC				*e*S	**Sn**	**13 41 14.9**	**-0.8**
SMLC				*i*		13 41 20.9	
	comp=Z,288nm,0.2s						
ROSC	**El Rosal**	**2.32**	**212**	P	**Pn**	**13 40 50.2**	**+1.9**
	comp=Z,81nm,0.3s,baz=221,slow=21,SNR=40						
ROSC				S	**Sn**	**13 41 19.3**	**+0.2**
	comp=Z,252nm,0.3s,baz=218,slow=22,SNR=13						
ROSC	**El Rosal**	**2.32**	**212**	*e*P	**Pn**	**13 40 49.9**	**+1.6**
ROSC				*e*S	**Sn**	**13 41 20.1**	**+1.1**
ROSC				*i*		13 41 24.9	
	comp=Z,1μm,0.4s						
HELC	**Santa Helena**	**2.49**	**255**	*e*P	**Pn**	**13 40 50.7**	**+0.3**
HELC				*e*S	**Sn**	**13 41 22.6**	**-0.2**
HELC				*i*		13 41 28.3	
	comp=Z,310nm,0.3s						
UREC	**San Jos de Ur**	**2.58**	**291**	*e*P	**Pn**	**13 40 50.0**	**-1.2**
UREC				*e*S	**Sn**	**13 41 20.8**	**-3.3**
UREC				*i*		13 41 34.0	
	comp=Z,269nm,0.4s						
SOCV	**Socops**	**2.66**	**57**	*e*P	**Pn**	**13 40 52.1**	**0.0**
SOCV				*e*S	**Sn**	**13 41 24.1**	**-1.6**
LL1C	**La Loma 1 Cana**	**2.74**	**351**	*e*P	**Pn**	**13 40 54.6**	**+1.5**
LL1C				*e*S	**Sn**	**13 41 30.4**	**+2.8**
GUY2C	**Guyana, Caldas**	**2.76**	**235**	*e*P	**Pn**	**13 40 54.4**	**+0.6**
GUY2C				*e*S	**Sn**	**13 41 29.0**	**+0.3**
GUY2C				*i*		13 41 36.7	
	comp=Z,306nm,0.6s						
PTGC	**Puerto Gaitan,**	**2.78**	**160**	⇓*e*P	**Pn**	**13 40 53.5**	**-0.2**
PTGC				*e*S	**Sn**	**13 41 27.0**	**-1.6**
PTGC				*i*		13 41 28.7	
	comp=Z,262nm,0.3s						
CBOC	**Ciudad Bolivar**	**3.05**	**252**	*e*P	**Pn**	**13 40 57.8**	**+0.6**
CBOC				*e*S	**Sn**	**13 41 35.0**	**+0.3**
CBOC				*i*		13 41 40.0	
	comp=Z,81nm,0.5s						
DBBC	**Dabeiba**	**3.09**	**274**	*e*P	**Pn**	**13 40 57.7**	**+0.1**
DBBC				*e*S	**Sn**	**13 41 34.3**	**-1.2**
SDV	**Santo Domingo**	**3.19**	**50**	P	**Pn**	**13 40 59.8**	**+0.9**
	comp=Z,61nm,0.3s,baz=181,slow=3.0,SNR=71						
SDV				S	**Sn**	**13 41 36.6**	**-1.3**
	comp=Z,31nm,0.3s,baz=261,slow=19,SNR=10						
SDV	**Santo Domingo**	**3.19**	**50**	*e*P	**Pn**	**13 40 59.7**	**+0.9**
SDV				*e*S	**Sn**	**13 41 37.2**	**-0.7**
SDV				*i*		13 41 40.5	
	comp=Z,78nm,0.4s						
MOTC	**Monteria, Cord**	**3.20**	**308**	*e*P	**Pn**	**13 40 57.2**	**-1.7**
MOTC				*e*S	**Sn**	**13 41 35.7**	**-2.1**
MOTC				*i*		13 41 51.2	
	comp=Z,130nm,0.5s						
ARGC	**Ariguani, Magd**	**3.22**	**339**	*e*P	**Pn**	**13 40 58.1**	**-1.0**
ARGC				*e*S	**Sn**	**13 41 38.5**	**+0.2**
ARGC				*i*		13 41 47.7	
	comp=Z,83nm,0.3s						
ANIL	**Santa Ana**	**3.26**	**225**	*e*P	**Pn**	**13 41 00.7**	**+0.8**
ANIL				*e*S	**Sn**	**13 41 40.2**	**+0.5**
ELOV	**Elorza**	**3.59**	**87**	*e*P	**Pn**	**13 41 04.4**	**+0.5**
ELOV				*e*S	**Sn**	**13 41 46.0**	**-0.9**
ORTC	**Ortega, Tolima**	**3.60**	**217**	*e*P	**Pn**	**13 41 04.5**	**+0.5**
ORTC				*e*S	**Sn**	**13 41 47.2**	**+0.1**
ORTC				*i*		13 41 51.7	
	comp=Z,204nm,0.2s						
CVALL	**Valledupar, Ce**	**3.66**	**358**	*e*P	**Pn**	**13 41 04.2**	**-0.6**
CVALL				*e*S	**Sn**	**13 41 47.2**	**-1.3**
CVALL				*i*		13 41 53.0	
	comp=Z,136nm,0.3s						
SJCC	**San Jacinto, C**	**3.68**	**326**	*e*P	**Pn**	**13 41 03.9**	**-1.1**
SJCC				*e*S	**Sn**	**13 41 45.4**	**-3.5**
SJCC				*i*		13 42 00.1	
	comp=Z,98nm,0.7s						
PLMC	**San Jos del P**	**3.70**	**239**	*e*P	**Pn**	**13 41 05.8**	**+0.5**
PLMC				*e*S	**Sn**	**13 41 47.3**	**-2.0**
PLMC				*i*		13 41 54.0	
	comp=Z,53nm,0.2s						
LCBC	**Los crdobas,**	**3.81**	**302**	*e*P	**Pn**	**13 41 08.9**	**+2.1**
LCBC				*e*S	**Sn**	**13 41 49.7**	**-2.2**
LCBC				*i*		13 41 55.0	
	comp=Z,106nm,0.3s						

GUVC	**San Jose del G**	**4.28**	**174**	*e*P	**Pn**	**13 41 12.8**	**0.0**
GUVC				*e*S	**Sn**	**13 42 01.2**	**-1.6**
GUVC				*i*		13 42 06.5	
	comp=Z,182nm,0.2s						
YOTC	**Yotoco, Valle**	**4.29**	**229**	*e*P	**Pn**	**13 41 12.6**	**-0.4**
YOTC				*e*S	**Sn**	**13 42 03.2**	**0.0**
SMRC	**Santa Marta, M**	**4.45**	**346**	*e*P	**Pn**	**13 41 14.6**	**-0.4**
SMRC				*e*S	**Sn**	**13 42 03.4**	**-3.5**
SMRC				*i*		13 42 06.0	
	comp=Z,60nm,0.5s						
PTAC	**Punta Ardita,**	**4.69**	**274**	*e*P	**Pn**	**13 41 17.3**	**-0.8**
MACC	**Macarena, Meta**	**4.71**	**189**	*e*P	**Pn**	**13 41 17.5**	**-1.0**
MACC				*e*S	**Sn**	**13 42 07.3**	**-5.7**
MACC				*i*		13 42 14.6	
	comp=Z,70nm,0.7s						
MACC	**Macarena, Meta**	**4.71**	**189**	*e*Pg	Pg	13 41 27.2	
BETC	**Betania**	**4.73**	**210**	*e*P	**Pn**	**13 41 18.2**	**-0.5**
BETC				*e*S	**Sn**	**13 42 06.7**	**-6.9**
BETC				*i*		13 42 16.5	
	comp=Z,54nm,0.4s						
MARP	**Paez Belalcaza**	**4.87**	**216**	*e*P	**Pn**	**13 41 20.9**	**+0.1**
MARP				*e*S	**Sn**	**13 42 16.5**	**-0.7**
GARC	**Garzon, Huila**	**5.19**	**207**	*e*P	**Pn**	**13 41 24.3**	**-0.6**
GARC				*e*S	**Sn**	**13 42 22.1**	**-2.5**
GARC				*i*		13 42 25.8	
	comp=Z,77nm,0.3s						
PCON	**Cinco Dias**	**5.55**	**216**	*e*P	**Pn**	**13 41 30.6**	**+0.6**
PCON				*e*S	**Sn**	**13 42 33.6**	**+0.1**
PCRV	**Puerto La Cruz**	**9.01**	**68**	P	**Pn**	**13 42 13.4**	**-2.1**
	comp=Z,0.7nm,0.3s,baz=9.6,slow=12,SNR=2.4						
TXAR	**Lajitas Array**	**36.47**	**312**	P	**P**	**13 46 59.3**	**+0.7**
	comp=Z,0.4nm,0.4s,baz=124,slow=7.8,SNR=4.3						
ULM	**Lac du Bonnet**	**47.29**	**340**	P	**P**	**13 48 25.6**	**-0.3**
	comp=Z,2.0nm,0.4s,baz=162,slow=9.4,SNR=2.4						
PDAR	**Pinedale Array**	**48.09**	**324**	P	**P**	**13 48 33.6**	**+1.1**
	comp=Z,0.3nm,0.4s,baz=126,slow=9.5,SNR=6.1						
NVAR	**Mina Array Bea**	**51.49**	**315**	P	**P**	**13 48 58.7**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=104,slow=6.9,SNR=2.4						
YKA	**Yellowknife Ar**	**63.27**	**340**	P	**P**	**13 50 20.8**	**+0.7**
	comp=Z,0.3nm,0.4s,baz=130,slow=6.5,SNR=5.7						
ILAR	**Eielson Array**	**76.97**	**335**	P	**P**	**13 51 43.9**	**+0.5**
	comp=Z,0.4nm,1.1s,baz=91,slow=4.7,SNR=2.0						
MKAR	**Makanchi Array**	**122.31**	**20**	PKP	**PKiKP**	**13 58 45.2**	**0.0**
	comp=Z,0.1nm,0.3s,baz=335,slow=3.8,SNR=1.8						

BUL ***26*** *13:42:04.9±1.2, 25°.31S×28°.51E, h10^{km}, MD3.7*

EAF ***26*** *13:42:05.1±1.1, 25°.30S×28°.49E, h10^{km}, MD3.6*

ISC 26 13:42:03.8±1.3**, 25°.32S**±0°.07×**28°.50E**±0°.06**, h10**^{km}**, n8,** σ**1^{s}.69**/16**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
LBTB	**Lobatse**	**2.65**	**276**	*e*P	**Pn**	**13 42 47.8**	**+1.1**
LBTB				*e*S	**Sn**	**13 43 18.2**	**-0.7**
LBTB	**Lobatse**	**2.65**	**276**	*e*P	**Pn**	**13 42 47.8**	**+1.1**
LBTB				*e*S	**Sn**	**13 43 18.2**	**-0.7**
MOPA	**Mopani**	**3.20**	**56**	*e*P	**Pn**	**13 42 55.7**	**+1.5**
MOPA				*e*S	**Sn**	**13 43 31.0**	**-1.4**
MOPA	**Mopani**	**3.20**	**56**	*e*P	**Pn**	**13 42 55.7**	**+1.5**
MOPA				*e*S	**Sn**	**13 43 31.0**	**-1.4**
MSNA	**Messina**	**3.28**	**26**	*e*P	**Pn**	**13 42 55.9**	**+0.6**
MSNA				*e*S	**Sn**	**13 43 33.2**	**-1.2**
MSNA	**Messina**	**3.28**	**26**	*e*P	**Pn**	**13 42 55.9**	**+0.6**
MSNA				*e*S	**Sn**	**13 43 33.2**	**-1.2**
BOSA	**Boshof**	**4.37**	**221**	*e*P	**Pn**	**13 43 12.3**	**+1.9**
BOSA				*e*S	**Sn**	**13 43 58.8**	**-2.8**
BOSA	**Boshof**	**4.37**	**221**	*e*P	**Pn**	**13 43 12.3**	**+1.9**
BOSA				*e*S	**Sn**	**13 43 58.8**	**-2.8**

IDC ***26*** *13:42:24.6±0.4, 9°.68S×71°.16W, h606^{km}±4^{km}, mb4.0/34, mb1 4.2/42, mb1mx4.1/51, mbtmp5.0/42, Error ellipse: s-maj=9.3km s-min=6.1km az=50.0*

NEIC ***26*** *13:42:24.5±2.0, 9°.76S±0°.09×71°.3W±0°.1, h606^{km}±7^{km}, mb4.9/327, Error ellipse: s-maj=17.1km s-min=13.0km az=70.0*

BDF ***26*** *13:42:24±2.1, 9°.69S±0°.09×71°.2W±0°.1, h591^{km}±5^{km}, Error ellipse: s-maj=16.2km s-min=12.6km az=71.0*

VAO ***26*** *13:42:24.9±0.3, 9°.82S×71°.15W, h593^{km}, mb4.8*

BJI ***26*** *13:42:27.0±0.0, 9°.80S×71°.30W, h616^{km}, mB5.4/5*

ISC 26 13:42:24.2±0.3**, 9°.75S**±0°.04×**71°.18W**±0°.05**, h607**^{km}±3^{km}**, n639,** σ**1^{s}.08**/552**, mb4.8**/194**, 63C-216D, Fault plane solution: NP1:** ϕ_s205.21568°, δ87.29458°, λ22.88483°. **NP2:** ϕ_s114.07429°, δ67.14213°, λ177.06383°. **Principal axes:** T Plg17.9417°, Azm71.9999°; N Plg66.9644°, Azm211.5962°; P Plg13.9631°, Azm337.3820°;

Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CZSB	**Cruzeiro do Su**	**2.51**	**323**	*e*P	**P**	**13 43 41.8**	**+0.2**
CZSB	**Cruzeiro do Su**	**2.51**	**323**	P	**P**	**13 43 41.6**	**0.0**
ETMB	**Extrema**	**4.90**	**91**	*e*P	**P**	**13 43 57.7**	**+0.9**
ETMB	**Extrema**	**4.90**	**91**	P	**P**	**13 43 57.6**	**+0.7**
TBTG	**Tabatinga, AM**	**5.67**	**13**	*e*P	**P**	**13 44 04.5**	**+1.4**
TBTG	**Tabatinga, AM**	**5.67**	**13**	P	**P**	**13 44 04.2**	**+1.1**
NNA	**Nana**	**5.99**	**248**	P	**P**	**13 44 06.1**	**+0.3**
	33nm,0.3s,baz=55,slow=6.8,SNR=137						
NNA				S	**S**	**13 45 27.0**	**-1.7**
	6.7nm,0.3s,baz=257,slow=16,SNR=10						
LPAZ	**La Paz**	**7.14**	**156**	P	**P**	**13 44 17.3**	**+0.8**
	28nm,0.3s,baz=337,slow=8.0,SNR=342						
LPAZ				S	**S**	**13 45 46.2**	**-2.2**
	baz=180,slow=9.7,SNR=1.9						
LPAZ				ScS	**ScS**	**13 55 58.1**	**-0.4**
	0.1nm,0.3s,baz=270,slow=23,SNR=2.6						
LPAZ	**La Paz**	**7.14**	**156**	⇓*i*P	**P**	**13 44 17.3**	**+0.8**
LPAZ				*e*S	**S**	**13 45 46.9**	**-1.5**
LPAZ	**La Paz**	**7.14**	**156**	*e*P	**P**	**13 44 17.4**	**+0.8**
ATAH	**Atahualpa**	**7.59**	**289**	P	**P**	**13 44 22.1**	**+1.6**
	16nm,0.3s,baz=119,slow=6.8,SNR=134						
ATAH				S	**S**	**13 45 56.2**	**+0.6**
	2.3nm,0.3s,baz=344,slow=19,SNR=4.9						
SAML	**Samuel**	**7.93**	**85**	P	**P**	**13 44 24.3**	**+1.0**
AP01	**Chacalluta**	**8.61**	**175**	⇑*e*P	**P**	**13 44 29.0**	**-0.5**
AP01				*i* S	**S**	**13 46 07.7**	**-4.6**
AP01	**Chacalluta**	**8.61**	**175**	P	**P**	**13 44 29.0**	**-0.5**
PB12	**IPOC Station P**	**8.85**	**175**	⇓*e*P	**P**	**13 44 30.8**	**-1.2**
PB12				*e*S	**S**	**13 46 11.5**	**-5.3**
PB12	**IPOC Station P**	**8.85**	**175**	P	**P**	**13 44 30.8**	**-1.2**
PB11	**IPOC Station P**	**10.06**	**172**	⇓*i*P	**P**	**13 44 43.0**	**-0.9**
PB11				*e*S	**S**	**13 46 33.4**	**-5.1**
PB11	**IPOC Station P**	**10.06**	**172**	P	**P**	**13 44 43.0**	**-0.9**
TA02	**Huaiquique**	**10.51**	**175**	*e*P	**P**	**13 44 48.2**	**0.0**
TA02				*e*S	**S**	**13 46 43.0**	**-3.3**
TA02	**Huaiquique**	**10.51**	**175**	P	**P**	**13 44 47.6**	**-0.5**
PB08	**IPOC Station P**	**10.51**	**170**	⇓*i*P	**P**	**13 44 48.2**	**-0.5**
PB08				*i* S	**S**	**13 46 41.9**	**-5.2**
PB08	**IPOC Station P**	**10.51**	**170**	P	**P**	**13 44 48.6**	**0.0**
TA01	**Diego Aracena**	**10.79**	**175**	⇓*e*P	**P**	**13 44 50.9**	**-0.1**
TA01				*e*S	**S**	**13 46 46.5**	**-5.0**
TA01	**Diego Aracena**	**10.79**	**175**	P	**P**	**13 44 50.2**	**-0.8**
VILB	**Vilhena**	**11.23**	**107**	*e*P	**P**	**13 44 57.0**	**+1.5**
VILB	**Vilhena**	**11.23**	**107**	P	**P**	**13 44 56.6**	**+1.2**
PB01	**IPOC Station P**	**11.35**	**172**	P	**P**	**13 44 56.6**	**0.0**
SIV	**San Ignacio**	**11.64**	**123**	P	**P**	**13 45 00.4**	**+0.9**
	12nm,0.3s,baz=297,slow=9.6,SNR=116						
SIV				S	**S**	**13 47 08.4**	**+1.4**
	baz=301,slow=16,SNR=13						
PB07	**IPOC Station P**	**11.97**	**174**	P	**P**	**13 45 02.9**	**0.0**
PB09	**IPOC Station P**	**12.12**	**171**	P	**P**	**13 45 04.5**	**+0.2**
OTAV	**Otavalo**	**12.28**	**323**	*e*P	**P**	**13 45 07.2**	**+0.8**
OTAV	**Otavalo**	**12.28**	**323**	*e*P	**P**	**13 45 08.3**	**+1.9**
OTAV	**Otavalo**	**12.28**	**323**	P	**P**	**13 45 06.4**	**0.0**
MACA	**Manacapuru-AM**	**12.31**	**59**	*e*P	**P**	**13 45 06.7**	**+0.5**
MACA	**Manacapuru-AM**	**12.31**	**59**	P	**P**	**13 45 06.7**	**+0.5**
PAC1	**Pacto, Paraso**	**12.51**	**322**	⇑*e*P	**P**	**13 45 10.6**	**+2.3**
GCUF	**Volcan Galeras**	**12.51**	**330**	*e*P	**P**	**13 45 10.8**	**+2.1**
PB04	**IPOC Station P**	**12.55**	**176**	P	**P**	**13 45 08.3**	**-0.3**
GARC	**Garzon, Huila**	**12.61**	**340**	*e*P	**P**	**13 45 08.5**	**-1.0**
LVC	**Limon Verde**	**12.97**	**171**	P	**P**	**13 45 13.9**	**+0.9**
	1.4nm,0.3s,baz=2.8,slow=5.9,SNR=5.3						
LVC				S	**S**	**13 47 33.5**	**+1.9**
	0.9nm,0.3s,baz=307,slow=22,SNR=6.4						
LVC	**Limon Verde**	**12.97**	**171**	*e*P	**P**	**13 45 13.4**	**+0.4**
LVC	**Limon Verde**	**12.97**	**171**	P	**P**	**13 45 13.4**	**+0.4**
SOTA	**Rioblanco**	**12.99**	**335**	*e*P	**P**	**13 45 14.6**	**+1.1**
PTLB	**Pontes e Lacer**	**13.04**	**117**	*e*P	**P**	**13 45 14.6**	**+1.1**
PTLB	**Pontes e Lacer**	**13.04**	**117**	P	**P**	**13 45 14.2**	**+0.8**
PCON	**Cinco Dias**	**13.08**	**336**	*e*P	**P**	**13 45 16.8**	**+2.3**
MARP	**Paez Belalcaza**	**13.38**	**339**	*e*P	**P**	**13 45 17.5**	**+0.3**
PB15	**IPOC Station P**	**13.48**	**173**	P	**P**	**13 45 17.9**	**-0.1**
PB10	**IPOC Station P**	**13.70**	**178**	P	**P**	**13 45 19.8**	**-0.1**
ORTC	**Ortega, Tolima**	**14.16**	**343**	*e*P	**P**	**13 45 24.5**	**-0.2**
PTGA	**Pitinga**	**14.31**	**52**	P	**P**	**13 45 26.6**	**+0.6**
	25nm,0.3s,baz=232,slow=11,SNR=260						
PTGA				S	**S**	**13 47 54.5**	**+0.1**
	baz=344,slow=23,SNR=1.4						
PTGA	**Pitinga**	**14.31**	**52**	P	**P**	**13 45 26.5**	**+0.5**
PDRB	**Porto dos Gac**	**14.32**	**99**	*e*P	**P**	**13 45 26.6**	**+0.5**
YOTC	**Yotoco, Valle**	**14.58**	**339**	*e*P	**P**	**13 45 27.6**	**-1.0**
ANIL	**Santa Ana**	**14.76**	**343**	*e*P	**P**	**13 45 30.6**	**+0.2**
ROSC	**El Rosal**	**14.83**	**348**	P	**P**	**13 45 32.4**	**+1.2**
	10.0nm,0.3s,baz=234,slow=9.7,SNR=4.6						
ROSC				S	**S**	**13 48 03.6**	**0.0**
	1.7nm,0.3s,baz=288,slow=23,SNR=1.8						
CLDB	**Colider**	**15.18**	**96**	*e*P	**P**	**13 45 34.8**	**+0.9**
PLMC	**San Jos del P**	**15.42**	**341**	*e*P	**P**	**13 45 36.5**	**+0.4**
GUY2C	**Guyana, Caldas**	**15.45**	**344**	*e*P	**P**	**13 45 36.8**	**-0.1**
SPBC	**San Pablo de B**	**15.57**	**349**	*e*P	**P**	**13 45 36.2**	**-1.4**
NORC	**Norcasia**	**15.65**	**346**	*e*P	**P**	**13 45 37.8**	**-0.4**
RUSC	**La Rusia**	**15.66**	**353**	*e*P	**P**	**13 45 40.1**	**+1.4**
NPGB	**Novo Progresso**	**15.88**	**81**	*e*P	**P**	**13 45 41.1**	**+0.7**
BOAV	**Boa Vista**	**16.07**	**42**	*e*P	**P**	**13 45 43.5**	**+1.4**
BOAV	**Boa Vista**	**16.07**	**42**	P	**P**	**13 45 43.5**	**+1.4**
ITTB	**Itaituba**	**16.23**	**72**	*e*P	**P**	**13 45 44.6**	**+1.1**
CBOC	**Ciudad Bolivar**	**16.24**	**343**	*e*P	**P**	**13 45 44.3**	**+0.5**
SALV	**Santo Antonio**	**16.29**	**114**	*e*P	**P**	**13 45 45.4**	**+1.4**
BARC	**Barichara**	**16.36**	**353**	*e*P	**P**	**13 45 44.6**	**-0.3**
HELC	**Santa Helena**	**16.42**	**345**	*e*P	**P**	**13 45 46.3**	**+0.7**
PTBC	**PUERTO BERRIO,**	**16.51**	**348**	*e*P	**P**	**13 45 45.0**	**-1.0**
PAMC	**Pamplona, Colo**	**17.05**	**355**	*e*P	**P**	**13 45 51.2**	**-0.3**
DBBC	**Dabeiba**	**17.40**	**343**	*e*P	**P**	**13 45 55.6**	**+1.3**
ZARC	**Zaragoza, Cauc**	**17.52**	**348**	*e*P	**P**	**13 45 54.5**	**-0.7**
ZARC	**Zaragoza, Cauc**	**17.52**	**348**	P	**P**	**13 45 54.8**	**-0.5**
PP1B	**Ponte de Pedra**	**17.65**	**118**	*e*P	**P**	**13 45 57.1**	**+0.7**
SOCV	**Socops**	**17.92**	**1**	*e*P	**P**	**13 45 58.8**	**-0.1**
UREC	**San Jos de Ur**	**17.92**	**346**	*e*P	**P**	**13 45 58.2**	**-0.7**
PTAC	**Punta Ardita,**	**18.04**	**338**	*e*P	**P**	**13 46 01.5**	**+1.5**
AQDB	**Aquidauana**	**18.34**	**127**	*e*P	**P**	**13 46 03.8**	**+1.2**
AQDB	**Aquidauana**	**18.34**	**127**	P	**P**	**13 46 03.5**	**+0.9**
AQDB				IAmb	IAmb	13 46 06.6	
	comp=Z,23nm,0.5s						
SDV	**Santo Domingo**	**18.52**	**2**	P	**P**	**13 46 04.9**	**+0.3**
	comp=Z,5.5nm,0.3s,baz=192,slow=6.0,SNR=5.8						
SDV				S	**S**	**13 48 57.4**	**-5.9**
	comp=Z,0.7nm,0.3s,baz=20,slow=12,SNR=1.3						
SDV	**Santo Domingo**	**18.52**	**2**	*e*P	**P**	**13 46 05.0**	**+0.4**
MALB	**Monte Alegre**	**18.56**	**66**	*e*P	**P**	**13 46 06.1**	**+1.3**
SMLC	**San Martn de**	**18.65**	**351**	*e*P	**P**	**13 46 04.5**	**-1.0**
BAUV	**El Baul**	**18.83**	**10**	P	**P**	**13 46 07.9**	**+0.7**
MOTC	**Monteria, Cord**	**18.94**	**346**	*e*P	**P**	**13 46 08.4**	**+0.2**
MOTC	**Monteria, Cord**	**18.94**	**346**	P	**P**	**13 46 08.7**	**+0.5**
MOTC				IAmb	IAmb	13 46 09.5	
	comp=Z,36nm,0.7s						
SNDB	**Serra Nova Dou**	**19.66**	**98**	*e*P	**P**	**13 46 16.2**	**+1.5**
ARGC	**Ariguani, Magd**	**19.72**	**351**	*e*P	**P**	**13 46 15.8**	**+0.6**
ARAG	**Araguaiana, MT**	**19.79**	**109**	*e*P	**P**	**13 46 16.7**	**+0.8**
SJCC	**San Jacinto, C**	**19.92**	**348**	*e*P	**P**	**13 46 16.4**	**-0.7**
SJCC	**San Jacinto, C**	**19.92**	**348**	P	**P**	**13 46 17.5**	**+0.4**
PCRV	**Puerto La Cruz**	**20.84**	**18**	P	**P**	**13 46 26.5**	**+1.1**
	comp=Z,12nm,0.4s,baz=299,slow=2.9,SNR=8.2						
SMRC	**Santa Marta, M**	**21.00**	**352**	*e*P	**P**	**13 46 25.6**	**-1.1**
CPUP	**Villa Florida**	**21.07**	**143**	P	**P**	**13 46 27.2**	**0.0**
	comp=Z,1.4nm,0.4s,baz=334,slow=11,SNR=5.2						
CPUP				ScP	**ScP**	**13 52 47.0**	**-0.5**
	comp=Z,4.5nm,0.6s,baz=237,slow=1.8,SNR=6.2						
CPUP	**Villa Florida**	**21.07**	**143**	*e*P	**P**	**13 46 26.8**	**-0.4**
CPUP	**Villa Florida**	**21.07**	**143**	P	**P**	**13 46 27.0**	**-0.2**
MCPB	**Macapa, AP**	**21.19**	**65**	*e*P	**P**	**13 46 30.0**	**+1.5**
PRPB	**Parauapebas**	**21.45**	**82**	*e*P	**P**	**13 46 31.5**	**+0.6**
TRCB	**Terra Rica**	**21.99**	**128**	*e*P	**P**	**13 46 36.5**	**+0.9**
DRK0	**Durika**	**22.38**	**327**	P	**P**	**13 46 37.5**	**-1.8**
ITRB	**Iturama**	**22.41**	**119**	*e*P	**P**	**13 46 40.4**	**+1.0**
PCMB	**Pacaembu**	**22.48**	**124**	*e*P	**P**	**13 46 40.2**	**+0.3**
PEXB	**Peixe**	**22.59**	**98**	*e*P	**P**	**13 46 42.6**	**+1.7**
BATAN	**Batan**	**23.15**	**328**	P	**P**	**13 46 42.4**	**-3.5**
SMTB	**Santa Maria do**	**23.30**	**90**	*e*P	**P**	**13 46 48.7**	**+1.4**
BDFB	**Brasilia**	**23.34**	**107**	P	**P**	**13 46 49.3**	**+1.6**
	comp=Z,39nm,0.8s,baz=271,slow=10,SNR=39						
BDFB				S	**S**	**13 50 18.6**	**-0.6**
	comp=Z,2.2nm,0.5s,baz=89,slow=22,SNR=1.4						
BDFB				ScP	**ScP**	**13 52 53.5**	**-0.3**
	comp=Z,4.8nm,0.6s,baz=310,slow=25,SNR=3.5						
BDFB	**Brasilia**	**23.34**	**107**	P	**P**	**13 46 48.1**	**+0.4**
BDFB				IAmb	IAmb	13 46 50.1	
	comp=Z,41nm,0.8s						
PTGB	**Pitanga**	**23.51**	**132**	*e*P	**P**	**13 46 49.5**	**+0.4**
MDP	**Montagnes des**	**23.64**	**52**	P	**P**	**13 46 50.9**	**+0.6**
	comp=Z,21nm,0.7s,baz=216,slow=4.5,SNR=18						
MDP				S	**S**	**13 50 21.1**	**-2.7**
	comp=Z,17nm,1.1s,baz=68,slow=13,SNR=3.5						
IPMB	**Ipameri, GO**	**23.73**	**113**	*e*P	**P**	**13 46 51.6**	**+0.5**
ITQB	**Itaqui**	**24.04**	**148**	*e*P	**P**	**13 46 54.2**	**+0.6**
TMAB	**Tom-Au,PA,Br**	**24.08**	**74**	*e*P	**P**	**13 46 55.9**	**+1.7**
BB19B	**Bebedouro**	**24.53**	**120**	*e*P	**P**	**13 46 58.2**	**+0.1**
FRTB	**Fartura**	**24.69**	**126**	*e*P	**P**	**13 47 00.3**	**+0.8**
SVB	**Belmont**	**24.91**	**23**	P	**P**	**13 47 01.2**	**-0.3**
SDBA	**SAO DESIDERIO**	**25.92**	**98**	*e*P	**P**	**13 47 10.9**	**+0.5**
RCLB	**Rio Claro- Sao**	**25.93**	**122**	*e*P	**P**	**13 47 10.9**	**+0.5**
TIJ01	**Guaruva-PR**	**26.14**	**129**	*e*P	**P**	**13 47 10.6**	**-1.7**
CPSB	**Cacapava Do Su**	**26.38**	**144**	*e*P	**P**	**13 47 14.2**	**0.0**
VAO	**Valinhos**	**26.65**	**123**	*e*P	**P**	**13 47 17.1**	**+0.3**
JANB	**Januaria**	**26.75**	**104**	*e*P	**P**	**13 47 18.6**	**+0.9**
PET01	**Itanhaem-SP**	**26.98**	**125**	*e*P	**P**	**13 47 19.7**	**+0.2**
CNLB	**Canela**	**27.22**	**138**	*e*P	**P**	**13 47 21.8**	**+0.2**
PLTB	**Pedras Altas**	**27.30**	**146**	*e*P	**P**	**13 47 22.1**	**-0.2**
MC01	**Montes Claros**	**27.38**	**107**	*e*P	**P**	**13 47 23.8**	**+0.6**
ROSB	**Rosrio**	**27.72**	**78**	*e*P	**P**	**13 47 27.1**	**+1.0**
BSCB	**Bom Sucesso**	**27.76**	**117**	*e*P	**P**	**13 47 26.9**	**+0.4**
MLPR	**Magueyes Islan**	**27.85**	**8**	P	**P**	**13 47 26.4**	**-0.7**
MLPR				IAmb	IAmb	13 47 27.9	
	comp=Z,36nm,0.8s						
CRPR	**Cabo Rojo, PR**	**27.87**	**8**	P	**P**	**13 47 26.1**	**-1.2**
CRPR				IAmb	IAmb	13 47 27.6	
	comp=Z,28nm,0.6s						
TER01	**Tubaro-SC**	**27.89**	**135**	*e*P	**P**	**13 47 27.8**	**+0.4**
PARB	**Paraibuna**	**27.91**	**122**	*e*P	**P**	**13 47 28.3**	**+0.5**
DIAM	**Diamantina, MG**	**27.98**	**111**	*e*P	**P**	**13 47 29.3**	**+0.9**
OBIP	**Obispado Ponce**	**27.98**	**9**	P	**P**	**13 47 28.2**	**-0.1**
OBIP				IAmb	IAmb	13 47 29.4	
	comp=Z,23nm,0.8s						
PDPR	**Patillas Dam,**	**28.06**	**10**	P	**P**	**13 47 28.0**	**-0.9**
PDPR				IAmb	IAmb	13 47 29.0	
	comp=Z,26nm,0.9s						
SJG	**San Juan**	**28.13**	**10**	P	**P**	**13 47 28.5**	**-1.0**
	comp=Z,18nm,0.6s,baz=162,slow=7.3,SNR=11						
SJG				S	**S**	**13 51 30.0**	**-3.7**
	comp=Z,9.1nm,0.7s,baz=2.4,slow=20,SNR=1.7						
SJG	**San Juan**	**28.13**	**10**	P	**P**	**13 47 28.8**	**-0.7**
SJG				IAmb	IAmb	13 47 30.9	
	comp=Z,19nm,0.7s						
AOPR	**Arecibo Observ**	**28.26**	**9**	P	**P**	**13 47 29.1**	**-1.6**
GCPR	**Guaynabo City**	**28.33**	**10**	P	**P**	**13 47 30.5**	**-0.8**
GCPR				IAmb	IAmb	13 47 32.3	
	comp=Z,31nm,0.7s						
CBYP	**Canovanas**	**28.34**	**11**	P	**P**	**13 47 30.8**	**-0.7**
CUPR	**Culebra, Puert**	**28.48**	**12**	P	**P**	**13 47 31.7**	**-0.9**
CUPR				IAmb	IAmb	13 47 32.6	
	comp=Z,20nm,0.8s						
SMRT	**St. Maarten**	**28.76**	**16**	P	**P**	**13 47 33.3**	**-1.8**
ANWB	**Willy Bob**	**28.78**	**19**	P	**P**	**13 47 33.4**	**-1.8**
MAN01	**Angra dos Reis**	**29.13**	**120**	*e*P	**P**	**13 47 38.9**	**+0.7**
VAS01	**Vassouras-RJ**	**29.36**	**118**	*e*P	**P**	**13 47 40.9**	**+0.6**
TRQA	**Tornquist**	**29.37**	**165**	*e*P	**P**	**13 47 41.4**	**+1.3**
NBPS	**Pedro II - PI**	**29.97**	**82**	*e*P	**P**	**13 47 46.7**	**+1.0**
DUB01	**Friburgo-RJ**	**30.23**	**117**	*e*P	**P**	**13 47 48.4**	**+0.7**
SJMB	**Sao Joao De Ma**	**30.36**	**110**	*e*P	**P**	**13 47 49.1**	**+0.2**
NBPN	**Ponto Novo - B**	**30.50**	**95**	*e*P	**P**	**13 47 50.9**	**+0.8**
BSFB	**Barra de Sao F**	**30.71**	**110**	*e*P	**P**	**13 47 52.1**	**+0.4**
CAM01	**Campos-RJ**	**30.77**	**117**	*e*P	**P**	**13 47 52.7**	**+0.4**
PLCA	**Paso Flores**	**30.86**	**179**	P	**P**	**13 47 53.8**	**+0.9**
	comp=Z,5.7nm,0.6s,baz=352,slow=9.7,SNR=27						
PLCA				PcP	**PcP**	**13 50 30.9**	**+0.7**
	comp=Z,5.3nm,0.7s,baz=354,slow=4.1,SNR=8.4						
PLCA				ScP	**ScP**	**13 53 16.0**	**-0.3**
	comp=Z,1.6nm,0.7s,baz=302,slow=2.6,SNR=4.2						
PLCA	**Paso Flores**	**30.86**	**179**	*e*P	**P**	**13 47 53.8**	**+0.9**
PLCA	**Paso Flores**	**30.86**	**179**	P	**P**	**13 47 52.2**	**-0.7**
PLCA					**PcP**	**13 50 31.3**	**+1.1**
APG	**El Apazote**	**31.15**	**322**	P	**P**	**13 47 56.7**	**+0.9**
	comp=Z,12nm,0.6s,baz=131,slow=6.6,SNR=9.0						
GDU01	**Guandu, BA**	**31.18**	**100**	*e*P	**P**	**13 47 57.1**	**+1.2**
RIB01	**Linhares ES**	**31.23**	**111**	*e*P	**P**	**13 47 56.5**	**+0.2**
ALF01	**Guarapari-ES**	**31.25**	**114**	*e*P	**P**	**13 47 57.2**	**+0.8**
CMC01	**Camacan, BA**	**31.38**	**103**	*e*P	**P**	**13 47 58.6**	**+1.0**
NBIT	**Itapeh - BA**	**31.42**	**103**	*e*P	**P**	**13 47 59.3**	**+1.5**
NBMO	**Morrinhos-CE**	**31.57**	**80**	*e*P	**P**	**13 48 00.1**	**+0.8**
NBMA	**Muriti-CE**	**32.14**	**88**	*e*P	**P**	**13 48 05.2**	**+1.2**
NBLA	**Lagarto - SE**	**32.86**	**95**	*e*P	**P**	**13 48 10.2**	**+0.1**
NBCL	**Cascavel-CE**	**33.09**	**83**	*e*P	**P**	**13 48 13.4**	**+1.4**
NBLV	**Livramento - P**	**33.95**	**89**	*e*P	**P**	**13 48 20.6**	**+1.3**
NBPA	**Parau_RN**	**33.98**	**86**	*e*P	**P**	**13 48 20.5**	**+1.1**
SOR	**Soroa**	**34.35**	**340**	P	**P**	**13 48 22.8**	**+0.4**
NBAN	**Anadia - AL**	**34.40**	**93**	*e*P	**P**	**13 48 23.7**	**+0.7**
CMIG	**Matias Romero**	**35.50**	**319**	P	**P**	**13 48 33.1**	**+1.0**
	comp=Z,26nm,0.5s,baz=120,slow=6.6,SNR=47						
CMIG				PcP	**PcP**	**13 50 44.3**	**+0.5**
	comp=Z,7.9nm,0.7s,baz=141,slow=4.4,SNR=5.5						
NBRF	**Rio Formoso -**	**35.59**	**91**	*e*P	**P**	**13 48 33.6**	**+0.8**
NBPV	**Pedro Velho**	**35.67**	**87**	*e*P	**P**	**13 48 34.8**	**+1.3**
DWPF	**Disney Wildern**	**38.92**	**346**	P	**P**	**13 49 00.1**	**+0.4**
	baz=164						
TIGA	**Tifton**	**42.65**	**344**	P	**P**	**13 49 29.2**	**+0.1**
	baz=162						
BRAL	**Brewton**	**43.44**	**340**	P	**P**	**13 49 35.3**	**+0.1**
	baz=157						
NHSC	**New Hope**	**43.47**	**349**	P	**P**	**13 49 36.0**	**+0.7**
	baz=167						
GOGA	**Godfrey**	**44.49**	**345**	P	**P**	**13 49 42.9**	**-0.3**
	baz=163						
GOGA	**Godfrey**	**44.49**	**345**	IAmb	IAmb	13 49 43.9	
	comp=Z,15nm,0.7s						
HODGE	**Hodges**	**44.99**	**347**	IAmb	IAmb	13 49 47.8	
	comp=Z,28nm,0.7s						
USHA	**Ushuaia**	**45.02**	**178**	P	**P**	**13 49 47.5**	**+0.6**
	comp=Z,6.6nm,0.8s,baz=337,slow=9.7,SNR=3.9						
W57A	**Gilead**	**45.43**	**350**	IAmb	IAmb	13 49 50.9	
	comp=Z,43nm,0.7s						
PAULI	**Pauline**	**45.46**	**348**	IAmb	IAmb	13 49 51.5	
	comp=Z,25nm,0.5s						
VBMS	**Vicksburg**	**45.64**	**337**	P	**P**	**13 49 51.5**	**-0.5**
	baz=153						
KMSC	**Kings Mountain**	**45.67**	**348**	P	**P**	**13 49 52.4**	**+0.2**
	baz=166,SNR=7.2						
KMSC	**Kings Mountain**	**45.67**	**348**	IAmb	IAmb	13 49 52.7	
	comp=Z,25nm,0.7s						
BG3	**Lake Jocassee**	**45.87**	**347**	P	**P**	**13 49 53.3**	**-0.4**
BG3				IAmb	IAmb	13 49 54.6	
	comp=Z,27nm,1.0s						
FPAL	**Fort Paine**	**46.13**	**343**	IAmb	IAmb	13 49 56.2	
	comp=Z,19nm,0.6s						
X48A	**Hartselle**	**46.47**	**342**	IAmb	IAmb	13 49 58.2	
	comp=Z,49nm,0.9s						
V53A	**Saluda**	**46.49**	**347**	IAmb	IAmb	13 49 58.7	
	comp=Z,17nm,0.7s						
833A	**Chaparral WMA,**	**46.66**	**325**	P	**P**	**13 50 00.5**	**+0.7**
	baz=140,SNR=20						
W50A	**Signal Mountai**	**46.66**	**344**	IAmb	IAmb	13 50 00.5	
	comp=Z,33nm,1.0s						
CPCT	**Cooper Cave**	**46.69**	**345**	IAmb	IAmb	13 50 00.2	
	comp=Z,18nm,0.7s						
TKL	**Tuckaleechee C**	**46.70**	**346**	P	**P**	**13 49 59.3**	**-0.7**
	comp=Z,16nm,0.6s,baz=173,slow=9.9,SNR=20						
TKL	**Tuckaleechee C**	**46.70**	**346**	IAmb	IAmb	13 49 59.8	
	comp=Z,18nm,0.8s						
V52A	**Sevierville**	**46.84**	**346**	IAmb	IAmb	13 50 00.9	
	comp=Z,31nm,0.8s						
T59A	**Double "B" Far**	**46.86**	**353**	IAmb	IAmb	13 50 01.5	
	comp=Z,34nm,0.7s						
NATX	**Nacogdoches**	**47.00**	**332**	P	**P**	**13 50 03.1**	**+0.9**
	baz=148,SNR=7.9						
U54A	**Nelsons Funny**	**47.10**	**348**	IAmb	IAmb	13 50 03.8	
	comp=Z,62nm,1.1s						
PLAL	**Pickwick Lake**	**47.28**	**341**	IAmb	IAmb	13 50 03.8	
	comp=Z,33nm,0.8s						
Z41A	**Richland Creek**	**47.47**	**335**	P	**P**	**13 50 05.6**	**-0.1**
	baz=151,SNR=9.3						
TZTN	**Tazewell**	**47.50**	**346**	P	**P**	**13 50 05.4**	**-0.5**
	baz=164,SNR=5.8						
TZTN	**Tazewell**	**47.50**	**346**	IAmb	IAmb	13 50 06.2	
	comp=Z,21nm,0.7s						
BLA	**Blacksburg**	**47.51**	**350**	P	**P**	**13 50 06.4**	**+0.4**
	baz=168,SNR=7.3						
BLA	**Blacksburg**	**47.51**	**350**	IAmb	IAmb	13 50 08.1	
	comp=Z,36nm,0.8s						
V48A	**Smith Brothers**	**47.59**	**343**	IAmb	IAmb	13 50 06.6	
	comp=Z,39nm,0.8s						
435B	**Jarrell**	**47.61**	**329**	P	**P**	**13 50 08.0**	**+1.1**
	baz=144						
CLTN	**Cedars of Leba**	**47.78**	**343**	IAmb	IAmb	13 50 08.0	
	comp=Z,28nm,0.8s						
S57A	**Dark Hollow, R**	**47.82**	**352**	IAmb	IAmb	13 50 09.2	
	comp=Z,34nm,0.7s						
U49A	**Red Boiling Sp**	**48.02**	**344**	IAmb	IAmb	13 50 09.5	
	comp=Z,23nm,0.6s						
CBN	**Corbin Frederi**	**48.05**	**353**	P	**P**	**13 50 09.9**	**-0.1**
	baz=172						
WVT	**Waverly**	**48.26**	**342**	P	**P**	**13 50 10.0**	**-1.6**
	baz=158						
WVT	**Waverly**	**48.26**	**342**	P	**P**	**13 50 09.9**	**-1.6**
WVT				IAmb	IAmb	13 50 10.8	
	comp=Z,27nm,0.7s						
T50A	**Nancy**	**48.26**	**345**	IAmb	IAmb	13 50 11.4	
	comp=Z,22nm,0.6s						
R55A	**Marlinton**	**48.51**	**351**	IAmb	IAmb	13 50 14.4	
	comp=Z,21nm,0.7s						
WHTX	**Lake Whitney,**	**48.52**	**330**	P	**P**	**13 50 13.7**	**+0.2**
	baz=145,SNR=11						
JCT	**Junction City**	**48.54**	**327**	P	**P**	**13 50 13.9**	**+0.1**
	baz=141,SNR=12						
JCT	**Junction City**	**48.54**	**327**	IAmb	IAmb	13 50 14.7	
	comp=Z,18nm,0.6s						
X40A	**Basin Creek Fa**	**48.55**	**336**	P	**P**	**13 50 13.5**	**-0.2**
	baz=151,SNR=9.0						
X40A	**Basin Creek Fa**	**48.55**	**336**	IAmb	IAmb	13 50 14.9	
	comp=Z,15nm,0.7s						
R53A	**Hurricane**	**48.88**	**349**	IAmb	IAmb	13 50 16.7	
	comp=Z,47nm,0.8s						
MIAR	**Mount Ida**	**48.90**	**335**	P	**P**	**13 50 15.6**	**-0.7**
	baz=150,SNR=23						
W41B	**Gary Mavity, V**	**48.92**	**337**	P	**P**	**13 50 15.7**	**-0.8**
	baz=152,SNR=17						
WHAR	**Wooly Hollow**	**49.04**	**337**	IAmb	IAmb	13 50 17.4	
	comp=Z,48nm,1.0s						
LCAR	**Lake Charles**	**49.31**	**339**	IAmb	IAmb	13 50 19.1	
	comp=Z,47nm,1.2s						
R50A	**Paris**	**49.34**	**346**	IAmb	IAmb	13 50 19.1	
	comp=Z,18nm,0.6s						
P60A	**Greenville**	**49.48**	**355**	P	**P**	**13 50 19.9**	**-0.6**
	baz=174						
P60A	**Greenville**	**49.48**	**355**	IAmb	IAmb	13 50 20.6	
	comp=Z,18nm,0.7s						
Q52A	**Bidwell**	**49.55**	**349**	IAmb	IAmb	13 50 21.5	
	comp=Z,32nm,0.8s						
W39A	**Magazine**	**49.55**	**336**	P	**P**	**13 50 20.9**	**-0.1**
	baz=150,SNR=23						
MVL	**Millersville**	**49.73**	**355**	IAmb	IAmb	13 50 22.9	
	comp=Z,22nm,0.8s						
WCI	**Wyandotte Cave**	**49.78**	**344**	P	**P**	**13 50 21.4**	**-1.3**
	baz=160						
WCI	**Wyandotte Cave**	**49.78**	**344**	P	**P**	**13 50 21.5**	**-1.2**
MCWV	**Mont Chateau**	**49.81**	**351**	P	**P**	**13 50 23.2**	**+0.3**
	baz=169,SNR=8.3						
MCWV	**Mont Chateau**	**49.81**	**351**	IAmb	IAmb	13 50 24.0	
	comp=Z,39nm,0.8s						
TXAR	**Lajitas Array**	**49.91**	**322**	P	**P**	**13 50 23.9**	**0.0**
	comp=Z,14nm,0.9s,baz=153,slow=7.7,SNR=91						
TXAR				PcP	**PcP**	**13 51 33.4**	**+0.5**
	comp=Z,3.5nm,0.6s,baz=139,slow=6.0,SNR=8.4						
TXAR				ScP	**ScP**	**13 54 32.9**	**+1.5**
	comp=Z,1.4nm,0.9s,baz=134,slow=7.1,SNR=4.9						
TXAR				S	**S**	**13 56 50.1**	**-0.4**
	comp=Z,0.4nm,0.9s,baz=193,slow=20,SNR=2.5						
TX31	**Lajitas Ar. Si**	**49.91**	**322**	IAmb	IAmb	13 50 25.0	
	comp=Z,48nm,0.9s						
LOOK	**Love County**	**50.02**	**332**		**P**	**13 50 23.4**	**-1.1**
LOOK				IAmb	IAmb	13 50 30.4	
	comp=Z,29nm,0.9s						
ABTX	**Abilene, Hawle**	**50.13**	**328**	P	**P**	**13 50 25.7**	**+0.3**
	baz=142,SNR=18						
P52A	**Corning**	**50.17**	**349**	P	**P**	**13 50 24.9**	**-0.6**
	baz=166,SNR=15						
U40A	**Yellville**	**50.20**	**337**	P	**P**	**13 50 24.9**	**-0.8**
	baz=152,SNR=46						
O56A	**Blue Knob Stat**	**50.23**	**353**	P	**P**	**13 50 26.2**	**+0.2**
	baz=171,SNR=5.4						
O56A	**Blue Knob Stat**	**50.23**	**353**	IAmb	IAmb	13 50 27.1	
	comp=Z,23nm,0.7s						

BRNJ	Basking Ridge	50.28	357	IAmb	IAmb	13 50 26.7	
	comp=Z,26nm,0.6s						
SLBS	Sierra La Lagu	50.40	312	P	P	13 50 27.9	+0.3
O54A	Avella	50.41	351	IAmb	IAmb	13 50 29.2	
	comp=Z,22nm,0.6s						
SSPA	Standing Stone	50.52	353	P	P	13 50 27.8	-0.2
	baz=172						
SSPA	Standing Stone	50.52	353	P	P	13 50 27.7	-0.2
SSPA				IAmb	IAmb	13 50 28.3	
	comp=Z,12nm,0.5s						
HHAR	Hobbs	50.56	336	IAmb	IAmb	13 50 28.4	
	comp=Z,50nm,1.0s						
N59A	State Game Lan	50.59	355	P	P	13 50 28.0	-0.6
	baz=174						
N58A	Sunbury	50.60	355	IAmb	IAmb	13 50 29.2	
	comp=Z,33nm,0.9s						
O53A	New Philadelph	50.61	350	P	P	13 50 28.4	-0.3
	baz=167,SNR=11						
O53A	New Philadelph	50.61	350	IAmb	IAmb	13 50 29.3	
	comp=Z,55nm,0.8s						
P49A	Miami Univ. Ec	50.62	346	P	P	13 50 27.3	-1.5
	baz=163,SNR=9.0						
P49A	Miami Univ. Ec	50.62	346	IAmb	IAmb	13 50 27.8	
	comp=Z,33nm,0.5s						
P48A	Milroy	50.72	346	IAmb	IAmb	13 50 28.6	
	comp=Z,21nm,0.8s						
TUL1	Leonard	51.00	334	P	P	13 50 31.4	-0.2
	baz=148,SNR=21						
N54A	Moraine State	51.11	351	P	P	13 50 32.5	+0.2
	baz=169,SNR=7.4						
N54A	Moraine State	51.11	351	IAmb	IAmb	13 50 33.4	
	comp=Z,28nm,0.8s						
CCM	Cathedral Cave	51.12	340	P	P	13 50 31.4	-1.0
	baz=154						
CCM	Cathedral Cave	51.12	340	P	P	13 50 31.5	-1.0
CCM				IAmb	IAmb	13 50 32.4	
	comp=Z,46nm,0.7s						
M57A	Sunshine Farm,	51.13	354	IAmb	IAmb	13 50 33.0	
	comp=Z,24nm,0.6s						
P46A	Rosedale	51.32	344	IAmb	IAmb	13 50 32.6	
	comp=Z,35nm,0.5s						
WMOK	Wichita Mounta	51.39	331	P	P	13 50 34.0	-0.5
	baz=144,SNR=24						
OK025	Westminster Rd	51.41	333	IAmb	IAmb	13 50 35.6	
	comp=Z,68nm,1.0s						
M55A	Ridgway	51.44	353	IAmb	IAmb	13 50 35.4	
	comp=Z,33nm,0.8s						
N51A	Ashland	51.46	349	IAmb	IAmb	13 50 34.8	
	comp=Z,42nm,0.7s						
M54A	Oil Creek Stat	51.60	352	P	P	13 50 35.6	-0.2
	baz=169,SNR=6.5						
M54A	Oil Creek Stat	51.60	352	IAmb	IAmb	13 50 36.5	
	comp=Z,32nm,0.8s						
M53A	WI Miller and	51.68	351	P	P	13 50 36.2	-0.2
	baz=168,SNR=9.8						
BINY	Binghamton	51.88	355	P	P	13 50 37.7	-0.1
	baz=174,SNR=14						
L56A	Greenwood	51.96	354	IAmb	IAmb	13 50 39.0	
	comp=Z,28nm,0.8s						
L61B	Northampton	51.96	359	P	P	13 50 37.6	-0.8
	baz=178						
HRV	Adam Dziewonsk	52.00	360	P	P	13 50 38.4	-0.3
	baz=180						
SFIN	Lafayette	52.01	345	P	P	13 50 36.8	-1.9
	baz=160,SNR=9.4						
T35A	Sooner Cattle	52.16	334	IAmb	IAmb	13 50 40.5	
	comp=Z,49nm,0.6s						
O44A	Mansfield	52.17	343	IAmb	IAmb	13 50 38.8	
	comp=Z,48nm,0.7s						
ERPA	Erie	52.24	352	P	P	13 50 40.5	+0.2
	baz=169,SNR=5.1						
TRY	Troy	52.28	358	IAmb	IAmb	13 50 41.4	
	comp=Z,25nm,0.8s						
WVNY	West Valley, N	52.35	353	IAmb	IAmb	13 50 41.5	
	comp=Z,26nm,0.6s						
K57A	Scipio Center	52.45	355	IAmb	IAmb	13 50 42.1	
	comp=Z,37nm,0.6s						
MMNY	Mt. Morris Dam	52.59	354	IAmb	IAmb	13 50 43.0	
	comp=Z,36nm,0.4s						
MNTX	Cornudas Mount	52.63	323	P	P	13 50 43.0	-0.4
	baz=136,SNR=21						
HDIL	Hopedale	52.78	343	P	P	13 50 42.1	-2.1
	baz=158						
KAN17	Caldwell West	52.82	333		P	13 50 44.5	0.0
KAN17				IAmb	IAmb	13 50 45.5	
	comp=Z,77nm,1.0s						
MSTX	Muleshoe	52.83	327	P	P	13 50 44.6	-0.2
	baz=140,SNR=25						
MSTX	Muleshoe	52.83	327	IAmb	IAmb	13 50 45.4	
	comp=Z,45nm,0.8s						
KAN14	Manchester OK	52.83	333	IAmb	IAmb	13 50 45.4	
	comp=Z,44nm,0.8s						
AMTX	Amarillo	52.95	328	P	P	13 50 45.5	-0.2
	baz=141						
AMTX	Amarillo	52.95	328	IAmb	IAmb	13 50 46.2	
	comp=Z,46nm,0.6s						
AAM	Ann Arbor	53.05	348	P	P	13 50 45.0	-1.1
	baz=165						
J59A	Piesco	53.05	357	IAmb	IAmb	13 50 46.8	
	comp=Z,38nm,1.1s						
LBNH	Lisbon	53.74	359	P	P	13 50 50.8	-0.1
	baz=179						
L44A	Lake County Fo	53.91	345	P	P	13 50 50.2	-1.9
	baz=160						
KSU1	Kansas State U	54.05	336	P	P	13 50 52.5	-0.8
	baz=149,SNR=14						
KSU1	Kansas State U	54.05	336	IAmb	IAmb	13 50 53.3	
	comp=Z,60nm,0.8s						
LONY	Lake Ozonia	54.20	357	P	P	13 50 53.8	-0.4
	baz=176						
L42A	Oliver, Polo	54.23	343	IAmb	IAmb	13 50 53.5	
	comp=Z,46nm,0.8s						
K43A	Burlington	54.51	345	IAmb	IAmb	13 50 55.6	
	comp=Z,40nm,0.5s						
121A	Cookes Peak, D	54.66	322	P	P	13 50 58.8	+0.9
	baz=134,SNR=17						
121A	Cookes Peak, D	54.66	322	IAmb	IAmb	13 50 59.6	
	comp=Z,50nm,1.4s						
G62A	West of Eustis	54.72	1	P	P	13 50 58.0	+0.2
G62A				IAmb	IAmb	13 50 59.1	
	comp=Z,50nm,0.8s						
SADO	Sadowa	54.74	353	P	P	13 50 57.0	-0.8
	comp=Z,9.4nm,0.5s,baz=221,slow=2.9,SNR=7.7						
L40A	Anamosa	54.74	342	IAmb	IAmb	13 50 58.0	
	comp=Z,60nm,0.8s						
PKME	Peaks-Kenny Pk	54.79	2	P	P	13 50 58.4	+0.2
	baz=182,SNR=6.5						
G65A	Princeton	54.79	3	IAmb	IAmb	13 50 59.3	
	comp=Z,54nm,0.7s						
319A	Douglas	54.81	320	IAmb	IAmb	13 51 00.3	
	comp=Z,31nm,0.7s						
CBKS	Cedar Bluff	55.15	333	P	P	13 51 00.9	-0.1
	baz=145,SNR=9.5						
CBKS	Cedar Bluff	55.15	333	IAmb	IAmb	13 51 02.0	
	comp=Z,68nm,0.9s						
PMSA	Palmer Station	55.17	176	*e*P	P	13 51 01.3	+0.8
N35A	Tabor	55.19	338	IAmb	IAmb	13 51 00.8	
	comp=Z,62nm,1.1s						
JFWS	Jewell Farm	55.23	343	P	P	13 51 00.3	-1.1
	baz=157,SNR=33						
SCIA	State Center	55.24	340	P	P	13 51 00.5	-1.0
	baz=153,SNR=34						
F64A	Sherman	55.42	2	P	P	13 51 02.8	+0.2
ANMO	Albuquerque	55.59	325	P	P	13 51 04.3	+0.1
	comp=Z,11nm,0.8s,baz=155,slow=8.6,SNR=53						
ANMO				PcP	PcP	13 51 55.1	+0.4
	comp=Z,2.4nm,0.7s,baz=162,slow=9.9,SNR=3.6						
ANMO				S	S	13 58 05.7	+0.3
	comp=Z,0.2nm,0.5s,baz=273,slow=15,SNR=1.3						
ANMO	Albuquerque	55.59	325	P	P	13 51 04.5	+0.2
	baz=137						
ANMO	Albuquerque	55.59	325	P	P	13 51 03.9	-0.4
K38A	Parkersburg	55.76	341	IAmb	IAmb	13 51 04.0	
	comp=Z,43nm,0.6s						
I42A	Draeger Farm,	55.77	345	IAmb	IAmb	13 51 04.9	
	comp=Z,52nm,0.8s						
H43A	Windswept, Lux	56.02	346	IAmb	IAmb	13 51 06.2	
	comp=Z,54nm,0.6s						
G45A	Suttons Bay	56.08	348	IAmb	IAmb	13 51 06.5	
	comp=Z,46nm,0.6s						
T25A	Trinidad	56.10	328	P	P	13 51 08.4	+0.7
	baz=140,SNR=22						
T25A	Trinidad	56.10	328	IAmb	IAmb	13 51 09.3	
	comp=Z,37nm,0.8s						
E62A	Clayton Lake	56.13	1	P	P	13 51 07.9	+0.4
I40A	Norwalk	56.23	343	IAmb	IAmb	13 51 07.9	
	comp=Z,58nm,0.6s						
TUC	Tucson	56.38	320	P	P	13 51 10.0	+0.4
	baz=131						
TUC	Tucson	56.38	320	P	P	13 51 09.2	-0.5
D62A	Allapoint, All	56.61	2	IAmb	IAmb	13 51 11.8	
	comp=Z,48nm,0.7s						
BGNE	Belgrade	56.63	336	P	P	13 51 10.8	-0.3
	baz=148,SNR=13						
BATG	Bathurst New B	56.96	4	P	P	13 51 12.8	-0.3
E46A	Sault Ste Mari	57.09	349	IAmb	IAmb	13 51 13.5	
	comp=Z,40nm,0.8s						
SDCO	Great Sand Dun	57.13	328	P	P	13 51 15.6	+0.8
	baz=139,SNR=68						
SDCO	Great Sand Dun	57.13	328	IAmb	IAmb	13 51 16.4	
	comp=Z,46nm,0.7s						
I37A	Lemond, Waseca	57.19	341	IAmb	IAmb	13 51 14.5	
	comp=Z,45nm,0.9s						
214A	Organ Pipe Nat	57.48	318	P	P	13 51 18.0	+1.0
	baz=129,SNR=11						
214A	Organ Pipe Nat	57.48	318	IAmb	IAmb	13 51 18.8	
	comp=Z,72nm,1.5s						
W18A	Petrified Fore	57.62	323	P	P	13 51 18.7	+0.6
	baz=134,SNR=6.5						
E43A	Lone Tree Farm	57.64	347	IAmb	IAmb	13 51 17.3	
	comp=Z,33nm,0.6s						
S22A	4UR Ranch, Cre	57.83	327	P	P	13 51 20.2	+0.6
	baz=138,SNR=22						
Q24A	Divide	57.86	329	P	P	13 51 20.5	+0.6
	baz=140,SNR=19						
ECSD	EROS Data Cent	58.04	338	P	P	13 51 19.7	-0.8
	baz=150,SNR=15						
SPMN	Marine on St.	58.09	342	P	P	13 51 19.8	-1.1
	baz=155,SNR=24						
SPMN	Marine on St.	58.09	342	IAmb	IAmb	13 51 20.5	
	comp=Z,53nm,0.5s						
MVCO	Mesa Verde	58.36	325	P	P	13 51 23.7	+0.5
	baz=136,SNR=31						
MVCO	Mesa Verde	58.36	325	IAmb	IAmb	13 51 24.6	
	comp=Z,35nm,0.8s						
113A	Mohawk Valley,	58.61	318	P	P	13 51 25.1	+0.6
D41A	Chassel	58.65	346	IAmb	IAmb	13 51 24.5	
	comp=Z,56nm,0.8s						
ISCO	Idaho Springs	58.73	329	P	P	13 51 26.3	+0.7
	baz=140,SNR=26						
WUAZ	Wupatki	58.87	322	P	P	13 51 27.5	+1.0
	baz=132,SNR=26						
WUAZ	Wupatki	58.87	322	IAmb	IAmb	13 51 28.4	
	comp=Z,36nm,0.8s						
F36A	Milaca	58.89	342	IAmb	IAmb	13 51 26.0	
	comp=Z,35nm,0.7s						
E38A	The Farm, Brul	58.99	344	IAmb	IAmb	13 51 26.6	
	comp=Z,42nm,0.6s						
GLA	Glamis	59.49	318	P	P	13 51 31.2	+0.7
	baz=128						
SUSD	Miller	59.52	337	P	P	13 51 30.0	-0.4
	baz=148						
N23A	Red Feather La	59.73	330	P	P	13 51 32.6	+0.5
	baz=140,SNR=6.7						
F33A	5 Mile Ranch,	59.76	340	IAmb	IAmb	13 51 31.9	
	comp=Z,44nm,0.6s						
PDMCI	Parker Dam,Lak	59.82	319	P	P	13 51 33.3	+0.7
	baz=129						
DRLN	Deer Lake	59.97	10	P	P	13 51 32.8	-0.4
DRLN				IAmb	IAmb	13 51 33.5	
	comp=Z,45nm,0.7s						
EYMN	Ely	60.20	344	P	P	13 51 33.8	-1.0
	baz=157,SNR=18						
EYMN	Ely	60.20	344	IAmb	IAmb	13 51 34.6	
	comp=Z,49nm,0.6s						
BC3	Big Chuckawall	60.27	318	P	P	13 51 36.7	+1.0
	baz=128,SNR=12						
O20A	White River Ci	60.33	328	P	P	13 51 36.7	+0.6
	baz=137,SNR=23						
IRM	Iron Mountain	60.38	319	P	P	13 51 37.1	+0.7
	baz=128,SNR=11						
MONP2	Monument Peak	60.46	317	P	P	13 51 37.9	+0.8
	baz=127						
KNB	Kanab	60.74	322	IAmb	IAmb	13 51 41.3	
	comp=Z,89nm,1.0s						
SRU	San Rafael Swe	60.83	326	IAmb	IAmb	13 51 40.6	
	comp=Z,36nm,0.6s						
BELC	Belle Mtn. Jos	60.84	318	P	P	13 51 40.5	+0.9
	baz=128,SNR=6.9						
PFO	Pinyon Flats O	60.91	317	P	P	13 51 40.9	+1.0
	comp=Z,11nm,0.8s,baz=108,slow=2.8,SNR=6.6						
PFO	Pinyon Flats O	60.91	317	P	P	13 51 41.0	+1.0
	baz=127						
PFO	Pinyon Flats O	60.91	317	P	P	13 51 38.3	-1.6
P18A	Preston Nutter	61.04	326	IAmb	IAmb	13 51 42.5	
	comp=Z,28nm,0.6s						
GMRC	Granite Mounta	61.10	319	P	P	13 51 42.3	+1.2
	baz=128,SNR=26						
B35A	Bob, Littlefor	61.20	343	IAmb	IAmb	13 51 41.1	
	comp=Z,63nm,0.7s						
P17A	Butcher Ranch,	61.20	326	IAmb	IAmb	13 51 43.3	
	comp=Z,55nm,1.1s						
RSSD	Black Hills	61.34	334	P	P	13 51 43.3	+0.7
	baz=143						
RSSD	Black Hills	61.34	334	P	P	13 51 43.2	+0.6
RSSD				IAmb	IAmb	13 51 44.1	
	comp=Z,31nm,0.5s						
K22A	Casper	61.34	331	P	P	13 51 43.2	+0.6
	baz=140,SNR=9.3						
TMUT	Trail Mountain	61.34	325	IAmb	IAmb	13 51 44.2	
	comp=Z,21nm,0.6s						
RDMU	Red Mountain	61.34	327	IAmb	IAmb	13 51 44.0	
	comp=Z,48nm,0.8s						
MURC	Murrieta	61.40	317	P	P	13 51 44.0	+1.0
	baz=126,SNR=6.5						
HEC	Hector,Ludlow	61.56	318	P	P	13 51 45.6	+1.4
	baz=128,SNR=11						
TUQ	Turquoise Moun	61.67	319	P	P	13 51 45.9	+1.1
	baz=128,SNR=15						
AGMN	Agassiz Nation	61.78	342	P	P	13 51 44.5	-0.6
	baz=152,SNR=35						
RRX	Edison Barstow	62.02	318	P	P	13 51 48.4	+1.4
	baz=127						
BFSC	Mount Baldy Ra	62.09	317	P	P	13 51 48.3	+0.7
	baz=126,SNR=5.8						
CIS	Catalina Islan	62.12	316	P	P	13 51 49.3	+1.6
	baz=125						
GSC	Goldstone, Bar	62.16	319	P	P	13 51 49.1	+1.2
	baz=127,SNR=17						
SHOC	Shoshone, Teco	62.18	319	P	P	13 51 49.2	+1.2
	baz=128,SNR=9.3						
DECC	Green Verdugo	62.55	317	P	P	13 51 51.8	+1.3
	baz=126						
GWY	Greenwater Val	62.60	319	P	P	13 51 51.6	+0.7
GWY				IAmb	IAmb	13 51 52.6	
	comp=Z,28nm,0.8s						
MDND	Maddock	62.64	339	P	P	13 51 51.3	+0.6
	baz=148,SNR=28						
EDW2	Edwards Air Fo	62.69	318	P	P	13 51 52.0	+0.7
	baz=126,SNR=18						
LRMC	Laurel Mtn Rad	62.84	318	P	P	13 51 53.4	+1.0
	baz=127,SNR=20						
DUG	Dugway, Tooele	62.86	325	P	P	13 51 53.5	+1.0
	baz=133,SNR=37						
DUG	Dugway, Tooele	62.86	325	IAmb	IAmb	13 51 54.4	
	comp=Z,29nm,0.8s						
FURC	Furnace Creek,	62.90	320	P	P	13 51 54.0	+1.5
	baz=128,SNR=44						
BW06	Boulder Array	62.92	329	P	P	13 51 52.8	-0.1
	baz=137,SNR=23						
PDAR	Pinedale Array	62.92	329	P	P	13 51 52.7	-0.2
	comp=Z,9.1nm,0.5s,baz=122,slow=8.8,SNR=172						
PDAR				PcP	PcP	13 52 23.8	-0.4
	comp=Z,4.4nm,0.7s,baz=126,slow=7.4,SNR=7.7						
PDAR				pP	pP	13 53 51.7	0.0
	comp=Z,1.0nm,0.7s,baz=123,slow=6.5,SNR=3.3						
OSI	Osito Audit: C	63.02	317	P	P	13 51 54.4	+0.9
	baz=126						
MPMC	Manual Prospec	63.05	319	P	P	13 51 54.6	+0.8
	baz=127,SNR=19						
R11A	Troy Canyon, C	63.27	322	P	P	13 51 56.5	+1.3
	baz=130,SNR=26						
ARVC	Arvin	63.39	317	P	P	13 51 56.7	+1.0
	baz=126						
ISA	Isabella, Lake	63.46	318	P	P	13 51 57.6	+1.3
	baz=126,SNR=24						
ISA	Isabella, Lake	63.46	318	IAmb	IAmb	13 51 58.5	
	comp=Z,31nm,0.8s						
ULM	Lac du Bonnet	63.52	343	P	P	13 51 55.3	-1.0
	comp=Z,64nm,0.5s,baz=153,slow=5.3,SNR=86						
ULM	Lac du Bonnet	63.52	343	P	P	13 51 55.2	-1.0
ULM				IAmb	IAmb	13 51 56.0	
	comp=Z,63nm,0.8s						
CWC	Cottonwood Cre	63.66	319	P	P	13 51 58.9	+1.2
	baz=127						
LCH	Last Change Ra	63.86	320	P	P	13 51 60.0	+1.1
PKM	Mcpherson Peak	63.91	317	P	P	13 52 00.5	+1.2
	baz=125,SNR=10						
VES	Vestal, Richgr	63.97	318	P	P	13 52 00.6	+1.2
	baz=126,SNR=22						
REDW	Red Top Meadow	64.01	329	IAmb	IAmb	13 52 01.1	
	comp=Z,38nm,1.4s						
TIN	Tinemaha, Big	64.13	319	P	P	13 52 01.8	+1.3
	baz=127						
SMMC	Simmler	64.28	317	P	P	13 52 02.8	+1.4
	baz=125,SNR=12						
LAO	LASA Array	64.31	334	P	P	13 52 01.8	+0.4
	baz=141,SNR=20						
LAO	LASA Array	64.31	334	IAmb	IAmb	13 52 02.7	
	comp=Z,26nm,0.7s						
SCHQ	Schefferville	64.44	3	P	P	13 52 01.0	-1.0
	comp=Z,8.1nm,0.6s,baz=191,slow=5.3,SNR=9.7						
SCHQ				pP	pP	13 54 01.8	+0.1
	comp=Z,4.1nm,0.9s,baz=294,slow=14,SNR=2.0						
SCHQ	Schefferville	64.44	3	P	P	13 52 01.2	-0.8
FLWY	Flagg Ranch	64.45	329	IAmb	IAmb	13 52 04.5	
	comp=Z,43nm,1.1s						
RLMT	Red Lodge	64.50	331	P	P	13 52 03.5	+0.6
	baz=138,SNR=21						
ELK	Elko	64.61	324	P	P	13 52 03.9	+0.2
	comp=Z,6.5nm,0.8s,baz=122,slow=3.4,SNR=33						
PAGB	Antelope Grade	64.68	317	IAmb	IAmb	13 52 06.0	
	comp=Z,43nm,0.7s						
MLAC	Mammoth, Mammo	64.86	320	P	P	13 52 06.6	+1.3
	baz=127						
DGMT	Dagmar	64.88	336	P	P	13 52 05.8	+0.9
	baz=144,SNR=21						
NVAR	Mina Array Bea	65.00	321	P	P	13 52 07.0	+0.9
	comp=Z,7.1nm,0.6s,baz=144,slow=6.3,SNR=62						
NVAR				PcP	PcP	13 52 33.0	+0.1
	comp=Z,5.2nm,0.6s,baz=139,slow=4.7,SNR=9.7						
YMR	Madison River	65.00	330	IAmb	IAmb	13 52 08.3	
	comp=Z,46nm,0.8s						
MDPB	Devils Postpil	65.02	319	IAmb	IAmb	13 52 08.2	
	comp=Z,39nm,0.7s						
YHH	Holmes Hill	65.03	330	IAmb	IAmb	13 52 08.5	
	comp=Z,20nm,0.7s						
RYN	Ryan	65.26	321	P	P	13 52 08.2	+0.6
BMN	Battle Mountai	65.57	323	IAmb	IAmb	13 52 10.9	
	comp=Z,16nm,0.5s						
YERR	Yerington	65.92	321	IAmb	IAmb	13 52 14.0	
	comp=Z,43nm,0.7s						
BOZ	Bozeman (W)	65.99	330	P	P	13 52 12.8	+0.7
	baz=136,SNR=32						
BOZ	Bozeman (W)	65.99	330	IAmb	IAmb	13 52 13.6	
	comp=Z,42nm,1.4s						
HLID	Hailey	66.01	327	P	P	13 52 13.3	+1.1
	baz=132,SNR=23						
CMB	Columbia Colle	66.09	319	P	P	13 52 13.4	+0.7
PNTR	Pine Nut	66.20	320	IAmb	IAmb	13 52 16.1	
	comp=Z,49nm,0.8s						
VCNR	Virginia City	66.36	321	IAmb	IAmb	13 52 16.9	
	comp=Z,38nm,0.8s						
PAHR	Pah Rah Range	66.44	321	IAmb	IAmb	13 52 17.3	
	comp=Z,43nm,0.9s						
EGMT	Eagleton	66.88	333	P	P	13 52 18.0	+0.6
	baz=138,SNR=38						
ORV	Oroville	67.67	320	IAmb	IAmb	13 52 24.7	
	comp=Z,42nm,0.9s						
PLID	Pearl Lake	67.88	327	IAmb	IAmb	13 52 25.0	
	comp=Z,21nm,0.8s						
MSO	Missoula	68.00	330	P	P	13 52 25.4	+1.1
	baz=134,SNR=25						
MSO	Missoula	68.00	330	IAmb	IAmb	13 52 26.4	
	comp=Z,31nm,1.1s						
DBIC	Dimbokro	68.05	79	P	P	13 52 25.6	+0.5
	comp=Z,5.1nm,0.4s,baz=287,slow=7.2,SNR=12						
DBIC				pP	pP	13 54 26.7	+0.1
	comp=Z,4.5nm,0.7s,baz=287,slow=3.9,SNR=3.0						
DBIC	Dimbokro	68.05	79	P	P	13 52 25.4	+0.3
O03E	Paynes Creek	68.29	320	P	P	13 52 26.4	+0.2
	baz=125,SNR=6.2						
JTMT	Jette	68.80	330	IAmb	IAmb	13 52 31.2	
	comp=Z,39nm,1.4s						
O02D	Mt. Diablo Mer	68.84	320	P	P	13 52 29.6	+0.1
	baz=124						
WDC	Whiskeytown Da	68.91	320	P	P	13 52 28.8	-1.0
WDC				IAmb	IAmb	13 52 29.7	
	comp=Z,20nm,0.7s						
F10A	Beach Ranch, E	69.11	327	IAmb	IAmb	13 52 33.2	
	comp=Z,24nm,0.8s						
K05A	Summer Lake	69.15	323	IAmb	IAmb	13 52 34.1	
	comp=Z,85nm,1.5s						
I07A	Izee	69.16	325	IAmb	IAmb	13 52 33.2	
	comp=Z,23nm,0.6s						
M04C	Macdoel	69.17	322	P	P	13 52 32.4	+1.0
	baz=126,SNR=17						
N02D	Trinity Center	69.24	321	P	P	13 52 31.5	-0.3
	baz=125,SNR=7.2						
FFC	Flin Flon	69.26	341	P	P	13 52 31.2	-0.3
KMRM	Mail Ridge	69.45	320	IAmb	IAmb	13 52 35.5	
	comp=Z,45nm,0.8s						
WALA	Waterton Lakes	69.54	332	IAmb	IAmb	13 52 34.8	
	comp=Z,28nm,0.8s						
M02C	Callahan	69.57	321	P	P	13 52 33.9	+0.1
	baz=125,SNR=6.7						
G08A	Pilot Rock	69.61	326	P	P	13 52 34.9	+0.9
G08A				IAmb	IAmb	13 52 35.9	
	comp=Z,18nm,0.8s						
YBH	Yreka Blue Hor	69.67	321	P	P	13 52 34.0	-0.4
	comp=Z,11nm,0.5s,baz=141,slow=2.9,SNR=51						
YBH	Yreka Blue Hor	69.67	321	P	P	13 52 34.0	-0.4
J05D	Fort Rock, OR	69.68	323	P	P	13 52 35.5	+1.1
	baz=126,SNR=20						
L04D	Klamath Falls	69.70	322	P	P	13 52 35.1	+0.5
	baz=125,SNR=5.3						
PINE	Pine Mountain	69.81	324	IAmb	IAmb	13 52 37.8	
	comp=Z,46nm,0.8s						
E09A	Wood Farm, Sta	69.95	327	IAmb	IAmb	13 52 37.5	
	comp=Z,20nm,0.8s						
J04D	Umpqua Nationa	70.17	323	P	P	13 52 38.5	+1.1
	baz=126						
KRMB	Red Mountain	70.30	321	IAmb	IAmb	13 52 40.3	
	comp=Z,33nm,0.9s						
I05D	Terrebonne, OR	70.37	324	P	P	13 52 40.0	+1.7
	baz=127,SNR=28						
L02E	Cave Junction	70.46	321	P	P	13 52 39.9	+1.0
	baz=124						
NEW	Newport	70.56	329	P	P	13 52 39.6	+0.1
	comp=Z,3.5nm,0.5s,baz=137,slow=5.8,SNR=11						
NEW				pP	pP	13 54 42.8	+0.5
	comp=Z,2.4nm,0.6s,baz=136,slow=7.8,SNR=3.0						
NEW	Newport	70.56	329	P	P	13 52 39.5	+0.1
	baz=132,SNR=6.4						
I04A	Tendick Farm,	70.67	323	P	P	13 52 40.6	+0.4
	baz=126,SNR=10						
D08A	Wollman Farm,	70.70	328	IAmb	IAmb	13 52 42.5	
	comp=Z,29nm,0.8s						
FCC	Fort Churchill	70.76	348	P	P	13 52 40.1	-0.1
DBO	Dodson Butte	70.78	322	IAmb	IAmb	13 52 42.8	
	comp=Z,24nm,0.8s						
K02D	Willamette Mer	70.80	322	P	P	13 52 42.2	+1.2
	baz=124,SNR=7.9						
KOWA	Kowa	70.81	71	P	P	13 52 42.1	+0.6
C09A	Chrisman Ranch	70.84	328	IAmb	IAmb	13 52 43.0	
	comp=Z,20nm,0.7s						
G05D	Wamic, OR	70.90	325	P	P	13 52 43.4	+2.0
	baz=127,SNR=16						
I03D	Drain, OR	71.17	323	P	P	13 52 44.1	+1.1
	baz=125,SNR=6.2						
J01E	Myrtle Point	71.22	322	P	P	13 52 44.2	+0.9
	baz=124						
BUCK	Buck Mountain	71.25	323	IAmb	IAmb	13 52 45.2	
	comp=Z,48nm,0.9s						
H04D	Lebanon	71.29	324	P	P	13 52 44.2	+0.5
	baz=126						
F05D	White Salmon	71.36	325	P	P	13 52 45.5	+1.4
	baz=127						
COR	Corvallis	71.66	324	P	P	13 52 46.3	+0.6
I02E	Swisshome, OR	71.70	323	P	P	13 52 47.9	+1.8
	baz=124						
VNA3	Neumayer Olymp	71.86	163	P	P	13 52 46.8	+0.2
G03D	McMinnville, O	71.99	324	P	P	13 52 49.4	+1.7
	baz=125						
VNA1	Neumayer--Stat	72.05	162	P	P	13 52 48.1	+0.5
F04D	Rainier, OR	72.35	325	P	P	13 52 51.5	+1.7
	baz=126						
E04D	Cinebar	72.38	326	P	P	13 52 51.0	+1.1
	baz=126						
VNA2	Neumayer--Watz	72.42	162	P	P	13 52 50.6	+0.8
	baz=290,slow=6.4						
D05A	Enumclaw	72.44	326	IAmb	IAmb	13 52 52.0	
	comp=Z,54nm,0.8s						
D04E	Lakebay	72.86	326	P	P	13 52 54.5	+1.8

	baz=126,SNR=5.1						
E03A	Lebam	72.93	325	IAmb	IAmb	13 52 55.5	
	comp=Z,70nm,1.3s						
B05A	Bryant	73.14	327	P	P	13 52 54.6	+0.4
	baz=127,SNR=25						
D03D	Eldon	73.24	326	P	P	13 52 56.0	+1.2
	baz=126,SNR=8.7						
SNAA	Sanae	74.05	162	P	P	13 52 59.9	+0.7
SNAA	Sanae	74.05	162	P	P	13 52 59.7	+0.6
MORF	Marmelete	74.87	47	*e*P	P	13 53 06.6	+2.3
PNCL	Nicolau / Gran	75.30	46	*e*P	P	13 53 08.8	+2.2
OZB	Mount Ozzard	75.38	326	P	P	13 53 07.6	+0.8
OZB				IAmb	IAmb	13 53 09.3	
	comp=Z,36nm,0.8s						
PCVE	Castro Verde	75.45	47	*e*P	P	13 53 09.5	+2.0
	comp=Z,37nm,1.5s						
PBEJ	Beja	75.74	47	*e*P	P	13 53 11.1	+2.1
TORD	Torodi Ar. Bea	75.84	74	P	P	13 53 10.3	+0.2
	comp=Z,7.5nm,0.5s,baz=251,slow=4.2,SNR=76						
TORD				pP	pP	13 55 15.4	+0.1
	comp=Z,11nm,0.8s,baz=269,slow=5.6,SNR=17						
TORD				S	S	14 02 01.9	-2.8
	comp=Z,1.2nm,0.8s,baz=264,slow=12,SNR=6.1						
TORD	Torodi Ar. Bea	75.84	74	P	P	13 53 10.3	+0.2
CBB	Campbell River	75.91	327	IAmb	IAmb	13 53 11.9	
	comp=Z,31nm,0.7s						
PMTG	Montargil	75.92	46	*e*P	P	13 53 11.1	+1.1
PVIS	Viseu	76.85	44	*e*P	P	13 53 16.5	+1.3
MTE	Manteigas	76.96	45	*e*P	P	13 53 16.3	+0.5
POLO	Lamas de Olo	77.20	44	*e*P	P	13 53 18.5	+1.4
MVO	Moncorvo	77.64	44	*e*P	P	13 53 20.5	+1.1
	comp=Z,37nm,1.7s						
SFJD	Kangerlussuaq	77.99	8	P	P	13 53 19.8	-0.8
	comp=Z,7.1nm,0.7s,baz=167,slow=0.5,SNR=5.8						
PBRG	Braganca	78.10	44	*e*P	P	13 53 22.9	+1.1
DY2G	Dye2	78.19	10	*i* P	P	13 53 21.1	-0.9
DY2G				IAmb	IAmb	13 53 22.0	
	comp=Z,29nm,0.6s						
BBB	Bella Bella	78.55	328	pP	pP	13 55 30.6	+0.2
	baz=117,slow=6.8						
ESDC	Sonseca Array	79.19	46	P	P	13 53 28.9	+1.3
	comp=Z,1.7nm,0.6s,baz=253,slow=5.7,SNR=11						
YKA	Yellowknife Ar	79.43	341	P	P	13 53 28.2	-0.1
	comp=Z,21nm,0.8s,baz=136,slow=5.0,SNR=61						
YKA				pP	pP	13 55 34.3	-1.0
	comp=Z,2.2nm,0.9s,baz=129,slow=7.2,SNR=3.6						
QSPA	South Pole Qui	80.37	180	P	P	13 53 33.1	-0.3
RUBB	Prince Rupert	80.77	329	P	P	13 53 36.0	+0.6
ICESG	Greenland Ices	81.69	11	*i* P	P	13 53 39.0	-1.3
ICESG				IAmb	IAmb	13 53 40.3	
	comp=Z,22nm,0.6s						
DLBC	Dease Lake	82.81	333	P	P	13 53 46.6	+0.7
	comp=Z,23nm,0.9s,baz=66,slow=2.3,SNR=37						
DLBC	Dease Lake	82.81	333	P	P	13 53 46.2	+0.4
DLBC				IAmb	IAmb	13 53 47.7	
	comp=Z,26nm,0.9s						
WRGLY	Wrigley	82.93	339	P	P	13 53 46.5	+0.3
	baz=128,SNR=5.5						
TGTN	Hyland Airport	83.75	336	P	P	13 53 51.9	+1.5
	baz=124,SNR=15						
SUMG	Summit	84.87	9	*i* P	P	13 53 56.0	-0.1
SUMG				IAmb	IAmb	13 53 56.6	
	comp=Z,17nm,0.6s						
SUMG	Summit	84.87	9	P	P	13 53 56.4	+0.3
SUMG				IAmb	IAmb	13 53 57.2	
	comp=Z,22nm,0.7s						
P33M	Teslin, Yukon	84.95	334	P	P	13 53 57.2	+0.8
	baz=120,SNR=5.9						
RES	Resolute Bay	85.55	354	P	P	13 53 59.2	+0.5
	comp=Z,4.9nm,0.7s,baz=204,slow=9.7,SNR=12						
WHY	Whitehorse	86.06	334	P	P	13 54 02.3	+0.6
	baz=118						
WHY	Whitehorse	86.06	334	P	P	13 54 02.0	+0.3
TULEG	Thule	86.15	1	*i* P	P	13 54 01.3	-0.3
TULEG	Thule	86.15	1	P	P	13 54 02.0	+0.4
FARO	Faro, Yukon	86.17	335	P	P	13 54 03.1	+1.1
	baz=119,SNR=12						
M31M	Drury Creek, Y	86.58	335	P	P	13 54 04.8	+0.9
	baz=118,SNR=5.4						
N31M	Braeburn, Yuko	86.83	334	P	P	13 54 05.8	+0.6
	baz=117						
HYT	Haines Junctio	87.29	333	P	P	13 54 08.6	+1.2
	baz=116						
M30M	Minto, Yukon	87.75	335	P	P	13 54 09.8	+0.3
	baz=116						
NEEM	North Greenlan	87.81	4	*i* P	P	13 54 09.8	+0.1
NEEM				IAmb	IAmb	13 54 10.8	
	comp=Z,35nm,0.8s						
VNDA	Vanda	87.98	190	P	P	13 54 11.9	+1.6
	comp=Z,4.8nm,0.7s,baz=132,slow=5.0,SNR=26						
VNDA				pP	pP	13 56 21.2	0.0
	comp=Z,1.8nm,0.9s,baz=127,slow=3.0,SNR=5.0						
VNDA	Vanda	87.98	190	P	P	13 54 10.0	-0.3
YUK4	Talbot Arm	88.01	334	P	P	13 54 11.7	+0.8
	baz=115						
KEST	Kesra	88.04	53	P	P	13 54 11.1	-0.4
	comp=Z,2.9nm,0.5s,baz=247,slow=18,SNR=1.7						
DOU	Dourbes	88.44	39	*b*P	P	13 54 13.1	+0.2
	comp=Z,5.9nm,0.7s						
BMRD	Maredsous	88.60	38	*b*P	P	13 54 13.9	+0.2
	comp=Z,6.7nm,0.8s						
BGES	Gesves	88.82	38	*b*P	P	13 54 14.9	+0.2
	comp=Z,10nm,0.7s						
A36M	Sachs Harbour	88.85	345	P	P	13 54 14.5	+0.2
	baz=127,SNR=47						
YUK3	Moose Creek	88.98	334	P	P	13 54 16.2	+0.8
	baz=113						
INK	Inuvik	89.20	341	P	P	13 54 16.3	+0.3
	comp=Z,19nm,0.7s,baz=96,slow=3.5,SNR=123						
INK	Inuvik	89.20	341	P	P	13 54 16.5	+0.5
	baz=119,SNR=27						
WLF	Walferdange	89.28	39	*b*P	P	13 54 17.0	+0.2
EPYK	Eagle Plains	89.40	338	P	P	13 54 17.3	+0.3
	baz=116,SNR=7.5						
DAWY	Dawson	89.44	336	P	P	13 54 17.4	+0.1
	baz=114,SNR=7.3						
DAWY	Dawson	89.44	336	IAmb	IAmb	13 54 18.3	
	comp=Z,9.3nm,0.7s						
I29M	Ogilvie Camp,	89.55	337	P	P	13 54 18.0	+0.2
	baz=115,SNR=16						
M27K	Edge Creek, AK	89.82	334	P	P	13 54 19.8	+0.6
	baz=112						
MCARA	McCarthy VSAT	89.98	333	P	P	13 54 21.0	+1.2
	baz=111						
EUNU	Eureka	90.02	357	IAmb	IAmb	13 54 21.1	
	comp=Z,12nm,1.2s						
L27K	Beaver Creek,	90.06	335	P	P	13 54 20.8	+0.7
	baz=112,SNR=6.7						
SCRK	Sand Creek	91.29	335	P	P	13 54 25.9	0.0
	baz=110						
J26L	Joseph Creek	91.29	336	P	P	13 54 26.1	+0.2
	baz=110,SNR=8.3						
KLU	Klutina	91.33	332	P	P	13 54 26.3	+0.2
	baz=108						
RIDG	Independent Ri	91.57	335	P	P	13 54 27.1	0.0
	baz=109						
PAX	Paxson	91.59	334	P	P	13 54 27.4	+0.1
	baz=108						
M24K	Tolsona, Glenn	91.63	333	P	P	13 54 27.9	+0.4
	baz=108						
J25K	Salcha River,	92.07	335	P	P	13 54 29.5	+0.1
	baz=108,SNR=10						
ILAR	Eielson Array	92.74	335	P	P	13 54 31.9	-0.5
	comp=Z,1.2nm,0.4s,baz=136,slow=3.7,SNR=36						
ILAR				pP	pP	13 56 42.2	-1.6
	comp=Z,0.5nm,0.8s,baz=126,slow=4.6,SNR=3.3						
ILAR				PP	PP	13 58 24.8	-0.8
	comp=Z,1.8nm,0.9s,baz=101,slow=5.5,SNR=7.9						
GHO	Glory Hole Cre	92.78	332	P	P	13 54 32.5	-0.3
POKR	Poker Plat Res	93.06	336	P	P	13 54 34.2	+0.3
	baz=107						
TCOL	CIGO, UAF Yank	93.17	335	P	P	13 54 34.4	+0.1
	baz=106						
MCK	McKinley	93.31	334	P	P	13 54 34.9	-0.1
	baz=105						
H24K	Noodor Dome	93.44	336	P	P	13 54 35.6	-0.1
	baz=106						
NEA2	Nenana	93.59	335	P	P	13 54 36.0	-0.3
	baz=105						
TRF	Thorofare Moun	93.82	334	P	P	13 54 37.0	-0.5
	baz=104						
I23K	Minto, Yukon-K	93.85	336	P	P	13 54 37.2	-0.3
	baz=105						
GERES	GERESS Array B	93.91	41	P	P	13 54 38.1	-0.2
	comp=Z,1.6nm,0.6s,baz=241,slow=2.7,SNR=10						
GERES				pP	pP	13 56 50.2	+0.4
	comp=Z,0.4nm,0.4s,baz=250,slow=2.7,SNR=2.9						
CLL	Collm	93.92	39	*e*P	P	13 54 40.0	+1.9
MLY	Manley	94.39	335	P	P	13 54 39.5	-0.5
	baz=104						
CAST	Castle Rocks	94.60	334	P	P	13 54 40.2	-0.7
	baz=102						
COLD	Coldfoot	94.70	337	P	P	13 54 42.2	+0.9
	baz=104						
NOR	Nord	94.72	7	*i* P	P	13 54 41.0	-0.1
NOR				IAmb	IAmb	13 54 41.3	
	comp=Z,2.0nm,1.0s						
NOA	NORSAR Array B	94.79	29	P	P	13 54 41.8	-0.1
	comp=Z,1.7nm,0.8s,baz=255,slow=4.3,SNR=3.8						
TOLK	Toolik Lake Re	94.81	339	P	P	13 54 41.8	0.0
	baz=104						
J20K	Nowinta River	95.65	334	P	P	13 54 46.3	+0.7
	baz=101						
MAW	Mawson	96.16	164	P	P	13 54 47.2	-0.7
	comp=Z,2.3nm,0.8s,baz=268,slow=11,SNR=4.2						
ARCES	ARCESS Array B	101.41	21	P	Pdif	13 55 11.2	0.0
	comp=Z,2.2nm,0.8s,baz=266,slow=3.5,SNR=4.6						
KBZ	Khabaz	114.05	46	PKiKP	PKPdf	13 59 56.0	+0.4
	comp=Z,1.8nm,0.4s,baz=222,slow=5.9,SNR=7.1						
TIXI	Tiksi	116.93	353	PKP	PKPdf	13 59 59.8	-0.6
	comp=Z,1.6nm,0.3s,baz=338,slow=3.9,SNR=2.4						
SEY	Seymchan	118.45	339	PKP	PKPdf	14 00 03.4	-0.1
	comp=Z,3.6nm,0.4s,baz=251,slow=3.6,SNR=8.5						
PETK	Petropavlovsk-	121.67	328	PKP	PKPdf	14 00 10.0	0.0
	comp=Z,1.9nm,0.7s,baz=153,slow=3.0,SNR=5.5						
ABKAR	Akbulak array	123.50	36	PKPdf	PKiKP	14 00 14.5	+0.5
YAK	Yakutsk	125.64	348	PKP	PKPdf	14 00 16.3	-1.0
	comp=Z,7.2nm,0.6s,baz=78,slow=0.1,SNR=5.0						
BRVK	Borovoye	126.84	28	PKPdf	PKiKP	14 00 21.2	+0.7
ZALV	Zalesovo Beam	131.91	19	PKhKP	PKPpre	14 00 21.6	
	comp=Z,2.2nm,0.6s,baz=270,slow=1.6,SNR=9.9						
ZALV				PKP	PKPdf	14 00 29.9	+0.3
	comp=Z,14nm,0.8s,baz=277,slow=2.7,SNR=46						
ZALV				pPKP	pPKPdf	14 02 48.1	-1.7
	comp=Z,6.5nm,0.8s,baz=307,slow=2.6,SNR=16						
ZALV				SKPbc	SKPbc	14 02 59.4	-0.4
	comp=Z,14nm,0.8s,baz=324,slow=4.8,SNR=22						
ZALV	Zalesovo Beam	131.91	19	PKPdf	PKPdf	14 00 30.1	+0.6
KURK	Kurchatov	132.18	26	PKPdf	PKPdf	14 00 30.9	+0.8
KURBB	Kurchatov Arra	132.21	26	SKPbc	SKPbc	14 03 00.3	-0.6
	baz=316,slow=3.7						
CTA	Charters Tower	132.71	231	PKP	PKPdf	14 00 32.4	+0.4
	comp=Z,4.9nm,0.5s,baz=114,slow=4.2,SNR=2.4						
EKS2	Erkin-Say	135.15	37	P	PKiKP	14 00 37.8	0.0
	SNR=8.4						
AML	Almayashu	135.41	38	P	PKiKP	14 00 38.5	-0.2
	SNR=12						
AAK	Ala-Archa	135.59	36	SKPbc	SKPbc	14 03 12.8	+0.5
	comp=Z,10nm,0.8s,baz=217,slow=2.5,SNR=9.5						
AAK	Ala-Archa	135.59	36	P	PKiKP	14 00 38.8	+0.1
	SNR=5.8						
AAK	Ala-Archa	135.59	36	PKPdf	PKiKP	14 00 38.5	-0.2
UCH	Uchtor	135.84	37	P	PKiKP	14 00 39.5	-0.2
	SNR=11						
TKM2	Tokmak 2	136.05	35	P	PKPdf	14 00 39.0	+1.1
	SNR=5.3						
MAKZ	Makanchi	136.59	27	PKPdf	PKPdf	14 00 38.7	+0.2
MKAR	Makanchi Array	136.74	27	PKhKP	PKPpre	14 00 26.9	
	comp=Z,0.4nm,0.5s,baz=327,slow=2.9,SNR=4.6						
MKAR				PKP	PKPdf	14 00 38.9	+0.1
	comp=Z,3.8nm,0.7s,baz=338,slow=1.7,SNR=28						
MKAR				pPKP	pPKPdf	14 02 57.5	-1.6
	comp=Z,1.8nm,0.8s,baz=326,slow=2.0,SNR=9.9						
MKAR				SKPbc	SKPbc	14 03 14.4	-1.0
	comp=Z,2.9nm,0.7s,baz=338,slow=2.9,SNR=13						
MKAR	Makanchi Array	136.74	27	PKPdf	PKPdf	14 00 39.2	+0.4
ULHL	Ulahol	136.84	36	P	PKiKP	14 00 41.2	-0.2
	SNR=9.4						
KSH	Kashi	138.35	39	PKP	PKPdf	14 00 43.5	+1.4
ASAR	Alice Springs	138.71	216	PKP	PKPdf	14 00 42.0	-1.2
	comp=Z,6.7nm,0.7s,baz=120,slow=3.3,SNR=2.4						
ASAR				SKPbc	SKPbc	14 03 20.8	-0.9
	comp=Z,3.3nm,0.7s,baz=117,slow=3.4,SNR=3.1						
USRK	Ussuriysk Ar.	140.24	334	PKhKP	PKPpre	14 00 38.5	
	comp=Z,3.0nm,0.8s,baz=306,slow=1.0,SNR=3.5						
WRA	Warramunga Arr	141.24	220	PKhKP	PKPpre	14 00 42.8	
	comp=Z,4.3nm,0.6s,baz=137,slow=1.6,SNR=1.8						
WRA				PKP	PKPdf	14 00 47.6	-0.2
	comp=Z,7.6nm,0.4s,baz=137,slow=1.6,SNR=3.9						
WRA				SKPbc	SKPbc	14 03 28.7	+0.3
	comp=Z,2.9nm,0.6s,baz=128,slow=2.3,SNR=2.9						
WMQ	Urumqi	141.41	25	*e*PKP	PKPdf	14 00 47.5	+0.1
SONM	Songino Array	141.99	3	PKhKP	PKPpre	14 00 45.6	
	comp=Z,5.4nm,0.7s,baz=319,slow=2.4,SNR=30						
SONM				SKPbc	SKPbc	14 03 29.8	+0.2
	comp=Z,2.4nm,0.6s,baz=337,slow=2.3,SNR=8.4						
SONM	Songino Array	141.99	3	PKPdf	PKPdf	14 00 45.4	-3.0
MJAR	Matsushiro Arr	142.32	320	PKhKP	PKPpre	14 00 45.0	
	comp=Z,12nm,0.7s,baz=90,slow=3.3,SNR=23						
MAJO	Matsushiro	142.32	320	PKPdf	PKPdf	14 00 46.9	-2.3
MAT	Matsushiro	142.32	320	PKP	PKPdf	14 00 44.8	-4.4
INU	Inuyama	143.81	319	PKPdf	PKPbc	14 00 51.6	+0.5
KSRS	Korea Array	147.47	331	PKP	PKPdf	14 00 58.8	+0.9
	comp=Z,38nm,0.6s,baz=58,slow=2.0,SNR=62						
KSRS				PKPbc	PKPbc	14 01 02.0	+0.6
	comp=Z,39nm,0.6s,baz=6.8,slow=2.3,SNR=49						
KSAR	Wonju Array Be	147.50	331		PKPbc	14 01 02.3	+0.8
FITZ	Fitzroy Crossi	147.73	211	PKPbc	PKPbc	14 01 02.6	0.0
	comp=Z,36nm,0.5s,baz=201,slow=3.0,SNR=8.2						
FITZ				pPKPbc	pPKPdf	14 03 20.3	+0.8
	comp=Z,22nm,0.8s,baz=172,slow=4.9,SNR=6.6						
HHC	Hu-ho-hao-te	148.93	356	*e*PKPbc	PKPdf	14 01 02.0	+1.6
PYUN	Piuthan	149.62	50	*e*P	PKPdf	14 01 02.3	+0.3
HYB	Hyderabad	149.64	72	*i* PKP	PKPdf	14 01 00.5	-1.5
HYB				*e*		14 01 07.5	
DANN	Dangsing	150.06	48	*e*P	PKPdf	14 01 03.5	+0.8
KOLN	Koldanda	150.25	50	*e*P	PKPdf	14 01 02.9	0.0
GKN	Gorkha	150.89	48	*e*P	PKPdf	14 01 04.1	+0.3
DMN	Daman	151.46	48	*e*P	PKPdf	14 01 05.2	+0.4
KKN	Kakani	151.48	48	*e*P	PKPdf	14 01 04.9	+0.1
PKIN	Phulchoki	151.69	48	*e*P	PKPdf	14 01 05.0	-0.2
PKI	Pulchoki	151.70	48	*e*P	PKPdf	14 01 05.0	-0.3
GUN	Gumba	151.85	47	*e*P	PKPdf	14 01 05.8	+0.3
JIRN	Jiri	152.22	47	*e*P	PKPdf	14 01 06.3	+0.2
RAMN	Ramite	152.93	48	*e*P	PKPdf	14 01 07.3	+0.3
TAPN	Taplejung	153.49	46	*e*P	PKPdf	14 01 08.0	+0.2
NJ2	Nanjing	155.94	339	*e*PKP	PKPdf	14 01 10.5	-0.1
CD2	Chengdu	158.43	12	PKP	PKPdf	14 01 12.0	-1.8
CMAR	Chiang Mai Arr	167.10	47	PKP	PKPdf	14 01 22.6	+0.3
	comp=Z,2.8nm,0.8s,baz=285,slow=1.5,SNR=18						
CMAR				PKPab	PKPab	14 02 30.1	-0.8
	comp=Z,0.6nm,0.4s,baz=290,slow=5.7,SNR=7.2						

OTT 26 13:51:03.3±0.2, 44°.55N×54°.45W, h18^{km}, ML3.6/6, Laurentian slope region. 296km south from Marystown, Nl, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SJNN	Saint John's	3.28	21	PN	Pn	13 51 53.6	-0.2
SJNN				SN	Sn	13 52 30.6	-1.7
SJNN				Trac		13 52 32.1	
	comp=Z,12nm,0.1s						
CHEG	Cheticamp, Nov	4.91	300	PN	Pn	13 52 15.7	-0.5
CHEG				SN	Sn	13 53 09.8	-2.8
CHEG				Trac		13 53 16.5	
	comp=Z,2.2nm,0.1s						
GBN	Guysborough	5.09	282	PN	Pn	13 52 18.1	-0.4
GBN				SN	Sn	13 53 13.4	-3.3
GBN				Trac		13 53 15.9	
	comp=Z,11nm,0.2s						
DRLN	Deer Lake	5.15	337	PN	Pn	13 52 18.7	-0.7
DRLN				SN	Sn	13 53 14.9	-3.4
DRLN				Trac		13 53 16.9	
	comp=Z,33nm,0.6s						
HAL	Halifax	6.53	274	SN	Sn	13 53 47.4	-5.0
LMN	Caledonia Moun	7.43	284	PN	Pn	13 52 49.8	-1.0
LMN				SN	Sn	13 54 08.4	-6.3
LMN				Trac		13 54 15.9	
	comp=Z,6.7nm,0.4s						
ELNB	Elgin, New Bru	7.67	284	PN	Pn	13 52 53.1	-1.0
ELNB				SN	Sn	13 54 14.4	-6.1
ELNB				Trac		13 54 15.7	
	comp=Z,0.3nm,0.0s						
WCNB	Wards Creek	7.91	282	PN	Pn	13 52 56.1	-1.1
WCNB				SN	Sn	13 54 19.6	-6.6
WCNB				Trac		13 54 26.4	
	comp=Z,4.9nm,0.2s						
NATG	Natashquan Que	8.06	318	PN	Pn	13 52 59.2	-0.2
NATG				SN	Sn	13 54 25.8	-4.2
NATG				Trac		13 54 27.1	
	comp=Z,10nm,0.3s						
BATG	Bathurst New B	8.54	293	PN	Pn	13 53 02.8	-3.2
BATG				Trac		13 54 39.4	
	comp=Z,0.7nm,0.0s						

BGR ***26*** *13:51:27.5±0.0, 19°.50S×179°.20W, h617^{km}*

BJI ***26*** *13:51:30.0±0.0, 17°.80S×179°.90E, h612^{km}, mB5.3/24, mb5.2/50*

NOU ***26*** *13:51:31.8, 17°.66S×179°.97E, h623^{km}, mB5.7/125, Fiji Islands*

NEIC ***26*** *13:51:31.3±2.2, 17°.65S±0°.09×179°.84E±0°.10, h604^{km}±6^{km}, mb5.1/282, Error ellipse: s-maj=14.1km s-min=12.6km az=142.0*

IDC ***26*** *13:51:32.1±0.3, 17°.63S×179°.86E, h617^{km}±3^{km}, mb4.4/45, mb1 4.5/47, mb1mx4.4/54, mbtmp5.4/47, Error ellipse: s-maj=8.3km s-min=6.0km az=170.0*

MOS ***26*** *13:51:32.5±1.2, 17°.52S×179°.64E, h622^{km}, mb5.1/34, Error ellipse: s-maj=10.9km s-min=9.5km az=97.3*

GCMT ***26*** *13:51:35.3±0.2, 17°.70S±0°.02×179°.89E±0°.02, h630^{km}±1^{km}, MW5.7/113, Moment Tensor Solution. s113,c179; Duration: 1^{s}7 Moment tensor: Scale 10^{17}Nm; M_{rr}1.02±.06; $M_{\theta\theta}$-0.23±.10; $M_{\phi\phi}$-0.79±.10; $M_{r\theta}$0.04±.09; $M_{\theta\phi}$-0.25±.10; $M_{\phi r}$-4.51±.08; Best double couple: $M_0$4.60700×10^{17} NP1:ϕ_s29.00000°, δ6.00000°, λ119.00000°. NP2:ϕ_s180.00000°, δ84.00000°, λ87.00000°. Principal axes: T 4.7200, Plg51.0000°, Azm87.0000°; N -0.2300, Plg3.0000°, Azm180.0000°; P -4.4940, Plg39.0000°, Azm273.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 26 13:51:31.9±0.3**, 17°.67S**±0°.04×**179°.92E**±0°.03**, h621**^{km}±3^{km}**, h622**^{km}**:pP-P, n1191, σ1^{s}11**/1189**, mb5.1**/239**, 208C-117D, Fault plane solution: NP1:**ϕ_s189.06297°, δ70.82050°, λ68.18124°. **NP2:**ϕ_s59.69065°, δ28.73717°, λ136.89743°. **Principal axes:** T Plg58.4650°, Azm68.8982°; N Plg20.5511°, Azm196.5559°; P Plg22.8121°, Azm295.6286°; **Fault plane solution: NP1:** ϕ_s299.11453°, δ16.24714°, λ56.00773°. **NP2:** ϕ_s154.19728°, δ76.58691°, λ99.25372°. **Principal axes:** T Plg57.4471°, Azm76.3971°; N Plg8.9992°, Azm332.0329°; P Plg30.9868°, Azm236.5753°; **Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
TAVE	Taveuni	0.97	10	P	P	13 52 45.9	+0.6
LKBA	Tubou, Lakemba	1.33	115	P	P	13 52 46.4	+0.4
DGTI	Dogotuki	1.37	353	P	P	13 52 46.5	+0.2
MSVF	Nonsavu	1.78	268	P	P	13 52 48.3	+0.8
	670nm,0.3s,baz=30,slow=3.6,SNR=1464						
MSVF				S	S	13 53 50.9	+1.9
	baz=197,slow=23,SNR=13						
MSVF	Nonsavu	1.78	268	P	P	13 52 48.5	+1.0
AFI	Afiamalu	8.82	66	P	P	13 53 36.1	-3.8
	47nm,0.3s,baz=140,slow=0.8,SNR=48						
AFI				S	S	13 55 18.1	-6.8
	7.9nm,0.3s,baz=206,slow=23,SNR=2.7						
FUNA	Funafuti	9.11	355	P	P	13 53 41.8	-0.9
NIUE	Niue	9.74	100	P	P	13 53 47.7	-1.0
	baz=9.8,SNR=14						
NIUE	Niue	9.74	100	P	P	13 53 47.4	-1.3
NIUE	Niue	9.74	100	P	P	13 53 48.1	-0.6
RTV	Rentapao	10.95	268	P	P	13 54 01.5	+0.9
RTV	Rentapao	10.95	268	P	P	13 54 02.4	+1.8
	734µm,0.8s						
DVP	Devils Point	11.18	268	P	P	13 54 03.2	+0.4
DVP	Devils Point	11.18	268	P	P	13 54 04.6	+1.8
	829µm,1.0s						
RAO	Raoul Island	11.70	171	S	S	13 56 15.2	-0.2
	154nm,0.3s,baz=274,slow=23,SNR=2.6						
MARNC	Mare, Loyalty	11.83	249	P	P	13 54 07.4	-1.6
MARNC	Mare, Loyalty	11.83	249	P	P	13 54 08.0	-1.0
MARNC	Mare, Loyalty	11.83	249	P	P	13 54 08.0	-1.0
	9.9nm,0.8s						
LIFNC	LIFOU	12.37	253	P	P	13 54 12.6	-1.7
LIFNC	LIFOU	12.37	253	P	P	13 54 13.2	-1.1
LIFNC	LIFOU	12.37	253	P	P	13 54 13.6	-0.7
SANVU	Saraoutou	12.39	278	P	P	13 54 13.1	-1.5
SANVU	Saraoutou	12.39	278	P	P	13 54 14.4	-0.1
SANVU	Saraoutou	12.39	278	P	P	13 54 14.1	-0.4
PINNC	Pines Island,	12.70	245	P	P	13 54 16.6	-0.9
PINNC	Pines Island,	12.70	245	P	P	13 54 17.7	+0.2
PINNC	Pines Island,	12.70	245	P	P	13 54 17.6	+0.1
YATNC	Mamie plateau,	13.01	248	P	P	13 54 20.6	+0.1
YATNC	Mamie plateau,	13.01	248	P	P	13 54 19.9	-0.6
OUENC	Ouen Island, N	13.16	247	P	P	13 54 21.0	-1.0
OUENC	Ouen Island, N	13.16	247	P	P	13 54 22.4	+0.4
OUENC	Ouen Island, N	13.16	247	P	P	13 54 22.2	+0.2
DZM	Mont Dzumac	13.41	249	*e*P	P	13 54 23.8	-0.7
	546nm,1.1s						
DZM	Mont Dzumac	13.41	249	P	P	13 54 23.9	-0.7
	10nm,0.3s,baz=77,slow=17,SNR=84						
DZM				S	S	13 56 44.5	-1.3
	baz=127,slow=16,SNR=1.6						
DZM	Mont Dzumac	13.41	249	P	P	13 54 23.1	-1.4
DZM	Mont Dzumac	13.41	249	P	P	13 54 24.8	+0.3
DZM	Mont Dzumac	13.41	249	P	P	13 54 23.8	-0.7
ONTNC	Ouen Toro	13.47	248	P	P	13 54 24.8	-0.2
ONTNC	Ouen Toro	13.47	248	P	P	13 54 26.3	+1.3
ONTNC	Ouen Toro	13.47	248	P	P	13 54 24.6	-0.4
NOUC	Port Laguerre	13.54	249	P	P	13 54 26.6	+0.9
NOUC	Port Laguerre	13.54	249	P	P	13 54 25.1	-0.6
KOUNC	Koumac, New Ca	15.05	257	P	P	13 54 41.7	+2.0
KOUNC	Koumac, New Ca	15.05	257	P	P	13 54 41.4	+1.7
NFK	Norfolk Island	15.77	222	P	P	13 54 46.8	+0.6
	baz=16,SNR=9.4						
NFK	Norfolk Island	15.77	222	P	P	13 54 48.4	+2.2
KNTN	Kanton	16.92	30	P	P	13 54 55.8	-1.1
OUZ	Omahuta	18.37	197	P	P	13 55 12.2	+2.4
OUZ				IAmb	IAmb	13 55 16.1	
	comp=Z,39nm,0.8s						
OUZ	Omahuta	18.37	197	P	P	13 55 11.8	+2.0
RAR	Rarotonga	19.47	104	P	P	13 55 20.5	+0.5
	comp=Z,2.2nm,0.3s,baz=245,slow=6.5,SNR=8.8						
RAR	Rarotonga	19.47	104	P	P	13 55 20.9	+0.9
RAR				pmax	pmax		
	comp=Z,226nm,1.1s						
RAR	Rarotonga	19.47	104	P	P	13 55 20.9	+0.9
MXZ	Matakaoa Point	19.87	184	P	P	13 55 23.3	-0.1
MXZ				IAmb	IAmb	13 55 34.7	
	comp=Z,54nm,1.0s						
HAZ	Te Kaha	20.10	185	P	P	13 55 25.8	+0.4
TARA	Tarawa	20.12	339	P	P	13 55 25.4	-0.5
PKGZ	Pakihiroa	20.21	184	P	P	13 55 23.7	-2.8
PKGZ				S	S	13 58 35.8	+0.2
RUGZ	Raukumara Rang	20.32	185	P	P	13 55 29.0	+1.5
RUGZ				S	S	13 58 39.5	+2.0
TOZ	Tahuroa Road	20.36	190	P	P	13 55 31.7	+3.9
PUZ	Puketiti	20.38	184	P	P	13 55 27.5	-0.5
TWGZ	Tauwhareparae	20.50	184	P	P	13 55 29.6	+0.5
TWGZ				S	S	13 58 35.8	-4.5
URZ	Urewera	20.66	186	P	P	13 55 28.0	-2.4
	comp=Z,5.8nm,0.3s,baz=120,slow=23,SNR=8.9						
URZ				S	S	13 58 38.8	-3.8
	comp=Z,7.8nm,0.6s,baz=118,slow=23,SNR=1.5						
URZ	Urewera	20.66	186	P	P	13 55 29.2	-1.2
URZ	Urewera	20.66	186	P	P	13 55 28.6	-1.9
URZ	Urewera	20.66	186	P	P	13 55 28.6	-1.9
MWZ	Matawai	20.70	185	P	P	13 55 30.5	-0.3
HNR	Honiara	21.05	290	P	P	13 55 33.0	-1.3
	comp=Z,219nm,0.7s,baz=0.5,slow=2.0,SNR=29						
HNR				S	S	13 58 48.4	-1.1
	comp=Z,16nm,0.6s,baz=234,slow=13,SNR=1.4						
HNR	Honiara	21.05	290	P	P	13 55 31.5	-2.8
HNR				pmax	pmax		
	comp=Z,224nm,0.7s						
HNR	Honiara	21.05	290	P	P	13 55 31.5	-2.8
HNR	Honiara	21.05	290	P	P	13 55 34.1	-0.2
HNR	Honiara	21.05	290	P	P	13 55 36.3	+2.0
HIZ	Hauiti	21.24	191	P	P	13 55 34.3	-1.3
HIZ				IAmb	IAmb	13 55 42.2	
	comp=Z,99nm,1.4s						
HIZ	Hauiti	21.24	191	P	P	13 55 36.0	+0.4
BKZ	Black Stump Fm	21.63	187	P	P	13 55 37.7	-1.4
BKZ	Black Stump Fm	21.63	187	P	P	13 55 39.6	+0.5
TMVZ	Te Maari	21.68	189	P	P	13 55 40.4	+0.7
ETVZ	East Tongariro	21.70	189	P	P	13 55 36.4	-3.5
VRZ	Vera Road	21.85	191	P	P	13 55 43.7	+2.7
MCHZ	McNeill Hill	21.88	187	P	P	13 55 41.9	+0.5
BHHZ	Black Hill Sta	22.00	188	P	P	13 55 43.5	+1.0

BHHZ				S	S	13 59 02.4	-1.4
TSZ	**Takapari Road**	22.57	188	P	P	13 55 48.4	+0.8
DVHZ	**Dannevirke**	22.79	187	P	P	13 55 46.8	-2.6
DVHZ				S	S	13 59 10.8	-5.3
ANWZ	**Angora Road**	22.91	187	P	P	13 55 47.7	-2.7
ANWZ				S	S	13 59 14.3	-3.7
BFZ	**Birch Farm**	23.15	187	P	P	13 55 52.0	-0.6
BFZ	**Birch Farm**	23.15	187	P	P	13 55 51.5	-1.1
BFZ				IAmb	IAmb	13 56 03.7	
	comp=Z,74nm,1.4s						
BFZ	**Birch Farm**	23.15	187	P	P	13 55 52.2	-0.4
MRZ	**Mangatainoka R**	23.22	188	P	P	13 55 52.0	-1.2
QRZ	**Quartz Range**	23.94	194	P	P	13 55 59.8	+0.2
QRZ				IAmb	IAmb	13 56 01.4	
	comp=Z,69nm,1.1s						
QRZ	**Quartz Range**	23.94	194	P	P	13 56 00.4	+0.8
SNZO	**South Karori**	23.99	190	P	P	13 55 58.9	-1.0
SNZO				IAmb	IAmb	13 56 11.4	
	comp=Z,76nm,0.9s						
SNZO	**South Karori**	23.99	190	P	P	13 55 59.7	-0.2
MSWZ	**Moikau Station**	24.01	189	P	P	13 55 56.8	-3.4
BHW	**Baring Head**	24.05	189	P	P	13 55 58.2	-2.3
NNZ	**Nelson**	24.14	192	P	P	13 56 00.4	-0.8
PLWZ	**Palliser**	24.16	189	P	P	13 55 59.1	-2.5
TUWZ	**Tuamarina**	24.23	191	P	P	13 56 00.9	-1.2
BSWZ	**Blackbirch Sta**	24.52	191	P	P	13 56 04.1	-0.6
THZ	**Tophouse**	24.76	193	P	P	13 56 05.8	-1.0
THZ				IAmb	IAmb	13 56 12.0	
	comp=Z,44nm,0.9s						
KHZ	**Kahutara**	25.26	191	P	P	13 56 09.9	-1.3
KHZ	**Kahutara**	25.26	191	P	P	13 56 10.6	-0.6
OXZ	**Oxford**	26.44	193	P	P	13 56 19.4	-2.1
MQZ	**McQueen's Vall**	26.68	192	P	P	13 56 21.3	-2.3
MQZ				IAmb	IAmb	13 56 27.9	
	comp=Z,93nm,1.2s						
RPZ	**Rata Peaks**	27.03	194	P	P	13 56 23.8	-2.9
RPZ				IAmb	IAmb	13 56 32.1	
	comp=Z,35nm,0.9s						
FOZ	**Fox Glacier**	27.17	196	P	P	13 56 26.4	-1.5
EIDS	**Eidsvold**	27.86	249	P	P	13 56 33.7	-0.5
	baz=28,SNR=52						
EIDS	**Eidsvold**	27.86	249	P	P	13 56 33.6	-0.5
EIDS				IAmb	IAmb	13 56 35.7	
	comp=Z,60nm,0.8s						
EIDS	**Eidsvold**	27.86	249	P	P	13 56 33.8	-0.4
EIDS	**Eidsvold**	27.86	249	P	P	13 56 33.6	-0.5
	comp=Z,97nm,0.9s						
LBZ	**Lake Benmore**	27.87	195	P	P	13 56 31.8	-2.2
LBZ				IAmb	IAmb	13 56 41.5	
	comp=Z,48nm,1.1s						
RK1H	**Rockhampton Ha**	28.11	253	P	P	13 56 36.3	0.0
RK1H	**Rockhampton Ha**	28.11	253	P	P	13 56 35.9	-0.4
	comp=Z,62nm,0.6s						
ODZ	**Otahua Downs**	28.38	194	P	P	13 56 36.8	-1.6
ODZ				IAmb	IAmb	13 56 39.2	
	comp=Z,33nm,1.0s						
ODZ	**Otahua Downs**	28.38	194	P	P	13 56 37.3	-1.1
WKZ	**Wanaka**	28.58	196	P	P	13 56 38.4	-1.7
ARMA	**Armidale**	28.69	238	P	P	13 56 42.1	+0.7
	baz=29,SNR=48						
ARMA	**Armidale**	28.69	238	P	P	13 56 42.0	+0.5
ARMA	**Armidale**	28.69	238	P	P	13 56 42.3	+0.8
PAE	**Paea**	29.05	95	*e*P	P	13 56 43.8	-0.7
PPT2	**Papeete2**	29.06	95	*e*P	P	13 56 44.2	-0.5
	comp=Z,267nm,1.3s						
PPT	**Papeete**	29.06	95	P	P	13 56 45.2	+0.5
	comp=Z,176nm,0.8s,baz=55,slow=2.0,SNR=24						
PPTF	**Pamatai, Papee**	29.07	95	P	P	13 56 45.5	+0.7
PPTF	**Pamatai, Papee**	29.07	95	P	P	13 56 45.2	+0.4
MLZ	**Mavora Lakes**	29.32	197	P	P	13 56 46.4	-0.1
NTLH	**Newcastle Hard**	29.56	234	P	P	13 56 50.1	+1.4
XMAS	**Kiritimati**	29.69	51	P	P	13 56 48.0	-2.1
WHZ	**Wether Hill Ro**	29.86	197	P	P	13 56 50.3	-0.8
RMQ	**Roma**	30.11	248	P	P	13 56 54.2	+0.6
	baz=30,SNR=199						
RMQ	**Roma**	30.11	248	P	P	13 56 54.2	+0.6
RMQ	**Roma**	30.11	248	P	P	13 56 53.8	+0.2
	comp=Z,232nm,0.6s						
MGCD	**Mangrove Creek**	30.14	234	P	P	13 56 54.7	+1.0
	baz=30,SNR=32						
MGCD	**Mangrove Creek**	30.14	234	P	P	13 56 54.9	+1.2
RABL	**Rabaul**	30.30	293	P	P	13 56 54.0	-1.3
RABL	**Rabaul**	30.30	293	P	P	13 56 55.1	-0.2
RABL	**Rabaul**	30.30	293	P	P	13 56 54.0	-1.3
RIV	**Riverview**	30.36	232	P	P	13 56 57.5	+2.0
	baz=30,SNR=4.9						
MEH	**Mehetia**	30.47	95	*e*P	P	13 56 56.0	-0.8
SYDH	**Sydney Hard Ro**	30.64	233	P	P	13 56 59.0	+1.0
PMOR	**Pomariorio Ree**	30.98	90	*e*P	P	13 57 00.7	-0.4
	comp=Z,535nm,1.1s						
VAH	**Vaihoa**	31.20	90	*e*P	P	13 57 02.2	-0.7
	comp=Z,244nm,1.0s						
CTA	**Charters Tower**	31.91	260	P	P	13 57 08.8	-0.2
	comp=Z,48nm,0.6s,baz=88,slow=11,SNR=65						
CTA				S	S	14 01 33.7	-4.5
	comp=Z,6.3nm,0.9s,baz=303,slow=6.7,SNR=1.8						
CTA				ScP	ScP	14 02 27.2	+1.8
	comp=Z,10nm,1.0s,baz=29,slow=3.8,SNR=8.4						
CTA	**Charters Tower**	31.91	260	P	P	13 57 09.0	0.0
CTA	**Charters Tower**	31.91	260	P	P	13 57 08.7	-0.2
	comp=Z,102nm,0.7s						
CTAO	**Charters Tower**	31.91	260	P	P	13 57 08.6	-0.4
CTAO				pmax	pmax		
	comp=Z,75nm,0.7s						
CTAO	**Charters Tower**	31.91	260	P	P	13 57 08.6	-0.4
CTAO	**Charters Tower**	31.91	260	P	P	13 57 08.8	-0.2
CTAO	**Charters Tower**	31.91	260	P	P	13 57 08.5	-0.4
CNB	**Canberra Magne**	32.32	231	P	P	13 57 12.9	+0.6
	baz=32,SNR=130						
CNB	**Canberra Magne**	32.32	231	P	P	13 57 13.0	+0.7
PATS	**Pohnpei**	32.38	317	P	P	13 57 13.4	+0.5
	baz=32,SNR=5.8						
PATS	**Pohnpei**	32.38	317	P	P	13 57 12.7	-0.2
PATS	**Pohnpei**	32.38	317	P	P	13 57 13.5	+0.6
CAN	**Canberra**	32.60	231	P	P	13 57 14.7	+0.1
CAN				pmax	pmax		
	comp=Z,38nm,0.8s						
CAN	**Canberra**	32.60	231	P	P	13 57 14.7	+0.1
CAN				IAmb	IAmb	13 57 16.2	
	comp=Z,38nm,0.8s						
CAN	**Canberra**	32.60	231	P	P	13 57 15.2	+0.6
YNG	**Young**	32.64	233	P	P	13 57 15.6	+0.7
	baz=33,SNR=9.0						
YNG	**Young**	32.64	233	P	P	13 57 15.8	+0.8
PMG	**Port Moresby**	32.85	280	P	P	13 57 17.6	+0.7
	comp=Z,65nm,0.8s,baz=83,slow=5.9,SNR=45						
PMG				S	S	14 01 47.7	-4.6
	comp=Z,3.0nm,0.5s,baz=303,slow=19,SNR=1.5						
PMG	**Port Moresby**	32.85	280	P	P	13 57 17.4	+0.6
PMG				pmax	pmax		
	comp=Z,95nm,0.9s						
PMG	**Port Moresby**	32.85	280	P	P	13 57 17.4	+0.6
PMG	**Port Moresby**	32.85	280	P	P	13 57 17.9	+1.0
PMG	**Port Moresby**	32.85	280	P	P	13 57 17.9	+1.0
PMG	**Port Moresby**	32.85	280	P	P	13 57 17.5	+0.6
PMG	**Port Moresby**	32.85	280	P	P	13 57 17.5	+0.6
MILA	**Mila**	33.24	228	P	P	13 57 20.6	+0.7
	baz=33,SNR=11						
MTSU	**Mount Surprise**	33.85	264	P	P	13 57 25.1	-0.2
	baz=34,SNR=64						
MTSU	**Mount Surprise**	33.85	264	P	P	13 57 25.3	0.0
MTSU	**Mount Surprise**	33.85	264	P	P	13 57 24.7	-0.6
	comp=Z,57nm,0.7s						
CMSA	**Cobar Meteorol**	33.89	239	P	P	13 57 25.6	+0.2
	baz=34,SNR=314						
CMSA	**Cobar Meteorol**	33.89	239	P	P	13 57 25.7	+0.3
QLP	**Quilpie**	34.13	249	P	P	13 57 27.4	-0.1
	baz=34,SNR=121						
QLP	**Quilpie**	34.13	249	P	P	13 57 27.6	+0.1
QLP	**Quilpie**	34.13	249	P	P	13 57 26.9	-0.6
	comp=Z,493nm,0.6s						
COEN	**Coen**	35.51	271	P	P	13 57 39.4	+0.3
COEN	**Coen**	35.51	271	P	P	13 57 39.5	+0.5
COEN	**Coen**	35.51	271	P	P	13 57 39.1	+0.1
	comp=Z,159nm,0.7s						
MANU	**Manus Island**	35.53	292	P	P	13 57 39.8	+0.6
GLAD	**Gladstone**	35.92	223	P	P	13 57 42.6	+0.6
TOO	**Toolangi**	36.10	230	P	P	13 57 44.1	+0.5
	baz=36,SNR=78						
TOO	**Toolangi**	36.10	230	P	P	13 57 44.2	+0.6
TOO				pmax	pmax		
	comp=Z,100nm,0.9s						
TOO	**Toolangi**	36.10	230	P	P	13 57 44.2	+0.6
TOO	**Toolangi**	36.10	230	P	P	13 57 44.2	+0.6
CORO	**Coronation Par**	36.72	223	P	P	13 57 49.3	+0.8
MOO	**Moorlands**	37.20	221	P	P	13 57 53.9	+1.4
	baz=37,SNR=4.3						
BRAT	**Ballarat**	37.23	231	P	P	13 57 54.0	+1.3
STKA	**Stephens Creek**	37.35	240	P	P	13 57 54.5	+0.5
	comp=Z,116nm,0.5s,baz=87,slow=10,SNR=332						
STKA				S	S	14 02 57.0	-2.2
	comp=Z,4.4nm,1.0s,baz=241,slow=22,SNR=1.5						
STKA	**Stephens Creek**	37.35	240	P	P	13 57 54.4	+0.5
STKA				pmax	pmax		
	comp=Z,27nm,0.6s						
STKA	**Stephens Creek**	37.35	240	P	P	13 57 54.4	+0.5
STKA				IAmb	IAmb	13 57 55.7	
	comp=Z,27nm,0.6s						
INKA	**Innaminka**	37.36	247	P	P	13 57 54.8	+0.8
TAU	**Tasmania Unive**	37.37	221	P	P	13 57 53.3	-0.5
TAU				pmax	pmax		
	comp=Z,71nm,1.3s						
TAU	**Tasmania Unive**	37.37	221	P	P	13 57 53.3	-0.5
TAU				IAmb	IAmb	13 58 00.6	
	comp=Z,71nm,1.2s						
TAU	**Tasmania Unive**	37.37	221	P	P	13 57 54.3	+0.5
QIS	**Mount Isa**	38.13	259	P	P	13 57 59.5	-0.9
	baz=38,SNR=20						
QIS	**Mount Isa**	38.13	259	P	P	13 57 59.7	-0.7
QIS	**Mount Isa**	38.13	259	P	P	13 57 59.6	-0.8
	comp=Z,46nm,0.6s						
ARPS	**Mount Arapiles**	38.52	233	P	P	13 58 03.4	+0.2
	baz=39,SNR=16						
ARPS	**Mount Arapiles**	38.52	233	P	P	13 58 03.6	+0.4
WAKE	**Wake Island**	38.96	340	P	P	13 58 07.1	+0.2
TAOE	**Nuku Hiva Isla**	39.77	83	*e*P	P	13 58 13.5	-0.2
	comp=Z,470nm,0.9s						
TAOE	**Nuku Hiva Isla**	39.77	83	P	P	13 58 14.1	+0.4
TAOE	**Nuku Hiva Isla**	39.77	83	P	P	13 58 14.3	+0.6
HTT	**Hallett**	39.90	239	P	P	13 58 14.8	+0.4
	baz=40,SNR=70						
HTT	**Hallett**	39.90	239	P	P	13 58 15.1	+0.7
LCRK	**Leigh Creek**	39.93	244	P	P	13 58 14.8	+0.2
PTPS	**Port Pirie**	40.60	239	P	P	13 58 20.4	+0.6
WHYH	**Whyalla**	40.92	240	P	P	13 58 22.8	+0.4
JAY	**Jayapura**	41.31	287	P	P	13 58 26.3	+0.5
	comp=Z,132nm,0.4s,baz=146,slow=6.4,SNR=100						
JAY				S	S	14 03 57.3	+0.1
	comp=Z,7.6nm,0.7s,baz=62,slow=22,SNR=1.5						
JAY	**Jayapura**	41.31	287	P	P	13 58 26.0	+0.2
	comp=Z,2µmcomp=Z,170nm,0.8s						
GENI	**Genyem**	41.77	286	P	P	13 58 29.8	+0.5
	comp=Z,5µmcomp=Z,13µmcomp=Z,792nm,1.1s						
OOD	**Oodnadatta**	41.83	248	P	P	13 58 30.1	+0.5
BBOO	**Buckleboo**	42.13	240	P	P	13 58 31.9	0.0
	baz=42,SNR=254						
BBOO	**Buckleboo**	42.13	240	P	P	13 58 32.0	0.0
BBOO	**Buckleboo**	42.13	240	P	P	13 58 31.9	0.0
WR0	**Warramunga Arr**	42.92	259	P	P	13 58 37.1	-1.1
WR0				IAmb	IAmb	13 58 39.8	
	comp=Z,46nm,0.9s						
WB0	**Warramunga Arr**	43.07	260	P	P	13 58 38.4	-1.0
WB0				IAmb	IAmb	13 58 38.9	
	comp=Z,145nm,1.4s						
WB2	**Warramunga Arr**	43.10	259	IAmb	IAmb	13 58 40.5	
	comp=Z,70nm,0.7s						
WRAB	**Tennant Creek**	43.10	260	P	P	13 58 38.5	-1.1
WRAB				pmax	pmax		
	comp=Z,55nm,0.7s						
WRAB	**Tennant Creek**	43.10	260	P	P	13 58 38.5	-1.1
WRAB				IAmb	IAmb	13 58 40.5	
	comp=Z,55nm,0.7s						
WRAB	**Tennant Creek**	43.10	260	P	P	13 58 38.5	-1.1
WRAB	**Tennant Creek**	43.10	260	P	P	13 58 38.5	-1.1
WRA	**Warramunga Arr**	43.11	259	P	P	13 58 38.6	-1.1
	comp=Z,36nm,0.6s,baz=96,slow=8.7,SNR=771						
WRA				PcP	PcP	14 00 14.7	-0.3
	comp=Z,19nm,0.9s,baz=94,slow=4.1,SNR=9.2						
WRA				pP	pP	14 00 26.0	+0.1
	comp=Z,28nm,1.2s,baz=94,slow=8.6,SNR=3.6						
WRA				ScP	ScP	14 03 08.6	+0.6
	comp=Z,2.3nm,0.5s,baz=133,slow=2.6,SNR=8.7						
WRA				S	S	14 04 16.1	-6.5
	comp=Z,9.7nm,0.8s,baz=95,slow=14,SNR=12						
WRA				ScS	ScS	14 07 31.8	+0.6
	comp=Z,9.6nm,1.3s,baz=88,slow=6.6,SNR=8.2						
ASAR	**Alice Springs**	43.32	254	P	P	13 58 41.0	-0.3
	comp=Z,438nm,0.6s,baz=89,slow=8.0,SNR=8001						
ASAR				PcP	PcP	14 00 15.7	0.0
	comp=Z,21nm,0.9s,baz=104,slow=3.8,SNR=7.0						
ASAR				pP	pP	14 00 28.6	+0.9
	comp=Z,3.4nm,0.6s,baz=82,slow=8.5,SNR=2.0						
ASAR				ScP	ScP	14 03 10.1	+1.2
	comp=Z,3.0nm,0.4s,baz=90,slow=4.7,SNR=4.5						
ASAR				S	S	14 04 22.3	-3.4
	comp=Z,55nm,1.0s,baz=86,slow=16,SNR=66						
ASAR				ScS	ScS	14 07 32.9	+0.4
	comp=Z,0.7nm,0.9s,baz=93,slow=5.0,SNR=4.5						
ASAR	**Alice Springs**	43.32	254	P	P	13 58 40.8	-0.5
ASAR	**Alice Springs**	43.32	254	P	P	13 58 40.8	-0.5
SMPI	**Sarmi**	43.34	286	P	P	13 58 41.6	+0.1
	comp=Z,2µmcomp=Z,125nm,2.1s						
MULG	**Mulgathing**	43.47	244	P	P	13 58 42.3	0.0
MLOA	**Mauna Loa Obse**	44.12	34	P	P	13 58 47.8	-0.1
MLH	**Mauna Loa**	44.18	34	P	P	13 58 48.4	+0.3
HMH	**Humu'ula Sheep**	44.22	34	P	P	13 58 49.4	+0.9
POHA	**Pohakuloa**	44.32	34	P	P	13 58 49.3	+0.1
POHA				IAmb	IAmb	13 58 57.6	
	comp=Z,93nm,1.0s						
POHA	**Pohakuloa**	44.32	34	P	P	13 58 49.8	+0.6
DHH	**Diamond Head**	44.43	30	P	P	13 58 49.7	0.0
DHH	**Diamond Head**	44.43	30	P	P	13 58 49.7	0.0
HPAH	**Hawaii Prepara**	44.46	34	P	P	13 58 50.6	+0.5
KIP	**Kipapa**	44.46	30	P	P	13 58 49.9	0.0
KIP	**Kipapa**	44.46	30	P	P	13 58 49.9	0.0
WMR	**Waimanalo Ridg**	44.53	30	P	P	13 58 50.5	0.0
HLK	**Haleakala**	44.77	32	P	P	13 58 53.1	+0.5
KHLH	**Kahului Airpor**	44.80	32	P	P	13 58 53.2	+0.8
SRPI	**Serui, Papua**	45.66	285	P	P	13 58 59.8	+0.6
	comp=Z,3µmcomp=Z,121nm,0.5s						
KDU	**Kakadu**	45.97	269	P	P	13 59 01.1	-0.4
	baz=46,SNR=194						
KDU	**Kakadu**	45.97	269	P	P	13 59 01.5	0.0
KDU	**Kakadu**	45.97	269	P	P	13 59 00.8	-0.7
GUMO	**Guam**	46.48	310	P	P	13 59 05.7	+0.2
	comp=Z,306nm,0.7s,baz=145,slow=7.4,SNR=20						
GUMO				pP	pP	14 00 53.7	-0.7
	comp=Z,60nm,0.7s,baz=175,slow=19,SNR=2.6						
GUMO	**Guam**	46.48	310	P	P	13 59 05.6	+0.2
GUMO				pmax	pmax		
	comp=Z,388nm,0.8s						
GUMO	**Guam**	46.48	310	P	P	13 59 05.6	+0.2
GUMO	**Guam**	46.48	310	P	P	13 59 06.0	+0.6
MTN	**Manton Dam**	47.21	269	P	P	13 59 10.1	-0.8
	baz=47,SNR=30						
MTN	**Manton Dam**	47.21	269	P	P	13 59 10.3	-0.6
MTN	**Manton Dam**	47.21	269	P	P	13 59 10.4	-0.5
MTN	**Manton Dam**	47.21	269	P	P	13 59 10.1	-0.8
DRS	**Darwin Rock St**	47.52	269	P	P	13 59 13.1	-0.1
DRS	**Darwin Rock St**	47.52	269	P	P	13 59 12.7	-0.5
ANA2	**Anatahan**	47.72	313	P	P	13 59 14.7	0.0
SARN	**Sarigan**	47.92	314	P	P	13 59 15.7	-0.4
SAUI	**Saumlaki**	48.25	275	P	P	13 59 18.8	+0.2
	comp=Z,12µmcomp=Z,318nm,1.3s						
WRKA	**Warakurna**	48.40	252	P	P	13 59 19.6	-0.1
	baz=48,SNR=467						
WRKA	**Warakurna**	48.40	252	P	P	13 59 19.8	+0.1
FORT	**Forrest**	48.67	244	P	P	13 59 21.0	-0.5
	baz=49,SNR=178						
FORT	**Forrest**	48.67	244	P	P	13 59 21.0	-0.5
FORT	**Forrest**	48.67	244	P	P	13 59 21.2	-0.3
KNRA	**Kununurra**	48.92	264	P	P	13 59 23.1	-0.4
	baz=49,SNR=36						
KNRA	**Kununurra**	48.92	264	P	P	13 59 23.4	-0.2
KNRA	**Kununurra**	48.92	264	P	P	13 59 23.0	-0.6
FAKI	**Fak Fak**	48.97	282	P	P	13 59 23.3	-0.6
	comp=Z,3µmcomp=Z,115nm,1.5s						
FAKI	**Fak Fak**	48.97	282	P	P	13 59 23.7	-0.2
FAKI	**Fak Fak**	48.97	282	P	P	13 59 23.8	-0.1
SIJI	**Sorong**	50.63	284	P	P	13 59 35.2	-0.8
	comp=Z,194nm,0.5s,baz=112,slow=4.6,SNR=210						
SIJI				pP	pP	14 01 27.0	-1.0
	comp=Z,38nm,1.1s,baz=77,slow=6.9,SNR=4.6						
SWI	**Sorong**	50.64	284	P	P	13 59 36.1	0.0
	comp=Z,4µmcomp=Z,349nm,0.7s						
FITZ	**Fitzroy Crossi**	51.49	261	S	S	14 06 18.4	+0.6
	comp=Z,6.0nm,1.1s,baz=236,slow=15,SNR=3.7						
FITZ	**Fitzroy Crossi**	51.49	261	P	P	13 59 42.4	+0.2
	baz=52,SNR=74						
MSAI	**Masohi**	51.93	280	P	P	13 59 44.7	-0.7
	comp=Z,328nmcomp=Z,27nm,0.6s						
AAI	**Ambon**	52.51	279	P	P	13 59 49.1	-0.4
	comp=Z,4µmcomp=Z,207nm,0.5s						
LBMI	**Labuha**	54.21	282	P	P	14 00 01.8	+0.3
	comp=Z,1µmcomp=Z,112nm,0.8s						
SOEI	**Soe**	54.47	271	P	P	14 00 04.5	+1.0
	comp=Z,5µmcomp=Z,528nm,0.9s						
SOEI	**Soe**	54.47	271	P	P	14 00 05.0	+1.5
TNTI	**Ternate**	54.85	284	P	P	14 00 05.9	-0.1
	comp=Z,4µmcomp=Z,260nm,0.9s						
TNTI	**Ternate**	54.85	284	P	P	14 00 06.9	+0.9
BATI	**Baumata**	54.94	270	P	P	14 00 08.0	+1.5
	comp=Z,83nm,0.5s,baz=136,slow=1.6,SNR=24						
BATI				pP	pP	14 02 01.7	+0.1
	comp=Z,20nm,0.7s,baz=13,slow=10.0,SNR=1.9						
BATI				S	S	14 07 07.6	+4.4
	comp=Z,8.3nm,0.5s,baz=157,slow=23,SNR=11						
BATI	**Baumata**	54.94	270	P	P	14 00 08.1	+1.5
	comp=Z,2µmcomp=Z,2µmcomp=Z,82nm,0.8s						
SANI	**Sanana**	55.13	280	P	P	14 00 07.3	-0.6
	comp=Z,2µmcomp=Z,187nm,0.8s						
SANI	**Sanana**	55.13	280	P	P	14 00 07.7	-0.2
PSA00	**Pilbara Seismi**	56.42	256	P	P	14 00 16.4	-0.4
PSA00				IAmb	IAmb	14 00 18.1	
	comp=Z,150nm,0.9s						
PSA00	**Pilbara Seismi**	56.42	256	P	P	14 00 15.7	-1.0
PSA00				IAmb	IAmb	14 00 18.1	
	comp=Z,97nm,0.9s						
PSA00	**Pilbara Seismi**	56.42	256	P	P	14 00 16.3	-0.4
MBWA	**Marble Bar**	56.59	256	P	P	14 00 17.2	-0.6
MMRI	**Maumere**	56.70	271	P	P	14 00 18.0	-0.7
	comp=Z,103nm,0.8s						
MEEK	**Meekatharra**	57.02	249	P	P	14 00 20.0	-0.7
	baz=57,SNR=29						
MEEK	**Meekatharra**	57.02	249	P	P	14 00 20.4	-0.4
KLBR	**Kellerberrin**	57.51	243	P	P	14 00 23.3	-0.6
	baz=58,SNR=50						
KLBR	**Kellerberrin**	57.51	243	P	P	14 00 23.4	-0.5
NWAO	**Narrogin (SRO)**	57.92	242	P	P	14 00 26.5	-0.1
KMSI	**Cibinong**	57.93	282	P	P	14 00 26.5	-0.5
	comp=Z,2µmcomp=Z,114nm,0.8s						
BLDU	**Ballidu**	58.44	245	P	P	14 00 29.6	-0.7
	baz=58,SNR=48						
BLDU	**Ballidu**	58.44	245	P	P	14 00 29.5	-0.7
LUWI	**Luwuk**	58.49	280	P	P	14 00 31.2	+0.4
	comp=Z,4µmcomp=Z,268nm,1.6s						
LUWI	**Luwuk**	58.49	280	P	P	14 00 30.0	-0.8
LUWI	**Luwuk**	58.49	280	P	P	14 00 29.9	-0.9
MUN	**Mundaring**	58.81	243	P	P	14 00 32.6	0.0
	baz=59,SNR=14						
MUN	**Mundaring**	58.81	243	P	P	14 00 32.6	0.0
BSSI	**Bau Bau, Buton**	59.05	273	P	P	14 00 34.2	-0.3
	comp=Z,923nmcomp=Z,61nm,2.0s						
MORW	**Morawa**	59.12	246	P	P	14 00 34.1	-0.6
	baz=59,SNR=11						
MORW	**Morawa**	59.12	246	P	P	14 00 34.1	-0.6
MORW				IAmb	IAmb	14 00 35.9	
	comp=Z,79nm,0.9s						
MORW	**Morawa**	59.12	246	P	P	14 00 34.3	-0.4
WBSI	**Waikabubak, Su**	59.15	269	P	P	14 00 35.0	-0.2
	comp=Z,2µmcomp=Z,81nm,0.9s						
MTKN	**Mount Kenneth**	59.18	243	P	P	14 00 36.8	+1.7
	comp=Z,282nm,0.9s						
APSI	**Ampana**	59.59	280	P	P	14 00 39.0	+0.9
	comp=Z,3µmcomp=Z,251nm,1.2s						
BKSI	**Bulukumba**	59.64	274	P	P	14 00 37.2	-1.2
	comp=Z,942nmcomp=Z,48nm,1.9s						
MRSI	**Marisa**	59.80	281	P	P	14 00 39.2	-0.2
	comp=Z,1µmcomp=Z,93nm,0.9s						
BNSI	**Bone**	59.93	275	P	P	14 00 40.5	+0.2
	comp=Z,2µmcomp=Z,112nm,1.1s						
KAPI	**Kappang**	60.08	274	P	P	14 00 41.2	-0.1
	comp=Z,10nm,0.3s,baz=215,slow=5.9,SNR=17						
SPSI	**Sidrap Palu**	60.38	276	P	P	14 00 42.4	-0.9
	comp=Z,908nmcomp=Z,55nm,0.9s						
VNDA	**Vanda**	60.55	184	P	P	14 00 44.2	+0.9
	comp=Z,13nm,1.0s,baz=1.3,slow=7.2,SNR=32						
VNDA	**Vanda**	60.55	184	P	P	14 00 44.7	+1.4
VNDA				pmax	pmax		
	comp=Z,29nm,1.2s						
VNDA	**Vanda**	60.55	184	P	P	14 00 44.7	+1.4
SBA	**Scott Base**	60.56	183	P	P	14 00 44.6	+1.2
SBA				pmax	pmax		
	comp=Z,63nm,1.1s						
SBA	**Scott Base**	60.56	183	P	P	14 00 44.6	+1.2
TTSI	**Tana Toraja**	60.62	277	P	P	14 00 45.0	+0.1
	comp=Z,862nmcomp=Z,31nm,0.9s						
PLAI	**Plampang**	60.90	270	P	P	14 00 46.0	-0.7
	comp=Z,3µmcomp=Z,234nm,1.0s						
PLAI	**Plampang**	60.90	270	P	P	14 00 46.4	-0.3
TOLI2	**Tolitoli**	61.10	281	P	P	14 00 47.0	-1.0
TOLI2	**Tolitoli**	61.10	281	P	P	14 00 48.4	+0.4
GIRL	**Giralia**	61.43	253	P	P	14 00 51.0	+0.9
	baz=61,SNR=22						
GIRL	**Giralia**	61.43	253	P	P	14 00 50.6	+0.5
GIRL	**Giralia**	61.43	253	P	P	14 00 51.0	+0.9
MPSI	**Mapaga**	61.66	280	P	P	14 00 51.3	-0.3
	comp=Z,2µmcomp=Z,124nm,1.0s						
TWSI	**Taliwang, Sumb**	61.78	269	P	P	14 00 51.8	-0.6
	comp=Z,2µmcomp=Z,159nm,0.9s						
DNP	**Denpasar**	63.39	269	P	P	14 01 02.3	-0.4
	comp=Z,30µmcomp=Z,220nm,0.9s						
IGBI	**Denpasar**	63.41	269	P	P	14 01 02.2	-0.7
	comp=Z,3µmcomp=Z,196nm,1.2s						
SRBI	**Singaraja**	63.54	270	P	P	14 01 03.0	-0.7
KBKI	**Kotabaru**	64.01	275	P	P	14 01 08.1	+1.4
JAGI	**Jajag, Banyuwa**	64.45	269	P	P	14 01 08.1	-1.4
JAGI	**Jajag, Banyuwa**	64.45	269	P	P	14 01 07.9	-1.5
JAGI	**Jajag, Banyuwa**	64.45	269	P	P	14 01 08.4	-1.1
ABJI	**Asem Bagus**	64.55	270	P	P	14 01 11.0	+0.9
MYLDM	**Lahad Datu**	64.71	285	IAmb	IAmb	14 01 15.7	
	comp=Z,197nm,1.4s						
KMMI	**Kalianget**	65.01	270	P	P	14 01 12.2	-0.8
BLJI	**Banyuglugur**	65.18	270	P	P	14 01 13.7	-0.3
GMJI	**Gumukmas**	65.18	269	P	P	14 01 14.5	+0.5
BBKI	**Banjar Baru**	65.22	274	P	P	14 01 15.0	+0.7
CASY	**Casey**	65.69	205	P	P	14 01 16.5	+0.3
CASY				IAmb	IAmb	14 01 18.7	
	comp=Z,117nm,1.0s						
MTKI	**Muara Teweh, K**	65.95	277	P	P	14 01 20.1	+1.3
JMM	**Marumori**	66.36	327	P	P	14 01 19.4	-1.4
JMM				IAmb	IAmb	14 01 22.4	
	comp=Z,50nm,0.9s						
SPMM	**Sapulut**	66.42	283	P	P	14 01 22.0	+0.3
MJAR	**Matsushiro Arr**	66.77	324	P	P	14 01 23.2	-0.2
	comp=Z,49nm,0.8s,baz=160,slow=5.8,SNR=45						
MJAR				pP	pP	14 03 25.0	-0.6
	comp=Z,1.0nm,0.5s,baz=174,slow=17,SNR=1.6						
MJAR	**Matsushiro Arr**	66.77	324	P	P	14 01 22.8	-0.6
MJAR				pmax	pmax		
	comp=Z,30nm,0.8s						
MJAR	**Matsushiro Arr**	66.77	324	P	P	14 01 22.8	-0.6
MAJO	**Matsushiro**	66.77	324	*i* P	P	14 01 23.3	-0.1
MAJO				pmax	pmax		
	comp=Z,42nm,0.6s						
MAJO	**Matsushiro**	66.77	324	P	P	14 01 22.5	-0.9
MAJO				IAmb	IAmb	14 01 24.8	
	comp=Z,75nm,0.9s						
MAJO	**Matsushiro**	66.77	324	P	P	14 01 23.4	0.0
MAT	**Matsushiro**	66.77	324	P	P	14 01 23.2	-0.2
MAT				*e*S	S	14 09 27.0	-1.2
JOW	**Kunigami**	66.84	310	P	P	14 01 24.7	+0.7
	comp=Z,54nm,0.5s,baz=91,slow=12,SNR=4.1						
KKM	**Kota Kinabalu**	67.14	285	P	P	14 01 25.9	-0.3
KKM				IAmb	IAmb	14 01 29.1	
	comp=Z,57nm,1.0s						
KKM	**Kota Kinabalu**	67.14	285	P	P	14 01 26.5	+0.3
NGJI	**Ngawi**	67.31	269	P	P	14 01 38.9	+12
PCJI	**Pacitan**	67.36	268	P	P	14 01 27.5	+0.1
UGM	**Wanagama**	68.06	268	P	P	14 01 31.4	-0.4
UGM	**Wanagama**	68.06	268	P	P	14 01 31.7	-0.1
UWJI	**Ujung Watu**	68.07	270	P	P	14 01 31.6	-0.2
JSU	**Suzuyama**	68.13	316	P	P	14 01 32.0	+0.2
SMRI	**Semarang**	68.37	269	P	P	14 01 34.0	+0.4
PBKI	**Pangkalan Bun**	68.46	274	P	P	14 01 35.2	+1.0
JHS	**Saijyo**	68.68	320	P	P	14 01 36.0	+1.0
ADK	**Adak**	69.32	2	P	P	14 01 38.0	-0.3
ADK				pmax	pmax		
	comp=Z,201nm,1.4s						
ADK	**Adak**	69.32	2	P	P	14 01 38.0	-0.3
ADK	**Adak**	69.32	2	P	P	14 01 38.3	0.0
STKI	**Sintang**	69.51	277	P	P	14 01 41.2	+0.8
SBUM	**Sibu**	69.59	280	P	P	14 01 41.0	+0.1
SBUM	**Sibu**	69.59	280	P	P	14 01 41.2	+0.3

SBUM				IAmb	IAmb	14 01 43.4	
	comp=Z,69nm,1.2s						
ATKA	Atka Island	69.76	4	P	P	14 01 40.4	-0.6
	comp=Z,150nm,0.9s						
JEW	Eniwo	69.84	331	P	P	14 01 42.5	+0.8
CMJI	Cimerak	70.07	268	P	P	14 01 42.5	-1.2
YULB	Yu-li	70.30	304	P	P	14 01 43.7	-1.2
YULB				IAmb	IAmb	14 01 46.6	
	comp=Z,43nm,1.1s						
JKA	Kamikawa-asahi	70.31	332	P	P	14 01 45.4	+1.0
JKA				IAmb	IAmb	14 01 47.7	
	comp=Z,41nm,0.9s						
ASAJ	Asahikawa	70.31	332	P	P	14 01 45.4	+0.9
ASAJ				pmax	pmax		
	comp=Z,41nm,0.9s						
NACB	Ninganchiao	70.46	304	P	P	14 01 45.5	-0.3
NACB				IAmb	IAmb	14 01 47.0	
	comp=Z,70nm,0.9s						
SSLB	Suanglung	70.77	304	P	P	14 01 46.3	-1.4
SSLB				IAmb	IAmb	14 01 48.2	
	comp=Z,44nm,0.6s						
SSLB	Suanglung	70.77	304	P	P	14 01 46.9	-0.7
TPUB	Ta-pu	70.79	303	P	P	14 01 46.9	-0.8
YHNB	Yeheng	70.88	305	P	P	14 01 48.0	-0.3
YHNB				IAmb	IAmb	14 01 49.8	
	comp=Z,78nm,0.9s						
YHNB	Yeheng	70.88	305	P	P	14 01 48.7	+0.4
KSM	Kuching	71.07	278	P	P	14 01 50.0	+0.4
KSM	Kuching	71.07	278	P	P	14 01 50.2	+0.6
KSM	Kuching	71.07	278	P	P	14 01 50.5	+0.9
LEM	Lembang	71.13	269	P	P	14 01 50.3	+0.2
	comp=Z,150nm,0.8s,baz=98,slow=7.3						
LEM	Lembang	71.13	269	P	P	14 01 50.3	+0.2
CNJI	Cibinong	71.46	268	P	P	14 01 51.8	0.0
CBJI	Citeko	71.97	269	P	P	14 01 54.0	-0.8
DBJI	Dramaga	72.03	269	P	P	14 01 55.3	+0.1
UNV	Unalaska Valle	72.17	8	P	P	14 01 54.2	-0.7
	baz=194						
UNV	Unalaska Valle	72.17	8	P	P	14 01 54.3	-0.7
UNV	Unalaska Valle	72.17	8	P	P	14 01 54.6	-0.4
QSPA	South Pole Qui	72.39	180	P	P	14 01 57.3	+0.9
	comp=Z,141nm,1.1s,baz=33,slow=3.4,SNR=262						
QSPA				S	S	14 10 32.6	+1.4
	comp=Z,2.3nm,1.0s,baz=158,slow=23,SNR=14						
QSPA	South Pole Qui	72.39	180	P	P	14 01 57.1	+0.8
YSS	Yuzh-Sakhalins	72.50	334	*ce*P	P	14 01 58.6	+1.6
YSS				pmax	pmax		
	comp=Z,98nm,1.0s						
SBJI	Serang	72.74	269	P	P	14 02 00.5	+1.3
PET	Petropavlovsk	72.76	347	*e*P	P	14 01 58.2	-0.2
PET				*e*S	S	14 10 36.8	+1.5
PET				*e*SS	SS	14 15 30.6	-3.1
PET	Petropavlovsk	72.76	347	P	P	14 01 58.2	-0.2
PET	Petropavlovsk	72.76	347	P	P	14 01 57.8	-0.6
PEA0B	Petropavlovsk-	73.05	346	P	P	14 02 00.6	+0.5
PEA0B				pmax	pmax		
	comp=Z,88nm,1.3s						
PEA0B	Petropavlovsk-	73.05	346	P	P	14 02 00.6	+0.5
PEA0B				IAmb	IAmb	14 02 02.7	
	comp=Z,88nm,1.3s						
PETK	Petropavlovsk-	73.05	346	P	P	14 01 59.9	-0.3
	comp=Z,21nm,0.9s,baz=116,slow=6.8,SNR=25						
PETK	Petropavlovsk-	73.05	346	P	P	14 02 00.1	0.0
PETK	Petropavlovsk-	73.05	346	P	P	14 02 00.1	0.0
QZH	Quanzhou	73.21	304	P	P	14 02 02.5	+0.9
QZH				pmax	pmax		
	comp=Z,67nm,0.8s						
KSRS	Korea Array	73.47	319	P	P	14 02 03.8	+1.0
	comp=Z,15nm,1.1s,baz=132,slow=6.6,SNR=13						
PPBI	Pangkal Pinang	73.89	273	P	P	14 02 07.1	+1.3
CHNA	Chernabura Isl	74.29	12	P	P	14 02 06.4	-0.6
	baz=200						
KASI	Kota Agung	74.47	269	P	P	14 02 08.0	-1.0
KLSI		74.49	270	P	P	14 02 09.3	+0.2
SDPT	Sand Point	74.61	11	P	P	14 02 08.2	-0.6
	baz=199,SNR=6.0						
SDPT	Sand Point	74.61	11	P	P	14 02 08.2	-0.6
LWLI	Liwa	75.03	269	P	P	14 02 11.9	-0.4
MDSI	Maura Dua	75.07	270	P	P	14 02 10.9	-1.5
USRK	Ussuriysk Ar.	75.53	327	P	P	14 02 15.8	+1.6
	comp=Z,10nm,0.7s,baz=140,slow=3.1,SNR=11						
USRK	Ussuriysk Ar.	75.53	327	P	P	14 02 14.5	+0.3
USRK	Ussuriysk Ar.	75.53	327	P	P	14 02 14.5	+0.3
TYV	Tymovskoe	75.67	337	*e*P	P	14 02 15.7	+0.9
TYV				pmax	pmax		
	comp=Z,300nm,1.9s						
TYV				pmax	pmax		
	comp=Z,50nm,1.0s						
DSRI	Dabo	75.89	274	P	P	14 02 18.1	+1.2
LHSI	Lahat	75.89	270	P	P	14 02 17.3	+0.4
CHGN	Chignik	75.91	12	P	P	14 02 15.6	-0.4
	baz=201						
CHGN	Chignik	75.91	12	P	P	14 02 15.4	-0.5
CHGN				IAmb	IAmb	14 02 19.6	
	comp=Z,57nm,0.8s						
CHIR	Chirikof Islan	76.07	14	P	P	14 02 16.9	0.0
	baz=204						
MNAI	Manna	76.28	270	P	P	14 02 18.9	-0.1
MNAI	Manna	76.28	270	P	P	14 02 19.1	+0.1
JMBI	JAMBI	76.43	273	P	P	14 02 21.5	+1.7
NJ2	Nanjing	76.56	310	*e*P	P	14 02 21.5	+1.4
NJ2				pmax	pmax		
	comp=Z,40nm,1.0s						
KSI	Kapahiang	76.83	270	P	P	14 02 21.1	-1.0
SII	Sitkinak Islan	77.08	14	P	P	14 02 22.5	+0.1
	baz=205						
SII	Sitkinak Islan	77.08	14	P	P	14 02 22.5	+0.1
SII				IAmb	IAmb	14 02 23.9	
	comp=Z,140nm,1.0s						
SII	Sitkinak Islan	77.08	14	P	P	14 02 23.1	+0.7
MASI	Maura Aman, Be	77.31	271	P	P	14 02 23.7	-1.0
SAO	San Andreas Ge	77.36	45	P	P	14 02 25.6	+1.2
SAO				pmax	pmax		
	comp=Z,34nm,1.0s						
SAO	San Andreas Ge	77.36	45	P	P	14 02 25.6	+1.2
PKM	Mcpherson Peak	77.47	47	P	P	14 02 27.4	+2.1
	baz=238,SNR=7.2						
PMPB	Monarch Peak	77.50	45	P	P	14 02 26.6	+1.4
PMPB				IAmb	IAmb	14 02 28.2	
	comp=Z,60nm,1.0s						
HOPS	Hopland Field	77.55	42	P	P	14 02 26.4	+1.0
HOPS				IAmb	IAmb	14 02 28.0	
	comp=Z,60nm,1.2s						
SMMC	Simmler	77.57	47	P	P	14 02 27.6	+2.0
	baz=238,SNR=5.3						
KMRM	Mail Ridge	77.86	41	P	P	14 02 27.9	+0.8
KMRM				IAmb	IAmb	14 02 30.2	
	comp=Z,81nm,1.0s						
OHAK	Old Harbor	77.89	15	P	P	14 02 26.9	+0.3
	baz=206						
OHAK	Old Harbor	77.89	15	P	P	14 02 26.8	+0.1
RGRI	Rengat	78.06	273	P	P	14 02 30.0	+1.3
GRNR	Gornyy	78.10	333	⇓*i*P	P	14 02 29.1	+1.1
GRNR				pmax	pmax		
	comp=Z,50nm,1.0s						
GRNR				MLR	MLR		
	comp=E,230nm,20.0s						
GRNR				MLR	MLR		
	comp=N,130nm,16.0s						
GRNR				MLR	MLR		
	comp=Z,240nm,13.0s						
ARVC	Arvin	78.28	47	P	P	14 02 30.5	+1.2
	baz=239,SNR=12						
MWC	Mount Wilson	78.36	48	IAmb	IAmb	14 02 32.3	
	comp=Z,38nm,0.8s						
KRJI	Kerinci	78.37	272	P	P	14 02 30.9	+0.5
109C	Camp Elliot, M	78.38	50	P	P	14 02 30.9	+1.0
	baz=240						
O02D	Mt. Diablo Mer	78.41	41	P	P	14 02 31.6	+1.6
	baz=235,SNR=13						
VES	Vestal, Richgr	78.48	46	P	P	14 02 31.1	+0.8
	baz=238,SNR=24						
KRMB	Red Mountain	78.50	40	P	P	14 02 31.8	+1.3
KDAK	Kodiak Island	78.56	15	P	P	14 02 30.3	0.0
KDAK				pmax	pmax		
	comp=Z,69nm,1.1s						
KDAK	Kodiak Island	78.56	15	P	P	14 02 30.6	+0.4
	baz=207						
KDAK	Kodiak Island	78.56	15	P	P	14 02 30.3	0.0
KDAK				IAmb	IAmb	14 02 39.3	
	comp=Z,69nm,1.1s						
BAR	Barrett	78.59	50	P	P	14 02 31.6	+0.5
BFSC	Mount Baldy Ra	78.66	49	P	P	14 02 32.3	+0.7
	baz=240,SNR=8.8						
MURC	Murrieta	78.67	49	P	P	14 02 32.5	+1.1
	baz=240,SNR=5.4						
EDW2	Edwards Air Fo	78.74	48	P	P	14 02 33.0	+1.1
	baz=239,SNR=19						
ISA	Isabella, Lake	78.81	47	P	P	14 02 33.4	+1.2
	baz=239,SNR=21						
ISA	Isabella, Lake	78.81	47	IAmb	IAmb	14 02 34.9	
	comp=Z,41nm,0.9s						
CN2	Changchun	78.86	323	*e*P	P	14 02 33.0	+0.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MONP2	Monument Peak	78.88	50	P	P	14 02 34.1	+1.2
	baz=240,SNR=8.8						
N02D	Trinity Center	78.92	41	P	P	14 02 34.1	+1.5
	baz=235,SNR=12						
IKP	In-Ko-Pah, Jac	78.99	51	P	P	14 02 34.6	+1.4
	baz=241,SNR=6.0						
L02E	Cave Junction	79.06	39	P	P	14 02 34.7	+1.4
	baz=234						
M02C	Callahan	79.07	40	P	P	14 02 35.0	+1.5
	baz=235,SNR=16						
O03E	Paynes Creek	79.10	41	P	P	14 02 34.4	+0.7
	baz=236,SNR=10.0						
KLR	Kul'dur	79.10	330	P	P	14 02 34.2	+0.9
	comp=Z,12nm,0.8s,baz=132,slow=6.0						
KLR	Kul'dur	79.10	330	*ce*P	P	14 02 34.9	+1.6
KLR				pmax	pmax		
	comp=Z,31nm,1.0s						
WHN	Wuhan	79.18	307	⇓P	P	14 02 35.8	+1.6
WHN				pmax	pmax		
	comp=Z,130nm,1.1s						
PFO	Pinyon Flats O	79.21	50	P	P	14 02 35.7	+1.3
	comp=Z,5.2nm,0.8s,baz=238,slow=5.8,SNR=7.0						
PFO	Pinyon Flats O	79.21	50	P	P	14 02 36.1	+1.6
	baz=240						
JRMM	Jerantut	79.25	278	P	P	14 02 35.0	+0.1
LRMC	Laurel Mtn Rad	79.27	47	P	P	14 02 35.7	+1.0
	baz=239,SNR=17						
K02D	Willamette Mer	79.34	39	P	P	14 02 35.9	+1.0
	baz=234						
Q19K	Cape Douglas,	79.35	14	P	P	14 02 34.4	-0.1
	baz=206						
Q19K	Cape Douglas,	79.35	14	P	P	14 02 34.4	-0.1
YBH	Yreka Blue Hor	79.35	40	P	P	14 02 36.3	+1.3
	comp=Z,20nm,0.7s,baz=218,slow=2.2,SNR=51						
YBH				pP	pP	14 04 44.3	+0.7
	comp=Z,3.9nm,0.9s,baz=343,slow=1.6,SNR=4.5						
SWSC	Sam W. Stewart	79.36	50	P	P	14 02 35.9	+0.8
	baz=241,SNR=5.3						
MDPB	Devils Postpil	79.42	45	IAmb	IAmb	14 02 38.2	
	comp=Z,42nm,0.9s						
P18K	Big Mountain,	79.42	13	P	P	14 02 34.4	-0.4
	baz=204,SNR=15						
P18K	Big Mountain,	79.42	13	IAmb	IAmb	14 02 36.2	
	comp=Z,90nm,0.8s						
J01E	Myrtle Point	79.46	38	P	P	14 02 36.5	+1.2
	baz=234						
CWC	Cottonwood Cre	79.48	46	P	P	14 02 36.8	+1.0
	baz=239						
BKNI	Bangkinang	79.50	274	P	P	14 02 37.1	+0.8
PPSI	Pulau Pagai	79.55	270	P	P	14 02 38.1	+1.6
MLAC	Mammoth, Mammo	79.59	45	P	P	14 02 38.4	+1.9
	baz=238,SNR=9.5						
PDSI	Padang	79.67	272	P	P	14 02 36.1	-1.1
MPK	Martis Peak	79.69	43	IAmb	IAmb	14 02 39.6	
	comp=Z,117nm,1.1s						
MPMC	Manual Prospec	79.70	47	P	P	14 02 38.1	+1.1
	baz=239,SNR=26						
BELC	Belle Mtn. Jos	79.73	49	P	P	14 02 38.4	+1.2
	baz=241,SNR=8.7						
GSC	Goldstone, Bar	79.80	48	P	P	14 02 38.4	+1.0
	baz=240,SNR=12						
SLBS	Sierra La Lagu	79.84	61	P	P	14 02 39.9	+2.0
O18K	Koktuh Hills	79.85	12	P	P	14 02 37.0	0.0
	baz=204,SNR=31						
PNTR	Pine Nut	79.86	43	IAmb	IAmb	14 02 40.5	
	comp=Z,79nm,0.8s						
PPI	Padang Panjang	79.88	273	P	P	14 02 38.6	+0.4
L04D	Klamath Falls	79.88	40	P	P	14 02 38.8	+1.1
	baz=235,SNR=11						
HEC	Hector,Ludlow	79.90	49	P	P	14 02 39.0	+1.0
	baz=240,SNR=21						
M04C	Macdoel	79.92	40	P	P	14 02 39.1	+1.2
	baz=235,SNR=7.4						
BC3	Big Chuckawall	79.96	50	P	P	14 02 39.8	+1.4
	baz=241,SNR=7.8						
YERR	Yerington	80.03	44	IAmb	IAmb	14 02 41.2	
	comp=Z,53nm,0.8s						
I02E	Swisshome, OR	80.07	37	P	P	14 02 39.8	+1.3
	baz=234						
P19K	Oil Pt	80.09	13	P	P	14 02 38.2	-0.1
	baz=206						
P19K	Oil Pt	80.09	13	P	P	14 02 38.1	-0.1
I03D	Drain, OR	80.11	38	P	P	14 02 39.6	+0.9
	baz=234						
GLA	Glamis	80.13	51	P	P	14 02 41.0	+1.8
	baz=241						
LHV	Little Huntoon	80.14	45	P	P	14 02 39.6	+0.7
LHV				IAmb	IAmb	14 02 42.0	
	comp=Z,69nm,1.1s						
PAHR	Pah Rah Range	80.33	43	IAmb	IAmb	14 02 42.7	
	comp=Z,55nm,1.0s						
FURC	Furnace Creek,	80.34	47	P	P	14 02 41.4	+1.4
	baz=240						
O19K	Port Alsworth	80.35	13	P	P	14 02 39.3	-0.2
	baz=205,SNR=24						
GMRC	Granite Mounta	80.36	49	P	P	14 02 41.5	+1.1
	baz=241,SNR=18						
NVAR	Mina Array Bea	80.36	45	P	P	14 02 41.5	+1.0
	comp=Z,18nm,0.7s,baz=227,slow=8.5,SNR=105						
NVAR				pP	pP	14 04 50.0	+0.5
	comp=Z,6.6nm,1.0s,baz=229,slow=9.2,SNR=9.6						
NVAR				PKKPbc	PKKPbc	14 21 20.0	+1.8
	comp=Z,0.2nm,0.6s,baz=64,slow=6.8,SNR=3.6						
NVAR	Mina Array Bea	80.36	45	P	P	14 02 41.3	+0.9
IRM	Iron Mountain	80.43	50	P	P	14 02 42.2	+1.5
	baz=241,SNR=13						
CNPM	China Poot	80.44	14	P	P	14 02 39.9	-0.1
CNPM				IAmb	IAmb	14 02 41.4	
	comp=Z,55nm,1.0s						
HOM	Homer	80.46	14	P	P	14 02 41.2	+1.1
	baz=207						
NV11	Mina Array Sit	80.47	45	IAmb	IAmb	14 02 43.5	
	comp=Z,67nm,1.1s						
SHOC	Shoshone, Teco	80.47	48	P	P	14 02 41.6	+0.8
	baz=240,SNR=7.8						
TUQ	Turquoise Moun	80.49	48	P	P	14 02 42.3	+1.3
	baz=240,SNR=9.1						
MA2	Magadan	80.55	345	P	P	14 02 40.5	-0.1
	comp=Z,24nm,0.8s,baz=132,slow=8.8,SNR=7.6						
MA2	Magadan	80.55	345	*i* P	P	14 02 40.3	-0.3
MA2				pmax	pmax		
	comp=Z,20nm,0.7s						
J04D	Umpqua Nationa	80.58	39	P	P	14 02 42.8	+1.4
	baz=235						
BUCK	Buck Mountain	80.62	38	IAmb	IAmb	14 02 44.2	
	comp=Z,64nm,1.1s						
COR	Corvallis	80.66	37	P	P	14 02 42.8	+1.2
COR				pmax	pmax		
	comp=Z,41nm,0.9s						
COR	Corvallis	80.66	37	P	P	14 02 42.8	+1.2
COR				IAmb	IAmb	14 02 44.3	
	comp=Z,41nm,0.9s						
I04A	Tendick Farm,	80.72	38	P	P	14 02 42.6	+0.6
	baz=235,SNR=12						
IPM	Ipoh	80.81	278	P	P	14 02 44.0	+0.9
IPM	Ipoh	80.81	278	P	P	14 02 43.5	+0.5
IPM				IAmb	IAmb	14 02 45.3	
	comp=Z,98nm,0.9s						
IPM	Ipoh	80.81	278	P	P	14 02 43.9	+0.9
KVN	Kaiserville	80.82	44	IAmb	IAmb	14 02 45.2	
	comp=Z,51nm,1.0s						
SISI	Saibi	80.86	272	P	P	14 02 44.8	+1.5
MOD	Modoc Plateau	80.94	41	IAmb	IAmb	14 02 45.7	
	comp=Z,54nm,0.9s						
H04D	Lebanon	80.95	38	P	P	14 02 44.4	+1.3
	baz=234,SNR=7.0						
K05A	Summer Lake	81.03	40	IAmb	IAmb	14 02 46.6	
	comp=Z,61nm,0.8s						
MNSI	Mandailing Nat	81.03	274	P	P	14 02 43.5	-0.7
G03D	McMinnville, O	81.06	37	P	P	14 02 44.9	+1.3
	baz=234,SNR=5.7						
214A	Organ Pipe Nat	81.13	53	P	P	14 02 46.0	+1.7
	baz=243,SNR=14						
214A	Organ Pipe Nat	81.13	53	IAmb	IAmb	14 02 47.5	
	comp=Z,52nm,1.2s						
J05D	Fort Rock, OR	81.14	39	P	P	14 02 45.6	+1.3
	baz=236,SNR=83						
PDMCI	Parker Dam,Lak	81.23	50	P	P	14 02 46.1	+1.4
	baz=242,SNR=13						
H04A	Detroit Lake	81.37	38	IAmb	IAmb	14 02 47.2	
	comp=Z,56nm,1.1s						
SEW	Seward	81.38	15	P	P	14 02 45.1	+0.2
	baz=210						
KULM	Kulim	81.42	278	P	P	14 02 47.0	+0.8
KULM	Kulim	81.42	278	IAmb	IAmb	14 02 48.6	
	comp=Z,57nm,1.0s						
GAMB	Gambell	81.44	4	P	P	14 02 45.9	+0.9
	baz=188						
PINE	Pine Mountain	81.60	39	IAmb	IAmb	14 02 49.4	
	comp=Z,73nm,0.8s						
I05D	Terrebonne, OR	81.67	38	P	P	14 02 48.0	+1.2
	baz=235,SNR=22						
E03A	Lebam	81.68	36	IAmb	IAmb	14 02 49.2	
	comp=Z,65nm,0.7s						
SPCR	Spurr Chakacha	81.71	13	P	P	14 02 45.7	-0.9
	baz=207,SNR=6.2						
F04D	Rainier, OR	81.71	36	P	P	14 02 48.3	+1.5
	baz=234						
M19K	Big River Lodg	81.89	12	P	P	14 02 47.3	-0.1
	baz=205,SNR=12						
M19K	Big River Lodg	81.89	12	IAmb	IAmb	14 02 49.3	
	comp=Z,30nm,0.7s						
F04A	Amboy	81.96	37	IAmb	IAmb	14 02 50.3	
	comp=Z,81nm,1.2s						
L19K	White Mountain	82.06	12	P	P	14 02 48.9	+0.6
	baz=204,SNR=27						
L19K	White Mountain	82.06	12	IAmb	IAmb	14 02 50.7	
	comp=Z,61nm,0.8s						
BMN	Battle Mountai	82.12	43	IAmb	IAmb	14 02 51.9	
	comp=Z,48nm,0.9s						
R11A	Troy Canyon, C	82.16	46	P	P	14 02 50.2	+0.6
	baz=240,SNR=24						
G05D	Wamic, OR	82.19	38	P	P	14 02 50.0	+0.6
	baz=235,SNR=9.5						
E04D	Cinebar	82.24	36	P	P	14 02 51.0	+1.5
	baz=234,SNR=14						
WVOR	Wild Horse Val	82.27	41	IAmb	IAmb	14 02 52.5	
	comp=Z,44nm,0.8s						
PSI	Prapat	82.27	275	P	P	14 02 50.0	-0.7
	comp=Z,29nm,0.8s,baz=82,slow=2.3,SNR=30						
PSI				pP	pP	14 05 00.3	-0.1
	comp=Z,1.2nm,0.3s,baz=158,slow=3.0,SNR=1.8						
PSI				sP	sP	14 06 04.7	+1.4
	comp=Z,1.6nm,0.3s,baz=264,slow=4.1,SNR=2.0						
PWL	Port Wells	82.31	15	P	P	14 02 49.1	-0.5
	baz=210						
F05D	White Salmon	82.48	37	P	P	14 02 51.7	+0.9
	baz=235,SNR=12						
D04E	Lakebay	82.49	35	P	P	14 02 52.4	+1.7
	baz=234						
BJI	Beijing	82.50	316	P	P	14 02 51.5	+0.5
BJI				S	S	14 12 20.0	+2.4
BJI				pmax	pmax		
	comp=Z,60nm,1.3s						
L20K	Farewell, AK	82.52	12	P	P	14 02 50.4	-0.2
	baz=205,SNR=8.4						
D03D	Eldon	82.53	35	P	P	14 02 52.0	+1.0
	baz=234,SNR=14						
TTA	Tatalina	82.53	11	P	P	14 02 50.9	+0.1
	baz=203,SNR=8.7						
I07A	Izee	82.62	39	IAmb	IAmb	14 02 54.3	
	comp=Z,43nm,0.8s						
GLI	Glacier Island	82.64	16	P	P	14 02 51.1	-0.1
	baz=212						
M22K	Willow	82.67	14	P	P	14 02 51.8	+0.6
	baz=209,SNR=6.4						
CLRS	Cowichan Lake	82.74	34	P	P	14 02 52.5	+0.6
PMR	Palmer	82.75	14	P	P	14 02 51.5	-0.2
	baz=210,SNR=5.1						
KNK	Knik Glacier	82.76	15	P	P	14 02 51.6	-0.2
	baz=210						
TUC	Tucson	82.82	53	P	P	14 02 54.2	+1.3
TUC				pmax	pmax		
	comp=Z,48nm,1.2s						
TUC	Tucson	82.82	53	P	P	14 02 54.7	+1.8
	baz=244						
TUC	Tucson	82.82	53	P	P	14 02 54.2	+1.3
TUC				IAmb	IAmb	14 02 56.3	
	comp=Z,48nm,1.1s						
TSI	Tuntungan	82.83	276	P	P	14 02 53.1	-0.2
J08A	Circle Bar Ran	82.86	40	IAmb	IAmb	14 02 55.3	
	comp=Z,71nm,1.1s						
BBB	Bella Bella	82.88	29	P	P	14 02 53.3	+0.7
	comp=Z,33nm,0.7s,baz=281,slow=3.6,SNR=30						
BBB	Bella Bella	82.88	29	IAmb	IAmb	14 02 54.6	
	comp=Z,35nm,0.8s						
D05A	Enumclaw	82.93	36	IAmb	IAmb	14 02 55.7	
	comp=Z,97nm,1.1s						
GHO	Glory Hole Cre	82.96	14	IAmb	IAmb	14 02 54.5	
	comp=Z,76nm,0.8s						
GSI	Gunungsitoli	83.10	274	P	P	14 02 55.6	+1.0
GSI	Gunungsitoli	83.10	274	P	P	14 02 55.3	+0.7
SML	Sawmill	83.13	15	P	P	14 02 53.6	-0.1
	baz=210						
SML	Sawmill	83.13	15	P	P	14 02 53.4	-0.4
SML				IAmb	IAmb	14 03 15.1	
	comp=Z,42nm,1.1s						
SEY	Seymchan	83.19	348	P	P	14 02 54.4	+0.5
	comp=Z,38nm,0.8s,baz=156,slow=5.6,SNR=50						
DIV	Divide	83.20	16	IAmb	IAmb	14 02 55.2	
	comp=Z,57nm,0.8s						
CUT	Chulitna	83.21	13	P	P	14 02 53.5	-0.5
	baz=209						
PPLA	Purkeypile	83.23	12	P	P	14 02 53.7	-0.6
	baz=207						
PPLA	Purkeypile	83.23	12	P	P	14 02 53.1	-1.2
K20K	Telida	83.28	11	P	P	14 02 54.5	+0.2
	baz=205,SNR=11						
K20K	Telida	83.28	11	IAmb	IAmb	14 02 55.8	
	comp=Z,44nm,1.1s						
BMRM	Bremner River	83.37	17	P	P	14 02 54.9	0.0
	baz=214						
BMRM	Bremner River	83.37	17	IAmb	IAmb	14 02 56.2	
	comp=Z,52nm,1.0s						
SCM	Sheep Creek Mo	83.40	15	P	P	14 02 55.0	-0.1
	baz=211						
KNB	Kanab	83.44	48	IAmb	IAmb	14 02 59.0	
	comp=Z,66nm,1.2s						
KLU	Klutina	83.46	16	P	P	14 02 55.4	0.0
	baz=213						
MESA	MESA	83.48	18	P	P	14 02 56.2	+0.5
	baz=216						
MESA	MESA	83.48	18	IAmb	IAmb	14 02 58.1	
	comp=Z,91nm,1.0s						
B05A	Bryant	83.49	35	P	P	14 02 56.5	+0.8
	baz=234,SNR=14						
GYA	Guiyang	83.53	300	⇑*i*P	P	14 02 58.3	+1.7
GYA				pmax	pmax		
	comp=Z,41nm,1.2s						
MAW	Mawson	83.54	200	P	P	14 02 56.8	+1.0
	comp=Z,38nm,0.8s,baz=135,slow=4.0,SNR=54						
MAW				pP	pP	14 05 06.5	+1.1
	comp=Z,4.0nm,0.9s,baz=75,slow=21,SNR=2.4						
MAW	Mawson	83.54	200	P	P	14 02 56.8	+1.0
	baz=83,SNR=58						
MAW	Mawson	83.54	200	P	P	14 02 56.7	+1.0
MAW				pmax	pmax		
	comp=Z,17nm,1.2s						
MAW	Mawson	83.54	200	P	P	14 02 56.7	+1.0
U15A	North Rim	83.55	49	IAmb	IAmb	14 02 59.7	
	comp=Z,35nm,0.8s						
319A	Douglas	83.58	54	P	P	14 02 58.0	+1.3
319A				IAmb	IAmb	14 02 59.2	
	comp=Z,79nm,1.5s						
ELK	Elko	83.58	44	P	P	14 02 57.5	+0.8
	comp=Z,7.2nm,0.5s,baz=252,slow=5.9,SNR=35						
ELK				pP	pP	14 05 07.1	+0.1
	comp=Z,2.9nm,1.0s,baz=189,slow=7.0,SNR=5.2						
CRQM	Cirque	83.61	17	IAmb	IAmb	14 02 57.6	
	comp=Z,43nm,0.9s						
G08A	Pilot Rock	83.61	38	IAmb	IAmb	14 02 58.9	
	comp=Z,41nm,0.9s						
CRQE	Cirque	83.61	17	P	P	14 02 56.3	+0.1
	baz=215						
CAST	Castle Rocks	83.72	12	P	P	14 02 55.4	-1.2
	baz=207						
E07A	Sunnyside	83.78	37	IAmb	IAmb	14 02 59.7	
	comp=Z,45nm,0.9s						
WUAZ	Wupatki	83.80	50	P	P	14 02 59.0	+1.1
	baz=243						
PNL	Peninsula	83.86	19	P	P	14 02 57.7	+0.4
	baz=219						
HAWA	Hanford	83.87	37	IAmb	IAmb	14 03 00.1	
	comp=Z,58nm,0.9s						
N25K	Chitina, Valde	83.91	16	P	P	14 02 57.6	0.0

	baz=214,SNR=14						
N25K	**Chitina, Valde**	**83.91**	**16**	IAmb	IAmb	14 02 58.9	
	comp=Z,61nm,0.8s						
M24K	**Tolsona, Glenn**	**83.92**	**15**	P	**P**	**14 02 58.0**	**+0.4**
	baz=212,SNR=6.5						
PINM	**Pinnacle**	**83.92**	**19**	P	**P**	**14 02 59.1**	**+1.4**
	baz=218						
TABL	**Table Mountain**	**83.93**	**18**	IAmb	IAmb	14 02 59.4	
	comp=Z,59nm,0.8s						
WRAK	**Wrangell Islan**	**83.94**	**24**	P	**P**	**14 02 58.3**	**+0.6**
	baz=225						
WRAK	**Wrangell Islan**	**83.94**	**24**	IAmb	IAmb	14 02 60.0	
	comp=Z,30nm,1.0s						
WAT6	**Susitna Watana**	**83.94**	**14**	P	**P**	**14 02 57.4**	**-0.4**
	baz=211						
GLB	**Gilahina Butte**	**83.98**	**17**	IAmb	IAmb	14 02 59.5	
	comp=Z,39nm,0.6s						
J20K	**Nowinta River**	**84.01**	**11**	P	**P**	**14 02 58.1**	**+0.2**
	baz=205,SNR=8.5						
GCSA	**Galena City Sc**	**84.06**	**10**	P	**P**	**14 02 58.4**	**+0.3**
	baz=202						
TPTI		**84.07**	**275**	P	**P**	**14 03 00.0**	**+0.6**
CHUM	**Lake Minchumin**	**84.09**	**12**	P	**P**	**14 02 57.6**	**-0.7**
	baz=207						
TRF	**Thorofare Moun**	**84.12**	**13**	P	**P**	**14 02 58.1**	**-0.6**
	baz=208						
TRF	**Thorofare Moun**	**84.12**	**13**	IAmb	IAmb	14 03 00.4	
	comp=Z,60nm,0.9s						
MCARA	**McCarthy VSAT**	**84.15**	**17**	P	**P**	**14 02 58.6**	**-0.1**
	baz=215						
E08A	**Dider Farm, El**	**84.20**	**37**	IAmb	IAmb	14 03 01.6	
	comp=Z,45nm,0.8s						
ZEA	**Zeya**	**84.21**	**332**	*e*P	**P**	**14 03 00.6**	**+1.5**
ZEA				pmax	pmax		
	comp=N,20nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,30nm,1.2s						
BARN	**Barnard Glacie**	**84.28**	**18**	IAmb	IAmb	14 03 01.1	
	comp=Z,34nm,0.8s						
LOGN	**Logan Glacier**	**84.28**	**18**	IAmb	IAmb	14 03 00.9	
	comp=Z,28nm,0.8s						
CTG	**Chitna Glacier**	**84.29**	**18**	P	**P**	**14 02 59.6**	**+0.1**
	baz=217						
CTGM	**Chitina Glacie**	**84.29**	**18**	IAmb	IAmb	14 03 01.0	
	comp=Z,32nm,0.9s						
RND	**Reindeer**	**84.40**	**14**	IAmb	IAmb	14 03 01.0	
	comp=Z,57nm,1.1s						
HARP	**HAARP**	**84.42**	**16**	P	**P**	**14 03 00.4**	**+0.3**
	baz=213,SNR=5.5						
DHY	**Denali Highway**	**84.45**	**14**	P	**P**	**14 03 00.2**	**-0.1**
	baz=211						
MFID	**Camas Ranch**	**84.54**	**41**	IAmb	IAmb	14 03 03.5	
	comp=Z,36nm,1.0s						
D08A	**Wollman Farm,**	**84.59**	**37**	IAmb	IAmb	14 03 03.5	
	comp=Z,39nm,0.8s						
MCK	**McKinley**	**84.67**	**13**	P	**P**	**14 03 00.6**	**-0.5**
	baz=210						
MCK	**McKinley**	**84.67**	**13**	IAmb	IAmb	14 03 03.4	
	comp=Z,35nm,1.1s						
E09A	**Wood Farm, Sta**	**84.74**	**38**	IAmb	IAmb	14 03 03.9	
	comp=Z,35nm,1.1s						
PAX	**Paxson**	**84.83**	**15**	P	**P**	**14 03 01.5**	**-0.6**
	baz=213						
W18A	**Petrified Fore**	**84.83**	**51**	P	**P**	**14 03 03.8**	**+0.9**
	baz=244						
XAN	**Xi'an**	**84.85**	**308**	P	**P**	**14 03 04.0**	**+1.2**
XAN				pmax	pmax		
	comp=Z,96nm,1.3s						
DUG	**Dugway, Tooele**	**84.94**	**45**	P	**P**	**14 03 03.7**	**+0.5**
	baz=242,SNR=6.6						
M26K	**Nabesna, AK**	**84.99**	**16**	P	**P**	**14 03 03.1**	**+0.2**
	baz=215,SNR=7.7						
F10A	**Beach Ranch, E**	**85.00**	**39**	IAmb	IAmb	14 03 05.2	
	comp=Z,54nm,0.9s						
B08A	**Colville Reser**	**85.07**	**36**	IAmb	IAmb	14 03 05.1	
	comp=Z,25nm,0.8s						
MLSI	**Meulaboh, Aceh**	**85.12**	**276**	P	**P**	**14 03 04.9**	**+0.4**
YUK3	**Moose Creek**	**85.20**	**18**	P	**P**	**14 03 04.0**	**0.0**
	baz=218,SNR=10						
121A	**Cookes Peak, D**	**85.21**	**54**	P	**P**	**14 03 06.3**	**+1.6**
	baz=246,SNR=9.5						
M27K	**Edge Creek, AK**	**85.26**	**17**	P	**P**	**14 03 04.5**	**+0.3**
	baz=216,SNR=6.7						
M27K	**Edge Creek, AK**	**85.26**	**17**	IAmb	IAmb	14 03 06.0	
	comp=Z,30nm,0.9s						
PLID	**Pearl Lake**	**85.28**	**40**	IAmb	IAmb	14 03 08.0	
	comp=Z,41nm,1.2s						
I21K	**Tanana**	**85.32**	**12**	P	**P**	**14 03 04.0**	**-0.2**
	baz=207,SNR=6.8						
I21K	**Tanana**	**85.32**	**12**	P	**P**	**14 03 03.9**	**-0.4**
HYT	**Haines Junctio**	**85.35**	**19**	P	**P**	**14 03 05.1**	**+0.5**
	baz=220						
C09A	**Chrisman Ranch**	**85.36**	**37**	IAmb	IAmb	14 03 06.9	
	comp=Z,29nm,0.9s						
NEA2	**Nenana**	**85.39**	**13**	P	**P**	**14 03 03.4**	**-1.2**
	baz=210						
L26K	**Log Cabin Wild**	**85.41**	**16**	P	**P**	**14 03 04.8**	**0.0**
	baz=215,SNR=8.4						
MLY	**Manley**	**85.43**	**12**	P	**P**	**14 03 03.8**	**-1.1**
	baz=208						
HLID	**Hailey**	**85.50**	**42**	P	**P**	**14 03 07.0**	**+1.2**
	baz=241						
HLID	**Hailey**	**85.50**	**42**	IAmb	IAmb	14 03 08.6	
	comp=Z,26nm,1.0s						
BVCY	**Beaver Creek**	**85.59**	**17**	P	**P**	**14 03 06.1**	**+0.5**
	baz=217						
H21K	**Melozitna Rive**	**85.60**	**11**	P	**P**	**14 03 05.7**	**+0.1**
	baz=206						
TMUT	**Trail Mountain**	**85.62**	**47**	IAmb	IAmb	14 03 11.1	
	comp=Z,73nm,1.5s						
RIDG	**Independent Ri**	**85.63**	**15**	P	**P**	**14 03 05.6**	**-0.2**
	baz=214						
RIDG	**Independent Ri**	**85.63**	**15**	IAmb	IAmb	14 03 07.0	
	comp=Z,27nm,1.0s						
HVU	**Hansel Valley**	**85.71**	**44**	IAmb	IAmb	14 03 09.4	
	comp=Z,32nm,0.8s						
IMAR	**Indian Mountai**	**85.73**	**10**	P	**P**	**14 03 06.2**	**0.0**
I23K	**Minto, Yukon-K**	**85.81**	**13**	P	**P**	**14 03 05.7**	**-0.9**
	baz=209						
L27K	**Beaver Creek,**	**85.84**	**16**	P	**P**	**14 03 06.8**	**0.0**
	baz=216						
BCAR	**Beaver Creek A**	**85.86**	**16**	P	**P**	**14 03 06.1**	**-0.9**
MDM	**Murphy Dome**	**85.89**	**13**	IAmb	IAmb	14 03 07.3	
	comp=Z,28nm,0.9s						
TCOL	**CIGO, UAF Yank**	**85.89**	**13**	P	**P**	**14 03 06.3**	**-0.7**
	baz=211						
COLA	**College**	**85.89**	**13**	P	**P**	**14 03 06.4**	**-0.5**
COLA				pmax	pmax		
	comp=Z,41nm,1.1s						
COLA	**College**	**85.89**	**13**	P	**P**	**14 03 06.4**	**-0.5**
COLA				IAmb	IAmb	14 03 07.4	
	comp=Z,41nm,1.1s						
HHC	**Hu-ho-hao-te**	**85.97**	**315**	*e*P	**P**	**14 03 09.3**	**+1.2**
HHC				SKS	**SKSac**	**14 12 32.8**	**-2.8**
HHC				S	**ScS**	**14 12 55.5**	**-1.5**
HHC				pmax	pmax		
	comp=Z,67nm,1.2s						
HHC				pmax	pmax		
	comp=Z,320nm,6.0s						
SRU	**San Rafael Swe**	**86.01**	**47**	IAmb	IAmb	14 03 10.8	
	comp=Z,20nm,0.7s						
IL31		**86.02**	**14**	IAmb	IAmb	14 03 08.1	
	comp=Z,28nm,1.1s						
ILAR	**Eielson Array**	**86.02**	**14**	P	**P**	**14 03 06.6**	**-1.0**
	comp=Z,12nm,0.8s,baz=226,slow=5.8,SNR=146						
ILAR				pP	**pP**	**14 05 19.4**	**+0.4**
	comp=Z,6.5nm,1.0s,baz=229,slow=6.2,SNR=11						
SCRK	**Sand Creek**	**86.04**	**15**	P	**P**	**14 03 07.9**	**+0.1**
	baz=214						
SCRK	**Sand Creek**	**86.04**	**15**	IAmb	IAmb	14 03 08.5	
	comp=Z,47nm,1.5s						
BILL	**Bilibino**	**86.04**	**355**	*ce*P	**P**	**14 03 07.9**	**+0.3**
BILL				*i* S	**S**	**14 12 47.4**	**-3.2**
BILL				pmax	pmax		
	comp=Z,41nm,0.9s						
BILL	**Bilibino**	**86.04**	**355**	P	**P**	**14 03 08.1**	**+0.5**
BILL				IAmb	IAmb	14 03 09.5	
	comp=Z,42nm,1.0s						
WHY	**Whitehorse**	**86.08**	**21**	P	**P**	**14 03 08.6**	**+0.5**
	baz=223,SNR=6.5						
POKR	**Poker Plat Res**	**86.20**	**13**	P	**P**	**14 03 07.5**	**-1.0**
	baz=211						
POKR	**Poker Plat Res**	**86.20**	**13**	IAmb	IAmb	14 03 09.5	
	comp=Z,29nm,1.0s						
J25K	**Salcha River,**	**86.23**	**14**	P	**P**	**14 03 08.3**	**-0.4**
	baz=213,SNR=15						
DLBC	**Dease Lake**	**86.25**	**24**	P	**P**	**14 03 08.9**	**+0.1**
	comp=Z,19nm,1.0s,baz=228,slow=4.0,SNR=23						
DLBC	**Dease Lake**	**86.25**	**24**	IAmb	IAmb	14 03 11.2	
	comp=Z,28nm,1.0s						
NEW	**Newport**	**86.26**	**37**	P	**P**	**14 03 09.4**	**+0.2**
	comp=Z,8.3nm,0.8s,baz=239,slow=4.4,SNR=24						
NEW	**Newport**	**86.26**	**37**	P	**P**	**14 03 09.3**	**+0.1**
	baz=238,SNR=15						
KMI	**Kunming**	**86.30**	**298**	⇓P	**P**	**14 03 11.5**	**+1.4**
KMI				pP	pwP	14 05 23.5	-1.0
KMI				sP	sP	14 06 25.3	+1.9
KMI				SKS	**SKSac**	**14 12 36.5**	**-2.1**
KMI				S	**S**	**14 12 56.5**	**+1.1**
KMI				SS	**SS**	**14 18 59.0**	**+4.1**
KMI				pmax	pmax		
	comp=Z,55nm,1.1s						
KMI				pmax	pmax		
	comp=Z,480nm,4.6s						
N31M	**Braeburn, Yuko**	**86.40**	**20**	P	**P**	**14 03 10.5**	**+1.0**
	baz=222						
P33M	**Teslin, Yukon**	**86.46**	**22**	P	**P**	**14 03 11.2**	**+1.4**
	baz=225						
J26L	**Joseph Creek**	**86.58**	**15**	P	**P**	**14 03 10.8**	**+0.5**
	baz=215,SNR=26						
MVCO	**Mesa Verde**	**86.63**	**49**	P	**P**	**14 03 12.1**	**+0.7**
	baz=245						
H24K	**Noodor Dome**	**86.72**	**13**	P	**P**	**14 03 09.7**	**-1.2**
	baz=211						
MNTX	**Cornudas Mount**	**86.75**	**55**	P	**P**	**14 03 13.2**	**+1.3**
	baz=247,SNR=22						
M30M	**Minto, Yukon**	**86.91**	**19**	P	**P**	**14 03 12.0**	**+0.1**
	baz=221,SNR=13						
MCMT	**McKenzie Canyo**	**87.10**	**41**	P	**P**	**14 03 13.6**	**+0.1**
ANMO	**Albuquerque**	**87.20**	**52**	P	**P**	**14 03 15.0**	**+0.9**
	comp=Z,8.5nm,0.8s,baz=232,slow=4.9,SNR=35						
ANMO				pP	**pP**	**14 05 27.3**	**+1.3**
	comp=Z,3.6nm,1.0s,baz=226,slow=6.1,SNR=6.0						
ANMO	**Albuquerque**	**87.20**	**52**	P	**P**	**14 03 15.1**	**+0.9**
ANMO				pmax	pmax		
	comp=Z,21nm,1.1s						
ANMO	**Albuquerque**	**87.20**	**52**	P	**P**	**14 03 15.0**	**+0.9**
	baz=246						
ANMO	**Albuquerque**	**87.20**	**52**	P	**P**	**14 03 15.1**	**+0.9**
TXAR	**Lajitas Array**	**87.22**	**58**	P	**P**	**14 03 16.0**	**+1.8**
	comp=Z,25nm,1.1s,baz=213,slow=4.3,SNR=95						
TXAR				pP	**pP**	**14 05 27.2**	**+1.0**
	comp=Z,8.0nm,1.2s,baz=221,slow=5.0,SNR=3.9						
TXAR				PP	**PP**	**14 06 48.0**	**-2.5**
	comp=Z,1.3nm,1.1s,baz=234,slow=4.3,SNR=1.8						
TXAR				PKKPbc	**PKKPbc**	**14 21 02.7**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=127,slow=3.3,SNR=4.0						
AHID	**Auburn Hatcher**	**87.26**	**43**	IAmb	IAmb	14 03 16.7	
	comp=Z,87nm,1.5s						
CMAR	**Chiang Mai Arr**	**87.30**	**290**	P	**P**	**14 03 15.9**	**+1.2**
	comp=Z,20nm,0.9s,baz=114,slow=2.8,SNR=65						
CMAR				pP	**pP**	**14 05 27.7**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=42,slow=54,SNR=1.9						
CMAR				PP	**PP**	**14 06 46.7**	**-4.5**
	comp=Z,0.6nm,0.3s,baz=110,slow=5.5,SNR=1.4						
CMAR				PKKPbc	**PKKPbc**	**14 21 01.8**	**+0.8**
	comp=Z,0.8nm,0.6s,baz=278,slow=3.7,SNR=6.3						
CMAR	**Chiang Mai Arr**	**87.30**	**290**	*i* P	**P**	**14 03 15.8**	**+1.1**
CMAR				pmax	pmax		
	comp=Z,21nm,0.9s						
DAWY	**Dawson**	**87.31**	**17**	P	**P**	**14 03 13.8**	**+0.1**
	baz=218,SNR=11						
DAWY	**Dawson**	**87.31**	**17**	IAmb	IAmb	14 03 15.1	
	comp=Z,14nm,0.6s						
RDMU	**Red Mountain**	**87.31**	**46**	IAmb	IAmb	14 03 16.9	
	comp=Z,22nm,1.0s						
M31M	**Drury Creek, Y**	**87.38**	**20**	P	**P**	**14 03 13.6**	**-0.5**
	baz=223,SNR=5.9						
MSO	**Missoula**	**87.39**	**39**	P	**P**	**14 03 14.4**	**-0.2**
	baz=241,SNR=24						
CHTO	**Chiang Mai**	**87.42**	**291**	P	**P**	**14 03 14.1**	**-1.1**
CHTO				pmax	pmax		
	comp=Z,39nm,1.1s						
CHTO	**Chiang Mai**	**87.42**	**291**	P	**P**	**14 03 14.1**	**-1.1**
CHTO				IAmb	IAmb	14 03 17.9	
	comp=Z,39nm,1.1s						
CHTO	**Chiang Mai**	**87.42**	**291**	P	**P**	**14 03 16.3**	**+1.1**
COLD	**Coldfoot**	**87.48**	**11**	P	**P**	**14 03 14.8**	**+0.4**
	baz=208						
COLD	**Coldfoot**	**87.48**	**11**	IAmb	IAmb	14 03 16.4	
	comp=Z,22nm,0.7s						
DLMT	**Dillon**	**87.51**	**41**	IAmb	IAmb	14 03 17.7	
	comp=Z,27nm,0.9s						
USHA	**Ushuaia**	**87.56**	**147**	P	**P**	**14 03 16.3**	**+1.1**
	comp=Z,16nm,1.1s,baz=165,slow=8.4,SNR=2.8						
CD2	**Chengdu**	**87.60**	**303**	*e*P	**P**	**14 03 16.0**	**+0.1**
TPAW	**Teton Pass**	**87.69**	**43**	IAmb	IAmb	14 03 19.0	
	comp=Z,46nm,1.2s						
REDW	**Red Top Meadow**	**87.70**	**43**	IAmb	IAmb	14 03 18.8	
	comp=Z,69nm,1.1s						
FXWY	**Fox Creek**	**87.71**	**43**	IAmb	IAmb	14 03 19.0	
	comp=Z,26nm,1.1s						
FARO	**Faro, Yukon**	**87.73**	**20**	P	**P**	**14 03 15.9**	**+0.1**
	baz=224,SNR=5.8						
MOOW	**Moose Ponds**	**87.94**	**43**	IAmb	IAmb	14 03 19.9	
	comp=Z,25nm,1.2s						
MAYO	**Mayo, Yukon**	**87.95**	**18**	P	**P**	**14 03 17.6**	**+1.0**
	baz=222						
LOHW	**Long Hollow**	**87.97**	**43**	IAmb	IAmb	14 03 20.0	
	comp=Z,26nm,1.1s						
O20A	**White River Ci**	**88.04**	**47**	P	**P**	**14 03 18.9**	**+1.0**
	baz=245,SNR=32						
O20A	**White River Ci**	**88.04**	**47**	IAmb	IAmb	14 03 20.4	
	comp=Z,45nm,0.9s						
S22A	**4UR Ranch, Cre**	**88.06**	**49**	P	**P**	**14 03 19.6**	**+1.4**
	baz=246,SNR=30						
FLWY	**Flagg Ranch**	**88.12**	**42**	IAmb	IAmb	14 03 21.1	
	comp=Z,78nm,1.4s						
BOZ	**Bozeman (W)**	**88.22**	**41**	P	**P**	**14 03 19.4**	**+0.8**
	baz=242,SNR=22						
BW06	**Boulder Array**	**88.28**	**44**	P	**P**	**14 03 19.4**	**+0.4**
	baz=244,SNR=28						
BW06	**Boulder Array**	**88.28**	**44**	IAmb	IAmb	14 03 20.9	
	comp=Z,24nm,1.0s						
PD31	**Pinedale Array**	**88.28**	**44**	IAmb	IAmb	14 03 20.9	
	comp=Z,22nm,1.0s						
PDAR	**Pinedale Array**	**88.28**	**44**	P	**P**	**14 03 19.2**	**+0.2**
	comp=Z,8.5nm,0.7s,baz=226,slow=3.1,SNR=70						
PDAR				pP	**pP**	**14 05 31.8**	**+0.5**
	comp=Z,1.7nm,0.9s,baz=224,slow=4.1,SNR=6.5						
PDAR				PP	**PP**	**14 06 56.4**	**-2.4**
	comp=Z,2.3nm,1.0s,baz=222,slow=3.8,SNR=7.7						
H17A	**Grant Village**	**88.34**	**42**	P	**P**	**14 03 21.6**	**+2.3**
	baz=243						
SMCO	**Snowmass**	**88.54**	**48**	IAmb	IAmb	14 03 23.0	
	comp=Z,49nm,1.1s						
HRY	**Holter Researc**	**88.61**	**40**	P	**P**	**14 03 20.2**	**-0.1**
I29M	**Ogilvie Camp,**	**88.61**	**16**	P	**P**	**14 03 19.8**	**+0.1**
	baz=220,SNR=5.5						
YAK	**Yakutsk**	**88.77**	**339**	P	**P**	**14 03 20.0**	**-0.5**
	comp=Z,5.7nm,0.6s,baz=26,slow=0.8,SNR=10						
YAK	**Yakutsk**	**88.77**	**339**	*ce*P	**P**	**14 03 19.9**	**-0.5**
YAK				pmax	pmax		
	comp=Z,36nm,1.0s						
TOLK	**Toolik Lake Re**	**88.84**	**11**	P	**P**	**14 03 20.7**	**0.0**
	baz=209						
TOLK	**Toolik Lake Re**	**88.84**	**11**	IAmb	IAmb	14 03 22.0	
	comp=Z,14nm,0.8s						
TGTN	**Hyland Airport**	**88.98**	**22**	P	**P**	**14 03 22.5**	**+0.9**
	baz=229,SNR=15						
SDCO	**Great Sand Dun**	**89.02**	**50**	P	**P**	**14 03 23.7**	**+1.0**
	baz=247,SNR=22						
SYO	**Syowa Base**	**89.03**	**193**	⇓*e*P	**P**	**14 03 21.0**	**-0.7**
SYO	**Syowa Base**	**89.03**	**193**	⇓*e*PcP	**P**	**14 03 22.0**	**+0.3**
LZH	**Lanzhou**	**89.48**	**308**	⇑P	**P**	**14 03 26.5**	**+1.8**
LZH				SKS	**SKSac**	**14 12 57.8**	**+1.1**
LZH				S	**ScS**	**14 13 29.8**	**+3.3**
LZH				pmax	pmax		
	comp=Z,85nm,1.3s						
LZH				pmax	pmax		
	comp=Z,280nm,6.8s						
RLMT	**Red Lodge**	**89.50**	**42**	P	**P**	**14 03 25.8**	**+1.2**
	baz=244,SNR=20						
RLMT	**Red Lodge**	**89.50**	**42**	P	**P**	**14 03 24.1**	**-0.4**
RLMT				IAmb	IAmb	14 03 27.6	
	comp=Z,16nm,0.8s						
T25A	**Trinidad**	**89.59**	**51**	P	**P**	**14 03 26.1**	**+0.9**
	baz=247,SNR=6.5						
MSTX	**Muleshoe**	**89.64**	**54**	P	**P**	**14 03 26.0**	**+0.6**
	baz=248,SNR=17						
ISCO	**Idaho Springs**	**89.75**	**48**	P	**P**	**14 03 26.9**	**+1.0**
	baz=247,SNR=16						
Q24A	**Divide**	**89.75**	**49**	P	**P**	**14 03 27.0**	**+0.9**
	baz=247,SNR=18						
EPYK	**Eagle Plains**	**89.81**	**16**	P	**P**	**14 03 25.2**	**-0.1**
	baz=221						
EPYK	**Eagle Plains**	**89.81**	**16**	IAmb	IAmb	14 03 26.4	
	comp=Z,23nm,0.9s						
N23A	**Red Feather La**	**89.95**	**47**	P	**P**	**14 03 28.1**	**+1.2**
	baz=246,SNR=18						
K22A	**Casper**	**90.26**	**45**	P	**P**	**14 03 29.5**	**+1.4**
	baz=246,SNR=6.0						
833A	**Chaparral WMA,**	**90.36**	**60**	P	**P**	**14 03 30.2**	**+1.5**
	baz=250						
CMIG	**Matias Romero**	**90.67**	**72**	P	**P**	**14 03 30.5**	**+0.2**
	comp=Z,4.9nm,0.9s,baz=315,slow=4.0,SNR=5.1						
JCT	**Junction City**	**90.76**	**58**	P	**P**	**14 03 31.1**	**+0.5**
	baz=250						
AMTX	**Amarillo**	**90.81**	**54**	P	**P**	**14 03 31.2**	**+0.5**
	baz=249						
EDM	**Edmonton**	**90.83**	**34**	IAmb	IAmb	14 03 31.5	
	comp=Z,34nm,1.2s						
SNAA	**Sanae**	**90.87**	**179**	P	**P**	**14 03 29.8**	**-0.5**
VNA3	**Neumayer Olymp**	**91.07**	**177**	P	**P**	**14 03 30.8**	**-0.3**
VNA2	**Neumayer--Watz**	**91.49**	**178**	P	**P**	**14 03 33.1**	**0.0**
	baz=196,slow=3.9						
KSCO	**Kaye Shedlock'**	**91.59**	**50**	P	**P**	**14 03 35.5**	**+1.2**
	baz=249,SNR=5.2						
ABTX	**Abilene, Hawle**	**91.62**	**56**	P	**P**	**14 03 34.9**	**+0.5**
	baz=250						
VNA1	**Neumayer--Stat**	**91.73**	**177**	P	**P**	**14 03 34.2**	**+0.1**
WRGLY	**Wrigley**	**91.80**	**22**	P	**P**	**14 03 35.2**	**+0.8**
	baz=233						
ULN	**Ulaanbaatar**	**91.94**	**320**	*ce*P	**P**	**14 03 35.9**	**+0.2**
ULN				pmax	pmax		
	comp=Z,19nm,1.0s						
ULN	**Ulaanbaatar**	**91.94**	**320**	P	**P**	**14 03 35.7**	**0.0**
ULN				IAmb	IAmb	14 03 37.4	
	comp=Z,18nm,1.1s						
INK	**Inuvik**	**92.08**	**16**	P	**P**	**14 03 35.6**	**+0.1**
	comp=Z,7.3nm,0.8s,baz=168,slow=4.5,SNR=35						
INK	**Inuvik**	**92.08**	**16**	P	**P**	**14 03 35.5**	**-0.1**
	baz=224						
INK	**Inuvik**	**92.08**	**16**	IAmb	IAmb	14 03 36.3	
	comp=Z,15nm,1.1s						
LAO	**LASA Array**	**92.08**	**41**	P	**P**	**14 03 37.7**	**+1.5**
	baz=246						
SONM	**Songino Array**	**92.33**	**320**	P	**P**	**14 03 38.0**	**+0.5**
	comp=Z,6.1nm,1.0s,baz=118,slow=4.9,SNR=14						
SONM				PP	**PP**	**14 07 26.0**	**-4.0**
	comp=Z,3.4nm,1.1s,baz=122,slow=8.0,SNR=5.8						
SONM				PKKPbc	**PKKPdf**	**14 20 47.9**	**+0.6**
	comp=Z,0.8nm,0.9s,baz=240,slow=1.6,SNR=3.8						
RSSD	**Black Hills**	**92.50**	**44**	P	**P**	**14 03 37.6**	**-0.9**
RSSD				pmax	pmax		
	comp=Z,8.0nm,0.8s						
RSSD	**Black Hills**	**92.50**	**44**	P	**P**	**14 03 38.5**	**+0.1**
	baz=248						
RSSD	**Black Hills**	**92.50**	**44**	P	**P**	**14 03 37.6**	**-0.9**
PLCA	**Paso Flores**	**92.65**	**134**	P	**P**	**14 03 39.8**	**+0.7**
	comp=Z,3.2nm,1.0s,baz=194,slow=6.1,SNR=4.1						
CBKS	**Cedar Bluff**	**93.63**	**51**	P	**P**	**14 03 44.1**	**+0.6**
	baz=250						
GTA	**Gaotai**	**93.66**	**310**	P	**P**	**14 03 44.0**	**+0.3**
GTA				pP	pwP	14 05 58.5	-1.2
GTA				sP	sP	14 06 50.8	-7.3
GTA				SKS	**SKSac**	**14 13 20.3**	**+0.8**
GTA				S	**ScS**	**14 14 02.5**	**+1.4**
GTA				SS	**SS**	**14 20 42.5**	**+3.7**
GTA				pmax	pmax		
	comp=Z,23nm,1.0s						
GTA				pmax	pmax		
	comp=Z,42nm,4.2s						
DGMT	**Dagmar**	**94.04**	**40**	P	**P**	**14 03 45.9**	**+0.8**
	baz=248						
APG	**El Apazote**	**94.10**	**76**	P	**P**	**14 03 47.3**	**+0.9**
	comp=Z,3.5nm,0.8s,baz=108,slow=19,SNR=3.6						
APG				pP	**pwP**	**14 06 00.9**	**-0.9**
	comp=Z,3.4nm,0.7s,baz=188,slow=5.3,SNR=2.3						
R32A	**Long Quarter,**	**94.26**	**51**	P	**P**	**14 03 46.3**	**-0.1**
YKA	**Yellowknife Ar**	**94.78**	**25**	P	**P**	**14 03 47.8**	**-0.2**
	comp=Z,4.7nm,0.7s,baz=246,slow=5.2,SNR=14						
ZAK	**Zakamensk**	**95.20**	**321**	*e*P	**P**	**14 03 46.4**	**-4.0**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.5s						
TIXI	**Tiksi**	**95.52**	**346**	P	**P**	**14 03 50.5**	**-0.7**
	comp=Z,4.0nm,0.8s,baz=106,slow=4.1,SNR=7.6						
TIXI				PP	**PP**	**14 07 49.5**	**-4.0**
	comp=Z,1.4nm,0.3s,baz=154,slow=6.0,SNR=3.3						
TIXI	**Tiksi**	**95.52**	**346**	*ce*P	**P**	**14 03 50.8**	**-0.4**
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KSU1	**Kansas State U**	**96.04**	**51**	Pdiff	**P**	**14 03 55.4**	**+1.1**
	baz=252						
A36M	**Sachs Harbour**	**96.65**	**15**	Pdiff	**P**	**14 03 56.3**	**+0.1**
	baz=232						
A36M	**Sachs Harbour**	**96.65**	**15**	P	**P**	**14 03 55.7**	**-0.5**
A36M				IAmb	IAmb	14 03 57.9	
	comp=Z,14nm,0.8s						
ZALV	**Zalesovo Beam**	**107.06**	**322**	PKiKP	**PKiKP**	**14 08 47.6**	**-0.7**
	comp=Z,3.1nm,0.6s,baz=144,slow=0.5,SNR=11						
ZALV				PP	**PP**	**14 09 20.8**	**+1.7**
	comp=Z,0.7nm,0.5s,baz=89,slow=7.7,SNR=3.8						
MKAR	**Makanchi Array**	**107.83**	**314**	Pdiff	**Pdif**	**14 04 46.9**	**+0.2**
	comp=Z,1.0nm,0.8s,baz=91,slow=6.4,SNR=4.7						
MKAR				PKiKP	**PKiKP**	**14 08 49.5**	**-0.5**
	comp=Z,4.2nm,0.6s,baz=68,slow=0.7,SNR=29						
MKAR				PP	**PP**	**14 09 25.3**	**+0.4**
	comp=Z,1.4nm,0.8s,baz=89,slow=7.6,SNR=3.8						
MKAR				PKKPbc	**PKKPbc**	**14 20 05.0**	**-1.0**
	comp=Z,0.4nm,0.4s,baz=272,slow=2.9,SNR=11						
KURK	**Kurchatov**	**110.58**	**318**	*c i*PKIKP	**PKiKP**	**14 08 54.8**	**-0.2**
KURK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KURBB	**Kurchatov Arra**	**110.64**	**318**	PKiKP	**PKiKP**	**14 08 54.3**	**-0.8**
	comp=Z,4.2nm,0.7s,baz=94,slow=1.8,SNR=41						
KURBB				PP	**PP**	**14 09 42.4**	**-2.2**
	comp=Z,2.6nm,0.9s,baz=96,slow=7.0,SNR=10.0						
SIV	**San Ignacio**	**111.23**	**116**	PP	**PP**	**14 09 47.0**	**-2.2**
	comp=Z,0.5nm,0.3s,baz=207,slow=8.5,SNR=3.0						
KSH	**Kashi**	**111.65**	**306**	PKP	**PKiKP**	**14 08 58.8**	**+1.2**
AAK	**Ala-Archa**	**113.00**	**309**	PKiKP	**PKiKP**	**14 09 00.1**	**0.0**
	comp=Z,1.7nm,0.6s,baz=160,slow=4.4,SNR=7.0						
AAK	**Ala-Archa**	**113.00**	**309**	*c i*PKIKP	**PKiKP**	**14 09 00.7**	**+0.6**
AAK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
BVAR	**Borovoye Array**	**115.65**	**321**	PKP	**PKPdf**	**14 09 04.1**	**-0.6**
	comp=Z,7.4nm,0.7s,baz=210,slow=8.6,SNR=42						
BVAR				PP	**PP**	**14 10 18.5**	**-1.0**
	comp=Z,1.8nm,0.8s,baz=183,slow=8.2,SNR=3.7						
BRVK	**Borovoye**	**115.71**	**321**	*c i*PKIKP	**PKiKP**	**14 09 04.8**	**0.0**
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BRVK	**Borovoye**	**115.71**	**321**	PKPdf	**PKPdf**	**14 09 04.6**	**-0.1**
KKAR	**Karatay Array**	**115.94**	**310**	PKIKP	**PKPdf**	**14 09 05.4**	**-0.2**
KKAR	**Karatay Array**	**115.94**	**310**	PKPdf	**PKPdf**	**14 09 05.4**	**-0.2**
SJG	**San Juan**	**117.45**	**78**	PKP	**PKPdf**	**14 09 08.2**	**-0.9**
	comp=Z,8.3nm,0.7s,baz=15,slow=21,SNR=2.8						
PTGA	**Pitinga**	**118.33**	**101**	PKP	**PKPdf**	**14 09 10.6**	**-0.4**
	comp=Z,2.9nm,0.4s,baz=270,slow=2.0,SNR=8.6						
PTGA	**Pitinga**	**118.33**	**101**		**PKPdf**	**14 09 10.8**	**-0.2**
SVE	**Sverdlovsk**	**120.55**	**326**	*e*PKIKP	**PKiKP**	**14 09 14.3**	**+0.2**
SVE				pmax	pmax		
	comp=Z,13nm,0.7s						
SFJD	**Kangerlussuaq**	**121.03**	**21**	PKP	**PKPdf**	**14 09 13.6**	**-0.9**
	comp=Z,7.2nm,0.4s,baz=335,slow=1.3,SNR=10						
OPO	**Ambohidratompo**	**121.21**	**235**	PKP	**PKiKP**	**14 09 17.8**	**+1.0**
	comp=Z,12nm,0.7s,baz=151,slow=3.1,SNR=14						
ARU	**Arti**	**121.76**	**326**	PKP	**PKPdf**	**14 09 16.2**	**-0.1**
	comp=Z,5.9nm,0.7s						
ARU	**Arti**	**121.76**	**326**	*i* PKIKP	**PKiKP**	**14 09 16.6**	**+0.1**
ARU						14 10 58.5	
ARU						14 15 31.7	
ARU				SS	SS	14 26 50.9	0.0
BDFB	**Brasilia**	**122.32**	**122**	PKP	**PKPdf**	**14 09 18.1**	**-0.6**
	comp=Z,2.3nm,0.3s,baz=62,slow=15,SNR=2.9						
GBN	**Guysborough**	**122.36**	**47**	PKPdf	**PKPdf**	**14 09 17.9**	**+0.1**
AKTO	**Aktyubinsk**	**123.65**	**319**	PKP	**PKPdf**	**14 09 19.9**	**-0.2**
	comp=Z,12nm,0.8s,baz=56,slow=1.8,SNR=13						
KIRV	**Kirov**	**125.54**	**331**	PKP	**PKPdf**	**14 09 23.5**	**+0.1**
	comp=Z,35nm,0.8s,baz=106,slow=1.6,SNR=4.2						
KIRV	**Kirov**	**125.54**	**331**	*c i*PKIKP	**PKiKP**	**14 09 24.1**	**+0.2**
GEYT	**Alibeck**	**125.59**	**304**	PKP	**PKiKP**	**14 09 24.9**	**+0.1**
	comp=Z,14nm,0.9s,baz=212,slow=5.3,SNR=15						
PRGR	**Permogore**	**125.66**	**335**	*e*PKIKP	**PKPdf**	**14 09 23.4**	**-0.2**
PRGR				pmax	pmax		
	comp=Z,11nm,0.6s						
ARCES	**ARCESS Array B**	**125.79**	**349**	PKP	**PKiKP**	**14 09 24.2**	**0.0**
	comp=Z,17nm,0.7s,baz=34,slow=1.1,SNR=40						
ARCES	**ARCESS Array B**	**125.79**	**349**	PKIKP	**PKPdf**	**14 09 23.6**	**-0.1**
ARCES	**ARCESS Array B**	**125.79**	**349**	PKPdf	**PKPdf**	**14 09 23.6**	**-0.1**

SUR	**Sutherland**	**126.36**	**202**	PKP	**PKiKP**	**14 09 26.9**	**+0.1**
	comp=Z,16nm,0.9s,baz=162,slow=1.5,SNR=6.4						
BOSA	**Boshof**	**127.87**	**208**	PKP	**PKPdf**	**14 09 29.2**	**+0.1**
	comp=Z,6.4nm,0.9s,baz=108,slow=5.3,SNR=5.5						
KLMR	**Klimovskoe**	**128.51**	**336**	*e*PKIKP	**PKPdf**	**14 09 28.5**	**-0.5**
KLMR				*e*		14 11 48.3	
KLMR				pmax	pmax		
	comp=Z,26nm,1.0s						
KLMR	**Klimovskoe**	**128.51**	**336**	*e*PKPdf	**PKPdf**	**14 09 28.5**	**-0.5**
KLMR				AMP		14 09 30.3	
	comp=Z,26nm,1.0s						
KLMR				*e*PP	**pPKPdf**	**14 11 48.3**	**-3.5**
BELG	**Belogornoye**	**129.16**	**324**	PKP	**PKiKP**	**14 09 31.1**	**-0.2**
	comp=Z,44nm,0.9s,baz=114,slow=2.8,SNR=7.2						
LBTB	**Lobatse**	**130.75**	**211**	PKP	**PKPdf**	**14 09 33.9**	**-0.7**
	comp=Z,3.1nm,0.7s,baz=224,slow=4.4,SNR=4.2						
FINES	**FINESS Array B**	**132.51**	**343**	PKhKP	PKPpre	14 09 22.1	
	comp=Z,3.4nm,0.9s,baz=29,slow=3.2,SNR=4.1						
FINES				PKP	**PKPdf**	**14 09 36.4**	**-0.2**
	comp=Z,8.0nm,0.7s,baz=42,slow=3.6,SNR=14						
FINES				SKPbc	**SKPab**	**14 12 08.1**	**-0.7**
	comp=Z,5.7nm,0.6s,baz=55,slow=3.7,SNR=14						
MAK	**Makhachkala**	**132.60**	**313**	*i* P	**Pdif**	**14 06 35.6**	**-1.2**
MAK				*i*		14 09 38.4	
MAK				*e*		14 11 56.8	
MAK				*e*		14 12 15.0	
MAK				*e*PPP	PPP	14 15 09.4	
MAK				*e*		14 15 51.7	
MAK				*e*SS	SS	14 29 04.6	+0.4
MAK				*e*SSS	SSS	14 34 09.4	
MAK				pmax	pmax		
	comp=Z,132nm,1.4s						
MATP	**Matopo**	**132.89**	**218**	PKP	**PKPdf**	**14 09 38.8**	**0.0**
	comp=Z,6.9nm,0.7s,baz=174,slow=3.4,SNR=6.0						
VRH	**Novokhopyorsk**	**132.97**	**325**	*e*PKIKP	**PKPdf**	**14 09 38.0**	**+0.2**
VRH				pmax	pmax		
	comp=Z,30nm,0.8s						
OBN	**Obninsk**	**133.34**	**332**	*c i*PKIKP	**PKPdf**	**14 09 38.4**	**+0.1**
OBN				*i*		14 12 10.7	
OBN				*i*		14 15 50.1	
OBN				*i* SS	SS	14 29 16.7	+4.9
OBN				pmax	pmax		
	comp=Z,13nm,0.9s						
LPSR	**Galich'ya Gora**	**133.70**	**328**	*e*PKIKP	**PKiKP**	**14 09 39.9**	**-0.6**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VSR	**Storozhevoye**	**134.34**	**326**	*e*PKIKP	**PKiKP**	**14 09 41.1**	**-0.8**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ZEI	**Tsey**	**135.17**	**314**	*i* PKIKP	**PKPdf**	**14 09 42.4**	**-0.1**
ZEI				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KBZ	**Khabaz**	**135.51**	**315**	*c i*PKIKP	**PKiKP**	**14 09 46.0**	**+1.5**
KIV	**Kislovodsk**	**135.57**	**316**	*e*PKIKP	**PKPdf**	**14 09 43.7**	**+0.7**
KIV				*e*		14 12 29.5	
KIV				*e*SS	SS	14 29 41.6	+2.1
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
NB2	**NORSAR Subarra**	**135.93**	**352**	PKPdf	PKPpre	14 09 34.0	
	comp=Z,1.6nm,0.5s,baz=31,slow=1.9						
NOA	**NORSAR Array B**	**135.93**	**352**	PKhKP	PKPpre	14 09 30.3	
	comp=Z,1.1nm,0.8s,baz=37,slow=2.3,SNR=2.8						
NOA				PKP	**PKPdf**	**14 09 42.9**	**-0.2**
	comp=Z,2.9nm,0.7s,baz=14,slow=4.1,SNR=10						
HFS	**Hagfors**	**136.44**	**350**	SKPbc	**SKPbc**	**14 12 20.9**	**+1.8**
	comp=Z,2.3nm,0.5s,baz=42,slow=4.5,SNR=4.8						
LSZ	**Lusaka**	**137.01**	**222**	PKhKP	PKPpre	14 09 37.3	
	comp=Z,1.8nm,0.4s,baz=114,slow=4.7,SNR=4.4						
LSZ				PKP	**PKPdf**	**14 09 46.9**	**+0.3**
	comp=Z,4.7nm,0.7s,baz=66,slow=5.4,SNR=6.8						
NACGM	**Naroch**	**137.51**	**337**	*i* PKP	**PKiKP**	**14 09 47.2**	**-1.0**
KMBO	**Kilima Mbogo**	**138.77**	**247**	PKhKP	PKPpre	14 09 42.3	
	comp=Z,1.2nm,0.3s,baz=50,slow=7.4,SNR=4.0						
KMBO				PKP	**PKPdf**	**14 09 49.9**	**-0.1**
	comp=Z,1.8nm,0.3s,baz=169,slow=24,SNR=3.0						
KMBO				SKPbc	**SKiKP**	**14 12 29.6**	**-1.0**
	comp=Z,1.3nm,0.3s,baz=88,slow=2.8,SNR=7.6						
KMBO	**Kilima Mbogo**	**138.77**	**247**	*i* PKHKP	PKPpre	14 09 45.2	
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
TSUM	**Tsumeb**	**139.46**	**206**	PKhKP	PKPpre	14 09 43.5	
	comp=Z,1.3nm,0.3s,baz=154,slow=7.1,SNR=1.9						
AKASG	**Malin Array Be**	**139.59**	**331**	PKhKP	PKPpre	14 09 42.1	
	comp=Z,0.8nm,0.3s,baz=42,slow=3.9,SNR=6.5						
AKASG				PKP	**PKPdf**	**14 09 49.5**	**-0.5**
	comp=Z,9.7nm,0.7s,baz=45,slow=2.3,SNR=12						
AKASG				SKPbc	**SKPbc**	**14 12 28.0**	**-0.1**
	comp=Z,2.0nm,0.4s,baz=42,slow=3.7,SNR=8.4						
AKBB	**Malin Array Si**	**139.59**	**331**	*c i*PKIKP	**PKiKP**	**14 09 53.1**	**+0.5**
KAC	**Achnashellach**	**140.04**	**4**	*e*P	**PKPdf**	**14 09 45.1**	**-5.6**
INVG	**Invergeldie, C**	**141.19**	**4**	*e*P	**PKPdf**	**14 09 47.5**	**-5.2**
LAWE	**Loch Awe, Argy**	**141.26**	**5**	*e*P	**PKPdf**	**14 09 47.9**	**-4.9**
RGN	**Rugen**	**141.77**	**347**	*e*PKPbc	**PKPdf**	**14 09 51.0**	**-2.7**
	baz=18,slow=2.9						
SORM	**Soroca**	**141.77**	**329**	⇑P	**PKPdf**	**14 09 50.6**	**-3.4**
SORM	**Soroca**	**141.77**	**329**	⇑PKHKP	PKPpre	14 09 50.6	
EBL	**Broad Law**	**141.90**	**3**	*e*P	**PKPdf**	**14 09 50.5**	**-3.5**
BZK	**Bozkurt**	**142.17**	**317**	⇑P	**PKPdf**	**14 09 54.0**	**-0.9**
SKMB	**Sankelmark Bun**	**142.30**	**351**	*e*PKPbc	**PKPdf**	**14 09 52.6**	**-2.1**
	baz=18,slow=2.9						
EKA	**Eskdalemuir Ar**	**142.33**	**3**	PKhKP	PKPpre	14 09 49.0	
	comp=Z,3.1nm,0.5s,baz=342,slow=2.8,SNR=5.1						
LVV	**L'vov**	**142.51**	**334**	*e*PKHKP	PKPpre	14 09 53.1	
LNIZ	**Loecknitz**	**142.55**	**346**	*e*PKPbc	**PKPdf**	**14 09 53.7**	**-1.5**
	baz=18,slow=2.9						
BSEG	**Bad Segeberg**	**142.91**	**350**	*e*PKPbc	**PKPdf**	**14 09 54.7**	**-1.2**
	baz=18,slow=2.9						
HLG	**Helgoland**	**143.03**	**352**	*e*PKPbc	**PKPdf**	**14 09 55.5**	**-0.6**
	baz=18,slow=2.9						
VASR	**Vaslui**	**143.06**	**328**	⇑P	**PKPdf**	**14 09 56.0**	**-0.3**
KWP	**Kalwaria Pacla**	**143.20**	**335**	*e*PKP	PKPbc	14 09 55.7	+0.6
KWP	**Kalwaria Pacla**	**143.20**	**335**	PKIKP	PKPbc	14 09 55.7	+0.6
KWP	**Kalwaria Pacla**	**143.20**	**335**		PKPbc	14 09 55.6	+0.5
IOMK	**Kirk Michael**	**143.31**	**4**	*e*P	PKPab	14 09 54.9	-0.1
VLDR	**Vladesti**	**143.44**	**326**	⇑P	**PKPdf**	**14 09 57.1**	**+0.1**
TLCR		**143.47**	**325**	⇑P	**PKPdf**	**14 09 57.0**	**-0.1**
TLCR		**143.47**	**325**	⇑PKIKP	**PKPdf**	**14 09 57.0**	**-0.1**
BR131	**Keskin Array S**	**143.47**	**314**	PKIKP	**PKPdf**	**14 09 57.2**	**-0.3**
BR131	**Keskin Array S**	**143.47**	**314**	PKPdf	**PKPdf**	**14 09 57.1**	**-0.3**
BRTR	**Keskin Array B**	**143.47**	**314**	PKP	PKPab	14 09 56.4	0.0
	comp=Z,45nm,0.9s,baz=108,slow=1.6,SNR=74						
BRTR				SKPbc	**SKPbc**	**14 12 38.8**	**+0.4**
	comp=Z,2.0nm,0.5s,baz=149,slow=5.3,SNR=6.3						
BRTR	**Keskin Array B**	**143.47**	**314**	PKIKP	**PKPdf**	**14 09 57.0**	**-0.5**
BRTR	**Keskin Array B**	**143.47**	**314**	PKPdf	**PKPdf**	**14 09 57.0**	**-0.5**
RUE	**Ruedersdorf**	**143.59**	**346**	*e*PKPbc	**PKPdf**	**14 09 56.7**	**-0.3**
	baz=18,slow=2.9						
SCTR	**Scanteiesti**	**143.60**	**326**	⇑P	**PKPdf**	**14 09 57.8**	**+0.5**
TATR	**Tatarca**	**143.62**	**326**	⇑P	**PKPdf**	**14 09 57.6**	**+0.2**
BUR08	**Bucovina Ar. S**	**143.63**	**331**	PKPdf	**PKPdf**	**14 09 57.9**	**+0.4**
BURAR	**Bucovina Array**	**143.64**	**331**	⇑P	**PKPdf**	**14 09 58.3**	**+0.8**
BURAR	**Bucovina Array**	**143.64**	**331**	⇑PKIKP	**PKPdf**	**14 09 58.3**	**+0.8**
BURAR	**Bucovina Array**	**143.64**	**331**		**PKPdf**	**14 09 58.2**	**+0.8**
ASF	**Jabal al Asfar**	**143.68**	**301**	PKP	PKPab	14 09 57.7	+0.3
	comp=Z,45nm,1.2s,baz=278,slow=0.4,SNR=16						
TESR	**Tescani**	**143.73**	**328**	⇑P	**PKPdf**	**14 09 57.4**	**-0.1**
HPK	**Haverah Park**	**143.76**	**2**	*e*P	PKPbc	14 09 56.4	-0.2
SLCR	**Slobozia Conac**	**143.77**	**326**	⇓P	**PKPdf**	**14 09 57.7**	**+0.1**
OJC	**Ojcow**	**143.82**	**338**	*e*PKP	**PKPdf**	**14 09 57.6**	**0.0**
CFR	**Carcaliu**	**143.84**	**325**	⇑P	**PKPdf**	**14 09 58.1**	**+0.4**
CFR	**Carcaliu**	**143.84**	**325**	⇑PKIKP	**PKPdf**	**14 09 58.1**	**+0.4**
TPGR	**Topolog**	**143.90**	**325**	⇑P	**PKPdf**	**14 09 58.5**	**+0.6**
KOLS	**Kolonicke sedl**	**143.92**	**335**	*e*PKIKP	**PKPdf**	**14 09 58.7**	**+0.9**
KOLS	**Kolonicke sedl**	**143.92**	**335**	*e*PKP	**PKPdf**	**14 09 58.7**	**+0.9**
ODBI	**Odobesti**	**144.03**	**327**	⇓P	**PKPab**	**14 09 59.8**	**+1.7**
VRI	**Vrincioaia**	**144.13**	**327**	⇓P	**PKPab**	**14 09 58.4**	**-0.1**
VRI	**Vrincioaia**	**144.13**	**327**	⇓PKIKP	**PKPab**	**14 09 58.4**	**-0.1**
TIRR	**Tirgusor**	**144.15**	**324**	⇑P	**PKPab**	**14 09 58.9**	**+0.3**
TIRR	**Tirgusor**	**144.15**	**324**	⇑PKIKP	**PKPab**	**14 09 58.9**	**+0.3**
UZH	**Uzhgorod**	**144.15**	**334**	⇓*i*PKIKP	PKPbc	14 09 57.5	-0.5
UZH				*e*		14 12 13.8	
DSB	**Dublin**	**144.16**	**6**		**PKPab**	**14 09 58.3**	**-0.1**
WPS	**Cemaes, Angles**	**144.17**	**5**	*e*P	PKPbc	14 09 57.8	-0.1
PLOR	**Plostina**	**144.18**	**328**	⇑P	**PKPab**	**14 09 58.7**	**-0.1**
PLOR	**Plostina**	**144.18**	**328**	⇑PKIKP	**PKPab**	**14 09 58.7**	**-0.1**
WME	**Myndd Eilian**	**144.19**	**4**	*e*P	**PKPdf**	**14 09 58.1**	**0.0**
RETH	**Rethem/Aller,**	**144.23**	**350**	*e*PKPbc	**PKPab**	**14 09 58.7**	**+0.2**
	baz=18,slow=2.9						
HARR	**Harsova**	**144.27**	**325**	⇑P	**PKPab**	**14 10 00.0**	**+1.0**
HARR	**Harsova**	**144.27**	**325**	⇑PKIKP	**PKPab**	**14 10 00.0**	**+1.0**
CRVS	**Cervenica-Dubn**	**144.27**	**335**	*e*PKIKP	**PKPab**	**14 09 59.2**	**+0.2**
CRVS	**Cervenica-Dubn**	**144.27**	**335**	*e*PKP	**PKPab**	**14 09 59.2**	**+0.2**
FLTG	**Flechtingen**	**144.28**	**348**	*e*PKPbc	**PKPab**	**14 09 58.6**	**-0.2**
	baz=18,slow=2.9						
LMK	**Market Rasen**	**144.28**	**0**	*e*P	**PKPdf**	**14 09 58.2**	**0.0**
WLF1	**Llynfaes**	**144.29**	**4**	*e*P	**PKPdf**	**14 09 57.8**	**-0.4**
NIE	**Niedzica**	**144.30**	**337**	*e*PKP	**PKPab**	**14 10 00.5**	**+1.4**
TLBR	**Topalu**	**144.30**	**325**	⇑P	**PKPab**	**14 09 59.5**	**+0.3**
LBWR	**Ladybower, Pea**	**144.31**	**2**	*e*P	**PKPdf**	**14 09 58.2**	**-0.1**
YRC	**Rhoscolyn**	**144.32**	**5**	*e*P	**PKPdf**	**14 09 57.9**	**-0.3**
NRDL	**Niedersach Rie**	**144.33**	**349**	*e*PKPbc	**PKPab**	**14 09 59.2**	**+0.3**
	baz=18,slow=2.9						
BMR	**Baia Mare**	**144.38**	**332**	⇑P	**PKPab**	**14 10 00.3**	**+0.9**
BMR	**Baia Mare**	**144.38**	**332**	⇑PKIKP	**PKPab**	**14 10 00.3**	**+0.9**
KSP	**Ksiaz**	**144.41**	**342**	*e*PKP	**PKPab**	**14 09 59.8**	**+0.4**
COVR	**Voineasa-Covas**	**144.41**	**328**	⇑P	**PKPab**	**14 09 59.3**	**-0.3**
ARCR	**ARCALIA**	**144.43**	**331**	⇑P	**PKPab**	**14 10 00.5**	**+0.9**
TRPA	**Tarpa**	**144.44**	**334**	⇑P	**PKPab**	**14 09 59.9**	**+0.3**
TRPA	**Tarpa**	**144.44**	**334**	*e*P	**PKPab**	**14 09 59.4**	**-0.1**
MANR	**Mangalia**	**144.45**	**323**	⇓P	**PKPab**	**14 10 00.7**	**+0.9**
YLL	**Llanberis**	**144.46**	**4**	*e*P	**PKPdf**	**14 09 58.2**	**-0.4**
ASSE	**Asse, Remlinge**	**144.58**	**349**	*e*PKPbc	**PKPab**	**14 10 00.1**	**+0.3**
	baz=18,slow=2.9						
MBAR	**Mbarara**	**144.65**	**242**	PKP	**PKPab**	**14 10 01.5**	**-0.2**
	comp=Z,48nm,1.0s,baz=91,slow=3.9,SNR=31						
NEHR	**Nehoiu**	**144.65**	**327**	⇑P	**PKPab**	**14 10 01.0**	**+0.4**
MMAI	**Mount Meron Ar**	**144.67**	**302**	PKP	**PKPab**	**14 10 01.1**	**0.0**
	comp=Z,109nm,0.8s,baz=60,slow=4.9,SNR=71						
MMAI				SKPbc	**SKiKP**	**14 12 42.6**	**+0.7**
	comp=Z,1.6nm,0.3s,baz=76,slow=6.1,SNR=3.1						
OSTC	**Ostas**	**144.69**	**342**	*e*PKP	**PKPab**	**14 10 00.6**	**+0.1**
CHVC	**Chvalec**	**144.71**	**342**	*e*PKP	**PKPab**	**14 10 00.6**	**0.0**
OKC	**Ostrava-Krasne**	**144.71**	**339**	*e*PKP	**PKPab**	**14 10 00.5**	**-0.1**
OKC	**Ostrava-Krasne**	**144.71**	**339**	*e*PKIKP	**PKPab**	**14 10 00.5**	**-0.1**
DOPR	**Dopca**	**144.74**	**329**	⇓P	**PKPab**	**14 10 01.2**	**+0.3**
FOEL	**Foel Wylfa**	**144.77**	**3**	*e*P	PKPbc	14 09 59.9	+0.1
MLR	**Muntele Rosu**	**144.79**	**328**	⇑P	**PKPab**	**14 10 02.4**	**+1.2**
MLR	**Muntele Rosu**	**144.79**	**328**	PKP	PKPbc	14 10 00.7	+0.5
	comp=Z,43nm,1.0s,baz=330,slow=7.6,SNR=21						
MLR	**Muntele Rosu**	**144.79**	**328**	⇑PKIKP	**PKPab**	**14 10 02.4**	**+1.2**
UPC	**Upice**	**144.79**	**342**	*e*PKP	PKPbc	14 09 59.9	0.0
UPC	**Upice**	**144.79**	**342**	*e*PKIKP	PKPbc	14 09 59.9	0.0
LANS	**Liptovska Anna**	**144.83**	**338**	*e*PKIKP	**PKPab**	**14 10 01.7**	**+0.6**
LANS	**Liptovska Anna**	**144.83**	**338**	*e*PKP	**PKPab**	**14 10 01.7**	**+0.6**
DPC	**Dobruska-Polom**	**144.84**	**342**	*e*PKP	**PKPab**	**14 10 01.0**	**-0.1**
DPC	**Dobruska-Polom**	**144.84**	**342**	*e*PKIKP	**PKPab**	**14 10 01.0**	**-0.1**
CLL	**Collm**	**144.86**	**346**	*i* PKPbc	PKPbc	14 10 00.4	+0.3
	comp=Z,174nm,0.8s						
CLL				*i* (PKiKP)		14 10 03.4	
CLL				*e*pPKiKP	pPKPdf	14 12 22.0	-0.4
CLL				*e*SKPbc	**SKiKP**	**14 12 44.0**	**+2.4**
CLL				*i* PP	**PP**	**14 13 29.5**	**+5.1**
CLL				*e*PPS	PPS	14 26 18.0	
CLL				*e*SS	**SS**	**14 31 29.0**	**+4.7**
CLL				*e*SKSSKSac	**S'S'ac**	**14 32 36.0**	**+0.5**
CLL				*e*		14 33 00.0	
CLL				*e*sSS		14 35 11.0	
CLL				*e*SSS	SSS	14 37 06.0	
CLL				*e*SSSS		14 41 00.0	
CLL				*e*		14 42 24.0	
CLL				*e*sSSSS		14 44 00.0	
CLL	**Collm**	**144.86**	**346**	*i* PKIKP	PKPbc	14 10 00.4	+0.3
CLL				*e*		14 12 22.0	
CLL				pmax	pmax		
	comp=Z,174nm,0.8s						
CLL	**Collm**	**144.86**	**346**	*e*PKPbc	PKPbc	14 10 00.5	+0.4
	baz=18,slow=2.9						
CLL	**Collm**	**144.86**	**346**	PKPdf	**PKPab**	**14 10 00.7**	**-0.4**
VAL	**Valentia**	**144.87**	**11**	*e*PKPbc	**PKPab**	**14 10 00.8**	**-0.2**
	baz=18,slow=2.9						
IBBN	**Ibbenburen**	**144.89**	**352**	*e*PKPbc	**PKPab**	**14 10 00.7**	**-0.5**
	baz=18,slow=2.9						
CLZ	**Clausthal**	**144.91**	**349**	*e*PKPbc	**PKPab**	**14 10 00.9**	**-0.4**
	baz=18,slow=2.9						
KRLC	**Kraliky**	**144.94**	**341**	*e*PKP	PKPbc	14 10 00.5	0.0
KRLC	**Kraliky**	**144.94**	**341**	*e*PKIKP	PKPbc	14 10 00.5	0.0
MORC	**Moravsky Berou**	**144.96**	**340**	⇑P	**PKPab**	**14 10 01.9**	**+0.3**
MORC	**Moravsky Berou**	**144.96**	**340**	⇑PKIKP	**PKPab**	**14 10 01.9**	**+0.3**
MORC	**Moravsky Berou**	**144.96**	**340**	*e*PKP	PKPbc	14 10 00.6	+0.1
KECS	**Kecovo**	**144.99**	**336**	*e*PKIKP	**PKPab**	**14 10 01.5**	**-0.2**
KECS	**Kecovo**	**144.99**	**336**	*e*PKP	**PKPab**	**14 10 01.5**	**-0.2**
LEHL	**Lehliu**	**145.01**	**326**	⇑P	**PKPab**	**14 10 02.3**	**+0.4**
BRG	**Berggiesshubel**	**145.03**	**344**	*e*PKPbc	**PKPab**	**14 10 01.7**	**-0.1**
	baz=18,slow=2.9						
BRG				*e*pPKPbc	**pPKPdf**	**14 12 24.8**	**+2.4**
BRG	**Berggiesshubel**	**145.03**	**344**	⇓*e*PKPf		14 10 00.2	
BRG				Amp		14 10 00.6	
	comp=Z,7.7nm,0.8s						
BRG				⇑PKPb		14 10 01.9	
BRG				Amp		14 10 02.9	
	comp=Z,87nm,0.8s						
BRG				pPKP	pPKPdf	14 12 24.2	+1.8
BRG				Amp		14 12 27.7	
	comp=Z,3.8nm,0.9s						
SECR		**145.04**	**327**	⇓P	**PKPbc**	**14 10 01.2**	**+0.3**
CJR	**Cluj-Napoca**	**145.05**	**331**	⇑P	**PKPab**	**14 10 02.1**	**0.0**
CJR	**Cluj-Napoca**	**145.05**	**331**	⇑PKIKP	**PKPab**	**14 10 02.1**	**0.0**
FBE	**Freiberg**	**145.13**	**345**	*e*PKPbc	**PKPab**	**14 10 02.1**	**-0.1**
	baz=18,slow=2.9						
HLM1	**Long Mynd**	**145.15**	**3**	*e*P	**PKPbc**	**14 10 01.0**	**0.0**
PVCC	**Panska Ves**	**145.18**	**344**	*e*PKP	**PKPbc**	**14 10 01.5**	**+0.4**
PVCC	**Panska Ves**	**145.18**	**344**	*e*PKIKP	**PKPbc**	**14 10 01.5**	**+0.4**
NEUB	**Neuenburg**	**145.23**	**347**	*e*PKPbc	**PKPab**	**14 10 02.2**	**-0.3**
	baz=18,slow=2.9						
GTTG	**Gottingen**	**145.27**	**349**	*e*PKPbc	**PKPbc**	**14 10 02.0**	**+0.7**
	baz=18,slow=2.9						
VOIR		**145.28**	**328**	⇑P	**PKPab**	**14 10 02.9**	**-0.2**
VOIR		**145.28**	**328**	⇑PKP2	**PKPab**	**14 10 02.9**	**-0.2**
WTSB	**Winterswijk**	**145.35**	**353**	*e*PKPbc	**PKPab**	**14 10 02.3**	**-0.6**
	baz=18,slow=2.9						
DRGR		**145.40**	**332**	⇑P	**PKPbc**	**14 10 02.6**	**+0.7**
DRGR		**145.40**	**332**	⇑PKP2	**PKPbc**	**14 10 02.6**	**+0.7**
ARR	**Arges**	**145.53**	**329**	⇑P	**PKPbc**	**14 10 03.1**	**+0.8**
RSBS	**Rosebush, Pemb**	**145.59**	**5**	*e*P	**PKPbc**	**14 10 02.2**	**0.0**
VYHS	**Vyhne**	**145.61**	**338**	*e*PKP2	**PKPab**	**14 10 03.5**	**-0.7**
VYHS	**Vyhne**	**145.61**	**338**	*e*PKP	**PKPab**	**14 10 03.5**	**-0.7**
PRA	**Prague**	**145.63**	**343**	*e*PKP	**PKPab**	**14 10 03.7**	**-0.5**
PRA	**Prague**	**145.63**	**343**	*e*PKP2	**PKPab**	**14 10 03.7**	**-0.5**
MCH1	**Michaelchurch**	**145.67**	**3**	*e*P	**PKPbc**	**14 10 02.1**	**-0.3**
VRAC	**Vranov**	**145.67**	**341**	⇓P	**PKPab**	**14 10 03.9**	**-0.5**
VRAC	**Vranov**	**145.67**	**341**	PKPbc	**PKPbc**	**14 10 03.2**	**+0.6**
	comp=Z,21nm,0.9s,baz=30,slow=3.3,SNR=13						
VRAC	**Vranov**	**145.67**	**341**	⇓PKP2	**PKPab**	**14 10 03.9**	**-0.5**
VRAC	**Vranov**	**145.67**	**341**	*e*PKP	**PKPbc**	**14 10 03.2**	**+0.6**
PRU	**Pruhonice**	**145.68**	**343**	*e*PKP	**PKPbc**	**14 10 02.8**	**+0.3**
PRU	**Pruhonice**	**145.68**	**343**	*e*PKIKP	**PKPbc**	**14 10 02.8**	**+0.3**
PSZ	**Piszkesteto**	**145.68**	**336**	⇑P	**PKPab**	**14 10 04.0**	**-0.6**
PSZ	**Piszkesteto**	**145.68**	**336**	*e*P	**PKPbc**	**14 10 03.1**	**+0.4**
PSZ	**Piszkesteto**	**145.68**	**336**	⇑PKP2	**PKPab**	**14 10 04.0**	**-0.6**
KOLL	**Kolacno**	**145.69**	**338**	*e*PKP	**PKPab**	**14 10 03.7**	**-0.8**
JAVC	**Velka Javorina**	**145.71**	**339**	*e*PKP	**PKPab**	**14 10 04.5**	**-0.1**
RAZG	**Razgrad**	**145.78**	**325**	⇓P	**PKPbc**	**14 10 03.9**	**+0.9**
MOX	**Moxa**	**145.79**	**347**	*e*PKPbc	**PKPbc**	**14 10 03.6**	**+0.7**
	baz=18,slow=2.9						
MOX				*e*pPKPbc	**pPKPdf**	**14 12 27.3**	**+3.5**
TANN	**Tannenbergstha**	**145.81**	**346**	*e*PKPbc	**PKPbc**	**14 10 04.0**	**+1.0**
	baz=18,slow=2.9						
TANN				*e*pPKPbc	**pPKPdf**	**14 12 26.6**	**+2.7**
PLN	**Plauen**	**145.82**	**346**	*e*PKPbc	**PKPbc**	**14 10 03.7**	**+0.8**
	baz=18,slow=2.9						
PLN				*e*pPKPbc	**pPKPdf**	**14 12 26.5**	**+2.7**
WERD	**Werda**	**145.82**	**346**	*e*PKPbc	**PKPab**	**14 10 04.0**	**-0.9**
	baz=18,slow=2.9						
KASTN	**Kahler Asten**	**145.86**	**350**	*e*PKPbc	**PKPbc**	**14 10 03.8**	**+0.8**
	baz=18,slow=2.9						
EIL	**Elat**	**145.89**	**297**	PKPbc	**PKPbc**	**14 10 04.4**	**+0.6**
	comp=Z,28nm,0.8s,baz=83,slow=2.6,SNR=16						
GUNZ	**Gunzen**	**145.89**	**346**	*e*PKPbc	**PKPab**	**14 10 04.5**	**-0.7**
	baz=18,slow=2.9						
GUNZ				*e*pPKPbc	**pPKPdf**	**14 12 26.8**	**+2.8**
LOT	**Lotru**	**145.90**	**329**	⇑P	**PKPbc**	**14 10 03.2**	**-0.2**
STRD	**Stroud**	**145.93**	**2**	*e*P	**PKPbc**	**14 10 02.9**	**-0.2**
LEF	**Lefka**	**145.94**	**307**	⇑P	**PKPbc**	**14 10 03.9**	**+0.2**
HUMR	**Humele**	**145.95**	**327**	⇓P	**PKPbc**	**14 10 03.8**	**+0.4**
KRUC	**Moravsky**	**145.95**	**341**	*e*PKP	**PKPbc**	**14 10 04.0**	**+0.7**
WERN	**Wernitzgruen**	**145.95**	**346**	*e*PKPbc	**PKPbc**	**14 10 04.4**	**+1.1**
	baz=18,slow=2.9						
NKC	**Novy Kostel**	**145.99**	**346**	*e*PKP	**PKPbc**	**14 10 03.4**	**0.0**
NKC	**Novy Kostel**	**145.99**	**346**	*e*PKIKP	**PKPbc**	**14 10 03.4**	**0.0**
TREC	**Trest**	**146.03**	**342**	*e*PKP	**PKPbc**	**14 10 03.9**	**+0.4**
TREC	**Trest**	**146.03**	**342**	*e*PKIKP	**PKPbc**	**14 10 03.9**	**+0.4**
MODS	**Modra-Piesok**	**146.26**	**339**	*e*PKIKP	**PKPbc**	**14 10 04.6**	**+0.4**
MODS	**Modra-Piesok**	**146.26**	**339**	*e*PKP	**PKPbc**	**14 10 04.6**	**+0.4**
SIRR	**Siria**	**146.26**	**332**	⇑P	**PKPbc**	**14 10 05.3**	**+1.0**
MANZ	**Manzenberg**	**146.30**	**346**	*e*PKPdf	**PKPdf**	**14 10 02.7**	**+0.9**
MANZ				*e*PKPbc	**PKPbc**	**14 10 05.3**	**+1.0**
	baz=18,slow=2.9						
BUD	**Budapest**	**146.38**	**336**	*e*P	**PKiKP**	**14 10 05.7**	**-0.9**
GZR	**Gura Zlata**	**146.42**	**330**	⇑P	**PKPbc**	**14 10 05.2**	**+0.4**
GZR	**Gura Zlata**	**146.42**	**330**	⇑PKIKP	**PKPbc**	**14 10 05.2**	**+0.4**
ZST	**Bratislava**	**146.47**	**339**	*e*PKP2	**PKiKP**	**14 10 05.8**	**-1.0**
ZST	**Bratislava**	**146.47**	**339**	*e*PKP	**PKiKP**	**14 10 05.8**	**-1.0**
ROTZ	**Rotzenmuhle**	**146.48**	**346**	*e*PKPbc	**PKPbc**	**14 10 05.7**	**+1.0**
	baz=18,slow=2.9						
HTL	**Hartland**	**146.56**	**5**	*e*P	**PKPbc**	**14 10 05.2**	**+0.3**
ELSH	**Elham, Standar**	**146.58**	**359**	*e*P	**PKPbc**	**14 10 05.3**	**+0.4**
BEBN	**Eben Emael**	**146.63**	**353**	*d*PKPbc	**PKPbc**	**14 10 05.8**	**+0.8**
BEBN				*d*PKPab	**PKPab**	**14 10 08.0**	**-0.1**
AHRW	**Bad Neuenahr-A**	**146.71**	**352**	*e*PKPbc	**PKPbc**	**14 10 06.2**	**+0.9**
	baz=18,slow=2.9						
KHC	**Kasperske Hory**	**146.72**	**344**	*e*PKP	**PKPdf**	**14 10 03.4**	**+0.8**
KHC				*e*x	x	14 10 06.3	
KHC	**Kasperske Hory**	**146.72**	**344**	*e*PKIKP	**PKPdf**	**14 10 03.4**	**+0.8**
KHC				*e*		14 10 06.3	
SRE	**Strehaia**	**146.75**	**329**	⇓P	**PKiKP**	**14 10 06.9**	**-0.6**
SRE	**Strehaia**	**146.75**	**329**	⇓PKP2	**PKiKP**	**14 10 06.9**	**-0.6**
CSKK	**Cskako**	**146.76**	**337**	*e*P	**PKPbc**	**14 10 06.5**	**+0.9**
MEM	**Membach**	**146.78**	**353**	*d*PKPdf	**PKPdf**	**14 10 02.8**	**+0.2**
MEM				*d*PKPbc	**PKPbc**	**14 10 05.6**	**+0.1**
MEM				*d*PKiKP	**PKiKP**	**14 10 06.9**	**-0.5**
GRF	**Grafenberg Arr**	**146.78**	**347**	*e*PKPbc	**PKPbc**	**14 10 06.5**	**+0.9**
	baz=18,slow=2.9						
GRF				*e*PKPab	**PKPab**	**14 10 09.5**	**+0.7**
BTNL	**Ternell**	**146.78**	**353**	*d*PKPdf	**PKPdf**	**14 10 03.0**	**+0.3**
BTNL				*d*PKPbc	**PKPbc**	**14 10 05.3**	**-0.2**
BTNL				*d*x	x	14 10 06.2	
BZS	**Buzias**	**146.78**	**332**	⇓P	**PKiKP**	**14 10 06.7**	**-0.9**
BZS	**Buzias**	**146.78**	**332**	⇓PKP2	**PKiKP**	**14 10 06.7**	**-0.9**
CKRC	**Cesky Krumlov**	**146.80**	**343**	*e*PKP	**PKPbc**	**14 10 06.3**	**+0.7**
TNS	**Taunus Mts**	**146.81**	**350**	*e*PKPdf	**PKPdf**	**14 10 03.3**	**+0.6**
TNS				*e*PKPbc	**PKPbc**	**14 10 06.5**	**+0.8**
	baz=18,slow=2.9						
HMNX	**Herstmonceux**	**146.88**	**360**	*e*P	**PKPbc**	**14 10 06.6**	**+0.9**
WET	**Wettzell**	**146.89**	**344**	*e*PKPbc	**PKPbc**	**14 10 06.6**	**+0.7**
	baz=18,slow=2.9						
WET				*e*PKPab	**PKPab**	**14 10 10.9**	**+1.6**
WET				*e*pPKPbc	pPKPbc	14 12 28.1	+2.0
GEC2	**GERESS Array S**	**146.94**	**343**	*e*PKPdf	**PKPdf**	**14 10 04.0**	**+0.9**
GEC2				*e*PKPbc	**PKPbc**	**14 10 06.6**	**+0.5**
	baz=18,slow=2.9						
GEC2	**GERESS Array S**	**146.94**	**343**		**PKPbc**	**14 10 06.6**	**+0.5**
GERES	**GERESS Array B**	**146.94**	**343**	PKPbc	**PKPbc**	**14 10 06.5**	**+0.3**
	comp=Z,22nm,0.6s,baz=31,slow=3.1,SNR=70						
GERES				pPKPbc	pPKPbc	14 12 26.9	+0.7
	comp=Z,1.3nm,0.8s,baz=67,slow=20,SNR=2.1						
GERES	**GERESS Array B**	**146.94**	**343**	PKP2	**PKPbc**	**14 10 06.8**	**+0.7**
GERES	**GERESS Array B**	**146.94**	**343**		**PKPbc**	**14 10 06.8**	**+0.7**
HERR	**Herculane**	**146.97**	**330**	⇑P	**PKPbc**	**14 10 06.7**	**+0.5**
BHOU	**Houvegnez**	**147.03**	**353**	*d*PKPdf	**PKPdf**	**14 10 04.1**	**+1.1**
BHOU				*d*PKP	**PKiKP**	**14 10 07.3**	**-0.6**
MILB	**Miltenberg**	**147.04**	**349**	*e*PKPbc	**PKiKP**	**14 10 07.3**	**-0.7**
	baz=18,slow=2.9						
BCLA	**Clavier**	**147.04**	**354**	*d*PKiKP	**PKiKP**	**14 10 07.4**	**-0.5**
BCLA				*d*PKPab	**PKPab**	**14 10 09.6**	**-0.2**
SNF	**Seneffe**	**147.05**	**355**	*d*PKPbc	**PKPbc**	**14 10 06.4**	**+0.2**
SNF				*d*PKPab	**PKPab**	**14 10 09.3**	**-0.5**
EGYH	**Egyhazaskeszo**	**147.06**	**338**	*e*P	**PKiKP**	**14 10 08.1**	**0.0**
DJES	**Djerdap**	**147.08**	**330**	⇓P	**PKPbc**	**14 10 06.1**	**-0.4**
BGES	**Gesves**	**147.10**	**354**	*d*PKPbc	**PKPbc**	**14 10 06.6**	**+0.3**
BGES				*d*PKPab	**PKPab**	**14 10 10.1**	**+0.1**
SOP	**Sopron**	**147.10**	**339**	*e*P	**PKiKP**	**14 10 08.0**	**-0.1**
CONA	**Conrad Observa**	**147.12**	**340**	*e*P	**PKiKP**	**14 10 07.6**	**-0.7**
	comp=Z,58nm,0.9s,SNR=19						
DYA	**Yadsworthy**	**147.16**	**5**	*e*P	**PKPbc**	**14 10 06.4**	**-0.1**
MPLH	**Magyarpolny**	**147.19**	**338**	*e*P	**PKiKP**	**14 10 07.6**	**-0.8**
BMRD	**Maredsous**	**147.21**	**354**	*d*PKPdf	**PKPdf**	**14 10 03.9**	**+0.7**
BMRD				*d*PKPbc	**PKPbc**	**14 10 06.4**	**-0.2**
BMRD				*d*PKiKP	**PKiKP**	**14 10 08.2**	**-0.1**
RCHB	**Rochefort**	**147.31**	**354**	*d*PKPbc	**PKPbc**	**14 10 06.8**	**0.0**
MDVR	**Moldovita**	**147.37**	**331**	⇑P	**PKPbc**	**14 10 07.2**	**-0.1**
DOU	**Dourbes**	**147.43**	**354**	*d*PKPbc	**PKPbc**	**14 10 07.6**	**+0.4**
MORH	**Mrgy, Hungar**	**147.57**	**335**	⇓P	**PKiKP**	**14 10 08.5**	**-0.6**
MORH	**Mrgy, Hungar**	**147.57**	**335**	*e*P	**PKPdf**	**14 10 05.2**	**+1.2**
MORH	**Mrgy, Hungar**	**147.57**	**335**	*e*P	**PKPbc**	**14 10 07.9**	**+0.2**
MOA	**Molln**	**147.68**	**342**	*i* P	**PKPbc**	**14 10 08.4**	**+0.5**
	comp=Z,33nm,1.2s,SNR=8.5						
WLF	**Walferdange**	**147.69**	**352**	*d*PKiKP	**PKiKP**	**14 10 08.8**	**-0.5**
WLF	**Walferdange**	**147.69**	**352**	*e*PKPbc	**PKiKP**	**14 10 09.3**	**0.0**
	baz=18,slow=2.9						
ARSA	**Arzberg**	**147.82**	**340**	*e*P	**PKiKP**	**14 10 09.0**	**-0.6**
	comp=Z,18nm,1.0s						
RDO	**Rodhopi**	**147.88**	**322**	P	**PKPbc**	**14 10 08.3**	**-0.3**
KOVH	**Kovagotottos**	**147.89**	**336**	*e*P	**PKPbc**	**14 10 09.1**	**+0.6**
FRGS	**Fruska Gora**	**147.94**	**333**	⇑P	**PKiKP**	**14 10 09.4**	**-0.6**
FRGS	**Fruska Gora**	**147.94**	**333**	*e*P	**PKPbc**	**14 10 09.1**	**+0.4**
STU	**Stuttgart**	**148.07**	**348**	*e*PKPdf	**PKPdf**	**14 10 05.7**	**+1.0**
STU				*e*PKPbc	**PKiKP**	**14 10 09.7**	**-0.4**
	baz=18,slow=2.9						
VTS	**Vitosha**	**148.19**	**326**	⇑P	**PKiKP**	**14 10 10.4**	**-0.4**
VTS	**Vitosha**	**148.19**	**326**	⇑PKP2	**PKiKP**	**14 10 10.4**	**-0.4**
FUR	**Furstenfeldbru**	**148.19**	**346**	*e*PKPbc	**PKiKP**	**14 10 10.1**	**-0.3**
	baz=18,slow=2.9						
FUR				*e*PKPab	**PKPab**	**14 10 15.8**	**+1.2**
BOVS	**Bovan**	**148.23**	**329**	⇑P	**PKPbc**	**14 10 09.4**	**0.0**
SMTH	**Samothraki Isl**	**148.31**	**321**	P	**PKPbc**	**14 10 09.0**	**-0.8**
KALN	**Kalnik**	**148.47**	**338**	*i* P	**PKPbc**	**14 10 09.7**	**-0.3**
SOKA	**Soboth**	**148.48**	**340**	*i* P	**PKPbc**	**14 10 10.0**	**-0.1**
	comp=Z,36nm,1.1s,SNR=6.0						
JSA	**Saint Aubin**	**148.51**	**3**	*e*P	**PKPbc**	**14 10 10.0**	**+0.1**
TEKS	**Tekeris**	**148.54**	**333**	*e*P	**PKPbc**	**14 10 10.1**	**-0.1**
KAVA	**Kavala**	**148.57**	**323**	P	**PKPbc**	**14 10 09.8**	**-0.6**
KBA	**Koelnbreinsper**	**148.65**	**342**	*i* P	**PKPbc**	**14 10 10.3**	**-0.3**
	comp=Z,24nm,0.6s,SNR=8.9						
BFO	**Black Forest**	**148.65**	**349**	PKHKP	**PKPbc**	**14 10 10.9**	**+0.5**
BFO	**Black Forest**	**148.65**	**349**	*e*PKPbc	**PKiKP**	**14 10 11.0**	**-0.4**
	baz=18,slow=2.9						
BFO	**Black Forest**	**148.65**	**349**		**PKPbc**	**14 10 10.9**	**+0.5**
DIVS	**Divibare**	**148.69**	**332**	*e*P	**PKPbc**	**14 10 11.1**	**+0.4**
NVR	**Nevrokopi**	**148.71**	**324**	P	**PKPbc**	**14 10 10.5**	**-0.3**
OBKA	**Obir**	**148.79**	**340**	*e*P	**PKPbc**	**14 10 11.1**	**+0.2**
	comp=Z,30nm,1.3s						
MOSL	**Moslavina**	**148.80**	**337**	*i* P	**PKPbc**	**14 10 11.2**	**+0.4**
WATA	**Walderalm**	**148.89**	**345**	*i* P	**PKPbc**	**14 10 11.6**	**+0.4**
	comp=Z,34nm,0.5s,SNR=15						
UBR	**Ueberruh**	**148.92**	**347**	*e*PKPbc	**PKiKP**	**14 10 11.6**	**-0.4**
	baz=18,slow=2.9						
UBR				*e*PKPab	**PKPab**	**14 10 18.7**	**+1.0**
WTTA	**Wattenberg**	**148.95**	**344**	*i* P	**PKPbc**	**14 10 11.6**	**+0.3**
	comp=Z,34nm,0.4s,SNR=19						
RETA	**Reutte**	**148.95**	**346**	*i* P	**PKPbc**	**14 10 11.4**	**+0.3**
	comp=Z,22nm,0.7s,SNR=8.2						
MYKA	**Terra Mystica**	**148.97**	**342**	*i* P	**PKPbc**	**14 10 10.9**	**-0.3**
	comp=Z,48nm,1.0s,SNR=9.6						
MOTA	**Moosalm**	**149.00**	**345**	*i* P	**PKiKP**	**14 10 12.3**	**0.0**
	comp=Z,68nm,1.0s,SNR=15						
SQTA	**Sankt Quirin**	**149.09**	**345**	*i* P	**PKiKP**	**14 10 12.0**	**-0.4**
	comp=Z,88nm,1.0s,SNR=14						
BBLS	**Lazići**	**149.14**	**332**	*e*P	**PKiKP**	**14 10 12.4**	**-0.2**
HAPS	**Han Pijesak,Bl**	**149.16**	**333**	*e*P	**PKiKP**	**14 10 12.3**	**-0.4**
ABTA	**Abfaltersbach**	**149.19**	**343**	*i* P	**PKPbc**	**14 10 11.6**	**-0.1**
	comp=Z,97nm,1.0s,SNR=18						
LJU	**Ljubljana**	**149.21**	**340**	*e*P	**PKPbc**	**14 10 11.8**	**+0.1**
LJU	**Ljubljana**	**149.21**	**340**	*i* PKPbc	**PKPbc**	**14 10 11.8**	**+0.1**
CHOS	**Chios island**	**149.22**	**317**	P	**PKPbc**	**14 10 11.3**	**-0.8**
OUR	**Ouranopolis**	**149.31**	**322**	P	**PKPbc**	**14 10 11.6**	**-0.5**
DAVA	**Damuels**	**149.34**	**347**	*i* P	**PKiKP**	**14 10 13.0**	**0.0**
	comp=Z,55nm,1.1s,SNR=14						
RUDO	**Rudo**	**149.35**	**332**	*e*P	**PKPbc**	**14 10 11.7**	**-0.5**
BLY	**Banja Luka**	**149.36**	**335**	*e*P	**PKiKP**	**14 10 12.8**	**-0.1**
KNT	**Kendrikon**	**149.37**	**325**	P	**PKPbc**	**14 10 11.4**	**-0.9**
STIP	**Stip**	**149.39**	**326**	*i* P	**PKPbc**	**14 10 11.7**	**-0.6**
FETA	**Feichten**	**149.40**	**345**	*e*P	**PKPdf**	**14 10 07.9**	**+0.7**
	comp=Z,8.6nm,1.1s						
FETA				*i* P	**PKiKP**	**14 10 13.3**	**+0.2**
	comp=Z,62nm,0.9s,SNR=14						
VOJS	**Vojsko**	**149.43**	**341**	*i* PKPbc	**PKPbc**	**14 10 11.9**	**-0.5**
VAY	**Valandovo**	**149.44**	**325**	*i* P	**PKPbc**	**14 10 12.4**	**-0.1**
CEY	**Cerknica**	**149.51**	**340**	*e*P	**PKPbc**	**14 10 12.5**	**0.0**
STAL	**STALIGIAL**	**149.57**	**342**		**PKPbc**	**14 10 12.5**	**-0.2**
SKO	**Skopje**	**149.58**	**327**	*i* P	**PKiKP**	**14 10 13.5**	**0.0**
MGRS	**Mrkonjic Grad**	**149.68**	**335**	*e*P	**PKPbc**	**14 10 13.0**	**+0.1**
DAVOX	**Davos/Dischmat**	**149.82**	**346**	PKPbc	**PKPbc**	**14 10 13.7**	**+0.3**
	comp=Z,90nm,0.6s,baz=251,slow=2.2,SNR=9.7						
RIY	**Rijeka**	**149.86**	**339**	*e*P	**PKPbc**	**14 10 13.3**	**0.0**
UPM	**Unac-Piva**	**149.88**	**332**	*e*P	**PKPbc**	**14 10 13.8**	**+0.1**
UDBI	**Udbina**	**150.09**	**337**	*i* P	**PKPbc**	**14 10 14.1**	**+0.1**
SMRN	**Sveta Marina**	**150.22**	**339**	*i* P	**PKPbc**	**14 10 13.5**	**-0.6**
TUE	**Stuetta**	**150.23**	**347**		**PKiKP**	**14 10 15.1**	**+0.2**
RABC	**Rab**	**150.26**	**338**	*i* P	**PKPbc**	**14 10 14.1**	**-0.1**

BRY	Bratogost	150.28	332	*e*P	PKPbc	14 10 13.9	-0.7
PHP	Peshkopia	150.30	328	P	PKPbc	14 10 13.7	-0.8
APE	Apeiranthos	150.31	316	⇑P	PKPbc	14 10 13.4	-1.3
APE	Apeiranthos	150.31	316	⇑PKIKP	PKPbc	14 10 13.4	-1.3
PDG	Podgorica	150.32	330	⇑P	PKiKP	14 10 14.8	-0.2
PDG	Podgorica	150.32	330	*e*P	PKPbc	14 10 14.5	+0.1
RICI	Ricice	150.42	334	*i* P	PKPbc	14 10 13.9	-0.8
FNA	Florina	150.47	326	P	PKPbc	14 10 14.0	-0.9
BRJN	Brijuni	150.47	340	*i* P	PKPbc	14 10 14.8	+0.1
TREB	Trebinje	150.51	332	*e*P	PKPbc	14 10 13.9	-1.0
OHR	Ohrid	150.54	327	*i* P	PKiKP	14 10 15.5	-0.1
DRME	Dracevica, Mon	150.54	330	*e*P	PKPbc	14 10 14.5	-0.5
MAKA	Makarska	150.63	334	*i* P	PKPbc	14 10 14.5	-0.6
DBRK	Dubrovnik	150.64	332	*i* P	PKPbc	14 10 13.5	-1.7
HCY	Herceg Novi	150.66	331	*e*P	PKPbc	14 10 14.6	-0.7
MORI	Morici	150.68	336	*i* P	PKPbc	14 10 14.7	-0.5
STON	Ston	150.68	333	*e*P	PKPbc	14 10 14.3	-0.9
STON	Ston	150.68	333	*i* P	PKPbc	14 10 14.5	-0.7
TEOL	Teolo	150.69	343		PKiKP	14 10 15.8	+0.1
THR8	Santorini-Mono	150.71	315	P	PKPbc	14 10 13.8	-1.7
SANT	Santorini	150.74	315	⇑P	PKPbc	14 10 14.9	-0.8
ZIRJ	Zirje	150.88	336	*i* P	PKPbc	14 10 15.2	-0.5
ATAL	Atalanti	150.93	321	P	PKPbc	14 10 15.2	-0.8
HVAR	Hvar	150.96	335	*i* P	PKPbc	14 10 15.3	-0.6
LSTV	Lastovo	151.11	334	*i* P	PKPbc	14 10 15.5	-0.8
AGG	Agios Georgios	151.13	322	PKIKP	PKPbc	14 10 16.0	-0.5
AGG	Agios Georgios	151.13	322		PKPbc	14 10 16.0	-0.5
MAKR	Makrakomi, Fth	151.25	322	P	PKPbc	14 10 16.5	-0.3
LTK	Loutraki	151.39	320	P	PKPbc	14 10 15.7	-1.4
ANX	Ano Chora	151.65	322	P	PKiKP	14 10 18.3	+0.3
SERG	Sergoula	151.69	321	P	PKPbc	14 10 17.3	-0.4
IDI	Anoyia	151.71	313	PKPbc	PKPbc	14 10 17.6	-0.3
	comp=Z,30nm,0.7s,baz=8.6,slow=7.2,SNR=19						
GUR	Goura	151.83	320	P	PKPbc	14 10 17.4	-0.8
POLO	Lamas de Olo	155.46	14	*e*PKPab	PKPab	14 10 47.5	+1.8
PVIS	Viseu	156.06	15	*e*PKPab	PKPab	14 10 48.6	+0.4
MTE	Manteigas	156.45	14	*e*PKPab	PKPab	14 10 50.8	+0.9
PCAS	Casmilo, Conde	156.53	16	*e*PKPab	PKPab	14 10 50.5	+0.3
PCBR	Castelo Branco	156.99	15	*e*PKPab	PKPab	14 10 52.4	+0.2
PMAFR	Mafra	157.32	19	*e*PKPab	PKPab	14 10 54.4	+0.7
PMRV	Marv??o	157.40	15	*e*PKPab	PKPab	14 10 54.8	+0.7
ESDC	Sonseca Array	157.81	8	PKP	PKPdf	14 10 20.0	+1.0
	comp=Z,0.9nm,0.8s,baz=243,slow=1.4,SNR=2.7						
ESDC				PKPab	PKPab	14 10 55.6	-0.3
	comp=Z,3.8nm,0.8s,baz=353,slow=4.4,SNR=10						
PESTR	Estremoz	157.88	16	*e*PKPab	PKPab	14 10 56.3	+0.1
PNCL	Nicolau / Gran	158.33	18	*e*PKPab	PKPab	14 10 58.1	0.0
PCVE	Castro Verde	158.92	18	*e*PKPab	PKPab	14 11 01.0	+0.3
MORF	Marmelete	159.03	19	*e*PKPdf	PKPdf	14 10 21.8	+1.3
MORF	Marmelete	159.03	19	*e*PKPab	PKPab	14 11 01.6	+0.3
PFVI	Vila Bisbo	159.13	20	*e*PKPab	PKPab	14 11 01.6	0.0
PVAQ	Vaqueiros	159.22	17	*e*PKPab	PKPab	14 11 03.0	+1.0
KEST	Kesra	160.15	337	PKPab	PKPab	14 11 06.6	+0.3
	comp=Z,11nm,0.8s,baz=37,slow=1.6,SNR=5.5						
MDT	Midelt	164.38	14	PKP	PKPdf	14 10 26.3	+0.2
	comp=Z,5.7nm,0.9s,baz=342,slow=3.0,SNR=5.2						
MDT				PKPab	PKPab	14 11 25.7	+0.8
	comp=Z,2.8nm,0.7s,baz=192,slow=2.1,SNR=4.2						
LIC	Lamto	167.64	156	*e*PKIKP	PKPdf	14 10 28.6	-0.5
	comp=Z,52nm,1.6s						
LIC	Lamto	167.64	156	*e*P	PKPab	14 11 40.0	+0.4
	comp=Z,55nm,1.1s						
KIC	Kosan Boka	167.88	157	*e*PKIKP	PKPdf	14 10 28.7	-0.5
	comp=Z,13nm,0.9s						
KIC	Kosan Boka	167.88	157	*e*P	PKPab	14 11 41.3	+0.7
	comp=Z,38nm,1.0s						
TIC	Toumodi	168.03	156	*e*PKIKP	PKPdf	14 10 28.9	-0.4
TIC	Toumodi	168.03	156	*e*P	PKPab	14 11 41.8	+0.4
DBIC	Dimbokro	168.12	156	PKPab	PKPab	14 11 41.2	-0.4
	comp=Z,16nm,1.0s,baz=216,slow=6.3,SNR=6.5						
TORD	Torodi Ar. Bea	175.19	201	PKP	PKPdf	14 10 31.9	-0.7
	comp=Z,4.6nm,0.9s,baz=326,slow=1.3,SNR=20						
TORD				PKPab	PKPab	14 12 13.2	+0.2
	comp=Z,10nm,1.0s,baz=169,slow=1.9,SNR=22						
TORD				pPKPab	pPKPab	14 14 27.7	+1.2
	comp=Z,1.6nm,1.0s,baz=284,slow=0.6,SNR=3.0						
TORD				PP	PP	14 16 06.0	+1.1
	comp=Z,8.9nm,1.1s,baz=173,slow=2.7,SNR=14						

PRU 26 14:07:22.2±0.0**,50°.04N×18°.72E,h0^{km},Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.42	242	*e*PG	Pg	14 07 30.1	-0.2
OKC				*e*SG	Sg	14 07 36.0	+0.3
	comp=Z,6.9nm,0.3s						
OJC	Ojcow	0.72	75	*e*Pg	Pg	14 07 34.4	-1.6
OJC				*e*Sg	Sg	14 07 43.8	-1.4
MORC	Moravsky Berou	0.81	251	*e*PG	Pg	14 07 37.3	-0.3
MORC				*e*SG	Sg	14 07 47.5	-0.5
NIE	Niedzica	1.20	121	*e*Pg	Pn	14 07 47.9	+1.7
NIE				*e*Sg	Sn	14 08 06.4	+3.1
KRLC	Kraliky	1.25	272	*e*PG	Pg	14 07 45.2	-0.9
KRLC				*e*SG	Sg	14 08 02.4	+0.1
	comp=Z,3.0nm,0.2s						
VYHS	Vyhne	1.55	177	*e*PN	Pg	14 07 52.3	+0.4
VYHS				*e*SN	Sb	14 08 11.9	0.0
DPC	Dobruska-Polom	1.57	282	*e*PG	Pn	14 07 51.3	-0.1
DPC				*e*SG	Sg	14 08 12.8	+0.1
	comp=Z,2.9nm,0.6s						

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*TIF **26** 14:37:46.4,42°.81N×47°.12E,h11^{km}±1^{km}*

*DRS **26** 14:37:46.2±0.0,42°.88N×47°.16E,h9^{km},ML2.8/7,FELT I=II-III MSK at Bujnaksk*

*NORS **26** 14:37:48.6±0.0,42°.85N×47°.07E,h5^{km},MPVA3.6*

ISC 26 14:37:45.3±1.5**,42°.93N**±0°.06×**47°.19E**±0°.06**,h16^{km}**±6^{km}**, n14,σ1^{s}.29**/28**,Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUJR	Buynaksk	0.12	209	*i* Pg	Pg	14 37 48.7	-0.1
	3µm,0.5s						
BUJR				*i* Sg	Sg	14 37 50.4	-0.8
	22µm,0.2s						
KRNR	Karanay	0.23	244	*i* Pg	Pg	14 37 50.6	+0.1
	61nm,0.1s						
KRNR				*e*Sg	Sg	14 37 53.6	-0.4
	125nm,0.1s						
DBC	Dubki	0.28	290	*i* Pg	Pb	14 37 52.8	+0.8
	125nm,0.1s						
DBC				*i* Sg	Sb	14 37 57.1	+0.6
	303nm,0.1s						
ARKR	Arakani	0.35	203	*i* Pg	Pg	14 37 52.8	+0.2
	259nm,0.4s						
ARKR				*i* Sg	Sg	14 37 57.5	-0.1
	740nm,0.4s						
UNCR	Uncukul	0.36	234	*i* Pg	Pg	14 37 53.0	+0.4
	241nm,0.4s						
UNCR				*i* Sg	Sg	14 37 57.9	+0.2
	1µm,0.4s						
DLMR	Dylym	0.43	290	*i* Pg	Pn	14 37 56.6	-0.3
	134nm,0.2s						
DLMR				*i* Sg	Sb	14 38 03.4	+2.6
	580nm,0.2s						
XNZR	Khunzakh	0.52	223	*e*Pg	Pg	14 37 56.2	+0.5
	46nm,0.5s						
XNZR				*i* Sg	Sg	14 38 02.8	+0.1
	174nm,0.5s						
GNBR	Gunib	0.56	197	*e*Pg	Pb	14 37 57.4	+0.6
	76nm,0.5s						
GNBR				*i* Sg	Sb	14 38 05.2	+0.5
	316nm,0.6s						
SGKR	Sergokala	0.58	143	*e*Pg	Pn	14 37 58.5	-0.5
	43nm,0.2s						
SGKR				*e*Sg	Sn	14 38 07.0	-1.2
	50nm,0.3s						
BTLR	Botlikh	0.76	250	*e*Pg	Pb	14 38 01.0	+0.9
	50nm,0.3s						
BTLR				*e*Sg	Sg	14 38 11.2	+1.2
	59nm,0.2s						
KMKR	Kumukh	0.80	185	*i* Pg	Pn	14 38 02.5	+0.4
	59nm,0.2s						
KMKR				*e*Sg	Sn	14 38 13.4	-0.4
LGD	Lagodekhi	1.29	213	P	Pg	14 38 10.5	+0.3
LGD				S	Sb	14 38 26.0	+0.3
PNSH	Pansheti	1.91	262	P	Pn	14 38 13.5	-3.9
PNSH				S	Sn	14 38 38.7	-2.6
MTEO	Meteo	1.97	264	P	Pb	14 38 22.3	+1.3
MTEO				S	Sb	14 38 46.9	+1.4

MAN 26 14:40:14.3,10°.29N×124°.10E,h1^{km},mb3.8,ML2.5,MS2.0, Leyte

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MAN 26 14:47:07.1,13°.85N×120°.36E,h43^{km},mb3.9,ML2.7, MS2.3,Mindoro

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*IDC **26** 14:59:35.4±1.7,51°.78N×172°.09E,h0^{km},mb3.5/7, mb1 3.8/8,mb1mx3.5/51,mbtmp3.5/8,ML2.0/1,Error ellipse: s-maj=62.7km s-min=20.8km az=178.0*

*NEIC **26** 14:59:37.6±1.8,51°.6N±0°.2×172°.0E±0°.1,h29^{km}±8^{km}, mb4.4/25,Error ellipse: s-maj=27.6km s-min=8.0km az=164.0*

ISC 26 14:59:39.8±1.1**,51°.8N**±0°.2×**171°.85E**±0°.06**,h35^{km},n42, σ1^{s}.61**/45**,mb4.2**/18**,Near Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMY	Shemya	1.65	56	Pn	Pn	15 00 05.1	-1.1
SMY				Sn	Sn	15 00 24.7	-1.4
PEA0B	Petropavlovsk-	8.74	284	Pn	Pn	15 01 43.7	+0.2
PETK	Petropavlovsk-	8.74	284	Pn	Pn	15 01 45.3	+1.8
	0.1nm,0.3s,baz=96,slow=17,SNR=1.9						
PETK				Sn	Sn	15 03 17.4	-3.2
	0.1nm,0.3s,baz=84,slow=39,SNR=1.5						
PETK	Petropavlovsk-	8.74	284		Pn	15 01 42.7	-0.8
PETK				Sn	Sn	15 03 16.7	-3.9
SEY	Seymchan	15.21	324	Pn	P	15 03 18.1	+1.9
	0.2nm,0.3s,baz=102,slow=18,SNR=5.0						
TNA	Tin City	17.19	29	P	Pn	15 03 37.6	+0.8
TNA				IAmb	IAmb	15 03 38.2	
	comp=Z,75nm,1.4s						
O18K	Koktuh Hills	19.98	53	P	P	15 04 03.6	-5.2
O18K				IAmb	IAmb	15 04 09.3	
	comp=Z,35nm,1.5s						
JKA	Kamikawa-asahi	20.94	260	P	P	15 04 17.0	-2.4
KDAK	Kodiak Island	21.16	60	P	P	15 04 20.6	-1.0
J20K	Nowinta River	21.52	42	P	P	15 04 25.8	+0.4
PPLA	Purkeypile	22.01	46	P	P	15 04 30.5	-0.3
PPLA				IAmb	IAmb	15 04 45.6	
	comp=Z,24nm,1.3s						
IMAR	Indian Mountai	22.32	37	P	P	15 04 34.1	+0.1
H21K	Melozitna Rive	22.56	39	P	P	15 04 36.7	+0.1
SEW	Seward	22.88	54	P	P	15 04 39.1	-0.8
TRF	Thorofare Moun	22.97	45	P	P	15 04 40.6	-0.4
TRF				IAmb	IAmb	15 04 49.2	
	comp=Z,12nm,1.1s						
GHO	Glory Hole Cre	23.30	49	P	P	15 04 43.6	-0.7
GHO				IAmb	IAmb	15 04 51.1	
	comp=Z,26nm,1.2s						
SML	Sawmill	23.59	49	P	P	15 04 46.0	-1.0
RND	Reindeer	23.59	45	P	P	15 04 46.4	-0.7
RND				IAmb	IAmb	15 04 46.6	
	comp=Z,18nm,1.4s						
MCK	McKinley	23.62	45	P	P	15 04 45.8	-1.5
MCK				IAmb	IAmb	15 04 49.3	
	comp=Z,12nm,1.3s						
I23K	Minto, Yukon-K	23.78	41	P	P	15 04 48.5	-0.1
SCM	Sheep Creek Mo	24.06	50	P	P	15 04 48.8	-2.7
A21K	Barrow	24.11	24	P	P	15 04 52.8	+1.1
A21K				IAmb	IAmb	15 04 53.3	
	comp=Z,29nm,1.4s						
WRH	Wood River Hil	24.14	43	P	P	15 04 51.4	-0.6
WRH				IAmb	IAmb	15 04 59.6	
	comp=Z,12nm,1.5s						
CCB	Clear Creek Bu	24.30	43	P	P	15 04 53.8	+0.3
H24K	Noodor Dome	24.56	40	P	P	15 04 56.3	+0.3
KLU	Klutina	24.70	50	P	P	15 04 55.4	-1.9
ILAR	Eielson Array	24.71	43	P	P	15 04 57.5	+0.3
	comp=Z,1.4nm,0.9s,baz=248,slow=8.9,SNR=12						
TOLK	Toolik Lake Re	24.85	33	P	P	15 04 59.8	+1.2
N25K	Chitina, Valde	25.34	50	P	P	15 05 01.1	-2.0
N25K				IAmb	IAmb	15 05 19.6	
	comp=Z,18nm,1.3s						
DOT	Dot Lake	25.75	46	P	P	15 05 06.2	-0.5
DOT				IAmb	IAmb	15 05 20.0	
	comp=Z,13nm,1.2s						
SCRK	Sand Creek	25.83	45	P	P	15 05 07.8	+0.2
SCRK				IAmb	IAmb	15 05 14.2	
	comp=Z,11nm,1.5s						
BMAR	Burnt Mountain	26.24	37	P	P	15 05 11.0	-0.1
BCAR	Beaver Creek A	26.73	47	P	P	15 05 15.8	+0.2
BARN	Barnard Glacie	26.75	52	P	P	15 05 15.5	-0.5
BARN				IAmb	IAmb	15 05 24.8	
	comp=Z,16nm,1.2s						
INK	Inuvik	30.51	37	P	P	15 05 47.8	-1.2
NVAR	Mina Array Bea	49.21	77	P	P	15 08 24.6	0.0
	comp=Z,0.3nm,0.6s,baz=300,slow=8.2,SNR=2.5						
PDAR	Pinedale Array	51.62	67	P	P	15 08 42.1	-0.7
	comp=Z,0.2nm,0.6s,baz=330,slow=5.2,SNR=1.6						
MKAR	Makanchi Array	55.04	303	P	P	15 09 09.0	+1.4
	comp=Z,0.3nm,0.4s,baz=59,slow=6.6,SNR=5.8						
MKAR	Makanchi Array	55.04	303	P	P	15 09 08.2	+0.6
TXAR	Lajitas Array	64.26	75	P	P	15 10 11.4	0.0
	comp=Z,0.4nm,0.7s,baz=308,slow=4.4,SNR=4.7						
CMAR	Chiang Mai Arr	65.17	269	P	P	15 10 19.6	+2.3
	comp=Z,0.3nm,0.6s,baz=18,slow=6.9,SNR=2.5						
AKASG	Malin Array Be	73.05	336	P	P	15 11 07.7	+2.0
	comp=Z,0.4nm,0.4s,baz=23,slow=6.6,SNR=3.2						

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*ROM **26** 15:35:53.6±0.2,39°.141N±0°.010×15°.41E±0°.03, h277^{km}±1^{km},ML3.4/25,Error ellipse: s-maj=2.2km s-min=0.6km az=104.0*

*NEIC **26** 15:35:54.7±1.9,39°.31N±0°.09×15°.2E±0°.1,h267^{km}±9^{km}, mb4.3/8,ML3.4(ROM),Error ellipse: s-maj=13.4km s-min=11.2km az=160.0*

*IDC **26** 15:36:13.3±9.0,39°.56N×14°.60E,h520^{km}±141^{km},mb2.9/6, mb1 3.0/7,mb1mx2.7/30,mbtmp3.8/7,Error ellipse: s-maj=68.8km s-min=15.2km az=114.0*

ISC 26 15:35:54.5±0.7**,39°.14N**±0°.05×**15°.49E**±0°.06**,h271^{km}**±6^{km}**, n64,σ1^{s}.63**/72**,mb3.6**/6**,3C-18D,Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IST3	Stromboli F	0.40	210	⇓*i*P	Pn	15 36 30.5	+0.9
IST3				AML	AML		
	comp=E,1430µm,1.0s						
IST3				AML	AML		
	comp=N,1765µm,0.6s						
CET2	Cetraro	0.53	43	⇓*i*P	Pn	15 36 30.1	+0.2
CET2				S	S	15 36 57.8	-0.1
CET2				AML	AML		
	comp=E,258µm,0.5s						
CET2				AML	AML		
	comp=N,328µm,1.0s						
CET2				AML	AML		
	comp=N,757µm,0.7s						
CET2				AML	AML		
	comp=E,832µm,0.6s						
CAR1	CAROLEI	0.58	79	⇓*i*P	Pn	15 36 30.2	+0.2
CAR1				S	S	15 36 57.3	-0.8
CAR1				AML	AML		
	comp=E,205µm,1.4s						
CAR1				AML	AML		
	comp=N,146µm,0.6s						
CAR1				AML	AML		
	comp=E,518µm,0.5s						
CAR1				AML	AML		
	comp=N,419µm,0.8s						
CAR1				AML	AML		
	comp=E,606µm,0.5s						
CAR1				AML	AML		
	comp=E,606µm,0.5s						
CAR1				AML	AML		
	comp=N,287µm,0.9s						
JOPP	Joppolo	0.62	149	⇓*i*P	Pn	15 36 30.5	+0.3
JOPP				S	S	15 36 58.0	-0.4
JOPP				AML	AML		
	comp=N,325µm,0.6s						
JOPP				AML	AML		
	comp=E,313µm,0.4s						
GRI	Girifalco	0.80	113	⇑*i*P	Pn	15 36 32.0	+1.1
GRI				S	S	15 36 59.4	-0.1
GRI				AML	AML		
	comp=E,476µm,1.0s						
GRI				AML	AML		
	comp=N,294µm,1.1s						
VPL	Vulcano Piano	0.86	207	P	Pn	15 36 32.1	+0.9
MSRU	Castanea	0.88	179	⇓*i*P	Pn	15 36 31.4	+0.2
MSRU				S	S	15 36 60.0	-0.3
MSRU				AML	AML		
	comp=E,684µm,0.5s						
MSRU				AML	AML		
	comp=N,454µm,0.3s						
MSRU				AML	AML		
	comp=N,454µm,0.3s						
CUC	Castrocucco	0.89	17	P	Pn	15 36 31.4	+0.2
CEL	Celeste	0.94	160	⇓*i*P	Pn	15 36 31.8	+0.2
CEL				S	S	15 36 60.0	-0.9
CEL				AML	AML		
	comp=N,248µm,1.4s						
CEL				AML	AML		
	comp=E,252µm,0.3s						
CEL	Celeste	0.94	160		Pn	15 36 31.5	0.0
MSCL	Scilla	0.94	165	P	Pn	15 36 31.8	+0.2
MSCL				AML	AML		
	comp=E,657µm,1.4s						
MSCL				AML	AML		
	comp=N,573µm,0.5s						
BULG	Bulgheria - Ca	0.94	355	P	Pn	15 36 31.9	+0.4
SERS	Sersale	0.94	96	⇓*i*P	Pn	15 36 32.6	+1.1
SERS				AML	AML		
	comp=N,267µm,0.4s						
SERS				AML	AML		
	comp=E,168µm,1.1s						
SERS				AML	AML		
	comp=N,268µm,0.4s						
TIP	Timpagrande	0.99	87	⇓*i*P	Pn	15 36 32.9	+1.1
TIP				S	S	15 37 01.2	0.0
TIP	Timpagrande	0.99	87		Pn	15 36 32.9	+1.1
SALB	San Lorenzo Be	0.99	42	⇓*i*P	Pn	15 36 32.7	+0.9
SALB				S	S	15 37 01.1	-0.2
SALB				AML	AML		
	comp=N,184µm,0.4s						
SALB				AML	AML		
	comp=E,272µm,0.3s						
SALB				AML	AML		
	comp=N,203µm,0.4s						
SALB				AML	AML		
	comp=E,265µm,0.3s						
SALB				AML	AML		
	comp=N,184µm,0.4s						
MGR	Morigerati	1.00	3	⇓*i*P	Pn	15 36 32.0	+0.4
MPNC	Port Mandanici	1.00	186	P	Pn	15 36 32.1	+0.3
MPNC				AML	AML		
	comp=N,363µm,1.5s						
MPNC				AML	AML		
	comp=E,373µm,0.6s						
GMB	Gambarie	1.01	164	⇑P	Pn	15 36 32.8	+0.8
GMB				S	S	15 37 01.6	-0.1
GMB				AML	AML		
	comp=N,1430µm,0.6s						
GMB				AML	AML		
	comp=E,1410µm,0.7s						
PLAC	Placanica	1.02	133	⇓*i*P	Pn	15 36 32.9	+1.0
PLAC				S	S	15 37 01.3	-0.2
PLAC				AML	AML		
	comp=E,256µm,1.6s						
PLAC				AML	AML		
	comp=N,272µm,1.6s						
PLAC				AML	AML		
	comp=N,289µm,0.3s						
PLAC				AML	AML		
	comp=E,295µm,0.2s						
PLAC				AML	AML		
	comp=N,271µm,1.6s						
SIRI	Monte Sirino -	1.08	16	⇓*i*P	Pn	15 36 32.5	+0.3
MCSR	Castroreale	1.09	190	P	Pn	15 36 33.0	+0.6
MCSR				AML	AML		
	comp=N,668µm,0.4s						
MCSR				AML	AML		
	comp=E,531µm,1.0s						
MCSR				AML	AML		
	comp=N,668µm,0.4s						
SCHR	S. Chirico Rap	1.15	23	⇓*i*P	Pn	15 36 33.7	+1.2
SCHR				AML	AML		
	comp=E,98µm,1.5s						
SCHR				AML	AML		
	comp=N,107µm,1.6s						
SCHR				AML	AML		
	comp=E,96µm,1.5s						
SCHR				AML	AML		
	comp=N,107µm,1.6s						
SOI	Samo	1.16	157	⇓*i*P	Pn	15 36 33.4	+0.7
SOI				S	S	15 37 02.5	-0.4
SOI				AML	AML		
	comp=E,160µm,0.9s						
SOI				AML	AML		
	comp=N,208µm,1.2s						
SOI				AML	AML		
	comp=N,208µm,1.2s						
SOI				AML	AML		
	comp=E,159µm,0.9s						
LADO	San Nicola del	1.17	83	⇓*i*P	Pn	15 36 33.6	+1.0
LADO				AML	AML		
	comp=E,18µm,0.3s						
LADO				AML	AML		
	comp=N,14µm,1.6s						
LADO				AML	AML		
	comp=N,14µm,1.6s						
AIO	Antillo	1.18	190	P	Pn	15 36 33.8	+0.9
AIO				AML	AML		
	comp=N,284µm,0.2s						
AIO				AML	AML		
	comp=N,284µm,0.2s						
AIO				AML	AML		
	comp=E,192µm,0.6s						
ORI	Oriolo Calabro	1.19	39	P	Pn	15 36 33.8	+1.1
ORI				S	S	15 37 02.8	-0.2
ORI				AML	AML		
	comp=N,480µm,1.5s						
ORI				AML	AML		
	comp=N,481µm,1.5s						
ORI				AML	AML		
	comp=E,526µm,1.6s						
MUCR	Ucria	1.20	204	P	Pn	15 36 33.2	+0.2
MCEL	Monticello	1.21	12	P	Pn	15 36 33.9	+0.9
MCEL				AML	AML		
	comp=E,226µm,1.5s						
MCEL				AML	AML		
	comp=N,185µm,1.0s						
AG11	Viggiano (PZ)	1.24	17	*i* P	Pn	15 36 34.5	+1.4
AG11				S	S	15 37 03.5	-0.2
CRAC	Craco	1.43	31	⇓*i*P	Pn	15 36 34.8	+0.6
CRAC				AML	AML		
	comp=N,382µm,1.4s						
CRAC				AML	AML		
	comp=E,521µm,0.9s						
GALF	Gagliano Caste	1.60	207	P	Pn	15 36 36.3	+0.6
GALF				AML	AML		
	comp=E,138µm,0.5s						
GALF				AML	AML		
	comp=N,198µm,0.7s						
CSLB	Castelbuono	1.64	223	P	Pn	15 36 36.1	+0.2
MATE	Matera	1.77	32	AML	AML		
	comp=N,185µm,0.3s						
MATE				AML	AML		
	comp=E,132µm,1.6s						
HLNI	Lentini	1.85	195	⇓*i*P	Pn	15 36 38.4	+0.8
SSY	Sortino	2.01	189	P	Pn	15 36 39.6	+0.7
SSY				AML	AML		
	comp=E,256µm,1.6s						
SSY				AML	AML		
	comp=N,458µm,1.1s						
NOCI	Noci	2.04	36	AML	AML		
	comp=E,144µm,1.1s						
NOCI				AML	AML		
	comp=N,160µm,1.4s						
RAFF	Raffo Rosso	2.11	205	Pn	Pn	15 36 40.4	+0.7
CORL	Corleone	2.12	235	Pn	Pn	15 36 40.0	+0.3
HAVL	Avola	2.20	188	P	Pn	15 36 41.6	+1.1
CRJA	Costa Raja	2.36	236	P	Pn	15 36 51.1	+9.1
CLTB	Caltabellotta	2.37	230	Pn	Pn	15 36 41.6	-0.6
MMGO	Monte Magaggia	2.46	234	⇓P	Pn	15 36 43.0	+0.1
SRN	Sarande	3.57	77	⇑P	Pn	15 37 04.7	+10
SRN				S	S	15 37 41.0	-1.0
VSL	Villasalto	4.75	276		Pn	15 37 07.1	-0.8
ARCI	Arcidosso	4.79	322	S	S	15 38 13.0	+5.4
FRON	Frontone	4.84	335	S	S	15 38 03.0	-5.6
NARO	Abbazia di Nar	4.97	335	S	S	15 38 18.0	+6.7
CASP	Castiglione de	5.05	318		Pn	15 37 08.9	-2.5
AGG	Agios Georgios	5.33	89	Pn	Pn	15 37 18.9	+4.0
ESDC	Sonseca Array	15.05	278	P	Pn	15 39 17.0	+2.6
	comp=N,0.1nm,0.3s,baz=72,slow=11,SNR=5.0						
PABE	Paberze	17.33	16	P	P	15 39 36.4	-1.8
PABE				IAmb	IAmb	15 39 37.9	
	comp=Z,36nm,1.6s						

NOA	NORSAR Array B	22.08	354	P	P	15 40 25.1	-2.0
	comp=Z,0.7nm,0.9s,baz=173,slow=11,SNR=3.8						
NB201	NORSAR Array S	22.09	355	P	P	15 40 25.3	-1.9
NC204	NORSAR Array S	22.35	354	P	P	15 40 27.9	-1.8
FINES	FINESS Array B	23.27	13	P	P	15 40 37.0	-0.9
	comp=Z,4.3nm,0.5s,baz=187,slow=8.7,SNR=37						
FIA1	FINESS Array S	23.27	13	P	P	15 40 37.0	-0.9
TORD	Torodi Ar. Bea	28.62	209	P	P	15 41 27.4	+1.1
	comp=Z,0.4nm,0.5s,baz=9.0,slow=11,SNR=3.3						
TORD	Torodi Ar. Bea	28.62	209	IAmb	IAmb	15 41 31.1	
	comp=Z,1.8nm,0.8s						
ARCES	ARCESS Array B	30.92	7	P	P	15 41 44.0	-1.9
	comp=Z,2.7nm,0.9s,baz=182,slow=7.9,SNR=8.1						
ARCES	ARCESS Array B	30.92	7	IAmb	IAmb	15 42 05.5	
	comp=Z,9.3nm,1.1s						
DBIC	Dimbokro	37.17	215	P	P	15 42 39.8	-0.2
	comp=Z,2.2nm,0.6s,baz=11,slow=5.2,SNR=1.6						
DBIC	Dimbokro	37.17	215	P	P	15 42 39.3	-0.7
DBIC				IAmb	IAmb	15 43 06.9	
	comp=Z,7.7nm,1.2s						
MKAR	Makanchi Array	48.15	58	P	P	15 44 08.6	+1.2
	comp=Z,0.3nm,0.5s,baz=284,slow=7.6,SNR=6.7						

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*IDC **26** 16:07:30.4±0.9, 38°.67S×73°.24W, h0^{km}, mb4.0/8, mb1 4.1/10, mb1mx4.0/28, mbtmp4.1/10, ML3.8/2, MS3.6/12, Ms1 3.6/12, ms1mx3.4/27, Error ellipse: s-maj=26.3km s-min=13.8km az=71.0*

*NEIC **26** 16:07:33.3±2.3, 38°.83S±0°.04×73°.48W±0°.10, h23^{km}±5^{km}, mb4.5/12, ML4.7(GUC), Error ellipse: s-maj=11.1km s-min=5.3km az=88.0*

*GUC **26** 16:07:33.9±0.7, 38°.76S×73°.48W, h22^{km}±3^{km}, ML4.7*

ISC 26 16:07:33.5±0.7**, 38°.79S**±0°.03×**73°.41W**±0°.06**, h22**^{km}±6^{km}**, n89, σ1^{s}25**/92**, mb4.3**/10**, MS3.7**/8**, 4C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LR02	Universidad Au	1.02	173	⇓iP	Pn	16 07 52.8	+0.4
LR02				eS	Sb	16 08 05.3	-0.1
LR04	Corral	1.09	181	⇑eP	Pn	16 07 53.3	-0.1
LR04				eS	Sb	16 08 06.9	-0.4
LR04				IAML		16 08 10.9	
	comp=E,37μm,0.3s						
LR03	Panguipulli	1.18	136	⇓eP	Pb	16 07 55.0	-0.1
LR03				eS	Sb	16 08 09.7	-0.2
LR03				IAML		16 08 14.0	
	comp=N,38μm,0.4s						
LR03	Panguipulli	1.18	136		Pn	16 07 54.5	-0.1
LR03				Sn	Sn	16 08 10.2	+0.2
LC01	Cunco	1.20	96	⇓iP	Pb	16 07 55.4	-0.1
LC01				eS	Sn	16 08 11.2	+0.6
CCSP	San Pedro de C	1.96	7	eS	Sn	16 08 30.0	+0.8
BI05	Punta Hualpn	2.05	5	eP	Pn	16 08 07.5	+0.9
BI05				eS	Sn	16 08 32.0	+0.6
LL04	Puerto Octay	2.25	160	eP	Pn	16 08 07.4	-2.0
LL04				eS	Sb	16 08 39.8	-1.1
LL04				IAML		16 08 46.1	
	comp=N,3μm,0.3s						
LL04	Puerto Octay	2.25	160		Pn	16 08 05.5	-3.9
LL03	Petrohue	2.47	162	eP	Pn	16 08 13.3	+1.0
LL03				eS	Sn	16 08 44.2	+2.3
LL03				IAML		16 09 05.6	
	comp=E,6μm,0.5s						
LL03	Petrohue	2.47	162		Pn	16 08 12.6	+0.2
LL05	Los Muermos	2.61	181	⇑iP	Pn	16 08 14.7	+0.3
LL05				i S	Sb	16 08 51.6	+0.4
LL05				IAML		16 09 13.3	
	comp=E,5μm,0.8s						
LL05	Los Muermos	2.61	181		Pn	16 08 14.5	+0.2
PLCA	Paso Flores	2.94	132	Pn	Pn	16 08 19.5	+0.7
	comp=E,2.8nm,0.3s,baz=289,slow=9.2,SNR=53						
PLCA				Pg	Pb	16 08 24.8	-0.4
	comp=E,47nm,0.3s,baz=310,slow=12,SNR=166						
PLCA				Lg	Lg	16 09 00.7	
	comp=E,120nm,0.3s,baz=218,slow=22,SNR=7.9						
PLCA				LR	LR	16 09 42.1	
	comp=E,1μm,19.8s,baz=312,slow=45						
PLCA	Paso Flores	2.94	132	eP	Pn	16 08 20.7	+1.9
PLCA				eS	Sn	16 08 57.0	+3.5
PLCA	Paso Flores	2.94	132		Pn	16 08 20.5	+1.6
ML02	Panimavida	3.41	28	eP	Pn	16 08 26.6	+1.2
ML02				eS	Sn	16 09 06.8	+1.6
ML02				IAML		16 09 38.7	
	comp=N,534nm,0.4s						
ML02	Panimavida	3.41	28		Pn	16 08 26.6	+1.2
LL01	San Ignacio de	3.66	168	⇑eP	Pn	16 08 29.7	+1.0
LL01				eS	Sn	16 09 12.6	+1.3
LL01	San Ignacio de	3.66	168		Pn	16 08 29.2	+0.4
GO05	Huala	3.96	18	eP	Pn	16 08 33.7	+0.8
GO05				eS	Sn	16 09 19.5	+1.0
GO05	Huala	3.96	18		Pn	16 08 33.1	+0.2
LL07	Hotel Espejo d	4.04	181	Pn	Pn	16 08 32.3	-1.6
GO07	Milladeo Hill,	4.32	182	eP	Pn	16 08 39.3	+1.4
GO07				eS	Sn	16 09 24.1	-3.4
GO07	Milladeo Hill,	4.32	182		Pn	16 08 38.1	+0.2
BO02	Sierra Bellavi	4.51	29	eP	Pn	16 08 41.5	+1.0
BO02	Sierra Bellavi	4.51	29		Pn	16 08 41.4	+0.9
LL02	Futaleuf	4.55	165		Pn	16 08 40.5	-0.5
BO01	Tunca	4.77	24	⇑eP	Pn	16 08 44.1	+0.1
BO01	Tunca	4.77	24		Pn	16 08 44.2	+0.1
MT01	Popeta	5.21	20		Pn	16 08 50.4	+0.3
VA05	Santo Domingo	5.32	16		Pn	16 08 51.7	+0.1
MT09	Talagante	5.37	22		Pn	16 08 52.1	-0.3
MT05	Renca	5.80	23		Pn	16 08 55.6	-2.7
MT02	Curacav	5.82	19		Pn	16 08 57.5	-1.0
VA01	Torpederas	5.93	14	Pn	Pn	16 08 59.7	-0.2
PEL	Peldehue	6.05	22		Pn	16 09 01.4	-0.3
VA03	San Esteban	6.45	22		Pn	16 09 06.7	-0.5
H03S1	Juan Fernandez	6.64	316	Pn	Pn	16 09 11.2	+1.8
	baz=108,slow=9.0,SNR=18						
H03S1				T	T	16 15 59.0	
	baz=140,slow=75,SNR=120						
H03S2	Juan Fernandez	6.65	316	Pn	Pn	16 09 11.0	+1.4
	baz=108,slow=9.0,SNR=26						
H03S2				T	T	16 15 58.6	
	baz=140,slow=75,SNR=150						
H03S3	Juan Fernandez	6.65	316	Pn	Pn	16 09 11.3	+1.6
	baz=108,slow=9.0,SNR=21						
H03S3				T	T	16 15 59.9	
	baz=140,slow=75,SNR=137						
VA04	Juan Fernndez	6.75	318	Pn	Pn	16 09 11.5	+0.3
COYC	Coyhaique	6.85	172		Pn	16 09 12.9	+0.3
H03N3	Juan Fernandez	6.95	318	Pn	Pn	16 09 15.9	+2.2
H03N1	Juan Fernandez	6.95	318	Pn	Pn	16 09 15.6	+1.9
H03N2	Juan Fernandez	6.96	318	Pn	Pn	16 09 15.8	+2.0
ZON	Zonda	8.20	30	Pn	Pn	16 09 30.7	-0.5
CO06	Fray Jorge	8.23	11	Pn	Pn	16 09 30.0	-1.5
GO04	Tololo Observa	8.86	15	Pn	Pn	16 09 40.6	+0.2
TRQA	Tornquist	9.00	89	Pn	Pn	16 09 43.9	+1.8
USHA	Ushuaia	16.40	170	Pn	P	16 11 23.6	-1.1
	comp=N,0.4nm,0.3s,baz=303,slow=7.2,SNR=3.4						
USHA				LR	LR	16 18 49.6	
	comp=N,236nm,19.1s,baz=44,slow=41						
LVC	Limon Verde	16.58	15	LR	LR	16 17 24.5	
	comp=N,118nm,21.9s,baz=201,slow=36						
EFI	East Falkland	16.77	145	P	Pn	16 11 26.5	-0.3
EFI				IAmb	IAmb	16 11 52.4	
	comp=Z,57nm,1.4s						
CPUP	Villa Florida	18.35	52	P	Pn	16 11 47.3	+0.8
	comp=Z,0.1nm,0.3s,baz=355,slow=1.7,SNR=2.9						
CPUP				LR	LR	16 19 07.2	
	comp=Z,172nm,19.1s,baz=222,slow=38						
PB16	IPOC Station P	20.66	11	P	P	16 12 13.1	+0.7
ITAB	Concordia	21.19	63	P	P	16 12 17.7	+0.3
LPAZ	La Paz	22.89	13	P	P	16 12 36.2	-0.1
	comp=Z,2.2nm,0.8s,baz=141,slow=5.7,SNR=7.7						
LPAZ	La Paz	22.89	13	P	P	16 12 37.3	+1.0
SIV	San Ignacio	25.16	29	P	P	16 12 56.0	-1.2
	comp=Z,3.4nm,0.9s,baz=224,slow=9.2,SNR=8.8						
PTLB	Pontes e Lacer	26.43	32	P	P	16 13 07.7	-0.9
PTLB				IAmb	IAmb	16 13 25.2	
	comp=Z,15nm,1.5s						
PMSA	Palmer Station	26.60	171	LR	LR	16 23 08.7	
	comp=Z,140nm,18.4s,baz=331,slow=35						
NNA	Nana	26.87	353	LR	LR	16 21 55.9	
	comp=Z,64nm,18.4s,baz=180,slow=32						
BDFB	Brasilia	32.08	51	LR	LR	16 28 07.7	
	comp=Z,172nm,19.4s,baz=335,slow=39						
PTGA	Pitinga	39.83	21	P	P	16 15 04.8	-0.5
	comp=Z,0.9nm,0.3s,baz=281,slow=10,SNR=2.9						
PTGA	Pitinga	39.83	21	P	P	16 15 03.9	-1.3
PTGA				IAmb	IAmb	16 15 15.6	
	comp=Z,11nm,1.4s						
ROSC	El Rosal	43.42	359	LR	LR	16 33 25.5	
	comp=Z,97nm,18.9s,baz=114,slow=36						
VNA3	Neumayer Olymp	45.39	156	P	P	16 15 50.4	+0.5
ZARC	Zaragoza, Cauc	46.06	358	P	P	16 15 55.6	-0.1
ZARC				IAmb	IAmb	16 15 56.9	
	comp=Z,3.3nm,0.6s						
VNA2	Neumayer--Watz	46.08	155	P	P	16 15 55.8	+0.6
SNAA	Sanae	47.62	156	P	P	16 16 08.0	+0.7
SNAA	Sanae	47.62	156	P	P	16 16 06.7	-0.6
QSPA	South Pole Qui	51.45	180	P	P	16 16 38.1	+1.3
	comp=Z,6.1nm,0.8s,baz=135,slow=3.5,SNR=20						
QSPA	South Pole Qui	51.45	180	P	P	16 16 38.0	+1.2
QSPA				IAmb	IAmb	16 16 39.1	
	comp=Z,6.5nm,0.8s						
CMIG	Matias Romero	59.12	336	LR	LR	16 38 00.5	
	comp=Z,73nm,18.6s,baz=228,slow=31						
VNDA	Vanda	59.20	192	P	P	16 17 34.4	+2.2
	comp=Z,0.8nm,0.8s,baz=127,slow=3.2,SNR=3.0						
MAW	Mawson	68.91	164	LR	LR	16 48 24.5	
	comp=Z,58nm,19.7s,baz=236,slow=36						
TXAR	Lajitas Array	73.42	333	P	P	16 19 02.6	-1.3
	comp=Z,0.3nm,0.9s,baz=139,slow=8.4,SNR=1.7						
DBIC	Dimbokro	77.77	71	P	P	16 19 29.1	0.0
	comp=Z,5.3nm,0.8s,baz=214,slow=2.3,SNR=5.1						
DBIC				LR	LR	16 49 31.8	
	comp=Z,20nm,21.7s,baz=166,slow=32						
DBIC	Dimbokro	77.77	71	P	P	16 19 28.5	-0.6
BOSA	Boshof	78.83	118	LR	LR	16 49 41.9	
	comp=Z,30nm,18.8s,baz=192,slow=32						
TORD	Torodi Ar. Bea	86.86	71	P	P	16 20 15.7	-0.9
	comp=Z,1.4nm,0.7s,baz=240,slow=4.2,SNR=7.2						
TORD	Torodi Ar. Bea	86.86	71	IAmb	IAmb	16 20 16.5	
	comp=Z,2.2nm,0.9s						
H11S2	WAKE ISLAND Hy	124.49	267	T	T	18 43 15.6	
	baz=126,slow=75,SNR=46						
H11S1	WAKE ISLAND Hy	124.50	267	T	T	18 43 20.4	
	baz=126,slow=75,SNR=29						
H11S3	WAKE ISLAND Hy	124.50	267	T	T	18 43 20.1	
	baz=126,slow=75,SNR=26						
TIXI	Tiksi	145.17	348	PKPbc	PKPbc	16 27 06.7	-0.9
	comp=Z,1.6nm,0.3s,baz=287,slow=0.6,SNR=9.0						
BVAR	Borovoye Array	151.42	48	PKPbc	PKPbc	16 27 24.7	-0.1
	comp=Z,1.7nm,0.7s,baz=238,slow=8.5,SNR=7.1						
AAK	Ala-Archa	155.45	71	PKPbc	PKPbc	16 27 34.2	
	comp=Z,0.5nm,0.4s,baz=208,slow=8.1,SNR=4.0						
AAK				PKPab	PKPab	16 27 49.4	-1.5
	comp=Z,1.2nm,0.6s,baz=179,slow=1.8,SNR=5.8						
MKAR	Makanchi Array	160.51	58	PKPab	PKPab	16 28 11.9	-0.5
	comp=Z,0.9nm,0.7s,baz=282,slow=3.6,SNR=9.1						

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*ROM **26** 16:10:31.8±0.2, 44°.547N±0°.006×6°.73E±0°.01, h8^{km}, ML2.2/11, Error ellipse: s-maj=1.1km s-min=0.2km az=243.0*

*STR **26** 16:10:31.5±0.2, 45°N±2°×°±°, h13^{km}±2^{km}, MLv2.2/7, preliminary*

*GEN **26** 16:10:31, 44°.53N×6°.71E, h9^{km}±1^{km}, ML2.1*

LDG 26 16:10:31.6±0.0**, 44°.53N×6°.67E, h7**^{km}**, Ml2.7**/26**, 2C-2D, Error ellipse: s-maj=1.0km s-min=0.6km az=54.0, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SURF	Saint Ours	0.12	117	Pg	Pg	16 10 34.6	+0.4
SURF				Sg	Sg	16 10 36.5	+0.4
OGAG	Argentiere	0.12	229	Pg	Pg	16 10 37.3	+3.0
OGAG				Sg	Sg	16 10 41.2	+5.1
MBDF	Montbardon	0.21	21	ePg	Pg	16 10 36.0	+0.2
MBDF				eSg	Sg	16 10 39.1	+0.4
	165nm,0.3s						
PZZ	Stroppo	0.32	95	P	Pg	16 10 38.1	+0.1
PZZ				S	Sg	16 10 42.7	+0.5
PZZ	Stroppo	0.32	95	⇑iP	Pg	16 10 38.1	+0.2
PZZ				S	Sg	16 10 42.6	+0.4
PZZ				AML	AML		
	comp=E,1600μm,0.2s						
PZZ				AML	AML		
	comp=N,1795μm,0.8s						
RRL	Rocca Remolon	0.40	13	P	Pg	16 10 39.7	+0.3
RRL				S	Sg	16 10 45.4	+0.7
RRL	Rocca Remolon	0.40	13	P	Pg	16 10 39.7	+0.3
RRL				S	Sg	16 10 45.8	+1.1
RRL				AML	AML		
	comp=E,440μm,0.4s						
RRL				AML	AML		
	comp=N,496μm,1.0s						
ISO	Isola	0.45	142	Pg	Pg	16 10 39.9	-0.3
ISO				Sg	Sg	16 10 45.5	-0.6
OGDI	Digne	0.50	212	Pg	Pb	16 10 42.8	+0.1
BNI	Bardonecchia	0.52	1	P	Pg	16 10 41.8	+0.2
BNI				S	Sb	16 10 49.9	-1.0
BHB	Bricherasio	0.53	54	P	Pg	16 10 41.9	+0.1
BHB				S	Sg	16 10 48.8	+0.2
BHB	Bricherasio	0.53	54	⇓P	Pg	16 10 41.9	+0.1
BHB				S	Sg	16 10 48.8	+0.2
BHB				AML	AML		
	comp=E,272μm,1.5s						
BHB				AML	AML		
	comp=N,443μm,0.7s						
ENR	Entracque	0.62	119	P	Pg	16 10 43.4	-0.2
ENR				S	Sg	16 10 51.6	-0.1
ENR	Entracque	0.62	119	⇓iP	Pg	16 10 43.4	-0.1
ENR				AML	AML		
	comp=E,612μm,0.1s						
ENR				AML	AML		
	comp=N,624μm,1.1s						
SPIF	crte de Spivo	0.63	139	Pg	Pg	16 10 43.6	-0.1
SPIF				Sg	Sg	16 10 51.7	-0.2
OGMO	Fort Saint-Gob	0.68	1	Pg	Pg	16 10 44.4	-0.2
OGMO				Sg	Sg	16 10 53.9	+0.5
ORIF	Oris-en-Rattie	0.68	305	ePg	Pg	16 10 44.5	-0.2
ORIF				eSg	Sg	16 10 53.4	-0.2
	comp=N,41nm,0.2s						
ORIF	Oris-en-Rattie	0.68	305	Pg	Pg	16 10 44.5	-0.2
ORIF				Sg	Sg	16 10 53.6	+0.1
ORIF	Oris-en-Rattie	0.68	305	P	Pg	16 10 44.5	-0.2
ORIF				AML	AML		
	comp=E,120μm,0.4s						
ORIF				AML	AML		
	comp=N,142μm,0.8s						
MVIF	Mont Vial	0.73	151	Pg	Pg	16 10 45.5	-0.1
MVIF				Sg	Sg	16 10 54.8	-0.2
RSP	Reno Superiore	0.75	35	P	Pg	16 10 46.3	+0.3
RSP				S	Sg	16 10 56.3	+0.6
RSP	Reno Superiore	0.75	35	P	Pg	16 10 46.2	+0.2
RSP				S	Sg	16 10 56.3	+0.5
RSP				AML	AML		
	comp=E,142μm,0.6s						
RSP				AML	AML		
	comp=N,134μm,0.5s						
TURF	col de Turini	0.76	137	Pg	Pg	16 10 46.0	-0.3
TURF				Sg	Sg	16 10 56.0	-0.2
GDM	Grand'Maison	0.78	330	Pg	Pg	16 10 46.5	-0.1
GDM				Sg	Sg	16 10 56.8	+0.2
CALF	Calern	0.80	167	Pg	Pg	16 10 47.1	+0.1
SAOF	Saorge	0.84	130	Pg	Pg	16 10 47.5	-0.3
SAOF				Sg	Sg	16 10 58.3	-0.4
SAOF	Saorge	0.84	130	⇑P	Pg	16 10 47.5	-0.3
SAOF				S	Sg	16 10 59.0	+0.3
SAOF				AML	AML		
	comp=N,188μm,1.6s						
SAOF				AML	AML		
	comp=E,175μm,1.5s						
ESCA	l'Escarene	0.87	144	Pg	Pg	16 10 48.0	-0.2
ESCA				Sg	Sg	16 10 59.3	-0.2
SBF	Sospel	0.87	140	ePg	Pg	16 10 47.8	-0.5
SBF				eSg	Sg	16 10 59.2	-0.4
	comp=E,60nm,0.2s						
GBOS	Grotte di Boss	0.89	109	P	Pg	16 10 48.2	-0.5
GBOS				S	Sg	16 10 59.6	-0.7
GBOS	Grotte di Boss	0.89	109	P	Pg	16 10 48.2	-0.5
GBOS				S	Sg	16 10 59.8	-0.5
GBOS				AML	AML		
	comp=E,156μm,0.8s						
GBOS				AML	AML		
	comp=N,210μm,1.1s						
MGRO	Montegrosso	0.95	121	P	Pg	16 10 49.6	-0.4
MGRO				S	Sg	16 11 02.2	-0.2
MGRO	Montegrosso	0.95	121	P	Pg	16 10 49.5	-0.4
MGRO				S	Sg	16 11 02.2	-0.2
SMRF	Simiane la Rot	0.96	235	eP	Pb	16 10 50.9	+0.3
SMRF				eSg	Sg	16 11 01.5	-1.1
	comp=N,40nm,0.2s						
LPG	La Plagne	0.97	4	ePg	Pg	16 10 50.1	-0.1
LPG				eSg	Sg	16 11 02.9	+0.2
	comp=N,41nm,0.3s						
FRF	La Foret Royal	0.97	181	ePg	Pg	16 10 49.9	-0.4
FRF				eSg	Sg	16 11 01.9	-1.0
	comp=N,56nm,0.2s						
LPL	La Plagne	0.98	3	ePg	Pg	16 10 50.6	+0.1
LPL				eSg	Sg	16 11 03.0	-0.3
	comp=N,33nm,0.4s						
BURY	Giardini Botan	0.99	139	P	Pg	16 10 50.2	-0.3
BURY				S	Sb	16 11 03.9	-0.3
BURY	Giardini Botan	0.99	139	P	Pg	16 10 50.5	-0.1
RUSF	Rustrel	1.04	236	Pn	Pn	16 10 52.4	-0.2
RUSF				Sn	Sb	16 11 06.1	+0.5
IMI	Imperia	1.08	125	P	Pg	16 10 51.8	-0.5
IMI				S	Sg	16 11 05.2	-1.1
IMI	Imperia	1.08	125	P	Pg	16 10 51.8	-0.5
IMI				S	Sg	16 11 05.9	-0.4
RORO	Rocca Rossa	1.09	112	P	Pg	16 10 51.6	-0.9
RORO				S	Sg	16 11 06.0	-0.7
RORO	Rocca Rossa	1.09	112	P	Pg	16 10 51.6	-0.9
RORO				S	Sg	16 11 05.8	-0.8
RORO				AML	AML		
	comp=E,126μm,1.4s						
RORO				AML	AML		
	comp=N,131μm,0.9s						
ARTF	Artigues	1.13	214	Pg	Pb	16 10 53.6	+0.1
RSL	Roselend	1.16	359	Pn	Pg	16 10 53.4	-0.4
CANO	Canova, Maglio	1.17	106	P	Pg	16 10 53.3	-0.7
LMR	La Mourre	1.21	185	ePg	Pg	16 10 54.0	-0.7
LMR				eSg	Sg	16 11 09.3	-1.0
	comp=N,54nm,0.2s						
QLNO	Quiliano	1.22	99	P	Pg	16 10 54.3	-0.7
QLNO				S	Sg	16 11 10.1	-0.7
QLNO				AML	AML		
	comp=E,95μm,1.1s						
QLNO				AML	AML		
	comp=N,100μm,1.6s						
TRAV	Traversella	1.24	38	P	Pb	16 10 54.7	-0.7
TRAV	Traversella	1.24	38	P	Pb	16 10 54.7	-0.8
TRAV				S	Sg	16 11 11.1	-0.5
TRAV				AML	AML		
	comp=N,41μm,1.4s						
TRAV				AML	AML		
	comp=E,46μm,0.9s						
CIRO	Champorcher	1.25	31	P	Pg	16 10 55.2	-0.3
CIRO	Champorcher	1.25	31	P	Pg	16 10 55.2	-0.3
OGSM	Saint Maurice	1.28	328	Pn	Pg	16 10 56.2	+0.1
PCP	Piancastagn	1.34	89	P	Pn	16 10 56.2	-0.6
PCP	Piancastagn	1.34	89	P	Pn	16 10 56.1	-0.7
PCP				S	Sb	16 11 13.6	-0.9
PCP				AML	AML		
	comp=E,75μm,1.2s						
PCP				AML	AML		
	comp=N,71μm,0.9s						
VIVF	Saint-Julien-l	1.46	283	ePg	Pn	16 10 58.3	-0.1
VIVF				eSg	Sn	16 11 17.0	-0.8
	comp=N,20nm,0.3s						
LASF	Ste Croix	2.07	258	ePn	Pn	16 11 06.9	+0.1
LASF				eSn	Sn	16 11 29.8	-3.0
LASF				eSg	Sb	16 11 36.5	+1.1
	comp=N,4.1nm,0.3s						
CABF	La Chapelle	2.12	349	eP	Pn	16 11 08.6	+1.1
CABF	La Chapelle	2.12	349	ePg	Pg	16 11 11.5	-0.7
CABF				eSn	Sn	16 11 30.7	-3.4
CABF				eSg	Sb	16 11 38.2	+1.3
	comp=N,6.6nm,0.4s						
PGF	Pioggiola	2.61	139	ePn	Pn	16 11 12.9	-1.4
PGF				eSn	Sn	16 11 43.8	-2.5
	comp=N,4.6nm,0.2s						
SMF	Signal de Mont	2.90	318	eP	Pn	16 11 19.0	+0.8
SMF	Signal de Mont	2.90	318	ePg	Pb	16 11 25.0	+1.4
SMF				eSn	Sn	16 11 49.1	-4.1
SMF				eSg	Sg	16 12 03.1	-1.5
	comp=N,2.9nm,0.2s						
AVF	Avril sur Loir	3.24	315	eP	Pn	16 11 23.8	+1.0
AVF	Avril sur Loir	3.24	315	ePg	Pb	16 11 31.5	+2.1
AVF				eSn	Sn	16 11 57.5	-4.1
AVF				eSg	Sg	16 12 13.1	-2.5
	comp=N,2.2nm,0.3s						
HINF	Hinteralfeld	3.29	2	ePn	Pn	16 11 22.0	-1.5
HINF				eSn	Sn	16 11 59.1	-3.8
HINF				eSg	Sg	16 12 14.4	-2.7
	comp=N,2.8nm,0.3s						
CAF	Calviac	3.30	278	eP	Pn	16 11 23.9	+0.1
CAF				eSn	Sn	16 11 59.3	-4.0
	comp=N,1.4nm,0.2s						
SSF	Saint Saulge	3.36	320	eP	Pn	16 11 25.2	+0.7
SSF	Saint Saulge	3.36	320	ePg	Pg	16 11 33.8	-2.1
SSF				eSn	Sn	16 12 00.3	-4.3
	comp=N,5.2nm,0.3s						
BGF	Bois d'Agland	3.36	308	eP	Pn	16 11 25.5	+1.0
BGF	Bois d'Agland	3.36	308	ePg	Pg	16 11 33.8	-2.2
BGF				eSn	Sn	16 12 00.4	-4.3
BGF				eSg	Sg	16 12 16.9	-2.6
	comp=N,6.9nm,0.3s						
LOR	Lormes	3.37	325	eP	Pn	16 11 25.4	+0.8
	baz=146						
LOR				eSn	Sn	16 12 00.4	-4.4
LOR				eSg	Sg	16 12 17.1	-2.5
	comp=N,3.0nm,0.3s,baz=146						
MTLF	Montolieu	3.43	251	eP	Pn	16 11 26.1	+0.7
MTLF				eSn	Sn	16 12 03.6	-2.7
	comp=N,1.6nm,0.2s						
HAU	Haudompre	3.48	356	eP	Pn	16 11 27.2	+1.0
HAU	Haudompre	3.48	356	ePg	Pg	16 11 36.0	-2.2
HAU				eSn	Sn	16 12 04.3	-3.3
	comp=N,14nm,0.4s						
TCF	Toulx Ste Croi	3.60	301	eP	Pn	16 11 28.9	+1.1
TCF				eSn	Sn	16 12 05.9	-4.6
	comp=N,1.0nm,0.2s						
SFTF	Sexfontaines	3.84	344	eP	Pn	16 11 32.3	+1.2
	baz=163						
SFTF				eSn	Sn	16 12 11.5	-5.0
	comp=N,2.3nm,0.2s						
BRSN	Barisano	3.88	92	P	Pn	16 11 34.4	+2.7
CDF	Champ du Feu	3.90	6	eP	Pn	16 11 32.4	+0.4
CDF				eSn	Sn	16 12 13.4	-4.7
	comp=N,1.0nm,0.2s						
PAGF	Fort de Pagny	4.08	351	eP	Pn	16 11 35.5	+1.2
PAGF				eSn	Sn	16 12 17.6	-4.6
	comp=N,3.0nm,0.3s						
BAIF	Baives	5.78	344	eP	Pn	16 11 59.1	+1.5
LDF	La Druitiere	6.20	313	eP	Pn	16 12 04.4	+1.0
GRR	Gorron	6.47	309	eP	Pn	16 12 08.3	+1.1
FLN	La Foliniere	6.49	313	eP	Pn	16 12 08.4	+1.0
	baz=130						
SGMF	Saint Gilles	7.38	304	eP	Pn	16 12 22.7	+3.0

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*ROM **26** 16:11:16.9±0.1, 44°.539N±0°.005×6°.685E±0°.006, h11^{km}, ML1.9/4, Error ellipse: s-maj=0.5km s-min=0.3km az=196.0*

*LDG **26** 16:11:16.8±0.1, 44°.53N×6°.66E, h6^{km}, Md2.3/2, Ml2.4/23, Error ellipse: s-maj=1.5km s-min=0.8km az=55.0*

*GEN **26** 16:11:16, 44°.55N×6°.69E, h6^{km}±1^{km}, ML1.9*

STR 26 16:11:16.5±0.4**, 45°N**±3°×°±°**, h14**^{km}±4^{km}**, MLv1.9**/7**, 2C-4D, preliminary, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SURF	Saint Ours	0.10	132	Pg	Pg	16 11 19.8	-0.1
SURF				Sg	Sg	16 11 21.9	-0.2
SURF	Saint Ours	0.10	132	Pg	Pg	16 11 19.8	-0.1
SURF				Sg	Sg	16 11 21.9	-0.2
OGAG	Argentiere	0.15	232	Pg	Pb	16 11 22.5	+1.3
OGAG				Sg	Sb	16 11 26.2	+1.9
OGAG	Argentiere	0.15	232	Pg	Pb	16 11 22.5	+1.3
OGAG				Sg	Sb	16 11 26.2	+1.9
MBDF	Montbardon	0.18	14	ePg	Pb	16 11 21.4	-0.3
MBDF				eSg	Sg	16 11 24.5	+0.5
	90nm,0.2s						
PZZ	Stroppo	0.29	98	P	Pb	16 11 23.3	-0.3
PZZ				S	Sb	16 11 27.9	-0.5
PZZ	Stroppo	0.29	98	⇑iP	Pb	16 11 23.3	-0.3
PZZ				S	Sb	16 11 27.9	-0.5
PZZ				AML	AML		
	comp=N,1125μm,0.9s						
PZZ				AML	AML		
	comp=E,826μm,0.3s						
RRL	Rocca Remolon	0.38	9	P	Pb	16 11 24.9	-0.1
RRL				S	Sb	16 11 30.6	-0.3
RRL	Rocca Remolon	0.38	9	⇓P	Pb	16 11 24.9	-0.2

RRL				S	Sb	16 11 30.6	-0.2
RRL				AML	AML		
	comp=E,366µm,0.3s						
RRL				AML	AML		
	comp=N,395µm,0.2s						
ISO	**Isola**	**0.44**	**146**	Pg	Pg	16 11 25.2	-0.1
ISO				Sg	Sg	16 11 30.6	-0.6
ISO	**Isola**	**0.44**	**146**	Pg	Pg	16 11 25.2	-0.1
ISO				Sg	Sg	16 11 30.6	-0.6
BHB	**Bricherasio**	**0.49**	**53**	P	Pb	16 11 27.4	+0.6
BHB				S	Sb	16 11 34.1	+0.2
BHB	**Bricherasio**	**0.49**	**53**	⇓*i*P	Pb	16 11 27.1	+0.2
BHB				S	Sb	16 11 34.1	+0.2
BHB				AML	AML		
	comp=E,156µm,1.1s						
BHB				AML	AML		
	comp=N,259µm,0.7s						
BNI	**Bardonecchia**	**0.50**	**358**	P	Pb	16 11 27.3	+0.1
BNI				S	Sb	16 11 34.5	0.0
BNI				AML	AML		
	comp=E,87µm,1.6s						
BNI				AML	AML		
	comp=E,87µm,1.6s						
BNI				AML	AML		
	comp=N,84µm,0.8s						
OGDI	**Digne**	**0.53**	**214**	Pg	Pb	16 11 27.9	+0.4
OGDI	**Digne**	**0.53**	**214**	Pg	Pb	16 11 27.9	+0.4
ENR	**Entracque**	**0.60**	**122**	P	Pb	16 11 28.6	-0.2
ENR				S	Sb	16 11 37.1	-0.1
ENR	**Entracque**	**0.60**	**122**	⇓*i*P	Pb	16 11 28.6	-0.2
ENR				S	Sb	16 11 37.0	-0.1
ENR				AML	AML		
	comp=E,220µm,1.0s						
ENR				AML	AML		
	comp=N,195µm,1.3s						
ENR				AML	AML		
	comp=N,194µm,1.3s						
ENR				AML	AML		
	comp=E,221µm,1.0s						
SPIF	**crte de Spivo**	**0.62**	**142**	Pg	Pg	16 11 28.8	+0.1
SPIF				Sg	Sg	16 11 37.0	+0.1
SPIF	**crte de Spivo**	**0.62**	**142**	Pg	Pg	16 11 28.8	+0.1
SPIF				Sg	Sg	16 11 37.0	+0.1
ORIF	**Oris-en-Rattie**	**0.70**	**302**	*e*Pg	Pg	16 11 29.9	-0.2
ORIF				*e*Sg	Sg	16 11 38.8	-0.5
	comp=E,33nm,0.3s						
ORIF	**Oris-en-Rattie**	**0.70**	**302**	Pg	Pg	16 11 29.8	-0.3
ORIF				Sg	Sg	16 11 39.0	-0.3
ORIF	**Oris-en-Rattie**	**0.70**	**302**	Pg	Pg	16 11 29.8	-0.3
ORIF				Sg	Sg	16 11 39.0	-0.3
ORIF	**Oris-en-Rattie**	**0.70**	**302**	*i* P	Pg	16 11 29.8	-0.3
ORIF				S	Sg	16 11 39.4	0.0
ORIF				AML	AML		
	comp=E,66µm,1.4s						
ORIF				AML	AML		
	comp=N,91µm,0.8s						
RSP	**Reno Superiore**	**0.72**	**33**	P	Pb	16 11 31.4	+0.6
RSP				S	Sb	16 11 41.3	+0.7
RSP	**Reno Superiore**	**0.72**	**33**	P	Pb	16 11 31.5	+0.7
TURF	**col de Turini**	**0.76**	**139**	Pg	Pb	16 11 31.4	0.0
TURF				Sg	Sg	16 11 40.9	-0.2
TURF	**col de Turini**	**0.76**	**139**	Pg	Pb	16 11 31.4	0.0
TURF				Sg	Sg	16 11 40.9	-0.2
GDM	**Grand'Maison**	**0.78**	**327**	Pg	Pg	16 11 31.6	0.0
GDM				Sg	Sg	16 11 41.7	-0.2
GDM	**Grand'Maison**	**0.78**	**327**	Pg	Pg	16 11 31.6	0.0
GDM				Sg	Sg	16 11 41.7	-0.2
SAOF	**Saorge**	**0.83**	**132**	Pg	Pb	16 11 32.7	+0.1
SAOF				Sg	Sg	16 11 43.3	-0.1
SAOF	**Saorge**	**0.83**	**132**	Pg	Pb	16 11 32.7	+0.1
SAOF				Sg	Sg	16 11 43.3	-0.1
SAOF	**Saorge**	**0.83**	**132**	P	Pb	16 11 32.6	+0.1
SAOF				S	Sg	16 11 43.4	0.0
SBF	**Sospel**	**0.86**	**142**	*e*Pg	Pb	16 11 33.4	+0.2
SBF				*e*Sg	Sb	16 11 44.7	+0.1
	comp=N,22nm,0.2s						
ESCA	**l'Escarene**	**0.86**	**146**	Pg	Pb	16 11 33.3	+0.1
ESCA				Sg	Sg	16 11 44.4	-0.1
ESCA	**l'Escarene**	**0.86**	**146**	Pg	Pb	16 11 33.3	+0.1
ESCA				Sg	Sg	16 11 44.4	-0.1
GBOS	**Grotte di Boss**	**0.87**	**110**	P	Pb	16 11 33.5	+0.2
GBOS				S	Sb	16 11 44.7	0.0
GBOS	**Grotte di Boss**	**0.87**	**110**	P	Pb	16 11 33.5	+0.2
GBOS				S	Sb	16 11 44.7	0.0
MGRO	**Montegrosso**	**0.94**	**122**	P	Pg	16 11 34.7	+0.1
MGRO				S	Sg	16 11 47.4	+0.5
MGRO	**Montegrosso**	**0.94**	**122**	⇑*i*P	Pg	16 11 34.8	+0.2
MGRO				S	Sg	16 11 47.7	+0.7
LPG	**La Plagne**	**0.95**	**2**	*e*Pg	Pn	16 11 35.5	-0.1
LPG				*e*Sg	Sb	16 11 48.2	+0.8
	comp=N,31nm,0.4s						
LSD	**Lago del Serru**	**0.96**	**18**	P	Pb	16 11 00.0	-35
LSD				S	Sg	16 11 48.2	+0.5
LPL	**La Plagne**	**0.97**	**1**	*e*Pg	Pn	16 11 35.8	0.0
LPL				*e*Sg	Sg	16 11 48.3	+0.4
	comp=N,20nm,0.3s						
BURY	**Giardini Botan**	**0.98**	**141**	P	Pn	16 11 35.7	0.0
BURY	**Giardini Botan**	**0.98**	**141**	P	Pn	16 11 35.6	-0.1
FRF	**La Foret Royal**	**0.99**	**183**	*e*Pg	Pb	16 11 35.3	0.0
FRF				*e*Sg	Sb	16 11 47.4	-0.8
	comp=N,34nm,0.2s						
SMRF	**Simiane la Rot**	**1.00**	**235**	*e*P	Pn	16 11 36.1	+0.1
SMRF				*e*Sg	Sg	16 11 48.6	-0.1
	comp=N,30nm,0.3s						
IMI	**Imperia**	**1.06**	**126**	P	Pg	16 11 37.1	+0.1
IMI				S	Sg	16 11 50.9	0.0
IMI	**Imperia**	**1.06**	**126**	P	Pn	16 11 37.0	0.0
IMI				S	Sg	16 11 51.0	+0.2
RORO	**Rocca Rossa**	**1.07**	**114**	P	Pn	16 11 36.9	-0.1
RORO	**Rocca Rossa**	**1.07**	**114**	P	Pn	16 11 36.8	-0.1
RORO				S	Sg	16 11 51.2	+0.3
CANO	**Canova, Maglio**	**1.15**	**107**	P	Pg	16 11 38.6	0.0
TRAV	**Traversella**	**1.21**	**37**	P	Pg	16 11 39.8	-0.1
CIRO	**Champorcher**	**1.22**	**30**	P	Pg	16 11 40.3	+0.4
CIRO	**Champorcher**	**1.22**	**30**	P	Pg	16 11 40.0	0.0
CIRO				S	Sg	16 11 55.8	-0.1
LMR	**La Mourre**	**1.22**	**187**	*e*Pg	Pb	16 11 39.5	+0.2
LMR				*e*Sg	Sb	16 11 54.6	-0.3
	comp=N,52nm,0.3s						
VIVF	**Saint-Julien-l**	**1.48**	**283**	*e*Pg	Pb	16 11 43.6	-0.2
VIVF				*e*Sg	Sb	16 12 02.4	-0.1
	comp=N,12nm,0.3s						
MMK	**Mattmark**	**1.74**	**30**	⇓P	Pg	16 11 50.0	0.0
LASF	**Ste Croix**	**2.10**	**258**	*e*Pn	Pn	16 11 52.3	+1.1
LASF				*e*Sn	Sn	16 12 15.2	-1.9
	comp=N,4.9nm,0.5s						
CABF	**La Chapelle**	**2.11**	**348**	*e*P	Pb	16 11 54.1	-0.4
CABF	**La Chapelle**	**2.11**	**348**	*e*Pg	Pg	16 11 57.1	+0.2
CABF				*e*Sg	Sg	16 12 23.7	-0.6
	comp=N,2.2nm,0.2s						
LEOD	**Capriano del C**	**2.59**	**68**	P	Pg	16 12 07.6	+1.6
PGF	**Pioggiola**	**2.60**	**139**	*e*Pn	Pn	16 11 58.3	+0.2
PGF				*e*Sn	Sn	16 12 29.2	-0.4
	comp=N,8.0nm,0.4s						
SMF	**Signal de Mont**	**2.91**	**317**	*e*P	Pn	16 12 04.2	+1.9
SMF	**Signal de Mont**	**2.91**	**317**	*e*Pg	Pg	16 12 11.7	-0.5
SMF				*e*Sn	Sn	16 12 34.5	-2.5
SMF				*e*Sg	Sg	16 12 48.3	-1.5
	comp=N,5.0nm,0.5s						
AVF	**Avril sur Loir**	**3.25**	**315**	*e*P	Pn	16 12 09.0	+2.1
AVF	**Avril sur Loir**	**3.25**	**315**	*e*Pg	Pg	16 12 16.9	-1.8
AVF				*e*Sg	Sg	16 12 58.8	-2.0
	comp=N,1.4nm,0.3s						
CAF	**Calviac**	**3.33**	**278**	*e*P	Pn	16 12 09.3	+1.2
CAF				*e*Sn	Sn	16 12 44.7	-2.8
	comp=N,2.2nm,0.5s						
SSF	**Saint Saulge**	**3.37**	**319**	*e*P	Pn	16 12 10.6	+2.0
SSF	**Saint Saulge**	**3.37**	**319**	*e*Pg	Pg	16 12 19.3	-1.6
SSF				*e*Sn	Sn	16 12 45.6	-2.7
	comp=N,1.2nm,0.2s						
GAGG	**Gaggia**	**3.37**	**61**	S	Sg	16 13 14.0	+9.4
LOR	**Lormes**	**3.37**	**325**	*e*P	Pn	16 12 10.7	+2.1
	baz=145						
LOR	**Lormes**	**3.37**	**325**	*e*Pg	Pg	16 12 18.7	-2.3
LOR				*e*Sn	Sn	16 12 45.9	-2.5
LOR				*e*Sg	Sg	16 13 02.4	-2.3
	comp=N,1.3nm,0.2s,baz=138						
BGF	**Bois d'Agland**	**3.38**	**308**	*e*P	Pn	16 12 10.8	+2.1
BGF	**Bois d'Agland**	**3.38**	**308**	*e*Pg	Pg	16 12 19.4	-1.7
BGF				*e*Sn	Sn	16 12 45.9	-2.6
BGF				*e*Sg	Sg	16 13 02.0	-2.9
	comp=N,3.4nm,0.3s						
MTLF	**Montolieu**	**3.46**	**251**	*e*Sn	Sn	16 12 49.0	-1.6
	comp=N,0.9nm,0.2s						
HAU	**Haudompre**	**3.47**	**356**	*e*Sn	Sn	16 12 49.7	-1.1
	comp=N,6.3nm,0.3s						
HAU				*e*Sg	Sg	16 13 05.7	-2.1
	comp=N,3.5nm,0.3s						
TCF	**Toulx Ste Croi**	**3.61**	**300**	*e*P	Pn	16 12 13.9	+1.9
TCF				*e*Sn	Sn	16 12 51.2	-3.2
	comp=N,1.5nm,0.5s						
CDF	**Champ du Feu**	**3.88**	**6**	*e*P	Pn	16 12 17.9	+2.1
ATFO	**Monte Foce - G**	**4.39**	**104**	P	Pb	16 12 34.3	+0.9
MURB	**Monte Urbino**	**4.39**	**105**	P	Pn	16 12 24.7	+2.0
CERT	**Cerreto**	**5.27**	**117**	P	Pb	16 12 43.8	-4.5

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*IDC **26** 16:21:02.6±1.0, 5°.68S×146°.92E, h0^{km}, mb3.9/8, mb1 4.2/12, mb1mx3.9/46, mbtmp4.1/12, ML4.2/3, MS3.4/7, Ms1 3.4/7, ms1mx3.0/30, Error ellipse: s-maj=27.7km s-min=17.9km az=90.0*

*NEIC **26** 16:21:03.4±2.1, 5°.66S±0°.04×146°.98E±0°.08, h10^{km}±1^{km}, mb4.4/20, Error ellipse: s-maj=13.7km s-min=6.0km az=83.0*

*DJA **26** 16:21:07.4±0.6, 6°S±3°×14°7E±°, h38^{km}±8^{km}, M4.7/20, mB4.9/4, mb4.6/20, MLv4.8/6, Mw(mB)4.2/4*

ISC 26 16:21:11.2±0.6,**5°.84S**±0°.06×**146°.92E**±0°.07,**h78**^{km},**n75,** σ**1ˢ.52**/69,**mb4.2**/15,**Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.55**	**176**	Pn	**Pn**	**16 22 03.1**	**-0.9**
	29nm,0.3s,baz=40,slow=5.8,SNR=100						
PMG				Sn	**Sn**	**16 22 47.7**	**+2.9**
	58nm,0.3s,baz=202,slow=21,SNR=7.6						
PMG				LR	LR	16 23 46.4	
	comp=Z,452nm,21.8s,baz=358,slow=44						
PMG	**Port Moresby**	**3.55**	**176**		**Pn**	**16 22 01.3**	**-2.7**
PMG	**Port Moresby**	**3.55**	**176**	P	**Pn**	**16 22 03.3**	**-0.7**
PMG	**Port Moresby**	**3.55**	**176**	P	**Pn**	**16 22 03.3**	**-0.7**
MANU	**Manus Island**	**3.80**	**7**		Pn	16 21 58.0	-10
RABL	**Rabaul**	**5.47**	**73**		Pn	16 22 23.8	-6.5
MMPI	**Merauke**	**6.99**	**248**	P	**Pn**	**16 22 49.6**	**-1.4**
	1.5nm259nm,1.2s						
JAY	**Jayapura**	**7.03**	**298**	P	**Pn**	**16 22 49.1**	**-2.5**
	0.1nm20nm,0.9s						
GENI	**Genyem**	**7.47**	**295**	P	**Pn**	**16 22 54.2**	**-3.4**
	0.6nm66nm,0.8s						
COEN	**Coen**	**8.87**	**204**	P	**Pn**	**16 23 15.7**	**-0.9**
	baz=9.2						
COEN				S	**Sn**	**16 24 55.5**	**+0.5**
	baz=9.2						
COEN	**Coen**	**8.87**	**204**		**Pn**	**16 23 15.5**	**-1.2**
COEN				Sn	**Sn**	**16 24 54.1**	**-0.9**
COEN	**Coen**	**8.87**	**204**	P	**Pn**	**16 23 16.1**	**-0.6**
MTSU	**Mount Surprise**	**12.48**	**192**	P	**Pn**	**16 24 05.2**	**-0.6**
	baz=13,SNR=16						
HNR	**Honiara**	**13.39**	**106**	Pn	**Pn**	**16 24 15.4**	**-2.7**
	1.5nm,0.3s,baz=82,slow=9.6,SNR=2.0						
HNR	**Honiara**	**13.39**	**106**	Pn	Pn	16 24 11.3	-6.8
CTAO	**Charters Tower**	**14.17**	**183**		**Pn**	**16 24 29.8**	**+1.4**
FAKI	**Fak Fak**	**14.92**	**281**	Pn	**Pn**	**16 24 35.2**	**-2.8**
KDU	**Kakadu**	**15.79**	**243**	P	**Pn**	**16 24 49.0**	**-0.1**
	baz=16,SNR=25						
QIS	**Mount Isa**	**16.26**	**205**	P	**P**	**16 24 56.5**	**-0.1**
	baz=17,SNR=32						
SIJI	**Sorong**	**16.39**	**287**	Pn	**Pn**	**16 24 52.8**	**-3.8**
	1.0nm,0.3s,baz=158,slow=22,SNR=4.1						
SIJI				LR	LR	16 31 36.7	
	comp=Z,83nm,18.8s,baz=68,slow=39						
SWI	**Sorong**	**16.40**	**287**	P	**Pn**	**16 24 55.0**	**-1.7**
	26nm,0.8s						
MTN	**Manton Dam**	**17.05**	**245**	P	**Pn**	**16 25 05.0**	**+0.2**
	baz=17,SNR=3.5						
MTN	**Manton Dam**	**17.05**	**245**		**Pn**	**16 25 04.0**	**-0.8**
MTN				IAmb	IAmb	16 25 05.4	
	comp=Z,41nm,1.2s						
WB0	**Warramunga Arr**	**18.44**	**220**	P	**P**	**16 25 20.8**	**0.0**
WR0	**Warramunga Arr**	**18.49**	**220**	P	**Pn**	**16 25 22.0**	**-0.3**
WR0				IAmb	IAmb	16 25 35.2	
	comp=Z,14nm,0.8s						
WRAB	**Tennant Creek**	**18.59**	**220**	P	**P**	**16 25 21.6**	**-0.7**
WRAB				IAmb	IAmb	16 25 22.9	
	comp=Z,17nm,0.7s						
WC3	**Warramunga Arr**	**18.59**	**220**	P	**P**	**16 25 22.6**	**+0.2**
	baz=19						
WB2	**Warramunga Arr**	**18.59**	**220**	P	**P**	**16 25 21.3**	**-1.1**
WB2				IAmb	IAmb	16 25 49.8	
	comp=Z,12nm,0.9s						
WRA	**Warramunga Arr**	**18.60**	**220**	P	**P**	**16 25 21.5**	**-1.0**
	comp=Z,0.7nm,0.3s,baz=43,slow=12,SNR=40						
WRA				LR	LR	16 34 01.3	
	comp=Z,98nm,19.2s,baz=105,slow=42						
WRA	**Warramunga Arr**	**18.60**	**220**	P	**P**	**16 25 22.4**	**-0.1**
AAI	**Ambon**	**18.79**	**276**	P	**P**	**16 25 24.8**	**+0.3**
	comp=Z,34nm,0.7s						
EIDS	**Eidsvold**	**19.82**	**169**	P	**Pn**	**16 25 37.2**	**-0.7**
	baz=20,SNR=3.7						
EIDS	**Eidsvold**	**19.82**	**169**	P	**P**	**16 25 33.4**	**-2.3**
EIDS				IAmb	IAmb	16 26 16.3	
	comp=Z,39nm,1.6s						
LBMI	**Labuha**	**20.06**	**284**	P	**P**	**16 25 38.7**	**+0.2**
	comp=Z,898nmcomp=Z,16nm,0.8s						
KNRA	**Kununurra**	**20.32**	**240**	P	**P**	**16 25 41.4**	**+0.1**
	baz=21,SNR=7.0						
KNRA	**Kununurra**	**20.32**	**240**	P	**P**	**16 25 38.0**	**-3.2**
KNRA				IAmb	IAmb	16 26 05.2	
	comp=Z,35nm,1.1s						
RMQ	**Roma**	**20.60**	**175**	P	Pn	16 25 47.9	+0.8
	baz=21,SNR=21						
QLP	**Quilpie**	**20.78**	**187**	P	Pn	16 25 48.3	-1.0
	baz=21,SNR=6.9						
SANI	**Sanana**	**21.22**	**279**	P	**P**	**16 25 51.1**	**+0.2**
	comp=Z,12nm,0.9s						
AS31	**Alice Springs**	**21.70**	**214**	P	**P**	**16 25 55.8**	**-0.2**
ASAR	**Alice Springs**	**21.70**	**214**	P	**P**	**16 25 56.6**	**+0.6**
	comp=Z,5.1nm,0.5s,baz=56,slow=8.5,SNR=110						
ASAR				LR	LR	16 35 33.4	
	comp=Z,118nm,18.1s,baz=64,slow=40						
ASAR	**Alice Springs**	**21.70**	**214**	P	**P**	**16 25 55.8**	**-0.2**
ASPA	**Alice Springs**	**21.71**	**214**	P	**P**	**16 25 56.7**	**+0.6**
	baz=22						
SOEI	**Soe**	**22.78**	**259**	P	**P**	**16 26 08.8**	**+1.1**
	comp=Z,31nm,0.9s						
SOEI	**Soe**	**22.78**	**259**	P	**P**	**16 26 08.4**	**+0.7**
SOEI				IAmb	IAmb	16 26 47.5	
	comp=Z,30nm,0.8s						
BATI	**Baumata**	**23.43**	**258**	LR	LR	16 37 50.1	
	comp=Z,122nm,20.0s,baz=66,slow=43						
BATI	**Baumata**	**23.43**	**258**	P	**P**	**16 26 13.9**	**0.0**
	comp=Z,16nm,0.9s						
KMSI	**Cibinong**	**23.78**	**285**	P	**P**	**16 26 18.5**	**+1.5**
	comp=Z,41nm,0.8s						
FITZ	**Fitzroy Crossi**	**24.08**	**238**	P	**P**	**16 26 19.6**	**-0.1**
	comp=Z,9.9nm,0.6s,baz=52,slow=10,SNR=24						
FITZ	**Fitzroy Crossi**	**24.08**	**238**	P	**P**	**16 26 20.0**	**+0.4**
	baz=24,SNR=40						
LIFNC	**LIFOU**	**24.67**	**129**	P	**P**	**16 26 23.9**	**-1.1**
GTOI	**Gorontalo**	**24.73**	**284**	P	**P**	**16 26 27.8**	**+2.2**
	comp=Z,9.3nm,0.6s						
ARMA	**Armidale**	**24.84**	**170**	P	**P**	**16 26 24.9**	**-1.6**
APSI	**Ampana**	**25.69**	**280**	P	**P**	**16 26 34.3**	**-0.1**
WRKA	**Warakurna**	**26.13**	**221**	P	**P**	**16 26 38.7**	**+0.4**
	baz=26,SNR=18						
STKA	**Stephens Creek**	**26.38**	**190**	P	**P**	**16 26 43.5**	**+3.3**
	comp=Z,3.7nm,0.7s,baz=13,slow=8.9,SNR=6.5						
STKA				LR	LR	16 38 15.1	
	comp=Z,166nm,18.4s,baz=19,slow=39						
STKA	**Stephens Creek**	**26.38**	**190**	P	**P**	**16 26 40.8**	**+0.5**
HTT	**Hallett**	**28.44**	**194**	P	**P**	**16 27 01.9**	**+3.1**
	baz=29,SNR=4.9						
BBOO	**Buckleboo**	**28.68**	**199**	P	**P**	**16 27 01.8**	**+0.9**
PSA00	**Pilbara Seismi**	**30.52**	**237**	P	**P**	**16 27 17.4**	**+0.1**
PSA00				IAmb	IAmb	16 27 39.2	
	comp=Z,11nm,1.6s						
PSA00	**Pilbara Seismi**	**30.52**	**237**	P	**P**	**16 27 18.3**	**+1.0**
PSA00				IAmb	IAmb	16 27 50.7	
	comp=Z,34nm,1.5s						
MEEK	**Meekatharra**	**34.00**	**229**	P	**P**	**16 27 49.1**	**+1.4**
	baz=34,SNR=9.5						
MORW	**Morawa**	**37.22**	**228**	P	**P**	**16 28 15.1**	**-0.2**
BKZ	**Black Stump Fm**	**42.58**	**145**	P	**P**	**16 29 00.7**	**+1.0**
BKZ				IAmb	IAmb	16 29 16.4	
	comp=Z,26nm,1.4s						
PSI	**Prapat**	**48.70**	**279**	LR	LR	16 55 00.2	
	comp=Z,31nm,18.9s,baz=140,slow=42						
CMAR	**Chiang Mai Arr**	**53.11**	**298**	P	**P**	**16 30 23.8**	**+2.5**
	comp=Z,0.2nm,0.3s,baz=125,slow=5.5,SNR=1.2						
CMAR	**Chiang Mai Arr**	**53.11**	**298**	P	**P**	**16 30 22.1**	**+0.9**
SONM	**Songino Array**	**64.23**	**331**	P	**P**	**16 31 39.5**	**+1.3**
	comp=Z,0.8nm,1.1s,baz=122,slow=4.0,SNR=3.2						
SONM	**Songino Array**	**64.23**	**331**	IAmb	IAmb	16 31 45.8	
	comp=Z,4.7nm,1.6s						
VNDA	**Vanda**	**72.07**	**177**	P	**P**	**16 32 28.6**	**+2.0**
	comp=Z,1.3nm,0.7s,baz=340,slow=7.0,SNR=3.6						
VNDA	**Vanda**	**72.07**	**177**	IAmb	IAmb	16 32 49.2	
	comp=Z,1.6nm,0.8s						
MKAR	**Makanchi Array**	**77.33**	**320**	P	**P**	**16 32 59.3**	**+1.8**
	comp=Z,0.3nm,0.8s,baz=98,slow=8.1,SNR=1.8						
ILAR	**Eielson Array**	**85.37**	**23**	P	**P**	**16 33 39.5**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=242,slow=4.7,SNR=7.2						
TORD	**Torodi Ar. Bea**	**144.98**	**285**	PKP	**PKPdf**	**16 40 41.0**	**+0.5**
	comp=Z,0.9nm,0.6s,baz=80,slow=3.5,SNR=5.5						
TORD	**Torodi Ar. Bea**	**144.98**	**285**		**PKPdf**	**16 40 41.7**	**+1.1**

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*MDD **26** 16:25:13.9±2.3, 37°.13N×10°.70W, h0^{km}, mbLg2.7/7, Error ellipse: s-maj=20.5km s-min=12.7km az=65.0, PRXIMO*

*IGIL **26** 16:25:14.1, 36°.98N×10°.79W, h10^{km}, ML2.0*

*INMG **26** 16:25:14.2±1.1, 36°.98N×10°.98W, h31^{km}, ML2.1, Error ellipse: s-maj=6.3km s-min=3.6km az=73.0*

*CNRM **26** 16:25:16.2, 36°.68N×10°.63W, h60^{km}, ml2.5*

ISC 26 16:25:11.2±2.6,**37°.15N**±0°.05×**10°.72W**±0°.09,**h6**^{km}±11^{km},**n40,** σ**1ˢ.55**/64,**1C,Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**1.51**	**90**	⇑*e*P	**Pb**	**16 25 40.2**	**+0.5**
PFVI				*e*S	**Sb**	**16 25 59.5**	**+0.4**
PFVI				A	A	16 26 01.3	
	14nm,0.1s						
PFVI	**Vila Bisbo**	**1.51**	**90**	P	**Pb**	**16 25 40.2**	**+0.5**
	9.1nm,0.1s,SNR=15						
PFVI				S	**Sb**	**16 25 59.5**	**+0.4**
	23nm,0.1s,SNR=9.0						
PFVI	**Vila Bisbo**	**1.51**	**90**	P	**Pb**	**16 25 40.3**	**+0.7**
PFVI				S	**Sg**	**16 26 00.4**	**+0.5**
PTEO	**Sao Teotonio**	**1.64**	**75**	*e*Pn	**Pg**	**16 25 42.7**	**0.0**
PTEO				*e*Sn	**Sg**	**16 26 03.9**	**0.0**
PTEO				A	A	16 26 08.1	
	8.4nm,0.7s						
MORF	**Marmelete**	**1.66**	**84**	*e*P	**Pb**	**16 25 42.6**	**+0.4**
MORF				*e*S	**Sb**	**16 26 03.4**	**0.0**
MORF				IAML		16 26 04.6	
	comp=N,13nm,0.1s						
MORF	**Marmelete**	**1.66**	**84**	*e*Pn	**Pb**	**16 25 42.6**	**+0.4**
MORF				*e*Sn	**Sb**	**16 26 03.4**	**0.0**
MORF				A	A	16 26 05.4	
	comp=N,13nm,0.2s						
MORF	**Marmelete**	**1.66**	**84**	P	**Pb**	**16 25 42.6**	**+0.4**
MORF				S	**Sb**	**16 26 03.4**	**0.0**
PNCL	**Nicolau / Gran**	**1.99**	**60**	*e*Pn	**Pb**	**16 25 47.6**	**-0.2**
PNCL				*e*Sn	**Sg**	**16 26 14.1**	**-1.0**
PNCL				A	A	16 26 17.4	
	comp=N,3.7nm,0.4s						
MESJ	**Messejana**	**2.11**	**70**	*e*P	**Pb**	**16 25 49.2**	**-0.5**
MESJ	**Messejana**	**2.11**	**70**	*e*Pn	**Pb**	**16 25 49.3**	**-0.5**
MESJ				*e*Sn	**Sb**	**16 26 15.8**	**-0.4**
MESJ				A	A	16 26 20.7	
	comp=N,4.5nm,0.6s						
MESJ	**Messejana**	**2.11**	**70**	P	**Pb**	**16 25 49.2**	**-0.5**
PMAFR	**Mafra**	**2.13**	**32**	*e*Sn	**Sb**	**16 26 16.4**	**-0.6**
PMAFR				A	A	16 26 17.5	
	comp=N,19nm,0.4s						
PMAFR	**Mafra**	**2.13**	**32**	S	**Sb**	**16 26 16.3**	**-0.7**
	comp=N,17nm,0.1s,SNR=7.9						
PCVE	**Castro Verde**	**2.19**	**76**	*e*Pn	**Pb**	**16 25 50.5**	**-0.7**
PCVE				*e*Sn	**Sb**	**16 26 16.9**	**-1.7**
PCVE				A	A	16 26 21.1	
	comp=N,4.2nm,0.8s						
PBDV	**Barranco-do-Ve**	**2.23**	**87**	*e*Pn	**Pb**	**16 25 50.7**	**-1.2**
PBDV				*e*Sn	**Sn**	**16 26 17.5**	**+0.9**
PBDV				A	A	16 26 26.1	
	comp=N,5.4nm,0.4s						
PVAQ	**Vaqueiros**	**2.41**	**83**	*e*Pn	**Pb**	**16 25 53.2**	**-1.8**
PVAQ				*e*Sn	**Sn**	**16 26 21.9**	**+1.0**
PVAQ				A	A	16 26 23.3	
	comp=N,5.1nm,0.1s						
PVAQ	**Vaqueiros**	**2.41**	**83**	P	**Pn**	**16 25 53.1**	**+1.9**
PVAQ				S	**Sb**	**16 26 23.2**	**-1.7**
EGRO	**El Granado**	**2.61**	**80**	P	**Pb**	**16 25 56.7**	**-1.6**
	comp=N,0.7nm,0.2s,SNR=7.9						
EGRO				S	**Sn**	**16 26 26.8**	**+0.9**
	comp=N,2.1nm,0.1s,SNR=7.9						
PMTG	**Montargil**	**2.75**	**45**	*e*Pn	**Pn**	**16 25 57.6**	**+1.8**
PMTG				*e*Sn	**Sn**	**16 26 30.7**	**+1.3**
PMTG				A	A	16 26 34.7	
	comp=N,3.4nm,0.8s						
PSBE	**So Bento**	**2.81**	**32**	*e*Sn	**Sb**	**16 26 33.5**	**-2.9**
PESTR	**Estremoz**	**3.01**	**54**	*e*Pn	**Pn**	**16 26 01.8**	**+2.3**
PESTR				*e*Sn	**Sb**	**16 26 38.8**	**-3.5**
PESTR	**Estremoz**	**3.01**	**54**	P	**Pb**	**16 26 06.1**	**+0.8**
PESTR				S	**Sb**	**16 26 40.5**	**-1.8**
EMIN	**Mina Concepcio**	**3.28**	**78**	P	**Pn**	**16 26 05.0**	**+1.9**
	comp=N,0.9nm,0.1s,SNR=8.0						
EMIN				S	**Sn**	**16 26 43.0**	**+0.6**
	comp=N,0.9nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**3.34**	**60**	P	**Pn**	**16 26 06.1**	**+2.1**
	comp=N,0.6nm,0.1s,SNR=7.5						
EBAD				S	**Sn**	**16 26 46.2**	**+2.3**
	comp=N,1.9nm,0.1s,SNR=7.9						
PCAS	**Casmilo, Conde**	**3.38**	**30**	*e*Pn	**Pn**	**16 26 06.7**	**+2.1**
PCAS				*e*Sn	**Sn**	**16 26 46.6**	**+1.5**
PMRV	**Marv??o**	**3.47**	**48**	*e*Pn	**Pn**	**16 26 07.3**	**+1.5**
PMRV				*e*Sn	**Sn**	**16 26 48.1**	**+0.9**
PMRV				A	A	16 26 50.3	
	comp=N,1.6nm,0.3s						
PCBR	**Castelo Branco**	**3.70**	**42**	*e*Sn	**Sn**	**16 26 53.3**	**+0.4**
PCBR				A	A	16 26 55.8	
	comp=N,2.1nm,0.2s						
PVIS	**Viseu**	**4.19**	**31**	*e*Sn	**Sn**	**16 27 05.3**	**+0.3**
PVIS				A	A	16 27 09.2	
	comp=N,5.8nm,0.3s						
ECAB	**El Cabril**	**4.31**	**76**	P	**Pn**	**16 26 19.1**	**+1.7**
	comp=N,0.4nm,0.1s,SNR=12						
ECAB				S	**Sn**	**16 27 08.0**	**0.0**
	comp=N,0.7nm,0.2s,SNR=7.9						
POLO	**Lamas de Olo**	**4.79**	**27**	*e*Sn	**Sn**	**16 27 19.2**	**-0.7**
POLO				A	A	16 27 19.8	
	comp=N,2.1nm,0.7s						
MVO	**Moncorvo**	**4.93**	**34**	*e*Sn	**Sn**	**16 27 23.6**	**+0.3**
MVO				A	A	16 27 26.0	
	comp=N,3.0nm,0.7s						
MVO	**Moncorvo**	**4.93**	**34**	S	**Sn**	**16 27 23.7**	**+0.4**
	comp=N,1.6nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**4.98**	**76**	P	**Pn**	**16 26 28.4**	**+1.9**
	comp=N,0.9nm,0.2s,SNR=7.9						
EADA				S	**Sn**	**16 27 23.8**	**-0.6**
	comp=N,0.3nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**5.14**	**23**	P	Pn	16 26 34.0	+5.2
	comp=N,1.0nm,0.2s,SNR=7.9						
ELOB				S	**Sn**	**16 27 27.5**	**-1.1**
	comp=N,1.5nm,0.1s,SNR=7.9						
EZAM	**Zamans**	**5.24**	**17**	S	**Sn**	**16 27 28.5**	**-2.2**
	SNR=7.9						
ECAL	**Calabor**	**5.69**	**31**	S	**Sn**	**16 27 40.8**	**-1.3**
	comp=N,0.3nm,0.1s,SNR=7.9						
EAGO	**Agolada(Pontev**	**6.00**	**19**	P	**Pn**	**16 26 42.2**	**+1.7**
	comp=N,0.3nm,0.1s,SNR=4.0						
EAGO				S	**Sn**	**16 27 46.8**	**-2.7**
	comp=N,1.6nm,0.1s,SNR=7.9						
OUK	**Oukaimeden**	**6.38**	**157**	P	Pn	16 26 41.8	-4.2
OUK				S	Sn	16 27 47.4	-12
MD31	**MD31**	**6.49**	**129**	P	**Pn**	**16 26 45.9**	**-1.4**
MD31				S	**Sn**	**16 27 56.3**	**-5.4**
TTIG	**Tnine Tigouga,**	**6.85**	**163**	P	**Pn**	**16 26 50.5**	**-1.8**
TTIG				S	Sn	16 27 57.7	-13

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*IDC **26** 16:32:41.1±2.5, 18°.37N×103°.71W, h0^{km}, mb3.4/4, mb1 3.7/6, mb1mx3.6/37, mbtmp3.4/6, ML3.4/2, MS2.8/1, Ms1 2.8/1, ms1mx2.4/20, Error ellipse: s-maj=51.7km s-min=33.5km az=53.0*

*MEX **26** 16:32:43.4±1.1, 18°.16N×103°.41W, h10^{km}, MD4.2*

ISC 26 16:32:41.7±1.8,**18°.20N**±0°.09×**103°.47W**±0°.08,**h12**^{km}±8^{km},**n20,** σ**2ˢ.15**/26,**mb3.5**/4,**Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	**Aquila**	**0.15**	**55**	*i* P	**Pg**	**16 32 45.6**	**+0.5**
MMIG				*i* S	**Sg**	**16 32 48.3**	**+0.6**
COIG	**Colima**	**0.99**	**348**	*e*P	**Pg**	**16 32 59.8**	**-1.0**

COIG				eS	Sg	16 33 13.3	-0.6
R15V		1.08	333	eP	Pb	16 33 01.4	-0.9
R15V				eS	Sb	16 33 16.3	-0.1
EZ5V		1.28	354	eP	Pn	16 33 04.8	-0.8
EZ5V				eS	Sb	16 33 21.5	-0.8
CJM	Chamela	1.97	311	eP	Pn	16 33 15.4	+0.5
CJM				eS	Sn	16 33 42.6	+3.0
ZIIG	Zihuatanejo	2.00	107	eP	Pn	16 33 14.7	-0.6
ZIIG				eS	Sn	16 33 38.8	-1.5
MOIG	Morelia	2.61	55	eP	Pn	16 33 23.7	-0.3
ARIG	Puente Sto Nin	2.97	88	eP	Pn	16 33 27.6	-1.1
ARIG				eS	Sn	16 34 04.0	-0.3
CAIG	El Cayaco	3.27	110	eP	Pn	16 33 31.0	-1.8
CAIG				eS	Sn	16 34 11.1	-0.4
DAIG	Los Arroyos	3.83	107	eP	Pn	16 33 44.6	+4.1
DAIG				eS	Sb	16 34 32.2	-3.4
CMIG	Matias Romero	8.26	96	Pn	Pn	16 34 45.9	+4.4
	0.3nm,0.3s,baz=78,slow=5.7,SNR=1.8						
CMIG				Sn	Sn	16 36 20.3	+5.5
	0.1nm,0.3s,baz=307,slow=10,SNR=1.7						
CMIG				Lg	Lg	16 36 55.0	
	0.4nm,0.3s,baz=211,slow=11,SNR=4.2						
TXAR	Lajitas Array	11.08	359	Pn	Pn	16 35 20.7	+0.6
	0.1nm,0.3s,baz=182,slow=14,SNR=6.4						
TXAR				Lg	Lg	16 38 25.7	
	0.1nm,0.3s,baz=182,slow=27,SNR=2.2						
ANMO	Albuquerque	16.89	352	LR	LR	16 43 17.8	
	comp=Z,33nm,21.1s,baz=142,slow=38						
NVAR	Mina Array Bea	23.95	330	P	P	16 37 56.1	0.0
	0.4nm,0.8s,baz=157,slow=12,SNR=3.6						
PDAR	Pinedale Array	25.03	349	P	P	16 38 04.9	-1.0
	0.3nm,0.7s,baz=161,slow=6.3,SNR=2.5						
INK	Inuvik	53.55	347	P	P	16 42 01.1	-0.9
	0.8nm,0.7s,baz=124,slow=7.3,SNR=3.9						
ILAR	Eielson Array	54.80	339	P	P	16 42 10.7	-0.6
	1.1nm,0.9s,baz=149,slow=6.6,SNR=8.4						
H03N2	Juan Fernandez	56.45	155	T	T	17 43 12.4	
	baz=333,slow=77,SNR=69						
H03N1	Juan Fernandez	56.45	155	T	T	17 43 15.1	
	baz=333,slow=77,SNR=88						
H03N3	Juan Fernandez	56.46	155	T	T	17 43 10.3	
	baz=333,slow=77,SNR=83						

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*IDC **26** 16:45:54.5±1.0, 6.°23S×149.°23E, h0^{km}, mb4.0/9, mb1 4.3/11, mb1mx4.1/29, mbtmp4.1/11, ML5.1/1, MS3.2/8, Ms1 3.2/8, ms1mx3.0/32, Error ellipse: s-maj=34.6km s-min=15.3km az=109.0*

*NEIC **26** 16:46:03.8±2.3, 6.°34S±0.°06×149.°04E±0.°08, h69^{km}±6^{km}, mb4.6/35, Error ellipse: s-maj=11.4km s-min=8.6km az=114.0*

*DJA **26** 16:46:04.4±0.4, 7°S±3°×14°9E±°, h73^{km}±6^{km}, M4.6/14, mB6.1/2, mb4.4/14, MLv4.7/3, Mw(mB)5.8/2*

ISC 26 16:46:01.8±0.5, **6.°37S**±0.°06×**149.°16E**±0.°07, **h53**^{km}, **n87**, σ**1^{s}75**/84, **mb4.6**/23, **MS3.2**/5, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.61	213	Pn	Pn	16 46 56.1	+0.8
	51nm,0.3s,baz=30,slow=12,SNR=102						
PMG				Sn	Sn	16 47 38.6	+2.0
	184nm,0.3s,baz=130,slow=24,SNR=15						
PMG				LR	LR	16 48 10.0	
	comp=Z,147nm,19.6s,baz=78,slow=36						
PMG	Port Moresby	3.61	213	P	Pn	16 46 57.7	+2.5
PMG	Port Moresby	3.61	213	P	Pn	16 46 57.6	+2.4
RABL	Rabaul	3.69	54		Pn	16 46 58.6	+2.2
MANU	Manus Island	4.65	337		Pn	16 47 10.0	+0.5
JAY	Jayapura	9.26	294	P	Pn	16 48 16.5	+3.8
	10nm,0.9s						
COEN	Coen	9.57	218	Pn	Pn	16 48 16.8	-0.1
COEN					Sn	16 49 58.6	-4.5
COEN	Coen	9.57	218	P	Pn	16 48 17.1	+0.2
GENI	Genyem	9.71	292	P	Pn	16 48 23.1	+4.2
	17nm,1.0s						
HNR	Honiara	11.11	107	LR	LR	16 52 06.6	
	comp=Z,138nm,20.2s,baz=246,slow=34						
HNR	Honiara	11.11	107	Pn	Pn	16 48 35.7	-2.4
MTSU	Mount Surprise	12.61	202	P	Pn	16 49 01.1	+2.5
CTAO	Charters Tower	13.93	191	Pn	Pn	16 49 17.7	+1.2
PATS	Pohnpei	15.98	35	Pn	Pn	16 49 42.9	-0.3
QIS	Mount Isa	16.88	212	P	P	16 49 56.2	+0.3
FAKI	Fak Fak	17.20	281		Pn	16 49 58.2	-0.3
KDU	Kakadu	17.61	248	P	Pn	16 50 00.7	-2.8
MTN	Manton Dam	18.89	249	P	P	16 50 16.0	-2.1
MTN				IAmb	IAmb	16 50 54.4	
	comp=Z,46nm,1.4s						
MTN	Manton Dam	18.89	249	P	P	16 50 16.0	-2.1
EIDS	Eidsvold	18.99	175		Pn	16 50 24.5	+4.3
DRS	Darwin Rock St	18.99	250	P	P	16 50 17.5	-1.6
WB0	Warramunga Arr	19.58	226	P	P	16 50 25.1	-0.5
WB0				IAmb	IAmb	16 50 26.7	
	comp=Z,16nm,0.8s						
WR0	Warramunga Arr	19.60	225	P	P	16 50 25.9	+0.1
WR0				IAmb	IAmb	16 50 27.0	
	comp=Z,18nm,0.9s						
WRAB	Tennant Creek	19.72	225	P	P	16 50 27.4	+0.3
WRAB				IAmb	IAmb	16 50 28.1	
	comp=Z,24nm,0.8s						
WRAB	Tennant Creek	19.72	225	P	P	16 50 27.6	+0.5
WB2	Warramunga Arr	19.72	225	P	P	16 50 27.0	-0.2
WB2				IAmb	IAmb	16 50 28.8	
	comp=Z,28nm,0.5s						
WRA	Warramunga Arr	19.73	225	P	P	16 50 27.2	0.0
	comp=Z,5.6nm,0.3s,baz=52,slow=11,SNR=244						
WRA				LR	LR	16 58 58.9	
	comp=Z,79nm,18.1s,baz=85,slow=40						
WRA	Warramunga Arr	19.73	225	P	P	16 50 26.6	-0.7
RMQ	Roma	20.01	181	P	Pn	16 50 35.4	+3.0
GUMO	Guam	20.28	348	LR	LR	16 57 11.3	
	comp=Z,54nm,18.2s,baz=115,slow=34						
AAI	Ambon	21.05	276	P	P	16 50 44.7	+3.1
	comp=Z,22nm,0.7s						
KNRA	Kununurra	22.03	243	P	P	16 50 50.6	-1.4
KNRA				IAmb	IAmb	16 51 10.0	
	comp=Z,79nm,1.5s						
KNRA	Kununurra	22.03	243	P	P	16 50 50.8	-1.3
AS31	Alice Springs	22.61	219	P	P	16 50 57.2	-1.0
ASAR	Alice Springs	22.61	219	P	P	16 50 57.8	-0.5
	comp=Z,5.4nm,0.5s,baz=51,slow=9.7,SNR=134						
ASAR				LR	LR	16 59 18.1	
	comp=Z,104nm,20.4s,baz=43,slow=35						
ASAR	Alice Springs	22.61	219	P	P	16 50 58.2	0.0
ASAR					S	16 55 00.7	-1.8
DZM	Mont Dzumac	22.86	135	P	P	16 51 01.7	+0.8
DZM				IAmb	IAmb	16 51 15.9	
	comp=Z,20nm,1.2s						
SANI	Sanana	23.50	280	P	P	16 51 09.4	+2.2
	comp=Z,7.4nm,0.6s						
ARMA	Armidale	24.04	175	P	P	16 51 13.7	+1.6
ARMA				IAmb	IAmb	16 51 52.2	
	comp=Z,24nm,1.4s						
OOD	Oodnadatta	24.85	209	P	P	16 51 21.0	+1.6
SOEI	Soe	24.87	261	P	P	16 51 20.9	+1.0
	comp=Z,30nm,0.7s						
SOEI	Soe	24.87	261	P	P	16 51 18.6	-1.3
SOEI				IAmb	IAmb	16 51 26.9	
	comp=Z,21nm,0.7s						
BATI	Baumata	25.51	260	P	P	16 51 25.7	+0.1
	comp=Z,41nm,0.6s,baz=148,slow=3.1,SNR=13						
BATI	Baumata	25.51	260	P	P	16 51 24.8	-0.8
	comp=Z,33nm,0.7s						
FITZ	Fitzroy Crossi	25.73	241	LR	LR	17 02 06.4	
	comp=Z,62nm,18.5s,baz=157,slow=38						
STKA	Stephens Creek	26.35	195	P	P	16 51 33.9	+1.0
	comp=Z,1.0nm,0.3s,baz=72,slow=19,SNR=2.9						
STKA				LR	LR	17 02 18.5	
	comp=Z,74nm,19.1s,baz=25,slow=37						
MMRI	Maumere	26.78	263	P	P	16 51 37.4	+0.3
	comp=Z,5µmcomp=Z,58nm,0.6s						
MMRI	Maumere	26.78	263	P	P	16 51 34.6	-2.5
WRKA	Warakurna	27.27	225	P	P	16 51 41.4	0.0
TTSI	Tana Toraja	29.42	275	P	P	16 52 01.8	+1.2
PLAI	Plampang	31.20	264	P	P	16 52 12.9	-3.4
FORT	Forrest	31.33	217	P	P	16 52 15.8	-1.5
FORT				IAmb	IAmb	16 52 20.6	
	comp=Z,19nm,0.8s						
FORT	Forrest	31.33	217	P	P	16 52 19.7	+2.4
MBWA	Marble Bar	32.05	240	P	P	16 52 23.7	-0.1
PSA00	Pilbara Seismi	32.12	239	P	P	16 52 23.1	-1.3
PSA00	Pilbara Seismi	32.12	239	P	P	16 52 23.2	-1.1
PSA00				IAmb	IAmb	16 52 42.2	
	comp=Z,52nm,1.8s						
JAGI	Jajag, Banyuwa	34.77	264	P	P	16 52 42.2	-5.3
JAGI				IAmb	IAmb	16 52 48.0	
	comp=Z,13nm,1.0s						
JAGI	Jajag, Banyuwa	34.77	264	P	P	16 52 44.4	-3.1
MEEK	Meekatharra	35.38	232	P	P	16 52 52.8	+0.1
MORW	Morawa	38.56	230	P	P	16 53 19.1	-0.5
MJAR	Matsushiro Arr	43.90	347	LR	LR	17 10 18.3	
	comp=Z,22nm,18.3s,baz=340,slow=34						
KSRS	Korea Array	47.89	337	P	P	16 54 34.4	-0.3
	comp=Z,0.9nm,0.6s,baz=159,slow=8.7,SNR=2.4						
PEA0B	Petropavlovsk-	59.69	6	P	P	16 56 00.9	+0.3
PETK	Petropavlovsk-	59.69	6	P	P	16 56 00.5	-0.2
	comp=Z,5.2nm,0.9s,baz=192,slow=7.2,SNR=18						
PETK	Petropavlovsk-	59.69	6	P	P	16 56 00.9	+0.3
SONM	Songino Array	65.78	330	P	P	16 56 41.9	+0.4
	comp=Z,0.5nm,0.6s,baz=153,slow=4.0,SNR=4.3						
VNDA	Vanda	71.43	177	P	P	16 57 17.6	+1.5
	comp=Z,0.6nm,0.8s,baz=354,slow=4.9,SNR=5.4						
VNDA	Vanda	71.43	177	IAmb	IAmb	16 57 35.5	
	comp=Z,8.0nm,1.6s						
SDPT	Sand Point	74.23	27	P	P	16 57 33.7	+0.8
MKAR	Makanchi Array	79.15	320	P	P	16 58 00.4	-0.6
	comp=Z,0.3nm,0.6s,baz=104,slow=9.2,SNR=4.2						
MAKZ	Makanchi	79.36	320	P	P	16 58 00.2	-1.9
ZALV	Zalesovo Beam	80.47	327	P	P	16 58 07.2	-0.7
	comp=Z,1.1nm,0.6s,baz=104,slow=5.8,SNR=5.4						
ZALV	Zalesovo Beam	80.47	327	P	P	16 58 06.3	-1.6
M19K	Big River Lodg	80.62	24	P	P	16 58 08.2	-0.4
M19K				IAmb	IAmb	16 58 45.9	
	comp=Z,29nm,1.7s						
CNPM	China Poot	80.70	26	P	P	16 58 08.7	-0.4
MAW	Mawson	82.74	203	P	P	16 58 16.7	-2.9
SML	Sawmill	83.05	25	P	P	16 58 19.8	-1.6
IMAR	Indian Mountai	83.08	20	P	P	16 58 21.3	-0.1
QSPA	South Pole Qui	83.60	180	P	P	16 58 25.1	+0.7
QSPA				IAmb	IAmb	16 58 29.9	
	comp=Z,15nm,1.6s						
MLY	Manley	83.65	22	P	P	16 58 23.0	-1.4
MLY				IAmb	IAmb	16 58 55.0	
	comp=Z,20nm,1.8s						
MCK	McKinley	83.71	23	P	P	16 58 23.4	-1.3
WRH	Wood River Hil	84.38	23	P	P	16 58 27.0	-1.1
CCB	Clear Creek Bu	84.57	23	P	P	16 58 27.1	-1.9
IL31		84.98	23	P	P	16 58 29.3	-1.8
IL31				IAmb	IAmb	16 58 58.4	
	comp=Z,8.7nm,1.6s						
ILAR	Eielson Array	84.98	23	P	P	16 58 29.3	-1.8
	comp=Z,1.7nm,0.7s,baz=250,slow=4.9,SNR=30						
TORD	Torodi Ar. Bea	147.26	284	PKPbc	PKPbc	17 05 40.8	+0.4
	comp=Z,0.7nm,0.6s,baz=91,slow=3.0,SNR=5.2						
TORD	Torodi Ar. Bea	147.26	284		PKPdf	17 05 39.1	+1.0

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*IDC **26** 17:14:13.7±1.3, 6.°74N×94.°38E, h0^{km}, mb3.9/8, mb1 4.0/10, mb1mx3.8/42, mbtmp3.9/10, ML4.0/2, MS3.0/5, Ms1 3.0/5, ms1mx2.8/36, Error ellipse: s-maj=54.4km s-min=17.8km az=57.0*

*NEIC **26** 17:14:19.2±1.2, 6.°9N±0.°1×94.°6E±0.°1, h30^{km}±7^{km}, mb4.3/18, Error ellipse: s-maj=20.8km s-min=8.3km az=46.0*

ISC 26 17:14:18.2±0.8, **6.°87N**±0.°10×**94.°6E**±0.°1, **h26**^{km}, **n49**, σ**1^{s}36**/41, **mb4.3**/16, **MS3.1**/3, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	Lhok Sumawe	2.85	125	Pn	Pn	17 15 02.5	+0.4
SRIT	Nakonsritamara	5.25	71	Pn	Pn	17 15 35.2	+0.2
PSI	Prapat	5.91	133	Pn	Pn	17 15 46.3	+2.0
	2.1nm,0.3s,baz=323,slow=15,SNR=11						
RPSI	Rantau Prapat	5.99	134		Pn	17 15 46.3	+1.1
KULM	Kulim	6.22	104	Pn	Pn	17 15 48.2	-0.3
IPM	Ipoh	6.83	110	Pn	Pn	17 15 54.5	-2.2
CMAR	Chiang Mai Arr	12.27	20	Pn	Pn	17 17 13.3	+1.9
	0.4nm,0.3s,baz=210,slow=14,SNR=6.2						
PALK	Pallekele	13.79	272	LR	LR	17 21 05.1	
	comp=Z,13nm,20.6s,baz=184,slow=30						
LEM	Lembang	18.82	136	LR	LR	17 27 24.8	
	comp=Z,100nm,18.8s,baz=224,slow=42						
ODAN	Odare	21.03	342	eP	P	17 19 03.0	+2.7
RAMN	Ramite	21.37	340	eP	P	17 19 07.6	+3.6
TAPN	Taplejung	21.39	343	eP	P	17 19 03.7	-0.6
JIRN	Jiri	22.16	340	eP	P	17 19 14.1	+1.4
PKI	Pulchoki	22.36	338	eP	P	17 19 15.3	+0.6
PKIN	Phulchoki	22.36	338	eP	P	17 19 15.1	+0.3
GUN	Gumba	22.50	339	eP	P	17 19 14.9	-1.3
DMN	Daman	22.50	338	eP	P	17 19 16.6	+0.4
LSA	Lhasa	22.94	352	P	P	17 19 19.9	-1.1
GKN	Gorkha	23.04	337	eP	P	17 19 20.2	-1.5
KOLN	Koldanda	23.25	335	eP	P	17 19 23.9	0.0
DANN	Dangsing	23.70	336	eP	P	17 19 25.2	-3.2
PYUN	Piuthan	23.80	334	eP	P	17 19 27.4	-1.9
MYLDM	Lahad Datu	23.83	93	P	P	17 19 29.2	-0.3
MYLDM				IAmb	IAmb	17 19 49.1	
	comp=Z,18nm,1.2s						
H08S3	Diego Garcia H	26.34	237	T	T	17 46 28.3	
	baz=56,slow=76,SNR=41						
H08S2	Diego Garcia H	26.34	237	T	T	17 46 28.9	
	baz=56,slow=76,SNR=32						
H08S1	Diego Carcia H	26.36	237	T	T	17 46 30.5	
	baz=56,slow=76,SNR=5.7						
KAPI	Kappang	27.75	115	LR	LR	17 31 20.2	
	comp=Z,38nm,18.3s,baz=346,slow=37						
NIL	Nilore	33.17	326	P	P	17 20 50.6	-2.2
TARG	Taragay, Kyrgy	37.78	339	P	P	17 21 34.9	+2.1
TARG				IAmb	IAmb	17 21 40.0	
	comp=Z,2.8nm,0.5s						
GAR	Garm	38.76	329	P	P	17 21 40.2	-0.5
GAR				IAmb	IAmb	17 21 50.0	
	comp=Z,5.4nm,0.9s						
CHGR	Chuyangaron	39.10	328	P	P	17 21 42.9	-0.6
MK31	Makanchi Array	41.16	347	P	P	17 22 00.3	-0.1
MKAR	Makanchi Array	41.16	347	P	P	17 22 00.3	-0.1
	comp=Z,1.6nm,0.8s,baz=167,slow=9.0,SNR=14						
MKAR	Makanchi Array	41.16	347	P	P	17 22 00.1	-0.3
MAKZ	Makanchi	41.24	347	P	P	17 22 00.9	-0.2
MAKZ				IAmb	IAmb	17 22 01.9	
	comp=Z,3.1nm,1.1s						
SONM	Songino Array	42.04	12	P	P	17 22 08.4	+0.7
	comp=Z,0.5nm,0.7s,baz=197,slow=8.7,SNR=3.5						
SONM	Songino Array	42.04	12	IAmb	IAmb	17 22 17.4	
	comp=Z,1.5nm,1.0s						
KURK	Kurchatov	45.69	346	P	P	17 22 37.3	+0.5
KURK				IAmb	IAmb	17 22 46.3	
	comp=Z,3.3nm,0.9s						
WRA	Warramunga Arr	47.32	125	P	P	17 22 49.5	-0.7
	comp=Z,0.6nm,0.6s,baz=304,slow=9.0,SNR=9.5						
WRA				LR	LR	17 44 24.0	
	comp=Z,23nm,20.9s,baz=5.0,slow=38						
WRA	Warramunga Arr	47.32	125	IAmb	IAmb	17 22 53.0	
	comp=Z,0.1nm,1.1s						
ZAA0	Zalesovo Array	47.60	352	P	P	17 22 50.9	-0.9
ZAA0				IAmb	IAmb	17 23 07.8	
	comp=Z,3.3nm,1.1s						
ZALV	Zalesovo Beam	47.60	352	P	P	17 22 52.0	+0.3
	comp=Z,0.5nm,0.3s,baz=163,slow=10,SNR=5.7						
ZALV				LR	LR	17 44 20.6	
	comp=Z,30nm,20.3s,baz=144,slow=38						
ASAR	Alice Springs	48.93	130	P	P	17 23 02.7	+0.1
	comp=Z,0.5nm,0.6s,baz=303,slow=7.8,SNR=11						
ABKAR	Akbulak array	51.32	331	P	P	17 23 20.1	-0.1
ABKAR	Akbulak array	51.32	331	P	P	17 23 20.6	+0.4
ABKAR				IAmb	IAmb	17 23 25.5	
	comp=Z,5.5nm,1.3s						
TIXI	Tiksi	68.12	11	P	P	17 25 15.2	-0.3
TIXI				IAmb	IAmb	17 25 17.1	
	comp=Z,4.4nm,1.1s						
FINES	FINESS Array B	73.80	332	P	P	17 25 50.0	-0.2
	comp=Z,3.9nm,1.1s,baz=92,slow=7.0,SNR=1.3						
ARCES	ARCESS Array B	76.35	340	P	P	17 26 03.6	-1.2
	comp=Z,4.4nm,1.0s,baz=104,slow=7.7,SNR=2.1						
GERES	GERESS Array B	78.87	318	P	P	17 26 19.7	+0.4
	comp=Z,0.4nm,0.6s,baz=68,slow=5.7,SNR=2.7						

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*IDC **26** 17:21:14.6±1.4, 1.°39N×126.°22E, h0^{km}, mb3.7/6, mb1 3.9/7, mb1mx3.5/33, mbtmp3.7/7, ML3.9/1, Error ellipse: s-maj=135.7km s-min=18.6km az=68.0*

*DJA **26** 17:21:19.1±0.3, 1°N±4°×12°6E±°, h10^{km}, M3.8/14, mb4.0/7, mB4.7/2, MLv3.7/14, Mw(mB)3.9/2*

ISC 26 17:21:21.0±1.1, **1.°5N**±0.°1×**126.°43E**±0.°08, **h47**^{km}, **n19**, σ**0^{s}92**/19, **mb3.7**/6, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.16	126	P	Pn	17 21 41.0	+0.2
LBMI	Labuha	2.34	153	P	Pn	17 21 57.7	+0.7
KMSI	Cibinong	2.60	250	P	Pn	17 22 00.2	-0.3
SANI	Sanana	3.50	187	P	Pn	17 22 13.0	0.0
GTOI	Gorontalo	3.51	257	P	Pn	17 22 13.7	+0.6
LUWI	Luwuk	4.42	236	P	Pn	17 22 26.5	+1.0
MRSI	Marisa	4.59	258	P	Pn	17 22 28.5	+0.6
APSI	Ampana	5.32	244	P	Pn	17 22 39.3	+1.3
MPSI	Mapaga	6.62	260	P	Pn	17 22 55.2	-0.6
	0.1nm733nm4.5nm,0.8s						
TTSI	Tana Toraja	7.97	236	P	Pn	17 23 15.2	+0.8
	0.1nm10.0nm,0.6s						
BNSI	Bone	8.58	227	P	Pn	17 23 23.2	+0.5
	11nm,0.9s						
BKSI	Bulukumba	9.21	223	P	Pn	17 23 31.6	+0.2
FITZ	Fitzroy Crossi	19.44	182	P	P	17 25 42.0	-1.7
	0.3nm,0.3s,baz=342,slow=19,SNR=2.1						
WRA	Warramunga Arr	22.63	160	P	P	17 26 17.1	-1.1
	1.6nm,0.3s,baz=340,slow=11,SNR=29						
ASAR	Alice Springs	26.00	164	P	P	17 26 49.4	-0.4
	0.4nm,0.3s,baz=347,slow=12,SNR=21						
STKA	Stephens Creek	36.13	158	P	P	17 28 18.4	-0.4
	1.6nm,0.7s,baz=330,slow=12,SNR=6.3						
MKAR	Makanchi Array	59.26	326	P	P	17 31 16.8	-1.0
	0.2nm,0.3s,baz=122,slow=8.3,SNR=10						
ZALV	Zalesovo Beam	62.48	334	P	P	17 31 40.3	+0.9
	0.2nm,0.4s,baz=83,slow=6.1,SNR=2.1						
VNDA	Vanda	81.22	173	P	P	17 33 32.9	+1.4
	0.3nm,0.8s,baz=319,slow=10.0,SNR=1.4						

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*IDC **26** 17:29:47.1±1.1, 14.°69N×147.°12E, h0^{km}, mb3.9/11, mb1 4.1/12, mb1mx3.9/45, mbtmp4.0/12, ML4.5/1, MS3.0/5, Ms1 3.1/5, ms1mx2.8/29, Error ellipse: s-maj=29.4km s-min=16.2km az=107.0*

*NEIC **26** 17:29:49.1±1.6, 14.°70N±0.°07×147.°15E±0.°08, h10^{km}±1^{km}, mb4.6/10, Error ellipse: s-maj=13.9km s-min=11.0km az=136.0*

ISC 26 17:29:51.6±0.9, **14.°66N**±0.°09×**147.°2E**±0.°1, **h33**^{km}, **n43**, σ**0^{s}68**/39, **mb4.3**/20, **MS3.0**/4, **Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANA2	Anatahan	2.18	320	Pn	Pn	17 30 25.2	-0.3
GUMO	Guam	2.46	245	Pn	Pn	17 30 28.8	-0.7
	107nm,0.3s,baz=99,slow=4.1,SNR=65						
GUMO				Sn	Sn	17 30 59.5	+1.0
	84nm,0.3s,baz=299,slow=20,SNR=6.5						
GUMO				LR	LR	17 31 06.4	
	comp=Z,124nm,21.7s,baz=49,slow=32						
PATS	Pohnpei	13.43	124	Pn	Pn	17 32 54.6	-5.4
H11N1	WAKE ISLAND Hy	19.51	72	T	T	17 54 25.2	
	baz=265						
H11N2	WAKE ISLAND Hy	19.52	72	T	T	17 54 23.5	
	baz=265						
H11N3	WAKE ISLAND Hy	19.52	72	T	T	17 54 21.9	
	baz=265						
FAKI	Fak Fak	22.88	221	P	P	17 34 52.7	+0.2
FAKI				IAmb	IAmb	17 35 06.8	
	comp=Z,16nm,0.6s						
MJAR	Matsushiro Arr	23.21	341	LR	LR	17 44 32.3	
	comp=Z,46nm,18.5s,baz=255,slow=38						
KSRS	Korea Array	28.41	327	P	P	17 35 43.5	+0.4
	comp=Z,1.9nm,0.7s,baz=149,slow=9.6,SNR=4.1						
KSRS				LR	LR	17 47 03.6	
	comp=Z,42nm,18.1s,baz=230,slow=36						
WB0	Warramunga Arr	36.44	201	P	P	17 36 52.8	-0.7
WB0				IAmb	IAmb	17 37 15.3	
	comp=Z,13nm,1.4s						
WB2	Warramunga Arr	36.62	200	P	P	17 36 55.3	+0.3
WB2				IAmb	IAmb	17 37 16.5	
	comp=Z,7.1nm,1.1s						
WRA	Warramunga Arr	36.62	200	P	P	17 36 55.3	+0.2
	comp=Z,1.2nm,0.8s,baz=21,slow=9.7,SNR=7.1						
FITZ	Fitzroy Crossi	38.85	214	P	P	17 37 14.3	+0.4
	comp=Z,3.1nm,0.9s,baz=181,slow=16,SNR=3.1						
PEA0B	Petropavlovsk-	39.26	10	P	P	17 37 17.4	+0.5
PETK	Petropavlovsk-	39.26	10	P	P	17 37 15.8	-1.2
ASAR	Alice Springs	40.24	199	P	P	17 37 26.1	+0.7
	comp=Z,0.3nm,0.6s,baz=23,slow=8.4,SNR=8.0						
CMAR	Chiang Mai Arr	46.27	282	P	P	17 38 14.7	+0.3
	comp=Z,0.5nm,0.5s,baz=86,slow=6.2,SNR=5.6						
CMAR				LR	LR	17 57 09.6	
	comp=Z,15nm,19.7s,baz=90,slow=36						
SONM	Songino Array	47.17	323	P	P	17 38 21.2	0.0
	comp=Z,1.7nm,0.7s,baz=132,slow=6.7,SNR=11						
SONM	Songino Array	47.17	323	P	P	17 38 20.4	-0.7
SEY	Seymchan	48.35	3	P	P	17 38 31.5	+1.7
	comp=Z,3.5nm,0.9s,baz=133,slow=7.1,SNR=4.6						
LSA	Lhasa	53.50	296	P	P	17 39 10.4	+0.7
LSA				IAmb	IAmb	17 39 12.2	
	comp=Z,4.5nm,0.6s						
TAPN	Taplejung	56.46	293	eP	P	17 39 29.6	-1.4
	comp=Z,10nm,0.7s						
ODAN	Odare	56.74	293	eP	P	17 39 32.7	-0.2
	comp=Z,12nm,0.8s						
RAMN	Ramite	57.45	293	eP	P	17 39 38.0	+0.1
	comp=Z,4.4nm,0.6s						
JIRN	Jiri	57.81	294	eP	P	17 39 40.5	-0.1
GUN	Gumba	58.08	294	eP	P	17 39 41.8	-0.7
PKI	Pulchoki	58.50	293	eP	P	17 39 45.1	-0.3
PKIN	Phulchoki	58.51	294	eP	P	17 39 44.7	-0.7
KKN	Kakani	58.61	294	eP	P	17 39 45.7	-0.3
DMN	Daman	58.77	294	eP	P	17 39 47.3	+0.1
GKN	Gorkha	59.18	294	eP	P	17 39 48.8	-1.1
DANN	Dangsing	59.95	294	eP	P	17 39 54.5	-0.8
KOLN	Koldanda	60.10	294	eP	P	17 39 56.6	+0.3
PYUN	Piuthan	60.63	294	eP	P	17 39 59.2	-0.7
ZALV	Zalesovo Beam	62.06	324	P	P	17 40 08.4	-0.5
	comp=Z,0.6nm,0.5s,baz=101,slow=7.3,SNR=4.0						
ZALV				LR	LR	18 06 23.7	
	comp=Z,23nm,20.4s,baz=33,slow=35						
MK31	Makanchi Array	62.28	315	P	P	17 40 10.6	+0.1
MK31				IAmb	IAmb	17 40 11.3	
	comp=Z,1.5nm,0.6s						
MKAR	Makanchi Array	62.28	315	P	P	17 40 10.9	+0.4
	comp=Z,1.6nm,0.4s,baz=91,slow=8.4,SNR=38						
MKAR	Makanchi Array	62.28	315	P	P	17 40 10.4	-0.1
MAKZ	Makanchi	62.49	315	P	P	17 40 12.3	+0.4
MAKZ				IAmb	IAmb	17 40 12.8	
	comp=Z,3.1nm,0.6s						
KURK	Kurchatov	65.21	319	P	P	17 40 29.4	-0.3
ILAR	Eielson Array	66.66	25	P	P	17 40 39.2	+0.5
	comp=Z,0.5nm,0.6s,baz=249,slow=6.2,SNR=9.5						
ABKAR	Akbulak array	77.24	318	P	P	17 41 42.3	-0.2
FINES	FINESS Array B	91.12	336	P	P	17 42 51.5	-1.3
	comp=Z,1.0nm,0.7s,baz=45,slow=6.1,SNR=0.9						

MAN 26 18:01:53.0, 9.°56N×126.°23E, h1^{km}, mb3.8, ML2.6, MS2.1, Mindanao

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*ATH **26** 18:03:29.5, 38.°47N×20.°58E, h11^{km}±2^{km}, ML2.2/6, Error ellipse: s-maj=2.5km s-min=0.7km az=278.0*

*THE **26** 18:03:29.4, 38.°47N×20.°55E, h10^{km}±1^{km}, ML2.7/4, Error ellipse: s-maj=1.6km s-min=0.4km az=108.0*

ISC 26 18:03:29.2±0.9, **38.°46N**±0.°02×**20.°58E**±0.°03, **h12**^{km}±6^{km}, **n32**, σ**0^{s}53**/51, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FSK	Fiskardo	0.02	265	P	Pg	18 03 31.0	-0.2
FSK				S	Sg	18 03 32.2	-0.5
	39µm,0.2s						
EVGI	Lefkada island	0.17	20	P	Pg	18 03 33.1	0.0
EVGI				S	Sg	18 03 36.2	+0.5
DRAG	Dragano-Lefkad	0.22	359	P	Pg	18 03 33.2	-0.8
DRAG				S	Sg	18 03 37.3	+0.1
	3µm,0.3s						
DRAG	Dragano-Lefkad	0.22	359	P	Pg	18 03 34.0	+0.1
DRAG				S	Sg	18 03 37.4	+0.2
KEF4	Livadi, Kephal	0.24	212	P	Pg	18 03 33.7	-0.5
KEF4				S	Sg	18 03 37.8	+0.3
KEF4	Livadi, Kephal	0.24	212	P	Pg	18 03 33.7	-0.5
KEF4				S	Sg	18 03 38.6	+1.1
NYDR	Nydri-Lefkada	0.27	20	P	Pg	18 03 34.4	-0.4
NYDR				S	Sg	18 03 38.9	+0.4
NYDR	Nydri-Lefkada	0.27	20	P	Pg	18 03 34.2	-0.5
DMLN	Damoulianata-K	0.28	217	P	Pg	18 03 35.0	+0.1
DMLN				S	Sg	18 03 39.5	+0.8
	3µm,0.2s						
DMLN	Damoulianata-K	0.28	217	P	Pg	18 03 34.4	-0.5
DMLN				S	Sg	18 03 39.5	+0.8

VLS	Valsamata	0.28	179	P	Pg	18 03 35.3	+0.3
VLS				S	Sg	18 03 39.7	+0.8
	1µm,0.1s						
VLS	Valsamata	0.28	179	P	Pg	18 03 35.1	+0.1
VLS				S	Sg	18 03 39.7	+0.8
VLS				AML	AML	18 03 40.3	
	comp=N,3366µm,0.2s						
VLS				AML	AML	18 03 40.6	
	comp=E,2043µm,0.2s						
LXRA	Lixouri, Kepha	0.28	204	P	Pg	18 03 35.3	+0.2
LXRA				S	Sb	18 03 40.3	-0.7
ARGA	Argostoli. Kep	0.29	196	P	Pb	18 03 36.3	-0.1
ARGA				S	Sg	18 03 39.4	+0.2
KEF3	Kipouria, Keph	0.32	216	P	Pg	18 03 35.1	-0.5
KEF3				S	Sg	18 03 40.0	+0.1
KEF3	Kipouria, Keph	0.32	216	P	Pg	18 03 34.9	-0.8
KEF3				S	Sg	18 03 40.2	+0.3
LKD2	Lefkada island	0.33	10	P	Pg	18 03 35.9	0.0
LKD2				S	Sg	18 03 41.1	+0.6
LKD2	Lefkada island	0.33	10	P	Pg	18 03 36.0	0.0
LKD2				S	Sg	18 03 40.8	+0.3
LKD2				AML	AML	18 03 44.3	
	comp=N,680µm,0.5s						
LKD2				AML	AML	18 03 50.1	
	comp=E,716µm,0.5s						
TSLK	Tsoukalades, L	0.37	9	P	Pg	18 03 36.6	0.0
TSLK	Tsoukalades, L	0.37	9	P	Pg	18 03 36.9	+0.3
TSLK				AML	AML	18 03 49.8	
	comp=E,886µm,0.6s						
TSLK				AML	AML	18 03 50.1	
	comp=N,1156µm,0.5s						
PVO	Paravola	0.76	78	P	Pg	18 03 43.9	0.0
PVO				AML	AML	18 04 01.1	
	comp=E,494µm,0.7s						
PVO				AML	AML	18 04 02.4	
	comp=N,402µm,0.4s						
LTHK	Lithakia	0.78	165	P	Pg	18 03 43.7	-0.5
DRO	Drossia	1.02	119	P	Pg	18 03 48.6	-0.3
DRO				S	Sb	18 04 03.5	+1.2
EFP	Efpalio	1.04	91	P	Pg	18 03 48.4	-0.9
ANX	Ano Chora	1.06	82	P	Pg	18 03 49.1	-0.5
ANX				AML	AML	18 04 12.6	
	comp=N,264µm,0.5s						
ANX				AML	AML	18 04 13.0	
	comp=E,358µm,0.6s						
EVR	Evrytania	1.06	64	P	Pg	18 03 49.1	-0.6
IGT	Igoumenitsa	1.09	350	P	Pn	18 03 50.4	+0.1
IGT				S	Sg	18 04 04.3	-0.1
SERG	Sergoula	1.16	92	P	Pb	18 03 50.2	-1.1
SERG				AML	AML	18 04 13.7	
	comp=E,177µm,0.9s						
SERG				AML	AML	18 04 17.2	
	comp=N,185µm,0.4s						
KLV	Kalavryta, Ach	1.30	108	P	Pn	18 03 52.9	-0.4
AGG	Agios Georgios	1.48	67	P	Pb	18 03 56.8	+0.1
GUR	Goura	1.48	110	P	Pn	18 03 56.0	+0.2
THL	Klokotos Trika	1.57	45	P	Pb	18 03 58.7	+0.5

NNC 26 18:09:48.2±5.5, 36°76N×70°21E, h132^{km}±125^{km}, mb2.8, mpv3.6, 1C-4D, Error ellipse: s-maj=51.0km s-min=37.9km az=7.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK02	Karatay Array	6.34	2	⇑P	Pn	18 11 19.8	+0.6
	0.6nm,0.2s,baz=188,slow=14						
KK03	Karatay Array	6.34	2	⇓S	Sn	18 12 31.4	+1.0
	1.5nm,0.5s,baz=182,slow=24						
AAK	Ala-Archa	6.74	28	⇓P	Pn	18 11 24.8	+0.1
	2.1nm,0.6s						
AAK				⇓S	Sn	18 12 40.3	+0.1
	2.7nm,0.6s						
TKM2	Tokmak 2	7.42	32	⇓P	Pn	18 11 33.3	-0.7
	4.2nm,0.5s						
AB31	Akbulak array	14.56	332	P	Pn	18 13 07.8	+0.1
	0.2nm,0.5s,baz=141,slow=12,SNR=5.4						

IDC 26 18:11:20.7±0.8, 35°12S×179°83E, h0^{km}, mb4.4/6, mb1 4.6/7, mb1mx4.2/31, mbtmp4.4/7, ML4.7/1, MS3.5/4, Ms1 3.4/4, ms1mx3.1/25, Error ellipse: s-maj=26.9km s-min=26.8km az=128.0

NOU 26 18:11:27.8, 35°60S×179°70E, h29^{km}, mb5.1/21, Off E. Coast of N. Island, N.Z.

WEL 26 18:11:27.5±0.6, 36°S±5°×18°0E±1°1, h33^{km}, M5.1/41, mB5.6/3, ML5.5/41, MLv5.1/41, Mw(mB)5.1/3, Error ellipse: s-maj=0.0km s-min=0.0km az=112.1

NEIC 26 18:11:28.4±2.2, 35°58S±0°08×179°83E±0°08, h57^{km}±6^{km}, mb4.7/21, Error ellipse: s-maj=14.4km s-min=3.1km az=139.0

ISC 26 18:11:30.1±0.6, 35°56S±0°05×179°79E±0°08, h76^{km}, n148, σ1^{s}82/133, mb4.8/15, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	2.33	210	P	Pn	18 12 04.5	-1.8
MXZ	Matakaoa Point	2.33	210	Pn	Pn	18 12 04.0	-2.3
WMGZ	Waiomatatini S	2.51	206	P	Pn	18 12 09.0	+0.3
PKGZ	Pakihiroa	2.70	210	P	Pn	18 12 10.7	-0.7
PKGZ				S	Sn	18 12 42.7	-0.3
HAZ	Te Kaha	2.72	216	P	Pn	18 12 09.2	-2.4
PUZ	Puketiti	2.79	206	P	Pn	18 12 12.0	-0.5
PUZ				S	Sn	18 12 44.9	-0.3
RUGZ	Raukumara Rang	2.94	215	P	Pn	18 12 13.4	-1.2
RUGZ				S	Sn	18 12 50.1	+1.2
TWGZ	Tauwhareparae	2.99	209	P	Pn	18 12 14.8	-0.5
TWGZ				S	Sn	18 12 48.9	-1.1
CNGZ	Carnagh Statio	3.18	203	P	Pn	18 12 17.3	-0.5
TKGZ	Te Karaka	3.27	208	P	Pn	18 12 17.7	-1.2
TKGZ				S	Sn	18 12 56.1	-0.6
MWZ	Matawai	3.31	213	P	Pn	18 12 18.4	-1.2
URZ	Urewera	3.44	218	Pn	Pn	18 12 19.8	-1.5
	52nm,0.3s,baz=268,slow=1.9,SNR=404						
URZ				Sn	Sn	18 12 58.1	-2.9
	103nm,0.3s,baz=206,slow=18,SNR=6.2						
URZ	Urewera	3.44	218	P	Pn	18 12 20.1	-1.3
URZ	Urewera	3.44	218		Pn	18 12 19.7	-1.7
RAGZ	Rawiri	3.49	212	P	Pn	18 12 21.3	-0.8
KUZ	Kuaotunu	3.50	249	P	Pn	18 12 19.6	-2.5
GRZ	Great Barrier	3.58	258	P	Pn	18 12 21.3	-1.9
LIRZ	Lichensteins R	3.66	227	P	Pn	18 12 23.9	-0.4
PRGZ	Paritu Road	3.68	204	P	Pn	18 12 23.4	-1.2
TARZ	Mount Tarawera	3.75	224	P	Pn	18 12 25.3	-0.3
KARZ	Kaharoa	3.76	228	P	Pn	18 12 24.6	-1.1
SNGZ	Shannon Statio	3.76	211	P	Pn	18 12 24.3	-1.5
SNGZ				S	Sn	18 13 08.1	-0.7
MUGZ	Murupara	3.78	219	P	Pn	18 12 24.3	-1.7
RTZ	Ruatahuna	3.79	216	P	Pn	18 12 24.4	-1.7
RRRZ	Republican Roa	3.82	222	P	Pn	18 12 25.3	-1.1
KNZ	Kokohu	3.84	205	P	Pn	18 12 23.9	-2.9
HLRZ	Highlands Stat	3.85	225	P	Pn	18 12 27.0	+0.1
MHGZ	Mahia Peninsul	3.89	202	P	Pn	18 12 25.7	-1.7
MHGZ				S	Sn	18 13 10.0	-1.8
HSRZ	Hossack Road	3.95	225	P	Pn	18 12 29.9	+1.6
HRRZ	Handcock Road	3.98	224	P	Pn	18 12 29.0	+0.3
RAHZ	Arahi	3.98	212	P	Pn	18 12 28.0	-0.8
PRRZ	Plateau Road	4.00	222	P	Pn	18 12 27.8	-1.1
MTHZ	Maungataniwha	4.04	215	P	Pn	18 12 28.2	-1.4
ALRZ	Allen Road	4.07	222	P	Pn	18 12 28.7	-1.2
WPRZ	Whakapapatarin	4.14	223	P	Pn	18 12 30.5	-0.4
MRHZ	Matea Rd	4.23	219	P	Pn	18 12 30.1	-2.1
NMHZ	Naumai	4.26	213	P	Pn	18 12 30.9	-1.6
ARHZ	Aropaoanui	4.31	210	P	Pn	18 12 31.3	-1.9
KUTZ	Kaahu Road	4.32	226	P	Pn	18 12 32.7	-0.6
TLZ	Tolley Road	4.39	230	P	Pn	18 12 33.6	-0.6
BKZ	Black Stump Fm	4.46	215	P	Pn	18 12 32.8	-2.4
BKZ	Black Stump Fm	4.46	215	Pn	Pn	18 12 32.4	-2.8
BKZ	Black Stump Fm	4.46	215	P	Pn	18 12 33.5	-1.7
RATZ	Rangitukua	4.60	223	P	Pn	18 12 36.2	-1.0
CKHZ	Cape Kidnapper	4.62	207	P	Pn	18 12 34.4	-3.1
RITZ	Rihia Road	4.63	221	P	Pn	18 12 36.4	-1.2
KWHZ	Kaweka Forest	4.70	214	P	Pn	18 12 35.4	-3.1
KATZ	Kakaramea	4.72	223	P	Pn	18 12 37.9	-1.0
KAHZ	Kahuranaki	4.82	208	P	Pn	18 12 37.0	-3.1
TMVZ	Te Maari	4.82	221	P	Pn	18 12 37.9	-2.3
KRVZ	Karewarewa	4.83	222	P	Pn	18 12 38.6	-1.9
NNVZ	North Ngauruho	4.88	222	P	Pn	18 12 39.4	-1.6
WTVZ	West Tongariro	4.88	222	P	Pn	18 12 39.4	-1.6
KRHZ	Kereru	4.90	213	P	Pn	18 12 37.8	-3.4
HIZ	Hauiti	4.93	232		Pn	18 12 41.1	-0.5
TWVZ	Taurewa	4.93	223	P	Pn	18 12 40.9	-0.8
FWVZ	Far West T-bar	5.00	221	P	Pn	18 12 41.4	-1.3
WHVZ	Whangaehu Hut	5.00	221	P	Pn	18 12 41.3	-1.5
OUZ	Omahuta	5.07	272		Pn	18 12 40.8	-2.8
OUZ	Omahuta	5.07	272	P	Pn	18 12 41.0	-2.6
BFZ	Birch Farm	5.83	208		Pn	18 12 49.3	-4.6
BFZ	Birch Farm	5.83	208	P	Pn	18 12 49.5	-4.3
GLKZ	Green Lake	6.57	18	P	Pn	18 12 59.9	-4.2
GLKZ				S	Sn	18 14 16.2	-1.4
MSWZ	Moikau Station	6.84	210		Pn	18 13 02.2	-5.5
PLWZ	Palliser	6.97	209	Pn	Pn	18 13 02.6	-6.9
SNZO	South Karori	6.99	213	Pn	Pn	18 13 03.7	-6.0
SNZO	South Karori	6.99	213	P	Pn	18 13 08.6	-1.1
BHW	Baring Head	7.00	212	Pn	Pn	18 13 03.7	-6.1
TUWZ	Tuamarina	7.44	216	Pn	Pn	18 13 08.9	-6.9
NNZ	Nelson	7.56	220	Pn	Pn	18 13 13.7	-3.8
BSWZ	Blackbirch Sta	7.69	215	Pn	Pn	18 13 13.4	-5.9
QRZ	Quartz Range	7.76	225	Pn	Pn	18 13 16.2	-4.1
QRZ	Quartz Range	7.76	225	P	Pn	18 13 16.7	-3.6
THZ	Tophouse	8.20	219	Pn	Pn	18 13 21.3	-5.1
KHZ	Kahutara	8.40	214	Pn	Pn	18 13 22.1	-6.9
LTZ	Lake Taylor	9.27	217	Pn	Pn	18 13 34.3	-6.7
OXZ	Oxford	9.80	215	Pn	Pn	18 13 41.6	-6.4
MQZ	McQueen's Vall	9.82	212	Pn	Pn	18 13 39.9	-8.4
LBZ	Lake Benmore	11.48	217	Pn	Pn	18 14 04.3	-6.7
ODZ	Otahua Downs	11.76	214	Pn	Pn	18 14 08.0	-6.8
ODZ	Otahua Downs	11.76	214	P	Pn	18 14 12.9	-1.8
MLZ	Mavora Lakes	13.21	219	Pn	Pn	18 14 28.5	-6.0
WHZ	Wether Hill Ro	13.66	217	Pn	Pn	18 14 34.5	-5.9
ONTNC	Ouen Toro	17.60	315	P	Pn	18 15 30.6	+0.3
LHI	Lord Howe Isla	17.74	277	P	P	18 15 31.0	-0.8
DZM	Mont Dzumac	17.79	316		Pn	18 15 32.8	+0.1
RMQ	Roma	28.00	280	P	P	18 17 16.9	+3.1
CMSA	Cobar Meteorol	28.62	268	P	P	18 17 20.6	+1.3
STKA	Stephens Creek	31.85	266	P	P	18 17 49.0	+1.2
	3.6nm,0.8s,baz=99,slow=10,SNR=5.8						
STKA				LR	LR	18 29 39.6	
	comp=Z,58nm,18.5s,baz=174,slow=34						
STKA	Stephens Creek	31.85	266	P	P	18 17 48.0	+0.1
PPT	Papeete	32.55	65	LR	LR	18 28 15.7	
	comp=Z,43nm,21.1s,baz=254,slow=31						
CTAO	Charters Tower	33.23	289	P	P	18 18 01.7	+1.7
CTAO	Charters Tower	33.23	289	P	P	18 18 02.2	+2.2
INKA	Innaminka	33.97	272	P	P	18 18 08.8	+2.5
LCRK	Leigh Creek	35.05	266	P	P	18 18 18.0	+2.3
MTSU	Mount Surprise	35.85	290	P	P	18 18 24.9	+2.2
BBOO	Buckleboo	36.06	261	P	P	18 18 24.1	-0.2
BBOO				IAmb	IAmb	18 18 32.6	
	comp=Z,26nm,1.4s						
OOD	Oodnadatta	38.07	269	P	P	18 18 43.3	+1.9
QIS	Mount Isa	38.20	282	P	P	18 18 44.5	+1.9
MULG	Mulgathing	38.48	265	P	P	18 18 46.0	+1.2
COEN	Coen	39.27	294	P	P	18 18 51.4	-0.1
COEN				IAmb	IAmb	18 18 54.3	
	comp=Z,18nm,0.8s						
COEN	Coen	39.27	294	P	P	18 18 53.4	+1.8
	comp=Z,24nm,0.9s						
PMG	Port Moresby	39.51	303	P	P	18 18 54.1	+0.6
PMG				IAmb	IAmb	18 18 56.6	
	comp=Z,12nm,0.9s						
RABL	Rabaul	40.31	314	P	P	18 19 00.6	+0.4
AS31	Alice Springs	41.28	274	P	P	18 19 09.4	+1.2
AS31				IAmb	IAmb	18 19 10.8	
	comp=Z,4.6nm,0.7s						
ASAR	Alice Springs	41.28	274	P	P	18 19 08.5	+0.3
	comp=Z,10nm,0.6s,baz=118,slow=7.5,SNR=160						
ASAR				LR	LR	18 35 23.3	
	comp=Z,91nm,20.2s,baz=120,slow=35						
ASAR	Alice Springs	41.28	274	P	P	18 19 09.5	+1.3
WR0	Warramunga Arr	42.57	279	P	P	18 19 19.4	+0.8
WR0				IAmb	IAmb	18 19 20.3	
	comp=Z,11nm,0.8s						
WB2	Warramunga Arr	42.73	279	P	P	18 19 18.6	-1.4
WRAB	Tennant Creek	42.74	279	P	P	18 19 20.4	+0.3
WRAB	Tennant Creek	42.74	279	P	P	18 19 20.9	+0.9
WRA	Warramunga Arr	42.74	279	P	P	18 19 19.5	-0.6
	comp=Z,17nm,0.7s,baz=121,slow=7.6,SNR=134						
WRA				LR	LR	18 36 21.5	
	comp=Z,78nm,18.7s,baz=110,slow=35						
WRA	Warramunga Arr	42.74	279	P	P	18 19 18.9	-1.2
WB0	Warramunga Arr	42.79	279	P	P	18 19 19.6	-0.9
FORT	Forrest	43.16	261	P	P	18 19 23.1	-0.2
FORT				IAmb	IAmb	18 19 51.8	
	comp=Z,17nm,0.8s						
FORT	Forrest	43.16	261	P	P	18 19 24.6	+1.3
MTN	Manton Dam	49.22	285	P	P	18 20 10.1	-0.9
KNRA	Kununurra	49.50	280	P	P	18 20 12.0	-1.1
KNRA	Kununurra	49.50	280	P	P	18 20 14.5	+1.4
PSA00	Pilbara Seismi	53.72	268	P	P	18 20 42.9	-1.7
PSA00	Pilbara Seismi	53.72	268	P	P	18 20 42.7	-1.8
PSA00				IAmb	IAmb	18 21 06.2	
	comp=Z,29nm,1.5s						
QSPA	South Pole Qui	54.56	180	P	P	18 20 54.3	+4.1
	comp=Z,3.1nm,1.1s,baz=198,slow=1.1,SNR=11						
QSPA	South Pole Qui	54.56	180	P	P	18 20 50.2	0.0
QSPA				IAmb	IAmb	18 21 05.2	
	comp=Z,5.5nm,0.8s						
FAKI	Fak Fak	54.62	295	P	P	18 20 50.8	-0.4
KSM	Kuching	74.28	283	P	P	18 22 59.3	-0.2
KSM				IAmb	IAmb	18 23 02.9	
	comp=Z,12nm,1.3s						
H03S2	Juan Fernandez	79.16	124	T	T	19 51 31.9	
	baz=232,slow=74,SNR=31						
H03S1	Juan Fernandez	79.17	124	T	T	19 51 33.2	
	baz=232,slow=74,SNR=31						
H03S3	Juan Fernandez	79.17	124	T	T	19 51 34.6	
	baz=232,slow=74,SNR=26						
H03N3	Juan Fernandez	79.38	123	T	T	19 51 58.9	
	baz=237,slow=72,SNR=43						
H03N2	Juan Fernandez	79.38	123	T	T	19 51 48.9	
	baz=237,slow=72,SNR=30						
H03N1	Juan Fernandez	79.39	123	T	T	19 51 57.8	
	baz=237,slow=72,SNR=46						
RGRI	Rengat	79.60	277	P	P	18 23 30.6	+1.3
NJ2	Nanjing	88.25	312	*e*P	P	18 24 18.0	+5.1
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
PETK	Petropavlovsk-	90.37	347	P	P	18 24 22.8	+0.5
	comp=Z,2.5nm,0.8s,baz=90,slow=8.9,SNR=4.1						
NVAR	Mina Array Bea	93.26	44	P	P	18 24 37.1	+0.8
	comp=Z,0.2nm,0.5s,baz=199,slow=5.3,SNR=2.0						
HHC	Hu-ho-hao-te	98.50	315	*e*P	Pdif	18 25 05.5	+5.5
HHC				pmax	pmax		
	comp=Z,13nm,1.3s						
HHC				pmax	pmax		
	comp=Z,100nm,7.4s						
WMQ	Urumqi	114.90	307	*e*P	PKiKP	18 30 06.3	+4.5
WMQ				pmax	pmax		
	comp=Z,87nm,4.9s						
ZALV	Zalesovo Beam	120.58	317	PKP	PKPdf	18 30 11.1	-1.2
	comp=Z,0.3nm,0.3s,baz=45,slow=1.0,SNR=2.6						
ARCES	ARCESS Array B	143.16	345	PKP	PKPdf	18 30 54.1	-0.2
	comp=Z,5.4nm,1.0s,baz=34,slow=1.1,SNR=5.5						
ARCES	ARCESS Array B	143.16	345		PKPdf	18 30 53.3	-1.0
FINES	FINESS Array B	149.21	335	PKPbc	PKPbc	18 31 09.1	+0.2
	comp=Z,6.4nm,0.7s,baz=38,slow=4.1,SNR=31						
MMAI	Mount Meron Ar	150.56	275	PKPbc	PKiKP	18 31 14.1	+0.1
	comp=Z,0.4nm,0.4s,baz=34,slow=5.4,SNR=2.0						
DBIC	Dimbokro	150.93	170	PKPbc	PKiKP	18 31 16.9	+1.8
	comp=Z,3.0nm,0.7s,baz=90,slow=2.4,SNR=3.5						
DBIC	Dimbokro	150.93	170		PKPbc	18 31 12.5	-2.1
BRTR	Keskin Array B	152.97	289	PKPbc	PKPbc	18 31 18.4	-0.3
	comp=Z,1.2nm,0.5s,baz=156,slow=6.4,SNR=5.7						
AKASG	Malin Array Be	153.95	315	PKPbc	PKPbc	18 31 19.1	-1.1
	comp=Z,0.4nm,0.3s,baz=52,slow=2.7,SNR=5.0						
TORD	Torodi Ar. Bea	157.62	185	PKPab	PKPab	18 31 52.8	+2.4
	comp=Z,1.3nm,0.8s,baz=180,slow=3.2,SNR=3.8						
TORD	Torodi Ar. Bea	157.62	185		PKPab	18 31 48.5	-1.9

TRN 26 18:14:47.8, 17°02N×62°11W, h104^{km}, MD4.2

IDC 26 18:14:48.3±0.7, 16°92N×62°19W, h108^{km}±8^{km}, mb3.2/5, mb1 3.5/8, mb1mx3.3/38, mbtmp3.7/8, Error ellipse: s-maj=17.3km s-min=9.3km az=34.0

ISC 26 18:14:48.5±0.7, 17°03N±0°05×62°10W±0°05, h111^{km}±6^{km}, n49, σ0^{s}68/72, mb3.4/5, 1C-1D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANDO	Antigua, Disas	0.28	72	⇑*i*P	Pn	18 15 04.4	+0.2
ANDO				*e*S	Sn	18 15 15.4	-0.7
ANBD	Bethesda, Anti	0.33	86	⇓*i*P	Pn	18 15 04.6	+0.2
ANBD				*e*S	Sn	18 15 15.9	-0.6
SKOC	St. Kitts, UWI	0.66	294	*e*P	Pn	18 15 06.9	+0.3
SKOC				*e*S	Sn	18 15 20.0	-0.2
SKI	Saint Kitts	0.68	297	*e*P	Pn	18 15 07.3	+0.5
SKI				*e*S	Sn	18 15 19.8	-0.8
ANWB	Willy Bob	0.71	25	*e*P	Pn	18 15 07.7	+0.7
ANWB				*e*S	Sn	18 15 20.9	-0.1
SEUS	St. Eustatius	0.96	299	*e*P	Pn	18 15 10.1	+0.8
SEUS				*e*S	Sn	18 15 25.5	+0.4
CBE	Ff, Capester	1.06	153	*e*P	Pn	18 15 10.9	+0.5
CBE				*e*S	Sn	18 15 27.5	+0.4
H05N1	Guadeloupe/Mar	1.23	125	P	Pn	18 15 12.2	-0.1
H05N1				S	Sn	18 15 29.9	-0.3
	SNR=8376						
SABA	Saba	1.24	299	*i* P	Pn	18 15 12.7	+0.3
TBG	Guadaloupe-3	1.25	159	*e*P	Pn	18 15 12.8	+0.3
TBG				*e*S	Sn	18 15 31.4	+0.8
TDBA	Terre de Bas,	1.25	159	*e*P	Pn	18 15 12.8	+0.3
TDBA				*e*S	Sn	18 15 31.1	+0.4
MAGL	Barre de l'ile	1.33	144	*e*P	Pn	18 15 13.9	+0.5
MAGL				*e*S	Sn	18 15 32.1	-0.2
SMRT	St. Maarten	1.38	318	*i* P	Pn	18 15 13.8	-0.1
SMRT				*e*S	Sn	18 15 32.3	-0.9
MDPV	Dominica, Penn	1.54	155	*e*P	Pn	18 15 16.2	+0.4
MDPV				*e*S	Sn	18 15 36.6	0.0
DSLB	Salisbury	1.71	157	*i* P	Pn	18 15 18.4	+0.4
DSLB				*e*S	Sn	18 15 40.3	0.0
MDN	Morne-Daniel	1.83	158	*e*P	Pn	18 15 19.9	+0.5
MDN				*e*S	Sn	18 15 43.2	+0.2
DLPL	La Plaine	1.88	154	*e*P	Pn	18 15 20.7	+0.7
DLPL				*e*S	Sn	18 15 44.2	+0.2
SVN	Savane Anatole	2.35	157	*e*P	Pn	18 15 26.4	+0.3
PCM	Pelee Case Pet	2.36	159	*e*P	Pn	18 15 26.5	+0.3
PCM	Pelee Case Pet	2.36	159	*e*P	Pn	18 15 27.5	+1.3
CXM	Morne La Croix	2.38	158	*e*P	Pn	18 15 27.3	+0.7
BAMF	Morne Balai	2.38	157	*e*P	Pn	18 15 27.0	+0.5
GBMF	Grand Be	2.39	158	*e*P	Pn	18 15 27.3	+0.6
PML	Morne Lenard	2.40	158	*e*P	Pn	18 15 27.5	+0.8
FDF	Fort de France	2.46	158	*e*P	Pn	18 15 27.3	-0.1
FDF				*e*S	Sn	18 15 56.4	-1.0
ILAM	Ilet Lapin Mar	2.53	152	*e*P	Pn	18 15 28.1	-0.2
ILAM				*e*S	Sn	18 15 57.3	-1.7
CDVI	St. Croix	2.64	286	*e*P	Pn	18 15 29.8	0.0
ZAM	Aeronautique	2.65	157	*e*P	Pn	18 15 30.3	+0.4
LPMF	Morne Lapointe	2.67	156	*e*P	Pn	18 15 30.2	0.0
TRMF	Trois Ilets	2.68	158	*e*P	Pn	18 15 30.6	+0.3
BIM	Bigot	2.69	158	*e*P	Pn	18 15 30.3	-0.1
BIM				*e*S	Sn	18 16 02.2	-0.5
MVM	Montagne Vaucl	2.72	155	*e*P	Pn	18 15 31.2	+0.3
MPOM	Morne Pois Mar	2.83	155	*e*P	Pn	18 15 32.1	-0.2
MPOM				*e*S	Sn	18 16 04.8	-1.3
H05S1	Guadeloupe/Mar	2.86	155	P	Pn	18 15 33.1	+0.4
H05S1				S	Sn	18 16 05.2	-1.5
	SNR=115						
SLBI	Saint Lucia, B	3.18	160	*e*P	Pn	18 15 37.0	+0.1
SLBI				*e*S	Sn	18 16 13.8	-0.4
MCLT	Moule a Chique	3.48	161	*e*P	Pn	18 15 41.8	+0.8
SSV	Crater Summit	3.78	166	*e*P	Pn	18 15 46.1	+1.1
SVV	Soufriere Volc	3.79	167	*e*P	Pn	18 15 46.4	+1.4
SVB	Belmont	3.82	167	*e*P	Pn	18 15 45.9	+0.4
SJG	San Juan	4.01	286	P	Pn	18 15 48.6	+0.7
	4.7nm,0.3s,baz=100,slow=16,SNR=15						
SJG				S	Sn	18 16 32.9	-1.1
	8.0nm,0.3s,baz=311,slow=19,SNR=4.5						
AOPR	Arecibo Observ	4.62	287	*e*P	Pn	18 15 57.1	+0.9
GRGR	Grenville	4.89	175	*e*P	Pn	18 16 00.1	+0.2
MDP	Montagnes des	15.05	141	P	Pn	18 18 14.3	-1.1
	0.8nm,0.3s,baz=320,slow=16,SNR=1.3						
PTGA	Pitinga	17.77	173	P	P	18 18 47.6	-0.5
	0.4nm,0.3s,baz=347,slow=12,SNR=4.6						
TXAR	Lajitas Array	39.92	295	P	P	18 22 11.4	-0.6
	0.2nm,0.6s,baz=100,slow=8.3,SNR=1.9						
ULM	Lac du Bonnet	42.80	328	P	P	18 22 34.4	-0.7
	2.3nm,0.4s,baz=140,slow=7.9,SNR=2.3						
PDAR	Pinedale Array	47.68	313	P	P	18 23 14.1	0.0
	0.6nm,0.8s,baz=123,slow=4.4,SNR=5.6						
TORD	Torodi Ar. Bea	61.49	84	P	P	18 24 55.5	+1.5
	0.2nm,0.5s,baz=297,slow=6.3,SNR=1.2						
ILAR	Eielson Array	72.53	333	P	P	18 26 03.8	+0.7
	0.4nm,0.6s,baz=95,slow=4.5,SNR=8.0						

MAN 26 18:23:17.8, 6°60N×125°52E, h1^{km}, mb4.0, ML2.8, MS2.4, Mindanao

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IDC 26 18:29:47.0±0.8, 14°61N×54°99E, h0^{km}, mb3.9/11, mb1 4.1/11, mb1mx3.8/45, mbtmp3.9/11, MS3.6/4, Ms1 3.6/4, ms1mx2.9/56, Error ellipse: s-maj=22.4km s-min=21.6km az=140.0

NEIC 26 18:29:48.0±0.8, 14°59N±0°08×54°8E±0°1, h10^{km}±1^{km}, mb4.0/11, Error ellipse: s-maj=16.9km s-min=13.7km az=78.0

ISC 26 18:29:48.9±0.7, 14°7N±0°1×54°9E±0°1, h14^{km}, n32, σ1^{s}02/25, mb4.0/17, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCY	Socotra	2.64	199	Pn	Pn	18 30 24.5	-6.7
WSAR	Wadi Sarin	9.21	22	LR	LR	18 35 20.2	
	comp=Z,170nm,20.6s,baz=201,slow=36						
ATD	Arta Tunnel	12.14	256	LR	LR	18 36 12.2	
	comp=Z,150nm,20.1s,baz=45,slow=32						
RAYN	Ar Rayn	12.47	316	Pn	Pn	18 32 45.3	-1.0
LODK	Lodwar	22.27	242	P	P	18 34 44.0	-1.9
LODK				IAmb	IAmb	18 35 09.5	
	comp=Z,7.5nm,1.4s						
GEYT	Alibeck	23.32	6	P	P	18 34 56.8	+0.1
GEYT				IAmb	IAmb	18 35 09.3	
	comp=Z,3.4nm,0.7s						
KBL	Kabul	23.54	30		P	18 34 59.3	+0.3
KBL				IAmb	IAmb	18 35 06.7	
	comp=Z,5.7nm,1.1s						
KIBK	Kibwezi	23.76	226	P	P	18 35 00.6	-0.7
SIRT	Sirnak	25.27	336	P	P	18 35 14.6	-0.3
ABKAR	Akbulak array	34.72	6	P	P	18 36 36.6	-1.8
ABKAR				IAmb	IAmb	18 36 45.1	
	comp=Z,1.8nm,0.9s						
MK31	Makanchi Array	39.34	30	P	P	18 37 17.4	-0.5
MK31				IAmb	IAmb	18 37 41.0	
	comp=Z,4.0nm,1.5s						
MKAR	Makanchi Array	39.34	30	P	P	18 37 18.9	+1.1
	comp=Z,0.6nm,0.5s,baz=212,slow=9.0,SNR=12						
MKAR				PcP	PcP	18 39 26.8	+0.5
	comp=Z,0.2nm,0.5s,baz=234,slow=2.6,SNR=2.2						
LSZ	Lusaka	39.79	223	LR	LR	18 51 55.5	
	comp=Z,54nm,19.9s,baz=161,slow=33						
AKASG	Malin Array Be	41.48	335	P	P	18 37 36.9	+1.5
	comp=Z,0.5nm,0.6s,baz=127,slow=8.4,SNR=4.6						
CM31	Chiang Mai Arr	42.32	79		P	18 37 42.5	-0.3
CMAR	Chiang Mai Arr	42.32	79	P	P	18 37 42.8	0.0
	comp=Z,2.8nm,0.7s,baz=275,slow=9.6,SNR=30						
CMAR	Chiang Mai Arr	42.32	79	P	P	18 37 42.2	-0.5
ZAA0	Zalesovo Array	45.66	24		P	18 38 08.9	-0.1
ZAA0				IAmb	IAmb	18 38 14.1	
	comp=Z,1.7nm,0.9s						
ZALV	Zalesovo Beam	45.66	24	P	P	18 38 08.8	-0.2
	comp=Z,1.3nm,0.6s,baz=226,slow=8.1,SNR=8.7						
FINES	FINESS Array B	51.06	343	P	P	18 38 51.4	+0.8
	comp=Z,2.7nm,0.8s,baz=134,slow=11,SNR=6.4						
TORD	Torodi Ar. Bea	51.55	275	P	P	18 38 55.6	+0.6
	comp=Z,1.3nm,1.0s,baz=72,slow=6.8,SNR=4.7						
BOSA	Boshof	51.72	214	P	P	18 38 57.9	+1.8
	comp=Z,1.7nm,0.6s,baz=24,slow=10,SNR=5.2						
SONM	Songino Array	53.70	41	P	P	18 39 11.6	+1.0
	comp=Z,1.5nm,1.0s,baz=261,slow=8.7,SNR=8.9						
SONM	Songino Array	53.70	41	P	P	18 39 11.2	+0.5
SONM				IAmb	IAmb	18 39 17.4	
	comp=Z,2.5nm,1.1s						
ARCES	ARCESS Array B	57.83	348	P	P	18 39 40.8	+1.1
	comp=Z,0.9nm,0.5s,baz=139,slow=6.1,SNR=9.3						
H01W3	Cape Leeuwin H	74.74	133	T	T	20 02 52.3	
	baz=301,slow=75,SNR=24						
H01W2	Cape Leeuwin H	74.74	133	T	T	20 02 49.4	
	baz=301,slow=75,SNR=27						
H01W1	Cape Leeuwin H	74.75	133	T	T	20 02 50.1	
	baz=301,slow=75,SNR=30						
FITZ	Fitzroy Crossi	76.97	113	LR	LR	19 06 54.4	
	comp=Z,169nm,21.6s,baz=274,slow=29						
WRA	Warramunga Arr	85.35	112	P	P	18 42 25.4	-0.9
	comp=Z,1.0nm,0.9s,baz=298,slow=4.0,SNR=5.1						
ASAR	Alice Springs	86.08	116	P	P	18 42 28.9	-1.1
	comp=Z,0.7nm,0.7s,baz=288,slow=4.7,SNR=7.8						
NVAR	Mina Array Bea	126.78	353	PKP	PKPdf	18 48 51.7	-1.2

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         comp=Z,0.7nm,0.7s,baz=279,slow=0.8,SNR=4.6
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*NORS **26** 18:35:12.0±0.0, 43.°42N×45.°76E, h137km±3km, MPVA4.1*
*MOS **26** 18:35:13.1±0.5, 43.°52N×45.°74E, h130km, mb3.6/1, Error ellipse: s-maj=8.8km s-min=6.9km az=126.9*
*DRS **26** 18:35:14.6±0.0, 44.°25N×44.°80E, h42km*
ISC 26 18:35:12.5±1.0**,43.°53N**±0.°05×**45.°77E**±0.°03**,h140**km±8km**,**
n56,σ**0.s88**/94**,5C-9D,Eastern Caucasus**

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Code  Station Name          Δ°   AZ°    Phase ID          Time     Res
                                        Op       ISC      h  m  s   ISC
DVE   Vedeno               0.63 155  i P      Pn       18 35 33.4 -0.1
DLMR  Dylym                0.78 126⇑ iP       Pn       18 35 34.6 +0.2
DLMR                                 eS       Sn       18 35 50.5 -0.6
DLMR                                  pmax    pmax
      comp=Z,370nm,0.1s
DLMR  Dylym                0.78 126  i Pg     Pn       18 35 34.6 +0.2
      comp=Z,370nm,0.1s
DLMR                                 eSg      Sn       18 35 50.5 -0.6
      comp=Z,104nm,0.2s
TRKR  Terskaya             0.78 285  i P      Pn       18 35 35.3 +0.9
TRKR                                  pmax    pmax
      comp=Z,214nm,0.2s
KMGR  Komgaron             0.81 235  eP       Pn       18 35 35.5 +0.7
KMGR                                 eS       Sn       18 35 52.9 +1.3
BTKR  Batakoyurt           0.91 260⇓ iP       Pn       18 35 36.5 +1.0
BTKR                                 eS       Sn       18 35 54.5 +1.5
BTLR  Botlikh              0.93 159⇓ iP       Pn       18 35 35.9 +0.2
BTLR                                 eS       Sn       18 35 52.4 -0.9
BTLR                                  pmax    pmax
      comp=Z,166nm,0.3s
BTLR  Botlikh              0.93 159  i Pg     Pn       18 35 35.9 +0.2
      comp=Z,166nm,0.3s
BTLR                                 eSg      Sn       18 35 52.5 -0.9
      comp=Z,151nm,0.2s
DBC   Dubki                0.93 123⇑ iP       Pn       18 35 35.7  0.0
DBC                                  eS       Sn       18 35 52.5 -0.8
DBC                                   pmax    pmax
      comp=Z,97nm,0.2s
DBC   Dubki                0.93 123  i Pg     Pn       18 35 35.8  0.0
      comp=Z,97nm,0.1s
DBC                                  eSg      Sn       18 35 52.5 -0.8
      comp=Z,101nm,0.3s
VLKR  Vladikavkaz          0.93 239  eP       Pn       18 35 35.7  0.0
VLKR                                 eS       Sn       18 35 54.0 +0.6
KRNR  Karanay              1.09 130⇓ iP       Pn       18 35 37.4 +0.2
KRNR                                 eS       Sn       18 35 54.9 -1.1
KRNR                                  pmax    pmax
      comp=Z,28nm,0.1s
KRNR  Karanay              1.09 130  i Pg     Pn       18 35 37.4 +0.2
      comp=Z,28nm,0.1s
KRNR                                 eSg      Sn       18 35 55.0 -1.1
      comp=Z,116nm,0.4s
PRTR  Priterechnaya        1.10 282⇑ iP       Pn       18 35 38.2 +1.0
PRTR                                 eS       Sn       18 35 57.4 +1.5
UNCR  Uncukul              1.11 137⇓ iP       Pn       18 35 37.2 -0.1
UNCR                                 eS       Sn       18 35 55.2 -0.9
UNCR                                  pmax    pmax
      comp=Z,63nm,0.2s
UNCR  Uncukul              1.11 137  i Pg     Pn       18 35 37.2 -0.1
      comp=Z,63nm,0.2s
UNCR                                 eSg      Sn       18 35 55.3 -0.9
      comp=Z,170nm,0.5s
XNZR  Khunzakh             1.20 145⇓ iP       Pn       18 35 39.2 +0.8
XNZR                                 eS       Sn       18 35 58.1 +0.1
XNZR  Khunzakh             1.20 145  i Pg     Pn       18 35 39.0 +0.6
      comp=Z,82nm,0.4s
XNZR                                 eSg      Sn       18 35 58.0 -0.1
      comp=Z,289nm,0.4s
BUJR  Buynaksk             1.21 125⇓ iP       Pn       18 35 39.3 +1.1
BUJR                                 eS       Sn       18 35 58.3 +0.5
BUJR                                  pmax    pmax
      comp=Z,152nm,0.2s
BUJR  Buynaksk             1.21 125  i Pg     Pn       18 35 39.3 +1.1
      comp=Z,152nm,0.2s
BUJR                                 eSg      Sn       18 35 58.3 +0.5
      comp=Z,181nm,0.5s
PNSH  Pansheti             1.23 224   P       Pn       18 35 29.9 -8.7
PNSH                                  S       Sn       18 35 48.2  -10
PNSH  Pansheti             1.23 224   P       Pn       18 35 30.0 -8.7
PNSH                                  S       Sn       18 35 48.2  -10
STDR  Stavd-Durt           1.25 263  eP       Pn       18 35 39.6 +0.9
STDR                                 eS       Sn       18 35 59.9 +1.3
LACR  Lac                  1.28 237  eP       Pn       18 35 38.8 -0.3
LACR                                  pmax    pmax
      comp=Z,14nm,0.2s
ARKR  Arakani              1.29 135⇓ iP       Pn       18 35 39.5 +0.4
ARKR                                 eS       Sn       18 35 58.6 -0.8
ARKR                                  pmax    pmax
      comp=Z,104nm,0.3s
ARKR  Arakani              1.29 135  i Pn     Pn       18 35 39.5 +0.4
      comp=Z,104nm,0.3s
ARKR                                 eSn      Sn       18 35 58.6 -0.8
      comp=Z,224nm,0.5s
KORR  Kora                 1.32 251  eP       Pn       18 35 40.0 +0.6
KORR                                 eS       Sn       18 36 00.0 +0.2
MAK   Makhachkala          1.39 114  eP       Pn       18 35 41.3 +1.3
MAK                                  e                 18 36 01.4
MAK                                   pmax    pmax
      comp=Z,80nm,0.3s
MAK                                   smax    smax
      comp=N,301nm,0.3s
MAK                                   smax    smax
      comp=N,387nm,0.5s
GNBR  Gunib                1.44 142  eP       Pn       18 35 41.2 +0.6
GNBR                                 eS       Sn       18 36 01.7 -0.4
GNBR                                  pmax    pmax
      comp=Z,39nm,0.1s
GNBR  Gunib                1.44 142  ePn      Pn       18 35 41.3 +0.6
      comp=Z,39nm,0.1s
GNBR                                 eSn      Sn       18 36 01.7 -0.4
      comp=Z,219nm,0.2s
LSNR  Lesken               1.44 261  i P      Pn       18 35 41.2 +0.6
LSNR                                  pmax    pmax
      comp=Z,54nm,0.2s
ZEI   Tsey                 1.55 242  eP       Pn       18 35 42.0 -0.1
ZEI                                  eS       Sn       18 36 02.5 -2.1
NCK   Nalchik              1.58 270⇑ iP       Pn       18 35 42.7 +0.5
NCK                                  eS       Sn       18 36 04.8  0.0
KMKR  Kumukh               1.71 145⇑ iP       Pn       18 35 44.3 +0.5
KMKR                                 eS       Sn       18 36 07.5 -0.1
KMKR                                  pmax    pmax
      comp=Z,41nm,0.2s
KMKR  Kumukh               1.71 145  i Pn     Pn       18 35 44.4 +0.5
      comp=Z,41nm,0.2s
KMKR                                 eSn      Sn       18 36 07.6 -0.1
      comp=Z,131nm,0.6s
DIGR  Digorskoe uzhe       1.72 249  eP       Pn       18 35 43.6 -0.3
DIGR                                 eS       Sn       18 36 05.8 -2.1
LGD   Lagodekhi            1.73 168   P       Pn       18 35 43.9 +0.1
LGD                                   S       Sn       18 36 07.0 -0.7
LGD   Lagodekhi            1.73 168   P       Pn       18 35 43.9 +0.1
LGD                                   S       Sn       18 36 07.1 -0.7
SGKR  Sergokala            1.75 127  eP       Pn       18 35 44.8 +0.7
SGKR                                 eS       Sn       18 36 08.8 +0.6
SGKR                                  pmax    pmax
      comp=Z,39nm,0.2s
SGKR  Sergokala            1.75 127  ePn      Pn       18 35 44.8 +0.7
      comp=Z,39nm,0.2s
SGKR                                 eSn      Sn       18 36 08.9 +0.6
      comp=Z,90nm,0.3s
URKR  Urkarakh             1.93 134  eP       Pn       18 35 46.6 +0.3
URKR                                 eS       Sn       18 36 11.7 -0.5
URKR                                  pmax    pmax
      comp=Z,16nm,0.5s
URKR  Urkarakh             1.93 134  ePn      Pn       18 35 46.6 +0.3
      comp=Z,16nm,0.5s
URKR                                 eSn      Sn       18 36 11.7 -0.5
ONI   Oni                  1.94 242   P       Pn       18 35 47.1 +0.7
ONI   Oni                  1.94 242  eP       Pn       18 35 47.3 +1.0
ONI                                  eS       Sn       18 36 12.5 +0.3
BTNK  Botanikuri           1.98 202   P       Pn       18 35 47.2 +0.4
BTNK                                  S       Sn       18 36 12.1 -0.9
BTNK  Botanikuri           1.98 202   P       Pn       18 35 47.2 +0.4
BTNK                                  S       Sn       18 36 12.1 -0.9
PYA1  Pyatigorsk           2.01 286  i P      Pn       18 35 46.9 -0.2
KBZ   Khabaz               2.09 276  i P      Pn       18 35 47.5 -0.5
DDFL  Dedoflistskaro       2.10 173   P       Pn       18 35 51.1 +2.9
DDFL  Dedoflistskaro       2.10 173   P       Pn       18 35 51.1 +2.9
NEY   Neytrino             2.24 264  i P      Pn       18 35 50.2 +0.2
SHA1  Shidzhatmaz          2.27 276⇓ iP       Pn       18 35 50.2 -0.2
SHA1                                 eS       Sn       18 36 18.8 -0.8
GOF   Gofitskoye           2.48 309⇓ iP       Pn       18 35 53.5 +0.7
GOF                                  eS       Sn       18 36 23.9  0.0
GOF                                   pmax    pmax
      comp=Z,33nm,0.6s
GOF                                   smax    smax
      comp=E,85nm,0.6s
GOF                                   smax    smax
      comp=N,63nm,0.4s
GNI   Garni                3.46 193  i P      Pn       18 36 07.3 +1.7
OBN   Obninsk             13.04 336  eP       P        18 38 16.0 -1.4
OBN                                   pmax    pmax
      comp=Z,7.0nm,1.1s
BRVK  Borovoye            18.81  51  i P      Pn       18 39 24.1 +1.0
BRVK                                  pmax    pmax
      comp=Z,1.0nm,1.0s
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*IDC **26** 18:37:38.7±3.3, 14.°26N×54.°24E, h0km, mb3.5/8, mb1 3.7/8, mb1mx3.4/64, mbtmp3.5/8, Error ellipse: s-maj=82.9km s-min=32.4km az=71.0*
ISC 26 18:37:40.5±3.1**,14.°3N**±0.°3×**54.°3E**±0.°5**,h10**km**,n8,**σ**0.s95**/8**,**
mb3.6/8**,Owen Fracture Zone region**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time     Res
                                     Op       ISC      h  m  s   ISC
AKTO  Aktyubinsk        36.17   4    P        P        18 44 42.5 -0.6
      0.5nm,0.4s,baz=0.7,slow=7.2,SNR=1.7
MKAR  Makanchi Array    39.98  30    P        P        18 45 15.0 -0.4
      0.3nm,0.7s,baz=208,slow=5.9,SNR=2.7
KURBB Kurchatov Arra    41.23  23    P        P        18 45 26.3 +0.8
      0.3nm,0.7s,baz=206,slow=10,SNR=2.4
CMAR  Chiang Mai Arr    42.99  78    P        P        18 45 39.9 -0.4
      1.2nm,0.8s,baz=278,slow=8.9,SNR=12
ZALV  Zalesovo Beam     46.26  25    P        P        18 46 05.7 -0.3
      0.6nm,0.7s,baz=222,slow=6.0,SNR=3.6
SONM  Songino Array     54.39  41    P        P        18 47 08.8 +1.0
      0.5nm,0.8s,baz=263,slow=7.1,SNR=3.5
WRA   Warramunga Arr    85.76 112    P        P        18 50 19.5 -1.0
      0.4nm,0.9s,baz=294,slow=4.6,SNR=1.7
ASAR  Alice Springs     86.45 115    P        P        18 50 25.0 +1.0
      0.4nm,0.9s,baz=290,slow=5.6,SNR=3.1
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*IDC **26** 18:38:05.0±3.0, 14.°52N×54.°84E, h0km, mb3.7/8, mb1 3.8/8, mb1mx3.4/64, mbtmp3.7/8, Error ellipse: s-maj=79.5km s-min=28.9km az=73.0*
ISC 26 18:38:06.8±3.1**,14.°5N**±0.°3×**54.°8E**±0.°5**,h14**km**,n8,**σ**1.s06**/8**,**
mb3.7/8**,Owen Fracture Zone region**

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Code  Station Name        Δ°   AZ°   Phase ID          Time     Res
                                     Op       ISC      h  m  s   ISC
AAK   Ala-Archa         32.79  27    P        P        18 44 41.0 +1.2
      0.3nm,0.3s,baz=209,slow=8.9,SNR=3.7
AKTO  Aktyubinsk        35.94   4    P        P        18 45 07.2 +0.4
      2.2nm,0.8s,baz=184,slow=8.3,SNR=5.2
MKAR  Makanchi Array    39.57  30    P        P        18 45 38.2 +0.7
      0.2nm,0.5s,baz=221,slow=8.6,SNR=4.2
KURBB Kurchatov Arra    40.85  23    P        P        18 45 46.8 -1.2
      0.2nm,0.5s,baz=222,slow=8.1,SNR=4.1
CMAR  Chiang Mai Arr    42.47  78    P        P        18 46 01.4 -0.4
      1.3nm,0.8s,baz=277,slow=9.3,SNR=8.9
ZALV  Zalesovo Beam     45.88  24    P        P        18 46 27.3 -1.3
      0.8nm,0.7s,baz=225,slow=5.9,SNR=4.9
WRA   Warramunga Arr    85.38 112    P        P        18 50 44.8 +0.5
      0.7nm,1.0s,baz=313,slow=4.0,SNR=4.5
ASAR  Alice Springs     86.09 116    P        P        18 50 47.8  0.0
      0.4nm,0.8s,baz=297,slow=4.9,SNR=4.9
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*IDC **26** 18:40:29.5±0.5, 14.°63N×55.°09E, h0km, mb4.2/31, mb1 4.3/32, mb1mx4.2/65, mbtmp4.2/32, ML4.1/1, Error ellipse: s-maj=13.2km s-min=11.5km az=121.0*
*NEIC **26** 18:40:31.5±2.7, 14.°69N±0.°06×55.°02E±0.°09, h10km±1km, mb4.7/54, Error ellipse: s-maj=14.1km s-min=10.7km az=97.0*
*GCMT **26** 18:40:31.5±0.3, 14.°74N±0.°02×54.°82E±0.°02, h15km±1km, MW5.0/89, Moment Tensor Solution. s30,c33; s89,c137; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.89±.18; $M_{\theta\theta}$2.87±.13; $M_{\phi\phi}$0.02±.12; $M_{r\theta}$2.36±.27; $M_{\theta\phi}$-1.17±.08; $M_{\phi r}$1.08±.27; Best double couple: $M_0$4.03800×10^{16} NP1:ϕ_s132.00000°,δ34.00000°,λ-48.00000°. NP2: ϕ_s265.00000°,δ65.00000°,λ-114.00000°. Principal axes: T 3.8660, Plg17.0000°, Azm12.0000°; N 0.3480, Plg22.0000°, Azm275.0000°; P -4.2110, Plg62.0000°, Azm137.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*OMAN **26** 18:40:33.2±0.4, 14.°71N×54.°83E, h10km, mb5.4/7, ml4.1/4, ms4.3/4, Mwp5.1/7 Error ellipse: s-maj=13.0km s-min=4.6km az=121.0*
ISC 26 18:40:31.7±0.4**,14.°55N**±0.°06×**55.°11E**±0.°05**,h14**km**,n158,**
σ**1.s81**/166**,mb4.6**/76**,MS4.3**/6**,1C,Owen Fracture Zone region**

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Code  Station Name          Δ°   AZ°    Phase ID          Time     Res
                                        Op       ISC      h  m  s   ISC
SOCY  Socotra              2.59 205    P        Pn       18 41 13.1 -0.3
      SNR=8.8
SOCY  Socotra              2.59 205    Pn       Pn       18 41 08.1 -5.3
SOCY                                   Sn       Sn       18 41 33.6  -11
RBK   Rabkut               3.06 344    P        Pn       18 41 16.5 -3.2
DMTO  DMTO                 3.15 357    P        Pn       18 41 19.5 -1.5
DMTO                                   P        Pn       18 41 19.5 -1.5
ABTO  Aybut                3.29 328    P        Pn       18 41 21.9 -1.0
ABTO                                   P        Pn       18 41 21.9 -1.0
SHAO  Shalim               3.49   8    P        Pn       18 41 24.4 -1.2
SHAO                                   P        Pn       18 41 24.4 -1.2
UMZA  Um Al Zommool        8.12   0    P        Pn       18 42 29.5 +0.2
ARQ   Araqi                8.84   9    P        Pn       18 42 40.0 +0.8
ARQ                                    P        Pn       18 42 40.0 +0.8
HOQ   Hoqain               9.22  13    P        Pn       18 42 44.8 +0.4
HOQ                                    P        Pn       18 42 44.8 +0.4
MZWR  Madinat Zayed        9.23 353    P        Pn       18 42 45.0 +0.4
MZWR                                   P        Pn       18 42 45.0 +0.4
SOHO  SOHO                 9.63   8    P        Pn       18 42 52.0 +2.0
SOHO                                   P        Pn       18 42 52.0 +2.0
ASHO  Ashiyiah            10.12   5    P        Pn       18 42 58.8 +2.1
UOSS  Minazif             10.39   6    P        Pn       18 43 00.1 -0.3
UOSS  Minazif             10.39   6    Pn       Pn       18 42 58.8 -1.7
BANOM Banah               11.37   5    P        Pn       18 43 13.6 -0.3
ATD   Arta Tunnel         12.32 257    Pn       Pn       18 43 26.8 -0.1
      1.0nm,0.3s,baz=56,slow=17,SNR=1.5
RAYN  Ar Rayn             12.72 316    P        Pn       18 43 29.0 -3.4
RAYN  Ar Rayn             12.72 316    Pn       Pn       18 43 27.2 -5.2
POO   Poona               18.40  75   eP        Pn       18 44 47.0 +0.4
HRA   Herat               20.78  17    P        P        18 45 10.2 -2.5
LODK  Lodwar              22.39 242    P        P        18 45 29.2 -0.9
      SNR=12
LODK  Lodwar              22.39 242    P        P        18 45 32.1 +2.0
LODK                                   IAmb     IAmb     18 45 38.6
      comp=Z,26nm,1.4s
HYB   Hyderabad           22.72  80  i P        P        18 45 35.0 +1.5
GEYT  Alibeck             23.44   6    P        P        18 45 39.1 -1.5
      comp=Z,8.1nm,0.7s,baz=200,slow=17,SNR=9.3
GEYT  Alibeck             23.44   6    P        P        18 45 36.9 -3.8
GYA0B ALIBECK ARRAY       23.44   6    P        P        18 45 36.7 -4.0
GYA0B                                  IAmb     IAmb     18 45 46.1
      comp=Z,18nm,1.0s
KBL   Kabul               23.55  30    P        P        18 45 44.8 +2.8
      SNR=19
KBL                                    P        P        18 45 44.8 +2.8
      SNR=19
KBL   Kabul               23.55  30    P        P        18 45 42.0  0.0
KBL                                    IAmb     IAmb     18 45 51.7
      comp=Z,36nm,1.4s
KMBO  Kilima Mbogo        23.56 230    P        P        18 45 42.5 +0.2
      comp=Z,2.1nm,0.4s,baz=28,slow=11,SNR=9.0
KMBO  Kilima Mbogo        23.56 230    P        P        18 45 41.1 -1.2
KMBO                                   IAmb     IAmb     18 45 46.4
      comp=Z,22nm,1.4s
THW   Thamme Wali         23.65  37    P        P        18 45 44.4 +1.6
KIBK  Kibwezi             23.82 227    P        P        18 45 46.5 +1.9
      SNR=6.1
KIBK  Kibwezi             23.82 227    P        P        18 45 44.5 -0.1
EIL   Elat                23.92 312    P        P        18 45 46.5 +1.2
      comp=Z,5.8nm,1.1s,baz=93,slow=5.3,SNR=4.0
ASF   Jabal al Asfar      24.16 320    P        P        18 45 47.5 -0.2
      comp=Z,2.9nm,0.9s,baz=183,slow=2.6,SNR=5.0
GHAJ  Ghor Haditha        24.46 316    P        P        18 45 45.6 -4.8
GHAJ                                   IAmb     IAmb     18 45 53.1
      comp=Z,52nm,1.4s
CEP   Cherat              24.49  35    P        P        18 45 51.8 +1.0
NIL   Nilore              25.14  38    P        P        18 45 58.2 +1.6
NIL                                    IAmb     IAmb     18 46 23.9
      comp=Z,22nm,1.2s
SIRT  Sirnak              25.48 336    P        P        18 45 58.0 -1.6
MMAI  Mount Meron Ar      25.66 319    P        P        18 46 00.6 -0.7
      comp=Z,14nm,1.0s,baz=136,slow=9.8,SNR=11
PALK  Pallekele           26.14 103    P        P        18 46 05.4 -0.3
      comp=Z,7.5nm,0.9s,baz=322,slow=18,SNR=2.1
GURO  Guroymak-BITLI      26.55 337    P        P        18 46 10.9 +1.5
CHGR  Chuyangaron         27.03  25    P        P        18 46 11.9 -1.8
GNI   Garni               27.07 342    P        P        18 46 15.8 +1.7
      comp=Z,13nm,1.0s,baz=243,slow=21,SNR=4.4
GNI   Garni               27.07 342    P        P        18 46 10.0 -4.0
GAR   Garm                27.80  26    P        P        18 46 17.5 -3.1
GAR                                    IAmb     IAmb     18 46 39.3
      comp=Z,22nm,1.3s
KARS  Kars                28.02 340    P        P        18 46 19.3 -3.3
BTK   Batken              28.90  25    P        P        18 46 29.2 -1.1
BTK                                    IAmb     IAmb     18 46 37.8
      comp=Z,18nm,1.2s
PYUN  Piuthan             29.18  58   eP        P        18 46 34.9 +1.8
      comp=Z,76nm,1.5s
KOLN  Koldanda            29.56  59   eP        P        18 46 37.6 +1.1
      comp=Z,49nm,1.3s
DANN  Dangsing            29.90  58   eP        P        18 46 40.5 +0.9
      comp=Z,102nm,1.5s
GKN   Gorkha              30.50  59   eP        P        18 46 45.7 +0.9
      comp=Z,43nm,1.2s
DMN   Daman               30.77  60   eP        P        18 46 49.2 +2.0
KSH   Kashi               30.89  32    P        P        18 46 45.5 -2.5
KSH                                    sP       sP       18 46 52.5 -0.5
KSH                                    pmax     pmax
      comp=Z,10.0nm,1.9s
KSH                                    LR       LR
      comp=Z,640nm,17.0s
KSH                                    LR       LR
      comp=Z,580nm,15.8s
KSH                                    LR       LR
      comp=Z,1μm,25.4s
KBZ   Khabaz              30.90 343    P        P        18 46 47.4 -0.5
      comp=Z,2.9nm,1.1s,baz=129,slow=9.3,SNR=3.8
KKN   Kakani              30.97  60   eP        P        18 46 49.9 +0.9
      comp=Z,20nm,0.6s
PKIN  Phulchoki           31.00  60   eP        P        18 46 50.7 +1.4
PKI   Pulchoki            31.01  60   eP        P        18 46 50.4 +0.9
KKAR  Karatay Array       31.38  22    P        P        18 46 51.4 -0.7
GUN   Gumba               31.51  60   eP        P        18 46 55.2 +1.3
JIRN  Jiri                31.69  61   eP        P        18 46 56.5 +0.9
ODAN  Odare               32.49  63   eP        P        18 47 03.5 +1.1
AAK   Ala-Archa           32.59  27    P        P        18 47 04.3 +1.3
      comp=Z,1.5nm,0.6s,baz=214,slow=10,SNR=8.7
AAK   Ala-Archa           32.59  27    P        P        18 47 02.3 -0.7
AAK                                    IAmb     IAmb     18 47 12.6
      comp=Z,15nm,1.4s
FRU1  Bishkek             32.79  27    P        P        18 47 04.1 -0.5
FRU1                                   IAmb     IAmb     18 47 12.8
      comp=Z,8.4nm,0.6s
TAPN  Taplejung           32.90  62   eP        P        18 47 06.5 +0.5
      comp=Z,52nm,1.1s
BOOM  Boomskoye usch      33.13  29    P        P        18 47 06.8 -0.9
BOOM                                   IAmb     IAmb     18 47 24.6
      comp=Z,8.4nm,1.2s
OPO   Ambohidratompo      33.83 194    P        P        18 47 16.0 +2.1
      comp=Z,3.4nm,1.0s,baz=357,slow=11,SNR=3.2
PRZ   Przheval'sk         34.32  31    P        P        18 47 15.9 -2.2
ABKAR Akbulak array       34.83   6    P        P        18 47 19.3 -2.9
ABKAR Akbulak array       34.83   6    P        P        18 47 20.0 -2.2
ABKAR                                  IAmb     IAmb     18 47 24.6
      comp=Z,7.9nm,1.0s
AKTO  Aktyubinsk          35.87   3    P        P        18 47 30.2 -0.9
      comp=Z,5.8nm,0.7s,baz=192,slow=8.6,SNR=16
SHL   Shillong            36.13  67    P        P        18 47 32.3 -1.6
SHL                                    IAmb     IAmb     18 47 36.4
      comp=Z,21nm,1.2s
LSA   Lhasa               36.46  59    P        P        18 47 34.4 -2.6
PBA   Port Blair          36.74  90    P        P        18 47 38.6 -0.4
VOI   Vohitsoka           37.14 193    P        P        18 47 45.2 +2.8
MAKZ  Makanchi            39.22  29    P        P        18 47 60.0 +0.4
MK31  Makanchi Array      39.35  30    P        P        18 48 00.3 -0.4
MKAR  Makanchi Array      39.35  30    P        P        18 48 00.8 +0.1
      comp=Z,1.9nm,0.6s,baz=214,slow=8.6,SNR=22
MKAR  Makanchi Array      39.35  30    P        P        18 48 01.1 +0.4
LSZ   Lusaka              39.83 223    P        P        18 48 06.2 +1.1
      comp=Z,2.8nm,0.2s,baz=95,slow=6.8,SNR=3.4
LSZ   Lusaka              39.83 223    IAmb     IAmb     18 48 08.6
      comp=Z,9.6nm,1.2s
BVAR  Borovoye Array      40.25  14    P        P        18 48 07.3 -0.8
      comp=Z,1.1nm,0.6s,baz=209,slow=15,SNR=5.2
WMQ   Urumqi              40.29  37   eP        P        18 48 11.8 +3.2
WMQ                                    pP       pwP      18 48 15.8 +0.3
WMQ                                    pmax     pmax
      comp=Z,12nm,1.5s
WMQ                                    pmax     pmax
      comp=Z,90nm,4.9s
WMQ                                    LR       LR
      comp=Z,320nm,25.3s
WMQ                                    LR       LR
      comp=Z,520nm,17.5s
WMQ                                    LR       LR
      comp=Z,380nm,22.9s
KURBB Kurchatov Arra      40.67  23    P        P        18 48 10.9 -0.6
      comp=Z,2.2nm,0.8s,baz=221,slow=8.6,SNR=16
KURK  Kurchatov           40.78  23    P        P        18 48 11.8 -0.6
BURAR Bucovina Array      41.25 329             P        18 48 12.7 -3.8
AKASG Malin Array Be      41.70 335    P        P        18 48 19.2 -0.7
      comp=Z,0.2nm,0.2s,baz=133,slow=7.8,SNR=12
AKASG Malin Array Be      41.70 335    P        P        18 48 18.4 -1.6
ARU   Arti                41.88   3    P        P        18 48 21.0 -0.4
      comp=Z,0.5nm,0.5s,baz=354,slow=3.5,SNR=3.5
ARU   Arti                41.88   3    IAmb     IAmb     18 48 26.3
      comp=Z,17nm,1.5s
CHTO  Chiang Mai          42.13  78    P        P        18 48 23.8 -0.2
CHTO                                   IAmb     IAmb     18 48 39.6
      comp=Z,13nm,1.2s
CM31  Chiang Mai Arr      42.14  78    P        P        18 48 25.7 +1.7
      SNR=5.8
CM31  Chiang Mai Arr      42.14  78    P        P        18 48 24.6 +0.5
CMAR  Chiang Mai Arr      42.14  78    P        P        18 48 25.0 +0.9
      comp=Z,5.7nm,0.6s,baz=276,slow=8.2,SNR=43
CMAR  Chiang Mai Arr      42.14  78    P        P        18 48 24.3 +0.3
TRPA  Tarpa               42.94 328   eP        P        18 48 30.4 +0.2
TPTI                      42.97 101    P        P        18 48 33.5 +2.6
      comp=Z,5.3nm,0.9s
SRIT  Nakonsritamara      43.94  93    P        P        18 48 37.9 -0.8
SRIT                                   IAmb     IAmb     18 48 45.7
      comp=Z,23nm,1.1s
MNK   Minsk               45.17 338  i P        P        18 48 50.5 +2.5
MNK                                  i P        P        18 48 50.5 +2.5
MNK                                  i P        P        18 48 50.5 +2.5
      baz=142
MNK                                  i PP       PP       18 50 35.4 +1.9
MNK                                  i PPP      PPP      18 51 31.0
MNK                                  i S        S        18 55 33.9 +6.9
MNK                                  i SS       SS       18 58 57.3 +7.7
MNK                                  i SSS      SSS      19 00 17.4
MNK                                  i LQ       LQ       19 04 37.9
MNK                                  i LR       LR       19 08 06.3
MNK                                  i LRM      MLR      19 09 42.2
      comp=E,41nm,20.4s
MNK                                  i LRM      MLR      19 09 43.5
      comp=Z,365nm,20.4s
MNK                                  i LRM      MLR      19 09 53.0
      comp=N,449nm,28.1s
ZAA0  Zalesovo Array      45.69  24    P        P        18 48 50.7 -1.4
ZAA0                                   IAmb     IAmb     18 48 53.3
      comp=Z,4.9nm,0.8s
ZALV  Zalesovo Beam       45.69  24    P        P        18 48 51.4 -0.7
      comp=Z,4.6nm,0.7s,baz=232,slow=7.3,SNR=25
ZALV  Zalesovo Beam       45.69  24    P        P        18 48 50.0 -2.1
MODS  Modra-Piesok        45.89 325   eP        P        18 48 54.1 +0.3
JAVC  Velka Javorina      45.95 326   eP        P        18 48 58.2 +3.9
JAVC                                  e                  18 50 20.1
ARSA  Arzberg             46.27 323   eP        P        18 48 58.4 +1.5
      comp=Z,16nm,2.0s
GTA   Gaotai              46.29  49   eP        P        18 48 56.0 -1.2
GTA                                    pP       pP       18 48 59.8 -1.0
GTA                                    sP       pwP      18 49 03.5 -0.7
GTA                                    pmax     pmax
      comp=Z,2.0nm,1.6s
GTA                                    pmax     pmax
      comp=Z,95nm,5.3s
GTA                                    LR       LR
      comp=Z,220nm,17.4s
GTA                                    LR       LR
      comp=Z,590nm,17.1s
GTA                                    LR       LR
```

	comp=Z,730nm,18.9s						
CONA	Conrad Observa	46.44	324	*e*P	P	18 48 59.8	+1.6
	comp=Z,20nm,2.1s						
OBKA	Obir	46.47	322	*e*P	P	18 49 01.8	+3.3
	comp=Z,31nm,1.9s						
MORC	Moravsky Berou	46.55	327	*e*P	P	18 48 59.5	+0.5
MORC	Moravsky Berou	46.55	327	P	P	18 48 55.7	-3.3
MORC				IAmb	IAmb	18 49 00.6	
	comp=Z,11nm,1.4s						
KRUC	Moravsky	46.76	326	*e*P	P	18 49 00.6	0.0
KRUC				*e*		18 50 24.3	
SLVN	Son La	46.77	74	P	P	18 48 59.9	-1.3
VRAC	Vranov	46.79	326	*e*P	P	18 49 01.6	+0.8
VRAC				*e*		18 50 24.7	
MOA	Molln	47.31	323	P	P	18 49 06.4	+1.4
	comp=Z,3.6nm,0.8s						
GERES	GERESS Array B	48.15	324	P	P	18 49 10.5	-1.0
	comp=Z,0.5nm,0.7s,baz=121,slow=7.0,SNR=1.9						
WTTA	Wattenberg	48.59	321	*e*P	P	18 49 15.8	+0.8
	comp=Z,20nm,1.3s						
WATA	Walderalm	48.66	321	P	P	18 49 17.7	+2.1
	comp=Z,10nm,1.2s						
LBTB	Lobatse	48.73	216	P	P	18 49 16.2	0.0
SQTA	Sankt Quirin	48.83	321	*e*P	P	18 49 16.2	-0.6
FETA	Feichten	49.03	321	*e*P	P	18 49 19.1	+0.6
	comp=Z,6.7nm,1.0s						
RETA	Reutte	49.22	321	*e*P	P	18 49 19.7	-0.1
	comp=Z,6.5nm,0.9s						
GYA	Guiyang	49.43	68	⇑P	P	18 49 21.0	-0.8
GYA				pmax	pmax		
	comp=Z,12nm,0.7s						
DAVA	Damuels	49.67	321	*i* P	P	18 49 23.0	-0.3
	comp=Z,6.3nm,1.0s						
CLL	Collm	49.81	327	*e*P	P	18 49 25.0	+0.9
	comp=Z,27nm,1.9s						
CLL				*e*PP	PP	18 51 20.0	+1.2
CLL				*e*S	S	18 56 34.0	+0.8
CLL				*e*(SS)		19 00 30.0	
CLL				Lm	MLR	19 15 00.0	
	comp=N,200nm,19.3s						
CLL				Lm	MLR	19 15 00.0	
	comp=E,100nm,18.0s						
FINES	FINESS Array B	51.26	343	P	P	18 49 33.3	-1.5
	comp=E,3.9nm,0.8s,baz=114,slow=13,SNR=7.0						
BOSA	Boshof	51.72	214	P	P	18 49 39.5	+0.6
	comp=E,2.4nm,0.5s,baz=41,slow=6.2,SNR=5.9						
TORD	Torodi Ar. Bea	51.78	275	P	P	18 49 39.2	-0.3
	comp=E,4.1nm,0.9s,baz=85,slow=7.0,SNR=17						
TORD	Torodi Ar. Bea	51.78	275	P	P	18 49 34.1	-5.4
TORD				IAmb	IAmb	18 49 41.6	
	comp=Z,7.5nm,1.1s						
SONM	Songino Array	53.66	41	P	P	18 49 53.9	+0.7
	comp=Z,3.9nm,0.9s,baz=240,slow=6.1,SNR=21						
SONM	Songino Array	53.66	41	P	P	18 49 53.8	+0.7
SONM				IAmb	IAmb	18 50 00.6	
	comp=Z,10.0nm,1.2s						
ULN	Ulaanbaatar	54.09	41	P	P	18 49 56.7	+0.4
ULN				IAmb	IAmb	18 49 58.4	
	comp=Z,7.9nm,1.2s						
HHC	Hu-ho-hao-te	55.35	50	*e*P	P	18 50 04.0	-1.5
HHC				pmax	pmax		
	comp=Z,8.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,380nm,4.9s						
HHC				LR	LR		
	comp=Z,540nm,16.8s						
HHC				LR	LR		
	comp=Z,540nm,18.8s						
HHC				LR	LR		
	comp=Z,870nm,19.9s						
NOA	NORSAR Array B	56.10	336	P	P	18 50 08.0	-2.4
	comp=Z,3.0nm,1.0s,baz=125,slow=7.0,SNR=4.4						
NOA	NORSAR Array B	56.10	336	P	P	18 50 08.0	-2.4
ESDC	Sonseca Array	57.12	308	P	P	18 50 17.0	-1.1
	comp=Z,4.6nm,1.0s,baz=83,slow=7.1,SNR=10						
ESDC	Sonseca Array	57.12	308	P	P	18 50 17.2	-0.9
ESDC				IAmb	IAmb	18 50 19.3	
	comp=Z,8.7nm,1.2s						
SBUM	Sibu	57.59	96	P	P	18 50 23.2	+1.4
SBUM				IAmb	IAmb	18 50 24.1	
	comp=Z,15nm,1.3s						
ARCES	ARCESS Array B	58.01	348	P	P	18 50 22.5	-1.3
	comp=Z,4.2nm,0.9s,baz=145,slow=4.4,SNR=9.4						
ARCES	ARCESS Array B	58.01	348	IAmb	IAmb	18 50 34.1	
	comp=Z,18nm,1.5s						
DBIC	Dimbokro	59.32	269	P	P	18 50 33.9	+0.2
	comp=Z,8.0nm,1.0s,baz=36,slow=3.9,SNR=4.1						
DBIC	Dimbokro	59.32	269	IAmb	IAmb	18 50 36.2	
	comp=Z,14nm,1.2s						
NJ2	Nanjing	60.29	61	*e*P	P	18 50 40.3	+0.1
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2	Changchun	65.92	48	*e*P	P	18 51 18.8	+1.4
CN2				pmax	pmax		
	comp=Z,20nm,1.4s						
KSRS	Korea Array	67.74	55	P	P	18 51 28.1	-1.0
	comp=Z,2.2nm,0.6s,baz=266,slow=6.9,SNR=5.3						
TIXI	Tiksi	71.18	19	P	P	18 51 49.5	-0.2
TIXI				IAmb	IAmb	18 52 16.4	
	comp=Z,7.7nm,1.4s						
SOEI	Soe	72.69	105	P	P	18 51 59.5	-0.4
SUMG	Summit	77.29	342	*i* P	P	18 52 26.0	+0.1
SUMG				IAmb	IAmb	18 52 28.4	
	comp=Z,6.6nm,1.2s						
SUMG	Summit	77.29	342	P	P	18 52 25.7	-0.2
NEEM	North Greenlan	79.36	348	*i* P	P	18 52 37.4	+0.3
NEEM				IAmb	IAmb	18 52 39.4	
	comp=Z,4.6nm,0.7s						
MAW	Mawson	82.12	177	P	P	18 52 51.6	+0.1
	comp=Z,5.6nm,1.1s,baz=53,slow=5.1,SNR=4.0						
WRA	Warramunga Arr	85.09	112	P	P	18 53 07.0	-0.8
	comp=Z,2.1nm,1.0s,baz=300,slow=3.9,SNR=7.8						
WRA	Warramunga Arr	85.09	112	P	P	18 53 07.5	-0.4
ASAR	Alice Springs	85.82	116	P	P	18 53 10.8	-0.6
	comp=Z,1.8nm,0.8s,baz=290,slow=4.8,SNR=20						
ASAR	Alice Springs	85.82	116	P	P	18 53 10.2	-1.3
AS31	Alice Springs	85.83	116	P	P	18 53 10.4	-1.1
PDAR	Pinedale Array	121.25	347	PKP	PKPdf	18 59 23.7	-1.3
	comp=Z,0.8nm,0.7s,baz=73,slow=2.1,SNR=6.3						
NVAR	Mina Array Bea	126.94	354	PKP	PKiKP	18 59 36.6	+0.1
	comp=Z,2.1nm,0.7s,baz=40,slow=0.8,SNR=14						

*IDC **26** 18:41:26.0±0.8, 14°.61N×55°.03E, h0^{km}, mb4.2/15, mb1 4.3/15, mb1mx3.9/65, mbtmp4.2/15, Error ellipse: s-maj=20.3km s-min=20.1km az=99.0*

*NEIC **26** 18:41:28.1±1.6, 14°.7N±0°.1×54°.99E±0°.05, h10^{km}±1^{km}, mb4.5/15, Error ellipse: s-maj=22.0km s-min=8.0km az=189.0*

ISC 26 18:41:28.3±0.7, **14°.7N**±0°.1×**55°.0E**±0°.1, **h14**^{km}, **n36**, σ**0^{s}.85**/32, **mb4.3**/20, **Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GEYT	Alibeck	23.31	6	P	P	18 46 36.1	+0.1
	7.2nm,0.8s,baz=159,slow=15,SNR=4.1						
GEYT	Alibeck	23.31	6	IAmb	IAmb	18 46 42.5	
	comp=Z,9.5nm,0.8s						
ABKAR	Akbulak array	34.71	6	P	P	18 48 17.7	0.0
ABKAR	Akbulak array	34.71	6	P	P	18 48 17.2	-0.5
ABKAR				IAmb	IAmb	18 48 24.4	
	comp=Z,5.9nm,0.9s						
AKTO	Aktyubinsk	35.73	3	P	P	18 48 27.2	+0.7
	comp=Z,2.7nm,0.7s,baz=203,slow=12,SNR=1.9						
MK31	Makanchi Array	39.28	30	P	P	18 48 57.6	+0.9
MKAR	Makanchi Array	39.28	30	P	P	18 48 57.8	+1.1
	comp=Z,1.3nm,0.7s,baz=218,slow=9.4,SNR=5.8						
KURBB	Kurchatov Arra	40.58	23	P	P	18 49 07.6	+0.2
	comp=Z,1.3nm,0.7s,baz=226,slow=7.8,SNR=4.7						
KURK	Kurchatov	40.69	23	P	P	18 49 07.6	-0.7
KURK	Kurchatov	40.69	23	IAmb	IAmb	18 49 14.5	
	comp=Z,3.2nm,0.9s						
BURAR	Bucovina Array	41.09	329	P	P	18 49 12.5	+0.8
BURAR				IAmb	IAmb	18 49 41.7	
	comp=Z,4.6nm,1.1s						
BUR08	Bucovina Ar. S	41.11	329	P	P	18 49 12.5	+0.5
BUR08				IAmb	IAmb	18 49 20.8	
	comp=Z,17nm,1.5s						
AKASG	Malin Array Be	41.53	335	P	P	18 49 15.4	+0.2
	comp=Z,0.6nm,0.6s,baz=141,slow=6.9,SNR=2.4						
CHTO	Chiang Mai	42.19	78	P	P	18 49 20.7	-0.4
CHTO				IAmb	IAmb	18 49 40.7	
	comp=Z,7.3nm,1.2s						
CMAR	Chiang Mai Arr	42.20	79	P	P	18 49 21.8	+0.6
	comp=Z,3.5nm,0.6s,baz=274,slow=10.0,SNR=8.6						
CMAR	Chiang Mai Arr	42.20	79	P	P	18 49 21.5	+0.3
ZAA0	Zalesovo Array	45.61	24	P	P	18 49 48.0	0.0
ZAA0				IAmb	IAmb	18 50 17.4	
	comp=Z,7.6nm,0.8s						
ZALV	Zalesovo Beam	45.61	24	P	P	18 49 48.0	0.0
	comp=Z,2.6nm,0.6s,baz=229,slow=7.8,SNR=5.1						
ZALV	Zalesovo Beam	45.61	24	P	P	18 49 47.6	-0.4
KRLC	Kraliky	46.96	327	*e*P	P	18 50 04.4	+5.6
KRLC				*e*x	x	18 50 26.7	
GERES	GERESS Array B	47.98	324	P	P	18 50 06.2	-0.6
KHC	Kasperske Hory	48.20	324	*e*P	P	18 50 18.0	+10
KHC				*e*x	x	18 50 35.6	
LBTB	Lobatse	48.79	216	P	P	18 50 14.8	+1.5
FINES	FINESS Array B	51.10	343	P	P	18 50 30.2	-0.1
	comp=Z,3.6nm,0.7s,baz=142,slow=9.6,SNR=3.8						
TORD	Torodi Ar. Bea	51.68	275	P	P	18 50 35.9	+0.6
	comp=Z,3.4nm,1.0s,baz=79,slow=4.9,SNR=7.0						
BOSA	Boshof	51.78	214	P	P	18 50 36.4	+0.4
	comp=Z,4.3nm,0.9s,baz=31,slow=8.9,SNR=3.6						
SONM	Songino Array	53.62	41	P	P	18 50 50.9	+1.5
	comp=Z,1.8nm,0.9s,baz=248,slow=7.9,SNR=2.2						
SONM	Songino Array	53.62	41	P	P	18 50 49.4	0.0
SONM				IAmb	IAmb	18 50 57.3	
	comp=Z,3.3nm,1.0s						
CART	Cartagena	54.35	306	P	P	18 50 52.6	-2.1
ESDC	Sonseca Array	56.96	308	P	P	18 51 13.1	-0.5
	comp=Z,1.9nm,0.8s,baz=86,slow=6.2,SNR=5.7						
ARCES	ARCESS Array B	57.85	348	P	P	18 51 19.4	+0.1
	comp=Z,4.2nm,0.8s,baz=82,slow=8.7,SNR=5.7						
WRA	Warramunga Arr	85.23	112	P	P	18 54 03.7	-1.4
	comp=Z,1.2nm,0.8s,baz=301,slow=3.8,SNR=10						
ASAR	Alice Springs	85.97	116	P	P	18 54 07.7	-1.1
	comp=Z,1.5nm,0.7s,baz=291,slow=4.7,SNR=11						
PDAR	Pinedale Array	121.10	347	PKP	PKPdf	19 00 21.0	-0.3
	comp=Z,0.7nm,0.6s,baz=79,slow=2.7,SNR=7.3						
PDAR	Pinedale Array	121.10	347		PKPdf	19 00 19.7	-1.6
NVAR	Mina Array Bea	126.79	353	PKP	PKiKP	19 00 33.1	+0.3
	comp=Z,1.0nm,0.6s,baz=9.0,slow=1.5,SNR=5.9						

*IDC **26** 18:41:53.8±0.4, 14°.63N×55°.10E, h0^{km}, mb4.5/39, mb1 4.5/40, mb1mx4.4/65, mbtmp4.5/40, ML4.2/1, Error ellipse: s-maj=11.7km s-min=10.6km az=125.0*

*NEIC **26** 18:41:55.1±2.3, 14°.53N±0°.07×55°.05E±0°.09, h10^{km}±1^{km}, mb4.9/85, Error ellipse: s-maj=16.1km s-min=9.9km az=115.0*

ISC 26 18:41:54.8±2.3, **14°.51N**±0°.05×**55°.00E**±0°.05, **h11**^{km}±14^{km}, **n217**, σ**1^{s}.38**/221, **mb4.9**/101, **MS4.6**/4, **11C-9D**, **Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCY	Socotra	2.51	203	Pn	Pn	18 42 30.1	-5.7
SOCY				Sn	Sn	18 42 58.3	-8.1
UOSS	Minazif	10.44	6	Pn	Pn	18 44 24.6	0.0
ATD	Arta Tunnel	12.21	257	Pn	Pn	18 44 51.5	+2.7
	1.3nm,0.3s,baz=265,slow=23,SNR=1.5						
RAYN	Ar Rayn	12.68	316	Pn	Pn	18 44 52.5	-2.8
HRA	Herat	20.84	17	P	Pn	18 46 36.8	-2.6
LODK	Lodwar	22.28	242	P	P	18 46 56.9	+4.4
LODK				IAmb	IAmb	18 47 02.5	
	comp=Z,51nm,1.3s						
HYB	Hyderabad	22.83	80	*i* P	P	18 47 01.0	+2.8
KMBO	Kilima Mbogo	23.45	230	P	P	18 47 08.0	+3.1
	comp=Z,4.6nm,0.6s,baz=45,slow=12,SNR=4.7						
KMBO	Kilima Mbogo	23.45	230	P	P	18 47 04.9	+0.1
GEYT	Alibeck	23.49	6	P	P	18 47 04.7	-0.1
	comp=Z,18nm,0.9s,baz=222,slow=17,SNR=8.3						
GEYT	Alibeck	23.49	6	P	P	18 47 04.0	-0.8
GYA0B	ALIBECK ARRAY	23.49	6	P	P	18 47 03.8	-0.9
GYA0B				IAmb	IAmb	18 47 12.1	
	comp=Z,53nm,1.1s						
KBL	Kabul	23.63	30	P	P	18 47 07.7	+1.3
KBL				IAmb	IAmb	18 47 24.3	
	comp=Z,46nm,1.1s						
KIBK	Kibwezi	23.71	226	P	P	18 47 05.5	-1.8
EIL	Elat	23.87	313	P	P	18 47 09.5	+1.0
	comp=Z,13nm,1.0s,baz=135,slow=9.6,SNR=3.9						
ASF	Jabal al Asfar	24.12	320	P	P	18 47 12.8	+1.9
	comp=Z,17nm,1.1s,baz=146,slow=6.1,SNR=2.1						
GHAJ	Ghor Haditha	24.42	316	P	P	18 47 14.6	+1.1
GHAJ				IAmb	IAmb	18 47 21.4	
	comp=Z,48nm,0.9s						
NIL	Nilore	25.23	38	P	P	18 47 19.5	-1.5
NIL				IAmb	IAmb	18 47 40.6	
	comp=Z,30nm,1.1s						
SIRT	Sirnak	25.47	336	P	P	18 47 22.3	-0.8
MMAI	Mount Meron Ar	25.62	319	P	P	18 47 26.8	+2.2
	comp=Z,17nm,0.9s,baz=121,slow=7.9,SNR=10						
GURO	Guroymak-BITLI	26.55	337	P	P	18 47 33.9	+0.9
GNI	Garni	27.07	343	P	P	18 47 38.8	+1.1
	comp=Z,11nm,0.9s,baz=180,slow=4.0,SNR=1.8						
CHGR	Chuyangaron	27.11	25	P	P	18 47 34.2	-3.7
CHGR				IAmb	IAmb	18 47 51.6	
	comp=Z,50nm,1.2s						
BTK	Batken	28.98	26	P	P	18 47 55.1	+0.4
BTK				IAmb	IAmb	18 47 58.1	
	comp=Z,22nm,1.1s						
BCA	Borcka	29.24	339	P	P	18 47 58.0	+1.1
ONI	Oni	29.70	343	P	P	18 48 01.6	+0.6
ONI				IAmb	IAmb	18 48 11.9	
	comp=Z,33nm,1.4s						
KBZ	Khabaz	30.90	343	P	P	18 48 12.1	+0.6
	comp=Z,2.6nm,0.8s,baz=222,slow=6.2,SNR=4.1						
KSH	Kashi	30.98	33	P	P	18 48 10.5	-1.9
KSH				pmax	pmax		
	comp=Z,13nm,1.0s						
KIV	Kislovodsk	31.17	343	P	P	18 48 15.0	+1.0
KIV	Kislovodsk	31.17	343	P	P	18 48 14.0	0.0
KIV				IAmb	IAmb	18 48 17.7	
	comp=Z,24nm,1.4s						
BRTR	Keskin Array B	31.33	327	P	P	18 48 16.2	+0.7
	comp=Z,1.1nm,0.6s,baz=147,slow=7.0,SNR=4.3						
BRTR	Keskin Array B	31.33	327	P	P	18 48 15.2	-0.3
KKAR	Karatay Array	31.46	22	P	P	18 48 16.3	-0.2
AAK	Ala-Archa	32.67	27	P	P	18 48 28.0	+0.6
	comp=Z,7.9nm,1.0s,baz=208,slow=6.4,SNR=5.6						
AAK				PcP	PcP	18 51 13.7	+0.6
	comp=Z,1.9nm,0.7s,baz=210,slow=7.4,SNR=3.7						
AAK	Ala-Archa	32.67	27	P	P	18 48 27.5	+0.2
AAK				IAmb	IAmb	18 48 38.6	
	comp=Z,17nm,1.2s						
FRU1	Bishkek	32.87	27	P	P	18 48 28.0	-0.9
BOOM	Boomskoye usch	33.22	29	P	P	18 48 32.1	0.0
BOOM				IAmb	IAmb	18 48 40.2	
	comp=Z,16nm,1.4s						
OPO	Ambohidratompo	33.76	193	P	P	18 48 40.6	+3.6
	comp=Z,4.0nm,0.9s,baz=5.6,slow=15,SNR=3.6						
PRZ	Przheval'sk	34.41	31	P	P	18 48 44.4	+2.0
BALB	Balikesir	34.53	322	P	P	18 48 42.5	-0.8
BALB				IAmb	IAmb	18 48 50.1	
	comp=Z,21nm,1.2s						
ABKAR	Akbulak array	34.88	6	P	P	18 48 45.2	-1.0
ABKAR	Akbulak array	34.88	6	P	P	18 48 45.0	-1.2
ABKAR				IAmb	IAmb	18 48 52.4	
	comp=Z,13nm,0.9s						
AKTO	Aktyubinsk	35.91	3	P	P	18 48 55.1	0.0
	comp=Z,16nm,0.8s,baz=186,slow=9.8,SNR=8.8						
SHL	Shillong	36.24	66	P	P	18 48 57.4	-1.1
SHL				IAmb	IAmb	18 49 04.8	
	comp=Z,21nm,0.9s						
LSA	Lhasa	36.57	59		P	18 49 01.1	-0.4
MILM	Milestii Mici	39.01	331	⇑P	P	18 49 22.2	+0.9
VTS	Vitosha	39.12	322	⇓P	P	18 49 23.4	+0.8
VTS	Vitosha	39.12	322	P	P	18 49 22.0	-0.6
VRI	Vrincioaia	39.27	328	⇑P	P	18 49 25.1	+1.4
PLOR	Plostina	39.30	328	⇑P	P	18 49 25.2	+1.3
MAKZ	Makanchi	39.30	29	P	P	18 49 24.1	+0.2
MLR	Muntele Rosu	39.42	327	⇑P	P	18 49 26.1	+1.1
MLR	Muntele Rosu	39.42	327	P	P	18 49 26.2	+1.2
MLR				IAmb	IAmb	18 49 28.9	
	comp=Z,38nm,1.3s						
MK31	Makanchi Array	39.44	30	P	P	18 49 26.4	+1.3
MKAR	Makanchi Array	39.44	30	P	P	18 49 25.6	+0.5
	comp=Z,2.3nm,0.6s,baz=213,slow=8.9,SNR=5.9						
MKAR	Makanchi Array	39.44	30	P	P	18 49 25.0	-0.1
COVR	Voineasa-Covas	39.52	328	⇓P	P	18 49 26.8	+1.1
LSZ	Lusaka	39.73	223	P	P	18 49 30.6	+2.7
	comp=Z,3.0nm,0.2s,baz=33,slow=6.8,SNR=4.8						
LSZ	Lusaka	39.73	223	IAmb	IAmb	18 49 37.1	
	comp=Z,6.9nm,0.8s						
TESR	Tescani	39.76	329	P	P	18 49 28.1	+0.5
VOIR		39.85	327	⇓P	P	18 49 29.4	+0.8
DOPR	Dopca	40.03	328	⇑P	P	18 49 30.7	+0.8
SORM	Soroca	40.12	332	⇓P	P	18 49 30.7	+0.2
BVAR	Borovoye Array	40.31	14	P	P	18 49 32.5	+0.3
	comp=Z,1.7nm,0.7s,baz=216,slow=16,SNR=5.2						
BVAR				PcP	PcP	18 51 35.2	-0.4
	comp=Z,2.6nm,0.8s,baz=201,slow=16,SNR=4.4						
BRVK	Borovoye	40.32	14	P	P	18 49 32.9	+0.7
WMQ	Urumqi	40.38	37	*e*P	P	18 49 34.5	+1.5
WMQ				pP	pwP	18 49 40.0	+1.0
WMQ				pmax	pmax		
	comp=Z,16nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,310nm,4.9s						
WMQ				LR	LR		
	comp=Z,370nm,22.3s						
WMQ				LR	LR		
	comp=Z,580nm,16.9s						
WMQ				LR	LR		
	comp=Z,470nm,23.7s						
LOT	Lotru	40.55	326	⇑P	P	18 49 34.9	+0.5
PRAR	RASCA	40.56	330	⇓P	P	18 49 35.5	+1.2
KURBB	Kurchatov Arra	40.75	23	P	P	18 49 36.0	+0.2
	comp=Z,3.5nm,0.8s,baz=221,slow=8.4,SNR=7.3						
KURBB				PcP	PcP	18 51 36.6	-0.5
	comp=Z,2.1nm,0.8s,baz=228,slow=3.3,SNR=6.5						
KURK	Kurchatov	40.86	23	P	P	18 49 37.1	+0.4
GZR	Gura Zlata	41.06	325	⇑P	P	18 49 39.3	+0.7
BURAR	Bucovina Array	41.23	329	⇑P	P	18 49 40.2	+0.3
BURAR	Bucovina Array	41.23	329	P	P	18 49 40.6	+0.6
BUR08	Bucovina Ar. S	41.26	329	P	P	18 49 39.0	-1.2
MDVR	Moldovita	41.29	324	P	P	18 49 41.1	+0.7
AKASG	Malin Array Be	41.69	335	P	P	18 49 43.4	-0.1
	comp=Z,4.2nm,0.9s,baz=135,slow=7.8,SNR=8.2						
AKASG				PcP	PcP	18 51 40.1	0.0
	comp=Z,0.4nm,0.4s,baz=215,slow=13,SNR=4.6						
AKASG	Malin Array Be	41.69	335	P	P	18 49 41.9	-1.6
AKBB	Malin Array Si	41.69	335	P	P	18 49 43.0	-0.5
AKBB				IAmb	IAmb	18 49 49.1	
	comp=Z,22nm,1.1s						
BZS	Buzias	41.84	325	⇓P	P	18 49 45.2	+0.4
DIVS	Divibare	41.91	322	P	P	18 49 43.1	-2.5
ARU	Arti	41.92	3	P	P	18 49 45.5	+0.2
	comp=Z,0.8nm,0.5s,baz=209,slow=6.5,SNR=4.8						
ARU	Arti	41.92	3	P	P	18 49 44.1	-1.2
DRGR		41.97	327	P	P	18 49 46.6	+0.7
SIRR	Siria	42.21	325	⇓P	P	18 49 48.1	+0.2
CHTO	Chiang Mai	42.24	78	P	P	18 49 49.0	+0.5
CM31	Chiang Mai Arr	42.25	78	P	P	18 49 49.1	+0.5
CM31				IAmb	IAmb	18 49 55.8	
	comp=Z,25nm,0.8s						
CMAR	Chiang Mai Arr	42.25	78	P	P	18 49 49.4	+0.8
	comp=Z,13nm,0.7s,baz=276,slow=9.8,SNR=17						
CMAR	Chiang Mai Arr	42.25	78	P	P	18 49 49.0	+0.5
TRPA	Tarpa	42.92	328	⇓P	P	18 49 54.7	+1.1
OBN	Obninsk	42.97	345	P	P	18 49 51.8	-2.1
OBN				IAmb	IAmb	18 50 08.5	
	comp=Z,41nm,1.2s						
MATP	Matopo	43.40	218	P	P	18 50 00.8	+2.8
	comp=Z,2.3nm,0.6s,baz=50,slow=14,SNR=3.9						
KOLS	Kolonicke sedl	43.57	329	*e*P	P	18 50 00.3	+1.4
KWP	Kalwaria Pacla	43.82	330	P	P	18 50 00.5	-0.4
MORH	Mrgy, Hungar	43.88	324	⇑P	P	18 50 01.9	+0.6
CRVS	Cervenica-Dubn	43.96	328	*e*P	P	18 50 03.9	+1.9
SRIT	Nakonsritamara	44.04	93	P	P	18 50 03.0	-0.1
SRIT				IAmb	IAmb	18 50 10.2	
	comp=Z,22nm,1.0s						
PSZ	Piszkesteto	44.17	326	P	P	18 50 02.8	-1.0
VYHS	Vyhne	45.08	326	*e*	P	18 50 15.8	+4.8
LANS	Liptovska Anna	45.14	327	*e*P	P	18 50 12.3	+0.8
MNK	Minsk	45.16	338	*i* P	P	18 50 11.0	-0.5
MNK				*i* P	P	18 50 11.0	-0.5
MNK				*i* P	P	18 50 11.0	-0.5
	comp=Z,12nm,0.7s,baz=143						
MNK				*i* PP	PP	18 51 57.0	0.0
MNK				*i* PPP	PPP	18 52 35.6	
MNK				*i* S	S	18 56 54.7	+3.7
MNK				*i* SS	SS	19 00 09.8	-3.6
MNK				*i* SSS	SSS	19 00 47.8	
MNK				*i* LQ	LQ	19 05 51.9	
MNK				*i* LR	LR	19 09 18.8	
MNK				*i* LRM	MLR	19 10 55.4	
	comp=E,61nm,21.6s						
MNK				*i* LRM	MLR	19 11 42.6	
	comp=N,328nm,16.2s						
MNK				*i* LRM	MLR	19 11 49.9	
	comp=Z,455nm,16.6s						
KOLL	Kolacno	45.37	326	*e*P	P	18 50 14.4	+1.2
OJC	Ojcow	45.63	329	P	P	18 50 12.7	-2.6
OJC				IAmb	IAmb	18 50 16.8	
	comp=Z,29nm,1.5s						
ZAA0	Zalesovo Array	45.77	24	P	P	18 50 15.0	-1.3
ZAA0				IAmb	IAmb	18 50 21.2	
	comp=Z,11nm,0.9s						
ZALV	Zalesovo Beam	45.77	24	P	P	18 50 16.1	-0.2
	comp=Z,6.0nm,0.7s,baz=231,slow=7.8,SNR=7.6						
ZALV	Zalesovo Beam	45.77	24	P	P	18 50 15.0	-1.3
SMOL	Smolenice	45.86	326	*e*P	P	18 50 17.6	+0.5
ZST	Bratislava	45.86	325	*e*P	P	18 50 17.8	+0.7
MODS	Modra-Piesok	45.86	325	*e*P	P	18 50 16.4	-0.8
NACGM	Naroch	45.88	338	*i* P	P	18 50 19.1	+1.9
SOKA	Soboth	46.24	322	*e*P	P	18 50 19.7	-0.6
	comp=Z,15nm,1.8s						
ARSA	Arzberg	46.24	323	*e*P	P	18 50 21.2	+0.9
	comp=Z,9.9nm,1.1s						
GTA	Gaotai	46.39	49	*e*P	P	18 50 29.3	+7.6
GTA				pP	pwP	18 50 34.0	+6.2
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,150nm,5.5s						
GTA				LR	LR		
	comp=N,220nm,18.5s						
GTA				LR	LR		
	comp=E,590nm,17.4s						
GTA				LR	LR		
	comp=Z,730nm,19.6s						
CONA	Conrad Observa	46.41	324	*e*P	P	18 50 22.1	+0.5
	comp=Z,27nm,1.8s						
MORC	Moravsky Berou	46.53	327	P	P	18 50 22.2	-0.2
MORC				IAmb	IAmb	18 50 39.2	
	comp=Z,26nm,1.3s						
SUW	Suwalki	46.63	335	*e*P	P	18 50 23.9	+0.8
SUW	Suwalki	46.63	335	P	P	18 50 22.7	-0.4
SLVN	Son La	46.88	74	P	P	18 50 25.1	-0.6
SLVN				IAmb	IAmb	18 50 35.2	
	comp=Z,24nm,1.2s						
MYKA	Terra Mystica	47.04	322	*e*P	P	18 50 27.8	+1.2
	comp=Z,18nm,1.0s						
MOA	Molln	47.28	323	*e*P	P	18 50 28.0	-0.4
	comp=Z,13nm,0.9s						
PABE	Paberze	47.39	337	*e*P	P	18 50 29.3	+0.3
PABE	Paberze	47.39	337	P	P	18 50 27.7	-1.3
STAL	STALIGIAL	47.43	321	P	P	18 50 27.2	-2.4
CD2	Chengdu	47.47	61	*e*P	P	18 50 29.5	-0.6
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
DPC	Dobruska-Polom	47.50	327	*e*P	P	18 50 29.6	-0.4
KLMR	Klimovskoe	47.62	350	*e*P	P	18 50 28.6	-2.1
KLMR				AMP		18 50 43.5	
	comp=Z,45nm,1.5s						
KLMR				*e*PcP	PcP	18 51 59.0	-1.2
KLMR				LQ	LQ	19 04 33.4	
KLMR				LQ	LQ	19 04 33.4	
KLMR				LR	LR	19 09 49.9	
OSTC	Ostas	47.67	327	*e*P	P	18 50 31.4	+0.1
TEOL	Teolo	47.68	319	P	P	18 50 31.1	-0.3
UPC	Upice	47.75	327	*e*P	P	18 50 31.7	-0.2
CKRC	Cesky Krumlov	47.76	324	*e*P	P	18 50 30.7	-1.3
CHVC	Chvalec	47.77	327	*e*P	P	18 50 32.3	+0.2
ABTA	Abfaltersbach	47.78	321	*e*P	P	18 50 33.5	+1.1
	comp=Z,17nm,1.2s						
CTI	Castel Tesino	47.99	320	P	P	18 50 33.9	-0.1
CTI				IAmb	IAmb	18 50 40.4	
	comp=Z,17nm,1.0s						
GEC2	GERESS Array S	48.12	324	P	P	18 50 34.9	0.0
GEC2				IAmb	IAmb	18 50 37.1	
	comp=Z,9.7nm,1.1s						
GERES	GERESS Array B	48.12	324	P	P	18 50 34.3	-0.6
	comp=Z,1.9nm,0.7s,baz=131,slow=7.6,SNR=7.1						
GERES				PcP	PcP	18 52 02.0	-0.5
	comp=Z,1.5nm,0.8s,baz=126,slow=6.8,SNR=4.2						
GERES	GERESS Array B	48.12	324	P	P	18 50 34.0	-0.9
PRU	Pruhonice	48.25	326	*e*P	P	18 50 41.0	+5.2
KHC	Kasperske Hory	48.33	324		P	18 50 34.1	-2.4
KHC				IAmb	IAmb	18 50 36.9	

	comp=Z,20nm,1.4s						
WTTA	Wattenberg	48.55	321	eP	P	18 50 38.4	0.0
	comp=Z,24nm,1.2s						
WATA	Walderalm	48.62	321	eP	P	18 50 38.0	-0.9
	comp=Z,16nm,0.9s						
LBTB	Lobatse	48.64	216		P	18 50 39.4	+0.2
SQTA	Sankt Quirin	48.79	321	eP	P	18 50 40.1	0.0
	comp=Z,23nm,1.0s						
MOTA	Moosalm	48.91	321	eP	P	18 50 41.1	0.0
	comp=Z,17nm,0.9s						
RETA	Reutte	49.19	321	eP	P	18 50 43.5	+0.4
	comp=Z,16nm,1.1s						
NKC	Novy Kostel	49.53	325	eP	P	18 50 45.4	-0.2
GYA	Guiyang	49.55	68	⇑P	P	18 50 46.5	+0.2
GYA				pmax	pmax		
	comp=Z,27nm,1.7s						
DAVA	Damuels	49.63	321	eP	P	18 50 47.1	+0.4
	comp=Z,21nm,1.4s						
CLL	Collm	49.78	327	i P	P	18 50 48.1	+0.6
	comp=Z,43nm,1.8s						
CLL				ePP	PP	18 52 44.0	+1.9
CLL				eS	S	18 57 56.0	-0.8
CLL				eSSS	SSS	19 02 42.0	
CLL	Collm	49.78	327	P	P	18 50 47.0	-0.5
CLL				IAmb	IAmb	18 50 50.5	
	comp=Z,19nm,1.4s						
TSUM	Tsumeb	49.79	229	P	P	18 50 45.2	-2.9
GRF	Grafenberg Arr	49.95	324	eP	P	18 50 47.4	-1.4
	comp=Z,26nm,1.7s,baz=119,slow=8.7						
BFO	Black Forest	51.02	321	P	P	18 50 56.2	-0.8
BFO				IAmb	IAmb	18 51 03.0	
	comp=Z,27nm,1.3s						
FIA1	FINESS Array S	51.26	343	P	P	18 50 57.8	-0.7
FIA1				IAmb	IAmb	18 51 12.2	
	comp=Z,11nm,0.9s						
FINES	FINESS Array B	51.26	343	P	P	18 50 58.4	-0.2
	comp=Z,7.0nm,0.6s,baz=135,slow=7.6,SNR=9.5						
FINES	FINESS Array B	51.26	343	P	P	18 50 57.8	-0.7
BOSA	Boshof	51.63	214	P	P	18 51 04.0	+2.1
	comp=Z,8.3nm,0.7s,baz=56,slow=8.4,SNR=8.0						
TORD	Torodi Ar. Bea	51.68	275	P	P	18 51 03.2	+0.9
	comp=Z,8.3nm,0.8s,baz=86,slow=7.6,SNR=12						
TORD				PcP	PcP	18 52 16.9	+0.9
	comp=Z,2.7nm,0.9s,baz=67,slow=3.7,SNR=2.4						
TORD	Torodi Ar. Bea	51.68	275		P	18 51 01.8	-0.6
TORD				IAmb	IAmb	18 51 04.6	
	comp=Z,15nm,1.1s						
XAN	Xi'an	52.24	58	P	P	18 51 07.5	+1.1
XAN				pP	pwP	18 51 11.5	-1.0
XAN				sP	sP	18 51 15.5	+5.6
XAN				pmax	pmax		
	comp=Z,14nm,0.8s						
SSB	Saint Sauveur	52.29	317		P	18 51 05.6	-0.9
ENH	Enshi	52.30	63	P	P	18 51 06.1	-0.7
ENH				IAmb	IAmb	18 51 13.0	
	comp=Z,27nm,1.3s						
WLF	Walferdange	52.88	322	P	P	18 51 10.4	-0.4
WLF				IAmb	IAmb	18 51 27.0	
	comp=Z,36nm,1.5s						
UPP	Uppsala	52.88	337	eP	P	18 51 09.1	-1.5
SONM	Songino Array	53.76	41	P	P	18 51 18.5	+1.0
	comp=Z,6.8nm,1.0s,baz=241,slow=6.2,SNR=10.0						
SONM	Songino Array	53.76	41		P	18 51 17.6	+0.2
SONM				IAmb	IAmb	18 51 24.7	
	comp=Z,14nm,1.0s						
ULN	Ulaanbaatar	54.19	41		P	18 51 21.5	+0.8
ULN				IAmb	IAmb	18 51 32.2	
	comp=Z,14nm,1.1s						
CLF	Chambon-Foret	54.67	319	P	P	18 51 22.8	-1.1
HHC	Hu-ho-hao-te	55.45	50	eP	P	18 51 31.0	+1.1
HHC				S	S	18 59 19.3	+4.4
HHC				pmax	pmax		
	comp=Z,19nm,1.1s						
HHC				pmax	pmax		
	comp=Z,310nm,5.4s						
HHC				LR	LR		
	comp=Z,480nm,17.8s						
HHC				LR	LR		
	comp=Z,540nm,15.0s						
HHC				LR	LR		
	comp=Z,870nm,14.7s						
NOA	NORSAR Array B	56.09	336	P	P	18 51 32.9	-1.1
	comp=Z,4.0nm,1.0s,baz=122,slow=7.5,SNR=3.8						
KOWA	Kowa	56.98	278	P	P	18 51 41.1	0.0
KOWA				IAmb	IAmb	18 51 43.7	
	comp=Z,22nm,1.2s						
ESBB	Sonseca Array	57.06	308	P	P	18 51 41.3	0.0
ESDC	Sonseca Array	57.06	308	P	P	18 51 40.7	-0.6
	comp=Z,7.3nm,1.0s,baz=81,slow=7.0,SNR=10.0						
ESDC	Sonseca Array	57.06	308	P	P	18 51 40.4	-0.8
ESDC				IAmb	IAmb	18 51 42.2	
	comp=Z,16nm,1.2s						
PAB	San Pablo	57.34	308	P	P	18 51 43.4	+0.1
PAB				IAmb	IAmb	18 51 44.4	
	comp=Z,24nm,1.2s						
SBUM	Sibu	57.70	96	P	P	18 51 46.1	0.0
SBUM				IAmb	IAmb	18 51 50.1	
	comp=Z,16nm,1.3s						
KEV	Kevo	57.92	349	P	P	18 51 47.5	+0.8
KEV				IAmb	IAmb	18 51 58.4	
	comp=Z,23nm,1.2s						
ARCES	ARCESS Array B	58.02	348	P	P	18 51 45.8	-1.7
	comp=Z,2.0nm,0.5s,baz=143,slow=4.2,SNR=9.6						
ARCES	ARCESS Array B	58.02	348	P	P	18 51 46.6	-0.9
NRIK	Noril'sk	58.50	13	P	P	18 51 49.8	-1.0
	comp=Z,1.5nm,0.6s,baz=201,slow=9.8,SNR=3.7						
KIC	Kosan Boka	59.17	269	eP	P	18 51 57.8	+1.4
	comp=Z,23nm,1.2s						
DBIC	Dimbokro	59.21	269	P	P	18 51 56.8	+0.1
	comp=Z,7.1nm,0.8s,baz=83,slow=5.8,SNR=5.4						
DBIC	Dimbokro	59.21	269	IAmb	IAmb	18 51 59.2	
	comp=Z,17nm,1.1s						
TIC	Toumodi	59.38	269	eP	P	18 51 59.1	+1.3
LIC	Lamto	59.48	269	eP	P	18 51 59.8	+1.3
	comp=Z,86nm,1.5s						
NJ2	Nanjing	60.40	61	eP	P	18 52 04.5	-0.1
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
HIA	Hailar	62.69	42	P	P	18 52 20.6	+0.8
TGY	Tagaytay City	63.68	81	P	P	18 52 25.1	-1.8
	comp=Z,147nm,0.5s,baz=298,slow=4.1,SNR=5.2						
CN2	Changchun	66.02	48	eP	P	18 52 42.5	+0.8
CN2				pmax	pmax		
	comp=Z,40nm,0.9s						
TOLI2	Tolitoli	66.30	95	P	P	18 52 42.3	-1.7
TOLI2				IAmb	IAmb	18 52 50.0	
	comp=Z,6.0nm,0.9s						
KSRS	Korea Array	67.85	55	P	P	18 52 52.0	-1.5
	comp=Z,4.6nm,0.7s,baz=273,slow=7.2,SNR=4.4						
YAK	Yakutsk	70.11	29	P	P	18 53 06.0	-1.0
KLR	Kul'dur	70.52	43	P	P	18 53 08.9	-0.8
	comp=Z,4.8nm,0.7s,baz=276,slow=8.1,SNR=8.7						
MMRI	Maumere	70.53	105	P	P	18 53 08.7	-1.7
USRK	Ussuriysk Ar.	70.74	48	P	P	18 53 11.2	-0.1
	comp=Z,5.3nm,0.7s,baz=246,slow=12,SNR=6.9						
USRK	Ussuriysk Ar.	70.74	48	P	P	18 53 09.9	-1.3
BATI	Baumata	72.36	106	P	P	18 53 22.1	+0.6
	comp=Z,15nm,0.8s,baz=323,slow=5.3,SNR=4.3						
SOEI	Soe	72.78	105	P	P	18 53 23.1	-1.0
H01W3	Cape Leeuwin H	74.53	133	T	T	20 14 60.0	
	baz=301,slow=75,SNR=3.7						
H01W2	Cape Leeuwin H	74.54	133	T	T	20 14 58.6	
	baz=301,slow=75,SNR=3.6						
H01W1	Cape Leeuwin H	74.55	133	T	T	20 15 01.3	
	baz=301,slow=75,SNR=3.4						
MJAR	Matsushiro Arr	76.12	55	P	P	18 53 43.8	+0.6
	comp=Z,2.7nm,0.8s,baz=273,slow=7.1,SNR=4.6						
SIJI	Sorong	76.93	94	P	P	18 53 47.3	-0.8
	comp=Z,3.9nm,0.7s,baz=306,slow=5.3,SNR=4.9						
SUMG	Summit	77.30	342	P	P	18 53 49.6	0.0
MAW	Mawson	82.09	177	P	P	18 54 16.9	+1.9
	comp=Z,3.0nm,0.8s,baz=333,slow=5.0,SNR=4.4						
MAW	Mawson	82.09	177	IAmb	IAmb	18 54 20.0	
	comp=Z,1.8nm,1.1s						
TULEG	Thule	83.35	349	P	P	18 54 20.7	-0.9
EUNU	Eureka	83.48	354	P	P	18 54 21.8	-0.5
EUNU				IAmb	IAmb	18 54 27.1	
	comp=Z,9.3nm,1.5s						
SYO	Syowa Base	84.02	186	⇑eP	P	18 54 26.6	+1.7
SYO	Syowa Base	84.02	186	⇓esP	sP	18 54 31.8	+3.4
WRA	Warramunga Arr	85.18	112	P	P	18 54 32.1	+0.2
	comp=Z,3.4nm,0.8s,baz=299,slow=3.8,SNR=9.0						
WRA	Warramunga Arr	85.18	112	P	P	18 54 32.1	+0.2
WRA				IAmb	IAmb	18 54 38.1	
	comp=Z,0.6nm,0.9s						
ASAR	Alice Springs	85.90	116	P	P	18 54 35.5	0.0
	comp=Z,3.8nm,0.8s,baz=294,slow=4.8,SNR=11						
ASAR	Alice Springs	85.90	116	P	P	18 54 34.8	-0.6
AS31	Alice Springs	85.90	116	P	P	18 54 34.7	-0.8
A36M	Sachs Harbour	93.71	0	P	P	18 55 11.6	+0.3
PDAR	Pinedale Array	121.26	347	PKP	PKiKP	19 00 48.5	-0.4
	comp=Z,2.0nm,0.9s,baz=52,slow=2.1,SNR=8.5						
NVAR	Mina Array Bea	126.96	353	PKP	PKiKP	19 00 59.2	-1.0
	comp=Z,4.4nm,0.8s,baz=331,slow=0.2,SNR=14						
TXAR	Lajitas Array	131.78	335	PKP	PKPdf	19 01 08.0	-1.0
	comp=Z,0.7nm,0.8s,baz=46,slow=3.6,SNR=3.9						

*IDC **26** 18:48:52.4±1.1, 31°.25N×128°.53E, h0^{km}, mb3.5/5, mb1 3.6/7, mb1mx3.3/44, mbtmp3.5/7, ML3.3/2, Error ellipse: s-maj=32.5km s-min=20.5km az=95.0*

*JMA **26** 18:48:53.4±0.3, 31°.34N×128°.79E, h17^{km}±3^{km}, M3.4*

ISC 26 18:48:56.8±1.0**, 31°.31N**±0°.07×**128°.90E**±0°.08**, h35**^{km}**, n15, σ1^{s}18**/15**, mb3.5**/5**, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	Shimokoshiki	0.79	62	P	Pn	18 49 09.2	-2.3
JSJ				eS	Sn	18 49 21.4	-0.6
JFU	Fukue jima 2	1.35	355	P	Pn	18 49 17.2	-1.9
JSU	Suzuyama	1.35	81	P	Pn	18 49 19.1	0.0
JYAK	Yakushimahirau	1.75	127	P	Pn	18 49 22.7	-2.0
JTN	Tanegashima 3	1.91	110	P	Pn	18 49 25.9	-0.9
JMTN	Minamitane	1.95	117	P	Pn	18 49 27.1	-0.3
JTZ	Takazaki	1.96	72	P	Pn	18 49 27.7	+0.2
JIU3	Izumi3	2.04	52	P	Pn	18 49 28.7	0.0
JNU	Nakatsue	2.46	42	Pn	Pn	18 49 39.5	+4.9
	6.5nm,0.3s,baz=296,slow=7.6,SNR=18						
JNU				Sn	Sn	18 50 11.5	+8.0
	8.6nm,0.3s,baz=322,slow=8.8,SNR=3.6						
KSRS	Korea Array	6.18	353	Pn	Pn	18 50 25.6	+0.1
	0.8nm,0.3s,baz=176,slow=14,SNR=8.6						
KSRS				Lg	Lg	18 52 04.6	
	0.5nm,0.3s,baz=178,slow=29,SNR=1.4						
SONM	Songino Array	23.81	320	P	P	18 54 06.2	-0.2
	0.7nm,0.8s,baz=140,slow=8.6,SNR=3.6						
WRA	Warramunga Arr	51.23	173	P	P	18 57 56.9	-0.1
	0.5nm,0.9s,baz=357,slow=8.4,SNR=2.8						
ASAR	Alice Springs	54.88	174	P	P	18 58 25.1	+1.3
	0.2nm,0.6s,baz=0.8,slow=15,SNR=5.5						
ILAR	Eielson Array	59.72	30	P	P	18 58 58.6	+1.0
	0.3nm,0.8s,baz=282,slow=7.2,SNR=4.4						
FINES	FINESS Array B	68.76	330	P	P	18 59 56.8	0.0
	1.4nm,0.7s,baz=353,slow=7.7,SNR=4.2						

*NEIC **26** 18:59:31.5±1.1, 59°.88N±0°.02×151°.85W±0°.05, h56^{km}±5^{km}, Error ellipse: s-maj=3.8km s-min=2.1km az=109.0*

*AEIC **26** 18:59:32.2±1.1, 59°.88N±0°.03×151°.85W±0°.05, h56^{km}±5^{km}, ML3.1/98, ML3.5/100(NEIC), Error ellipse: s-maj=4.3km s-min=3.3km az=218.0*

ISC 26 18:59:31.4±1.3**, 59°.87N**±0°.04×**151°.82W**±0°.03**, h58**^{km}±7^{km}**, n173, σ0^{s}63**/167**, Kenai Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOM	Homer	0.23	157	P	Pn	18 59 40.8	0.0
	baz=336						
HOM				S	Sn	18 59 48.3	+0.8
	baz=336						
HOM	Homer	0.23	157		Pn	18 59 40.8	0.0
HOM	Homer	0.23	157		Sn	18 59 48.3	+0.8
HOM	Homer	0.23	157	IAML		18 59 44.0	
	comp=N,621nm,0.8s						
O20K	Slope Mountain	0.46	298	P	Pn	18 59 42.8	0.0
	baz=117						
O20K				S	Sn	18 59 50.8	-0.3
	baz=117						
O20K	Slope Mountain	0.46	298		Pn	18 59 42.8	0.0
O20K					Sn	18 59 50.8	-0.3
CNPM	China Poot	0.46	139		Pn	18 59 42.2	-0.5
CNPM					Sn	18 59 50.8	-0.2
CNPM	China Poot	0.46	139	IAML		18 59 51.5	
	comp=N,5μm,0.4s						
CNPM				IAML		18 59 51.5	
	comp=E,3μm,0.4s						
IVE	Iliamna Volcan	0.62	284		Pn	18 59 44.1	-0.6
IVE					Sn	18 59 54.0	-0.3
ILS	Iliamna Low So	0.64	278		Pn	18 59 44.5	-0.3
ILS					Sn	18 59 54.3	-0.3
ILSW	Iliamna Southw	0.68	280		Pn	18 59 44.8	-0.5
ILSW					Sn	18 59 54.8	-0.6
RED	Redoubt Volcan	0.73	319		Pn	18 59 45.3	-0.6
RED					Sn	18 59 56.3	-0.3
OPT	Oil Point	0.75	253	P	Pn	18 59 46.0	-0.1
	baz=71						
OPT	Oil Point	0.75	253		Pn	18 59 46.0	-0.1
P19K	Oil Pt	0.75	253	P	Pn	18 59 46.1	0.0
	baz=71						
P19K				S	Sn	18 59 57.4	+0.5
	baz=71						
P19K	Oil Pt	0.75	253		Pn	18 59 46.1	0.0
P19K					Sn	18 59 57.4	+0.5
RSO	Redoubt South	0.75	322		Pn	18 59 46.0	-0.4
RDWB	Redoubt West	0.80	321		Pn	18 59 46.4	-0.6
DFR	Drift River	0.84	329		Pn	18 59 46.7	-0.7
DFR					Sn	18 59 58.4	-0.7
NCT	North Crescent	0.89	322		Pn	18 59 47.6	-0.4
NCT					Sn	19 00 00.1	-0.1
AU22	Augustine Moun	0.93	238		Pn	18 59 48.7	+0.3
AU22					Sn	19 00 01.8	+0.9
AUL	Augustine Lava	0.96	240		Pn	18 59 49.2	+0.5
CAPN	Captain Cook N	0.96	20	P	Pn	18 59 50.0	+1.2
	baz=202						
CAPN	Captain Cook N	0.96	20		Pn	18 59 50.0	+1.2
CAPN	Captain Cook N	0.96	20	IAML		19 00 06.3	
	comp=E,2μm,0.7s						
AUQ	Augustine Qik'	0.96	238		Pn	18 59 49.3	+0.4
AGU	Augustine-Summ	0.97	239		Pn	18 59 49.5	+0.5
AUW	Augustine West	0.98	240		Pn	18 59 49.6	+0.6
SLKM	Skilak Lake	1.02	51		Pn	18 59 48.6	-1.0
O22K	Cooper Landing	1.21	59	P	Pn	18 59 51.9	-0.2
	baz=241						
O22K	Cooper Landing	1.21	59		Pn	18 59 51.9	-0.2
SEW	Seward	1.21	78	P	Pn	18 59 51.9	-0.2
	baz=260						
SEW	Seward	1.21	78		Pn	18 59 51.9	-0.2
O19K	Port Alsworth	1.30	286	P	Pn	18 59 53.1	-0.1
	baz=103						
O19K	Port Alsworth	1.30	286		Pn	18 59 53.1	-0.1
SPU	Mount Spurr	1.32	355		Pn	18 59 53.2	-0.4
Q19K	Cape Douglas,	1.33	225	P	Pn	18 59 54.2	+0.4
	baz=43						
Q19K				S	Sn	19 00 11.9	+1.5
	baz=43						
Q19K	Cape Douglas,	1.33	225		Pn	18 59 54.2	+0.4
Q19K					Sn	19 00 11.9	+1.5
Q19K	Cape Douglas,	1.33	225	IAML		19 00 13.5	
	comp=N,1μm,0.5s						
SPCR	Spurr Chakacha	1.35	352	P	Pn	18 59 53.7	-0.3
	baz=172						
SPCR	Spurr Chakacha	1.35	352		Pn	18 59 53.7	-0.3
SPCN	Chakachatna No	1.37	353		Pn	18 59 54.3	0.0
SPBG	Spurr Blockage	1.42	349		Pn	18 59 54.9	-0.1
SPCG	Spurr Capps Gl	1.43	356		Pn	18 59 55.1	-0.1
RC01	Rabbit Creek A	1.60	39	P	Pn	18 59 57.4	0.0
	baz=222						
RC01				S	Sn	19 00 17.7	+0.8
	baz=222						
RC01	Rabbit Creek A	1.60	39		Pn	18 59 57.4	0.0
RC01					Sn	19 00 17.7	+0.8
RC01	Rabbit Creek A	1.60	39	IAML		19 00 21.0	
	comp=E,393nm,0.6s						
STLK	Strandline Lak	1.63	360		Pn	18 59 58.3	+0.4
O18K	Koktuh Hills	1.71	271	P	Pn	18 59 58.4	-0.5
	baz=88						
O18K				S	Sn	19 00 19.3	-0.3
	baz=88						
O18K	Koktuh Hills	1.71	271		Pn	18 59 58.4	-0.5
O18K					Sn	19 00 19.3	-0.3
P18K	Big Mountain,	1.80	256	P	Pn	18 59 59.5	-0.6
	baz=73						
P18K	Big Mountain,	1.80	256		Pn	18 59 59.5	-0.6
PWL	Port Wells	2.00	59	P	Pn	19 00 02.0	-0.8
	baz=242						
PWL	Port Wells	2.00	59		Pn	19 00 02.0	-0.8
PWL	Port Wells	2.00	59	IAML		19 00 32.8	
	comp=N,530nm,0.5s						
PWL				IAML		19 00 35.4	
	comp=E,366nm,0.5s						
M22K	Willow	2.06	23	P	Pn	19 00 04.0	+0.4
	baz=205						
M22K	Willow	2.06	23		Pn	19 00 04.0	+0.4
PMR	Palmer	2.17	36	P	Pn	19 00 04.6	-0.5
	baz=219						
PMR	Palmer	2.17	36		Pn	19 00 04.6	-0.5
SVW2	Sparrevohn	2.23	305		Pn	19 00 05.2	-0.8
KNK	Knik Glacier	2.27	46	P	Pn	19 00 06.0	-0.5
	baz=229						
KNK	Knik Glacier	2.27	46		Pn	19 00 06.0	-0.5
KNK	Knik Glacier	2.27	46	IAML		19 00 40.3	
	comp=N,187nm,0.7s						
KNK				IAML		19 00 43.0	
	comp=E,217nm,0.7s						
GHO	Glory Hole Cre	2.38	35		Pn	19 00 07.4	-0.6
GHO	Glory Hole Cre	2.38	35	IAML		19 00 42.3	
	comp=N,185nm,0.9s						
GHO				IAML		19 00 43.6	
	comp=E,290nm,0.6s						
M19K	Big River Lodg	2.40	329	P	Pn	19 00 08.1	-0.1
	baz=148						
M19K	Big River Lodg	2.40	329		Pn	19 00 08.1	-0.1
SML	Sawmill	2.58	40	P	Pn	19 00 10.2	-0.6
	baz=223						
SML	Sawmill	2.58	40		Pn	19 00 10.2	-0.6
SML	Sawmill	2.58	40	IAML		19 00 50.7	
	comp=N,147nm,0.9s						
CUT	Chulitna	2.65	16	P	Pn	19 00 12.1	+0.5
	baz=198						
CUT	Chulitna	2.65	16		Pn	19 00 12.1	+0.5
CUT	Chulitna	2.65	16	IAML		19 00 52.7	
	comp=N,143nm,0.5s						
CUT				IAML		19 01 10.0	
	comp=E,186nm,0.6s						
L19K	White Mountain	2.75	329	P	Pn	19 00 12.9	-0.1
	baz=146						
L19K	White Mountain	2.75	329		Pn	19 00 12.9	-0.1
OHAK	Old Harbor	2.77	197	P	Pn	19 00 12.0	-1.3
	baz=15						
OHAK	Old Harbor	2.77	197		Pn	19 00 12.0	-1.3
L20K	Farewell, AK	2.80	340	P	Pn	19 00 13.6	-0.1
	baz=158						
L20K	Farewell, AK	2.80	340		Pn	19 00 13.6	-0.1
FID	Port Fidalgo	2.80	69	Pn	Pn	19 00 11.0	-2.7
FID				IAML		19 00 57.7	
	comp=E,140nm,0.5s						
FID				IAML		19 01 03.8	
	comp=N,151nm,3.2s						
SCM	Sheep Creek Mo	2.95	46	P	Pn	19 00 15.8	0.0
	baz=230						
SCM	Sheep Creek Mo	2.95	46		Pn	19 00 15.8	0.0
SCM	Sheep Creek Mo	2.95	46	IAML		19 01 01.2	
	comp=N,115nm,2.8s						
SCM				IAML		19 01 06.9	
	comp=E,112nm,0.9s						
PPLA	Purkeypile	3.04	357	P	Pn	19 00 18.0	+0.9
	baz=177						
PPLA	Purkeypile	3.04	357		Pn	19 00 18.0	+0.9
DIV	Divide	3.25	65		Pn	19 00 18.9	-1.0
WAT7	Susitna Watana	3.30	24		Pn	19 00 21.6	+1.0
KLU	Klutina	3.33	58	P	Pn	19 00 20.0	-1.0
	baz=244						
KLU	Klutina	3.33	58		Pn	19 00 20.0	-1.0
KLU	Klutina	3.33	58	IAML		19 01 10.7	
	comp=N,114nm,0.7s						
KLU				IAML		19 01 21.6	
	comp=E,86nm,4.3s						
WAT6	Susitna Watana	3.36	34	P	Pn	19 00 21.5	0.0
	baz=218						
WAT6	Susitna Watana	3.36	34		Pn	19 00 21.5	0.0
M24K	Tolsona, Glenn	3.55	48	P	Pn	19 00 23.8	-0.2
	baz=234						
M24K	Tolsona, Glenn	3.55	48		Pn	19 00 23.8	-0.2
M24K	Tolsona, Glenn	3.55	48	IAML		19 01 14.2	
	comp=E,147nm,3.3s						
SII	Sitkinak Islan	3.55	202	Pn	Pn	19 00 23.1	-0.8
TT01	Tatalina	3.65	328		Pn	19 00 25.3	-0.1
K20K	Telida	3.66	344	P	Pn	19 00 25.8	+0.4
	baz=162						
K20K	Telida	3.66	344		Pn	19 00 25.9	+0.4
TRF	Thorofare Moun	3.66	11		Pn	19 00 27.3	+1.7
TRF				IAML		19 01 16.5	
	comp=N,67nm,0.7s						
TRF				IAML		19 01 43.5	
	comp=E,60nm,3.8s						
RND	Reindeer	3.82	20		Pn	19 00 28.5	+0.8
RND	Reindeer	3.82	20	IAML		19 01 19.8	
	comp=N,47nm,4.1s						
DHY	Denali Highway	3.86	32	Pn	Pn	19 00 28.7	+0.4
DHY				IAML		19 01 14.2	
	comp=E,49nm,0.6s						
DHY				IAML		19 01 27.0	
	comp=N,42nm,0.8s						
N25K	Chitina, Valde	3.95	61	P	Pn	19 00 28.5	-0.9
	baz=247						
N25K	Chitina, Valde	3.95	61		Pn	19 00 28.5	-0.9
N25K	Chitina, Valde	3.95	61	IAML		19 01 11.5	
	comp=E,46nm,3.0s						
N25K				IAML		19 01 26.0	
	comp=N,49nm,3.4s						
CHUM	Lake Minchumin	4.03	357	P	Pn	19 00 31.2	+0.7
	baz=177						
CHUM	Lake Minchumin	4.03	357		Pn	19 00 31.2	+0.7
MCK	McKinley	4.11	18	P	Pn	19 00 32.6	+1.0
	baz=201						
MCK	McKinley	4.11	18		Pn	19 00 32.6	+1.0
MCK	McKinley	4.11	18	IAML		19 01 29.9	
	comp=N,35nm,2.3s						
GLB	Gilahina Butte	4.24	65		Pn	19 00 32.1	-1.4
GLB	Gilahina Butte	4.24	65	IAML		19 01 44.3	
	comp=E,47nm,4.1s						
GLB				IAML		19 02 46.9	
	comp=N,63nm,3.5s						
BPAW	Bear Paw Mtn.	4.26	5	P	Pn	19 00 35.0	+1.3
	baz=186						
BPAW	Bear Paw Mtn.	4.26	5		Pn	19 00 35.0	+1.3
PAX	Paxson	4.35	42	P	Pn	19 00 34.9	-0.2
	baz=228						
PAX	Paxson	4.35	42		Pn	19 00 34.9	-0.2
BWN	Browne	4.46	13	Pn	Pn	19 00 36.8	+0.5
BWN				IAML		19 01 21.8	
	comp=E,72nm,3.0s						
J20K	Nowinta River	4.46	347	P	Pn	19 00 36.8	+0.4
	baz=165						
J20K	Nowinta River	4.46	347		Pn	19 00 36.8	+0.4
J20K	Nowinta River	4.46	347	IAML		19 01 10.1	
	comp=N,27nm,3.7s						
NEA2	Nenana	4.91	14	P	Pn	19 00 42.4	-0.1
	baz=197						
NEA2	Nenana	4.91	14		Pn	19 00 42.4	-0.1
NEA2	Nenana	4.91	14	IAML		19 02 22.2	
	comp=N,27nm,4.6s						
NEA2				IAML		19 03 12.3	
	comp=E,26nm,4.9s						
WRH	Wood River Hil	4.94	19		Pn	19 00 42.7	-0.2
WRH	Wood River Hil	4.94	19	IAML		19 02 00.0	
	comp=N,33nm,3.7s						
WRH				IAML		19 02 16.9	
	comp=E,28nm,4.4s						
MESA	MESA	4.96	82	P	Pn	19 00 43.5	+0.1
	baz=271						
MESA	MESA	4.96	82		Pn	19 00 43.5	+0.1
M26K	Nabesna, AK	4.97	56	Pn	Pn	19 00 43.7	+0.3
M26K				IAML		19 01 50.0	
	comp=N,40nm,3.9s						
M26K				IAML		19 02 13.1	
	comp=E,46nm,4.2s						
YAH	Yahtse	5.06	80	Pn	Pn	19 00 45.2	+0.3
HDA	Harding Lake	5.09	25	P	Pn	19 00 45.1	+0.1
	baz=209						
HDA	Harding Lake	5.09	25		Pn	19 00 45.1	+0.1
HDA	Harding Lake	5.09	25	IAML		19 01 44.8	
	comp=E,30nm,0.3s						
RIDG	Independent Ri	5.10	37	Pn	Pn	19 00 45.3	+0.1
RIDG				IAML		19 03 51.4	
	comp=N,49nm,4.1s						
CCB	Clear Creek Bu	5.14	20		Pn	19 00 45.4	-0.3
CCB	Clear Creek Bu	5.14	20	IAML		19 01 35.7	
	comp=N,19nm,4.7s						
CCB				IAML		19 03 45.1	
	comp=E,18nm,3.5s						
BARN	Barnard Glacie	5.17	72	Pn	Pn	19 00 47.1	+0.9
BARN				IAML		19 04 05.9	
	comp=E,47nm,3.5s						
MLY	Manley	5.20	5	P	Pn	19 00 47.2	+0.6
	baz=186						

MLY	Manley	5.20	5		Pn	19 00 47.2	+0.6
MLY	Manley	5.20	5	IAML		19 03 05.6	
	comp=N,21nm,4.9s						
MLY				IAML		19 03 53.7	
	comp=E,17nm,4.7s						
DOT	Dot Lake	5.28	41	Pn	Pn	19 00 48.2	+0.5
I21K	Tanana	5.33	359	P	Pn	19 00 48.2	0.0
	baz=179						
I21K	Tanana	5.33	359		Pn	19 00 48.2	0.0
I21K	Tanana	5.33	359	IAML		19 01 41.5	
	comp=E,29nm,4.8s						
I21K				IAML		19 03 11.2	
	comp=N,28nm,4.5s						
TCOL	CIGO, UAF Yank	5.35	18		Pn	19 00 48.7	+0.2
COLA	College	5.35	18		Pn	19 00 48.1	-0.4
TABL	Table Mountain	5.37	79	Pn	Pn	19 00 49.1	+0.1
MDM	Murphy Dome	5.37	17		Pn	19 00 49.0	+0.1
MDM	Murphy Dome	5.37	17	IAML		19 03 48.3	
	comp=E,25nm,4.6s						
MDM				IAML		19 03 59.2	
	comp=N,24nm,4.3s						
I23K	Minto, Yukon-K	5.42	11		Pn	19 00 49.8	+0.4
M27K	Edge Creek, AK	5.43	58	Pn	Pn	19 00 49.4	-0.3
IL31		5.43	23		Pn	19 00 49.6	+0.1
ILAR	Eielson Array	5.43	23	Pn	Pn	19 00 48.9	-0.7
LOGN	Logan Glacier	5.46	75	Pn	Pn	19 00 50.0	-0.2
SCRK	Sand Creek	5.53	39	P	Pn	19 00 50.1	-1.1
	baz=226						
SCRK	Sand Creek	5.53	39		Pn	19 00 50.0	-1.1
J25K	Salcha River,	5.63	30	P	Pn	19 00 52.5	0.0
	baz=215						
J25K	Salcha River,	5.63	30		Pn	19 00 52.5	0.0
POKR	Poker Plat Res	5.64	19	P	Pn	19 00 52.6	+0.1
	baz=203						
POKR	Poker Plat Res	5.64	19		Pn	19 00 52.6	+0.1
L27K	Beaver Creek,	5.76	52	Pn	Pn	19 00 53.3	-0.9
BC03		5.78	52		Pn	19 00 53.8	-0.6
BCAR	Beaver Creek A	5.78	52	Pn	Pn	19 00 54.1	-0.4
PCA	Pinnacle	5.81	83	Pn	Pn	19 00 54.9	0.0
H21K	Melozitna Rive	5.83	356	P	Pn	19 00 55.0	-0.1
	baz=175						
H21K	Melozitna Rive	5.83	356		Pn	19 00 55.0	-0.1
J26L	Joseph Creek	6.04	36	P	Pn	19 00 57.5	-0.6
	baz=224						
J26L	Joseph Creek	6.04	36		Pn	19 00 57.5	-0.6
IM03		6.20	353		Pn	19 00 59.7	-0.4
IMAR	Indian Mountai	6.20	353	Pn	Pn	19 01 00.7	+0.6
H24K	Noodor Dome	6.25	15	Pn	Pn	19 01 00.5	-0.5
BMAR	Burnt Mountain	8.23	20	Pn	Pn	19 01 26.9	-1.1
TOLK	Toolik Lake Re	8.86	5	Pn	Pn	19 01 36.2	-0.3

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*IDC **26** 18:59:47.8±1.1, 31°.56N×87°.81E, h0km, mb3.6/7, mb1 3.7/9, mb1mx3.5/48, mbtmp3.6/9, ML2.8/2, MS4.1/1, Ms1 4.1/1, ms1mx2.7/50, Error ellipse: s-maj=37.4km s-min=19.1km az=64.0*

*NEIC **26** 18:59:49.2±0.9, 31°.7N±0°.2×87°.8E±0°.2, h11km±4km, mb3.8/9, ML4.1(BJI), Error ellipse: s-maj=25.0km s-min=22.6km az=87.0*

*BJI **26** 18:59:49.1±0.0, 31°.90N×88°.00E, h9km, mb4.0/3, ML4.0/2*

ISC 26 18:59:49.2±0.7**, 31°.72N**±0°.09×**87°.94E**±0°.07**, h10**km**, n25, σ2ˢ.00**/23**, mb3.8**/7**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSA	Lhasa	3.42	125	Pg	Pb	19 00 50.5	+0.4
LSA				Sg	Sg	19 01 38.5	-0.6
LSA				smax	smax		
	comp=N,680nm,0.9s						
LSA				smax	smax		
	comp=E,830nm,0.9s						
LSA	Lhasa	3.42	125		Pb	19 00 49.4	-0.7
SMLA	Simla	9.22	269	*e*P	Pn	19 02 05.9	+3.7
SMLA				*e*S	Sn	19 03 45.2	-0.9
DHRM	DHARAMSHALA	9.90	276	*e*P	Pn	19 02 16.8	+5.1
DHRM				*e*S	Sn	19 04 05.8	+2.7
WMQ	Urumqi	12.08	359	*e*P	Pn	19 02 42.3	+0.9
NIL	Nilore	12.52	283		Pn	19 02 45.0	-2.4
MKAR	Makanchi Array	15.67	346	Pn	Pn	19 03 29.2	-0.8
	0.0nm,0.3s,baz=158,slow=12,SNR=2.9						
KBL	Kabul	16.08	285	Pn	Pn	19 03 31.7	-3.8
KBL				IAmb	IAmb	19 03 43.8	
	comp=Z,4.0nm,0.6s						
GAR	Garm	16.09	302	Pn	Pn	19 03 32.4	-3.2
BTK	Batken	16.16	306		Pn	19 03 33.3	-3.1
BTK				IAmb	IAmb	19 03 48.4	
	comp=Z,11nm,1.2s						
CMAR	Chiang Mai Arr	16.53	140	Pn	Pn	19 03 41.5	+0.3
	comp=Z,0.0nm,0.3s,baz=320,slow=11,SNR=8.4						
KURBB	Kurchatov Arra	20.14	342	P	P	19 04 23.9	+0.7
	comp=Z,3.6nm,1.2s,baz=157,slow=10,SNR=5.1						
KURK	Kurchatov	20.20	343	P	P	19 04 23.1	-0.9
KURK				IAmb	IAmb	19 04 33.8	
	comp=Z,4.7nm,1.1s						
SONM	Songino Array	21.37	36	P	P	19 04 38.6	+1.8
	comp=Z,2.0nm,0.8s,baz=223,slow=8.9,SNR=13						
SONM	Songino Array	21.37	36	IAmb	IAmb	19 04 42.1	
	comp=Z,5.7nm,1.2s						
ZAA0	Zalesovo Array	22.33	355	P	P	19 04 45.9	-0.9
ZAA0				IAmb	IAmb	19 04 54.5	
	comp=Z,4.6nm,1.1s						
ZALV	Zalesovo Beam	22.33	355	P	P	19 04 49.5	+2.6
	comp=Z,1.2nm,0.6s,baz=188,slow=9.2,SNR=8.9						
ZALV	Zalesovo Beam	22.33	355	P	P	19 04 45.6	-1.3
BVAR	Borovoye Array	24.80	334	P	P	19 05 12.1	+0.9
	comp=Z,0.7nm,0.7s,baz=187,slow=18,SNR=3.3						
ASAJ	Asahikawa	44.11	58	LR	LR	19 28 52.5	
	comp=Z,230nm,18.2s,baz=19,slow=39						
WRA	Warramunga Arr	67.94	133	P	P	19 10 48.2	-0.2
	comp=Z,0.7nm,0.9s,baz=326,slow=6.8,SNR=4.8						
WRA	Warramunga Arr	67.94	133	IAmb	IAmb	19 10 50.3	
	comp=Z,0.2nm,1.2s						
ASAR	Alice Springs	70.47	136	P	P	19 11 04.2	+0.2
	comp=Z,0.6nm,0.7s,baz=326,slow=4.1,SNR=5.8						
TORD	Torodi Ar. Bea	80.06	279	P	P	19 11 59.5	-0.1
	comp=Z,0.8nm,0.6s,baz=46,slow=4.4,SNR=5.0						
TORD	Torodi Ar. Bea	80.06	279	IAmb	IAmb	19 12 02.9	
	comp=Z,2.5nm,1.5s						

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*IDC **26** 19:01:15.3±1.6, 1°.55N×126°.54E, h0km, mb3.7/4, mb1 3.9/5, mb1mx3.4/38, mbtmp3.7/5, ML3.6/1, MS3.6/1, Ms1 3.6/1, ms1mx2.7/33, Error ellipse: s-maj=114.1km s-min=19.4km az=69.0*

*DJA **26** 19:01:20.7±0.3, 1°N±4°×12°6E±°, h10km, M3.9/13, mb4.2/6, mB4.5/1, MLv3.7/13, Mw(mB)3.7/1*

ISC 26 19:01:21.9±1.3**, 1°.5N**±0°.1×**126°.48E**±0°.09**, h47**km**, n17, σ0ˢ.78**/16**, mb3.7**/4**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.16	130	P	Pn	19 01 42.4	+0.7
LBMI	Labuha	2.38	155	P	Pn	19 01 59.2	+0.8
KMSI	Cibinong	2.67	249	P	Pn	19 02 01.7	-0.7
GTOI	Gorontalo	3.58	256	P	Pn	19 02 15.3	+0.4
SANI	Sanana	3.59	188	P	Pn	19 02 14.5	-0.5
LUWI	Luwuk	4.50	235	P	Pn	19 02 28.2	+0.7
MRSI	Marisa	4.66	257	P	Pn	19 02 29.6	-0.1
APSI	Ampana	5.40	243	P	Pn	19 02 40.6	+0.7
	0.1nm438nm23nm,0.4s						
TTSI	Tana Toraja	8.06	236	P	Pn	19 03 16.5	+0.1
	0.0nm8.3nm,0.5s						
SPSI	Sidrap Palu	8.64	231	P	Pn	19 03 24.8	+0.4
	10nm,0.4s						
BKSI	Bulukumba	9.30	223	P	Pn	19 03 35.1	+1.6
FITZ	Fitzroy Crossi	19.52	182	P	P	19 05 44.6	-0.8
	0.1nm,0.3s,baz=3.6,slow=8.8,SNR=7.9						
GUMO	Guam	21.79	56	LR	LR	19 12 52.2	
	comp=Z,155nm,19.7s,baz=214,slow=32						
WRA	Warramunga Arr	22.69	161	P	P	19 06 18.3	-1.3
	2.1nm,0.4s,baz=340,slow=11,SNR=46						
ASAR	Alice Springs	26.06	164	P	P	19 06 51.1	0.0
	0.3nm,0.3s,baz=344,slow=7.4,SNR=12						
MKAR	Makanchi Array	59.22	326	P	P	19 11 18.5	+0.1
	0.2nm,0.3s,baz=122,slow=8.4,SNR=6.3						
KURBB	Kurchatov Arra	63.46	328	P	P	19 11 47.1	+0.2
	0.4nm,0.5s,baz=131,slow=6.1,SNR=7.7						

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*MDD **26** 19:05:33.5±0.7, 35°.41N×1°.08W, h0km, mbLg2.2/7, Error ellipse: s-maj=11.1km s-min=4.2km az=36.0, PRXIMO*

*CRAAG **26** 19:05:34.4, 35°.39N×0°.87W, Ml2.7*

*CNRM **26** 19:05:35.7, 35°.61N×1°.18W, h111km, ml2.5*

ISC 26 19:05:32.4±1.2**, 35°.55N**±0°.03×**0°.92W**±0°.04**, h10**km±11km**, n23, σ1ˢ.66**/39**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OTSS	Djebel Tessala	0.28	159	P	Pg	19 05 38.0	-0.2
OTSS	Djebel Tessala	0.28	159	P	Pg	19 05 38.0	-0.2
USTO	Oran	0.35	58	P	Pn	19 05 43.3	-0.3
USTO	Oran	0.35	58	P	Pn	19 05 43.3	-0.3
OLHC	Oulhaca	0.51	234	P	Pb	19 05 44.4	+1.0
OLHC	Oulhaca	0.51	234	P	Pb	19 05 44.4	+1.0
ODJA	Bouhanifia	0.66	109	P	Pn	19 05 50.0	+2.1
TAF	Taforalt	1.43	240	P	Pb	19 05 59.7	+0.5
TAF				S	Sg	19 06 18.4	+0.1
GOG	Mont Gurugu	1.73	260	P	Pb	19 06 04.3	0.0
GOG				S	Sn	19 06 25.1	+0.3
ENIJ	Nijar	1.76	324	P	Pb	19 06 04.5	-0.4
	2.6nm,0.2s,SNR=7.9						
ENIJ				S	Sn	19 06 26.3	+0.8
	14nm,0.3s,SNR=7.9						
JBK	JBK	1.81	229	P	Pg	19 06 07.8	+0.5
JBK				S	Sg	19 06 31.1	+0.3
CART	Cartagena	2.04	358	P	Pn	19 06 07.8	+1.0
CART				S	Sn	19 06 33.7	+1.5
EBER	Berja	2.09	311	P	Pn	19 06 08.3	+0.7
	4.6nm,0.4s,SNR=7.9						
EBER				S	Sn	19 06 32.9	-0.9
	4.2nm,0.3s,SNR=4.0						
EMUR	La Murta	2.31	354	P	Pb	19 06 12.9	-1.2
	1.7nm,0.3s,SNR=7.9						
EMUR				S	Sn	19 06 39.1	+0.2
	11nm,0.4s,SNR=7.9						
ELGU	Los Guajares,	2.56	302	P	Pn	19 06 14.7	+0.7
	0.9nm,0.3s,SNR=7.9						
ELGU				S	Sn	19 06 44.2	-1.0
	3.6nm,0.2s,SNR=7.9						
EQES	Quesada	2.84	323	P	Pb	19 06 22.1	-1.2
	3.6nm,0.2s,SNR=25						
EQES				S	Sb	19 06 57.0	-1.2
	0.5nm,0.1s,SNR=7.9						
SESP	Santiago Espad	2.88	334	P	Pb	19 06 22.5	-1.5
	16nm,0.2s,SNR=7.9						
SESP				S	Sn	19 06 56.4	+3.0
	8.6nm,0.2s,SNR=7.9						
ETOB	Tobarra	3.13	351	P	Pb	19 06 25.8	-2.5
	1.8nm,0.1s,SNR=12						
ETOB				S	Sn	19 07 02.0	+2.5
	3.0nm,0.3s,SNR=7.9						
EMIJ	Mijas	3.28	289	P	Pn	19 06 23.4	-0.6
	0.3nm,0.1s,SNR=7.9						
EMIJ				S	Sn	19 06 60.0	-3.1
	1.3nm,0.2s,SNR=7.9						
MDT	Midelt	4.10	229	P	Pn	19 06 35.7	+0.5
MDT				S	Sn	19 07 20.4	-2.8
MD31	MD31	4.16	231	P	Pn	19 06 36.0	0.0
MD31				S	Sn	19 07 21.6	-3.1
ECAB	El Cabril	4.41	306	P	Pn	19 06 42.8	+3.4
	0.1nm,0.2s,SNR=7.9						
ECAB				S	Sn	19 07 30.1	-0.6
	SNR=7.9						
PAB	San Pablo	4.83	327	P	Pn	19 06 48.8	+3.5
	0.5nm,0.2s,SNR=7.9						
PAB				S	Sn	19 07 40.4	-1.0
	SNR=7.9						

IDC 26 19:16:53.8±10.0**, 5°.43S**×**153°.99E, h150**km±70km**, mb3.2**/3**, mb1 3.4**/4**, mb1mx3.1**/37**, mbtmp3.7**/4**, Error ellipse: s-maj=108.8km s-min=36.6km az=103.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	7.84	239	P	Pn	19 18 44.9	-0.3
	3.3nm,0.3s,baz=62,slow=6.9,SNR=15						
PMG				S	Sn	19 20 14.0	+1.3
	1.0nm,0.3s,baz=306,slow=21,SNR=2.7						
WRA	Warramunga Arr	23.95	231	P	P	19 21 54.5	0.0
	1.5nm,0.7s,baz=55,slow=9.5,SNR=16						
ASAR	Alice Springs	26.52	225	P	P	19 22 17.5	-0.2
	0.5nm,0.7s,baz=48,slow=10,SNR=4.4						
SONM	Songino Array	67.49	327	P	P	19 27 33.9	+0.2
	0.3nm,0.5s,baz=130,slow=4.5,SNR=2.3						

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*IDC **26** 19:17:47.5±2.1, 43°.50N×105°.31W, h0km, mb1 3.7/3, mb1mx3.4/57, mbtmp3.4/3, ML3.4/3, Error ellipse: s-maj=55.0km s-min=10.1km az=151.0*

*NEIC **26** 19:17:49.5±0.9, 43°.70N±0°.06×105°.26W±0°.09, h0km±2km, ML3.4/52, Error ellipse: s-maj=11.8km s-min=9.1km az=112.0*

ISC 26 19:17:49.3±1.0**, 43°.71N**±0°.05×**105°.32W**±0°.05**, h0**km**, n48, σ0ˢ.83**/46**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	1.01	66		Pg	19 18 08.3	-0.4
K22A	Casper	1.38	220		Pg	19 18 13.9	-1.8
K22A				IAML		19 18 37.5	
	comp=N,410nm,0.4s						
K22A				IAML		19 18 41.5	
	comp=E,540nm,0.3s						
RWWY	Rawlins	2.45	215		Pn	19 18 31.8	+1.0
RWWY				IAML		19 19 07.4	
	comp=E,208nm,1.1s						
RWWY				IAML		19 19 07.4	
	comp=E,261nm,1.1s						
LAO	LASA Array	3.05	348	Pn	Pn	19 18 40.1	+1.3
LAO				IAML		19 19 36.8	
	comp=E,148nm,0.9s						
LAO				IAML		19 19 38.6	
	comp=E,125nm,0.8s						
RLMT	Red Lodge	3.16	298		Pn	19 18 40.9	+0.4
RLMT				IAML		19 19 30.3	
	comp=E,63nm,0.7s						
BW06	Boulder Array	3.24	255		Pn	19 18 41.8	+0.2
BW06				IAML		19 19 30.5	
	comp=E,57nm,0.6s						
BW06				IAML		19 19 31.0	
	comp=E,60nm,0.6s						
PD31	Pinedale Array	3.24	255		Pn	19 18 41.6	+0.1
PDAR	Pinedale Array	3.24	255	Pn	Pn	19 18 41.7	+0.1
	comp=E,4.6nm,0.3s,baz=70,slow=15,SNR=64						
PDAR				Lg	Lg	19 19 26.9	
	comp=E,16nm,0.3s,baz=85,slow=20,SNR=2.8						
PDAR	Pinedale Array	3.24	255	Pn	Pn	19 18 41.2	-0.3
YMP	Mirror Lake Pl	3.63	288		Pn	19 18 47.7	+0.7
YMP				IAML		19 19 48.7	
	comp=E,91nm,0.8s						
GCMT	Greycliff	3.73	305		Pn	19 18 48.5	+0.3
LOHW	Long Hollow	3.84	270		Pn	19 18 50.7	+0.9
FLWY	Flagg Ranch	3.91	277		Pn	19 18 51.8	+1.1
FLWY				IAML		19 20 02.4	
	comp=E,62nm,0.9s						
ISCO	Idaho Springs	3.91	183		Pn	19 18 51.2	+0.3
ISCO				IAML		19 19 57.2	
	comp=E,33nm,1.1s						
MOOW	Moose Ponds	3.93	272	Pn	Pn	19 18 52.3	+1.2
REDW	Red Top Meadow	4.04	267		Pn	19 18 53.5	+1.0
REDW				IAML		19 20 05.7	
	comp=E,53nm,1.4s						
REDW				IAML		19 20 06.7	
	comp=E,50nm,1.0s						
YHH	Holmes Hill	4.12	287	Pn	Pn	19 18 54.1	+0.4
FXWY	Fox Creek	4.14	271	Pn	Pn	19 18 55.2	+1.2
YMR	Madison River	4.17	285		Pn	19 18 54.8	+0.4
YMR				IAML		19 20 08.7	
	comp=E,39nm,1.0s						
YMR				IAML		19 20 15.7	
	comp=N,63nm,1.0s						
O20A	White River Ci	4.18	212	Pn	Pn	19 18 55.1	+0.6
O20A				IAML		19 20 00.5	
	comp=N,46nm,2.2s						
O20A				IAML		19 20 11.7	
	comp=E,38nm,0.8s						
AHID	Auburn Hatcher	4.33	259		Pn	19 18 57.1	+0.6
AHID				IAML		19 20 11.7	
	comp=E,40nm,0.9s						
AHID				IAML		19 20 13.1	
	comp=E,48nm,0.8s						
E28A	Huff	4.35	47		Pn	19 18 57.1	+0.5
RDMU	Red Mountain	4.45	227	Pn	Pn	19 18 59.1	+0.9
RDMU				IAML		19 20 13.5	
	comp=E,37nm,0.9s						
RDMU				IAML		19 20 15.1	
	comp=N,33nm,0.8s						
ECR	Eagle Creek	4.46	264		Pn	19 18 59.0	+0.7
SMCO	Snowmass	4.70	196		Pb	19 19 14.2	+1.5
SMCO				IAML		19 20 21.5	
	comp=N,20nm,1.1s						
SMCO				IAML		19 20 30.4	
	comp=N,24nm,1.1s						
DGMT	Dagmar	4.83	9	Pn	Pn	19 19 03.4	+0.2
BOZ	Bozeman (W)	4.88	295		Pn	19 19 03.9	-0.2
BOZ				IAML		19 20 31.4	
	comp=N,14nm,0.9s						
HWUT	Hardware Ranch	5.06	248	Pn	Pn	19 19 06.8	+0.2
HWUT				IAML		19 20 40.4	
	comp=N,25nm,1.0s						
KSCO	Kaye Shedlock'	5.11	156	Pn	Pn	19 19 06.8	-0.4
TCUT	Toone Canyon	5.20	242		Pn	19 19 08.8	+0.3
EGMT	Eagleton	5.31	326		Pn	19 19 10.4	+0.5
HRY	Holter Researc	5.49	305		Pn	19 19 13.2	+0.8
P18A	Preston Nutter	5.50	224		Pn	19 19 13.1	+0.4
LRM	Limekiln Ridge	5.50	295		Pn	19 19 12.8	+0.2
MCMT	McKenzie Canyo	5.52	284	Pn	Pn	19 19 12.5	-0.4
CTU	Camp Tracy	5.65	240	Pn	Pn	19 19 14.7	+0.1
SPUT	South Promonto	5.79	248	Pn	Pn	19 19 17.6	+1.1
HVU	Hansel Valley	5.82	253		Pn	19 19 17.2	+0.3
P17A	Butcher Ranch,	5.87	226	Pn	Pn	19 19 17.9	+0.3
SRU	San Rafael Swe	6.03	222		Pn	19 19 19.2	-0.7
TMUT	Trail Mountain	6.24	227		Pn	19 19 23.0	+0.1
CBKS	Cedar Bluff	6.45	137		Pg	19 19 52.2	-0.5
Q16A	Castle Valley	6.50	225		Pn	19 19 26.7	+0.3
DUG	Dugway, Tooele	6.60	240	Pn	Pn	19 19 28.0	+0.3
I10CA	LAC DU BONNET	9.08	41	*i*		20 10 08.7	
	baz=222,slow=336,SNR=3.8						
ULM	Lac du Bonnet	9.19	41	Pn	Pn	19 20 00.7	-2.3
	comp=N,1.2nm,0.3s,baz=234,slow=9.5,SNR=5.2						
ULM				Lg	Lg	19 22 37.5	
	comp=N,0.4nm,0.3s,baz=131,slow=19,SNR=4.6						
NVAR	Mina Array Bea	11.13	246	Pn	Pn	19 20 31.5	+1.7
	comp=N,0.1nm,0.3s,baz=65,slow=13,SNR=2.8						
TXAR	Lajitas Array	14.41	174	Pg	Pg	19 22 12.5	
	comp=N,0.0nm,0.3s,baz=17,slow=9.8,SNR=1.9						
TXAR				Lg	Lg	19 25 12.8	
	comp=N,0.0nm,0.3s,baz=14,slow=22,SNR=2.2						

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*NNC **26** 19:22:20.8±1.5, 42°.91N×85°.73E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=11.4km s-min=6.1km az=141.0*

*SOME **26** 19:22:36.6, 42°.88N×85°.12E, h10km*

ISC 26 19:22:34.0±2.4**, 42°.9N**±0°.1×**85°.09E**±0°.09**, h10**km**, n25, σ1ˢ.79**/27**, 5C-2D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	Ketmen	3.51	281	*e*P	Pg	19 23 41.6	+0.4
	2.1nm,0.3s						
KTMS				*e*S	Sg	19 24 27.9	+1.2
	15nm,0.3s						
KTMS	Ketmen	3.51	281	Pg	Pb	19 23 33.2	-3.0
	2.7nm,0.3s						
KTMS				Lg	Lg	19 24 27.8	
	15nm,0.3s						
DJR	Jarkent	4.11	292	*e*P	Pg	19 23 52.0	-0.7
	0.9nm,0.4s						
DJR				*e*S	Sg	19 24 45.2	-0.7
	4.4nm,0.2s						
DJR	Jarkent	4.11	292	Pg	Pb	19 23 42.8	-3.7
	2.4nm,0.5s						
DJR				Lg	Lg	19 24 44.2	
	4.4nm,0.2s						
PDGK	Podgornoye	4.12	278	Pg	Pb	19 23 44.3	-2.4
	0.5nm,0.2s						
PDGK				Lg	Lg	19 24 47.0	
	6.5nm,0.3s						
PDGK	Podgornoye	4.12	278	⇑Pg	Pb	19 23 42.6	-4.1
	2.1nm,0.7s						
PDGK				⇑Lg	Lg	19 24 47.8	
	11nm,0.6s						
MK31	Makanchi Array	4.39	334	Pn	Pn	19 23 34.0	-6.7
	0.2nm,0.3s,baz=143,slow=14,SNR=15						
MK31				⇑Pg	Pb	19 23 44.0	-7.1
	0.5nm,0.4s,baz=137,slow=17,SNR=5.7						
MK31				⇑Lg	Lg	19 24 47.8	
	5.5nm,0.8s,baz=144,slow=31,SNR=10						
UZB	Uzynbulak	4.46	275	*e*P	Pg	19 23 59.2	-0.1
	1.4nm,0.3s						
UZB				*e*S	Sg	19 24 57.3	+0.3
	4.8nm,0.5s						
UZB	Uzynbulak	4.46	275	Pg	Pb	19 23 50.0	-2.3
	4.7nm,0.2s						
UZB				Lg	Lg	19 24 56.8	
	4.8nm,0.5s						
MAKZ	Makanchi	4.51	332	⇓Pg	Pn	19 23 47.0	+4.7
	1.2nm,0.6s						
MAKZ				⇓Lg	Lg	19 24 51.0	
	4.5nm,0.8s						
ZSN	Zaisan	4.57	358	*e*P	Pg	19 24 01.1	-0.4
	0.5nm,0.2s						
ZSN				*e*S	Sg	19 25 01.7	+1.0
	5.6nm,0.4s						
ZSN	Zaisan	4.57	358	Pg	Pn	19 23 44.2	+1.0
	6.0nm,1.1s						
ZSN				Lg	Lg	19 24 46.4	
	4.2nm,0.6s						
KAPS	Kapalarasan	4.78	302	*e*P	Pg	19 24 06.3	+0.9
	1.6nm,0.8s						
KAPS				*e*S	Sg	19 25 09.5	+2.2
	3.2nm,0.6s						
KAPS	Kapalarasan	4.78	302	Pg	Pb	19 23 55.5	-2.3
	1.1nm,0.6s						
KAPS				Lg	Lg	19 25 06.7	
	3.2nm,0.6s						
SATY	Saty	4.91	274	*e*P	Pg	19 24 07.5	-0.4
	1.2nm,0.3s						
SATY				*e*S	Sg	19 25 12.0	+0.5
	5.9nm,0.2s						
SATY	Saty	4.91	274	Pg	Pb	19 23 59.0	-1.1
	1.3nm,0.3s						
SATY				Lg	Lg	19 25 12.0	
	5.9nm,0.2s						
BLB	Baldybastay	4.96	286	Pg	Pb	19 24 00.3	-0.6
	2.5nm,0.1s						
BLB				Lg	Lg	19 25 14.2	
	7.1nm,0.4s						
ARXS	Arharly	5.44	287	Pg	Pb	19 24 07.9	-1.2
	0.8nm,0.3s						
ARXS				Lg	Lg	19 25 27.5	
	5.8nm,0.4s						
KOTS	Kotyrbulak	5.85	276	Pg	Pb	19 24 16.3	+0.1
	1.7nm,0.4s						
KOTS				Lg	Lg	19 25 42.1	
	8.6nm,0.5s						
MDOK	Medeo	5.90	275	Lg	Lg	19 25 44.0	
	4.6nm,0.9s						
MDOK	Medeo	5.90	275	Pg	Pb	19 24 18.0	+1.0
	1.1nm,0.3s						
MDOK				Lg	Lg	19 25 44.7	
	4.3nm,0.5s						
TNSS	Tian-Shan	5.98	274	Pg	Pb	19 24 18.4	-0.1
	1.2nm,0.5s						
TNSS				Lg	Lg	19 25 45.2	
	1.6nm,0.4s						
KUU	Kurty	6.45	282	Pg	Pb	19 24 28.1	+1.7
	2.6nm,1.2s						
KUU				Lg	Lg	19 26 02.0	
	4.3nm,0.3s						
DGS	Degeres	6.83	276	Pg	Pb	19 24 34.8	+1.9
	0.6nm,0.3s						
DGS				Lg	Lg	19 26 14.1	
	2.0nm,0.4s						
TKM2	Tokmak 2	6.97	274	⇑Lg	Lg	19 26 18.0	
	3.3nm,0.9s						

IDC 26 19:29:51.1±2.8**, 8°.34S**×**133°.33E, h0**km**, mb3.7**/1**, mb1 3.5**/4**, mb1mx3.3**/31**, mbtmp3.3**/4**, ML2.8**/3**, Error ellipse: s-maj=96.1km s-min=31.1km az=85.0, Arafura Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	11.57	175	Pn	Pn	19 32 38.1	+0.4
	0.0nm,0.3s,baz=360,slow=13,SNR=1.6						
FITZ	Fitzroy Crossi	12.24	217	Pn	Pn	19 32 45.8	-1.1
	0.1nm,0.3s,baz=46,slow=12,SNR=5.6						
ASAR	Alice Springs	15.25	178	Pn	Pn	19 33 28.6	+0.7
	0.0nm,0.3s,baz=4.5,slow=13,SNR=2.5						
MKAR	Makanchi Array	71.17	326	P	P	19 41 11.8	+0.1

```
        0.5nm,0.6s,baz=120,slow=7.2,SNR=5.2
```

MAN 26 19:31:51.0,6°.46N×123°.85E,h29km,mb4.7,ML3.6,MS3.5, Mindanao

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*IDC **26** 19:40:26.1±9.1,12°.39S×166°.74E,h222km±99km,mb3.4/5, mb1 3.5/6,mb1mx3.2/40,mbtmp3.9/6,Error ellipse: s-maj=81.8km s-min=26.7km az=153.0*

ISC 26 19:40:24.2±1.6,**12°.3S**±0°.2×**166°.7E**±0°.2,**h200km,n6, σ1s.09**/6,**mb3.7**/5,**Santa Cruz Islands**

```
Code  Station Name        Δ°  AZ°   Phase ID          Time     Res
                                    Op     ISC       h  m  s   ISC
DZM   Mont Dzumac       9.76 181    P      Pn       19 42 40.5 +0.1
      0.4nm,0.3s,baz=42,slow=12,SNR=1.2
STKA  Stephens Creek   30.23 226    P      P        19 46 16.1 -0.3
      1.9nm,0.7s,baz=44,slow=9.6,SNR=6.6
WRA   Warramunga Arr   31.97 252    P      P        19 46 30.4 -1.3
      0.8nm,0.6s,baz=86,slow=8.8,SNR=10
ASAR  Alice Springs    33.11 245    P      P        19 46 41.4 -0.2
      1.3nm,0.7s,baz=72,slow=9.3,SNR=23
FITZ  Fitzroy Crossi   39.98 256    P      P        19 47 41.0 +1.3
      1.5nm,0.6s,baz=120,slow=18,SNR=2.3
ILAR  Eielson Array    84.37  18    P      P        19 52 33.5 -0.1
      0.6nm,0.5s,baz=233,slow=5.3,SNR=14
```

NNC 26 19:42:27.3±9.3,**36°.40N×70°.46E,h0km,mb3.6,mpv3.3, 3C-2D,Error ellipse: s-maj=93.8km s-min=70.7km az=130.0,Hindu Kush region**

```
Code  Station Name        Δ°  AZ°   Phase ID          Time     Res
                                    Op     ISC       h  m  s   ISC
KK02  Karatay Array     6.69   0  ⇑P      Pn       19 44 08.0 +1.1
      1.0nm,0.4s
KK02                              ⇓S      Sn       19 45 25.0 +1.2
      1.2nm,0.6s
AAK   Ala-Archa         6.96  25  ⇑P      Pn       19 44 10.2 -0.4
      0.8nm,0.3s
AAK                               ⇓S      Sn       19 45 31.5 +0.9
      3.5nm,0.8s
AB31  Akbulak array    14.97 332  ⇑P      Pn       19 45 58.5 -1.5
      0.3nm,0.3s,baz=164,slow=12,SNR=42
```

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*IDC **26** 19:48:16.3±0.7,0°.87N×127°.38E,h0km,mb4.1/10, mb1 4.3/12,mb1mx4.0/36,mbtmp4.1/12,ML3.6/2,MS3.2/4, Ms1 3.2/4,ms1mx2.8/37,Error ellipse: s-maj=29.0km s-min=14.0km az=65.0*

*NEIC **26** 19:48:19.8±2.6,0°.83N±0°.08×127°.44E±0°.05,h18km±4km, mb4.5/29,Error ellipse: s-maj=12.1km s-min=6.8km az=167.0*

*DJA **26** 19:48:19.5±0.2,1°N±2°×12°8E±°,h10km,M4.2/18, mb4.5/18,mB5.0/7,MLv4.0/16,Mw(mB)4.3/7,MwMwp5.0/1, Mwp5.3/1*

ISC 26 19:48:18.6±0.5,**0°.90N**±0°.06×**127°.48E**±0°.06,**h10km,n75, σ1s.51**/69,**mb4.4**/28,**Halmahera**

```
Code  Station Name        Δ°  AZ°   Phase ID          Time     Res
                                    Op     ISC       h  m  s   ISC
TNTI  Ternate           0.17 223    P      Pg       19 48 22.4 +0.1
TNTI  Ternate           0.17 223           Pg       19 48 22.3 +0.1
TNTI                                Sg     Sg       19 48 25.6 +0.7
LBMI  Labuha            1.53 179    P      Pn       19 48 46.1 +0.1
SANI  Sanana            3.29 207    P      Pn       19 49 09.6 -0.6
KMSI  Cibinong          3.52 265    P      Pn       19 49 13.4 +0.1
SWI   Sorong            4.16 115    P      Pn       19 49 23.6 +1.4
SIJI  Sorong            4.17 115    Pn     Pn       19 49 22.5 +0.1
      3.3nm,0.3s,baz=333,slow=22,SNR=17
SIJI                                Sn     Sn       19 50 12.4 +1.2
      1.2nm,0.3s,baz=205,slow=23,SNR=1.4
MSAI  Masohi            4.46 161    P      Pn       19 49 30.1 +3.8
GTOI  Gorontalo         4.48 267    P      Pn       19 49 29.0 +2.4
AAI   Ambon             4.61 171    P      Pn       19 49 30.2 +1.8
LUWI  Luwuk             5.09 248    P      Pn       19 49 37.9 +2.9
      0.5nm1µm53nm,1.3s
LUWI  Luwuk             5.09 248    Pn     Pn       19 49 35.4 +0.4
MRSI  Marisa            5.56 266    P      Pn       19 49 44.1 +2.7
      0.1nm542nm32nm,0.6s
FAKI  Fak Fak           6.09 129    P      Pn       19 49 51.3 +2.6
      0.1nm13nm,0.9s
FAKI  Fak Fak           6.09 129    Pn     Pn       19 49 40.3 -8.4
APSI  Ampana            6.10 253    P      Pn       19 49 49.7 +0.8
      0.2nm438nm38nm,1.1s
TOLI2 Tolitoli          6.70 272    Pn     Pn       19 49 57.0 -0.2
MPSI  Mapaga            7.60 266    P      Pn       19 50 10.3 +0.8
      0.1nm9.5nm,1.5s
TTSI  Tana Toraja       8.60 243    P      Pn       19 50 23.5 +0.2
      1µm22nm,0.6s
BNSI  Bone              9.06 234    P      Pn       19 50 30.6 +1.1
      5µm18nm,1.3s
SPSI  Sidrap Palu       9.10 238    P      Pn       19 50 31.5 +1.5
      36nm,0.5s
BKSI  Bulukumba         9.60 230    P      Pn       19 50 39.0 +2.0
      294nm19nm,0.9s
KAPI  Kappang           9.70 233    Pn     Pn       19 50 37.1 -1.3
      0.6nm,0.3s,baz=120,slow=16,SNR=1.5
KAPI                                LR     LR       19 54 50.5
      comp=Z,66nm,21.5s,baz=72,slow=41
MYLDM Lahad Datu        9.93 296    Pn     Pn       19 50 41.4  0.0
EDFI  Ende, Flores     11.19 211    P      Pn       19 51 01.7 +2.9
      4.1nm,0.9s
BATI  Baumata          11.67 199    LR     LR       19 56 02.0
      comp=Z,102nm,20.6s,baz=8.0,slow=40
KPJI  Karang Pucung    20.23 246    P      Pn       19 52 57.8 +1.8
LEM   Lembang          21.26 249    LR     LR       20 01 12.0
      comp=Z,89nm,19.2s,baz=8.0,slow=37
WB0   Warramunga Arr   21.63 162    P      P        19 53 07.8 -1.4
WRAB  Tennant Creek    21.77 162    P      P        19 53 09.1 -1.6
WRA   Warramunga Arr   21.78 162    P      P        19 53 10.6 -0.2
      4.8nm,0.6s,baz=342,slow=11,SNR=53
WRA   Warramunga Arr   21.78 162    P      P        19 53 08.3 -2.5
WB2   Warramunga Arr   21.78 162    P      P        19 53 10.8  0.0
WB2                                 IAmb   IAmb     19 53 13.4
      comp=Z,20nm,1.3s
WR0   Warramunga Arr   21.85 162    P      P        19 53 11.7 +0.1
WR0                                 IAmb   IAmb     19 53 26.7
      comp=Z,17nm,1.2s
PMG   Port Moresby     22.11 118    LR     LR       20 03 30.6
      comp=Z,89nm,18.6s,baz=314,slow=41
AS31  Alice Springs    25.20 166    P      P        19 53 43.8 -0.9
ASAR  Alice Springs    25.20 166    P      P        19 53 44.2 -0.4
      comp=Z,5.1nm,0.9s,baz=347,slow=11,SNR=40
NJ2   Nanjing          32.04 346   eP      P        19 54 48.5 +3.0
NJ2                                 pmax   pmax
      comp=Z,3.0nm,0.5s
CMAR  Chiang Mai Arr   33.00 304    P      P        19 54 54.0 -0.2
      comp=Z,1.3nm,0.3s,baz=128,slow=7.6,SNR=5.6
STKA  Stephens Creek   35.23 159    P      P        19 55 12.5 -0.8
      comp=Z,3.6nm,0.7s,baz=337,slow=9.5,SNR=7.4
MJAR  Matsushiro Arr   36.83  14    P      P        19 55 28.2 +1.2
      comp=Z,3.9nm,0.8s,baz=182,slow=9.7,SNR=5.3
LZH   Lanzhou          41.31 331   eP      P        19 56 05.0 +0.3
LZH                                 pP     sP       19 56 08.8 -0.3
LZH                                 pmax   pmax
      comp=Z,19nm,1.1s
SHL   Shillong         42.18 308    P      P        19 56 12.0 -0.1
SHL                                 IAmb   IAmb     19 56 16.0
      comp=Z,3.9nm,0.6s
HHC   Hu-ho-hao-te     42.30 342   eP      P        19 56 14.0 +1.3
HHC                                 pmax   pmax
      comp=Z,6.0nm,1.0s
GTA   Gaotai           45.90 330   eP      P        19 56 41.3 -0.3
GTA                                 pP     sP       19 56 48.8 +2.8
GTA                                 sP     pP       19 56 51.8 +7.0
GTA                                 pmax   pmax
      comp=Z,2.0nm,1.2s
ULN   Ulaanbaatar      50.03 342    P      P        19 57 13.9 +0.5
ULN                                 IAmb   IAmb     19 57 18.7
      comp=Z,5.9nm,1.1s
SONM  Songino Array    50.20 342    P      P        19 57 14.0 -0.8
      comp=Z,1.8nm,0.8s,baz=154,slow=8.0,SNR=11
SONM  Songino Array    50.20 342    IAmb   IAmb     19 57 20.6
      comp=Z,8.4nm,1.4s
WMQ   Urumqi           55.47 326   eP      P        19 57 55.0 +1.3
WMQ                                 pP     sP       19 57 58.0 -0.1
WMQ                                 sP     pP       19 58 07.8  +11
WMQ                                 pmax   pmax
      comp=Z,21nm,1.1s
PETK  Petropavlovsk-   57.77  21    P      P        19 58 09.8  0.0
MK31  Makanchi Array   60.30 326    P      P        19 58 26.5 -1.0
MK31                                IAmb   IAmb     19 58 32.6
      comp=Z,3.1nm,0.9s
MKAR  Makanchi Array   60.30 326    P      P        19 58 25.4 -2.1
      comp=Z,2.0nm,0.6s,baz=119,slow=7.8,SNR=25
MKAR  Makanchi Array   60.30 326    P      P        19 58 26.1 -1.4
PRZ   Przheval'sk      60.34 320    P      P        19 58 27.3 -0.7
MAKZ  Makanchi         60.48 326    P      P        19 58 27.5 -1.3
MAKZ                                IAmb   IAmb     19 58 31.2
      comp=Z,11nm,1.5s
KSH   Kashi            60.58 316    P      P        19 58 33.3 +3.6
KSH                                 pmax   pmax
      comp=Z,6.0nm,1.3s
BOOM  Boomskoye usch   61.94 319    P      P        19 58 37.8 -1.1
BOOM                                IAmb   IAmb     19 58 43.9
      comp=Z,8.9nm,1.4s
AAK   Ala-Archa        62.96 319    P      P        19 58 45.6 -0.1
AAK                                 IAmb   IAmb     19 58 53.1
      comp=Z,6.5nm,1.4s
ZAA0  Zalesovo Array   63.44 333    P      P        19 58 49.4 +0.9
ZAA0                                IAmb   IAmb     19 58 50.9
      comp=Z,5.9nm,1.4s
ZALV  Zalesovo Beam    63.44 333    P      P        19 58 47.5 -1.0
      comp=Z,0.4nm,0.4s,baz=115,slow=7.0,SNR=5.6
ZALV  Zalesovo Beam    63.44 333    P      P        19 58 47.6 -0.9
KBL   Kabul            63.84 308    P      P        19 58 50.2 -1.6
KBL                                 IAmb   IAmb     19 58 56.7
      comp=Z,4.5nm,0.6s
GAR   Garm             64.39 313    P      P        19 58 54.5 -0.8
BTK   Batken           64.42 315    P      P        19 58 56.6 +1.2
BTK                                 IAmb   IAmb     19 59 00.3
      comp=Z,11nm,1.2s
KURK  Kurchatov        64.52 328    P      P        19 58 53.4 -2.2
CHGR  Chuyangaron      65.12 313    P      P        19 59 00.3 +0.4
KKAR  Karatay Array    65.81 318    P      P        19 59 01.5 -2.8
HRA   Herat            69.20 307    P      P        19 59 23.9 -2.2
BRVK  Borovoye         70.16 327    P      P        19 59 32.0 +0.6
BRVK                                IAmb   IAmb     19 59 37.1
      comp=Z,7.5nm,1.4s
NRIK  Noril'sk         73.34 346    P      P        19 59 48.9 -1.3
      comp=Z,1.7nm,0.5s,baz=126,slow=8.7,SNR=1.7
NRIK  Noril'sk         73.34 346    IAmb   IAmb     19 59 54.3
      comp=Z,2.2nm,0.6s
ABKAR Akbulak array    74.81 321    P      P        19 59 59.5 +0.3
ABKAR Akbulak array    74.81 321    P      P        20 00 00.0 +0.8
VNDA  Vanda            80.54 173    P      P        20 00 28.8 -1.8
      comp=Z,0.7nm,0.9s,baz=307,slow=10,SNR=3.5
VNDA  Vanda            80.54 173    IAmb   IAmb     20 00 38.5
      comp=Z,5.1nm,1.4s
```

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*IDC **26** 19:53:14.4±2.2,7°.12S×130°.34E,h152km±25km,mb3.1/2, mb1 3.2/6,mb1mx2.9/29,mbtmp3.7/6,Error ellipse: s-maj=42.2km s-min=21.6km az=102.0*

ISC 26 19:53:13.4±0.9,**7°.06S**±0°.07×**130°.2E**±0°.1,**h150km,n6, σ3s.23**/10,**Tanimbar Islands region**

```
Code  Station Name        Δ°  AZ°   Phase ID          Time     Res
                                    Op     ISC       h  m  s   ISC
SIJI  Sorong            6.25  10    P      Pn       19 54 44.8 +1.2
      0.9nm,0.3s,baz=184,slow=23,SNR=21
SIJI                                S      Sn       19 55 49.9 -4.2
      1.0nm,0.3s,baz=273,slow=23,SNR=7.4
BATI  Baumata           7.14 244    P      Pn       19 54 58.4 +3.0
      0.9nm,0.3s,baz=63,slow=4.5,SNR=1.6
BATI                                S      Sn       19 56 10.5 -4.9
      2.2nm,0.3s,baz=153,slow=16,SNR=7.2
FITZ  Fitzroy Crossi   11.82 201    P      Pn       19 55 59.9 +2.4
      0.2nm,0.3s,baz=25,slow=10,SNR=12
FITZ                                S      Sn       19 58 06.5 -1.7
WRA   Warramunga Arr   13.44 163    P      Pn       19 56 16.1 -2.2
      0.2nm,0.3s,baz=340,slow=11,SNR=10.0
WRA                                 S      Sn       19 58 47.6 +0.5
      0.1nm,0.3s,baz=340,slow=21,SNR=2.2
MKAR  Makanchi Array   68.36 327    P      P        20 03 59.8 +1.1
      0.1nm,0.3s,baz=116,slow=7.8,SNR=4.6
ZALV  Zalesovo Beam    71.70 334    P      P        20 04 21.2 +2.4
      0.4nm,0.4s,baz=151,slow=3.3,SNR=2.0
```

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*GUC **26** 19:55:46.6±0.8,31°.34S×72°.21W,h48km±3km,ML3.3*

*IDC **26** 19:55:47.9±7.6,31°.41S×72°.34W,h35km±57km,mb3.9/2, mb1 4.1/4,mb1mx3.6/27,mbtmp4.1/4,ML4.2/2,Error ellipse: s-maj=84.4km s-min=38.8km az=106.0*

ISC 26 19:55:46.1±1.5,**31°.35S**±0°.04×**72°.3W**±0°.2,**h20km**±6km,**n21, σ0s.59**/29,**Off coast of central Chile**

```
Code  Station Name        Δ°  AZ°   Phase ID          Time     Res
                                    Op     ISC       h  m  s   ISC
CO06  Fray Jorge        0.86  39   eP      Pb       19 56 02.1 -0.3
CO06                               i S     Sb       19 56 14.1 +0.5
CO06                                IAML            19 56 15.0
      comp=E,1µm,0.3s
VA06  Catapilco         1.46 146   eP      Pn       19 56 10.6 -0.7
VA06                                IAML            19 56 29.4
      comp=E,985nm,0.5s
CO05  La Serena         1.68  32   eP      Pn       19 56 13.9 -0.5
CO05                               i S     Sn       19 56 34.4 -0.9
CO05                                IAML            19 56 36.6
      comp=N,584nm,0.3s
GO04  Tololo Observa    1.72  47   eP      Pn       19 56 14.7 -0.5
GO04                               i S     Sn       19 56 36.2 -0.4
ROCH  El Roble          1.93 147   eP      Pn       19 56 17.5 -0.5
ROCH                               i S     Sn       19 56 41.5 -0.3
ROCH                               i S     Sn       19 56 41.6 -0.3
ROCH                                IAML            19 56 43.3
      comp=N,316nm,0.2s
VA03  San Esteban       2.02 135   eP      Pn       19 56 19.2  0.0
VA03                               i S     Sn       19 56 43.7 -0.2
VA03                                IAML            19 56 47.9
      comp=N,636nm,0.5s
MT02  Curacav           2.13 154   eP      Pn       19 56 20.1 -0.4
PEL   Peldehue          2.23 144   eP      Pn       19 56 21.9 -0.1
PEL                                i S     Sn       19 56 49.0  0.0
PEL                                 IAML            19 56 58.8
      comp=N,158nm,0.4s
MT05  Renca             2.41 148   eP      Pn       19 56 24.2 -0.2
MT05                               i S     Sn       19 56 53.0 -0.4
MT05                                IAML            19 56 58.2
      comp=E,261nm,0.2s
MT09  Talagante         2.65 156   eP      Pn       19 56 27.6 -0.1
MT09                               i S     Sn       19 56 59.0 -0.3
MT09                                IAML            19 57 00.6
      comp=N,246nm,0.2s
MT01  Popeta            2.65 161   eP      Pn       19 56 27.0 -0.7
LCO   Las Campanas      2.70  30   eP      Pn       19 56 28.1 -0.5
LCO                                i S     Sn       19 56 59.8 -1.0
BO04  La Punta          2.98 153   eP      Pn       19 56 32.4 +0.1
BO04                               i S     Sn       19 57 06.3 -1.0
H03N1 Juan Fernandez    6.00 248    T      T        20 04 04.2
      baz=76,slow=72,SNR=40
H03N3 Juan Fernandez    6.01 248    T      T        20 04 01.0
      baz=76,slow=72,SNR=43
H03N2 Juan Fernandez    6.01 248    T      T        20 03 59.9
      baz=76,slow=72,SNR=36
PLCA  Paso Flores       9.46 172    Pn     Pn       19 58 01.1 -0.2
      comp=N,0.4nm,0.3s,baz=334,slow=13,SNR=13
LPAZ  La Paz           15.46  15    Pn     Pn       19 59 25.1 +1.4
      comp=N,0.5nm,0.3s,baz=200,slow=4.2,SNR=21
BDFB  Brasilia         27.09  60    P      P        20 01 28.2 +0.4
      comp=N,12nm,1.3s,baz=199,slow=4.9,SNR=3.9
TORD  Torodi Ar. Bea   83.49  70    P      P        20 08 13.2 +0.4
      comp=N,0.7nm,0.6s,baz=264,slow=4.3,SNR=3.3
ZALV  Zalesovo Beam   152.06  29    PKPbc  PKPbc    20 15 38.8 -0.6
      comp=N,0.7nm,0.5s,baz=320,slow=2.0,SNR=4.3
```

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*IDC **26** 19:59:58.7±1.8,3°.02S×137°.58E,h49km±20km,mb3.9/7, mb1 4.2/11,mb1mx3.8/38,mbtmp4.2/11,ML3.9/3,MS3.1/8, Ms1 3.1/8,ms1mx2.9/32,Error ellipse: s-maj=15.0km s-min=13.8km az=78.0*

*NEIC **26** 19:59:58.9±2.1,3°.00S±0°.07×137°.46E±0°.07,h36km±8km, mb4.5/17,Error ellipse: s-maj=10.7km s-min=9.5km az=166.0*

*DJA **26** 19:59:59.1±0.3,3°S±3°×13°8E±°,h56km±4km,M4.4/28, mB5.3/6,mb4.5/28,MLv4.3/7,Mw(mB)4.7/6*

ISC 26 19:59:59.9±0.5,**3°.08S**±0°.06×**137°.51E**±0°.05,**h54km,n94, σ1s.59**/93,**mb4.5**/24,**MS3.3**/3,**Irian Jaya**

```
Code  Station Name        Δ°  AZ°   Phase ID          Time     Res
                                    Op     ISC       h  m  s   ISC
SMPI  Sarmi             1.62  48    P      Pn       20 00 23.9 -2.2
SRPI  Serui, Papua      1.75 313    P      Pn       20 00 26.7 -1.3
GENI  Genyem            2.70  80    P      Pn       20 00 40.1 -0.8
JAY   Jayapura          3.24  80    P      Pn       20 00 47.7 -0.6
      4.6nm,0.3s,baz=222,slow=8.2,SNR=20
JAY                                 S      Sn       20 01 22.7 -3.0
      15nm,0.3s,baz=104,slow=18,SNR=4.0
JAY   Jayapura          3.24  80    P      Pn       20 00 47.2 -1.1
FAKI  Fak Fak           5.26 272    P      Pn       20 01 14.9 -1.1
      0.2nm39nm,0.8s
FAKI  Fak Fak           5.26 272    Pn     Pn       20 01 14.3 -1.7
FAKI  Fak Fak           5.26 272    P      Pn       20 01 15.0 -1.1
SIJI  Sorong            6.62 289    P      Pn       20 01 33.3 -1.4
      3.4nm,0.3s,baz=319,slow=23,SNR=17
SIJI                                S      Sn       20 02 44.1 -4.8
      0.2nm,0.3s,baz=338,slow=23,SNR=1.7
SIJI                                LR     LR       20 04 44.6
      comp=Z,159nm,20.6s,baz=21,slow=43
SWI   Sorong            6.63 289    P      Pn       20 01 34.3 -0.5
      0.1nm26nm,0.7s
MSAI  Masohi            8.57 268    P      Pn       20 02 00.9 -0.6
AAI   Ambon             9.32 266    P      Pn       20 02 13.7 +2.0
KDU   Kakadu           10.77 207    P      Pn       20 02 30.6 -0.9
DRS   Darwin Rock St   11.36 215    P      Pn       20 02 39.4 -0.2
PMG   Port Moresby     11.46 124    P      Pn       20 02 42.9 +1.9
      0.7nm,0.3s,baz=321,slow=8.3,SNR=6.3
SANI  Sanana           11.56 275    P      Pn       20 02 42.1 -0.2
      12nm,0.5s
SANI  Sanana           11.56 275    P      Pn       20 02 41.1 -1.2
MTN   Manton Dam       11.57 213    Pn     Pn       20 02 41.8 -0.7
MTN   Manton Dam       11.57 213    P      Pn       20 02 43.2 +0.7
COEN  Coen             12.16 153    Pn     Pn       20 02 49.8 -0.9
COEN  Coen             12.16 153    P      Pn       20 02 50.8 +0.2
KMSI  Cibinong         14.01 285    P      Pn       20 03 17.5 +1.8
      1µm49nm,0.9s
SOEI  Soe              14.73 243    P      Pn       20 03 24.9 -0.5
      52nm,0.8s
SOEI  Soe              14.73 243           Pn       20 03 23.9 -1.5
SOEI  Soe              14.73 243    P      Pn       20 03 25.6 +0.2
LUWI  Luwuk            14.87 278    Pn     Pn       20 03 22.8 -4.3
GTOI  Gorontalo        14.96 284    P      Pn       20 03 30.1 +1.9
      6.0nm,0.7s
KNRA  Kununurra        15.19 214    Pn     Pn       20 03 29.7 -1.6
KNRA  Kununurra        15.19 214    P      Pn       20 03 31.7 +0.5
BATI  Baumata          15.46 242    P      Pn       20 03 34.1 -0.6
      15nm,0.3s,baz=118,slow=2.0,SNR=17
BATI  Baumata          15.46 242    P      Pn       20 03 35.1 +0.3
      69nm,0.6s
MRSI  Marisa           15.96 283    P      Pn       20 03 40.6 -0.5
      36nm,1.0s
APSI  Ampana           16.00 277    P      Pn       20 03 42.4 +0.8
      37nm,1.1s
MTSU  Mount Surprise   16.38 156    P      Pn       20 03 45.2 -1.2
WB0   Warramunga Arr   16.86 190           Pn       20 03 49.2 -3.2
WB0                                 IAmb   IAmb     20 03 57.1
      comp=Z,59nm,1.4s
WR0   Warramunga Arr   17.02 190    Pn     Pn       20 03 52.0 -2.4
WR0                                 IAmb   IAmb     20 03 59.1
      comp=Z,29nm,0.8s
WRAB  Tennant Creek    17.03 190           Pn       20 03 51.9 -2.6
WRAB  Tennant Creek    17.03 190    P      Pn       20 03 54.1 -0.4
WB2   Warramunga Arr   17.04 190           Pn       20 03 51.9 -2.7
WRA   Warramunga Arr   17.04 190    P      Pn       20 03 51.4 -3.2
      comp=Z,2.9nm,0.3s,baz=14,slow=12,SNR=41
WRA                                 S      Sn       20 06 50.9  -12
      comp=Z,0.4nm,0.3s,baz=12,slow=22,SNR=7.0
WRA                                 LR     LR       20 10 32.1
      comp=Z,114nm,21.9s,baz=30,slow=37
WRA   Warramunga Arr   17.04 190           Pn       20 03 51.5 -3.2
TOLI2 Tolitoli         17.24 284           Pn       20 03 56.5 -0.6
TOLI2                               IAmb   IAmb     20 04 00.2
      comp=Z,21nm,0.8s
TOLI2 Tolitoli         17.24 284    P      P        20 03 58.2 +0.2
QIS   Mount Isa        17.49 173    P      Pn       20 03 59.3 -0.9
TTSI  Tana Toraja      17.67 270    P      P        20 04 04.3 +1.6
      comp=Z,2µmcomp=Z,14nm,1.1s
KAPI  Kappang          17.82 263    LR     LR       20 11 19.3
      comp=Z,15nm,18.2s,baz=126,slow=38
MPSI  Mapaga           17.93 281    P      Pn       20 04 06.2 +0.6
      comp=Z,7.8nm,0.7s
GUMO  Guam             18.10  24    LR     LR       20 10 08.4
      comp=Z,58nm,21.9s,baz=206,slow=34
FITZ  Fitzroy Crossi   18.92 217    P      P        20 04 15.5 -1.0
      comp=Z,0.4nm,0.3s,baz=50,slow=10,SNR=9.3
FITZ                                LR     LR       20 11 41.8
      comp=Z,76nm,21.5s,baz=38,slow=37
CTA   Charters Tower   18.93 154    P      Pn       20 04 19.9 +2.1
      comp=Z,0.5nm,0.3s,baz=335,slow=11,SNR=5.8
CTAO  Charters Tower   18.93 154           P        20 04 17.1 +0.5
CTAO  Charters Tower   18.93 154    P      P        20 04 16.6  0.0
PLAI  Plampang         20.43 253    P      P        20 04 30.6 -2.4
      comp=Z,16nm,0.8s
MYLDM Lahad Datu       20.69 293    P      P        20 04 36.0 +0.2
MYLDM                               IAmb   IAmb     20 04 42.0
      comp=Z,22nm,1.2s
AS31  Alice Springs    20.76 189    P      P        20 04 36.3 -0.1
AS31                                IAmb   IAmb     20 04 49.3
      comp=Z,25nm,0.8s
ASAR  Alice Springs    20.76 189    P      P        20 04 37.1 +0.6
      comp=Z,32nm,0.5s,baz=16,slow=11,SNR=431
ASAR                                S      S        20 08 27.8 +2.4
      comp=Z,32nm,0.9s,baz=12,slow=24,SNR=15
ASAR                                LR     LR       20 11 48.7
      comp=Z,129nm,21.7s,baz=22,slow=34
ASAR  Alice Springs    20.76 189    P      P        20 04 36.9 +0.4
TWSI  Taliwang, Sumb   21.27 254    P      P        20 04 43.3 +1.3
      comp=Z,4.9nm,1.0s
BBKI  Banjar Baru      22.64 268    P      P        20 04 56.6 -0.1
      comp=Z,3µmcomp=Z,12nm,0.8s
WRKA  Warakurna        23.56 201    P      P        20 05 06.0 +0.2
PSA00 Pilbara Seismi   25.16 222    P      P        20 05 21.4 +1.0
PSA00 Pilbara Seismi   25.16 222    P      P        20 05 20.7 +0.4
PSA00                               IAmb   IAmb     20 05 44.6
      comp=Z,28nm,1.4s
STKA  Stephens Creek   28.90 173    P      P        20 05 54.0 +0.1
      comp=Z,1.3nm,0.5s,baz=353,slow=5.9,SNR=4.7
BKNI  Bangkinang       36.61 275    P      P        20 07 00.9 -0.5
      comp=Z,93nm,0.5s
PPI   Padang Panjang   37.19 273    P      P        20 07 04.7 -1.6
      comp=Z,13nm,0.6s
NJ2   Nanjing          39.18 335   eP      P        20 07 26.5 +3.8
NJ2                                 pmax   pmax
      comp=Z,10.0nm,0.5s
CM31  Chiang Mai Arr   43.59 301    P      P        20 07 59.0 -0.1
CM31                                IAmb   IAmb     20 08 00.1
      comp=Z,6.5nm,1.0s
CMAR  Chiang Mai Arr   43.59 301    P      P        20 07 59.4 +0.2
      comp=Z,2.7nm,0.8s,baz=123,slow=6.6,SNR=22
CMAR  Chiang Mai Arr   43.59 301    P      P        20 07 58.8 -0.4
CHTO  Chiang Mai       43.75 301    P      P        20 08 00.2 -0.2
CHTO                                IAmb   IAmb     20 08 01.0
      comp=Z,4.4nm,0.9s
USRK  Ussuriysk Ar.    47.33 355    LR     LR       20 27 02.6
      comp=Z,39nm,19.6s,baz=126,slow=34
HHC   Hu-ho-hao-te     49.73 334   eP      P        20 08 49.5 +2.5
HHC                                 pmax   pmax
      comp=Z,5.0nm,1.0s
HHC                                 pmax   pmax
      comp=Z,320nm,5.5s
TAPN  Taplejung        56.71 306   eP      P        20 09 38.6 -0.2
      comp=Z,6.5nm,0.5s
ODAN  Odare            56.78 305   eP      P        20 09 39.3 +0.1
      comp=Z,16nm,0.7s
RAMN  Ramite           57.46 305   eP      P        20 09 44.0  0.0
      comp=Z,6.0nm,0.6s
JIRN  Jiri             58.07 305   eP      P        20 09 48.5  0.0
      comp=Z,8.0nm,0.8s
GUN   Gumba            58.42 305   eP      P        20 09 50.7 -0.2
      comp=Z,12nm,0.6s
PKI   Pulchoki         58.68 305   eP      P        20 09 52.1 -0.5
PKIN  Phulchoki        58.69 305   eP      P        20 09 52.1 -0.6
KKN   Kakani           58.87 305   eP      P        20 09 53.4 -0.4
DMN   Daman            58.94 305   eP      P        20 09 54.3 -0.1
GKN   Gorkha           59.47 305   eP      P        20 09 57.8 -0.1
      comp=Z,19nm,0.8s
KOLN  Koldanda         60.24 304   eP      P        20 10 03.2 -0.1
PYUN  Piuthan          60.86 305   eP      P        20 10 07.4 -0.1
      comp=Z,18nm,0.6s
TLY   Talaya           61.68 337    LR     LR       20 38 35.0
      comp=Z,13nm,18.9s,baz=190,slow=38
WMQ   Urumqi           64.56 322   eP      P        20 10 35.3 +3.6
MKAR  Makanchi Array   69.36 323    P      P        20 11 01.2 -0.8
      comp=Z,0.4nm,0.6s,baz=113,slow=9.5,SNR=4.6
MKAR  Makanchi Array   69.36 323    P      P        20 11 01.9 -0.2
KSH   Kashi            70.47 314    P      P        20 11 10.5 +1.3
KSH                                 pmax   pmax
      comp=Z,3.0nm,0.8s
VNDA  Vanda            75.52 175    P      P        20 11 37.0 -1.2
      comp=Z,0.7nm,0.6s,baz=335,slow=6.0,SNR=5.1
SBA   Scott Base       76.30 174    P      P        20 11 46.3 +3.7
SBA                                 IAmb   IAmb     20 12 06.1
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	comp=Z,6.4nm,0.8s						
ILAR	Eielson Array	86.67	25	P	P	20 12 37.5	-0.1
	comp=Z,0.4nm,0.9s,baz=257,slow=3.6,SNR=2.4						
QSPA	South Pole Qui	86.86	180	P	P	20 12 36.8	-1.9
	comp=Z,2.0nm,0.6s,baz=331,slow=2.4,SNR=6.9						
QSPA	South Pole Qui	86.86	180	P	P	20 12 38.5	-0.2

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*SJA **26** 20:02:13.0, 30°.83S×71°.43W, h10^{km}, ML4.0*
*GUC **26** 20:02:14.0±0.7, 30°.80S×71°.40W, h52^{km}±3^{km}, ML3.5*
ISC 26 20:02:14.4±1.3**, 30°.79S**±0°.03×**71°.53W**±0°.06**, h53^{km}, n40, σ1^{s}.13**/52**, 1C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.15	322	⇑eP	Pn	20 02 22.1	-0.7
CO06				eS	Sn	20 02 28.7	-0.1
CO06				IAML		20 02 29.3	
	comp=E,7μm,0.2s						
GO04	Tololo Observa	0.88	46	⇓iP	Pn	20 02 29.7	-1.2
GO04				eS	Sn	20 02 41.5	-1.5
GO04				IAML		20 02 44.1	
	comp=E,6μm,0.6s						
GO04	Tololo Observa	0.88	46	i P	Pn	20 02 29.0	-1.9
CO05	La Serena	0.91	16	⇓eP	Pn	20 02 30.8	-0.2
CO05				eS	Sn	20 02 43.3	+0.2
CO05				IAML		20 02 46.1	
	comp=E,832nm,0.2s						
VA06	Catapilco	1.77	174	eP	Pn	20 02 42.5	-0.2
VA06				i S	Sn	20 03 03.8	-0.3
VA06				IAML		20 03 11.7	
	comp=N,538nm,0.5s						
AROD	Rodeo	1.88	71	i P	Pn	20 02 45.0	+0.5
LCO	Las Campanas	1.92	22	eP	Pn	20 02 45.4	+0.4
LCO				eS	Sn	20 03 08.1	+0.1
LCO	Las Campanas	1.92	22	i P	Pn	20 02 45.0	+0.1
ACCO	Cerro Coronel	2.13	85	i P	Pn	20 02 49.0	+1.1
VA03	San Esteban	2.13	157	eP	Pn	20 02 47.0	-0.8
VA03				eS	Sn	20 03 12.1	-1.0
VA03				IAML		20 03 15.6	
	comp=E,457nm,0.2s						
VA03	San Esteban	2.13	157	i P	Pn	20 02 47.0	-0.8
RTLS	Leoncito	2.16	118	i P	Pn	20 02 49.0	+0.7
ROCH	El Roble	2.22	169	eP	Pn	20 02 49.6	+0.6
ROCH				i S	Sn	20 03 16.0	+0.7
ROCH				eS	Sn	20 03 16.1	+0.7
ROCH				IAML		20 03 28.1	
	comp=N,232nm,0.6s						
ROCH				IAML		20 03 28.2	
	comp=N,306nm,0.6s						
ROC1	El Roble	2.22	169	i P	Pn	20 02 49.0	-0.1
PEL	Peldehue	2.45	163	i P	Pn	20 02 54.0	+1.9
MT02	Curacav	2.48	172	eP	Pn	20 02 50.8	-1.6
MT02	Curacav	2.48	172	i P	Pn	20 02 52.0	-0.4
MT05	Renca	2.68	166	eP	Pn	20 02 54.5	-0.7
MT05				eS	Sn	20 03 26.5	+0.1
MT05				IAML		20 03 43.0	
	comp=E,347nm,0.3s						
RTCV	Cerro Valdivia	2.77	113	i P	Pn	20 02 57.0	+0.6
ASAL	Salagasta	2.91	129	i P	Pn	20 02 59.0	+0.6
ARCO	CERRO ARCO	3.01	133	i P	Pn	20 03 02.0	+2.2
MT09	Talagante	3.01	171	eP	Pn	20 02 59.3	-0.5
MT09				IAML		20 03 47.5	
	comp=N,158nm,0.3s						
MT01	Popeta	3.07	176	eP	Pn	20 02 59.2	-1.3
MT01				i S	Sn	20 03 36.0	0.0
MT01				IAML		20 03 51.7	
	comp=E,81nm,0.4s						
MT01	Popeta	3.07	176	i P	Pn	20 03 00.0	-0.5
AAGR	Agrelo	3.24	136	i P	Pn	20 03 05.0	+2.1
LMEL	Las Melosas	3.25	160	eP	Pn	20 03 03.4	+0.3
LMEL				i S	Sn	20 03 40.3	-0.2
LMEL				IAML		20 03 57.3	
	comp=N,133nm,0.4s						
BO04	La Punta	3.28	167	eP	Pn	20 03 02.7	-0.7
BO04				IAML		20 03 54.0	
	comp=E,88nm,0.3s						
GO03	Copiap	3.38	20	eP	Pn	20 03 05.5	+0.6
GO03				i S	Sn	20 03 43.5	-0.3
GO03				IAML		20 04 03.0	
	comp=N,124nm,0.2s						
GO03	Copiap	3.38	20	i P	Pn	20 03 07.0	+2.2
AVFE	Valle Fertil	3.51	89	i P	Pn	20 03 06.0	-0.6
VCA	Vinchina	3.54	55	i P	Pn	20 03 10.0	+2.9
BO01	Tunca	3.61	174	i P	Pn	20 03 11.0	+3.1
BO02	Sierra Bellavi	4.04	171	eP	Pn	20 03 14.0	+0.2
ACLC	CERRO LA CRUZ	4.19	72	i P	Pn	20 03 16.0	0.0
ACHE	Chepes	4.19	96	i P	Pn	20 03 16.0	0.0
APLL	PUNTA DE LOS L	4.33	86	i P	Pn	20 03 17.0	-0.8
AC02	Maricunga	4.47	29	i P	Pn	20 03 21.0	+0.9
RFA	San Rafael	4.73	148	i P	Pn	20 03 22.0	-1.3
MRA	San Martin	5.22	110	i P	Pn	20 03 29.0	-1.0
CYA	Choya	5.51	66	i P	Pn	20 03 33.0	-1.0

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*IDC **26** 20:04:11.1±0.7, 33°.20S×77°.97E, h0^{km}, mb4.1/13, mb1 4.3/13, mb1mx4.0/38, mbtmp4.1/13, MS3.7/11, Ms1 3.7/11, ms1mx3.5/25, Error ellipse: s-maj=22.3km s-min=18.8km az=102.0*
*NEIC **26** 20:04:13.4±2.7, 33°.2S±0°.1×78°.0E±0°.2, h15^{km}±4^{km}, mb4.5/20, Error ellipse: s-maj=19.3km s-min=17.6km az=127.0*
ISC 26 20:04:12.5±0.6**, 33°.2S**±0°.1×**78°.0E**±0°.1**, h10^{km}, n40, σ0^{s}.88**/27**, mb4.4**/20**, MS3.9**/11**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S2	Diego Garcia H	25.93	347	T	T	20 36 41.1	
	baz=170,slow=76,SNR=197						
H08S1	Diego Carcia H	25.93	347	T	T	20 36 42.4	
	baz=170,slow=76,SNR=60						
H08S3	Diego Garcia H	25.95	347	T	T	20 36 43.6	
	baz=170,slow=76,SNR=291						
H01W2	Cape Leeuwin H	29.90	103	T	T	20 41 30.8	
	baz=262,slow=74,SNR=40						
H01W3	Cape Leeuwin H	29.90	103	T	T	20 41 31.1	
	baz=262,slow=74,SNR=62						
H01W1	Cape Leeuwin H	29.91	103	T	T	20 41 32.1	
	baz=262,slow=74,SNR=50						
MAW	Mawson	35.56	190	P	P	20 11 10.1	+0.6
	2.1nm,0.7s,baz=355,slow=5.6,SNR=7.3						
MAW				LR	LR	20 22 38.9	
	comp=Z,134nm,19.4s,baz=59,slow=31						
MAW	Mawson	35.56	190	IAmb	IAmb	20 11 10.7	
	comp=Z,1.1nm,0.8s						
BOSA	Boshof	45.09	261	LR	LR	20 27 32.0	
	comp=Z,142nm,19.6s,baz=161,slow=31						
FITZ	Fitzroy Crossi	45.13	83	P	P	20 12 29.2	-0.2
	comp=Z,2.1nm,0.9s,baz=211,slow=5.9,SNR=1.7						
LBTB	Lobatse	46.10	266	P	P	20 12 36.9	-0.3
	comp=Z,1.8nm,0.4s,baz=111,slow=7.5,SNR=4.1						
LSZ	Lusaka	48.32	279	P	P	20 12 54.0	-0.5
LSZ				IAmb	IAmb	20 13 06.4	
	comp=Z,5.8nm,0.9s						
ASAR	Alice Springs	49.58	94	P	P	20 13 04.3	+0.3
	comp=Z,3.8nm,1.1s,baz=239,slow=6.1,SNR=8.3						
ASAR				LR	LR	20 32 35.3	
	comp=Z,43nm,18.1s,baz=246,slow=34						
KMBO	Kilima Mbogo	49.77	301	LR	LR	20 29 28.8	
	comp=Z,26nm,18.5s,baz=96,slow=30						
WRA	Warramunga Arr	51.55	90	P	P	20 13 19.1	+0.1
	comp=Z,2.4nm,0.8s,baz=244,slow=7.8,SNR=5.4						
WRA				LR	LR	20 32 17.4	
	comp=Z,118nm,21.7s,baz=25,slow=33						
WB0	Warramunga Arr	51.67	90	P	P	20 13 20.0	+0.2
WB0				IAmb	IAmb	20 13 21.2	
	comp=Z,5.7nm,0.9s						
WR0	Warramunga Arr	51.71	90	P	P	20 13 19.9	-0.3
WR0				IAmb	IAmb	20 13 21.3	
	comp=Z,4.1nm,0.8s						
TOLI2	Tolitoli	52.79	59	P	P	20 13 26.8	-1.4
TOLI2				IAmb	IAmb	20 13 29.1	
	comp=Z,5.8nm,0.8s						
STKA	Stephens Creek	52.88	107	LR	LR	20 33 07.0	
	comp=Z,116nm,19.2s,baz=210,slow=33						
MYLDM	Lahad Datu	54.12	53	P	P	20 13 38.1	+0.2
CMAR	Chiang Mai Arr	55.13	24	P	P	20 13 46.2	+1.1
	comp=Z,1.2nm,0.7s,baz=208,slow=7.7,SNR=9.5						
CMAR				LR	LR	20 33 07.4	
	comp=Z,33nm,21.6s,baz=203,slow=32						
VNDA	Vanda	56.54	165	P	P	20 13 54.1	-0.4
	comp=Z,1.2nm,1.0s,baz=261,slow=5.3,SNR=4.1						
VNDA				LR	LR	20 35 35.5	
	comp=Z,64nm,19.3s,baz=272,slow=33						
VNDA	Vanda	56.54	165	IAmb	IAmb	20 14 04.2	
	comp=Z,3.0nm,1.1s						
QSPA	South Pole Qui	56.95	180	P	P	20 13 58.1	+0.3
	comp=Z,11nm,0.9s,baz=280,slow=3.1,SNR=17						
QSPA	South Pole Qui	56.95	180	P	P	20 13 57.8	0.0
SHL	Shillong	59.92	15	P	P	20 14 18.9	0.0
LSA	Lhasa	63.78	13	P	P	20 14 45.0	-0.3
LSA				IAmb	IAmb	20 14 49.2	
	comp=Z,6.2nm,1.1s						
KBL	Kabul	67.90	352	P	P	20 15 09.8	-1.6
KBL				IAmb	IAmb	20 15 19.0	
	comp=Z,5.3nm,1.0s						
BTK	Batken	73.19	354	P	P	20 15 45.5	+2.1
BTK				IAmb	IAmb	20 15 46.9	
	comp=Z,8.7nm,1.4s						
AAK	Ala-Archa	75.53	357	P	P	20 15 57.1	0.0
MK31	Makanchi Array	79.72	3	P	P	20 16 19.3	-0.8
MKAR	Makanchi Array	79.72	3	P	P	20 16 19.1	-1.1
	comp=Z,0.7nm,0.8s,baz=191,slow=7.0,SNR=3.2						
BRTR	Keskin Array B	83.37	327	P	P	20 16 41.7	+1.8
	comp=Z,2.1nm,0.9s,baz=171,slow=6.4,SNR=3.7						
SONM	Songino Array	84.59	19	P	P	20 16 45.7	-0.1
	comp=Z,0.4nm,0.6s,baz=197,slow=6.3,SNR=3.6						
TORD	Torodi Ar. Bea	85.97	288	P	P	20 16 52.7	-0.6
	comp=Z,0.9nm,0.9s,baz=99,slow=4.2,SNR=4.0						
TORD				LR	LR	20 53 21.0	
	comp=Z,102nm,19.5s,baz=85,slow=34						
TORD	Torodi Ar. Bea	85.97	288	IAmb	IAmb	20 17 18.5	
	comp=Z,4.5nm,1.2s						
ZAA0	Zalesovo Array	86.99	4	P	P	20 16 56.8	-0.6
ZALV	Zalesovo Beam	86.99	4	P	P	20 16 57.4	0.0
	comp=Z,1.8nm,0.5s,baz=187,slow=5.2,SNR=11						
ZALV				LR	LR	20 53 57.6	
	comp=Z,44nm,19.9s,baz=216,slow=34						
ZALV	Zalesovo Beam	86.99	4	P	P	20 16 56.3	-1.1
DBIC	Dimbokro	87.66	279	LR	LR	20 52 12.9	
	comp=Z,76nm,21.3s,baz=160,slow=33						

IDC 26 20:04:21.4±8.4**, 26°.12N**×**142°.06E, h0^{km}, mb4.1**/5**, mb1 4.2**/5**, mb1mx3.6**/52**, mbtmp4.1**/5**, Error ellipse: s-maj=196.8km s-min=99.7km az=178.0, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	35.34	317	P	P	20 11 19.3	+0.7
	0.6nm,0.4s,baz=129,slow=9.6,SNR=5.6						
ZALV	Zalesovo Beam	50.15	320	P	P	20 13 17.5	-1.0
	0.8nm,0.4s,baz=111,slow=7.9,SNR=2.8						
MKAR	Makanchi Array	51.01	310	P	P	20 13 24.9	-0.2
	0.5nm,0.4s,baz=84,slow=10,SNR=12						
NRIK	Noril'sk	53.51	339	P	P	20 13 43.0	-0.4
	1.6nm,0.4s,baz=90,slow=3.0,SNR=3.7						
FINES	FINESS Array B	78.77	334	P	P	20 16 26.0	+0.3
	10.0nm,1.1s,baz=60,slow=4.6,SNR=7.1						

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*IDC **26** 20:08:23.7±0.7, 52°.70N×34°.36W, h0^{km}, mb3.8/15, mb1 4.1/18, mb1mx3.9/49, mbtmp3.9/18, ML3.6/3, MS3.4/13, Ms1 3.4/13, ms1mx3.1/46, Error ellipse: s-maj=20.5km s-min=14.8km az=6.0*
*NEIC **26** 20:08:25.4±1.8, 52°.7N±0°.1×34°.4W±0°.2, h10^{km}±2^{km}, mb4.5/29, Error ellipse: s-maj=21.3km s-min=16.6km az=187.0*
*OTT **26** 20:08:28.4±0.5, 53°.01N×34°.73W, h18^{km}, ML4.9/3, Atlantic Ocean. 1380km northeast from Bonavista, Nl*
ISC 26 20:08:24.9±0.5**, 52°.63N**±0°.10×**34°.40W**±0°.06**, h10^{km}, n70, σ1^{s}.14**/59**, mb4.3**/28**, MS3.3**/11**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRS	Narsarsuaq	10.45	329	Pn	Pn	20 10 54.2	-0.4
SJNN	Saint John's	12.76	254	PN	Pn	20 11 25.6	-0.6
SJNN				SN	Sn	20 13 37.6	-11
SJNN				Trac		20 13 41.2	
	comp=Z,146nm,1.0s						
H07N1	FLORES T-PHASE	13.13	169	T	T	20 25 20.9	
	SNR=18						
DRLN	Deer Lake	14.94	266	Pn	Pn	20 11 53.0	-2.9
DRLN	Deer Lake	14.94	266	PN	Pn	20 11 53.7	-2.2
DRLN				SN	Sn	20 14 27.4	-14
DRLN				Trac		20 14 31.9	
	comp=Z,20nm,0.5s						
SFJD	Kangerlussuaq	16.47	337	Pn	Pn	20 12 13.9	-1.8
	0.3nm,0.3s,baz=151,slow=5.2,SNR=2.5						
SFJD				LR	LR	20 17 25.2	
	comp=Z,125nm,18.4s,baz=124,slow=33						
SFJD	Kangerlussuaq	16.47	337	IAmb	IAmb	20 12 20.2	
	comp=Z,47nm,1.4s						
ICESG	Greenland Ices	16.71	353	i P	P	20 12 25.7	+4.3
CHEG	Cheticamp, Nov	17.91	262	PN	Pn	20 12 33.6	-0.3
CHEG				SN	Sn	20 15 39.3	-14
CHEG				Trac		20 15 44.2	
	comp=Z,447nm,2.6s						
EKA	Eskdalemuir Ar	18.49	69	P	P	20 12 39.9	-0.9
	baz=282,slow=9.3,SNR=17						
GBN	Guysborough	19.12	259	P	P	20 12 46.1	-1.6
GBN	Guysborough	19.12	259	PN	Pn	20 12 49.1	+0.6
GBN				SN	Sn	20 16 08.5	-14
GBN				SN	S	20 16 08.7	-16
GBN				Trac		20 16 15.3	
	comp=Z,2.3nm,0.2s						
SCHQ	Schefferville	19.23	290	P	P	20 12 48.0	-0.9
	comp=Z,0.3nm,0.3s,baz=102,slow=5.2,SNR=4.3						
SCHQ				LR	LR	20 18 51.5	
	comp=Z,130nm,19.7s,baz=102,slow=33						
SCHQ	Schefferville	19.23	290	IAmb	IAmb	20 12 54.7	
	comp=Z,17nm,1.2s						
SCHQ	Schefferville	19.23	290	PN	Pn	20 12 51.0	+1.2
SUMG	Summit	20.10	356	i P	P	20 12 58.0	-0.8
SUMG	Summit	20.10	356	P	P	20 12 58.8	0.0
ICQ	Pointe Anglais	20.79	275	PN	P	20 13 07.2	+1.3
LMN	Caledonia Moun	20.87	263	P	P	20 13 08.4	+1.5
LMN				IAmb	IAmb	20 13 24.1	
	comp=Z,31nm,1.2s						
D62A	Allapoint, All	22.87	270	P	P	20 13 29.1	+0.9
D62A				IAmb	IAmb	20 13 34.0	
	comp=Z,15nm,1.0s						
F64A	Sherman	23.02	267	P	P	20 13 30.4	+0.6
F64A				IAmb	IAmb	20 13 31.9	
	comp=Z,15nm,1.1s						
E62A	Clayton Lake	23.37	269	P	P	20 13 33.0	-0.4
ESDC	Sonseca Array	24.53	110	P	P	20 13 44.8	+0.2
	comp=Z,1.1nm,0.9s,baz=306,slow=10,SNR=4.5						
ESDC				LR	LR	20 21 15.0	
	comp=Z,78nm,18.5s,baz=275,slow=31						
NEEM	North Greenlan	25.68	352	i P	P	20 13 56.1	+1.3
NB2	NORSAR Subarra	25.84	53	P	P	20 13 55.1	-1.0
	comp=Z,15nm,1.4s,baz=271,slow=9.3						
NOA	NORSAR Array B	25.84	53	P	P	20 13 55.7	-0.4
	comp=Z,2.5nm,0.9s,baz=273,slow=9.5,SNR=4.0						
NOA				LR	LR	20 22 26.0	
	comp=Z,51nm,18.6s,baz=270,slow=33						
HFS	Hagfors	27.12	55	LR	LR	20 22 14.3	
	comp=Z,70nm,19.1s,baz=360,slow=31						
CLL	Collm	28.82	73	eP	P	20 14 23.0	+0.1
	comp=Z,3.0nm,0.7s						
CLL				e		20 14 27.0	
DAVOX	Davos/Dischmat	28.86	84	LR	LR	20 25 57.2	
	comp=Z,67nm,18.1s,baz=181,slow=36						
MDT	Midelt	29.18	121	LR	LR	20 23 31.1	
	comp=Z,37nm,19.4s,baz=20,slow=31						
GERES	GERESS Array B	30.22	78	P	P	20 14 35.3	-0.2
	comp=Z,0.9nm,0.6s,baz=306,slow=8.0,SNR=7.6						
ARCES	ARCESS Array B	31.83	35	P	P	20 14 48.2	-1.2
	comp=Z,2.6nm,0.8s,baz=256,slow=7.3,SNR=9.7						
ARCES	ARCESS Array B	31.83	35	IAmb	IAmb	20 15 17.1	
	comp=Z,7.1nm,1.3s						
N54A	Moraine State	32.78	268	P	P	20 14 58.4	+0.4
FINES	FINESS Array B	32.91	50	P	P	20 14 58.2	-0.6
	comp=Z,1.7nm,0.7s,baz=258,slow=7.0,SNR=4.6						
FINES				LR	LR	20 26 25.9	
	comp=Z,64nm,20.3s,baz=307,slow=33						
PABE	Paberze	33.51	61	P	P	20 15 04.4	+0.3
BURAR	Bucovina Array	37.59	73	P	P	20 15 40.1	+0.7
AKASG	Malin Array Be	38.37	67	LR	LR	20 30 56.0	
	comp=Z,42nm,18.0s,baz=255,slow=35						
AGG	Agios Georgios	40.75	86	P	P	20 16 04.7	-1.1
A36M	Sachs Harbour	41.36	332	P	P	20 16 10.7	+0.3
H05N1	Guadeloupe/Mar	41.89	220	T	T	21 01 11.8	
	SNR=12						
WHAR	Wooly Hollow	43.87	270	P	P	20 16 31.3	+0.1
WHAR				IAmb	IAmb	20 16 58.0	
	comp=Z,17nm,1.5s						
X40A	Basin Creek Fa	44.74	270	P	P	20 16 38.1	-0.1
X40A				IAmb	IAmb	20 16 59.5	
	comp=Z,6.4nm,1.1s						
KOWA	Kowa	45.05	136	P	P	20 16 40.9	+0.1
	comp=Z,1.3nm,0.7s,baz=284,slow=4.2,SNR=2.0						
INK	Inuvik	45.58	329	P	P	20 16 43.8	-0.6
	comp=Z,0.5nm,0.3s,baz=72,slow=2.6,SNR=2.7						
BRTR	Keskin Array B	47.12	77	P	P	20 16 58.2	+1.1
	comp=Z,1.6nm,0.6s,baz=295,slow=7.4,SNR=4.0						
TORD	Torodi Ar. Bea	48.77	130	P	P	20 17 09.9	-0.1
	comp=Z,1.0nm,0.8s,baz=330,slow=7.1,SNR=4.2						
TOLK	Toolik Lake Re	50.01	334	P	P	20 17 19.2	+0.3
TOLK				IAmb	IAmb	20 17 19.6	
	comp=Z,5.0nm,0.9s						
NEW	Newport	50.11	300	P	P	20 17 20.2	+0.3
	comp=Z,0.6nm,0.7s,baz=112,slow=16,SNR=1.5						
AHID	Auburn Hatcher	50.24	291	P	P	20 17 20.0	-1.2
AHID				IAmb	IAmb	20 17 38.6	
	comp=Z,4.8nm,0.9s						
HWUT	Hardware Ranch	51.25	290	P	P	20 17 26.2	-2.5
HWUT				IAmb	IAmb	20 17 39.9	
	comp=Z,5.2nm,0.7s						
ILAR	Eielson Array	51.95	330	P	P	20 17 33.9	+0.4
	comp=Z,1.1nm,0.8s,baz=46,slow=3.7,SNR=10.0						
ILAR				PcP	PcP	20 18 46.9	+1.2
	comp=Z,0.4nm,0.9s,baz=20,slow=2.9,SNR=1.7						
MLY	Manley	52.92	332	P	P	20 17 40.8	+0.1
H21K	Melozitna Rive	53.05	333	P	P	20 17 41.5	-0.1
H21K				IAmb	IAmb	20 17 53.1	
	comp=Z,6.6nm,1.4s						
IMAR	Indian Mountai	53.06	333	P	P	20 17 41.3	-0.3
I21K	Tanana	53.17	332	P	P	20 17 43.0	+0.5
I21K				IAmb	IAmb	20 17 49.8	
	comp=Z,5.9nm,1.2s						
TXAR	Lajitas Array	54.92	274	P	P	20 17 55.3	-0.6
	comp=Z,0.3nm,0.7s,baz=70,slow=7.6,SNR=3.7						
ABKAR	Akbulak array	55.34	53	P	P	20 17 56.9	-1.6
TIXI	Tiksi	55.46	6	P	P	20 18 00.0	+1.0
TIXI				IAmb	IAmb	20 18 03.5	
	comp=Z,3.4nm,0.8s						
X16A	Lo Mia Camp, P	56.01	284	P	P	20 18 03.2	-0.5
X16A				IAmb	IAmb	20 18 14.6	
	comp=Z,5.9nm,1.0s						
ROSC	El Rosal	57.84	229	P	P	20 18 18.4	+1.3
	comp=Z,8.9nm,0.4s,baz=39,slow=21,SNR=5.4						
ROSC				LR	LR	20 40 19.4	
	comp=Z,20nm,21.6s,baz=64,slow=33						
ZALV	Zalesovo Beam	62.38	36	P	P	20 18 47.8	+0.5
	comp=Z,0.2nm,0.3s,baz=346,slow=3.6,SNR=1.5						
SEY	Seymchan	64.66	357	LR	LR	20 46 41.0	
	comp=Z,34nm,18.1s,baz=91,slow=36						
MKAR	Makanchi Array	67.18	42	P	P	20 19 18.6	-0.1
	comp=Z,1.6nm,0.7s,baz=336,slow=4.9,SNR=11						
GAR	Garm	67.90	54	P	P	20 19 24.1	+0.5
SONM	Songino Array	74.48	26	P	P	20 20 03.6	+0.4
	comp=Z,0.7nm,0.9s,baz=318,slow=4.6,SNR=3.8						
PLCA	Paso Flores	98.12	207	LR	LR	21 07 02.4	
	comp=Z,38nm,19.0s,baz=341,slow=36						
CMAR	Chiang Mai Arr	98.49	44	LR	LR	21 07 16.3	
	comp=Z,16nm,18.5s,baz=203,slow=36						
WRA	Warramunga Arr	146.22	19	PKPbc	PKPbc	20 28 05.2	-0.2
	comp=Z,0.9nm,0.8s,baz=337,slow=3.1,SNR=3.5						
ASAR	Alice Springs	149.74	22	PKPbc	PKPbc	20 28 14.0	-0.8
	comp=Z,0.4nm,0.7s,baz=333,slow=2.0,SNR=3.6						

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*IDC **26** 20:30:20.9±1.8, 6°.44S×131°.04E, h0^{km}, mb3.8/4, mb1 3.7/6, mb1mx3.5/38, mbtmp3.7/6, ML3.4/2, Error ellipse: s-maj=122.2km s-min=28.6km az=74.0*
ISC 26 20:30:21.1±0.9**, 6°.13S**±0°.07×**132°.3E**±0°.1**, h10^{km}, n13, σ2^{s}.67**/14**, mb3.9**/4**, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.08	208	P	Pg	20 31 04.7	+3.7
FAKI	Fak Fak	3.19	360	P	Pn	20 31 12.5	+1.1
DRS	Darwin Rock St	6.40	192	P	Pn	20 31 59.3	+3.7
KDU	Kakadu	6.51	178	P	Pn	20 31 59.7	+2.6
SANI	Sanana	7.47	303	P	Pn	20 32 07.9	-2.3
SOEI	Soe	8.71	245	P	Pn	20 32 26.8	-0.6
KNRA	Kununurra	10.09	200	P	Pn	20 32 46.6	+0.4
WRA	Warramunga Arr	13.87	172	Pn	Pn	20 33 36.0	-1.9
	0.2nm,0.3s,baz=349,slow=13,SNR=4.7						
WRA				Sn	Sn	20 36 06.8	-5.5
	0.1nm,0.3s,baz=358,slow=23,SNR=2.6						
ASAR	Alice Springs	17.50	175	P	P	20 34 26.1	-0.5
	0.2nm,0.3s,baz=352,slow=13,SNR=12						
SONM	Songino Array	58.38	340	P	P	20 40 17.4	+0.6
	0.3nm,0.7s,baz=157,slow=4.2,SNR=2.5						
MKAR	Makanchi Array	68.77	326	P	P	20 41 24.8	-0.6
	0.7nm,0.3s,baz=113,slow=8.0,SNR=24						
ZALV	Zalesovo Beam	71.83	333	P	P	20 41 42.9	-1.0
	0.7nm,0.6s,baz=116,slow=6.6,SNR=4.8						
KURBB	Kurchatov Arra	72.98	328	P	P	20 41 49.6	-1.3
	0.5nm,0.4s,baz=125,slow=5.3,SNR=6.6						

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*NEIC **26** 20:50:46.3±1.2, 10°.6S±0°.1×71°.2W±0°.2, h602^{km}±11^{km}, mb4.2/6, Error ellipse: s-maj=25.4km s-min=19.0km az=53.0*
*IDC **26** 20:50:47.5±3.7, 10°.69S×70°.88W, h616^{km}±39^{km}, mb3.4/2, mb1 3.2/3, mb1mx2.7/27, mbtmp4.1/3, Error ellipse: s-maj=67.9km s-min=45.6km az=140.0*
*VAO **26** 20:50:48.3±0.5, 10°.44S×70°.92W, h590^{km}±7^{km}, mb3.8*
ISC 26 20:50:46.0±0.7**, 10°.56S**±0°.09×**71°.1W**±0°.1**, h602^{km}, n42, σ1^{s}.16**/41**, mb4.2**/3**, Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CZSB	Cruzeiro do Su	3.22	331	eP	P	20 52 07.3	+0.6
CZSB	Cruzeiro do Su	3.22	331	P	P	20 52 07.3	+0.6
ETMB	Extrema	4.88	82	eP	P	20 52 19.0	+0.8
ETMB	Extrema	4.88	82	P	P	20 52 18.8	+0.6
LPAZ	La Paz	6.39	153	P	P	20 52 32.6	+1.2
	0.4nm,0.3s,baz=360,slow=8.1,SNR=17						
LPAZ				S	S	20 53 56.0	-1.5
	0.1nm,0.3s,baz=114,slow=16,SNR=3.7						
LPAZ	La Paz	6.39	153	eP	P	20 52 32.8	+1.4
TBTG	Tabatinga, AM	6.44	11	eP	P	20 52 31.6	+0.3
PB16	IPOC Station P	7.89	169	P	P	20 52 45.1	+0.1
SAML	Samuel	7.98	79	P	P	20 52 45.8	+0.5
PB12	IPOC Station P	8.05	175	P	P	20 52 44.5	-1.4
PB11	IPOC Station P	9.26	171	P	P	20 52 57.7	0.0
PB08	IPOC Station P	9.72	169	P	P	20 53 02.9	+0.5
VILB	Vilhena	10.95	104	eP	P	20 53 15.0	+0.6
VILB	Vilhena	10.95	104	P	P	20 53 15.0	+0.6
LVC	Limon Verde	12.17	170	eP	P	20 53 29.4	+2.5
PTLB	Pontes e Lacer	12.65	114	eP	P	20 53 31.8	+0.6
PTLB	Pontes e Lacer	12.65	114	P	P	20 53 31.3	0.0
MACA	Manacapuru-AM	12.70	55	eP	P	20 53 31.5	-0.4
MACA	Manacapuru-AM	12.70	55	P	P	20 53 31.1	-0.8
OTAV	Otavalo	12.97	325	eP	P	20 53 37.2	+2.1
PDRB	Porto dos Gac	14.16	96	eP	P	20 53 46.6	+0.1
PTGA	Pitinga	14.77	49	P	P	20 53 52.2	+0.1
	baz=165,slow=20						
CLDB	Colider	15.06	93	eP	P	20 53 55.0	+0.2
SALV	Santo Antonio	15.93	111	eP	P	20 54 04.5	+1.8
NPGB	Novo Progresso	15.96	79	eP	P	20 54 03.4	+0.3
ITTB	Itaituba	16.44	69	eP	P	20 54 08.3	+0.8
BOAV	Boa Vista	16.64	40	eP	P	20 54 10.1	+0.9
BOAV	Boa Vista	16.64	40	P	P	20 54 10.9	+1.6
BOAV				IAmb	IAmb	20 54 11.7	
	comp=Z,4.6nm,0.7s						
PP1B	Ponte de Pedra	17.23	116	eP	P	20 54 16.7	+2.1
ZARC	Zaragoza, Cauc	18.31	348	P	P	20 54 24.6	0.0
ZARC				IAmb	IAmb	20 54 25.1	
	comp=Z,3.2nm,1.1s						
MALB	Monte Alegre	18.84	64	eP	P	20 54 30.4	+1.0
T47A	Sharon Grove	49.62	343	P	P	20 58 40.8	-2.9
P46A	Rosedale	52.11	344	P	P	20 59 00.8	-0.8
P46A				IAmb	IAmb	20 59 09.4	
	comp=Z,16nm,0.9s						
DBIC	Dimbokro	68.15	78	P	P	21 00 47.3	-0.6
	comp=Z,3.8nm,0.9s,baz=233,slow=2.0,SNR=3.7						
DBIC	Dimbokro	68.15	78	IAmb	IAmb	21 00 49.9	
	comp=Z,24nm,1.4s						
TORD	Torodi Ar. Bea	76.00	74	P	P	21 01 32.6	-0.6
	comp=Z,0.9nm,0.3s,baz=256,slow=5.6,SNR=18						
TORD	Torodi Ar. Bea	76.00	74	IAmb	IAmb	21 01 33.1	
	comp=Z,1.4nm,0.8s						
ZALV	Zalesovo Beam	132.65	19	PKP	PKPdf	21 08 53.6	+0.4
	comp=Z,0.6nm,0.6s,baz=253,slow=1.5,SNR=3.9						
KURK	Kurchatov	132.88	26		PKPdf	21 08 54.5	+0.8
KURBB	Kurchatov Arra	132.91	26	PKP	PKPdf	21 08 54.5	+0.7

	comp=Z,0.2nm,0.5s,baz=300,slow=2.6,SNR=5.7						
WRA	Warramunga Arr	140.67	220	PKP	PKiKP	21 09 10.6	-1.3
	comp=Z,0.4nm,0.3s,baz=154,slow=1.3,SNR=6.1						
SONM	Songino Array	142.78	3	PKP	PKPdf	21 09 10.5	-1.6
	comp=Z,0.4nm,0.3s,baz=324,slow=2.7,SNR=9.4						

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*IDC **26** 21:00:42.1±2.1, 17°.58S×177°.99W, h467^{km}±22^{km}, mb2.9/5, mb1 3.2/6, mb1mx3.0/40, mbtmp3.8/6, Error ellipse: s-maj=37.0km s-min=23.1km az=140.0*

*NEIC **26** 21:00:43.9±2.6, 17°.7S±0°.2×178°.19W±0°.09, h429^{km}±10^{km}, mb4.1/11, Error ellipse: s-maj=24.0km s-min=12.1km az=187.0*

ISC 26 21:00:41.5±0.8**, 17°.4S**±0°.1×**177°.9W**±0°.1**, h450^{km}, n26, σ1^{s}24**/23**, mb4.0**/10**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.85	265	P	P	21 01 56.6	+1.1
	10nm,0.3s,baz=111,slow=13,SNR=31						
MSVF	Nonsavu	3.85	265	P	P	21 01 56.8	+1.3
NIUE	Niue	7.78	104	P	P	21 02 34.6	0.0
PINNC	Pines Island,	14.69	247	P	P	21 03 48.0	-1.3
OUZ	Omahuta	19.28	201	P	P	21 04 36.4	+0.2
OUZ				IAmb	IAmb	21 04 37.4	
	comp=Z,5.5nm,1.0s						
URZ	Urewera	21.22	191	P	P	21 04 51.9	-1.9
	comp=Z,2.0nm,0.3s,baz=308,slow=20,SNR=1.5						
URZ	Urewera	21.22	191	P	P	21 04 52.5	-1.3
URZ				IAmb	IAmb	21 05 10.7	
	comp=Z,10nm,1.0s						
PLWZ	Palliser	24.78	192	P	P	21 05 26.1	+0.3
TUWZ	Tuamarina	24.93	195	P	P	21 05 28.5	+1.3
MLZ	Mavora Lakes	30.22	200	P	P	21 06 14.8	+1.2
MLZ				IAmb	IAmb	21 06 28.2	
	comp=Z,7.0nm,1.1s						
DCZ	Deep Cove	30.62	201	P	P	21 06 15.3	-1.8
DCZ				IAmb	IAmb	21 06 17.0	
	comp=Z,41nm,1.2s						
WHZ	Wether Hill Ro	30.74	199	P	P	21 06 19.8	+1.6
WHZ				IAmb	IAmb	21 06 25.9	
	comp=Z,15nm,1.2s						
BBOO	Buckleboo	44.05	241	P	P	21 08 08.3	+0.3
BBOO				IAmb	IAmb	21 08 14.7	
	comp=Z,9.1nm,1.1s						
WB0	Warramunga Arr	45.14	259	P	P	21 08 16.6	-0.2
WB2	Warramunga Arr	45.17	259	P	P	21 08 17.0	+0.1
WRA	Warramunga Arr	45.18	259	P	P	21 08 15.9	-1.1
	comp=Z,0.2nm,0.3s,baz=95,slow=7.6,SNR=6.4						
ASAR	Alice Springs	45.37	254	P	P	21 08 16.6	-1.9
	comp=Z,1.4nm,0.5s,baz=88,slow=8.1,SNR=14						
ASAR	Alice Springs	45.37	254	P	P	21 08 19.0	+0.4
FAKI	Fak Fak	50.94	281	P	P	21 09 01.5	+1.1
FAKI				IAmb	IAmb	21 09 02.6	
	comp=Z,7.9nm,1.0s						
VNDA	Vanda	60.97	185	P	P	21 10 11.2	+1.9
NVAR	Mina Array Bea	78.75	44	P	P	21 11 57.0	+0.3
	comp=Z,0.3nm,0.7s,baz=220,slow=8.3,SNR=3.9						
319A	Douglas	81.76	54	P	P	21 12 18.9	+6.4
ILAR	Eielson Array	85.30	13	P	P	21 12 28.2	-1.1
	comp=Z,0.1nm,0.3s,baz=228,slow=5.1,SNR=1.3						
TX32	Lajitas Array	85.34	57		pwP	21 14 15.8	+1.3
KAN10	Anthony SW Sta	92.52	52	P	P	21 13 11.9	+8.1
ARCES	ARCESS Array B	125.91	350	PKP	PKPdf	21 18 49.9	-0.8
	comp=Z,2.9nm,1.0s,baz=24,slow=3.3,SNR=1.2						

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*EAF **26** 21:05:47.5±3.8, 22°.51S×32°.19E, h10^{km}, MD3.7*

BUL 26 21:05:46.5±2.1**, 22°.60S×32°.21E, h10^{km}, MD4.0, Mozambique**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOPA	Mopani	1.18	219	*e*P	Pg	21 06 10.4	+1.2
MOPA				*e*S	Sn	21 06 28.5	+3.2
MOPA	Mopani	1.18	219	*e*P	Pg	21 06 10.4	+1.2
MOPA				*e*S	Sn	21 06 28.5	+3.2
MSNA	Messina	2.04	277	*e*P	Pn	21 06 17.8	-3.1
MSNA				*e*S	Sn	21 06 45.5	-0.9
MSNA	Messina	2.04	277	*e*P	Pn	21 06 17.8	-3.1
MSNA				*e*S	Sn	21 06 45.5	-0.9
MATP	Matopo	4.07	301	*e*P	Pn	21 06 49.5	+0.5
MATP				*e*S	Sn	21 07 34.6	-2.2
MATP	Matopo	4.07	301	*e*P	Pn	21 06 49.5	+0.5
MATP				*e*S	Sn	21 07 34.6	-2.2
KRI	Karoi	6.23	337	*e*S	Sn	21 08 10.0	-20
KRI	Karoi	6.23	337	*e*S	Sn	21 08 10.0	-20
KRI	Karoi	6.23	337	*e*P	Pn	21 07 09.1	-10
KRI	Karoi	6.23	337	*e*P	Pn	21 07 09.1	-10
LBTB	Lobatse	6.51	247	*e*P	Pn	21 07 22.0	-0.6
LBTB				*e*S	Sn	21 08 31.3	-5.7
LBTB	Lobatse	6.51	247	*e*P	Pn	21 07 22.0	-0.6
LBTB				*e*S	Sn	21 08 31.3	-5.7
BOSA	Boshof	8.67	225	*e*P	Pn	21 07 48.9	-3.3
BOSA				*e*S	Sn	21 09 20.8	-9.3
BOSA	Boshof	8.67	225	*e*P	Pn	21 07 48.9	-3.3
BOSA				*e*S	Sn	21 09 20.8	-9.3

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*IDC **26** 21:10:18.5±1.4, 31°.99S×72°.07W, h0^{km}, mb3.8/3, mb1 3.9/5, mb1mx3.7/22, mbtmp3.7/5, ML3.8/2, Error ellipse: s-maj=47.7km s-min=34.8km az=85.0*

*GUC **26** 21:10:20.6±0.8, 32°.05S×72°.24W, h37^{km}±2^{km}, ML3.5*

ISC 26 21:10:20.8±1.3**, 32°.05S**±0°.05×**72°.3W**±0°.1**, h46^{km}**±13^{km}**, n27, σ1^{s}58**/36**, mb3.7**/3**, 2C, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA06	Catapilco	1.01	121	*e*P	Pn	21 10 37.1	-1.4
VA06				*i* S	Sn	21 10 50.0	-1.7
VA06				IAML		21 10 54.2	
	comp=N,3µm,0.4s						
VA01	Torpederas	1.13	150	*e*P	Pn	21 10 39.3	-0.9
VA01				*i* S	Sn	21 10 54.3	-0.2
ROCH	El Roble	1.44	130	*e*P	Pn	21 10 44.1	-0.6
ROCH				*e*P	Pn	21 10 44.0	-0.8
ROCH				*i* S	Sn	21 11 02.2	-0.4
ROCH				IAML		21 11 07.7	
	comp=N,1µm,0.5s						
ROCH				IAML		21 11 07.8	
	comp=N,2µm,0.5s						
CO06	Fray Jorge	1.49	24	*e*P	Pn	21 10 45.1	-0.1
CO06				IAML		21 11 18.1	
	comp=E,822nm,0.7s						
MT02	Curacav	1.57	141	*e*P	Pn	21 10 45.9	-0.3
VA03	San Esteban	1.66	116	*e*P	Pn	21 10 47.3	-0.3
VA03				*i* S	Sn	21 11 07.4	-0.5
VA03				IAML		21 11 15.2	
	comp=E,3µm,0.3s						
VA05	Santo Domingo	1.71	160	*e*P	Pn	21 10 47.8	-0.4
VA05				IAML		21 11 23.7	
	comp=E,912nm,0.3s						
PEL	Peldehue	1.76	129	*e*P	Pn	21 10 48.8	-0.1
PEL				*i* S	Sn	21 11 09.8	-0.4
PEL				IAML		21 11 13.1	
	comp=E,949nm,0.3s						
MT05	Renca	1.89	135	*e*P	Pn	21 10 50.8	0.0
MT05				*i* S	Sn	21 11 13.3	-0.2
MT01	Popeta	2.02	154	*e*P	Pn	21 10 52.2	-0.2
MT01				*i* S	Sn	21 11 16.6	0.0
MT01				IAML		21 11 31.7	
	comp=E,338nm,0.4s						
MT09	Talagante	2.06	147	*e*P	Pn	21 10 53.3	+0.3
MT09				*i* S	Sn	21 11 18.1	+0.5
MT09				IAML		21 11 29.0	
	comp=N,602nm,0.3s						
GO04	Tololo Observa	2.28	35	*e*P	Pn	21 10 56.8	+0.5
GO04				*e*S	Sn	21 11 25.3	+2.0
CO05	La Serena	2.32	24	*e*P	Pn	21 10 57.1	+0.6
BO04	La Punta	2.41	144	*e*P	Pn	21 10 58.6	+0.7
BO04				*i* S	Sn	21 11 26.6	+0.4
BO04				IAML		21 11 43.7	
	comp=E,298nm,0.3s						
LMEL	Las Melosas	2.53	136	⇑*i*P	Pn	21 11 00.7	+1.1
LMEL				*i* S	Sn	21 11 29.4	+0.1
LMEL				IAML		21 11 46.2	
	comp=E,246nm,0.5s						
BO01	Tunca	2.56	156	*e*P	Pn	21 10 60.0	+0.2
BO01				IAML		21 11 43.6	
	comp=N,114nm,0.2s						
GO05	Huala	2.97	174	*e*P	Pn	21 11 05.1	-0.4
BO02	Sierra Bellavi	3.03	155	⇑*i*P	Pn	21 11 06.9	+0.6
BO02				IAML		21 12 01.4	
	comp=N,335nm,0.6s						
H03N1	Juan Fernandez	5.72	254	T	T	21 18 37.2	
	baz=82,slow=73,SNR=116						
H03N3	Juan Fernandez	5.73	254	T	T	21 18 37.4	
	baz=82,slow=73,SNR=107						
H03N2	Juan Fernandez	5.74	254	T	T	21 18 37.7	
	baz=82,slow=73,SNR=93						
PLCA	Paso Flores	8.78	171	Pn	Pn	21 12 27.4	+2.1
	comp=N,0.2nm,0.3s,baz=349,slow=10,SNR=6.0						
LPAZ	La Paz	16.15	15	Pn	P	21 14 06.3	-1.6
	comp=N,0.2nm,0.3s,baz=198,slow=6.4,SNR=2.1						
BDFB	Brasilia	27.49	59	P	P	21 16 05.2	+2.0
	comp=N,1.0nm,0.3s,baz=229,slow=11,SNR=2.0						
TXAR	Lajitas Array	67.92	331	P	P	21 21 19.7	+4.8
	comp=N,0.2nm,0.6s,baz=143,slow=9.1,SNR=2.4						
TORD	Torodi Ar. Bea	83.78	70	P	P	21 22 48.8	+3.3
	comp=N,0.6nm,0.8s,baz=244,slow=5.2,SNR=2.8						
ZALV	Zalesovo Beam	152.69	30	PKPbc	PKPab	21 30 16.3	-6.5
	comp=N,2.6nm,0.5s,baz=308,slow=2.8,SNR=16						
ZALV				PKPab	pPKPbc	21 30 25.8	+1.1
	comp=N,1.9nm,0.7s,baz=299,slow=3.6,SNR=7.2						

MAN 26 21:13:35.6, 13°.90N×120°.60E, h6^{km}, mb3.5, ML2.1, MS1.5, Mindoro

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MAN 26 21:34:55.1, 10°.06N×123°.19E, h1^{km}, mb3.7, ML2.4, MS1.9, Cebu

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NOU 26 21:43:10.0, 20°.29S×169°.09E, h7^{km}, ML3.6/10**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARNC	Mare, Loyalty	1.54	220	P	Pn	21 43 36.9	-1.1
LIFNC	LIFOU	1.80	254	P	Pn	21 43 40.3	-1.2
RTV	Rentapao	2.56	346	P	Pn	21 43 52.5	+0.5
YATNC	Mamie plateau,	2.70	229	P	Pn	21 43 52.7	-1.2
OUENC	Ouen Island, N	2.98	224	P	Pn	21 43 58.5	+0.8
DZM	Mont Dzumac	3.04	234	P	Pn	21 43 58.3	-0.3
NOUC	Port Laguerre	3.16	235	P	Pn	21 44 01.1	+0.9
KOUNC	Koumac, New Ca	4.51	266	P	Pn	21 44 19.7	+0.9

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*NEIC **26** 22:23:23.4±1.4, 17°.6S±0°.1×177°.4W±0°.1, h585^{km}±12^{km}, mb4.2/20, Error ellipse: s-maj=19.5km s-min=16.9km az=72.0*

*IDC **26** 22:23:32.2±2.3, 17°.31S×178°.84W, h586^{km}±19^{km}, mb3.2/5, mb1 3.4/7, mb1mx3.0/40, mbtmp4.1/7, Error ellipse: s-maj=69.7km s-min=22.7km az=143.0*

ISC 26 22:23:23.8±0.7**, 17°.7S**±0°.1×**177°.40W**±0°.08**, h600^{km}, n31, σ1^{s}71**/32**, mb4.1**/13**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.34	269	P	P	22 24 50.2	-1.6
	2.8nm,0.3s,baz=122,slow=9.2,SNR=17						
MSVF	Nonsavu	4.34	269	P	P	22 24 50.4	-1.4
NIUE	Niue	7.22	102	P	P	22 25 15.8	0.0
NIUE				S	S	22 26 44.6	-3.0
LIFNC	LIFOU	14.82	256	P	P	22 26 28.7	-1.7
PINNC	Pines Island,	15.04	249	P	P	22 26 32.1	-0.2
PINNC				IAmb	IAmb	22 26 46.2	
	comp=Z,37nm,1.0s						
DZM	Mont Dzumac	15.80	251	P	P	22 26 38.0	-1.4
	comp=Z,0.4nm,0.3s,baz=56,slow=15,SNR=2.3						
DZM	Mont Dzumac	15.80	251	P	P	22 26 36.8	-2.7
DZM				IAmb	IAmb	22 26 39.8	
	comp=Z,4.6nm,0.7s						
KHZ	Kahutara	25.80	196	P	P	22 28 08.6	-0.2
FOZ	Fox Glacier	27.92	200	P	P	22 28 28.9	+1.5
EIDS	Eidsvold	30.24	250	P	P	22 28 46.0	-1.7
EIDS				IAmb	IAmb	22 29 03.4	
	comp=Z,7.6nm,1.1s						
ARMA	Armidale	30.87	240	P	P	22 28 53.1	0.0
ARMA				IAmb	IAmb	22 29 00.8	
	comp=Z,8.0nm,1.1s						
PATS	Pohnpei	34.22	313	P	P	22 29 18.7	-2.7
CTAO	Charters Tower	34.43	260	P	P	22 29 21.7	-1.4
TOO	Toolangi	38.04	231	P	P	22 29 52.9	+0.4
COEN	Coen	38.07	270	P	P	22 29 52.6	-0.4
COEN				IAmb	IAmb	22 29 53.0	
	comp=Z,5.4nm,0.7s						
STKA	Stephens Creek	39.57	241	P	P	22 30 06.0	+1.2
	comp=Z,1.7nm,0.6s,baz=93,slow=13,SNR=5.5						
STKA	Stephens Creek	39.57	241	P	P	22 30 05.9	+1.1
KIP	Kipapa	43.29	27	P	P	22 30 33.5	-0.7
BBOO	Buckleboo	44.34	241	P	P	22 30 43.3	+1.0
BBOO				IAmb	IAmb	22 31 03.0	
	comp=Z,9.8nm,1.0s						
WB0	Warramunga Arr	45.58	259	P	P	22 30 51.3	-0.6
WB2	Warramunga Arr	45.60	259	P	P	22 30 51.4	-0.6
WRA	Warramunga Arr	45.62	259	P	P	22 30 51.5	-0.6
	comp=Z,1.5nm,0.4s,baz=94,slow=6.8,SNR=29						
AS31	Alice Springs	45.77	254	P	P	22 30 53.5	+0.2
AS31				IAmb	IAmb	22 30 53.9	
	comp=Z,4.1nm,0.7s						
ASAR	Alice Springs	45.77	254	P	P	22 30 53.5	+0.1
	comp=Z,11nm,0.4s,baz=88,slow=8.1,SNR=199						
ASAR				PcP	PcP	22 32 22.2	+4.0
	comp=Z,0.3nm,0.4s,baz=100,slow=4.0,SNR=2.0						
FORT	Forrest	50.96	245	P	P	22 31 31.7	+0.2
FORT				IAmb	IAmb	22 31 40.0	
	comp=Z,19nm,1.1s						
KNRA	Kununurra	51.47	264	P	P	22 31 35.0	-0.4
KNRA				IAmb	IAmb	22 31 42.5	
	comp=Z,6.2nm,1.1s						
PSA00	Pilbara Seismi	58.89	255	P	P	22 32 27.7	+0.9
PSA00				IAmb	IAmb	22 32 37.5	
	comp=Z,8.6nm,1.1s						
GIRL	Giralia	63.87	253	P	P	22 32 59.6	+0.4
USRK	Ussuriysk Ar.	77.00	325	P	P	22 34 19.1	+3.2
	comp=Z,2.1nm,0.9s,baz=78,slow=3.0,SNR=2.2						
NVAR	Mina Array Bea	78.62	43	P	P	22 34 38.1	+13
	comp=Z,0.2nm,0.6s,baz=213,slow=8.2,SNR=1.7						
GERES	GERESS Array B	147.67	346	PKPbc	PKPab	22 42 09.9	+3.5
	comp=Z,0.3nm,0.5s,baz=338,slow=3.2,SNR=2.4						

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*SKHL **26** 22:28:44.0±0.4, 43°.60N×147°.50E, h69^{km}±7^{km}, mb5.1/4*

*MOS **26** 22:28:44.6±1.0, 43°.83N×147°.32E, h66^{km}, mb4.5/1, Error ellipse: s-maj=15.7km s-min=13.2km az=158.2*

*NIED **26** 22:28:44.8, 43°.66N×147°.32E, h28^{km}, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.37; $M_{\theta\theta}$1.22; $M_{\phi\phi}$-3.59; $M_{r\theta}$2.81; $M_{\theta\phi}$-3.01; $M_{\phi r}$-1.35; Fault plane solution: $M_0$5.34000×10^{14} NP1:ϕ_s62.00000°, δ61.00000°, λ146.00000°. NP2:ϕ_s170.00000°, δ61.00000°, λ34.00000°.*

*JMA **26** 22:28:44.8±0.3, 43°.66N×147°.32E, h28^{km}, M4.2*

*IDC **26** 22:28:48.5±3.8, 44°.04N×147°.25E, h75^{km}±28^{km}, mb3.3/8, mb1 3.6/10, mb1mx3.3/51, mbtmp3.7/10, Error ellipse: s-maj=61.1km s-min=20.4km az=169.0*

ISC 26 22:28:42.6±2.0**, 43°.72N**±0°.08×**147°.51E**±0°.07**, h30^{km}**±13^{km}**, n43, σ1^{s}46**/51**, mb3.6**/8**, 4D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK	Yuzh-Kuril'sk	1.23	285	d *i*PN	Pn	22 29 04.3	+0.6
YUK				*e*S	Sn	22 29 18.4	-0.9
YUK				pmax	pmax		
	comp=N,203nm,0.2s						
YUK				pmax	pmax		
	comp=Z,2µm,0.2s						
YUK				pmax	pmax		
	comp=E,144nm,0.1s						
YUK				smax	smax		
	comp=N,2µm,0.3s						
YUK				smax	smax		
	comp=E,3µm,0.5s						
YUK	Yuzh-Kuril'sk	1.23	285	*i* P	Pn	22 29 04.0	+0.3
YUK				AMB	AMB	22 29 04.0	
	comp=E,2µm,0.4s						
YUK				*e*S	Sn	22 29 18.7	-0.6
YUK				A	A	22 29 19.0	
	comp=E,3µm,0.8s						
YUK				A	A	22 29 19.0	
	comp=E,4µm,0.8s						
GRPR	Tuman	1.29	283	d *i*PN	Pn	22 29 05.0	+0.6
GRPR				*i* S	Sn	22 29 19.7	-0.9
GRPR				pmax	pmax		
	comp=Z,485nm,0.2s						
GRPR				smax	smax		
	comp=N,1µm,0.2s						
GRPR				smax	smax		
	comp=E,2µm,0.4s						
GRPR	Tuman	1.29	283	*i* P	Pn	22 29 05.0	+0.6
GRPR				AMB	AMB	22 29 07.0	
	comp=E,485nm,0.5s						
GRPR				*i* S	Sn	22 29 19.0	-1.6
GRPR				A	A	22 29 24.0	
	comp=E,1µm,0.7s						
GRPR				A	A	22 29 24.0	
	comp=E,2µm,0.7s						
NEM2	Nemuro 2	1.33	255	P	Pn	22 29 05.8	+0.7
NEM2				*e*S	Sn	22 29 21.0	-0.7
NMR	Nemuro--Hokkai	1.34	256	⇓*i*PN	Pn	22 29 05.8	+0.6
NMR				*i* S	Sn	22 29 21.2	-0.8
NMR	Nemuro--Hokkai	1.34	256	*i* P	Pn	22 29 05.0	-0.2
NMR				*i* S	Sn	22 29 21.0	-1.0
GLVR	Golovnino	1.44	271	*e*PN	Pn	22 29 07.5	+0.9
GLVR				*e*S	Sn	22 29 24.5	0.0
GLVR				pmax	pmax		
	comp=Z,2µm,0.4s						
GLVR				smax	smax		
	comp=E,5µm,0.4s						
GLVR				smax	smax		
	comp=N,2µm,0.5s						
GLVR	Golovnino	1.44	271	*e*P	Pn	22 29 07.0	+0.4
GLVR				AMB	AMB	22 29 08.0	
	comp=N,2µm,0.4s						
GLVR				*e*S	Sn	22 29 24.0	-0.5
GLVR				A	A	22 29 26.0	
	comp=N,2µm,0.5s						
GLVR				A	A	22 29 26.0	
	comp=N,2µm,0.5s						
KUR	Kuril'sk	1.54	9	*e*PN	Pb	22 29 10.1	-0.3
KUR				*i* S	Sb	22 29 28.0	-1.4
KUR				pmax	pmax		
	comp=Z,119nm,0.2s						
KUR				pmax	pmax		
	comp=N,36nm,0.1s						
KUR				pmax	pmax		
	comp=E,42nm,0.1s						
KUR				smax	smax		
	comp=N,1µm,0.3s						
KUR				smax	smax		
	comp=E,615nm,0.2s						
KUR	Kuril'sk	1.54	9	*e*P	Pb	22 29 10.2	-0.2
KUR				AMB	AMB	22 29 11.6	
	comp=E,700nm,0.7s						
KUR				*i* S	Sb	22 29 28.0	-1.4
KUR				A	A	22 29 29.6	
	comp=E,870nm,0.4s						
KUR				A	A	22 29 29.6	
	comp=E,850nm,0.4s						
RUSJ	Misakicho	1.68	284	⇓*i*PN	Pn	22 29 11.4	+1.6
RUSJ				*e*S	Sn	22 29 30.9	+0.6
JRA	Rausu	1.74	278	P	Pn	22 29 12.0	+1.3
JRA				*e*S	Sn	22 29 32.2	+0.4
JNSB	Nemuroshibetsu	1.82	273	P	Pn	22 29 13.3	+1.6
JNK	Nakash	2.03	267	P	Pn	22 29 15.7	+1.0
JNK				*e*S	Sn	22 29 38.1	-0.9
JAK	Akkeshi	2.17	252	P	Pn	22 29 17.8	+1.2
JAK				*e*S	Sn	22 29 41.5	-1.0
JTKR	Abashiri--Toko	2.62	277	P	Pn	22 29 24.7	+2.0
JAR	Ashorobuto	2.75	262	P	Pn	22 29 26.7	+2.1
JOB	Onbets	2.80	254	P	Pn	22 29 27.0	+1.7
JOB				*e*S	Sn	22 29 58.2	+0.2
JMP	Maruseppu	3.02	277	P	Pn	22 29 30.4	+2.2
JCH	Churui	3.23	251	*e*S	Sn	22 30 08.0	-0.5
JKA	Kamikawa-asahi	3.57	278	*e*P	Pn	22 29 38.9	+3.1
ASAJ	Asahikawa	3.57	278	P	Pn	22 29 38.8	+2.9
	comp=E,2.6nm,0.3s,baz=89,slow=12,SNR=11						
ASAJ				S	Sn	22 30 21.1	+4.1
	comp=E,3.1nm,0.3s,baz=93,slow=17,SNR=1.6						
JFR	Furan	3.62	263	P	Pn	22 29 39.4	+2.8
JNBK	Urakawa-nobuka	3.77	249	P	Pn	22 29 39.8	+1.2
PETK	Petropavlovsk-	11.57	32	P	Pn	22 31 27.4	+2.0
	comp=E,0.5nm,0.3s,baz=202,slow=14,SNR=7.8						
H11N2	WAKE ISLAND Hy	28.91	140	T	T	23 05 26.5	
	baz=330,slow=76,SNR=93						
H11N1	WAKE ISLAND Hy	28.92	140	T	T	23 05 19.3	
	baz=330,slow=76,SNR=75						
H11N3	WAKE ISLAND Hy	28.93	140	T	T	23 05 19.7	
	baz=330,slow=76,SNR=82						
H11S1	WAKE ISLAND Hy	29.88	141	T	T	23 06 36.7	
	baz=332,slow=76,SNR=192						
H11S3	WAKE ISLAND Hy	29.88	141	T	T	23 06 31.4	
	baz=332,slow=76,SNR=166						
H11S2	WAKE ISLAND Hy	29.90	141	T	T	23 06 34.5	
	baz=332,slow=76,SNR=126						
ILAR	Eielson Array	41.36	36	P	P	22 36 25.6	+0.2
	comp=E,0.6nm,0.5s,baz=271,slow=8.5,SNR=18						
MKAR	Makanchi Array	44.83	298	P	P	22 36 52.9	-0.8
	comp=E,0.1nm,0.4s,baz=44,slow=4.4,SNR=6.2						
INK	Inuvik	46.30	30	P	P	22 37 05.6	+0.7
	comp=E,0.7nm,0.3s,baz=311,slow=11,SNR=6.1						
FINES	FINESS Array B	65.02	333	P	P	22 39 17.4	-1.9
	comp=E,1.4nm,0.7s,baz=22,slow=7.7,SNR=5.3						
NVAR	Mina Array Bea	67.37	58	P	P	22 39 35.8	+0.8
	comp=E,0.1nm,0.5s,baz=250,slow=7.7,SNR=4.6						
PDAR	Pinedale Array	69.73	50	P	P	22 39 50.0	+0.3
	comp=E,0.2nm,0.4s,baz=27,slow=0.3,SNR=3.7						
AKASG	Malin Array Be	71.76	324	P	P	22 39 59.4	-2.2
	comp=E,0.2nm,0.3s,baz=336,slow=11,SNR=1.5						
TXAR	Lajitas Array	82.45	56	P	P	22 41 02.7	+0.5
	comp=E,0.1nm,0.4s,baz=308,slow=4.4,SNR=4.2						
H03N2	Juan Fernandez	142.70	90	T	T	01 27 33.2	
	baz=304,slow=77,SNR=8.4						
H03N3	Juan Fernandez	142.72	90	T	T	01 27 35.3	
	baz=304,slow=77,SNR=6.7						
H03N1	Juan Fernandez	142.72	90	T	T	01 27 35.7	
	baz=304,slow=77,SNR=8.0						

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*SJA **26** 22:33:01.4±0.9, 23°.19S×64°.82W, h80^{km}±30^{km}, ML4.4, MW4.3*

*NEIC **26** 22:33:05.6±1.4, 23°.53S±0°.06×64°.71W±0°.07, h18^{km}±3^{km}, mb4.9/176, Md4.6(SJA), Error ellipse: s-maj=9.4km s-min=9.1km az=92.0*

*IDC **26** 22:33:07.0±2.8, 23°.49S×64°.64W, h33^{km}±21^{km}, mb4.3/25, mb1 4.4/32, mb1mx4.3/43, mbtmp4.5/32, ML4.1/7, MS3.5/4, Ms1 3.5/4, ms1mx3.2/19, Error ellipse: s-maj=14.0km s-min=10.0km az=52.0*

*VAO **26** 22:33:08.3±0.3, 23°.54S×64°.64W, h46^{km}, mb4.5*

ISC 26 22:33:07.0±0.3**, 23°.51S**±0°.04×**64°.70W**±0°.04**, h35^{km}, n285, σ1^{s}14**/253**, mb4.8**/107**, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HJA	Humahuaca	0.72	294	*i* P	Pn	22 33 17.5	-3.6
HJA				*e*S	Sn	22 33 28.8	-2.3
HJA				IAML		22 34 18.7	
	comp=Z,1µm,0.5s						
AZAP	Zapla	0.79	205	*e*P	Pn	22 33 18.8	-3.1
SLA	San Lorenzo	1.41	211	*i* P	Pn	22 33 30.9	+0.4
SLA				*e*S	Sn	22 33 49.7	+1.7
FSA	Cafayete	2.84	204	*i* P	Pn	22 33 50.3	+0.2
AHML	Horco Molle	3.31	190	*i* P	Pn	22 33 56.2	-0.3
AHML				*i* S	Sn	22 34 48.5	+14
AHML				IAML		22 35 03.7	
	comp=Z,1µm,0.6s						
LVC	Limon Verde	3.98	282	Pn	Pn	22 34 08.1	+2.2
	comp=Z,1.9nm,0.3s,baz=90,slow=9.6,SNR=32						
LVC				Sn	Sn	22 34 57.4	+5.8
	comp=Z,2.3nm,0.3s,baz=136,slow=9.0,SNR=3.6						
LVC				Lg	Lg	22 35 16.1	
	baz=34,slow=23,SNR=0.9						
LVC				LR	LR	22 36 01.2	
	comp=Z,647nm,19.2s,baz=98,slow=43						
LVC	Limon Verde	3.98	282	*e*P	Pn	22 34 07.9	+2.0
LVC	Limon Verde	3.98	282	Pn	Pn	22 34 05.2	-0.7
PB15	IPOC Station P	4.40	273		Pn	22 34 12.1	+0.6
PB09	IPOC Station P	4.53	291		Pn	22 34 14.0	+0.7
PB09	IPOC Station P	4.53	291	*i* P	Pn	22 34 16.9	+3.6
PB06	IPOC Station P	4.56	279		Pn	22 34 14.4	+0.8
PB06	IPOC Station P	4.56	279	*i* P	Pn	22 34 15.9	+2.2
PB03	IPOC Station P	4.88	286	*i* P	Pn	22 34 20.4	+2.3
CYA	Choya	5.01	191	*i* P	Pn	22 34 19.1	-0.7
CYA				*i* S	Sn	22 35 44.5	+28
CYA				IAML		22 35 59.6	
	comp=Z,281nm,0.9s						
PB01	IPOC Station P	5.07	298		Pn	22 34 21.2	+0.6
PB01	IPOC Station P	5.07	298	*i* P	Pn	22 34 23.3	+2.6

PB05	IPOC Station P	5.11	276	*i* P	Pn	22 34 23.4	+2.2
PB07	IPOC Station P	5.11	289		Pn	22 34 21.7	+0.4
PB07	IPOC Station P	5.11	289	*i* P	Pn	22 34 23.4	+2.1
PB04	IPOC Station P	5.16	282		Pn	22 34 22.2	+0.2
PB04	IPOC Station P	5.16	282	*i* P	Pn	22 34 24.3	+2.4
AC02	Maricunga	5.20	230	Pn	Pn	22 34 22.4	-0.5
PB02	IPOC Station P	5.28	293	*i* P	Pn	22 34 25.9	+2.4
PB08	IPOC Station P	5.33	308		Pn	22 34 24.9	+0.5
PB08	IPOC Station P	5.33	308	*i* P	Pn	22 34 27.4	+3.0
PB14	IPOC Station P	5.33	257	Pn	Pn	22 34 24.5	+0.1
PB10	IPOC Station P	5.38	269	Pn	Pn	22 34 23.9	-0.9
PB10	IPOC Station P	5.38	269	*i* P	Pn	22 34 27.2	+2.4
TA01	Diego Aracena	5.87	299	Pn	Pn	22 34 31.5	0.0
PB11	IPOC Station P	5.93	308	Pn	Pn	22 34 33.5	+0.9
TA02	Huaiquique	5.99	302	Pn	Pn	22 34 33.4	+0.3
VCA	Vinchina	6.08	210	*i* P	Pn	22 34 36.7	+2.0
VCA				IAML		22 36 45.9	
	comp=Z,186nm,0.7s						
ACLC	CERRO LA CRUZ	6.23	198	*i* P	Pn	22 34 36.4	-0.3
ACLC				IAML		22 36 44.4	
	comp=Z,128nm,0.8s						
GO03	Copiap	6.45	230	Pn	Pn	22 34 39.8	+0.3
PB16	IPOC Station P	6.83	318		Pn	22 34 46.3	+1.0
APLL	PUNTA DE LOS L	7.05	193	*i* P	Pn	22 34 46.2	-1.6
PB12	IPOC Station P	7.17	312	Pn	Pn	22 34 50.5	+1.1
CPUP	Villa Florida	7.26	114	Pn	Pn	22 34 49.9	-0.7
	comp=Z,4.6nm,0.3s,baz=299,slow=12,SNR=64						
CPUP				Sn	Sn	22 36 13.1	+1.4
	baz=284,slow=18,SNR=1.0						
CPUP				Lg	Lg	22 36 52.6	
	comp=Z,12nm,0.3s,baz=335,slow=17,SNR=2.8						
CPUP				LR	LR	22 38 05.6	
	comp=Z,280nm,21.6s,baz=18,slow=41						
CPUP	Villa Florida	7.26	114	*e*P	Pn	22 34 50.3	-0.3
CPUP	Villa Florida	7.26	114	Pn	Pn	22 34 50.0	-0.5
LCO	Las Campanas	7.68	223	Pn	Pn	22 34 56.5	-0.3
TCA	Tanti	7.80	179	*i* P	Pn	22 34 56.3	-1.8
LPAZ	La Paz	7.88	335	Pn	Pn	22 35 00.7	+1.0
	comp=Z,0.4nm,0.3s,baz=155,slow=9.1,SNR=6.8						
LPAZ				Sn	Sn	22 36 29.4	+1.5
	comp=Z,3.0nm,0.3s,baz=246,slow=6.0,SNR=4.3						
LPAZ				Lg	Lg	22 37 20.7	
	comp=Z,1.2nm,0.3s,baz=190,slow=17,SNR=1.7						
LPAZ	La Paz	7.88	335	*e*P	Pn	22 35 00.8	+1.2
LPAZ	La Paz	7.88	335		Pn	22 35 01.1	+1.4
SIV	San Ignacio	8.22	25	Pn	Pn	22 35 03.9	0.0
	comp=Z,7.6nm,0.3s,baz=208,slow=12,SNR=187						
SIV				Sn	Sn	22 36 33.6	-2.0
	comp=Z,8.9nm,0.3s,baz=226,slow=15,SNR=1.6						
GO04	Tololo Observa	8.59	218	Pn	Pn	22 35 08.2	-0.9
ZON	Zonda	8.75	203	Pn	Pn	22 35 10.7	-0.4
AQDB	Aquidauana	8.88	72	*e*P	Pn	22 35 12.3	-0.5
AQDB	Aquidauana	8.88	72	Pn	Pn	22 35 12.9	0.0
MRA	San Martin	8.92	186	*i* P	Pn	22 35 11.5	-2.0
CO03	El Pedregal	9.04	215	Pn	Pn	22 35 14.3	-0.9
PTLB	Pontes e Lacer	9.58	34	*e*P	Pn	22 35 22.4	-0.1
PTLB	Pontes e Lacer	9.58	34	Pn	Pn	22 35 21.9	-0.6
VA03	San Esteban	10.56	208	Pn	Pn	22 35 36.6	+0.6
PP1B	Ponte de Pedra	10.91	59	*e*P	Pn	22 35 41.5	+0.7
TRCB	Terra Rica	11.12	89	*e*P	Pn	22 35 43.1	-0.6
TRCB	Terra Rica	11.12	89	Pn	Pn	22 35 42.2	-1.5
MT05	Renca	11.19	207	Pn	Pn	22 35 44.2	-0.3
VILB	Vilhena	11.33	23	*e*P	Pn	22 35 46.8	+0.2
VILB	Vilhena	11.33	23	Pn	Pn	22 35 46.1	-0.5
SALV	Santo Antonio	11.36	50	*e*P	Pn	22 35 47.0	+0.1
PTGB	Pitanga	11.60	98	*e*P	Pn	22 35 50.8	+0.5
MT09	Talagante	11.62	207	Pn	Pn	22 35 50.5	-0.1
ITAB	Concordia	11.95	111	Pn	Pn	22 35 55.3	+0.4
CPSB	Cacapava Do Su	12.16	127	*e*P	Pn	22 35 58.4	+0.6
BO01	Tunca	12.20	206	Pn	Pn	22 35 58.2	-0.1
BO02	Sierra Bellavi	12.43	204	Pn	Pn	22 36 01.4	-0.1
PCMB	Pacaembu	12.56	84	*e*P	Pn	22 36 03.0	-0.3
PLTB	Pedras Altas	12.81	132	*e*P	Pn	22 36 05.1	-1.6
CNLB	Canela	13.68	118	*e*P	Pn	22 36 18.7	0.0
ETMB	Extrema	13.69	354	Pn	Pn	22 36 16.0	-2.8
ITRB	Iturama	13.86	77	*e*P	Pn	22 36 21.5	+0.4
ARAG	Araguaiana, MT	14.40	60	*e*P	Pn	22 36 29.2	+0.7
SAML	Samuel	14.55	6	Pn	Pn	22 36 27.4	-3.1
CLDB	Colider	15.16	36	*e*P	Pn	22 36 38.5	-0.2
BB19B	Bebedouro	15.16	84	*e*P	Pn	22 36 38.4	-0.3
RCLB	Rio Claro- Sao	15.85	89	*e*P	Pn	22 36 47.0	-0.7
NNA	Nana	16.27	313	Pn	P	22 36 54.8	-0.9
	comp=Z,2.0nm,0.3s,baz=167,slow=14,SNR=4.3						
NNA	Nana	16.27	313	Pn	Pn	22 36 53.0	0.0
VAO	Valinhos	16.31	92	*e*P	P	22 36 55.2	-0.9
IPMB	Ipameri, GO	16.37	73	*e*P	Pn	22 36 54.4	+0.2
LC01	Cunco	16.51	200	Pn	Pn	22 36 55.5	-0.5
SNDB	Serra Nova Dou	17.15	50	*e*P	P	22 37 07.4	+2.0
BDFB	Brasilia	17.55	67	P	P	22 37 10.5	+0.5
	comp=Z,0.2nm,0.3s,baz=251,slow=9.9,SNR=1.9						
BDFB				Lg	Lg	22 42 27.0	
	comp=Z,0.4nm,0.3s,baz=239,slow=12,SNR=3.7						
PLCA	Paso Flores	17.87	195	P	Pn	22 37 12.2	-0.7
	comp=Z,0.1nm,0.3s,baz=32,slow=11,SNR=7.8						
PLCA				PcP	PcP	22 41 49.0	+0.7
	comp=Z,0.1nm,0.3s,baz=49,slow=0.5,SNR=4.9						
PLCA				Lg	Lg	22 42 37.3	
	comp=Z,0.1nm,0.3s,baz=305,slow=16,SNR=2.1						
PLCA	Paso Flores	17.87	195	*e*P	Pn	22 37 12.7	-0.2
PLCA	Paso Flores	17.87	195		P	22 37 13.5	+0.2
LL04	Puerto Octay	18.52	199	P	P	22 37 18.6	-1.8
NPGB	Novo Progresso	18.67	30	*e*P	P	22 37 22.3	+0.1
LL03	Petrohue	18.73	198	P	P	22 37 21.6	-1.1
LL03				IAmb	IAmb	22 37 36.1	
	comp=Z,45nm,0.6s						
PEXB	Peixe	19.27	57	*e*P	Pn	22 37 29.6	-0.5
LL01	San Ignacio de	19.88	197	P	P	22 37 34.1	-1.2
MACA	Manacapuru-AM	20.60	11	*e*P	P	22 37 43.9	+0.7
MACA	Manacapuru-AM	20.60	11	P	P	22 37 43.0	-0.2
MACA				IAmb	IAmb	22 37 48.6	
	comp=Z,56nm,0.9s						
MC01	Montes Claros	20.62	75	*e*P	P	22 37 44.4	+0.8
ITTB	Itaituba	20.91	26	*e*P	P	22 37 46.8	+0.3
GO07	Milladeo Hill,	20.91	199	P	P	22 37 45.4	-1.0
ATAH	Atahualpa	20.93	319	P	Pn	22 37 49.5	-0.5
	comp=Z,5.2nm,0.8s,baz=181,slow=17,SNR=1.9						
JANB	Januaria	20.98	70	*e*P	P	22 37 48.2	+0.7
SDBA	SAO DESIDERIO	21.80	63	*e*P	P	22 37 57.5	+1.3
SMTB	Santa Maria do	21.92	51	*e*P	P	22 37 58.1	+0.6
PRPB	Parauapebas	22.41	42	*e*P	P	22 38 02.4	-0.4
COYC	Coyhaique	22.82	193	P	P	22 38 04.9	-1.9
PTGA	Pitinga	23.10	12	P	P	22 38 08.8	-1.2
	comp=Z,7.9nm,0.7s,baz=202,slow=12,SNR=12						
MALB	Monte Alegre	23.78	27	*e*P	P	22 38 16.5	-0.1
CMC01	Camacan, BA	25.06	76	*e*P	P	22 38 29.4	+1.1
GDU01	Guandu, BA	25.68	72	*e*P	P	22 38 35.0	+1.0
BOAV	Boa Vista	26.07	10	*e*P	P	22 38 37.3	-0.1
NBPN	Ponto Novo - B	26.52	66	*e*P	P	22 38 40.7	-0.9
MG02	Cerro Sombrero	29.43	186	P	P	22 39 06.1	-1.0
ROSC	El Rosal	29.70	340	LR	LR	22 51 54.8	
	comp=Z,137nm,19.4s,baz=212,slow=38						
NBPB	Pedra_Branca-C	30.07	57	*e*P	P	22 39 13.8	+0.5
ZARC	Zaragoza, Cauc	32.37	341	P	P	22 39 30.2	-3.3
SDV	Santo Domingo	32.72	349	*e*P	P	22 39 36.5	-0.2
MOTC	Monteria, Cord	33.83	340	P	P	22 39 46.3	+0.1
SJCC	San Jacinto, C	34.75	342	P	P	22 39 51.3	-2.9
SJCC				IAmb	IAmb	22 39 52.7	
	comp=Z,17nm,1.0s						
COVE	Coope Vega, Sa	39.10	328	P	P	22 40 32.3	+1.1
MATN	Matagalpa	41.75	328	P	P	22 40 53.9	+0.8
MTO3	Montecristo	44.74	325	P	P	22 41 16.6	-0.8
MTO3				IAmb	IAmb	22 41 18.0	
	comp=Z,7.2nm,0.7s						
CMIG	Matias Romero	49.98	321	P	P	22 41 57.8	-0.2
	comp=Z,8.6nm,0.9s,baz=79,slow=4.3,SNR=6.7						
VNA1	Neumayer--Stat	57.10	161	P	P	22 42 50.0	+0.5
VNA2	Neumayer--Watz	57.48	161	P	P	22 42 52.3	+0.1
	baz=284,slow=7.7						
ZAIG	Zacatecas	58.92	319	P	P	22 43 03.0	-0.2
ZAIG				IAmb	IAmb	22 43 04.9	
	comp=Z,7.1nm,0.8s						
SNAA	Sanae	59.12	161	P	P	22 43 03.4	-0.3
SNAA	Sanae	59.12	161	P	P	22 43 03.1	-0.6
	comp=Z,4.9nm,0.9s,baz=346,slow=5.8						
SNAA	Sanae	59.12	161	IAmb	IAmb	22 43 03.9	
	comp=Z,3.4nm,0.7s						
V55A	Taylorsville	61.07	345	P	P	22 43 17.1	-0.2
V53A	Saluda	61.30	343	P	P	22 43 17.8	-1.3
V53A				IAmb	IAmb	22 43 26.7	
	comp=Z,12nm,1.1s						
TKL	Tuckaleechee C	61.55	342	P	P	22 43 19.4	-1.3
	comp=Z,9.7nm,0.8s,baz=170,slow=10,SNR=6.0						
V52A	Sevierville	61.68	343	P	P	22 43 19.6	-1.9
SWET	Sewanee	61.78	340	P	P	22 43 21.2	-1.0
PLAL	Pickwick Lake	62.26	338	IAmb	IAmb	22 43 24.9	
	comp=Z,13nm,0.9s						
WLAR	White Oak Lake	62.98	334	P	P	22 43 30.4	+0.1
WVT	Waverly	63.22	339	P	P	22 43 30.5	-1.3
JCT	Junction City	63.37	326	P	P	22 43 32.6	-0.4
JCT				IAmb	IAmb	22 43 33.5	
	comp=Z,8.7nm,0.8s						
Z38A	Mt. Pleasant	63.41	332	P	P	22 43 32.6	-0.4
LNXT	Lenox	63.75	338	P	P	22 43 35.1	-0.2
UTMT	University of	63.76	338	P	P	22 43 34.3	-1.0
GNAR	Gosnell	63.82	337	P	P	22 43 35.5	-0.2
GLAT	Glass	63.84	338	P	P	22 43 35.3	-0.5
HPIG		63.89	319	P	P	22 43 36.8	+0.1
HPIG				IAmb	IAmb	22 43 37.1	
	comp=Z,4.8nm,0.7s						
PEBM	Pemiscott Bayo	63.89	337	P	P	22 43 36.2	0.0
MIAR	Mount Ida	63.92	334	IAmb	IAmb	22 43 36.2	
	comp=Z,6.9nm,1.0s						
HICK	Hickman	64.06	338	P	P	22 43 35.9	-1.5
PENMO	Penman	64.12	338	P	P	22 43 37.5	-0.1
LCAR	Lake Charles	64.32	336	IAmb	IAmb	22 43 38.9	
	comp=Z,12nm,1.1s						
Z35A	Perchaven, San	64.48	330	P	P	22 43 40.7	+0.5
FCAR	Ozark Folk Cen	64.52	336	IAmb	IAmb	22 43 40.9	
	comp=Z,8.0nm,1.1s						
TX31	Lajitas Ar. Si	64.54	323	IAmb	IAmb	22 43 41.3	
	comp=Z,5.7nm,0.8s						
TX32	Lajitas Array	64.54	323	P	P	22 43 40.2	-0.5
TXAR	Lajitas Array	64.54	323	P	P	22 43 40.2	-0.6
	comp=Z,1.3nm,0.7s,baz=151,slow=8.7,SNR=18						
TXAR				S	S	22 52 32.2	+14
	comp=Z,0.4nm,0.4s,baz=129,slow=26,SNR=7.3						
W39A	Magazine	64.57	334	IAmb	IAmb	22 43 41.0	
	comp=Z,11nm,1.1s						
Q51A	Peebles	64.61	344	P	P	22 43 39.7	-1.2
Q51A				IAmb	IAmb	22 43 40.8	
	comp=Z,16nm,1.1s						
X37A	Clayton	64.71	332	P	P	22 43 41.2	-0.4
X37A				IAmb	IAmb	22 43 42.8	
	comp=Z,16nm,1.1s						
LIC	Lamto	65.28	71	*e*P	P	22 43 46.1	+0.3
	comp=Z,48nm,1.5s						
TIC	Toumodi	65.50	70	*e*P	P	22 43 47.4	+0.2
KIC	Kosan Boka	65.60	71	*e*P	P	22 43 48.3	+0.4
	comp=Z,19nm,0.6s						
DBIC	Dimbokro	65.65	71	P	P	22 43 48.7	+0.5
	comp=Z,10nm,0.7s,baz=232,slow=7.8,SNR=13						
DBIC	Dimbokro	65.65	71	P	P	22 43 48.6	+0.5
DBIC				IAmb	IAmb	22 43 49.7	
	comp=Z,11nm,0.8s						
MGMO	Mountain Grove	65.69	336	P	P	22 43 47.7	-0.3
MGMO				IAmb	IAmb	22 43 48.1	
	comp=Z,14nm,1.0s						
CCM	Cathedral Cave	66.12	337	P	P	22 43 49.4	-1.3
CCM				IAmb	IAmb	22 43 50.5	
	comp=Z,15nm,1.0s						
S39A	Bolivar	66.56	336	IAmb	IAmb	22 43 53.7	
	comp=Z,15nm,1.1s						
QSPA	South Pole Qui	66.69	180	P	P	22 43 54.7	+0.4
	comp=Z,9.9nm,0.7s,baz=152,slow=5.9						
QSPA	South Pole Qui	66.69	180	P	P	22 43 54.8	+0.6
QSPA				IAmb	IAmb	22 43 55.8	
	comp=Z,13nm,0.8s						
R40A	Maddies Statio	66.70	337	IAmb	IAmb	22 43 54.1	
	comp=Z,9.7nm,1.1s						
T35A	Sooner Cattle	67.17	333	P	P	22 43 57.0	-0.4
T35A				IAmb	IAmb	22 43 58.7	
	comp=Z,12nm,1.0s						
MNTX	Cornudas Mount	67.30	323	IAmb	IAmb	22 43 58.4	
	comp=Z,8.1nm,1.0s						
KAN09	Caldwell North	67.83	332	P	P	22 44 02.3	+0.7
AMTX	Amarillo	67.85	328	P	P	22 44 01.9	0.0
AMTX				IAmb	IAmb	22 44 03.4	
	comp=Z,12nm,0.9s						
121A	Cookes Peak, D	69.27	322	IAmb	IAmb	22 44 13.4	
	comp=Z,12nm,0.9s						
319A	Douglas	69.28	320	P	P	22 44 11.4	+0.4
319A				IAmb	IAmb	22 44 12.6	
	comp=Z,7.4nm,0.8s						
JFWS	Jewell Farm	70.16	340	IAmb	IAmb	22 44 15.9	
	comp=Z,15nm,0.9s						
KOWA	Kowa	70.32	64	P	P	22 44 18.0	+0.4
ANMO	Albuquerque	70.34	324	P	P	22 44 17.8	+0.3
	comp=Z,5.9nm,1.0s,baz=141,slow=5.6,SNR=17						
ANMO	Albuquerque	70.34	324	P	P	22 44 18.4	+0.9
ANMO				IAmb	IAmb	22 44 19.1	
	comp=Z,10nm,1.1s						
TUC	Tucson	70.84	320	P	P	22 44 21.4	+1.0
T25A	Trinidad	70.98	327	IAmb	IAmb	22 44 23.1	
	comp=Z,6.7nm,0.9s						
SDCO	Great Sand Dun	72.00	327	IAmb	IAmb	22 44 30.0	
	comp=Z,12nm,1.1s						
W18A	Petrified Fore	72.26	322	P	P	22 44 29.8	+0.7
W18A				IAmb	IAmb	22 44 31.0	
	comp=Z,10nm,1.0s						
X16A	Lo Mia Camp, P	72.73	321	P	P	22 44 32.5	+0.7
MVCO	Mesa Verde	73.13	325	IAmb	IAmb	22 44 36.8	
	comp=Z,16nm,1.1s						
WUAZ	Wupatki	73.47	322	P	P	22 44 36.6	+0.4
WUAZ				IAmb	IAmb	22 44 38.5	
	comp=Z,9.0nm,1.0s						
ISCO	Idaho Springs	73.65	328	P	P	22 44 38.3	+0.9
SMCO	Snowmass	73.84	327	P	P	22 44 39.3	+0.8
SMCO				IAmb	IAmb	22 44 40.8	
	comp=Z,9.6nm,1.1s						
F36A	Milaca	73.84	339	IAmb	IAmb	22 44 37.9	
	comp=Z,11nm,0.8s						
SUR	Sutherland	74.20	119	P	P	22 44 41.2	+0.4
	comp=Z,4.0nm,0.8s,baz=240,slow=8.1,SNR=1.1						
TORD	Torodi Ar. Bea	74.43	68	P	P	22 44 42.3	+0.3
	comp=Z,28nm,0.7s,baz=255,slow=5.7,SNR=140						
TORD	Torodi Ar. Bea	74.43	68	P	P	22 44 42.3	+0.3
U15A	North Rim	74.65	322	P	P	22 44 44.0	+0.8
U15A				IAmb	IAmb	22 44 45.8	
	comp=Z,10nm,1.0s						
PFO	Pinyon Flats O	75.19	317	P	P	22 44 46.5	+0.3
	comp=Z,2.0nm,0.7s,baz=157,slow=13,SNR=2.3						
O20A	White River Ci	75.20	327	P	P	22 44 46.8	+0.6
O20A				IAmb	IAmb	22 44 48.2	
	comp=Z,20nm,1.0s						
KNB	Kanab	75.36	322	P	P	22 44 48.5	+1.3
VNDA	Vanda	75.53	189	P	P	22 44 48.8	+1.4
	comp=Z,1.2nm,0.8s,baz=156,slow=4.9,SNR=5.3						
LCMT	Little Creek M	75.60	322	P	P	22 44 49.2	+0.7
SRU	San Rafael Swe	75.61	325	P	P	22 44 49.3	+0.7
SRU				IAmb	IAmb	22 44 50.4	
	comp=Z,14nm,1.0s						
MTPU	Mount Pierson	75.73	323	P	P	22 44 50.5	+1.0
TSUM	Tsumeb	75.75	105	P	P	22 44 49.8	0.0
	comp=Z,8.3nm,1.0s,baz=214,slow=3.9,SNR=6.0						
TSUM	Tsumeb	75.75	105	P	P	22 44 50.3	+0.5
TSUM				IAmb	IAmb	22 44 51.5	
	comp=Z,9.3nm,0.9s						
Q16A	Castle Valley	75.82	324	P	P	22 44 51.0	+1.2
P18A	Preston Nutter	75.85	325	P	P	22 44 51.1	+1.1
P18A				IAmb	IAmb	22 44 52.3	
	comp=Z,13nm,0.9s						
RWWY	Rawlins	75.88	329	P	P	22 44 50.9	+0.8
RWWY				IAmb	IAmb	22 44 52.2	
	comp=Z,15nm,0.9s						
P17A	Butcher Ranch,	75.99	325	IAmb	IAmb	22 44 53.3	
	comp=Z,16nm,1.0s						
CCUT	Cedar City	76.05	322	P	P	22 44 52.8	+1.7
CCUT				IAmb	IAmb	22 44 54.0	
	comp=Z,11nm,1.0s						
MVU	Marysvale	76.08	323	P	P	22 44 52.5	+1.1
TMUT	Trail Mountain	76.11	325	P	P	22 44 52.6	+1.0
B35A	Bob, Littlefor	76.13	341	IAmb	IAmb	22 44 51.2	
	comp=Z,14nm,0.9s						
RDMU	Red Mountain	76.20	326	IAmb	IAmb	22 44 53.7	
	comp=Z,12nm,0.9s						
K22A	Casper	76.30	330	P	P	22 44 53.2	+0.9
K22A				IAmb	IAmb	22 44 58.9	
	comp=Z,8.6nm,1.1s						
RSSD	Black Hills	76.34	332	P	P	22 44 52.7	0.0
SHPR	Sheep Range	76.36	320	P	P	22 44 53.6	+0.7
GSC	Goldstone, Bar	76.53	318	P	P	22 44 54.7	+0.9
GSC				IAmb	IAmb	22 44 56.0	
	comp=Z,9.2nm,1.1s						
AGMN	Agassiz Nation	76.75	339	IAmb	IAmb	22 44 55.0	
	comp=Z,11nm,0.8s						
MPU	Maple Canyon	76.86	325	P	P	22 44 56.8	+1.2
MPU				IAmb	IAmb	22 44 57.7	
	comp=Z,10nm,1.0s						
E28A	Huff	76.98	335	IAmb	IAmb	22 44 57.2	
	comp=Z,16nm,0.8s						
PSUT	Pine Spring	77.01	322	P	P	22 44 57.0	+0.4
GWY	Greenwater Val	77.03	319	P	P	22 44 57.8	+1.1
GWY				IAmb	IAmb	22 44 58.5	
	comp=Z,8.3nm,1.0s						
NLU	North Lily Min	77.05	325	P	P	22 44 57.5	+0.7
JLU	Jordanelle	77.19	325	P	P	22 44 58.7	+1.1
JLU				IAmb	IAmb	22 44 59.7	
	comp=Z,15nm,1.1s						
SPR3	Spring Creek 3	77.60	323	P	P	22 45 00.6	+0.6
SPR3				IAmb	IAmb	22 45 01.9	
	comp=Z,9.4nm,1.2s						
DUG	Dugway, Tooele	77.61	324	P	P	22 45 00.6	+0.7
DUG				IAmb	IAmb	22 45 02.0	
	comp=Z,8.1nm,1.0s						
PD31	Pinedale Array	77.83	328	P	P	22 45 01.3	+0.2
PDAR	Pinedale Array	77.83	328	P	P	22 45 01.2	+0.1
	comp=Z,2.2nm,0.8s,baz=134,slow=7.7,SNR=17						
R11A	Troy Canyon, C	77.86	321	P	P	22 45 02.2	+0.9
SCHQ	Schefferville	78.04	359	P	P	22 45 02.0	+0.3
	comp=Z,3.8nm,0.9s,baz=99,slow=19,SNR=1.4						
BGU	Big Grassy Mou	78.25	325	P	P	22 45 04.0	+0.7
BGU				IAmb	IAmb	22 45 05.2	
	comp=Z,9.6nm,1.1s						
ULM	Lac du Bonnet	78.46	340	P	P	22 45 03.4	-0.7
	comp=Z,5.9nm,0.8s,baz=167,slow=6.1,SNR=5.0						
AHID	Auburn Hatcher	78.59	327	IAmb	IAmb	22 45 07.0	
	comp=Z,20nm,1.1s						
TPH	Tonopah	78.63	320	P	P	22 45 06.2	+0.6
HVU	Hansel Valley	78.73	325	IAmb	IAmb	22 45 08.2	
	comp=Z,11nm,1.2s						
REDW	Red Top Meadow	78.91	328	IAmb	IAmb	22 45 08.8	
	comp=Z,10nm,1.0s						
LOHW	Long Hollow	78.97	328	P	P	22 45 07.6	+0.3
BOSA	Boshof	79.07	116	P	P	22 45 07.8	-0.5
	comp=Z,7.9nm,1.2s,baz=266,slow=2.5,SNR=5.2						
BOSA				LR	LR	23 17 19.4	
	comp=Z,30nm,18.1s,baz=352,slow=34						
ELK	Elko	79.32	323	P	P	22 45 09.6	+0.3
	comp=Z,4.9nm,0.9s,baz=137,slow=2.3,SNR=23						
ELK	Elko	79.32	323	P	P	22 45 10.2	+0.8
FLWY	Flagg Ranch	79.36	328	P	P	22 45 09.8	+0.3
FLWY				IAmb	IAmb	22 45 11.7	
	comp=Z,12nm,0.9s						
RLMT	Red Lodge	79.46	330	IAmb	IAmb	22 45 11.8	
	comp=Z,11nm,1.1s						
NVAR	Mina Array Bea	79.50	320	P	P	22 45 11.1	+0.7
	comp=Z,1.7nm,0.9s,baz=144,slow=7.6,SNR=13						
YMP	Mirror Lake Pl	79.59	329	IAmb	IAmb	22 45 27.6	
	comp=Z,8.6nm,0.9s						
KVN	Kaiserville	79.79	321	IAmb	IAmb	22 45 13.6	
	comp=Z,8.9nm,1.0s						
YMR	Madison River	79.93	328	P	P	22 45 13.9	+1.4
YMR				IAmb	IAmb	22 45 15.0	
	comp=Z,14nm,0.9s						
YHH	Holmes Hill	79.96	329	IAmb	IAmb	22 45 15.2	
	comp=Z,14nm,0.8s						
YHL	Hebgen Lake	80.17	328	P	P	22 45 15.2	+1.3
YHL				IAmb	IAmb	22 45 15.8	
	comp=Z,6.4nm,0.7s						
LBTB	Lobatse	80.65	113	P	P	22 45 16.2	-0.7
	comp=Z,3.2nm,0.8s,baz=252,slow=6.3,SNR=5.7						
PNTR	Pine Nut	80.69	320	P	P	22 45 17.9	+1.1
PNTR				IAmb	IAmb	22 45 19.1	
	comp=Z,14nm,0.9s						
VCNR	Virginia City	80.86	320	P	P	22 45 18.5	+0.9
BCYI	Bear Canyon	80.86	327	P	P	22 45 18.9	+1.2
PAHR	Pah Rah Range	80.97	320	P	P	22 45 19.1	+1.0
PAHR				IAmb	IAmb	22 45 20.4	
	comp=Z,14nm,1.0s						
MAW	Mawson	81.26	162	P	P	22 45 18.9	-0.2
	comp=Z,2.4nm,0.7s,baz=232,slow=12,SNR=5.0						
MAW	Mawson	81.26	162	P	P	22 45 19.7	+0.5
MFID	Camas Ranch	81.48	325	P	P	22 45 21.4	+0.7
MFID				IAmb	IAmb	22 45 23.0	
	comp=Z,9.5nm,1.1s						
EGMT	Eagleton	81.88	331	IAmb	IAmb	22 45 23.7	
	comp=Z,16nm,1.0s						
ORV	Oroville	82.12	319	P	P	22 45 24.7	+0.6
ORV				IAmb	IAmb	22 45 26.1	
	comp=Z,9.5nm,1.1s						
PLID	Pearl Lake	82.72	326	IAmb	IAmb	22 45 29.1	
	comp=Z,11nm,0.9s						
J08A	Circle Bar Ran	82.86	324	P	P	22 45 29.2	+1.2
J08A				IAmb	IAmb	22 45 30.7	
	comp=Z,16nm,1.1s						
MOD	Modoc Plateau	82.92	322	P	P	22 45 29.4	+1.0
MOD				IAmb	IAmb	22 45 30.7	
	comp=Z,5.9nm,1.0s						
BMO	Blue Mountains	83.24	325	IAmb	IAmb	22 45 32.4	
	comp=Z,8.5nm,1.1s						
JTMT	Jette	83.74	329	P	P	22 45 32.7	+0.2
JTMT				IAmb	IAmb	22 45 33.8	
	comp=Z,5.2nm,0.8s						
K05A	Summer Lake	83.79	322	P	P	22 45 33.7	+0.8
K05A				IAmb	IAmb	22 45 35.0	
	comp=Z,12nm,1.0s						
F10A	Beach Ranch, E	83.96	326	IAmb	IAmb	22 45 40.2	
	comp=Z,7.6nm,0.9s						
PINE	Pine Mountain	84.50	323	P	P	22 45 36.8	+0.3
PINE				IAmb	IAmb	22 45 38.1	
	comp=Z,5.7nm,0.9s						
ESDC	Sonseca Array	84.60	43	P	P	22 45 37.4	+0.5
	comp=Z,3.9nm,1.1s,baz=249,slow=5.4,SNR=8.2						
ESDC	Sonseca Array	84.60	43	P	P	22 45 37.6	+0.8
MATP	Matopo	84.86	110	P	P	22 45 38.7	-0.1
	comp=Z,1.7nm,0.7s,baz=229,slow=12,SNR=4.7						
F07A	Phinny Hill Vi	85.31	325	P	P	22 45 41.0	+0.8
F07A				IAmb	IAmb	22 45 42.4	
	comp=Z,7.4nm,1.0s						
HAWA	Hanford	85.43	325	P	P	22 45 41.7	+0.9
HAWA				IAmb	IAmb	22 45 42.6	
	comp=Z,13nm,1.0s						
D08A	Wollman Farm,	85.56	326	IAmb	IAmb	22 45 43.1	
	comp=Z,11nm,1.1s						
E07A	Sunnyside	85.71	325	IAmb	IAmb	22 45 44.0	
	comp=Z,5.9nm,1.0s						
C09A	Chrisman Ranch	85.73	327	IAmb	IAmb	22 45 43.6	
	comp=Z,11nm,0.9s						
LTY	Liberty	86.59	326	IAmb	IAmb	22 45 47.8	
	comp=Z,9.6nm,0.8s						
LSZ	Lusaka	86.60	105	P	P	22 45 48.3	+0.7
LSZ				IAmb	IAmb	22 45 55.3	
	comp=Z,5.6nm,0.9s						
LLLB	Lillooet	89.35	328	IAmb	IAmb	22 46 00.6	
	comp=Z,11nm,1.1s						
YKA	Yellowknife Ar	94.40	339	P	P	22 46 22.8	0.0
	comp=Z,1.6nm,0.9s,baz=120,slow=6.2,SNR=7.5						
ASAR	Alice Springs	129.75	202	PKP	PKPdf	22 52 13.0	-0.4
	comp=Z,2.0nm,0.8s,baz=150,slow=2.6,SNR=16						
WRA	Warramunga Arr	132.99	205	PKP	PKPdf	22 52 19.4	-0.1
	comp=Z,4.8nm,1.2s,baz=173,slow=1.7,SNR=14						
FITZ	Fitzroy Crossi	137.43	195	PKP	PKPdf	22 52 28.6	+0.8
	comp=Z,1.3nm,0.7s,baz=106,slow=9.0,SNR=2.4						
ZALV	Zalesovo Beam	141.96	29	PKhKP	PKPpre	22 52 31.0	
	comp=Z,1.4nm,0.6s,baz=303,slow=4.2,SNR=4.6						
ZALV				PKP	PKPdf	22 52 36.0	+1.1
	comp=Z,6.1nm,0.8s,baz=271,slow=2.6,SNR=22						
MKAR	Makanchi Array	144.79	40	PKP	PKPbc	22 52 39.6	+0.3
	comp=Z,4.5nm,0.7s,baz=307,slow=4.1,SNR=44						
HYB	Hyderabad	145.11	93	*i* P	PKPdf	22 52 41.5	-0.1
BATI	Baumata	145.51	195	PKPbc	PKPab	22 52 43.1	+0.5
	comp=Z,8.5nm,0.5s,baz=74,slow=2.6,SNR=6.0						
SIJI	Sorong	151.22	215	PKPbc	PKPbc	22 52 56.3	-1.4
	comp=Z,6.5nm,0.6s,baz=55,slow=14,SNR=4.5						
KAPI	Kappang	151.32	189	PKPbc	PKiKP	22 52 58.2	-0.1
	comp=Z,5.1nm,0.8s,baz=115,slow=7.4,SNR=3.8						
SONM	Songino Array	154.71	14	PKP	PKPdf	22 52 57.1	+1.2
	comp=Z,2.1nm,0.9s,baz=322,slow=1.0,SNR=9.9						
SONM				PKPbc	PKiKP	22 53 05.0	+0.5
	comp=Z,2.1nm,0.7s,baz=284,slow=1.4,SNR=10						
CMAR	Chiang Mai Arr	163.92	105	PKPab	PKPab	22 53 59.3	-0.9
	comp=Z,2.0nm,0.5s,baz=253,slow=5.5,SNR=11						

IDC 26 22:35:54.3±4.8, 44°.56S×37°.72E, h0^{km}, mb3.9/3, mb1 4.1/4, mb1mx3.6/40, mbtmp4.0/4, ML3.5/1, MS3.7/16, Ms1 3.7/16, ms1mx3.5/31, Error ellipse: s-maj=476.3km s-min=29.5km az=35.0, Prince Edward Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUR	Sutherland	17.93	307	P	Pn	22 40 04.7	-0.4
	0.2nm,0.3s,baz=146,slow=18,SNR=1.4						
SUR				LR	LR	22 45 39.1	

	comp=Z,157nm,20.6s,baz=144,slow=33						
BOSA	Boshof	18.76	324	LR	LR	22 45 59.0	
	comp=Z,299nm,21.3s,baz=184,slow=32						
LBTB	Lobatse	21.84	329	LR	LR	22 47 53.1	
	comp=Z,226nm,20.7s,baz=160,slow=33						
MAW	Mawson	26.64	159	LR	LR	22 49 25.8	
	comp=Z,151nm,21.4s,baz=32,slow=30						
OPO	Ambohidratompo	27.09	20	LR	LR	22 50 12.4	
	comp=Z,109nm,18.2s,baz=6.0,slow=32						
VNA3	Neumayer Olymp	35.09	204	P	P	22 42 48.4	-0.3
KMBO	Kilima Mbogo	43.25	359	LR	LR	23 00 19.1	
	comp=Z,124nm,19.7s,baz=114,slow=34						
VNDA	Vanda	53.47	167	LR	LR	23 06 00.9	
	comp=Z,140nm,21.8s,baz=214,slow=34						
H10S2	ASCENSION HYDR	57.35	292	T	T	23 47 47.1	
	baz=134,slow=74,SNR=13						
H10S3	ASCENSION HYDR	57.37	292	T	T	23 47 49.2	
	baz=86,slow=74,SNR=52						
TORD	Torodi Ar. Bea	66.09	321	P	P	22 46 43.4	+0.2
	1.8nm,1.0s,baz=148,slow=4.5,SNR=3.4						
TORD				LR	LR	23 13 29.7	
	comp=Z,37nm,21.6s,baz=270,slow=34						
PLCA	Paso Flores	73.49	229	LR	LR	23 15 26.8	
	comp=Z,33nm,18.6s,baz=110,slow=32						
STKA	Stephens Creek	77.20	122	LR	LR	23 14 58.2	
	comp=Z,65nm,20.2s,baz=203,slow=30						
ASAR	Alice Springs	77.97	111	P	P	22 47 54.5	0.0
	0.7nm,0.7s,baz=225,slow=5.5,SNR=8.3						
BATI	Baumata	80.05	94	LR	LR	23 18 07.0	
	comp=Z,76nm,18.9s,baz=229,slow=32						
WRA	Warramunga Arr	80.82	109	P	P	22 48 10.2	+0.1
	0.2nm,0.7s,baz=224,slow=4.2,SNR=3.1						
WRA				LR	LR	23 19 48.3	
	comp=Z,34nm,18.1s,baz=175,slow=33						
KAPI	Kappang	80.83	88	LR	LR	23 16 46.4	
	comp=Z,24nm,20.1s,baz=302,slow=30						
BRTR	Keskin Array B	83.98	357	LR	LR	23 24 21.6	
	comp=Z,25nm,20.2s,baz=247,slow=35						
KBZ	Khabaz	88.02	4	LR	LR	23 25 29.1	
	comp=Z,22nm,21.9s,baz=336,slow=34						
ESDC	Sonseca Array	91.86	329	LR	LR	23 30 48.9	
	comp=Z,72nm,19.8s,baz=280,slow=36						

IDC 26 22:40:34.1±2.4**, 1°.02N**×**127°.67E, h0^{km}, mb3.3**/3**, mb1 3.6**/3**, mb1mx3.2**/38**, mbtmp3.4**/3**, Error ellipse: s-maj=181.9km s-min=28.5km az=67.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	21.83	163	P	P	22 45 27.4	-1.0
	0.8nm,0.6s,baz=342,slow=11,SNR=6.5						
ASAR	Alice Springs	25.27	167	P	P	22 46 03.0	+0.6
	0.9nm,0.8s,baz=346,slow=10.0,SNR=10						
MKAR	Makanchi Array	60.30	326	P	P	22 50 44.6	-0.1
	0.1nm,0.5s,baz=140,slow=5.7,SNR=1.2						

NEIC ***26*** *22:55:54.2±1.1, 17°.6S±0°.2×178°.5W±0°.1, h603^{km}±15^{km}, mb4.1/13, Error ellipse: s-maj=23.3km s-min=16.2km az=189.0*

IDC ***26*** *22:55:55.0±4.5, 17°.48S×178°.77W, h598^{km}±21^{km}, mb3.3/3, mb1 3.4/5, mb1mx3.0/24, mbtmp4.2/5, Error ellipse: s-maj=114.5km s-min=75.2km az=148.0*

ISC 26 22:55:53.5±1.4**, 17°.5S**±0°.2×**178°.5W**±0°.2**, h600^{km}, n23, σ0^{s}64**/22**, mb4.0**/9**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	3.29	266	P	P	22 57 14.3	-0.2
	3.0nm,0.3s,baz=108,slow=13,SNR=11						
MSVF	Nonsavu	3.29	266	P	P	22 57 14.7	+0.2
LIFNC	LIFOU	13.85	254	P	P	22 58 52.4	+1.5
DZM	Mont Dzumac	14.87	250	P	P	22 59 01.3	+0.8
	0.2nm,0.3s,baz=65,slow=19,SNR=1.7						
DZM	Mont Dzumac	14.87	250	P	P	22 58 59.7	-0.8
KNTN	Kanton	16.11	25	P	P	22 59 11.9	-0.1
OUZ	Omahuta	18.96	200	P	P	22 59 38.1	+0.4
OUZ				IAmb	IAmb	22 59 42.7	
	comp=Z,5.6nm,1.0s						
ARMA	Armidale	30.05	239	P	P	23 01 14.8	-1.0
ARMA				IAmb	IAmb	23 01 16.7	
	comp=Z,5.4nm,1.0s						
CTAO	Charters Tower	33.42	260	P	P	23 01 43.9	-0.5
CTAO				IAmb	IAmb	23 01 46.6	
	comp=Z,3.4nm,0.9s						
COEN	Coen	37.02	270	P	P	23 02 14.1	-0.1
COEN				IAmb	IAmb	23 02 15.4	
	comp=Z,8.1nm,1.1s						
TOO	Toolangi	37.33	230	P	P	23 02 15.7	-0.8
TOO				IAmb	IAmb	23 02 35.2	
	comp=Z,16nm,1.1s						
STKA	Stephens Creek	38.73	241	P	P	23 02 27.6	-0.3
	comp=Z,1.1nm,0.3s,baz=76,slow=9.3,SNR=6.3						
STKA	Stephens Creek	38.73	241	P	P	23 02 28.3	+0.4
MCQ	Macquarie Isla	40.77	200	P	P	23 02 44.0	+0.3
WB0	Warramunga Arr	44.58	259	P	P	23 03 14.0	0.0
WB2	Warramunga Arr	44.60	259	P	P	23 03 13.8	-0.3
WB2				IAmb	IAmb	23 03 28.4	
	comp=Z,5.5nm,1.1s						
WRA	Warramunga Arr	44.61	259	P	P	23 03 13.5	-0.7
	comp=Z,1.3nm,0.5s,baz=95,slow=6.9,SNR=24						
WRA	Warramunga Arr	44.61	259	IAmb	IAmb	23 03 18.2	
	comp=Z,0.1nm,0.8s						
AS31	Alice Springs	44.80	254	P	P	23 03 15.8	+0.1
AS31				IAmb	IAmb	23 03 16.3	
	comp=Z,2.9nm,0.7s						
ASAR	Alice Springs	44.81	254	P	P	23 03 15.7	0.0
	comp=Z,9.6nm,0.6s,baz=88,slow=8.4,SNR=151						
ASAR				PcP	PcP	23 04 45.2	+0.8
	comp=Z,0.3nm,0.4s,baz=107,slow=3.9,SNR=1.6						
ASAR	Alice Springs	44.81	254	P	P	23 03 15.3	-0.4
FORT	Forrest	50.09	244	P	P	23 03 54.2	-0.6
MTO3	Montecristo	93.45	76		pP	23 10 11.9	-4.2

ATH ***26*** *23:00:15.3, 40°.97N×20°.14E, h40^{km}±8^{km}, ML2.6/6, Error ellipse: s-maj=8.5km s-min=1.3km az=356.0*

TIR ***26*** *23:00:21.3, 40°.85N×20°.20E, h17^{km}, Md3.0, Ml2.8*

SKO ***26*** *23:00:22.3, 40°.95N×20°.11E, h2^{km}*

ISC 26 23:00:18.6±1.3**, 40°.79N**±0°.03×**20°.17E**±0°.03**, h5^{km}**±10^{km}**, n26, σ1^{s}88**/35**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	Korca	0.50	109	P	Pn	23 00 31.7	-0.8
	baz=116						
KBN				S	Sn	23 00 39.4	+4.7
	baz=116						
KBN				AMP			
	comp=E,4.0nm,0.6s,baz=116						
OHR	Ohrid	0.58	56	*i* Pg	Pn	23 00 32.8	-0.8
OHR				*i* Sg	Sb	23 00 39.8	0.0
OHR				*e*Lg	Lg	23 00 45.7	
	comp=N,186nm,0.8s						
VLO	Vlora	0.60	238	P	Pn	23 00 34.5	+0.7
	baz=236						
VLO				AMP			
	comp=N,3.8nm,0.4s,baz=236						
TIR	Tirane	0.60	338	P	Pg	23 00 24.9	-5.4
TIR				S	Pn	23 00 32.7	-1.2
TIR				AML	AML	23 00 46.3	
	comp=N,1528µm,0.5s						
TIR				AML	AML	23 00 50.8	
	comp=E,1222µm,0.5s						
TIR	Tirane	0.60	338	*i* Pg	Pg	23 00 30.3	0.0
TIR	Tirane	0.60	338	P	Pn	23 00 32.7	-1.2
	baz=334						
TIR				S	Sb	23 00 41.4	+0.9
	baz=334						
LSK	Leskovik	0.72	153	P	Pn	23 00 36.5	+1.0
	baz=156						
LSK				S	Sn	23 00 47.9	+0.9
	baz=156						
LSK				AMP			
	comp=E,1.4nm,0.6s,baz=156						
NEST	Nestorio	0.77	119	P	Pg	23 00 32.3	-1.0
NEST				AML	AML	23 00 51.5	
	comp=E,612µm,0.4s						
NEST				AML	AML	23 00 56.1	
	comp=N,601µm,0.3s						
SRN	Sarande	0.92	188	P	Pn	23 00 40.3	+2.2
	baz=189						
SRN				S	Sn	23 00 54.5	+2.9
	baz=189						
SRN				AMP			
	comp=E,0.9nm,0.5s,baz=189						
FNA	Florina	0.92	90	P	Pg	23 00 33.1	-3.1
FNA				AML	AML	23 00 57.7	
	comp=N,842µm,0.3s						
FNA				AML	AML	23 00 58.3	
	comp=E,1046µm,0.7s						
FNA	Florina	0.92	90	*i* Pg	Pn	23 00 40.2	+1.9
FNA				*i* Sg	Sn	23 00 54.5	+2.7
FNA	Florina	0.92	90	P	Pn	23 00 38.6	+0.3
	baz=93						
PHP	Peshkopia	0.92	13	P	Pn	23 00 38.2	0.0
	baz=12						
PHP				S	Sb	23 00 51.0	+1.3
	baz=12						
PHP				AMP			
	comp=N,1.0nm,0.4s,baz=12						
PENT	Pentalofos	0.95	128	P	Pg	23 00 35.7	-1.1
PENT				AML	AML	23 01 00.5	
	comp=E,341µm,0.4s						
PENT				AML	AML	23 01 03.4	
	comp=N,335µm,0.4s						
KASA	Kassiopi	1.05	190	P	Pg	23 00 37.7	-1.1
KEK	Kerkira	1.11	195	P	Pg	23 00 38.3	-1.6
KPRO	Kipourio	1.23	132	P	Pn	23 00 40.3	-2.3
JAN	Janina	1.25	155	P	Pn	23 00 40.5	-2.2
IGT	Igoumenitsa	1.26	174	P	Pn	23 00 40.9	-2.0
IGT				AML	AML	23 01 05.3	
	comp=E,470µm,0.7s						
IGT				AML	AML	23 01 06.6	
	comp=N,395µm,0.5s						
KZN	Kozani	1.31	111	P	Pn	23 00 40.8	-2.9
KZN				AML	AML	23 01 07.0	
	comp=E,524µm,0.4s						
KZN				AML	AML	23 01 09.1	
	comp=N,378µm,0.4s						
ULC	Ulcinj	1.36	330	*i* Pg	Pn	23 00 43.3	-1.1
SCTE	Santa Cesarea	1.48	242	P	Pn	23 00 43.7	-2.2
SKO	Skopje	1.52	39	*i* Pg	Pn	23 00 44.5	-2.1
SKO				*i* Sg	Sb	23 01 08.3	+1.4
SKO				*e*Lg	Lg	23 01 10.1	
	comp=N,9.7nm,0.4s						
PDG	Podgorica	1.78	338	*i* Pg	Pb	23 00 51.4	-0.3
PDG				*i* Sg	Sb	23 01 15.0	+0.7
THL	Klokotos Trika	1.87	130	P	Pn	23 00 50.6	-0.7
NOCI	Noci	2.36	271	P	Pn	23 00 56.4	-1.6

ATH ***26*** *23:00:59.0, 40°.82N×20°.17E, h14^{km}±4^{km}, ML2.7/6, Error ellipse: s-maj=5.0km s-min=1.2km az=358.0*

SKO ***26*** *23:00:59.4, 40°.85N×20°.20E, h30^{km}*

ISC 26 23:00:58.7±1.2**, 40°.83N**±0°.03×**20°.16E**±0°.03**, h15^{km}**±11^{km}**, n20, σ0^{s}75**/28**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	Tirane	0.56	337	P	Pb	23 01 09.7	-0.5
TIR				S	Sb	23 01 18.4	+0.4
TIR				AML	AML	23 01 23.6	
	comp=N,1902µm,0.6s						
TIR				AML	AML	23 01 24.8	
	comp=E,1649µm,0.7s						
TIR	Tirane	0.56	337	*i* Pg	Pb	23 01 10.0	-0.1
OHR	Ohrid	0.56	60	*i* Pg	Pb	23 01 09.9	-0.3
OHR				*i* Sg	Sn	23 01 19.8	-1.4
OHR				*e*Lg	Lg	23 01 20.6	
	comp=E,118nm,0.6s						
NEST	Nestorio	0.80	121	P	Pb	23 01 14.0	-0.3
NEST				AML	AML	23 01 28.0	
	comp=E,734µm,0.5s						
NEST				AML	AML	23 01 31.3	
	comp=N,686µm,0.7s						
FNA	Florina	0.93	93	P	Pb	23 01 16.1	-0.4
FNA				AML	AML	23 01 32.1	
	comp=E,1144µm,0.4s						
FNA				AML	AML	23 01 32.9	
	comp=N,929µm,0.3s						
FNA	Florina	0.93	93	*i* Pg	Pb	23 01 16.2	-0.3
FNA				*i* Sg	Sn	23 01 31.5	+1.2
PENT	Pentalofos	0.98	130	P	Pb	23 01 17.3	-0.1
KASA	Kassiopi	1.10	189	P	Pb	23 01 19.0	-0.3
KEK	Kerkira	1.15	194	P	Pb	23 01 19.9	-0.4
KPRO	Kipourio	1.27	133	P	Pn	23 01 22.0	0.0
KPRO				AML	AML	23 01 44.5	
	comp=E,708µm,0.8s						
KPRO				AML	AML	23 01 44.7	
	comp=N,470µm,0.9s						
JAN	Janina	1.29	155	P	Pb	23 01 22.4	-0.2
IGT	Igoumenitsa	1.31	174	P	Pn	23 01 22.4	0.0
IGT				AML	AML	23 01 42.2	
	comp=N,787µm,0.6s						
IGT				AML	AML	23 01 42.6	
	comp=E,779µm,0.9s						
IGT	Igoumenitsa	1.31	174	*i* Pg	Pg	23 01 23.2	-0.6
IGT				*i* Sg	Sg	23 01 41.3	+0.5
ULC	Ulcinj	1.32	329	*i* Pg	Pg	23 01 24.0	-0.1
KZN	Kozani	1.34	113	P	Pb	23 01 23.1	-0.4
KZN				AML	AML	23 01 44.1	
	comp=N,392µm,0.6s						
KZN				AML	AML	23 01 44.3	
	comp=E,522µm,0.4s						
SKO	Skopje	1.49	40	*i* Pg	Pb	23 01 25.5	-0.6
SKO				*i* Sg	Sg	23 01 46.1	-0.7
SKO				*e*Lg	Lg	23 01 46.7	
	comp=E,5.1nm,0.4s						
SCTE	Santa Cesarea	1.50	240	P	Pb	23 01 26.0	-0.1
GRG	Griva	1.71	85	*i* Pg	Pb	23 01 28.7	-1.1
GRG				*i* Sg	Sb	23 01 51.0	-0.1
STIP	Stip	1.76	60	*i* Pn	Pg	23 01 32.1	-0.3
STIP				*i* Sn	Sg	23 01 57.4	+2.2
STIP				*e*Lg	Lg	23 01 58.6	
	comp=E,12nm,0.5s						
VAY	Valandovo	1.89	74	*i* Pn	Pn	23 01 30.6	+0.3
VAY				*i* Sn	Sb	23 01 57.2	+1.0
VAY				*e*Lg	Lg	23 02 03.5	
	comp=E,20nm,0.5s						

TUL ***26*** *23:02:42.2±0.6, 36°.65N±0°.02×98°.47W±0°.02, h8^{km}±7^{km}, ML2.7, mb_Lg2.3/13(NEIC), Error ellipse: s-maj=3.2km s-min=2.1km az=143.0*

NEIC 26 23:02:42.2±1.1**, 36°.66N**±0°.02×**98°.47W**±0°.02**, h5^{km}**±2^{km}**, Error ellipse: s-maj=3.4km s-min=3.0km az=130.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CROK	Carrier	0.42	111		Pg	23 02 50.4	+0.1
CROK				Sg	Sg	23 02 56.5	+0.6
KAN14	Manchester OK	0.51	54	Pg	Pg	23 02 51.9	0.0
KAN14				Sg	Sg	23 02 59.4	+0.8
U32A	Winter Ranch,	0.51	237	Pg	Pg	23 02 52.0	-0.1
U32A				Sg	Sg	23 02 59.2	+0.5
GC02	Grant County #	0.53	68	Pg	Pg	23 02 52.5	+0.2
GC02				Sg	Sg	23 02 59.8	+0.6
KAN10	Anthony SW Sta	0.55	33	Pg	Pg	23 02 53.0	+0.2
KAN10				Sg	Sg	23 03 00.7	+0.7
KAN16	Harper SW Stat	0.65	30	Pg	Pg	23 02 54.7	0.0
KAN16				Sg	Sg	23 03 04.0	+0.8
KAN12	Harper NE Stat	0.74	31	Pg	Pg	23 02 56.4	0.0
KAN01	Argonia South	0.75	49	Pg	Pg	23 02 56.8	0.0
KAN09	Caldwell North	0.83	55	Pg	Pg	23 02 58.3	+0.1
KAN13	South Haven SW	0.87	66	Pg	Pg	23 02 59.0	+0.1
BLOK	Blackwell	1.01	84	Pg	Pg	23 03 01.2	-0.5
OK029	Liberty Lake	1.19	136		Pg	23 03 04.1	-1.0
BCOK	Bluff Creek, N	1.22	145		Pg	23 03 04.6	-1.0
OK033	Mehan	1.38	116	Pn	Pn	23 03 07.7	-0.4
OK025	Westminster Rd	1.41	139		Pn	23 03 07.5	-1.1
OK031	S. Brethren Rd	1.50	118		Pn	23 03 09.6	-0.2
QUOK	Quay	1.50	108		Pn	23 03 09.6	-0.3
OK030	Cody Creek RV	1.55	118		Pn	23 03 10.2	-0.3
OK034	N. Norfolk Rd.	1.56	114		Pn	23 03 09.5	-1.1
T35A	Sooner Cattle	1.59	80	Pn	Pn	23 03 10.2	-1.0
FNO	Franklin	1.65	148		Pn	23 03 11.2	-0.6
R32A	Long Quarter,	1.77	354		Pn	23 03 12.8	-0.8
WMOK	Wichita Mounta	1.93	188	Pn	Pn	23 03 15.9	+0.1
X34A	Smith Ranch, M	2.12	166	Pn	Pn	23 03 19.4	+1.1
X34A				IAmb_Lg		23 03 50.1	
	comp=Z,20nm,0.8s						
TUL1	Leonard	2.29	108		Pn	23 03 20.1	-0.5
CBKS	Cedar Bluff	2.37	335		Pn	23 03 21.9	+0.1
CBKS				IAmb_Lg		23 04 03.7	
	comp=Z,14nm,0.8s						
KSU1	Kansas State U	2.85	31	Pn	Pn	23 03 28.0	-0.3
KSU1				IAmb_Lg		23 04 11.5	
	comp=Z,8.2nm,0.7s						
LOOK	Love County	2.86	158	Pn	Pn	23 03 28.9	+0.4
AMTX	Amarillo	3.15	237	IAmb_Lg		23 04 23.0	
	comp=Z,10.0nm,0.9s						
X37A	Clayton	3.26	128	Pn	Pn	23 03 34.2	+0.1
U38A	Gravette	3.30	93	Pn	Pn	23 03 34.1	-0.4
HHAR	Hobbs	3.67	95	IAmb_Lg		23 04 39.5	
	comp=Z,6.3nm,0.8s						
KSCO	Kaye Shedlock'	4.04	307	IAmb_Lg		23 05 01.4	
	comp=Z,6.3nm,0.8s						

MAN 26 23:18:31.5, 13°.22N×120°.37E, h15^{km}, mb3.6, ML2.3, MS1.7, Mindoro

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IDC ***26*** *23:26:12.7±2.0, 24°.30S×180°.00W, h484^{km}±18^{km}, mb3.3/5, mb1 3.5/8, mb1mx3.3/22, mbtmp4.2/8, Error ellipse: s-maj=38.1km s-min=18.9km az=152.0*

NEIC ***26*** *23:26:15.7±1.0, 24°.4S±0°.1×179°.9W±0°.1, h528^{km}±13^{km}, mb4.4/20, Error ellipse: s-maj=20.4km s-min=14.9km az=69.0*

ISC 26 23:26:13.9±0.8**, 24°.4S**±0°.1×**179°.9W**±0°.1**, h505^{km}, n33, σ1^{s}21**/34**, mb4.2**/14**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	5.19	160	P	P	23 27 51.0	+8.2
MSVF	Nonsavu	6.86	344	P	P	23 27 57.2	-1.9
	1.5nm,0.3s,baz=144,slow=17,SNR=5.1						
MSVF	Nonsavu	6.86	344	P	P	23 27 57.7	-1.4
DZM	Mont Dzumac	12.74	278	P	P	23 29 00.6	+0.1
	0.8nm,0.3s,baz=157,slow=18,SNR=8.7						
DZM	Mont Dzumac	12.74	278	P	P	23 29 01.7	+1.2
URZ	Urewera	14.09	190	P	P	23 29 14.4	+0.1
	0.7nm,0.3s,baz=302,slow=23,SNR=1.6						
URZ	Urewera	14.09	190	P	P	23 29 15.0	+0.7
SANVU	Saraoutou	15.00	304	P	P	23 29 25.7	+1.5
BFZ	Birch Farm	16.59	190	P	P	23 29 40.4	-0.1
BFZ				IAmb	IAmb	23 29 42.0	
	comp=Z,25nm,1.1s						
QRZ	Quartz Range	17.60	199	P	P	23 29 50.8	+0.7
PLWZ	Palliser	17.63	192	P	P	23 29 48.4	-2.1
KHZ	Kahutara	18.81	195	P	P	23 30 01.1	-0.1
EIDS	Eidsvold	26.31	262	P	P	23 31 09.1	+0.3
EIDS				IAmb	IAmb	23 31 09.6	
	comp=Z,10.0nm,1.1s						
CTAO	Charters Tower	31.55	271	P	P	23 31 55.0	+0.4
TOO	Toolangi	32.26	238	P	P	23 32 00.3	-0.1
TOO				IAmb	IAmb	23 32 04.4	
	comp=Z,9.3nm,1.1s						
STKA	Stephens Creek	34.62	249	P	P	23 32 19.7	-0.7
	comp=Z,1.7nm,0.5s,baz=104,slow=12,SNR=5.8						
COEN	Coen	36.26	280	P	P	23 32 34.3	+0.1
BBOO	Buckleboo	39.34	247	P	P	23 32 58.4	-0.8
BBOO				IAmb	IAmb	23 33 04.0	
	comp=Z,5.7nm,0.9s						
AS31	Alice Springs	42.03	261	P	P	23 33 20.7	-0.2
ASAR	Alice Springs	42.03	261	P	P	23 33 20.6	-0.4
	comp=Z,1.5nm,0.4s,baz=94,slow=7.7,SNR=34						
ASAR				ScP	ScP	23 38 09.2	+2.6
	comp=Z,1.0nm,1.1s,baz=101,slow=4.8,SNR=4.4						
ASAR	Alice Springs	42.03	261	P	P	23 33 20.4	-0.5
WB2	Warramunga Arr	42.44	267	P	P	23 33 23.1	-1.0
WB2				IAmb	IAmb	23 33 23.8	
	comp=Z,6.0nm,0.7s						
WB0	Warramunga Arr	42.45	267	P	P	23 33 23.4	-0.8
WB0				IAmb	IAmb	23 33 24.2	
	comp=Z,6.3nm,0.6s						
WRA	Warramunga Arr	42.45	267	P	P	23 33 23.3	-0.9
	comp=Z,5.2nm,0.4s,baz=97,slow=8.4,SNR=84						
WRA				ScP	ScP	23 38 11.5	+3.2
	comp=Z,1.6nm,0.9s,baz=95,slow=4.5,SNR=7.2						
WRA	Warramunga Arr	42.45	267	P	P	23 33 23.1	-1.1
FORT	Forrest	46.22	250	P	P	23 33 52.3	-0.9
FORT				IAmb	IAmb	23 33 52.6	
	comp=Z,17nm,0.8s						
KNRA	Kununurra	48.76	270	P	P	23 34 12.1	-0.3
KNRA				IAmb	IAmb	23 34 29.9	
	comp=Z,17nm,1.1s						
PSA00	Pilbara Seismi	55.15	260	P	P	23 34 57.5	-1.0
PSA00				IAmb	IAmb	23 35 12.9	
	comp=Z,7.5nm,0.9s						
MORW	Morawa	56.79	250	P	P	23 35 09.0	-0.8
GIRL	Giralia	59.88	257	P	P	23 35 32.6	+1.7
GIRL				IAmb	IAmb	23 35 34.2	
	comp=Z,47nm,1.1s						
VA02	Isla de Pascua	62.76	109	P	P	23 35 48.8	-0.9
NVAR	Mina Array Bea	85.03	44	P	P	23 37 57.3	+1.3
	comp=Z,0.3nm,0.6s,baz=224,slow=7.6,SNR=3.3						
TXAR	Lajitas Array	90.61	58	P	P	23 38 22.6	+0.2
	comp=Z,0.8nm,0.7s,baz=220,slow=5.9,SNR=9.8						

ANF ***26*** *23:47:40.9±0.3, 36°.27N×97°.67W, h5^{km}, ML3.3/8, Error ellipse: s-maj=4.1km s-min=2.9km az=166.0*

TUL ***26*** *23:47:40.8±1.3, 36°.30N±0°.01×97°.68W±0°.02, h5^{km}±2^{km}, ML2.9, mb_Lg2.7/44(NEIC), Error ellipse: s-maj=2.4km s-min=1.6km az=59.0*

NEIC ***26*** *23:47:40.9±1.1, 36°.300N±0°.009×97°.68W±0°.02, h1^{km}±5^{km}, Error ellipse: s-maj=2.2km s-min=0.7km az=58.0*

ISC 26 23:47:41.2±1.1**, 36°.30N**±0°.02×**97°.68W**±0°.02**, h2^{km}**±11^{km}**, n69, σ0^{s}64**/72**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CROK	Carrier	0.32	309	Pg	Pg	23 47 47.2	-0.1
CROK				Sg	Sg	23 47 51.9	+0.4
OK029	Liberty Lake	0.54	160	Pg	Pg	23 47 51.3	-0.2
OK029				Sg	Sg	23 47 58.8	+0.4
GC02	Grant County #	0.57	345	Pg	Pg	23 47 51.8	-0.3
GC02				Sg	Sg	23 47 59.7	+0.3
BLOK	Blackwell	0.59	39	Pg	Pg	23 47 52.5	0.0
BLOK				Sg	Sg	23 48 00.5	+0.4
BCOK	Bluff Creek, N	0.65	175	Pg	Pg	23 47 53.2	-0.4
BCOK				Sg	Sg	23 48 02.3	+0.3
OK033	Mehan	0.65	113	Pg	Pg	23 47 53.5	-0.2
OK033				Sg	Sg	23 48 02.5	+0.5
KAN14	Manchester OK	0.69	341		Pg	23 47 54.0	-0.4
KAN14				Sg	Sg	23 48 03.5	+0.1
KAN13	South Haven SW	0.73	13		Pg	23 47 54.6	-0.5
KAN17	Caldwell West	0.74	355		Pg	23 47 55.0	-0.4
OK031	S. Brethren Rd	0.76	117		Pg	23 47 55.5	-0.3
OK025	Westminster Rd	0.77	159	Pg	Pg	23 47 55.5	-0.4
QUOK	Quay	0.80	99	Pg	Pg	23 47 56.1	-0.3
QUOK				Sg	Sg	23 48 07.0	+0.3
OK030	Cody Creek RV	0.81	117	Pg	Pg	23 47 56.4	-0.3
KAN05	Bluff City Nor	0.82	349	IAmb_Lg		23 48 07.6	
	comp=Z,106nm,0.9s						
KAN09	Caldwell North	0.83	3	Pg	Pg	23 47 56.7	-0.5
OK034	N. Norfolk Rd.	0.83	110		Pg	23 47 56.8	-0.4
KAN01	Argonia South	0.85	356	Pg	Pg	23 47 57.1	-0.4
KAN01				IAmb_Lg		23 48 08.0	
	comp=Z,55nm,0.7s						
KAN10	Anthony SW Sta	0.89	338	Pg	Pg	23 47 57.5	-0.6
OKCFA	Oklahoma City	0.91	168		Pg	23 47 58.0	-0.5
OKCFA	Oklahoma City	0.91	168	P	Pg	23 47 57.9	-0.6
	baz=348						
OKCSW	OKLAHOMA CITY	0.92	168	Pg	Pg	23 47 58.6	-0.1
KAN06	Argonia West S	0.95	351		Pg	23 47 59.0	-0.5
KAN16	Harper SW Stat	0.97	341	Pg	Pg	23 47 59.3	-0.5
KAN12	Harper NE Stat	1.02	346		Pg	23 48 00.1	-0.7
FNO	Franklin	1.07	168	Pg	Pg	23 48 00.7	-0.9
U32A	Winter Ranch,	1.07	274		Pg	23 48 00.6	-1.1
U32A	Winter Ranch,	1.07	274	P	Pg	23 48 00.6	-1.1
	baz=94						
U32A				S	Sg	23 48 15.6	0.0
	baz=94						
T35A	Sooner Cattle	1.12	57		Pg	23 48 01.9	-0.7
T35B	Sooner Cattle	1.12	57	P	Pg	23 48 01.9	-0.8
	baz=237						
T35B				S	Sg	23 48 17.2	+0.1
	baz=237						
TUL1	Leonard	1.58	104		Pn	23 48 09.1	-1.0
TUL1	Leonard	1.58	104	P	Pn	23 48 09.2	-1.0
	baz=285						
TUL1				S	Sn	23 48 30.6	-0.5
	baz=285						
X34A	Smith Ranch, M	1.70	184		Pn	23 48 12.1	+0.2
X34A				IAmb_Lg		23 48 37.7	
	comp=Z,40nm,0.8s						

WMOK	Wichita Mounta	1.80	210		Pn	23 48 12.4	-0.9
WMOK	Wichita Mounta	1.80	210	P	Pn	23 48 12.5	-0.8
	baz=29						
WMOK				S	Sn	23 48 36.6	-0.1
	baz=29						
R32A	Long Quarter,	2.27	339		Pn	23 48 19.8	0.0
R32A	Long Quarter,	2.27	339	P	Pn	23 48 20.7	+1.0
	baz=159						
R32A				S	Sb	23 48 51.2	-0.3
	baz=159						
LOOK	Love County	2.34	170		Pn	23 48 20.3	-0.4
LOOK				IAmb_Lg		23 49 00.2	
	comp=Z,24nm,0.7s						
X37A	Clayton	2.54	132		Pn	23 48 24.0	+0.6
X37A				IAmb_Lg		23 49 06.8	
	comp=Z,31nm,0.7s						
U38A	Gravette	2.66	86		Pn	23 48 25.9	+0.9
KSU1	Kansas State U	2.92	17		Pn	23 48 29.9	+1.3
KSU1				IAmb_Lg		23 49 18.0	
	comp=Z,14nm,0.7s						
Z35A	Perchaven, San	2.99	173	Pn	Pn	23 48 29.5	0.0
CBKS	Cedar Bluff	2.99	327	Pn	Pn	23 48 30.8	+1.1
HHAR	Hobbs	3.02	89		Pn	23 48 29.9	-0.1
W39A	Magazine	3.35	108	Pn	Pn	23 48 34.0	-0.6
W39A				IAmb_Lg		23 49 30.6	
	comp=Z,20nm,0.8s						
AMTX	Amarillo	3.56	248		Pb	23 48 45.3	+0.4
S39A	Bolivar	3.75	67		Pb	23 48 48.8	+0.7
S39A				IAmb_Lg		23 49 40.1	
	comp=Z,22nm,0.8s						
S39A	Bolivar	3.75	67	P	Pn	23 48 39.8	-0.2
	baz=250						
Z38A	Mt. Pleasant	3.76	143	IAmb_Lg		23 49 46.2	
	comp=Z,29nm,1.0s						
MIAR	Mount Ida	3.78	116	Pn	Pn	23 48 40.5	+0.2
MIAR				IAmb_Lg		23 49 45.4	
	comp=Z,23nm,0.9s						
MIAR	Mount Ida	3.78	116	P	Pn	23 48 40.6	+0.2
	baz=299						
U40A	Yellville	3.90	88	Pg	Pb	23 48 51.1	+0.6
ABTX	Abilene, Hawle	4.01	204		Sb	23 49 41.6	0.0
ABTX				IAmb_Lg		23 49 53.4	
	comp=Z,10.0nm,0.7s						
WHTX	Lake Whitney,	4.30	177	Pg	Pb	23 48 58.8	+1.3
X40A	Basin Creek Fa	4.35	113		Pn	23 48 48.8	+0.6
X40A				IAmb_Lg		23 50 01.5	
	comp=Z,15nm,0.9s						
MGMO	Mountain Grove	4.43	77	IAmb_Lg		23 50 06.8	
	comp=Z,18nm,0.9s						
WHAR	Wooly Hollow	4.50	101		Pn	23 48 50.7	+0.5
WLAR	White Oak Lake	4.57	124	Pn	Pn	23 48 51.4	+0.2
P38A	Dawn	4.66	43	Pn	Pn	23 48 52.8	+0.2
P38A					Pg	23 49 07.9	-2.5
P38A				IAmb_Lg		23 50 13.6	
	comp=Z,14nm,0.7s						
R40A	Maddies Statio	4.75	64	P	Pn	23 48 53.2	-0.5
	baz=247						
KSCO	Kaye Shedlock’	4.77	306	IAmb_Lg		23 50 20.5	
	comp=Z,20nm,1.1s						
MSTX	Muleshoe	4.78	242	Pn	Pn	23 48 54.2	-0.1
N35A	Tabor	4.82	19	Pn	Pn	23 48 54.3	-0.5
T42A	Van Buren	5.34	80	IAmb_Lg		23 50 35.7	
	comp=Z,10nm,0.7s						
CCM	Cathedral Cave	5.43	69	IAmb_Lg		23 50 39.8	
	comp=Z,17nm,0.8s						
T25A	Trinidad	5.47	281	IAmb_Lg		23 50 47.5	
	comp=Z,8.2nm,0.7s						
435B	Jarrell	5.51	179	IAmb_Lg		23 50 39.9	
	comp=Z,9.2nm,1.0s						
FVM	French Village	6.03	72	IAmb_Lg		23 50 57.5	
	comp=Z,13nm,1.1s						
JCT	Junction City	6.07	198	IAmb_Lg		23 51 05.0	
	comp=Z,12nm,0.8s						
S44A	Carbondale	6.88	76	IAmb_Lg		23 51 26.1	
	comp=Z,12nm,0.9s						

TUL ***27*** *00:06:46.9±1.2, 36°.84N±0°.02×97°.79W±0°.03, h4^{km}±1^{km}, ML2.8, mb_Lg2.5/27(NEIC), Error ellipse: s-maj=3.8km s-min=2.4km az=76.0*

NEIC 27 00:06:47.1±0.7**, 36°.81N**±0°.02×**97°.79W**±0°.03**, h1**^{km}±7^{km}**, Error ellipse: s-maj=4.2km s-min=2.4km az=68.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
GC02	Grant County #	0.07	304	Pg	Pg	00 06 48.5	0.0
GC02				Sg	Sg	00 06 49.7	+0.3
KAN14	Manchester OK	0.20	316		Pg	00 06 50.9	-0.1
KAN17	Caldwell West	0.23	4		Pg	00 06 51.6	0.0
KAN17				Sg	Sg	00 06 54.8	+0.1
KAN05	Bluff City Nor	0.30	347	Pg	Pg	00 06 52.7	-0.3
KAN13	South Haven SW	0.32	51	Pg	Pg	00 06 53.3	+0.1
KAN01	Argonia South	0.34	4	Pg	Pg	00 06 53.6	-0.1
CROK	Carrier	0.34	207	Pg	Pg	00 06 54.2	+0.5
CROK				Sg	Sg	00 06 59.4	+1.3
KAN09	Caldwell North	0.35	23		Pg	00 06 53.7	-0.1
KAN10	Anthony SW Sta	0.40	322		Pg	00 06 54.6	-0.2
KAN10				Sg	Sg	00 06 59.9	0.0
KAN06	Argonia West S	0.44	353		Pg	00 06 55.4	-0.2
KAN08	Anthony NE Sta	0.44	341	Pg	Pg	00 06 54.9	-0.6
BLOK	Blackwell	0.46	96		Pg	00 06 56.2	+0.2
KAN16	Harper SW Stat	0.47	332		Pg	00 06 55.9	-0.2
OK033	Mehan	1.03	138	Pg	Pg	00 07 06.7	0.0
T35A	Sooner Cattle	1.03	84	Pg	Pg	00 07 06.5	-0.3
OK029	Liberty Lake	1.05	165	Pg	Pg	00 07 07.1	-0.1
U32A	Winter Ranch,	1.07	247		Pg	00 07 07.0	-0.6
QUOK	Quay	1.08	126		Pg	00 07 07.7	0.0
OK031	S. Brethren Rd	1.15	138	Pg	Pg	00 07 09.0	-0.1
BCOK	Bluff Creek, N	1.16	173		Pg	00 07 09.0	-0.3
OK034	N. Norfolk Rd.	1.18	132		Pg	00 07 09.5	-0.2
OK030	Cody Creek RV	1.20	137		Pg	00 07 09.7	-0.3
OK025	Westminster Rd	1.28	163	Pn	Pg	00 07 11.3	-0.3
OKCFA	Oklahoma City	1.42	169		Pn	00 07 13.7	-0.3
OKCFA				IAmb_Lg		00 07 35.2	
	comp=Z,35nm,0.8s						
OKCSW	OKLAHOMA CITY	1.43	169	Pn	Pn	00 07 13.9	-0.2
FNO	Franklin	1.58	168		Pn	00 07 16.1	-0.1
FNO				IAmb_Lg		00 07 37.8	
	comp=Z,17nm,1.3s						
R32A	Long Quarter,	1.77	336		Pn	00 07 18.9	+0.1
TUL1	Leonard	1.84	119		Pn	00 07 19.8	-0.1
X34A	Smith Ranch, M	2.21	181		Pn	00 07 25.5	+0.7
X34A				IAmb_Lg		00 08 03.9	
	comp=Z,15nm,0.7s						
WMOK	Wichita Mounta	2.22	202	Pn	Pn	00 07 25.7	+0.6
KSU1	Kansas State U	2.47	22	Pn	Pn	00 07 28.9	+0.5
CBKS	Cedar Bluff	2.53	323	Pn	Pn	00 07 29.5	+0.2
CBKS				IAmb_Lg		00 08 04.2	
	comp=Z,14nm,1.0s						
U38A	Gravette	2.76	97		Pn	00 07 33.0	+0.6
LOOK	Love County	2.86	170		Pn	00 07 33.9	+0.1
X37A	Clayton	2.96	138		Pn	00 07 35.8	+0.6
X37A				IAmb_Lg		00 08 23.4	
	comp=Z,16nm,0.7s						
HHAR	Hobbs	3.14	99		Pn	00 07 37.9	+0.2
Z35A	Perchaven, San	3.50	173	Pn	Pn	00 07 42.3	-0.3
W39A	Magazine	3.62	115	IAmb_Lg		00 08 48.2	
	comp=Z,19nm,0.8s						
S39A	Bolivar	3.67	75		Pn	00 07 44.9	0.0
AMTX	Amarillo	3.70	240	IAmb_Lg		00 08 55.0	
	comp=Z,12nm,0.8s						
N33A	J Bar K, Exete	3.93	4	Pn	Pn	00 07 47.3	-1.2
U40A	Yellville	4.00	95		Pn	00 07 49.3	-0.2
MIAR	Mount Ida	4.11	122	IAmb_Lg		00 08 58.2	
	comp=Z,10nm,0.8s						
P38A	Dawn	4.37	49		Pn	00 07 54.5	-0.1
P38A				IAmb_Lg		00 09 08.4	
	comp=Z,14nm,0.7s						
KSCO	Kaye Shedlock’	4.41	301	IAmb_Lg		00 09 18.8	
	comp=Z,12nm,0.9s						
MGMO	Mountain Grove	4.43	84	Pn	Pn	00 07 55.7	+0.2
MGMO				IAmb_Lg		00 09 09.0	
	comp=Z,9.2nm,0.7s						
ABTX	Abilene, Hawle	4.45	201	Pn	Pn	00 07 55.8	+0.1
R40A	Maddies Statio	4.63	70		Pn	00 07 57.5	-0.6
X40A	Basin Creek Fa	4.65	118	Pn	Pn	00 07 58.6	+0.1
X40A				IAmb_Lg		00 09 23.2	
	comp=Z,7.9nm,0.8s						
FCAR	Ozark Folk Cen	4.66	100	IAmb_Lg		00 09 16.7	
	comp=Z,8.7nm,0.8s						
WHAR	Wooly Hollow	4.71	107	Pn	Pn	00 07 59.0	-0.2
L34A	Svendsen Farm,	5.26	12	IAmb_Lg		00 09 31.0	
	comp=Z,13nm,0.7s						
CCM	Cathedral Cave	5.35	75	Pn	Pn	00 08 08.2	+0.1
LCAR	Lake Charles	5.40	96	Pn	Pn	00 08 09.3	+0.6
ISCO	Idaho Springs	6.84	298	IAmb_Lg		00 10 23.9	
	comp=Z,6.9nm,1.1s						

MOS ***27*** *00:13:53.6±0.8, 55°.77N×110°.17E, h11^{km}, mb3.9/1, Error ellipse: s-maj=10.0km s-min=6.3km az=76.6*

IDC ***27*** *00:13:54.0±1.3, 55°.75N×110°.11E, h0^{km}, mb3.7/3, mb1 3.9/11, mb1mx3.6/41, mbtmp3.8/11, ML3.5/7, MS3.0/2, Ms1 3.0/2, ms1mx2.5/38, Error ellipse: s-maj=26.8km s-min=12.8km az=123.0*

BYKL ***27*** *00:13:54.8±0.1, 55°.73N×110°.20E, h7^{km}±2^{km}*

NEIC ***27*** *00:13:55.0±0.9, 55°.8N±0°.1×110°.2E±0°.1, h10^{km}±1^{km}, mb3.9/8, Error ellipse: s-maj=18.0km s-min=12.3km az=203.0*

ISC 27 00:13:53.8±1.1**, 55°.72N**±0°.02×**110°.20E**±0°.02**, h3**^{km}±8^{km}**, n83, σ2^{s}37**/146**, mb3.7**/4**, 9C, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
NIZ	Nizh Angarsk	0.37	279	⇑*i*Pg	Pg	00 14 02.0	+1.0
NIZ				Pmax		00 14 02.2	
	1µm,0.3s						
NIZ				*e*Sg	Sg	00 14 07.4	+1.6
NIZ				Smax		00 14 07.8	
	7µm,0.5s						
NIZ	Nizh Angarsk	0.37	279	*e*PG	Pg	00 14 01.6	+0.6
NIZ				*e*		00 14 07.4	
NIZ				pmax	pmax		
	comp=Z,1µm,0.3s						
NIZ				smax	smax		
	comp=E,7µm,0.5s						
KMO	Kumora	0.59	73	⇑*i*Pg	Pg	00 14 05.2	+0.1
KMO				Pmax		00 14 05.9	
	comp=E,517nm,0.4s						
KMO				*e*Sg	Sg	00 14 13.1	+0.3
KMO				Smax		00 14 15.4	
	comp=E,3µm,1.1s						
KMO	Kumora	0.59	73	⇑*i*PG	Pg	00 14 05.1	0.0
KMO				*e*		00 14 12.5	
KMO				pmax	pmax		
	comp=Z,518nm,0.3s						
KMO				smax	smax		
	comp=N,3µm,1.0s						
YOA	Uoyan	0.95	64	*e*Pg	Pg	00 14 11.9	-0.2
YOA				Pmax		00 14 18.7	
	comp=N,403nm,0.4s						
YOA				*e*Sg	Sg	00 14 24.6	+0.2
YOA				Smax		00 14 39.8	
	comp=N,3µm,0.6s						
YOA	Uoyan	0.95	64	*e*PG	Pg	00 14 11.8	-0.3
YOA				*e*		00 14 25.3	
YOA				pmax	pmax		
	comp=Z,393nm,0.2s						
YOA				smax	smax		
	comp=N,3µm,0.6s						
YLYR	Ulyunkhan	1.01	146	⇑*i*Pg	Pg	00 14 13.3	+0.2
YLYR				Pmax		00 14 14.0	
	comp=N,275nm,0.1s						
YLYR				*e*Sg	Sg	00 14 27.0	+0.8
YLYR				*e*		00 14 28.5	
YLYR				max		00 14 41.6	
	comp=N,2µm,0.3s						
YLYR	Ulyunkhan	1.01	146	⇑*i*PG	Pg	00 14 13.3	+0.2
YLYR				*e*		00 14 27.2	
YLYR				pmax	pmax		
	comp=Z,463nm,0.4s						
YLYR				smax	smax		
	comp=N,2µm,0.3s						
SVKR	Severomuysk	1.93	77	*e*Pg	Pb	00 14 29.1	-0.6
SVKR				Pmax		00 14 30.3	
	comp=N,436nm,0.4s						
SVKR				*e*Sg	Sb	00 14 54.7	+0.4
SVKR				Smax		00 14 58.3	
	comp=N,4µm,0.6s						
UKT	Uakit	1.96	95	⇑*i*Pg	Pn	00 14 29.4	+1.4
UKT				Pmax		00 14 30.4	
	comp=N,417nm,0.9s						
UKT				*e*Sg	Sb	00 14 55.9	+0.9
UKT				Smax		00 14 56.9	
	comp=N,1µm,0.7s						
UKT	Uakit	1.96	95	*e*PN	Pb	00 14 30.3	+0.1
UKT				*e*		00 14 56.8	
UKT				pmax	pmax		
	comp=Z,357nm,0.4s						
UKT				smax	smax		
	comp=N,1µm,0.4s						
SYVR	Suvo	2.07	183	*e*Pn	Pn	00 14 30.5	+1.1
SYVR				⇑*i*Pg	Pb	00 14 32.2	+0.2
SYVR				Pmax		00 14 32.7	
	comp=N,239nm,0.7s						
SYVR				*e*Sg	Sb	00 15 00.2	+2.1
SYVR				Smax		00 15 02.6	
	comp=N,3µm,0.8s						
SYVR	Suvo	2.07	183	⇑*i*PN	Pb	00 14 32.2	+0.2
SYVR				*e*		00 15 00.6	
SYVR				pmax	pmax		
	comp=Z,234nm,0.5s						
SYVR				smax	smax		
	comp=E,3µm,0.7s						
OGRR	Ongureny	2.57	217	*e*Pg	Pb	00 14 40.0	-0.5
OGRR				*e*		00 14 46.1	
OGRR				max		00 14 53.4	
	comp=E,67nm,0.3s						
OGRR				*e*Sn	Sn	00 15 07.7	-0.4
OGRR				*e*		00 15 12.1	
OGRR				*e*Sg	Sb	00 15 14.3	+1.8
OGRR				Smax		00 15 20.2	
	comp=E,494nm,0.4s						
OGRR	Ongureny	2.57	217	*e*PN	Pb	00 14 40.0	-0.5
OGRR				*e*		00 14 43.9	
OGRR				*e*S	Sb	00 15 11.1	-1.4
OGRR				*e*		00 15 16.6	
OGRR				pmax	pmax		
	comp=Z,60nm,0.4s						
OGRR				smax	smax		
	comp=E,661nm,0.6s						
BOD	Bodaibo	2.97	43	*e*Pn	Pn	00 14 42.6	+0.8
BOD				max		00 14 45.8	
	comp=E,48nm,0.5s						
BOD				*e*Pg	Pb	00 14 48.0	+0.7
BOD				*e*Sn	Sn	00 15 17.4	-0.5
BOD				*e*Sg	Sb	00 15 26.0	+2.1
BOD				Smax		00 15 31.0	
	comp=E,364nm,1.2s						
BOD	Bodaibo	2.97	43	*e*PN	Pn	00 14 42.4	+0.6
BOD				*e*		00 14 47.9	
BOD				*e*		00 15 25.7	
BOD				pmax	pmax		
	comp=Z,38nm,0.5s						
BOD				smax	smax		
	comp=E,362nm,1.0s						
NLYR	Nelyaty	3.18	74	*e*Pn	Pn	00 14 45.6	+0.9
NLYR				*e*		00 14 50.3	
NLYR				*e*Pg	Pb	00 14 52.0	+1.1
NLYR				Pmax		00 14 55.5	
	comp=E,98nm,0.8s						
NLYR				*e*Sn	Sn	00 15 21.9	-1.2
NLYR				*e*Sg	Sb	00 15 32.9	+2.9
NLYR				Smax		00 15 45.2	
	comp=E,524nm,1.5s						
KELR	Kotokel	3.22	204	*e*Pn	Pn	00 14 47.0	+1.8
KELR				*e*Pg	Pb	00 14 53.2	+1.7
KELR				*e*		00 14 59.3	
KELR				*e*Sn	Sn	00 15 24.3	+0.3
KELR				*e*Sg	Sb	00 15 34.7	+3.6
TRG	Tyrgan	3.73	219	*e*Pn	Pn	00 14 53.8	+1.6
TRG				max		00 14 55.4	
	comp=E,63nm,0.3s						
TRG				*e*		00 14 57.3	
TRG				*e*Sn	Sn	00 15 37.0	+0.4
TRG				*e*Sg	Sb	00 15 50.6	+4.8
TRG				Smax		00 15 56.4	
	comp=E,287nm,0.2s						
TRG	Tyrgan	3.73	219	*e*PN	Pn	00 14 53.8	+1.6
TRG				*e*		00 15 02.6	
TRG				*e*S	Sn	00 15 36.6	0.0
TRG				*e*		00 15 50.3	
TRG				pmax	pmax		
	comp=Z,48nm,0.3s						
TRG				smax	smax		
	comp=N,291nm,0.2s						
UUDB	Ulan-Yde	4.14	202	*e*Pn	Pn	00 14 59.6	+1.7
UUDB				*e*Pg	Pb	00 15 09.8	+2.5
UUDB				Pmax		00 15 20.8	
	comp=N,64nm,1.2s						
UUDB				*e*		00 15 34.7	
UUDB				*e*Sg	Sb	00 16 03.7	+6.0
UUDB				Smax		00 16 12.4	
	comp=N,203nm,0.8s						
FFNB	Fofonovo	4.20	210	*e*Pn	Pn	00 14 59.9	+1.1
FFNB				*e*Pg	Pb	00 15 10.4	+2.1
FFNB				*e*Sn	Sn	00 15 48.2	-0.1
FFNB				*e*Sg	Sb	00 16 04.8	+5.3
CIT	Chita	4.21	150	*e*Pg	Pb	00 15 10.0	+1.6
CIT				Pmax		00 15 11.1	
	comp=N,93nm,0.3s						
CIT				*e*Sg	Sb	00 16 04.1	+4.6
CIT				Smax		00 16 14.5	
	comp=N,270nm,0.4s						
CIT	Chita	4.21	150	*e*PN	Pn	00 15 00.0	+1.2
CIT				*e*		00 15 10.3	
CIT				*e*S	Sn	00 15 45.6	-2.8
CIT				*e*		00 16 03.7	
CIT				pmax	pmax		
	comp=Z,112nm,0.8s						
CIT				smax	smax		
	comp=E,161nm,1.1s						
KAB	Kabansk	4.23	211	*e*Sg	Sb	00 16 05.9	+5.6
KAB				Smax		00 16 16.3	
	comp=E,828nm,1.6s						
BGT	Bolshoye Golou	4.64	220	Smax		00 15 06.8	
BGT				Smax		00 15 18.9	
BGT				*e*Sn	Sn	00 15 57.9	-1.3
BGT				*e*Sg	Sg	00 16 18.9	-4.0
BGT				Smax		00 16 39.1	
	comp=E,195nm,0.6s						
CRS	Chara	4.65	72	*e*Pn	Pn	00 15 05.9	+1.0
CRS				*e*Pg	Pb	00 15 18.1	+2.2
CRS				Pmax		00 15 21.1	
	comp=E,74nm,1.0s						
CRS				*e*Sg	Sb	00 16 17.9	+5.6
CRS				Smax		00 16 24.4	
	comp=E,206nm,1.8s						
CRS	Chara	4.65	72	*e*PN	Pn	00 15 06.1	+1.2
CRS				*e*		00 15 19.2	
CRS				*e*		00 16 17.2	
CRS				pmax	pmax		
	comp=Z,74nm,0.7s						
CRS				smax	smax		
	comp=E,110nm,0.7s						
IRK	Irkutsk	4.94	228	*e*Sn	Sn	00 16 05.4	-1.0
IRK				*e*Sg	Sg	00 16 28.1	-4.1
IRK				Smax		00 16 34.3	
	comp=E,475nm,0.5s						
LSTR	Listvyanka	5.00	222	*e*Pn	Pn	00 15 10.8	+1.1
LSTR				*e*Pg	Pb	00 15 24.7	+2.8
LSTR				Pmax		00 15 36.2	
	comp=E,30nm,0.8s						
LSTR				*e*Sn	Sn	00 16 07.0	-1.0
LSTR				*e*		00 16 09.9	
LSTR				*e*		00 16 24.2	
LSTR				*e*Sg	Sg	00 16 29.9	-4.3
LSTR				Smax		00 16 40.7	
	comp=E,149nm,1.4s						
IVK	Ivanovka	5.21	224	*e*Pn	Pn	00 15 13.2	+0.6
IVK				*e*		00 15 18.0	
IVK				max		00 15 20.8	
	comp=E,20nm,0.5s						
IVK				*e*Pg	Pb	00 15 28.4	+2.9
IVK				*e*Sn	Sn	00 16 11.7	-1.5
IVK				*e*		00 16 28.2	
IVK				*e*Sg	Sg	00 16 37.0	-4.1
IVK				Smax		00 16 38.3	
	comp=E,138nm,0.6s						
TLY	Talaya	5.61	227	Pn	Pn	00 15 18.6	+0.5
	comp=E,0.0nm,0.3s,baz=74,slow=7.6,SNR=15						
TLY				Sn	Sn	00 16 21.5	-1.6
	comp=E,0.1nm,0.3s,baz=228,slow=20,SNR=9.9						
TLY				Lg	Lg	00 16 45.9	
	comp=E,0.1nm,0.3s,baz=92,slow=23,SNR=5.3						
TLY	Talaya	5.61	227	*e*Pn	Pn	00 15 18.3	+0.2
TLY				*e*Pg	Pb	00 15 35.5	+3.2
TLY				Pmax		00 15 44.3	
	comp=E,17nm,0.5s						
TLY				*e*Sn	Sn	00 16 21.2	-1.9
TLY				*e*Sg	Sg	00 16 48.3	-5.6
TLY				Smax		00 16 56.8	
	comp=E,124nm,0.6s						
TLY	Talaya	5.61	227	*e*PN	Pn	00 15 18.1	0.0
TLY				*e*		00 15 36.5	
TLY				*e*S	Sn	00 16 20.3	-2.8
TLY				*e*		00 16 47.1	
TLY				pmax	pmax		
	comp=Z,29nm,0.3s						
TLY	Talaya	5.61	227	Pn	Pn	00 15 18.3	+0.2
TUP	Tupik	5.75	99	*e*Pn	Pn	00 15 20.5	+0.5
TUP				*e*Pg	Pb	00 15 37.9	+3.1
TUP				Pmax		00 15 50.4	
	comp=Z,41nm,1.1s						
TUP				*e*Sn	Sn	00 16 24.2	-2.4
TUP				*e*Sg	Sg	00 16 53.3	-5.2
TUP				Smax		00 16 56.6	
	comp=Z,293nm,1.0s						
TUP	Tupik	5.75	99	*e*PN	Pn	00 15 20.6	+0.5
TUP				*e*		00 15 37.9	
TUP				*e*S	Sn	00 16 25.9	-0.7
TUP				*e*		00 16 54.1	
TUP				pmax	pmax		
	comp=Z,30nm,0.7s						
TUP				smax	smax		
	comp=N,295nm,0.9s						
ARS	Arshan	5.97	234	*e*Pn	Pn	00 15 23.9	+0.8
ARS				max		00 15 24.2	
	comp=N,64nm,0.6s						
ARS				*e*Sn	Sn	00 16 29.4	-2.6
ARS				*e*Sg	Sg	00 16 59.6	-5.8
ARS				Smax		00 17 05.6	
	comp=N,588nm,0.9s						
KPC	Khapcheranga	6.17	167	*e*Pn	Pn	00 15 27.1	+1.3
KPC				*e*Pg	Pb	00 15 45.7	+3.8
KPC				*e*		00 15 47.2	
KPC				max		00 15 47.6	
	comp=N,22nm,0.8s						
KPC				*e*Sn	Sn	00 16 34.0	-2.9
KPC				*e*Sg	Sg	00 17 06.0	-5.8
KPC				Smax		00 17 15.1	
	comp=N,172nm,1.1s						
KPC	Khapcheranga	6.17	167	*e*PN	Pn	00 15 26.7	+0.9
KPC				*e*		00 15 45.7	
KPC				*e*		00 17 05.3	
KPC				pmax	pmax		
	comp=Z,22nm,0.6s						
KPC				smax	smax		
	comp=E,171nm,1.1s						
ZAK	Zakamensk	6.78	221	*e*Pn	Pn	00 15 35.8	+1.6
ZAK				max		00 15 41.4	
	comp=E,14nm,0.7s						
ZAK				*e*Sn	Sn	00 16 48.9	-3.0
ZAK				*e*Sg	Sg	00 17 24.5	-6.8
ZAK				Smax		00 17 35.0	
	comp=E,123nm,1.3s						
ZAK	Zakamensk	6.78	221	*e*PN	Pn	00 15 35.8	+1.6
ZAK				*e*S	Sb	00 17 23.7	+10
ZAK				smax	smax		
	comp=N,106nm,0.8s						
MOY	Mondy	6.81	237	*e*Pn	Pn	00 15 36.9	+2.3
MOY				max		00 15 37.4	
	comp=N,77nm,1.1s						
MOY				*e*		00 15 43.6	
MOY				*e*Sn	Sn	00 16 50.7	-1.9
MOY				*e*Sg	Sg	00 17 24.8	-7.4
MOY				Smax		00 17 30.0	
	comp=N,215nm,1.4s						
MOY	Mondy	6.81	237	*e*PN	Pn	00 15 36.8	+2.2
MOY				*e*		00 15 59.8	
MOY				*e*S	Sn	00 16 51.5	-1.1
MOY				*e*		00 17 27.0	
ORL	Orlik	6.88	247	*e*Pn	Pn	00 15 37.7	+2.0
ORL				max		00 15 41.3	
	comp=N,24nm,0.5s						
ORL				*e*		00 15 43.6	
ORL				*e*Sn	Sn	00 16 52.2	-2.3
ORL				*e*Sg	Sg	00 17 27.6	-7.1
ORL				Smax		00 17 43.2	
	comp=N,99nm,1.3s						

ORL	**Orlik**	**6.88**	**247**	⇑*i*PN	**Pn**	**00 15 37.7**	**+2.0**
ORL				*e*		00 15 57.5	
ORL				*e*S	**Sn**	**00 16 52.5**	**-2.0**
ORL				*e*		00 17 28.3	
ORL				pmax	pmax		
	comp=Z,32nm,0.6s						
ORL				smax	smax		
	comp=N,99nm,1.4s						
ULN	**Ulaanbaatar**	**8.10**	**195**	PN	**Pn**	**00 15 53.4**	**+1.0**
ULN	**Ulaanbaatar**	**8.10**	**195**	Pn	**Pn**	**00 15 53.4**	**+1.0**
SONM	**Songino Array**	**8.24**	**198**	Pn	**Pn**	**00 15 55.0**	**+0.7**
	comp=N,0.5nm,0.3s,baz=5.4,slow=13,SNR=8.1						
SONM				Lg	Lg	00 18 14.3	
	comp=N,4.5nm,0.3s,baz=17,slow=28,SNR=11						
SONM	**Songino Array**	**8.24**	**198**	PN	**Pn**	**00 15 55.0**	**+0.7**
IENR	**Iengra**	**8.24**	**80**	*e*Pn	**Pn**	**00 15 55.3**	**+1.1**
IENR				*e*Pg	Pb	00 16 23.9	+6.8
IENR				*e*Sn	**Sn**	**00 17 24.4**	**-3.4**
IENR				*e*Sg	Sg	00 18 10.2	-7.9
KNGR	**Kungurtug, Tuv**	**9.17**	**241**	*e*Pn	**Pn**	**00 16 09.0**	**+2.0**
KNGR				*e*Sn	**Sn**	**00 17 47.4**	**-3.4**
KNGR				*e*Sg		00 18 39.7	
KLR	**Kul'dur**	**14.62**	**107**	Pn	**Pn**	**00 17 22.6**	**+1.3**
	comp=N,0.1nm,0.3s,baz=308,slow=16,SNR=1.8						
ZAA0	**Zalesovo Array**	**14.71**	**274**	Pn	**Pn**	**00 17 21.9**	**-0.5**
ZALV	**Zalesovo Beam**	**14.71**	**274**	Pn	**Pn**	**00 17 22.1**	**-0.4**
	comp=N,0.1nm,0.3s,baz=81,slow=10,SNR=5.7						
ZALV				LR	LR	00 22 45.1	
	comp=N,20nm,21.2s,baz=42,slow=36						
ZALV	**Zalesovo Beam**	**14.71**	**274**	P	**Pn**	**00 17 22.6**	**+0.1**
ZALV	**Zalesovo Beam**	**14.71**	**274**	Pn	**Pn**	**00 17 22.6**	**+0.1**
BJT	**Baijiatuau**	**16.20**	**163**	P	**Pn**	**00 17 42.6**	**+0.3**
BJT				pmax	pmax		
	comp=Z,30nm,1.9s						
BJT	**Baijiatuau**	**16.20**	**163**	Pn	**Pn**	**00 17 42.6**	**+0.3**
BJT				IAmb	IAmb	00 18 00.2	
	comp=Z,30nm,1.9s						
NRIK	**Noril'sk**	**17.02**	**332**	Pn	**Pn**	**00 17 52.0**	**-0.4**
	comp=Z,0.9nm,0.3s,baz=106,slow=7.4,SNR=1.6						
TIXI	**Tiksi**	**17.85**	**19**	P	**Pn**	**00 18 01.5**	**-1.3**
	comp=Z,0.4nm,0.3s,baz=233,slow=2.6,SNR=3.7						
TIXI	**Tiksi**	**17.85**	**19**	P	**Pn**	**00 18 01.5**	**-1.3**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
TIXI	**Tiksi**	**17.85**	**19**	P	**Pn**	**00 18 01.5**	**-1.3**
KURK	**Kurchatov**	**19.45**	**268**	P	**Pn**	**00 18 23.4**	**+1.0**
KURK	**Kurchatov**	**19.45**	**268**	P	**P**	**00 18 21.2**	**0.0**
KURK				IAmb	IAmb	00 18 25.0	
	comp=Z,5.0nm,1.0s						
MK31	**Makanchi Array**	**19.50**	**254**	P	**P**	**00 18 21.8**	**-0.1**
MK31				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MK31	**Makanchi Array**	**19.50**	**254**		**P**	**00 18 21.8**	**-0.1**
MKAR	**Makanchi Array**	**19.50**	**254**	P	**P**	**00 18 21.8**	**0.0**
	comp=Z,0.4nm,0.3s,baz=64,slow=11,SNR=23						
KURBB	**Kurchatov Arra**	**19.55**	**268**	P	**Pn**	**00 18 23.4**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=67,slow=12,SNR=7.1						
MAKZ	**Makanchi**	**19.66**	**255**	P	**P**	**00 18 23.8**	**+0.2**
MAKZ				pmax	pmax		
	comp=Z,11nm,1.7s						
MAKZ	**Makanchi**	**19.66**	**255**	P	**P**	**00 18 23.8**	**+0.2**
MAKZ				IAmb	IAmb	00 18 28.4	
	comp=Z,11nm,1.7s						
BVAR	**Borovoye Array**	**23.12**	**280**	P	**P**	**00 19 01.2**	**+0.5**
	comp=Z,1.1nm,0.5s,baz=152,slow=6.7,SNR=6.5						
BRVK	**Borovoye**	**23.17**	**280**	P	**P**	**00 19 01.2**	**0.0**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BRVK	**Borovoye**	**23.17**	**280**	P	**P**	**00 19 01.2**	**0.0**
BRVK				IAmb	IAmb	00 19 06.1	
	comp=Z,2.1nm,0.7s						
ABKAR	**Akbulak array**	**30.69**	**279**	P	**P**	**00 20 09.0**	**-0.4**
FINES	**FINESS Array B**	**41.33**	**314**	P	**P**	**00 21 39.9**	**-0.3**
	comp=Z,3.9nm,1.0s,baz=64,slow=8.7,SNR=5.6						
FINES	**FINESS Array B**	**41.33**	**314**	P	**P**	**00 21 39.4**	**-0.8**
COLD	**Coldfoot**	**43.72**	**34**	P	**P**	**00 21 59.4**	**-0.2**
H21K	**Melozitna Rive**	**43.80**	**36**	P	**P**	**00 22 00.1**	**-0.2**
ILAR	**Eielson Array**	**46.31**	**35**	P	**P**	**00 22 21.1**	**+0.8**
	comp=Z,0.5nm,0.9s,baz=298,slow=6.6,SNR=4.7						
ILAR	**Eielson Array**	**46.31**	**35**	P	**P**	**00 22 19.4**	**-0.8**
BORG	**Borgarnes**	**54.27**	**337**	LR	LR	00 49 15.2	
	comp=Z,48nm,21.9s,baz=12,slow=39						

IDC ***27*** *00:49:21.8±0.8, 55.°78N×110.°23E, h0^{km}, mb3.9/14, mb1 4.2/22, mb1mx4.0/47, mbtmp4.1/22, ML4.0/7, MS3.0/5, Ms1 3.0/5, ms1mx2.7/49, Error ellipse: s-maj=17.4km s-min=11.5km az=121.0*
MOS ***27*** *00:49:22.3±1.0, 55.°81N×110.°14E, h10^{km}, mb4.5/7, Error ellipse: s-maj=8.4km s-min=5.9km az=69.9*
NEIC ***27*** *00:49:24.1±1.0, 55.°82N±0.°08×110.°1E±0.°2, h10^{km}±1^{km}, mb4.3/21, Error ellipse: s-maj=18.1km s-min=10.9km az=123.0*
BYKL ***27*** *00:49:24.0±0.2, 55.°72N×110.°21E, h8^{km}±2^{km}*
ISC 27 00:49:23.0±1.0**, 55.°72N**±0.°03×**110.°19E**±0.°02**, h6**^{km}±7^{km}**, n127,** σ2.^{s}07/194**, mb4.2**/21**, 17C-5D, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIZ	**Nizh Angarsk**	**0.37**	**279**	⇑*i*Pg	**Pg**	**00 49 31.0**	**+0.7**
NIZ				Pmax		00 49 31.2	
	1µm,0.3s						
NIZ				*e*Sg	**Sg**	**00 49 36.5**	**+1.3**
NIZ				Smax		00 49 37.2	
	27µm,0.3s						
NIZ	**Nizh Angarsk**	**0.37**	**279**	*e*PG	**Pg**	**00 49 30.5**	**+0.2**
NIZ				*e*		00 49 36.4	
NIZ				pmax	pmax		
	comp=Z,3µm,0.4s						
NIZ				smax	smax		
	comp=N,13µm,0.5s						
KMO	**Kumora**	**0.59**	**73**	⇑*i*Pg	**Pg**	**00 49 34.2**	**-0.2**
KMO				Pmax		00 49 35.3	
	comp=N,823nm,0.3s						
KMO				*e*Sg	**Sg**	**00 49 42.1**	**0.0**
KMO				Smax		00 49 44.6	
	comp=N,11µm,1.0s						
KMO	**Kumora**	**0.59**	**73**	⇑*i*PG	**Pg**	**00 49 34.2**	**-0.2**
KMO				*e*		00 49 41.0	
KMO				pmax	pmax		
	comp=Z,811nm,0.2s						
KMO				smax	smax		
	comp=N,620nm,1.0s						
YOA	**Uoyan**	**0.96**	**64**	*e*Pg	**Pg**	**00 49 41.0**	**-0.3**
YOA				Pmax		00 49 45.2	
	comp=N,1µm,0.4s						
YOA				*e*Sg	**Sg**	**00 49 54.5**	**+0.8**
YOA				Smax		00 50 09.3	
	comp=N,12µm,0.6s						
YOA	**Uoyan**	**0.96**	**64**	*e*PG	**Pg**	**00 49 41.0**	**-0.3**
YOA				*e*		00 49 54.5	
YOA				pmax	pmax		
	comp=Z,656nm,0.2s						
YOA				smax	smax		
	comp=N,2µm,0.6s						
YLYR	**Ulyunkhan**	**1.01**	**146**	⇓*i*Pg	**Pg**	**00 49 42.4**	**+0.1**
	comp=N,1µm,0.6s						
YLYR				⇑*i*Pg	**Pg**	**00 49 42.4**	**+0.1**
	comp=N,918nm,0.6s						
YLYR				⇑*i*Pg	**Pg**	**00 49 42.4**	**+0.1**
	comp=N,2µm,0.6s						
YLYR				Pmax		00 49 42.5	
	comp=N,1µm,0.4s						
YLYR				*e*Sg	**Sg**	**00 49 56.3**	**+0.9**
YLYR				*e*		00 50 01.6	
YLYR				Smax		00 50 03.2	
	comp=N,4µm,0.2s						
YLYR	**Ulyunkhan**	**1.01**	**146**	⇑*i*PG	**Pg**	**00 49 42.3**	**0.0**
YLYR				*e*		00 49 56.2	
YLYR				pmax	pmax		
	comp=Z,1µm,0.4s						
YLYR				smax	smax		
	comp=N,4µm,0.3s						
SVKR	**Severomuysk**	**1.94**	**77**	*e*Pn	**Pn**	**00 49 58.0**	**+1.6**
SVKR				*e*Pg	**Pb**	**00 49 59.0**	**+0.3**
SVKR				Pmax		00 50 02.3	
	comp=N,1µm,0.5s						
SVKR				*e*Sn	**Sn**	**00 50 21.4**	**+0.3**
SVKR				*e*Sg	**Sb**	**00 50 24.0**	**+0.9**
SVKR				Smax		00 50 27.8	
	comp=N,11µm,0.6s						
SVKR	**Severomuysk**	**1.94**	**77**	*e*PN	**Pn**	**00 49 58.1**	**+1.6**
SVKR				*e*		00 49 58.9	
SVKR				*e*S	**Sb**	**00 50 23.7**	**+0.6**
SVKR				*e*		00 50 24.7	
SVKR				pmax	pmax		
	comp=Z,1µm,1.1s						
SVKR				smax	smax		
	comp=N,850nm,0.6s						
UKT	**Uakit**	**1.96**	**95**	⇓*i*Pg	**Pb**	**00 49 58.5**	**-0.6**
	comp=N,78nm,0.5s						
UKT				⇑*i*Pg	**Pb**	**00 49 58.5**	**-0.6**
	comp=N,130nm,0.5s						
UKT				⇑*i*Pg	**Pb**	**00 49 58.5**	**-0.6**
	comp=N,168nm,0.5s						
UKT				Pmax		00 50 00.0	
	comp=N,2µm,1.0s						
UKT				*e*Sg	**Sb**	**00 50 25.0**	**+1.2**
UKT				Smax		00 50 26.0	
	comp=N,4µm,0.7s						
UKT	**Uakit**	**1.96**	**95**	*e*PN	**Pb**	**00 49 59.3**	**+0.2**
UKT				*e*		00 50 25.5	
UKT				pmax	pmax		
	comp=Z,994nm,0.3s						
UKT				smax	smax		
	comp=N,3µm,0.4s						
SYVR	**Suvo**	**2.07**	**183**	*e*Pn	**Pn**	**00 49 59.6**	**+1.4**
SYVR				⇑*i*Pg	**Pb**	**00 50 01.3**	**+0.4**
SYVR				Pmax		00 50 01.8	
	comp=N,1µm,0.6s						
SYVR				*e*Sn	**Sn**	**00 50 24.5**	**+0.3**
SYVR				*e*Sg	**Sg**	**00 50 29.2**	**-0.2**
SYVR				Smax		00 50 32.1	
	comp=N,12µm,0.9s						
SYVR	**Suvo**	**2.07**	**183**	⇑*i*PN	**Pb**	**00 50 01.3**	**+0.4**
SYVR				*e*		00 50 30.4	
SYVR				pmax	pmax		
	comp=Z,1µm,0.5s						
SYVR				smax	smax		
	comp=N,12µm,0.8s						
OGRR	**Ongureny**	**2.57**	**217**	*e*Pg	**Pb**	**00 50 09.0**	**-0.4**
OGRR				Pmax		00 50 17.3	
	comp=N,183nm,0.4s						
OGRR				*e*Sg	**Sb**	**00 50 42.6**	**+1.4**
OGRR				Smax		00 50 48.5	
	comp=N,1µm,0.4s						
OGRR	**Ongureny**	**2.57**	**217**	*e*PN	**Pb**	**00 50 09.0**	**-0.4**
OGRR				*e*		00 50 12.1	
OGRR				*e*		00 50 42.2	
OGRR				pmax	pmax		
	comp=Z,182nm,0.4s						
OGRR				smax	smax		
	comp=E,2µm,1.1s						
BOD	**Bodaibo**	**2.97**	**43**	*e*Pn	**Pn**	**00 50 11.6**	**+1.0**
BOD				*e*Pg	**Pb**	**00 50 17.6**	**+1.3**
BOD				Pmax		00 50 19.8	
	comp=E,137nm,0.3s						
BOD				*e*Sn	**Sn**	**00 50 46.6**	**+0.1**
BOD				*e*Sg	**Sb**	**00 50 55.1**	**+2.3**
BOD				Smax		00 51 05.1	
	comp=E,1µm,0.6s						
BOD	**Bodaibo**	**2.97**	**43**	*e*PN	**Pn**	**00 50 11.5**	**+1.0**
BOD				*e*		00 50 17.2	
BOD				*e*S	**Sn**	**00 50 46.6**	**+0.1**
BOD				*e*		00 50 54.6	
BOD				pmax	pmax		
	comp=Z,170nm,0.6s						
BOD				smax	smax		
	comp=N,1µm,0.7s						
NLYR	**Nelyaty**	**3.18**	**74**	*e*Pn	**Pn**	**00 50 14.6**	**+1.1**
NLYR				*e*Pg	**Pb**	**00 50 20.3**	**+0.4**
NLYR				*e*PgPg	**PbPb**	**00 50 23.8**	**+0.8**
NLYR				max		00 50 27.0	
	comp=N,482nm,0.7s						
NLYR				*e*Sn	**Sn**	**00 50 50.6**	**-1.1**
NLYR				*e*Sg	**Sb**	**00 51 02.0**	**+3.2**
NLYR				Smax		00 51 15.0	
	comp=N,2µm,1.3s						
KELR	**Kotokel**	**3.21**	**204**	*e*Pn	**Pn**	**00 50 15.3**	**+1.4**
KELR				*e*Pg	**Pb**	**00 50 21.7**	**+1.3**
KELR				*e*Sg	**Sb**	**00 51 03.8**	**+4.1**
TRG	**Tyrgan**	**3.73**	**219**	⇓*i*Pn	**Pn**	**00 50 22.8**	**+1.8**
TRG				*e*Pg	**Pb**	**00 50 31.7**	**+2.6**
TRG				Pmax		00 50 35.7	
	comp=N,162nm,0.4s						
TRG				*e*Sn	**Sn**	**00 51 06.1**	**+1.0**
TRG				*e*Sg	**Sg**	**00 51 19.8**	**-2.7**
TRG				Smax		00 51 30.6	
	comp=N,1µm,0.8s						
TRG	**Tyrgan**	**3.73**	**219**	⇓*i*PN	**Pn**	**00 50 22.8**	**+1.8**
TRG				*e*		00 50 31.3	
TRG				*e*S	**Sn**	**00 51 05.8**	**+0.7**
TRG				*e*		00 51 18.8	
TRG				pmax	pmax		
	comp=Z,164nm,0.4s						
TRG				smax	smax		
	comp=E,1µm,0.8s						
UUDB	**Ulan-Yde**	**4.14**	**202**	*e*Pn	**Pn**	**00 50 28.7**	**+2.0**
UUDB				*e*Pg	**Pb**	**00 50 38.3**	**+2.1**
UUDB				Pmax		00 50 44.9	
	comp=E,254nm,1.3s						
UUDB				*e*Sn	**Sn**	**00 51 15.8**	**+0.5**
UUDB				*e*Sg	**Sg**	**00 51 32.4**	**-3.4**
UUDB				Smax		00 51 44.4	
	comp=E,741nm,0.9s						
FFNB	**Fofonovo**	**4.20**	**210**	*e*Pn	**Pn**	**00 50 28.8**	**+1.3**
FFNB				*e*Pg	**Pb**	**00 50 39.1**	**+1.9**
FFNB				*e*Sg	**Sg**	**00 51 34.0**	**-3.8**
CIT	**Chita**	**4.20**	**150**	*e*Pg	**Pb**	**00 50 39.4**	**+2.1**
CIT				Pmax		00 50 39.8	
	comp=E,579nm,0.8s						
CIT				*e*Sg	**Sg**	**00 51 34.6**	**-3.3**
CIT				*e*		00 51 40.2	
CIT				max		00 51 42.6	
	comp=E,801nm,0.2s						
CIT	**Chita**	**4.20**	**150**	*e*PN	**Pn**	**00 50 26.7**	**-0.9**
CIT				*e*		00 50 39.4	
CIT				*e*		00 51 32.9	
CIT				pmax	pmax		
	comp=Z,463nm,1.3s						
CIT				smax	smax		
	comp=E,924nm,1.1s						
STDB	**Stepnoy Dvoret**	**4.21**	**214**	*e*Pn	**Pn**	**00 50 30.3**	**+2.6**
STDB				*e*Pg	**Pb**	**00 50 40.7**	**+3.3**
STDB				*e*Sg	**Sg**	**00 51 36.0**	**-2.2**
KAB	**Kabansk**	**4.23**	**211**	*e*Pg	**Pb**	**00 50 40.6**	**+2.9**
KAB				Pmax		00 50 48.1	
	comp=E,209nm,0.4s						
KAB				*e*Sg	**Sg**	**00 51 35.1**	**-3.6**
KAB				Smax		00 52 10.5	
	comp=E,2µm,0.9s						
BGT	**Bolshoye Golou**	**4.64**	**220**	*e*Pn	**Pn**	**00 50 36.1**	**+2.5**
BGT				*e*Sn	**Sn**	**00 51 28.1**	**+0.4**
BGT				*e*Sg	**Sg**	**00 51 47.5**	**-4.5**
BGT				Smax		00 51 58.7	
	comp=E,700nm,0.8s						
CRS	**Chara**	**4.65**	**72**	*e*Pn	**Pn**	**00 50 34.9**	**+1.2**
CRS				*e*Pg	**Pb**	**00 50 47.9**	**+3.0**
CRS				Pmax		00 50 51.9	
	comp=E,367nm,1.0s						
CRS				*e*Sn	**Sn**	**00 51 27.3**	**-0.6**
CRS				*e*Sg	**Sg**	**00 51 47.4**	**-4.8**
CRS				Smax		00 51 53.5	
	comp=E,900nm,1.5s						
CRS	**Chara**	**4.65**	**72**	*e*PN	**Pn**	**00 50 34.8**	**+1.1**
CRS				*e*		00 50 47.8	
CRS				*e*		00 51 47.6	
CRS				pmax	pmax		
	comp=Z,366nm,0.8s						
CRS				smax	smax		
	comp=E,467nm,1.0s						
IRK	**Irkutsk**	**4.93**	**228**	*e*PN	**Pn**	**00 50 38.4**	**+0.9**
IRK				*e*		00 50 53.9	
IRK				*e*S	**Sn**	**00 51 33.2**	**-1.6**
IRK				*e*		00 51 55.9	
IRK				pmax	pmax		
	comp=Z,176nm,0.2s						
IRK				smax	smax		
	comp=N,1µm,0.6s						
LSTR	**Listvyanka**	**5.00**	**222**	*e*Pn	**Pn**	**00 50 39.3**	**+0.9**
LSTR				max		00 50 57.5	
	comp=N,51nm,0.6s						
LSTR				*e*Sn	**Sn**	**00 51 36.2**	**-0.2**
LSTR				*e*Sg	**Sg**	**00 51 58.5**	**-4.8**
LSTR				Smax		00 52 09.8	
	comp=N,492nm,1.2s						
IVK	**Ivanovka**	**5.21**	**224**	*e*Pn	**Pn**	**00 50 42.1**	**+0.7**
IVK				max		00 50 49.8	
	comp=N,44nm,0.5s						
IVK				*e*		00 50 50.0	
IVK				*e*Sn	**Sn**	**00 51 40.4**	**-1.3**
IVK				*e*Sg	**Sg**	**00 52 06.2**	**-4.0**
IVK				Smax		00 52 18.1	
	comp=N,518nm,1.2s						
TLY	**Talaya**	**5.61**	**227**	Pn	**Pn**	**00 50 47.1**	**+0.3**
	comp=N,0.1nm,0.3s,baz=18,slow=8.8,SNR=29						
TLY				Sn	**Sn**	**00 51 50.3**	**-1.3**
	comp=N,0.1nm,0.3s,baz=9.5,slow=10,SNR=3.4						
TLY				Lg	Lg	00 52 17.4	
	comp=N,0.3nm,0.3s,baz=92,slow=16,SNR=5.6						
TLY	**Talaya**	**5.61**	**227**	*e*Pn	**Pn**	**00 50 47.6**	**+0.7**
TLY				*e*Pg	**Pb**	**00 51 05.2**	**+4.0**
TLY				Pmax		00 51 13.4	
	comp=N,52nm,0.6s						
TLY				*e*Sn	**Sn**	**00 51 50.7**	**-0.8**
TLY				*e*Sg	**Sg**	**00 52 18.1**	**-4.9**
TLY				*e*		00 52 22.1	
TLY				max		00 52 26.2	
	comp=N,471nm,0.7s						
TLY	**Talaya**	**5.61**	**227**	*e*PN	**Pn**	**00 50 47.5**	**+0.7**
TLY				*e*		00 51 06.1	
TLY				*e*S	**Sn**	**00 51 50.8**	**-0.8**
TLY				*e*		00 52 17.8	
TLY				pmax	pmax		
	comp=Z,52nm,0.4s						
TLY				smax	smax		
	comp=E,485nm,1.1s						
TUP	**Tupik**	**5.76**	**99**	*e*Pn	**Pn**	**00 50 49.3**	**+0.4**
TUP				*e*Pg	**Pb**	**00 51 07.1**	**+3.4**
TUP				*e*		00 51 08.7	
TUP				max		00 51 10.2	
	comp=E,79nm,0.7s						
TUP				*e*Sn	**Sn**	**00 51 53.0**	**-2.2**
TUP				*e*Sg	**Sg**	**00 52 21.4**	**-6.3**
TUP				Smax		00 52 30.7	
	comp=E,1µm,0.7s						
TUP	**Tupik**	**5.76**	**99**	*e*PN	**Pn**	**00 50 49.3**	**+0.4**
TUP				*e*		00 51 06.9	
TUP				*e*S	**Sn**	**00 51 55.1**	**-0.1**
TUP				*e*		00 52 23.3	
TUP				pmax	pmax		
	comp=Z,78nm,0.6s						
TUP				smax	smax		
	comp=N,1µm,0.9s						
ARS	**Arshan**	**5.97**	**234**	*e*Pn	**Pn**	**00 50 52.9**	**+1.1**
ARS				max		00 50 53.3	
	comp=N,212nm,0.6s						
ARS				*e*Sn	**Sn**	**00 51 58.4**	**-2.1**
ARS				*e*Sg	**Sg**	**00 52 28.6**	**-5.9**
ARS				Smax		00 52 34.7	
	comp=N,2µm,0.9s						
KPC	**Khapcheranga**	**6.17**	**167**	*e*Pn	**Pn**	**00 50 56.4**	**+1.8**
KPC				*e*Pg	Pb	00 51 16.2	+5.4
KPC				Pmax		00 51 16.6	
	comp=N,85nm,0.7s						
KPC				*e*		00 51 21.1	
KPC				*e*Sg	**Sg**	**00 52 36.0**	**-4.9**
KPC				*e*		00 52 44.0	
KPC				max		00 52 44.9	
	comp=N,712nm,1.3s						
ZAK	**Zakamensk**	**6.78**	**221**	*e*Pn	**Pn**	**00 51 04.7**	**+1.8**
ZAK				Pmax		00 51 09.7	
	comp=N,55nm,1.0s						
ZAK				*e*Pg	**Pb**	**00 51 25.6**	**+4.5**
ZAK				*e*		00 52 27.9	
ZAK				*e*Sg	**Sg**	**00 52 54.0**	**-6.4**
ZAK				Smax		00 53 04.0	
	comp=N,470nm,1.2s						
ZAK	**Zakamensk**	**6.78**	**221**	*e*PN	**Pn**	**00 51 05.3**	**+2.4**
ZAK				*e*S	Sb	00 52 51.9	+10
ZAK				smax	smax		
	comp=N,468nm,1.1s						
MOY	**Mondy**	**6.80**	**237**	*e*Pn	**Pn**	**00 51 05.6**	**+2.3**
MOY				max		00 51 06.5	
	comp=N,311nm,0.9s						
MOY				*e*		00 51 09.1	
MOY				*e*		00 51 13.8	
MOY				*e*Sn	**Sn**	**00 52 20.3**	**-0.8**
MOY				*e*Sg	**Sg**	**00 52 55.5**	**-5.8**
MOY				Smax		00 52 59.6	
	comp=N,913nm,1.4s						
MOY	**Mondy**	**6.80**	**237**	*e*PN	**Pn**	**00 51 05.6**	**+2.3**
MOY				*e*		00 51 27.3	
MOY				*e*S	**Sn**	**00 52 20.0**	**-1.1**
MOY				*e*		00 52 55.7	
ORL	**Orlik**	**6.88**	**247**	*e*Pn	**Pn**	**00 51 06.4**	**+2.0**
ORL				max		00 51 07.1	
	comp=N,135nm,0.8s						
ORL				*e*Sn	**Sn**	**00 52 20.8**	**-2.2**
ORL				*e*Sg	**Sg**	**00 52 57.5**	**-6.3**
ORL				Smax		00 53 09.8	
	comp=N,387nm,1.1s						
ORL	**Orlik**	**6.88**	**247**	*e*PN	**Pn**	**00 51 06.3**	**+1.9**
ORL				*e*		00 51 28.4	
ORL				*e*S	**Sn**	**00 52 21.6**	**-1.4**
ORL				*e*		00 52 57.5	
ORL				pmax	pmax		
	comp=Z,145nm,0.5s						
ORL				smax	smax		
	comp=N,389nm,1.2s						
ULN	**Ulaanbaatar**	**8.10**	**195**	c*e*PN	**Pn**	**00 51 25.5**	**+4.3**
ULN				pmax	pmax		
	comp=Z,13nm,2.5s						
ULN	**Ulaanbaatar**	**8.10**	**195**		**Pn**	**00 51 22.7**	**+1.6**
SONM	**Songino Array**	**8.24**	**198**	Pn	**Pn**	**00 51 24.7**	**+1.7**
	comp=Z,1.1nm,0.3s,baz=5.1,slow=13,SNR=15						
SONM				Lg	Lg	00 53 43.1	
	comp=Z,6.1nm,0.3s,baz=17,slow=27,SNR=15						
SONM				LR	LR	00 54 49.1	
	comp=Z,86nm,18.6s,baz=232,slow=39						
IENR	**Iengra**	**8.24**	**80**	*e*Pn	**Pn**	**00 51 24.0**	**+1.0**
IENR				*e*Pg	Pb	00 51 53.6	+7.6
IENR				*e*Sg	Sg	00 53 38.7	-8.6
KNGR	**Kungurtug, Tuv**	**9.17**	**241**	*e*Pn	**Pn**	**00 51 38.9**	**+3.1**
KNGR				*e*		00 51 49.7	
KNGR				*e*		00 53 35.4	
KNGR				*e*Sg	Sg	00 54 08.8	
ZEA	**Zeya**	**10.06**	**94**	*e*P	**Pn**	**00 51 52.0**	**+4.1**
ZEA				*e*S	**Sn**	**00 53 40.0**	**-0.9**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ZEA				smax	smax		
	comp=N,20nm,1.2s						
YAK	**Yakutsk**	**11.87**	**50**	Lg	Lg	00 55 33.7	
	comp=N,0.3nm,0.3s,baz=139,slow=12,SNR=9.1						
YAK				LR	LR	00 57 13.5	
	comp=N,53nm,21.4s,baz=105,slow=40						
YAK	**Yakutsk**	**11.87**	**50**	*e*P	Pn	00 52 06.2	-6.3
YAK				*e*S	**Sn**	**00 54 18.7**	**-6.4**
YAK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.4s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.7s						
YAK				pmax	pmax		
	comp=Z,509nm,4.3s						
YAK				pmax	pmax		
	comp=N,338nm,4.7s						
YAK				pmax	pmax		
	comp=E,325nm,4.1s						
YAK				smax	smax		
	comp=E,166nm,4.7s						
YAK				smax	smax		
	comp=N,279nm,4.4s						
YAK				MLR	MLR		
	comp=Z,72nm,17.0s						
YAK				MLR	MLR		
	comp=E,70nm,22.0s						
KLR	**Kul'dur**	**14.62**	**107**	Pn	**Pn**	**00 52 51.2**	**+1.1**
	comp=E,0.6nm,0.3s,baz=308,slow=12,SNR=14						
KLR				Lg	Lg	00 56 59.6	
	comp=E,0.2nm,0.3s,baz=207,slow=17,SNR=3.8						
KLR				LR	LR	00 58 56.2	
	comp=E,86nm,21.1s,baz=298,slow=39						
ZAA0	**Zalesovo Array**	**14.70**	**274**	Pn	**Pn**	**00 52 51.9**	**+0.6**
ZALV	**Zalesovo Beam**	**14.70**	**274**	Pn	**Pn**	**00 52 51.9**	**+0.7**
	comp=E,0.5nm,0.3s,baz=78,slow=11,SNR=30						
ZALV				Lg	Lg	00 57 04.4	
	comp=E,0.1nm,0.3s,baz=61,slow=28,SNR=4.0						
ZALV	**Zalesovo Beam**	**14.70**	**274**	Pn	**Pn**	**00 52 51.7**	**+0.5**
DGZ	**Jazzator, Alta**	**15.02**	**256**	⇓*e*P	**Pn**	**00 52 56.7**	**+1.1**
DGZ				pmax	pmax		

	comp=Z,12nm,0.9s						
NRIK	**Noril'sk**	17.02	332	Pn	Pn	00 53 18.2	-3.0
	comp=Z,1.1nm,0.3s,baz=116,slow=9.6,SNR=12						
NRIK				Sn	Sn	00 56 17.1	-13
	comp=Z,1.2nm,0.3s,baz=154,slow=22,SNR=6.5						
NRIK	**Noril'sk**	17.02	332	ceP	Pn	00 53 19.4	-1.9
NRIK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
NRIK	**Noril'sk**	17.02	332	Pn	Pn	00 53 17.2	-4.1
GTA	**Gaotai**	17.72	207	eP	P	00 53 35.5	+4.3
GTA				pP	sP	00 53 39.0	+4.7
GTA				sP	pP	00 53 42.5	+9.3
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GTA				smax	smax		
	comp=N,5.0nm,1.4s						
GTA				smax	smax		
	comp=E,5.0nm,1.5s						
TIXI	**Tiksi**	17.85	19	P	Pn	00 53 28.3	-3.2
	comp=E,0.7nm,0.3s,baz=141,slow=2.0,SNR=4.6						
TIXI				S	Sn	00 56 36.6	-14
	comp=E,0.4nm,0.3s,baz=344,slow=12,SNR=6.6						
TIXI	**Tiksi**	17.85	19	ceP	Pn	00 53 31.0	-0.5
TIXI				pmax	pmax		
	comp=Z,12nm,0.9s						
TIXI	**Tiksi**	17.85	19	P	Pn	00 53 31.0	-0.5
TIXI				IAmb	IAmb	00 53 34.4	
	comp=Z,14nm,0.7s						
KURK	**Kurchatov**	19.45	268	P	Pn	00 53 51.2	+0.1
KURK	**Kurchatov**	19.45	268		P	00 53 50.4	+0.4
KURK				IAmb	IAmb	00 53 54.1	
	comp=Z,18nm,0.8s						
KURK	**Kurchatov**	19.45	268		LR	00 59 42.7	
MK31	**Makanchi Array**	19.50	254	i P	Pn	00 53 52.2	+0.5
MK31	**Makanchi Array**	19.50	254	P	P	00 53 50.9	+0.3
MK31				IAmb	IAmb	00 53 53.1	
	comp=Z,8.9nm,0.7s						
MKAR	**Makanchi Array**	19.50	254	P	P	00 53 50.8	+0.3
	comp=Z,1.4nm,0.3s,baz=62,slow=9.7,SNR=94						
MKAR	**Makanchi Array**	19.50	254	P	P	00 53 50.9	+0.4
KURBB	**Kurchatov Arra**	19.54	268	P	P	00 53 51.2	+0.2
	comp=Z,0.6nm,0.3s,baz=67,slow=12,SNR=43						
KURBB				Lg	Lg	00 59 42.7	
	baz=57,slow=32,SNR=4.3						
MAKZ	**Makanchi**	19.66	255	P	P	00 53 52.5	+0.2
MAKZ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MAKZ	**Makanchi**	19.66	255		P	00 53 52.5	+0.2
KSRS	**Korea Array**	21.84	139	LR	LR	01 03 50.9	
	comp=Z,43nm,20.2s,baz=85,slow=40						
BVAR	**Borovoye Array**	23.12	280	P	P	00 54 29.7	+0.3
	comp=Z,6.3nm,0.6s,baz=130,slow=4.6,SNR=34						
BRVK	**Borovoye**	23.17	280	ceP	P	00 54 29.5	-0.4
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BRVK	**Borovoye**	23.17	280	P	P	00 54 29.5	-0.4
BRVK				IAmb	IAmb	00 54 32.8	
	comp=Z,12nm,0.9s						
BOOM	**Boomskoye usch**	25.73	254	P	P	00 54 54.5	+0.4
BOOM				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BOOM	**Boomskoye usch**	25.73	254	P	P	00 54 54.5	+0.4
BOOM				IAmb	IAmb	00 55 11.3	
	comp=Z,5.0nm,0.9s						
AAK	**Ala-Archa**	26.42	255	P	P	00 55 00.9	+0.6
	comp=Z,1.5nm,0.8s,baz=223,slow=5.6,SNR=4.5						
AAK	**Ala-Archa**	26.42	255	ceP	P	00 55 02.4	+2.1
AAK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
AAK	**Ala-Archa**	26.42	255	P	P	00 55 00.6	+0.2
PETK	**Petropavlovsk-**	27.34	75	LR	LR	01 05 32.1	
	comp=Z,49nm,22.0s,baz=27,slow=36						
KKAR	**Karatay Array**	28.32	260	P	P	00 55 18.0	+0.8
KKAR	**Karatay Array**	28.32	260	P	P	00 55 18.0	+0.8
ABKAR	**Akbulak array**	30.69	279	P	P	00 55 37.7	-0.4
ABKAR	**Akbulak array**	30.69	279	P	P	00 55 37.4	-0.7
SPB2	**Spitsbergen Ar**	36.96	340	P	P	00 56 31.9	-0.3
SPITS	**Spitsbergen Ar**	36.96	340	P	P	00 56 31.2	-1.1
ARCES	**ARCESS Array B**	37.79	325	P	P	00 56 39.2	-0.2
	comp=Z,1.7nm,0.6s,baz=65,slow=8.5,SNR=14						
ARCES	**ARCESS Array B**	37.79	325	P	P	00 56 38.5	-0.9
FINES	**FINESS Array B**	41.33	314	P	P	00 57 08.6	-0.2
	comp=Z,3.6nm,0.5s,baz=64,slow=9.1,SNR=21						
FINES	**FINESS Array B**	41.33	314	P	P	00 57 08.0	-0.8
IMAR	**Indian Mountai**	43.29	36	P	P	00 57 25.9	+1.0
KIV	**Kislovodsk**	43.40	284	eP	P	00 57 27.7	+1.6
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KIV	**Kislovodsk**	43.40	284	P	P	00 57 26.4	+0.3
KIV				IAmb	IAmb	00 57 28.2	
	comp=Z,4.5nm,0.8s						
KBZ	**Khabaz**	43.43	283	P	P	00 57 26.6	+0.5
	comp=Z,0.5nm,0.6s,baz=62,slow=13,SNR=1.5						
BMAR	**Burnt Mountain**	45.31	32	P	P	00 57 41.2	+0.1
M19K	**Big River Lodg**	45.49	41	P	P	00 57 42.7	+0.2
M19K				IAmb	IAmb	00 57 46.3	
	comp=Z,2.8nm,0.9s						
AKASG	**Malin Array Be**	46.15	299	P	P	00 57 47.5	-0.3
	comp=Z,0.3nm,0.3s,baz=45,slow=8.7,SNR=11						
AKASG	**Malin Array Be**	46.15	299	ceP	P	00 57 47.5	-0.3
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKASG	**Malin Array Be**	46.15	299	P	P	00 57 47.2	-0.6
NB2	**NORSAR Subarra**	47.37	319	P	P	00 57 56.8	-0.5
	comp=Z,2.5nm,0.8s,baz=49,slow=7.9						
NOA	**NORSAR Array B**	47.37	319	P	P	00 57 57.2	0.0
	comp=Z,1.5nm,0.8s,baz=52,slow=7.8,SNR=4.1						
INK	**Inuvik**	47.76	27	P	P	00 57 59.6	-0.5
	comp=Z,2.1nm,1.0s,baz=323,slow=8.5,SNR=4.3						
INK	**Inuvik**	47.76	27	P	P	00 57 59.6	-0.5
INK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KLU	**Klutina**	48.83	38	P	P	00 58 08.3	-0.3
KLU				IAmb	IAmb	00 58 21.3	
	comp=Z,7.9nm,1.1s						
BCAR	**Beaver Creek A**	49.13	35	P	P	00 58 11.3	+0.4
BUR08	**Bucovina Ar. S**	50.15	299	P	P	00 58 18.4	-0.5
BUR08				IAmb	IAmb	00 58 34.4	
	comp=Z,3.0nm,1.1s						
BURAR	**Bucovina Array**	50.16	299	P	P	00 58 19.1	+0.1
BALB	**Balikesir**	54.38	290	P	P	00 58 48.8	-1.5
GERES	**GERESS Array B**	54.78	307	P	P	00 58 52.8	-0.4
	comp=Z,0.6nm,0.8s,baz=43,slow=6.2,SNR=4.5						
RAYN	**Ar Rayn**	56.68	263	P	P	00 59 07.2	+0.1
RAYN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
RAYN	**Ar Rayn**	56.68	263	P	P	00 59 07.2	+0.1
RAYN				IAmb	IAmb	00 59 08.3	
	comp=Z,3.5nm,1.0s						
YKA	**Yellowknife Ar**	57.05	23	P	P	00 59 08.2	-0.9
	comp=Z,0.9nm,0.8s,baz=336,slow=6.7,SNR=4.4						
YKA	**Yellowknife Ar**	57.05	23	ceP	P	00 59 12.1	+3.0
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ESDC	**Sonseca Array**	69.78	311	P	P	01 00 33.2	-0.6
	comp=Z,1.6nm,0.9s,baz=27,slow=7.1,SNR=7.0						
WRA	**Warramunga Arr**	78.10	157	P	P	01 01 22.4	0.0
	comp=Z,0.6nm,0.7s,baz=350,slow=6.1,SNR=5.3						
ASAR	**Alice Springs**	81.61	158	P	P	01 01 41.5	+0.1
	comp=Z,0.3nm,0.5s,baz=4.8,slow=6.0,SNR=4.9						
MVL	**Millersville**	84.49	5	P	P	01 01 57.1	+0.8
WUPA	**West Chester U**	84.59	4	P	P	01 01 56.8	0.0
P60A	**Greenville**	84.71	5		P	01 01 57.1	-0.3
TORD	**Torodi Ar. Bea**	89.34	293	P	P	01 02 18.5	-1.8
	comp=Z,0.9nm,0.8s,baz=22,slow=5.8,SNR=4.4						

PRU ***27*** *00:52:32.2±0.0, 51°.42N×16°.19E, h0^{km}*

VIE ***27*** *00:52:33.6±1.5, 51°.24N×16°.09E, h0^{km}, mb2.6/2, ml2.4/2, Error ellipse: s-maj=9.5km s-min=7.0km az=24.0 66 km WNW of Wroclaw Suspected Mining induced.*

ISC 27 00:52:31.7±1.2**, 51°.40N**±0°.05×**16°.20E**±0°.03**, h0**^{km}**, n23, σ0^{s}.70**/49**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	0.56	174	ePg	Pg	00 52 43.2	+0.7
KSP				eSg	Sg	00 52 51.2	+1.4
CHVC	**Chvalec**	0.82	186	ePG	Pg	00 52 48.1	+0.7
CHVC				eSG	Sb	00 52 59.9	-0.6
OSTC	**Ostas**	0.85	179	ePG	Pb	00 52 48.7	-0.6
OSTC				eSG	Sb	00 53 00.4	-0.9
	comp=Z,14nm,0.3s						
UPC	**Upice**	0.90	187	ePG	Pg	00 52 49.4	+0.4
UPC				eSG	Sb	00 53 02.0	-0.9
	comp=Z,47nm,0.3s						
DPC	**Dobruska-Polom**	1.06	176	ePG	Pg	00 52 52.1	+0.1
DPC				eSG	Sb	00 53 07.1	-0.2
	comp=Z,17nm,0.4s						
PVCC	**Panska Ves**	1.35	230	ePG	Pn	00 52 57.8	0.0
PVCC				eSG	Sn	00 53 17.1	+0.6
	comp=Z,74nm,0.3s						
KRLC	**Kraliky**	1.38	164	ePG	Pg	00 52 57.7	-0.5
KRLC				eSG	Sg	00 53 16.3	+0.3
	comp=Z,11nm,0.2s						
BRG	**Berggiesshubel**	1.52	250	Pg	Pb	00 53 00.5	-0.2
BRG				Sg	Sn	00 53 21.0	+0.5
BRG				Amp		00 53 21.9	
	comp=Z,16nm,0.5s						
PRA	**Prague**	1.74	221	eSG	Sg	00 53 27.5	-0.1
PRU	**Pruhonice**	1.76	217	ePG	Pb	00 53 04.5	-0.4
PRU				eSG	Sb	00 53 27.9	+0.3
	comp=Z,11nm,0.5s						
MORC	**Moravsky Berou**	1.84	152	ePN	Pn	00 53 03.9	-0.7
MORC				eSG	Sg	00 53 30.5	-0.3
OKC	**Ostrava-Krasne**	2.00	141	ePG	Pg	00 53 09.6	-0.4
OKC				eSG	Sb	00 53 34.6	+0.2
	comp=Z,12nm,0.5s						
CLL	**Collm**	2.00	269	ePg	Pb	00 53 09.0	0.0
CLL				eSg	Sb	00 53 35.0	+0.5
	comp=Z,7.0nm,0.6s						
VRAC	**Vranov**	2.11	173	ePN	Pn	00 53 08.6	+0.3
VRAC				eSG	Sg	00 53 40.3	+0.7
KRUC	**Moravsky**	2.35	177	ePN	Pn	00 53 11.8	+0.3
KRUC				eSG	Sg	00 53 48.0	+0.9
OJC	**Ojcow**	2.57	116	ePg	Pg	00 53 21.0	0.0
OJC				eSg	Sg	00 53 55.0	+0.6
NKC	**Novy Kostel**	2.65	245	ePN	Pn	00 53 15.3	-0.4
NKC				ePG	Pg	00 53 21.9	-0.6
NKC				eSG	Sg	00 53 57.4	+0.6
	comp=Z,13nm,0.3s						
KHC	**Kasperske Hory**	2.83	217	ePN	Pn	00 53 18.4	+0.2
KHC				ePG	Pb	00 53 23.8	+0.7
KHC				eSN	Sn	00 53 52.9	0.0
KHC				eSG	Sg	00 54 01.2	-1.3
CKRC	**Cesky Krumlov**	2.86	206	ePN	Pn	00 53 19.0	+0.4
CKRC				ePG	Pb	00 53 24.5	+0.9
CKRC				eSG	Sg	00 54 02.8	-0.6
	comp=Z,5.4nm,0.4s						
LANS	**Liptovska Anna**	3.08	136	ePG	Pg	00 53 30.8	+0.1
LANS				eSG	Sg	00 54 09.3	-1.3
MODS	**Modra-Piesok**	3.11	167	ePG	Pg	00 53 30.7	-0.6
MODS				eSG	Sg	00 54 12.1	+0.4
CONA	**Conrad Observa**	3.48	184	ePn	Pn	00 53 28.4	+1.1
	comp=Z,0.5nm,0.3s						
CONA				eSg	Sg	00 54 22.9	-0.8
	comp=Z,4.0nm,0.3s						
MOA	**Molln**	3.77	200	ePn	Pn	00 53 31.1	0.0
	comp=Z,0.7nm,0.3s						
MOA				eSg	Sg	00 54 30.8	-2.0
	comp=Z,2.8nm,0.4s						

IDC ***27*** *00:52:54.9±0.4, 9°.27S×71°.15W, h628^{km}±4^{km}, mb4.2/26, mb1 4.4/34, mb1mx4.3/45, mbtmp5.2/34, Error ellipse: s-maj=9.6km s-min=6.9km az=64.0*

VAO ***27*** *00:52:54.6±0.2, 9°.38S×71°.18W, h627^{km}, mb5.1*

NEIC ***27*** *00:52:54.6±1.6, 9°.29S±0°.08×71°.09W±0°.09, h617^{km}±5^{km}, mb5.1/679, Error ellipse: s-maj=13.5km s-min=11.1km az=69.0*

BDF ***27*** *00:52:54±1.9, 9°.35S±0°.08×71°.20W±0°.09, h631^{km}±4^{km}, Error ellipse: s-maj=12.9km s-min=10.6km az=71.0*

ISC 27 00:52:54.7±0.3**, 9°.32S**±0°.04×**71°.16W**±0°.05**, h629**^{km}±3^{km}**, h630**^{km}**:pP-P, n1126, σ0^{s}.97**/981**, mb5.1**/388**, 40C-371D, Fault plane solution: NP1:**ϕ_s348.60532°**,** δ53.63155°, λ-81.89360°. **NP2:**ϕ_s155.09856°**,** δ37.13887°, λ-100.84003°. **Principal axes:** T Plg8.3020°, Azm72.8220°**;** N Plg6.5197°, Azm163.7775°**;** P Plg79.4154°, Azm291.4815°**; Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CZSB	**Cruzeiro do Su**	2.20	316	eP	P	00 54 12.3	-0.2
CZSB	**Cruzeiro do Su**	2.20	316	P	P	00 54 12.1	-0.4
ETMB	**Extrema**	4.90	96	eP	P	00 54 29.1	+0.4
ETMB	**Extrema**	4.90	96	P	P	00 54 29.2	+0.4
ETMB				S	S	00 55 45.2	-0.2
TBTG	**Tabatinga, AM**	5.25	14	eP	P	00 54 31.3	-0.1
TBTG	**Tabatinga, AM**	5.25	14	eP	P	00 54 32.3	+0.9
TBTG	**Tabatinga, AM**	5.25	14	P	P	00 54 32.0	+0.6
NNA	**Nana**	6.18	244	P	P	00 54 39.0	0.0
	43nm,0.3s,baz=46,slow=6.7,SNR=108						
NNA				S	S	00 56 02.6	-1.7
	13nm,0.3s,baz=256,slow=17,SNR=17						
NNA	**Nana**	6.18	244	P	P	00 54 38.6	-0.4
ATAH	**Atahualpa**	7.48	286	P	P	00 54 52.1	+1.3
	68nm,0.3s,baz=106,slow=6.7,SNR=559						
ATAH				S	S	00 56 28.1	+2.3
	16nm,0.3s,baz=253,slow=15,SNR=3.8						
LPAZ	**La Paz**	7.53	157	P	P	00 54 51.8	+0.3
	34nm,0.3s,baz=335,slow=8.3,SNR=762						
LPAZ				S	S	00 56 26.4	-0.5
	baz=195,slow=15,SNR=3.6						
LPAZ	**La Paz**	7.53	157	eP	P	00 54 50.4	-1.0
LPAZ	**La Paz**	7.53	157	eP	P	00 54 51.7	+0.3
SAML	**Samuel**	7.89	88	P	P	00 54 54.6	+0.5
AP01	**Chacalluta**	9.04	175	P	P	00 55 03.0	-1.7
PB16	**IPOC Station P**	9.11	170	P	P	00 55 05.0	-1.1
PB12	**IPOC Station P**	9.28	175	P	P	00 55 04.7	-2.5
PTLC	**Puerto Leguiza**	10.10	339	eP	P	00 55 09.5	-5.6
PB11	**IPOC Station P**	10.48	172	P	P	00 55 17.7	-1.3
PB08	**IPOC Station P**	10.93	170	P	P	00 55 22.7	-1.0
TA02	**Huaiquique**	10.94	175	P	P	00 55 21.9	-1.3
TA02					S	00 57 23.1	-1.8
TA01	**Diego Aracena**	11.22	175	P	P	00 55 25.0	-1.0
TA01					S	00 57 26.3	-3.7
VILB	**Vilhena**	11.35	110	eP	P	00 55 27.7	+0.4
VILB	**Vilhena**	11.35	110	P	P	00 55 27.9	+0.6
MACC	**Macarena, Meta**	11.70	347	eP	P	00 55 28.6	-2.1
PB01	**IPOC Station P**	11.77	172	P	P	00 55 30.2	-1.1
SIV	**San Ignacio**	11.87	125	P	P	00 55 32.6	+0.3
	20nm,0.3s,baz=298,slow=9.4,SNR=293						
SIV				S	S	00 57 40.9	-0.4
	2.3nm,0.3s,baz=307,slow=14,SNR=8.6						
OTAV	**Otavalo**	11.95	322	eP	P	00 55 35.3	+1.8
OTAV	**Otavalo**	11.95	322	eP	P	00 55 34.2	+0.6
OTAV	**Otavalo**	11.95	322	P	P	00 55 33.3	-0.3
TULM	**Tulcn-Chalpat**	11.95	326	eP	P	00 55 35.3	+1.7
CUSE	**Cuicocha Este**	11.97	323	eP	P	00 55 34.4	+0.6
MACA	**Manacapuru-AM**	12.07	60	eP	P	00 55 34.6	+0.3
MACA	**Manacapuru-AM**	12.07	60	P	P	00 55 34.5	+0.3
GCUF	**Volcan Galeras**	12.15	329	eP	P	00 55 36.3	+0.7
PAC1	**Pacto, Paraso**	12.18	321	eP	P	00 55 36.3	+0.8
GARC	**Garzon, Huila**	12.22	339	eP	P	00 55 34.4	-1.5
PB07	**IPOC Station P**	12.40	174	P	P	00 55 36.9	-0.5
PB09	**IPOC Station P**	12.54	172	P	P	00 55 38.7	-0.1
SOTA	**Rioblanco**	12.61	334	eP	P	00 55 41.1	+1.2
BETC	**Betania**	12.66	340	eP	P	00 55 41.1	+1.2
PB04	**IPOC Station P**	12.98	176	P	P	00 55 42.8	-0.2
MARP	**Paez Belalcaza**	12.99	338	eP	P	00 55 42.0	-1.3
PTLB	**Pontes e Lacer**	13.23	119	eP	P	00 55 45.9	+0.7
PTLB	**Pontes e Lacer**	13.23	119	P	P	00 55 46.2	+1.0
TUMC	**Tumaco**	13.39	325	P	P	00 55 47.0	+0.1
LVC	**Limon Verde**	13.39	171	P	P	00 55 48.1	+1.0
	3.9nm,0.3s,baz=23,slow=7.6,SNR=27						
LVC				S	S	00 58 11.6	+3.5
	1.1nm,0.3s,baz=306,slow=23,SNR=11						
LVC	**Limon Verde**	13.39	171	eP	P	00 55 47.0	-0.1
LVC	**Limon Verde**	13.39	171	P	P	00 55 47.0	-0.1
PTGC	**Puerto Gaitan,**	13.46	356	eP	P	00 55 47.8	+0.2
ORTC	**Ortega, Tolima**	13.76	343	eP	P	00 55 50.6	+0.2
PB15	**IPOC Station P**	13.91	174	P	P	00 55 49.8	-2.1
PTGA	**Pitinga**	14.03	53	P	P	00 55 54.0	+1.0
	82nm,0.3s,baz=231,slow=11,SNR=623						
PTGA				S	S	00 58 21.3	+2.8
	7.6nm,0.3s,baz=230,slow=19,SNR=14						
PB10	**IPOC Station P**	14.13	178	P	P	00 55 52.8	-0.9
YOTC	**Yotoco, Valle**	14.19	338	eP	P	00 55 52.5	-2.0
ANIL	**Santa Ana**	14.35	343	eP	P	00 55 55.4	-0.9
PDRB	**Porto dos Gac**	14.37	100	eP	P	00 55 57.1	+1.0
ROSC	**El Rosal**	14.41	347	P	P	00 55 57.6	+0.7
	18nm,0.3s,baz=243,slow=3.8,SNR=21						
ROSC				S	S	00 58 29.7	+4.3
	2.8nm,0.3s,baz=190,slow=22,SNR=7.6						
ROSC	**El Rosal**	14.41	347	eP	P	00 55 59.2	+2.3
ROSC	**El Rosal**	14.41	347	P	P	00 55 57.5	+0.6
PLMC	**San Jos del P**	15.02	340	eP	P	00 56 02.1	0.0
GUY2C	**Guyana, Caldas**	15.04	344	eP	P	00 56 02.1	-0.6
SPBC	**San Pablo de B**	15.15	349	eP	P	00 56 02.1	-1.2
CLDB	**Colider**	15.21	97	eP	P	00 56 04.1	+0.4
RUSC	**La Rusia**	15.23	353	eP	P	00 56 05.9	+1.5
NORC	**Norcasia**	15.24	346	eP	P	00 56 03.0	-1.0
CNOCA	**NORCASIA, CALD**	15.24	346	eP	P	00 56 04.0	-0.1
TAMC	**Tame, Arauca**	15.66	358	eP	P	00 56 07.8	-0.1
TAMC	**Tame, Arauca**	15.66	358	eP	P	00 56 08.8	+0.9
BOAV	**Boa Vista**	15.74	43	eP	P	00 56 09.4	+0.8
BOAV	**Boa Vista**	15.74	43	P	P	00 56 10.0	+1.4
NPGB	**Novo Progresso**	15.80	83	eP	P	00 56 09.6	+0.4
CBOC	**Ciudad Bolivar**	15.84	342	eP	P	00 56 09.7	+0.1
BARC	**Barichara**	15.93	353	eP	P	00 56 10.7	+0.1
HELC	**Santa Helena**	16.01	344	eP	P	00 56 12.6	+1.2
ITTB	**Itaituba**	16.08	73	eP	P	00 56 12.9	+1.2
PTBC	**PUERTO BERRIO,**	16.09	348	eP	P	00 56 11.7	-0.1
ELOV	**Elorza**	16.30	6	eP	P	00 56 14.5	+0.9
SALV	**Santo Antonio**	16.45	115	eP	P	00 56 16.1	+1.2
BRRC	**Barranca, Sant**	16.51	351	eP	P	00 56 14.5	-1.1
PAMC	**Pamplona, Colo**	16.62	355	eP	P	00 56 15.5	-1.6
SOLC	**Bahia Solano**	16.65	338	eP	P	00 56 15.5	-1.4
DBBC	**Dabeiba**	16.99	343	eP	P	00 56 20.3	+0.2
ZARC	**Zaragoza, Cauc**	17.10	347	eP	P	00 56 19.3	-1.7
ZARC	**Zaragoza, Cauc**	17.10	347	P	P	00 56 20.3	-0.7
SOCV	**Socops**	17.49	1	eP	P	00 56 22.2	-2.4
UREC	**San Jos de Ur**	17.51	345	eP	P	00 56 25.0	+0.3
AC02	**Maricunga**	17.53	174	P	P	00 56 27.0	+1.7
OCAC	**Ocana**	17.57	353	eP	P	00 56 25.0	-0.4
OCAC	**Ocana**	17.57	353	P	P	00 56 24.4	-1.1
OCAC				IAmb	IAmb	00 56 26.6	
	comp=Z,39nm,0.3s						
PTAC	**Punta Ardita,**	17.65	338	eP	P	00 56 26.0	0.0
PP1B	**Ponte de Pedra**	17.84	119	eP	P	00 56 28.9	+1.3
SDV	**Santo Domingo**	18.09	2	P	P	00 56 30.6	+0.3
	comp=Z,12nm,0.3s,baz=166,slow=11,SNR=32						
SDV				S	S	00 59 26.0	+1.1
	comp=Z,1.7nm,0.3s,baz=219,slow=14,SNR=3.4						
SDV	**Santo Domingo**	18.09	2	eP	P	00 56 29.8	-0.4
SDV	**Santo Domingo**	18.09	2	eP	P	00 56 30.3	0.0
SDV	**Santo Domingo**	18.09	2	P	P	00 56 30.4	+0.2
SDV				IAmb	IAmb	00 56 36.7	
	comp=Z,48nm,0.6s						
SMLC	**San Martn de**	18.23	351	eP	P	00 56 28.9	-2.4
MALB	**Monte Alegre**	18.37	67	eP	P	00 56 33.5	+0.9
BAUV	**El Baul**	18.40	10	eP	P	00 56 33.4	+0.6
BAUV	**El Baul**	18.40	10	P	P	00 56 33.5	+0.6
MOTC	**Monteria, Cord**	18.53	346	eP	P	00 56 33.6	-0.3
MOTC	**Monteria, Cord**	18.53	346	IAmb	IAmb	00 56 36.5	
	comp=Z,69nm,0.8s						
AQDB	**Aquidauana**	18.59	128	eP	P	00 56 34.9	+0.4
AQDB	**Aquidauana**	18.59	128	P	P	00 56 35.1	+0.7
AQDB				IAmb	IAmb	00 56 37.8	
	comp=Z,58nm,0.8s						
LL6C	**La Loma 6 Bece**	19.04	354	eP	P	00 56 34.6	-4.0
ARGC	**Ariguani, Magd**	19.30	351	eP	P	00 56 39.4	-1.5
SJCC	**San Jacinto, C**	19.50	348	eP	P	00 56 41.3	-1.6
SJCC	**San Jacinto, C**	19.50	348	P	P	00 56 42.5	-0.3
LCO	**Las Campanas**	19.60	179		PcP	01 00 34.0	+1.0
SNDB	**Serra Nova Dou**	19.70	99	eP	P	00 56 45.9	+1.3
ARAG	**Araguaiana, MT**	19.92	111	eP	P	00 56 47.2	+0.7
BIRV	**Birongo**	20.26	14	P	P	00 56 50.4	+0.9
BCIP	**Isla Barro Col**	20.29	335	P	P	00 56 51.2	+1.3
PCRV	**Puerto La Cruz**	20.43	19	P	P	00 56 51.9	+0.7
	comp=Z,28nm,0.4s,baz=200,slow=5.0,SNR=34						
SMRC	**Santa Marta, M**	20.57	351	eP	P	00 56 49.9	-2.5
URIC	**Uribia, Colomb**	20.90	358	eP	P	00 56 50.8	-4.4
URIC	**Uribia, Colomb**	20.90	358	P	P	00 56 52.7	-2.5
URIC				IAmb	IAmb	00 56 53.6	
	comp=Z,51nm,1.0s						
MCPB	**Macapa, AP**	21.00	66	eP	P	00 56 57.5	+1.2
PRPB	**Parauapebas**	21.38	83	eP	P	00 56 59.7	+0.1
CPUP	**Villa Florida**	21.41	144	P	P	00 56 59.1	-0.6
	comp=Z,5.9nm,0.5s,baz=332,slow=10,SNR=16						
CPUP				PcP	PcP	01 00 36.4	+0.2
	comp=Z,4.6nm,0.6s,baz=285,slow=1.4,SNR=3.9						
CPUP				ScP	ScP	01 03 14.7	-0.3
	comp=Z,5.4nm,0.6s,baz=20,slow=1.9,SNR=8.4						
CPUP	**Villa Florida**	21.41	144	eP	P	00 56 59.2	-0.4
CPUP	**Villa Florida**	21.41	144	P	P	00 56 58.9	-0.8
HATO	**Hato, Curacao**	21.47	6	P	P	00 56 58.6	-1.8
RIOS	**Rincon, Osa**	21.72	325	P	P	00 57 03.9	+1.2
RIOS				IAmb	IAmb	00 57 05.3	
	comp=Z,20nm,0.5s						
DRK0	**Durika**	22.03	327	P	P	00 57 06.1	+0.5
DRK0				IAmb	IAmb	00 57 09.8	
	comp=Z,61nm,0.6s						
SRBA	**San Rafael, Bu**	22.07	326	P	P	00 57 07.9	+2.0
TRN	**Trinidad (W)**	22.08	26	e	P	00 57 13.8	+8.0
ZON	**Zonda**	22.24	174	P	P	00 57 08.1	+1.0
TRCB	**Terra Rica**	22.25	129	eP	P	00 57 07.2	-0.1
TRCB	**Terra Rica**	22.25	129	P	P	00 57 07.7	+0.4
ITRB	**Iturama**	22.60	119	eP	P	00 57 10.9	+0.4
PEXB	**Peixe**	22.63	99	eP	P	00 57 12.0	+1.3
PCMB	**Pacaembu**	22.70	125	eP	P	00 57 11.3	-0.1
RIMA	**Rio Macho**	22.79	326	P	P	00 57 14.8	+2.4
TOSP	**Speyside**	23.05	28	e	P	00 57 16.1	+1.7
TOSP	**Speyside**	23.05	28	P	P	00 57 16.2	+1.8
TOSP				IAmb	IAmb	00 58 01.7	
	comp=Z,146nm,1.6s						
JACO	**JACO, Garabito**	23.15	324	P	P	00 57 17.5	+2.1
SMTB	**Santa Maria do**	23.28	91	eP	P	00 57 17.7	+1.2
GRGR	**Grenville**	23.31	24	eP	P	00 57 17.2	+0.5
GRGR	**Grenville**	23.31	24	P	P	00 57 16.9	+0.2
VA03	**San Esteban**	23.34	179	IAmb	IAmb	00 57 19.9	
	comp=Z,19nm,0.6s						
MDP	**Montagnes des**	23.36	53	P	P	00 57 17.5	+0.2
	comp=Z,15nm,0.4s,baz=227,slow=6.9,SNR=57						
BDFB	**Brasilia**	23.44	108	P	P	00 57 19.2	+1.1
	comp=Z,60nm,0.4s,baz=277,slow=11,SNR=103						
BDFB	**Brasilia**	23.44	108	P	P	00 57 19.1	+1.1
GCMP	**Grenada, Carri**	23.72	24	eP	P	00 57 20.4	0.0
PTGB	**Pitanga**	23.78	132	eP	P	00 57 20.7	-0.2
MT02	**Curacav**	23.83	180	P	P	00 57 22.0	+0.9
JTS	**Las Juntas de**	23.83	324	P	P	00 57 23.5	+2.1
IPMB	**Ipameri, GO**	23.88	114	eP	P	00 57 22.1	+0.2
TMAB	**Tom-Au,PA,Br**	23.95	75	eP	P	00 57 23.5	+1.1
MT05	**Renca**	23.96	179	P	P	00 57 22.9	+0.5
MT09	**Talagante**	24.34	180	P	P	00 57 26.9	+1.1
ITQB	**Itaqui**	24.40	148	eP	P	00 57 25.5	-0.7
ITQB	**Itaqui**	24.40	148	P	P	00 57 25.5	-0.7
MT01	**Popeta**	24.43	180	P	P	00 57 26.8	+0.4
SVB	**Belmont**	24.50	24	eP	P	00 57 26.9	-0.4
SVB	**Belmont**	24.50	24	P	P	00 57 26.9	-0.4
HZTE	**Horizontes, Gu**	24.54	324	P	P	00 57 30.3	+2.7
HZTE				IAmb	IAmb	00 57 42.9	
	comp=Z,154nm,1.6s						
SVV	**Soufriere Volc**	24.56	24	eP	P	00 57 27.6	-0.1
SSV	**Crater Summit**	24.58	24	eP	P	00 57 28.3	+0.3
PRVC	**Isla de Provid**	24.72	336	P	P	00 57 30.9	+1.7
BB19B	**Bebedouro**	24.73	121	eP	P	00 57 29.4	+0.1
FRTB	**Fartura**	24.93	127	eP	P	00 57 30.3	-0.7
MCLT	**Moule a Chique**	25.02	24	eP	P	00 57 30.4	-1.4
MCLT	**Moule a Chique**	25.02	24	P	P	00 57 30.4	-1.4
SLBI	**Saint Lucia, B**	25.30	24	eP	P	00 57 33.4	-0.9
ITAB	**Concordia**	25.31	137	eP	P	00 57 34.4	+0.1
ITAB	**Concordia**	25.31	137	P	P	00 57 34.0	-0.2
ITAB				IAmb	IAmb	00 57 34.7	
	comp=Z,37nm,0.8s						
ACON	**Acoyapa**	25.32	326	P	P	00 57 36.3	+1.8
BO02	**Sierra Bellavi**	25.36	179	P	P	00 57 35.5	+0.9
BO02					PcP	01 00 45.5	+0.7
GO05	**Huala**	25.58	181	P	P	00 57 37.4	+0.8
BIM	**Bigot**	25.71	23	eP	P	00 57 36.4	-1.5
BIM	**Bigot**	25.71	23	P	P	00 57 36.7	-1.2
BIM				IAmb	IAmb	00 58 32.5	
	comp=Z,97nm,1.2s						
MPOM	**Morne Pois Mar**	25.72	24	eP	P	00 57 36.2	-1.7
MPOM	**Morne Pois Mar**	25.72	24	P	P	00 57 36.3	-1.7
MPOM				IAmb	IAmb	00 57 43.5	
	comp=Z,75nm,1.0s						
FDF	**Fort de France**	25.87	23	P	P	00 57 37.4	-2.0
SDBA	**SAO DESIDERIO**	25.96	99	eP	P	00 57 41.2	+1.0
SVN	**Savane Anatole**	25.97	23	P	P	00 57 40.3	+0.1
BOAB	**BOACO BROADBAN**	25.99	326	P	P	00 57 41.1	+0.8
BOAB				IAmb	IAmb	00 57 43.0	
	comp=Z,88nm,1.5s						
RCLB	**Rio Claro- Sao**	26.14	123	eP	P	00 57 41.6	-0.1
MDN	**Morne-Daniel**	26.32	22	e	P	00 57 42.1	-1.1
TIJ01	**Guaruva-PR**	26.40	130	eP	P	00 57 44.1	+0.2
DSLB	**Salisbury**	26.42	22	eP	P	00 57 42.5	-1.7
MATN	**Matagalpa**	26.52	326	P	P	00 57 46.7	+1.6

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MATN                                IAmb  IAmb  00 57 48.5
      comp=Z,30nm,0.8s
MATN                                      PcP   01 00 48.3 +0.4
CPSB  Cacapava Do Su     26.72 144  eP    P     00 57 45.6 -1.0
JANB  Januaria           26.84 105  eP    P     00 57 48.4 +0.5
VAO   Valinhos           26.87 123  eP    P     00 57 47.6 -0.5
CBE   Ff, Capester       26.94  21  eP    P     00 57 46.9 -1.8
MAGL  Barre de l'ile     26.94  21  eP    P     00 57 47.0 -1.6
PET01 Itanhaem-SP        27.22 126  eP    P     00 57 50.4 -0.6
JAKH  Jacmel             27.41 357  P     P     00 57 53.2 +0.5
MLPR  Magueyes Islan     27.42   9  P     P     00 57 52.8 +0.1
CRPR  Cabo Rojo, PR      27.44   8  P     P     00 57 52.6 -0.3
MC01  Montes Claros      27.49 108  eP    P     00 57 53.7 +0.1
CNLB  Canela             27.53 139  eP    P     00 57 53.2 -0.5
OBIP  Obispado Ponce     27.55   9  IAmb  IAmb  00 57 54.7
      comp=Z,62nm,0.6s
ROSB  Rosrio             27.61  78  eP    P     00 57 55.1 +0.6
CDVI  St. Croix          27.63  13  P     P     00 57 53.9 -0.7
PRSN  Puerto Rico Se     27.64   8  IAmb  IAmb  00 57 56.1
      comp=Z,82nm,1.0s
PLTB  Pedras Altas       27.65 146  eP    P     00 57 54.0 -0.6
PLTB  Pedras Altas       27.65 146  P     P     00 57 53.8 -0.9
PLTB                                      PcP   01 00 50.7 +0.4
LGNH  Logne              27.69 357  P     P     00 57 55.4 +0.4
LGNH                                IAmb  IAmb  00 57 56.3
      comp=Z,67nm,0.6s
SJG   San Juan           27.70  10  P     P     00 57 54.5 -0.7
      comp=Z,38nm,0.5s,baz=158,slow=7.1,SNR=33
SJG                                 S     S     01 01 51.8 -3.6
      comp=Z,9.9nm,0.5s,baz=0.2,slow=22,SNR=7.4
SJG   San Juan           27.70  10  P     P     00 57 54.5 -0.7
SJG                                 IAmb  IAmb  00 57 56.5
      comp=Z,47nm,0.6s
SKI   Saint Kitts        27.76  17  eP    P     00 57 58.1 +2.4
SEUS  St. Eustatius      27.84  17  P     P     00 57 57.5 +1.1
SABA  Saba               27.89  16  eP    P     00 57 56.3 -0.6
AGPR  Aguadilla, PR      27.90   8  P     P     00 57 57.2 +0.3
GCPR  Guaynabo City      27.90  10  P     P     00 57 56.2 -0.7
GCPR                                IAmb  IAmb  00 57 57.6
      comp=Z,62nm,0.7s
GCPR                                      PcP   01 00 50.9 -0.2
BSCB  Bom Sucesso        27.94 118  eP    P     00 57 57.5 +0.1
CUPR  Culebra, Puert     28.05  12  P     P     00 57 57.3 -1.0
MTDJ  Mount Denham       28.08 347  P     P     00 57 59.2 +0.5
DIAM  Diamantina, MG     28.11 111  eP    P     00 57 59.5 +0.5
SDDR  Presa de Saban     28.12 360  IAmb  IAmb  00 58 03.4
      comp=Z,34nm,0.7s
PARB  Paraibuna          28.13 123  eP    P     00 57 58.9 -0.1
STVI  Saint Thomas       28.17  13  IAmb  IAmb  00 58 01.6
      comp=Z,39nm,0.7s
TER01 Tubaro-SC          28.18 136  eP    P     00 57 58.9 -0.4
TGUH  Tegucigalpa,Un     28.19 325  P     P     00 57 59.7 +0.1
TGUH                                IAmb  IAmb  00 58 23.1
      comp=Z,24nm,0.7s
SMRT  St. Maarten        28.34  16  eP    P     00 57 59.5 -1.3
ANWB  Willy Bob          28.37  19  eP    P     00 57 59.1 -1.8
ANWB  Willy Bob          28.37  19  P     P     00 57 59.3 -1.7
SC01  Santiago de lo     28.57   1  P     P     00 58 02.4 -0.3
GTBY  Guantanamo Bay     29.32 352  P     P     00 58 09.2 +0.1
GTBY                                IAmb  IAmb  00 58 09.9
      comp=Z,100nm,1.3s
MAN01 Angra dos Reis     29.33 121  eP    P     00 58 09.4 +0.1
LC01  Cunco              29.46 181  P     P     00 58 10.2 +0.1
LC01                                PcP   PcP   01 00 54.5 -0.3
VAS01 Vassouras-RJ       29.55 119  eP    P     00 58 11.2 -0.1
MTO3  Montecristo        29.68 322  P     P     00 58 13.1 +0.5
TRQA  Tornquist          29.79 165  eP    P     00 58 12.4 -0.6
TRQA  Tornquist          29.79 165  P     P     00 58 12.6 -0.4
ESQI  Esquipulas         29.80 323  P     P     00 58 13.7 +0.2
ESQI                                IAmb  IAmb  00 58 20.1
      comp=Z,33nm,0.7s
NBPS  Pedro II - PI      29.89  83  eP    P     00 58 14.9 +0.6
LCCY  Blossom Villag     30.11 343  P     P     00 58 15.6 -0.3
LR03  Panguipulli        30.21 182  P     P     00 58 16.6 +0.1
LR03                                IAmb  IAmb  00 58 19.2
      comp=Z,82nm,1.6s
DUB01 Friburgo-RJ        30.41 118  eP    P     00 58 18.2 -0.4
SJMB  Sao Joao De Ma     30.50 111  eP    P     00 58 19.4  0.0
NBPN  Ponto Novo - B     30.52  96  eP    P     00 58 20.2 +0.7
GRTK  Grand Turk         30.64   0  P     P     00 58 20.4  0.0
APG   El Apazote         30.82 321  P     P     00 58 23.8 +1.4
      comp=Z,12nm,0.4s,baz=122,slow=6.3,SNR=18
BSFB  Barra de Sao F     30.84 111  eP    P     00 58 22.0 -0.2
CAM01 Campos-RJ          30.95 117  eP    P     00 58 23.2 +0.1
GDU01 Guandu, BA         31.24 101  eP    P     00 58 26.6 +0.9
PLCA  Paso Flores        31.29 179  P     P     00 58 26.4 +0.6
      comp=Z,10nm,0.6s,baz=353,slow=9.1,SNR=57
PLCA                                PcP   PcP   01 01 00.5 +0.7
      comp=Z,11nm,0.6s,baz=343,slow=2.4,SNR=9.8
PLCA                                ScP   ScP   01 03 44.6 +0.2
      comp=Z,3.4nm,0.8s,baz=48,slow=5.4,SNR=4.3
PLCA  Paso Flores        31.29 179  eP    P     00 58 26.3 +0.5
PLCA  Paso Flores        31.29 179  P     P     00 58 26.1 +0.3
NAN01 Guarapari, ES      31.29 109  eP    P     00 58 26.6 +0.5
GUA01 Guaratinga, BA     31.37 107  eP    P     00 58 27.2 +0.5
RIB01 Linhares ES        31.37 112  eP    P     00 58 26.9 +0.1
ALF01 Guarapari-ES       31.41 114  eP    P     00 58 27.2 +0.2
CMC01 Camacan, BA        31.46 104  eP    P     00 58 28.5 +0.9
LL04  Puerto Octay       31.48 182  P     P     00 58 26.9 -0.4
LL04                                      PcP   01 01 00.4 +0.2
NBMO  Morrinhos-CE       31.48  81  eP    P     00 58 28.2 +0.4
NBIT  Itapeh - BA        31.49 103  eP    P     00 58 29.1 +1.2
NBPB  Pedra_Branca-C     31.53  85  eP    P     00 58 28.8 +0.6
PETF  Flores             31.96 325  P     P     00 58 32.4 +0.6
PETF                                IAmb  IAmb  00 58 33.7
      comp=Z,54nm,0.7s
PETF                                      PcP   01 01 02.5 +0.5
NBMA  Muriti-CE          32.11  89  eP    P     00 58 33.9 +0.8
CCIG  Comitan            32.83 321  P     P     00 58 39.8 +0.5
CCIG                                IAmb  IAmb  00 58 41.0
      comp=Z,30nm,0.6s
NBLA  Lagarto - SE       32.88  96  eP    P     00 58 39.4 -0.2
LL01  San Ignacio de     32.95 182  IAmb  IAmb  00 58 40.0
      comp=Z,17nm,0.6s
NBCL  Cascavel-CE        33.02  83  eP    P     00 58 41.8 +1.1
NBLV  Livramento - P     33.93  89  eP    P     00 58 49.3 +1.0
NBPA  Parau_RN           33.93  86  eP    P     00 58 48.6 +0.2
SOR   Soroa              33.95 340  P     P     00 58 49.1 +0.7
NBAN  Anadia - AL        34.40  94  eP    P     00 58 52.5 +0.2
CMIG  Matias Romero      35.20 318  P     P     00 58 59.8 +1.1
      comp=Z,34nm,0.5s,baz=124,slow=6.4,SNR=53
CMIG                                PcP   PcP   01 01 11.6 +0.2
      comp=Z,15nm,0.6s,baz=124,slow=2.7,SNR=8.3
CMIG                                S     S     01 03 49.0 -0.5
      comp=Z,4.5nm,0.8s,baz=282,slow=22,SNR=7.5
NBRF  Rio Formoso -      35.59  92  eP    P     00 59 02.2 +0.2
NBPV  Pedro Velho        35.64  88  eP    P     00 59 03.1 +0.6
061Z  Ochoppi            36.23 345  P     P     00 59 07.5 +0.4
TLIG  Tlapa              38.03 315  P     P     00 59 23.1 +1.1
DWPF  Disney Wildern     38.51 345  P     P     00 59 25.7 +0.2
      baz=164
DWPF  Disney Wildern     38.51 345  P     P     00 59 25.8 +0.3
656A  Willston           39.99 344  P     P     00 59 37.0 -0.3
MOIG  Morelia            41.29 314  P     P     00 59 48.8 +0.8
MOIG                                IAmb  IAmb  00 59 50.5
      comp=Z,35nm,0.6s
553A  Crawfordville      41.30 342  P     P     00 59 48.2 +0.6
GO09  Cerro Castillo     41.84 181  P     P     00 59 52.6 +1.1
BBSR  BB Station         41.91   8  P     P     00 59 52.2 -0.1
451A  Vernon             42.10 341  P     P     00 59 53.5 -0.4
451A                                IAmb  IAmb  00 59 56.7
      comp=Z,173nm,1.2s
257A  Skidaway Islan     42.13 347  P     P     00 59 54.8 +0.7
TIGA  Tifton             42.24 344  P     P     00 59 54.9 -0.1
      baz=162,SNR=6.8
TIGA  Tifton             42.24 344  IAmb  IAmb  00 59 55.9
      comp=Z,123nm,1.1s
352A  Blakely            42.65 343  IAmb  IAmb  00 59 58.9
      comp=Z,95nm,0.7s
RGRS  Roger Stewart      42.86 349  P     P     01 00 00.3 +0.6
BRAL  Brewton            43.04 340  P     P     01 00 01.0 -0.1
      baz=157,SNR=6.3
NHSC  New Hope           43.05 349  P     P     01 00 01.7 +0.5
      baz=167,SNR=10
NHSC  New Hope           43.05 349  P     P     01 00 01.5 +0.3
EFI   East Falkland      43.58 168  P     P     01 00 05.8 +0.8
EFI                                 IAmb  IAmb  01 01 39.1
      comp=Z,53nm,1.1s
Y60A  Bolivia            43.60 351  P     P     01 00 05.2 -0.3
GO10  Punta Arenas       43.71 180  P     P     01 00 08.1 +2.0
GO10                                IAmb  IAmb  01 01 40.6
      comp=Z,88nm,1.1s
Y58A  Scranton           43.74 350  P     P     01 00 05.8 -0.7
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GOGA  Godfrey            44.08 345  P     P     01 00 08.7 -0.4
      baz=162,SNR=9.8
GOGA  Godfrey            44.08 345  IAmb  IAmb  01 00 09.1
      comp=Z,49nm,1.1s
ZAIG  Zacatecas          44.31 316  P     P     01 00 12.2 +0.8
X58A  Rowland            44.31 350  IAmb  IAmb  01 00 11.1
      comp=Z,67nm,0.5s
JSC   Jenkinsville       44.41 348  IAmb  IAmb  01 00 11.9
      comp=Z,58nm,0.5s
Z51A  Franklin           44.45 343  IAmb  IAmb  01 00 11.9
      comp=Z,51nm,0.8s
HODGE Hodges             44.57 347  P     P     01 00 12.6 -0.3
HODGE                               IAmb  IAmb  01 00 13.6
      comp=Z,75nm,0.8s
Y52A  Lilburn            44.66 345  IAmb  IAmb  01 00 13.4
      comp=Z,33nm,0.6s
344A  Westbrook Farm     44.66 336  IAmb  IAmb  01 00 15.0
      comp=Z,75nm,1.0s
KVTX  Kingsville         44.87 326  P     P     01 00 17.4 +2.1
W57A  Gilead             45.01 350  IAmb  IAmb  01 00 16.7
      comp=Z,75nm,0.7s
PAULI Pauline            45.04 348  IAmb  IAmb  01 00 16.9
      comp=Z,64nm,0.7s
441A  DeRidder           45.10 333  P     P     01 00 17.4 +0.4
441A                                IAmb  IAmb  01 00 18.7
      comp=Z,72nm,0.7s
V61A  Roper              45.16 354  P     P     01 00 17.0 -0.3
KMSC  Kings Mountain     45.25 348  P     P     01 00 18.0  0.0
      baz=166,SNR=17
KMSC  Kings Mountain     45.25 348  IAmb  IAmb  01 00 18.9
      comp=Z,76nm,0.9s
VBMS  Vicksburg          45.25 337  P     P     01 00 17.6 -0.5
      baz=153,SNR=7.2
VBMS  Vicksburg          45.25 337  IAmb  IAmb  01 00 18.4
      comp=Z,71nm,0.8s
Y49A  Blount Mountai     45.32 342  IAmb  IAmb  01 00 18.4
      comp=Z,63nm,0.7s
USHA  Ushuaia            45.45 178  P     P     01 00 20.6 +1.4
      comp=Z,15nm,0.6s,baz=359,slow=7.8,SNR=15
BG3   Lake Jocassee      45.45 346  P     P     01 00 19.4 -0.2
BG3                                 IAmb  IAmb  01 00 20.5
      comp=Z,56nm,1.0s
V58A  Windy Hill, Pi     45.49 351  IAmb  IAmb  01 00 20.3
      comp=Z,91nm,1.2s
X51A  Calhoun            45.53 344  IAmb  IAmb  01 00 20.5
      comp=Z,118nm,1.6s
HKT   Hockley            45.69 330  P     P     01 00 22.0 +0.6
FPAL  Fort Paine         45.72 343  IAmb  IAmb  01 00 22.1
      comp=Z,34nm,0.6s
W52A  Murphy             45.79 345  IAmb  IAmb  01 00 22.7
      comp=Z,55nm,1.1s
735A  Kenedy             45.84 327  IAmb  IAmb  01 00 24.4
      comp=Z,93nm,0.9s
U59A  Littleton          45.85 353  IAmb  IAmb  01 00 22.4
      comp=Z,21nm,0.6s
X48A  Hartselle          46.06 342  IAmb  IAmb  01 00 24.1
      comp=Z,82nm,0.8s
V53A  Saluda             46.08 347  IAmb  IAmb  01 00 24.5
      comp=Z,41nm,0.6s
W50A  Signal Mountai     46.25 344  IAmb  IAmb  01 00 25.9
      comp=Z,91nm,1.1s
CPCT  Cooper Cave        46.28 345  IAmb  IAmb  01 00 26.1
      comp=Z,36nm,0.8s
TKL   Tuckaleechee C     46.29 346  IAmb  IAmb  01 00 25.6
      comp=Z,37nm,0.8s
833A  Chaparral WMA,     46.31 325  P     P     01 00 26.8 +0.6
      baz=140,SNR=43
V52A  Sevierville        46.42 346  IAmb  IAmb  01 00 27.2
      comp=Z,90nm,0.9s
T59A  Double "B" Far     46.43 353  IAmb  IAmb  01 00 27.3
      comp=Z,70nm,0.8s
SWET  Sewanee            46.44 343  IAmb  IAmb  01 00 26.9
      comp=Z,70nm,0.7s
T60A  Surry              46.51 354  IAmb  IAmb  01 00 27.8
      comp=Z,66nm,0.8s
V51A  Loudon             46.57 345  IAmb  IAmb  01 00 28.1
      comp=Z,49nm,0.9s
NATX  Nacogdoches        46.63 332  P     P     01 00 29.3 +0.8
      baz=147,SNR=20
NATX  Nacogdoches        46.63 332  P     P     01 00 29.1 +0.6
U54A  Nelsons Funny      46.68 348  IAmb  IAmb  01 00 29.6
      comp=Z,152nm,1.1s
T57A  Hurt               46.69 351  IAmb  IAmb  01 00 29.7
      comp=Z,126nm,1.1s
PLAL  Pickwick Lake      46.88 341  IAmb  IAmb  01 00 29.7
      comp=Z,55nm,0.8s
S61A  Accomac            46.94 355  P     P     01 00 30.8 +0.1
TZTN  Tazewell           47.08 346  P     P     01 00 31.1 -0.7
      baz=163,SNR=8.9
TZTN  Tazewell           47.08 346  P     P     01 00 31.4 -0.4
TZTN                                IAmb  IAmb  01 00 32.0
      comp=Z,41nm,0.7s
Z41A  Richland Creek     47.09 335  P     P     01 00 31.6 -0.2
      baz=150,SNR=20
BLA   Blacksburg         47.09 350  P     P     01 00 32.2 +0.3
      baz=168,SNR=13
BLA   Blacksburg         47.09 350  IAmb  IAmb  01 00 32.7
      comp=Z,55nm,0.7s
V48A  Smith Brothers     47.19 343  IAmb  IAmb  01 00 32.5
      comp=Z,75nm,0.7s
435B  Jarrell            47.25 329  P     P     01 00 34.1 +0.9
      baz=143,SNR=8.9
435B  Jarrell            47.25 329  PcP   PcP   01 01 52.0 +0.6
435B                                IAmb  IAmb  01 01 52.7
      comp=Z,44nm,0.7s
CLTN  Cedars of Leba     47.37 343  IAmb  IAmb  01 00 33.8
      comp=Z,46nm,0.8s
CLTN                                PcP   PcP   01 01 51.2 -0.5
S57A  Dark Hollow, R     47.40 352  IAmb  IAmb  01 00 34.9
      comp=Z,71nm,0.8s
R58B  Mineral            47.45 353  IAmb  IAmb  01 00 35.2
      comp=Z,28nm,0.6s
U49A  Red Boiling Sp     47.62 344  IAmb  IAmb  01 00 35.3
      comp=Z,45nm,0.7s
CBN   Corbin Frederi     47.63 353  P     P     01 00 35.5 -0.4
      baz=172,SNR=14
T50A  Nancy              47.85 345  IAmb  IAmb  01 00 37.2
      comp=Z,45nm,0.6s
WVT   Waverly            47.85 342  P     P     01 00 35.8 -1.8
      baz=158
WVT   Waverly            47.85 342  P     P     01 00 35.7 -1.8
WVT                                 IAmb  IAmb  01 00 36.7
      comp=Z,48nm,0.6s
R55A  Marlinton          48.09 351  P     P     01 00 39.4 +0.1
R55A                                IAmb  IAmb  01 00 40.3
      comp=Z,41nm,0.7s
S51A  Beattyville        48.14 347  P     P     01 00 38.9 -0.7
S51A                                IAmb  IAmb  01 00 39.6
      comp=Z,41nm,0.8s
HALT  Halls              48.14 340  P     P     01 00 38.1 -1.5
HALT                                IAmb  IAmb  01 00 38.9
      comp=Z,86nm,0.8s
WHTX  Lake Whitney,      48.16 330  P     P     01 00 40.4 +0.5
      baz=144,SNR=14
WHTX  Lake Whitney,      48.16 330  P     P     01 00 40.1 +0.2
WHTX                                IAmb  IAmb  01 00 41.2
      comp=Z,96nm,0.8s
X40A  Basin Creek Fa     48.17 336  P     P     01 00 39.1 -0.8
      baz=151,SNR=25
X40A  Basin Creek Fa     48.17 336  IAmb  IAmb  01 00 40.9
      comp=Z,32nm,0.6s
JCT   Junction City      48.19 326  P     P     01 00 40.2  0.0
      baz=141,SNR=15
JCT   Junction City      48.19 326  IAmb  IAmb  01 01 55.8
      comp=Z,41nm,0.7s
LNXT  Lenox              48.36 340  IAmb  IAmb  01 00 40.9
      comp=Z,98nm,0.8s
UTMT  University of      48.38 341  IAmb  IAmb  01 00 40.9
      comp=Z,124nm,1.0s
R53A  Hurricane          48.46 349  IAmb  IAmb  01 00 42.5
      comp=Z,106nm,0.8s
PEBM  Pemiscott Bayo     48.50 340  P     P     01 00 41.8 -0.5
MIAR  Mount Ida          48.52 335  P     P     01 00 41.7 -0.8
      baz=150,SNR=39
MIAR  Mount Ida          48.52 335  IAmb  IAmb  01 00 42.6
      comp=Z,69nm,0.7s
W41B  Gary Mavity, V     48.53 337  P     P     01 00 41.7 -0.9
      baz=152,SNR=32
WHAR  Wooly Hollow       48.65 337  IAmb  IAmb  01 00 43.4
      comp=Z,95nm,1.1s
Q56A  Snyder Ridge,      48.69 352  IAmb  IAmb  01 00 45.0
      comp=Z,83nm,0.8s
PENMO Penman             48.73 340  P     P     01 00 43.0 -0.9
HENM  Henderson Moun     48.92 340  IAmb  IAmb  01 00 44.7
      comp=Z,68nm,0.8s
LCAR  Lake Charles       48.92 338  IAmb  IAmb  01 00 44.5
      comp=Z,54nm,0.5s
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R50A  Paris              48.92 346  IAmb  IAmb  01 00 45.0
      comp=Z,40nm,0.6s
P60A  Greenville         49.05 355  P     P     01 00 45.5 -0.8
      baz=174,SNR=11
P60A  Greenville         49.05 355  IAmb  IAmb  01 00 46.4
      comp=Z,42nm,0.7s
Q52A  Bidwell            49.13 349  IAmb  IAmb  01 00 47.3
      comp=Z,73nm,0.8s
W39A  Magazine           49.17 335  P     P     01 00 47.0 -0.2
      baz=150,SNR=48
WUPA  West Chester U     49.17 355  IAmb  IAmb  01 00 47.5
      comp=Z,34nm,0.8s
HPIG                     49.18 318  P     P     01 00 47.5 -0.3
MVL   Millersville       49.30 355  IAmb  IAmb  01 00 48.7
      comp=Z,52nm,0.9s
X37A  Clayton            49.33 334  IAmb  IAmb  01 00 49.5
      comp=Z,86nm,0.7s
WCI   Wyandotte Cave     49.37 344  P     P     01 00 47.3 -1.3
      baz=160
WCI   Wyandotte Cave     49.37 344  P     P     01 00 47.4 -1.3
WCI                                 IAmb  IAmb  01 00 48.1
      comp=Z,130nm,1.1s
MCWV  Mont Chateau       49.39 351  P     P     01 00 49.0 +0.2
      baz=169,SNR=21
MCWV  Mont Chateau       49.39 351  IAmb  IAmb  01 00 49.8
      comp=Z,94nm,0.8s
Q51A  Peebles            49.41 347  PcP   PcP   01 01 59.5 +0.3
Q51A                                IAmb  IAmb  01 02 00.2
      comp=Z,37nm,0.8s
TXAR  Lajitas Array      49.58 322  P     P     01 00 50.5  0.0
      comp=Z,10nm,0.6s,baz=156,slow=7.5,SNR=131
TXAR                                PcP   PcP   01 02 00.5 +0.4
      comp=Z,7.2nm,0.6s,baz=143,slow=7.1,SNR=10
TXAR                                ScP   ScP   01 04 56.0 -0.6
      comp=Z,0.8nm,0.7s,baz=116,slow=2.1,SNR=2.5
TXAR  Lajitas Array      49.58 322  PcP   PcP   01 02 00.3 +0.1
TX31  Lajitas Ar. Si     49.58 322  IAmb  IAmb  01 00 51.6
      comp=Z,56nm,0.9s
TX31                                PcP   PcP   01 02 00.7 +0.5
TX32  Lajitas Array      49.58 322  PcP   PcP   01 02 00.5 +0.4
LOOK  Love County        49.65 331  P     P     01 00 51.3 +0.5
LOOK                                IAmb  IAmb  01 00 55.2
      comp=Z,50nm,0.8s
LOOK                                PcP   PcP   01 02 00.5 +0.3
T42A  Van Buren          49.75 339  IAmb  IAmb  01 00 50.9
      comp=Z,103nm,0.8s
P52A  Corning            49.76 349  P     P     01 00 50.8 -0.6
      baz=166,SNR=33
ABTX  Abilene, Hawle     49.78 328  P     P     01 00 52.1 +0.3
      baz=142,SNR=23
ABTX  Abilene, Hawle     49.78 328  P     P     01 00 51.8  0.0
ABTX                                IAmb  IAmb  01 00 53.0
      comp=Z,85nm,1.1s
ABTX                                PcP   PcP   01 02 01.0 +0.3
P51A  Williamsport       49.79 348  IAmb  IAmb  01 00 51.1
      comp=Z,43nm,0.7s
P51A                                PcP   PcP   01 02 00.6  0.0
U40A  Yellville          49.81 337  P     P     01 00 51.0 -0.9
      baz=152,SNR=109
O56A  Blue Knob Stat     49.81 353  P     P     01 00 52.0 +0.1
      baz=170,SNR=12
O56A  Blue Knob Stat     49.81 353  IAmb  IAmb  01 00 52.9
      comp=Z,48nm,0.6s
LUPA  Lehigh Univers     49.82 356  IAmb  IAmb  01 00 51.8
      comp=Z,26nm,0.5s
LUPA                                PcP   PcP   01 02 00.6  0.0
BRNJ  Basking Ridge      49.85 357  IAmb  IAmb  01 00 52.5
      comp=Z,55nm,0.6s
BRNJ                                PcP   PcP   01 02 00.8 +0.1
CPNY  Central Park       49.92 357  P     P     01 00 51.2 -1.4
CPNY                                IAmb  IAmb  01 00 52.5
      comp=Z,31nm,0.7s
O54A  Avella             49.98 351  IAmb  IAmb  01 00 55.1
      comp=Z,45nm,0.6s
N62A  Caumsett State     50.04 358  IAmb  IAmb  01 00 54.0
      comp=Z,62nm,0.5s
SSPA  Standing Stone     50.09 353  P     P     01 00 53.7 -0.1
      baz=171
SSPA  Standing Stone     50.09 353  P     P     01 00 53.8 -0.1
SSPA                                IAmb  IAmb  01 00 54.5
      comp=Z,169nm,1.9s
SSPA                                PcP   PcP   01 02 01.7 +0.1
SLBS  Sierra La Lagu     50.13 312  P     P     01 00 55.5 +0.9
PAL   Palisades          50.13 357  P     P     01 00 53.1 -1.0
      baz=176
PAL   Palisades          50.13 357  IAmb  IAmb  01 00 54.2
      comp=Z,61nm,1.3s
N59A  State Game Lan     50.16 355  P     P     01 00 54.0 -0.4
      baz=174,SNR=7.0
N59A  State Game Lan     50.16 355  PcP   PcP   01 02 01.7 -0.2
N58A  Sunbury            50.17 355  IAmb  IAmb  01 00 55.0
      comp=Z,59nm,0.8s
N58A                                PcP   PcP   01 02 01.9  0.0
HHAR  Hobbs              50.17 336  P     P     01 00 53.4 -1.1
HHAR                                IAmb  IAmb  01 00 54.5
      comp=Z,104nm,1.0s
O53A  New Philadelph     50.19 350  P     P     01 00 54.3 -0.3
      baz=167,SNR=30
O53A  New Philadelph     50.19 350  IAmb  IAmb  01 00 55.1
      comp=Z,120nm,0.8s
P49A  Miami Univ. Ec     50.21 346  P     P     01 00 53.3 -1.5
      baz=162,SNR=15
P49A  Miami Univ. Ec     50.21 346  IAmb  IAmb  01 00 53.6
      comp=Z,63nm,0.5s
ODNJ  Ogdensburg         50.25 357  PcP   PcP   01 02 02.3 +0.1
ODNJ                                IAmb  IAmb  01 02 02.9
      comp=Z,32nm,0.6s
WSPT  Westport, CT       50.27 358  IAmb  IAmb  01 00 55.4
      comp=Z,55nm,0.9s
TRNY  Table Rock, Ra     50.29 357  PcP   PcP   01 02 02.4  0.0
P48A  Milroy             50.30 346  IAmb  IAmb  01 00 54.0
      comp=Z,33nm,0.7s
OLIL  Olney              50.34 343  PcP   PcP   01 02 02.5 -0.1
OLIL                                IAmb  IAmb  01 02 03.2
      comp=Z,55nm,0.6s
YLE   Yale               50.41 358  IAmb  IAmb  01 00 56.7
      comp=Z,72nm,0.9s
U38A  Gravette           50.49 336  PcP   PcP   01 02 03.5 +0.3
ACSO  Alum Creek Sta     50.50 348  P     P     01 00 56.0 -0.8
      baz=165,SNR=18
ACSO  Alum Creek Sta     50.50 348  IAmb  IAmb  01 00 56.9
      comp=Z,90nm,1.0s
TUL1  Leonard            50.62 334  P     P     01 00 57.6 -0.3
      baz=148,SNR=40
TUL1  Leonard            50.62 334  IAmb  IAmb  01 00 58.4
      comp=Z,99nm,0.7s
N54A  Moraine State      50.69 351  P     P     01 00 58.3 +0.1
      baz=169,SNR=17
N54A  Moraine State      50.69 351  IAmb  IAmb  01 00 59.2
      comp=Z,81nm,0.9s
M57A  Sunshine Farm,     50.70 354  IAmb  IAmb  01 00 58.8
      comp=Z,59nm,0.6s
CCM   Cathedral Cave     50.73 340  P     P     01 00 57.5 -1.0
      baz=154
CCM   Cathedral Cave     50.73 340  P     P     01 00 57.5 -1.0
CCM                                 IAmb  IAmb  01 00 58.4
      comp=Z,116nm,0.8s
CCM                                 PcP   PcP   01 02 04.1  0.0
O49A  Covington          50.74 347  IAmb  IAmb  01 00 58.1
      comp=Z,92nm,1.1s
Q44A  Meyer Farm, Va     50.77 342  IAmb  IAmb  01 00 58.1
      comp=Z,135nm,0.8s
FNO   Franklin           50.80 332        P     01 00 58.9 -0.2
KSPA  Keystone Colle     50.80 356  IAmb  IAmb  01 00 58.9
      comp=Z,24nm,0.4s
KSPA                                PcP   PcP   01 02 04.4 +0.1
UCCT  U. Connecticut     50.87 359  P     P     01 00 58.0 -1.4
UCCT                                PcP   PcP   01 02 04.1 -0.4
SLM   Saint Louis        50.91 341  IAmb  IAmb  01 01 00.2
      comp=Z,203nm,1.2s
P46A  Rosedale           50.91 344  IAmb  IAmb  01 00 58.5
      comp=Z,77nm,0.5s
OKCSW OKLAHOMA CITY      50.94 332  P     P     01 00 60.0 -0.1
BRYW  Bryant College     50.98 360  IAmb  IAmb  01 01 00.7
      comp=Z,99nm,0.7s
L64A  Middleborough      51.00   0  P     P     01 00 59.4 -1.0
M55A  Ridgway            51.02 353  IAmb  IAmb  01 01 01.2
      comp=Z,57nm,0.7s
M55A                                PcP   PcP   01 02 05.2 +0.1
WMOK  Wichita Mounta     51.03 331  P     P     01 01 00.3 -0.5
      baz=144,SNR=36
WMOK  Wichita Mounta     51.03 331  IAmb  IAmb  01 01 01.6
      comp=Z,42nm,0.5s
N51A  Ashland            51.04 349  IAmb  IAmb  01 01 00.6
      comp=Z,96nm,0.6s
N51A                                PcP   PcP   01 02 05.2 -0.1
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S39A	**Bolivar**	**51.16**	**337**	PcP	**PcP**	**01 02 05.8**	**+0.1**
M54A	**Oil Creek Stat**	**51.17**	**352**	P	**P**	**01 01 01.5**	**-0.2**
	baz=169,SNR=16						
M54A	**Oil Creek Stat**	**51.17**	**352**	IAmb	IAmb	01 01 02.0	
	comp=Z,65nm,0.6s						
BCOK	**Bluff Creek, N**	**51.22**	**332**		**P**	**01 01 01.9**	**-0.2**
QUOK	**Quay**	**51.24**	**333**		**P**	**01 01 01.9**	**-0.4**
M53A	**WI Miller and**	**51.26**	**351**	P	**P**	**01 01 02.1**	**-0.2**
	baz=168,SNR=50						
OK029	**Liberty Lake**	**51.27**	**333**		**P**	**01 01 02.5**	**+0.1**
QUA2	**Belchertown**	**51.35**	**359**	P	**P**	**01 01 02.1**	**-0.9**
BCX	**Boston College**	**51.40**	**360**	P	**P**	**01 01 02.9**	**-0.3**
WES	**Weston**	**51.45**	**360**	P	**P**	**01 01 02.1**	**-1.5**
BINY	**Binghamton**	**51.45**	**355**	P	**P**	**01 01 03.6**	**-0.1**
	baz=174,SNR=28						
M52A	**Chesterland**	**51.47**	**350**	IAmb	IAmb	01 01 04.1	
	comp=Z,85nm,0.6s						
L61B	**Northampton**	**51.53**	**359**	P	**P**	**01 01 03.5**	**-0.7**
	baz=178,SNR=7.3						
L56A	**Greenwood**	**51.54**	**354**	IAmb	IAmb	01 01 04.7	
	comp=Z,66nm,0.8s						
L56A				PcP	**PcP**	**01 02 07.2**	**+0.1**
HRV	**Adam Dziewonsk**	**51.57**	**360**	P	**P**	**01 01 04.1**	**-0.4**
	baz=180						
HRV	**Adam Dziewonsk**	**51.57**	**360**	P	**P**	**01 01 04.1**	**-0.4**
HRV				IAmb	IAmb	01 01 05.0	
	comp=Z,56nm,0.7s						
SFIN	**Lafayette**	**51.60**	**344**	P	**P**	**01 01 02.8**	**-1.9**
	baz=160,SNR=25						
M50A	**Fremont**	**51.64**	**349**	IAmb	IAmb	01 01 04.9	
	comp=Z,80nm,0.8s						
O44A	**Mansfield**	**51.76**	**343**	IAmb	IAmb	01 01 04.7	
	comp=Z,80nm,0.7s						
O44A				PcP	**PcP**	**01 02 08.1**	**+0.2**
T35A	**Sooner Cattle**	**51.78**	**334**	IAmb	IAmb	01 01 06.7	
	comp=Z,87nm,0.7s						
T35A				PcP	**PcP**	**01 02 08.6**	**+0.4**
ERPA	**Erie**	**51.82**	**352**	P	**P**	**01 01 06.0**	**-0.3**
	baz=169,SNR=21						
TRY	**Troy**	**51.85**	**358**	IAmb	IAmb	01 01 07.7	
	comp=Z,107nm,1.2s						
TRY				PcP	**PcP**	**01 02 09.2**	**+1.0**
WVNY	**West Valley, N**	**51.92**	**353**	IAmb	IAmb	01 01 07.3	
	comp=Z,77nm,0.5s						
K57A	**Scipio Center**	**52.03**	**355**	IAmb	IAmb	01 01 07.9	
	comp=Z,84nm,0.6s						
MMNY	**Mt. Morris Dam**	**52.16**	**354**	PcP	**PcP**	**01 02 09.7**	**+0.3**
KAN13	**South Haven SW**	**52.29**	**333**	P	**P**	**01 01 09.1**	**-0.7**
MNTX	**Cornudas Mount**	**52.30**	**323**	P	**P**	**01 01 09.3**	**-0.7**
	baz=136,SNR=41						
MNTX	**Cornudas Mount**	**52.30**	**323**	PcP	**PcP**	**01 02 09.8**	**-0.5**
HDIL	**Hopedale**	**52.38**	**343**	P	**P**	**01 01 08.4**	**-1.9**
	baz=157,SNR=15						
J61A	**Chester**	**52.42**	**359**	IAmb	IAmb	01 01 11.8	
	comp=Z,121nm,1.9s						
KAN17	**Caldwell West**	**52.44**	**333**	P	**P**	**01 01 10.3**	**-0.5**
KAN17				IAmb	IAmb	01 01 11.7	
	comp=Z,150nm,1.1s						
KAN09	**Caldwell North**	**52.45**	**333**	P	**P**	**01 01 10.9**	**0.0**
KAN09				PcP	**PcP**	**01 02 10.0**	**-0.7**
KAN14	**Manchester OK**	**52.46**	**333**	IAmb	IAmb	01 01 11.7	
	comp=Z,78nm,0.8s						
U32A	**Winter Ranch,**	**52.46**	**332**	IAmb	IAmb	01 01 12.0	
	comp=Z,124nm,0.9s						
MSTX	**Muleshoe**	**52.48**	**327**	P	**P**	**01 01 11.0**	**-0.3**
	baz=139,SNR=62						
MSTX	**Muleshoe**	**52.48**	**327**	IAmb	IAmb	01 01 11.8	
	comp=Z,75nm,0.7s						
ACCN	**Adirondack Com**	**52.50**	**358**	PcP	**PcP**	**01 02 10.5**	**-0.2**
KAN01	**Argonia South**	**52.53**	**333**		**P**	**01 01 11.5**	**0.0**
KAN01				IAmb	IAmb	01 01 12.4	
	comp=Z,122nm,0.8s						
FFD	**Franklin Falls**	**52.54**	**360**	IAmb	IAmb	01 01 12.0	
	comp=Z,50nm,0.7s						
J58A	**Remsen**	**52.56**	**356**	PcP	**PcP**	**01 02 10.9**	**-0.1**
AMTX	**Amarillo**	**52.60**	**328**	P	**P**	**01 01 11.8**	**-0.3**
	baz=141						
AMTX	**Amarillo**	**52.60**	**328**	IAmb	IAmb	01 01 12.2	
	comp=Z,89nm,0.5s						
J56A	**Wolcott**	**52.60**	**355**	PcP	**PcP**	**01 02 11.0**	**0.0**
J59A	**Piesco**	**52.62**	**357**	IAmb	IAmb	01 01 12.6	
	comp=Z,92nm,1.1s						
AAM	**Ann Arbor**	**52.63**	**348**	P	**P**	**01 01 10.9**	**-1.1**
	baz=164,SNR=8.6						
AAM	**Ann Arbor**	**52.63**	**348**	IAmb	IAmb	01 01 11.2	
	comp=Z,39nm,0.6s						
MEDO	**Medina**	**52.65**	**353**	IAmb	IAmb	01 01 11.5	
	comp=Z,120nm,1.5s						
MEDO				PcP	**PcP**	**01 02 10.2**	**-1.1**
J57A	**Williamstown**	**52.66**	**356**	IAmb	IAmb	01 01 12.4	
	comp=Z,56nm,0.8s						
J57A				PcP	**PcP**	**01 02 11.6**	**+0.3**
J55A	**Hilton**	**52.68**	**354**	IAmb	IAmb	01 01 12.1	
	comp=Z,43nm,0.6s						
HOPE	**Hope Point**	**52.68**	**155**	P	**P**	**01 01 12.9**	**+0.7**
HOPE				IAmb	IAmb	01 02 45.3	
	comp=Z,168nm,1.6s						
KAN12	**Harper NE Stat**	**52.75**	**333**	IAmb	IAmb	01 01 13.9	
	comp=Z,199nm,1.1s						
HNH	**Hanover**	**52.78**	**359**	P	**P**	**01 01 12.9**	**-0.2**
J54A	**Appleton**	**52.78**	**353**	P	**P**	**01 01 12.4**	**-0.6**
L46A	**Eue Claire**	**52.93**	**346**	IAmb	IAmb	01 01 13.2	
	comp=Z,121nm,1.2s						
I62A	**Tamworth**	**52.94**	**360**	P	**P**	**01 01 13.7**	**-0.5**
I62A				IAmb	IAmb	01 03 12.2	
	comp=Z,117nm,2.0s						
I63A	**Otisfield**	**53.12**	**1**	P	**P**	**01 01 15.5**	**+0.1**
I63A				PcP	**PcP**	**01 02 13.3**	**+0.3**
HQIL	**Hanson Quary C**	**53.13**	**344**	IAmb	IAmb	01 01 14.1	
	comp=Z,88nm,0.6s						
PECO	**Prince Edward**	**53.26**	**355**	IAmb	IAmb	01 01 16.7	
	comp=Z,56nm,0.6s						
LBNH	**Lisbon**	**53.31**	**359**	P	**P**	**01 01 16.8**	**0.0**
	baz=179,SNR=7.6						
LBNH	**Lisbon**	**53.31**	**359**	IAmb	IAmb	01 01 17.7	
	comp=Z,51nm,1.0s						
L44A	**Lake County Fo**	**53.49**	**345**	P	**P**	**01 01 15.6**	**-2.5**
	baz=159						
L44A	**Lake County Fo**	**53.49**	**345**	IAmb	IAmb	01 01 16.9	
	comp=Z,50nm,0.7s						
L44A				PcP	**PcP**	**01 02 14.6**	**+0.1**
H62A	**Milan**	**53.64**	**0**	P	**P**	**01 01 19.0**	**-0.1**
H62A				PcP	**PcP**	**01 02 15.8**	**+0.7**
WVL	**Waterville**	**53.65**	**1**	P	**P**	**01 01 19.2**	**+0.1**
KSU1	**Kansas State U**	**53.67**	**335**	P	**P**	**01 01 18.6**	**-0.8**
	baz=148,SNR=32						
KSU1	**Kansas State U**	**53.67**	**335**	IAmb	IAmb	01 01 19.5	
	comp=Z,179nm,1.1s						
LONY	**Lake Ozonia**	**53.77**	**357**	P	**P**	**01 01 19.6**	**-0.4**
	baz=176,SNR=9.6						
L42A	**Oliver, Polo**	**53.82**	**343**	IAmb	IAmb	01 01 19.5	
	comp=Z,89nm,0.8s						
N38A	**Joes South For**	**53.86**	**339**	IAmb	IAmb	01 01 20.2	
	comp=Z,120nm,0.7s						
EMMW	**East Machias**	**53.88**	**3**	P	**P**	**01 01 20.2**	**-0.5**
EMMW				IAmb	IAmb	01 01 21.2	
	comp=Z,49nm,0.5s						
DELO	**Deloro Mine**	**53.90**	**354**	IAmb	IAmb	01 01 20.6	
	comp=Z,37nm,0.5s						
DELO				PcP	**PcP**	**01 02 15.9**	**-0.2**
R32A	**Long Quarter,**	**54.00**	**333**	IAmb	IAmb	01 01 22.5	
	comp=Z,186nm,1.2s						
I49A	**Point Hope**	**54.05**	**350**	P	**P**	**01 01 20.8**	**-1.2**
I49A				IAmb	IAmb	01 01 21.6	
	comp=Z,116nm,0.8s						
K43A	**Burlington**	**54.10**	**344**	IAmb	IAmb	01 01 22.1	
	comp=Z,130nm,1.1s						
HAL	**Halifax**	**54.14**	**7**	P	**P**	**01 01 22.5**	**-0.1**
HAL	**Halifax**	**54.14**	**7**	P	**P**	**01 01 22.5**	**-0.1**
HAL				IAmb	IAmb	01 01 23.4	
	comp=Z,67nm,0.7s						
G62A	**West of Eustis**	**54.28**	**1**	IAmb	IAmb	01 01 25.0	
	comp=Z,108nm,0.8s						
GGN	**Saint George**	**54.32**	**4**	P	**P**	**01 01 24.2**	**+0.3**
GGN				IAmb	IAmb	01 01 25.7	
	comp=Z,172nm,1.5s						
121A	**Cookes Peak, D**	**54.34**	**322**	P	**P**	**01 01 25.2**	**+0.7**
	baz=134,SNR=24						
L40A	**Anamosa**	**54.34**	**342**	IAmb	IAmb	01 01 24.0	
	comp=Z,109nm,0.8s						
PKME	**Peaks-Kenny Pk**	**54.35**	**2**	P	**P**	**01 01 24.2**	**+0.1**
	baz=182,SNR=12						
PKME	**Peaks-Kenny Pk**	**54.35**	**2**	P	**P**	**01 01 24.2**	**+0.1**
PKME				IAmb	IAmb	01 01 24.9	
	comp=Z,78nm,0.8s						
G65A	**Princeton**	**54.36**	**3**	IAmb	IAmb	01 01 25.1	
	comp=Z,130nm,0.7s						
MOQ	**Mont Orford**	**54.38**	**359**	PcP	**PcP**	**01 02 18.1**	**0.0**
319A	**Douglas**	**54.49**	**320**	IAmb	IAmb	01 01 26.6	
	comp=Z,51nm,0.5s						
MNTQ	**Montreal, Queb**	**54.61**	**358**	IAmb	IAmb	01 01 26.4	
	comp=Z,138nm,0.7s						
BNM	**Barren Site**	**54.78**	**324**	PcP	**PcP**	**01 02 20.5**	**+0.5**
CBKS	**Cedar Bluff**	**54.78**	**333**	P	**P**	**01 01 27.4**	**+0.2**
	baz=145,SNR=17						
F63A	**Nahmakanta, Br**	**54.80**	**2**	P	**P**	**01 01 27.3**	**+0.1**
F63A				PcP	**PcP**	**01 02 19.9**	**+0.3**
N35A	**Tabor**	**54.80**	**337**	IAmb	IAmb	01 01 26.9	
	comp=Z,145nm,1.1s						
N35A				PcP	**PcP**	**01 02 19.9**	**+0.2**
JFWS	**Jewell Farm**	**54.82**	**343**	P	**P**	**01 01 26.2**	**-1.2**
	baz=157,SNR=64						
I45A	**Fountain**	**54.84**	**347**	P	**P**	**01 01 25.6**	**-1.9**
I45A				IAmb	IAmb	01 02 33.5	
	comp=Z,84nm,0.9s						
SCIA	**State Center**	**54.84**	**340**	P	**P**	**01 01 26.5**	**-1.1**
	baz=153,SNR=22						
Y22D	**IRIS PASSCAL I**	**54.89**	**324**	P	**P**	**01 01 28.7**	**+0.4**
F62A	**Pittston Farm,**	**54.97**	**1**	IAmb	IAmb	01 01 28.8	
	comp=Z,34nm,0.6s						
F64A	**Sherman**	**54.98**	**2**	IAmb	IAmb	01 01 29.4	
	comp=Z,66nm,0.6s						
LENM	**Lemitar**	**54.99**	**324**	P	**P**	**01 01 29.9**	**+0.9**
GBN	**Guysborough**	**55.16**	**8**	P	**P**	**01 01 29.4**	**-0.3**
GBN				IAmb	IAmb	01 01 30.1	
	comp=Z,96nm,1.3s						
GBN				PcP	**PcP**	**01 02 21.0**	**+0.1**
LMN	**Caledonia Moun**	**55.21**	**5**	IAmb	IAmb	01 01 30.2	
	comp=Z,51nm,0.6s						
LMN				PcP	**PcP**	**01 02 20.9**	**-0.3**
GLMI	**Grayling**	**55.24**	**348**	P	**P**	**01 01 28.9**	**-1.4**
	baz=164						
GLMI	**Grayling**	**55.24**	**348**	IAmb	IAmb	01 01 30.4	
	comp=Z,96nm,1.0s						
ANMO	**Albuquerque**	**55.25**	**325**	P	**P**	**01 01 30.9**	**+0.1**
	baz=136						
ANMO	**Albuquerque**	**55.25**	**325**	P	**P**	**01 01 30.9**	**+0.1**
I42A	**Draeger Farm,**	**55.36**	**344**	P	**P**	**01 01 30.3**	**-0.8**
I42A				IAmb	IAmb	01 01 30.8	
	comp=Z,107nm,0.7s						
K38A	**Parkersburg**	**55.36**	**341**	IAmb	IAmb	01 01 30.1	
	comp=Z,111nm,0.5s						
PMSA	**Palmer Station**	**55.60**	**176**	*e*P	**P**	**01 01 33.4**	**+1.0**
PMSA	**Palmer Station**	**55.60**	**176**	P	**P**	**01 01 33.4**	**+1.0**
PMSA				IAmb	IAmb	01 02 49.9	
	comp=Z,154nm,1.7s						
H43A	**Windswept, Lux**	**55.61**	**346**	P	**P**	**01 01 31.4**	**-1.4**
H43A				IAmb	IAmb	01 01 32.1	
	comp=Z,104nm,0.6s						
G45A	**Suttons Bay**	**55.66**	**348**	IAmb	IAmb	01 01 32.4	
	comp=Z,99nm,0.7s						
E62A	**Clayton Lake**	**55.70**	**1**	IAmb	IAmb	01 01 34.6	
	comp=Z,84nm,0.9s						
T25A	**Trinidad**	**55.74**	**328**	P	**P**	**01 01 34.8**	**+0.6**
	baz=139,SNR=30						
T25A	**Trinidad**	**55.74**	**328**	IAmb	IAmb	01 01 35.8	
	comp=Z,59nm,0.8s						
PQI	**Presque Isle**	**55.81**	**3**	P	**P**	**01 01 34.4**	**+0.3**
TUC	**Tucson**	**56.07**	**319**	P	**P**	**01 01 36.6**	**+0.3**
	baz=131						
TUC	**Tucson**	**56.07**	**319**	P	**P**	**01 01 36.7**	**+0.3**
ASCN	**Ascension**	**56.12**	**93**	P	**P**	**01 01 37.0**	**0.0**
ASCN				IAmb	IAmb	01 01 39.4	
	comp=Z,74nm,1.1s						
D62A	**Allapoint, All**	**56.18**	**2**	IAmb	IAmb	01 01 37.6	
	comp=Z,130nm,0.6s						
BGNE	**Belgrade**	**56.25**	**336**	P	**P**	**01 01 36.8**	**-0.5**
	baz=148,SNR=16						
KSCO	**Kaye Shedlock'**	**56.29**	**331**	P	**P**	**01 01 38.1**	**+0.3**
	baz=142,SNR=11						
KSCO	**Kaye Shedlock'**	**56.29**	**331**	IAmb	IAmb	01 01 39.1	
	comp=Z,50nm,0.8s						
BATG	**Bathurst New B**	**56.52**	**4**	IAmb	IAmb	01 01 39.8	
	comp=Z,57nm,0.6s						
LMQ	**La Malbaie**	**56.62**	**1**	P	**P**	**01 01 39.0**	**-0.7**
E46A	**Sault Ste Mari**	**56.67**	**349**	IAmb	IAmb	01 01 39.4	
	comp=Z,110nm,1.0s						
SDCO	**Great Sand Dun**	**56.77**	**328**	P	**P**	**01 01 41.9**	**+0.6**
	baz=138,SNR=49						
SDCO	**Great Sand Dun**	**56.77**	**328**	IAmb	IAmb	01 01 42.8	
	comp=Z,72nm,0.7s						
I37A	**Lemond, Waseca**	**56.79**	**341**	IAmb	IAmb	01 01 40.2	
	comp=Z,129nm,0.5s						
G40A	**Rib Lake**	**56.98**	**344**	PcP	**PcP**	**01 02 28.4**	**+0.3**
X18A	**Snowflake**	**57.02**	**322**	P	**P**	**01 01 43.3**	**+0.4**
214A	**Organ Pipe Nat**	**57.17**	**318**	P	**P**	**01 01 44.5**	**+0.7**
	baz=129,SNR=21						
214A	**Organ Pipe Nat**	**57.17**	**318**	P	**P**	**01 01 44.2**	**+0.4**
E43A	**Lone Tree Farm**	**57.23**	**347**	IAmb	IAmb	01 01 43.2	
	comp=Z,64nm,0.7s						
E43A				PcP	**PcP**	**01 02 29.3**	**+0.2**
W18A	**Petrified Fore**	**57.29**	**323**	P	**P**	**01 01 45.2**	**+0.5**
	baz=133,SNR=14						
W18A	**Petrified Fore**	**57.29**	**323**	P	**P**	**01 01 44.8**	**+0.1**
VLDQ	**Val d'Or**	**57.45**	**355**	PcP	**PcP**	**01 02 30.1**	**+0.2**
S22A	**4UR Ranch, Cre**	**57.48**	**327**	P	**P**	**01 01 46.7**	**+0.6**
	baz=137,SNR=46						
Q24A	**Divide**	**57.50**	**329**	P	**P**	**01 01 46.7**	**+0.4**
	baz=139,SNR=30						
K31A	**O'Neill**	**57.51**	**336**	IAmb	IAmb	01 01 46.5	
	comp=Z,114nm,0.5s						
ECSD	**EROS Data Cent**	**57.64**	**338**	P	**P**	**01 01 45.6**	**-1.1**
	baz=150,SNR=34						
SPMN	**Marine on St.**	**57.69**	**342**	P	**P**	**01 01 45.7**	**-1.2**
	baz=155,SNR=42						
SFX	**San Felipe**	**57.99**	**316**	P	**P**	**01 01 49.8**	**+0.5**
MVCO	**Mesa Verde**	**58.02**	**325**	P	**P**	**01 01 50.1**	**+0.4**
	baz=135,SNR=53						
MVCO	**Mesa Verde**	**58.02**	**325**	IAmb	IAmb	01 01 51.0	
	comp=Z,54nm,0.7s						
D41A	**Chassel**	**58.23**	**346**	IAmb	IAmb	01 01 50.5	
	comp=Z,101nm,0.7s						
113A	**Mohawk Valley,**	**58.30**	**318**	PcP	**PcP**	**01 02 34.4**	**+0.7**
ISCO	**Idaho Springs**	**58.37**	**329**	P	**P**	**01 01 52.5**	**+0.5**
	baz=139,SNR=38						
ISCO	**Idaho Springs**	**58.37**	**329**	P	**P**	**01 01 52.2**	**+0.1**
ISCO				PcP	**PcP**	**01 02 34.8**	**+0.5**
F36A	**Milaca**	**58.48**	**342**	IAmb	IAmb	01 01 52.0	
	comp=Z,83nm,0.9s						
WUAZ	**Wupatki**	**58.55**	**322**	P	**P**	**01 01 54.0**	**+0.8**
	baz=132,SNR=47						
E38A	**The Farm, Brul**	**58.58**	**344**	IAmb	IAmb	01 01 52.6	
	comp=Z,94nm,0.6s						
SUSD	**Miller**	**59.12**	**337**	P	**P**	**01 01 56.1**	**-0.6**
	baz=148,SNR=10						
SUSD	**Miller**	**59.12**	**337**	IAmb	IAmb	01 01 56.5	
	comp=Z,111nm,0.5s						
GLA	**Glamis**	**59.18**	**318**	P	**P**	**01 01 58.1**	**+0.8**
GLA	**Glamis**	**59.18**	**318**	P	**P**	**01 01 58.0**	**+0.8**
	baz=128						
GLA	**Glamis**	**59.18**	**318**	P	**P**	**01 01 58.1**	**+0.8**
F33A	**5 Mile Ranch,**	**59.36**	**340**	IAmb	IAmb	01 01 58.0	
	comp=Z,76nm,0.6s						
N23A	**Red Feather La**	**59.36**	**330**	P	**P**	**01 01 59.1**	**+0.5**
	baz=139,SNR=10						
PDMCI	**Parker Dam,Lak**	**59.50**	**319**	P	**P**	**01 02 00.0**	**+0.7**
	baz=129,SNR=6.6						
DRLN	**Deer Lake**	**59.54**	**10**	IAmb	IAmb	01 01 59.5	
	comp=Z,98nm,0.7s						
U15A	**North Rim**	**59.70**	**322**	P	**P**	**01 02 01.7**	**+0.7**
EYMN	**Ely**	**59.79**	**344**	P	**P**	**01 01 59.7**	**-1.2**
	baz=157,SNR=30						
EYMN	**Ely**	**59.79**	**344**	IAmb	IAmb	01 02 00.6	
	comp=Z,100nm,0.8s						
IKP	**In-Ko-Pah, Jac**	**59.81**	**316**	P	**P**	**01 02 02.6**	**+1.1**
	baz=126,SNR=5.1						
BC3	**Big Chuckawall**	**59.97**	**318**	P	**P**	**01 02 03.4**	**+0.8**
	baz=127,SNR=28						
O20A	**White River Ci**	**59.97**	**328**	P	**P**	**01 02 03.2**	**+0.6**
	baz=137,SNR=31						
CBX	**Cerro Bola**	**59.99**	**316**	P	**P**	**01 02 03.8**	**+1.1**
IRM	**Iron Mountain**	**60.07**	**318**	P	**P**	**01 02 04.0**	**+0.9**
	baz=128,SNR=41						
NEE2	**Needles Airpor**	**60.10**	**319**	P	**P**	**01 02 04.0**	**+0.7**
	baz=129,SNR=5.1						
MONP2	**Monument Peak**	**60.16**	**316**	P	**P**	**01 02 04.5**	**+0.5**
	baz=126,SNR=6.4						
BAR	**Barrett**	**60.21**	**316**	P	**P**	**01 02 04.9**	**+0.8**
PKCU	**Pink Cliffs**	**60.39**	**323**	P	**P**	**01 02 06.3**	**+0.8**
KNB	**Kanab**	**60.41**	**322**	IAmb	IAmb	01 02 07.8	
	comp=Z,140nm,1.0s						
SRU	**San Rafael Swe**	**60.49**	**325**	IAmb	IAmb	01 02 07.1	
	comp=Z,69nm,0.6s						
BELC	**Belle Mtn. Jos**	**60.53**	**318**	P	**P**	**01 02 07.2**	**+0.9**
	baz=127,SNR=18						
PFO	**Pinyon Flats O**	**60.61**	**317**	P	**P**	**01 02 07.6**	**+0.9**
	baz=126,SNR=6.7						
PFO	**Pinyon Flats O**	**60.61**	**317**	P	**P**	**01 02 07.7**	**+0.9**
109C	**Camp Elliot, M**	**60.63**	**316**	P	**P**	**01 02 07.3**	**+0.6**
	baz=126						
109C	**Camp Elliot, M**	**60.63**	**316**	P	**P**	**01 02 06.8**	**0.0**
LCMT	**Little Creek M**	**60.66**	**322**	P	**P**	**01 02 08.1**	**+1.0**
P18A	**Preston Nutter**	**60.69**	**326**	IAmb	IAmb	01 02 09.0	
	comp=Z,48nm,0.6s						
GMRC	**Granite Mounta**	**60.78**	**319**	P	**P**	**01 02 09.0**	**+1.1**
	baz=128,SNR=54						
P17A	**Butcher Ranch,**	**60.86**	**326**	IAmb	IAmb	01 02 09.4	
	comp=Z,65nm,0.5s						
RSSD	**Black Hills**	**60.96**	**333**	P	**P**	**01 02 09.5**	**+0.5**
	baz=142						
RSSD	**Black Hills**	**60.96**	**333**	P	**P**	**01 02 10.0**	**+1.0**
RSSD				IAmb	IAmb	01 02 10.4	
	comp=Z,83nm,0.5s						
K22A	**Casper**	**60.97**	**331**	P	**P**	**01 02 09.6**	**+0.5**
	baz=139,SNR=16						
K22A	**Casper**	**60.97**	**331**	IAmb	IAmb	01 02 10.3	
	comp=Z,39nm,0.7s						
RDMU	**Red Mountain**	**60.99**	**327**	IAmb	IAmb	01 02 10.4	
	comp=Z,78nm,0.7s						
TMUT	**Trail Mountain**	**61.00**	**325**	IAmb	IAmb	01 02 10.7	
	comp=Z,41nm,0.5s						
MSU	**Marysvale**	**61.02**	**324**	PcP	**PcP**	**01 02 46.1**	**+1.2**
MVU	**Marysvale**	**61.04**	**324**	PcP	**PcP**	**01 02 46.0**	**+0.9**
CCUT	**Cedar City**	**61.09**	**322**	PcP	**PcP**	**01 02 46.1**	**+0.9**
MURC	**Murrieta**	**61.10**	**317**	P	**P**	**01 02 10.9**	**+1.0**
	baz=126,SNR=12						
TCRU	**Three Creeks R**	**61.24**	**324**	P	**P**	**01 02 11.9**	**+0.9**
TCRU				IAmb	IAmb	01 02 12.8	
	comp=Z,51nm,0.8s						
HEC	**Hector,Ludlow**	**61.25**	**318**	P	**P**	**01 02 12.1**	**+1.2**
	baz=127,SNR=24						
BBRC	**Big Bear Solar**	**61.30**	**317**	P	**P**	**01 02 12.9**	**+1.4**
	baz=126						
TUQ	**Turquoise Moun**	**61.35**	**319**	P	**P**	**01 02 12.5**	**+0.9**
	baz=128,SNR=9.8						
AGMN	**Agassiz Nation**	**61.38**	**341**	P	**P**	**01 02 10.7**	**-0.6**
	baz=152,SNR=78						
SHPR	**Sheep Range**	**61.53**	**320**	P	**P**	**01 02 13.9**	**+1.2**
RRX	**Edison Barstow**	**61.72**	**318**	P	**P**	**01 02 15.1**	**+1.3**
	baz=127						
BFSC	**Mount Baldy Ra**	**61.78**	**317**	P	**P**	**01 02 15.1**	**+0.7**
	baz=126,SNR=11						
CIS	**Catalina Islan**	**61.82**	**316**	P	**P**	**01 02 15.6**	**+1.1**
	baz=125,SNR=5.7						
GSC	**Goldstone, Bar**	**61.85**	**318**	P	**P**	**01 02 15.9**	**+1.1**
	baz=127,SNR=30						
SHOC	**Shoshone, Teco**	**61.86**	**319**	P	**P**	**01 02 15.9**	**+1.1**
	baz=128,SNR=12						
JLU	**Jordanelle**	**62.03**	**326**	P	**P**	**01 02 16.7**	**+0.6**
JLU				IAmb	IAmb	01 02 17.6	
	comp=Z,42nm,0.6s						
MDND	**Maddock**	**62.25**	**339**	P	**P**	**01 02 17.4**	**+0.4**
	baz=148,SNR=108						
DECC	**Green Verdugo**	**62.25**	**317**	P	**P**	**01 02 18.4**	**+1.1**
	baz=125,SNR=8.2						
TCUT	**Toone Canyon**	**62.37**	**327**	IAmb	IAmb	01 02 19.7	
	comp=Z,64nm,0.7s						
EDW2	**Edwards Air Fo**	**62.38**	**317**	P	**P**	**01 02 18.9**	**+0.7**
	baz=126,SNR=34						
SNCC	**San Nicolas Is**	**62.50**	**315**	P	**P**	**01 02 19.8**	**+0.9**
SNCC				IAmb	IAmb	01 03 41.8	
	comp=Z,81nm,1.1s						
DUG	**Dugway, Tooele**	**62.52**	**325**	P	**P**	**01 02 19.9**	**+0.9**
	baz=132,SNR=51						
DUG	**Dugway, Tooele**	**62.52**	**325**	IAmb	IAmb	01 02 20.9	
	comp=Z,47nm,0.8s						
LRMC	**Laurel Mtn Rad**	**62.53**	**318**	P	**P**	**01 02 20.2**	**+1.0**
	baz=126,SNR=40						
BW06	**Boulder Array**	**62.56**	**329**	P	**P**	**01 02 19.2**	**-0.2**
	baz=136,SNR=46						
PD31	**Pinedale Array**	**62.56**	**329**	PcP	**PcP**	**01 02 50.7**	**-0.5**
PDAR	**Pinedale Array**	**62.56**	**329**	P	**P**	**01 02 19.1**	**-0.3**
	comp=Z,17nm,0.4s,baz=122,slow=9.4,SNR=325						
PDAR				PcP	**PcP**	**01 02 50.2**	**-1.0**
	comp=Z,8.2nm,0.5s,baz=122,slow=7.4,SNR=10						
FURC	**Furnace Creek,**	**62.58**	**319**	P	**P**	**01 02 20.7**	**+1.3**
	baz=127,SNR=32						
OSI	**Osito Audit: C**	**62.72**	**317**	P	**P**	**01 02 21.2**	**+0.9**
	baz=125						
MPMC	**Manual Prospec**	**62.74**	**319**	P	**P**	**01 02 21.3**	**+0.6**
	baz=127,SNR=33						
HWUT	**Hardware Ranch**	**62.79**	**327**	P	**P**	**01 02 20.7**	**-0.1**
HWUT				IAmb	IAmb	01 02 21.8	
	comp=Z,38nm,0.7s						
R11A	**Troy Canyon, C**	**62.95**	**322**	P	**P**	**01 02 23.1**	**+1.2**
	baz=129,SNR=48						
SCZ2	**Santa Cruz Isl**	**62.99**	**316**	P	**P**	**01 02 23.3**	**+1.2**
	baz=124						
ARVC	**Arvin**	**63.09**	**317**	P	**P**	**01 02 23.7**	**+1.1**
	baz=125,SNR=16						
ULM	**Lac du Bonnet**	**63.11**	**342**	P	**P**	**01 02 21.4**	**-1.1**
	comp=Z,177nm,0.5s,baz=154,slow=5.4,SNR=235						
ISA	**Isabella, Lake**	**63.16**	**318**	P	**P**	**01 02 24.4**	**+1.2**
	baz=126,SNR=28						
ISA	**Isabella, Lake**	**63.16**	**318**	IAmb	IAmb	01 02 25.2	
	comp=Z,44nm,0.8s						
CWC	**Cottonwood Cre**	**63.35**	**319**	P	**P**	**01 02 25.7**	**+1.1**
	baz=126						
PKM	**Mcpherson Peak**	**63.61**	**316**	P	**P**	**01 02 27.2**	**+1.0**
	baz=124,SNR=27						
VES	**Vestal, Richgr**	**63.66**	**318**	P	**P**	**01 02 27.4**	**+1.2**
	baz=125,SNR=32						
TPH	**Tonopah**	**63.79**	**321**	IAmb	IAmb	01 02 29.2	
	comp=Z,105nm,0.8s						
TIN	**Tinemaha, Big**	**63.81**	**319**	P	**P**	**01 02 28.5**	**+1.1**
	baz=126						
LAO	**LASA Array**	**63.93**	**334**	P	**P**	**01 02 28.2**	**+0.4**
	baz=141,SNR=29						
LAO	**LASA Array**	**63.93**	**334**	IAmb	IAmb	01 02 29.0	
	comp=Z,46nm,0.7s						
SMMC	**Simmler**	**63.98**	**317**	P	**P**	**01 02 29.8**	**+1.5**
	baz=124,SNR=23						
SCHQ	**Schefferville**	**64.01**	**3**	P	**P**	**01 02 27.4**	**-0.6**
	comp=Z,22nm,0.5s,baz=198,slow=5.4,SNR=26						
SCHQ	**Schefferville**	**64.01**	**3**	P	**P**	**01 02 27.5**	**-0.6**
SCHQ				IAmb	IAmb	01 02 28.2	
	comp=Z,54nm,1.1s						
FLWY	**Flagg Ranch**	**64.09**	**329**	IAmb	IAmb	01 02 30.9	
	comp=Z,76nm,1.1s						
RLMT	**Red Lodge**	**64.14**	**331**	P	**P**	**01 02 29.8**	**+0.5**
	baz=138,SNR=40						
H17A	**Grant Village**	**64.25**	**330**	P	**P**	**01 02 31.4**	**+1.3**
	baz=136,SNR=5.9						
PAGB	**Antelope Grade**	**64.38**	**317**	IAmb	IAmb	01 02 32.8	
	comp=Z,62nm,0.7s						
YUF	**Upper Falls**	**64.44**	**330**	P	**P**	**01 02 31.9**	**+0.6**
DGMT	**Dagmar**	**64.50**	**336**	P	**P**	**01 02 32.0**	**+0.8**
	baz=144,SNR=34						
YNR	**Norris Junctio**	**64.53**	**330**	IAmb	IAmb	01 02 33.9	
	comp=Z,34nm,0.6s						
MLAC	**Mammoth, Mammo**	**64.54**	**319**	P	**P**	**01 02 33.2**	**+1.1**
	baz=126,SNR=6.3						
YMR	**Madison River**	**64.64**	**330**	IAmb	IAmb	01 02 34.8	
	comp=Z,83nm,0.8s						
YHH	**Holmes Hill**	**64.67**	**330**	IAmb	IAmb	01 02 35.0	
	comp=Z,35nm,0.7s						
MDPB	**Devils Postpil**	**64.70**	**319**	P	**P**	**01 02 34.1**	**+1.0**
MDPB				IAmb	IAmb	01 02 34.9	
	comp=Z,51nm,0.7s						
YHL	**Hebgen Lake**	**64.88**	**330**	P	**P**	**01 02 33.1**	**-1.0**
RYN	**Ryan**	**64.94**	**320**	P	**P**	**01 02 34.8**	**+0.3**
PMPB	**Monarch Peak**	**65.02**	**317**	P	**P**	**01 02 35.6**	**+0.7**
PMPB				IAmb	IAmb	01 02 37.0	
	comp=Z,61nm,0.7s						
BMN	**Battle Mountai**	**65.24**	**323**	IAmb	IAmb	01 02 37.5	
	comp=Z,29nm,0.5s						
YERR	**Yerington**	**65.60**	**320**	IAmb	IAmb	01 02 40.6	
	comp=Z,67nm,0.6s						
BOZ	**Bozeman (W)**	**65.63**	**330**	P	**P**	**01 02 39.2**	**+0.6**
	baz=135,SNR=49						
BCYI	**Bear Canyon**	**65.63**	**328**	P	**P**	**01 02 39.5**	**+0.7**
HLID	**Hailey**	**65.66**	**327**	P	**P**	**01 02 39.8**	**+0.9**
	baz=132,SNR=46						
HLID	**Hailey**	**65.66**	**327**	P	**P**	**01 02 39.7**	**+0.9**
SAO	**San Andreas Ge**	**65.76**	**317**	P	**P**	**01 02 40.1**	**+0.7**
CMB	**Columbia Colle**	**65.78**	**319**	P	**P**	**01 02 40.1**	**+0.6**
PNTR	**Pine Nut**	**65.89**	**320**	P	**P**	**01 02 41.8**	**+1.4**
PNTR				IAmb	IAmb	01 02 42.7	
	comp=Z,66nm,0.8s						

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VCNR  Virginia City     66.04 321  P      P       01 02 42.4 +1.0
VCNR                               IAmb   IAmb    01 02 43.6
      comp=Z,49nm,0.8s
PAHR  Pah Rah Range     66.11 321  IAmb   IAmb    01 02 43.9
      comp=Z,54nm,0.9s
MPK   Martis Peak       66.28 320  P      P       01 02 43.8 +0.9
MPK                                IAmb   IAmb    01 02 45.3
      comp=Z,34nm,0.7s
PMOZ  Porto Moniz, M    66.29  48 eP      P       01 02 43.6 +0.7
PMOZ  Porto Moniz, M    66.29  48  P      P       01 02 43.9 +1.1
MFID  Camas Ranch       66.34 326  IAmb   IAmb    01 02 45.1
      comp=Z,101nm,0.9s
EGMT  Eagleton          66.51 333  P      P       01 02 44.2 +0.3
      baz=138,SNR=53
EGMT  Eagleton          66.51 333  IAmb   IAmb    01 02 45.0
      comp=Z,109nm,0.8s
ORV   Oroville          67.36 320  IAmb   IAmb    01 02 51.4
      comp=Z,50nm,0.9s
MCCM  Marconi Confer    67.47 318  P      P       01 02 50.8 +1.0
MCCM                               IAmb   IAmb    01 02 51.7
      comp=Z,59nm,0.8s
PLID  Pearl Lake        67.53 327  IAmb   IAmb    01 02 51.5
      comp=Z,34nm,0.7s
MSO   Missoula          67.64 330  P      P       01 02 51.8 +0.9
      baz=134,SNR=38
MSO   Missoula          67.64 330  IAmb   IAmb    01 02 52.9
      comp=Z,56nm,1.1s
LIC   Lamto             67.68  79 eP      P       01 02 51.4 -0.2
      comp=Z,29nm,0.7s
GDXM  Geysers           67.78 319  P      P       01 02 53.2 +1.4
TIC   Toumodi           67.78  79 eP      P       01 02 52.2 -0.1
DBIC  Dimbokro          67.95  79  P      P       01 02 53.5 +0.2
      comp=Z,13nm,0.5s,baz=264,slow=4.8,SNR=42
DBIC                               pP     pP      01 04 59.4 +1.4
      comp=Z,12nm,0.7s,baz=250,slow=4.8,SNR=5.8
O03E  Paynes Creek      67.97 320  P      P       01 02 53.0 +0.1
      baz=125,SNR=12
KIC   Kosan Boka        67.99  79 eP      P       01 02 53.6 +0.1
      comp=Z,42nm,0.6s
O02D  Mt. Diablo Mer    68.53 320  P      P       01 02 56.2 -0.1
      baz=124,SNR=11
WDC   Whiskeytown Da    68.59 320  IAmb   IAmb    01 02 56.4
      comp=Z,28nm,0.7s
F10A  Beach Ranch, E    68.76 327  IAmb   IAmb    01 02 59.7
      comp=Z,43nm,0.8s
KCPM  Cahto Peak        68.77 319  P      P       01 02 59.2 +1.4
KCPM                               IAmb   IAmb    01 03 00.3
      comp=Z,43nm,0.8s
K05A  Summer Lake       68.82 323  IAmb   IAmb    01 03 01.4
      comp=Z,48nm,1.1s
I07A  Izee              68.82 325  P      P       01 02 58.8 +0.7
I07A                               IAmb   IAmb    01 02 59.8
      comp=Z,36nm,0.6s
M04C  Macdoel           68.84 322  P      P       01 02 59.0 +0.8
      baz=125,SNR=45
FFC   Flin Flon         68.86 341  P      P       01 02 57.4 -0.5
FFC                                IAmb   IAmb    01 02 58.3
      comp=Z,31nm,0.8s
N02D  Trinity Center    68.92 321  P      P       01 02 58.2 -0.5
      baz=124,SNR=17
KMRM  Mail Ridge        69.14 319  P      P       01 03 00.8 +0.9
KMRM                               IAmb   IAmb    01 03 02.3
      comp=Z,68nm,0.7s
WALA  Waterton Lakes    69.17 331  IAmb   IAmb    01 03 01.2
      comp=Z,55nm,0.8s
M02C  Callahan          69.25 321  P      P       01 03 00.6  0.0
      baz=124,SNR=21
K04D  Chiloquin, OR     69.27 322  P      P       01 03 01.7 +0.9
      baz=126,SNR=7.5
J05D  Fort Rock, OR     69.35 323  P      P       01 03 02.3 +1.0
      baz=126,SNR=33
L04D  Klamath Falls     69.37 322  P      P       01 03 01.7 +0.4
      baz=125,SNR=14
PINE  Pine Mountain     69.48 324  IAmb   IAmb    01 03 04.5
      comp=Z,73nm,0.8s
KHMM  Horse Mountain    69.51 320  P      P       01 03 03.1 +0.8
KHMM                               IAmb   IAmb    01 03 04.9
      comp=Z,63nm,0.9s
J04D  Umpqua Nationa    69.84 323  P      P       01 03 05.2 +1.0
      baz=125
KRMB  Red Mountain      69.98 320  IAmb   IAmb    01 03 07.1
      comp=Z,45nm,0.9s
I05D  Terrebonne, OR    70.03 324  P      P       01 03 06.7 +1.5
      baz=126,SNR=36
E08A  Dider Farm, El    70.07 327  P      P       01 03 05.5 +0.3
L02E  Cave Junction     70.14 321  P      P       01 03 06.6 +0.9
      baz=124,SNR=12
F07A  Phinny Hill Vi    70.17 326  P      P       01 03 07.0 +1.2
F07A                               IAmb   IAmb    01 03 08.4
      comp=Z,45nm,0.9s
NEW   Newport           70.20 329  P      P       01 03 06.0  0.0
      comp=Z,7.6nm,0.5s,baz=141,slow=6.2,SNR=17
NEW                                pP     pP      01 05 12.1  0.0
      comp=Z,5.7nm,0.8s,baz=155,slow=7.1,SNR=3.9
NEW   Newport           70.20 329  P      P       01 03 06.1  0.0
      baz=131,SNR=14
HAWA  Hanford           70.26 327  IAmb   IAmb    01 03 07.8
      comp=Z,24nm,0.5s
I04A  Tendick Farm,     70.34 323  P      P       01 03 07.2 +0.3
      baz=125,SNR=25
D08A  Wollman Farm,     70.35 327  IAmb   IAmb    01 03 09.0
      comp=Z,57nm,0.8s
DBO   Dodson Butte      70.45 322  IAmb   IAmb    01 03 09.5
      comp=Z,36nm,0.8s
K02D  Willamette Mer    70.47 322  P      P       01 03 08.9 +1.1
      baz=124,SNR=17
C09A  Chrisman Ranch    70.48 328  IAmb   IAmb    01 03 09.6
      comp=Z,40nm,0.7s
E07A  Sunnyside         70.54 327  IAmb   IAmb    01 03 10.3
      comp=Z,55nm,1.2s
G05D  Wamic, OR         70.55 325  P      P       01 03 09.9 +1.8
      baz=127,SNR=24
KOWA  Kowa              70.65  71  P      P       01 03 09.7 +0.4
KOWA                               IAmb   IAmb    01 03 10.5
      comp=Z,30nm,0.6s
KOWA  Kowa              70.65  71  P      P       01 03 09.7 +0.4
HOOD  Mount Hood Mea    70.79 325  P      P       01 03 10.7 +1.0
HOOD                               IAmb   IAmb    01 03 14.5
      comp=Z,62nm,0.8s
I03D  Drain, OR         70.84 323  P      P       01 03 10.8 +0.9
      baz=124,SNR=20
J01E  Myrtle Point      70.89 322  P      P       01 03 11.5 +1.4
      baz=124,SNR=12
BUCK  Buck Mountain     70.91 323  IAmb   IAmb    01 03 11.9
      comp=Z,78nm,0.9s
H04D  Lebanon           70.95 324  P      P       01 03 10.7 +0.3
      baz=125,SNR=7.0
KEBM  Edson Butte       70.98 322  IAmb   IAmb    01 03 13.2
      comp=Z,84nm,1.1s
F05D  White Salmon      71.02 325  P      P       01 03 12.2 +1.3
      baz=127,SNR=5.7
COR   Corvallis         71.32 323  P      P       01 03 13.8 +1.2
COR                                IAmb   IAmb    01 03 15.0
      comp=Z,73nm,0.8s
I02E  Swisshome, OR     71.37 323  P      P       01 03 14.4 +1.5
      baz=124
F04A  Amboy             71.59 325  IAmb   IAmb    01 03 15.8
      comp=Z,64nm,0.9s
G03D  McMinnville, O    71.65 324  P      P       01 03 16.0 +1.5
      baz=125
C06D  Leavenworth       71.94 327  P      P       01 03 16.8 +0.7
      baz=128
HEBO  Mount Hebo        71.94 324  P      P       01 03 16.5 +0.3
HEBO                               IAmb   IAmb    01 03 18.9
      comp=Z,141nm,1.1s
TTIG  Tnine Tigouga,    72.00  54  P      P       01 03 19.0 +1.9
F04D  Rainier, OR       72.01 325  P      P       01 03 18.1 +1.6
      baz=125,SNR=7.6
E04D  Cinebar           72.03 325  P      P       01 03 17.5 +0.8
      baz=126,SNR=7.7
D05A  Enumclaw          72.09 326  P      P       01 03 17.5 +0.6
D05A                               IAmb   IAmb    01 03 18.7
      comp=Z,93nm,0.9s
VNA3  Neumayer Olymp    72.27 163  P      P       01 03 18.0 +0.4
VNA3  Neumayer Olymp    72.27 163  PKiKP  PKiKP   01 09 14.6 +2.9
VNA3  Neumayer Olymp    72.27 163  pP     pP      01 05 21.0 -3.7
VNA1  Neumayer--Stat    72.45 162  P      P       01 03 19.2 +0.6
VNA1  Neumayer--Stat    72.45 162  PKiKP  PKiKP   01 09 14.0 +2.1
VNA1  Neumayer--Stat    72.45 162  pP     pP      01 05 23.0 -2.7
D04E  Lakebay           72.51 326  P      P       01 03 20.9 +1.5
      baz=126,SNR=5.9
E03A  Lebam             72.59 325  P      P       01 03 20.6 +0.8
E03A                               IAmb   IAmb    01 03 22.2
      comp=Z,102nm,1.3s
IVI   Ivigtut           72.59  11 iP      P       01 03 17.9 -1.5
IVI                                IAmb   IAmb    01 03 19.5
      comp=Z,42nm,0.7s
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IVI   Ivigtut           72.59  11  P      P       01 03 19.1 -0.3
IVI                                IAmb   IAmb    01 03 20.0
      comp=Z,72nm,0.8s
B06A  Marblemount       72.61 328  IAmb   IAmb    01 03 21.0
      comp=Z,98nm,0.8s
RADR  Rader Ridge       72.65 325  P      P       01 03 21.1 +0.9
RADR                               IAmb   IAmb    01 03 22.8
      comp=Z,91nm,0.8s
B05A  Bryant            72.79 327  P      P       01 03 21.0 +0.1
      baz=127,SNR=24
VNA2  Neumayer--Watz    72.82 162  P      P       01 03 21.1 +0.3
      baz=305,slow=3.2
VNA2  Neumayer--Watz    72.82 162  PKiKP  PKiKP   01 09 13.0 +0.5
      baz=60,slow=2.7
VNA2  Neumayer--Watz    72.82 162  pP     pP      01 05 27.6 -0.5
D03D  Eldon             72.90 326  P      P       01 03 22.6 +1.1
      baz=126,SNR=24
WISH  Wishkah           73.03 325  P      P       01 03 23.3 +1.0
WISH                               IAmb   IAmb    01 03 25.1
      comp=Z,42nm,0.8s
NRS   Narsarsuaq        73.12  13 iP      P       01 03 20.7 -1.8
NRS   Narsarsuaq        73.12  13  IAmb   IAmb    01 03 22.6
      comp=Z,66nm,0.9s
SRHM  Skhour des Reh    73.18  52  P      P       01 03 25.4 +1.8
NLWA  Neilton Lookou    73.25 326  P      P       01 03 24.8 +1.2
NLWA                               IAmb   IAmb    01 03 26.1
      comp=Z,52nm,0.8s
A04D  Lummi Island      73.38 327  P      P       01 03 25.3 +1.0
      baz=126,SNR=6.8
B04A  Port Angeles      73.43 326  P      P       01 03 25.4 +0.8
B04A                               IAmb   IAmb    01 03 27.1
      comp=Z,55nm,1.1s
PGC   Sidney            73.74 327  IAmb   IAmb    01 03 28.4
      comp=Z,71nm,0.9s
LLLB  Lillooet          74.09 329  IAmb   IAmb    01 03 29.7
      comp=Z,121nm,1.6s
ZGR   Zagora            74.11  55  P      P       01 03 30.5 +1.5
CLRS  Cowichan Lake     74.21 327  IAmb   IAmb    01 03 30.9
      comp=Z,33nm,0.8s
PFVI  Vila Bisbo        74.36  47 eP      P       01 03 31.6 +1.5
TZRR  Tazzarine         74.39  54  P      P       01 03 32.1 +1.6
SNAA  Sanae             74.46 162  P      P       01 03 30.4 +0.3
SNAA  Sanae             74.46 162  pP     pP      01 05 37.7 -0.6
SNAA  Sanae             74.46 162  IAmb   IAmb    01 03 31.4
      comp=Z,42nm,1.2s
ZHG   ZHG               74.53  52  P      P       01 03 32.3 +1.1
MORF  Marmelete         74.56  47 eP      P       01 03 33.0 +1.7
MORF                               IAmb   IAmb    01 03 33.3
      comp=Z,58nm,0.9s
MORF  Marmelete         74.56  47 eP      P       01 03 33.0 +1.7
      comp=Z,86nm,1.7s
PTEO  Sao Teotonio      74.61  47 eP      P       01 03 33.4 +1.9
      comp=Z,115nm,1.6s
NUUK  Nuuk              74.75   9 eP      P       01 03 31.2 -0.4
PMAFR Mafra             74.81  45 eP      P       01 03 33.4 +0.8
      comp=Z,250nm,1.6s
PNCL  Nicolau / Gran    74.99  46 eP      P       01 03 34.9 +1.4
      comp=Z,59nm,1.9s
OZB   Mount Ozzard      75.03 326  P      P       01 03 34.8 +1.1
OZB                                IAmb   IAmb    01 03 35.9
      comp=Z,73nm,0.8s
PBDV  Barranco-do-Ve    75.06  48 eP      P       01 03 35.8 +1.8
      comp=Z,55nm,1.8s
MESJ  Messejana         75.09  47 eP      P       01 03 36.0 +1.8
MESJ                               IAmb   IAmb    01 03 36.5
      comp=Z,16nm,0.6s
MESJ  Messejana         75.09  47 eP      P       01 03 35.9 +1.8
      comp=Z,42nm,1.2s
PCVE  Castro Verde      75.14  47 eP      P       01 03 36.2 +1.8
      comp=Z,58nm,0.9s
PVAQ  Vaqueiros         75.28  47 eP      P       01 03 36.8 +1.6
      comp=Z,38nm,1.6s
PVAQ  Vaqueiros         75.28  47  P      P       01 03 36.3 +1.1
PSBE  So Bento          75.39  45 eP      P       01 03 37.0 +1.2
      comp=Z,141nm,1.7s
PBEJ  Beja              75.43  47 eP      P       01 03 37.3 +1.3
CBB   Campbell River    75.56 327  IAmb   IAmb    01 03 38.6
      comp=Z,69nm,0.8s
PMTG  Montargil         75.60  46 eP      P       01 03 38.0 +1.1
TORD  Torodi Ar. Bea    75.70  74  P      P       01 03 37.9 -0.1
      comp=Z,18nm,0.6s,baz=277,slow=6.1,SNR=98
TORD                               pP     pP      01 05 47.0 +0.3
      comp=Z,16nm,0.9s,baz=269,slow=6.3,SNR=11
TORD                               S      S       01 12 28.0 -2.5
      comp=Z,3.5nm,1.0s,baz=268,slow=13,SNR=11
PCAS  Casmilo, Conde    75.83  45 eP      P       01 03 39.1 +0.9
MDT   Midelt            75.88  53  P      P       01 03 40.5 +1.8
COI   Coimbra           75.95  45 eP      P       01 03 40.5 +1.7
      comp=Z,60nm,1.2s
COI   Coimbra           75.95  45  P      P       01 03 40.2 +1.4
COI                                IAmb   IAmb    01 03 41.2
      comp=Z,40nm,0.8s
PESTR Estremoz          75.97  46 eP      P       01 03 40.1 +1.1
      comp=Z,30nm,1.5s
PBAR  Barrancos         76.08  47 eP      P       01 03 41.0 +1.4
PMRV  Marv??o           76.34  46 eP      P       01 03 42.6 +1.6
PCBR  Castelo Branco    76.45  45 eP      P       01 03 42.3 +0.7
      comp=Z,33nm,1.3s
PVIS  Viseu             76.53  44 eP      P       01 03 42.8 +0.7
      comp=Z,49nm,0.7s
TLCB  Telegraph Cove    76.63 327  P      P       01 03 42.9 +0.7
TLCB                               IAmb   IAmb    01 03 44.2
      comp=Z,52nm,1.2s
MTE   Manteigas         76.64  45 eP      P       01 03 43.4 +0.8
      comp=Z,38nm,1.9s
MTE   Manteigas         76.64  45  P      P       01 03 43.5 +0.8
PCAB  Cabril            76.86  43 eP      P       01 03 44.4 +0.6
      comp=Z,82nm,1.5s
POLO  Lamas de Olo      76.88  44 eP      P       01 03 44.5 +0.5
      comp=Z,26nm,1.6s
PVRL  Vila Real         76.89  44 eP      P       01 03 44.8 +0.8
MVO   Moncorvo          77.31  44 eP      P       01 03 47.2 +0.9
      comp=Z,39nm,0.7s
SFJD  Kangerlussuaq     77.56   8⇓iP      P       01 03 45.9 -1.0
SFJD                               IAmb   IAmb    01 03 46.5
      comp=Z,27nm,0.6s
SFJD  Kangerlussuaq     77.56   8  P      P       01 03 45.9 -1.0
SFJD                               IAmb   IAmb    01 03 46.4
      comp=Z,24nm,0.6s
DY2G  Dye2              77.76  10 iP      P       01 03 46.6 -1.7
PBRG  Braganca          77.77  44 eP      P       01 03 49.6 +0.9
BBB   Bella Bella       78.19 328  P      P       01 03 51.2 +0.6
FIGM  Figuig            78.31  54  P      P       01 03 53.2 +1.3
ISOG  Isortoq, Green    78.38  13 iP      P       01 03 49.9 -1.4
PAB   San Pablo         78.55  46  P      P       01 03 54.0 +1.0
PAB   San Pablo         78.55  46  P      P       01 03 54.3 +1.3
ANGG  Ammassalik, Gr    78.74  14 iP      P       01 03 51.5 -1.8
ANGG                               IAmb   IAmb    01 03 52.7
      comp=Z,40nm,0.5s
ESDC  Sonseca Array     78.88  46  P      P       01 03 55.9 +1.1
      comp=Z,5.6nm,0.6s,baz=257,slow=5.5,SNR=95
ESDC                               pP     pP      01 06 05.4 +0.5
      comp=Z,2.1nm,0.8s,baz=262,slow=5.9,SNR=6.2
ESDC  Sonseca Array     78.88  46  P      P       01 03 55.8 +1.1
ESBB  Sonseca Array     78.88  46  P      P       01 03 55.1 +0.4
YKA   Yellowknife Ar    79.03 341  P      P       01 03 54.6 -0.3
      comp=Z,41nm,0.7s,baz=128,slow=6.5,SNR=253
YKA                                pP     pP      01 06 04.8 -0.4
      comp=Z,2.3nm,0.6s,baz=128,slow=7.1,SNR=5.0
ILULI Ilulissat         79.59   7 iP      P       01 03 56.5 -1.1
QSPA  South Pole Qui    80.80 180  P      P       01 04 05.0 +0.7
QSPA                               IAmb   IAmb    01 04 05.9
      comp=Z,62nm,0.8s
ICESG Greenland Ices    81.26  11 iP      P       01 04 05.3 -1.4
DLBC  Dease Lake        82.44 333  IAmb   IAmb    01 04 14.3
      comp=Z,49nm,0.9s
WRAK  Wrangell Islan    82.50 331  P      P       01 04 13.3 +0.5
      baz=119
WRGLY Wrigley           82.53 339  P      P       01 04 13.0 +0.2
      baz=128,SNR=14
WTLY  Watson Lake, Y    82.80 335  P      P       01 04 15.1 +0.8
      baz=123
TGTN  Hyland Airport    83.36 336  P      P       01 04 18.4 +1.3
      baz=124,SNR=32
SUMG  Summit            84.44   9 iP      P       01 04 22.0 -0.6
SUMG                              iP      P       01 04 22.0 -0.6
SUMG                               IAmb   IAmb    01 04 23.0
      comp=Z,55nm,0.5s
SUMG  Summit            84.44   9  IAmb   IAmb    01 04 23.7
      comp=Z,61nm,0.7s
P33M  Teslin, Yukon     84.57 334  P      P       01 04 23.8 +0.7
      baz=119,SNR=11
BESE  Bessie Mountai    84.71 332  P      P       01 04 24.5 +0.8
BESE                               IAmb   IAmb    01 04 26.2
      comp=Z,41nm,0.9s
WIN   Windhoek          84.89 112  P      P       01 04 24.9 -0.7
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RES   Resolute Bay      85.12 354  P      P       01 04 25.4 +0.1
      comp=Z,13nm,0.7s,baz=192,slow=9.0,SNR=58
MMPY  Sheldon Lake,     85.13 336  P      P       01 04 26.4 +0.7
      baz=121,SNR=10
SKAG  Skagway           85.33 333  P      P       01 04 27.7 +1.1
      baz=117
WHY   Whitehorse        85.69 334  P      P       01 04 28.8 +0.3
      baz=118
TULEG Thule             85.72   1 iP      P       01 04 27.4 -0.7
TULEG                             iP      PcP     01 04 28.0 -1.9
TULEG Thule             85.72   1  P      P       01 04 28.1  0.0
FARO  Faro, Yukon       85.78 335  P      P       01 04 29.7 +0.9
      baz=119,SNR=21
TSUM  Tsumeb            85.81 109  P      P       01 04 29.6 -0.4
CLF   Chambon-Foret     86.00  40  IAmb   IAmb    01 04 32.1
      comp=Z,146nm,1.9s
M31M  Drury Creek, Y    86.20 335  P      P       01 04 31.6 +0.8
      baz=118,SNR=12
SCO   Scoresbysund      86.26  15 iP      P       01 04 30.0 -0.8
SCO                               iP      PcP     01 04 31.0 -1.4
N31M  Braeburn, Yuko    86.45 334  P      P       01 04 32.7 +0.8
      baz=117,SNR=14
SUR   Sutherland        86.73 122  P      P       01 04 33.9 -0.3
SUR                                IAmb   IAmb    01 07 34.5
      comp=Z,139nm,1.8s
HYT   Haines Junctio    86.91 333  P      P       01 04 35.6 +1.4
      baz=115
YUK6  Outpost Mounta    87.34 333  P      P       01 04 37.7 +1.3
      baz=114
SBA   Scott Base        87.36 190  P      P       01 04 37.0 +1.1
M30M  Minto, Yukon      87.36 335  P      P       01 04 36.5 +0.3
      baz=116,SNR=13
NEEM  North Greenlan    87.37   4 iP      P       01 04 35.7 -0.6
MAYO  Mayo, Yukon       87.45 336  P      P       01 04 37.6 +1.0
      baz=117
YUK4  Talbot Arm        87.64 334  P      P       01 04 38.7 +1.0
      baz=114
KEST  Kesra             87.77  53  P      P       01 04 39.0 +0.2
      comp=Z,13nm,0.8s,baz=179,slow=1.7,SNR=12
KEST  Kesra             87.77  53  P      P       01 04 39.0 +0.2
KEST                               IAmb   IAmb    01 04 56.5
      comp=Z,139nm,1.9s
PINM  Pinnacle          87.86 332  P      P       01 04 39.6 +1.0
      baz=113
SNF   Seneffe           88.02  38 κP      P       01 04 39.1 -0.4
      comp=Z,24nm,0.8s
DOU   Dourbes           88.09  39 dP      P       01 04 39.4 -0.4
      comp=Z,25nm,0.8s
BMRD  Maredsous         88.25  38 κP      P       01 04 40.4 -0.2
      comp=Z,24nm,0.9s
VNDA  Vanda             88.41 190  P      P       01 04 42.1 +1.3
      comp=Z,12nm,0.8s,baz=126,slow=4.2,SNR=36
VNDA                               pP     pP      01 06 56.0 +0.7
      comp=Z,3.2nm,0.7s,baz=122,slow=4.2,SNR=7.1
VNDA  Vanda             88.41 190  P      P       01 04 42.1 +1.3
A36M  Sachs Harbour     88.44 345  P      P       01 04 41.0 +0.1
      baz=127,SNR=45
BGES  Gesves            88.47  38 bP      P       01 04 41.3 -0.3
      comp=Z,24nm,0.8s
RCHB  Rochefort         88.50  39 bP      P       01 04 41.1 -0.6
      comp=Z,16nm,0.9s
YUK3  Moose Creek       88.61 334  P      P       01 04 42.8 +0.5
      baz=113
BCLA  Clavier           88.62  38 bP      P       01 04 42.1 -0.2
      comp=Z,8.0nm,0.9s
SYO   Syowa Base        88.62 160⇓eP      P       01 04 42.1 +0.2
SYO   Syowa Base        88.62 160⇓epP     pP      01 06 52.6 -3.8
CTG   Chitna Glacier    88.69 333  P      P       01 04 43.5 +0.9
      baz=112
INK   Inuvik            88.80 341  P      P       01 04 43.0 +0.3
      comp=Z,52nm,0.7s,baz=94,slow=4.3,SNR=120
INK                                pP     pP      01 06 56.9 -0.4
      comp=Z,4.0nm,0.7s,baz=94,slow=12,SNR=3.4
INK   Inuvik            88.80 341  P      P       01 04 43.0 +0.3
      baz=119,SNR=54
WLF   Walferdange       88.94  39 dP      P       01 04 44.1 +0.4
      comp=Z,17nm,0.9s
WLF   Walferdange       88.94  39 eP      P       01 04 43.6 -0.2
      comp=Z,35nm,1.1s,baz=258,slow=5.7
WLF   Walferdange       88.94  39  IAmb   IAmb    01 04 44.9
      comp=Z,24nm,0.8s
EPYK  Eagle Plains      89.00 338  P      P       01 04 43.9 +0.1
      baz=116,SNR=11
EPYK  Eagle Plains      89.00 338  IAmb   IAmb    01 04 44.9
      comp=Z,52nm,1.3s
BHOU  Houvegnez         89.03  39 dP      P       01 04 44.2  0.0
DAWY  Dawson            89.06 336  P      P       01 04 44.2 +0.1
      baz=114,SNR=12
DAWY  Dawson            89.06 336  IAmb   IAmb    01 04 45.0
      comp=Z,20nm,0.8s
MEM   Membach           89.10  38 dP      P       01 04 44.3 -0.2
      comp=Z,5.8nm,0.8s
I29M  Ogilvie Camp,     89.16 337  P      P       01 04 44.7 +0.2
      baz=115,SNR=19
BTNL  Ternell           89.17  38 dP      P       01 04 44.5 -0.4
      comp=Z,9.4nm,0.9s
DBG   Daneborg          89.17  12 iP      P       01 04 44.5 +0.2
DBG                                IAmb   IAmb    01 04 45.7
      comp=Z,5.5nm,0.6s
ECH   Echery            89.19  41  IAmb   IAmb    01 04 45.8
      comp=Z,22nm,1.2s
M27K  Edge Creek, AK    89.44 334  P      P       01 04 46.4 +0.4
      baz=111,SNR=5.2
M27K  Edge Creek, AK    89.44 334  IAmb   IAmb    01 04 47.2
      comp=Z,17nm,0.8s
MCARA McCarthy VSAT     89.60 333  P      P       01 04 47.2 +0.6
      baz=110
L27K  Beaver Creek,     89.68 335  P      P       01 04 47.6 +0.6
      baz=111,SNR=15
L27K  Beaver Creek,     89.68 335  IAmb   IAmb    01 04 48.3
      comp=Z,25nm,0.8s
AHRW  Bad Neuenahr-A    89.74  39 eP      P       01 04 47.6 +0.2
      comp=Z,11nm,0.8s,baz=258,slow=5.7
L26K  Log Cabin Wild    90.31 334  P      P       01 04 50.1 +0.2
      baz=110
TNS   Taunus Mts        90.51  39 eP      P       01 04 51.0 -0.1
      comp=Z,14nm,0.7s,baz=258,slow=5.7
DAVA  Damuels           90.75  42 eP      P       01 04 52.8 +0.3
      comp=Z,4.2nm,0.7s
DAVA                              iP      pP      01 07 07.3 -0.2
      comp=Z,4.0nm,0.7s
DOT   Dot Lake          90.83 335  IAmb   IAmb    01 04 53.1
      comp=Z,23nm,0.8s
SCRK  Sand Creek        90.91 335  P      P       01 04 52.7  0.0
      baz=109,SNR=15
SCRK  Sand Creek        90.91 335  IAmb   IAmb    01 04 53.5
      comp=Z,20nm,0.6s
J26L  Joseph Creek      90.91 336  P      P       01 04 52.8 +0.1
      baz=110,SNR=20
KLU   Klutina           90.96 332  P      P       01 04 52.9  0.0
      baz=108,SNR=6.5
KLU   Klutina           90.96 332  IAmb   IAmb    01 04 53.2
      comp=Z,33nm,1.0s
BOSA  Boshof            91.17 119  P      P       01 04 54.8  0.0
      comp=Z,3.8nm,0.8s,baz=297,slow=4.0,SNR=5.5
BOSA                               PKKPbc PKKPbc  01 22 14.0 -0.4
      comp=Z,3.2nm,0.9s,baz=90,slow=1.5,SNR=12
RIDG  Independent Ri    91.19 335  P      P       01 04 53.9  0.0
      baz=109,SNR=6.0
PAX   Paxson            91.21 334  P      P       01 04 53.7 -0.4
      baz=108,SNR=5.2
PAX   Paxson            91.21 334  IAmb   IAmb    01 04 54.5
      comp=Z,16nm,1.0s
FETA  Feichten          91.26  43 eP      P       01 04 55.2 +0.4
      comp=Z,4.0nm,0.8s
FETA                              eP      pP      01 07 10.4 +0.6
      comp=Z,1.9nm,0.7s
RETA  Reutte            91.38  42 eP      P       01 04 54.9 -0.3
      comp=Z,1.8nm,0.5s
MOTA  Moosalm           91.58  42 eP      P       01 04 55.7 -0.5
      comp=Z,5.2nm,0.8s
MOTA                              eP      pP      01 07 11.8 +0.5
      comp=Z,4.1nm,0.8s
SQTA  Sankt Quirin      91.62  43 eP      P       01 04 56.4  0.0
      comp=Z,4.5nm,0.8s
J25K  Salcha River,     91.68 335  P      P       01 04 56.2  0.0
      baz=108,SNR=29
WTTA  Wattenberg        91.92  43 eP      P       01 04 58.1 +0.2
      comp=Z,7.0nm,0.7s
WTTA                              iP      pP      01 07 13.2 +0.2
      comp=Z,3.6nm,0.7s
DHY   Denali Highway    92.07 334  P      P       01 04 58.2  0.0
      baz=106
WAT6  Susitna Watana    92.09 333  P      P       01 04 57.6 -0.7
      baz=106,SNR=6.6
GRF   Grafenberg Arr    92.14  40 eP      P       01 04 59.3 +0.7
      comp=Z,30nm,1.6s,baz=258,slow=5.7
SML   Sawmill           92.15 332  P      P       01 04 58.2 -0.2
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	baz=106						
HDA	Harding Lake	92.27	335	P	P	01 04 58.3	-0.6
	baz=107,SNR=8.7						
HDA	Harding Lake	92.27	335	IAmb	IAmb	01 04 59.2	
	comp=Z,16nm,1.0s						
IL31		92.35	335	IAmb	IAmb	01 05 00.8	
	comp=Z,31nm,1.6s						
ILAR	Eielson Array	92.35	335	P	P	01 04 58.6	-0.6
	comp=Z,3.4nm,0.5s,baz=126,slow=3.2,SNR=67						
ILAR				pP	pP	01 07 10.8	-3.6
	comp=Z,2.3nm,0.9s,baz=101,slow=3.8,SNR=6.0						
ILAR				PP	PP	01 08 46.0	-5.7
	comp=Z,1.2nm,0.7s,baz=107,slow=6.3,SNR=5.7						
ILAR				PKKPbc	PKKPdf	01 22 08.9	-0.6
	comp=Z,0.4nm,0.4s,baz=296,slow=3.8,SNR=7.0						
ABTA	Abfaltersbach	92.41	43	eP	P	01 05 00.0	+0.1
	comp=Z,6.9nm,0.9s						
PMR	Palmer	92.46	332	P	P	01 04 59.6	-0.1
	baz=105						
RC01	Rabbit Creek A	92.61	332	P	P	01 05 00.1	-0.4
	baz=104						
POKR	Poker Plat Res	92.67	336	P	P	01 05 00.7	0.0
	baz=106,SNR=19						
POKR	Poker Plat Res	92.67	336	IAmb	IAmb	01 05 01.6	
	comp=Z,40nm,1.0s						
CCB	Clear Creek Bu	92.69	335	IAmb	IAmb	01 05 01.2	
	comp=Z,16nm,0.7s						
WRH	Wood River Hil	92.77	335	IAmb	IAmb	01 05 01.6	
	comp=Z,13nm,0.6s						
COLA	College	92.78	335	P	P	01 05 01.3	+0.2
TCOL	CIGO, UAF Yank	92.78	335	P	P	01 05 01.2	+0.1
	baz=106,SNR=7.2						
RND	Reindeer	92.81	334	IAmb	IAmb	01 05 03.0	
	comp=Z,23nm,0.8s						
MCK	McKinley	92.93	334	P	P	01 05 01.7	-0.1
	baz=105						
MCK	McKinley	92.93	334	IAmb	IAmb	01 05 02.4	
	comp=Z,20nm,1.0s						
NKC	Novy Kostel	93.02	40	eP	P	01 05 03.2	+0.6
KBA	Koelnbreinsper	93.03	43	eP	P	01 05 02.6	-0.3
	comp=Z,5.2nm,0.5s						
H24K	Noodor Dome	93.05	336	P	P	01 05 02.7	+0.2
	baz=106,SNR=5.9						
H24K	Noodor Dome	93.05	336	IAmb	IAmb	01 05 03.5	
	comp=Z,12nm,0.8s						
WET	Wettzell	93.09	41	eP	P	01 05 03.2	+0.2
	comp=Z,193nm,3.0s,baz=258,slow=5.7						
MYKA	Terra Mystica	93.15	43	eP	P	01 05 03.4	+0.1
	comp=Z,4.7nm,0.5s						
CUT	Chulitna	93.18	333	P	P	01 05 02.7	-0.2
	baz=104						
NEA2	Nenana	93.21	335	P	P	01 05 02.8	-0.3
	baz=105,SNR=14						
KDAK	Kodiak Island	93.27	328	P	P	01 05 03.1	-0.3
	baz=102						
TRF	Thorofare Moun	93.44	334	P	P	01 05 04.1	-0.3
	baz=104						
TRF	Thorofare Moun	93.44	334	IAmb	IAmb	01 05 04.6	
	comp=Z,15nm,0.6s						
I23K	Minto, Yukon-K	93.47	336	P	P	01 05 04.0	-0.3
	baz=105,SNR=11						
I23K	Minto, Yukon-K	93.47	336	IAmb	IAmb	01 05 04.3	
	comp=Z,13nm,0.6s						
OHAK	Old Harbor	93.52	327	P	P	01 05 04.5	-0.2
	baz=102						
KHC	Kasperske Hory	93.55	41	eP	P	01 05 04.9	-0.1
KHC				epP	pP	01 07 20.5	+0.2
CLL	Collm	93.57	39	eP	P	01 05 05.0	0.0
CLL				epP	pP	01 07 21.0	+0.7
GEC2	GERESS Array S	93.58	41	eP	P	01 05 05.0	-0.3
	baz=258,slow=5.7						
GEC2	GERESS Array S	93.58	41	IAmb	IAmb	01 05 05.8	
	comp=Z,8.3nm,0.8s						
GERES	GERESS Array B	93.58	41	P	P	01 05 04.7	-0.6
	comp=Z,5.7nm,0.8s,baz=245,slow=2.9,SNR=41						
GERES				pP	pP	01 07 18.4	-2.1
	comp=Z,1.1nm,0.8s,baz=225,slow=3.6,SNR=4.8						
GERES				PKKPbc	PKKPdf	01 22 07.7	+0.7
	comp=Z,0.5nm,0.6s,baz=108,slow=3.0,SNR=5.5						
MOA	Molln	93.78	42	P	P	01 05 06.2	+0.1
	comp=Z,5.2nm,0.6s,SNR=7.9						
SPCR	Spurr Chakacha	93.81	331	P	P	01 05 05.8	-0.2
	baz=102						
BPAW	Bear Paw Mtn.	93.90	334	P	P	01 05 05.8	-0.5
	baz=103,SNR=10						
CKRC	Cesky Krumlov	93.97	41	eP	P	01 05 06.9	-0.1
MLY	Manley	94.01	335	P	P	01 05 06.0	-0.8
	baz=103						
MLY	Manley	94.01	335	IAmb	IAmb	01 05 06.8	
	comp=Z,9.6nm,0.5s						
Q19K	Cape Douglas,	94.05	329	P	P	01 05 06.7	-0.4
	baz=101						
BRG	Berggiesshubel	94.08	39	i P	P	01 05 08.0	+0.6
BRG				Amp		01 05 10.7	
	comp=Z,8.6nm,1.0s						
PPLA	Purkeypile	94.16	333	P	P	01 05 07.0	-0.7
	baz=102						
CAST	Castle Rocks	94.22	334	P	P	01 05 07.1	-0.7
	baz=102						
CAST	Castle Rocks	94.22	334	IAmb	IAmb	01 05 07.6	
	comp=Z,14nm,0.9s						
NOR	Nord	94.29	7	i P	P	01 05 06.0	-1.8
PRU	Pruhonice	94.31	40	eP	P	01 05 08.8	+0.4
COLD	Coldfoot	94.31	337	P	P	01 05 09.0	+1.0
	baz=104,SNR=7.7						
COLD	Coldfoot	94.31	337	IAmb	IAmb	01 05 10.1	
	comp=Z,16nm,0.8s						
NB2	NORSAR Subarra	94.40	29	P	P	01 05 09.2	+0.5
	comp=Z,2.4nm,0.7s,baz=258,slow=4.6						
NOA	NORSAR Array B	94.40	29	P	P	01 05 08.8	+0.2
	comp=Z,4.6nm,0.8s,baz=257,slow=4.3,SNR=11						
PVCC	Panska Ves	94.41	40	eP	P	01 05 09.4	+0.5
TOLK	Toolik Lake Re	94.42	339	P	P	01 05 08.8	+0.2
	baz=104						
TOLK	Toolik Lake Re	94.42	339	IAmb	IAmb	01 05 09.1	
	comp=Z,6.4nm,0.7s						
CHUM	Lake Minchumin	94.42	334	P	P	01 05 07.6	-1.0
	baz=102						
ARSA	Arzberg	94.52	43	eP	P	01 05 09.1	-0.5
	comp=Z,1.2nm,0.4s						
I21K	Tanana	94.55	335	P	P	01 05 08.2	-0.9
	baz=102						
TREC	Trest	94.81	41	eP	P	01 05 11.2	+0.5
N19K	Bonanza Creek	94.82	331	P	P	01 05 09.4	-1.2
	baz=100						
L20K	Farewell, AK	94.84	332	P	P	01 05 09.5	-1.1
	baz=101						
CONA	Conrad Observa	94.85	42	eP	P	01 05 11.1	+0.1
	comp=Z,3.3nm,0.6s						
M19K	Big River Lodg	94.97	332	P	P	01 05 10.2	-0.9
	baz=100						
H21K	Melozitna Rive	94.99	336	P	P	01 05 10.2	-0.9
	baz=101						
H21K	Melozitna Rive	94.99	336	IAmb	IAmb	01 07 11.8	
	comp=Z,28nm,1.9s						
K20K	Telida	95.09	333	P	P	01 05 10.9	-0.8
	baz=100						
L19K	White Mountain	95.23	332	P	P	01 05 11.1	-1.3
	baz=100						
J20K	Nowinta River	95.27	334	P	P	01 05 11.6	-0.9
	baz=100						
UPC	Upice	95.32	40	eP	P	01 05 13.5	+0.5
CHVC	Chvalec	95.36	40	eP	P	01 05 13.6	+0.4
KRUC	Moravsky	95.36	41	ePDIF	P	01 05 13.6	+0.4
OSTC	Ostas	95.45	40	eP	P	01 05 14.2	+0.6
OSTC				epP	pP	01 07 29.1	0.0
DPC	Dobruska-Polom	95.49	40	eP	P	01 05 14.3	+0.5
VRAC	Vranov	95.53	41	ePDIF	P	01 05 14.4	+0.4
KRLC	Kraliky	95.75	40	eP	P	01 05 15.8	+0.8
KRLC				epP	pP	01 07 31.0	+0.5
MODS	Modra-Piesok	95.85	42	ePDIFF	P	01 05 14.7	-0.8
MORC	Moravsky Berou	96.20	41	ePDIF	P	01 05 17.9	+0.9
MORC	Moravsky Berou	96.20	41	P	P	01 05 17.9	+0.9
MORC				IAmb	IAmb	01 05 18.8	
	comp=Z,11nm,1.1s						
GCSA	Galena City Sc	96.53	334	Pdiff	P	01 05 18.5	+0.5
	baz=98						
MAW	Mawson	96.56	164	P	P	01 05 18.5	+0.3
	comp=Z,3.7nm,0.8s,baz=240,slow=6.2,SNR=6.2						
VYHS	Vyhne	96.89	42	ePDIFF	P	01 05 20.7	+0.6
A21K	Barrow	97.30	341	Pdiff	P	01 05 21.6	+0.2
	baz=97						
ARCES	ARCESS Array B	101.00	21	P	Pdif	01 05 37.3	-0.6
	comp=Z,1.5nm,0.4s,baz=265,slow=2.5,SNR=13						
ARCES				PKKPbc	PKKPbc	01 21 46.4	-3.0
	comp=Z,1.2nm,0.4s,baz=133,slow=2.1,SNR=21						
FINES	FINESS Array B	101.58	29	PKKPbc	PKKPbc	01 21 44.7	-2.8
	comp=Z,4.0nm,0.8s,baz=102,slow=3.9,SNR=12						
AKASG	Malin Array Be	103.72	40	PKiKP	PKiKP	01 10 03.7	-0.6
	comp=Z,0.4nm,0.3s,baz=276,slow=3.0,SNR=4.5						
KBZ	Khabaz	113.73	46	PKiKP	PKiKP	01 10 23.6	+0.3
	comp=Z,7.0nm,0.7s,baz=183,slow=3.5,SNR=28						
DZM	Mont Dzumac	115.49	240	PKP	PKiKP	01 10 28.0	+0.4
	comp=Z,10nm,1.1s,baz=150,slow=6.7,SNR=3.6						
TIXI	Tiksi	116.50	353	PKP	PKPdf	01 10 26.6	-1.3
	comp=Z,1.8nm,0.4s,baz=18,slow=3.0,SNR=4.5						
SEY	Seymchan	118.05	339	PKP	PKPdf	01 10 31.1	-0.1
	comp=Z,5.4nm,0.5s,baz=110,slow=3.5,SNR=9.2						
RAYN	Ar Rayn	118.06	68	PKPdf	PKiKP	01 10 32.4	0.0
ARU	Arti	118.96	29		PKPdf	01 10 32.9	-0.1
PETK	Petropavlovsk-	121.32	328	PKP	PKiKP	01 10 37.9	0.0
	comp=Z,5.6nm,0.8s,baz=167,slow=3.6,SNR=12						
YAK	Yakutsk	125.22	348	PKP	PKPdf	01 10 44.6	-0.3
	comp=Z,10nm,0.4s,baz=202,slow=2.0,SNR=4.4						
GEYT	Alibeck	126.34	49	PKP	PKPdf	01 10 47.9	0.0
	comp=Z,4.9nm,0.4s,baz=222,slow=2.0,SNR=10						
GEYT	Alibeck	126.34	49		PKPdf	01 10 47.7	-0.2
BRVK	Borovoye	126.45	28	PKPdf	PKiKP	01 10 47.9	-0.1
UOSS	Minazif	127.68	66	PKPdf	PKPdf	01 10 50.2	-0.6
STKA	Stephens Creek	128.44	216	PKP	PKPdf	01 10 52.2	+0.2
	comp=Z,18nm,0.6s,baz=104,slow=2.5,SNR=37						
STKA				pPKP	pPKPdf	01 13 14.3	-2.1
	comp=Z,5.5nm,0.8s,baz=15,slow=3.6,SNR=3.6						
STKA	Stephens Creek	128.44	216	PKPdf	PKPdf	01 10 52.1	+0.1
ZAA0	Zalesovo Array	131.50	19	PKPdf	PKPdf	01 10 57.3	+0.2
ZALV	Zalesovo Beam	131.50	19	PKhKP	PKPpre	01 10 41.8	
	comp=Z,2.1nm,0.7s,baz=317,slow=2.4,SNR=9.7						
ZALV				PKP	PKPdf	01 10 56.9	-0.2
	comp=Z,26nm,0.7s,baz=14,slow=1.0,SNR=38						
ZALV				pPKP	pPKPdf	01 13 19.7	-1.8
	comp=Z,14nm,0.5s,baz=318,slow=2.0,SNR=22						
ZALV	Zalesovo Beam	131.50	19	PKPdf	PKPdf	01 10 57.3	+0.2
KURK	Kurchatov	131.78	25	PKPdf	PKPpre	01 10 52.8	
KURBB	Kurchatov Arra	131.82	26	PKhKP	PKPpre	01 10 51.0	
	comp=Z,1.4nm,0.8s,baz=347,slow=1.8,SNR=9.4						
KURBB				PKP	PKPdf	01 10 58.2	+0.4
	comp=Z,9.8nm,0.6s,baz=312,slow=2.5,SNR=54						
CTAO	Charters Tower	132.99	231	PKPdf	PKPdf	01 11 01.4	+0.4
ASAJ	Asahikawa	134.64	326	PKP	PKPdf	01 11 04.0	+0.7
	comp=Z,16nm,0.9s,baz=292,slow=4.3,SNR=4.2						
EKS2	Erkin-Say	134.79	37	P	PKiKP	01 11 05.5	+0.1
	SNR=12						
USP	Ospenovka	134.84	36	P	PKiKP	01 11 04.9	-0.5
	SNR=6.8						
AML	Almayashu	135.06	37	P	PKiKP	01 11 06.0	-0.4
	SNR=17						
AAK	Ala-Archa	135.22	36	P	PKiKP	01 11 05.9	-0.4
	SNR=10.0						
AAK	Ala-Archa	135.22	36	PKPdf	PKPdf	01 11 03.5	-1.1
UCH	Uchtor	135.49	37	P	PKiKP	01 11 07.1	-0.2
	SNR=12						
TKM2	Tokmak 2	135.68	35	P	PKiKP	01 11 06.5	-0.8
	SNR=7.4						
KBL	Kabul	135.79	49		PKPdf	01 11 06.5	+0.5
KLR	Kul'dur	135.84	339	PKhKP	PKPpre	01 10 54.5	
	comp=Z,1.3nm,0.4s,baz=347,slow=2.1,SNR=6.8						
KLR				PKP	PKPdf	01 11 05.4	0.0
	comp=Z,7.8nm,0.4s,baz=104,slow=2.1,SNR=22						
MAKZ	Makanchi	136.19	27		PKPpre	01 10 56.7	
MAKZ				PKPdf	PKPdf	01 11 06.1	-0.1
MK31	Makanchi Array	136.34	26	PKPdf	PKPdf	01 11 06.3	-0.1
MKAR	Makanchi Array	136.34	26	PKhKP	PKPpre	01 10 54.8	
	comp=Z,1.2nm,0.3s,baz=318,slow=2.2,SNR=11						
MKAR				PKP	PKPdf	01 11 06.1	-0.3
	comp=Z,8.4nm,0.6s,baz=332,slow=1.6,SNR=37						
MKAR				pPKP	pPKPdf	01 13 29.6	-1.4
	comp=Z,1.9nm,0.6s,baz=321,slow=2.6,SNR=5.5						
MKAR				SKPbc	SKPbc	01 13 40.1	-0.7
	comp=Z,4.1nm,0.6s,baz=19,slow=3.2,SNR=14						
ULHL	Ulahol	136.48	36	P	PKiKP	01 11 08.6	-0.3
	SNR=10						
TLY	Talaya	137.55	5	PKhKP	PKPpre	01 11 00.7	
	comp=Z,3.1nm,0.6s,baz=171,slow=13,SNR=3.6						
TLY				PKP	PKPdf	01 11 09.2	+0.7
	comp=Z,8.5nm,0.7s,baz=265,slow=3.3,SNR=9.3						
TLY	Talaya	137.55	5		PKiKP	01 11 09.6	-1.0
KSH	Kashi	138.00	39	PKP	PKPpre	01 11 05.5	
ASAR	Alice Springs	139.07	216	PKhKP	PKPpre	01 11 02.3	
	comp=Z,4.0nm,0.4s,baz=134,slow=3.7,SNR=48						
ASAR				PKP	PKPdf	01 11 11.5	-0.7
	comp=Z,14nm,0.5s,baz=124,slow=2.1,SNR=24						
ASAR				pPKP	pPKPdf	01 13 34.7	-2.0
	comp=Z,5.4nm,0.9s,baz=141,slow=2.1,SNR=8.8						
ASAR				SKPbc	SKPbc	01 13 48.1	-1.2
	comp=Z,2.5nm,0.5s,baz=133,slow=3.8,SNR=6.7						
ASAR				SKKPbc	SKKPbc	01 22 27.3	-0.8
	comp=Z,1.1nm,0.8s,baz=328,slow=4.1,SNR=6.6						
ASAR	Alice Springs	139.07	216	PKPdf	PKPdf	01 11 12.3	+0.1
NIL	Nilore	139.31	48		PKPpre	01 11 05.5	
NIL					PKPdf	01 11 12.6	+0.3
USRK	Ussuriysk Ar.	139.86	334	PKhKP	PKPpre	01 11 03.4	
	comp=Z,2.5nm,0.4s,baz=21,slow=3.1,SNR=11						
USRK				PKP	PKPdf	01 11 12.9	+0.1
	comp=Z,10nm,0.8s,baz=225,slow=4.6,SNR=9.0						
WMQ	Urumqi	141.01	25	ePKP	PKPdf	01 11 15.0	-0.1
WMQ				AMB	AMB		
	comp=Z,190nm,4.3s						
ULN	Ulaanbaatar	141.55	2	PKPdf	PKPpre	01 11 12.8	
SONM	Songino Array	141.56	3	PKhKP	PKPpre	01 11 12.4	
	comp=Z,14nm,0.7s,baz=311,slow=1.9,SNR=46						
SONM				SKPbc	SKPbc	01 13 55.0	-0.1
	comp=Z,2.4nm,0.6s,baz=316,slow=1.8,SNR=3.9						
WB2	Warramunga Arr	141.58	221	PKPdf	PKPdf	01 11 16.8	0.0
WRA	Warramunga Arr	141.59	221	PKhKP	PKPpre	01 11 11.8	
	comp=Z,15nm,0.5s,baz=142,slow=2.8,SNR=450						
WRA				PKP	PKiKP	01 11 18.9	-0.9
	comp=Z,16nm,0.3s,baz=134,slow=1.8,SNR=20						
WRA				pPKP	pPKPdf	01 13 39.6	-1.7
	comp=Z,3.2nm,0.6s,baz=142,slow=1.6,SNR=5.3						
WRA				SKPbc	SKPbc	01 13 55.0	-0.9
	comp=Z,1.5nm,0.3s,baz=134,slow=2.7,SNR=5.2						
WRA				SKKPbc	SKKPbc	01 22 17.4	-0.9
	comp=Z,3.0nm,1.1s,baz=330,slow=4.2,SNR=8.8						
MAJO	Matsushiro	142.00	320		PKPpre	01 11 13.6	
MJAR	Matsushiro Arr	142.00	320	PKP	PKPdf	01 11 14.3	-2.7
	comp=Z,9.7nm,0.5s,baz=88,slow=2.3,SNR=16						
MAT	Matsushiro	142.00	320	ePKP	PKPdf	01 11 12.2	-4.8
CN2	Changchun	142.73	340	ePKP	PKPdf	01 11 14.5	-3.5
CN2				ePP	PP	01 14 35.5	+1.4
CN2				AMB	AMB		
	comp=Z,1µm,5.0s						
INU	Inuyama	143.50	320		PKPab	01 11 18.2	-0.4
NDI	New Delhi	144.61	53	eP	PKPbc	01 11 22.5	+0.3
POO	Poona	144.88	71	eP	PKPdf	01 11 21.0	-1.5
JHS	Saijyo	146.15	323		PKPbc	01 11 25.4	-1.1
KS19	Wonju Array Si	147.09	331	PKPbc	PKPbc	01 11 29.5	+0.6
KSRS	Korea Array	147.11	331	PKP	PKPdf	01 11 26.1	+0.4
	comp=Z,89nm,0.6s,baz=38,slow=1.5,SNR=92						
KSRS				PKPbc	PKPbc	01 11 29.4	+0.5
	comp=Z,91nm,0.6s,baz=22,slow=2.5,SNR=106						
PSA00	Pilbara Seismi	147.46	199	PKPbc	PKPbc	01 11 30.1	-0.2
PSA00	Pilbara Seismi	147.46	199	PKPdf	PKPdf	01 11 26.9	+0.2
PSA00				PKPbc	PKPbc	01 11 29.8	-0.5
KNRA	Kununurra	148.28	219	PKPdf	PKPdf	01 11 28.4	+0.3
DL2	Dalian	148.38	341	PKPbc	PKPbc	01 11 31.8	-0.3
HHC	Hu-ho-hao-te	148.50	356	ePKPbc	PKPdf	01 11 29.0	+1.0
BJI	Beijing	148.71	349	PKPbc	PKPdf	01 11 28.0	-0.2
BJT	Baijiatuau	148.74	349	PKPbc	PKPbc	01 11 33.1	+0.1
BTO	Baotou	148.82	358	ePKPbc	PKPdf	01 11 29.3	+0.8
GTA	Gaotai	148.97	14	PKPbc	PKPdf	01 11 29.5	+0.7
GTA				PKPab	PKPab	01 11 40.0	-0.4
GTA				pPKP	pPKPbc	01 13 55.3	-1.4
GTA				sPKP		01 14 54.0	
PYUN	Piuthan	149.32	49	eP	PKPdf	01 11 30.3	+0.5
	comp=Z,386nm,0.5s						
HYB	Hyderabad	149.49	72	i PKP	PKPdf	01 11 30.0	-0.1
HYB				e		01 11 35.0	
DANN	Dangsing	149.75	48	eP	PKPdf	01 11 31.5	+0.9
	comp=Z,472nm,0.8s						
KOLN	Koldanda	149.95	49	eP	PKPdf	01 11 31.0	+0.2
GKN	Gorkha	150.59	48	eP	PKPdf	01 11 32.3	+0.6
	comp=Z,450nm,0.6s						
DMN	Daman	151.15	48	eP	PKPdf	01 11 33.1	+0.4
	comp=Z,112nm,0.6s						
KKN	Kakani	151.18	47	eP	PKPdf	01 11 33.0	+0.3
	comp=Z,195nm,0.6s						
PKIN	Phulchoki	151.38	48	eP	PKPdf	01 11 33.0	-0.1
	comp=Z,69nm,0.6s						
PKI	Pulchoki	151.40	48	eP	PKPdf	01 11 33.1	-0.1
	comp=Z,53nm,0.5s						
JIRN	Jiri	151.91	47	eP	PKPdf	01 11 33.7	-0.3
	comp=Z,62nm,0.7s						
RAMN	Ramite	152.62	47	eP	PKPdf	01 11 35.4	+0.5
	comp=Z,112nm,0.4s						
LZH	Lanzhou	152.97	9	⇑PKPbc	PKPdf	01 11 32.0	-3.0
TAPN	Taplejung	153.17	45	eP	PKPdf	01 11 35.8	+0.1
	comp=Z,53nm,0.5s						
ODAN	Odare	153.24	47	eP	PKPdf	01 11 35.3	-0.5
	comp=Z,74nm,0.7s						
FAKI	Fak Fak	153.69	244	PKPdf	PKPdf	01 11 37.3	+0.8
LSA	Lhasa	153.82	37	PKPdf	PKPdf	01 11 37.8	+1.0
NJ2	Nanjing	155.54	339	ePKP	PKPdf	01 11 38.5	+0.1
SHL	Shillong	157.18	43	PKPdf	PKPdf	01 11 41.0	0.0
CD2	Chengdu	158.00	12	PKP	PKPdf	01 11 41.0	-0.6
TOLI2	Tolitoli	165.59	236	PKPab	PKPab	01 12 52.7	-0.3
CHTO	Chiang Mai	166.54	44		PKPdf	01 11 49.9	-0.4
CHTO				PKPab	PKPab	01 12 56.8	-0.2
CMAR	Chiang Mai Arr	166.78	46	PKP	PKPdf	01 11 50.9	+0.5
	comp=Z,6.9nm,0.7s,baz=291,slow=1.5,SNR=36						
CMAR				PKPab	PKPab	01 12 58.0	-0.1
	comp=Z,4.4nm,0.7s,baz=312,slow=5.5,SNR=10						
CMAR	Chiang Mai Arr	166.78	46	PKPab	PKPab	01 12 58.3	+0.2
IPM	Ipoh	170.88	121	P	PKPdf	01 11 53.0	-0.2
KULM	Kulim	170.95	116	P	PKPdf	01 11 53.0	-0.2
SPMM	Sapulut	171.16	239	P	PKPdf	01 11 53.0	-0.3
KSM	Kuching	172.07	191	P	PKPdf	01 11 54.0	+0.3
SBUM	Sibu	172.40	206	P	PKPdf	01 11 53.0	-0.8

IDC ***27*** *01:12:15.2±2.1, 3°.24N×125°.44E, h0^{km}, mb3.6/4, mb1 3.8/4, mb1mx3.5/27, mbtmp3.6/4, MS3.4/2, Ms1 3.4/2, ms1mx2.6/43 Error ellipse: s-maj=150.4km s-min=25.4km az=68.0*

DJA ***27*** *01:12:48.2±0.6, 1°N±6°×12°4E±°, h395^{km}±5^{km}, M3.8/11, mb4.0/2, MLv3.6/11*

ISC 27 01:12:52.0±2.3**, 1°.9N**±0°.2×**124°.21E**±0°.08**, h350^{km}, n14,** σ**3^{s}.72**/13**, mb3.2**/3**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	Cibinong	1.30	190	P	Pn	01 13 41.3	+2.2
GTOI	Gorontalo	1.71	225	P	Pn	01 13 41.9	+0.5
GTOI				S	S	01 14 20.7	-0.3
MRSI	Marisa	2.66	239	P	Pn	01 13 47.7	-0.7
LUWI	Luwuk	3.23	207	P	Pn	01 13 41.7	-12
LUWI				S	S	01 14 39.7	-3.2
APSI	Ampana	3.76	223	P	Pn	01 13 54.5	-4.2
LBMI	Labuha	4.12	127	P	Pn	01 13 58.3	-4.0
LBMI				S	S	01 14 52.8	-6.2
SANI	Sanana	4.27	155	P	Pn	01 14 06.4	+2.5
MPSI	Mapaga	4.57	251	P	Pn	01 14 04.1	-2.9
BATI	Baumata	12.00	183	LR	LR	01 22 07.0	
	comp=Z,149nm,18.5s,baz=64,slow=44						
FITZ	Fitzroy Crossi	19.89	176	P	P	01 17 01.9	+3.0
	1.8nm,0.4s,baz=23,slow=8.5,SNR=2.9						
WRA	Warramunga Arr	23.84	156	P	P	01 17 37.7	+2.6
	0.9nm,0.7s,baz=342,slow=9.9,SNR=4.0						
ASAR	Alice Springs	27.07	160	P	P	01 18 08.4	+4.5
	0.2nm,0.6s,baz=338,slow=7.0,SNR=2.0						
MKAR	Makanchi Array	57.70	327	P	P	01 22 04.2	-2.9
	0.5nm,0.5s,baz=127,slow=7.1,SNR=6.7						
ARU	Arti	75.18	328	LR	LR	01 57 31.4	
	comp=Z,20nm,19.7s,baz=25,slow=36						

ANF ***27*** *01:12:58.0±0.3, 36°.27N×97°.40W, h5^{km}, ML2.9/7, Error ellipse: s-maj=3.5km s-min=2.6km az=163.0*

TUL ***27*** *01:12:58.3±1.5, 36°.25N±0°.02×97°.41W±0°.05, h7^{km}±7^{km}, ML2.7, mb_Lg2.7/31(NEIC), Error ellipse: s-maj=5.4km s-min=2.3km az=86.0*

NEIC 27 01:12:58.5±1.4**, 36°.240N**±0°.004×**97°.42W**±0°.05**, h5^{km}**±2^{km}**, Error ellipse: s-maj=7.3km s-min=3.0km az=89.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OK033	Mehan	0.43	117	Pg	Pg	01 13 07.0	+0.2
OK029	Liberty Lake	0.44	184	Pg	Pg	01 13 07.1	+0.1
CROK	Carrier	0.53	300	Pg	Pg	01 13 08.5	-0.1
BLOK	Blackwell	0.54	17	Pg	Pg	01 13 08.8	-0.1
OK031	S. Brethren Rd	0.55	121		Pg	01 13 09.0	0.0
QUOK	Quay	0.58	97	Pg	Pg	01 13 09.0	-0.5
OK030	Cody Creek RV	0.60	121		Pg	01 13 09.5	-0.5
BCOK	Bluff Creek, N	0.60	195	Pg	Pg	01 13 10.2	+0.2
OK034	N. Norfolk Rd.	0.61	112		Pg	01 13 10.2	0.0
OK025	Westminster Rd	0.66	175	Pg	Pg	01 13 11.3	+0.2
GC02	Grant County #	0.71	330	Pg	Pg	01 13 12.4	+0.3
KAN13	South Haven SW	0.77	356	Pg	Pg	01 13 12.7	-0.6
OKCFA	Oklahoma City	0.82	182		Pg	01 13 14.0	-0.3
OKCFA	Oklahoma City	0.82	182	P	Pg	01 13 14.0	-0.3
	baz=2.5						
FNO	Franklin	0.98	179	Pg	Pg	01 13 16.9	-0.3
T35A	Sooner Cattle	0.99	47		Pg	01 13 16.5	-1.0
T35B	Sooner Cattle	0.99	47	P	Pg	01 13 16.9	-0.7
	baz=227						
T35B				S	Sg	01 13 29.7	-0.7
	baz=227						
U32A	Winter Ranch,	1.29	277	Pn	Pn	01 13 22.2	-1.0
U32A	Winter Ranch,	1.29	277	P	Pn	01 13 22.1	-1.0
	baz=96						
U32A				S	Sb	01 13 40.1	0.0
	baz=96						
TUL1	Leonard	1.36	104		Pn	01 13 22.8	-1.2
TUL1	Leonard	1.36	104	P	Pn	01 13 22.8	-1.3
	baz=285						
TUL1				S	Sb	01 13 41.4	-0.6
	baz=285						
X34A	Smith Ranch, M	1.67	192		Pn	01 13 28.9	+0.5
X34A				IAmb_Lg		01 13 51.7	
	comp=Z,27nm,1.1s						
WMOK	Wichita Mounta	1.87	217		Pn	01 13 30.6	-0.5
WMOK	Wichita Mounta	1.87	217	P	Pn	01 13 31.7	+0.5
	baz=36						
WMOK				S	Sb	01 13 56.8	+0.1
	baz=36						
X37A	Clayton	2.34	134		Pn	01 13 38.3	+0.6
X37A				IAmb_Lg		01 14 16.6	
	comp=Z,32nm,0.8s						
X37A	Clayton	2.34	134	P	Pn	01 13 38.3	+0.7
	baz=316						
R32A	Long Quarter,	2.41	335	S	Sn	01 14 09.0	+0.5
	baz=154						
U38A	Gravette	2.45	84		Pn	01 13 40.0	+0.8
HHAR	Hobbs	2.81	88		Pn	01 13 45.4	+1.4
KSU1	Kansas State U	2.93	12	Pn	Pn	01 13 45.8	+0.2
W39A	Magazine	3.13	108	Pn	Pn	01 13 48.3	-0.2
CBKS	Cedar Bluff	3.16	325		Sb	01 14 36.8	+2.7
MIAR	Mount Ida	3.56	117		Pn	01 13 53.7	-0.7
MIAR					LR	01 14 51.5	
MIAR	Mount Ida	3.56	117	P	Pn	01 13 55.1	+0.7
	baz=300						
S39A	Bolivar	3.58	65	Pn	Pn	01 13 55.0	+0.3
S39A				IAmb_Lg		01 14 59.0	
	comp=Z,13nm,0.7s						
Z38A	Mt. Pleasant	3.58	145	Pn	Pn	01 13 55.1	+0.4
Z38A				IAmb_Lg		01 14 56.8	
	comp=Z,24nm,0.7s						
U40A	Yellville	3.69	87	Pn	Pn	01 13 54.3	-1.8
AMTX	Amarillo	3.73	250	Pn	Pn	01 13 57.2	+0.4
AMTX				IAmb_Lg		01 15 01.6	
	comp=Z,21nm,0.8s						
ABTX	Abilene, Hawle	4.05	208	Pn	Pn	01 14 01.0	-0.2
X40A	Basin Creek Fa	4.13	114	Pn	Pn	01 14 01.1	-1.1
X40A				IAmb_Lg		01 15 11.9	
	comp=Z,9.9nm,0.8s						
MGMO	Mountain Grove	4.24	76	Pn	Pn	01 14 02.8	-0.9
MGMO				IAmb_Lg		01 15 16.3	
	comp=Z,16nm,0.8s						
WHAR	Wooly Hollow	4.28	101	Pn	Pn	01 14 04.7	+0.5
WHAR					LR	01 15 12.5	
FCAR	Ozark Folk Cen	4.30	93	Pn	Pn	01 14 03.5	-1.1
P38A	Dawn	4.56	41	Pn	Pn	01 14 07.9	-0.3
P38A					LR	01 15 22.3	
P38A				IAmb_Lg		01 15 22.4	
	comp=Z,12nm,1.0s						
R40A	Maddies Statio	4.59	62	Pn	Pn	01 14 08.4	0.0
KSCO	Kaye Shedlock'	4.98	305	Pn	Pn	01 14 14.5	+0.5
KSCO				IAmb_Lg		01 15 48.7	
	comp=Z,15nm,0.9s						
T42A	Van Buren	5.15	79	IAmb_Lg		01 15 39.2	
	comp=Z,8.6nm,1.0s						
CCM	Cathedral Cave	5.25	68	Pn	Pn	01 14 17.8	+0.2
CCM				IAmb_Lg		01 15 57.8	
	comp=Z,15nm,1.0s						
P40A	Paris	5.37	51	IAmb_Lg		01 15 47.8	
	comp=Z,24nm,1.1s						

PBMO	**Poplar Bluff**	**5.65**	**82**	IAmb_Lg		01 16 01.1	
	comp=Z,17nm,0.7s						
T25A	**Trinidad**	**5.69**	**281**	Pn	Pn	01 14 23.9	0.0
L34A	**Svendsen Farm,**	**5.78**	**8**	IAmb_Lg		01 16 13.2	
	comp=Z,18nm,0.8s						
FVM	**French Village**	**5.85**	**71**	IAmb_Lg		01 16 05.0	
	comp=Z,20nm,0.7s						
JCT	**Junction City**	**6.08**	**200**	IAmb_Lg		01 16 21.9	
	comp=Z,8.0nm,0.7s						
W45A	**Hickory Valley**	**6.78**	**97**	IAmb_Lg		01 16 50.3	
	comp=Z,16nm,0.7s						

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*DJA **27** 01:19:52.1±0.3, 8°S±4°×12°1E±°, h10km, M3.5/9, MLv3.5/9*

*IDC **27** 01:20:01.7±3.4, 8°.65S×121°.78E, h146km±32km, mb3.2/1, mb1 3.2/5, mb1mx2.9/34, mbtmp3.5/5, Error ellipse: s-maj=91.5km s-min=27.5km az=63.0*

ISC 27 01:19:53.1±1.1**, 8°.49S**±0°.07×**121°.46E**±0°.06**, h35**km**, n15,** σ**2^{s}30**/14**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EDFI	**Ende, Flores**	**0.34**	**140**	P	**Pn**	**01 20 00.9**	**-0.8**
MMRI	**Maumere**	**0.78**	**101**	P	**Pn**	**01 20 07.8**	**+0.2**
BASI	**Baing, Sumba**	**1.93**	**207**	P	**Pn**	**01 20 24.2**	**+0.7**
WBSI	**Waikabubak, Su**	**2.35**	**241**	P	**Pn**	**01 20 29.5**	**+0.3**
BSSI	**Bau Bau, Buton**	**2.52**	**337**	P	**Pn**	**01 20 32.3**	**+0.7**
BATI	**Baumata**	**2.76**	**128**	P	Pn	01 20 41.6	+6.7
	14nm,0.3s,baz=288,slow=2.7,SNR=13						
BATI				S	Sn	01 21 20.1	+13
	12nm,0.3s,baz=337,slow=23,SNR=7.5						
BATI	**Baumata**	**2.76**	**128**	P	**Pn**	**01 20 37.9**	**+3.0**
SOEI	**Soe**	**3.04**	**115**	P	**Pn**	**01 20 43.5**	**+4.7**
BKSI	**Bulukumba**	**3.42**	**337**	P	**Pn**	**01 20 45.7**	**+1.8**
PLAI	**Plampang**	**3.66**	**264**	P	**Pn**	**01 20 47.5**	**+0.2**
TWSI	**Taliwang, Sumb**	**4.54**	**267**	P	**Pn**	**01 21 00.7**	**+1.4**
FITZ	**Fitzroy Crossi**	**10.38**	**157**	P	**Pn**	**01 22 23.1**	**+3.6**
	0.4nm,0.3s,baz=354,slow=11,SNR=3.7						
WRA	**Warramunga Arr**	**16.88**	**134**	P	**Pn**	**01 23 45.4**	**-1.4**
	0.2nm,0.3s,baz=309,slow=14,SNR=7.9						
WRA				S	Sn	01 26 45.0	-8.4
	0.0nm,0.3s,baz=307,slow=20,SNR=4.9						
ASAR	**Alice Springs**	**19.23**	**143**	P	**P**	**01 24 13.2**	**-1.3**
	0.1nm,0.3s,baz=314,slow=10,SNR=2.3						
SONM	**Songino Array**	**57.64**	**348**	P	**P**	**01 29 37.8**	**-2.1**
	0.4nm,0.5s,baz=169,slow=8.2,SNR=4.0						

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*IDC **27** 01:20:52.1±1.0, 8°.56N×71°.02W, h0km, mb3.6/4, mb1 4.0/5, mb1mx3.6/32, mbtmp3.7/5, ML2.7/1, MS2.9/1, Ms1 2.9/1, ms1mx2.4/31, Error ellipse: s-maj=23.5km s-min=5.8km az=109.0*

*FUNV **27** 01:20:54.5, 8°.45N×71°.42W, h2km, MW3.7*

ISC 27 01:20:54.2±1.1**, 8°.47N**±0°.03×**71°.40W**±0°.02**, h10**km±8km**, n42,** σ**1^{s}69**/65**, mb3.9**/4**, 2C-1D, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	**Socops**	**0.57**	**109**	*e*P	**Pg**	**01 21 05.7**	**+0.4**
SOCV				*e*S	**Sg**	**01 21 12.7**	**0.0**
SOCV	**Socops**	**0.57**	**109**	⇑*e*P	**Pg**	**01 21 05.7**	**+0.4**
SOCV				*e*S	**Sg**	**01 21 13.7**	**+0.9**
SDV	**Santo Domingo**	**0.86**	**61**	*e*P	**Pg**	**01 21 11.1**	**+0.1**
SDV				*e*S	**Sg**	**01 21 22.8**	**+0.6**
CAPV	**Capacho**	**1.09**	**237**	⇓*e*P	**Pg**	**01 21 14.7**	**-0.5**
CAPV				*e*S	**Sb**	**01 21 29.6**	**-0.1**
PAMC	**Pamplona, Colo**	**1.71**	**229**	*e*P	**Pg**	**01 21 26.5**	**-0.6**
PAMC				*e*S	**Sg**	**01 21 50.4**	**+1.2**
OCAC	**Ocana**	**1.91**	**263**	*e*P	**Pb**	**01 21 28.6**	**-0.7**
OCAC				*e*S	**Sb**	**01 21 54.1**	**+0.7**
MCQV	**Machiques**	**1.93**	**325**	⇑*i*P	**Pn**	**01 21 28.3**	**+1.1**
MCQV				*e*S	**Sn**	**01 21 51.9**	**+0.3**
LL6C	**La Loma 6 Bece**	**2.24**	**304**	*e*P	**Pn**	**01 21 32.3**	**+0.9**
LL6C				*e*S	**Sn**	**01 22 00.5**	**+1.4**
ELOV	**Elorza**	**2.39**	**127**	*e*P	**Pb**	**01 21 36.8**	**-0.7**
ELOV				*e*S	**Sb**	**01 22 07.8**	**+0.7**
ELOV	**Elorza**	**2.39**	**127**	*e*P	**Pn**	**01 21 33.9**	**+0.4**
ELOV				*e*S	**Sn**	**01 22 03.7**	**+0.7**
DABV	**Dabajuro**	**2.55**	**17**	*e*P	**Pn**	**01 21 36.9**	**+1.1**
DABV				*e*S	**Sn**	**01 22 07.6**	**+0.7**
BARC	**Barichara**	**2.57**	**224**	*e*P	**Pg**	**01 21 42.1**	**-1.4**
BARC				*e*S	**Sn**	**01 22 07.1**	**-0.6**
BRRC	**Barranca, Sant**	**2.66**	**240**	*e*P	**Pb**	**01 21 39.6**	**-2.4**
BRRC				*e*S	**Sn**	**01 22 10.8**	**+1.2**
SMLC	**San Martn de**	**2.66**	**277**	*e*S	**Sb**	**01 22 14.1**	**-0.8**
SIQV	**Siquisique**	**2.68**	**36**	*e*P	**Pn**	**01 21 38.7**	**+1.2**
RUSC	**La Rusia**	**3.06**	**213**	*e*P	**Pn**	**01 21 45.8**	**+2.7**
RUSC				*e*S	**Sb**	**01 22 23.0**	**-3.7**
ARGC	**Ariguani, Magd**	**3.13**	**296**	*e*P	**Pn**	**01 21 44.7**	**+1.0**
ARGC				*e*S	**Sn**	**01 22 18.6**	**-2.7**
BAUV	**El Baul**	**3.35**	**82**	*e*P	**Pn**	**01 21 47.6**	**+0.8**
BAUV				*e*S	**Sn**	**01 22 26.4**	**-0.2**
PTBC	**PUERTO BERRIO,**	**3.59**	**238**	*e*P	**Pn**	**01 21 50.8**	**+0.8**
PTBC				*e*S	**Sn**	**01 22 34.6**	**+2.1**
JACV	**Jacura**	**3.63**	**44**	*e*P	**Pn**	**01 21 50.9**	**+0.2**
MONV	**Montecano**	**3.74**	**22**	*e*P	**Pn**	**01 21 52.9**	**+0.8**
TURV	**Turiamo**	**4.03**	**60**	*e*P	**Pn**	**01 21 56.7**	**+0.7**
BENV	**Beln**	**4.04**	**68**	*e*P	**Pn**	**01 21 56.8**	**+0.6**
MOTC	**Monteria, Cord**	**4.23**	**275**	*e*P	**Pn**	**01 22 00.5**	**+1.7**
MOTC				*e*S	**Sn**	**01 22 48.8**	**+0.4**
PTGC	**Puerto Gaitan,**	**4.30**	**190**	*e*P	**Pn**	**01 22 01.9**	**+2.0**
PTGC				*e*S	**Sn**	**01 22 49.7**	**-0.4**
NORC	**Norcasia**	**4.49**	**230**	*e*P	**Pn**	**01 22 04.7**	**+2.2**
NORC				*e*S	**Sn**	**01 22 57.3**	**+2.4**
ROSC	**El Rosal**	**4.63**	**219**	Pn	**Pn**	**01 22 07.9**	**+3.3**
	6.1nm,0.3s,baz=269,slow=21,SNR=13						
ROSC				Sn	**Sb**	**01 23 07.4**	**-4.4**
	9.6nm,0.3s,baz=18,slow=23,SNR=4.0						
HELC	**Santa Helena**	**4.68**	**241**	*e*P	**Pn**	**01 22 07.2**	**+1.9**
HELC				*e*S	**Sn**	**01 23 04.0**	**+4.1**
PAYV	**Puerto Ayacuch**	**4.79**	**129**	*e*P	**Pn**	**01 22 06.1**	**-0.4**
CARV	**Caracas**	**4.85**	**65**	*e*P	**Pn**	**01 22 07.6**	**+0.1**
FUNV	**FUNVISIS**	**4.94**	**66**	*e*P	**Pn**	**01 22 09.1**	**+0.3**
GUY2C	**Guyana, Caldas**	**5.09**	**231**	*e*P	**Pn**	**01 22 13.6**	**+2.5**
MERV	**Las Mercedes**	**5.10**	**81**	*e*P	**Pn**	**01 22 10.8**	**0.0**
BIRV	**Birongo**	**5.44**	**68**	*e*P	**Pn**	**01 22 15.7**	**+0.3**
BIRV				*e*S	**Sn**	**01 23 13.5**	**-4.7**
ANIL	**Santa Ana**	**5.61**	**225**	*e*P	**Pn**	**01 22 20.9**	**+2.9**
ANIL				*e*S	**Sn**	**01 23 24.4**	**+1.7**
ORTC	**Ortega, Tolima**	**5.93**	**220**	*e*P	**Pn**	**01 22 24.3**	**+2.1**
ATAH	**Atahualpa**	**17.00**	**204**	LR	LR	01 32 05.2	
	comp=Z,35nm,19.8s,baz=21,slow=39						
TXAR	**Lajitas Array**	**36.71**	**309**	P	**P**	**01 28 02.0**	**+0.2**
	0.2nm,0.6s,baz=144,slow=7.8,SNR=2.2						
PDAR	**Pinedale Array**	**47.80**	**322**	P	**P**	**01 29 33.0**	**+0.8**
	0.8nm,0.4s,baz=130,slow=11,SNR=10						
PLCA	**Paso Flores**	**48.96**	**179**	P	**P**	**01 29 41.4**	**+0.4**
	1.6nm,1.0s,baz=28,slow=15,SNR=2.4						
YKA	**Yellowknife Ar**	**62.33**	**339**	P	**P**	**01 31 15.9**	**-0.8**
	0.3nm,0.5s,baz=131,slow=6.5,SNR=2.1						
WRA	**Warramunga Arr**	**152.61**	**243**	PKPbc	**PKPbc**	**01 40 51.7**	**-0.5**
	0.3nm,0.6s,baz=107,slow=2.6,SNR=1.6						

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*ANF **27** 01:21:26.9±0.2, 33°.77N×116°.11W, h17km±1km, ML2.9/26, Error ellipse: s-maj=1.4km s-min=1.2km az=116.0*

*NEIC **27** 01:21:27.1±1.2, 33°.75N±0°.04×116°.05W±0°.04, h7km±9km, Error ellipse: s-maj=5.8km s-min=4.5km az=155.0*

*PAS **27** 01:21:28.0±1.3, 33°.79N±0°.03×116°.10W±0°.04, h7km±7km, ML3.0/25, ML2.8/60(NEIC), Error ellipse: s-maj=5.4km s-min=3.3km az=124.0*

ISC 27 01:21:27.0±1.0**, 33°.75N**±0°.02×**116°.07W**±0°.02**, h6**km±10km**, n57,** σ**0^{s}71**/82**, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BELC	**Belle Mtn. Jos**	**0.26**	**14**	P	**Pg**	**01 21 32.4**	**+0.3**
	baz=203,SNR=1000						
BELC				S	**Sg**	**01 21 36.0**	**+0.4**
	baz=203						
PFO	**Pinyon Flats O**	**0.35**	**247**	P	**Pg**	**01 21 34.4**	**+0.6**
	baz=59,SNR=283						
PFO				S	**Sg**	**01 21 39.2**	**+0.8**
	baz=59						
PFO	**Pinyon Flats O**	**0.35**	**247**		**Pg**	**01 21 34.4**	**+0.6**
PFO				IAML		01 21 39.5	
	874nm,0.2s						
GVDA	**Garner Valley**	**0.51**	**261**		**Pg**	**01 21 37.1**	**+0.4**
GVDA					**Sg**	**01 21 43.7**	**+0.3**
BC3	**Big Chuckawall**	**0.53**	**100**	P	**Pb**	**01 21 38.8**	**+0.1**
	baz=284,SNR=307						
BC3				S	**Sb**	**01 21 46.6**	**0.0**
	baz=284						
SWSC	**Sam W. Stewart**	**0.83**	**164**	P	**Pb**	**01 21 43.5**	**-0.3**
	baz=343,SNR=19						
SWSC				S	**Sb**	**01 21 55.2**	**-0.1**
	baz=343						
BBRC	**Big Bear Solar**	**0.87**	**306**	P	**Pg**	**01 21 43.3**	**-0.4**
	baz=124						
BBRC				S	**Sg**	**01 21 54.5**	**-0.5**
	baz=124						
IRM	**Iron Mountain**	**0.87**	**62**	P	**Pb**	**01 21 44.3**	**-0.3**
	baz=246,SNR=141						
IRM				S	**Sb**	**01 21 55.7**	**-0.7**
	baz=246						
MONP2	**Monument Peak**	**0.90**	**199**	P	**Pb**	**01 21 45.1**	**0.0**
	baz=16,SNR=33						
MONP2				S	**Sb**	**01 21 57.8**	**+0.3**
	baz=16						
MURC	**Murrieta**	**0.95**	**261**	P	**Pg**	**01 21 44.9**	**-0.3**
	baz=78,SNR=59						
MURC				S	**Sg**	**01 21 56.8**	**-0.7**
	baz=78						
GMRC	**Granite Mounta**	**1.09**	**18**	P	**Pg**	**01 21 47.4**	**-0.4**
	baz=200,SNR=86						
GMRC				S	**Sg**	**01 22 01.4**	**-0.6**
	baz=200						
IKP	**In-Ko-Pah, Jac**	**1.10**	**182**	P	**Pg**	**01 21 47.7**	**-0.3**
	baz=0.3						
IKP				S	**Sg**	**01 22 01.9**	**-0.3**
	baz=0.3						
HEC	**Hector,Ludlow**	**1.10**	**349**	P	**Pg**	**01 21 47.6**	**-0.5**
	baz=170,SNR=28						
HEC				S	**Sg**	**01 22 01.4**	**-0.9**
	baz=170						
RMX	**La Rumorosa**	**1.14**	**180**	Pn	**Pn**	**01 21 51.3**	**+1.7**
RMX				IAML		01 22 04.7	
	comp=E,170nm,0.2s						
BAR	**Barrett**	**1.18**	**205**	Pg	**Pg**	**01 21 49.4**	**-0.1**
BAR				IAML		01 22 07.2	
	comp=E,229nm,0.3s						
BAR				IAML		01 22 07.7	
	comp=N,245nm,0.2s						
109C	**Camp Elliot, M**	**1.22**	**225**	Pn	**Pb**	**01 21 49.4**	**-1.0**
	baz=42,SNR=47						
109C				Pg	**Pn**	**01 21 50.2**	**-0.3**
	baz=42						
109C				S	**Sg**	**01 22 05.8**	**-0.3**
	baz=42						
109C	**Camp Elliot, M**	**1.22**	**225**	Pn	**Pb**	**01 21 49.4**	**-1.0**
GLA	**Glamis**	**1.25**	**123**	Pn	**Pb**	**01 21 50.2**	**-0.9**
	baz=305						
GLA				Pg	**Pg**	**01 21 52.0**	**+0.9**
	baz=305						
GLA	**Glamis**	**1.25**	**123**		**Pb**	**01 21 50.3**	**-0.7**
RRX	**Edison Barstow**	**1.36**	**326**	Pg	**Pn**	**01 21 52.5**	**0.0**
	baz=146,SNR=9.5						
RRX				Sg	**Sb**	**01 22 10.2**	**-0.3**
	baz=146						
BFSC	**Mount Baldy Ra**	**1.40**	**291**	Pg	**Pn**	**01 21 52.6**	**-0.6**
	baz=109,SNR=23						
BFSC				Sb	**Sb**	**01 22 10.4**	**-1.5**
	baz=109						
CBX	**Cerro Bola**	**1.52**	**199**		**Pn**	**01 21 54.8**	**+0.1**
CBX				IAML		01 22 17.1	
	comp=N,110nm,0.4s						
CBX				IAML		01 22 19.9	
	comp=E,120nm,0.5s						
NEE2	**Needles Airpor**	**1.58**	**49**	Pg	**Pb**	**01 21 56.7**	**+0.2**
	baz=232						
NEE2				Sb	**Sg**	**01 22 17.3**	**-0.3**
	baz=232						
GSC	**Goldstone, Bar**	**1.66**	**339**	Pg	**Pb**	**01 21 57.9**	**-0.1**
	baz=159,SNR=23						
GSC				Sb	**Sb**	**01 22 19.2**	**-0.1**
	baz=159						
GSC	**Goldstone, Bar**	**1.66**	**339**		**Pn**	**01 21 55.7**	**-1.0**
GSC				IAML		01 22 20.6	
	comp=E,108nm,0.4s						
GSC				IAML		01 22 23.3	
	comp=N,90nm,0.4s						
TUQ	**Turquoise Moun**	**1.69**	**4**	Pg	**Pb**	**01 21 58.5**	**0.0**
	baz=185						
TUQ				Sb	**Sb**	**01 22 19.9**	**-0.2**
	baz=185						
PDMCI	**Parker Dam,Lak**	**1.70**	**70**	Sb	**Sg**	**01 22 20.8**	**-0.7**
	baz=253						
MWC	**Mount Wilson**	**1.71**	**287**		**Pn**	**01 21 57.7**	**+0.2**
PASC	**Pasadena Art C**	**1.81**	**284**		**Pn**	**01 21 59.2**	**+0.6**
PASC				IAML		01 22 23.0	
	comp=N,92nm,0.6s						
PASC				IAML		01 22 24.9	
	comp=E,88nm,0.5s						
DECC	**Green Verdugo**	**1.94**	**286**	Pb	**Pb**	**01 22 02.1**	**-0.7**
	baz=103						
DECC				Sb	**Sn**	**01 22 26.6**	**+1.4**
	baz=103						
EDW2	**Edwards Air Fo**	**1.95**	**306**	Pg	**Pb**	**01 22 02.6**	**-0.3**
	baz=124,SNR=25						
EDW2				Sb	**Sb**	**01 22 27.1**	**-0.4**
	baz=124						
CIS	**Catalina Islan**	**1.98**	**261**	Sb	**Sb**	**01 22 28.1**	**-0.4**
	baz=78						
SHOC	**Shoshone, Teco**	**2.15**	**356**	Pg	**Pb**	**01 22 07.3**	**+0.9**
	baz=176						
SHOC				Sb	**Sb**	**01 22 34.8**	**+1.5**
	baz=176						
113A	**Mohawk Valley,**	**2.17**	**116**	Pn	**Pn**	**01 22 02.3**	**-1.2**
LRMC	**Laurel Mtn Rad**	**2.18**	**323**	Pg	**Pb**	**01 22 07.5**	**+0.6**
	baz=142,SNR=22						
LRMC				Sb	**Sb**	**01 22 35.4**	**+1.3**
	baz=142						
W13A	**Hualapai Mount**	**2.25**	**53**	Pn	**Pn**	**01 22 03.9**	**-1.1**
W13A				IAML		01 22 40.0	
	comp=E,60nm,0.4s						
W13A				IAML		01 22 40.7	
	comp=N,51nm,0.4s						
QSM	**Queen of Sheba**	**2.31**	**344**	Pn	**Pn**	**01 22 04.6**	**-0.9**
QSM				IAML		01 22 40.0	
	comp=N,52nm,0.3s						
QSM				IAML		01 22 40.6	
	comp=E,58nm,0.3s						
GWY	**Greenwater Val**	**2.48**	**349**	Pn	**Pn**	**01 22 07.4**	**-0.6**
Y14A	**Wickenburg**	**2.56**	**85**		**Pn**	**01 22 09.3**	**+0.3**
Y14A				IAML		01 22 52.6	
	comp=E,39nm,0.4s						
MPMC	**Manual Prospec**	**2.58**	**334**	P	**Pn**	**01 22 08.2**	**-1.3**
	baz=153						
MPMC				Sb	**Sb**	**01 22 47.4**	**+1.6**
	baz=153						
ARVC	**Arvin**	**2.66**	**302**	Sb	**Sb**	**01 22 48.9**	**+1.0**
	baz=120						
ISA	**Isabella, Lake**	**2.75**	**315**	Pn	**Pn**	**01 22 11.7**	**+0.1**
SHPR	**Sheep Range**	**2.85**	**15**	Pn	**Pn**	**01 22 13.0**	**-0.1**
214A	**Organ Pipe Nat**	**3.28**	**122**	Pn	**Pn**	**01 22 17.6**	**-1.3**
LCH	**Last Change Ra**	**3.70**	**340**		**Pn**	**01 22 23.8**	**-1.0**
PRN	**Pahroc Range**	**3.74**	**13**	Pn	**Pn**	**01 22 25.0**	**-0.3**
PRN				IAML		01 23 29.4	
	comp=E,14nm,0.9s						
PRN				IAML		01 23 52.5	
	comp=N,14nm,1.9s						
X16A	**Lo Mia Camp, P**	**3.90**	**79**		**Pn**	**01 22 27.4**	**-0.2**
X16A				IAML		01 23 35.4	
	comp=E,11nm,0.7s						
X16A				IAML		01 23 47.8	
	comp=N,9.7nm,3.9s						
LCMT	**Little Creek M**	**3.99**	**35**		**Pn**	**01 22 28.7**	**-0.1**
U15A	**North Rim**	**4.09**	**48**		**Pn**	**01 22 30.2**	**-0.1**
U15A				IAML		01 23 46.3	
	comp=N,10nm,2.7s						
U15A				IAML		01 24 24.5	
	comp=E,9.6nm,4.9s						
KNB	**Kanab**	**4.21**	**38**		**Pn**	**01 22 31.9**	**+0.1**
KNB				IAML		01 23 44.6	
	comp=N,10nm,1.8s						
KNB				IAML		01 23 48.9	
	comp=E,9.6nm,2.1s						
WUAZ	**Wupatki**	**4.26**	**64**	Pn	**Pn**	**01 22 33.5**	**+1.0**
CCUT	**Cedar City**	**4.39**	**29**	Pn	**Pn**	**01 22 34.9**	**+0.5**
CCUT				IAML		01 23 32.6	
	comp=E,8.8nm,5.0s						
CCUT				IAML		01 24 20.1	
	comp=N,6.9nm,4.8s						
MDPB	**Devils Postpil**	**4.58**	**329**		**Pn**	**01 22 36.1**	**-0.9**
MDPB				IAML		01 25 01.6	
	comp=E,11nm,0.9s						
TUC	**Tucson**	**4.67**	**106**	Pn	**Pn**	**01 22 38.5**	**+0.4**
TUC				IAML		01 24 15.5	
	comp=E,5.4nm,4.9s						
PSUT	**Pine Spring**	**5.10**	**20**	Pn	**Pn**	**01 22 44.0**	**-0.1**
SPR3	**Spring Creek 3**	**5.42**	**15**	Pn	**Pn**	**01 22 48.4**	**-0.2**
MSU	**Marysvale**	**5.70**	**32**	Pn	**Pn**	**01 22 53.0**	**+0.6**

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*NOU **27** 01:36:50.9, 22°.32S×170°.21E, h0km, ML5.2/16, Southeast of Loyalty Islands*

*NEIC **27** 01:36:51.0±1.7, 22°.52S±0°.10×170°.46E±0°.08, h37km±5km, mb4.7/22, Error ellipse: s-maj=14.7km s-min=10.7km az=166.0*

*IDC **27** 01:36:51.5±2.8, 22°.38S×170°.53E, h51km±22km, mb4.2/16, mb1 4.4/18, mb1mx4.2/35, mbtmp4.5/18, ML5.4/2, MS3.7/16, Ms1 3.7/16, ms1mx3.6/25, Error ellipse: s-maj=25.9km s-min=14.6km az=163.0*

ISC 27 01:36:49.5±0.5**, 22°.53S**±0°.08×**170°.55E**±0°.06**, h33**km**, n170,** σ**0^{s}91**/159**, mb4.8**/40**, MS3.8**/13**, 16C-12D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**2.56**	**294**	Pn	**Pn**	**01 37 27.6**	**-1.1**
MARNC	**Mare, Loyalty**	**2.56**	**294**	P	**Pn**	**01 37 27.9**	**-0.8**
PINNC	**Pines Island,**	**2.87**	**268**		**Pn**	**01 37 33.2**	**+0.3**
PINNC	**Pines Island,**	**2.87**	**268**	P	**Pn**	**01 37 33.3**	**+0.4**
YATNC	**Mamie plateau,**	**3.42**	**277**	P	**Pn**	**01 37 39.9**	**-0.6**
OUENC	**Ouen Island, N**	**3.43**	**271**	Pn	**Pn**	**01 37 40.2**	**-0.5**
OUENC	**Ouen Island, N**	**3.43**	**271**	P	**Pn**	**01 37 41.5**	**+0.8**
LIFNC	**LIFOU**	**3.54**	**299**		**Pn**	**01 37 41.0**	**-1.1**
LIFNC	**LIFOU**	**3.54**	**299**	P	**Pn**	**01 37 41.8**	**-0.3**
ONTNC	**Ouen Toro**	**3.79**	**273**	Pn	**Pn**	**01 37 45.5**	**-0.2**
ONTNC	**Ouen Toro**	**3.79**	**273**	P	**Pn**	**01 37 46.8**	**+1.1**
DZM	**Mont Dzumac**	**3.83**	**276**	*e*Pn	**Pn**	**01 37 46.3**	**+0.1**
	119nm,0.2s						
DZM				*e*Sn	**Sn**	**01 38 28.2**	**-2.0**
	171nm,0.2s						
DZM	**Mont Dzumac**	**3.83**	**276**	P	**Pn**	**01 37 46.5**	**+0.2**
	40nm,0.3s,baz=122,slow=12,SNR=1071						
DZM				S	**Sn**	**01 38 30.9**	**+0.8**
	78nm,0.3s,baz=51,slow=18,SNR=13						
DZM				LR	LR	01 39 19.8	
	comp=Z,1μm,19.0s,baz=96,slow=39						
DZM	**Mont Dzumac**	**3.83**	**276**	Pn	**Pn**	**01 37 46.0**	**-0.2**
DZM	**Mont Dzumac**	**3.83**	**276**	P	**Pn**	**01 37 46.9**	**+0.7**
NOUC	**Port Laguerre**	**3.95**	**275**	P	**Pn**	**01 37 48.4**	**+0.5**
RTV	**Rentapao**	**5.12**	**337**	P	**Pn**	**01 38 04.3**	**+0.4**
DVP	**Devils Point**	**5.27**	**335**	P	**Pn**	**01 38 05.8**	**-0.2**
KOUNC	**Koumac, New Ca**	**6.15**	**287**	P	**Pn**	**01 38 19.3**	**+1.2**
SANVU	**Saraoutou**	**7.72**	**335**		**Pn**	**01 38 39.8**	**+0.1**
SANVU	**Saraoutou**	**7.72**	**335**	P	**Pn**	**01 38 40.5**	**+0.8**
MSVF	**Nonsavu**	**8.51**	**57**	P	**Pn**	**01 38 52.9**	**+2.3**
	4.0nm,0.3s,baz=223,slow=11,SNR=20						
MSVF	**Nonsavu**	**8.51**	**57**	Pn	**Pn**	**01 38 52.2**	**+1.6**
RAO	**Raoul Island**	**12.35**	**125**	LR	LR	01 43 43.3	
	comp=Z,416nm,18.9s,baz=23,slow=33						
HNR	**Honiara**	**16.52**	**320**	LR	LR	01 45 36.0	
	comp=Z,81nm,20.9s,baz=138,slow=32						
URZ	**Urewera**	**16.66**	**162**	LR	LR	01 46 04.4	
	comp=Z,407nm,18.7s,baz=31,slow=33						
CTA	**Charters Tower**	**22.76**	**272**	P	**P**	**01 41 50.3**	**+1.1**
	6.0nm,0.6s,baz=97,slow=12,SNR=6.9						
CTAO	**Charters Tower**	**22.76**	**272**	P	**P**	**01 41 50.1**	**+1.0**
PMG	**Port Moresby**	**25.95**	**296**	P	**P**	**01 42 19.8**	**+0.7**
	7.9nm,0.2s,baz=94,slow=6.8,SNR=4.2						
PMG				LR	LR	01 51 33.1	
	comp=Z,172nm,19.9s,baz=98,slow=34						
STKA	**Stephens Creek**	**27.31**	**244**	P	**P**	**01 42 32.7**	**+1.3**
	2.0nm,0.7s,baz=86,slow=2.4,SNR=3.6						
STKA				LR	LR	01 52 56.6	
	comp=Z,166nm,18.1s,baz=61,slow=35						
STKA	**Stephens Creek**	**27.31**	**244**	P	**P**	**01 42 32.0**	**+0.7**
COEN	**Coen**	**27.32**	**283**	P	**P**	**01 42 30.3**	**-1.2**
COEN				IAmb	IAmb	01 42 56.5	
	comp=Z,9.7nm,0.9s						
RAR	**Rarotonga**	**27.55**	**93**	LR	LR	01 51 20.9	
	comp=Z,66nm,20.9s,baz=275,slow=32						
AS31	**Alice Springs**	**33.67**	**261**	P	**P**	**01 43 27.5**	**-0.1**
ASAR	**Alice Springs**	**33.67**	**261**	P	**P**	**01 43 28.1**	**+0.5**
	comp=Z,5.6nm,0.6s,baz=76,slow=9.6,SNR=77						
ASAR				LR	LR	01 57 21.0	
	comp=Z,148nm,19.0s,baz=100,slow=36						
ASAR	**Alice Springs**	**33.67**	**261**	P	**P**	**01 43 27.8**	**+0.2**
WRA	**Warramunga Arr**	**33.80**	**267**	P	**P**	**01 43 27.8**	**-1.0**
	comp=Z,1.5nm,0.7s,baz=103,slow=7.9,SNR=16						
WRA				LR	LR	01 57 22.0	
	comp=Z,206nm,18.4s,baz=85,slow=36						
PPT2	**Papeete2**	**37.70**	**90**	*e*LR	LR	01 54 15.7	
	comp=Z,84nm,27.0s						
FAKI	**Fak Fak**	**41.93**	**292**	P	**P**	**01 44 37.4**	**0.0**
	comp=Z,13nm,1.1s						
FAKI	**Fak Fak**	**41.93**	**292**	P	**P**	**01 44 36.5**	**-1.0**
FAKI				IAmb	IAmb	01 44 38.4	
	comp=Z,24nm,1.3s						
SIJI	**Sorong**	**43.84**	**294**	P	**P**	**01 44 52.5**	**-0.4**
	comp=Z,15nm,0.7s,baz=80,slow=11,SNR=7.8						
SWI	**Sorong**	**43.84**	**294**	P	**P**	**01 44 53.3**	**+0.4**
	comp=Z,35nm,0.7s						
SANI	**Sanana**	**47.79**	**289**	P	**P**	**01 45 24.7**	**+0.6**
	comp=Z,36nm,0.9s						
LUWI	**Luwuk**	**51.09**	**288**	P	**P**	**01 45 49.2**	**0.0**
BKSI	**Bulukumba**	**51.56**	**282**	P	**P**	**01 45 53.4**	**+0.6**
	comp=Z,9.8nm,0.8s						
GTOI	**Gorontalo**	**51.69**	**290**	P	**P**	**01 45 55.5**	**+1.8**
	comp=Z,6.7nm,0.8s						
PLAI	**Plampang**	**52.34**	**276**	P	**P**	**01 45 59.6**	**+0.9**
	comp=Z,11nm,0.8s						
TWSI	**Taliwang, Sumb**	**53.20**	**276**	P	**P**	**01 46 05.7**	**+0.7**
	comp=Z,12nm,0.8s						
TOLI2	**Tolitoli**	**53.86**	**289**	P	**P**	**01 46 09.3**	**-0.6**
MPSI	**Mapaga**	**54.27**	**288**	P	**P**	**01 46 12.9**	**+0.1**
	comp=Z,8.5nm,0.9s						
IGBI	**Denpasar**	**54.77**	**275**	P	**P**	**01 46 17.7**	**+1.3**
	comp=Z,18nm,0.6s						
VNDA	**Vanda**	**55.20**	**182**	LR	LR	02 06 51.8	
	comp=Z,107nm,19.2s,baz=15,slow=32						
JAGI	**Jajag, Banyuwa**	**55.81**	**275**	P	**P**	**01 46 24.0**	**0.0**
	comp=Z,22nm,0.8s						
JAGI	**Jajag, Banyuwa**	**55.81**	**275**	P	**P**	**01 46 23.4**	**-0.6**
ABJI	**Asem Bagus**	**55.98**	**276**	P	**P**	**01 46 26.7**	**+1.5**
	comp=Z,19nm,0.4s						
MJAR	**Matsushiro Arr**	**66.22**	**332**	P	**P**	**01 47 32.9**	**-1.3**
	comp=Z,1.2nm,0.4s,baz=158,slow=7.7,SNR=2.1						
MJAR	**Matsushiro Arr**	**66.22**	**332**	IAmb	IAmb	01 47 37.0	
	comp=Z,5.3nm,1.1s						
QSPA	**South Pole Qui**	**67.54**	**180**	P	**P**	**01 47 43.0**	**+0.5**
QSPA				IAmb	IAmb	01 47 46.8	
	comp=Z,8.0nm,0.9s						
MNSI	**Mandailing Nat**	**72.77**	**278**	P	**P**	**01 48 15.0**	**-0.1**
	comp=Z,2μmcomp=Z,34nm,0.7s						
NJ2	**Nanjing**	**73.41**	**316**	*e*P	**P**	**01 48 21.0**	**+2.5**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
MAW	**Mawson**	**75.86**	**202**	P	**P**	**01 48 32.8**	**+0.6**
	comp=Z,1.8nm,0.8s,baz=112,slow=9.8,SNR=7.2						
MAW				LR	LR	02 17 16.1	
	comp=Z,22nm,21.8s,baz=67,slow=32						
PETK	**Petropavlovsk-**	**76.14**	**352**	P	**P**	**01 48 33.2**	**-0.7**
	comp=Z,2.7nm,0.8s,baz=194,slow=12,SNR=3.7						
PETK				LR	LR	02 14 57.6	
	comp=Z,47nm,20.5s,baz=128,slow=30						
CM31	**Chiang Mai Arr**	**80.96**	**294**	P	**P**	**01 49 01.7**	**+0.4**
CM31				IAmb	IAmb	01 49 04.2	
	comp=Z,15nm,1.1s						
CMAR	**Chiang Mai Arr**	**80.96**	**294**	P	**P**	**01 49 02.0**	**+0.8**
	comp=Z,6.1nm,0.7s,baz=136,slow=4.2,SNR=27						
CMAR	**Chiang Mai Arr**	**80.96**	**294**	P	**P**	**01 49 01.9**	**+0.6**
CHTO	**Chiang Mai**	**81.13**	**295**	P	**P**	**01 49 02.3**	**+0.2**
CHTO				IAmb	IAmb	01 49 04.8	
	comp=Z,12nm,0.8s						
HHC	**Hu-ho-hao-te**	**83.50**	**319**	*e*P	**P**	**01 49 17.0**	**+2.9**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,450nm,6.0s						
HIA	**Hailar**	**84.56**	**329**	P	**P**	**01 49 19.4**	**+0.2**
HIA				IAmb	IAmb	01 49 20.7	
	comp=Z,4.7nm,0.8s						
LZH	**Lanzhou**	**85.83**	**312**	⇓P	**P**	**01 49 27.3**	**+1.2**
LZH				pP	pP	01 49 36.5	+1.3
LZH				pmax	pmax		
	comp=Z,20nm,1.2s						
SNAA	**Sanae**	**85.94**	**182**	P	**P**	**01 49 25.3**	**-0.7**
SNAA	**Sanae**	**85.94**	**182**	P	**P**	**01 49 25.1**	**-0.9**
SEY	**Seymchan**	**86.38**	**352**	P	**P**	**01 49 25.6**	**-2.3**
	comp=Z,1.8nm,0.4s,baz=124,slow=6.5,SNR=4.6						

VNA3	Neumayer Olymp	86.48	180	P	P	01 49 27.7	-0.9
VNA2	Neumayer--Watz	86.79	181	P	P	01 49 29.7	-0.4
	baz=176,slow=4.2						
VNA1	Neumayer--Stat	87.07	180	P	P	01 49 30.6	-0.8
ISA	Isabella, Lake	88.61	50	P	P	01 49 39.8	+0.4
ISA				IAmb	IAmb	01 49 44.2	
	comp=Z,4.9nm,1.2s						
NVAR	Mina Array Bea	90.07	48	P	P	01 49 45.1	-1.3
	comp=Z,2.1nm,0.7s,baz=224,slow=7.6,SNR=12						
NVAR				LR	LR	02 24 12.8	
	comp=Z,79nm,18.6s,baz=270,slow=32						
NV11	Mina Array Sit	90.17	48	P	P	01 49 47.6	+0.8
NV11				IAmb	IAmb	01 49 49.7	
	comp=Z,3.8nm,0.9s						
ULN	Ulaanbaatar	90.22	323	P	P	01 49 46.5	-0.3
ULN				IAmb	IAmb	01 49 47.6	
	comp=Z,9.2nm,1.1s						
KVN	Kaiserville	90.51	48	P	P	01 49 49.2	+0.8
KVN				IAmb	IAmb	01 49 51.1	
	comp=Z,2.5nm,0.7s						
SONM	Songino Array	90.57	323	P	P	01 49 47.4	-1.0
	comp=Z,5.8nm,0.9s,baz=140,slow=4.9,SNR=32						
SONM	Songino Array	90.57	323	P	P	01 49 48.7	+0.3
SONM				IAmb	IAmb	01 49 49.1	
	comp=Z,5.8nm,1.0s						
NEA2	Nenana	92.28	16	P	P	01 49 58.4	+2.6
ILAR	Eielson Array	93.00	17	P	P	01 49 57.8	-1.3
	comp=Z,0.7nm,0.6s,baz=233,slow=5.0,SNR=9.2						
ANMO	Albuquerque	97.16	55	LR	LR	02 27 27.7	
	comp=Z,44nm,18.9s,baz=282,slow=31						
TXAR	Lajitas Array	97.26	61	P	P	01 50 19.0	-0.5
	comp=Z,0.1nm,0.6s,baz=226,slow=5.3,SNR=4.5						
TXAR				LR	LR	02 25 15.0	
	comp=Z,37nm,21.7s,baz=0.0,slow=30						
PDAR	Pinedale Array	97.95	47	P	P	01 50 22.5	0.0
	comp=Z,0.4nm,0.9s,baz=198,slow=2.4,SNR=2.3						
PDAR				LR	LR	02 31 18.6	
	comp=Z,35nm,18.1s,baz=277,slow=33						
WMQ	Urumqi	100.35	313	eP	Pdif	01 50 34.8	+1.8
AKTO	Aktyubinsk	121.30	316	PKP	PKPdf	01 55 37.0	-2.0
	comp=Z,1.1nm,0.7s,baz=271,slow=6.3,SNR=4.7						
SPITS	Spitsbergen Ar	122.98	354	PKP	PKPdf	01 55 40.1	-1.5
	comp=Z,5.7nm,0.6s,baz=90,slow=1.4,SNR=6.1						
PTGA	Pitinga	125.67	108	PKP	PKPdf	01 55 47.2	-1.3
	comp=Z,1.1nm,0.3s,baz=213,slow=2.9,SNR=4.9						
ARCES	ARCESS Array B	128.54	345	PKP	PKPdf	01 55 51.2	-1.1
	comp=Z,1.6nm,0.5s,baz=55,slow=3.1,SNR=15						
FINES	FINESS Array B	134.08	337	PKP	PKPdf	01 56 01.4	-1.6
	comp=Z,8.4nm,1.0s,baz=106,slow=6.2,SNR=5.4						
AKASG	Malin Array Be	138.85	323	PKP	PKPdf	01 56 11.6	-0.6
	comp=Z,0.7nm,0.5s,baz=179,slow=2.5,SNR=4.2						
HFS	Hagfors	139.05	343	PKhKP	PKPpre	01 56 08.6	
	comp=Z,4.3nm,0.8s,baz=78,slow=3.5,SNR=4.4						
ARCR	ARCALIA	143.43	320	⇑P	PKPbc	01 56 17.4	-0.4
KOLS	Kolonicke sedl	143.61	324	ePKP	PKPbc	01 56 18.0	-0.3
TRPA	Tarpa	143.92	323	⇑P	PKPbc	01 56 19.6	+0.4
CRVS	Cervenica-Dubn	144.06	325	ePKP	PKPbc	01 56 20.5	+0.8
ARR	Arges	144.10	318	⇑P	PKPdf	01 56 21.1	-0.8
HUMR	Humele	144.26	316	⇑P	PKPbc	01 56 20.3	-0.1
DRGR		144.55	321	⇓P	PKPbc	01 56 21.6	+0.2
LOT	Lotru	144.59	318	⇑P	PKPab	01 56 21.2	-0.2
LANS	Liptovska Anna	144.96	326	ePKP	PKPdf	01 56 23.6	+0.4
OKC	Ostrava-Krasne	145.17	328	ePKP	PKPbc	01 56 23.0	-0.1
GZR	Gura Zlata	145.23	319	⇑P	PKPbc	01 56 23.0	-0.5
BSEG	Bad Segeberg	145.26	339	ePKPab	PKPbc	01 56 22.9	-0.3
	baz=39,slow=3.4						
SIRR	Siria	145.44	321	⇑P	PKPab	01 56 24.8	+0.4
PSZ	Piszkesteto	145.49	324	⇑P	PKPdf	01 56 24.0	-0.3
PSZ	Piszkesteto	145.49	324		PKPbc	01 56 24.3	0.0
MORC	Moravsky Berou	145.50	329	⇑P	PKPdf	01 56 24.2	0.0
MORC	Moravsky Berou	145.50	329	ePKP	PKPdf	01 56 24.0	-0.2
MORC	Moravsky Berou	145.50	329		PKPdf	01 56 24.1	0.0
OSTC	Ostas	145.59	331	ePKP	PKPbc	01 56 24.4	-0.1
CHVC	Chvalec	145.63	331	ePKP	PKPbc	01 56 24.7	+0.1
KRLC	Kraliky	145.66	330	ePKP	PKPdf	01 56 24.3	-0.1
DPC	Dobruska-Polom	145.68	330	ePKP	PKPab	01 56 25.0	-0.1
VYHS	Vyhne	145.69	326	ePKP	PKPab	01 56 25.2	0.0
HERR	Herculane	145.71	318	⇑P	PKPdf	01 56 24.8	+0.2
UPC	Upice	145.71	331	ePKP	PKPbc	01 56 25.0	+0.2
BZS	Buzias	145.81	320	⇑P	PKPdf	01 56 24.6	-0.1
KOLL	Kolacno	145.86	326	ePKP	PKPab	01 56 25.9	+0.1
JAVC	Velka Javorina	146.05	327	ePKP	PKPab	01 56 26.9	+0.3
MDVR	Moldovita	146.19	319	⇑P	PKPbc	01 56 26.7	+0.1
VTS	Vitosha	146.24	314	⇑P	PKPab	01 56 27.5	-0.2
VTS	Vitosha	146.24	314	PKPbc	PKPdf	01 56 26.0	+0.2
FLTG	Flechtingen	146.26	337	ePKPab	PKPdf	01 56 25.8	+0.5
	baz=39,slow=3.4						
VRAC	Vranov	146.28	329	⇑P	PKPbc	01 56 26.8	+0.2
VRAC	Vranov	146.28	329	ePKP	PKPbc	01 56 26.5	-0.1
PVCC	Panska Ves	146.33	332	ePKP	PKPbc	01 56 26.7	0.0
BRG	Berggiesshubel	146.34	333	ePKPab	PKPbc	01 56 26.3	-0.4
	baz=39,slow=3.4						
BRG	Berggiesshubel	146.34	333	ePKP	PKPbc	01 56 26.7	-0.1
BRG				Amp		01 56 28.0	
	comp=Z,15nm,0.7s						
CLL	Collm	146.40	334	i PKPbc	PKPdf	01 56 26.1	+0.6
	comp=Z,24nm,0.6s						
CLL				ePKiKP	PKiKP	01 56 31.0	+1.1
CLL				epPKPdf	sPKPdf	01 56 38.0	-0.1
CLL	Collm	146.40	334	ePKPab	PKPbc	01 56 26.3	-0.6
	baz=39,slow=3.4						
CLL	Collm	146.40	334	PKPbc	PKPbc	01 56 26.5	-0.4
KRUC	Moravsky	146.54	329	ePKP	PKPbc	01 56 27.0	-0.4
FBE	Freiberg	146.55	334	ePKPab	PKPbc	01 56 27.3	0.0
	baz=39,slow=3.4						
MODS	Modra-Piesok	146.57	327	ePKP	PKPbc	01 56 27.3	-0.2
PRU	Pruhonice	146.74	331	ePKP	PKPbc	01 56 27.4	-0.5
BOVS	Bovan	146.76	317	⇑P	PKPdf	01 56 26.3	-0.1
NEUB	Neuenburg	146.96	335	ePKPab	PKPbc	01 56 27.9	-0.6
	baz=39,slow=3.4						
CLZ	Clausthal	146.97	337	ePKPab	PKPbc	01 56 28.3	-0.3
	baz=39,slow=3.4						
FRGS	Fruska Gora	147.13	320	⇑P	PKPbc	01 56 28.9	-0.4
GTTG	Gottingen	147.36	337	ePKPab	PKPbc	01 56 29.3	-0.3
	baz=39,slow=3.4						
NKC	Novy Kostel	147.45	334	ePKP	PKPbc	01 56 29.9	0.0
MOX	Moxa	147.47	335	eL	L	03 03 20.7	
	comp=Z,33nm,20.9s						
CONA	Conrad Observa	147.57	328	eP	PKPbc	01 56 30.2	-0.2
	comp=Z,8.8nm,0.7s						
CKRC	Cesky Krumlov	147.69	330	ePKP	PKPbc	01 56 30.5	-0.1
KHC	Kasperske Hory	147.80	331	ePKP	PKPbc	01 56 30.4	-0.5
KHC				ex	x	01 56 32.9	
KHC	Kasperske Hory	147.80	331	PKPbc	PKPbc	01 56 30.4	-0.5
GEC2	GERESS Array S	147.95	331	PKPbc	PKPbc	01 56 31.2	-0.2
GERES	GERESS Array B	147.95	331	PKPbc	PKPbc	01 56 31.0	-0.4
	comp=Z,6.4nm,0.8s,baz=35,slow=3.3,SNR=31						
GERES	GERESS Array B	147.95	331	PKPbc	PKPbc	01 56 31.2	-0.2
GRF	Grafenberg Arr	148.37	334	ePKPab	PKPab	01 56 35.5	-0.2
	baz=39,slow=3.4						
GRF				eL	L	03 00 02.0	
	comp=Z,45nm,18.6s						
MOA	Molln	148.40	329	P	PKPbc	01 56 31.9	-0.7
	comp=Z,4.1nm,0.7s						
BTNL	Ternell	149.46	340	dPKP	PKPbc	01 56 34.5	-0.6
MEM	Membach	149.48	340	dPKP	PKPbc	01 56 34.6	-0.5
BHOU	Houvegnez	149.70	340	dPKP	PKPbc	01 56 35.6	-0.1
BHOU				dPKPab	pPKPdf	01 56 40.0	-0.3
BGES	Gesves	149.95	341	dPKP	PKPbc	01 56 36.4	+0.1
WATA	Walderalm	150.03	331	i P	PKPbc	01 56 35.6	-1.2
	comp=Z,3.0nm,0.4s,SNR=5.8						
SNF	Seneffe	150.07	342	dPKP	PKPbc	01 56 35.9	-0.7
RCHB	Rochefort	150.11	341	dPKP	PKPbc	01 56 35.2	-1.5
BMRD	Maredsous	150.12	342	dPKP	PKPbc	01 56 36.3	-0.4
MOTA	Moosalm	150.23	331	i P	PKPbc	01 56 36.2	-1.1
	comp=Z,8.3nm,0.7s,SNR=9.8						
WLF	Walferdange	150.25	339	dPKP	PKPbc	01 56 36.9	-0.1
DOU	Dourbes	150.35	342	dPKP	PKPbc	01 56 36.6	-0.7
TORD	Torodi Ar. Bea	165.88	231	PKP	PKPdf	01 56 51.6	-0.3
	comp=Z,1.6nm,0.9s,baz=329,slow=1.9,SNR=8.4						
TORD	Torodi Ar. Bea	165.88	231		PKPdf	01 56 48.6	-3.3
KOWA	Kowa	170.49	214	PKP	PKPdf	01 56 54.7	-0.2
	comp=Z,2.8nm,1.0s,baz=244,slow=1.9,SNR=4.7						
KOWA	Kowa	170.49	214		PKPdf	01 56 52.5	-2.5

EAF ***27*** *01:44:32.7±1.5, 27°.07S×27°.38E, h10^{km}, MD4.0*
PRE ***27*** *01:44:35.2±0.8, 27°.39S×26°.79E, h5^{km}, ML2.8*
ISC 27 01:44:29.3±0.7**, 27°.05S**±0°.04×**27°.09E**±0°.03**, h6^{km}, n24,**
σ**3^{s}.36**/43**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SWZ	Schweizer	1.57	265	eP	Pg	01 45 00.7	+1.3
SWZ				eS	Sn	01 45 18.4	-0.2
SWZ				IAML		01 45 21.1	
	comp=Z,191nm,0.4s						
BOSA	Boshof	2.25	226	eP	Pg	01 45 12.6	+0.2
BOSA				eS	Sb	01 45 41.2	+2.6
BOSA	Boshof	2.25	226	eP	Pg	01 45 12.6	+0.2
BOSA				eS	Sb	01 45 41.2	+2.6
LBTB	Lobatse	2.43	326	eP	Pb	01 45 14.6	+1.0
LBTB				eS	Sb	01 45 44.3	+0.5
LBTB	Lobatse	2.43	326	eP	Pb	01 45 14.6	+1.0
LBTB				eS	Sb	01 45 44.3	+0.5
NWCL	Newcastle	2.58	106	eP	Pg	01 45 21.4	+2.6
NWCL				eS	Sg	01 45 54.5	+2.2
NWCL				IAML		01 46 06.4	
	comp=Z,47nm,1.8s						
POGA	Pongola	4.12	95	eP	Pb	01 45 43.5	+1.2
POGA				eS	Sb	01 46 32.3	-0.1
POGA				IAML		01 47 08.9	
	comp=Z,113nm,3.6s						
PKA	Prieska	4.62	235	eP	Pn	01 45 41.3	+1.5
PKA				eS	Sn	01 46 29.0	-4.8
PKA				IAML		01 47 10.8	
	comp=Z,4.4nm,0.4s						
MOPA	Mopani	5.25	49	eP	Pn	01 45 46.1	-2.3
MOPA				eS	Sn	01 46 42.6	-6.7
MOPA	Mopani	5.25	49	eP	Pn	01 45 46.1	-2.3
MOPA				eS	Sn	01 46 42.6	-6.7
UPI	Upington	5.34	255	eP	Pn	01 45 52.5	+3.0
UPI				eS	Sn	01 46 48.2	-3.2
UPI				IAML		01 47 19.6	
	comp=Z,8.7nm,1.4s						
MSNA	Messina	5.39	30	eP	Pn	01 45 52.2	+1.9
MSNA				eS	Sn	01 46 48.9	-3.9
MSNA	Messina	5.39	30	eP	Pn	01 45 52.2	+1.9
MSNA				eS	Sn	01 46 48.9	-3.9
SOE	Somerset East	5.79	193	eP	Pn	01 45 58.2	+2.4
SOE				eS	Sn	01 46 57.6	-5.1
SOE				IAML		01 47 18.6	
	comp=Z,56nm,3.2s						
ARMS	Ukamas	6.60	260	eP	Pn	01 46 08.9	+2.0
ARMS				eS	Sn	01 47 19.2	-3.3
ARMS				IAML		01 47 31.5	
	comp=Z,31nm,4.0s						
MATP	Matopo	6.72	11	eP	Pn	01 46 10.8	+2.1
MATP				eS	Sn	01 47 21.9	-3.8
MATP	Matopo	6.72	11	eP	Pn	01 46 10.8	+2.1
MATP				eS	Sn	01 47 21.9	-3.8
GRAN	Grantham	6.76	218	eP	Pn	01 46 10.3	+1.2
GRAN				eS	Sn	01 47 19.2	-7.3
GRAN				IAML		01 47 33.0	
	comp=Z,4.6nm,1.1s						
BLWY	Bulawayo	7.02	12	eP	Pn	01 46 15.0	+2.2
BLWY				eS	Sn	01 47 28.7	-4.4
BLWY	Bulawayo	7.02	12	eP	Pn	01 46 15.0	+2.2
BLWY				eS	Sn	01 47 28.7	-4.4
CVNA	Calvinia	7.77	234	eP	Pn	01 46 24.9	+1.8
CVNA				eS	Sn	01 47 44.4	-7.1
CVNA				IAML		01 48 24.4	
	comp=Z,27nm,4.5s						
KRI	Karoi	10.44	13	eP	Pn	01 46 53.5	-6.2
KRI				eS	Sn	01 48 35.6	-21
BRG	Berggiesshubel	78.45	352	P	P	01 56 30.8	+0.2
BRG				Amp		01 56 31.4	
	comp=Z,7.1nm,0.6s						
BRG	Berggiesshubel	78.45	352	P	P	01 56 44.2	+14
BRG				Amp		01 56 45.3	
	comp=Z,6.2nm,0.7s						

IDC 27 01:46:06.8±2.9**, 33°.57S**×**178°.60W, h0^{km}, mb3.9**/2**,**
mb1 4.2/3**, mb1mx3.8**/32**, mbtmp4.0**/3**, ML4.0**/1**, MS3.5**/1**,**
Ms1 3.5/1**, ms1mx2.8**/25**, Error ellipse: s-maj=69.7km**
s-min=35.7km az=120.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
URZ	Urewera	5.83	215	Pn	Pn	01 47 35.3	+0.8
	4.1nm,0.3s,baz=123,slow=23,SNR=23						
URZ				Sn	Sn	01 48 41.5	-0.6
	4.1nm,0.3s,baz=169,slow=18,SNR=5.6						
DZM	Mont Dzumac	17.48	307	LR	LR	01 55 23.4	
	comp=Z,158nm,21.4s,baz=111,slow=32						
ASAR	Alice Springs	42.53	271	P	P	01 54 04.3	-0.1
	1.2nm,0.7s,baz=109,slow=7.5,SNR=15						
WRA	Warramunga Arr	43.81	276	P	P	01 54 14.5	-0.2
	1.1nm,0.5s,baz=118,slow=7.5,SNR=13						
FINES	FINESS Array B	147.91	338	PKPbc	PKPbc	02 05 52.4	-0.8
	2.4nm,0.7s,baz=52,slow=5.4,SNR=8.2						

IDC ***27*** *02:20:40.8±2.5, 2°.98N×96°.27E, h0^{km}, mb3.8/8, mb1 3.9/8,*
mb1mx3.6/52, mbtmp3.8/8, MS2.9/1, Ms1 3.1/1,
ms1mx2.5/43, Error ellipse: s-maj=113.8km s-min=20.5km
az=56.0
NEIC ***27*** *02:20:45.1±0.9, 2°.94N±0°.06×96°.1E±0°.1, h26^{km}±7^{km},*
mb4.3/6, Error ellipse: s-maj=19.7km s-min=8.1km
az=76.0
DJA ***27*** *02:20:46.0±0.6, 3˚N±4˚×9˚6E±˚, h10^{km}, M3.7/7, mb3.8/1,*
MLv3.6/7
ISC 27 02:20:45.4±0.8**, 2°.93N**±0°.05×**96°.25E**±0°.09**, h33^{km}, n34,**
σ**1^{s}.22**/26**, mb4.0**/12**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SNSI	Sinabang, Aceh	0.52	172	P	Pn	02 20 58.0	+1.5
TPTI		0.98	71	P	Pb	02 21 02.2	-1.7
MLSI	Meulaboh, Aceh	1.34	7	P	Pb	02 21 09.0	-0.9
GSI	Gunungsitoli	2.09	141	P	Pb	02 21 20.8	-1.8
GSI	Gunungsitoli	2.09	141	Pn	Pn	02 21 19.7	+1.6
LHMI	Lhok Sumawe	2.39	17	P	Pn	02 21 24.1	+1.9
LHMI	Lhok Sumawe	2.39	17	Pn	Pn	02 21 23.5	+1.4
KULM	Kulim	4.97	62	Pn	Pn	02 21 59.1	+1.3
IPM	Ipoh	5.01	72		Pn	02 21 59.9	+1.7
SISI	Saibi	5.09	146	P	Pn	02 22 02.0	+2.6
CMAR	Chiang Mai Arr	15.65	10	LR	LR	02 31 34.8	
	comp=Z,40nm,18.1s,baz=195,slow=42						
H08S2	Diego Garcia H	25.93	246	T	T	02 52 48.0	
	baz=67,slow=76,SNR=5.7						
H08S3	Diego Garcia H	25.93	246	T	T	02 52 49.4	
	baz=67,slow=76,SNR=8.0						
H08S1	Diego Carcia H	25.95	246	T	T	02 52 45.0	
	baz=67,slow=76,SNR=4.9						
H01W3	Cape Leeuwin H	41.20	157	T	T	03 11 48.3	
	baz=333,slow=76,SNR=17						
H01W2	Cape Leeuwin H	41.21	157	T	T	03 11 49.2	
	baz=333,slow=76,SNR=16						
H01W1	Cape Leeuwin H	41.21	157	T	T	03 11 49.5	
	baz=333,slow=76,SNR=14						
WB0	Warramunga Arr	43.72	123	P	P	02 28 48.0	+0.1
WB0				IAmb	IAmb	02 28 53.9	
	comp=Z,10nm,1.5s						
WRA	Warramunga Arr	43.76	123	P	P	02 28 48.0	-0.1
	comp=Z,0.4nm,0.4s,baz=302,slow=9.0,SNR=9.3						
WB2	Warramunga Arr	43.77	123	P	P	02 28 48.8	+0.6
WB2				IAmb	IAmb	02 29 02.8	
	comp=Z,9.0nm,1.4s						
ASAR	Alice Springs	45.19	128	P	P	02 29 00.4	+0.9
	comp=Z,0.4nm,1.0s,baz=302,slow=7.5,SNR=2.3						
MK31	Makanchi Array	45.35	347	P	P	02 29 00.7	+0.2
MKAR	Makanchi Array	45.35	347	P	P	02 29 00.8	+0.4
	comp=Z,1.7nm,0.3s,baz=161,slow=9.0,SNR=47						
MKAR	Makanchi Array	45.35	347	P	P	02 29 00.3	-0.1
MAKZ	Makanchi	45.43	346	P	P	02 29 01.0	-0.1
MAKZ				IAmb	IAmb	02 29 01.9	
	comp=Z,2.4nm,0.5s						
SONM	Songino Array	45.58	10	P	P	02 29 02.0	-0.4
	comp=Z,0.5nm,0.4s,baz=191,slow=9.3,SNR=4.6						
KURBB	Kurchatov Arra	49.83	345	P	P	02 29 35.5	+0.5
	comp=Z,0.8nm,0.6s,baz=168,slow=7.0,SNR=11						
KURK	Kurchatov	49.89	345	P	P	02 29 35.5	0.0
KURK	Kurchatov	49.89	345	IAmb	IAmb	02 29 52.4	
	comp=Z,2.0nm,1.1s						
ZALV	Zalesovo Beam	51.71	351	P	P	02 29 49.2	0.0
	comp=Z,0.8nm,0.4s,baz=180,slow=5.9,SNR=4.9						
ZALV	Zalesovo Beam	51.71	351	P	P	02 29 49.0	-0.3
BVAR	Borovoye Array	54.32	341	P	P	02 30 07.5	-1.0
	comp=Z,0.9nm,0.7s,baz=193,slow=12,SNR=4.2						
LSZ	Lusaka	69.71	253	P	P	02 31 51.2	-1.5
ARCES	ARCESS Array B	80.60	340	P	P	02 32 54.8	+0.5
	comp=Z,2.0nm,0.8s,baz=88,slow=6.4,SNR=1.2						

IDC ***27*** *02:25:51.4±0.6, 26°.60N×130°.46E, h0^{km}, mb4.2/22,*
mb1 4.3/24, mb1mx4.2/50, mbtmp4.2/24, ML3.6/2, MS3.4/12,
Ms1 3.5/12, ms1mx3.2/39, Error ellipse: s-maj=17.9km
s-min=13.1km az=77.0
JMA ***27*** *02:25:54.1, 26°.60N×130°.38E, h45^{km}, M4.3*
NIED ***27*** *02:25:54.1, 26°.60N×130°.38E, h45^{km}, MW4.3, Moment*
Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm;
M_{rr}-2.77; $M_{\theta\theta}$1.22; $M_{\phi\phi}$1.55; $M_{r\theta}$-0.61; $M_{\theta\phi}$1.75; $M_{\phi r}$0.10;
Fault plane solution: $M_0$3.03000×10^{15} NP1:ϕ_s54.00000°,
δ49.00000°, λ-75.00000°. NP2:ϕ_s211.00000°, δ43.00000°,
λ-107.00000°.
BJI ***27*** *02:26:01.2±0.0, 27°.02N×129°.81E, h49^{km}, mB5.0/14,*
mb4.5/31, Ms4.4/6, Ms7 4.2/6
NEIC ***27*** *02:26:02.9±2.7, 27°.18N±0°.08×129°.84E±0°.09, h51^{km}±6^{km},*
mb4.7/47, Error ellipse: s-maj=13.9km s-min=8.4km
az=133.0
ISC 27 02:26:00.2±1.4**, 26°.93N**±0°.06×**130°.08E**±0°.06**, h47^{km}**±12^{km}**,**
n111, σ**1^{s}.70**/112**, mb4.6**/48**, MS3.4**/11**, 1D, Southeast of**
Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JTK	Tokunoshima	1.32	311	P	Pn	02 26 22.9	+0.7
JTK				S	Sn	02 26 43.0	+4.3
JZK	Kikaishima	1.38	356	P	Pn	02 26 23.4	+0.3
JZK				eS	Sn	02 26 45.1	+4.9
JOKE	Okinoerabujima	1.42	288	P	Pn	02 26 23.7	+0.2
JOKE				S	Sn	02 26 44.8	+3.8
JKDJ	Kitadaitoujima	1.46	132	P	Pn	02 26 12.6	-12
JKDJ				eS	Sn	02 26 26.4	-16
JYRO	Yoronjima	1.46	274	P	Pn	02 26 23.2	-0.9
JYRO				S	Sn	02 26 43.5	+1.4
JMZ	Minamidaito 2	1.50	137	P	Pn	02 26 13.1	-12
JMZ				eS	Sn	02 26 26.6	-17
JAM	Amami Oshima	1.54	344	P	Pn	02 26 25.2	+0.1
JAM				S	Sn	02 26 46.8	+2.9
JAMN	Amaminishikomi	1.54	329	P	Pn	02 26 25.5	+0.3
JAMN				eS	Sn	02 26 47.6	+3.6
JOW	Kunigami	1.62	267	Pn	Pn	02 26 25.3	-1.0
	3µm,0.3s,baz=113,slow=26,SNR=2184						
JOW				Sn	Sn	02 26 47.0	+1.0
	334nm,0.3s,baz=104,slow=10,SNR=4.0						
JOW				LR	LR	02 27 19.4	
	comp=Z,367nm,19.7s,baz=274,slow=45						
JOW	Kunigami	1.62	267	P	Pn	02 26 25.2	-1.0
JOW				S	Sn	02 26 47.1	+1.1
JOW	Kunigami	1.62	267	Pn	Pn	02 26 24.9	-1.4
JNTH	Nagotoyohara	1.89	258	P	Pn	02 26 27.8	-2.2
JNTH				S	Sn	02 26 51.3	-1.3
JIH	Iheya	1.89	274	P	Pn	02 26 29.4	-0.6
JIH				S	Sn	02 26 55.2	+2.6
JJT3	Tamagusuku3	2.20	250	P	Pn	02 26 32.1	-2.2
JJT3				S	Sn	02 26 59.5	-0.8
JTAJ	Takarajima	2.35	341	P	Pn	02 26 36.3	0.0
JTAJ				S	Sn	02 27 05.8	+1.9
JAGN	Aguni-jima	2.56	263	P	Pn	02 26 37.7	-1.5
JAGN				S	Sn	02 27 09.2	0.0
JNN	Nakanoshima	2.91	356	P	Pn	02 26 44.0	0.0
JNN				eS	Sn	02 27 20.8	+3.1
JKE	Kume jima 2	3.01	259	P	Pn	02 26 42.7	-2.7
JKE				eS	Sn	02 27 19.3	-0.9
JYAK	Yakushimahirau	3.32	6	P	Pn	02 26 49.4	-0.2
JYAK				S	Sn	02 27 26.7	-1.1
JKC	Kuchinoerabu	3.52	2	eS	Sn	02 27 33.5	+0.7
JMTN	Minamitane	3.53	12	P	Pn	02 26 50.3	-2.2
JMTN				eS	Sn	02 27 32.1	-0.9
JTN	Tanegashima 3	3.79	12	eS	Sn	02 27 38.0	-1.5
JTSR	Tashiro 2	4.29	10	eS	Sn	02 27 50.4	-1.2
JNU	Nakatsue	6.21	6	Pn	Pn	02 27 28.8	-0.5
	1.5nm,0.3s,baz=219,slow=14,SNR=2.1						
JNU				Sn	Sn	02 28 36.8	-2.2
	1.2nm,0.3s,baz=233,slow=18,SNR=1.0						
JNU	Nakatsue	6.21	6	Pn	Pn	02 27 27.6	-1.7
JMN	Monobe	7.53	25	Pn	Pn	02 27 45.8	-1.6
KSRS	Korea Array	10.65	351	Pn	Pn	02 28 32.2	+2.1
	0.3nm,0.3s,baz=166,slow=13,SNR=7.2						
KSRS				LR	LR	02 33 25.2	
	comp=Z,158nm,18.6s,baz=175,slow=41						
JCJ	Chichijima	10.79	86	LR	LR	02 31 44.3	
	comp=Z,70nm,20.5s,baz=60,slow=34						
NJ2	Nanjing	11.03	300	eP	Pn	02 28 33.5	-1.8
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
USRK	Ussuriysk Ar.	17.30	5	Pn	Pn	02 29 55.1	-3.2
BJT	Baijiatuau	17.44	322	Pn	Pn	02 29 56.2	-3.8
ENH	Enshi	18.39	285		P	02 30 08.8	-2.5
ENH				IAmb	IAmb	02 30 29.7	
	comp=Z,17nm,0.3s						
XAN	Xi'an	19.55	296	P	Pn	02 30 25.5	-0.1
XAN				pP	pP	02 30 34.0	-0.2
XAN				sP	sP	02 30 37.0	-2.8
XAN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KLR	Kul'dur	22.30	3	P	P	02 30 54.0	+0.5
	comp=Z,2.1nm,0.5s,baz=179,slow=7.5,SNR=8.2						
KLR				LR	LR	02 40 02.5	
	comp=Z,78nm,18.4s,baz=178,slow=38						
CD2	Chengdu	23.36	286	eP	P	02 31 03.0	-1.6
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
LZH	Lanzhou	24.10	299	eP	P	02 31 09.5	-2.1
LZH				pP	pP	02 31 24.5	+1.6
LZH				pmax	pmax		
	comp=Z,12nm,1.3s						
KMI	Kunming	24.62	272	⇓P	P	02 31 16.3	-0.2
KMI				pP	pP	02 31 24.8	-2.9
KMI				sP	pwP	02 31 29.5	-2.9
KMI				pmax	pmax		
	comp=Z,9.0nm,0.5s						
SONM	Songino Array	27.91	325	P	P	02 31 48.1	+2.3
	comp=Z,0.4nm,0.3s,baz=143,slow=11,SNR=5.0						
SONM				LR	LR	02 43 13.2	
	comp=Z,76nm,19.7s,baz=194,slow=37						
GTA	Gaotai	28.09	304	eP	P	02 31 48.0	+0.4
GTA				pP	pP	02 31 56.3	-2.6
GTA				sP	pwP	02 32 00.8	-2.6
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,170nm,5.3s						
GTA				LR	LR		
	comp=Z,250nm,16.4s						
GTA				LR	LR		
	comp=Z,130nm,16.7s						
GTA				LR	LR		
	comp=Z,210nm,15.6s						
FAKI	Fak Fak	29.75	176	P	P	02 32 06.4	+4.1
FAKI				IAmb	IAmb	02 32 08.7	
	comp=Z,28nm,1.4s						
CMAR	Chiang Mai Arr	29.88	260	LR	LR	02 44 27.7	
	comp=Z,26nm,18.4s,baz=154,slow=37						
TLY	Talaya	31.76	328	LR	LR	02 46 11.7	
	comp=Z,38nm,20.1s,baz=150,slow=38						
PETK	Petropavlovsk-	33.25	31	P	P	02 32 29.9	-2.8
	comp=Z,6.0nm,0.9s,baz=225,slow=6.1,SNR=4.2						
SHL	Shillong	34.20	276	P	P	02 32 41.7	+0.1
SHL				IAmb	IAmb	02 32 56.8	
	comp=Z,6.4nm,0.8s						
LSA	Lhasa	34.28	284	P	P	02 32 42.0	-0.6
WMQ	Urumqi	37.99	308	eP	P	02 33 15.5	+1.9
SEY	Seymchan	38.88	16	P	P	02 33 19.6	-1.2
	comp=Z,0.9nm,0.3s,baz=187,slow=9.6,SNR=3.5						
MK31	Makanchi Array	42.32	311	P	P	02 33 48.7	-0.7
MKAR	Makanchi Array	42.32	311	P	P	02 33 50.3	+0.9
	comp=Z,1.9nm,0.7s,baz=102,slow=9.4,SNR=17						
MKAR	Makanchi Array	42.32	311	P	P	02 33 48.5	-0.9
MAKZ	Makanchi	42.53	311	P	P	02 33 51.0	-0.1
ZAA0	Zalesovo Array	42.71	322	P	P	02 33 51.5	-0.9
ZALV	Zalesovo Beam	42.71	322	P	P	02 33 53.1	+0.7
	comp=Z,1.2nm,0.5s,baz=107,slow=8.2,SNR=6.5						
ZALV				PcP	PcP	02 35 42.6	-0.8
	comp=Z,1.1nm,0.7s,baz=129,slow=4.0,SNR=4.9						
ZALV				LR	LR	02 51 58.9	
	comp=Z,39nm,18.1s,baz=60,slow=36						
ZALV	Zalesovo Beam	42.71	322	P	P	02 33 52.3	-0.1
TIXI	Tiksi	44.77	359	LR	LR	02 53 38.8	
	comp=Z,46nm,18.9s,baz=212,slow=37						
KURK	Kurchatov	45.47	316	P	P	02 34 14.1	-0.4
KURBB	Kurchatov Arra	45.50	316	P	P	02 34 16.3	+1.5
	comp=Z,4.8nm,0.9s,baz=103,slow=8.3,SNR=8.5						
BILL	Bilibino	46.49	18	P	P	02 34 22.2	-0.1
BILL				IAmb	IAmb	02 34 23.2	
	comp=Z,11nm,1.3s						

WB0	**Warramunga Arr**	**46.61**	**174**	P	**P**	**02 34 27.3**	**+3.6**
WB0				IAmb	IAmb	02 34 30.0	
	comp=Z,5.9nm,0.8s						
WRA	**Warramunga Arr**	**46.77**	**175**	P	P	02 34 19.8	-5.3
	comp=Z,2.6nm,0.6s,baz=354,slow=8.5,SNR=35						
WRA				PcP	**PcP**	**02 35 53.9**	**-3.9**
	comp=Z,1.1nm,0.7s,baz=0.1,slow=4.3,SNR=3.7						
WR0	**Warramunga Arr**	**46.81**	**174**	P	**P**	**02 34 28.9**	**+3.6**
WR0				IAmb	IAmb	02 34 31.8	
	comp=Z,7.5nm,1.0s						
NIL	**Nilore**	**49.01**	**292**	P	**P**	**02 34 42.5**	**+0.1**
NIL				IAmb	IAmb	02 34 49.8	
	comp=Z,19nm,1.5s						
CTAO	**Charters Tower**	**49.30**	**160**	P	**P**	**02 34 48.7**	**+4.1**
CTAO				IAmb	IAmb	02 34 52.1	
	comp=Z,5.4nm,0.9s						
KKAR	**Karatay Array**	**50.37**	**305**	P	**P**	**02 34 52.4**	**-0.2**
ASAR	**Alice Springs**	**50.43**	**175**	P	P	02 34 48.2	-5.0
	comp=Z,1.2nm,0.7s,baz=7.1,slow=14,SNR=33						
ASAR				PcP	**PcP**	**02 36 08.1**	**-2.9**
	comp=Z,1.5nm,0.8s,baz=3.8,slow=3.1,SNR=7.4						
GAR	**Garm**	**50.76**	**300**	P	**P**	**02 34 55.8**	**+0.1**
GAR				IAmb	IAmb	02 35 04.5	
	comp=Z,12nm,1.2s						
BVAR	**Borovoye Array**	**50.87**	**318**	P	**P**	**02 34 58.4**	**+2.2**
	comp=Z,4.0nm,0.7s,baz=157,slow=8.0,SNR=19						
BRVK	**Borovoye**	**50.93**	**318**	P	**P**	**02 34 56.5**	**-0.1**
BRVK				IAmb	IAmb	02 35 03.8	
	comp=Z,6.2nm,0.9s						
KBL	**Kabul**	**52.33**	**294**	P	**P**	**02 35 07.0**	**-0.7**
KBL				IAmb	IAmb	02 35 24.5	
	comp=Z,5.6nm,0.7s						
ANM	**Nome**	**55.11**	**28**	P	**P**	**02 35 27.3**	**+0.1**
ABKAR	**Akbulak array**	**57.38**	**313**	P	**P**	**02 35 43.5**	**-0.1**
ARU	**Arti**	**57.88**	**322**	P	**P**	**02 35 47.5**	**+0.5**
	comp=Z,0.6nm,0.4s,baz=107,slow=6.8,SNR=3.1						
HRA	**Herat**	**57.88**	**295**	P	**P**	**02 35 47.3**	**-0.4**
STKA	**Stephens Creek**	**59.50**	**169**	P	P	02 35 53.6	-4.9
	comp=Z,1.1nm,0.5s,baz=357,slow=4.7,SNR=4.1						
IMAR	**Indian Mountai**	**60.11**	**27**	P	**P**	**02 36 01.9**	**-0.4**
GEYT	**Alibeck**	**60.38**	**300**	LR	LR	03 04 55.4	
	comp=Z,39nm,18.2s,baz=20,slow=38						
MLY	**Manley**	**61.38**	**28**	IAmb	IAmb	02 36 12.0	
	comp=Z,12nm,1.1s						
NEA2	**Nenana**	**62.12**	**29**	P	**P**	**02 36 15.8**	**-0.2**
MCK	**McKinley**	**62.24**	**30**	P	**P**	**02 36 17.5**	**+0.7**
MCK				IAmb	IAmb	02 36 32.8	
	comp=Z,9.4nm,1.2s						
RND	**Reindeer**	**62.31**	**30**	P	**P**	**02 36 16.4**	**-0.9**
IL31		**63.04**	**29**	IAmb	IAmb	02 36 21.2	
	comp=Z,4.0nm,0.8s						
ILAR	**Eielson Array**	**63.04**	**29**	P	**P**	**02 36 20.5**	**-1.6**
	comp=Z,2.1nm,0.7s,baz=264,slow=5.5,SNR=14						
ILAR	**Eielson Array**	**63.04**	**29**	P	**P**	**02 36 21.2**	**-0.8**
BMAR	**Burnt Mountain**	**63.67**	**25**	P	**P**	**02 36 26.4**	**+0.1**
SCRK	**Sand Creek**	**64.39**	**29**	IAmb	IAmb	02 36 30.9	
	comp=Z,11nm,0.9s						
SCRK				P	**P**	**02 36 31.3**	**+0.1**
INK	**Inuvik**	**67.59**	**24**	P	**P**	**02 36 50.4**	**-1.1**
	comp=Z,3.1nm,0.5s,baz=302,slow=6.9,SNR=38						
INK	**Inuvik**	**67.59**	**24**	P	**P**	**02 36 50.8**	**-0.7**
A36M	**Sachs Harbour**	**69.04**	**19**	P	**P**	**02 37 00.8**	**+0.3**
KBZ	**Khabaz**	**70.00**	**310**	P	**P**	**02 37 08.8**	**+2.0**
	comp=Z,3.4nm,0.8s,baz=125,slow=8.3,SNR=9.6						
KIV	**Kislovodsk**	**70.07**	**310**	P	**P**	**02 37 07.9**	**+0.4**
KIV				IAmb	IAmb	02 37 28.9	
	comp=Z,7.0nm,0.9s						
GURO	**Guroymak-BITLI**	**72.34**	**305**	P	**P**	**02 37 21.2**	**-0.1**
FINES	**FINESS Array B**	**73.07**	**331**	P	**P**	**02 37 25.4**	**+0.4**
	comp=Z,1.8nm,0.5s,baz=56,slow=10,SNR=11						
RAYN	**Ar Rayn**	**75.16**	**289**		**P**	**02 37 37.9**	**-0.1**
AKASG	**Malin Array Be**	**76.07**	**320**	P	**P**	**02 37 43.0**	**+0.3**
	comp=Z,1.4nm,0.6s,baz=60,slow=6.0,SNR=4.8						
AKASG				LR	LR	03 14 05.1	
	comp=Z,41nm,18.0s,baz=115,slow=38						
YKA	**Yellowknife Ar**	**77.19**	**25**	P	**P**	**02 37 48.0**	**-0.7**
	comp=Z,2.3nm,0.7s,baz=306,slow=4.5,SNR=18						
BRTR	**Keskin Array B**	**77.91**	**308**	P	**P**	**02 37 54.4**	**+1.0**
	comp=Z,1.9nm,0.9s,baz=127,slow=5.5,SNR=2.9						
URZ	**Urewera**	**78.39**	**144**	LR	LR	03 08 00.1	
	comp=Z,203nm,18.7s,baz=31,slow=32						
NOA	**NORSAR Array B**	**79.41**	**334**	P	**P**	**02 37 59.8**	**-1.3**
	comp=Z,1.8nm,0.9s,baz=55,slow=5.4,SNR=3.1						
GERES	**GERESS Array B**	**85.64**	**324**	LR	LR	03 19 46.8	
	comp=Z,40nm,18.8s,baz=24,slow=38						
VCNR	**Virginia City**	**87.47**	**47**	P	**P**	**02 38 41.4**	**-1.8**
VCNR				IAmb	IAmb	02 38 42.4	
	comp=Z,4.9nm,1.1s						
DLMT	**Dillon**	**88.25**	**39**	IAmb	IAmb	02 38 47.1	
	comp=Z,8.8nm,1.0s						
HLID	**Hailey**	**88.29**	**41**	P	**P**	**02 38 47.1**	**+0.1**
NVAR	**Mina Array Bea**	**88.82**	**47**	P	**P**	**02 38 48.6**	**-1.1**
	comp=Z,0.5nm,0.6s,baz=297,slow=5.3,SNR=4.7						
NVAR	**Mina Array Bea**	**88.82**	**47**	P	**P**	**02 38 49.9**	**+0.3**
FLWY	**Flagg Ranch**	**90.10**	**39**	P	**P**	**02 38 55.7**	**+0.2**
FLWY				IAmb	IAmb	02 38 57.2	
	comp=Z,5.3nm,0.9s						
PD31	**Pinedale Array**	**91.58**	**39**	IAmb	IAmb	02 39 02.3	
	comp=Z,3.3nm,1.1s						
PDAR	**Pinedale Array**	**91.58**	**39**	P	**P**	**02 39 01.6**	**-0.9**
	comp=Z,1.5nm,0.8s,baz=301,slow=1.7,SNR=12						
LCMT	**Little Creek M**	**92.91**	**46**	IAmb	IAmb	02 39 08.5	
	comp=Z,3.4nm,1.1s						
P17A	**Butcher Ranch,**	**92.96**	**43**	P	**P**	**02 39 08.3**	**-0.5**
P17A				IAmb	IAmb	02 39 09.3	
	comp=Z,6.1nm,1.1s						
Q16A	**Castle Valley**	**93.04**	**43**	IAmb	IAmb	02 39 09.6	
	comp=Z,3.6nm,0.9s						
U15A	**North Rim**	**93.87**	**46**	IAmb	IAmb	02 39 13.3	
	comp=Z,2.2nm,0.9s						

MOS ***27*** *02:38:02.9±1.9, 55°.74N×110°.10E, h12^{km}, mb3.4/1, Error ellipse: s-maj=14.0km s-min=8.6km az=63.4*

BYKL ***27*** *02:38:03.5±0.1, 55°.73N×110°.20E, h6^{km}±2^{km}*

IDC ***27*** *02:38:03.3±2.6, 55°.66N×110°.05E, h0^{km}, mb1 3.5/6, mb1mx3.2/52, mbtmp3.5/6, ML3.0/5, Error ellipse: s-maj=45.8km s-min=18.5km az=119.0*

ISC 27 02:38:03.4±0.6**, 55°.71N**±0°.03×**110°.21E**±0°.02**, h10**^{km}**, n51,** σ**2**^{s}**.75**/104**, 6C, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIZ	**Nizh Angarsk**	**0.38**	**280**	⇑*i*Pg	**Pg**	**02 38 10.6**	**-0.4**
NIZ				*e*Sg	**Sg**	**02 38 16.0**	**-0.1**
NIZ				Pmax			
	267nm,0.4s						
NIZ				Smax			
	2μm,0.5s						
NIZ	**Nizh Angarsk**	**0.38**	**280**	*e*PG	**Pg**	**02 38 10.4**	**-0.6**
NIZ				*e*		02 38 16.0	
NIZ				pmax	pmax		
	comp=Z,265nm,0.3s						
NIZ				smax	smax		
	comp=E,2μm,0.5s						
KMO	**Kumora**	**0.59**	**72**	⇑*i*Pg	**Pg**	**02 38 13.9**	**-0.9**
KMO				*e*Sg	**Sg**	**02 38 21.9**	**-0.6**
KMO				Pmax			
	comp=E,196nm,0.3s						
KMO				Smax			
	comp=E,760nm,0.2s						
KMO	**Kumora**	**0.59**	**72**	⇑*i*PG	**Pg**	**02 38 13.9**	**-0.9**
KMO				*e*		02 38 20.9	
KMO				pmax	pmax		
	comp=Z,82nm,0.2s						
KMO				smax	smax		
	comp=N,1μm,1.0s						
YOA	**Uoyan**	**0.95**	**63**	*e*Pg	**Pg**	**02 38 21.2**	**-0.5**
YOA				*e*Sg	**Sg**	**02 38 33.8**	**-0.3**
YOA				Pmax			
	comp=N,300nm,0.2s						
YOA				Smax			
	comp=N,2μm,0.4s						
YOA	**Uoyan**	**0.95**	**63**	*e*PG	**Pb**	**02 38 21.9**	**-0.1**
YOA				*e*		02 38 34.2	
YOA				pmax	pmax		
	comp=Z,125nm,0.2s						
YOA				smax	smax		
	comp=N,2μm,0.3s						
YLYR	**Ulyunkhan**	**1.00**	**147**	⇑*i*Pg	**Pg**	**02 38 22.0**	**-0.6**
YLYR				*e*Sg	**Sg**	**02 38 35.7**	**+0.1**
YLYR				*e*		02 38 37.3	
YLYR				Pmax			
	comp=N,144nm,0.3s						
YLYR				max			
	comp=N,814nm,0.2s						
YLYR	**Ulyunkhan**	**1.00**	**147**	⇑*i*PG	**Pg**	**02 38 22.2**	**-0.4**
YLYR				*e*		02 38 35.5	
YLYR				pmax	pmax		
	comp=Z,145nm,0.4s						
YLYR				smax	smax		
	comp=N,818nm,0.2s						
SVKR	**Severomuysk**	**1.93**	**76**	*e*Pg	**Pb**	**02 38 37.9**	**-0.8**
SVKR				*e*Sg	**Sb**	**02 39 03.5**	**+0.7**
SVKR				Pmax			
	comp=N,220nm,0.3s						
SVKR				Smax			
	comp=N,2μm,0.6s						
UKT	**Uakit**	**1.95**	**95**	⇑*i*Pg	**Pb**	**02 38 38.3**	**-0.8**
UKT				*e*Sg	**Sb**	**02 39 04.7**	**+1.2**
UKT				Pmax			
	comp=N,125nm,0.4s						
UKT				Smax			
	comp=N,397nm,0.4s						
UKT	**Uakit**	**1.95**	**95**	*e*PN	**Pb**	**02 38 38.8**	**-0.3**
UKT				*e*		02 39 05.2	
UKT				pmax	pmax		
	comp=Z,83nm,0.3s						
UKT				smax	smax		
	comp=N,402nm,0.2s						
SYVR	**Suvo**	**2.06**	**183**	*e*Pg	**Pb**	**02 38 40.6**	**-0.3**
SYVR				*e*Sg	**Sb**	**02 39 08.7**	**+2.1**
SYVR				Pmax			
	comp=N,87nm,0.6s						
SYVR				Smax			
	comp=N,2μm,0.8s						
SYVR	**Suvo**	**2.06**	**183**	*e*PN	**Pb**	**02 38 41.1**	**+0.2**
SYVR				*e*		02 39 10.3	
SYVR				pmax	pmax		
	comp=Z,90nm,0.7s						
SYVR				smax	smax		
	comp=E,2μm,0.7s						
OGRR	**Ongureny**	**2.57**	**217**	*e*Pg	**Pb**	**02 38 48.7**	**-0.9**
OGRR				*e*		02 38 56.3	
OGRR				*e*Sn	**Sn**	**02 39 16.8**	**+0.4**
OGRR				*e*Sg	**Sb**	**02 39 22.8**	**+1.6**
OGRR				max			
	comp=E,111nm,0.8s						
OGRR				Smax			
	comp=E,167nm,0.6s						
OGRR	**Ongureny**	**2.57**	**217**	*e*PN	**Pb**	**02 38 49.0**	**-0.6**
OGRR				*e*		02 38 52.8	
OGRR				*e*		02 39 25.3	
OGRR				pmax	pmax		
	comp=Z,20nm,0.4s						
OGRR				smax	smax		
	comp=E,166nm,0.6s						
BOD	**Bodaibo**	**2.97**	**43**	*e*Pn	**Pn**	**02 38 51.2**	**+0.6**
BOD				*e*Pg	**Pb**	**02 38 55.9**	**-0.5**
BOD				*e*		02 39 14.0	
BOD				*e*Sn	**Sn**	**02 39 27.1**	**+0.9**
BOD				*e*Sg	**Sb**	**02 39 34.8**	**+2.1**
BOD				Pmax			
	comp=E,19nm,0.2s						
BOD				Smax			
	comp=E,177nm,0.4s						
BOD	**Bodaibo**	**2.97**	**43**	*e*PN	**Pb**	**02 38 56.2**	**-0.2**
BOD				*e*		02 39 34.6	
BOD				pmax	pmax		
	comp=Z,18nm,0.2s						
BOD				smax	smax		
	comp=N,177nm,0.4s						
NLYR	**Nelyaty**	**3.17**	**73**	*e*Pn	**Pn**	**02 38 54.4**	**+1.0**
NLYR				*e*Pg	**Pb**	**02 39 00.0**	**+0.1**
NLYR				*e*PgPg	**PbPb**	**02 39 03.0**	**0.0**
NLYR				*e*Sn	**Sn**	**02 39 32.2**	**+0.9**
NLYR				*e*Sg	**Sb**	**02 39 41.6**	**+3.0**
NLYR				max			
	comp=N,48nm,0.8s						
NLYR				Smax			
	comp=N,217nm,1.1s						
KELR	**Kotokel**	**3.21**	**204**	*e*Pn	**Pn**	**02 38 55.5**	**+1.6**
KELR				*e*Pg	**Pb**	**02 39 00.7**	**+0.2**
KELR				*e*		02 39 06.2	
KELR				*e*Sg	**Sb**	**02 39 43.5**	**+3.9**
TRG	**Tyrgan**	**3.73**	**219**	*e*Pn	**Pn**	**02 39 02.5**	**+1.5**
TRG				*e*Pg	**Pb**	**02 39 10.9**	**+1.6**
TRG				*e*Sn	**Sn**	**02 39 45.7**	**+0.8**
TRG				*e*Sg	**Sb**	**02 39 59.1**	**+4.6**
TRG				max			
	comp=N,32nm,0.7s						
TRG				Smax			
	comp=N,95nm,0.5s						
UUDB	**Ulan-Yde**	**4.14**	**202**	*e*Pg	**Pb**	**02 39 18.6**	**+2.3**
UUDB				*e*Sg	**Sg**	**02 40 12.8**	**-3.4**
UUDB				Pmax			
	comp=N,9.0nm,0.5s						
UUDB				Smax			
	comp=N,79nm,1.0s						
CIT	**Chita**	**4.19**	**150**	*e*Sn	**Sn**	**02 39 56.8**	**+0.3**
CIT				*e*Sg	**Sb**	**02 40 13.3**	**+5.4**
CIT				Smax			
	comp=N,159nm,0.4s						
FFNB	**Fofonovo**	**4.20**	**210**	*e*Pn	**Pn**	**02 39 08.6**	**+1.1**
FFNB				*e*Pg	**Pb**	**02 39 18.4**	**+1.1**
FFNB				*e*Sg	**Sg**	**02 40 13.9**	**-4.3**
KAB	**Kabansk**	**4.23**	**211**	*e*Sg	**Sb**	**02 40 14.3**	**+5.4**
BGT	**Bolshoye Golou**	**4.64**	**220**	Smax		02 39 15.9	
BGT				*e*Sn	**Sn**	**02 40 07.0**	**-0.5**
BGT				*e*Sg	**Sb**	**02 40 27.0**	**+6.2**
BGT				Smax			
	comp=N,73nm,0.7s						
CRS	**Chara**	**4.64**	**72**	*e*Pn	**Pn**	**02 39 15.0**	**+1.4**
CRS				*e*Pg	**Pb**	**02 39 27.4**	**+2.5**
CRS				*e*Sg	**Sg**	**02 40 27.5**	**-4.9**
CRS				Pmax			
	comp=N,40nm,1.8s						
CRS				Smax			
	comp=N,96nm,2.5s						
IRK	**Irkutsk**	**4.94**	**228**	*e*Sg	**Sg**	**02 40 36.4**	**-5.3**
IRK				Smax			
	comp=N,212nm,0.5s						
LSTR	**Listvyanka**	**5.00**	**222**	*e*Pn	**Pn**	**02 39 19.9**	**+1.5**
LSTR				*e*Pg	**Pb**	**02 39 33.5**	**+2.6**
LSTR				*e*Sn	**Sn**	**02 40 15.3**	**-0.9**
LSTR				*e*		02 40 30.8	
LSTR				*e*Sg	**Sg**	**02 40 38.4**	**-5.4**
LSTR				Pmax			
	comp=N,14nm,0.7s						
LSTR				Smax			
	comp=N,50nm,1.6s						
IVK	**Ivanovka**	**5.21**	**224**	*e*Pn	**Pn**	**02 39 22.5**	**+1.1**
IVK				*e*Pg	**Pb**	**02 39 37.4**	**+2.8**
IVK				*e*Sn	**Sn**	**02 40 21.0**	**-0.5**
IVK				*e*Sg	**Sg**	**02 40 45.4**	**-5.2**
IVK				max			
	comp=N,12nm,0.7s						
IVK				Smax			
	comp=N,49nm,1.2s						
TLY	**Talaya**	**5.61**	**227**	Pn	**Pn**	**02 39 26.4**	**-0.5**
	comp=N,0.0nm,0.3s,baz=45,slow=11,SNR=3.6						
TLY				Sn	**Sn**	**02 40 28.6**	**-2.8**
	comp=N,0.0nm,0.3s,baz=214,slow=21,SNR=6.3						
TLY				Lg	Lg	02 40 57.3	
	comp=N,0.0nm,0.3s,baz=250,slow=11,SNR=7.1						
TLY	**Talaya**	**5.61**	**227**	*e*Pn	**Pn**	**02 39 27.3**	**+0.4**
TLY				*e*		02 39 34.6	
TLY				*e*Sn	**Sn**	**02 40 30.4**	**-1.0**
TLY				*e*Sg	**Sg**	**02 40 57.0**	**-6.5**
TLY				max			
	comp=N,13nm,0.8s						
TLY				Smax			
	comp=N,43nm,1.0s						
TLY	**Talaya**	**5.61**	**227**	*e*PN	**Pn**	**02 39 27.1**	**+0.2**
TLY				*e*S	**Sn**	**02 40 30.7**	**-0.7**
TLY				*e*		02 40 57.7	
TLY				pmax	pmax		
	comp=Z,11nm,0.3s						
TLY				smax	smax		
	comp=E,52nm,0.7s						
TUP	**Tupik**	**5.75**	**99**	*e*Pn	**Pn**	**02 39 29.3**	**+0.6**
TUP				*e*Pg	**Pb**	**02 39 46.2**	**+2.5**
TUP				*e*Sn	**Sn**	**02 40 32.7**	**-2.0**
TUP				*e*Sg	**Sg**	**02 41 01.4**	**-6.3**
TUP				Pmax			
	comp=E,10.0nm,0.3s						
TUP				Smax			
	comp=E,113nm,0.9s						
TUP	**Tupik**	**5.75**	**99**	*e*PN	**Pn**	**02 39 29.3**	**+0.6**
TUP				*e*		02 39 47.0	
TUP				*e*		02 41 03.0	
TUP				pmax	pmax		
	comp=Z,10.0nm,0.5s						
TUP				smax	smax		
	comp=N,114nm,0.8s						
ARS	**Arshan**	**5.97**	**234**	*e*Pn	**Pn**	**02 39 32.6**	**+0.7**
ARS				*e*Pg	**Pb**	**02 39 50.7**	**+3.1**
ARS				*e*Sn	**Sn**	**02 40 39.7**	**-0.6**
ARS				*e*Sg	**Sg**	**02 41 08.5**	**-6.5**
ARS				max			
	comp=N,35nm,0.8s						
ARS				Smax			
	comp=N,190nm,0.8s						
KPC	**Khapcheranga**	**6.16**	**167**	*e*Pn	**Pn**	**02 39 35.9**	**+1.4**
KPC				*e*		02 39 45.4	
KPC				*e*Pg	**Pb**	**02 39 54.3**	**+3.5**
KPC				*e*		02 40 18.2	
KPC				*e*Sn	**Sn**	**02 40 43.5**	**-1.4**
KPC				*e*		02 40 58.8	
KPC				*e*Sg	**Sg**	**02 41 14.6**	**-6.4**
KPC				Pmax			
	comp=N,8.0nm,0.6s						
KPC				Smax			
	comp=N,53nm,1.5s						
ZAK	**Zakamensk**	**6.78**	**221**	*e*Pn	**Pn**	**02 39 44.6**	**+1.7**
ZAK				*e*		02 39 53.7	
ZAK				*e*Sn	**Sn**	**02 40 58.6**	**-1.5**
ZAK				*e*Sg	**Sg**	**02 41 33.8**	**-7.0**
ZAK				max			
	comp=N,7.0nm,0.4s						
ZAK				Smax			
	comp=N,45nm,1.2s						
ZAK	**Zakamensk**	**6.78**	**221**	*e*PN	**Pn**	**02 39 43.3**	**+0.4**
ZAK				*e*		02 41 33.7	
ZAK				pmax	pmax		
	comp=Z,7.0nm,0.4s						
ZAK				smax	smax		
	comp=N,45nm,0.7s						
MOY	**Mondy**	**6.81**	**237**	*e*Pn	**Pn**	**02 39 45.7**	**+2.3**
MOY				*e*		02 39 53.2	
MOY				*e*Sn	**Sn**	**02 40 59.7**	**-1.2**
MOY				*e*Sg	**Sg**	**02 41 34.1**	**-7.7**
MOY				max			
	comp=N,27nm,0.8s						
MOY				Smax			
	comp=N,72nm,1.4s						
MOY	**Mondy**	**6.81**	**237**	*e*PN	**Pn**	**02 39 45.5**	**+2.1**
MOY				*e*		02 40 07.7	
MOY				*e*		02 41 35.8	
MOY				pmax	pmax		
	comp=Z,12nm,0.4s						
MOY				smax	smax		
	comp=E,72nm,1.3s						
ORL	**Orlik**	**6.89**	**247**	*e*Pn	**Pn**	**02 39 46.3**	**+1.8**
ORL				*e*Sn	**Sn**	**02 41 00.7**	**-2.2**
ORL				*e*Sg	**Sg**	**02 41 36.9**	**-7.4**
ORL				max			
	comp=E,12nm,0.7s						
ORL				Smax			
	comp=E,40nm,1.6s						
ORL	**Orlik**	**6.89**	**247**	*e*PN	**Pn**	**02 39 46.0**	**+1.5**
ORL				*e*		02 40 08.0	
ORL				*e*S	**Sn**	**02 41 00.4**	**-2.5**
ORL				*e*		02 41 37.0	
ORL				pmax	pmax		
	comp=Z,12nm,0.7s						
ORL				smax	smax		
	comp=N,28nm,1.1s						
SONM	**Songino Array**	**8.23**	**198**	Pn	**Pn**	**02 40 04.2**	**+1.3**
	comp=N,0.2nm,0.3s,baz=15,slow=12,SNR=2.2						
SONM				Lg	Lg	02 42 23.4	
	comp=N,1.7nm,0.3s,baz=17,slow=28,SNR=13						
IENR	**Iengra**	**8.24**	**80**	*e*Pn	**Pn**	**02 40 04.3**	**+1.4**
IENR				*e*Pg	Pb	02 40 32.4	+6.4
IENR				*e*Sg	Sg	02 42 18.1	-9.3
KNGR	**Kungurtug, Tuv**	**9.18**	**241**	*e*Sn	**Sn**	**02 41 57.4**	**-1.7**
KNGR	**Kungurtug, Tuv**	**9.18**	**241**	*e*Sg	Sg	02 42 47.5	
ZALV	**Zalesovo Beam**	**14.71**	**274**	Pn	**Pn**	**02 41 30.4**	**-0.9**
	comp=N,0.1nm,0.3s,baz=72,slow=14,SNR=2.2						
TIXI	**Tiksi**	**17.86**	**19**	P	**Pn**	**02 42 11.7**	**+0.2**
	comp=N,0.4nm,0.3s,baz=231,slow=5.2,SNR=5.2						
KURK	**Kurchatov**	**19.46**	**268**	P	**Pn**	**02 42 32.4**	**+1.2**
MKAR	**Makanchi Array**	**19.50**	**254**	P	**Pn**	**02 42 31.9**	**+0.2**
	comp=N,0.2nm,0.3s,baz=68,slow=11,SNR=7.7						
KURBB	**Kurchatov Arra**	**19.55**	**268**	P	**Pn**	**02 42 32.4**	**+0.1**
	comp=N,0.1nm,0.3s,baz=66,slow=11,SNR=4.5						

IDC ***27*** *02:53:06.0±0.6, 16°.93S×172°.67W, h0^{km}, mb4.4/17, mb1 4.6/17, mb1mx4.5/26, mbtmp4.4/17, ML4.9/1, MS3.9/19, Ms1 3.9/19, ms1mx3.8/28, Error ellipse: s-maj=24.5km s-min=15.4km az=136.0*

NEIC ***27*** *02:53:08.4±3.0, 17°.31S±0°.10×172°.24W±0°.07, h10^{km}±1^{km}, mb4.8/34, Error ellipse: s-maj=19.1km s-min=5.2km az=32.0*

GCMT ***27*** *02:53:11.4±0.4, 16°.82S±0°.04×171°.99W±0°.03, h29^{km}, MW5.0/68, Moment Tensor Solution. s24,c27; s68,c75; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$4.60±.27; M$_{\theta\theta}$-2.73±.25; M$_{\phi\phi}$-1.87±.17; M$_{r\theta}$-0.33±.30; M$_{\theta\phi}$-1.35±.13; M$_{\phi r}$1.43±.18; Best double couple: M$_0$4.35500×10^{16} NP1:φ$_s$245.00000°,δ42.00000°,λ109.00000°. NP2: φ$_s$40.00000°,δ51.00000°,λ73.00000°. Principal axes: T 4.9510, Plg76.0000°, Azm250.0000°; N -1.1910, Plg13.0000°, Azm51.0000°; P -3.7600, Plg4.0000°, Azm142.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 27 02:53:08.4±0.5**, 16°.85S**±0°.09×**172°.65W**±0°.10**, h17**^{km}**, n100,** σ**1**^{s}**.98**/81**, mb4.7**/37**, MS3.9**/20**, 2D, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.04**	**16**	Pn	**Pn**	**02 53 51.2**	**-4.7**
	26nm,0.3s,baz=69,slow=20,SNR=7.8						
AFI				Sn	**Sn**	**02 54 26.9**	**-5.1**
	98nm,0.3s,baz=214,slow=24,SNR=9.8						
NIUE	**Niue**	**3.41**	**131**	Pn	Pn	02 53 53.2	-7.7
MSVF	**Nonsavu**	**8.92**	**263**	Pn	**Pn**	**02 55 16.9**	**+0.2**
	0.4nm,0.3s,baz=320,slow=21,SNR=1.8						
MSVF	**Nonsavu**	**8.92**	**263**	Pn	Pn	02 55 22.1	+5.3
RAR	**Rarotonga**	**12.93**	**112**	Pn	Pn	02 56 04.0	-7.5
DZM	**Mont Dzumac**	**20.38**	**252**	*e*LR	LR	03 02 51.9	
	comp=Z,787nm,27.2s						
DZM	**Mont Dzumac**	**20.38**	**252**	P	**P**	**02 57 43.9**	**-0.6**
	4.8nm,0.9s,baz=118,slow=15,SNR=3.6						
DZM				LR	LR	03 05 06.5	
	comp=Z,287nm,18.5s,baz=23,slow=35						
DZM	**Mont Dzumac**	**20.38**	**252**	P	**P**	**02 57 44.3**	**-0.2**
PAE	**Paea**	**22.05**	**96**	*e*T	T	03 19 52.3	
	1.5nm,0.3s						
PPT2	**Papeete2**	**22.05**	**95**	*e*LQ	LQ	03 02 07.8	
	440nm,25.8s						
PPT2				*e*LR	LR	03 03 02.4	
	comp=Z,670nm,26.5s,baz=262						
PPT	**Papeete**	**22.06**	**95**	LR	LR	03 04 57.2	
	comp=Z,194nm,18.1s,baz=284,slow=32						
URZ	**Urewera**	**23.15**	**201**	P	**P**	**02 58 13.4**	**-0.5**
	27nm,0.7s,baz=119,slow=23,SNR=19						
URZ	**Urewera**	**23.15**	**201**	P	**P**	**02 58 10.1**	**-3.8**
URZ				IAmb	IAmb	02 58 16.5	
	comp=Z,32nm,0.7s						
HNR	**Honiara**	**27.66**	**282**	LR	LR	03 08 12.5	
	comp=Z,819nm,20.4s,baz=123,slow=33						
TAOE	**Nuku Hiva Isla**	**32.63**	**80**	*e*T	T	03 33 07.3	
	comp=Z,22nm,0.2s						
STKA	**Stephens Creek**	**43.96**	**241**	P	**P**	**03 01 14.2**	**-0.6**
	comp=Z,13nm,1.2s,baz=116,slow=7.6,SNR=5.7						
STKA				LR	LR	03 19 19.6	
	comp=Z,182nm,18.3s,baz=44,slow=36						
STKA	**Stephens Creek**	**43.96**	**241**	P	**P**	**03 01 14.1**	**-0.7**
WB0	**Warramunga Arr**	**50.19**	**258**	P	**P**	**03 02 01.6**	**-2.1**
WB0				IAmb	IAmb	03 02 04.1	
	comp=Z,9.3nm,0.9s						
WB2	**Warramunga Arr**	**50.22**	**258**	P	**P**	**03 02 02.0**	**-1.9**
WB2				IAmb	IAmb	03 02 04.9	
	comp=Z,18nm,1.2s						
WRAB	**Tennant Creek**	**50.22**	**258**	P	**P**	**03 02 02.1**	**-1.8**
WRAB				IAmb	IAmb	03 02 04.3	
	comp=Z,7.8nm,0.9s						
WRA	**Warramunga Arr**	**50.23**	**258**	P	**P**	**03 02 02.0**	**-2.0**

	comp=Z,11nm,1.1s,baz=96,slow=7.1,SNR=33						
WRA				LR	LR	03 23 00.5	
	comp=Z,222nm,18.2s,baz=90,slow=36						
AS31	Alice Springs	50.36	253	P	P	03 02 02.9	-2.1
ASAR	Alice Springs	50.36	253	P	P	03 02 03.5	-1.4
	comp=Z,16nm,0.7s,baz=84,slow=8.6,SNR=101						
ASAR				S	S	03 09 14.8	-2.8
	comp=Z,1.1nm,1.0s,baz=90,slow=14,SNR=4.2						
ASAR				LR	LR	03 21 42.4	
	comp=Z,100nm,19.7s,baz=92,slow=34						
ASAR	Alice Springs	50.36	253	P	P	03 02 03.0	-2.0
SOEI	Soe	61.58	268	P	P	03 03 25.6	0.0
VNDA	Vanda	62.02	186	P	P	03 03 27.8	+0.5
	comp=Z,2.2nm,1.1s,baz=354,slow=8.4,SNR=4.6						
VNDA				LR	LR	03 26 33.9	
	comp=Z,31nm,20.4s,baz=22,slow=32						
TOLI2	Tolitoli	67.96	278	P	P	03 04 08.9	+1.8
TOLI2				IAmb	IAmb	03 04 33.8	
	comp=Z,3.5nm,0.9s						
MJAR	Matsushiro Arr	70.50	320	P	P	03 04 24.1	+1.8
	comp=Z,6.8nm,1.3s,baz=147,slow=11,SNR=4.2						
MJAR				LR	LR	03 31 52.3	
	comp=Z,41nm,20.0s,baz=115,slow=33						
JAGI	Jajag, Banyuwa	71.58	267	P	P	03 04 29.3	-0.1
PETK	Petropavlovsk-	74.22	342	P	P	03 04 45.0	+0.9
	comp=Z,6.8nm,1.1s,baz=163,slow=11,SNR=3.9						
PETK				LR	LR	03 35 45.3	
	comp=Z,35nm,19.4s,baz=136,slow=34						
QSM	Queen of Sheba	74.43	44	P	P	03 04 48.4	+2.6
QSM				IAmb	IAmb	03 05 03.0	
	comp=Z,12nm,1.5s						
113A	Mohawk Valley,	74.83	48	P	P	03 04 49.6	+1.5
NVAR	Mina Array Bea	74.93	41	P	P	03 04 50.2	+1.3
	comp=Z,1.0nm,0.8s,baz=233,slow=7.9,SNR=6.6						
NVAR	Mina Array Bea	74.93	41	P	P	03 04 50.7	+1.8
NV11	Mina Array Sit	75.02	41	P	P	03 04 51.2	+1.9
NV11				IAmb	IAmb	03 04 56.5	
	comp=Z,12nm,1.4s						
TPH	Tonopah	75.41	42	P	P	03 04 53.4	+1.7
PINE	Pine Mountain	76.64	36	IAmb	IAmb	03 05 12.2	
	comp=Z,15nm,1.4s						
KSRS	Korea Array	77.69	315	LR	LR	03 32 49.1	
	comp=Z,61nm,20.3s,baz=120,slow=31						
MSU	Marysvale	78.96	44	P	P	03 05 12.3	+0.6
TMUT	Trail Mountain	80.01	44	P	P	03 05 19.6	+2.1
TMUT				IAmb	IAmb	03 05 21.3	
	comp=Z,9.2nm,1.3s						
HLID	Hailey	80.29	39	P	P	03 05 20.1	+1.4
TX31	Lajitas Ar. Si	80.83	56	P	P	03 05 23.6	+1.8
TXAR	Lajitas Array	80.83	56	P	P	03 05 21.5	-0.3
	comp=Z,2.1nm,1.1s,baz=207,slow=5.2,SNR=9.1						
TXAR				LR	LR	03 35 59.9	
	comp=Z,40nm,18.1s,baz=0.0,slow=32						
TXAR	Lajitas Array	80.83	56	P	P	03 05 23.9	+2.1
ANMO	Albuquerque	81.19	50	P	P	03 05 24.1	+0.4
NJ2	Nanjing	81.61	307	*e*P	P	03 05 30.0	+4.3
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
MSO	Missoula	82.41	36	P	P	03 05 31.4	+1.6
MSO				IAmb	IAmb	03 05 35.5	
	comp=Z,5.7nm,1.5s						
PMSA	Palmer Station	82.57	156	P	P	03 05 26.4	-3.8
SMCO	Snowmass	82.80	46	IAmb	IAmb	03 05 44.3	
	comp=Z,11nm,1.5s						
PDAR	Pinedale Array	82.86	41	P	P	03 05 32.8	+0.3
	comp=Z,0.8nm,0.9s,baz=222,slow=2.0,SNR=6.3						
PDAR				LR	LR	03 38 59.0	
	comp=Z,102nm,18.1s,baz=268,slow=33						
PDAR	Pinedale Array	82.86	41	P	P	03 05 33.7	+1.3
BOZ	Bozeman (W)	83.07	38	IAmb	IAmb	03 05 44.6	
	comp=Z,6.6nm,1.3s						
YHH	Holmes Hill	83.11	39	P	P	03 05 35.4	+1.7
YHH				IAmb	IAmb	03 05 39.0	
	comp=Z,5.9nm,1.2s						
CCB	Clear Creek Bu	83.45	10	IAmb	IAmb	03 05 45.2	
	comp=Z,11nm,1.1s						
I23K	Minto, Yukon-K	83.65	10	IAmb	IAmb	03 05 41.0	
	comp=Z,9.8nm,1.2s						
IL31		83.72	11	IAmb	IAmb	03 05 47.1	
	comp=Z,14nm,1.5s						
ILAR	Eielson Array	83.72	11	P	P	03 05 35.4	-0.7
	comp=Z,1.5nm,0.9s,baz=217,slow=6.2,SNR=12						
ILAR				LR	LR	03 38 06.8	
	comp=Z,91nm,19.8s,baz=189,slow=32						
ILAR	Eielson Array	83.72	11	P	P	03 05 37.8	+1.8
BMAR	Burnt Mountain	86.53	10	P	P	03 05 53.1	+3.0
MAW	Mawson	86.65	198	P	P	03 05 50.7	-0.1
	comp=Z,1.7nm,0.6s,baz=122,slow=9.5,SNR=2.4						
MAW				LR	LR	03 44 01.6	
	comp=Z,152nm,18.7s,baz=70,slow=35						
PLCA	Paso Flores	88.01	132	P	P	03 05 57.9	-0.2
	comp=Z,1.8nm,0.9s,baz=313,slow=2.2,SNR=3.1						
PLCA				LR	LR	03 38 20.0	
	comp=Z,79nm,18.8s,baz=282,slow=31						
INK	Inuvik	89.50	14	P	P	03 06 06.0	+1.9
INK				IAmb	IAmb	03 06 08.7	
	comp=Z,9.4nm,1.4s						
HHC	Hu-ho-hao-te	90.53	313	*e*P	P	03 06 14.0	+4.2
HHC				pmax	pmax		
	comp=Z,17nm,0.9s						
HHC				pmax	pmax		
	comp=Z,290nm,6.6s						
YKA	Yellowknife Ar	91.14	23	P	P	03 06 13.0	+1.1
	comp=Z,0.8nm,1.0s,baz=226,slow=3.2,SNR=2.6						
KMI	Kunming	92.29	295	⇓P	P	03 06 22.3	+3.8
KMI				pP	pwP	03 06 28.0	-0.3
KMI				sP	sP	03 06 32.3	+7.9
KMI				pmax	pmax		
	comp=Z,13nm,0.7s						
CMAR	Chiang Mai Arr	93.75	288	P	P	03 06 27.3	+2.3
	comp=Z,1.6nm,0.3s,baz=89,slow=2.8,SNR=9.1						
CMAR				LR	LR	03 43 37.4	
	comp=Z,29nm,19.1s,baz=172,slow=32						
CMAR	Chiang Mai Arr	93.75	288	P	P	03 06 26.7	+1.7
A36M	Sachs Harbour	94.14	13	P	P	03 06 28.4	+2.8
A36M				IAmb	IAmb	03 06 29.6	
	comp=Z,6.5nm,1.0s						
ULM	Lac du Bonnet	94.60	39	LR	LR	03 45 27.3	
	comp=Z,205nm,18.4s,baz=300,slow=33						
SONM	Songino Array	96.40	318	P	P	03 06 36.9	+0.2
	comp=Z,0.7nm,0.9s,baz=156,slow=4.0,SNR=3.8						
SONM				LR	LR	03 43 26.1	
	comp=Z,31nm,20.4s,baz=68,slow=31						
GTA	Gaotai	98.64	308	*e*P	Pdif	03 06 55.0	+8.0
GTA				pP	pwP	03 07 01.8	+4.9
GTA				sP	sP	03 07 04.5	+12
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
LPAZ	La Paz	98.65	110	LR	LR	03 44 22.3	
	comp=Z,30nm,18.3s,baz=232,slow=31						
RAYN	Ar Rayn	143.66	287	PKPdf	PKiKP	03 12 44.7	-2.0
KIBK	Kibwezi	144.20	241	PKPdf	PKPdf	03 12 43.5	-1.1
OJC	Ojcow	145.23	346	*e*PKP	PKiKP	03 12 47.9	-1.1
OJC	Ojcow	145.23	346		PKiKP	03 12 49.0	-0.1
CLL	Collm	145.33	354	*e*PKPbc	PKPdf	03 12 46.0	+0.7
CLL				*e*PKiKP	sPKPdf	03 12 51.0	+0.1
CLL	Collm	145.33	354	PKPbc	PKiKP	03 12 46.7	-2.5
KSP	Ksiaz	145.34	350	*e*PKP	PKiKP	03 12 48.8	-0.5
KMBO	Kilima Mbogo	145.52	242	PKPbc	PKPab	03 12 48.4	+1.0
	comp=Z,6.4nm,0.8s,baz=42,slow=1.1,SNR=7.1						
KMBO	Kilima Mbogo	145.52	242		PKPab	03 12 48.0	+0.6
OSTC	Ostas	145.63	350	*e*PKP	PKiKP	03 12 48.6	-1.3
OSTC				*e*x	x	03 13 00.1	
BRG	Berggiesshubel	145.65	353	*e*PKP	PKiKP	03 12 51.4	+1.5
BRG				Amp		03 13 00.2	
	comp=Z,11nm,1.3s						
DPC	Dobruska-Polom	145.81	350	*e*PKP	PKPab	03 12 47.4	+0.3
DPC				*e*x	x	03 12 58.5	
NIE	Niedzica	145.85	345	*e*PKP	PKiKP	03 12 50.6	+0.2
KRLC	Kraliky	145.99	349	*e*PKP	PKiKP	03 12 50.2	-0.5
KRLC				*e*x	x	03 12 58.7	
MORC	Moravsky Berou	146.13	348	*e*PKP	PKiKP	03 12 51.4	+0.4
LANS	Liptovska Anna	146.31	346	*e*PKP	PKiKP	03 12 50.4	-1.0
LANS				*e*		03 13 00.1	
PRU	Pruhonice	146.44	352	*e*PKP	PKiKP	03 12 58.8	+7.3
BGES	Gesves	146.50	3	*d*PKPdf	PKPbc	03 12 48.1	-0.6
KHC	Kasperske Hory	147.40	352	*e*PKP	PKPdf	03 12 47.6	-1.3
KHC				*e*x	x	03 12 59.0	
CKRC	Cesky Krumlov	147.61	351	*e*PKP	PKPab	03 12 59.4	+5.3
GERES	GERESS Array B	147.67	352	PKPbc	PKiKP	03 12 53.3	-1.0
	comp=Z,0.7nm,0.8s,baz=35,slow=5.4,SNR=2.3						
BRTR	Keskin Array B	147.72	320	PKPbc	PKiKP	03 12 53.2	-1.5
	comp=Z,5.3nm,0.9s,baz=130,slow=2.3,SNR=9.0						
CONA	Conrad Observa	148.22	349	*e*P	PKPdf	03 12 50.3	-0.1
	comp=Z,11nm,1.3s						
ARSA	Arzberg	148.94	349	P	PKPab	03 12 59.9	+0.5
	comp=Z,6.2nm,1.1s						
WATA	Walderalm	149.40	354	*e*P	PKPab	03 13 05.7	+4.2
	comp=Z,12nm,1.4s						
WTTA	Wattenberg	149.46	354	*e*P	PKPab	03 13 05.3	+3.6
	comp=Z,12nm,1.2s						
SQTA	Sankt Quirin	149.54	355	*e*P	PKPdf	03 12 53.4	+0.8
	comp=Z,14nm,1.5s						
ABTA	Abfaltersbach	149.88	353	P	PKPab	03 13 06.7	+3.3
	comp=Z,13nm,1.2s						

*NEIC **27** 02:59:02.9±0.5, 22°.0S±0°.3×174°.1W±0°.2, h10^{km}±1^{km}, mb4.4/9, Error ellipse: s-maj=57.3km s-min=10.2km az=142.0*

*IDC **27** 02:59:03.2±1.2, 22°.34S×174°.39W, h0^{km}, mb4.0/6, mb1 4.3/7, mb1mx4.0/24, mbtmp4.1/7, ML3.2/1, Error ellipse: s-maj=60.9km s-min=24.2km az=155.0*

ISC 27 02:59:04.6±1.0**, 22°.6S**±0°.2×**174°.2W**±0°.1**, h10^{km}, n18, σ1^{s}16**/16**, mb4.4**/9**, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	5.36	50	Pn	Pn	03 00 15.9	-8.8
MSVF	Nonsavu	8.73	303	Pn	Pn	03 01 12.2	+1.2
	0.5nm,0.3s,baz=353,slow=24,SNR=2.1						
DZM	Mont Dzumac	17.88	268	P	Pn	03 03 13.5	-0.2
	0.1nm,0.3s,baz=143,slow=22,SNR=1.6						
EIDS	Eidsvold	31.75	258	P	P	03 05 28.7	-0.4
EIDS				IAmb	IAmb	03 05 29.4	
	comp=Z,9.5nm,1.1s						
STKA	Stephens Creek	40.10	247	P	P	03 06 41.0	+0.4
	comp=Z,0.8nm,0.4s,baz=86,slow=13,SNR=3.7						
AS31	Alice Springs	47.47	258	P	P	03 07 39.3	-0.8
AS31				IAmb	IAmb	03 07 40.1	
	comp=Z,1.6nm,0.5s						
ASAR	Alice Springs	47.47	258	P	P	03 07 39.2	-0.9
	comp=Z,6.4nm,0.8s,baz=94,slow=8.1,SNR=38						
WB2	Warramunga Arr	47.79	263	P	P	03 07 41.0	-1.5
WB2				IAmb	IAmb	03 07 41.5	
	comp=Z,6.0nm,0.8s						
WB0	Warramunga Arr	47.79	263	P	P	03 07 40.8	-1.8
WRA	Warramunga Arr	47.80	263	P	P	03 07 41.0	-1.7
	comp=Z,4.0nm,0.7s,baz=95,slow=8.1,SNR=46						
WRA	Warramunga Arr	47.80	263	P	P	03 07 40.9	-1.7
FORT	Forrest	51.71	248	P	P	03 08 11.8	-0.4
MORW	Morawa	62.27	248	P	P	03 09 27.0	-0.2
NVAR	Mina Array Bea	80.23	41	P	P	03 11 15.4	-0.5
	comp=Z,0.4nm,0.7s,baz=218,slow=5.6,SNR=2.1						
MAW	Mawson	80.73	199	P	P	03 11 19.4	+1.6
	comp=Z,2.1nm,0.6s,baz=111,slow=8.6,SNR=3.1						
MAW	Mawson	80.73	199	IAmb	IAmb	03 11 20.6	
	comp=Z,0.7nm,0.8s						
TXAR	Lajitas Array	85.31	56	P	P	03 11 42.0	-0.2
	comp=Z,0.2nm,0.8s,baz=258,slow=4.5,SNR=1.8						
AKASG	Malin Array Be	146.54	333	PKPbc	PKPdf	03 18 45.0	+0.4
	comp=Z,1.6nm,0.6s,baz=41,slow=3.9,SNR=8.7						

*JMA **27** 03:15:44.6±0.3, 32°.97N×137°.86E, h413^{km}±3^{km}, M3.8*

*IDC **27** 03:15:52.7±1.1, 33°.17N×137°.73E, h343^{km}±12^{km}, mb2.9/8, mb1 3.1/11, mb1mx3.0/40, mbtmp3.6/11, Error ellipse: s-maj=18.5km s-min=13.5km az=89.0*

ISC 27 03:15:51.9±0.7**, 33°.05N**±0°.07×**137°.83E**±0°.07**, h341^{km}, n41, σ1^{s}70**/48**, mb3.3**/12**, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TTO3	TONANKAI O.B.S	0.89	336	P	Pn	03 16 37.6	+1.6
TTO2	TONANKAI O.B.S	0.96	316	P	Pn	03 16 37.7	+1.6
TTO1	TONANKAI O.B.S	1.04	304	P	Pn	03 16 37.7	+1.3
JIE	Ise	1.64	325	P	Pn	03 16 40.2	+0.4
JHJ	Hachijo jima 2	1.64	87	P	Pn	03 16 42.2	+2.3
	23nm,0.3s,baz=69,slow=20,SNR=1.4						
JHJ				S	S	03 17 19.5	+1.0
	6.4nm,0.3s,baz=83,slow=18,SNR=1.1						
JKN2	Miekihoku	1.76	313	P	Pn	03 16 40.7	+0.1
JTNC	Tanabenakahech	2.01	293	P	Pn	03 16 42.3	-0.1
JWY	Kouya	2.20	303	P	Pn	03 16 44.1	+0.2
JAO	Obara	2.26	348	P	Pn	03 16 44.1	-0.2
JNY	Yasuok	2.31	1	P	Pn	03 16 44.6	-0.1
JOD2	Odawara 2	2.45	25	P	Pn	03 16 45.6	-0.1
JOD2				*e*S	S	03 17 32.9	+4.0
BSO3	Boso 3	2.83	51	P	Pn	03 16 48.0	-0.7
BSO3				S	S	03 17 37.6	+3.2
BSO4	Boso 4	2.85	46	P	Pn	03 16 48.7	-0.3
BSO4				*e*S	S	03 17 38.2	+3.3
JAI	Aioi	2.92	286	P	Pn	03 16 49.4	-0.4
JWT	Wachi	3.00	319	P	Pn	03 16 50.0	-0.5
JHU	Hanno	3.04	23	P	Pn	03 16 50.2	-0.7
JHU				*e*S	S	03 17 41.5	+3.1
BSO1	Boso 1	3.07	58	P	Pn	03 16 49.4	-1.1
JRY	Ryogami san	3.09	16	P	Pn	03 16 51.1	-0.3
JRY				*e*S	S	03 17 42.3	+3.1
MJAR	Matsushiro Arr	3.50	5	P	Pn	03 16 54.3	-0.9
	0.2nm,0.3s,baz=187,slow=10.0,SNR=12						
MAT	Matsushiro	3.50	5	P	Pn	03 16 54.0	-1.2
MAT	Matsushiro	3.50	5	P	Pn	03 16 54.1	-1.2
JAG	Ashikaga	3.63	21	P	Pn	03 16 54.6	-1.9
JYT	Yasato	3.73	31	P	Pn	03 16 55.5	-1.9
JYT				*e*S	S	03 17 51.4	+1.2
JHO	Hitachi	4.21	32	P	Pn	03 17 00.2	-2.3
JFK	Kawauchi	4.98	29	P	Pn	03 17 08.0	-2.8
JCJ	Chichijima	7.03	146	S	S	03 18 53.2	-4.6
	20nm,0.3s,baz=235,slow=23,SNR=5.8						
KSRS	Korea Array	9.21	301	P	Pn	03 18 00.1	-0.3
	0.6nm,0.3s,baz=113,slow=12,SNR=7.8						
USRK	Ussuriysk Ar.	12.03	339	P	Pn	03 18 32.5	-1.4
	baz=142,slow=8.3,SNR=2.8						
SONM	Songino Array	27.88	311	P	P	03 21 11.1	-0.3
	1.3nm,0.6s,baz=121,slow=9.3,SNR=8.5						
TAPN	Taplejung	43.36	276	*e*P	P	03 23 21.3	-0.8
	5.6nm,0.3s						
MKAR	Makanchi Array	43.87	305	P	P	03 23 24.6	-0.9
	0.4nm,0.3s,baz=88,slow=9.2,SNR=7.6						
JIRN	Jiri	44.52	277	*e*P	P	03 23 30.9	-0.5
	16nm,0.6s						
GUN	Gumba	44.70	278	*e*P	P	03 23 32.8	+0.1
	5.4nm,0.4s						
DANN	Dangsing	46.31	279	*e*P	P	03 23 45.1	0.0
PYUN	Piuthan	47.03	279	*e*P	P	03 23 50.2	-0.4
	9.7nm,0.3s						
WRA	Warramunga Arr	52.80	184	P	P	03 24 33.9	+0.7
	0.3nm,0.6s,baz=0.3,slow=7.7,SNR=18						
ILAR	Eielson Array	54.42	31	P	P	03 24 43.8	-0.7
	0.4nm,0.7s,baz=259,slow=5.0,SNR=7.9						
ASAR	Alice Springs	56.52	184	P	P	03 25 02.1	+2.4
	0.2nm,0.7s,baz=11,slow=14,SNR=4.6						
INK	Inuvik	59.26	26	P	P	03 25 18.2	+0.3
	0.8nm,0.5s,baz=277,slow=4.3,SNR=7.4						
YKA	Yellowknife Ar	68.72	28	P	P	03 26 19.6	+0.5
	0.3nm,0.8s,baz=298,slow=6.4,SNR=4.7						
PDAR	Pinedale Array	82.57	43	P	P	03 27 38.2	+0.5
	0.1nm,0.5s,baz=286,slow=3.7,SNR=3.8						

GUC 27 04:43:20.1±0.5**, 38°.07S×73°.71W, h38^{km}, ML3.7, 1C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BI05	Punta Hualpn	1.38	18	*e*P	Pn	04 43 43.6	+0.8
BI05				*i* S	Sn	04 44 00.8	+1.0
BI05				IAML		04 44 07.2	
	comp=N,2µm,0.5s						
LC01	Cunco	1.66	120	*e*P	Pn	04 43 47.8	+1.1
LC01				*i* S	Sn	04 44 08.3	+1.5
LC01				IAML		04 44 13.6	
	comp=N,446nm,0.4s						
LR02	Universidad Au	1.77	168	IAML		04 44 22.6	
	comp=N,4µm,0.5s						
LR04	Corral	1.82	173	*e*P	Pn	04 43 49.6	+0.7
LR04				*i* S	Sn	04 44 11.0	+0.3
LR04				IAML		04 44 22.2	
	comp=N,1µm,0.3s						
LR03	Panguipulli	1.89	146	*e*P	Pn	04 43 51.7	+1.8
LR03				*i* S	Sn	04 44 13.7	+1.3
LR03				IAML		04 44 26.9	
	comp=N,1µm,0.5s						
ML02	Panimavida	2.94	39	⇑*e*P	Pn	04 44 05.0	+0.7
ML02				*e*S	Sn	04 44 39.0	+0.6
ML02				IAML		04 44 58.0	
	comp=N,276nm,0.5s						
LL04	Puerto Octay	3.01	161	*e*P	Pn	04 44 06.1	+0.9
LL04				*i* S	Sn	04 44 40.2	+0.2
LL04				IAML		04 44 59.5	
	comp=E,124nm,0.7s						
GO05	Huala	3.37	26	*i* P	Pn	04 44 11.1	+0.8
GO05				IAML		04 45 11.2	
	comp=E,127nm,0.6s						
BO02	Sierra Bellavi	4.03	37	⇓*i*P	Pn	04 44 20.0	+0.6
BO02				*i* S	Sn	04 45 07.1	+1.7
MT01	Popeta	4.65	26	*e*P	Pn	04 44 27.6	-0.1
MT01				*i* S	Sn	04 45 20.0	-0.4
MT09	Talagante	4.82	28	*e*P	Pn	04 44 30.3	+0.1
MT02	Curacav	5.24	24	*e*P	Pn	04 44 35.0	-0.9
PEL	Peldehue	5.50	28	*e*P	Pn	04 44 39.1	-0.4

DSN 27 04:48:39.2±0.8**, 24°.86N×49°.28E, h10^{km}, ML3.5**/6**, Error ellipse: s-maj=22.6km s-min=5.2km az=163.0, Eastern Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBD	Kabd	4.53	342	*e*P	Pb	04 49 58.7	-0.1
MIB	Mutribah	5.22	341	*e*P	Pn	04 50 02.7	+5.4
NAZ	Nazwa, Dubai	5.79	87	P	Pn	04 50 04.9	-0.3
ASHO	Ashiyiah	6.16	90	P	Pn	04 50 10.2	-0.2
HATD	Hatta, Dubai	6.22	89	P	Pn	04 50 11.4	+0.2
MSFE	Esma-Masafi	6.25	84	P	Pn	04 50 11.4	-0.2
MSFE				S	Sn	04 51 24.0	+0.8
UOSS	Minazif	6.29	88	P	Pn	04 50 12.4	+0.4
BANOM	Banah	6.43	79	P	Pn	04 50 13.7	-0.4
BANOM				S	Sn	04 51 28.5	+0.9
SOHO	SOHO	6.64	95	P	Pn	04 50 16.4	-0.5

IDC 27 04:56:59.2±1.9**, 1°.57N×129°.00E, h0^{km}, mb3.1**/3**, mb1 3.4**/5**, mb1mx3.1**/40**, mbtmp3.2**/5**, ML3.1**/1**, Error ellipse: s-maj=69.4km s-min=26.5km az=65.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	3.32	137	Pn	Pn	04 57 51.8	-0.6
	1.8nm,0.3s,baz=178,slow=22,SNR=7.4						
FITZ	Fitzroy Crossi	19.82	189	P	Pn	05 01 32.9	-0.2
	baz=23,slow=7.7						
WRA	Warramunga Arr	22.01	166	P	P	05 01 53.7	-1.6
	0.3nm,0.7s,baz=343,slow=12,SNR=2.9						
ASAR	Alice Springs	25.54	170	P	P	05 02 30.4	+0.7
	0.1nm,0.4s,baz=351,slow=11,SNR=2.5						
MKAR	Makanchi Array	60.61	325	P	P	05 07 11.7	-0.1
	0.3nm,0.6s,baz=122,slow=8.4,SNR=2.3						

*IDC **27** 05:15:45.6±1.3, 0°.88N×127°.33E, h0^{km}, mb4.2/4, mb1 4.3/5, mb1mx3.8/36, mbtmp4.1/5, ML3.4/1, MS3.0/2, Ms1 3.1/2, ms1mx2.5/42, Error ellipse: s-maj=60.7km s-min=21.5km az=61.0*

*DJA **27** 05:15:46.8±0.3, 1°N±2°×12°7E±°, h10^{km}, M4.0/12, mb4.4/2, mB6.1/1, MLv3.9/12, Mw(mB)5.7/1*

*NEIC **27** 05:15:47.8±1.5, 0°.93N±0°.06×127°.50E±0°.07, h9^{km}±7^{km}, mb3.9/6, Error ellipse: s-maj=12.7km s-min=5.4km az=130.0*

ISC 27 05:15:46.9±1.8**, 0°.95N**±0°.07×**127°.51E**±0°.08**, h10^{km}**±10^{km}**, n26, σ0^{s}71**/27**, mb4.1**/7**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.23	219	P	Pg	05 15 51.1	-0.5
TNTI				S	Sg	05 15 55.0	+0.2
TNTI	Ternate	0.23	219		Pg	05 15 51.8	+0.2
TNTI				Sg	Sg	05 15 54.9	+0.1
LBMI	Labuha	1.58	180	P	Pn	05 16 14.9	0.0
LBMI				S	Sb	05 16 36.0	-0.2
SANI	Sanana	3.35	207	P	Pn	05 16 38.7	-0.6
SGSI	Sangihe	3.36	324	P	Pn	05 16 39.3	-0.2
KMSI	Cibinong	3.55	264	P	Pn	05 16 41.5	-0.6
SWI	Sorong	4.16	116	P	Pn	05 16 51.0	+0.6
SIJI	Sorong	4.17	116	Pn	Pn	05 16 52.0	+1.4
	2.2nm,0.3s,baz=301,slow=12,SNR=5.5						
SIJI				LR	LR	05 18 45.7	
	comp=Z,369nm,18.3s,baz=236,slow=42						
MSAI	Masohi	4.50	162	P	Pn	05 16 55.2	+0.1
GTOI	Gorontalo	4.51	266	P	Pn	05 16 56.7	+1.4
AAI	Ambon	4.66	172	P	Pn	05 16 57.0	-0.3
LUWI	Luwuk	5.14	247	P	Pn	05 17 03.2	-0.7
	0.8nm17µm64nm,0.9s						
TOLI2	Tolitoli	6.73	271	Pn	Pn	05 17 27.4	+1.5
MMRI	Maumere	10.88	209	Pn	Pn	05 18 23.6	+0.8
WB0	Warramunga Arr	21.67	162	P	P	05 20 37.5	-0.4
WB0				IAmb	IAmb	05 20 39.0	
	comp=Z,7.0nm,1.1s						
WRA	Warramunga Arr	21.82	162	P	P	05 20 39.6	+0.1
	comp=Z,5.3nm,0.6s,baz=340,slow=11,SNR=17						
WRA	Warramunga Arr	21.82	162	P	P	05 20 39.5	+0.1
WB2	Warramunga Arr	21.82	162	P	P	05 20 39.1	-0.4
WB2				IAmb	IAmb	05 20 44.4	
	comp=Z,7.6nm,0.8s						
AS31	Alice Springs	25.25	166	P	P	05 21 13.8	+0.5
AS31				IAmb	IAmb	05 21 19.9	
	comp=Z,2.2nm,0.8s						
ASAR	Alice Springs	25.25	166	P	P	05 21 13.1	-0.3
	comp=Z,5.3nm,0.8s,baz=344,slow=10,SNR=28						
ASAR	Alice Springs	25.25	166	P	P	05 21 14.2	+0.9
CMAR	Chiang Mai Arr	33.00	304	LR	LR	05 36 43.1	
	comp=Z,11nm,18.2s,baz=115,slow=38						
BBOO	Buckleboo	34.54	167	P	P	05 22 34.6	-1.0
STKA	Stephens Creek	35.27	159	P	P	05 22 42.4	+0.5
	comp=Z,2.3nm,0.7s,baz=341,slow=8.8,SNR=5.3						
STKA	Stephens Creek	35.27	159	IAmb	IAmb	05 23 05.9	
	comp=Z,0.5nm,1.2s						
MKAR	Makanchi Array	60.27	326	P	P	05 25 55.7	0.0
	comp=Z,1.9nm,0.6s,baz=119,slow=7.8,SNR=13						

IDC 27 05:34:53.4±4.1**, 22°.48S×148°.33E, h0^{km}, mb1 3.4**/4**, mb1mx3.2**/32**, mbtmp3.2**/4**, ML3.2**/4**, Error ellipse: s-maj=41.2km s-min=23.4km az=81.0, Queensland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	3.07	320	Pn	Pn	05 35 43.4	+0.2
	2.5nm,0.3s,baz=139,slow=15,SNR=24						
CTA				Pg	Pb	05 35 50.2	+1.3
	2.3nm,0.3s,baz=139,slow=17,SNR=16						
CTA				Lg	Lg	05 36 29.1	
	8.1nm,0.3s,baz=46,slow=22,SNR=12						
STKA	Stephens Creek	11.12	211	Pn	Pn	05 37 34.1	+0.4
	0.4nm,0.3s,baz=28,slow=9.5,SNR=5.6						
WRA	Warramunga Arr	13.29	278	Pn	Pn	05 38 02.8	-0.7
	0.0nm,0.3s,baz=101,slow=11,SNR=1.9						
WRA				Lg	Lg	05 41 56.8	
	0.1nm,0.3s,baz=110,slow=26,SNR=6.4						
ASAR	Alice Springs	13.34	262	Pn	Pn	05 38 03.9	-0.3
	0.1nm,0.3s,baz=94,slow=13,SNR=5.8						
ASAR				Lg	Lg	05 41 59.3	
	0.1nm,0.3s,baz=94,slow=27,SNR=3.1						

IDC 27 05:35:34.7±7.9**, 30°.40S×178°.08W, h0^{km}, mb3.5**/2**, mb1 3.7**/2**, mb1mx3.2**/37**, mbtmp3.5**/2**, Error ellipse: s-maj=328.5km s-min=63.2km az=155.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.04	267	P	P	05 43 35.9	-0.5
	0.3nm,0.5s,baz=100,slow=7.6,SNR=4.2						
WRA	Warramunga Arr	44.02	272	P	P	05 43 44.5	+0.1
	0.4nm,0.5s,baz=111,slow=8.0,SNR=6.4						
FINES	FINESS Array B	145.12	340	PKPbc	PKPbc	05 55 12.1	-0.8
	8.6nm,1.1s,baz=75,slow=1.6,SNR=3.4						

*VAO **27** 05:35:37.3±0.5, 16°.47S×69°.84W, h183^{km}±6^{km}, mb4.5*

*SJA **27** 05:35:39.2±0.6, 16°.70S×70°.17W, h223^{km}±23^{km}, ML4.6, MW4.2*

*NEIC **27** 05:35:40.4±2.5, 16°.61S±0°.06×69°.66W±0°.08, h192^{km}±5^{km}, mb4.5/21, Error ellipse: s-maj=11.7km s-min=8.1km az=124.0*

*IDC **27** 05:35:40.7±0.8, 16°.51S×69°.56W, h192^{km}±6^{km}, mb3.9/13, mb1 4.1/18, mb1mx3.9/36, mbtmp4.5/18, Error ellipse:*

s-maj=13.2km s-min=11.9km az=55.0

ISC 27 05:35:39.5±0.6**, 16°.64S**±0°.04×**69°.62W**±0°.05**, h189**^{km}±5^{km}**, n148, σ1^{s}.41**/166**, mb4.4**/17**, Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I08BO	LAS PENAS INFR	1.20	70	P	Pn	05 36 12.2	+2.0
	baz=262,slow=14,SNR=11						
LPAZ	La Paz	1.47	77	P	Pn	05 36 14.7	+2.0
	473nm,0.3s,baz=293,slow=6.4,SNR=1907						
LPAZ				LR	LR	05 36 30.8	
	comp=Z,118nm,18.2s,baz=208,slow=36						
LPAZ				S	Sn	05 36 39.5	+1.2
	71nm,0.3s,baz=201,slow=24,SNR=4.0						
LPAZ	La Paz	1.47	77	Pn	Pn	05 36 15.1	+2.5
LPAZ				Sn	Sn	05 36 40.3	+2.0
PB16	IPOC Station P	1.69	176		Pn	05 36 17.7	+3.0
PB16				Sn	Sn	05 36 43.2	+1.1
AP01	Chacalluta	1.86	202	Pn	Pn	05 36 16.8	+1.1
AP01				Sn	Sn	05 36 43.3	-0.7
PB12	IPOC Station P	2.08	199	Pn	Pn	05 36 18.6	+0.5
PB12				Sn	Sn	05 36 47.6	-0.7
PB11	IPOC Station P	3.11	181	Pn	Pn	05 36 31.4	+1.4
PB08	IPOC Station P	3.52	173	Pn	Pn	05 36 37.1	+1.8
TA02	Huaiquique	3.65	188		Pn	05 36 36.6	+0.1
TA01	Diego Aracena	3.95	188	Pn	Pn	05 36 40.5	+0.3
PB01	IPOC Station P	4.39	178		Pn	05 36 46.2	+0.3
PB01	IPOC Station P	4.39	178	*e*S	Sn	05 37 36.8	-1.4
PB01				IAML		05 37 40.9	
	comp=Z,453nm,0.2s						
PB02	IPOC Station P	4.67	183	*e*P	Pn	05 36 50.0	+0.5
PB02				*e*S	Sn	05 37 42.3	-2.3
PB02				IAML		05 37 45.9	
	comp=Z,1μm,0.3s						
PB07	IPOC Station P	5.07	183		Pn	05 36 55.2	+0.5
PB07	IPOC Station P	5.07	183	*e*P	Pn	05 36 55.1	+0.4
PB07				*e*S	Sn	05 37 50.9	-3.2
PB07				IAML		05 37 54.6	
	comp=Z,306nm,0.6s						
PB09	IPOC Station P	5.15	176		Pn	05 36 56.6	+0.9
PB09	IPOC Station P	5.15	176	*e*P	Pn	05 36 57.0	+1.3
PB09				*e*S	Sn	05 37 54.4	-1.4
PB09				IAML		05 37 59.3	
	comp=Z,189nm,0.9s						
PB03	IPOC Station P	5.39	181	*e*P	Pn	05 36 59.1	+0.3
PB03				*e*S	Sn	05 37 58.7	-2.7
PB03				IAML		05 38 01.5	
	comp=Z,313nm,0.2s						
PB04	IPOC Station P	5.69	185		Pn	05 37 02.4	-0.3
PB04	IPOC Station P	5.69	185	*e*P	Pn	05 37 02.6	-0.1
PB04				*e*S	Sn	05 38 04.3	-4.1
PB04				IAML		05 38 11.0	
	comp=Z,230nm,0.4s						
LVC	Limon Verde	5.98	174	P	Pn	05 37 08.0	+1.3
	comp=Z,4.2nm,0.3s,baz=40,slow=12,SNR=74						
LVC				S	Sn	05 38 13.0	-2.5
	comp=Z,19nm,0.3s,baz=126,slow=18,SNR=16						
LVC	Limon Verde	5.98	174	*e*P	Pn	05 37 07.0	+0.3
LVC	Limon Verde	5.98	174	Pn	Pn	05 37 07.5	+0.8
LVC	Limon Verde	5.98	174	*e*P	Pn	05 37 08.0	+1.2
LVC				*e*S	Sn	05 38 13.7	-1.9
LVC				IAML		05 38 19.2	
	comp=Z,87nm,0.5s						
PB06	IPOC Station P	6.04	180		Pn	05 37 07.1	-0.1
PB06	IPOC Station P	6.04	180	*e*P	Pn	05 37 07.3	0.0
PB06				*e*S	Sn	05 38 14.7	-1.9
PB06				IAML		05 38 18.0	
	comp=Z,218nm,1.0s						
PB05	IPOC Station P	6.21	185	*e*P	Pn	05 37 08.9	-0.6
PB05				*e*S	Sn	05 38 15.1	-5.5
PB05				IAML		05 38 20.4	
	comp=Z,78nm,0.3s						
PB15	IPOC Station P	6.54	179		Pn	05 37 14.6	+0.7
PB15	IPOC Station P	6.54	179	*e*P	Pn	05 37 14.2	+0.3
PB15				*e*S	Sn	05 38 23.8	-4.7
PB15				IAML		05 38 31.6	
	comp=Z,579nm,0.2s						
YJA	Yavi	6.74	146	*e*P	Pn	05 37 19.3	+2.6
YJA				*e*S	Sn	05 38 32.8	-0.7
PB10	IPOC Station P	6.90	187	Pn	Pn	05 37 18.0	-0.4
PB10	IPOC Station P	6.90	187	*e*P	Pn	05 37 13.2	-5.1
PB10				*e*S	Sn	05 38 27.8	-8.8
PB10				IAML		05 38 37.4	
	comp=Z,57nm,0.7s						
ETMB	Extrema	7.54	27	Pn	Pn	05 37 26.9	+0.1
HJA	Humahuaca	7.64	149	*e*P	Pn	05 37 30.2	+1.7
HJA				IAML		05 39 02.6	
	comp=Z,61nm,0.4s						
PB14	IPOC Station P	7.99	185		Pn	05 37 32.5	-0.4
PB14	IPOC Station P	7.99	185	*e*P	Pn	05 37 32.5	-0.4
PB14				IAML		05 39 08.5	
	comp=Z,32nm,0.3s						
SIV	San Ignacio	8.23	87	P	Pn	05 37 34.7	-1.2
	comp=Z,8.8nm,0.3s,baz=274,slow=10,SNR=88						
SIV				S	Sn	05 39 04.3	-4.2
	comp=Z,1.3nm,0.3s,baz=202,slow=20,SNR=9.6						
NNA	Nana	8.38	302	P	Pn	05 37 37.3	-0.7
	comp=Z,27nm,0.3s,baz=133,slow=10,SNR=4.8						
AZAP	Zapla	8.67	151	*e*P	Pn	05 37 41.5	-0.3
AZAP				*e*S	Sn	05 39 15.6	-3.6
AZAP				IAML		05 39 19.2	
	comp=Z,93nm,0.5s						
ASTB	Santa Barbara	8.74	147	*e*P	Pn	05 37 43.0	+0.3
ASTB				IAML		05 39 21.4	
	comp=Z,4.9nm,0.5s						
SLA	San Lorenzo	8.92	155	*e*P	Pn	05 37 45.5	+0.5
SLA				IAML		05 39 26.9	
	comp=Z,20nm,0.7s						
CZSB	Cruzeiro do Su	9.35	341	*e*P	Pn	05 37 44.4	-6.1
VILB	Vilhena	9.82	69	*e*P	Pn	05 37 56.6	-0.1
VILB	Vilhena	9.82	69	Pn	Pn	05 37 56.4	-0.3
FSA	Cafayete	10.02	161	*e*P	Pn	05 37 59.5	+0.2
PTLB	Pontes e Lacer	10.15	85	Pn	Pn	05 37 59.8	-1.1
AC02	Maricunga	10.16	178		Pn	05 38 02.7	+1.2
TBTG	Tabatinga, AM	12.37	359	*e*P	Pn	05 38 25.5	-4.0
SALV	Santo Antonio	13.39	89	*e*P	Pn	05 38 42.4	0.0
PDRB	Porto dos Gac	13.46	70	*e*P	Pn	05 38 42.6	-0.7
AQDB	Aquidauana	13.74	108	*e*P	Pn	05 38 47.5	+0.8
AQDB	Aquidauana	13.74	108	Pn	Pn	05 38 47.6	+0.8
PP1B	Ponte de Pedra	14.13	96	*e*P	P	05 38 52.5	-1.0
CLDB	Colider	14.60	69	*e*P	P	05 38 58.6	-0.2
CPUP	Villa Florida	14.96	132	P	P	05 39 03.4	+0.8
	comp=Z,0.7nm,0.3s,baz=306,slow=9.3,SNR=9.5						
MACA	Manacapuru-AM	16.01	34	*e*P	P	05 39 13.3	-1.1
MACA	Manacapuru-AM	16.01	34	P	P	05 39 13.4	-1.0
VA03	San Esteban	16.08	183	P	P	05 39 14.0	-1.1
VA03				IAmb	IAmb	05 39 19.8	
	comp=Z,16nm,0.7s						
MT02	Curacav	16.61	184	P	Pn	05 39 22.6	+0.9
MT02				IAmb	IAmb	05 39 23.8	
	comp=Z,17nm,0.8s						
NPGB	Novo Progresso	16.89	57	*e*P	P	05 39 23.5	-0.6
TRCB	Terra Rica	17.12	114	*e*P	P	05 39 26.1	-0.5
TRCB	Terra Rica	17.12	114	P	Pn	05 39 27.2	-0.7
TRCB				IAmb	IAmb	05 39 30.0	
	comp=Z,41nm,1.0s						
ARAG	Araguaiana, MT	17.13	89	*e*P	Pn	05 39 27.4	-0.6
MT01	Popeta	17.22	185	P	P	05 39 28.3	+0.8
MT01				IAmb	IAmb	05 39 33.4	
	comp=Z,14nm,0.7s						
ITQB	Itaqui	17.62	140	*e*P	Pn	05 39 34.6	+1.0
ITQB	Itaqui	17.62	140	P	Pn	05 39 33.7	+0.1
PCMB	Pacaembu	18.04	109	*e*P	Pn	05 39 38.5	-0.1
PTGB	Pitanga	18.28	119	*e*P	P	05 39 38.5	-0.7
ITTB	Itaituba	18.29	50	*e*P	P	05 39 38.8	-0.6
SNDB	Serra Nova Dou	18.35	78	*e*P	P	05 39 40.5	+0.4
PTGA	Pitinga	18.45	32	P	P	05 39 40.6	-0.4
	comp=Z,7.3nm,0.3s,baz=336,slow=23,SNR=59						
ITRB	Iturama	18.56	102	*e*P	Pn	05 39 43.4	-1.4
FRTB	Fartura	19.99	113	*e*P	P	05 39 59.0	+1.3
CPSB	Cacapava Do Su	20.17	136	*e*P	P	05 40 00.7	+1.2
BB19B	Bebedouro	20.44	106	*e*P	P	05 40 04.1	+1.6
IPMB	Ipameri, GO	20.49	97	*e*P	P	05 40 02.2	-0.8
BDFB	Brasilia	20.78	90	P	P	05 40 06.3	0.0
	comp=Z,12nm,0.5s,baz=266,slow=12,SNR=22						
BDFB	Brasilia	20.78	90	P	P	05 40 06.2	0.0
BDFB				IAmb	IAmb	05 40 08.9	
	comp=Z,15nm,0.8s						
BOAV	Boa Vista	20.94	26	*e*P	P	05 40 05.7	-2.1
PLTB	Pedras Altas	20.94	139	P	P	05 40 06.4	-1.3
PLTB				IAmb	IAmb	05 40 16.0	
	comp=Z,25nm,1.3s						
MALB	Monte Alegre	21.08	47	*e*P	P	05 40 08.1	-1.2
TIJ01	Guaruva-PR	21.08	118	*e*P	P	05 40 10.9	+1.5
PEXB	Peixe	21.13	81	*e*P	P	05 40 08.8	-1.1
RCLB	Rio Claro- Sao	21.59	109	*e*P	P	05 40 14.9	+0.2
PRPB	Parauapebas	22.00	64	*e*P	P	05 40 18.1	-0.8
VAO	Valinhos	22.22	110	*e*P	P	05 40 21.1	+0.2
PET01	Itanhaem-SP	22.26	114	*e*P	P	05 40 20.2	-0.9
LC01	Cunco	22.27	185	P	P	05 40 22.4	+1.4
TER01	Tubaro-SC	22.28	126	*e*P	P	05 40 20.5	-0.9
TRQA	Tornquist	22.38	164	*e*P	P	05 40 22.7	+0.6
SMTB	Santa Maria do	22.82	73	*e*P	P	05 40 26.2	-0.2
PARB	Paraibuna	23.50	110	*e*P	P	05 40 33.5	+1.0
MCPB	Macapa, AP	23.69	49	*e*P	P	05 40 32.9	-1.3
BSCB	Bom Sucesso	23.91	104	*e*P	P	05 40 37.2	+0.9
PLCA	Paso Flores	24.03	182	P	P	05 40 38.6	+1.5
	comp=Z,9.9nm,0.6s,baz=358,slow=11,SNR=36						
PLCA	Paso Flores	24.03	182	*e*P	P	05 40 37.0	-0.1
PLCA	Paso Flores	24.03	182	P	P	05 40 38.8	+1.6
PLCA				IAmb	IAmb	05 40 41.6	
	comp=Z,12nm,0.8s						
SDBA	SAO DESIDERIO	24.29	83	*e*P	P	05 40 38.5	-1.3
JANB	Januaria	24.40	90	*e*P	P	05 40 40.1	-0.7
ZARC	Zaragoza, Cauc	24.52	347	P	P	05 40 39.2	-2.6
ZARC				IAmb	IAmb	05 40 40.5	
	comp=Z,5.3nm,0.5s						
MC01	Montes Claros	24.60	94	*e*P	P	05 40 42.9	+0.3
DIAM	Diamantina, MG	24.80	98	*e*P	P	05 40 44.5	0.0
DUB01	Friburgo-RJ	26.25	106	*e*P	P	05 40 58.4	+1.0
MDP	Montagnes des	27.36	39	P	P	05 41 06.6	-0.7
	comp=Z,6.2nm,0.6s,baz=210,slow=6.4,SNR=5.4						
NBIT	Itapeh - BA	29.09	91	*e*P	P	05 41 22.7	+0.1
GDU01	Guandu, BA	29.13	88	*e*P	P	05 41 21.6	-1.4
NBPN	Ponto Novo - B	29.13	82	*e*P	P	05 41 22.6	-0.5
NBPS	Pedro II - PI	30.20	69	*e*P	P	05 41 32.2	-0.3
NBLA	Lagarto - SE	31.39	84	*e*P	P	05 41 41.7	-1.2
NBPB	Pedra_Branca-C	31.42	73	*e*P	P	05 41 43.0	-0.3
NBMO	Morrinhos-CE	31.93	69	*e*P	P	05 41 47.0	-0.7
NBCL	Cascavel-CE	33.12	72	*e*P	P	05 41 57.7	-0.3
NBAN	Anadia - AL	33.17	82	*e*P	P	05 41 56.2	-2.2
NBRF	Rio Formoso -	34.53	81	*e*P	P	05 42 09.2	-0.9
NBPV	Pedro Velho	35.08	77	*e*P	P	05 42 15.0	+0.1
TXAR	Lajitas Array	56.29	324	P	P	05 45 01.1	+0.4
	comp=Z,0.6nm,0.6s,baz=153,slow=8.1,SNR=12						
TX31	Lajitas Ar. Si	56.29	324	P	P	05 45 01.4	+0.6
VNA3	Neumayer Olymp	64.88	162	P	P	05 46 00.2	+2.1
VNA1	Neumayer--Stat	65.08	161	P	P	05 45 59.0	-0.3
VNA2	Neumayer--Watz	65.45	161	P	P	05 46 01.7	0.0
SNAA	Sanae	67.08	162	P	P	05 46 12.6	+0.4
SNAA	Sanae	67.08	162	P	P	05 46 14.3	+2.1
MTPU	Mount Pierson	67.48	325	P	P	05 46 16.7	+1.1
MTPU				IAmb	IAmb	05 48 34.5	
	comp=Z,17nm,2.0s						
LIC	Lamto	67.77	76	*e*PKP1	P	05 46 18.8	+1.4
	comp=Z,52nm,0.9s						
TIC	Toumodi	67.93	76	*e*PKP1	P	05 46 19.8	+1.4
KIC	Kosan Boka	68.09	76	*e*PKP1	P	05 46 18.8	-0.6
	comp=Z,34nm,0.4s						
DBIC	Dimbokro	68.09	76	P	P	05 46 19.0	-0.4
	comp=Z,14nm,0.5s,baz=256,slow=3.7,SNR=30						
DBIC	Dimbokro	68.09	76	P	P	05 46 18.8	-0.6
PDAR	Pinedale Array	69.58	330	P	P	05 46 28.8	+0.4
	comp=Z,0.4nm,0.4s,baz=121,slow=8.8,SNR=7.2						
ULM	Lac du Bonnet	70.50	342	P	P	05 46 32.5	-0.9
	comp=Z,2.3nm,0.5s,baz=145,slow=6.0,SNR=4.4						
NVAR	Mina Array Bea	71.28	321	P	P	05 46 39.0	+0.4
	comp=Z,1.5nm,0.9s,baz=149,slow=7.8,SNR=6.6						
KOWA	Kowa	71.78	68	P	P	05 46 41.7	-0.1
PAHR	Pah Rah Range	72.74	322	P	P	05 46 48.9	+1.7
QSPA	South Pole Qui	73.53	180	P	P	05 46 53.7	+2.2
QSPA				IAmb	IAmb	05 46 54.5	
	comp=Z,9.8nm,1.2s						
TORD	Torodi Ar. Bea	76.42	72	P	P	05 47 08.2	-0.6
	comp=Z,13nm,0.7s,baz=259,slow=5.7,SNR=70						
TORD	Torodi Ar. Bea	76.42	72	P	P	05 47 08.5	-0.2
TORD				IAmb	IAmb	05 47 08.9	
	comp=Z,7.3nm,0.8s						
VNDA	Vanda	81.50	190	P	P	05 47 37.6	+2.4
	comp=Z,0.9nm,0.6s,baz=132,slow=6.2,SNR=6.7						
ESDC	Sonseca Array	82.87	45	P	P	05 47 43.6	+0.6
	comp=Z,0.4nm,0.5s,baz=248,slow=4.8,SNR=4.4						
YKA	Yellowknife Ar	86.40	341	P	P	05 48 00.7	+0.6
	comp=Z,0.4nm,0.5s,baz=90,slow=15,SNR=14						
MAW	Mawson	89.16	164	P	P	05 48 15.0	+1.8
	comp=Z,1.6nm,0.4s,baz=147,slow=2.9,SNR=2.5						
ARCES	ARCESS Array B	107.25	22	PKKPbc	PKKPbc	06 05 00.1	-2.0
	comp=Z,1.3nm,0.7s,baz=45,slow=1.9,SNR=5.3						
ASAR	Alice Springs	133.82	210	PKP	PKiKP	05 54 35.6	-0.5
	comp=Z,0.7nm,0.6s,baz=125,slow=1.9,SNR=11						
WRA	Warramunga Arr	136.69	214	PKhKP	PKPpre	05 54 28.2	
	comp=Z,0.2nm,0.4s,baz=140,slow=3.1,SNR=6.7						
WRA				PKP	PKiKP	05 54 41.4	-0.6
	comp=Z,0.9nm,0.3s,baz=148,slow=1.8,SNR=38						
WRA				SKPbc	SKPbc	05 57 55.9	+0.7
	comp=Z,0.6nm,0.8s,baz=132,slow=2.8,SNR=6.4						
ZALV	Zalesovo Beam	137.79	22	PKP	PKPdf	05 54 41.3	+0.2
	comp=Z,1.7nm,0.6s,baz=265,slow=2.7,SNR=7.2						
ZALV				SKPbc	SKPbc	05 57 57.8	+0.6
	comp=Z,1.7nm,0.8s,baz=289,slow=4.5,SNR=6.9						
MKAR	Makanchi Array	141.98	32	PKP	PKPdf	05 54 50.1	+1.1
	comp=Z,0.4nm,0.7s,baz=338,slow=3.1,SNR=2.4						
MKAR				SKPbc	SKiKP	05 58 09.8	-0.5
	comp=Z,0.5nm,0.7s,baz=336,slow=2.7,SNR=4.2						
USRK	Ussuriysk Ar.	147.00	331	PKPbc	PKPab	05 55 00.8	-1.1
	comp=Z,2.3nm,0.6s,baz=45,slow=1.7,SNR=4.9						
SONM	Songino Array	148.71	5	PKPbc	PKiKP	05 55 06.0	+0.1
	comp=Z,2.9nm,0.4s,baz=315,slow=2.0,SNR=33						
SONM	Songino Array	148.71	5		PKPbc	05 55 04.9	+0.4

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*NEIC **27** 05:49:13.5±1.4, 7°.3N±0°.2×103°.5W±0°.2, h10^{km}±2^{km}, mb4.4/23, Error ellipse: s-maj=28.8km s-min=28.0km az=230.0*

*IDC **27** 05:49:19.8±1.9, 8°.42N×103°.73W, h0^{km}, mb3.9/7, mb1 4.3/8, mb1mx4.0/34, mbtmp4.0/8, ML3.9/1, MS3.6/17, Ms1 3.6/17, ms1mx3.4/32, Error ellipse: s-maj=63.8km s-min=25.7km az=52.0*

ISC 27 05:49:20.8±1.5**, 8°.3N**±0°.2×**103°.7W**±0°.1**, h10**^{km}**, n47, σ1^{s}.51**/26**, mb4.3**/14**, MS3.6**/15**, Northern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	12.26	44	LR	LR	05 55 50.8	
	comp=Z,531nm,21.1s,baz=219,slow=32						
HUEH	Huehuetenango	13.83	59	P	Pn	05 52 36.6	-0.6
APG	El Apazote	14.58	62	Pn	Pn	05 52 45.5	-2.0
	0.6nm,0.3s,baz=230,slow=5.3,SNR=14						
APG				LR	LR	05 57 11.6	
	comp=Z,439nm,21.9s,baz=269,slow=32						
MGAN	Managua	17.61	76	Pn	Pn	05 53 17.5	-9.0
HPIG		18.62	355	P	Pn	05 53 41.7	+2.6
HPIG				IAmb	IAmb	05 53 45.3	
	comp=Z,22nm,1.5s						
TX31	Lajitas Ar. Si	20.92	0	P	Pn	05 54 05.8	-0.5
TX31				IAmb	IAmb	05 54 27.5	
	comp=Z,24nm,1.4s						
TXAR	Lajitas Array	20.92	0	P	Pn	05 54 03.6	-2.7
	comp=Z,0.8nm,0.8s,baz=181,slow=12,SNR=7.5						
TXAR				LR	LR	06 01 37.4	
	comp=Z,317nm,18.4s,baz=0.0,slow=36						
TXAR	Lajitas Array	20.92	0	P	Pn	05 54 05.1	-1.2
435B	Jarrell	23.09	14	P	P	05 54 28.6	+1.8
435B				IAmb	IAmb	05 54 32.5	
	comp=Z,15nm,1.4s						
MNTX	Cornudas Mount	23.33	356	P	P	05 54 30.9	+1.6
MNTX				IAmb	IAmb	05 54 36.9	
	comp=Z,8.6nm,1.1s						
319A	Douglas	23.54	348	P	P	05 54 33.3	+1.9
319A				IAmb	IAmb	05 54 47.2	
	comp=Z,12nm,1.4s						
ABTX	Abilene, Hawle	24.49	8	P	P	05 54 41.0	+0.7
ABTX				IAmb	IAmb	05 54 47.6	
	comp=Z,10nm,1.0s						
TUC	Tucson	24.77	346	P	P	05 54 43.2	+0.2
TUC				IAmb	IAmb	05 54 49.5	
	comp=Z,14nm,1.6s						
113A	Mohawk Valley,	26.07	340	P	P	05 54 56.3	+1.7
AMTX	Amarillo	26.52	4	P	P	05 55 01.2	+2.4
ANMO	Albuquerque	26.64	355	LR	LR	06 05 38.2	
	comp=Z,86nm,18.5s,baz=162,slow=37						
X16A	Lo Mia Camp, P	26.95	346	P	P	05 55 04.3	+1.6
PFO	Pinyon Flats O	27.80	337	P	P	05 55 10.8	+0.4
	comp=Z,5.7nm,1.1s,baz=144,slow=5.0,SNR=3.9						
PFO				LR	LR	06 03 23.2	
	comp=Z,81nm,18.6s,baz=149,slow=30						
PFO	Pinyon Flats O	27.80	337	IAmb	IAmb	05 55 12.1	
	comp=Z,5.8nm,1.0s						
MVCO	Mesa Verde	29.10	352	P	P	05 55 23.3	+1.2
MVCO				IAmb	IAmb	05 55 34.3	
	comp=Z,12nm,1.5s						
ATAH	Atahualpa	29.53	121	LR	LR	06 04 41.8	
	comp=Z,144nm,21.7s,baz=285,slow=31						
MPU	Maple Canyon	32.36	349	P	P	05 55 52.5	+1.8
MPU				IAmb	IAmb	05 55 59.8	
	comp=Z,16nm,1.6s						
PD31	Pinedale Array	34.71	352	P	P	05 56 11.9	+0.7
PDAR	Pinedale Array	34.71	352	P	P	05 56 12.1	+0.9
	comp=Z,1.7nm,1.0s,baz=156,slow=7.5,SNR=7.6						
KHMM	Horse Mountain	37.00	334	P	P	05 56 29.4	-1.3
HAWA	Hanford	40.31	343	P	P	05 56 58.3	0.0
E07A	Sunnyside	40.55	343	P	P	05 57 01.3	+1.0
E07A				IAmb	IAmb	05 57 08.3	
	comp=Z,5.9nm,0.8s						
ULM	Lac du Bonnet	42.32	7	LR	LR	06 14 19.6	
	comp=Z,81nm,20.2s,baz=130,slow=36						
LPAZ	La Paz	42.86	125	P	P	05 57 22.0	+1.7
	comp=Z,1.0nm,0.8s,baz=316,slow=12,SNR=4.7						
LPAZ				LR	LR	06 14 09.3	
	comp=Z,22nm,19.2s,baz=283,slow=35						
LVC	Limon Verde	45.89	133	LR	LR	06 11 41.9	
	comp=Z,51nm,21.4s,baz=230,slow=29						
H03N2	Juan Fernandez	47.73	152	T	T	06 49 13.6	
	baz=328,slow=78,SNR=5.5						
H03N1	Juan Fernandez	47.74	152	T	T	06 49 14.9	
	baz=328,slow=78,SNR=6.5						
H03N3	Juan Fernandez	47.75	152	T	T	06 49 13.5	
	baz=328,slow=78,SNR=4.9						
SIV	San Ignacio	48.63	120	LR	LR	06 16 37.6	
	comp=Z,67nm,18.2s,baz=296,slow=34						
DIB	Dawson Inlet,	50.47	338	P	P	05 58 16.5	-2.2
PPT	Papeete	52.09	240	LR	LR	06 13 30.7	
	comp=Z,53nm,20.3s,baz=74,slow=28						
YKA	Yellowknife Ar	54.67	354	P	P	05 58 49.0	-0.7
	comp=Z,0.3nm,0.7s,baz=157,slow=8.3,SNR=3.5						
YKA				LR	LR	06 22 19.5	
	comp=Z,46nm,19.1s,baz=0.0,slow=36						
SCHQ	Schefferville	54.90	25	LR	LR	06 23 39.6	
	comp=Z,76nm,19.1s,baz=132,slow=38						
CPUP	Villa Florida	56.67	129	LR	LR	06 20 53.4	
	comp=Z,21nm,21.2s,baz=236,slow=33						
RAR	Rarotonga	62.36	241	LR	LR	06 18 27.0	
	comp=Z,69nm,21.8s,baz=212,slow=28						
INK	Inuvik	63.10	348	P	P	05 59 47.3	-0.9
	comp=Z,2.8nm,0.7s,baz=143,slow=5.4,SNR=15						
INK	Inuvik	63.10	348	IAmb	IAmb	06 00 10.4	
	comp=Z,8.5nm,1.4s						
IL31		63.96	341	P	P	05 59 53.2	-0.7
ILAR	Eielson Array	63.96	341	P	P	05 59 53.2	-0.8
	comp=Z,3.4nm,0.7s,baz=150,slow=4.5,SNR=61						
A36M	Sachs Harbour	64.99	353	P	P	05 59 59.5	-1.1
DBIC	Dimbokro	97.75	82	LR	LR	06 42 26.4	
	comp=Z,17nm,21.5s,baz=122,slow=33						
VNDA	Vanda	99.01	193	LR	LR	06 39 42.2	
	comp=Z,21nm,18.0s,baz=354,slow=30						

MAN 27 06:01:47.2, 17°.75N×120°.73E, h8^{km}, mb4.3, ML3.1, MS2.8, Luzon

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*IDC **27** 06:18:02.1±1.4, 17°.89S×178°.07W, h622^{km}±17^{km}, mb3.5/12, mb1 3.8/14, mb1mx3.6/35, mbtmp4.5/14, Error ellipse: s-maj=25.9km s-min=12.7km az=158.0*

*NEIC **27** 06:18:02.5±1.5, 17°.9S±0°.1×178°.0W±0°.1, h614^{km}±8^{km}, mb4.2/25, Error ellipse: s-maj=22.4km s-min=16.2km az=152.0*

ISC 27 06:18:00.8±0.6**, 17°.9S**±0°.1×**178°.01W**±0°.10**, h600**^{km}**, n73, σ1^{s}.39**/72**, mb4.1**/23**, 6C-7D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.76	272	P	P	06 19 28.3	+3.6
	19nm,0.3s,baz=123,slow=3.7,SNR=86						
MSVF	Nonsavu	3.76	272	P	P	06 19 28.5	+3.8
MARNC	Mare, Loyalty	13.63	253	P	P	06 20 56.8	+0.8
LIFNC	LIFOU	14.22	256	P	P	06 21 00.6	-1.1
SANVU	Saraoutou	14.38	278	P	P	06 21 04.2	+0.9
PINNC	Pines Island,	14.43	249	P	P	06 21 04.1	+0.3
DZM	Mont Dzumac	15.20	252	P	P	06 21 11.4	+0.5
	0.9nm,0.3s,baz=87,slow=18,SNR=2.6						
DZM	Mont Dzumac	15.20	252	IAmb	IAmb	06 21 13.2	
	comp=Z,12nm,0.9s						
KNTN	Kanton	16.24	23	P	P	06 21 19.9	-0.6
PPT	Papeete	27.07	94	P	P	06 22 57.2	-0.2
	comp=Z,25nm,0.6s,baz=249,slow=7.3,SNR=5.0						
EIDS	Eidsvold	29.63	250	P	P	06 23 19.9	+0.5
EIDS				IAmb	IAmb	06 23 46.4	
	comp=Z,14nm,1.2s						
ARMA	Armidale	30.28	240	P	P	06 23 25.7	+0.6
CTAO	Charters Tower	33.83	260	P	P	06 23 55.1	0.0
CTAO				IAmb	IAmb	06 23 55.5	
	comp=Z,3.8nm,0.6s						
CAN	Canberra	34.02	233	P	P	06 23 57.0	+0.4
COEN	Coen	37.49	270		P	06 24 26.1	+0.8
COEN				IAmb	IAmb	06 24 26.9	
	comp=Z,11nm,0.8s						
STKA	Stephens Creek	38.97	241	P	P	06 24 36.0	-1.1
	comp=Z,1.8nm,0.5s,baz=116,slow=9.8,SNR=7.3						
STKA	Stephens Creek	38.97	241	IAmb	IAmb	06 24 39.2	
	comp=Z,2.5nm,1.4s						
BBOO	Buckleboo	43.75	241	P	P	06 25 14.2	-0.5
WB0	Warramunga Arr	44.98	260	P	P	06 25 23.8	-0.5
WB0				IAmb	IAmb	06 25 24.1	
	comp=Z,4.4nm,0.3s						
WRA	Warramunga Arr	45.01	259	P	P	06 25 23.8	-0.7
	comp=Z,2.5nm,0.4s,baz=96,slow=7.0,SNR=142						
WRA	Warramunga Arr	45.01	259	IAmb	IAmb	06 25 30.2	
	comp=Z,0.4nm,1.4s						
ASAR	Alice Springs	45.16	254	P	P	06 25 25.2	-0.5
	comp=Z,4.2nm,0.4s,baz=90,slow=8.3,SNR=86						
ASAR				PcP	PcP	06 26 52.0	-1.0
	comp=Z,1.3nm,0.6s,baz=102,slow=4.1,SNR=6.7						
ASAR				S	S	06 31 19.9	-3.0
	comp=Z,0.9nm,0.7s,baz=90,slow=15,SNR=10.0						
MJAR	Matsushiro Arr	68.12	323	P	P	06 28 00.9	-1.3
	comp=Z,4.3nm,0.6s,baz=151,slow=6.5,SNR=6.8						
MJAR	Matsushiro Arr	68.12	323	IAmb	IAmb	06 28 01.8	
	comp=Z,9.2nm,1.4s						
JHS	Saijyo	70.13	319	P	P	06 28 15.0	+0.7
QSPA	South Pole Qui	72.17	180	P	P	06 28 25.7	-0.1
QSPA				IAmb	IAmb	06 28 33.2	
	comp=Z,6.0nm,1.5s						
PEA0B	Petropavlovsk-	73.76	345	P	P	06 28 34.9	+0.2
PETK	Petropavlovsk-	73.76	345	P	P	06 28 34.4	-0.4
	comp=Z,6.4nm,0.7s,baz=121,slow=8.5,SNR=13						
PETK	Petropavlovsk-	73.76	345	P	P	06 28 34.7	0.0
YBH	Yreka Blue Hor	78.27	39	P	P	06 29 00.9	+1.0
HUMO	Hull Mountain	78.65	38	P	P	06 29 02.5	+0.7
HUMO				IAmb	IAmb	06 29 03.1	
	comp=Z,4.8nm,1.0s						
PNTR	Pine Nut	78.67	43	P	P	06 29 03.0	+0.7
PNTR				IAmb	IAmb	06 29 03.7	
	comp=Z,7.0nm,0.9s						
YERR	Yerington	78.84	43	P	P	06 29 03.3	+0.2
NVAR	Mina Array Bea	79.14	44	P	P	06 29 04.8	0.0
	comp=Z,2.1nm,0.7s,baz=222,slow=7.9,SNR=14						
NVAR	Mina Array Bea	79.14	44	P	P	06 29 05.2	+0.4
NV11	Mina Array Sit	79.24	44	P	P	06 29 05.2	-0.1
NV11				IAmb	IAmb	06 29 06.5	
	comp=Z,6.3nm,1.2s						
KVN	Kaiserville	79.62	43	P	P	06 29 07.7	+0.5
K05A	Summer Lake	79.94	39	P	P	06 29 09.8	+1.0
K05A				IAmb	IAmb	06 29 10.4	
	comp=Z,8.2nm,1.0s						
I07A	Izee	81.55	38	P	P	06 29 17.4	+0.4
I07A				IAmb	IAmb	06 29 18.4	
	comp=Z,4.3nm,0.8s						
SEY	Seymchan	83.84	347	P	P	06 29 26.6	-1.2
	baz=137,slow=8.0						
TX32	Lajitas Array	85.66	57	P	P	06 29 38.7	+1.1
TXAR	Lajitas Array	85.66	57	P	P	06 29 38.7	+1.1
	comp=Z,1.5nm,0.7s,baz=217,slow=6.0,SNR=20						
TXAR	Lajitas Array	85.66	57	P	P	06 29 38.6	+1.0
ILAR	Eielson Array	85.78	13	P	P	06 29 35.8	-1.4
	comp=Z,1.9nm,0.4s,baz=220,slow=4.9,SNR=71						
PDAR	Pinedale Array	87.07	43	P	P	06 29 44.0	-0.1
	comp=Z,1.2nm,0.6s,baz=224,slow=2.8,SNR=13						
EGAK	Eagle	87.09	15	P	P	06 29 43.1	-0.2
EGAK				IAmb	IAmb	06 30 10.3	
	comp=Z,9.6nm,1.3s						
BMAR	Burnt Mountain	88.56	12	P	P	06 29 50.4	+0.1

CMAR	Chiang Mai Arr	89.24	290	P	P	06 29 54.3	-0.1
	comp=Z,0.6nm,0.3s,baz=103,slow=3.0,SNR=5.3						
YKA	Yellowknife Ar	94.15	25	P	P	06 30 14.5	-1.5
	comp=Z,0.8nm,0.8s,baz=223,slow=3.2,SNR=4.7						
MKAR	Makanchi Array	109.39	314	PKiKP	PKiKP	06 35 21.6	-2.3
	comp=Z,0.3nm,0.5s,baz=143,slow=1.3,SNR=4.4						
ARCES	ARCESS Array B	126.36	350	PKP	PKPdf	06 35 53.9	-1.9
	comp=Z,1.8nm,0.8s,baz=21,slow=0.8,SNR=9.5						
AKASG	Malin Array Be	140.72	333	PKP	PKPdf	06 36 23.8	+0.8
	comp=Z,0.7nm,0.5s,baz=41,slow=3.2,SNR=4.7						
SORM	Soroca	142.96	330	⇓P	PKPdf	06 36 23.7	-3.4
BUR08	Bucovina Ar. S	144.76	332		PKPdf	06 36 31.1	+0.7
BURAR	Bucovina Array	144.77	332	⇑P	PKPdf	06 36 30.9	+0.5
TESR	Tescani	144.93	330	⇑P	PKPdf	06 36 31.0	+0.4
BRTR	Keskin Array B	145.04	315	PKP	PKPdf	06 36 31.4	+0.2
	comp=Z,4.2nm,0.8s,baz=125,slow=5.5,SNR=9.6						
BRTR	Keskin Array B	145.04	315		PKPdf	06 36 31.2	+0.1
TPGR	Topolog	145.19	326	⇑P	PKPdf	06 36 32.1	+1.0
VRI	Vrincioaia	145.36	329	⇑P	PKPdf	06 36 32.3	+0.9
TRPA	Tarpa	145.49	335	⇓P	PKPdf	06 36 32.5	+1.1
CLL	Collm	145.52	348	⇓*i*PKPbc	PKPdf	06 36 32.2	+0.8
	comp=Z,18nm,1.0s						
CLL				⇑*i*PKPab	PKPbc	06 36 33.7	+0.8
DPC	Dobruska-Polom	145.64	344	*e*PKP	PKPdf	06 36 33.1	+1.4
KRLC	Kraliky	145.76	343	*e*PKP	PKPdf	06 36 33.3	+1.4
MLR	Muntele Rosu	146.01	329	⇓P	PKPdf	06 36 33.6	+1.0
PRU	Pruhonice	146.42	345	*e*PKP	PKPdf	06 36 35.1	+2.1
DRGR		146.49	334	⇓P	PKPdf	06 36 35.3	+2.0
ARR	Arges	146.73	330	⇑P	PKPbc	06 36 36.8	+0.2
KHC	Kasperske Hory	147.45	346	*e*PKP	PKPdf	06 36 37.6	+2.8
GZR	Gura Zlata	147.56	332	⇓P	PKPdf	06 36 37.5	+2.3
CKRC	Cesky Krumlov	147.56	345	*e*PKP	PKPbc	06 36 38.3	-0.3
GERES	GERESS Array B	147.69	345	PKPbc	PKPdf	06 36 38.4	+3.1
	comp=Z,3.1nm,0.5s,baz=31,slow=3.1,SNR=22						
HERR	Herculane	148.12	332	⇓P	PKPdf	06 36 39.1	+3.2

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*IDC **27** 06:31:37.0±2.5, 1°.07N×126°.82E, h75^{km}±23^{km}, mb3.8/9, mb1 3.9/12, mb1mx3.6/55, mbtmp4.1/12, MS3.4/9, Ms1 3.4/9, ms1mx3.1/31, Error ellipse: s-maj=26.0km s-min=11.2km az=69.0*

*DJA **27** 06:31:36.2±0.6, 1°N±3°×12°7E±°, h29^{km}±7^{km}, M4.5/19, mb4.6/10, mB4.9/3, MLv4.4/19, Mw(mB)4.2/3*

*NEIC **27** 06:31:36.5±1.7, 1°.20N±0°.09×126°.90E±0°.07, h51^{km}±9^{km}, mb4.5/20, Error ellipse: s-maj=14.1km s-min=9.0km az=197.0*

ISC 27 06:31:35.7±0.5**, 1°.20N**±0°.06×**126°.87E**±0°.07**, h50**^{km}**, n73,** σ1^{s}**41**/76**, mb4.5**/20**, MS3.4**/10**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	0.65	130	P	Pn	06 31 49.1	+0.2
TNTI				S	Sn	06 32 00.2	+1.8
TNTI	Ternate	0.65	130		Pn	06 31 49.2	+0.3
LBMI	Labuha	1.93	161	P	Pn	06 32 07.0	+0.9
SGSI	Sangihe	2.81	332	P	Pn	06 32 19.8	+1.6
KMSI	Cibinong	2.96	258	P	Pn	06 32 21.5	+1.3
SANI	Sanana	3.34	195	P	Pn	06 32 24.8	-0.7
GTOI	Gorontalo	3.90	262	P	Pn	06 32 35.2	+2.1
LUWI	Luwuk	4.66	242	P	Pn	06 32 44.5	+0.9
LUWI	Luwuk	4.66	242	Pn	Pn	06 32 46.5	+2.8
SWI	Sorong	4.84	115	P	Pn	06 32 47.9	+1.8
SIJI	Sorong	4.85	115	P	Pn	06 32 46.7	+0.5
	2.0nm,0.3s,baz=298,slow=11,SNR=7.6						
MSAI	Masohi	4.96	156	P	Pn	06 32 49.4	+1.7
MRSI	Marisa	4.98	262	P	Pn	06 32 48.8	+0.8
AAI	Ambon	5.03	165	P	Pn	06 32 49.6	+0.9
	0.5nm55nm,0.6s						
APSI	Ampana	5.63	248	P	Pn	06 32 57.6	+0.7
	0.5nm1µm76nm,0.5s						
TOLI2	Tolitoli	6.09	269		Pn	06 33 05.3	+2.1
FAKI	Fak Fak	6.75	127	P	Pn	06 33 14.0	+1.6
	0.1nm24nm,0.9s						
FAKI	Fak Fak	6.75	127	Pn	Pn	06 33 15.7	+3.3
MPSI	Mapaga	7.02	263	P	Pn	06 33 17.1	+1.1
TTSI	Tana Toraja	8.21	239	P	Pn	06 33 32.2	-0.1
	23nm,0.8s						
BNSI	Bone	8.75	231	P	Pn	06 33 40.0	+0.3
	44nm,0.8s						
SPSI	Sidrap Palu	8.76	234	P	Pn	06 33 39.8	0.0
	540nm35nm,0.5s						
MYLDM	Lahad Datu	9.24	296		Pn	06 33 48.7	+2.2
BKSI	Bulukumba	9.35	226	P	Pn	06 33 48.6	+0.7
	60nm,0.8s						
KAPI	Kappang	9.41	229	P	Pn	06 33 48.6	-0.2
	3.9nm,0.3s,baz=81,slow=7.7,SNR=12						
KAPI	Kappang	9.41	229	Pn	Pn	06 33 49.2	+0.4
SOEI	Soe	11.19	193	P	Pn	06 34 16.6	+3.4
SBUM	Sibu	14.70	275	P	P	06 35 06.0	+0.2
JAGI	Jajag, Banyuwa	15.90	233	P	P	06 35 19.7	+0.5
JAGI				IAmb	IAmb	06 35 45.6	
	comp=Z,48nm,1.4s						
KNRA	Kununurra	16.87	174	P	P	06 35 30.7	+0.8
FITZ	Fitzroy Crossi	19.21	184	P	P	06 35 54.1	-1.6
	comp=Z,0.2nm,0.3s,baz=8.5,slow=13,SNR=2.4						
GUMO	Guam	21.65	55	LR	LR	06 43 29.7	
	comp=Z,105nm,18.7s,baz=235,slow=33						
WB0	Warramunga Arr	22.10	161	P	P	06 36 26.1	-0.9
WB0				IAmb	IAmb	06 36 39.5	
	comp=Z,24nm,1.3s						
WRA	Warramunga Arr	22.25	161	P	P	06 36 26.7	-1.9
	comp=Z,2.6nm,0.5s,baz=341,slow=11,SNR=34						
WRA				S	S	06 40 27.0	-3.6
	comp=Z,1.0nm,0.9s,baz=341,slow=17,SNR=5.4						
WRA	Warramunga Arr	22.25	161	P	P	06 36 27.1	-1.5
WB2	Warramunga Arr	22.25	161	P	P	06 36 27.3	-1.3
TPUB	Ta-pu	22.79	345	P	P	06 36 33.5	-0.8
TPUB				IAmb	IAmb	06 36 35.6	
	comp=Z,48nm,1.2s						
JOW	Kunigami	25.52	3	P	P	06 36 58.8	-0.9
AS31	Alice Springs	25.64	165	P	P	06 37 01.6	+0.7
ASAR	Alice Springs	25.64	165	P	P	06 36 59.3	-1.6
	comp=Z,3.0nm,0.4s,baz=347,slow=12,SNR=34						
ASAR	Alice Springs	25.64	165	P	P	06 37 01.2	+0.3
NJ2	Nanjing	31.61	347	*e*P	P	06 37 56.0	+2.1
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
FORT	Forrest	31.82	178	P	P	06 37 55.8	0.0
CMAR	Chiang Mai Arr	32.33	304	P	P	06 37 58.5	-1.9
	comp=Z,0.6nm,0.3s,baz=133,slow=7.7,SNR=6.1						
CMAR				LR	LR	06 53 27.9	
	comp=Z,23nm,18.1s,baz=195,slow=40						
JSG	Sagara	34.94	16	P	P	06 38 24.2	+1.3
STKA	Stephens Creek	35.73	158	LR	LR	06 52 48.4	
	comp=Z,84nm,19.8s,baz=21,slow=36						
KSRS	Korea Array	36.09	1	LR	LR	06 53 59.1	
	comp=Z,24nm,20.4s,baz=170,slow=37						
MJAR	Matsushiro Arr	36.70	15	LR	LR	06 50 44.7	
	comp=Z,34nm,21.5s,baz=250,slow=31						
HHC	Hu-ho-hao-te	41.84	343	*e*P	P	06 39 20.8	-0.1
HHC				pmax	pmax		
	comp=Z,12nm,0.7s						
HHC				pmax	pmax		
	comp=Z,310nm,5.4s						
ULN	Ulaanbaatar	49.56	343	P	P	06 40 22.2	+0.4
ULN				IAmb	IAmb	06 40 23.4	
	comp=Z,11nm,1.2s						
SONM	Songino Array	49.73	342	P	P	06 40 23.5	+0.4
	comp=Z,2.7nm,1.0s,baz=163,slow=7.9,SNR=13						
SONM				LR	LR	07 04 09.2	
	comp=Z,41nm,18.3s,baz=14,slow=39						
SONM	Songino Array	49.73	342	P	P	06 40 23.5	+0.4
SONM				IAmb	IAmb	06 40 24.5	
	comp=Z,4.4nm,1.1s						
WMQ	Urumqi	54.88	326	*e*P	P	06 41 03.5	+2.2
PETK	Petropavlovsk-	57.71	21	P	P	06 41 21.2	0.0
	comp=Z,1.2nm,0.6s,baz=188,slow=7.3,SNR=5.4						
PETK	Petropavlovsk-	57.71	21	P	P	06 41 21.8	+0.6
MK31	Makanchi Array	59.71	326	P	P	06 41 35.1	-0.2
MK31				IAmb	IAmb	06 41 37.1	
	comp=Z,4.9nm,1.4s						
MKAR	Makanchi Array	59.71	326	P	P	06 41 35.0	-0.4
	comp=Z,2.0nm,0.4s,baz=120,slow=7.5,SNR=48						
MKAR	Makanchi Array	59.71	326	P	P	06 41 35.1	-0.2
MAKZ	Makanchi	59.90	326	P	P	06 41 36.7	+0.1
AAK	Ala-Archa	62.33	319	LR	LR	07 11 09.1	
	comp=Z,44nm,18.4s,baz=88,slow=38						
ZAA0	Zalesovo Array	62.90	334	P	P	06 41 55.9	-0.7
ZAA0				IAmb	IAmb	06 41 57.0	
	comp=Z,5.0nm,1.2s						
ZALV	Zalesovo Beam	62.90	334	P	P	06 41 54.8	-1.8
	comp=Z,0.6nm,0.3s,baz=122,slow=7.2,SNR=7.7						
ZALV				LR	LR	07 11 48.5	
	comp=Z,21nm,18.1s,baz=42,slow=38						
ZALV	Zalesovo Beam	62.90	334	P	P	06 41 56.5	-0.2
KURK	Kurchatov	63.95	328	P	P	06 42 02.9	-0.7
KKAR	Karatay Array	65.18	318	P	P	06 42 11.9	+0.1
BRVK	Borovoye	69.58	327	P	P	06 42 39.2	-0.3
BRVK				IAmb	IAmb	06 42 41.1	
	comp=Z,7.3nm,1.0s						
GEYT	Alibeck	72.59	309	P	P	06 42 58.7	+0.6
GEYT				IAmb	IAmb	06 43 05.6	
	comp=Z,4.8nm,1.0s						
ABKAR	Akbulak array	74.19	321	P	P	06 43 07.4	+0.2
AKTO	Aktyubinsk	75.72	322	P	P	06 43 14.5	-1.5
	comp=Z,2.3nm,0.5s,baz=117,slow=8.9,SNR=6.9						
RAYN	Ar Rayn	81.61	293	P	P	06 43 48.1	-0.9
RAYN				IAmb	IAmb	06 44 07.7	
	comp=Z,4.6nm,0.9s						
ILAR	Eielson Array	87.32	25	P	P	06 44 15.1	-1.8
	comp=Z,0.1nm,0.5s,baz=280,slow=4.9,SNR=4.1						
FINES	FINESS Array B	94.11	332	LR	LR	07 33 00.6	
	comp=Z,31nm,18.4s,baz=224,slow=39						
MNK	Minsk	94.26	325	*i* P	P	06 44 49.4	-0.1
	comp=E,3.0nm,1.4s						
MNK				*i* P	P	06 44 49.4	-0.1
	comp=N,13nm,1.0s						
MNK				*i* P	P	06 44 49.4	-0.1
	comp=Z,6.0nm,1.0s,baz=82						
MNK				*i* pP	pP	06 44 60.0	-3.6
MNK				*i* PP	PP	06 48 36.1	-0.6
MNK				*i* PPP	PPP	06 50 37.3	
MNK				*i* S	SKSac	06 55 21.4	+1.0
MNK				*i* sS	SKKSac	06 55 39.6	-2.0
MNK				*i* SS	SS	07 02 20.5	+1.7
MNK				*i* SSS	SSS	07 06 02.2	
MNK				*i* LQ	LQ	07 21 26.5	
MNK				*i* LR	LR	07 24 07.3	
MNK				*i* LRM	MLR	07 26 26.8	
	comp=E,120nm,17.2s						
MNK				*i* LRM	MLR	07 26 26.8	
	comp=N,612nm,19.3s						
MNK				*i* LRM	MLR	07 27 08.7	
	comp=Z,124nm,9.4s						

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*IDC **27** 06:36:27.2±0.5, 40°.34N×140°.07E, h0^{km}, mb3.6/8, mb1 3.7/8, mb1mx3.5/45, mbtmp3.6/8, Error ellipse: s-maj=15.9km s-min=8.2km az=64.0*

*JMA **27** 06:36:48.3±0.2, 40°.52N×140°.10E, h177^{km}±2^{km}, M2.9*

ISC 27 06:36:47.6±0.8**, 40°.50N**±0°.07×**140°.1E**±0°.1**, h182**^{km}±8^{km}**, n17,** σ0^{s}**42**/21**, mb3.3**/8**, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIW	Iwasaki	0.10	341	P	Pn	06 37 11.8	+0.2
JAH	Hinai	0.55	124	P	Pn	06 37 13.0	+0.2
JAH				S	Sn	06 37 32.4	+0.3
JTM	Tenmabayashi	0.83	69	P	Pn	06 37 14.4	+0.1
JTM				*e*S	Sn	06 37 34.4	-0.5
JANG	Nango	1.13	96	P	Pn	06 37 16.4	-0.1
JANG				*e*S	Sn	06 37 38.2	-0.5
JOT	Ohata	1.16	40	P	Pn	06 37 16.8	+0.1
JOM	Ohasama	1.40	137	P	Pn	06 37 18.9	+0.1
JKB	Kayabe	1.57	28	P	Pn	06 37 20.4	0.0
JYK	Kaneyama	1.60	171	P	Pn	06 37 21.1	+0.4
JYK				S	Sn	06 37 46.5	+0.2
JMK	Ichinoseki	1.79	149	P	Pn	06 37 22.6	0.0
SONM	Songino Array	25.08	298	P	P	06 41 54.9	-0.5
	0.2nm,0.3s,baz=97,slow=7.4,SNR=1.6						
ZALV	Zalesovo Beam	38.84	309	P	P	06 43 54.8	0.0
	1.3nm,0.6s,baz=100,slow=7.2,SNR=3.9						
MKAR	Makanchi Array	41.45	299	P	P	06 44 16.1	-0.3
	0.3nm,0.4s,baz=98,slow=7.4,SNR=7.2						
KURBB	Kurchatov Arra	43.09	305	P	P	06 44 29.5	0.0
	1.7nm,0.4s,baz=81,slow=8.7,SNR=12						
ILAR	Eielson Array	47.18	34	P	P	06 45 02.4	+0.9
	0.3nm,0.7s,baz=279,slow=8.1,SNR=2.1						
INK	Inuvik	51.81	28	P	P	06 45 37.1	+0.7
	0.8nm,0.6s,baz=281,slow=5.2,SNR=4.6						
WRA	Warramunga Arr	60.36	186	P	P	06 46 37.0	-0.5
	0.3nm,0.4s,baz=3.7,slow=7.2,SNR=11						
ASAR	Alice Springs	64.09	186	P	P	06 47 01.8	-0.5
	0.1nm,0.3s,baz=2.4,slow=6.8,SNR=1.7						

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*NEIC **27** 06:54:59.0±2.2, 8°.34S±0°.03×125°.14E±0°.06, h13^{km}±4^{km}, mb4.7/27, Error ellipse: s-maj=9.2km s-min=2.3km az=113.0*

*DJA **27** 06:54:59.4±0.2, 8°S±2°×12°5E±°, h10^{km}, M4.5/30, mb4.6/30, mB5.0/11, MLv4.6/18, Mw(mB)4.4/11, MwMwp5.2/1, Mwp5.4/1*

*IDC **27** 06:54:59.8±3.3, 8°.24S×125°.07E, h28^{km}±23^{km}, mb4.2/19, mb1 4.3/24, mb1mx4.1/54, mbtmp4.4/24, ML3.8/4, MS3.4/11, Ms1 3.3/11, ms1mx3.1/32, Error ellipse: s-maj=18.1km s-min=12.1km az=78.0*

ISC 27 06:54:59.7±0.3**, 8°.46S**±0°.04×**125°.20E**±0°.05**, h24**^{km}**, n107,** σ1^{s}**87**/107**, mb4.6**/32**, MS3.5**/7**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	Soe	1.58	216	P	Pb	06 55 28.6	+0.2
SOEI	Soe	1.58	216	Pn	Pn	06 55 26.7	+0.3
BATI	Baumata	2.30	221	Pn	Pn	06 55 38.5	+2.2
	33nm,0.3s,baz=162,slow=2.1,SNR=20						
BATI				Sn	Sn	06 56 04.4	+0.5
	51nm,0.3s,baz=60,slow=17,SNR=7.2						
BATI	Baumata	2.30	221	P	Pb	06 55 38.8	-1.9
MMRI	Maumere	2.94	266	P	Pn	06 55 47.1	+2.1
MMRI	Maumere	2.94	266	Pn	Pn	06 55 46.4	+1.5
EDFI	Ende, Flores	3.48	265	P	Pn	06 55 53.5	+0.9
BASI	Baing, Sumba	4.89	249	P	Pn	06 56 13.6	+1.8
BSSI	Bau Bau, Buton	5.21	296	P	Pn	06 56 17.7	+1.5
	0.2nm672nm55nm,0.7s						
AAI	Ambon	5.60	32	P	Pn	06 56 21.4	-0.2
	0.3nm2µm60nm,0.8s						
WBSI	Waikabubak, Su	5.86	258	P	Pn	06 56 26.8	+1.6
BKSI	Bulukumba	5.93	301	P	Pn	06 56 26.8	+0.7
	0.1nm729nm34nm,0.9s						
SAUI	Saumlaki	6.05	86	P	Pn	06 56 27.2	-0.7
	1.1nm277nm,0.8s						
MSAI	Masohi	6.29	36	P	Pn	06 56 32.3	+1.2
	0.1nm6.5nm,0.6s						
KAPI	Kappang	6.41	302	Pn	Pn	06 56 30.9	-1.7
	1.1nm,0.3s,baz=100,slow=11,SNR=1.5						
SANI	Sanana	6.42	7	P	Pn	06 56 31.3	-1.5
	0.2nm49nm,0.7s						
BNSI	Bone	6.47	308	P	Pn	06 56 34.3	+0.7
	0.3nm1µm85nm,0.9s						
SPSI	Sidrap Palu	7.01	309	P	Pn	06 56 41.8	+0.8
	0.1nm26nm,0.7s						
MTN	Manton Dam	7.28	127		Pn	06 56 47.2	+2.5
PLAI	Plampang	7.35	267	P	Pn	06 56 48.3	+2.6
	0.4nm1µm92nm,0.9s						
TTSI	Tana Toraja	7.59	315	P	Pn	06 56 50.8	+1.8
	0.2nm48nm,0.8s						
LUWI	Luwuk	7.76	342	P	Pn	06 56 49.4	-1.9
	0.4nm79nm,1.2s						
LUWI	Luwuk	7.76	342	Pn	Pn	06 56 49.8	-1.5
KNRA	Kununurra	7.97	154		Pn	06 56 56.0	+1.9
TWSI	Taliwang, Sumb	8.23	267	P	Pn	06 56 59.4	+1.6
	390nm39nm,0.9s						
APSI	Ampana	8.29	335	P	Pn	06 57 08.3	+10
FAKI	Fak Fak	8.91	52	P	Pn	06 57 09.3	+2.2
	28nm,1.0s						
FAKI	Fak Fak	8.91	52	Pn	Pn	06 57 08.3	+1.2
GTOI	Gorontalo	9.30	346	P	Pn	06 57 14.5	+2.1
	6.9nm,0.7s						
FITZ	Fitzroy Crossi	9.59	177	Pn	Pn	06 57 17.5	+1.2
	baz=8.2,slow=11						
FITZ				Sn	Sn	06 58 58.8	-4.7
	baz=202,slow=1.9						
SIJI	Sorong	9.66	39	Pn	Pn	06 57 17.3	-0.1
	1.2nm,0.3s,baz=204,slow=20,SNR=1.9						
SIJI				LR	LR	07 01 05.4	
	comp=Z,281nm,19.9s,baz=160,slow=38						
TOLI2	Tolitoli	10.48	335		Pn	06 57 27.5	-1.1
BBKI	Banjar Baru	11.44	295	P	Pn	06 57 46.3	+4.6
	6µm6µm12nm,1.1s						
PSA00	Pilbara Seismi	14.02	201	Pn	Pn	06 58 17.5	+0.5
WB0	Warramunga Arr	14.34	143		Pn	06 58 20.1	-1.3
WRA	Warramunga Arr	14.44	143	Pn	Pn	06 58 19.9	-2.8
	1.3nm,0.3s,baz=319,slow=13,SNR=50						
WRA				Sn	Sn	07 00 57.4	-4.8
	0.8nm,0.3s,baz=315,slow=24,SNR=6.1						
WRA	Warramunga Arr	14.44	143		Pn	06 58 20.1	-2.7
JAY	Jayapura	16.52	70	LR	LR	07 06 17.9	
	comp=Z,64nm,19.2s,baz=252,slow=41						
SBUM	Sibu	16.88	309		P	06 58 56.3	-0.2
AS31	Alice Springs	17.26	152		Pn	06 59 00.0	+0.6
ASAR	Alice Springs	17.27	152	P	P	06 59 00.3	-0.4
	0.5nm,0.3s,baz=317,slow=10,SNR=36						
ASAR				S	Sn	07 02 06.5	-4.5
	0.3nm,0.3s,baz=317,slow=20,SNR=8.7						
ASAR				LR	LR	07 06 25.5	
	comp=Z,94nm,18.2s,baz=336,slow=39						
ASAR				ScP	ScP	07 07 15.4	-0.2
	baz=339,slow=2.6,SNR=6.7						
ASAR	Alice Springs	17.27	152		Pn	06 58 59.9	+0.5
LEM	Lembang	17.50	274	LR	LR	07 07 33.1	
	comp=Z,216nm,18.1s,baz=52,slow=43						
KSM	Kuching	17.83	303		P	06 59 08.4	+1.4
COEN	Coen	18.45	109	P	Pn	06 59 15.1	+1.0
PMG	Port Moresby	21.71	94	P	P	06 59 50.8	+1.5
	8.6nm,0.4s,baz=270,slow=16,SNR=6.8						
PMG				LR	LR	07 09 33.4	
	comp=Z,168nm,18.1s,baz=253,slow=40						
PMG	Port Moresby	21.71	94	P	P	06 59 50.8	+1.5
PMG				IAmb	IAmb	06 59 58.8	
	comp=Z,29nm,1.1s						
FORT	Forrest	22.36	174	P	P	06 59 57.2	+1.0
FORT				IAmb	IAmb	07 00 12.3	
	comp=Z,18nm,0.7s						
BBOO	Buckleboo	26.23	159	P	P	07 00 34.8	+1.8
BBOO				IAmb	IAmb	07 00 48.4	
	comp=Z,13nm,1.1s						
STKA	Stephens Creek	27.84	149	P	P	07 00 49.9	+2.3
	comp=Z,3.6nm,0.7s,baz=314,slow=12,SNR=4.4						
STKA				LR	LR	07 13 12.2	
	comp=Z,39nm,20.5s,baz=23,slow=39						
STKA	Stephens Creek	27.84	149	P	P	07 00 49.8	+2.3
PSI	Prapat	28.49	292	P	P	07 00 50.8	-2.9
	comp=Z,1.3nm,0.2s,baz=151,slow=18,SNR=1.8						
CM31	Chiang Mai Arr	37.24	316	P	P	07 02 09.7	-0.1
CM31				IAmb	IAmb	07 02 10.4	
	comp=Z,8.7nm,0.9s						
CMAR	Chiang Mai Arr	37.24	316	P	P	07 02 09.0	-0.8
	comp=Z,5.4nm,0.8s,baz=144,slow=6.7,SNR=20						
CMAR	Chiang Mai Arr	37.24	316	P	P	07 02 08.8	-0.9
CHTO	Chiang Mai	37.49	316	P	P	07 02 11.6	-0.3
CHTO				IAmb	IAmb	07 02 15.5	
	comp=Z,11nm,1.0s						
NJ2	Nanjing	40.74	352	*e*P	P	07 02 40.0	+1.2
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
JWT	Wachi	44.56	12	P	P	07 03 09.5	-0.3
KSRS	Korea Array	45.75	3	LR	LR	07 21 45.4	
	comp=Z,11nm,21.8s,baz=35,slow=35						
MJAR	Matsushiro Arr	46.40	14	P	P	07 03 22.0	-2.4
	comp=Z,5.6nm,0.9s,baz=182,slow=9.4,SNR=6.9						
MJAR				LR	LR	07 22 09.3	
	comp=Z,21nm,20.9s,baz=300,slow=35						
MJAR	Matsushiro Arr	46.40	14	IAmb	IAmb	07 03 29.6	
	comp=Z,3.8nm,1.1s						
SHL	Shillong	46.85	317	P	P	07 03 27.0	-1.3
LSA	Lhasa	50.13	321	P	P	07 03 53.4	-0.5
HHC	Hu-ho-hao-te	50.65	347	*e*P	P	07 03 59.8	+2.6
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,450nm,7.3s						
BTO	Baotou	50.79	345	*e*P	P	07 04 00.5	+2.2
USRK	Ussuriysk Ar.	52.77	6	P	P	07 04 11.5	-1.3
	comp=Z,3.6nm,0.7s,baz=192,slow=11,SNR=5.0						
USRK	Ussuriysk Ar.	52.77	6	P	P	07 04 12.7	-0.2
GTA	Gaotai	53.13	335	*e*P	P	07 04 18.3	+2.5
GTA				pP	pwP	07 04 34.0	+11
GTA				sP	sP	07 04 42.5	+17
GTA				pmax	pmax		
	comp=Z,4.0nm,1.3s						
KLR	Kul'dur	57.73	5	P	P	07 04 46.4	-2.1
	comp=Z,1.6nm,0.7s,baz=192,slow=6.3,SNR=3.7						
ULN	Ulaanbaatar	58.34	346	P	P	07 04 52.4	-0.6
ULN				IAmb	IAmb	07 04 56.1	
	comp=Z,8.7nm,0.9s						
SONM	Songino Array	58.47	345	P	P	07 04 51.6	-2.4
	comp=Z,5.6nm,0.9s,baz=163,slow=9.4,SNR=16						
SONM	Songino Array	58.47	345	P	P	07 04 53.5	-0.4
SONM				IAmb	IAmb	07 04 57.0	
	comp=Z,5.2nm,1.0s						
WMQ	Urumqi	62.15	330	*e*P	P	07 05 20.8	+1.7
MK31	Makanchi Array	66.95	329	P	P	07 05 49.6	-0.7
MKAR	Makanchi Array	66.95	329	P	P	07 05 48.7	-1.6
	comp=Z,13nm,0.8s,baz=134,slow=7.9,SNR=46						
MKAR	Makanchi Array	66.95	329	P	P	07 05 50.1	-0.3
MAKZ	Makanchi	67.11	329	P	P	07 05 50.4	-1.0
PETK	Petropavlovsk-	67.27	21	P	P	07 05 50.6	-1.6
	comp=Z,1.0nm,0.6s,baz=212,slow=6.7,SNR=4.9						
PETK	Petropavlovsk-	67.27	21	P	P	07 05 52.9	+0.6
AAK	Ala-Archa	68.68	322	P	P	07 05 59.6	-1.9
	comp=Z,2.6nm,0.3s,baz=99,slow=3.2,SNR=7.3						
AAK	Ala-Archa	68.68	322	P	P	07 06 00.3	-1.2
AAK				IAmb	IAmb	07 06 04.2	
	comp=Z,6.4nm,1.1s						
ZAA0	Zalesovo Array	70.88	336	P	P	07 06 12.5	-2.1
ZAA0				IAmb	IAmb	07 06 15.8	
	comp=Z,7.6nm,0.8s						
ZALV	Zalesovo Beam	70.88	336	P	P	07 06 11.8	-2.8
	comp=Z,7.7nm,0.8s,baz=134,slow=4.3,SNR=16						
ZALV	Zalesovo Beam	70.88	336	P	P	07 06 12.7	-1.9
KURBB	Kurchatov Arra	71.36	331	P	P	07 06 13.6	-4.0
	comp=Z,3.8nm,0.8s,baz=140,slow=5.0,SNR=22						
KURK	Kurchatov	71.37	331	P	P	07 06 16.2	-1.5
KURK				IAmb	IAmb	07 06 19.6	
	comp=Z,9.1nm,0.9s						
KKAR	Karatay Array	71.38	321	P	P	07 06 16.6	-1.3
VNDA	Vanda	71.62	172	P	P	07 06 18.5	-0.3
	comp=Z,0.8nm,0.5s,baz=319,slow=8.4,SNR=5.2						
VNDA				LR	LR	07 38 05.5	
	comp=Z,45nm,18.0s,baz=320,slow=36						
VNDA	Vanda	71.62	172	P	P	07 06 20.9	+2.1
VNDA				IAmb	IAmb	07 06 28.1	
	comp=Z,11nm,1.3s						
MAW	Mawson	71.88	201	P	P	07 06 20.8	+0.3
	comp=Z,3.2nm,1.0s,baz=103,slow=14,SNR=3.0						
MAW				LR	LR	07 36 41.4	
	comp=Z,35nm,18.3s,baz=59,slow=35						
SOCY	Socotra	73.69	285	P	P	07 06 32.7	+0.4
BVAR	Borovoye Array	76.83	330	P	P	07 06 46.9	-2.7
	comp=Z,1.3nm,0.8s,baz=182,slow=15,SNR=4.2						
TIXI	Tiksi	79.98	1	P	P	07 07 04.6	-1.9
	comp=Z,2.6nm,0.5s,baz=179,slow=2.6,SNR=6.7						
TIXI	Tiksi	79.98	1	P	P	07 07 05.8	-0.6
TIXI				IAmb	IAmb	07 07 08.1	
	comp=Z,2.8nm,0.5s						
ABKAR	Akbulak array	80.75	323	P	P	07 07 10.2	-0.9
QSPA	South Pole Qui	81.53	180	P	P	07 07 16.8	+1.6
QSPA				IAmb	IAmb	07 07 35.9	
	comp=Z,7.4nm,1.3s						
AKTO	Aktyubinsk	82.36	324	P	P	07 07 16.5	-3.1
	comp=Z,2.5nm,0.7s,baz=127,slow=3.3,SNR=8.3						
RAYN	Ar Rayn	84.01	295	P	P	07 07 27.0	-1.8
RAYN				IAmb	IAmb	07 07 29.0	
	comp=Z,5.5nm,0.8s						
KMBO	Kilima Mbogo	87.81	269	LR	LR	07 41 19.6	
	comp=Z,18nm,19.9s,baz=82,slow=32						
KBZ	Khabaz	90.27	314	P	P	07 07 56.9	-1.8
	comp=Z,1.7nm,0.5s,baz=154,slow=9.2,SNR=3.9						
SNAA	Sanae	93.11	194	P	P	07 08 13.3	+1.8
SNAA	Sanae	93.11	194	P	P	07 08 12.8	+1.3
SNAA				IAmb	IAmb	07 08 14.0	
	comp=Z,4.9nm,1.0s						
VNA2	Neumayer--Watz	94.71	194	P	P	07 08 20.5	+1.8
KLMR	Klimovskoe	95.22	331	P	P	07 08 23.1	+2.0
KLMR				AMP		07 08 33.0	
	comp=Z,19nm,1.3s						
KLMR				*e*pP	sP	07 08 33.9	+3.1
TORD	Torodi Ar. Bea	124.40	280	PKP	PKPdf	07 13 57.2	-0.6
	comp=Z,0.7nm,0.7s,baz=37,slow=2.1,SNR=5.1						
CPUP	Villa Florida	145.33	176	PKPbc	PKPdf	07 14 37.0	+0.6
	comp=Z,2.8nm,0.9s,baz=207,slow=7.1,SNR=3.9						
LPAZ	La Paz	152.09	152	PKPbc	PKiKP	07 14 56.4	+1.1
	comp=Z,1.8nm,0.7s,baz=225,slow=1.5,SNR=8.6						

IDC 27 06:59:50.7±2.7**, 53°.68N**×**86°.92E, h0**^{km}**, mb1 2.9**/2**, mb1mx2.8**/47**, mbtmp2.9**/2**, ML2.7**/2**, Error ellipse: s-maj=26.8km s-min=15.2km az=69.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.27	283	*i*		07 06 00.0	
	baz=102,slow=339,SNR=1.8						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZALV	Zalesovo Beam	1.27	283	Pg	Pg	07 00 14.6	-0.5
	1.5nm,0.3s,baz=103,slow=12,SNR=7.7						
ZALV				Lg	Lg	07 00 32.0	
	1.1nm,0.3s,baz=102,slow=28,SNR=3.7						
KURBB	Kurchatov Arra	6.00	243	Pn	Pn	07 01 21.6	+0.9
	0.1nm,0.3s,baz=58,slow=14,SNR=3.1						
MKAR	Makanchi Array	7.50	205	Pn	Pn	07 01 42.5	+1.1
	0.2nm,0.3s,baz=25,slow=14,SNR=10.0						

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*IDC **27** 07:03:31.3±6.7,36°.43N×71°.05E,h175^{km}±56^{km},mb3.4/5, mb1 3.5/8,mb1mx3.1/45,mbtmp3.8/8,Error ellipse: s-maj=54.6km s-min=24.4km az=42.0*

ISC 27 07:03:32.9±1.3**,36°.5N**±0°.1×**71°.2E**±0°.2**,h188**^{km}**,n8,** σ**1^{s}25**/9**,mb3.3**/5**,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	6.63	22	P	Pn	07 05 10.0	+1.7
	0.7nm,0.3s,baz=215,slow=12,SNR=4.3						
AAK				S	Sn	07 06 22.4	-1.3
	0.7nm,0.3s,baz=335,slow=23,SNR=8.9						
MKAR	Makanchi Array	13.19	35	P	P	07 06 35.1	-1.2
	0.2nm,0.3s,baz=213,slow=12,SNR=9.2						
ZALV	Zalesovo Beam	19.84	24	P	P	07 07 49.9	+0.8
	0.5nm,0.3s,baz=221,slow=11,SNR=11						
FINES	FINESS Array B	37.56	326	P	P	07 10 27.9	-0.8
	14nm,1.2s,baz=114,slow=14,SNR=1.9						
NOA	NORSAR Array B	44.47	323	P	P	07 11 24.2	-0.8
	0.6nm,0.5s,baz=97,slow=7.7,SNR=2.2						
YKA	Yellowknife Ar	81.23	3	P	P	07 15 28.4	+1.1
	0.6nm,0.9s,baz=346,slow=5.6,SNR=2.0						
WRA	Warramunga Arr	81.86	122	P	P	07 15 31.0	-0.4
	0.7nm,1.1s,baz=322,slow=4.8,SNR=4.7						
ASAR	Alice Springs	84.13	125	P	P	07 15 42.8	-0.2
	0.3nm,0.7s,baz=302,slow=3.8,SNR=5.7						

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*IDC **27** 07:21:38.4±1.8,8°.67S×124°.05E,h80^{km}±15^{km},mb4.0/10, mb1 4.1/11,mb1mx3.8/32,mbtmp4.4/11,MS3.1/3, Ms1 3.0/3,ms1mx2.6/39,Error ellipse: s-maj=29.8km s-min=12.3km az=80.0*

*DJA **27** 07:21:40.5±0.2,9°S±3°×12°4E±°,h106^{km}±5^{km},M4.6/17, mb4.8/16,mB5.1/8,MLv4.7/17,Mw(mB)4.5/8*

*NEIC **27** 07:21:41.1±2.7,8°.89S±0°.06×124°.03E±0°.08,h101^{km}±6^{km}, mb4.4/23,Error ellipse: s-maj=11.8km s-min=8.2km az=55.0*

ISC 27 07:21:40.8±0.4**,8°.96S**±0°.05×**124°.01E**±0°.07**,h100**^{km}**,n127,** σ**1^{s}38**/128**,mb4.6**/45**,Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	0.83	162	P	Pn	07 22 00.7	+1.0
SOEI	Soe	0.83	162	Pn	Pn	07 22 01.1	+1.4
BATI	Baumata	1.29	195	P	Pn	07 22 06.0	+1.4
	919nm,0.3s,baz=26,slow=3.8,SNR=240						
BATI				S	Sn	07 22 24.5	+2.0
	2µm,0.3s,baz=93,slow=23,SNR=15						
BATI	Baumata	1.29	195	P	Pn	07 22 06.0	+1.4
MMRI	Maumere	1.78	280	P	Pn	07 22 11.6	+1.0
MMRI	Maumere	1.78	280	Pn	Pn	07 22 11.9	+1.3
MMRI	Maumere	1.78	280	P	Pn	07 22 12.2	+1.6
EDFI	Ende, Flores	2.30	275	P	Pn	07 22 18.5	+1.1
BASI	Baing, Sumba	3.61	249	P	Pn	07 22 34.9	+0.1
BSSI	Bau Bau, Buton	4.47	308	P	Pn	07 22 48.0	+1.6
WBSI	Waikabubak, Su	4.61	261	P	Pn	07 22 47.2	-1.1
BKSI	Bulukumba	5.28	313	P	Pn	07 22 58.3	+0.9
	0.3nm936nm88nm,0.5s						
KAPI	Kappang	5.76	313	P	Pn	07 23 02.8	-1.1
	7.4nm,0.3s,baz=158,slow=9.6,SNR=17						
KAPI				LR	LR	07 25 34.0	
	comp=Z,66nm,18.8s,baz=175,slow=42						
KAPI	Kappang	5.76	313	Pn	Pn	07 23 05.3	+1.4
BNSI	Bone	5.96	319	P	Pn	07 23 08.8	+2.2
	0.5nm2µm168nm,0.7s						
PLAI	Plampang	6.16	271	P	Pn	07 23 10.0	+0.7
	1.1nm3µm107nm,0.5s						
PLAI	Plampang	6.16	271	P	Pn	07 23 10.6	+1.3
	141nm,0.6s						
SPSI	Sidrap Palu	6.51	319	P	Pn	07 23 16.0	+2.0
	0.1nm37nm,0.7s						
TWSI	Taliwang, Sumb	7.05	271	P	Pn	07 23 22.0	+0.6
	0.5nm1µm64nm,0.5s						
SANI	Sanana	7.14	16	P	Pn	07 23 23.7	+1.1
	0.1nm20nm,0.5s						
TTSI	Tana Toraja	7.20	324	P	Pn	07 23 26.2	+2.7
	0.2nm54nm,0.8s						
DRS	Darwin Rock St	7.60	118	P	Pn	07 23 28.6	-0.3
	142nm,0.7s						
MTN	Manton Dam	7.99	120	Pn	Pn	07 23 33.5	-0.8
MTN	Manton Dam	7.99	120	P	Pn	07 23 33.7	-0.5
	277nm,0.4s						
KNRA	Kununurra	8.13	146	Pn	Pn	07 23 34.5	-1.7
KNRA	Kununurra	8.13	146	P	Pn	07 23 34.8	-1.4
APSI	Ampana	8.33	343	P	Pn	07 23 41.5	+2.6
	25nm,0.7s						
IGBI	Denpasar	8.76	270	P	Pn	07 23 45.4	+0.7
KDU	Kakadu	9.10	115	P	Pn	07 23 47.9	-1.4
FITZ	Fitzroy Crossi	9.23	170	P	Pn	07 23 48.5	-2.5
	baz=90,slow=2.1						
FITZ				S	Sn	07 25 24.4	-8.7
	baz=108,slow=20						
JAGI	Jajag, Banyuwa	9.76	272	P	Pn	07 23 59.0	+0.7
	27nm,0.7s						
JAGI	Jajag, Banyuwa	9.76	272	Pn	Pn	07 23 58.5	+0.2
JAGI	Jajag, Banyuwa	9.76	272	P	Pn	07 23 59.3	+1.0
	28nm,0.5s						
GMJI	Gumukmas	10.47	273	P	Pn	07 24 08.2	+0.2
	15nm,0.7s						
TOLI2	Tolitoli	10.50	342	P	Pn	07 24 10.6	+2.1
	15nm,0.8s						
PCJI	Pacitan	12.71	272	P	Pn	07 24 38.4	+0.4
	38nm,0.4s						
MBWA	Marble Bar	12.81	198	P	Pn	07 24 37.1	-2.2
	18nm,0.8s						
PSA00	Pilbara Seismi	13.17	197		Pn	07 24 42.7	-1.2
PSA00	Pilbara Seismi	13.17	197		Pn	07 24 43.1	-0.9
PSA00	Pilbara Seismi	13.17	197	P	Pn	07 24 42.8	-1.2
	16nm,2.4s						
UGM	Wanagama	13.38	273	P	Pn	07 24 48.4	+1.6
	75nm,1.5s						
WB0	Warramunga Arr	14.71	138		Pn	07 25 00.8	-3.2
WRA	Warramunga Arr	14.80	139	P	Pn	07 25 01.4	-3.7
	12nm,0.3s,baz=315,slow=15,SNR=273						
WRA				S	Sn	07 27 33.0	-15
	5.2nm,0.3s,baz=309,slow=21,SNR=16						
WRA				LR	LR	07 31 39.8	
	comp=Z,76nm,18.9s,baz=0.0,slow=40						
WRA	Warramunga Arr	14.80	139		Pn	07 25 02.1	-3.0
SBUM	Sibu	16.32	313	P	P	07 25 26.7	+1.3
WRKA	Warakurna	16.51	166	P	Pn	07 25 25.6	-0.9
	44nm,0.8s						
GIRL	Giralia	16.53	213	P	Pn	07 25 26.4	-0.3
	93nm,2.0s						
CNJI	Cibinong	16.79	274	P	Pn	07 25 29.6	-0.4
AS31	Alice Springs	17.43	148		P	07 25 36.8	-0.7
ASAR	Alice Springs	17.43	148	P	P	07 25 37.2	-0.3
	2.4nm,0.3s,baz=324,slow=11,SNR=96						
ASAR				S	Sn	07 28 38.5	-13
	1.7nm,0.3s,baz=318,slow=21,SNR=12						
ASAR	Alice Springs	17.43	148	P	P	07 25 36.6	-0.9
MEEK	Meekatharra	18.32	196	P	P	07 25 48.0	+0.7
	20nm,1.1s						
QIS	Mount Isa	18.96	129	P	Pn	07 25 56.3	+0.1
	39nm,0.6s						
COEN	Coen	19.43	107	P	P	07 26 00.3	+0.8
COEN				IAmb	IAmb	07 26 23.8	
	comp=Z,10nm,0.7s						
COEN	Coen	19.43	107	P	Pn	07 26 01.5	-0.1
	comp=Z,15nm,0.9s						
MORW	Morawa	21.36	199	P	P	07 26 19.8	-0.4
MORW				IAmb	IAmb	07 26 22.8	
	comp=Z,36nm,1.3s						
MORW	Morawa	21.36	199	P	P	07 26 20.2	0.0
	comp=Z,24nm,0.9s						
OOD	Oodnadatta	21.74	151	P	P	07 26 25.1	+0.9
	comp=Z,29nm,0.7s						
FORT	Forrest	22.04	171	P	P	07 26 26.7	-0.6
FORT	Forrest	22.04	171	P	P	07 26 27.1	-0.2
	comp=Z,38nm,0.6s						
BLDU	Ballidu	22.60	197	P	P	07 26 32.9	-0.3
	comp=Z,35nm,0.9s						
MULG	Mulgathing	23.20	157	P	P	07 26 40.0	+0.9
	comp=Z,21nm,1.0s						
KLBR	Kellerberrin	23.26	194	P	P	07 26 39.5	-0.1
	comp=Z,79nm,0.7s						
MUN	Mundaring	24.03	196	P	P	07 26 46.5	0.0
	comp=Z,29nm,1.7s						
NWAO	Narrogin (SRO)	24.66	194	P	P	07 26 52.2	-0.1
	comp=Z,23nm,0.5s						
LCRK	Leigh Creek	25.17	150	P	P	07 26 57.4	+0.5
	comp=Z,23nm,0.6s						
BBOO	Buckleboo	26.23	157	P	P	07 27 06.2	-0.3
BBOO				IAmb	IAmb	07 27 10.3	
	comp=Z,19nm,1.1s						
BBOO	Buckleboo	26.23	157	P	P	07 27 06.9	+0.4
	comp=Z,22nm,2.4s						
HTT	Hallett	27.97	153	P	P	07 27 23.5	+1.3
	comp=Z,12nm,2.8s						
STKA	Stephens Creek	28.05	147	P	P	07 27 23.9	+1.1
	comp=Z,1.5nm,0.5s,baz=320,slow=10,SNR=7.6						
STKA				LR	LR	07 40 07.2	
	comp=Z,61nm,18.2s,baz=20,slow=39						
STKA	Stephens Creek	28.05	147	P	P	07 27 24.0	+1.2
CMSA	Cobar Meteorol	30.19	141	P	P	07 27 43.9	+2.2
ARPS	Mount Arapiles	32.07	152	P	P	07 27 59.6	+1.3
	comp=Z,24nm,0.8s						
CAN	Canberra	34.79	143	P	P	07 28 23.3	+1.4
CAN	Canberra	34.79	143	P	P	07 28 22.3	+0.4
CNB	Canberra Magne	35.00	142	P	P	07 28 24.3	+0.5
	comp=Z,26nm,2.8s						
CM31	Chiang Mai Arr	36.80	318	P	P	07 28 39.7	+0.5
CM31				IAmb	IAmb	07 28 53.2	
	comp=Z,4.8nm,0.6s						
CMAR	Chiang Mai Arr	36.80	318	P	P	07 28 36.0	-3.2
	comp=Z,2.1nm,0.6s,baz=141,slow=6.4,SNR=9.0						
CMAR				ScP	ScP	07 34 37.9	+0.5
	comp=Z,0.9nm,0.3s,baz=176,slow=2.5,SNR=5.8						
CMAR	Chiang Mai Arr	36.80	318	P	P	07 28 38.8	-0.5
CHTO	Chiang Mai	37.05	318	P	P	07 28 41.2	-0.2
CHTO				IAmb	IAmb	07 28 42.4	
	comp=Z,5.0nm,0.9s						
MJAR	Matsushiro Arr	47.18	16	P	P	07 30 04.0	+0.6
MJAR				IAmb	IAmb	07 30 13.0	
	comp=Z,5.8nm,1.1s						
ODAN	Odare	50.29	316	*e*P	P	07 30 26.8	-0.9
	comp=Z,28nm,0.6s						
TAPN	Taplejung	50.39	317	*e*P	P	07 30 27.5	-1.0
	comp=Z,30nm,0.5s						
HHC	Hu-ho-hao-te	50.87	348	*e*P	P	07 30 35.5	+3.9
HHC				pmax	pmax		
	comp=Z,20nm,0.7s						
HHC				pmax	pmax		
	comp=Z,310nm,5.5s						
RAMN	Ramite	50.89	316	*e*P	P	07 30 31.9	-0.3
	comp=Z,64nm,0.5s						
JIRN	Jiri	51.62	316	*e*P	P	07 30 36.9	-0.9
	comp=Z,25nm,0.6s						
GUN	Gumba	51.99	316	*e*P	P	07 30 39.6	-1.0
	comp=Z,53nm,0.5s						
PKI	Pulchoki	52.10	315	*e*P	P	07 30 40.4	-1.0
	comp=Z,38nm,0.4s						
PKIN	Phulchoki	52.12	315	*e*P	P	07 30 40.2	-1.2
	comp=Z,47nm,0.4s						
KKN	Kakani	52.33	316	*e*P	P	07 30 41.9	-1.0
	comp=Z,25nm,0.6s						
DMN	Daman	52.34	315	*e*P	P	07 30 42.4	-0.6
	comp=Z,25nm,0.6s						
GKN	Gorkha	52.91	315	*e*P	P	07 30 46.0	-1.1
	comp=Z,37nm,0.4s						
USRK	Ussuriysk Ar.	53.40	7	P	P	07 30 47.0	-3.1
	comp=Z,1.8nm,0.4s,baz=212,slow=5.4,SNR=7.1						
KOLN	Koldanda	53.49	314	*e*P	P	07 30 50.3	-1.1
	comp=Z,32nm,0.6s						
DANN	Dangsing	53.73	315	*e*P	P	07 30 52.2	-1.1
	comp=Z,74nm,0.6s						
PYUN	Piuthan	54.12	314	*e*P	P	07 30 55.6	-0.4
	comp=Z,29nm,0.4s						
SONM	Songino Array	58.66	346	P	P	07 31 26.2	-1.6
	comp=Z,1.1nm,0.6s,baz=169,slow=7.4,SNR=3.6						
SONM	Songino Array	58.66	346	IAmb	IAmb	07 31 27.6	
	comp=Z,0.8nm,0.7s						
WMQ	Urumqi	62.00	331	*e*P	P	07 31 53.0	+2.5
NIL	Nilore	64.15	314	P	P	07 32 04.1	-0.8
MK31	Makanchi Array	66.78	330	P	P	07 32 20.8	-0.8
MK31				IAmb	IAmb	07 32 21.8	
	comp=Z,3.3nm,0.9s						
MKAR	Makanchi Array	66.78	330	P	P	07 32 20.7	-0.9
	comp=Z,3.5nm,0.6s,baz=133,slow=6.9,SNR=27						
BOOM	Boomskoye usch	67.40	323	P	P	07 32 25.2	-0.6
BOOM				IAmb	IAmb	07 32 25.9	
	comp=Z,3.6nm,0.7s						
KBL	Kabul	67.61	313	P	P	07 32 26.8	-0.5
PETK	Petropavlovsk-	68.15	21	P	P	07 32 28.0	-2.0
	comp=Z,2.8nm,1.0s,baz=201,slow=5.3,SNR=1.9						
PETK	Petropavlovsk-	68.15	21	P	P	07 32 30.4	+0.4
AAK	Ala-Archa	68.35	323	P	P	07 32 31.8	+0.1
AAK				IAmb	IAmb	07 32 32.1	
	comp=Z,3.7nm,0.5s						
ZAA0	Zalesovo Array	70.86	337	P	P	07 32 45.0	-1.7
ZAA0				IAmb	IAmb	07 32 45.7	
	comp=Z,5.0nm,1.0s						
ZALV	Zalesovo Beam	70.86	337	P	P	07 32 44.4	-2.3
	comp=Z,1.9nm,0.4s,baz=132,slow=4.2,SNR=13						
ZALV	Zalesovo Beam	70.86	337	P	P	07 32 44.8	-1.9
MAW	Mawson	71.00	201	P	P	07 32 48.3	+1.0
	comp=Z,2.5nm,0.6s,baz=115,slow=4.4,SNR=10						
MAW	Mawson	71.00	201	P	P	07 32 48.8	+1.4
KKAR	Karatay Array	71.03	321	P	P	07 32 47.4	-0.6
KURK	Kurchatov	71.23	331	P	P	07 32 48.0	-1.1
KURK				IAmb	IAmb	07 32 48.5	
	comp=Z,4.8nm,0.7s						
VNDA	Vanda	71.30	172	P	P	07 32 50.2	+1.1
	comp=Z,1.5nm,0.5s,baz=319,slow=7.1,SNR=14						
VNDA	Vanda	71.30	172	P	P	07 32 49.9	+0.8
VNDA				IAmb	IAmb	07 33 01.4	
	comp=Z,15nm,1.4s						
VOI	Vohitsoka	74.91	250	P	P	07 33 11.4	-0.1
ABKAR	Akbulak array	80.43	323	P	P	07 33 40.1	-1.3
QSPA	South Pole Qui	81.04	180	P	P	07 33 45.8	+1.2
	comp=Z,3.7nm,0.7s,baz=298,slow=0.8,SNR=42						
QSPA	South Pole Qui	81.04	180	P	P	07 33 45.5	+1.0
QSPA				IAmb	IAmb	07 33 46.0	
	comp=Z,4.7nm,0.8s						
SNAA	Sanae	92.33	195	P	P	07 34 41.3	+1.6
VNA2	Neumayer--Watz	93.94	194	P	P	07 34 48.3	+1.3
	baz=134,slow=3.6						
VNA3	Neumayer Olymp	94.27	194	P	P	07 34 49.7	+1.2
VNA1	Neumayer--Stat	94.34	194	P	P	07 34 46.1	-2.7
TORD	Torodi Ar. Bea	123.33	280	PKP	PKiKP	07 40 27.6	+0.2
	comp=Z,0.5nm,0.5s,baz=56,slow=1.8,SNR=4.4						
CPUP	Villa Florida	144.90	178	PKPbc	PKPdf	07 41 07.9	+0.9
	comp=Z,8.4nm,0.7s,baz=194,slow=0.8,SNR=16						
LPAZ	La Paz	152.19	154	PKPbc	PKiKP	07 41 27.8	+0.9
	comp=Z,0.7nm,0.5s,baz=263,slow=1.3,SNR=5.3						

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*SOME **27** 07:26:25.4,40°.73N×69°.93E,h15^{km}*

*KRNET **27** 07:26:26.9±0.1,41°.08N×69°.59E,h7^{km},mb3.0*

*NNC **27** 07:26:30.8±4.3,41°.07N×69°.80E,h0^{km},mb3.6,mpv3.5, Error ellipse: s-maj=28.7km s-min=16.7km az=33.0*

ISC 27 07:26:28.4±1.1**,41°.03N**±0°.03×**69°.35E**±0°.06**,h15**^{km}±9^{km}**,n26,** σ**1^{s}83**/46**,19C-11D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAS	Tashkent	0.29	352	⇑*e*P	Pg	07 26 33.7	-0.9
	baz=19						
TAS				⇑*e*S	Sg	07 26 38.0	-0.8
	baz=19						
IUG	Iuzhnay	1.22	24	*e*P	Pg	07 26 52.4	+0.4
	513nm,0.2s						
IUG				*e*S	Sg	07 27 11.5	+3.5
	67nm,0.2s						
IUG	Iuzhnay	1.22	24	P	Pg	07 26 53.1	+1.1
	513nm,0.2s						
IUG				S	Sb	07 27 06.6	-0.4
	67nm,0.2s						
TRKS	Terek-Say	1.44	69	⇑*i*P	Pn	07 26 50.5	-3.7
	baz=72						
TRKS				⇑*i*S	Sn	07 27 08.0	-4.9
	baz=72						
BTK	Batken	1.48	131	⇓*i*P	Pn	07 26 53.6	-1.1
	baz=37						
BTK				⇓*i*S	Sn	07 27 12.3	-1.6
	baz=37						
BRLS	Borolday	2.03	10	*e*P	Pn	07 27 01.7	-0.4
	4.0nm,0.1s						
BRLS				*e*S	Sn	07 27 26.8	-0.5
	17nm,0.4s						
BRLS	Borolday	2.03	10	P	Pn	07 27 01.9	-0.3
	4.0nm,0.1s						
BRLS				S	Sn	07 27 26.2	-1.0
	17nm,0.4s						
GAR	Garm	2.16	160	⇑*e*P	Pb	07 27 06.8	-0.6
	baz=65						
GAR				⇑*i*S	Sb	07 27 35.3	+1.2
	baz=65						
KK07	Karatay Array	2.23	22	⇑Pg	Pb	07 27 08.5	+0.1
	4.9nm,0.5s,baz=198,slow=15						
KK07				⇓Lg	Lg	07 27 39.0	
	9.4nm,0.5s,baz=202,slow=26						
CHGR	Chuyangaron	2.38	184	⇑*i*P	Pb	07 27 10.5	-0.6
	baz=88						
CHGR				⇑*i*S	Sb	07 27 41.7	+1.4
	baz=88						
DRK	Karamyk	2.43	129	⇑*i*P	Pn	07 27 08.5	+0.5
	baz=33						
DRK				⇑*i*S	Sn	07 27 39.0	+1.3
	baz=33						
OHH	Osh	2.66	100	⇑*i*P	Pn	07 27 10.8	-0.1
	baz=2.0						
OHH				⇑*i*S	Sn	07 27 42.5	-0.4
	baz=2.0						
MNAS	Manas	2.77	57	⇓*e*P	Pn	07 27 12.6	+0.1
	baz=56						
MNAS				⇓*i*S	Sn	07 27 45.4	-0.4
	baz=56						
SFK	Sufi-Kurgan	3.33	107	⇑*e*P	Pn	07 27 20.1	-0.1
	baz=8.0						
SFK				⇑*e*S	Sn	07 27 59.2	-0.4
	baz=8.0						
MRKS	Merke	3.36	58	*e*P	Pn	07 27 22.8	+2.3
	1.7nm,0.2s						
MRKS				*e*S	Sn	07 28 04.1	+3.8
	3.4nm,0.4s						
MRKS	Merke	3.36	58	Pg	Pb	07 27 26.5	-1.3
	4.3nm,0.5s						
MRKS				Lg	Lg	07 27 59.2	
	3.7nm,0.6s						
AML	Almayashu	3.44	70	⇓*e*P	Pn	07 27 22.2	+0.3
	baz=70						
AML				⇓*i*S	Sn	07 28 02.2	-0.4
	baz=70						
EKS2	Erkin-Say	3.69	62	⇑*i*P	Pn	07 27 25.4	+0.4
	baz=62						
EKS2				⇑*i*S	Sn	07 28 07.7	-0.6
	baz=62						
UCH	Uchtor	4.05	71	⇑*e*P	Pn	07 27 30.8	+0.5
	baz=71						
UCH				⇑*e*S	Sn	07 28 17.0	-0.7
	baz=71						
USP	Ospenovka	4.43	58	⇓*e*P	Pn	07 27 35.6	+0.4
	baz=57						
USP				⇓*i*S	Sn	07 28 25.3	-1.3
	baz=57						
TKM2	Tokmak 2	5.02	66	⇓Pg	Pb	07 27 53.8	-2.4
	1.5nm,0.6s						
TKM2				⇓Lg	Lg	07 28 58.4	
	5.3nm,0.6s						
DGS	Degeres	5.26	63	*e*P	Pb	07 27 56.1	-4.1
	2.8nm,0.4s						
DGS				*e*S	Sb	07 29 01.4	-1.8
	4.7nm,0.7s						
DGS	Degeres	5.26	63	Pg	Pb	07 28 00.8	+0.7
	2.8nm,0.4s						
DGS				Lg	Lg	07 29 02.3	
	4.7nm,0.7s						
KRBS	Karabastau	5.39	58	*e*P	Pb	07 27 59.8	-2.5
	1.7nm,0.5s						
KRBS				*e*S	Sb	07 29 09.0	+2.2
	2.2nm,0.3s						
KRBS	Karabastau	5.39	58	Pg	Pb	07 28 05.1	+2.8
	1.7nm,0.5s						
KRBS				Lg	Lg	07 29 09.0	
	2.2nm,0.3s						
KUU	Kurty	5.91	59	Pg	Pb	07 28 13.6	+2.5
	1.8nm,0.4s						
KUU				Lg	Lg	07 29 26.1	
	5.0nm,0.5s						

IDC 27 07:27:54.0±1.0**,3°.88N**×**95°.52E,h0**^{km}**,mb3.6**/2**,mb1 3.9**/4**, mb1mx3.4**/36**,mbtmp3.7**/4**,ML3.9**/2**,MS3.6**/3**,Ms1 3.6**/3**, ms1mx2.8**/42**,Error ellipse: s-maj=19.7km s-min=9.0km az=33.0,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	3.56	107	Pn	Pn	07 28 51.7	+1.0
	1.6nm,0.3s,baz=313,slow=17,SNR=7.8						
PSI				Lg	Lg	07 29 47.8	
	1.7nm,0.3s,baz=50,slow=24,SNR=3.7						
CMAR	Chiang Mai Arr	14.87	13	Pn	Pn	07 31 25.4	-0.2
	0.6nm,0.3s,baz=202,slow=11,SNR=2.1						
WRA	Warramunga Arr	44.88	123	P	P	07 36 10.3	-0.3
	0.5nm,0.8s,baz=304,slow=9.4,SNR=3.6						
ASAR	Alice Springs	46.35	128	P	P	07 36 21.8	-0.5
	0.6nm,0.6s,baz=300,slow=7.8,SNR=6.2						
ASAJ	Asahikawa	57.58	39	LR	LR	08 03 09.1	
	comp=Z,80nm,21.8s,baz=190,slow=37						
PETK	Petropavlovsk-	70.46	34	LR	LR	08 15 45.1	
	comp=Z,22nm,18.0s,baz=143,slow=41						
SEY	Seymchan	71.98	24	LR	LR	08 14 36.7	
	comp=Z,58nm,20.9s,baz=228,slow=39						

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*IDC **27** 07:56:38.3±0.8,35°.37N×141°.09E,h0^{km},mb3.8/10, mb1 4.0/14,mb1mx3.9/48,mbtmp3.8/14,ML3.6/3,MS3.2/3, Ms1 3.2/3,ms1mx2.6/56,Error ellipse: s-maj=21.6km s-min=17.0km az=93.0*

*JMA **27** 07:56:40.7±0.1,35°.50N×140°.90E,h22^{km}±2^{km},M3.9*

JMA Felt I J1.

*NIED **27** 07:56:40.7,35°.50N×140°.90E,h22^{km},MW4.0,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.00; $M_{\theta\theta}$0.34; $M_{\phi\phi}$0.65; $M_{r\theta}$0.05; $M_{\theta\phi}$-0.61; $M_{\phi r}$-0.15; Fault plane solution: $M_0$1.07000×10^{15} NP1: ϕ_s326.00000°,δ49.00000°,λ-85.00000°. NP2: ϕ_s139.00000°,δ41.00000°,λ-95.00000°.*

*NEIC **27** 07:56:44.3±2.5,35°.56N±0°.05×140°.94E±0°.10,h34^{km}±6^{km}, mb4.3/10 Error ellipse: s-maj=11.6km s-min=7.8km az=97.0*

ISC 27 07:56:40.5±1.1**,35°.47N**±0°.04×**140°.91E**±0°.05**,h13**^{km}±7^{km}**, n59,** σ**1^{s}19**/54**,mb4.0**/16**,6C-1D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.23	350	⇑P	Pg	07 56 46.0	+0.4
CHOJ				S	Sg	07 56 50.0	+1.0
JSMT	Sammumatsuo	0.41	294	P	Pb	07 56 49.2	-0.5
JCN	Nagara	0.58	265	⇑P	Pb	07 56 52.6	0.0
JIHU	Itakohorinouch	0.58	328	⇑P	Pb	07 56 52.3	-0.3
KTR	Katsuura	0.58	237	⇑P	Pb	07 56 52.0	-0.6
KTR				*e*S	Sb	07 57 00.4	-0.4
BSO4	Boso 4	0.67	224	⇑P	Pb	07 56 54.2	+0.1
BSO3	Boso 3	0.74	206	⇑P	Pb	07 56 55.4	+0.2
BSO1	Boso 1	0.82	176	P	Pb	07 56 55.6	-0.7
JYT	Yasato	0.95	323	⇓P	Pg	07 56 57.3	-1.6
JYT				S	Sg	07 57 09.8	-1.6
JYT	Yasato	0.95	323		Pg	07 56 57.8	-1.1
JMM	Marumori	2.39	358		Pn	07 57 18.7	-0.7
MJAR	Matsushiro Arr	2.44	297	Pn	Pn	07 57 21.8	+1.7
	2.3nm,0.3s,baz=121,slow=14,SNR=37						
MJAR				Sn	Sb	07 57 54.2	0.0
	2.3nm,0.3s,baz=104,slow=25,SNR=6.8						
MJAR				LR	LR	07 58 40.7	
	comp=Z,179nm,21.4s,baz=115,slow=48						
MJAR	Matsushiro Arr	2.44	297		Pn	07 57 21.2	+1.2
MAJO	Matsushiro	2.44	297		Pn	07 57 21.4	+1.4
MAT	Matsushiro	2.44	297	P	Pb	07 57 22.4	-1.9
MAT				*e*S	Sn	07 57 49.2	-0.6
MJB9	Matsu-Tunnel	2.44	297	Pn	Pb	07 57 22.6	-1.7
JHJ	Hachijo jima 2	2.53	202	Pn	Pn	07 57 21.4	+0.2
	36nm,0.3s,baz=73,slow=20,SNR=2.2						
JHJ				Sn	Sn	07 57 48.8	-3.2
	70nm,0.3s,baz=74,slow=22,SNR=1.8						
JGF	Kuroka	2.90	274		Pn	07 57 27.4	+0.9
INU	Inuyama	3.18	269		Pn	07 57 31.4	+1.1
JTM	Tenmabayashi	5.31	1	Pn	Pn	07 58 00.2	+0.7
ASAJ	Asahikawa	8.73	8	Pn	Pn	07 58 45.0	-1.4
	1.7nm,0.3s,baz=201,slow=7.5,SNR=7.5						
JKA	Kamikawa-asahi	8.73	8		Pn	07 58 45.0	-1.4
KSRS	Korea Array	10.65	285	LR	LR	08 03 17.3	
	comp=Z,100nm,20.1s,baz=85,slow=37						

USRK	Ussuriysk Ar.	11.08	325	Pn	Pn	07 59 18.6	-0.1
	baz=122,slow=11,SNR=2.3						
H11N2	WAKE ISLAND Hy	27.74	118	T	T	08 31 33.2	
	baz=310,slow=75,SNR=482						
H11N1	WAKE ISLAND Hy	27.75	118	T	T	08 31 24.9	
	baz=310,slow=75,SNR=400						
H11N3	WAKE ISLAND Hy	27.76	118	T	T	08 31 34.5	
	baz=310,slow=75,SNR=401						
SONM	Songino Array	28.35	306	P	P	08 02 37.3	+3.0
	0.3nm,0.5s,baz=103,slow=10.0,SNR=3.6						
H11S1	WAKE ISLAND Hy	28.40	120	T	T	08 32 22.4	
	baz=312,slow=75,SNR=1323						
H11S3	WAKE ISLAND Hy	28.40	120	T	T	08 32 09.8	
	baz=312,slow=75,SNR=1170						
H11S2	WAKE ISLAND Hy	28.41	120	T	T	08 32 18.3	
	baz=312,slow=75,SNR=1177						
ZALV	Zalesovo Beam	42.68	314	P	P	08 04 38.1	+1.3
	0.5nm,0.3s,baz=102,slow=7.3,SNR=5.9						
ZALV	Zalesovo Beam	42.68	314	P	P	08 04 38.6	+1.8
MKAR	Makanchi Array	44.62	303	P	P	08 04 52.5	0.0
	0.3nm,0.5s,baz=86,slow=10.0,SNR=5.0						
MTN	Manton Dam	48.94	193	P	P	08 05 26.4	-0.2
MDM	Murphy Dome	50.45	31	P	P	08 05 39.0	+1.4
MDM				IAmb	IAmb	08 05 39.7	
	comp=Z,2.8nm,0.9s						
H24K	Noodor Dome	50.60	30	P	P	08 05 40.3	+1.5
H24K				IAmb	IAmb	08 05 57.0	
	comp=Z,9.0nm,1.4s						
IL31		51.03	32	P	P	08 05 42.4	+0.5
IL31				IAmb	IAmb	08 06 03.0	
	comp=Z,2.9nm,1.3s						
ILAR	Eielson Array	51.03	32	P	P	08 05 42.1	+0.1
	comp=Z,1.4nm,0.8s,baz=264,slow=6.1,SNR=21						
BMAR	Burnt Mountain	51.90	28	P	P	08 05 49.7	+1.3
DOT	Dot Lake	52.33	33	P	P	08 05 52.2	+0.4
DOT				IAmb	IAmb	08 06 04.9	
	comp=Z,5.2nm,1.2s						
SCRK	Sand Creek	52.34	33	P	P	08 05 52.5	+0.6
SCRK				IAmb	IAmb	08 05 52.5	
	comp=Z,2.9nm,1.1s						
BCAR	Beaver Creek A	53.41	34	P	P	08 06 01.0	+1.2
WB0	Warramunga Arr	55.28	187	P	P	08 06 12.2	-1.6
WRA	Warramunga Arr	55.46	188	P	P	08 06 13.3	-1.7
	comp=Z,3.3nm,0.8s,baz=0.9,slow=7.1,SNR=21						
WRA	Warramunga Arr	55.46	188	P	P	08 06 13.4	-1.6
ABKAR	Akbulak array	58.64	311	P	P	08 06 37.1	-0.2
ABKAR				IAmb	IAmb	08 06 59.8	
	comp=Z,1.8nm,0.8s						
ABKAR	Akbulak array	58.64	311	P	P	08 06 37.0	-0.3
AS31	Alice Springs	59.19	187	P	P	08 06 41.3	0.0
ASAR	Alice Springs	59.19	187	P	P	08 06 40.5	-0.8
	comp=Z,0.5nm,0.8s,baz=14,slow=13,SNR=8.5						
ASAR	Alice Springs	59.19	187	P	P	08 06 41.8	+0.5
DZM	Mont Dzumac	62.14	153	LR	LR	08 30 24.9	
	comp=Z,52nm,20.1s,baz=124,slow=33						
NVAR	Mina Array Bea	76.25	53	P	P	08 08 29.3	+0.1
	comp=Z,0.3nm,0.6s,baz=289,slow=4.5,SNR=3.8						
PDAR	Pinedale Array	79.05	45	P	P	08 08 44.6	-0.1
	comp=Z,0.3nm,0.6s,baz=207,slow=1.7,SNR=4.0						
SCHQ	Schefferville	86.95	16	P	P	08 09 24.7	-0.5
	comp=Z,5.3nm,0.9s,baz=282,slow=9.3,SNR=2.1						
TXAR	Lajitas Array	91.40	52	P	P	08 09 46.5	-0.2
	comp=Z,0.3nm,0.8s,baz=347,slow=3.7,SNR=2.8						
H03N2	Juan Fernandez	147.24	98	T	T	11 00 55.9	
	baz=289,slow=76,SNR=89						
H03N3	Juan Fernandez	147.25	98	T	T	11 00 55.2	
	baz=289,slow=76,SNR=79						
H03N1	Juan Fernandez	147.25	98	T	T	11 00 51.0	
	baz=289,slow=76,SNR=89						

IDC ***27*** *08:01:34.0±1.4, 32°.91S×178°.20W, h0km, mb4.2/3, mb1 4.4/4, mb1mx4.0/38, mbtmp4.2/4, ML3.7/1, MS3.6/1, Ms1 3.6/1, ms1mx2.7/34, Error ellipse: s-maj=35.6km s-min=29.3km az=88.0*

NEIC ***27*** *08:01:35.7±1.0, 33°.05S±0°.06×178°.1W±0°.1, h10km±2km, mb4.4/10, Error ellipse: s-maj=22.8km s-min=5.3km az=115.0*

WEL ***27*** *08:01:35.0±0.9, 33°S±7°×17°8W±2°0, h33km, M4.7/13, mB4.9/6, ML5.3/13, MLv5.0/13, Mw(mB)4.2/6, Error ellipse: s-maj=0.0km s-min=0.0km az=108.4*

ISC 27 08:01:36.7±0.9**, 32°.89S**±0°.06×**177°.9W**±0°.1**, h34km, n47, σ1ˢ80**/58**, mb4.4**/8**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.62	360	P	Pn	08 02 26.9	-3.4
GLKZ				S	Sn	08 03 07.7	-4.2
RIZ	Raoul Island	3.64	360	P	Pn	08 02 28.0	-2.6
RIZ				S	Sn	08 03 11.7	-0.6
MXZ	Matakaoa Point	5.59	213	P	Pn	08 02 55.7	-1.7
MXZ				S	Sn	08 03 58.7	-1.8
MXZ	Matakaoa Point	5.59	213	Pn	Pn	08 02 56.0	-1.4
WMGZ	Waiomatatini S	5.76	210	P	Pn	08 02 57.6	-2.1
WMGZ				S	Sn	08 04 04.9	+0.3
PKGZ	Pakihiroa	5.96	212	P	Pn	08 03 01.2	-1.4
PKGZ				S	Sn	08 04 08.9	-0.8
HAZ	Te Kaha	5.99	215	P	Pn	08 03 02.7	-0.2
HAZ				S	Sn	08 04 10.4	0.0
PUZ	Puketiti	6.04	210	P	Pn	08 03 01.0	-2.6
PUZ				S	Sn	08 04 10.6	-0.9
RUGZ	Raukumara Rang	6.21	214	P	Pn	08 03 05.8	-0.3
RUGZ				S	Sn	08 04 15.8	-0.1
TWGZ	Tauwhareparae	6.25	211	P	Pn	08 03 05.3	-1.2
TWGZ				S	Sn	08 04 15.9	-0.8
CNGZ	Carnagh Statio	6.41	208	P	Pn	08 03 06.8	-1.8
TKGZ	Te Karaka	6.52	211	P	Pn	08 03 08.3	-1.9
TKGZ				S	Sn	08 04 22.4	-0.9
MWZ	Matawai	6.58	213	P	Pn	08 03 09.5	-1.5
MWZ				S	Sn	08 04 23.4	-1.4
URZ	Urewera	6.72	216	Pn	Pn	08 03 11.4	-1.4
	1.7nm,0.3s,baz=300,slow=23,SNR=12						
URZ				Sn	Sn	08 04 26.3	-1.9
	19nm,0.3s,baz=201,slow=21,SNR=11						
URZ	Urewera	6.72	216	P	Pn	08 03 11.4	-1.4
URZ				S	Sn	08 04 26.2	-1.9
RIGZ	Rimuhau	6.78	210	P	Pn	08 03 11.3	-2.5
RIGZ				S	Sn	08 04 28.2	-1.7
SNGZ	Shannon Statio	7.03	212	P	Pn	08 03 19.4	+2.2
SNGZ				S	Sn	08 04 33.9	-2.0
KNZ	Kokohu	7.09	209	P	Pn	08 03 14.5	-3.4
KNZ				S	Sn	08 04 34.0	-3.2
MTHZ	Maungataniwha	7.31	214	P	Pn	08 03 21.5	+0.4
MTHZ				S	Sn	08 04 42.0	-0.9
BKZ	Black Stump Fm	7.73	214	P	Pn	08 03 27.4	+0.6
BKZ				S	Sn	08 04 50.0	-3.1
BKZ	Black Stump Fm	7.73	214	Pn	Pn	08 03 24.9	-1.9
THZ	Tophouse	11.47	217	Pn	Pn	08 04 16.3	-1.8
LTZ	Lake Taylor	12.55	215	Pn	Pn	08 04 31.1	-1.7
DZM	Mont Dzumac	17.55	304	LR	LR	08 11 22.8	
	comp=Z,180nm,19.6s,baz=176,slow=34						
DZM	Mont Dzumac	17.55	304	Pn	Pn	08 05 39.7	+0.8
DZM				IAmb	IAmb	08 05 53.3	
	comp=Z,15nm,1.2s						
CTAO	Charters Tower	34.35	283	P	P	08 08 20.7	+0.3
CTAO				IAmb	IAmb	08 08 28.2	
	comp=Z,6.6nm,1.1s						
AS31	Alice Springs	43.11	270	P	P	08 09 35.0	+1.1
ASAR	Alice Springs	43.11	270	P	P	08 09 34.0	+0.1
	comp=Z,3.8nm,0.9s,baz=112,slow=7.5,SNR=16						
WB2	Warramunga Arr	44.31	275	P	P	08 09 44.2	+0.6
WB2				IAmb	IAmb	08 09 48.8	
	comp=Z,8.7nm,1.2s						
WRA	Warramunga Arr	44.32	275	P	P	08 09 44.4	+0.7
	comp=Z,3.0nm,0.6s,baz=112,slow=7.9,SNR=27						
WRA	Warramunga Arr	44.32	275	IAmb	IAmb	08 09 48.9	
	comp=Z,0.3nm,1.1s						
WB0	Warramunga Arr	44.35	275	P	P	08 09 44.4	+0.5
WB0				IAmb	IAmb	08 09 48.7	
	comp=Z,5.7nm,0.8s						
KNRA	Kununurra	51.01	276	P	P	08 10 37.0	+1.5
FAKI	Fak Fak	55.30	292	P	P	08 11 09.7	+2.5
FAKI				IAmb	IAmb	08 11 24.1	
	comp=Z,4.7nm,0.9s						
QSPA	South Pole Qui	57.23	180	P	P	08 11 22.8	+2.4
	comp=Z,3.6nm,0.9s,baz=67,slow=1.0,SNR=15						
QSPA	South Pole Qui	57.23	180	P	P	08 11 22.2	+1.8
SNAA	Sanae	75.67	178	P	P	08 13 15.2	-2.9
SNAA	Sanae	75.67	178	pP	pP	08 13 34.9	+8.7
SNAA	Sanae	75.67	178	P	P	08 13 19.0	+1.0
SNAA				IAmb	IAmb	08 13 20.3	
	comp=Z,2.2nm,0.9s						
VNA3	Neumayer Olymp	75.82	176	P	P	08 13 19.3	+0.4
VNA3	Neumayer Olymp	75.82	176	pP	pP	08 13 36.0	+9.0
VNA2	Neumayer--Watz	76.25	177	P	P	08 13 22.4	+1.0
	baz=182,slow=4.9						
VNA2	Neumayer--Watz	76.25	177	pP	pP	08 13 36.4	+7.0
	baz=180,slow=4.7						
VNA1	Neumayer--Stat	76.48	176	P	P	08 13 26.8	+4.3
VNA1	Neumayer--Stat	76.48	176	pP	pP	08 13 38.5	+7.8
FINES	FINESS Array B	147.50	339	PKPbc	PKPab	08 21 19.5	+1.1
	comp=Z,5.1nm,0.8s,baz=35,slow=4.2,SNR=6.9						
NOA	NORSAR Array B	151.22	351	PKPbc	PKiKP	08 21 26.9	+0.6
	comp=Z,1.5nm,0.8s,baz=15,slow=4.3,SNR=3.5						

JMA ***27*** *08:05:45.7±0.1, 23°.81N×121°.90E, h31km±3km, M2.7*

TAP ***27*** *08:05:46.4, 23°.85N×121°.88E, h37km, ML3.4, C*

ISC 27 08:05:46.1±1.1**, 23°.82N**±0°.02×**121°.89E**±0°.02**, h34km**±2km**, n100, σ0ˢ61**/182**, 2D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TEYL	Yanliau Villag	0.27	280	P	Pb	08 05 54.1	+0.5
	baz=282						
TEYL				S	Sb	08 05 59.8	+1.1
	baz=282						
HWA	Hwalien	0.30	301	P	Pb	08 05 54.4	+0.4
	baz=293						
HWA				S	Sb	08 06 00.4	+1.1
	baz=293						
TWD	Chiawan	0.37	314	⇓*i*P	Pb	08 05 54.9	0.0
	baz=309						
TWD				*i* S	Sb	08 06 00.8	-0.1
	baz=309						
ETL	Fush Village	0.41	324	P	Pb	08 05 55.4	-0.1
	baz=320						
ETL				S	Sb	08 06 01.8	-0.2
	baz=320						
ESL	Shilin	0.42	269	*i* P	Pb	08 05 55.3	-0.2
	baz=261						
ESL				*i* S	Sb	08 06 02.0	0.0
	baz=261						
NACB	Ninganchiao	0.44	323	P	Pb	08 05 55.6	-0.3
	baz=322						
NACB				S	Sb	08 06 02.2	-0.4
	baz=322						
EGFH	Guangfu	0.45	250	*i* P	Pn	08 05 56.2	0.0
	baz=246						
EGFH				*i* S	Sn	08 06 03.9	+0.9
	baz=246						
EHP	Heping Village	0.51	345	S	Sn	08 06 04.8	+0.4
	baz=352						
ETLH	Xiulin Townshi	0.53	316	P	Pn	08 05 57.0	-0.3
	baz=315						
ETLH				S	Sn	08 06 05.1	-0.2
	baz=315						
HGSD	Ruisui	0.54	232	P	Pb	08 05 57.4	+0.1
	baz=227						
HGSD				S	Sn	08 06 05.8	+0.7
	baz=227						
EHY	Hungye	0.61	239	P	Pb	08 05 58.4	0.0
	baz=248						
EHY				S	Sn	08 06 06.6	-0.3
	baz=248						
ENA	Nanau	0.62	348	P	Pb	08 05 58.4	-0.3
	baz=339						
ENA				S	Sn	08 06 07.0	-0.2
	baz=339						
EWUT	Wuta	0.63	351	P	Pb	08 05 58.7	-0.2
	baz=343						
EWUT				S	Sn	08 06 07.3	-0.2
	baz=343						
WHF	Hehuan Shan	0.65	300	⇓*i*P	Pn	08 05 58.9	-0.4
	baz=298						
WHF				S	Sb	08 06 08.7	0.0
	baz=298						
OWD	Renai	0.66	282	*i* P	Pb	08 05 59.4	-0.1
	baz=279						
OWD				*i* S	Sn	08 06 07.5	-1.0
	baz=279						
YULB	Yu-li	0.69	232	S	Sn	08 06 08.8	-0.1
	baz=241						
CHGB	Renai	0.69	290	S	Sn	08 06 09.3	-0.1
	baz=288						
EYUL	Yuli	0.70	228	*i* P	Pb	08 06 00.0	0.0
	baz=238						
EYUL				S	Sb	08 06 10.2	+0.7
	baz=238						
FUSS	Fushou	0.73	306	*i* P	Pn	08 06 00.3	+0.1
	baz=304						
FUSS				*i* S	Sn	08 06 10.1	-0.1
	baz=304						
NNSB	Datong	0.76	323	P	Pn	08 06 00.7	+0.1
	baz=314						
NNSB				S	Sn	08 06 10.4	-0.6
	baz=314						
NNS	Nan Shan	0.78	323	*i* P	Pn	08 06 00.8	+0.1
	baz=315						
NNS				*i* S	Sn	08 06 10.9	-0.4
	baz=315						
TWT	Tachien	0.78	304	P	Pb	08 06 01.4	-0.1
	baz=301						
TWT				S	Sb	08 06 11.7	-0.2
	baz=301						
TDCB	Techi	0.79	303	P	Pb	08 06 01.4	-0.2
	baz=308						
NDS	Dongshan	0.82	349	P	Pb	08 06 02.0	-0.1
	baz=346						
NDS				S	Sb	08 06 12.7	-0.2
	baz=346						
FULB	Fuli	0.82	221	*i* P	Pn	08 06 01.3	0.0
	baz=209						
FULB				*i* S	Sb	08 06 12.8	-0.1
	baz=209						
NDT	Datong Townshi	0.85	336	*i* P	Pb	08 06 02.0	-0.5
	baz=336						
NDT				*i* S	Sn	08 06 13.1	+0.1
	baz=336						
SSLB	Suanglung	0.85	268	P	Pn	08 06 02.2	+0.4
	baz=265						
SSLB				S	Sn	08 06 13.3	+0.2
	baz=265						
CHKT	Chengkung	0.86	214	*i* P	Pn	08 06 01.4	-0.4
	baz=200						
CHKT				*i* S	Sn	08 06 12.2	-1.0
	baz=200						
ENTT	Nioudou	0.87	340	P	Pn	08 06 02.1	+0.2
	baz=341						
ENTT				S	Sb	08 06 13.6	-0.6
	baz=341						
SMLT	Sun Moon Lake	0.91	274	*i* P	Pb	08 06 03.1	-0.5
	baz=272						
SMLT				*i* S	Sb	08 06 15.3	0.0
	baz=272						
TWE	Neicheng	0.92	347	*i* P	Pb	08 06 03.2	-0.5
	baz=340						
TWE				S	Sn	08 06 14.8	+0.2
	baz=340						
YUS	Yu-Shan	0.92	249	P	Pb	08 06 03.6	-0.4
	baz=246						
YUS				S	Sn	08 06 15.0	-0.3
	baz=246						
WCS	Beigang Elemen	0.92	285	P	Pb	08 06 03.5	-0.2
	baz=280						
WCS				S	Sb	08 06 15.2	-0.5
	baz=280						
TYC	Yuchr	0.95	275	P	Pb	08 06 03.6	-0.5
	baz=273						
TYC				S	Sn	08 06 15.7	+0.3
	baz=273						
YHNB	Yeheng	0.96	331	P	Pb	08 06 03.8	-0.7
	baz=339						
WHP	Taichung City	0.97	298	*i* P	Pb	08 06 04.5	-0.1
	baz=303						
WHP				*i* S	Sb	08 06 16.9	-0.4
	baz=303						
NSK	Sanguang	0.98	331	P	Pb	08 06 04.1	-0.6
	baz=331						
NSK				S	Sn	08 06 15.9	-0.3
	baz=331						
EDH	Donghe	1.00	213	*i* P	Pn	08 06 03.4	-0.3
	baz=201						
EDH				*i* S	Sn	08 06 15.9	-0.7
	baz=201						
NWLT	Wulai	1.01	340	*i* P	Pb	08 06 04.6	-0.7
	baz=329						
NWLT				*i* S	Sn	08 06 16.9	-0.2
	baz=329						
ELDTW	Lidau	1.02	232	*i* P	Pn	08 06 04.0	-0.1
	baz=229						
ELDTW				S	Sn	08 06 17.8	+0.5
	baz=229						
NTC	Toucheng	1.03	357	*i* P	Pb	08 06 05.1	-0.4
	baz=12						
NTC				*i* S	Sb	08 06 18.9	+0.1
	baz=12						
ALS	Alishan	1.04	253	*i* P	Pb	08 06 05.7	-0.2
	baz=250						
ALS				*i* S	Sb	08 06 19.0	-0.4
	baz=250						
WJS	Zhushan	1.06	270	*i* P	Pb	08 06 06.1	+0.1
	baz=268						
WJS				*i* S	Sb	08 06 20.9	+1.2
	baz=268						
WNT	Mingjian	1.10	273	P	Pb	08 06 07.3	+0.5
	baz=271						
WNT				S	Sb	08 06 21.5	+0.6
	baz=271						
CHN5	Tsauling	1.13	259	P	Pb	08 06 07.2	0.0
	baz=248						
CHN5				S	Sb	08 06 22.0	+0.3
	baz=248						
NSTT	Nanjuang	1.14	315	*i* P	Pb	08 06 07.2	-0.2
	baz=315						
NSTT				*i* S	Sb	08 06 21.4	-0.6
	baz=315						
LIOB	Emei	1.14	316	*i* P	Pb	08 06 07.6	+0.1
	baz=315						
LIOB				S	Sb	08 06 21.7	-0.3
	baz=315						
LONT	Longtian	1.15	218	*i* P	Pn	08 06 05.5	-0.2
	baz=215						
LONT				*e*S	Sb	08 06 21.3	-0.7
	baz=215						
TWQ1	Liyutan	1.15	297	*i* P	Pb	08 06 07.5	0.0
	baz=296						
TWQ1				*i* S	Sb	08 06 22.8	+0.7
	baz=296						
TIPB	Shuangxi	1.15	357	*i* P	Pb	08 06 07.4	-0.1
	baz=10.0						
TIPB				*i* S	Sb	08 06 21.5	-0.7
	baz=10.0						
TCU	Taichung	1.16	287	*i* P	Pb	08 06 08.1	+0.5
	baz=285						
TCU				*i* S	Sb	08 06 23.6	+1.3
	baz=285						
NHDH	Xindian Distri	1.18	344	*i* P	Pb	08 06 07.4	-0.7
	baz=334						
NHDH				*i* S	Sb	08 06 22.7	-0.4
	baz=334						
TWB1	Santiao Chiao	1.19	4	P	Pn	08 06 06.8	+0.5
	baz=6.0						
TWB1				S	Sb	08 06 22.0	-1.2
	baz=6.0						
NSY	Sanyi	1.19	300	P	Pb	08 06 07.4	-0.8
	baz=299						
NSY				S	Sb	08 06 23.5	+0.3
	baz=299						
TWA	Mucha	1.19	347	*i* P	Pb	08 06 07.6	-0.6
	baz=335						
TWA				*i* S	Sb	08 06 22.6	-0.6
	baz=335						
LDUT	Ludao	1.21	199	*i* P	Pn	08 06 06.0	-0.6
	baz=192						
LDUT				S	Sn	08 06 20.5	-1.2
	baz=192						
YOJ	Yonaguni jima	1.21	58	*e*P	Pn	08 06 06.8	+0.2
	baz=59						
YOJ				S	Sb	08 06 23.0	-0.9
	baz=59						
YOJ	Yonaguni jima	1.21	58	P	Pn	08 06 06.4	-0.2
YOJ				*e*S	Sn	08 06 21.6	-0.2
STYH	Taoyuan	1.21	238	P	Pb	08 06 07.8	-0.6
	baz=235						
STYH				S	Sb	08 06 23.3	-0.5
	baz=235						
NMLH	Miaoli	1.23	306	P	Pb	08 06 08.9	0.0
	baz=305						
WCHH	Zhanghua	1.24	282	*i* P	Pb	08 06 09.0	-0.1
	baz=280						
WCHH				*i* S	Sb	08 06 25.7	+0.9
	baz=280						
WDLH	Douliu	1.24	264	*i* P	Pb	08 06 09.3	+0.3
	baz=262						
WDLH				*i* S	Sb	08 06 25.7	+0.9
	baz=262						
TWGBT	Beinan	1.24	217	P	Pn	08 06 06.8	-0.3
	baz=214						
TWGBT				S	Sn	08 06 22.6	-0.1
	baz=214						
TWG	Pinlang	1.25	217	*i* P	Pn	08 06 06.9	-0.3
	baz=214						
TWG				S	Sn	08 06 23.4	+0.7
	baz=214						
NWF	Wu-fen Shan	1.25	356	*i* P	Pb	08 06 09.0	-0.2
	baz=356						
NWF				*i* S	Sb	08 06 24.9	-0.2
	baz=356						
WDJ	Dajia District	1.25	295	P	Pb	08 06 08.9	-0.4
	baz=293						
WDJ				S	Sb	08 06 25.7	+0.6
	baz=293						
TPUB	Ta-pu	1.27	246	P	Pb	08 06 09.3	-0.1
	baz=244						
TPUB				S	Sb	08 06 26.1	+0.6
	baz=244						
CHN4	Tsaushan	1.28	249	P	Pn	08 06 08.2	+0.7
	baz=246						
CHN4				S	Sb	08 06 25.6	-0.1
	baz=246						
WTP	Ta-pu	1.30	244	*i* P	Pb	08 06 09.7	-0.4
	baz=241						
WTP				S	Sb	08 06 26.8	+0.3
	baz=241						
NCUH	Zhongli	1.31	331	P	Pb	08 06 09.2	-1.0
	baz=331						
NCUH				*i* S	Sb	08 06 26.3	-0.4
	baz=331						
NCU	National Centr	1.31	331	S	Sb	08 06 27.0	+0.3
	baz=331						
TWS1	Kuangyinshan	1.34	342	P	Pb	08 06 10.3	-0.4
	baz=342						
TWS1				S	Sb	08 06 26.8	-0.9
	baz=342						
YM01	YM01	1.35	348	P	Pn	08 06 09.1	+0.5
	baz=333						
YM01				S	Sb	08 06 26.6	-1.3
	baz=333						
CHY	Chiayi	1.38	257	P	Pb	08 06 11.4	+0.1
	baz=254						
CHY				S	Sb	08 06 28.9	+0.2
	baz=254						
WTK	Tuku	1.38	265	*i* P	Pb	08 06 11.4	+0.1
	baz=262						
WTK				*i* S	Sb	08 06 29.2	+0.5
	baz=262						
WRL	Guolierlin Hig	1.39	274	P	Pb	08 06 11.2	-0.2
	baz=285						
WRL				S	Sb	08 06 28.5	-0.3
	baz=285						
TWK	Hsinying	1.40	247	P	Pb	08 06 11.3	-0.4
	baz=244						
TWK				S	Sb	08 06 29.2	0.0
	baz=244						
CHN1	Nanshi	1.40	243	*i* P	Pb	08 06 12.0	+0.3
	baz=241						
CHN1				*i* S	Sb	08 06 29.6	+0.3
	baz=241						
SGST	Jiashian	1.41	239	P	Pb	08 06 10.9	-0.9
	baz=236						
SGST				S	Sb	08 06 29.6	+0.2
	baz=236						
SLGT	Liugui	1.41	234	*i* P	Pb	08 06 11.5	-0.4
	baz=221						
SLGT				*i* S	Sb	08 06 29.8	+0.3
	baz=221						
SNST	Tainan City	1.41	245	S	Sb	08 06 30.5	+0.9
	baz=242						
WTCT	Ta-ch'eng	1.47	272	S	Sb	08 06 31.2	0.0
	baz=270						
ECL	Taimali	1.49	215	P	Pn	08 06 10.2	-0.3
	baz=211						
ICHU	Yijhu	1.54	253	P	Pb	08 06 12.7	-1.4
	baz=250						
ICHU				S	Sb	08 06 33.6	+0.2
	baz=250						
SSD	Sandimen	1.57	227	*i* P	Pb	08 06 13.5	-1.2
	baz=224						

SSD				S	**Sb**	**08 06 33.8**	**-0.4**
	baz=224						
TSMG	**Majia**	**1.59**	**226**	*i* P	**Pb**	**08 06 13.5**	**-1.5**
	baz=223						
TSMG				*i* S	**Sb**	**08 06 35.1**	**+0.4**
	baz=223						
MASBT	**Mashibuluo**	**1.67**	**224**	P	**Pn**	**08 06 14.0**	**+1.1**
	baz=221						
MASBT				S	**Sb**	**08 06 36.3**	**-0.6**
	baz=221						
EAST	**Anshuo**	**1.72**	**214**	P	**Pn**	**08 06 13.8**	**+0.1**
	baz=202						
EAST				*e*S	**Sn**	**08 06 34.3**	**-0.3**
	baz=202						
IRIF	**Iriomote-Funau**	**1.76**	**73**	S	**Sn**	**08 06 36.8**	**+1.4**
HATJ	**Hateruma jima**	**1.77**	**82**	*e*S	**Sn**	**08 06 36.8**	**+1.1**
SSPT	**Xinbi**	**1.80**	**223**	P	**Pb**	**08 06 17.8**	**-0.8**
	baz=213						
SCZT	**Fangliau**	**1.85**	**219**	P	**Pb**	**08 06 17.6**	**-1.8**
	baz=211						
SCZT				S	**Sb**	**08 06 41.6**	**-0.6**
	baz=211						
SLIU	**Shizi**	**1.89**	**212**	*i* P	**Pn**	**08 06 17.3**	**+1.3**
	baz=200						
JKRS	**Kuro-shima**	**1.98**	**78**	P	**Pn**	**08 06 18.5**	**+1.2**
JKRS				S	**Sn**	**08 06 43.2**	**+2.3**
JIJ	**Ishigaki jima**	**2.13**	**75**	P	**Pn**	**08 06 20.4**	**+1.1**
JIJ				*e*S	**Sn**	**08 06 44.7**	**+0.1**
PHUB	**P'eng-hu**	**2.15**	**262**	S	**Sn**	**08 06 45.8**	**+0.9**
	baz=246						
VCHM	**Qimei**	**2.34**	**255**	*e*S	**Sn**	**08 06 50.7**	**+1.0**
	baz=253						
JISG	**Ishigakijimahi**	**2.34**	**70**	P	**Pn**	**08 06 23.3**	**+1.1**
JISG				S	**Sn**	**08 06 49.7**	**0.0**
PTMZ	**Houxiangcun**	**2.80**	**296**	P	**Pn**	**08 06 29.2**	**+0.7**
	baz=296						
MATB	**Ma-tsu**	**2.91**	**323**	*e*S	**Sn**	**08 07 03.2**	**-0.7**
	baz=333						

IDC 27 08:08:55.4±2.2**, 2°.24S×127°.96E, h0^{km}, mb3.3**/2**, mb1 3.6**/3**, mb1mx3.4**/36**, mbtmp3.4**/3**, ML3.5**/1**, Error ellipse: s-maj=156.7km s-min=27.6km az=67.0, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.66**	**161**	P	P	08 13 14.8	-0.3
	0.1nm,0.3s,baz=340,slow=11,SNR=6.6						
ASAR	**Alice Springs**	**22.06**	**165**	P	P	08 13 51.9	-0.2
	0.5nm,0.6s,baz=341,slow=12,SNR=9.6						
MKAR	**Makanchi Array**	**63.16**	**327**	P	P	08 19 25.5	+0.2
	0.5nm,0.7s,baz=111,slow=6.9,SNR=3.7						

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*IDC **27** 08:13:04.0±1.2, 6°.85S×129°.18E, h0^{km}, mb3.5/1, mb1 4.0/5, mb1mx3.6/47, mbtmp3.9/5, ML3.9/4, Error ellipse: s-maj=16.6km s-min=8.2km az=26.0*

ISC 27 08:13:05.7±1.6**, 7°.2S**±0°.1×**129°.1E**±0°.1**, h10^{km}, n9, σ3^{s}.99**/8**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**5.43**	**241**	P	**Pn**	**08 14 30.9**	**+4.0**
DRS	**Darwin Rock St**	**5.53**	**161**	P	Pb	08 14 38.9	-3.5
BATI	**Baumata**	**6.17**	**240**	Pn	**Pn**	**08 14 39.4**	**+2.4**
	8.4nm,0.3s,baz=73,slow=4.4,SNR=6.1						
BATI				Sn	**Sn**	**08 15 44.0**	**-3.7**
	22nm,0.3s,baz=242,slow=23,SNR=12						
KDU	**Kakadu**	**6.42**	**149**	P	Pb	08 14 52.2	-5.4
KNRA	**Kununurra**	**8.48**	**182**	P	Pn	08 15 14.6	+6.0
FITZ	**Fitzroy Crossi**	**11.39**	**197**	Pn	**Pn**	**08 15 50.5**	**+2.0**
	0.5nm,0.3s,baz=26,slow=10,SNR=12						
FITZ				Sn	Sn	08 17 45.8	-10
WRA	**Warramunga Arr**	**13.69**	**159**	Pn	**Pn**	**08 16 21.6**	**+1.6**
	0.3nm,0.3s,baz=346,slow=12,SNR=15						
WRA				Sn	Sn	08 18 46.4	-6.0
	1.4nm,0.3s,baz=322,slow=24,SNR=12						
ASAR	**Alice Springs**	**17.05**	**165**	P	**P**	**08 17 08.1**	**+1.9**
	0.6nm,0.3s,baz=338,slow=9.9,SNR=59						
ASAR				S	**Sn**	**08 20 09.1**	**-5.1**
	0.4nm,0.3s,baz=342,slow=26,SNR=9.7						
MKAR	**Makanchi Array**	**67.87**	**327**	P	**P**	**08 24 01.4**	**-3.0**
	0.2nm,0.4s,baz=110,slow=7.4,SNR=2.4						

IDC 27 08:17:37.6±2.4**, 17°.36S×177°.39W, h0^{km}, mb3.7**/4**, mb1 4.1**/4**, mb1mx3.8**/32**, mbtmp3.7**/4**, Error ellipse: s-maj=138.2km s-min=28.5km az=152.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**45.69**	**259**	P	P	08 26 00.6	-0.1
	0.5nm,0.4s,baz=95,slow=7.8,SNR=16						
ASAR	**Alice Springs**	**45.87**	**254**	P	P	08 26 02.0	-0.1
	0.9nm,0.5s,baz=91,slow=8.4,SNR=15						
TXAR	**Lajitas Array**	**84.88**	**57**	P	P	08 30 15.1	+0.2
	0.2nm,0.6s,baz=231,slow=4.3,SNR=3.6						
ILAR	**Eielson Array**	**85.14**	**13**	P	P	08 30 14.9	-0.3
	0.3nm,0.5s,baz=218,slow=5.2,SNR=5.6						

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*IDC **27** 08:31:28.5±1.3, 30°.98S×72°.90W, h0^{km}, mb3.6/2, mb1 4.0/5, mb1mx3.8/21, mbtmp3.8/5, ML3.9/3, MS3.0/3, Ms1 3.0/3, ms1mx2.7/22, Error ellipse: s-maj=48.8km s-min=31.4km az=93.0*

*NEIC **27** 08:31:29.1±1.6, 30°.82S±0°.05×72°.72W±0°.05, h10^{km}±1^{km}, mb4.2/3, ML3.7(GUC), Error ellipse: s-maj=9.6km s-min=6.7km az=334.0*

*GUC **27** 08:31:32.1±0.6, 30°.93S×72°.51W, h42^{km}±2^{km}, ML3.7*

ISC 27 08:31:28.6±2.6**, 31°.00S**±0°.04×**72°.66W**±0°.08**, h3^{km}**±15^{km}**, n48, σ1^{s}.72**/60**, mb4.0**/4**, 1D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	**Fray Jorge**	**0.94**	**70**	*e*P	**Pb**	**08 31 47.1**	**-0.4**
CO06				*i* S	**Sg**	**08 31 58.9**	**+0.3**
CO06				IAML		08 32 00.1	
	comp=E,2μm,0.3s						
CO06	**Fray Jorge**	**0.94**	**70**		**Pb**	**08 31 47.4**	**-0.1**
CO06				Sg	**Sg**	**08 31 59.3**	**+0.7**
CO05	**La Serena**	**1.63**	**49**		**Pn**	**08 31 56.9**	**-1.4**
GO04	**Tololo Observa**	**1.80**	**63**	*e*P	**Pn**	**08 32 00.1**	**-0.7**
GO04				*i* S	**Sn**	**08 32 21.9**	**-2.4**
GO04	**Tololo Observa**	**1.80**	**63**		**Pn**	**08 32 00.4**	**-0.4**
VA06	**Catapilco**	**1.94**	**144**	*e*P	**Pn**	**08 32 03.4**	**+0.8**
VA06				*i* S	**Sn**	**08 32 27.3**	**-0.2**
VA06				IAML		08 32 30.2	
	comp=E,2μm,0.4s						
VA01	**Torpederas**	**2.19**	**157**	*e*P	**Pn**	**08 32 07.2**	**+1.2**
VA01	**Torpederas**	**2.19**	**157**	Pn	**Pn**	**08 32 07.6**	**+1.6**
ROCH	**El Roble**	**2.42**	**145**	*e*P	**Pn**	**08 32 10.3**	**+1.0**
ROCH				*e*P	**Pb**	**08 32 10.6**	**-2.3**
ROCH				*i* S	**Sn**	**08 32 39.2**	**-0.3**
ROCH				*i* S	**Sb**	**08 32 39.7**	**-3.5**
ROCH				IAML		08 32 43.6	
	comp=E,686nm,0.7s						
ROCH				IAML		08 32 43.9	
	comp=E,700nm,0.6s						
VA03	**San Esteban**	**2.51**	**135**	*e*P	**Pn**	**08 32 12.5**	**+2.1**
VA03				*i* S	**Sn**	**08 32 41.2**	**-0.5**
VA03				IAML		08 32 44.5	
	comp=N,312nm,0.3s						
VA03	**San Esteban**	**2.51**	**135**		**Pn**	**08 32 12.6**	**+2.1**
MT02	**Curacav**	**2.60**	**151**	*e*P	**Pn**	**08 32 12.7**	**+1.1**
MT02				IAML		08 32 45.1	
	comp=N,335nm,0.4s						
MT02	**Curacav**	**2.60**	**151**		**Pn**	**08 32 13.4**	**+1.8**
LCO	**Las Campanas**	**2.60**	**41**	*e*P	**Pn**	**08 32 10.7**	**-1.2**
LCO				*i* S	**Sn**	**08 32 41.3**	**-2.9**
LCO	**Las Campanas**	**2.60**	**41**	Pn	**Pn**	**08 32 11.2**	**-0.8**
PEL	**Peldehue**	**2.72**	**143**	*e*P	**Pn**	**08 32 15.1**	**+1.9**
PEL				*i* S	**Sn**	**08 32 46.0**	**-0.7**
PEL				IAML		08 32 51.5	
	comp=N,160nm,0.6s						
PEL	**Peldehue**	**2.72**	**143**		**Pn**	**08 32 15.4**	**+2.2**
VA05	**Santo Domingo**	**2.80**	**162**	*e*P	**Pn**	**08 32 15.4**	**+1.1**
VA05				*i* S	**Sn**	**08 32 46.8**	**-1.8**
VA05	**Santo Domingo**	**2.80**	**162**		**Pn**	**08 32 15.6**	**+1.3**
MT05	**Renca**	**2.89**	**146**	*e*P	**Pn**	**08 32 16.7**	**+1.0**
MT05				*i* S	**Sn**	**08 32 50.3**	**-0.7**
MT05				IAML		08 32 54.5	
	comp=E,406nm,0.2s						
MT05	**Renca**	**2.89**	**146**		**Pn**	**08 32 17.5**	**+1.8**
FCH	**Farellones**	**3.07**	**140**	*e*P	**Pn**	**08 32 19.9**	**+1.6**
FCH				IAML		08 33 03.0	
	comp=E,75nm,0.2s						
MT01	**Popeta**	**3.10**	**158**	*e*P	**Pn**	**08 32 19.3**	**+0.8**
MT01				*i* S	**Sn**	**08 32 53.7**	**-2.4**
MT01				IAML		08 33 01.4	
	comp=N,138nm,0.2s						
MT01	**Popeta**	**3.10**	**158**	Pn	**Pn**	**08 32 19.8**	**+1.3**
AC04	**Llanos de Chal**	**3.10**	**27**	Pn	**Pn**	**08 32 16.4**	**-2.1**
MT09	**Talagante**	**3.11**	**153**	IAML		08 33 00.8	
	comp=N,280nm,0.3s						
ZON	**Zonda**	**3.45**	**100**	Pn	**Pb**	**08 32 27.6**	**-2.8**
LMEL	**Las Melosas**	**3.52**	**145**	*e*P	**Pn**	**08 32 26.9**	**+2.5**
LMEL				*i* S	**Sn**	**08 33 07.6**	**+0.9**
LMEL				IAML		08 33 12.3	
	comp=N,204nm,0.2s						
BO01	**Tunca**	**3.64**	**159**	Pn	**Pn**	**08 32 27.2**	**+1.3**
GO05	**Huala**	**4.05**	**172**	⇓*e*P	**Pn**	**08 32 32.0**	**+0.4**
GO05				*i* S	**Sn**	**08 33 14.5**	**-5.1**
GO05	**Huala**	**4.05**	**172**		**Pn**	**08 32 32.7**	**+1.1**
BO02	**Sierra Bellavi**	**4.10**	**158**		**Pn**	**08 32 34.5**	**+2.2**
AC02	**Maricunga**	**5.17**	**38**	Pn	**Pn**	**08 32 47.0**	**-0.5**
LC01	**Cunco**	**7.91**	**176**	Pn	**Pn**	**08 33 25.8**	**+1.2**
LVC	**Limon Verde**	**9.00**	**23**	LR	LR	08 37 07.4	
	comp=N,64nm,18.7s,baz=216,slow=37						
PLCA	**Paso Flores**	**9.87**	**171**	Pn	**Pn**	**08 33 52.4**	**+1.0**
	comp=N,0.3nm,0.3s,baz=322,slow=16,SNR=5.0						
TRQA	**Tornquist**	**11.27**	**132**	Pn	**Pn**	**08 34 12.6**	**+2.0**
CPUP	**Villa Florida**	**14.23**	**75**	LR	LR	08 40 50.6	
	comp=N,105nm,19.6s,baz=222,slow=39						
LPAZ	**La Paz**	**15.21**	**17**	Pn	**Pn**	**08 35 05.7**	**+0.6**
	comp=N,0.1nm,0.3s,baz=191,slow=6.5,SNR=10.0						
LPAZ	**La Paz**	**15.21**	**17**	P	**Pn**	**08 35 06.7**	**+1.6**
LPAZ				IAmb	IAmb	08 35 17.9	
	comp=Z,3.8nm,1.1s						
SIV	**San Ignacio**	**18.31**	**38**	P	**P**	**08 35 45.2**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=206,slow=11,SNR=22						
SIV				LR	LR	08 42 43.2	
	comp=Z,42nm,20.6s,baz=142,slow=37						
SNAA	**Sanae**	**54.56**	**159**	P	**P**	**08 40 58.9**	**+1.1**
SNAA				IAmb	IAmb	08 41 01.2	
	comp=Z,2.6nm,0.9s						
QSPA	**South Pole Qui**	**59.23**	**180**	P	**P**	**08 41 33.3**	**+2.2**
QSPA				IAmb	IAmb	08 41 56.4	
	comp=Z,3.6nm,1.2s						
TXAR	**Lajitas Array**	**66.87**	**331**	P	**P**	**08 42 21.6**	**-0.5**
	comp=Z,0.4nm,0.7s,baz=155,slow=9.1,SNR=4.9						
TXAR	**Lajitas Array**	**66.87**	**331**	P	**P**	**08 42 19.3**	**-2.8**
TORD	**Torodi Ar. Bea**	**83.69**	**71**	P	**P**	**08 44 00.3**	**+1.1**
	comp=Z,0.5nm,0.8s,baz=242,slow=3.1,SNR=1.9						
WRA	**Warramunga Arr**	**123.10**	**211**	PKP	**PKPdf**	**08 50 27.0**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=152,slow=1.8,SNR=2.3						
ZALV	**Zalesovo Beam**	**151.91**	**29**	PKPbc	**PKiKP**	**08 51 25.4**	**+0.5**
	comp=Z,1.2nm,0.4s,baz=338,slow=3.5,SNR=4.8						

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*NEIC **27** 08:33:57.8±2.3, 22°.50N±0°.07×94°.84E±0°.07, h11^{km}±3^{km}, mb5.5/163, Ms_20 4.8/73, Error ellipse: s-maj=10.3km s-min=7.9km az=215.0*

*BGR **27** 08:33:57.9±0.0, 21°.74N×94°.72E, h33^{km}, mb5.6, Ms4.9*

*MOS **27** 08:33:58.9±1.0, 22°.45N×94°.84E, h39^{km}, mb5.7/83, MS4.9/31, Error ellipse: s-maj=5.9km s-min=3.4km az=120.5*

*NDI **27** 08:34:00.9±2.6, 22°.39N×94°.38E, h10^{km}, mb5.3, mb5.5(NEIC)*

*IDC **27** 08:34:00.9±1.5, 22°.48N×94°.88E, h41^{km}±13^{km}, mb4.9/52, mb1 5.0/53, mb1mx4.9/58, mbtmp5.2/53, ML5.3/1, MS4.7/41, Ms1 4.7/41, ms1mx4.7/53, Error ellipse: s-maj=10.1km s-min=8.7km az=41.0*

*BJI **27** 08:34:00.9±0.0, 22°.53N×94°.78E, h54^{km}, mB5.4/60, mb5.3/72, Ms5.5/84, Ms7 5.3/77*

*GCMT **27** 08:34:01.6±0.1, 22°.38N±0°.01×94°.99E±0°.01, h17^{km}, MW5.4/118, Moment Tensor Solution. s83,c118; s118,c196; Duration: 1^{s}.2 Moment tensor: Scale 10^{17} Nm; M_{rr}0.87±.03; $M_{\theta\theta}$-0.82±.02; $M_{\phi\phi}$-0.04±.02; $M_{r\theta}$-0.47±.06; $M_{\theta\phi}$1.08±.02; $M_{\phi r}$0.83±.07; Best double couple: $M_0$1.61200×10^{17} NP1:ϕ_s92.00000°, δ37.00000°, λ38.00000°. NP2:ϕ_s330.00000°, δ69.00000°, λ121.00000°. Principal axes: T 1.3670, Plg56.0000°, Azm280.0000°; N 0.4910, Plg28.0000°, Azm138.0000°; P -1.8580, Plg18.0000°, Azm38.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 27 08:33:58.5±0.4**, 22°.47N**±0°.03×**94°.76E**±0°.03**, h22^{km}**±2^{km}**, h23^{km}:pP-P, n993, σ1^{s}.51**/1024**, mb5.5**/283**, MS4.9**/111**, 55C-42D, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IMP	**Imphal**	**2.47**	**343**	*e*P	**Pb**	**08 34 40.5**	**-1.7**
IMP				*e*S	**Sb**	**08 35 12.7**	**+0.5**
BRDH	**Bariadhala**	**2.89**	**275**	P	**Pn**	**08 34 46.1**	**+3.0**
	4.0nm,0.3s,baz=81,slow=24,SNR=31						
BRDH				S	**Sb**	**08 35 24.9**	**+0.7**
	12nm,0.3s,baz=221,slow=24,SNR=25						
KOHI	**KOHIMA**	**3.29**	**350**	*e*P	**Pb**	**08 34 52.7**	**-3.7**
AGT	**Agartala**	**3.52**	**294**	*e*x	x	08 35 13.1	
MOKO	**MOKOCHONG**	**3.84**	**357**	*e*P	**Pn**	**08 34 59.7**	**+3.2**
SHL	**Shillong**	**4.05**	**320**	P	**Pn**	**08 35 02.0**	**+2.7**
SHL	**Shillong**	**4.05**	**320**	*e*P	**Pn**	**08 35 02.1**	**+2.7**
SHL				*e*S	**Sn**	**08 35 45.2**	**-1.0**
SHL	**Shillong**	**4.05**	**320**	P	**Pn**	**08 35 02.0**	**+2.7**
	SNR=176						
SHL	**Shillong**	**4.05**	**320**	Pn	**Pn**	**08 35 02.0**	**+2.7**
ITAN	**ITANAGAR**	**4.75**	**349**	*e*P	**Pn**	**08 35 12.2**	**+3.4**
LKP	**Lekhapani**	**4.94**	**11**	*e*P	Pb	08 35 18.9	-5.5
DIBR	**DIBRUGARH**	**4.98**	**2**	*e*x	**Pn**	**08 35 08.8**	**-3.1**
CHTO	**Chiang Mai**	**5.35**	**132**	P	**Pn**	**08 35 16.4**	**-0.6**
CHTO	**Chiang Mai**	**5.35**	**132**	Pn	**Pn**	**08 35 16.4**	**-0.6**
CHTO	**Chiang Mai**	**5.35**	**132**	P	**Pn**	**08 35 17.1**	**+0.1**
CM31	**Chiang Mai Arr**	**5.60**	**135**	P	**Pn**	**08 35 20.3**	**-0.1**
	SNR=62						
CM31	**Chiang Mai Arr**	**5.60**	**135**		**Pn**	**08 35 20.3**	**-0.1**
CMAR	**Chiang Mai Arr**	**5.60**	**135**	P	**Pn**	**08 35 20.0**	**-0.5**
	24nm,0.3s,baz=312,slow=14,SNR=170						
CMAR				S	**Sn**	**08 36 27.1**	**+3.0**
	22nm,0.3s,baz=313,slow=16,SNR=4.5						
CMAR				LR	LR	08 37 25.1	
	comp=Z,4μm,20.9s,baz=358,slow=37						
CMAR	**Chiang Mai Arr**	**5.60**	**135**	P	**Pn**	**08 35 20.2**	**-0.3**
CMAR	**Chiang Mai Arr**	**5.60**	**135**	Pn	**Pn**	**08 35 20.2**	**-0.3**
GTK	**Tadong**	**7.38**	**312**	*e*P	**Pn**	**08 35 47.4**	**+2.3**
GTK				*e*x	**Sn**	**08 37 09.7**	**+1.4**
KMI	**Kunming**	**7.77**	**69**	P	Pn	08 35 57.8	+7.3
KMI				S	**Sn**	**08 37 15.0**	**-3.0**
KMI				LR	LR		
	comp=N,42μm,14.7s						
KMI				LR	LR		
	comp=E,20μm,12.4s						
KMI				LR	LR		
	comp=Z,21μm,13.0s						
LSA	**Lhasa**	**7.90**	**337**	P	**Pn**	**08 35 55.5**	**+3.1**
LSA				S	**Sn**	**08 37 17.0**	**-4.4**
LSA	**Lhasa**	**7.90**	**337**	P	**Pn**	**08 35 55.9**	**+3.5**
LSA	**Lhasa**	**7.90**	**337**	P	**Pn**	**08 35 55.8**	**+3.3**
LSA	**Lhasa**	**7.90**	**337**	Pn	**Pn**	**08 35 55.8**	**+3.3**
ODAN	**Odare**	**8.00**	**305**	*e*Pn	**Pn**	**08 35 55.1**	**+1.4**
ODAN				*e*Sn	**Sn**	**08 37 23.0**	**-0.6**
TAPN	**Taplejung**	**8.03**	**309**	*e*Pn	**Pn**	**08 35 55.9**	**+1.7**
TAPN				*e*Sn	**Sn**	**08 37 25.7**	**+1.2**
	329nm,0.4s						
PBKT	**Sadao Pong**	**8.29**	**134**	Pn	**Pn**	**08 35 58.1**	**+0.6**
SLVN	**Son La**	**8.57**	**96**	Pn	**Pn**	**08 36 02.3**	**+1.0**
RAMN	**Ramite**	**8.65**	**303**	*e*Pn	**Pn**	**08 36 03.7**	**+1.1**
RAMN				*e*Sn	**Sn**	**08 37 37.8**	**-1.9**
JIRN	**Jiri**	**9.33**	**305**	*e*Pn	**Pn**	**08 36 13.0**	**+1.0**
JIRN				*e*Sn	**Sn**	**08 37 55.9**	**-0.5**
	511nm,0.6s						
DGPR	**DIGLIPUR**	**9.40**	**191**	*e*P	**Pn**	**08 36 13.8**	**+1.1**
GUN	**Gumba**	**9.69**	**306**	*e*Pn	**Pn**	**08 36 18.1**	**+1.1**
GUN				*e*Sn	**Sn**	**08 38 03.6**	**-1.8**
	1μm,0.8s						
PKI	**Pulchoki**	**9.88**	**303**	*e*Pn	**Pn**	**08 36 20.2**	**+0.7**
PKI				*e*Sn	**Sn**	**08 38 07.9**	**-2.1**
	389nm,0.8s						
PKIN	**Phulchoki**	**9.89**	**303**	*e*Pn	**Pn**	**08 36 20.0**	**+0.3**
KKN	**Kakani**	**10.09**	**304**	*e*Pn	**Pn**	**08 36 22.5**	**+0.2**
DMN	**Daman**	**10.13**	**302**	*e*Pn	**Pn**	**08 36 23.3**	**+0.3**
GKN	**Gorkha**	**10.69**	**303**	*e*Pn	**Pn**	**08 36 30.4**	**0.0**
GKN				*e*Sn	**Sn**	**08 38 27.5**	**-2.0**
PBA	**Port Blair**	**10.92**	**190**	*e*P	**Pn**	**08 36 35.0**	**+1.5**
PBA	**Port Blair**	**10.92**	**190**		**Pn**	**08 36 34.9**	**+1.4**
KOLN	**Koldanda**	**11.40**	**300**	*e*Pn	**Pn**	**08 36 39.7**	**-0.6**
KOLN				*e*Sn	**Sn**	**08 38 43.1**	**-4.0**
	362nm,0.5s						
DANN	**Dangsing**	**11.53**	**303**	*e*Pn	**Pn**	**08 36 41.8**	**-0.3**
GYA	**Guiyang**	**11.55**	**68**	⇑P	**Pn**	**08 36 46.5**	**+4.3**
GYA				S	Sn	08 38 59.8	+9.2
GYA				pmax	pmax		
	comp=Z,29nm,1.4s						
GYA				pmax	pmax		
	comp=Z,670nm,8.2s						
GYA				LR	LR		
	comp=N,12μm,11.2s						
GYA				LR	LR		
	comp=E,14μm,10.4s						
GYA				LR	LR		
	comp=Z,20μm,11.2s						
CD2	**Chengdu**	**11.63**	**42**	P	**Pn**	**08 36 43.8**	**+0.5**
CD2				S	**Sn**	**08 38 59.0**	**+6.5**
CD2				pmax	pmax		
	comp=Z,40nm,0.7s						
CD2				pmax	pmax		
	comp=Z,2μm,7.8s						
CD2				LR	LR		
	comp=N,20μm,10.8s						
CD2				LR	LR		
	comp=E,14μm,12.2s						
CD2				LR	LR		
	comp=Z,29μm,12.4s						
PYUN	**Piuthan**	**12.03**	**300**	*e*Pn	**Pn**	**08 36 48.2**	**-0.7**
UBPT	**Khong Chiam**	**12.40**	**123**	Pn	**Pn**	**08 36 53.0**	**-0.8**
QIZ	**Qiongzhong**	**14.52**	**101**	P	**Pn**	**08 37 23.0**	**+0.3**
QIZ				S	**Sn**	**08 40 08.5**	**+5.4**
QIZ				pmax	pmax		
	comp=Z,990nm,6.6s						
QIZ				LR	LR		
	comp=N,10μm,14.5s						
QIZ				LR	LR		
	comp=E,12μm,11.2s						
QIZ				LR	LR		
	comp=Z,13μm,10.8s						
SRIT	**Nakonsritamara**	**14.56**	**161**	P	**P**	**08 37 28.3**	**-1.3**
LZH	**Lanzhou**	**15.70**	**28**	⇑P	**Pn**	**08 37 40.0**	**+1.5**
LZH				sP	sP	08 37 51.3	-0.3
LZH				S	**Sn**	**08 40 37.5**	**+5.5**
LZH				sS	S	08 40 49.5	+2.9
LZH				pmax	pmax		
	comp=Z,37nm,1.5s						
LZH				pmax	pmax		
	comp=Z,820nm,4.6s						
LZH				LR	LR		
	comp=N,9μm,10.3s						
LZH				LR	LR		
	comp=E,5μm,11.4s						
LZH				LR	LR		
	comp=Z,8μm,10.8s						
BHPL	**Bhopal**	**16.00**	**276**	*e*P	**Pn**	**08 37 40.3**	**-1.9**
BHPL				IAmb	IAmb	08 37 48.0	
	comp=Z,151nm,1.2s						
HYB	**Hyderabad**	**16.04**	**255**	*i* P	**Pn**	**08 37 43.5**	**+0.7**
	comp=Z,150nm,1.0s						
HYB				*e*S	**Sn**	**08 40 46.0**	**+5.8**
HYB	**Hyderabad**	**16.04**	**255**	*e*P	**Pn**	**08 37 42.8**	**0.0**
XAN	**Xi'an**	**16.97**	**44**	P	**P**	**08 37 57.0**	**+0.7**
XAN				pP	sP	08 38 04.3	-1.2
XAN				sP	pP	08 38 09.0	+6.5
XAN				pmax	pmax		
	comp=Z,170nm,0.8s						
XAN				pmax	pmax		
	comp=Z,120nm,5.2s						
XAN				LR	LR		
	comp=Z,11μm,12.0s						
XAN				LR	LR		
	comp=Z,15μm,10.8s						
XAN				LR	LR		
	comp=Z,21μm,12.3s						
LHMI	**Lhok Sumawe**	**17.27**	**173**	P	**P**	**08 38 00.4**	**+0.7**
LHMI				IAmb	IAmb	08 38 23.6	
	comp=Z,450nm,1.4s						
GTA	**Gaotai**	**17.43**	**13**	*e*P	**P**	**08 38 01.0**	**-0.5**
GTA				S	**Sn**	**08 41 12.3**	**-1.5**
GTA				pmax	pmax		
	comp=Z,130nm,4.7s						
GTA				LR	LR		
	comp=Z,10μm,11.3s						
GTA				LR	LR		
	comp=Z,7μm,9.3s						
GTA				LR	LR		
	comp=Z,11μm,11.6s						
SMLA	**Simla**	**17.90**	**303**	*e*P	**Pn**	**08 38 05.9**	**-0.2**
SMLA				IAmb	IAmb	08 38 14.6	
	comp=Z,173nm,0.8s						
KULM	**Kulim**	**18.00**	**161**	P	**P**	**08 38 09.0**	**+1.2**
MLSI	**Meulaboh, Aceh**	**18.16**	**175**	P	**Pn**	**08 38 09.1**	**-0.3**
	comp=Z,110nm,1.0s						
IPM	**Ipoh**	**18.89**	**160**	P	**Pn**	**08 38 19.0**	**+0.8**
IPM	**Ipoh**	**18.89**	**160**		**P**	**08 38 17.6**	**0.0**
DHRM	**DHARAMSHALA**	**19.05**	**305**	*e*P	**Pn**	**08 38 21.4**	**+1.1**
DHRM				IAmb	IAmb	08 38 24.6	
	comp=Z,374nm,0.5s						
TSI	**Tuntungan**	**19.21**	**168**	P	**Pn**	**08 38 24.5**	**+2.4**
	comp=Z,4μmcomp=Z,395nm,1.2s						
TPTI		**19.24**	**173**	P	**P**	**08 38 21.1**	**-0.3**
	comp=Z,396nmcomp=Z,28nm,1.0s						
WHN	**Wuhan**	**19.27**	**61**	⇓P	**Pn**	**08 38 23.5**	**+0.7**
WHN				pmax	pmax		
	comp=Z,230nm,1.4s						
WHN				LR	LR		
	comp=Z,17μm,9.4s						
WHN				LR	LR		
	comp=Z,7μm,9.9s						
WHN				LR	LR		
	comp=Z,13μm,10.3s						
JRMM	**Jerantut**	**19.93**	**157**	P	**Pn**	**08 38 32.0**	**+1.3**
PSI	**Prapat**	**19.96**	**168**	P	**P**	**08 38 29.9**	**+0.5**
	comp=Z,9.8nm,0.6s,baz=321,slow=6.3,SNR=15						
POO	**Poona**	**19.97**	**262**	*e*P	**Pn**	**08 38 31.7**	**+0.5**
RPSI	**Rantau Prapat**	**20.07**	**168**	P	**P**	**08 38 29.9**	**-0.5**
PALK	**Pallekele**	**20.29**	**224**	P	**P**	**08 38 33.0**	**+0.1**
	comp=Z,14nm,0.6s,baz=146,slow=14,SNR=7.4						
PALK				S	**S**	**08 42 11.8**	**-7.8**
	comp=Z,18nm,0.6s,baz=212,slow=23,SNR=8.0						
PALK				LR	LR	08 47 45.9	
	comp=Z,1μm,18.3s,baz=146,slow=40						
PALK	**Pallekele**	**20.29**	**224**	P	**P**	**08 38 33.0**	**+0.1**
PALK	**Pallekele**	**20.29**	**224**	P	Pn	08 38 36.7	+1.7
PALK	**Pallekele**	**20.29**	**224**		**P**	**08 38 32.9**	**+0.1**
GOA	**Goa**	**20.96**	**254**	*e*P	Pn	08 38 43.5	+0.8
GOA				IAmb	IAmb	08 38 46.9	
	comp=Z,50nm,0.7s						
GSI	**Gunungsitoli**	**21.21**	**172**	P	**P**	**08 38 42.8**	**-0.1**
	comp=Z,3μmcomp=Z,15μmcomp=Z,212nm,0.9s						
GSI	**Gunungsitoli**	**21.21**	**172**	P	**P**	**08 38 42.2**	**-0.7**
GSI				IAmb	IAmb	08 38 51.1	
	comp=Z,130nm,0.7s						
QZH	**Quanzhou**	**21.96**	**79**	⇓*i*P	**P**	**08 38 54.0**	**+3.2**
QZH				S	**S**	**08 42 50.0**	**-2.3**
QZH				pmax	pmax		
	comp=Z,810nm,9.4s						
QZH				LR	LR		
	comp=Z,19μm,13.3s						
QZH				LR	LR		
	comp=Z,3μm,11.4s						
QZH				LR	LR		
	comp=Z,9μm,9.4s						
NIL	**Nilore**	**21.96**	**305**	P	**P**	**08 38 52.0**	**+1.2**
NIL				pmax	pmax		
	comp=Z,195nm,0.7s						
NIL	**Nilore**	**21.96**	**305**	P	**P**	**08 38 52.0**	**+1.2**
NIL				IAmb	IAmb	08 39 00.6	
	comp=Z,195nm,0.7s						
TRD	**Trivandrum**	**22.03**	**234**	*e*x	pP	08 38 57.1	-0.9
MNSI	**Mandailing Nat**	**22.05**	**167**	P	**P**	**08 38 54.2**	**+2.4**
	comp=Z,87nm,0.8s						
WMQ	**Urumqi**	**22.08**	**346**	*e*P	**P**	**08 38 53.0**	**+0.9**
WMQ				pP	sP	08 39 00.8	-0.6
WMQ				S	**S**	**08 42 54.5**	**0.0**
WMQ				sS	Sn	08 43 07.0	+1.2
WMQ				SS	**SnSn**	**08 43 29.8**	**+8.3**
WMQ				pmax	pmax		
	comp=Z,190nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,680nm,5.1s						

WMQ				LR	LR		
	comp=Z,5µm,16.3s						
WMQ				LR	LR		
	comp=Z,10µm,18.1s						
WMQ				LR	LR		
	comp=Z,5µm,18.1s						
BTO	Baotou	22.22	32	eP	P	08 38 54.0	+0.4
BTO				LR	LR		
	comp=Z,25µm,10.9s						
BTO				LR	LR		
	comp=Z,14µm,10.7s						
MYKOM	Kota Tinggi	22.37	155	P	P	08 38 58.0	+2.7
BKNI	Bangkinang	22.84	164	IAMs_20	IAMs_20	08 49 24.0	
	comp=Z,3µm,21.0s						
HHC	Hu-ho-hao-te	23.18	34	eP	P	08 39 03.8	+0.1
HHC				S	S	08 43 10.5	-3.7
HHC				pmax	pmax		
	comp=Z,75nm,0.9s						
HHC				LR	LR		
	comp=Z,6µm,10.6s						
HHC				LR	LR		
	comp=Z,4µm,11.9s						
HHC				LR	LR		
	comp=Z,6µm,11.1s						
KSH	Kashi	23.33	321	P	P	08 39 06.3	+1.0
KSH				pP	pP	08 39 12.8	+1.0
KSH				S	S	08 43 14.5	-2.4
KSH				SS	SnSn	08 44 01.5	+9.3
KSH				pmax	pmax		
	comp=Z,200nm,0.9s						
KSH				pmax	pmax		
	comp=Z,2µm,4.3s						
KSH				LR	LR		
	comp=Z,3µm,12.9s						
KSH				LR	LR		
	comp=Z,3µm,12.2s						
KSH				LR	LR		
	comp=Z,2µm,13.7s						
NJ2	Nanjing	23.41	61	eP	P	08 39 06.8	+0.9
NJ2				pP	pP	08 39 13.3	+0.9
NJ2				S	S	08 43 19.5	+1.6
NJ2				SS	SnSn	08 43 55.5	+1.6
NJ2				PcS	PcS	08 46 30.0	-1.5
NJ2				pmax	pmax		
	comp=Z,36nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,960nm,5.6s						
NJ2				LR	LR		
	comp=Z,5µm,10.4s						
NJ2				LR	LR		
	comp=Z,6µm,10.4s						
NJ2				LR	LR		
	comp=Z,5µm,12.4s						
TIA	Tai'an	23.75	50	⇑P	P	08 39 09.8	+0.5
TIA				pmax	pmax		
	comp=Z,180nm,1.1s						
TIA				pmax	pmax		
	comp=Z,1µm,5.7s						
TIA				LR	LR		
	comp=Z,5µm,10.4s						
TIA				LR	LR		
	comp=Z,14µm,11.7s						
TIA				LR	LR		
	comp=Z,17µm,12.9s						
TPUB	Ta-pu	23.84	83	IAMs_20	IAMs_20	08 48 53.8	
	comp=Z,3µm,19.0s						
PDSI	Padang	23.89	166	P	P	08 39 10.1	-0.7
	comp=Z,4µmcomp=Z,22nm,0.5s						
TARG	Taragay, Kyrgy	23.90	327	P	P	08 39 13.2	+2.1
TARG				IAmb	IAmb	08 39 38.6	
	comp=Z,270nm,1.5s						
SISI	Saibi	24.02	169	P	P	08 39 11.3	-0.6
	comp=Z,2µmcomp=Z,99nm,1.2s						
SSLB	Suanglung	24.12	82	IAMs_20	IAMs_20	08 47 33.0	
	comp=Z,2µm,18.0s						
PRZ	Przheval'sk	24.18	329	P	P	08 39 15.4	+1.9
PRZ				pmax	pmax		
	comp=Z,392nm,1.5s						
PRZ	Przheval'sk	24.18	329	P	P	08 39 15.4	+1.9
PDGK	Podgornoye	24.36	332	P	P	08 39 16.3	+1.3
UZB	Uzynbulak	24.42	331	eP	P	08 39 17.3	+1.7
YHNB	Yeheng	24.48	80	IAMs_20	IAMs_20	08 48 58.7	
	comp=Z,5µm,18.0s						
NACB	Ninganchiao	24.69	81	IAMs_20	IAMs_20	08 49 19.2	
	comp=Z,4µm,18.0s						
DSRI	Dabo	24.73	156	P	P	08 39 17.6	-0.9
	comp=Z,58nm,1.1s						
SSE	Sheshan	25.06	64	P	P	08 39 22.0	+0.7
SSE				pmax	pmax		
	comp=Z,27nm,0.7s						
SSE				pmax	pmax		
	comp=Z,64nm,3.5s						
SSE				LR	LR		
	comp=Z,6µm,17.6s						
SSE				LR	LR		
	comp=Z,3µm,16.1s						
ULHL	Ulahol	25.07	326	P	P	08 39 23.7	+2.2
	SNR=69						
BJT	Baijiatuau	25.21	41	P	P	08 39 23.4	+0.8
BJT				pmax	pmax		
	comp=Z,71nm,0.6s						
BJT	Baijiatuau	25.21	41	P	P	08 39 23.4	+0.8
BJT				IAmb	IAmb	08 39 31.5	
	comp=Z,71nm,0.6s						
BJI	Beijing	25.23	41	P	P	08 39 24.0	+1.2
BJI				pP	pP	08 39 30.8	+1.3
BJI				pmax	pmax		
	comp=Z,100nm,0.8s						
BJI				pmax	pmax		
	comp=Z,1µm,6.8s						
BJI				LR	LR		
	comp=Z,5µm,15.2s						
BJI				LR	LR		
	comp=Z,5µm,14.5s						
MDOK	Medeo	25.34	329	P	P	08 39 25.9	+1.9
BOOM	Boomskoye usch	25.40	326	P	P	08 39 26.0	+1.5
BOOM				pmax	pmax		
	comp=Z,207nm,1.1s						
BOOM	Boomskoye usch	25.40	326	P	P	08 39 26.0	+1.5
BOOM				IAmb	IAmb	08 39 31.5	
	comp=Z,207nm,1.1s						
JMBI	JAMBI	25.48	159	P	P	08 39 34.2	+9.1
KBL	Kabul	25.52	304	P	P	08 39 27.5	+1.8
KBL				pmax	pmax		
	comp=Z,181nm,1.2s						
KBL	Kabul	25.52	304	P	P	08 39 27.9	+2.2
	SNR=65						
KBL	Kabul	25.52	304	P	P	08 39 27.5	+1.8
KBL				IAmb	IAmb	08 39 29.9	
	comp=Z,181nm,1.2s						
PPSI	Pulau Pagai	25.60	168	P	P	08 39 25.5	-0.7
	comp=Z,255nm,0.8s						
KSM	Kuching	25.77	142	P	P	08 39 29.0	+1.1
KSM	Kuching	25.77	142	P	P	08 39 28.5	+0.7
KSM				IAmb	IAmb	08 39 37.2	
	comp=Z,111nm,1.1s						
KSM				IAMs_20	IAMs_20	08 50 18.9	
	comp=Z,2µm,19.0s						
ARXS	Arharly	25.79	331	eP	P	08 39 29.0	+1.1
DRK	Karamyk	25.87	316	P	P	08 39 30.4	+1.5
DRK				IAmb	IAmb	08 39 51.6	
	comp=Z,96nm,0.7s						
TKM2	Tokmak 2	25.89	326	P	P	08 39 30.9	+1.9
	SNR=72						
TKM2	Tokmak 2	25.89	326	i P	P	08 39 30.7	+1.8
TKM2				pmax	pmax		
	comp=Z,109nm,0.8s						
UCH	Uchtor	25.97	324	P	P	08 39 32.1	+2.1
	SNR=8.6						
KBK	Karagaybulak	26.04	325	P	P	08 39 32.7	+2.4
	SNR=27						
SBUM	Sibu	26.14	137	P	P	08 39 33.0	+1.8
SBUM	Sibu	26.14	137	P	P	08 39 32.3	+1.1
SBUM				IAMs_20	IAMs_20	08 49 58.5	
	comp=Z,2µm,19.0s						
AAK	Ala-Archa	26.26	325	P	P	08 39 33.9	+1.6
	comp=Z,39nm,0.7s,baz=144,slow=6.5,SNR=67						
AAK				LR	LR	08 51 12.2	
	comp=Z,1µm,19.1s,baz=119,slow=39						
AAK	Ala-Archa	26.26	325	i P	P	08 39 34.5	+2.2
	SNR=47						
AAK	Ala-Archa	26.26	325	P	P	08 39 34.7	+2.4
AAK				pmax	pmax		
	comp=Z,112nm,1.2s						
AAK	Ala-Archa	26.26	325	P	P	08 39 34.5	+2.2
AAK				P	P	08 39 34.5	+2.2
AAK	Ala-Archa	26.26	325	P	P	08 39 34.6	+2.4
AAK				IAmb	IAmb	08 39 36.0	
	comp=Z,112nm,1.2s						
MK31	Makanchi Array	26.28	340c	iP	P	08 39 33.6	+1.3
MK31	Makanchi Array	26.28	340	P	P	08 39 33.5	+1.3
MKAR	Makanchi Array	26.28	340	P	P	08 39 33.0	+0.8
	comp=Z,232nm,0.8s,baz=149,slow=9.9,SNR=989						
MKAR				LR	LR	08 52 25.9	
	comp=Z,2µm,19.7s,baz=158,slow=42						
MKAR	Makanchi Array	26.28	340	P	P	08 39 33.7	+1.4
MKAR	Makanchi Array	26.28	340	P	P	08 39 33.7	+1.4
FRU1	Bishkek	26.31	325	P	P	08 39 34.7	+2.1
FRU1				pmax	pmax		
	comp=Z,106nm,1.2s						
FRU1	Bishkek	26.31	325	P	P	08 39 34.7	+2.1
FRU1				IAmb	IAmb	08 39 36.2	
	comp=Z,106nm,1.1s						
AML	Almayashu	26.36	323	P	P	08 39 35.7	+2.3
	SNR=29						
AML	Almayashu	26.36	323	P	P	08 39 35.8	+2.3
AML	Almayashu	26.36	323	P	P	08 39 35.6	+2.1
MAKZ	Makanchi	26.39	340	P	P	08 39 34.3	+1.0
MAKZ				pmax	pmax		
	comp=Z,257nm,1.4s						
MAKZ				MLR	MLR		
	comp=Z,4µm,18.0s						
MAKZ	Makanchi	26.39	340	P	P	08 39 34.2	+1.0
MAKZ				IAmb	IAmb	08 39 35.6	
	comp=Z,257nm,1.4s						
MAKZ				IAMs_20	IAMs_20	08 51 55.8	
	comp=Z,4µm,18.0s						
GAR	Garm	26.58	314	P	P	08 39 36.2	+1.1
EKS2	Erkin-Say	26.67	324	P	P	08 39 38.9	+2.9
	SNR=20						
USP	Ospenovka	26.70	326	P	P	08 39 39.2	+3.1
	SNR=5.0						
BTK	Batken	26.82	316	P	P	08 39 39.2	+1.9
BTK				pmax	pmax		
	comp=Z,128nm,0.9s						
BTK	Batken	26.82	316	P	P	08 39 39.2	+1.9
BTK				IAmb	IAmb	08 39 48.0	
	comp=Z,128nm,0.9s						
SONM	Songino Array	26.98	17	P	P	08 39 38.4	-0.3
	comp=Z,8.9nm,0.9s,baz=198,slow=9.1,SNR=32						
SONM				ScP	ScP	08 46 36.2	-2.7
	comp=Z,1.5nm,0.8s,baz=196,slow=4.3,SNR=4.3						
SONM				LR	LR	08 52 06.6	
	comp=Z,3µm,19.2s,baz=204,slow=40						
SONM	Songino Array	26.98	17	P	P	08 39 38.6	0.0
KSI	Kapahiang	27.07	163	P	P	08 39 43.3	+3.7
PMBI	Palembang	27.07	158	IAMs_20	IAMs_20	08 50 41.5	
	comp=Z,2µm,18.0s						
CHGR	Chuyangaron	27.19	312	P	P	08 39 41.6	+1.0
CHGR				IAmb	IAmb	08 39 56.1	
	comp=Z,78nm,0.8s						
ULN	Ulaanbaatar	27.19	18d	iP	P	08 39 41.1	+0.5
ULN				pmax	pmax		
	comp=Z,22nm,1.6s						
ULN	Ulaanbaatar	27.19	18	P	P	08 39 39.5	-1.1
ULN	Ulaanbaatar	27.19	18	IAMs_20	IAMs_20	08 52 02.2	
	comp=Z,3µm,19.0s						
SPMM	Sapulut	27.44	127	P	P	08 39 45.0	+2.0
STKI	Sintang	27.59	142	P	P	08 39 45.5	+1.3
	comp=Z,12µmcomp=Z,83nm,0.9s						
DGZ	Jazzator, Alta	27.79	350c	iP	P	08 39 46.6	+0.7
DGZ				pmax	pmax		
	comp=Z,25nm,0.6s						
DL2	Dalian	28.18	48	P	P	08 39 50.3	+1.0
DL2				S	S	08 44 34.0	+0.3
DL2				sS	sS	08 44 49.8	+5.0
DL2				SS	SnSn	08 45 56.5	+6.1
DL2				pmax	pmax		
	comp=Z,71nm,0.7s						
DL2				pmax	pmax		
	comp=Z,1µm,5.0s						
DL2				LR	LR		
	comp=Z,3µm,12.5s						
DL2				LR	LR		
	comp=Z,3µm,12.7s						
DL2				LR	LR		
	comp=Z,4µm,12.8s						
BTLS	Baital	28.19	328	eP	P	08 39 50.4	+1.0
MDSI	Maura Dua	28.33	160	P	P	08 39 46.1	-4.7
TAS	Tashkent	28.48	317	P	P	08 39 53.8	+1.8
TAS				pmax	pmax		
	comp=Z,101nm,0.4s						
TAS	Tashkent	28.48	317	P	P	08 39 53.8	+1.8
IUG	Iuzhnay	28.50	319	eP	P	08 39 54.3	+2.0
ZAK	Zakamensk	28.65	11	eP	P	08 39 53.4	-0.1
ZAK				pmax	pmax		
	comp=Z,23nm,1.6s						
MYLDM	Lahad Datu	28.67	123	P	P	08 39 55.4	+1.4
MYLDM				IAMs_20	IAMs_20	08 51 26.0	
	comp=Z,3µm,22.0s						
KLSI		28.70	159	P	P	08 39 51.8	-2.3
	comp=Z,8.5nm,0.9s						
KKAR	Karatay Array	28.79	321	P	P	08 39 55.8	+1.0
KKAR	Karatay Array	28.79	321	P	P	08 39 55.8	+1.0
BRLS	Borolday	29.13	321	eP	P	08 39 58.4	+0.6
TLY	Talaya	29.96	11	LR	LR	08 54 15.2	
	comp=Z,1µm,18.3s,baz=191,slow=41						
TLY	Talaya	29.96	11	eP	P	08 40 07.7	+2.6
TLY				pmax	pmax		
	comp=Z,28nm,1.3s						
TLY				MLR	MLR		
	comp=Z,6µm,11.0s						
TLY	Talaya	29.96	11	IAMs_20	IAMs_20	08 54 02.7	
	comp=Z,2µm,19.0s						
MTKI	Muara Teweh, K	30.44	137	P	P	08 40 13.8	+4.1
HRA	Herat	30.83	300	P	P	08 40 14.2	+1.0
KURBB	Kurchatov Arra	30.84	340	P	P	08 40 13.7	+0.9
	comp=Z,114nm,0.6s,baz=150,slow=8.6,SNR=579						
KURBB				ScP	ScP	08 46 49.2	-1.7
	comp=Z,4.3nm,0.7s,baz=150,slow=2.7,SNR=10						
KURK	Kurchatov	30.89	340	P	P	08 40 13.7	+0.5
KURK	Kurchatov	30.89	340	P	P	08 40 14.3	+1.1
KURK	Kurchatov	30.89	340	P	P	08 40 14.0	+0.8
KURK				pP	pP	08 40 17.4	-2.6
INCN	Inchon	31.23	54	P	P	08 40 17.2	+0.8
INCN				pmax	pmax		
	comp=Z,46nm,1.1s						
INCN				MLR	MLR		
	comp=Z,2µm,19.0s						
INCN	Inchon	31.23	54	P	P	08 40 17.2	+0.8
INCN				IAmb	IAmb	08 40 22.4	
	comp=Z,46nm,1.1s						
INCN	Inchon	31.23	54	IAMs_20	IAMs_20	08 52 08.3	
	comp=Z,2µm,19.0s						
OTUK	Ortayu	31.33	331	P	P	08 40 18.2	+1.0
TJN	Taejon	31.44	56	⇓iP	P	08 40 17.4	-0.8
BKB	Balikpapan	31.97	135	P	P	08 40 21.0	-2.1
KSAR	Wonju Array Be	32.16	55	P	P	08 40 23.5	-1.0
KSAR	Wonju Array Be	32.16	55	P	P	08 40 23.5	-1.0
KSRS	Korea Array	32.19	55	P	P	08 40 23.9	-1.0
	comp=Z,4.1nm,0.5s,baz=250,slow=8.8,SNR=12						
KSRS				LR	LR	08 53 50.3	
	comp=Z,1µm,19.2s,baz=276,slow=37						
ZAA0	Zalesovo Array	32.32	349	P	P	08 40 25.9	+0.1
ZAA0				IAmb	IAmb	08 40 27.4	
	comp=Z,96nm,1.1s						
ZALV	Zalesovo Beam	32.32	349	P	P	08 40 26.2	+0.4
	comp=Z,30nm,0.5s,baz=168,slow=7.6,SNR=143						
ZALV				LR	LR	08 54 47.8	
	comp=Z,2µm,18.9s,baz=176,slow=39						
ZALV	Zalesovo Beam	32.32	349	P	P	08 40 25.9	+0.2
BBKI	Banjar Baru	32.39	140	P	P	08 40 27.1	+0.3
	comp=Z,169nm,0.8s						
BRZS	Berezniki	32.48	333	eP	P	08 40 28.5	+1.2
JLN	Jalan Bani Buh	32.66	276	P	P	08 40 36.1	+7.0
	SNR=5.6						
JLN				P	P	08 40 36.1	+7.0
	SNR=5.6						
UWJI	Ujung Watu	32.80	149	P	P	08 40 40.1	+10
MPSI	Mapaga	32.91	129	P	P	08 40 31.7	+0.4
	comp=Z,684nmcomp=Z,23nm,1.7s						
TOLI2	Tolitoli	33.03	126	P	P	08 40 32.9	+0.5
TOLI2				IAmb	IAmb	08 40 34.9	
	comp=Z,69nm,1.1s						
CN2	Changchun	33.07	43	eP	P	08 40 30.5	-2.0
CN2				epP	sP	08 40 42.5	+0.4
CN2				eS	S	08 45 43.5	-6.6
CN2				pmax	pmax		
	comp=Z,30nm,1.3s						
CN2				LR	LR		
	comp=Z,2µm,15.0s						
CN2				LR	LR		
	comp=Z,3µm,15.0s						
CN2				LR	LR		
	comp=Z,2µm,15.0s						
KBKI	Kotabaru	33.07	138	P	P	08 40 33.4	+0.7
	comp=Z,145nm,0.8s						
HIA	Hailar	33.25	30	P	P	08 40 32.6	-1.4
HIA				pmax	pmax		
	comp=Z,14nm,0.8s						
HIA				MLR	MLR		
	comp=Z,2µm,19.0s						
HIA	Hailar	33.25	30	P	P	08 40 32.6	-1.4
HIA	Hailar	33.25	30	IAMs_20	IAMs_20	08 55 54.2	
	comp=Z,2µm,19.0s						
WSAR	Wadi Sarin	33.25	278	PcP	PcP	08 43 16.8	+0.2
	comp=Z,6.9nm,0.8s,baz=226,slow=3.8,SNR=4.5						
BIDO	Bidbid	33.68	279	P	P	08 40 44.0	+5.9
	SNR=7.1						
BIDO				P	P	08 40 44.0	+5.9
	SNR=7.1						
SMDO	Samad	33.80	278	P	P	08 40 43.0	+3.8
	SNR=8.4						
SMDO				P	P	08 40 43.0	+3.8
	SNR=8.4						
MRSI	Marisa	34.32	126	P	P	08 40 44.2	+0.6
	comp=Z,2µmcomp=Z,129nm,0.7s						
HOQ	Hoqain	34.42	279	P	P	08 40 48.0	+3.5
	SNR=9.4						
HOQ				P	P	08 40 48.0	+3.5
	SNR=9.4						
BSY	Bisya	34.61	278	P	P	08 40 51.5	+5.3
	SNR=9.9						
BSY				P	P	08 40 51.5	+5.3
	SNR=9.9						
KMMI	Kalianget	34.85	145	P	P	08 40 47.6	-0.6
	comp=Z,2µmcomp=Z,196nm,0.7s						
GEYT	Alibeck	34.96	305	P	P	08 40 50.7	+1.6
	comp=Z,7.3nm,0.8s,baz=91,slow=6.2,SNR=4.6						
GEYT				PcP	PcP	08 43 21.6	+0.4
	comp=Z,11nm,0.7s,baz=190,slow=4.5,SNR=4.7						
GEYT				ScP	ScP	08 47 04.2	-1.3
	comp=Z,5.0nm,0.7s,baz=186,slow=2.9,SNR=5.8						
GEYT				LR	LR	08 58 29.2	
	comp=Z,1µm,19.8s,baz=80,slow=42						
GEYT	Alibeck	34.96	305	P	P	08 40 51.1	+2.0
GYA0B	ALIBECK ARRAY	34.96	305	P	P	08 40 50.8	+1.8
GYA0B				pP	pP	08 40 55.4	-0.6
SOHO	SOHO	35.08	280	P	P	08 40 52.8	+2.7
BANOM	Banah	35.16	283	P	P	08 40 53.7	+2.7
MDH	Madha	35.20	282	P	P	08 40 52.2	+1.0
TTSI	Tana Toraja	35.24	133	P	P	08 40 52.8	+1.2
	comp=Z,1µmcomp=Z,100nm,1.1s						
UOSS	Minazif	35.31	282	P	P	08 40 52.6	+0.4
UOSS	Minazif	35.31	282	P	P	08 40 52.1	0.0
UOSS				pP	pP	08 40 57.5	-1.6
MSFE	Esma-Masafi	35.32	283	P	P	08 40 55.0	+2.7
HATD	Hatta, Dubai	35.38	282	i P	P	08 40 56.0	+3.2
	SNR=8.0						
HATD	Hatta, Dubai	35.38	282	P	P	08 40 59.0	+6.2
	SNR=5.4						
HATD				P	P	08 40 59.0	+6.2
	SNR=5.4						
ASHO	Ashiyiah	35.46	281	i P	P	08 40 56.0	+2.5
	SNR=11						
ASHO	Ashiyiah	35.46	281	P	P	08 40 57.0	+3.5
	SNR=8.9						
ASHO				P	P	08 40 57.0	+3.5
	SNR=8.9						
JHS	Saijyo	35.67	61	P	P	08 40 55.8	+0.6
JHS				IAmb	IAmb	08 41 05.5	
	comp=Z,110nm,1.3s						
BVAR	Borovoye Array	35.73	335	P	P	08 40 56.1	+0.7
	comp=Z,26nm,0.5s,baz=179,slow=16,SNR=78						
BRVK	Borovoye	35.80	335c	iP	P	08 40 56.6	+0.7
BRVK				pmax	pmax		
	comp=Z,71nm,1.0s						
BRVK	Borovoye	35.80	335	P	P	08 40 56.8	+0.8
BRVK				IAmb	IAmb	08 40 59.3	
	comp=Z,166nm,1.4s						
BRVK				pP	pP	08 41 00.7	-2.2
NAZ	Nazwa, Dubai	35.80	282	P	P	08 41 00.2	+3.9
KMSI	Cibinong	35.81	123	P	P	08 40 56.7	+0.2
	comp=Z,274nm,1.0s						
FAQ	Al Faqa, Dubai	35.88	282	P	P	08 40 59.1	+2.1
SPSI	Sidrap Palu	35.89	134	P	P	08 40 57.9	+0.8
	comp=Z,2µmcomp=Z,86nm,1.0s						
LUWI	Luwuk	35.94	127	P	P	08 40 57.3	-0.3
	comp=Z,248nm,1.1s						
LUWI	Luwuk	35.94	127	P	P	08 40 58.6	+1.0
LUWI				pP	pP	08 41 02.7	-1.8
LUWI				IAMs_20	IAMs_20	08 57 02.8	
	comp=Z,1µm,21.0s						
MDJ	Mudanjiang	36.08	44	P	P	08 40 59.0	+0.5
MDJ				PP	PnPn	08 42 17.0	-2.8
MDJ				S	S	08 46 36.5	0.0
MDJ				SS	SnSn	08 49 01.0	-1.2
MDJ				pmax	pmax		
	comp=Z,38nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,1µm,4.7s						
MDJ				LR	LR		
	comp=Z,3µm,9.6s						
MDJ				LR	LR		
	comp=Z,3µm,13.8s						
MDJ				LR	LR		
	comp=Z,3µm,11.1s						
ASUD	Al Ashush, Dub	36.13	281	P	P	08 41 01.6	+2.4
JAGI	Jajag, Banyuwa	36.15	146	P	P	08 41 03.0	+3.7
BNSI	Bone	36.43	134	P	P	08 41 03.0	+1.2
	comp=Z,727nmcomp=Z,49nm,0.9s						
KAPI	Kappang	36.66	135	P	P	08 41 04.3	+0.6
KAPI				pmax	pmax		
	comp=Z,51nm,1.1s						
KAPI				MLR	MLR		
	comp=Z,800nm,20.0s						
KAPI	Kappang	36.66	135	P	P	08 41 04.3	+0.6
VLA	Vladivostok	36.98	47	deP	P	08 41 06.4	+0.2
VLA				pmax	pmax		
	comp=Z,172nm,1.0s						
BKSI	Bulukumba	37.13	135	P	P	08 41 08.1	+0.4
	comp=Z,707nmcomp=Z,63nm,0.9s						
USA0B	Ussuriysk Arra	37.47	46	P	P	08 41 10.8	+0.5
USA0B				pmax	pmax		
	comp=Z,159nm,1.3s						
USA0B	Ussuriysk Arra	37.47	46	P	P	08 41 10.8	+0.5
USA0B				IAmb	IAmb	08 41 18.1	
	comp=Z,159nm,1.3s						
USRK	Ussuriysk Ar.	37.47	46	P	P	08 41 10.3	0.0
	comp=Z,36nm,0.9s,baz=240,slow=7.5,SNR=29						
USRK				LR	LR	08 57 03.6	
	comp=Z,1µm,19.5s,baz=245,slow=37						
USRK	Ussuriysk Ar.	37.47	46	P	P	08 41 09.7	-0.6
TWSI	Taliwang, Sumb	37.84	143	P	P	08 41 09.3	-4.4
BOD	Bodaibo	37.97	17	eP	P	08 41 13.1	-1.3
BOD				pmax	pmax		
	comp=Z,18nm,1.8s						
AB31	Akbulak array	38.31	323	P	P	08 41 18.7	+1.3
ABKAR	Akbulak array	38.31	323	P	P	08 41 18.6	+1.2
ABKAR				IAmb	IAmb	08 41 20.0	
	comp=Z,89nm,1.1s						
ABKAR	Akbulak array	38.31	323	P	P	08 41 18.6	+1.2
RBK	Rabkut	38.35	270	P	P	08 41 25.0	+6.9
	SNR=7.6						
RBK				P	P	08 41 25.0	+6.9
	SNR=7.6						
PLAI	Plampang	38.42	142	P	P	08 41 17.8	-0.8
	comp=Z,699nmcomp=Z,82nm,0.8s						
INU	Inuyama	38.88	61	P	P	08 41 22.4	+0.1
INU				IAmb	IAmb	08 41 23.7	
	comp=Z,96nm,0.6s						
SANI	Sanana	39.02	125	P	P	08 41 20.7	-3.0
	comp=Z,1µmcomp=Z,48nm,0.8s						
JGF	Kuroka	39.19	61	P	P	08 41 25.3	+0.3
JGF				IAmb	IAmb	08 41 32.6	
	comp=Z,108nm,1.4s						
ABTO	Aybut	39.22	270	P	P	08 41 34.0	+8.5
	SNR=5.0						
ABTO				P	P	08 41 34.0	+8.5
	SNR=5.0						
LBMI	Labuha	39.31	121	P	P	08 41 26.4	+0.3
	comp=Z,1µmcomp=Z,61nm,1.9s						
KLR	Kul'dur	39.53	38	P	P	08 41 27.5	-0.1
	comp=Z,20nm,1.2s,baz=258,slow=9.5,SNR=13						
KLR				LR	LR	08 58 50.9	
	comp=Z,1µm,19.0s,baz=230,slow=38						
ZEA	Zeya	39.72	30	eP	P	08 41 29.4	+0.3

ZEA				*e*		08 43 10.0	
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
ZEA				MLR	MLR		
	comp=E,1µm,17.0s						
ZEA				MLR	MLR		
	comp=N,1µm,10.0s						
ZEA				MLR	MLR		
	comp=Z,1µm,15.0s						
AKTO	**Aktyubinsk**	**39.99**	**323**	P	**P**	**08 41 32.5**	**+1.1**
	comp=Z,34nm,0.6s,baz=113,slow=8.2,SNR=124						
MAJO	**Matsushiro**	**40.00**	**60**	*d i*P	**P**	**08 41 32.1**	**+0.4**
MAJO				pmax	pmax		
	comp=Z,64nm,0.7s						
MAJO	**Matsushiro**	**40.00**	**60**	P	**P**	**08 41 32.1**	**+0.4**
MAJO				IAmb	IAmb	08 41 32.8	
	comp=Z,67nm,0.7s						
MAT	**Matsushiro**	**40.00**	**60**	P	**P**	**08 41 31.7**	**0.0**
MAT				*e*S	**S**	**08 47 35.0**	**-1.2**
MJAR	**Matsushiro Arr**	**40.00**	**60**	P	**P**	**08 41 31.6**	**-0.1**
	comp=Z,27nm,0.7s,baz=270,slow=9.5,SNR=63						
MJAR				LR	LR	08 58 38.3	
	comp=Z,1µm,21.0s,baz=260,slow=37						
MJAR	**Matsushiro Arr**	**40.00**	**60**	P	**P**	**08 41 31.3**	**-0.4**
WBSI	**Waikabubak, Su**	**40.02**	**140**	P	**P**	**08 41 28.1**	**-3.9**
	comp=Z,1µmcomp=Z,121nm,1.0s						
SOCY	**Socotra**	**40.12**	**262**	P	**P**	**08 41 34.0**	**+1.0**
SOCY				IAmb	IAmb	08 41 38.5	
	comp=Z,76nm,1.1s						
SOCY				IAMs_20	IAMs_20	08 57 30.6	
	comp=Z,2µm,21.0s						
EDFI	**Ende, Flores**	**40.73**	**137**	P	**P**	**08 41 34.4**	**-3.6**
	comp=Z,294nmcomp=Z,30nm,0.8s						
JHJ	**Hachijo jima 2**	**40.95**	**65**	LR	LR	08 59 37.7	
	comp=Z,1µm,19.1s,baz=300,slow=38						
AAI	**Ambon**	**41.75**	**124**	P	**P**	**08 41 45.8**	**-0.5**
	comp=Z,2µmcomp=Z,238nm,0.8s						
MSAI	**Masohi**	**42.10**	**123**	P	**P**	**08 41 49.8**	**+0.6**
	comp=Z,1µmcomp=Z,23nm,0.6s						
JMM	**Marumori**	**42.23**	**58**	P	**P**	**08 41 50.2**	**+0.2**
JMM				IAmb	IAmb	08 41 59.6	
	comp=Z,60nm,0.9s						
SVE	**Sverdlovsk**	**42.41**	**333**	*d i*P	**P**	**08 41 52.5**	**+1.3**
SVE				*e*S	**S**	**08 48 15.5**	**+4.2**
SVE				pmax	pmax		
	comp=Z,283nm,0.6s						
SVE				MLR	MLR		
	comp=Z,3µm,15.0s						
SWI	**Sorong**	**42.46**	**118**	P	**P**	**08 41 50.9**	**-1.2**
	comp=Z,2µmcomp=Z,96nm,0.9s						
QRN	**Al-Qurain**	**42.49**	**288**	*e*P	**P**	**08 41 52.5**	**+0.2**
UMR	**Umm Al-Rimmam**	**42.63**	**290**	*e*P	**P**	**08 41 53.6**	**+0.2**
KBD	**Kabd**	**42.67**	**289**	*e*P	**P**	**08 41 54.9**	**+1.2**
RDF	**Al-Radifah**	**42.80**	**289**	*e*P	**P**	**08 41 55.1**	**+0.3**
GRNR	**Gornyy**	**42.92**	**38**	⇑*i*P	**P**	**08 41 55.4**	**0.0**
GRNR				*e*S	**S**	**08 48 22.0**	**+2.9**
GRNR				pmax	pmax		
	comp=E,10.0nm,0.7s						
GRNR				pmax	pmax		
	comp=N,7.0nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,20nm,0.7s						
GRNR				smax	smax		
	comp=N,3.0nm,0.9s						
GRNR				MLR	MLR		
	comp=E,1µm,10.0s						
GRNR				MLR	MLR		
	comp=N,1µm,14.0s						
GRNR				MLR	MLR		
	comp=Z,1µm,14.0s						
MIB	**Mutribah**	**42.95**	**290**	*e*P	**P**	**08 41 56.5**	**+0.5**
ARU	**Arti**	**43.06**	**331**	P	**P**	**08 41 57.2**	**+0.8**
	comp=Z,56nm,0.4s,baz=119,slow=4.8,SNR=176						
ARU				LR	LR	09 02 08.6	
	comp=Z,1µm,20.2s,baz=128,slow=39						
ARU	**Arti**	**43.06**	**331**	*c i*P	**P**	**08 41 57.1**	**+0.6**
ARU						08 43 43.1	
ARU				S	**S**	**08 48 24.0**	**+3.1**
ARU				SS	**SS**	**08 51 29.0**	**-4.4**
ARU				pmax	pmax		
	comp=Z,76nm,0.5s						
ARU				MLR	MLR		
	comp=Z,1µm,17.0s						
ARU	**Arti**	**43.06**	**331**	P	**P**	**08 41 57.4**	**+0.9**
BATI	**Baumata**	**43.10**	**136**	P	**P**	**08 41 53.2**	**-4.1**
	comp=Z,948nmcomp=Z,107nm,0.8s						
JCJ	**Chichijima**	**43.11**	**74**	LR	LR	09 00 40.3	
	comp=Z,872nm,18.3s,baz=263,slow=37						
SOEI	**Soe**	**43.15**	**135**	P	**P**	**08 41 56.0**	**-1.8**
	comp=Z,3µmcomp=Z,279nm,0.9s						
SOEI	**Soe**	**43.15**	**135**	P	**P**	**08 41 57.6**	**-0.3**
SOEI				IAMs_20	IAMs_20	09 03 26.1	
	comp=Z,886nm,19.0s						
MAK	**Makhachkala**	**44.03**	**309**	*e*P	**P**	**08 42 01.1**	**-3.4**
MAK				*e*		08 43 43.4	
MAK				*e*S	**S**	**08 48 32.4**	**-3.1**
MAK				*e*SS	**SS**	**08 51 50.4**	**-2.4**
MAK				pmax	pmax		
	comp=Z,162nm,1.3s						
MAK				MLR	MLR		
	comp=Z,1µm,15.0s						
FAKI	**Fak Fak**	**44.46**	**120**	P	**P**	**08 42 05.7**	**-2.6**
	comp=Z,2µmcomp=Z,155nm,1.5s						
FAKI	**Fak Fak**	**44.46**	**120**	P	**P**	**08 42 08.6**	**+0.3**
FAKI				IAmb	IAmb	08 42 09.9	
	comp=Z,96nm,0.9s						
ERM	**Erimo**	**44.68**	**52**	*ce*P	**P**	**08 42 10.0**	**+0.3**
ERM	**Erimo**	**44.68**	**52**	P	**P**	**08 42 09.7**	**0.0**
ASAJ	**Asahikawa**	**44.70**	**49**	LR	LR	09 03 56.9	
	comp=Z,687nm,18.4s,baz=254,slow=40						
ASAJ	**Asahikawa**	**44.70**	**49**	P	**P**	**08 42 11.4**	**+1.5**
ASAJ				pmax	pmax		
	comp=Z,127nm,1.3s						
JKA	**Kamikawa-asahi**	**44.70**	**49**	P	**P**	**08 42 11.4**	**+1.5**
JKA				IAmb	IAmb	08 42 17.8	
	comp=Z,127nm,1.3s						
RAYN	**Ar Rayn**	**45.17**	**281**	*i* P	**P**	**08 42 16.0**	**+2.0**
	SNR=36						
RAYN	**Ar Rayn**	**45.17**	**281**	P	**P**	**08 42 15.2**	**+1.2**
RAYN				pmax	pmax		
	comp=Z,33nm,0.9s						
RAYN				MLR	MLR		
	comp=Z,800nm,18.0s						
RAYN	**Ar Rayn**	**45.17**	**281**	P	**P**	**08 42 15.2**	**+1.2**
RAYN	**Ar Rayn**	**45.17**	**281**	IAMs_20	IAMs_20	09 04 48.0	
	comp=Z,785nm,18.0s						
YSS	**Yuzh-Sakhalins**	**45.51**	**46**	*de*P	**P**	**08 42 16.4**	**+0.2**
YSS				pmax	pmax		
	comp=Z,179nm,2.5s						
GNI	**Garni**	**45.60**	**305**	P	**P**	**08 42 18.2**	**+1.0**
	comp=Z,7.7nm,0.3s,baz=43,slow=8.7,SNR=3.5						
GNI	**Garni**	**45.60**	**305**	⇑*e*P	**P**	**08 42 19.0**	**+1.7**
GNI				pmax	pmax		
	comp=Z,71nm,2.2s						
GNI	**Garni**	**45.60**	**305**	IAmb	IAmb	08 42 34.6	
	comp=Z,46nm,1.2s						
UGL	**Uglegorsk**	**45.68**	**42**	*e*P	**P**	**08 42 18.0**	**+0.5**
UGL				pmax	pmax		
	comp=Z,170nm,0.9s						
YAK	**Yakutsk**	**46.16**	**22**	P	**P**	**08 42 20.8**	**-0.2**
	comp=Z,7.2nm,0.5s,baz=287,slow=0.4,SNR=4.2						
YAK				LR	LR	09 03 01.9	
	comp=Z,1µm,19.0s,baz=254,slow=38						
YAK	**Yakutsk**	**46.16**	**22**	*e*P	**P**	**08 42 18.0**	**-3.1**
YAK				e*PP	**sP**	**08 42 33.1**	**+2.3**
YAK				*e*		08 44 07.6	
YAK				*e*PPP	PPP	08 44 52.7	
YAK				*e*S	**S**	**08 48 59.5**	**-6.2**
YAK				*e*SSS	SSS	08 53 24.8	
YAK				pmax	pmax		
	comp=Z,22nm,1.1s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,4.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,537nm,6.7s						
YAK				pmax	pmax		
	comp=N,545nm,5.8s						
YAK				pmax	pmax		
	comp=E,855nm,5.8s						
YAK				smax	smax		
	comp=E,354nm,5.5s						
YAK				smax	smax		
	comp=N,197nm,5.8s						
YAK	**Yakutsk**	**46.16**	**22**	IAMs_20	IAMs_20	09 02 51.7	
	comp=Z,1µm,19.0s						
ZEI	**Tsey**	**46.60**	**308**	*e*P	P	08 42 15.8	-9.4
ZEI				pmax	pmax		
	comp=Z,40nm,0.8s						
TYV	**Tymovskoe**	**46.61**	**40**	*e*P	**P**	**08 42 25.8**	**+1.0**
TYV				*e*S	**S**	**08 49 16.0**	**+3.5**
TYV				pmax	pmax		
	comp=Z,33nm,1.3s						
TYV				pmax	pmax		
	comp=Z,500nm,5.3s						
TYV				smax	smax		
	comp=E,19nm,1.4s						
TYV				smax	smax		
	comp=N,800nm,6.2s						
TYV				smax	smax		
	comp=E,1µm,6.2s						
TYV				MLR	MLR		
	comp=Z,3µm,13.0s						
BELG	**Belogornoye**	**46.69**	**322**	P	**P**	**08 42 25.9**	**+0.4**
	comp=Z,104nm,0.7s,baz=348,slow=0.9,SNR=36						
KARS	**Kars**	**46.92**	**305**	P	**P**	**08 42 29.9**	**+2.3**
KARS				pmax	pmax		
	comp=Z,145nm,0.8s						
KARS	**Kars**	**46.92**	**305**	P	**P**	**08 42 29.9**	**+2.3**
MSEY	**Mahe Island**	**46.93**	**240**	P	**P**	**08 42 29.8**	**+2.0**
MSEY	**Mahe Island**	**46.93**	**240**	P	**P**	**08 42 29.8**	**+2.0**
MSEY				pmax	pmax		
	comp=Z,53nm,1.4s						
MSEY				MLR	MLR		
	comp=Z,900nm,18.0s						
MSEY	**Mahe Island**	**46.93**	**240**	P	**P**	**08 42 29.8**	**+2.0**
MSEY				IAmb	IAmb	08 42 32.5	
	comp=Z,53nm,1.4s						
MSEY	**Mahe Island**	**46.93**	**240**	IAMs_20	IAMs_20	09 02 31.0	
	comp=Z,900nm,18.0s						
NCK	**Nalchik**	**46.94**	**309**	⇓*e*P	**P**	**08 42 29.4**	**+1.8**
NCK				pmax	pmax		
	comp=Z,178nm,1.8s						
NRIK	**Noril'sk**	**47.08**	**357**	P	**P**	**08 42 27.6**	**-0.6**
	comp=Z,5.2nm,0.4s,baz=130,slow=5.3,SNR=10						
NRIK				LR	LR	09 02 40.2	
	comp=Z,823nm,21.2s,baz=182,slow=36						
KBZ	**Khabaz**	**47.48**	**309**	P	**P**	**08 42 32.6**	**+0.9**
	comp=Z,7.5nm,0.9s,baz=106,slow=7.4,SNR=14						
KBZ				LR	LR	09 06 01.9	
	comp=Z,1µm,20.2s,baz=91,slow=40						
KBZ	**Khabaz**	**47.48**	**309**	*c i*P	**P**	**08 42 33.0**	**+1.3**
KBZ				pmax	pmax		
	comp=Z,55nm,2.1s						
NEY	**Neytrino**	**47.53**	**309**	*ce*P	**P**	**08 42 35.0**	**+2.6**
NEY				pmax	pmax		
	comp=Z,84nm,2.1s						
GURO	**Guroymak-BITLI**	**47.54**	**302**	P	**P**	**08 42 34.6**	**+2.1**
GOF	**Gofitskoye**	**47.60**	**311**	⇑*i*P	**P**	**08 42 33.9**	**+1.2**
GOF				pmax	pmax		
	comp=Z,223nm,1.4s						
KVAR	**Kislovodsk Arr**	**47.66**	**310**	P	**P**	**08 42 34.5**	**+1.2**
	comp=Z,13nm,0.7s,baz=90,slow=20,SNR=5.4						
KIV	**Kislovodsk**	**47.66**	**310**	*i* P	**P**	**08 42 35.0**	**+1.7**
	SNR=17						
KIV	**Kislovodsk**	**47.66**	**310**	*e*P	**P**	**08 42 34.8**	**+1.5**
KIV				*e*		08 44 26.2	
KIV				*e*S	**S**	**08 49 30.9**	**+2.9**
KIV				pmax	pmax		
	comp=Z,80nm,1.0s						
KIV				pmax	pmax		
	comp=Z,88nm,3.5s						
KIV				MLR	MLR		
	comp=Z,419nm,16.0s						
KIV	**Kislovodsk**	**47.66**	**310**	P	**P**	**08 42 34.5**	**+1.2**
GUMO	**Guam**	**48.28**	**92**	LR	LR	09 03 55.3	
	comp=Z,854nm,18.5s,baz=296,slow=37						
KIRV	**Kirov**	**48.38**	**330**	P	**P**	**08 42 39.1**	**+0.7**
	comp=Z,111nm,0.5s,baz=130,slow=1.5,SNR=25						
KUR	**Kuril'sk**	**48.61**	**49**	*ce*P	**P**	**08 42 41.5**	**+1.1**
SMPI	**Sarmi**	**49.28**	**114**	P	**P**	**08 42 48.3**	**+2.3**
	comp=Z,1µmcomp=Z,55nm,0.8s						
SOC	**Sochi**	**49.74**	**309**	*e*P	**P**	**08 42 48.9**	**-0.3**
SOC				*e*		08 44 43.9	
SOC				*e*PPP	PPP	08 45 37.5	
SOC				*e*S	**S**	**08 49 59.0**	**+1.9**
SOC				*e*SS	**SS**	**08 53 29.4**	**-0.1**
SOC				*e*SSS	SSS	08 54 53.6	
SOC				pmax	pmax		
	comp=Z,73nm,0.7s						
SOC				MLR	MLR		
	comp=Z,509nm,19.0s						
VRH	**Novokhopyorsk**	**49.81**	**319**	*e*P	**P**	**08 42 49.2**	**-0.3**
VRH				pmax	pmax		
	comp=Z,100nm,0.9s						
MTN	**Manton Dam**	**50.03**	**131**	P	**P**	**08 42 51.6**	**0.0**
	baz=50,SNR=5.2						
MTN	**Manton Dam**	**50.03**	**131**	P	**P**	**08 42 51.3**	**-0.3**
PSA00	**Pilbara Seismi**	**50.15**	**149**	P	**P**	**08 42 52.5**	**+0.1**
PSA00				IAmb	IAmb	08 42 53.2	
	comp=Z,50nm,0.8s						
PSA00	**Pilbara Seismi**	**50.15**	**149**	P	**P**	**08 42 51.8**	**-0.6**
PSA00				IAmb	IAmb	08 42 53.3	
	comp=Z,26nm,0.8s						
KNRA	**Kununurra**	**50.46**	**136**	P	**P**	**08 42 54.9**	**0.0**
	baz=50,SNR=154						
KNRA	**Kununurra**	**50.46**	**136**	P	**P**	**08 42 55.3**	**+0.4**
ATD	**Arta Tunnel**	**50.60**	**267**	P	**P**	**08 42 57.6**	**+1.5**
	comp=Z,8.9nm,0.6s,baz=285,slow=7.4,SNR=5.3						
ATD	**Arta Tunnel**	**50.60**	**267**	IAmb	IAmb	08 43 03.2	
	comp=Z,72nm,1.5s						
ATD				IAMs_20	IAMs_20	09 05 19.6	
	comp=Z,462nm,19.0s						
KDU	**Kakadu**	**50.86**	**130**	P	**P**	**08 42 57.4**	**-0.5**
	baz=51,SNR=9.3						
JAY	**Jayapura**	**51.24**	**113**	P	**P**	**08 43 01.0**	**+0.1**
	comp=Z,835nmcomp=Z,64nm,0.8s						
VORD	**Divnogorie**	**51.25**	**318**	*e*P	**P**	**08 42 59.8**	**-0.6**
VORD				pmax	pmax		
	comp=Z,40nm,1.0s						
GAZ	**Gaziantep**	**51.31**	**300**	P	**P**	**08 43 01.6**	**+0.4**
GAZ				IAmb	IAmb	08 43 08.4	
	comp=Z,85nm,1.3s						
VSR	**Storozhevoye**	**51.38**	**318**	*e*P	**P**	**08 43 00.9**	**-0.5**
VSR				pmax	pmax		
	comp=Z,80nm,1.7s						
PRGR	**Permogore**	**51.47**	**333**	*e*P	**P**	**08 43 02.1**	**+0.2**
PRGR				pmax	pmax		
	comp=Z,64nm,0.6s						
ANN	**Anapa**	**51.51**	**310**	*e*P	**P**	**08 42 57.9**	**-4.6**
ANN				e*PP	**pP**	**08 43 05.8**	**-3.7**
ANN				*e*		08 44 55.3	
ANN				*e*S	**S**	**08 50 15.8**	**-5.7**
ANN				pmax	pmax		
	comp=Z,58nm,1.1s						
ANN				MLR	MLR		
	comp=N,891nm,18.0s						
ANN				MLR	MLR		
	comp=E,1µm,21.0s						
ANN				MLR	MLR		
	comp=Z,1µm,21.0s						
ASF	**Jabal al Asfar**	**51.78**	**294**	P	**P**	**08 43 06.1**	**+1.3**
	comp=Z,12nm,0.7s,baz=38,slow=5.1,SNR=15						
LPSR	**Galich'ya Gora**	**51.83**	**320**	*e*P	**P**	**08 43 04.5**	**-0.2**
LPSR				pmax	pmax		
	comp=Z,90nm,0.6s						
BNN	**Bunyan**	**52.39**	**302**	P	**P**	**08 43 10.4**	**+1.1**
DIKM	**Dikmen**	**52.88**	**306**	⇑P	**P**	**08 43 13.5**	**+0.7**
TIXI	**Tiksi**	**52.91**	**13**	P	**P**	**08 43 10.8**	**-1.7**
	comp=Z,16nm,0.4s,baz=203,slow=4.8,SNR=23						
TIXI				LR	LR	09 08 01.1	
	comp=Z,1µm,19.0s,baz=244,slow=39						
TIXI	**Tiksi**	**52.91**	**13**	IAMs_20	IAMs_20	09 07 40.1	
	comp=Z,1µm,19.0s						
SNOP	**Sinop**	**52.94**	**306**	P	**P**	**08 43 14.3**	**+1.2**
MMAI	**Mount Meron Ar**	**52.97**	**295**	P	**P**	**08 43 15.0**	**+1.4**
	comp=Z,3.7nm,0.5s,baz=79,slow=8.6,SNR=9.4						
MMAI				PcP	**PcP**	**08 44 23.4**	**+1.1**
	comp=Z,4.5nm,0.6s,baz=82,slow=6.2,SNR=4.0						
MOS	**Moscow**	**53.32**	**324**	*e*P	**P**	**08 43 12.1**	**-3.6**
MOS				*e*		08 46 31.4	
MOS				*e*S	**S**	**08 50 41.9**	**-4.1**
MOS				pmax	pmax		
	comp=Z,83nm,0.9s						
MOS				MLR	MLR		
	comp=Z,800nm,18.0s						
EIL	**Elat**	**53.70**	**291**	P	**P**	**08 43 20.1**	**+1.1**
	comp=Z,14nm,0.7s,baz=97,slow=4.3,SNR=17						
OBN	**Obninsk**	**53.76**	**323**	P	**P**	**08 43 19.0**	**+0.1**
	comp=Z,9.8nm,0.5s,baz=235,slow=2.9,SNR=8.8						
OBN	**Obninsk**	**53.76**	**323**	*c i*P	**P**	**08 43 18.9**	**0.0**
OBN						08 44 26.0	
OBN				*e*S	**S**	**08 50 53.2**	**+1.2**
OBN				pmax	pmax		
	comp=Z,231nm,2.5s						
OBN				MLR	MLR		
	comp=Z,1µm,19.0s						
MA2	**Magadan**	**53.82**	**32**	LR	LR	09 07 08.5	
	comp=Z,449nm,18.5s,baz=266,slow=37						
MA2	**Magadan**	**53.82**	**32**	P	**P**	**08 43 18.6**	**-0.8**
MA2				pmax	pmax		
	comp=Z,46nm,1.0s						
MA2				MLR	MLR		
	comp=Z,2µm,18.0s						
MA2	**Magadan**	**53.82**	**32**	P	**P**	**08 43 18.6**	**-0.8**
MA2				IAmb	IAmb	08 43 27.4	
	comp=Z,46nm,1.0s						
BZK	**Bozkurt**	**53.83**	**306**	⇑P	**P**	**08 43 20.6**	**+1.0**
BZK	**Bozkurt**	**53.83**	**306**	P	**P**	**08 43 22.0**	**+2.3**
KLMR	**Klimovskoe**	**53.88**	**330**	*e*P	**P**	**08 43 17.9**	**-1.8**
KLMR				*e*		08 44 21.6	
KLMR				pmax	pmax		
	comp=Z,71nm,0.7s						
KLMR	**Klimovskoe**	**53.88**	**330**	*e*P	**P**	**08 43 18.0**	**-1.8**
KLMR				AMP		08 43 20.3	
	comp=Z,71nm,0.7s						
KLMR				*e*PcP	**PcP**	**08 44 21.7**	**-3.4**
KLMR				LQ	LQ	09 02 07.0	
KLMR				LQ	LQ	09 02 07.0	
KLMR				LR	LR	09 05 48.2	
MEEK	**Meekatharra**	**54.00**	**153**	P	**P**	**08 43 21.6**	**+0.5**
	baz=54,SNR=4.5						
BR131	**Keskin Array S**	**54.09**	**304**	P	**P**	**08 43 23.4**	**+1.5**
BR131				pmax	pmax		
	comp=Z,69nm,1.5s						
BR131	**Keskin Array S**	**54.09**	**304**	P	**P**	**08 43 22.7**	**+0.9**
	SNR=15						
BR131				P	**P**	**08 43 22.7**	**+0.9**
	SNR=15						
BR131	**Keskin Array S**	**54.09**	**304**	P	**P**	**08 43 23.4**	**+1.5**
BR131				IAmb	IAmb	08 43 29.8	
	comp=Z,69nm,1.4s						
BRTR	**Keskin Array B**	**54.09**	**304**	P	**P**	**08 43 22.5**	**+0.6**
	comp=Z,7.9nm,0.7s,baz=108,slow=6.6,SNR=30						
BRTR				PcP	**PcP**	**08 44 26.2**	**-0.4**
	comp=Z,6.7nm,0.9s,baz=114,slow=4.9,SNR=3.7						
BRTR				LR	LR	09 12 16.3	
	comp=Z,928nm,21.0s,baz=115,slow=42						
BRTR	**Keskin Array B**	**54.09**	**304**	P	**P**	**08 43 22.8**	**+1.0**
CSS	**Mathiatis**	**54.54**	**298**	IAMs_20	IAMs_20	09 09 38.4	
	comp=Z,722nm,22.0s						
ANTO	**Ankara**	**54.74**	**304**	P	**P**	**08 43 27.7**	**+1.2**
ANTO				pmax	pmax		
	comp=Z,80nm,1.2s						
ANTO	**Ankara**	**54.74**	**304**	P	**P**	**08 43 27.7**	**+1.2**
ANTO				IAmb	IAmb	08 43 30.2	
	comp=Z,80nm,1.1s						
BR231	**Keskin MP Arra**	**54.76**	**304**	P	**P**	**08 43 27.2**	**+0.6**
BR231				IAmb	IAmb	08 43 30.3	
	comp=Z,101nm,1.3s						
SEY	**Seymchan**	**55.63**	**28**	LR	LR	09 09 06.3	
	comp=Z,2µm,18.2s,baz=250,slow=38						
KDZE	**Karadeniz Ereo**	**55.75**	**305**	⇓P	**P**	**08 43 34.5**	**+0.9**
MDUB	**Mudurnu**	**55.95**	**304**	P	**P**	**08 43 36.1**	**+0.9**
PEA0B	**Petropavlovsk-**	**56.16**	**40**	⇑*e*P	**P**	**08 43 36.5**	**+0.1**
PETK	**Petropavlovsk-**	**56.16**	**40**	P	**P**	**08 43 35.5**	**-0.9**
	comp=Z,17nm,1.0s,baz=75,slow=1.7,SNR=11						
PETK				LR	LR	09 07 51.6	
	comp=Z,574nm,21.9s,baz=254,slow=36						
PETK	**Petropavlovsk-**	**56.16**	**40**	P	**P**	**08 43 36.0**	**-0.4**
PETK	**Petropavlovsk-**	**56.16**	**40**	P	**P**	**08 43 36.0**	**-0.4**
PET	**Petropavlovsk**	**56.72**	**40**	*e*P	**P**	**08 43 40.0**	**-0.4**
PET				*e*S	**S**	**08 51 24.8**	**-6.9**
PET				pmax	pmax		
	comp=Z,53nm,1.1s						
PET				pmax	pmax		
	comp=Z,200nm,12.9s						
PET				MLR	MLR		
	comp=Z,2µm,17.0s						
PET	**Petropavlovsk**	**56.72**	**40**	P	**P**	**08 43 40.0**	**-0.4**
PET				IAmb	IAmb	08 43 41.2	
	comp=Z,53nm,1.2s						
MANU	**Manus Island**	**56.78**	**108**	P	**P**	**08 43 42.8**	**+1.5**
MANU				IAmb	IAmb	08 43 44.7	
	comp=Z,51nm,0.8s						
BLDU	**Ballidu**	**56.83**	**157**	P	**P**	**08 43 41.1**	**-0.2**
	baz=57						
WB0	**Warramunga Arr**	**57.10**	**134**	P	**P**	**08 43 43.2**	**-0.3**
ELL	**Elmali**	**57.17**	**300**	P	**P**	**08 43 44.8**	**+0.8**
ELL	**Elmali**	**57.17**	**300**	P	**P**	**08 43 44.8**	**+0.8**
WRA	**Warramunga Arr**	**57.19**	**135**	P	**P**	**08 43 44.2**	**+0.1**
	comp=Z,105nm,0.7s,baz=322,slow=7.4,SNR=1317						
WRA				LR	LR	09 10 51.0	
	comp=Z,399nm,21.5s,baz=330,slow=39						
WRA				PKPPKP	**P'P'df**	**09 13 31.1**	**+0.5**
	comp=Z,1.9nm,1.0s,baz=180,slow=1.6,SNR=5.5						
WRA	**Warramunga Arr**	**57.19**	**135**	*i* P	**P**	**08 43 44.2**	**+0.1**
WRA				pmax	pmax		
	comp=Z,114nm,0.6s						
WRA	**Warramunga Arr**	**57.19**	**135**	P	**P**	**08 43 43.7**	**-0.4**
WRAB	**Tennant Creek**	**57.19**	**134**	*c i*P	**P**	**08 43 44.2**	**+0.1**
WRAB				pmax	pmax		
	comp=Z,207nm,1.3s						
WRAB	**Tennant Creek**	**57.19**	**134**	P	**P**	**08 43 43.8**	**-0.3**
WRAB	**Tennant Creek**	**57.19**	**134**	IAMs_20	IAMs_20	09 10 41.3	
	comp=Z,769nm,21.0s						
WB2	**Warramunga Arr**	**57.20**	**134**	P	**P**	**08 43 43.9**	**-0.2**
	baz=57						
WB2	**Warramunga Arr**	**57.20**	**134**	P	**P**	**08 43 43.8**	**-0.4**
WRKA	**Warakurna**	**57.35**	**143**	P	**P**	**08 43 45.5**	**+0.3**
	baz=58,SNR=71						
AKASG	**Malin Array Be**	**57.53**	**317**	P	**P**	**08 43 45.5**	**-0.6**
	comp=Z,64nm,0.7s,baz=82,slow=6.2,SNR=137						
AKASG				S	**S**	**08 51 39.8**	**-2.7**
	comp=Z,0.6nm,0.5s,baz=87,slow=13,SNR=5.2						
AKASG				LR	LR	09 12 21.2	
	comp=Z,997nm,18.4s,baz=90,slow=40						
AKASG	**Malin Array Be**	**57.53**	**317**	P	**P**	**08 43 45.5**	**-0.6**
AKASG				IAmb	IAmb	08 43 46.6	
	comp=Z,55nm,0.8s						
AKBB	**Malin Array Si**	**57.53**	**317**	P	**P**	**08 43 45.7**	**-0.4**
AKBB				pmax	pmax		
	comp=Z,74nm,0.8s						
AKBB	**Malin Array Si**	**57.53**	**317**	P	**P**	**08 43 45.6**	**-0.4**
TLCR		**57.63**	**310**	⇓P	**P**	**08 43 47.3**	**+0.3**
MILM	**Milestii Mici**	**57.65**	**312**	⇓P	**P**	**08 43 47.1**	**+0.1**
MILM	**Milestii Mici**	**57.65**	**312**	*c i*P	**P**	**08 43 46.5**	**-0.5**
MILM				pmax	pmax		
	comp=Z,120nm,0.6s						
MILM				MLR	MLR		
	comp=Z,800nm,15.5s						
MUN	**Mundaring**	**57.90**	**158**	P	**P**	**08 43 48.6**	**-0.2**
	baz=58,SNR=4.8						
TPGR	**Topolog**	**57.92**	**310**	⇑P	**P**	**08 43 49.2**	**+0.2**
TIRR	**Tirgusor**	**57.93**	**309**	⇑P	**P**	**08 43 49.2**	**+0.2**
SORM	**Soroca**	**57.98**	**314**	⇑P	**P**	**08 43 49.1**	**-0.3**
PUL	**Pulkovo**	**58.01**	**327**	⇓*e*P	**P**	**08 43 50.0**	**+0.7**
PUL				pmax	pmax		
	comp=Z,84nm,0.7s						
KLBR	**Kellerberrin**	**58.09**	**157**	P	**P**	**08 43 49.9**	**-0.4**
	baz=58,SNR=6.2						
CFR	**Carcaliu**	**58.11**	**310**	⇓P	**P**	**08 43 51.0**	**+0.7**
LVZ	**Lovozero**	**58.25**	**337**	*ce*P	**P**	**08 43 49.3**	**-1.7**
LVZ				pmax	pmax		
	comp=Z,92nm,1.0s						
VARL	**Varlezi**	**58.31**	**311**	⇑P	**P**	**08 43 51.8**	**+0.2**
VASR	**Vaslui**	**58.35**	**312**	⇓P	**P**	**08 43 52.3**	**+0.4**
ICOR	**Ion Corvin**	**58.37**	**309**	⇑P	**P**	**08 43 53.1**	**+0.9**
TUDR		**58.44**	**311**	⇑P	**P**	**08 43 52.9**	**+0.3**
BIR	**Birlad**	**58.46**	**311**	⇓P	**P**	**08 43 53.3**	**+0.6**
BALB	**Balikesir**	**58.54**	**304**	P	**P**	**08 43 54.0**	**+0.6**
APA	**Apatity**	**58.60**	**337**	⇓*i*P	**P**	**08 43 49.2**	**-4.1**
APA				*i*		08 44 47.2	
APA				*i*		08 46 04.1	
APA				pmax	pmax		
	comp=Z,38nm,0.7s						
APA				MLR	MLR		
	comp=Z,2µm,17.0s						
MNK	**Minsk**	**58.63**	**321**	*i* P	**P**	**08 43 53.7**	**-0.1**
MNK				*i*		08 44 43.3	
MNK				*i*		08 46 03.7	
MNK				*i* S	**S**	**08 51 58.4**	**+1.7**
MNK				*i*		08 53 41.6	
MNK				*i* SS	**SS**	**08 55 53.8**	**+4.5**
MNK				pmax	pmax		
	comp=E,9.0nm,0.9s						

MNK				pmax	pmax		
	comp=Z,92nm,0.9s						
MNK				pmax	pmax		
	comp=N,21nm,1.8s						
MNK				MLR	MLR		
	comp=N,425nm,16.0s						
MNK				MLR	MLR		
	comp=E,97nm,13.0s						
MNK				MLR	MLR		
	comp=Z,919nm,18.0s						
MNK	**Minsk**	**58.63**	**321**	*i* P	**P**	**08 43 53.8**	**0.0**
	comp=E,9.0nm,0.9s						
MNK				*i* P	**P**	**08 43 53.8**	**0.0**
	comp=N,21nm,1.8s						
MNK				*i* P	**P**	**08 43 53.8**	**0.0**
	comp=Z,92nm,0.9s,baz=95						
MNK				*i* PcP	**PcP**	**08 44 43.4**	**-0.4**
MNK				*i* PP	**PP**	**08 46 03.7**	**+0.4**
MNK				*i* PPP	PPP	08 47 23.1	
MNK				*i* S	**S**	**08 51 58.4**	**+1.7**
MNK				*i* SS	**SS**	**08 55 53.9**	**+4.5**
MNK				*i* SSS	SSS	08 58 25.5	
MNK				*i* LQ	LQ	09 05 02.8	
MNK				*i* LR	LR	09 09 24.4	
MNK				*i* LRM	MLR	09 11 57.7	
	comp=N,425nm,15.9s						
MNK				*i* LRM	MLR	09 12 02.8	
	comp=Z,919nm,17.9s						
MNK				*i* LRM	MLR	09 12 04.1	
	comp=E,97nm,13.4s						
VRI	**Vrincioaia**	**59.09**	**311**	⇑P	**P**	**08 43 58.1**	**+0.9**
NWAO	**Narrogin (SRO)**	**59.12**	**158**	IAMs_20	IAMs_20	09 08 20.0	
	comp=Z,857nm,22.0s						
PLOR	**Plostina**	**59.15**	**311**	⇓P	**P**	**08 43 58.9**	**+1.3**
NACGM	**Naroch**	**59.30**	**321**	*i* P	**P**	**08 43 58.8**	**+0.4**
COVR	**Voineasa-Covas**	**59.46**	**311**	⇑P	**P**	**08 44 00.1**	**+0.4**
SMG	**Samos**	**59.52**	**301**	P	**P**	**08 44 01.5**	**+1.2**
ASPA	**Alice Springs**	**59.60**	**138**	P	**P**	**08 44 02.2**	**+1.3**
	baz=60						
AS31	**Alice Springs**	**59.60**	**138**	P	**P**	**08 44 01.1**	**+0.3**
AS31				IAmb	IAmb	08 44 02.0	
	comp=Z,25nm,0.6s						
ASAR	**Alice Springs**	**59.60**	**138**	P	**P**	**08 44 01.2**	**+0.4**
	comp=Z,68nm,0.6s,baz=321,slow=6.9,SNR=1275						
ASAR				S	**S**	**08 52 08.2**	**-1.8**
	comp=Z,0.4nm,0.9s,baz=311,slow=11,SNR=4.3						
ASAR				PKPPKP	**P'P'df**	**09 13 24.2**	**-2.4**
	comp=Z,1.4nm,0.9s,baz=159,slow=3.3,SNR=7.1						
ASAR	**Alice Springs**	**59.60**	**138**	P	**P**	**08 44 00.9**	**+0.1**
MLR	**Muntele Rosu**	**59.65**	**311**	⇓P	**P**	**08 44 02.3**	**+1.1**
MLR	**Muntele Rosu**	**59.65**	**311**	P	**P**	**08 44 02.2**	**+1.0**
MLR				pmax	pmax		
	comp=Z,197nm,0.8s						
MLR	**Muntele Rosu**	**59.65**	**311**	P	**P**	**08 44 02.1**	**+1.0**
VSU	**Vasula**	**59.65**	**326**	*e*P	**P**	**08 44 01.1**	**+0.3**
VSU	**Vasula**	**59.65**	**326**	*ce*P	**P**	**08 44 00.3**	**-0.4**
VSU				pmax	pmax		
	comp=Z,151nm,0.7s						
COEN	**Coen**	**59.67**	**123**	P	**P**	**08 44 02.9**	**+1.4**
	baz=60						
COEN	**Coen**	**59.67**	**123**	P	**P**	**08 44 01.9**	**+0.4**
COEN				IAmb	IAmb	08 44 09.9	
	comp=Z,32nm,1.1s						
ISAL	**Salakas**	**59.72**	**322**	*e*P	**P**	**08 44 02.2**	**+0.9**
ALN	**Alexandroupoli**	**59.84**	**305**	P	**P**	**08 44 03.2**	**+0.8**
ALN	**Alexandroupoli**	**59.84**	**305**	P	**P**	**08 44 03.4**	**+1.0**
ALN				pmax	pmax		
	comp=Z,93nm,0.9s						
ALN	**Alexandroupoli**	**59.84**	**305**	P	**P**	**08 44 03.4**	**+1.0**
DOPR	**Dopca**	**60.02**	**311**	⇑P	**P**	**08 44 04.0**	**+0.4**
CHOS	**Chios island**	**60.06**	**302**	P	**P**	**08 44 05.3**	**+1.2**
BURAR	**Bucovina Array**	**60.09**	**313**	⇑P	**P**	**08 44 04.7**	**+0.5**
BURAR	**Bucovina Array**	**60.09**	**313**	P	**P**	**08 44 04.3**	**+0.1**
BURAR				IAmb	IAmb	08 44 05.4	
	comp=Z,33nm,0.7s						
BUR08	**Bucovina Ar. S**	**60.10**	**313**	P	**P**	**08 44 04.5**	**+0.3**
BUR08				IAmb	IAmb	08 44 05.5	
	comp=Z,18nm,0.7s						
COPA	**Copaceanca**	**60.23**	**309**	⇑P	**P**	**08 44 05.8**	**+0.8**
VOIR		**60.28**	**311**	⇑P	**P**	**08 44 05.7**	**+0.2**
PMG	**Port Moresby**	**60.32**	**116**	P	**P**	**08 44 07.1**	**+1.1**
PMG				pmax	pmax		
	comp=Z,82nm,0.8s						
PMG	**Port Moresby**	**60.32**	**116**	P	**P**	**08 44 07.1**	**+1.1**
ZKR	**Zakros**	**60.33**	**299**	P	**P**	**08 44 06.5**	**+0.7**
FINES	**FINESS Array B**	**60.34**	**329**	P	**P**	**08 44 05.3**	**-0.1**
	comp=Z,33nm,0.6s,baz=104,slow=7.0,SNR=120						
FINES				LR	LR	09 12 16.0	
	comp=Z,905nm,21.1s,baz=96,slow=38						
STFAR	**Stefanesti-Arg**	**60.38**	**310**	⇓P	**P**	**08 44 06.7**	**+0.7**
LODK	**Lodwar**	**60.49**	**261**	P	**P**	**08 44 09.1**	**+1.8**
	SNR=15						
LODK	**Lodwar**	**60.49**	**261**	P	**P**	**08 44 08.2**	**+0.9**
LODK				IAMs_20	IAMs_20	09 11 57.3	
	comp=Z,541nm,20.0s						
KIBK	**Kibwezi**	**60.54**	**254**	P	**P**	**08 44 08.8**	**+1.1**
	SNR=5.7						
ARR	**Arges**	**60.58**	**310**	⇑P	**P**	**08 44 07.8**	**+0.4**
KMBO	**Kilima Mbogo**	**60.70**	**255**	P	**P**	**08 44 09.7**	**+0.8**
	comp=Z,4.2nm,0.7s,baz=48,slow=7.0,SNR=10						
KMBO				LR	LR	09 08 29.0	
	comp=Z,609nm,21.6s,baz=83,slow=34						
KMBO	**Kilima Mbogo**	**60.70**	**255**	*i* P	**P**	**08 44 10.2**	**+1.3**
	SNR=5.9						
KMBO	**Kilima Mbogo**	**60.70**	**255**	P	**P**	**08 44 09.3**	**+0.4**
KMBO	**Kilima Mbogo**	**60.70**	**255**	IAMs_20	IAMs_20	09 07 43.0	
	comp=Z,1µm,22.0s						
SANT	**Santorini**	**60.77**	**300**	P	**P**	**08 44 08.3**	**-0.6**
STAX	**Taxiarchis Har**	**60.81**	**300**	P	**P**	**08 44 08.4**	**-0.7**
THR3	**Thira Island,**	**60.81**	**300**	P	**P**	**08 44 09.2**	**+0.1**
SNT5	**Nea Kammeni, S**	**60.82**	**300**	P	P	08 44 19.3	+10
LVV	**L'vov**	**60.84**	**316**	*e*P	**P**	**08 44 08.8**	**-0.3**
LVV				*e*		08 44 48.0	
LVV				*e*		08 46 23.3	
LVV				*e*S	**S**	**08 52 24.3**	**-1.0**
LVV				*e*PS	**PnS**	**08 52 40.9**	**+0.6**
LVV				*e*SS	**SS**	**08 56 23.5**	**-0.7**
LVV				pmax	pmax		
	comp=Z,110nm,0.8s						
LVV				MLR	MLR		
	comp=N,1µm,17.0s						
LVV				MLR	MLR		
	comp=E,900nm,17.0s						
LVV				MLR	MLR		
	comp=Z,1µm,17.0s						
PABE	**Paberze**	**60.95**	**322**	*e*P	**P**	**08 44 10.2**	**+0.6**
PABE	**Paberze**	**60.95**	**322**	P	**P**	**08 44 09.6**	**0.0**
QIS	**Mount Isa**	**61.19**	**131**	P	**P**	**08 44 12.4**	**+0.6**
	baz=61,SNR=33						
CJR	**Cluj-Napoca**	**61.23**	**312**	⇓P	**P**	**08 44 12.3**	**+0.4**
SUW	**Suwalki**	**61.36**	**320**	*e*P	**P**	**08 44 12.0**	**-0.5**
SUW	**Suwalki**	**61.36**	**320**	*e*P	**P**	**08 44 12.5**	**0.0**
SUW	**Suwalki**	**61.36**	**320**	P	**P**	**08 44 11.8**	**-0.7**
SUW				pmax	pmax		
	comp=Z,116nm,0.8s						
SUW	**Suwalki**	**61.36**	**320**	P	**P**	**08 44 11.8**	**-0.7**
IDI	**Anoyia**	**61.38**	**299**	P	**P**	**08 44 13.0**	**-0.1**
	comp=Z,27nm,0.5s,baz=27,slow=11,SNR=21						
IDI	**Anoyia**	**61.38**	**299**	P	**P**	**08 44 13.1**	**0.0**
KEV	**Kevo**	**61.44**	**338**	P	**P**	**08 44 12.7**	**-0.1**
KEV				pmax	pmax		
	comp=Z,60nm,0.9s						
KEV	**Kevo**	**61.44**	**338**	P	**P**	**08 44 12.7**	**-0.1**
KEV				IAmb	IAmb	08 44 13.9	
	comp=Z,60nm,0.9s						
NVR	**Nevrokopi**	**61.44**	**306**	P	**P**	**08 44 13.3**	**-0.1**
SRE	**Strehaia**	**61.64**	**310**	⇓P	**P**	**08 44 15.3**	**+0.8**
PRNS	**Prines Rethymn**	**61.68**	**299**	P	**P**	**08 44 16.3**	**+1.3**
KWP	**Kalwaria Pacla**	**61.70**	**315**	*e*P	**P**	**08 44 15.3**	**+0.4**
PAIG	**Paliouri**	**61.73**	**304**	P	**P**	**08 44 15.2**	**-0.1**
VTS	**Vitosha**	**61.79**	**307**	⇓P	**P**	**08 44 16.4**	**+0.6**
VTS	**Vitosha**	**61.79**	**307**	P	**P**	**08 44 16.4**	**+0.6**
VTS				pmax	pmax		
	comp=Z,42nm,0.8s						
VTS	**Vitosha**	**61.79**	**307**	P	**P**	**08 44 16.4**	**+0.6**
VTS				IAmb	IAmb	08 44 17.5	
	comp=Z,42nm,0.8s						
DRGR		**61.84**	**312**	⇓P	**P**	**08 44 16.4**	**+0.4**
PLG	**Polygyros**	**61.86**	**305**	P	**P**	**08 44 16.5**	**+0.3**
TRPA	**Tarpa**	**61.88**	**314**	⇑P	**P**	**08 44 16.4**	**+0.3**
TRPA	**Tarpa**	**61.88**	**314**	*e*P	**P**	**08 44 16.4**	**+0.3**
GZR	**Gura Zlata**	**61.88**	**311**	⇓P	**P**	**08 44 16.9**	**+0.6**
ARA0	**ARCESS Array S**	**61.90**	**338**	⇑*i*P	**P**	**08 44 16.0**	**+0.1**
ARCES	**ARCESS Array B**	**61.90**	**338**	P	**P**	**08 44 15.9**	**0.0**
	comp=Z,29nm,0.6s,baz=87,slow=7.5,SNR=171						
ARCES				LR	LR	09 14 21.0	
	comp=Z,1µm,20.0s,baz=80,slow=39						
ARCES	**ARCESS Array B**	**61.90**	**338**	P	**P**	**08 44 16.0**	**0.0**
ARCES				pmax	pmax		
	comp=Z,34nm,0.7s						
ARCES	**ARCESS Array B**	**61.90**	**338**	P	**P**	**08 44 15.9**	**0.0**
ARCES				IAmb	IAmb	08 44 16.6	
	comp=Z,34nm,0.7s						
VAM	**Vamos**	**61.92**	**299**	P	**P**	**08 44 17.7**	**+1.1**
SLIT	**Slitere, Latvi**	**61.95**	**324**	*e*P	**P**	**08 44 17.8**	**+1.4**
RABL	**Rabaul**	**62.01**	**108**	P	**P**	**08 44 18.7**	**+1.2**
KOLS	**Kolonicke sedl**	**62.02**	**315**	*e*P	**P**	**08 44 17.3**	**+0.2**
KOLS				pmax	pmax		
	comp=Z,30nm,1.4s						
KOLS	**Kolonicke sedl**	**62.02**	**315**	*e*P	**P**	**08 44 17.3**	**+0.2**
UZH	**Uzhgorod**	**62.02**	**314**	⇓*i*P	**P**	**08 44 15.6**	**-1.4**
UZH				*e*		08 44 30.5	
IMMV	**Iera Moni Meta**	**62.09**	**299**	P	**P**	**08 44 18.8**	**+1.0**
HORT	**Hortiatis**	**62.10**	**305**	P	**P**	**08 44 17.7**	**-0.1**
DJES	**Djerdap**	**62.12**	**310**	⇑P	**P**	**08 44 18.9**	**+1.1**
XOR	**Xorichti**	**62.17**	**304**	P	**P**	**08 44 17.8**	**-0.5**
HERR	**Herculane**	**62.18**	**310**	⇓P	**P**	**08 44 18.7**	**+0.5**
VILL	**Villia**	**62.23**	**302**	P	**P**	**08 44 17.8**	**-1.0**
RODP	**Rodopos**	**62.25**	**299**	P	**P**	**08 44 20.2**	**+1.3**
VAY	**Valandovo**	**62.41**	**306**	*i* P	**P**	**08 44 19.7**	**-0.2**
BILL	**Bilibino**	**62.46**	**24**	*ce*P	**P**	**08 44 18.4**	**-1.3**
BILL				*e**SP	**pP**	**08 44 27.0**	**+0.1**
BILL						08 44 56.0	
BILL				*e*		08 53 19.2	
BILL				pmax	pmax		
	comp=Z,15nm,1.0s						
BILL				MLR	MLR		
	comp=Z,830nm,16.0s						
BILL	**Bilibino**	**62.46**	**24**	IAMs_20	IAMs_20	09 12 29.4	
	comp=Z,686nm,20.0s						
LTK	**Loutraki**	**62.52**	**302**	P	**P**	**08 44 18.8**	**-1.9**
CRVS	**Cervenica-Dubn**	**62.55**	**315**	*e*P	**P**	**08 44 21.6**	**+1.0**
CRVS				pmax	pmax		
	comp=Z,64nm,1.0s						
CRVS	**Cervenica-Dubn**	**62.55**	**315**	*e*P	**P**	**08 44 21.6**	**+1.0**
GRG	**Griva**	**62.58**	**306**	P	**P**	**08 44 20.6**	**-0.4**
SIRR	**Siria**	**62.60**	**312**	⇑P	**P**	**08 44 21.5**	**+0.5**
KTK1	**Kautokeino**	**62.61**	**337**	*e*P	**P**	**08 44 20.5**	**-0.2**
STIP	**Stip**	**62.66**	**306**	*i* P	**P**	**08 44 19.9**	**-1.6**
BZS	**Buzias**	**62.68**	**311**	⇑P	**P**	**08 44 21.9**	**+0.4**
MDVR	**Moldovita**	**62.69**	**310**	⇑P	**P**	**08 44 22.4**	**+0.7**
HAMF	**Hammerfest**	**62.72**	**339**	⇑*i*P	**P**	**08 44 21.5**	**+0.1**
VLI	**Veliai**	**62.74**	**301**	P	**P**	**08 44 20.9**	**-1.2**
BOVS	**Bovan**	**62.80**	**309**	⇑P	**P**	**08 44 22.0**	**-0.4**
BEL	**Belsk**	**62.84**	**318**	*e*P	**P**	**08 44 22.8**	**+0.3**
AGG	**Agios Georgios**	**62.88**	**303**	P	**P**	**08 44 22.2**	**-0.9**
AGG	**Agios Georgios**	**62.88**	**303**	P	**P**	**08 44 21.5**	**-1.5**
AGG				pmax	pmax		
	comp=Z,63nm,0.9s						
AGG	**Agios Georgios**	**62.88**	**303**	P	**P**	**08 44 21.5**	**-1.5**
PATS	**Pohnpei**	**63.00**	**94**	P	**P**	**08 44 25.4**	**+1.2**
	baz=63,SNR=3.7						
GUR	**Goura**	**63.02**	**302**	P	**P**	**08 44 23.0**	**-1.1**
THL	**Klokotos Trika**	**63.05**	**304**	P	**P**	**08 44 23.2**	**-0.9**
MTSU	**Mount Surprise**	**63.06**	**126**	P	**P**	**08 44 25.1**	**+0.7**
	baz=63,SNR=16						
KZN	**Kozani**	**63.14**	**305**	P	**P**	**08 44 24.4**	**-0.4**
KLV	**Kalavryta, Ach**	**63.16**	**302**	P	**P**	**08 44 24.2**	**-0.8**
SKO	**Skopje**	**63.18**	**307**	*i* P	**P**	**08 44 24.6**	**-0.4**
AAL	**Aland**	**63.22**	**327**	*e*P	**P**	**08 44 24.4**	**-0.4**
KECS	**Kecovo**	**63.22**	**314**	*e*P	**P**	**08 44 25.5**	**+0.4**
KECS	**Kecovo**	**63.22**	**314**	*e*P	**P**	**08 44 25.5**	**+0.4**
ANX	**Ano Chora**	**63.26**	**303**	P	**P**	**08 44 24.6**	**-1.0**
LAKA	**Lakka**	**63.27**	**303**	P	**P**	**08 44 24.4**	**-1.2**
NIE	**Niedzica**	**63.28**	**315**	*e*P	**P**	**08 44 27.1**	**+1.6**
EFP	**Efpalio**	**63.29**	**303**	P	**P**	**08 44 25.1**	**-0.6**
EVR	**Evrytania**	**63.30**	**303**	P	**P**	**08 44 25.0**	**-0.9**
FNA	**Florina**	**63.38**	**306**	P	**P**	**08 44 25.6**	**-0.7**
FNA	**Florina**	**63.38**	**306**	P	**P**	**08 44 25.6**	**-0.7**
FNA				pmax	pmax		
	comp=Z,53nm,0.8s						
FNA	**Florina**	**63.38**	**306**	P	**P**	**08 44 25.6**	**-0.7**
ITM	**Ithomi**	**63.47**	**301**	P	**P**	**08 44 25.9**	**-1.0**
OJC	**Ojcow**	**63.55**	**316**	*e*P	**P**	**08 44 27.2**	**-0.1**
OJC	**Ojcow**	**63.55**	**316**	P	**P**	**08 44 27.2**	**-0.1**
OJC				pmax	pmax		
	comp=Z,34nm,0.9s						
OJC	**Ojcow**	**63.55**	**316**	P	**P**	**08 44 27.1**	**-0.1**
OJC				IAmb	IAmb	08 44 31.2	
	comp=Z,34nm,0.9s						
PVO	**Paravola**	**63.56**	**303**	P	**P**	**08 44 27.0**	**-0.5**
HOPEN	**Hopen**	**63.61**	**346**	*e*P	**P**	**08 44 28.0**	**+0.8**
PSZ	**Piszkesteto**	**63.66**	**314**	⇓P	**P**	**08 44 28.7**	**+0.6**
PSZ	**Piszkesteto**	**63.66**	**314**	*e*P	**P**	**08 44 28.1**	**0.0**
PSZ	**Piszkesteto**	**63.66**	**314**	P	**P**	**08 44 28.1**	**0.0**
PSZ				pmax	pmax		
	comp=Z,32nm,1.1s						
PSZ	**Piszkesteto**	**63.66**	**314**	P	**P**	**08 44 28.1**	**0.0**
PSZ				IAmb	IAmb	08 44 31.6	
	comp=Z,32nm,1.1s						
NEST	**Nestorio**	**63.67**	**305**	P	**P**	**08 44 27.7**	**-0.6**
JETT	**Jettan, Norway**	**63.68**	**338**	*e*P	**P**	**08 44 28.5**	**+0.7**
LANS	**Liptovska Anna**	**63.84**	**315**	*e*P	**P**	**08 44 30.0**	**+0.8**
LANS				pmax	pmax		
	comp=Z,9.0nm,1.0s						
LANS	**Liptovska Anna**	**63.84**	**315**	*e*P	**P**	**08 44 30.0**	**+0.8**
DIVS	**Divibare**	**63.98**	**309**	*e*P	**P**	**08 44 29.7**	**-0.6**
DIVS	**Divibare**	**63.98**	**309**	P	**P**	**08 44 29.6**	**-0.7**
DIVS				IAmb	IAmb	08 44 35.1	
	comp=Z,46nm,0.9s						
FRGS	**Fruska Gora**	**63.99**	**311**	⇓P	**P**	**08 44 30.7**	**+0.4**
FRGS	**Fruska Gora**	**63.99**	**311**	*e*P	**P**	**08 44 30.1**	**-0.2**
LSK	**Leskovik**	**64.05**	**305**	P	**P**	**08 44 30.1**	**-0.7**
TRO	**Tromso**	**64.20**	**338**	*e*P	**P**	**08 44 31.0**	**-0.1**
TEKS	**Tekeris**	**64.26**	**310**	*e*P	**P**	**08 44 30.4**	**-1.6**
VOI	**Vohitsoka**	**64.26**	**230**	P	**P**	**08 44 32.4**	**0.0**
VOI				IAmb	IAmb	08 44 35.3	
	comp=Z,39nm,0.8s						
VYHS	**Vyhne**	**64.32**	**314**	*e*P	**P**	**08 44 32.3**	**0.0**
VYHS				pmax	pmax		
	comp=Z,22nm,0.9s						
VYHS	**Vyhne**	**64.32**	**314**	*e*P	**P**	**08 44 32.3**	**0.0**
UPP	**Uppsala**	**64.40**	**327**	*e*P	**P**	**08 44 32.7**	**+0.1**
BBLS	**Lazići**	**64.43**	**309**	*e*P	**P**	**08 44 32.9**	**-0.3**
OKC	**Ostrava-Krasne**	**64.64**	**316**	*e*P	**P**	**08 44 35.1**	**+0.7**
OKC	**Ostrava-Krasne**	**64.64**	**316**	*e*P	**P**	**08 44 35.1**	**+0.7**
SRO2	**Moca**	**64.68**	**314**	*e*P	**P**	**08 44 34.4**	**-0.3**
SRO2	**Moca**	**64.68**	**314**	*e*P	**P**	**08 44 34.4**	**-0.3**
MORH	**Mrgy, Hungar**	**64.69**	**312**	*e*P	**P**	**08 44 34.8**	**0.0**
MORH	**Mrgy, Hungar**	**64.69**	**312**	*e*P	**P**	**08 44 34.3**	**-0.4**
BJO1	**Bjornoya**	**64.71**	**343**	*e*P	**P**	**08 44 35.5**	**+1.1**
HAPS	**Han Pijesak,Bl**	**64.73**	**309**	*e*P	**P**	**08 44 35.3**	**+0.1**
PDG	**Podgorica**	**64.73**	**308**	*e*P	**P**	**08 44 34.7**	**-0.4**
SRO	**Srobarova**	**64.73**	**314**	*e*P	**P**	**08 44 35.4**	**+0.4**
SRO	**Srobarova**	**64.73**	**314**	*e*P	**P**	**08 44 35.4**	**+0.4**
CSKK	**Cskako**	**64.82**	**313**	*e*P	**P**	**08 44 36.0**	**+0.4**
DRME	**Dracevica, Mon**	**64.82**	**307**	*e*P	**P**	**08 44 35.3**	**-0.4**
MORC	**Moravsky Berou**	**65.04**	**316**	⇑P	**P**	**08 44 37.4**	**+0.3**
MORC	**Moravsky Berou**	**65.04**	**316**	P	**P**	**08 44 37.0**	**-0.1**
MORC				pmax	pmax		
	comp=Z,31nm,1.0s						
MORC	**Moravsky Berou**	**65.04**	**316**	*e*P	**P**	**08 44 37.3**	**+0.2**
MORC	**Moravsky Berou**	**65.04**	**316**	P	**P**	**08 44 37.0**	**-0.1**
MORC				IAmb	IAmb	08 44 38.5	
	comp=Z,31nm,0.9s						
KOVH	**Kovagotottos**	**65.08**	**312**	*e*P	**P**	**08 44 37.0**	**-0.3**
BRY	**Bratogost**	**65.19**	**308**	*e*P	**P**	**08 44 37.7**	**-0.6**
N2IH	**Innhavet**	**65.19**	**336**	*e*P	**P**	**08 44 37.3**	**-0.3**
SMOL	**Smolenice**	**65.25**	**314**	*e*P	**P**	**08 44 38.4**	**0.0**
SMOL	**Smolenice**	**65.25**	**314**	*e*P	**P**	**08 44 38.4**	**0.0**
N2ST	**Straumen**	**65.31**	**335**	*e*P	**P**	**08 44 38.1**	**-0.3**
MPLH	**Magyarpolny**	**65.33**	**313**	*e*P	**P**	**08 44 38.7**	**-0.2**
TREB	**Trebinje**	**65.35**	**308**	*e*P	**P**	**08 44 38.3**	**-0.9**
MODS	**Modra-Piesok**	**65.36**	**314**	*e*P	**P**	**08 44 38.1**	**-1.0**
MODS				pmax	pmax		
	comp=Z,28nm,1.1s						
MODS	**Modra-Piesok**	**65.36**	**314**	*e*P	**P**	**08 44 38.1**	**-1.0**
FAUS	**Fauske**	**65.43**	**335**	*e*P	**P**	**08 44 38.8**	**-0.4**
STEI	**Steigen**	**65.45**	**336**	*e*P	**P**	**08 44 38.9**	**-0.4**
KRLC	**Kraliky**	**65.50**	**316**	*e*P	**P**	**08 44 40.4**	**+0.4**
KRLC				AMS	AMS	09 17 20.0	
	comp=Z,800nm,14.9s						
KRLC	**Kraliky**	**65.50**	**316**	*e*P	**P**	**08 44 40.4**	**+0.4**
KRLC				MLR	MLR		
	comp=Z,800nm,14.9s						
ZST	**Bratislava**	**65.50**	**314**	*e*P	**P**	**08 44 40.2**	**+0.2**
ZST	**Bratislava**	**65.50**	**314**	*e*P	**P**	**08 44 40.2**	**+0.2**
BLEU	**Blekinge**	**65.52**	**323**	*i* P	**P**	**08 44 39.7**	**-0.3**
NBB08	**Skaug oppvekst**	**65.68**	**335**	*e*P	**P**	**08 44 40.8**	**0.0**
CTAO	**Charters Tower**	**65.70**	**126**	P	**P**	**08 44 42.5**	**+0.8**
CTAO				pmax	pmax		
	comp=Z,89nm,1.5s						
CTAO	**Charters Tower**	**65.70**	**126**	P	**P**	**08 44 42.5**	**+0.8**
CTAO				IAmb	IAmb	08 44 45.1	
	comp=Z,89nm,1.5s						
VRAC	**Vranov**	**65.70**	**315**	⇑P	**P**	**08 44 42.1**	**+0.8**
VRAC	**Vranov**	**65.70**	**315**	P	**P**	**08 44 41.9**	**+0.6**
	comp=Z,48nm,0.8s,baz=93,slow=6.3,SNR=36						
VRAC	**Vranov**	**65.70**	**315**	*e*P	**P**	**08 44 41.9**	**+0.6**
KSP	**Ksiaz**	**65.72**	**317**	*e*P	**P**	**08 44 41.8**	**+0.4**
NBB28	**Valnes**	**65.75**	**335**	*e*P	**P**	**08 44 40.9**	**-0.3**
DPC	**Dobruska-Polom**	**65.76**	**317**	*e*P	**P**	**08 44 42.1**	**+0.4**
DPC				AMS	AMS	09 17 30.0	
	comp=Z,700nm,15.3s						
DPC	**Dobruska-Polom**	**65.76**	**317**	*e*P	**P**	**08 44 42.1**	**+0.4**
DPC				MLR	MLR		
	comp=Z,700nm,15.3s						
SPA0	**Spitsbergen Ar**	**65.78**	**347**	*e*P	**P**	**08 44 41.7**	**+0.3**
SPITS	**Spitsbergen Ar**	**65.78**	**347**	P	**P**	**08 44 40.8**	**-0.5**
	comp=Z,4.7nm,0.5s,baz=100,slow=8.9,SNR=7.2						
STON	**Ston**	**65.80**	**308**	*e*P	**P**	**08 44 40.1**	**-1.9**
OSTC	**Ostas**	**65.80**	**317**	*e*P	**P**	**08 44 42.3**	**+0.3**
KRUC	**Moravsky**	**65.86**	**315**	*e*P	**P**	**08 44 42.5**	**+0.2**
BLY	**Banja Luka**	**65.89**	**310**	*e*P	**P**	**08 44 42.0**	**-0.6**
CHVC	**Chvalec**	**65.90**	**317**	*e*P	**P**	**08 44 43.0**	**+0.4**
NBB05	**Inndyr**	**65.92**	**335**	*e*P	**P**	**08 44 42.2**	**-0.2**
SOP	**Sopron**	**65.92**	**314**	*e*P	**P**	**08 44 42.6**	**-0.1**
UPC	**Upice**	**65.94**	**317**	*e*P	**P**	**08 44 43.3**	**+0.5**
UPC				AMS	AMS	09 17 30.0	
	comp=Z,1µm,13.8s						
UPC	**Upice**	**65.94**	**317**	*e*P	**P**	**08 44 43.3**	**+0.5**
UPC				MLR	MLR		
	comp=Z,1µm,13.8s						
NBB17	**Glomfjord B¥r**	**65.95**	**335**	*e*P	**P**	**08 44 42.4**	**-0.1**
MGRS	**Mrkonjic Grad**	**66.01**	**310**	*e*P	**P**	**08 44 41.7**	**-1.7**
NBB30	**Finnes**	**66.04**	**335**	*e*P	**P**	**08 44 42.8**	**-0.3**
LOF	**Lofoten**	**66.09**	**336**	*e*P	**P**	**08 44 42.3**	**-1.2**
KONS	**Konsvik**	**66.29**	**334**	*e*P	**P**	**08 44 45.0**	**+0.3**
KOGS	**Kog**	**66.30**	**312**	*i* P	**P**	**08 44 45.3**	**+0.1**
STOK	**Stokkvaagen**	**66.34**	**334**	*e*P	**P**	**08 44 45.8**	**+0.7**
MBAR	**Mbarara**	**66.34**	**259**	*ce*P	**P**	**08 44 47.4**	**+1.2**
MBAR	**Mbarara**	**66.34**	**259**	P	**P**	**08 44 46.5**	**+0.3**
MBAR				IAmb	IAmb	08 44 55.3	
	comp=Z,30nm,1.1s						
MBAR	**Mbarara**	**66.34**	**259**	IAMs_20	IAMs_20	09 14 19.6	
	comp=Z,801nm,20.0s						
CONA	**Conrad Observa**	**66.36**	**314**	*i* P	**P**	**08 44 45.8**	**+0.2**
	comp=Z,48nm,1.3s,SNR=9.5						
HFS	**Hagfors**	**66.37**	**327**	P	**P**	**08 44 45.0**	**-0.3**
	comp=Z,49nm,0.7s,baz=104,slow=6.3,SNR=52						
DEL	**Delary**	**66.58**	**323**	*i* P	**P**	**08 44 46.0**	**-0.8**
DEL				*i* P	**pP**	**08 44 46.5**	**-7.6**
ARSA	**Arzberg**	**66.68**	**313**	*e*P	**P**	**08 44 47.6**	**-0.1**
	comp=Z,18nm,0.8s						
NSS	**Namsos**	**66.87**	**332**	*e*P	**P**	**08 44 47.8**	**-0.7**
CRES	**Cresnjev**	**66.94**	**312**	*e*P	**P**	**08 44 49.5**	**+0.2**
CRES	**Cresnjev**	**66.94**	**312**	*i* P	**P**	**08 44 49.7**	**+0.4**
PRU	**Pruhonice**	**66.94**	**316**	*e*P	**P**	**08 44 49.5**	**+0.3**
PRU				AMS	AMS	09 18 00.0	
	comp=Z,900nm,15.0s						
PRU	**Pruhonice**	**66.94**	**316**	*e*P	**P**	**08 44 49.5**	**+0.3**
PRU				MLR	MLR		
	comp=Z,900nm,15.0s						
BORU	**Boraas**	**67.06**	**325**	*i* P	**P**	**08 44 49.6**	**-0.2**
RUE	**Ruedersdorf**	**67.09**	**319**	*e*P	**P**	**08 44 50.6**	**+0.6**
RUE	**Ruedersdorf**	**67.09**	**319**	*e*P	**P**	**08 44 50.2**	**+0.1**
	comp=Z,75nm,0.8s,baz=80,slow=6.2						
SOKA	**Soboth**	**67.10**	**313**	*e*P	**P**	**08 44 50.6**	**+0.2**
	comp=Z,24nm,0.9s						
TIP	**Timpagrande**	**67.13**	**304**	⇓P	**P**	**08 44 51.0**	**+0.2**
BRG	**Berggiesshubel**	**67.20**	**317**	*e*P	**P**	**08 44 51.2**	**+0.3**
	comp=Z,34nm,0.8s,baz=80,slow=6.2						
BRG	**Berggiesshubel**	**67.20**	**317**	⇑*i*PKP	**P**	**08 44 51.2**	**+0.3**
BRG				Amp		08 44 54.4	
	comp=Z,27nm,0.7s						
BRG	**Berggiesshubel**	**67.20**	**317**	P	P	08 44 57.9	+7.0
BRG				Amp		08 44 59.8	
	comp=Z,12nm,0.7s						
BRG				Amp		09 18 07.0	
	comp=N,0.2nm,17.7s						
BRG				Amp		09 18 08.0	
	comp=Z,1.3nm,15.3s						
BRG				Amp		09 18 19.0	
	comp=E,0.7nm,15.1s						
CKRC	**Cesky Krumlov**	**67.26**	**315**	*e*P	**P**	**08 44 52.7**	**+1.4**
CKRC				AMS	AMS	09 18 30.0	
	comp=E,600nm,13.5s						
NC602	**NORSAR Array S**	**67.38**	**328**	*e*P	**P**	**08 44 51.3**	**-0.5**
MOA	**Molln**	**67.43**	**314**	*i* P	**P**	**08 44 52.4**	**0.0**
	comp=E,31nm,0.7s,SNR=12						
OBKA	**Obir**	**67.45**	**313**	*e*P	**P**	**08 44 52.8**	**+0.1**
	comp=E,24nm,0.9s						
NB2	**NORSAR Subarra**	**67.51**	**328**	P	**P**	**08 44 51.6**	**-1.1**
	comp=Z,14nm,0.6s,baz=84,slow=6.5						
NOA	**NORSAR Array B**	**67.51**	**328**	P	**P**	**08 44 51.8**	**-0.9**
	comp=Z,23nm,0.7s,baz=85,slow=6.3,SNR=60						
NOA				LR	LR	09 16 27.2	
	comp=Z,1µm,20.0s,baz=90,slow=38						
LJU	**Ljubljana**	**67.54**	**312**	*e*P	**P**	**08 44 52.5**	**-0.6**
FBE	**Freiberg**	**67.56**	**317**	*e*P	**P**	**08 44 53.9**	**+0.7**
	comp=Z,57nm,0.9s,baz=80,slow=6.2						
GEC2	**GERESS Array S**	**67.65**	**315**	*e*P	**P**	**08 44 54.1**	**+0.2**
	comp=Z,47nm,0.9s,baz=80,slow=6.2						
GEC2				*e*L	L	09 18 33.7	
	comp=Z,399nm,19.6s						
GEC2	**GERESS Array S**	**67.65**	**315**	P	**P**	**08 44 53.6**	**-0.3**
GEC2				IAmb	IAmb	08 44 57.2	
	comp=Z,37nm,0.8s						
GERES	**GERESS Array B**	**67.65**	**315**	P	**P**	**08 44 54.1**	**+0.2**
	comp=Z,28nm,0.7s,baz=79,slow=6.9,SNR=151						
GERES				LR	LR	09 19 54.8	
	comp=Z,460nm,18.4s,baz=84,slow=41						
GERES	**GERESS Array B**	**67.65**	**315**	P	**P**	**08 44 53.9**	**0.0**
BBOO	**Buckleboo**	**67.65**	**143**	P	**P**	**08 44 53.5**	**-0.4**
	baz=68,SNR=23						
BBOO	**Buckleboo**	**67.65**	**143**	P	**P**	**08 44 53.5**	**-0.4**
BBOO				IAmb	IAmb	08 44 54.5	
	comp=Z,28nm,0.8s						
CEY	**Cerknica**	**67.66**	**312**	*e*P	**P**	**08 44 53.9**	**0.0**
CEY	**Cerknica**	**67.66**	**312**	*i* P	**P**	**08 44 54.1**	**+0.2**
KHC	**Kasperske Hory**	**67.69**	**315**	*e*P	**P**	**08 44 54.1**	**0.0**
KHC	**Kasperske Hory**	**67.69**	**315**	*c i*P	**P**	**08 44 54.2**	**+0.2**
KHC				pmax	pmax		
	comp=Z,53nm,1.1s						
KHC	**Kasperske Hory**	**67.69**	**315**	P	**P**	**08 44 54.0**	**0.0**
CLL	**Collm**	**67.72**	**318**	⇑*i*P	**P**	**08 44 54.4**	**+0.3**
	comp=Z,30nm,1.2s						
CLL				*e*PP	**PP**	**08 47 24.0**	**+0.7**
CLL				*e*S	**S**	**08 53 54.0**	**+3.5**
CLL				*e*PPS	PPS	08 54 30.0	
CLL				*e*SS	SS	08 58 00.0	-11
CLL				*e*		08 59 48.0	
CLL				*e*SSS	SSS	09 01 18.0	
CLL				*e*SSSS		09 02 18.0	
CLL				Lm	MLR	09 18 00.0	
	comp=Z,1µm,18.4s						
CLL	**Collm**	**67.72**	**318**	⇑*i*P	**P**	**08 44 54.4**	**+0.3**
CLL				pmax	pmax		
	comp=Z,30nm,1.2s						
CLL				MLR	MLR		
	comp=Z,1µm,18.4s						
CLL	**Collm**	**67.72**	**318**	*e*P	**P**	**08 44 53.9**	**-0.2**
	comp=Z,30nm,1.2s,baz=80,slow=6.2						
CLL				*e*L	L	09 18 24.5	
	comp=Z,1µm,18.4s						
CLL	**Collm**	**67.72**	**318**	P	**P**	**08 44 54.3**	**+0.1**
CLL				IAmb	IAmb	08 44 56.7	
	comp=Z,42nm,1.3s						
TBLU	**Trondheim**	**67.73**	**331**	*e*P	**P**	**08 44 53.0**	**-0.9**
STRU	**Stroemstad**	**67.74**	**326**	*i* P	**P**	**08 44 53.3**	**-0.8**
OSL	**Oslo**	**67.87**	**327**	*e*P	**P**	**08 44 55.0**	**+0.1**
WET	**Wettzell**	**68.14**	**316**	*e*P	**P**	**08 44 57.2**	**+0.4**
	comp=Z,34nm,1.0s,baz=80,slow=6.2						
WET				*e*L	L	09 16 21.9	
	comp=Z,389nm,20.1s						
KBA	**Koelnbreinsper**	**68.17**	**313**	*e*P	**P**	**08 44 56.6**	**-0.7**
	comp=Z,25nm,0.8s						
TANN	**Tannenbergstha**	**68.20**	**317**	*e*P	**P**	**08 44 57.5**	**+0.3**
	comp=Z,27nm,0.9s,baz=80,slow=6.2						
NKC	**Novy Kostel**	**68.24**	**317**	*e*P	**P**	**08 44 57.9**	**+0.5**
NKC	**Novy Kostel**	**68.24**	**317**	*e*P	**P**	**08 44 57.9**	**+0.5**

WERN	Wernitzgruen	68.27	317	*e*P	P	08 44 58.1	+0.4
	comp=Z,27nm,0.9s,baz=80,slow=6.2						
GUNZ	Gunzen	68.29	317	*e*P	P	08 44 58.2	+0.4
	comp=Z,43nm,1.0s,baz=80,slow=6.2						
WERD	Werda	68.29	317	*e*P	P	08 44 58.1	+0.4
	comp=Z,29nm,0.8s,baz=80,slow=6.2						
QLP	Quilpie	68.34	133	P	P	08 44 59.4	+1.1
	baz=68,SNR=17						
PLN	Plauen	68.38	317	*e*P	P	08 44 58.4	+0.1
	comp=Z,25nm,0.9s,baz=80,slow=6.2						
DOMB	Dombas	68.42	330	*e*P	P	08 44 58.2	-0.1
ROTZ	Rotzenmuhle	68.47	316	*e*P	P	08 44 59.8	+0.9
	comp=Z,16nm,0.8s,baz=80,slow=6.2						
KONO	Kongsberg	68.47	327⇑	*e*P	P	08 44 57.7	-1.0
KONO				pmax	pmax		
	comp=Z,86nm,2.5s						
KONO	Kongsberg	68.47	327	*e*P	P	08 44 58.5	-0.2
MANZ	Manzenberg	68.49	317	*e*P	P	08 44 59.6	+0.6
	comp=Z,7.7nm,0.9s,baz=80,slow=6.2						
NEUB	Neuenburg	68.50	318	*e*P	P	08 44 59.3	+0.2
	comp=Z,50nm,0.9s,baz=80,slow=6.2						
FLTG	Flechtingen	68.65	319	*e*P	P	08 44 59.6	-0.3
	comp=Z,22nm,0.9s,baz=80,slow=6.2						
MOX	Moxa	68.69	317	*e*P	P	08 45 00.4	+0.1
	comp=Z,465nm,3.5s,baz=80,slow=6.2						
MOX				*e*L	L	09 18 05.5	
	comp=Z,650nm,20.1s						
STAL	STALIGIAL	68.75	313	P	P	08 45 00.2	-0.6
STAL				IAmb	IAmb	08 45 01.0	
	comp=Z,55nm,0.9s						
ABTA	Abfaltersbach	68.79	313	*e*P	P	08 45 00.1	-1.0
	comp=Z,30nm,1.0s						
BSEG	Bad Segeberg	68.94	321	*e*P	P	08 45 02.3	+0.6
	comp=Z,58nm,0.8s,baz=80,slow=6.2						
BSEG				*e*L	L	09 18 28.6	
	comp=Z,854nm,21.1s						
SKAR	Skarslia	68.97	328	*e*P	P	08 45 02.3	+0.5
AQU	L'Aquila	69.02	308	*e*P	P	08 44 53.6	-8.9
MOL	Molde	69.05	330	*e*P	P	08 45 02.5	+0.3
GRA1	Grafenberg Arr	69.11	316	IAMs_20	IAMs_20	09 18 23.8	
	comp=Z,707nm,20.0s						
GRF	Grafenberg Arr	69.11	316	*e*P	P	08 45 03.5	+0.6
	comp=Z,113nm,1.8s,baz=80,slow=6.2						
GRF				*e*L	L	09 19 06.2	
	comp=Z,890nm,19.5s						
GRFO	Grafenberg	69.11	316	IAMs_20	IAMs_20	09 18 23.8	
	comp=Z,729nm,20.0s						
NRCA	Norcia	69.13	309	P	P	08 45 03.5	+0.3
CLZ	Clausthal	69.26	319	*e*P	P	08 45 04.2	+0.4
	comp=Z,53nm,1.0s,baz=80,slow=6.2						
WTTA	Wattenberg	69.29	314	*i* P	P	08 45 03.4	-0.8
	comp=Z,44nm,1.2s,SNR=6.6						
NRDL	Niedersach Rie	69.30	319	*e*P	P	08 45 04.6	+0.7
	comp=Z,69nm,1.3s,baz=80,slow=6.2						
WATA	Walderalm	69.31	314	*e*P	P	08 45 03.6	-0.8
	comp=Z,24nm,0.7s						
FUR	Furstenfeldbru	69.36	315	*e*L	L	09 19 48.6	
	comp=Z,536nm,18.0s						
AKN	Aaknes	69.36	330	*e*P	P	08 45 04.9	+0.7
MURB	Monte Urbino	69.46	309	P	P	08 45 06.3	+1.0
GTTG	Gottingen	69.56	318	*e*P	P	08 45 06.0	+0.4
	comp=Z,32nm,0.8s,baz=80,slow=6.2						
SQTA	Sankt Quirin	69.58	314	*i* P	P	08 45 05.0	-1.0
	comp=Z,32nm,0.7s,SNR=7.2						
MOTA	Moosalm	69.63	314	*i* P	P	08 45 05.5	-0.8
	comp=Z,52nm,0.9s,SNR=13						
TEOL	Teolo	69.64	312	P	P	08 45 06.0	-0.3
TEOL				IAmb	IAmb	08 45 07.5	
	comp=Z,43nm,0.8s						
HTT	Hallett	69.73	142	P	P	08 45 07.0	+0.2
	baz=70,SNR=7.4						
RETA	Reutte	69.83	314	*i* P	P	08 45 07.0	-0.5
	comp=Z,44nm,0.8s,SNR=9.2						
FETA	Feichten	69.94	314	*i* P	P	08 45 07.6	-0.7
	comp=Z,30nm,0.9s,SNR=9.2						
STKA	Stephens Creek	70.21	139	P	P	08 45 09.7	-0.1
	comp=Z,16nm,0.8s,baz=326,slow=7.5,SNR=24						
STKA				LR	LR	09 20 36.0	
	comp=Z,593nm,19.8s,baz=301,slow=40						
STKA	Stephens Creek	70.21	139	P	P	08 45 08.5	-1.3
UBR	Ueberruh	70.22	314	*e*P	P	08 45 09.4	-0.5
	comp=Z,28nm,0.9s,baz=80,slow=6.2						
SALO	Salr	70.37	312	P	P	08 45 10.7	0.0
DAVA	Damuels	70.45	314	*i* P	P	08 45 11.0	-0.4
	comp=Z,37nm,0.9s,SNR=9.6						
DAVOX	Davos/Dischmat	70.56	313	P	P	08 45 11.7	-0.4
	comp=Z,28nm,0.7s,baz=113,slow=6.2,SNR=42						
STU	Stuttgart	70.59	316	*e*P	P	08 45 12.3	+0.3
	comp=Z,135nm,0.9s,baz=80,slow=6.2						
TNS	Taunus Mts	70.76	317	*e*P	P	08 45 13.3	+0.2
	comp=Z,37nm,1.0s,baz=80,slow=6.2						
TNS				*e*L	L	09 20 09.4	
	comp=Z,590nm,18.8s						
VLC	Villacollemand	70.79	311	P	P	08 45 14.4	+1.1
VLC				IAmb	IAmb	08 45 15.3	
	comp=Z,62nm,1.1s						
NOR	Nord	70.97	352	*i* P	P	08 45 11.8	-2.0
BUG	Bochum--Univer	71.23	319	*e*P	P	08 45 16.2	+0.4
	comp=Z,31nm,0.9s,baz=80,slow=6.2						
BFO	Black Forest	71.25	315	*e*P	P	08 45 15.7	-0.4
	comp=Z,12nm,0.9s,baz=80,slow=6.2						
BFO				*e*L	L	09 21 44.0	
	comp=Z,557nm,19.3s						
HNR	Honiara	71.27	109	P	P	08 45 16.4	-0.2
HNR				pmax	pmax		
	comp=Z,204nm,0.9s						
HNR	Honiara	71.27	109	P	P	08 45 16.4	-0.2
HNR				IAMs_20	IAMs_20	09 11 21.2	
	comp=Z,687nm,19.0s						
RMQ	Roma	71.42	130	P	P	08 45 19.0	+1.7
	baz=72,SNR=29						
AHRW	Bad Neuenahr-A	71.55	318	*e*P	P	08 45 18.2	+0.4
	comp=Z,35nm,1.1s,baz=80,slow=6.2						
BTNL	Ternell	72.13	318	*b*P	P	08 45 21.2	-0.1
	comp=Z,17nm,0.9s						
MEM	Membach	72.20	318	*d*P	P	08 45 21.3	-0.4
	comp=Z,15nm,1.0s						
BHOU	Houvegnez	72.26	318	*d*P	P	08 45 22.3	+0.3
	comp=Z,14nm,1.1s						
WLF	Walferdange	72.33	317	*d*P	P	08 45 23.5	+1.0
	comp=Z,66nm,1.0s						
WLF	Walferdange	72.33	317	P	P	08 45 23.1	+0.6
WLF				pmax	pmax		
	comp=Z,90nm,0.9s						
WLF	Walferdange	72.33	317	*e*P	P	08 45 23.3	+0.8
	comp=Z,120nm,1.0s,baz=80,slow=6.2						
WLF	Walferdange	72.33	317	P	P	08 45 23.1	+0.6
CMSA	Cobar Meteorol	72.55	136	P	P	08 45 24.4	+0.5
	baz=73,SNR=152						
BCLA	Clavier	72.68	318	*d*P	P	08 45 24.6	+0.1
RCHB	Rochefort	72.79	318	*b*P	P	08 45 25.0	-0.2
	comp=Z,14nm,0.8s						
BGES	Gesves	72.82	318	κP	P	08 45 25.6	+0.2
BMRD	Maredsous	73.04	318	*d*P	P	08 45 26.5	-0.2
	comp=Z,17nm,0.8s						
BNI	Bardonecchia	73.14	312	P	P	08 45 27.3	-0.2
BNI				pmax	pmax		
	comp=Z,44nm,1.2s						
BNI	Bardonecchia	73.14	312	P	P	08 45 27.3	-0.2
BNI				IAmb	IAmb	08 45 30.5	
	comp=Z,44nm,1.2s						
DOU	Dourbes	73.20	318	*d*P	P	08 45 27.8	+0.2
	comp=Z,11nm,1.2s						
SNF	Seneffe	73.29	318	*d*P	P	08 45 28.3	+0.2
KEST	Kesra	73.67	302	P	P	08 45 31.4	+0.6
	comp=Z,57nm,1.0s,baz=17,slow=1.6,SNR=18						
KEST				LR	LR	09 24 23.8	
	comp=Z,155nm,18.8s,baz=247,slow=41						
ARPS	Mount Arapiles	73.78	142	P	P	08 45 31.6	+0.5
	baz=74,SNR=7.4						
A21K	Barrow	74.66	18	P	P	08 45 34.8	-1.0
	baz=295,SNR=9.2						
A21K	Barrow	74.66	18	P	P	08 45 34.7	-1.0
KRI	Karoi	74.75	244	*e*P	P	08 45 37.4	0.0
KRI	Karoi	74.75	244	*e*P	P	08 45 37.4	0.0
LSZ	Lusaka	75.20	246	P	P	08 45 40.5	+0.6
LSZ				pmax	pmax		
	comp=Z,45nm,0.7s						
LSZ				MLR	MLR		
	comp=Z,600nm,19.0s						
LSZ	Lusaka	75.20	246	P	P	08 45 40.5	+0.6
LSZ				IAmb	IAmb	08 45 43.5	
	comp=Z,45nm,0.7s						
LSZ	Lusaka	75.20	246	IAMs_20	IAMs_20	09 20 42.9	
	comp=Z,610nm,19.0s						
CLF	Chambon-Foret	75.25	316	P	P	08 45 39.2	-0.4
CLF				IAmb	IAmb	08 45 40.6	
	comp=Z,74nm,1.0s						
ARMA	Armidale	75.80	132	P	P	08 45 44.9	+1.8
	baz=76,SNR=4.9						
ARMA	Armidale	75.80	132	P	P	08 45 42.3	-0.8
ARMA				IAmb	IAmb	08 45 51.8	
	comp=Z,51nm,1.2s						
EKA	Eskdalemuir Ar	76.17	324	P	P	08 45 44.6	-0.1
	comp=Z,17nm,0.7s,baz=75,slow=5.7,SNR=23						
ESK	Eskdalemuir	76.20	324	P	P	08 45 44.8	-0.1
ESK				pmax	pmax		
	comp=Z,32nm,0.9s						
ESK	Eskdalemuir	76.20	324	P	P	08 45 44.8	-0.1
ESK				IAmb	IAmb	08 45 45.8	
	comp=Z,32nm,0.9s						
TOO	Toolangi	76.44	141	P	P	08 45 47.1	+0.6
	baz=77,SNR=7.6						
TOO	Toolangi	76.44	141	P	P	08 45 46.8	+0.3
TOO				pmax	pmax		
	comp=Z,17nm,0.9s						
TOO	Toolangi	76.44	141	P	P	08 45 46.8	+0.3
MOPA	Mopani	76.71	237	*e*P	P	08 45 48.6	+0.4
MOPA	Mopani	76.71	237	*e*P	P	08 45 48.6	+0.4
CAN	Canberra	77.10	137	P	P	08 45 50.3	+0.1
CAN				pmax	pmax		
	comp=Z,86nm,1.5s						
CAN	Canberra	77.10	137	P	P	08 45 50.3	+0.1
CAN				IAmb	IAmb	08 45 51.7	
	comp=Z,86nm,1.5s						
MSNA	Messina	77.18	239	*e*P	P	08 45 51.6	+0.6
MSNA	Messina	77.18	239	*e*P	P	08 45 51.6	+0.6
CNB	Canberra Magne	77.32	137	P	P	08 45 51.9	+0.3
	baz=77,SNR=4.3						
GCSA	Galena City Sc	77.39	25	P	P	08 45 50.6	-0.9
	baz=296						
EUNU	Eureka	77.68	0	P	P	08 45 52.4	-0.5
IMAR	Indian Mountai	78.00	23	P	P	08 45 53.5	-1.3
TOLK	Toolik Lake Re	78.07	20	P	P	08 45 54.4	-0.8
	baz=302,SNR=7.1						
TOLK	Toolik Lake Re	78.07	20	P	P	08 45 54.4	-0.8
NEEM	North Greenlan	78.27	353	*i* P	P	08 45 54.8	-1.7
NEEM				IAmb	IAmb	08 46 04.0	
	comp=Z,25nm,0.9s						
H21K	Melozitna Rive	78.49	23	P	P	08 45 56.8	-0.8
	baz=299						
H21K	Melozitna Rive	78.49	23	P	P	08 45 56.9	-0.8
TTA	Tatalina	78.55	26	P	P	08 45 57.5	-0.6
	baz=297						
COLD	Coldfoot	78.60	21	P	P	08 45 57.1	-1.1
	baz=301						
COLD	Coldfoot	78.60	21	P	P	08 45 58.1	-0.1
J20K	Nowinta River	78.71	25	P	P	08 45 58.3	-0.4
	baz=298						
J20K	Nowinta River	78.71	25	P	P	08 45 58.5	-0.3
CRZF	Crozet Islands	78.80	209	P	P	08 45 59.5	+0.2
CRZF				IAmb	IAmb	08 46 00.5	
	comp=Z,64nm,0.7s						
I21K	Tanana	79.03	23	P	P	08 45 58.7	-1.8
	baz=300						
I21K	Tanana	79.03	23	P	P	08 46 00.6	0.0
K20K	Telida	79.13	25	P	P	08 46 01.0	-0.1
	baz=298						
K20K	Telida	79.13	25	P	P	08 46 01.1	-0.1
L19K	White Mountain	79.37	27	P	P	08 46 02.3	-0.2
	baz=298						
L19K	White Mountain	79.37	27	P	P	08 46 02.7	+0.2
CHUM	Lake Minchumin	79.56	24	P	P	08 46 03.0	-0.4
	baz=300						
MLY	Manley	79.56	23	P	P	08 46 02.8	-0.7
	baz=301						
SVW2	Sparrevohn	79.58	28	P	P	08 46 03.2	-0.4
L20K	Farewell, AK	79.63	26	P	P	08 46 03.4	-0.5
	baz=299						
CAST	Castle Rocks	79.88	25	P	P	08 46 04.6	-0.6
	baz=300						
BPAW	Bear Paw Mtn.	79.95	24	P	P	08 46 04.7	-0.9
	baz=301						
BPAW	Bear Paw Mtn.	79.95	24	P	P	08 46 05.3	-0.3
I23K	Minto, Yukon-K	80.00	23	P	P	08 46 05.0	-0.7
	baz=302						
I23K	Minto, Yukon-K	80.00	23	P	P	08 46 05.4	-0.4
PPLA	Purkeypile	80.10	25	P	P	08 46 06.2	-0.4
	baz=300						
SUMG	Summit	80.12	347	P	P	08 46 06.2	-0.6
SUMG				pmax	pmax		
	comp=Z,24nm,1.1s						
SUMG	Summit	80.12	347	*i* P	P	08 46 05.0	-1.8
SUMG	Summit	80.12	347	P	P	08 46 06.2	-0.6
H24K	Noodor Dome	80.14	22	P	P	08 46 05.8	-0.8
	baz=304						
BMAR	Burnt Mountain	80.30	20	P	P	08 46 07.9	+0.4
MDM	Murphy Dome	80.50	23	P	P	08 46 07.7	-0.9
TCOL	CIGO, UAF Yank	80.68	23	P	P	08 46 08.8	-0.6
	baz=304						
COLA	College	80.68	23⇓	*e*P	P	08 46 08.4	-1.0
COLA				pmax	pmax		
	comp=Z,20nm,1.3s						
POKR	Poker Plat Res	80.69	22	P	P	08 46 08.8	-0.8
	baz=304,SNR=10						
POKR	Poker Plat Res	80.69	22	P	P	08 46 08.5	-1.1
TULEG	Thule	80.70	356	*e*P	P	08 46 08.0	-1.4
MCK	McKinley	80.92	24	P	P	08 46 10.2	-0.6
	baz=303						
ILAR	Eielson Array	81.08	22	P	P	08 46 09.3	-2.3
	comp=Z,3.8nm,0.7s,baz=295,slow=4.5,SNR=47						
ILAR				PKKPbc	PKKPbc	09 04 47.0	-2.6
	comp=Z,0.5nm,0.6s,baz=152,slow=1.6,SNR=8.2						
ILAR				PKPPKP	P'P'df	09 12 55.3	-1.5
	comp=Z,0.6nm,0.9s,baz=178,slow=1.2,SNR=4.1						
ILAR				LR	LR	09 25 17.3	
	comp=Z,647nm,18.1s,baz=310,slow=38						
HDA	Harding Lake	81.27	23	P	P	08 46 11.1	-1.6
	baz=304						
J25K	Salcha River,	81.71	22	P	P	08 46 12.8	-2.2
	baz=306,SNR=7.0						
A36M	Sachs Harbour	81.91	12	P	P	08 46 14.8	-1.0
	baz=323						
A36M	Sachs Harbour	81.91	12	P	P	08 46 14.8	-1.0
A36M				IAmb	IAmb	08 46 17.4	
	comp=Z,37nm,0.8s						
WAT6	Susitna Watana	82.01	24	P	P	08 46 15.5	-1.3
	baz=304						
PMR	Palmer	82.01	26	P	P	08 46 16.0	-0.6
	baz=303						
LBTB	Lobatse	82.02	239	P	P	08 46 17.9	+0.5
LBTB				pmax	pmax		
	comp=Z,60nm,1.1s						
LBTB	Lobatse	82.02	239	*e*P	P	08 46 18.1	+0.7
LBTB	Lobatse	82.02	239	*e*P	P	08 46 18.1	+0.7
LBTB	Lobatse	82.02	239	P	P	08 46 17.9	+0.5
LBTB				IAmb	IAmb	08 46 21.0	
	comp=Z,60nm,1.1s						
RC01	Rabbit Creek A	82.04	26	P	P	08 46 17.4	+0.7
	baz=302						
SML	Sawmill	82.21	25	P	P	08 46 17.0	-0.7
	baz=304						
ESDC	Sonseca Array	82.33	310	P	P	08 46 18.1	-0.7
	comp=Z,8.8nm,1.0s,baz=58,slow=4.8,SNR=20						
ESDC				LR	LR	09 30 22.4	
	comp=Z,390nm,19.0s,baz=35,slow=41						
J26L	Joseph Creek	82.40	22	P	P	08 46 17.6	-1.1
	baz=307,SNR=15						
RIDG	Independent Ri	82.41	23	P	P	08 46 17.2	-1.6
	baz=306						
OHAK	Old Harbor	82.49	31	P	P	08 46 17.0	-2.1
	baz=300						
KDAK	Kodiak Island	82.53	30	P	P	08 46 18.7	-0.7
	baz=301						
SCRK	Sand Creek	82.57	22	P	P	08 46 18.1	-1.6
	baz=307,SNR=11						
SCRK	Sand Creek	82.57	22	P	P	08 46 18.4	-1.3
PAX	Paxson	82.64	24	P	P	08 46 20.2	+0.2
PAX				pmax	pmax		
	comp=Z,18nm,1.2s						
PAX	Paxson	82.64	24	P	P	08 46 19.9	-0.1
	baz=306						
PAX	Paxson	82.64	24	P	P	08 46 20.2	+0.2
DZM	Mont Dzumac	82.67	117	*e*P	P	08 46 21.7	+0.9
	comp=Z,96nm,1.3s						
DZM	Mont Dzumac	82.67	117	*e*LR	LR	09 12 12.7	
	comp=Z,391nm,26.2s						
DZM	Mont Dzumac	82.67	117	P	P	08 46 20.7	-0.1
DZM				IAmb	IAmb	08 46 30.1	
	comp=Z,59nm,1.3s						
PWL	Port Wells	82.73	26	P	P	08 46 20.3	-0.1
	baz=304						
PWL	Port Wells	82.73	26	P	P	08 46 19.3	-1.1
PWL				IAmb	IAmb	08 46 24.6	
	comp=Z,42nm,1.0s						
DOT	Dot Lake	82.74	23	P	P	08 46 19.9	-0.5
M24K	Tolsona, Glenn	82.88	24	P	P	08 46 21.7	+0.6
	baz=305						
INK	Inuvik	82.88	16	LR	LR	09 28 51.2	
	comp=Z,318nm,18.9s,baz=304,slow=40						
INK	Inuvik	82.88	16	P	P	08 46 19.8	-1.2
INK				pmax	pmax		
	comp=Z,23nm,1.0s						
INK	Inuvik	82.88	16	P	P	08 46 19.8	-1.2
	baz=316						
INK	Inuvik	82.88	16	P	P	08 46 19.8	-1.2
INK				IAmb	IAmb	08 46 23.1	
	comp=Z,23nm,0.9s						
ICESG	Greenland Ices	82.98	345	*i* P	P	08 46 20.0	-1.9
HARP	HAARP	83.09	24	P	P	08 46 21.9	-0.3
	baz=306						
KLU	Klutina	83.33	25	P	P	08 46 23.0	-0.6
	baz=306						
KLU	Klutina	83.33	25	P	P	08 46 22.9	-0.7
KLU				IAmb	IAmb	08 46 31.9	
	comp=Z,52nm,1.2s						
EPYK	Eagle Plains	83.37	19	P	P	08 46 23.1	-0.5
	baz=313						
L26K	Log Cabin Wild	83.38	23	P	P	08 46 23.6	-0.1
	baz=308						
I29M	Ogilvie Camp,	83.57	20	P	P	08 46 24.0	-0.6
	baz=312						
N25K	Chitina, Valde	83.78	24	P	P	08 46 25.6	-0.3
	baz=307,SNR=6.4						
N25K	Chitina, Valde	83.78	24	P	P	08 46 25.4	-0.5
N25K				IAmb	IAmb	08 46 28.1	
	comp=Z,76nm,1.5s						
MVO	Moncorvo	83.89	312	*e*P	P	08 46 26.9	+0.1
	comp=Z,43nm,1.5s						
MVO	Moncorvo	83.89	312	*e*LR	LR	09 21 13.7	
	comp=Z,205nm,18.0s						
M26K	Nabesna, AK	83.89	23	P	P	08 46 27.2	+0.8
	baz=308,SNR=8.7						
L27K	Beaver Creek,	83.90	22	P	P	08 46 26.4	-0.1
	baz=309,SNR=9.9						
BOSA	Boshof	84.04	236	P	P	08 46 27.9	+0.1
	comp=Z,46nm,0.9s,baz=62,slow=2.9,SNR=58						
BOSA				LR	LR	09 23 41.6	
	comp=Z,384nm,19.2s,baz=46,slow=35						
BOSA	Boshof	84.04	236	*e*P	P	08 46 28.1	+0.3
BOSA	Boshof	84.04	236	*e*P	P	08 46 28.1	+0.3
DAWY	Dawson	84.08	21	P	P	08 46 26.5	-0.9
	baz=311						
BMRM	Bremner River	84.16	25	P	P	08 46 27.2	-0.6
	baz=307,SNR=8.6						
J29M	Klondike Camp	84.21	20	P	P	08 46 28.5	+0.5
	baz=312						
POLO	Lamas de Olo	84.32	312	*e*P	P	08 46 29.4	+0.3
	comp=Z,22nm,1.5s						
M27K	Edge Creek, AK	84.33	23	P	P	08 46 28.7	0.0
	baz=309,SNR=12						
M27K	Edge Creek, AK	84.33	23	P	P	08 46 28.9	+0.2
M27K				IAmb	IAmb	08 46 31.1	
	comp=Z,50nm,1.1s						
PGAV	Gavieira, Arco	84.40	313	*e*LR	LR	09 19 16.2	
	comp=Z,253nm,18.0s						
MCARA	McCarthy VSAT	84.51	24	P	P	08 46 29.6	+0.1
	baz=308						
MTE	Manteigas	84.56	311	*e*P	P	08 46 30.3	0.0
	comp=Z,48nm,1.8s						
MTE	Manteigas	84.56	311	*e*LR	LR	09 18 42.4	
	comp=Z,244nm,20.0s						
BVCY	Beaver Creek	84.66	23	P	P	08 46 31.1	+0.9
	baz=310						
PCBR	Castelo Branco	84.75	311	*e*P	P	08 46 31.1	0.0
	comp=Z,29nm,1.5s						
PMRV	Marv??o	84.86	311	*e*P	P	08 46 31.7	0.0
	comp=Z,35nm,1.8s						
PMRV	Marv??o	84.86	311	*e*LR	LR	09 20 35.5	
	comp=Z,434nm,18.0s						
CRQE	Cirque	84.88	25	P	P	08 46 30.9	-0.6
	baz=308						
PBAR	Barrancos	85.13	309	*e*P	P	08 46 32.9	-0.2
	comp=Z,56nm,1.5s						
YUK3	Moose Creek	85.21	23	P	P	08 46 33.7	+0.4
	baz=310						
BARN	Barnard Glacie	85.23	24	P	P	08 46 33.2	-0.2
BARN				IAmb	IAmb	08 46 35.0	
	comp=Z,25nm,0.6s						
CTG	Chitna Glacier	85.41	24	P	P	08 46 34.5	+0.3
	baz=310,SNR=6.7						
CTGM	Chitina Glacie	85.41	24	P	P	08 46 35.0	+0.7
CTGM				IAmb	IAmb	08 46 36.0	
	comp=Z,32nm,0.8s						
PMTG	Montargil	85.60	310	*e*P	P	08 46 35.3	-0.1
	comp=Z,49nm,1.5s						
LOGN	Logan Glacier	85.63	24	P	P	08 46 35.9	+0.5
LOGN				IAmb	IAmb	08 46 44.2	
	comp=Z,30nm,0.8s						
MESA	MESA	85.68	25	P	P	08 46 36.1	+0.5
	baz=309						
PBEJ	Beja	85.79	309	*e*P	P	08 46 36.8	+0.4
	comp=Z,36nm,1.6s						
PVAQ	Vaqueiros	85.94	309	*e*P	P	08 46 37.2	+0.1
	comp=Z,57nm,1.4s						
PVAQ	Vaqueiros	85.94	309	*e*LR	LR	09 21 24.6	
	comp=Z,269nm,18.0s						
PVAQ	Vaqueiros	85.94	309	P	P	08 46 37.5	+0.3
PVAQ				IAmb	IAmb	08 46 38.4	
	comp=Z,46nm,1.2s						
M30M	Minto, Yukon	85.96	21	P	P	08 46 36.4	-0.3
	baz=313						
MESJ	Messejana	86.12	309	*e*P	P	08 46 38.3	+0.3
MESJ				IAmb	IAmb	08 46 39.8	
	comp=Z,52nm,1.3s						
MESJ	Messejana	86.12	309	*e*P	P	08 46 38.3	+0.3
	comp=Z,54nm,1.4s						
MESJ	Messejana	86.12	309	*e*P	P	08 46 38.2	+0.3
YUK4	Talbot Arm	86.15	23	P	P	08 46 37.9	0.0
	baz=312						
PBDV	Barranco-do-Ve	86.17	309	*e*P	P	08 46 39.1	+0.8
	comp=Z,79nm,1.3s						
PNCL	Nicolau / Gran	86.22	310	*e*P	P	08 46 38.8	+0.3
	comp=Z,56nm,2.1s						
YUK6	Outpost Mounta	86.52	23	P	P	08 46 40.5	+0.7
	baz=312						
DY2G	Dye2	86.60	345	*i* P	P	08 46 39.1	-1.0
DY2G				IAmb	IAmb	08 46 44.4	
	comp=Z,7.7nm,0.6s						
MORF	Marmelete	86.66	309	*e*P	P	08 46 42.9	+2.2
	comp=Z,67nm,1.7s						
HYT	Haines Junctio	86.91	23	P	P	08 46 41.1	-0.5
	baz=313						
N31M	Braeburn, Yuko	87.06	22	P	P	08 46 42.0	-0.2
	baz=314						
SFJD	Kangerlussuaq	87.12	347	*i* P	P	08 46 41.5	-0.8
FARO	Faro, Yukon	87.34	20	P	P	08 46 42.7	-0.9
	baz=316						
TORD	Torodi Ar. Bea	87.84	283	P	P	08 46 47.2	+0.4
	comp=Z,28nm,0.9s,baz=64,slow=3.9,SNR=98						
TORD				PP	PP	08 50 11.2	-1.5
	comp=Z,4.5nm,1.0s,baz=57,slow=6.0,SNR=5.7						
TORD				LR	LR	09 33 06.9	
	comp=Z,424nm,18.4s,baz=40,slow=40						
TORD	Torodi Ar. Bea	87.84	283	P	P	08 46 47.1	+0.4
TORD				IAmb	IAmb	08 46 48.3	
	comp=Z,21nm,0.8s						
WHY	Whitehorse	87.96	22	P	P	08 46 45.7	-0.9
	baz=315						
CASY	Casey	89.28	174	IAMs_20	IAMs_20	09 21 36.1	
	comp=Z,456nm,20.0s						
WRGLY	Wrigley	89.45	16	P	P	08 46 52.2	-1.2
	baz=325						
TGTN	Hyland Airport	89.46	19	P	P	08 46 54.5	+0.9
	baz=321						
YKA	Yellowknife Ar	92.16	13	P	P	08 47 05.2	-0.9
	comp=Z,3.1nm,1.0s,baz=342,slow=4.1,SNR=10						
YKA				LR	LR	09 32 11.1	
	comp=Z,344nm,21.7s,baz=0.0,slow=38						
YKA	Yellowknife Ar	92.16	13	*ce*P	P	08 47 05.6	-0.5
YKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KOWA	Kowa	92.42	287	P	P	08 47 08.6	+0.5
KOWA				IAmb	IAmb	08 47 09.2	
	comp=Z,14nm,0.8s						
KOWA				IAMs_20	IAMs_20	09 33 54.3	
	comp=Z,581nm,20.0s						
MAW	Mawson	92.87	192	P	P	08 47 08.4	-0.5
	comp=Z,9.9nm,1.1s,baz=282,slow=2.5,SNR=5.1						
MAW	Mawson	92.87	192	P	P	08 47 09.0	+0.1

	baz=93						
OUZ	Omahuta	94.10	126	IAMs_20	IAMs_20	09 32 53.6	
	comp=Z,385nm,18.0s						
DBIC	Dimbokro	96.29	280	P	P	08 47 26.0	+0.1
	comp=Z,12nm,0.7s,baz=65,slow=4.2,SNR=15						
DBIC				LR	LR	09 34 43.3	
	comp=Z,358nm,19.6s,baz=79,slow=38						
KIC	Kosan Boka	96.31	280	eP	P	08 47 25.7	-0.3
	comp=Z,16nm,0.7s						
TIC	Toumodi	96.45	280	eP	P	08 47 26.5	-0.2
LIC	Lamto	96.62	279	eP	P	08 47 27.2	-0.3
	comp=Z,80nm,1.7s						
PDAR	Pinedale Array	111.33	19	PKKPbc	PKKPbc	09 03 30.7	+3.2
	comp=Z,0.7nm,0.8s,baz=152,slow=4.1,SNR=5.2						
SNAA	Sanae	113.53	200	PKiKP	PKiKP	08 52 31.7	-2.5
VNA2	Neumayer--Watz	115.02	201	PKiKP	PKiKP	08 52 36.6	-0.4
	baz=64,slow=1.7						
VNA1	Neumayer--Stat	115.32	201	PKiKP	PKiKP	08 52 36.1	-1.4
VNA3	Neumayer Olymp	115.73	200	PKiKP	PKiKP	08 52 37.6	-0.8
ANMO	Albuquerque	119.45	20	PKIKP	PKPdf	08 52 46.4	-0.6
ANMO	Albuquerque	119.45	20	P	PKPdf	08 52 46.1	-0.8
	baz=337						
ANMO	Albuquerque	119.45	20		PKPdf	08 52 46.4	-0.6
PPT2	Papeete2	119.75	98	ePS	PS	09 03 57.5	-3.4
	comp=Z,114nm,25.2s						
PPT2	Papeete2	119.75	98	eLR	LR	09 29 28.7	
	comp=Z,245nm,24.5s						
MNTX	Cornudas Mount	122.79	20	P	PKPdf	08 52 52.1	-1.1
	baz=338						
TXAR	Lajitas Array	125.53	20	PKP	PKPdf	08 52 57.3	-1.3
	comp=Z,1.3nm,0.7s,baz=126,slow=0.7,SNR=15						
JCT	Junction City	125.53	15	P	PKPdf	08 52 57.3	-1.2
	baz=343						
TAOE	Nuku Hiva Isla	125.71	85	eLR	LR	09 32 12.9	
	comp=Z,285nm,22.8s						
NBPV	Pedro Velho	129.32	280	eP	PKPdf	08 53 06.2	+0.1
NBPA	Parau_RN	130.70	282	eP	PKPdf	08 53 09.1	+0.4
NBCL	Cascavel-CE	131.11	285	eP	PKPdf	08 53 07.3	-2.1
NBAN	Anadia - AL	131.46	277	eP	PKPdf	08 53 09.1	-1.1
SMTB	Santa Maria do	141.43	284	eP	PKPdf	08 53 27.6	-1.0
MALB	Monte Alegre	143.60	300	eP	PKPdf	08 53 32.5	+0.1
BDFB	Brasilia	144.23	274	PKP	PKPbc	08 53 32.2	+0.3
	comp=Z,23nm,0.6s,baz=61,slow=2.6,SNR=22						
BDFB	Brasilia	144.23	274	PKPdf	PKPbc	08 53 31.9	+0.1
BOAV	Boa Vista	145.46	313	eP	PKPab	08 53 36.0	+0.1
BOAV	Boa Vista	145.46	313	PKPdf	PKPbc	08 53 34.9	-0.8
SDV	Santo Domingo	145.71	334	eP	PKPdf	08 53 34.7	-1.7
SDV	Santo Domingo	145.71	334	eP	PKPbc	08 53 36.6	-0.1
SDV	Santo Domingo	145.71	334	IAMs_20	IAMs_20	09 55 40.7	
	comp=Z,225nm,18.0s						
BB19B	Bebedouro	145.93	265	eP	PKPdf	08 53 36.6	+0.3
SOCV	Socops	146.34	334	eP	PKPdf	08 53 35.7	-1.6
SJCC	San Jacinto, C	146.36	342	eP	PKPdf	08 53 35.7	-1.6
SJCC	San Jacinto, C	146.36	342	PKPdf	PKPdf	08 53 36.3	-1.0
ELOV	Elorza	146.89	330	eP	PKPdf	08 53 37.6	-0.5
SMLC	San Martn de	147.05	339	eP	PKPdf	08 53 35.7	-2.7
OCAC	Ocana	147.32	338	eP	PKPdf	08 53 37.6	-1.5
NPGB	Novo Progresso	147.39	293	eP	PKPdf	08 53 39.8	+0.8
PAMC	Pamplona, Colo	147.93	336	eP	PKPdf	08 53 40.5	0.0
UREC	San Jos de Ur	148.50	341	eP	PKiKP	08 53 45.3	-0.7
BRRC	Barranca, Sant	148.51	338	eP	PKPdf	08 53 39.5	-1.3
ZARC	Zaragoza, Cauc	148.53	340	eP	PKPdf	08 53 42.4	+1.5
BARC	Barichara	148.80	336	eP	PKPdf	08 53 41.5	-0.2
PTBC	PUERTO BERRIO,	149.30	339	eP	PKPdf	08 53 41.5	-0.7
DBBC	Dabeiba	149.39	342	eP	PKPbc	08 53 45.3	-1.5
CLDB	Colider	149.59	287	eP	PKPdf	08 53 44.1	+1.6
HELC	Santa Helena	149.97	340	eP	PKPbc	08 53 48.2	-0.4
SPBC	San Pablo de B	149.99	337	eP	PKPdf	08 53 43.4	0.0
NORC	Norcasia	150.35	339	eP	PKPdf	08 53 43.4	-0.5
CBOC	Ciudad Bolivar	150.43	341	eP	PKPdf	08 53 43.4	-0.8
PLTB	Pedras Altas	150.44	245	eP	PKPdf	08 53 44.1	+0.7
PTGC	Puerto Gaitan,	150.56	333	eP	PKPdf	08 53 46.2	+2.1
PDRB	Porto dos Gac	150.74	287	eP	PKPdf	08 53 44.7	+0.4
GUY2C	Guyana, Caldas	150.83	339	eP	PKPdf	08 53 46.2	+1.1
ROSC	El Rosal	150.83	337	PKPbc	PKPbc	08 53 50.1	-0.6
	comp=Z,30nm,0.6s,baz=143,slow=6.5,SNR=11						
ROSC	El Rosal	150.83	337	eP	PKPbc	08 53 50.1	-0.6
PLMC	San Jos del P	151.42	341	eP	PKPdf	08 53 45.3	-0.3
YOTC	Yotoco, Valle	152.31	341	eP	PKPdf	08 53 45.3	-1.7
MARP	Paez Belalcaza	153.26	339	eP	PKPdf	08 53 51.0	+2.5
CPUP	Villa Florida	154.31	256	PKP	PKPdf	08 53 50.0	+0.7
	comp=Z,18nm,0.6s,baz=83,slow=1.9,SNR=24						
CPUP				PKPbc	pPKPdf	08 53 56.1	-0.8
	comp=Z,18nm,0.6s,baz=87,slow=2.9,SNR=10						
OTAV	Otavalo	156.48	343	IAMs_20	IAMs_20	10 05 55.2	
	comp=Z,213nm,20.0s						
PLCA	Paso Flores	157.96	211	PKP	PKPdf	08 53 52.3	-1.4
	comp=Z,1.5nm,0.9s,baz=268,slow=2.3,SNR=4.3						
PLCA				PKPab	PKPab	08 54 25.9	-0.9
	comp=Z,12nm,0.8s,baz=159,slow=3.9,SNR=15						
LPAZ	La Paz	162.73	288	PKP	PKPdf	08 53 59.3	-1.1
	comp=Z,1.5nm,0.7s,baz=7.7,slow=3.3,SNR=7.1						
LPAZ				PKPab	PKPab	08 54 47.8	-1.3
	comp=Z,3.5nm,0.8s,baz=143,slow=12,SNR=5.6						
LPAZ	La Paz	162.73	288	eP	PKPdf	08 53 58.7	-1.7
MT09	Talagante	163.14	225		PKPab	08 54 48.9	-0.9
PB04	IPOC Station P	166.04	268	PKPab	PKPab	08 55 03.4	+0.4

IDC 27 08:46:58.9±5.3**, 22°.65N**×**95°.00E, h0^{km}, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.2**/58**, mbtmp3.4**/3**, Error ellipse: s-maj=455.1km s-min=30.5km az=60.0, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	26.18	340	P	P	08 52 35.1	0.0
	0.3nm,0.6s,baz=148,slow=12,SNR=2.1						
WRA	Warramunga Arr	57.16	135	P	P	08 56 47.4	-0.4
	0.4nm,0.7s,baz=320,slow=7.6,SNR=5.4						
ASAR	Alice Springs	59.59	138	P	P	08 57 05.0	+0.3
	0.3nm,0.6s,baz=321,slow=7.5,SNR=6.5						

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*IDC **27** 08:48:13.3±0.7, 55°.66N×165°.66E, h0^{km}, mb3.9/25, mb1 4.1/26, mb1mx4.0/48, mbtmp3.9/26, ML2.9/1, MS3.4/1, Ms1 3.4/1, ms1mx2.9/45, Error ellipse: s-maj=21.4km s-min=11.6km az=161.0*

*KRSC **27** 08:48:14.2±1.5, 55°.65N×165°.71E, h44^{km}±15^{km}, ML4.7*

*MOS **27** 08:48:16.7±0.8, 55°.67N×165°.67E, h38^{km}, mb4.5/21, Error ellipse: s-maj=6.6km s-min=5.3km az=50.5*

*NEIC **27** 08:48:23.2±1.3, 56°.0N±0°.2×164°.6E±0°.2, h33^{km}±5^{km}, mb4.6/39, Error ellipse: s-maj=25.5km s-min=12.0km az=169.0*

ISC 27 08:48:21.0±0.4**, 55°.75N**±0°.05×**165°.21E**±0°.05**, h35^{km}, n190,** σ**2^s.29**/193**, mb4.4**/64**, 7C-5D, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	Bering	0.70	141	PN	Pn	08 48 25.3	-9.0
BKI				S	Sn	08 48 32.8	-11
BKI	Bering	0.70	141	iP	Pn	08 48 25.3	-9.0
BKI				eS	Sn	08 48 32.8	-11
KBTR	Krutoberegovo	1.42	290	PN	Pn	08 48 42.4	-1.8
KBTR				S	Sn	08 49 03.1	+1.5
KBTR	Krutoberegovo	1.42	290	eP	Pn	08 48 42.4	-1.8
KBTR				eS	Sn	08 49 03.1	+1.5
KBG	Krutoberegovo	1.49	291	PN	Pn	08 48 43.5	-1.7
KBG	Krutoberegovo	1.49	291	eP	Pn	08 48 43.5	-1.7
SMKR	Semkarok	2.25	293	PN	Pn	08 48 55.7	0.0
SMKR	Semkarok	2.25	293	eP	Pn	08 48 55.7	0.0
MKZ	Mys Kozlova	2.33	240	PN	Pn	08 48 55.1	-1.6
MKZ				S	Sn	08 49 26.9	+2.9
MKZ	Mys Kozlova	2.33	240	eP	Pn	08 48 55.1	-1.6
MKZ				eS	Sn	08 49 26.9	+2.9
BDR	Baidarnaya	2.38	292	PN	Pn	08 48 57.8	+0.3
BDR				S	Sn	08 49 31.6	+6.1
BDR	Baidarnaya	2.38	292	eP	Pn	08 48 57.8	+0.3
BDR				eS	Sn	08 49 31.6	+6.1
SRKR	Sorokina	2.43	294	PN	Pn	08 48 58.1	-0.1
SRKR	Sorokina	2.43	294	eP	Pn	08 48 58.1	-0.1
ZLN	Zelenaya	2.49	278	PN	Pn	08 49 00.3	+1.2
ZLN	Zelenaya	2.49	278	eP	Pn	08 49 00.3	+1.2
CIRR	Tsirk	2.53	280	PN	Pn	08 49 00.6	+0.9
CIRR	Tsirk	2.53	280	eP	Pn	08 49 00.6	+0.9
BZGR	Bezymyannyi-Gr	2.55	276	PN	Pn	08 49 00.5	+0.6
BZGR	Bezymyannyi-Gr	2.55	276	eP	Pn	08 49 00.5	+0.6
KLY	Klyuchi	2.62	284	PN	Pn	08 49 00.1	-0.6
KLY	Klyuchi	2.62	284	eP	Pn	08 49 00.1	-0.6
KRSR	Krestovskiy	2.65	282	PN	Pn	08 49 01.5	+0.3
KRSR	Krestovskiy	2.65	282	eP	Pn	08 49 01.5	+0.3
BZWR	Bezymyannyi-We	2.66	277	PN	Pn	08 49 02.3	+0.8
BZWR	Bezymyannyi-We	2.66	277	eP	Pn	08 49 02.3	+0.8
KIRR	Kirishev	2.75	276	PN	Pn	08 49 03.4	+0.7
KIRR	Kirishev	2.75	276	eP	Pn	08 49 03.4	+0.7
TUMD	Tumrok D	2.79	261	eP	Pn	08 49 03.6	+0.5
KMNR	Kamenistaya	2.81	272	PN	Pn	08 49 04.7	+1.3
KMNR	Kamenistaya	2.81	272	eP	Pn	08 49 04.7	+1.3
KPT	Kopyto	2.82	276	PN	Pn	08 49 03.7	+0.2
KPT	Kopyto	2.82	276	eP	Pn	08 49 03.7	+0.2
TUMR	Tumrok	2.92	263	PN	Pn	08 49 06.1	+1.2
TUMR	Tumrok	2.92	263	eP	Pn	08 49 06.1	+1.2
KOZ	Kozyrevsk	3.02	278	PN	Pn	08 49 08.0	+1.8
KOZ	Kozyrevsk	3.02	278	eP	Pn	08 49 08.0	+1.8
ESO	Esso	3.67	275	PN	Pn	08 49 21.2	+6.0
ESO	Esso	3.67	275	eP	Pn	08 49 21.2	+6.0
KII	Karymskiy	3.74	245	PN	Pn	08 49 17.0	+0.8
KII	Karymskiy	3.74	245	eP	Pn	08 49 17.0	+0.8
SPN	Mys Shipunski	4.03	231	PN	Pn	08 49 19.7	-0.4
SPN	Mys Shipunski	4.03	231	eP	Pn	08 49 19.7	-0.4
SPN				eS	Sn	08 50 06.2	+0.2
NLC	Nalytchevo	4.29	235	PN	Pn	08 49 24.0	+0.4
NLC	Nalytchevo	4.29	235	eP	Pn	08 49 24.0	+0.4
NLC				eS	Sn	08 50 13.8	+1.5
SDLR	Sedlovina	4.44	239	PN	Pn	08 49 25.7	-0.1
SDLR				S	Sn	08 50 19.8	+3.5
SDLR	Sedlovina	4.44	239	eP	Pn	08 49 25.7	-0.1
SDLR				eS	Sn	08 50 19.8	+3.5
SMAR	Somma	4.49	239	PN	Pn	08 49 26.5	-0.1
SMAR	Somma	4.49	239	eP	Pn	08 49 26.5	-0.1
KRER	Koryakskii	4.49	240	PN	Pn	08 49 26.9	+0.3
KRER	Koryakskii	4.49	240	eP	Pn	08 49 26.9	+0.3
UGLR	Uglovaya	4.51	238	PN	Pn	08 49 26.9	+0.1
UGLR	Uglovaya	4.51	238	eP	Pn	08 49 26.9	+0.1
AVH	Avacha	4.52	239	PN	Pn	08 49 27.3	+0.4
AVH	Avacha	4.52	239	eP	Pn	08 49 27.3	+0.4
KOK	Koryaka	4.55	240	PN	Pn	08 49 27.9	+0.5
KOK	Koryaka	4.55	240	eP	Pn	08 49 27.9	+0.5
DALK	Dalny	4.65	237	PN	Pn	08 49 28.4	-0.2
DALK	Dalny	4.65	237	eP	Pn	08 49 28.4	-0.2
GNL	Ganaly	4.69	247	PN	Pn	08 49 30.0	+0.8
GNL	Ganaly	4.69	247	eP	Pn	08 49 30.0	+0.8
PET	Petropavlovsk	4.70	237	ePN	Pn	08 49 30.9	+1.6
PET				eS	Sn	08 50 25.2	+2.6
PET				pmax	pmax		
	comp=Z,113nm,0.4s						
PET				smax	smax		
	comp=N,574nm,0.6s						
PET				smax	smax		
	comp=E,466nm,0.4s						
PET				MLR	MLR		
	comp=Z,500nm,17.0s						
PET	Petropavlovsk	4.70	237	eP	Pn	08 49 29.0	-0.3
PET				eS	Sn	08 50 24.7	+2.1
PET	Petropavlovsk	4.70	237		Pn	08 49 28.9	-0.5
TILK	Tilichiki	4.73	6	PN	Pn	08 49 26.8	-2.9
TILK	Tilichiki	4.73	6	eP	Pn	08 49 26.8	-2.9
KRMR	Karymshinskiy	5.07	238	PN	Pn	08 49 36.7	+2.3
KRMR	Karymshinskiy	5.07	238	eP	Pn	08 49 36.7	+2.3
PEA0B	Petropavlovsk-	5.12	242⇓	ePN	Pn	08 49 35.2	+0.1
PEA0B	Petropavlovsk-	5.12	242	Pn	Pn	08 49 34.5	-0.6
PETK	Petropavlovsk-	5.12	242	Pn	Pn	08 49 34.3	-0.8
	comp=Z,2.2nm,0.3s,baz=76,slow=16,SNR=36						
PETK				Sn	Sn	08 50 39.0	+6.1
	comp=Z,7.8nm,0.3s,baz=14,slow=20,SNR=9.7						
PETK				LR	LR	08 51 57.9	
	comp=Z,391nm,19.5s,baz=1.1,slow=42						
PETK	Petropavlovsk-	5.12	242	Pn	Pn	08 49 35.6	+0.5
RUS	Russkaya	5.15	233	PN	Pn	08 49 34.9	-0.6
RUS	Russkaya	5.15	233	eP	Pn	08 49 34.9	-0.6
RUS				eS	Sn	08 50 34.8	+1.1
MTVR	Mutnovka	5.27	234	PN	Pn	08 49 37.7	+0.4
MTVR	Mutnovka	5.27	234	eP	Pn	08 49 37.7	+0.4
MTVR				eS	Sn	08 50 38.4	+1.6
ASAK	Asacha	5.47	235	PN	Pn	08 49 40.8	+0.9
ASAK	Asacha	5.47	235	eP	Pn	08 49 40.8	+0.9
KDTR	Khodutka, Kamc	5.78	230	PN	Pn	08 49 43.5	-0.7
KDTR	Khodutka, Kamc	5.78	230	eP	Pn	08 49 43.5	-0.7
KDTR				eS	Sn	08 50 47.9	-1.3
SKR	Severo-Kuril's	7.45	231	ePN	Pn	08 50 07.6	+0.6
SKR				pmax	pmax		
	comp=Z,19nm,0.4s						
MA2	Magadan	8.63	302	ePN	Pn	08 50 17.8	-5.4
KIWB	Kanaga Island	11.13	103	Pn	Pn	08 51 04.6	+7.1
BILL	Bilibino	12.34	2⇑	ePN	Pn	08 51 13.5	-0.4
BILL				pmax	pmax		
	comp=Z,13nm,1.9s						
BILL				MLR	MLR		
	comp=Z,247nm,15.0s						
YAK	Yakutsk	19.20	304	eP	P	08 52 40.9	-0.5
YAK				pmax	pmax		
	comp=Z,20nm,1.1s						
KLR	Kul'dur	21.23	266	P	P	08 53 04.3	+0.7
	comp=Z,0.4nm,0.5s,baz=66,slow=12,SNR=1.9						
J20K	Nowinta River	21.66	51	P	P	08 53 12.4	+4.4
TIXI	Tiksi	22.09	330	eP	P	08 53 11.4	-1.1
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
H21K	Melozitna Rive	22.36	47	P	P	08 53 19.9	+4.4
RND	Reindeer	24.00	53	P	P	08 53 33.2	+1.2
RND				pmax	pmax		
	comp=Z,10.0nm,1.0s						
RND	Reindeer	24.00	53	P	P	08 53 33.2	+1.2
USA0B	Ussuriysk Arra	24.04	255	eP	P	08 53 32.2	-0.3
USRK	Ussuriysk Ar.	24.04	255	P	P	08 53 33.0	+0.5
	comp=Z,1.6nm,0.6s,baz=68,slow=16,SNR=2.0						
USRK	Ussuriysk Ar.	24.04	255	P	P	08 53 33.0	+0.5
MDM	Murphy Dome	24.24	49	P	P	08 53 36.0	+1.9
WRH	Wood River Hil	24.30	50	P	P	08 53 36.7	+1.9
WRH				IAmb	IAmb	08 53 45.8	
	comp=Z,26nm,1.4s						
COLA	College	24.40	49⇑	eP	P	08 53 37.2	+1.6
COLA				pmax	pmax		
	comp=Z,31nm,2.6s						
CCB	Clear Creek Bu	24.42	50	P	P	08 53 37.6	+1.9
CCB				IAmb	IAmb	08 53 46.8	
	comp=Z,12nm,1.0s						
IL31		24.82	49	P	P	08 53 42.5	+3.2
IL31				IAmb	IAmb	08 53 43.9	
	comp=Z,13nm,1.2s						
ILAR	Eielson Array	24.82	49	P	P	08 53 34.6	-4.7
	comp=Z,1.7nm,1.0s,baz=254,slow=7.5,SNR=9.3						
ILAR	Eielson Array	24.82	49	P	P	08 53 41.9	+2.6
M24K	Tolsona, Glenn	25.35	56	P	P	08 53 48.0	+3.7
N25K	Chitina, Valde	26.17	56	P	P	08 53 54.4	+2.7
MAJO	Matsushiro	26.53	235	eP	P	08 53 55.4	+0.2
MAJO				pmax	pmax		
	comp=Z,29nm,1.6s						
MJAR	Matsushiro Arr	26.53	235	P	P	08 53 54.4	-0.8
	comp=Z,2.0nm,0.9s,baz=28,slow=16,SNR=1.9						
L27K	Beaver Creek,	27.20	53	P	P	08 54 04.8	+3.8
L27K				IAmb	IAmb	08 54 06.4	
	comp=Z,13nm,1.2s						
BCAR	Beaver Creek A	27.22	53	P	P	08 54 04.3	+3.2
DAWY	Dawson	28.12	50	P	P	08 54 12.7	+3.5
INK	Inuvik	29.92	41	P	P	08 54 20.8	-4.2
	comp=Z,0.6nm,0.5s,baz=295,slow=4.4,SNR=4.8						
INK	Inuvik	29.92	41	P	P	08 54 21.3	-3.7
INK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
INK	Inuvik	29.92	41	P	P	08 54 21.3	-3.7
A36M	Sachs Harbour	32.29	33	P	P	08 54 46.0	+0.2
A36M				IAmb	IAmb	08 54 55.4	
	comp=Z,7.7nm,0.8s						
DLBC	Dease Lake	34.08	58	P	P	08 54 58.9	-2.8
	comp=Z,4.2nm,0.6s,baz=252,slow=9.7,SNR=4.1						
NRIK	Noril'sk	35.51	323⇑	iP	P	08 55 12.1	-1.7
NRIK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
TLY	Talaya	35.60	290⇓	eP	P	08 55 11.6	-3.2
TLY				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ULN	Ulaanbaatar	35.84	282	eP	P	08 55 14.7	-2.3
ULN				pmax	pmax		
	comp=Z,2.0nm,1.1s						
H11N2	WAKE ISLAND Hy	35.99	177	T	T	09 33 15.5	
	baz=358,slow=76,SNR=337						
H11N3	WAKE ISLAND Hy	36.00	177	T	T	09 33 18.3	
	baz=358,slow=76,SNR=176						
H11N1	WAKE ISLAND Hy	36.00	177	T	T	09 33 20.1	
	baz=358,slow=76,SNR=211						
SONM	Songino Array	36.22	283	P	P	08 55 21.2	+0.9
	comp=Z,0.9nm,0.6s,baz=62,slow=8.6,SNR=7.5						
HHC	Hu-ho-hao-te	37.66	270	eP	P	08 55 31.5	-1.0
HHC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,700nm,7.1s						
YKA	Yellowknife Ar	39.17	46	P	P	08 55 42.0	-2.8
	comp=Z,0.5nm,0.9s,baz=295,slow=12,SNR=1.6						
NJ2	Nanjing	39.91	253	eP	P	08 55 51.3	-0.1
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
NOR	Nord	42.88	0	e	P	08 56 24.2	+9.1
	baz=247,slow=14						
NOR				iP	pwP	08 56 30.4	+2.0
NOR				IAML		08 56 59.3	
	comp=Z,3.0nm,0.5s						
D05A	Enumclaw	44.18	69	P	P	08 56 30.2	+4.2
DGZ	Jazzator, Alta	45.17	297⇓	eP	P	08 56 33.9	-0.1
DGZ				pmax	pmax		
	comp=Z,8.0nm,2.5s						
GTA	Gaotai	45.25	277	eP	P	08 56 36.3	+1.5
GTA				pP	pP	08 56 42.5	-1.6
GTA				sP	sP	08 56 47.0	-0.9
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GTA				LR	LR		
	comp=N,510nm,15.3s						
GTA				LR	LR		
	comp=E,310nm,15.3s						
GTA				LR	LR		
	comp=Z,300nm,15.3s						
HOOD	Mount Hood Mea	45.55	71	P	P	08 56 41.0	+3.9
HOOD				IAmb	IAmb	08 56 42.4	
	comp=Z,12nm,0.9s						
WALA	Waterton Lakes	47.14	62	P	P	08 56 53.4	+3.8
WALA				IAmb	IAmb	08 56 54.9	
	comp=Z,9.3nm,1.1s						
YBH	Yreka Blue Hor	47.38	75	P	P	08 56 54.4	+3.0
YBH				pmax	pmax		
	comp=Z,8.0nm,1.3s						
YBH	Yreka Blue Hor	47.38	75	P	P	08 56 54.4	+3.0
YBH				IAmb	IAmb	08 56 56.6	
	comp=Z,8.3nm,1.3s						
BMO	Blue Mountains	48.17	69	P	P	08 57 00.8	+3.2
BMO				pmax	pmax		
	comp=Z,4.0nm,1.2s						
BMO	Blue Mountains	48.17	69	P	P	08 57 00.8	+3.2
MOD	Modoc Plateau	48.57	74	P	P	08 57 04.8	+4.0
MOD				IAmb	IAmb	08 57 05.4	
	comp=Z,5.7nm,0.8s						
KURK	Kurchatov	48.84	303	P	P	08 57 02.7	+0.2
KURK	Kurchatov	48.84	303	P	P	08 57 01.7	-0.8
WMQ	Urumqi	48.88	290	eP	P	08 57 04.8	+1.8
KURBB	Kurchatov Arra	48.95	303	P	P	08 57 02.7	-0.6
	comp=Z,3.5nm,0.8s,baz=51,slow=7.5,SNR=8.3						
MK31	Makanchi Array	49.67	297	P	P	08 57 08.1	-0.8
MK31				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MK31	Makanchi Array	49.67	297	P	P	08 57 08.1	-0.8
MKAR	Makanchi Array	49.67	297	P	P	08 57 08.3	-0.6
	comp=Z,1.3nm,0.7s,baz=62,slow=5.8,SNR=9.7						
VCNR	Virginia City	50.75	76	P	P	08 57 21.5	+4.1
VCNR				IAmb	IAmb	08 57 22.7	
	comp=Z,9.9nm,1.1s						
PNTR	Pine Nut	50.92	76	P	P	08 57 22.4	+3.7
BVAR	Borovoye Array	51.05	309	P	P	08 57 17.9	-1.4
	comp=Z,0.7nm,0.4s,baz=183,slow=7.4,SNR=5.2						
BRVK	Borovoye	51.07	309⇑	iP	P	08 57 18.7	-0.7
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
YERR	Yerington	51.19	76	P	P	08 57 24.6	+3.9
YERR				IAmb	IAmb	08 57 25.0	
	comp=Z,3.8nm,0.7s						
YHL	Hebgen Lake	51.35	65	P	P	08 57 25.0	+3.0
YHL				IAmb	IAmb	08 57 27.1	
	comp=Z,6.6nm,1.1s						
ARCES	ARCESS Array B	51.65	343	P	P	08 57 23.6	+0.1
	comp=Z,2.6nm,0.8s,baz=33,slow=12,SNR=6.6						
ARCES	ARCESS Array B	51.65	343	IAmb	IAmb	08 57 28.8	
	comp=Z,2.5nm,0.9s						
KVN	Kaiserville	51.77	75	P	P	08 57 28.7	+3.7
KVN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KVN	Kaiserville	51.77	75	P	P	08 57 28.7	+3.7
KVN				IAmb	IAmb	08 57 29.4	
	comp=Z,4.2nm,0.8s						
NVAR	Mina Array Bea	52.10	75	P	P	08 57 23.6	-3.9
	comp=Z,0.7nm,0.7s,baz=299,slow=6.1,SNR=5.6						
LCH	Last Change Ra	53.32	76	P	P	08 57 40.9	+4.4
LCH				IAmb	IAmb	08 57 41.6	
	comp=Z,7.1nm,1.1s						
ARU	Arti	53.42	318	P	P	08 57 35.8	-1.0
PDAR	Pinedale Array	53.66	66	P	P	08 57 35.2	-3.8
	comp=Z,1.0nm,0.9s,baz=357,slow=3.0,SNR=6.8						
PDAR	Pinedale Array	53.66	66	P	P	08 57 43.7	+4.7
PSUT	Pine Spring	54.44	72	P	P	08 57 49.1	+4.3
PSUT				IAmb	IAmb	08 57 49.4	
	comp=Z,3.4nm,0.8s						
GWY	Greenwater Val	54.62	76	P	P	08 57 49.8	+3.7
ULM	Lac du Bonnet	54.82	51	P	P	08 57 44.3	-2.8
	comp=Z,3.6nm,0.9s,baz=329,slow=12,SNR=2.2						
TMUT	Trail Mountain	55.30	70	P	P	08 57 54.9	+3.9
MSU	Marysvale	55.35	71	P	P	08 57 56.2	+4.8
Q16A	Castle Valley	55.59	70	P	P	08 57 57.2	+4.2
Q16A				IAmb	IAmb	08 57 58.5	
	comp=Z,7.0nm,0.8s						
AAK	Ala-Archa	56.53	298	P	P	08 57 59.8	+0.1
	comp=Z,1.0nm,0.5s,baz=55,slow=8.0,SNR=3.8						
AAK	Ala-Archa	56.53	298	IAmb	IAmb	08 58 21.7	
	comp=Z,5.1nm,0.9s						
KSH	Kashi	58.09	294	P	P	08 58 14.3	+3.7
KSH				pmax	pmax		
	comp=Z,3.0nm,0.4s						
ABKAR	Akbulak array	58.29	312	P	P	08 58 10.6	-1.1
ABKAR	Akbulak array	58.29	312	P	P	08 58 10.1	-1.6
ABKAR				IAmb	IAmb	08 58 35.4	
	comp=Z,4.9nm,1.4s						
X16A	Lo Mia Camp, P	58.79	74	P	P	08 58 20.2	+4.6
X16A				IAmb	IAmb	08 58 21.3	
	comp=Z,5.3nm,0.9s						
FINES	FINESS Array B	58.80	338	P	P	08 58 13.1	-2.0
	comp=Z,6.0nm,1.0s,baz=16,slow=11,SNR=2.3						
BELG	Belogornoye	60.57	321	eP	P	08 58 28.0	+0.7
BELG				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ANMO	Albuquerque	61.06	70⇓	eP	P	08 58 35.6	+4.3
ANMO				pmax	pmax		
	comp=Z,17nm,4.3s						
CMAR	Chiang Mai Arr	61.60	261	P	P	08 58 32.9	-2.0
	comp=Z,0.6nm,0.3s,baz=19,slow=6.8,SNR=0.8						
NB2	NORSAR Subarra	61.75	346	P	P	08 58 40.4	+5.1
	comp=Z,1.0nm,0.7s,baz=14,slow=6.9						
NOA	NORSAR Array B	61.75	346	P	P	08 58 32.9	-2.4
	comp=Z,0.4nm,0.5s,baz=17,slow=6.9,SNR=1.6						
OBN	Obninsk	61.82	329⇓	eP	P	08 58 35.7	0.0
OBN				e*PP	pP	08 58 45.7	+0.4
OBN				eSS	SS	09 10 59.7	+2.3
OBN				pmax	pmax		
	comp=Z,4.0nm,0.6s						
OBN				MLR	MLR		
	comp=Z,137nm,15.0s						
MNTX	Cornudas Mount	64.14	71	P	P	08 58 56.0	+4.4
TX32	Lajitas Array	66.90	72	P	P	08 59 13.3	+3.7
TX32				IAmb	IAmb	08 59 14.1	
	comp=Z,4.0nm,0.8s						
TXAR	Lajitas Array	66.90	72	P	P	08 59 06.4	-3.2
	comp=Z,0.6nm,0.6s,baz=297,slow=5.5,SNR=8.7						
TXAR	Lajitas Array	66.90	72	P	P	08 59 13.2	+3.6
AKASG	Malin Array Be	67.79	331	P	P	08 59 13.3	-1.4
	comp=Z,0.7nm,0.5s,baz=24,slow=6.4,SNR=2.4						
AKBB	Malin Array Si	67.79	331⇑	iP	P	08 59 12.4	-2.3
AKBB				pmax	pmax		
	comp=Z,8.0nm,1.5s						
KBZ	Khabaz	69.57	319⇑	eP	P	08 59 25.3	-0.6
KBZ				pmax	pmax		
	comp=Z,3.0nm,1.4s						
CRVS	Cervenica-Dubn	71.40	336	eP	P	08 59 36.4	-0.7
CRVS	Cervenica-Dubn	71.40	336	eP	P	08 59 36.4	-0.7
Z47A	Carrollton	71.75	58	P	P	08 59 42.4	+3.0
KHC	Kasperske Hory	72.83	341⇑	eP	P	08 59 47.6	+2.0
KHC				pmax	pmax		
	comp=Z,11nm,1.2s						
GERES	GERESS Array B	73.08	341	P	P	08 59 45.9	-1.4
	comp=Z,0.6nm,0.3s,baz=35,slow=3.6,SNR=5.3						
DAVOX	Davos/Dischmat	75.75	343	P	P	09 00 01.4	-1.5
	comp=Z,0.8nm,0.4s,baz=327,slow=19,SNR=1.7						
WRA	Warramunga Arr	79.81	209	P	P	09 00 22.4	-3.0
	comp=Z,0.5nm,0.9s,baz=17,slow=6.3,SNR=2.7						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	83.47	209	P	P	09 00 42.0	-2.7
	comp=Z,0.4nm,0.5s,baz=19,slow=5.0,SNR=6.7						

IDC 27 09:01:15.4±1.1, 53°.58N×90°.67E, h0^{km}, mb1 3.2/3, mb1mx3.1/47, mbtmp3.2/3, ML2.6/3, Error ellipse: s-maj=6.5km s-min=6.1km az=59.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	3.49	278	*i*		09 23 40.0	
	baz=88,slow=332,SNR=2.5						
ZALV	Zalesovo Beam	3.49	278	Pn	Pn	09 02 12.8	+1.9
	1.4nm,0.3s,baz=94,slow=15,SNR=8.1						
ZALV				Lg	Lg	09 03 03.8	
	2.5nm,0.3s,baz=93,slow=27,SNR=7.9						
KURBB	Kurchatov Arra	8.04	253	Pn	Pn	09 03 11.6	-1.8
	0.1nm,0.3s,baz=66,slow=15,SNR=3.3						
KURBB				Sn	Sn	09 04 46.5	+1.6
	0.1nm,0.3s,baz=68,slow=26,SNR=7.1						
KURBB				Lg	Lg	09 05 32.2	
	0.1nm,0.3s,baz=70,slow=33,SNR=11						
MKAR	Makanchi Array	8.66	222	Pn	Pn	09 03 20.2	-1.7
	0.2nm,0.3s,baz=34,slow=13,SNR=5.1						
MKAR				Sn	Sn	09 05 00.9	+0.7
	0.1nm,0.3s,baz=42,slow=18,SNR=3.6						
MKAR				Lg	Lg	09 05 49.0	
	baz=36,slow=23,SNR=5.8						
I34MN	SONGINO INFRAS	11.53	114	*i*		10 07 10.0	
	baz=308,slow=323,SNR=1.7						

NNC 27 09:06:01.8±8.9, 53°.88N×88°.38E, h0^{km}, mb3.9, mpv3.6, 4C-5D, Error ellipse: s-maj=88.6km s-min=62.2km az=162.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURK	Kurchatov	6.77	246	⇓Pn	Pn	09 07 39.1	-3.3
	5.6nm,1.3s						
KURK				⇓Sn	Sn	09 09 05.3	+5.2
	1.8nm,0.7s						
KURK				⇓Lg	Lg	09 09 34.1	
	6.2nm,1.0s						
KURBB	Kurchatov Arra	6.87	246	⇑Pn	Pn	09 07 45.5	+1.8
	2.2nm,0.3s						
KURBB				⇓Sn	Sn	09 09 00.8	-1.7
	3.9nm,0.6s						
KURBB				⇑Lg	Lg	09 09 40.4	
	7.4nm,0.8s						
MK31	Makanchi Array	8.09	211	⇓Pn	Pn	09 08 02.8	+2.4
	1.1nm,0.6s,baz=28,slow=13,SNR=6.9						
MK31				⇑Sn	Sn	09 09 33.9	+1.4
	0.8nm,0.7s,baz=35,slow=26,SNR=4.7						
MK31				⇑Lg	Lg	09 10 14.0	
	2.7nm,0.9s						

KRSC 27 09:08:35.4±2.2, 50°.26N×157°.24E, h60^{km}±24^{km}, ML4.1, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.83	301	*e*P	Pn	09 08 51.4	+0.2
SKR				*e*S	Sn	09 09 02.4	-0.5
PAU	Pauzhetka	1.24	348	*e*P	Pn	09 08 58.6	+2.1
PAU				*e*S	Sn	09 09 15.1	+2.7
KDTR	Khodutka, Kamc	1.64	19	*e*P	Pn	09 09 04.1	+2.2
KDTR				*e*S	Sn	09 09 24.3	+2.3
MIPR	Malaya Ipel'ka	2.04	352	*e*P	Pn	09 09 10.3	+2.9
ASAK	Asacha	2.17	11	*e*P	Pn	09 09 12.1	+2.9
ASAK				*e*S	Sn	09 09 38.5	+3.6
MTVR	Mutnovka	2.31	15	*e*P	Pn	09 09 13.9	+2.8
MTVR				*e*S	Sn	09 09 41.9	+3.5
RUS	Russkaya	2.32	20	*e*P	Pn	09 09 13.4	+2.3
RUS				*e*S	Sn	09 09 41.2	+2.7
KRMR	Karymshinskiy	2.63	12	*e*P	Pn	09 09 21.4	+6.0
KRMR				*e*S	Sn	09 09 51.0	+4.8
APC	Apacha	2.67	359	*e*P	Pn	09 09 18.2	+2.3
PET	Petropavlovsk	2.91	17	*e*P	Pn	09 09 21.9	+2.8
PET				*e*S	Sn	09 09 55.8	+3.0
DALK	Dalny	2.93	18	*e*P	Pn	09 09 22.3	+2.8
DALK				*e*S	Sn	09 09 57.0	+3.5
UGLR	Uglovaya	3.12	18	*e*P	Pn	09 09 25.8	+3.7
AVH	Avacha	3.15	17	*e*P	Pn	09 09 27.0	+4.4
KOK	Koryaka	3.16	15	*e*P	Pn	09 09 27.3	+4.6
SMAR	Somma	3.16	17	*e*P	Pn	09 09 26.9	+4.1
KRER	Koryakskii	3.19	17	*e*P	Pn	09 09 27.4	+4.2
SDLR	Sedlovina	3.19	18	*e*P	Pn	09 09 26.2	+3.0
SDLR				*e*S	Sn	09 10 03.2	+3.2
NLC	Nalytchevo	3.20	23	P	Pn	09 09 24.7	+1.6
NLC				*e*S	Sn	09 10 01.2	+1.2
SPN	Mys Shipunski	3.33	30	*e*P	Pn	09 09 27.8	+2.9
SPN				*e*S	Sn	09 10 06.0	+2.8
GNL	Ganaly	3.47	7	*e*P	Pn	09 09 30.7	+3.7
KII	Karymskiy	4.02	19	S	Sn	09 10 24.0	+3.7
MKZ	Mys Kozlova	5.11	31	*e*P	Pn	09 09 51.2	+2.0
MKZ				*e*S	Sn	09 10 47.4	+0.6
TUMD	Tumrok D	5.31	20	*e*P	Pn	09 09 55.0	+2.9
TUMR	Tumrok	5.33	18	*e*P	Pn	09 09 56.7	+4.3
KBTR	Krutoberegovo	6.84	27	*e*P	Pn	09 10 15.3	+2.4

KRNET ***27*** *09:13:02.3±0.1, 39°.20N×72°.59E, h12^{km}, mb4.7*

NEIC ***27*** *09:13:04.9±2.9, 39°.15N±0°.03×72°.58E±0°.04, h14^{km}±5^{km}, mb4.3/9, Error ellipse: s-maj=4.5km s-min=3.7km az=132.0*

BJI ***27*** *09:13:04.2±0.0, 39°.18N×72°.82E, h18^{km}, mB4.6/5, mb4.4/17, ML4.0/1*

IDC ***27*** *09:13:05.8±4.4, 39°.06N×72°.74E, h29^{km}±30^{km}, mb3.9/17, mb1 4.0/25, mb1mx3.9/53, mbtmp4.1/25, ML3.6/8, MS3.1/2, Ms1 3.1/2, ms1mx2.8/50, Error ellipse: s-maj=19.2km s-min=12.3km az=170.0*

MOS ***27*** *09:13:05.8±1.8, 39°.14N×72°.71E, h31^{km}, mb4.4/11, Error ellipse: s-maj=8.3km s-min=5.1km az=89.7*

SOME ***27*** *09:13:06.0, 39°.50N×72°.55E, h5^{km}*

NNC ***27*** *09:13:07.6±1.8, 39°.50N×72°.51E, h0^{km}, mb4.9, mpv4.5, Error ellipse: s-maj=14.6km s-min=7.4km az=2.0*

ISC 27 09:13:04.0±0.4, 39°.13N±0°.03×72°.58E±0°.02, h10^{km}, n178, σ2^{s}.78/219, mb4.2/26, 39C-24D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	0.69	300		Pg	09 13 15.5	-2.0
DRK				Sg	Sg	09 13 26.7	+0.1
DRK	Karamyk	0.69	300	⇑*i*P	Pg	09 13 15.4	-2.0
	baz=95						
DRK				⇑*i*S	Sg	09 13 25.9	-0.7
	baz=95						
SFK	Sufi-Kurgan	1.13	39	⇑*e*P	Pg	09 13 22.7	-3.1
	baz=40						
SFK				⇑*e*S	Sg	09 13 37.9	-2.6
	baz=40						
OHH	Osh	1.40	7	⇑*i*P	Pn	09 13 27.3	-2.3
	baz=6.0						
OHH				⇑*i*S	Sb	09 13 46.0	-2.2
	baz=6.0						
BTK	Batken	1.64	305	Pn	Pn	09 13 32.4	-0.6
BTK				Sn	Sn	09 13 55.1	+0.9
BTK	Batken	1.64	305	⇑*e*P	Pn	09 13 32.9	-0.1
	baz=3.0						
BTK				⇑*e*S	Sn	09 13 55.2	+1.0
	baz=3.0						
GAR	Garm	1.76	266		Pn	09 13 34.2	-0.5
GAR				Sg	Sb	09 14 00.5	+1.8
GAR	Garm	1.76	266	⇑*e*P	Pn	09 13 35.8	+1.1
	baz=64						
GAR				⇑*i*S	Sb	09 13 59.8	+1.1
	baz=64						
TRKS	Terek-Say	2.63	336	⇓*i*P	Pn	09 13 46.3	-0.4
	baz=35						
TRKS				⇓*i*S	Sn	09 14 18.7	-0.1
	baz=35						
KSH	Kashi	2.66	81	Pg	Pn	09 13 42.3	-4.7
KSH				Sg	Sn	09 14 08.8	-11
KSH				smax	smax		
	comp=N,1μm,1.1s						
KSH				smax	smax		
	comp=E,1μm,1.0s						
CHGR	Chuyangaron	2.71	261		Pn	09 13 49.5	+1.9
CHGR	Chuyangaron	2.71	261	⇑*e*P	Pn	09 13 49.4	+1.8
	baz=60						
CHGR				⇑*i*S	Sn	09 14 24.0	+3.5
	baz=60						
AML	Almayashu	3.11	15	P	Pn	09 13 55.6	+2.1
	SNR=448						
AML	Almayashu	3.11	15	⇑*i*P	Pn	09 13 54.3	+0.8
	baz=16						
AML				⇑*e*S	Sn	09 14 31.9	+1.0
	baz=16						
TAS	Tashkent	3.33	312	PN	Pn	09 13 58.0	+1.9
TAS	Tashkent	3.33	312	Pn	Pn	09 13 58.0	+1.9
TAS	Tashkent	3.33	312	⇑*i*P	Pn	09 13 57.5	+1.4
	baz=11						
TAS				⇑*i*S	Sn	09 14 37.9	+2.1
	baz=11						
MNAS	Manas	3.35	359	⇓*e*P	Pn	09 13 57.0	+0.5
	baz=59						
MNAS				⇓*e*S	Sn	09 14 37.6	+1.1
	baz=59						
UCH	Uchtor	3.42	25	P	Pn	09 13 58.0	+0.2
	SNR=37						
IUG	Iuzhnay	3.58	328	*e*P	Pb	09 14 05.0	-2.4
	3μm,0.6s						
IUG				*e*S	Sb	09 14 47.9	-3.1
	664nm,0.6s						
IUG	Iuzhnay	3.58	328	*e*PN	Pn	09 14 02.3	+2.7
IUG	Iuzhnay	3.58	328	Pg	Pb	09 14 05.0	-2.4
	3μm,0.6s						
IUG				Pg	Pb	09 14 05.0	-2.4
IUG				Lg	Lg	09 14 47.7	
IUG				Lg	Lg	09 14 47.9	
	664nm,0.6s						
EKS2	Erkin-Say	3.64	14	P	Pn	09 14 04.7	+4.2
	SNR=7.8						
EKS2	Erkin-Say	3.64	14	⇓*e*P	Pn	09 14 01.7	+1.2
	baz=14						
EKS2				⇓*i*S	Sn	09 14 44.7	+1.1
	baz=14						
MRKS	Merke	3.64	8	*e*P	Pb	09 14 08.4	-0.1
MRKS				*e*S	Sb	09 14 54.4	+1.6
MRKS	Merke	3.64	8	Pg	Pb	09 14 08.4	-0.1
MRKS				Lg	Lg	09 14 54.4	
AAK	Ala-Archa	3.79	22	Pn	Pn	09 14 05.0	+2.4
	29nm,0.3s,baz=177,slow=6.3,SNR=199						
AAK				Sn	Sn	09 14 52.2	+4.9
	24nm,0.3s,baz=29,slow=15,SNR=15						
AAK				LR	LR	09 15 40.4	
	comp=Z,294nm,18.8s,baz=266,slow=41						
AAK	Ala-Archa	3.79	22		Pn	09 14 03.2	+0.6
DZA	Taraz	3.87	346	*e*P	Pb	09 14 10.4	-1.9
	440nm,0.3s						
DZA				*e*S	Sb	09 14 56.6	-2.6
	1μm,0.4s						
DZA	Taraz	3.87	346	Pg	Pb	09 14 10.4	-1.9
	440nm,0.3s						
DZA				Lg	Lg	09 14 56.6	
	1μm,0.4s						
KBK	Karagaybulak	3.95	26	P	Pn	09 14 07.9	+3.1
	SNR=12						
KBK	Karagaybulak	3.95	26	⇑*e*P	Pn	09 14 06.1	+1.3
	baz=27						
KBK				⇑*i*S	Sn	09 14 52.3	+1.0
	baz=27						
FRU1	Bishkek	3.99	22	⇑*e*P	Pn	09 14 06.5	+1.3
	baz=22						
FRU1				⇑*e*S	Sn	09 14 53.2	+1.1
	baz=22						
ULHL	Ulahol	4.17	41	P	Pn	09 14 10.8	+2.9
	SNR=13						
ULHL	Ulahol	4.17	41	⇑*e*P	Pn	09 14 09.2	+1.3
	baz=41						
ULHL				⇑*e*S	Sn	09 14 57.6	+0.7
	baz=41						
CHMS	Chumysh	4.20	22	P	Pn	09 14 11.0	+2.9
	SNR=6.5						
CHMS	Chumysh	4.20	22	⇑*e*P	Pn	09 14 09.3	+1.3
	baz=23						
CHMS				⇑*i*S	Sn	09 14 58.0	+0.8
	baz=23						
BOOM	Boomskoye usch	4.21	36	PN	Pn	09 14 09.6	+1.2
BOOM	Boomskoye usch	4.21	36	Pn	Pn	09 14 09.6	+1.2
BOOM	Boomskoye usch	4.21	36	⇓*e*P	Pn	09 14 09.7	+1.3
	baz=37						
BOOM				⇓*i*S	Sn	09 14 58.5	+0.7
	baz=37						
KK02	Karatay Array	4.26	339	⇓Pn	Pn	09 14 10.8	+1.9
	17nm,0.3s						
KK02				⇓Pg	Pb	09 14 19.9	+0.9
	76nm,0.7s						
KK02				⇑Lg	Lg	09 15 04.4	
	87nm,0.6s						
KKAR	Karatay Array	4.26	339	PN	Pn	09 14 10.7	+1.8
KKAR	Karatay Array	4.26	339		Pn	09 14 10.7	+1.8
USP	Ospenovka	4.38	19	P	Pn	09 14 13.3	+2.8
	SNR=14						
USP	Ospenovka	4.38	19	⇑*e*P	Pn	09 14 11.7	+1.2
	baz=19						
USP				⇑*e*S	Sn	09 15 02.5	+0.9
	baz=19						
BRLS	Borolday	4.41	333	*e*P	Pb	09 14 19.4	-2.1
	12nm,0.2s						
BRLS				*e*S	Sb	09 15 13.5	-1.3
	98nm,0.6s						
BRLS	Borolday	4.41	333	*e*PN	Pn	09 14 11.4	+0.4
BRLS	Borolday	4.41	333	Pg	Pb	09 14 17.1	-4.4
	50nm,0.2s						
BRLS				Lg	Lg	09 15 13.5	
	98nm,0.6s						
TKM2	Tokmak 2	4.42	30	P	Pn	09 14 13.7	+2.5
	SNR=19						
TKM2	Tokmak 2	4.42	30	⇓Pn	Pn	09 14 13.0	+1.7
	24nm,0.7s						
TKM2				⇑Pg	Pg	09 14 25.9	-2.7
	39nm,0.6s						
TKM2				⇓Lg	Lg	09 15 19.5	
	168nm,0.7s						
TKM2	Tokmak 2	4.42	30	⇑*e*P	Pn	09 14 12.7	+1.4
	baz=30						
TKM2				⇑*i*S	Sn	09 15 03.7	+0.8
	baz=30						
KST	Kastek	4.67	32	*e*P	Pb	09 14 28.2	+2.2
	70nm,0.4s						
KST				*e*S	Sb	09 15 28.2	+5.8
	185nm,0.6s						
KST	Kastek	4.67	32	Pg	Pb	09 14 28.2	+2.2
	70nm,0.4s						
KST				Lg	Lg	09 15 28.2	
	185nm,0.6s						
TARG	Taragay, Kyrgy	4.76	55	Pn	Pn	09 14 16.6	+0.5
DGS	Degeres	4.76	29	*e*P	Pb	09 14 29.7	+2.2
	76nm,0.6s						
DGS				*e*S	Sb	09 15 30.4	+5.5
	152nm,0.3s						
DGS	Degeres	4.76	29	Pg	Pb	09 14 26.9	-0.6
	82nm,0.6s						
DGS				Lg	Lg	09 15 30.4	
	152nm,0.3s						
MTBS	Maitube	4.94	35	*e*P	Pb	09 14 33.6	+3.0
	42nm,0.3s						
MTBS				*e*S	Sg	09 15 37.6	-4.9
	95nm,0.4s						
MTBS	Maitube	4.94	35	Pg	Pb	09 14 33.6	+3.0
	42nm,0.3s						
MTBS				Lg	Lg	09 15 37.6	
	95nm,0.4s						
IZV	Izvestkoviy	4.95	37	Pg	Pb	09 14 30.9	+0.1
	74nm,0.7s						
IZV				Lg	Lg	09 15 32.0	
	193nm,0.4s						
TNSS	Tian-Shan	5.11	39	*e*P	Pb	09 14 36.0	+2.3
	50nm,0.5s						
TNSS				*e*S	Sb	09 15 41.4	+6.1
	88nm,0.6s						
TNSS	Tian-Shan	5.11	39	Pg	Pb	09 14 36.0	+2.3
	50nm,0.5s						
TNSS				Lg	Lg	09 15 41.4	
	88nm,0.6s						
KRBS	Karabastau	5.12	26	*e*P	Pb	09 14 35.7	+2.1
	38nm,0.5s						
KRBS				*e*S	Sb	09 15 41.3	+6.1
	63nm,0.3s						
KRBS	Karabastau	5.12	26	Pg	Pb	09 14 32.3	-1.4
	37nm,0.5s						
KRBS				Lg	Lg	09 15 41.3	
	63nm,0.3s						
MDOK	Medeo	5.25	39	*e*P	Pb	09 14 38.8	+2.9
	32nm,0.6s						
MDOK				*e*S	Sg	09 15 46.6	-6.0
	130nm,0.8s						
MDOK	Medeo	5.25	39	⇓Pn	Pn	09 14 25.0	+2.3
	33nm,0.6s						
MDOK				Lg	Lg	09 15 44.5	
MDOK	Medeo	5.25	39	Pg	Pb	09 14 38.8	+2.9
	32nm,0.6s						
MDOK				Lg	Lg	09 15 46.6	
	130nm,0.8s						
CEP	Cherat	5.33	186	P	Pn	09 14 27.5	+3.8
CHCP	Chirah Chowk	5.49	174	P	Pn	09 14 29.1	+3.3
NIL	Nilore	5.50	174	PN	Pn	09 14 28.2	+2.3
NIL	Nilore	5.50	174	Pn	Pn	09 14 28.2	+2.3
KTBS	Karatobe	5.52	33	*e*P	Pb	09 14 43.3	+2.9
	24nm,0.5s						
KTBS				*e*S	Sb	09 15 54.1	+7.5
	149nm,0.7s						
KTBS	Karatobe	5.52	33	Pg	Pb	09 14 43.3	+2.9
	24nm,0.5s						
KTBS				Lg	Lg	09 15 54.1	
	149nm,0.7s						
KUU	Kurty	5.53	29	*e*P	Pb	09 14 43.7	+3.1
	22nm,0.6s						
KUU				*e*S	Sb	09 15 53.8	+6.8
	164nm,0.7s						
KUU	Kurty	5.53	29	Pg	Pb	09 14 43.7	+3.1
	22nm,0.6s						
KUU				Lg	Lg	09 15 53.8	
	164nm,0.7s						
PRZ	Przheval'sk	5.54	51	PN	Pn	09 14 28.3	+1.6
PRZ	Przheval'sk	5.54	51	Pn	Pn	09 14 28.3	+1.6
CHKK	Chushkaly	5.76	34	*e*P	Pb	09 14 48.2	+3.6
	23nm,0.6s						
CHKK				*e*S	Sg	09 16 02.1	-6.9
	87nm,0.5s						
CHKK	Chushkaly	5.76	34	Pg	Pb	09 14 48.2	+3.6
	23nm,0.6s						
CHKK				Lg	Lg	09 16 02.1	
	87nm,0.5s						
SATY	Saty	5.90	46	*e*P	Pb	09 14 50.1	+3.2
	30nm,0.5s						
SATY				*e*S	Sb	09 16 05.1	+7.5
	94nm,1.2s						
SATY	Saty	5.90	46	Pg	Pb	09 14 50.1	+3.2
	30nm,0.5s						
SATY				Lg	Lg	09 16 05.1	
	94nm,1.2s						
BTLS	Baital	6.00	10	*e*P	Pb	09 14 52.6	+3.9
	16nm,0.5s						
BTLS				*e*S	Sg	09 16 09.6	-7.1
	61nm,0.6s						
BTLS	Baital	6.00	10	*e*PN	Pn	09 14 34.8	+2.0
BTLS	Baital	6.00	10	Pg	Pb	09 14 52.6	+3.9
	16nm,0.5s						
BTLS				Lg	Lg	09 16 09.6	
	61nm,0.6s						
UZB	Uzynbulak	6.30	48	*e*PN	Pn	09 14 37.8	+0.7
THW	Thamme Wali	6.36	186	P	Pn	09 14 40.4	+2.6
ARXS	Arharly	6.42	36	*e*P	Pb	09 14 59.4	+3.6
	15nm,0.7s						
ARXS				*e*S	Sg	09 16 21.8	-8.2
	62nm,0.5s						
ARXS	Arharly	6.42	36	*e*PN	Pn	09 14 40.4	+1.8
ARXS	Arharly	6.42	36	Pg	Pb	09 14 59.4	+3.6
	15nm,0.7s						
ARXS				Lg	Lg	09 16 21.8	
	62nm,0.5s						
PDGK	Podgornoye	6.69	49	⇓Pn	Pn	09 14 42.8	+0.5
	13nm,0.7s						
PDGK				⇓Pg	Pb	09 15 03.0	+2.7
	33nm,0.7s						
PDGK				⇑Lg	Lg	09 16 29.0	
	114nm,0.9s						
DHRM	DHARAMSHALA	7.50	155	*e*P	Pn	09 14 54.0	+0.3
DHRM				*e*S	Sn	09 16 15.4	-3.6
DHRM				IAML		09 16 30.2	
	comp=E,131nm,0.6s						
DHRM				IAML		09 16 31.7	
	comp=N,62nm,1.1s						
SMLA	Simla	8.82	153	*e*P	Pn	09 15 11.0	-0.5
SMLA				*e*S	Sn	09 16 44.8	-6.2
SMLA				IAML		09 16 52.8	
	comp=N,75nm,0.0s						
SMLA				IAML		09 16 57.7	
	comp=E,45nm,0.3s						
OTUK	Ortayu	9.11	359	⇓Pn	Pn	09 15 16.1	+0.7
	comp=E,7.8nm,0.6s						
OTUK				⇓Lg	Lg	09 17 50.0	
	comp=E,22nm,0.6s						
HRA	Herat	9.54	243	Pn	Pn	09 15 22.4	+0.8
MAKZ	Makanchi	10.30	39	P	Pn	09 15 32.4	+0.6
MAKZ	Makanchi	10.30	39	Pn	Pn	09 15 32.4	+0.6
MK31	Makanchi Array	10.45	40	P	Pn	09 15 33.7	-0.1
MK31	Makanchi Array	10.45	40	⇓Pn	Pn	09 15 36.5	+2.8
	comp=E,3.5nm,0.7s,baz=225,slow=19,SNR=27						
MK31				⇑Lg	Lg	09 18 29.4	
	comp=E,6.6nm,0.8s,baz=227,slow=28,SNR=3.6						
MK31	Makanchi Array	10.45	40		Pn	09 15 33.7	-0.1
MKAR	Makanchi Array	10.45	40	Pn	Pn	09 15 35.2	+1.4
	comp=E,0.2nm,0.3s,baz=209,slow=12,SNR=17						
MKAR				LR	LR	09 18 58.9	
	comp=E,102nm,19.6s,baz=26,slow=34						
MKAR	Makanchi Array	10.45	40	Pn	Pn	09 15 35.0	+1.2
GEYT	Alibeck	11.39	268	Pn	Pn	09 15 46.2	-0.5
	comp=E,2.2nm,0.3s,baz=118,slow=8.6,SNR=7.8						
GEYT				Sn	Sn	09 17 55.1	+1.0
	comp=E,1.0nm,0.3s,baz=134,slow=19,SNR=3.7						
GYA0B	ALIBECK ARRAY	11.39	268	Pn	Pn	09 15 47.3	+0.5
KUDL	Kundal	11.43	162	*e*P	Pn	09 15 46.7	-0.6
KUDL				*e*x	x	09 17 46.2	
KURBB	Kurchatov Arra	12.23	18	Pn	Pn	09 15 56.1	-2.0
	comp=E,0.2nm,0.3s,baz=211,slow=12,SNR=4.4						
KURK	Kurchatov	12.34	18	P	Pn	09 15 56.1	-3.5
AB31	Akbulak array	13.56	322	⇑P	Pn	09 16 14.7	-1.6
	comp=E,6.2nm,0.5s,baz=128,slow=13,SNR=210						
ABKAR	Akbulak array	13.56	322		Pn	09 16 14.9	-1.4
ABKAR	Akbulak array	13.56	322	Pn	Pn	09 16 15.1	-1.3
BVAR	Borovoye Array	13.98	355	Pn	Pn	09 16 21.0	-0.9
	comp=E,0.6nm,0.3s,baz=185,slow=16,SNR=5.7						
BVAR				Sn	Sn	09 18 54.9	-2.1
	comp=E,0.5nm,0.3s,baz=184,slow=31,SNR=5.4						
BVAR	Borovoye Array	13.98	355	P	Pn	09 16 21.0	-0.9
BRVK	Borovoye	14.02	354	⇑*e*P	Pn	09 16 22.7	+0.2
DANN	Dangsing	14.21	136	*e*Pn	Pn	09 16 19.2	-6.3
DANN				*e*Sn	Sn	09 18 54.0	-9.3
KOLN	Koldanda	14.58	138	*e*Pn	Pn	09 16 25.0	-5.6
KOLN				*e*Sn	Sn	09 19 03.8	-8.6
DGZ	Jazzator, Alta	14.95	40	⇑*i*P	Pn	09 16 35.2	-0.1
GKN	Gorkha	14.96	134	*e*Pn	Pn	09 16 30.1	-5.5
GKN				*e*Sn	Sn	09 19 12.5	-9.0
	comp=E,59nm,1.0s						
AKTO	Aktyubinsk	15.28	322	Pn	Pn	09 16 38.9	-0.8
	comp=E,0.8nm,0.3s,baz=134,slow=13,SNR=13						
AKTO				Sn	Sn	09 19 26.8	-2.1
	comp=E,0.7nm,0.3s,baz=352,slow=23,SNR=3.6						
AKTO	Aktyubinsk	15.28	322	⇓P	Pn	09 16 38.8	-0.8
	comp=E,28nm,0.7s						
KKN	Kakani	15.48	133	*e*Pn	Pn	09 16 37.2	-5.4
KKN				*e*Sn	Sn	09 19 24.6	-10
	comp=E,73nm,1.1s						
DMN	Daman	15.53	134	*e*Pn	Pn	09 16 38.3	-4.9
PKIN	Phulchoki	15.71	133	*e*Pn	Pn	09 16 39.4	-6.3
PKIN				*e*Sn	Sn	09 19 29.2	-11
	comp=E,37nm,0.9s						
PKI	Pulchoki	15.72	133	*e*Pn	Pn	09 16 40.2	-5.7
PKI				*e*Sn	Sn	09 19 31.0	-9.4
GUN	Gumba	15.74	131	*e*Pn	Pn	09 16 39.5	-6.6
JIRN	Jiri	16.11	131	*e*Pn	Pn	09 16 44.8	-6.0
JIRN				*e*Sn	Sn	09 19 39.5	-10
RAMN	Ramite	16.88	132	*e*Pn	Pn	09 16 55.8	-4.8
ZAA0	Zalesovo Array	17.00	25	Pn	Pn	09 17 01.4	-0.3
ZAA0				IAmb	IAmb	09 17 06.6	
	comp=Z,27nm,1.4s						
ZALV	Zalesovo Beam	17.00	25	Pn	Pn	09 17 00.9	-0.7
	comp=Z,1.1nm,0.3s,baz=219,slow=10,SNR=16						
ZALV	Zalesovo Beam	17.00	25	*i* P	Pn	09 17 01.3	-0.4
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.5s						
ZALV	Zalesovo Beam	17.00	25	Pn	Pn	09 17 01.0	-0.7
ODAN	Odare	17.41	130	*e*Pn	Pn	09 17 02.4	-4.8
MAK	Makhachkala	19.27	290	*e*P	P	09 17 26.7	-1.9
MAK				*e*S	Sn	09 21 06.2	+0.7
MAK				pmax	pmax		
	comp=Z,200nm,1.5s						
MAK				MLR	MLR		
	comp=Z,73nm,9.0s						
ARU	Arti	19.63	336	P	P	09 17 33.0	+0.5

	comp=Z,0.0nm,0.3s,baz=144,slow=13,SNR=5.5						
ARU	Arti	19.63	336	c *i*P	Pn	09 17 35.0	+1.2
ARU				S	Sn	09 21 18.4	+4.3
ARU				pmax	pmax		
	comp=Z,6.0nm,0.7s						
GTA	Gaotai	21.07	81	⇑P	P	09 17 48.3	0.0
GTA				pP	pP	09 17 51.5	-0.9
GTA				sP	sP	09 17 54.5	+0.2
GTA				pmax	pmax		
	comp=Z,22nm,1.0s						
SHL	Shillong	21.13	124	P	P	09 17 48.7	-0.5
SHL				pmax	pmax		
	comp=Z,9.0nm,0.9s						
SHL	Shillong	21.13	124	P	P	09 17 48.7	-0.5
SHL				IAmb	IAmb	09 18 01.8	
	comp=Z,9.5nm,0.9s						
GNI	Garni	21.43	282	P	P	09 17 53.5	+1.2
	comp=Z,4.3nm,0.4s,baz=45,slow=23,SNR=1.9						
BELG	Belogornoye	21.75	316	P	P	09 17 55.5	+0.1
	comp=Z,16nm,0.7s,baz=223,slow=2.8,SNR=4.1						
BELG	Belogornoye	21.75	316	⇓*e*P	P	09 18 00.4	+5.1
BELG				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KBZ	Khabaz	22.66	291	P	P	09 18 06.6	+1.4
	comp=Z,1.1nm,0.6s,baz=143,slow=5.9,SNR=3.6						
KBZ	Khabaz	22.66	291	*e*P	P	09 18 09.6	+4.4
KBZ				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KIV	Kislovodsk	22.82	292	*e*P	P	09 18 11.2	+4.2
KIV				pmax	pmax		
	comp=Z,11nm,1.0s						
ZAK	Zakamensk	24.36	52	*e*P	P	09 18 21.1	-1.0
ZAK				pmax	pmax		
	comp=Z,11nm,0.9s						
ANN	Anapa	26.60	294	*e*P	P	09 18 42.1	-0.1
ANN				*e*PPP	PPP	09 19 33.1	
ANN				*e*S	S	09 23 19.1	+2.3
ANN				*e*SS	SnSn	09 24 26.3	+7.4
ANN				pmax	pmax		
	comp=Z,50nm,1.1s						
AKASG	Malin Array Be	32.36	305	P	P	09 19 33.4	+0.1
	comp=Z,0.4nm,0.4s,baz=80,slow=7.1,SNR=4.7						
AKASG	Malin Array Be	32.36	305	*e*P	P	09 19 34.9	+1.6
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
VSU	Vasula	34.96	319	⇓*e*P	P	09 20 00.9	+5.0
VSU				pmax	pmax		
	comp=Z,201nm,1.3s						
FINES	FINESS Array B	36.05	324	P	P	09 20 05.0	-0.2
	comp=Z,1.6nm,0.6s,baz=107,slow=12,SNR=7.2						
FINES	FINESS Array B	36.05	324	*i* P	P	09 20 06.8	+1.6
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ARCES	ARCESS Array B	39.22	336	P	P	09 20 31.8	-0.2
	comp=Z,1.1nm,0.5s,baz=95,slow=10.0,SNR=9.8						
ZEA	Zeya	39.40	50	*e*P	P	09 20 36.4	+2.8
GERES	GERESS Array B	42.48	303	P	P	09 21 00.3	+1.1
	comp=Z,1.8nm,0.8s,baz=77,slow=7.0,SNR=7.9						
GERES	GERESS Array B	42.48	303	*e*P	P	09 21 02.0	+2.8
GERES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KHC	Kasperske Hory	42.52	304	*e*P	P	09 21 00.0	+0.6
KHC	Kasperske Hory	42.52	304	⇓*e*P	P	09 21 03.0	+3.6
CLL	Collm	42.56	307	*e*P	P	09 21 01.0	+1.3
CLL	Collm	42.56	307	*e*P	P	09 21 01.0	+1.3
KLR	Kul'dur	42.61	56	P	P	09 20 59.2	-1.0
	comp=Z,0.9nm,0.5s,baz=167,slow=5.6,SNR=4.8						
TIXI	Tiksi	42.87	23	P	P	09 21 01.0	-0.9
	comp=Z,2.5nm,0.4s,baz=266,slow=3.3,SNR=5.2						
TIXI	Tiksi	42.87	23	P	P	09 21 01.0	-0.9
TIXI	Tiksi	42.87	23	P	P	09 20 59.6	-2.3
TIXI				IAmb	IAmb	09 21 05.9	
	comp=Z,11nm,1.3s						
NB2	NORSAR Subarra	43.07	321	P	P	09 21 04.3	+0.5
	comp=Z,1.5nm,0.8s,baz=91,slow=7.9						
NOA	NORSAR Array B	43.07	321	P	P	09 21 02.6	-1.2
	comp=Z,0.8nm,0.6s,baz=91,slow=8.2,SNR=2.5						
MBAR	Mbarara	55.05	234	c*e*P	P	09 22 39.3	+3.1
BILL	Bilibino	55.70	27	⇓*i*P	P	09 22 44.2	+4.2
BILL				*e*		09 22 54.6	
BILL				pmax	pmax		
	comp=Z,15nm,2.5s						
ESDC	Sonseca Array	57.36	297	P	P	09 22 53.0	+0.6
	comp=Z,0.7nm,0.6s,baz=64,slow=6.8,SNR=4.8						
ESDC	Sonseca Array	57.36	297	IAmb	IAmb	09 23 06.8	
	comp=Z,4.4nm,1.4s						
TORD	Torodi Ar. Bea	67.03	268	P	P	09 23 56.8	-0.8
	comp=Z,4.1nm,0.7s,baz=42,slow=5.9,SNR=17						
TORD	Torodi Ar. Bea	67.03	268	P	P	09 23 56.7	-0.8
TORD				IAmb	IAmb	09 24 00.1	
	comp=Z,3.0nm,0.7s						
A36M	Sachs Harbour	68.47	6	P	P	09 24 05.0	-0.7
INK	Inuvik	71.11	10	P	P	09 24 20.5	-1.4
	comp=Z,1.6nm,0.5s,baz=351,slow=5.8,SNR=9.5						
INK	Inuvik	71.11	10	IAmb	IAmb	09 24 27.9	
	comp=Z,9.0nm,1.5s						
COLA	College	71.60	17	⇓*e*P	P	09 24 23.8	-1.2
COLA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ILAR	Eielson Array	71.91	17	P	P	09 24 25.4	-1.5
	comp=Z,1.4nm,0.9s,baz=331,slow=4.3,SNR=15						
YKA	Yellowknife Ar	78.56	3	P	P	09 25 04.2	-0.9
	comp=Z,1.3nm,0.6s,baz=3.7,slow=5.6,SNR=8.9						
WRA	Warramunga Arr	82.35	123	P	P	09 25 24.4	-1.8
	comp=Z,1.4nm,0.6s,baz=324,slow=4.9,SNR=19						
WRA	Warramunga Arr	82.35	123	IAmb	IAmb	09 25 26.7	
	comp=Z,0.1nm,0.7s						
WRAB	Tennant Creek	82.35	123	⇑*e*P	P	09 25 24.2	-2.0
WRAB				pmax	pmax		
	comp=Z,7.0nm,1.5s						
ASAR	Alice Springs	84.76	126	P	P	09 25 36.3	-2.2
	comp=Z,0.8nm,0.8s,baz=324,slow=5.0,SNR=9.8						

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*IDC **27** 09:25:19.4±1.0, 52°.57N×34°.64W, h0^{km}, mb3.6/6, mb1 3.8/6, mb1mx3.5/49, mbtmp3.6/6, MS3.9/1, Ms1 3.9/1, ms1mx2.9/42, Error ellipse: s-maj=33.0km s-min=19.2km az=179.0*

ISC 27 09:25:23.0±1.9**, 52°.6N**±0°.4×**34°.6W**±0°.2**, h20**^{km}**, n10, σ0^{s}.63**/8**, mb3.8**/6**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSD	Bornholm Skovb	28.83	65	*e*	P	09 31 24.5	+5.0
BSD				*e*		09 31 34.6	
ILAR	Eielson Array	51.88	330	P	P	09 34 29.1	-0.3
	0.8nm,0.9s,baz=49,slow=6.4,SNR=7.3						
DBIC	Dimbokro	51.91	141	LR	LR	09 52 49.8	
	comp=Z,126nm,20.6s,baz=38,slow=32						
TXAR	Lajitas Array	54.77	273	P	P	09 34 51.5	+0.3
	0.3nm,1.0s,baz=50,slow=11,SNR=2.0						
TIXI	Tiksi	55.47	6	P	P	09 34 55.7	+0.2
	0.7nm,0.3s,baz=9.8,slow=4.4,SNR=1.8						
BVAR	Borovoye Array	57.57	44	P	P	09 35 11.4	+0.6
	0.5nm,0.4s,baz=256,slow=12,SNR=2.3						
KURBB	Kurchatov Arra	62.72	41	P	P	09 35 46.2	+0.1
	0.5nm,0.6s,baz=323,slow=7.1,SNR=4.3						
MKAR	Makanchi Array	67.28	42	P	P	09 36 15.5	-0.3
	0.4nm,0.6s,baz=353,slow=6.0,SNR=3.0						
WRA	Warramunga Arr	146.27	19	PKPbc	PKPdf	09 45 01.1	+0.3
	0.8nm,0.7s,baz=339,slow=3.1,SNR=9.6						
ASAR	Alice Springs	149.79	21	PKPbc	PKPbc	09 45 10.2	-1.1
	0.7nm,0.8s,baz=339,slow=1.6,SNR=6.5						

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*IDC **27** 09:36:05.0±1.1, 37°.10N×135°.18E, h382^{km}±15^{km}, mb3.0/6, mb1 3.2/10, mb1mx2.9/47, mbtmp3.8/10, Error ellipse: s-maj=28.4km s-min=14.0km az=60.0*

*JMA **27** 09:36:05.4±0.5, 37°.20N×135°.13E, h383^{km}±4^{km}, M3.1*

ISC 27 09:36:05.1±0.8**, 37°.18N**±0°.09×**135°.11E**±0°.09**, h372**^{km}**, n21, σ1^{s}.31**/22**, mb3.1**/6**, Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWT	Wachi	1.91	173	P	Pn	09 36 59.6	+1.7
JYTA	Yamagatataniai	2.06	140	P	Pn	09 37 00.4	+1.5
JYTA				*e*S	S	09 37 43.3	+1.2
MAT	Matsushiro	2.57	104	P	Pn	09 37 04.0	+1.4
MAT	Matsushiro	2.57	104	P	Pn	09 37 04.0	+1.4
MJAR	Matsushiro Arr	2.57	104	P	Pn	09 37 03.0	+0.4
	0.9nm,0.3s,baz=276,slow=7.6,SNR=52						
JWY	Kouya	2.98	172	P	Pn	09 37 07.5	+1.3
JIE	Ise	3.07	155	P	Pn	09 37 08.6	+1.8
JRY	Ryogami san	3.27	110	P	Pn	09 37 10.4	+1.9
JTNC	Tanabenakahech	3.38	173	P	Pn	09 37 10.6	+1.0
JOD2	Odawara 2	3.75	120	P	Pn	09 37 14.1	+1.1
JMK	Ichinoseki	5.13	68	P	Pn	09 37 28.2	+1.1
BSO1	Boso 1	5.39	116	P	Pn	09 37 29.5	+0.1
KSRS	Korea Array	5.73	275	P	Pn	09 37 34.7	+1.1
	0.3nm,0.3s,baz=94,slow=12,SNR=8.4						
USRK	Ussuriysk Ar.	7.40	342	P	P	09 37 54.0	+0.6
	baz=155,slow=12,SNR=7.7						
ASAJ	Asahikawa	8.96	37	P	P	09 38 11.2	-0.6
	0.8nm,0.3s,baz=262,slow=7.1,SNR=5.9						
SONM	Songino Array	23.56	306	P	P	09 40 45.0	+1.3
	0.3nm,0.4s,baz=119,slow=10,SNR=2.6						
MKAR	Makanchi Array	39.75	301	P	P	09 43 02.5	-0.6
	0.5nm,0.5s,baz=80,slow=8.8,SNR=6.9						
BVAR	Borovoye Array	46.72	311	P	P	09 43 57.3	-0.7
	0.7nm,0.4s,baz=75,slow=10,SNR=5.0						
WRA	Warramunga Arr	56.82	181	P	P	09 45 10.1	-2.0
	1.0nm,0.4s,baz=354,slow=7.6,SNR=23						
ASAR	Alice Springs	60.53	181	P	P	09 45 36.6	-0.8
	0.3nm,0.5s,baz=18,slow=13,SNR=5.2						
FINES	FINESS Array B	66.26	330	P	P	09 46 13.2	-0.7
	6.2nm,1.1s,baz=45,slow=8.1,SNR=3.4						

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*THR **27** 10:22:42.9±0.3, 26°.79N×54°.31E, h15^{km}±3^{km}, ML3.2*

*TEH **27** 10:22:49.8, 27°.21N×54°.77E, h8^{km}, ML3.5*

ISC 27 10:22:49.4±1.1**, 27°.06N**±0°.04×**54°.62E**±0°.06**, h18**^{km}**, n31, σ0^{s}.99**/30**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAR1	LAR	0.64	341	*e*Pg	Pb	10 23 01.2	-0.9
LAR1				*e*		10 23 15.5	
	comp=Z,36µm,0.2s						
BNDS	Bandar-Abbas	1.43	76	*e*Pg	Pb	10 23 15.3	-0.3
BNDS				IAML		10 24 01.6	
	comp=N,226nm,0.5s						
BNDS				IAML		10 24 02.4	
	comp=E,186nm,0.3s						
BNDS	Bandar-Abbas	1.43	76	*e*Pg	Pb	10 23 15.3	-0.3
GENO	Geno	1.43	76	*e*Pn	Pb	10 23 14.6	-1.0
SHME	Shamm	1.70	126	*e*Pn	Pb	10 23 20.0	-0.1
JHRM	Jahrom	1.71	328	*e*Pn	Pb	10 23 20.5	+0.2
JHRM				*e*		10 24 17.0	
	comp=Z,10µm,0.4s						
IBND	Bandar-abas	1.76	77	*e*Pn	Pn	10 23 18.8	-0.1
IBND				*e*		10 24 30.5	
	comp=Z,5µm,0.5s						
UMQ	Umm Al-Quwin	1.80	148	*e*Pn	Pg	10 23 23.0	-1.0
BANOM	Banah	1.89	127	*e*Pn	Pg	10 23 24.9	-0.8
NAZ	Nazwa, Dubai	2.27	155	*e*Pn	Pg	10 23 33.7	+0.7
FAQ	Al Faqa, Dubai	2.47	159	*e*Pn	Pb	10 23 33.4	+0.1
AJN	Ajban	2.51	172	*e*Pn	Pb	10 23 33.8	-0.2
UOSS	Minazif	2.55	145	*e*Pn	Pb	10 23 35.7	+1.1
HATD	Hatta, Dubai	2.61	148	*e*Pn	Pb	10 23 36.0	+0.3
KHNJ	Kahnooj	2.88	71	*e*Pn	Pn	10 23 34.6	+0.1
ALNE	Al Ain	3.16	161	*e*Pn	Pb	10 23 43.5	-1.6
NGRK	Negar Kerman	3.18	35	*e*Pn	Pn	10 23 39.7	+0.8
NGRK				*e*		10 23 55.1	
	comp=Z,1µm,0.2s						
SOHO	SOHO	3.39	149	*e*Pn	Pb	10 23 48.4	-0.6
KRBR	Kerman	3.47	32	*e*Pn	Pn	10 23 43.8	+1.0
KRBR				IAML		10 24 49.7	
	comp=E,38nm,0.7s						
KRBR				IAML		10 25 13.4	
	comp=N,31nm,0.5s						
KRBR	Kerman	3.47	32	*e*Pn	Pn	10 23 43.8	+1.0
TVBK	TV Kerman	3.47	32	*e*Pn	Pn	10 23 44.7	+1.8
TVBK				*e*		10 24 01.2	
	comp=Z,972nm,0.2s						
KHGB	Koh Gabri	3.69	26	*e*Pn	Pn	10 23 47.0	+1.3
KHGB				*e*		10 24 00.7	
	comp=Z,475nm,0.3s						
CHMN	Cheshme madani	3.80	42	*e*Pn	Pn	10 23 49.6	+2.3
KBAM	BAM	3.97	58	*e*Pn	Pn	10 23 50.8	+1.3
KBAM				*e*		10 24 04.7	
	comp=Z,2µm,0.3s						
IMEH	Mehriz	4.31	360	*e*Pn	Pn	10 23 56.0	+1.6
UMZA	Um Al Zommool	4.36	173	*e*Pn	Pn	10 23 59.9	+5.2
IRAM	Ramesheh	5.12	338	*e*Pn	Pn	10 24 04.6	-0.8
YZKH	Yazd	5.31	360	*e*Pn	Pn	10 24 07.9	0.0
YZKH	Yazd	5.31	360	*e*Pn	Pn	10 24 07.9	0.0
SRVN	Saravan	6.94	85	*e*Pn	Pn	10 24 30.5	+0.2
TNSJ	Nastanj	7.09	14	*e*Pn	Pn	10 24 32.3	-0.1

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*IDC **27** 10:32:22.9±0.7, 3°.20N×126°.78E, h0^{km}, mb4.4/13, mb1 4.5/14, mb1mx4.2/48, mbtmp4.3/14, ML3.5/1, MS3.1/4, Ms1 3.1/4, ms1mx2.7/44, Error ellipse: s-maj=46.1km s-min=12.5km az=65.0*

*DJA **27** 10:32:29.7±0.3, 3°N±2°×12°7E±°, h45^{km}±5^{km}, M4.5/14, mB5.0/6, mb4.6/14, MLv4.4/14, Mw(mB)4.4/6*

*NEIC **27** 10:32:29.2±1.3, 3°.32N±0°.08×127°.00E±0°.08, h44^{km}±8^{km}, mb4.5/29, Error ellipse: s-maj=13.7km s-min=9.7km az=45.0*

ISC 27 10:32:29.6±0.5**, 3°.26N**±0°.05×**126°.97E**±0°.08**, h48**^{km}**, n77, σ1^{s}.63**/76**, mb4.5**/26**, MS2.9**/3**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	1.50	287	P	Pn	10 32 53.8	-0.2
TNTI	Ternate	2.50	171	P	Pn	10 33 09.5	+1.7
TNTI				S	Sn	10 33 39.1	+2.0
TNTI	Ternate	2.50	171		Pn	10 33 09.0	+1.2
TNTI				Sn	Sn	10 33 39.1	+2.0
LBMI	Labuha	3.90	172	P	Pn	10 33 29.0	+1.9
LBMI				S	Sn	10 34 15.1	+3.4
KMSI	Cibinong	4.00	228	P	Pn	10 33 31.1	+2.7
DAV	Davao City (W)	4.03	340	Sn	Sn	10 34 21.7	+6.8
	55nm,0.3s,baz=22,slow=18,SNR=2.0						
GTOI	Gorontalo	4.73	237	P	Pn	10 33 40.4	+1.9
SANI	Sanana	5.36	191	P	Pn	10 33 46.1	-1.0
	0.3nm2µm31nm,0.7s						
MRSI	Marisa	5.73	241	P	Pn	10 33 54.1	+1.9
	0.4nm1µm95nm,0.7s						
SWI	Sorong	5.93	134	P	Pn	10 33 56.4	+1.5
	0.1nm33nm,0.9s						
SIJI	Sorong	5.94	134	Pn	Pn	10 33 53.9	-1.2
	1.2nm,0.3s,baz=195,slow=20,SNR=1.9						
SIJI				Sn	Sn	10 35 02.4	+0.5
	4.7nm,0.3s,baz=193,slow=24,SNR=9.3						
LUWI	Luwuk	5.98	225	P	Pn	10 33 57.8	+2.2
	0.5nm1µm81nm,0.7s						
LUWI	Luwuk	5.98	225		Pn	10 33 56.2	+0.6
TOLI2	Tolitoli	6.54	251	Pn	Pn	10 34 03.7	+0.4
APSI	Ampana	6.74	232	P	Pn	10 34 09.0	+3.0
	0.4nm836nm99nm,0.7s						
MSAI	Masohi	6.84	163	P	Pn	10 34 12.8	+5.3
MPSI	Mapaga	7.64	248	P	Pn	10 34 26.9	+8.6
FAKI	Fak Fak	8.09	139	P	Pn	10 34 27.6	+3.0
	8.8nm,0.9s						
FAKI	Fak Fak	8.09	139		Pn	10 34 24.0	-0.6
MYLDM	Lahad Datu	8.66	283		Pn	10 34 30.6	-1.7
TTSI	Tana Toraja	9.50	229	P	Pn	10 34 47.1	+3.3
	18nm,0.6s						
BKSI	Bulukumba	10.92	219	P	Pn	10 35 03.8	+0.4
	9.8nm,0.6s						
KKM	Kota Kinabalu	11.07	285	Pn	Pn	10 35 06.4	+0.9
BSSI	Bau Bau, Buton	11.36	215	P	Pn	10 35 10.0	+0.7
	20nm,0.8s						
JAY	Jayapura	14.88	112	LR	LR	10 41 22.7	
	comp=Z,57nm,19.9s,baz=316,slow=36						
PLAI	Plampang	15.10	217	P	Pn	10 36 01.8	+1.8
	1µm154nm,0.8s						
TWSI	Taliwang, Sumb	15.59	220	P	P	10 36 09.3	-0.5
	573nm17nm,0.8s						
MTN	Manton Dam	16.52	166	Pn	Pn	10 36 16.9	-1.2
KNRA	Kununurra	18.89	175	P	P	10 36 45.3	-1.0
KNRA				IAmb	IAmb	10 36 49.5	
	comp=Z,22nm,0.7s						
YULB	Yu-li	20.76	345	P	P	10 37 03.5	-3.0
YULB				IAmb	IAmb	10 37 28.2	
	comp=Z,30nm,1.1s						
TPUB	Ta-pu	20.85	343	P	P	10 37 05.4	-2.2
SSLB	Suanglung	21.22	345	P	P	10 37 09.8	-1.8
FITZ	Fitzroy Crossi	21.26	183	P	P	10 37 10.4	-1.5
	comp=Z,4.3nm,0.5s,baz=352,slow=13,SNR=4.6						
YOJ	Yonaguni jima	21.43	350	P	P	10 37 12.7	-1.0
PMG	Port Moresby	23.73	122	LR	LR	10 47 56.3	
	comp=Z,83nm,18.4s,baz=262,slow=39						
WB0	Warramunga Arr	24.02	163	P	P	10 37 39.4	-0.8
WB0				IAmb	IAmb	10 37 48.0	
	comp=Z,23nm,0.9s						
WRAB	Tennant Creek	24.16	163	P	P	10 37 40.7	-0.8
WRAB				IAmb	IAmb	10 37 49.2	
	comp=Z,18nm,0.8s						
WRA	Warramunga Arr	24.16	163	P	P	10 37 40.7	-0.8
	comp=Z,9.2nm,0.6s,baz=342,slow=11,SNR=99						
WRA				LR	LR	10 48 37.2	
	comp=Z,36nm,19.4s,baz=355,slow=40						
WRA	Warramunga Arr	24.16	163	P	P	10 37 39.1	-2.4
WB2	Warramunga Arr	24.17	163	P	P	10 37 40.9	-0.6
WB2				IAmb	IAmb	10 37 49.3	
	comp=Z,18nm,0.8s						
WR0	Warramunga Arr	24.24	162	P	P	10 37 41.4	-0.8
WR0				IAmb	IAmb	10 37 43.1	
	comp=Z,7.9nm,0.7s						
UBPT	Khong Chiam	24.31	301	P	P	10 37 42.2	-0.7
UBPT				IAmb	IAmb	10 37 43.6	
	comp=Z,8.9nm,0.9s						
PSA00	Pilbara Seismi	25.64	195	P	P	10 37 55.0	+0.1
PSA00				IAmb	IAmb	10 37 55.6	
	comp=Z,7.5nm,0.7s						
KULM	Kulim	26.32	275	P	P	10 37 59.8	-1.4
KULM				IAmb	IAmb	10 38 21.4	
	comp=Z,24nm,1.3s						
AS31	Alice Springs	27.60	166	P	P	10 38 12.2	-0.4
ASAR	Alice Springs	27.60	166	P	P	10 38 11.9	-0.7
	comp=Z,2.0nm,0.5s,baz=350,slow=7.3,SNR=74						
ASAR	Alice Springs	27.60	166	P	P	10 38 12.2	-0.4
CMAR	Chiang Mai Arr	31.32	301	P	P	10 38 44.2	-1.4
	comp=Z,1.7nm,0.7s,baz=115,slow=6.8,SNR=11						
CMAR				LR	LR	10 51 43.8	
	comp=Z,20nm,20.7s,baz=195,slow=37						
CMAR	Chiang Mai Arr	31.32	301	P	P	10 38 44.7	-0.9
CHTO	Chiang Mai	31.47	302	P	P	10 38 46.1	-0.8
FORT	Forrest	33.86	178	P	P	10 39 07.2	-0.4
BBOO	Buckleboo	36.89	167	P	P	10 39 33.1	-0.6
STKA	Stephens Creek	37.60	159	P	P	10 39 39.9	+0.1
	comp=Z,8.9nm,0.7s,baz=330,slow=8.0,SNR=21						
STKA	Stephens Creek	37.60	159	P	P	10 39 39.8	+0.1
HHC	Hu-ho-hao-te	39.92	342	*e*P	P	10 40 01.0	+1.8
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,310nm,7.2s						
SONM	Songino Array	47.82	341	P	P	10 41 02.7	+0.2
	comp=Z,1.4nm,0.8s,baz=155,slow=8.3,SNR=6.6						
SONM	Songino Array	47.82	341	IAmb	IAmb	10 41 04.6	
	comp=Z,3.1nm,1.4s						
WMQ	Urumqi	53.25	325	*e*P	P	10 41 45.5	+2.0
MKAR	Makanchi Array	58.08	325	P	P	10 42 17.2	-0.9
	comp=Z,2.6nm,0.6s,baz=119,slow=8.5,SNR=17						
MAKZ	Makanchi	58.26	325	P	P	10 42 19.1	-0.3
MAKZ				IAmb	IAmb	10 42 21.7	
	comp=Z,3.6nm,0.7s						
ZAA0	Zalesovo Array	61.12	333	P	P	10 42 38.2	-0.6
ZAA0				IAmb	IAmb	10 42 40.5	
	comp=Z,2.8nm,0.8s						
ZALV	Zalesovo Beam	61.12	333	P	P	10 42 37.8	-1.0
	comp=Z,3.1nm,0.8s,baz=138,slow=6.0,SNR=11						
ZALV	Zalesovo Beam	61.12	333	P	P	10 42 38.2	-0.6
KURBB	Kurchatov Arra	62.26	327	P	P	10 42 45.9	-0.7
	comp=Z,5.9nm,0.7s,baz=125,slow=6.3,SNR=44						
KURK	Kurchatov	62.27	328	P	P	10 42 45.6	-1.0
KKAR	Karatay Array	63.74	317	P	P	10 42 55.1	-1.5
BVAR	Borovoye Array	67.84	327	P	P	10 43 22.5	-0.3
	comp=Z,1.7nm,0.7s,baz=185,slow=14,SNR=9.4						
BRVK	Borovoye	67.92	327	P	P	10 43 22.2	-1.1
BRVK				IAmb	IAmb	10 43 23.3	
	comp=Z,2.8nm,0.7s						
TIXI	Tiksi	68.31	1	P	P	10 43 25.4	+0.1
TIXI				IAmb	IAmb	10 43 26.0	
	comp=Z,3.4nm,0.6s						
NRIK	Noril'sk	70.94	346	P	P	10 43 42.0	+0.4
	comp=Z,6.3nm,0.7s,baz=130,slow=5.6,SNR=7.3						
NRIK	Noril'sk	70.94	346	P	P	10 43 41.8	+0.2
NRIK				IAmb	IAmb	10 43 42.7	
	comp=Z,6.3nm,0.7s						
ABKAR	Akbulak array	72.66	321	P	P	10 43 51.5	-0.8
ABKAR				IAmb	IAmb	10 43 52.2	
	comp=Z,2.9nm,0.8s						
RAYN	Ar Rayn	80.88	293	P	P	10 44 38.2	-1.1
BRTR	Keskin Array B	90.50	310	P	P	10 45 26.8	-0.1
	comp=Z,1.3nm,0.8s,baz=108,slow=8.5,SNR=2.6						
ARCES	ARCESS Array B	90.97	340	P	P	10 45 30.0	+1.8
	comp=Z,2.2nm,0.8s,baz=74,slow=6.7,SNR=3.7						
TORD	Torodi Ar. Bea	123.29	288	PKP	PKiKP	10 51 22.7	+0.1
	comp=Z,1.0nm,0.8s,baz=53,slow=1.9,SNR=6.1						
TORD	Torodi Ar. Bea	123.29	288		PKPdf	10 51 22.1	-0.2

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*IDC **27** 10:37:33.6±1.1, 27°.09N×87°.86E, h0^{km}, mb3.7/7, mb1 3.9/7, mb1mx3.6/46, mbtmp3.7/7, MS3.2/2, Ms1 3.2/2, ms1mx2.6/52, Error ellipse: s-maj=52.1km s-min=19.8km az=55.0*

*DMN **27** 10:37:38.7±0.5, 27°.11N×87°.95E, h2^{km}, Ml4.7/5, Error ellipse: s-maj=9.9km s-min=6.7km az=102.0*

ISC 27 10:37:35.8±2.1**, 27°.16N**±0°.07×**88°.02E**±0°.07**, h13**^{km}±12^{km}**, n22, σ1^{s}.17**/27**, mb4.0**/6**, Sikkim**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAPN	Taplejung	0.33	304	*e*Pg	Pb	10 37 44.5	+0.6
TAPN				*e*Sg	Sb	10 37 49.4	+0.1
ODAN	Odare	0.64	242	*e*Pg	Pb	10 37 49.0	0.0
ODAN				*e*Sg	Sb	10 37 57.3	-0.6
	12µm,0.3s						
RAMN	Ramite	1.28	261	*e*Pg	Pb	10 38 00.7	+0.7
JIRN	Jiri	1.70	287	*e*Pn	Pg	10 38 08.0	-0.5
GUN	Gumba	2.04	292	*e*Pn	Pb	10 38 12.6	-0.4
GUN				*e*Sg	Sg	10 38 41.1	-0.4
PKI	Pulchoki	2.36	281	*e*Pn	Pn	10 38 16.5	+1.9
PKIN	Phulchoki	2.37	281	*e*Pn	Pn	10 38 16.6	+1.9
PKIN				*e*Sn	Sn	10 38 44.7	+0.9
	713nm,0.2s						
KKN	Kakani	2.51	285	*e*Pn	Pn	10 38 18.9	+2.3
DMN	Daman	2.63	280	*e*Pn	Pn	10 38 19.9	+1.6
DMN				*e*Sn	Sn	10 38 50.7	+0.5
	319nm,0.2s						
GKN	Gorkha	3.12	286	*e*Pn	Pn	10 38 27.2	+2.3
DANN	Dangsing	3.96	288	*e*Pn	Pn	10 38 37.9	+1.3
DANN				*e*Sn	Sn	10 39 22.6	-0.4
	197nm,0.2s						
KOLN	Koldanda	3.97	280	*e*Pn	Pn	10 38 37.9	+1.2
KOLN				*e*Sn	Sn	10 39 22.6	-0.7
	164nm,0.3s						
PYUN	Piuthan	4.56	283	*e*Pn	Pn	10 38 45.3	+0.5
PYUN				*e*Sn	Sn	10 39 36.4	-1.4
	472nm,0.4s						
MKAR	Makanchi Array	20.11	348	P	Pn	10 42 11.3	+0.1
	0.5nm,0.3s,baz=176,slow=10,SNR=10						
PALK	Pallekele	20.97	201	LR	LR	10 49 35.4	
	comp=Z,38nm,19.4s,baz=73,slow=35						
SONM	Songino Array	25.15	30	P	P	10 43 00.8	-0.1
	0.2nm,0.4s,baz=232,slow=12,SNR=2.4						
OBN	Obninsk	46.32	322	LR	LR	11 04 50.9	
	comp=Z,46nm,19.3s,baz=18,slow=35						
AKASG	Malin Array Be	49.91	315	P	P	10 46 28.2	-0.9
	0.5nm,0.4s,baz=86,slow=6.3,SNR=3.1						
FINES	FINESS Array B	53.16	328	P	P	10 46 52.8	-0.4
	3.6nm,0.9s,baz=116,slow=9.6,SNR=4.3						
HFS	Hagfors	59.10	326	P	P	10 47 34.6	-1.1
	3.5nm,1.0s,baz=90,slow=10,SNR=4.3						
WRA	Warramunga Arr	64.86	131	P	P	10 48 15.3	+0.3
	0.5nm,0.4s,baz=326,slow=6.8,SNR=14						
ASAR	Alice Springs	67.21	134	P	P	10 48 30.2	+0.2
	0.4nm,0.7s,baz=316,slow=6.8,SNR=6.6						

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*IDC **27** 10:51:18.8±1.5, 8°.65S×124°.60E, h0^{km}, mb3.9/2, mb1 4.2/4, mb1mx3.7/35, mbtmp4.0/4, ML4.1/2, MS2.7/1, Ms1 2.7/1, ms1mx2.3/33, Error ellipse: s-maj=217.6km s-min=25.4km az=58.0*

*DJA **27** 10:51:27.6±0.3, 9°S±4°×12°4E±°, h71^{km}±7^{km}, M4.1/10, mb4.1/5, mB4.7/3, MLv4.1/10, Mw(mB)4.0/3*

ISC 27 10:51:25.5±1.1**, 9°.01S**±0°.07×**124°.16E**±0°.09**, h35**^{km}**, n15, σ2^{s}.71**/16**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	0.75	172	P	Pn	10 51 45.3	+5.6
SOEI				S	Sn	10 51 53.8	+3.9
BATI	Baumata	1.28	202	P	Pn	10 51 48.4	+1.4
BATI				S	Sn	10 52 06.1	+3.1
MMRI	Maumere	1.93	281	P	Pn	10 51 58.9	+3.0
MMRI				S	Sn	10 52 20.9	+1.9
EDFI	Ende, Flores	2.45	276	P	Pn	10 52 05.4	+2.2

BASI	**Baing, Sumba**	**3.73**	**251**	P	**Pn**	**10 52 21.4**	**+0.8**
BSSI	**Bau Bau, Buton**	**4.62**	**308**	P	**Pn**	**10 52 36.4**	**+3.5**
BKSI	**Bulukumba**	**5.43**	**312**	P	**Pn**	**10 52 47.2**	**+3.2**
	0.0nm10nm,0.8s						
PLAI	**Plampang**	**6.31**	**271**	P	**Pn**	**10 52 57.5**	**+1.4**
	1.3nm564nm22nm,0.7s						
PLAI				S	**Sn**	**10 54 03.1**	**-3.9**
	1.3nm564nm22nm,0.7s						
TWSI	**Taliwang, Sumb**	**7.19**	**272**	P	**Pn**	**10 53 08.9**	**+0.6**
	0.2nm272nm12nm,0.7s						
LBMI	**Labuha**	**8.96**	**22**	P	Pn	10 53 21.1	-11
WRA	**Warramunga Arr**	**14.66**	**139**	Pn	**Pn**	**10 54 48.8**	**-1.8**
	0.9nm,0.3s,baz=326,slow=14,SNR=22						
WRA				Sn	Sn	10 57 14.8	-17
	0.3nm,0.3s,baz=317,slow=18,SNR=2.4						
ASAR	**Alice Springs**	**17.30**	**149**	P	**Pn**	**10 55 23.0**	**-1.5**
	0.8nm,0.3s,baz=320,slow=11,SNR=67						
ASAR				S	Sn	10 58 23.1	-13
	0.5nm,0.3s,baz=311,slow=21,SNR=7.1						
JAY	**Jayapura**	**17.68**	**70**	LR	LR	11 01 45.8	
	comp=Z,29nm,20.3s,baz=344,slow=37						
STKA	**Stephens Creek**	**27.92**	**147**	P	**P**	**10 57 11.2**	**-1.4**
	0.9nm,0.5s,baz=336,slow=12,SNR=4.4						
MKAR	**Makanchi Array**	**66.90**	**330**	P	**P**	**11 02 12.4**	**-1.9**
	0.4nm,0.5s,baz=142,slow=6.5,SNR=7.7						

IDC 27 11:01:23.3±9.7**, 5°.03S**×**153°.46E, h149**^{km}±65^{km}**, mb3.1**/2**, mb1 3.5**/3**, mb1mx3.1**/41**, mbtmp3.8**/3**, Error ellipse: s-maj=123.6km s-min=59.9km az=119.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.61**	**235**	P	Pn	11 03 11.1	-0.5
	3.8nm,0.3s,baz=47,slow=6.2,SNR=11						
PMG				S	Sn	11 04 38.6	+2.0
	0.8nm,0.3s,baz=252,slow=20,SNR=2.0						
WRA	**Warramunga Arr**	**23.79**	**230**	P	P	11 06 22.9	+0.3
	1.3nm,0.7s,baz=54,slow=9.7,SNR=15						
ASAR	**Alice Springs**	**26.43**	**224**	P	P	11 06 45.8	-0.7
	0.2nm,0.4s,baz=54,slow=8.9,SNR=9.7						
TORD	**Torodi Ar. Bea**	**151.00**	**288**	PKPbc	PKPbc	11 20 59.9	+0.2
	0.2nm,0.6s,baz=64,slow=3.4,SNR=1.3						

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*NNC **27** 11:08:33.1±2.6, 51°.42N×75°.56E, h0^{km}, mb3.7, mpv3.2, Error ellipse: s-maj=116.3km s-min=14.6km az=24.0, Suspected Mining explosion.*

*IDC **27** 11:08:36.1±1.1, 51°.59N×75°.83E, h0^{km}, mb1 2.8/3, mb1mx2.7/53, mbtmp2.8/3, ML2.5/3, Error ellipse: s-maj=22.9km s-min=9.1km az=30.0*

ISC 27 11:08:35.4±1.1**, 51°.47N**±0°.09×**75°.73E**±0°.05**, h0**^{km}**, n9, σ0**^{s}**.76**/9**, 3C-3D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**1.96**	**115**	Pn	**Pn**	**11 09 10.5**	**+0.6**
	1.3nm,0.3s,baz=297,slow=18,SNR=51						
KURBB				Lg	Lg	11 09 37.3	
	1.3nm,0.3s,baz=304,slow=32,SNR=11						
KURBB	**Kurchatov Arra**	**1.96**	**115**	⇓Pg	**Pb**	**11 09 11.2**	**-0.7**
	14nm,0.4s						
KURBB				⇑Lg	Lg	11 09 38.6	
	40nm,0.4s						
KURK	**Kurchatov**	**1.98**	**111**	⇑Pg	**Pn**	**11 09 10.5**	**+0.5**
	6.8nm,0.5s						
KURK				⇓Lg	Lg	11 09 36.9	
	6.5nm,0.4s						
BVAR	**Borovoye Array**	**3.63**	**297**	Pn	**Pn**	**11 09 32.8**	**0.0**
	0.3nm,0.3s,baz=140,slow=11,SNR=3.0						
BVAR				Sn	**Sn**	**11 10 16.3**	**-0.1**
	1.2nm,0.3s,baz=125,slow=20,SNR=3.3						
BVAR				Lg	Lg	11 10 26.1	
	1.8nm,0.3s,baz=131,slow=26,SNR=6.6						
BVA3	**Borovoye Array**	**3.64**	**297**	⇑Lg	Lg	11 10 25.6	
	5.3nm,0.4s						
I46RU	**ZALESOVO INFRA**	**6.06**	**62**	*i*		11 45 40.0	
	baz=245,slow=297,SNR=2.0						
ZALV	**Zalesovo Beam**	**6.06**	**62**	Pn	**Pn**	**11 10 07.0**	**+0.9**
	0.7nm,0.3s,baz=256,slow=14,SNR=11						
ZALV				Sn	**Sn**	**11 11 15.6**	**-0.5**
	0.4nm,0.3s,baz=260,slow=24,SNR=5.1						
MK31	**Makanchi Array**	**6.36**	**135**	⇓Lg	Lg	11 11 53.2	
	1.3nm,0.5s,baz=316,slow=27,SNR=5.7						
MKAR	**Makanchi Array**	**6.36**	**135**	Pn	**Pn**	**11 10 11.4**	**+1.1**
	0.1nm,0.3s,baz=320,slow=12,SNR=4.6						
MKAR				Sn	**Sn**	**11 11 23.1**	**-0.5**
	0.1nm,0.3s,baz=326,slow=28,SNR=3.3						
MKAR				Lg	Lg	11 11 52.5	
	0.3nm,0.3s,baz=331,slow=26,SNR=4.2						

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*DNK **27** 11:18:46.8±0.8, 78°.73N×4°.44E, h30^{km}±12^{km}, ML0.8*

*NAO **27** 11:18:46.2±2.4, 79°.05N×5°.16E, ML3.1*

*BER **27** 11:18:48.6±2.3, 78°.86N×4°.84E, h22^{km}±23^{km}, ML2.5, ML3.1(NAO), Confirmed Earthquake*

ISC 27 11:18:42.1±0.9**, 78°.66N**±0°.07×**4°.19E**±0°.05**, h10**^{km}**, n13, σ1**^{s}**.83**/23**, 1C, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**1.54**	**76**	Pg	**Pg**	**11 19 11.0**	**-0.5**
KBS				Lg	Lg	11 19 27.5	
KBS	**Kingsbay**	**1.54**	**76**	*i* P	**Pg**	**11 19 11.1**	**-0.4**
KBS	**Kingsbay**	**1.54**	**76**	⇑*i*P	**Pg**	**11 19 11.0**	**-0.5**
KBS				*e*S	**Sn**	**11 19 27.0**	**-2.4**
KBS				IAML		11 19 28.6	
	comp=Z,53nm,0.2s						
BRBA	**Barentsburg A**	**2.12**	**102**	Pn	**Pb**	**11 19 20.5**	**0.0**
BRBA				Sn	**Sn**	**11 19 43.5**	**-0.3**
BRBA	**Barentsburg A**	**2.12**	**102**	*e*P	**Pb**	**11 19 20.4**	**-0.1**
BRBA				*e*S	**Sn**	**11 19 42.9**	**-0.9**
BRBA				IAML		11 19 46.6	
	comp=Z,39nm,0.3s						
SPA0	**Spitsbergen Ar**	**2.50**	**95**	Pn	**Pb**	**11 19 26.0**	**-1.0**
	baz=302,slow=7.9						
SPA0				Sn	**Sn**	**11 19 53.5**	**+0.2**
	baz=288,slow=22						
SPA0	**Spitsbergen Ar**	**2.50**	**95**	Pn	**Pb**	**11 19 26.0**	**-1.0**
	baz=302,slow=7.9						
SPA0				Sn	**Sn**	**11 19 53.5**	**+0.2**
	baz=288,slow=22						
SPA0				IAML		11 19 57.1	
	comp=Z,34nm,0.7s						
NOR	**Nord**	**4.62**	**319**	Pn	**Pn**	**11 19 53.8**	**+2.0**
NOR				Sn	**Sn**	**11 20 43.6**	**-1.7**
NOR	**Nord**	**4.62**	**319**	*i* P	**Pn**	**11 19 53.0**	**+1.3**
NOR				*i* S	**Sn**	**11 20 42.9**	**-2.4**
NOR				IAML		11 20 46.1	
	comp=Z,0.3nm,0.5s						
NOR	**Nord**	**4.62**	**319**	*e*P	**Pn**	**11 19 53.3**	**+1.6**
NOR				*e*S	**Sn**	**11 20 43.8**	**-1.5**
HOPEN	**Hopen**	**4.96**	**105**	*e*P	**Pn**	**11 19 58.4**	**+2.0**
HOPEN				*e*S	**Sn**	**11 20 50.4**	**-3.3**
HOPEN				IAML		11 20 55.1	
	comp=Z,41nm,0.5s						
BJO1	**Bjornoya**	**5.39**	**133**	*e*S	**Sn**	**11 21 03.4**	**-1.0**
BJO1				IAML		11 21 03.9	
	comp=Z,22nm,0.1s						
DBG	**Daneborg**	**7.13**	**245**	*i* P	**Pn**	**11 20 28.6**	**+2.4**
DBG				*i* S	**Sn**	**11 21 43.1**	**-4.0**
DBG				IAML		11 21 50.6	
	comp=Z,0.4nm,0.1s						

EAF 27 11:21:05.3±4.0**, 20°.79S**×**25°.36E, h41**^{km}±178^{km}**, MD3.6, Botswana**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATP	**Matopo**	**2.96**	**84**	*e*P	Pn	11 21 50.0	0.0
MATP				*e*S	Sn	11 22 20.7	-3.7
MATP	**Matopo**	**2.96**	**84**	*e*P	Pn	11 21 50.0	0.0
MATP				*e*S	Sn	11 22 20.7	-3.7
BLWY	**Bulawayo**	**3.12**	**79**	*e*P	Pn	11 21 52.1	0.0
BLWY				*e*S	Sn	11 22 25.9	-2.3
BLWY	**Bulawayo**	**3.12**	**79**	*e*P	Pn	11 21 52.1	0.0
BLWY				*e*S	Sn	11 22 25.9	-2.3
LBTB	**Lobatse**	**4.21**	**177**	*e*P	Pn	11 22 07.0	-0.2
LBTB				*e*S	Sn	11 22 51.1	-4.1
LBTB	**Lobatse**	**4.21**	**177**	*e*P	Pn	11 22 07.0	-0.2
LBTB				*e*S	Sn	11 22 51.1	-4.1
MSNA	**Messina**	**4.61**	**110**	*e*P	Pn	11 22 10.5	-2.1
MSNA				*e*S	Sn	11 22 57.6	-7.3
MSNA	**Messina**	**4.61**	**110**	*e*P	Pn	11 22 10.5	-2.1
MSNA				*e*S	Sn	11 22 57.6	-7.3
MOPA	**Mopani**	**6.22**	**117**	*e*P	Pn	11 22 37.4	+2.7
MOPA				*e*S	Sn	11 23 42.4	-2.2
MOPA	**Mopani**	**6.22**	**117**	*e*P	Pn	11 22 37.4	+2.7
MOPA				*e*S	Sn	11 23 42.4	-2.2
BOSA	**Boshof**	**7.79**	**181**	*e*P	Pn	11 22 54.4	-1.9
BOSA				*e*S	Sn	11 24 13.6	-10
BOSA	**Boshof**	**7.79**	**181**	*e*P	Pn	11 22 54.4	-1.9
BOSA				*e*S	Sn	11 24 13.6	-10

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*INET **27** 11:36:50.0, 9°.46N×84°.12W, h36^{km}, MW2.6*

UPA 27 11:36:53.8±0.8**, 9°.50N**×**83°.97W, h3**^{km}±13^{km}**, MW4.0, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HDC	**Heredia**	**0.52**	**344**	*i* P	Pb	11 37 05.0	-0.6
HDC				*e*S	Sb	11 37 13.6	+0.1
DRK0	**Durika**	**0.76**	**108**	*e*S	Sb	11 37 21.2	+0.7
BATAN	**Batan**	**0.83**	**45**	*e*P	Pb	11 37 11.5	+0.5
BRU2	**Volcan**	**1.45**	**119**	*e*P	Pn	11 37 21.0	0.0
BCO2	**Palmira**	**1.63**	**118**	*e*P	Pn	11 37 21.1	-2.4
BCO2				*e*S	Sg	11 37 46.8	+0.7
PTPM	**Petroterminale**	**1.68**	**140**	*e*P	Pn	11 37 23.8	-0.3
PTPM				*e*S	Sn	11 37 45.4	-0.8

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*IDC **27** 11:40:33.3±0.4, 34°.94N×73°.93E, h0^{km}, mb4.7/39, mb1 4.7/46, mb1mx4.7/60, mbtmp4.7/46, ML4.4/7, MS3.4/11, Ms1 3.4/11, ms1mx3.1/59, Error ellipse: s-maj=11.6km s-min=9.3km az=25.0*

*MOS **27** 11:40:33.2±0.9, 34°.95N×73°.94E, h9^{km}, mb4.9/25, Error ellipse: s-maj=6.8km s-min=3.8km az=90.8*

*NEIC **27** 11:40:34.3±1.8, 34°.83N±0°.05×73°.93E±0°.03, h5^{km}±3^{km}, mb5.0/56, Error ellipse: s-maj=7.4km s-min=2.6km az=193.0*

*NDI **27** 11:40:34.7±3.6, 34°.97N×73°.89E, h10^{km}±101^{km}, mb5.0, ML4.6, mb5.0(NEIC)*

*NNC **27** 11:40:35.9±3.2, 35°.10N×73°.84E, h0^{km}, mb4.9, mpv4.7, Error ellipse: s-maj=33.1km s-min=30.7km az=25.0*

*BJI **27** 11:40:37.7±0.0, 34°.95N×74°.01E, h44^{km}, mB5.0/24, mb4.7/43, ML4.9/1, Ms4.4/17, Ms7 4.0/15*

*DNK **27** 11:40:41.7±0.3, 36°.04N×74°.70E, h18^{km}, mb5.0*

ISC 27 11:40:35.2±0.3**, 34°.96N**±0°.03×**73°.94E**±0°.03**, h10**^{km}**, n311, σ1**^{s}**.65**/309**, mb4.9**/100**, MS3.4**/12**, 16C-19D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHCP	**Chirah Chowk**	**1.41**	**204**	P	**Pn**	**11 41 01.7**	**+0.7**
NIL	**Nilore**	**1.42**	**204**	P	**Pn**	**11 41 00.8**	**-0.3**
NIL	**Nilore**	**1.42**	**204**		**Pn**	**11 41 00.8**	**-0.3**
CEP	**Cherat**	**2.02**	**237**	P	**Pn**	**11 41 12.7**	**+3.2**
CEP				S	**Sn**	**11 41 39.0**	**+4.1**
THW	**Thamme Wali**	**2.83**	**221**	P	**Pn**	**11 41 23.2**	**+2.8**
SARP	**Sargodha**	**3.21**	**200**	P	**Pn**	**11 41 28.4**	**+2.8**
DHRM	**DHARAMSHALA**	**3.34**	**143**	*e*P	**Pn**	**11 41 30.5**	**+2.8**
DHRM				*e*S	**Sn**	**11 42 11.5**	**+4.0**
DHRM				IAML		11 42 12.9	
	comp=N,4μm,0.3s						
KBL	**Kabul**	**4.05**	**266**	P	**Pn**	**11 41 40.0**	**+2.5**
KBL	**Kabul**	**4.05**	**266**	Pn	**Pn**	**11 41 40.0**	**+2.5**
BHK	**Bhakra**	**4.09**	**149**	*e*P	**Pn**	**11 41 36.0**	**-1.9**
BHK				*e*P	Pb	11 41 40.8	-6.6
BHK				*i* x	Pg	11 41 49.1	-4.6
BHK				*e*S	**Sn**	**11 42 24.2**	**-1.7**
SMLA	**Simla**	**4.68**	**144**	*e*P	**Pn**	**11 41 48.1**	**+2.2**
SMLA				*e*S	**Sn**	**11 42 40.5**	**+0.3**
SMLA				IAML		11 42 44.8	
	comp=N,2μm,0.6s						
SMLA				IAML		11 43 04.6	
	comp=E,2μm,0.3s						
KSH	**Kashi**	**4.83**	**19**	P	**Pn**	**11 41 48.0**	**-0.1**
KSH				S	**Sn**	**11 42 41.5**	**-2.6**
GAR	**Garm**	**4.97**	**325**	Pn	**Pn**	**11 41 51.9**	**+1.9**
CHGR	**Chuyangaron**	**5.33**	**315**		**Pn**	**11 41 55.1**	**+0.3**
NDI	**New Delhi**	**6.85**	**155**	*e*P	**Pn**	**11 42 16.6**	**+0.9**
NDI				*e*S	**Sn**	**11 43 30.8**	**-2.9**
NDI				*e*S	Sb	11 43 32.0	-24
AYAN	**Aya Nagar**	**7.00**	**156**	*e*P	**Pn**	**11 42 18.7**	**+0.9**
KUDL	**Kundal**	**7.13**	**162**	*e*P	**Pn**	**11 42 19.7**	**+0.2**
SONA	**Sohna**	**7.20**	**157**	*e*P	**Pn**	**11 42 21.4**	**+0.8**
UCH	**Uchtor**	**7.27**	**3**	P	**Pn**	**11 42 25.0**	**+3.1**
	SNR=35						
TARG	**Taragay, Kyrgy**	**7.41**	**23**		**Pn**	**11 42 27.0**	**+3.3**
ULHL	**Ulahol**	**7.50**	**13**	P	**Pn**	**11 42 28.8**	**+4.0**
	SNR=9.8						
PTH	**Pithoragarh**	**7.57**	**134**	*e*PN	**Pn**	**11 42 26.8**	**+1.1**
PTH				*e*SN	**Sn**	**11 43 47.4**	**-4.3**
AAK	**Ala-Archa**	**7.68**	**3**	Pn	**Pn**	**11 42 30.6**	**+3.3**
	comp=E,3.0nm,0.3s,baz=153,slow=7.9,SNR=29						
AAK				LR	LR	11 45 37.4	
	comp=E,453nm,20.2s,baz=188,slow=40						
AAK	**Ala-Archa**	**7.68**	**3**	Pn	**Pn**	**11 42 30.2**	**+2.9**
EKS2	**Erkin-Say**	**7.69**	**359**	P	**Pn**	**11 42 31.6**	**+4.2**
	SNR=39						
KBK	**Karagaybulak**	**7.73**	**6**	P	**Pn**	**11 42 30.8**	**+2.9**
	SNR=22						
IUG	**Iuzhnay**	**7.80**	**338**	*e*P	**Pn**	**11 42 30.8**	**+1.9**
CHMS	**Chumysh**	**8.05**	**4**	P	**Pn**	**11 42 35.6**	**+3.4**
	SNR=12						
TKM2	**Tokmak 2**	**8.06**	**9**	P	**Pn**	**11 42 35.4**	**+3.0**
	SNR=102						
TKM2	**Tokmak 2**	**8.06**	**9**	*i* P	**Pn**	**11 42 35.3**	**+2.9**
TKM2				pmax	pmax		
	comp=Z,19nm,0.4s						
TKM2	**Tokmak 2**	**8.06**	**9**	⇑P	**Pn**	**11 42 35.4**	**+3.0**
	comp=Z,19nm,0.4s						
TKM2				⇓S	**Sn**	**11 44 03.6**	**0.0**
	comp=Z,65nm,0.7s						
USP	**Ospenovka**	**8.31**	**3**	P	**Pn**	**11 42 39.1**	**+3.3**
	SNR=20						
JASL	**Jaisalmer**	**8.42**	**199**	*e*P	**Pn**	**11 42 38.0**	**+0.8**
AJM	**Ajmer**	**8.47**	**176**	*e*P	**Pn**	**11 42 37.9**	**-0.1**
MDOK	**Medeo**	**8.54**	**15**	P	**Pn**	**11 42 41.1**	**+2.1**
MDOK	**Medeo**	**8.54**	**15**	⇑P	**Pn**	**11 42 41.2**	**+2.1**
	comp=Z,14nm,0.8s						
KK02	**Karatay Array**	**8.56**	**343**	⇓P	**Pn**	**11 42 40.4**	**+1.2**
	comp=Z,35nm,0.4s,baz=157,slow=12						
KK02				⇓S	**Sn**	**11 44 15.0**	**-0.8**
	comp=Z,51nm,0.6s,baz=173,slow=23						
KK31	**Karatay Array**	**8.56**	**343**	P	**Pn**	**11 42 40.3**	**+1.1**
KK31				S	**Sn**	**11 44 15.0**	**-0.8**
KKAR	**Karatay Array**	**8.56**	**343**	P	**Pn**	**11 42 40.6**	**+1.4**
KKAR	**Karatay Array**	**8.56**	**343**	Pn	**Pn**	**11 42 40.6**	**+1.4**
BRLS	**Borolday**	**8.67**	**340**	*e*P	**Pn**	**11 42 39.3**	**-1.4**
UZB	**Uzynbulak**	**9.08**	**24**	*e*P	**Pn**	**11 42 49.4**	**+3.0**
PDGK	**Podgornoye**	**9.40**	**26**	P	**Pn**	**11 42 52.5**	**+1.7**
PDGK	**Podgornoye**	**9.40**	**26**	⇓P	**Pn**	**11 42 52.6**	**+1.7**
	comp=Z,26nm,0.8s						
HRA	**Herat**	**9.65**	**270**	Pn	**Pn**	**11 42 53.0**	**-1.3**
ARXS	**Arharly**	**9.72**	**17**	*e*P	**Pn**	**11 42 56.1**	**+1.0**
BTLS	**Baital**	**10.07**	**0**	*e*P	**Pn**	**11 43 01.7**	**+1.9**
PYUN	**Piuthan**	**10.31**	**129**	*e*P	**Pn**	**11 43 01.5**	**-1.8**
	comp=Z,435nm,0.4s						
DANN	**Dangsing**	**10.64**	**126**	*e*P	**Pn**	**11 43 06.0**	**-2.0**
KOLN	**Koldanda**	**10.93**	**128**	*e*P	**Pn**	**11 43 09.8**	**-2.0**
GKN	**Gorkha**	**11.46**	**124**	*e*P	**Pn**	**11 43 17.5**	**-1.5**
	comp=Z,158nm,0.3s						
DMN	**Daman**	**12.03**	**124**	*e*P	**Pn**	**11 43 24.9**	**-2.0**
KKN	**Kakani**	**12.03**	**123**	*e*P	**Pn**	**11 43 24.8**	**-2.1**
	comp=Z,222nm,0.5s						
BHPL	**Bhopal**	**12.06**	**164**	*e*P	Pn	11 43 24.8	-2.4
BHUJ	**Bhuj**	**12.25**	**199**	*e*P	**Pn**	**11 43 30.8**	**+1.2**
PKIN	**Phulchoki**	**12.25**	**124**	*e*P	Pn	11 43 27.4	-2.5
PKI	**Pulchoki**	**12.26**	**124**	*e*P	Pn	11 43 27.4	-2.8
	comp=Z,132nm,0.4s						
GUN	**Gumba**	**12.37**	**121**	*e*P	**Pn**	**11 43 29.6**	**-2.1**
JIRN	**Jiri**	**12.74**	**121**	*e*P	Pn	11 43 34.5	-2.3
GEYT	**Alibeck**	**13.08**	**288**	Pn	Pn	11 43 38.9	-2.2
	comp=Z,2.5nm,0.3s,baz=90,slow=19,SNR=9.2						
GEYT				Sn	**Sn**	**11 46 03.3**	**-3.4**
	comp=Z,1.8nm,0.3s,baz=160,slow=35,SNR=2.8						
GEYT				LR	LR	11 49 53.3	
	comp=Z,104nm,18.1s,baz=45,slow=43						
GEYT	**Alibeck**	**13.08**	**288**		Pn	11 43 39.2	-1.9
GYA0B	**ALIBECK ARRAY**	**13.08**	**288**		Pn	11 43 39.2	-1.9
MAKZ	**Makanchi**	**13.30**	**25**	P	**Pn**	**11 43 45.2**	**+1.2**
MAKZ	**Makanchi**	**13.30**	**25**	⇓P	**Pn**	**11 43 45.0**	**+1.0**
	comp=Z,20nm,0.6s						
MAKZ	**Makanchi**	**13.30**	**25**		**Pn**	**11 43 45.1**	**+1.2**
OTUK	**Ortayu**	**13.33**	**355**	P	**Pn**	**11 43 43.6**	**-0.8**
OTUK	**Ortayu**	**13.33**	**355**	⇓P	**Pn**	**11 43 43.6**	**-0.8**
	comp=Z,22nm,0.6s						
MK31	**Makanchi Array**	**13.39**	**26**	*d i*P	**Pn**	**11 43 46.5**	**+1.2**
MK31	**Makanchi Array**	**13.39**	**26**		**Pn**	**11 43 46.5**	**+1.2**
MKAR	**Makanchi Array**	**13.39**	**26**	Pn	**Pn**	**11 43 45.9**	**+0.6**
	comp=Z,0.6nm,0.3s,baz=213,slow=15,SNR=24						
MKAR	**Makanchi Array**	**13.39**	**26**	P	**Pn**	**11 43 46.5**	**+1.2**
MKAR	**Makanchi Array**	**13.39**	**26**	Pn	**Pn**	**11 43 46.5**	**+1.2**
RAMN	**Ramite**	**13.47**	**123**	*e*P	Pn	11 43 43.5	-3.1
	comp=Z,153nm,0.4s						
WMQ	**Urumqi**	**13.82**	**46**	*e*P	**Pn**	**11 43 55.8**	**+4.6**
WMQ				LR	LR		
	comp=Z,220nm,11.7s						
WMQ				LR	LR		
	comp=Z,430nm,11.3s						
TAPN	**Taplejung**	**14.01**	**119**	*e*P	Pn	11 43 49.7	-4.3
	comp=Z,280nm,0.4s						
ODAN	**Odare**	**14.08**	**121**	*e*P	Pn	11 43 50.9	-4.0
AKL	**Akola**	**14.46**	**168**	*e*P	Pn	11 43 56.4	-3.6
GTK	**Tadong**	**14.67**	**117**	IAmb	IAmb	11 44 08.3	
	comp=Z,28nm,0.3s						
BRZS	**Berezniki**	**15.04**	**357**	*e*P	**Pn**	**11 44 08.1**	**+0.4**
LSA	**Lhasa**	**15.46**	**105**	P	**Pn**	**11 44 13.3**	**-0.5**
LSA				pmax	pmax		
	comp=Z,20nm,0.8s						
LSA	**Lhasa**	**15.46**	**105**		**Pn**	**11 44 13.3**	**-0.5**
KURBB	**Kurchatov Arra**	**16.01**	**11**	Pn	**Pn**	**11 44 18.2**	**-2.1**
	comp=Z,0.4nm,0.3s,baz=198,slow=12,SNR=39						
KURBB	**Kurchatov Arra**	**16.01**	**11**	P	**Pn**	**11 44 18.5**	**-1.8**
KURBB	**Kurchatov Arra**	**16.01**	**11**	⇑P	**Pn**	**11 44 18.6**	**-1.8**
	comp=Z,44nm,0.8s						
KURK	**Kurchatov**	**16.11**	**11**	*de*P	**Pn**	**11 44 20.1**	**-1.5**
KURK				pmax	pmax		
	comp=Z,68nm,0.8s						
KURK	**Kurchatov**	**16.11**	**11**	Pn	**Pn**	**11 44 19.9**	**-1.8**
KURK				IAmb	IAmb	11 44 26.0	
	comp=Z,60nm,0.8s						
POO	**Poona**	**16.36**	**180**	*e*P	**Pn**	**11 44 24.0**	**-1.1**
	comp=Z,40nm,0.2s						
AB31	**Akbulak array**	**17.62**	**328**	*e*P	**Pn**	**11 44 39.9**	**-0.7**
AB31	**Akbulak array**	**17.62**	**328**	⇑P	**Pn**	**11 44 39.9**	**-0.7**
	comp=Z,6.9nm,0.5s,baz=140,slow=12,SNR=285						
WSAR	**Wadi Sarin**	**17.73**	**233**	Pn	**Pn**	**11 44 41.6**	**-0.6**
	comp=Z,0.6nm,0.3s,baz=96,slow=8.2,SNR=6.7						
WSAR				LR	LR	11 53 12.6	
	comp=Z,100nm,21.7s,baz=69,slow=43						
DGZ	**Jazzator, Alta**	**17.75**	**30**	*ce*P	**Pn**	**11 44 41.8**	**-0.6**
HYB	**Hyderabad**	**17.95**	**166**	*i* P	Pn	11 44 40.0	-4.9
HYB				*e*S	**S**	**11 48 15.5**	**+3.9**
SHL	**Shillong**	**18.08**	**116**	P	**Pn**	**11 44 44.8**	**-1.9**
SHL				pmax	pmax		
	comp=Z,33nm,0.8s						
SHL	**Shillong**	**18.08**	**116**	P	**Pn**	**11 44 44.8**	**-1.9**
BVAR	**Borovoye Array**	**18.24**	**353**	P	**Pn**	**11 44 48.1**	**-0.1**
	comp=Z,12nm,0.3s,baz=190,slow=16,SNR=182						
BRVK	**Borovoye**	**18.28**	**353**	P	**Pn**	**11 44 49.3**	**+0.5**
BRVK				pmax	pmax		
	comp=Z,45nm,0.6s						
BRVK	**Borovoye**	**18.28**	**353**	⇑P	**Pn**	**11 44 48.8**	**0.0**
	comp=Z,28nm,0.5s						
BRVK	**Borovoye**	**18.28**	**353**	P	**Pn**	**11 44 49.3**	**+0.5**
BRVK				IAmb	IAmb	11 44 50.4	
	comp=Z,45nm,0.6s						
AKTO	**Aktyubinsk**	**19.33**	**328**	P	**P**	**11 45 00.6**	**+0.1**
	comp=Z,6.5nm,0.3s,baz=129,slow=11,SNR=96						
AKTO				LR	LR	11 52 48.3	
	comp=Z,161nm,19.1s,baz=146,slow=38						
AKTO	**Aktyubinsk**	**19.33**	**328**	⇑P	**P**	**11 45 00.6**	**+0.1**
	comp=Z,30nm,0.6s						
MOKO	**MOKOCHONG**	**19.66**	**110**	IAmb	IAmb	11 45 11.6	
	comp=Z,36nm,0.4s						
KOHI	**KOHIMA**	**19.66**	**112**	IAmb	IAmb	11 45 09.2	
	comp=Z,45nm,1.1s						
ZAA0	**Zalesovo Array**	**20.47**	**19**	⇑P	**P**	**11 45 11.8**	**-1.1**
	comp=Z,8.8nm,0.7s						
ZAA0	**Zalesovo Array**	**20.47**	**19**	P	**P**	**11 45 11.7**	**-1.1**
ZAA0				IAmb	IAmb	11 45 13.2	
	comp=Z,51nm,0.6s						
ZALV	**Zalesovo Beam**	**20.47**	**19**	P	**P**	**11 45 12.3**	**-0.5**
	comp=Z,50nm,0.5s,baz=214,slow=11,SNR=245						
ZALV				LR	LR	11 54 13.6	
	comp=Z,72nm,18.8s,baz=212,slow=40						
ZALV	**Zalesovo Beam**	**20.47**	**19**	P	**P**	**11 45 11.7**	**-1.1**
GTA	**Gaotai**	**21.06**	**70**	⇑P	**P**	**11 45 19.5**	**0.0**
GTA				pP	pP	11 45 26.0	+2.5
GTA				pmax	pmax		
	comp=Z,46nm,0.8s						
GTA				pmax	pmax		
	comp=Z,120nm,4.5s						
GTA				LR	LR		
	comp=Z,220nm,11.3s						
GTA				LR	LR		
	comp=Z,190nm,12.7s						
GTA				LR	LR		
	comp=Z,200nm,13.1s						
KBD	**Kabd**	**22.95**	**263**	*e*P	**P**	**11 45 37.9**	**-1.7**
MIB	**Mutribah**	**23.02**	**265**	*e*P	**P**	**11 45 39.0**	**-1.4**
RDF	**Al-Radifah**	**23.15**	**262**	*e*P	**P**	**11 45 40.6**	**-1.2**
GNI	**Garni**	**23.66**	**291**	LR	LR	11 57 05.9	
	comp=Z,80nm,18.8s,baz=74,slow=42						
GNI	**Garni**	**23.66**	**291**	*ce*P	**P**	**11 45 50.4**	**+3.4**
GNI				pmax	pmax		
	comp=Z,60nm,1.4s						
SVE	**Sverdlovsk**	**23.67**	**342**	*e*P	**P**	**11 45 46.9**	**+0.3**
SVE				pmax	pmax		
	comp=Z,15nm,0.6s						
ARU	**Arti**	**23.90**	**339**	P	**P**	**11 45 48.8**	**0.0**
	comp=Z,5.6nm,0.5s,baz=159,slow=5.3,SNR=27						
ARU				LR	LR	11 54 43.9	
	comp=Z,150nm,19.2s,baz=142,slow=36						
ARU	**Arti**	**23.90**	**339**	*c i*P	**P**	**11 45 48.9**	**0.0**
ARU						11 46 17.3	
ARU				S	**S**	**11 50 05.0**	**0.0**
ARU				SS	**SnSn**	**11 50 47.2**	**+3.0**
ARU				pmax	pmax		
	comp=Z,20nm,0.7s						
ARU	**Arti**	**23.90**	**339**	P	**P**	**11 45 48.8**	**0.0**
ARU				IAmb	IAmb	11 45 50.0	
	comp=Z,27nm,1.0s						
LZH	**Lanzhou**	**24.32**	**79**	*e*P	**P**	**11 45 55.0**	**+1.8**
LZH				pP	sP	11 46 02.5	+3.3
LZH				pmax	pmax		
	comp=Z,19nm,1.3s						
ZEI	**Tsey**	**24.57**	**298**	*e*P	P	11 45 46.0	-9.4
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CD2	**Chengdu**	**25.30**	**91**	*e*P	**P**	**11 46 01.0**	**-1.0**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KBZ	**Khabaz**	**25.44**	**300**	P	**P**	**11 46 03.0**	**0.0**
	comp=Z,2.5nm,0.7s,baz=129,slow=6.6,SNR=4.8						
KBZ				LR	LR	11 57 50.0	
	comp=Z,92nm,19.1s,baz=48,slow=41						
KBZ	**Khabaz**	**25.44**	**300**	P	**P**	**11 46 03.0**	**0.0**
BELG	**Belogornoye**	**25.59**	**321**	P	**P**	**11 46 05.1**	**+0.9**
	comp=Z,62nm,1.0s,baz=305,slow=1.7,SNR=15						
BELG				LR	LR	11 57 03.8	
	comp=Z,103nm,19.6s,baz=182,slow=39						
MOY	**Mondy**	**25.60**	**41**	*e*P	**P**	**11 46 05.6**	**+1.0**
MOY				pmax	pmax		
	comp=Z,36nm,1.8s						
KIV	**Kislovodsk**	**25.63**	**300**	*e*P	**P**	**11 46 04.0**	**-0.9**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,52nm,15.0s						
ZAK	**Zakamensk**	**26.29**	**45**	*e*P	**P**	**11 46 10.8**	**0.0**
ZAK				pmax	pmax		
	comp=Z,14nm,1.0s						
KMI	**Kunming**	**26.71**	**104**	⇓P	**P**	**11 46 14.3**	**-0.7**
KMI				pP	pP	11 46 21.8	+2.6
KMI				pmax	pmax		
	comp=Z,19nm,0.6s						
TLY	**Talaya**	**27.06**	**43**	P	**P**	**11 46 17.2**	**-0.4**
	comp=Z,5.9nm,0.6s,baz=257,slow=15,SNR=4.6						
TLY	**Talaya**	**27.06**	**43**	⇓*e*P	**P**	**11 46 19.2**	**+1.6**
TLY				pmax	pmax		
	comp=Z,10.0nm,0.9s						
RAYN	**Ar Rayn**	**27.21**	**253**	P	**P**	**11 46 18.1**	**-1.2**
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
RAYN	**Ar Rayn**	**27.21**	**253**	P	**P**	**11 46 18.1**	**-1.2**
SONM	**Songino Array**	**27.32**	**52**	P	**P**	**11 46 20.7**	**+0.6**
	comp=Z,5.3nm,0.5s,baz=254,slow=9.1,SNR=36						

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SONM                              PcP     PcP       11 49 38.9 -0.5
       comp=Z,0.4nm,0.5s,baz=244,slow=1.3,SNR=2.0
SONM   Songino Array     27.32  52  P       P         11 46 20.4 +0.2
CMAR   Chiang Mai Arr    27.61 120  P       P         11 46 23.2 +0.3
       comp=Z,5.0nm,0.6s,baz=300,slow=8.8,SNR=21
CMAR                              PcP     PcP       11 49 38.8 -1.6
       comp=Z,1.8nm,0.7s,baz=298,slow=4.4,SNR=2.6
CMAR   Chiang Mai Arr    27.61 120  P       P         11 46 23.4 +0.5
ULN    Ulaanbaatar       27.75  52⇓iP      P         11 46 24.5 +0.4
ULN                               pmax    pmax
       comp=Z,7.0nm,0.8s
ULN    Ulaanbaatar       27.75  52  P       P         11 46 24.0 -0.1
KIRV   Kirov             28.68 333  P       P         11 46 31.8 -0.2
       comp=Z,31nm,0.6s,baz=138,slow=0.9,SNR=9.7
KIRV                              LR      LR        11 59 43.9
       comp=Z,57nm,18.2s,baz=135,slow=40
KIRV   Kirov             28.68 333d iP     P         11 46 32.5 +0.5
XAN    Xi'an             28.76  82  P       P         11 46 31.0 -2.1
XAN                               pmax    pmax
       comp=Z,22nm,0.8s
BTO    Baotou            28.93  68 eP       P         11 46 35.0 +0.4
BTO                               S       S         11 51 25.5 +0.3
ANN    Anapa             29.48 301 eP       P         11 46 34.9 -4.3
ANN                              e                  11 47 30.2
ANN                              eS       S         11 51 26.5 -6.9
ANN                               pmax    pmax
       comp=Z,87nm,1.1s
HHC    Hu-ho-hao-te      30.10  67 eP       P         11 46 44.5 -0.5
HHC                               pmax    pmax
       comp=Z,9.0nm,0.8s
HHC                               pmax    pmax
       comp=Z,410nm,5.8s
ENH    Enshi             30.20  89  P       P         11 46 46.0 +0.1
PRGR   Permogore         32.17 335 eP       P         11 47 00.3 -2.5
PRGR                              pmax    pmax
       comp=Z,24nm,0.6s
BR131  Keskin Array S    32.20 291  P       P         11 47 03.4 -0.1
BR131                             pmax    pmax
       comp=Z,7.0nm,0.8s
BR131  Keskin Array S    32.20 291  P       P         11 47 03.4 -0.1
BRTR   Keskin Array B    32.20 291  P       P         11 47 04.0 +0.5
       comp=Z,3.8nm,0.7s,baz=103,slow=8.9,SNR=19
BRTR   Keskin Array B    32.20 291  P       P         11 47 03.0 -0.6
OBN    Obninsk           32.66 320  P       P         11 47 07.0 -0.2
       comp=Z,8.7nm,0.5s,baz=114,slow=6.4,SNR=5.7
OBN    Obninsk           32.66 320d iP     P         11 47 07.2  0.0
OBN                               *PP     pP        11 47 15.0 +3.7
OBN                               S       S         11 52 26.0 +3.0
OBN                               SS      SnSn      11 54 24.0 +6.4
OBN                               pmax    pmax
       comp=Z,22nm,0.6s
OBN    Obninsk           32.66 320  P       P         11 47 07.1  0.0
KLMR   Klimovskoe        34.00 330 eP       P         11 47 17.3 -1.5
KLMR                              pmax    pmax
       comp=Z,21nm,0.8s
KLMR   Klimovskoe        34.00 330 eP       P         11 47 17.4 -1.4
KLMR                              AMP               11 47 18.8
       comp=Z,21nm,0.8s
BOD    Bodaibo           35.09  37 eP       P         11 47 27.8 -0.5
BOD                               pmax    pmax
       comp=Z,9.0nm,0.9s
NRIK   Noril'sk          35.26   8  P       P         11 47 30.0 +0.4
       comp=Z,22nm,0.9s,baz=191,slow=6.0,SNR=14
NRIK   Noril'sk          35.26   8  P       P         11 47 30.0 +0.4
NRIK   Noril'sk          35.26   8  P       P         11 47 29.8 +0.3
NRIK                              IAmb    IAmb      11 47 31.0
       comp=Z,27nm,1.0s
ELL    Elmali            35.50 286  P       P         11 47 32.6 +0.4
ELL                               pmax    pmax
       comp=Z,64nm,0.6s
ELL    Elmali            35.50 286  P       P         11 47 32.6 +0.4
MILM   Milestii Mici     35.66 304 eP       P         11 47 44.0 +11
MILM                              pmax    pmax
       comp=Z,340nm,2.5s
AKASG  Malin Array Be    35.77 310  P       P         11 47 33.3 -0.9
       comp=Z,1.9nm,0.5s,baz=80,slow=6.7,SNR=14
AKASG                             PP      PnPn      11 48 49.7 -4.3
       comp=Z,0.5nm,0.4s,baz=101,slow=9.7,SNR=1.3
AKASG  Malin Array Be    35.77 310  P       P         11 47 33.5 -0.7
AKASG                             pmax    pmax
       comp=Z,2.0nm,1.0s
AKASG  Malin Array Be    35.77 310  P       P         11 47 33.5 -0.7
AKBB   Malin Array Si    35.77 310  P       P         11 47 33.6 -0.6
AKBB                              pmax    pmax
       comp=Z,32nm,1.8s
AKBB   Malin Array Si    35.77 310  P       P         11 47 33.6 -0.6
AKBB                              IAmb    IAmb      11 48 21.1
       comp=Z,32nm,1.8s
MNK    Minsk             37.27 316 i P      P         11 47 44.2 -2.8
MNK                              i                  11 50 03.2
MNK                              i S      S         11 53 29.7 -4.4
MNK                              i SS     SnSn      11 56 08.6 -0.8
MNK                               pmax    pmax
       comp=Z,5.0nm,0.7s
MNK                               pmax    pmax
       comp=N,13nm,1.0s
MNK                               pmax    pmax
       comp=E,4.0nm,1.0s
MNK                               MLR     MLR
       comp=N,153nm,17.0s
MNK                               MLR     MLR
       comp=E,25nm,14.0s
MNK                               MLR     MLR
       comp=Z,110nm,16.0s
MNK    Minsk             37.27 316 i P      P         11 47 44.2 -2.8
       comp=E,4.0nm,1.0s
MNK                              i P      P         11 47 44.2 -2.8
       comp=N,13nm,1.0s
MNK                              i P      P         11 47 44.2 -2.8
       comp=Z,5.0nm,0.7s,baz=102
MNK                              i PPP    PPP       11 49 26.6
MNK                              i S      S         11 53 29.8 -4.3
MNK                              i SS     SnSn      11 56 08.6 -0.8
MNK                              i SSS    SSS       11 56 25.4
MNK                              i LQ     LQ        12 00 28.6
MNK                              i LR     LR        12 02 16.6
MNK                              i LRM    MLR       12 04 59.8
       comp=N,153nm,16.9s
MNK                              i LRM    MLR       12 05 06.9
       comp=E,25nm,14.4s
MNK                              i LRM    MLR       12 05 13.9
       comp=Z,110nm,16.3s
NJ2    Nanjing           37.33  81 eP       P         11 47 47.5 -0.2
NJ2                               pmax    pmax
       comp=Z,8.0nm,0.5s
MLR    Muntele Rosu      37.62 301  P       P         11 47 51.6 +1.4
       comp=Z,16nm,0.8s,baz=115,slow=6.7,SNR=14
MLR    Muntele Rosu      37.62 301  P       P         11 47 51.0 +0.8
MLR                               IAmb    IAmb      11 47 55.0
       comp=Z,17nm,0.8s
NACGM  Naroch            37.98 317 i P      P         11 47 50.9 -2.1
VSU    Vasula            38.87 322⇓eP      P         11 48 00.1 -0.3
VSU                               pmax    pmax
       comp=Z,99nm,1.0s
IPM    Ipoh              39.34 134  P       P         11 48 03.5 -1.3
IPM                               IAmb    IAmb      11 49 26.9
       comp=Z,40nm,1.6s
VTS    Vitosha           39.76 297  P       P         11 48 08.3 +0.1
VTS                               pmax    pmax
       comp=Z,31nm,1.9s
VTS    Vitosha           39.76 297  P       P         11 48 08.3 +0.1
LVZ    Lovozero          39.78 338  P       P         11 48 08.5 +0.6
LVZ                               pmax    pmax
       comp=Z,181nm,1.9s
LVZ    Lovozero          39.78 338  P       P         11 48 08.5 +0.6
IDI    Anoyia            39.79 285  P       P         11 48 09.0 +0.5
       comp=Z,4.9nm,0.5s,baz=5.2,slow=11,SNR=2.1
APA    Apatity           39.98 337⇓iP      P         11 48 12.8 +3.3
APA                               pmax    pmax
       comp=Z,9.0nm,1.0s
APA                               MLR     MLR
       comp=Z,2µm,16.0s
GSI    Gunungsitoli      40.08 141  P       P         11 48 11.1 +0.2
GSI                               IAmb    IAmb      11 48 17.4
       comp=Z,17nm,0.7s
FIA1   FINESS Array S    40.09 326  P       P         11 48 10.3 -0.3
FIA1                              IAmb    IAmb      11 49 06.6
       comp=Z,114nm,1.6s
FINES  FINESS Array B    40.09 326  P       P         11 48 10.5  0.0
       comp=Z,10nm,0.5s,baz=117,slow=9.8,SNR=25
ZEA    Zeya              41.38  46 eP       P         11 48 22.6 +1.3
ZEA                               pmax    pmax
       comp=Z,10.0nm,1.6s
MNSI   Mandailing Nat    41.56 139  P       P         11 48 28.5 +5.4
DGAR   Diego Garcia      42.16 182⇓eP      P         11 48 28.2 +0.2
PPI    Padang Panjang    43.04 139  P       P         11 48 39.8 +4.6
MDJ    Mudanjiang        43.09  60  P       P         11 48 36.0 +0.6
MDJ                               pmax    pmax
       comp=Z,36nm,3.3s
KEV    Kevo              43.12 338  P       P         11 48 35.5 +0.3
KEV                               pmax    pmax
       comp=Z,117nm,1.8s
KEV    Kevo              43.12 338  P       P         11 48 35.5 +0.3
KEV                               IAmb    IAmb      11 49 06.3
       comp=Z,117nm,1.8s
KSRS   Korea Array       43.13  70  P       P         11 48 35.7 -0.1
       comp=Z,1.6nm,0.5s,baz=281,slow=7.6,SNR=8.0
PDSI   Padang            43.46 140  P       P         11 48 45.1 +6.5
ARA0   ARCESS Array S    43.48 338 eP       P         11 48 38.3 +0.1
ARCES  ARCESS Array B    43.48 338  P       P         11 48 38.4 +0.2
       comp=Z,17nm,0.9s,baz=112,slow=8.7,SNR=37
ARCES                             PcP     PP        11 50 25.2 +6.1
       comp=Z,1.7nm,0.7s,baz=113,slow=6.9,SNR=1.1
ARCES  ARCESS Array B    43.48 338  P       P         11 48 38.2  0.0
ARCES                             IAmb    IAmb      11 48 39.4
       comp=Z,26nm,1.1s
YAK    Yakutsk           43.86  34⇓iP      P         11 48 39.8 -1.5
YAK                               pmax    pmax
       comp=Z,13nm,0.5s
KTK1   Kautokeino        43.99 336 eP       P         11 48 41.8 -0.4
KLR    Kul'dur           44.15  53⇑iP      P         11 48 43.8  0.0
KLR                               pmax    pmax
       comp=Z,61nm,3.3s
HAMF   Hammerfest        44.53 339 eP       P         11 48 46.9 +0.3
USRK   Ussuriysk Ar.     44.85  60  P       P         11 48 49.2 -0.3
       comp=Z,1.7nm,0.5s,baz=283,slow=6.7,SNR=9.1
VLA    Vladivostok       44.95  61⇑eP      P         11 48 49.2 -1.1
VLA                               pmax    pmax
       comp=Z,165nm,1.9s
JETT   Jettan, Norway    45.13 337 eP       P         11 48 52.0 +0.7
TRO    Tromso            45.64 336 eP       P         11 48 55.4  0.0
HFS    Hagfors           45.75 323  P       P         11 48 55.9 -0.5
       comp=Z,15nm,0.6s,baz=98,slow=11,SNR=41
GERES  GERESS Array B    45.77 307  P       P         11 48 56.2 -0.6
       comp=Z,1.5nm,1.0s,baz=93,slow=7.1,SNR=4.8
FAUS   Fauske            46.27 333 eP       P         11 49 00.4  0.0
MASI   Maura Aman, Be    46.28 139  P       P         11 49 06.1 +5.0
       comp=Z,46nm,0.9s
TIXI   Tiksi             46.33  21  P       P         11 49 00.8  0.0
TIXI                              pmax    pmax
       comp=Z,20nm,0.8s
TIXI   Tiksi             46.33  21  P       P         11 49 00.8  0.0
TIXI                              IAmb    IAmb      11 49 01.4
       comp=Z,20nm,0.8s
STEI   Steigen           46.42 334 eP       P         11 49 01.7 +0.2
NC405  NORSAR Array S    46.80 324  P       P         11 49 03.4 -1.3
NC602  NORSAR Array S    46.86 323 eP       P         11 49 04.1 -1.1
KSI    Kapahiang         46.90 139  P       P         11 49 11.0 +5.0
       comp=Z,40nm,0.6s
KONS   Konsvik           46.91 331 eP       P         11 49 05.4  0.0
NB2    NORSAR Subarra    47.04 324  P       P         11 49 05.4 -1.2
       comp=Z,7.6nm,0.7s,baz=94,slow=7.9
NOA    NORSAR Array B    47.04 324  P       P         11 49 05.7 -0.9
       comp=Z,3.1nm,0.5s,baz=95,slow=7.6,SNR=13
NOA                               LR      LR        12 09 47.7
       comp=Z,79nm,19.6s,baz=290,slow=37
NSS    Namsos            47.06 329 eP       P         11 49 06.3 -0.3
LOF    Lofoten           47.09 334 eP       P         11 49 05.8 -0.9
KONO   Kongsberg         47.78 322  P       P         11 49 12.0 -0.3
KONO                              pmax    pmax
       comp=Z,34nm,0.6s
KONO   Kongsberg         47.78 322 eP       P         11 49 11.7 -0.6
KONO   Kongsberg         47.78 322  P       P         11 49 11.9 -0.3
DOMB   Dombas            48.13 325 eP       P         11 49 14.9 -0.2
HOMB   Homborsund        48.34 320 eP       P         11 49 16.3 -0.3
SKAR   Skarslia          48.45 323 eP       P         11 49 17.5 -0.1
DAVOX  Davos/Dischmat    48.60 305  P       P         11 49 17.7 -1.4
       comp=Z,1.4nm,0.4s,baz=117,slow=9.0,SNR=3.0
STKI   Sintang           49.31 127  P       P         11 49 32.8 +8.2
SPB2   Spitsbergen Ar    49.53 347  P       P         11 49 26.5 +1.0
SPA0   Spitsbergen Ar    49.54 347 eP       P         11 49 26.1 +0.5
SPITS  Spitsbergen Ar    49.54 347  P       P         11 49 26.2 +0.6
       comp=Z,8.1nm,0.5s,baz=107,slow=11,SNR=21
SPITS  Spitsbergen Ar    49.54 347  P       P         11 49 26.6 +1.0
SPITS                             pmax    pmax
       comp=Z,101nm,1.4s
KMBO   Kilima Mbogo      49.65 232  P       P         11 49 28.8 +1.2
       comp=Z,7.3nm,0.8s,baz=36,slow=12,SNR=9.4
KBS    Kingsbay          50.64 347 eP       P         11 49 34.1 +0.2
MJAR   Matsushiro Arr    51.29  68  P       P         11 49 39.5 +0.1
       comp=Z,3.0nm,0.7s,baz=341,slow=6.3,SNR=5.3
KEST   Kesra             51.81 291  P       P         11 49 43.5 +0.1
       comp=Z,9.4nm,0.6s,baz=12,slow=1.9,SNR=8.4
KEST   Kesra             51.81 291  P       P         11 49 43.8 +0.4
MBAR   Mbarara           53.65 238ceP       P         11 49 58.4 +1.1
MPSI   Mapaga            54.95 119  P       P         11 50 07.6 +1.0
       comp=Z,11nm,0.9s
EKA    Eskdalemuir Ar    55.05 317  P       P         11 50 05.5 -1.3
       comp=Z,3.1nm,0.6s,baz=98,slow=7.2,SNR=5.6
MRSI   Marisa            56.34 117  P       P         11 50 17.1 +0.5
       comp=Z,799nmcomp=Z,72nm,0.7s
GTOI   Gorontalo         57.02 116  P       P         11 50 20.1 -1.3
       comp=Z,17nm,0.7s
BILL   Bilibino          58.94  26d iP     P         11 50 34.6 +0.4
BILL                             e                  11 50 38.2
BILL                             e                  11 51 22.8
BILL                                                11 52 44.0
BILL                              S       S         11 58 31.0 -9.0
BILL                              pmax    pmax
       comp=Z,5.0nm,0.6s
BILL   Bilibino          58.94  26  P       P         11 50 35.1 +0.9
BILL                              IAmb    IAmb      11 50 35.6
       comp=Z,16nm,0.6s
ESBB   Sonseca Array     60.29 300  P       P         11 50 43.2 -0.8
ESBB                              IAmb    IAmb      11 50 44.6
       comp=Z,31nm,1.6s
ESDC   Sonseca Array     60.30 300  P       P         11 50 43.0 -1.0
       comp=Z,5.0nm,0.6s,baz=56,slow=7.1,SNR=30
ESDC   Sonseca Array     60.30 300  P       P         11 50 43.6 -0.4
SANI   Sanana            61.02 116  P       P         11 50 48.7 -0.5
       comp=Z,32nm,0.7s
LBMI   Labuha            61.21 113  P       P         11 50 52.7 +2.2
       comp=Z,30nm,0.7s
VOI    Vohitsoka         62.15 209  P       P         11 50 57.1 +0.4
NEEM   North Greenlan    63.03 348 i P      P         11 51 01.2 -1.0
NEEM                              IAmb    IAmb      11 51 05.8
       comp=Z,9.4nm,0.8s
SUMG   Summit            63.28 342  P       P         11 51 05.0 +0.9
SUMG                              pmax    pmax
       comp=Z,29nm,0.8s
SUMG   Summit            63.28 342 i P      P         11 51 03.7 -0.4
SUMG   Summit            63.28 342  P       P         11 51 05.0 +0.9
PVAQ   Vaqueiros         63.90 299  P       P         11 51 07.8 -0.4
MSAI   Masohi            64.06 115  P       P         11 51 11.6 +2.1
       comp=Z,5.3nm,0.6s
SIJI   Sorong            64.23 111  P       P         11 51 11.1 +0.4
       comp=Z,10.0nm,0.6s,baz=298,slow=6.8,SNR=5.2
EUNU   Eureka            64.71 356  P       P         11 51 13.7 +0.7
EUNU                              IAmb    IAmb      11 51 15.2
       comp=Z,4.9nm,0.9s
SOEI   Soe               65.11 123  P       P         11 51 21.8 +5.3
ICESG  Greenland Ices    65.52 339 i P      P         11 51 18.8 +0.1
ICESG                             IAmb    IAmb      11 51 19.8
       comp=Z,11nm,0.8s
FAKI   Fak Fak           66.29 112  P       P         11 51 23.5 -0.5
       comp=Z,20nm,0.7s
FAKI   Fak Fak           66.29 112  P       P         11 51 23.6 -0.5
FAKI                              IAmb    IAmb      11 51 26.4
       comp=Z,14nm,0.8s
TORD   Torodi Ar. Bea    68.11 271  P       P         11 51 34.0 -1.6
       comp=Z,11nm,0.5s,baz=47,slow=5.9,SNR=162
TORD   Torodi Ar. Bea    68.11 271  P       P         11 51 34.2 -1.4
TORD                              IAmb    IAmb      11 51 34.9
       comp=Z,9.4nm,0.6s
TOLK   Toolik Lake Re    71.79  15  P       P         11 51 57.2 -0.3
TOLK                              IAmb    IAmb      11 51 58.4
       comp=Z,7.3nm,0.8s
KOWA   Kowa              72.07 275  P       P         11 51 58.8 -1.1
KOWA                              IAmb    IAmb      11 51 59.4
       comp=Z,13nm,0.7s
A36M   Sachs Harbour     72.50   6  P       P         11 52 01.7 +0.2
A36M                              IAmb    IAmb      11 52 04.5
       comp=Z,13nm,0.8s
BMAR   Burnt Mountain    73.85  14  P       P         11 52 10.3 +0.6
J20K   Nowinta River     74.19  20  P       P         11 52 12.0 +0.3
J20K                              IAmb    IAmb      11 53 10.2
       comp=Z,21nm,1.5s
INK    Inuvik            75.02  10  P       P         11 52 16.2 -0.2
INK                               pmax    pmax
       comp=Z,14nm,1.3s
INK    Inuvik            75.02  10  P       P         11 52 16.2 -0.2
INK                               IAmb    IAmb      11 52 17.8
       comp=Z,14nm,1.3s
LBTB   Lobatse           75.20 225  P       P         11 52 17.6 -0.5
LBTB                              pmax    pmax
       comp=Z,68nm,1.8s
LBTB   Lobatse           75.20 225  P       P         11 52 17.6 -0.5
COLA   College           75.27  17ceP       P         11 52 17.5 -0.4
COLA                              pmax    pmax
       comp=Z,12nm,0.9s
ILAR   Eielson Array     75.58  17  P       P         11 52 18.6 -1.2
       comp=Z,3.6nm,0.9s,baz=313,slow=4.7,SNR=29
ILAR                              PP      PP        11 55 09.2 +0.8
       comp=Z,1.0nm,1.0s,baz=314,slow=7.5,SNR=4.1
SCRK   Sand Creek        76.93  16  P       P         11 52 27.4 -0.2
SCRK                              IAmb    IAmb      11 52 48.7
       comp=Z,24nm,1.7s
DBIC   Dimbokro          77.04 269  P       P         11 52 27.8 -1.0
       comp=Z,6.2nm,0.9s,baz=53,slow=4.9,SNR=5.0
KIC    Kosan Boka        77.11 269 eP       P         11 52 27.9 -1.4
       comp=Z,13nm,0.8s
TIC    Toumodi           77.19 269 eP       P         11 52 28.1 -1.6
LIC    Lamto             77.43 269 eP       P         11 52 29.7 -1.3
       comp=Z,11nm,0.3s
DAWY   Dawson            77.85  14  P       P         11 52 32.6  0.0
BOSA   Boshof            78.17 222  P       P         11 52 34.1 -0.8
       comp=Z,8.7nm,0.5s,baz=36,slow=5.1,SNR=14
BCAR   Beaver Creek A    78.22  16  P       P         11 52 35.0 +0.3
WB0    Warramunga Arr    79.06 123  P       P         11 52 39.4 -0.5
WB0                               IAmb    IAmb      11 52 40.2
       comp=Z,20nm,1.6s
WRA    Warramunga Arr    79.15 124  P       P         11 52 40.0 -0.3
       comp=Z,4.1nm,0.7s,baz=325,slow=5.2,SNR=42
WRA                               PKKPbc  PKKPbc    12 11 32.0 +0.5
       comp=Z,0.5nm,0.3s,baz=123,slow=2.1,SNR=23
WRA    Warramunga Arr    79.15 124  P       P         11 52 40.0 -0.3
WRA    Warramunga Arr    79.15 124  P       P         11 52 39.9 -0.5
WRAB   Tennant Creek     79.15 124ceP       P         11 52 39.8 -0.5
WRAB                              pmax    pmax
       comp=Z,13nm,1.7s
WRAB   Tennant Creek     79.15 124  P       P         11 52 39.6 -0.7
AS31   Alice Springs     81.41 127  P       P         11 52 52.0 -0.4
ASAR   Alice Springs     81.41 127  P       P         11 52 51.9 -0.6
       comp=Z,3.6nm,0.7s,baz=315,slow=5.5,SNR=38
ASAR   Alice Springs     81.41 127  P       P         11 52 51.6 -0.9
YKA    Yellowknife Ar    82.64   4  P       P         11 52 58.0 -0.3
       comp=Z,3.8nm,0.3s,baz=343,slow=5.4,SNR=63
YKA    Yellowknife Ar    82.64   4  P       P         11 52 58.2 -0.2
YKA    Yellowknife Ar    82.64   4  P       P         11 52 58.2 -0.2
SCHQ   Schefferville     84.43 338  P       P         11 53 06.8 -0.9
       comp=Z,4.3nm,0.9s,baz=79,slow=16,SNR=1.8
CTA    Charters Tower    87.72 116  P       P         11 53 24.2 -0.2
       comp=Z,5.0nm,0.6s,baz=341,slow=2.0,SNR=2.8
CTAO   Charters Tower    87.72 116  P       P         11 53 24.0 -0.4
CTAO                              pmax    pmax
       comp=Z,7.0nm,0.8s
CTAO   Charters Tower    87.72 116  P       P         11 53 24.0 -0.4
CTAO                              IAmb    IAmb      11 53 24.6
       comp=Z,6.9nm,0.8s
STKA   Stephens Creek    91.95 128  P       P         11 53 43.6 -0.3
       comp=Z,1.0nm,0.7s,baz=162,slow=8.9,SNR=3.5
STKA   Stephens Creek    91.95 128  IAmb    IAmb      11 56 59.3
       comp=Z,8.0nm,1.9s
E62A   Clayton Lake      92.39 336          P         11 53 48.2 +2.2
SYO    Syowa Base       106.72 192⇓ePdiff  Pdif      11 54 50.8 +1.3
VNA2   Neumayer--Watz   119.87 202  PKiKP   PKPdf     11 59 23.8 -0.8
VNA1   Neumayer--Stat   120.04 202  PKiKP   PKPdf     11 59 24.4 -0.5
VNA3   Neumayer Olymp   120.67 202  PKiKP   PKPdf     11 59 24.8 -1.4
QSPA   South Pole Qui   124.75 180          PKPdf     11 59 33.2 -1.0
PETF   Flores           126.17 341          PKPdf     11 59 35.8 -2.6
TRQA   Tornquist        144.68 252  PKIKP   PKPab     12 00 10.2 -0.6
TRQA   Tornquist        144.68 252          PKPab     12 00 10.2 -0.6
LVC    Limon Verde      145.39 281  PKPbc   PKPbc     12 00 13.7 -0.3
       comp=Z,14nm,0.7s,baz=333,slow=1.8,SNR=10
USHA   Ushuaia          147.31 221  PKPbc   PKPdf     12 00 17.9 +2.0
       comp=Z,5.1nm,0.7s,baz=129,slow=6.5,SNR=2.3
PLCA   Paso Flores      151.50 248  PKPbc   PKPdf     12 00 28.9 +5.7
       comp=Z,3.6nm,0.7s,baz=14,slow=3.9,SNR=9.4
PLCA   Paso Flores      151.50 248  PKIKP   PKPdf     12 00 29.0 +5.7
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IDC 27 11:41:00.7±11.0**, 4°.41S**×**153°.04E, h189**km±64km**, mb3.1**/3**, mb1 3.3**/4**, mb1mx3.0**/35**, mbtmp3.7**/4**, Error ellipse: s-maj=100.9km s-min=82.7km az=4.0, New Ireland region**

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Code   Station Name         Δ°   AZ°   Phase ID            Time      Res
                                       Op      ISC       h  m  s     ISC
PMG    Port Moresby       7.66 229  P       Pn        11 42 49.5  0.0
       3.6nm,0.3s,baz=26,slow=15,SNR=8.3
PMG                                 S       Sn        11 44 16.7 +0.8
       0.8nm,0.3s,baz=72,slow=20,SNR=2.1
WRA    Warramunga Arr    23.88 228  P       P         11 45 57.6 +0.5
       1.0nm,0.7s,baz=55,slow=10.0,SNR=9.5
ASAR   Alice Springs     26.60 222  P       P         11 46 21.1 -0.5
       0.2nm,0.4s,baz=53,slow=9.0,SNR=6.3
STKA   Stephens Creek    29.36 200  P       P         11 46 46.0  0.0
       1.9nm,0.9s,baz=0.0,slow=15,SNR=2.9
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*INET **27** 11:46:18.6, 12°.77N×89°.13W, h22km, MW5.3*

*MOS **27** 11:46:22.9±1.2, 13°.18N×88°.68W, h40km, mb5.6/22, Error ellipse: s-maj=14.0km s-min=6.4km az=108.5*

*IDC **27** 11:46:25.8±0.9, 13°.33N×88°.68W, h57km±6km, mb4.6/33, mb1 4.7/36, mb1mx4.6/49, mbtmp4.9/36, MS4.8/32, Ms1 4.8/32, ms1mx4.7/39, Error ellipse: s-maj=13.4km s-min=7.6km az=55.0*

*UCR **27** 11:46:26.6±1.5, 13°.04N×89°.06W, h50km±14km, ML5.2, MW5.3, mb5.6(NEIC)*

*SNET **27** 11:46:26.6±0.9, 13°.04N×89°.06W, h50km±9km, ML5.3*

*NEIC **27** 11:46:27.9, 13°.12N×88°.94W, h58km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-1.36; $M_{\theta\theta}$0.60; $M_{\phi\phi}$0.76; $M_{r\theta}$1.58; $M_{\theta\phi}$-0.56; $M_{\phi r}$-1.00; Fault plane solution: $M_0$2.28000×10^{17} NP1:ϕ_s148.28000°, δ18.47000°, λ-68.51000°. NP2:ϕ_s305.74000°, δ72.85000°, λ-96.98000°. Principal axes: T 2.1881, Plg28.0000°, Azm41.0000°; N 0.1754, Plg7.0000°, Azm308.0000°; P -2.3635, Plg62.0000°, Azm205.0000°;*

*NEIC **27** 11:46:27.2±2.2, 13°.09N±0°.06×88°.95W±0°.07, h52km±1km, mb5.4/154, Mwb5.5/47, Mwr5.5/36, Mww5.6, Md5.3(SNET) Error ellipse: s-maj=12.1km s-min=7.6km az=54.0*

*GCMT **27** 11:46:27.2±0.1, 13°.02N±0°.01×89°.16W±0°.01, h62km±1km, MW5.5/135, Moment Tensor Solution. s127,c218; s135,c242; Duration: 1s.4 Moment tensor: Scale 10^{17} Nm; M_{rr}0.34±.03; $M_{\theta\theta}$-0.68±.03; $M_{\phi\phi}$0.33±.03; $M_{r\theta}$1.50±.03; $M_{\theta\phi}$0.22±.03; $M_{\phi r}$-1.49±.02; Best double couple: $M_0$2.20400×10^{17} NP1:ϕ_s244.00000°, δ14.00000°, λ21.00000°. NP2:ϕ_s134.00000°, δ85.00000°, λ103.00000°. Principal axes: T 2.1700, Plg48.0000°, Azm58.0000°; N 0.0680, Plg13.0000°, Azm313.0000°; P -2.2380, Plg39.0000°, Azm212.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **27** 11:46:27.9, 13°.12N×88°.94W, h47km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.18; $M_{\theta\theta}$-0.32; $M_{\phi\phi}$0.14; $M_{r\theta}$1.49; $M_{\theta\phi}$0.38; $M_{\phi r}$-1.52; Fault plane solution: $M_0$2.18000×10^{17} NP1:ϕ_s136.35000°, δ85.76000°, λ96.48000°. NP2:ϕ_s259.40000°, δ7.73000°, λ33.30000°. Principal axes: T 2.0264, Plg49.0000°, Azm53.0000°; N 0.2775, Plg6.0000°, Azm316.0000°; P -2.3039, Plg40.0000°, Azm220.0000°;*

*NEIC **27** 11:46:32, 13°.07N×88°.98W, h46km, Moment Tensor Solution. Duration: 10s.6 Moment tensor: Scale 10^{17}Nm; M_{rr}0.05; $M_{\theta\theta}$-0.67; $M_{\phi\phi}$0.62; $M_{r\theta}$1.86; $M_{\theta\phi}$0.12; $M_{\phi r}$-1.79; Fault plane solution: $M_0$2.67000×10^{17} NP1: ϕ_s229.00000°, δ14.00000°, λ4.00000°. NP2:ϕ_s134.00000°, δ89.00000°, λ104.00000°. Principal axes: T 2.6066, Plg44.0000°, Azm58.0000°; N 0.1172, Plg14.0000°, Azm314.0000°; P -2.7238, Plg42.0000°, Azm211.0000°;*

*GCG **27** 11:46:46.7±0.3, 15°.18N×90°.44W, h50km, MD4.9*

ISC 27 11:46:26.5±0.4**, 13°.12N**±0°.04×**89°.00W**±0°.03**, h66**km±3km**, h67**km**:pP-P, n722,** σ**1s.60**/751**, mb5.3**/114**, 12C-24D, El Salvador**

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Code   Station Name         Δ°   AZ°   Phase ID            Time      Res
                                       Op      ISC       h  m  s     ISC
ALJI   Alcalda de J       0.47  63⇓eP       Pn        11 46 38.8 +0.2
ALJI   Alcalda de J       0.47  63⇓eP       Pn        11 46 38.8 +0.2
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LALI  Alcalda de L       0.49 320  eP      Pn        11 46 38.0 -0.8
LALI                               eS      Sn        11 46 46.9 -0.9
LALI  Alcalda de L       0.49 320  eP      Pn        11 46 38.0 -0.8
LALI                               eS      Sn        11 46 46.9 -0.9
SJTE  Alcalda de S       0.50 359⇓eP      Pn        11 46 38.8 -0.3
SJTE  Alcalda de S       0.50 359⇓eP      Pn        11 46 38.8 -0.3
LFRS  El Faro            0.51 353  eP      Pn        11 46 38.8 -0.5
LFRS  El Faro            0.51 353  eP      Pn        11 46 38.8 -0.5
COEB  Comit de Eme       0.59  50⇓eP      Pn        11 46 40.6 +0.5
COEB                                IAML             11 46 55.6
      comp=Z,212µm,0.5s
COEB  Comit de Eme       0.59  50⇓eP      Pn        11 46 40.6 +0.5
COEB                                IAML             11 46 55.6
      comp=Z,212µm,0.5s
PAVA  Las Pavas          0.60   6  eP      Pn        11 46 40.4 +0.3
PAVA  Las Pavas          0.60   6  eP      Pn        11 46 40.4 +0.3
SNET  Serv Nac Est T     0.61 338  eP      Pn        11 46 40.1 -0.2
SNET  Serv Nac Est T     0.61 338  eP      Pn        11 46 40.1 -0.2
SNET  Serv Nac Est T     0.61 338          Pn        11 46 40.0 -0.2
SNET                                Sn     Sn        11 46 50.5 +0.2
UTEC  Universidad Te     0.61 341  i P     Pn        11 46 40.2 -0.1
UTEC                               eS      Sn        11 46 51.0 +0.7
UTEC  Universidad Te     0.61 341  i P     Pn        11 46 40.2 -0.1
UTEC                               eS      Sn        11 46 51.0 +0.7
IGN   Direccin Gen       0.62 344  eP      Pn        11 46 40.3  0.0
IGN   Direccin Gen       0.62 344  eP      Pn        11 46 40.3  0.0
ITCA  Escuela Especi     0.62 334  e       Pn        11 46 40.1 -0.3
ITCA                               eP      Pn        11 46 40.1 -0.3
ITCA  Escuela Especi     0.62 334  e       Pn        11 46 40.1 -0.3
ITCA                               eP      Pn        11 46 40.1 -0.3
LBRS  Las Brisas         0.62 356⇓eP      Pn        11 46 40.8 +0.4
LBRS  Las Brisas         0.62 356⇓eP      Pn        11 46 40.8 +0.4
OPAM  Oficina de Pla     0.62 342  eP      Pn        11 46 40.4  0.0
OPAM  Oficina de Pla     0.62 342  eP      Pn        11 46 40.4  0.0
SEMO  Seminario San      0.62 339  eP      Pn        11 46 40.2 -0.2
SEMO                               eP      Pn        11 46 40.2 -0.2
LFU   La Fuente          0.64 350  eP      Pn        11 46 40.8 +0.2
LFU   La Fuente          0.64 350  eP      Pn        11 46 40.8 +0.2
SCLA  Alcaldia de Sa     0.64  24⇓eP      Pn        11 46 41.4 +0.9
SCLA                                IAML             11 47 00.6
      comp=Z,37µm,0.6s
SCLA  Alcaldia de Sa     0.64  24⇓eP      Pn        11 46 41.4 +0.9
SCLA                                IAML             11 47 00.6
      comp=Z,37µm,0.6s
PQSS  Presa 15 de Se     0.66  40⇑eP      Pn        11 46 41.6 +0.9
PQSS                                IAML             11 46 59.6
      comp=Z,46µm,0.2s
BOQS  Boqueron           0.67 336⇓eP      Pn        11 46 41.1  0.0
BOQS  Boqueron           0.67 336⇓eP      Pn        11 46 41.1  0.0
PACA  Pacayal            0.75  62  eP      Pn        11 46 43.2 +1.4
PACA                                IAML             11 46 57.7
      comp=Z,59µm,0.4s
PACA  Pacayal            0.75  62  eP      Pn        11 46 43.2 +1.4
PACA                                IAML             11 46 57.7
      comp=Z,59µm,0.4s
CNRM  Centro Naciona     0.88  66  eP      Pn        11 46 44.2 +0.9
CNRM  Centro Naciona     0.88  66  eP      Pn        11 46 44.2 +0.9
CEVE  Cerro Verde        0.93 319  eP      Pn        11 46 44.3 +0.1
CEVE                                IAML             11 47 00.3
      comp=Z,270µm,0.6s
CEVE  Cerro Verde        0.93 319  eP      Pn        11 46 44.3 +0.1
CEVE                                IAML             11 47 00.3
      comp=Z,270µm,0.6s
RTR   El Retiro          1.00 321  eP      Pn        11 46 45.4 +0.4
RTR   El Retiro          1.00 321  eP      Pn        11 46 45.4 +0.4
UNIC  Universidad Ca     1.01 328⇓iP      Pn        11 46 45.6 +0.5
UNIC                               eS      Sn        11 46 59.9 +1.1
UNIC  Universidad Ca     1.01 328⇓iP      Pn        11 46 45.6 +0.5
UNIC                               eS      Sn        11 46 59.9 +1.1
LLGN  La Laguna          1.04   3  eP      Pn        11 46 46.4 +0.9
LLGN  La Laguna          1.04   3  eP      Pn        11 46 46.4 +0.9
LCND  La Caada           1.10  80⇓eP      Pn        11 46 46.8 +0.8
LCND                                IAML             11 47 05.6
      comp=Z,309µm,0.4s
LCND  La Caada           1.10  80  eP      Pn        11 46 46.8 +0.8
LCND                              ⇓eP      Pn        11 46 46.8 +0.8
LCND                                IAML             11 47 05.6
      comp=Z,309µm,0.4s
CNCH  Conchagua          1.15  82⇓eP      Pn        11 46 47.4 +0.6
CNCH                               eS      Sn        11 47 03.3 +1.3
CNCH  Conchagua          1.15  82⇓eP      Pn        11 46 47.4 +0.6
CNCH                               eS      Sn        11 47 03.3 +1.3
SLOZ  Alcaldia de Sa     1.18 320  eP      Pn        11 46 47.7 +0.5
SLOZ                                IAML             11 47 09.5
      comp=Z,41µm,0.5s
MTO3  Montecristo        1.32 345  eP      Pn        11 46 50.0 +0.8
MTO3  Montecristo        1.32 345  eP      Pn        11 46 50.0 +0.8
MTO3  Montecristo        1.32 345          Pn        11 46 50.1 +0.8
MTO3                                Sn     Sn        11 47 07.8 +1.6
ESQI  Esquipulas         1.47 347  eP      Pn        11 46 52.5 +1.4
ESQI  Esquipulas         1.47 347          Pn        11 46 52.5 +1.4
TGUH  Tegucigalpa,Un     1.92  61          Pn        11 46 58.6 +1.5
NBG   Las Nubes          1.96 318  eP      Pn        11 46 59.9 +2.1
PCG   Pacaya             2.01 309  eP      Pn        11 47 00.6 +2.1
MRL   Marmol             2.06 341⇑iP      Pn        11 47 01.6 +2.4
FUG   Fuego 3            2.23 307  eP      Pn        11 47 02.6 +1.2
CNGN  Cerro Negro        2.33 105          Pn        11 47 03.2 +0.7
APG   El Apazote         2.35 323   P      Pn        11 47 04.3 +1.2
      comp=Z,99nm,0.3s,baz=125,slow=9.9,SNR=452
RTAL  Retalhuleu         2.97 298          Pn        11 47 11.5 +0.3
MATN  Matagalpa          3.00  93          Pn        11 47 12.2 +0.4
BOAB  BOACO BROADBAN3.32 101               Pn        11 47 15.7 -0.3
PETF  Flores             3.87 348          Pn        11 47 26.6 +3.0
ACON  Acoyapa            3.91 107          Pn        11 47 23.0 -1.0
HZTE  Horizontes, Gu     4.10 125          Pn        11 47 28.1 +1.4
GBS3  Finca Las Img      4.17 123  eP      Pn        11 47 27.8 +0.1
GB1A  Borinquen Arri     4.20 123  eP      Pn        11 47 29.7 +1.5
LAPC  Finca la Perla     4.20 123  eP      Pn        11 47 28.1  0.0
BUEV  Buena Vista        4.20 123  eP      Pn        11 47 28.5 +0.3
BUAI  Buenos Aires       4.22 121  eP      Pn        11 47 28.9 +0.5
GPS2  Hotel Rincn d      4.27 123  eP      Pn        11 47 29.9 +0.8
CCIG  Comitan            4.37 316          Pn        11 47 33.3 +2.7
LIM1  Limonal            4.38 123  eP      Pn        11 47 31.1 +0.5
GUAB  Guayabo de Bag     4.40 123  eP      Pn        11 47 31.7 +0.9
GUAI  GUAI               4.43 129  eP      Pn        11 47 32.5 +1.2
HORNC Hornillas          4.44 122  eP      Pn        11 47 31.6 +0.3
COLC  Colonia            4.44 123  eP      Pn        11 47 32.2 +0.8
CUI   Cuipilapa          4.48 123  eP      Pn        11 47 33.5 +1.6
DUNO  Dulce Nombre,      4.57 131          Pn        11 47 34.2 +1.1
PTEN  Parque Tenorio     4.59 121  eP      Pn        11 47 33.8 +0.2
ACAL  Aguas Claras       4.60 122  eP      Pn        11 47 33.5 -0.1
ESPN  Las Esperanzas     4.68 101          Pn        11 47 34.9 +0.3
JTS   Las Juntas de      4.86 125deP       Pn        11 47 37.8 +0.7
JTS   Las Juntas de      4.86 125          Pn        11 47 37.5 +0.5
CEDE  Laguna Cedeo       4.95 121  eP      Pn        11 47 39.2 +0.8
CASO  Castillo           4.95 122  eP      Pn        11 47 39.6 +1.1
FORC  Fortuna            4.99 121  eP      Pn        11 47 40.3 +1.4
COVE  Coope Vega, Sa     5.09 117          Pn        11 47 40.6 +0.4
CAO2  Cobano, Puntar     5.11 131          Pn        11 47 41.3 +0.7
JACO  JACO, Garabito     5.47 128   Pn     Pn        11 47 46.4 +1.0
HDC   Heredia            5.70 122  eP      Pn        11 47 49.9 +1.2
HDC   Heredia            5.70 122          Pn        11 47 49.7 +1.0
LCR2  La Lucha 2         5.93 124  eP      Pn        11 47 52.5 +0.5
RAFA  San Farael, Vo     5.97 121⇑iP      Pn        11 47 55.0 +2.3
CVTR  Volcan Turrial     5.99 120          Pn        11 47 54.2 +1.3
RIMA  Rio Macho          6.03 123⇓eP      Pn        11 47 54.8 +1.5
RIMA  Rio Macho          6.03 123          Pn        11 47 54.6 +1.2
BATAN Batan              6.27 118          Pn        11 47 58.0 +1.6
PEZE  Perez Zeledon,     6.40 125  eP      Pn        11 47 59.8 +1.5
SRBA  San Rafael, Bu     6.75 124⇑iP      Pn        11 48 05.3 +2.3
SRBA  San Rafael, Bu     6.75 124          Pn        11 48 04.6 +1.6
DRK0  Durika             6.82 124          Pn        11 48 05.8 +1.6
CMIG  Matias Romero      6.92 306   P      Pn        11 48 06.4 +1.1
      comp=Z,11nm,0.3s,baz=152,slow=11,SNR=141
CMIG                                S      Sn        11 49 22.9 +0.2
      comp=Z,51nm,0.3s,baz=259,slow=9.2,SNR=4.4
RIOS  Rincon, Osa        6.95 129          Pn        11 48 07.6 +1.9
EDSV  San Vito           7.30 125  eP      Pn        11 48 09.9 -0.7
PRVC  Isla de Provid     7.44  87  eP      Pn        11 48 13.8 +1.4
CDITO Canoas             7.52 126          Pn        11 48 14.5 +0.9
BRU2  Volcan             7.54 124   Pn     Pn        11 48 15.6 +1.7
BCIP  Isla Barro Col     9.81 113   P      Pn        11 48 44.6 -0.2
BCIP  Isla Barro Col     9.81 113   Pn     Pn        11 48 44.6 -0.2
LCCY  Blossom Villag    10.75  52   Pn     Pn        11 48 57.4 -0.2
SOR   Soroa             11.18  30   P      Pn        11 49 06.9 +3.3
SOR   Soroa             11.18  30   Pn     Pn        11 49 06.9 +3.3
MTDJ  Mount Denham      12.15  64  eP      Pn        11 49 20.4 +3.5
MOIG  Morelia           13.39 301   Pn     Pn        11 49 36.9 +3.0
PAYG  Puerto Ayora      13.76 185  eP      P         11 49 44.9 -0.1
MOTC  Monteria, Cord    13.78 107  eP      Pn        11 49 38.7 -0.2
SJCC  San Jacinto, C    13.91 102  eP      Pn        11 49 43.1 +2.4
DBBC  Dabeiba           13.97 114  eP      Pn        11 49 42.3 +0.8
UREC  San Jos de Ur     14.27 111  eP      Pn        11 49 47.1 +1.8
SMRC  Santa Marta, M    14.57  96  eP      Pn        11 49 48.1 -1.2
CBOC  Ciudad Bolivar    14.69 118  eP      Pn        11 49 51.1 +0.1
GTBY  Guantanamo Bay    14.93  61  eP      P         11 49 56.6 -1.4
GTBY  Guantanamo Bay    14.93  61   Pn     Pn        11 49 55.6 +1.7
HELC  Santa Helena      14.95 116  eP      P         11 49 59.0 +0.4
PLMC  San Jos del P     14.97 122  eP      Pn        11 49 54.3 -0.2
ZARC  Zaragoza, Cauc    14.99 111  eP      Pn        11 49 52.9 -1.8
ZARC  Zaragoza, Cauc    14.99 111   Pn     Pn        11 49 54.8 +0.1
SMLC  San Martn de      15.27 105  eP      Pn        11 49 57.6 -0.6
YOTC  Yotoco, Valle     15.45 125  eP      Pn        11 50 01.4 +0.8
GUY2C Guyana, Caldas    15.57 119  eP      P         11 50 05.5 -0.1
PTBC  PUERTO BERRIO,    15.74 113  eP      Pn        11 50 05.0 +0.6
LL6C  La Loma 6 Bece    15.78 101  eP      Pn        11 50 06.0 +1.3
NORC  Norcasia          15.82 117  eP      P         11 50 06.8 -1.2
ANIL  Santa Ana         15.93 121  eP      P         11 50 10.4 +1.0
BRRC  Barranca, Sant    16.18 110  eP      Pn        11 50 10.7 +0.8
PAC1  Pacto, Paraso     16.29 141  eP      P         11 50 17.5 +4.2
ORTC  Ortega, Tolima    16.38 123  eP      P         11 50 14.1 -0.1
SOTA  Rioblanco         16.41 131  eP      P         11 50 14.8 -0.2
PCON  Cinco Dias        16.44 130  eP      P         11 50 17.2 +1.8
MARP  Paez Belalcaza    16.45 127  eP      P         11 50 17.5 +2.3
SPBC  San Pablo de B    16.48 115  eP      Pn        11 50 10.9 -2.7
DWPF  Disney Wildern    16.51  24   P      P         11 50 16.4 +1.0
      baz=207
DWPF  Disney Wildern    16.51  24   P      P         11 50 16.2 +0.8
GCUF  Volcan Galeras    16.52 135  eP      P         11 50 19.3 +3.2
OTAV  Otavalo           16.52 140ceP       P         11 50 16.7 +0.6
OTAV                                pmax   pmax
      comp=Z,24nm,1.0s
OTAV  Otavalo           16.52 140  eP      P         11 50 18.0 +1.8
OTAV  Otavalo           16.52 140          Pn        11 50 15.0 +0.4
TULM  Tulcn-Chalpat     16.59 137  eP      P         11 50 17.6 +0.7
LGNH  Logne             16.66  69   P      P         11 50 17.0 -0.1
LGNH                                IAmb   IAmb      11 50 37.6
      comp=Z,1µm,1.9s
ROSC  El Rosal          16.66 118   P      P         11 50 18.8 +1.2
      comp=Z,3.6nm,0.3s,baz=78,slow=4.8,SNR=15
ROSC                                LR     LR        11 58 30.3
      comp=Z,2µm,20.1s,baz=322,slow=44
ROSC                                ScP    ScP       11 58 36.3 +4.4
      comp=Z,2.2nm,0.3s,baz=122,slow=2.2,SNR=8.7
ROSC  El Rosal          16.66 118   P      P         11 50 17.8 +0.2
ROSC                                pmax   pmax
      comp=Z,91nm,0.9s
ROSC  El Rosal          16.66 118  eP      P         11 50 18.2 +0.7
ROSC  El Rosal          16.66 118   P      P         11 50 17.8 +0.2
JAKH  Jacmel            16.66  70          P         11 50 18.0 +0.8
JAKH                                IAmb   IAmb      11 50 41.5
      comp=Z,262nm,1.2s
URIC  Uribia, Colomb    16.67  93  eP      Pn        11 50 14.8 -1.2
URIC  Uribia, Colomb    16.67  93   P      P         11 50 17.0 -0.3
URIC                                IAmb   IAmb      11 50 35.7
      comp=Z,389nm,1.6s
BARC  Barichara         16.87 111  eP      P         11 50 20.1 +0.3
BETC  Betania           16.95 127  eP      P         11 50 22.3 +1.8
PAMC  Pamplona, Colo    17.03 108  eP      Pn        11 50 20.9  0.0
656A  Willston          17.25  19   P      P         11 50 25.6 +2.0
RUSC  La Rusia          17.25 113  eP      Pn        11 50 23.7 +0.1
553A  Crawfordville     17.51  13   P      P         11 50 29.2 +2.8
553A                                IAmb   IAmb      11 50 33.7
      comp=Z,368nm,1.2s
735A  Kenedy            17.68 334   P      P         11 50 29.7 +1.4
HKT   Hockley           17.91 340ceP       Pn        11 50 33.4 +2.4
HKT                                 pmax   pmax
      comp=Z,114nm,1.7s
HKT   Hockley           17.91 340          Pn        11 50 32.3 +1.3
833A  Chaparral WMA,    17.97 329   P      Pn        11 50 34.0 +2.2
      baz=145,SNR=38
441A  DeRidder          17.97 348   P      Pn        11 50 35.9 +4.1
SDDR  Presa de Saban    17.99  69  eP      Pn        11 50 34.4 +2.2
SDDR  Presa de Saban    17.99  69          Pn        11 50 33.7 +1.5
BRAL  Brewton           18.06   5   P      Pn        11 50 36.1 +3.2
      baz=186
346A  Big Creek Wild    18.19 359          Pn        11 50 38.3 +3.8
346A                                IAmb   IAmb      11 50 56.8
      comp=Z,334nm,1.1s
TAMC  Tame, Arauca      18.20 110  eP      Pn        11 50 34.9 +0.1
344A  Westbrook Farm    18.32 355   P      Pn        11 50 39.3 +3.3
344A                                IAmb   IAmb      11 50 58.6
      comp=Z,416nm,1.4s
342A  Flagon Creek P    18.43 351          Pn        11 50 39.9 +2.6
342A                                IAmb   IAmb      11 50 56.0
      comp=Z,454nm,1.4s
SOCV  Socops            18.46 103  eP      P         11 50 34.8 -2.3
SDV   Santo Domingo     18.51 101   P      P         11 50 37.0 -0.8
      comp=Z,31nm,0.3s,baz=277,slow=4.7,SNR=52
SDV                                 ScP    ScP       11 58 38.4 +2.8
      comp=Z,1.2nm,0.3s,baz=206,slow=1.2,SNR=12
SDV                                 LR     LR        11 59 15.0
      comp=Z,1µm,19.7s,baz=290,slow=42
SDV   Santo Domingo     18.51 101  eP      P         11 50 37.3 -0.5
SDV   Santo Domingo     18.51 101  eP      P         11 50 37.5 -0.3
SDV   Santo Domingo     18.51 101   P      P         11 50 37.5 -0.3
SDV                                 IAmb   IAmb      11 50 40.3
      comp=Z,145nm,0.8s
MACC  Macarena, Meta    18.54 125  eP      Pn        11 50 38.8  0.0
352A  Blakely           18.66  11   P      Pn        11 50 41.7 +1.6
352A                                IAmb   IAmb      11 50 45.0
      comp=Z,441nm,1.3s
TIGA  Tifton            18.91  14   P      Pn        11 50 45.2 +2.2
      baz=196,SNR=21
TIGA  Tifton            18.91  14   P      Pn        11 50 45.5 +2.4
250A  Grady             18.94   7   P      Pn        11 50 45.8 +2.3
250A                                IAmb   IAmb      11 50 48.1
      comp=Z,504nm,1.5s
VBMS  Vicksburg         19.07 356   P      Pn        11 50 47.3 +2.3
      baz=175,SNR=29
VBMS  Vicksburg         19.07 356   P      Pn        11 50 46.6 +1.7
PTLC  Puerto Leguiza    19.07 131  eP      Pn        11 50 49.2 +4.1
SDD   Santo Domingo     19.11  71   P      P         11 50 44.6 +0.4
SDD                                 IAmb   IAmb      11 51 11.0
      comp=Z,293nm,1.1s
NATX  Nacogdoches       19.27 345   P      Pn        11 50 48.2 +0.8
      baz=163,SNR=10
NATX  Nacogdoches       19.27 345   P      Pn        11 50 48.0 +0.6
NATX                                IAmb   IAmb      11 51 03.4
      comp=Z,246nm,1.1s
435B  Jarrell           19.29 337   P      Pn        11 50 47.5 -0.1
      baz=154,SNR=17
435B  Jarrell           19.29 337   P      Pn        11 50 47.6  0.0
435B                                IAmb   IAmb      11 50 59.4
      comp=Z,118nm,0.7s
146A  Union             19.43 360   P      Pn        11 50 50.6 +1.3
146A                                IAmb   IAmb      11 51 12.2
      comp=Z,460nm,1.2s
DR12  Loma Pena Alta    19.68  71   P      Pn        11 50 52.1 -0.3
JCT   Junction City     19.96 332   P      Pn        11 50 54.8 -0.8
      baz=148,SNR=49
ELOV  Elorza            20.14 106  eP      P         11 50 54.5 -1.0
WHTX  Lake Whitney,     20.33 339   P      Pn        11 50 58.8 -1.1
      baz=156,SNR=7.9
WHTX  Lake Whitney,     20.33 339   P      Pn        11 50 58.9 -0.9
WHTX                                IAmb   IAmb      11 51 16.1
      comp=Z,274nm,0.8s
Z41A  Richland Creek    20.35 351   P      Pn        11 51 00.5 +0.4
      baz=169,SNR=15
GOGA  Godfrey           20.82  13   P      Pn        11 51 05.1 -0.6
      baz=195,SNR=46
TXAR  Lajitas Array     21.11 322   P      P         11 51 08.1 +2.1
      comp=Z,22nm,0.6s,baz=145,slow=9.5,SNR=165
TXAR                                PcP    PcP       11 55 11.4 +1.5
      comp=Z,11nm,1.1s,baz=172,slow=2.5,SNR=6.0
TXAR                                ScP    ScP       11 58 43.2 +2.0
      comp=Z,3.7nm,0.8s,baz=108,slow=4.1,SNR=12
TXAR                                LR     LR        12 00 59.9
      comp=Z,697nm,21.4s,baz=0.0,slow=41
TXAR  Lajitas Array     21.11 322   P      P         11 51 07.6 +1.7
TX31  Lajitas Ar. Si    21.11 322   P      P         11 51 07.5 +1.6
TX31                                IAmb   IAmb      11 51 22.9
      comp=Z,276nm,1.2s
NHSC  New Hope          21.47  21   P      P         11 51 11.1 +1.6
      baz=204,SNR=7.4
Z35A  Perchaven, San    21.49 341   P      P         11 51 10.9 +1.2
Z35A                                IAmb   IAmb      11 51 53.1
      comp=Z,141nm,1.1s
X40A  Basin Creek Fa    21.56 351   P      P         11 51 12.2 +1.8
      baz=170,SNR=35
X51A  Calhoun           21.68   9   P      P         11 51 14.6 +2.8
X51A                                IAmb   IAmb      11 51 21.3
      comp=Z,293nm,1.6s
AGPR  Aguadilla, PR     21.71  73   P      P         11 51 12.6 +0.3
ABTX  Abilene, Hawle    21.73 335   P      P         11 51 12.9 +0.5
      baz=151,SNR=19
MIAR  Mount Ida         21.74 350   P      P         11 51 14.3 +2.0
MIAR                                pmax   pmax
      comp=Z,525nm,1.7s
MIAR  Mount Ida         21.74 350   P      P         11 51 14.8 +2.5
      baz=168,SNR=60
MIAR  Mount Ida         21.74 350   P      P         11 51 14.3 +2.0
HODGE Hodges            21.90  15   P      P         11 51 16.8 +2.7
HODGE                               IAmb   IAmb      11 51 33.7
      comp=Z,361nm,1.5s
W45A  Hickory Valley    21.95 360   P      P         11 51 16.5 +1.9
W45A                                IAmb   IAmb      11 51 38.0
      comp=Z,127nm,1.0s
CELP  Cerrillos         22.14  74   P      P         11 51 16.6 -0.4
W41B  Gary Mavity, V    22.16 353   P      P         11 51 19.7 +2.8
      baz=172,SNR=36
JSC   Jenkinsville      22.21  17   P      P         11 51 19.6 +2.1
JSC                                 pmax   pmax
      comp=Z,507nm,1.5s
JSC   Jenkinsville      22.21  17   P      P         11 51 19.6 +2.1
Y57A  Sumter            22.23  19   P      P         11 51 19.7 +2.0
W52A  Murphy            22.36  11   P      P         11 51 21.3 +2.2
W52A                                IAmb   IAmb      11 51 51.0
      comp=Z,69nm,0.8s
HBAR  Harrisburg        22.39 356   P      P         11 51 20.9 +1.4
W39A  Magazine          22.41 350   P      P         11 51 21.9 +2.3
      baz=168,SNR=31
LPAR  Lepanto           22.42 357   P      P         11 51 21.4 +1.7
BG3   Lake Jocassee     22.46  13   P      P         11 51 21.9 +1.7
BG3                                 IAmb   IAmb      11 51 39.2
      comp=Z,188nm,1.3s
SJG   San Juan          22.55  74   P      P         11 51 19.3 -2.0
      comp=Z,14nm,0.4s,baz=314,slow=3.9,SNR=5.2
SJG                                 ScP    ScP       11 58 44.5 -0.3
      comp=Z,23nm,0.6s,baz=28,slow=2.9,SNR=8.1
SJG                                 LR     LR        12 01 13.6
      comp=Z,3µm,18.5s,baz=270,slow=40
PAULI Pauline           22.57  16   P      P         11 51 22.9 +1.6
PAULI                               IAmb   IAmb      11 51 40.4
      comp=Z,283nm,1.4s
V48A  Smith Brothers    22.61   5   P      P         11 51 22.9 +1.1
V48A                                IAmb   IAmb      11 51 40.4
      comp=Z,278nm,1.6s
GCPR  Guaynabo City     22.65  74   P      P         11 51 21.5 -0.9
HALT  Halls             22.70 359   P      P         11 51 24.2 +1.6
ATAH  Atahualpa         22.71 152   P      P         11 51 25.8 +2.4
      comp=Z,54nm,0.7s,baz=1.8,slow=4.1,SNR=29
GNAR  Gosnell           22.77 358   P      P         11 51 25.0 +1.6
TKL   Tuckaleechee C    22.93  11   P      P         11 51 26.0 +0.9
      comp=Z,76nm,1.1s,baz=182,slow=9.7,SNR=26
TKL                                 LR     LR        12 00 50.9
      comp=Z,3µm,21.8s,baz=188,slow=38
TKL   Tuckaleechee C    22.93  11   P      P         11 51 25.9 +0.8
TKL                                 pmax   pmax
      comp=Z,421nm,1.6s
TKL   Tuckaleechee C    22.93  11   P      P         11 51 25.9 +0.8
TKL                                 IAmb   IAmb      11 51 44.0
      comp=Z,421nm,1.6s
LCAR  Lake Charles      22.94 356   P      P         11 51 26.8 +1.6
LCAR                                IAmb   IAmb      11 51 42.6
      comp=Z,223nm,1.1s
WVT   Waverly           22.94   2   P      P         11 51 27.0 +1.9
      baz=183
KMSC  Kings Mountain    23.00  16   P      P         11 51 27.0 +1.2
      baz=199,SNR=24
CLTN  Cedars of Leba    23.00   6   P      P         11 51 27.4 +1.6
CLTN                                IAmb   IAmb      11 51 44.2
      comp=Z,457nm,1.8s
WMOK  Wichita Mounta    23.28 339   P      P         11 51 29.4 +0.8
      baz=155,SNR=26
U40A  Yellville         23.40 352   P      P         11 51 31.0 +1.4
      baz=170,SNR=36
U40A  Yellville         23.40 352   P      P         11 51 31.6 +2.0
U40A                                IAmb   IAmb      11 51 47.2
      comp=Z,404nm,1.7s
W57A  Gilead            23.40  19   P      P         11 51 30.9 +1.3
W57A                                IAmb   IAmb      11 51 47.7
      comp=Z,184nm,1.4s
PARMO Parma             23.46 358   P      P         11 51 31.5 +1.4
OKCFA Oklahoma City     23.48 342   P      P         11 51 31.3 +0.9
HENM  Henderson Moun    23.50 359   P      P         11 51 31.5 +1.0
TUL1  Leonard           23.51 346   P      P         11 51 30.8 +0.2
      baz=163,SNR=16
OK031 S. Brethren Rd    23.81 344   P      P         11 51 34.0 +0.7
OK031                               IAmb   IAmb      11 51 35.6
      comp=Z,261nm,1.3s
TZTN  Tazewell          23.84  11   P      P         11 51 35.4 +1.8
      baz=193,SNR=7.4
MNTX  Cornudas Mount    23.85 324   P      P         11 51 34.4 +0.7
      baz=137,SNR=52
PCRV  Puerto La Cruz    24.04  94   P      P         11 51 34.7 -0.9
      comp=Z,38nm,0.5s,baz=214,slow=6.2,SNR=27
PCRV                                ScP    ScP       11 58 50.7 +1.7
      comp=Z,13nm,0.8s,baz=355,slow=4.1,SNR=4.9
PCRV                                LR     LR        12 01 12.1
      comp=Z,2µm,21.1s,slow=37
PLCV  Puerto La Cruz    24.08  94   P      P         11 51 34.7 -1.3
PLCV                                       ScP       11 58 50.7 +1.6
CNNC  Cliffs of the     24.21  23   P      P         11 51 38.2 +1.3
      baz=207
MSTX  Muleshoe          24.25 331   P      P         11 51 37.9 +0.5
      baz=146
CROK  Carrier           24.65 342          P         11 51 41.5 +0.6
CROK                                IAmb   IAmb      11 51 43.3
      comp=Z,415nm,2.0s
BLOK  Blackwell         24.67 344          P         11 51 41.9 +0.7
BLOK                                IAmb   IAmb      11 51 45.1
      comp=Z,82nm,0.9s
CCM   Cathedral Cave    24.92 356   P      P         11 51 43.9 +0.5
      baz=175
KAN14 Manchester OK     25.06 343   P      P         11 51 45.2 +0.4
KAN14                               IAmb   IAmb      11 51 46.8
      comp=Z,147nm,1.5s
WCI   Wyandotte Cave    25.13   5   P      P         11 51 45.8 +0.6
WCI                                 pmax   pmax
      comp=Z,166nm,1.5s
WCI   Wyandotte Cave    25.13   5   P      P         11 51 45.2 -0.1
      baz=186
WCI   Wyandotte Cave    25.13   5   P      P         11 51 45.8 +0.6
WCI                                 IAmb   IAmb      11 52 01.4
      comp=Z,166nm,1.5s
BLA   Blacksburg        25.19  16   P      P         11 51 46.9 +0.9
      baz=200,SNR=5.6
R40A  Maddies Statio    25.24 354   P      P         11 51 47.2 +0.9
R40A                                IAmb   IAmb      11 52 06.0
      comp=Z,152nm,1.2s
R49A  Shelbyville       25.30   7   P      P         11 51 47.9 +1.0
KAN16 Harper SW Stat    25.34 343          P         11 51 47.7 +0.4
KAN16                               IAmb   IAmb      11 52 03.7
      comp=Z,154nm,1.6s
KAN12 Harper NE Stat    25.39 343   P      P         11 51 48.1 +0.4
KAN12                               IAmb   IAmb      11 51 51.3
      comp=Z,116nm,1.0s
SLM   Saint Louis       25.44 358   P      P         11 51 50.2 +2.1
SLM                                 pmax   pmax
      comp=Z,438nm,1.7s
SLM   Saint Louis       25.44 358   P      P         11 51 50.2 +2.1
TBTG  Tabatinga, AM     25.59 131   P      P         11 51 50.8 +1.0
TBTG                                IAmb   IAmb      11 52 15.2
      comp=Z,133nm,1.1s
121A  Cookes Peak, D    25.87 321   P      P         11 51 54.6 +2.3
      baz=134,SNR=14
121A  Cookes Peak, D    25.87 321   P      P         11 51 53.9 +1.6
T59A  Double "B" Far    25.88  21   P      P         11 51 53.4 +1.3
T59A                                IAmb   IAmb      11 52 11.2
      comp=Z,224nm,1.1s
S57A  Dark Hollow, R    26.13  18   P      P         11 51 55.7 +1.3
S57A                                IAmb   IAmb      11 52 12.4
      comp=Z,204nm,1.9s
CZSB  Cruzeiro do Su    26.28 141  eP      P         11 51 56.7 +0.7
CZSB  Cruzeiro do Su    26.28 141   P      P         11 51 58.1 +2.2
CZSB                                IAmb   IAmb      11 52 01.7
      comp=Z,114nm,0.8s
BNM   Barren Site       26.36 326   P      P         11 51 57.9 +1.1
P43A  Skaggs, Pawnee    26.43 359   P      P         11 51 58.8 +1.8
P43A                                IAmb   IAmb      11 52 40.7
      comp=Z,76nm,1.1s
P48A  Milroy            26.43   6   P      P         11 51 57.6 +0.6
P49A  Miami Univ. Ec    26.59   7   P      P         11 51 58.9 +0.4
      baz=189
R32A  Long Quarter,     26.64 343   P      P         11 51 59.7 +0.7
R32A                                IAmb   IAmb      11 52 01.7
      comp=Z,80nm,1.1s
KSU1  Kansas State U    26.75 347   P      P         11 52 00.5 +0.6
      baz=163,SNR=16
ANMO  Albuquerque       26.87 327   P      P         11 52 03.2 +1.9
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	comp=Z,2.2nm,0.4s,baz=141,slow=8.9,SNR=12						
ANMO				PcP	PcP	11 55 23.4	+1.1
	comp=Z,8.1nm,0.9s,baz=150,slow=3.5,SNR=3.9						
ANMO	**Albuquerque**	26.87	327	P	P	11 52 03.0	+1.7
	baz=140						
ANMO	**Albuquerque**	26.87	327	P	P	11 52 03.0	+1.7
CBN	**Corbin Frederi**	27.04	20	P	P	11 52 03.9	+1.3
	baz=205						
P52A	**Corning**	27.10	12	P	P	11 52 04.5	+1.4
	baz=195						
CBKS	**Cedar Bluff**	27.31	342	P	P	11 52 06.1	+1.1
CBKS				pmax	pmax		
	comp=Z,67nm,1.1s						
CBKS	**Cedar Bluff**	27.31	342	P	P	11 52 06.9	+1.9
	baz=157,SNR=6.9						
CBKS	**Cedar Bluff**	27.31	342	P	P	11 52 06.1	+1.1
CBKS				IAmb	IAmb	11 52 07.2	
	comp=Z,67nm,1.1s						
HDIL	**Hopedale**	27.34	360	P	P	11 52 06.5	+1.3
	baz=179						
ACSO	**Alum Creek Sta**	27.53	10	P	P	11 52 07.5	+0.6
	baz=193						
T25A	**Trinidad**	27.61	333	P	P	11 52 10.4	+2.5
	baz=146,SNR=41						
T25A	**Trinidad**	27.61	333	P	P	11 52 10.0	+2.0
T25A				IAmb	IAmb	11 52 13.8	
	comp=Z,50nm,0.8s						
TUC	**Tucson**	27.63	317	P	P	11 52 11.1	+3.1
	baz=129						
MCWV	**Mont Chateau**	27.65	15	P	P	11 52 09.8	+1.9
	baz=199						
NNA	**Nana**	27.70	154	P	P	11 52 09.8	+1.1
	comp=Z,15nm,0.6s,baz=328,slow=8.8,SNR=6.2						
NNA				LR	LR	12 02 17.0	
	comp=Z,535nm,21.8s,baz=316,slow=34						
O53A	**New Philadelph**	27.88	13	P	P	11 52 11.9	+1.8
	baz=196						
KSCO	**Kaye Shedlock'**	28.48	337	P	P	11 52 17.8	+2.3
	baz=151,SNR=17						
O56A	**Blue Knob Stat**	28.56	17	P	P	11 52 17.5	+1.3
	baz=202						
SDCO	**Great Sand Dun**	28.61	332	P	P	11 52 19.2	+2.3
	baz=145,SNR=7.9						
214A	**Organ Pipe Nat**	28.79	315	P	P	11 52 20.7	+2.4
	baz=125,SNR=7.3						
W18A	**Petrified Fore**	28.83	323	P	P	11 52 21.8	+3.0
	baz=134,SNR=8.8						
W18A	**Petrified Fore**	28.83	323	P	P	11 52 21.1	+2.3
N54A	**Moraine State**	28.84	14	P	P	11 52 20.2	+1.6
	baz=198,SNR=7.8						
P60A	**Greenville**	29.09	21	P	P	11 52 22.9	+2.1
	baz=207						
SSPA	**Standing Stone**	29.10	18	P	P	11 52 22.5	+1.6
	baz=203						
M53A	**WI Miller and**	29.14	13	P	P	11 52 22.7	+1.5
	baz=197						
S22A	**4UR Ranch, Cre**	29.23	330	P	P	11 52 24.3	+1.8
	baz=142,SNR=52						
BGNE	**Belgrade**	29.30	346	P	P	11 52 24.8	+2.1
	baz=162						
BGNE	**Belgrade**	29.30	346	P	P	11 52 23.7	+1.1
BGNE				IAmb	IAmb	11 53 15.4	
	comp=Z,94nm,0.9s						
M54A	**Oil Creek Stat**	29.44	14	P	P	11 52 25.4	+1.5
	baz=199						
Q24A	**Divide**	29.45	334	P	P	11 52 26.5	+2.1
	baz=147,SNR=10						
MVCO	**Mesa Verde**	29.66	327	P	P	11 52 27.9	+1.7
	baz=139,SNR=15						
MVCO	**Mesa Verde**	29.66	327	P	P	11 52 28.2	+2.0
JFWS	**Jewell Farm**	29.71	358	P	P	11 52 28.2	+2.0
	baz=178						
ERPA	**Erie**	29.94	14	P	P	11 52 29.9	+1.6
	baz=198						
N59A	**State Game Lan**	30.02	20	P	P	11 52 29.9	+0.8
	baz=206,SNR=10						
WUAZ	**Wupatki**	30.08	322	P	P	11 52 32.3	+2.4
	baz=132,SNR=10						
BRNJ	**Basking Ridge**	30.24	22	P	P	11 52 32.2	+1.3
ISCO	**Idaho Springs**	30.35	334	P	P	11 52 33.7	+1.4
ISCO				pmax	pmax		
	comp=Z,34nm,1.2s						
ISCO	**Idaho Springs**	30.35	334	P	P	11 52 34.3	+2.0
	baz=147,SNR=25						
ISCO	**Idaho Springs**	30.35	334	P	P	11 52 33.7	+1.4
K31A	**O'Neill**	30.59	346	P	P	11 52 35.5	+1.4
K31A				IAmb	IAmb	11 52 38.5	
	comp=Z,115nm,1.0s						
I40A	**Norwalk**	30.70	358	P	P	11 52 35.8	+0.8
PAL	**Palisades**	30.76	23	P	P	11 52 37.7	+2.2
	baz=210						
GLA	**Glamis**	30.81	314	P	P	11 52 38.7	+2.5
	baz=124,SNR=8.1						
PDMCI	**Parker Dam,Lak**	31.07	317	P	P	11 52 41.5	+3.2
	baz=127,SNR=8.2						
BINY	**Binghamton**	31.11	19	P	P	11 52 39.9	+1.3
	baz=205,SNR=5.7						
ECSD	**EROS Data Cent**	31.21	349	P	P	11 52 39.7	+0.2
	baz=166,SNR=20						
W13A	**Hualapai Mount**	31.38	318	P	P	11 52 43.1	+1.7
N23A	**Red Feather La**	31.40	335	P	P	11 52 43.5	+1.9
	baz=147,SNR=14						
L59A	**Walton**	31.40	20	P	P	11 52 42.9	+1.6
SWSC	**Sam W. Stewart**	31.43	313	P	P	11 52 43.6	+2.0
	baz=123						
RMX	**La Rumorosa**	31.45	313	P	P	11 52 43.0	+1.1
IKP	**In-Ko-Pah, Jac**	31.50	313	P	P	11 52 45.1	+2.8
	baz=122,SNR=5.2						
BC3	**Big Chuckawall**	31.58	315	P	P	11 52 45.6	+2.5
	baz=124,SNR=12						
IRM	**Iron Mountain**	31.65	316	P	P	11 52 46.4	+2.9
	baz=125						
CBX	**Cerro Bola**	31.72	312	P	P	11 52 45.1	+0.8
O20A	**White River Ci**	31.79	331	P	P	11 52 47.3	+2.3
	baz=143,SNR=37						
O20A	**White River Ci**	31.79	331	P	P	11 52 47.3	+2.3
O20A				IAmb	IAmb	11 52 48.3	
	comp=Z,94nm,1.3s						
MONP2	**Monument Peak**	31.85	313	P	P	11 52 47.6	+2.1
	baz=122						
PTGA	**Pitinga**	31.91	113	P	P	11 52 44.2	-1.8
	comp=Z,13nm,0.7s,baz=298,slow=12,SNR=18						
PTGA				PcP	PcP	11 55 35.8	+0.5
	comp=Z,9.6nm,0.9s,baz=284,slow=2.9,SNR=4.5						
PTGA				ScP	ScP	11 59 15.6	+2.5
	comp=Z,5.9nm,0.7s,baz=234,slow=2.5,SNR=9.8						
PKCU	**Pink Cliffs**	31.94	323	P	P	11 52 49.0	+2.6
UCCT	**U. Connecticut**	32.09	24	P	P	11 52 48.2	+1.0
ETMB	**Extrema**	32.11	134	*e*P	P	11 52 48.0	+0.3
ETMB	**Extrema**	32.11	134	P	P	11 52 48.3	+0.6
ETMB				IAmb	IAmb	11 52 49.1	
	comp=Z,83nm,0.8s						
BELC	**Belle Mtn. Jos**	32.15	315	P	P	11 52 50.5	+2.4
	baz=124						
SPMN	**Marine on St.**	32.17	355	P	P	11 52 47.7	-0.1
	baz=173,SNR=43						
TPFO	**Pinon Flats**	32.25	314	P	P	11 52 51.9	+2.9
	baz=123						
PFO	**Pinyon Flats O**	32.26	314	*ce*P	P	11 52 52.7	+3.7
PFO	**Pinyon Flats O**	32.26	314	P	P	11 52 51.4	+2.4
	baz=123						
109C	**Camp Elliot, M**	32.34	312	P	P	11 52 51.6	+2.1
	baz=121						
GMRC	**Granite Mounta**	32.36	316	P	P	11 52 52.3	+2.4
	baz=125						
SUSD	**Miller**	32.36	347	P	P	11 52 50.9	+1.3
	baz=162,SNR=15						
P18A	**Preston Nutter**	32.38	328	P	P	11 52 52.1	+1.9
MACA	**Manacapuru-AM**	32.43	118	*e*P	P	11 52 48.8	-1.7
L61B	**Northampton**	32.47	23	P	P	11 52 50.7	+0.2
	baz=210						
TMUT	**Trail Mountain**	32.64	327	P	P	11 52 54.4	+1.9
RDMU	**Red Mountain**	32.77	330	P	P	11 52 54.7	+1.2
RDMU				IAmb	IAmb	11 52 57.0	
	comp=Z,94nm,1.7s						
MURC	**Murrieta**	32.77	313	P	P	11 52 55.7	+2.3
	baz=122						
BBRC	**Big Bear Solar**	32.93	314	P	P	11 52 58.5	+3.5
	baz=123						
K22A	**Casper**	33.11	336	P	P	11 52 57.7	+1.3
	baz=148,SNR=27						
K22A	**Casper**	33.11	336	P	P	11 52 57.5	+1.1
K22A				IAmb	IAmb	11 52 59.8	
	comp=Z,107nm,1.4s						
MPU	**Maple Canyon**	33.38	328	P	P	11 53 00.5	+1.6
BFSC	**Mount Baldy Ra**	33.44	314	P	P	11 53 01.4	+2.1
	baz=122						
RSSD	**Black Hills**	33.48	340	P	P	11 53 01.4	+1.7
	baz=153						
PSUT	**Pine Spring**	33.57	323	P	P	11 53 02.4	+1.9
LONY	**Lake Ozonia**	33.73	19	P	P	11 53 01.8	+0.3
	baz=206						
SAML	**Samuel**	33.73	129	P	P	11 53 01.1	-0.8
SAML				pmax	pmax		
	comp=Z,3µm,1.1s						
SAML	**Samuel**	33.73	129	P	P	11 53 01.1	-0.8
PASC	**Pasadena Art C**	33.77	313	P	P	11 53 04.3	+2.3
PASC				IAmb	IAmb	11 53 21.2	
	comp=Z,87nm,1.8s						
GWY	**Greenwater Val**	33.84	318	P	P	11 53 04.7	+1.8
DECC	**Green Verdugo**	33.92	313	P	P	11 53 06.3	+3.0
	baz=121						
CTU	**Camp Tracy**	33.94	328	P	P	11 53 05.3	+1.7
CTU				IAmb	IAmb	11 53 06.8	
	comp=Z,76nm,1.8s						
EDW2	**Edwards Air Fo**	34.01	315	P	P	11 53 06.8	+2.7
	baz=122						
FURC	**Furnace Creek,**	34.13	318	P	P	11 53 07.7	+2.6
	baz=126						
DUG	**Dugway, Tooele**	34.14	327	P	P	11 53 09.0	+3.7
	baz=136,SNR=7.0						
MPMC	**Manual Prospec**	34.31	317	P	P	11 53 08.9	+2.0
	baz=125						
R11A	**Troy Canyon, C**	34.48	322	P	P	11 53 10.4	+2.0
	baz=130,SNR=5.3						
PD31	**Pinedale Array**	34.48	333	P	P	11 53 09.1	+0.8
PDAR	**Pinedale Array**	34.48	333	P	P	11 53 08.9	+0.5
	comp=Z,3.4nm,0.6s,baz=131,slow=6.2,SNR=29						
PDAR				PcP	PcP	11 55 42.1	-0.2
	comp=Z,4.4nm,0.6s,baz=154,slow=4.6,SNR=9.3						
PDAR				ScP	ScP	11 59 21.8	-0.1
	comp=Z,7.0nm,1.0s,baz=154,slow=4.8,SNR=13						
PDAR				PKiKP	PKiKP	12 03 04.5	-0.9
	comp=Z,0.4nm,0.5s,baz=106,slow=3.2,SNR=4.0						
PDAR				LR	LR	12 10 02.7	
	comp=Z,825nm,21.1s,baz=150,slow=41						
PDAR	**Pinedale Array**	34.48	333	P	P	11 53 09.6	+1.2
BW06	**Boulder Array**	34.48	333	P	P	11 53 09.1	+0.7
	baz=143,SNR=11						
BW06	**Boulder Array**	34.48	333	P	P	11 53 09.3	+0.9
D32A	**Dogwood Acres,**	34.58	350	P	P	11 53 08.8	0.0
D32A				IAmb	IAmb	11 53 11.2	
	comp=Z,60nm,1.0s						
ARVC	**Arvin**	34.72	314	P	P	11 53 13.3	+3.0
	baz=122						
ISA	**Isabella, Lake**	34.76	315	P	P	11 53 14.3	+3.6
	baz=123						
EYMN	**Ely**	34.79	357	P	P	11 53 09.6	-1.0
	baz=176,SNR=11						
AHID	**Auburn Hatcher**	35.19	331	P	P	11 53 15.4	+1.0
AHID				IAmb	IAmb	11 53 17.8	
	comp=Z,40nm,1.1s						
HVU	**Hansel Valley**	35.27	329	P	P	11 53 17.4	+2.4
HVU				pmax	pmax		
	comp=Z,35nm,1.2s						
HVU	**Hansel Valley**	35.27	329	P	P	11 53 17.4	+2.4
HVU				IAmb	IAmb	11 53 33.6	
	comp=Z,35nm,1.2s						
VES	**Vestal, Richgr**	35.28	315	P	P	11 53 18.6	+3.6
	baz=122,SNR=6.8						
PKM	**Mcpherson Peak**	35.29	313	P	P	11 53 18.2	+2.8
	baz=120						
AGMN	**Agassiz Nation**	35.54	352	P	P	11 53 16.9	-0.1
	baz=168						
MDND	**Maddock**	35.74	348	P	P	11 53 19.3	+0.5
	baz=162,SNR=26						
MDND	**Maddock**	35.74	348	P	P	11 53 19.3	+0.5
LPAZ	**La Paz**	35.77	144	P	P	11 53 20.8	+0.7
	comp=Z,29nm,0.7s,baz=334,slow=6.9,SNR=130						
LPAZ				ScP	ScP	11 59 29.6	+2.3
	comp=Z,3.2nm,0.8s,baz=12,slow=9.0,SNR=4.5						
LPAZ				LR	LR	12 09 07.9	
	comp=Z,652nm,21.7s,baz=312,slow=38						
LPAZ	**La Paz**	35.77	144	*e*P	P	11 53 20.6	+0.6
FLWY	**Flagg Ranch**	36.03	333	P	P	11 53 23.3	+1.6
FLWY				IAmb	IAmb	11 53 31.9	
	comp=Z,58nm,1.4s						
PKME	**Peaks-Kenny Pk**	36.16	24	P	P	11 53 22.3	-0.1
	baz=214						
NVAR	**Mina Array Bea**	36.21	319	PcP	PcP	11 55 49.6	+2.2
	comp=Z,6.5nm,0.6s,baz=133,slow=3.8,SNR=7.6						
NVAR				ScP	ScP	11 59 30.5	+2.3
	comp=Z,7.7nm,0.8s,baz=130,slow=4.2,SNR=20						
H17A	**Grant Village**	36.23	334	P	P	11 53 25.8	+2.5
	baz=143						
RLMT	**Red Lodge**	36.27	336	P	P	11 53 24.9	+1.2
	baz=145						
LAO	**LASA Array**	36.47	340	P	P	11 53 26.5	+1.3
	baz=151,SNR=24						
YMR	**Madison River**	36.61	333	P	P	11 53 28.5	+1.9
YMR				IAmb	IAmb	11 53 30.7	
	comp=Z,60nm,1.2s						
YHH	**Holmes Hill**	36.66	334	P	P	11 53 28.9	+1.8
PB16	**IPOC Station P**	36.69	148	P	P	11 53 29.3	+1.4
PB16				IAmb	IAmb	11 53 30.7	
	comp=Z,44nm,0.8s						
MDP	**Montagnes des**	36.73	99	P	P	11 53 25.3	-2.5
	comp=Z,12nm,1.0s,baz=272,slow=6.9,SNR=2.6						
MDP				ScP	ScP	11 59 30.6	+0.2
	comp=Z,23nm,0.9s,baz=42,slow=4.4,SNR=4.7						
BMN	**Battle Mountai**	36.78	323	P	P	11 53 29.9	+1.9
BMN				pmax	pmax		
	comp=Z,44nm,1.6s						
BMN	**Battle Mountai**	36.78	323	P	P	11 53 29.9	+1.9
BMN				IAmb	IAmb	11 53 54.8	
	comp=Z,44nm,1.6s						
YHL	**Hebgen Lake**	36.85	333	P	P	11 53 30.6	+1.8
HLID	**Hailey**	37.39	329	P	P	11 53 34.5	+1.3
	baz=137,SNR=15						
HLID	**Hailey**	37.39	329	P	P	11 53 34.2	+1.1
DGMT	**Dagmar**	37.44	343	P	P	11 53 35.5	+2.2
	baz=155,SNR=6.6						
BCYI	**Bear Canyon**	37.45	331	P	P	11 53 35.6	+1.9
ULM	**Lac du Bonnet**	37.46	353	P	P	11 53 32.2	-1.1
	comp=Z,51nm,1.1s,baz=176,slow=8.3,SNR=17						
ULM				PcP	PcP	11 55 50.4	-0.3
	comp=Z,4.1nm,0.6s,baz=198,slow=3.2,SNR=1.8						
ULM				ScP	ScP	11 59 31.1	-1.2
	comp=Z,14nm,1.0s,baz=167,slow=6.6,SNR=4.5						
ULM				LR	LR	12 10 48.6	
	comp=Z,3µm,21.6s,baz=168,slow=39						
MALB	**Monte Alegre**	37.53	111	*e*P	P	11 53 31.4	-3.1
BOZ	**Bozeman (W)**	37.64	334	P	P	11 53 36.7	+1.5
BOZ				pmax	pmax		
	comp=Z,51nm,1.3s						
BOZ	**Bozeman (W)**	37.64	334	P	P	11 53 36.7	+1.5
	baz=142,SNR=24						
BOZ	**Bozeman (W)**	37.64	334	P	P	11 53 36.7	+1.5
BOZ				IAmb	IAmb	11 53 53.9	
	comp=Z,51nm,1.3s						
VILB	**Vilhena**	38.55	131	*e*P	P	11 53 42.4	-0.6
VILB	**Vilhena**	38.55	131	P	P	11 53 42.7	-0.3
EGMT	**Eagleton**	38.86	338	P	P	11 53 46.6	+1.3
	baz=147,SNR=41						
EGMT	**Eagleton**	38.86	338	P	P	11 53 46.6	+1.3
PB01	**IPOC Station P**	38.98	150	P	P	11 53 47.5	+0.8
MCPB	**Macapa, AP**	38.99	107	*e*P	P	11 53 45.8	-1.0
PB07	**IPOC Station P**	39.38	151	P	P	11 53 51.1	+1.0
PB07				IAmb	IAmb	11 53 52.1	
	comp=Z,30nm,0.8s						
O03E	**Paynes Creek**	39.50	319	P	P	11 53 51.5	+0.7
	baz=124						
MOD	**Modoc Plateau**	39.52	322	P	P	11 53 51.8	+0.8
MSO	**Missoula**	39.60	333	P	P	11 53 52.3	+0.8
	baz=140,SNR=17						
MSO	**Missoula**	39.60	333	P	P	11 53 52.6	+1.1
MSO				IAmb	IAmb	11 54 09.6	
	comp=Z,80nm,1.4s						
PB09	**IPOC Station P**	39.74	151	P	P	11 53 54.3	+1.2
PB09				IAmb	IAmb	11 53 56.1	
	comp=Z,72nm,1.0s						
SIV	**San Ignacio**	39.99	135	P	P	11 53 55.2	+0.2
	comp=Z,33nm,0.5s,baz=310,slow=7.8,SNR=74						
SIV				PcP	PcP	11 55 59.0	-0.2
	comp=Z,12nm,0.6s,baz=304,slow=5.3,SNR=3.5						
SIV				ScP	ScP	11 59 42.9	+0.3
	comp=Z,1.5nm,0.7s,baz=0.3,slow=8.1,SNR=1.9						
PDRB	**Porto dos Gac**	40.35	126	*e*P	P	11 53 55.7	-2.4
M04C	**Macdoel**	40.37	321	P	P	11 53 58.7	+0.6
	baz=126						
LVC	**Limon Verde**	40.60	151	P	P	11 54 00.8	+0.5
	comp=Z,28nm,0.8s,baz=309,slow=6.4,SNR=15						
LVC	**Limon Verde**	40.60	151	P	P	11 54 01.6	+1.3
LVC				pmax	pmax		
	comp=Z,31nm,0.8s						
LVC	**Limon Verde**	40.60	151	*e*P	P	11 54 00.2	-0.1
LVC	**Limon Verde**	40.60	151	P	P	11 54 01.6	+1.3
LVC				IAmb	IAmb	11 54 03.3	
	comp=Z,31nm,0.8s						
CLDB	**Colider**	40.67	124	*e*P	P	11 53 58.4	-2.2
L04D	**Klamath Falls**	40.91	321	P	P	11 54 02.8	+0.3
	baz=125						
PTLB	**Pontes e Lacer**	40.97	133	*e*P	P	11 54 03.5	+0.4
PTLB	**Pontes e Lacer**	40.97	133	P	P	11 54 02.7	-0.4
I05D	**Terrebonne, OR**	41.61	325	P	P	11 54 11.0	+2.9
	baz=128						
I04A	**Tendick Farm,**	41.89	323	P	P	11 54 13.0	+2.6
	baz=127						
K02D	**Willamette Mer**	42.01	321	P	P	11 54 14.5	+3.1
	baz=124						
NEW	**Newport**	42.11	332	P	P	11 54 13.2	+1.1
	baz=137						
D08A	**Wollman Farm,**	42.11	329	P	P	11 54 13.0	+0.9
G05D	**Wamic, OR**	42.16	326	P	P	11 54 14.8	+2.2
	baz=129						
HOOD	**Mount Hood Mea**	42.40	326	P	P	11 54 16.3	+1.7
HOOD				IAmb	IAmb	11 54 20.3	
	comp=Z,64nm,1.0s						
H04D	**Lebanon**	42.52	324	P	P	11 54 18.7	+3.3
	baz=127						
F05D	**White Salmon**	42.65	326	P	P	11 54 18.5	+2.0
	baz=130						
HJA	**Humahuaca**	42.85	147	*i*P	P	11 54 20.6	+1.8
G03D	**McMinnville, O**	43.23	324	P	P	11 54 24.6	+3.4
	baz=127						
PRPB	**Parauapebas**	43.38	114	*e*P	P	11 54 20.9	-1.9
TMAB	**Tom-Au,PA,Br**	43.41	108	*e*P	P	11 54 22.6	-0.5
SALV	**Santo Antonio**	43.77	130	*e*P	P	11 54 25.2	-0.6
AZAP	**Zapla**	43.86	148	*i*P	P	11 54 27.9	+1.1
ASTB	**Santa Barbara**	43.96	147	*i*P	P	11 54 28.8	+1.3
AC02	**Maricunga**	44.16	154	P	P	11 54 30.8	+1.5
AC02				IAmb	IAmb	11 54 32.5	
	comp=Z,70nm,1.2s						
GO03	**Copiap**	44.37	156	P	P	11 54 31.5	+1.0
B05A	**Bryant**	44.51	329	P	P	11 54 31.3	-0.1
	baz=131						
D03D	**Eldon**	44.56	327	P	P	11 54 31.7	0.0
	baz=129						
RPN	**Rapa Nui**	44.61	206	P	P	11 54 34.5	+2.2
	comp=Z,58nm,0.6s,baz=344,slow=7.4,SNR=3.2						
RPN	**Rapa Nui**	44.61	206	IAmb	IAmb	11 54 35.6	
	comp=Z,267nm,1.2s						
SNDB	**Serra Nova Dou**	44.95	122	*e*P	P	11 54 33.2	-2.1
FSA	**Cafayete**	44.97	150	*i*P	P	11 54 36.8	+1.3
SCHQ	**Schefferville**	45.10	18	P	P	11 54 34.8	-1.1
	comp=Z,18nm,0.5s,baz=221,slow=6.3,SNR=39						
SCHQ				PcP	PcP	11 56 14.8	-0.8
	comp=Z,7.4nm,0.6s,baz=230,slow=7.4,SNR=1.5						
SCHQ				LR	LR	12 15 11.2	
	comp=Z,1µm,19.5s,baz=218,slow=38						
PP1B	**Ponte de Pedra**	45.45	131	*e*P	P	11 54 39.3	0.0
LCO	**Las Campanas**	45.46	157	P	P	11 54 40.7	+1.3
LCO				pmax	pmax		
	comp=Z,41nm,0.9s						
LCO	**Las Campanas**	45.46	157	P	P	11 54 40.7	+1.3
LCO				IAmb	IAmb	11 54 41.1	
	comp=Z,40nm,0.9s						
AHML	**Horco Molle**	45.84	150	*i*P	P	11 54 43.4	+1.1
VCA	**Vinchina**	46.21	154	*i*P	P	11 54 47.4	+2.2
GO04	**Tololo Observa**	46.47	158	P	P	11 54 47.4	+0.1
GO04				IAmb	IAmb	11 55 07.2	
	comp=Z,69nm,1.1s						
SMTB	**Santa Maria do**	46.56	116	*e*P	P	11 54 47.9	-0.1
ARAG	**Araguaiana, MT**	46.62	127	*e*P	P	11 54 46.5	-1.9
AQDB	**Aquidauana**	46.76	135	*e*P	P	11 54 49.4	-0.1
AROD	**Rodeo**	46.96	157	*i*P	P	11 54 53.7	+2.4
CYA	**Choya**	47.02	152	*i*P	P	11 54 52.5	+1.1
H03N2	**Juan Fernandez**	47.28	169	T	T	12 45 11.9	
	baz=347,slow=76,SNR=71						
H03N1	**Juan Fernandez**	47.28	169	T	T	12 45 11.0	
	baz=347,slow=76,SNR=107						
H03N3	**Juan Fernandez**	47.30	169	T	T	12 45 10.1	
	baz=347,slow=76,SNR=80						
ACLC	**CERRO LA CRUZ**	47.34	154	*i*P	P	11 54 55.3	+1.2
ACCO	**Cerro Coronel**	47.50	156	*i*P	P	11 54 57.2	+1.8
PEXB	**Peixe**	47.51	120	*e*P	P	11 54 54.4	-1.0
AVFE	**Valle Fertil**	48.20	155	*i*P	P	11 55 01.5	+0.9
APLL	**PUNTA DE LOS L**	48.37	154	*i*P	P	11 55 02.8	+1.0
RTLS	**Leoncito**	48.49	157	*i*P	P	11 55 05.0	+1.9
ZON	**Zonda**	48.50	157	P	P	11 55 03.9	+1.1
ZON				pmax	pmax		
	comp=Z,54nm,1.0s						
ZON	**Zonda**	48.50	157	P	P	11 55 03.9	+1.1
ZON				IAmb	IAmb	11 55 05.4	
	comp=Z,54nm,1.0s						
VA01	**Torpederas**	48.78	161	P	P	11 55 05.7	+0.8
AUSP	**Uspallata**	48.84	158	*i*P	P	11 55 07.9	+2.2
VA03	**San Esteban**	48.91	159	P	P	11 55 06.8	+0.7
ROC1	**El Roble**	48.95	160	*i*P	P	11 55 07.0	+0.5
ASAL	**Salagasta**	49.37	157	*i*P	P	11 55 11.3	+1.8
BDFB	**Brasilia**	49.60	124	P	P	11 55 10.1	-1.5
	comp=Z,15nm,0.5s,baz=300,slow=9.2,SNR=22						
BDFB				LR	LR	12 18 43.4	
	comp=Z,746nm,19.5s,baz=309,slow=39						
BDFB	**Brasilia**	49.60	124	P	P	11 55 10.5	-1.1
BDFB				pmax	pmax		
	comp=Z,91nm,1.4s						
BDFB	**Brasilia**	49.60	124	P	P	11 55 10.5	-1.1
BDFB				IAmb	IAmb	11 55 12.1	
	comp=Z,91nm,1.4s						
MT01	**Popeta**	49.68	161	P	P	11 55 11.8	0.0
MT01				IAmb	IAmb	11 55 13.0	
	comp=Z,33nm,0.7s						
AAGR	**Agrelo**	49.81	158	*i*P	P	11 55 14.7	+1.8
CPUP	**Villa Florida**	49.86	142	P	P	11 55 12.6	-0.6
	comp=Z,9.4nm,0.8s,baz=334,slow=9.3,SNR=10						
CPUP				LR	LR	12 18 02.9	
	comp=Z,563nm,21.5s,baz=336,slow=38						
TCA	**Tanti**	50.02	153	*i*P	P	11 55 15.1	+0.6
ITRB	**Iturama**	50.10	130	*e*P	P	11 55 14.6	-0.7
BO01	**Tunca**	50.22	161	P	P	11 55 16.3	+0.5
AVIZ	**Vizcacheras**	50.28	158	*i*P	P	11 55 18.4	+2.0
NBPS	**Pedro II - PI**	50.32	107	*e*P	P	11 55 15.7	-1.5
TRCB	**Terra Rica**	50.42	135	*e*P	P	11 55 16.4	-1.3
GO05	**Huala**	50.53	162	P	P	11 55 18.3	+0.2
SDBA	**SAO DESIDERIO**	50.55	118	*e*P	P	11 55 18.5	-0.2
PCMB	**Pacaembu**	50.62	133	*e*P	P	11 55 18.2	-1.0
BO02	**Sierra Bellavi**	50.69	161	P	P	11 55 19.8	+0.4
BO02				IAmb	IAmb	11 55 20.9	
	comp=Z,37nm,0.8s						
IPMB	**Ipameri, GO**	50.74	127	*e*P	P	11 55 18.9	-1.2
NBMO	**Morrinhos-CE**	51.27	105	*e*P	P	11 55 23.8	-0.3
ML02	**Panimavida**	51.38	162	P	P	11 55 24.8	+0.2
PTGB	**Pitanga**	52.09	136	*e*P	P	11 55 29.7	-0.4
BB19B	**Bebedouro**	52.29	130	*e*P	P	11 55 31.0	-0.7
JANB	**Januaria**	52.34	121	*e*P	P	11 55 31.2	-1.0
YKA	**Yellowknife Ar**	52.58	345	P	P	11 55 33.1	0.0
	comp=Z,33nm,0.7s,baz=136,slow=7.5,SNR=79						
YKA				ScP	ScP	12 00 33.9	-0.3
	comp=Z,2.3nm,0.9s,baz=134,slow=5.0,SNR=6.0						
YKA				LR	LR	12 20 39.3	
	comp=Z,2µm,21.5s,baz=0.0,slow=39						
ITQB	**Itaqui**	52.77	144	*e*P	P	11 55 35.0	0.0
ITQB	**Itaqui**	52.77	144	P	P	11 55 34.8	-0.2
FRTB	**Fartura**	52.93	133	*e*P	P	11 55 36.2	-0.1
NBCL	**Cascavel-CE**	53.22	105	*e*P	P	11 55 36.9	-1.6
MC01	**Montes Claros**	53.48	122	*e*P	P	11 55 39.5	-1.1
RCLB	**Rio Claro- Sao**	53.84	131	*e*P	P	11 55 43.0	0.0
NBMA	**Muriti-CE**	53.89	109	*e*P	P	11 55 41.4	-2.1
LC01	**Cunco**	54.16	164	P	P	11 55 45.3	+0.3
DIAM	**Diamantina, MG**	54.52	124	*e*P	P	11 55 47.2	-1.0
VAO	**Valinhos**	54.61	131	*e*P	P	11 55 48.3	-0.4
BSCB	**Bom Sucesso**	55.11	127	*e*P	P	11 55 51.6	-0.7
PET01	**Itanhaem-SP**	55.16	132	*e*P	P	11 55 51.9	-0.6
CPSB	**Cacapava Do Su**	55.17	142	*e*P	P	11 55 52.4	-0.1
TAOE	**Nuku Hiva Isla**	55.29	249	*e*S	S	12 03 32.6	-0.6
	comp=Z,466nm,27.8s						
TAOE				*e*LR	LR	12 11 47.4	
	comp=Z,4µm,27.3s,baz=63						
TAOE	**Nuku Hiva Isla**	55.29	249	*e*T	T	12 55 04.0	
	comp=Z,63nm,0.3s						
NBLV	**Livramento - P**	55.58	108	*e*P	P	11 55 54.7	-1.1
WRGLY	**Wrigley**	55.61	342	P	P	11 55 55.3	+0.1
	baz=138,SNR=11						
PARB	**Paraibuna**	55.80	130	*e*P	P	11 55 56.7	-0.5
CNLB	**Canela**	55.99	139	*e*P	P	11 55 57.2	-1.2
TGTN	**Hyland Airport**	55.99	339	P	P	11 55 59.2	+1.2

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       baz=132,SNR=5.9
PLTB   Pedras Altas      56.06 144  eP       P          11 55 58.7  -0.1
NBLA   Lagarto - SE      56.18 113  eP       P          11 55 59.0  -1.0
PLCA   Paso Flores       56.24 163   P       P          11 56 00.8  +0.7
       comp=Z,23nm,0.7s,baz=335,slow=8.2,SNR=87
PLCA                                 LR      LR         12 14 33.6
       comp=Z,491nm,21.3s,baz=348,slow=30
PLCA   Paso Flores       56.24 163  eP       P          11 56 00.5  +0.5
PLCA   Paso Flores       56.24 163   P       P          11 56 00.3  +0.3
PLCA                                 IAmb    IAmb       11 56 01.3
       comp=Z,31nm,0.8s
NBIT   Itapeh - BA       56.42 118  eP       P          11 55 59.8  -1.9
CMC01  Camacan, BA       56.54 118  eP       P          11 56 02.1  -0.4
TER01  Tubaro-SC         56.58 137  eP       P          11 56 02.5  -0.1
NBPV   Pedro Velho       56.77 107  eP       P          11 56 03.2  -1.0
MAN01  Angra dos Reis    56.78 129  eP       P          11 56 03.9  -0.2
VAS01  Vassouras-RJ      56.85 128  eP       P          11 56 04.3  -0.4
TRQA   Tornquist         56.86 155   P       P          11 56 04.3  -0.1
TRQA                                 pmax    pmax
       comp=Z,71nm,1.4s
TRQA   Tornquist         56.86 155   P       P          11 56 04.3  -0.1
TRQA                                 IAmb    IAmb       11 56 05.7
       comp=Z,71nm,1.4s
NBAN   Anadia - AL       57.03 111  eP       P          11 56 04.5  -1.6
BSFB   Barra de Sao F    57.09 123  eP       P          11 56 05.0  -1.4
DUB01  Friburgo-RJ       57.57 127  eP       P          11 56 10.6  +0.8
RIB01  Linhares ES       57.70 123  eP       P          11 56 09.0  -1.7
NBRF   Rio Formoso -     57.72 109  eP       P          11 56 08.6  -2.3
CAM01  Campos-RJ         57.99 126  eP       P          11 56 12.4  -0.2
ALF01  Guarapari-ES      58.10 125  eP       P          11 56 12.4  -1.0
N31M   Braeburn, Yuko    58.80 336   P       P          11 56 18.3  +0.5
       baz=124
M30M   Minto, Yukon      59.81 337   P       P          11 56 26.1  +1.3
       baz=123
COYC   Coyhaique         60.38 166   P       P          11 56 29.2  +0.5
DY2G   Dye2              60.41  18 i P       P          11 56 23.8  -5.2
DY2G                                 IAmb    IAmb       11 56 29.4
       comp=Z,8.3nm,0.5s
M27K   Edge Creek, AK    61.73 335   P       P          11 56 38.3  +0.5
       baz=118
I29M   Ogilvie Camp,     61.90 339   P       P          11 56 38.5  -0.3
       baz=123,SNR=5.9
L27K   Beaver Creek,     62.04 336   P       P          11 56 39.9   0.0
       baz=118
INK    Inuvik            62.12 343   P       P          11 56 40.0  -0.2
       baz=129,SNR=28
N25K   Chitina, Valde    62.54 334   P       P          11 56 45.2  +2.0
       baz=115
A36M   Sachs Harbour     62.70 348   P       P          11 56 43.1  -0.8
       baz=140,SNR=26
ANGG   Ammassalik, Gr    62.76  21 i P       P          11 56 42.6  -1.9
ANGG                                 IAmb    IAmb       11 57 02.9
       comp=Z,27nm,0.7s
KLU    Klutina           63.07 333   P       P          11 56 47.7  +1.0
       baz=114
SCRK   Sand Creek        63.33 336   P       P          11 56 48.8  +0.4
       baz=117,SNR=6.4
J26L   Joseph Creek      63.40 337   P       P          11 56 49.3  +0.4
       baz=117,SNR=6.8
PAX    Paxson            63.49 335   P       P          11 56 50.8  +1.2
       baz=115
ICESG  Greenland Ices    64.00  18 i P       P          11 56 49.9  -3.2
ICESG                                IAmb    IAmb       11 57 12.2
       comp=Z,26nm,0.9s
J25K   Salcha River,     64.15 336   P       P          11 56 54.1  +0.2
       baz=116
PMR    Palmer            64.53 333   P       P          11 56 57.4  +1.2
       baz=111
PMOR   Pomariorio Ree    64.64 246  eT       T          13 06 43.7
       comp=Z,12nm,0.2s
HDA    Harding Lake      64.68 336   P       P          11 56 57.0  -0.2
       baz=114,SNR=7.4
IL31                     64.81 336   P       P          11 56 57.6  -0.3
IL31                                 IAmb    IAmb       11 56 59.5
       comp=Z,42nm,1.5s
ILAR   Eielson Array     64.81 336   P       P          11 56 57.1  -0.9
       comp=Z,3.2nm,0.4s,baz=126,slow=5.3,SNR=50
ILAR   Eielson Array     64.81 336   P       P          11 56 57.8  -0.2
ILAR   Eielson Array     64.81 336   P       P          11 56 57.8  -0.2
BMAR   Burnt Mountain    65.13 339   P       P          11 57 00.7  +0.6
POKR   Poker Plat Res    65.16 337   P       P          11 57 00.0  -0.3
       baz=114
MCK    McKinley          65.22 335   P       P          11 57 00.8   0.0
       baz=112
COLA   College           65.23 336⇑ eP       P          11 57 02.5  +1.8
CUT    Chulitna          65.32 333   P       P          11 57 01.6  +0.2
       baz=110
NEA2   Nenana            65.60 336   P       P          11 57 02.8  -0.3
       baz=112
H24K   Noodor Dome       65.62 337   P       P          11 57 03.0  -0.3
       baz=114
I23K   Minto, Yukon-K    65.92 336   P       P          11 57 05.3  +0.1
       baz=112,SNR=11
BPAW   Bear Paw Mtn.     66.20 335   P       P          11 57 08.1  +1.0
       baz=110
PPLA   Purkeypile        66.32 333   P       P          11 57 08.8  +0.9
       baz=108
SUMG   Summit            66.33  15 i P       P          11 57 05.0  -3.2
MLY    Manley            66.42 336   P       P          11 57 08.4  -0.1
       baz=111
O18K   Koktuh Hills      66.86 330   P       P          11 57 12.3  +1.0
       baz=104
L20K   Farewell, AK      66.94 333   P       P          11 57 13.2  +1.5
       baz=106
COLD   Coldfoot          67.02 338   P       P          11 57 12.8  +0.6
       baz=112,SNR=7.7
PPT    Papeete           67.11 244   LR      LR         12 18 27.4
       comp=Z,1µm,20.4s,baz=66,slow=28
PPT2   Papeete2          67.12 244  eS       S          12 06 02.2  -1.1
       comp=Z,269nm,24.5s
PPT2   Papeete2          67.12 244  eLR      LR         12 17 20.7
       comp=Z,5µm,27.2s,baz=59
NEEM   North Greenlan    67.16   8 i P       P          11 57 07.3  -6.0
K20K   Telida            67.27 334   P       P          11 57 14.6  +0.8
       baz=107
TOLK   Toolik Lake Re    67.35 340   P       P          11 57 14.5  +0.2
       baz=113,SNR=9.2
H21K   Melozitna Rive    67.45 336   P       P          11 57 13.5  -1.4
       baz=109
J20K   Nowinta River     67.54 335   P       P          11 57 16.1  +0.6
       baz=107
PMOZ   Porto Moniz, M    67.80  60  eLR      LR         12 18 22.2
       comp=Z,977nm,22.0s
TTA    Tatalina          68.00 333   P       P          11 57 17.7  -0.8
       baz=105
EFI    East Falkland     69.88 160⇓ eP       P          11 57 31.9  +1.8
EFI                                  pmax    pmax
       comp=Z,74nm,2.4s
USHA   Ushuaia           69.89 168   P       P          11 57 30.4  +0.3
       comp=Z,17nm,0.8s,baz=2.0,slow=3.1,SNR=12
PCAS   Casmilo, Conde    74.46  52  eP       P          11 57 56.9  -1.0
       comp=Z,76nm,2.0s
PCAS                                epP      pP         11 58 16.3  +0.4
PGAV   Gavieira, Arco    74.50  50  eLR      LR         12 21 20.5
       comp=Z,1µm,22.0s
MESJ   Messejana         74.85  54  epP      pP         11 58 18.7  +0.5
PVIS   Viseu             74.87  51  eP       P          11 57 59.4  -0.9
       comp=Z,39nm,1.7s
PVIS                                epP      pP         11 58 18.6  +0.3
POLO   Lamas de Olo      74.90  50  eP       P          11 58 00.1  -0.4
       comp=Z,20nm,1.5s
PBDV   Barranco-do-Ve    75.13  55  eP       P          11 57 59.8  -2.1
       comp=Z,69nm,1.4s
PBDV                                epP      pP         11 58 20.5  +0.6
MTE    Manteigas         75.16  51  epP      pP         11 58 20.3  +0.2
MTE                                  A       A          11 58 21.2
       comp=Z,4.9nm,0.5s
MTE    Manteigas         75.16  51  eLR      LR         12 21 27.0
       comp=Z,1µm,20.0s
PCBR   Castelo Branco    75.26  52  eP       P          11 58 02.0  -0.5
PVAQ   Vaqueiros         75.29  54  eLR      LR         12 21 34.2
       comp=Z,1µm,20.0s
PMRV   Marv??o           75.36  52  eLR      LR         12 21 41.0
       comp=Z,1µm,22.0s
MVO    Moncorvo          75.49  51  eP       P          11 58 02.0  -1.9
       comp=Z,32nm,1.8s
MVO                                 epP      pP         11 58 21.5  -0.4
MVO    Moncorvo          75.49  51  eLR      LR         12 21 43.7
       comp=Z,795nm,22.0s
EKA    Eskdalemuir Ar    76.97  36   P       P          11 58 09.0  -2.9
       comp=Z,6.1nm,0.7s,baz=272,slow=5.3,SNR=9.0
RAR    Rarotonga         77.39 245   LR      LR         12 23 09.4
       comp=Z,688nm,19.8s,baz=51,slow=28
ESDC   Sonseca Array     77.97  52   P       P          11 58 16.4  -1.5
       comp=Z,2.4nm,0.6s,baz=281,slow=5.5,SNR=12
ESDC                                 LR      LR         12 26 27.9
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       comp=Z,1µm,21.6s,baz=275,slow=31
SPITS  Spitsbergen Ar    80.36  12   P       P          11 58 29.6  -0.5
       comp=Z,2.6nm,0.4s,baz=164,slow=1.6,SNR=10
HOPE   Hope Point        80.50 152   P       P          11 58 32.2  +1.1
HOPE                                 pmax    pmax
       comp=Z,70nm,0.8s
HOPE   Hope Point        80.50 152   P       P          11 58 32.2  +1.1
KOWA   Kowa              82.03  77   P       P          11 58 38.1  -2.1
TIC    Toumodi           82.68  85  eP       P          11 58 46.3  +2.7
LIC    Lamto             82.76  85  eP       P          11 58 47.6  +3.6
       comp=Z,24nm,0.7s
DBIC   Dimbokro          82.83  85   P       P          11 58 42.0  -2.4
       comp=Z,2.8nm,0.5s,baz=321,slow=4.0,SNR=2.9
DBIC                                 LR      LR         12 31 56.1
       comp=Z,454nm,21.9s,baz=296,slow=33
DBIC   Dimbokro          82.83  85   P       P          11 58 42.6  -1.8
DBIC                                 pmax    pmax
       comp=Z,24nm,1.5s
DBIC   Dimbokro          82.83  85   P       P          11 58 42.6  -1.8
KIC    Kosan Boka        83.01  85  eP       P          11 58 43.5  -1.8
       comp=Z,19nm,0.8s
BILL   Bilibino          83.35 339deP       P          11 58 45.5  -0.5
BILL                                e*PP     pP         11 59 02.6  -1.7
BILL                                eS       S          12 09 03.2  +1.7
BILL                                 pmax    pmax
       comp=Z,51nm,1.5s
BILL                                 MLR     MLR
       comp=Z,392nm,22.0s
NOA    NORSAR Array B    83.52  29   P       P          11 58 45.3  -1.8
       comp=Z,1.2nm,0.7s,baz=288,slow=5.0,SNR=4.7
NOA                                  LR      LR         12 31 53.5
       comp=Z,697nm,21.9s,baz=285,slow=33
HFS    Hagfors           84.95  29   P       P          11 58 51.7  -2.6
       comp=Z,3.2nm,0.7s,baz=75,slow=1.7,SNR=5.9
HFS                                  LR      LR         12 32 44.5
       comp=Z,679nm,21.1s,baz=279,slow=33
ARCES  ARCESS Array B    86.05  19   P       P          11 58 58.4  -1.2
       comp=Z,0.8nm,0.4s,baz=287,slow=3.4,SNR=12
ARCES                                LR      LR         12 37 44.5
       comp=Z,287nm,18.5s,baz=310,slow=36
ARCES  ARCESS Array B    86.05  19   P       P          11 59 00.0  +0.5
ARCES                                pmax    pmax
       comp=Z,131nm,2.0s
ARCES  ARCESS Array B    86.05  19   P       P          11 59 00.0  +0.5
DAVOX  Davos/Dischmat    86.53  43   P       P          11 59 01.1  -1.5
       comp=Z,2.6nm,0.8s,baz=312,slow=16,SNR=3.1
DAVOX                                LR      LR         12 32 26.3
       comp=Z,595nm,21.7s,baz=270,slow=32
CLL    Collm             87.23  38  eP       P          11 59 07.0  +1.3
CLL                                 epP      pP         11 59 22.0  -2.1
CLL                                 esPP                12 02 54.0
CLL                                 eS       S          12 09 33.0  -7.3
CLL                                 esS      sS         12 10 12.0  +0.4
CLL                                 ePS      PnS        12 10 47.0  -1.0
CLL                                 eSS      SS         12 15 30.0  +5.1
CLL                                 eSSS     SSS        12 19 06.0
CLL                                  LmV                12 37 00.0
       comp=Z,500nm,21.4s
CLL    Collm             87.23  38  eP       P          11 59 03.0  -2.7
CLL                                 e*PP     pP         11 59 22.0  -2.1
CLL                                 eS       S          12 09 33.0  -7.3
CLL                                  pmax    pmax
       comp=Z,28nm,1.9s
TORD   Torodi Ar. Bea    87.74  77   P       P          11 59 05.7  -3.2
       comp=Z,1.5nm,0.5s,baz=294,slow=5.1,SNR=15
TORD                                 LR      LR         12 34 12.0
       comp=Z,271nm,21.8s,baz=280,slow=33
TORD   Torodi Ar. Bea    87.74  77   P       P          11 59 08.4  -0.5
BRG    Berggiesshubel    87.93  38  eP       P          11 59 08.0  -1.0
BRG                                  Amp                11 59 10.6
       comp=Z,3.7nm,0.8s
BRG                                  Amp                12 36 14.0
       comp=E,0.4nm,20.7s
BRG                                  Amp                12 36 18.0
       comp=Z,0.4nm,18.8s
BRG                                  Amp                12 36 20.0
       comp=N,0.2nm,18.8s
KHC    Kasperske Hory    88.24  40  eP       P          11 59 10.7  +0.1
KHC    Kasperske Hory    88.24  40  eP       P          11 59 10.7  +0.1
GEC2   GERESS Array S    88.41  40   P       P          11 59 09.5  -2.0
GEC2                                 IAmb    IAmb       11 59 10.5
       comp=Z,32nm,1.9s
GERES  GERESS Array B    88.41  40   P       P          11 59 10.3  -1.2
       comp=Z,0.8nm,0.6s,baz=222,slow=1.8,SNR=6.9
GERES                                LR      LR         12 35 15.1
       comp=Z,527nm,22.0s,baz=286,slow=33
GERES  GERESS Array B    88.41  40   P       P          11 59 10.7  -0.8
GERES  GERESS Array B    88.41  40   P       P          11 59 10.7  -0.8
LATE   Laterza           89.01  46   P       P          11 59 16.0  +1.6
KEST   Kesra             89.08  54   LR      LR         12 33 09.6
       comp=Z,505nm,21.9s,baz=208,slow=32
APA    Apatity           89.55  19⇓iP       P          11 59 10.3  -6.0
APA                                  pmax    pmax
       comp=Z,10.0nm,1.1s
FINES  FINESS Array B    90.04  26   P       P          11 59 16.4  -2.3
       comp=Z,2.9nm,0.9s,baz=259,slow=2.8,SNR=1.3
FINES                                LR      LR         12 37 54.4
       comp=Z,474nm,21.7s,baz=276,slow=34
FINES  FINESS Array B    90.04  26   P       P          11 59 20.6  +1.9
FINES  FINESS Array B    90.04  26   P       P          11 59 20.6  +1.9
VRAC   Vranov            90.05  39   P       P          11 59 17.5  -1.6
       comp=Z,2.1nm,0.5s,baz=346,slow=4.2,SNR=3.4
VRAC                                 LR      LR         12 35 25.4
       comp=Z,833nm,21.7s,baz=284,slow=33
TIXI   Tiksi             91.70 349   P       P          11 59 25.6  -0.6
TIXI                                 pmax    pmax
       comp=Z,8.0nm,1.0s
TIXI   Tiksi             91.70 349   P       P          11 59 25.6  -0.6
VAE    Valguarnera       92.47  51   LR      LR         12 35 33.7
       comp=Z,1µm,20.3s,baz=321,slow=32
PET    Petropavlovsk     92.53 326  eP       P          11 59 24.9  -5.5
PET                                 e*PP     pP         11 59 41.5  -7.4
PET                                 eS       S          12 10 21.1  -8.1
PET                                 eSPP     SPP        12 11 58.6
PET                                 eSS      SS         12 16 41.6  +0.3
PET                                  pmax    pmax
       comp=Z,34nm,1.2s
KLMR   Klimovskoe        95.76  23  eP       P          11 59 43.4  -1.7
KLMR                                e                   12 03 35.8
KLMR                                 pmax    pmax
       comp=Z,25nm,1.4s
KLMR   Klimovskoe        95.76  23  eP       P          11 59 43.4  -1.7
KLMR                                 AMP                11 59 45.0
       comp=Z,25nm,1.4s
KLMR                                ePP      PP         12 03 35.9  -1.0
AKASG  Malin Array Be    96.83  34   LR      LR         12 40 02.7
       comp=Z,350nm,21.8s,baz=290,slow=33
MLR    Muntele Rosu      97.40  40   LR      LR         12 40 09.7
       comp=Z,504nm,22.0s,baz=286,slow=33
NRIK   Noril'sk          97.72   1   LR      LR         12 45 22.5
       comp=Z,1µm,21.8s,baz=3.5,slow=36
VNA3   Neumayer Olymp    98.92 161   P       Pdif       11 59 59.2  +0.2
VNA1   Neumayer--Stat    99.22 161   P       Pdif       12 00 00.5  +0.1
VNA2   Neumayer--Watz    99.57 161   P       Pdif       12 00 02.1  +0.2
       baz=289,slow=5.6
BRTR   Keskin Array B   105.17  42   PKKPbc  PKKPbc     12 16 09.4   0.0
       comp=Z,0.9nm,0.7s,baz=207,slow=2.9,SNR=4.3
DZM    Mont Dzumac      108.14 251  ePS      PS         12 14 31.4  -5.6
       comp=Z,231nm,28.2s
DZM    Mont Dzumac      108.14 251  eLR      LR         12 36 28.1
       comp=Z,1µm,26.6s
KBZ    Khabaz           108.44  35   PKKPbc  PKKPbc     12 15 58.1  -1.0
       comp=Z,1.9nm,0.8s,baz=124,slow=3.6,SNR=4.0
BVAR   Borovoye Array   111.78  13   PKKPbc  PKKPbc     12 15 45.6  -3.2
       comp=Z,1.5nm,0.9s,baz=206,slow=9.9,SNR=4.6
ZALV   Zalesovo Beam    113.00   4   PKiKP   PKiKP      12 04 54.4  -1.7
       comp=Z,1.5nm,0.4s,baz=267,slow=2.1,SNR=10
ZALV                                 PP      PP         12 05 42.6  -1.9
       comp=Z,4.0nm,1.0s,baz=348,slow=6.7,SNR=9.4
ZALV                                 PKKPbc  PKKPab     12 15 49.6  -3.6
       comp=Z,1.2nm,0.8s,baz=242,slow=2.8,SNR=3.8
KURK   Kurchatov        115.53   9⇓iPKIKP   PKPdf      12 05 01.2  +0.2
KURBB  Kurchatov Arra   115.60   9   SKP                12 08 31.7
       comp=Z,0.6nm,0.5s,baz=350,slow=1.8,SNR=4.4
KURBB                                PKKPbc  PKKPbc     12 15 31.8  -4.0
       comp=Z,0.3nm,0.4s,baz=194,slow=3.4,SNR=4.2
BOSA   Boshof           117.34 116   PKP     PKiKP      12 05 05.3  +0.1
       comp=Z,7.6nm,0.8s,baz=269,slow=1.4,SNR=11
BOSA                                 SKP                12 08 36.5
       comp=Z,7.2nm,0.8s,baz=330,slow=1.0,SNR=6.9
DGZ    Jazzator, Alta   117.38   3⇑iPKIKP   PKiKP      12 05 05.0  +0.2
ULN    Ulaanbaatar      117.63 348⇑iPKIKP   PKiKP      12 05 06.3  +0.9
SONM   Songino Array    117.79 348   PKP     PKPdf      12 05 05.4  -0.3
       comp=Z,2.6nm,0.6s,baz=338,slow=1.2,SNR=17
SONM                                 PP      PP         12 06 16.7  -1.8
       comp=Z,2.9nm,1.1s,baz=359,slow=8.9,SNR=7.6
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SONM                                 SKP                12 08 36.5
       comp=Z,1.0nm,0.6s,baz=5.7,slow=2.9,SNR=4.3
SONM                                 PKKPbc  PKKPbc     12 15 26.2  -2.1
       comp=Z,2.1nm,0.6s,baz=191,slow=3.7,SNR=14
KSRS   Korea Array      118.90 327   PKP     PKiKP      12 05 08.2  +0.3
       comp=Z,4.2nm,0.7s,baz=5.3,slow=1.5,SNR=11
KSRS                                 SKP                12 08 38.5
       comp=Z,3.4nm,0.8s,baz=13,slow=2.3,SNR=7.7
MKAR   Makanchi Array   119.86   7   PKP     PKPdf      12 05 07.8  -1.7
       comp=Z,1.1nm,0.4s,baz=332,slow=2.9,SNR=28
MKAR                                 SKP                12 08 39.0
       comp=Z,0.2nm,0.4s,baz=33,slow=3.7,SNR=4.2
MKAR                                 PKKPbc  PKKPbc     12 15 17.9  -2.8
       comp=Z,1.1nm,0.8s,baz=159,slow=3.6,SNR=6.2
AAK    Ala-Archa        122.49  14   PKP     PKPdf      12 05 14.8  -0.1
       comp=Z,1.8nm,0.8s,baz=198,slow=6.4,SNR=3.6
MAW    Mawson           122.51 168   PKP     PKiKP      12 05 14.4  +0.4
       comp=Z,4.0nm,0.6s,baz=173,slow=2.8,SNR=15
HHC    Hu-ho-hao-te     123.03 341  ePKP     PKiKP      12 05 17.0  +0.9
HHC                                  AMB     AMB
       comp=Z,330nm,6.6s
HHC                                  LR      LR
       comp=Z,730nm,17.9s
HHC                                  LR      LR
       comp=Z,590nm,17.0s
HHC                                  LR      LR
       comp=Z,1µm,18.7s
WMQ    Urumqi           123.26   3  ePKP     PKiKP      12 05 18.0  +1.6
WMQ                                  AMB     AMB
       comp=Z,180nm,4.9s
WMQ                                  LR      LR
       comp=Z,1µm,20.7s
WMQ                                  LR      LR
       comp=Z,530nm,19.1s
WMQ                                  LR      LR
       comp=Z,1µm,20.9s
BTO    Baotou           123.72 343  ePKP     PKiKP      12 05 19.8  +2.3
BTO                                  SS      SS         12 23 39.3  -2.4
BTO                                  LR      LR
       comp=Z,2µm,21.5s
BTO                                  LR      LR
       comp=Z,2µm,22.1s
KMBO   Kilima Mbogo     125.48  82 i PKIKP   PKiKP      12 05 24.0  +2.2
KMBO                                 pmax    pmax
       comp=Z,1.0nm,0.3s
GTA    Gaotai           127.11 351   PKP     PKPdf      12 05 23.3  -0.5
GTA                                  LR      LR
       comp=Z,610nm,23.6s
GTA                                  LR      LR
       comp=Z,300nm,19.3s
GTA                                  LR      LR
       comp=Z,950nm,21.8s
NJ2    Nanjing          127.76 330   PKP     PKiKP      12 05 25.8  +0.2
LZH    Lanzhou          129.58 346  ePKP     PKiKP      12 05 30.5  +1.1
LZH                                  LR      LR
       comp=Z,720nm,23.9s
LZH                                  LR      LR
       comp=Z,420nm,22.8s
LZH                                  LR      LR
       comp=Z,680nm,24.4s
XAN    Xi'an            130.10 340   PKP     PKiKP      12 05 31.0  +0.7
STKA   Stephens Creek   130.14 239   PKP     PKiKP      12 05 30.3  -0.1
       comp=Z,2.9nm,0.5s,baz=117,slow=6.1,SNR=10
STKA                                 SKPbc   SKPbc      12 08 53.6  +6.7
       comp=Z,4.8nm,0.8s,baz=37,slow=5.1,SNR=4.0
STKA                                 SKKPbc  SKKPbc     12 18 26.1  -1.8
       comp=Z,1.5nm,0.5s,baz=325,slow=4.5,SNR=5.4
WHN    Wuhan            131.12 333   PKP     PKiKP      12 05 32.5  +0.1
WHN                                  AMB     AMB
       comp=Z,160nm,1.5s
WHN                                  LR      LR
       comp=Z,2µm,17.5s
WSAR   Wadi Sarin       131.94  41   SKPbc   SKPbc      12 08 52.1  -1.6
       comp=Z,40nm,0.7s,baz=313,slow=2.3,SNR=33
CD2    Chengdu          134.54 345   PKP     PKPdf      12 05 37.5  -0.5
CD2                                  PP      PP         12 08 12.0  +2.4
CD2                                  AMB     AMB
       comp=Z,480nm,6.3s
CD2                                  LR      LR
       comp=Z,680nm,23.5s
CD2                                  LR      LR
       comp=Z,710nm,24.5s
CD2                                  LR      LR
       comp=Z,960nm,23.5s
LSA    Lhasa            137.44 360   PKP     PKPdf      12 05 44.0  +0.1
OPO    Ambohidratompo   137.58 103   SKPab   SKiKP      12 09 15.0  -1.5
       comp=Z,11nm,0.6s,baz=234,slow=3.6,SNR=16
WRAB   Tennant Creek    137.98 255cePKIKP   PKPdf      12 05 45.2  +0.7
WRA    Warramunga Arr   137.99 255   PKhKP   PKPpre     12 05 34.7
       comp=Z,0.6nm,0.6s,baz=183,slow=2.0,SNR=17
WRA                                  PKP     PKPdf      12 05 45.4  +0.8
       comp=Z,12nm,0.7s,baz=92,slow=2.6,SNR=36
WRA                                  PP      PP         12 08 29.6  -3.8
       comp=Z,2.0nm,1.0s,baz=92,slow=6.4,SNR=7.9
WRA                                  SKP                12 09 15.0
       comp=Z,20nm,1.1s,baz=92,slow=2.6,SNR=18
WRA                                  SKKPbc  SKKPbc     12 18 00.7  +2.4
       comp=Z,3.2nm,0.6s,baz=291,slow=3.0,SNR=28
ASAR   Alice Springs    138.10 249   PKhKP   PKPpre     12 05 34.6
       comp=Z,1.8nm,0.7s,baz=108,slow=3.1,SNR=17
ASAR                                 PKP     PKiKP      12 05 46.2  -0.6
       comp=Z,6.3nm,0.9s,baz=105,slow=2.6,SNR=14
ASAR                                 SKPbc   SKiKP      12 09 15.8  -1.5
       comp=Z,15nm,1.1s,baz=103,slow=2.7,SNR=21
ASAR                                 SKKPbc  SKKPbc     12 17 59.9  +1.8
       comp=Z,5.7nm,0.6s,baz=282,slow=4.3,SNR=75
SIJI   Sorong           138.31 284   PKP     PKiKP      12 05 47.5  +0.1
       comp=Z,8.0nm,0.5s,baz=34,slow=6.1,SNR=5.1
KMI    Kunming          140.31 343   PKP     PKPdf      12 05 48.8  -0.2
QIZ    Qiongzhong       143.05 329   PKP     PKPdf      12 05 53.0  -0.8
QIZ                                  LR      LR
       comp=Z,380nm,21.6s
FITZ   Fitzroy Crossi   146.31 257   PKPbc   PKPbc      12 06 01.0  +0.4
       comp=Z,21nm,0.8s,baz=175,slow=3.1,SNR=17
HYB    Hyderabad        147.27  22 i PKP     PKPdf      12 06 01.5  +0.4
HYB    Hyderabad        147.27  22  eP       PKPbc      12 06 02.4  -1.0
BATI   Baumata          147.90 272   PKPbc   PKiKP      12 06 06.4  -0.7
       comp=Z,30nm,0.5s,baz=235,slow=8.1,SNR=7.3
UBPT   Khong Chiam      148.36 333           PKPbc      12 06 06.2  -0.1
MMRI   Maumere          149.02 275           PKPbc      12 06 07.3  -0.8
KAPI   Kappang          150.52 283   PKPbc   PKiKP      12 06 12.8  +0.3
       comp=Z,5.8nm,0.3s,baz=56,slow=0.5,SNR=1.7
KAPI   Kappang          150.52 283c iPKIKP   PKiKP      12 06 13.7  +1.2
PSA00  Pilbara Seismi   151.25 249   PKPdf   PKPdf      12 06 07.3   0.0
PSA00                                PKPbc   PKiKP      12 06 13.8   0.0
DGPR   DIGLIPUR         153.81 356  eP       PKPdf      12 06 12.5  +1.3
GSI    Gunungsitoli     164.26 335           PKPdf      12 06 23.7  +0.2
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SOME ***27*** *11:54:31.2, 38.°92N×72.°72E, h20^{km}*

ISC 27 11:54:37.7±4.6**, 38.°2N**±0.°3×**72.°4E**±0.°1**, h35^{km}, n5,** σ**0.s57**/8**,**
2C-1D, Tajikistan

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Code   Station Name        Δ°   AZ°     Phase ID          Time       Res
                                      Op       ISC      h  m  s      ISC
IUG    Iuzhnay            4.29 336  eP       Pn         11 55 40.5  -0.1
       223nm,0.3s
IUG                                 eS       Sn         11 56 30.3  +0.9
       18nm,0.3s
MRKS   Merke              4.55   8  eP       Pn         11 55 43.5  -0.6
       13nm,0.3s
MRKS                                eS       Sn         11 56 35.7  -0.2
       22nm,0.3s
KK07   Karatay Array      5.04 344  ⇑P       Pn         11 55 50.4  -0.5
       15nm,0.4s,baz=146,slow=11
KK07                                ⇑S       Sn         11 56 48.0  +0.1
       2.0nm,0.4s,baz=143,slow=26
KST    Kastek             5.53  29  eP       Pn         11 55 58.1  +0.4
       3.7nm,0.3s
KST                                 eS       Sn         11 57 00.1  +0.1
       3.7nm,0.4s
AB31   Akbulak array     14.18 325  ⇓P       Pn         11 57 50.1  -5.7
       0.3nm,0.3s,baz=132,slow=13,SNR=25
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IDC ***27*** *12:04:15.8±0.6, 22.°58N×94.°96E, h0^{km}, mb4.3/18,*
mb1 4.4/19, mb1mx4.1/71, mbtmp4.3/19, ML2.0/1, MS4.5/3,
Ms1 4.5/3, ms1mx3.2/52, Error ellipse: s-maj=21.8km
s-min=11.1km az=48.0

BJI ***27*** *12:04:16.8±0.0, 22.°19N×94.°86E, h34^{km}, mB4.8/11,*
mb4.5/28, Ms4.5/5, Ms7 4.0/6

NEIC ***27*** *12:04:18.9±1.2, 22.°59N±0.°07×94.°99E±0.°06, h14^{km}±3^{km},*
mb4.6/42, Error ellipse: s-maj=10.6km s-min=7.2km
az=214.0

ISC 27 12:04:17.8±0.4**, 22.°57N**±0.°05×**95.°00E**±0.°05**, h10^{km}, n85,**

σ1^{s}18/83, mb4.5/41, MS4.8/3, 1D, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRDH	Bariadhala	3.11	273	Pn	Pn	12 05 07.5	+0.7
	0.2nm,0.3s,baz=253,slow=19,SNR=1.7						
BRDH				Sn	Sn	12 05 43.4	-0.6
	0.1nm,0.3s,baz=72,slow=20,SNR=6.2						
SHL	Shillong	4.12	317	*e*P	Pn	12 05 22.6	+1.5
SHL				*e*S	Sn	12 06 08.5	-0.9
SHL	Shillong	4.12	317	Pn	Pn	12 05 22.3	+1.3
SHL				Sn	Sn	12 06 09.2	-0.2
CHTO	Chiang Mai	5.25	135	Pn	Pn	12 05 37.0	+0.6
CHTO				Sn	Sn	12 06 36.5	-0.6
CM31	Chiang Mai Arr	5.51	137		Pn	12 05 40.6	+0.6
CMAR	Chiang Mai Arr	5.51	137	Pn	Pn	12 05 40.5	+0.5
	5.3nm,0.3s,baz=311,slow=14,SNR=59						
CMAR				Sn	Sn	12 06 42.9	-0.6
	0.6nm,0.3s,baz=301,slow=18,SNR=2.9						
CMAR				Lg	Lg	12 07 13.9	
	6.9nm,0.3s,baz=321,slow=7.0,SNR=7.4						
CMAR				LR	LR	12 07 26.7	
	comp=Z,111nm,19.2s,baz=4.0,slow=34						
KMI	Kunming	7.52	69	⇓Pn	Pn	12 06 04.5	-3.3
KMI				Sn	Sn	12 07 28.5	-4.8
KMI				smax	smax		
	comp=N,110nm,1.2s						
KMI				smax	smax		
	comp=E,110nm,1.6s						
KMI				LR	LR		
	comp=N,560nm,9.7s						
KMI				LR	LR		
	comp=E,660nm,10.3s						
KMI				LR	LR		
	comp=Z,670nm,12.1s						
UBPT	Khong Chiam	12.27	124	Pn	Pn	12 07 14.1	+1.4
SRIT	Nakonsritamara	14.59	162	Pn	Pn	12 07 44.6	+0.3
ENH	Enshi	15.06	56	Pn	Pn	12 07 50.4	-0.3
ENH				IAmb	IAmb	12 07 59.8	
	comp=Z,17nm,0.9s						
XAN	Xi'an	16.73	44	P	P	12 08 17.5	+2.8
XAN				pP	sP	12 08 23.8	+4.9
XAN				sP	pP	12 08 29.5	+12
XAN				pmax	pmax		
	comp=Z,18nm,0.8s						
IPM	Ipoh	18.91	161	P	P	12 08 39.2	+0.4
PALK	Pallekele	20.52	224	P	P	12 08 56.9	+0.5
PALK				IAmb	IAmb	12 09 00.3	
	comp=Z,18nm,1.1s						
WMQ	Urumqi	22.04	346	*e*P	P	12 09 15.5	+3.0
WMQ				pP	sP	12 09 19.3	+2.5
WMQ				sP	pP	12 09 23.3	+7.8
WMQ				PP	PnPn	12 09 38.8	+4.4
WMQ				pmax	pmax		
	comp=Z,17nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,240nm,5.1s						
HHC	Hu-ho-hao-te	22.96	34	*e*P	P	12 09 24.0	+1.5
HHC				pmax	pmax		
	comp=Z,13nm,0.7s						
HHC				pmax	pmax		
	comp=Z,460nm,7.0s						
NJ2	Nanjing	23.16	61	*e*P	P	12 09 24.3	-0.1
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
KSH	Kashi	23.39	321	P	P	12 09 26.3	-0.6
KSH				sP	sP	12 09 38.8	+7.6
KSH				pmax	pmax		
	comp=Z,19nm,0.9s						
SSLB	Suanglung	23.88	82	P	P	12 09 31.4	-0.3
SSLB				IAmb	IAmb	12 09 50.5	
	comp=Z,32nm,1.3s						
TARG	Taragay, Kyrgy	23.93	327	P	P	12 09 32.4	-0.1
KSM	Kuching	25.71	143	P	P	12 09 48.7	+0.3
KSM				IAmb	IAmb	12 09 50.3	
	comp=Z,11nm,1.0s						
MK31	Makanchi Array	26.26	340	P	P	12 09 53.7	+0.6
MK31				IAmb	IAmb	12 09 54.6	
	comp=Z,11nm,1.0s						
MKAR	Makanchi Array	26.26	340	P	P	12 09 53.8	+0.6
	comp=Z,11nm,0.7s,baz=145,slow=9.6,SNR=58						
MKAR	Makanchi Array	26.26	340	P	P	12 09 53.4	+0.3
AAK	Ala-Archa	26.31	324	P	P	12 09 54.9	+1.1
	comp=Z,5.9nm,1.0s,baz=173,slow=8.0,SNR=6.6						
AAK	Ala-Archa	26.31	324	P	P	12 09 53.7	-0.1
MAKZ	Makanchi	26.37	340	P	P	12 09 54.6	+0.4
MAKZ				IAmb	IAmb	12 09 58.9	
	comp=Z,7.3nm,1.1s						
SONM	Songino Array	26.81	17	P	P	12 09 59.5	+1.3
	comp=Z,0.4nm,0.5s,baz=194,slow=11,SNR=2.2						
KURBB	Kurchatov Arra	30.82	339	P	P	12 10 33.9	+0.2
	comp=Z,6.6nm,0.6s,baz=150,slow=8.6,SNR=28						
KURK	Kurchatov	30.87	340	P	P	12 10 33.9	-0.2
KURK				IAmb	IAmb	12 10 35.5	
	comp=Z,9.5nm,0.8s						
ZAA0	Zalesovo Array	32.26	349	P	P	12 10 44.4	-2.0
ZAA0				IAmb	IAmb	12 10 52.1	
	comp=Z,3.9nm,0.7s						
ZALV	Zalesovo Beam	32.26	349	P	P	12 10 46.6	+0.2
	comp=Z,1.5nm,0.3s,baz=165,slow=6.2,SNR=12						
ZALV	Zalesovo Beam	32.26	349	P	P	12 10 45.9	-0.5
JSU	Suzuyama	32.69	67	P	P	12 10 51.3	+0.8
TOLI2	Tolitoli	32.91	127	P	P	12 10 52.5	0.0
TOLI2				IAmb	IAmb	12 10 55.5	
	comp=Z,11nm,1.1s						
UOSS	Minazif	35.51	282	P	P	12 11 13.8	-1.1
UOSS				IAmb	IAmb	12 11 37.3	
	comp=Z,12nm,1.4s						
BVAR	Borovoye Array	35.73	334	P	P	12 11 16.5	0.0
	comp=Z,2.3nm,0.6s,baz=178,slow=16,SNR=12						
BRVK	Borovoye	35.80	334	P	P	12 11 16.7	-0.4
BRVK				IAmb	IAmb	12 11 19.2	
	comp=Z,3.9nm,0.7s						
ABKAR	Akbulak array	38.37	323	P	P	12 11 39.0	0.0
INU	Inuyama	38.63	61	P	P	12 11 42.5	+1.1
INU				IAmb	IAmb	12 12 03.4	
	comp=Z,17nm,1.2s						
MJAR	Matsushiro Arr	39.75	60	P	P	12 11 49.5	-1.3
	comp=Z,2.5nm,0.7s,baz=274,slow=11,SNR=5.0						
AKTO	Aktyubinsk	40.04	323	P	P	12 11 51.1	-1.8
	comp=Z,1.6nm,0.5s,baz=108,slow=9.0,SNR=8.0						
SOEI	Soe	43.07	135	P	P	12 12 17.1	-1.2
ARU	Arti	43.08	331	P	P	12 12 16.6	-1.1
ARU				IAmb	IAmb	12 12 17.8	
	comp=Z,5.6nm,0.7s						
JEW	Eniwo	43.36	51	P	P	12 12 20.7	+0.4
FAKI	Fak Fak	44.31	120	P	P	12 12 28.1	-0.2
FAKI				IAmb	IAmb	12 12 29.9	
	comp=Z,12nm,0.9s						
RAYN	Ar Rayn	45.38	281	P	P	12 12 35.9	-0.8
RAYN				pP	pP	12 12 40.1	+0.2
SAUI	Saumlaki	46.75	126	P	P	12 12 47.3	-0.2
PSA00	Pilbara Seismi	50.12	149	P	P	12 13 13.0	-0.3
PSA00				IAmb	IAmb	12 13 13.8	
	comp=Z,3.5nm,1.0s						
KNRA	Kununurra	50.38	136	P	P	12 13 15.6	+0.2
TIXI	Tiksi	52.76	13	P	P	12 13 32.1	-0.5
BRTR	Keskin Array B	54.23	303	LR	LR	12 43 28.8	
	comp=Z,308nm,21.5s,baz=300,slow=43						
CSS	Mathiatis	54.69	298	P	P	12 13 47.1	-0.2
WB0	Warramunga Arr	57.01	135	P	P	12 14 03.7	-0.4
WB0				IAmb	IAmb	12 14 09.2	
	comp=Z,6.7nm,0.8s						
WRA	Warramunga Arr	57.10	135	P	P	12 14 04.5	-0.2
	comp=Z,5.6nm,0.7s,baz=322,slow=7.4,SNR=39						
WRA	Warramunga Arr	57.10	135	P	P	12 14 04.6	-0.1
WRAB	Tennant Creek	57.10	135	P	P	12 14 04.2	-0.4
WRAB				IAmb	IAmb	12 14 05.4	
	comp=Z,6.4nm,0.7s						
WRAB				pP	pP	12 14 09.1	+1.2
WB2	Warramunga Arr	57.11	135	P	P	12 14 04.1	-0.6
WB2				IAmb	IAmb	12 14 05.4	
	comp=Z,7.5nm,0.8s						
WR0	Warramunga Arr	57.25	135	P	P	12 14 05.5	-0.2
WR0				IAmb	IAmb	12 14 06.2	
	comp=Z,6.9nm,0.7s						
AKASG	Malin Array Be	57.61	317	P	P	12 14 05.8	-2.1
	comp=Z,2.0nm,0.6s,baz=84,slow=6.0,SNR=10						
AKASG	Malin Array Be	57.61	317	IAmb	IAmb	12 14 08.2	
	comp=Z,2.3nm,1.4s						
AS31	Alice Springs	59.52	138	P	P	12 14 21.6	0.0
ASAR	Alice Springs	59.52	138	P	P	12 14 21.4	-0.2
	comp=Z,3.7nm,0.7s,baz=321,slow=6.7,SNR=34						
ASAR	Alice Springs	59.52	138	P	P	12 14 21.7	+0.2
MLR	Muntele Rosu	59.76	310	P	P	12 14 22.2	-0.9
PMG	Port Moresby	60.16	116	P	P	12 14 26.4	+0.3
	comp=Z,14nm,0.2s,baz=296,slow=6.7,SNR=3.2						
PMG	Port Moresby	60.16	116	P	P	12 14 26.7	+0.7
BURAR	Bucovina Array	60.19	313	P	P	12 14 24.7	-1.3
BUR08	Bucovina Ar. S	60.20	313	P	P	12 14 24.5	-1.6
FINES	FINESS Array B	60.37	329	P	P	12 14 25.7	-1.1
	comp=Z,1.6nm,0.5s,baz=86,slow=5.9,SNR=8.4						
LODK	Lodwar	60.73	261	P	P	12 14 29.8	-0.3
PABE	Paberze	61.00	322	P	P	12 14 29.4	-1.8
ARCES	ARCESS Array B	61.89	338	P	P	12 14 36.4	-0.7
	comp=Z,5.4nm,0.8s,baz=65,slow=3.2,SNR=10.0						
CRVS	Cervenica-Dubn	62.64	315	*e*P	P	12 14 45.4	+3.0
NOA	NORSAR Array B	67.54	328	P	P	12 15 12.1	-2.0
	comp=Z,1.4nm,0.8s,baz=100,slow=5.0,SNR=3.3						
GERES	GERESS Array B	67.73	315	P	P	12 15 14.1	-1.5
	comp=Z,1.4nm,0.7s,baz=78,slow=7.0,SNR=9.0						
GERES	GERESS Array B	67.73	315	P	P	12 15 14.7	-1.0
LSZ	Lusaka	75.45	246	P	P	12 16 03.7	+1.1
	comp=Z,2.6nm,0.6s,baz=84,slow=3.7,SNR=5.0						
LSZ	Lusaka	75.45	246	IAmb	IAmb	12 16 17.5	
	comp=Z,8.0nm,1.3s						
BMAR	Burnt Mountain	80.13	20	P	P	12 16 28.1	+0.4
A36M	Sachs Harbour	81.76	12	P	P	12 16 35.6	-0.8
A36M				IAmb	IAmb	12 16 38.2	
	comp=Z,4.8nm,1.1s						
INK	Inuvik	82.72	16	P	P	12 16 41.0	-0.4
	comp=Z,1.0nm,0.7s,baz=33,slow=6.3,SNR=4.0						
INK	Inuvik	82.72	16	P	P	12 16 41.6	+0.3
INK				IAmb	IAmb	12 16 42.7	
	comp=Z,3.9nm,1.4s						
BOSA	Boshof	84.29	236	LR	LR	12 54 07.9	
	comp=Z,382nm,20.6s,baz=280,slow=36						
TORD	Torodi Ar. Bea	88.03	283	P	P	12 17 07.5	-1.5
	comp=Z,1.7nm,0.9s,baz=48,slow=2.4,SNR=6.4						
MAW	Mawson	93.02	192	LR	LR	12 54 10.2	
	comp=Z,324nm,19.6s,baz=227,slow=32						

DJA 27 12:04:59.0±0.5**, 2°S**±4°×**12°3E**±°**, h269**^{km}±7^{km}**, M3.6**/13**, MLv3.6**/13**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUWI	Luwuk	0.87	324	P	Pn	12 05 37.9	+2.4
LUWI				S	S	12 06 02.5	-1.8
APSI	Ampana	1.84	297	P	Pn	12 05 44.9	+3.2
APSI				S	S	12 06 04.5	-11
GTOI	Gorontalo	2.39	353	P	Pn	12 05 49.0	+2.4
KMSI	Cibinong	2.41	17	P	Pn	12 05 47.5	+0.7
MRSI	Marisa	2.59	329	P	Pn	12 05 48.6	0.0
SANI	Sanana	2.71	96	P	Pn	12 05 49.7	0.0
TTSI	Tana Toraja	3.70	250	P	Pn	12 06 14.1	+14
MPSI	Mapaga	3.98	301	P	Pn	12 06 00.7	-2.7
BNSI	Bone	4.13	230	P	Pn	12 06 08.3	+3.1
SPSI	Sidrap Palu	4.15	238	P	Pn	12 06 05.2	-0.2
BKSI	Bulukumba	4.75	222	P	Pn	12 06 10.5	-2.0
TNTI	Ternate	4.78	58	P	Pn	12 06 11.3	-1.6
BSSI	Bau Bau, Buton	5.18	213	P	Pn	12 06 08.7	-8.9

LJU 27 12:14:59.3, 46°.16N×14°.35E, h10^{km}**, ML0.7, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRNS	Crni Vrh	0.10	217	*i* Pg	Pg	12 15 02.2	+0.3
CRNS				*i* Sg	Sg	12 15 04.0	+0.2
CRNS				IAML		12 15 04.5	
	comp=Z,17nm,0.1s						
MOZS	Mozjanca	0.15	26	*i* Pg	Pg	12 15 02.9	+0.2
MOZS				*i* Sg	Sg	12 15 05.3	+0.2
MOZS				IAML		12 15 05.8	
	comp=Z,3.2nm,0.1s						
LJU	Ljubljana	0.17	133	*i* Pg	Pg	12 15 03.1	+0.1
GBAS	Gorenja Brezov	0.23	163	*i* Pg	Pg	12 15 04.1	0.0
GORS	Gorjuse	0.29	303	*i* Pg	Pg	12 15 05.4	+0.2
GORS				*i* Sg	Sg	12 15 09.5	+0.3
GORS				IAML		12 15 10.5	
	comp=Z,2.2nm,0.1s						

VIE 27 12:15:33.8±0.5**, 47°.61N×14°.35E, h0**^{km}**, ml1.3**/2**, Error ellipse: s-maj=5.1km s-min=1.6km az=40.0 7 km S of Spital am Pyhrn Suspected Mining explosion., Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOA	Molln	0.25	346	*e*Pg	Pg	12 15 39.0	+0.4
	1.9nm,0.1s						
MOA				*e*Sg	Sg	12 15 42.9	+1.0
	4.9nm,0.1s						
CONA	Conrad Observa	1.07	72	*e*Pg	Pg	12 15 54.5	+0.2
	0.4nm,0.1s						
CONA				*e*Sg	Sb	12 16 09.1	-0.7
	0.6nm,0.1s						

IDC 27 12:29:37.2±3.5**, 50°.30N×27°.62E, h0**^{km}**, mb1 3.7**/3**, mb1mx3.2**/40**, mbtmp3.7**/3**, ML2.7**/3**, Error ellipse: s-maj=40.0km s-min=12.3km az=11.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKASG	Malin Array Be	1.10	68	Pg	Pg	12 29 58.1	-0.1
	17nm,0.3s,baz=251,slow=17,SNR=40						
AKASG				Lg	Lg	12 30 14.0	
	17nm,0.3s,baz=222,slow=45,SNR=9.7						
FINES	FINESS Array B	11.21	356	Pn	Pn	12 32 12.2	-6.1
	0.1nm,0.3s,baz=171,slow=12,SNR=4.7						
HFS	Hagfors	12.63	327	Pn	Pn	12 32 30.8	-7.0
	0.1nm,0.3s,baz=125,slow=15,SNR=1.8						
ARCES	ARCESS Array B	19.32	358	Pn	P	12 33 59.2	-4.3
	baz=179,slow=11,SNR=5.6						

TUL ***27*** *12:32:17.4±0.9, 36°.52N±0°.02×98°.62W±0°.04, h7*^{km}*±2*^{km}*, ML2.5, mb_Lg2.4/4(NEIC), Error ellipse: s-maj=4.6km s-min=3.1km az=89.0*

NEIC 27 12:32:17.6±0.7**, 36°.53N**±0°.02×**98°.62W**±0°.04**, h10**^{km}±7^{km}**, Error ellipse: s-maj=5.3km s-min=2.3km az=77.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
U32A	Winter Ranch,	0.35	244	Pg	Pg	12 32 24.3	-0.2
CROK	Carrier	0.51	93	Pg	Pg	12 32 27.4	-0.1
CROK				Sg	Sg	12 32 34.6	+0.4
KAN14	Manchester OK	0.67	51	Pg	Pg	12 32 30.9	+0.3
KAN14				Sg	Sg	12 32 40.0	+0.6
GC02	Grant County #	0.69	62	Pg	Pg	12 32 30.8	-0.1
KAN16	Harper SW Stat	0.82	32	Pg	Pg	12 32 33.5	+0.1
KAN05	Bluff City Nor	0.83	46	Pg	Pg	12 32 33.4	-0.1
KAN17	Caldwell West	0.85	53	Pg	Pg	12 32 33.9	-0.1
KAN01	Argonia South	0.93	48	Pg	Pg	12 32 35.3	-0.1
KAN06	Argonia West S	0.94	40	Pg	Pg	12 32 35.6	0.0
KAN09	Caldwell North	1.00	53	Pg	Pg	12 32 36.8	-0.1
KAN13	South Haven SW	1.03	62	Pg	Pg	12 32 37.1	-0.4
BLOK	Blackwell	1.15	78	Pg	Pb	12 32 39.0	-0.5
BCOK	Bluff Creek, N	1.19	137	Pg	Pb	12 32 39.5	-0.7
OK025	Westminster Rd	1.40	132	Pn	Pn	12 32 43.3	+0.1
OK031	S. Brethren Rd	1.55	111	Pn	Pn	12 32 45.2	+0.1
QUOK	Quay	1.58	103	Pn	Pn	12 32 45.5	-0.1
OK030	Cody Creek RV	1.60	112	Pn	Pn	12 32 46.3	+0.5
FNO	Franklin	1.61	142	Pn	Pn	12 32 45.8	-0.2
FNO				IAmb_Lg		12 33 06.8	
	comp=Z,20nm,1.3s						
OK034	N. Norfolk Rd.	1.62	108	Pn	Pb	12 32 47.1	-0.5
T35A	Sooner Cattle	1.73	77	Pn	Pn	12 32 48.3	+0.6
WMOK	Wichita Mounta	1.79	184	Pn	Pn	12 32 48.7	+0.2
R32A	Long Quarter,	1.89	358	Pn	Pb	12 32 51.6	-0.6
X34A	Smith Ranch, M	2.03	161		Pn	12 32 52.8	+1.0
TUL1	Leonard	2.37	104	Pn	Pn	12 32 56.6	+0.2
CBKS	Cedar Bluff	2.45	339	Pn	Pn	12 32 57.7	+0.2
X37A	Clayton	3.28	125	Pn	Pn	12 33 09.7	+0.7
X37A				IAmb_Lg		12 34 08.9	
	comp=Z,10nm,0.8s						
U40A	Yellville	4.65	90	Pn	Pn	12 33 26.4	-1.4
T42A	Van Buren	6.06	83	Pn	Pn	12 33 46.0	-1.2

IDC ***27*** *12:36:39.8±1.1, 35°.37S×179°.58W, h0*^{km}*, mb4.3/5, mb1 4.5/6, mb1mx4.2/28, mbtmp4.4/6, ML4.2/1, Error ellipse: s-maj=33.2km s-min=30.1km az=158.0*

NEIC ***27*** *12:36:41.8±2.0, 35°.63S±0°.09×179°.4W±0°.1, h10*^{km}*±1*^{km}*, mb4.4/9, Error ellipse: s-maj=20.6km s-min=14.0km az=103.0*

WEL ***27*** *12:36:42.8±1.2, 36°S±11°×17°9W±1°6, h33*^{km}*, M4.3/13, ML4.5/13, MLv4.3/13, Error ellipse: s-maj=0.0km s-min=0.0km az=123.0*

ISC 27 12:36:45.4±0.9**, 35°.59S**±0°.07×**179°.5W**±0°.1**, h41**^{km}**, n42, σ1**^{s}**19**/49**, mb4.6**/7**, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.67	222	P	Pn	12 37 24.4	-1.4
MXZ				S	Sn	12 37 56.9	-0.1
MXZ	Matakaoa Point	2.67	222	Pn	Pn	12 37 24.6	-1.2
WMGZ	Waiomatatini S	2.81	217	P	Pn	12 37 27.6	-0.2
WMGZ				S	Sn	12 38 02.3	+2.0
PUZ	Puketiti	3.08	216	P	Pn	12 37 30.3	-1.3
PUZ				S	Sn	12 38 08.4	+1.2
HAZ	Te Kaha	3.10	225	P	Pn	12 37 31.2	-0.6
TWGZ	Tauwhareparae	3.30	218	P	Pn	12 37 33.6	-0.9
RUGZ	Raukumara Rang	3.30	223	P	Pn	12 37 34.3	-0.4
CNGZ	Carnagh Statio	3.44	212	P	Pn	12 37 35.7	-0.7
CNGZ				S	Sn	12 38 17.7	+1.7
TKGZ	Te Karaka	3.57	216	P	Pn	12 37 37.3	-0.9
TKGZ				S	Sn	12 38 19.6	+0.5
MWZ	Matawai	3.65	221	P	Pn	12 37 38.2	-1.2
RIGZ	Rimuhau	3.82	215	P	Pn	12 37 40.1	-1.6
RIGZ				S	Sn	12 38 26.0	+0.5
URZ	Urewera	3.83	225	Pn	Pn	12 37 40.5	-1.3
	18nm,0.3s,baz=302,slow=23,SNR=83						
URZ				Sn	Sn	12 38 26.1	+0.6
	7.1nm,0.3s,baz=142,slow=19,SNR=3.1						
URZ	Urewera	3.83	225		Pn	12 37 40.6	-1.1
OPRZ	Ohinepanea	3.92	234	P	Pn	12 37 41.9	-1.1
OPRZ				S	Sn	12 38 28.6	+0.9
PRGZ	Paritu Road	3.95	212	P	Pn	12 37 41.7	-1.7
PRGZ				S	Sn	12 38 27.3	-1.2
TGRZ	Tauranga	4.05	237	P	Pn	12 37 43.8	-1.0
SNGZ	Shannon Statio	4.09	218	P	Pn	12 37 44.6	-0.8
SNGZ				S	Sn	12 38 32.6	+0.7
PRRZ	Plateau Road	4.41	228	P	Pn	12 37 47.4	-2.4
BKZ	Black Stump Fm	4.81	221		Pn	12 37 52.8	-2.5
HIZ	Hauiti	5.41	236	Pn	Pn	12 38 03.3	-0.1
OUZ	Omahuta	5.69	272		Pn	12 38 06.9	-0.4
DZM	Mont Dzumac	18.25	314	P	Pn	12 40 57.2	+1.6
	0.4nm,0.3s,baz=176,slow=12,SNR=5.6						
DZM	Mont Dzumac	18.25	314	IAmb	IAmb	12 41 13.4	
	comp=Z,14nm,1.2s						
STKA	Stephens Creek	32.46	265	P	P	12 43 12.2	+0.3
	comp=Z,2.9nm,0.8s,baz=80,slow=11,SNR=4.8						
STKA	Stephens Creek	32.46	265	IAmb	IAmb	12 43 23.5	
	comp=Z,3.0nm,1.4s						
CTAO	Charters Tower	33.83	288	P	P	12 43 23.7	-0.2
COEN	Coen	39.85	293	P	P	12 44 14.5	-0.6
COEN				IAmb	IAmb	12 44 16.3	
	comp=Z,9.0nm,0.9s						
AS31	Alice Springs	41.90	273	P	P	12 44 31.4	-0.6
ASAR	Alice Springs	41.90	273	P	P	12 44 30.8	-1.2
	comp=Z,3.5nm,0.8s,baz=114,slow=8.0,SNR=36						
WB2	Warramunga Arr	43.35	278	P	P	12 44 42.7	-1.0
WRAB	Tennant Creek	43.35	278	P	P	12 44 42.7	-1.1
WRAB				IAmb	IAmb	12 44 43.7	
	comp=Z,9.7nm,0.7s						
WRA	Warramunga Arr	43.36	278	P	P	12 44 42.7	-1.1
	comp=Z,8.8nm,0.6s,baz=121,slow=7.6,SNR=127						
WRA	Warramunga Arr	43.36	278	P	P	12 44 42.8	-1.1
QSPA	South Pole Qui	54.53	180	P	P	12 46 11.6	+2.6
	comp=Z,0.9nm,1.0s,baz=29,slow=6.5,SNR=2.3						
QSPA	South Pole Qui	54.53	180	IAmb	IAmb	12 46 19.8	
	comp=Z,10nm,1.5s						
PETK	Petropavlovsk-	90.54	346	P	P	12 49 43.2	+0.8
	comp=Z,4.7nm,0.8s,baz=185,slow=14,SNR=5.3						
MKAR	Makanchi Array	120.09	308	PKP	PKPdf	12 55 30.3	-1.0
	comp=Z,0.5nm,0.7s,baz=183,slow=2.9,SNR=3.2						
KURBB	Kurchatov Arra	123.69	312	PKhKP	PKPpre	12 55 32.8	
	comp=Z,0.3nm,0.4s,baz=114,slow=1.6,SNR=7.4						
KURBB				PKP	PKiKP	12 55 37.5	-0.7
	comp=Z,0.5nm,0.6s,baz=110,slow=1.6,SNR=4.8						
FINES	FINESS Array B	149.49	336	PKPbc	PKiKP	12 56 29.5	-0.8
	comp=Z,6.4nm,0.8s,baz=82,slow=2.7,SNR=7.0						
DBIC	Dimbokro	150.79	169	PKPbc	PKiKP	12 56 35.2	+0.7
	comp=Z,3.6nm,1.0s,baz=207,slow=6.8,SNR=1.7						
BRTR	Keskin Array B	153.56	289	PKPbc	PKiKP	12 56 39.4	-0.3
	comp=Z,1.1nm,0.8s,baz=177,slow=2.5,SNR=4.2						
AKASG	Malin Array Be	154.41	315	PKPbc	PKiKP	12 56 40.2	-0.6
	comp=Z,0.2nm,0.3s,baz=79,slow=2.4,SNR=4.2						

NIED ***27*** *12:51:02.8, 40°.16N×142°.48E, h33*^{km}*, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale* 10^{15}*Nm;* M_{rr}*2.81;* $M_{\theta\theta}$*-0.27;* $M_{\phi\phi}$*-2.54;* $M_{r\theta}$*1.56;* $M_{\theta\phi}$*-0.63;* $M_{\phi r}$*2.32; Fault plane solution:* M_0*3.92000×*10^{15} *NP1:*ϕ_s*28.00000°, δ68.00000°, λ99.00000°. NP2:*ϕ_s*184.00000°, δ24.00000°, λ68.00000°.*

JMA ***27*** *12:51:02.7±0.1, 40°.16N×142°.48E, h33*^{km}*±1*^{km}*, M4.4*
JMA Felt II J1.

MOS ***27*** *12:51:02.7±0.9, 40°.22N×142°.44E, h49*^{km}*, mb4.8/24, Error ellipse: s-maj=8.0km s-min=4.8km az=94.0*

BJI ***27*** *12:51:03.5±0.0, 40°.14N×142°.38E, h60*^{km}*, mB5.1/13, mb4.6/40, Ms4.6/5, Ms7 4.3/6*

NEIC ***27*** *12:51:04.4±2.1, 40°.26N±0°.05×142°.18E±0°.06, h35*^{km}*±1*^{km}*, mb4.6/62, Error ellipse: s-maj=8.7km s-min=6.4km az=147.0*

IDC ***27*** *12:51:04.3±1.6, 40°.15N×142°.44E, h50*^{km}*±14*^{km}*, mb4.1/30, mb1 4.2/35, mb1mx4.2/47, mbtmp4.4/35, ML3.6/5, MS3.7/6, Ms1 3.7/6, ms1mx3.2/52, Error ellipse: s-maj=13.9km s-min=10.7km az=113.0*

ISC 27 12:51:03.4±0.4**, 40°.20N**±0°.03×**142°.45E**±0°.04**, h40**^{km}±3^{km}**, h40**^{km}**:pP-P, n224, σ1**^{s}**34**/256**, mb4.6**/90**, MS4.0**/8**, 31C-13D, Fault plane solution: NP1:**ϕ_s144.41434°**,** δ27.12102°**,** λ8.44777°. **NP2:**ϕ_s46.88413°**,** δ86.15997°**,** λ116.86822°. **Principal axes:** T Plg42.5873°, Azm342.6091°**;** N Plg26.8031°, Azm224.9408°**;** P Plg35.5914°, Azm113.7438°**; Fault plane solution: NP1:** ϕ_s171.93858°**,** δ32.68205°**,** λ80.85053°. **NP2:**ϕ_s2.77147°**,** δ57.78441°**,** λ95.82475°. **Principal axes:** T Plg76.4390°, Azm290.5925°**;** N Plg4.9256°, Azm179.6586°**;** P Plg12.6030°, Azm88.5545°**; Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	0.52	240	⇓P	Pn	12 51 13.5	-1.0
JTH				S	Sn	12 51 21.4	-0.8
JKEN	Kujiedanarisaw	0.57	271	⇓P	Pn	12 51 14.2	-0.9
JKEN				S	Sn	12 51 22.3	-1.0
JANG	Nango	0.74	284	⇓P	Pn	12 51 16.9	-0.5
JANG				S	Sn	12 51 26.8	-0.6
MIYJ	Miyakonagasawa	0.79	218	⇓P	Pn	12 51 16.8	-1.3
MIYJ				S	Sn	12 51 26.9	-1.8
JKZ	Kuzumaki	0.89	256	⇓P	Pn	12 51 19.2	-0.3
JKZ				S	Sn	12 51 30.8	-0.4
JOM	Ohasama	1.15	231	⇓P	Pn	12 51 23.0	-0.1
JOM				S	Sn	12 51 37.8	+0.2
JARK	Aomorirokkasho	1.15	315	⇓P	Pn	12 51 23.4	+0.3
JARK				*e*S	Sn	12 51 38.9	+1.3
JTM	Tenmabayashi	1.21	299	⇓P	Pn	12 51 24.4	+0.6
JTM				*e*S	Sn	12 51 40.1	+1.2
JTM	Tenmabayashi	1.21	299		Pn	12 51 24.4	+0.6
JTM				Sn	Sn	12 51 37.3	-1.6
OFUJ	Ofunato	1.27	209	P	Pn	12 51 24.3	-0.4
OFUJ				*e*S	Sn	12 51 40.1	-0.5
JAH	Hinai	1.39	270	⇓P	Pn	12 51 27.0	+0.7
JAH				S	Sn	12 51 45.2	+1.7
JMK	Ichinoseki	1.57	218	P	Pn	12 51 29.0	+0.2
JMK				S	Sn	12 51 48.9	+1.0
ERM	Erimo	1.89	16	⇓*e*P	Pn	12 51 36.3	+3.1
ERM	Erimo	1.89	16		Pn	12 51 33.6	+0.5
ERM				Sn	Sn	12 51 59.0	+3.2
JMM	Marumori	2.67	209		Pn	12 51 44.4	+0.5
JEW	Eniwo	2.74	344		Pn	12 51 47.0	+2.1
JKA	Kamikawa-asahi	3.91	2		Pn	12 52 02.4	+1.4
ASAJ	Asahikawa	3.91	2	P	Pn	12 52 02.2	+1.2
	6.2nm,0.3s,baz=200,slow=13,SNR=47						
ASAJ				S	Sn	12 52 47.9	+2.2
	14nm,0.3s,baz=80,slow=17,SNR=1.7						
ASAJ				LR	LR	12 53 48.8	
	comp=Z,726nm,20.1s,baz=197,slow=42						
NMR	Nemuro--Hokkai	4.00	37	⇑*i*P	Pn	12 52 01.2	-1.0

NMR				*e*S	**Sn**	**12 52 44.0**	**-3.8**
GLVR	**Golovnino**	**4.21**	**32**	*e*P	**Pn**	**12 52 05.2**	**+0.2**
GLVR				*e*S	**Sn**	**12 52 50.4**	**-2.5**
GLVR				pmax	pmax		
	comp=Z,184nm,0.3s						
GLVR				smax	smax		
	comp=N,470nm,0.3s						
GLVR				smax	smax		
	comp=E,1μm,0.3s						
JYT	**Yasato**	**4.35**	**205**		**Pn**	**12 52 06.7**	**-0.3**
RUSJ	**Misakicho**	**4.42**	**27**	*e*P	**Pn**	**12 52 08.8**	**+0.9**
RUSJ				*e*S	**Sn**	**12 52 56.7**	**-1.4**
GRPR	**Tuman**	**4.52**	**32**	*e*P	**Pn**	**12 52 08.7**	**-0.7**
GRPR				*e*S	**Sn**	**12 52 56.0**	**-4.7**
GRPR				pmax	pmax		
	comp=Z,207nm,0.3s						
GRPR				smax	smax		
	comp=E,819nm,0.4s						
GRPR				smax	smax		
	comp=N,851nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**4.59**	**32**	*e*P	**Pn**	**12 52 10.7**	**+0.4**
YUK				*e*S	**Sn**	**12 52 58.8**	**-3.6**
YUK				pmax	pmax		
	comp=N,70nm,0.3s						
YUK				pmax	pmax		
	comp=Z,201nm,0.3s						
YUK				pmax	pmax		
	comp=E,155nm,0.2s						
YUK				smax	smax		
	comp=E,686nm,0.6s						
YUK				smax	smax		
	comp=N,635nm,0.4s						
MAJO	**Matsushiro**	**4.95**	**224**	*ce*P	**Pn**	**12 52 17.9**	**+2.7**
MAJO				pmax	pmax		
	comp=Z,81nm,0.8s						
MAJO	**Matsushiro**	**4.95**	**224**		**Pn**	**12 52 17.1**	**+1.8**
MJAR	**Matsushiro Arr**	**4.95**	**224**	P	**Pn**	**12 52 17.1**	**+1.9**
	comp=Z,1.5nm,0.3s,baz=19,slow=12,SNR=76						
MJAR				LR	LR	12 54 26.0	
	comp=Z,378nm,18.9s,baz=20,slow=41						
MJAR	**Matsushiro Arr**	**4.95**	**224**		**Pn**	**12 52 16.9**	**+1.7**
MAT	**Matsushiro**	**4.95**	**224**	P	**Pn**	**12 52 17.5**	**+2.3**
MAT				*e*S	**Sn**	**12 53 15.1**	**+3.9**
JGF	**Kuroka**	**6.11**	**223**		**Pn**	**12 52 33.2**	**+2.0**
KUR	**Kuril'sk**	**6.42**	**37**	*e*P	**Pn**	**12 52 35.3**	**0.0**
KUR				*e*S	**Sn**	**12 53 43.5**	**-3.8**
KUR				pmax	pmax		
	comp=Z,111nm,0.7s						
KUR				smax	smax		
	comp=E,295nm,0.6s						
KUR				smax	smax		
	comp=N,117nm,0.3s						
INU	**Inuyama**	**6.48**	**223**	Pn	**Pn**	**12 52 38.5**	**+2.2**
YSS	**Yuzh-Sakhalins**	**6.75**	**2**	*e*P	**Pn**	**12 52 40.9**	**+1.0**
YSS				pmax	pmax		
	comp=Z,50nm,1.0s						
YSS	**Yuzh-Sakhalins**	**6.75**	**2**	Pn	**Pn**	**12 52 41.4**	**+1.4**
JHJ2	**Mitsune**	**7.38**	**197**	Pn	**Pn**	**12 52 51.2**	**+2.5**
JHJ	**Hachijo jima 2**	**7.39**	**198**	P	**Pn**	**12 52 48.2**	**-0.5**
	comp=Z,15nm,0.3s,baz=80,slow=19,SNR=1.2						
JWT	**Wachi**	**7.43**	**231**	Pn	**Pn**	**12 52 51.9**	**+2.5**
USRK	**Ussuriysk Ar.**	**8.73**	**301**	P	**Pn**	**12 53 09.6**	**+2.5**
	baz=104,slow=16,SNR=16						
USRK				LR	LR	12 56 26.9	
	comp=Z,499nm,19.9s,baz=14,slow=37						
USRK	**Ussuriysk Ar.**	**8.73**	**301**		**Pn**	**12 53 08.3**	**+1.2**
JHS	**Saijyo**	**9.04**	**238**	Pn	**Pn**	**12 53 11.2**	**-0.3**
JMN	**Monobe**	**9.42**	**229**	Pn	**Pn**	**12 53 15.9**	**-0.7**
MDJ	**Mudanjiang**	**10.48**	**299**	P	**Pn**	**12 53 30.3**	**-0.7**
MDJ				pmax	pmax		
	comp=Z,23nm,2.3s						
KSRS	**Korea Array**	**11.66**	**261**	P	Pn	12 53 52.5	+5.3
	comp=Z,0.5nm,0.3s,baz=69,slow=14,SNR=4.6						
KLR	**Kul'dur**	**11.80**	**323**	P	**Pn**	**12 53 48.7**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=145,slow=16,SNR=2.9						
KLR	**Kul'dur**	**11.80**	**323**	⇑*e*P	**Pn**	**12 53 50.4**	**+1.4**
KLR				pmax	pmax		
	comp=Z,15nm,1.4s						
PEA0B	**Petropavlovsk-**	**16.57**	**34**	P	**P**	**12 54 56.0**	**+1.3**
PEA0B				pmax	pmax		
	comp=Z,60nm,1.5s						
PEA0B	**Petropavlovsk-**	**16.57**	**34**		**P**	**12 54 56.0**	**+1.3**
PEA0B				IAmb	IAmb	12 55 22.0	
	comp=Z,60nm,1.5s						
ZEA	**Zeya**	**17.00**	**328**	*e*P	**Pn**	**12 54 56.4**	**-1.7**
ZEA				pmax	pmax		
	comp=N,10.0nm,0.7s						
ZEA				pmax	pmax		
	comp=E,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MA2	**Magadan**	**20.09**	**12**	P	**P**	**12 55 34.1**	**+0.8**
MA2				pmax	pmax		
	comp=Z,74nm,1.5s						
MA2	**Magadan**	**20.09**	**12**	P	**P**	**12 55 34.1**	**+0.8**
MA2				IAmb	IAmb	12 55 38.8	
	comp=Z,74nm,1.5s						
NJ2	**Nanjing**	**20.68**	**254**	*e*P	**P**	**12 55 40.8**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,23nm,0.7s						
YAK	**Yakutsk**	**23.20**	**345**	P	**P**	**12 56 04.2**	**-2.2**
	comp=Z,12nm,0.5s,baz=143,slow=3.5,SNR=13						
YAK	**Yakutsk**	**23.20**	**345**	*e*P	**P**	**12 56 03.4**	**-3.0**
YAK				*e**PP	**pP**	**12 56 14.0**	**-2.4**
YAK				*e*		12 56 33.0	
YAK				*e*		12 59 49.9	
YAK				*e*S	**S**	**13 00 10.8**	**-4.2**
YAK				*e**SS	Sn	13 00 35.2	+0.7
YAK				*e*SS	SnSn	13 01 19.8	+29
YAK				*e*		13 07 08.6	
YAK				pmax	pmax		
	comp=Z,35nm,0.9s						
YAK				pmax	pmax		
	comp=N,11nm,1.2s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,238nm,4.9s						
YAK				pmax	pmax		
	comp=E,516nm,6.0s						
YAK				pmax	pmax		
	comp=N,250nm,6.0s						
YAK				smax	smax		
	comp=E,468nm,6.8s						
YAK				smax	smax		
	comp=N,230nm,4.9s						
HHC	**Hu-ho-hao-te**	**23.43**	**282**	*e*P	**P**	**12 56 09.0**	**0.0**
HHC				pmax	pmax		
	comp=N,8.0nm,0.7s						
HHC				pmax	pmax		
	comp=N,390nm,6.7s						
SEY	**Seymchan**	**23.53**	**11**	P	**P**	**12 56 09.8**	**+0.1**
	comp=N,4.9nm,0.6s,baz=187,slow=9.5,SNR=12						
SSLB	**Suanglung**	**24.40**	**234**	P	**P**	**12 56 17.8**	**-0.3**
SSLB				IAmb	IAmb	12 56 39.4	
	comp=Z,23nm,1.1s						
YULB	**Yu-li**	**24.48**	**233**	P	**P**	**12 56 18.8**	**0.0**
YULB				IAmb	IAmb	12 56 21.2	
	comp=Z,38nm,1.2s						
BTO	**Baotou**	**24.63**	**282**	*e*P	**P**	**12 56 19.5**	**-0.6**
TPUB	**Ta-pu**	**24.96**	**234**	P	**P**	**12 56 23.7**	**+0.6**
BOD	**Bodaibo**	**25.38**	**323**	*e*P	**P**	**12 56 26.1**	**-0.5**
BOD				pmax	pmax		
	comp=Z,17nm,0.8s						
ULN	**Ulaanbaatar**	**26.40**	**299**	⇓*e*P	**P**	**12 56 35.3**	**-0.8**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ULN	**Ulaanbaatar**	**26.40**	**299**	P	**P**	**12 56 35.1**	**-1.1**
SONM	**Songino Array**	**26.84**	**299**	P	**P**	**12 56 40.0**	**-0.1**
	comp=Z,2.8nm,0.5s,baz=102,slow=8.7,SNR=18						
SONM	**Songino Array**	**26.84**	**299**	P	**P**	**12 56 40.3**	**+0.2**
SONM				pmax	pmax		
	comp=Z,6.0nm,1.2s						
SONM	**Songino Array**	**26.84**	**299**	P	**P**	**12 56 40.3**	**+0.2**
ZAK	**Zakamensk**	**29.07**	**304**	*e*P	**P**	**12 56 59.3**	**-0.6**
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.4s						
H11N2	**WAKE ISLAND Hy**	**29.24**	**127**	T	T	13 27 48.4	
	baz=319,slow=75,SNR=466						
H11N1	**WAKE ISLAND Hy**	**29.25**	**127**	T	T	13 27 56.8	
	baz=319,slow=75,SNR=446						
H11N3	**WAKE ISLAND Hy**	**29.26**	**127**	T	T	13 27 53.9	
	baz=319,slow=75,SNR=495						
H11S1	**WAKE ISLAND Hy**	**30.06**	**129**	T	T	13 28 55.3	
	baz=321,slow=76,SNR=137						
H11S3	**WAKE ISLAND Hy**	**30.06**	**129**	T	T	13 28 58.3	
	baz=321,slow=76,SNR=100						
H11S2	**WAKE ISLAND Hy**	**30.07**	**129**	T	T	13 28 56.5	
	baz=321,slow=76,SNR=62						
BILL	**Bilibino**	**30.76**	**17**	⇑*e*P	**P**	**12 57 16.1**	**+1.5**
BILL				*e**PP	**sP**	**12 57 29.6**	**-0.4**
BILL				*e**SP	pP	12 57 39.4	+14
BILL				*e*		12 58 10.5	
BILL						13 00 16.0	
BILL				SS	SS	13 03 59.0	-28
BILL				pmax	pmax		
	comp=Z,15nm,2.0s						
BILL				MLR	MLR		
	comp=Z,49nm,16.0s						
BILL	**Bilibino**	**30.76**	**17**	P	**P**	**12 57 16.0**	**+1.4**
TIXI	**Tiksi**	**32.26**	**352**	P	**P**	**12 57 26.8**	**-0.8**
	comp=Z,1.1nm,0.3s,baz=105,slow=12,SNR=1.1						
TIXI	**Tiksi**	**32.26**	**352**	⇑*e*P	**P**	**12 57 28.0**	**+0.3**
TIXI				pmax	pmax		
	comp=Z,10.0nm,2.3s						
GTA	**Gaotai**	**32.53**	**283**	*e*P	**P**	**12 57 31.0**	**+0.3**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KMI	**Kunming**	**36.33**	**258**	⇑P	**P**	**12 58 05.0**	**+1.2**
KMI				pP	sP	12 58 17.5	-2.1
KMI				pmax	pmax		
	comp=Z,18nm,0.9s						
DGZ	**Jazzator, Alta**	**39.28**	**303**	*c i*P	**P**	**12 58 29.1**	**+0.8**
DGZ				pmax	pmax		
	comp=Z,33nm,0.7s						
WMQ	**Urumqi**	**40.22**	**294**	*e*P	**P**	**12 58 36.0**	**-0.1**
WMQ				pmax	pmax		
	comp=Z,19nm,0.7s						
ZAA0	**Zalesovo Array**	**40.45**	**310**	P	**P**	**12 58 37.9**	**+0.2**
ZAA0				IAmb	IAmb	12 58 38.4	
	comp=Z,5.7nm,0.8s						
ZALV	**Zalesovo Beam**	**40.45**	**310**	P	**P**	**12 58 37.9**	**+0.1**
	comp=Z,5.5nm,0.5s,baz=92,slow=7.9,SNR=28						
ZALV				PcP	**PcP**	**13 00 40.0**	**+0.1**
	comp=Z,1.3nm,0.4s,baz=89,slow=3.6,SNR=3.8						
ZALV	**Zalesovo Beam**	**40.45**	**310**	P	**P**	**12 58 38.0**	**+0.3**
ZALV	**Zalesovo Beam**	**40.45**	**310**	P	**P**	**12 58 38.0**	**+0.3**
CNBA	**Chernabura Isl**	**40.58**	**49**	P	**P**	**12 58 42.9**	**+4.2**
NRIK	**Noril'sk**	**40.76**	**334**	P	**P**	**12 58 40.7**	**+0.6**
	comp=Z,2.2nm,0.3s,baz=38,slow=1.7,SNR=5.0						
NRIK				LR	LR	13 16 47.1	
	comp=Z,161nm,18.2s,baz=166,slow=38						
CHTO	**Chiang Mai**	**42.92**	**253**	P	**P**	**12 58 57.6**	**-0.8**
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CHTO	**Chiang Mai**	**42.92**	**253**	P	**P**	**12 58 57.6**	**-0.8**
CMAR	**Chiang Mai Arr**	**43.15**	**253**	P	**P**	**12 58 59.5**	**-0.7**
	comp=Z,0.9nm,0.3s,baz=49,slow=6.8,SNR=7.2						
CMAR	**Chiang Mai Arr**	**43.15**	**253**	*i* P	**P**	**12 59 00.6**	**+0.4**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CMAR	**Chiang Mai Arr**	**43.15**	**253**	P	**P**	**12 58 59.9**	**-0.3**
MK31	**Makanchi Array**	**43.20**	**299**	P	**P**	**12 59 00.4**	**+0.1**
MK31				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MK31	**Makanchi Array**	**43.20**	**299**	P	**P**	**12 59 00.4**	**+0.1**
MKAR	**Makanchi Array**	**43.20**	**299**	P	**P**	**12 59 00.2**	**-0.1**
	comp=Z,4.4nm,0.6s,baz=84,slow=10,SNR=36						
MKAR	**Makanchi Array**	**43.20**	**299**	P	**P**	**12 59 00.4**	**0.0**
MKAR	**Makanchi Array**	**43.20**	**299**	P	**P**	**12 59 00.3**	**0.0**
A21K	**Barrow**	**43.23**	**24**	P	**P**	**12 59 01.2**	**+1.0**
A21K				IAmb	IAmb	12 59 07.3	
	comp=Z,11nm,1.1s						
J20K	**Nowinta River**	**43.27**	**35**	P	**P**	**12 59 02.1**	**+1.6**
K20K	**Telida**	**43.27**	**36**	P	**P**	**12 59 02.5**	**+1.8**
K20K				IAmb	IAmb	12 59 03.5	
	comp=Z,12nm,1.1s						
MAKZ	**Makanchi**	**43.40**	**300**	P	**P**	**12 59 01.9**	**-0.1**
MAKZ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MAKZ	**Makanchi**	**43.40**	**300**	P	**P**	**12 59 01.9**	**-0.1**
MAKZ				IAmb	IAmb	12 59 05.8	
	comp=Z,6.7nm,0.8s						
IMAR	**Indian Mountai**	**43.53**	**32**	P	**P**	**12 59 04.4**	**+1.7**
KURK	**Kurchatov**	**44.68**	**306**	P	**P**	**12 59 12.5**	**+0.4**
KURK	**Kurchatov**	**44.68**	**306**	P	**P**	**12 59 11.8**	**-0.2**
KURBB	**Kurchatov Arra**	**44.76**	**306**	P	**P**	**12 59 12.5**	**-0.2**
	comp=Z,16nm,0.6s,baz=82,slow=8.6,SNR=81						
TOLK	**Toolik Lake Re**	**45.30**	**29**	P	**P**	**12 59 18.4**	**+1.6**
SML	**Sawmill**	**45.98**	**38**	P	**P**	**12 59 23.7**	**+1.4**
SML				IAmb	IAmb	12 59 36.0	
	comp=Z,19nm,1.2s						
PDGK	**Podgornoye**	**46.08**	**296**	P	**P**	**12 59 23.5**	**0.0**
POKR	**Poker Plat Res**	**46.15**	**33**	P	**P**	**12 59 25.4**	**+1.9**
POKR				IAmb	IAmb	12 59 39.1	
	comp=Z,6.7nm,0.9s						
HDA	**Harding Lake**	**46.40**	**34**	P	**P**	**12 59 25.8**	**+0.3**
IL31		**46.40**	**34**	P	**P**	**12 59 26.3**	**+0.8**
ILAR	**Eielson Array**	**46.40**	**34**	P	**P**	**12 59 26.4**	**+0.8**
	comp=Z,1.3nm,0.7s,baz=266,slow=5.8,SNR=18						
ILAR	**Eielson Array**	**46.40**	**34**	P	**P**	**12 59 26.0**	**+0.5**
TAPN	**Taplejung**	**46.60**	**272**	*e*P	**P**	**12 59 29.2**	**+1.3**
	comp=Z,8.7nm,0.4s						
ODAN	**Odare**	**47.09**	**271**	*e*P	**P**	**12 59 32.2**	**+0.5**
KLU	**Klutina**	**47.16**	**38**	P	**P**	**12 59 32.9**	**+1.3**
BMAR	**Burnt Mountain**	**47.18**	**30**	P	**P**	**12 59 33.5**	**+1.9**
JIRN	**Jiri**	**47.61**	**273**	*e*P	**P**	**12 59 36.4**	**+0.5**
	comp=Z,15nm,0.6s						
RAMN	**Ramite**	**47.65**	**272**	*e*P	**P**	**12 59 36.3**	**+0.2**
	comp=Z,8.7nm,0.3s						
SCRK	**Sand Creek**	**47.73**	**35**	P	**P**	**12 59 36.8**	**+0.7**
SCRK				IAmb	IAmb	12 59 36.9	
	comp=Z,4.6nm,1.0s						
DOT	**Dot Lake**	**47.74**	**35**	P	**P**	**12 59 36.0**	**0.0**
TARG	**Taragay, Kyrgy**	**47.79**	**294**	P	**P**	**12 59 37.3**	**+0.1**
TARG				IAmb	IAmb	12 59 54.8	
	comp=Z,5.5nm,0.6s						
KKN	**Kakani**	**48.24**	**274**	*e*P	**P**	**12 59 40.9**	**+0.3**
PKI	**Pulchoki**	**48.25**	**273**	*e*P	**P**	**12 59 40.7**	**-0.1**
	comp=Z,6.8nm,0.5s						
PKIN	**Phulchoki**	**48.26**	**273**	*e*P	**P**	**12 59 40.7**	**-0.1**
	comp=Z,5.1nm,0.3s						
L27K	**Beaver Creek,**	**48.82**	**36**	P	**P**	**12 59 45.8**	**+1.4**
BCAR	**Beaver Creek A**	**48.84**	**36**	P	**P**	**12 59 46.5**	**+1.9**
TKM2	**Tokmak 2**	**48.90**	**296**	*i* P	**P**	**12 59 45.5**	**0.0**
TKM2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
M27K	**Edge Creek, AK**	**48.92**	**37**	P	**P**	**12 59 45.5**	**+0.2**
M27K				IAmb	IAmb	13 00 07.8	
	comp=Z,15nm,1.4s						
BVAR	**Borovoye Array**	**49.09**	**310**	P	**P**	**12 59 46.7**	**+0.2**
	comp=Z,11nm,0.4s,baz=153,slow=4.1,SNR=84						
DANN	**Dangsing**	**49.12**	**275**	*e*P	**P**	**12 59 47.8**	**+0.4**
	comp=Z,83nm,0.5s						
BRVK	**Borovoye**	**49.14**	**311**	P	**P**	**12 59 47.5**	**+0.6**
BRVK				pmax	pmax		
	comp=Z,12nm,1.1s						
BRVK	**Borovoye**	**49.14**	**311**	P	**P**	**12 59 47.5**	**+0.6**
BRVK				IAmb	IAmb	12 59 47.9	
	comp=Z,12nm,1.1s						
OTUK	**Ortayu**	**49.28**	**304**	P	**P**	**12 59 47.6**	**-0.5**
KOLN	**Koldanda**	**49.53**	**275**	*e*P	**P**	**12 59 50.4**	**-0.1**
	comp=Z,14nm,0.5s						
AAK	**Ala-Archa**	**49.76**	**296**	P	**P**	**12 59 51.6**	**-0.4**
	comp=Z,1.0nm,0.3s,baz=95,slow=4.1,SNR=7.1						
AAK	**Ala-Archa**	**49.76**	**296**	P	**P**	**12 59 52.2**	**+0.2**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AAK	**Ala-Archa**	**49.76**	**296**	P	**P**	**12 59 52.2**	**+0.2**
PYUN	**Piuthan**	**49.83**	**275**	*e*P	**P**	**12 59 52.7**	**-0.1**
	comp=Z,19nm,0.4s						
KSH	**Kashi**	**49.91**	**292**	P	**P**	**12 59 56.5**	**+3.3**
KSH				pP	sP	13 00 08.0	-1.3
KSH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KULM	**Kulim**	**51.14**	**238**	P	**P**	**13 00 03.5**	**+1.0**
INK	**Inuvik**	**51.21**	**28**	P	**P**	**13 00 03.2**	**+0.9**
	comp=Z,3.0nm,0.7s,baz=299,slow=5.9,SNR=17						
INK	**Inuvik**	**51.21**	**28**	P	**P**	**13 00 03.4**	**+1.1**
INK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
INK	**Inuvik**	**51.21**	**28**	P	**P**	**13 00 03.4**	**+1.1**
INK				IAmb	IAmb	13 00 22.3	
	comp=Z,6.8nm,1.2s						
KKAR	**Karatay Array**	**52.29**	**298**	P	**P**	**13 00 11.0**	**+0.2**
KKAR	**Karatay Array**	**52.29**	**298**	P	**P**	**13 00 10.9**	**+0.2**
A36M	**Sachs Harbour**	**53.02**	**23**	P	**P**	**13 00 16.9**	**+1.2**
A36M				IAmb	IAmb	13 00 25.1	
	comp=Z,6.1nm,0.9s						
SVE	**Sverdlovsk**	**53.34**	**317**	*e*P	**P**	**13 00 18.9**	**+0.6**
SVE				pmax	pmax		
	comp=Z,28nm,0.8s						
NIL	**Nilore**	**54.44**	**287**	P	**P**	**13 00 25.9**	**-0.9**
NIL				pmax	pmax		
	comp=Z,12nm,0.8s						
NIL	**Nilore**	**54.44**	**287**	P	**P**	**13 00 25.9**	**-0.9**
ARU	**Arti**	**54.56**	**317**	P	**P**	**13 00 27.2**	**0.0**
	comp=Z,4.4nm,0.6s,baz=79,slow=4.1,SNR=25						
ARU	**Arti**	**54.56**	**317**	*c i*P	**P**	**13 00 27.5**	**+0.3**
ARU				*PP	**sP**	**13 00 42.7**	**-0.6**
ARU				S	**S**	**13 08 03.6**	**+0.1**
ARU				SS	**SS**	**13 11 44.5**	**-1.3**
ARU				pmax	pmax		
	comp=Z,16nm,0.7s						
ARU	**Arti**	**54.56**	**317**	P	**P**	**13 00 27.4**	**+0.2**
CHGR	**Chuyangaron**	**55.08**	**294**	P	**P**	**13 00 31.2**	**-0.2**
AB31	**Akbulak array**	**56.55**	**309**	P	**P**	**13 00 41.5**	**-0.1**
ABKAR	**Akbulak array**	**56.55**	**309**	P	**P**	**13 00 41.6**	**-0.1**
RSD	**Rainshed**	**56.69**	**92**	P	**P**	**13 00 46.6**	**+3.5**
EUNU	**Eureka**	**56.94**	**9**	P	**P**	**13 00 44.1**	**+0.1**
EUNU				IAmb	IAmb	13 00 44.6	
	comp=Z,3.6nm,0.8s						
KNRA	**Kununurra**	**57.03**	**196**	P	**P**	**13 00 45.2**	**-0.1**
KNRA				IAmb	IAmb	13 00 59.1	
	comp=Z,12nm,1.1s						
KBL	**Kabul**	**57.08**	**290**	P	**P**	**13 00 45.3**	**-0.6**
KBL				pmax	pmax		
	comp=Z,20nm,0.9s						
KBL	**Kabul**	**57.08**	**290**	P	**P**	**13 00 45.3**	**-0.6**
AKTO	**Aktyubinsk**	**57.19**	**311**	P	**P**	**13 00 46.1**	**-0.1**
	comp=Z,7.5nm,0.6s,baz=74,slow=7.7,SNR=23						
KIRV	**Kirov**	**58.23**	**322**	P	**P**	**13 00 53.9**	**+0.6**
	comp=Z,19nm,0.5s,baz=40,slow=2.9,SNR=4.3						
RES	**Resolute Bay**	**59.34**	**15**	P	**P**	**13 01 00.6**	**-0.1**
	comp=Z,1.9nm,0.5s,baz=313,slow=5.5,SNR=11						
RES	**Resolute Bay**	**59.34**	**15**	P	**P**	**13 01 00.9**	**+0.2**
RES				pmax	pmax		
	comp=Z,7.0nm,1.3s						
RES	**Resolute Bay**	**59.34**	**15**	P	**P**	**13 01 00.9**	**+0.2**
RES				IAmb	IAmb	13 01 28.7	
	comp=Z,7.1nm,1.3s						
WB0	**Warramunga Arr**	**60.13**	**189**	P	**P**	**13 01 05.9**	**-0.9**
WB0				IAmb	IAmb	13 01 20.1	
	comp=Z,4.6nm,0.7s						
WRAB	**Tennant Creek**	**60.30**	**189**	⇑*e*P	**P**	**13 01 07.5**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,6.0nm,1.1s						
WR0	**Warramunga Arr**	**60.30**	**189**	P	**P**	**13 01 07.1**	**-0.9**
WR0				IAmb	IAmb	13 01 22.6	
	comp=Z,9.8nm,1.5s						
WB2	**Warramunga Arr**	**60.31**	**189**	P	**P**	**13 01 07.2**	**-0.8**
WB2				IAmb	IAmb	13 01 21.4	
	comp=Z,3.8nm,0.8s						
WRA	**Warramunga Arr**	**60.31**	**189**	P	**P**	**13 01 06.9**	**-1.1**
	comp=Z,1.3nm,0.6s,baz=7.8,slow=6.8,SNR=12						
WRA	**Warramunga Arr**	**60.31**	**189**	P	**P**	**13 01 06.0**	**-2.1**
WRA	**Warramunga Arr**	**60.31**	**189**	P	**P**	**13 01 06.0**	**-2.1**
YKA	**Yellowknife Ar**	**60.67**	**31**	P	**P**	**13 01 10.1**	**0.0**
	comp=Z,0.6nm,0.8s,baz=312,slow=4.9,SNR=2.2						
ARCES	**ARCESS Array B**	**61.33**	**339**	P	**P**	**13 01 14.3**	**-0.1**
	comp=Z,2.9nm,0.8s,baz=48,slow=7.2,SNR=9.7						
ARCES	**ARCESS Array B**	**61.33**	**339**	IAmb	IAmb	13 01 15.8	
	comp=Z,9.4nm,1.2s						
KLMR	**Klimovskoe**	**61.53**	**327**	*e*P	**P**	**13 01 15.5**	**-0.3**
KLMR				pmax	pmax		
	comp=Z,18nm,1.2s						
KLMR	**Klimovskoe**	**61.53**	**327**	*e*P	**P**	**13 01 15.6**	**-0.3**
KLMR				AMP		13 01 17.3	
	comp=Z,18nm,1.2s						
BELG	**Belogornoye**	**62.06**	**316**	P	**P**	**13 01 19.8**	**+0.2**
	comp=Z,18nm,0.7s,baz=347,slow=2.7,SNR=5.6						
GEYT	**Alibeck**	**63.04**	**298**	P	**P**	**13 01 26.4**	**-0.1**
	comp=Z,3.4nm,0.5s,baz=46,slow=13,SNR=4.3						
ASAR	**Alice Springs**	**64.03**	**189**	P	**P**	**13 01 32.1**	**-0.9**
	comp=Z,1.0nm,0.8s,baz=9.4,slow=6.2,SNR=11						
OBN	**Obninsk**	**66.06**	**323**	⇓*e*P	**P**	**13 01 46.2**	**+0.4**
OBN				*e**PP	**sP**	**13 02 01.4**	**-0.5**
OBN						13 02 14.0	
OBN				pmax	pmax		
	comp=Z,13nm,1.2s						
OBN				MLR	MLR		
	comp=Z,122nm,16.0s						
FIA1	**FINESS Array S**	**66.40**	**332**	P	**P**	**13 01 48.9**	**+1.0**
FINES	**FINESS Array B**	**66.40**	**332**	P	**P**	**13 01 48.1**	**+0.2**
	comp=Z,7.2nm,0.7s,baz=37,slow=6.9,SNR=15						
FINES				LR	LR	13 32 43.9	
	comp=Z,109nm,18.5s,baz=72,slow=38						
SUMG	**Summit**	**67.52**	**0**	P	**P**	**13 01 56.4**	**+1.1**
SUMG				pmax	pmax		
	comp=Z,10.0nm,1.5s						
SUMG	**Summit**	**67.52**	**0**	P	**P**	**13 01 56.4**	**+1.1**
SUMG				IAmb	IAmb	13 02 03.9	
	comp=Z,10nm,1.5s						
PINE	**Pine Mountain**	**67.69**	**51**	P	**P**	**13 01 59.0**	**+2.3**
PINE				IAmb	IAmb	13 02 12.4	
	comp=Z,7.4nm,1.2s						
YBH	**Yreka Blue Hor**	**67.79**	**54**	P	**P**	**13 01 58.8**	**+1.6**
YBH				pmax	pmax		
	comp=Z,4.0nm,1.1s						
YBH	**Yreka Blue Hor**	**67.79**	**54**	P	**P**	**13 01 58.8**	**+1.6**
YBH				IAmb	IAmb	13 02 17.5	
	comp=Z,4.2nm,1.1s						
K05A	**Summer Lake**	**68.33**	**52**	P	**P**	**13 02 02.0**	**+1.3**
K05A				IAmb	IAmb	13 02 21.9	
	comp=Z,5.4nm,1.1s						
ZEI	**Tsey**	**69.43**	**309**	*e*P	**P**	**13 02 06.5**	**-1.0**
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KIV	**Kislovodsk**	**69.46**	**311**	*e*P	**P**	**13 02 08.9**	**+1.3**
KIV				pmax	pmax		
	comp=Z,18nm,1.0s						
KIV				MLR	MLR		
	comp=Z,35nm,17.0s						
KIV	**Kislovodsk**	**69.46**	**311**	P	**P**	**13 02 08.2**	**+0.7**
KBZ	**Khabaz**	**69.47**	**310**	P	**P**	**13 02 07.9**	**+0.4**
	comp=Z,5.3nm,0.7s,baz=21,slow=3.7,SNR=11						
KBZ	**Khabaz**	**69.47**	**310**	*ce*P	**P**	**13 02 08.1**	**+0.6**
KBZ				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ONI	**Oni**	**69.81**	**309**	P	**P**	**13 02 10.0**	**+0.3**
ONI				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ONI	**Oni**	**69.81**	**309**	P	**P**	**13 02 10.0**	**+0.3**
ONI				IAmb	IAmb	13 02 11.7	
	comp=Z,7.5nm,0.9s						
MNK	**Minsk**	**70.33**	**326**	*i* P	**P**	**13 02 12.5**	**-0.1**
MNK				*i* *PP	**sP**	**13 02 29.0**	**+0.1**
MNK				*i*		13 04 48.4	
MNK				*i* PPP	PPP	13 06 31.0	
MNK				*i* S	**S**	**13 11 20.4**	**-1.3**
MNK				*i* *SS	**SKiKP**	**13 11 48.5**	**-5.2**
MNK				*i* SS	**SS**	**13 15 52.3**	**+0.5**
MNK				pmax	pmax		
	comp=N,21nm,1.0s						
MNK				pmax	pmax		
	comp=Z,21nm,1.0s						
MNK				pmax	pmax		
	comp=E,3.0nm,1.0s						
MNK				MLR	MLR		
	comp=N,619nm,19.0s						
MNK				MLR	MLR		
	comp=E,150nm,12.0s						
MNK				MLR	MLR		
	comp=Z,167nm,15.0s						
MNK	**Minsk**	**70.33**	**326**	*i* P	**P**	**13 02 12.6**	**0.0**
	comp=E,3.0nm,1.0s						
MNK				*i* P	**P**	**13 02 12.6**	**0.0**
	comp=N,21nm,1.0s						
MNK				*i* P	**P**	**13 02 12.6**	**0.0**
	comp=Z,21nm,1.0s,baz=48						
MNK				*i* pP	**sP**	**13 02 29.0**	**+0.2**
MNK				*i* PP	**PP**	**13 04 48.4**	**+0.4**
MNK				*i* PPP	PPP	13 06 31.1	
MNK				*i* S	**S**	**13 11 20.4**	**-1.3**
MNK				*i* sS	**SKiKP**	**13 11 48.6**	**-5.2**
MNK				*i* SS	**SS**	**13 15 52.3**	**+0.6**
MNK				*i* SSS	SSS	13 19 10.8	
MNK				*i* LQ	LQ	13 28 17.3	
MNK				*i* LR	LR	13 32 25.3	
MNK				*i* LRM	MLR	13 34 35.0	
	comp=N,619nm,19.1s						
MNK				*i* LRM	MLR	13 34 36.9	
	comp=E,150nm,12.1s						
MNK				*i* LRM	MLR	13 34 38.2	
	comp=Z,167nm,15.3s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NC204	NORSAR Array S	71.53	338	P	P	13 02 20.2	+0.4
NB201	NORSAR Array S	71.55	337	P	P	13 02 20.1	+0.2
NB2	NORSAR Subarra	71.58	337	P	P	13 02 20.2	+0.1
	comp=Z,1.8nm,0.7s,baz=37,slow=6.2						
NOA	NORSAR Array B	71.58	337	P	P	13 02 19.6	-0.6
	comp=Z,4.0nm,0.8s,baz=38,slow=5.9,SNR=10						
NOA				LR	LR	13 36 30.4	
	comp=Z,43nm,21.6s,baz=325,slow=38						
UOSS	Minazif	71.63	287	P	P	13 02 21.1	+0.1
UOSS				IAmb	IAmb	13 02 21.5	
	comp=Z,7.7nm,0.7s						
AKASG	Malin Array Be	72.29	322	P	P	13 02 24.2	-0.3
	comp=Z,3.3nm,0.7s,baz=44,slow=6.1,SNR=8.3						
AKASG	Malin Array Be	72.29	322	IAmb	IAmb	13 02 25.1	
	comp=Z,4.3nm,1.2s						
AKBB	Malin Array Si	72.30	322	⇑*i*P	P	13 02 24.2	-0.3
AKBB				pmax	pmax		
	comp=Z,6.0nm,0.8s						
AKBB	Malin Array Si	72.30	322	P	P	13 02 23.9	-0.6
AKBB				IAmb	IAmb	13 02 24.8	
	comp=Z,5.7nm,0.8s						
NVAR	Mina Array Bea	72.46	54	P	P	13 02 26.0	-0.1
	comp=Z,0.2nm,0.6s,baz=278,slow=6.1						
PDAR	Pinedale Array	74.88	47	P	P	13 02 40.1	0.0
	comp=Z,0.3nm,0.6s,baz=0.9,slow=1.2,SNR=4.4						
BUR08	Bucovina Ar. S	76.32	322	P	P	13 02 47.1	-1.1
BUR08				IAmb	IAmb	13 03 14.5	
	comp=Z,8.8nm,1.3s						
BRTR	Keskin Array B	77.36	312	P	P	13 02 54.0	-0.2
	comp=Z,1.0nm,0.6s,baz=46,slow=3.6,SNR=5.1						
BRTR	Keskin Array B	77.36	312	*i* P	P	13 02 54.5	+0.3
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
DPC	Dobruska-Polom	78.21	328	*e*P	P	13 02 59.6	+1.0
DPC	Dobruska-Polom	78.21	328	*e*P	P	13 02 59.6	+1.0
KHC	Kasperske Hory	80.27	329	*e*P	P	13 03 10.4	+0.5
KHC				*e*pP	sP	13 03 23.1	-3.2
KHC	Kasperske Hory	80.27	329	*e*P	P	13 03 10.4	+0.5
KHC				*e*		13 03 23.1	
GERES	GERESS Array B	80.44	329	P	P	13 03 10.9	+0.1
	comp=Z,0.9nm,0.6s,baz=46,slow=7.6,SNR=6.7						
GERES	GERESS Array B	80.44	329	P	P	13 03 11.0	+0.1
TXAR	Lajitas Array	87.56	53	P	P	13 03 48.1	+0.6
	comp=Z,0.1nm,0.6s,baz=278,slow=6.3,SNR=1.9						
ESDC	Sonseca Array	94.80	335	P	P	13 04 20.4	-0.5
	comp=Z,0.5nm,0.7s,baz=29,slow=2.9,SNR=2.7						
VNA2	Neumayer--Watz	145.58	197	PKPdf	PKPdf	13 10 36.1	0.0
	baz=110,slow=0.7						
VNA3	Neumayer Olymp	145.83	196	PKPdf	PKPdf	13 10 36.1	-0.3
VNA1	Neumayer--Stat	145.98	197	PKPdf	PKPdf	13 10 36.1	-0.5

*NEIC **27** 13:16:44.9±0.9, 19°.9S±0°.2×175°.4W±0°.1, h247^{km}±11^{km}, mb4.3/20 Error ellipse: s-maj=24.1km s-min=15.6km az=200.0*

*IDC **27** 13:16:47.0±2.9, 20°.07S×175°.80W, h250^{km}±25^{km}, mb3.4/5, mb1 3.8/7, mb1mx3.5/34, mbtmp4.2/7, Error ellipse: s-maj=25.1km s-min=20.2km az=113.0*

ISC 27 13:16:47.1±0.8**, 20°.17S**±0°.07×**175°.8W**±0°.1**, h250**^{km}**, n72, σ1^{s}.33**/79**, mb4.3**/15**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	5.60	80	Pn	Pn	13 18 03.4	-6.9
MSVF	Nonsavu	6.34	291	P	Pn	13 18 19.3	-0.4
	3.1nm,0.3s,baz=291,slow=23,SNR=15						
MSVF	Nonsavu	6.34	291	Pn	Pn	13 18 19.7	0.0
GLKZ	Green Lake	9.27	192	S	S	13 20 37.6	-3.4
PINNC	Pines Island,	15.83	258	P	Pn	13 20 18.7	+1.4
DZM	Mont Dzumac	16.72	260	P	Pn	13 20 28.7	+0.9
	2.2nm,0.3s,baz=91,slow=20,SNR=26						
DZM	Mont Dzumac	16.72	260		Pn	13 20 28.6	+0.7
OUZ	Omahuta	17.69	210	P	Pn	13 20 38.9	-0.1
PKGZ	Pakihiroa	18.45	196	P	P	13 20 46.7	+2.1
PKGZ				S	S	13 24 00.0	-1.8
PUZ	Puketiti	18.58	195	P	Pn	13 20 48.8	-0.7
PUZ				S	S	13 24 00.9	-3.5
EPAZ	Eden Park BICE	18.60	205	P	Pn	13 20 49.8	+0.1
TWGZ	Tauwhareparae	18.75	196	P	Pn	13 20 52.1	+0.6
TWGZ				S	S	13 24 08.0	+0.3
OPRZ	Ohinepanea	18.84	199	P	Pn	13 20 53.1	+0.6
MWZ	Matawai	19.02	196	P	Pn	13 20 53.5	-1.1
MWZ				S	S	13 24 13.6	+0.7
TKGZ	Te Karaka	19.03	196	P	Pn	13 20 53.7	-1.0
TKGZ				S	S	13 24 12.2	-1.0
KMRZ	Kaimai	19.04	201	P	Pn	13 20 55.0	+0.1
URZ	Urewera	19.06	197	P	P	13 20 51.6	+0.6
	6.9nm,0.3s,baz=300,slow=23,SNR=25						
URZ	Urewera	19.06	197	P	P	13 20 51.6	+0.6
URZ				S	S	13 24 12.6	-1.1
URZ	Urewera	19.06	197	P	P	13 20 52.6	+1.5
KARZ	Kaharoa	19.10	200	P	Pn	13 20 55.5	-0.1
OMRZ	Omania	19.14	199	P	Pn	13 20 56.0	0.0
UTU	Utuhina	19.26	200	P	Pn	13 20 58.4	+1.0
HLRZ	Highlands Stat	19.28	199	P	Pn	13 20 57.3	-0.3
RRRZ	Republican Roa	19.31	199	P	Pn	13 20 57.8	-0.2
HSRZ	Hossack Road	19.36	199	P	Pn	13 20 58.2	-0.4
HRRZ	Handcock Road	19.43	199	P	Pn	13 20 58.0	-1.4
SNGZ	Shannon Statio	19.49	196	P	P	13 20 55.2	-0.5
SNGZ				S	S	13 24 23.7	+1.6
PRRZ	Plateau Road	19.49	199	P	P	13 20 58.6	+2.9
KNZ	Kokohu	19.63	195	P	P	13 20 59.9	+2.9
RAHZ	Arahi	19.68	197	P	P	13 20 59.3	+1.6
MTHZ	Maungataniwha	19.69	197	P	P	13 20 58.2	+0.4
NMHZ	Naumai	19.93	197	P	P	13 21 03.7	+3.3
BKZ	Black Stump Fm	20.08	198	P	P	13 21 03.1	+1.1
MCHZ	McNeill Hill	20.28	197	P	P	13 21 06.8	+2.7
KWHZ	Kaweka Forest	20.34	198	P	P	13 21 05.6	+0.8
BHHZ	Black Hill Sta	20.50	198	P	P	13 21 05.5	-1.1
KRHZ	Kereru	20.56	198	P	P	13 21 08.3	+1.3
KAHZ	Kahuranaki	20.56	196	P	P	13 21 09.6	+2.5
PXZ	Pawanui	20.79	196	P	P	13 21 11.3	+1.9
PNHZ	Pukenui	20.86	198	P	P	13 21 12.1	+1.9
WPHZ	Waipukurau	20.93	197	P	P	13 21 12.3	+1.4
PRHZ	Porangahau	21.07	196	P	P	13 21 15.1	+2.8
BFZ	Birch Farm	21.56	197	P	P	13 21 18.0	+1.0
EIDS	Eidsvold	30.96	254	P	P	13 22 42.3	+1.0
EIDS				IAmb	IAmb	13 22 47.2	
	comp=Z,22nm,1.4s						
CTAO	Charters Tower	35.62	263	P	P	13 23 21.9	+0.3
TOO	Toolangi	37.79	234	P	P	13 23 40.5	+0.8
TOO				IAmb	IAmb	13 23 57.4	
	comp=Z,20nm,1.4s						
COEN	Coen	39.67	272	P	P	13 23 55.5	0.0
COEN				IAmb	IAmb	13 24 09.5	
	comp=Z,6.7nm,1.2s						
STKA	Stephens Creek	39.83	244	P	P	13 23 56.9	+0.3
	comp=Z,1.0nm,0.3s,baz=98,slow=9.8,SNR=4.0						
BBOO	Buckleboo	44.58	243	P	P	13 24 34.1	-0.7
BBOO				IAmb	IAmb	13 24 53.9	
	comp=Z,28nm,1.4s						
WR0	Warramunga Arr	46.54	261	P	P	13 24 50.2	-0.1
AS31	Alice Springs	46.64	256	P	P	13 24 51.5	+0.4
ASAR	Alice Springs	46.64	256	P	P	13 24 50.9	-0.2
	comp=Z,5.5nm,0.8s,baz=98,slow=8.1,SNR=67						
ASAR				PcP	PcP	13 26 20.8	+0.2
	comp=Z,1.9nm,0.7s,baz=111,slow=3.4,SNR=12						
ASAR	Alice Springs	46.64	256	P	P	13 24 51.0	0.0
WB0	Warramunga Arr	46.71	261	P	P	13 24 51.2	-0.4
WB2	Warramunga Arr	46.72	261	P	P	13 24 51.2	-0.5
WB2				IAmb	IAmb	13 25 04.2	
	comp=Z,10nm,1.5s						
WRAB	Tennant Creek	46.72	261	P	P	13 24 51.7	0.0
WRA	Warramunga Arr	46.73	261	P	P	13 24 50.6	-1.1
	comp=Z,1.1nm,0.4s,baz=97,slow=7.6,SNR=30						
WRA				PcP	PcP	13 26 21.0	+0.1
	comp=Z,1.4nm,0.8s,baz=90,slow=3.7,SNR=7.3						
WRA	Warramunga Arr	46.73	261	P	P	13 24 51.1	-0.7
MTN	Manton Dam	51.27	269	P	P	13 25 26.0	-0.1
MTN				IAmb	IAmb	13 25 36.2	
	comp=Z,14nm,1.2s						
FORT	Forrest	51.36	246	P	P	13 25 26.6	+0.1
FORT				IAmb	IAmb	13 25 34.3	
	comp=Z,21nm,1.1s						
KNRA	Kununurra	52.78	265	P	P	13 25 36.4	-0.9
KNRA				IAmb	IAmb	13 26 01.4	
	comp=Z,18nm,1.3s						
SOEI	Soe	58.60	271	P	P	13 26 17.9	-0.8
PSA00	Pilbara Seismi	59.79	256	P	P	13 26 25.5	-1.1
PSA00				IAmb	IAmb	13 26 41.1	
	comp=Z,17nm,1.1s						
QSPA	South Pole Qui	69.90	180	P	P	13 27 32.6	+1.6
QSPA				IAmb	IAmb	13 27 34.9	
	comp=Z,6.2nm,1.1s						
TXAR	Lajitas Array	85.11	57	P	P	13 28 55.7	+0.2
	comp=Z,0.9nm,0.9s,baz=214,slow=6.0,SNR=7.6						
ILAR	Eielson Array	87.54	12	P	P	13 29 04.0	-2.2
	comp=Z,0.2nm,0.5s,baz=210,slow=5.7,SNR=5.0						
VNA3	Neumayer Olymp	88.32	176	P	P	13 29 11.1	+1.0
VNA2	Neumayer--Watz	88.79	176	P	P	13 29 13.6	+1.3
AKASG	Malin Array Be	143.71	333	PKhKP	PKPpre	13 35 45.9	
	comp=Z,0.4nm,0.3s,baz=40,slow=3.5,SNR=2.8						
BRTR	Keskin Array B	148.15	314	PKPbc	PKPbc	13 36 02.8	-1.0
	comp=Z,0.9nm,0.7s,baz=141,slow=1.8,SNR=4.2						
CLL	Collm	148.17	350	*e*PKPbc	PKPbc	13 36 03.0	-0.3
GERES	GERESS Array B	150.40	347	PKPbc	PKPbc	13 36 08.8	-0.2
	comp=Z,1.7nm,0.7s,baz=32,slow=3.3,SNR=12						

IDC 27 13:29:52.0±6.8**, 7°.29S**×**120°.37E, h568**^{km}±119^{km}**, mb2.4**/2**, mb1 2.6**/4**, mb1mx2.2**/34**, mbtmp3.4**/4**, Error ellipse: s-maj=224.6km s-min=32.8km az=48.0, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.91	155	P	P	13 32 29.8	+0.1
	0.1nm,0.3s,baz=339,slow=12,SNR=7.9						
WRA	Warramunga Arr	18.49	134	P	P	13 33 33.6	-0.1
	0.2nm,0.3s,baz=312,slow=7.8,SNR=8.7						
ASAR	Alice Springs	20.84	143	P	P	13 33 54.9	-0.1
	0.1nm,0.3s,baz=320,slow=8.4,SNR=6.1						
MKAR	Makanchi Array	63.58	332	P	P	13 39 27.6	0.0
	0.7nm,0.9s,baz=147,slow=6.7,SNR=3.4						

IDC 27 13:46:00.4±2.1**, 0°.64N**×**125°.39E, h0**^{km}**, mb3.3**/3**, mb1 3.6**/3**, mb1mx3.4**/24**, mbtmp3.4**/3**, Error ellipse: s-maj=191.2km s-min=27.8km az=64.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.26	157	P	P	13 50 58.6	-0.6
	0.9nm,0.5s,baz=335,slow=11,SNR=14						
ASAR	Alice Springs	25.54	162	P	P	13 51 31.5	+0.4
	0.3nm,0.5s,baz=344,slow=8.9,SNR=10						
MKAR	Makanchi Array	59.36	327	P	P	13 56 04.4	-0.1
	0.2nm,0.5s,baz=116,slow=6.9,SNR=2.6						

*REN **27** 13:52:29.4±2.4, 37°.42N±0°.03×117°.10W±0°.03, h14^{km}±2^{km}, ML2.5/11, ML2.4/54(NEIC), Error ellipse: s-maj=4.9km s-min=3.2km az=219.0*

NEIC 27 13:52:29.2±1.7**, 37°.42N**±0°.03×**117°.07W**±0°.03**, h9**^{km}±9^{km}**, Error ellipse: s-maj=5.0km s-min=3.8km az=193.0, California-Nevada border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCH	Last Change Ra	0.49	249		Pg	13 52 38.9	+0.1
TPH	Tonopah	0.67	349		Pg	13 52 42.3	+0.1
TPH					Sg	13 52 51.5	+0.5
DSP	Deep Springs	0.72	267		Pg	13 52 43.1	0.0
POCCA	Poleta Canyon	0.97	267		Pg	13 52 47.7	-0.1
MLNR	Milner Canyon	1.03	280		Pg	13 52 48.9	-0.1
S11A	Rachel	1.07	77		Pn	13 52 51.3	+0.8
GWY	Greenwater Val	1.27	165		Pn	13 52 52.8	-0.4
ORC	Owens River	1.28	280		Pb	13 52 53.7	+0.1
RCCR	Rock Creek Can	1.32	274		Pg	13 52 54.6	0.0
LHV	Little Huntoon	1.41	307		Pn	13 52 55.3	+0.3
LHV				IAML		13 53 18.0	
	comp=E,68nm,0.6s						
LHV				IAML		13 53 22.1	
	comp=N,68nm,0.6s						
QSM	Queen of Sheba	1.46	174		Pb	13 52 56.4	0.0
QSM				IAML		13 53 19.5	
	comp=E,40nm,0.4s						
QSM				IAML		13 53 21.9	
	comp=N,51nm,0.5s						
R11A	Troy Canyon, C	1.50	51		Pn	13 52 56.7	+0.3
MDPB	Devils Postpil	1.61	278		Pb	13 52 59.1	-0.2
RYN	Ryan	1.67	317		Pb	13 52 59.9	-0.3
RYN				IAML		13 53 25.5	
	comp=E,39nm,4.2s						
RYN				IAML		13 53 26.2	
	comp=N,51nm,0.3s						
SHPR	Sheep Range	1.78	120	Pn	Pb	13 53 01.5	-0.6
KVN	Kaiserville	1.82	334		Pb	13 53 02.2	-0.7
KVN				IAML		13 53 29.2	
	comp=E,44nm,0.5s						
KVN				IAML		13 53 31.3	
	comp=N,30nm,0.6s						
ISA	Isabella, Lake	2.08	213		Pn	13 53 04.4	+0.1
GSC	Goldstone, Bar	2.12	174		Pn	13 53 05.3	+0.5
GSC				IAML		13 53 39.4	
	comp=N,31nm,0.6s						
YERR	Yerington	2.32	313		Pn	13 53 08.2	+0.5
YERR				IAML		13 53 46.2	
	comp=N,16nm,0.4s						
YERR				IAML		13 53 52.3	
	comp=E,15nm,0.8s						
ICU	Indian Springs	2.52	95		Pb	13 53 13.8	-0.9
PNTR	Pine Nut	2.60	311	Pn	Pn	13 53 09.9	-1.7
PNTR				IAML		13 54 03.9	
	comp=N,15nm,4.5s						
PNTR				IAML		13 54 23.1	
	comp=E,11nm,3.3s						
SPR3	Spring Creek 3	2.67	53		Pn	13 53 12.2	-0.5
SPR3				IAML		13 53 53.0	
	comp=E,17nm,1.0s						
CMB	Columbia Colle	2.70	284	Pn	Pn	13 53 10.9	-2.0
VCNR	Virginia City	2.77	314		Pn	13 53 13.3	-0.6
VCNR				IAML		13 54 00.1	
	comp=E,12nm,2.2s						
VCNR				IAML		13 54 02.9	
	comp=N,11nm,3.8s						
PSUT	Pine Spring	2.77	65		Pn	13 53 12.8	-1.2
PSUT				IAML		13 53 58.3	
	comp=E,18nm,0.5s						
PSUT				IAML		13 53 59.6	
	comp=N,17nm,0.4s						
PAHR	Pah Rah Range	2.92	322	Pn	Pn	13 53 14.0	-2.0
PAHR				IAML		13 54 49.8	
	comp=N,8.3nm,4.5s						
LCMT	Little Creek M	3.08	96		Pn	13 53 17.1	-1.1
LCMT				IAML		13 54 16.7	
	comp=E,7.3nm,4.1s						
KNB	Kanab	3.41	95		Pn	13 53 22.1	-0.7
KNB				IAML		13 53 56.3	
	comp=N,8.0nm,3.8s						
KNB				IAML		13 54 12.1	
	comp=E,8.2nm,4.7s						
W13A	Hualapai Mount	3.46	131		Pn	13 53 22.9	-0.5
W13A				IAML		13 54 19.4	
	comp=N,7.1nm,3.2s						
W13A				IAML		13 54 31.6	
	comp=E,7.4nm,3.2s						
ELK	Elko	3.62	23	Pn	Pn	13 53 24.4	-1.2
ELK				IAML		13 54 25.8	
	comp=E,5.6nm,0.8s						
U15A	North Rim	3.95	103		Pn	13 53 29.1	-1.2
U15A				IAML		13 55 47.3	
	comp=E,6.7nm,4.0s						

IDC 27 14:18:56.9±2.1**, 19°.73S**×**177°.14W, h0**^{km}**, mb3.8**/4**, mb1 4.0**/4**, mb1mx3.8**/33**, mbtmp3.8**/4**, Error ellipse: s-maj=176.8km s-min=34.0km az=158.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.85	243	P	P	14 26 22.2	-1.7
	1.2nm,0.6s,baz=100,slow=6.1,SNR=2.0						
ASAR	Alice Springs	45.49	256	P	P	14 27 19.8	+1.5
	2.2nm,0.7s,baz=88,slow=8.7,SNR=38						
WRA	Warramunga Arr	45.51	261	P	P	14 27 17.8	-0.7
	0.3nm,0.4s,baz=95,slow=8.1,SNR=15						
TXAR	Lajitas Array	85.96	57	P	P	14 31 39.4	0.0
	0.2nm,0.7s,baz=224,slow=7.6,SNR=2.4						

*IDC **27** 14:22:28.6±2.7, 30°.68S×71°.82W, h0^{km}, mb3.8/1, mb1 3.7/3, mb1mx3.6/22, mbtmp3.6/3, ML3.5/2, Error ellipse: s-maj=127.7km s-min=39.8km az=94.0*

*GUC **27** 14:22:29.7±0.6, 30°.62S×72°.12W, h26^{km}±8^{km}, ML3.8*

ISC 27 14:22:29.3±2.1**, 30°.62S**±0°.04×**72°.1W**±0°.1**, h11**^{km}±13^{km}**, n23, σ1^{s}.27**/27**, 2C-2D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.41	98	⇓*i*P	Pg	14 22 38.1	+0.8
CO05	La Serena	1.02	47	*e*P	Pb	14 22 48.1	-0.8
CO05				*e*S	Sb	14 23 01.8	-0.6
CO05				IAML		14 23 13.3	
	comp=E,2µm,0.5s						
GO04	Tololo Observa	1.21	69	*e*P	Pn	14 22 51.3	-1.0
GO04				*e*S	Sb	14 23 07.6	-0.5
LCO	Las Campanas	2.01	38	⇑*i*P	Pn	14 23 02.7	-0.6
LCO				*e*S	Sn	14 23 27.5	-1.2
VA06	Catapilco	2.06	161	*e*P	Pn	14 23 03.5	-0.3
VA06				*e*S	Sb	14 23 32.5	+0.4
VA06				IAML		14 23 41.8	
	comp=N,1µm,0.5s						
VA03	San Esteban	2.52	149	*e*P	Pn	14 23 11.1	+0.9
VA03				*e*S	Sn	14 23 42.4	+1.5
VA03				IAML		14 23 52.3	
	comp=N,708nm,0.6s						
ROCH	El Roble	2.52	159	*e*P	Pb	14 23 10.6	-4.1
ROCH				*e*P	Pn	14 23 10.4	0.0
ROCH				*e*S	Sb	14 23 45.5	-0.4
ROCH				IAML		14 23 56.5	
	comp=N,506nm,0.7s						
ROCH				IAML		14 24 00.5	
	comp=N,657nm,0.5s						
AC04	Llanos de Chal	2.57	21	*e*P	Pn	14 23 09.2	-1.6
MT02	Curacav	2.76	163	⇓*e*P	Pn	14 23 14.1	+0.6
PEL	Peldehue	2.79	155	*e*P	Pn	14 23 14.4	+0.5
PEL				IAML		14 23 58.7	
	comp=E,248nm,0.5s						
MT05	Renca	3.00	158	*e*P	Pb	14 23 21.4	-1.4
VA05	Santo Domingo	3.06	172	*e*P	Pb	14 23 22.9	-0.9
VA05				IAML		14 24 15.0	
	comp=E,232nm,0.7s						
MT09	Talagante	3.29	164	*e*P	Pn	14 23 21.5	+0.7
MT09				IAML		14 24 22.4	
	comp=N,188nm,0.5s						
MT01	Popeta	3.32	168	⇑*e*P	Pn	14 23 21.1	0.0
MT01				IAML		14 24 18.6	
	comp=N,99nm,0.6s						
GO03	Copiap	3.43	29	*e*P	Pn	14 23 21.8	-0.8
GO03				IAML		14 24 30.0	
	comp=N,103nm,0.6s						
LMEL	Las Melosas	3.60	154	*e*P	Pn	14 23 26.5	+1.4
LMEL				IAML		14 24 24.9	
	comp=N,116nm,0.6s						
H03N1	Juan Fernandez	6.43	242	T	T	14 31 02.2	
	baz=71,slow=72,SNR=525						
H03N2	Juan Fernandez	6.45	242	T	T	14 31 00.6	
	baz=71,slow=72,SNR=431						
H03N3	Juan Fernandez	6.45	242	T	T	14 31 01.7	
	baz=71,slow=72,SNR=463						
PLCA	Paso Flores	10.17	173	Pn	Pn	14 24 55.2	-0.1
	comp=N,0.1nm,0.3s,baz=334,slow=13,SNR=1.1						
LPAZ	La Paz	14.72	15	Pn	Pn	14 25 59.8	+1.7
	comp=N,0.1nm,0.3s,baz=212,slow=13,SNR=2.2						
TORD	Torodi Ar. Bea	83.12	70	P	P	14 34 55.5	0.0
	comp=N,0.6nm,0.7s,baz=252,slow=5.2,SNR=3.6						
ZALV	Zalesovo Beam	151.35	29	PKPbc	PKiKP	14 42 23.2	+0.2
	comp=N,2.3nm,0.6s,baz=310,slow=4.0,SNR=13						

*NORS **27** 14:22:34.0±0.0, 43°.96N×44°.45E, h16^{km}, MPVA3.5*

ISC 27 14:22:32.5±2.2**, 44°.04N**±0°.09×**44°.49E**±0°.06**, h16**^{km}±8^{km}**, n14, σ0^{s}.64**/26**, Ukraine-Moldova-Southwestern Russia region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRTR	Priterechnaya	0.33	208	*i* Pg	Pg	14 22 39.2	-0.1
	245nm,0.4s						
PRTR				*e*Sg	Sg	14 22 43.8	-0.2
TRKR	Terskaya	0.36	151	*e*Pg	Pb	14 22 40.7	+0.1
TRKR				*e*Sg	Sb	14 22 46.0	0.0
BTKR	Batakoyurt	0.67	177	*e*Pg	Pg	14 22 45.6	0.0
BTKR				*e*Sg	Sg	14 22 54.9	+0.4
STDR	Stavd-Durt	0.74	205	*e*Pg	Pb	14 22 48.0	+0.9
	18nm,0.4s						
STDR				*e*Sg	Sb	14 22 57.7	+0.7
LSNR	Lesken	0.91	213	*e*Pg	Pb	14 22 50.5	+0.7
	22nm,0.1s						
LSNR				*e*Sg	Sn	14 23 03.2	-0.2
KORR	Kora	1.00	198	*e*Pg	Pb	14 22 52.2	+0.7
KORR				*e*Sg	Sn	14 23 06.3	+0.5
LACR	Lac	1.22	187	*i* Pg	Pn	14 22 55.0	-0.1
	39nm,0.3s						
LACR				*e*Sg	Sb	14 23 11.0	+0.1
DIGR	Digorskoe uzhe	1.32	210	*e*Pg	Pn	14 22 56.3	-0.2
	23nm,0.2s						
DIGR				*e*Sg	Sb	14 23 12.5	-1.3
ZEI	Tsey	1.33	199	*e*Pg	Pn	14 22 56.3	-0.3
	50nm,0.2s						
ZEI				*e*Sg	Sb	14 23 12.4	-1.5
SHA1	Shidzhatmaz	1.36	258	*e*Pg	Pg	14 22 58.7	0.0
	16nm,0.3s						
SHA1				*e*Sg	Sg	14 23 16.4	-0.1
MTEO	Meteo	1.36	179	P	Pn	14 22 57.1	-0.1
MTEO				S	Sb	14 23 13.9	-1.4
PNSH	Pansheti	1.41	176	P	Pn	14 22 49.5	-8.1
PNSH				S	Sb	14 23 07.5	-8.9
NEY	Neytrino	1.51	239	*e*Pg	Pb	14 23 00.4	+0.2
	11nm,0.2s						
NEY				*e*Sg	Sn	14 23 18.8	+0.3
ONI	Oni	1.64	208	P	Pb	14 23 02.1	-0.2
ONI				S	Sb	14 23 23.1	+0.3

*IDC **27** 14:26:55.0±13.0, 36°.18N×70°.16E, h177^{km}±73^{km}, mb3.3/3, mb1 3.1/6, mb1mx2.9/46, mbtmp3.7/6, Error ellipse: s-maj=200.6km s-min=42.8km az=80.0*

*NNC **27** 14:27:03.7±6.9, 37°.04N×70°.59E, h0^{km}, mb4.2, mpv3.8, Error ellipse: s-maj=57.8km s-min=53.7km az=127.0*

ISC 27 14:27:00.2±1.8**, 36°.6N**±0°.1×**70°.5E**±0°.2**, h204**^{km}**, n15, σ1^{s}.56**/19**, 4C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	6.08	23	P	Pn	14 28 29.6	+0.8
	SNR=73						
UCH	Uchtor	6.45	27	P	Pn	14 28 34.4	+0.8
	SNR=32						
KK09	Karatay Array	6.55	360	⇑P	Pn	14 28 36.0	+1.5
	2.8nm,0.4s						
KK09				⇑S	S	14 29 45.6	-3.8
	3.5nm,0.6s						
EKS2	Erkin-Say	6.59	21	P	Pn	14 28 36.8	+1.7
	SNR=11						
AAK	Ala-Archa	6.80	26	P	Pn	14 28 39.0	+1.1
	1.7nm,0.3s,baz=198,slow=6.1,SNR=26						
AAK				S	S	14 29 54.9	-0.4
	0.6nm,0.3s,baz=325,slow=24,SNR=17						
AAK	Ala-Archa	6.80	26	P	Pn	14 28 38.8	+1.0
	SNR=11						
AAK	Ala-Archa	6.80	26	⇓P	Pn	14 28 38.7	+0.8
	4.5nm,0.6s						
AAK				S	S	14 29 54.6	-0.7
	6.1nm,0.6s						
KBK	Karagaybulak	6.98	28	P	Pn	14 28 42.0	+1.7
	SNR=5.7						
TKM2	Tokmak 2	7.46	30	P	Pn	14 28 47.4	+0.9
	SNR=7.2						
TKM2	Tokmak 2	7.46	30	⇑P	Pn	14 28 46.7	+0.3
	4.6nm,0.5s						
TKM2				⇑S	S	14 30 09.0	-1.9
	0.9nm,0.5s						
MKAR	Makanchi Array	13.47	37	P	P	14 30 06.2	+0.5
	0.1nm,0.3s,baz=219,slow=11,SNR=4.1						
KURBB	Kurchatov Arra	15.19	20	P	Pn	14 30 24.4	+0.1
	0.0nm,0.3s,baz=210,slow=12,SNR=4.5						
ZALV	Zalesovo Beam	20.02	25	P	P	14 31 18.5	+1.3
	1.4nm,0.3s,baz=217,slow=11,SNR=12						
TIXI	Tiksi	45.86	22	P	P	14 35 02.8	+1.3
	0.8nm,0.3s,baz=278,slow=2.4,SNR=5.4						
WRA	Warramunga Arr	82.35	122	P	P	14 38 57.3	-2.0
	0.4nm,0.9s,baz=328,slow=4.7,SNR=1.5						

*TUL **27** 14:43:19.5±0.9, 36°.66N±0°.01×98°.46W±0°.02, h8^{km}±7^{km}, ML2.6, mb_Lg2.5/8(NEIC), Error ellipse: s-maj=2.2km s-min=1.4km az=66.0*

NEIC 27 14:43:19.7±1.0**, 36°.66N**±0°.02×**98°.46W**±0°.02**, h10**^{km}±6^{km}**, Error ellipse: s-maj=3.4km s-min=1.4km az=140.0,**

Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CROK	**Carrier**	**0.41**	**112**		Pg	14 43 27.7	-0.1
CROK				Sg	Sg	14 43 33.6	+0.4
KAN14	**Manchester OK**	**0.49**	**53**		Pg	14 43 29.1	-0.3
KAN14				Sg	Sg	14 43 35.8	-0.1
GC02	**Grant County #**	**0.52**	**68**	Pg	Pg	14 43 29.5	-0.3
GC02				Sg	Sg	14 43 36.6	0.0
U32A	**Winter Ranch,**	**0.52**	**238**	Pg	Pg	14 43 29.4	-0.5
U32A				Sg	Sg	14 43 36.6	-0.2
KAN10	**Anthony SW Sta**	**0.55**	**32**	Pg	Pb	14 43 31.2	-0.3
KAN10				Sg	Sg	14 43 37.6	0.0
KAN16	**Harper SW Stat**	**0.65**	**29**	Pg	Pg	14 43 32.2	-0.1
KAN16				Sg	Sg	14 43 41.0	+0.2
KAN17	**Caldwell West**	**0.67**	**55**		Pg	14 43 32.4	-0.4
KAN17				Sg	Sg	14 43 41.6	-0.1
KAN08	**Anthony NE Sta**	**0.69**	**34**	Pg	Pg	14 43 32.8	-0.3
KAN08				Sg	Sg	14 43 42.0	0.0
KAN12	**Harper NE Stat**	**0.73**	**30**		Pb	14 43 34.3	-0.4
KAN12				Sg	Sg	14 43 43.5	0.0
KAN01	**Argonia South**	**0.74**	**48**	Pg	Pg	14 43 33.7	-0.4
KAN01				Sg	Sg	14 43 43.5	-0.3
KAN06	**Argonia West S**	**0.76**	**39**	Pg	Pg	14 43 34.1	-0.2
KAN06				Sg	Sg	14 43 43.5	-0.7
KAN09	**Caldwell North**	**0.82**	**54**	Pg	Pg	14 43 35.2	-0.4
KAN09					Sg	14 43 46.3	0.0
KAN09				IAmb_Lg		14 43 46.9	
	comp=Z,29nm,0.9s						
KAN13	**South Haven SW**	**0.86**	**66**	Pg	Pg	14 43 36.1	-0.2
KAN13				IAmb_Lg		14 43 46.9	
	comp=Z,58nm,1.1s						
KAN13				Sg	Sg	14 43 47.7	+0.1
BLOK	**Blackwell**	**1.00**	**84**	Pg	Pg	14 43 38.4	-0.6
BLOK				Sg	Sg	14 43 52.1	+0.1
BCOK	**Bluff Creek, N**	**1.21**	**145**		Pn	14 43 41.9	-0.9
OK025	**Westminster Rd**	**1.41**	**140**		Pn	14 43 44.8	-0.7
OK031	**S. Brethren Rd**	**1.48**	**118**	Pn	Pn	14 43 47.0	+0.4
QUOK	**Quay**	**1.49**	**109**		Pn	14 43 46.0	-0.7
OK034	**N. Norfolk Rd.**	**1.55**	**114**	Pn	Pn	14 43 47.2	-0.2
T35A	**Sooner Cattle**	**1.58**	**80**	Pn	Pn	14 43 47.9	0.0
FNO	**Franklin**	**1.64**	**148**		Pn	14 43 48.9	+0.2
R32A	**Long Quarter,**	**1.77**	**354**		Pb	14 43 51.6	-0.7
WMOK	**Wichita Mounta**	**1.94**	**188**		Pn	14 43 53.1	+0.3
X34A	**Smith Ranch, M**	**2.12**	**166**		Pn	14 43 56.0	+0.8
TUL1	**Leonard**	**2.28**	**108**		Pn	14 43 57.0	-0.4
CBKS	**Cedar Bluff**	**2.38**	**335**	Pn	Pn	14 43 58.5	-0.4
KSU1	**Kansas State U**	**2.84**	**30**	Pn	Pn	14 44 06.6	+1.4
LOOK	**Love County**	**2.86**	**158**	Pn	Pn	14 44 06.7	+1.2
X37A	**Clayton**	**3.25**	**129**		Pn	14 44 11.1	+0.2
U38A	**Gravette**	**3.29**	**93**		Pn	14 44 11.7	+0.4
HHAR	**Hobbs**	**3.66**	**95**		Pn	14 44 16.4	0.0
HHAR				IAmb_Lg		14 45 21.5	
	comp=Z,10nm,1.0s						
W39A	**Magazine**	**4.06**	**110**		Pn	14 44 21.1	-0.9
S39A	**Bolivar**	**4.23**	**74**		Pn	14 44 22.9	-1.3
N35A	**Tabor**	**4.74**	**27**		Pn	14 44 31.2	-0.1
T25A	**Trinidad**	**4.80**	**277**	Pn	Pn	14 44 32.5	+0.3
T25A				IAmb_Lg		14 45 54.1	
	comp=Z,11nm,1.0s						
MGMO	**Mountain Grove**	**4.98**	**82**	Pn	Pn	14 44 35.0	+0.4
X40A	**Basin Creek Fa**	**5.07**	**114**	Pn	Pn	14 44 37.9	+2.1
R40A	**Maddies Statio**	**5.18**	**70**	Pn	Pn	14 44 37.6	+0.2
WHAR	**Wooly Hollow**	**5.18**	**103**	Pn	Pn	14 44 36.3	-1.1
SDCO	**Great Sand Dun**	**5.73**	**283**	Pn	Pn	14 44 46.0	+0.9
P40A	**Paris**	**5.81**	**59**	Pn	Pn	14 44 46.0	0.0
CCM	**Cathedral Cave**	**5.91**	**74**	Pn	Pn	14 44 47.4	0.0

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*GUC **27** 14:47:48.7±0.6, 30°.82S×72°.76W, h25^{km}, ML3.4*
*IDC **27** 14:47:49.5±1.6, 30°.91S×72°.57W, h0^{km}, mb3.4/1, mb1 3.9/3, mb1mx3.7/18, mbtmp3.6/3, ML3.8/2, Error ellipse: s-maj=99.3km s-min=35.9km az=82.0*
ISC 27 14:47:52.4±3.1, **30°.88S**±0°.04×**72°.6W**±0°.1, **h24**^{km}±23^{km}, **n24**, σ**1^s.44**/35, **1C-1D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	**Fray Jorge**	**0.86**	**77**	⇑*i*P	**Pn**	**14 48 07.8**	**-1.1**
CO06				*e*S	**Sb**	**14 48 19.6**	**-0.1**
CO06				IAML		14 48 20.7	
	comp=E,996nm,0.2s						
CO05	**La Serena**	**1.52**	**51**	*e*P	**Pn**	**14 48 16.9**	**-1.1**
CO05				*e*S	**Sn**	**14 48 36.2**	**-0.8**
CO05				IAML		14 48 37.5	
	comp=E,527nm,0.3s						
GO04	**Tololo Observa**	**1.71**	**66**	*e*P	**Pn**	**14 48 20.0**	**-0.9**
GO04				*i* S	**Sn**	**14 48 42.6**	**+0.5**
VA06	**Catapilco**	**2.02**	**147**	*e*P	**Pn**	**14 48 24.1**	**-0.7**
VA06				*i* S	**Sn**	**14 48 47.0**	**-2.3**
VA06				IAML		14 48 49.4	
	comp=E,637nm,0.4s						
LCO	**Las Campanas**	**2.49**	**42**	*e*P	**Pn**	**14 48 30.7**	**-0.9**
LCO				*e*S	**Sn**	**14 49 00.7**	**-0.6**
ROCH	**El Roble**	**2.49**	**147**	*e*P	**Pn**	**14 48 31.5**	**-0.1**
ROCH				*e*P	**Pn**	**14 48 31.5**	**-0.1**
ROCH				IAML		14 49 04.9	
	comp=E,255nm,0.6s						
VA03	**San Esteban**	**2.57**	**138**	*e*P	**Pn**	**14 48 32.8**	**+0.2**
VA03				IAML		14 49 10.6	
	comp=N,200nm,0.3s						
MT02	**Curacav**	**2.68**	**153**	*e*P	**Pn**	**14 48 33.9**	**-0.1**
MT02				IAML		14 49 06.1	
	comp=N,108nm,0.7s						
PEL	**Peldehue**	**2.79**	**145**	*e*P	**Pn**	**14 48 35.5**	**0.0**
PEL				*i* S	**Sn**	**14 49 08.1**	**-0.3**
VA05	**Santo Domingo**	**2.90**	**163**	*e*P	**Pn**	**14 48 36.3**	**-0.7**
VA05				*i* S	**Sn**	**14 49 08.4**	**-2.5**
VA05				IAML		14 49 11.4	
	comp=N,174nm,0.2s						
AC04	**Llanos de Chal**	**2.98**	**27**	*e*P	**Pn**	**14 48 36.0**	**-2.1**
AC04				*e*S	**Sn**	**14 49 09.5**	**-3.6**
MT01	**Popeta**	**3.19**	**159**	⇓*i*P	**Pn**	**14 48 40.4**	**-0.7**
MT01				*i* S	**Sn**	**14 49 15.4**	**-2.9**
MT01				IAML		14 49 22.0	
	comp=E,52nm,0.3s						
MT09	**Talagante**	**3.20**	**155**	*e*P	**Pn**	**14 48 41.7**	**+0.4**
MT09				*i* S	**Sn**	**14 49 17.4**	**-1.3**
MT09				IAML		14 49 22.6	
	comp=N,116nm,0.8s						
BO04	**La Punta**	**3.53**	**152**	*e*P	**Pn**	**14 48 46.7**	**+1.0**
BO04				*i* S	**Sn**	**14 49 28.1**	**+1.3**
BO01	**Tunca**	**3.73**	**160**	*e*P	**Pn**	**14 48 48.2**	**-0.2**
BO01				*i* S	**Sn**	**14 49 29.5**	**-2.2**
GO03	**Copiap**	**3.87**	**33**	*e*P	**Pn**	**14 48 49.5**	**-1.0**
GO03				*i* S	**Sn**	**14 49 33.5**	**-1.8**
AC02	**Maricunga**	**5.05**	**38**	*e*P	**Pn**	**14 49 07.2**	**+0.1**
H03N1	**Juan Fernandez**	**5.93**	**243**	T	T	14 55 21.7	
	baz=70,slow=71,SNR=5.0						
H03N2	**Juan Fernandez**	**5.94**	**243**	T	T	14 55 22.4	
	baz=70,slow=71,SNR=5.5						
H03N3	**Juan Fernandez**	**5.94**	**243**	T	T	14 55 20.2	
	baz=70,slow=71,SNR=5.9						
PLCA	**Paso Flores**	**9.97**	**171**	Pn	**Pn**	**14 50 14.5**	**+0.3**
	comp=N,0.2nm,0.3s,baz=323,slow=12,SNR=6.0						
LPAZ	**La Paz**	**15.09**	**17**	Pn	**Pn**	**14 51 26.6**	**+2.0**
	comp=N,0.2nm,0.3s,baz=196,slow=7.5,SNR=7.9						
TXAR	**Lajitas Array**	**66.78**	**331**	P	**P**	**14 58 43.5**	**+1.5**
	comp=N,0.2nm,0.5s,baz=152,slow=7.9,SNR=3.0						
ZALV	**Zalesovo Beam**	**151.78**	**29**	PKPbc	**PKiKP**	**15 07 44.9**	**0.0**
	comp=N,1.6nm,0.7s,baz=293,slow=2.8,SNR=7.3						

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*IDC **27** 15:14:54.5±2.1, 6°.85S×129°.45E, h0^{km}, mb3.9/1, mb1 3.7/3, mb1mx3.4/22, mbtmp3.5/3, ML3.5/2, Error ellipse: s-maj=144.8km s-min=30.7km az=68.0*
ISC 27 15:15:07.3±1.3, **7°.00S**±0°.09×**129°.8E**±0°.2, **h104**^{km}, **n10**, σ**2^s.57**/9, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**1.76**	**124**	P	Sn	15 16 05.6	+5.9
FAKI	**Fak Fak**	**4.73**	**31**	P	**Sn**	**15 17 12.3**	**+2.2**
	11nm,0.6s						
DRS	**Darwin Rock St**	**5.50**	**169**	P	**Pn**	**15 16 27.9**	**+1.0**
MTN	**Manton Dam**	**5.95**	**168**	P	**Pn**	**15 16 33.7**	**+0.8**
KDU	**Kakadu**	**6.22**	**155**	P	**Pn**	**15 16 37.7**	**+1.0**
WRAB	**Tennant Creek**	**13.59**	**162**	P	**Pn**	**15 18 13.2**	**-2.6**
WRA	**Warramunga Arr**	**13.59**	**162**	Pn	**Pn**	**15 18 11.7**	**-4.2**
	0.3nm,0.3s,baz=343,slow=14,SNR=22						
WRA				Sn	Sn	15 20 31.1	-14
	0.2nm,0.3s,baz=332,slow=22,SNR=3.9						
ASAR	**Alice Springs**	**17.03**	**167**	P	**P**	**15 18 57.6**	**-1.7**
	0.1nm,0.3s,baz=339,slow=9.1,SNR=14						
ASAR				S	Sn	15 21 53.8	-15
	0.1nm,0.3s,baz=352,slow=25,SNR=1.8						
WRKA	**Warakurna**	**17.99**	**184**	P	**Pn**	**15 19 12.1**	**+1.3**
MKAR	**Makanchi Array**	**68.13**	**327**	P	**P**	**15 25 54.4**	**-1.9**
	0.6nm,0.4s,baz=121,slow=8.0,SNR=12						

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*IDC **27** 15:43:09.0±4.0, 37°.17N×71°.81E, h133^{km}±32^{km}, mb3.4/7, mb1 3.3/12, mb1mx3.2/66, mbtmp3.8/12, MS2.2/1, Ms1 2.2/1, ms1mx2.1/34, Error ellipse: s-maj=40.0km s-min=18.4km az=162.0*
*NNC **27** 15:43:15.5±7.2, 37°.66N×71°.75E, h141^{km}±124^{km}, mb3.1, mpv3.8, Error ellipse: s-maj=67.0km s-min=42.5km az=6.0*
ISC 27 15:43:09.5±0.7, **37°.24N**±0°.07×**71°.82E**±0°.06, **h142**^{km}, **n36**, σ**1^s.56**/41, **mb3.4**/7, **3C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**5.09**	**16**	P	**Pn**	**15 44 25.0**	**+0.8**
	SNR=261						
UCH	**Uchtor**	**5.39**	**22**	P	**Pn**	**15 44 29.2**	**+0.9**
	SNR=89						
EKS2	**Erkin-Say**	**5.62**	**15**	P	**Pn**	**15 44 32.4**	**+1.4**
	SNR=11						
AAK	**Ala-Archa**	**5.76**	**20**	P	**Pn**	**15 44 34.4**	**+1.4**
	5.6nm,0.3s,baz=173,slow=6.0,SNR=72						
AAK				S	**Sn**	**15 45 35.2**	**-3.1**
	2.7nm,0.3s,baz=225,slow=9.3,SNR=6.7						
AAK	**Ala-Archa**	**5.76**	**20**	P	**Pn**	**15 44 34.2**	**+1.2**
	SNR=28						
AAK	**Ala-Archa**	**5.76**	**20**	⇓P	**Pn**	**15 44 34.0**	**+0.9**
	11nm,0.5s						
AAK				S	**Sn**	**15 45 36.2**	**-2.1**
	16nm,0.5s						
KBK	**Karagaybulak**	**5.91**	**23**	P	**Pn**	**15 44 36.8**	**+1.8**
	SNR=12						
KK08	**Karatay Array**	**5.94**	**350**	⇓P	**Pn**	**15 44 36.1**	**+0.8**
	4.8nm,0.4s,baz=182,slow=15						
KK08				⇑S	**Sn**	**15 45 37.6**	**-4.8**
	17nm,0.6s,baz=164,slow=22						
CHMS	**Chumysh**	**6.17**	**20**	P	**Pn**	**15 44 39.4**	**+1.1**
	SNR=9.7						
USP	**Ospenovka**	**6.35**	**18**	P	**Pn**	**15 44 41.3**	**+0.5**
	SNR=9.0						
TKM2	**Tokmak 2**	**6.36**	**26**	P	**Pn**	**15 44 41.8**	**+0.7**
	SNR=12						
TKM2	**Tokmak 2**	**6.36**	**26**	⇑P	**Pn**	**15 44 41.4**	**+0.3**
	3.3nm,0.5s						
TKM2				⇓S	**Sn**	**15 45 52.7**	**0.0**
	7.9nm,0.8s						
GEYT	**Alibeck**	**10.90**	**278**	P	**Pn**	**15 45 40.6**	**-0.9**
	1.8nm,0.3s,baz=95,slow=14,SNR=13						
GEYT				S	**Sn**	**15 47 38.8**	**-3.2**
	2.3nm,0.3s,baz=219,slow=50,SNR=4.2						
GEYT				LR	LR	15 51 05.5	
	comp=Z,13nm,21.0s,baz=120,slow=44						
MKAR	**Makanchi Array**	**12.30**	**36**	P	**Pn**	**15 45 59.3**	**-0.5**
	0.1nm,0.3s,baz=225,slow=15,SNR=6.7						
PYUN	**Piuthan**	**13.09**	**131**	*e*P	**Pn**	**15 46 08.3**	**-2.0**
	15nm,0.3s						
DANN	**Dangsing**	**13.38**	**128**	*e*P	**Pn**	**15 46 12.4**	**-1.8**
	13nm,0.4s						
GKN	**Gorkha**	**14.18**	**127**	*e*P	**Pn**	**15 46 22.5**	**-1.7**
	20nm,0.4s						
KURBB	**Kurchatov Arra**	**14.21**	**18**	P	**P**	**15 46 26.9**	**-0.3**
	0.1nm,0.3s,baz=204,slow=11,SNR=9.2						
KKN	**Kakani**	**14.74**	**126**	*e*P	**Pn**	**15 46 29.4**	**-1.8**
AB31	**Akbulak array**	**14.78**	**328**	⇑P	**Pn**	**15 46 32.2**	**+0.9**
	0.9nm,0.4s						
PKIN	**Phulchoki**	**14.96**	**126**	*e*P	**Pn**	**15 46 33.0**	**-1.1**
	11nm,0.5s						
PKI	**Pulchoki**	**14.97**	**126**	*e*P	**Pn**	**15 46 33.2**	**-1.1**
	3.4nm,0.3s						
JIRN	**Jiri**	**15.42**	**124**	*e*P	**Pn**	**15 46 38.8**	**-1.1**
	16nm,0.4s						
BVAR	**Borovoye Array**	**15.81**	**357**	P	**Pn**	**15 46 43.8**	**-0.3**
	0.3nm,0.3s,baz=186,slow=12,SNR=4.4						
RAMN	**Ramite**	**16.17**	**125**	*e*P	**Pn**	**15 46 49.0**	**+0.1**
	13nm,0.4s						
AKTO	**Aktyubinsk**	**16.49**	**327**	P	**P**	**15 46 53.2**	**+0.7**
	0.5nm,0.3s,baz=124,slow=14,SNR=8.5						
AKTO				S	Sn	15 49 45.7	-10
	0.1nm,0.3s,baz=30,slow=20,SNR=1.9						
AKTO	**Aktyubinsk**	**16.49**	**327**	⇓P	**P**	**15 46 54.3**	**+1.8**
	2.7nm,0.6s						
TAPN	**Taplejung**	**16.64**	**122**	*e*P	**P**	**15 46 54.7**	**0.0**
	9.2nm,0.5s						
ZALV	**Zalesovo Beam**	**18.97**	**24**	P	**P**	**15 47 19.8**	**+0.2**
	0.5nm,0.3s,baz=222,slow=9.8,SNR=12						
ARU	**Arti**	**21.16**	**339**	P	**P**	**15 47 42.6**	**-0.5**
	0.5nm,0.3s,baz=94,slow=9.2,SNR=3.3						
BELG	**Belogornoye**	**22.74**	**319**	P	**P**	**15 48 00.1**	**+0.9**
	4.7nm,0.6s,baz=112,slow=16,SNR=1.7						
SONM	**Songino Array**	**27.37**	**56**	P	**P**	**15 48 42.8**	**+1.4**
	0.5nm,0.8s,baz=260,slow=8.6,SNR=4.1						
BRTR	**Keskin Array B**	**29.85**	**287**	P	**P**	**15 49 05.5**	**+2.1**
	0.5nm,0.6s,baz=100,slow=9.0,SNR=3.5						
AKASG	**Malin Array Be**	**33.00**	**308**	P	**P**	**15 49 31.6**	**+0.9**
	1.6nm,0.6s,baz=77,slow=6.4,SNR=5.2						
FINES	**FINESS Array B**	**37.24**	**325**	P	**P**	**15 50 08.2**	**+1.3**
	4.0nm,1.0s,baz=120,slow=11,SNR=4.0						
TORD	**Torodi Ar. Bea**	**66.39**	**269**	P	**P**	**15 53 43.1**	**-0.4**
	0.3nm,0.6s,baz=33,slow=5.5,SNR=3.1						

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*BJI **27** 15:46:41.2±0.0, 2°.88N×96°.57E, h50^{km}, mB5.0/22, mb4.9/52, Ms4.6/12, Ms7 4.4/7*
*NEIC **27** 15:46:42.8±1.8, 2°.85N±0°.06×96°.54E±0°.08, h45^{km}±6^{km}, mb5.0/68, Error ellipse: s-maj=11.4km s-min=8.0km az=69.0*
*KLM **27** 15:46:42, 2°.84N×96°.41E, h38^{km}, mb5.0*
*DJA **27** 15:46:43.2±0.4, 3°N±2°×9°7E±°, h35^{km}±3^{km}, M4.7/43, mb5.0/43, mB5.2/13, MLv4.9/18, Mw(mB)4.6/13*
*MOS **27** 15:46:44.3±0.8, 2°.97N×96°.67E, h72^{km}, mb5.2/33, Error ellipse: s-maj=9.4km s-min=5.3km az=112.1*
*IDC **27** 15:46:47.7±1.6, 3°.02N×96°.74E, h83^{km}±14^{km}, mb4.5/37, mb1 4.5/40, mb1mx4.3/60, mbtmp4.8/40, MS3.7/25, Ms1 3.7/25, ms1mx3.5/47, Error ellipse: s-maj=13.1km s-min=8.8km az=53.0*
ISC 27 15:46:41.8±0.3, **2°.90N**±0°.04×**96°.61E**±0°.04, **h33**^{km}, **n339**, σ**1^s.47**/344, **mb5.0**/117, **MS3.8**/28, **8C-7D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNSI	**Sinabang, Aceh**	**0.56**	**210**	P	**Pn**	**15 46 55.0**	**+1.5**
TPTI		**0.68**	**58**	P	**Pb**	**15 46 56.8**	**+1.5**
MLSI	**Meulaboh, Aceh**	**1.38**	**352**	P	**Pb**	**15 47 07.3**	**+0.3**
GSI	**Gunungsitoli**	**1.85**	**149**	P	**Pn**	**15 47 12.6**	**+1.3**
GSI	**Gunungsitoli**	**1.85**	**149**		**Pn**	**15 47 12.4**	**+1.1**
GSI	**Gunungsitoli**	**1.85**	**149**	P	**Pn**	**15 47 12.9**	**+1.6**
TSI	**Tuntungan**	**2.04**	**73**	P	**Pb**	**15 47 19.6**	**+1.3**
PSI	**Prapat**	**2.32**	**92**	P	**Pb**	**15 47 21.1**	**-1.9**
	6.0nm,0.3s,baz=314,slow=11,SNR=27						
PSI				S	**Sb**	**15 47 50.5**	**-0.8**
	52nm,0.3s,baz=270,slow=9.9,SNR=10.0						
PSI				LR	LR	15 48 32.8	
	comp=Z,1μm,18.2s,baz=256,slow=48						
LHMI	**Lhok Sumawe**	**2.34**	**8**	P	**Pb**	**15 47 21.5**	**-1.9**
LHMI	**Lhok Sumawe**	**2.34**	**8**		**Pn**	**15 47 20.3**	**+2.3**
LHMI	**Lhok Sumawe**	**2.34**	**8**	P	**Pb**	**15 47 21.5**	**-1.9**
MNSI	**Mandailing Nat**	**3.63**	**125**	P	**Pn**	**15 47 38.3**	**+2.5**
KULM	**Kulim**	**4.68**	**59**	P	**Pn**	**15 47 53.0**	**+2.8**
KULM	**Kulim**	**4.68**	**59**	Pn	**Pn**	**15 47 53.0**	**+2.8**
IPM	**Ipoh**	**4.68**	**70**	Pn	**Pn**	**15 47 53.0**	**+2.7**
IPM	**Ipoh**	**4.68**	**70**	P	**Pn**	**15 47 53.7**	**+3.5**
SISI	**Saibi**	**4.87**	**149**	P	**Pn**	**15 47 53.5**	**+0.6**
PPI	**Padang Panjang**	**5.04**	**131**	P	**Pn**	**15 47 57.9**	**+2.7**
	0.3nm1μm70nm,0.6s						
BKNI	**Bangkinang**	**5.11**	**120**	P	**Pn**	**15 47 57.9**	**+1.8**
	1.7nm3μm213nm,1.0s						
BKNI	**Bangkinang**	**5.11**	**120**		**Pn**	**15 47 58.0**	**+1.8**
BKNI	**Bangkinang**	**5.11**	**120**	P	**Pn**	**15 47 57.6**	**+1.4**
PDSI	**Padang**	**5.40**	**134**	P	**Pn**	**15 48 01.6**	**+1.5**
	0.4nm1μm45nm,1.0s						
JRMM	**Jerantut**	**5.94**	**80**	P	**Pn**	**15 48 10.0**	**+2.5**
SRIT	**Nakonsritamara**	**6.40**	**28**	Pn	**Pn**	**15 48 15.0**	**+1.2**
PPSI	**Pulau Pagai**	**6.57**	**149**	P	**Pn**	**15 48 16.9**	**+0.7**
KRJI	**Kerinci**	**6.94**	**136**	P	**Pn**	**15 48 22.1**	**+0.8**
	2.1nm637nm,0.8s						
MYKOM	**Kota Tinggi**	**7.32**	**98**	Pn	**Pn**	**15 48 27.8**	**+1.3**
MASI	**Maura Aman, Be**	**8.23**	**137**	P	**Pn**	**15 48 41.8**	**+2.8**
	146nm,0.7s						
KSI	**Kapahiang**	**8.84**	**137**	P	**Pn**	**15 48 48.2**	**+0.8**
	2μm176nm,0.7s						
MNAI	**Manna**	**9.60**	**139**	P	**Pn**	**15 48 58.3**	**+0.5**
	7μm509nm,0.8s						
MNAI	**Manna**	**9.60**	**139**	Pn	**Pn**	**15 48 58.1**	**+0.2**
MNAI	**Manna**	**9.60**	**139**	P	**Pn**	**15 48 58.4**	**+0.6**
MDSI	**Maura Dua**	**10.54**	**134**	P	**Pn**	**15 49 11.5**	**+0.9**
	901nm122nm,0.7s						
LWLI	**Liwa**	**10.83**	**137**	P	**Pn**	**15 49 15.8**	**+1.1**
	3μm166nm,0.8s						
KLSI		**11.08**	**133**	P	**Pn**	**15 49 17.4**	**-0.6**
	436nm63nm,0.8s						
KASI	**Kota Agung**	**11.49**	**137**	P	**Pn**	**15 49 22.5**	**-1.2**
	114nm,0.7s						
KSM	**Kuching**	**13.76**	**96**	P	**Pn**	**15 49 57.8**	**+3.0**
UBPT	**Khong Chiam**	**15.09**	**35**		**Pn**	**15 50 14.3**	**+1.5**
UBPT				IAmb	IAmb	15 50 19.4	
	comp=Z,69nm,1.1s						
CM31	**Chiang Mai Arr**	**15.63**	**8**	P	**Pn**	**15 50 21.2**	**+1.3**
CMAR	**Chiang Mai Arr**	**15.63**	**8**	P	**Pn**	**15 50 20.9**	**+1.1**
	comp=Z,2.0nm,0.3s,baz=198,slow=11,SNR=52						
CMAR				LR	LR	15 56 54.1	
	comp=Z,376nm,19.1s,baz=227,slow=39						
CMAR	**Chiang Mai Arr**	**15.63**	**8**	*ce*P	**P**	**15 50 22.0**	**-1.7**
CMAR				pmax	pmax		
	comp=Z,30nm,0.7s						
CMAR	**Chiang Mai Arr**	**15.63**	**8**	Pn	**Pn**	**15 50 21.2**	**+1.4**
CMJI	**Cimerak**	**15.88**	**132**	P	**Pn**	**15 50 20.8**	**-2.2**
	comp=Z,22nm,0.9s						
CHTO	**Chiang Mai**	**15.98**	**8**	P	**Pn**	**15 50 25.0**	**+0.7**
CHTO				pmax	pmax		
	comp=Z,33nm,1.3s						
CHTO	**Chiang Mai**	**15.98**	**8**	Pn	**Pn**	**15 50 25.0**	**+0.7**
CHTO	**Chiang Mai**	**15.98**	**8**	P	**Pn**	**15 50 25.4**	**+1.1**
PALK	**Pallekele**	**16.42**	**286**	P	**P**	**15 50 34.2**	**+1.7**
	comp=Z,0.8nm,0.3s,baz=205,slow=3.7,SNR=6.3						
PALK	**Pallekele**	**16.42**	**286**	P	**Pn**	**15 50 31.2**	**+1.2**
MTKI	**Muara Teweh, K**	**18.68**	**102**	P	**Pn**	**15 50 59.0**	**+1.1**
	comp=Z,37nm,0.8s						
SLVN	**Son La**	**19.65**	**21**	P	**P**	**15 51 06.1**	**-1.9**
SLVN				IAmb	IAmb	15 51 09.9	
	comp=Z,34nm,0.7s						
KMMI	**Kalianget**	**19.95**	**120**	P	**P**	**15 51 11.8**	**+0.5**
	comp=Z,112nm,0.8s						
BKB	**Balikpapan**	**20.70**	**101**	P	**P**	**15 51 20.7**	**+1.2**
SRBI	**Singaraja**	**21.53**	**121**	P	**P**	**15 51 30.1**	**+1.8**
	comp=Z,82nm,0.9s						
KOHI	**KOHIMA**	**22.82**	**354**	*e*P	**P**	**15 51 41.1**	**-1.1**
HYB	**Hyderabad**	**22.85**	**310**	*i* P	**P**	**15 51 44.5**	**+2.0**
HYB	**Hyderabad**	**22.85**	**310**	*e*P	**P**	**15 51 45.1**	**+2.6**
HYB				IAmb	IAmb	15 51 48.8	
	comp=Z,14nm,0.9s						
KMI	**Kunming**	**22.87**	**14**	⇑P	**P**	**15 51 45.0**	**+2.1**
KMI				pmax	pmax		
	comp=Z,20nm,0.7s						
KMI				LR	LR		
	comp=Z,340nm,15.1s						
SHL	**Shillong**	**22.99**	**349**	P	**P**	**15 51 41.1**	**-3.0**
SHL				pmax	pmax		
	comp=Z,38nm,0.7s						
SHL	**Shillong**	**22.99**	**349**	*e*P	**P**	**15 51 40.7**	**-3.4**
SHL				IAmb	IAmb	15 51 45.7	
	comp=Z,39nm,0.3s						
SHL	**Shillong**	**22.99**	**349**	P	**P**	**15 51 41.1**	**-3.0**
SHL				IAmb	IAmb	15 52 00.7	
	comp=Z,38nm,0.7s						
TWSI	**Taliwang, Sumb**	**23.29**	**120**	P	**P**	**15 51 48.6**	**+1.7**
	comp=Z,14nm,1.2s						
MOKO	**MOKOCHONG**	**23.38**	**355**	*e*P	**P**	**15 51 44.7**	**-3.1**
MPSI	**Mapaga**	**23.42**	**96**	P	**P**	**15 51 49.5**	**+1.2**
	comp=Z,17nm,0.9s						
SPSI	**Sidrap Palu**	**24.13**	**106**	P	**P**	**15 51 58.3**	**+3.3**
	comp=Z,17nm,0.8s						
TOLI2	**Tolitoli**	**24.22**	**94**	P	**P**	**15 51 55.7**	**-0.2**
TOLI2				IAmb	IAmb	15 52 10.3	
	comp=Z,39nm,0.9s						
TOLI2	**Tolitoli**	**24.22**	**94**	P	**P**	**15 51 56.6**	**+0.7**
ITAN	**ITANAGAR**	**24.27**	**354**	*e*P	**P**	**15 51 53.7**	**-2.4**
KAPI	**Kappang**	**24.42**	**109**	P	**P**	**15 51 57.5**	**-0.2**
	comp=Z,14nm,0.8s,baz=304,slow=9.9,SNR=9.5						
KAPI				LR	LR	16 02 05.1	
	comp=Z,117nm,19.4s,baz=296,slow=38						
KAPI	**Kappang**	**24.42**	**109**	P	**P**	**15 51 55.2**	**-2.5**
KAPI	**Kappang**	**24.42**	**109**	P	**P**	**15 51 59.8**	**+2.1**
BNSI	**Bone**	**24.57**	**107**	P	**P**	**15 52 00.5**	**+1.4**
	comp=Z,40nm,0.9s						
BKSI	**Bulukumba**	**24.87**	**109**	P	**P**	**15 52 04.0**	**+2.3**
	comp=Z,431nmcomp=Z,57nm,1.0s						
GYA	**Guiyang**	**25.34**	**21**	⇓P	**P**	**15 52 05.8**	**-0.2**
GYA				pP	sP	15 52 18.3	-0.7
GYA				pmax	pmax		
	comp=Z,31nm,1.3s						
ODAN	**Odare**	**25.41**	**341**	*e*P	**P**	**15 52 06.2**	**-0.6**
	comp=Z,113nm,0.6s						
GTK	**Tadong**	**25.46**	**343**	*e*P	**P**	**15 52 07.0**	**-0.1**
GTK				IAmb	IAmb	15 52 11.1	
	comp=Z,38nm,0.7s						
TAPN	**Taplejung**	**25.76**	**342**	*e*P	**P**	**15 52 09.7**	**-0.3**
	comp=Z,124nm,0.7s						
RAMN	**Ramite**	**25.77**	**339**	*e*P	**P**	**15 52 10.1**	**+0.1**
	comp=Z,70nm,0.5s						
H08S2	**Diego Garcia H**	**26.24**	**246**	T	T	16 18 50.7	
	baz=68,slow=75,SNR=224						
H08S3	**Diego Garcia H**	**26.24**	**246**	T	T	16 18 59.7	
	baz=68,slow=75,SNR=179						
H08S1	**Diego Carcia H**	**26.26**	**246**	T	T	16 18 54.2	
	baz=68,slow=75,SNR=128						
GTOI	**Gorontalo**	**26.48**	**94**	P	**P**	**15 52 18.3**	**+1.9**
	comp=Z,8.2nm,1.0s						
JIRN	**Jiri**	**26.56**	**339**	*e*P	**P**	**15 52 17.0**	**-0.3**
	comp=Z,74nm,0.7s						
PKI	**Pulchoki**	**26.77**	**337**	*e*P	**P**	**15 52 19.1**	**-0.1**
	comp=Z,18nm,0.5s						
PKIN	**Phulchoki**	**26.78**	**337**	*e*P	**P**	**15 52 19.3**	**+0.1**
	comp=Z,16nm,0.5s						
KKN	**Kakani**	**27.02**	**337**	*e*P	**P**	**15 52 20.8**	**-0.5**
	comp=Z,23nm,0.5s						
LSA	**Lhasa**	**27.16**	**350**	P	**P**	**15 52 21.8**	**-1.0**
LSA				pmax	pmax		
	comp=Z,79nm,0.8s						
LSA	**Lhasa**	**27.16**	**350**	P	**P**	**15 52 20.8**	**-2.0**
LSA				pmax	pmax		
	comp=Z,20nm,1.0s						
LSA	**Lhasa**	**27.16**	**350**	P	**P**	**15 52 20.8**	**-2.0**
GKN	**Gorkha**	**27.46**	**337**	*e*P	**P**	**15 52 24.5**	**-0.6**
	comp=Z,11nm,0.3s						
BHPL	**Bhopal**	**27.46**	**319**	*e*P	**P**	**15 52 25.8**	**+0.7**
BHPL				IAmb	IAmb	15 52 26.8	
	comp=Z,10.0nm,0.3s						
KOLN	**Koldanda**	**27.68**	**335**	*e*P	**P**	**15 52 27.0**	**-0.2**
DANN	**Dangsing**	**28.12**	**335**	*e*P	**P**	**15 52 30.5**	**-0.7**
	comp=Z,32nm,0.5s						
PYUN	**Piuthan**	**28.23**	**334**	*e*P	**P**	**15 52 32.4**	**+0.3**
	comp=Z,41nm,0.6s						
CD2	**Chengdu**	**28.67**	**13**	*e*P	**P**	**15 52 36.3**	**+0.5**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
DAV	**Davao City (W)**	**29.15**	**81**	LR	LR	16 05 21.4	
	comp=Z,57nm,20.9s,baz=300,slow=38						
ENH	**Enshi**	**29.84**	**23**	P	**P**	**15 52 44.6**	**-1.5**
ENH				IAmb	IAmb	15 52 45.6	
	comp=Z,22nm,0.7s						
BATI	**Baumata**	**29.92**	**116**	P	**P**	**15 52 45.8**	**-1.3**
	comp=Z,28nm,0.7s,baz=84,slow=2.0,SNR=5.3						
SONA	**Sohna**	**31.34**	**325**	*e*P	**P**	**15 52 59.7**	**+0.3**
KUDL	**Kundal**	**31.60**	**325**	*e*P	**P**	**15 53 02.3**	**+0.6**
XAN	**Xi'an**	**33.05**	**19**	P	**P**	**15 53 13.3**	**-1.1**
XAN				pP	pP	15 53 24.0	+0.4
XAN				sP	sP	15 53 30.5	+3.0
XAN				pmax	pmax		
	comp=Z,79nm,0.8s						
PSA00	**Pilbara Seismi**	**33.30**	**138**	P	**P**	**15 53 16.2**	**-0.5**
PSA00	**Pilbara Seismi**	**33.30**	**138**	P	**P**	**15 53 15.5**	**-1.2**
PSA00				IAmb	IAmb	15 53 18.1	
	comp=Z,24nm,1.4s						
PSA00	**Pilbara Seismi**	**33.30**	**138**	P	**P**	**15 53 17.6**	**+0.9**
SMLA	**Simla**	**33.54**	**329**	*e*P	**P**	**15 53 18.8**	**+0.1**
BHK	**Bhakra**	**34.16**	**328**	*e*P	**P**	**15 53 24.8**	**+0.7**
SIJI	**Sorong**	**34.85**	**96**	P	**P**	**15 53 28.8**	**-1.5**
	comp=Z,9.1nm,0.8s,baz=267,slow=6.7,SNR=4.5						
DHRM	**DHARAMSHALA**	**34.88**	**329**	*e*P	**P**	**15 53 31.2**	**+0.6**
FITZ	**Fitzroy Crossi**	**35.41**	**127**	P	**P**	**15 53 34.2**	**-0.7**
	baz=35,SNR=28						
NJ2	**Nanjing**	**35.76**	**33**	*e*P	**P**	**15 53 40.0**	**+2.2**

NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
FAKI	Fak Fak	36.09	99	P	P	15 53 38.9	-2.1
MEEK	Meekatharra	36.25	145	P	P	15 53 43.5	+1.3
	baz=36,SNR=6.4						
GTA	Gaotai	36.46	4	⇓P	P	15 53 43.3	-0.6
GTA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KNRA	Kununurra	36.77	121	P	P	15 53 45.5	-1.2
	baz=37,SNR=18						
KNRA	Kununurra	36.77	121	P	P	15 53 45.2	-1.5
KNRA				IAmb	IAmb	15 53 46.4	
	comp=Z,31nm,1.0s						
MORW	Morawa	36.85	151	P	P	15 53 49.2	+2.0
	baz=37,SNR=5.9						
MORW	Morawa	36.85	151	P	P	15 53 45.5	-1.7
MORW				IAmb	IAmb	15 53 50.2	
	comp=Z,32nm,1.2s						
MORW	Morawa	36.85	151	P	P	15 53 48.0	+0.8
NIL	Nilore	37.58	327	P	P	15 53 52.7	-0.7
NIL				pmax	pmax		
	comp=Z,27nm,0.8s						
NIL	Nilore	37.58	327	P	P	15 53 52.7	-0.7
NIL				IAmb	IAmb	15 53 54.7	
	comp=Z,27nm,0.8s						
MTN	Manton Dam	37.68	115	P	P	15 53 53.2	-1.2
	baz=38,SNR=9.2						
MTN	Manton Dam	37.68	115	P	P	15 53 52.6	-1.8
MTN				IAmb	IAmb	15 53 54.8	
	comp=Z,24nm,1.1s						
BLDU	Ballidu	38.45	152	P	P	15 54 02.5	+1.8
	baz=39,SNR=8.0						
JOW	Kunigami	38.55	49	P	P	15 54 01.1	-0.5
	comp=Z,18nm,0.6s,baz=232,slow=4.9,SNR=4.8						
JOW	Kunigami	38.55	49	P	P	15 54 00.1	-1.6
KDU	Kakadu	38.84	114	P	P	15 54 02.8	-1.4
	baz=39,SNR=4.7						
MUN	Mundaring	39.37	153	P	P	15 54 10.4	+2.0
	baz=40,SNR=7.3						
BTO	Baotou	39.45	16	eP	P	15 54 09.5	+0.4
BTO				S	S	16 00 08.3	-0.6
KLBR	Kellerberrin	39.76	151	P	P	15 54 11.6	-0.1
	baz=40,SNR=4.9						
KLBR	Kellerberrin	39.76	151	P	P	15 54 12.7	+1.0
HHC	Hu-ho-hao-te	40.12	18	eP	P	15 54 15.3	+0.6
HHC				pmax	pmax		
	comp=Z,21nm,0.8s						
HHC				pmax	pmax		
	comp=Z,300nm,5.4s						
KSH	Kashi	40.99	335	P	P	15 54 20.5	-1.4
KSH				pP	sP	15 54 35.0	-0.1
KSH				PcP	PcP	15 56 20.0	-1.7
KSH				pmax	pmax		
	comp=Z,26nm,0.9s						
BJI	Beijing	41.01	23	P	P	15 54 22.5	+0.7
BJI				pmax	pmax		
	comp=Z,29nm,0.6s						
WRKA	Warakurna	41.43	134	P	P	15 54 25.5	-0.1
	baz=42,SNR=5.3						
WMQ	Urumqi	41.51	350	eP	P	15 54 27.0	+1.0
WMQ				pP	pP	15 54 36.5	+1.1
WMQ				PP	PnPn	15 56 07.0	-0.2
WMQ				pmax	pmax		
	comp=Z,26nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,350nm,5.1s						
TARG	Taragay, Kyrgy	42.19	339	P	P	15 54 31.2	-0.8
TARG				IAmb	IAmb	15 54 33.8	
	comp=Z,34nm,0.8s						
GAR	Garm	43.18	330	P	P	15 54 39.4	-0.4
GAR				IAmb	IAmb	15 54 56.0	
	comp=Z,29nm,0.9s						
ULHL	Ulahol	43.21	338	P	P	15 54 40.8	+0.7
	SNR=12						
WB0	Warramunga Arr	43.41	123	P	P	15 54 41.0	-0.7
WRA	Warramunga Arr	43.44	123	P	P	15 54 42.2	+0.2
	comp=Z,36nm,0.5s,baz=301,slow=9.1,SNR=296						
WRA				LR	LR	16 14 54.9	
	comp=Z,57nm,20.9s,baz=320,slow=39						
WRAB	Tennant Creek	43.45	123	P	P	15 54 42.0	-0.1
WRAB				pmax	pmax		
	comp=Z,55nm,1.0s						
WRAB	Tennant Creek	43.45	123	P	P	15 54 42.0	-0.1
WRAB	Tennant Creek	43.45	123	P	P	15 54 42.3	+0.2
WB2	Warramunga Arr	43.45	123	P	P	15 54 41.7	-0.4
	baz=43						
CHGR	Chuyangaron	43.52	328	IAmb	IAmb	15 54 57.8	
	comp=Z,39nm,0.9s						
TJN	Taejon	43.76	37	⇑eP	P	15 54 45.4	+1.1
UCH	Uchtor	43.87	336	P	P	15 54 46.4	+0.7
	SNR=37						
TKM2	Tokmak 2	44.03	338	P	P	15 54 47.1	+0.4
	SNR=28						
TKM2	Tokmak 2	44.03	338	i P	P	15 54 47.0	+0.3
TKM2				pmax	pmax		
	comp=Z,40nm,1.5s						
KBK	Karagaybulak	44.06	337	P	P	15 54 47.9	+1.1
	SNR=29						
AML	Almayashu	44.12	335	P	P	15 54 48.6	+0.9
	SNR=31						
AAK	Ala-Archa	44.22	337	LR	LR	16 14 33.6	
	comp=Z,131nm,21.9s,baz=156,slow=38						
AAK	Ala-Archa	44.22	337	P	P	15 54 50.2	+2.1
	SNR=14						
AAK	Ala-Archa	44.22	337	⇑eP	P	15 54 48.8	+0.7
AAK				pmax	pmax		
	comp=Z,55nm,1.0s						
AAK	Ala-Archa	44.22	337	P	P	15 54 47.5	-0.6
AAK				IAmb	IAmb	15 54 51.0	
	comp=Z,28nm,1.3s						
CHMS	Chumysh	44.42	337	P	P	15 54 50.0	+0.4
	SNR=8.8						
EKS2	Erkin-Say	44.53	336	P	P	15 54 51.6	+1.0
	SNR=21						
USP	Ospenovka	44.75	337	P	P	15 54 52.6	+0.4
	SNR=48						
KSRS	Korea Array	44.81	36	P	P	15 54 52.0	-0.7
	comp=Z,2.5nm,0.7s,baz=227,slow=8.7,SNR=7.2						
KSRS				LR	LR	16 15 50.6	
	comp=Z,156nm,18.9s,baz=216,slow=39						
KSRS	Korea Array	44.81	36	P	P	15 54 52.0	-0.7
AS31	Alice Springs	44.89	128	P	P	15 54 52.3	-1.3
ASAR	Alice Springs	44.89	128	P	P	15 54 53.6	-0.1
	comp=Z,11nm,0.8s,baz=303,slow=7.9,SNR=148						
ASAR				PcP	PcP	15 56 35.3	+0.3
	comp=Z,2.1nm,0.6s,baz=318,slow=2.9,SNR=6.7						
ASAR				LR	LR	16 15 43.7	
	comp=Z,74nm,20.6s,baz=301,slow=39						
ASAR	Alice Springs	44.89	128	P	P	15 54 52.7	-1.0
FORT	Forrest	44.95	141	P	P	15 54 55.4	+1.5
	baz=45,SNR=15						
FORT	Forrest	44.95	141	P	P	15 54 51.3	-2.6
FORT	Forrest	44.95	141	P	P	15 54 54.8	+0.9
MK31	Makanchi Array	45.46	346	P	P	15 54 57.2	-0.6
MK31	Makanchi Array	45.46	346	P	P	15 54 56.2	-1.6
MK31				IAmb	IAmb	15 54 59.0	
	comp=Z,40nm,1.1s						
MKAR	Makanchi Array	45.46	346	P	P	15 54 57.5	-0.3
	comp=Z,25nm,0.5s,baz=156,slow=9.0,SNR=339						
MKAR				LR	LR	16 16 55.1	
	comp=Z,28nm,18.7s,baz=168,slow=40						
MAKZ	Makanchi	45.55	346	P	P	15 54 57.7	-0.8
MAKZ				pmax	pmax		
	comp=Z,38nm,0.6s						
MAKZ	Makanchi	45.55	346	P	P	15 54 57.7	-0.8
SONM	Songino Array	45.56	9	P	P	15 54 58.6	0.0
	comp=Z,19nm,0.6s,baz=189,slow=9.3,SNR=111						
SONM				PcP	PcP	15 56 37.5	+0.6
	comp=Z,2.8nm,0.4s,baz=200,slow=4.3,SNR=10						
SONM				LR	LR	16 16 51.7	
	comp=Z,126nm,18.1s,baz=188,slow=40						
SONM	Songino Array	45.56	9	P	P	15 54 58.2	-0.5
SONM				IAmb	IAmb	15 54 59.6	
	comp=Z,19nm,0.8s						
ULN	Ulaanbaatar	45.70	10	ceP	P	15 54 59.7	-0.1
ULN				pmax	pmax		
	comp=Z,25nm,1.7s						
ULN	Ulaanbaatar	45.70	10	P	P	15 54 58.2	-1.5
ULN				IAmb	IAmb	15 55 00.5	
	comp=Z,11nm,0.6s						
KK31	Karatay Array	46.28	334	P	P	15 55 04.4	+0.1
KKAR	Karatay Array	46.28	334	P	P	15 55 04.0	-0.3
KKAR	Karatay Array	46.28	334	P	P	15 55 04.0	-0.3
JMN	Monobe	46.36	44	P	P	15 55 04.8	-0.4
DGZ	Jazzator, Alta	47.28	352	d iP	P	15 55 12.6	+0.4
DGZ				pmax	pmax		
	comp=Z,17nm,1.0s						
ZAK	Zakamensk	47.65	6	eP	P	15 55 14.7	-0.3
ZAK				pmax	pmax		
	comp=Z,11nm,1.5s						
QIS	Mount Isa	48.17	121	P	P	15 55 19.7	+0.3
	baz=48,SNR=14						
QIS	Mount Isa	48.17	121	P	P	15 55 20.0	+0.6
OOD	Oodnadatta	48.43	132	P	P	15 55 21.7	+0.5
MULG	Mulgathing	48.65	136	P	P	15 55 23.5	+0.6
MOY	Mondy	48.74	4	eP	P	15 55 23.5	+0.1
TLY	Talaya	48.97	6	P	P	15 55 25.0	0.0
	comp=Z,12nm,0.8s,baz=349,slow=9.8,SNR=6.1						
TLY	Talaya	48.97	6	eP	P	15 55 26.2	+1.1
TLY				pmax	pmax		
	comp=Z,25nm,0.6s						
TLY				MLR	MLR		
	comp=Z,167nm,6.0s						
COEN	Coen	49.11	111	P	P	15 55 25.7	-1.0
	baz=49						
COEN	Coen	49.11	111	P	P	15 55 25.7	-1.0
COEN				IAmb	IAmb	15 55 27.4	
	comp=Z,10.0nm,0.7s						
COEN	Coen	49.11	111	P	P	15 55 27.8	+1.1
GEYT	Alibeck	49.54	320	P	P	15 55 30.6	+1.0
	comp=Z,21nm,0.7s,baz=121,slow=11,SNR=24						
GEYT				LR	LR	16 17 13.1	
	comp=Z,40nm,21.9s,baz=235,slow=37						
GEYT	Alibeck	49.54	320	P	P	15 55 27.9	-1.8
GYA0B	ALIBECK ARRAY	49.54	320	P	P	15 55 29.0	-0.7
OTUK	Ortayu	49.76	339	P	P	15 55 31.3	+0.1
KURBB	Kurchatov Arra	49.95	345	P	P	15 55 32.4	-0.1
MJAR	Matsushiro Arr	50.86	44	LR	LR	16 18 33.2	
	comp=Z,44nm,19.2s,baz=60,slow=38						
MTSU	Mount Surprise	51.42	116	P	P	15 55 44.6	+0.4
	baz=51,SNR=9.7						
MTSU	Mount Surprise	51.42	116	P	P	15 55 45.0	+0.8
	comp=Z,7.7nm,0.9s						
BBOO	Buckleboo	51.51	137	P	P	15 55 44.9	+0.3
	baz=52,SNR=9.3						
BBOO	Buckleboo	51.51	137	P	P	15 55 44.2	-0.4
BBOO				IAmb	IAmb	15 55 45.6	
	comp=Z,12nm,0.8s						
USRK	Ussuriysk Ar.	51.64	32	LR	LR	16 19 22.8	
	comp=Z,92nm,19.2s,baz=199,slow=38						
LCRK	Leigh Creek	51.72	133	P	P	15 55 47.4	+1.3
ZALV	Zalesovo Beam	51.80	351	P	P	15 55 46.4	0.0
	comp=Z,41nm,0.5s,baz=173,slow=7.1,SNR=219						
ZALV				LR	LR	16 19 57.9	
	comp=Z,59nm,21.1s,baz=129,slow=38						
PMG	Port Moresby	51.83	104	P	P	15 55 47.2	0.0
	comp=Z,7.8nm,0.7s,baz=282,slow=1.8,SNR=9.4						
PMG	Port Moresby	51.83	104	P	P	15 55 44.9	-2.3
PMG				IAmb	IAmb	15 55 47.5	
	comp=Z,7.5nm,0.7s						
PMG	Port Moresby	51.83	104	P	P	15 55 48.8	+1.6
PMG	Port Moresby	51.83	104	P	P	15 55 48.8	+1.6
INKA	Innaminka	52.26	129	P	P	15 55 51.4	+1.2
RAYN	Ar Rayn	53.45	297	P	P	15 55 58.5	-0.7
RAYN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
RAYN	Ar Rayn	53.45	297	P	P	15 55 58.5	-0.7
CTA	Charters Tower	53.80	117	P	P	15 56 01.6	-0.1
	comp=Z,7.6nm,0.6s,baz=290,slow=10,SNR=3.9						
CTAO	Charters Tower	53.80	117	P	P	15 56 00.7	-1.0
CTAO				pmax	pmax		
	comp=Z,16nm,1.0s						
CTAO	Charters Tower	53.80	117	P	P	15 56 00.7	-1.0
CTAO				IAmb	IAmb	15 56 03.1	
	comp=Z,16nm,1.0s						
CTAO	Charters Tower	53.80	117	P	P	15 56 03.1	+1.4
HTT	Hallett	53.84	136	P	P	15 56 02.5	+0.7
	baz=54,SNR=11						
HTT	Hallett	53.84	136	P	P	15 56 03.0	+1.1
QLP	Quilpie	54.52	126	P	P	15 56 07.8	+0.9
	baz=54,SNR=29						
QLP	Quilpie	54.52	126	P	P	15 56 08.4	+1.5
BRVK	Borovoye	54.53	341	c iP	P	15 56 05.7	-0.7
BRVK				pmax	pmax		
	comp=Z,11nm,0.8s						
BRVK	Borovoye	54.53	341	P	P	15 56 05.2	-1.2
BRVK				IAmb	IAmb	15 56 07.9	
	comp=Z,16nm,1.1s						
STKA	Stephens Creek	54.93	133	P	P	15 56 10.2	+0.4
	comp=Z,7.3nm,0.6s,baz=300,slow=9.0,SNR=24						
STKA				LR	LR	16 22 14.1	
	comp=Z,68nm,20.1s,baz=5.7,slow=39						
STKA	Stephens Creek	54.93	133	P	P	15 56 09.8	0.0
KLR	Kul'dur	55.02	27	P	P	15 56 09.8	-0.3
	comp=Z,7.8nm,0.8s,baz=266,slow=6.7,SNR=15						
AB31	Akbulak array	55.75	332	P	P	15 56 14.7	-0.6
ABKAR	Akbulak array	55.75	332	P	P	15 56 15.0	-0.4
ABKAR	Akbulak array	55.75	332	IAmb	IAmb	15 56 18.1	
	comp=Z,25nm,1.2s						
BOD	Bodaibo	56.47	11	eP	P	15 56 18.6	-1.7
BOD				pmax	pmax		
	comp=Z,27nm,0.9s						
ZEA	Zeya	56.58	21	eP	P	15 56 21.4	+0.2
ZEA				pmax	pmax		
	comp=N,10.0nm,0.4s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CMSA	Cobar Meteorol	57.83	130	P	P	15 56 31.4	+0.9
	baz=58,SNR=29						
CMSA	Cobar Meteorol	57.83	130	P	P	15 56 31.6	+1.1
RMQ	Roma	58.20	124	P	P	15 56 33.5	+0.3
	baz=58,SNR=8.8						
RMQ	Roma	58.20	124	P	P	15 56 34.6	+1.4
KMBO	Kilima Mbogo	59.47	267	P	P	15 56 44.8	+2.3
	comp=Z,1.0nm,0.3s,baz=21,slow=4.9,SNR=4.8						
KMBO				LR	LR	16 19 18.2	
	comp=Z,60nm,19.2s,baz=92,slow=33						
GNI	Garni	59.67	316	⇓eP	P	15 56 44.6	+1.3
GNI				pmax	pmax		
	comp=Z,25nm,1.7s						
EIDS	Eidsvold	59.76	122	P	P	15 56 43.7	-0.3
	baz=60,SNR=3.5						
EIDS	Eidsvold	59.76	122	P	P	15 56 43.1	-0.9
EIDS				IAmb	IAmb	15 56 45.1	
	comp=Z,8.0nm,0.9s						
TOO	Toolangi	60.57	137	P	P	15 56 50.7	+1.3
	baz=61						
SVE	Sverdlovsk	60.90	338	eP	P	15 56 51.2	0.0
SVE				pmax	pmax		
	comp=Z,43nm,1.3s						
ZEI	Tsey	61.35	318	eP	P	15 56 54.7	-0.1
ZEI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ARU	Arti	61.40	337	P	P	15 56 53.6	-1.0
	comp=Z,3.2nm,0.7s,baz=126,slow=6.1,SNR=6.4						
ARU	Arti	61.40	337	d iP	P	15 56 54.2	-0.4
ARU				*PP	sP	15 57 08.5	+0.4
ARU				S	S	16 05 12.9	-0.2
ARU				SS	SS	16 09 14.0	-0.2
ARU				pmax	pmax		
	comp=Z,14nm,0.9s						
CAN	Canberra	62.00	133	P	P	15 56 59.3	+0.2
CAN				pmax	pmax		
	comp=Z,26nm,1.3s						
CAN	Canberra	62.00	133	P	P	15 56 59.3	+0.2
CAN				IAmb	IAmb	15 57 01.0	
	comp=Z,26nm,1.3s						
NEY	Neytrino	62.33	318	⇓eP	P	15 57 02.4	+1.1
NEY				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KBZ	Khabaz	62.41	319	P	P	15 57 01.6	+0.1
	comp=Z,8.1nm,0.8s,baz=172,slow=7.1,SNR=18						
KBZ	Khabaz	62.41	319	ceP	P	15 57 01.7	+0.1
KBZ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KIV	Kislovodsk	62.65	319	eP	P	15 57 03.6	+0.3
KIV				pmax	pmax		
	comp=Z,14nm,1.0s						
KIV				MLR	MLR		
	comp=Z,21nm,17.0s						
BELG	Belogornoye	63.81	329	P	P	15 57 11.9	+1.2
	comp=Z,38nm,0.9s,baz=328,slow=0.5						
YAK	Yakutsk	63.97	17	P	P	15 57 11.1	-0.5
	comp=Z,9.0nm,0.3s,baz=169,slow=0.9,SNR=9.8						
YAK	Yakutsk	63.97	17	eP	P	15 57 10.8	-0.8
YAK				e		15 57 44.7	
YAK				eS	S	16 05 45.2	0.0
YAK				e*SS	sS	16 06 07.2	+5.7
YAK				e		16 06 53.0	
YAK				eSS	SS	16 09 49.3	-4.9
YAK				pmax	pmax		
	comp=Z,28nm,1.5s						
YAK				pmax	pmax		
	comp=N,13nm,1.4s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,519nm,5.8s						
YAK				pmax	pmax		
	comp=N,402nm,5.7s						
YAK				pmax	pmax		
	comp=E,470nm,6.8s						
YAK				smax	smax		
	comp=E,239nm,5.8s						
YAK				smax	smax		
	comp=N,314nm,5.7s						
YAK	Yakutsk	63.97	17	P	P	15 57 10.5	-1.0
VRH	Novokhopyorsk	66.39	326	eP	P	15 57 26.4	-1.1
VRH				pmax	pmax		
	comp=Z,20nm,0.7s						
KIRV	Kirov	66.53	335	P	P	15 57 29.5	+1.3
	comp=Z,17nm,0.7s,baz=208,slow=2.0,SNR=8.8						
NRIK	Noril'sk	66.61	357	P	P	15 57 28.0	-0.5
	comp=Z,4.3nm,0.4s,baz=155,slow=7.7,SNR=7.7						
NRIK				LR	LR	16 29 40.9	
	comp=Z,58nm,19.3s,baz=134,slow=39						
NRIK	Noril'sk	66.61	357	P	P	15 57 28.1	-0.5
NRIK				pmax	pmax		
	comp=Z,16nm,1.2s						
NRIK	Noril'sk	66.61	357	P	P	15 57 28.1	-0.5
NRIK				IAmb	IAmb	15 57 29.5	
	comp=Z,16nm,1.2s						
BRTR	Keskin Array B	67.54	312	P	P	15 57 34.8	-0.5
	comp=Z,3.2nm,0.7s,baz=128,slow=7.6,SNR=12						
BRTR				LR	LR	16 31 03.9	
	comp=Z,26nm,18.9s,baz=143,slow=39						
BRTR	Keskin Array B	67.54	312	P	P	15 57 34.0	-1.3
VSR	Storozhevoye	67.85	325	eP	P	15 57 35.7	-1.1
VSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LPSR	Galich'ya Gora	68.56	326	eP	P	15 57 40.6	-0.6
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PRGR	Permogore	69.86	337	eP	P	15 57 40.4	-8.6
PRGR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MA2	Magadan	70.07	26	P	P	15 57 50.0	-0.4
	comp=Z,6.1nm,0.8s,baz=179,slow=18,SNR=1.9						
PETK	Petropavlovsk-	70.66	34	LR	LR	16 30 03.2	
	comp=Z,54nm,20.1s,baz=213,slow=37						
OBN	Obninsk	70.87	328	⇓iP	P	15 57 55.3	-0.1
OBN				i *PP	PcP	15 58 12.8	-3.0
OBN						15 58 16.0	
OBN				*SP	sP	15 58 20.0	+11
OBN				pmax	pmax		
	comp=Z,52nm,2.5s						
OBN				MLR	MLR		
	comp=Z,61nm,15.0s						
TIXI	Tiksi	71.63	10	P	P	15 57 58.1	-1.6
	comp=Z,2.9nm,0.4s,baz=24,slow=1.2,SNR=3.9						
TIXI	Tiksi	71.63	10	P	P	15 57 57.9	-1.8
KLMR	Klimovskoe	71.97	334	eP	P	15 57 58.9	-3.0
KLMR				e		16 00 39.2	
KLMR				pmax	pmax		
	comp=Z,21nm,1.3s						
KLMR	Klimovskoe	71.97	334	eP	P	15 57 58.9	-3.0
KLMR				AMP		15 58 06.3	
	comp=Z,21nm,1.3s						
KLMR				ePP	PP	16 00 39.2	-2.8
SEY	Seymchan	72.45	23	P	P	15 58 04.2	-0.6
	comp=Z,5.6nm,0.9s,baz=234,slow=6.6,SNR=9.5						
DZM	Mont Dzumac	72.51	114	LR	LR	16 29 58.0	
	comp=Z,45nm,21.4s,baz=360,slow=36						
AKASG	Malin Array Be	73.56	322	P	P	15 58 10.9	-0.7
	comp=Z,2.1nm,0.4s,baz=87,slow=5.4,SNR=26						
AKBB	Malin Array Si	73.56	322	⇑iP	P	15 58 10.8	-0.8
AKBB				pmax	pmax		
	comp=Z,5.0nm,0.6s						
AKBB	Malin Array Si	73.56	322	P	P	15 58 10.5	-1.1
AKBB				IAmb	IAmb	15 58 11.5	
	comp=Z,6.1nm,0.6s						
LBTB	Lobatse	74.11	243	P	P	15 58 14.0	-1.5
LBTB				pmax	pmax		
	comp=Z,14nm,0.9s						
LBTB	Lobatse	74.11	243	P	P	15 58 14.0	-1.5
LBTB				IAmb	IAmb	15 58 17.7	
	comp=Z,14nm,0.9s						
MAW	Mawson	74.22	193	P	P	15 58 16.5	+1.5
	comp=Z,7.0nm,0.9s,baz=57,slow=4.9,SNR=9.1						
MAW	Mawson	74.22	193	P	P	15 58 12.8	-2.3
BOSA	Boshof	75.11	240	P	P	15 58 22.1	+0.9
	comp=Z,3.6nm,0.7s,baz=66,slow=3.3,SNR=6.4						
BOSA				LR	LR	16 28 38.0	
	comp=Z,40nm,18.2s,baz=20,slow=33						
BOSA	Boshof	75.11	240	P	P	15 58 19.9	-1.4
BOSA				IAmb	IAmb	15 58 32.4	
	comp=Z,16nm,1.2s						
BURAR	Bucovina Array	75.37	318	P	P	15 58 21.7	-0.6
BUR08	Bucovina Ar. S	75.39	319	P	P	15 58 21.7	-0.7
MNK	Minsk	75.39	326	i P	P	15 58 25.9	+3.8
MNK				i		16 01 13.9	
MNK				i PPP	PPP	16 03 00.4	
MNK				i SS	SS	16 12 55.0	+4.6
MNK				pmax	pmax		
	comp=Z,20nm,1.0s						
MNK				pmax	pmax		
	comp=N,21nm,1.0s						
MNK				pmax	pmax		
	comp=E,6.0nm,2.1s						
MNK				MLR	MLR		
	comp=Z,95nm,10.0s						
MNK				MLR	MLR		
	comp=E,21nm,12.0s						
MNK				MLR	MLR		
	comp=N,219nm,17.0s						
MNK	Minsk	75.39	326	i P	P	15 58 25.9	+3.8
	comp=E,6.0nm,2.1s						
MNK				i P	P	15 58 25.9	+3.8
	comp=N,21nm,1.0s						
MNK				i P	P	15 58 25.9	+3.8
	comp=Z,20nm,1.0s,baz=106						
MNK				i PP	PP	16 01 13.9	+2.7
MNK				i PPP	PPP	16 03 00.5	
MNK				i S	S	16 08 06.6	+6.8
MNK				i SS	SS	16 12 55.1	+4.7
MNK				i SSS	SSS	16 16 18.2	
MNK				i LQ	LQ	16 26 37.5	
MNK				i LR	LR	16 32 22.0	
MNK				i LRM	MLR	16 34 16.1	
	comp=Z,95nm,10.2s						
MNK				i LRM	MLR	16 34 34.4	
	comp=E,21nm,11.8s						
MNK				i LRM	MLR	16 34 41.4	
	comp=N,219nm,16.9s						
NACGM	Naroch	76.12	326	i P	P	15 58 29.1	+2.9
LVZ	Lovozero	77.05	340	P	P	15 58 30.7	-0.6
LVZ				pmax	pmax		
	comp=Z,38nm,1.1s						
LVZ	Lovozero	77.05	340	P	P	15 58 30.7	-0.6
KOLS	Kolonicke sedl	77.55	319	eP	P	15 58 36.6	+2.1
KOLS	Kolonicke sedl	77.55	319	eP	P	15 58 36.6	+2.1
CRVS	Cervenica-Dubn	78.07	319	eP	P	15 58 40.6	+3.2
CRVS	Cervenica-Dubn	78.07	319	eP	P	15 58 40.6	+3.2
FIA1	FINESS Array S	78.23	332	P	P	15 58 36.2	-1.8
FIA1				IAmb	IAmb	15 58 40.2	
	comp=Z,22nm,1.1s						
FINES	FINESS Array B	78.23	332	P	P	15 58 37.9	-0.1
	comp=Z,2.7nm,0.5s,baz=107,slow=5.9,SNR=16						
ARA0	ARCESS Array S	80.75	340	eP	P	15 58 51.9	+0.3
ARCES	ARCESS Array B	80.75	340	P	P	15 58 51.6	0.0
	comp=Z,3.1nm,0.6s,baz=91,slow=5.1,SNR=31						
ARCES				LR	LR	16 37 42.7	
	comp=Z,75nm,20.7s,baz=260,slow=38						
ARCES	ARCESS Array B	80.75	340	P	P	15 58 50.5	-1.1
MODS	Modra-Piesok	80.75	318	eP	P	15 58 52.1	0.0
MODS	Modra-Piesok	80.75	318	eP	P	15 58 52.1	0.0
KTK1	Kautokeino	81.38	340	eP	P	15 58 55.0	+0.1
HAMF	Hammerfest	81.66	341	eP	P	15 58 57.3	+1.0
BLEU	Blekinge	82.49	326	e	P	15 59 11.8	+11
JETT	Jettan, Norway	82.49	340	eP	P	15 59 02.4	+1.6
TRO	Tromso	83.01	340	eP	P	15 59 04.0	+0.5
GERES	GERESS Array B	83.16	319	P	P	15 59 04.6	-0.2
	comp=Z,1.2nm,0.6s,baz=105,slow=6.9,SNR=9.9						
GERES	GERESS Array B	83.16	319	P	P	15 59 04.3	-0.5
ZOU	Zoufplan	83.53	316	P	P	15 59 05.5	-1.3
ZOU				IAmb	IAmb	15 59 17.7	

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
	comp=Z,22nm,1.5s						
DEL	Delary	83.58	326	*i*	P	15 59 06.9	+0.3
FAUS	Fauske	84.00	337	*e*P	P	15 59 08.8	+0.3
BJUU	Bjuv	84.02	326	*e*	P	15 59 08.8	-0.1
STEI	Steigen	84.08	338	*e*P	P	15 59 09.7	+0.7
MOR8	Moi Rana	84.19	336	*e*P	P	15 59 09.4	-0.2
FABU	Falkenberg	84.25	327	*e*	P	15 59 10.5	+0.5
BORU	Boraas	84.26	327	*e*	P	15 59 10.9	+0.8
URZ	Urewera	84.33	129	LR	LR	16 38 44.8	
	comp=Z,65nm,18.6s,baz=211,slow=37						
LOF	Lofoten	84.74	338	*e*P	P	15 59 12.2	-0.1
KONS	Konsvik	84.75	336	*e*P	P	15 59 13.1	+0.7
STOK	Stokkvaagen	84.78	336	*e*P	P	15 59 13.3	+0.7
RETA	Reutte	85.07	317	*e*P	P	15 59 14.6	0.0
	comp=Z,13nm,1.9s						
NSS	Namsos	85.09	334	*e*P	P	15 59 14.1	0.0
STRU	Stroemstad	85.17	329	*i*	P	15 59 14.9	+0.3
NC303	NORSAR Array S	85.18	331	P	P	15 59 12.9	-1.8
NC303				IAmb	IAmb	15 59 26.5	
	comp=Z,21nm,1.2s						
SPA0	Spitsbergen Ar	85.18	348	*e*P	P	15 59 15.1	+0.7
SPITS	Spitsbergen Ar	85.18	348	P	P	15 59 13.4	-1.0
	comp=Z,5.4nm,0.6s,baz=90,slow=4.3,SNR=6.6						
SPITS	Spitsbergen Ar	85.18	348	P	P	15 59 13.6	-0.8
SPITS				pmax	pmax		
	comp=Z,69nm,1.4s						
NOA	NORSAR Array B	85.24	331	P	P	15 59 15.1	0.0
	comp=Z,1.9nm,0.9s,baz=94,slow=5.6,SNR=3.4						
NOA				LR	LR	16 41 08.2	
	comp=Z,42nm,18.4s,baz=295,slow=38						
TBLU	Trondheim	85.78	333	*e*P	P	15 59 17.8	+0.2
MOL	Molde	87.01	332	*e*P	P	15 59 24.4	+0.8
VNDA	Vanda	87.59	169	LR	LR	16 32 28.5	
	comp=Z,34nm,20.7s,baz=313,slow=31						
A21K	Barrow	92.60	18	P	P	15 59 49.1	-0.6
A21K				IAmb	IAmb	15 59 50.8	
	comp=Z,5.8nm,0.8s						
QSPA	South Pole Qui	92.83	180	P	P	15 59 50.3	-0.7
TORD	Torodi Ar. Bea	94.13	283	P	P	15 59 58.6	+0.7
	comp=Z,1.6nm,1.0s,baz=110,slow=4.3,SNR=5.9						
TOLK	Toolik Lake Re	95.80	20	P	P	16 00 03.5	-1.0
ESDC	Sonseca Array	96.28	310	P	P	16 00 08.0	+0.6
	comp=Z,0.4nm,0.5s,baz=73,slow=5.7,SNR=2.3						
PDAR	Pinedale Array	128.77	25	PKP	PKPdf	16 05 46.5	0.0
	comp=Z,0.5nm,0.6s,baz=174,slow=2.0,SNR=6.6						
TXAR	Lajitas Array	142.52	30	PKhKP	PKPpre	16 06 08.3	
	comp=Z,0.2nm,0.4s,baz=318,slow=0.1,SNR=6.9						
250A	Grady	145.21	4	PKPbc	PKPdf	16 06 16.8	0.0
CPUP	Villa Florida	145.82	225	PKPbc	PKPab	16 06 18.8	-0.1
	comp=Z,12nm,0.8s,baz=147,slow=2.0,SNR=12						
SIV	San Ignacio	154.47	238	PKPbc	PKPbc	16 06 39.8	-0.4
	comp=Z,0.5nm,0.6s,baz=67,slow=7.7,SNR=4.2						
SIV				PKPab	PKPab	16 06 54.9	+0.4
	comp=Z,0.4nm,0.4s,baz=135,slow=4.6,SNR=4.2						
PTGA	Pitinga	156.49	275	PKPab	PKPab	16 07 04.5	+1.2
	comp=Z,3.6nm,0.5s,baz=94,slow=5.9,SNR=11						
LPAZ	La Paz	159.94	227	PKP	PKPdf	16 06 39.5	+0.1
	comp=Z,1.4nm,0.8s,baz=107,slow=2.3,SNR=4.9						
LPAZ				PKPab	PKPab	16 07 19.7	+1.0
	comp=Z,2.1nm,0.8s,baz=98,slow=7.1,SNR=6.0						

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*NIED **27** 15:50:24.8, 41°.91N×142°.33E, h69^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}7.85; $M_{\theta\theta}$-2.11; $M_{\phi\phi}$-5.74; $M_{r\theta}$3.05; $M_{\theta\phi}$-3.30; $M_{\phi r}$3.72; Fault plane solution: $M_0$9.14000×10^{14} NP1:ϕ_s35.00000°, δ61.00000°, λ94.00000°. NP2:ϕ_s206.00000°, δ29.00000°, λ82.00000°.*

*JMA **27** 15:50:24.7±0.2, 41°.91N×142°.33E, h69^{km}±3^{km}, M3.5 Broadband fault plane solution: P waves. NP1: ϕ_s162.00000°, δ22.00000°, λ35.00000°. NP2:ϕ_s39.00000°, δ77.00000°, λ109.00000°. Principal axes: T Plg54.0000°, Azm332.0000°; N Plg18.0000°, Azm215.0000°; P Plg30.0000°, Azm114.0000°;*

JMA Felt I J1.

*NEIC **27** 15:50:25.6±2.2, 41°.84N±0°.05×142°.32E±0°.06, h68^{km}±9^{km}, mb4.3/6 Error ellipse: s-maj=8.8km s-min=5.6km az=212.0*

*IDC **27** 15:50:27.2±1.7, 42°.01N×142°.36E, h77^{km}±13^{km}, mb3.6/15, mb1 3.7/20, mb1mx3.5/58, mbtmp3.9/20, MS2.7/2, Ms1 2.7/2, ms1mx2.2/48, Error ellipse: s-maj=18.5km s-min=11.1km az=118.0*

ISC 27 15:50:26.0±0.8, **41°.93N**±0°.04×**142°.32E**±0°.05, **h65**^{km}±7^{km}, **n62,** σ**1^{s}.10**/65, **mb4.0**/18, **2C-7D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNBK	Urakawa-nobuka	0.47	43	P	Pn	15 50 36.8	-1.3
JSHD	Hidakashinhida	0.49	13	P	Pn	15 50 37.6	-0.7
JSHD				*e*S	Sn	15 50 47.3	0.0
ERM	Erimo	0.63	82		Pn	15 50 39.2	-0.6
JEM	Erimo	0.63	82	P	Pn	15 50 38.7	-1.0
JIAM	Iburiatsuma	0.75	337	⇓P	Pn	15 50 41.2	+0.1
JIAM				*e*S	Sn	15 50 53.4	+1.1
JBT2	Biratori 2	0.85	2	⇓P	Pn	15 50 41.4	-0.9
JKB	Kayabe	0.96	268	⇓P	Pn	15 50 42.7	-1.0
JKB				*e*S	Sn	15 50 55.7	-1.1
JCH	Churui	1.03	48	⇑P	Pn	15 50 44.1	-0.5
JNB	Noboribetsu	1.09	300	⇓P	Pn	15 50 44.0	-1.4
JNB				*e*S	Sn	15 50 58.0	-1.8
JOT	Ohata	1.10	240	⇓P	Pn	15 50 44.6	-0.9
JOT				*e*S	Sn	15 50 58.9	-1.1
JEW	Eniwo	1.11	325	⇓P	Pn	15 50 45.2	-0.5
JEW	Eniwo	1.11	325	Pn	Pn	15 50 45.3	-0.3
JFR	Furan	1.25	9	P	Pn	15 50 46.7	-0.8
JYM2	Yakumo 2	1.46	278	P	Pn	15 50 49.2	-1.1
JSR	Shiriuchi	1.48	255	P	Pn	15 50 50.1	-0.4
JSR				*e*S	Sn	15 51 08.9	0.0
JTM	Tenmabayashi	1.48	220	⇑P	Pn	15 50 50.1	-0.4
JTM	Tenmabayashi	1.48	220	Pn	Pn	15 50 50.2	-0.3
JOB	Onbets	1.48	49	P	Pn	15 50 50.9	+0.4
JISS	Ishikarishitsu	1.50	334	P	Pn	15 50 50.2	-0.5
JISS				*e*S	Sn	15 51 08.9	-0.5
JAB	Ashibetsu	1.57	357	P	Pn	15 50 51.7	-0.1
JANG	Nango	1.67	202	P	Pn	15 50 52.6	-0.5
JANG				*e*S	Sn	15 51 13.1	-0.5
JAR	Ashorobuto	1.73	38	P	Pn	15 50 53.9	0.0
JHR	Hokuryu	1.86	347	⇓P	Pn	15 50 55.9	+0.3
ASAJ	Asahikawa	2.19	5	P	Pn	15 51 00.3	+0.2
	8.9nm,0.3s,baz=221,slow=12,SNR=53						
ASAJ				S	Sn	15 51 26.1	0.0
	14nm,0.3s,baz=333,slow=23,SNR=9.3						
JKA	Kamikawa-asahi	2.19	5		Pn	15 51 00.5	+0.3
JMM	Marumori	4.23	197	Pn	Pn	15 51 27.7	-0.2
MAJO	Matsushiro	6.26	212	Pn	Pn	15 51 56.2	+0.5
MJAR	Matsushiro Arr	6.26	212	P	Pn	15 51 57.3	+1.6
	0.1nm,0.3s,baz=8.5,slow=9.0,SNR=4.5						
MJAR	Matsushiro Arr	6.26	212		Pn	15 51 54.8	-0.8
USA0B	Ussuriysk Arra	7.89	290	Pn	Pn	15 52 19.5	+1.5
USRK	Ussuriysk Ar.	7.89	290	P	Pn	15 52 20.4	+2.5
	baz=92,slow=15,SNR=6.0						
JWT	Wachi	8.56	221	Pn	Pn	15 52 29.1	+1.9
KLR	Kul'dur	10.39	318	P	Pn	15 52 54.7	+2.7
	0.1nm,0.3s,baz=124,slow=14,SNR=10						
KLR				LR	LR	15 56 32.1	
	comp=Z,45nm,20.4s,baz=138,slow=35						
KSRS	Korea Array	11.95	253	P	Pn	15 53 17.4	+4.0
	0.4nm,0.3s,baz=63,slow=14,SNR=6.8						
KSRS				LR	LR	15 57 31.9	
	comp=Z,26nm,18.9s,baz=95,slow=35						
SONM	Songino Array	25.96	295	P	P	15 55 52.7	+0.3
	0.9nm,0.5s,baz=88,slow=9.3,SNR=1.3						
SONM	Songino Array	25.96	295	P	P	15 55 51.5	-0.9
SONM				IAmb	IAmb	15 56 04.9	
	comp=Z,1.4nm,0.8s						
H11N2	WAKE ISLAND Hy	30.39	129	T	T	16 28 00.9	
	baz=321,slow=75,SNR=4.1						
H11N1	WAKE ISLAND Hy	30.40	129	T	T	16 27 57.5	
	baz=321,slow=75,SNR=22						
H11N3	WAKE ISLAND Hy	30.41	129	T	T	16 27 59.7	
	baz=321,slow=75,SNR=4.3						
H11S1	WAKE ISLAND Hy	31.25	131	T	T	16 29 05.1	
	baz=324,slow=76,SNR=17						
H11S3	WAKE ISLAND Hy	31.25	131	T	T	16 29 07.6	
	baz=324,slow=76,SNR=17						
H11S2	WAKE ISLAND Hy	31.26	131	T	T	16 29 07.9	
	baz=324,slow=76,SNR=14						
ZALV	Zalesovo Beam	39.29	308	P	P	15 57 47.8	-0.3
	comp=Z,2.2nm,0.7s,baz=96,slow=6.5,SNR=2.9						
MKAR	Makanchi Array	42.28	298	P	P	15 58 12.3	-0.6
	comp=Z,1.9nm,0.8s,baz=92,slow=9.4,SNR=4.9						
CMAR	Chiang Mai Arr	43.59	251	P	P	15 58 24.3	+0.6
	comp=Z,0.4nm,0.6s,baz=36,slow=7.8,SNR=3.7						
KURBB	Kurchatov Arra	43.68	304	P	P	15 58 23.4	-0.7
	comp=Z,3.3nm,0.7s,baz=78,slow=8.6,SNR=7.1						
ILAR	Eielson Array	45.03	35	P	P	15 58 34.5	-0.1
	comp=Z,0.8nm,0.9s,baz=270,slow=8.7,SNR=6.1						
BVAR	Borovoye Array	47.90	309	P	P	15 58 57.0	-0.3
	comp=Z,1.3nm,0.4s,baz=321,slow=50,SNR=13						
AAK	Ala-Archa	48.92	295	P	P	15 59 05.3	-0.1
	comp=Z,0.7nm,0.4s,baz=143,slow=5.1,SNR=2.5						
INK	Inuvik	49.74	29	P	P	15 59 10.7	-0.4
	comp=Z,0.3nm,0.3s,baz=293,slow=13,SNR=2.9						
KKAR	Karatay Array	51.40	297	P	P	15 59 23.4	-0.6
BATI	Baumata	54.64	203	P	P	15 59 49.6	+1.5
	comp=Z,4.3nm,0.4s,baz=53,slow=5.1,SNR=3.6						
ABKAR	Akbulak array	55.40	308	P	P	15 59 52.5	-0.7
ABKAR				IAmb	IAmb	15 59 53.8	
	comp=Z,4.9nm,1.2s						
RES	Resolute Bay	57.69	15	P	P	16 00 08.2	-0.9
RES				IAmb	IAmb	16 00 16.6	
	comp=Z,7.4nm,1.5s						
ARCES	ARCESS Array B	59.68	339	P	P	16 00 23.2	+0.2
WB0	Warramunga Arr	61.82	188	P	P	16 00 36.8	-1.3
WB0				IAmb	IAmb	16 00 37.1	
	comp=Z,3.8nm,1.1s						
WRA	Warramunga Arr	62.00	189	P	P	16 00 38.2	-1.1
	comp=Z,0.4nm,0.8s,baz=5.5,slow=6.7,SNR=4.4						
WRA	Warramunga Arr	62.00	189	P	P	16 00 37.3	-1.9
FINES	FINESS Array B	64.83	332	P	P	16 00 56.9	-0.6
	comp=Z,1.7nm,0.4s,baz=54,slow=7.3,SNR=14						
NOA	NORSAR Array B	69.95	337	P	P	16 01 28.9	-1.0
	comp=Z,0.5nm,0.4s,baz=35,slow=6.3,SNR=3.1						
AKASG	Malin Array Be	70.87	322	P	P	16 01 34.9	-0.7
	comp=Z,0.7nm,0.4s,baz=45,slow=5.7,SNR=5.5						
PDAR	Pinedale Array	73.77	47	P	P	16 01 54.0	+0.6
	comp=Z,0.6nm,0.8s,baz=325,slow=2.3,SNR=5.8						

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*IDC **27** 16:28:20.9±1.7, 17°.56S×179°.88E, h617^{km}±15^{km}, mb3.2/5, mb1 3.4/6, mb1mx2.9/49, mbtmp4.2/6, Error ellipse: s-maj=33.0km s-min=25.5km az=176.0*

ISC 27 16:28:19.7±1.7, **17°.5S**±0°.3×**180°.0E**±0°.2, **h600**^{km}, **n9,** σ**1^{s}.29**/9, **mb3.7**/5, **Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	1.84	264	P	P	16 29 35.8	+2.3
	2.5nm,0.3s,baz=8.3,slow=8.3,SNR=8.4						
DZM	Mont Dzumac	13.50	248	P	P	16 31 14.4	+0.7
	0.2nm,0.3s,baz=109,slow=18,SNR=2.4						
STKA	Stephens Creek	37.46	240	P	P	16 34 43.8	0.0
	2.1nm,0.4s,baz=89,slow=11,SNR=10						
WRA	Warramunga Arr	43.18	259	P	P	16 35 27.9	-1.5
	0.6nm,0.3s,baz=95,slow=7.9,SNR=35						
WRA				PcP	PcP	16 37 04.2	-0.8
	0.2nm,0.4s,baz=93,slow=3.4,SNR=1.9						
ASAR	Alice Springs	43.40	254	P	P	16 35 30.3	-0.8
	7.5nm,0.4s,baz=89,slow=8.0,SNR=300						
FITZ	Fitzroy Crossi	51.56	261	P	P	16 36 31.7	-0.2
	1.6nm,0.5s,baz=76,slow=8.0,SNR=12						
QSPA	South Pole Qui	72.51	180	P	P	16 38 46.3	-0.3
	0.8nm,0.6s,baz=69,slow=2.6,SNR=8.0						
BRTR	Keskin Array B	143.42	314	PKP	PKPab	16 46 45.3	-0.7
	0.7nm,0.5s,baz=84,slow=1.6,SNR=4.8						
GERES	GERESS Array B	146.84	343	PKPbc	PKPbc	16 46 55.0	-0.7
	0.6nm,0.5s,baz=26,slow=3.4,SNR=5.9						

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*IDC **27** 16:35:48.8±1.0, 6°.32S×104°.23E, h0^{km}, mb4.1/21, mb1 4.1/22, mb1mx3.9/55, mbtmp4.1/22, ML5.2/1, MS3.1/6, Ms1 3.1/6, ms1mx2.8/35, Error ellipse: s-maj=32.8km s-min=13.7km az=48.0*

*NEIC **27** 16:35:50.3±1.5, 6°.77S±0°.09×103°.9E±0°.1, h29^{km}±4^{km}, mb4.4/16, Error ellipse: s-maj=18.7km s-min=8.6km az=54.0*

*DJA **27** 16:35:56.3±0.7, 7°S±7°×10°4E±°, h53^{km}±8^{km}, M4.3/13, mb4.3/3, mB4.9/1, MLv4.2/13, Mw(mB)4.2/1*

ISC 27 16:35:49.8±0.5, **6°.81S**±0°.06×**103°.94E**±0°.06, **h24**^{km}, **n94,** σ**1^{s}.53**/87, **mb4.3**/35, **MS3.1**/4, **Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KASI	Kota Agung	1.39	23	P	Pn	16 36 12.4	-1.3
LWLI	Liwa	1.79	4	P	Pn	16 36 19.8	+0.5
BLSI	Bandar Lampung	1.93	42	P	Pn	16 36 20.9	-0.3
KLI	Kotabumi	2.14	25	P	Pn	16 36 25.0	+1.0
KLSI		2.25	20	P	Pn	16 36 26.6	+1.1
SBJI	Serang	2.28	73	P	Pn	16 36 27.9	+2.0
MDSI	Maura Dua	2.32	6	P	Pn	16 36 26.9	+0.4
MNAI	Manna	2.63	338		Pn	16 36 32.5	+1.7
MNAI	Manna	2.63	338	P	Pn	16 36 32.6	+1.9
DBJI	Dramaga	2.80	85	P	Pb	16 36 36.9	-2.2
CBJI	Citeko	2.91	82	P	Pn	16 36 37.2	+2.6
LHSI	Lahat	3.00	352	P	Pb	16 36 40.5	-2.0
CNJI	Cibinong	3.20	99	P	Pb	16 36 57.6	+12
KSI	Kapahiang	3.42	337	P	Pn	16 36 44.5	+2.9
LEM	Lembang	3.65	90	Pn	Pn	16 36 46.6	+1.7
	9.4nm,0.3s,baz=15,slow=21,SNR=5.3						
LEM				LR	LR	16 38 09.9	
	comp=Z,133nm,18.5s,baz=289,slow=42						
XMI	Christmas Isla	4.00	155	P	Pn	16 36 50.5	+0.8
XMIS	Christmas Isla	4.02	155	Pn	Pn	16 36 48.4	-1.4
XMIS	Christmas Isla	4.02	155	P	Pn	16 36 49.1	-0.8
MASI	Maura Aman, Be	4.02	335	P	Pb	16 36 57.0	-3.0
PPBI	Pangkal Pinang	5.11	25	P	Pn	16 37 05.9	+1.0
DSRI	Dabo	6.32	6	P	Pn	16 37 25.3	+3.7
	0.1nm10nm,0.9s						
UGM	Wanagama	6.62	100	Pn	Pn	16 37 26.4	+0.7
UGM	Wanagama	6.62	100	P	Pn	16 37 25.3	-0.3
JAGI	Jajag, Banyuwa	10.25	100	Pn	Pn	16 38 15.2	-0.3
JAGI	Jajag, Banyuwa	10.25	100	P	Pn	16 38 15.4	-0.1
ABJI	Asem Bagus	10.25	96	P	Pn	16 38 32.7	+17
GSI	Gunungsitoli	10.27	322	Pn	Pn	16 38 14.1	-1.6
PLAI	Plampang	13.85	99	P	Pn	16 39 03.0	-1.7
KAPI	Kappang	15.82	84	LR	LR	16 45 43.9	
	comp=Z,56nm,21.2s,baz=273,slow=38						
KKM	Kota Kinabalu	17.69	44	P	P	16 39 55.9	+0.3
TOLI2	Tolitoli	18.56	66	P	P	16 40 03.4	-1.6
TOLI2	Tolitoli	18.56	66	P	P	16 40 04.8	-0.3
GIRL	Giralia	18.60	149	P	Pn	16 40 06.9	+1.0
MYLDM	Lahad Datu	18.79	51	P	P	16 40 06.6	-0.9
MRSI	Marisa	19.36	69	P	P	16 40 14.2	+0.3
BATI	Baumata	19.79	101	P	Pn	16 40 19.8	-0.4
	6.9nm,0.3s,baz=292,slow=7.1,SNR=9.8						
SOEI	Soe	20.32	100	P	P	16 40 25.7	+1.2
	24nm,0.8s						
SOEI	Soe	20.32	100	P	P	16 40 21.8	-2.7
SOEI				IAmb	IAmb	16 40 31.8	
	comp=Z,30nm,1.0s						
SOEI	Soe	20.32	100	P	P	16 40 24.8	+0.3
FITZ	Fitzroy Crossi	23.94	120	P	P	16 41 06.7	+4.5
	comp=Z,0.8nm,0.6s,baz=310,slow=16,SNR=1.7						
CMAR	Chiang Mai Arr	25.59	349	P	P	16 41 15.2	-2.0
	comp=Z,1.9nm,0.5s,baz=181,slow=9.0,SNR=11						
CMAR				LR	LR	16 51 53.7	
	comp=Z,65nm,18.2s,baz=198,slow=38						
KNRA	Kununurra	25.86	112	P	P	16 41 18.6	-1.2
MTN	Manton Dam	27.44	105	P	P	16 41 32.3	-1.7
MTN				IAmb	IAmb	16 41 45.6	
	comp=Z,16nm,1.2s						
H01W3	Cape Leeuwin H	29.47	163	T	T	17 12 56.5	
	baz=342,slow=76,SNR=3.5						
H01W1	Cape Leeuwin H	29.49	163	T	T	17 12 56.4	
	baz=342,slow=76,SNR=3.4						
H01W2	Cape Leeuwin H	29.49	163	T	T	17 12 49.2	
	baz=342,slow=76,SNR=4.2						
WRA	Warramunga Arr	32.25	117	P	P	16 42 17.9	+1.3
	comp=Z,0.4nm,0.6s,baz=301,slow=10,SNR=7.4						
WRA	Warramunga Arr	32.25	117	P	P	16 42 16.6	-0.1
WB2	Warramunga Arr	32.26	117	P	P	16 42 15.7	-1.0
WB2				IAmb	IAmb	16 42 26.2	
	comp=Z,8.9nm,1.2s						
ASAR	Alice Springs	33.29	123	P	P	16 42 28.9	+3.0
	comp=Z,0.2nm,0.5s,baz=308,slow=8.4,SNR=7.7						
ASAR				LR	LR	16 57 13.4	
	comp=Z,34nm,20.0s,baz=330,slow=38						
ASAR	Alice Springs	33.29	123	P	P	16 42 25.6	-0.3
JIRN	Jiri	38.33	334	*e*P	P	16 43 10.2	+0.9
GKN	Gorkha	39.32	333	*e*P	P	16 43 17.9	+0.5
	comp=Z,7.0nm,0.4s						
KOLN	Koldanda	39.61	331	*e*P	P	16 43 21.0	+1.2
	comp=Z,16nm,0.6s						
PYUN	Piuthan	40.18	331	*e*P	P	16 43 25.9	+1.3
	comp=Z,23nm,0.4s						
NJ2	Nanjing	41.18	19	*e*P	P	16 43 35.0	+2.5
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
STKA	Stephens Creek	43.04	130	P	P	16 43 50.5	+2.6
	comp=Z,0.8nm,0.5s,baz=311,slow=8.2,SNR=5.5						
STKA	Stephens Creek	43.04	130	P	P	16 43 47.6	-0.3
GTA	Gaotai	46.15	356	*e*P	P	16 44 13.0	+0.4
GTA				sP	sP	16 44 27.0	+4.8
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
HHC	Hu-ho-hao-te	47.94	8	*e*P	P	16 44 29.0	+2.5
HHC				pmax	pmax		
	comp=Z,18nm,0.7s						
HHC				pmax	pmax		
	comp=Z,260nm,6.1s						
KSRS	Korea Array	49.41	25	P	P	16 44 36.0	-1.6
	comp=Z,2.8nm,0.6s,baz=219,slow=7.5,SNR=11						
NIL	Nilore	49.66	326	P	P	16 44 38.0	-1.8
WMQ	Urumqi	52.50	345	*e*P	P	16 45 01.8	+0.8
WMQ				pP	sP	16 45 11.5	+0.9
WMQ				sP	pwP	16 45 19.0	+8.8
WMQ				pmax	pmax		
	comp=Z,17nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,210nm,4.5s						
KSH	Kashi	52.86	333	P	P	16 45 03.3	-0.5
KSH				pmax	pmax		
	comp=Z,4.0nm,0.3s						
MJAR	Matsushiro Arr	53.77	34	P	P	16 45 07.5	-2.9
	comp=Z,1.2nm,0.5s,baz=199,slow=9.0,SNR=6.1						
SONM	Songino Array	54.45	2	P	P	16 45 15.2	-0.2
	comp=Z,6.7nm,1.0s,baz=176,slow=8.9,SNR=30						
SONM				PcP	PcP	16 46 19.3	+0.5
	comp=Z,0.2nm,0.4s,baz=165,slow=3.9,SNR=4.8						
SONM	Songino Array	54.45	2	P	P	16 45 14.3	-1.0
SONM				IAmb	IAmb	16 45 16.3	
	comp=Z,3.4nm,0.8s						
AAK	Ala-Archa	56.04	334	P	P	16 45 28.0	+1.0
	comp=Z,0.8nm,0.5s,baz=108,slow=3.4,SNR=4.3						
MKAR	Makanchi Array	56.73	342	P	P	16 45 31.8	+0.2
	comp=Z,2.0nm,0.5s,baz=151,slow=9.0,SNR=36						
MKAR	Makanchi Array	56.73	342	P	P	16 45 30.6	-1.0
USA0B	Ussuriysk Arra	56.74	24	P	P	16 45 30.6	-1.0
USRK	Ussuriysk Ar.	56.74	24	P	P	16 45 30.9	-0.7
	comp=Z,7.7nm,0.8s,baz=204,slow=6.5,SNR=14						
USRK	Ussuriysk Ar.	56.74	24	P	P	16 45 30.0	-1.6
MAKZ	Makanchi	56.84	342	P	P	16 45 30.6	-1.8
MAKZ				IAmb	IAmb	16 45 38.9	
	comp=Z,4.3nm,1.3s						
KKAR	Karatay Array	58.22	332	P	P	16 45 42.4	+0.3
KLR	Kul'dur	60.87	20	P	P	16 45 58.9	-1.3
	comp=Z,0.9nm,0.4s,baz=235,slow=6.4,SNR=6.2						
KURBB	Kurchatov Arra	61.28	342	P	P	16 46 03.1	0.0
	comp=Z,0.9nm,0.7s,baz=158,slow=6.5,SNR=7.8						
KURK	Kurchatov	61.34	342	P	P	16 46 03.0	-0.4
KURK				IAmb	IAmb	16 46 07.3	
	comp=Z,1.5nm,0.9s						
ZAA0	Zalesovo Array	62.64	347	P	P	16 46 11.6	-0.5
ZALV	Zalesovo Beam	62.64	347	P	P	16 46 12.2	+0.1
	comp=Z,4.0nm,0.3s,baz=162,slow=5.5,SNR=15						
ZALV	Zalesovo Beam	62.64	347	P	P	16 46 11.8	-0.3
BVAR	Borovoye Array	66.05	339	P	P	16 46 34.7	+0.2
	comp=Z,1.6nm,0.6s,baz=180,slow=16,SNR=9.4						
BRVK	Borovoye	66.11	339	P	P	16 46 34.4	-0.5
BRVK				IAmb	IAmb	16 46 48.9	
	comp=Z,3.6nm,1.1s						
ABKAR	Akbulak array	67.73	331	P	P	16 46 44.1	-1.1
ABKAR	Akbulak array	67.73	331	P	P	16 46 45.2	0.0
ABKAR				IAmb	IAmb	16 47 00.2	
	comp=Z,4.0nm,0.9s						
ARU	Arti	73.17	336	P	P	16 47 20.5	+2.2
	comp=Z,0.5nm,0.3s,baz=117,slow=13,SNR=3.4						
PETK	Petropavlovsk-	74.93	30	P	P	16 47 27.8	-0.9
	comp=Z,2.1nm,0.9s,baz=220,slow=3.8,SNR=2.1						
VNDA	Vanda	76.72	169	LR	LR	17 17 27.6	
	comp=Z,20nm,21.8s,baz=192,slow=32						
SEY	Seymchan	78.66	20	P	P	16 47 49.1	-0.5
	comp=Z,1.0nm,0.5s,baz=189,slow=2.8,SNR=4.5						
BRTR	Keskin Array B	79.45	312	P	P	16 47 56.1	+1.6
	comp=Z,0.6nm,0.6s,baz=105,slow=4.9,SNR=2.8						
AKASG	Malin Array Be	85.67	322	P	P	16 48 28.4	+1.8
	comp=Z,0.6nm,0.6s,baz=92,slow=4.5,SNR=5.2						
FINES	FINESS Array B	90.17	332	P	P	16 48 49.2	+1.4
	comp=Z,5.1nm,1.1s,baz=126,slow=4.8,SNR=7.3						
NOA	NORSAR Array B	97.24	331	LR	LR	17 35 47.4	
	comp=Z,5.2nm,21.6s,baz=295,slow=37						
TXAR	Lajitas Array	145.67	46	PKPbc	PKPab	16 55 28.8	+1.1
	comp=Z,1.2nm,0.5s,baz=292,slow=0.8,SNR=21						

IDC 27 16:37:10.2±1.7, **1°.89S**×**127°.82E, h0**^{km}, **mb3.0**/2, **mb1 3.2**/4, **mb1mx3.0**/49, **mbtmp3.1**/4, **ML3.0**/2, **Error ellipse: s-maj=43.0km s-min=29.0km az=70.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	3.59	74	Pn	Pn	16 38 07.6	+0.3
	8.3nm,0.3s,baz=79,slow=20,SNR=52						
SIJI				Sn	Sn	16 38 39.5	-11
	1.2nm,0.3s,baz=124,slow=24,SNR=5.5						
WRA	Warramunga Arr	19.04	161	P	P	16 41 33.2	-0.9
	0.0nm,0.3s,baz=341,slow=10,SNR=1.0						
ASAR	Alice Springs	22.43	165	P	P	16 42 11.0	+0.1
	0.2nm,0.6s,baz=345,slow=11,SNR=5.4						
MKAR	Makanchi Array	62.79	327	P	P	16 47 37.8	+0.1
	0.3nm,0.6s,baz=120,slow=8.0,SNR=2.0						

KRSC 27 16:43:47.0±1.1, **55°.76N**×**165°.89E, h33**^{km}±13^{km}, **ML3.5, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	Bering	0.56	175	*e*P	Pn	16 43 59.1	+0.5
BKI				*e*S	Sn	16 44 07.2	+0.5
KBTR	Krutoberegovo	1.78	286	*e*P	Pb	16 44 17.3	-1.7
MKZ	Mys Kozlova	2.67	245	*e*P	Pn	16 44 30.1	+2.4
MKZ				S	Sb	16 45 03.3	-3.1
SDLR	Sedlovina	4.78	242	*e*P	Pn	16 45 00.4	+3.7
SDLR				S	Sn	16 45 55.2	+4.3
SMAR	Somma	4.83	242	P	Pn	16 45 01.0	+3.5
KRER	Koryakskii	4.83	242	*e*P	Pn	16 45 02.8	+5.3
UGLR	Uglovaya	4.85	241	P	Pn	16 45 03.0	+5.4
AVH	Avacha	4.86	242	*e*P	Pn	16 45 02.5	+4.7
KOK	Koryaka	4.89	243	*e*P	Pn	16 45 03.2	+4.9
ASAK	Asacha	5.79	238	P	Pn	16 45 16.0	+5.4

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*IDC **27** 16:44:36.5±1.9, 9°.28S×126°.40E, h0^{km}, mb3.5/1, mb1 3.6/5, mb1mx3.2/40, mbtmp3.4/5, ML3.4/4, MS3.0/1, Ms1 3.0/1, ms1mx2.4/21, Error ellipse: s-maj=34.9km s-min=27.7km az=61.0*

ISC 27 16:44:40.6±1.5, **9°.3S**±0°.1×**126°.48E**±0°.10, **h35**^{km}, **n6,** σ**1^{s}.44**/9, **Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	2.91	253	Pn	Pn	16 45 23.0	-1.4
	2.5nm,0.3s,baz=217,slow=22,SNR=1.6						
BATI				Sn	Sn	16 45 58.7	+0.6
	12nm,0.3s,baz=42,slow=22,SNR=5.1						
FITZ	Fitzroy Crossi	8.74	185	Pn	Pn	16 46 45.7	+1.2
	0.5nm,0.3s,baz=1.2,slow=11,SNR=38						
FITZ				Sn	Sn	16 48 21.8	-0.1
	1.2nm,0.3s,baz=306,slow=23,SNR=6.2						
WRA	Warramunga Arr	12.99	145	Pn	Pn	16 47 43.6	+0.8
	0.2nm,0.3s,baz=324,slow=13,SNR=22						
WRA				Sn	Sn	16 50 03.5	-2.6
	0.4nm,0.3s,baz=330,slow=33,SNR=6.8						
ASAR	Alice Springs	15.92	154	Pn	Pn	16 48 22.6	+0.5
	0.1nm,0.3s,baz=325,slow=10,SNR=11						
ASAR				Sn	Sn	16 51 17.0	-0.4
	0.1nm,0.3s,baz=313,slow=19,SNR=4.6						
STKA	Stephens Creek	26.45	150	LR	LR	17 03 10.0	
	comp=Z,34nm,18.8s,baz=22,slow=42						
MKAR	Makanchi Array	68.34	329	P	P	16 55 39.3	+0.9
	0.2nm,0.4s,baz=124,slow=7.3,SNR=5.1						

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*KRSC **27** 16:51:45.4±1.9, 55°.65N×165°.87E, h38^{km}±17^{km}, ML4.3*

*IDC **27** 16:51:50.2±1.1, 56°.03N×165°.08E, h0^{km}, mb3.7/6, mb1 3.9/7, mb1mx3.5/44, mbtmp3.6/7, ML2.7/1, MS2.9/6, Ms1 2.9/6, ms1mx2.7/40, Error ellipse: s-maj=34.1km s-min=21.4km az=164.0*

ISC 27 16:51:46.6±1.8, **55°.73N**±0°.06×**165°.8E**±0°.2, **h7**^{km}±20^{km},

n48,σ1ˢ.30/56,mb3.7/6,MS3.2/3,Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	**Bering**	0.54	168	*e*P	**Pg**	**16 51 56.7**	**-0.3**
BKI				*e*S	**Sg**	**16 52 04.0**	**0.0**
KBTR	**Krutoberegovo**	1.73	287	*e*P	**Pn**	**16 52 14.7**	**-2.3**
KBTR				S	**Sn**	**16 52 36.4**	**-2.9**
KBG	**Krutoberegovo**	1.80	288	*e*P	Pn	16 52 15.5	-2.5
KBG				S	**Sn**	**16 52 38.7**	**-2.4**
SMKR	**Semkarok**	2.55	291	*e*P	**Pn**	**16 52 28.1**	**-0.4**
SMKR				*e*S	**Sn**	**16 53 00.2**	**+0.4**
MKZ	**Mys Kozlova**	2.60	245	*e*P	**Pn**	**16 52 27.6**	**-1.4**
MKZ				*e*S	**Sn**	**16 52 59.1**	**-1.7**
BDR	**Baidarnaya**	2.69	290	*e*P	**Pn**	**16 52 30.4**	**+0.1**
BDR				*e*S	**Sn**	**16 53 05.3**	**+2.2**
SRKR	**Sorokina**	2.73	292	*e*P	**Pn**	**16 52 30.7**	**-0.2**
ZLN	**Zelenaya**	2.81	278	*e*P	**Pn**	**16 52 32.6**	**+0.6**
CIRR	**Tsirk**	2.85	280	*e*P	**Pn**	**16 52 32.4**	**-0.2**
BZGR	**Bezymyannyi-Gr**	2.87	276	*e*P	**Pn**	**16 52 33.1**	**+0.3**
LGNR	**Loginova**	2.88	279	*e*P	**Pn**	**16 52 32.8**	**-0.4**
KLY	**Klyuchi**	2.93	284	*e*P	**Pn**	**16 52 32.2**	**-1.4**
KLY				S	**Sn**	**16 53 07.0**	**-2.0**
KRSR	**Krestovskiy**	2.96	282	*e*P	**Pn**	**16 52 34.2**	**+0.1**
BZWR	**Bezymyannyi-We**	2.98	277	*e*P	**Pn**	**16 52 35.1**	**+0.7**
KIRR	**Kirishev**	3.07	276	*e*P	**Pn**	**16 52 35.9**	**+0.3**
TUMD	**Tumrok D**	3.10	262	*e*P	**Pn**	**16 52 36.3**	**+0.3**
TUMD				S	**Sn**	**16 53 15.1**	**+1.9**
KMNR	**Kamenistaya**	3.13	273	*e*P	**Pn**	**16 52 37.2**	**+0.8**
KPT	**Kopyto**	3.14	277	*e*P	**Pn**	**16 52 37.0**	**+0.5**
TUMR	**Tumrok**	3.23	264	*e*P	**Pn**	**16 52 38.8**	**+1.0**
KOZ	**Kozyrevsk**	3.34	278	*e*P	**Pn**	**16 52 40.5**	**+1.3**
ESO	**Esso**	3.99	276	P	Pn	16 52 53.9	+5.7
SPN	**Mys Shipunski**	4.27	234	P	**Pn**	**16 52 50.9**	**-1.0**
SPN				S	**Sn**	**16 53 38.8**	**-3.1**
SDLR	**Sedlovina**	4.70	241	*e*P	**Pn**	**16 52 57.9**	**-0.1**
SDLR				*e*S	**Sn**	**16 53 52.8**	**-0.1**
SMAR	**Somma**	4.75	242	*e*P	**Pn**	**16 52 58.8**	**0.0**
SMAR				S	**Sn**	**16 53 53.6**	**-0.6**
KRER	**Koryakskii**	4.76	242	*e*P	**Pn**	**16 52 59.4**	**+0.6**
KRER				S	**Sn**	**16 53 55.0**	**+0.7**
UGLR	**Uglovaya**	4.77	241	*e*P	**Pn**	**16 52 59.4**	**+0.4**
UGLR				S	**Sn**	**16 53 54.3**	**-0.2**
AVH	**Avacha**	4.78	242	*e*P	**Pn**	**16 52 59.4**	**+0.3**
AVH				S	**Sn**	**16 53 54.3**	**-0.5**
KOK	**Koryaka**	4.82	243	*e*P	**Pn**	**16 53 00.1**	**+0.5**
KOK				S	**Sn**	**16 53 56.3**	**+0.6**
DALK	**Dalny**	4.91	240	*e*P	**Pn**	**16 53 00.8**	**+0.1**
DALK				*e*S	**Sn**	**16 53 55.9**	**-1.8**
PET	**Petropavlovsk**	4.96	240	*e*S	**Sn**	**16 53 59.0**	**-0.1**
GNL	**Ganaly**	4.97	249	P	**Pn**	**16 53 02.5**	**+0.7**
KRMR	**Karymshinskiy**	5.33	240	P	**Pn**	**16 53 09.3**	**+2.7**
KRMR				S	**Sn**	**16 54 09.8**	**+1.6**
PETK	**Petropavlovsk-**	5.39	244	Pn	**Pn**	**16 53 09.4**	**+2.0**
	1.3nm,0.3s,baz=72,slow=17,SNR=18						
PETK				LR	LR	16 54 54.5	
	comp=Z,65nm,18.2s,baz=51,slow=36						
RUS	**Russkaya**	5.40	235	*e*S	**Sn**	**16 54 07.2**	**-2.5**
MTVR	**Mutnovka**	5.52	237	P	**Pn**	**16 53 10.1**	**+0.8**
MTVR				S	**Sn**	**16 54 11.7**	**-1.3**
ASAK	**Asacha**	5.72	237	*e*P	**Pn**	**16 53 13.1**	**+1.2**
ASAK				*e*S	**Sn**	**16 54 16.6**	**-1.2**
MA2	**Magadan**	8.91	302	LR	LR	16 57 35.5	
	comp=Z,20nm,21.2s,baz=105,slow=41						
SEY	**Seymchan**	9.93	322	LR	LR	16 58 11.7	
	comp=Z,82nm,18.4s,baz=157,slow=40						
TIXI	**Tiksi**	22.27	330	P	**P**	**16 56 44.3**	**+0.6**
	1.1nm,0.5s,baz=129,slow=8.2,SNR=5.2						
ILAR	**Eielson Array**	24.59	49	P	P	16 57 12.8	+6.0
	2.5nm,1.1s,baz=249,slow=7.1,SNR=7.3						
KSRS	**Korea Array**	31.26	250	LR	LR	17 09 32.6	
	comp=Z,12nm,20.5s,baz=50,slow=34						
H11N2	**WAKE ISLAND Hy**	35.95	178	T	T	17 36 41.8	
	baz=358,slow=76,SNR=25						
H11N3	**WAKE ISLAND Hy**	35.96	178	T	T	17 36 54.9	
	baz=358,slow=76,SNR=30						
H11N1	**WAKE ISLAND Hy**	35.97	178	T	T	17 36 43.7	
	baz=358,slow=76,SNR=31						
SONM	**Songino Array**	36.53	283	P	**P**	**16 58 53.7**	**+1.1**
	0.6nm,0.6s,baz=56,slow=7.3,SNR=4.6						
SONM				LR	LR	17 16 08.8	
	comp=Z,38nm,18.2s,baz=346,slow=40						
MKAR	**Makanchi Array**	49.96	297	P	**P**	**17 00 40.5**	**-0.3**
	0.5nm,0.7s,baz=58,slow=7.3,SNR=4.2						
TXAR	**Lajitas Array**	66.61	72	P	P	17 02 43.8	+6.2
	0.8nm,0.7s,baz=298,slow=4.4,SNR=8.7						
ASAR	**Alice Springs**	83.61	209	P	P	17 04 20.9	+5.6
	1.0nm,1.0s,baz=2.8,slow=4.3,SNR=6.0						
ASAR				LR	LR	17 36 47.8	
	comp=Z,28nm,22.0s,baz=304,slow=32						

IDC 27 16:52:46.4±6.5,32°.42S×178°.87W,h0^{km},mb3.5/2, mb1 3.8/2,mb1mx3.6/25,mbtmp3.5/2,Error ellipse: s-maj=280.6km s-min=62.3km az=159.0,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	42.30	270	P	P	17 00 42.0	-0.2
	0.6nm,0.7s,baz=105,slow=7.6,SNR=6.2						
WRA	**Warramunga Arr**	43.48	275	P	P	17 00 51.5	-0.2
	0.2nm,0.3s,baz=116,slow=7.5,SNR=2.5						
FINES	**FINESS Array B**	146.77	338	PKPbc	PKPbc	17 12 28.9	-0.8
	0.6nm,0.4s,baz=46,slow=5.5,SNR=4.2						

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*IDC **27** 16:57:46.8±1.3,55°.66N×165°.45E,h0^{km},mb3.3/4, mb1 3.6/4,mb1mx3.2/40,mbtmp3.3/4,MS3.0/1,Ms1 3.0/1, ms1mx2.3/21,Error ellipse: s-maj=66.2km s-min=30.2km az=165.0*

KRSC 27 16:57:11.2±2.0,55°.71N×165°.93E,h37^{km}±15^{km},ML3.5, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	**Bering**	0.51	177	*e*P	Pn	16 57 23.0	+1.2
BKI				*e*S	Sn	16 57 30.7	+1.4
KBTR	**Krutoberegovo**	1.82	287	*e*P	Pn	16 57 40.6	+0.8
KBTR				*e*S	Sn	16 58 03.0	+1.5
KBG	**Krutoberegovo**	1.89	288	*e*P	Pn	16 57 42.1	+1.3
KBG				*e*S	Sn	16 58 05.8	+2.5
SMKR	**Semkarok**	2.64	291	*e*P	Pn	16 57 54.3	+3.1
SMKR				S	Sn	16 58 29.8	+7.8
MKZ	**Mys Kozlova**	2.67	246	*e*P	Pn	16 57 53.5	+2.0
MKZ				*e*S	Sn	16 58 25.5	+2.9
BDR	**Baidarnaya**	2.78	290	P	Pn	16 57 56.8	+3.7
BDR				*e*S	Sn	16 58 30.7	+5.4
SRKR	**Sorokina**	2.82	292	*e*P	Pn	16 57 56.9	+3.2
SRKR				S	Sn	16 58 31.2	+4.7
ZLN	**Zelenaya**	2.90	278	P	Pn	16 57 58.3	+3.5
BZGR	**Bezymyannyi-Gr**	2.96	277	*e*P	Pn	16 57 59.6	+4.0
KLY	**Klyuchi**	3.02	284	*e*P	Pn	16 57 58.2	+1.9
KLY				S	Sn	16 58 32.5	+1.3
KRSR	**Krestovskiy**	3.06	282	P	Pn	16 58 00.3	+3.4
BZWR	**Bezymyannyi-We**	3.07	277	*e*P	Pn	16 58 00.9	+3.7
KIRR	**Kirishev**	3.16	277	*e*P	Pn	16 58 01.7	+3.3
KIRR				S	Sn	16 58 39.7	+4.8
KMNR	**Kamenistaya**	3.22	273	*e*P	Pn	16 58 03.1	+4.0
KPT	**Kopyto**	3.23	277	P	Pn	16 58 03.0	+3.7
SDLR	**Sedlovina**	4.77	242	*e*P	Pn	16 58 24.4	+3.9
SMAR	**Somma**	4.82	242	*e*P	Pn	16 58 25.4	+4.1
KRER	**Koryakskii**	4.83	243	P	Pn	16 58 26.2	+4.9
UGLR	**Uglovaya**	4.84	242	*e*P	Pn	16 58 25.7	+4.2
AVH	**Avacha**	4.85	243	*e*P	Pn	16 58 26.7	+5.1
KOK	**Koryaka**	4.89	243	P	Pn	16 58 26.5	+4.4
DALK	**Dalny**	4.98	240	P	Pn	16 58 27.2	+4.0
KRMR	**Karymshinskiy**	5.40	241	P	Pn	16 58 36.2	+7.2
MTVR	**Mutnovka**	5.59	238	P	Pn	16 58 36.3	+4.6
ASAK	**Asacha**	5.78	238	*e*P	Pn	16 58 39.5	+5.1
KLR	**Kul'dur**	21.64	267	LR	LR	17 12 18.6	
	comp=Z,38nm,20.1s,baz=51,slow=41						
SONM	**Songino Array**	36.62	283	P	P	17 04 52.4	+39
	0.2nm,0.4s,baz=57,slow=8.8,SNR=1.9						
PDAR	**Pinedale Array**	53.30	66	P	P	17 07 09.2	+43
	0.1nm,0.4s,baz=283,slow=12,SNR=1.3						
TXAR	**Lajitas Array**	66.53	72	P	P	17 08 40.4	+43
	0.3nm,0.8s,baz=302,slow=4.1,SNR=2.3						
ASAR	**Alice Springs**	83.63	209	P	P	17 10 15.9	+40
	0.2nm,0.9s,baz=22,slow=3.7,SNR=5.5						

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*IDC **27** 17:03:09.4±3.1,16°.51S×66°.69E,h0^{km},mb3.7/6, mb1 3.9/6,mb1mx3.5/34,mbtmp3.7/6,MS3.1/1,Ms1 3.3/1, ms1mx2.6/43,Error ellipse: s-maj=106.0km s-min=26.7km az=51.0*

ISC 27 17:03:10.9±3.0,16°.6S±0°.5×66°.7E±0°.5,h10^{km},n13, σ0ˢ.72/6,mb3.9/6,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	10.52	33	T	T	17 16 15.4	
	baz=212,slow=75,SNR=33						
H08S2	**Diego Garcia H**	10.53	33	T	T	17 16 20.8	
	baz=212,slow=75,SNR=33						
H08S3	**Diego Garcia H**	10.54	33	T	T	17 16 16.5	
	baz=212,slow=75,SNR=41						
H01W3	**Cape Leeuwin H**	46.05	123	T	T	18 01 04.1	
	baz=278,slow=74,SNR=7.4						
H01W2	**Cape Leeuwin H**	46.05	123	T	T	18 01 01.8	
	baz=278,slow=74,SNR=6.4						
H01W1	**Cape Leeuwin H**	46.06	123	T	T	18 01 05.3	
	baz=278,slow=74,SNR=6.6						
CMAR	**Chiang Mai Arr**	47.12	44	LR	LR	17 28 55.6	
	comp=Z,22nm,20.1s,baz=195,slow=33						
ASAR	**Alice Springs**	63.06	108	P	**P**	**17 13 39.0**	**+0.1**
	0.8nm,0.8s,baz=269,slow=5.6,SNR=14						
BRTR	**Keskin Array B**	63.90	332	P	**P**	**17 13 44.3**	**+0.2**
	0.3nm,0.4s,baz=148,slow=12,SNR=2.9						
WRA	**Warramunga Arr**	63.98	104	P	**P**	**17 13 44.9**	**-0.1**
	1.1nm,0.8s,baz=269,slow=5.7,SNR=8.7						
MKAR	**Makanchi Array**	64.61	12	P	**P**	**17 13 48.5**	**+0.1**
	0.3nm,0.7s,baz=211,slow=8.2,SNR=3.6						
ZALV	**Zalesovo Beam**	71.92	11	P	**P**	**17 14 33.0**	**-1.1**
	0.5nm,0.4s,baz=201,slow=5.7,SNR=5.2						
SONM	**Songino Array**	73.28	27	P	**P**	**17 14 43.1**	**+0.5**
	0.6nm,0.7s,baz=209,slow=7.4,SNR=5.1						

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*NIED **27** 17:16:42.2,31°.08N×128°.65E,h4^{km},MW3.4,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-0.19; M$_{θθ}$0.96; M$_{φφ}$-0.77; M$_{rθ}$0.38; M$_{θφ}$0.96; M$_{φr}$0.37; Fault plane solution: M$_{0}$1.39000×10^{14} NP1:φ$_{s}$21.00000°, δ86.00000°,λ160.00000°. NP2:φ$_{s}$112.00000°,δ71.00000°, λ4.00000°.*

JMA 27 17:16:42.1±0.3,31°.08N×128°.65E,h4^{km}±3^{km},M3.5, Northwest of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	**Shimokoshiki**	1.09	57	P	Pg	17 17 02.6	-0.4
JSJ				*e*S	Sg	17 17 17.2	+0.1
JKC	**Kuchinoerabu**	1.47	114	P	Pn	17 17 09.3	0.0
JKC				*e*S	Sb	17 17 28.7	-0.2
JFU	**Fukue jima 2**	1.57	3	P	Pn	17 17 11.1	+0.3
JFU				*e*S	Sn	17 17 31.8	+0.2
JSU	**Suzuyama**	1.60	74	P	Pn	17 17 11.2	0.0
JNN	**Nakanoshima**	1.63	139	P	Pb	17 17 12.4	-0.3
JNN				*e*S	Sg	17 17 34.0	-0.3
JYAK	**Yakushimahirau**	1.81	117	P	Pn	17 17 13.8	-0.2
JTN	**Tanegashima 3**	2.05	101	P	Pn	17 17 17.3	0.0
JMTN	**Minamitane**	2.05	109	P	Pn	17 17 17.2	-0.2

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*MAN **27** 17:35:56.0,12°.94N×124°.77E,h1^{km},mb5.1,ML4.1,MS4.2*

*IDC **27** 17:35:55.7±0.9,12°.93N×124°.98E,h0^{km},mb3.9/9, mb1 4.1/10,mb1mx3.8/38,mbtmp3.9/10,MS3.3/4, Ms1 3.4/4,ms1mx2.8/43,Error ellipse: s-maj=45.6km s-min=15.6km az=62.0*

*NEIC **27** 17:36:06.5±2.2,12°.8N±0°.2×124°.6E±0°.2,h87^{km}±8^{km}, mb4.1/9,Error ellipse: s-maj=39.1km s-min=12.8km az=55.0*

ISC 27 17:36:01.3±0.9,12°.9N±0°.1×125°.0E±0°.2,h41^{km},n30, σ0ˢ.78/20,mb3.9/11,MS3.5/3,Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	4.09	287	Pn	**Pn**	**17 37 01.5**	**+0.1**
	baz=129,slow=8.0,SNR=6.4						
DAV	**Davao City (W)**	5.85	174	LR	LR	17 40 05.7	
	comp=Z,353nm,19.9s,baz=48,slow=43						
CMAR	**Chiang Mai Arr**	25.63	286	P	**P**	**17 41 26.6**	**-0.7**
	0.3nm,0.3s,baz=100,slow=7.5,SNR=5.1						
CMAR				LR	LR	17 51 59.6	
	comp=Z,17nm,18.4s,baz=205,slow=38						
WRAB	**Tennant Creek**	33.93	164	P	**P**	**17 42 39.5**	**-1.2**
WRA	**Warramunga Arr**	33.94	164	P	**P**	**17 42 40.3**	**-0.5**
	0.5nm,0.4s,baz=343,slow=9.2,SNR=15						
WB2	**Warramunga Arr**	33.94	164	P	**P**	**17 42 39.0**	**-1.8**
WR0	**Warramunga Arr**	34.01	164	P	**P**	**17 42 41.4**	**0.0**
WR0				IAmb	IAmb	17 43 07.5	
	comp=Z,4.4nm,1.2s						
AS31	**Alice Springs**	37.40	166	P	**P**	**17 43 11.7**	**+1.1**
ASAR	**Alice Springs**	37.40	166	P	**P**	**17 43 10.8**	**+0.3**
	comp=Z,1.1nm,0.7s,baz=351,slow=6.8,SNR=33						
SONM	**Songino Array**	38.10	340	P	**P**	**17 43 16.7**	**+0.4**
	comp=Z,0.5nm,0.5s,baz=154,slow=10,SNR=4.3						
SONM	**Songino Array**	38.10	340	P	**P**	**17 43 16.1**	**-0.2**
SONM				IAmb	IAmb	17 43 22.2	
	comp=Z,2.4nm,1.3s						
H11S3	**WAKE ISLAND Hy**	40.48	77	T	T	18 27 12.1	
	baz=268,slow=75,SNR=22						
H11S1	**WAKE ISLAND Hy**	40.49	77	T	T	18 27 04.9	
	baz=268,slow=75,SNR=7.8						
H11S2	**WAKE ISLAND Hy**	40.50	77	T	T	18 27 08.3	
	baz=268,slow=75,SNR=13						
H11N1	**WAKE ISLAND Hy**	40.72	75	T	T	18 27 23.3	
	baz=267,slow=74,SNR=100						
H11N2	**WAKE ISLAND Hy**	40.73	75	T	T	18 27 27.0	
	baz=267,slow=74,SNR=53						
H11N3	**WAKE ISLAND Hy**	40.74	75	T	T	18 27 27.8	
	baz=267,slow=74,SNR=121						
BBOO	**Buckleboo**	46.70	167		**P**	**17 44 26.7**	**+0.6**
STKA	**Stephens Creek**	47.31	161	P	**P**	**17 44 30.8**	**-0.2**
	comp=Z,1.4nm,0.8s,baz=334,slow=8.1,SNR=5.9						
STKA	**Stephens Creek**	47.31	161	IAmb	IAmb	17 45 07.7	
	comp=Z,2.1nm,1.4s						
MKAR	**Makanchi Array**	49.16	322	P	**P**	**17 44 45.2**	**0.0**
	comp=Z,0.8nm,0.9s,baz=128,slow=9.4,SNR=4.7						
MKAR	**Makanchi Array**	49.16	322	P	**P**	**17 44 44.8**	**-0.3**
ZALV	**Zalesovo Beam**	51.70	331	P	**P**	**17 45 04.0**	**-0.1**
	comp=Z,1.1nm,0.7s,baz=105,slow=9.3,SNR=5.1						
ZALV	**Zalesovo Beam**	51.70	331	P	**P**	**17 45 02.8**	**-1.3**
KURK	**Kurchatov**	53.17	325	P	**P**	**17 45 14.9**	**-0.2**
KURK				IAmb	IAmb	17 45 27.4	
	comp=Z,3.7nm,0.9s						
URZ	**Urewera**	70.49	139	LR	LR	18 16 03.3	
	comp=Z,68nm,21.1s,baz=31,slow=34						
ARCES	**ARCESS Array B**	81.27	339	P	**P**	**17 48 13.1**	**+0.2**
	comp=Z,4.1nm,1.0s,baz=58,slow=4.7,SNR=6.6						
FINES	**FINESS Array B**	82.96	331	P	**P**	**17 48 22.6**	**+0.8**
	comp=Z,2.3nm,0.9s,baz=76,slow=5.9,SNR=1.2						
NOA	**NORSAR Array B**	89.83	334	LR	LR	18 31 38.7	
	comp=Z,18nm,19.0s,baz=30,slow=37						
PLCA	**Paso Flores**	149.14	157	PKPbc	**PKiKP**	**17 55 47.2**	**+0.3**
	comp=Z,1.0nm,0.9s,baz=217,slow=5.1,SNR=1.7						

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*IDC **27** 17:47:45.4±0.9,26°.23N×142°.08E,h0^{km},mb3.8/14, mb1 4.1/17,mb1mx3.9/45,mbtmp3.9/17,ML3.4/3,MS3.4/3, Ms1 3.4/3,ms1mx2.7/46,Error ellipse: s-maj=29.1km s-min=13.5km az=98.0*

*NEIC **27** 17:47:47.9±1.6,26°.36N±0°.05×142°.3E±0°.2,h16^{km}±5^{km}, mb4.5/17,Error ellipse: s-maj=26.1km s-min=7.1km az=81.0*

ISC 27 17:47:52.1±0.8,26°.43N±0°.07×142°.0E±0°.1,h40^{km},n49, σ1ˢ.96/44,mb4.0/21,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	**Chichijima**	0.68	14	Pn	**Pn**	**17 48 03.8**	**-1.5**
	466nm,0.3s,baz=293,slow=22,SNR=58						
JCJ				Sn	**Sn**	**17 48 20.3**	**+5.5**
	2µm,0.3s,baz=274,slow=22,SNR=15						
JCJ	**Chichijima**	0.68	14		**Pn**	**17 48 02.6**	**-2.7**
JYT	**Yasato**	9.89	351		**Pn**	**17 50 09.9**	**-1.8**
MJAR	**Matsushiro Arr**	10.58	343	Pn	**Pn**	**17 50 20.8**	**-0.5**
	0.2nm,0.3s,baz=170,slow=6.0,SNR=11						
MAJO	**Matsushiro**	10.59	343	Pn	**Pn**	**17 50 20.1**	**-1.1**
JMM	**Marumori**	11.45	355		**Pn**	**17 50 29.9**	**-3.1**
JMM					**Sn**	**17 52 35.1**	**-4.4**
KSRS	**Korea Array**	16.21	316	LR	LR	17 58 05.7	
	comp=Z,175nm,18.0s,baz=120,slow=38						
ASAJ	**Asahikawa**	17.65	1	P	**Pn**	**17 51 55.3**	**+0.4**
	0.6nm,0.3s,baz=241,slow=19,SNR=2.2						
JKA	**Kamikawa-asahi**	17.65	1	P	**Pn**	**17 51 53.2**	**-1.7**
JKA				IAmb	IAmb	17 51 56.5	
	comp=Z,96nm,1.4s						
USRK	**Ussuriysk Ar.**	19.49	338	P	**P**	**17 52 16.9**	**+1.2**
	baz=131,slow=10,SNR=2.8						
USRK				LR	LR	17 58 38.2	
	comp=Z,69nm,21.4s,baz=184,slow=33						
H11N2	**WAKE ISLAND Hy**	23.83	101	T	T	18 16 33.2	
	baz=291,slow=74,SNR=7.8						
H11N1	**WAKE ISLAND Hy**	23.83	101	T	T	18 16 35.2	
	baz=291,slow=74,SNR=7.4						
H11N3	**WAKE ISLAND Hy**	23.85	101	T	T	18 16 36.0	
	baz=291,slow=74,SNR=7.3						
H11S3	**WAKE ISLAND Hy**	24.11	104	T	T	18 16 55.6	
	baz=294,slow=75,SNR=9.8						
KLR	**Kul'dur**	24.11	343	P	**P**	**17 53 05.3**	**+1.4**
	comp=Z,3.8nm,0.9s,baz=158,slow=9.8,SNR=7.6						
H11S1	**WAKE ISLAND Hy**	24.12	104	T	T	18 16 57.7	
	baz=294,slow=75,SNR=8.0						
H11S2	**WAKE ISLAND Hy**	24.13	104	T	T	18 16 56.9	
	baz=294,slow=75,SNR=8.9						
SONM	**Songino Array**	35.08	317	P	**P**	**17 54 41.8**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=131,slow=8.6,SNR=4.8						
SONM	**Songino Array**	35.08	317	P	**P**	**17 54 43.3**	**+1.8**
CMAR	**Chiang Mai Arr**	40.43	268	P	**P**	**17 55 27.3**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=66,slow=5.8,SNR=8.7						
MTN	**Manton Dam**	40.45	196	P	**P**	**17 55 24.6**	**-2.2**
MTN				IAmb	IAmb	17 55 37.5	
	comp=Z,29nm,1.5s						
WB0	**Warramunga Arr**	46.51	190	P	**P**	**17 56 13.0**	**-2.7**
WB0				IAmb	IAmb	17 56 23.5	
	comp=Z,5.7nm,0.8s						
WR0	**Warramunga Arr**	46.68	190	P	**P**	**17 56 14.4**	**-2.6**
WR0				IAmb	IAmb	17 56 30.9	
	comp=Z,11nm,1.5s						
WRAB	**Tennant Creek**	46.68	190	P	**P**	**17 56 14.6**	**-2.4**
WB2	**Warramunga Arr**	46.69	190	P	**P**	**17 56 14.6**	**-2.6**
WRA	**Warramunga Arr**	46.69	190	P	**P**	**17 56 14.6**	**-2.5**
	comp=Z,2.7nm,0.5s,baz=12,slow=8.4,SNR=29						
WRA	**Warramunga Arr**	46.69	190	P	**P**	**17 56 14.6**	**-2.5**
ZALV	**Zalesovo Beam**	49.88	319	P	**P**	**17 56 41.9**	**+0.5**
	comp=Z,0.4nm,0.4s,baz=115,slow=6.9,SNR=3.3						
ZALV				LR	LR	18 16 58.6	
	comp=Z,34nm,18.8s,baz=65,slow=35						
AS31	**Alice Springs**	50.41	190	P	**P**	**17 56 43.3**	**-2.4**
AS31				IAmb	IAmb	17 56 55.7	
	comp=Z,2.5nm,1.6s						
ASAR	**Alice Springs**	50.42	190	P	**P**	**17 56 43.0**	**-2.8**
	comp=Z,0.1nm,0.3s,baz=8.6,slow=5.1,SNR=8.5						
MK31	**Makanchi Array**	50.77	310	P	**P**	**17 56 47.4**	**-0.9**
MKAR	**Makanchi Array**	50.77	310	P	**P**	**17 56 48.6**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=91,slow=9.2,SNR=9.9						
MAKZ	**Makanchi**	50.99	310	P	**P**	**17 56 50.2**	**+0.3**
MAKZ				IAmb	IAmb	17 57 02.2	
	comp=Z,6.6nm,1.4s						
ILAR	**Eielson Array**	58.37	28	P	**P**	**17 57 44.9**	**+1.8**
	comp=Z,0.4nm,0.7s,baz=257,slow=6.8,SNR=2.6						
ILAR	**Eielson Array**	58.37	28	P	**P**	**17 57 43.0**	**-0.1**
BRVK	**Borovoye**	58.48	318	P	**P**	**17 57 45.1**	**+1.0**
BRVK				IAmb	IAmb	17 57 46.0	
	comp=Z,1.9nm,0.7s						
BBOO	**Buckleboo**	59.19	186	P	**P**	**17 57 51.4**	**+2.4**
KKAR	**Karatay Array**	59.34	306	P	**P**	**17 57 50.9**	**+0.7**
ARU	**Arti**	64.85	322	P	**P**	**17 58 27.4**	**+0.5**
ABKAR	**Akbulak array**	65.44	314	P	**P**	**17 58 31.7**	**+0.9**
ABKAR				IAmb	IAmb	17 58 41.5	
	comp=Z,2.7nm,1.2s						
ABKAR	**Akbulak array**	65.44	314	P	**P**	**17 58 31.6**	**+0.7**
YKA	**Yellowknife Ar**	72.80	28	P	**P**	**17 59 16.9**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=292,slow=4.8,SNR=2.7						
ARCES	**ARCESS Array B**	74.11	341	P	**P**	**17 59 24.4**	**+0.5**
	comp=Z,3.9nm,1.1s,baz=70,slow=6.7,SNR=7.4						
KBZ	**Khabaz**	78.34	313	P	**P**	**17 59 48.9**	**+0.6**
	comp=Z,1.5nm,0.9s,baz=182,slow=9.0,SNR=3.7						
FIA1	**FINESS Array S**	78.47	334	P	**P**	**17 59 48.8**	**+0.2**
FINES	**FINESS Array B**	78.47	334	P	**P**	**17 59 49.0**	**+0.3**
	comp=Z,1.6nm,0.4s,baz=72,slow=5.3,SNR=19						
AKASG	**Malin Array Be**	83.05	324	P	**P**	**18 00 12.7**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=53,slow=4.7,SNR=2.6						
NC204	**NORSAR Array S**	84.14	339	P	**P**	**18 00 18.5**	**-0.3**
NOA	**NORSAR Array B**	84.16	338	P	**P**	**18 00 18.1**	**-0.9**
	comp=Z,0.6nm,0.7s,baz=45,slow=4.8,SNR=2.2						

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*IDC **27** 17:55:46.4±1.3,55°.51N×165°.69E,h0^{km},mb3.3/6, mb1 3.5/7,mb1mx3.3/57,mbtmp3.3/7,ML2.5/1,MS3.1/4, Ms1 3.1/4,ms1mx2.7/33,Error ellipse: s-maj=37.6km s-min=21.9km az=162.0*

*KRSC **27** 17:55:46.7±1.1,55°.62N×165°.67E,h31^{km}±13^{km},ML4.3*

*MOS **27** 17:55:49.7±0.9,55°.56N×165°.70E,h34^{km},mb4.5/4,Error ellipse: s-maj=12.6km s-min=6.8km az=45.8*

ISC 27 17:55:48.6±0.7,55°.69N±0°.04×165°.68E±0°.07,h10^{km},n67, σ1ˢ.41/78,mb3.6/10,4C-3D,Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	**Bering**	0.51	161	PN	**Pg**	**17 55 56.5**	**-2.0**
BKI				S	**Sg**	**17 56 04.7**	**-0.6**
BKI	**Bering**	0.51	161	*e*P	**Pg**	**17 55 56.5**	**-2.0**
BKI				*e*S	**Sg**	**17 56 04.7**	**-0.6**
KBTR	**Krutoberegovo**	1.69	289	PN	**Pn**	**17 56 15.2**	**-2.9**
KBTR				S	**Sn**	**17 56 36.6**	**-3.2**
KBTR	**Krutoberegovo**	1.69	289	*e*P	**Pn**	**17 56 15.2**	**-2.9**
KBTR				*e*S	**Sn**	**17 56 36.6**	**-3.2**
SMKR	**Semkarok**	2.52	293	PN	**Pn**	**17 56 28.2**	**-1.4**
SMKR				S	**Sn**	**17 56 59.2**	**-1.2**
SMKR	**Semkarok**	2.52	293	*e*P	**Pn**	**17 56 28.2**	**-1.4**
SMKR				*e*S	**Sn**	**17 56 59.2**	**-1.2**
MKZ	**Mys Kozlova**	2.53	245	PN	**Pn**	**17 56 28.1**	**-1.6**
MKZ				S	**Sn**	**17 56 58.6**	**-2.0**
MKZ	**Mys Kozlova**	2.53	245	*e*P	**Pn**	**17 56 28.1**	**-1.6**
MKZ				*e*S	**Sn**	**17 56 58.6**	**-2.0**
BDR	**Baidarnaya**	2.65	291	*e*S	**Sn**	**17 57 02.3**	**-1.4**
SRKR	**Sorokina**	2.70	293	PN	**Pn**	**17 56 30.9**	**-1.2**
SRKR	**Sorokina**	2.70	293	*e*P	**Pn**	**17 56 30.9**	**-1.2**
TUMD	**Tumrok D**	3.04	263	*e*P	**Pn**	**17 56 36.4**	**-0.4**
TUMR	**Tumrok**	3.17	265	PN	**Pn**	**17 56 39.0**	**+0.4**
TUMR	**Tumrok**	3.17	265	*e*P	**Pn**	**17 56 39.0**	**+0.4**
SPN	**Mys Shipunski**	4.20	234	PN	**Pn**	**17 56 51.5**	**-1.1**
SPN	**Mys Shipunski**	4.20	234	*e*P	**Pn**	**17 56 51.5**	**-1.1**
SPN				*e*S	**Sn**	**17 57 38.8**	**-2.9**
NLC	**Nalytchevo**	4.47	238	PN	**Pn**	**17 56 55.6**	**-0.7**
NLC				S	**Sn**	**17 57 47.0**	**-1.4**
NLC	**Nalytchevo**	4.47	238	*e*P	**Pn**	**17 56 55.6**	**-0.7**
NLC				*e*S	**Sn**	**17 57 47.0**	**-1.4**
SDLR	**Sedlovina**	4.64	241	PN	**Pn**	**17 56 58.9**	**+0.2**
SDLR	**Sedlovina**	4.64	241	*e*P	**Pn**	**17 56 58.9**	**+0.2**
SMAR	**Somma**	4.69	242	PN	**Pn**	**17 56 58.9**	**-0.6**
SMAR	**Somma**	4.69	242	*e*P	**Pn**	**17 56 58.9**	**-0.6**
KRER	**Koryakskii**	4.69	242	PN	**Pn**	**17 57 00.1**	**+0.6**
KRER	**Koryakskii**	4.69	242	*e*P	**Pn**	**17 57 00.1**	**+0.6**
UGLR	**Uglovaya**	4.71	241	PN	**Pn**	**17 56 59.3**	**-0.4**
UGLR	**Uglovaya**	4.71	241	*e*P	**Pn**	**17 56 59.3**	**-0.4**
AVH	**Avacha**	4.72	242	PN	**Pn**	**17 57 00.7**	**+0.9**
AVH	**Avacha**	4.72	242	*e*P	**Pn**	**17 57 00.7**	**+0.9**
KOK	**Koryaka**	4.75	243	PN	**Pn**	**17 57 00.9**	**+0.6**
KOK	**Koryaka**	4.75	243	*e*P	**Pn**	**17 57 00.9**	**+0.6**
DALK	**Dalny**	4.84	240	PN	**Pn**	**17 57 01.5**	**+0.1**
DALK				S	**Sn**	**17 57 56.5**	**-1.0**
DALK	**Dalny**	4.84	240	*e*P	**Pn**	**17 57 01.5**	**+0.1**
DALK				*e*S	**Sn**	**17 57 56.5**	**-1.0**
PET	**Petropavlovsk**	4.90	240	*e*PN	**Pn**	**17 57 01.8**	**-0.4**
PET				*e*S	**Sn**	**17 57 59.1**	**+0.3**
PET				smax	smax		
	comp=E,97nm,0.8s						
PET				smax	smax		
	comp=N,176nm,0.7s						
GNL	**Ganaly**	4.91	249	PN	**Pn**	**17 57 03.5**	**+1.0**
GNL	**Ganaly**	4.91	249	*e*P	**Pn**	**17 57 03.5**	**+1.0**
KRMR	**Karymshinskiy**	5.27	240	PN	**Pn**	**17 57 08.3**	**+1.0**
KRMR				S	**Sn**	**17 58 08.7**	**+0.7**
KRMR	**Karymshinskiy**	5.27	240	*e*P	**Pn**	**17 57 08.3**	**+1.0**
KRMR				*e*S	**Sn**	**17 58 08.7**	**+0.7**
PEA0B	**Petropavlovsk-**	5.33	244	⇑*i*PN	**Pn**	**17 57 09.6**	**+1.5**
PETK	**Petropavlovsk-**	5.33	244	Pn	**Pn**	**17 57 07.1**	**-1.0**
	comp=N,0.8nm,0.3s,baz=76,slow=17,SNR=13						
PETK				Sn	**Sn**	**17 58 09.7**	**+0.2**
	comp=N,1.0nm,0.3s,baz=79,slow=23,SNR=7.0						
PETK				LR	LR	17 59 29.3	
	comp=N,113nm,18.1s,baz=47,slow=42						
RUS	**Russkaya**	5.33	235	PN	**Pn**	**17 57 08.2**	**+0.1**
RUS	**Russkaya**	5.33	235	*e*P	**Pn**	**17 57 08.2**	**+0.1**
MTVR	**Mutnovka**	5.45	237	PN	**Pn**	**17 57 10.0**	**0.0**
MTVR	**Mutnovka**	5.45	237	*e*P	**Pn**	**17 57 10.0**	**0.0**

MTVR				eS	Sn	17 58 11.3	-1.5
ASAK	Asacha	5.65	237	PN	Pn	17 57 13.6	+1.0
ASAK	Asacha	5.65	237	eP	Pn	17 57 13.6	+1.0
KDTR	Khodutka, Kamc	5.95	232	PN	Pn	17 57 16.5	-0.1
KDTR	Khodutka, Kamc	5.95	232	eP	Pn	17 57 16.5	-0.1
SKR	Severo-Kuril's	7.62	233⇓	ePN	Pn	17 57 41.4	+1.9
SEY	Seymchan	9.93	322	LR	LR	18 02 02.0	
	comp=N,68nm,20.4s,baz=159,slow=37						
YAK	Yakutsk	19.46	304⇓	eP	P	18 00 14.1	-0.9
YAK				pmax	pmax		
	comp=Z,11nm,0.7s						
KLR	Kul'dur	21.50	267	LR	LR	18 10 49.4	
	comp=Z,52nm,18.2s,baz=66,slow=42						
TIXI	Tiksi	22.27	330	P	P	18 00 47.7	+2.4
	comp=Z,1.0nm,0.6s,baz=122,slow=19,SNR=2.2						
ILAR	Eielson Array	24.66	49	P	P	18 01 08.7	-0.4
	comp=Z,0.6nm,0.9s,baz=258,slow=8.7,SNR=2.6						
NRIK	Noril'sk	35.72	323	eP	P	18 02 47.1	+0.4
NRIK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
H11N2	WAKE ISLAND Hy	35.91	178	T	T	18 40 22.0	
	baz=359,slow=76						
H11N3	WAKE ISLAND Hy	35.92	178	T	T	18 40 23.3	
	baz=359,slow=76						
H11N1	WAKE ISLAND Hy	35.93	178	T	T	18 40 43.5	
	baz=359,slow=76						
ULN	Ulaanbaatar	36.11	283⇓	eP	P	18 02 53.7	+3.2
ULN				pmax	pmax		
	comp=Z,16nm,3.2s						
SONM	Songino Array	36.49	283	P	P	18 02 53.6	-0.1
	comp=Z,0.4nm,0.7s,baz=40,slow=8.5,SNR=3.7						
JOW	Kunigami	39.47	239	LR	LR	18 20 57.2	
	comp=Z,59nm,18.4s,baz=302,slow=38						
DGZ	Jazzator, Alta	45.43	297⇑	eP	P	18 04 09.0	+1.6
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GTA	Gaotai	45.53	278	eP	P	18 04 14.3	+6.1
GTA				pP	pwP	18 04 28.5	+14
GTA				sP	sP	18 04 35.0	+24
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MKAR	Makanchi Array	49.93	297	P	P	18 04 40.3	-1.9
	comp=Z,0.2nm,0.6s,baz=46,slow=8.3,SNR=1.8						
BRVK	Borovoye	51.32	310⇑	eP	P	18 04 55.7	+3.2
BRVK				pmax	pmax		
	comp=Z,6.0nm,2.0s						
AAK	Ala-Archa	56.80	298⇑	eP	P	18 05 35.0	+2.2
AAK				pmax	pmax		
	comp=Z,26nm,4.2s						
TXAR	Lajitas Array	66.67	72	P	P	18 06 39.9	+0.4
	comp=Z,0.4nm,0.7s,baz=320,slow=5.2,SNR=3.6						
ASAR	Alice Springs	83.54	209	P	P	18 08 15.1	-1.4
	comp=Z,0.2nm,0.8s,baz=22,slow=5.1,SNR=1.3						

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*IDC **27** 17:57:36.2±1.2, 55°.97N×166°.01E, h0^{km}, mb3.5/5, mb1 3.7/6, mb1mx3.4/56, mbtmp3.4/6, ML2.5/1, Error ellipse: s-maj=54.5km s-min=23.5km az=168.0*

*KRSC **27** 17:57:40.4±0.9, 55°.41N×165°.66E, h43^{km}±13^{km}, ML3.8*

ISC 27 17:57:39.0±0.9**, 55°.64N**±0°.08×**165°.95E**±0°.08**, h20**^{km}**, n22, σ1^{s}.51**/23**, mb3.5**/5**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	Bering	0.44	178	eP	Pb	17 57 48.5	+0.4
BKI				eS	Sn	17 57 56.4	-1.2
MKZ	Mys Kozlova	2.66	248	eP	Pn	17 58 20.5	-0.1
MKZ				eS	Sn	17 58 49.3	-2.9
TUMD	Tumrok D	3.19	264	eP	Pn	17 58 29.0	+1.0
KMNR	Kamenistaya	3.23	274	eP	Pn	17 58 29.1	+0.4
TUMR	Tumrok	3.32	266	eP	Pn	17 58 31.1	+1.2
SPN	Mys Shipunski	4.30	236	eP	Pn	17 58 43.8	+0.6
SPN				eS	Sn	17 59 29.5	-3.3
SDLR	Sedlovina	4.75	243	eP	Pn	17 58 50.3	+0.7
SMAR	Somma	4.80	243	eP	Pn	17 58 50.8	+0.4
KRER	Koryakskii	4.81	244	eP	Pn	17 58 51.6	+1.2
UGLR	Uglovaya	4.82	243	eP	Pn	17 58 51.9	+1.4
AVH	Avacha	4.83	243	eP	Pn	17 58 52.1	+1.4
KOK	Koryaka	4.87	244	eP	Pn	17 58 52.2	+1.0
RUS	Russkaya	5.43	237	eP	Pn	17 58 58.9	+0.1
PETK	Petropavlovsk-	5.45	246	Pn	Pn	17 59 00.7	+1.6
	0.7nm,0.3s,baz=70,slow=15,SNR=1.0						
PETK				Sn	Sn	18 00 02.9	+1.9
	0.5nm,0.3s,baz=145,slow=48,SNR=1.8						
H11N2	WAKE ISLAND Hy	35.86	178	T	T	18 43 34.0	
	baz=357,slow=76,SNR=4.8						
H11N3	WAKE ISLAND Hy	35.88	178	T	T	18 43 35.0	
	baz=357,slow=76,SNR=5.2						
H11N1	WAKE ISLAND Hy	35.88	178	T	T	18 43 34.4	
	baz=357,slow=76,SNR=6.8						
SONM	Songino Array	36.65	283	P	P	18 04 44.6	+0.6
	0.3nm,0.6s,baz=72,slow=11,SNR=2.0						
MKAR	Makanchi Array	50.09	297	P	P	18 06 30.9	-1.4
	0.6nm,0.9s,baz=40,slow=4.8,SNR=2.7						
PDAR	Pinedale Array	53.32	66	P	P	18 06 54.9	-1.8
	0.6nm,0.4s,baz=264,slow=10.0,SNR=7.0						
TXAR	Lajitas Array	66.54	72	P	P	18 08 28.1	+0.7
	0.2nm,0.6s,baz=308,slow=4.5,SNR=1.8						
ASAR	Alice Springs	83.58	209	P	P	18 10 07.2	+1.8
	0.3nm,0.9s,baz=12,slow=4.9,SNR=1.1						

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*JMA **27** 18:02:11.4±0.6, 44°.55N×148°.42E, h128^{km}, M3.7*

*IDC **27** 18:02:12.5±4.2, 45°.18N×148°.06E, h170^{km}±36^{km}, mb3.2/9, mb1 3.3/10, mb1mx3.1/49, mbtmp3.6/10, Error ellipse: s-maj=34.7km s-min=22.1km az=74.0*

ISC 27 18:02:07.9±1.0**, 45°.0N**±0°.1×**148°.3E**±0°.1**, h132**^{km}**, n26, σ2^{s}.34**/25**, mb3.4**/9**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	Nemuro 2	2.43	229	P	Pn	18 02 49.0	+1.7
NEM2				eS	Sn	18 03 18.0	+0.5
JRA	Rausu	2.48	246	P	Pn	18 02 50.9	+3.0
JNSB	Nemuroshibetsu	2.63	244	P	Pn	18 02 53.2	+3.4
JKHN	Kushirohamanak	2.94	231	P	Pn	18 02 55.7	+2.0
JKHN				eS	Sn	18 03 30.2	+1.2
JAK	Akkeshi	3.25	234	P	Pn	18 02 59.6	+1.8
JAK				eS	Sn	18 03 36.3	-0.1
JAR	Ashorobuto	3.65	244	P	Pn	18 03 06.6	+3.6
ASAJ	Asahikawa	4.15	260	P	Pn	18 03 13.6	+4.0
	0.7nm,0.3s,baz=55,slow=12,SNR=1.4						
JCH	Churui	4.27	238	P	Pn	18 03 12.9	+1.7
JCH				eS	Sn	18 04 00.0	-0.3
JNBK	Urakawa-nobuka	4.83	238	P	Pn	18 03 19.8	+1.1
JNBK				eS	Sn	18 04 11.9	-1.8
JOT	Ohata	6.39	238	eS	Sn	18 04 47.1	-4.1
JMK	Ichinoseki	7.99	224	eS	Sn	18 05 25.3	-4.6
SONM	Songino Array	28.77	291	P	P	18 07 53.2	+0.1
	0.3nm,0.4s,baz=84,slow=11,SNR=4.6						
H11N2	WAKE ISLAND Hy	29.54	142	T	T	18 39 16.6	
	baz=333						
H11N1	WAKE ISLAND Hy	29.55	142	T	T	18 39 16.3	
	baz=333						
H11N3	WAKE ISLAND Hy	29.56	142	T	T	18 39 19.2	
	baz=333						
H11S1	WAKE ISLAND Hy	30.54	144	T	T	18 40 30.1	
	baz=334,slow=76,SNR=22						
H11S3	WAKE ISLAND Hy	30.55	144	T	T	18 40 32.1	
	baz=334,slow=76,SNR=13						
H11S2	WAKE ISLAND Hy	30.56	144	T	T	18 40 31.6	
	baz=334,slow=76,SNR=14						
MKAR	Makanchi Array	44.74	297	P	P	18 10 07.0	-0.9
	0.7nm,0.7s,baz=73,slow=7.7,SNR=5.6						
FINES	FINESS Array B	64.15	333	P	P	18 12 25.7	-2.0
	1.9nm,0.5s,baz=45,slow=8.1,SNR=9.3						
WRA	Warramunga Arr	65.84	194	P	P	18 12 39.8	+0.7
	0.4nm,0.9s,baz=8.5,slow=6.8,SNR=2.4						
NOA	NORSAR Array B	68.75	339	P	P	18 12 55.3	-1.7
	0.3nm,0.4s,baz=29,slow=6.6,SNR=1.3						
ASAR	Alice Springs	69.56	194	P	P	18 13 04.1	+1.8
	0.2nm,0.6s,baz=8.6,slow=5.8,SNR=2.0						
AKASG	Malin Array Be	71.07	324	P	P	18 13 10.2	-1.1
	0.4nm,0.3s,baz=41,slow=6.7,SNR=1.5						
GERES	GERESS Array B	78.48	331	P	P	18 13 53.4	-0.7
	0.2nm,0.4s,baz=38,slow=5.4,SNR=1.8						
TXAR	Lajitas Array	81.30	57	P	P	18 14 10.9	+1.2
	0.4nm,0.6s,baz=298,slow=4.0,SNR=4.5						

IDC 27 18:04:25.8±5.9**, 6°.42S**×**148°.79E, h139**^{km}±42^{km}**, mb3.1**/2**, mb1 3.1**/4**, mb1mx3.0**/44**, mbtmp3.4**/4**, MS3.8**/1**, Ms1 3.8**/1**, ms1mx2.6**/18**, Error ellipse: s-maj=97.2km s-min=50.8km az=123.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.37	208	P	Pn	18 05 17.9	+0.3
	1.7nm,0.3s,baz=12,slow=9.3,SNR=7.1						
PMG				S	Sn	18 05 58.0	+0.3
	4.0nm,0.3s,baz=50,slow=19,SNR=16						
WRA	Warramunga Arr	19.43	225	P	P	18 08 41.8	+0.2
	0.1nm,0.3s,baz=51,slow=11,SNR=7.4						
ASAR	Alice Springs	22.33	218	P	P	18 09 13.2	+0.8
	0.3nm,0.5s,baz=55,slow=8.9,SNR=11						
DZM	Mont Dzumac	23.08	134	LR	LR	18 17 23.0	
	comp=Z,218nm,18.2s,baz=59,slow=34						
FITZ	Fitzroy Crossi	25.38	241	P	P	18 09 39.4	-1.0
	2.8nm,1.1s,baz=53,slow=10,SNR=2.1						
TORD	Torodi Ar. Bea	146.92	284	PKPbc	PKPbc	18 23 52.3	-0.7
	0.2nm,0.3s,baz=93,slow=3.8,SNR=2.3						

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*NEIC **27** 18:07:59.6±2.8, 26°.44S±0°.06×177°.1W±0°.2, h5^{km}±6^{km}, mb4.5/15, Error ellipse: s-maj=20.6km s-min=6.1km az=106.0*

*IDC **27** 18:08:02.4±1.0, 26°.67S×177°.48W, h0^{km}, mb3.9/7, mb1 4.1/8, mb1mx4.0/38, mbtmp4.0/8, ML4.9/1, MS3.4/6, Ms1 3.4/6, ms1mx3.1/22, Error ellipse: s-maj=29.7km s-min=22.7km az=108.0*

ISC 27 18:08:07.5±0.8**, 26°.66S**±0°.08×**177°.7W**±0°.1**, h35**^{km}**, n37, σ1^{s}.72**/29**, mb4.2**/11**, MS3.3**/6**, 1C, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	2.59	184	Pn	Pn	18 08 47.1	+0.2
	208nm,0.3s,baz=106,slow=22,SNR=2.8						
RAO				Sn	Sn	18 09 19.4	+2.2
	343nm,0.3s,baz=77,slow=22,SNR=12						
RAO	Raoul Island	2.59	184		Pn	18 08 45.3	-1.7
RAO					Sn	18 09 19.7	+2.5
NIUE	Niue	10.41	45	Pn	Pn	18 10 20.2	-14
URZ	Urewera	12.36	199	Pn	Pn	18 10 59.0	-2.0
OUENC	Ouen Island, N	14.67	283	Pn	Pn	18 11 30.4	-2.1
OUENC				IAmb	IAmb	18 11 41.8	
	comp=Z,21nm,1.2s						
BFZ	Birch Farm	14.86	198	Pn	Pn	18 11 24.8	-10
DZM	Mont Dzumac	15.14	284	ePn	P	18 11 57.1	+13
	comp=Z,47nm,1.5s						
DZM				eLR	LR	18 15 43.5	
	comp=Z,222nm,26.1s						
THZ	Tophouse	16.93	205	Pn	Pn	18 11 58.4	-3.3
THZ				IAmb	IAmb	18 12 25.6	
	comp=Z,58nm,1.6s						
RAR	Rarotonga	17.27	76	LR	LR	18 17 30.2	
	comp=Z,165nm,21.6s,baz=339,slow=33						
KHZ	Kahutara	17.28	202	Pn	Pn	18 11 57.9	-8.1
KHZ				IAmb	IAmb	18 12 16.4	
	comp=Z,20nm,0.9s						
HNR	Honiara	27.21	305	LR	LR	18 21 53.3	
	comp=Z,29nm,21.7s,baz=261,slow=30						
PAE	Paea	27.50	77	eT	T	18 40 44.8	
	comp=Z,3.6nm,0.2s						
PPT2	Papeete2	27.53	77	eLR	LR	18 20 15.3	
	comp=Z,93nm,26.5s						
VAH	Vaihoa	30.23	74	eT	T	18 44 07.9	
	comp=Z,5.0nm,0.2s						
STKA	Stephens Creek	35.73	252	P	P	18 15 05.7	+2.7
	comp=Z,0.9nm,0.5s,baz=79,slow=12,SNR=4.5						
STKA				LR	LR	18 28 10.9	
	comp=Z,48nm,18.2s,baz=31,slow=34						
BBOO	Buckleboo	40.36	250	P	P	18 15 44.6	+2.6
BBOO				IAmb	IAmb	18 16 19.2	
	comp=Z,23nm,1.4s						
AS31	Alice Springs	43.69	263	P	P	18 16 10.4	+1.0
ASAR	Alice Springs	43.69	263	P	P	18 16 10.3	+0.9
	comp=Z,0.5nm,0.4s,baz=95,slow=8.0,SNR=33						
ASAR				LR	LR	18 34 39.0	
	comp=Z,57nm,18.1s,baz=85,slow=36						
ASAR	Alice Springs	43.69	263	P	P	18 16 09.6	+0.3
WR0	Warramunga Arr	44.15	268	P	P	18 16 12.5	-0.6
WR0				IAmb	IAmb	18 16 37.0	
	comp=Z,7.2nm,1.4s						
WB2	Warramunga Arr	44.33	268	P	P	18 16 13.2	-1.2
WB2				IAmb	IAmb	18 16 27.8	
	comp=Z,14nm,1.6s						
WRA	Warramunga Arr	44.34	268	P	P	18 16 14.6	+0.1
	comp=Z,0.2nm,0.4s,baz=105,slow=6.0,SNR=11						
WRA				LR	LR	18 33 15.2	
	comp=Z,42nm,19.6s,baz=90,slow=34						
WRA	Warramunga Arr	44.34	268	P	P	18 16 14.5	-0.1
WB0	Warramunga Arr	44.34	268	P	P	18 16 15.0	+0.4
WB0				IAmb	IAmb	18 16 30.7	
	comp=Z,19nm,1.6s						
FORT	Forrest	47.35	252	P	P	18 16 37.5	-0.7
CASY	Casey	58.57	207	P	P	18 18 01.3	+1.0
LUWI	Luwuk	62.48	284	P	P	18 18 26.5	-1.4
QSPA	South Pole Qui	63.44	180	P	P	18 18 32.0	-1.6
MAW	Mawson	75.89	200	P	P	18 19 51.7	+1.7
	comp=Z,2.4nm,0.7s,baz=124,slow=3.6,SNR=2.1						
SYO	Syowa Base	80.81	193⇑	eP	P	18 20 30.4	+13
KSRS	Korea Array	81.68	319	P	P	18 20 24.9	+2.7
	comp=Z,0.6nm,0.7s,baz=127,slow=6.6,SNR=1.6						
PETK	Petropavlovsk-	82.27	345	P	P	18 20 26.8	+1.9
	comp=Z,2.1nm,0.9s,baz=148,slow=8.5,SNR=1.7						
TXAR	Lajitas Array	90.16	57	P	P	18 21 03.3	-1.2
	comp=Z,0.9nm,1.0s,baz=212,slow=8.8,SNR=4.8						
TXAR				LR	LR	18 55 40.5	
	comp=Z,25nm,18.6s,baz=0.0,slow=32						
NOA	NORSAR Array B	145.09	352	PKPbc	PKPdf	18 27 39.9	-0.7
	comp=Z,1.3nm,0.8s,baz=12,slow=4.6,SNR=2.2						
AKASG	Malin Array Be	148.40	327	PKPbc	PKiKP	18 27 50.8	-0.7
	comp=Z,0.2nm,0.2s,baz=35,slow=2.2,SNR=4.9						
BRTR	Keskin Array B	150.86	304	PKPbc	PKiKP	18 27 56.7	-0.6
	comp=Z,0.5nm,0.6s,baz=78,slow=2.6,SNR=2.3						
TORD	Torodi Ar. Bea	166.55	178	PKPab	PKPab	18 29 10.2	-1.6
	comp=Z,1.8nm,0.9s,baz=193,slow=3.4,SNR=6.9						

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*IDC **27** 18:10:36.1±0.8, 39°.30N×117°.95E, h0^{km}, mb3.8/11, mb1 3.9/13, mb1mx3.8/44, mbtmp3.8/13, ML4.0/2, MS3.1/6, Ms1 3.2/6, ms1mx2.8/41, Error ellipse: s-maj=29.8km s-min=15.8km az=40.0*

*NEIC **27** 18:10:40.7±2.4, 39°.3N±0°.2×117°.9E±0°.1, h29^{km}±7^{km}, mb4.2/6, Error ellipse: s-maj=27.8km s-min=8.9km az=207.0*

ISC 27 18:10:39.4±0.7**, 39°.4N**±0°.2×**117°.94E**±0°.08**, h20**^{km}**, n32, σ1^{s}.57**/27**, mb3.9**/13**, MS3.0**/4**, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BJT	Baijiatuau	1.52	296		Pn	18 11 04.7	-0.8
BJT				Sn	Sn	18 11 24.3	-0.3
KS19	Wonju Array Si	8.01	100		Pn	18 12 35.0	+0.4
KSAR	Wonju Array Be	8.04	101		Pn	18 12 34.6	-0.3
KSRS	Korea Array	8.06	100	Pn	Pn	18 12 35.1	-0.1
	1.4nm,0.3s,baz=287,slow=14,SNR=16						
KSRS				Sn	Sn	18 14 01.5	-4.3
	1.0nm,0.3s,baz=284,slow=25,SNR=6.9						
KSRS				Lg	Lg	18 14 50.8	
	1.2nm,0.3s,baz=283,slow=30,SNR=5.6						
KSRS				LR	LR	18 16 06.5	
	comp=Z,96nm,21.1s,baz=285,slow=41						
USRK	Ussuriysk Ar.	11.55	61	Lg	Lg	18 16 42.3	
	baz=255,slow=16,SNR=2.5						
ULN	Ulaanbaatar	11.60	321		Pn	18 13 23.1	-0.7
SONM	Songino Array	11.90	319	Pn	Pn	18 13 26.8	-1.2
	1.1nm,0.3s,baz=133,slow=14,SNR=30						
SONM				Sn	Sn	18 15 30.6	-10
	0.1nm,0.3s,baz=117,slow=24,SNR=4.2						
SONM				Lg	Lg	18 16 48.0	
	0.4nm,0.3s,baz=130,slow=30,SNR=7.2						
KLR	Kul'dur	13.95	40	Lg	Lg	18 18 03.1	
	0.2nm,0.3s,baz=318,slow=23,SNR=6.4						
KLR				LR	LR	18 19 31.5	
	comp=Z,65nm,20.9s,baz=224,slow=38						
TLY	Talaya	15.85	326	Lg	Lg	18 18 57.0	
	0.0nm,0.3s,baz=267,slow=16,SNR=1.5						
MJAR	Matsushiro Arr	16.23	94	Pn	P	18 14 34.6	+5.5
	0.0nm,0.3s,baz=295,slow=9.3,SNR=6.4						
YAK	Yakutsk	23.82	14	Lg	Lg	18 23 05.8	
	1.2nm,0.3s,baz=120,slow=20,SNR=1.4						
YAK				LR	LR	18 25 22.1	
	comp=Z,51nm,18.3s,baz=62,slow=37						
CMAR	Chiang Mai Arr	26.54	224	LR	LR	18 27 43.5	
	comp=Z,23nm,19.3s,baz=190,slow=39						
ZALV	Zalesovo Beam	26.72	314	P	P	18 16 17.6	+0.5
	0.4nm,0.5s,baz=116,slow=9.8,SNR=3.9						
ZALV				LR	LR	18 26 12.0	
	comp=Z,43nm,18.4s,baz=73,slow=35						
MKAR	Makanchi Array	26.91	298	P	P	18 16 20.0	+1.0
	0.5nm,0.7s,baz=82,slow=10,SNR=4.7						
MKAR	Makanchi Array	26.91	298	P	P	18 16 19.5	+0.6
MAKZ	Makanchi	27.12	298	P	P	18 16 21.2	+0.3
MAKZ				IAmb	IAmb	18 16 36.5	
	comp=Z,6.8nm,1.2s						
KURK	Kurchatov	29.68	306	P	P	18 16 42.5	-1.1
KURK				IAmb	IAmb	18 17 06.9	
	comp=Z,1.7nm,0.9s						
KURBB	Kurchatov Arra	29.73	305	P	P	18 16 44.7	+0.7
	comp=Z,0.5nm,0.3s,baz=93,slow=10,SNR=6.9						
NRIK	Noril'sk	34.13	341	P	P	18 17 23.1	+0.7
	comp=Z,3.5nm,0.8s,baz=141,slow=6.0,SNR=3.6						
NRIK	Noril'sk	34.13	341	IAmb	IAmb	18 17 25.1	
	comp=Z,3.6nm,0.8s						
KKAR	Karatay Array	35.50	292	P	P	18 17 35.4	+0.8
CHGR	Chuyangaron	37.55	285	P	P	18 17 52.8	+0.5
FINES	FINESS Array B	57.20	325	P	P	18 20 24.4	-0.2
	comp=Z,1.6nm,0.5s,baz=77,slow=6.1,SNR=7.1						
ILAR	Eielson Array	57.27	30	P	P	18 20 25.3	+0.2
	comp=Z,0.3nm,0.6s,baz=280,slow=6.2,SNR=4.7						
AKASG	Malin Array Be	60.10	313	P	P	18 20 43.9	-1.1
	comp=Z,1.0nm,0.6s,baz=57,slow=6.8,SNR=6.0						
WRA	Warramunga Arr	60.95	162	P	P	18 20 50.0	-1.0
	comp=Z,0.8nm,0.9s,baz=350,slow=7.4,SNR=3.9						
BRTR	Keskin Array B	62.52	300	P	P	18 21 02.7	+0.9
	comp=Z,0.8nm,0.7s,baz=58,slow=6.0,SNR=6.3						
BRTR	Keskin Array B	62.52	300	P	P	18 21 02.2	+0.5
NOA	NORSAR Array B	63.70	329	P	P	18 21 09.0	-0.1
	comp=Z,0.8nm,0.6s,baz=56,slow=6.5,SNR=2.2						
ASAR	Alice Springs	64.44	164	P	P	18 21 14.0	-0.3
	comp=Z,0.5nm,0.8s,baz=344,slow=7.0,SNR=5.0						
CLL	Collm	68.52	319	eP	P	18 21 40.0	-0.1
ULM	Lac du Bonnet	85.95	21	LR	LR	19 05 07.4	
	comp=Z,41nm,19.3s,baz=84,slow=38						

KRSC 27 18:25:04.0±1.2**, 55°.66N**×**165°.92E, h40**^{km}±14^{km}**, ML3.6, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	Bering	0.46	176	eP	Pn	18 25 15.0	+0.8
BKI				eS	Sn	18 25 22.7	+1.4
KBTR	Krutoberegovo	1.83	289	eP	Pn	18 25 33.6	+0.7
KBTR				eS	Sn	18 25 56.1	+1.3
KBG	Krutoberegovo	1.90	290	S	Sn	18 25 58.8	+2.2
MKZ	Mys Kozlova	2.65	247	eP	Pn	18 25 46.9	+2.8
MKZ				eS	Sn	18 26 18.6	+3.6
SMKR	Semkarok	2.66	292	eP	Pn	18 25 47.1	+2.8
BDR	Baidarnaya	2.79	291	eP	Pn	18 25 49.7	+3.5
SRKR	Sorokina	2.84	292	eP	Pn	18 25 49.7	+2.9
TUMD	Tumrok D	3.18	264	eP	Pn	18 25 56.1	+4.6
TUMD				S	Sn	18 26 33.2	+5.1
KMNR	Kamenistaya	3.22	274	eP	Pn	18 25 56.1	+4.0
KPT	Kopyto	3.23	278	P	Pn	18 25 56.4	+4.2
KPT				eS	Sn	18 26 35.7	+6.3
TUMR	Tumrok	3.31	266	P	Pn	18 25 57.8	+4.5
SDLR	Sedlovina	4.75	243	eP	Pn	18 26 17.0	+3.9
SDLR				S	Sn	18 27 10.0	+3.1
SMAR	Somma	4.80	243	eP	Pn	18 26 18.1	+4.2
KRER	Koryakskii	4.80	243	eP	Pn	18 26 18.4	+4.5
KRER				S	Sn	18 27 12.3	+4.0
UGLR	Uglovaya	4.82	242	eP	Pn	18 26 18.1	+4.1
AVH	Avacha	4.83	243	P	Pn	18 26 18.0	+3.8
KOK	Koryaka	4.87	244	eP	Pn	18 26 19.1	+4.4
KRMR	Karymshinskiy	5.38	241	S	Sn	18 27 28.2	+6.1
ASAK	Asacha	5.75	239	P	Pn	18 26 31.6	+4.7

MAN 27 18:25:50.5, 13°.54N×**120°.49E, h33**^{km}**, mb3.9, ML2.7, MS2.3, Mindoro**

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*IDC **27** 18:51:08.1±2.8, 33°.38S×178°.64W, h0^{km}, mb3.9/2, mb1 4.1/3, mb1mx3.6/32, mbtmp3.9/3, ML3.5/1, Error ellipse: s-maj=67.5km s-min=37.5km az=118.0*

*NEIC **27** 18:51:09.7±1.2, 33°.6S±0°.1×178°.5W±0°.2, h10^{km}±2^{km}, mb4.3/7, Error ellipse: s-maj=32.9km s-min=4.8km az=123.0*

ISC 27 18:51:13.0±1.6**, 33°.6S**±0°.1×**178°.5W**±0°.2**, h41**^{km}**, n13, σ1^{s}.11**/15**, mb4.1**/7**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	5.90	216	Pn	Pn	18 52 38.1	+0.4
	1.1nm,0.3s,baz=126,slow=23,SNR=1.7						
URZ				Sn	Sn	18 53 45.5	+1.5
	2.8nm,0.3s,baz=136,slow=17,SNR=7.2						
URZ	Urewera	5.90	216		Pn	18 52 36.1	-1.7
BKZ	Black Stump Fm	6.91	215	Pn	Pn	18 52 51.3	-0.4
BFZ	Birch Farm	8.26	209	Pn	Pn	18 53 07.9	-2.3
CTAO	Charters Tower	34.04	284	P	P	18 57 54.0	+0.6
ASAR	Alice Springs	42.63	271	P	P	18 59 05.3	-0.3
	1.3nm,0.7s,baz=109,slow=7.0,SNR=20						
ASAR				PcP	PcP	19 00 57.1	-0.1
	0.6nm,1.0s,baz=121,slow=4.4,SNR=3.4						
WR0	Warramunga Arr	43.73	276	P	P	18 59 13.8	-0.6
WR0				IAmb	IAmb	18 59 15.1	
	comp=Z,6.9nm,1.2s						
WB2	Warramunga Arr	43.90	276	P	P	18 59 15.1	-0.8
WB2				IAmb	IAmb	18 59 22.7	
	comp=Z,9.6nm,1.3s						
WRAB	Tennant Creek	43.90	276	P	P	18 59 14.8	-1.0
WRAB				IAmb	IAmb	18 59 43.5	
	comp=Z,3.2nm,1.1s						
WRA	Warramunga Arr	43.91	276	P	P	18 59 15.6	-0.3
	comp=Z,1.1nm,0.5s,baz=114,slow=7.8,SNR=23						
WB0	Warramunga Arr	43.94	276	P	P	18 59 15.6	-0.6
WB0				IAmb	IAmb	18 59 16.7	
	comp=Z,8.0nm,1.2s						
QSPA	South Pole Qui	56.56	180	P	P	19 00 52.1	+0.9
QSPA				IAmb	IAmb	19 00 59.3	
	comp=Z,2.6nm,1.3s						
FINES	FINESS Array B	147.94	338	PKPbc	PKPbc	19 10 53.5	+0.5
	comp=Z,8.7nm,1.1s,baz=48,slow=2.1,SNR=3.3						

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*IDC **27** 18:58:48.8±0.8, 10°.28N×91°.61E, h0^{km}, mb3.9/11, mb1 4.0/13, mb1mx3.8/44, mbtmp3.9/13, ML4.0/2, MS3.4/12, Ms1 3.3/12, ms1mx3.1/39, Error ellipse: s-maj=30.3km s-min=14.3km az=58.0*

*NEIC **27** 18:58:53.1±2.0, 10°.29N±0°.07×91°.62E±0°.08, h27^{km}±6^{km}, mb4.4/24, Error ellipse: s-maj=11.9km s-min=10.8km az=83.0*

*NDI **27** 18:58:55.0±4.2, 10°.69N×91°.49E, h12^{km}±44^{km}, mb4.5, ML4.1, mb4.4(NEIC)*

ISC 27 18:58:51.1±0.6**, 10°.29N**±0°.06×**91°.63E**±0°.06**, h17**^{km}**, n83, σ0^{s}.97**/72**, mb4.3**/23**, MS3.4**/10**, 1C, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PBA	Port Blair	1.75	39	eP	Pb	18 59 22.8	+0.1
PBA				eS	Sb	18 59 44.0	-0.3
PBA				IAML		18 59 47.1	
	comp=E,3µm,0.5s						
PBA				IAML		18 59 47.4	
	comp=N,3µm,0.6s						
PBA	Port Blair	1.75	39		Pn	18 59 21.0	+0.4
DGPR	DIGLIPUR	3.14	24	eP	Pn	18 59 39.6	-0.2
LHMI	Lhok Sumawe	7.28	133	Pn	Pn	19 00 35.9	-0.8
SRIT	Nakonsritamara	8.04	101	Pn	Pn	19 00 47.9	+0.7
KULM	Kulim	10.22	118	Pn	Pn	19 01 17.4	+0.3
PSI	Prapat	10.38	135	LR	LR	19 05 56.8	
	comp=N,143nm,19.4s,baz=294,slow=41						
CMAR	Chiang Mai Arr	10.78	40	Pn	Pn	19 01 25.8	+1.1
	comp=N,0.3nm,0.3s,baz=236,slow=15,SNR=8.4						
IPM	Ipoh	10.96	121	Pn	Pn	19 01 26.7	-0.5
CHTO	Chiang Mai	11.04	39	Pn	Pn	19 01 27.0	-1.4
PALK	Pallekele	11.21	255	Pn	Pn	19 01 30.7	0.0
	comp=N,1.8nm,0.3s,baz=184,slow=9.8,SNR=13						
PALK				Sn	Sn	19 03 23.4	-12
	comp=N,4.5nm,0.3s,baz=270,slow=20,SNR=8.7						
PALK				LR	LR	19 05 24.3	
	comp=N,109nm,19.9s,baz=174,slow=35						
PALK	Pallekele	11.21	255		Pn	19 01 29.6	-1.1
UBPT	Khong Chiam	14.38	68	P	P	19 02 19.8	-1.1
HYB	Hyderabad	14.54	301	iP	Pn	19 02 10.0	-6.2
HYB	Hyderabad	14.54	301	eP	Pn	19 02 16.4	+0.2
HYB				eS	Sn	19 04 54.4	-2.7
SHL	Shillong	15.20	1	eP	Pn	19 02 27.2	+2.0

SHL	**Shillong**	**15.20**	**1**	P	**P**	**19 02 29.1**	**-1.1**
SHL				IAmb	IAmb	19 02 30.6	
	comp=Z,20nm,0.8s						
KOHI	**KOHIMA**	**15.53**	**8**	eP	**Pn**	**19 02 27.2**	**-2.3**
SLVN	**Son La**	**16.12**	**46**	P	**P**	**19 02 39.8**	**-0.5**
SLVN				IAmb	IAmb	19 02 50.6	
	comp=Z,29nm,1.1s						
MOKO	**MOKOCHONG**	**16.18**	**9**	eP	**Pn**	**19 02 35.3**	**-2.6**
ODAN	**Odare**	**16.97**	**347**	eP	**Pn**	**19 02 48.5**	**+0.5**
RAMN	**Ramite**	**17.24**	**345**	eP	**Pn**	**19 02 51.8**	**+0.3**
	comp=Z,24nm,0.4s						
TAPN	**Taplejung**	**17.37**	**348**	eP	**Pn**	**19 02 53.0**	**-0.1**
LKP	**Lekhapani**	**17.42**	**13**	eP	**Pn**	**19 02 52.6**	**-0.8**
JIRN	**Jiri**	**18.03**	**344**	eP	**Pn**	**19 03 01.3**	**0.0**
PKI	**Pulchoki**	**18.16**	**342**	eP	**P**	**19 03 03.9**	**+0.7**
PKIN	**Phulchoki**	**18.18**	**342**	eP	**P**	**19 03 03.5**	**+0.3**
DMN	**Daman**	**18.30**	**341**	eP	**P**	**19 03 05.2**	**+0.6**
GKN	**Gorkha**	**18.81**	**340**	eP	**Pn**	**19 03 10.6**	**-0.1**
	comp=Z,12nm,0.4s						
KOLN	**Koldanda**	**18.96**	**338**	eP	**Pn**	**19 03 12.5**	**-0.1**
LSA	**Lhasa**	**19.32**	**359**	P	**P**	**19 03 16.3**	**+0.3**
LSA				pmax	pmax		
	comp=Z,120nm,0.7s						
LSA	**Lhasa**	**19.32**	**359**	P	**P**	**19 03 16.6**	**+0.6**
DANN	**Dangsing**	**19.43**	**339**	eP	**P**	**19 03 17.8**	**+0.7**
	comp=Z,23nm,0.6s						
PYUN	**Piuthan**	**19.49**	**337**	eP	**Pn**	**19 03 18.7**	**-0.2**
	comp=Z,25nm,0.4s						
LEM	**Lembang**	**23.29**	**136**	LR	LR	19 13 14.0	
	comp=Z,97nm,21.1s,baz=280,slow=37						
KKM	**Kota Kinabalu**	**24.69**	**98**	P	**P**	**19 04 09.9**	**-1.8**
SMLA	**Simla**	**24.71**	**329**	eP	**P**	**19 04 13.8**	**+2.3**
SMLA				IAmb	IAmb	19 04 19.8	
	comp=Z,26nm,1.8s						
ENH	**Enshi**	**25.93**	**37**	P	**P**	**19 04 21.5**	**-1.1**
H08S3	**Diego Garcia H**	**26.08**	**228**	T	T	19 31 44.4	
	baz=47,slow=75,SNR=272						
H08S2	**Diego Garcia H**	**26.08**	**228**	T	T	19 31 41.2	
	baz=47,slow=75,SNR=223						
H08S1	**Diego Carcia H**	**26.10**	**228**	T	T	19 31 42.3	
	baz=47,slow=75,SNR=84						
MYLDM	**Lahad Datu**	**27.09**	**99**	P	**P**	**19 04 34.3**	**+1.0**
MYLDM				IAmb	IAmb	19 04 46.8	
	comp=Z,12nm,0.9s						
GTA	**Gaotai**	**29.91**	**13**	⇑P	**P**	**19 04 59.3**	**+1.1**
GTA				pP	pwP	19 05 08.5	+2.7
GTA				sP	sP	19 05 13.0	+8.5
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
TOLI2	**Tolitoli**	**30.38**	**106**	P	**P**	**19 05 03.3**	**+0.8**
TOLI2				IAmb	IAmb	19 05 18.7	
	comp=Z,4.0nm,0.7s						
LUWI	**Luwuk**	**32.97**	**108**	P	**P**	**19 05 26.9**	**+1.6**
AAK	**Ala-Archa**	**35.54**	**338**	P	**P**	**19 05 48.7**	**+1.2**
AAK				IAmb	IAmb	19 06 03.1	
	comp=Z,7.0nm,1.4s						
MK31	**Makanchi Array**	**37.24**	**349**	P	**P**	**19 06 02.0**	**+0.2**
MKAR	**Makanchi Array**	**37.24**	**349**	P	**P**	**19 06 02.3**	**+0.5**
	comp=Z,1.9nm,0.7s,baz=166,slow=8.1,SNR=20						
MKAR				LR	LR	19 24 30.5	
	comp=Z,34nm,18.2s,baz=141,slow=41						
MKAR	**Makanchi Array**	**37.24**	**349**	P	**P**	**19 06 01.9**	**+0.1**
MAKZ	**Makanchi**	**37.31**	**349**	P	**P**	**19 06 03.2**	**+0.8**
KKAR	**Karatay Array**	**37.52**	**334**	P	**P**	**19 06 05.7**	**+1.5**
SONM	**Songino Array**	**39.44**	**16**	P	**P**	**19 06 20.8**	**+0.4**
	comp=Z,2.5nm,0.8s,baz=208,slow=7.9,SNR=16						
SONM				LR	LR	19 24 38.2	
	comp=Z,38nm,18.7s,baz=33,slow=39						
SONM	**Songino Array**	**39.44**	**16**	IAmb	IAmb	19 06 22.0	
	comp=Z,2.8nm,1.0s						
GEYT	**Alibeck**	**40.76**	**318**	LR	LR	19 25 07.9	
	comp=Z,62nm,19.3s,baz=70,slow=39						
KURBB	**Kurchatov Arra**	**41.64**	**347**	P	**P**	**19 06 38.9**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=170,slow=6.9,SNR=8.0						
KURK	**Kurchatov**	**41.71**	**348**	P	**P**	**19 06 38.9**	**-0.1**
KURK	**Kurchatov**	**41.71**	**348**	IAmb	IAmb	19 06 56.2	
	comp=Z,3.4nm,0.5s						
KSRS	**Korea Array**	**42.38**	**44**	LR	LR	19 25 22.5	
	comp=Z,44nm,19.2s,baz=340,slow=38						
FAKI	**Fak Fak**	**42.52**	**106**	P	**P**	**19 06 45.7**	**-0.4**
FAKI				IAmb	IAmb	19 06 55.1	
	comp=Z,6.3nm,0.7s						
FITZ	**Fitzroy Crossi**	**43.85**	**130**	P	**P**	**19 06 56.4**	**-0.4**
	comp=Z,1.1nm,0.6s,baz=332,slow=9.9,SNR=6.3						
ZAA0	**Zalesovo Array**	**43.89**	**354**	P	**P**	**19 06 55.8**	**-0.7**
ZALV	**Zalesovo Beam**	**43.89**	**354**	P	**P**	**19 06 56.8**	**+0.2**
	comp=Z,2.7nm,0.8s,baz=172,slow=12,SNR=11						
ZALV	**Zalesovo Beam**	**43.89**	**354**	P	**P**	**19 06 55.6**	**-1.0**
KNRA	**Kununurra**	**44.92**	**125**	P	**P**	**19 07 04.6**	**-0.8**
JHS	**Saijyo**	**45.05**	**50**	P	**P**	**19 07 04.8**	**-1.4**
BVAR	**Borovoye Array**	**45.94**	**342**	P	**P**	**19 07 12.0**	**-0.9**
	comp=Z,0.3nm,0.4s,baz=161,slow=14,SNR=4.2						
ABKAR	**Akbulak array**	**46.94**	**332**	P	**P**	**19 07 20.8**	**-0.1**
ABKAR				IAmb	IAmb	19 07 24.8	
	comp=Z,4.8nm,1.4s						
ABKAR	**Akbulak array**	**46.94**	**332**	P	**P**	**19 07 21.9**	**+1.0**
AKTO	**Aktyubinsk**	**48.66**	**332**	P	**P**	**19 07 34.6**	**+0.4**
	comp=Z,1.3nm,0.6s,baz=109,slow=13,SNR=4.4						
MJAR	**Matsushiro Arr**	**49.46**	**50**	LR	LR	19 30 57.6	
	comp=Z,34nm,18.0s,baz=245,slow=39						
WB0	**Warramunga Arr**	**51.62**	**125**	P	**P**	**19 07 57.1**	**-0.1**
WB0				IAmb	IAmb	19 08 13.4	
	comp=Z,9.6nm,1.4s						
WRA	**Warramunga Arr**	**51.67**	**126**	P	**P**	**19 07 58.0**	**+0.4**
	comp=Z,2.5nm,0.6s,baz=305,slow=8.5,SNR=42						
WRA	**Warramunga Arr**	**51.67**	**126**	P	**P**	**19 07 57.2**	**-0.3**
WRAB	**Tennant Creek**	**51.68**	**126**	P	**P**	**19 07 57.2**	**-0.3**
WRAB				IAmb	IAmb	19 08 11.0	
	comp=Z,4.3nm,0.8s						
WB2	**Warramunga Arr**	**51.68**	**126**	P	**P**	**19 07 57.5**	**-0.1**
WB2				IAmb	IAmb	19 07 59.5	
	comp=Z,4.6nm,0.8s						
WR0	**Warramunga Arr**	**51.84**	**125**	P	**P**	**19 07 59.0**	**+0.2**
WR0				IAmb	IAmb	19 08 00.2	
	comp=Z,4.8nm,0.8s						
ASAR	**Alice Springs**	**53.35**	**130**	P	**P**	**19 08 10.2**	**+0.2**
	comp=Z,1.4nm,0.8s,baz=306,slow=7.2,SNR=21						
ASAR				LR	LR	19 32 49.3	
	comp=Z,25nm,19.6s,baz=332,slow=38						
BRTR	**Keskin Array B**	**58.99**	**310**	P	**P**	**19 08 50.6**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=121,slow=6.9,SNR=2.1						
BRTR	**Keskin Array B**	**58.99**	**310**	P	**P**	**19 08 50.5**	**+0.3**
STKA	**Stephens Creek**	**63.55**	**133**	P	**P**	**19 09 22.3**	**+1.3**
	comp=Z,1.7nm,0.7s,baz=326,slow=9.8,SNR=5.8						
STKA				LR	LR	19 39 47.6	
	comp=Z,22nm,20.1s,baz=27,slow=39						
STKA	**Stephens Creek**	**63.55**	**133**	P	**P**	**19 09 21.9**	**+0.9**
SPITS	**Spitsbergen Ar**	**76.98**	**348**	LR	LR	19 53 18.0	
	comp=Z,31nm,18.7s,baz=200,slow=42						
MAW	**Mawson**	**80.40**	**191**	LR	LR	19 38 50.7	
	comp=Z,27nm,19.5s,baz=240,slow=30						

MAN 27 19:11:24.1, 10°.99N×124°.15E, h7^{km}, mb3.9, ML2.6, MS2.2, Leyte

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*NEIC **27** 19:27:11.6±2.3, 18°.85S±0°.02×169°.5E±0°.1, h239^{km}±13^{km}, mb4.3/19, Error ellipse: s-maj=18.8km s-min=3.0km az=86.0*

*NOU **27** 19:27:11.9, 18°.94S×169°.45E, h246^{km}, ML3.8/7, Vanuatu Islands*

*IDC **27** 19:27:13.7±4.6, 19°.02S×169°.37E, h259^{km}±22^{km}, mb3.7/5, mb1 3.8/7, mb1mx3.5/27, mbtmp4.4/7, Error ellipse: s-maj=62.6km s-min=28.4km az=97.0*

ISC 27 19:27:12.3±1.3**, 18°.90S**±0°.06×**169°.3E**±0°.2**, h246^{km}, n37, σ0^{s}.87**/40**, mb4.2**/13**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTV	**Rentapao**	**1.41**	**322**	P	**Pn**	**19 27 50.2**	**+0.6**
DVP	**Devils Point**	**1.60**	**317**	P	**Pn**	**19 27 51.8**	**+0.7**
LIFNC	**LIFOU**	**2.72**	**226**		**Pn**	**19 28 01.5**	**0.0**
LIFNC				Sn	**S**	**19 28 39.3**	**-1.1**
LIFNC	**LIFOU**	**2.72**	**226**	P	**Pn**	**19 28 01.7**	**+0.2**
MARNC	**Mare, Loyalty**	**2.85**	**205**		**Pn**	**19 28 02.7**	**-0.2**
MARNC				Sn	**S**	**19 28 40.8**	**-2.1**
MARNC	**Mare, Loyalty**	**2.85**	**205**	P	**Pn**	**19 28 02.8**	**-0.1**
SANVU	**Saraoutou**	**4.00**	**329**	Pn	**Pn**	**19 28 15.9**	**-0.1**
PINNC	**Pines Island,**	**4.10**	**205**	Pn	**Pn**	**19 28 17.2**	**+0.1**
DZM	**Mont Dzumac**	**4.16**	**220**	ePn	**Pn**	**19 28 18.8**	**+0.8**
	11nm,0.2s						
DZM	**Mont Dzumac**	**4.16**	**220**	P	**Pn**	**19 28 18.8**	**+0.8**
	2.8nm,0.3s,baz=41,slow=18,SNR=32						
DZM				S	**S**	**19 29 11.4**	**+1.3**
	2.4nm,0.3s,baz=115,slow=19,SNR=1.2						
OUENC	**Ouen Island, N**	**4.21**	**213**		**Pn**	**19 28 19.4**	**+1.0**
ONTNC	**Ouen Toro**	**4.34**	**218**		**Pn**	**19 28 21.3**	**+1.4**
HNR	**Honiara**	**13.09**	**315**	P	**P**	**19 30 11.5**	**+0.1**
	4.6nm,0.3s,baz=167,slow=18,SNR=3.7						
EIDS	**Eidsvold**	**18.09**	**246**	P	**Pn**	**19 31 08.7**	**-0.6**
EIDS				IAmb	IAmb	19 31 40.2	
	comp=Z,24nm,1.6s						
ARMA	**Armidale**	**19.73**	**231**	P	**Pn**	**19 31 27.5**	**-1.1**
ARMA				IAmb	IAmb	19 31 48.8	
	comp=Z,19nm,1.3s						
BKZ	**Black Stump Fm**	**21.12**	**164**	P	**P**	**19 31 38.6**	**+0.2**
CTAO	**Charters Tower**	**21.80**	**263**	P	**P**	**19 31 45.9**	**+1.0**
CTAO				IAmb	IAmb	19 31 48.2	
	comp=Z,16nm,1.6s						
BFZ	**Birch Farm**	**22.50**	**166**	P	**P**	**19 31 51.8**	**+0.6**
PMG	**Port Moresby**	**23.46**	**291**	P	**P**	**19 32 01.5**	**+1.3**
	comp=Z,7.3nm,0.7s,baz=135,slow=7.1,SNR=8.8						
PMG	**Port Moresby**	**23.46**	**291**	P	**P**	**19 31 59.6**	**-0.6**
PMG				IAmb	IAmb	19 32 02.3	
	comp=Z,7.8nm,0.8s						
STKA	**Stephens Creek**	**28.11**	**237**	P	**P**	**19 32 42.2**	**+0.6**
	comp=Z,2.7nm,0.7s,baz=60,slow=8.1,SNR=13						
STKA	**Stephens Creek**	**28.11**	**237**	P	**P**	**19 32 42.5**	**+0.8**
WR0	**Warramunga Arr**	**32.80**	**262**	P	**P**	**19 33 22.7**	**-0.3**
BBOO	**Buckleboo**	**32.84**	**238**	P	**P**	**19 33 23.2**	**0.0**
BBOO				IAmb	IAmb	19 33 33.0	
	comp=Z,19nm,1.4s						
WB0	**Warramunga Arr**	**32.96**	**263**	P	**P**	**19 33 23.5**	**-0.8**
WB0				IAmb	IAmb	19 34 00.3	
	comp=Z,15nm,1.6s						
WB2	**Warramunga Arr**	**32.98**	**262**	P	**P**	**19 33 23.8**	**-0.8**
WB2				IAmb	IAmb	19 33 57.1	
	comp=Z,10nm,1.5s						
WRAB	**Tennant Creek**	**32.98**	**262**	P	**P**	**19 33 23.5**	**-1.0**
WRAB				IAmb	IAmb	19 33 48.5	
	comp=Z,11nm,1.6s						
WRA	**Warramunga Arr**	**32.99**	**262**	P	**P**	**19 33 24.1**	**-0.6**
	comp=Z,1.3nm,0.4s,baz=100,slow=8.4,SNR=77						
WRA	**Warramunga Arr**	**32.99**	**262**	P	**P**	**19 33 22.8**	**-1.8**
AS31	**Alice Springs**	**33.30**	**256**	P	**P**	**19 33 27.5**	**+0.2**
ASAR	**Alice Springs**	**33.30**	**256**	P	**P**	**19 33 27.4**	**+0.1**
	comp=Z,14nm,0.5s,baz=81,slow=8.9,SNR=393						
KNRA	**Kununurra**	**38.82**	**268**	P	**P**	**19 34 13.8**	**-0.2**
FAKI	**Fak Fak**	**39.60**	**289**	P	**P**	**19 34 18.9**	**-1.6**
FAKI				IAmb	IAmb	19 34 50.3	
	comp=Z,12nm,1.5s						
SOEI	**Soe**	**44.50**	**275**	P	**P**	**19 35 00.7**	**+0.6**
SOEI				IAmb	IAmb	19 35 09.3	
	comp=Z,18nm,1.3s						
PSA00	**Pilbara Seismi**	**46.37**	**258**	P	**P**	**19 35 14.4**	**-0.1**
PSA00				IAmb	IAmb	19 35 46.5	
	comp=Z,20nm,1.3s						
PSA00	**Pilbara Seismi**	**46.37**	**258**	P	**P**	**19 35 14.2**	**-0.3**
PSA00				IAmb	IAmb	19 35 15.2	
	comp=Z,5.7nm,1.2s						
SONM	**Songino Array**	**87.01**	**323**	P	**P**	**19 39 30.4**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=116,slow=6.6,SNR=2.3						

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*JMA **27** 19:49:17.7±0.1, 23°.35N×122°.03E, h37^{km}, M2.8*

*TAP **27** 19:49:18.4, 23°.33N×122°.01E, h46^{km}±1^{km}, ML3.1, D*

ISC 27 19:49:13.6±1.1**, 23°.28N**±0°.02×**122°.15E**±0°.02**, h9^{km}**±9^{km}**, n98, σ0^{s}.94**/181**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ECBN	**Changbin**	**0.64**	**273**	i P	**Pn**	**19 49 29.0**	**+0.1**
	baz=263						
ECBN				i S	**Sb**	**19 49 36.6**	**+0.6**
	baz=263						
HGSD	**Ruisui**	**0.70**	**288**	P	**Pn**	**19 49 29.5**	**-0.2**
	baz=287						
HGSD				S	**Sb**	**19 49 38.5**	**+0.9**
	baz=287						
CHKT	**Chengkung**	**0.74**	**256**	P	**Pn**	**19 49 30.2**	**-0.1**
	baz=244						
CHKT				S	**Sg**	**19 49 38.5**	**+0.9**
	baz=244						
EGFH	**Guangfu**	**0.77**	**300**	P	**Pn**	**19 49 30.4**	**-0.1**
	baz=309						
EGFH				S	**Sb**	**19 49 40.6**	**+0.9**
	baz=309						
EYUL	**Yuli**	**0.77**	**275**	eP	**Pn**	**19 49 30.9**	**+0.4**
	baz=265						
EYUL				eS	**Sb**	**19 49 41.1**	**+1.4**
	baz=265						
YULB	**Yu-li**	**0.79**	**278**	P	**Pn**	**19 49 31.1**	**+0.2**
	baz=276						
YULB				S	**Sb**	**19 49 41.0**	**+0.7**
	baz=276						
EHY	**Hungye**	**0.79**	**286**	P	**Pn**	**19 49 30.8**	**-0.2**
	baz=286						
EHY				S	**Sb**	**19 49 40.3**	**-0.1**
	baz=286						
FULB	**Fuli**	**0.79**	**264**	eP	**Pn**	**19 49 30.8**	**-0.2**
	baz=253						
FULB				eS	**Sb**	**19 49 40.8**	**+0.4**
	baz=253						
EDH	**Donghe**	**0.84**	**249**	eS	**Sb**	**19 49 41.5**	**-0.2**
	baz=239						
ESL	**Shilin**	**0.84**	**309**	eP	**Pb**	**19 49 31.2**	**+0.8**
	baz=317						
ESL				eS	**Sg**	**19 49 40.4**	**-0.5**
	baz=317						
HWA	**Hwalien**	**0.85**	**324**	eP	**Pn**	**19 49 32.4**	**+0.6**
	baz=337						
HWA				eS	**Sb**	**19 49 42.6**	**+0.4**
	baz=337						
LDUT	**Ludao**	**0.87**	**226**	eS	**Sb**	**19 49 43.9**	**+1.2**
	baz=217						
TWD	**Chiawan**	**0.94**	**328**	eP	**Pn**	**19 49 33.1**	**+0.1**
	baz=334						
TWD				eS	**Sg**	**19 49 43.9**	**0.0**
	baz=334						
ETL	**Fush Village**	**1.00**	**331**	eP	**Pn**	**19 49 34.1**	**+0.3**
	baz=337						
ETL				eS	**Sg**	**19 49 45.9**	**+0.2**
	baz=337						
LONT	**Longtian**	**1.01**	**248**	eS	**Sb**	**19 49 46.7**	**0.0**
	baz=239						
NACB	**Ninganchiao**	**1.02**	**330**	eP	**Pn**	**19 49 34.4**	**+0.3**
	baz=336						
NACB				eS	**Sg**	**19 49 46.1**	**-0.4**
	baz=336						
VWDT	**VWDT**	**1.04**	**297**	eP	**Pn**	**19 49 35.2**	**+0.9**
	baz=298						
VWDT				eS	**Sg**	**19 49 47.0**	**0.0**
	baz=298						
ELDTW	**Lidau**	**1.05**	**265**	eP	**Pn**	**19 49 34.6**	**+0.1**
	baz=261						
ELDTW				eS	**Sg**	**19 49 46.1**	**-1.2**
	baz=261						
TTN	**Taitung**	**1.06**	**241**	eS	**Sb**	**19 49 48.7**	**+0.5**
	baz=234						
TWGBT	**Beinan**	**1.09**	**245**	eP	**Pn**	**19 49 36.0**	**+1.0**
	baz=236						
TWGBT				eS	**Sg**	**19 49 48.5**	**-0.1**
	baz=236						
TWG	**Pinlang**	**1.09**	**245**	eP	**Pn**	**19 49 36.0**	**+0.9**
	baz=236						
TWG				eS	**Sg**	**19 49 48.2**	**-0.6**
	baz=236						
ETLH	**Xiulin Townshi**	**1.10**	**327**	eP	**Pn**	**19 49 36.0**	**+0.7**
	baz=338						
ETLH				eS	**Sg**	**19 49 48.3**	**-0.9**
	baz=338						
OWD	**Renai**	**1.12**	**307**	eP	**Pn**	**19 49 35.9**	**+0.4**
	baz=310						
OWD				eS	**Sg**	**19 49 48.2**	**-1.3**
	baz=310						
YUS	**Yu-Shan**	**1.12**	**281**	eP	**Pn**	**19 49 36.5**	**+0.6**
	baz=287						
YUS				eS	**Sg**	**19 49 50.1**	**+0.4**
	baz=287						
WHF	**Hehuan Shan**	**1.18**	**317**	eP	**Pn**	**19 49 37.0**	**+0.3**
	baz=321						
WHF				eS	**Sg**	**19 49 50.6**	**-1.0**
	baz=321						
CHGB	**Renai**	**1.18**	**311**	eP	**Pn**	**19 49 37.1**	**+0.6**
	baz=314						
CHGB				eS	**Sg**	**19 49 50.3**	**-1.4**
	baz=314						
ENA	**Nanau**	**1.20**	**342**	eP	**Pn**	**19 49 37.7**	**+1.1**
	baz=348						
ENA				eS	**Sg**	**19 49 51.7**	**-0.5**
	baz=348						
EWUT	**Wuta**	**1.21**	**344**	eS	**Sg**	**19 49 52.4**	**-0.1**
	baz=349						
SSLB	**Suanglung**	**1.21**	**295**	eP	**Pn**	**19 49 37.2**	**+0.5**
	baz=303						
ALS	**Alishan**	**1.26**	**281**	eP	**Pn**	**19 49 38.9**	**+1.3**
	baz=286						
ALS				eS	**Sg**	**19 49 53.5**	**-0.5**
	baz=286						
FUSS	**Fushou**	**1.27**	**319**	eP	**Pn**	**19 49 38.5**	**+0.7**
	baz=333						
FUSS				eS	**Sg**	**19 49 53.0**	**-1.5**
	baz=333						
STYH	**Taoyuan**	**1.27**	**265**	eP	**Pb**	**19 49 38.8**	**+1.2**
	baz=260						
STYH				eS	**Sg**	**19 49 53.3**	**-1.1**
	baz=260						
SMLT	**Sun Moon Lake**	**1.29**	**298**	eP	**Pb**	**19 49 38.7**	**+0.6**
	baz=304						
SMLT				eS	**Sg**	**19 49 54.0**	**-1.2**
	baz=304						
ECL	**Taimali**	**1.30**	**238**	eP	**Pb**	**19 49 38.4**	**+0.2**
	baz=241						
ECL				eS	**Sg**	**19 49 52.6**	**-2.7**
	baz=241						
TWT	**Tachien**	**1.31**	**317**	eP	**Pb**	**19 49 39.6**	**+1.1**
	baz=320						
TWT				eS	**Sg**	**19 49 54.1**	**-1.8**
	baz=320						
TDCB	**Techi**	**1.33**	**317**	eP	**Pb**	**19 49 39.7**	**+1.0**
	baz=320						
TDCB				eS	**Sg**	**19 49 54.0**	**-2.3**
	baz=320						
TYC	**Yuchr**	**1.34**	**298**	eP	**Pg**	**19 49 39.7**	**+0.4**
	baz=306						
TYC				eS	**Sg**	**19 49 54.5**	**-2.1**
	baz=306						
NNSB	**Datong**	**1.34**	**329**	eP	**Pb**	**19 49 39.8**	**+0.8**
	baz=333						
NNSB				eS	**Sg**	**19 49 54.9**	**-1.9**
	baz=333						
TWC	**Suao**	**1.35**	**348**	eP	**Pg**	**19 49 40.5**	**+1.1**
	baz=354						
TWC				eS	**Sg**	**19 49 56.7**	**-0.3**
	baz=354						
NNS	**Nan Shan**	**1.35**	**328**	eP	**Pg**	**19 49 40.1**	**+0.5**
	baz=333						
NNS				eS	**Sg**	**19 49 55.5**	**-1.6**
	baz=333						
JYNG	**Yonagunijimaku**	**1.37**	**32**	P	**Pg**	**19 49 41.4**	**+1.5**
JYNG				eS	**Sn**	**19 49 58.4**	**+1.2**
WCS	**Beigang Elemen**	**1.37**	**304**	eP	**Pg**	**19 49 40.1**	**+0.2**
	baz=312						
WCS				eS	**Sb**	**19 49 55.6**	**-1.5**
	baz=312						
CHN5	**Tsauling**	**1.39**	**283**	eP	**Pg**	**19 49 41.0**	**+0.8**
	baz=289						
CHN5				eS	**Sb**	**19 49 56.9**	**-0.7**
	baz=289						
TPUB	**Ta-pu**	**1.40**	**271**	eP	**Pg**	**19 49 41.2**	**+0.8**
	baz=269						
TPUB				eS	**Sb**	**19 49 57.0**	**-0.9**
	baz=269						
NDS	**Dongshan**	**1.40**	**344**	eP	**Pg**	**19 49 41.7**	**+1.2**
	baz=349						
NDS				eS	**Sb**	**19 49 57.2**	**-0.7**
	baz=349						
WJS	**Zhushan**	**1.41**	**293**	eP	**Pg**	**19 49 42.0**	**+1.3**
	baz=293						
WJS				eS	**Sb**	**19 49 59.0**	**+0.8**
	baz=293						
WTP	**Ta-pu**	**1.41**	**269**	eP	**Pg**	**19 49 41.4**	**+0.7**
	baz=259						
WTP				eS	**Sb**	**19 49 58.3**	**0.0**
	baz=259						
YOJ	**Yonaguni jima**	**1.41**	**34**	P	**Pg**	**19 49 42.5**	**+1.8**
YOJ				eS	**Sn**	**19 49 59.5**	**+1.2**
CHN4	**Tsaushan**	**1.43**	**273**	eP	**Pb**	**19 49 40.8**	**+0.3**
	baz=271						
CHN4				eS	**Sb**	**19 49 58.0**	**-0.8**
	baz=271						
NDT	**Datong Townshi**	**1.44**	**336**	eP	**Pg**	**19 49 41.5**	**+0.4**
	baz=341						
NDT				eS	**Sb**	**19 49 57.9**	**-1.1**
	baz=341						
ENTT	**Nioudou**	**1.45**	**339**	eP	**Pg**	**19 49 41.6**	**+0.1**
	baz=343						
ENTT				eS	**Sb**	**19 49 58.3**	**-1.2**
	baz=343						
SGST	**Jiashian**	**1.46**	**262**	eP	**Pg**	**19 49 41.8**	**+0.3**
	baz=259						
SGST				eS	**Sb**	**19 49 58.7**	**-0.8**
	baz=259						
WNT	**Mingjian**	**1.47**	**294**	eP	**Pg**	**19 49 42.2**	**+0.4**
	baz=295						
WNT				eS	**Sn**	**19 49 60.0**	**+0.3**
	baz=295						
WHP	**Taichung City**	**1.48**	**312**	eP	**Pg**	**19 49 42.8**	**+0.7**
	baz=315						
WHP				eS	**Sn**	**19 49 58.5**	**-1.6**
	baz=315						
CHN1	**Nanshi**	**1.50**	**267**	eP	**Pg**	**19 49 43.2**	**+1.0**
	baz=259						
CHN1				eS	**Sn**	**19 50 01.1**	**+0.8**
	baz=259						
SSD	**Sandimen**	**1.50**	**249**	eP	**Pg**	**19 49 42.4**	**+0.1**
	baz=245						
SSD				eS	**Sn**	**19 49 58.6**	**-1.7**
	baz=245						
EAST	**Anshuo**	**1.50**	**234**	eP	**Pb**	**19 49 41.5**	**-0.1**
	baz=234						
EAST				eS	**Sn**	**19 49 59.2**	**-1.2**
	baz=234						
TWE	**Neicheng**	**1.50**	**343**	eP	**Pg**	**19 49 42.7**	**+0.3**
	baz=340						
TWE				eS	**Sn**	**19 50 00.4**	**+0.1**
	baz=340						
TSMG	**Majia**	**1.50**	**248**	eS	**Sn**	**19 49 59.5**	**-0.9**
	baz=244						
SNST	**Tainan City**	**1.52**	**268**	eP	**Pg**	**19 49 43.3**	**+0.5**
	baz=266						
SNST				eS	**Sn**	**19 50 01.5**	**+0.6**
	baz=266						
TWK	**Hsinying**	**1.53**	**270**	eP	**Pg**	**19 49 43.3**	**+0.4**
	baz=268						
TWK				eS	**Sn**	**19 50 01.8**	**+0.6**
	baz=268						
WDLH	**Douliu**	**1.53**	**286**	eS	**Sn**	**19 50 01.1**	**-0.1**
	baz=286						
MASBT	**Mashibuluo**	**1.55**	**245**	eP	**Pg**	**19 49 42.9**	**-0.4**
	baz=236						
MASBT				eS	**Sn**	**19 50 00.1**	**-1.5**
	baz=236						
YHNB	**Yeheng**	**1.55**	**333**	eP	**Pg**	**19 49 43.2**	**-0.1**
	baz=337						
YHNB				eS	**Sn**	**19 49 59.9**	**-1.9**
	baz=337						
NSK	**Sanguang**	**1.56**	**333**	eP	**Pg**	**19 49 43.6**	**+0.1**
	baz=337						
NSK				eS	**Sn**	**19 50 01.0**	**-1.1**
	baz=337						
NWLT	**Wulai**	**1.60**	**338**	eP	**Pg**	**19 49 44.3**	**0.0**
	baz=333						
NWLT				eS	**Sn**	**19 50 02.4**	**-0.6**
	baz=333						
TCU	**Taichung**	**1.60**	**303**	eP	**Pg**	**19 49 44.3**	**0.0**
	baz=305						
TCU				eS	**Sn**	**19 50 03.5**	**+0.7**
	baz=305						
SLIU	**Shizi**	**1.64**	**230**	eP	**Pb**	**19 49 44.1**	**+0.1**
	baz=216						
SLIU				eS	**Sn**	**19 50 03.6**	**-0.2**
	baz=216						
TWQ1	**Liyutan**	**1.65**	**310**	eP	**Pg**	**19 49 45.3**	**+0.1**
	baz=323						
TWQ1				eS	**Sn**	**19 50 05.0**	**+0.9**
	baz=323						
CHN3	**Shinhua**	**1.66**	**263**	eS	**Sg**	**19 50 06.5**	**-0.3**
	baz=272						
TWM1	**Shoushan**	**1.66**	**254**	eP	**Pg**	**19 49 46.2**	**+0.9**
	baz=251						
TWM1				eS	**Sg**	**19 50 06.9**	**+0.1**
	baz=251						
WCHH	**Zhanghua**	**1.66**	**299**	eP	**Pb**	**19 49 45.0**	**+0.7**
	baz=300						
WCHH				eS	**Sn**	**19 50 05.2**	**+0.9**
	baz=300						

SCZT	**Fangliau**	**1.68**	**238**	*e*P	**Pg**	**19 49 45.6**	**-0.2**
	baz=231						
SCZT				*e*S	**Sn**	**19 50 04.1**	**-0.7**
	baz=231						
HATJ	**Hateruma jima**	**1.70**	**63**	P	**Pg**	**19 49 46.9**	**+0.7**
HATJ				*e*S	**Sg**	**19 50 07.7**	**-0.6**
NSTT	**Nanjuang**	**1.71**	**322**	*e*P	**Pg**	**19 49 46.3**	**+0.1**
	baz=334						
NSTT				*e*S	**Sn**	**19 50 05.1**	**-0.3**
	baz=334						
LIOB	**Emei**	**1.71**	**323**	*e*P	**Pg**	**19 49 46.5**	**+0.1**
	baz=333						
LIOB				*e*S	**Sn**	**19 50 05.5**	**0.0**
	baz=333						
TIPB	**Shuangxi**	**1.71**	**350**	*e*P	**Pg**	**19 49 46.2**	**-0.1**
	baz=5.0						
TIPB				*e*S	**Sn**	**19 50 06.2**	**+0.6**
	baz=5.0						
ICHU	**Yijhu**	**1.72**	**273**	*e*S	**Sn**	**19 50 06.4**	**+0.6**
	baz=272						
WRL	**Guolierlin Hig**	**1.74**	**291**	*e*P	**Pb**	**19 49 46.2**	**+0.5**
	baz=292						
WRL				*e*S	**Sb**	**19 50 08.0**	**+0.3**
	baz=292						
NMLH	**Miaoli**	**1.76**	**315**	*e*S	**Sn**	**19 50 07.2**	**+0.3**
	baz=330						
TWA	**Mucha**	**1.77**	**343**	*e*P	**Pb**	**19 49 46.7**	**+0.5**
	baz=339						
TWA				*e*S	**Sn**	**19 50 07.5**	**+0.4**
	baz=339						
CHN8	**Yiju**	**1.78**	**272**	*e*P	**Pb**	**19 49 46.8**	**+0.3**
	baz=271						
CHN8				*e*S	**Sn**	**19 50 07.7**	**+0.3**
	baz=271						
IRIF	**Iriomote-Funau**	**1.79**	**54**	P	**Pg**	**19 49 48.1**	**+0.3**
IRIF				*e*S	**Sg**	**19 50 09.8**	**-1.2**
NWF	**Wu-fen Shan**	**1.81**	**349**	*e*P	**Pg**	**19 49 47.9**	**-0.4**
	baz=353						
NWF				*e*S	**Sn**	**19 50 08.9**	**+0.7**
	baz=353						
TWKBT	**Hengchun**	**1.82**	**223**	*e*P	**Pb**	**19 49 47.5**	**+0.5**
	baz=224						
TWKBT				*e*S	**Sn**	**19 50 08.6**	**+0.3**
	baz=224						
HEN	**Hengchun**	**1.82**	**226**	*e*P	**Pg**	**19 49 48.1**	**-0.4**
	baz=221						
HEN				*e*S	**Sn**	**19 50 08.2**	**-0.1**
	baz=221						
YM01	**YM01**	**1.93**	**344**	*e*P	**Pb**	**19 49 49.1**	**+0.2**
	baz=337						
YM01				*e*S	**Sn**	**19 50 10.8**	**-0.3**
	baz=337						
JKRS	**Kuro-shima**	**1.95**	**60**	P	**Pg**	**19 49 50.6**	**-0.4**
JKRS				S	**Sb**	**19 50 14.1**	**+0.4**
JIJ	**Ishigaki jima**	**2.12**	**59**	P	**Pg**	**19 49 53.0**	**-1.2**
JIJ				S	**Sb**	**19 50 17.3**	**-1.3**
JISG	**Ishigakijimahi**	**2.37**	**56**	P	**Pb**	**19 49 55.5**	**-0.9**
JISG				S	**Sn**	**19 50 23.4**	**+1.7**
PHUB	**P'eng-hu**	**2.38**	**276**	*e*P	**Pn**	**19 49 54.0**	**+1.2**
	baz=263						
PHUB				*e*S	**Sn**	**19 50 20.5**	**-1.6**
	baz=263						
PNG	**Penghu**	**2.40**	**277**	*e*P	**Pn**	**19 49 54.7**	**+1.6**
	baz=264						
PNG				*e*S	**Sn**	**19 50 21.2**	**-1.4**
	baz=264						
JTJ	**Tarama**	**2.70**	**59**	P	**Pb**	**19 50 00.9**	**-1.1**
JTJ				S	**Sn**	**19 50 32.2**	**+2.2**
PTMZ	**Houxiangcun**	**3.27**	**303**	*e*P	**Pn**	**19 50 06.2**	**+1.2**
	baz=305						
PTMZ				*e*S	**Sn**	**19 50 41.8**	**-2.4**
	baz=305						
MATB	**Ma-tsu**	**3.49**	**325**	*e*S	**Sn**	**19 50 47.9**	**-1.6**
	baz=318						
LYJJ	**Jianjiangzhen**	**3.91**	**327**	*e*S	**Sn**	**19 50 58.5**	**-1.3**
	baz=320						
MHZQ	**Yeshan**	**3.99**	**315**	*e*S	**Sn**	**19 50 59.0**	**-2.9**
	baz=318						
XPSS	**Dashiqiu**	**4.04**	**334**	*e*S	**Sn**	**19 51 01.5**	**-1.7**
	baz=337						

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*NEIC **27** 19:51:29.8±2.8, 29°.64S±0°.04×72°.94W±0°.07, h10^{km}±1^{km}, mb4.6/11, ML3.9(GUC), Error ellipse: s-maj=10.7km s-min=7.1km az=269.0*
*SJA **27** 19:51:29.0, 29°.53S×73°.27W, h10^{km}, ML4.3*
*IDC **27** 19:51:30.1±0.8, 29°.68S×73°.03W, h0^{km}, mb4.1/5, mb1 4.2/9, mb1mx4.0/27, mbtmp4.0/9, ML3.7/4, MS3.1/3, Ms1 3.1/3, ms1mx2.7/23, Error ellipse: s-maj=33.0km s-min=23.2km az=98.0*
*GUC **27** 19:51:32.6±0.6, 29°.71S×72°.79W, h39^{km}±6^{km}, ML3.9*
ISC 27 19:51:29.7±0.8**, 29°.65S**±0°.04×**72°.97W**±0°.06**, h7**^{km}±4^{km}**, n123,** σ2^{s}**10**/136**, mb4.4**/8**, 4C-1D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	**La Serena**	**1.53**	**100**	*e*P	**Pn**	**19 51 56.6**	**-0.9**
CO05				*i* S	**Sn**	**19 52 14.1**	**-3.5**
CO05				IAML		19 52 16.3	
	comp=N,1μm,0.6s						
CO05	**La Serena**	**1.53**	**100**		**Pn**	**19 51 56.7**	**-0.7**
CO05				Sn	**Sn**	**19 52 14.6**	**-3.0**
CO06	**Fray Jorge**	**1.54**	**132**	*e*P	**Pn**	**19 51 56.8**	**-0.8**
CO06				*i* S	**Sn**	**19 52 14.7**	**-3.3**
CO06				IAML		19 52 15.3	
	comp=E,849nm,0.3s						
CO06	**Fray Jorge**	**1.54**	**132**		**Pn**	**19 51 56.8**	**-0.8**
CO06				Sn	**Sn**	**19 52 14.5**	**-3.4**
GO04	**Tololo Observa**	**1.96**	**106**	⇑*i*P	**Pn**	**19 52 03.5**	**-0.1**
GO04				*i* S	**Sn**	**19 52 26.1**	**-2.4**
GO04				IAML		19 52 31.3	
	comp=N,3μm,0.6s						
GO04	**Tololo Observa**	**1.96**	**106**		**Pn**	**19 52 03.4**	**-0.1**
GO04	**Tololo Observa**	**1.96**	**106**	*i* P	**Pn**	**19 52 03.0**	**-0.6**
LCO	**Las Campanas**	**2.08**	**73**	*e*P	**Pn**	**19 52 04.8**	**-0.5**
LCO				*i* S	**Sn**	**19 52 28.7**	**-3.0**
LCO	**Las Campanas**	**2.08**	**73**	Pn	**Pn**	**19 52 04.9**	**-0.3**
LCO				Sn	**Sn**	**19 52 29.1**	**-2.6**
LCO	**Las Campanas**	**2.08**	**73**	*i* P	**Pn**	**19 52 05.0**	**-0.3**
AC04	**Llanos de Chal**	**2.20**	**50**	*e*P	**Pn**	**19 52 05.3**	**-1.4**
AC04	**Llanos de Chal**	**2.20**	**50**	Pn	**Pn**	**19 52 05.0**	**-1.6**
AC04				Sn	**Sn**	**19 52 30.0**	**-4.2**
AC04	**Llanos de Chal**	**2.20**	**50**	*i* P	**Pn**	**19 52 06.0**	**-0.7**
AROD	**Rodeo**	**3.08**	**100**	*i* P	**Pb**	**19 52 22.0**	**-3.1**
GO03	**Copiap**	**3.16**	**50**	⇓*i*P	**Pn**	**19 52 19.9**	**0.0**
GO03				*i* S	**Sn**	**19 52 55.9**	**-2.0**
GO03				IAML		19 52 56.5	
	comp=N,389nm,0.4s						
GO03	**Copiap**	**3.16**	**50**	Pn	**Pn**	**19 52 18.9**	**-1.1**
GO03	**Copiap**	**3.16**	**50**	*i* P	**Pn**	**19 52 20.0**	**0.0**
VA06	**Catapilco**	**3.24**	**154**	*e*P	**Pn**	**19 52 20.7**	**-0.2**
VA06				*i* S	**Sn**	**19 52 55.3**	**-4.4**
VA06				IAML		19 53 01.2	
	comp=E,434nm,0.6s						
ACCO	**Cerro Coronel**	**3.51**	**106**	*i* P	**Pb**	**19 52 29.0**	**-3.4**
VA01	**Torpederas**	**3.55**	**162**		**Pn**	**19 52 24.3**	**-0.9**
ROCH	**El Roble**	**3.71**	**154**	⇑*i*P	**Pn**	**19 52 27.8**	**+0.1**
ROCH				*i* S	**Sn**	**19 53 09.4**	**-2.4**
ROC1	**El Roble**	**3.71**	**154**	*i* P	**Pn**	**19 52 28.0**	**+0.3**
VA03	**San Esteban**	**3.73**	**147**	⇑*i*P	**Pn**	**19 52 28.9**	**+1.0**
VA03				*i* S	**Sn**	**19 53 09.4**	**-2.7**
VA03				IAML		19 53 12.9	
	comp=E,370nm,0.5s						
VA03	**San Esteban**	**3.73**	**147**		**Pn**	**19 52 26.8**	**-1.0**
VA03	**San Esteban**	**3.73**	**147**	*i* P	**Pn**	**19 52 29.0**	**+1.2**
RTLS	**Leoncito**	**3.82**	**125**	*i* P	**Pn**	**19 52 33.0**	**+3.8**
MT02	**Curacav**	**3.92**	**157**	*e*P	**Pn**	**19 52 30.6**	**+0.3**
MT02	**Curacav**	**3.92**	**157**		**Pn**	**19 52 30.0**	**-0.4**
MT02	**Curacav**	**3.92**	**157**	*i* P	**Pn**	**19 52 30.0**	**-0.4**
PEL	**Peldehue**	**3.99**	**151**	⇑*i*P	**Pn**	**19 52 31.1**	**-0.3**
PEL				*i* S	**Sn**	**19 53 16.2**	**-2.3**
PEL	**Peldehue**	**3.99**	**151**		**Pn**	**19 52 30.8**	**-0.6**
PEL	**Peldehue**	**3.99**	**151**	*i* P	**Pn**	**19 52 32.0**	**+0.6**
AUSP	**Uspallata**	**4.01**	**131**	*i* P	**Pn**	**19 52 35.0**	**+3.2**
ZON	**Zonda**	**4.16**	**118**	Pn	**Pn**	**19 52 34.0**	**+0.4**
ZON	**Zonda**	**4.16**	**118**	*i* P	**Pn**	**19 52 37.0**	**+3.4**
VA05	**Santo Domingo**	**4.16**	**164**		**Pn**	**19 52 33.4**	**-0.2**
MT05	**Renca**	**4.19**	**153**	Pn	**Pn**	**19 52 32.2**	**-1.9**
VCA	**Vinchina**	**4.27**	**79**	*i* P	Pb	19 52 40.0	-5.2
AC02	**Maricunga**	**4.40**	**51**	*e*P	**Pn**	**19 52 38.2**	**+0.9**
AC02				*i* S	**Sn**	**19 53 27.4**	**-1.8**
AC02	**Maricunga**	**4.40**	**51**	Pn	**Pn**	**19 52 37.8**	**+0.4**
AC02	**Maricunga**	**4.40**	**51**	*i* P	**Pn**	**19 52 38.0**	**+0.6**
RTCV	**Cerro Valdivia**	**4.41**	**121**	*i* P	**Pn**	**19 52 40.0**	**+2.9**
MT09	**Talagante**	**4.45**	**158**	*e*P	**Pn**	**19 52 38.5**	**+0.8**
MT09				*i* S	**Sn**	**19 53 26.7**	**-3.1**
MT09	**Talagante**	**4.45**	**158**		**Pn**	**19 52 38.3**	**+0.6**
MT01	**Popeta**	**4.45**	**161**	*e*P	**Pn**	**19 52 37.9**	**+0.4**
MT01	**Popeta**	**4.45**	**161**	Pn	**Pn**	**19 52 38.0**	**+0.4**
MT01	**Popeta**	**4.45**	**161**	*i* P	**Pn**	**19 52 38.0**	**+0.4**
ASAL	**Salagasta**	**4.60**	**131**	*i* P	**Pn**	**19 52 44.0**	**+4.2**
ARCO	**CERRO ARCO**	**4.70**	**134**	*i* P	Pn	19 52 46.0	+4.8
BO04	**La Punta**	**4.77**	**156**	*e*P	**Pn**	**19 52 42.9**	**+0.9**
BO04				*i* S	**Sn**	**19 53 34.0**	**-3.6**
LMEL	**Las Melosas**	**4.80**	**151**	*e*P	**Pn**	**19 52 44.1**	**+1.5**
LMEL				*i* S	**Sn**	**19 53 35.1**	**-3.5**
AVFE	**Valle Fertil**	**4.88**	**103**	*i* P	**Pn**	**19 52 46.0**	**+2.4**
AAGR	**Agrelo**	**4.93**	**135**	*i* P	**Pn**	**19 52 48.0**	**+3.7**
BO01	**Tunca**	**4.99**	**162**	*e*P	**Pn**	**19 52 45.6**	**+0.5**
BO01				*i* S	**Sn**	**19 53 39.6**	**-3.4**
BO01	**Tunca**	**4.99**	**162**	Pn	**Pn**	**19 52 45.0**	**0.0**
BO01	**Tunca**	**4.99**	**162**	*i* P	**Pn**	**19 52 46.0**	**+1.0**
ACLC	**CERRO LA CRUZ**	**5.25**	**89**	*i* P	**Pn**	**19 52 51.0**	**+2.2**
GO05	**Huala**	**5.42**	**171**	Pn	**Pn**	**19 52 50.1**	**-0.7**
GO05	**Huala**	**5.42**	**171**	*i* P	**Pn**	**19 52 52.0**	**+1.1**
BO02	**Sierra Bellavi**	**5.45**	**161**		**Pn**	**19 52 51.9**	**+0.4**
BO02	**Sierra Bellavi**	**5.45**	**161**	*i* P	**Pn**	**19 52 52.0**	**+0.6**
PB14	**IPOC Station P**	**5.50**	**25**	Pn	**Pn**	**19 52 49.8**	**-2.6**
PB14	**IPOC Station P**	**5.50**	**25**	*i* P	**Pn**	**19 52 50.0**	**-2.4**
APLL	**PUNTA DE LOS L**	**5.64**	**99**	*i* P	**Pn**	**19 52 56.0**	**+2.0**
ML02	**Panimavida**	**6.23**	**168**		**Pn**	**19 53 01.0**	**-1.1**
H03N1	**Juan Fernandez**	**6.32**	**232**	T	T	19 59 34.9	
	baz=56,slow=74						
H03N2	**Juan Fernandez**	**6.33**	**232**	T	T	19 59 33.1	
	baz=56,slow=74						
H03N3	**Juan Fernandez**	**6.34**	**232**	T	T	19 59 35.6	
	baz=56						
RFA	**San Rafael**	**6.38**	**144**	*i* P	**Pn**	**19 53 06.0**	**+1.9**
VA04	**Juan Fernndez**	**6.38**	**230**		**Pn**	**19 53 00.9**	**-3.3**
CYA	**Choya**	**6.39**	**81**	*i* P	**Pn**	**19 53 07.0**	**+2.7**
PB10	**IPOC Station P**	**6.49**	**20**	Pn	**Pn**	**19 53 02.4**	**-3.2**
MRA	**San Martin**	**6.81**	**116**	*i* P	**Pn**	**19 53 11.0**	**+0.9**
PB15	**IPOC Station P**	**7.14**	**27**		**Pn**	**19 53 13.0**	**-1.8**
PB15	**IPOC Station P**	**7.14**	**27**	*i* P	**Pn**	**19 53 16.0**	**+1.2**
PB05	**IPOC Station P**	**7.21**	**21**	*i* P	**Pn**	**19 53 13.0**	**-2.7**
PB06	**IPOC Station P**	**7.56**	**25**	Pn	**Pn**	**19 53 17.2**	**-3.3**
PB06	**IPOC Station P**	**7.56**	**25**	*i* P	**Pn**	**19 53 19.0**	**-1.5**
PB04	**IPOC Station P**	**7.72**	**20**	Pn	**Pn**	**19 53 19.3**	**-3.3**
PB04	**IPOC Station P**	**7.72**	**20**	*i* P	**Pn**	**19 53 21.0**	**-1.7**
LVC	**Limon Verde**	**7.91**	**28**	Pn	**Pn**	**19 53 24.9**	**-0.5**
	comp=E,0.7nm,0.3s,baz=205,slow=12,SNR=7.2						
LVC				Sn	**Sn**	**19 54 51.6**	**-3.8**
	comp=E,2.1nm,0.3s,baz=208,slow=23,SNR=3.0						
LVC				LR	LR	19 56 48.8	
	comp=E,57nm,19.2s,baz=216,slow=40						
LVC	**Limon Verde**	**7.91**	**28**	Pn	**Pn**	**19 53 22.8**	**-2.6**
LVC	**Limon Verde**	**7.91**	**28**	*i* P	**Pn**	**19 53 26.0**	**+0.6**
PB07	**IPOC Station P**	**8.37**	**20**		**Pn**	**19 53 28.6**	**-3.0**
PB09	**IPOC Station P**	**8.51**	**24**	Pn	**Pn**	**19 53 30.2**	**-3.4**
PB02	**IPOC Station P**	**8.75**	**19**	*i* P	**Pn**	**19 53 36.0**	**-0.8**
PB01	**IPOC Station P**	**9.13**	**21**	Pn	**Pn**	**19 53 38.5**	**-3.5**
PATCX	**Punta Patache**	**9.15**	**17**	Pn	Pn	19 53 37.0	-5.3
LC01	**Cunco**	**9.27**	**175**	Pn	**Pn**	**19 53 42.5**	**-1.3**
PB08	**IPOC Station P**	**10.08**	**21**	Pn	**Pn**	**19 53 51.1**	**-4.1**
PB11	**IPOC Station P**	**10.30**	**18**	Pn	**Pn**	**19 53 53.8**	**-4.3**
PLCA	**Paso Flores**	**11.23**	**171**	Pn	**Pn**	**19 54 11.8**	**+1.1**
	comp=E,0.1nm,0.3s,baz=325,slow=11,SNR=6.1						
PLCA	**Paso Flores**	**11.23**	**171**	Pn	**Pn**	**19 54 07.2**	**-3.5**
PLCA	**Paso Flores**	**11.23**	**171**	*i* P	**Pn**	**19 54 13.0**	**+2.3**
PB12	**IPOC Station P**	**11.25**	**13**	Pn	**Pn**	**19 54 07.0**	**-4.0**
PB16	**IPOC Station P**	**11.70**	**16**	Pn	Pn	19 54 12.4	-5.3
TRQA	**Tornquist**	**12.39**	**135**	Pn	**Pn**	**19 54 25.4**	**-1.2**
LPAZ	**La Paz**	**14.03**	**20**	Pn	**Pn**	**19 54 51.5**	**+2.0**
	comp=E,0.1nm,0.3s,baz=187,slow=7.3,SNR=5.9						
LPAZ	**La Paz**	**14.03**	**20**		**Pn**	**19 54 47.3**	**-2.1**
CPUP	**Villa Florida**	**14.21**	**80**	LR	LR	20 00 20.2	
	comp=E,77nm,21.8s,baz=218,slow=37						
SIV	**San Ignacio**	**17.45**	**41**	P	**P**	**19 55 36.5**	**+1.6**
	comp=E,0.3nm,0.3s,baz=217,slow=11,SNR=14						
EFI	**East Falkland**	**24.64**	**157**	P	**P**	**19 56 52.9**	**+2.2**
PAYG	**Puerto Ayora**	**33.20**	**327**	P	**P**	**19 58 05.3**	**-2.1**
BOAV	**Boa Vista**	**34.02**	**23**	P	**P**	**19 58 15.5**	**+1.1**
BOAV				IAmb	IAmb	19 58 26.1	
	comp=Z,7.2nm,1.4s						
HOPE	**Hope Point**	**35.99**	**144**	P	**P**	**19 58 30.8**	**-0.2**
ZARC	**Zaragoza, Cauc**	**36.97**	**357**	P	**P**	**19 58 40.2**	**+0.4**
BAUV	**El Baul**	**38.66**	**8**	P	**P**	**19 58 53.0**	**-1.0**
BAUV				IAmb	IAmb	19 58 56.6	
	comp=Z,14nm,0.9s						
RIMA	**Rio Macho**	**40.57**	**343**	P	**P**	**19 59 08.8**	**-1.4**
QSPA	**South Pole Qui**	**60.57**	**180**	P	**P**	**20 01 41.5**	**+0.8**
QSPA				IAmb	IAmb	20 02 12.0	
	comp=Z,4.7nm,1.4s						
TXAR	**Lajitas Array**	**65.56**	**331**	P	**P**	**20 02 15.9**	**+1.8**
	comp=Z,0.6nm,0.7s,baz=152,slow=10.0,SNR=5.4						
TXAR	**Lajitas Array**	**65.56**	**331**	P	**P**	**20 02 14.8**	**+0.7**
DBIC	**Dimbokro**	**74.61**	**73**	P	**P**	**20 03 11.5**	**+1.6**
	comp=Z,7.1nm,1.0s,baz=238,slow=6.8,SNR=6.1						
DBIC				LR	LR	20 34 36.5	
	comp=Z,23nm,19.7s,baz=344,slow=35						
DBIC	**Dimbokro**	**74.61**	**73**	IAmb	IAmb	20 03 12.8	
	comp=Z,12nm,1.1s						
MAW	**Mawson**	**77.57**	**164**	P	**P**	**20 03 27.6**	**+1.6**
	comp=Z,1.1nm,0.5s,baz=240,slow=18,SNR=1.7						
PDAR	**Pinedale Array**	**79.53**	**333**	P	**P**	**20 03 38.5**	**+1.3**
	comp=Z,0.3nm,0.6s,baz=144,slow=6.7,SNR=3.6						
PDAR	**Pinedale Array**	**79.53**	**333**	P	**P**	**20 03 38.0**	**+0.7**
TORD	**Torodi Ar. Bea**	**83.51**	**71**	P	**P**	**20 04 00.6**	**+1.9**
	comp=Z,3.6nm,0.7s,baz=256,slow=5.4,SNR=18						
TORD	**Torodi Ar. Bea**	**83.51**	**71**	P	**P**	**20 04 00.3**	**+1.6**
TORD				IAmb	IAmb	20 04 03.1	
	comp=Z,4.1nm,0.7s						
ASAR	**Alice Springs**	**121.03**	**209**	PKP	**PKiKP**	**20 10 24.2**	**+0.4**
	comp=Z,0.3nm,0.6s,baz=122,slow=3.5,SNR=2.5						
WRA	**Warramunga Arr**	**124.11**	**211**	PKP	**PKiKP**	**20 10 30.3**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=155,slow=1.7,SNR=14						
ZALV	**Zalesovo Beam**	**150.85**	**27**	PKP	**PKPdf**	**20 11 19.0**	**+2.2**
	comp=Z,0.9nm,0.9s,baz=318,slow=2.0,SNR=4.1						
ZALV				PKPbc	**sPKPbc**	**20 11 24.5**	**+0.7**
	comp=Z,4.8nm,0.7s,baz=306,slow=2.8,SNR=23						
ZALV	**Zalesovo Beam**	**150.85**	**27**		**PKPdf**	**20 11 18.5**	**+1.6**
ZALV					**sPKPbc**	**20 11 24.4**	**+0.7**
MKAR	**Makanchi Array**	**154.27**	**41**	PKPbc	**PKiKP**	**20 11 31.8**	**+1.3**
	comp=Z,0.6nm,0.9s,baz=309,slow=4.6,SNR=2.9						
MKAR				PKPab	**sPKPab**	**20 11 46.4**	**+0.8**
	comp=Z,0.7nm,0.7s,baz=317,slow=5.6,SNR=4.6						

IDC 27 20:16:43.6±4.3**, 22°.63S**×**178°.00E, h0**^{km}**, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.7**/25**, mbtmp3.7**/3**, Error ellipse: s-maj=154.0km s-min=83.6km az=166.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**33.52**	**246**	P	P	20 23 23.7	-1.3
	1.0nm,0.7s,baz=83,slow=8.1,SNR=3.1						
ASAR	**Alice Springs**	**40.44**	**260**	P	P	20 24 23.7	-0.4
	0.3nm,0.5s,baz=91,slow=6.7,SNR=11						
ASAR				PcP	PcP	20 26 27.1	-0.1
	0.2nm,0.5s,baz=99,slow=3.8,SNR=5.5						
WRA	**Warramunga Arr**	**40.67**	**265**	P	P	20 24 26.6	+0.7
	0.8nm,0.3s,baz=99,slow=8.3,SNR=35						

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*NNC **27** 20:23:10.9±0.3, 43°.16N×76°.88E, h0^{km}, mpv2.3, Error ellipse: s-maj=2.6km s-min=1.5km az=169.0*
SOME 27 20:23:10.4, 43°.15N×76°.90E, h10^{km}**, 1C, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAA	**Alma-Ata**	**0.06**	**11**	*e*P	Pg	20 23 13.2	+0.6
	17nm,0.1s						
AAA				*e*S	Sg	20 23 15.2	+1.0
	23nm,0.1s						
MDOK	**Medeo**	**0.11**	**83**	*e*P	Pg	20 23 13.4	+0.2
	14nm,0.1s						
MDOK				*e*S	Sg	20 23 15.6	+0.2
	31nm,0.1s						
MDOK	**Medeo**	**0.11**	**83**	P	Pg	20 23 13.4	+0.2
	1.6nm,0.2s						
MDOK				⇑S	Sg	20 23 15.6	+0.3
	3.4nm,0.2s						
MDOK	**Medeo**	**0.11**	**83**	Pg	Pg	20 23 13.5	+0.2
	14nm,0.1s						
MDOK				Lg	Lg	20 23 15.6	
	31nm,0.1s						
TNSS	**Tian-Shan**	**0.12**	**163**	*e*P	Pg	20 23 13.5	-0.1
	37nm,0.1s						
TNSS				*e*S	Sg	20 23 15.8	-0.1
	41nm,0.1s						
TNSS	**Tian-Shan**	**0.12**	**163**	P	Pg	20 23 13.5	-0.1
	37nm,0.1s						
TNSS				S	Sg	20 23 15.8	-0.1
	56nm,0.1s						
KOTS	**Kotyrbulak**	**0.18**	**61**	*e*P	Pg	20 23 14.4	+0.1
	1.8nm,0.2s						
KOTS				*e*S	Sg	20 23 17.4	+0.3
	7.7nm,0.2s						
KOTS	**Kotyrbulak**	**0.18**	**61**	P	Pg	20 23 14.4	+0.1
	1.8nm,0.2s						
KOTS				S	Sg	20 23 17.4	+0.3
	7.7nm,0.2s						
MTBS	**Maitube**	**0.34**	**267**	*e*P	Pg	20 23 17.3	0.0
	1.2nm,0.1s						
MTBS				*e*S	Sg	20 23 22.2	+0.3
	4.5nm,0.1s						
MTBS	**Maitube**	**0.34**	**267**	P	Pg	20 23 17.3	0.0
	1.2nm,0.1s						
MTBS				S	Sg	20 23 22.3	+0.3
	4.5nm,0.1s						
KST	**Kastek**	**0.69**	**261**	*e*P	Pg	20 23 23.5	-0.3
	0.6nm,0.1s						
KST				*e*S	Sg	20 23 32.9	-0.1
	1.0nm,0.1s						

KRNET 27 20:23:11.6±0.1**, 42°.13N**×**74°.99E, h11**^{km}**, mb1.9, 8C-2D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FRU1	**Bishkek**	**0.73**	**339**	⇑*i*P	Pb	20 23 26.4	0.0
	baz=39						
FRU1				⇑*i*S	Sb	20 23 36.9	+0.4
	baz=39						
TKM2	**Tokmak 2**	**0.91**	**29**	⇑*i*P	Pg	20 23 29.1	-0.1
	baz=29						
TKM2				⇑*i*S	Sb	20 23 42.1	+0.3
	baz=29						
ULHL	**Ulahol**	**0.94**	**82**	⇑*i*P	Pg	20 23 29.5	-0.1
	baz=82						
ULHL				⇑*i*S	Sb	20 23 42.7	+0.2
	baz=82						
USP	**Ospenovka**	**1.20**	**343**	⇓*i*P	Pg	20 23 34.6	0.0
	baz=43						
USP				⇓*i*S	Sn	20 23 51.2	+0.6
	baz=43						
KDJ	**Kajisay**	**1.63**	**89**	⇑*i*P	Pg	20 23 42.5	-0.3
	baz=89						
KDJ				⇑*i*S	Sg	20 24 05.1	+1.2
	baz=89						

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*NNC **27** 20:26:30.6±2.6, 50°.36N×89°.56E, h0^{km}, mb4.0, mpv3.7, Error ellipse: s-maj=25.9km s-min=11.2km az=104.0*
ISC 27 20:26:33.8±1.5**, 50°.39N**±0°.05×**89°.67E**±0°.05**, h24**^{km}±16^{km}**, n24,** σ2^{s}**02**/31**, 7C-4D, Tuva-Buryatia-Mongolia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CUR	**Chagan-Uzun**	**0.90**	**252**	Pg	**Pb**	**20 26 47.1**	**-3.6**
CUR				Sg	**Sn**	**20 27 02.2**	**-1.0**
ULGR	**Ulagan, Altay**	**1.12**	**283**	Pg	**Pn**	**20 26 52.9**	**-1.1**
ULGR				Sg	**Sn**	**20 27 09.2**	**+0.5**
AKAR	**Aktash**	**1.32**	**268**	Pg	**Pn**	**20 26 55.0**	**-1.8**
AKAR				Sg	**Sb**	**20 27 14.1**	**-0.3**
CHBI	**Chibit, Altay**	**1.39**	**268**	Pg	**Pb**	**20 26 58.3**	**-0.9**
CHBI				Sg	**Sb**	**20 27 19.0**	**+2.5**
DGZ	**Jazzator, Alta**	**1.60**	**245**	Pg	**Pn**	**20 27 00.5**	**-0.2**
DGZ				Sg	**Sb**	**20 27 25.8**	**+3.1**
ARTR	**Artybash**	**2.06**	**314**	Pg	**Pn**	**20 27 07.9**	**+1.0**
ARTR				Sg	**Sb**	**20 27 38.3**	**+2.6**
DJO	**Djoy, Khakassi**	**2.58**	**21**	Pg	**Pn**	**20 27 13.6**	**-0.4**
DJO				Sg	**Sn**	**20 27 45.0**	**+0.4**
TASR	**Tashtagol**	**2.62**	**335**	Pg	**Pn**	**20 27 15.5**	**+1.0**
TASR				Sg	**Sb**	**20 27 52.7**	**+0.8**
TBTR	**Tabat**	**2.62**	**14**	Sg	**Sn**	**20 27 40.8**	**-4.9**
CERR	**Cheremushki**	**2.69**	**23**	Pg	**Pn**	**20 27 15.8**	**+0.2**
CERR				Sg	**Sn**	**20 27 49.4**	**+2.0**
KZLR	**Kyzyl**	**3.29**	**65**	Sg	**Sn**	**20 28 02.1**	**0.0**
LUZB	**Luzhba, Kemero**	**3.31**	**352**	Pg	**Pn**	**20 27 26.5**	**+2.5**
LUZB				Sg	**Sb**	**20 28 11.9**	**+0.3**
ABNR	**Abakan**	**3.51**	**17**	Pg	**Pn**	**20 27 30.2**	**+3.5**
ABNR				Sg	**Sb**	**20 28 15.0**	**-2.4**
ZSN	**Zaisan**	**4.33**	**229**	Pg	**Pb**	**20 27 49.5**	**+0.4**
	34nm,0.5s						
ZSN				Lg	Lg	20 28 46.3	
	118nm,0.6s						
ZAA0	**Zalesovo Array**	**4.65**	**322**	⇓Pn	**Pn**	**20 27 42.1**	**-0.3**
	0.1nm,0.2s						
ZAA0				⇓Pg	**Pb**	**20 27 53.6**	**-0.9**
	0.9nm,0.4s						
ZAA0				⇓Lg	Lg	20 28 55.9	
	20nm,0.8s						
SEM	**Semipalatinsk**	**6.03**	**274**	Pg	Pb	20 28 22.0	+3.9
	6.1nm,0.3s						
SEM				Lg	Lg	20 29 40.9	
	56nm,0.6s						
MK31	**Makanchi Array**	**6.08**	**237**	⇑Pn	**Pn**	**20 28 01.3**	**-0.8**
	3.6nm,0.5s,baz=59,slow=14,SNR=136						
MK31				Lg	Lg	20 29 44.9	
	21nm,0.6s,baz=57,slow=28,SNR=9.5						
MAKZ	**Makanchi**	**6.24**	**238**	⇓Pn	**Pn**	**20 28 03.3**	**-1.0**
	3.4nm,0.4s						
MAKZ				⇑Pg	**Pb**	**20 28 24.5**	**+2.9**
	11nm,0.8s						
MAKZ				⇑Lg	Lg	20 29 47.4	
	28nm,0.8s						
KURBB	**Kurchatov Arra**	**7.11**	**276**	⇑Pn	**Pn**	**20 28 14.7**	**-1.5**
	6.3nm,0.5s						
KURBB				⇑Lg	Lg	20 30 15.7	
	81nm,0.7s						
DJR	**Jarkent**	**9.04**	**232**	Pg	Pn	20 29 15.6	+33
	2.2nm,0.4s						
DJR				Lg	Lg	20 31 14.0	
	9.6nm,1.0s						
TDK	**Taldyqorghan**	**9.31**	**239**	Pg	Pn	20 29 22.9	+36
	7.1nm,0.2s						
TDK				Lg	Lg	20 31 26.6	
	51nm,1.0s						
PDGK	**Podgornoye**	**9.92**	**228**	Pg	Pn	20 29 32.3	+37
	0.7nm,0.9s						
PDGK				Lg	Lg	20 31 41.8	
	6.9nm,0.8s						
PDGK	**Podgornoye**	**9.92**	**228**	⇑Lg	Lg	20 31 46.5	
	19nm,0.9s						
OTUK	**Ortayu**	**11.52**	**266**	⇑Lg	Lg	20 32 33.5	
	13nm,0.9s						

MAN 27 20:27:49.3, 10°.69N×**125°.73E, h23**^{km}**, mb3.8, ML2.5, MS2.0, Leyte**

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*IDC **27** 20:51:54.0±0.8, 55°.14N×165°.36E, h0^{km}, mb3.8/11, mb1 4.1/13, mb1mx3.9/40, mbtmp3.9/13, ML3.6/2, MS3.0/5, Ms1 3.0/5, ms1mx2.8/61, Error ellipse: s-maj=26.6km s-min=14.8km az=151.0*
*KRSC **27** 20:51:55.2±1.6, 55°.09N×165°.31E, h41^{km}±14^{km}, ML4.5*
*MOS **27** 20:51:57.0±0.6, 55°.11N×165°.45E, h35^{km}, mb4.6/3, Error ellipse: s-maj=6.6km s-min=5.6km az=137.6*
*NEIC **27** 20:51:59.4±1.1, 55°.2N±0°.2×165°.3E±0°.2, h35^{km}±8^{km}, mb4.4/28, Error ellipse: s-maj=25.1km s-min=11.7km az=148.0*
ISC 27 20:51:57.5±0.5**, 55°.15N**±0°.04×**165°.30E**±0°.04**, h21**^{km}±3^{km}**, n150,** σ1^{s}**19**/166**, mb4.3**/24**, 2C-1D, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	**Bering**	**0.39**	**81**	PN	**Pb**	**20 52 05.0**	**-0.5**
BKI				S	**Sb**	**20 52 10.5**	**-0.5**
BKI	**Bering**	**0.39**	**81**	*i* P	**Pb**	**20 52 05.0**	**-0.5**
BKI				*e*S	**Sb**	**20 52 10.5**	**-0.5**
KBTR	**Krutoberegovo**	**1.76**	**308**	PN	**Pn**	**20 52 25.2**	**-1.5**
KBTR				S	**Sn**	**20 52 46.2**	**-2.3**
KBTR	**Krutoberegovo**	**1.76**	**308**	*e*P	**Pn**	**20 52 25.2**	**-1.5**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KBTR				eS	Sn	20 52 46.2	-2.3
KBG	Krutoberegovo	1.84	308	PN	Pn	20 52 25.9	-1.9
KBG				S	Sn	20 52 49.5	-0.9
KBG	Krutoberegovo	1.84	308	eP	Pn	20 52 25.9	-1.9
KBG				eS	Sn	20 52 49.5	-0.9
MKZ	Mys Kozlova	2.15	255	PN	Pn	20 52 31.8	-0.1
MKZ				S	Sn	20 52 56.2	-1.7
MKZ	Mys Kozlova	2.15	255	eP	Pn	20 52 31.8	-0.1
MKZ				eS	Sn	20 52 56.2	-1.7
SMKR	Semkarok	2.59	305	PN	Pn	20 52 38.5	+0.3
SMKR				S	Sn	20 53 08.3	-0.8
SMKR	Semkarok	2.59	305	eP	Pn	20 52 38.5	+0.3
SMKR				eS	Sn	20 53 08.3	-0.8
ZLN	Zelenaya	2.70	291	PN	Pn	20 52 40.9	+1.3
ZLN	Zelenaya	2.70	291	eP	Pn	20 52 40.9	+1.3
BDR	Baidarnaya	2.71	303	PN	Pn	20 52 39.8	0.0
BDR	Baidarnaya	2.71	303	eP	Pn	20 52 39.8	0.0
BZGR	Bezymyannyi-Gr	2.73	289	PN	Pn	20 52 41.1	+0.9
BZGR	Bezymyannyi-Gr	2.73	289	eP	Pn	20 52 41.1	+0.9
CIRR	Tsirk	2.76	293	PN	Pn	20 52 41.7	+1.2
CIRR	Tsirk	2.76	293	eP	Pn	20 52 41.7	+1.2
SRKR	Sorokina	2.77	305	PN	Pn	20 52 41.2	+0.5
SRKR	Sorokina	2.77	305	eP	Pn	20 52 41.2	+0.5
LGNR	Loginova	2.78	292	PN	Pn	20 52 41.9	+1.0
LGNR	Loginova	2.78	292	eP	Pn	20 52 41.9	+1.0
TUMD	Tumrok D	2.81	273	eP	Pn	20 52 41.6	+0.5
TUMD				eS	Sn	20 53 13.3	-1.1
BZWR	Bezymyannyi-We	2.85	289	PN	Pn	20 52 43.6	+1.8
BZWR	Bezymyannyi-We	2.85	289	eP	Pn	20 52 43.6	+1.8
KLY	Klyuchi	2.88	296	PN	Pn	20 52 41.5	-0.5
KLY				S	Sn	20 53 13.5	-2.4
KLY	Klyuchi	2.88	296	eP	Pn	20 52 41.5	-0.5
KLY				eS	Sn	20 53 13.5	-2.4
KRSR	Krestovskiy	2.89	294	PN	Pn	20 52 43.0	+0.7
KRSR	Krestovskiy	2.89	294	eP	Pn	20 52 43.0	+0.7
KIRR	Kirishev	2.93	288	PN	Pn	20 52 44.4	+1.5
KIRR	Kirishev	2.93	288	eP	Pn	20 52 44.4	+1.5
KMNR	Kamenistaya	2.95	284	PN	Pn	20 52 44.7	+1.6
KMNR	Kamenistaya	2.95	284	eP	Pn	20 52 44.7	+1.6
TUMR	Tumrok	2.96	275	PN	Pn	20 52 44.2	+1.0
TUMR				S	Sn	20 53 17.9	-0.2
TUMR	Tumrok	2.96	275	eP	Pn	20 52 44.2	+1.0
TUMR				eS	Sn	20 53 17.9	-0.2
KPT	Kopyto	3.00	288	PN	Pn	20 52 45.2	+1.4
KPT	Kopyto	3.00	288	eP	Pn	20 52 45.2	+1.4
KOZ	Kozyrevsk	3.21	289	PN	Pn	20 52 48.2	+1.6
KOZ	Kozyrevsk	3.21	289	eP	Pn	20 52 48.2	+1.6
KII	Karymskiy	3.58	254	PN	Pn	20 52 52.4	+0.6
KII	Karymskiy	3.58	254	eP	Pn	20 52 52.4	+0.6
KII				eS	Sn	20 53 32.5	-0.9
SPN	Mys Shipunski	3.72	239	PN	Pn	20 52 52.8	-0.8
SPN	Mys Shipunski	3.72	239	eP	Pn	20 52 52.8	-0.8
SPN				eS	Sn	20 53 33.0	-3.7
ESO	Esso	3.83	284	PN	Pb	20 53 02.2	-2.1
ESO	Esso	3.83	284	eP	Pb	20 53 02.2	-2.1
NLC	Nalytchevo	4.02	243	PN	Pn	20 52 57.6	-0.1
NLC	Nalytchevo	4.02	243	eP	Pn	20 52 57.6	-0.1
NLC				eS	Sn	20 53 42.0	-2.1
SDLR	Sedlovina	4.20	246	PN	Pn	20 53 00.9	+0.5
SDLR	Sedlovina	4.20	246	eP	Pn	20 53 00.9	+0.5
SDLR				eS	Sn	20 53 47.0	-1.9
SMAR	Somma	4.25	246	PN	Pn	20 53 02.0	+0.8
SMAR	Somma	4.25	246	eP	Pn	20 53 02.0	+0.8
SMAR				eS	Sn	20 53 48.6	-1.6
KRER	Koryakskii	4.26	247	PN	Pn	20 53 02.2	+0.9
KRER	Koryakskii	4.26	247	eP	Pn	20 53 02.2	+0.9
UGLR	Uglovaya	4.27	246	PN	Pn	20 53 02.1	+0.8
UGLR	Uglovaya	4.27	246	eP	Pn	20 53 02.1	+0.8
AVH	Avacha	4.29	247	PN	Pn	20 53 02.9	+1.4
AVH	Avacha	4.29	247	eP	Pn	20 53 02.9	+1.4
OSSR	Ossora	4.29	344	PN	Pn	20 53 01.6	+0.2
OSSR	Ossora	4.29	344	eP	Pn	20 53 01.6	+0.2
OSSR				eS	Sn	20 53 51.6	+0.8
KOK	Koryaka	4.33	247	PN	Pn	20 53 03.2	+1.1
KOK	Koryaka	4.33	247	eP	Pn	20 53 03.2	+1.1
DALK	Dalny	4.40	244	PN	Pn	20 53 03.2	+0.3
DALK	Dalny	4.40	244	eP	Pn	20 53 03.2	+0.3
DALK				eS	Sn	20 53 51.7	-1.7
PET	Petropavlovsk	4.45	244	ePN	Pn	20 53 04.8	+1.2
PET				MLR	MLR		
	comp=Z,300nm,16.0s						
PET	Petropavlovsk	4.45	244	eP	Pn	20 53 04.2	+0.6
PET				eS	Sn	20 53 54.5	-0.3
PET	Petropavlovsk	4.45	244		Pn	20 53 02.9	-0.7
GNL	Ganaly	4.54	254	PN	Pn	20 53 06.2	+1.3
GNL	Ganaly	4.54	254	eP	Pn	20 53 06.2	+1.3
KRMR	Karymshinskiy	4.82	244	PN	Pn	20 53 11.7	+3.0
KRMR	Karymshinskiy	4.82	244	eP	Pn	20 53 11.7	+3.0
KRMR				eS	Sn	20 54 04.3	+0.4
RUS	Russkaya	4.85	239	PN	Pn	20 53 09.5	+0.3
RUS	Russkaya	4.85	239	eP	Pn	20 53 09.5	+0.3
PEA0B	Petropavlovsk-	4.91	249	dePN	Pn	20 53 11.3	+1.3
PEA0B	Petropavlovsk-	4.91	249		Pn	20 53 11.1	+1.1
PETK	Petropavlovsk-	4.91	249	Pn	Pn	20 53 10.6	+0.6
	comp=Z,8.2nm,0.3s,baz=199,slow=33,SNR=110						
PETK				Sn	Sn	20 54 06.3	+0.2
	comp=Z,4.8nm,0.3s,baz=217,slow=7.1,SNR=9.5						
PETK				LR	LR	20 55 11.1	
	comp=Z,139nm,20.4s,baz=10,slow=40						
PETK	Petropavlovsk-	4.91	249		Pn	20 53 10.5	+0.5
MTVR	Mutnovka	4.99	241	PN	Pn	20 53 11.9	+0.7
MTVR	Mutnovka	4.99	241	eP	Pn	20 53 11.9	+0.7
MTVR				eS	Sn	20 54 06.2	-2.0
ASAK	Asacha	5.19	241	PN	Pn	20 53 15.1	+1.3
ASAK	Asacha	5.19	241	eP	Pn	20 53 15.1	+1.3
APC	Apacha	5.29	248	PN	Pn	20 53 17.5	+2.4
APC	Apacha	5.29	248	eP	Pn	20 53 17.5	+2.4
TILK	Tilichiki	5.33	5	PN	Pn	20 53 17.0	+1.3
TILK	Tilichiki	5.33	5	eP	Pn	20 53 17.0	+1.3
KDTR	Khodutka, Kamc	5.46	235	PN	Pn	20 53 17.6	+0.2
KDTR	Khodutka, Kamc	5.46	235	eP	Pn	20 53 17.6	+0.2
PAU	Pauzhetka	6.28	238	PN	Pn	20 53 30.7	+2.0
PAU	Pauzhetka	6.28	238	eP	Pn	20 53 30.7	+2.0
SKR	Severo-Kuril’s	7.12	235	⇑ePN	Pn	20 53 40.9	+0.6
KMSK	Kamenskaya	7.36	3	PN	Pn	20 53 44.7	+1.2
KMSK	Kamenskaya	7.36	3	eP	Pn	20 53 44.7	+1.2
MA2	Magadan	9.01	305	LR	LR	20 57 43.0	
	comp=Z,70nm,18.7s,baz=114,slow=39						
SEY	Seymchan	10.24	325	LR	LR	20 58 29.7	
	comp=Z,146nm,19.3s,baz=136,slow=39						
TNA	Tin City	16.70	41	Pn	Pn	20 55 48.9	-0.9
ASAJ	Asahikawa	18.29	242	P	P	20 56 10.7	+1.0
	comp=Z,0.5nm,0.3s,baz=317,slow=23,SNR=2.4						
ASAJ				LR	LR	21 02 42.5	
	comp=Z,49nm,21.2s,baz=126,slow=35						
KLR	Kul'dur	21.26	268	LR	LR	21 04 26.3	
	comp=Z,21nm,20.1s,baz=104,slow=35						
J20K	Nowinta River	22.01	49	P	P	20 56 52.6	+2.7
Q19K	Cape Douglas,	22.39	63	P	P	20 56 54.3	+0.2
IMAR	Indian Mountai	22.40	45	P	P	20 56 54.4	+0.2
TIXI	Tiksi	22.64	331	P	P	20 56 57.2	+0.6
	comp=Z,0.4nm,0.3s,baz=92,slow=12,SNR=2.2						
H21K	Melozitna Rive	22.74	46	P	P	20 56 58.7	+0.9
H21K				IAmb	IAmb	20 56 59.9	
	comp=Z,13nm,1.2s						
PPLA	Purkeypile	22.83	53	P	P	20 56 58.9	+0.1
PPLA				IAmb	IAmb	20 57 26.5	
	comp=Z,26nm,1.6s						
COLD	Coldfoot	23.99	42	P	P	20 57 09.3	-0.8
RC01	Rabbit Creek A	24.08	57	P	P	20 57 10.8	-0.2
I23K	Minto, Yukon-K	24.13	47	P	P	20 57 11.4	0.0
GHO	Glory Hole Cre	24.40	56	P	P	20 57 14.2	+0.1
TOLK	Toolik Lake Re	24.46	39	P	P	20 57 14.7	+0.2
WRH	Wood River Hil	24.66	49	P	P	20 57 15.5	-0.7
WRH				IAmb	IAmb	20 57 17.9	
	comp=Z,12nm,1.0s						
CCB	Clear Creek Bu	24.78	49	P	P	20 57 17.3	-0.1
CCB				IAmb	IAmb	20 57 19.0	
	comp=Z,13nm,0.9s						
IL31		25.18	48	P	P	20 57 19.2	-1.7
IL31				IAmb	IAmb	20 57 38.0	
	comp=Z,12nm,1.2s						
ILAR	Eielson Array	25.18	48	P	P	20 57 20.1	-0.8
	comp=Z,3.5nm,0.9s,baz=260,slow=8.6,SNR=22						
PAX	Paxson	25.89	52	P	P	20 57 26.2	-1.4
PAX				pmax	pmax		
	comp=Z,16nm,1.3s						
PAX	Paxson	25.89	52	P	P	20 57 26.2	-1.4
PAX				IAmb	IAmb	20 57 55.5	
	comp=Z,16nm,1.3s						
RIDG	Independent Ri	26.11	51	P	P	20 57 29.8	+0.4
BMAR	Burnt Mountain	26.18	42	P	P	20 57 30.1	0.0
MJAR	Matsushiro Arr	26.23	236	P	P	20 57 30.8	0.0
MJAR				pmax	pmax		
	comp=Z,13nm,1.6s						
MJAR	Matsushiro Arr	26.23	236	P	P	20 57 30.8	0.0
MJAR				IAmb	IAmb	20 57 38.1	
	comp=Z,13nm,1.6s						
L27K	Beaver Creek,	27.53	52	P	P	20 57 42.4	+0.1
L27K				IAmb	IAmb	20 57 43.8	
	comp=Z,11nm,1.2s						
BCAR	Beaver Creek A	27.55	52	P	P	20 57 41.2	-1.2
INK	Inuvik	30.34	40	P	P	20 58 06.2	-0.9
	comp=Z,0.4nm,0.4s,baz=263,slow=4.2,SNR=3.6						
INK	Inuvik	30.34	40	IAmb	IAmb	20 58 17.1	
	comp=Z,12nm,1.5s						
H11N2	WAKE ISLAND Hy	35.38	177	T	T	21 36 31.1	
	baz=359,slow=76,SNR=650						
H11N3	WAKE ISLAND Hy	35.39	177	T	T	21 36 36.5	
	baz=359,slow=76,SNR=382						
H11N1	WAKE ISLAND Hy	35.39	177	T	T	21 36 30.1	
	baz=359,slow=76,SNR=490						
SONM	Songino Array	36.41	284	P	P	20 59 01.3	+1.0
	comp=Z,0.9nm,0.7s,baz=54,slow=7.8,SNR=6.3						
H11S1	WAKE ISLAND Hy	36.59	178	T	T	21 38 06.0	
	baz=359,slow=76,SNR=23						
H11S3	WAKE ISLAND Hy	36.60	178	T	T	21 38 04.3	
	baz=359,slow=76,SNR=17						
H11S2	WAKE ISLAND Hy	36.61	178	T	T	21 38 05.7	
	baz=359,slow=76,SNR=19						
EUNU	Eureka	39.19	15	P	P	20 59 23.4	0.0
YKA	Yellowknife Ar	39.55	46	P	P	20 59 26.1	-0.3
	comp=Z,1.1nm,0.8s,baz=300,slow=7.1,SNR=4.7						
YKA	Yellowknife Ar	39.55	46	P	P	20 59 25.8	-0.6
WALA	Waterton Lakes	47.38	62	P	P	21 00 29.8	-0.1
WALA				IAmb	IAmb	21 00 46.8	
	comp=Z,3.4nm,0.9s						
K05A	Summer Lake	47.82	73	P	P	21 00 34.4	+1.0
MKAR	Makanchi Array	49.99	297	P	P	21 00 48.1	-1.7
	comp=Z,0.4nm,0.7s,baz=52,slow=7.4,SNR=2.5						
MKAR	Makanchi Array	49.99	297	P	P	21 00 49.2	-0.6
MKAR	Makanchi Array	49.99	297	P	P	21 00 49.2	-0.6
MAKZ	Makanchi	50.14	297	P	P	21 00 50.1	-0.8
MAKZ				pmax	pmax		
	comp=Z,7.0nm,1.6s						
MAKZ	Makanchi	50.14	297		P	21 00 50.1	-0.8
MAKZ				IAmb	IAmb	21 01 22.3	
	comp=Z,7.1nm,1.6s						
RLMT	Red Lodge	52.37	63	P	P	21 01 08.2	+0.3
RLMT				IAmb	IAmb	21 01 09.8	
	comp=Z,3.7nm,0.9s						
BW06	Boulder Array	53.86	65	P	P	21 01 18.4	-0.5
BW06				IAmb	IAmb	21 01 20.7	
	comp=Z,3.4nm,1.2s						
PD31	Pinedale Array	53.86	65	P	P	21 01 18.7	-0.2
PDAR	Pinedale Array	53.86	65	P	P	21 01 19.2	+0.3
	comp=Z,1.3nm,0.8s,baz=329,slow=2.6,SNR=7.5						
PDAR	Pinedale Array	53.86	65	P	P	21 01 18.6	-0.3
SPR3	Spring Creek 3	53.98	72	P	P	21 01 20.9	+0.9
SPR3				IAmb	IAmb	21 01 22.6	
	comp=Z,3.9nm,0.9s						
ANMO	Albuquerque	61.23	70	⇑eP	P	21 02 11.6	+0.7
NOA	NORSAR Array B	62.36	346	P	P	21 02 16.8	-1.1
	comp=Z,0.5nm,0.6s,baz=10,slow=5.0,SNR=1.7						
TXAR	Lajitas Array	67.04	71	P	P	21 02 49.0	0.0
	comp=Z,1.4nm,0.9s,baz=303,slow=4.4,SNR=6.6						
TXAR	Lajitas Array	67.04	71	P	P	21 02 49.0	0.0
WRA	Warramunga Arr	79.31	210	P	P	21 04 00.7	-0.5
	comp=Z,1.2nm,0.8s,baz=20,slow=6.0,SNR=8.1						
ASAR	Alice Springs	82.97	209	P	P	21 04 20.4	-0.1
	comp=Z,1.3nm,0.8s,baz=15,slow=5.2,SNR=13						

SJA **27** *21:00:16.6±1.3, 24°.77S×70°.87W, h10^{km}, ML5.8, MW5.4*

NEIC **27** *21:00:19.8, 24°.85S×70°.61W, h39^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}2.38; $M_{\theta\theta}$0.25; $M_{\phi\phi}$-2.62; $M_{r\theta}$0.55; $M_{\theta\phi}$0.10; $M_{\phi r}$-1.46; Fault plane solution: $M_0$2.95000×10^{18} NP1:ϕ_s167.63000°, δ61.10000°, λ79.10000°. NP2:ϕ_s9.35000°, δ30.72000°, λ108.91000°. Principal axes: T 2.8683, Plg72.0000°, Azm52.0000°; N 0.1649, Plg10.0000°, Azm173.0000°; P -3.0332, Plg15.0000°, Azm266.0000°;*

BJI **27** *21:00:19.9±0.0, 24°.60S×70°.30W, h12^{km}, mB6.1/60, Ms6.2/82, Ms7 6.2/75*

GUC **27** *21:00:21.5±0.7, 24°.78S×70°.55W, h37^{km}±1^{km}, MW6.3*

MOS **27** *21:00:21.9±1.4, 24°.77S×70°.49W, h35^{km}, mb6.3/22, MS5.8/53, Error ellipse: s-maj=9.9km s-min=5.6km az=94.6*

NEIC **27** *21:00:22.9±2.4, 24°.83S±0°.04×70°.60W±0°.07, h34^{km}±1^{km}, mb6.1/548, Ms_20 5.8/285, Mwb6.2/68, Mww6.2, Mwr6.2(GUC), Error ellipse: s-maj=10.9km s-min=6.6km az=272.0*

VAO **27** *21:00:23.2±0.2, 24°.66S×70°.32W, h35^{km}, mb6.3*

IDC **27** *21:00:24.2±1.8, 24°.79S×70°.38W, h53^{km}±14^{km}, mb5.6/18, mb1 5.6/22, mb1mx5.5/25, mbtmp5.7/22, ML5.2/5, MS5.9/24, Ms1 5.9/24, ms1mx5.8/29, Error ellipse: s-maj=15.2km s-min=10.0km az=87.0*

GCMT **27** *21:00:27.9±0.1, 24°.76S×70°.90W, h41^{km}, MW6.2/156, Moment Tensor Solution. s153,c354; s156,c518; Duration: 3^{s}0 Moment tensor: Scale 10^{18}Nm; M_{rr}1.65±.01; $M_{\theta\theta}$0.24±.01; $M_{\phi\phi}$-1.89±.01; $M_{r\theta}$0.48±.01; $M_{\theta\phi}$0.03±.01; $M_{\phi r}$-1.48±.02; Best double couple: $M_0$2.36200×10^{18} NP1:ϕ_s13.00000°, δ26.00000°, λ113.00000°. NP2:ϕ_s167.00000°, δ66.00000°, λ79.00000°. Principal axes: T 2.2830, Plg67.0000°, Azm57.0000°; N 0.1580, Plg10.0000°, Azm172.0000°; P -2.4410, Plg20.0000°, Azm266.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC **27** *21:00:28, 24°.81S×70°.50W, h46^{km}, Moment Tensor Solution. Duration: 14^{s}0 Moment tensor: Scale 10^{18}Nm; M_{rr}1.96; $M_{\theta\theta}$-0.01; $M_{\phi\phi}$-1.96; $M_{r\theta}$0.26; $M_{\theta\phi}$0.30; $M_{\phi r}$-0.87; Fault plane solution: $M_0$2.18000×10^{18} NP1: ϕ_s355.00000°, δ33.00000°, λ96.00000°. NP2: ϕ_s168.00000°, δ57.00000°, λ86.00000°. Principal axes: T 2.1615, Plg77.0000°, Azm66.0000°; N 0.0323, Plg3.0000°, Azm170.0000°; P -2.1938, Plg12.0000°, Azm261.0000°;*

ISC 27 21:00:22.3±0.4, **24°.81S**±0°.02×**70°.47W**±0°.03, **h34**^{km}±1^{km}, **h35**^{km}**:pP-P, n1631,** σ**1^{s}87**/1570, **mb6.1**/342, **MS5.8**/220, **343C-89D, Fault plane solution: NP1:**ϕ_s186.95923°, δ43.16811°, λ102.14132°. **NP2:**ϕ_s350.52478°, δ48.02254°, λ78.83962°. **Principal axes:** T Plg81.3662°, Azm194.7815°; N Plg8.2731°, Azm358.0417°; P Plg2.4523°, Azm88.3985°; **Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB14	IPOC Station P	0.19	19	eP	Pb	21 00 29.1	-0.3
PB14				eS	Sb	21 00 34.2	0.0
PB14	IPOC Station P	0.19	19	Pg	Pb	21 00 29.1	-0.3
PB14	IPOC Station P	0.19	19	i P	Pb	21 00 29.0	-0.4
PB14				IAML		21 00 39.0	
	comp=Z,508μm,0.7s						
PB10	IPOC Station P	1.29	357	⇑eP	Pn	21 00 43.5	-0.4
PB10				eS	Sn	21 01 00.6	+0.6
PB10	IPOC Station P	1.29	357	Pn	Pn	21 00 43.8	-0.2
PB10				Sn	Sb	21 01 01.5	-0.9
PB10	IPOC Station P	1.29	357	i P	Pn	21 00 44.0	+0.1
PB10				IAML		21 01 06.5	
	comp=Z,104μm,0.5s						
PB15	IPOC Station P	1.84	30	⇑eP	Pn	21 00 53.2	+1.5
PB15				eS	Sb	21 01 16.9	-1.4
PB15	IPOC Station P	1.84	30		Pn	21 00 53.1	+1.4
PB15				Sn	Sb	21 01 18.0	-0.2
PB15	IPOC Station P	1.84	30	i P	Pn	21 00 53.0	+1.4
PB05	IPOC Station P	1.96	7	⇑eP	Pn	21 00 53.2	0.0
PB05				eS	Sn	21 01 17.5	+0.7
PB05	IPOC Station P	1.96	7	i P	Pn	21 00 53.0	-0.3
PB05				eS	Sn	21 01 18.0	+1.2
PB05				IAML		21 01 24.5	
	comp=Z,111μm,0.5s						
PB06	IPOC Station P	2.25	22	⇑eP	Pn	21 00 58.0	+0.8
PB06				eS	Sn	21 01 26.8	+2.8
PB06	IPOC Station P	2.25	22		Pn	21 00 58.1	+0.8
PB06	IPOC Station P	2.25	22	i P	Pn	21 00 58.0	+0.8
AC02	Maricunga	2.35	149	⇑eP	Pn	21 01 01.7	+2.6
AC02				eS	Sb	21 01 31.3	-2.0
AC02	Maricunga	2.35	149	Pn	Pb	21 01 02.0	-2.4
AC02	Maricunga	2.35	149	i P	Pb	21 01 02.0	-2.4
AC02				eS	Sb	21 01 34.5	+1.2
AC02				IAML		21 01 40.1	
	comp=Z,53μm,0.4s						
PB04	IPOC Station P	2.48	7	⇑eP	Pn	21 00 59.9	-0.5
PB04				eS	Sn	21 01 31.4	+1.8
PB04	IPOC Station P	2.48	7		Pn	21 00 60.0	-0.5
PB04	IPOC Station P	2.48	7	i P	Pn	21 01 00.0	-0.5
PB04				eS	Sb	21 01 36.5	-0.1
LVC	Limon Verde	2.62	34	P	Pn	21 01 04.6	+2.1
	comp=Z,3μm,0.3s,baz=216,slow=10,SNR=781						
LVC				S	Sn	21 01 34.5	+1.2
	comp=Z,8μm,0.3s,baz=253,slow=10,SNR=3.8						
LVC				LR	LR	21 01 56.9	
	comp=Z,499μm,19.4s,baz=154,slow=36						
LVC	Limon Verde	2.62	34	eP	Pn	21 01 04.3	+1.7
LVC				eS	Sn	21 01 36.4	+3.1
LVC	Limon Verde	2.62	34	⇑P	Pn	21 01 04.5	+2.1
LVC	Limon Verde	2.62	34	Pn	Pn	21 01 04.2	+1.7
LVC	Limon Verde	2.62	34	i P	Pn	21 01 04.0	+1.5
LVC				eS	Sb	21 01 40.5	-0.2
GO03	Copiap	2.78	176	eP	Pn	21 01 05.0	+0.5
GO03				eS	Sn	21 01 40.5	+3.6
GO03	Copiap	2.78	176	⇓P	Pn	21 01 04.8	+0.3
GO03	Copiap	2.78	176	Pn	Pn	21 01 04.7	+0.3
GO03	Copiap	2.78	176	i P	Pn	21 01 05.0	+0.5
GO03				eS	Sb	21 01 47.8	+2.7
PB03	IPOC Station P	2.83	14	⇑eP	Pn	21 01 05.0	-0.2
PB03				eS	Sn	21 01 40.1	+1.9
PB07	IPOC Station P	3.12	10	⇑eP	Pn	21 01 09.2	0.0
PB07				⇓eS	Sn	21 01 46.8	+1.5
PB07	IPOC Station P	3.12	10		Pn	21 01 08.9	-0.3
PB09	IPOC Station P	3.21	21	⇑eP	Pn	21 01 11.7	+1.3
PB09				eS	Sn	21 01 50.1	+2.6
PB09	IPOC Station P	3.21	21		Pn	21 01 11.5	+1.0
AC04	Llanos de Chal	3.42	189	⇑eP	Pn	21 01 11.3	-2.0
AC04				⇓eS	Sn	21 01 55.5	+2.8
AC04	Llanos de Chal	3.42	189	Pn	Pn	21 01 10.9	-2.3
AC04	Llanos de Chal	3.42	189	i P	Pn	21 01 11.0	-2.3
AC04				eS	Sb	21 02 07.3	+3.8
AC04				IAML		21 02 14.3	
	comp=Z,15μm,1.5s						
PB02	IPOC Station P	3.51	9	eP	Pn	21 01 14.1	-0.5
PB02				eS	Sn	21 01 56.6	+1.6
PB01	IPOC Station P	3.86	14		Pn	21 01 19.3	-0.1
PATCX	Punta Patache	3.98	4		Pn	21 01 19.4	-1.6
LCO	Las Campanas	4.19	183	P	Pn	21 01 23.1	-1.0
LCO	Las Campanas	4.19	183	⇑P	Pn	21 01 23.0	-1.0
LCO	Las Campanas	4.19	183	Pn	Pn	21 01 23.1	-1.0
LCO	Las Campanas	4.19	183	i P	Pn	21 01 23.0	-1.0
TA01	Diego Aracena	4.23	4	Pn	Pn	21 01 22.4	-1.9
FSA	Cafayete	4.26	109	i P	Pn	21 01 29.0	+4.0
VCA	Vinchina	4.41	153	i P	Pn	21 01 31.0	+4.1
VCA				IAML		21 02 50.5	
	comp=Z,13μm,1.4s						
TA02	Huaiquique	4.53	4		Pn	21 01 26.8	-1.6
TA02	Huaiquique	4.53	4	i P	Pn	21 01 28.0	-0.5
PB08	IPOC Station P	4.80	15		Pn	21 01 32.4	-0.2
HJA	Humahuaca	4.90	72	i P	Pn	21 01 40.0	+6.1
HJA				IAML		21 02 49.6	
	comp=Z,14μm,2.1s						
AZAP	Zapla	4.96	84	i P	Pn	21 01 39.0	+4.4
AZAP				IAML		21 02 56.2	
	comp=Z,12μm,3.5s						
AHML	Horco Molle	5.03	114	i P	Pn	21 01 39.0	+3.6
AHML				IAML		21 03 07.5	
	comp=Z,4μm,3.2s						
PB11	IPOC Station P	5.08	9	Pn	Pn	21 01 34.4	-1.8
CO05	La Serena	5.14	187		Pn	21 01 34.9	-1.9
YJA	Yavi	5.25	61	i P	Pn	21 01 44.0	+5.2
YJA				IAML		21 02 55.0	
	comp=Z,1μm,2.6s						
GO04	Tololo Observa	5.35	183		Pn	21 01 38.9	-1.0
GO04	Tololo Observa	5.35	183	i P	Pn	21 01 39.0	-1.0
AROD	Rodeo	5.41	171	i P	Pn	21 01 43.0	+2.1
CYA	Choya	5.53	132	i P	Pn	21 01 45.0	+2.7
CYA				IAML		21 02 59.7	
	comp=Z,4μm,1.1s						
ASTB	Santa Barbara	5.55	82	i P	Pn	21 01 47.0	+4.3
ASTB				IAML		21 03 53.6	
	comp=Z,532nm,2.5s						
ACLC	CERRO LA CRUZ	5.57	146	i P	Pn	21 01 46.0	+3.1
ACLC				IAML		21 03 01.9	
	comp=Z,8μm,1.2s						
ACCO	Cerro Coronel	5.89	168	i P	Pn	21 01 50.0	+2.5
ACCO				IAML		21 04 07.0	
	comp=Z,2μm,2.6s						
ALOL	LOMAS DE OLMED	6.00	82	i P	Pn	21 01 53.0	+4.2
PB12	IPOC Station P	6.17	1	Pn	Pn	21 01 49.2	-1.8
PB12	IPOC Station P	6.17	1	i P	Pn	21 01 49.0	-2.1
AP01	Chacalluta	6.41	1		Pn	21 01 52.8	-1.5
AP01	Chacalluta	6.41	1	i P	Pn	21 01 54.0	-0.3
AP01				IAML		21 03 44.0	
	comp=Z,31μm,0.8s						
AVFE	Valle Fertil	6.41	156	i P	Pn	21 01 56.0	+1.6
PB16	IPOC Station P	6.50	8		Pn	21 01 55.1	-1.0
PB16	IPOC Station P	6.50	8	i P	Pn	21 01 55.0	-1.2
PB16				IAML		21 03 10.8	
	comp=Z,1μm,0.6s						
APLL	PUNTA DE LOS L	6.57	149	i P	Pn	21 01 58.0	+1.4
ZON	Zonda	6.90	167	P	Pn	21 02 02.9	+1.8
ZON	Zonda	6.90	167		Pn	21 02 02.9	+1.8
RTLS	Leoncito	7.04	172	i P	Pn	21 02 04.0	+0.7
RTLS				IAML		21 04 19.9	
	comp=Z,2μm,1.3s						
ACHE	Chepes	7.17	153	i P	Pn	21 02 09.0	+4.1
RTCV	Cerro Valdivia	7.23	167	i P	Pn	21 02 07.0	+1.4
AUSP	Uspallata	7.45	173	i P	Pn	21 02 09.0	+0.1
ASAL	Salagasta	7.89	170	i P	Pn	21 02 15.0	+0.3
VA01	Torpederas	8.25	187	Pn	Pn	21 02 19.7	+0.1
PEL	Peldehue	8.31	181	P	Pn	21 02 18.8	-1.6
PEL	Peldehue	8.31	181		Pn	21 02 18.8	-1.6
AAGR	Agrelo	8.37	170	i P	Pn	21 02 24.0	+2.7
MT02	Curacav	8.44	184		Pn	21 02 19.4	-2.8
MT05	Renca	8.56	181	Pn	Pn	21 02 23.3	-0.5
LPAZ	La Paz	8.76	15	P	Pn	21 02 27.8	+0.6
	comp=Z,85nm,0.3s,baz=203,slow=5.3,SNR=303						
LPAZ				S	Sn	21 04 07.0	+2.0
	baz=10,slow=25,SNR=1.7						
LPAZ				LR	LR	21 06 20.1	
	comp=Z,146μm,20.0s,baz=206,slow=41						
LPAZ				P3KPbc		21 39 36.0	
	comp=Z,0.0nm,0.3s,baz=98,slow=7.1,SNR=1.8						
LPAZ	La Paz	8.76	15	eP	Pn	21 02 27.7	+0.6
LPAZ	La Paz	8.76	15	⇑P	Pn	21 02 27.5	+0.4
VA05	Santo Domingo	8.87	186		Pn	21 02 24.3	-3.8
BO02	Sierra Bellavi	9.95	181		Pn	21 02 41.4	-1.6
GO05	Huala	10.24	187		Pn	21 02 41.9	-5.0
ML02	Panimavida	10.95	184		Pn	21 02 54.8	-1.7
H03N1	Juan Fernandez	11.33	219	T	T	21 14 41.2	
	baz=45,slow=71,SNR=824						
H03N2	Juan Fernandez	11.34	219	T	T	21 14 37.2	
	baz=45,slow=71,SNR=562						
H03N3	Juan Fernandez	11.34	219	T	T	21 14 36.7	
	baz=45,slow=71,SNR=606						
VA04	Juan Fernndez	11.43	218		Pn	21 02 59.7	-3.4
CPUP	Villa Florida	11.96	100	P	Pn	21 03 11.4	+1.0
	comp=Z,1.7nm,0.3s,baz=271,slow=12,SNR=19						
CPUP				S	Sn	21 05 23.4	+0.7
	comp=Z,1.9nm,0.3s,baz=134,slow=16,SNR=1.1						
CPUP				LR	LR	21 08 18.5	
	comp=Z,115μm,19.3s,baz=279,slow=40						
CPUP	Villa Florida	11.96	100	⇑P	Pn	21 03 10.4	-0.1
CPUP	Villa Florida	11.96	100	eP	Pn	21 03 10.3	-0.1
CPUP	Villa Florida	11.96	100		Pn	21 03 10.6	+0.2
SIV	San Ignacio	12.43	47	P	Pn	21 03 14.0	-2.9
	comp=Z,18nm,0.3s,baz=230,slow=12,SNR=76						
SIV				S	Sn	21 05 30.6	-3.6
	comp=Z,18nm,0.3s,baz=236,slow=18,SNR=2.1						
ITQB	Itaqui	13.24	115	eP	Pn	21 03 28.5	+0.7
ITQB	Itaqui	13.24	115		Pn	21 03 28.1	+0.2
LC01	Cunco	14.10	184		Pn	21 03 36.7	-2.9
NNA	Nana	14.11	334	P	Pn	21 03 41.1	+1.2
	comp=Z,3.2nm,0.3s,baz=244,slow=8.3,SNR=12						
NNA				S	Sn	21 06 13.9	-1.4
	comp=Z,19nm,0.3s,baz=200,slow=17,SNR=2.4						
NNA				LR	LR	21 08 18.6	
	comp=Z,28μm,21.3s,baz=168,slow=34						
NNA	Nana	14.11	334	⇑P	Pn	21 03 43.0	+3.2
NNA	Nana	14.11	334		Pn	21 03 39.0	-0.8
PTLB	Pontes e Lacer	14.13	51	eP	Pn	21 03 38.3	-1.9
PTLB	Pontes e Lacer	14.13	51	Pn	Pn	21 03 38.6	-1.5
AQDB	Aquidauana	14.30	75	eP	Pn	21 03 42.3	-0.2

AQDB	Aquidauana	14.30	75		Pn	21 03 42.5	0.0
LPA	La Plata	14.81	136	PN	P	21 03 53.3	-1.4
LPA				PP	PnPn	21 03 58.7	+1.4
LPA				sP	Pn	21 04 06.3	+17
LPA				pPP		21 04 43.6	
LPA				S	Sn	21 06 25.9	-6.2
LPA	La Plata	14.81	136	SN	Sn	21 06 35.0	+2.9
LPA				SS	S	21 06 42.8	-6.8
LPA				SSS	SSS	21 06 54.9	
LPA				sS		21 07 18.3	
LPA				PCP	PcP	21 09 04.8	+5.9
LPA				SCS	ScS	21 16 08.2	+0.1
LPA				PKIKP	PKiKP	21 16 50.2	-4.0
LPA				SKIKP		21 20 25.4	
LPA				PKIKS		21 20 34.6	
LPA				SKIKS		21 23 51.7	
LR03	Panguipulli	14.87	186		Pn	21 03 48.0	-1.9
TRQA	Tornquist	15.05	153	*e*P	Pn	21 03 49.9	-2.6
TRQA	Tornquist	15.05	153	Pn	Pn	21 03 49.9	-2.6
VILB	Vilhena	15.27	41	*e*P	Pn	21 03 53.7	-1.8
VILB	Vilhena	15.27	41	IAmb	IAmb	21 04 11.8	
	comp=Z,1μm,0.9s						
ETMB	Extrema	15.45	16	*e*P	Pn	21 03 55.5	-2.3
ETMB	Extrema	15.45	16	Pn	Pn	21 03 54.3	-3.5
ETMB				IAmb	IAmb	21 04 06.4	
	comp=Z,1μm,1.2s						
PLCA	Paso Flores	15.88	180	P	Pn	21 04 04.0	+0.7
	comp=Z,0.7nm,0.3s,baz=356,slow=11,SNR=16						
PLCA				S	Sn	21 06 54.8	-3.4
	comp=Z,1.0nm,0.3s,baz=355,slow=12,SNR=1.3						
PLCA				LR	LR	21 10 26.2	
	comp=Z,67μm,21.6s,baz=354,slow=38						
PLCA				P3KPbc		21 39 11.8	
	comp=Z,0.0nm,0.3s,baz=72,slow=4.6,SNR=3.0						
PLCA	Paso Flores	15.88	180	P	Pn	21 04 04.0	+0.7
PLCA	Paso Flores	15.88	180	⇓P	Pn	21 04 04.0	+0.7
PLCA	Paso Flores	15.88	180	*e*P	P	21 04 06.0	-0.6
PLCA	Paso Flores	15.88	180	P	Pn	21 04 03.6	+0.3
CPSB	Cacapava Do Su	16.09	114	*e*P	Pn	21 04 06.1	+0.2
LL04	Puerto Octay	16.14	185		Pn	21 04 04.5	-2.0
PP1B	Ponte de Pedra	16.20	67	*e*P	Pn	21 04 04.8	-2.8
PLTB	Pedras Altas	16.39	119	Pn	Pn	21 04 07.3	-2.4
PLTB				IAmb	IAmb	21 04 29.7	
	comp=Z,3μm,1.9s						
SALV	Santo Antonio	16.44	60	*e*P	Pn	21 04 07.4	-3.0
TRCB	Terra Rica	16.45	87	*e*P	Pn	21 04 10.0	-0.6
TRCB	Terra Rica	16.45	87	Pn	Pn	21 04 11.7	+1.0
ITAB	Concordia	16.66	102	Pn	Pn	21 04 12.7	-0.6
PTGB	Pitanga	16.72	94	*e*P	Pn	21 04 15.0	+0.9
LL05	Los Muermos	16.74	188		P	21 04 15.6	-0.5
CZSB	Cruzeiro do Su	17.12	352	*e*P	Pn	21 04 18.6	-0.4
CZSB	Cruzeiro do Su	17.12	352		Pn	21 04 18.8	-0.2
CZSB				IAmb	IAmb	21 04 51.3	
	comp=Z,953nm,0.8s						
SAML	Samuel	17.24	25	P	Pn	21 04 17.0	-3.5
SAML				pmax	pmax		
	comp=Z,993nm,1.0s						
SAML	Samuel	17.24	25		Pn	21 04 17.0	-3.5
SAML				IAmb	IAmb	21 04 25.5	
	comp=Z,993nm,1.0s						
LL01	San Ignacio de	17.60	185		P	21 04 25.7	+0.2
PCMB	Pacaembu	17.94	84	*e*P	Pn	21 04 28.2	-1.0
CNLB	Canela	18.04	109	*e*P	P	21 04 31.0	+0.4
LL07	Hotel Espejo d	18.15	187		Pn	21 04 31.2	-0.4
LL02	Futaleuf	18.37	183	P	P	21 04 32.9	-1.2
GO07	Milladeo Hill,	18.45	187	P	P	21 04 33.9	-1.0
PDRB	Porto dos Gac	18.49	47	*e*P	P	21 04 32.8	-2.8
ATAH	Atahualpa	19.14	335	P	P	21 04 41.2	-2.0
	comp=Z,0.5nm,0.3s,baz=0.5,slow=12,SNR=2.1						
ATAH				S	Sn	21 08 13.5	-4.4
	baz=320,slow=22,SNR=1.3						
ATAH				LR	LR	21 11 19.8	
	comp=Z,11μm,21.7s,baz=166,slow=34						
FRTB	Fartura	19.15	90	*e*P	P	21 04 43.2	+0.4
ITRB	Iturama	19.29	79	*e*P	P	21 04 43.6	-0.8
TER01	Tubaro-SC	19.43	106	*e*P	P	21 04 46.6	+0.8
TIJ01	Guaruva-PR	19.46	96	*e*P	P	21 04 46.8	+0.5
CLDB	Colider	19.65	48	*e*P	P	21 04 47.0	-1.3
ARAG	Araguaiana, MT	19.69	66	*e*P	P	21 04 47.8	-1.0
TBTG	Tabatinga, AM	20.51	2	*e*P	Pn	21 05 03.0	+3.0
TBTG	Tabatinga, AM	20.51	2	*e*P	P	21 04 57.6	-0.1
TBTG	Tabatinga, AM	20.51	2	P	P	21 04 56.9	-0.7
TBTG				IAmb	IAmb	21 05 52.8	
	comp=Z,1μm,1.0s						
BB19B	Bebedouro	20.55	84	*e*P	P	21 04 56.8	-1.3
COYC	Coyhaique	20.76	183	P	P	21 05 00.1	+0.1
PET01	Itanhaem-SP	21.11	93	*e*P	P	21 05 03.3	-0.8
RCLB	Rio Claro- Sao	21.15	88	*e*P	P	21 05 03.4	-1.3
VAO	Valinhos	21.56	90	*e*P	P	21 05 07.6	-1.5
IPMB	Ipameri, GO	21.80	76	*e*P	P	21 05 09.8	-1.8
SNDB	Serra Nova Dou	22.19	58	*e*P	P	21 05 13.6	-2.2
PARB	Paraibuna	22.73	91	*e*P	P	21 05 19.5	-2.0
NPGB	Novo Progresso	22.83	42	*e*P	P	21 05 19.7	-2.8
BDFB	Brasilia	22.93	71	P	P	21 05 21.6	-2.1
	comp=Z,591nm,0.8s,baz=238,slow=11,SNR=108						
BDFB				S	S	21 09 22.3	-9.4
	comp=Z,94nm,0.9s,baz=136,slow=10,SNR=2.3						
BDFB				LR	LR	21 15 26.7	
	comp=Z,56μm,18.7s,baz=244,slow=40						
BDFB	Brasilia	22.93	71	P	P	21 05 21.0	-2.8
BDFB				IAmb	IAmb	21 05 41.4	
	comp=Z,915nm,0.9s						
MACA	Manacapuru-AM	23.50	25	*e*P	P	21 05 27.7	-1.5
MACA	Manacapuru-AM	23.50	25	P	P	21 05 27.3	-1.9
BSCB	Bom Sucesso	23.96	86	*e*P	P	21 05 32.7	-1.0
MAN01	Angra dos Reis	24.31	91	*e*P	P	21 05 35.7	-1.2
PEXB	Peixe	24.49	63	*e*P	P	21 05 37.3	-1.2
ITTB	Itaituba	24.78	37	*e*P	P	21 05 40.1	-1.0
VAS01	Vassouras-RJ	24.89	90	*e*P	P	21 05 41.9	-0.3
PTLC	Puerto Leguiza	25.18	350	*e*P	P	21 05 41.6	-3.2
DIAM	Diamantina, MG	25.73	81	*e*P	P	21 05 48.9	-1.0
DUB01	Friburgo-RJ	25.90	90	*e*P	P	21 05 50.7	-0.7
PTGA	Pitinga	26.00	25	P	P	21 05 51.3	-0.9
	comp=Z,430nm,0.9s,baz=206,slow=10,SNR=150						
PTGA				S	S	21 10 15.2	-5.6
	comp=Z,43nm,1.0s,baz=38,slow=8.6,SNR=1.4						
PTGA				LR	LR	21 17 11.6	
	comp=Z,59μm,19.3s,baz=198,slow=39						
MC01	Montes Claros	26.05	77	*e*P	P	21 05 50.9	-1.9
OTAV	Otavalo	26.07	342	P	P	21 05 52.5	-0.8
OTAV				pmax	pmax		
	comp=Z,208nm,1.1s						
OTAV	Otavalo	26.07	342	⇑P	P	21 05 54.2	+0.9
OTAV	Otavalo	26.07	342	*e*P	P	21 05 53.1	-0.2
OTAV	Otavalo	26.07	342	P	P	21 05 52.5	-0.8
CUSE	Cuicocha Este	26.12	342	*e*P	P	21 05 52.9	-0.8
PAC1	Pacto, Paraso	26.20	341	*e*P	P	21 05 54.8	+0.7
TULM	Tulcn-Chalpat	26.34	343	*e*P	P	21 05 59.4	+3.6
JANB	Januaria	26.39	73	*e*P	P	21 05 54.9	-1.0
GO09	Cerro Castillo	26.46	183	P	P	21 05 56.9	+0.9
CAM01	Campos-RJ	26.61	90	*e*P	P	21 05 56.5	-1.2
MG05	Puerto Natales	26.87	183	P	P	21 05 59.0	-0.7
SMTB	Santa Maria do	26.97	58	*e*P	P	21 06 00.3	-0.7
MACC	Macarena, Meta	26.99	353	*e*P	P	21 06 01.6	+0.5
PRPB	Parauapebas	27.12	50	*e*P	P	21 06 01.0	-1.3
SDBA	SAO DESIDERIO	27.13	68	*e*P	P	21 06 01.5	-1.0
GUVC	San Jose del G	27.27	355	*e*P	P	21 05 55.5	-8.1
SOTA	Rioblanco	27.44	347	*e*P	P	21 06 06.8	+1.2
PCON	Cinco Dias	27.58	347	*e*P	P	21 06 08.6	+1.5
TUMC	Tumaco	27.66	342	P	P	21 06 06.5	-0.5
TUMC				IAmb	IAmb	21 06 34.5	
	comp=Z,365nm,1.0s						
MALB	Monte Alegre	27.67	37	*e*P	P	21 06 05.9	-1.4
ALF01	Guarapari-ES	27.73	87	*e*P	P	21 06 06.7	-1.0
SJMB	Sao Joao De Ma	27.84	83	*e*P	P	21 06 08.3	-0.5
MG02	Cerro Sombrero	27.95	178	P	P	21 06 10.6	+1.3
MG02				IAmb	IAmb	21 06 33.3	
	comp=Z,294nm,0.9s						
MARP	Paez Belalcaza	28.00	348	*e*P	P	21 06 11.1	+0.7
MG04	Isla Riesco	28.02	181	P	P	21 06 10.6	+0.7
BSFB	Barra de Sao F	28.11	84	*e*P	P	21 06 11.9	+0.7
GO10	Punta Arenas	28.31	181	P	P	21 06 10.9	-1.7
GO10				IAmb	IAmb	21 07 07.5	
	comp=Z,282nm,1.1s						
RIB01	Linhares ES	28.37	85	*e*P	P	21 06 11.5	-2.0
EFI	East Falkland	28.46	164*c*	*i*P	P	21 06 15.1	+1.2
EFI				pmax	pmax		
	comp=Z,151nm,1.6s						
EFI				MLR	MLR		
	comp=Z,34μm,19.0s						
EFI	East Falkland	28.46	164	⇑P	P	21 06 15.6	+1.7
EFI	East Falkland	28.46	164	P	P	21 06 12.7	-1.2
EFI	East Falkland	28.46	164	IAMs_20	IAMs_20	21 18 16.9	
	comp=Z,36μm,21.0s						
PRAC	Prado	28.67	351	*e*P	P	21 06 16.9	+0.7
BOAV	Boa Vista	28.71	21	*e*P	P	21 06 15.5	-1.0
BOAV	Boa Vista	28.71	21	P	P	21 06 15.6	-1.0
BOAV				IAmb	IAmb	21 06 19.0	
	comp=Z,320nm,1.0s						
PTGC	Puerto Gaitan,	28.88	357	*e*P	P	21 06 16.7	-1.2
VILC	Villavicencio,	28.92	353	*e*P	P	21 06 18.9	+0.5
ORTC	Ortega, Tolima	28.92	350	*e*P	P	21 06 19.6	+1.2
YOTC	Yotoco, Valle	29.18	348	*e*P	P	21 06 19.9	-0.9
ROSC	El Rosal	29.71	352	P	P	21 06 26.2	+0.5
	comp=Z,178nm,1.1s,baz=19,slow=3.2,SNR=26						
ROSC				S	S	21 11 14.6	-5.3
	comp=Z,6.5nm,0.3s,baz=23,slow=24,SNR=1.0						
ROSC				LR	LR	21 18 34.5	
	comp=Z,20μm,21.3s,baz=198,slow=37						
ROSC	El Rosal	29.71	352	*e*P	P	21 06 24.6	-1.1
ROSC	El Rosal	29.71	352	P	P	21 06 25.6	-0.1
ROSC				IAmb	IAmb	21 06 33.1	
	comp=Z,234nm,1.0s						
GUA01	Guaratinga, BA	29.78	80	*e*P	P	21 06 25.4	-0.6
USHA	Ushuaia	30.03	178	P	P	21 06 27.1	-0.7
	comp=Z,42nm,1.1s,baz=148,slow=5.4,SNR=9.3						
USHA				S	S	21 11 20.4	-3.0
	comp=Z,7.8nm,0.9s,baz=215,slow=7.2,SNR=1.3						
USHA				LR	LR	21 19 32.6	
	comp=Z,32μm,18.9s,baz=9.0,slow=38						
PLMC	San Jos del P	30.07	348	*e*P	P	21 06 28.6	0.0
MCPB	Macapa, AP	30.14	39	*e*P	P	21 06 28.2	-0.9
MG01	Puerto William	30.16	177	P	P	21 06 29.7	+0.8
GUY2C	Guyana, Caldas	30.23	350	*e*P	P	21 06 31.2	+0.8
PIZC	Pizarro, Choco	30.34	346	*e*P	P	21 06 30.4	-0.5
SPBC	San Pablo de B	30.48	353	*e*P	P	21 06 31.2	-1.0
NORC	Norcasia	30.49	351	*e*P	P	21 06 32.3	0.0
CMC01	Camacan, BA	30.49	78	*e*P	P	21 06 31.0	-1.3
RUSC	La Rusia	30.62	355	*e*P	P	21 06 32.0	-2.0
PAYG	Puerto Ayora	30.70	318	P	P	21 06 33.6	-0.6
PAYG	Puerto Ayora	30.70	318	IAMs_20	IAMs_20	21 15 27.0	
	comp=Z,19μm,22.0s						
NBIT	Itapeh - BA	30.73	77	*e*P	P	21 06 34.2	-0.2
TMAB	Tom-Au,PA,Br	31.04	48	*e*P	P	21 06 37.0	-0.1
TAMC	Tame, Arauca	31.08	357	*e*P	P	21 06 35.8	-1.7
GDU01	Guandu, BA	31.11	75	*e*P	P	21 06 36.4	-1.3
HELC	Santa Helena	31.20	350	*e*P	P	21 06 39.3	+0.4
BARC	Barichara	31.32	355	*e*P	P	21 06 35.6	-4.2
PTBC	PUERTO BERRIO,	31.40	352	*e*P	P	21 06 37.8	-2.4
ELOV	Elorza	31.63	2	*e*P	P	21 06 42.5	+0.2
NBPN	Ponto Novo - B	31.89	70	*e*P	P	21 06 43.6	-1.1
DBBC	Dabeiba	32.12	349	*e*P	P	21 06 47.1	+0.4
ZARC	Zaragoza, Cauc	32.39	352	*e*P	P	21 06 47.5	-1.5
ZARC	Zaragoza, Cauc	32.39	352	P	P	21 06 47.4	-1.5
ZARC				IAmb	IAmb	21 06 51.4	
	comp=Z,195nm,0.9s						
PTAC	Punta Ardita,	32.56	346	*e*P	P	21 06 50.8	+0.4
UREC	San Jos de Ur	32.74	351	*e*P	P	21 06 50.4	-1.6
SOCV	Socops	32.89	359	*e*P	P	21 06 50.2	-3.2
OCAC	Ocana	32.96	355	P	P	21 06 52.2	-2.0
ROSB	Rosrio	33.46	54	*e*P	P	21 06 57.4	-1.0
SDV	Santo Domingo	33.49	360	*e*P	P	21 06 54.8	-4.0
SDV	Santo Domingo	33.49	360	*e*P	P	21 06 57.0	-1.8
SDV	Santo Domingo	33.49	360	P	P	21 06 56.6	-2.2
SDV				IAmb	IAmb	21 07 31.5	
	comp=Z,311nm,1.8s						
SDV	Santo Domingo	33.49	360	IAMs_20	IAMs_20	21 21 38.9	
	comp=Z,19μm,19.0s						
SMLC	San Martn de	33.59	354	*e*P	P	21 06 56.2	-3.2
BAUV	El Baul	33.63	4	P	P	21 06 58.0	-1.7
NBLA	Lagarto - SE	33.89	72	*e*P	P	21 07 00.2	-2.0
NBPS	Pedro II - PI	34.51	59	*e*P	P	21 07 06.6	-1.0
ARGC	Ariguani, Magd	34.65	353	*e*P	P	21 07 02.8	-5.9
SJCC	San Jacinto, C	34.80	352	*e*P	P	21 07 08.2	-1.8
SJCC	San Jacinto, C	34.80	352	P	P	21 07 08.6	-1.4
NBMA	Muriti-CE	34.92	66	*e*P	P	21 07 10.6	-0.5
RPN	Rapa Nui	34.92	258	P	P	21 07 09.7	-1.3
RPN				pmax	pmax		
	comp=Z,694nm,1.5s						
RPN				MLR	MLR		
	comp=Z,13μm,19.0s						
RPN	Rapa Nui	34.92	258	P	P	21 07 09.7	-1.3
RPN	Rapa Nui	34.92	258	IAMs_20	IAMs_20	21 17 25.4	
	comp=Z,13μm,19.0s						
BCIP	Isla Barro Col	34.98	344	P	P	21 07 10.9	-0.6
BCIP				pmax	pmax		
	comp=Z,144nm,1.2s						
BCIP				MLR	MLR		
	comp=Z,8μm,22.0s						
BCIP	Isla Barro Col	34.98	344	*e*P	P	21 07 10.5	-1.0
BCIP	Isla Barro Col	34.98	344	⇑P	P	21 07 12.9	+1.4
BCIP	Isla Barro Col	34.98	344	P	P	21 07 10.9	-0.6
VA02	Isla de Pascua	35.01	258	P	P	21 07 08.6	-3.1
VA02				IAmb	IAmb	21 07 32.2	
	comp=Z,202nm,0.9s						
NBPB	Pedra_Branca-C	35.28	62	*e*P	P	21 07 14.2	0.0
BIRV	Birongo	35.31	7	P	P	21 07 13.9	-0.4
BIRV				IAmb	IAmb	21 07 16.3	
	comp=Z,310nm,1.0s						
CDITO	Canoas	35.31	338	P	P	21 07 15.0	+0.7
CDITO				IAmb	IAmb	21 07 19.8	
	comp=Z,268nm,1.2s						
BRU2	Volcan	35.46	339	P	P	21 07 15.5	-0.3
BRU2				IAmb	IAmb	21 07 34.0	
	comp=Z,511nm,1.3s						
NBAN	Anadia - AL	35.83	71	*e*P	P	21 07 17.4	-1.6
SMRC	Santa Marta, M	35.94	354	*e*P	P	21 07 17.9	-1.8
DRK0	Durika	36.08	338	P	P	21 07 22.3	+1.2
DRK0				IAmb	IAmb	21 07 26.9	
	comp=Z,224nm,1.0s						
SRBA	San Rafael, Bu	36.09	338	P	P	21 07 21.7	+0.5
SRBA				IAmb	IAmb	21 07 26.8	
	comp=Z,259nm,1.1s						
NBMO	Morrinhos-CE	36.27	59	*e*P	P	21 07 21.0	-1.7
URIC	Uribia, Colomb	36.32	357	*e*P	P	21 07 17.7	-5.2
URIC	Uribia, Colomb	36.32	357	P	P	21 07 19.6	-3.3
TRN	Trinidad (W)	36.34	15	*e*P	P	21 07 15.6	-7.5
PEZE	Perez Zeledon,	36.34	338	P	P	21 07 24.7	+1.4
NBLV	Livramento - P	36.46	67	*e*P	P	21 07 23.4	-1.0
RIMA	Rio Macho	36.76	338	P	P	21 07 27.4	+0.4
HATO	Hato, Curacao	36.79	2	P	P	21 07 25.3	-1.7
HATO				IAmb	IAmb	21 07 26.9	
	comp=Z,276nm,0.9s						
HATO				IAMs_20	IAMs_20	21 23 54.7	
	comp=Z,27μm,20.0s						
BATAN	Batan	36.91	339	P	P	21 07 27.5	-0.4
BATAN				IAmb	IAmb	21 07 33.4	
	comp=Z,444nm,1.1s						
JACO	JACO, Garabito	36.95	336	P	P	21 07 29.0	+0.6
CVTR	Volcan Turrial	36.96	338	P	P	21 07 29.0	0.0
CVTR				IAmb	IAmb	21 07 35.0	
	comp=Z,245nm,1.1s						
HDC	Heredia	37.07	337	P	P	21 07 29.8	+0.3
HDC				IAmb	IAmb	21 07 44.0	
	comp=Z,262nm,1.0s						
NBCL	Cascavel-CE	37.10	62	*e*P	P	21 07 28.9	-0.7
CAO2	Cobano, Puntar	37.14	336	P	P	21 07 30.4	+0.5
TOSP	Speyside	37.17	16	*e*P	P	21 07 28.5	-1.8
TOSP	Speyside	37.17	16	P	P	21 07 29.2	-1.0
TOSP				IAmb	IAmb	21 08 19.6	
	comp=Z,278nm,0.8s						
NBPA	Parau_RN	37.17	65	*e*P	P	21 07 30.1	-0.2
JTS	Las Juntas de	37.64	336	P	P	21 07 36.5	+2.3
JTS				pmax	pmax		
	comp=Z,135nm,1.1s						
JTS				MLR	MLR		
	comp=Z,9μm,18.0s						
JTS	Las Juntas de	37.64	336	⇑P	P	21 07 35.8	+1.6
JTS	Las Juntas de	37.64	336	P	P	21 07 36.5	+2.3
DUNO	Dulce Nombre,	37.65	335	P	P	21 07 36.1	+1.9
GRGR	Grenville	37.71	14	*e*P	P	21 07 29.7	-5.1
GRGR	Grenville	37.71	14	⇑P	P	21 07 33.0	-1.8
GRGR	Grenville	37.71	14	P	P	21 07 33.5	-1.3
GRGR				IAMs_20	IAMs_20	21 24 17.7	
	comp=Z,19μm,19.0s						
COVE	Coope Vega, Sa	37.84	337	P	P	21 07 37.2	+1.4
GCMP	Grenada, Carri	38.10	14	*e*P	P	21 07 31.8	-6.3
HZTE	Horizontes, Gu	38.27	336	P	P	21 07 41.8	+2.3
NBPV	Pedro Velho	38.33	67	*e*P	P	21 07 40.1	0.0
HOPE	Hope Point	38.75	148	P	P	21 07 43.1	-0.1
HOPE				pmax	pmax		
	comp=Z,350nm,1.0s						
HOPE				MLR	MLR		
	comp=Z,9μm,21.0s						
HOPE	Hope Point	38.75	148	⇓P	P	21 07 43.5	+0.3
HOPE	Hope Point	38.75	148	P	P	21 07 43.1	-0.1
HOPE				IAmb	IAmb	21 07 47.4	
	comp=Z,350nm,0.9s						
SVB	Belmont	38.90	14	*e*P	P	21 07 42.0	-2.8
SVB	Belmont	38.90	14	P	P	21 07 42.8	-2.0
ESPN	Las Esperanzas	39.18	338	P	P	21 07 49.1	+2.0
BBGH	Gun Hill	39.20	17	*e*P	P	21 07 46.1	-1.1
ACON	Acoyapa	39.27	337	P	P	21 07 47.0	-0.8
MCLT	Moule a Chique	39.40	15	*e*P	P	21 07 44.5	-4.5
MCLT	Moule a Chique	39.40	15	P	P	21 07 48.4	-0.6
MCLT				IAmb	IAmb	21 08 04.4	
	comp=Z,372nm,1.0s						
PRVC	Isla de Provid	39.41	343	*e*P	P	21 07 48.3	-0.8
PRVC	Isla de Provid	39.41	343	P	P	21 07 49.7	+0.7
SLBI	Saint Lucia, B	39.69	15	*e*P	P	21 07 47.5	-3.9
BOAB	BOACO BROADBAN	39.89	336	⇑P	P	21 07 53.2	+0.2
BOAB	BOACO BROADBAN	39.89	336	P	P	21 07 52.6	-0.5
MPOM	Morne Pois Mar	40.13	15	*e*P	P	21 07 50.5	-4.4
MPOM	Morne Pois Mar	40.13	15	P	P	21 07 53.6	-1.4
MPOM				IAmb	IAmb	21 07 55.2	
	comp=Z,406nm,1.0s						
BIM	Bigot	40.15	14	P	P	21 07 53.5	-1.8
BIM				IAmb	IAmb	21 08 10.8	
	comp=Z,348nm,0.9s						
PMSA	Palmer Station	40.18	176	P	P	21 07 55.3	+0.4
	comp=Z,169nm,1.3s,baz=351,slow=5.6,SNR=12						
PMSA	Palmer Station	40.18	176	⇓P	P	21 07 56.9	+2.0
PMSA	Palmer Station	40.18	176	*e*P	P	21 07 55.3	+0.4
PMSA	Palmer Station	40.18	176	P	P	21 07 55.2	+0.3
PMSA	Palmer Station	40.18	176	IAMs_20	IAMs_20	21 23 52.0	
	comp=Z,15μm,21.0s						
CNGN	Cerro Negro	40.32	335	P	P	21 07 57.4	+0.7
FDF	Fort de France	40.34	14	⇑P	P	21 07 53.6	-3.2
FDF	Fort de France	40.34	14	IAmb	IAmb	21 08 48.0	
	comp=Z,571nm,1.3s						
MATN	Matagalpa	40.43	336	P	P	21 07 57.0	-0.6
SVN	Savane Anatole	40.44	14	IAmb	IAmb	21 08 49.3	
	comp=Z,572nm,1.0s						
ILAM	Ilet Lapin Mar	40.44	14	P	P	21 07 56.5	-1.1
ILAM				IAmb	IAmb	21 08 50.9	
	comp=Z,1μm,1.9s						
CRIN	San Cristobal	40.64	335	P	P	21 08 00.3	+1.0
MDN	Morne-Daniel	40.85	13	*e*P	P	21 07 57.5	-3.5
DLPL	La Plaine	40.90	14	*e*P	P	21 07 59.6	-1.8
DLPL	La Plaine	40.90	14	P	P	21 08 00.6	-0.8
DLPL				IAmb	IAmb	21 08 08.3	
	comp=Z,434nm,1.2s						
DSLB	Salisbury	40.97	13	*e*P	P	21 07 59.6	-2.3
TDBA	Terre de Bas,	41.32	13	*e*P	P	21 08 02.7	-2.1
MAGL	Barre de l’ile	41.49	13	*e*P	P	21 08 04.7	-1.5
CBE	Ff, Capester	41.54	13	*e*P	P	21 08 01.7	-5.0
TGUH	Tegucigalpa,Un	41.96	335	*e*P	P	21 08 13.2	+2.9
TGUH	Tegucigalpa,Un	41.96	335	⇑P	P	21 08 10.7	+0.4
TGUH	Tegucigalpa,Un	41.96	335	P	P	21 08 10.1	-0.2
TGUH				IAmb	IAmb	21 08 14.6	
	comp=Z,346nm,1.0s						
SNET	Serv Nac Est T	42.41	332	P	P	21 08 14.8	+0.9
SNET				IAmb	IAmb	21 08 20.9	
	comp=Z,433nm,1.0s						
ANBD	Bethesda, Anti	42.46	12	*e*P	P	21 08 11.9	-2.2
SKI	Saint Kitts	42.56	11	P	P	21 08 15.2	+0.2
SKI				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SKI	Saint Kitts	42.56	11	P	P	21 08 15.2	+0.2
MLPR	Magueyes Islan	42.65	5	P	P	21 08 13.5	-2.2
MLPR				IAmb	IAmb	21 08 32.2	
	comp=Z,235nm,0.8s						
CDVI	St. Croix	42.67	8	P	P	21 08 14.8	-0.9
SEUS	St. Eustatius	42.67	11	P	P	21 08 14.8	-1.1
SEUS				IAmb	IAmb	21 08 15.9	
	comp=Z,702nm,1.6s						
SEUS				IAMs_20	IAMs_20	21 26 52.0	
	comp=Z,22μm,21.0s						
CRPR	Cabo Rojo, PR	42.68	5	P	P	21 08 15.0	-0.9
CRPR				IAmb	IAmb	21 08 31.9	
	comp=Z,260nm,0.8s						
SABA	Saba	42.76	10	*e*P	P	21 08 13.6	-3.0
SABA	Saba	42.76	10	P	P	21 08 15.8	-0.7
SABA				IAmb	IAmb	21 08 31.6	
	comp=Z,246nm,0.9s						
OBIP	Obispado Ponce	42.76	5	P	P	21 08 14.8	-1.7
OBIP				IAmb	IAmb	21 08 18.7	
	comp=Z,361nm,1.0s						
PDPR	Patillas Dam,	42.79	6	P	P	21 08 14.0	-2.8
PDPR				IAmb	IAmb	21 08 32.1	
	comp=Z,202nm,0.8s						
CELP	Cerrillos	42.79	5	P	P	21 08 14.9	-1.9
CELP				IAmb	IAmb	21 08 18.8	
	comp=Z,392nm,1.0s						
JAKH	Jacmel	42.83	357	P	P	21 08 16.2	-0.9
SJG	San Juan	42.87	6	P	P	21 08 16.0	-1.4
SJG				pmax	pmax		
	comp=Z,216nm,0.8s						
SJG				MLR	MLR		
	comp=Z,10μm,21.0s						
SJG	San Juan	42.87	6	*e*P	P	21 08 16.3	-1.1
SJG	San Juan	42.87	6	⇑P	P	21 08 16.3	-1.1
SJG	San Juan	42.87	6	P	P	21 08 16.0	-1.4
SJG				IAmb	IAmb	21 08 33.2	
	comp=Z,216nm,0.8s						
PRSN	Puerto Rico Se	42.89	5	P	P	21 08 15.8	-1.8
PRSN				IAmb	IAmb	21 08 18.2	
	comp=Z,313nm,1.0s						
SDD	Santo Domingo	43.01	1	IAmb	IAmb	21 08 20.6	
	comp=Z,509nm,1.1s						
CBYP	Canovanas	43.05	6	IAmb	IAmb	21 08 19.2	
	comp=Z,304nm,1.1s						
ANWB	Willy Bob	43.06	12	*e*P	P	21 08 15.3	-3.7
ANWB	Willy Bob	43.06	12	P	P	21 08 15.9	-3.0
ANWB				IAmb	IAmb	21 08 17.6	
	comp=Z,310nm,1.0s						
ANWB				IAMs_20	IAMs_20	21 27 17.3	
	comp=Z,15μm,20.0s						
LGNH	Logne	43.11	357	P	P	21 08 19.4	+0.1
AGPR	Aguadilla, PR	43.14	5	P	P	21 08 18.3	-1.3
SMRT	St. Maarten	43.20	10	P	P	21 08 17.6	-2.6
SMRT				IAMs_20	IAMs_20	21 27 18.0	
	comp=Z,18μm,21.0s						
ESQI	Esquipulas	43.24	333	P	P	21 08 21.6	+0.9
ESQI				IAmb	IAmb	21 08 51.2	
	comp=Z,374nm,1.2s						
MTDJ	Mount Denham	43.32	350	P	P	21 08 21.8	+0.6
MTDJ				IAMs_20	IAMs_20	21 29 03.0	
	comp=Z,11μm,22.0s						
SDDR	Presa de Saban	43.53	359	IAMs_20	IAMs_20	21 27 55.1	
	comp=Z,17μm,20.0s						
SC01	Santiago de lo	43.97	360	P	P	21 08 26.4	+0.1
SC01				IAmb	IAmb	21 08 54.6	
	comp=Z,376nm,1.1s						
GTBY	Guantanamo Bay	44.69	354	⇓P	P	21 08 32.3	+0.2
GTBY	Guantanamo Bay	44.69	354	P	P	21 08 31.8	-0.3
GTBY				IAmb	IAmb	21 08 35.0	
	comp=Z,304nm,1.1s						
LCCY	Blossom Villag	45.19	347	P	P	21 08 36.7	+0.7
PETF	Flores	45.58	334	P	P	21 08 39.9	+0.7
PETF				IAmb	IAmb	21 08 43.6	
	comp=Z,241nm,1.1s						
GRTK	Grand Turk	46.05	359	P	P	21 08 43.0	+0.2
GRTK				IAMs_20	IAMs_20	21 30 27.7	
	comp=Z,15μm,19.0s						
SOR	Soroa	48.86	345	IAmb	IAmb	21 09 08.0	
	comp=Z,299nm,1.1s						
TLIG	Tlapa	50.23	324	P	P	21 09 15.7	+0.3
061Z	Ochoppi	51.38	348	P	P	21 09 23.8	+0.1
UNM	Universidad Na	52.02	325	P	P	21 09 29.3	+0.4
UNM				pmax	pmax		
	comp=Z,333nm,1.0s						
UNM				MLR	MLR		
	comp=Z,8μm,22.0s						
UNM	Universidad Na	52.02	325	P	P	21 09 29.3	+0.4
UNM				IAmb	IAmb	21 09 34.5	
	comp=Z,332nm,1.0s						
060A	Indiantown	52.42	349	P	P	21 09 32.2	+0.8
MOIG	Morelia	53.38	323	P	P	21 09 39.6	+0.7
MOIG				IAmb	IAmb	21 09 43.7	
	comp=Z,119nm,0.9s						
PTCN	Pitcairn Islan	53.66	256	IAMs_20	IAMs_20	21 27 12.7	
	comp=Z,9μm,18.0s						
DWPF	Disney Wildern	53.66	348	P	P	21 09 41.8	+1.2
	baz=168						
DWPF	Disney Wildern	53.66	348	⇓P	P	21 09 42.5	+2.0
DWPF	Disney Wildern	53.66	348	P	P	21 09 39.4	-1.1
DWPF				IAmb	IAmb	21 09 43.3	
	comp=Z,298nm,1.0s						

ASCN	**Ascension**	**56.01**	**83**	P	**P**	**21 09 57.8**	**-0.1**
456A	**Hilliard**	**56.32**	**348**	P	**P**	**21 09 57.9**	**-1.8**
451A	**Vernon**	**57.02**	**344**	P	**P**	**21 10 05.4**	**+0.6**
BBSR	**BB Station**	**57.13**	**6**	⇓P	**P**	**21 10 05.4**	**0.0**
BBSR	**BB Station**	**57.13**	**6**	P	**P**	**21 10 04.7**	**-0.8**
BBSR				IAmb	IAmb	21 10 08.0	
	comp=Z,276nm,0.9s						
TIGA	**Tifton**	**57.32**	**347**	P	**P**	**21 10 06.6**	**-0.2**
	baz=166,SNR=12						
TIGA	**Tifton**	**57.32**	**347**	P	**P**	**21 10 07.0**	**+0.1**
TIGA				IAmb	IAmb	21 10 09.3	
	comp=Z,264nm,1.1s						
257A	**Skidaway Islan**	**57.36**	**349**	P	**P**	**21 10 07.0**	**-0.1**
VNA3	**Neumayer Olymp**	**57.44**	**160**	P	**P**	**21 10 07.0**	**-0.3**
255A	**Hazlehurst**	**57.57**	**348**	IAmb	IAmb	21 10 11.8	
	comp=Z,363nm,1.1s						
VNA1	**Neumayer--Stat**	**57.68**	**160**	P	**P**	**21 10 08.8**	**-0.1**
BRAL	**Brewton**	**57.88**	**343**	P	**P**	**21 10 10.5**	**-0.2**
	baz=162,SNR=23						
BRAL				S	**S**	**21 18 05.1**	**-3.1**
	baz=162						
BRAL	**Brewton**	**57.88**	**343**	⇑P	**P**	**21 10 10.8**	**+0.1**
VNA2	**Neumayer--Watz**	**58.04**	**160**	P	**P**	**21 10 11.2**	**-0.3**
	baz=287,slow=8.6						
NHSC	**New Hope**	**58.33**	**350**	P	**P**	**21 10 14.1**	**+0.2**
	baz=170,SNR=18						
NHSC	**New Hope**	**58.33**	**350**	P	**P**	**21 10 13.8**	**0.0**
KVTX	**Kingsville**	**58.38**	**331**	P	**P**	**21 10 14.6**	**+0.3**
H06S1	**SOCORRO T**	**58.55**	**314**	T	T	22 13 21.6	
	SNR=46						
H06E1	**SOCORRO T-PHAS**	**58.56**	**314**	T	T	22 13 22.4	
	SNR=21						
Y59A	**Loris**	**59.02**	**352**	P	**P**	**21 10 19.6**	**+0.9**
Y59A				IAmb	IAmb	21 10 21.5	
	comp=Z,188nm,0.9s						
GOGA	**Godfrey**	**59.20**	**347**	P	**P**	**21 10 18.9**	**-1.1**
	baz=166,SNR=26						
GOGA				S	**S**	**21 18 21.0**	**-4.4**
	baz=166						
GOGA	**Godfrey**	**59.20**	**347**	IAmb	IAmb	21 10 22.1	
	comp=Z,173nm,1.1s						
441A	**DeRidder**	**59.38**	**337**	P	**P**	**21 10 20.9**	**-0.3**
441A				IAmb	IAmb	21 10 25.5	
	comp=Z,280nm,1.1s						
Z51A	**Franklin**	**59.47**	**346**	IAmb	IAmb	21 10 24.1	
	comp=Z,220nm,1.1s						
735A	**Kenedy**	**59.48**	**332**	P	**P**	**21 10 21.8**	**-0.1**
735A				IAmb	IAmb	21 10 26.2	
	comp=Z,254nm,1.1s						
HKT	**Hockley**	**59.64**	**334**	*d i*P	**P**	**21 10 24.6**	**+1.6**
HKT				pmax	pmax		
	comp=Z,116nm,1.3s						
HKT				MLR	MLR		
	comp=Z,2µm,22.0s						
HKT	**Hockley**	**59.64**	**334**	⇑P	**P**	**21 10 22.8**	**-0.2**
HKT	**Hockley**	**59.64**	**334**	P	**P**	**21 10 23.4**	**+0.5**
JSC	**Jenkinsville**	**59.65**	**350**	IAmb	IAmb	21 10 25.7	
	comp=Z,268nm,1.1s						
SNAA	**Sanae**	**59.65**	**160**	PKP2bc	**P'P'df**	**21 39 59.9**	**+4.1**
	baz=151,slow=9.9						
833A	**Chaparral WMA,**	**59.71**	**330**	P	**P**	**21 10 23.8**	**+0.2**
	baz=150,SNR=65						
833A				S	**S**	**21 18 30.5**	**-1.7**
	baz=150						
Y52A	**Lilburn**	**59.76**	**347**	IAmb	IAmb	21 10 26.6	
	comp=Z,240nm,1.1s						
HODGE	**Hodges**	**59.77**	**349**	IAmb	IAmb	21 10 26.4	
	comp=Z,151nm,1.1s						
VBMS	**Vicksburg**	**59.85**	**340**	P	**P**	**21 10 25.7**	**+1.3**
	baz=159,SNR=9.5						
VBMS	**Vicksburg**	**59.85**	**340**	P	**P**	**21 10 24.8**	**+0.3**
VBMS				IAmb	IAmb	21 10 27.6	
	comp=Z,331nm,1.3s						
CNNC	**Cliffs of the**	**60.13**	**353**	P	**P**	**21 10 28.3**	**+2.0**
	baz=172,SNR=13						
CNNC				S	**S**	**21 18 37.7**	**+0.5**
	baz=172						
CNNC	**Cliffs of the**	**60.13**	**353**	⇑P	**P**	**21 10 26.2**	**-0.1**
CNNC	**Cliffs of the**	**60.13**	**353**	P	**P**	**21 10 25.9**	**-0.4**
PAULI	**Pauline**	**60.27**	**349**	IAmb	IAmb	21 10 30.1	
	comp=Z,294nm,1.1s						
Y49A	**Blount Mountai**	**60.28**	**345**	IAmb	IAmb	21 10 29.4	
	comp=Z,197nm,1.1s						
SACV	**Santiago Islan**	**60.43**	**54**	P	**P**	**21 10 29.5**	**+0.7**
SACV				IAmb	IAmb	21 10 50.5	
	comp=Z,227nm,1.2s						
KMSC	**Kings Mountain**	**60.51**	**350**	P	**P**	**21 10 28.9**	**0.0**
	baz=169,SNR=59						
KMSC				S	**S**	**21 18 40.2**	**-1.9**
	baz=169						
KMSC	**Kings Mountain**	**60.51**	**350**	IAmb	IAmb	21 10 31.7	
	comp=Z,286nm,1.1s						
BG3	**Lake Jocassee**	**60.64**	**348**	P	**P**	**21 10 28.8**	**-1.0**
BG3				IAmb	IAmb	21 10 32.5	
	comp=Z,225nm,1.1s						
NATX	**Nacogdoches**	**60.82**	**336**	P	**P**	**21 10 32.0**	**+0.9**
	baz=155,SNR=18						
NATX				S	**S**	**21 18 48.0**	**+1.8**
	baz=155						
NATX	**Nacogdoches**	**60.82**	**336**	P	**P**	**21 10 31.3**	**+0.2**
SHEL	**Horse Pasture**	**60.84**	**95**	P	**P**	**21 10 32.3**	**+0.5**
SHEL				pmax	pmax		
	comp=Z,148nm,1.0s						
SHEL				MLR	MLR		
	comp=Z,10µm,18.0s						
SHEL	**Horse Pasture**	**60.84**	**95**	⇑P	**P**	**21 10 32.5**	**+0.7**
SHEL	**Horse Pasture**	**60.84**	**95**	P	**P**	**21 10 32.2**	**+0.5**
SHEL				IAmb	IAmb	21 10 35.8	
	comp=Z,148nm,0.9s						
SHEL	**Horse Pasture**	**60.84**	**95**	IAMs_20	IAMs_20	21 36 06.1	
	comp=Z,10µm,18.0s						
W52A	**Murphy**	**60.92**	**347**	IAmb	IAmb	21 10 34.4	
	comp=Z,288nm,1.1s						
435B	**Jarrell**	**61.07**	**333**	P	**P**	**21 10 33.9**	**+1.0**
	baz=152,SNR=13						
435B				S	**S**	**21 18 47.7**	**-1.8**
	baz=152						
435B	**Jarrell**	**61.07**	**333**	P	**P**	**21 10 32.8**	**-0.1**
435B				IAmb	IAmb	21 10 36.2	
	comp=Z,126nm,1.1s						
V53A	**Saluda**	**61.27**	**349**	IAmb	IAmb	21 10 36.6	
	comp=Z,198nm,1.1s						
TKL	**Tuckaleechee C**	**61.44**	**348**	S	S	21 18 44.4	-10
	comp=Z,3.4nm,0.8s,baz=331,slow=18,SNR=1.7						
237A	**Washetta, Mont**	**61.46**	**336**	P	**P**	**21 10 35.5**	**+0.1**
Z41A	**Richland Creek**	**61.54**	**339**	P	**P**	**21 10 36.4**	**+0.4**
	baz=157,SNR=12						
Z41A				S	**S**	**21 18 54.8**	**-0.5**
	baz=157						
SLBS	**Sierra La Lagu**	**61.55**	**318**	⇑P	**P**	**21 10 39.7**	**+3.4**
SLBS	**Sierra La Lagu**	**61.55**	**318**	P	**P**	**21 10 36.6**	**+0.3**
SLBS				IAmb	IAmb	21 10 51.0	
	comp=Z,118nm,0.9s						
HPIG		**61.64**	**324**	IAmb	IAmb	21 10 41.5	
	comp=Z,149nm,1.1s						
V51A	**Loudon**	**61.70**	**347**	IAmb	IAmb	21 10 39.2	
	comp=Z,199nm,1.1s						
JCT	**Junction City**	**61.74**	**331**	P	**P**	**21 10 37.5**	**+0.1**
	baz=150,SNR=92						
JCT				S	**S**	**21 18 57.4**	**-0.8**
	baz=150						
JCT	**Junction City**	**61.74**	**331**	⇑P	**P**	**21 10 37.4**	**0.0**
JCT	**Junction City**	**61.74**	**331**	IAmb	IAmb	21 10 58.7	
	comp=Z,167nm,0.8s						
PLAL	**Pickwick Lake**	**61.76**	**344**	IAmb	IAmb	21 10 39.8	
	comp=Z,256nm,1.0s						
T57A	**Hurt**	**62.03**	**352**	IAmb	IAmb	21 10 42.2	
	comp=Z,264nm,1.1s						
WHTX	**Lake Whitney,**	**62.09**	**334**	P	**P**	**21 10 40.8**	**+1.2**
	baz=152,SNR=11						
WHTX				S	**S**	**21 18 59.5**	**-2.8**
	baz=152						
WHTX	**Lake Whitney,**	**62.09**	**334**	IAmb	IAmb	21 10 42.9	
	comp=Z,258nm,1.1s						
TZTN	**Tazewell**	**62.26**	**348**	P	**P**	**21 10 40.2**	**-0.5**
	baz=167,SNR=16						
TZTN				S	**S**	**21 19 00.8**	**-3.6**
	baz=167						
TZTN	**Tazewell**	**62.26**	**348**	IAmb	IAmb	21 10 42.9	
	comp=Z,167nm,1.1s						
TZTN				IAMs_20	IAMs_20	21 41 39.2	
	comp=Z,6µm,20.0s						
Z38A	**Mt. Pleasant**	**62.29**	**337**	P	**P**	**21 10 41.2**	**+0.2**
Z38A				IAmb	IAmb	21 10 44.5	
	comp=Z,216nm,1.1s						
S61A	**Accomac**	**62.35**	**355**	P	**P**	**21 10 41.5**	**+0.2**
MET	**Memphis--Engin**	**62.39**	**342**	P	**P**	**21 10 41.9**	**+0.3**
BLA	**Blacksburg**	**62.40**	**351**	P	**P**	**21 10 43.3**	**+1.6**
	baz=170,SNR=15						
BLA				S	**S**	**21 19 03.4**	**-2.7**
	baz=170						
BLA	**Blacksburg**	**62.40**	**351**	IAmb	IAmb	21 11 04.8	
	comp=Z,133nm,0.9s						
BLA				IAMs_20	IAMs_20	21 39 53.1	
	comp=Z,6µm,22.0s						
CLTN	**Cedars of Leba**	**62.40**	**346**	IAmb	IAmb	21 10 43.9	
	comp=Z,256nm,1.0s						
TX31	**Lajitas Ar. Si**	**62.57**	**327**	⇑P	**P**	**21 10 43.2**	**+0.1**
TX31	**Lajitas Ar. Si**	**62.57**	**327**	IAmb	IAmb	21 10 47.1	
	comp=Z,188nm,1.1s						
TXAR	**Lajitas Array**	**62.57**	**327**	P	**P**	**21 10 43.2**	**+0.1**
	comp=Z,43nm,0.9s,baz=149,slow=7.0,SNR=42						
TXAR				LR	LR	21 33 50.4	
	comp=Z,5µm,21.6s,baz=0.0,slow=32						
TXAR				PKPPKP		21 39 47.5	
	comp=Z,3.0nm,1.0s,baz=170,slow=0.8,SNR=7.3						
X40A	**Basin Creek Fa**	**62.67**	**339**	P	**P**	**21 10 43.0**	**-0.5**
	baz=157,SNR=13						
X40A				S	**S**	**21 19 06.8**	**-2.8**
	baz=157						
X40A	**Basin Creek Fa**	**62.67**	**339**	P	**P**	**21 10 43.7**	**+0.2**
U49A	**Red Boiling Sp**	**62.68**	**346**	IAmb	IAmb	21 10 45.7	
	comp=Z,221nm,1.1s						
WVT	**Waverly**	**62.79**	**344**	P	**P**	**21 10 42.7**	**-1.5**
WVT				pmax	pmax		
	comp=Z,321nm,1.1s						
WVT	**Waverly**	**62.79**	**344**	P	**P**	**21 10 42.7**	**-1.5**
	baz=162						
WVT				S	**S**	**21 19 05.5**	**-5.5**
	baz=162						
WVT	**Waverly**	**62.79**	**344**	⇑P	**P**	**21 10 42.6**	**-1.7**
WVT	**Waverly**	**62.79**	**344**	P	**P**	**21 10 42.7**	**-1.5**
HALT	**Halls**	**62.97**	**343**	P	**P**	**21 10 45.2**	**-0.3**
HALT				IAmb	IAmb	21 10 48.0	
	comp=Z,203nm,0.9s						
MIAR	**Mount Ida**	**62.97**	**339**	P	**P**	**21 10 44.6**	**-0.9**
MIAR				pmax	pmax		
	comp=Z,299nm,1.1s						
MIAR	**Mount Ida**	**62.97**	**339**	P	**P**	**21 10 45.0**	**-0.5**
	baz=157,SNR=167						
MIAR				S	**S**	**21 19 11.4**	**-1.9**
	baz=157						
MIAR	**Mount Ida**	**62.97**	**339**	⇑P	**P**	**21 10 44.8**	**-0.7**
MIAR	**Mount Ida**	**62.97**	**339**	P	**P**	**21 10 44.6**	**-0.9**
MIAR				IAmb	IAmb	21 10 49.0	
	comp=Z,299nm,1.1s						
T50A	**Nancy**	**62.97**	**347**	IAmb	IAmb	21 10 47.5	
	comp=Z,154nm,1.1s						
R61A	**Willards**	**62.97**	**356**	P	**P**	**21 10 44.2**	**-1.2**
HBAR	**Harrisburg**	**63.00**	**342**	P	**P**	**21 10 45.8**	**+0.1**
CBN	**Corbin Frederi**	**63.01**	**354**	P	**P**	**21 10 47.4**	**+1.7**
	baz=173						
CBN				S	**S**	**21 19 13.8**	**+0.1**
	baz=173						
CBN	**Corbin Frederi**	**63.01**	**354**	P	**P**	**21 10 46.3**	**+0.6**
CBN				IAmb	IAmb	21 10 48.9	
	comp=Z,299nm,1.3s						
S54A	**Dingess, Beckl**	**63.10**	**350**	IAmb	IAmb	21 10 48.8	
	comp=Z,295nm,1.1s						
W41B	**Gary Mavity, V**	**63.12**	**340**	P	**P**	**21 10 45.9**	**-0.6**
	baz=158,SNR=72						
W41B				S	**S**	**21 19 12.5**	**-2.7**
	baz=158						
LNXT	**Lenox**	**63.19**	**343**	P	**P**	**21 10 47.2**	**+0.3**
WHAR	**Wooly Hollow**	**63.24**	**340**	IAmb	IAmb	21 10 50.0	
	comp=Z,208nm,0.9s						
S51A	**Beattyville**	**63.33**	**348**	IAmb	IAmb	21 10 50.0	
	comp=Z,179nm,1.1s						
R55A	**Marlinton**	**63.41**	**352**	IAmb	IAmb	21 10 51.8	
	comp=Z,217nm,1.1s						
Q61A	**Milford**	**63.52**	**356**	P	**P**	**21 10 51.4**	**+2.4**
	baz=175						
ABTX	**Abilene, Hawle**	**63.53**	**333**	P	**P**	**21 10 49.3**	**0.0**
	baz=151,SNR=138						
ABTX				S	**S**	**21 19 19.0**	**-1.5**
	baz=151						
LCAR	**Lake Charles**	**63.62**	**341**	IAmb	IAmb	21 10 52.8	
	comp=Z,264nm,1.0s						
W39A	**Magazine**	**63.63**	**339**	P	**P**	**21 10 50.0**	**0.0**
	baz=157,SNR=85						
W39A				S	**S**	**21 19 20.5**	**-1.1**
	baz=157						
W39A	**Magazine**	**63.63**	**339**	P	**P**	**21 10 49.9**	**0.0**
W39A				IAmb	IAmb	21 10 53.3	
	comp=Z,320nm,1.1s						
R53A	**Hurricane**	**63.72**	**350**	IAmb	IAmb	21 10 52.7	
	comp=Z,142nm,1.1s						
FCAR	**Ozark Folk Cen**	**63.75**	**340**	IAmb	IAmb	21 10 53.0	
	comp=Z,307nm,1.2s						
LOOK	**Love County**	**63.75**	**335**		**P**	**21 10 51.0**	**+0.3**
HENM	**Henderson Moun**	**63.76**	**343**	P	**P**	**21 10 51.0**	**+0.3**
HENM				IAmb	IAmb	21 10 53.9	
	comp=Z,270nm,1.1s						
PBMO	**Poplar Bluff**	**64.08**	**342**	IAmb	IAmb	21 10 55.7	
	comp=Z,263nm,0.9s						
R50A	**Paris**	**64.09**	**348**	IAmb	IAmb	21 10 54.9	
	comp=Z,130nm,1.1s						
Q54A	**Coxs Mills**	**64.19**	**351**	IAmb	IAmb	21 10 55.7	
	comp=Z,108nm,1.0s						
R49A	**Shelbyville**	**64.27**	**347**	IAmb	IAmb	21 10 55.8	
	comp=Z,185nm,1.1s						
P61A	**Hammonton**	**64.27**	**356**	P	**P**	**21 10 54.4**	**+0.4**
NVL	**N'lazarevskaya**	**64.28**	**159**	*e*P	P	21 11 00.0	+6.3
NVL				*e*		21 11 37.4	
NVL				*e*S	**PP**	**21 13 17.9**	**+2.9**
NVL				pmax	pmax		
	comp=Z,344nm,1.2s						
NVL				MLR	MLR		
	comp=E,2µm,17.0s						
NVL				MLR	MLR		
	comp=Z,3µm,17.0s						
Q52A	**Bidwell**	**64.39**	**350**	IAmb	IAmb	21 10 57.0	
	comp=Z,170nm,1.1s						
U40A	**Yellville**	**64.40**	**340**	P	**P**	**21 10 54.3**	**-0.6**
	baz=158,SNR=170						
U40A				S	**S**	**21 19 27.1**	**-4.0**
	baz=158						
WCI	**Wyandotte Cave**	**64.44**	**346**	P	**P**	**21 10 53.3**	**-1.8**
WCI				pmax	pmax		
	comp=Z,283nm,1.0s						
WCI				MLR	MLR		
	comp=Z,5µm,22.0s						
WCI	**Wyandotte Cave**	**64.44**	**346**	P	**P**	**21 10 53.6**	**-1.5**
	baz=164						
WCI				S	**S**	**21 19 26.0**	**-5.4**
	baz=164						
WCI	**Wyandotte Cave**	**64.44**	**346**	⇑P	**P**	**21 10 53.3**	**-1.8**
WCI	**Wyandotte Cave**	**64.44**	**346**	P	**P**	**21 10 53.3**	**-1.8**
WCI				IAmb	IAmb	21 10 56.8	
	comp=Z,283nm,1.0s						
P60A	**Greenville**	**64.47**	**356**	P	**P**	**21 10 54.9**	**-0.3**
	baz=175,SNR=16						
P60A				S	**S**	**21 19 31.5**	**-0.2**
	baz=175						
P60A	**Greenville**	**64.47**	**356**	IAmb	IAmb	21 10 58.1	
	comp=Z,118nm,0.9s						
P60A				IAMs_20	IAMs_20	21 39 09.2	
	comp=Z,6µm,22.0s						
T42A	**Van Buren**	**64.50**	**342**	IAmb	IAmb	21 10 58.2	
	comp=Z,145nm,1.1s						
X34A	**Smith Ranch, M**	**64.54**	**335**		**P**	**21 10 55.6**	**-0.3**
S44A	**Carbondale**	**64.63**	**344**	IAmb	IAmb	21 10 58.6	
	comp=Z,276nm,0.9s						
Q51A	**Peebles**	**64.63**	**349**	IAmb	IAmb	21 10 58.5	
	comp=Z,182nm,1.0s						
HHAR	**Hobbs**	**64.68**	**339**	IAmb	IAmb	21 10 59.5	
	comp=Z,283nm,1.3s						
MVL	**Millersville**	**64.70**	**355**	IAmb	IAmb	21 11 00.1	
	comp=Z,166nm,1.0s						
MCWV	**Mont Chateau**	**64.73**	**352**	P	**P**	**21 10 57.0**	**0.0**
	baz=171,SNR=20						
MCWV				S	**S**	**21 19 34.4**	**-0.6**
	baz=171						
MCWV	**Mont Chateau**	**64.73**	**352**	IAmb	IAmb	21 10 60.0	
	comp=Z,180nm,1.0s						
P53A	**Whipple**	**64.77**	**351**	IAmb	IAmb	21 10 59.8	
	comp=Z,222nm,1.0s						
FNO	**Franklin**	**64.96**	**336**	P	**P**	**21 10 57.9**	**-0.7**
FNO				IAmb	IAmb	21 11 03.1	
	comp=Z,117nm,0.9s						
MGMO	**Mountain Grove**	**64.96**	**341**	IAmb	IAmb	21 11 01.3	
	comp=Z,288nm,1.1s						
TUL1	**Leonard**	**64.96**	**337**	P	**P**	**21 10 58.0**	**-0.5**
	baz=155,SNR=136						
TUL1				S	**S**	**21 19 35.6**	**-2.4**
	baz=155						
U38A	**Gravette**	**64.97**	**339**	IAmb	IAmb	21 11 01.3	
	comp=Z,210nm,1.2s						
WMOK	**Wichita Mounta**	**65.02**	**334**	P	**P**	**21 10 59.4**	**+0.4**
WMOK				pmax	pmax		
	comp=Z,68nm,1.2s						
WMOK	**Wichita Mounta**	**65.02**	**334**	P	**P**	**21 10 58.4**	**-0.7**
	baz=152						
WMOK				S	**S**	**21 19 37.4**	**-1.5**
	baz=152						
WMOK	**Wichita Mounta**	**65.02**	**334**	P	**P**	**21 10 59.4**	**+0.4**
P52A	**Corning**	**65.03**	**350**	P	**P**	**21 10 57.9**	**-1.0**
	baz=168,SNR=24						
P52A				S	**S**	**21 19 32.9**	**-5.8**
	baz=168						
P51A	**Williamsport**	**65.03**	**349**	IAmb	IAmb	21 11 00.8	
	comp=Z,276nm,1.1s						
MBO	**M'Bour**	**65.13**	**59**	P	**P**	**21 11 00.7**	**+0.7**
MBO				IAmb	IAmb	21 11 20.2	
	comp=Z,296nm,1.1s						
O56A	**Blue Knob Stat**	**65.18**	**353**	P	**P**	**21 10 59.8**	**-0.1**
	baz=172,SNR=72						
O56A				S	**S**	**21 19 39.7**	**-0.9**
	baz=172						
O56A	**Blue Knob Stat**	**65.18**	**353**	IAmb	IAmb	21 11 03.4	
	comp=Z,344nm,1.1s						
BRNJ	**Basking Ridge**	**65.27**	**357**	IAmb	IAmb	21 11 03.7	
	comp=Z,151nm,0.9s						
O54A	**Avella**	**65.31**	**352**	P	**P**	**21 11 01.1**	**+0.3**
OLIL	**Olney**	**65.33**	**345**	IAmb	IAmb	21 11 02.6	
	comp=Z,250nm,1.1s						
CPNY	**Central Park**	**65.34**	**357**	P	**P**	**21 11 01.4**	**+0.4**
MNTX	**Cornudas Mount**	**65.35**	**328**	P	**P**	**21 11 00.7**	**-0.5**
	baz=145,SNR=116						
MNTX				S	**S**	**21 19 43.4**	**+0.4**
	baz=145						
MNTX	**Cornudas Mount**	**65.35**	**328**	IAmb	IAmb	21 11 04.9	
	comp=Z,121nm,1.0s						
P49A	**Miami Univ. Ec**	**65.38**	**348**	P	**P**	**21 10 59.5**	**-1.7**
	baz=166,SNR=45						
P49A				S	**S**	**21 19 38.7**	**-4.2**
	baz=166						
P49A	**Miami Univ. Ec**	**65.38**	**348**	IAmb	IAmb	21 11 02.8	
	comp=Z,264nm,1.1s						
BCOK	**Bluff Creek, N**	**65.39**	**336**	IAmb	IAmb	21 11 04.0	
	comp=Z,219nm,1.0s						
BLO	**Bloomington**	**65.39**	**346**	IAmb	IAmb	21 11 03.0	
	comp=Z,120nm,1.0s						
QSPA	**South Pole Qui**	**65.40**	**180**	P	**P**	**21 11 01.4**	**+0.2**
QSPA				IAmb	IAmb	21 11 17.3	
	comp=Z,240nm,1.1s						
QSPA	**South Pole Qui**	**65.40**	**180**	IAMs_20	IAMs_20	21 38 41.0	
	comp=Z,6µm,22.0s						
P48A	**Milroy**	**65.44**	**347**	IAmb	IAmb	21 11 03.1	
	comp=Z,168nm,1.1s						
O52A	**Adamsville**	**65.45**	**350**	IAmb	IAmb	21 11 03.8	
	comp=Z,161nm,0.9s						
N62A	**Caumsett State**	**65.46**	**358**	P	**P**	**21 11 02.8**	**+1.1**
N62A				IAmb	IAmb	21 11 04.7	
	comp=Z,284nm,1.0s						
SSPA	**Standing Stone**	**65.47**	**354**	P	**P**	**21 11 01.6**	**-0.2**
	baz=173						
SSPA				S	**S**	**21 19 44.5**	**+0.4**
	baz=173						
SSPA	**Standing Stone**	**65.47**	**354**	⇑P	**P**	**21 11 01.6**	**-0.2**
SSPA	**Standing Stone**	**65.47**	**354**	P	**P**	**21 11 01.4**	**-0.4**
SSPA				IAmb	IAmb	21 11 05.0	
	comp=Z,206nm,1.1s						
SSPA	**Standing Stone**	**65.47**	**354**	IAMs_20	IAMs_20	21 40 19.8	
	comp=Z,6µm,22.0s						
O53A	**New Philadelph**	**65.49**	**351**	P	**P**	**21 11 01.1**	**-0.8**
	baz=169,SNR=14						
O53A				S	**S**	**21 19 40.8**	**-3.5**
	baz=169						
O53A	**New Philadelph**	**65.49**	**351**	IAmb	IAmb	21 11 04.3	
	comp=Z,155nm,1.1s						
CCM	**Cathedral Cave**	**65.50**	**342**	P	**P**	**21 11 01.1**	**-0.9**
CCM				pmax	pmax		
	comp=Z,366nm,1.1s						
CCM	**Cathedral Cave**	**65.50**	**342**	P	**P**	**21 11 01.2**	**-0.8**
	baz=160						
CCM				S	**S**	**21 19 41.4**	**-3.2**
	baz=160						
CCM	**Cathedral Cave**	**65.50**	**342**	⇑P	**P**	**21 11 01.1**	**-0.9**
CCM	**Cathedral Cave**	**65.50**	**342**	P	**P**	**21 11 01.1**	**-0.9**
QUOK	**Quay**	**65.52**	**337**	IAmb	IAmb	21 11 05.0	
	comp=Z,254nm,1.0s						
PAL	**Palisades**	**65.56**	**357**	P	**P**	**21 11 03.0**	**+0.7**
PAL				pmax	pmax		
	comp=Z,90nm,1.1s						
PAL				MLR	MLR		
	comp=Z,6µm,22.0s						
PAL	**Palisades**	**65.56**	**357**	P	**P**	**21 11 03.2**	**+0.9**
	baz=177,SNR=11						
PAL				S	**S**	**21 19 44.8**	**-0.2**
	baz=177						
PAL	**Palisades**	**65.56**	**357**	P	**P**	**21 11 03.0**	**+0.7**
PAL				IAMs_20	IAMs_20	21 39 30.1	
	comp=Z,6µm,22.0s						
N58A	**Sunbury**	**65.57**	**355**	IAmb	IAmb	21 11 05.8	
	comp=Z,212nm,1.1s						
N59A	**State Game Lan**	**65.57**	**356**	P	**P**	**21 11 02.9**	**+0.5**
	baz=175,SNR=36						
N59A				S	**S**	**21 19 46.5**	**+1.1**
	baz=175						
N59A	**State Game Lan**	**65.57**	**356**	IAmb	IAmb	21 11 06.0	
	comp=Z,142nm,1.0s						
N59A				IAMs_20	IAMs_20	21 39 52.5	
	comp=Z,6µm,21.0s						
WSPT	**Westport, CT**	**65.69**	**358**	IAmb	IAmb	21 11 06.4	
	comp=Z,262nm,1.2s						
WSPT				IAMs_20	IAMs_20	21 41 40.9	
	comp=Z,6µm,20.0s						
ACSO	**Alum Creek Sta**	**65.75**	**350**	P	**P**	**21 11 02.6**	**-1.0**
	baz=168,SNR=58						
ACSO				S	**S**	**21 19 43.5**	**-4.0**
	baz=168						
SLM	**Saint Louis**	**65.77**	**343**	IAmb	IAmb	21 11 06.1	
	comp=Z,264nm,1.1s						
YLE	**Yale**	**65.83**	**358**	P	**P**	**21 11 04.5**	**+0.5**
YLE				IAMs_20	IAMs_20	21 41 12.4	
	comp=Z,6µm,20.0s						
M63A	**Gales Ferry**	**65.89**	**359**	P	**P**	**21 11 05.5**	**+1.0**
O49A	**Covington**	**65.94**	**348**	IAmb	IAmb	21 11 07.2	
	comp=Z,248nm,1.0s						
EPT	**El Paso**	**65.96**	**327**	IAMs_20	IAMs_20	21 35 49.8	
	comp=Z,6µm,21.0s						
P46A	**Rosedale**	**65.97**	**346**	IAmb	IAmb	21 11 06.5	
	comp=Z,239nm,1.1s						
N53A	**Lisbon**	**65.99**	**351**	IAmb	IAmb	21 11 07.7	
	comp=Z,173nm,1.1s						
N54A	**Moraine State**	**66.03**	**352**	P	**P**	**21 11 05.0**	**-0.4**
	baz=171,SNR=32						
N54A				S	**S**	**21 19 48.8**	**-2.1**
	baz=171						
N54A	**Moraine State**	**66.03**	**352**	IAmb	IAmb	21 11 08.4	
	comp=Z,280nm,1.2s						
N54A				IAMs_20	IAMs_20	21 40 06.4	
	comp=Z,6µm,22.0s						
M57A	**Sunshine Farm,**	**66.10**	**355**	IAmb	IAmb	21 11 09.2	
	comp=Z,273nm,1.4s						
KSPA	**Keystone Colle**	**66.21**	**356**	IAmb	IAmb	21 11 09.9	
	comp=Z,149nm,1.0s						
KSCT	**Kent School, K**	**66.26**	**358**	IAmb	IAmb	21 11 10.2	
	comp=Z,192nm,1.4s						
UCCT	**U. Connecticut**	**66.28**	**359**	P	**P**	**21 11 07.2**	**+0.2**
UCCT				IAmb	IAmb	21 11 09.3	
	comp=Z,167nm,1.1s						
N51A	**Ashland**	**66.32**	**350**	P	**P**	**21 11 07.5**	**+0.3**
N51A				IAmb	IAmb	21 11 40.4	
	comp=Z,171nm,1.1s						
BRYW	**Bryant College**	**66.40**	**359**	IAMs_20	IAMs_20	21 39 33.5	
	comp=Z,5µm,21.0s						
L64A	**Middleborough**	**66.41**	**360**	IAmb	IAmb	21 11 11.1	
	comp=Z,184nm,1.0s						
M54A	**Oil Creek Stat**	**66.53**	**352**	P	**P**	**21 11 08.0**	**-0.6**
	baz=171,SNR=17						
M54A				S	**S**	**21 19 54.8**	**-2.1**
	baz=171						
M54A	**Oil Creek Stat**	**66.53**	**352**	IAmb	IAmb	21 11 11.2	
	comp=Z,257nm,1.1s						
M53A	**WI Miller and**	**66.59**	**352**	P	**P**	**21 11 08.6**	**-0.4**
	baz=170,SNR=13						
M53A				S	**S**	**21 19 54.6**	**-3.0**
	baz=170						

M53A	**WI Miller and**	**66.59**	**352**	IAMs_20	IAMs_20	21 40 25.1	
	comp=Z,6µm,21.0s						
SFIN	**Lafayette**	**66.67**	**346**	P	**P**	**21 11 07.7**	**-1.8**
	baz=164,SNR=21						
SFIN				S	**S**	**21 19 52.2**	**-6.5**
	baz=164						
SFIN	**Lafayette**	**66.67**	**346**	IAmb	IAmb	21 11 10.9	
	comp=Z,198nm,1.1s						
KAN17	**Caldwell West**	**66.68**	**336**	P	**P**	**21 11 09.1**	**-0.6**
KAN17				IAmb	IAmb	21 11 12.7	
	comp=Z,229nm,1.1s						
ALLY	**Alegheny Colle**	**66.72**	**352**	P	**P**	**21 11 09.3**	**-0.5**
ALLY				IAmb	IAmb	21 11 12.4	
	comp=Z,303nm,1.1s						
QUA2	**Belchertown**	**66.77**	**358**	P	**P**	**21 11 10.1**	**0.0**
QUA2				IAmb	IAmb	21 11 13.4	
	comp=Z,222nm,1.4s						
QUA2				IAMs_20	IAMs_20	21 40 08.4	
	comp=Z,6µm,21.0s						
M52A	**Chesterland**	**66.78**	**351**	P	**P**	**21 11 09.4**	**-0.8**
M52A				IAmb	IAmb	21 11 12.5	
	comp=Z,210nm,1.0s						
BCX	**Boston College**	**66.81**	**359**	IAMs_20	IAMs_20	21 40 08.5	
	comp=Z,6µm,22.0s						
WES	**Weston**	**66.86**	**359**	IAMs_20	IAMs_20	21 39 57.8	
	comp=Z,6µm,21.0s						
BINY	**Binghamton**	**66.86**	**356**	P	**P**	**21 11 10.9**	**+0.2**
	baz=175,SNR=49						
BINY				S	**S**	**21 19 59.9**	**-1.1**
	baz=175						
BINY	**Binghamton**	**66.86**	**356**	P	**P**	**21 11 10.6**	**-0.1**
BINY				IAmb	IAmb	21 11 14.1	
	comp=Z,299nm,1.1s						
BINY				IAMs_20	IAMs_20	21 40 31.7	
	comp=Z,6µm,22.0s						
L61B	**Northampton**	**66.95**	**358**	P	**P**	**21 11 11.5**	**+0.3**
	baz=178,SNR=46						
L61B				S	**S**	**21 20 00.8**	**-1.2**
	baz=178						
HRV	**Adam Dziewonsk**	**66.98**	**359**	P	**P**	**21 11 11.4**	**0.0**
HRV				pmax	pmax		
	comp=Z,320nm,1.0s						
HRV				MLR	MLR		
	comp=Z,6µm,22.0s						
HRV	**Adam Dziewonsk**	**66.98**	**359**	P	**P**	**21 11 11.8**	**+0.4**
	baz=179						
HRV	**Adam Dziewonsk**	**66.98**	**359**	⇑P	**P**	**21 11 11.7**	**+0.2**
HRV	**Adam Dziewonsk**	**66.98**	**359**	P	**P**	**21 11 11.4**	**0.0**
HRV	**Adam Dziewonsk**	**66.98**	**359**	IAMs_20	IAMs_20	21 40 12.1	
	comp=Z,6µm,22.0s						
319A	**Douglas**	**67.08**	**324**	P	**P**	**21 11 12.9**	**+0.4**
319A				IAmb	IAmb	21 11 17.8	
	comp=Z,242nm,1.0s						
ERPA	**Erie**	**67.17**	**352**	P	**P**	**21 11 13.5**	**+0.8**
	baz=171,SNR=12						
ERPA	**Erie**	**67.17**	**352**	IAMs_20	IAMs_20	21 43 08.6	
	comp=Z,6µm,19.0s						
121A	**Cookes Peak, D**	**67.22**	**326**	P	**P**	**21 11 14.8**	**+1.4**
	baz=144,SNR=54						
121A				S	**S**	**21 20 09.0**	**+3.1**
	baz=144						
121A	**Cookes Peak, D**	**67.22**	**326**	P	**P**	**21 11 13.6**	**+0.2**
121A				IAmb	IAmb	21 11 18.4	
	comp=Z,133nm,1.0s						
TRY	**Troy**	**67.27**	**357**	IAMs_20	IAMs_20	21 40 29.4	
	comp=Z,6µm,22.0s						
HDIL	**Hopedale**	**67.35**	**345**	P	**P**	**21 11 12.6**	**-1.2**
	baz=162,SNR=20						
AAM	**Ann Arbor**	**67.88**	**349**	P	**P**	**21 11 16.7**	**-0.4**
AAM				pmax	pmax		
	comp=Z,133nm,1.2s						
AAM				MLR	MLR		
	comp=Z,6µm,21.0s						
AAM	**Ann Arbor**	**67.88**	**349**	S	**S**	**21 20 07.9**	**-5.1**
	baz=167						
AAM	**Ann Arbor**	**67.88**	**349**	P	**P**	**21 11 16.7**	**-0.4**
AAM				IAmb	IAmb	21 11 19.1	
	comp=Z,133nm,1.1s						
AAM				IAMs_20	IAMs_20	21 43 53.1	
	comp=Z,6µm,21.0s						
TAOE	**Nuku Hiva Isla**	**67.93**	**270**	*e*S	**S**	**21 20 12.0**	**-3.1**
	comp=Z,4µm,26.4s						
TAOE	**Nuku Hiva Isla**	**67.93**	**270**	*e*LR	LR	21 31 46.2	
	comp=Z,13µm,26.6s,baz=121						
TAOE	**Nuku Hiva Isla**	**67.93**	**270**	*e*T	T	22 24 37.2	
	comp=Z,35nm,0.2s						
BNM	**Barren Site**	**67.95**	**328**	P	**P**	**21 11 18.7**	**+0.7**
Y22D	**IRIS PASSCAL I**	**68.03**	**328**	S	**S**	**21 20 18.4**	**+2.8**
	baz=145						
MEDO	**Medina**	**68.03**	**354**	P	**P**	**21 11 17.6**	**-0.4**
MEDO				IAmb	IAmb	21 11 19.8	
	comp=Z,208nm,1.1s						
KSU1	**Kansas State U**	**68.12**	**338**	P	**P**	**21 11 18.0**	**-0.7**
	baz=155,SNR=23						
KSU1				S	**S**	**21 20 11.6**	**-4.5**
	baz=155						
KSU1	**Kansas State U**	**68.12**	**338**	⇓P	**P**	**21 11 19.1**	**+0.4**
KSU1	**Kansas State U**	**68.12**	**338**	P	**P**	**21 11 17.8**	**-0.9**
KSU1				IAmb	IAmb	21 11 21.2	
	comp=Z,218nm,1.1s						
HNH	**Hanover**	**68.20**	**359**	IAMs_20	IAMs_20	21 41 01.1	
	comp=Z,5µm,21.0s						
HQIL	**Hanson Quary C**	**68.20**	**346**	IAMs_20	IAMs_20	21 45 30.5	
	comp=Z,5µm,20.0s						
I62A	**Tamworth**	**68.35**	**359**	P	**P**	**21 11 20.3**	**+0.2**
I62A				IAmb	IAmb	21 11 23.9	
	comp=Z,207nm,1.1s						
ANMO	**Albuquerque**	**68.52**	**329**	PKP2bc	**P'P'df**	**21 39 37.7**	**+4.3**
	baz=266,slow=3.1						
ANMO	**Albuquerque**	**68.52**	**329***c*	*i*P	**P**	**21 11 22.5**	**+0.9**
ANMO				pmax	pmax		
	comp=Z,147nm,1.3s						
ANMO				MLR	MLR		
	comp=Z,2µm,17.0s						
ANMO	**Albuquerque**	**68.52**	**329**	P	**P**	**21 11 22.6**	**+0.9**
	baz=145						
ANMO				S	**S**	**21 20 23.3**	**+1.8**
	baz=145						
ANMO	**Albuquerque**	**68.52**	**329**	⇑P	**P**	**21 11 22.5**	**+0.9**
ANMO	**Albuquerque**	**68.52**	**329**	P	**P**	**21 11 21.9**	**+0.4**
ANMO				IAmb	IAmb	21 11 26.2	
	comp=Z,129nm,1.1s						
I63A	**Otisfield**	**68.52**	**360**	P	**P**	**21 11 21.5**	**+0.5**
I63A				IAmb	IAmb	21 11 25.2	
	comp=Z,301nm,1.2s						
L44A	**Lake County Fo**	**68.57**	**346**	P	**P**	**21 11 22.1**	**+0.6**
	baz=163,SNR=8.9						
L44A	**Lake County Fo**	**68.57**	**346**	IAMs_20	IAMs_20	21 44 22.4	
	comp=Z,6µm,22.0s						
TUC	**Tucson**	**68.60**	**324**	P	**P**	**21 11 22.4**	**+0.4**
TUC				pmax	pmax		
	comp=Z,133nm,1.1s						
TUC	**Tucson**	**68.60**	**324**	P	**P**	**21 11 23.1**	**+1.1**
	baz=141						
TUC				S	**S**	**21 20 25.7**	**+3.4**
	baz=141						
TUC	**Tucson**	**68.60**	**324**	⇑P	**P**	**21 11 22.7**	**+0.7**
TUC	**Tucson**	**68.60**	**324**	P	**P**	**21 11 22.4**	**+0.4**
TUC				IAmb	IAmb	21 11 27.3	
	comp=Z,133nm,1.1s						
PECO	**Prince Edward**	**68.67**	**355**	IAmb	IAmb	21 11 24.9	
	comp=Z,318nm,1.1s						
LBNH	**Lisbon**	**68.72**	**359**	P	**P**	**21 11 23.0**	**+0.7**
	baz=179,SNR=45						
LBNH				S	**S**	**21 20 26.0**	**+2.8**
	baz=179						
LBNH	**Lisbon**	**68.72**	**359**	IAmb	IAmb	21 11 26.3	
	comp=Z,317nm,1.1s						
LBNH				IAMs_20	IAMs_20	21 41 16.1	
	comp=Z,5µm,22.0s						
VT1	**Waterbury**	**68.83**	**358**	IAMs_20	IAMs_20	21 40 49.7	
	comp=Z,5µm,21.0s						
CBKS	**Cedar Bluff**	**68.97**	**336**	P	**P**	**21 11 24.4**	**+0.3**
	baz=152,SNR=139						
CBKS				S	**S**	**21 20 26.2**	**-0.2**
	baz=152						
CBKS	**Cedar Bluff**	**68.97**	**336**	⇑P	**P**	**21 11 24.3**	**+0.2**
K43A	**Burlington**	**69.17**	**346**	P	**P**	**21 11 25.0**	**-0.1**
LONY	**Lake Ozonia**	**69.19**	**357**	P	**P**	**21 11 25.3**	**0.0**
	baz=176,SNR=64						
LONY				S	**S**	**21 20 28.6**	**-0.1**
	baz=176						
LONY	**Lake Ozonia**	**69.19**	**357**	P	**P**	**21 11 25.1**	**-0.2**
LONY				IAmb	IAmb	21 11 28.6	
	comp=Z,274nm,1.1s						
LONY				IAMs_20	IAMs_20	21 43 50.4	
	comp=Z,5µm,20.0s						
EMMW	**East Machias**	**69.23**	**2**	P	**P**	**21 11 25.2**	**-0.2**
EMMW				IAmb	IAmb	21 11 29.1	
	comp=Z,227nm,1.0s						
EMMW				IAMs_20	IAMs_20	21 40 02.8	
	comp=Z,6µm,22.0s						
DELO	**Deloro Mine**	**69.30**	**355**	P	**P**	**21 11 25.6**	**-0.3**
DELO				IAmb	IAmb	21 11 28.7	
	comp=Z,248nm,1.3s						
HAL	**Halifax**	**69.39**	**5**	P	**P**	**21 11 26.0**	**-0.5**
HAL				pmax	pmax		
	comp=Z,190nm,1.1s						
HAL	**Halifax**	**69.39**	**5**	P	**P**	**21 11 26.0**	**-0.5**
HAL				IAmb	IAmb	21 11 30.0	
	comp=Z,190nm,1.1s						
T25A	**Trinidad**	**69.41**	**332**	P	**P**	**21 11 28.0**	**+0.9**
	baz=147,SNR=84						
T25A				S	**S**	**21 20 34.5**	**+2.4**
	baz=147						
T25A	**Trinidad**	**69.41**	**332**	P	**P**	**21 11 27.3**	**+0.3**
T25A				IAmb	IAmb	21 11 31.6	
	comp=Z,194nm,1.1s						
214A	**Organ Pipe Nat**	**69.44**	**322**	P	**P**	**21 11 28.6**	**+1.4**
	baz=139,SNR=151						
214A				S	**S**	**21 20 32.9**	**+0.7**
	baz=139						
SCIA	**State Center**	**69.64**	**342**	P	**P**	**21 11 28.4**	**+0.3**
	baz=158,SNR=19						
SCIA				S	**S**	**21 20 30.6**	**-3.4**
	baz=158						
SCIA	**State Center**	**69.64**	**342**	IAmb	IAmb	21 11 31.5	
	comp=Z,239nm,1.0s						
GGN	**Saint George**	**69.67**	**3**	P	**P**	**21 11 28.4**	**+0.3**
GGN				IAmb	IAmb	21 11 31.9	
	comp=Z,223nm,1.1s						
G62A	**West of Eustis**	**69.69**	**360**	P	**P**	**21 11 28.3**	**0.0**
SADO	**Sadowa**	**69.69**	**353**	⇑P	**P**	**21 11 27.4**	**-0.9**
PKME	**Peaks-Kenny Pk**	**69.74**	**1**	P	**P**	**21 11 29.0**	**+0.4**
	baz=181,SNR=36						
PKME				S	**S**	**21 20 35.9**	**+0.9**
	baz=181						
PKME	**Peaks-Kenny Pk**	**69.74**	**1**	IAMs_20	IAMs_20	21 42 32.2	
	comp=Z,6µm,22.0s						
MOQ	**Mont Orford**	**69.80**	**359**	P	**P**	**21 11 29.3**	**+0.2**
JFWS	**Jewell Farm**	**69.81**	**345**	P	**P**	**21 11 29.6**	**+0.5**
	baz=161,SNR=24						
JFWS				S	**S**	**21 20 32.2**	**-3.8**
	baz=161						
JFWS	**Jewell Farm**	**69.81**	**345**	IAMs_20	IAMs_20	21 46 40.0	
	comp=Z,5µm,20.0s						
MNTQ	**Montreal, Queb**	**70.03**	**358**	⇑P	**P**	**21 11 30.4**	**+0.1**
MNTQ	**Montreal, Queb**	**70.03**	**358**	P	**P**	**21 11 30.3**	**-0.1**
W18A	**Petrified Fore**	**70.25**	**327**	P	**P**	**21 11 33.7**	**+1.4**
	baz=143,SNR=45						
W18A				S	**S**	**21 20 45.9**	**+4.0**
	baz=143						
W18A	**Petrified Fore**	**70.25**	**327**	P	**P**	**21 11 32.4**	**+0.1**
W18A				IAmb	IAmb	21 11 47.2	
	comp=Z,292nm,1.1s						
KSCO	**Kaye Shedlock'**	**70.25**	**334**	P	**P**	**21 11 33.0**	**+0.9**
	baz=149,SNR=32						
KSCO				S	**S**	**21 20 42.3**	**+0.7**
	baz=149						
GAC	**Glen Almond**	**70.32**	**356**	⇑P	**P**	**21 11 31.9**	**-0.2**
GBN	**Guysborough**	**70.35**	**7**	P	**P**	**21 11 32.6**	**+0.2**
GBN				IAmb	IAmb	21 11 35.5	
	comp=Z,147nm,1.2s						
F64A	**Sherman**	**70.36**	**2**	P	**P**	**21 11 32.5**	**+0.2**
F64A				IAmb	IAmb	21 11 36.0	
	comp=Z,303nm,1.1s						
F62A	**Pittston Farm,**	**70.37**	**0**	P	**P**	**21 11 32.6**	**+0.1**
F62A				IAmb	IAmb	21 11 36.2	
	comp=Z,176nm,1.1s						
SDCO	**Great Sand Dun**	**70.39**	**331**	P	**P**	**21 11 34.1**	**+0.9**
	baz=147,SNR=271						
SDCO				S	**S**	**21 20 46.2**	**+2.5**
	baz=147						
SDCO	**Great Sand Dun**	**70.39**	**331**	P	**P**	**21 11 33.3**	**+0.1**
SDCO				IAmb	IAmb	21 11 38.3	
	comp=Z,182nm,1.1s						
I42A	**Draeger Farm,**	**70.43**	**346**	IAmb	IAmb	21 11 35.4	
	comp=Z,230nm,1.2s						
GLMI	**Grayling**	**70.49**	**349**	P	**P**	**21 11 34.3**	**+1.1**
	baz=167,SNR=11						
GLMI	**Grayling**	**70.49**	**349**	IAmb	IAmb	21 11 35.9	
	comp=Z,341nm,1.1s						
GLMI				IAMs_20	IAMs_20	21 45 22.3	
	comp=Z,7µm,20.0s						
LMN	**Caledonia Moun**	**70.51**	**4**	P	**P**	**21 11 33.5**	**+0.1**
LMN				IAmb	IAmb	21 11 36.4	
	comp=Z,208nm,1.1s						
LIC	**Lamto**	**70.70**	**73**	*e*P	**P**	**21 11 34.3**	**-0.9**
	comp=Z,356nm,1.1s						
BGNE	**Belgrade**	**70.70**	**338**	P	**P**	**21 11 34.7**	**0.0**
	baz=154,SNR=53						
BGNE				S	**S**	**21 20 44.2**	**-2.4**
	baz=154						
TRQ	**Mont Tremblant**	**70.79**	**357**	P	**P**	**21 11 34.5**	**-0.7**
TIC	**Toumodi**	**70.91**	**73**	*e*P	**P**	**21 11 35.6**	**-0.9**
S22A	**4UR Ranch, Cre**	**70.98**	**330**	P	**P**	**21 11 37.6**	**+0.8**
	baz=146,SNR=45						
S22A				S	**S**	**21 20 53.1**	**+2.5**
	baz=146						
KIC	**Kosan Boka**	**71.02**	**73**	*e*P	**P**	**21 11 36.4**	**-0.8**
	comp=Z,132nm,0.6s						
DBIC	**Dimbokro**	**71.06**	**73**	P	**P**	**21 11 36.9**	**-0.6**
	comp=Z,187nm,0.9s,baz=241,slow=5.4,SNR=39						
DBIC				S	S	21 20 43.3	-8.5
	comp=Z,7.5nm,1.1s,baz=266,slow=2.3,SNR=1.8						
DBIC				LR	LR	21 41 05.1	
	comp=Z,23µm,20.6s,baz=245,slow=34						
DBIC	**Dimbokro**	**71.06**	**73**	⇑P	**P**	**21 11 36.8**	**-0.6**
DBIC	**Dimbokro**	**71.06**	**73**	P	**P**	**21 11 36.6**	**-0.8**
PQI	**Presque Isle**	**71.18**	**2**	P	**P**	**21 11 37.4**	**+0.1**
PQI				IAmb	IAmb	21 11 40.8	
	comp=Z,199nm,1.1s						
PQI				IAMs_20	IAMs_20	21 41 13.2	
	comp=Z,5µm,22.0s						
Q24A	**Divide**	**71.26**	**332**	P	**P**	**21 11 39.2**	**+0.8**
	baz=147,SNR=159						
Q24A				S	**S**	**21 20 55.6**	**+1.9**
	baz=147						
MVCO	**Mesa Verde**	**71.32**	**329**	P	**P**	**21 11 39.7**	**+0.9**
	baz=144,SNR=108						
MVCO				S	**S**	**21 20 57.9**	**+3.6**
	baz=144						
MVCO	**Mesa Verde**	**71.32**	**329**	P	**P**	**21 11 39.5**	**+0.7**
MVCO				IAmb	IAmb	21 11 53.5	
	comp=Z,217nm,1.1s						
MVCO				IAMs_20	IAMs_20	21 39 19.6	
	comp=Z,5µm,21.0s						
GLA	**Glamis**	**71.38**	**322**	P	**P**	**21 11 39.7**	**+0.7**
GLA				pmax	pmax		
	comp=Z,95nm,1.1s						
GLA	**Glamis**	**71.38**	**322**	P	**P**	**21 11 41.2**	**+2.2**
	baz=138,SNR=13						
GLA				S	**S**	**21 20 58.8**	**+3.9**
	baz=138						
GLA	**Glamis**	**71.38**	**322**	P	**P**	**21 11 39.7**	**+0.7**
WUAZ	**Wupatki**	**71.40**	**326**	P	**P**	**21 11 40.2**	**+1.0**
	baz=141,SNR=100						
WUAZ				S	**S**	**21 20 59.6**	**+4.4**
	baz=141						
WUAZ	**Wupatki**	**71.40**	**326**	⇑P	**P**	**21 11 40.4**	**+1.2**
WUAZ	**Wupatki**	**71.40**	**326**	P	**P**	**21 11 39.6**	**+0.4**
WUAZ				IAmb	IAmb	21 11 44.8	
	comp=Z,168nm,1.0s						
WUAZ				IAMs_20	IAMs_20	21 38 51.4	
	comp=Z,7µm,22.0s						
IKP	**In-Ko-Pah, Jac**	**71.82**	**321**	P	**P**	**21 11 43.2**	**+1.5**
	baz=137,SNR=21						
SWSC	**Sam W. Stewart**	**71.86**	**321**	P	**P**	**21 11 44.2**	**+2.5**
	baz=137,SNR=8.6						
SWSC				S	**S**	**21 21 06.8**	**+6.6**
	baz=137						
BATG	**Bathurst New B**	**71.86**	**3**	P	**P**	**21 11 41.5**	**0.0**
BATG				IAmb	IAmb	21 11 44.9	
	comp=Z,171nm,1.1s						
CBX	**Cerro Bola**	**71.90**	**320**	P	**P**	**21 11 41.8**	**-0.4**
PDMCI	**Parker Dam,Lak**	**71.94**	**323**	P	**P**	**21 11 44.6**	**+2.4**
	baz=139,SNR=14						
PDMCI				S	**S**	**21 21 06.6**	**+5.5**
	baz=139						
G40A	**Rib Lake**	**72.02**	**345**	P	**P**	**21 11 43.0**	**+0.4**
ISCO	**Idaho Springs**	**72.15**	**332**	P	**P**	**21 11 44.1**	**+0.3**
ISCO				pmax	pmax		
	comp=Z,103nm,1.1s						
ISCO				MLR	MLR		
	comp=Z,2µm,20.0s						
ISCO	**Idaho Springs**	**72.15**	**332**	P	**P**	**21 11 44.4**	**+0.6**
	baz=147,SNR=101						
ISCO				S	**S**	**21 21 06.5**	**+2.5**
	baz=147						
ISCO	**Idaho Springs**	**72.15**	**332**	P	**P**	**21 11 44.1**	**+0.3**
MONP2	**Monument Peak**	**72.18**	**321**	P	**P**	**21 11 46.4**	**+2.4**
	baz=137,SNR=19						
MONP2				S	**S**	**21 21 08.9**	**+4.6**
	baz=137						
BC3	**Big Chuckawall**	**72.18**	**322**	P	**P**	**21 11 45.0**	**+1.2**
	baz=138,SNR=84						
BC3				S	**S**	**21 21 10.1**	**+5.9**
	baz=138						
SMCO	**Snowmass**	**72.22**	**331**	⇑P	**P**	**21 11 45.6**	**+1.2**
SMCO	**Snowmass**	**72.22**	**331**	P	**P**	**21 11 44.2**	**-0.2**
SMCO				IAmb	IAmb	21 11 49.2	
	comp=Z,205nm,1.1s						
ECSD	**EROS Data Cent**	**72.31**	**340**	P	**P**	**21 11 43.7**	**-0.5**
	baz=155,SNR=181						
ECSD				S	**S**	**21 21 02.8**	**-2.2**
	baz=155						
ECSD	**EROS Data Cent**	**72.31**	**340**	IAmb	IAmb	21 11 47.3	
	comp=Z,324nm,1.1s						
SBA	**Scott Base**	**72.33**	**191**	P	**P**	**21 11 44.3**	**+0.3**
SBA				pmax	pmax		
	comp=Z,232nm,1.7s						
SBA	**Scott Base**	**72.33**	**191**	P	**P**	**21 11 44.3**	**+0.3**
SBA				IAmb	IAmb	21 13 06.3	
	comp=Z,232nm,1.7s						
IRM	**Iron Mountain**	**72.38**	**322**	P	**P**	**21 11 46.1**	**+1.1**
	baz=138,SNR=70						
IRM				S	**S**	**21 21 11.0**	**+4.8**
	baz=138						
W13A	**Hualapai Mount**	**72.39**	**324**	P	**P**	**21 11 45.7**	**+0.5**
E43A	**Lone Tree Farm**	**72.41**	**348**	P	**P**	**21 11 45.1**	**+0.2**
E43A				IAmb	IAmb	21 11 47.2	
	comp=Z,144nm,1.1s						
109C	**Camp Elliot, M**	**72.57**	**320**	P	**P**	**21 11 48.4**	**+2.3**
	baz=136						
109C				S	**S**	**21 21 12.8**	**+4.5**
	baz=136						
COWI	**Conover**	**72.58**	**347**	IAmb	IAmb	21 11 48.5	
	comp=Z,178nm,1.2s						
SPMN	**Marine on St.**	**72.61**	**344**	P	**P**	**21 11 45.1**	**-0.9**
	baz=159,SNR=44						
SPMN				S	**S**	**21 21 04.7**	**-3.6**
	baz=159						
SPMN	**Marine on St.**	**72.61**	**344**	IAmb	IAmb	21 11 48.4	
	comp=Z,229nm,1.1s						
TPFO	**Pinon Flats**	**72.71**	**321**	P	**P**	**21 11 49.0**	**+1.9**
	baz=137,SNR=18						
PFO	**Pinyon Flats O**	**72.72**	**321**	P	**P**	**21 11 48.8**	**+1.7**
PFO				pmax	pmax		
	comp=Z,104nm,1.2s						
PFO				MLR	MLR		
	comp=Z,6µm,22.0s						
PFO	**Pinyon Flats O**	**72.72**	**321**	P	**P**	**21 11 49.8**	**+2.7**
	baz=137,SNR=20						
PFO				S	**SKiKP**	**21 21 16.6**	**-2.0**
	baz=137						
PFO	**Pinyon Flats O**	**72.72**	**321**	P	**P**	**21 11 48.8**	**+1.7**
PFO	**Pinyon Flats O**	**72.72**	**321**	IAMs_20	IAMs_20	21 37 23.4	
	comp=Z,6µm,22.0s						
BELC	**Belle Mtn. Jos**	**72.74**	**322**	P	**P**	**21 11 49.8**	**+2.6**
	baz=138,SNR=16						
BELC				S	**SKiKP**	**21 21 16.0**	**-2.7**
	baz=138						
VLDQ	**Val d'Or**	**72.85**	**355**	IAmb	IAmb	21 11 50.4	
	comp=Z,324nm,1.1s						
GMRC	**Granite Mounta**	**73.13**	**322**	P	**P**	**21 11 50.9**	**+1.4**
	baz=138,SNR=81						
GMRC				S	**SKiKP**	**21 21 18.3**	**-0.9**
	baz=138						
MURC	**Murrieta**	**73.13**	**321**	P	**P**	**21 11 51.2**	**+1.8**
	baz=136,SNR=17						
MURC				S	**SKiKP**	**21 21 20.6**	**+1.5**
	baz=136						
PPT2	**Papeete2**	**73.19**	**258**	*e*S	**S**	**21 21 12.2**	**-4.1**
	comp=Z,11µm,29.5s						
PPT2	**Papeete2**	**73.19**	**258**	*e*LR	LR	21 34 09.3	
	comp=Z,43µm,28.5s,baz=113						
PPT	**Papeete**	**73.20**	**258**	LR	LR	21 35 49.9	
	comp=Z,5µm,20.5s,baz=96,slow=29						
N23A	**Red Feather La**	**73.20**	**333**	P	**P**	**21 11 50.9**	**+0.9**
	baz=147,SNR=75						
N23A				S	**S**	**21 21 16.9**	**+1.0**
	baz=147						
KNB	**Kanab**	**73.30**	**326**	P	**P**	**21 11 51.9**	**+1.4**
KNB				pmax	pmax		
	comp=Z,386nm,1.2s						
KNB	**Kanab**	**73.30**	**326**	P	**P**	**21 11 51.9**	**+1.4**
KNB				IAmb	IAmb	21 12 06.1	
	comp=Z,386nm,1.2s						
VNDA	**Vanda**	**73.35**	**190**	P	**P**	**21 11 50.4**	**+0.3**
	comp=Z,14nm,0.9s,baz=126,slow=4.4,SNR=14						
VNDA				S	**S**	**21 21 09.0**	**-7.2**
	comp=Z,2.2nm,1.0s,baz=331,slow=9.4,SNR=1.8						
VNDA	**Vanda**	**73.35**	**190**	P	**P**	**21 11 50.9**	**+0.8**
VNDA	**Vanda**	**73.35**	**190**	P	**P**	**21 11 50.9**	**+0.8**
PKCU	**Pink Cliffs**	**73.36**	**326**	P	**P**	**21 11 52.0**	**+0.9**
F36A	**Milaca**	**73.39**	**343**	IAmb	IAmb	21 11 53.1	
	comp=Z,189nm,1.0s						
BBRC	**Big Bear Solar**	**73.45**	**321**	P	**P**	**21 11 55.9**	**+4.3**
	baz=137						
HEC	**Hector,Ludlow**	**73.54**	**322**	P	**P**	**21 11 53.3**	**+1.5**
	baz=137,SNR=65						
HEC				S	**SKiKP**	**21 21 25.1**	**+5.3**
	baz=137						
O20A	**White River Ci**	**73.57**	**331**	P	**P**	**21 11 53.0**	**+0.9**
	baz=145,SNR=130						
O20A				S	**SKiKP**	**21 21 23.4**	**+3.5**
	baz=145						
O20A	**White River Ci**	**73.57**	**331**	IAmb	IAmb	21 11 57.2	
	comp=Z,237nm,1.0s						
E38A	**The Farm, Brul**	**73.60**	**345**	IAmb	IAmb	21 11 54.3	
	comp=Z,156nm,1.0s						
H07S1	**FLORES T-PHASE**	**73.64**	**31**	*e*P	**P**	**21 11 54.2**	**+1.9**
SUSD	**Miller**	**73.68**	**339**	P	**P**	**21 11 52.1**	**-0.3**
	baz=153,SNR=19						
SUSD				S	**SKiKP**	**21 21 19.4**	**-0.2**
	baz=153						
SUSD	**Miller**	**73.68**	**339**	IAmb	IAmb	21 11 55.4	
	comp=Z,359nm,1.0s						
CIS	**Catalina Islan**	**73.70**	**320**	S	**S**	**21 21 26.3**	**+5.0**
	baz=136						
TUQ	**Turquoise Moun**	**73.75**	**323**	P	**P**	**21 11 54.6**	**+1.4**
	baz=138,SNR=20						
TUQ				S	**S**	**21 21 27.5**	**+5.4**
	baz=138						
SRU	**San Rafael Swe**	**73.80**	**329**	IAmb	IAmb	21 12 07.9	
	comp=Z,144nm,1.0s						
BFSC	**Mount Baldy Ra**	**73.86**	**321**	P	**P**	**21 11 54.8**	**+1.0**
	baz=136,SNR=22						
BFSC				S	**S**	**21 21 28.5**	**+5.3**
	baz=136						
SYO	**Syowa Base**	**73.92**	**159**	⇓*e*P	**P**	**21 11 51.2**	**-2.4**
SYO	**Syowa Base**	**73.92**	**159**	⇑*e*pP	pP	21 12 02.4	-2.3
SYO	**Syowa Base**	**73.92**	**159**	⇓*e*sP	sP	21 12 06.0	-2.4
H07N1	**FLORES T-PHASE**	**73.93**	**31**	*e*P	**P**	**21 11 56.3**	**+2.3**
RRX	**Edison Barstow**	**73.94**	**322**	P	**P**	**21 11 57.6**	**+3.4**
	baz=137,SNR=5.1						
Q16A	**Castle Valley**	**73.95**	**328**	IAmb	IAmb	21 12 10.0	
	comp=Z,145nm,1.1s						
CCUT	**Cedar City**	**73.98**	**326**	IAmb	IAmb	21 12 00.6	
	comp=Z,226nm,1.0s						
MACI	**Morro de la Ar**	**74.03**	**48**	P	**P**	**21 11 55.6**	**+0.6**
MACI				IAmb	IAmb	21 11 60.0	
	comp=Z,226nm,1.0s						
P18A	**Preston Nutter**	**74.08**	**329**	IAmb	IAmb	21 11 59.9	
	comp=Z,206nm,1.1s						
F33A	**5 Mile Ranch,**	**74.13**	**342**	IAmb	IAmb	21 11 57.5	
	comp=Z,154nm,1.1s						
GSC	**Goldstone, Bar**	**74.14**	**322**	P	**P**	**21 11 56.4**	**+1.0**
GSC				pmax	pmax		
	comp=Z,73nm,1.1s						
GSC	**Goldstone, Bar**	**74.14**	**322**	P	**P**	**21 11 56.7**	**+1.3**
	baz=137,SNR=45						
GSC				S	**S**	**21 21 31.3**	**+4.9**
	baz=137						
GSC	**Goldstone, Bar**	**74.14**	**322**	P	**P**	**21 11 56.4**	**+1.0**
P17A	**Butcher Ranch,**	**74.19**	**329**	IAmb	IAmb	21 12 10.3	
	comp=Z,188nm,1.1s						
CALA	**Caldeira**	**74.21**	**33**	*e*P	**P**	**21 11 57.3**	**+1.6**
	comp=Z,438nm,1.4s						
PCAN	**Candelaria**	**74.23**	**33**	*e*P	**P**	**21 11 57.9**	**+2.2**
	comp=Z,359nm,1.3s						

PCED	Cedros	74.25	33	*e*P	P	21 11 57.0	+1.2
	comp=Z,367nm,1.1s						
DECC	Green Verdugo	74.26	320	P	P	21 11 58.9	+2.8
	baz=136,SNR=11						
PICO	Pico	74.29	33	*e*P	P	21 11 58.2	+2.1
	comp=Z,468nm,1.5s						
SHOC	Shoshone, Teco	74.29	323	P	P	21 11 58.2	+2.0
	baz=138,SNR=8.9						
SHOC				S	S	21 21 31.9	+4.1
	baz=138						
PID	Ribeirinha	74.39	33	*e*P	P	21 11 59.4	+2.7
	comp=Z,346nm,1.4s						
RWWY	Rawlins	74.39	332	IAmb	IAmb	21 12 01.3	
	comp=Z,152nm,1.0s						
EDW2	Edwards Air Fo	74.51	321	P	P	21 11 58.6	+1.0
	baz=136,SNR=24						
ROSA	Rosais	74.55	33	*e*P	P	21 11 59.7	+2.1
	comp=Z,418nm,1.1s						
ROSA	Rosais	74.55	33	⇑P	P	21 12 01.5	+3.9
ROSA	Rosais	74.55	33	P	P	21 11 59.0	+1.4
ROSA				IAmb	IAmb	21 12 01.9	
	comp=Z,312nm,1.1s						
PMAN	Manadas	74.56	33	*e*P	P	21 11 59.4	+1.8
	comp=Z,490nm,1.1s						
DRLN	Deer Lake	74.63	9	⇓P	P	21 11 57.6	-0.1
DRLN	Deer Lake	74.63	9	P	P	21 11 57.2	-0.5
DRLN				IAmb	IAmb	21 12 00.9	
	comp=Z,286nm,1.1s						
QSM	Queen of Sheba	74.66	322	P	P	21 11 58.6	+0.3
KAPO	Kapuskasing	74.70	352	⇓P	P	21 11 57.6	-0.5
GWY	Greenwater Val	74.72	323	P	P	21 11 59.3	+0.5
OSI	Osito Audit: C	74.74	320	S	S	21 21 36.5	+3.5
	baz=136						
PRN	Pahroc Range	74.75	325	⇑P	P	21 12 00.3	+1.4
PRN	Pahroc Range	74.75	325	P	P	21 11 59.6	+0.6
PRN				IAmb	IAmb	21 12 04.8	
	comp=Z,141nm,1.0s						
LRMC	Laurel Mtn Rad	74.77	322	P	P	21 12 00.3	+1.3
	baz=136,SNR=17						
SCZ2	Santa Cruz Isl	74.84	319	P	P	21 12 02.4	+3.0
	baz=135,SNR=9.0						
EYMN	Ely	74.84	346	P	P	21 11 58.1	-1.0
	baz=160,SNR=37						
EYMN				S	S	21 21 27.7	-5.8
	baz=160						
PSMA	Santa Maria	74.85	36	*e*P	P	21 11 59.1	-0.2
	comp=Z,118nm,1.2s						
PSMN	Pico do Norte,	74.89	36	*e*P	P	21 12 00.9	+1.3
	comp=Z,264nm,1.7s						
SRBC	Serra Branca	74.89	33	*e*P	P	21 12 00.5	+1.0
	comp=Z,683nm,1.3s						
K22A	Casper	74.91	333	P	P	21 12 00.6	+0.8
	baz=147,SNR=43						
K22A				S	S	21 21 37.2	+2.5
	baz=147						
PGRA	Graciosa	74.92	33	*e*P	P	21 12 00.9	+1.2
	comp=Z,513nm,1.5s						
ADH	Angra Heroismo	75.00	34	*e*P	P	21 12 01.6	+1.4
	comp=Z,351nm,1.2s						
FURC	Furnace Creek,	75.03	323	P	P	21 12 02.1	+1.8
	baz=137,SNR=40						
FURC				S	S	21 21 41.4	+5.5
	baz=137						
MPMC	Manual Prospec	75.08	322	P	P	21 12 01.7	+0.8
	baz=137,SNR=42						
MPMC				S	S	21 21 41.6	+4.7
	baz=137						
PSCM	Serra do Cume	75.09	34	*e*P	P	21 12 02.2	+1.5
	comp=Z,370nm,1.3s						
PAGU	Agualva, Azore	75.11	34	*e*P	P	21 12 02.3	+1.5
	comp=Z,309nm,1.6s						
PSET	Sete Cidades	75.15	35	*e*P	P	21 12 02.1	+1.0
	comp=Z,458nm,2.2s						
ARVC	Arvin	75.17	321	S	S	21 21 41.8	+4.3
	baz=136						
RSSD	Black Hills	75.17	336	P	P	21 12 01.7	+0.4
RSSD				pmax	pmax		
	comp=Z,135nm,1.0s						
RSSD	Black Hills	75.17	336	P	P	21 12 01.7	+0.4
	baz=149						
RSSD				S	S	21 21 38.3	+0.6
	baz=149						
RSSD	Black Hills	75.17	336	⇑P	P	21 12 01.8	+0.4
RSSD	Black Hills	75.17	336	P	P	21 12 01.7	+0.4
RSSD				IAmb	IAmb	21 12 05.3	
	comp=Z,135nm,1.0s						
GRON	Grota Negra	75.21	35	*e*P	P	21 12 02.2	+0.7
	comp=Z,220nm,2.3s						
CMLA	Cha da Macela	75.21	35	*e*P	P	21 12 04.0	+2.6
	comp=Z,235nm,1.8s						
PCALD	Caldeiras da R	75.25	35	*e*P	P	21 12 02.6	+0.9
	comp=Z,261nm,1.4s						
ISA	Isabella, Lake	75.35	321	P	P	21 12 03.7	+1.4
	baz=136,SNR=61						
ISA				S	S	21 21 44.4	+4.7
	baz=136						
BART	Pico Bartolome	75.41	36	*e*P	P	21 12 02.2	-0.5
	comp=Z,305nm,1.2s						
D32A	Dogwood Acres,	75.51	342	IAmb	IAmb	21 12 05.8	
	comp=Z,352nm,1.1s						
PKM	Mcpherson Peak	75.57	320	P	P	21 12 05.1	+1.3
	baz=135,SNR=46						
PKM				S	S	21 21 46.2	+3.7
	baz=135						
KOWA	Kowa	75.65	66	⇑P	P	21 12 03.8	-0.7
KOWA	Kowa	75.65	66	P	P	21 12 03.5	-1.0
CWC	Cottonwood Cre	75.68	322	P	P	21 12 05.3	+0.9
	baz=136						
CWC				S	S	21 21 48.0	+4.4
	baz=136						
R11A	Troy Canyon, C	75.73	325	P	P	21 12 05.9	+1.3
	baz=139,SNR=124						
R11A				S	S	21 21 47.8	+3.7
	baz=139						
DUG	Dugway, Tooele	75.74	328	P	P	21 12 05.7	+1.1
	baz=141,SNR=130						
DUG				S	S	21 21 47.8	+3.7
	baz=141						
B35A	Bob, Littlefor	75.76	344	IAmb	IAmb	21 12 06.9	
	comp=Z,169nm,1.1s						
VES	Vestal, Richgr	75.82	321	P	P	21 12 06.2	+1.3
	baz=136,SNR=14						
SMMC	Simmler	75.98	320	P	P	21 12 07.6	+1.7
	baz=135,SNR=36						
LCH	Last Change Ra	76.01	323	P	P	21 12 05.9	-0.4
TIN	Tinemaha, Big	76.21	322	P	P	21 12 09.0	+1.7
	baz=136,SNR=6.6						
TIN				S	S	21 21 54.3	+5.1
	baz=136						
AGMN	Agassiz Nation	76.25	343	P	P	21 12 06.6	-0.6
	baz=156,SNR=67						
AGMN	Agassiz Nation	76.25	343	IAmb	IAmb	21 12 09.9	
	comp=Z,165nm,0.9s						
HWUT	Hardware Ranch	76.25	330	IAMs_20	IAMs_20	21 42 07.6	
	comp=Z,6µm,22.0s						
BW06	Boulder Array	76.28	331	P	P	21 12 07.7	-0.1
	baz=144,SNR=48						
BW06				S	S	21 21 51.2	+1.2
	baz=144						
BW06	Boulder Array	76.28	331	P	P	21 12 06.7	-1.1
PD31	Pinedale Array	76.28	331	⇓P	P	21 12 08.0	+0.3
PD31	Pinedale Array	76.28	331	P	P	21 12 07.3	-0.4
PDAR	Pinedale Array	76.28	331	P	P	21 12 07.6	-0.1
	comp=Z,11nm,0.6s,baz=125,slow=7.8,SNR=41						
PDAR				S	S	21 21 45.3	-4.8
	comp=Z,0.3nm,0.4s,baz=198,slow=42,SNR=0.6						
PDAR				PKKP	PKKPdf	21 31 10.1	-1.2
	comp=Z,0.2nm,0.6s,baz=298,slow=1.9,SNR=1.8						
PDAR				PKKPbc	PKKPbc	21 31 22.4	-1.1
	comp=Z,1.5nm,1.0s,baz=31,slow=0.9,SNR=5.0						
PDAR				PKPPKP		21 39 21.6	
	comp=Z,0.9nm,0.9s,baz=259,slow=0.8,SNR=3.7						
PDAR				LR	LR	21 44 48.5	
	comp=Z,857nm,20.9s,baz=150,slow=35						
PDAR	Pinedale Array	76.28	331	P	P	21 12 07.1	-0.6
BGU	Big Grassy Mou	76.41	328	P	P	21 12 08.6	+0.2
PAGB	Antelope Grade	76.42	320	P	P	21 12 09.7	+1.3
PAGB				IAmb	IAmb	21 12 23.6	
	comp=Z,175nm,1.1s						
SPUT	South Promonto	76.43	329	IAmb	IAmb	21 12 23.1	
	comp=Z,189nm,1.2s						
PMOZ	Porto Moniz, M	76.56	44	*e*P	P	21 12 10.4	+1.0
	comp=Z,265nm,1.1s						
PMOZ	Porto Moniz, M	76.56	44	*e*LR	LR	21 37 04.1	
	comp=Z,4µm,24.0s						
FUL	Funchal	76.64	44	*e*P	P	21 12 12.7	+3.1
	comp=Z,214nm,1.4s						
PMAR	Madeira	76.67	44	*e*P	P	21 12 13.1	+3.0
	comp=Z,288nm,1.5s						
MDND	Maddock	76.92	340	P	P	21 12 11.2	+0.3
	baz=153,SNR=34						
MLAC	Mammoth, Mammo	76.96	322	P	P	21 12 13.1	+1.4
	baz=136,SNR=18						
AHID	Auburn Hatcher	76.96	331	IAmb	IAmb	21 12 15.6	
	comp=Z,200nm,1.1s						
MDPB	Devils Postpil	77.09	322	P	P	21 12 13.4	+0.9
NVAR	Mina Array Bea	77.24	323	LR	LR	21 43 25.3	
	comp=Z,1µm,20.4s,baz=172,slow=33						
PMPST	Porto Santo, M	77.27	44	*e*P	P	21 12 14.9	+1.7
	comp=Z,573nm,1.7s						
REDW	Red Top Meadow	77.33	331	IAmb	IAmb	21 12 17.8	
	comp=Z,138nm,1.1s						
ELK	Elko	77.35	327	IAMs_20	IAMs_20	21 42 36.2	
	comp=Z,6µm,22.0s						
TPAW	Teton Pass	77.47	331	IAmb	IAmb	21 12 18.8	
	comp=Z,143nm,1.1s						
SAO	San Andreas Ge	77.83	320	⇓P	P	21 12 19.9	+3.6
FLWY	Flagg Ranch	77.83	332	IAmb	IAmb	21 12 21.1	
	comp=Z,229nm,1.0s						
H17A	Grant Village	78.03	332	P	P	21 12 19.0	+1.5
	baz=144,SNR=19						
H17A				S	S	21 22 13.2	+4.2
	baz=144						
ULM	Lac du Bonnet	78.05	344	P	P	21 12 15.9	-1.2
	comp=Z,118nm,1.0s,baz=149,slow=6.1,SNR=31						
ULM				S	S	21 22 02.2	-6.2
	comp=Z,2.0nm,0.7s,baz=117,slow=8.3,SNR=1.1						
ULM	Lac du Bonnet	78.05	344	⇑P	P	21 12 16.2	-1.0
ULM	Lac du Bonnet	78.05	344	IAmb	IAmb	21 12 19.9	
	comp=Z,248nm,1.2s						
RLMT	Red Lodge	78.07	333	P	P	21 12 18.4	+0.7
	baz=145,SNR=82						
RLMT				S	S	21 22 10.9	+1.5
	baz=145						
RLMT	Red Lodge	78.07	333	IAmb	IAmb	21 12 22.0	
	comp=Z,170nm,1.1s						
YMP	Mirror Lake Pl	78.13	332	IAmb	IAmb	21 12 32.0	
	comp=Z,163nm,1.0s						
SUR	Sutherland	78.16	120	P	P	21 12 19.7	+1.0
SUR				P	P	21 12 19.7	+1.0
SUR	Sutherland	78.16	120	⇓P	P	21 12 19.4	+0.7
SUR	Sutherland	78.16	120	P	P	21 12 19.3	+0.6
SUR				IAmb	IAmb	21 12 34.3	
	comp=Z,180nm,0.9s						
LAO	LASA Array	78.17	336	P	P	21 12 18.6	+0.6
	baz=147,SNR=30						
LAO				S	S	21 22 11.5	+1.5
	baz=147						
LAO	LASA Array	78.17	336	IAmb	IAmb	21 12 21.9	
	comp=Z,276nm,1.1s						
YMR	Madison River	78.42	332	IAmb	IAmb	21 12 24.7	
	comp=Z,247nm,1.0s						
PNTR	Pine Nut	78.42	323	IAmb	IAmb	21 12 34.9	
	comp=Z,162nm,0.9s						
YHH	Holmes Hill	78.46	332	IAmb	IAmb	21 12 24.9	
	comp=Z,240nm,1.1s						
PAHR	Pah Rah Range	78.74	324	IAmb	IAmb	21 12 26.4	
	comp=Z,212nm,1.0s						
WIN	Windhoek	78.77	110	P	P	21 12 21.1	-1.1
WIN				pmax	pmax		
	comp=Z,200nm,1.1s						
WIN	Windhoek	78.77	110	P	P	21 12 21.1	-1.1
WIN				IAmb	IAmb	21 12 26.1	
	comp=Z,200nm,1.1s						
MPK	Martis Peak	78.80	323	IAmb	IAmb	21 12 26.9	
	comp=Z,152nm,1.1s						
DGMT	Dagmar	78.95	338	P	P	21 12 23.0	+0.7
	baz=149,SNR=38						
DGMT	Dagmar	78.95	338	IAmb	IAmb	21 12 26.4	
	comp=Z,345nm,1.1s						
SFNM	Sidi Ifni	79.06	51	P	P	21 12 27.2	+3.9
HLID	Hailey	79.10	329	P	P	21 12 24.5	+1.2
	baz=140,SNR=254						
HLID				S	S	21 22 25.2	+4.9
	baz=140						
HLID	Hailey	79.10	329	IAmb	IAmb	21 12 28.2	
	comp=Z,186nm,1.1s						
SCHQ	Schefferville	79.37	2	P	P	21 12 23.1	-1.3
	comp=Z,141nm,1.0s,baz=168,slow=3.3,SNR=37						
SCHQ				LR	LR	21 47 54.4	
	comp=Z,3µm,21.4s,baz=194,slow=36						
SCHQ	Schefferville	79.37	2	⇑P	P	21 12 23.9	-0.5
SCHQ	Schefferville	79.37	2	P	P	21 12 23.7	-0.7
SCHQ				IAmb	IAmb	21 12 27.4	
	comp=Z,291nm,1.1s						
BOZ	Bozeman (W)	79.44	332	P	P	21 12 25.3	+0.2
	baz=143,SNR=78						
BOZ				S	S	21 22 25.1	+1.3
	baz=143						
MCCM	Marconi Confer	79.60	321	⇑P	P	21 12 29.0	+3.1
DLMT	Dillon	79.67	331	IAmb	IAmb	21 12 31.0	
	comp=Z,153nm,1.1s						
ORV	Oroville	79.79	322	IAmb	IAmb	21 12 31.7	
	comp=Z,204nm,1.1s						
TORD	Torodi Ar. Bea	79.82	70	P	P	21 12 27.0	-0.7
	comp=Z,453nm,0.9s,baz=257,slow=4.9,SNR=332						
TORD				PP	PP	21 15 28.6	-0.8
	comp=Z,14nm,0.8s,baz=237,slow=6.1,SNR=2.0						
TORD				ScS	S	21 22 41.9	+13
	comp=Z,1.5nm,1.0s,baz=242,slow=5.7,SNR=5.4						
TORD				LR	LR	21 47 16.0	
	comp=Z,19µm,18.9s,baz=240,slow=35						
TORD	Torodi Ar. Bea	79.82	70	P	P	21 12 27.0	-0.7
TORD					SKSac	21 22 41.9	-0.7
CGR	Cap Guir	80.03	50	P	P	21 12 33.0	+4.5
WVOR	Wild Horse Val	80.31	326	⇓P	P	21 12 30.6	+0.7
WVOR	Wild Horse Val	80.31	326	IAMs_20	IAMs_20	21 44 14.7	
	comp=Z,5µm,21.0s						
TSUM	Tsumeb	80.47	107	⇑P	P	21 12 31.6	+0.2
TSUM	Tsumeb	80.47	107	P	P	21 12 31.2	-0.2
TSUM				IAmb	IAmb	21 12 35.5	
	comp=Z,378nm,1.1s						
TSUM	Tsumeb	80.47	107	IAMs_20	IAMs_20	21 45 50.6	
	comp=Z,5µm,19.0s						
O03E	Paynes Creek	80.47	323	P	P	21 12 30.7	-0.1
	baz=134,SNR=60						
O03E				S	S	21 22 34.5	-0.3
	baz=134						
EGMT	Eagleton	80.62	334	P	P	21 12 31.7	+0.3
	baz=144,SNR=58						
EGMT				S	S	21 22 37.0	+1.0
	baz=144						
EGMT	Eagleton	80.62	334	IAmb	IAmb	21 12 35.0	
	comp=Z,171nm,1.1s						
RAR	Rarotonga	80.77	251	LR	LR	21 39 07.2	
	comp=Z,5µm,21.0s,baz=124,slow=29						
EAH	EAH	80.84	49	P	P	21 12 37.0	+4.2
J08A	Circle Bar Ran	80.91	327	IAmb	IAmb	21 12 37.6	
	comp=Z,169nm,1.2s						
O02D	Mt. Diablo Mer	80.94	322	P	P	21 12 33.5	+0.2
	baz=134,SNR=23						
O02D				S	S	21 22 40.3	+0.6
	baz=134						
TTIG	Tnine Tigouga,	80.99	50	P	P	21 12 38.0	+4.2
PLID	Pearl Lake	81.00	329	IAmb	IAmb	21 12 37.8	
	comp=Z,190nm,1.0s						
WDC	Whiskeytown Da	81.08	323	⇑P	P	21 12 33.0	-0.8
MSO	Missoula	81.40	331	P	P	21 12 36.1	+0.6
	baz=141,SNR=31						
MSO				S	S	21 22 47.0	+2.7
	baz=141						
MSO	Missoula	81.40	331	IAMs_20	IAMs_20	21 45 38.6	
	comp=Z,5µm,22.0s						
N02D	Trinity Center	81.44	323	P	P	21 12 35.7	-0.2
	baz=134,SNR=28						
KMRM	Mail Ridge	81.48	322	P	P	21 12 36.8	+0.6
KMRM				IAmb	IAmb	21 12 41.1	
	comp=Z,178nm,1.1s						
M04C	Macdoel	81.53	324	P	P	21 12 36.8	+0.4
	baz=134,SNR=88						
M04C				S	S	21 22 46.9	+1.0
	baz=134						
MAW	Mawson	81.58	164	P	P	21 12 36.4	+0.2
	comp=Z,236nm,1.0s,baz=211,slow=4.6,SNR=45						
MAW				S	S	21 22 43.6	-1.9
	comp=Z,2.0nm,0.9s,baz=153,slow=22,SNR=1.6						
MAW				LR	LR	21 48 56.0	
	comp=Z,4µm,21.2s,baz=228,slow=36						
MAW	Mawson	81.58	164	⇑P	P	21 12 36.4	+0.2
MAW				⇑P	P	21 12 36.4	+0.2
MAW	Mawson	81.58	164	P	P	21 12 36.0	-0.2
K05A	Summer Lake	81.69	325	IAmb	IAmb	21 12 52.5	
	comp=Z,286nm,1.2s						
OUK	Oukaimeden	81.77	50	P	P	21 12 42.0	+3.8
M02C	Callahan	81.81	323	P	P	21 12 37.8	0.0
	baz=134,SNR=26						
K04D	Chiloquin, OR	82.07	324	P	P	21 12 40.4	+1.2
	baz=134,SNR=6.0						
L04D	Klamath Falls	82.08	324	P	P	21 12 39.3	0.0
	baz=134,SNR=39						
F10A	Beach Ranch, E	82.23	329	⇑P	P	21 12 40.2	+0.3
F10A				⇓P	PcP	21 12 40.7	-4.5
F10A	Beach Ranch, E	82.23	329	IAmb	IAmb	21 12 45.6	
	comp=Z,147nm,1.1s						
J05D	Fort Rock, OR	82.26	325	P	P	21 12 40.9	+0.6
	baz=135,SNR=91						
OUZM	OUZ	82.38	51	P	P	21 12 44.0	+2.9
PINE	Pine Mountain	82.46	326	IAmb	IAmb	21 12 46.1	
	comp=Z,168nm,1.1s						
SRHM	Skhour des Reh	82.48	49	P	P	21 12 45.0	+3.4
J04D	Umpqua Nationa	82.68	325	P	P	21 12 43.2	+0.7
	baz=134,SNR=14						
HUMO	Hull Mountain	82.69	324	⇑P	P	21 12 44.5	+2.2
L02E	Cave Junction	82.74	323	P	P	21 12 43.4	+0.8
	baz=133,SNR=17						
ZGR	Zagora	82.75	52	P	P	21 12 46.0	+2.9
I05D	Terrebonne, OR	83.05	326	P	P	21 12 45.1	+0.9
	baz=135,SNR=56						
WALA	Waterton Lakes	83.12	333	⇑P	P	21 12 44.8	+0.2
WALA				⇓P	PcP	21 12 47.5	-1.5
WALA	Waterton Lakes	83.12	333	IAmb	IAmb	21 12 48.4	
	comp=Z,165nm,1.0s						
K02D	Willamette Mer	83.14	324	P	P	21 12 45.7	+1.0
	baz=133,SNR=43						
TZRR	Tazzarine	83.15	52	P	P	21 12 49.0	+3.8
BOSA	Boshof	83.16	118	P	P	21 12 44.7	-0.8
	comp=Z,282nm,1.0s,baz=240,slow=5.0,SNR=47						
BOSA				S	S	21 22 59.6	-3.9
	comp=Z,2.0nm,0.9s,baz=96,slow=22,SNR=1.4						
BOSA				LR	LR	21 47 06.9	
	comp=Z,12µm,18.8s,baz=246,slow=34						
BOSA	Boshof	83.16	118	P	P	21 12 44.6	-0.9
DBO	Dodson Butte	83.20	324	IAmb	IAmb	21 12 59.2	
	comp=Z,156nm,1.2s						
I04A	Tendick Farm,	83.23	325	P	P	21 12 46.6	+1.4
	baz=134,SNR=17						
AVE	Averroes	83.29	49	P	P	21 12 46.0	+0.3
AVE				S	S	21 23 01.4	-2.5
AVE	Averroes	83.29	49	⇑P	P	21 12 46.9	+1.3
AVE	Averroes	83.29	49	P	P	21 12 49.4	+3.7
J01E	Myrtle Point	83.60	324	P	P	21 12 49.8	+2.8
	baz=133,SNR=13						
HAWA	Hanford	83.63	328	⇓P	P	21 12 47.9	+0.8
I03D	Drain, OR	83.65	324	P	P	21 12 47.8	+0.6
	baz=133,SNR=15						
G05D	Wamic, OR	83.68	327	P	P	21 12 48.7	+1.3
	baz=135,SNR=18						
FFC	Flin Flon	83.71	342	*e*P	P	21 12 46.6	-0.7
FFC	Flin Flon	83.71	342	P	P	21 12 46.6	-0.7
FFC				IAmb	IAmb	21 12 50.1	
	comp=Z,117nm,1.1s						
BUCK	Buck Mountain	83.80	325	IAmb	IAmb	21 12 52.1	
	comp=Z,130nm,1.0s						
NEW	Newport	83.89	331	P	P	21 12 48.8	+0.4
	baz=139,SNR=18						
H04D	Lebanon	83.90	325	P	P	21 12 51.1	+2.6
	baz=134,SNR=6.4						
E07A	Sunnyside	83.90	328	P	P	21 12 48.8	+0.3
HOOD	Mount Hood Mea	83.90	326	P	P	21 12 49.0	+0.3
HOOD				IAmb	IAmb	21 12 56.6	
	comp=Z,112nm,1.1s						
ZHG	ZHG	83.90	49	P	P	21 12 52.0	+3.1
C09A	Chrisman Ranch	84.07	330	P	P	21 12 49.1	-0.2
C09A				IAmb	IAmb	21 12 53.2	
	comp=Z,148nm,1.1s						
GOLM	Goulmima	84.10	51	P	P	21 12 54.0	+4.0
I02E	Swisshome, OR	84.19	324	P	P	21 12 53.6	+3.6
	baz=133,SNR=9.7						
F05D	White Salmon	84.20	327	P	P	21 12 51.9	+1.9
	baz=135,SNR=12						
COR	Corvallis	84.24	325	⇓P	P	21 12 53.0	+2.8
PFVI	Vila Bisbo	84.60	45	*e*P	P	21 12 52.8	+0.6
	comp=Z,509nm,1.5s						
PFVI	Vila Bisbo	84.60	45	P	P	21 12 53.8	+1.6
PFVI	Vila Bisbo	84.60	45	P	P	21 12 55.6	+3.4
G03D	McMinnville, O	84.64	326	P	P	21 12 54.4	+2.1
	baz=134,SNR=11						
F04A	Amboy	84.72	327	IAmb	IAmb	21 12 56.3	
	comp=Z,140nm,1.1s						
MORF	Marmelete	84.82	45	*e*P	P	21 12 54.1	+0.7
MORF				*e*PP	PP	21 16 10.7	+0.3
MORF				*e*SKSac	SKSac	21 23 15.0	-0.1
MORF				IAMs_20	IAMs_20	21 45 42.4	
	comp=Z,13µm,29.0s						
MORF	Marmelete	84.82	45	*e*P	P	21 12 54.4	+1.0
	comp=Z,528nm,1.6s						
MORF	Marmelete	84.82	45	*e*P	P	21 12 54.1	+0.7
MORF				*e*		21 16 10.6	
MORF				*e*		21 23 15.0	
MORF	Marmelete	84.82	45	⇑P	P	21 12 54.0	+0.7
MORF				⇑P	PcP	21 12 55.1	-1.6
PTEO	Sao Teotonio	84.91	45	*e*P	P	21 12 54.9	+1.1
	comp=Z,902nm,1.1s						
LBTB	Lobatse	84.94	115	P	P	21 12 54.4	-0.1
LBTB				pmax	pmax		
	comp=Z,219nm,1.0s						
LBTB	Lobatse	84.94	115	*e*P	P	21 12 54.5	-0.1
LBTB	Lobatse	84.94	115	*e*P	P	21 12 54.5	-0.1
LBTB	Lobatse	84.94	115	P	P	21 12 54.4	-0.1
LBTB				IAmb	IAmb	21 12 57.8	
	comp=Z,219nm,0.9s						
MDT	Midelt	84.96	50	P	P	21 12 57.5	+3.2
IFR	Ifrane	84.99	50	P	P	21 12 53.9	-0.6
IFR				S	S	21 23 22.4	+1.1
E04D	Cinebar	85.22	327	P	P	21 12 57.2	+2.1
	baz=134,SNR=12						
PBDV	Barranco-do-Ve	85.24	45	*e*P	P	21 12 56.6	+1.1
	comp=Z,874nm,1.2s						
LCRM	LCR	85.27	50	P	P	21 12 59.0	+3.1
PMST	Lisbon--Monsan	85.33	43	*e*P	P	21 12 56.9	+1.0
	comp=Z,482nm,1.4s						
LIS	Lisbon	85.34	44	*e*P	P	21 12 56.8	+0.9
LIS				*e*SKSac	SKSac	21 23 18.1	-0.1
LIS				IAMs_20	IAMs_20	21 44 10.4	
	comp=E,14µm,33.0s						
LIS	Lisbon	85.34	44	*e*P	P	21 12 56.8	+0.9
	comp=E,426nm,1.4s						
LIS	Lisbon	85.34	44	*e*P	P	21 12 56.7	+0.9
LIS				*e*		21 23 18.1	
PNCL	Nicolau / Gran	85.37	44	*e*P	P	21 12 56.9	+0.8
	comp=E,340nm,1.2s						
D05A	Enumclaw	85.38	328	P	P	21 12 56.8	+0.9
D05A				IAmb	IAmb	21 12 59.4	
	comp=Z,122nm,1.1s						
PCVE	Castro Verde	85.40	45	*e*P	P	21 12 57.1	+0.9
	comp=Z,556nm,1.1s						
PMAFR	Mafra	85.40	43	*e*P	P	21 12 58.5	+2.3
	comp=Z,569nm,1.3s						
MESJ	Messejana	85.41	45	*e*P	P	21 12 57.0	+0.8
MESJ				*e*SKSac	SKSac	21 23 18.6	-0.1
MESJ				IAMs_20	IAMs_20	21 45 47.7	
	comp=Z,11µm,22.3s						
MESJ	Messejana	85.41	45	*e*P	P	21 12 57.2	+1.0
	comp=Z,570nm,1.1s						
MESJ	Messejana	85.41	45	*e*P	P	21 12 57.0	+0.8
MESJ				*e*		21 23 18.6	
PVAQ	Vaqueiros	85.47	45	*e*P	P	21 12 57.5	+0.9
	comp=Z,475nm,1.6s						
PVAQ	Vaqueiros	85.47	45	*e*S	S	21 23 29.9	+4.3
PVAQ	Vaqueiros	85.47	45	*e*LQ	LQ	21 35 52.1	
PVAQ				*e*LR	LR	21 41 09.6	
	comp=Z,7µm,22.0s						
PVAQ	Vaqueiros	85.47	45	P	P	21 12 60.0	+3.4
FCC	Fort Churchill	85.54	348	P	P	21 12 57.2	+0.9
FCC				pmax	pmax		
	comp=Z,103nm,1.2s						
FCC	Fort Churchill	85.54	348	P	P	21 12 57.2	+0.9
FCC				IAmb	IAmb	21 12 59.6	
	comp=Z,103nm,1.1s						
CHEFC	Chefchaouen	85.73	48	P	P	21 13 02.0	+4.0
PBEJ	Beja	85.74	45	*e*P	P	21 12 58.9	+1.0
	comp=Z,465nm,1.1s						
D04E	Lakebay	85.75	327	P	P	21 13 00.3	+2.6
	baz=134						
PNT	Penticton	85.78	330	⇑P	P	21 12 59.1	+1.2
PNT				⇑P	PcP	21 12 59.3	-1.3
SFS	San Fernando	85.92	47	P	P	21 12 59.3	+0.4
SFS				S	S	21 23 46.9	+17
EVO	Evora	85.95	44	P	P	21 12 58.4	-0.5

EVO				S	S	21 23 40.2	+10
EVO	Evora	85.95	44	*e*P	P	21 12 59.6	+0.7
	comp=Z,299nm,1.6s						
EVO	Evora	85.95	44	*e*PP	PP	21 16 19.4	0.0
CNIL	Conil	85.97	47	P	P	21 13 02.5	+3.5
SMIR	Smir Dam	86.03	48	P	P	21 13 03.1	+3.7
PSBE	So Bento	86.04	43	*e*P	P	21 13 00.0	+0.6
	comp=Z,444nm,1.5s						
B06A	Marblemount	86.07	329	IAmb	IAmb	21 13 02.1	
	comp=Z,118nm,1.3s						
PMTG	Montargil	86.13	44	*e*P	P	21 13 00.3	+0.5
	comp=Z,416nm,1.2s						
CEU	Ceuta	86.15	48	P	P	21 12 58.5	-1.5
CEU				S	S	21 23 40.1	+7.8
D03D	Eldon	86.16	327	P	P	21 13 00.2	+0.4
	baz=134,SNR=19						
B05A	Bryant	86.18	328	P	P	21 12 59.8	-0.1
	baz=135,SNR=30						
PESTR	Estremoz	86.41	44	*e*P	P	21 13 01.6	+0.4
	comp=Z,297nm,1.6s						
PESTR	Estremoz	86.41	44	⇑P	P	21 13 01.6	+0.4
PESTR				⇑P	PcP	21 13 03.0	-0.7
PESTR	Estremoz	86.41	44	P	P	21 13 02.0	+0.8
PESTR				IAmb	IAmb	21 13 23.7	
	comp=Z,119nm,1.3s						
PESTR	Estremoz	86.41	44	P	P	21 13 04.9	+3.7
NLWA	Neilton Lookou	86.44	327	⇓P	P	21 13 03.0	+1.8
NLWA	Neilton Lookou	86.44	327	IAMs_20	IAMs_20	21 48 15.9	
	comp=Z,6µm,22.0s						
PCAS	Casmilo, Conde	86.54	43	*e*P	P	21 13 01.8	0.0
	comp=Z,193nm,1.5s						
LIJA	Lijar	86.70	47	P	P	21 13 05.2	+2.5
PALE	Palemas	86.75	49	P	P	21 13 06.0	+3.0
A04D	Lummi Island	86.79	328	P	P	21 13 03.6	+0.8
	baz=134,SNR=9.9						
PMRV	Marv??o	86.86	44	*e*P	P	21 13 04.2	+0.8
	comp=Z,91nm,1.2s						
PMRV	Marv??o	86.86	44	*e*PP	PP	21 16 27.0	+0.1
PMRV				*e*S	S	21 23 40.7	+1.6
PMRV	Marv??o	86.86	44	*e*LQ	LQ	21 38 18.9	
PMRV				*e*LR	LR	21 41 21.8	
	comp=Z,5µm,22.0s						
TDRA	Tendrara	86.90	51	P	P	21 13 07.0	+3.0
FIGM	Figuig	86.97	53	P	P	21 13 07.0	+2.7
PCBR	Castelo Branco	87.05	43	*e*P	P	21 13 05.7	+1.4
	comp=Z,118nm,1.5s						
PCBR	Castelo Branco	87.05	43	*e*PP	PP	21 16 32.1	+3.8
PGC	Sidney	87.10	328	P	P	21 13 04.6	+0.3
PGC				IAmb	IAmb	21 13 08.0	
	comp=Z,107nm,1.1s						
JBK	JBK	87.22	50	P	P	21 13 08.4	+2.9
EMAL	Malaga-Limoner	87.27	47	P	P	21 13 06.1	+0.7
EMAL				S	S	21 23 56.6	+14
PVIS	Viseu	87.31	42	*e*P	P	21 13 07.0	+1.4
	comp=Z,94nm,1.4s						
MTE	Manteigas	87.34	43	*e*P	P	21 13 06.0	+0.2
	comp=Z,108nm,1.2s						
MTE	Manteigas	87.34	43	*e*S	S	21 23 42.8	-1.0
MTE	Manteigas	87.34	43	*e*LQ	LQ	21 36 40.0	
MTE				*e*LR	LR	21 41 59.3	
	comp=Z,6µm,22.0s						
MTE	Manteigas	87.34	43	⇑P	P	21 13 05.9	+0.2
MTE	Manteigas	87.34	43	P	P	21 13 05.8	0.0
MTE				IAmb	IAmb	21 13 08.9	
	comp=Z,79nm,0.8s						
MTE				IAMs_20	IAMs_20	21 51 29.5	
	comp=Z,6µm,20.0s						
GOG	Mont Gurugu	87.40	49	P	P	21 13 09.0	+2.8
TAF	Taforalt	87.58	50	P	P	21 13 11.0	+3.9
IVI	Ivigtut	87.59	11	⇑P	P	21 13 07.2	+0.8
IVI	Ivigtut	87.59	11	P	P	21 13 06.7	+0.3
LLLB	Lillooet	87.73	330	IAmb	IAmb	21 13 10.4	
	comp=Z,86nm,1.1s						
PVRL	Vila Real	87.75	42	*e*P	P	21 13 07.9	+0.2
	comp=Z,148nm,1.1s						
POLO	Lamas de Olo	87.75	42	*e*P	P	21 13 08.1	+0.3
	comp=Z,42nm,1.0s						
POLO	Lamas de Olo	87.75	42	*e*PP	PP	21 16 34.9	+0.8
CHAS	Isla Isabel II	87.77	49	P	P	21 13 06.0	-1.8
CHAS				S	S	21 24 00.8	+13
PGAV	Gavieira, Arco	87.82	41	*e*P	P	21 13 09.1	+1.0
	comp=Z,103nm,1.1s						
PGAV	Gavieira, Arco	87.82	41	*e*PP	PP	21 16 35.7	+1.1
PGAV				*e*S	S	21 23 51.8	+3.4
PGAV	Gavieira, Arco	87.82	41	*e*LQ	LQ	21 36 37.3	
PGAV				*e*LR	LR	21 41 29.4	
	comp=Z,9µm,20.0s						
NRS	Narsarsuaq	88.04	12	*i* P	P	21 13 08.4	-0.1
MVO	Moncorvo	88.10	43	*e*P	P	21 13 10.6	+1.2
	comp=Z,113nm,1.7s						
MVO	Moncorvo	88.10	43	*e*S	S	21 23 52.9	+1.9
MVO	Moncorvo	88.10	43	*e*LQ	LQ	21 36 43.8	
MVO				*e*LR	LR	21 42 01.2	
	comp=Z,9µm,20.0s						
OZB	Mount Ozzard	88.31	327	P	P	21 13 10.9	+0.7
OZB				IAmb	IAmb	21 13 13.9	
	comp=Z,92nm,1.0s						
PBRG	Braganca	88.65	42	*e*P	P	21 13 12.5	+0.5
	comp=Z,104nm,1.3s						
PBRG	Braganca	88.65	42	*e*PP	PP	21 16 40.1	-1.1
PAB	San Pablo	88.87	45	P	P	21 13 12.8	-0.3
PAB				pmax	pmax		
	comp=Z,98nm,1.1s						
PAB				MLR	MLR		
	comp=Z,7µm,18.0s						
PAB	San Pablo	88.87	45	⇑P	P	21 13 12.9	-0.3
PAB	San Pablo	88.87	45	P	P	21 13 12.8	-0.3
PAB				IAmb	IAmb	21 13 16.5	
	comp=Z,98nm,1.1s						
PAB	San Pablo	88.87	45	P	P	21 13 15.8	+2.7
CBB	Campbell River	88.96	328	P	P	21 13 14.7	+1.5
CBB				IAmb	IAmb	21 13 16.8	
	comp=Z,71nm,1.1s						
ESDC	Sonseca Array	89.18	45	P	P	21 13 14.4	-0.1
	comp=Z,35nm,0.9s,baz=249,slow=4.5,SNR=67						
ESDC				LR	LR	21 53 37.2	
	comp=Z,6µm,18.1s,baz=250,slow=36						
ESBB	Sonseca Array	89.19	45	P	P	21 13 15.5	+0.9
CASY	Casey	89.20	180	⇑P	P	21 13 14.7	+0.5
CASY				⇓s	sP	21 13 29.5	-0.5
CASY	Casey	89.20	180	P	P	21 13 13.8	-0.4
CASY				IAmb	IAmb	21 13 30.1	
	comp=Z,131nm,0.8s						
MATP	Matopo	89.32	112	*e*P	P	21 13 16.5	+0.7
MATP	Matopo	89.32	112	*e*P	P	21 13 16.5	+0.7
BLWY	Bulawayo	89.54	112	*e*P	P	21 13 16.7	-0.2
BLWY	Bulawayo	89.54	112	*e*P	P	21 13 16.7	-0.2
MSNA	Messina	89.75	114	*e*P	P	21 13 18.4	+0.7
MSNA	Messina	89.75	114	*e*P	P	21 13 18.4	+0.7
NUUK	Nuuk	89.90	8	*i* P	P	21 13 18.8	+1.6
CART	Cartagena	90.02	48	P	P	21 13 17.1	-1.2
CART				S	S	21 24 10.8	+1.8
CART	Cartagena	90.02	48	IAMs_20	IAMs_20	21 50 38.8	
	comp=Z,3µm,22.0s						
MXZ	Matakaoa Point	90.46	228	IAMs_20	IAMs_20	21 43 38.0	
	comp=Z,5µm,22.0s						
MQZ	McQueen’s Vall	90.61	220	IAMs_20	IAMs_20	21 43 23.5	
	comp=Z,4µm,22.0s						
KHZ	Kahutara	90.83	222	⇓P	P	21 13 27.2	+5.0
URZ	Urewera	90.89	227	LR	LR	21 44 34.3	
	comp=Z,6µm,21.9s,baz=211,slow=29						
URZ	Urewera	90.89	227	IAMs_20	IAMs_20	21 44 12.2	
	comp=Z,6µm,22.0s						
NNZ	Nelson	91.62	223	IAMs_20	IAMs_20	21 43 59.3	
	comp=Z,3µm,22.0s						
LBZ	Lake Benmore	91.63	219	IAMs_20	IAMs_20	21 46 38.5	
	comp=Z,5µm,20.0s						
KRI	Karoi	91.86	109	*e*P	P	21 13 28.5	+0.8
KRI	Karoi	91.86	109	*e*P	P	21 13 28.5	+0.8
CRZF	Crozet Islands	92.00	144	IAMs_20	IAMs_20	21 50 45.5	
	comp=Z,3µm,19.0s						
RAO	Raoul Island	92.02	237	LR	LR	21 44 56.5	
	comp=Z,3µm,21.9s,baz=134,slow=29						
HIZ	Hauiti	92.22	226	IAMs_20	IAMs_20	21 45 41.5	
	comp=Z,5µm,20.0s						
SFJD	Kangerlussuaq	92.74	8	P	P	21 13 28.2	-2.1
	comp=Z,58nm,1.0s,baz=202,slow=5.0,SNR=12						
SFJD	Kangerlussuaq	92.74	8	P	P	21 13 30.5	+0.2
SFJD				pmax	pmax		
	comp=Z,88nm,1.1s						
SFJD	Kangerlussuaq	92.74	8	*i* P	P	21 13 30.3	+0.1
SFJD				IAmb	IAmb	21 13 32.5	
	comp=Z,15nm,0.9s						
SFJD	Kangerlussuaq	92.74	8	P	P	21 13 30.5	+0.2
SFJD				IAmb	IAmb	21 13 33.1	
	comp=Z,88nm,1.1s						
DY2G	Dye2	92.83	9	*i* P	P	21 13 30.7	-0.4
DY2G				IAmb	IAmb	21 13 33.4	
	comp=Z,102nm,0.8s						
ANGG	Ammassalik, Gr	93.59	13	*i* P	P	21 13 35.1	+0.8
ANGG				IAmb	IAmb	21 13 36.8	
	comp=Z,38nm,0.8s						
YKA	Yellowknife Ar	93.83	341	P	P	21 13 34.6	-0.8
	comp=Z,69nm,1.0s,baz=129,slow=5.5,SNR=88						
YKA				PKKPbc	PKKPdf	21 30 40.4	-0.7
	comp=Z,2.7nm,1.1s,baz=350,slow=1.5,SNR=5.3						
MAHO	Mahon	94.73	48	P	P	21 13 39.5	-0.6
MAHO				S	S	21 24 43.6	-7.5
ILULI	Ilulissat	94.80	7	*i* P	P	21 13 38.7	-1.1
OUZ	Omahuta	94.92	228	IAMs_20	IAMs_20	21 45 49.0	
	comp=Z,6µm,22.0s						
ICESG	Greenland Ices	96.27	11	*i* P	P	21 13 46.1	-0.9
ICESG				IAmb	IAmb	21 13 48.6	
	comp=Z,27nm,0.8s						
KEST	Kesra	96.42	54	P	P	21 13 46.7	-1.4
	comp=Z,26nm,0.9s,baz=251,slow=4.6,SNR=11						
KEST				LR	LR	21 56 59.9	
	comp=Z,7µm,21.8s,baz=203,slow=35						
KEST	Kesra	96.42	54	P	P	21 13 48.6	+0.5
DLBC	Dease Lake	96.47	333	P	P	21 13 48.5	+0.8
DLBC				IAmb	IAmb	21 13 51.4	
	comp=Z,68nm,1.1s						
WTLY	Watson Lake, Y	97.02	335	P	Pdif	21 13 52.8	+2.5
	baz=129						
WRGLY	Wrigley	97.14	339	P	Pdif	21 13 52.1	+1.5
	baz=133						
SSB	Saint Sauveur	97.45	43	P	Pdif	21 13 52.8	+0.3
SSB				pmax	pmax		
	comp=Z,33nm,1.1s						
SSB				MLR	MLR		
	comp=Z,9µm,19.0s						
SSB	Saint Sauveur	97.45	43	⇑P	Pdif	21 13 54.8	+2.3
SSB	Saint Sauveur	97.45	43	P	Pdif	21 13 52.8	+0.2
TGTN	Hyland Airport	97.71	336	P	Pdif	21 13 55.6	+2.3
	baz=129,SNR=9.9						
BESE	Bessie Mountai	98.60	331	P	Pdif	21 13 57.4	+0.1
BESE				IAmb	IAmb	21 14 01.5	
	comp=Z,73nm,1.3s						
P33M	Teslin, Yukon	98.68	333	Pdiff	Pdif	21 14 00.0	+2.4
	baz=126,SNR=6.4						
BNI	Bardonecchia	98.69	44	P	Pdif	21 13 58.3	+0.1
BNI				pmax	pmax		
	comp=Z,29nm,1.2s						
BNI				MLR	MLR		
	comp=Z,13µm,21.0s						
BNI	Bardonecchia	98.69	44		Pdif	21 13 58.3	+0.1
SUMG	Summit	99.54	9	*i* P	Pdif	21 14 02.7	+1.1
SUMG				IAmb	IAmb	21 14 08.0	
	comp=Z,27nm,0.8s						
DOU	Dourbes	99.69	39	*d*P	Pdif	21 14 03.6	+1.3
SNF	Seneffe	99.70	39	*d*P	Pdif	21 14 04.3	+2.0
	comp=Z,33nm,0.9s						
UCC	Uccle	99.88	38	*d*P	Pdif	21 14 04.5	+1.4
	comp=Z,11nm,1.1s						
BMRD	Maredsous	99.89	39	*d*P	Pdif	21 14 04.2	+1.0
	comp=Z,45nm,1.0s						
FARO	Faro, Yukon	100.06	335	Pdiff	Pdif	21 14 05.7	+2.0
	baz=125,SNR=13						
RCHB	Rochefort	100.08	39	*d*P	Pdif	21 14 04.9	+0.9
	comp=Z,22nm,1.0s						
BGES	Gesves	100.11	39	*d*P	Pdif	21 14 03.7	-0.4
BCLA	Clavier	100.25	39	*d*P	Pdif	21 14 06.2	+1.5
ECH	Echery	100.37	42	IAMs_20	IAMs_20	21 58 29.3	
	comp=Z,4µm,19.0s						
WLF	Walferdange	100.40	40	*d*P	Pdif	21 14 07.3	+1.8
	comp=Z,43nm,1.1s						
WLF	Walferdange	100.40	40	*e*P	Pdif	21 14 07.8	+2.3
	comp=Z,91nm,1.1s,baz=248,slow=4.5						
RES	Resolute Bay	100.51	354	P	Pdif	21 14 02.5	-2.9
	comp=Z,7.0nm,1.1s,baz=180,slow=18						
BHOU	Houvegnez	100.62	39	*d*P	Pdif	21 14 08.3	+1.8
VLC	Villacollemand	100.71	46	IAMs_20	IAMs_20	21 58 35.6	
	comp=Z,3µm,21.0s						
MEM	Membach	100.73	39	*d*P	Pdif	21 14 07.2	+0.3
	comp=Z,15nm,1.1s						
BTNL	Ternell	100.79	39	*d*P	Pdif	21 14 09.3	+2.0
	comp=Z,19nm,1.1s						
BTNL				*d*pP	pP	21 14 20.4	+1.3
TULEG	Thule	101.12	0	IAMs_20	IAMs_20	22 00 04.6	
	comp=Z,3µm,22.0s						
BFO	Black Forest	101.13	42	*e*L	L	21 57 53.5	
	comp=Z,3µm,21.4s						
BFO	Black Forest	101.13	42	IAMs_20	IAMs_20	21 58 23.4	
	comp=Z,3µm,20.0s						
AHRW	Bad Neuenahr-A	101.32	39	*e*P	Pdif	21 14 11.8	+2.3
	comp=Z,61nm,1.1s,baz=248,slow=4.5						
DAVA	Damuels	101.65	43	*i* P	Pdif	21 14 13.5	+2.2
	comp=Z,24nm,1.0s						
DAVA				P	PP	21 18 19.2	-3.1
	comp=Z,49nm,1.4s						
STU	Stuttgart	101.83	42	*e*P	Pdif	21 14 13.9	+2.0
	comp=Z,60nm,1.0s,baz=248,slow=4.5						
STU	Stuttgart	101.83	42	IAMs_20	IAMs_20	21 59 40.0	
	comp=Z,3µm,20.0s						
UBR	Ueberruh	101.95	43	*e*P	Pdif	21 14 14.8	+2.2
	comp=Z,70nm,1.5s,baz=248,slow=4.5						
TNS	Taunus Mts	101.98	40	*e*P	Pdif	21 14 14.7	+2.1
	comp=Z,43nm,1.2s,baz=248,slow=4.5						
TNS				*e*L	L	21 58 57.4	
	comp=Z,7µm,21.0s						
FETA	Feichten	102.08	44	*e*P	Pdif	21 14 15.4	+2.2
	comp=Z,32nm,1.1s						
FETA				*e*P	PP	21 18 23.7	-1.8
	comp=Z,34nm,1.1s						
RETA	Reutte	102.28	43	*e*P	Pdif	21 14 16.2	+2.2
	comp=Z,26nm,1.1s,SNR=6.3						
RETA				*e*P	PP	21 18 23.4	-3.5
	comp=Z,33nm,1.4s						
LOGN	Logan Glacier	102.43	332	IAMs_20	IAMs_20	21 57 16.8	
	comp=Z,3µm,21.0s						
MOTA	Moosalm	102.44	44	*e*P	Pdif	21 14 16.9	+2.1
	comp=Z,30nm,1.1s,SNR=8.5						
MOTA				*e*P	PP	21 18 24.4	-3.8
	comp=Z,61nm,1.9s						
IBBN	Ibbenburen	102.45	38	*e*P	Pdif	21 14 16.6	+2.1
	comp=Z,94nm,1.1s,baz=248,slow=4.5						
SQTA	Sankt Quirin	102.46	44	*e*P	Pdif	21 14 17.2	+2.3
	comp=Z,69nm,1.1s,SNR=10						
CTGM	Chitina Glacie	102.64	332	IAMs_20	IAMs_20	21 57 45.3	
	comp=Z,3µm,20.0s						
NEEM	North Greenlan	102.69	4	*i* P	Pdif	21 14 16.1	+0.6
NEEM				IAmb	IAmb	21 14 28.1	
	comp=Z,16nm,0.9s						
WATA	Walderalm	102.73	44	*e*P	Pdif	21 14 18.1	+2.0
	comp=Z,28nm,1.0s,SNR=8.0						
WATA				*e*P	PP	21 18 26.3	-4.1
	comp=Z,26nm,1.4s						
WTTA	Wattenberg	102.74	44	*e*P	Pdif	21 14 18.5	+2.3
	comp=Z,48nm,0.9s,SNR=10						
WTTA				P	PP	21 18 27.1	-3.4
	comp=Z,30nm,1.4s						
BARN	Barnard Glacie	102.83	332	IAMs_20	IAMs_20	21 57 51.2	
	comp=Z,2µm,20.0s						
FUR	Furstenfeldbru	102.86	43	*e*L	L	22 04 51.7	
	comp=Z,2µm,21.6s						
ISLE	Juniper Island	102.91	331	IAMs_20	IAMs_20	21 57 31.3	
	comp=Z,3µm,21.0s						
ABTA	Abfaltersbach	103.10	44	*e*P	Pdif	21 14 20.0	+2.3
	comp=Z,29nm,1.2s						
ABTA				*e*P	PP	21 18 29.1	-4.0
	comp=Z,38nm,1.6s						
UBBA	Unterbreizbach	103.13	40	*e*P	Pdif	21 14 19.7	+2.3
	comp=Z,36nm,1.6s,baz=248,slow=4.5						
TGL	Tana Glacier	103.19	331	IAMs_20	IAMs_20	21 57 51.8	
	comp=Z,3µm,21.0s						
DAWY	Dawson	103.36	335	Pdiff	Pdif	21 14 19.7	+1.4
	baz=120,SNR=5.5						
GRFO	Grafenberg	103.42	41	IAMs_20	IAMs_20	21 59 22.9	
	comp=Z,2µm,20.0s						
GRA1	Grafenberg Arr	103.42	41	IAMs_20	IAMs_20	21 59 22.9	
	comp=Z,2µm,20.0s						
GRF	Grafenberg Arr	103.42	41	*e*Pdiff	Pdif	21 14 21.4	+2.5
GRF				*e*L	L	21 59 12.6	
	comp=Z,2µm,21.4s						
A36M	Sachs Harbour	103.50	345	Pdiff	Pdif	21 14 19.8	+1.1
	baz=130,SNR=12						
A36M	Sachs Harbour	103.50	345	IAMs_20	IAMs_20	22 06 01.9	
	comp=Z,4µm,19.0s						
RETH	Rethem/Aller,	103.52	38	*e*P	Pdif	21 14 22.1	+2.9
	comp=Z,54nm,1.0s,baz=248,slow=4.5						
M27K	Edge Creek, AK	103.53	333	Pdiff	Pdif	21 14 21.1	+1.9
	baz=118						
INK	Inuvik	103.55	340	PKKPbc	PKKPbc	21 30 11.9	-2.3
	comp=Z,8.6nm,1.0s,baz=336,slow=2.2,SNR=10						
INK	Inuvik	103.55	340	*i* P	Pdif	21 14 19.2	+0.2
INK	Inuvik	103.55	340	Pdiff	Pdif	21 14 20.4	+1.4
	baz=124,SNR=16						
INK	Inuvik	103.55	340	Pdif	Pdif	21 14 19.2	+0.2
I29M	Ogilvie Camp,	103.60	336	Pdiff	Pdif	21 14 21.1	+1.7
	baz=120,SNR=8.9						
VRDI	Verde Repeater	103.68	332	IAMs_20	IAMs_20	21 58 51.7	
	comp=Z,3µm,22.0s						
CLZ	Clausthal	103.74	39	*e*P	Pdif	21 14 22.4	+2.0
	comp=Z,30nm,1.3s,baz=248,slow=4.5						
KBA	Koelnbreinsper	103.75	44	*e*P	Pdif	21 14 22.4	+1.7
	comp=Z,15nm,1.1s,SNR=6.0						
KBA				*e*P	PP	21 18 35.4	-2.6
	comp=Z,13nm,1.1s						
MYKA	Terra Mystica	103.78	45	*e*P	Pdif	21 14 23.0	+2.4
	comp=Z,16nm,0.9s,SNR=4.5						
L27K	Beaver Creek,	103.84	334	Pdiff	Pdif	21 14 21.8	+1.3
	baz=118						
L27K	Beaver Creek,	103.84	334	IAMs_20	IAMs_20	22 08 27.8	
	comp=Z,3µm,19.0s						
NRDL	Niedersach Rie	103.84	38	*e*P	Pdif	21 14 23.2	+2.6
	comp=Z,38nm,1.2s,baz=248,slow=4.5						
GLB	Gilahina Butte	103.93	332	IAMs_20	IAMs_20	21 58 50.3	
	comp=Z,3µm,20.0s						
MOX	Moxa	104.01	41	*e*L	L	22 00 38.2	
	comp=Z,5µm,21.1s						
TAU	Tasmania Unive	104.16	208	IAMs_20	IAMs_20	21 51 19.6	
	comp=Z,4µm,18.0s						
WET	Wettzell	104.22	42	*e*P	Pdif	21 14 24.5	+1.9
	comp=Z,135nm,2.6s,baz=248,slow=4.5						
WET				*e*L	L	22 01 31.8	
	comp=Z,3µm,19.2s						
PLN	Plauen	104.27	41	*e*P	Pdif	21 14 25.2	+2.5
	comp=Z,10nm,1.2s,baz=248,slow=4.5						
OBKA	Obir	104.32	45	*e*P	Pdif	21 14 25.4	+2.3
	comp=Z,21nm,1.1s,SNR=5.0						
OBKA				P	PKiKP	21 18 38.9	-0.7
	comp=Z,27nm,1.2s						
WERN	Wernitzgruen	104.33	41	*e*P	Pdif	21 14 25.7	+2.7
	comp=Z,14nm,1.2s,baz=248,slow=4.5						
N25K	Chitina, Valde	104.34	332	IAMs_20	IAMs_20	21 59 34.1	
	comp=Z,3µm,21.0s						
NKC	Novy Kostel	104.36	41	*e*PDIFF	Pdif	21 14 25.7	+2.6
NKC				AMS	AMS	22 00 20.0	
	comp=Z,4µm,18.6s						
NKC	Novy Kostel	104.36	41	*e*P	Pdif	21 14 25.7	+2.6
NKC				MLR	MLR		
	comp=Z,4µm,18.6s						
EGAK	Eagle	104.37	335	IAMs_20	IAMs_20	22 06 15.8	
	comp=Z,4µm,22.0s						
TANN	Tannenbergstha	104.43	41	*e*P	Pdif	21 14 26.1	+2.6
	comp=Z,18nm,1.2s,baz=248,slow=4.5						
L26K	Log Cabin Wild	104.44	333	IAMs_20	IAMs_20	22 08 48.7	
	comp=Z,3µm,19.0s						
BSEG	Bad Segeberg	104.51	37	*e*P	Pdif	21 14 25.8	+2.2
	comp=Z,69nm,1.6s,baz=248,slow=4.5						
BSEG				*e*L	L	22 00 02.6	
	comp=Z,6µm,20.4s						
MOA	Molln	104.61	44	*e*P	Pdif	21 14 26.3	+2.0
	comp=Z,17nm,1.7s						
GEC2	GERESS Array S	104.61	43	*e*P	Pdif	21 14 26.4	+2.0
	comp=Z,14nm,1.2s,baz=248,slow=4.5						
GEC2				*e*L	L	22 01 20.4	
	comp=Z,3µm,20.3s						
GERES	GERESS Array B	104.61	43	Pdiff	Pdif	21 14 23.3	-1.1
	comp=Z,4.0nm,0.9s,baz=232,slow=3.2,SNR=19						
GERES				PKiKP	PKiKP	21 18 36.8	-3.3
	comp=Z,4.6nm,1.1s,baz=225,slow=3.6,SNR=4.5						
GERES				PKKPbc	PKKPbc	21 30 08.5	-2.0
	comp=Z,0.8nm,0.9s,baz=110,slow=5.3,SNR=2.2						
GERES	GERESS Array B	104.61	43	*i* P	Pdif	21 14 25.3	+0.9
GERES	GERESS Array B	104.61	43	Pdif	Pdif	21 14 25.3	+0.9
KHC	Kasperske Hory	104.64	42	*e*PDIFF	Pdif	21 14 26.6	+2.2
KHC				*e*x	x	21 18 06.1	
KHC				*e*PP	PKiKP	21 18 41.4	+1.4
KHC				*e*SKS		21 25 03.4	
KHC				AMS	AMS	21 55 40.0	
	comp=Z,4µm,23.3s						
KHC	Kasperske Hory	104.64	42	*e*P	Pdif	21 14 26.6	+2.2
KHC				*e*		21 18 41.4	
KHC				*e*		21 25 03.4	
KHC				MLR	MLR		
	comp=Z,4µm,23.3s						
SOKA	Soboth	104.69	45	*e*P	Pdif	21 14 26.8	+2.1
	comp=Z,11nm,1.1s						
KLU	Klutina	104.87	331	Pdiff	Pdif	21 14 26.7	+1.6
	baz=115						
CKRC	Cesky Krumlov	104.98	43	*e*PDIFF	Pdif	21 14 28.7	+2.8
CKRC				*e*x	PP	21 18 43.6	-3.4
CKRC				AMS	AMS	21 58 30.0	
	comp=Z,5µm,24.3s						
CLL	Collm	105.07	40	*e*Pdif	Pdif	21 14 29.0	+2.8
	comp=Z,19nm,1.2s						
CLL				*e*		21 18 10.0	
CLL				*e*PP	PKiKP	21 18 43.0	+2.3
CLL				*e*sPP		21 19 05.0	
CLL				*e*SKSac	SKSac	21 25 11.0	+7.6
CLL				*e*Sdif	Sdif	21 26 19.0	+1.1
CLL				*e*PS	PS	21 28 04.0	+1.6
CLL				*e*PPS	PPS	21 29 00.0	
CLL				*e*SS	SS	21 33 42.0	+2.1
CLL				*e*SSS	SSS	21 37 30.0	
CLL				*e*SSSS		21 41 06.0	
CLL				Lm	MLR	22 01 00.0	
	comp=N,2µm,21.9s						
CLL				Lm	MLR	22 01 00.0	
	comp=E,4µm,19.9s						
CLL				Lm	MLR	22 01 00.0	
	comp=Z,5µm,20.5s						
CLL	Collm	105.07	40	*e*P	Pdif	21 14 29.0	+2.8
CLL				*e*S	Sdif	21 26 19.0	+1.1
CLL				pmax	pmax		
	comp=Z,19nm,1.2s						
CLL				MLR	MLR		
	comp=Z,5µm,20.5s						
CLL	Collm	105.07	40	*e*P	Pdif	21 14 28.6	+2.4
	comp=Z,19nm,1.2s,baz=248,slow=4.5						
CLL				*e*L	L	22 00 51.2	
	comp=Z,5µm,20.4s						
CLL	Collm	105.07	40	IAMs_20	IAMs_20	22 00 51.5	
	comp=Z,5µm,20.0s						
SCRK	Sand Creek	105.11	334	IAMs_20	IAMs_20	22 07 06.6	
	comp=Z,3µm,21.0s						
J26L	Joseph Creek	105.17	335	Pdiff	Pdif	21 14 27.5	+1.0
	baz=116,SNR=6.1						
ARSA	Arzberg	105.20	45	*e*P	Pdif	21 14 29.0	+2.1
	comp=Z,7.9nm,1.0s						
RIDG	Independent Ri	105.36	334	IAMs_20	IAMs_20	21 59 37.0	
	comp=Z,3µm,22.0s						
BRG	Berggiesshubel	105.47	41	⇓*e*Pif		21 14 30.8	
BRG				Amp		21 14 32.5	
	comp=Z,5.1nm,0.9s						
BRG	Berggiesshubel	105.47	41	PS	PS	21 28 14.0	+7.4
BRG				Amp		21 57 00.0	
	comp=N,1.0nm,19.7s						
BRG				Amp		21 57 11.0	
	comp=E,3.6nm,21.1s						
BRG				Amp		21 57 17.0	
	comp=Z,4.3nm,23.1s						
PRU	Pruhonice	105.53	42	*e*PDIFF	Pdif	21 14 29.6	+1.3
PRU				*e*SKS	SKSac	21 25 10.0	+4.4
PRU				AMS	AMS	22 02 00.0	
	comp=Z,4µm,19.8s						
PRU	Pruhonice	105.53	42	*e*P	Pdif	21 14 29.6	+1.3
PRU				*e*		21 25 10.0	
PRU				MLR	MLR		
	comp=Z,4µm,19.8s						
CONA	Conrad Observa	105.65	44	*e*P	Pdif	21 14 31.1	+2.1
	comp=Z,8.6nm,1.0s,SNR=4.5						
TREC	Trest	105.87	43	*e*PDIFF	Pdif	21 14 32.7	+2.8
TREC				AMS	AMS	21 58 50.0	
	comp=Z,4µm,22.2s						
TREC	Trest	105.87	43	*e*P	Pdif	21 14 32.7	+2.8
TREC				MLR	MLR		
	comp=Z,4µm,22.2s						
J25K	Salcha River,	105.93	334	Pdiff	Pdif	21 14 31.6	+1.8
	baz=114						
KNK	Knik Glacier	105.95	331	IAMs_20	IAMs_20	22 07 04.7	
	comp=Z,2µm,21.0s						
PDG	Podgorica	106.10	50	IAMs_20	IAMs_20	22 03 33.8	
	comp=Z,5µm,21.0s						
TIR	Tirane	106.18	52	IAMs_20	IAMs_20	22 04 43.8	
	comp=Z,4µm,21.0s						
KRUC	Moravsky	106.36	43	*e*PDIFF	Pdif	21 14 34.3	+2.3

HDA	**Harding Lake**	**106.47**	**334**	IAMs_20	IAMs_20	22 08 17.5	
	comp=Z,3μm,21.0s						
VRAC	**Vranov**	**106.56**	**43**	*e*PDIFF	**Pdif**	**21 14 35.3**	**+2.4**
ILAR	**Eielson Array**	**106.59**	**334**	Pdiff	**Pdif**	**21 14 33.0**	**+0.3**
	comp=Z,1.9nm,1.0s,baz=150,slow=3.7,SNR=8.2						
ILAR				PP	**PP**	**21 18 56.9**	**-1.5**
	comp=Z,6.3nm,1.0s,baz=116,slow=5.9,SNR=7.4						
ILAR				PKKPbc	**PKKPbc**	**21 30 04.0**	**-0.8**
	comp=Z,3.1nm,0.9s,baz=314,slow=4.4,SNR=9.6						
ILAR				PKKP	**PKKPab**	**21 30 15.9**	**-0.5**
	comp=Z,1.3nm,0.9s,baz=306,slow=3.7,SNR=4.5						
ILAR	**Eielson Array**	**106.59**	**334**		**Pdif**	**21 14 33.1**	**+0.5**
UPC	**Upice**	**106.59**	**42**	*e*PDIFF	**Pdif**	**21 14 35.7**	**+2.7**
UPC				AMS	AMS	22 01 30.0	
	comp=Z,4μm,19.6s						
UPC	**Upice**	**106.59**	**42**	*e*P	**Pdif**	**21 14 35.7**	**+2.7**
UPC				MLR	MLR		
	comp=Z,4μm,19.6s						
CHVC	**Chvalec**	**106.64**	**42**	*e*PDIFF	**Pdif**	**21 14 36.0**	**+2.7**
CHVC				AMS	AMS	22 01 30.0	
	comp=Z,4μm,17.0s						
MODS	**Modra-Piesok**	**106.69**	**44**	*e*P	**Pdif**	**21 14 35.3**	**+1.8**
MODS	**Modra-Piesok**	**106.69**	**44**	*e*PDIFF	**Pdif**	**21 14 35.3**	**+1.8**
DPC	**Dobruska-Polom**	**106.73**	**42**	*e*PDIFF	**Pdif**	**21 14 36.0**	**+2.3**
DPC				*e*x	PP	21 18 50.3	-10
DPC				AMS	AMS	22 00 50.0	
	comp=Z,3μm,19.0s						
DPC	**Dobruska-Polom**	**106.73**	**42**	*e*P	**Pdif**	**21 14 36.0**	**+2.3**
DPC				MLR	MLR		
	comp=Z,3μm,19.0s						
OSTC	**Ostas**	**106.73**	**42**	*e*x	PKiKP	21 18 52.2	+8.4
OSTC				AMS	AMS	22 01 30.0	
	comp=Z,4μm,20.3s						
RND	**Reindeer**	**106.87**	**333**	IAMs_20	IAMs_20	22 11 49.1	
	comp=Z,2μm,20.0s						
CCB	**Clear Creek Bu**	**106.91**	**334**	IAMs_20	IAMs_20	22 01 19.0	
	comp=Z,3μm,22.0s						
KRLC	**Kraliky**	**106.92**	**42**	*e*PDIFF	**Pdif**	**21 14 35.2**	**+0.7**
KRLC				AMS	AMS	22 01 20.0	
	comp=Z,4μm,20.9s						
KRLC	**Kraliky**	**106.92**	**42**	*e*P	**Pdif**	**21 14 35.2**	**+0.7**
KRLC				MLR	MLR		
	comp=Z,4μm,20.9s						
POKR	**Poker Plat Res**	**106.94**	**334**	Pdiff	**Pdif**	**21 14 36.1**	**+1.9**
	baz=112						
POKR	**Poker Plat Res**	**106.94**	**334**	IAMs_20	IAMs_20	22 06 18.8	
	comp=Z,3μm,20.0s						
WRH	**Wood River Hil**	**106.95**	**334**	IAMs_20	IAMs_20	22 00 33.3	
	comp=Z,3μm,22.0s						
COLA	**College**	**107.01**	**334**	⇓*e*P	**Pdif**	**21 14 36.0**	**+1.5**
TCOL	**CIGO, UAF Yank**	**107.01**	**334**	IAMs_20	IAMs_20	22 07 52.8	
	comp=Z,2μm,21.0s						
MCK	**McKinley**	**107.03**	**333**	IAMs_20	IAMs_20	22 10 29.1	
	comp=Z,2μm,20.0s						
JAVC	**Velka Javorina**	**107.09**	**44**	*e*PDIFF	**Pdif**	**21 14 37.9**	**+2.6**
DIVS	**Divibare**	**107.14**	**49**	IAMs_20	IAMs_20	22 06 20.0	
	comp=Z,3μm,19.0s						
MDM	**Murphy Dome**	**107.19**	**334**	IAMs_20	IAMs_20	22 07 58.6	
	comp=Z,2μm,21.0s						
H24K	**Noodor Dome**	**107.38**	**335**	Pdiff	**Pdif**	**21 14 38.0**	**+1.7**
	baz=112						
H24K	**Noodor Dome**	**107.38**	**335**	IAMs_20	IAMs_20	22 09 48.5	
	comp=Z,2μm,20.0s						
NEA2	**Nenana**	**107.39**	**334**	IAMs_20	IAMs_20	22 00 43.8	
	comp=Z,3μm,22.0s						
BWN	**Browne**	**107.40**	**333**	IAMs_20	IAMs_20	22 08 37.3	
	comp=Z,2μm,20.0s						
KOLL	**Kolacno**	**107.47**	**44**	*e*	**PKiKP**	**21 18 47.9**	**+2.7**
TRF	**Thorofare Moun**	**107.49**	**332**	IAMs_20	IAMs_20	22 12 45.4	
	comp=Z,2μm,18.0s						
NOA	**NORSAR Array B**	**107.49**	**30**	PP	**PP**	**21 19 02.7**	**-2.4**
	comp=Z,11nm,1.2s,baz=250,slow=7.1,SNR=5.0						
NOA				PKPPKP		21 38 27.3	
	comp=Z,1.0nm,0.9s,baz=72,slow=2.1,SNR=3.2						
DZM	**Mont Dzumac**	**107.71**	**235**	*e*PP	**PP**	**21 19 05.4**	**-1.6**
	comp=Z,541nm,29.1s						
DZM	**Mont Dzumac**	**107.71**	**235**	*e*PS	PS	21 28 21.5	-8.7
	comp=Z,2μm,26.3s						
DZM				*e*SS	SS	21 34 11.9	-4.0
	comp=Z,3μm,26.8s						
DZM	**Mont Dzumac**	**107.71**	**235**	*e*LR	LR	21 50 09.6	
	comp=Z,9μm,28.7s,baz=138						
VYHS	**Vyhne**	**107.71**	**44**	*e*P	**Pdif**	**21 14 39.7**	**+1.6**
VYHS	**Vyhne**	**107.71**	**44**	*e*PDIFF	**Pdif**	**21 14 39.7**	**+1.6**
VYHS				*e*		21 18 47.8	
LIFNC	**LIFOU**	**107.88**	**236**	IAMs_20	IAMs_20	21 52 17.7	
	comp=Z,3μm,22.0s						
MLY	**Manley**	**108.22**	**334**	IAMs_20	IAMs_20	22 01 55.5	
	comp=Z,2μm,22.0s						
PSZ	**Piszkesteto**	**108.22**	**45**	IAMs_20	IAMs_20	22 05 16.3	
	comp=Z,3μm,19.0s						
CAST	**Castle Rocks**	**108.24**	**332**	IAMs_20	IAMs_20	22 11 16.2	
	comp=Z,2μm,20.0s						
N19K	**Bonanza Creek**	**108.50**	**329**	IAMs_20	IAMs_20	22 11 05.8	
	comp=Z,3μm,21.0s						
BZS	**Buzias**	**108.69**	**48**	⇑P	**PKiKP**	**21 18 46.4**	**-1.2**
COLD	**Coldfoot**	**108.74**	**336**	PKiKP	**PKiKP**	**21 18 50.0**	**+3.0**
	baz=109						
I21K	**Tanana**	**108.76**	**334**	IAMs_20	IAMs_20	22 10 53.0	
	comp=Z,3μm,20.0s						
SANT	**Santorini**	**108.79**	**58**	IAMs_20	IAMs_20	22 09 16.6	
	comp=Z,3μm,19.0s						
TOLK	**Toolik Lake Re**	**108.98**	**338**	PKiKP	**PKiKP**	**21 18 50.2**	**+2.6**
	baz=110						
TOLK	**Toolik Lake Re**	**108.98**	**338**	IAMs_20	IAMs_20	22 08 03.0	
	comp=Z,3μm,21.0s						
HERR	**Herculane**	**109.03**	**49**	⇑P	**PKiKP**	**21 18 47.3**	**-0.9**
L19K	**White Mountain**	**109.07**	**330**	IAMs_20	IAMs_20	22 13 34.2	
	comp=Z,2μm,19.0s						
H21K	**Melozitna Rive**	**109.24**	**334**	PKiKP	**PKiKP**	**21 18 50.6**	**+2.6**
	baz=108						
H21K	**Melozitna Rive**	**109.24**	**334**	IAMs_20	IAMs_20	22 11 11.5	
	comp=Z,2μm,19.0s						
CRVS	**Cervenica-Dubn**	**109.50**	**44**	*e*	**PKiKP**	**21 18 56.0**	**+7.0**
NOR	**Nord**	**109.50**	**7**	*i* P	**Pdif**	**21 14 45.5**	**+0.2**
DRGR		**109.75**	**47**	⇑P	**PKiKP**	**21 18 50.2**	**+0.6**
TRPA	**Tarpa**	**109.99**	**45**	⇓P	**PKiKP**	**21 18 50.5**	**+0.6**
KOLS	**Kolonicke sedl**	**110.02**	**45**	*e*PKIKP	PKiKP	21 18 58.8	+8.8
KOLS	**Kolonicke sedl**	**110.02**	**45**	*e*	PKiKP	21 18 58.8	+8.8
BMR	**Baia Mare**	**110.49**	**46**	⇑P	**PKiKP**	**21 18 52.5**	**+1.6**
BMR	**Baia Mare**	**110.49**	**46**	⇑PKIKP	**PKiKP**	**21 18 52.5**	**+1.6**
ARR	**Arges**	**110.67**	**49**	⇑P	**PKiKP**	**21 18 47.4**	**-4.1**
VOIR		**110.97**	**49**	⇑P	**PKiKP**	**21 18 47.7**	**-4.3**
VOIR		**110.97**	**49**	⇑PKIKP	**PKiKP**	**21 18 47.7**	**-4.3**
DOPR	**Dopca**	**111.33**	**48**	⇑P	**PKiKP**	**21 18 52.1**	**-0.5**
LVV	**L'vov**	**111.35**	**44**	*e*P	**Pdif**	**21 14 55.5**	**+1.3**
LVV				*i*		21 18 53.4	
LVV				*e*		21 25 25.8	
LVV				MLR	MLR		
	comp=N,3μm,24.0s						
LVV				MLR	MLR		
	comp=E,5μm,24.0s						
LVV				MLR	MLR		
	comp=Z,5μm,25.0s						
BURAR	**Bucovina Array**	**111.61**	**46**	⇑P	**PKiKP**	**21 18 54.4**	**+1.2**
BURAR	**Bucovina Array**	**111.61**	**46**	⇑PKIKP	**PKiKP**	**21 18 54.4**	**+1.2**
SUW	**Suwalki**	**111.78**	**39**	*e*PKP	**PKiKP**	**21 18 54.3**	**+1.2**
SUW	**Suwalki**	**111.78**	**39**	*e*P	**PKiKP**	**21 18 55.2**	**+2.1**
A21K	**Barrow**	**112.05**	**340**	PKiKP	**PKiKP**	**21 18 55.3**	**+2.1**
	baz=102						
A21K	**Barrow**	**112.05**	**340**	IAMs_20	IAMs_20	22 15 52.6	
	comp=Z,2μm,20.0s						
PLOR	**Plostina**	**112.16**	**48**	⇑P	**PKiKP**	**21 18 53.5**	**-0.7**
PLOR	**Plostina**	**112.16**	**48**	⇑PKIKP	**PKiKP**	**21 18 53.5**	**-0.7**
VRI	**Vrincioaia**	**112.22**	**48**	⇓P	**PKiKP**	**21 18 55.1**	**+0.8**
VRI	**Vrincioaia**	**112.22**	**48**	⇓PKIKP	**PKiKP**	**21 18 55.1**	**+0.8**
TESR	**Tescani**	**112.31**	**48**	⇑P	**PKiKP**	**21 18 54.6**	**+0.2**
PABE	**Paberze**	**112.53**	**38**	*e*P	**PKiKP**	**21 18 56.4**	**+2.0**
CFR	**Carcaliu**	**113.03**	**49**	⇓P	**PKiKP**	**21 18 55.5**	**-0.2**
CFR	**Carcaliu**	**113.03**	**49**	⇓PKIKP	**PKiKP**	**21 18 55.5**	**-0.2**
ISP	**Isparta**	**113.08**	**58**	IAMs_20	IAMs_20	22 11 41.0	
	comp=Z,4μm,20.0s						
TLCR		**113.50**	**50**	⇑P	**PKiKP**	**21 18 56.4**	**-0.3**
TLCR		**113.50**	**50**	⇑PKIKP	**PKiKP**	**21 18 56.4**	**-0.3**
RDOG	**Red Dog Mine**	**113.65**	**336**	IAMs_20	IAMs_20	22 13 02.3	
	comp=Z,3μm,20.0s						
SORM	**Soroca**	**113.78**	**46**	⇓P	**PKiKP**	**21 18 57.2**	**+0.1**
SORM	**Soroca**	**113.78**	**46**	⇓PKIKP	**PKiKP**	**21 18 57.2**	**+0.1**
MILM	**Milestii Mici**	**113.85**	**48**	⇑P	**PKiKP**	**21 18 56.9**	**-0.4**
MILM	**Milestii Mici**	**113.85**	**48**	*e*PKIKP	**PKiKP**	**21 18 56.0**	**-1.3**
MILM				*e*PS	PKKPbc	21 29 30.0	-11
MILM				MLR	MLR		
	comp=Z,3μm,20.5s						
KIS	**Kishinev**	**113.87**	**48**	*e*PKP	**PKiKP**	**21 18 54.0**	**-3.3**
	comp=Z,25nm,0.8s						
KIS	**Kishinev**	**113.87**	**48**	*e*PS	PS	21 29 31.0	+2.4
KIS				*e*L	L	21 54 39.0	
KIS				LRM	MLR	22 02 04.0	
	comp=Z,1μm,28.0s						
KIS	**Kishinev**	**113.87**	**48**	*e*PKIKP	**PKiKP**	**21 18 54.0**	**-3.3**
KIS				*e*PS	PKKPbc	21 29 31.0	-9.5
KIS				pmax	pmax		
	comp=Z,25nm,0.9s						
KIS				MLR	MLR		
	comp=Z,1μm,28.0s						
NACGM	**Naroch**	**114.01**	**39**	*i* PKP	**PKiKP**	**21 18 58.6**	**+1.2**
VSU	**Vasula**	**114.51**	**35**	*e*P	**PKiKP**	**21 18 59.9**	**+1.7**
VSU	**Vasula**	**114.51**	**35**	⇑*i*PKIKP	**PKiKP**	**21 18 59.8**	**+1.6**
VSU				MLR	MLR		
	comp=Z,17μm,21.0s						
FINES	**FINESS Array B**	**114.57**	**32**	PKP	PKPdf	21 18 55.3	-2.9
	comp=Z,16nm,1.2s,baz=336,slow=3.0,SNR=2.7						
MNK	**Minsk**	**114.58**	**39**	*i* PKIKP	**PKiKP**	**21 18 58.9**	**+0.5**
MNK				*i*		21 19 57.1	
MNK				*i* PPP	PPP	21 22 22.7	
MNK				*i*		21 26 08.3	
MNK				*i* SS	SS	21 35 51.9	+4.6
MNK				*i* SSS	SSS	21 40 04.6	
MNK				pmax	pmax		
	comp=Z,66nm,1.0s						
MNK				pmax	pmax		
	comp=N,7.0nm,0.8s						
MNK				pmax	pmax		
	comp=E,3.0nm,1.5s						
MNK				MLR	MLR		
	comp=Z,4μm,17.0s						
MNK				MLR	MLR		
	comp=E,507nm,17.0s						
MNK				MLR	MLR		
	comp=N,934nm,17.0s						
MNK	**Minsk**	**114.58**	**39**	*i* PKP	**PKiKP**	**21 18 58.9**	**+0.5**
	comp=E,3.0nm,1.5s						
MNK				*i* PKP	**PKiKP**	**21 18 58.9**	**+0.5**
	comp=N,7.0nm,0.8s,baz=262						
MNK				*i* PKP	**PKiKP**	**21 18 58.9**	**+0.5**
	comp=Z,66nm,1.0s						
MNK				*i* PP	**PP**	**21 19 57.1**	**+0.9**
MNK				*i* PPP	PPP	21 22 22.7	
MNK				*i* SKS	**SKSdf**	**21 26 08.3**	**+0.6**
MNK				*i* SS	**SS**	**21 35 51.9**	**+4.6**
MNK				*i* SSS	SSS	21 40 04.7	
MNK				*i* LQ	LQ	22 01 08.4	
MNK				*i* LR	LR	22 04 30.5	
MNK				*i* LRM	MLR	22 06 04.7	
	comp=Z,4μm,16.9s						
MNK				*i* LRM	MLR	22 06 08.5	
	comp=E,507nm,17.4s						
MNK				*i* LRM	MLR	22 06 20.8	
	comp=N,934nm,17.4s						
CSS	**Mathiatis**	**114.59**	**61**	IAMs_20	IAMs_20	22 10 08.3	
	comp=Z,4μm,22.0s						
AKASG	**Malin Array Be**	**114.80**	**44**	PKP	PKPdf	21 18 57.5	-1.4
	comp=Z,15nm,0.8s,baz=267,slow=2.4,SNR=28						
AKASG				PP	**PP**	**21 19 56.5**	**-1.3**
	comp=Z,2.9nm,0.8s,baz=263,slow=5.6,SNR=4.6						
AKASG				PKKPbc	**PKKPbc**	**21 29 36.7**	**-0.7**
	comp=Z,2.6nm,0.9s,baz=66,slow=3.4,SNR=3.0						
AKBB	**Malin Array Si**	**114.80**	**44**	*d* *i*PKIKP	**PKiKP**	**21 19 00.1**	**+1.1**
AKBB				MLR	MLR		
	comp=Z,3μm,19.0s						
ARCES	**ARCESS Array B**	**115.08**	**23**	PKP	**PKiKP**	**21 18 58.5**	**-0.5**
	comp=Z,3.3nm,1.0s,baz=225,slow=1.1,SNR=2.3						
ARCES				PKKPbc	**PKKPbc**	**21 29 37.0**	**0.0**
	comp=Z,4.7nm,0.9s,baz=66,slow=4.1,SNR=6.0						
BR231	**Keskin MP Arra**	**115.25**	**56**		**PKiKP**	**21 19 01.7**	**+1.3**
ANTO	**Ankara**	**115.27**	**56**	PKIKP	**PKiKP**	**21 19 01.2**	**+0.8**
ANTO	**Ankara**	**115.27**	**56**		**PKiKP**	**21 19 01.2**	**+0.8**
STKA	**Stephens Creek**	**115.84**	**210**	PKP	**PKiKP**	**21 19 00.5**	**-1.3**
	comp=Z,7.1nm,0.9s,baz=46,slow=4.3,SNR=12						
STKA				PKKPbc	**PKKPbc**	**21 29 32.2**	**-1.2**
	comp=Z,7.8nm,0.9s,baz=321,slow=6.7,SNR=11						
STKA	**Stephens Creek**	**115.84**	**210**	PKIKP	**PKPdf**	**21 19 02.0**	**+0.2**
STKA	**Stephens Creek**	**115.84**	**210**		**PKPdf**	**21 19 02.0**	**+0.2**
BR131	**Keskin Array S**	**115.88**	**56**	PKIKP	**PKPdf**	**21 19 01.1**	**-0.6**
BR131	**Keskin Array S**	**115.88**	**56**	P	**PKiKP**	**21 19 03.2**	**+1.5**
	SNR=11						
BR131	**Keskin Array S**	**115.88**	**56**		**PKPdf**	**21 19 01.1**	**-0.6**
BRTR	**Keskin Array B**	**115.88**	**56**	PKP	**PKPdf**	**21 19 00.3**	**-1.4**
	comp=Z,16nm,0.9s,baz=190,slow=3.8,SNR=33						
BRTR				PP	**PP**	**21 20 06.1**	**+0.1**
	comp=Z,6.1nm,1.0s,baz=232,slow=6.1,SNR=3.9						
BRTR				PKKP	**PKKPdf**	**21 29 57.5**	**-1.6**
	comp=Z,1.0nm,0.8s,baz=102,slow=5.2,SNR=3.5						
BRTR	**Keskin Array B**	**115.88**	**56**	PKIKP	**PKPdf**	**21 19 01.2**	**-0.4**
BRTR	**Keskin Array B**	**115.88**	**56**		**PKPdf**	**21 19 01.2**	**-0.4**
PUL	**Pulkovo**	**116.49**	**34**	⇑*i*PKIKP	**PKiKP**	**21 19 04.6**	**+2.6**
PUL				pmax	pmax		
	comp=Z,67nm,0.5s						
PUL				MLR	MLR		
	comp=Z,4μm,21.0s						
DIKM	**Dikmen**	**117.45**	**54**	⇑P	**PKiKP**	**21 19 04.4**	**0.0**
APA	**Apatity**	**117.97**	**25**	⇓*i*PKIKP	**PKPdf**	**21 19 03.3**	**-1.3**
APA				pmax	pmax		
	comp=Z,16nm,1.0s						
APA				MLR	MLR		
	comp=Z,4μm,23.0s						
LVZ	**Lovozero**	**118.42**	**25**	⇑*i*PKIKP	**PKiKP**	**21 19 08.3**	**+2.7**
LVZ				pmax	pmax		
	comp=Z,139nm,2.5s						
LVZ				MLR	MLR		
	comp=Z,4μm,19.0s						
ANN	**Anapa**	**119.47**	**51**	*e*P	**Pdif**	**21 15 33.3**	**+2.9**
ANN				*i*		21 19 09.9	
ANN				*e*		21 19 19.6	
ANN				*e*		21 26 01.7	
ANN				pmax	pmax		
	comp=Z,133nm,1.3s						
ANN				pmax	pmax		
	comp=Z,115nm,1.3s						
OBN	**Obninsk**	**119.64**	**39**	PKP	**PKPdf**	**21 19 06.7**	**-1.4**
	comp=Z,22nm,1.0s,baz=192,slow=0.7,SNR=14						
OBN	**Obninsk**	**119.64**	**39**	*c* *i*PKIKP	**PKPdf**	**21 19 07.5**	**-0.6**
OBN				*e*		21 19 21.6	
OBN				PPP	PPP	21 23 03.0	
OBN				*e*		21 26 06.2	
OBN				*e*SS	SS	21 37 07.4	+14
OBN				pmax	pmax		
	comp=Z,8.0nm,0.5s						
OBN				pmax	pmax		
	comp=Z,90nm,0.9s						
OBN				MLR	MLR		
	comp=Z,3μm,19.0s						
OBN	**Obninsk**	**119.64**	**39**	PKPdf	**PKiKP**	**21 19 08.8**	**+0.6**
MSEY	**Mahe Island**	**119.87**	**111**	PKiKP	**PKiKP**	**21 19 11.8**	**+1.7**
HNR	**Honiara**	**120.22**	**242**	IAMs_20	IAMs_20	22 01 17.9	
	comp=Z,3μm,21.0s						
MOS	**Moscow**	**120.25**	**38**	*i* PKIKP	**PKPdf**	**21 19 08.8**	**-0.5**
MOS				*e*		21 19 20.9	
MOS				*e*		21 20 33.3	
MOS				*i* PS	PKKPdf	21 30 29.2	+38
MOS				pmax	pmax		
	comp=Z,87nm,1.1s						
MOS				MLR	MLR		
	comp=N,3μm,20.0s						
MOS				MLR	MLR		
	comp=E,5μm,20.0s						
MOS				MLR	MLR		
	comp=Z,4μm,20.0s						
KTUT	**Trabzon**	**120.71**	**56**	⇓P	**PKPdf**	**21 19 09.2**	**-1.5**
SOC	**Sochi**	**120.97**	**53**	*i* PKIKP	**PKiKP**	**21 19 11.8**	**+0.6**
SOC				*e*		21 20 39.7	
SOC				*e*PPP	PPP	21 23 12.9	
SOC				*e*PS	PKKPdf	21 30 34.7	+45
SOC				*e*SS	SS	21 37 10.0	-0.9
SOC				pmax	pmax		
	comp=Z,77nm,0.9s						
SOC				MLR	MLR		
	comp=Z,2μm,21.0s						
LPSR	**Galich'ya Gora**	**120.98**	**42**	*i* PKIKP	**PKiKP**	**21 19 11.1**	**+0.2**
LPSR				pmax	pmax		
	comp=Z,150nm,0.9s						
LPSR				MLR	MLR		
	comp=Z,3μm,16.0s						
KLMR	**Klimovskoe**	**121.06**	**32**	*e*PKIKP	**PKPdf**	**21 19 10.3**	**-0.4**
KLMR				*e*SS	SS	21 37 04.8	-6.1
KLMR				pmax	pmax		
	comp=Z,141nm,1.1s						
KLMR	**Klimovskoe**	**121.06**	**32**	*e*PKPdf	**PKPdf**	**21 19 10.4**	**-0.3**
KLMR				AMP		21 19 14.4	
	comp=Z,141nm,1.1s						
KLMR				*e*PP	**PP**	**21 20 37.3**	**-3.6**
KLMR				*e*SKP		21 22 45.1	
KLMR				*e*PKKPab	**PKKPbc**	**21 29 14.3**	**-0.8**
KLMR				*e*SS	**SS**	**21 37 04.9**	**-6.0**
KLMR				*e*SS	**SS**	**21 37 04.9**	**-6.0**
KLMR				LQ	LQ	21 57 33.2	
KLMR				LQ	LQ	21 57 33.2	
KLMR				LR	LR	22 05 45.5	
VSR	**Storozhevoye**	**121.10**	**44**	*i* PKIKP	**PKiKP**	**21 19 11.5**	**+0.3**
VSR				pmax	pmax		
	comp=Z,80nm,1.0s						
VSR				MLR	MLR		
	comp=Z,3μm,17.0s						
VORD	**Divnogorie**	**121.17**	**44**	*e*PKIKP	**PKPdf**	**21 19 11.1**	**-0.1**
VORD				pmax	pmax		
	comp=Z,70nm,1.0s						
RAYN	**Ar Rayn**	**122.07**	**77**	*i* PKPdf	**PKPdf**	**21 19 13.7**	**-0.2**
	SNR=25						
RAYN	**Ar Rayn**	**122.07**	**77**	PKIKP	**PKPdf**	**21 19 13.3**	**-0.6**
RAYN				MLR	MLR		
	comp=Z,4μm,19.0s						
RAYN	**Ar Rayn**	**122.07**	**77**	P	**PKPdf**	**21 19 13.8**	**-0.1**
RAYN	**Ar Rayn**	**122.07**	**77**	PKPdf	**PKPdf**	**21 19 13.3**	**-0.6**
GURO	**Guroymak-BITLI**	**122.12**	**59**	PKPdf	**PKiKP**	**21 19 14.5**	**+0.6**
BCA	**Borcka**	**122.15**	**55**	⇓P	**PKPdf**	**21 19 12.4**	**-1.1**
VRH	**Novokhopyorsk**	**122.70**	**44**	*i* PKIKP	**PKiKP**	**21 19 14.8**	**+0.4**
VRH				pmax	pmax		
	comp=Z,110nm,1.0s						
VRH				MLR	MLR		
	comp=Z,5μm,25.0s						
CTAO	**Charters Tower**	**122.83**	**222**	IAMs_20	IAMs_20	22 04 00.7	
	comp=Z,2μm,21.0s						
NEY	**Neytrino**	**123.12**	**53**	⇑*i*PKIKP	**PKiKP**	**21 19 17.1**	**+1.4**
NEY				MLR	MLR		
	comp=Z,3μm,24.0s						
KIV	**Kislovodsk**	**123.14**	**52**	⇓P	**PKiKP**	**21 19 15.9**	**+0.2**
KIV	**Kislovodsk**	**123.14**	**52**	*i* PKPdf	**PKPdf**	**21 19 15.4**	**0.0**
	SNR=23						
KIV	**Kislovodsk**	**123.14**	**52**	*i* PKIKP	**PKiKP**	**21 19 16.8**	**+1.2**
KIV				*e*		21 20 56.9	
KIV				*e*PS	PS	21 30 54.8	+2.2
KIV				*e*SS	SS	21 37 42.6	+3.8
KIV				pmax	pmax		
	comp=Z,65nm,1.0s						
KIV				MLR	MLR		
	comp=Z,2μm,22.0s						
KIV	**Kislovodsk**	**123.14**	**52**	P	**PKPdf**	**21 19 15.0**	**-0.4**
KIV	**Kislovodsk**	**123.14**	**52**		**PKiKP**	**21 19 15.6**	**0.0**
KIV				IAMs_20	IAMs_20	22 15 36.9	
	comp=Z,2μm,20.0s						
KVAR	**Kislovodsk Arr**	**123.15**	**52**	PKP	**PKPdf**	**21 19 13.9**	**-1.5**
	comp=Z,3.2nm,0.6s,baz=269,slow=22,SNR=2.7						
KARS	**Kars**	**123.16**	**56**	PKIKP	**PKiKP**	**21 19 16.5**	**+0.6**
KARS	**Kars**	**123.16**	**56**		**PKiKP**	**21 19 16.5**	**+0.6**
KBZ	**Khabaz**	**123.28**	**53**	PKP	**PKPdf**	**21 19 15.1**	**-0.4**
	comp=Z,76nm,0.9s,baz=232,slow=1.6,SNR=46						
GOF	**Gofitskoye**	**123.46**	**51**	⇑*e*PKIKP	**PKiKP**	**21 19 16.0**	**-0.1**
GOF				pmax	pmax		
	comp=Z,171nm,1.0s						
AKH	**Akhalkalaki**	**123.55**	**56**	⇑P	**PKPdf**	**21 19 15.8**	**-0.5**
ONI	**Oni**	**123.61**	**54**	PKIKP	**PKiKP**	**21 19 17.2**	**+0.6**
ONI	**Oni**	**123.61**	**54**		**PKiKP**	**21 19 17.1**	**+0.6**
NCK	**Nalchik**	**123.77**	**53**	⇓*e*PKIKP	**PKiKP**	**21 19 16.7**	**-0.1**
PRGR	**Permogore**	**123.89**	**31**	*e*PKIKP	**PKPdf**	**21 19 16.1**	**0.0**
PRGR				pmax	pmax		
	comp=Z,105nm,0.8s						
ZEI	**Tsey**	**123.95**	**54**	*i* PKIKP	**PKPdf**	**21 19 16.4**	**-0.8**
ZEI				pmax	pmax		
	comp=Z,17nm,0.9s						
GNI	**Garni**	**124.38**	**57**	PKP	**PKPdf**	**21 19 17.7**	**-0.3**
	comp=Z,43nm,0.9s,baz=49,slow=9.2,SNR=19						
GNI	**Garni**	**124.38**	**57**	PKiKP	**PKiKP**	**21 19 20.5**	**+2.2**
GNI	**Garni**	**124.38**	**57**	*c* *i*PKIKP	**PKiKP**	**21 19 20.5**	**+2.2**
GNI				MLR	MLR		
	comp=Z,3μm,22.0s						
GNI	**Garni**	**124.38**	**57**	P	**PKPdf**	**21 19 17.9**	**-0.1**
GNI	**Garni**	**124.38**	**57**	PKPdf	**PKiKP**	**21 19 18.5**	**+0.1**
GNI	**Garni**	**124.38**	**57**	IAMs_20	IAMs_20	22 15 19.2	
	comp=Z,3μm,22.0s						
BILL	**Bilibino**	**125.03**	**337**	*d* *i*PKIKP	**PKiKP**	**21 19 20.4**	**+1.9**
BILL				*i*		21 19 29.7	
BILL				*i*		21 19 34.1	
BILL				*i*		21 21 08.0	
BILL				*e*PPP	PPP	21 23 48.2	
BILL				*i* PS	PS	21 31 07.6	-0.5
BILL				*e*		21 32 35.2	
BILL				SSS	SSS	21 42 34.0	
BILL				pmax	pmax		
	comp=Z,35nm,1.1s						
MIB	**Mutribah**	**125.09**	**70**	*e*P	**PKiKP**	**21 19 20.4**	**+0.6**
RDF	**Al-Radifah**	**125.11**	**71**	*e*P	**PKiKP**	**21 19 20.2**	**+0.3**
GROC	**Groznyy**	**125.36**	**54**	*i* PKIKP	**PKiKP**	**21 19 20.6**	**+0.7**
GROC				pmax	pmax		
	comp=Z,43nm,1.0s						
UMR	**Umm Al-Rimmam**	**125.37**	**70**	*e*P	**PKiKP**	**21 19 20.2**	**-0.1**
MORW	**Morawa**	**126.07**	**187**	PKPdf	**PKPdf**	**21 19 21.3**	**-0.2**
BELG	**Belogornoye**	**126.30**	**42**	PKP	**PKPdf**	**21 19 20.4**	**-0.6**
	comp=Z,200nm,0.9s,baz=191,slow=1.0,SNR=42						
BELG	**Belogornoye**	**126.30**	**42**	*d* *e*PKIKP	**PKPdf**	**21 19 20.6**	**-0.4**
BELG				MLR	MLR		
	comp=Z,975nm,19.0s						
ASAR	**Alice Springs**	**126.33**	**208**	PKhKP	PKPpre	21 19 08.8	
	comp=Z,0.1nm,0.3s,baz=135,slow=2.4,SNR=2.6						
ASAR				PKP	**PKPdf**	**21 19 21.2**	**-0.9**
	comp=Z,50nm,0.9s,baz=144,slow=1.9,SNR=56						
ASAR				SKKPbc	SKKPbc	21 32 35.6	-5.3
	comp=Z,4.0nm,1.1s,baz=351,slow=4.4,SNR=4.2						
ASAR	**Alice Springs**	**126.33**	**208**	PKPdf	**PKPdf**	**21 19 20.5**	**-1.7**
AS31	**Alice Springs**	**126.33**	**208**		**PKPdf**	**21 19 21.3**	**-0.9**
KIRV	**Kirov**	**126.34**	**34**	PKP	**PKPdf**	**21 19 20.2**	**-0.7**
	comp=Z,56nm,0.9s,baz=245,slow=1.4,SNR=20						
KIRV	**Kirov**	**126.34**	**34**	*c* *i*PKIKP	**PKiKP**	**21 19 22.9**	**+1.6**
MAK	**Makhachkala**	**126.61**	**54**	*i* P	**Pdif**	**21 15 59.0**	**-3.2**
MAK				*i*		21 19 21.9	
MAK				*e*		21 21 15.8	
MAK				*e*PPP	PPP	21 24 02.3	
MAK				*e*		21 26 29.4	
MAK				*e*SS	SS	21 38 20.1	-2.1
MAK				*e*SSS	SSS	21 43 04.5	
MAK				pmax	pmax		
	comp=Z,139nm,1.6s						
H11S2	**WAKE ISLAND Hy**	**126.80**	**275**	T	T	23 38 57.4	
	baz=108,slow=75,SNR=5187						
H11S1	**WAKE ISLAND Hy**	**126.81**	**275**	T	T	23 38 58.1	
	baz=108,slow=75,SNR=3310						
H11S3	**WAKE ISLAND Hy**	**126.82**	**275**	T	T	23 38 56.1	
	baz=108,slow=75,SNR=4471						
H11N3	**WAKE ISLAND Hy**	**126.97**	**277**	T	T	23 39 12.3	
	baz=107,slow=75,SNR=655						
H11N1	**WAKE ISLAND Hy**	**126.99**	**277**	T	T	23 39 13.5	
	baz=107,slow=75,SNR=367						
H11N2	**WAKE ISLAND Hy**	**126.99**	**277**	T	T	23 39 13.4	
	baz=107,slow=75,SNR=536						
ABTO	**Aybut**	**127.31**	**87**	P	**PKPdf**	**21 19 24.1**	**0.0**
TRNA	**Turayna**	**127.42**	**77**	P	**PKPdf**	**21 19 23.2**	**-0.8**
SLWR	**Sila**	**127.69**	**78**	P	**PKiKP**	**21 19 26.4**	**+1.2**
WHFO	**Wadi Hawf**	**127.92**	**86**	P	**PKPdf**	**21 19 23.1**	**-2.1**
DOK	**Doka**	**128.45**	**85**	P	**PKPdf**	**21 19 25.0**	**-1.1**
JRN	**Qarnain Island**	**128.92**	**77**	P	**PKiKP**	**21 19 29.9**	**+2.3**
DMTO	**DMTO**	**128.92**	**87**	P	**PKPdf**	**21 19 26.2**	**-0.8**
WRA	**Warramunga Arr**	**129.39**	**211**	PKhKP	PKPpre	21 19 14.5	
	comp=Z,1.0nm,0.9s,baz=169,slow=1.3,SNR=6.9						
WRA				PKP	**PKPdf**	**21 19 27.4**	**-0.7**
	comp=Z,77nm,1.0s,baz=154,slow=1.8,SNR=66						
WRA				SKKPbc	SKKPbc	21 32 29.8	-0.5
	comp=Z,10nm,1.0s,baz=340,slow=5.3,SNR=5.6						
WRAB	**Tennant Creek**	**129.39**	**211**	*c* *i*PKIKP	**PKPdf**	**21 19 27.5**	**-0.6**
WRAB				MLR	MLR		
	comp=Z,2μm,17.0s						
WRAB	**Tennant Creek**	**129.39**	**211**	IAMs_20	IAMs_20	22 09 10.7	
	comp=Z,2μm,20.0s						
WB0	**Warramunga Arr**	**129.51**	**211**		**PKPdf**	**21 19 27.6**	**-0.7**
SHAO	**Shalim**	**129.63**	**87**	P	**PKiKP**	**21 19 30.7**	**+1.5**
PMG	**Port Moresby**	**129.97**	**232**	PKP	**PKPdf**	**21 19 28.9**	**-0.4**
	comp=Z,62nm,1.0s,baz=56,slow=1.6,SNR=26						
PMG				SKPbc	SKPab	21 22 46.9	-2.0
	comp=Z,5.7nm,0.4s,baz=78,slow=3.5,SNR=1.1						
PMG	**Port Moresby**	**129.97**	**232**	PKIKP	**PKiKP**	**21 19 30.0**	**0.0**
PMG				MLR	MLR		
	comp=Z,3μm,20.0s						
PMG	**Port Moresby**	**129.97**	**232**	PKPdf	**PKiKP**	**21 19 30.0**	**0.0**
PMG	**Port Moresby**	**129.97**	**232**	IAMs_20	IAMs_20	22 06 38.6	
	comp=Z,3μm,20.0s						
ASUD	**Al Ashush, Dub**	**131.05**	**78**	PKiKP	**PKiKP**	**21 19 32.9**	**+1.0**

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ALNE  Al Ain             131.31  79  i PKiKP   PKiKP    21 19 32.5 +0.1
      SNR=10
ALNE  Al Ain             131.31  79    P       PKiKP    21 19 32.2 -0.2
      SNR=8.2
FAQ   Al Faqa, Dubai     131.31  78  i PKiKP   PKiKP    21 19 32.5 +0.1
      SNR=16
FAQ   Al Faqa, Dubai     131.31  78    P       PKPdf    21 19 31.9 +0.4
      SNR=5.6
ARU   Arti               131.68  35    PKP     PKPdf    21 19 30.4 -0.8
      comp=Z,21nm,0.8s,baz=290,slow=1.7,SNR=42
ARU   Arti               131.68  35  i PKIKP   PKiKP    21 19 32.4 +0.2
ARU                                                     21 21 50.2
ARU                                    PPP     PPP      21 24 40.3
ARU                                    MLR     MLR
      comp=Z,6µm,22.0s
ARU   Arti               131.68  35            PKiKP    21 19 31.9 -0.2
ASHO  Ashiyiah           131.71  78    P       PKPdf    21 19 30.9 -1.4
HATD  Hatta, Dubai       131.81  78  i PKiKP   PKiKP    21 19 34.0 +0.5
      SNR=7.3
HATD  Hatta, Dubai       131.81  78    P       PKiKP    21 19 33.9 +0.5
ARQ   Araqi              131.84  80    P       PKiKP    21 19 33.1 -0.4
      SNR=6.6
TIXI  Tiksi              131.87 352    PP      PP       21 21 51.5 -0.4
      comp=Z,17nm,1.1s,baz=37,slow=9.3,SNR=5.3
TIXI  Tiksi              131.87 352c iPKIKP    PKiKP    21 19 32.6 +0.5
TIXI                                   MLR     MLR
      comp=Z,2µm,20.0s
TIXI  Tiksi              131.87 352            PKiKP    21 19 32.4 +0.3
TIXI                                   IAMs_20 IAMs_20  22 16 41.9
      comp=Z,2µm,22.0s
UOSS  Minazif            131.90  78  i PKPdf   PKPdf    21 19 33.0 +0.5
      SNR=6.0
MSFE  Esma-Masafi        131.94  77  i PKiKP   PKiKP    21 19 33.5 -0.3
      SNR=7.7
MASF  Masafi             131.94  77    P       PKiKP    21 19 34.1 +0.4
SOHO  SOHO               132.02  79  i PKiKP   PKiKP    21 19 33.8  0.0
      SNR=26
SOHO  SOHO               132.02  79    P       PKPdf    21 19 32.0 -0.8
SHME  Shamm              132.06  77  i PKiKP   PKiKP    21 19 34.2 +0.3
      SNR=8.6
BANOM Banah              132.17  77    PKiKP   PKiKP    21 19 34.8 +0.6
BANOM Banah              132.17  77    P       PKiKP    21 19 35.0 +0.9
SEY   Seymchan           132.52 335    PKP     PKPdf    21 19 32.7 +0.1
      comp=Z,65nm,1.1s,baz=79,slow=3.1
SEY                                    PP      PP       21 21 57.1 +0.6
      comp=Z,28nm,1.1s,baz=78,slow=8.3,SNR=5.2
HOQ   Hoqain             132.60  80    P       PKPdf    21 19 34.0  0.0
      SNR=5.6
SVE   Sverdlovsk         132.61  34d iPKIKP    PKiKP    21 19 35.6 +1.6
SVE                                    pmax    pmax
      comp=Z,80nm,1.3s
JMDO  Jabal Madar        133.03  82    P       PKiKP    21 19 35.4 -0.6
AKTO  Aktyubinsk         133.04  43    PKP     PKPdf    21 19 33.9 -0.1
      comp=Z,26nm,0.9s,baz=284,slow=2.2,SNR=32
SMDO  Samad              133.14  81    P       PKiKP    21 19 36.2 -0.1
      SNR=17
BIDO  Bidbid             133.31  80    P       PKPdf    21 19 34.8 -0.5
      SNR=7.2
NRIK  Noril'sk           133.57  11    PKP     PKPdf    21 19 34.6 +0.3
      comp=Z,28nm,1.1s,baz=31,slow=0.7,SNR=20
NRIK  Noril'sk           133.57  11c iPKIKP    PKiKP    21 19 36.8 +1.2
NRIK  Noril'sk           133.57  11    PKPdf   PKiKP    21 19 36.2 +0.5
WSAR  Wadi Sarin         133.71  81    PP      PP       21 22 04.3 -1.3
      comp=Z,28nm,1.1s,baz=301,slow=6.6,SNR=5.9
WSAR  Wadi Sarin         133.71  81    P       PKPdf    21 19 35.9 -0.1
      SNR=5.3
PET   Petropavlovsk      133.77 321   ePKIKP   PKPdf    21 19 35.7 +0.5
PET                                   ePPP     PPP      21 25 07.8
PET                                   ePS      PS       21 32 27.6 +3.1
PET                                   ePPS     PPS      21 34 12.3
PET                                   eSSS     SSS      21 44 54.5
PET                                    pmax    pmax
      comp=Z,700nm,13.0s
PET                                    MLR     MLR
      comp=Z,2µm,20.0s
WBK   Wadi Bani Khal     133.87  82    P       PKPdf    21 19 33.8 -2.6
      SNR=8.9
JLN   Jalan Bani Buh     134.16  83    P       PKPdf    21 19 33.9 -3.0
      SNR=9.6
PEA0B Petropavlovsk-     134.29 321ce PKIKP    PKPdf    21 19 36.0 -0.2
PETK  Petropavlovsk-     134.29 321    PKP     PKPdf    21 19 36.3 +0.1
      comp=Z,21nm,1.0s,baz=79,slow=7.7,SNR=11
ABKAR Akbulak array      134.53  44            PKPdf    21 19 37.3 +0.5
ABKAR Akbulak array      134.53  44            PKPdf    21 19 37.4 +0.7
GEYT  Alibeck            134.72  60    PKP     PKPdf    21 19 38.1 +0.5
      comp=Z,15nm,0.8s,baz=235,slow=12,SNR=12
GEYT  Alibeck            134.72  60            PKiKP    21 19 38.4 -0.6
GYA0B ALIBECK ARRAY      134.72  60    PKPdf   PKPdf    21 19 37.9 +0.4
MA2   Magadan            134.99 332de PKIKP    PKiKP    21 19 38.8  0.0
MA2                                    MLR     MLR
      comp=Z,2µm,23.0s
MA2   Magadan            134.99 332    IAMs_20 IAMs_20  22 25 35.2
      comp=Z,3µm,22.0s
SKR   Severo-Kuril's     135.99 318   ePKHKP   PKPpre   21 19 16.5
SKR                                   e                 21 22 20.6
SKR                                   eSSS     SSS      21 45 23.4
SKR                                    MLR     MLR
      comp=Z,600nm,20.0s
SKR                                    MLR     MLR
      comp=Z,800nm,20.0s
MTN   Manton Dam         137.05 212            PKPdf    21 19 42.5  0.0
HRA   Herat              138.11  66            PKiKP    21 19 45.4 -0.9
BRVK  Borovoye           139.24  36de PKIKP    PKPdf    21 19 44.1 -1.3
BRVK                                   MLR     MLR
      comp=Z,6µm,20.0s
BVAR  Borovoye Array     139.32  36    PKhKP   PKPpre   21 19 35.9
      comp=Z,2.5nm,1.0s,baz=265,slow=6.8,SNR=5.0
BVAR                                   PKP     PKPdf    21 19 43.5 -2.0
      comp=Z,12nm,0.9s,baz=238,slow=8.5,SNR=10
JAY   Jayapura           139.34 233    PKP     PKPdf    21 19 45.9 -1.0
      comp=Z,18nm,0.9s,baz=213,slow=4.1,SNR=4.2
YAK   Yakutsk            140.37 345    PKhKP   PKPpre   21 19 40.6
      comp=Z,5.6nm,0.5s,baz=190,slow=4.8,SNR=9.6
YAK   Yakutsk            140.37 345   ePKHKP   PKPpre   21 19 41.2
YAK                                   eSS      SS       21 41 02.8 -3.6
YAK                                    pmax    pmax
      comp=Z,89nm,1.2s
YAK                                    pmax    pmax
      comp=N,7.0nm,1.3s
YAK                                    pmax    pmax
      comp=E,18nm,1.4s
YAK                                    pmax    pmax
      comp=Z,492nm,5.3s
YAK                                    pmax    pmax
      comp=N,345nm,5.5s
YAK                                    pmax    pmax
      comp=E,165nm,4.4s
YAK   Yakutsk            140.37 345    IAMs_20 IAMs_20  22 25 27.2
      comp=Z,2µm,22.0s
BATI  Baumata            142.56 203    PKhKP   PKPpre   21 19 48.6
      comp=Z,22nm,0.6s,baz=94,slow=2.2,SNR=2.7
SOEI  Soe                142.76 204            PKPdf    21 19 53.1  0.0
BHUJ  Bhuj               143.64  84   eP       PKPdf    21 19 53.2 -0.9
KBL   Kabul              143.72  65    PKIKP   PKPbc    21 19 52.5 +0.6
KBL   Kabul              143.72  65    P       PKPab    21 19 49.0 -2.1
      SNR=17
KBL   Kabul              143.72  65            PKPbc    21 19 52.5 +0.6
GAR   Garm               144.12  57            PKPbc    21 19 52.9  0.0
MMRI  Maumere            144.52 202            PKPab    21 19 54.1 -0.2
MMRI                                   IAMs_20 IAMs_20  22 18 15.6
      comp=Z,2µm,22.0s
FAKI  Fak Fak            144.69 222    IAMs_20 IAMs_20  22 16 17.1
      comp=Z,3µm,22.0s
YUK   Yuzh-Kuril'sk      144.79 312   ePKIKP   PKPab    21 19 54.2 -0.3
YUK                                   e                 21 23 12.3
YUK                                   ePPP     PPP      21 26 24.6
YUK                                   eSS      SS       21 41 57.7 -1.6
YUK                                   eSSS     SSS      21 47 24.9
KURK  Kurchatov          144.86  35    PKIKP   PKPbc    21 19 54.8 +0.2
KURK  Kurchatov          144.86  35    P       PKPdf    21 19 55.3 -0.2
KURK  Kurchatov          144.86  35            PKPbc    21 19 54.8 +0.2
KURK  Kurchatov          144.86  35    IAMs_20 IAMs_20  22 25 46.2
      comp=Z,2µm,20.0s
KURBB Kurchatov Arra     144.87  35    PKP     PKPbc    21 19 54.8 +0.2
      comp=Z,290nm,0.9s,baz=305,slow=3.4,SNR=455
KURBB                                  PP      PP       21 23 16.9 +3.7
      comp=Z,9.0nm,1.0s,baz=302,slow=5.4,SNR=3.3
GUMO  Guam               144.91 258    PKPbc   PKPab    21 19 55.5 -0.2
      comp=Z,571nm,1.1s,baz=162,slow=8.0,SNR=5.7
GUMO  Guam               144.91 258    PKIKP   PKPdf    21 19 58.1 +1.5
GUMO  Guam               144.91 258    PKPdf   PKPdf    21 19 58.1 +1.5
TRD   Trivandrum         144.97 112   eP       PKPbc    21 19 55.7 -0.3
TRD                                   i x      x        21 20 10.5
GOA   Goa                145.31  99   eP       PKPbc    21 19 56.3 -0.7
GOA                                   i x      x        21 20 10.6
ZAA0  Zalesovo Array     145.54  26            PKPdf    21 19 56.3 -0.2
ZALV  Zalesovo Beam      145.54  26    PKPbc   PKPbc    21 19 56.6 -0.1
      comp=Z,1µm,0.9s,baz=317,slow=4.4,SNR=350
ZALV  Zalesovo Beam      145.54  26            PKPdf    21 19 56.5  0.0
YSS   Yuzh-Sakhalins     145.56 318  i PKP2    PKPab    21 19 58.9 +1.6
YSS                                   e                 21 23 20.5
YSS                                   ePPS     PPS      21 36 02.4
YSS                                    pmax    pmax
      comp=Z,260nm,1.0s
EKS2  Erkin-Say          145.67  50    P       PKPab    21 19 58.6 +0.6
      SNR=6.8
AML   Almayashu          145.78  51    P       PKPab    21 19 58.9 +0.1
      SNR=12
AML   Almayashu          145.78  51  i PKPab   PKPab    21 19 58.6 -0.2
      SNR=102
AML   Almayashu          145.78  51    P       PKPbc    21 19 58.4  0.0
USP   Ospenovka          145.95  48    P       PKPbc    21 19 58.3 -0.1
      SNR=227
AAK   Ala-Archa          146.17  50    PKPbc   PKPbc    21 19 59.1 -0.2
      comp=Z,285nm,1.0s,baz=246,slow=3.4,SNR=137
AAK   Ala-Archa          146.17  50    P       PKPbc    21 19 59.2  0.0
      SNR=305
AAK   Ala-Archa          146.17  50  i PKPbc   PKPbc    21 19 59.0 -0.2
      SNR=556
AAK   Ala-Archa          146.17  50c iPKP2     PKPab    21 20 00.3 +0.3
AAK                                    MLR     MLR
      comp=Z,8µm,20.0s
AAK   Ala-Archa          146.17  50    P       PKPab    21 19 59.9 -0.1
AAK   Ala-Archa          146.17  50            PKPdf    21 19 58.6 +0.4
CHMS  Chumysh            146.22  49    P       PKPab    21 19 59.9 -0.1
      SNR=160
UCH   Uchtor             146.33  50    P       PKPbc    21 19 59.9 -0.2
      SNR=412
POO   Poona              146.33  94   eP       PKPdf    21 19 59.4 +0.4
POO                                   i x      x        21 20 13.6
POO   Poona              146.33  94⇓iP         PKPdf    21 19 58.0 -1.0
KBK   Karagaybulak       146.48  49    P       PKPbc    21 19 59.5 -0.7
      SNR=238
KRAR  Krasnoyarsk        146.53  17d iPKIKP    PKPdf    21 19 57.8 -0.3
JAGI  Jajag, Banyuwa     146.62 188            PKPdf    21 20 00.3 +0.6
JAGI                                   IAMs_20 IAMs_20  22 26 56.2
      comp=Z,2µm,20.0s
GRNR  Gornyy             146.82 328⇑iPKP2      PKiKP    21 20 03.7 +0.4
GRNR                                   pmax    pmax
      comp=E,20nm,1.2s
GRNR                                   pmax    pmax
      comp=N,10.0nm,1.0s
GRNR                                   pmax    pmax
      comp=Z,110nm,1.1s
GRNR                                   MLR     MLR
      comp=E,880nm,16.0s
TKM2  Tokmak 2           146.83  49    P       PKPdf    21 19 59.8 +0.4
      SNR=172
BOD   Bodaibo            146.86 356   ePKIKP   PKPdf    21 19 59.0 +0.4
BOD                                    pmax    pmax
      comp=Z,308nm,1.3s
SIJI  Sorong             146.91 223    PKPbc   PKPbc    21 20 01.0 -1.0
      comp=Z,104nm,0.9s,baz=350,slow=4.6,SNR=9.8
ASAJ  Asahikawa          146.93 314    PKPbc   PKPbc    21 20 00.1 -1.0
      comp=Z,73nm,0.9s,baz=90,slow=9.4,SNR=10
NIL   Nilore             147.28  66    PKIKP   PKPdf    21 20 00.0 -0.2
NIL                                    MLR     MLR
      comp=Z,3µm,19.0s
NIL   Nilore             147.28  66    P       PKPbc    21 20 01.6 -1.0
NIL   Nilore             147.28  66    PKPdf   PKPdf    21 20 00.0 -0.2
ERM   Erimo              147.37 310c iPKP2     PKiKP    21 20 05.5 +0.8
PALK  Pallekele          147.39 117    PKP2    PKPab    21 20 04.6 -0.7
PALK  Pallekele          147.39 117    P       PKPbc    21 20 03.0 -0.4
PALK  Pallekele          147.39 117            PKPdf    21 20 00.5 -0.5
PALK                                   PKPbc   PKPab    21 20 04.6 -0.7
UGM   Wanagama           147.46 182    IAMs_20 IAMs_20  22 22 10.9
      comp=Z,2µm,21.0s
ULHL  Ulahol             147.52  49    P       PKPdf    21 20 01.7 +1.1
      SNR=89
ZEA   Zeya               148.20 340  i PKP2    PKPbc    21 20 03.7 -0.6
ZEA                                   e                 21 42 39.3
ZEA                                   e                 21 48 20.3
ZEA                                    pmax    pmax
      comp=N,20nm,0.8s
ZEA                                    pmax    pmax
      comp=Z,90nm,1.6s
ZEA                                    pmax    pmax
      comp=E,300nm,3.7s
ZEA                                    pmax    pmax
      comp=N,500nm,5.9s
ZEA                                    pmax    pmax
      comp=Z,2µm,8.9s
ZEA                                    MLR     MLR
      comp=E,500nm,26.0s
ZEA                                    MLR     MLR
      comp=N,800nm,20.0s
ZEA                                    MLR     MLR
      comp=Z,2µm,22.0s
KSH   Kashi              148.24  54    PKPbc   PKPdf    21 20 02.0 +0.3
KSH                                    PP      PP       21 23 32.5 -1.4
KSH                                    SKS     SKSdf    21 27 05.3 -2.4
KSH                                    AMB     AMB
      comp=Z,2µm,9.3s
KSH                                    LR      LR
      comp=Z,3µm,22.2s
KSH                                    LR      LR
      comp=Z,2µm,23.2s
KSH                                    LR      LR
      comp=Z,6µm,23.4s
KAPI  Kappang            148.73 200    PKPbc   PKPdf    21 20 04.7 +1.6
      comp=Z,67nm,1.1s,baz=212,slow=3.4,SNR=15
KAPI  Kappang            148.73 200    PKIKP   PKPbc    21 20 05.2 -1.7
KAPI                                   MLR     MLR
      comp=Z,4µm,22.0s
KAPI  Kappang            148.73 200    P       PKPbc    21 20 05.5 -1.4
KAPI  Kappang            148.73 200            PKPbc    21 20 05.2 -1.7
MAKZ  Makanchi           148.95  38    PKIKP   PKPdf    21 20 02.4 -0.1
MAKZ                                                    21 20 08.9
MAKZ                                   MLR     MLR
      comp=Z,4µm,20.0s
MAKZ  Makanchi           148.95  38    PKPdf   PKPdf    21 20 02.4 -0.1
MAKZ                                   PKPbc   PKiKP    21 20 08.9 +1.1
MK31  Makanchi Array     149.13  38    PKIKP   PKPdf    21 20 03.4 +0.6
MK31  Makanchi Array     149.13  38            PKPdf    21 20 03.4 +0.6
MKAR  Makanchi Array     149.13  38    PKPbc   PKPdf    21 20 04.8 +2.0
      comp=Z,250nm,0.8s,baz=320,slow=2.5,SNR=132
MKAR  Makanchi Array     149.13  38    PKIKP   PKPdf    21 20 02.0 -0.8
MKAR                                                    21 20 09.2
MKAR  Makanchi Array     149.13  38    PKPdf   PKPdf    21 20 02.0 -0.8
MKAR                                   PKPbc   PKiKP    21 20 09.2 +1.0
DGZ   Jazzator, Alta     149.78  29c iPKIKP    PKPdf    21 20 03.2 -0.7
DGZ                                    MLR     MLR
      comp=Z,4µm,21.0s
DHRM  DHARAMSHALA        149.97  68   eP       PKPdf    21 20 05.2 +0.4
DHRM                                  i x      x        21 20 11.9
DHRM                                  ex       x        21 23 39.7
KLR   Kul'dur            150.06 330    PKP     PKPdf    21 20 03.4 -0.8
      comp=Z,15nm,0.9s,baz=20,slow=3.5,SNR=25
KLR   Kul'dur            150.06 330c iPKIKP    PKPdf    21 20 05.6 +1.4
HYB   Hyderabad          150.23  98  i PKP     PKPbc    21 20 08.0 -2.5
HYB   Hyderabad          150.23  98   eP       PKPdf    21 20 07.4 +2.0
HYB                                   i x      PKPbc    21 20 10.6  0.0
MNAI  Manna              150.31 167    IAMs_20 IAMs_20  22 21 10.7
      comp=Z,2µm,22.0s
BHPL  Bhopal             150.67  86   eP       PKPdf    21 20 05.7 -0.2
SMLA  Simla              150.80  70   eP       PKPdf    21 20 08.2 +2.4
SMLA                                  ex       PP       21 23 43.7 -5.3
NDI   New Delhi          150.94  75   eP       PKiKP    21 20 14.0 +1.5
PPSI  Pulau Pagai        151.08 160    P       PKiKP    21 20 15.6 +2.4
LUWI  Luwuk              151.27 208            PKPdf    21 20 07.0 -0.1
LUWI                                   IAMs_20 IAMs_20  22 28 05.7
      comp=Z,2µm,21.0s
PMBI  Palembang          152.05 170    IAMs_20 IAMs_20  22 23 16.7
      comp=Z,3µm,20.0s
SISI  Saibi              152.12 157    P       PKPbc    21 20 14.3 -0.7
IRK   Irkutsk            152.31   7   ePKIKP   PKPdf    21 20 09.2 +1.7
IRK                                   e                 21 20 26.0
IRK                                    pmax    pmax
      comp=Z,190nm,1.5s
MOY   Mondy              152.40  12   ePKIKP   PKPbc    21 20 11.3 -3.4
MOY                                    pmax    pmax
      comp=Z,277nm,1.3s
CIT   Chita              152.66 355   ePKIKP   PKPdf    21 20 10.4 +2.3
CIT                                   e                 21 20 21.0
CIT                                   e                 21 20 27.3
CIT                                   e                 21 23 57.1
CIT                                    pmax    pmax
      comp=Z,495nm,1.2s
TLY   Talaya             152.79   8    PKP     PKPdf    21 20 07.7 -0.6
      comp=Z,8.6nm,0.8s,baz=317,slow=3.7,SNR=8.9
TLY                                    PKPbc   PKiKP    21 20 16.2 +0.6
      comp=Z,22nm,0.7s,baz=222,slow=4.0,SNR=13
TLY                                    PKPab   pPKPbc   21 20 27.1 -0.2
      comp=Z,89nm,0.8s,baz=324,slow=4.0,SNR=9.5
TLY   Talaya             152.79   8   ePKIKP   PKPdf    21 20 07.2 -1.1
TLY                                   e                 21 23 58.4
TLY                                   eSS      SS       21 43 23.6 -3.5
TLY                                    pmax    pmax
      comp=Z,451nm,1.0s
TLY   Talaya             152.79   8    P       PKPdf    21 20 08.4 +0.1
TLY   Talaya             152.79   8            PKPdf    21 20 10.4 +2.1
TLY                                            pPKPdf   21 20 18.4 -1.9
TLY                                    PKPab   sPKPbc   21 20 29.1 -2.4
TLY                                    IAMs_20 IAMs_20  22 31 58.7
      comp=Z,2µm,21.0s
MJAR  Matsushiro Arr     152.80 302    PKP     PKPdf    21 20 09.2 +0.4
      comp=Z,13nm,1.1s,baz=67,slow=0.9,SNR=13
MJAR                                   PKPbc   PKPbc    21 20 15.9 -0.1
      comp=Z,31nm,1.0s,baz=92,slow=1.4,SNR=20
MJAR  Matsushiro Arr     152.80 302            PKPdf    21 20 09.2 +0.4
MJAR                                           PKiKP    21 20 17.1 +1.0
MAJO  Matsushiro         152.80 302d iPKIKP    PKiKP    21 20 17.8 +1.7
MAJO  Matsushiro         152.80 302            PKPdf    21 20 10.2 +1.4
MAJO                                           PKiKP    21 20 17.8 +1.7
MAT   Matsushiro         152.80 302    PKP     PKPdf    21 20 10.3 +1.5
PDSI  Padang             152.97 160    P       PKPdf    21 20 11.6 +1.9
USRK  Ussuriysk Ar.      153.37 322    PKP     PKPdf    21 20 08.1 -1.2
      comp=Z,7.9nm,1.0s,baz=5.7,slow=3.8,SNR=5.7
USRK                                   PKPbc   PKPbc    21 20 16.1 -0.8
      comp=Z,37nm,0.9s,baz=24,slow=1.5,SNR=22
USRK                                   PKPab   PKPab    21 20 29.8 +0.8
      comp=Z,21nm,0.8s,baz=58,slow=1.2,SNR=8.4
GSI   Gunungsitoli       153.93 152    P       PKPbc    21 20 16.2 -2.8
WMQ   Urumqi             153.97  38    PKPbc   PKPdf    21 20 11.5 +1.2
WMQ                                    pPKP    PKiKP    21 20 19.3 +0.9
WMQ                                    PKPab   sPKPbc   21 20 35.5 +1.1
WMQ                                    PP      PP       21 24 08.0 +1.9
WMQ                                    AMB     AMB
      comp=Z,1µm,5.9s
WMQ                                    LR      LR
      comp=Z,3µm,19.3s
WMQ                                    LR      LR
      comp=Z,3µm,20.7s
WMQ                                    LR      LR
      comp=Z,4µm,20.7s
ZAK   Zakamensk          154.01   9   ePKIKP   PKPdf    21 20 12.3 +2.1
ZAK                                    pmax    pmax
      comp=Z,53nm,1.3s
TOLI2 Tolitoli           154.05 206    IAMs_20 IAMs_20  22 30 26.2
      comp=Z,2µm,22.0s
MNSI  Mandailing Nat     154.26 157    P       PKPdf    21 19 55.8  -16
HIA   Hailar             154.31 344    IAMs_20 IAMs_20  22 33 13.7
      comp=Z,2µm,22.0s
BKNI  Bangkinang         154.31 160    P       PKiKP    21 20 21.8 +1.9
MDJ   Mudanjiang         154.38 325    PKPbc   PKPdf    21 20 11.3 +0.6
MDJ                                    PP      PP       21 24 09.8 +1.6
MDJ                                    SS      SS       21 43 48.3 +2.7
MDJ                                    LR      LR
      comp=Z,1µm,16.9s
MDJ                                    LR      LR
      comp=Z,2µm,18.4s
MDJ                                    LR      LR
      comp=Z,4µm,21.6s
TPTI                     155.49 149    P       PKPab    21 20 37.8 -1.0
PYUN  Piuthan            156.03  76   eP       PKPdf    21 20 15.8 +2.0
      comp=Z,100nm,1.0s
KOLN  Koldanda           156.58  77   eP       PKPdf    21 20 16.2 +1.7
      comp=Z,111nm,1.3s
DAV   Davao City (W)     156.61 224    IAMs_20 IAMs_20  22 26 17.0
      comp=Z,2µm,22.0s
DANN  Dangsing           156.70  76   eP       PKPdf    21 20 16.7 +1.9
      comp=Z,278nm,1.1s
KSM   Kuching            156.79 182    IAMs_20 IAMs_20  22 28 37.1
      comp=Z,2µm,21.0s
SONM  Songino Array      156.88   5    PKP     PKPdf    21 20 14.0 -0.2
      comp=Z,26nm,1.1s,baz=245,slow=0.3,SNR=54
SONM                                   PKPbc   pPKPdf   21 20 24.9 -1.2
      comp=Z,14nm,1.0s,baz=356,slow=0.7,SNR=11
SONM                                   PKPab   PKPab    21 20 43.1 -0.9
      comp=Z,76nm,0.9s,baz=331,slow=2.6,SNR=29
SONM                                   PP      PP       21 24 21.5 -0.1
      comp=Z,22nm,1.1s,baz=332,slow=4.7,SNR=7.1
SONM  Songino Array      156.88   5    PKIKP   PKPdf    21 20 14.0 -0.2
SONM  Songino Array      156.88   5            PKPdf    21 20 13.7 -0.4
SONM                                   PKPab   PKPab    21 20 46.8 +2.8
ULN   Ulaanbaatar        156.91   4    PKP2    PKPab    21 20 46.4 +2.3
ULN                                                     22 20 14.1
ULN                                    MLR     MLR
      comp=Z,3µm,21.0s
ULN   Ulaanbaatar        156.91   4    P       PKPdf    21 20 14.1 -0.1
ULN   Ulaanbaatar        156.91   4    PKPdf   PKPdf    21 20 14.1 -0.1
ULN                                    PKPab   PKPab    21 20 46.4 +2.3
CN2   Changchun          157.01 329   ePKP     PKPdf    21 20 13.5 -0.8
CN2                                    PP      PP       21 24 24.5 +1.8
CN2                                    SKKS             21 31 12.0
CN2                                    SS      SS       21 44 13.5 -0.2
CN2                                    LR      LR
      comp=Z,2µm,22.0s
CN2                                    LR      LR
      comp=Z,2µm,22.0s
CN2                                    LR      LR
      comp=Z,2µm,23.0s
GKN   Gorkha             157.49  76   eP       PKPdf    21 20 17.0 +1.4
      comp=Z,115nm,1.1s
DMN   Daman              157.92  77   eP       PKPdf    21 20 17.7 +1.4
      comp=Z,88nm,1.2s
KKN   Kakani             158.07  77   eP       PKPdf    21 20 17.7 +1.3
      comp=Z,87nm,1.1s
PKIN  Phulchoki          158.18  77   eP       PKPdf    21 20 17.8 +1.2
      comp=Z,83nm,1.2s
PKI   Pulchoki           158.19  78   eP       PKPdf    21 20 18.3 +1.6
KULM  Kulim              158.80 155    IAMs_20 IAMs_20  22 31 34.4
      comp=Z,2µm,22.0s
JIRN  Jiri               158.88  77   eP       PKPdf    21 20 19.3 +1.7
RAMN  Ramite             159.26  79   eP       PKPdf    21 20 19.6 +1.7
PBA   Port Blair         159.41 126   eP       PKPdf    21 20 20.0 +2.0
JNU   Nakatsue           159.59 299    PP      PP       21 24 38.8 +0.8
      comp=Z,9.5nm,0.4s,baz=110,slow=0.5,SNR=5.1
KSRS  Korea Array        159.87 313    PKP     PKPdf    21 20 17.5 -0.4
      comp=Z,19nm,1.0s,baz=92,slow=0.9,SNR=31
KSRS                                   PKPab   PKPab    21 20 56.2 -0.9
      comp=Z,22nm,1.1s,baz=56,slow=5.4,SNR=2.9
KSRS                                   PP      PP       21 24 41.6 +2.8
      comp=Z,1.5nm,0.8s,baz=44,slow=3.7,SNR=2.0
KSAR  Wonju Array Be     159.91 313    PKP2    PKPab    21 20 59.8 +2.5
KSAR  Wonju Array Be     159.91 313    PKPab   PKPab    21 20 59.8 +2.5
ODAN  Odare              159.97  79   eP       PKPdf    21 20 18.7  0.0
      comp=Z,133nm,1.1s
TAPN  Taplejung          160.24  78   eP       PKPdf    21 20 18.7 -0.3
      comp=Z,127nm,1.3s
DGPR  DIGLIPUR           160.53 123   eP       PKPdf    21 20 17.2 -2.0
DGPR                                  i x      x        21 24 44.5
DL2   Dalian             162.61 327    PKP     PKPdf    21 20 19.8 -0.9
DL2                                    PP      PP       21 24 53.3 +0.2
DL2                                    SS      SS       21 45 15.5 +2.6
DL2                                    AMB     AMB
      comp=Z,730nm,11.1s
DL2                                    LR      LR
      comp=Z,1µm,36.8s
DL2                                    LR      LR
      comp=Z,2µm,22.8s
DL2                                    LR      LR
      comp=Z,3µm,20.2s
LSA   Lhasa              162.95  69    PKP     PKPdf    21 20 22.3 +0.3
LSA                                    LR      LR
      comp=Z,930nm,17.8s
LSA                                    LR      LR
      comp=Z,2µm,12.1s
LSA                                    LR      LR
      comp=Z,2µm,13.5s
LSA   Lhasa              162.95  69  i PKPdf   PKPdf    21 20 23.9 +1.9
      SNR=13
GTA   Gaotai             163.29  27 ⇑ PKP      PKPdf    21 20 21.0 -0.6
GTA                                    pPKP    pPKPdf   21 20 31.3 -2.3
GTA                                    PKPab   PKPab    21 21 14.5 +2.3
GTA                                    PP      PP       21 24 56.3 -0.4
GTA                                    SKKS             21 31 47.5
GTA                                    SS      SS       21 45 22.0 +2.1
GTA                                    AMB     AMB
      comp=Z,1µm,7.6s
GTA                                    LR      LR
      comp=Z,2µm,22.2s
GTA                                    LR      LR
      comp=Z,2µm,22.9s
GTA                                    LR      LR
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	comp=Z,3µm,21.8s						
BJI	**Beijing**	163.82	341	PKP	PKPdf	21 20 23.3	+1.5
BJI				PP	PP	21 25 05.8	+6.8
BJI				SS	SS	21 45 23.0	-1.5
BJI				AMB	AMB		
	comp=Z,720nm,7.4s						
BJI				LR	LR		
	comp=Z,1µm,20.8s						
BJI				LR	LR		
	comp=Z,2µm,19.1s						
BJI				LR	LR		
	comp=Z,3µm,20.4s						
HHC	**Hu-ho-hao-te**	163.91	354	*e*PKP	PKPdf	21 20 22.5	+0.4
HHC				PP	PP	21 24 59.0	-0.5
HHC				SKKS		21 31 47.8	
HHC				SS	SS	21 45 25.0	-0.4
HHC				AMB	AMB		
	comp=Z,2µm,10.8s						
HHC				LR	LR		
	comp=Z,2µm,21.3s						
HHC				LR	LR		
	comp=Z,2µm,21.3s						
HHC				LR	LR		
	comp=Z,4µm,21.2s						
SHL	**Shillong**	164.01	84	PKIKP	PKPdf	21 20 20.4	-2.3
SHL						21 21 17.1	
SHL	**Shillong**	164.01	84	*e*P	PKPdf	21 20 21.6	-1.1
SHL				*i* x	x	21 21 17.7	
SHL				*e*x	x	21 25 00.2	
SHL	**Shillong**	164.01	84	P	PKPdf	21 20 23.5	+0.7
	SNR=34						
SHL	**Shillong**	164.01	84		PKPdf	21 20 20.4	-2.3
SHL				PKPab	PKPab	21 21 17.1	+1.1
BTO	**Baotou**	164.24	359	*e*PKP	PKPdf	21 20 21.8	-0.6
BTO				PP	PP	21 25 00.0	-1.2
BTO				LR	LR		
	comp=Z,8µm,20.2s						
BTO				LR	LR		
	comp=Z,5µm,19.6s						
TIA	**Tai'an**	166.89	332	PKP	PKPdf	21 20 25.0	+0.4
TIA				PP	PP	21 25 16.3	+1.0
TIA				SS	SS	21 45 56.3	-0.1
TIA				LR	LR		
	comp=Z,2µm,23.0s						
TIA				LR	LR		
	comp=Z,2µm,19.1s						
TIA				LR	LR		
	comp=Z,4µm,22.6s						
TIY	**Taiyuan**	166.90	350	*e*PKP	PKPdf	21 20 28.0	+3.4
TIY				PKPab	PKPab	21 21 28.0	+0.1
TIY				PP	PP	21 25 14.8	-0.2
TIY				SS	SS	21 45 59.0	+3.1
TIY				AMB	AMB		
	comp=Z,1µm,8.8s						
TIY				LR	LR		
	comp=Z,2µm,18.0s						
TIY				LR	LR		
	comp=Z,1µm,18.5s						
TIY				LR	LR		
	comp=Z,6µm,22.2s						
LZH	**Lanzhou**	167.74	22	⇓PKP	PKPdf	21 20 26.5	+1.1
LZH				SS	SS	21 46 04.5	-0.5
LZH				AMB	AMB		
	comp=Z,2µm,5.4s						
LZH				LR	LR		
	comp=Z,2µm,20.6s						
LZH				LR	LR		
	comp=Z,3µm,20.6s						
LZH				LR	LR		
	comp=Z,2µm,21.1s						
SSE	**Sheshan**	167.94	304	PKP	PKPdf	21 20 24.5	-1.0
SSE				PP	PP	21 25 21.3	-0.4
SSE				SS	SS	21 46 06.5	-2.4
SSE				AMB	AMB		
	comp=Z,230nm,8.2s						
SSE				LR	LR		
	comp=Z,440nm,23.1s						
SSE				LR	LR		
	comp=Z,470nm,23.7s						
CM31	**Chiang Mai Arr**	168.31	121	P	PKPdf	21 20 24.5	-1.6
	SNR=7.9						
CM31	**Chiang Mai Arr**	168.31	121	PKPdf	PKPdf	21 20 25.1	-1.0
CM31					PKPab	21 21 33.3	-1.5
CMAR	**Chiang Mai Arr**	168.31	121	PKP	PKPdf	21 20 25.7	-0.4
	comp=Z,15nm,1.0s,baz=272,slow=1.9,SNR=43						
CMAR				PKPab	PKPab	21 21 33.5	-1.3
	comp=Z,30nm,1.0s,baz=253,slow=4.1,SNR=19						
CMAR				PP	PP	21 25 23.4	-0.3
	comp=Z,4.9nm,0.9s,baz=256,slow=6.1,SNR=4.6						
CMAR	**Chiang Mai Arr**	168.31	121		PKPdf	21 20 25.2	-0.9
CMAR				PKPab	PKPab	21 21 33.5	-1.3
CHTO	**Chiang Mai**	168.50	119	P	PKPdf	21 20 25.9	-0.3
NJ2	**Nanjing**	169.07	313	⇑PKP	PKPdf	21 20 25.8	-0.4
NJ2				PKPab	PKPab	21 21 38.3	+0.5
NJ2				PP	PP	21 25 25.3	-1.8
NJ2				SKKS		21 32 13.3	
NJ2				SS	SS	21 46 22.0	+2.5
NJ2				AMB	AMB		
	comp=Z,1µm,8.2s						
NJ2				LR	LR		
	comp=Z,1µm,20.1s						
NJ2				LR	LR		
	comp=Z,2µm,20.1s						
NJ2				LR	LR		
	comp=Z,2µm,22.6s						
XAN	**Xi'an**	170.79	3	PKP	PKPdf	21 20 29.8	+2.6
XAN				PKPab	PKPab	21 21 45.8	+0.6
XAN				SKKS		21 32 20.5	
XAN				LR	LR		
	comp=Z,3µm,17.9s						
XAN				LR	LR		
	comp=Z,2µm,18.0s						
XAN				LR	LR		
	comp=Z,5µm,20.6s						
QZH	**Quanzhou**	171.77	273	*i* PKP	PKPdf	21 20 28.5	+0.6
QZH				PKPab	pPKPab	21 21 57.5	-4.0
QZH				PP	PP	21 25 43.0	+1.4
QZH				SKKS		21 32 24.0	
QZH				SS	SS	21 46 53.5	+5.4
QZH				LR	LR		
	comp=Z,1µm,19.4s						
QZH				LR	LR		
	comp=Z,2µm,22.7s						
QZH				LR	LR		
	comp=Z,3µm,25.6s						
CD2	**Chengdu**	172.06	39	PKP	PKPdf	21 20 27.8	-0.1
CD2				PKPab	PKPab	21 21 53.0	+1.9
CD2				PP	PP	21 25 40.3	-1.5
CD2				SKKS		21 32 23.8	
CD2				SS	SS	21 46 49.0	+0.3
CD2				AMB	AMB		
	comp=Z,3µm,8.6s						
CD2				LR	LR		
	comp=Z,5µm,30.4s						
CD2				LR	LR		
	comp=Z,4µm,24.5s						
CD2				LR	LR		
	comp=Z,4µm,24.5s						
WHN	**Wuhan**	172.87	324	PKP	PKPdf	21 20 31.0	+2.8
WHN				PKPab	PKPab	21 21 56.0	+1.5
WHN				PP	PP	21 25 46.3	+0.8
WHN				LR	LR		
	comp=Z,3µm,17.6s						
WHN				LR	LR		
	comp=Z,6µm,19.5s						
WHN				LR	LR		
	comp=Z,9µm,31.1s						
KMI	**Kunming**	173.83	86	⇑PKP	PKPdf	21 20 26.8	-2.2
QIZ	**Qiongzhong**	174.24	183	PKP	PKPdf	21 20 33.0	+4.0
QIZ				PP	PP	21 25 55.5	+4.0
QIZ				SS	SS	21 47 11.3	+3.2
QIZ				LR	LR		
	comp=Z,2µm,19.1s						
QIZ				LR	LR		
	comp=Z,2µm,19.1s						
QIZ				LR	LR		
	comp=Z,3µm,19.6s						
GZH	**Guangzhou**	176.11	245	PKP	PKPdf	21 20 31.5	+2.1
GYA	**Guiyang**	176.94	57	⇑*i*PKP	PKPdf	21 20 31.8	+2.1
GYA				PKPab	PKPab	21 22 14.0	+0.9
GYA				PP	PP	21 26 06.0	-0.2
GYA				SKKS		21 32 51.0	
GYA				LR	LR		
	comp=Z,1µm,18.1s						
GYA				LR	LR		
	comp=Z,1µm,22.0s						
GYA				LR	LR		
	comp=Z,1µm,17.2s						

NNC 27 21:12:53.1±5.5**,36°.94N**×**70°.87E,h0^{km},mb3.7,mpv3.4, 4C-3D Error ellipse: s-maj=47.9km s-min=32.8km az=156.0,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK08	**Karatay Array**	6.16	357	⇑P	Pn	21 14 27.5	+2.0
	2.4nm,0.3s,baz=181,slow=13						
KK08				⇑S	Sn	21 15 38.8	+2.2
	2.2nm,0.3s,baz=182,slow=22						
AAK	**Ala-Archa**	6.34	25	⇑P	Pn	21 14 28.1	+0.1
	1.7nm,0.5s						
AAK				⇓S	Sn	21 15 41.6	+0.5
	1.8nm,0.5s						
TKM2	**Tokmak 2**	6.99	30	⇓P	Pn	21 14 36.0	-1.0
	0.8nm,0.5s						
TKM2				⇓S	Sn	21 15 57.0	-0.2
	0.4nm,0.3s						
AB31	**Akbulak array**	14.64	331	P	Pn	21 16 19.8	-1.7
	0.3nm,0.3s,baz=138,slow=14,SNR=28						
AKTO	**Aktyubinsk**	16.34	330	⇑P	Pn	21 16 44.5	+0.6
	0.4nm,0.5s						

*IDC **27** 21:34:29.6±19.0, 17°.08S×177°.86W, h443^{km}±137^{km}, mb3.6/4, mb1 3.6/5, mb1mx3.1/47, mbtmp4.4/5, Error ellipse: s-maj=170.1km s-min=98.8km az=67.0*

*NEIC **27** 21:34:34.9±0.8, 17°.4S±0°.1×177°.2W±0°.1, h567^{km}±8^{km}, mb4.1/21, Error ellipse: s-maj=19.4km s-min=18.3km az=165.0*

ISC 27 21:34:33.7±0.9**,17°.3S**±0°.2×**177°.3W**±0°.1**,h550^{km},n30,** σ**1^s.25**/26**,mb4.1**/14**,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	7.24	105	P	P	21 36 24.6	+0.7
SANVU	**Saraoutou**	14.98	275	P	P	21 37 44.5	+1.5
DZM	**Mont Dzumac**	16.02	250	P	P	21 37 47.4	-6.1
	0.2nm,0.3s,baz=13,slow=9.3,SNR=2.3						
DZM	**Mont Dzumac**	16.02	250	P	P	21 37 53.1	-0.5
DZM				IAmb	IAmb	21 38 08.7	
	comp=Z,4.1nm,0.8s						
BSWZ	**Blackbirch Sta**	25.48	195	P	P	21 39 18.3	-0.2
PPTF	**Pamatai, Papee**	26.46	95	P	P	21 39 26.0	-1.5
DCZ	**Deep Cove**	30.94	202	P	P	21 40 01.5	-4.4
ARMA	**Armidale**	31.15	239	P	P	21 40 08.2	+0.1
ARMA				IAmb	IAmb	21 40 22.0	
	comp=Z,8.4nm,1.1s						
COEN	**Coen**	38.16	269	P	P	21 41 06.8	+0.1
COEN				IAmb	IAmb	21 41 07.6	
	comp=Z,6.1nm,0.9s						
TOO	**Toolangi**	38.37	231	P	P	21 41 07.9	-0.3
TOO				IAmb	IAmb	21 41 10.9	
	comp=Z,3.8nm,1.1s						
STKA	**Stephens Creek**	39.84	241	P	P	21 41 20.6	+0.6
	comp=Z,1.7nm,0.3s,baz=89,slow=9.8,SNR=14						
STKA	**Stephens Creek**	39.84	241	IAmb	IAmb	21 41 21.3	
	comp=Z,0.7nm,0.7s						
BBOO	**Buckleboo**	44.62	241	P	P	21 41 58.2	+0.6
BBOO				IAmb	IAmb	21 41 58.9	
	comp=Z,5.1nm,0.8s						
WB0	**Warramunga Arr**	45.74	259	P	P	21 42 05.5	-0.8
WB2	**Warramunga Arr**	45.76	259	P	P	21 42 05.8	-0.7
WRA	**Warramunga Arr**	45.78	259	P	P	21 42 05.9	-0.7
	comp=Z,1.4nm,0.5s,baz=97,slow=6.9,SNR=50						
WRA	**Warramunga Arr**	45.78	259	IAmb	IAmb	21 42 06.6	
	comp=Z,0.1nm,0.7s						
AS31	**Alice Springs**	45.97	254	P	P	21 42 07.9	-0.1
AS31				IAmb	IAmb	21 42 08.6	
	comp=Z,3.8nm,0.6s						
ASAR	**Alice Springs**	45.97	254	P	P	21 42 08.1	0.0
	comp=Z,12nm,0.5s,baz=88,slow=8.1,SNR=254						
ASAR				PcP	PcP	21 43 37.9	+4.5
	comp=Z,0.3nm,0.6s,baz=96,slow=3.8,SNR=2.0						
ASAR	**Alice Springs**	45.97	254	P	P	21 42 07.6	-0.4
MTN	**Manton Dam**	49.87	268	P	P	21 42 36.4	-0.8
MTN				IAmb	IAmb	21 42 37.9	
	comp=Z,6.7nm,0.8s						
FORT	**Forrest**	51.22	244	P	P	21 42 46.5	-0.4
FORT				IAmb	IAmb	21 42 53.9	
	comp=Z,15nm,0.8s						
FAKI	**Fak Fak**	51.49	280	P	P	21 42 48.5	-0.5
FAKI				IAmb	IAmb	21 42 54.9	
	comp=Z,3.9nm,0.8s						
KNRA	**Kununurra**	51.60	263	P	P	21 42 49.6	-0.1
KNRA				IAmb	IAmb	21 42 51.1	
	comp=Z,9.7nm,0.9s						
FITZ	**Fitzroy Crossi**	54.16	260	P	P	21 43 09.4	+1.4
	comp=Z,1.4nm,0.6s,baz=108,slow=5.5						
PSA00	**Pilbara Seismi**	59.08	255	P	P	21 43 41.5	-0.2
PSA00				IAmb	IAmb	21 43 42.5	
	comp=Z,9.9nm,1.0s						
JCJ	**Chichijima**	59.09	318	P	P	21 43 41.9	+0.3
LUWI	**Luwuk**	61.05	279	P	P	21 43 52.8	-2.1
MORW	**Morawa**	61.69	246	P	P	21 43 58.7	-0.1
BJT	**Baijiatuau**	84.09	315		pP	21 48 05.1	+0.1

*NEIC **27** 21:45:11.8±2.2, 24°.79S±0°.04×70°.80W±0°.07, h22^{km}±4^{km}, Error ellipse: s-maj=9.6km s-min=6.0km az=98.0*

*VAO **27** 21:45:11.9±0.4, 24°.95S×70°.67W, h45^{km}, mb5.1*

*SJA **27** 21:45:11.1±0.7, 24°.83S×70°.71W, h32^{km}±3^{km}, ML5.1, MW4.8*

*NEIC **27** 21:45:12.5, 24°.78S×70°.67W, h39^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}1.31; $M_{\theta\theta}$-0.24; $M_{\phi\phi}$-1.07; $M_{r\theta}$0.13; $M_{\theta\phi}$-0.06; $M_{\phi r}$-1.00; Fault plane solution: $M_0$1.57000×10^{16} NP1:ϕ_s177.12000°, δ65.21000°, λ85.20000°. NP2:ϕ_s8.45000°, δ25.22000°, λ100.28000°. Principal axes: T 1.6852, Plg69.0000°, Azm77.0000°; N -0.2506, Plg4.0000°, Azm179.0000°; P -1.4346, Plg20.0000°, Azm271.0000°;*

*BJI **27** 21:45:13.0±0.0, 24°.80S×70°.70W, h40^{km}, mB5.3/1*

*GUC **27** 21:45:13.6±0.8, 24°.74S×70°.55W, h39^{km}±2^{km}, ML5.0*

*MOS **27** 21:45:13.1±1.6, 24°.76S×70°.54W, h43^{km}, mb5.1/15, Error ellipse: s-maj=17.6km s-min=8.2km az=88.8*

*IDC **27** 21:45:14.4±2.9, 24°.79S×70°.41W, h42^{km}±23^{km}, mb4.3/10, mb1 4.4/13, mb1mx4.3/23, mbtmp4.5/13, ML4.4/4, MS4.4/4, Ms1 4.5/4, ms1mx4.2/21, Error ellipse: s-maj=25.7km s-min=18.3km az=62.0*

ISC 27 21:45:11.6±1.0**,24°.82S**±0°.02×**70°.56W**±0°.05**,h27**^{km}±6^{km}**, n313,**σ**1^s.35**/314**,mb5.0**/52**,11C-7D,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB14	**IPOC Station P**	0.24	37	⇑*i*P	Pn	21 45 20.4	+0.6
PB14				*e*S	Sb	21 45 25.3	+2.6
PB14	**IPOC Station P**	0.24	37		Pn	21 45 20.3	+0.6
PB14				Sn	Sb	21 45 25.4	+2.6
PB14	**IPOC Station P**	0.24	37	*e*P	Pn	21 45 20.0	+0.3
PB14				*e*S	Pn	21 45 20.4	+0.6
PB14				IAML		21 45 27.0	
	comp=Z,116µm,0.5s						
PB10	**IPOC Station P**	1.30	0	*e*P	Pn	21 45 34.9	+0.9
PB10				*e*S	Sn	21 45 50.9	+0.4
PB10	**IPOC Station P**	1.30	0		Pn	21 45 34.7	+0.6
PB10					Sn	21 45 51.6	+1.0
PB10	**IPOC Station P**	1.30	0	*e*P	Pn	21 45 35.0	+0.9
PB10				*e*S	Sb	21 45 53.2	+1.6
PB15	**IPOC Station P**	1.89	32	*e*P	Pb	21 45 44.5	-1.0
PB15				*e*S	Sb	21 46 08.3	-0.5
PB15	**IPOC Station P**	1.89	32		Sb	21 46 10.4	+1.6
PB15	**IPOC Station P**	1.89	32	*e*P	Pb	21 45 45.0	-0.5
PB15				*e*S	Sb	21 46 09.5	+0.8
PB15				IAML		21 46 16.3	
	comp=Z,46µm,0.3s						
PB05	**IPOC Station P**	1.98	10	⇑*i*P	Pn	21 45 44.4	+0.9
PB05				*e*S	Sn	21 46 07.2	-0.4
PB06	**IPOC Station P**	2.29	24	*i* P	Pn	21 45 49.2	+1.4
PB06				*e*S	Sn	21 46 17.1	+1.8
PB06				IAML		21 46 24.9	
	comp=E,8µm,0.2s						
PB06	**IPOC Station P**	2.29	24		Pn	21 45 49.4	+1.6
AC02	**Maricunga**	2.39	148	⇑*i*P	Pb	21 45 53.5	-0.7
AC02				*e*S	Sb	21 46 21.7	-1.8
AC02				IAML		21 46 27.9	
	comp=E,12µm,0.3s						
AC02	**Maricunga**	2.39	148	Pn	Pb	21 45 53.6	-0.7
AC02	**Maricunga**	2.39	148	*e*P	Pb	21 45 53.0	-1.3
AC02				*e*S	Sb	21 46 26.2	+2.7
AC02				IAML		21 46 35.7	
	comp=Z,5µm,0.9s						
PB04	**IPOC Station P**	2.50	9	*i* P	Pn	21 45 51.2	+0.4
PB04				*e*S	Sn	21 46 20.3	-0.2
PB04				IAML		21 46 37.5	
	comp=N,9µm,0.5s						
PB04	**IPOC Station P**	2.50	9		Pn	21 45 50.8	0.0
LVC	**Limon Verde**	2.67	35	P	Pn	21 45 55.4	+2.2
	comp=N,249nm,0.3s,baz=189,slow=8.7,SNR=146						
LVC				S	Sb	21 46 30.5	-0.9
	comp=N,2µm,0.3s,baz=15,slow=22,SNR=13						
LVC				LR	LR	21 47 01.3	
	comp=N,6µm,18.8s,baz=207,slow=42						
LVC	**Limon Verde**	2.67	35	*e*P	Pn	21 45 54.5	+1.3
LVC	**Limon Verde**	2.67	35	*e*P	Pn	21 45 55.8	+2.6
LVC				*e*S	Sb	21 46 28.6	-2.8
LVC	**Limon Verde**	2.67	35	*e*P	Pn	21 45 55.6	+2.4
LVC	**Limon Verde**	2.67	35	Pn	Pn	21 45 54.5	+1.3
LVC	**Limon Verde**	2.67	35	*e*P	Pn	21 45 56.0	+2.8
LVC				*e*S	Sb	21 46 29.0	-2.4
LVC				IAML		21 46 42.7	
	comp=Z,6µm,0.8s						
GO03	**Copiap**	2.78	174	*e*P	Pn	21 45 56.1	+1.7
GO03				IAML		21 46 44.9	
	comp=E,4µm,0.6s						
GO03	**Copiap**	2.78	174	Pn	Pn	21 45 56.2	+1.7
GO03	**Copiap**	2.78	174	*e*P	Pn	21 45 56.0	+1.5
GO03				*e*P	Pn	21 45 56.2	+1.7
GO03				*e*S	Sn	21 46 25.5	-1.8
PB03	**IPOC Station P**	2.85	15	⇑*i*P	Pn	21 45 56.3	+0.7
PB03				*e*S	Sb	21 46 34.5	-2.0
PB03				IAML		21 46 48.5	
	comp=E,6µm,0.6s						
PB07	**IPOC Station P**	3.14	12	*e*P	Pn	21 46 00.0	+0.5
PB07				IAML		21 47 00.1	
	comp=E,5µm,0.3s						
PB07	**IPOC Station P**	3.14	12		Pn	21 45 60.0	+0.5
PB07	**IPOC Station P**	3.14	12	*e*P	Pn	21 46 00.0	+0.5
PB07				*e*S	Sb	21 46 41.5	-3.2
PB07				IAML		21 46 58.7	
	comp=Z,6µm,1.0s						
PB09	**IPOC Station P**	3.24	22	⇑*i*P	Pn	21 46 02.6	+1.7
PB09				IAML		21 46 58.0	
	comp=N,5µm,0.8s						
PB09	**IPOC Station P**	3.24	22		Pn	21 46 03.0	+2.1
PB09	**IPOC Station P**	3.24	22	*e*P	Pn	21 46 03.0	+2.1
PB09				*e*S	Sn	21 46 42.0	+3.2
PB09				*e*S	Sb	21 46 44.0	-3.7
PB09				IAML		21 46 55.7	
	comp=Z,4µm,0.6s						
AC04	**Llanos de Chal**	3.41	188	*e*P	Pn	21 46 02.5	-0.5
AC04				IAML		21 47 06.9	
	comp=E,2µm,0.3s						
AC04	**Llanos de Chal**	3.41	188	Pn	Pn	21 46 02.5	-0.5
AC04	**Llanos de Chal**	3.41	188	*e*P	Pn	21 46 03.0	0.0
AC04				*e*S	Sn	21 46 41.0	-1.6
PB02	**IPOC Station P**	3.53	10	*e*P	Pn	21 46 04.5	-0.4
PB01	**IPOC Station P**	3.88	15	⇑*i*P	Pn	21 46 10.5	+0.8
PB01	**IPOC Station P**	3.88	15		Pn	21 46 10.5	+0.8
PB01	**IPOC Station P**	3.88	15	*e*P	Pn	21 46 10.0	+0.3
PB01				*e*S	Sn	21 46 55.5	+1.0
PB01				*e*S	Sb	21 47 03.0	-3.1
PB01				IAML		21 47 14.0	
	comp=Z,2µm,0.4s						
PATCX	**Punta Patache**	4.00	5		Pn	21 46 10.9	-0.3
LCO	**Las Campanas**	4.18	182	*e*P	Pn	21 46 15.5	+1.6
LCO	**Las Campanas**	4.18	182	Pn	Pn	21 46 15.5	+1.6
LCO	**Las Campanas**	4.18	182	*e*P	Pn	21 46 16.0	+2.1
TA01	**Diego Aracena**	4.25	5	*e*P	Pn	21 46 13.8	-0.9
TA01	**Diego Aracena**	4.25	5	Pn	Pn	21 46 13.7	-0.9
TA01	**Diego Aracena**	4.25	5	*e*P	Pn	21 46 14.0	-0.6
TA01				IAML		21 47 31.3	
	comp=Z,2µm,0.7s						
FSA	**Cafayete**	4.34	108	*e*P	Pn	21 46 21.0	+5.0
VCA	**Vinchina**	4.43	152	*e*P	Pb	21 46 23.0	-5.9
VCA				*e*S	Sb	21 47 23.0	+1.0
VCA				*e*S	Sn	21 47 27.0	+19
VCA				IAML		21 47 39.1	
	comp=Z,948nm,1.0s						
TA02	**Huaiquique**	4.54	5	*e*P	Pn	21 46 18.1	-0.6
TA02	**Huaiquique**	4.54	5	Pn	Pn	21 46 18.7	0.0
SLA	**San Lorenzo**	4.60	90	*e*P	Pb	21 46 28.0	-3.7
PB08	**IPOC Station P**	4.83	16		Pn	21 46 23.5	+0.5
PB08	**IPOC Station P**	4.83	16	*e*P	Pn	21 46 24.0	+1.0
PB08				IAML		21 47 50.5	
	comp=Z,1µm,1.2s						
HJA	**Humahuaca**	4.97	72	*e*P	Pn	21 46 26.0	+1.0
HJA				*e*P	Pb	21 46 32.0	-6.3
AZAP	**Zapla**	5.04	84	*e*P	Pn	21 46 26.0	+0.3
AZAP				*e*P	Pb	21 46 32.0	-7.3
PB11	**IPOC Station P**	5.10	10	Pn	Pn	21 46 26.1	-0.4
PB11	**IPOC Station P**	5.10	10	*e*P	Pn	21 46 26.0	-0.5
PB11				*e*S	Sb	21 47 41.0	-0.2
PB11				IAML		21 48 02.4	
	comp=Z,1µm,0.6s						
AHML	**Horco Molle**	5.10	114	*e*P	Pn	21 46 32.0	+5.6
YJA	**Yavi**	5.33	61	*e*P	Pn	21 46 37.0	+7.2
GO04	**Tololo Observa**	5.34	182		Pn	21 46 30.0	+0.2
AROD	**Rodeo**	5.42	170	*e*P	Pn	21 46 29.0	-2.0
AROD				*e*P	Pb	21 46 34.0	-12
AROD				*e*S	Sb	21 47 48.0	-2.4
CYA	**Choya**	5.58	131	*e*P	Pn	21 46 32.0	-1.0
CYA				*e*S	Sb	21 47 48.0	-6.9
ACLC	**CERRO LA CRUZ**	5.60	146	*e*P	Pn	21 46 38.0	+4.6
CO06	**Fray Jorge**	5.91	189	Pn	Pn	21 46 36.8	-0.7
PB12	**IPOC Station P**	6.18	2	Pn	Pn	21 46 39.7	-1.5
PB12	**IPOC Station P**	6.18	2	*e*S	Sn	21 47 53.2	+2.2
AVFE	**Valle Fertil**	6.44	155	*e*P	Pn	21 46 47.8	+3.0
PB16	**IPOC Station P**	6.52	9		Pn	21 46 47.0	+0.5
VA03	**San Esteban**	7.92	180	Pn	Pn	21 47 05.3	+0.2
MT02	**Curacav**	8.43	183	Pn	Pn	21 47 12.8	+0.8
LPAZ	**La Paz**	8.79	15	P	Pn	21 47 19.5	+2.0
	comp=Z,2.3nm,0.3s,baz=169,slow=3.0,SNR=68						
LPAZ	**La Paz**	8.79	15	P	Pn	21 47 18.5	+1.0
LPAZ	**La Paz**	8.79	15	*e*P	Pn	21 47 19.6	+2.0
LPAZ	**La Paz**	8.79	15	Pn	Pn	21 47 18.5	+1.0
MT09	**Talagante**	8.94	182	Pn	Pn	21 47 19.6	+0.5
MT01	**Popeta**	9.04	184	Pn	Pn	21 47 20.3	0.0
BO01	**Tunca**	9.55	183	Pn	Pn	21 47 28.6	+1.1
BO02	**Sierra Bellavi**	9.94	181	Pn	Pn	21 47 33.9	+1.0
H03N1	**Juan Fernandez**	11.27	218	T	T	21 59 25.5	
	baz=44,slow=72,SNR=2219						
H03N2	**Juan Fernandez**	11.28	218	T	T	21 59 28.0	
	baz=44,slow=72,SNR=2118						
H03N3	**Juan Fernandez**	11.29	218	T	T	21 59 24.2	
	baz=44,slow=72,SNR=1900						
CPUP	**Villa Florida**	12.04	100	P	Pn	21 48 01.1	-0.4
	comp=Z,0.4nm,0.3s,baz=264,slow=13,SNR=2.0						
CPUP	**Villa Florida**	12.04	100	*e*P	Pn	21 48 02.2	+0.7
ITQB	**Itaqui**	13.30	114	*e*P	Pn	21 48 18.1	-0.7
LC01	**Cunco**	14.08	184	Pn	Pn	21 48 28.8	-0.6
PTLB	**Pontes e Lacer**	14.20	51	*e*P	Pn	21 48 32.6	+1.5
PTLB	**Pontes e Lacer**	14.20	51	Pn	Pn	21 48 32.5	+1.5
TRQA	**Tornquist**	15.08	153	P	Pn	21 48 43.1	+0.1
TRQA				pmax	pmax		
	comp=Z,29nm,0.7s						
TRQA	**Tornquist**	15.08	153	*e*P	Pn	21 48 39.4	-3.6
TRQA	**Tornquist**	15.08	153	Pn	Pn	21 48 43.1	+0.1
VILB	**Vilhena**	15.33	42	*e*P	Pn	21 48 45.7	-0.6
VILB	**Vilhena**	15.33	42	Pn	Pn	21 48 46.6	+0.3
ETMB	**Extrema**	15.48	16	*e*P	Pn	21 48 47.5	-0.8
ETMB	**Extrema**	15.48	16	Pn	Pn	21 48 46.2	-2.1
PLCA	**Paso Flores**	15.87	180	P	Pn	21 48 54.8	+1.5
	comp=Z,0.2nm,0.3s,baz=345,slow=9.7,SNR=5.7						
PLCA				LR	LR	21 54 51.3	
	comp=Z,2µm,18.3s,baz=25,slow=36						
PLCA	**Paso Flores**	15.87	180	P	Pn	21 48 54.1	+0.8
PLCA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
PLCA	**Paso Flores**	15.87	180	*e*P	Pn	21 48 50.4	-2.9
PLCA	**Paso Flores**	15.87	180	P	Pn	21 48 54.1	+0.8
CPSB	**Cacapava Do Su**	16.16	114	*e*P	Pn	21 48 56.8	-0.1
PP1B	**Ponte de Pedra**	16.28	67	*e*P	Pn	21 48 57.4	-1.2
PLTB	**Pedras Altas**	16.45	119	*e*P	Pn	21 48 59.1	-1.6
PLTB	**Pedras Altas**	16.45	119	Pn	Pn	21 48 57.5	-3.2
TRCB	**Terra Rica**	16.53	87	*e*P	Pn	21 49 02.2	+0.5
ITAB	**Concordia**	16.74	102		P	21 49 05.6	-0.8
ITAB				IAmb	IAmb	21 49 18.6	

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               comp=Z,118nm,1.3s
SAML   Samuel              17.28  25   P        Pn        21 49 11.3 +0.2
SAML                                   pmax     pmax
               comp=Z,520nm,1.0s
SAML   Samuel              17.28  25            Pn        21 49 11.3 +0.2
PCMB   Pacaembu            18.02  84  eP        P         21 49 21.4 +0.7
PDRB   Porto dos Gac       18.55  47  eP        P         21 49 27.0 +0.5
ITRB   Iturama             19.37  79  eP        P         21 49 35.5  0.0
TER01  Tubaro-SC           19.50 106  eP        Pn        21 49 38.0 -0.2
CLDB   Colider             19.71  48  eP        P         21 49 39.4 +0.1
ARAG   Araguaiana, MT      19.77  66  eP        P         21 49 40.5 +0.6
TBTG   Tabatinga, AM       20.52   2  eP        P         21 49 48.8 +0.8
BB19B  Bebedouro           20.63  84  eP        P         21 49 49.1 -0.1
PET01  Itanhaem-SP         21.18  93  eP        P         21 49 55.1  0.0
RCLB   Rio Claro- Sao      21.23  88  eP        P         21 49 55.4 -0.4
VAO    Valinhos            21.64  90  eP        P         21 49 59.7 -0.4
IPMB   Ipameri, GO         21.87  76  eP        P         21 50 02.1 -0.6
SNDB   Serra Nova Dou      22.26  58  eP        P         21 50 05.0 -1.7
PARB   Paraibuna           22.81  91  eP        P         21 50 10.5 -2.1
NPGB   Novo Progresso      22.89  42  eP        P         21 50 11.7 -1.8
BDFB   Brasilia            23.01  71   P        P         21 50 13.1 -1.7
               comp=Z,16nm,0.6s,baz=242,slow=13,SNR=21
BDFB   Brasilia            23.01  71   P        P         21 50 13.6 -1.2
BDFB                                   pmax     pmax
               comp=Z,56nm,0.9s
BDFB   Brasilia            23.01  71   P        P         21 50 13.6 -1.2
BDFB                                   IAmb     IAmb      21 50 28.9
               comp=Z,56nm,0.9s
MACA   Manacapuru-AM       23.54  25  eP        P         21 50 19.3 -0.7
MACA   Manacapuru-AM       23.54  25   P        P         21 50 19.2 -0.7
BSCB   Bom Sucesso         24.04  86  eP        P         21 50 24.3 -0.5
MAN01  Angra dos Reis      24.39  91  eP        P         21 50 27.6 -0.3
PEXB   Peixe               24.56  63  eP        P         21 50 28.1 -1.4
ITTB   Itaituba            24.83  37  eP        P         21 50 31.4 -0.5
VAS01  Vassouras-RJ        24.97  90  eP        P         21 50 33.7 +0.5
DIAM   Diamantina, MG      25.81  81  eP        P         21 50 41.2 +0.2
DUB01  Friburgo-RJ         25.98  90  eP        P         21 50 42.1 -0.3
PTGA   Pitinga             26.04  25   LR       LR        22 02 01.4
               comp=Z,831nm,18.1s,baz=182,slow=39
OTAV   Otavalo             26.05 342   P        P         21 50 41.7 -1.8
OTAV                                   pmax     pmax
               comp=Z,4.0nm,1.0s
OTAV   Otavalo             26.05 342  eP        P         21 50 42.0 -1.5
OTAV   Otavalo             26.05 342   P        P         21 50 41.7 -1.8
MC01   Montes Claros       26.13  77  eP        P         21 50 43.0 -0.8
JANB   Januaria            26.47  73  eP        P         21 50 46.3 -0.6
CAM01  Campos-RJ           26.69  90  eP        P         21 50 49.8 +1.1
MG05   Puerto Natales      26.86 183   P        P         21 50 50.6 +0.7
SMTB   Santa Maria do      27.04  58  eP        P         21 50 52.2 +0.3
PRPB   Parauapebas         27.19  50  eP        P         21 50 53.1 -0.2
SDBA   SAO DESIDERIO       27.21  68  eP        P         21 50 52.8 -0.7
MALB   Monte Alegre        27.73  37  eP        P         21 50 58.1 +0.1
ALF01  Guarapari-ES        27.81  87  eP        P         21 50 57.3 -1.4
SJMB   Sao Joao De Ma      27.92  83  eP        P         21 50 59.2 -0.6
BSFB   Barra de Sao F      28.18  84  eP        P         21 51 00.9 -1.2
RIB01  Linhares ES         28.45  85  eP        P         21 51 03.4 -1.1
BOAV   Boa Vista           28.75  21  eP        P         21 51 07.3 +0.2
BOAV   Boa Vista           28.75  21   P        P         21 51 07.1 -0.1
NAN01  Guarapari, ES       29.14  82  eP        P         21 51 09.5 -1.2
GUA01  Guaratinga, BA      29.86  80  eP        P         21 51 16.3 -0.8
MCPB   Macapa, AP          30.19  39  eP        P         21 51 20.3 +0.3
CMC01  Camacan, BA         30.57  78  eP        P         21 51 22.3 -1.0
NBIT   Itapeh - BA         30.81  77  eP        P         21 51 25.9 +0.4
GDU01  Guandu, BA          31.19  75  eP        P         21 51 27.9 -0.9
NBPN   Ponto Novo - B      31.97  70  eP        P         21 51 35.3 -0.5
ZARC   Zaragoza, Cauc      32.38 352   P        P         21 51 37.1 -2.2
BAUV   El Baul             33.64   4   P        P         21 51 49.7 -0.6
NBLA   Lagarto - SE        33.97  72  eP        P         21 51 52.7 -0.5
NBPS   Pedro II - PI       34.58  59  eP        P         21 51 58.6 +0.1
SJCC   San Jacinto, C      34.80 352   P        P         21 51 58.2 -2.1
VA02   Isla de Pascua      34.93 258   P        P         21 51 59.4 -2.0
BIRV   Birongo             35.33   7   P        P         21 52 04.4 -0.4
BIRV                                   IAmb     IAmb      21 52 20.6
               comp=Z,22nm,1.1s
NBPB   Pedra_Branca-C      35.35  62  eP        P         21 52 05.6 +0.4
NBAN   Anadia - AL         35.91  71  eP        P         21 52 09.4 -0.5
TOSP   Speyside            37.20  16   P        P         21 52 20.9 +0.1
HOPE   Hope Point          38.79 148   P        P         21 52 34.5 +0.7
HOPE                                   pmax     pmax
               comp=Z,20nm,0.8s
HOPE   Hope Point          38.79 148   P        P         21 52 34.5 +0.7
HOPE                                   IAmb     IAmb      21 52 50.6
               comp=Z,20nm,0.8s
PMSA   Palmer Station      40.18 176   P        P         21 52 47.3 +2.0
PMSA                                   IAmb     IAmb      21 52 53.1
               comp=Z,59nm,1.5s
CRPR   Cabo Rojo, PR       42.70   5   P        P         21 53 03.4 -3.0
CRPR                                   IAmb     IAmb      21 53 09.5
               comp=Z,44nm,1.4s
PDPR   Patillas Dam,       42.80   6   P        P         21 53 04.1 -3.2
CELP   Cerrillos           42.81   6   P        P         21 53 04.7 -2.6
VNA3   Neumayer Olymp      57.45 160   P        P         21 54 58.6 +0.8
VNA1   Neumayer--Stat      57.70 160   P        P         21 55 00.8 +1.4
VNA2   Neumayer--Watz      58.06 160   P        P         21 55 03.0 +0.9
               baz=287,slow=8.6
H06S1  SOCORRO T           58.49 314   T        T         22 58 19.6
               SNR=2.9
H06E1  SOCORRO T-PHAS58.51 314         T        T         22 58 13.5
               SNR=3.5
HKT    Hockley             59.61 335⇓eP         P         21 55 12.8 -0.4
HKT                                    pmax     pmax
               comp=Z,13nm,1.7s
143A   Socs Landing,       60.55 340   P        P         21 55 21.5 +1.9
V58A   Windy Hill, Pi      60.82 352   P        P         21 55 22.0 +0.5
X48A   Hartselle           60.99 344   IAmb     IAmb      21 55 23.8
               comp=Z,8.8nm,0.8s
Y45A   Yeager Farm, C      61.09 342   P        P         21 55 23.9 +0.6
Y45A                                   IAmb     IAmb      21 55 25.5
               comp=Z,16nm,0.9s
V55A   Taylorsville        61.17 350   P        P         21 55 24.9 +1.1
W50A   Signal Mountai      61.30 346   P        P         21 55 25.0 +0.2
W50A                                   IAmb     IAmb      21 55 26.8
               comp=Z,12nm,0.9s
TKL    Tuckaleechee C      61.43 348   P        P         21 55 25.0 -0.6
TKL                                    pmax     pmax
               comp=Z,14nm,1.0s
TKL    Tuckaleechee C      61.43 348   P        P         21 55 25.0 -0.6
TKL                                    IAmb     IAmb      21 55 27.3
               comp=Z,14nm,1.0s
V52A   Sevierville         61.58 348   P        P         21 55 26.6 +0.1
T59A   Double "B" Far      61.81 354   P        P         21 55 29.5 +1.5
T59A                                   IAmb     IAmb      21 55 30.8
               comp=Z,15nm,0.9s
WLAR   White Oak Lake      62.01 339   P        P         21 55 31.9 +2.4
V48A   Smith Brothers      62.16 345   IAmb     IAmb      21 55 31.8
               comp=Z,20nm,1.2s
CLTN   Cedars of Leba      62.38 346   P        P         21 55 32.4 +0.4
TXAR   Lajitas Array       62.53 327   P        P         21 55 32.4 -0.9
               comp=Z,1.0nm,0.7s,baz=146,slow=6.6,SNR=4.5
TXAR   Lajitas Array       62.53 327   P        P         21 55 34.8 +1.5
TXAR   Lajitas Array       62.53 327   P        P         21 55 34.8 +1.5
U49A   Red Boiling Sp      62.67 346   P        P         21 55 33.7 -0.1
U49A                                   IAmb     IAmb      21 55 35.4
               comp=Z,12nm,1.4s
S57A   Dark Hollow, R      62.74 353   P        P         21 55 35.6 +1.3
WVT    Waverly             62.77 344   P        P         21 55 34.3 -0.3
WVT                                    pmax     pmax
               comp=Z,12nm,0.7s
WVT    Waverly             62.77 344   P        P         21 55 34.3 -0.3
WVT                                    IAmb     IAmb      21 55 35.4
               comp=Z,12nm,0.7s
R58B   Mineral             62.83 354   P        P         21 55 36.4 +1.5
R58B                                   IAmb     IAmb      21 55 38.2
               comp=Z,17nm,1.0s
MIAR   Mount Ida           62.95 339   P        P         21 55 36.1 +0.3
MIAR                                   pmax     pmax
               comp=Z,16nm,1.3s
MIAR   Mount Ida           62.95 339   P        P         21 55 36.1 +0.3
MIAR                                   IAmb     IAmb      21 55 47.7
               comp=Z,16nm,1.2s
S54A   Dingess, Beckl      63.10 350   P        P         21 55 36.9 +0.1
S54A                                   IAmb     IAmb      21 55 39.2
               comp=Z,19nm,1.2s
WHAR   Wooly Hollow        63.22 340   P        P         21 55 37.6 +0.1
WHAR                                   IAmb     IAmb      21 55 53.9
               comp=Z,22nm,1.3s
R55A   Marlinton           63.40 352   P        P         21 55 38.4 -0.4
R55A                                   IAmb     IAmb      21 55 38.4
               comp=Z,24nm,1.4s
LCAR   Lake Charles        63.61 341   P        P         21 55 40.8 +0.7
LCAR                                   IAmb     IAmb      21 55 41.4
               comp=Z,9.6nm,0.7s
W39A   Magazine            63.61 339   P        P         21 55 41.4 +1.3
W39A                                   IAmb     IAmb      21 55 42.6
               comp=Z,8.5nm,0.9s
Q56A   Snyder Ridge,       64.03 353   P        P         21 55 44.8 +1.9
Q56A                                   IAmb     IAmb      21 55 55.6
               comp=Z,24nm,1.4s
PBMO   Poplar Bluff        64.07 342   IAmb     IAmb      21 55 54.3
               comp=Z,12nm,0.9s
P57A   Homestead Farm      64.34 354   P        P         21 55 46.7 +1.8
P57A                                   IAmb     IAmb      21 55 47.6
               comp=Z,9.0nm,0.8s
U40A   Yellville           64.38 340   IAmb     IAmb      21 55 47.7
               comp=Z,14nm,0.7s
WCI    Wyandotte Cave      64.43 346   P        P         21 55 45.2 -0.2
WCI                                    pmax     pmax
               comp=Z,15nm,1.1s
WCI    Wyandotte Cave      64.43 346   P        P         21 55 45.2 -0.2
WCI                                    IAmb     IAmb      21 55 46.6
               comp=Z,15nm,1.1s
T42A   Van Buren           64.49 342   P        P         21 55 46.4 +0.5
SIUC   Southern Illin      64.63 344   P        P         21 55 47.3 +0.5
SIUC                                   IAmb     IAmb      21 55 48.1
               comp=Z,13nm,0.7s
HHAR   Hobbs               64.66 339   P        P         21 55 47.4 +0.3
TUL1   Leonard             64.94 338   P        P         21 55 49.9 +1.0
TUL1                                   IAmb     IAmb      21 55 51.1
               comp=Z,14nm,0.9s
MGMO   Mountain Grove      64.94 341   P        P         21 55 49.6 +0.7
MGMO                                   IAmb     IAmb      21 55 51.1
               comp=Z,14nm,1.0s
U38A   Gravette            64.94 339   IAmb     IAmb      21 56 00.1
               comp=Z,18nm,1.4s
QSPA   South Pole Qui      65.39 180   P        P         21 55 53.4 +1.7
QSPA                                   IAmb     IAmb      21 55 54.7
               comp=Z,8.0nm,0.8s
CCM    Cathedral Cave      65.49 342   P        P         21 55 49.7 -2.6
CCM                                    pmax     pmax
               comp=Z,11nm,0.8s
CCM    Cathedral Cave      65.49 342   P        P         21 55 49.7 -2.6
CCM                                    IAmb     IAmb      21 55 53.9
               comp=Z,11nm,0.8s
O49A   Covington           65.93 348   P        P         21 55 54.7 -0.4
L59A   Walton              66.80 356   P        P         21 56 01.6 +0.9
KAN16  Harper SW Stat      66.92 336   IAmb     IAmb      21 56 04.6
               comp=Z,11nm,0.9s
R32A   Long Quarter,       68.22 336   P        P         21 56 09.8  0.0
R32A                                   IAmb     IAmb      21 56 13.2
               comp=Z,18nm,0.8s
ANMO   Albuquerque         68.49 329⇑eP         P         21 56 13.4 +1.6
ANMO                                   pmax     pmax
               comp=Z,9.0nm,1.7s
L40A   Anamosa             69.23 344   IAmb     IAmb      21 56 17.8
               comp=Z,22nm,1.0s
G62A   West of Eustis      69.70   0   P        P         21 56 20.1 +1.3
G62A                                   IAmb     IAmb      21 56 21.7
               comp=Z,14nm,0.8s
LIC    Lamto               70.78  73  eP        P         21 56 42.0  +16
               comp=Z,37nm,0.9s
TRQ    Mont Tremblant      70.79 357   P        P         21 56 26.2 +0.7
TRQ                                    IAmb     IAmb      21 56 27.8
               comp=Z,14nm,1.0s
TIC    Toumodi             70.99  73  eP        P         21 56 43.4  +16
KIC    Kosan Boka          71.09  73  eP        P         21 56 44.1  +16
               comp=Z,43nm,0.6s
DBIC   Dimbokro            71.14  73   P        P         21 56 27.9 -0.5
               comp=Z,4.4nm,0.5s,baz=246,slow=6.0,SNR=8.1
DBIC   Dimbokro            71.14  73   P        P         21 56 29.0 +0.7
DBIC                                   pmax     pmax
               comp=Z,20nm,0.9s
DBIC   Dimbokro            71.14  73   P        P         21 56 29.0 +0.7
DBIC                                   IAmb     IAmb      21 56 46.4
               comp=Z,20nm,0.8s
VLDQ   Val d'Or            72.86 355   P        P         21 56 38.9 +1.1
VLDQ                                   IAmb     IAmb      21 56 39.8
               comp=Z,14nm,1.1s
VNDA   Vanda               73.33 190   LR       LR        22 26 00.9
               comp=Z,299nm,20.7s,baz=172,slow=33
KOWA   Kowa                75.73  66   P        P         21 56 55.9 +0.6
KOWA                                   IAmb     IAmb      21 56 57.0
               comp=Z,15nm,0.7s
PDAR   Pinedale Array      76.25 332   P        P         21 56 59.2 +1.2
               comp=Z,0.6nm,0.5s,baz=130,slow=7.0,SNR=12
PDAR   Pinedale Array      76.25 332   P        P         21 56 59.9 +1.9
SCHQ   Schefferville       79.39   2   P        P         21 57 15.0 +0.2
               comp=Z,5.3nm,0.8s,baz=209,slow=4.7,SNR=4.0
SCHQ   Schefferville       79.39   2   IAmb     IAmb      21 57 25.1
               comp=Z,30nm,1.4s
TORD   Torodi Ar. Bea      79.89  70   P        P         21 57 18.5  0.0
               comp=Z,15nm,0.7s,baz=260,slow=4.9,SNR=86
TORD   Torodi Ar. Bea      79.89  70   P        P         21 57 18.8 +0.3
TORD                                   IAmb     IAmb      21 57 20.0
               comp=Z,14nm,0.8s
MAW    Mawson              81.60 164   P        P         21 57 27.6 +0.8
               comp=Z,5.8nm,0.6s,baz=202,slow=6.3,SNR=15
MAW    Mawson              81.60 164   P        P         21 57 27.9 +1.2
MAW                                    pmax     pmax
               comp=Z,4.0nm,1.2s
MAW    Mawson              81.60 164   P        P         21 57 27.9 +1.2
BOSA   Boshof              83.23 118   P        P         21 57 36.0 -0.3
               comp=Z,8.3nm,0.9s,baz=256,slow=3.8,SNR=12
BOSA   Boshof              83.23 118   P        P         21 57 36.7 +0.5
BOSA                                   pmax     pmax
               comp=Z,19nm,1.2s
BOSA   Boshof              83.23 118   P        P         21 57 36.7 +0.5
BOSA                                   IAmb     IAmb      21 57 38.4
               comp=Z,19nm,1.1s
EDM    Edmonton            86.13 336   P        P         21 57 50.1 +0.1
EDM                                    pmax     pmax
               comp=Z,8.0nm,0.8s
EDM    Edmonton            86.13 336   P        P         21 57 50.1 +0.1
EDM                                    IAmb     IAmb      21 57 51.8
               comp=Z,8.2nm,0.8s
ESDC   Sonseca Array       89.25  45   P        P         21 58 04.7 -0.6
               comp=Z,0.7nm,0.8s,baz=248,slow=5.5,SNR=4.5
YKA    Yellowknife Ar      93.81 341   P        P         21 58 24.8 -1.0
               comp=Z,2.2nm,0.7s,baz=128,slow=4.9,SNR=13
VSU    Vasula             114.57  35⇓iPKIKP     PKiKP     22 03 49.6 +0.8
BRTR   Keskin Array B     115.95  56   PKP      PKPdf     22 03 51.6 -0.7
               comp=Z,0.5nm,0.9s,baz=116,slow=2.9,SNR=3.6
KLMR   Klimovskoe         121.11  32  ePKIKP    PKPdf     22 04 01.6 +0.3
KLMR                                   pmax     pmax
               comp=Z,23nm,1.5s
KLMR   Klimovskoe         121.11  32  ePKPdf    PKPdf     22 04 01.7 +0.4
KLMR                                   AMP                22 04 05.4
               comp=Z,23nm,1.5s
KBZ    Khabaz             123.35  53   PKP      PKiKP     22 04 06.8 +0.4
               comp=Z,1.6nm,0.8s,baz=67,slow=3.0,SNR=4.8
KBZ    Khabaz             123.35  53⇓iPKIKP     PKiKP     22 04 08.1 +1.7
ASAR   Alice Springs      126.28 208   PKP      PKPdf     22 04 13.0 +0.4
               comp=Z,1.4nm,0.6s,baz=131,slow=1.6,SNR=23
H11S2  WAKE ISLAND Hy126.72 275        T        T         00 23 48.5
               baz=108,slow=75,SNR=492
H11S1  WAKE ISLAND Hy126.73 275        T        T         00 23 42.8
               baz=108,slow=75,SNR=263
H11S3  WAKE ISLAND Hy126.74 275        T        T         00 23 50.5
               baz=108,slow=75,SNR=243
H11N3  WAKE ISLAND Hy126.89 277        T        T         00 24 00.2
               baz=107,slow=75,SNR=73
H11N1  WAKE ISLAND Hy126.91 277        T        T         00 24 00.1
               baz=107,slow=75,SNR=66
H11N2  WAKE ISLAND Hy126.91 277        T        T         00 23 59.2
               baz=107,slow=75,SNR=50
WRA    Warramunga Arr     129.34 211   PKP      PKPdf     22 04 18.7 +0.2
               comp=Z,2.4nm,0.8s,baz=163,slow=1.7,SNR=21
WRA    Warramunga Arr     129.34 211   PKIKP    PKiKP     22 04 19.4 +0.2
WRA    Warramunga Arr     129.34 211            PKiKP     22 04 19.4 +0.2
WRAB   Tennant Creek      129.34 211⇑iPKIKP     PKPdf     22 04 18.7 +0.2
ARU    Arti               131.73  35   PKP      PKPdf     22 04 22.0 +0.2
               comp=Z,0.7nm,0.5s,baz=342,slow=2.0,SNR=4.5
ARU    Arti               131.73  35  i PKIKP   PKiKP     22 04 23.3 +0.5
ARU                                                       22 06 39.7
ARU                                    SS       SS        22 24 07.5 -7.9
ARU    Arti               131.73  35            PKiKP     22 04 23.3 +0.5
TIXI   Tiksi              131.86 352⇓iPKIKP     PKiKP     22 04 23.1 +0.5
SEY    Seymchan           132.49 335   PKP      PKPdf     22 04 23.4 +0.4
               comp=Z,0.8nm,0.4s,baz=108,slow=6.4,SNR=1.8
NRIK   Noril'sk           133.59  11⇓ePKIKP     PKPdf     22 04 24.2 -0.7
FITZ   Fitzroy Crossi     134.52 202   PKP      PKiKP     22 04 30.0 +0.4
               comp=Z,1.6nm,0.7s,baz=194,slow=4.2,SNR=2.4
BRVK   Borovoye           139.30  36⇑iPKIKP     PKiKP     22 04 37.8 -0.5
BVAR   Borovoye Array     139.37  36   PKP      PKiKP     22 04 37.7 -0.7
               comp=Z,1.4nm,0.8s,baz=228,slow=13,SNR=7.3
KURK   Kurchatov          144.92  35   PKIKP    PKPdf     22 04 46.4 +0.4
KURK   Kurchatov          144.92  35            PKPdf     22 04 46.4 +0.4
KURBB  Kurchatov Arra     144.92  35   PKP      PKPdf     22 04 46.4 +0.4
               comp=Z,8.3nm,0.9s,baz=300,slow=3.5,SNR=57
ZALV   Zalesovo Beam      145.59  26   PKPbc    PKPab     22 04 48.1 +0.5
               comp=Z,27nm,0.8s,baz=314,slow=3.9,SNR=103
ZALV   Zalesovo Beam      145.59  26   PKIKP    PKPab     22 04 48.4 +0.8
ZALV   Zalesovo Beam      145.59  26            PKPab     22 04 48.4 +0.8
EKS2   Erkin-Say          145.73  50   P        PKPab     22 04 49.8 +1.0
               SNR=22
AML    Almayashu          145.85  51   P        PKPab     22 04 50.7 +1.1
               SNR=18
USP    Ospenovka          146.02  48   P        PKPab     22 04 50.4 +0.7
               SNR=8.1
AAK    Ala-Archa          146.24  50   P        PKPdf     22 04 49.2 +0.4
               SNR=14
AAK    Ala-Archa          146.24  50⇑ePKP2      PKPdf     22 04 49.1 +0.3
CHMS   Chumysh            146.29  49   P        PKPab     22 04 51.4 +0.7
               SNR=8.0
UCH    Uchtor             146.39  50   P        PKPab     22 04 52.8 +1.1
               SNR=19
KBK    Karagaybulak       146.54  49   P        PKPab     22 04 52.4 +0.5
               SNR=12
BOD    Bodaibo            146.86 356  ePKP2     PKPbc     22 04 51.5 +0.5
BOD                                    pmax     pmax
               comp=Z,12nm,0.9s
TKM2   Tokmak 2           146.89  48   P        PKPbc     22 04 51.7 -0.2
               SNR=21
ULHL   Ulahol             147.59  49   P        PKPbc     22 04 53.2 -0.7
               SNR=8.0
KSH    Kashi              148.31  54   PKPbc    PKPbc     22 04 54.8 -1.0
KSH                                    pPKP     sPKPbc    22 05 07.3 -0.7
MK31   Makanchi Array     149.19  38c iPKP2     PKPbc     22 04 58.2 +0.6
MKAR   Makanchi Array     149.19  38   PKPbc    PKPbc     22 04 58.3 +0.6
               comp=Z,10nm,0.8s,baz=304,slow=2.6,SNR=60
DGZ    Jazzator, Alta     149.82  29⇓iPKP2      PKiKP     22 05 00.7 +0.5
HYB    Hyderabad          150.31  98  i PKP     PKiKP     22 05 03.0 +1.0
TLY    Talaya             152.81   8dePKIKP     PKPdf     22 04 56.3 -2.5
WMQ    Urumqi             154.02  38  ePKPbc    PKPdf     22 04 58.5 -2.4
SONM   Songino Array      156.90   5   PKPab    PKPab     22 05 36.4 +1.8
               comp=Z,2.1nm,0.8s,baz=336,slow=3.6,SNR=9.6
GTA    Gaotai             163.34  27  ePKP      PKPdf     22 05 14.5 +2.3
GTA                                    pPKP     sPKPdf    22 05 24.5 -0.1
GTA                                    PKPab    PKPab     22 06 04.3 +1.5
HHC    Hu-ho-hao-te       163.91 354  ePKP      PKPdf     22 05 11.5 -1.1
CMAR   Chiang Mai Arr     168.37 121   PKPab    PKPab     22 06 25.5  0.0
               comp=Z,0.5nm,0.3s,baz=235,slow=5.9,SNR=4.8
NJ2    Nanjing            169.02 313  ePKP      PKPdf     22 05 14.0 -2.7
CD2    Chengdu            172.12  38   PKP      PKPdf     22 05 15.5 -3.0
```

PRU 27 21:59:09.1±0.0**,50°.01N×18°.55E,h0^{km},Poland**

```
Code   Station Name         Δ°   AZ°    Phase ID            Time      Res
                                       Op       ISC       h  m  s    ISC
OKC    Ostrava-Krasne       0.31 237  ePG       Pg        21 59 14.9 -0.2
OKC                                   eSG       Sg        21 59 19.1  0.0
MORC   Moravsky Berou       0.69 251  ePG       Pg        21 59 22.1 -0.2
MORC                                  eSG       Sg        21 59 31.2 -0.1
LANS   Liptovska Anna       1.05 145  eP        Pg        21 59 27.4 -1.7
LANS   Liptovska Anna       1.05 145  ePG       Pg        21 59 27.4 -1.7
LANS                                  eSG       Sb        21 59 44.4  0.0
LANS                                  eLG       Lg        21 59 47.7
LANS   Liptovska Anna       1.05 145   pmax     pmax
               comp=N,4.0nm,0.7s
KRLC   Kraliky              1.14 274  ePG       Pg        21 59 29.2 -1.8
KRLC                                  eSG       Sg        21 59 46.4 +0.6
KRLC   Kraliky              1.14 274  eP        Pg        21 59 29.2 -1.8
JAVC   Velka Javorina       1.29 207  ePG       Pg        21 59 33.3 -0.4
VRAC   Vranov               1.45 242  ePG       Pn        21 59 35.5 -1.1
VRAC                                  eSG       Sg        21 59 55.2 -0.5
DPC    Dobruska-Polom       1.47 284  ePG       Pn        21 59 35.9 -1.0
DPC                                   eSG       Sg        21 59 56.4  0.0
DPC    Dobruska-Polom       1.47 284  eP        Pn        21 59 35.9 -1.0
VYHS   Vyhne                1.53 173  eP        Pn        21 59 37.0 -0.7
VYHS   Vyhne                1.53 173  ePG       Pn        21 59 37.0 -0.7
OSTC   Ostas                1.59 291  ePG       Pn        21 59 38.8 +0.2
KRUC   Moravsky             1.69 237  ePG       Pn        21 59 39.0 -0.9
KRUC                                  eSG       Sn        22 00 01.8 -0.5
CHVC   Chvalec              1.70 291  eSG       Sg        22 00 04.2 +0.5
KHC    Kasperske Hory       3.35 257  eSG       Sg        22 00 55.0 -1.8
```

NNC 27 22:51:40.5±3.2**,35°.83N×70°.01E,h0^{km},mb3.6,mpv3.2, 4C-4D,Error ellipse: s-maj=30.0km s-min=18.1km az=149.0,Hindu Kush region**

```
Code   Station Name         Δ°   AZ°    Phase ID            Time      Res
                                       Op       ISC       h  m  s    ISC
KK08   Karatay Array        7.27   3 ⇑P         Pn        22 53 28.1 +0.1
               0.6nm,0.3s,baz=184,slow=13
KK08                                 ⇓S         Sn        22 54 53.7 +2.3
               1.9nm,0.6s,baz=186,slow=24
AAK    Ala-Archa            7.63  26 ⇓P         Pn        22 53 32.0 -1.1
               0.8nm,0.5s
AAK                                  ⇑S         Sn        22 55 01.0 +0.5
               4.5nm,0.5s
TKM2   Tokmak 2             8.30  30 ⇓P         Pn        22 53 42.7 +0.5
               0.3nm,0.4s
TKM2                                 ⇑S         Sn        22 55 17.1 +0.4
               3.1nm,0.8s
AB31   Akbulak array       15.31 334 ⇓P         Pn        22 55 17.9 +0.1
               0.4nm,0.3s,baz=152,slow=14,SNR=37
AKTO   Aktyubinsk          16.98 333 ⇑P         Pn        22 55 39.0 -0.3
               0.9nm,0.6s
```

IDC 27 22:54:05.5±2.1**,56°.42S×27°.59W,h0^{km},mb3.6**/1**, mb1 3.6**/1**,mb1mx3.5**/19**,mbtmp3.6**/1**,Error ellipse: s-maj=113.9km s-min=80.0km az=135.0,South Sandwich Islands region**

```
Code   Station Name         Δ°   AZ°    Phase ID            Time      Res
                                       Op       ISC       h  m  s    ISC
TORD   Torodi Ar. Bea      73.49  30   P        P         23 05 39.8  0.0
               0.3nm,0.5s,baz=194,slow=5.7,SNR=5.2
ILAR   Eielson Array      150.19 311   PKPbc    PKPbc     23 13 56.4 -0.4
               0.4nm,0.7s,baz=112,slow=3.8,SNR=4.7
SONM   Songino Array      150.97  87   PKPbc    PKPbc     23 13 59.0 -0.3
               0.5nm,1.0s,baz=224,slow=3.1,SNR=4.5
```

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*MAN **27** 23:03:11.9, 4°.80N×125°.95E, h167^{km}, mb4.3, ML2.9, MS3.1*

IDC 27 23:02:54.7±2.0**,3°.92N×124°.50E,h0^{km},mb3.3**/3**, mb1 3.5**/3**,mb1mx3.2**/52**,mbtmp3.3**/3**,Error ellipse: s-maj=209.9km s-min=26.4km az=64.0,Celebes Sea**

```
Code   Station Name         Δ°   AZ°    Phase ID            Time      Res
                                       Op       ISC       h  m  s    ISC
WRA    Warramunga Arr      25.61 158   P        P         23 08 27.3 +1.3
               0.2nm,0.4s,baz=337,slow=10,SNR=6.2
ASAR   Alice Springs       28.92 162   P        P         23 08 53.9 -1.7
               0.2nm,0.4s,baz=342,slow=7.6,SNR=1.7
MKAR   Makanchi Array      56.14 326   P        P         23 12 36.1 -0.1
               0.2nm,0.4s,baz=116,slow=7.9,SNR=7.4
```

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*DJA **27** 23:13:06.4±0.3, 9°S±5°×12°4E±°, h82^{km}±5^{km}, M4.3/11, mb4.4/6, mB4.9/5, MLv4.2/11, Mw(mB)4.2/5*

*IDC **27** 23:13:06.2±3.5, 9°.05S×124°.04E, h72^{km}±35^{km}, mb3.9/9, mb1 3.9/9, mb1mx3.5/44, mbtmp4.2/9, Error ellipse: s-maj=53.8km s-min=24.0km az=61.0*

*NEIC **27** 23:13:07.0±2.7, 9°.30S±0°.06×124°.18E±0°.06, h96^{km}±5^{km}, mb4.5/15, Error ellipse: s-maj=8.9km s-min=7.4km az=221.0*

ISC 27 23:13:06.8±0.4**,9°.37S**±0°.05×**124°.22E**±0°.05**,h100^{km},n62,** σ**1§86**/71**,mb4.4**/22**,Timor region**

```
Code   Station Name         Δ°   AZ°    Phase ID            Time      Res
                                       Op       ISC       h  m  s    ISC
SOEI   Soe                  0.38 172   P        Pn        23 13 22.1 +0.1
SOEI                                   S        Sn        23 13 32.4 -0.9
SOEI   Soe                  0.38 172            Pn        23 13 22.1 +0.1
SOEI                                   Sn       Sn        23 13 33.1 -0.2
BATI   Baumata              0.99 213   P        Pn        23 13 27.9 +0.8
               401nm,0.3s,baz=80,slow=2.7,SNR=171
BATI                                   S        Sn        23 13 43.2 +0.8
               245nm,0.3s,baz=359,slow=8.2,SNR=9.5
BATI   Baumata              0.99 213   P        Pn        23 13 27.8 +0.7
MMRI   Maumere              2.09 290   P        Pn        23 13 39.2 -1.3
MMRI   Maumere              2.09 290            Pn        23 13 38.8 -1.7
MMRI                                   Sn       Sn        23 14 02.4 -3.9
EDFI   Ende, Flores         2.57 284   P        Pn        23 13 45.3 -1.6
BASI   Baing, Sumba         3.68 257   P        Pn        23 14 01.3 -0.4
WBSI   Waikabubak, Su       4.77 266   P        Pn        23 14 14.4 -2.0
BSSI   Bau Bau, Buton       4.89 311   P        Pn        23 14 17.9 -0.2
PLAI   Plampang             6.38 274   P        Pn        23 14 37.4 -0.9
               0.3nm796nm41nm,0.8s
```

SAUI	Saumlaki	7.14	79	Pn	Pn	23 14 50.0	+1.4
SAUI				Sn	Sn	23 16 07.4	-0.8
TWSI	Taliwang, Sumb	7.27	274	P	Pn	23 14 49.1	-1.3
	0.1nm376nm13nm,1.4s						
MTN	Manton Dam	7.61	118	Pn	Pn	23 14 57.0	+1.9
MTN				Sn	Sn	23 16 17.7	-2.1
KNRA	Kununurra	7.68	145		Pn	23 14 56.7	+0.8
KNRA				Sn	Sn	23 16 20.6	-0.7
FITZ	Fitzroy Crossi	8.78	171	P	Pn	23 15 10.1	-0.8
	baz=2.3,slow=10						
FITZ				S	Sn	23 16 41.6	-6.6
	baz=341,slow=17						
JAGI	Jajag, Banyuwa	9.98	274	Pn	Pn	23 15 26.4	-0.9
FAKI	Fak Fak	10.24	52	Pn	Pn	23 15 29.4	-1.5
TOLI2	Tolitoli	10.96	342	Pn	Pn	23 15 40.2	-0.5
PSA00	Pilbara Seismi	12.84	199	Pn	Pn	23 16 06.1	+0.5
WB0	Warramunga Arr	14.27	138	Pn	Pn	23 16 23.5	-0.7
WRA	Warramunga Arr	14.36	138	P	Pn	23 16 24.4	-1.0
	1.9nm,0.3s,baz=322,slow=14,SNR=48						
WRA				S	Sn	23 18 55.8	-7.8
	2.3nm,0.3s,baz=316,slow=24,SNR=13						
WRA	Warramunga Arr	14.36	138		Pn	23 16 24.9	-0.5
WRAB	Tennant Creek	14.36	138	Pn	Pn	23 16 24.7	-0.7
WB2	Warramunga Arr	14.36	138	Pn	Pn	23 16 24.9	-0.6
WR0	Warramunga Arr	14.50	138	Pn	Pn	23 16 26.8	-0.4
AS31	Alice Springs	16.96	148		P	23 16 59.5	+1.1
ASAR	Alice Springs	16.96	148	P	Pn	23 16 58.9	+0.9
	1.0nm,0.3s,baz=321,slow=12,SNR=48						
ASAR				S	Sn	23 19 58.6	-8.1
	0.7nm,0.3s,baz=311,slow=20,SNR=6.2						
ASAR	Alice Springs	16.96	148		Pn	23 16 59.4	+1.3
KKM	Kota Kinabalu	17.27	332	Pn	P	23 17 02.7	+0.9
KKM				IAmb	IAmb	23 17 14.0	
	comp=Z,54nm,1.2s						
COEN	Coen	19.11	106	P	Pn	23 17 25.6	+1.7
FORT	Forrest	21.60	171	P	P	23 17 49.0	+0.4
FORT				IAmb	IAmb	23 17 57.1	
	comp=Z,78nm,1.5s						
BBOO	Buckleboo	25.76	157	P	P	23 18 30.3	+2.1
BBOO				IAmb	IAmb	23 18 32.5	
	comp=Z,16nm,1.4s						
STKA	Stephens Creek	27.59	147	P	P	23 18 50.5	+5.8
	comp=Z,1.6nm,0.6s,baz=321,slow=11,SNR=4.3						
STKA	Stephens Creek	27.59	147	P	P	23 18 47.8	+3.1
RABL	Rabaul	28.21	81	P	P	23 18 50.6	+0.1
CMAR	Chiang Mai Arr	37.24	318	P	P	23 20 09.2	+0.3
	comp=Z,1.2nm,0.3s,baz=134,slow=7.7,SNR=5.1						
PATS	Pohnpei	37.60	66	P	P	23 20 08.8	-3.3
JHS	Saijyo	44.93	10	P	P	23 21 12.2	+0.5
JHS				IAmb	IAmb	23 21 28.0	
	comp=Z,57nm,1.3s						
JWT	Wachi	45.66	13	P	P	23 21 17.6	+0.2
JWT				IAmb	IAmb	23 21 27.6	
	comp=Z,55nm,1.5s						
RAMN	Ramite	51.33	316	*e*P	P	23 22 02.2	+0.7
	comp=Z,11nm,0.5s						
JIRN	Jiri	52.06	316	*e*P	P	23 22 07.2	+0.1
	comp=Z,6.2nm,0.6s						
FOZ	Fox Glacier	52.18	139	P	P	23 22 08.5	+1.3
PKI	Pulchoki	52.55	316	*e*P	P	23 22 10.6	0.0
	comp=Z,11nm,0.5s						
PKIN	Phulchoki	52.56	316	*e*P	P	23 22 10.7	+0.1
	comp=Z,6.8nm,0.4s						
GKN	Gorkha	53.35	315	*e*P	P	23 22 16.8	+0.5
	comp=Z,7.5nm,0.3s						
DANN	Dangsing	54.17	315	*e*P	P	23 22 22.3	-0.1
	comp=Z,18nm,0.5s						
PYUN	Piuthan	54.56	314	*e*P	P	23 22 25.4	+0.3
	comp=Z,11nm,0.4s						
BHW	Baring Head	54.74	135	P	P	23 22 25.2	-0.9
CASY	Casey	57.60	187	P	P	23 22 46.2	+0.4
CASY				IAmb	IAmb	23 22 53.3	
	comp=Z,5.6nm,1.1s						
SONM	Songino Array	59.11	346	P	P	23 22 57.0	+0.2
	comp=Z,0.9nm,0.6s,baz=165,slow=9.0,SNR=8.3						
SONM	Songino Array	59.11	346	P	P	23 22 57.2	+0.4
SONM				IAmb	IAmb	23 22 58.2	
	comp=Z,1.1nm,0.8s						
MKAR	Makanchi Array	67.24	330	P	P	23 23 50.9	+0.4
	comp=Z,1.8nm,0.5s,baz=134,slow=7.0,SNR=32						
MKAR	Makanchi Array	67.24	330	P	P	23 23 51.1	+0.7
AAK	Ala-Archa	68.80	323	P	P	23 24 00.3	-0.3
	comp=Z,0.5nm,0.3s,baz=171,slow=10.0,SNR=6.6						
AAK	Ala-Archa	68.80	323	P	P	23 24 00.5	-0.1
AAK				IAmb	IAmb	23 24 02.6	
	comp=Z,1.3nm,0.6s						
ZALV	Zalesovo Beam	71.32	337	P	P	23 24 15.1	-0.4
	comp=Z,1.0nm,0.4s,baz=133,slow=4.3,SNR=7.3						
KURBB	Kurchatov Arra	71.68	331	P	P	23 24 17.9	+0.3
	comp=Z,0.5nm,0.4s,baz=143,slow=5.6,SNR=1.9						
KURK	Kurchatov	71.70	331	P	P	23 24 18.2	+0.5
KURK				IAmb	IAmb	23 24 19.1	
	comp=Z,1.9nm,0.7s						
TIXI	Tiksi	80.91	1	P	P	23 25 09.4	0.0
	comp=Z,1.3nm,0.3s,baz=194,slow=4.2,SNR=4.8						
AKTO	Aktyubinsk	82.52	324	P	P	23 25 19.0	+0.6
	comp=Z,2.4nm,0.6s,baz=30,slow=16,SNR=12						
TORD	Torodi Ar. Bea	123.60	280	PKP	PKiKP	23 31 56.3	+2.5
	comp=Z,0.5nm,0.6s,baz=99,slow=2.2,SNR=4.5						

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*IDC **27** 23:44:39.5±1.2, 18°.50S×176°.11E, h0^{km}, mb3.9/5, mb1 4.2/5, mb1mx4.0/21, mbtmp3.9/5, MS3.3/2, Ms1 3.3/2, ms1mx2.9/29, Error ellipse: s-maj=124.6km s-min=19.8km az=157.0*

*NEIC **27** 23:44:44.0±1.2, 18°.4S±0°.2×176°.3E±0°.1, h36^{km}±7^{km}, mb4.3/13, Error ellipse: s-maj=34.1km s-min=10.7km az=160.0*

ISC 27 23:44:43.7±0.7**, 18°.5S**±0°.2×**176°.3E**±0°.1**, h35**^{km}**, n24,** σ**1^{s}01**/24**, mb4.2**/11**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	1.86	67	Pn	Pn	23 45 13.5	+0.4
	5.4nm,0.3s,baz=230,slow=14,SNR=6.6						
MSVF				Sn	Sn	23 45 36.2	+0.8
	43nm,0.3s,baz=315,slow=21,SNR=10						
MSVF				LR	LR	23 46 07.7	
	comp=Z,606nm,20.4s,baz=108,slow=44						
MSVF	Nonsavu	1.86	67	Pn	Pn	23 45 13.0	-0.1
MSVF				Sn	Sn	23 45 33.1	-2.4
OUENC	Ouen Island, N	9.66	244	Pn	Pn	23 47 00.6	+0.3
DZM	Mont Dzumac	9.88	247	LR	LR	23 50 08.6	
	comp=Z,201nm,19.7s,baz=98,slow=34						
HNR	Honiara	18.19	297	LR	LR	23 55 01.2	
	comp=Z,82nm,18.7s,baz=93,slow=34						
URZ	Urewera	19.73	178	P	P	23 49 11.5	+1.2
URZ				IAmb	IAmb	23 49 16.3	
	comp=Z,27nm,1.1s						
THZ	Tophouse	23.39	186	P	P	23 49 49.8	+0.4
THZ				IAmb	IAmb	23 50 01.8	
	comp=Z,12nm,0.9s						
KHZ	Kahutara	23.98	185	P	P	23 49 52.8	-2.1
TOO	Toolangi	32.94	228	P	P	23 51 15.5	+0.4
TOO				IAmb	IAmb	23 51 17.6	
	comp=Z,7.3nm,0.9s						
STKA	Stephens Creek	33.94	240	P	P	23 51 24.2	+0.4
	comp=Z,2.2nm,0.7s,baz=70,slow=8.3,SNR=6.5						
STKA	Stephens Creek	33.94	240	P	P	23 51 23.9	+0.1
BBOO	Buckleboo	38.71	240	P	P	23 52 04.4	-0.1
BBOO				IAmb	IAmb	23 52 05.1	
	comp=Z,6.7nm,0.9s						
WB0	Warramunga Arr	39.51	261	P	P	23 52 10.9	-0.5
WB0				IAmb	IAmb	23 52 12.1	
	comp=Z,1.8nm,1.0s						
WB2	Warramunga Arr	39.53	261	P	P	23 52 11.0	-0.6
WB2				IAmb	IAmb	23 52 19.9	
	comp=Z,3.4nm,1.1s						
WRA	Warramunga Arr	39.54	261	P	P	23 52 10.3	-1.4
	comp=Z,0.5nm,0.8s,baz=98,slow=8.5,SNR=6.0						
WRA	Warramunga Arr	39.54	261	P	P	23 52 10.5	-1.2
AS31	Alice Springs	39.75	255	P	P	23 52 12.6	-0.8
ASAR	Alice Springs	39.76	255	P	P	23 52 13.2	-0.2
	comp=Z,1.6nm,0.7s,baz=86,slow=8.7,SNR=23						
ASAR				PcP	PcP	23 54 19.0	-0.5
	comp=Z,0.4nm,0.8s,baz=105,slow=3.2,SNR=4.1						
ASAR	Alice Springs	39.76	255	P	P	23 52 13.1	-0.4
FORT	Forrest	45.18	245	P	P	23 52 57.1	-0.4
MORW	Morawa	55.60	247	P	P	23 54 16.6	+0.2
QSPA	South Pole Qui	71.58	180	P	P	23 56 00.9	-0.3
QSPA				IAmb	IAmb	23 56 03.4	
	comp=Z,2.7nm,0.9s						
NVAR	Mina Array Bea	83.40	46	P	P	23 57 09.6	+1.7
	comp=Z,0.4nm,0.8s,baz=230,slow=9.3,SNR=2.9						
TXAR	Lajitas Array	90.61	59	P	P	23 57 46.6	+3.6
	comp=Z,1.0nm,0.8s,baz=253,slow=6.3,SNR=4.2						

IDC 27 23:56:57.5±1.9**, 18°.85S**×**176°.35E, h0**^{km}**, mb3.7**/4**, mb1 3.9**/4**, mb1mx3.7**/25**, mbtmp3.7**/4**, MS3.4**/1**, Ms1 3.4**/1**, ms1mx2.8**/25**, Error ellipse: s-maj=155.1km s-min=18.7km az=152.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	1.96	56	Pn	Pn	23 57 31.5	-0.6
	5.6nm,0.3s,baz=225,slow=12,SNR=14						
MSVF				Sn	Sn	23 57 57.0	-0.5
	36nm,0.3s,baz=298,slow=23,SNR=8.9						
MSVF				LR	LR	23 58 33.3	
	comp=Z,588nm,18.0s,baz=88,slow=49						
PMG	Port Moresby	29.78	284	LR	LR	00 14 16.9	
	comp=Z,71nm,18.1s,baz=71,slow=35						
STKA	Stephens Creek	33.82	241	P	P	00 03 42.2	+0.6
	1.3nm,0.6s,baz=99,slow=13,SNR=3.1						
WRA	Warramunga Arr	39.57	261	P	P	00 04 29.8	-1.0
	0.4nm,0.9s,baz=97,slow=8.6,SNR=2.1						
ASAR	Alice Springs	39.74	255	P	P	00 04 31.8	-0.4
	0.9nm,0.7s,baz=88,slow=8.6,SNR=12						
ASAR				PcP	PcP	00 06 38.7	-0.2
	0.6nm,1.0s,baz=73,slow=3.1,SNR=3.0						
NVAR	Mina Array Bea	83.60	46	P	P	00 09 29.2	+1.0
	0.2nm,0.3s,baz=237,slow=9.6,SNR=2.0						

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*IDC **28** 00:24:14.5±1.5, 31°.68S×72°.26W, h0^{km}, mb4.0/1, mb1 3.9/4, mb1mx3.7/17, mbtmp3.7/4, ML3.7/3, Error ellipse: s-maj=61.6km s-min=35.0km az=104.0*

*GUC **28** 00:24:17.6±0.8, 31°.72S×72°.11W, h43^{km}±4^{km}, ML3.7*

ISC 28 00:24:17.7±1.3**, 31°.73S**±0°.04×**72°.28W**±0°.09**, h29**^{km}±9^{km}**, n28,** σ**0^{s}92**/41**, 1C-9D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA06	Catapilco	1.17	135	⇓*i*P	Pn	00 24 37.3	-0.9
VA06				*i* S	Sn	00 24 51.9	-1.3
VA06				IAML		00 24 56.7	
	comp=E,4µm,0.2s						
CO06	Fray Jorge	1.19	28	⇓*i*P	Pn	00 24 37.4	-1.0
CO06				*i* S	Sn	00 24 51.9	-1.7
ROCH	El Roble	1.64	139	⇓*i*P		00 24 44.3	
ROCH				⇓*i*P	Pn	00 24 44.2	-0.6
ROCH				*i* S	Sn	00 25 04.9	-0.1
ROCH				*i* S		00 25 05.0	
ROCH				IAML		00 25 12.0	
	comp=N,2µm,0.5s						
ROCH				IAML		00 25 12.1	
	comp=N,3µm,0.5s						
VA03	San Esteban	1.79	126	⇓*i*P	Pn	00 24 46.5	-0.3
VA03				*i* S	Sn	00 25 07.4	-1.2
VA03				IAML		00 25 13.1	
	comp=E,3µm,0.4s						
MT02	Curacav	1.80	148	*e*P	Pn	00 24 46.8	-0.1
MT02				*i* S	Sn	00 25 07.8	-1.0
PEL	Peldehue	1.95	137	⇓*i*P	Pn	00 24 48.8	-0.1
PEL				*i* S	Sn	00 25 12.1	-0.3
PEL				IAML		00 25 17.7	
	comp=E,982nm,0.4s						
VA05	Santo Domingo	2.00	164	*e*P	Pn	00 24 49.4	-0.1
GO04	Tololo Observa	2.00	40	*e*P	Pn	00 24 49.6	-0.3
GO04				*i* S	Sn	00 25 15.2	+1.1
CO05	La Serena	2.02	27	*e*P	Pn	00 24 49.6	-0.2
CO05				*i* S	Sn	00 25 14.3	+0.4
CO05				IAML		00 25 24.3	
	comp=E,915nm,0.6s						
MT05	Renca	2.10	142	*e*P	Pn	00 24 51.2	+0.1
MT05				*i* S	Sn	00 25 16.2	-0.1
MT05				IAML		00 25 28.1	
	comp=E,1µm,0.2s						
MT01	Popeta	2.29	158	*e*P	Pn	00 24 53.6	-0.1
MT01				*i* S	Sn	00 25 19.6	-1.3
MT01				IAML		00 25 35.5	
	comp=E,339nm,0.6s						
MT09	Talagante	2.31	152	⇓*i*P	Pn	00 24 54.5	+0.5
MT09				*i* S	Sn	00 25 21.6	+0.1
MT09				IAML		00 25 34.8	
	comp=N,721nm,0.6s						
BO04	La Punta	2.65	149	⇓*i*P	Pn	00 24 59.3	+0.7
BO04				*i* S	Sn	00 25 30.1	+0.3
BO04				IAML		00 25 44.6	
	comp=N,367nm,0.2s						
LMEL	Las Melosas	2.74	141	*e*P	Pn	00 25 00.4	+0.5
LMEL				*i* S	Sn	00 25 31.5	-0.6
LMEL				IAML		00 25 42.9	
	comp=N,464nm,0.2s						
BO01	Tunca	2.84	160	*e*P	Pn	00 25 01.2	+0.1
BO01				IAML		00 25 46.8	
	comp=E,130nm,0.4s						
LCO	Las Campanas	3.03	27	*e*P	Pn	00 25 03.5	-0.6
GO05	Huala	3.28	175	⇓*i*P	Pn	00 25 07.0	-0.2
GO05				*i* S	Sn	00 25 43.0	-2.3
BO02	Sierra Bellavi	3.30	158	⇑*i*P	Pn	00 25 08.1	+0.6
BO02				*e*S	Sn	00 25 45.5	-0.3
AC04	Llanos de Chal	3.67	17	*e*P	Pn	00 25 12.2	-0.3
H03N1	Juan Fernandez	5.86	251	T	T	00 32 30.8	
	baz=79,slow=72						
H03N3	Juan Fernandez	5.87	251	T	T	00 32 27.5	
	baz=79,slow=72						
H03N2	Juan Fernandez	5.87	251	T	T	00 32 29.3	
	baz=79,slow=72						
PLCA	Paso Flores	9.09	172	Pn	Pn	00 26 27.5	+0.5
	comp=E,0.4nm,0.3s,baz=331,slow=13,SNR=8.5						
CPUP	Villa Florida	14.13	71	Pn	Pn	00 27 36.2	+0.3
	comp=E,0.1nm,0.3s,baz=231,slow=14,SNR=1.8						
LPAZ	La Paz	15.83	15	Pn	Pn	00 27 56.6	-2.6
	comp=E,0.0nm,0.3s,baz=198,slow=9.6,SNR=1.6						
TORD	Torodi Ar. Bea	83.63	70	P	P	00 36 44.7	+0.8
	comp=E,0.8nm,0.7s,baz=249,slow=7.3,SNR=5.9						
WRA	Warramunga Arr	122.63	210	PKP	PKiKP	00 43 12.1	+0.7
	comp=E,0.3nm,0.8s,baz=185,slow=4.2,SNR=2.1						
ZALV	Zalesovo Beam	152.39	30	PKPbc	PKiKP	00 44 12.3	+1.6
	comp=E,1.4nm,0.5s,baz=308,slow=3.1,SNR=9.4						
ZALV				PKPab	sPKPbc	00 44 21.9	+0.6
	comp=E,1.0nm,0.5s,baz=305,slow=3.7,SNR=6.4						

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*MOS **28** 00:52:22.5±0.8, 25°.25N×122°.22E, h229^{km}, mb4.3/22, Error ellipse: s-maj=9.3km s-min=6.0km az=93.4*

*TAP **28** 00:52:23.8, 25°.19N×122°.26E, h219^{km}, ML5.2, C*

*NEIC **28** 00:52:23.3±1.5, 25°.27N±0°.07×122°.21E±0°.07, h212^{km}±5^{km}, mb4.6/92, Error ellipse: s-maj=10.7km s-min=8.8km az=138.0*

*NIED **28** 00:52:24.5, 25°.12N×122°.16E, h208^{km}, MW4.5, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.47; $M_{\theta\theta}$-0.67; $M_{\phi\phi}$2.14; $M_{r\theta}$-2.42; $M_{\theta\phi}$3.65; $M_{\phi r}$3.83; Fault plane solution: $M_0$6.01000×10^{15} NP1: ϕ_s172.00000°, δ78.00000°, λ-134.00000°. NP2: ϕ_s70.00000°, δ46.00000°, λ-17.00000°.*

*IDC **28** 00:52:24.7±1.3, 25°.29N×122°.13E, h233^{km}±12^{km}, mb4.0/24, mb1 4.1/28, mb1mx4.0/44, mbtmp4.6/28 Error ellipse: s-maj=11.3km s-min=7.9km az=80.0*

*BJI **28** 00:52:24.3±0.0, 25°.29N×122°.00E, h200^{km}, mB4.8/26, mb4.8/49*

*JMA **28** 00:52:24.5±0.2, 25°.12N×122°.16E, h208^{km}±2^{km}, M4.5*

ISC 28 00:52:23.1±0.4**, 25°.26N**±0°.03×**122°.18E**±0°.03**, h218**^{km}±3^{km}**, n420,** σ**1^{s}16**/541**, mb4.5**/90**, 24C-103D, Fault plane solution: NP1:**ϕ_s72.22646°**,** δ52.65381°**,** λ-35.71695°. **NP2:**ϕ_s185.79231°**,** δ62.34819°**,** λ-136.77617°. **Principal axes:** T Plg5.7844°, Azm306.9834°**;** N Plg40.1999°, Azm212.0725°**;** P Plg49.2108°, Azm43.7257°**; Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.30	215	*i* P	Pn	00 52 52.5	+0.7
	baz=234						
TWB1				*i* S	S	00 53 13.4	-0.7
	baz=234						
PCYT	Pengchaiyu	0.39	346	⇓*i*P	Pn	00 52 53.1	+1.1
	baz=339						
PCYT				*i* S	S	00 53 15.9	+1.3
	baz=339						
NWF	Wu-fen Shan	0.40	243	⇓*i*P	Pn	00 52 52.6	+0.4
	baz=258						
NWF				S	S	00 53 14.1	-0.7
	baz=258						
TIPB	Shuangxi	0.42	229	⇓*i*P	Pn	00 52 52.5	+0.3
	baz=255						
TIPB				*e*S	S	00 53 13.7	-1.1
	baz=255						
EGS		0.46	209	⇓*i*P	Pn	00 52 52.6	+0.4
	baz=215						
EGS				S	S	00 53 13.8	-1.2
	baz=215						
NTC	Toucheng	0.51	218	⇓P	Pn	00 52 52.8	+0.4
	baz=243						
NTC				S	S	00 53 13.5	-1.6
	baz=243						
TWY	Chenhua	0.52	272	⇓*i*P	Pn	00 52 53.2	+0.9
	baz=279						
TWY				S	S	00 53 15.0	-0.1
	baz=279						
YM01	YM01	0.56	259	⇓*i*P	Pn	00 52 52.9	+0.3
	baz=276						
YM01				S	S	00 53 13.7	-1.9
	baz=276						
ANP	Anpu	0.60	264	*e*P	Pn	00 52 53.0	+0.3
	baz=264						
TWA	Mucha	0.60	243	⇓*i*P	Pn	00 52 53.0	+0.3
	baz=255						
TWA				S	S	00 53 15.2	-0.6
	baz=255						
ILA	Ilan	0.62	219	P	Pn	00 52 53.9	+1.1
	baz=238						
ILA				S	S	00 53 16.4	+0.5
	baz=238						
TAP	Taipei	0.64	251	P	Pn	00 52 53.1	+0.3
	baz=265						
TAP				*e*S	S	00 53 14.8	-1.2
	baz=265						
NHDH	Xindian Distri	0.66	244	⇓*i*P	Pn	00 52 53.3	+0.4
	baz=261						
NHDH				*e*S	S	00 53 16.0	-0.1
	baz=261						
NTST	Danshui	0.67	262	P	Pn	00 52 53.8	+0.9
	baz=275						
NTST				*e*S	S	00 53 16.0	-0.2
	baz=275						
TATO	Taipei	0.68	246		Pn	00 52 53.0	0.0
TWE	Neicheng	0.70	221	*i* P	Pn	00 52 53.5	+0.4
	baz=234						
TWE				S	S	00 53 16.5	0.0
	baz=234						
TWS1	Kuangyinshan	0.70	258	⇓*i*P	Pn	00 52 53.8	+0.6
	baz=272						
TWS1				*e*S	S	00 53 16.0	-0.4
	baz=272						
TWC	Suao	0.71	205	⇓*i*P	Pn	00 52 53.4	+0.3
	baz=214						
TWC				*i* S	S	00 53 14.7	-1.9
	baz=214						
NDS	Dongshan	0.75	214	*i* P	Pn	00 52 54.0	+0.6
	baz=228						
NDS				S	S	00 53 16.6	-0.3
	baz=228						
NWLT	Wulai	0.77	232	⇓P	Pn	00 52 53.8	+0.2
	baz=242						
NWLT				S	S	00 53 15.8	-1.4
	baz=242						
ENTT	Nioudou	0.82	222	⇓*i*P	Pn	00 52 54.3	+0.5
	baz=241						
ENTT				S	S	00 53 17.1	-0.5
	baz=241						
EWUT	Wuta	0.88	204	⇓*i*P	Pn	00 52 54.9	+0.8
	baz=212						
EWUT				S	S	00 53 17.8	-0.4
	baz=212						
NDT	Datong Townshi	0.89	223	⇓*i*P	Pn	00 52 54.6	+0.5
	baz=241						
NDT				S	S	00 53 17.1	-1.2
	baz=241						
ENA	Nanau	0.91	206	⇓*i*P	Pn	00 52 55.0	+0.7
	baz=212						
ENA				*e*S	S	00 53 18.2	-0.4
	baz=212						
YHNB	Yeheng	0.93	231	⇓*i*P	Pn	00 52 54.6	+0.1
	baz=247						
YHNB				S	S	00 53 17.2	-1.6
	baz=247						
YHNB	Yeheng	0.93	231		Pn	00 52 54.5	+0.1
NCU	National Centr	0.94	253	⇓*i*P	Pn	00 52 55.0	+0.6
	baz=265						
NCU				*i* S	S	00 53 18.4	-0.3
	baz=265						
NSK	Sanguang	0.94	232	⇓*i*P	Pn	00 52 54.7	+0.2
	baz=248						
NSK				*i* S	S	00 53 17.1	-1.7
	baz=248						
NCUH	Zhongli	0.94	253	⇓*i*P	Pn	00 52 55.1	+0.7
	baz=265						
NCUH				*e*S	S	00 53 17.9	-0.8
	baz=265						
EHP	Heping Village	1.02	203	*e*P	Pn	00 52 55.5	+0.6
	baz=212						
EHP				*e*S	S	00 53 19.9	+0.3
	baz=212						
JYNG	Yonagunijimaku	1.06	139	P	Pn	00 52 55.2	0.0
JYNG				S	S	00 53 19.0	-1.1
NNS	Nan Shan	1.09	222	⇓*i*P	Pn	00 52 56.1	+0.6
	baz=234						
NNS				S	S	00 53 20.1	-0.6
	baz=234						
NNSB	Datong	1.09	221	⇓*i*P	Pn	00 52 56.2	+0.6
	baz=233						
NNSB				S	S	00 53 18.9	-1.8
	baz=233						
YOJ	Yonaguni jima	1.09	136	⇑*i*P	Pn	00 52 55.3	-0.1
	baz=143						
YOJ				*i* S	S	00 53 18.9	-1.6
	baz=143						
YOJ	Yonaguni jima	1.09	136	P	Pn	00 52 55.4	-0.1
YOJ				S	S	00 53 18.8	-1.6
YOJ	Yonaguni jima	1.09	136	P	Pn	00 52 55.2	-0.2
YOJ	Yonaguni jima	1.09	136		Pn	00 52 55.2	-0.1
SBCB	Hsinchu	1.17	247	⇓*i*P	Pn	00 52 56.7	+0.8
	baz=248						
SBCB				*e*S	S	00 53 19.6	-1.7
	baz=248						
HSN	Hsinchu	1.18	248	⇓*i*P	Pn	00 52 56.4	+0.4
	baz=248						
HSN				*e*S	S	00 53 20.8	-0.6
	baz=248						
NACB	Ninganchiao	1.20	206	⇓*i*P	Pn	00 52 56.0	-0.2
	baz=209						
NACB				S	S	00 53 20.4	-1.4
	baz=209						
NACB	Ninganchiao	1.20	206	Pn	Pn	00 52 55.8	-0.4
NACB				Sn	S	00 53 21.4	-0.4
ETL	Fush Village	1.20	205	*e*P	Pn	00 52 56.1	-0.1
	baz=222						
ETL				*e*S	S	00 53 21.4	-0.5
	baz=222						
LIOB	Emei	1.22	240	⇓*i*P	Pn	00 52 56.8	+0.5
	baz=250						
LIOB				*e*S	S	00 53 21.5	-0.4
	baz=250						
ETLH	Xiulin Townshi	1.22	211	⇓*i*P	Pn	00 52 56.6	+0.2
	baz=220						
ETLH				*e*S	S	00 53 20.3	-1.9
	baz=220						
NSTT	Nanjuang	1.23	240	⇓*i*P	Pn	00 52 56.8	+0.5
	baz=250						
NSTT				S	S	00 53 20.6	-1.6
	baz=250						
TWD	Chiawan	1.28	204	⇓*i*P	Pn	00 52 56.5	-0.2
	baz=219						
TWD				*e*S	S	00 53 20.9	-2.0
	baz=219						
FUSS	Fushou	1.31	220	⇓*i*P	Pn	00 52 58.2	+0.9
	baz=232						
FUSS				S	S	00 53 23.2	-0.5
	baz=232						
TWT	Tachien	1.35	223	⇓*i*P	Pn	00 52 58.2	+0.8
	baz=235						
TWT				*e*S	S	00 53 24.0	-0.1
	baz=235						
TDCB	Techi	1.36	223	⇓*i*P	Pn	00 52 58.2	+0.6
	baz=235						
TDCB				*i* S	S	00 53 23.3	-0.8
	baz=235						
HWA	Hwalien	1.37	202	P	Pn	00 52 57.9	+0.4
	baz=205						
HWA				*e*S	S	00 53 23.7	-0.4
	baz=205						

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WHF   Hehuan Shan      1.38 217⇓iP    Pn    00 52 58.8 +0.8
      baz=219
WHF                           eS      S     00 53 24.8 -0.2
      baz=219
NMLH  Miaoli           1.45 241 ⇓P    Pn    00 52 59.0 +1.0
      baz=251
NMLH                          eS      S     00 53 24.6 -0.4
      baz=251
WHP   Taichung City    1.48 229⇓iP    Pn    00 52 59.0 +0.6
      baz=233
WHP                           eS      S     00 53 25.1 -0.7
      baz=233
CHGB  Renai            1.50 218⇓iP    Pn    00 52 59.7 +1.0
      baz=220
CHGB                           S      S     00 53 26.7 +0.4
      baz=220
NSY   Sanyi            1.53 237⇓iP    Pn    00 52 59.7 +0.9
      baz=248
NSY                           eS      S     00 53 26.7 +0.4
      baz=248
TWQ1  Liyutan          1.56 235⇓iP    Pn    00 52 59.7 +0.7
      baz=241
TWQ1                          eS      S     00 53 26.7 -0.1
      baz=241
OWD   Renai            1.58 215 eP    Pn    00 53 00.3 +1.0
      baz=222
OWD                           eS      S     00 53 27.6 +0.2
      baz=222
ESL   Shilin           1.59 205⇓iP    Pn    00 52 58.7 -0.5
      baz=207
ESL                           eS      S     00 53 24.6 -2.6
      baz=207
WCS   Beigang Elemen   1.66 224⇓iP    Pn    00 53 00.5 +0.6
      baz=237
WCS                           eS      S     00 53 27.6 -0.6
      baz=237
WDJ   Dajia District   1.66 237⇓iP    Pn    00 53 00.8 +1.0
      baz=248
WDJ                           eS      S     00 53 27.1 -1.2
      baz=248
IRIF  Iriomote-Funau   1.68 123  P    Pn    00 53 00.0  0.0
IRIF                           S      S     00 53 27.9 -0.7
EGFH  Guangfu          1.72 204  P    Pn    00 52 59.6 -0.8
      baz=214
EGFH                          eS      S     00 53 26.4 -2.9
      baz=214
TCU   Taichung         1.75 231⇓iP    Pn    00 53 01.6 +0.9
      baz=245
SMLT  Sun Moon Lake    1.79 221⇓iP    Pn    00 53 01.7 +0.5
      baz=221
SMLT                          eS      S     00 53 29.9 -0.8
      baz=221
TYC   Yuchr            1.80 222⇓iP    Pn    00 53 01.7 +0.6
      baz=235
TYC                           eS      S     00 53 29.9 -0.6
      baz=235
SSLB  Suanglung        1.84 218⇓iP    Pn    00 53 01.9 +0.4
      baz=224
SSLB                          eS      S     00 53 30.3 -1.0
      baz=224
SSLB  Suanglung        1.84 218  Pn   Pn    00 53 01.4 -0.1
WCHH  Zhanghua         1.88 232⇓iP    Pn    00 53 02.3 +0.4
      baz=243
WCHH                          eS      S     00 53 31.4 -0.5
      baz=243
HGSD  Ruisui           1.88 202⇓iP    Pn    00 53 02.3 +0.4
      baz=212
HGSD                          eS      S     00 53 31.6 -0.4
      baz=212
HATJ  Hateruma jima    1.90 128  P    Pn    00 53 02.7 +0.7
HATJ                           S      S     00 53 31.2 -1.0
EHY   Hungye           1.91 204  P    Pn    00 53 01.3 -0.9
      baz=209
EHY                           eS      S     00 53 28.8 -3.6
      baz=209
WNT   Mingjian         1.93 225⇓iP    Pn    00 53 03.0 +0.6
      baz=231
WNT                           eS      S     00 53 33.4 +0.6
      baz=231
WJS   Zhushan          1.94 223⇓iP    Pn    00 53 03.2 +0.7
      baz=235
WJS                           eS      S     00 53 32.7 -0.3
      baz=235
JKRS  Kuro-shima       1.95 121  P    Pn    00 53 03.2 +0.7
JKRS                           S      S     00 53 32.0 -1.0
JIJ   Ishigaki jima    2.00 116  P    Pn    00 53 03.2 +0.3
JIJ                            S      S     00 53 31.7 -2.1
YULB  Yu-li            2.02 204⇓iP    Pn    00 53 02.6 -0.6
      baz=214
YULB                          eS      S     00 53 30.0 -4.4
      baz=214
YULB  Yu-li            2.02 204       Pn    00 53 02.3 -0.9
JISG  Ishigakijimahi   2.05 108  P    Pn    00 53 03.8 +0.4
JISG                           S      S     00 53 33.6 -1.1
EYUL  Yuli             2.05 203 eP    Pn    00 53 02.8 -0.7
      baz=215
EYUL                          eS      S     00 53 31.6 -3.4
      baz=215
WRL   Guolierlin Hig   2.12 231  P    Pn    00 53 04.7 +0.5
      baz=233
ALS   Alishan          2.14 216⇓iP    Pn    00 53 05.4 +0.6
      baz=228
ALS                           eS      S     00 53 37.0  0.0
      baz=228
CHN5  Tsauling         2.14 220⇓iP    Pn    00 53 05.1 +0.6
      baz=232
CHN5                          eS      S     00 53 36.6  0.0
      baz=232
WDLH  Douliu           2.16 224⇓iP    Pn    00 53 05.4 +0.8
      baz=234
WDLH                          eS      S     00 53 36.6 -0.1
      baz=234
FULB  Fuli             2.20 202⇓iP    Pn    00 53 05.2 +0.1
      baz=213
FULB                          eS      S     00 53 36.2 -1.4
      baz=213
MATB  Ma-tsu           2.20 294⇓eP    Pn    00 53 05.2 +0.2
      baz=294
WTK   Tuku             2.25 227⇓iP    Pn    00 53 06.2 +0.7
      baz=232
WTK                           eS      S     00 53 38.4 -0.1
      baz=232
CHKT  Chengkung        2.27 199 eP    Pn    00 53 05.6 -0.1
      baz=209
CHKT                          eS      S     00 53 35.9 -2.9
      baz=209
CHN2  Minshiung        2.31 222  P    Pn    00 53 06.9 +0.7
      baz=233
CHN2                          eS      S     00 53 39.8 +0.2
      baz=233
ELDTW Lidau            2.31 207⇓iP    Pn    00 53 06.8 +0.5
      baz=211
ELDTW                         eS      S     00 53 38.3 -1.6
      baz=211
CHY   Chiayi           2.37 223⇓iP    Pn    00 53 07.5 +0.7
      baz=233
CHY                           eS      S     00 53 39.5 -1.1
      baz=233
JTJ   Tarama           2.37 104  P    Pn    00 53 07.5 +0.7
JTJ                            S      S     00 53 40.4 -0.2
WSF   Szhu             2.40 228  P    Pn    00 53 07.6 +0.5
      baz=230
TPUB  Ta-pu            2.40 216⇓iP    Pn    00 53 07.7 +0.5
      baz=217
TPUB                          eS      S     00 53 41.2 -0.2
      baz=217
TPUB  Ta-pu            2.40 216       Pn    00 53 06.9 -0.3
EDH   Donghe           2.41 200⇓iP    Pn    00 53 06.9 -0.3
      baz=206
EDH                           eS      S     00 53 39.9 -1.5
      baz=206
STYH  Taoyuan          2.44 212⇓iP    Pn    00 53 08.2 +0.7
      baz=223
STYH                          eS      S     00 53 40.8 -1.1
      baz=223
XPSS  Dashiqiu         2.44 313 eP    Pn    00 53 07.5  0.0
      baz=311
WTP   Ta-pu            2.46 216⇓iP    Pn    00 53 08.2 +0.5
      baz=226
TWK   Hsinying         2.51 218⇓iP    Pn    00 53 08.8 +0.5
      baz=230
TWK                           eS      S     00 53 43.8 +0.3
      baz=230
LONT  Longtian         2.53 202 i P   Pn    00 53 07.8 -0.6
      baz=205
LONT                          eS      S     00 53 41.0 -2.7
      baz=205
LYJJ  Jianjiangzhen    2.53 301⇓iP    Pn    00 53 08.9 +0.5
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      baz=300
SNST  Tainan City      2.54 217⇓iP    Pn    00 53 09.2 +0.6
      baz=230
CHN1  Nanshi           2.55 216⇓iP    Pn    00 53 09.3 +0.5
      baz=220
CHN1                          eS      S     00 53 42.7 -1.6
      baz=220
ICHU  Yijhu            2.56 223 eP    Pn    00 53 09.3 +0.5
      baz=234
SGST  Jiashian         2.61 214⇓iP    Pn    00 53 09.3 -0.1
      baz=223
SGST                          eS      S     00 53 43.1 -2.2
      baz=223
CHN8  Yiju             2.61 224 eP    Pn    00 53 09.9 +0.5
      baz=234
TWG   Pinlang          2.62 203  Pn   Pn    00 53 08.7 -0.8
TWGBT Beinan           2.62 203 eP    Pn    00 53 08.7 -0.8
      baz=208
LDUT  Ludao            2.65 194  P    Pn    00 53 09.3 -0.5
      baz=194
LDUT                          eS      S     00 53 42.2 -3.9
      baz=194
SLGT  Liugui           2.65 212 eP    Pn    00 53 10.7 +0.8
      baz=214
SLGT                          eS      S     00 53 45.4 -0.8
      baz=214
TTN   Taitung          2.66 201 eP    Pn    00 53 09.7 -0.2
      baz=208
SSHA  Shanhua          2.72 220 eP    Pn    00 53 11.2 +0.6
      baz=232
CHN3  Shinhua          2.73 218  P    Pn    00 53 12.1 +1.4
      baz=230
SCLT  Jiali            2.75 222 eP    Pn    00 53 11.4 +0.6
      baz=228
JIRB  Irabujima        2.75  98  P    Pn    00 53 11.7 +0.8
JIRB                          eS      S     00 53 47.4 -0.6
PTMZ  Houxiangcun      2.78 266⇓iP    Pn    00 53 11.4 +0.2
      baz=268
PTMZ                          i S     S     00 53 47.4 -1.1
      baz=268
JIKM  Ikemajima        2.80  96  P    Pn    00 53 12.6 +1.1
JIKM                           S      S     00 53 49.2 +0.1
SCST  Cishan           2.81 213 eP    Pn    00 53 13.1 +1.4
      baz=220
TAI1  Yung-k'ang       2.83 219 eP    Pn    00 53 12.8 +1.0
      baz=231
SSD   Sandimen         2.87 210⇓iP    Pn    00 53 13.2 +1.0
      baz=216
SSD                           eS      S     00 53 50.2 -0.3
      baz=216
ECL   Taimali          2.87 203 eP    Pn    00 53 14.0 +1.7
      baz=210
TSMG  Majia            2.90 209⇓iP    Pn    00 53 13.6 +1.0
      baz=215
TSMG                           S      S     00 53 50.1 -1.0
      baz=215
TWM1  Shoushan         2.90 214⇓iP    Pn    00 53 14.4 +1.7
      baz=214
JMJ2  Miyako jima3     2.91  99  P    Pn    00 53 13.9 +1.3
JMJ2                           S      S     00 53 50.8 -0.3
PNG   Penghu           2.92 235 eP    Pn    00 53 12.8 -0.1
      baz=240
PNG                           eS      S     00 53 49.8 -1.7
      baz=240
PHUB  P'eng-hu         2.94 234 eP    Pn    00 53 13.0  0.0
      baz=239
SGLT  Jiouru           2.95 212⇓iP    Pn    00 53 15.0 +1.8
      baz=219
MHZQ  Yeshan           2.96 287 eP    Pn    00 53 13.2  0.0
      baz=287
MHZQ                          i S     S     00 53 51.7 -0.5
      baz=287
JOGS  Gusukube         2.97  99  P    Pn    00 53 14.7 +1.3
JOGS                          eS      S     00 53 52.4 -0.1
MASBT Mashibuluo       2.99 209⇓iP    Pn    00 53 14.5 +0.9
      baz=214
MASBT                          S      S     00 53 52.2 -0.7
      baz=214
EAST  Anshuo           3.11 203  P    Pn    00 53 15.3 +0.3
      baz=216
TAW   Tawu             3.11 202 eP    Pn    00 53 15.9 +0.8
      baz=209
SSPT  Xinbi            3.13 208  P    Pn    00 53 16.4 +1.2
      baz=210
KAU   Kaohsiung        3.17 213 eP    Pn    00 53 17.2 +1.5
      baz=226
SCZT  Fangliau         3.20 207⇓iP    Pn    00 53 16.8 +0.7
      baz=217
SCZT                          eS      S     00 53 55.6 -1.8
      baz=217
VCHM  Qimei            3.23 231 eP    Pn    00 53 15.5 -0.9
      baz=236
LAY   Lan-yu           3.25 190 eP    Pn    00 53 17.0 +0.3
      baz=187
QZH   Quanzhou         3.26 265⇓iP    Pn    00 53 16.8 +0.1
QZH                            S      S     00 53 56.8 -1.8
QZH                            smax   smax
      comp=N,390nm,1.1s
QZH                            smax   smax
      comp=E,300nm,1.0s
SLIU  Shizi            3.28 203  P    Pn    00 53 17.7 +0.7
      baz=209
SLIU                          eS      S     00 53 58.2 -0.8
      baz=209
WLCH  Liuqiu           3.33 210 eP    Pn    00 53 19.2 +1.7
      baz=223
HEN   Hengchun         3.49 202 eP    Pn    00 53 19.5  0.0
      baz=214
KNM   Kinmen           3.50 257 eP    Pn    00 53 20.7 +1.2
      baz=259
KNM                           eS      S     00 54 04.7 +1.1
      baz=259
TWK1  Hengchun         3.53 201 eP    Pn    00 53 20.7 +0.8
      baz=213
TWKBT Hengchun         3.53 201  P    Pn    00 53 20.6 +0.7
      baz=213
KNMB  Chin-men Tao     3.53 258 i P   Pn    00 53 19.6 -0.2
      baz=259
KNMB                          eS      S     00 54 02.7 -1.5
      baz=259
KNMB  Chin-men Tao     3.53 258  Pn   Pn    00 53 19.9  0.0
TSEB  Hengchuen, Pin   3.54 200⇓iP    Pn    00 53 21.4 +1.3
      baz=208
ZPLA  Ao Xicun         4.24 253 eP    Pn    00 53 28.6 +0.1
      baz=255
NJ2   Nanjing          7.37 337 ⇓P    Pn    00 54 09.5 +1.3
NJ2                            pmax   pmax
      comp=Z,28nm,1.1s
JMZ   Minamidaito 2    8.19  84  Pn   Pn    00 54 17.7 -1.1
WHN   Wuhan            8.70 309 ⇑P    Pn    00 54 26.3 +1.0
WHN                            pmax   pmax
      comp=Z,150nm,0.9s
JNU   Nakatsue        10.92  42  P    P     00 54 56.7 -2.8
      4.1nm,0.3s,baz=257,slow=4.5,SNR=9.6
JNU                            S      S     00 56 57.6 +1.7
      0.6nm,0.3s,baz=330,slow=15,SNR=1.7
JNU   Nakatsue        10.92  42       Pn    00 54 51.9 -1.8
JTU   Tsushima        11.16  32  Pn   Pn    00 54 57.1 +0.4
ENH   Enshi           12.29 297  Pn   Pn    00 55 12.4 +1.2
KSDEI Deokjeokdo      12.43  15  P    P     00 55 17.6 +1.5
      SNR=6.6
KSMGY Mungyeong       12.43  23  P    P     00 55 15.9 -0.3
      SNR=7.8
YOJB  Youngju         12.79  24  P    P     00 55 20.0 -0.2
      SNR=12
KSSEO Seoul           12.85  17  P    P     00 55 22.4 +1.6
      SNR=7.2
KSSEO Seoul           12.85  17  P    P     00 55 23.0 +2.2
      SNR=7.2
KSGAH Ganghwa         12.94  15  P    P     00 55 23.4 +1.6
      SNR=6.3
KSSOD Songwoldong     12.94  17  P    P     00 55 23.8 +1.9
      SNR=7.7
KSYOW Yeongwol        13.04  23  P    P     00 55 22.5 -0.4
      SNR=21
KSAR  Wonju Array Be  13.09  20  P    Pn    00 55 20.2 -0.8
KSAR  Wonju Array Be  13.09  20  Pn   Pn    00 55 20.2 -0.8
KSWJU Wonju           13.11  21  P    P     00 55 24.0 +0.2
      SNR=13
KSRS  Korea Array     13.11  21  P    P     00 55 22.9 -0.8
      3.1nm,0.3s,baz=206,slow=13,SNR=39
KSRS  Korea Array     13.11  21  P    P     00 55 23.0 -0.8
KS19  Wonju Array Si  13.14  20  Pn   Pn    00 55 20.2 -1.4
KSTBA Taebaek         13.17  24  P    P     00 55 24.1 -0.4
      SNR=12
JMN   Monobe          13.23  48  Pn   Pn    00 55 20.8 -2.0
GAPB  Gapyeong        13.34  19  P    P     00 55 28.0 +1.7
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      SNR=14
JHS   Saijyo          13.55  42  Pn   Pn    00 55 26.3 -0.5
KSCWO Cheorwon        13.57  18  P    P     00 55 30.7 +1.8
      SNR=26
KSIJA INJE            13.66  20  P    P     00 55 31.3 +1.5
      SNR=9.3
HWCB  Hwacheon        13.74  19  P    P     00 55 33.0 +2.2
      SNR=14
KSJMJ Jumunjin        13.78  22  P    P     00 55 33.0 +1.8
      SNR=7.9
SEHB  SEOHWA          13.96  20  P    P     00 55 35.2 +1.9
      SNR=6.8
GYA   Guiyang         14.02 278⇑iP    P     00 55 36.3 +2.2
GYA                              pmax pmax
      comp=Z,41nm,1.0s
KSSKC Sokcho          14.07  21  P    P     00 55 36.6 +2.3
      SNR=12
XAN   Xi'an           14.46 310  P    P     00 55 39.0 +0.1
XAN                              pmax pmax
      comp=Z,29nm,0.8s
INU   Inuyama         16.27  48  P    P     00 55 57.3 -1.5
JGF   Kuroka          16.65  48  P    P     00 56 01.8 -1.1
JGF                              IAmb IAmb  00 56 04.7
      comp=Z,12nm,0.6s
SLVN  Son La          17.23 261  P    Pn    00 56 10.6 -0.7
SLVN                             IAmb IAmb  00 56 15.0
      comp=Z,28nm,1.3s
JHJ   Hachijo jima 2  17.24  59  P    Pn    00 56 12.3 +1.0
      comp=Z,15nm,0.3s,baz=20,slow=14,SNR=1.7
KMI   Kunming         17.59 274 ⇑P    Pn    00 56 16.0 +0.3
KMI                              pmax pmax
      comp=Z,20nm,0.6s
MAT   Matsushiro      17.75  47  P    P     00 56 14.5 -0.4
MAJO  Matsushiro      17.75  47  P    P     00 56 14.3 -0.6
MAJO                             pmax pmax
      comp=Z,18nm,1.1s
MAJO  Matsushiro      17.75  47  P    P     00 56 14.3 -0.6
MAJO                             IAmb IAmb  00 56 33.2
      comp=Z,18nm,1.1s
MJAR  Matsushiro Arr  17.75  47  P    P     00 56 14.9  0.0
      comp=Z,0.4nm,0.3s,baz=221,slow=9.5,SNR=16
MJAR  Matsushiro Arr  17.75  47  P    P     00 56 14.6 -0.3
HHC   Hu-ho-hao-te    17.89 333 eP    Pn    00 56 19.0 +0.1
HHC                              pmax pmax
      comp=Z,95nm,4.9s
BTO   Baotou          18.37 329 eP    Pn    00 56 24.5  0.0
UBPT  Khong Chiam     18.53 241  P    P     00 56 25.0 +1.5
UBPT                             IAmb IAmb  00 56 42.0
      comp=Z,19nm,1.3s
CN2   Changchun       18.70   7 eP    P     00 56 25.3 +0.2
CN2                              pmax pmax
      comp=Z,30nm,0.6s
LZH   Lanzhou         19.08 309 ⇑P    P     00 56 31.0 +1.5
LZH                              sP   sP    00 57 26.3 -6.7
LZH                              pmax pmax
      comp=Z,47nm,1.2s
VLA   Vladivostok     19.52  22⇓eP    P     00 56 35.3 +1.4
VLA                              pmax pmax
      comp=Z,39nm,0.7s
JMM   Marumori        20.20  47  P    P     00 56 38.8 -2.4
MDJ   Mudanjiang      20.23  15  P    P     00 56 43.8 +2.3
MDJ                              pmax pmax
      comp=Z,40nm,1.1s
MDJ                              pmax pmax
      comp=Z,420nm,5.5s
MDJ   Mudanjiang      20.23  15  P    P     00 56 41.6 +0.1
USA0B Ussuriysk Arra  20.52  20  P    P     00 56 44.9 +0.3
USA0B                            pmax pmax
      comp=Z,18nm,0.9s
USA0B Ussuriysk Arra  20.52  20  P    P     00 56 44.9 +0.3
USA0B                            IAmb IAmb  00 56 48.0
      comp=Z,18nm,0.9s
USRK  Ussuriysk Ar.   20.52  20  P    P     00 56 45.2 +0.6
      comp=Z,18nm,0.8s,baz=204,slow=8.6,SNR=22
USRK  Ussuriysk Ar.   20.52  20  P    P     00 56 45.0 +0.4
SPMM  Sapulut         21.15 196  P    P     00 56 56.0 +4.4
JTM   Tenmabayashi    22.08  41  P    P     00 56 57.8 -2.7
CM31  Chiang Mai Arr  22.58 257  P    P     00 57 05.2 -0.1
CM31                             IAmb IAmb  00 57 07.9
      comp=Z,11nm,0.9s
CMAR  Chiang Mai Arr  22.58 257  P    P     00 57 06.0 +0.8
      comp=Z,4.7nm,0.4s,baz=60,slow=8.5,SNR=25
CMAR                             ScP  ScP   01 04 06.9 -0.8
      comp=Z,0.8nm,0.3s,baz=38,slow=1.7,SNR=6.6
GTA   Gaotai          23.50 312 ⇑P    P     00 57 13.5  0.0
GTA                              pmax pmax
      comp=Z,12nm,1.5s
ERM   Erimo           24.08  41  P    P     00 57 19.3 +0.8
ERM                              pmax pmax
      comp=Z,69nm,1.1s
ERM   Erimo           24.08  41  P    P     00 57 19.3 +0.8
SBUM  Sibu            24.62 204  P    P     00 57 24.0 +0.3
SBUM  Sibu            24.62 204  P    P     00 57 24.7 +1.0
SBUM                             IAmb IAmb  00 57 26.0
      comp=Z,9.5nm,0.6s
KLR   Kul'dur         25.07  15  P    P     00 57 28.4 +0.9
      comp=Z,19nm,0.6s,baz=208,slow=7.8,SNR=71
KLR                              PcP  PcP   01 00 56.2 +0.5
      comp=Z,1.1nm,0.7s,baz=223,slow=3.1,SNR=3.9
ASAJ  Asahikawa       25.10  36  P    P     00 57 28.4 +0.6
      comp=Z,10nm,0.5s,baz=248,slow=14,SNR=5.6
JKA   Kamikawa-asahi  25.10  36  P    P     00 57 27.1 -0.7
ULN   Ulaanbaatar     25.54 336d iP   P     00 57 32.2 +0.4
ULN                              pmax pmax
      comp=Z,8.0nm,1.1s
ULN   Ulaanbaatar     25.54 336  P    P     00 57 32.0 +0.2
SONM  Songino Array   25.76 335  P    P     00 57 34.0 +0.3
      comp=Z,6.4nm,0.8s,baz=152,slow=10,SNR=47
SONM                             PcP  PcP   01 00 58.5 +0.9
      comp=Z,0.4nm,0.5s,baz=158,slow=3.3,SNR=2.4
SONM                             ScP  ScP   01 04 15.3 -0.9
      comp=Z,0.8nm,0.8s,baz=145,slow=1.5,SNR=5.9
SONM  Songino Array   25.76 335  P    P     00 57 34.1 +0.3
YSS   Yuzh-Sakhalins  27.15  32 eP    P     00 57 49.8 +3.8
SHL   Shillong        27.34 277  P    P     00 57 48.7 +0.5
SHL                              pmax pmax
      comp=Z,12nm,0.6s
SHL   Shillong        27.34 277  P    P     00 57 48.7 +0.5
SHL                              IAmb IAmb  00 57 52.7
      comp=Z,12nm,0.6s
SANI  Sanana          27.39 172  P    P     00 57 48.3 -0.2
      comp=Z,16nm,0.8s
SIJI  Sorong          27.42 160  P    P     00 57 50.9 +2.1
      comp=Z,6.9nm,0.4s,baz=287,slow=11,SNR=2.7
LSA   Lhasa           27.84 286  P    P     00 57 53.5 +0.6
LSA                              pmax pmax
      comp=Z,15nm,0.6s
LSA   Lhasa           27.84 286  P    P     00 57 53.5 +0.6
KULM  Kulim           28.64 230  P    P     00 58 01.0 +1.4
IPM   Ipoh            28.97 228  P    P     00 58 04.0 +1.5
FAKI  Fak Fak         29.66 159  P    P     00 58 08.1 -0.5
      comp=Z,13nm,0.8s
FAKI  Fak Fak         29.66 159  P    P     00 58 08.9 +0.3
FAKI                             IAmb IAmb  00 58 09.4
      comp=Z,9.7nm,0.6s
TLY   Talaya          29.94 337  P    P     00 58 11.0 +0.3
      comp=Z,1.9nm,0.4s,baz=143,slow=5.1,SNR=1.9
TLY   Talaya          29.94 337  P    P     00 58 11.0 +0.3
TAPN  Taplejung       30.91 282 eP    P     00 58 19.8 -0.1
ODAN  Odare           31.23 281 eP    P     00 58 23.2 +0.5
RAMN  Ramite          31.93 281 eP    P     00 58 28.9 +0.1
      comp=Z,15nm,0.5s
JIRN  Jiri            32.24 282 eP    P     00 58 31.9 +0.3
      comp=Z,23nm,0.7s
PKIN  Phulchoki       32.95 282 eP    P     00 58 37.5 -0.1
      comp=Z,12nm,0.4s
KKN   Kakani          33.03 283 eP    P     00 58 38.2 -0.1
      comp=Z,27nm,0.7s
PPI   Padang Panjang  33.12 223  P    P     00 58 41.1 +2.2
      comp=Z,16nm,0.6s
GKN   Gorkha          33.59 283 eP    P     00 58 42.8 -0.2
      comp=Z,12nm,0.4s
WMQ   Urumqi          33.59 312 eP    P     00 58 48.0 +5.3
GSI   Gunungsitoli    33.62 229  P    P     00 58 43.7 +0.4
DANN  Dangsing        34.33 284 eP    P     00 58 49.6  0.0
KOLN  Koldanda        34.52 283 eP    P     00 58 51.2 +0.1
PYUN  Piuthan         35.03 283 eP    P     00 58 55.8 +0.4
      comp=Z,14nm,0.3s
DGZ   Jazzator, Alta  36.31 321⇑eP    P     00 59 05.6 -0.4
DGZ                              pmax pmax
      comp=Z,3.0nm,1.2s
YAK   Yakutsk         37.11   6 eP    P     00 59 11.9 -0.4
YAK                              e          01 00 28.8
YAK                              e          01 01 27.3
YAK                              eS   S     01 04 42.3 +0.6
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YAK				pmax	pmax		
	comp=Z,14nm,0.9s						
YAK				pmax	pmax		
	comp=N,3.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,116nm,3.7s						
YAK				smax	smax		
	comp=E,77nm,3.2s						
MK31	**Makanchi Array**	**38.22**	**315**	P	**P**	**00 59 22.0**	**+0.1**
MK31				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MK31	**Makanchi Array**	**38.22**	**315**	P	**P**	**00 59 22.0**	**+0.1**
MKAR	**Makanchi Array**	**38.22**	**315**	P	**P**	**00 59 22.0**	**+0.1**
	comp=Z,2.7nm,0.6s,baz=99,slow=6.9,SNR=41						
MKAR				PcP	**PcP**	**01 01 31.4**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=72,slow=5.0,SNR=3.2						
MKAR				ScP	**ScP**	**01 04 57.0**	**-1.5**
	comp=Z,2.3nm,0.8s,baz=95,slow=6.5,SNR=12						
MKAR	**Makanchi Array**	**38.22**	**315**	P	**P**	**00 59 21.8**	**0.0**
MKAR	**Makanchi Array**	**38.22**	**315**	ScP	**ScP**	**01 04 57.2**	**-1.2**
MAKZ	**Makanchi**	**38.42**	**314**	P	**P**	**00 59 23.7**	**+0.1**
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MAKZ	**Makanchi**	**38.42**	**314**	P	**P**	**00 59 23.7**	**+0.1**
PEA0B	**Petropavlovsk-**	**38.48**	**34**	⇑*e*P	**P**	**00 59 22.0**	**-2.0**
PEA0B	**Petropavlovsk-**	**38.48**	**34**	P	**P**	**00 59 21.9**	**-2.0**
PETK	**Petropavlovsk-**	**38.48**	**34**	P	**P**	**00 59 24.2**	**+0.3**
	comp=Z,4.8nm,0.9s,baz=158,slow=2.1,SNR=9.8						
MTN	**Manton Dam**	**38.86**	**166**	P	**P**	**00 59 26.9**	**-0.6**
PET	**Petropavlovsk**	**38.92**	**35**	⇓*e*P	**P**	**00 59 26.8**	**-0.8**
PET				pmax	pmax		
	comp=Z,59nm,1.7s						
ZALV	**Zalesovo Beam**	**39.85**	**326**	P	**P**	**00 59 34.5**	**-0.7**
	comp=Z,2.7nm,0.4s,baz=114,slow=8.0,SNR=18						
ZALV				PcP	**PcP**	**01 01 35.4**	**-1.1**
	comp=Z,0.5nm,0.4s,baz=124,slow=5.4,SNR=2.0						
ZALV				ScP	**ScP**	**01 05 02.2**	**-2.3**
	comp=Z,0.7nm,0.6s,baz=90,slow=4.3,SNR=4.9						
TARG	**Taragay, Kyrgy**	**40.02**	**306**	P	**P**	**00 59 38.0**	**+0.7**
KSH	**Kashi**	**41.09**	**302**	P	**P**	**00 59 49.3**	**+3.6**
KSH				pP	pP	01 00 35.8	+4.1
KSH				PcP	**PcP**	**01 01 44.0**	**+3.0**
KSH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KNRA	**Kununurra**	**41.19**	**170**	P	**P**	**00 59 46.3**	**-0.2**
KNRA				IAmb	IAmb	00 59 48.8	
	comp=Z,35nm,1.5s						
KURK	**Kurchatov**	**41.87**	**319**	P	**P**	**00 59 51.8**	**+0.1**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.4s						
KURK	**Kurchatov**	**41.87**	**319**	P	**P**	**00 59 51.8**	**+0.1**
KURK				IAmb	IAmb	00 59 52.4	
	comp=Z,5.1nm,0.4s						
PMG	**Port Moresby**	**42.18**	**142**	P	**P**	**00 59 54.1**	**-0.6**
	comp=Z,5.3nm,0.3s,baz=354,slow=9.2,SNR=4.1						
AAK	**Ala-Archa**	**42.59**	**306**	⇓*i*P	**P**	**00 59 58.2**	**+0.3**
AAK				pmax	pmax		
	comp=Z,60nm,4.2s						
AAK	**Ala-Archa**	**42.59**	**306**	P	**P**	**00 59 58.0**	**+0.1**
NIL	**Nilore**	**43.09**	**293**	P	**P**	**01 00 01.8**	**0.0**
NIL				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NIL	**Nilore**	**43.09**	**293**	P	**P**	**01 00 01.8**	**0.0**
NIL				IAmb	IAmb	01 00 02.9	
	comp=Z,10nm,0.8s						
COEN	**Coen**	**44.02**	**150**	P	**P**	**01 00 10.2**	**+0.9**
COEN				IAmb	IAmb	01 00 11.1	
	comp=Z,15nm,0.8s						
GAR	**Garm**	**45.44**	**301**	IAmb	IAmb	01 00 22.0	
	comp=Z,32nm,1.3s						
KKAR	**Karatay Array**	**45.55**	**306**	P	**P**	**01 00 22.1**	**+0.9**
KKAR	**Karatay Array**	**45.55**	**306**	P	**P**	**01 00 22.1**	**+0.9**
CHGR	**Chuyangaron**	**46.34**	**300**	P	**P**	**01 00 28.0**	**+0.5**
WRAB	**Tennant Creek**	**46.45**	**164**	*d i*P	**P**	**01 00 28.6**	**+0.3**
WRAB				pmax	pmax		
	comp=Z,22nm,1.3s						
WRAB	**Tennant Creek**	**46.45**	**164**	P	**P**	**01 00 28.5**	**+0.1**
WRAB				IAmb	IAmb	01 00 29.1	
	comp=Z,17nm,0.5s						
WRA	**Warramunga Arr**	**46.46**	**164**	P	**P**	**01 00 28.7**	**+0.3**
	comp=Z,21nm,0.5s,baz=348,slow=8.8,SNR=297						
WRA				PcP	**PcP**	**01 01 59.2**	**-0.1**
	comp=Z,1.3nm,0.5s,baz=344,slow=2.7,SNR=2.9						
WRA	**Warramunga Arr**	**46.46**	**164**	*ce*P	**P**	**01 00 28.7**	**+0.3**
WRA				pmax	pmax		
	comp=Z,20nm,0.4s						
WB2	**Warramunga Arr**	**46.46**	**164**	P	**P**	**01 00 29.0**	**+0.6**
WB2				IAmb	IAmb	01 00 29.5	
	comp=Z,21nm,0.6s						
KBL	**Kabul**	**46.53**	**294**	P	**P**	**01 00 29.7**	**+0.5**
KBL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KBL	**Kabul**	**46.53**	**294**	P	**P**	**01 00 29.7**	**+0.5**
TIXI	**Tiksi**	**46.58**	**3**	P	**P**	**01 00 28.2**	**-0.5**
	comp=Z,33nm,0.7s,baz=155,slow=5.5,SNR=88						
TIXI	**Tiksi**	**46.58**	**3**	P	**P**	**01 00 28.5**	**-0.2**
TIXI				pmax	pmax		
	comp=Z,35nm,0.7s						
TIXI	**Tiksi**	**46.58**	**3**	P	**P**	**01 00 28.5**	**-0.2**
PSA00	**Pilbara Seismi**	**46.60**	**183**	P	**P**	**01 00 28.9**	**-0.6**
PSA00				IAmb	IAmb	01 00 43.8	
	comp=Z,24nm,1.3s						
BRVK	**Borovoye**	**47.50**	**320**	P	**P**	**01 00 36.3**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.4s						
BRVK	**Borovoye**	**47.50**	**320**	P	**P**	**01 00 36.3**	**+0.2**
NRIK	**Noril'sk**	**48.61**	**344**	P	**P**	**01 00 43.0**	**-1.3**
	comp=Z,2.7nm,0.9s,baz=138,slow=8.6,SNR=5.4						
NRIK	**Noril'sk**	**48.61**	**344**	P	**P**	**01 00 45.0**	**+0.7**
NRIK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
NRIK	**Noril'sk**	**48.61**	**344**	P	**P**	**01 00 45.0**	**+0.7**
AS31	**Alice Springs**	**49.94**	**166**	P	**P**	**01 00 55.7**	**+0.7**
AS31				IAmb	IAmb	01 00 56.3	
	comp=Z,5.6nm,0.5s						
ASAR	**Alice Springs**	**49.94**	**166**	P	**P**	**01 00 55.6**	**+0.7**
	comp=Z,7.2nm,0.4s,baz=350,slow=6.7,SNR=133						
ASAR				PcP	**PcP**	**01 02 10.8**	**-1.0**
	comp=Z,1.1nm,0.4s,baz=345,slow=3.4,SNR=4.4						
ASAR				ScP	**ScP**	**01 05 46.4**	**-0.1**
	comp=Z,0.8nm,1.0s,baz=350,slow=5.0,SNR=3.1						
ASAR	**Alice Springs**	**49.94**	**166**	P	**P**	**01 00 55.8**	**+0.8**
AMKA	**Amchitka**	**50.31**	**43**	P	**P**	**01 00 57.7**	**+0.4**
BILL	**Bilibino**	**50.38**	**20**	*i* P	**P**	**01 00 57.4**	**-0.2**
BILL				*i* *PP	**pP**	**01 01 44.2**	**-1.2**
BILL				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BILL	**Bilibino**	**50.38**	**20**	P	**P**	**01 00 58.3**	**+0.6**
CTAO	**Charters Tower**	**50.79**	**150**	P	**P**	**01 01 02.5**	**+1.1**
CTAO				pmax	pmax		
	comp=Z,18nm,1.3s						
CTAO	**Charters Tower**	**50.79**	**150**	P	**P**	**01 01 02.5**	**+1.1**
CTAO				IAmb	IAmb	01 01 03.2	
	comp=Z,18nm,1.3s						
ABKAR	**Akbulak array**	**53.35**	**314**	P	**P**	**01 01 20.3**	**+0.4**
ABKAR	**Akbulak array**	**53.35**	**314**	P	**P**	**01 01 20.2**	**+0.4**
ABKAR				IAmb	IAmb	01 01 21.1	
	comp=Z,5.0nm,1.1s						
MORW	**Morawa**	**54.33**	**187**	P	**P**	**01 01 27.6**	**+0.4**
MORW				IAmb	IAmb	01 01 36.8	
	comp=Z,18nm,1.4s						
ARU	**Arti**	**54.80**	**322**	*c i*P	**P**	**01 01 30.7**	**+0.4**
ARU						01 02 27.4	
ARU				S	**S**	**01 08 54.7**	**+1.0**
ARU				SS	**SS**	**01 12 40.7**	**+0.8**
ARU				pmax	pmax		
	comp=Z,9.0nm,1.5s						
ARU	**Arti**	**54.80**	**322**	P	**P**	**01 01 29.9**	**-0.3**
GEYT	**Alibeck**	**55.04**	**300**	P	**P**	**01 01 33.3**	**+0.9**
	comp=Z,3.1nm,0.6s,baz=74,slow=6.9,SNR=2.9						
GEYT	**Alibeck**	**55.04**	**300**	P	**P**	**01 01 34.3**	**+1.9**
GYA0B	**ALIBECK ARRAY**	**55.04**	**300**	P	**P**	**01 01 34.2**	**+1.8**
GYA0B				IAmb	IAmb	01 01 37.9	
	comp=Z,5.7nm,0.6s						
FORT	**Forrest**	**56.00**	**174**	P	**P**	**01 01 39.5**	**+0.5**
FORT				IAmb	IAmb	01 01 40.2	
	comp=Z,14nm,0.8s						
EIDS	**Eidsvold**	**57.56**	**149**	P	**P**	**01 01 50.6**	**+0.5**
NWAO	**Narrogin (SRO)**	**58.05**	**185**	P	**P**	**01 01 52.7**	**-0.6**
NWAO	**Narrogin (SRO)**	**58.05**	**185**	P	**P**	**01 01 52.7**	**-0.6**
BBOO	**Buckleboo**	**59.24**	**166**	P	**P**	**01 02 01.9**	**+0.4**
STKA	**Stephens Creek**	**59.76**	**161**	P	**P**	**01 02 05.2**	**+0.1**
	comp=Z,3.2nm,0.6s,baz=348,slow=7.3,SNR=9.2						
STKA	**Stephens Creek**	**59.76**	**161**	P	**P**	**01 02 05.4**	**+0.3**
STKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
STKA	**Stephens Creek**	**59.76**	**161**	P	**P**	**01 02 05.4**	**+0.3**
ANM	**Nome**	**59.96**	**28**	P	**P**	**01 02 06.5**	**+0.4**
ANM				pmax	pmax		
	comp=Z,55nm,1.4s						
ANM	**Nome**	**59.96**	**28**	P	**P**	**01 02 06.5**	**+0.4**
ARMA	**Armidale**	**62.14**	**151**	P	**P**	**01 02 22.8**	**+1.5**
ARMA				IAmb	IAmb	01 02 26.7	
	comp=Z,22nm,1.5s						
SDPT	**Sand Point**	**62.51**	**39**	P	**P**	**01 02 22.2**	**-1.1**
A21K	**Barrow**	**63.49**	**21**	P	**P**	**01 02 30.5**	**+1.0**
	baz=270						
A21K	**Barrow**	**63.49**	**21**	P	**P**	**01 02 30.1**	**+0.6**
CHGN	**Chignik**	**63.57**	**38**	P	**P**	**01 02 29.1**	**-1.2**
DZM	**Mont Dzumac**	**63.71**	**134**	P	**P**	**01 02 32.6**	**+0.9**
DZM				IAmb	IAmb	01 02 37.1	
	comp=Z,12nm,1.2s						
TTA	**Tatalina**	**64.13**	**30**	P	**P**	**01 02 34.8**	**+0.9**
TTA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
TTA	**Tatalina**	**64.13**	**30**	P	**P**	**01 02 34.8**	**+0.9**
TTA				IAmb	IAmb	01 02 35.8	
	comp=Z,7.0nm,0.6s						
OUENC	**Ouen Island, N**	**64.21**	**134**	P	**P**	**01 02 35.8**	**+0.9**
OUENC				IAmb	IAmb	01 02 46.8	
	comp=Z,16nm,1.1s						
L19K	**White Mountain**	**64.74**	**31**	P	**P**	**01 02 39.3**	**+1.4**
	baz=276						
L19K	**White Mountain**	**64.74**	**31**	P	**P**	**01 02 39.4**	**+1.5**
L19K				IAmb	IAmb	01 02 40.0	
	comp=Z,5.9nm,0.8s						
J20K	**Nowinta River**	**64.84**	**29**	P	**P**	**01 02 40.1**	**+1.7**
	baz=276						
J20K	**Nowinta River**	**64.84**	**29**	IAmb	IAmb	01 02 40.5	
	comp=Z,7.0nm,0.5s						
O18K	**Koktuh Hills**	**64.85**	**34**	P	**P**	**01 02 40.8**	**+2.2**
P18K	**Big Mountain,**	**64.90**	**34**	P	**P**	**01 02 39.6**	**+0.7**
P18K				IAmb	IAmb	01 02 46.3	
	comp=Z,16nm,1.1s						
K20K	**Telida**	**64.97**	**30**	P	**P**	**01 02 41.0**	**+1.7**
	baz=276						
K20K	**Telida**	**64.97**	**30**	P	**P**	**01 02 41.0**	**+1.7**
K20K				IAmb	IAmb	01 02 41.4	
	comp=Z,6.5nm,0.7s						
H21K	**Melozitna Rive**	**65.25**	**27**	P	**P**	**01 02 42.5**	**+1.5**
	baz=277						
KIV	**Kislovodsk**	**65.62**	**309**	*e*P	**P**	**01 02 44.9**	**+1.0**
KIV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
I21K	**Tanana**	**65.65**	**28**	P	**P**	**01 02 45.3**	**+1.8**
	baz=278						
CHUM	**Lake Minchumin**	**65.68**	**29**	P	**P**	**01 02 45.4**	**+1.7**
	baz=278						
NEY	**Neytrino**	**65.75**	**308**	⇑*e*P	**P**	**01 02 44.9**	**+0.1**
NEY				pmax	pmax		
	comp=Z,2.0nm,1.0s						
CAST	**Castle Rocks**	**65.84**	**29**	P	**P**	**01 02 46.0**	**+1.1**
	baz=278						
PPLA	**Purkeypile**	**65.87**	**30**	P	**P**	**01 02 46.6**	**+1.4**
	baz=278						
COLD	**Coldfoot**	**66.08**	**25**	P	**P**	**01 02 47.5**	**+1.3**
	baz=278						
COLD	**Coldfoot**	**66.08**	**25**	P	**P**	**01 02 47.5**	**+1.3**
COLD				IAmb	IAmb	01 02 49.2	
	comp=Z,13nm,1.3s						
TOLK	**Toolik Lake Re**	**66.11**	**24**	P	**P**	**01 02 47.7**	**+1.2**
	baz=278						
TOLK	**Toolik Lake Re**	**66.11**	**24**	P	**P**	**01 02 47.7**	**+1.2**
TOLK				IAmb	IAmb	01 02 48.5	
	comp=Z,12nm,0.7s						
MLY	**Manley**	**66.19**	**28**	P	**P**	**01 02 48.4**	**+1.3**
	baz=279						
MLY	**Manley**	**66.19**	**28**	P	**P**	**01 02 48.4**	**+1.3**
MLY				IAmb	IAmb	01 02 49.3	
	comp=Z,15nm,1.0s						
BPAW	**Bear Paw Mtn.**	**66.23**	**29**	P	**P**	**01 02 48.0**	**+0.7**
	baz=279						
NEA2	**Nenana**	**66.97**	**28**	P	**P**	**01 02 52.8**	**+0.8**
	baz=280,SNR=6.6						
NEA2	**Nenana**	**66.97**	**28**	IAmb	IAmb	01 02 53.6	
	comp=Z,13nm,0.8s						
M22K	**Willow**	**67.02**	**31**	P	**P**	**01 02 53.1**	**+0.9**
	baz=281						
MCK	**McKinley**	**67.18**	**29**	P	**P**	**01 02 53.8**	**+0.4**
	baz=281						
H24K	**Noodor Dome**	**67.23**	**27**	P	**P**	**01 02 55.2**	**+1.6**
	baz=281,SNR=5.8						
H24K	**Noodor Dome**	**67.23**	**27**	IAmb	IAmb	01 02 56.1	
	comp=Z,12nm,1.1s						
RND	**Reindeer**	**67.28**	**29**	P	**P**	**01 02 54.3**	**+0.3**
RND				pmax	pmax		
	comp=Z,35nm,0.8s						
RND	**Reindeer**	**67.28**	**29**	P	**P**	**01 02 54.3**	**+0.3**
COLA	**College**	**67.43**	**28**	⇓*e*P	**P**	**01 02 53.5**	**-1.3**
COLA				pmax	pmax		
	comp=Z,25nm,2.4s						
PMR	**Palmer**	**67.51**	**31**	P	**P**	**01 02 55.5**	**+0.1**
	baz=282						
POKR	**Poker Plat Res**	**67.55**	**27**	P	**P**	**01 02 56.7**	**+1.1**
	baz=282,SNR=5.9						
POKR	**Poker Plat Res**	**67.55**	**27**	IAmb	IAmb	01 02 57.6	
	comp=Z,9.7nm,0.7s						
ILAR	**Eielson Array**	**67.85**	**28**	P	**P**	**01 02 56.8**	**-0.7**
	comp=Z,3.0nm,0.5s,baz=273,slow=5.4,SNR=41						
WAT6	**Susitna Watana**	**67.95**	**30**	P	**P**	**01 02 58.5**	**+0.2**
	baz=282						
SCM	**Sheep Creek Mo**	**68.30**	**31**	P	**P**	**01 03 01.1**	**+0.7**
	baz=283						
M24K	**Tolsona, Glenn**	**68.77**	**30**	P	**P**	**01 03 04.5**	**+1.2**
	baz=284						
PAX	**Paxson**	**68.87**	**29**	P	**P**	**01 03 04.2**	**+0.3**
	baz=284						
ARCES	**ARCESS Array B**	**68.89**	**338**	P	**P**	**01 03 02.4**	**-1.4**
	comp=Z,2.0nm,0.6s,baz=70,slow=7.9,SNR=16						
KLU	**Klutina**	**69.03**	**31**	P	**P**	**01 03 05.5**	**+0.6**
	baz=284						
HARP	**HAARP**	**69.16**	**30**	P	**P**	**01 03 06.8**	**+1.2**
	baz=285						
SCRK	**Sand Creek**	**69.27**	**28**	P	**P**	**01 03 06.5**	**+0.1**
	baz=285						
J26L	**Joseph Creek**	**69.31**	**27**	P	**P**	**01 03 06.8**	**+0.2**
	baz=285,SNR=6.1						
DOT	**Dot Lake**	**69.32**	**28**	P	**P**	**01 03 06.9**	**+0.3**
DOT				IAmb	IAmb	01 03 07.4	
	comp=Z,12nm,1.0s						
M26K	**Nabesna, AK**	**70.12**	**30**	P	**P**	**01 03 12.6**	**+1.0**
	baz=286						
L27K	**Beaver Creek,**	**70.45**	**29**	P	**P**	**01 03 15.1**	**+1.6**
	baz=287,SNR=5.3						
L27K	**Beaver Creek,**	**70.45**	**29**	IAmb	IAmb	01 03 15.9	
	comp=Z,15nm,1.3s						
M27K	**Edge Creek, AK**	**70.64**	**29**	P	**P**	**01 03 15.9**	**+1.2**
	baz=287						
FINES	**FINESS Array B**	**70.98**	**330**	P	**P**	**01 03 16.0**	**-0.7**
	comp=Z,4.1nm,0.8s,baz=74,slow=8.1,SNR=9.8						
FINES	**FINESS Array B**	**70.98**	**330**	*i* P	**P**	**01 03 16.8**	**+0.2**
FINES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
DAWY	**Dawson**	**71.17**	**27**	P	**P**	**01 03 18.6**	**+0.8**
	baz=289,SNR=6.6						
DAWY	**Dawson**	**71.17**	**27**	IAmb	IAmb	01 03 19.3	
	comp=Z,12nm,1.0s						
I29M	**Ogilvie Camp,**	**71.19**	**26**	P	**P**	**01 03 18.6**	**+0.7**
	baz=289						
CTG	**Chitna Glacier**	**71.31**	**31**	P	**P**	**01 03 20.0**	**+1.2**
	baz=288						
INK	**Inuvik**	**71.90**	**22**	P	**P**	**01 03 22.3**	**+0.3**
	baz=293						
INK	**Inuvik**	**71.90**	**22**	IAmb	IAmb	01 03 23.0	
	comp=Z,9.9nm,0.9s						
MNK	**Minsk**	**72.23**	**322**	*i* P	**P**	**01 03 21.0**	**-3.2**
MNK				*i*		01 03 37.7	
MNK				*i* *PP	**pP**	**01 04 12.6**	**-2.9**
MNK				*i*		01 06 04.2	
MNK				*i* PPP	PPP	01 07 49.2	
MNK				*i* S	**S**	**01 12 24.8**	**-4.0**
MNK				*i*		01 13 05.8	
MNK				*i* SS	**SS**	**01 17 08.7**	**-1.8**
MNK				*i* SSS	SSS	01 20 30.1	
MNK				pmax	pmax		
	comp=E,3.0nm,1.0s						
MNK				pmax	pmax		
	comp=N,8.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MNK				MLR	MLR		
	comp=N,19nm,9.0s						
MNK				MLR	MLR		
	comp=E,5.0nm,11.0s						
MNK				MLR	MLR		
	comp=Z,29nm,10.0s						
MNK	**Minsk**	**72.23**	**322**	*i* P	**P**	**01 03 21.0**	**-3.2**
	comp=E,3.0nm,1.1s						
MNK				*i* P	**P**	**01 03 21.0**	**-3.2**
	comp=N,8.0nm,0.8s						
MNK				*i* P	**P**	**01 03 21.0**	**-3.2**
	comp=Z,7.0nm,1.0s,baz=72						
MNK				*i* pP	**pP**	**01 04 12.6**	**-2.9**
MNK				*i* PP	**PP**	**01 06 04.2**	**-3.3**
MNK				*i* PPP	PPP	01 07 49.2	
MNK				*i* S	**S**	**01 12 24.8**	**-3.9**
MNK				*i* sS	**sS**	**01 13 58.3**	**-0.5**
MNK				*i* SS	**SS**	**01 17 08.7**	**-1.8**
MNK				*i* SSS	SSS	01 20 30.2	
MNK				*i* LRM	MLR	01 37 55.5	
	comp=N,19nm,8.7s						
MNK				*i* LRM	MLR	01 38 02.4	
	comp=E,5.0nm,11.2s						
MNK				*i* LRM	MLR	01 38 04.2	
	comp=Z,29nm,10.5s						
M30M	**Minto, Yukon**	**72.79**	**28**	P	**P**	**01 03 28.8**	**+1.4**
	baz=292						
A36M	**Sachs Harbour**	**72.84**	**17**	P	**P**	**01 03 27.6**	**+0.1**
	baz=299						
A36M	**Sachs Harbour**	**72.84**	**17**	IAmb	IAmb	01 03 31.0	
	comp=Z,9.2nm,0.9s						
BRTR	**Keskin Array B**	**73.27**	**306**	P	**P**	**01 03 31.1**	**+0.3**
	comp=Z,0.8nm,0.8s,baz=90,slow=2.5,SNR=4.3						
M31M	**Drury Creek, Y**	**73.97**	**28**	P	**P**	**01 03 35.1**	**+0.8**
	baz=294						
FARO	**Faro, Yukon**	**74.40**	**28**	P	**P**	**01 03 37.8**	**+1.0**
	baz=294						
TGTN	**Hyland Airport**	**76.87**	**28**	P	**P**	**01 03 51.7**	**+0.9**
	baz=299						
NB2	**NORSAR Subarra**	**77.70**	**332**	P	**P**	**01 03 54.9**	**-0.5**
	comp=Z,0.7nm,0.5s,baz=54,slow=6.2						
NOA	**NORSAR Array B**	**77.70**	**332**	P	**P**	**01 03 54.9**	**-0.5**
	comp=Z,1.2nm,0.7s,baz=57,slow=5.9,SNR=3.9						
WRGLY	**Wrigley**	**77.93**	**25**	P	**P**	**01 03 57.0**	**+0.4**
	baz=302						
YKA	**Yellowknife Ar**	**81.64**	**23**	P	**P**	**01 04 16.4**	**-0.1**
	comp=Z,5.0nm,0.5s,baz=325,slow=4.1,SNR=56						
BCLA	**Clavier**	**86.31**	**325**	*d*P	**P**	**01 04 38.8**	**-1.5**
D03D	**Eldon**	**86.83**	**38**	P	**P**	**01 04 44.7**	**+1.8**
	baz=305						
B08A	**Colville Reser**	**88.39**	**36**	P	**P**	**01 04 51.1**	**+0.8**
B08A				IAmb	IAmb	01 04 52.3	
	comp=Z,6.3nm,0.9s						
I03D	**Drain, OR**	**88.86**	**41**	P	**P**	**01 04 54.2**	**+1.7**
	baz=305						
I04A	**Tendick Farm,**	**89.36**	**41**	P	**P**	**01 04 56.0**	**+1.1**
	baz=305						
D08A	**Wollman Farm,**	**89.40**	**37**	P	**P**	**01 04 56.4**	**+1.3**
D08A				IAmb	IAmb	01 04 56.7	
	comp=Z,4.4nm,0.9s						
NEW	**Newport**	**89.61**	**35**	P	**P**	**01 04 56.5**	**+0.4**
	baz=309						
I05D	**Terrebonne, OR**	**89.67**	**40**	P	**P**	**01 04 57.8**	**+1.4**
	baz=306						
L04D	**Klamath Falls**	**90.33**	**42**	P	**P**	**01 05 00.8**	**+1.2**
	baz=305,SNR=7.7						
J05D	**Fort Rock, OR**	**90.35**	**41**	P	**P**	**01 05 01.4**	**+1.7**
	baz=306,SNR=6.5						
M04C	**Macdoel**	**90.86**	**42**	P	**P**	**01 05 03.7**	**+1.6**
	baz=306,SNR=8.5						
O02D	**Mt. Diablo Mer**	**91.20**	**44**	P	**P**	**01 05 04.9**	**+1.2**
	baz=305						
EGMT	**Eagleton**	**93.46**	**32**	P	**P**	**01 05 14.5**	**+0.6**
	baz=314						
HLID	**Hailey**	**94.08**	**37**	P	**P**	**01 05 18.6**	**+1.6**
	baz=311						
NVAR	**Mina Array Bea**	**95.04**	**43**	P	**P**	**01 05 22.8**	**+1.3**
	comp=Z,1.6nm,0.8s,baz=283,slow=4.5,SNR=7.6						
WMOK	**Wichita Mounta**	**108.81**	**35**	P	**PKiKP**	**01 10 24.0**	**-2.7**
	baz=321						
DBIC	**Dimbokro**	**119.52**	**294**	PKP	**PKPdf**	**01 10 45.1**	**-2.4**
	comp=Z,2.1nm,0.9s,baz=346,slow=4.2,SNR=1.6						
VNA2	**Neumayer--Watz**	**126.18**	**198**	PKPdf	**PKiKP**	**01 10 59.0**	**0.0**
VNA3	**Neumayer Olymp**	**126.65**	**197**	PKPdf	**PKPdf**	**01 10 59.6**	**+0.1**
SDV	**Santo Domingo**	**143.84**	**22**	PKP	PKPab	01 11 30.7	-0.2
	comp=Z,6.5nm,0.5s,baz=296,slow=2.6,SNR=12						
PCRV	**Puerto La Cruz**	**144.16**	**12**	PKP	**PKPab**	**01 11 30.8**	**-1.1**
	comp=Z,5.1nm,0.5s,baz=236,slow=2.6,SNR=5.9						
ROSC	**El Rosal**	**146.06**	**30**	PKPbc	**PKPab**	**01 11 39.6**	**0.0**
	comp=Z,7.6nm,0.6s,baz=26,slow=24,SNR=2.1						
SIV	**San Ignacio**	**170.30**	**19**	PKP	**PKPdf**	**01 12 05.1**	**-0.4**
	comp=Z,1.2nm,0.6s,baz=203,slow=3.7,SNR=6.3						

NOU 28 00:53:05.2, 18°.02S × 168°.39E, h78^{km}, ML3.8/12, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTV	**Rentapao**	**0.23**	**8**	P	Pn	00 53 18.3	+1.4
DVP	**Devils Point**	**0.35**	**327**	P	Pn	00 53 19.4	+1.8
SANVU	**Saraoutou**	**2.80**	**336**	P	Pn	00 53 47.5	-0.3
YATNC	**Mamie plateau,**	**4.26**	**199**	P	Pn	00 54 06.8	-0.9
DZM	**Mont Dzumac**	**4.43**	**204**	P	Pn	00 54 10.1	+0.1
NOUC	**Port Laguerre**	**4.51**	**205**	P	Pn	00 54 11.4	+0.3
OUENC	**Ouen Island, N**	**4.61**	**198**	P	Pn	00 54 12.6	+0.1
KOUNC	**Koumac, New Ca**	**4.62**	**236**	P	Pn	00 54 12.9	+0.3

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*IDC **28** 01:16:26.3±1.5, 39°.14N×110°.64E, h0^{km}, mb3.7/5, mb1 3.8/6, mb1mx3.5/43, mbtmp3.7/6, ML2.7/1, MS3.3/1, Ms1 3.3/1, ms1mx2.4/42, Error ellipse: s-maj=46.8km s-min=19.5km az=65.0*

ISC 28 01:16:31.6±1.4, 39°.1N±0°.1×110°.5E±0°.3, h35^{km}, n7, σ0^{s}.39/6, mb3.7/5, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	**Songino Array**	**9.23**	**342**	Pn	**Pn**	**01 18 42.2**	**0.0**
	0.1nm,0.3s,baz=157,slow=13,SNR=14						
SONM				Lg	Lg	01 21 16.6	
	0.0nm,0.3s,baz=153,slow=23,SNR=3.0						
MKAR	**Makanchi Array**	**21.97**	**300**	P	**P**	**01 21 22.2**	**0.0**
	1.8nm,1.0s,baz=108,slow=11,SNR=6.0						
CMAR	**Chiang Mai Arr**	**22.90**	**209**	P	**P**	**01 21 32.3**	**0.0**
	1.3nm,0.3s,baz=14,slow=9.6,SNR=8.2						
KURBB	**Kurchatov Arra**	**25.24**	**308**	P	**P**	**01 21 54.0**	**0.0**
	0.9nm,0.2s,baz=108,slow=11,SNR=3.1						
JAY	**Jayapura**	**49.86**	**139**	LR	LR	01 45 42.1	
	comp=Z,30nm,21.2s,baz=207,slow=35						
WRA	**Warramunga Arr**	**62.82**	**155**	P	**P**	**01 26 53.3**	**-0.4**
	0.5nm,0.8s,baz=355,slow=5.0,SNR=2.5						
ASAR	**Alice Springs**	**66.16**	**157**	P	**P**	**01 27 16.0**	**+0.5**
	0.3nm,0.7s,baz=352,slow=6.0,SNR=2.2						

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*IDC **28** 01:20:56.6±1.5, 28°.95S×177°.69W, h131^{km}±12^{km}, mb3.3/2, mb1 3.9/3, mb1mx3.5/33, mbtmp4.2/3, Error ellipse: s-maj=64.7km s-min=26.9km az=174.0*

ISC 28 01:20:57.3±1.1, 29°.1S±0°.5×177°.6W±0°.2, h150^{km}, n6, σ2^{s}.19/6, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.36**	**239**	P	**Pn**	**01 21 15.9**	**-2.1**
	144nm,0.3s,baz=78,slow=22,SNR=2.0						
RAO				S	Sn	01 21 43.0	+9.2
	128nm,0.3s,baz=76,slow=23,SNR=1.9						
RAR	**Rarotonga**	**17.89**	**68**	P	**Pn**	**01 24 56.3**	**-0.5**
	0.6nm,0.3s,baz=230,slow=7.9,SNR=4.8						
ASAR	**Alice Springs**	**43.58**	**265**	P	**P**	**01 28 47.4**	**+0.7**
	0.5nm,0.4s,baz=100,slow=7.4,SNR=9.4						
WRA	**Warramunga Arr**	**44.45**	**271**	P	**P**	**01 28 52.9**	**-0.7**
	0.5nm,0.5s,baz=109,slow=6.4,SNR=12						
BRTR	**Keskin Array B**	**152.27**	**301**	PKPbc	**PKiKP**	**01 40 38.5**	**+2.7**
	0.4nm,0.6s,baz=57,slow=5.3,SNR=2.1						
TORD	**Torodi Ar. Bea**	**164.15**	**177**	PKPab	**PKPab**	**01 41 38.7**	**+1.2**
	0.4nm,0.9s,baz=182,slow=4.0,SNR=3.6						

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*IDC **28** 01:22:00.8±69.0, 14°.39S×166°.81E, h0^{km}, mb3.7/3, mb1 3.9/3, mb1mx3.6/39, mbtmp3.7/3, Error ellipse: s-maj=1167.0km s-min=116.2km az=64.0*

*NOU **28** 01:22:09.2, 14°.36S×167°.29E, h122^{km}, ML4.3/10,* *Vanuatu Islands*

ISC 28 01:22:10.3±3.1**, 14°.4S**±0°.3×**167°.1E**±0°.2**, h100^{km}, n9, σ1^{s}01**/9**, mb3.6**/3**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.02	175	P	Pn	01 22 32.7	+1.7
DVP	Devils Point	3.44	163	P	Pn	01 23 01.5	-0.5
KOUNC	Koumac, New Ca	6.66	203	P	Pn	01 23 46.2	+0.6
YATNC	Mamie plateau,	7.59	182	P	Pn	01 23 58.7	+0.4
	14nm,0.9s						
DZM	Mont Dzumac	7.63	185	P	Pn	01 23 57.7	-1.2
OUENC	Ouen Island, N	7.95	182	P	Pn	01 24 03.9	+0.7
STKA	Stephens Creek	29.07	229	P	P	01 28 01.4	0.0
	0.9nm,0.4s,baz=69,slow=8.6,SNR=7.5						
WRA	Warramunga Arr	31.75	255	P	P	01 28 24.7	-0.5
	0.2nm,0.6s,baz=86,slow=9.1,SNR=2.2						
ASAR	Alice Springs	32.63	249	P	P	01 28 32.5	-0.5
	0.4nm,0.4s,baz=78,slow=9.0,SNR=8.9						

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*IDC **28** 01:42:18.5±2.4, 12°.75S×167°.86E, h0^{km}, mb4.1/5, mb1 4.3/5, mb1mx3.9/27, mbtmp4.0/5, Error ellipse: s-maj=129.3km s-min=25.6km az=143.0*

*NEIC **28** 01:42:45.2±1.5, 12°.07S±0°.09×166°.9E±0°.2, h197^{km}±11^{km}, mb4.3/7, Error ellipse: s-maj=30.5km s-min=13.5km az=89.0*

ISC 28 01:42:46.6±0.8**, 12°.31S**±0°.10×**167°.0E**±0°.2**, h220^{km}, n18, σ1^{s}10**/20**, mb4.0**/9**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	3.13	176		Pn	01 43 38.9	0.0
SANVU				Sn	S	01 44 18.9	-0.8
EIDS	Eidsvold	19.85	227	P	P	01 47 02.1	+1.0
EIDS				IAmb	IAmb	01 47 48.4	
	comp=Z,12nm,1.4s						
MANU	Manus Island	21.94	296	P	P	01 47 21.2	-1.5
WB0	Warramunga Arr	32.13	252	P	P	01 48 54.0	+0.3
WB0				IAmb	IAmb	01 49 36.0	
	comp=Z,20nm,2.0s						
WB2	Warramunga Arr	32.20	252	P	P	01 48 54.1	-0.3
WB2				IAmb	IAmb	01 49 14.1	
	comp=Z,11nm,1.4s						
WRA	Warramunga Arr	32.21	252	P	P	01 48 55.0	+0.5
	comp=Z,0.7nm,0.5s,baz=85,slow=8.8,SNR=11						
AS31	Alice Springs	33.33	246	P	P	01 49 03.4	-0.8
AS31				IAmb	IAmb	01 49 56.6	
	comp=Z,3.6nm,1.9s						
ASAR	Alice Springs	33.34	246	P	P	01 49 04.5	+0.4
	comp=Z,0.7nm,0.7s,baz=69,slow=9.5,SNR=14						
IL31		84.32	18	P	P	01 54 52.6	-0.8
IL31				IAmb	IAmb	01 56 44.7	
	comp=Z,5.5nm,0.6s						
ILAR	Eielson Array	84.32	18	P	P	01 54 54.0	+0.5
	comp=Z,2.0nm,0.6s,baz=245,slow=5.0,SNR=34						
MKAR	Makanchi Array	95.26	317	P	P	01 55 47.0	+1.6
	comp=Z,0.7nm,0.8s,baz=83,slow=9.9,SNR=5.4						
ZALV	Zalesovo Beam	95.27	324	P	P	01 55 42.5	-2.7
YKA	Yellowknife Ar	95.54	27	P	P	01 55 46.0	-0.3
	comp=Z,0.2nm,0.5s,baz=258,slow=5.4,SNR=4.3						
ARCES	ARCESS Array B	117.85	346	PKP	PKiKP	02 01 06.7	+0.4
	comp=Z,5.2nm,1.0s,baz=90,slow=1.8,SNR=22						
FINES	FINESS Array B	123.38	339	PKP	PKPdf	02 01 17.5	+0.5
	comp=Z,4.3nm,0.9s,baz=85,slow=3.1,SNR=5.9						
NOA	NORSAR Array B	128.22	345	PKP	PKPdf	02 01 26.8	+0.4
	comp=Z,0.6nm,0.7s,baz=27,slow=2.0,SNR=1.3						
ESDC	Sonseca Array	151.58	345	PKPbc	PKiKP	02 02 16.0	+0.5
	comp=Z,0.7nm,0.7s,baz=8.3,slow=3.6,SNR=6.9						
ESDC				PKPab	PKPab	02 02 26.2	+1.9
	comp=Z,0.7nm,0.8s,baz=24,slow=3.9,SNR=4.3						
ESDC	Sonseca Array	151.58	345		PKPbc	02 02 14.8	-0.3

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*IDC **28** 02:21:58.5±0.7, 53°.39N×35°.23W, h0^{km}, mb4.1/16, mb1 4.2/17, mb1mx4.1/43, mbtmp4.1/17, ML3.2/1, MS3.9/17, Ms1 3.9/17, ms1mx3.7/44, Error ellipse: s-maj=23.2km s-min=13.6km az=1.0*

*NEIC **28** 02:22:00.8±1.5, 53°.4N±0°.1×35°.3W±0°.2, h10^{km}±1^{km}, mb4.7/70, Error ellipse: s-maj=17.8km s-min=15.6km az=181.0*

*GCMT **28** 02:22:00.8±0.3, 53°.16N±0°.03×35°.22W±0°.04, h19^{km}±1^{km}, MW4.8/70, Moment Tensor Solution. s13,c14; s70,c94; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.13±.20; $M_{\theta\theta}$-0.38±.14; $M_{\phi\phi}$1.51±.14; $M_{r\theta}$-0.14±.32; $M_{\theta\phi}$-1.43±.09; $M_{\phi r}$1.26±.27; Best double couple: $M_0$2.23000×10^{16} NP1:ϕ_s296.00000°, δ39.00000°, λ-147.00000°. NP2: ϕ_s179.00000°, δ70.00000°, λ-55.00000°. Principal axes: T 2.6510, Plg18.0000°, Azm244.0000°; N -0.8410, Plg32.0000°, Azm345.0000°; P -1.8090, Plg52.0000°, Azm130.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 02:22:00.6±0.4**, 53°.41N**±0°.09×**35°.23W**±0°.06**, h12^{km}, n100, σ1^{s}09**/81**, mb4.6**/49**, MS3.9**/17**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H07N1	FLORES T-PHASE	14.00	167	T	T	02 39 35.6	
	SNR=10						
SFJD	Kangerlussuaq	15.55	337	Pn	Pn	02 25 39.4	0.0
SFJD				IAmb	IAmb	02 25 46.5	
	comp=Z,53nm,1.1s						
SCHQ	Schefferville	18.50	287	P	P	02 26 15.1	-1.3
	comp=Z,0.7nm,0.3s,baz=98,slow=7.6,SNR=7.4						
SCHQ				LR	LR	02 32 01.1	
	comp=Z,407nm,21.8s,baz=80,slow=33						
SCHQ	Schefferville	18.50	287	IAmb	IAmb	02 26 17.1	
	comp=Z,56nm,1.3s						
SUMG	Summit	19.29	357	P	P	02 26 24.5	-0.8
D62A	Allapoint, All	22.38	267	P	P	02 26 55.9	-2.5
D62A				IAmb	IAmb	02 26 60.0	
	comp=Z,51nm,1.4s						
PESTR	Estremoz	23.85	116	P	P	02 27 13.8	+0.3
ESDC	Sonseca Array	25.27	110	P	P	02 27 26.2	-0.4
	comp=Z,3.8nm,0.9s,baz=312,slow=8.6,SNR=12						
ESDC				LR	LR	02 35 21.4	
	comp=Z,167nm,18.3s,baz=295,slow=32						
ESDC	Sonseca Array	25.27	110	P	P	02 27 26.0	-0.5
NOA	NORSAR Array B	25.78	54	P	P	02 27 30.0	-0.9
	comp=Z,4.1nm,1.0s,baz=273,slow=9.0,SNR=4.1						
NOA				LR	LR	02 36 02.6	
	comp=Z,301nm,19.4s,baz=275,slow=33						
TULEG	Thule	26.43	343	P	P	02 27 37.6	+1.0
TULEG				IAmb	IAmb	02 27 43.8	
	comp=Z,11nm,1.1s						
CLL	Collm	29.09	74	iP	P	02 28 00.8	+0.1
	comp=Z,18nm,1.4s						
GERES	GERESS Array B	30.55	78	P	P	02 28 13.9	+0.2
	comp=Z,2.2nm,0.9s,baz=298,slow=9.0,SNR=9.1						
GERES				LR	LR	02 40 03.2	
	comp=Z,258nm,18.8s,baz=276,slow=36						
GERES	GERESS Array B	30.55	78	P	P	02 28 13.4	-0.3
ARCES	ARCESS Array B	31.49	36	LR	LR	02 38 39.7	
	comp=Z,108nm,18.2s,baz=285,slow=32						
MORC	Moravsky Berou	32.36	75	eP	P	02 28 30.0	+0.4
MORC	Moravsky Berou	32.36	75	P	P	02 28 30.2	+0.6
MORC				IAmb	IAmb	02 28 31.0	
	comp=Z,25nm,1.5s						
FINES	FINESS Array B	32.80	51	P	P	02 28 31.6	-1.6
	comp=Z,8.2nm,0.9s,baz=268,slow=9.5,SNR=6.6						
FINES				LR	LR	02 40 13.4	
	comp=Z,480nm,20.9s,baz=252,slow=33						
MODS	Modra-Piesok	32.87	77	eP	P	02 28 34.0	0.0
PABE	Paberze	33.58	62	P	P	02 28 41.0	+0.9
LANS	Liptovska Anna	33.77	75	eP	P	02 28 43.1	+1.2
CRVS	Cervenica-Dubn	35.03	74	eP	P	02 28 54.1	+1.3
KEST	Kesra	35.64	101	P	P	02 28 59.8	+1.6
	comp=Z,10nm,1.0s,baz=286,slow=8.7,SNR=4.2						
KEST	Kesra	35.64	101	IAmb	IAmb	02 29 08.7	
	comp=Z,50nm,1.4s						
MNK	Minsk	36.05	62	iP	P	02 28 59.3	-2.1
	comp=E,1.0nm,0.8s						
MNK				iP	P	02 28 59.3	-2.1
	comp=N,33nm,1.2s						
MNK				iP	P	02 28 59.3	-2.1
	comp=Z,11nm,0.9s,baz=115						
MNK				iPP	PnPn	02 30 19.9	-2.2
MNK				iPPP	PPP	02 30 33.6	
MNK				iS	S	02 34 37.2	-2.7
MNK				iSS	SnSn	02 37 03.3	-0.9
MNK				iSSS	SSS	02 37 19.6	
MNK				iLQ	LQ	02 41 00.4	
MNK				iLR	LR	02 43 44.5	
MNK				iLRM	MLR	02 45 00.7	
	comp=N,188nm,18.8s						
MNK				iLRM	MLR	02 45 15.2	
	comp=E,16nm,17.4s						
MNK				iLRM	MLR	02 45 16.6	
	comp=Z,151nm,19.6s						
ULM	Lac du Bonnet	36.63	290	LR	LR	02 42 48.2	
	comp=Z,178nm,18.1s,baz=70,slow=34						
ULM	Lac du Bonnet	36.63	290	P	P	02 29 06.1	-0.4
BUR08	Bucovina Ar. S	37.83	74	P	P	02 29 17.5	+0.8
BUR08				IAmb	IAmb	02 29 23.2	
	comp=Z,18nm,1.4s						
BURAR	Bucovina Array	37.85	74	P	P	02 29 18.0	+1.0
AKASG	Malin Array Be	38.52	67	P	P	02 29 21.8	-0.7
	comp=Z,0.1nm,0.2s,baz=302,slow=8.5,SNR=8.8						
AKASG				LR	LR	02 45 06.9	
	comp=Z,211nm,18.7s,baz=305,slow=36						
AKASG	Malin Array Be	38.52	67	IAmb	IAmb	02 29 22.9	
	comp=Z,3.0nm,1.4s						
Q44A	Meyer Farm, Va	39.02	270	P	P	02 29 27.5	+0.8
Q44A				IAmb	IAmb	02 29 30.4	
	comp=Z,31nm,1.2s						
KLMR	Klimovskoe	39.15	48	eP	P	02 29 26.7	-0.8
KLMR				AMP		02 29 30.2	
	comp=Z,34nm,1.3s						
KLMR				ePcP	PcP	02 31 37.7	+1.0
SIUC	Southern Illin	39.91	269	P	P	02 29 33.5	-0.7
SIUC				IAmb	IAmb	02 29 38.0	
	comp=Z,22nm,1.1s						
S44A	Carbondale	39.95	269	P	P	02 29 34.4	-0.1
S44A				IAmb	IAmb	02 29 35.8	
	comp=Z,18nm,1.0s						
OBN	Obninsk	40.27	58	P	P	02 29 36.9	0.0
A36M	Sachs Harbour	40.44	331	P	P	02 29 38.9	+0.8
FVM	French Village	40.46	271	P	P	02 29 38.8	+0.1
FVM				IAmb	IAmb	02 29 42.0	
	comp=Z,25nm,1.4s						
PBMO	Poplar Bluff	41.25	269	P	P	02 29 45.0	-0.3
PBMO				IAmb	IAmb	02 29 46.5	
	comp=Z,26nm,1.4s						
P38A	Dawn	41.26	275	P	P	02 29 44.9	-0.5
P38A				IAmb	IAmb	02 29 48.4	
	comp=Z,22nm,1.5s						
SMRT	St. Maarten	41.38	222	P	P	02 29 47.5	+1.0
LCAR	Lake Charles	42.16	269	P	P	02 29 52.3	-0.4
H05N1	Guadeloupe/Mar	42.17	219	T	T	03 14 44.6	
	SNR=2.8						
Z47A	Carrollton	42.29	263	P	P	02 29 53.2	-0.6
S39A	Bolivar	42.38	272	P	P	02 29 54.2	-0.3
S39A				IAmb	IAmb	02 29 55.1	
	comp=Z,22nm,1.5s						
U40A	Yellville	42.98	271	P	P	02 29 58.9	-0.6
U40A				IAmb	IAmb	02 30 00.2	
	comp=Z,16nm,1.3s						
KSU1	Kansas State U	43.43	276	P	P	02 30 02.7	-0.3
KSU1				IAmb	IAmb	02 30 04.5	
	comp=Z,13nm,0.9s						
W39A	Magazine	44.33	270	IAmb	IAmb	02 30 10.9	
	comp=Z,18nm,1.2s						
LAO	LASA Array	44.34	291	IAmb	IAmb	02 30 14.9	
	comp=Z,18nm,1.3s						
MIAR	Mount Ida	44.65	269	P	P	02 30 12.1	-0.7
KAN14	Manchester OK	45.64	275	P	P	02 30 19.8	-0.8
K22A	Casper	46.97	287	IAmb	IAmb	02 30 34.4	
	comp=Z,12nm,1.2s						
WALA	Waterton Lakes	47.11	298	IAmb	IAmb	02 30 42.5	
	comp=Z,12nm,1.4s						
BR131	Keskin Array S	47.44	78	IAmb	IAmb	02 30 42.2	
	comp=Z,5.1nm,0.8s						
BRTR	Keskin Array B	47.44	78	P	P	02 30 34.6	-0.4
	comp=Z,4.4nm,1.1s,baz=294,slow=6.4,SNR=9.0						
BRTR				LR	LR	02 52 02.6	
	comp=Z,201nm,18.4s,baz=310,slow=38						
BRTR	Keskin Array B	47.44	78	P	P	02 30 34.8	-0.2
WMOK	Wichita Mounta	47.63	274	IAmb	IAmb	02 30 39.1	
	comp=Z,6.5nm,1.2s						
BOZ	Bozeman (W)	48.00	293	IAmb	IAmb	02 30 49.1	
	comp=Z,5.4nm,1.3s						
BW06	Boulder Array	48.63	289	IAmb	IAmb	02 30 53.5	
	comp=Z,8.5nm,1.4s						
PD31	Pinedale Array	48.63	289	IAmb	IAmb	02 30 53.5	
	comp=Z,7.8nm,1.4s						
PDAR	Pinedale Array	48.63	289	P	P	02 30 43.4	-0.8
	comp=Z,0.7nm,0.6s,baz=60,slow=7.6,SNR=7.1						
PDAR				LR	LR	02 50 04.5	
	comp=Z,108nm,18.5s,baz=71,slow=35						
PDAR	Pinedale Array	48.63	289	P	P	02 30 43.8	-0.4
T25A	Trinidad	49.34	280	IAmb	IAmb	02 31 06.8	
	comp=Z,15nm,1.5s						
TORD	Torodi Ar. Bea	49.66	130	P	P	02 30 49.8	-2.3
	comp=Z,4.3nm,0.8s,baz=333,slow=8.2,SNR=11						
TORD	Torodi Ar. Bea	49.66	130	P	P	02 30 50.4	-1.6
TORD				IAmb	IAmb	02 30 56.2	
	comp=Z,6.7nm,1.1s						
ARU	Arti	49.91	46	P	P	02 30 54.0	+0.5
ARU				IAmb	IAmb	02 31 00.4	
	comp=Z,8.5nm,1.0s						
RDMU	Red Mountain	50.06	287	IAmb	IAmb	02 31 05.8	
	comp=Z,7.0nm,1.2s						
KBZ	Khabaz	50.13	68	LR	LR	02 53 22.8	
	comp=Z,183nm,18.4s,baz=312,slow=38						
HWUT	Hardware Ranch	50.51	289	IAmb	IAmb	02 31 09.8	
	comp=Z,5.3nm,0.8s						
HLID	Hailey	50.83	293	P	P	02 31 01.6	+0.8
ILAR	Eielson Array	51.03	329	P	P	02 31 01.1	-0.8
	comp=Z,1.0nm,1.0s,baz=51,slow=5.4,SNR=5.7						
JCT	Junction City	51.23	270	P	P	02 31 03.2	-0.7
JCT				IAmb	IAmb	02 31 04.4	
	comp=Z,8.9nm,1.1s						
DBIC	Dimbokro	52.73	141	LR	LR	02 51 17.1	
	comp=Z,139nm,18.7s,baz=1.5,slow=33						
TXAR	Lajitas Array	54.37	272	P	P	02 31 27.0	-0.2
	comp=Z,4.0nm,1.2s,baz=66,slow=7.0,SNR=5.1						
TXAR				LR	LR	02 55 49.7	
	comp=Z,137nm,18.5s,baz=0.0,slow=37						
TIXI	Tiksi	54.74	6	P	P	02 31 30.2	+1.1
TIXI				IAmb	IAmb	02 31 38.1	
	comp=Z,5.8nm,1.1s						
ABKAR	Akbulak array	55.27	53	P	P	02 31 34.0	+0.7
KVN	Kaiserville	55.92	291	P	P	02 31 39.0	+0.7
NVAR	Mina Array Bea	56.46	291	P	P	02 31 41.7	-0.6
	comp=Z,0.3nm,0.4s,baz=39,slow=7.2,SNR=2.0						
YBH	Yreka Blue Hor	56.58	296	LR	LR	02 55 39.4	
	comp=Z,63nm,18.2s,baz=60,slow=36						
BRVK	Borovoye	57.18	44	P	P	02 31 47.7	+0.8
BRVK				IAmb	IAmb	02 31 50.5	
	comp=Z,5.2nm,1.1s						
ROSC	El Rosal	57.98	228	P	P	02 31 54.3	+0.9
	comp=Z,6.5nm,0.4s,baz=136,slow=1.8,SNR=5.9						
ROSC				LR	LR	02 54 06.1	
	comp=Z,69nm,21.8s,baz=42,slow=33						
ROSC	El Rosal	57.98	228	P	P	02 31 54.1	+0.7
JTS	Las Juntas de	58.46	242	P	P	02 31 56.9	+0.5
PFO	Pinyon Flats O	58.84	285	LR	LR	02 56 47.5	
	comp=Z,103nm,18.7s,baz=49,slow=36						
ZALV	Zalesovo Beam	62.04	35	P	P	02 32 20.7	+0.4
	comp=Z,0.9nm,0.6s,baz=335,slow=6.5,SNR=2.7						
OTAV	Otavalo	63.92	230	P	P	02 32 32.8	-1.1
OTAV				IAmb	IAmb	02 32 44.0	
	comp=Z,4.2nm,1.0s						
KKAR	Karatay Array	64.76	51	P	P	02 32 40.0	+1.4
MK31	Makanchi Array	66.93	41	P	P	02 32 53.7	+1.2
MKAR	Makanchi Array	66.93	41	P	P	02 32 53.2	+0.8
	comp=Z,2.0nm,0.9s,baz=336,slow=5.0,SNR=9.4						
AAK	Ala-Archa	66.95	49	P	P	02 32 54.1	+1.2
AAK				IAmb	IAmb	02 33 00.9	
	comp=Z,5.9nm,1.2s						
GAR	Garm	67.85	54	P	P	02 32 59.2	+0.7
KSH	Kashi	70.11	50	P	P	02 33 16.0	+3.4
KSH				sP	pwP	02 33 20.3	+1.5
KSH				pmax	pmax		
	comp=Z,5.0nm,1.7s						
SONM	Songino Array	74.00	26	P	P	02 33 36.8	+1.0
	comp=Z,0.6nm,0.4s,baz=334,slow=5.1,SNR=4.5						
SONM	Songino Array	74.00	26	IAmb	IAmb	02 33 38.2	
	comp=Z,3.2nm,1.2s						
LPAZ	La Paz	74.96	213	LR	LR	03 05 44.1	
	comp=Z,35nm,19.4s,baz=331,slow=35						
LODK	Lodwar	75.75	104	P	P	02 33 46.8	+0.6
LODK				IAmb	IAmb	02 33 53.4	
	comp=Z,6.0nm,1.4s						
WRA	Warramunga Arr	145.64	18	PKPbc	PKPdf	02 41 39.0	+0.3
	comp=Z,3.4nm,1.1s,baz=344,slow=3.7,SNR=13						
WRA	Warramunga Arr	145.64	18	PKPbc	PKPdf	02 41 38.9	+0.2
ASAR	Alice Springs	149.18	20	PKPbc	PKPbc	02 41 48.4	-0.3
	comp=Z,0.9nm,0.7s,baz=345,slow=2.4,SNR=9.0						
ASAR	Alice Springs	149.18	20	PKPbc	PKiKP	02 41 49.9	-0.1

IDC 28 02:38:09.2±39.0**, 30°.43S**×**176°.44W, h0^{km}, mb3.9**/3**, mb1 4.0**/3**, mb1mx3.5**/31**, mbtmp3.9**/3**, MS4.2**/1**, Ms1 4.2**/1**, ms1mx3.0**/32**, Error ellipse: s-maj=715.7km s-min=182.2km az=98.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	35.78	257	P	P	02 45 09.9	-0.3
	0.8nm,0.5s,baz=100,slow=11,SNR=4.2						
ASAR	Alice Springs	44.45	266	P	P	02 46 22.1	-0.2
	0.7nm,0.5s,baz=104,slow=7.5,SNR=13						
WRA	Warramunga Arr	45.45	271	P	P	02 46 30.4	+0.1
	0.6nm,0.3s,baz=110,slow=8.0,SNR=30						
GUMO	Guam	57.46	314	LR	LR	03 07 58.8	
	comp=Z,198nm,21.1s,baz=349,slow=31						

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*INET **28** 02:39:13.3, 13°.09N×88°.99W, h63^{km}, MW3.4*

*SNET **28** 02:39:16.6±1.1, 13°.04N×89°.08W, h54^{km}±7^{km}, ML3.7*

*UCR **28** 02:39:16.6±1.2, 13°.05N×89°.07W, h55^{km}±7^{km}, ML3.7*

ISC 28 02:39:16.8±1.9**, 13°.00N**±0°.10×**89°.09W**±0°.05**, h49^{km}**±15^{km}**, n59, σ0^{s}44**/84**, 2D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LALI	Alcalda de L	0.54	335	eP	Pn	02 39 28.2	-0.2
LALI				eS	Sn	02 39 36.2	-0.6
LALI	Alcalda de L	0.54	335	eP	Pn	02 39 28.2	-0.2
LALI				eS	Sn	02 39 36.2	-0.6
ALJI	Alcalda de J	0.60	57	eP	Pn	02 39 29.2	0.0
ALJI				IAML		02 39 29.9	
	comp=Z,4μm,0.2s						
ALJI				eS	Sn	02 39 39.0	+0.9
ALJI	Alcalda de J	0.60	57	eP	Pn	02 39 29.2	0.0
ALJI				IAML		02 39 29.9	
	comp=Z,4μm,0.2s						
ALJI				eS	Sn	02 39 39.0	+0.9
SJTE	Alcalda de S	0.62	7	iP	Pn	02 39 28.9	-0.6
SJTE	Alcalda de S	0.62	7	iP	Pn	02 39 28.9	-0.6
LFRS	El Faro	0.62	2	eP	Pn	02 39 29.1	-0.5
LFRS	El Faro	0.62	2	eP	Pn	02 39 29.1	-0.5
COEG	Centro de Oper	0.65	18	eP	Pn	02 39 29.4	-0.6
COEG				eP		02 39 29.5	
COEG	Centro de Oper	0.65	18	eP	Pn	02 39 29.4	-0.6
COEG				eP		02 39 29.5	
SNVI	San Vicente	0.66	21	eP	Pn	02 39 29.9	-0.3
SNVI	San Vicente	0.66	21	eP	Pn	02 39 29.9	-0.3
UESV	Universidad de	0.70	25	⇓iP	Pn	02 39 30.3	-0.3
UESV	Universidad de	0.70	25	⇓iP	Pn	02 39 30.3	-0.3
SNET	Serv Nac Est T	0.70	348	eP	Pn	02 39 30.1	-0.5
SNET				IAML		02 39 31.2	
	comp=Z,2μm,0.2s						
SNET				eS	Sn	02 39 41.7	+1.1
SNET	Serv Nac Est T	0.70	348	eP	Pn	02 39 30.1	-0.5
SNET				IAML		02 39 31.2	
	comp=Z,2μm,0.2s						
SNET				eS	Sn	02 39 41.7	+1.1
OPAM	Oficina de Pla	0.72	351	eS	Sn	02 39 41.4	+0.3
OPAM				IAML		02 39 44.6	
	comp=Z,1μm,0.3s						
OPAM	Oficina de Pla	0.72	351	eS	Sn	02 39 41.4	+0.3
OPAM				IAML		02 39 44.6	
	comp=Z,1μm,0.3s						
PAVA	Las Pavas	0.73	11	eP	Pn	02 39 30.6	-0.4
PAVA				eS	Sn	02 39 41.6	+0.3
PAVA				IAML		02 39 44.8	
	comp=Z,993nm,0.3s						
PAVA	Las Pavas	0.73	11	eP	Pn	02 39 30.6	-0.4
PAVA				eS	Sn	02 39 41.6	+0.3
PAVA				IAML		02 39 44.8	
	comp=Z,993nm,0.3s						
UESS	Universidad de	0.73	351	eP	Pn	02 39 30.6	-0.3
UESS	Universidad de	0.73	351	eP	Pn	02 39 30.6	-0.3
UEES	Universidad Ev	0.73	348	IAML		02 39 45.9	
	comp=Z,2μm,0.1s						
UEES	Universidad Ev	0.73	348	IAML		02 39 45.9	
	comp=Z,2μm,0.1s						
COEB	Comit de Eme	0.74	47	eP	Pn	02 39 30.9	-0.2
COEB				eS	Sn	02 39 41.8	+0.3
COEB				IAML		02 39 48.5	
	comp=Z,2μm,0.3s						
COEB	Comit de Eme	0.74	47	eP	Pn	02 39 30.9	-0.2
COEB				eS	Sn	02 39 41.8	+0.3
COEB				IAML		02 39 48.5	
	comp=Z,2μm,0.3s						
JAYA	Jayaque - finc	0.74	332	eP	Pn	02 39 30.9	-0.4
JAYA				eS	Sn	02 39 42.0	+0.3
JAYA	Jayaque - finc	0.74	332	eP	Pn	02 39 30.9	-0.4
JAYA				eS	Sn	02 39 42.0	+0.3
LFU	La Fuente	0.75	358	iP	Pn	02 39 31.1	-0.1
LFU	La Fuente	0.75	358	iP	Pn	02 39 31.1	-0.1
BOQS	Boqueron	0.76	346	iP	Pn	02 39 31.3	-0.2
BOQS				eS	Sn	02 39 42.6	+0.4
BOQS	Boqueron	0.76	346	iP	Pn	02 39 31.3	-0.2
BOQS				eS	Sn	02 39 42.6	+0.4
SCLA	Alcaldia de Sa	0.78	26	iP	Pn	02 39 31.6	0.0
SCLA	Alcaldia de Sa	0.78	26	iP	Pn	02 39 31.6	0.0
PQSS	Presa 15 de Se	0.81	39	eP	Pn	02 39 31.7	-0.2
PQSS				eS	Sn	02 39 43.6	+0.7
JUCU	Jucuar¡n	0.85	72	eS	Sn	02 39 44.0	-0.2
JUCU	Jucuar¡n	0.85	72	eS	Sn	02 39 44.0	-0.2
CEDA	San Andres	0.86	339	eP	Pn	02 39 31.9	-0.7
CEDA				eS	Sn	02 39 44.4	+0.2
CEDA				IAML		02 39 48.0	
	comp=Z,2μm,0.4s						
CEDA	San Andres	0.86	339	eP	Pn	02 39 31.9	-0.7
CEDA				eS	Sn	02 39 44.4	+0.2
CEDA				IAML		02 39 48.0	
	comp=Z,2μm,0.4s						
CEVE	Cerro Verde	0.98	328	eP	Pn	02 39 34.4	-0.1
CEVE				eS	Sn	02 39 47.9	+0.5
CEVE				IAML		02 39 49.8	
	comp=Z,5μm,0.3s						
CEVE	Cerro Verde	0.98	328	eP	Pn	02 39 34.4	-0.1
CEVE				eS	Sn	02 39 47.9	+0.5
CEVE				IAML		02 39 49.8	
	comp=Z,5μm,0.3s						
TACO	Tacachico	1.00	345	eP	Pn	02 39 34.1	-0.5
TACO	Tacachico	1.00	345	eP	Pn	02 39 34.1	-0.5
RTR	El Retiro	1.05	329	eP	Pn	02 39 35.7	+0.4
RTR	El Retiro	1.05	329	eP	Pn	02 39 35.7	+0.4
UNIC	Universidad Ca	1.08	335	iP	Pn	02 39 35.6	0.0
UNIC	Universidad Ca	1.08	335	iP	Pn	02 39 35.6	0.0
LLGN	La Laguna	1.17	7	eP	Pn	02 39 36.5	-0.3
LLGN				eS	Sn	02 39 52.1	+0.3
LLGN	La Laguna	1.17	7	eP	Pn	02 39 36.5	-0.3
LLGN				eS	Sn	02 39 52.1	+0.3
LCND	La Caada	1.21	75	eP	Pn	02 39 37.6	+0.3
LCND				eS	Sn	02 39 52.6	+0.1
LCND				IAML		02 39 55.2	
	comp=Z,2μm,0.4s						
LCND	La Caada	1.21	75	eP	Pn	02 39 37.6	+0.3
LCND				eS	Sn	02 39 52.2	-0.4
LCND				eS		02 39 52.6	
LCND				IAML		02 39 55.2	
	comp=Z,2μm,0.4s						
SLOZ	Alcaldia de Sa	1.23	327	eP	Pn	02 39 37.5	-0.1
CNCH	Conchagua	1.25	77	eP	Pn	02 39 37.6	-0.4
CNCH				eS	Sn	02 39 54.3	+0.5
CNCH	Conchagua	1.25	77	eP	Pn	02 39 37.6	-0.4
CNCH				eS	Sn	02 39 54.3	+0.5
MTO3	Montecristo	1.42	349	iP	Pn	02 39 40.1	-0.3
MTO3				eS	Sn	02 39 57.9	-0.1
MTO3	Montecristo	1.42	349	iP	Pn	02 39 40.1	-0.3
MTO3				eS	Sn	02 39 57.9	-0.1
ESQI	Esquipulas	1.57	351	eP	Pn	02 39 42.5	+0.1
TGUH	Tegucigalpa,Un	2.06	59	eP	Pn	02 39 48.3	-0.7
TGUH	Tegucigalpa,Un	2.06	59	eP	Pn	02 39 48.3	-0.7

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*AEIC **28** 02:49:44±1.4, 51°.55N±0°.09×175°.81W±0°.06, h34^{km}±8^{km}, Error ellipse: s-maj=13.3km s-min=5.7km az=179.0*

NEIC 28 02:49:45.8±0.6**, 51°.67N**±0°.10×**175°.88W**±0°.05**, h42^{km}**±19^{km}**, ML3.9**(AEIC)**, Error ellipse: s-maj=14.6km s-min=2.7km az=192.0, Andreanof Islands**

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

GSIG	**Igitkin Island**	0.32	354		Pn	02 49 54.4	-0.1
ETKA	**Kagalaska Isla**	0.38	301		Pn	02 49 55.0	-0.2
GSMY	**Great Sitkin M**	0.39	343		Pn	02 49 55.4	0.0
GSTD	**Great Sitkin T**	0.42	337		Pn	02 49 55.9	+0.1
ADK	**Adak**	0.55	294		Pn	02 49 56.6	-0.6
ADK	**Adak**	0.55	294	Sn	Sn	02 50 05.0	-0.3
KIWB	**Kanaga Island**	0.81	284		Pn	02 50 00.6	-0.2
KIKV	**Kanaga Island**	0.83	285		Pn	02 50 00.9	-0.2
KIMD	**Kanaga Island**	0.85	277		Pn	02 50 00.8	-0.5
KICM	**Kanaga Island**	0.86	288		Pn	02 50 01.5	0.0
ATKA	**Atka Island**	1.17	62		Pn	02 50 04.4	-1.3
TAPA	**Tanaga Point A**	1.21	278		Pn	02 50 06.4	0.0
KOKL	**Mount Kliuchef**	1.23	57		Pn	02 50 06.4	-0.1
KOFP	**Korovin Flat P**	1.26	60		Pn	02 50 06.6	-0.3
TAFL	**Tanaga Flats**	1.26	275		Pn	02 50 06.9	0.0
TAFP	**Tanaga Falls P**	1.33	281		Pn	02 50 08.2	+0.3
TASE	**Tanaga Southea**	1.35	278		Pn	02 50 08.7	+0.4
GAEA	**Gareloi East**	1.79	275		Pn	02 50 14.7	+0.5
GALAA	**Gareloi Lava P**	1.81	274		Pn	02 50 14.8	+0.4
GANO	**Gareloi North**	1.83	276		Pn	02 50 14.9	+0.2
CERAA	**Semis' Rag'd T**	2.77	277		Pn	02 50 27.8	+0.2
CESW	**Semis' Southwe**	2.84	277		Pn	02 50 28.7	0.0
AMKA	**Amchitka**	3.03	266		Pn	02 50 31.1	-0.1
LSSA	**Little Sitkin**	3.50	277		Pn	02 50 38.2	+0.6
NIKH	**Nikolski High**	4.50	70		Pn	02 50 51.1	-0.3
UNV	**Unalaska Valle**	6.09	65		Pn	02 51 13.6	+0.4

BJI ***28*** *02:51:04.2±0.0, 43°.57N×146°.51E, h56^{km}, mB5.6/53, mb5.6/74, Ms4.9/80, Ms7 4.6/70*

BGR ***28*** *02:51:05.9±0.0, 43°.65N×146°.75E, h33^{km}, mb6.0, mB_BB6.0, Ms5.0*

SKHL ***28*** *02:51:06.5±0.8, 43°.20N×146°.70E, h79^{km}±1^{km}, mb6.2/13, ms5.0/8*

MOS ***28*** *02:51:06.4±0.9, 43°.28N×146°.49E, h77^{km}, mb6.2/84, MS4.9/22, Error ellipse: s-maj=5.8km s-min=3.4km az=115.1*

MOS Felt (III-IV) at Malokuril'skoe, Yuzhno-Kuril'sk, Golovnino, Goryachiye Klyuchi,(II-III) at Kuril'sk.

NEIC ***28*** *02:51:07.5, 43°.39N×146°.44E, h66^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.39; $M_{\theta\theta}$0.84; $M_{\phi\phi}$-0.45; $M_{r\theta}$2.14; $M_{\theta\phi}$-0.59; $M_{\phi r}$1.54; Fault plane solution: $M_0$2.79000×10^{17} NP1:ϕ_s142.10000°, δ18.22000°, λ-7.79000°. NP2:ϕ_s239.50000°, δ87.57000°, λ-108.06000°. Principal axes: T 2.5322, Plg40.0000°, Azm346.0000°; N 0.4614, Plg18.0000°, Azm240.0000°; P -2.9936, Plg45.0000°, Azm132.0000°;*

NEIC ***28*** *02:51:07.8±1.8, 43°.39N±0°.06×146°.4E±0°.1, h69^{km}±1^{km}, mb5.8/694, Mwb5.6/29, Mww5.6 Error ellipse: s-maj=12.5km s-min=10.3km az=286.0*

GCMT ***28*** *02:51:08.8±0.1, 43°.33N±0°.01×146°.56E±0°.01, h76^{km}±1^{km}, MW5.5/151, Moment Tensor Solution. s122,c219; s151,c300; Duration: 1^{s}5 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.43±.03; $M_{\theta\theta}$1.27±.03; $M_{\phi\phi}$-0.83±.03; $M_{r\theta}$2.00±.02; $M_{\theta\phi}$-0.27±.03; $M_{\phi r}$1.34±.02; Best double couple: $M_0$2.66800×10^{17} NP1:ϕ_s137.00000°, δ24.00000°, λ-13.00000°. NP2:ϕ_s238.00000°, δ85.00000°, λ-114.00000°. Principal axes: T 2.6760, Plg36.0000°, Azm349.0000°; N -0.0120, Plg24.0000°, Azm240.0000°; P -2.6600, Plg45.0000°, Azm125.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NIED ***28*** *02:51:08.1, 43°.22N×146°.50E, h71^{km}, MW5.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.43; $M_{\theta\theta}$1.09; $M_{\phi\phi}$-0.67; $M_{r\theta}$1.61; $M_{\theta\phi}$-0.24; $M_{\phi r}$1.11; Fault plane solution: $M_0$2.19000×10^{17} NP1: ϕ_s239.00000°, δ84.00000°, λ-114.00000°. NP2: ϕ_s136.00000°, δ25.00000°, λ-14.00000°.*

JMA ***28*** *02:51:08.1±0.1, 43°.22N×146°.50E, h71^{km}±2^{km}, M5.6*

JMA Felt IV J1.

IDC ***28*** *02:51:08.0±0.3, 43°.34N×146°.56E, h75^{km}±2^{km}, mb5.4/38, mb1 5.4/44, mb1mx5.4/50, mbtmp5.7/44, MS4.6/28, Ms1 4.6/28, ms1mx4.5/36, Error ellipse: s-maj=8.0km s-min=7.0km az=156.0*

NEIC ***28*** *02:51:11, 43°.34N×146°.48E, h80^{km}, Moment Tensor Solution. Duration: 10^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.49; $M_{\theta\theta}$1.59; $M_{\phi\phi}$-1.10; $M_{r\theta}$1.97; $M_{\theta\phi}$-0.03; $M_{\phi r}$1.21; Fault plane solution: $M_0$2.70000×10^{17} NP1: ϕ_s134.00000°, δ28.00000°, λ-14.00000°. NP2: ϕ_s236.00000°, δ83.00000°, λ-117.00000°. Principal axes: T 2.8707, Plg33.0000°, Azm349.0000°; N -0.3716, Plg27.0000°, Azm240.0000°; P -2.4991, Plg45.0000°, Azm119.0000°;*

ISC 28 02:51:07.1±0.2**, 43°.37N**±0°.03×**146°.47E**±0°.03**, h69**^{km}±1^{km}**, h69**^{km}**:pP-P, n1680, σ1^{s}51**/1580**, mb5.8**/603**, 517C-235D, Fault plane solution: NP1:**ϕ_s191.04727°, δ25.97045°, λ19.33815°. **NP2:**ϕ_s83.53655°, δ81.66215°, λ114.68411°. **Principal axes:** T Plg47.5818°, Azm19.4988°; N Plg24.4061°, Azm259.7235°; P Plg32.2196°, Azm153.1074°; **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	0.53	269	⇓P	Pn	02 51 21.8	+1.7
NEM2				eS	Sn	02 51 31.6	+1.9
NMR	**Nemuro--Hokkai**	0.54	270	c iPN	Pn	02 51 21.2	+0.9
NMR				eS	Sn	02 51 31.6	+1.7
NMR	**Nemuro--Hokkai**	0.54	270	i P	Pn	02 51 21.0	+0.8
NMR				eS	Sn	02 51 31.0	+1.1
GLVR	**Golovnino**	0.78	298	c iPN	Pn	02 51 24.9	+2.0
GLVR				i S	Sn	02 51 38.1	+3.5
GLVR				pmax	pmax		
	comp=Z,305µm,0.6s						
GLVR				pmax	pmax		
	comp=N,11µm,0.5s						
GLVR				pmax	pmax		
	comp=Z,187µm,0.5s						
GLVR				pmax	pmax		
	comp=E,13µm,0.3s						
GLVR				smax	smax		
	comp=N,1001µm,0.9s						
GLVR				smax	smax		
	comp=E,860µm,1.0s						
GLVR				smax	smax		
	comp=N,592µm,0.6s						
GLVR				smax	smax		
	comp=E,250µm,0.8s						
GLVR	**Golovnino**	0.78	298	i P	Pn	02 51 24.0	+1.1
GLVR				AMB	AMB	02 51 26.0	
	comp=E,305µm,3.0s						
GLVR				AMB	AMB	02 51 26.0	
	comp=E,187µm,0.4s						
GLVR				i S	Sn	02 51 38.0	+3.5
GLVR				A	A	02 51 38.0	
	comp=E,1001µm,1.0s						
GLVR				A	A	02 51 38.0	
	comp=E,860µm,1.0s						
GLVR				A	A	02 51 39.0	
	comp=E,592µm,0.7s						
GLVR				A	A	02 51 39.0	
	comp=E,250µm,0.7s						
YUK	**Yuzh-Kuril'sk**	0.80	326	c iPN	Pn	02 51 24.8	+1.8
YUK				i S	Sn	02 51 37.7	+2.9
YUK				pmax	pmax		
	comp=Z,44µm,0.2s						
YUK				pmax	pmax		
	comp=N,3µm,0.1s						
YUK				pmax	pmax		
	comp=E,5µm,0.1s						
YUK				pmax	pmax		
	comp=Z,128µm,1.0s						
YUK				smax	smax		
	comp=N,399µm,0.9s						
YUK				smax	smax		
	comp=E,505µm,0.9s						
YUK				smax	smax		
	comp=N,256µm,0.4s						
YUK				smax	smax		
	comp=E,381µm,0.6s						
YUK	**Yuzh-Kuril'sk**	0.80	326	i P	Pn	02 51 24.0	+1.0
YUK				AMB	AMB	02 51 25.0	
	comp=E,44µm,0.2s						
YUK				AMB	AMB	02 51 26.0	
	comp=E,128µm,1.0s						
YUK				i S	Sn	02 51 37.0	+2.2
YUK				A	A	02 51 38.0	
	comp=E,399µm,0.9s						
YUK				A	A	02 51 38.0	
	comp=E,505µm,0.9s						
YUK				A	A	02 51 39.0	
	comp=E,256µm,0.5s						
YUK				A	A	02 51 39.0	
	comp=E,385µm,0.5s						
GRPR	**Tuman**	0.80	321	c iPN	Pn	02 51 24.8	+1.7
GRPR				i S	Sn	02 51 37.3	+2.3
GRPR				pmax	pmax		
	comp=Z,120µm,0.5s						
GRPR				pmax	pmax		
	comp=E,20µm,0.5s						
GRPR				pmax	pmax		
	comp=Z,98µm,0.5s						
GRPR				pmax	pmax		
	comp=N,36µm,0.4s						
GRPR				smax	smax		
	comp=N,501µm,0.6s						
GRPR				smax	smax		
	comp=E,715µm,0.5s						
GRPR				smax	smax		
	comp=E,649µm,0.5s						
GRPR				smax	smax		
	comp=N,271µm,0.3s						
GRPR	**Tuman**	0.80	321	i P	Pn	02 51 24.0	+0.9
GRPR				AMB	AMB	02 51 25.0	
	comp=N,120µm,2.0s						
GRPR				AMB	AMB	02 51 25.0	
	comp=N,98µm,0.5s						
GRPR				i S	Sn	02 51 37.0	+2.0
GRPR				A	A	02 51 37.0	
	comp=N,501µm,2.0s						
GRPR				A	A	02 51 37.0	
	comp=N,715µm,2.0s						
GRPR				A	A	02 51 38.0	
	comp=N,271µm,0.4s						
GRPR				A	A	02 51 38.0	
	comp=N,649µm,0.4s						
JKHN	**Kushirohamanak**	1.00	254	⇓P	Pn	02 51 27.0	+1.4
JKHN				eS	Sn	02 51 41.1	+1.8
JRA	**Rausu**	1.13	300	⇓P	Pn	02 51 29.8	+2.6
JRA				eS	Sn	02 51 45.9	+3.7
JNSB	**Nemuroshibetsu**	1.14	291	⇓P	Pn	02 51 29.6	+2.3
JNSB				eS	Sn	02 51 45.8	+3.4
RUSJ	**Misakicho**	1.15	310	c iPN	Pn	02 51 29.9	+2.5
RUSJ				eS	Sn	02 51 47.1	+4.5
JNK	**Nakash**	1.29	280	⇓P	Pn	02 51 30.9	+1.6
JNK				eS	Sn	02 51 47.7	+1.7
JAK	**Akkeshi**	1.35	254	⇓P	Pn	02 51 31.0	+0.9
JAK				eS	Sn	02 51 48.2	+0.9
JTKR	**Abashiri--Toko**	1.96	289	⇓P	Pn	02 51 40.9	+2.8
JTKR				eS	Sn	02 52 05.0	+3.3
JAR	**Ashorobuto**	1.98	269	⇓P	Pn	02 51 40.2	+1.8
JAR				eS	Sn	02 52 04.5	+2.3
JOB	**Onbets**	1.99	257	⇓P	Pn	02 51 39.8	+1.3
JOB				eS	Sn	02 52 03.5	+1.0
KUR	**Kuril'sk**	2.11	28	c iPN	Pn	02 51 42.5	+2.3
KUR				i S	Sn	02 52 07.5	+2.1
KUR				pmax	pmax		
	comp=N,2µm,0.7s						
KUR				pmax	pmax		
	comp=Z,9µm,0.7s						
KUR				pmax	pmax		
	comp=E,1µm,0.3s						
KUR				pmax	pmax		
	comp=Z,34µm,4.1s						
KUR				smax	smax		
	comp=N,126µm,1.7s						
KUR				smax	smax		
	comp=N,78µm,0.7s						
KUR				smax	smax		
	comp=E,40µm,0.4s						
KUR	**Kuril'sk**	2.11	28	i P	Pn	02 51 40.5	+0.3
KUR				AMB	AMB	02 51 43.0	
	comp=E,9µm,0.5s						
KUR				AMB	AMB	02 51 44.0	
	comp=E,34µm,4.0s						
KUR				i S	Sn	02 52 05.5	+0.1
KUR				A	A	02 52 08.0	
	comp=E,126µm,2.0s						
KUR				A	A	02 52 08.0	
	comp=E,250µm,2.0s						
KUR				A	A	02 52 11.0	
	comp=E,78µm,0.4s						
KUR				A	A	02 52 11.0	
	comp=E,40µm,0.4s						
JMP	**Maruseppu**	2.35	287	⇓P	Pn	02 51 46.3	+2.9
JMP				eS	Sn	02 52 14.2	+3.0
JCH	**Churui**	2.41	253	⇓P	Pn	02 51 44.9	+0.7
JCH				eS	Sn	02 52 12.8	+0.2
JKK2	**Kamakawa 2**	2.75	282	⇓P	Pn	02 51 51.8	+2.9
JEM	**Erimo**	2.80	242		Pn	02 51 51.9	+2.4
ERM	**Erimo**	2.80	242	dePN	Pn	02 51 51.8	+2.3
ERM	**Erimo**	2.80	242		Pn	02 51 51.4	+1.9
JFR	**Furan**	2.84	267	⇓P	Pn	02 51 52.4	+2.3
JKA	**Kamikawa-asahi**	2.90	286	eP	Pn	02 51 54.5	+3.5
JKA	**Kamikawa-asahi**	2.90	286	Pn	Pn	02 51 54.0	+3.0
ASAJ	**Asahikawa**	2.91	286	P	Pn	02 51 54.5	+3.5
	comp=E,1µm,0.3s,baz=116,slow=11,SNR=2827						
ASAJ				S	Sn	02 52 30.2	+5.4
	comp=E,242nm,0.3s,baz=340,slow=29,SNR=9.9						
ASAJ	**Asahikawa**	2.91	286	⇓P	Pn	02 51 54.3	+3.3
JHR	**Hokuryu**	3.47	278	⇓P	Pn	02 52 02.3	+3.6
JSS	**Shosan**	3.50	289	⇓P	Pn	02 52 03.2	+4.2
JEW	**Eniwo**	3.72	263	Pn	Pn	02 52 04.0	+1.9
JWK2	**Keihoku**	3.81	302	⇓P	Pn	02 52 07.7	+4.4
JNB	**Noboribetsu**	4.09	259	⇓P	Pn	02 52 08.5	+1.3
YSS	**Yuzh-Sakhalins**	4.44	325	α iPN	Pn	02 52 15.1	+3.1
YSS				eS	Sn	02 53 05.2	+2.9
YSS				pmax	pmax		
	comp=Z,1µm,0.9s						
YSS				pmax	pmax		
	comp=Z,5µm,4.5s						
YSS				pmax	pmax		
	comp=N,5µm,5.6s						
YSS				pmax	pmax		
	comp=E,2µm,4.9s						
YSS				smax	smax		
	comp=N,3µm,0.8s						
YSS				smax	smax		
	comp=E,3µm,0.9s						
YSS				smax	smax		
	comp=N,11µm,2.4s						
YSS				smax	smax		
	comp=E,7µm,2.6s						
YSS				MLR	MLR		
	comp=Z,15µm,13.0s						
YSS				MLR	MLR		
	comp=N,10µm,14.0s						
YSS	**Yuzh-Sakhalins**	4.44	325	i P	Pn	02 52 15.0	+3.1
YSS				AMB	AMB	02 52 16.0	
	comp=N,1µm,0.9s						
YSS				AMB	AMB	02 52 17.0	
	comp=N,5µm,4.0s						
YSS				eS	Sn	02 53 05.0	+2.7
YSS				A	A	02 53 08.0	
	comp=N,3µm,0.9s						
YSS				A	A	02 53 08.0	
	comp=N,3µm,0.9s						
YSS				A	A	02 53 09.0	
	comp=N,11µm,2.5s						
YSS				A	A	02 53 09.0	
	comp=N,7µm,2.5s						
YSS				AMS	AMS	02 54 09.0	
	comp=N,10µm,14.0s						
YSS				AMS	AMS	02 54 09.0	
	comp=N,15µm,14.0s						
YSS	**Yuzh-Sakhalins**	4.44	325	Pn	Pn	02 52 14.3	+2.4
JARK	**Aomorirokkasho**	4.47	240	P	Pn	02 52 12.5	+0.2
JOT	**Ohata**	4.49	246	⇓P	Pn	02 52 13.2	+0.7
JTM	**Tenmabayashi**	4.78	239	Pn	Pn	02 52 16.8	+0.2
JTH	**Tanohata**	4.87	227	P	Pn	02 52 16.1	-1.7
JSI2	**Shiura 2**	5.06	245	P	Pn	02 52 21.1	+0.7
OFUJ	**Ofunato**	5.61	222	⇑P	Pn	02 52 26.1	-1.9
JKMT	**Kesennumamotoy**	5.92	221	⇑P	Pn	02 52 30.2	-1.9
JRG	**Rokugo**	5.92	230	P	Pn	02 52 31.6	-0.6
JIO	**Ouri**	6.26	220	P	Pn	02 52 34.4	-2.4
UGL	**Uglegorsk**	6.47	333	⇑iPN	Pn	02 52 43.8	+4.2
UGL				pmax	pmax		
	comp=Z,19µm,1.4s						
UGL				pmax	pmax		
	comp=Z,7µm,1.0s						
UGL				MLR	MLR		
	comp=Z,7µm,4.0s						
UGL				MLR	MLR		
	comp=N,7µm,6.5s						
UGL				MLR	MLR		
	comp=E,4µm,9.0s						
UGL	**Uglegorsk**	6.47	333	i P	Pn	02 52 43.0	+3.4
UGL				AMB	AMB	02 52 44.0	
	comp=E,19µm,1.4s						
UGL				AMB	AMB	02 52 45.0	
	comp=E,7µm,1.0s						
UGL				eS	Sn	02 53 50.0	-2.0
UGL				A	A	02 54 06.0	
	comp=E,18µm,3.0s						
UGL				A	A	02 54 06.0	
	comp=E,18µm,3.0s						
UGL				AMS	AMS	02 56 47.0	
	comp=E,7µm,7.0s						
UGL				AMS	AMS	02 56 47.0	
	comp=E,4µm,7.0s						
UGL				AMS	AMS	02 56 47.0	
	comp=E,7µm,7.0s						
JMM	**Marumori**	6.99	220		Pn	02 52 44.4	-2.5
JMST	**Minamisoumatoc**	7.07	219	⇑P	Pn	02 52 44.9	-2.9
TEY	**Ternei**	7.29	287	⇑ePN	Pn	02 52 54.0	+3.2
TEY				eS	Sn	02 54 13.6	+1.6
TEY				pmax	pmax		
	comp=Z,700nm,1.1s						
TEY				pmax	pmax		
	comp=E,410nm,0.9s						
TEY				pmax	pmax		
	comp=Z,380nm,0.9s						
TEY				pmax	pmax		
	comp=N,110nm,0.9s						
TEY				smax	smax		
	comp=N,2µm,7.1s						
TEY	**Ternei**	7.29	287	eP	Pn	02 52 54.0	+3.2
TEY				AMB	AMB	02 52 54.9	
	comp=N,380nm,0.9s						
TYV	**Tymovskoe**	7.93	342	ePN	Pn	02 53 03.1	+3.5
TYV				eS	Sn	02 54 30.8	+3.1
TYV				pmax	pmax		
	comp=Z,1µm,1.1s						
TYV				pmax	pmax		
	comp=Z,5µm,3.4s						
TYV				smax	smax		
	comp=E,3µm,4.0s						
TYV				smax	smax		
	comp=N,242nm,1.3s						
TYV				smax	smax		
	comp=E,187nm,1.3s						
TYV	**Tymovskoe**	7.93	342	eP	Pn	02 53 03.1	+3.5
TYV				AMB	AMB	02 53 03.9	
	comp=E,1µm,0.9s						
TYV				AMB	AMB	02 53 03.9	
	comp=E,5µm,3.4s						
TYV				eS	Sn	02 54 28.9	+1.2
TYV				A	A	02 54 31.0	
	comp=E,240nm,0.9s						
TYV				A	A	02 54 31.0	
	comp=E,186nm,0.9s						
TYV				A	A	02 54 31.0	
	comp=E,5µm,4.0s						
TYV				A	A	02 54 31.0	
	comp=E,3µm,4.0s						
TYV				AMS	AMS	02 56 05.0	
	comp=E,8µm,8.0s						
TYV				AMS	AMS	02 56 05.0	
	comp=E,5µm,8.0s						
TYV				AMS	AMS	02 56 05.0	
	comp=E,8µm,8.0s						
JSD	**Sado**	8.20	232	Pn	Pn	02 53 02.5	-0.9
JYT	**Yasato**	8.62	216	Pn	Pn	02 53 05.8	-3.2
JAG	**Ashikaga**	8.79	220	P	Pn	02 53 09.4	-2.0
MJB9	**Matsu-Tunnel**	9.31	226		Pn	02 53 17.7	-0.9
MAJO	**Matsushiro**	9.31	226	c iPN	Pn	02 53 17.7	-0.9
MAJO	**Matsushiro**	9.31	226		Pn	02 53 16.6	-1.9
MAT	**Matsushiro**	9.31	226	P	Pn	02 53 17.1	-1.5
MAT				S	Sn	02 54 56.2	-5.5
MJAR	**Matsushiro Arr**	9.31	226	P	Pn	02 53 18.1	-0.5
	comp=E,0.8nm,0.3s,baz=29,slow=13,SNR=40						
MJAR	**Matsushiro Arr**	9.31	226	Pn	Pn	02 53 16.9	-1.7
JNG	**Nsakai**	9.47	226	P	Pn	02 53 19.5	-1.3
SKR	**Severo-Kuril's**	9.83	39	ePN	Pn	02 53 24.6	-0.9
SKR				pmax	pmax		
	comp=Z,200nm,2.7s						
SKR				pmax	pmax		
	comp=Z,280nm,0.6s						
SKR				MLR	MLR		
	comp=N,2µm,15.0s						
SKR				MLR	MLR		
	comp=E,2µm,12.0s						
SKR	**Severo-Kuril's**	9.83	39	eP	Pn	02 53 26.0	+0.5
SKR				AMB	AMB	02 53 26.0	
	comp=E,200nm,3.0s						
SKR				AMB	AMB	02 53 29.0	
	comp=E,280nm,0.6s						
SKR				eS	Sn	02 55 09.7	-4.4
SKR				A	A	02 55 17.0	
	comp=E,757nm,0.6s						
SKR				A	A	02 55 17.0	
	comp=E,395nm,0.6s						
SKR				AMS	AMS	02 58 33.0	
	comp=E,2µm,15.0s						
SKR				AMS	AMS	02 58 33.0	
	comp=E,2µm,15.0s						
SKR				AMS	AMS	02 58 33.0	
	comp=E,1µm,15.0s						
GRNR	**Gornyy**	10.08	321	⇑iPN	Pn	02 53 32.1	+3.2
GRNR				eS	Sn	02 55 28.2	+7.9
GRNR				pmax	pmax		
	comp=E,40nm,1.0s						
GRNR				pmax	pmax		
	comp=N,50nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,60nm,1.0s						
GRNR				smax	smax		
	comp=N,800nm,0.8s						
GRNR				MLR	MLR		
	comp=E,2µm,14.0s						
GRNR				MLR	MLR		
	comp=N,2µm,17.0s						
GRNR				MLR	MLR		
	comp=Z,4µm,14.0s						
GRNR	**Gornyy**	10.08	321	eP	Pn	02 53 32.1	+3.2
GRNR				AMB	AMB	02 53 33.0	
	comp=Z,60nm,0.9s						
GRNR				AMS	AMS	02 57 50.0	
	comp=Z,2µm,16.0s						
GRNR				AMS	AMS	02 57 50.0	
	comp=Z,2µm,16.0s						
GRNR				AMS	AMS	02 57 50.0	
	comp=Z,4µm,16.0s						
OKH	**Okha**	10.45	348	c iPN	Pn	02 53 38.7	+4.8
OKH				pmax	pmax		
	comp=Z,2µm,11.5s						
OKH				MLR	MLR		
	comp=N,6µm,14.0s						
OKH				MLR	MLR		
	comp=E,8µm,15.0s						
OKH				MLR	MLR		
	comp=Z,5µm,15.0s						
OKH	**Okha**	10.45	348	eP	Pn	02 53 36.3	+2.4
OKH				AMB	AMB	02 53 40.6	
	comp=Z,740nm,0.8s						
OKH				AMS	AMS	02 58 42.0	
	comp=Z,6µm,15.0s						
OKH				AMS	AMS	02 58 42.0	
	comp=Z,8µm,15.0s						
OKH				AMS	AMS	02 58 42.0	
	comp=Z,5µm,15.0s						
JGF	**Kuroka**	10.48	225		Pn	02 53 33.6	-0.9
USA0B	**Ussuriysk Arra**	10.51	279	PN	Pn	02 53 35.8	+1.0
USA0B	**Ussuriysk Arra**	10.51	279	Pn	Pn	02 53 35.8	+1.0
USRK	**Ussuriysk Ar.**	10.51	279	P	Pn	02 53 36.4	+1.6
	baz=86,slow=14,SNR=173						
USRK	**Ussuriysk Ar.**	10.51	279		Pn	02 53 36.0	+1.2
NKL	**Nikolayevsk**	10.51	341	ePN	Pn	02 53 36.8	+2.0
NKL				eS	Sn	02 55 35.6	+4.9
NKL				pmax	pmax		
	comp=N,4.0nm,0.9s						
NKL				pmax	pmax		
	comp=E,4.0nm,0.9s						
NKL				pmax	pmax		
	comp=Z,2µm,1.2s						
NKL				MLR	MLR		
	comp=Z,2µm,13.0s						
NKL	**Nikolayevsk**	10.51	341	eP	Pn	02 53 37.1	+2.3

NKL				AMB	AMB	02 53 38.0	
	comp=Z,800nm,0.8s						
NKL				*e*S	**Sn**	**02 55 30.4**	**-0.3**
NKL				A	A	02 55 35.4	
	comp=Z,90nm,0.9s						
NKL				A	A	02 55 35.4	
	comp=Z,50nm,0.9s						
NKL				AMS	AMS	02 58 01.0	
	comp=Z,5µm,15.0s						
NKL				AMS	AMS	02 58 01.0	
	comp=Z,2µm,15.0s						
NKL				AMS	AMS	02 58 01.0	
	comp=Z,2µm,15.0s						
VLA	**Vladivostok**	**10.65**	**274**	*c i*PN	**Pn**	**02 53 38.2**	**+1.5**
JSG	**Sagara**	**10.81**	**219**		**Pn**	**02 53 38.8**	**-0.2**
INU	**Inuyama**	**10.85**	**226**	Pn	**Pn**	**02 53 38.5**	**-0.9**
JHJ	**Hachijo jima 2**	**11.50**	**209**	P	**Pn**	**02 53 46.1**	**-2.4**
	comp=Z,78nm,0.3s,baz=358,slow=3.7,SNR=12						
JHJ				S	Sn	02 55 44.2	-11
	comp=Z,147nm,0.3s,baz=73,slow=22,SNR=7.2						
KLR	**Kul'dur**	**11.74**	**305**	ScP	**ScP**	**03 03 00.1**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=304,slow=3.3,SNR=4.5						
JWT	**Wachi**	**11.77**	**230**		**Pn**	**02 53 50.9**	**-1.2**
MDJ	**Mudanjiang**	**12.22**	**282**	P	**Pn**	**02 53 59.0**	**+0.8**
MDJ				sP	P	02 54 17.0	+8.9
MDJ				S	**Sn**	**02 56 14.0**	**+1.4**
MDJ				pmax	pmax		
	comp=Z,430nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,650nm,7.2s						
MDJ				LR	LR		
	comp=Z,3µm,10.4s						
MDJ				LR	LR		
	comp=Z,1µm,10.5s						
MDJ				LR	LR		
	comp=Z,2µm,12.9s						
MDJ	**Mudanjiang**	**12.22**	**282**		**Pn**	**02 53 58.7**	**+0.4**
PEA0B	**Petropavlovsk-**	**12.27**	**34**	*de*PN	**Pn**	**02 53 57.4**	**-1.3**
PEA0B	**Petropavlovsk-**	**12.27**	**34**	Pn	**Pn**	**02 53 57.2**	**-1.5**
PETK	**Petropavlovsk-**	**12.27**	**34**	P	**Pn**	**02 53 57.8**	**-1.0**
	comp=Z,6.4nm,0.3s,baz=190,slow=5.9,SNR=100						
PETK				LR	LR	02 59 18.8	
	comp=Z,1µm,18.8s,baz=241,slow=40						
PETK	**Petropavlovsk-**	**12.27**	**34**		**Pn**	**02 53 56.8**	**-1.9**
PET	**Petropavlovsk**	**12.60**	**36**	*e*PN	**Pn**	**02 54 00.8**	**-2.4**
PET				pmax	pmax		
	comp=Z,800nm,4.5s						
PET				pmax	pmax		
	comp=Z,300nm,5.3s						
PET				pmax	pmax		
	comp=Z,245nm,1.2s						
PET				MLR	MLR		
	comp=Z,2µm,16.0s						
PET				MLR	MLR		
	comp=Z,1µm,16.0s						
PET	**Petropavlovsk**	**12.60**	**36**		**Pn**	**02 54 01.1**	**-2.1**
JMN	**Monobe**	**13.77**	**230**	Pn	**Pn**	**02 54 17.1**	**-1.9**
SEHB	**SEOHWA**	**14.70**	**256**	P	**Pn**	**02 54 30.9**	**-0.4**
	SNR=8.0						
KSIJA	**INJE**	**14.93**	**255**	P	**Pn**	**02 54 34.9**	**+0.7**
	SNR=5.6						
HWCB	**Hwacheon**	**15.13**	**256**	P	**Pn**	**02 54 38.0**	**+1.2**
	SNR=8.6						
CN2	**Changchun**	**15.24**	**279**	⇑*i*P	**Pn**	**02 54 36.8**	**-1.4**
CN2				pP	P	02 54 47.5	+5.9
CN2				sP	pP	02 54 59.5	+3.8
CN2				S	**Sn**	**02 57 22.8**	**-3.1**
CN2				pmax	pmax		
	comp=Z,250nm,0.7s						
CN2				pmax	pmax		
	comp=Z,400nm,3.0s						
CN2				LR	LR		
	comp=Z,1µm,10.0s						
CN2				LR	LR		
	comp=Z,1µm,10.0s						
CN2				LR	LR		
	comp=Z,2µm,10.0s						
KSRS	**Korea Array**	**15.31**	**254**	P	**Pn**	**02 54 39.0**	**0.0**
	comp=Z,0.9nm,0.3s,baz=60,slow=12,SNR=33						
KSRS				S	**Sn**	**02 57 33.2**	**+5.7**
	comp=Z,0.6nm,0.3s,baz=66,slow=24,SNR=4.2						
KSRS				LR	LR	03 00 06.0	
	comp=Z,814nm,20.1s,baz=68,slow=35						
KSRS				ScP	**ScP**	**03 03 07.6**	**0.0**
	baz=60,slow=1.7,SNR=5.9						
KSRS	**Korea Array**	**15.31**	**254**	*e*P	**Pn**	**02 54 39.0**	**0.0**
KS19	**Wonju Array Si**	**15.32**	**254**		**Pn**	**02 54 38.5**	**-0.8**
KSAR	**Wonju Array Be**	**15.34**	**254**	P	**Pn**	**02 54 37.5**	**-1.9**
KSAR	**Wonju Array Be**	**15.34**	**254**	Pn	**Pn**	**02 54 37.5**	**-1.9**
YNCB	**YEONCHEON**	**15.74**	**257**	P	**Pn**	**02 54 44.5**	**-0.1**
	SNR=17						
KSCPR	**CHUPUNGNYEONG**	**15.90**	**250**	P	**P**	**02 54 48.0**	**-1.0**
	SNR=6.4						
JNU	**Nakatsue**	**15.94**	**235**	P	**Pn**	**02 54 46.2**	**-0.9**
	comp=Z,1.1nm,0.3s,baz=38,slow=9.2,SNR=2.3						
JNU	**Nakatsue**	**15.94**	**235**	Pn	**Pn**	**02 54 45.6**	**-1.5**
OKCB	**Cheongsan-myeo**	**15.95**	**250**	P	**P**	**02 54 49.0**	**-0.5**
	SNR=5.7						
ZEA	**Zeya**	**16.36**	**316**	*ce*P	**Pn**	**02 54 52.1**	**-0.1**
ZEA				*e*S	**Sn**	**02 57 43.1**	**-10**
ZEA				pmax	pmax		
	comp=N,260nm,0.7s						
ZEA				pmax	pmax		
	comp=E,120nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,260nm,0.7s						
ZEA				pmax	pmax		
	comp=E,400nm,3.6s						
ZEA				pmax	pmax		
	comp=N,500nm,2.3s						
ZEA				pmax	pmax		
	comp=Z,700nm,3.8s						
ZEA				smax	smax		
	comp=E,900nm,7.4s						
ZEA				smax	smax		
	comp=N,1µm,5.7s						
ZEA				MLR	MLR		
	comp=E,2µm,14.0s						
ZEA				MLR	MLR		
	comp=N,2µm,15.0s						
ZEA				MLR	MLR		
	comp=Z,2µm,18.0s						
ZEA	**Zeya**	**16.36**	**316**	*e*P	**Pn**	**02 54 52.1**	**-0.1**
ZEA				AMB	AMB	02 54 57.8	
	comp=Z,260nm,0.7s						
ZEA				AMB	AMB	02 54 58.1	
	comp=Z,700nm,4.0s						
ZEA				AMS	AMS	03 01 37.1	
	comp=Z,2µm,16.0s						
ZEA				AMS	AMS	03 01 37.1	
	comp=Z,2µm,16.0s						
ZEA				AMS	AMS	03 01 37.1	
	comp=Z,2µm,16.0s						
MA2	**Magadan**	**16.44**	**8**	P	**Pn**	**02 54 52.2**	**-0.9**
MA2				pmax	pmax		
	comp=Z,238nm,1.0s						
MA2	**Magadan**	**16.44**	**8**	*e*P	**Pn**	**02 54 52.2**	**-0.9**
MA2	**Magadan**	**16.44**	**8**	Pn	**Pn**	**02 54 52.2**	**-0.9**
KBG	**Krutoberegovo**	**16.55**	**33**	*e*P	**Pn**	**02 54 49.9**	**-4.6**
JCJ	**Chichijima**	**16.61**	**193**	P	**Pn**	**02 54 54.1**	**-1.4**
	comp=Z,49nm,0.3s,baz=276,slow=23,SNR=4.7						
JCJ				S	Sn	02 57 44.0	-15
	comp=Z,35nm,0.3s,baz=297,slow=21,SNR=2.5						
JCJ	**Chichijima**	**16.61**	**193**	IAmb	IAmb	02 55 19.6	
	comp=Z,436nm,0.9s						
SNY	**Shenyang**	**16.92**	**273**	⇑P	**Pn**	**02 54 58.3**	**-0.9**
SNY				pP	**pP**	**02 55 08.5**	**-5.8**
SNY				S	**Sn**	**02 57 59.0**	**-7.5**
SNY				pmax	pmax		
	comp=Z,45nm,1.2s						
SNY				LR	LR		
	comp=Z,2µm,14.7s						
SNY				LR	LR		
	comp=Z,470nm,11.2s						
SNY				LR	LR		
	comp=Z,3µm,24.4s						
KSJEU	**Jeongeup**	**17.00**	**249**	P	**P**	**02 55 03.0**	**+1.9**
	SNR=8.5						
KSKWJ	**Gwangju**	**17.15**	**248**	P	**P**	**02 55 04.8**	**+2.0**
	SNR=8.5						
KSKWJ	**Gwangju**	**17.15**	**248**	P	**P**	**02 55 05.0**	**+2.2**
	SNR=8.5						
BOSB	**Boseong-gun**	**17.22**	**247**	P	**P**	**02 55 06.0**	**+2.4**
	SNR=8.0						
KOHB	**KOHEUNG**	**17.27**	**246**	P	**P**	**02 55 06.4**	**+2.3**
	SNR=5.7						
GOCB	**Gochang-gun**	**17.31**	**249**	P	**P**	**02 55 06.0**	**+1.5**
	SNR=10						
KSBAR	**Backryungdo**	**17.35**	**259**	P	**P**	**02 55 07.7**	**+2.8**
	SNR=14						
KSGBI	**Gyogryolbido**	**17.36**	**254**	P	**P**	**02 55 08.5**	**+3.4**
	SNR=6.3						
DACB	**Daecheong-do R**	**17.41**	**259**	P	**P**	**02 55 09.0**	**+3.3**
	SNR=7.0						
ANMD	**Anmado**	**17.70**	**250**	P	**P**	**02 55 11.0**	**+2.2**
	SNR=6.5						
DL2	**Dalian**	**19.21**	**265**	P	**Pn**	**02 55 26.5**	**-0.5**
DL2				pP	**pP**	**02 55 41.3**	**+1.6**
DL2				S	**S**	**02 58 58.8**	**-0.6**
DL2				pmax	pmax		
	comp=Z,560nm,1.2s						
DL2				pmax	pmax		
	comp=Z,2µm,4.0s						
DL2				LR	LR		
	comp=Z,2µm,9.1s						
DL2				LR	LR		
	comp=Z,1µm,8.3s						
DL2				LR	LR		
	comp=Z,1µm,16.7s						
HIA	**Hailar**	**19.32**	**297**	P	**P**	**02 55 25.4**	**-1.2**
HIA				pmax	pmax		
	comp=Z,207nm,0.9s						
HIA	**Hailar**	**19.32**	**297**	P	**P**	**02 55 25.4**	**-1.2**
SMY	**Shemya**	**20.59**	**53**	P	**P**	**02 55 39.6**	**-0.6**
SMY				pmax	pmax		
	comp=Z,889nm,1.0s						
SMY	**Shemya**	**20.59**	**53**	P	**P**	**02 55 39.6**	**-0.6**
YAK	**Yakutsk**	**21.16**	**338**	*c i*P	**P**	**02 55 42.2**	**-4.0**
YAK				*e*S	**S**	**02 59 30.7**	**-6.7**
YAK				*e*		02 59 43.6	
YAK				*e*		03 06 59.4	
YAK				pmax	pmax		
	comp=Z,517nm,1.0s						
YAK				pmax	pmax		
	comp=E,82nm,1.3s						
YAK				pmax	pmax		
	comp=N,112nm,1.3s						
YAK				smax	smax		
	comp=N,174nm,2.3s						
YAK				smax	smax		
	comp=E,634nm,2.5s						
YAK				MLR	MLR		
	comp=Z,2µm,17.0s						
YAK				MLR	MLR		
	comp=N,1µm,17.0s						
YAK				MLR	MLR		
	comp=E,1µm,14.0s						
YAK	**Yakutsk**	**21.16**	**338**	P	**P**	**02 55 41.7**	**-4.5**
YAK				IAmb	IAmb	02 55 46.3	
	comp=Z,393nm,0.8s						
JMZ	**Minamidaito 2**	**21.49**	**220**	P	**P**	**02 55 50.4**	**+0.4**
JOW	**Kunigami**	**22.15**	**228**	P	**P**	**02 55 58.0**	**+0.8**
	comp=Z,116nm,0.3s,baz=18,slow=12,SNR=6.3						
JOW				LR	LR	03 04 50.8	
	comp=Z,489nm,18.5s,baz=58,slow=37						
JOW	**Kunigami**	**22.15**	**228**	IAmb	IAmb	02 56 16.8	
	comp=Z,394nm,1.1s						
BJI	**Beijing**	**22.80**	**272**	P	**P**	**02 56 03.3**	**-0.7**
BJI				pP	**pP**	**02 56 17.5**	**-1.1**
BJI				S	**S**	**03 00 04.8**	**-3.0**
BJI				sS	Sn	03 00 26.5	-1.2
BJI				SS	**SnSn**	**03 00 51.3**	**+6.7**
BJI				pmax	pmax		
	comp=Z,540nm,0.8s						
BJI				pmax	pmax		
	comp=Z,1µm,3.2s						
BJI				LR	LR		
	comp=Z,760nm,20.0s						
BJI				LR	LR		
	comp=Z,1µm,20.4s						
BJI				LR	LR		
	comp=Z,2µm,18.7s						
BJT	**Baijiatuau**	**22.82**	**272**	P	**P**	**02 56 03.3**	**-0.8**
BJT				pmax	pmax		
	comp=Z,355nm,0.8s						
BJT	**Baijiatuau**	**22.82**	**272**	P	**P**	**02 56 03.3**	**-0.8**
BJT				IAmb	IAmb	02 56 05.5	
	comp=Z,355nm,0.8s						
JAGN	**Aguni-jima**	**22.91**	**229**	P	P	02 56 23.9	+19
SSE	**Sheshan**	**23.47**	**247**	P	**P**	**02 56 10.5**	**0.0**
SSE				sP	**sP**	**02 56 30.3**	**-4.0**
SSE				S	**S**	**03 00 19.8**	**+1.1**
SSE				pmax	pmax		
	comp=Z,230nm,3.7s						
SSE				LR	LR		
	comp=Z,520nm,12.6s						
AMKA	**Amchitka**	**23.47**	**59**	P	**P**	**02 56 10.4**	**+0.1**
TIA	**Tai'an**	**23.58**	**262**	⇑P	**P**	**02 56 11.3**	**-0.2**
TIA				S	**S**	**03 00 19.0**	**-1.5**
TIA				pmax	pmax		
	comp=Z,230nm,1.0s						
TIA				pmax	pmax		
	comp=Z,700nm,4.2s						
TIA				LR	LR		
	comp=Z,640nm,11.6s						
TIA				LR	LR		
	comp=Z,910nm,11.2s						
TIA				LR	LR		
	comp=Z,560nm,14.7s						
CIT	**Chita**	**23.61**	**303**	*e*P	**P**	**02 56 09.0**	**-2.7**
CIT				*e*		02 56 37.2	
CIT				*e*		02 56 47.4	
CIT				*e*		03 00 25.2	
CIT				pmax	pmax		
	comp=Z,790nm,1.7s						
NJ2	**Nanjing**	**24.49**	**252**	⇑P	**P**	**02 56 22.8**	**+3.1**
NJ2				pP	**pP**	**02 56 31.8**	**-4.2**
NJ2				sP	**sP**	**02 56 39.0**	**-5.2**
NJ2				PP	**PnPn**	**02 57 00.0**	**+5.9**
NJ2				S	**S**	**03 00 40.5**	**+5.4**
NJ2				ScP	**ScP**	**03 03 30.3**	**+1.2**
NJ2				PcS	**PcS**	**03 03 36.8**	**+0.2**
NJ2				pmax	pmax		
	comp=Z,78nm,1.2s						
NJ2				pmax	pmax		
	comp=Z,230nm,3.5s						
NJ2				LR	LR		
	comp=Z,2µm,17.4s						
NJ2				LR	LR		
	comp=Z,2µm,14.1s						
NJ2				LR	LR		
	comp=Z,1µm,15.3s						
BOD	**Bodaibo**	**24.86**	**317**	⇓*i*P	**P**	**02 56 19.7**	**-3.2**
BOD				pmax	pmax		
	comp=Z,223nm,1.6s						
JIKM	**Ikemajima**	**25.32**	**230**	P	P	02 56 45.9	+19
HHC	**Hu-ho-hao-te**	**25.91**	**276**	*e*P	**P**	**02 56 33.5**	**+0.8**
HHC				S	**S**	**03 00 56.0**	**-1.8**
HHC				pmax	pmax		
	comp=Z,360nm,1.4s						
HHC				pmax	pmax		
	comp=Z,2µm,6.8s						
HHC				LR	LR		
	comp=Z,1µm,11.4s						
HHC				LR	LR		
	comp=Z,1µm,11.8s						
HHC				LR	LR		
	comp=Z,760nm,11.6s						
TIY	**Taiyuan**	**26.36**	**269**	*e*P	**P**	**02 56 39.0**	**+2.3**
TIY				S	**S**	**03 01 09.5**	**+4.6**
TIY				pmax	pmax		
	comp=Z,280nm,1.0s						
BILL	**Bilibino**	**26.86**	**16**	*i* P	**P**	**02 56 36.4**	**-4.4**
BILL				*i* *PP	**pP**	**02 56 54.6**	**-2.6**
BILL				pmax	pmax		
	comp=Z,52nm,0.9s						
BILL				MLR	MLR		
	comp=Z,441nm,16.0s						
BILL	**Bilibino**	**26.86**	**16**	P	**P**	**02 56 38.4**	**-2.4**
BTO	**Baotou**	**27.10**	**277**	*e*P	**P**	**02 56 44.8**	**+1.4**
BTO				S	**S**	**03 01 21.0**	**+4.4**
BTO				LR	LR		
	comp=Z,4µm,12.4s						
BTO				LR	LR		
	comp=Z,3µm,12.2s						
ULN	**Ulaanbaatar**	**27.72**	**293**	*ce*P	**P**	**02 56 50.1**	**+1.1**
ULN				pmax	pmax		
	comp=Z,2µm,1.3s						
ULN	**Ulaanbaatar**	**27.72**	**293**	*e*P	**P**	**02 56 50.1**	**+1.1**
ULN	**Ulaanbaatar**	**27.72**	**293**	P	**P**	**02 56 49.8**	**+0.9**
SONM	**Songino Array**	**28.16**	**293**	P	**P**	**02 56 54.3**	**+1.4**
	comp=Z,1µm,0.9s,baz=89,slow=8.5,SNR=2901						
SONM				ScP	**ScP**	**03 03 40.2**	**+0.4**
	comp=Z,7.9nm,1.1s,baz=88,slow=5.2,SNR=5.1						
SONM				LR	LR	03 09 11.2	
	comp=Z,3µm,18.9s,baz=87,slow=38						
WHN	**Wuhan**	**28.50**	**254**	⇑P	**P**	**02 56 56.5**	**+0.7**
WHN				S	**S**	**03 01 35.8**	**-2.8**
WHN				pmax	pmax		
	comp=Z,300nm,1.0s						
WHN				LR	LR		
	comp=Z,3µm,13.9s						
WHN				LR	LR		
	comp=Z,2µm,13.4s						
WHN				LR	LR		
	comp=Z,3µm,29.2s						
H11N2	**WAKE ISLAND Hy**	**29.15**	**138**	T	T	03 27 53.4	
	baz=330,slow=76,SNR=1070						
H11N1	**WAKE ISLAND Hy**	**29.16**	**138**	T	T	03 27 58.1	
	baz=330,slow=76,SNR=884						
H11N3	**WAKE ISLAND Hy**	**29.16**	**138**	T	T	03 27 54.8	
	baz=330,slow=76,SNR=1335						
TPUB	**Ta-pu**	**29.25**	**235**	P	**P**	**02 57 02.1**	**-0.4**
TPUB				IAmb	IAmb	02 57 24.6	
	comp=Z,170nm,0.9s						
IRK	**Irkutsk**	**29.33**	**303**	*e*P	**P**	**02 57 01.1**	**-1.9**
IRK				pmax	pmax		
	comp=Z,231nm,0.2s						
TIK	**Tiksi**	**29.62**	**349**	*e*P	**P**	**02 57 05.9**	**+0.6**
TIXI	**Tiksi**	**29.63**	**349**	P	**P**	**02 57 01.2**	**-4.2**
	comp=Z,14nm,0.6s,baz=139,slow=7.4,SNR=34						
TIXI				ScP	**ScP**	**03 03 43.7**	**-0.2**
	comp=Z,6.0nm,0.9s,baz=164,slow=5.0,SNR=4.5						
TIXI				LR	LR	03 09 49.0	
	comp=Z,2µm,19.9s,baz=136,slow=38						
TIXI	**Tiksi**	**29.63**	**349**	⇓*e*P	**P**	**02 57 05.9**	**+0.5**
TIXI				pmax	pmax		
	comp=Z,37nm,1.2s						
TIXI				MLR	MLR		
	comp=Z,1µm,16.0s						
TIXI	**Tiksi**	**29.63**	**349**	P	**P**	**02 57 01.2**	**-4.2**
TLY	**Talaya**	**29.72**	**301**	P	**P**	**02 57 06.7**	**+0.2**
	comp=Z,37nm,0.8s,baz=105,slow=6.2,SNR=28						
TLY				LR	LR	03 10 01.1	
	comp=Z,2µm,18.4s,baz=88,slow=38						
TLY	**Talaya**	**29.72**	**301**	*c i*P	**P**	**02 57 05.9**	**-0.6**
TLY				*e*S	**S**	**03 02 01.2**	**+3.8**
TLY				pmax	pmax		
	comp=Z,254nm,1.3s						
TLY				MLR	MLR		
	comp=Z,4µm,12.0s						
TLY	**Talaya**	**29.72**	**301**	*e*P	**P**	**02 57 05.9**	**-0.6**
TLY	**Talaya**	**29.72**	**301**	P	**P**	**02 57 05.6**	**-0.9**
KNMB	**Chin-men Tao**	**29.77**	**240**	P	**P**	**02 57 05.3**	**-1.8**
KNMB				IAmb	IAmb	02 57 32.2	
	comp=Z,316nm,1.3s						
ZAK	**Zakamensk**	**30.00**	**299**	*e*P	**P**	**02 57 09.5**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,488nm,1.1s						
ZAK	**Zakamensk**	**30.00**	**299**	*e*P	**P**	**02 57 09.5**	**+0.4**
H11S1	**WAKE ISLAND Hy**	**30.10**	**139**	T	T	03 29 07.7	
	baz=330,slow=76,SNR=2150						
H11S3	**WAKE ISLAND Hy**	**30.10**	**139**	T	T	03 29 09.1	
	baz=330,slow=76,SNR=889						
H11S2	**WAKE ISLAND Hy**	**30.11**	**139**	T	T	03 29 15.3	
	baz=330,slow=76,SNR=2056						
XAN	**Xi'an**	**30.53**	**265**	P	**P**	**02 57 14.0**	**+0.1**
XAN				pmax	pmax		
	comp=Z,64nm,1.2s						
XAN				pmax	pmax		
	comp=Z,370nm,5.5s						
XAN				LR	LR		
	comp=Z,870nm,16.5s						
XAN				LR	LR		
	comp=Z,850nm,15.1s						
XAN				LR	LR		
	comp=Z,830nm,14.2s						
GAMB	**Gambell**	**31.30**	**35**	P	**P**	**02 57 21.3**	**+1.1**
	baz=249						
MOY	**Mondy**	**31.37**	**301**	*e*P	**P**	**02 57 21.2**	**0.0**
MOY				pmax	pmax		
	comp=Z,422nm,1.6s						
ENH	**Enshi**	**32.10**	**258**	P	**P**	**02 57 26.8**	**-0.9**
LZH	**Lanzhou**	**33.29**	**272**	⇑P	**P**	**02 57 39.3**	**+1.1**
LZH				pP	pP	02 57 53.0	-1.9
LZH				S	**S**	**03 02 51.3**	**-2.5**
LZH				sS	sS	03 03 19.0	-3.2
LZH				pmax	pmax		
	comp=Z,150nm,1.3s						
LZH				pmax	pmax		
	comp=Z,300nm,5.4s						
LZH				LR	LR		
	comp=Z,950nm,16.8s						
LZH				LR	LR		
	comp=Z,590nm,16.3s						
LZH				LR	LR		
	comp=Z,510nm,16.9s						
TNA	**Tin City**	**33.43**	**33**	P	**P**	**02 57 40.3**	**+1.4**
	baz=251,SNR=26						
TNA	**Tin City**	**33.43**	**33**	P	**P**	**02 57 40.1**	**+1.2**
ANM	**Nome**	**34.18**	**35**	P	**P**	**02 57 46.6**	**+1.2**
ANM				pmax	pmax		
	comp=Z,779nm,1.4s						
ANM	**Nome**	**34.18**	**35**	P	**P**	**02 57 47.1**	**+1.7**
	baz=255,SNR=22						
ANM	**Nome**	**34.18**	**35**	P	**P**	**02 57 46.5**	**+1.2**
GTA	**Gaotai**	**34.87**	**280**	⇑P	**P**	**02 57 52.5**	**+0.7**
GTA				pP	pP	02 58 06.3	-2.2
GTA				sP	sP	02 58 11.3	-5.3
GTA				S	**S**	**03 03 19.5**	**+1.5**
GTA				sS	sS	03 03 38.8	-7.7
GTA				ScP	**ScP**	**03 04 03.5**	**+1.0**
GTA				PcS	**PcS**	**03 04 11.5**	**+1.3**
GTA				SS	**SnSn**	**03 05 37.5**	**-0.8**
GTA				ScS	**ScS**	**03 08 05.5**	**-0.8**
GTA				pmax	pmax		
	comp=Z,71nm,1.1s						
GTA				pmax	pmax		
	comp=Z,600nm,5.6s						
GTA				LR	LR		
	comp=Z,410nm,18.2s						
GTA				LR	LR		
	comp=Z,510nm,18.9s						
GTA				LR	LR		
	comp=Z,670nm,17.8s						
CD2	**Chengdu**	**35.88**	**264**	P	**P**	**02 58 00.5**	**+0.1**
CD2				pP	pP	02 58 15.5	-1.7
CD2				S	**S**	**03 03 31.5**	**-1.9**
CD2				sS	sS	03 03 56.3	-5.7
CD2				pmax	pmax		
	comp=Z,210nm,0.9s						
CD2				pmax	pmax		
	comp=Z,380nm,5.3s						
CD2				LR	LR		
	comp=Z,990nm,10.8s						
CD2				LR	LR		
	comp=Z,570nm,9.8s						
CD2				LR	LR		
	comp=Z,820nm,10.0s						
RDOG	**Red Dog Mine**	**36.09**	**30**	P	P	02 58 09.0	+7.2
	baz=253						
GYA	**Guiyang**	**36.35**	**256**	⇑P	**P**	**02 58 05.5**	**+0.9**
GYA				pP	pP	02 58 23.0	+1.6
GYA				sP	sP	02 58 28.3	-1.1
GYA				PP	**PP**	**02 59 24.3**	**-4.1**
GYA				S	**S**	**03 03 37.3**	**-3.5**
GYA				ScS	**ScS**	**03 08 13.3**	**-1.4**
GYA				pmax	pmax		
	comp=Z,27nm,0.9s						
GYA				LR	LR		
	comp=Z,1µm,16.8s						
TGY	**Tagaytay City**	**36.48**	**225**	P	**P**	**02 58 06.4**	**+0.7**
	comp=Z,134nm,0.3s,baz=140,slow=1.6,SNR=5.3						
GCSA	**Galena City Sc**	**37.80**	**36**	P	**P**	**02 58 17.1**	**+0.8**
	baz=264,SNR=47						
PATS	**Pohnpei**	**37.85**	**161**	P	**P**	**02 58 17.7**	**+0.6**
TTA	**Tatalina**	**38.03**	**39**	P	**P**	**02 58 18.9**	**+0.6**
TTA				pmax	pmax		
	comp=Z,131nm,0.8s						
TTA	**Tatalina**	**38.03**	**39**	P	**P**	**02 58 19.8**	**+1.4**
	baz=267,SNR=61						
TTA	**Tatalina**	**38.03**	**39**	P	**P**	**02 58 18.9**	**+0.6**
TTA				IAmb	IAmb	02 58 24.4	
	comp=Z,131nm,0.8s						
SVW2	**Sparrevohn**	**38.17**	**42**	IAmb	IAmb	02 58 49.2	
	comp=Z,109nm,0.9s						
O18K	**Koktuh Hills**	**38.37**	**44**	P	**P**	**02 58 22.8**	**+1.6**

	baz=271						
O18K	Koktuh Hills	38.37	44	IAmb	IAmb	02 58 26.1	
	comp=Z,121nm,0.8s						
P18K	Big Mountain,	38.37	45	P	P	02 58 22.6	+1.4
	baz=272,SNR=28						
P18K	Big Mountain,	38.37	45	IAmb	IAmb	02 58 23.6	
	comp=Z,178nm,0.9s						
L19K	White Mountain	38.54	40	P	P	02 58 24.0	+1.5
	baz=269,SNR=23						
L19K	White Mountain	38.54	40	P	P	02 58 22.9	+0.4
L19K				IAmb	IAmb	02 58 52.1	
	comp=Z,112nm,1.2s						
N19K	Bonanza Creek	38.71	42	P	P	02 58 25.8	+1.7
	baz=271						
N19K	Bonanza Creek	38.71	42	IAmb	IAmb	02 58 53.8	
	comp=Z,112nm,0.9s						
M19K	Big River Lodg	38.75	40	P	P	02 58 26.0	+1.7
	baz=269						
M19K	Big River Lodg	38.75	40	IAmb	IAmb	02 58 53.5	
	comp=Z,91nm,1.1s						
O19K	Port Alsworth	38.80	43	P	P	02 58 26.2	+1.5
	baz=272,SNR=9.1						
K20K	Telida	38.93	38	P	P	02 58 27.4	+1.6
	baz=268						
K20K	Telida	38.93	38	IAmb	IAmb	02 58 28.6	
	comp=Z,112nm,0.9s						
J20K	Nowinta River	38.94	37	P	P	02 58 27.5	+1.7
	baz=267,SNR=83						
J20K	Nowinta River	38.94	37	P	P	02 58 27.0	+1.2
L20K	Farewell, AK	39.00	40	P	P	02 58 28.1	+1.7
	baz=269,SNR=20						
A21K	Barrow	39.10	25	P	P	02 58 27.3	+0.2
	baz=256,SNR=212						
A21K	Barrow	39.10	25	P	P	02 58 26.8	-0.3
QIZ	Qiongzhong	39.16	243	P	P	02 58 28.3	+0.1
QIZ				S	S	03 04 27.0	+3.8
QIZ				pmax	pmax		
	comp=Z,780nm,3.9s						
QIZ				LR	LR		
	comp=Z,680nm,16.2s						
QIZ				LR	LR		
	comp=Z,930nm,10.3s						
QIZ				LR	LR		
	comp=Z,710nm,17.7s						
Q19K	Cape Douglas,	39.21	45	P	P	02 58 28.7	+0.5
	baz=274,SNR=8.0						
Q19K	Cape Douglas,	39.21	45	IAmb	IAmb	02 58 30.0	
	comp=Z,162nm,0.8s						
IMAR	Indian Mountai	39.23	34	P	P	02 58 29.4	+1.1
NRIK	Noril'sk	39.34	331	P	P	02 58 28.1	-1.1
	comp=Z,33nm,0.8s,baz=130,slow=2.8,SNR=26						
NRIK				ScP	ScP	03 04 17.3	-1.2
	comp=Z,12nm,1.1s,baz=157,slow=4.2,SNR=3.7						
NRIK				LR	LR	03 16 35.0	
	comp=Z,518nm,19.0s,baz=94,slow=39						
NRIK	Noril'sk	39.34	331	P	P	02 58 27.1	-2.0
P19K	Oil Pt	39.38	44	P	P	02 58 31.5	+1.9
	baz=273						
OHAK	Old Harbor	39.55	48	P	P	02 58 31.3	+0.3
	baz=276						
OHAK	Old Harbor	39.55	48	P	P	02 58 31.0	0.0
OHAK				IAmb	IAmb	02 58 59.0	
	comp=Z,120nm,1.0s						
H21K	Melozitna Rive	39.59	35	P	P	02 58 32.8	+1.5
	baz=266						
O20K	Slope Mountain	39.66	43	P	P	02 58 33.0	+1.0
	baz=273,SNR=5.5						
CHUM	Lake Minchumin	39.73	37	P	P	02 58 34.4	+2.0
	baz=269						
PPLA	Purkeypile	39.78	39	P	P	02 58 35.0	+1.9
	baz=270						
CAST	Castle Rocks	39.83	38	P	P	02 58 35.0	+1.7
	baz=270						
CAST	Castle Rocks	39.83	38	P	P	02 58 34.8	+1.5
CAST				IAmb	IAmb	02 58 36.3	
	comp=Z,189nm,0.8s						
KDAK	Kodiak Island	39.86	47	P	P	02 58 33.1	-0.5
KDAK				pmax	pmax		
	comp=Z,241nm,1.0s						
KDAK	Kodiak Island	39.86	47	P	P	02 58 33.6	0.0
	baz=276						
KDAK	Kodiak Island	39.86	47	P	P	02 58 33.1	-0.5
I21K	Tanana	39.91	35	P	P	02 58 35.4	+1.5
	baz=268,SNR=36						
I21K	Tanana	39.91	35	IAmb	IAmb	02 58 37.1	
	comp=Z,169nm,1.0s						
KMI	Kunming	39.95	257	⇑P	P	02 58 35.8	+0.8
KMI				pP	pP	02 58 50.3	-1.7
KMI				sP	sP	02 58 54.3	-5.7
KMI				PP	PnPn	03 00 12.0	+0.1
KMI				S	S	03 04 34.5	-1.0
KMI				sS	sS	03 05 04.5	+0.1
KMI				SS	SS	03 07 24.5	-10
KMI				pmax	pmax		
	comp=Z,33nm,1.0s						
KMI				pmax	pmax		
	comp=Z,300nm,3.9s						
KMI				LR	LR		
	comp=Z,580nm,19.4s						
KMI				LR	LR		
	comp=Z,430nm,24.0s						
KMI				LR	LR		
	comp=Z,530nm,23.3s						
DGZ	Jazzator, Alta	40.18	300c	iP	P	02 58 38.4	+1.8
DGZ				pmax	pmax		
	comp=Z,786nm,1.3s						
BPAW	Bear Paw Mtn.	40.32	37	P	P	02 58 38.8	+1.5
	baz=270,SNR=38						
BPAW	Bear Paw Mtn.	40.32	37	IAmb	IAmb	02 58 40.0	
	comp=Z,76nm,0.8s						
CNPM	China Poot	40.40	44	IAmb	IAmb	02 58 40.2	
	comp=Z,109nm,0.9s						
MLY	Manley	40.43	36	P	P	02 58 39.9	+1.6
	baz=269						
MLY	Manley	40.43	36	IAmb	IAmb	02 58 43.1	
	comp=Z,87nm,0.9s						
DAV	Davao City (W)	40.55	213	LR	LR	03 14 16.7	
	comp=Z,572nm,21.0s,baz=42,slow=34						
TRF	Thorofare Moun	40.63	38	P	P	02 58 41.3	+1.2
	baz=271						
TRF	Thorofare Moun	40.63	38	IAmb	IAmb	02 58 45.9	
	comp=Z,83nm,0.8s						
CUT	Chulitna	40.68	40	P	P	02 58 41.1	+0.9
	baz=272,SNR=13						
CUT	Chulitna	40.68	40	IAmb	IAmb	02 59 09.9	
	comp=Z,194nm,1.0s						
COLD	Coldfoot	40.73	32	P	P	02 58 41.7	+1.1
	baz=267,SNR=144						
COLD	Coldfoot	40.73	32	P	P	02 58 41.0	+0.4
ZAA0	Zalesovo Array	40.83	307	P	P	02 58 41.0	-0.7
ZALV	Zalesovo Beam	40.83	307	P	P	02 58 41.0	-0.7
	comp=Z,414nm,1.0s,baz=75,slow=7.0,SNR=396						
ZALV				PcP	PcP	03 00 42.0	+0.8
	comp=Z,20nm,0.6s,baz=102,slow=2.1,SNR=3.8						
ZALV				LR	LR	03 17 12.3	
	comp=Z,806nm,19.7s,baz=78,slow=38						
ZALV				PKPPKP	P'P'df	03 30 55.8	-5.4
	comp=Z,2.1nm,1.0s,baz=298,slow=3.2,SNR=4.0						
ZALV	Zalesovo Beam	40.83	307	iP	P	02 58 41.0	-0.7
ZALV				pmax	pmax		
	comp=Z,419nm,1.0s						
ZALV	Zalesovo Beam	40.83	307	P	P	02 58 40.8	-0.8
RC01	Rabbit Creek A	41.01	42	P	P	02 58 43.8	+0.7
	baz=274,SNR=12						
RC01	Rabbit Creek A	41.01	42	IAmb	IAmb	02 59 11.6	
	comp=Z,150nm,1.0s						
I23K	Minto, Yukon-K	41.02	35	P	P	02 58 44.6	+1.6
	baz=270,SNR=88						
I23K	Minto, Yukon-K	41.02	35	IAmb	IAmb	02 58 46.2	
	comp=Z,152nm,0.8s						
TOLK	Toolik Lake Re	41.06	30	P	P	02 58 44.1	+0.7
	baz=266,SNR=102						
TOLK	Toolik Lake Re	41.06	30	IAmb	IAmb	02 58 45.0	
	comp=Z,144nm,0.8s						
O22K	Cooper Landing	41.07	43	P	P	02 58 44.1	+0.7
	baz=275,SNR=7.3						
NEA2	Nenana	41.15	36	P	P	02 58 45.4	+1.2
	baz=271,SNR=120						
MCK	McKinley	41.23	38	P	P	02 58 45.7	+0.9
	baz=272,SNR=44						
MCK	McKinley	41.23	38	IAmb	IAmb	02 59 13.6	
	comp=Z,271nm,1.2s						
SEW	Seward	41.24	43	P	P	02 58 45.1	+0.2
	baz=276						
SEW	Seward	41.24	43	P	P	02 58 44.7	-0.2
SEW				IAmb	IAmb	02 58 54.6	
	comp=Z,123nm,0.9s						
PMR	Palmer	41.26	41	P	P	02 58 44.9	-0.2
PMR				pmax	pmax		
	comp=Z,118nm,1.1s						
PMR	Palmer	41.26	41	P	P	02 58 45.7	+0.6
	baz=274,SNR=12						
PMR	Palmer	41.26	41	P	P	02 58 44.9	-0.2
PMR				IAmb	IAmb	02 59 13.5	
	comp=Z,118nm,1.1s						
RND	Reindeer	41.28	38	IAmb	IAmb	02 58 47.0	
	comp=Z,170nm,1.0s						
GHO	Glory Hole Cre	41.35	41	IAmb	IAmb	02 58 52.0	
	comp=Z,142nm,0.8s						
MDM	Murphy Dome	41.50	36	IAmb	IAmb	02 58 50.5	
	comp=Z,162nm,0.7s						
SLVN	Son La	41.57	252	P	P	02 58 47.9	-0.3
WRH	Wood River Hil	41.58	36	IAmb	IAmb	02 58 52.5	
	comp=Z,170nm,0.9s						
KNK	Knik Glacier	41.60	41	P	P	02 58 48.8	+0.9
	baz=275,SNR=20						
KNK	Knik Glacier	41.60	41	IAmb	IAmb	02 59 17.4	
	comp=Z,216nm,1.0s						
SML	Sawmill	41.62	40	P	P	02 58 49.0	+0.8
	baz=275,SNR=47						
H24K	Noodor Dome	41.63	34	P	P	02 58 49.7	+1.6
	baz=271						
TCOL	CIGO, UAF Yank	41.66	36	P	P	02 58 49.8	+1.5
	baz=272,SNR=36						
COLA	College	41.66	36c	iP	P	02 58 49.7	+1.4
COLA				pmax	pmax		
	comp=Z,234nm,0.9s						
COLA	College	41.66	36	P	P	02 58 49.5	+1.2
PWL	Port Wells	41.71	42	P	P	02 58 48.9	+0.1
	baz=276,SNR=11						
PWL	Port Wells	41.71	42	IAmb	IAmb	02 59 19.0	
	comp=Z,132nm,0.9s						
WMQ	Urumqi	41.78	292	eP	P	02 58 51.0	+1.4
WMQ				pP	pP	02 59 00.8	-5.9
WMQ				S	S	03 05 01.5	-0.4
WMQ				pmax	pmax		
	comp=Z,200nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,1µm,3.7s						
WMQ				LR	LR		
	comp=Z,2µm,13.5s						
WMQ				LR	LR		
	comp=Z,2µm,12.5s						
WMQ				LR	LR		
	comp=Z,860nm,24.1s						
POKR	Poker Plat Res	41.83	35	P	P	02 58 51.5	+1.7
	baz=272,SNR=171						
WAT6	Susitna Watana	41.84	39	P	P	02 58 50.4	+0.4
	baz=274,SNR=29						
DHY	Denali Highway	41.97	39	P	P	02 58 51.7	+0.7
	baz=274,SNR=7.8						
HDA	Harding Lake	42.07	36	P	P	02 58 51.9	+0.2
	baz=273,SNR=84						
HDA	Harding Lake	42.07	36	IAmb	IAmb	02 59 20.0	
	comp=Z,136nm,0.9s						
IL31		42.08	36	IAmb	IAmb	02 59 20.3	
	comp=Z,209nm,0.9s						
ILAR	Eielson Array	42.08	36	P	P	02 58 52.1	+0.4
	comp=Z,99nm,0.9s,baz=257,slow=6.5,SNR=400						
ILAR				ScP	ScP	03 04 28.0	-1.5
	comp=Z,2.6nm,1.0s,baz=250,slow=4.6,SNR=3.6						
ILAR				LR	LR	03 18 18.7	
	comp=Z,246nm,18.1s,baz=268,slow=39						
ILAR	Eielson Array	42.08	36	P	P	02 58 52.4	+0.6
SCM	Sheep Creek Mo	42.10	40	P	P	02 58 52.9	+0.9
	baz=276,SNR=8.6						
SCM	Sheep Creek Mo	42.10	40	IAmb	IAmb	02 59 20.5	
	comp=Z,273nm,1.2s						
GLI	Glacier Island	42.31	42	P	P	02 58 54.3	+0.6
	baz=277						
GLI	Glacier Island	42.31	42	IAmb	IAmb	02 59 20.7	
	comp=Z,103nm,1.0s						
ZSN	Zaisan	42.45	298c	iP	P	02 58 55.9	+0.9
ZSN				eS	S	03 05 11.4	-0.2
ZSN				pmax	pmax		
	comp=Z,160nm,1.0s						
ZSN				smax	smax		
	comp=E,144nm,3.0s						
M24K	Tolsona, Glenn	42.61	40	P	P	02 58 58.0	+1.8
	baz=276,SNR=11						
M24K	Tolsona, Glenn	42.61	40	IAmb	IAmb	02 59 25.9	
	comp=Z,219nm,0.9s						
J25K	Salcha River,	42.74	36	P	P	02 58 56.7	-0.5
	baz=274,SNR=37						
KLU	Klutina	42.80	41	P	P	02 58 58.9	+1.2
	baz=277,SNR=22						
KLU	Klutina	42.80	41	IAmb	IAmb	02 59 27.1	
	comp=Z,226nm,1.0s						
PAX	Paxson	42.84	39	P	P	02 59 00.2	+2.1
	baz=276,SNR=19						
BMAR	Burnt Mountain	42.91	32	P	P	02 59 00.5	+2.0
DIV	Divide	42.92	41	P	P	02 58 59.2	+0.5
DIV				IAmb	IAmb	02 59 01.0	
	comp=Z,184nm,1.0s						
RIDG	Independent Ri	43.05	37	P	P	02 58 59.7	+0.1
	baz=276,SNR=18						
HARP	HAARP	43.05	39	P	P	02 59 01.1	+1.4
	baz=277,SNR=20						
SCRK	Sand Creek	43.40	37	P	P	02 59 02.9	+0.3
	baz=276,SNR=115						
SCRK	Sand Creek	43.40	37	P	P	02 59 02.7	+0.2
SCRK				IAmb	IAmb	02 59 30.4	
	comp=Z,146nm,0.9s						
DOT	Dot Lake	43.40	37	IAmb	IAmb	02 59 31.4	
	comp=Z,80nm,0.8s						
N25K	Chitina, Valde	43.41	40	P	P	02 59 03.8	+1.1
	baz=278,SNR=12						
BMRM	Bremner River	43.51	41	P	P	02 59 04.8	+1.4
	baz=279,SNR=17						
BMRM	Bremner River	43.51	41	IAmb	IAmb	02 59 32.3	
	comp=Z,229nm,1.0s						
J26L	Joseph Creek	43.53	36	P	P	02 59 03.3	-0.2
	baz=276,SNR=49						
RAGM	Ragged Mountai	43.56	42	IAmb	IAmb	02 59 25.2	
	comp=Z,142nm,1.0s						
MENT	Mentasta	43.64	38	P	P	02 59 05.4	+1.0
MENT				IAmb	IAmb	02 59 22.1	
	comp=Z,87nm,0.8s						
L26K	Log Cabin Wild	43.80	38	P	P	02 59 07.3	+1.7
	baz=278,SNR=54						
L26K	Log Cabin Wild	43.80	38	IAmb	IAmb	02 59 08.6	
	comp=Z,166nm,0.9s						
VRDI	Verde Repeater	44.02	41	IAmb	IAmb	02 59 10.1	
	comp=Z,93nm,0.9s						
M26K	Nabesna, AK	44.05	39	P	P	02 59 09.6	+1.9
	baz=279,SNR=64						
M26K	Nabesna, AK	44.05	39	IAmb	IAmb	02 59 36.8	
	comp=Z,219nm,1.0s						
MCARA	McCarthy VSAT	44.20	41	P	P	02 59 10.5	+1.6
	baz=280,SNR=13						
MCARA	McCarthy VSAT	44.20	41	IAmb	IAmb	02 59 21.1	
	comp=Z,112nm,0.8s						
CRQE	Cirque	44.27	42	P	P	02 59 11.0	+1.4
	baz=280						
MK31	Makanchi Array	44.32	298c	iP	P	02 59 10.8	+0.7
MKAR	Makanchi Array	44.32	298	P	P	02 59 11.0	+0.9
	comp=Z,414nm,0.7s,baz=78,slow=8.7,SNR=1709						
MKAR				LR	LR	03 19 03.4	
	comp=Z,1µm,18.3s,baz=70,slow=38						
MKAR				PKPPKP	P'P'df	03 30 56.4	-0.4
	comp=Z,1.1nm,0.9s,baz=217,slow=5.9,SNR=3.7						
MKAR	Makanchi Array	44.32	298	P	P	02 59 10.4	+0.3
SEM	Semipalatinsk	44.44	303c	iP	P	02 59 11.2	0.0
SEM				pmax	pmax		
	comp=Z,479nm,0.8s						
L27K	Beaver Creek,	44.48	38	P	P	02 59 12.8	+1.7
	baz=279,SNR=113						
L27K	Beaver Creek,	44.48	38	IAmb	IAmb	02 59 14.1	
	comp=Z,150nm,0.8s						
BCAR	Beaver Creek A	44.50	38	P	P	02 59 12.6	+1.3
MAKZ	Makanchi	44.52	298	P	P	02 59 12.3	+0.6
MAKZ				pmax	pmax		
	comp=Z,555nm,0.9s						
MAKZ	Makanchi	44.52	298	P	P	02 59 12.3	+0.6
M27K	Edge Creek, AK	44.57	39	P	P	02 59 13.8	+1.8
	baz=280,SNR=37						
M27K	Edge Creek, AK	44.57	39	IAmb	IAmb	02 59 19.7	
	comp=Z,147nm,0.9s						
ISLE	Juniper Island	44.66	42	IAmb	IAmb	02 59 14.6	
	comp=Z,132nm,0.9s						
UBPT	Khong Chiam	44.74	244	P	P	02 59 13.6	-0.1
BARN	Barnard Glacie	44.90	41	IAmb	IAmb	02 59 17.3	
	comp=Z,176nm,1.1s						
MESA	MESA	44.94	42	P	P	02 59 16.7	+1.7
	baz=282						
MESA	MESA	44.94	42	IAmb	IAmb	02 59 17.6	
	comp=Z,124nm,0.7s						
YAH	Yahtse	45.00	42	IAmb	IAmb	02 59 18.2	
	comp=Z,183nm,0.9s						
BVCY	Beaver Creek	45.03	39	P	P	02 59 17.2	+1.7
	baz=280,SNR=22						
CTG	Chitna Glacier	45.07	41	P	P	02 59 17.4	+1.4
	baz=281,SNR=18						
CTGM	Chitina Glacie	45.08	41	IAmb	IAmb	02 59 18.6	
	comp=Z,242nm,1.2s						
TABL	Table Mountain	45.28	42	IAmb	IAmb	02 59 19.9	
	comp=Z,114nm,0.8s						
YUK3	Moose Creek	45.33	40	P	P	02 59 19.2	+1.1
	baz=281,SNR=22						
KURK	Kurchatov	45.33	304	P	P	02 59 18.4	+0.4
KURK				pmax	pmax		
	comp=Z,789nm,0.7s						
KURK	Kurchatov	45.33	304	eP	P	02 59 18.4	+0.4
KURK	Kurchatov	45.33	304	P	P	02 59 18.4	+0.4
MYLDM	Lahad Datu	45.35	221	P	P	02 59 19.5	+1.0
MYLDM				IAmb	IAmb	02 59 41.1	
	comp=Z,216nm,1.5s						
DAWY	Dawson	45.39	36	P	P	02 59 19.2	+0.9
	baz=280,SNR=44						
KURBB	Kurchatov Arra	45.42	304	P	P	02 59 18.9	+0.2
I29M	Ogilvie Camp,	45.63	35	P	P	02 59 21.6	+1.4
	baz=280,SNR=64						
SMPI	Sarmi	45.70	191	P	P	02 59 22.7	+1.5
	comp=Z,2µmcomp=Z,160nm,1.2s						
LSA	Lhasa	45.71	272	P	P	02 59 23.0	+1.1
LSA				pmax	pmax		
	comp=Z,290nm,1.0s						
LSA	Lhasa	45.71	272	P	P	02 59 22.9	+1.1
LSA	Lhasa	45.71	272	P	P	02 59 22.8	+1.0
LSA				pmax	pmax		
	comp=Z,84nm,1.1s						
LSA	Lhasa	45.71	272	P	P	02 59 22.8	+1.0
TNTI	Ternate	45.73	207	P	P	02 59 22.8	+1.4
	comp=Z,78nm,1.1s						
TNTI	Ternate	45.73	207	P	P	02 59 20.6	-0.8
PCA	Pinnacle	45.78	42	IAmb	IAmb	02 59 33.7	
	comp=Z,95nm,1.1s						
PINM	Pinnacle	45.78	42	P	P	02 59 22.7	+1.1
	baz=283						
KOHI	KOHIMA	45.81	265	⇑iP	P	02 59 22.4	+0.1
KOHI				IAmb	IAmb	02 59 35.5	
	comp=Z,53nm,0.5s						
JAY	Jayapura	45.97	188	P	P	02 59 23.6	+0.2
	comp=Z,80nm,1.0s,baz=329,slow=3.7,SNR=14						
JAY				LR	LR	03 16 17.4	
	comp=Z,163nm,19.9s,baz=21,slow=33						
SWI	Sorong	46.11	201	P	P	02 59 24.0	-0.4
	comp=Z,3µmcomp=Z,164nm,1.1s						
SIJI	Sorong	46.11	201	P	P	02 59 23.5	-1.0
	comp=Z,49nm,0.7s,baz=9.5,slow=10,SNR=41						
YUK4	Talbot Arm	46.27	40	P	P	02 59 27.1	+1.6
	baz=283						
YUK6	Outpost Mounta	46.50	41	P	P	02 59 28.9	+1.6
	baz=284						
CHTO	Chiang Mai	46.71	254	P	P	02 59 29.6	+0.4
CHTO				pmax	pmax		
	comp=Z,71nm,1.1s						
CHTO	Chiang Mai	46.71	254	P	P	02 59 29.6	+0.4
M30M	Minto, Yukon	46.84	38	P	P	02 59 31.8	+2.1
	baz=283,SNR=36						
HYT	Haines Junctio	46.93	41	P	P	02 59 33.0	+2.4
	baz=284						
CM31	Chiang Mai Arr	46.95	253	P	P	02 59 30.9	-0.1
CMAR	Chiang Mai Arr	46.95	253	P	P	02 59 32.5	+1.4
	comp=Z,3.4nm,0.6s,baz=37,slow=7.9,SNR=13						
CMAR				ScP	ScP	03 04 51.8	+1.7
	comp=Z,1.9nm,0.3s,baz=46,slow=6.4,SNR=1.6						
CMAR	Chiang Mai Arr	46.95	253	P	P	02 59 31.4	+0.4
INK	Inuvik	46.97	30	P	P	02 59 31.6	+1.0
	comp=Z,467nm,0.9s,baz=289,slow=7.3,SNR=1020						
INK	Inuvik	46.97	30	P	P	02 59 31.6	+1.0
	baz=281,SNR=464						
LBMI	Labuha	47.00	206	P	P	02 59 30.6	-0.8
	comp=Z,1µmcomp=Z,88nm,0.7s						
MAYO	Mayo, Yukon	47.01	37	P	P	02 59 33.1	+2.2
	baz=283						
GTOI	Gorontalo	47.44	213	P	P	02 59 33.9	-0.9
	comp=Z,632nmcomp=Z,27nm,0.8s						
PDGK	Podgornoye	47.47	294	P	P	02 59 35.0	0.0
TDK	Taldyqorghan	47.51	297	iP	P	02 59 36.0	+0.8
TDK				pmax	pmax		
	comp=Z,691nm,1.1s						
SHL	Shillong	47.52	266	P	P	02 59 35.2	-0.5
SHL				pmax	pmax		
	comp=Z,31nm,0.6s						
SHL	Shillong	47.52	266	P	P	02 59 35.2	-0.5
N31M	Braeburn, Yuko	47.57	39	P	P	02 59 37.5	+2.1
	baz=285,SNR=31						
RABL	Rabaul	47.62	172	P	P	02 59 36.9	+0.6
FAKI	Fak Fak	47.83	199	P	P	02 59 37.7	-0.2
	comp=Z,2µmcomp=Z,139nm,1.1s						
FAKI	Fak Fak	47.83	199	P	P	02 59 37.0	-0.9
FAKI				IAmb	IAmb	03 00 00.1	
	comp=Z,191nm,1.2s						
UZB	Uzynbulak	47.86	294c	iP	P	02 59 38.2	+0.1
UZB				iS	S	03 06 29.7	-0.3
UZB				pmax	pmax		
	comp=Z,87nm,1.0s						
UZB				smax	smax		
	comp=E,90nm,3.8s						
TOLI2	Tolitoli	47.92	216	P	P	02 59 37.7	-0.9
MRSI	Marisa	48.01	214	P	P	02 59 39.3	0.0
	comp=E,3µmcomp=E,257nm,1.0s						
M31M	Drury Creek, Y	48.02	38	P	P	02 59 40.6	+1.8
	baz=286,SNR=37						
TARA	Tarawa	48.03	143	P	P	02 59 38.9	-0.5
TARA				IAmb	IAmb	02 59 40.5	
	comp=Z,186nm,1.1s						
ARXS	Arharly	48.20	296	eP	P	02 59 41.2	+0.6
SATY	Saty	48.31	294c	iP	P	02 59 42.3	+0.8
SATY				eS	S	03 06 35.5	-0.8
SATY				pmax	pmax		
	comp=Z,162nm,1.5s						
SATY				smax	smax		
	comp=E,80nm,3.8s						
SKAG	Skagway	48.35	42	P	P	02 59 43.5	+2.1
	baz=287,SNR=6.4						
FARO	Faro, Yukon	48.48	38	P	P	02 59 44.0	+1.5
	baz=286,SNR=36						
SANI	Sanana	48.83	208	P	P	02 59 44.3	-1.2
	comp=E,3µmcomp=E,200nm,1.2s						
BESE	Bessie Mountai	48.86	43	IAmb	IAmb	02 59 48.4	
	comp=Z,92nm,1.1s						
A36M	Sachs Harbour	48.92	24	P	P	02 59 45.7	+0.2
	baz=285,SNR=152						
MPSI	Mapaga	48.99	216	P	P	02 59 46.0	-0.8
	comp=Z,986nmcomp=Z,53nm,1.4s						
LUWI	Luwuk	49.06	212	P	P	02 59 46.3	-1.0
	comp=Z,10µmcomp=Z,145nm,1.1s						
LUWI	Luwuk	49.06	212	IAmb	IAmb	03 00 15.0	
	comp=Z,159nm,1.2s						
SIT	Sitka	49.11	45	P	P	02 59 49.3	+2.1
	baz=289						
BRZS	Berezniki	49.16	305c	iP	P	02 59 48.6	+0.8
MDOK	Medeo	49.16	295	iP	P	02 59 48.7	+0.6
MDOK				eS	S	03 06 47.6	-0.8
JIS	Juneau Island	49.19	43	IAmb	IAmb	02 59 51.1	
	comp=Z,146nm,1.1s						
AAA	Alma-Ata	49.23	295c	iP	P	02 59 49.3	+0.8
AAA				pmax	pmax		
	comp=Z,335nm,0.8s						
AAA	Alma-Ata	49.23	295	eP	P	02 59 49.3	+0.8
TARG	Taragay, Kyrgy	49.28	293	IAmb	IAmb	02 59 52.1	
	comp=Z,83nm,1.0s						
KUU	Kurty	49.31	296c	iP	P	02 59 49.1	0.0
KUU				pmax	pmax		
	comp=Z,377nm,1.2s						
P33M	Teslin, Yukon	49.33	41	P	P	02 59 50.9	+1.9
	baz=288,SNR=40						
APSI	Ampana	49.39	214	P	P	02 59 49.4	-0.4
	comp=Z,2µmcomp=Z,160nm,1.2s						
BRVK	Borovoye	49.41	309	P	P	02 59 50.1	+0.5
BRVK				pmax	pmax		
	comp=Z,1µm,1.3s						
BRVK	Borovoye	49.41	309	eP	P	02 59 50.1	+0.5
BRVK	Borovoye	49.41	309	P	P	02 59 50.1	+0.5
TAPN	Taplejung	49.53	271	eP	P	02 59 52.1	+0.9
ODAN	Odare	50.04	271	eP	P	02 59 55.6	+0.5
ULHL	Ulahol	50.10	294	P	P	02 59 55.7	+0.5
	SNR=52						

TKM2	**Tokmak 2**	50.22	295	*i* P	P	02 59 56.8	+0.6
TKM2				pmax	pmax		
	comp=Z,267nm,0.9s						
BTLS	**Baital**	50.31	299	c *i*P	P	02 59 56.7	+0.2
BTLS				*e*S	S	03 07 02.2	-1.8
BTLS				pmax	pmax		
	comp=Z,137nm,1.3s						
OPA	**Opana**	50.55	97	P	P	02 59 58.4	-0.2
OPA				pmax	pmax		
	comp=Z,182nm,0.9s						
OPA	**Opana**	50.55	97	P	P	02 59 58.4	-0.2
RAMN	**Ramite**	50.57	272	*e*P	P	02 59 59.6	+0.6
	comp=Z,207nm,0.5s						
CHMS	**Chumysh**	50.74	296	P	P	03 00 00.8	+0.9
	SNR=8.3						
KBK	**Karagaybulak**	50.77	295	P	P	03 00 01.5	+1.2
	SNR=73						
CRAG	**Craig**	50.82	46	P	P	03 00 02.7	+2.5
	baz=292						
SBUM	**Sibu**	50.86	226	P	P	03 00 02.0	+1.0
WRAK	**Wrangell Islan**	50.87	45	P	P	03 00 02.9	+2.3
	baz=292						
WRAK	**Wrangell Islan**	50.87	45	P	P	03 00 02.1	+1.6
WRAK				IAmb	IAmb	03 00 23.0	
	comp=Z,69nm,1.1s						
FRU1	**Bishkek**	50.91	296	IAmb	IAmb	03 00 04.4	
	comp=Z,118nm,0.8s						
TGTN	**Hyland Airport**	50.98	38	P	P	03 00 03.3	+1.9
	baz=291,SNR=43						
KKN	**Kakani**	51.05	273	*e*P	P	03 00 03.2	+0.6
	comp=Z,448nm,1.0s						
AAK	**Ala-Archa**	51.08	296	*i* P	P	03 00 03.5	+1.0
	SNR=27						
AAK	**Ala-Archa**	51.08	296	c *i*P	P	03 00 03.2	+0.6
AAK				pmax	pmax		
	comp=Z,665nm,1.8s						
AAK	**Ala-Archa**	51.08	296	*e*P	P	03 00 03.2	+0.6
AAK	**Ala-Archa**	51.08	296	P	P	03 00 02.5	-0.1
AAK				IAmb	IAmb	03 00 04.8	
	comp=Z,94nm,0.9s						
PKI	**Pulchoki**	51.08	273	*e*P	P	03 00 03.2	+0.2
	comp=Z,506nm,1.2s						
PKIN	**Phulchoki**	51.09	273	*e*P	P	03 00 03.2	+0.3
DMN	**Daman**	51.28	273	*e*P	P	03 00 05.1	+0.7
	comp=Z,853nm,1.4s						
DLBC	**Dease Lake**	51.29	42	P	P	03 00 05.7	+1.9
	comp=Z,19nm,0.6s,baz=287,slow=6.1,SNR=58						
GKN	**Gorkha**	51.40	274	*e*P	P	03 00 05.5	+0.4
	comp=Z,62nm,0.4s						
KSH	**Kashi**	51.54	291	P	P	03 00 10.5	+4.5
KSH				pP	pP	03 00 27.5	+3.9
KSH				sP	sP	03 00 33.0	+1.5
KSH				PP	PP	03 02 13.3	+10
KSH				S	S	03 07 26.3	+4.9
KSH				sS	sS	03 07 52.0	+0.8
KSH				ScS	ScS	03 09 52.0	+2.1
KSH				SS	SS	03 11 00.5	+2.7
KSH				pmax	pmax		
	comp=Z,86nm,1.5s						
KSH				pmax	pmax		
	comp=Z,710nm,3.0s						
KSH				LR	LR		
	comp=Z,1µm,15.6s						
KSH				LR	LR		
	comp=Z,700nm,15.3s						
KSH				LR	LR		
	comp=Z,2µm,16.7s						
BKB	**Balikpapan**	51.75	219	P	P	03 00 06.8	-0.8
AML	**Almayashu**	51.84	295	*i* P	P	03 00 09.5	+1.0
	SNR=28						
DANN	**Dangsing**	51.84	275	*e*P	P	03 00 09.6	+1.0
	comp=Z,1µm,0.9s						
DIB	**Dawson Inlet,**	52.06	49	IAmb	IAmb	03 00 34.4	
	comp=Z,79nm,1.2s						
KOLN	**Koldanda**	52.28	274	*e*P	P	03 00 12.5	+0.7
	comp=Z,660nm,1.1s						
MTKI	**Muara Teweh, K**	52.41	221	P	P	03 00 12.5	-0.1
	comp=Z,115nm,1.4s						
WRGLY	**Wrigley**	52.43	35	P	P	03 00 13.8	+1.8
	baz=293,SNR=44						
PMG	**Port Moresby**	52.53	179	P	P	03 00 12.6	-0.7
PMG				pmax	pmax		
	comp=Z,80nm,1.2s						
PMG	**Port Moresby**	52.53	179	P	P	03 00 12.6	-0.7
PMG				IAmb	IAmb	03 00 14.9	
	comp=Z,80nm,1.2s						
PYUN	**Piuthan**	52.54	275	*e*P	P	03 00 14.5	+0.8
	comp=Z,754nm,1.1s						
KSM	**Kuching**	52.70	228	P	P	03 00 16.0	+1.3
KSM	**Kuching**	52.70	228	P	P	03 00 14.1	-0.6
KSM				IAmb	IAmb	03 00 36.1	
	comp=Z,160nm,1.1s						
RUBB	**Prince Rupert**	52.80	47	IAmb	IAmb	03 00 45.4	
	comp=Z,84nm,1.0s						
SPSI	**Sidrap Palu**	52.92	214	P	P	03 00 17.8	+1.5
	comp=Z,21nm,1.0s						
SAUI	**Saumlaki**	52.94	199	P	P	03 00 15.6	-0.8
	comp=Z,11µmcomp=Z,243nm,1.2s						
DZA	**Taraz**	53.02	297	*e*P	P	03 00 15.5	-1.4
SVE	**Sverdlovsk**	53.08	317	*d* *i*P	P	03 00 17.8	+0.8
SVE				pmax	pmax		
	comp=Z,2µm,1.1s						
SVE				MLR	MLR		
	comp=Z,1µm,15.0s						
GRNB	**Grenville Isla**	53.16	47	IAmb	IAmb	03 00 44.1	
	comp=Z,53nm,0.8s						
BNSI	**Bone**	53.18	214	P	P	03 00 18.9	+0.7
	comp=Z,1µmcomp=Z,68nm,1.3s						
KKAR	**Karatay Array**	53.45	298	P	P	03 00 20.4	+0.4
KKAR	**Karatay Array**	53.45	298	P	P	03 00 20.4	+0.4
SRIT	**Nakonsritamara**	53.52	244	IAmb	IAmb	03 00 42.3	
	comp=Z,145nm,1.3s						
POHA	**Pohakuloa**	53.56	97	P	P	03 00 21.9	+0.6
KAPI	**Kappang**	53.88	214	P	P	03 00 22.7	-0.6
KAPI				pmax	pmax		
	comp=Z,53nm,1.2s						
KAPI	**Kappang**	53.88	214	P	P	03 00 22.7	-0.6
KBKI	**Kotabaru**	53.89	219	P	P	03 00 22.4	-1.0
	comp=Z,65nm,1.1s						
HNR	**Honiara**	53.97	163	P	P	03 00 23.6	-0.3
	comp=Z,75nm,0.3s,baz=178,slow=20,SNR=6.5						
HNR				LR	LR	03 25 45.1	
	comp=Z,240nm,18.0s,baz=338,slow=38						
HNR	**Honiara**	53.97	163	P	P	03 00 24.5	+0.6
HNR				pmax	pmax		
	comp=Z,348nm,1.1s						
HNR	**Honiara**	53.97	163	P	P	03 00 24.5	+0.6
IUG	**Iuzhnay**	54.22	297	*e*P	P	03 00 26.0	+0.3
IUG				*e*S	S	03 07 59.3	+1.5
ARU	**Arti**	54.28	317	c *i*P	P	03 00 25.6	-0.2
ARU				*PP	pP	03 00 45.4	+1.9
ARU				*SP	sP	03 00 54.5	+3.2
ARU						03 01 26.4	
ARU				S	S	03 07 59.3	+1.3
ARU						03 10 04.2	
ARU				SS	SS	03 11 35.4	-4.7
ARU				pmax	pmax		
	comp=Z,2µm,1.1s						
ARU				MLR	MLR		
	comp=Z,1µm,16.0s						
ARU	**Arti**	54.28	317	P	P	03 00 25.4	-0.4
HOPEN	**Hopen**	54.84	346	*e*P	P	03 00 28.1	-1.4
BBB	**Bella Bella**	54.89	49	P	P	03 00 30.9	+0.7
BBB				IAmb	IAmb	03 00 51.9	
	comp=Z,69nm,1.1s						
NOR	**Nord**	54.95	357	*i* P	P	03 00 28.7	-1.6
SMLA	**Simla**	55.04	282	⇑*i*P	P	03 00 31.6	0.0
SMLA				*i* pP	pP	03 00 50.0	+0.7
DHRM	**DHARAMSHALA**	55.04	283	⇑*i*P	P	03 00 32.1	+0.2
DHRM				IAmb	IAmb	03 00 36.9	
	comp=Z,134nm,0.8s						
SPA0	**Spitsbergen Ar**	55.06	349	*e*P	P	03 00 30.9	-0.1
SPB2	**Spitsbergen Ar**	55.06	349	IAmb	IAmb	03 00 36.9	
	comp=Z,133nm,1.1s						
SPITS	**Spitsbergen Ar**	55.06	349	P	P	03 00 31.0	-0.1
	comp=Z,48nm,0.8s,baz=120,slow=17,SNR=9.8						
KBS	**Kingsbay**	55.07	350	P	P	03 00 30.3	-0.9
KBS				pmax	pmax		
	comp=Z,188nm,1.0s						
KBS	**Kingsbay**	55.07	350	*i* P	P	03 00 29.9	-1.3
KBS	**Kingsbay**	55.07	350	*e*P	P	03 00 29.7	-1.5
KBS	**Kingsbay**	55.07	350	P	P	03 00 30.3	-0.9
TAS	**Tashkent**	55.11	296	P	P	03 00 32.3	+0.3
TAS				pmax	pmax		
	comp=Z,218nm,1.1s						
TAS	**Tashkent**	55.11	296	P	P	03 00 32.3	+0.3
KULM	**Kulim**	55.34	240	P	P	03 00 34.0	0.0
KULM				IAmb	IAmb	03 00 55.2	
	comp=Z,130nm,1.0s						
BHK	**Bhakra**	55.42	283	⇑*i*P	P	03 00 35.3	+0.9
RES	**Resolute Bay**	55.47	16	P	P	03 00 34.4	+0.4
	comp=Z,419nm,0.6s,baz=317,slow=6.9,SNR=771						
GAR	**Garm**	55.61	294	P	P	03 00 35.1	-0.7
IPM	**Ipoh**	55.73	239	P	P	03 00 36.7	0.0
IPM				IAmb	IAmb	03 00 57.2	
	comp=Z,67nm,1.0s						
HSPB	**Hornsund (broa**	56.05	348	*e*P	P	03 00 38.2	0.0
HSPB				*e*L	L	03 10 16.8	
HSPB				*e*L	L	03 20 33.3	
	comp=Z,2µm,32.5s						
MYKOM	**Kota Tinggi**	56.12	235	P	P	03 00 39.0	-0.5
MYKOM				IAmb	IAmb	03 01 01.0	
	comp=Z,88nm,1.1s						
MMRI	**Maumere**	56.26	209	P	P	03 00 39.7	-0.7
	comp=Z,4µmcomp=Z,140nm,1.9s						
MMRI	**Maumere**	56.26	209	P	P	03 00 39.1	-1.4
MMRI				IAmb	IAmb	03 01 02.0	
	comp=Z,194nm,1.3s						
NDI	**New Delhi**	56.38	279	⇑*i*P	P	03 00 41.5	+0.2
YKA	**Yellowknife Ar**	56.39	33	P	P	03 00 41.4	+0.6
	comp=Z,68nm,0.9s,baz=307,slow=6.0,SNR=160						
NIL	**Nilore**	56.43	287	P	P	03 00 42.2	+0.6
NIL				pmax	pmax		
	comp=Z,646nm,1.5s						
NIL	**Nilore**	56.43	287	P	P	03 00 42.2	+0.6
AYAN	**Aya Nagar**	56.56	279	*e*P	P	03 00 42.4	-0.1
AYAN				*i* x	x	03 01 01.3	
EDFI	**Ende, Flores**	56.56	210	P	P	03 00 41.0	-1.7
	comp=Z,588nmcomp=Z,37nm,0.8s						
SOEI	**Soe**	56.61	206	P	P	03 00 43.2	+0.1
	comp=Z,2µmcomp=Z,137nm,1.1s						
AB31	**Akbulak array**	56.91	309	*i* P	P	03 00 45.5	+0.7
ABKAR	**Akbulak array**	56.91	309	P	P	03 00 45.6	+0.8
COEN	**Coen**	57.13	184	P	P	03 00 46.2	-0.4
KUDL	**Kundal**	57.21	279	*e*P	P	03 00 47.0	-0.2
AKTO	**Aktyubinsk**	57.41	311	P	P	03 00 48.5	+0.3
KIRV	**Kirov**	57.59	322	c *i*P	P	03 00 49.5	+0.2
PRGR	**Permogore**	57.61	326	*e*P	P	03 00 49.8	+0.4
PRGR				*e**SP	sP	03 01 14.7	-0.4
PRGR				pmax	pmax		
	comp=Z,1µm,0.9s						
OZB	**Mount Ozzard**	57.92	51	IAmb	IAmb	03 01 21.9	
	comp=Z,49nm,1.0s						
LVZ	**Lovozero**	57.94	336	c *i*P	P	03 00 51.2	-0.5
LVZ				pmax	pmax		
	comp=Z,471nm,1.3s						
LVZ	**Lovozero**	57.94	336	P	P	03 00 50.9	-0.9
TULEG	**Thule**	58.28	9	*i* P	P	03 00 52.0	-1.9
TULEG				IAmb	IAmb	03 00 54.6	
	comp=Z,1µm,2.4s						
APA	**Apatity**	58.52	336	⇓*i*P	P	03 00 54.4	-1.3
APA				*i*		03 01 20.1	
APA				*i* S	S	03 08 49.0	-4.6
APA				*i* PS	PnS	03 09 04.0	-11
APA				*i*		03 10 37.0	
APA				pmax	pmax		
	comp=Z,200nm,0.8s						
SRBI	**Singaraja**	58.56	217	P	P	03 00 57.3	+0.7
	comp=Z,195nm,1.5s						
KBL	**Kabul**	58.85	290	P	P	03 00 58.0	-0.8
KBL				pmax	pmax		
	comp=Z,111nm,0.8s						
KBL	**Kabul**	58.85	290	P	P	03 00 58.0	-0.8
KEV	**Kevo**	58.89	339	P	P	03 00 57.8	-0.4
KEV				pmax	pmax		
	comp=Z,329nm,0.8s						
KEV	**Kevo**	58.89	339	P	P	03 00 57.8	-0.4
NEEM	**North Greenlan**	58.96	4	*i* P	P	03 00 58.0	-1.0
BKNI	**Bangkinang**	58.97	236	P	P	03 00 59.8	+0.3
LLLB	**Lillooet**	59.06	48	IAmb	IAmb	03 01 30.0	
	comp=Z,68nm,0.9s						
HAMF	**Hammerfest**	59.10	341	*e*P	P	03 00 59.6	-0.1
ARA0	**ARCESS Array S**	59.43	339	*e*P	P	03 01 01.8	-0.2
ARCES	**ARCESS Array B**	59.43	339	P	P	03 01 01.6	-0.3
	comp=Z,173nm,0.8s,baz=52,slow=6.9,SNR=139						
ARCES				LR	LR	03 32 29.2	
	comp=Z,501nm,18.1s,baz=15,slow=42						
ARCES	**ARCESS Array B**	59.43	339	P	P	03 01 01.7	-0.3
BHPL	**Bhopal**	59.45	274	⇑*i*P	P	03 01 02.5	-0.4
BHPL				*i* pP	pP	03 01 20.6	-0.2
BHPL				*e*x	x	03 03 11.5	
AJM	**Ajmer**	59.52	279	⇑*i*P	P	03 01 03.8	+0.5
AJM				*i* x	x	03 01 21.4	
A04D	**Lummi Island**	59.61	50	P	P	03 01 04.8	+1.3
	baz=302						
NLWA	**Neilton Lookou**	59.66	52	IAmb	IAmb	03 01 34.8	
	comp=Z,66nm,0.9s						
DAG	**Danmarks Havn**	59.76	356	*i* P	P	03 01 03.6	-0.6
DAG				IAmb	IAmb	03 01 04.6	
	comp=Z,670nm,1.5s						
WISH	**Wishkah**	59.87	52	IAmb	IAmb	03 01 36.5	
	comp=Z,77nm,1.0s						
SMRI	**Semarang**	59.88	222	P	P	03 01 05.3	-0.4
D03D	**Eldon**	60.03	51	P	P	03 01 07.9	+1.4
	baz=303,SNR=17						
B05A	**Bryant**	60.20	50	P	P	03 01 08.5	+0.9
	baz=303,SNR=12						
E03A	**Lebam**	60.30	53	IAmb	IAmb	03 01 39.2	
	comp=Z,125nm,1.0s						
GSI	**Gunungsitoli**	60.35	240	P	P	03 01 09.1	0.0
KTK1	**Kautokeino**	60.37	340	*e*P	P	03 01 08.8	+0.3
B06A	**Marblemount**	60.40	50	IAmb	IAmb	03 01 39.0	
	comp=Z,65nm,1.0s						
D04E	**Lakebay**	60.41	52	P	P	03 01 11.3	+2.2
	baz=303						
KLMR	**Klimovskoe**	60.49	327	c *i*P	P	03 01 09.3	0.0
KLMR				*i* PPP	PPP	03 04 49.5	
KLMR				pmax	pmax		
	comp=Z,2µm,1.2s						
KLMR				pmax	pmax		
	comp=Z,1µm,1.2s						
KLMR	**Klimovskoe**	60.49	327	⇑*i*P	P	03 01 09.3	0.0
KLMR				⇓*i*P	P	03 01 09.3	0.0
KLMR				⇓*i*P	P	03 01 09.3	0.0
KLMR				AMP		03 01 11.0	
	comp=Z,1µm,1.2s						
KLMR				*i* PPP	PPP	03 04 49.5	
KLMR				LQ	LQ	03 22 58.4	
KLMR				LQ	LQ	03 22 58.4	
KLMR				LR	LR	03 25 39.6	
UGM	**Wanagama**	60.58	222	P	P	03 01 09.9	-0.7
JETT	**Jettan, Norway**	60.67	341	*e*P	P	03 01 12.0	+1.5
E04D	**Cinebar**	60.87	52	P	P	03 01 13.9	+1.8
	baz=304,SNR=19						
HEBO	**Mount Hebo**	60.91	54	IAmb	IAmb	03 01 44.2	
	comp=Z,91nm,0.9s						
TRO	**Tromso**	60.96	341	*e*P	P	03 01 12.8	+0.4
KNRA	**Kununurra**	60.97	200	P	P	03 01 12.9	-0.1
KNRA				IAmb	IAmb	03 01 13.8	
	comp=Z,85nm,1.0s						
MASI	**Maura Aman, Be**	61.02	233	P	P	03 01 13.4	-0.2
C06D	**Leavenworth**	61.06	50	P	P	03 01 14.9	+1.4
	baz=304						
BLSI	**Bandar Lampung**	61.16	229	P	P	03 01 14.7	+0.2
	comp=Z,199nm,0.4s						
G03D	**McMinnville, O**	61.20	54	P	P	03 01 16.2	+1.8
	baz=304						
F04A	**Amboy**	61.30	53	IAmb	IAmb	03 01 45.7	
	comp=Z,112nm,1.0s						
I02E	**Swisshome, OR**	61.47	55	P	P	03 01 18.1	+1.8
	baz=304						
COR	**Corvallis**	61.53	54	P	P	03 01 18.3	+1.6
COR				pmax	pmax		
	comp=Z,82nm,1.0s						
COR	**Corvallis**	61.53	54	P	P	03 01 18.3	+1.6
COR				IAmb	IAmb	03 01 48.7	
	comp=Z,82nm,1.0s						
SANVU	**Saraoutou**	61.54	157	P	P	03 01 16.2	-0.7
MNAI	**Manna**	61.60	231	P	P	03 01 18.1	+0.6
B08A	**Colville Reser**	61.69	49	IAmb	IAmb	03 01 29.4	
	comp=Z,45nm,0.8s						
BELG	**Belogornoye**	61.83	317	c *i*P	P	03 01 18.8	+0.2
BELG				pmax	pmax		
	comp=Z,266nm,1.5s						
KEBM	**Edson Butte**	61.87	56	IAmb	IAmb	03 01 50.3	
	comp=Z,104nm,1.0s						
F05D	**White Salmon**	61.88	52	P	P	03 01 20.7	+1.7
	baz=304,SNR=11						
H04D	**Lebanon**	61.90	54	P	P	03 01 21.1	+1.9
	baz=304						
BUCK	**Buck Mountain**	61.94	55	IAmb	IAmb	03 01 50.9	
	comp=Z,50nm,0.9s						
JASL	**Jaisalmer**	61.94	282	*e*P	P	03 01 20.1	+0.4
J01E	**Myrtle Point**	61.95	56	P	P	03 01 21.4	+1.9
	baz=304,SNR=9.2						
I03D	**Drain, OR**	62.00	55	P	P	03 01 21.8	+2.0
	baz=304,SNR=12						
EDM	**Edmonton**	62.01	42	IAmb	IAmb	03 01 31.2	
	comp=Z,125nm,1.0s						
HOOD	**Mount Hood Mea**	62.09	53	P	P	03 01 21.3	+0.7
DBG	**Daneborg**	62.27	356	*i* P	P	03 01 20.0	-1.2
HYB	**Hyderabad**	62.27	268	*i* P	P	03 01 21.5	-0.6
	comp=Z,100nm,1.0s						
HYB				*e*pP	pP	03 01 40.0	-0.2
HYB	**Hyderabad**	62.27	268	*e*P	P	03 01 22.3	+0.2
HYB				IAmb	IAmb	03 01 23.9	
	comp=Z,89nm,1.1s						
HYB				*i* x	x	03 01 55.0	
KBO	**Bosley Butte**	62.31	57	IAmb	IAmb	03 01 54.0	
	comp=Z,119nm,1.1s						
G05D	**Wamic, OR**	62.33	53	P	P	03 01 23.7	+1.6
	baz=305,SNR=13						
K02D	**Willamette Mer**	62.38	56	P	P	03 01 24.1	+1.5
	baz=305,SNR=18						
E07A	**Sunnyside**	62.41	51	IAmb	IAmb	03 01 44.7	
	comp=Z,71nm,1.0s						
I04A	**Tendick Farm,**	62.51	55	P	P	03 01 24.7	+1.4
	baz=305,SNR=21						
C09A	**Chrisman Ranch**	62.59	49	IAmb	IAmb	03 01 35.3	
	comp=Z,50nm,0.9s						
D08A	**Wollman Farm,**	62.66	50	IAmb	IAmb	03 01 45.2	
	comp=Z,49nm,0.9s						
HAWA	**Hanford**	62.69	51	IAmb	IAmb	03 01 54.1	
	comp=Z,64nm,1.0s						
L02E	**Cave Junction**	62.72	57	P	P	03 01 26.5	+1.8
	baz=305,SNR=9.1						
F07A	**Phinny Hill Vi**	62.75	52	IAmb	IAmb	03 01 55.7	
	comp=Z,108nm,0.9s						
I05D	**Terrebonne, OR**	62.83	54	P	P	03 01 26.9	+1.4
	baz=305,SNR=14						
E08A	**Dider Farm, El**	62.90	51	IAmb	IAmb	03 01 55.8	
	comp=Z,56nm,1.0s						
N2IH	**Innhavet**	62.94	341	*e*P	P	03 01 24.9	-0.8
NEW	**Newport**	62.95	48	P	P	03 01 26.9	+0.8
	comp=Z,26nm,0.9s,baz=305,slow=6.2,SNR=37						
NEW	**Newport**	62.95	48	P	P	03 01 26.9	+0.8
	baz=306,SNR=41						
NEW	**Newport**	62.95	48	P	P	03 01 26.8	+0.6
NEW				IAmb	IAmb	03 01 47.8	
	comp=Z,76nm,1.0s						
J04D	**Umpqua Nationa**	63.00	55	P	P	03 01 28.6	+1.8
	baz=305,SNR=7.2						
N2VI	**Vinje**	63.06	342	*e*P	P	03 01 24.7	-1.8
UPNV	**Upernavik**	63.08	7	*i* P	P	03 01 25.0	-1.5
STEI	**Steigen**	63.13	341	*e*P	P	03 01 27.0	0.0
CTAO	**Charters Tower**	63.15	180	P	P	03 01 27.1	-0.5
CTAO				pmax	pmax		
	comp=Z,126nm,1.3s						
CTAO	**Charters Tower**	63.15	180	P	P	03 01 27.1	-0.5
CTAO				IAmb	IAmb	03 01 28.3	
	comp=Z,126nm,1.2s						
LOF	**Lofoten**	63.36	342	*e*P	P	03 01 28.0	-0.5
PINE	**Pine Mountain**	63.38	54	IAmb	IAmb	03 01 60.0	
	comp=Z,65nm,0.9s						
KHMM	**Horse Mountain**	63.38	58	IAmb	IAmb	03 02 00.7	
	comp=Z,79nm,1.1s						
L04D	**Klamath Falls**	63.48	56	P	P	03 01 31.4	+1.5
	baz=306,SNR=37						
J05D	**Fort Rock, OR**	63.50	55	P	P	03 01 31.6	+1.6
	baz=306,SNR=42						
N2ST	**Straumen**	63.51	341	*e*P	P	03 01 29.7	+0.3
YBH	**Yreka Blue Hor**	63.51	57	P	P	03 01 31.1	+1.1
	comp=Z,23nm,1.0s,baz=323,slow=2.0,SNR=61						
HRA	**Herat**	63.55	293	IAmb	IAmb	03 01 32.1	
	comp=Z,70nm,0.8s						
FAUS	**Fauske**	63.56	341	*e*P	P	03 01 30.1	+0.4
K04D	**Chiloquin, OR**	63.57	55	P	P	03 01 32.1	+1.6
	baz=306,SNR=6.8						
M02C	**Callahan**	63.62	57	P	P	03 01 32.6	+1.8
	baz=306,SNR=20						
NBB08	**Skaug oppvekst**	63.70	341	*e*P	P	03 01 31.1	+0.4
WB0	**Warramunga Arr**	63.80	193	IAmb	IAmb	03 01 32.2	
	comp=Z,165nm,1.1s						
NBB28	**Valnes**	63.90	341	*e*P	P	03 01 32.7	+0.6
N02D	**Trinity Center**	63.95	57	P	P	03 01 34.7	+1.7
	baz=306,SNR=27						
WR0	**Warramunga Arr**	63.97	193	IAmb	IAmb	03 01 33.4	
	comp=Z,136nm,1.2s						
WRAB	**Tennant Creek**	63.97	193	P	P	03 01 32.0	-1.0
WRAB				pmax	pmax		
	comp=Z,166nm,1.2s						
WRAB	**Tennant Creek**	63.97	193	P	P	03 01 32.0	-1.0
WRAB				IAmb	IAmb	03 01 57.3	
	comp=Z,166nm,1.1s						
WB2	**Warramunga Arr**	63.98	193	IAmb	IAmb	03 01 33.5	
	comp=Z,156nm,1.1s						
WRA	**Warramunga Arr**	63.98	193	P	P	03 01 32.0	-1.2
	comp=Z,80nm,1.0s,baz=12,slow=7.1,SNR=217						
WRA				LR	LR	03 28 32.8	
	comp=Z,31nm,20.4s,baz=5.0,slow=35						
WRA				PKP2bc		03 30 31.2	
	comp=Z,2.1nm,0.8s,baz=192,slow=3.0,SNR=8.4						
WRA	**Warramunga Arr**	63.98	193	*i* P	P	03 01 32.0	-1.2
WRA				pmax	pmax		
	comp=Z,79nm,1.0s						
WRA	**Warramunga Arr**	63.98	193	P	P	03 01 31.9	-1.2
M04C	**Macdoel**	64.01	56	P	P	03 01 34.8	+1.3
	baz=306,SNR=49						
K05A	**Summer Lake**	64.03	55	IAmb	IAmb	03 02 04.8	
	comp=Z,121nm,1.0s						
NBB05	**Inndyr**	64.13	341	*e*P	P	03 01 34.1	+0.5
GEYT	**Alibeck**	64.19	299	P	P	03 01 35.1	+0.6
	comp=Z,44nm,0.7s,baz=43,slow=2.8,SNR=53						
GEYT				LR	LR	03 32 10.8	
	comp=Z,2µm,18.6s,baz=250,slow=38						
GEYT	**Alibeck**	64.19	299	P	P	03 01 35.1	+0.6
GYA0B	**ALIBECK ARRAY**	64.19	299	P	P	03 01 34.6	0.0
GYA0B				IAmb	IAmb	03 01 36.4	
	comp=Z,103nm,1.1s						
NBB30	**Finnes**	64.25	341	*e*P	P	03 01 34.4	+0.1
SUMG	**Summit**	64.30	2	P	P	03 01 35.5	+0.4
SUMG				pmax	pmax		
	comp=Z,2µm,1.4s						
SUMG	**Summit**	64.30	2	⇑*i*P	P	03 01 36.2	+1.1
SUMG				IAmb	IAmb	03 01 37.0	
	comp=Z,389nm,0.8s						
SUMG	**Summit**	64.30	2	P	P	03 01 35.5	+0.4
NBB17	**Glomfjord B¥r**	64.32	341	*e*P	P	03 01 34.9	+0.1
O02D	**Mt. Diablo Mer**	64.37	58	P	P	03 01 37.4	+1.7
	baz=306,SNR=26						
MOS	**Moscow**	64.46	324	*e*P	P	03 01 31.3	-4.6
MOS				*e**PP	pP	03 01 53.2	-0.9
MOS				*e*		03 02 06.4	
MOS				*e*S	S	03 10 04.6	-4.5
MOS				*e*		03 11 19.7	
MOS				pmax	pmax		
	comp=Z,2µm,2.0s						
MOS				pmax	pmax		
	comp=Z,1µm,1.5s						
MOS				MLR	MLR		
	comp=Z,700nm,18.0s						
XMAS	**Kiritimati**	64.47	113	P	P	03 01 37.8	+1.2
XMAS				IAmb	IAmb	03 01 38.9	
	comp=Z,154nm,1.1s						
NUUG	**Nuugaatsiaq**	64.54	7	*i* P	P	03 01 34.8	-1.3
NBB13	**Alf Garage**	64.62	341	*e*P	P	03 01 37.0	+0.2
PUL	**Pulkovo**	64.68	330	*e*P	P	03 01 37.9	+0.6
PUL	**Pulkovo**	64.68	330	c *i*P	P	03 01 37.9	+0.6
PUL				pmax	pmax		
	comp=Z,1µm,0.9s						
PUL	**Pulkovo**	64.68	330	*e*P	P	03 01 37.9	+0.6
MOR8	**Moi Rana**	64.73	341	*e*P	P	03 01 36.7	-0.9
KONS	**Konsvik**	64.78	341	*e*P	P	03 01 37.4	-0.4
NBB40	**Tonnes**	64.79	341	*e*P	P	03 01 38.7	+0.9
O03E	**Paynes Creek**	64.91	58	P	P	03 01 40.1	+0.8
	baz=306,SNR=33						
STOK	**Stokkvaagen**	64.94	341	*e*P	P	03 01 39.5	+0.7
FIA1	**FINESS Array S**	64.98	333	P	P	03 01 39.3	+0.1
FINES	**FINESS Array B**	64.98	333	P	P	03 01 39.2	0.0
	comp=Z,481nm,0.8s,baz=46,slow=6.3,SNR=430						
FINES				LR	LR	03 34 01.3	
	comp=Z,755nm,18.8s,baz=56,slow=40						
POO	**Poona**	64.99	272	⇑*i*P	P	03 01 39.9	-0.1
XMIS	**Christmas Isla**	65.23	225	P	P	03 01 40.2	-1.2
XMIS				IAmb	IAmb	03 02 01.5	
	comp=Z,143nm,1.2s						

OBN	Obninsk	65.33	324	⇑P	P	03 01 41.7	+0.1
OBN	Obninsk	65.33	324c	iP	P	03 01 41.6	+0.1
OBN				i		03 02 11.4	
OBN				i		03 04 03.5	
OBN				pmax	pmax		
	comp=Z,167nm,5.7s						
OBN				MLR	MLR		
	comp=Z,879nm,16.0s						
OBN	Obninsk	65.33	324	eP	P	03 01 41.6	+0.1
OBN	Obninsk	65.33	324	P	P	03 01 41.3	-0.2
PLID	Pearl Lake	65.46	51	IAmb	IAmb	03 02 04.5	
	comp=Z,74nm,1.0s						
VRH	Novokhopyorsk	65.47	318	eP	P	03 01 42.6	+0.1
VRH				pmax	pmax		
	comp=Z,420nm,1.0s						
KAD	Karad	65.53	271	eP	P	03 01 43.3	-0.2
MSO	Missoula	65.53	48	P	P	03 01 43.9	+0.7
	baz=308,SNR=41						
MSO	Missoula	65.53	48	IAmb	IAmb	03 02 13.2	
	comp=Z,81nm,0.9s						
LPSR	Galich'ya Gora	65.91	320	eP	P	03 01 45.3	0.0
LPSR				pmax	pmax		
	comp=Z,400nm,0.9s						
SCO	Scoresbysund	66.14	356	iP	P	03 01 46.0	-0.5
FFC	Flin Flon	66.29	36	P	P	03 01 47.9	+0.1
FFC				pmax	pmax		
	comp=Z,87nm,1.0s						
FFC	Flin Flon	66.29	36	P	P	03 01 47.9	+0.1
FFC				IAmb	IAmb	03 01 56.9	
	comp=Z,87nm,1.0s						
FCC	Fort Churchill	66.59	30	P	P	03 01 49.8	+0.2
FCC				pmax	pmax		
	comp=Z,83nm,0.8s						
FCC	Fort Churchill	66.59	30	P	P	03 01 49.8	+0.2
FCC				IAmb	IAmb	03 01 55.6	
	comp=Z,83nm,0.8s						
MPK	Martis Peak	66.60	58	IAmb	IAmb	03 02 13.0	
	comp=Z,79nm,0.9s						
LIFNC	LIFOU	66.63	159	P	P	03 01 51.2	+1.0
NSS	Namsos	66.67	340	eP	P	03 01 50.0	0.0
VSR	Storozhevoye	66.70	319	eP	P	03 01 50.6	+0.2
VSR				pmax	pmax		
	comp=Z,250nm,0.6s						
EMB	Emerald Bay	66.75	58	IAmb	IAmb	03 02 22.5	
	comp=Z,107nm,1.0s						
VORD	Divnogorie	66.80	319	eP	P	03 01 51.2	+0.2
VORD				pmax	pmax		
	comp=Z,330nm,1.2s						
VSU	Vasula	66.92	330	eP	P	03 01 52.6	+1.0
VSU	Vasula	66.92	330c	iP	P	03 01 52.2	+0.5
GOA	Goa	66.97	270	eP	P	03 01 53.1	+0.5
ILULI	Ilulissat	66.98	7	iP	P	03 01 51.4	-0.5
ILULI	Ilulissat	66.98	7	IAmb	IAmb	03 01 54.1	
	comp=Z,171nm,0.9s						
PNTR	Pine Nut	66.99	58	IAmb	IAmb	03 02 18.1	
	comp=Z,83nm,1.1s						
EGMT	Eagleton	67.00	45	P	P	03 01 53.1	+0.5
	baz=310,SNR=26						
EGMT	Eagleton	67.00	45	IAmb	IAmb	03 02 14.2	
	comp=Z,147nm,0.9s						
SAO	San Andreas Ge	67.26	60	P	P	03 01 55.7	+1.5
SAO				pmax	pmax		
	comp=Z,12nm,0.9s						
SAO	San Andreas Ge	67.26	60	P	P	03 01 55.7	+1.5
YERR	Yerington	67.28	57	IAmb	IAmb	03 02 16.8	
	comp=Z,76nm,1.0s						
HLID	Hailey	67.30	51	P	P	03 01 55.4	+0.8
	baz=309,SNR=48						
MSVF	Nonsavu	67.36	147	P	P	03 01 56.2	+1.2
MSVF				pmax	pmax		
	comp=Z,68nm,1.0s						
MSVF	Nonsavu	67.36	147	P	P	03 01 56.2	+1.2
PALK	Pallekele	67.48	258	P	P	03 01 56.4	+0.4
PALK				pmax	pmax		
	comp=Z,66nm,1.2s						
PALK	Pallekele	67.48	258	P	P	03 01 56.4	+0.4
MARNC	Mare, Loyalty	67.51	158	P	P	03 01 56.5	+0.7
BOZ	Bozeman (W)	67.56	48	P	P	03 01 56.9	+0.8
	baz=310,SNR=43						
BOZ	Bozeman (W)	67.56	48	IAmb	IAmb	03 02 17.6	
	comp=Z,105nm,0.8s						
MAK	Makhachkala	67.59	308	eP	P	03 01 56.2	0.0
MAK				e*PP	pP	03 02 13.7	-0.8
MAK				e*SP	sP	03 02 21.8	-0.4
MAK				eS	S	03 10 47.2	-0.3
MAK				e*SS	sS	03 11 18.6	-0.1
MAK				eSS	SS	03 15 13.9	+5.3
MAK				pmax	pmax		
	comp=Z,209nm,1.0s						
MAK				MLR	MLR		
	comp=Z,599nm,15.0s						
DZM	Mont Dzumac	67.66	160	eP	P	03 01 58.5	+1.7
	comp=Z,389nm,1.1s						
DZM				eS	S	03 10 51.3	+2.5
	comp=Z,374nm,25.8s						
DZM	Mont Dzumac	67.66	160	eLR	LR	03 22 26.5	
	comp=Z,2µm,34.2s						
DZM	Mont Dzumac	67.66	160	IAmb	IAmb	03 01 59.9	
	comp=Z,171nm,1.0s						
AS31	Alice Springs	67.70	192	P	P	03 01 56.8	-0.2
ASAR	Alice Springs	67.70	192	P	P	03 01 56.8	-0.2
	comp=Z,48nm,0.8s,baz=12,slow=5.9,SNR=355						
ASAR				pP	pP	03 02 18.6	+3.6
	comp=Z,46nm,0.8s,baz=8.1,slow=5.1,SNR=14						
ASAR				LR	LR	03 26 57.6	
	comp=Z,88nm,20.7s,baz=21,slow=32						
ASAR				PKP2bc		03 30 20.4	
	comp=Z,2.5nm,0.9s,baz=170,slow=2.6,SNR=15						
ASAR	Alice Springs	67.70	192	P	P	03 01 56.6	-0.4
ICESG	Greenland Ices	67.77	2	iP	P	03 01 56.7	-0.6
ICESG				IAmb	IAmb	03 01 59.7	
	comp=Z,4µm,2.9s						
MTSE	Matsula	67.77	332	eP	P	03 01 57.9	+0.9
ONTNC	Ouen Toro	67.89	160	IAmb	IAmb	03 02 00.4	
	comp=Z,97nm,1.0s						
AAL	Aland	67.91	334	eP	P	03 01 58.0	+0.1
KVN	Kaiserville	67.93	57	IAmb	IAmb	03 02 20.9	
	comp=Z,64nm,0.9s						
OUENC	Ouen Island, N	68.09	160	P	P	03 02 00.0	+0.6
OUENC				IAmb	IAmb	03 02 02.5	
	comp=Z,173nm,1.0s						
TBLU	Trondheim	68.16	340	eP	P	03 01 58.7	-0.7
LHV	Little Huntoon	68.18	58	IAmb	IAmb	03 02 31.6	
	comp=Z,97nm,0.9s						
MLAC	Mammoth, Mammo	68.36	58	P	P	03 02 04.0	+2.5
	baz=309						
GROC	Groznyy	68.41	309	eP	P	03 02 01.6	+0.3
GROC				e*PP	pP	03 02 19.9	+0.2
GROC				e*SP	sP	03 02 28.4	+1.1
GROC				e		03 04 33.9	
GROC				eS	S	03 10 57.4	+0.1
GROC				pmax	pmax		
	comp=Z,65nm,0.9s						
YMR	Madison River	68.51	48	IAmb	IAmb	03 02 24.0	
	comp=Z,77nm,0.8s						
EIDS	Eidsvold	68.53	176	P	P	03 02 02.5	+0.3
GOF	Gofitskoye	68.73	312	⇑eP	P	03 02 04.6	+1.3
GOF				pmax	pmax		
	comp=Z,627nm,0.9s						
LKWY	Lake	68.89	48	IAmb	IAmb	03 02 36.8	
	comp=Z,73nm,0.9s						
H17A	Grant Village	68.90	48	P	P	03 02 07.6	+2.9
	baz=310,SNR=10						
H17A	Grant Village	68.90	48	IAmb	IAmb	03 02 37.2	
	comp=Z,113nm,0.9s						
UPP	Uppsala	68.90	335	eP	P	03 02 04.5	+0.5
SMMC	Simmler	69.08	61	P	P	03 02 08.2	+2.5
	baz=309						
PSA00	Pilbara Seismi	69.11	207	P	P	03 02 05.6	-0.2
PSA00				IAmb	IAmb	03 02 06.8	
	comp=Z,142nm,1.4s						
SLIT	Slitere, Latvi	69.12	332	eP	P	03 02 06.4	+1.0
RLMT	Red Lodge	69.14	47	P	P	03 02 07.2	+1.1
	baz=311						
SFJD	Kangerlussuaq	69.19	7	P	P	03 02 05.8	0.0
	comp=Z,148nm,0.9s,baz=348,slow=5.0,SNR=43						
SFJD	Kangerlussuaq	69.19	7	P	P	03 02 05.9	+0.2
SFJD				pmax	pmax		
	comp=Z,184nm,1.0s						
SFJD	Kangerlussuaq	69.19	7	iP	P	03 02 04.3	-1.4
SFJD	Kangerlussuaq	69.19	7	P	P	03 02 05.9	+0.2
SFJD				IAmb	IAmb	03 02 08.4	
	comp=Z,184nm,1.0s						
MOOW	Moose Ponds	69.23	49	IAmb	IAmb	03 02 29.5	
	comp=Z,128nm,1.4s						
ISAL	Salakas	69.27	328	eP	P	03 02 07.9	+1.4
TPAW	Teton Pass	69.28	49	IAmb	IAmb	03 02 30.0	
	comp=Z,100nm,1.0s						
VES	Vestal, Richgr	69.33	60	P	P	03 02 07.5	+0.4
	baz=309,SNR=7.3						
MNK	Minsk	69.37	327	iP	P	03 02 08.4	+1.3
MNK				i*PP	PcP	03 02 28.1	-2.0
MNK				i		03 04 42.6	
MNK				iPPP	PPP	03 06 24.4	
MNK				iS	S	03 11 09.4	+1.1
MNK				i*SS	SKiKP	03 11 44.8	-4.6
MNK				iSS	SS	03 15 40.4	+5.0
MNK				pmax	pmax		
	comp=Z,321nm,0.8s						
MNK				pmax	pmax		
	comp=E,21nm,1.0s						
MNK				pmax	pmax		
	comp=N,159nm,1.0s						
MNK				MLR	MLR		
	comp=E,127nm,22.0s						
MNK				MLR	MLR		
	comp=Z,1µm,22.0s						
MNK				MLR	MLR		
	comp=N,512nm,19.0s						
MNK	Minsk	69.37	327	iP	P	03 02 08.4	+1.3
	comp=E,21nm,1.0s						
MNK				iP	P	03 02 08.4	+1.3
	comp=N,159nm,1.0s						
MNK				iP	P	03 02 08.4	+1.3
	comp=Z,321nm,0.8s,baz=223						
MNK				ipP	PcP	03 02 28.1	-2.0
MNK				iPP	PP	03 04 42.6	+2.1
MNK				iPPP	PPP	03 06 24.4	
MNK				iS	S	03 11 09.4	+1.1
MNK				isS	SKiKP	03 11 44.9	-4.6
MNK				iSS	SS	03 15 40.5	+5.1
MNK				iSSS	SSS	03 18 58.4	
MNK				iLR	LR	03 29 39.1	
MNK				iLRM	MLR	03 35 12.7	
	comp=E,127nm,21.7s						
MNK				iLRM	MLR	03 35 19.2	
	comp=Z,1µm,22.4s						
MNK				iLRM	MLR	03 35 21.3	
	comp=N,512nm,18.8s						
MOL	Molde	69.39	341	eP	P	03 02 07.7	+0.6
NCK	Nalchik	69.45	311c	iP	P	03 02 08.9	+1.1
NCK				pmax	pmax		
	comp=Z,227nm,1.2s						
PKM	Mcpherson Peak	69.46	61	P	P	03 02 09.9	+1.6
	baz=309,SNR=7.7						
DOMB	Dombas	69.48	340	eP	P	03 02 08.1	+0.4
DGMT	Dagmar	69.50	42	P	P	03 02 08.7	+0.6
	baz=313,SNR=13						
DGMT	Dagmar	69.50	42	IAmb	IAmb	03 02 29.1	
	comp=Z,140nm,0.8s						
NACGM	Naroch	69.51	328	iP	P	03 02 08.5	+0.5
CWC	Cottonwood Cre	69.58	59	P	P	03 02 09.6	+0.6
	baz=309						
KIV	Kislovodsk	69.65	312	⇑P	P	03 02 10.3	+1.2
KIV	Kislovodsk	69.65	312	iP	P	03 02 10.3	+1.2
	SNR=159						
KIV	Kislovodsk	69.65	312	eP	P	03 02 10.2	+1.1
KIV				eS	S	03 11 13.7	+1.6
KIV				pmax	pmax		
	comp=Z,138nm,3.7s						
KIV				pmax	pmax		
	comp=Z,405nm,1.1s						
KIV				MLR	MLR		
	comp=Z,971nm,17.0s						
KIV	Kislovodsk	69.65	312	eP	P	03 02 10.2	+1.1
KIV	Kislovodsk	69.65	312	P	P	03 02 10.2	+1.1
FRB	Frobisher Bay	69.68	16	P	P	03 02 08.5	-0.3
	comp=Z,157nm,0.9s,baz=360,slow=6.7,SNR=63						
KBZ	Khabaz	69.68	311	P	P	03 02 10.4	+1.2
	comp=Z,152nm,0.9s,baz=63,slow=4.4,SNR=195						
KBZ				LR	LR	03 38 05.3	
	comp=Z,1µm,18.5s,baz=34,slow=40						
LAO	LASA Array	69.69	44	P	P	03 02 10.5	+1.2
	baz=312,SNR=9.0						
ZEI	Tsey	69.74	310	eP	P	03 02 07.8	-2.1
ZEI				pmax	pmax		
	comp=Z,55nm,1.1s						
NB201	NORSAR Array S	69.75	339	P	P	03 02 09.8	+0.5
NB2	NORSAR Subarra	69.77	339	P	P	03 02 09.7	+0.2
	comp=Z,1µm,1.4s,baz=33,slow=6.2						
NOA	NORSAR Array B	69.77	339	P	P	03 02 09.8	+0.3
	comp=Z,308nm,0.8s,baz=37,slow=5.9,SNR=684						
NOA				LR	LR	03 37 35.4	
	comp=Z,931nm,18.9s,baz=15,slow=40						
ISA	Isabella, Lake	69.82	60	P	P	03 02 10.5	+0.2
	baz=309,SNR=8.6						
AKN	Aaknes	69.86	341	eP	P	03 02 11.0	+0.9
R11A	Troy Canyon, C	69.90	56	P	P	03 02 11.8	+0.9
	baz=310,SNR=18						
ARVC	Arvin	69.94	60	P	P	03 02 11.4	+0.5
	baz=309						
NC602	NORSAR Array S	69.94	338	eP	P	03 02 10.3	-0.2
DY2G	Dye2	70.05	5	iP	P	03 02 11.5	+0.1
NEY	Neytrino	70.09	311c	eP	P	03 02 13.3	+1.3
NEY				pmax	pmax		
	comp=Z,26nm,0.9s						
ONI	Oni	70.12	310	P	P	03 02 12.4	+0.4
ONI				pmax	pmax		
	comp=Z,204nm,1.1s						
ONI	Oni	70.12	310	P	P	03 02 12.3	+0.4
ONI				IAmb	IAmb	03 02 15.1	
	comp=Z,204nm,1.1s						
PABE	Paberze	70.13	329	eP	P	03 02 12.9	+1.2
MPMC	Manual Prospec	70.19	59	P	P	03 02 13.6	+0.9
	baz=310,SNR=30						
FURC	Furnace Creek,	70.32	58	P	P	03 02 14.5	+1.3
	baz=310,SNR=29						
DUG	Dugway, Tooele	70.36	53	P	P	03 02 14.8	+1.1
	baz=311,SNR=44						
LRMC	Laurel Mtn Rad	70.44	60	P	P	03 02 15.0	+0.8
	baz=310						
PBUR	Paburge	70.48	331	eP	P	03 02 14.8	+1.0
BW06	Boulder Array	70.53	49	P	P	03 02 15.2	+0.5
	baz=311,SNR=49						
PDAR	Pinedale Array	70.53	49	P	P	03 02 15.2	+0.4
	comp=Z,25nm,1.0s,baz=279,slow=2.2,SNR=91						
PDAR				pP	PcP	03 02 34.5	-1.1
	comp=Z,26nm,0.7s,baz=275,slow=1.7,SNR=10						
PDAR	Pinedale Array	70.53	49	P	P	03 02 15.0	+0.3
GWY	Greenwater Val	70.62	58	P	P	03 02 16.1	+0.8
EDW2	Edwards Air Fo	70.62	60	P	P	03 02 16.2	+1.0
	baz=310,SNR=22						
DECC	Green Verdugo	70.81	61	P	P	03 02 16.9	+0.6
	baz=310						
FOO	Floro	70.83	342	eP	P	03 02 16.5	+0.6
OSL	Oslo	70.84	338	eP	P	03 02 16.5	+0.6
SKAR	Skarslia	70.84	340	eP	P	03 02 16.8	+0.8
HYA	Hoyanger	70.94	341	eP	P	03 02 17.2	+0.7
GNI	Garni	70.98	307	P	P	03 02 19.3	+1.8
GNI	Garni	70.98	307c	iP	P	03 02 19.6	+2.2
GNI				pmax	pmax		
	comp=Z,248nm,1.3s						
GNI	Garni	70.98	307	P	P	03 02 18.7	+1.3
GNI				IAmb	IAmb	03 02 24.6	
	comp=Z,213nm,1.2s						
SHOC	Shoshone, Teco	71.05	58	P	P	03 02 18.7	+0.9
	baz=310						
GSC	Goldstone, Bar	71.10	59	P	P	03 02 19.0	+0.9
	baz=310,SNR=8.5						
ANGG	Ammassalik, Gr	71.30	2	iP	P	03 02 17.3	-1.3
ANGG				IAmb	IAmb	03 02 19.9	
	comp=Z,211nm,0.7s						
CIS	Catalina Islan	71.30	62	P	P	03 02 20.0	+0.7
	baz=310						
ISOG	Isortoq, Green	71.33	2	iP	P	03 02 18.1	-0.8
ISOG				IAmb	IAmb	03 02 20.3	
	comp=Z,301nm,0.7s						
SUE	Sulen	71.37	341	eP	P	03 02 20.4	+1.3
KONO	Kongsberg	71.38	339	P	P	03 02 19.8	+0.5
KONO				pmax	pmax		
	comp=Z,85nm,0.9s						
KONO	Kongsberg	71.38	339	eP	P	03 02 19.6	+0.4
KONO	Kongsberg	71.38	339	P	P	03 02 19.8	+0.5
KONO				IAmb	IAmb	03 02 20.4	
	comp=Z,85nm,0.9s						
SOC	Sochi	71.50	313	eP	P	03 02 18.1	-2.2
SOC				e*PP	pP	03 02 38.5	-0.2
SOC				e*SP	sP	03 02 47.3	+0.9
SOC				e		03 04 58.9	
SOC				ePPP	PPP	03 06 47.3	
SOC				eS	S	03 11 31.6	-1.9
SOC				e*SS	SKSac	03 12 13.6	-3.7
SOC				eSS	SS	03 16 14.6	+6.0
SOC				pmax	pmax		
	comp=Z,107nm,0.7s						
SOC				MLR	MLR		
	comp=Z,805nm,21.0s						
TUQ	Turquoise Moun	71.57	59	P	P	03 02 22.1	+1.1
	baz=310,SNR=6.7						
SUW	Suwalki	71.57	329	eP	P	03 02 20.3	-0.2
SUW				eL	L	03 30 41.1	
	comp=Z,1µm,29.5s						
SUW	Suwalki	71.57	329	eP	P	03 02 20.4	-0.2
AKASG	Malin Array Be	71.59	323	P	P	03 02 20.9	+0.2
	comp=Z,135nm,0.6s,baz=39,slow=6.1,SNR=475						
AKASG				PKP2ab		03 30 02.6	
	comp=Z,0.1nm,0.3s,baz=226,slow=2.7,SNR=5.3						
AKASG				LR	LR	03 36 56.1	
	comp=Z,1µm,18.6s,baz=20,slow=38						
AKASG	Malin Array Be	71.59	323	P	P	03 02 20.8	+0.2
AKBB	Malin Array Si	71.59	323c	iP	P	03 02 20.7	0.0
AKBB				pmax	pmax		
	comp=Z,317nm,0.9s						
BBRC	Big Bear Solar	71.70	60	P	P	03 02 22.4	+0.5
	baz=310						
HEC	Hector,Ludlow	71.70	59	P	P	03 02 22.9	+1.2
	baz=310,SNR=13						
ASK	Askoy	71.77	341	eP	P	03 02 22.5	+0.9
BORG	Borgarnes	71.79	355	P	P	03 02 23.3	+1.7
BORG				pmax	pmax		
	comp=Z,336nm,0.9s						
BORG	Borgarnes	71.79	355	P	P	03 02 23.3	+1.7
MVU	Marysvale	71.82	54	IAmb	IAmb	03 02 44.5	
	comp=Z,137nm,1.2s						
BER	Bergen	71.83	341	eP	P	03 02 22.8	+0.9
NUUK	Nuuk	71.83	8	iP	P	03 02 22.4	+0.5
ANN	Anapa	71.87	315c	iP	P	03 02 22.4	0.0
ANN				e*PP	PcP	03 02 40.5	-0.4
ANN				eS	S	03 11 38.4	+0.8
ANN				pmax	pmax		
	comp=Z,94nm,0.5s						
ANN				MLR	MLR		
	comp=Z,752nm,18.0s						
BCA	Borcka	71.90	310	⇓P	P	03 02 23.6	+0.8
ODD1	Odda	71.92	340	eP	P	03 02 23.4	+0.8
MURC	Murrieta	71.95	61	P	P	03 02 24.0	+0.8
	baz=310,SNR=8.5						
RDMU	Red Mountain	71.98	51	IAmb	IAmb	03 02 45.8	
	comp=Z,178nm,1.0s						
P17A	Butcher Ranch,	72.04	53	IAmb	IAmb	03 02 46.1	
	comp=Z,103nm,1.2s						
ULM	Lac du Bonnet	72.10	37	P	P	03 02 23.4	-0.3
	comp=Z,13nm,0.7s,baz=337,slow=6.3,SNR=8.6						
ULM				LR	LR	03 36 55.9	
	comp=Z,155nm,18.2s,baz=312,slow=38						
ULM	Lac du Bonnet	72.10	37	P	P	03 02 23.4	-0.3
MDND	Maddock	72.14	40	P	P	03 02 24.6	+0.5
	baz=316						
GMRC	Granite Mounta	72.15	59	P	P	03 02 25.3	+0.7
	baz=311,SNR=9.0						
KLNR	Kaliningrad	72.20	330	⇓eP	P	03 02 22.8	-1.4
K22A	Casper	72.26	48	P	P	03 02 25.6	+0.4
	baz=313,SNR=29						
K22A	Casper	72.26	48	IAmb	IAmb	03 02 46.9	
	comp=Z,92nm,1.0s						
SRU	San Rafael Swe	72.40	53	IAmb	IAmb	03 02 56.2	
	comp=Z,70nm,0.8s						
PFO	Pinyon Flats O	72.41	60	P	P	03 02 26.7	+0.6
PFO				pmax	pmax		
	comp=Z,36nm,1.3s						
PFO	Pinyon Flats O	72.41	60	P	P	03 02 26.7	+0.6
	baz=311,SNR=9.4						
PFO	Pinyon Flats O	72.41	60	P	P	03 02 26.7	+0.6
TPFO	Pinon Flats	72.42	60	P	P	03 02 26.8	+0.7
	baz=311,SNR=12						
BELC	Belle Mtn. Jos	72.45	60	P	P	03 02 26.5	+0.1
	baz=311,SNR=6.8						
109C	Camp Elliot, M	72.47	61	P	P	03 02 27.1	+0.9
	baz=311						
E28A	Huff	72.53	42	IAmb	IAmb	03 02 47.4	
	comp=Z,101nm,0.8s						
RWWY	Rawlins	72.54	49	IAmb	IAmb	03 02 48.7	
	comp=Z,96nm,1.1s						
RSSD	Black Hills	72.57	45	P	P	03 02 27.2	+0.2
RSSD				pmax	pmax		
	comp=Z,74nm,0.8s						
RSSD	Black Hills	72.57	45	P	P	03 02 27.2	+0.2
	baz=314						
RSSD	Black Hills	72.57	45	P	P	03 02 27.2	+0.2
RSSD				IAmb	IAmb	03 02 47.9	
	comp=Z,74nm,0.8s						
BANOM	Banah	72.81	290	iP	P	03 02 28.6	+0.2
	SNR=23						
SHME	Shamm	72.84	290	iP	P	03 02 28.8	+0.2
	SNR=22						
HOMB	Homborsund	72.86	338	eP	P	03 02 29.1	+1.0
KMY	Karmoy	72.88	340	eP	P	03 02 29.0	+0.8
IRM	Iron Mountain	72.88	59	P	P	03 02 29.8	+1.0
	baz=311,SNR=17						
MONP2	Monument Peak	72.90	61	P	P	03 02 29.8	+0.7
	baz=311						
TKX	Tecate	73.00	61	P	P	03 02 30.5	+1.1
BC3	Big Chuckawall	73.02	60	P	P	03 02 30.3	+0.7
	baz=311,SNR=14						
O20A	White River Ci	73.02	51	P	P	03 02 30.2	+0.5
	baz=313,SNR=28						
SNART	Snartemo	73.14	339	eP	P	03 02 30.4	+0.6
OVD	Ostervraa, Den	73.20	337	iP	P	03 02 30.2	+0.1
OVD				IAmb	IAmb	03 02 31.4	
	comp=Z,315nm,0.7s						
KTUT	Trabzon	73.24	311	⇓P	P	03 02 31.2	+0.6
IKP	In-Ko-Pah, Jac	73.26	61	P	P	03 02 32.0	+0.9
	baz=311,SNR=9.3						
SWSC	Sam W. Stewart	73.26	60	P	P	03 02 31.4	+0.5
	baz=311						
MSFE	Esma-Masafi	73.27	289	iP	P	03 02 31.5	+0.3
	SNR=23						
PDMCI	Parker Dam,Lak	73.41	58	P	P	03 02 32.9	+1.1
	baz=311,SNR=6.2						
SIM	Simferopol'	73.45	317	eP	P	03 02 31.4	-0.5
SIM				e		03 02 47.7	
SIM				pmax	pmax		
	comp=Z,156nm,0.8s						
LRW	Lerwick	73.49	344	⇑eP	P	03 02 32.3	+0.5
LRW				IAmb	IAmb	03 02 34.9	
	comp=Z,215nm,0.8s						
UMQ	Umm Al-Quwin	73.50	290	P	P	03 02 33.4	+1.0
UOSS	Minazif	73.51	289	iP	P	03 02 32.6	0.0
	SNR=8.0						
UOSS	Minazif	73.51	289	P	P	03 02 32.4	-0.1
UOSS				IAmb	IAmb	03 02 33.8	
	comp=Z,135nm,0.8s						
AGMN	Agassiz Nation	73.54	38	P	P	03 02 32.1	-0.2
	baz=318,SNR=9.8						
ARMA	Armidale	73.58	175	IAmb	IAmb	03 02 35.3	
	comp=Z,101nm,1.2s						
BSD	Bornholm Skovb	73.61	333	eP	P	03 02 33.1	+0.5
BSD	Bornholm Skovb	73.61	333	iP	P	03 02 31.5	-1.1
GURO	Guroymak-BITLI	73.61	308	IAmb	IAmb	03 02 36.1	
	comp=Z,138nm,0.9s						
HATD	Hatta, Dubai	73.63	289	iP	P	03 02 33.7	+0.4
	SNR=35						
GOET	G??ttrup	73.72	337	iP	P	03 02 33.9	+0.7
GOET				IAmb	IAmb	03 02 34.8	
	comp=Z,348nm,0.7s						
ASHO	Ashiyiah	73.78	289	P	P	03 02 33.6	-0.5
N23A	Red Feather La	73.78	49	P	P	03 02 35.3	+1.1
	baz=314,SNR=28						
SOHO	SOHO	73.80	288	iP	P	03 02 34.2	-0.1
	SNR=26						
GLA	Glamis	73.81	60	P	P	03 02 35.4	+1.1
	baz=312,SNR=13						
NAZ	Nazwa, Dubai	73.85	289	iP	P	03 02 35.0	+0.4
	SNR=11						
SORM	Soroca	73.87	322	⇑P	P	03 02 34.4	+0.2
SORM	Soroca	73.87	322	⇑P	P	03 02 34.4	+0.2
D32A	Dogwood Acres,	73.87	39	IAmb	IAmb	03 02 55.1	
	comp=Z,139nm,1.0s						
COP	Copenhagen	73.92	335	iP	P	03 02 34.3	-0.1
COP				IAmb	IAmb	03 02 35.5	
	comp=Z,1µm,0.7s						
FAQ	Al Faqa, Dubai	74.06	289	iP	P	03 02 35.6	-0.1
	SNR=22						
SIRT	Sirnak	74.09	307	P	P	03 02 36.7	+0.8
BEL	Belsk	74.17	328	eP	P	03 02 37.3	+1.4
BEL				eL	L	03 32 06.1	

	comp=Z,2µm,34.5s						
MUD	Monsted U'grnd	74.24	337	iP	P	03 02 35.6	-0.6
MUD				IAmb	IAmb	03 02 37.4	
	comp=Z,89nm,0.8s						
WUAZ	Wupatki	74.30	56	P	P	03 02 38.4	+1.2
	baz=312,SNR=19						
ASUD	Al Ashush, Dub	74.32	289	iP	P	03 02 37.9	+0.6
	SNR=13						
GKP	Gorka Klasztor	74.33	331	eP	P	03 02 37.5	+0.7
GKP				eL	L	03 32 17.6	
	comp=Z,1µm,27.8s						
GKP	Gorka Klasztor	74.33	331	eP	P	03 02 38.1	+1.3
PURM	Purcari	74.36	320	⇑P	P	03 02 37.4	+0.3
ALNE	Al Ain	74.40	288	iP	P	03 02 38.2	+0.4
	SNR=11						
LVV	L'vov	74.46	325	eP	P	03 02 38.2	+0.6
LVV				eS	S	03 12 05.6	-1.2
LVV				ePS	PnS	03 12 57.6	+8.6
LVV				eSS	SS	03 16 55.5	+2.2
LVV				MLR	MLR		
	comp=E,600nm,18.0s						
LVV				MLR	MLR		
	comp=N,400nm,20.0s						
LVV				MLR	MLR		
	comp=Z,600nm,19.0s						
KIS	Kishinev	74.50	321	⇑iP	P	03 02 38.0	+0.1
	comp=Z,160nm,0.8s						
KIS				eS	S	03 12 06.0	-1.4
KIS				eLR	LR	03 34 38.0	
	comp=Z,400nm,12.0s						
KIS	Kishinev	74.50	321	⇓P	P	03 02 38.1	+0.2
KIS	Kishinev	74.50	321	iP	P	03 02 38.0	+0.1
KIS				eS	S	03 12 06.0	-1.4
KIS				pmax	pmax		
	comp=Z,160nm,0.8s						
KIS				MLR	MLR		
	comp=Z,400nm,12.0s						
MILM	Milestii Mici	74.56	321	⇑P	P	03 02 38.3	0.0
MILM	Milestii Mici	74.56	321	⇑P	P	03 02 38.3	0.0
ISCO	Idaho Springs	74.72	49	P	P	03 02 41.0	+1.2
	baz=314,SNR=39						
MVCO	Mesa Verde	74.86	53	P	P	03 02 41.3	+0.7
	baz=313,SNR=21						
SUSD	Miller	74.91	42	P	P	03 02 40.7	+0.3
	baz=317						
SUSD	Miller	74.91	42	IAmb	IAmb	03 03 01.8	
	comp=Z,306nm,1.4s						
IAS	Iasi	74.93	322	⇓P	P	03 02 40.9	+0.5
IAS	Iasi	74.93	322	⇓P	P	03 02 40.9	+0.5
SNOP	Sinop	74.97	314	IAmb	IAmb	03 02 42.2	
	comp=Z,86nm,0.9s						
STKA	Stephens Creek	75.02	184	P	P	03 02 41.1	+0.2
	comp=Z,41nm,0.9s,baz=348,slow=7.9,SNR=88						
STKA				LR	LR	03 36 27.9	
	comp=Z,96nm,20.3s,baz=10,slow=36						
STKA	Stephens Creek	75.02	184	P	P	03 02 41.0	+0.2
IVI	Ivigtut	75.10	7	iP	P	03 02 41.0	0.0
IVI				IAmb	IAmb	03 02 43.8	
	comp=Z,132nm,0.7s						
KWP	Kalwaria Pacla	75.14	326	eP	P	03 02 42.9	+1.3
KWP				eL	L	03 31 54.6	
	comp=Z,1µm,36.0s						
F33A	5 Mile Ranch,	75.16	40	IAmb	IAmb	03 03 03.1	
	comp=Z,145nm,1.3s						
DIKM	Dikmen	75.21	314	⇓P	P	03 02 43.5	+1.4
VASR	Vaslui	75.24	321	⇓P	P	03 02 43.0	+0.8
NRS	Narsarsuaq	75.37	6	iP	P	03 02 42.5	-0.2
PRAR	RASCA	75.39	323	⇓P	P	03 02 43.4	+0.3
S22A	4UR Ranch, Cre	75.46	52	P	P	03 02 45.3	+1.3
	baz=314,SNR=26						
BIGH	Upper Bighouse	75.56	344	⇑eP	P	03 02 44.2	+0.5
BIGH				IAmb	IAmb	03 02 45.8	
	comp=Z,149nm,0.8s						
W18A	Petrified Fore	75.56	55	P	P	03 02 45.6	+1.2
	baz=313						
Q24A	Divide	75.56	50	P	P	03 02 45.4	+0.8
	baz=314,SNR=13						
BIR	Birlad	75.59	321	⇑P	P	03 02 45.7	+1.5
BIR	Birlad	75.59	321	⇑P	P	03 02 45.7	+1.5
MLA1	Latheron	75.62	344	eP	P	03 02 44.7	+0.6
BUR08	Bucovina Ar. S	75.63	323	IAmb	IAmb	03 02 46.5	
	comp=Z,123nm,0.7s						
BZK	Bozkurt	75.64	315	⇑P	P	03 02 46.1	+1.5
BURAR	Bucovina Array	75.65	323	⇑P	P	03 02 45.5	+0.8
BURAR	Bucovina Array	75.65	323	⇑P	P	03 02 45.5	+0.8
BURAR	Bucovina Array	75.65	323	P	P	03 02 45.6	+0.9
FORT	Forrest	75.70	196	P	P	03 02 45.0	+0.2
FORT				IAmb	IAmb	03 03 07.6	
	comp=Z,157nm,0.9s						
VLDR	Vladesti	75.70	321	⇑P	P	03 02 45.9	+1.0
EYMN	Ely	75.72	36	P	P	03 02 44.7	-0.3
	baz=320,SNR=11						
EYMN	Ely	75.72	36	IAmb	IAmb	03 03 05.4	
	comp=Z,76nm,0.9s						
VARL	Varlezi	75.77	321	⇓P	P	03 02 46.3	+1.0
214A	Organ Pipe Nat	75.81	59	P	P	03 02 46.7	+0.9
	baz=312						
OJC	Ojcow	75.84	328	eP	P	03 02 46.7	+1.1
OJC				eL	L	03 33 34.0	
	comp=Z,1µm,28.5s						
TLCR		75.85	320	⇓P	P	03 02 46.3	+0.6
TLCR		75.85	320	⇓P	P	03 02 46.3	+0.6
TESR	Tescani	75.85	322	⇑P	P	03 02 46.3	+0.5
KOLS	Kolonicke sedl	75.87	326	eP	P	03 02 46.7	+0.9
KOLS				pmax	pmax		
	comp=Z,142nm,1.1s						
KOLS	Kolonicke sedl	75.87	326	eP	P	03 02 46.7	+0.9
SCTR	Scanteiesti	75.87	321	⇓P	P	03 02 46.7	+0.9
TATR	Tatarca	75.90	320	⇑P	P	03 02 47.1	+1.1
STHS	Stebnicka Huta	75.91	327	eP	P	03 02 47.0	+1.0
STHS	Stebnicka Huta	75.91	327	eP	P	03 02 47.0	+1.0
SLCR	Slobozia Conac	76.04	321	⇑P	P	03 02 48.0	+1.3
BSEG	Bad Segeberg	76.06	335	eP	P	03 02 47.7	+1.0
	comp=Z,289nm,1.0s,baz=31,slow=5.5						
BSEG				eL	L	03 40 46.8	
	comp=Z,820nm,20.5s						
IZVR	Izvoarele	76.07	321	⇑P	P	03 02 48.1	+1.2
SCHL	Schela	76.08	321	⇑P	P	03 02 47.9	+0.9
UZH	Uzhgorod	76.10	326	⇓eP	P	03 02 46.3	-0.7
UZH				i		03 02 57.0	
UZH				e		03 03 06.1	
UZH				e		03 05 43.7	
UZH				e		03 07 32.3	
UZH				eS	S	03 12 23.1	-1.9
UZH				e		03 12 56.4	
UZH				e		03 13 17.9	
UZH				e		03 17 26.6	
UZH				e		03 20 37.4	
JURR	Jurilovca	76.14	319	⇓P	P	03 02 48.7	+1.3
UMR	Umm Al-Rimmam	76.17	298	eP	P	03 02 46.6	-1.2
RUE	Ruedersdorf	76.17	332	eP	P	03 02 48.7	+1.3
RUE	Ruedersdorf	76.17	332	eP	P	03 02 48.2	+0.9
	comp=Z,228nm,1.0s,baz=31,slow=5.5						
CFR	Carcaliu	76.17	320	⇑P	P	03 02 48.1	+0.6
CFR	Carcaliu	76.17	320	⇑P	P	03 02 48.1	+0.6
SDCO	Great Sand Dun	76.22	51	P	P	03 02 49.4	+1.1
	baz=314,SNR=13						
CRVS	Cervenica-Dubn	76.22	326	eP	P	03 02 48.9	+1.1
CRVS				pmax	pmax		
	comp=Z,982nm,2.3s						
CRVS	Cervenica-Dubn	76.22	326	eP	P	03 02 48.8	+1.0
ODBI	Odobesti	76.23	321	⇓P	P	03 02 50.1	+2.2
MIB	Mutribah	76.25	298	eP	P	03 02 47.2	-1.0
MCD	Coleburn Disti	76.27	344	eP	P	03 02 48.2	+0.3
NIE	Niedzica	76.28	327	eP	P	03 02 50.2	+2.1
NIE				eL	L	03 38 17.1	
	comp=Z,700nm,24.8s						
TPGR	Topolog	76.28	320	⇓P	P	03 02 49.2	+0.9
BMR	Baia Mare	76.34	324	⇑P	P	03 02 49.5	+1.0
BMR	Baia Mare	76.34	324	⇑P	P	03 02 49.5	+1.0
PLOR	Plostina	76.35	321	⇓P	P	03 02 49.4	+0.8
PLOR				⇑P	P	03 02 49.6	+1.0
PLOR	Plostina	76.35	321	⇑P	P	03 02 49.6	+1.0
TRPA	Tarpa	76.39	325	⇑P	P	03 02 49.9	+1.2
BBOO	Buckleboo	76.41	189	P	P	03 02 48.9	+0.1
BBOO				IAmb	IAmb	03 02 50.2	
	comp=Z,78nm,1.1s						
ARCR	ARCALIA	76.43	323	⇑P	P	03 02 50.5	+1.5
KBD	Kabd	76.44	297	eP	P	03 02 48.8	-0.5
BISRR	Bisoca	76.56	321	⇓P	P	03 02 51.8	+2.0
OZUR		76.56	322	⇑P	P	03 02 51.5	+1.8
COVR	Voineasa-Covas	76.56	322	⇑P	P	03 02 50.9	+1.1
GRER		76.56	321	⇓P	P	03 02 51.8	+2.1
ECSD	EROS Data Cent	76.58	42	P	P	03 02 49.8	-0.1
	baz=318,SNR=24						
ECSD	EROS Data Cent	76.58	42	IAmb	IAmb	03 03 10.6	
	comp=Z,101nm,0.8s						
QRN	Al-Qurain	76.58	297	eP	P	03 02 49.7	-0.5
TIRR	Tirgusor	76.58	319	⇑P	P	03 02 50.4	+0.5
TIRR	Tirgusor	76.58	319	⇑P	P	03 02 50.4	+0.5
MDO	Dochfour	76.62	344	⇑eP	P	03 02 50.0	+0.1
HARR	Harsova	76.64	320	⇑P	P	03 02 51.7	+1.5
HARR	Harsova	76.64	320	⇑P	P	03 02 51.7	+1.5
KSP	Ksiaz	76.65	330	eP	P	03 02 51.2	+1.0
KSP				eL	L	03 33 43.2	
	comp=Z,1µm,32.6s						
RDF	Al-Radifah	76.70	297	eP	P	03 02 49.9	-0.9
E38A	The Farm, Brul	76.73	37	IAmb	IAmb	03 03 11.4	
	comp=Z,107nm,0.8s						
KAC	Achnashellach	76.75	345	⇑eP	P	03 02 51.0	+0.4
OKC	Ostrava-Krasne	76.78	329	⇑eP	P	03 02 51.8	+0.9
OKC	Ostrava-Krasne	76.78	329	eP	P	03 02 51.8	+0.9
LANS	Liptovska Anna	76.82	327	eP	P	03 02 53.0	+1.8
LANS				pmax	pmax		
	comp=Z,98nm,1.0s						
LANS	Liptovska Anna	76.82	327	eP	P	03 02 53.0	+1.8
TUC	Tucson	76.83	58	P	P	03 02 52.1	+0.5
TUC				pmax	pmax		
	comp=Z,34nm,1.2s						
TUC	Tucson	76.83	58	P	P	03 02 52.7	+1.0
	baz=313						
TUC	Tucson	76.83	58	P	P	03 02 52.1	+0.5
DOPR	Dopca	76.83	322	⇑P	P	03 02 52.9	+1.6
OSTC	Ostas	76.91	330	⇑iP	P	03 02 52.6	+0.9
KSCO	Kaye Shedlock'	76.92	48	P	P	03 02 52.6	+0.5
	baz=316,SNR=12						
KSCO	Kaye Shedlock'	76.92	48	IAmb	IAmb	03 03 13.2	
	comp=Z,175nm,1.3s						
CHVC	Chvalec	76.94	330	⇑iP	P	03 02 52.8	+0.9
MLR	Muntele Rosu	76.95	322	⇓P	P	03 02 52.8	+0.7
MLR	Muntele Rosu	76.95	322	⇓P	P	03 02 52.8	+0.7
MLR	Muntele Rosu	76.95	322	IAmb	IAmb	03 02 54.4	
	comp=Z,116nm,1.1s						
KECS	Kecovo	76.95	326	eP	P	03 02 53.1	+1.2
KECS				pmax	pmax		
	comp=Z,44nm,0.9s						
KECS	Kecovo	76.95	326	eP	P	03 02 53.1	+1.2
ISR	Istrita	76.96	321	⇑P	P	03 02 53.3	+1.2
ISR	Istrita	76.96	321	⇑P	P	03 02 53.3	+1.2
KPL	Plockton	76.97	345	⇑eP	P	03 02 52.2	+0.5
KPL				IAmb	IAmb	03 02 54.4	
	comp=Z,283nm,0.8s						
AMRR	Amara	76.98	320	⇑P	P	03 02 53.6	+1.5
AMRR	Amara	76.98	320	⇑P	P	03 02 53.6	+1.5
MESR	Meseseni	76.98	324	⇓P	P	03 02 53.4	+1.3
CBBR	Cluj-Babes-Bol	77.02	324	⇑P	P	03 02 53.9	+1.5
UPC	Upice	77.03	330	⇑eP	P	03 02 53.4	+1.1
UPC				AMS	AMS	03 40 50.0	
	comp=Z,900nm,16.7s						
UPC	Upice	77.03	330	eP	P	03 02 53.4	+1.1
UPC				MLR	MLR		
	comp=Z,900nm,16.7s						
DPC	Dobruska-Polom	77.04	330	⇑iP	P	03 02 53.6	+1.2
DPC				AMS	AMS	03 37 20.0	
	comp=Z,900nm,24.7s						
DPC	Dobruska-Polom	77.04	330	⇑iP	P	03 02 53.6	+1.2
DPC				MLR	MLR		
	comp=Z,900nm,24.7s						
CJR	Cluj-Napoca	77.04	324	⇑P	P	03 02 53.8	+1.3
CJR	Cluj-Napoca	77.04	324	⇑P	P	03 02 53.8	+1.3
MORC	Moravsky Berou	77.06	329	⇑P	P	03 02 53.8	+1.3
MORC	Moravsky Berou	77.06	329	⇑P	P	03 02 53.8	+1.3
MORC	Moravsky Berou	77.06	329	eP	P	03 02 53.4	+0.9
MORC				eS	S	03 12 38.0	+2.4
MORC	Moravsky Berou	77.06	329	IAmb	IAmb	03 02 54.8	
	comp=Z,144nm,1.0s						
KRLC	Kraliky	77.10	329	⇑iP	P	03 02 53.7	+0.9
KRLC				AMS	AMS	03 41 30.0	
	comp=Z,800nm,17.6s						
KRLC	Kraliky	77.10	329	⇑iP	P	03 02 53.7	+0.9
KRLC				MLR	MLR		
	comp=Z,800nm,17.6s						
ICOR	Ion Corvin	77.13	320	⇑P	P	03 02 54.4	+1.4
FLTG	Flechtingen	77.14	334	eP	P	03 02 53.2	+0.4
	comp=Z,212nm,0.8s,baz=31,slow=5.5						
MDB	Medias	77.15	323	⇓P	P	03 02 54.9	+1.9
MDB	Medias	77.15	323	⇓P	P	03 02 54.9	+1.9
SPMN	Marine on St.	77.24	39	P	P	03 02 53.6	0.0
	baz=320,SNR=6.5						
SPMN	Marine on St.	77.24	39	IAmb	IAmb	03 03 14.5	
	comp=Z,66nm,0.8s						
SECR		77.24	321	⇑P	P	03 02 55.1	+1.5
T25A	Trinidad	77.26	51	P	P	03 02 54.8	+0.6
	baz=315,SNR=26						
T25A	Trinidad	77.26	51	IAmb	IAmb	03 03 16.3	
	comp=Z,88nm,1.1s						
MORW	Morawa	77.31	207	P	P	03 02 53.5	-0.5
MORW				pP	pP	03 03 13.1	+0.9
MORW				IAmb	IAmb	03 03 16.1	
	comp=Z,84nm,0.9s						
GAZ	Gaziantep	77.32	309	IAmb	IAmb	03 02 56.2	
	comp=Z,70nm,0.9s						
LEHL	Lehliu	77.32	320	⇑P	P	03 02 55.1	+1.1
NRDL	Niedersach Rie	77.36	334	eP	P	03 02 54.7	+0.7
	comp=Z,492nm,2.0s,baz=31,slow=5.5						
DRGR		77.36	324	⇑P	P	03 02 55.0	+0.6
DRGR		77.36	324	⇑P	P	03 02 55.0	+0.6
RASA	Rasa	77.36	320	⇓P	P	03 02 55.4	+1.2
RETH	Rethem/Aller,	77.38	335	eP	P	03 02 55.0	+0.8
	comp=Z,281nm,1.0s,baz=31,slow=5.5						
VOIR		77.39	322	⇓P	P	03 02 55.6	+1.1
VOIR		77.39	322	⇓P	P	03 02 55.6	+1.1
CLL	Collm	77.42	332	⇑iP	P	03 02 54.6	+0.1
	comp=Z,274nm,0.9s						
CLL				epP	pP	03 03 13.0	-0.1
CLL				esP	sP	03 03 23.0	+2.3
CLL				ePP	PP	03 05 47.0	-1.9
CLL				eS	S	03 12 38.0	-1.3
CLL				esS	ScS	03 13 08.0	+1.7
CLL				ePPS	PPS	03 13 42.0	
CLL				e(SS)		03 18 06.0	
CLL				eSSS	SSS	03 21 18.0	
CLL				LmV		03 41 00.0	
	comp=Z,600nm,20.1s						
CLL	Collm	77.42	332	⇑iP	P	03 02 54.6	+0.1
CLL				e*PP	pP	03 03 13.0	-0.1
CLL				eS	S	03 12 38.0	-1.3
CLL				e*SS	ScS	03 13 08.0	+1.7
CLL				pmax	pmax		
	comp=Z,274nm,0.9s						
CLL				MLR	MLR		
	comp=Z,600nm,20.1s						
CLL	Collm	77.42	332	eP	P	03 02 54.7	+0.3
	comp=Z,274nm,0.9s,baz=31,slow=5.5						
CLL				eL	L	03 41 46.1	
	comp=Z,652nm,20.0s						
KDZE	Karadeniz Ereo	77.43	316	⇑P	P	03 02 55.2	+0.5
BR131	Keskin Array S	77.44	313	IAmb	IAmb	03 02 56.5	
	comp=Z,67nm,0.9s						
BRTR	Keskin Array B	77.45	313	P	P	03 02 55.7	+0.7
	comp=Z,31nm,0.8s,baz=80,slow=3.6,SNR=188						
BRTR				pP	pP	03 03 14.9	+1.2
	comp=Z,7.7nm,0.6s,baz=102,slow=3.0,SNR=5.3						
BRTR				LR	LR	03 43 17.0	
	comp=Z,737nm,18.6s,baz=55,slow=40						
BRG	Berggiesshubel	77.46	331	eP	P	03 02 55.2	+0.5
	comp=Z,86nm,1.0s,baz=31,slow=5.5						
BRG	Berggiesshubel	77.46	331	⇑iP	P	03 02 55.1	+0.4
BRG				Amp		03 02 56.4	
	comp=Z,67nm,0.9s						
BRG	Berggiesshubel	77.46	331	P	P	03 03 04.6	+10
BRG				Amp		03 03 05.0	
	comp=Z,23nm,0.8s						
BRG	Berggiesshubel	77.46	331	S	S	03 12 42.0	+2.2
BRG				Amp		03 41 15.0	
	comp=Z,1.0nm,19.3s						
BRG				Amp		03 41 30.0	
	comp=E,0.3nm,15.8s						
BRG				Amp		03 41 40.0	
	comp=N,0.4nm,13.3s						
ASSE	Asse, Remlinge	77.49	334	eP	P	03 02 55.5	+0.7
	comp=N,88nm,1.1s,baz=31,slow=5.5						
INVG	Invergeldie, C	77.51	344	⇑eP	P	03 02 54.7	-0.1
INVG				IAmb	IAmb	03 02 57.2	
	comp=Z,94nm,0.7s						
PVCC	Panska Ves	77.53	331	⇑iP	P	03 02 56.1	+1.0
PVCC				AMS	AMS	03 43 00.0	
	comp=Z,800nm,16.1s						
PVCC	Panska Ves	77.53	331	⇑iP	P	03 02 56.1	+1.0
PVCC				MLR	MLR		
	comp=Z,800nm,16.1s						
BGNE	Belgrade	77.53	44	P	P	03 02 55.4	0.0
	baz=318,SNR=8.0						
VYHS	Vyhne	77.60	327	eP	P	03 02 56.7	+1.2
VYHS				pmax	pmax		
	comp=Z,134nm,1.3s						
VYHS	Vyhne	77.60	327	eP	P	03 02 56.7	+1.2
ANMO	Albuquerque	77.62	54	P	P	03 02 56.9	+0.8
ANMO				pmax	pmax		
	comp=Z,41nm,1.2s						
ANMO	Albuquerque	77.62	54	P	P	03 02 57.5	+1.3
	baz=315						
ANMO	Albuquerque	77.62	54	P	P	03 02 56.9	+0.8
FBE	Freiberg	77.62	332	eP	P	03 02 56.3	+0.7
	comp=Z,148nm,0.9s,baz=31,slow=5.5						
ARR	Arges	77.63	322	⇑P	P	03 02 57.2	+1.4
PSZ	Piszkesteto	77.64	326	⇑P	P	03 02 57.1	+1.2
PSZ	Piszkesteto	77.64	326	eP	P	03 02 56.0	+0.1
PSZ	Piszkesteto	77.64	326	⇑P	P	03 02 57.1	+1.2
PSZ	Piszkesteto	77.64	326	IAmb	IAmb	03 02 58.3	
	comp=Z,135nm,1.0s						
D41A	Chassel	77.66	35	IAmb	IAmb	03 03 17.3	
	comp=Z,193nm,1.2s						
ESY	Stoneypath	77.68	343	⇑eP	P	03 02 56.3	+0.5
JAVC	Velka Javorina	77.76	328	eP	P	03 02 58.3	+1.8
JAVC				eS	S	03 12 47.6	+4.4
ANTO	Ankara	77.79	314	P	P	03 02 57.0	+0.2
ANTO				pmax	pmax		
	comp=Z,163nm,0.8s						
ANTO	Ankara	77.79	314	P	P	03 02 57.0	+0.2
VRAC	Vranov	77.80	329	⇑P	P	03 02 57.6	+1.0
VRAC	Vranov	77.80	329	⇑P	P	03 02 57.6	+1.0
VRAC	Vranov	77.80	329	eP	P	03 02 57.7	+1.0
VRAC				eS	S	03 12 44.2	+0.6
BR231	Keskin MP Arra	77.82	314	IAmb	IAmb	03 02 59.4	
	comp=Z,148nm,0.8s						
CLZ	Clausthal	77.84	334	eP	P	03 02 57.9	+1.0
	comp=Z,506nm,1.5s,baz=31,slow=5.5						
CLZ				eL	L	03 42 32.0	
	comp=Z,564nm,18.2s						
EBL	Broad Law	77.91	343	⇑eP	P	03 02 57.7	+0.6
NEUB	Neuenburg	77.92	333	eP	P	03 02 57.8	+0.6
	comp=Z,238nm,1.0s,baz=31,slow=5.5						
LAWE	Loch Awe, Argy	77.93	344	⇑eP	P	03 02 57.5	+0.2
LAWE				IAmb	IAmb	03 02 58.6	
	comp=Z,312nm,1.4s						
LOT	Lotru	77.95	323	⇓P	P	03 02 58.5	+0.8
Y22D	IRIS PASSCAL I	77.96	54	P	P	03 02 59.9	+1.9
	baz=314						
PRA	Prague	77.96	331	⇑eP	P	03 02 58.5	+1.0
PRA	Prague	77.96	331	eP	P	03 02 58.5	+1.0
BSZH	Besenyszg	77.98	326	⇓P	P	03 02 59.0	+1.4
BSZH	Besenyszg	77.98	326	eP	P	03 02 58.4	+0.7
PRU	Pruhonice	77.99	331	⇑iP	P	03 02 58.5	+0.9
PRU				AMS	AMS	03 43 40.0	
	comp=Z,1µm,21.8s						
PRU	Pruhonice	77.99	331	⇑iP	P	03 02 58.5	+0.9
PRU				MLR	MLR		
	comp=Z,1µm,21.8s						
DEV	Deva	77.99	323	⇓P	P	03 02 58.4	+0.7
DEV	Deva	77.99	323	⇓P	P	03 02 58.4	+0.7
KRUC	Moravsky	78.07	329	eP	P	03 02 59.1	+0.9
KRUC				eS	S	03 12 49.3	+2.8
HUMR	Humele	78.12	321	⇓P	P	03 02 58.1	-0.4
SMOL	Smolenice	78.13	328	eP	P	03 02 59.9	+1.4
SMOL				pmax	pmax		
	comp=Z,62nm,1.0s						
SMOL	Smolenice	78.13	328	eP	P	03 02 59.9	+1.4
SCHQ	Schefferville	78.14	19	P	P	03 02 58.7	+0.3
	comp=Z,45nm,0.9s,baz=354,slow=5.4,SNR=25						
SCHQ				pP	pP	03 03 17.8	+0.7
	comp=Z,32nm,0.7s,baz=352,slow=8.4,SNR=5.1						
SCHQ	Schefferville	78.14	19	P	P	03 02 58.4	-0.1
RAZG	Razgrad	78.16	320	⇓P	P	03 02 59.4	+0.7
PGBU	Gleniffербraes	78.17	344	⇑eP	P	03 02 59.3	+0.8
PGBU				IAmb	IAmb	03 03 03.0	
	comp=Z,340nm,1.0s						
COWI	Conover	78.17	36	IAmb	IAmb	03 03 19.1	
	comp=Z,72nm,0.9s						
TREC	Trest	78.22	330	⇑iP	P	03 02 59.9	+0.9
TREC				AMS	AMS	03 41 50.0	
	comp=Z,1µm,18.6s						
TREC	Trest	78.22	330	⇑iP	P	03 02 59.9	+0.9
TREC				MLR	MLR		
	comp=Z,1µm,18.6s						
GTTG	Gottingen	78.22	334	eP	P	03 02 59.8	+0.9
	comp=Z,239nm,1.1s,baz=31,slow=5.5						
SIRR	Siria	78.22	324	⇑P	P	03 02 59.8	+0.7
IBBN	Ibbenburen	78.25	336	eP	P	03 02 59.8	+0.8
	comp=Z,278nm,0.9s,baz=31,slow=5.5						
MODS	Modra-Piesok	78.30	328	eP	P	03 02 59.8	+0.3
MODS				pmax	pmax		
	comp=Z,126nm,1.0s						
MODS	Modra-Piesok	78.30	328	eP	P	03 02 59.8	+0.3
COPA	Copaceanca	78.32	321	⇑P	P	03 02 59.7	+0.1
BUD	Budapest	78.34	327	eP	P	03 02 59.4	-0.3
CAN	Canberra	78.36	178	P	P	03 03 00.5	+0.9
CAN				IAmb	IAmb	03 03 02.2	
	comp=Z,132nm,1.5s						
CAN				pP	pwP	03 03 20.5	+0.5
SRO	Srobarova	78.36	327	eP	P	03 03 01.4	+1.7
SRO				pmax	pmax		
	comp=Z,164nm,1.0s						
SRO	Srobarova	78.36	327	eP	P	03 03 01.4	+1.7
TANN	Tannenbergstha	78.36	332	eP	P	03 03 00.3	+0.5
	comp=Z,46nm,1.0s,baz=31,slow=5.5						
ESK	Eskdalemuir	78.36	343	⇑eP	P	03 02 59.7	+0.1
ESK				IAmb	IAmb	03 03 01.1	
	comp=Z,103nm,0.8s						
ESK	Eskdalemuir	78.36	343	P	P	03 02 59.3	-0.3
ESK				pmax	pmax		
	comp=Z,113nm,0.8s						
ESK	Eskdalemuir	78.36	343	P	P	03 02 59.2	-0.3
ESK				IAmb	IAmb	03 03 01.3	
	comp=Z,113nm,0.8s						
G40A	Rib Lake	78.37	37	IAmb	IAmb	03 03 20.8	
	comp=Z,66nm,0.8s						
WERD	Werda	78.38	332	eP	P	03 03 00.4	+0.6
	comp=Z,70nm,0.9s,baz=31,slow=5.5						
N33A	J Bar K, Exete	78.39	44	P	P	03 03 00.1	0.0
N33A					pP	03 03 19.9	+1.1
N33A				IAmb	IAmb	03 03 20.8	
	comp=Z,156nm,1.2s						
319A	Douglas	78.40	58	IAmb	IAmb	03 03 23.0	
	comp=Z,106nm,1.1s						
PLN	Plauen	78.40	332	eP	P	03 03 00.5	+0.6
	comp=Z,67nm,0.9s,baz=31,slow=5.5						
GZR	Gura Zlata	78.43	323	⇑P	P	03 03 00.8	+0.5
GZR	Gura Zlata	78.43	323	⇑P	P	03 03 00.8	+0.5
GUNZ	Gunzen	78.44	332	eP	P	03 03 01.0	+0.7
	comp=Z,79nm,0.8s,baz=31,slow=5.5						
MOX	Moxa	78.45	333	eP	P	03 03 00.9	+0.7
	comp=Z,82nm,0.9s,baz=31,slow=5.5						
MOX				eL	L	03 43 46.7	
	comp=Z,502nm,18.7s						
SHAO	Shalim	78.45	284	iP	P	03 03 00.9	+0.1
	SNR=11						
WERN	Wernitzgruen	78.49	332	eP	P	03 03 01.3	+0.8
	comp=Z,92nm,0.8s,baz=31,slow=5.5						
121A	Cookes Peak, D	78.51	56	P	P	03 03 02.4	+1.3
	baz=314,SNR=9.1						
NKC	Novy Kostel	78.52	332	⇑iP	P	03 03 01.0	+0.4
NKC	Novy Kostel	78.52	332	⇑iP	P	03 03 01.0	+0.4
ZST	Bratislava	78.52	328	eP	P	03 03 02.3	+1.7
ZST	Bratislava	78.52	328	eP	P	03 03 02.3	+1.7
EDMD	Edmundbyers	78.54	342	⇑eP	P	03 03 00.9	+0.3
EDMD				IAmb	IAmb	03 03 04.1	
	comp=Z,91nm,0.9s						
AMBH	Ambrzfalva	78.55	325	⇑P	P	03 03 01.9	+1.1
AMBH	Ambrzfalva	78.55	325	eP	P	03 03 00.7	-0.1
CBKS	Cedar Bluff	78.62	47	P	P	03 03 01.1	-0.3
	baz=317,SNR=9.6						
CBKS	Cedar Bluff	78.62	47	IAmb	IAmb	03 03 22.3	
	comp=Z,101nm,1.1s						
ZIMR		78.62	321	⇑P	P	03 03 01.8	+0.6
ZIMR		78.62	321	⇑P	P	03 03 01.8	+0.6
CSKK	Cskako	78.74	327	eP	P	03 03 02.0	+0.1
BZS	Buzias	78.76	324	⇑P	P	03 03 02.4	+0.4
BZS	Buzias	78.76	324	⇑P	P	03 03 02.4	+0.4
NEWG	New Galloway	78.77	343	⇑eP	P	03 03 01.9	+0.1
NEWG				IAmb	IAmb	03 03 04.0	
	comp=Z,87nm,0.9s						

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VLAD  Vladila           78.80 321 ⇑P    P     03 03 02.5 +0.3
UBBA  Unterbreizbach    78.83 334  eP   P     03 03 02.8 +0.6
      comp=Z,64nm,1.0s,baz=31,slow=5.5
MANZ  Manzenberg        78.84 332  eP   P     03 03 03.0 +0.6
      comp=Z,197nm,2.8s,baz=31,slow=5.5
E43A  Lone Tree Farm    78.86  35  IAmb IAmb  03 03 23.4
      comp=Z,62nm,0.8s
F42A  Maple Grove Fa    78.87  36  IAmb IAmb  03 03 23.7
      comp=Z,68nm,0.8s
HSIG                    78.98  61  P    P     03 03 04.2 +0.7
HERR  Herculane         78.99 323 ⇑P    P     03 03 03.5 +0.2
ROTZ  Rotzenmuhle       78.99 332  eP   P     03 03 04.1 +0.9
      comp=Z,25nm,1.1s,baz=31,slow=5.5
KESW  Keswick, Cumbr    79.02 343⇑eP    P     03 03 04.1 +0.9
KESW                               IAmb IAmb  03 03 05.7
      comp=Z,602nm,1.2s
CKRC  Cesky Krumlov     79.05 330⇑iP    P     03 03 05.0 +1.5
CKRC                               AMS  AMS   03 42 50.0
      comp=Z,1µm,17.9s
KHC   Kasperske Hory    79.05 331⇑iP    P     03 03 04.4 +0.8
KHC                               epP   pP    03 03 23.2 +0.9
KHC                                AMS  AMS   03 42 10.0
      comp=Z,1µm,18.4s
KHC   Kasperske Hory    79.05 331⇑iP    P     03 03 04.4 +0.8
KHC                               e           03 03 23.2
KHC                                MLR  MLR
      comp=Z,1µm,18.4s
KHC   Kasperske Hory    79.05 331  IAmb IAmb  03 03 05.6
      comp=Z,140nm,0.8s
GAL1  Galloway          79.10 344⇑eP    P     03 03 04.1 +0.4
GAL1                               IAmb IAmb  03 03 06.9
      comp=Z,172nm,0.7s
SOP   Sopron            79.15 328  eP   P     03 03 04.3 +0.3
BANR  Banloc            79.15 324 ⇑P    P     03 03 05.1 +1.0
BUG   Bochum--Univer    79.15 335  eP   P     03 03 04.6 +0.6
      comp=Z,208nm,1.0s,baz=31,slow=5.5
CLGH  Cloghs, Cushen    79.18 344⇑eP    P     03 03 04.5 +0.4
CLGH                               IAmb IAmb  03 03 05.7
      comp=Z,232nm,1.1s
MPLH  Magyarpolny       79.18 327  eP   P     03 03 04.2  -0.1
CONA  Conrad Observa    79.21 329  i P  P     03 03 05.7 +1.1
      comp=Z,77nm,0.8s,SNR=28
K38A  Parkersburg       79.23  40  IAmb IAmb  03 03 25.1
      comp=Z,74nm,0.9s
GEC2  GERESS Array S    79.24 330  eP   P     03 03 05.2 +0.5
      comp=Z,55nm,0.9s,baz=31,slow=5.5
GEC2                               eL   L     03 42 25.9
      comp=Z,967nm,19.3s
GERES GERESS Array B    79.24 330  P    P     03 03 05.0 +0.3
      comp=Z,33nm,0.8s,baz=37,slow=5.2,SNR=128
GERES                              LR   LR    03 42 36.4
      comp=Z,862nm,18.9s,baz=40,slow=39
GERES GERESS Array B    79.24 330  P    P     03 03 04.8 +0.1
BAIL  Bailesti          79.26 322 ⇑P    P     03 03 05.6 +0.8
I40A  Norwalk           79.26  38  IAmb IAmb  03 03 25.1
      comp=Z,69nm,0.9s
TIH   Tihany            79.27 327  eP   P     03 03 05.3 +0.6
HPK   Haverah Park      79.27 341⇑eP    P     03 03 05.6 +1.0
HPK                                IAmb IAmb  03 03 06.4
      comp=Z,333nm,0.8s
WET   Wettzell          79.29 331  eP   P     03 03 05.9 +1.0
      comp=Z,136nm,1.1s,baz=31,slow=5.5
WET                                eL   L     03 40 03.2
      comp=Z,1µm,21.8s
MDVR  Moldovita         79.38 323 ⇑P    P     03 03 05.6 +0.1
GRF   Grafenberg Arr    79.39 332  eP   P     03 03 06.5 +1.1
      comp=Z,250nm,1.0s,baz=31,slow=5.5
GRF                                eL   L     03 39 05.4
      comp=Z,498nm,22.0s
GRFO  Grafenberg        79.40 332  P    P     03 03 05.7 +0.3
GRFO                               pmax pmax
      comp=Z,232nm,0.9s
GRFO  Grafenberg        79.40 332  P    P     03 03 05.7 +0.3
MORH  Mrgy, Hungar      79.52 326⇑iP    P     03 03 06.0  -0.1
SCIA  State Center      79.59  41  P    P     03 03 07.1 +0.5
      baz=320,SNR=11
IOMK  Kirk Michael      79.64 343  eP   P     03 03 07.0 +0.5
LBWR  Ladybower, Pea    79.81 341⇑eP    P     03 03 08.3 +0.7
LBWR                               IAmb IAmb  03 03 09.4
      comp=Z,541nm,0.9s
KOVH  Kovagotottos      79.84 326  eP   P     03 03 07.2  -0.7
TNS   Taunus Mts        79.85 334  eP   P     03 03 08.5 +0.6
      comp=Z,98nm,0.9s,baz=31,slow=5.5
TNS                                eL   L     03 43 59.8
      comp=Z,673nm,18.7s
WACR  West Acre         79.85 340  eP   P     03 03 08.1 +0.3
WACR                               IAmb IAmb  03 03 09.9
      comp=Z,358nm,0.9s
MOA   Molln             79.87 330  i P  P     03 03 08.8 +0.7
      comp=Z,41nm,0.8s,SNR=12
FRGS  Fruska Gora       79.89 325 ⇑P    P     03 03 08.6 +0.3
FRGS  Fruska Gora       79.89 325⇑iP    P     03 03 08.5 +0.3
ARSA  Arzberg           79.90 328  i P  P     03 03 09.1 +0.9
      comp=Z,47nm,1.1s,SNR=15
AHRW  Bad Neuenahr-A    80.00 335  eP   P     03 03 09.2 +0.6
      comp=Z,135nm,1.0s,baz=31,slow=5.5
KSU1  Kansas State U    80.04  45  P    P     03 03 08.6  -0.5
      baz=319,SNR=8.1
KSU1  Kansas State U    80.04  45  IAmb IAmb  03 03 29.2
      comp=Z,83nm,0.8s
BEBN  Eben Emael        80.20 336  dP   P     03 03 07.4  -2.2
      comp=Z,211nm,0.8s
BTNL  Ternell           80.25 336  dP   P     03 03 10.1 +0.1
      comp=Z,69nm,1.0s
BTNL                               dpP  pP    03 03 24.7  -4.1
MEM   Membach           80.27 336  dP   P     03 03 09.2  -0.9
      comp=Z,78nm,0.9s
CWF   Charnwood Fore    80.32 341⇑eP    P     03 03 10.6 +0.3
CWF                                IAmb IAmb  03 03 13.2
      comp=Z,449nm,1.7s
ELMS  Elmsett, Ipswi    80.33 339⇑eP    P     03 03 11.2 +0.9
ELMS                               IAmb IAmb  03 03 12.1
      comp=Z,511nm,0.7s
VTS   Vitosha           80.41 321 ⇑P    P     03 03 12.4 +1.2
VTS   Vitosha           80.41 321 ⇑P    P     03 03 12.4 +1.2
L40A  Anamosa           80.41  40  IAmb IAmb  03 03 31.9
      comp=Z,90nm,0.9s
ALN   Alexandroupoli    80.42 318  IAmb IAmb  03 03 13.2
      comp=Z,210nm,1.1s
KALN  Kalnik            80.46 327  i P  P     03 03 11.1  -0.2
RDO   Rodhopi           80.48 319  P    P     03 03 12.6 +1.2
BALB  Balikesir         80.48 317  IAmb IAmb  03 03 13.4
      comp=Z,119nm,0.9s
BHOU  Houvegnez         80.49 336  dP   P     03 03 11.7 +0.4
      comp=Z,51nm,0.9s
BHOU                               dpP  pP    03 03 26.5  -3.6
BHOU                               dsP  sP    03 03 32.8  -4.8
ISP   Isparta           80.49 314  P    P     03 03 11.3  -0.4
ISP                                pmax pmax
      comp=Z,39nm,0.8s
ISP   Isparta           80.49 314  P    P     03 03 11.2  -0.4
TEKS  Tekeris           80.50 325⇑iP    P     03 03 11.0  -0.5
RJOB  Jochberg          80.50 330  eP   P     03 03 12.6 +1.1
      comp=Z,89nm,0.9s,baz=31,slow=5.5
MNTX  Cornudas Mount    80.55  55  P    P     03 03 12.9 +1.0
      baz=316,SNR=26
GROS  Grobnik           80.56 328  i P  P     03 03 12.1 +0.3
SOKA  Soboth            80.56 328  i P  P     03 03 12.4 +0.6
      comp=Z,117nm,0.8s,SNR=35
PERS  Pernice           80.57 328  i P  P     03 03 12.3 +0.5
TOO   Toolangi          80.57 181  P    P     03 03 11.7   0.0
TOO                                pmax pmax
      comp=Z,101nm,1.5s
TOO   Toolangi          80.57 181  P    P     03 03 11.7   0.0
UCC   Uccle             80.58 337  dP   P     03 03 11.8 +0.1
      comp=Z,11nm,1.2s
UCC                                dsP  pP    03 03 34.0 +3.5
LOBO  Lobor             80.60 328  i P  P     03 03 11.7  -0.3
FOEL  Foel Wylfa        80.62 342⇑eP    P     03 03 12.9 +0.9
FOEL                               IAmb IAmb  03 03 13.8
      comp=Z,303nm,0.8s
BCLA  Clavier           80.64 336  bP   P     03 03 12.3 +0.2
      comp=Z,55nm,0.9s
BCLA                               dsP  pP    03 03 34.5 +3.6
KAN12 Harper NE Stat    80.66  47  IAmb IAmb  03 03 33.7
      comp=Z,109nm,1.0s
DIVS  Divibare          80.67 324⇑iP    P     03 03 12.6 +0.1
DIVS  Divibare          80.67 324  IAmb IAmb  03 03 13.9
      comp=Z,79nm,0.9s
KAN16 Harper SW Stat    80.68  47  P    P     03 03 12.8 +0.2
KAN16                              pP   pP    03 03 31.1  -0.2
KAN16                              IAmb IAmb  03 03 33.8
      comp=Z,161nm,1.1s
FUR   Furstenfeldbru    80.68 331  eP   P     03 03 13.3 +0.9
      comp=Z,188nm,0.9s,baz=31,slow=5.5
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FUR                                eL   L     03 39 58.1
      comp=Z,626nm,21.9s
BGES  Gesves            80.74 336  dP   P     03 03 12.7 +0.1
      comp=Z,57nm,0.9s
MOSL  Moslavina         80.77 327  i P  P     03 03 12.6  -0.3
U32A  Winter Ranch,     80.80  48  IAmb IAmb  03 03 34.5
      comp=Z,193nm,1.4s
PTJ   Puntijarka        80.84 327  P    P     03 03 13.3   0.0
KBA   Koelnbreinsper    80.86 330  i P  P     03 03 14.1 +0.6
      comp=Z,127nm,0.8s,SNR=15
SNF   Seneffe           80.86 337  dP   P     03 03 13.6 +0.3
      comp=Z,76nm,0.9s
STU   Stuttgart         80.86 333  eP   P     03 03 13.9 +0.6
      comp=Z,397nm,0.9s,baz=31,slow=5.5
STU   Stuttgart         80.86 333  IAmb IAmb  03 03 14.9
      comp=Z,152nm,0.9s
OBKA  Obir              80.89 329  i P  P     03 03 13.9 +0.3
      comp=Z,52nm,0.8s,SNR=8.1
HLM1  Long Mynd         80.89 342  eP   P     03 03 13.6 +0.2
HLM1                               IAmb IAmb  03 03 15.0
      comp=Z,158nm,1.1s
KAN01 Argonia South     80.89  47       P     03 03 13.9 +0.2
KAN01                                   pP    03 03 32.5 +0.1
KAN01                              IAmb IAmb  03 03 35.2
      comp=Z,219nm,1.3s
RCHB  Rochefort         80.90 336  dP   P     03 03 13.3  -0.2
      comp=Z,54nm,1.1s
ZAG   Zagreb            80.90 327⇑iP    P     03 03 13.9 +0.4
BMRD  Maredsous         80.90 336  dP   P     03 03 13.6 +0.2
      comp=Z,88nm,0.9s
KAN14 Manchester OK     80.93  47  IAmb IAmb  03 03 34.7
      comp=Z,132nm,1.3s
KULA  Kula-Manisa       80.94 315  P    P     03 03 14.9 +0.9
DOB   Doboj             80.95 326  eP   P     03 03 14.2 +0.4
DSB   Dublin            80.97 344  IAmb IAmb  03 03 15.5
      comp=Z,81nm,0.9s
KAN17 Caldwell West     80.97  47  IAmb IAmb  03 03 35.7
      comp=Z,242nm,1.3s
KAN09 Caldwell North    80.98  47  IAmb IAmb  03 03 35.0
      comp=Z,127nm,1.2s
VLDQ  Val d'Or          81.03  28  IAmb IAmb  03 03 34.4
      comp=Z,100nm,1.1s
WLF   Walferdange       81.06 335  dP   P     03 03 15.0 +0.7
      comp=Z,36nm,1.2s
WLF   Walferdange       81.06 335  P    P     03 03 14.5 +0.2
WLF                                pmax pmax
      comp=Z,71nm,1.0s
WLF   Walferdange       81.06 335  P    P     03 03 14.5 +0.2
KAVA  Kavala            81.08 319  P    P     03 03 15.6 +1.0
CSS   Mathiatis         81.08 310  IAmb IAmb  03 03 16.5
      comp=Z,78nm,0.8s
GLMI  Grayling          81.09  34  P    P     03 03 14.7 +0.1
      baz=325
BBLS  Lazi&#263;i       81.10 324⇑iP    P     03 03 15.0 +0.2
CRES  Cresnjev          81.11 328⇑iP    P     03 03 14.6  -0.1
NVR   Nevrokopi         81.11 320  P    P     03 03 15.7 +0.9
HAPS  Han Pijesak,Bl    81.12 325⇑iP    P     03 03 15.5 +0.6
MYKA  Terra Mystica     81.13 329  i P  P     03 03 14.9   0.0
      comp=Z,46nm,0.8s,SNR=14
DOU   Dourbes           81.14 336  dP   P     03 03 13.9  -0.8
      comp=Z,40nm,1.1s
DOU                                dpP  pP    03 03 28.7  -4.8
DOU                                dsP  sP    03 03 36.5  -4.5
KAN13 South Haven SW    81.15  47  IAmb IAmb  03 03 35.9
      comp=Z,90nm,1.0s
ELSH  Elham, Standar    81.16 339  eP   P     03 03 15.0 +0.2
ELSH                               IAmb IAmb  03 03 16.3
      comp=Z,283nm,0.8s
P38A  Dawn              81.19  43  IAmb IAmb  03 03 36.2
      comp=Z,119nm,0.8s
LEF   Lefka             81.21 311 ⇑P    P     03 03 15.2  -0.2
CROK  Carrier           81.26  47  IAmb IAmb  03 03 37.4
      comp=Z,222nm,1.2s
OZLJ  Ozalj             81.28 328  i P  P     03 03 15.4  -0.2
WATA  Walderalm         81.28 331  i P  P     03 03 16.3 +0.5
      comp=Z,90nm,0.7s,SNR=34
LJU   Ljubljana         81.28 328⇑iP    P     03 03 15.4  -0.2
LJU   Ljubljana         81.28 328  i P  P     03 03 15.5  -0.2
BLY   Banja Luka        81.31 326⇑iP    P     03 03 15.8 +0.1
RUDO  Rudo              81.32 324  eP   P     03 03 15.6  -0.2
WTTA  Wattenberg        81.32 331  i P  P     03 03 16.8 +0.8
      comp=Z,107nm,0.7s,SNR=24
VISS  Visnje            81.37 328  i P  P     03 03 16.0  -0.1
MCH1  Michaelchurch     81.40 341⇑eP    P     03 03 16.9 +0.8
MCH1                               IAmb IAmb  03 03 17.3
      comp=Z,185nm,0.9s
STRD  Stroud            81.41 341⇑eP    P     03 03 16.0  -0.1
STRD                               IAmb IAmb  03 03 17.8
      comp=Z,414nm,1.0s
RETA  Reutte            81.44 331  i P  P     03 03 17.1 +0.6
      comp=Z,89nm,0.9s,SNR=24
MOTA  Moosalm           81.44 331  i P  P     03 03 17.2 +0.6
      comp=Z,159nm,0.8s,SNR=45
ABTA  Abfaltersbach     81.44 330  i P  P     03 03 16.3  -0.3
      comp=Z,61nm,1.2s,SNR=16
BOJS  Bojanci           81.45 328  i P  P     03 03 16.6 +0.1
BLOK  Blackwell         81.48  47       P     03 03 17.0 +0.2
BLOK                                    pP    03 03 35.6 +0.1
BLOK                               IAmb IAmb  03 03 37.9
      comp=Z,188nm,1.3s
UBR   Ueberruh          81.50 332  eP   P     03 03 17.2 +0.4
      comp=Z,37nm,0.9s,baz=31,slow=5.5
SQTA  Sankt Quirin      81.51 331  i P  P     03 03 17.7 +0.7
      comp=Z,106nm,0.7s,SNR=32
BFO   Black Forest      81.53 333  P    P     03 03 17.0 +0.1
BFO                                pmax pmax
      comp=Z,71nm,0.8s
BFO   Black Forest      81.53 333  eP   P     03 03 17.3 +0.4
      comp=Z,86nm,0.9s,baz=31,slow=5.5
BFO                                eL   L     03 31 08.6
      comp=Z,372nm,20.9s
BFO   Black Forest      81.53 333  P    P     03 03 17.0 +0.1
BFO                                IAmb IAmb  03 03 18.4
      comp=Z,71nm,0.8s
SWN1  Swindon           81.57 341⇑eP    P     03 03 17.9 +0.9
SWN1                               IAmb IAmb  03 03 18.9
      comp=Z,505nm,0.8s
CEY   Cerknica          81.58 328⇑iP    P     03 03 16.9  -0.3
PRK   Paraskevi         81.58 317  P    P     03 03 19.0 +1.7
OLDB  Oldbury-Upon-S    81.61 341  eP   P     03 03 17.1   0.0
LIA   Limnos Island     81.61 318  P    P     03 03 18.0 +0.6
STIP  Stip              81.61 321  i P  P     03 03 17.2  -0.3
HMNX  Herstmonceux      81.62 339⇑eP    P     03 03 18.5 +1.3
HMNX                               IAmb IAmb  03 03 19.4
      comp=Z,628nm,0.9s
MGRS  Mrkonjic Grad     81.62 326⇑iP    P     03 03 18.3 +0.8
KNT   Kendrikon         81.71 321  P    P     03 03 18.5 +0.6
RAYN  Ar Rayn           81.71 294  i P  P     03 03 18.8 +0.6
      SNR=68
RAYN  Ar Rayn           81.71 294  P    P     03 03 18.0  -0.3
RAYN                               pmax pmax
      comp=Z,80nm,1.1s
RAYN  Ar Rayn           81.71 294  P    P     03 03 18.0  -0.3
RAYN                               IAmb IAmb  03 03 20.1
      comp=Z,80nm,1.1s
T35A  Sooner Cattle     81.73  46  IAmb IAmb  03 03 39.3
      comp=Z,240nm,1.3s
SKO   Skopje            81.73 322  i P  P     03 03 19.4 +1.3
VAY   Valandovo         81.73 321  i P  P     03 03 18.8 +0.8
STAL  STALIGIAL         81.78 330  IAmb IAmb  03 03 20.0
      comp=Z,84nm,0.9s
PLIT  Plitvice          81.83 327  i P  P     03 03 18.6   0.0
RSBS  Rosebush, Pemb    81.84 342⇑eP    P     03 03 18.9 +0.5
RSBS                               IAmb IAmb  03 03 19.9
      comp=Z,426nm,1.5s
OUR   Ouranopolis       81.85 319  P    P     03 03 19.3 +0.7
FETA  Feichten          81.85 331  i P  P     03 03 19.3 +0.6
      comp=Z,74nm,0.9s,SNR=20
UPM   Unac-Piva         81.85 324  eP   P     03 03 18.7  -0.2
RIY   Rijeka            81.90 328⇑iP    P     03 03 18.2  -0.7
RIY   Rijeka            81.90 328  P    P     03 03 18.4  -0.5
DAVA  Damuels           81.92 332  i P  P     03 03 19.6 +0.4
      comp=Z,89nm,0.7s,SNR=37
P40A  Paris             81.99  42  IAmb IAmb  03 03 40.5
      comp=Z,135nm,0.8s
ECH   Echery            82.02 334  IAmb IAmb  03 03 20.8
      comp=Z,94nm,0.9s
UDBI  Udbina            82.06 327  i P  P     03 03 19.1  -0.7
PLG   Polygyros         82.07 320  P    P     03 03 20.1 +0.2
BCOK  Bluff Creek, N    82.09  48  IAmb IAmb  03 03 41.5
      comp=Z,119nm,1.2s
WMOK  Wichita Mounta    82.14  49  P    P     03 03 20.2  -0.1
      baz=318,SNR=9.6
QUOK  Quay              82.19  47  IAmb IAmb  03 03 41.7
      comp=Z,124nm,1.2s
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BRY   Bratogost         82.25 324  eP   P     03 03 20.5  -0.4
RABC  Rab               82.27 328  i P  P     03 03 20.0  -0.7
SMRN  Sveta Marina      82.27 328  i P  P     03 03 19.4  -1.3
OK031 S. Brethren Rd    82.28  47  IAmb IAmb  03 03 42.3
      comp=Z,161nm,1.3s
OK025 Westminster Rd    82.29  48  IAmb IAmb  03 03 42.4
      comp=Z,161nm,1.0s
J47A  Sunmer            82.31  35  IAmb IAmb  03 03 42.7
      comp=Z,121nm,0.9s
OK034 N. Norfolk Rd.    82.31  47  IAmb IAmb  03 03 42.4
      comp=Z,84nm,1.0s
PAIG  Paliouri          82.31 319  P    P     03 03 21.3 +0.2
PDG   Podgorica         82.33 323 ⇑P    P     03 03 21.4 +0.3
PDG   Podgorica         82.33 323⇑iP    P     03 03 21.2 +0.1
PDG   Podgorica         82.33 323  P    P     03 03 20.9  -0.3
OK030 Cody Creek RV     82.33  47  IAmb IAmb  03 03 42.5
      comp=Z,92nm,1.1s
CTI   Castel Tesino     82.35 330  IAmb IAmb  03 03 21.7
      comp=Z,62nm,0.7s
CTI                                P    P     03 03 21.8 +0.5
OKCFA Oklahoma City     82.36  48  P    P     03 03 22.1 +0.6
OKCFA                                   pP    03 03 41.2 +0.9
OKCFA                              IAmb IAmb  03 03 43.5
      comp=Z,168nm,1.0s
RICI  Ricice            82.36 325  i P  P     03 03 20.8  -0.6
PHP   Peshkopia         82.41 322  P    P     03 03 22.0 +0.3
GHAJ  Ghor Haditha      82.47 306  IAmb IAmb  03 03 24.5
      comp=Z,86nm,1.0s
TREB  Trebinje          82.49 324⇑iP    P     03 03 21.1  -0.9
HDIL  Hopedale          82.49  39  P    P     03 03 22.0   0.0
      baz=323
FNO   Franklin          82.50  48  IAmb IAmb  03 03 43.7
      comp=Z,188nm,1.1s
DRME  Dracevica, Mon    82.56 323⇑iP    P     03 03 22.7 +0.3
MAKA  Makarska          82.58 325  i P  P     03 03 21.6  -0.8
STON  Ston              82.64 325⇑iP    P     03 03 21.8  -0.9
STON  Ston              82.64 325  i P  P     03 03 21.4  -1.3
MORI  Morici            82.64 326  i P  P     03 03 22.0  -0.7
HCY   Herceg Novi       82.64 324⇑iP    P     03 03 22.3  -0.5
HTL   Hartland          82.68 342⇑eP    P     03 03 23.2 +0.5
HTL                                IAmb IAmb  03 03 24.6
      comp=Z,353nm,1.2s
FNA   Florina           82.71 321  P    P     03 03 24.4 +1.2
FNA   Florina           82.71 321  IAmb IAmb  03 03 24.6
      comp=Z,120nm,0.9s
OHR   Ohrid             82.71 322  i P  P     03 03 23.5 +0.3
X34A  Smith Ranch, M    82.76  49  IAmb IAmb  03 03 45.3
      comp=Z,236nm,1.3s
S39A  Bolivar           82.78  44  IAmb IAmb  03 03 44.4
      comp=Z,72nm,0.9s
DUGI  Dugi Otok         82.79 327  i P  P     03 03 23.0  -0.5
ZIRJ  Zirje             82.84 326  i P  P     03 03 23.0  -0.8
R40A  Maddies Statio    82.84  43  IAmb IAmb  03 03 44.6
      comp=Z,110nm,0.8s
W35A  Tecumseh          82.86  48  IAmb IAmb  03 03 45.4
      comp=Z,136nm,1.1s
TUL1  Leonard           82.87  46  P    P     03 03 24.1   0.0
      baz=320,SNR=8.6
TUL1  Leonard           82.87  46  IAmb IAmb  03 03 45.3
      comp=Z,82nm,0.9s
HVAR  Hvar              82.90 326  i P  P     03 03 23.0  -1.1
KZN   Kozani            82.91 321  P    P     03 03 24.3   0.0
TEOL  Teolo             82.93 330  IAmb IAmb  03 03 25.3
      comp=Z,115nm,0.9s
TIR   Tirane            82.94 322 ⇑P    P     03 03 24.7 +0.4
TIR   Tirane            82.94 322  P    P     03 03 25.0 +0.7
TIR   Tirane            82.94 322  P    P     03 03 24.8 +0.5
TIR                                pmax pmax
      comp=Z,323nm,1.0s
TIR   Tirane            82.94 322  P    P     03 03 24.8 +0.5
ARG   Arkhangelos       82.96 314  P    P     03 03 25.1 +0.6
NEO   Neokhori          83.02 319  P    P     03 03 24.8   0.0
LSTV  Lastovo           83.06 325  i P  P     03 03 23.8  -1.1
DYA   Yadsworthy        83.07 341⇑eP    P     03 03 24.7  -0.1
DYA                                IAmb IAmb  03 03 26.3
      comp=Z,363nm,1.1s
KBN   Korca             83.11 321  P    P     03 03 25.5 +0.2
P43A  Skaggs, Pawnee    83.11  40  IAmb IAmb  03 03 46.6
      comp=Z,97nm,0.8s
LRSO  Larissa Observ    83.12 320  P    P     03 03 26.6 +1.3
KYMI  Kymi, Euboea I    83.13 318  P    P     03 03 25.6 +0.2
SALO  Salr              83.13 331  IAmb IAmb  03 03 26.2
      comp=Z,138nm,0.8s
NEST  Nestorio          83.15 321  P    P     03 03 25.8 +0.2
U38A  Gravette          83.20  45       P     03 03 25.7  -0.1
U38A                                    pP    03 03 45.1 +0.5
ABTX  Abilene, Hawle    83.22  51  P    P     03 03 26.3 +0.3
      baz=318,SNR=6.4
ABTX  Abilene, Hawle    83.22  51  IAmb IAmb  03 03 48.5
      comp=Z,114nm,1.3s
TX32  Lajitas Array     83.27  56  IAmb IAmb  03 03 48.2
      comp=Z,93nm,1.1s
TXAR  Lajitas Array     83.27  56  P    P     03 03 27.1 +0.7
      comp=Z,14nm,0.8s,baz=297,slow=3.9,SNR=49
TXAR                               pP   pP    03 03 47.8 +2.6
      comp=Z,60nm,1.0s,baz=292,slow=3.9,SNR=14
TXAR                               LR   LR    03 36 13.1
      comp=Z,110nm,21.8s,baz=0.0,slow=32
TXAR  Lajitas Array     83.27  56  P    P     03 03 27.1 +0.7
TXAR                               pP   pP    03 03 47.2 +2.0
PENT  Pentalofos        83.29 321  P    P     03 03 26.5 +0.2
PMOR  Pomariorio Ree    83.41 118  eT   T     04 35 22.0
      comp=Z,134nm,0.3s
CCM   Cathedral Cave    83.53  42  P    P     03 03 27.3  -0.1
CCM                                pmax pmax
      comp=Z,137nm,1.0s
CCM   Cathedral Cave    83.53  42  P    P     03 03 27.6 +0.2
      baz=322
CCM   Cathedral Cave    83.53  42  P    P     03 03 27.3  -0.1
CCM                                IAmb IAmb  03 03 48.4
      comp=Z,137nm,0.9s
SOCY  Socotra           83.53 281  IAmb IAmb  03 03 27.8
      comp=Z,94nm,1.2s
AAM   Ann Arbor         83.56  35  P    P     03 03 27.5   0.0
      baz=326,SNR=5.5
AAM   Ann Arbor         83.56  35  IAmb IAmb  03 03 49.1
      comp=Z,126nm,1.0s
SLM   Saint Louis       83.57  41  IAmb IAmb  03 03 48.5
      comp=Z,143nm,0.9s
LSK   Leskovik          83.57 321  P    P     03 03 28.7 +1.0
LOOK  Love County       83.57  49  IAmb IAmb  03 03 49.0
      comp=Z,137nm,1.1s
SENIN Lac Senin/Sane    83.59 333  IAmb IAmb  03 03 29.3
      comp=Z,58nm,0.8s
ATAL  Atalanti          83.60 319  P    P     03 03 27.3  -0.5
APE   Apeiranthos       83.64 316 ⇓P    P     03 03 27.0  -1.1
APE   Apeiranthos       83.64 316 ⇓P    P     03 03 27.0  -1.1
SFIN  Lafayette         83.64  38  P    P     03 03 27.6  -0.3
      baz=324,SNR=6.8
LKR   Lokris            83.64 319  P    P     03 03 27.5  -0.5
TRQ   Mont Tremblant    83.65  27  IAmb IAmb  03 03 49.0
      comp=Z,122nm,1.1s
AGG   Agios Georgios    83.67 320  IAmb IAmb  03 03 28.4
      comp=Z,85nm,0.9s
CLF   Chambon-Foret     83.68 337  IAmb IAmb  03 03 30.6
      comp=Z,71nm,0.8s
MGMO  Mountain Grove    83.73  43  IAmb IAmb  03 03 49.1
      comp=Z,112nm,1.3s
HPIG                    83.76  59  P    P     03 03 29.5 +0.4
HPIG                               pP   pP    03 03 49.1 +1.2
HPIG                               IAmb IAmb  03 03 51.6
      comp=Z,90nm,1.2s
JQE   Queens East       83.76 340⇑eP    P     03 03 28.9 +0.5
MAKR  Makrakomi, Fth    83.77 320  P    P     03 03 28.4  -0.3
JAN   Janina            83.85 321  P    P     03 03 30.0 +0.9
VILL  Villia            83.88 318  P    P     03 03 28.6  -0.7
VLY   Voula,Athens      83.89 318  P    P     03 03 28.4  -0.9
Q44A  Meyer Farm, Va    83.93  40  IAmb IAmb  03 03 50.4
      comp=Z,140nm,0.9s
PRMA  PARMA             83.94 330  IAmb IAmb  03 03 31.6
      comp=Z,210nm,1.2s
FVM   French Village    83.99  42  IAmb IAmb  03 03 50.8
      comp=Z,74nm,0.8s
U40A  Yellville         84.05  44  P    P     03 03 30.1  -0.1
      baz=321,SNR=30
U40A  Yellville         84.05  44  IAmb IAmb  03 03 51.0
      comp=Z,125nm,0.9s
ZCCA  Zocca             84.05 330  IAmb IAmb  03 03 40.9
      comp=Z,113nm,0.9s
DELO  Deloro Mine       84.06  30  P    P     03 03 29.2  -0.8
DELO                               pP   pP    03 03 48.6  -0.3
DELO                               IAmb IAmb  03 03 51.0
      comp=Z,88nm,1.2s
X37A  Clayton           84.10  47  IAmb IAmb  03 03 51.7
      comp=Z,65nm,1.1s
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LTK	Loutraki	84.15	319	P	P	03 03 29.1	-1.6
TAOE	Nuku Hiva Isla	84.17	108	*e*LR	LR	03 29 51.5	
	comp=Z,1µm,25.6s						
TAOE	Nuku Hiva Isla	84.17	108	*e*T	T	04 36 11.4	
	comp=Z,26nm,0.2s						
IGT	Igoumenitsa	84.19	321	P	P	03 03 31.0	+0.2
ANX	Ano Chora	84.20	320	P	P	03 03 30.9	-0.1
PPT	Papeete	84.25	121	LR	LR	03 39 48.1	
	comp=Z,341nm,18.2s,baz=316,slow=35						
PPT2	Papeete2	84.27	121	*e*S	S	03 13 52.0	+0.5
	comp=Z,301nm,27.5s						
PPT2	Papeete2	84.27	121	*e*LR	LR	03 29 50.3	
	comp=Z,5µm,32.2s,baz=318						
PPT2	Papeete2	84.27	121	*e*T	T	04 36 26.7	
	comp=Z,8.1nm,0.3s						
SERG	Sergoula	84.28	319	P	P	03 03 30.9	-0.4
KEK	Kerkira	84.29	322	P	P	03 03 31.3	0.0
THAL	Thalero	84.29	319	P	P	03 03 30.4	-0.9
TRIZ	Trizonia	84.31	319	P	P	03 03 31.0	-0.4
PAE	Paea	84.32	121	*e*T	T	04 36 29.8	
	comp=Z,2.5nm,0.3s						
EFP	Efpalio	84.34	319	P	P	03 03 31.8	+0.3
ALIK	Aliki, Aigiali	84.38	319	P	P	03 03 32.7	+1.0
SGRT	San Giovanni R	84.38	325	IAmb	IAmb	03 03 32.7	
	comp=Z,138nm,0.9s						
T42A	Van Buren	84.41	43	IAmb	IAmb	03 03 52.8	
	comp=Z,72nm,1.0s						
VLC	Villacollemand	84.43	330	P	P	03 03 32.4	+0.5
VLC				IAmb	IAmb	03 03 34.0	
	comp=Z,98nm,0.9s						
LAKA	Lakka	84.46	319	P	P	03 03 32.1	-0.1
W39A	Magazine	84.47	46	P	P	03 03 32.3	0.0
	baz=321,SNR=10						
W39A	Magazine	84.47	46	IAmb	IAmb	03 03 53.4	
	comp=Z,108nm,1.1s						
N49A	Columbus Grove	84.48	36	IAmb	IAmb	03 03 53.6	
	comp=Z,125nm,0.9s						
OLIL	Olney	84.50	40	IAmb	IAmb	03 03 53.5	
	comp=Z,160nm,1.1s						
GUR	Goura	84.52	319	P	P	03 03 32.0	-0.6
KLV	Kalavryta, Ach	84.53	319	P	P	03 03 32.1	-0.5
MNTQ	Montreal, Queb	84.60	27	IAmb	IAmb	03 04 01.9	
	comp=Z,67nm,0.9s						
MSSA	Maissana	84.61	331	IAmb	IAmb	03 03 33.6	
	comp=Z,144nm,1.1s						
OSSC	Osservatorio P	84.66	329	P	P	03 03 32.8	-0.3
OSSC				IAmb	IAmb	03 03 34.5	
	comp=Z,147nm,1.0s						
NYDR	Nydri-Lefkada	84.68	320	P	P	03 03 33.5	+0.3
JCT	Junction City	84.72	53	P	P	03 03 33.9	+0.3
	baz=318,SNR=12						
JCT	Junction City	84.72	53	IAmb	IAmb	03 03 55.1	
	comp=Z,140nm,1.1s						
EVGI	Lefkada island	84.77	320	P	P	03 03 34.2	+0.5
STIA	Sitia Lasithi	84.80	315	P	P	03 03 34.6	+0.7
ZKR	Zakros	84.80	315	P	P	03 03 34.5	+0.6
DRO	Drossia	84.81	319	P	P	03 03 34.5	+0.5
AQU	L'Aquila	84.82	327	⇑*i*P	P	03 03 33.7	-0.3
AQU	L'Aquila	84.82	327	IAmb	IAmb	03 03 35.9	
	comp=Z,119nm,0.9s						
RLS	Riolos of Patr	84.84	320	P	P	03 03 34.6	+0.5
BLO	Bloomington	84.87	39	IAmb	IAmb	03 03 55.2	
	comp=Z,72nm,0.9s						
MATE	Matera	84.89	324	⇓P	P	03 03 34.3	0.0
WHTX	Lake Whitney,	84.92	50	P	P	03 03 35.0	+0.4
	baz=319,SNR=8.0						
WHTX	Lake Whitney,	84.92	50	IAmb	IAmb	03 03 56.2	
	comp=Z,177nm,1.1s						
BNI	Bardonecchia	84.95	333	P	P	03 03 34.4	-0.3
BNI				pmax	pmax		
	comp=Z,37nm,0.8s						
BNI	Bardonecchia	84.95	333	P	P	03 03 34.4	-0.3
NPS	Neapolis	85.00	315	P	P	03 03 34.4	-0.5
O49A	Covington	85.02	37	IAmb	IAmb	03 03 55.8	
	comp=Z,76nm,0.9s						
MIAR	Mount Ida	85.08	46	P	P	03 03 35.5	+0.2
	baz=321						
MIAR	Mount Ida	85.08	46	IAmb	IAmb	03 03 56.8	
	comp=Z,140nm,1.0s						
P48A	Milroy	85.13	38	IAmb	IAmb	03 03 56.3	
	comp=Z,123nm,1.1s						
LCAR	Lake Charles	85.13	43	IAmb	IAmb	03 03 56.5	
	comp=Z,70nm,1.1s						
VLS	Valsamata	85.16	320	P	P	03 03 35.8	+0.1
FRNY	Flat Rock	85.19	27	P	P	03 03 36.8	+1.1
FRNY				pP	pP	03 03 55.1	+0.5
VLI	Veliai	85.20	318	P	P	03 03 34.8	-1.1
HRKL	Herakleio	85.22	316	P	P	03 03 36.5	+0.5
KSTL	Kastelli Herak	85.24	316	P	P	03 03 35.7	-0.4
BATG	Bathurst New B	85.26	22	IAmb	IAmb	03 03 37.0	
	comp=Z,64nm,1.1s						
W41B	Gary Mavity, V	85.28	45	P	P	03 03 36.5	+0.2
	baz=321,SNR=14						
Z38A	Mt. Pleasant	85.32	48	IAmb	IAmb	03 03 57.9	
	comp=Z,166nm,1.1s						
ITM	Ithomi	85.33	319	P	P	03 03 36.1	-0.4
IDI	Anoyia	85.35	316	P	P	03 03 36.2	-0.6
DRLN	Deer Lake	85.39	15	IAmb	IAmb	03 03 43.4	
	comp=Z,105nm,1.2s						
P49A	Miami Univ. Ec	85.39	37	P	P	03 03 36.7	-0.1
	baz=325,SNR=8.2						
F62A	Pittston Farm,	85.40	25	IAmb	IAmb	03 04 06.5	
	comp=Z,79nm,0.9s						
CASP	Castiglione de	85.43	329	IAmb	IAmb	03 03 37.4	
	comp=Z,47nm,0.8s						
SSB	Saint Sauveur	85.45	334	P	P	03 03 37.3	+0.2
SSB				pmax	pmax		
	comp=Z,81nm,1.1s						
SSB	Saint Sauveur	85.45	334	P	P	03 03 37.3	+0.2
SSB				IAmb	IAmb	03 03 39.1	
	comp=Z,80nm,1.1s						
MMNY	Mt. Morris Dam	85.49	31	IAmb	IAmb	03 03 58.3	
	comp=Z,95nm,0.9s						
WVNY	West Valley, N	85.50	32	IAmb	IAmb	03 03 58.7	
	comp=Z,148nm,1.1s						
M53A	WI Miller and	85.51	34	P	P	03 03 37.6	+0.2
	baz=328						
X40A	Basin Creek Fa	85.51	45	P	P	03 03 37.4	-0.1
	baz=321,SNR=12						
X40A	Basin Creek Fa	85.51	45	IAmb	IAmb	03 03 58.9	
	comp=Z,145nm,1.3s						
ACSO	Alum Creek Sta	85.56	36	P	P	03 03 37.6	0.0
	baz=326						
ACSO	Alum Creek Sta	85.56	36	IAmb	IAmb	03 03 59.2	
	comp=Z,141nm,0.9s						
VAM	Vamos	85.61	316	P	P	03 03 38.3	+0.4
IMMV	Iera Moni Meta	85.67	316	P	P	03 03 38.4	+0.1
WCI	Wyandotte Cave	85.74	39	P	P	03 03 38.8	+0.2
WCI				pmax	pmax		
	comp=Z,115nm,0.9s						
WCI	Wyandotte Cave	85.74	39	P	P	03 03 38.8	+0.2
	baz=324						
WCI	Wyandotte Cave	85.74	39	P	P	03 03 38.8	+0.2
WCI				IAmb	IAmb	03 03 59.8	
	comp=Z,115nm,0.9s						
435B	Jarrell	85.76	51	P	P	03 03 39.3	+0.5
	baz=319						
G62A	West of Eustis	85.84	25	IAmb	IAmb	03 04 00.1	
	comp=Z,85nm,1.1s						
M54A	Oil Creek Stat	85.85	33	P	P	03 03 39.0	-0.1
	baz=328						
M54A	Oil Creek Stat	85.85	33	IAmb	IAmb	03 04 00.1	
	comp=Z,208nm,1.4s						
J58A	Remsen	85.90	29	IAmb	IAmb	03 04 00.3	
	comp=Z,74nm,0.9s						
VT1	Waterbury	85.92	27	IAmb	IAmb	03 04 00.9	
	comp=Z,62nm,0.7s						
LPAR	Lepanto	85.93	43	P	P	03 03 40.8	+1.3
LPAR					pP	03 03 59.5	+1.0
TIP	Timpagrande	86.08	323	⇓P	P	03 03 41.2	+0.9
TIP	Timpagrande	86.08	323	IAmb	IAmb	03 03 42.0	
	comp=Z,143nm,1.1s						
J59A	Piesco	86.09	29	IAmb	IAmb	03 04 01.2	
	comp=Z,45nm,0.8s						
L56A	Greenwood	86.13	31	IAmb	IAmb	03 04 01.7	
	comp=Z,68nm,0.9s						
O52A	Adamsville	86.14	35	IAmb	IAmb	03 04 02.0	
	comp=Z,148nm,1.1s						
P51A	Williamsport	86.15	36	IAmb	IAmb	03 04 01.8	
	comp=Z,129nm,0.9s						
N54A	Moraine State	86.19	33	P	P	03 03 40.9	+0.2
	baz=328						
R49A	Shelbyville	86.20	38	IAmb	IAmb	03 04 02.2	
	comp=Z,52nm,1.0s						
H62A	Milan	86.22	26	IAmb	IAmb	03 04 01.9	
	comp=Z,88nm,0.8s						
M55A	Ridgway	86.24	32	IAmb	IAmb	03 04 02.7	
	comp=Z,84nm,0.8s						
LBNH	Lisbon	86.27	27	P	P	03 03 42.6	+1.5
LBNH				pmax	pmax		
	comp=Z,24nm,0.7s						
LBNH	Lisbon	86.27	27	P	P	03 03 42.2	+1.1
	baz=333						
LBNH	Lisbon	86.27	27	P	P	03 03 42.6	+1.5
O53A	New Philadelph	86.29	35	P	P	03 03 41.2	0.0
	baz=327,SNR=5.7						
P52A	Corning	86.42	35	P	P	03 03 41.9	-0.1
	baz=327						
P52A	Corning	86.42	35	IAmb	IAmb	03 04 02.5	
	comp=Z,101nm,1.1s						
ACCN	Adirondack Com	86.45	28	IAmb	IAmb	03 04 03.3	
	comp=Z,98nm,1.1s						
Z41A	Richland Creek	86.48	46	P	P	03 03 43.2	+0.9
	baz=321						
R50A	Paris	86.59	38	IAmb	IAmb	03 04 04.0	
	comp=Z,79nm,1.1s						
NATX	Nacogdoches	86.64	48	P	P	03 03 44.5	+1.4
	baz=320,SNR=8.0						
BINY	Binghamton	86.66	30	P	P	03 03 43.1	+0.1
	baz=330						
BINY	Binghamton	86.66	30	P	P	03 03 43.2	+0.1
BINY				IAmb	IAmb	03 04 03.7	
	comp=Z,132nm,1.5s						
O54A	Avella	86.69	34	IAmb	IAmb	03 04 05.0	
	comp=Z,113nm,0.8s						
WVT	Waverly	86.72	41	P	P	03 03 43.6	+0.2
WVT				pmax	pmax		
	comp=Z,71nm,0.9s						
WVT	Waverly	86.72	41	P	P	03 03 43.5	+0.1
	baz=324						
WVT	Waverly	86.72	41	P	P	03 03 43.6	+0.2
WVT				IAmb	IAmb	03 04 04.7	
	comp=Z,71nm,0.9s						
P53A	Whipple	86.86	35	IAmb	IAmb	03 04 05.1	
	comp=Z,102nm,1.1s						
I63A	Otisfield	86.87	26	IAmb	IAmb	03 04 06.3	
	comp=Z,111nm,1.1s						
M57A	Sunshine Farm,	86.98	31	IAmb	IAmb	03 04 06.3	
	comp=Z,64nm,0.8s						
FFD	Franklin Falls	87.05	27	IAmb	IAmb	03 04 07.0	
	comp=Z,65nm,1.1s						
SSPA	Standing Stone	87.30	32	P	P	03 03 46.4	+0.3
	baz=329						
SSPA	Standing Stone	87.30	32	P	P	03 03 45.8	-0.3
SSPA				IAmb	IAmb	03 04 07.4	
	comp=Z,153nm,1.2s						
O56A	Blue Knob Stat	87.34	33	P	P	03 03 46.8	+0.3
	baz=329,SNR=8.5						
MCWV	Mont Chateau	87.35	34	P	P	03 03 47.0	+0.5
	baz=328,SNR=7.9						
S51A	Beattyville	87.44	38	IAmb	IAmb	03 04 08.0	
	comp=Z,98nm,1.1s						
CLTN	Cedars of Leba	87.46	40	IAmb	IAmb	03 04 08.4	
	comp=Z,108nm,1.0s						
V48A	Smith Brothers	87.51	41	IAmb	IAmb	03 04 08.4	
	comp=Z,92nm,0.9s						
PLAL	Pickwick Lake	87.52	42	P	P	03 03 47.1	-0.2
PLAL				IAmb	IAmb	03 04 08.2	
	comp=Z,69nm,0.9s						
R53A	Hurricane	87.59	36	IAmb	IAmb	03 04 08.8	
	comp=Z,114nm,1.1s						
N59A	State Game Lan	87.86	31	P	P	03 03 48.9	+0.1
	baz=331,SNR=10						
KSCT	Kent School, K	87.97	29	IAmb	IAmb	03 04 09.5	
	comp=Z,55nm,1.2s						
PAGS	Pennsylvania G	88.10	32	IAmb	IAmb	03 04 11.3	
	comp=Z,107nm,0.9s						
BCX	Boston College	88.22	27	P	P	03 03 50.7	+0.3
BCX				IAmb	IAmb	03 04 11.5	
	comp=Z,148nm,1.5s						
P57A	Homestead Farm	88.23	33	IAmb	IAmb	03 04 11.8	
	comp=Z,128nm,1.2s						
S54A	Dingess, Beckl	88.31	36	IAmb	IAmb	03 04 12.3	
	comp=Z,112nm,1.1s						
TZTN	Tazewell	88.37	38	P	P	03 03 51.7	+0.4
	baz=326,SNR=5.0						
TZTN	Tazewell	88.37	38	IAmb	IAmb	03 04 12.7	
	comp=Z,110nm,0.9s						
R55A	Marlinton	88.40	35	P	P	03 03 52.3	+0.7
X48A	Hartselle	88.45	42	IAmb	IAmb	03 04 12.5	
	comp=Z,67nm,0.9s						
VBMS	Vicksburg	88.49	45	P	P	03 03 53.1	+1.1
	baz=322,SNR=5.9						
VAE	Valguarnera	88.51	324	P	P	03 03 52.3	+0.2
	comp=Z,16nm,1.0s,baz=64,slow=7.0,SNR=2.1						
W50A	Signal Mountai	88.67	40	IAmb	IAmb	03 04 13.9	
	comp=Z,74nm,0.9s						
ZAIG	Zacatecas	88.71	60	P	P	03 03 54.4	+0.9
SDMD	Soldier's Deli	88.76	32	IAmb	IAmb	03 04 14.1	
	comp=Z,47nm,1.1s						
WUPA	West Chester U	88.78	31	IAmb	IAmb	03 04 15.4	
	comp=Z,46nm,1.2s						
CPCT	Cooper Cave	88.83	39	IAmb	IAmb	03 04 14.7	
	comp=Z,96nm,0.9s						
P60A	Greenville	88.87	31	P	P	03 03 53.5	-0.1
	baz=331,SNR=8.5						
Z47A	Carrollton	88.95	43	P	P	03 03 54.6	+0.5
FPAL	Fort Paine	89.06	41	IAmb	IAmb	03 04 15.7	
	comp=Z,78nm,1.0s						
BLA	Blacksburg	89.18	36	P	P	03 03 55.6	+0.4
	baz=328,SNR=5.6						
Y49A	Blount Mountai	89.23	42	IAmb	IAmb	03 04 16.4	
	comp=Z,78nm,0.9s						
OXZ	Oxford	89.30	162	IAmb	IAmb	03 04 19.7	
	comp=Z,108nm,1.1s						
V53A	Saluda	89.43	38	P	P	03 03 56.5	+0.1
V53A					pP	03 04 15.7	+0.3
V53A				IAmb	IAmb	03 04 17.7	
	comp=Z,65nm,1.1s						
T57A	Hurt	89.86	35	IAmb	IAmb	03 04 19.5	
	comp=Z,88nm,1.1s						
LBZ	Lake Benmore	89.90	163	P	P	03 03 59.6	+1.6
U56A	King	89.93	36	IAmb	IAmb	03 04 19.9	
	comp=Z,83nm,1.1s						
Y52A	Lilburn	90.35	40	IAmb	IAmb	03 04 22.2	
	comp=Z,57nm,0.8s						
KMSC	Kings Mountain	90.53	37	P	P	03 04 02.1	+0.6
	baz=327,SNR=7.3						
KMSC	Kings Mountain	90.53	37	IAmb	IAmb	03 04 22.6	
	comp=Z,86nm,1.0s						
PAULI	Pauline	90.58	38	IAmb	IAmb	03 04 22.8	
	comp=Z,78nm,1.0s						
250A	Grady	90.83	43	P	P	03 04 03.6	+0.7
250A					pP	03 04 22.8	+0.8
HODGE	Hodges	90.88	39	IAmb	IAmb	03 04 24.5	
	comp=Z,79nm,1.1s						
GOGA	Godfrey	91.00	40	P	P	03 04 04.2	+0.5
	baz=326,SNR=6.3						
U59A	Littleton	91.01	34	IAmb	IAmb	03 04 24.9	
	comp=Z,73nm,1.2s						
PBRG	Braganca	91.85	340	*e*P	P	03 04 06.9	-0.6
	comp=Z,45nm,1.8s						
ATD	Arta Tunnel	91.86	288	P	P	03 04 09.9	+1.9
	comp=Z,18nm,0.9s,baz=27,slow=3.2,SNR=11						
ATD	Arta Tunnel	91.86	288	P	P	03 04 08.6	+0.6
ATD				IAmb	IAmb	03 04 10.7	
	comp=Z,47nm,1.2s						
PGAV	Gavieira, Arco	92.06	341	*e*P	P	03 04 08.2	-0.4
PGAV	Gavieira, Arco	92.06	341	*e*LR	LR	03 35 59.5	
	comp=Z,206nm,20.0s						
KEST	Kesra	92.12	326	P	P	03 04 08.4	-0.5
	comp=Z,25nm,0.9s,baz=46,slow=1.8,SNR=13						
KEST				LR	LR	03 48 49.7	
	comp=Z,726nm,21.9s,baz=352,slow=38						
KEST	Kesra	92.12	326	IAmb	IAmb	03 04 09.9	
	comp=Z,35nm,0.9s						
POLO	Lamas de Olo	92.51	341	*e*P	P	03 04 10.3	-0.3
	comp=Z,44nm,1.4s						
MVO	Moncorvo	92.52	340	*e*P	P	03 04 10.3	-0.4
	comp=Z,44nm,1.4s						
MVO	Moncorvo	92.52	340	*e*LR	LR	03 36 25.8	
	comp=Z,418nm,20.0s						
PVRL	Vila Real	92.58	341	*e*P	P	03 04 10.3	-0.6
	comp=Z,58nm,1.3s						
ESBB	Sonseca Array	93.11	338	IAmb	IAmb	03 04 14.5	
	comp=Z,35nm,0.9s						
ESDC	Sonseca Array	93.12	338	P	P	03 04 13.2	-0.2
	comp=Z,26nm,0.9s,baz=18,slow=3.7,SNR=90						
ESDC				LR	LR	03 53 17.5	
	comp=Z,321nm,18.5s,baz=330,slow=40						
ESDC	Sonseca Array	93.12	338	P	P	03 04 13.4	0.0
ESDC				IAmb	IAmb	03 04 14.5	
	comp=Z,39nm,1.0s						
PVIS	Viseu	93.16	341	*e*P	P	03 04 13.1	-0.5
	comp=Z,47nm,1.6s						
PAB	San Pablo	93.34	338	P	P	03 04 13.7	-0.8
PAB				pmax	pmax		
	comp=Z,47nm,1.1s						
PAB	San Pablo	93.34	338	P	P	03 04 13.7	-0.8
PAB				IAmb	IAmb	03 04 15.4	
	comp=Z,47nm,1.1s						
MTE	Manteigas	93.37	340	*e*P	P	03 04 14.0	-0.6
	comp=Z,66nm,1.2s						
MTE	Manteigas	93.37	340	*e*S	SKSac	03 14 44.2	+1.4
MTE	Manteigas	93.37	340	*e*LR	LR	03 36 29.0	
	comp=Z,344nm,18.0s						
MTE	Manteigas	93.37	340	IAmb	IAmb	03 04 15.1	
	comp=Z,44nm,1.0s						
COI	Coimbra	93.76	341	IAmb	IAmb	03 04 16.6	
	comp=Z,38nm,0.9s						
PCBR	Castelo Branco	93.88	340	*e*P	P	03 04 16.6	-0.3
	comp=Z,58nm,1.5s						
PCAS	Casmilo, Conde	93.93	341	*e*P	P	03 04 16.3	-0.8
	comp=Z,76nm,1.2s						
PMRV	Marv??o	94.25	340	*e*P	P	03 04 17.7	-0.9
	comp=Z,47nm,1.4s						
PMRV	Marv??o	94.25	340	*e*LR	LR	03 36 49.4	
	comp=Z,369nm,18.0s						
PSBE	So Bento	94.51	341	*e*P	P	03 04 19.1	-0.7
	comp=Z,63nm,1.3s						
PMTG	Montargil	94.80	340	*e*P	P	03 04 20.6	-0.5
	comp=Z,34nm,2.8s						
PESTR	Estremoz	94.83	340	*e*P	P	03 04 20.8	-0.5
EVO	Evora	95.25	340	*e*P	P	03 04 22.6	-0.6
	comp=Z,28nm,1.2s						
PBEJ	Beja	95.70	340	*e*P	P	03 04 24.7	-0.5
	comp=Z,43nm,1.4s						
PNCL	Nicolau / Gran	95.78	340	*e*P	P	03 04 25.1	-0.4
MESJ	Messejana	95.96	340	*e*P	P	03 04 25.9	-0.5
MESJ				IAmb	IAmb	03 04 27.3	
	comp=Z,56nm,1.3s						
MESJ	Messejana	95.96	340	*e*P	P	03 04 26.1	-0.3
	comp=Z,52nm,1.1s						
MESJ	Messejana	95.96	340	*e*P	P	03 04 25.8	-0.5
PCVE	Castro Verde	96.11	340	*e*P	P	03 04 26.8	-0.3
	comp=Z,37nm,1.4s						
PVAQ	Vaqueiros	96.25	340	*e*P	P	03 04 27.5	-0.2
PVAQ	Vaqueiros	96.25	340	*e*LR	LR	03 37 44.0	
	comp=Z,510nm,20.0s						
MORF	Marmelete	96.58	340	*e*P	P	03 04 28.9	-0.4
MORF				IAmb	IAmb	03 04 30.7	
	comp=Z,46nm,0.9s						
MORF	Marmelete	96.58	340	*e*P	P	03 04 29.4	+0.1
	comp=Z,82nm,1.2s						
MORF	Marmelete	96.58	340	*e*P	P	03 04 28.8	-0.4
PFVI	Vila Bisbo	96.78	340	*e*P	P	03 04 30.4	+0.3
KMBO	Kilima Mbogo	104.68	283	Pdiff	Pdif	03 05 06.2	+0.2
	comp=Z,1.1nm,0.6s,baz=338,slow=6.5,SNR=4.8						
KMBO				PKiKP	PKiKP	03 09 20.2	-1.2
	comp=Z,1.1nm,0.6s,baz=26,slow=6.6,SNR=4.3						
TORD	Torodi Ar. Bea	115.19	322	PKP	PKiKP	03 09 40.4	-0.4
	comp=Z,0.7nm,0.5s,baz=24,slow=1.9,SNR=6.9						
KOWA	Kowa	116.39	328	PKP	PKPdf	03 09 42.9	-0.3
	comp=Z,1.6nm,0.7s,baz=145,slow=13,SNR=2.8						
SDV	Santo Domingo	118.01	42	PKPdf	PKiKP	03 09 47.1	+0.5
OTAV	Otavalo	120.89	55	*e*P	PKiKP	03 09 52.8	+0.2
VNDA	Vanda	121.00	176	PKP	PKPdf	03 09 50.2	+0.1
	comp=Z,5.2nm,1.1s,baz=331,slow=10,SNR=3.8						
VNDA				pPKP	pPKPdf	03 10 11.3	+1.5
	comp=Z,5.8nm,1.0s,baz=280,slow=5.0,SNR=4.7						
DBIC	Dimbokro	123.82	325	PKP	PKPdf	03 09 57.0	-0.5
	comp=Z,5.9nm,1.0s,baz=34,slow=7.5,SNR=4.5						
DBIC				pPKP	pPKPdf	03 10 17.0	-0.3
	comp=Z,4.1nm,0.6s,baz=17,slow=4.3,SNR=3.1						
DBIC				PP	PP	03 11 35.1	-5.1
	comp=Z,30nm,1.0s,baz=28,slow=9.5,SNR=9.1						
DBIC	Dimbokro	123.82	325		PKPdf	03 09 57.0	-0.5
MAW	Mawson	126.94	208	PKP	PKiKP	03 10 02.6	+0.4
	comp=Z,7.0nm,1.0s,baz=275,slow=13,SNR=6.1						
MAW				pPKP	pPKPdf	03 10 23.1	+1.7
	comp=Z,9.6nm,0.9s,baz=50,slow=2.5,SNR=5.8						
MAW	Mawson	126.94	208	PKPdf	PKiKP	03 10 02.2	0.0
BOAV	Boa Vista	128.37	35	*e*P	PKPdf	03 10 04.8	-1.4
LBTB	Lobatse	128.85	271	PKIKP	PKPdf	03 10 06.1	-0.8
LBTB	Lobatse	128.85	271	PKPdf	PKPdf	03 10 06.1	-0.8
TBTG	Tabatinga, AM	129.43	50	*e*P	PKiKP	03 10 09.3	+0.4
TBTG	Tabatinga, AM	129.43	50	PKPdf	PKiKP	03 10 09.4	+0.5
CZSB	Cruzeiro do Su	130.66	56	*e*P	PKiKP	03 10 11.2	-0.2
CZSB	Cruzeiro do Su	130.66	56	PKPdf	PKPdf	03 10 10.4	-0.1
TSUM	Tsumeb	131.02	283	PP	PP	03 12 24.8	-4.0
	comp=Z,3.8nm,0.8s,baz=155,slow=7.1,SNR=3.9						
TSUM				SKPbc	SKPab	03 13 31.3	+1.5
	comp=Z,4.8nm,0.8s,baz=37,slow=5.8,SNR=4.9						
TSUM	Tsumeb	131.02	283	PKPdf	PKPdf	03 10 11.5	+0.3
BOSA	Boshof	131.17	267	PKP	PKiKP	03 10 12.3	+0.2
	comp=Z,3.2nm,0.8s,baz=45,slow=4.4,SNR=3.9						
BOSA				pPKP	pPKPdf	03 10 32.4	+1.4
	comp=Z,6.9nm,0.9s,baz=291,slow=1.3,SNR=4.9						
BOSA				PP	PP	03 12 28.1	-1.8
	comp=Z,14nm,1.1s,baz=61,slow=8.2,SNR=4.7						
BOSA				SKPbc	SKPbc	03 13 29.9	+0.1
	comp=Z,12nm,1.0s,baz=96,slow=3.1,SNR=5.4						
BOSA	Boshof	131.17	267	PKPdf	PKiKP	03 10 13.7	+1.5
PTGA	Pitinga	131.42	36	PKP	PKiKP	03 10 12.7	-0.3
	comp=Z,1.3nm,0.3s,baz=139,slow=8.6,SNR=5.7						
PTGA				pPKP	pPKPdf	03 10 33.4	+1.6
	comp=Z,18nm,1.1s,baz=346,slow=3.6,SNR=6.5						
PTGA				PP	PP	03 12 27.4	-2.9
	comp=Z,4.4nm,0.9s,baz=312,slow=21,SNR=2.0						
QSPA	South Pole Qui	133.11	180	PP	PP	03 12 38.7	-2.7
	comp=Z,18nm,1.1s,baz=317,slow=2.2,SNR=5.0						
QSPA	South Pole Qui	133.11	180		PKPpre	03 10 04.8	
MACA	Manacapuru-AM	133.26	39	*e*P	PKPdf	03 10 14.5	-0.9
MACA	Manacapuru-AM	133.26	39	PKPdf	PKiKP	03 10 16.8	+0.1
MCPB	Macapa, AP	134.08	26	*e*P	PKiKP	03 10 18.4	+0.1
SYO	Syowa Base	135.61	210	⇑*e*PKiKP	PKiKP	03 10 23.6	+3.9
ETMB	Extrema	136.12	50	*e*P	PKPdf	03 10 21.5	+0.7
SAML	Samuel	137.04	46	PKIKP	PKPdf	03 10 22.0	-0.5
SAML	Samuel	137.04	46	PKPdf	PKPdf	03 10 22.0	-0.5
TMAB	Tom-Au,PA,Br	137.16	22	*e*P	PKiKP	03 10 24.1	-0.5
ROSB	Rosrio	138.61	16	*e*P	PKPdf	03 10 25.5	+0.1
LPAZ	La Paz	140.10	58	PKhKP	PKPpre	03 10 21.9	
	comp=Z,1.4nm,0.7s,baz=18,slow=6.9,SNR=5.4						
LPAZ				PKP	PKiKP	03 10 30.4	-0.8
	comp=Z,3.5nm,0.7s,baz=6.5,slow=7.4,SNR=12						
LPAZ				pPKP	pPKPdf	03 10 49.2	+0.7
	comp=Z,11nm,0.9s,baz=24,slow=8.2,SNR=8.2						
LPAZ				SKPbc	SKPbc	03 13 55.2	-3.4
	comp=Z,5.1nm,0.9s,baz=333,slow=4.5,SNR=4.3						
LPAZ	La Paz	140.10	58	PKPdf	PKPdf	03 10 29.2	+0.4
PRPB	Parauapebas	140.26	26	*e*P	PKPdf	03 10 29.3	+0.8
PB11	IPOC Station P	141.69	64	PKPdf	PKPdf	03 10 30.8	-0.1
VILB	Vilhena	141.96	45	*e*P	PKiKP	03 10 33.0	-1.3
VILB	Vilhena	141.96	45	PKPdf	PKPdf	03 10 31.4	-0.1
CLDB	Colider	142.29	37	*e*P	PKPdf	03 10 33.3	+1.3
PB08	IPOC Station P	142.29	63	PKPdf	PKPdf	03 10 31.9	-0.4
PDRB	Porto dos Gac	142.52	39	*e*P	PKPdf	03 10 33.6	+1.2
SHEL	Horse Pasture	143.86	311	PKIKP	PKPbc	03 10 33.4	+0.8
SHEL	Horse Pasture	143.86	311	PKPdf	PKPbc	03 10 33.4	+0.8
LVC	Limon Verde	144.19	66	PKIKP	PKPdf	03 10 34.9	-0.7
LVC	Limon Verde	144.19	66	*e*P	PKPdf	03 10 35.4	-0.2
LVC	Limon Verde	144.19	66	PKPdf	PKPdf	03 10 34.9	-0.7
PTLB	Pontes e Lacer	144.61	46	*e*P	PKPbc	03 10 35.1	+0.2
NVL	N'lazarevskaya	144.63	204	*e*PKIKP	PKiKP	03 10 37.9	-0.2
NVL				pmax	pmax		
	comp=Z,127nm,1.1s						
SNDB	Serra Nova Dou	145.14	31	*e*P	PKPbc	03 10 36.2	-0.4
AC04	Llanos de Chal	146.30	76		PKPbc	03 10 40.1	+0.2
PEXB	Peixe	146.32	27	*e*P	PKPbc	03 10 40.6	+0.3
SALV	Santo Antonio	146.73	41	*e*P	PKPbc	03 10 41.1	-0.2
LCO	Las Campanas	147.04	77	PKP2	PKPbc	03 10 43.2	+0.9
LCO	Las Campanas	147.04	77	PKPab	PKPbc	03 10 43.2	+0.9
SDBA	SAO DESIDERIO	147.62	21	*e*P	PKPdf	03 10 41.6	+0.4
GO04	Tololo Observa	147.64	78	PKPbc	PKiKP	03 10 45.3	-0.6
ARAG	Araguaiana, MT	148.31	35	*e*P	PKPdf	03 10 43.3	+1.1
PP1B	Ponte de Pedra	148.58	42	*e*P	PKPbc	03 10 44.6	-1.8
VA05	Santo Domingo	148.89	85		PKPab	03 10 49.8	-1.1
MT09	Talagante	149.40	84		PKPbc	03 10 47.4	-0.8
VNA2	Neumayer--Watz	149.49	197	PKPbc	PKiKP	03 10 47.6	-0.5
VNA2	Neumayer--Watz	149.49	197	PKPdf	PKPdf	03 10 42.7	+0.2
VNA2	Neumayer--Watz	149.49	197	PKSdf	PKSdf	03 14 21.7	+4.8
VNA2	Neumayer--Watz	149.49	197	sPKPdf	sPKPdf	03 11 08.9	-0.5
VNA3	Neumayer Olymp	149.68	195	PKPbc	PKPbc	03 10 47.7	+0.2
VNA3	Neumayer Olymp	149.68	195	PKPdf	PKPdf	03 10 43.5	+0.6
VNA3	Neumayer Olymp	149.68	195	PKSdf	PKSdf	03 14 24.1	+6.9
VNA3	Neumayer Olymp	149.68	195	sPKPdf	sPKPdf	03 11 08.9	-0.8
BDFB	Brasilia	149.72	29	PKPbc	PKPbc	03 10 49.8	+0.4

	comp=Z,27nm,1.0s,baz=313,slow=1.9,SNR=21						
BDFB				pPKPbc	pPKPbc	03 11 10.2	+1.1
	comp=Z,101nm,0.8s,baz=8.3,slow=0.7,SNR=22						
BDFB	Brasilia	149.72	29	PKPbc	PKPbc	03 10 48.9	-0.5
VNA1	Neumayer--Stat	149.88	196	PKPbc	PKiKP	03 10 48.6	-0.3
VNA1	Neumayer--Stat	149.88	196	PKPdf	PKPdf	03 10 44.4	+1.3
VNA1	Neumayer--Stat	149.88	196	sPKPdf	sPKPdf	03 11 10.0	-0.1
ML02	Panimavida	150.02	88		PKPbc	03 10 48.9	-0.6
JANB	Januaria	150.31	21	eP	PKPdf	03 10 46.7	+1.1
AQDB	Aquidauana	150.59	46	eP	PKPdf	03 10 47.2	+1.5
AQDB	Aquidauana	150.59	46		PKPbc	03 10 51.3	+0.1
LL04	Puerto Octay	151.24	99		PKPbc	03 10 51.5	-0.6
CMC01	Camacan, BA	151.61	12	eP	PKPdf	03 10 49.3	+1.8
IPMB	Ipameri, GO	151.80	31	eP	PKPdf	03 10 48.8	+1.1
MC01	Montes Claros	151.98	22	eP	PKPdf	03 10 49.1	+1.1
ITRB	Iturama	152.49	36	eP	PKPdf	03 10 50.6	+1.9
PLCA	Paso Flores	152.53	97	PKP	PKPdf	03 10 49.2	+1.0
	comp=Z,2.8nm,1.0s,baz=264,slow=8.0,SNR=5.0						
PLCA				PKPbc	PKiKP	03 10 55.5	+0.1
	comp=Z,15nm,1.0s,baz=250,slow=4.3,SNR=17						
PLCA				pPKPbc	sPKPdf	03 11 15.2	-0.2
	comp=Z,40nm,1.0s,baz=238,slow=4.5,SNR=12						
PLCA	Paso Flores	152.53	97	PKPdf	PKPdf	03 10 47.6	-0.6
PLCA				PKPbc	PKiKP	03 10 55.9	+0.4
GUA01	Guaratinga, BA	152.77	13	eP	PKPdf	03 10 50.6	+1.4
GO10	Punta Arenas	153.46	125	PKPdf	PKPdf	03 10 50.9	+1.8
GO10					PKPab	03 11 10.2	+0.8
PCMB	Pacaembu	153.75	40	eP	PKPdf	03 10 52.6	+2.1
NAN01	Guarapari, ES	153.94	14	eP	PKPdf	03 10 52.5	+1.6
CPUP	Villa Florida	154.24	56	PKPbc	PKiKP	03 11 00.2	+1.0
	comp=Z,5.7nm,1.0s,baz=44,slow=2.1,SNR=3.8						
CPUP				pPKPbc	pPKPbc	03 11 20.6	+1.6
	comp=Z,29nm,1.2s,baz=309,slow=4.8,SNR=8.0						
CPUP	Villa Florida	154.24	56	PKP2	PKPab	03 11 12.7	-0.7
CPUP						04 10 58.3	
CPUP	Villa Florida	154.24	56	eP	PKPdf	03 10 53.3	+2.3
CPUP	Villa Florida	154.24	56	PKPbc	PKPbc	03 10 58.3	-0.9
CPUP				PKPab	PKPab	03 11 12.7	-0.7
BSFB	Barra de Sao F	154.76	16	eP	PKPdf	03 10 53.6	+1.7
PTGB	Pitanga	155.96	45	eP	PKPdf	03 10 55.5	+2.0
RCLB	Rio Claro- Sao	156.09	34	eP	PKPdf	03 10 55.6	+1.9

SOME 28 02:58:09.4, 39°08N×72°47E, h0km, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	3.19	17	P	Pg	02 59 10.8	+0.4
	SNR=56						
UCH	Uchtor	3.51	26	P	Pb	02 59 14.2	+1.6
	SNR=25						
IUG	Iuzhnay	3.58	330	eP	Pg	02 59 18.6	+0.6
	100nm,0.1s						
IUG				eS	Sg	03 00 08.2	+3.9
	197nm,0.4s						
MRKS	Merke	3.70	9	eP	Pg	02 59 19.2	-1.1
	19nm,0.1s						
MRKS				eS	Sg	03 00 09.4	+1.0
	110nm,0.2s						
EKS2	Erkin-Say	3.71	15	P	Pg	02 59 18.2	-2.3
	SNR=14						
AAK	Ala-Archa	3.87	23	P	Pb	02 59 19.5	+0.9
	SNR=16						
BRLS	Borolday	4.42	334	eP	Pb	02 59 25.7	-2.1
	2.9nm,0.0s						
BRLS				eS	Sb	03 00 20.8	-0.8
	18nm,0.0s						
BRLS	Borolday	4.42	334	eP	Sb	03 00 21.0	-0.7
USP	Ospenovka	4.45	19	P	Pb	02 59 27.6	-0.9
	SNR=6.8						
TKM2	Tokmak 2	4.51	31	P	Pb	02 59 26.6	-2.9
	SNR=5.7						

TIF 28 03:04:26.7, 42°35N×43°03E, h7km
DDA 28 03:04:27.4, 42°30N×43°02E, h3km±3km, ML3.0
ISK 28 03:04:27.5, 42°35N×42°99E, h9km, ML3.1/8
ISC 28 03:04:27.5±0.9, 42°34N±0°03×43°04E±0°02, h4km±7km, n39, $\sigma 0^{\mathrm{s}}68$/61, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TKB	Tkibuli	0.04	288	P	Pg	03 04 28.2	-0.3
TKB				S	Sg	03 04 29.4	+0.2
ONI	Oni	0.40	51	P	Pg	03 04 35.1	0.0
ONI				S	Sg	03 04 41.5	+1.2
ABS	Abastumani	0.61	196	P	Pg	03 04 39.7	+0.6
ABS				S	Sb	03 04 49.1	-0.6
CHVG	Ch'k'valeri	0.80	298	P	Pb	03 04 44.0	+0.1
CHVG				S	Sb	03 04 55.6	+0.5
EPOS	Posof	0.87	196	iP	Pg	03 04 44.5	+0.4
EPOS				iS	Sb	03 04 56.7	-0.5
EPOS				IAML		03 05 06.0	
	comp=N,474nm,1.1s						
BRNG	Burnasheti	0.93	140	P	Pg	03 04 45.7	+0.5
BRNG				S	Sb	03 04 59.2	+0.3
AKH	Akhalkalaki	0.99	160	P	Pg	03 04 46.8	+0.4
AKH				S	Sb	03 05 01.1	+0.3
AKH	Akhalkalaki	0.99	160	PG	Pg	03 04 46.5	+0.1
AKH				SG	Sn	03 05 01.9	-0.9
GUDG	Gudauri	1.07	83	P	Pn	03 04 49.8	+0.3
TRLG	Trialeti	1.13	135	P	Pg	03 04 48.9	-0.2
TRLG				S	Sb	03 05 05.0	+0.4
BGD	Bogdanovka	1.15	159	P	Pg	03 04 49.7	+0.1
BGD				S	Sb	03 05 06.1	+0.6
MTEO	Meteo	1.16	72	P	Pg	03 04 49.5	-0.2
PNSH	Pansheti	1.20	75	P	Pg	03 04 41.9	-8.7
DMNI	Dmanisi	1.33	139	P	Pn	03 04 52.1	-0.7
DMNI				S	Sn	03 05 11.0	-0.1
BCA	Borcka	1.39	230	PN	Pn	03 04 53.2	-0.4
BCA				SN	Sn	03 05 12.2	-0.2
DBOC	Borcka	1.43	226	iP	Pn	03 04 53.8	-0.4
DBOC				iS	Sg	03 05 14.0	+0.6
DBOC				IAML		03 05 16.0	
	comp=E,224nm,0.4s						
SEAG	Tbilisi Sea	1.43	113	P	Pb	03 04 54.6	-0.2
SEAG				S	Sg	03 05 14.6	+1.1
BTNK	Botanikuri	1.47	116	P	Pn	03 04 54.7	0.0
BTNK				S	Sg	03 05 14.8	+0.2
DAGI	Agillar	1.52	214	iP	Pn	03 04 55.4	-0.1
DAGI				iS	Sg	03 05 17.1	+0.9
KIV	Kislovodsk	1.64	351	PN	Pn	03 04 57.1	0.0
DBAD	Bademkaya	1.66	218	iP	Pn	03 04 57.3	-0.2
DBAD				iS	Sg	03 05 20.9	+0.1
DBAD				IAML		03 05 24.0	
	comp=E,280nm,0.6s						
DBAD				IAML		03 05 25.0	
	comp=N,404nm,0.8s						
EAK	Akyaka	1.71	165	iP	Pb	03 04 58.9	-0.6
KARS	Kars	1.71	179	PN	Pn	03 04 58.3	+0.1
DDEM	Demirkent	1.74	214	iP	Pb	03 04 59.9	-0.2
DDEM				iS	Sg	03 05 23.7	+0.4
DDEM				IAML		03 05 29.0	
	comp=E,442nm,0.9s						
DDEM				IAML		03 05 30.0	
	comp=N,349nm,0.7s						
SENK	Senkaya-Erzuru	1.85	196	PN	Pn	03 05 00.1	-0.1
DIGO	Kars	1.94	172	iP	Pb	03 05 02.9	-0.7
DIGO				iS	Sg	03 05 29.8	+0.1
DIGO				IAML		03 05 33.0	
	comp=E,133nm,0.9s						
DIGO				IAML		03 05 36.0	
	comp=N,107nm,0.7s						
DGRG	David-gareji	1.96	116	P	Pb	03 05 03.9	+0.2
DGRG				S	Sg	03 05 32.0	+1.7
CHOM	Cayeli-Rize	2.11	235	PN	Pn	03 05 03.7	+0.1
LGD	Lagodekhi	2.44	101	P	Pb	03 05 11.0	-0.8
LGD				S	Sg	03 05 44.2	-1.5
HOMI	Horasan	2.45	201	iP	Pb	03 05 11.5	-0.7
HOMI				IAML		03 05 56.0	
	comp=N,72nm,0.9s						
DDFL	Dedoflistskaro	2.47	110	P	Pg	03 05 14.3	-0.4
DDFL	Dedoflistskaro	2.47	110	iP	Pg	03 05 14.0	-0.7
DDFL				IAML		03 06 02.0	
	comp=N,92nm,0.5s						
DDFL				IAML		03 06 04.0	
	comp=E,168nm,0.9s						
KOPR	Koprukoy-ERZUR	2.51	201	PN	Pn	03 05 09.6	+0.4
GNI	Garni	2.54	149	PN	Pn	03 05 10.5	+0.9
KRIK	Erzurum-spir	2.56	219	iP	Pb	03 05 14.5	+0.4
KRIK				iS	Sg	03 05 48.0	-1.6
ERZM	Erzurum	2.74	208	iP	Pg	03 05 19.8	-0.2
ERZM				iS	Sg	03 05 57.8	+2.2
EMRE	Erzurum,Aziziy	2.78	215	iP	Pg	03 05 19.7	-1.1
BAYT	Aydıntepe-Bayb	2.92	229	PN	Pn	03 05 15.6	+0.7
KOPT	Kop Dagi	3.01	220	iP	Pg	03 05 25.4	+0.2

IDC 28 03:07:07.7±1.9, 3°89N×127°33E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.4/42, mbtmp3.9/4, Error ellipse: s-maj=143.7km s-min=24.2km az=65.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.66	164	P	P	03 12 30.2	-0.2
	6.7nm,0.8s,baz=344,slow=11,SNR=28						
ASAR	Alice Springs	28.13	167	P	P	03 13 01.9	+0.2
	0.5nm,0.7s,baz=347,slow=7.2,SNR=7.5						
STKA	Stephens Creek	38.07	160	P	P	03 14 28.2	0.0
	2.5nm,0.7s,baz=337,slow=11,SNR=6.9						
MKAR	Makanchi Array	57.77	325	P	P	03 17 00.6	-0.1
	0.5nm,0.5s,baz=122,slow=8.7,SNR=7.0						

IDC 28 04:03:29.0±2.2, 32°84S×178°27W, h0km, mb4.3/2, mb1 4.5/3, mb1mx4.1/19, mbtmp4.3/3, ML4.3/1, MS3.5/5, Ms1 3.5/5, ms1mx3.2/26, Error ellipse: s-maj=60.4km s-min=33.7km az=125.0
NEIC 28 04:03:33.9±1.3, 32°82S±0°06×178°5W±0°2, h21km±5km, mb4.5/9, Error ellipse: s-maj=23.8km s-min=8.6km az=96.0
ISC 28 04:03:35.0±1.0, 32°8S±0°1×178°5W±0°2, h32km, n23, $\sigma 0^{\mathrm{s}}77$/17, mb4.3/7, MS3.4/4, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	3.56	8	Pn	Pn	04 04 28.0	-0.1
URZ	Urewera	6.53	212	Pn	Pn	04 05 07.7	-1.2
	6.8nm,0.3s,baz=116,slow=21,SNR=13						
URZ				Sn	Sn	04 06 23.1	+0.9
	5.3nm,0.3s,baz=291,slow=22,SNR=3.8						
DZM	Mont Dzumac	17.08	305	LR	LR	04 13 06.0	
	comp=Z,225nm,20.7s,baz=181,slow=33						
STKA	Stephens Creek	33.59	261	LR	LR	04 23 25.1	
	comp=Z,84nm,18.2s,baz=31,slow=35						
CTAO	Charters Tower	33.84	283	P	P	04 10 15.3	+0.7
CTAO				IAmb	IAmb	04 10 29.8	
	comp=Z,14nm,1.4s						
COEN	Coen	39.58	289	P	P	04 11 03.9	+0.3
COEN				IAmb	IAmb	04 11 23.0	
	comp=Z,3.5nm,0.8s						
AS31	Alice Springs	42.61	270	P	P	04 11 27.9	-0.6
ASAR	Alice Springs	42.61	270	P	P	04 11 28.7	+0.2
	comp=Z,1.8nm,0.5s,baz=115,slow=7.6,SNR=26						
WR0	Warramunga Arr	43.64	275	P	P	04 11 36.5	-0.3
WR0				IAmb	IAmb	04 11 50.9	
	comp=Z,6.3nm,1.0s						
WB2	Warramunga Arr	43.81	275	P	P	04 11 37.1	-1.1
WB2				IAmb	IAmb	04 11 52.7	
	comp=Z,7.2nm,0.6s						
WRA	Warramunga Arr	43.82	275	P	P	04 11 38.3	0.0
	comp=Z,1.9nm,0.4s,baz=116,slow=7.6,SNR=79						
WRA				LR	LR	04 28 50.1	
	comp=Z,39nm,19.0s,baz=145,slow=35						
WRA	Warramunga Arr	43.82	275	P	P	04 11 38.2	0.0
WB0	Warramunga Arr	43.85	275	P	P	04 11 38.5	-0.1
FITZ	Fitzroy Crossi	51.97	272	LR	LR	04 34 24.2	
	comp=Z,67nm,18.5s,baz=113,slow=36						
QSPA	South Pole Qui	57.33	180	P	P	04 13 20.5	+0.7
QSPA				IAmb	IAmb	04 13 32.9	
	comp=Z,4.2nm,0.8s						
VNA3	Neumayer Olymp	75.96	176	P	P	04 15 28.0	+10
VNA2	Neumayer--Watz	76.39	177	P	P	04 15 30.5	+10
	baz=179,slow=5.3						
VNA1	Neumayer--Stat	76.62	177	P	P	04 15 31.5	+9.5
MJAR	Matsushiro Arr	79.96	326	LR	LR	04 49 43.9	
	comp=Z,13nm,18.7s,baz=185,slow=35						
ISA	Isabella, Lake	88.29	45	P	P	04 16 23.4	+0.1
FINES	FINESS Array B	147.22	338	PKPbc	PKPbc	04 23 13.2	-1.0
	comp=Z,3.6nm,0.6s,baz=56,slow=3.9,SNR=17						
BRTR	Keskin Array B	153.27	294	PKPbc	PKPbc	04 23 29.1	-0.8
	comp=Z,0.7nm,0.5s,baz=90,slow=1.4,SNR=6.7						
CLL	Collm	159.66	339	ePKPab	PKPab	04 24 10.0	+1.3

IDC 28 04:27:39.5±2.7, 8°04S×113°03E, h0km, mb3.3/3, mb1 3.5/4, mb1mx3.1/29, mbtmp3.3/4, ML2.9/1, Error ellipse: s-maj=153.9km s-min=27.6km az=49.0
DJA 28 04:27:43.5±0.3, 8°S±4°×11°3E±°, h10km, M3.9/16, mb4.2/1, MLv3.8/16
ISC 28 04:27:43.3±1.3, 8°53S±0°08×112°71E±0°03, h25km±12km, n21, $\sigma 1^{\mathrm{s}}36$/27, mb3.4/3, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GMJI	Gumukmas	0.77	71	P	Pb	04 27 57.5	-0.6
GMJI				S	Sb	04 28 07.6	-0.5
BLJI	Banyuglugur	1.17	48	P	Pb	04 28 04.7	-0.2
BLJI				S	Sn	04 28 20.2	+0.9
JAGI	Jajag, Banyuwa	1.43	88	P	Pb	04 28 08.6	-0.7
JAGI				S	Sb	04 28 27.1	0.0
PCJI	Pacitan	1.55	282	P	Pn	04 28 11.1	+1.8
PCJI				S	Sb	04 28 30.8	+0.2
ABJI	Asem Bagus	1.68	64	P	Pb	04 28 13.5	0.0
ABJI				S	Sb	04 28 35.9	+1.7
NGJI	Ngawi	1.69	313	P	Pn	04 28 11.3	+0.1
KMMI	Kalianget	1.93	40	P	Pn	04 28 13.9	-0.6
UGM	Wanagama	2.25	286	P	Pn	04 28 21.7	+2.8
UGM				S	Sb	04 28 51.1	+0.4
IGBI	Denpasar	2.43	97	P	Pn	04 28 23.6	+2.3
DNP	Denpasar	2.48	94	P	Pn	04 28 21.8	-0.2
YOGI	Yogyakarta	2.49	286	P	Pb	04 28 25.6	-1.8
SRBI	Singaraja	2.52	80	P	Pn	04 28 23.5	+0.9
SMRI	Semarang	2.69	303	P	Pn	04 28 25.0	+0.1
UWJI	Ujung Watu	2.73	320	P	Pn	04 28 28.5	+3.0
TWSI	Taliwang, Sumb	4.13	93	P	Pn	04 28 44.5	-0.3
CMJI	Cimerak	4.28	280	P	Pn	04 28 47.5	+0.6
PLAI	Plampang	5.02	94	P	Pn	04 28 58.6	+1.6
FITZ	Fitzroy Crossi	15.76	128	Pn	Pn	04 31 24.0	+0.3
	0.0nm,0.3s,baz=317,slow=8.1,SNR=1.2						
FITZ				Sn	Sn	04 34 07.5	-10
	0.1nm,0.3s,baz=342,slow=17,SNR=1.9						
WRA	Warramunga Arr	23.80	121	P	P	04 32 54.1	-0.2
	0.5nm,0.5s,baz=297,slow=12,SNR=13						
ASAR	Alice Springs	25.27	129	P	P	04 33 08.3	+0.6
	0.5nm,0.5s,baz=303,slow=8.9,SNR=6.9						
MKAR	Makanchi Array	61.38	337	P	P	04 37 55.1	-2.0
	0.2nm,0.5s,baz=145,slow=7.7,SNR=2.0						

IDC 28 04:43:04.5±1.0, 38°71N×20°61E, h0km, mb3.7/7, mb1 3.7/13, mb1mx3.6/47, mbtmp3.6/13, ML3.4/5, MS3.3/1, Ms1 3.3/1, ms1mx2.3/49, Error ellipse: s-maj=18.1km s-min=16.5km az=34.0
PDG 28 04:43:06.1±0.7, 38°68N×20°53E, h11km±1km, ML3.5/14, Error ellipse: s-maj=1.1km s-min=1.8km az=0.0
THE 28 04:43:06.8, 38°64N×20°61E, h11km, ML3.8/7, Error ellipse: s-maj=1.6km s-min=0.5km az=101.0
ATH 28 04:43:06.9, 38°64N×20°62E, h11km±1km, ML3.5/15, Error ellipse: s-maj=1.5km s-min=0.6km az=286.0
ISC 28 04:43:06.5±0.7, 38°66N±0°02×20°58E±0°03, h14km±4km, n126, $\sigma 1^{\mathrm{s}}27$/167, mb3.9/7, 4C-6D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EVGI	Lefkada island	0.07	124	P	Pg	04 43 08.9	-0.5
EVGI				S	Sg	04 43 10.6	-0.7
	439µm,0.1s						
EVGI	Lefkada island	0.07	124	P	Pg	04 43 09.0	-0.5
EVGI				S	Sg	04 43 10.5	-0.8
NYDR	Nydri-Lefkada	0.11	60	P	Pg	04 43 09.4	-0.3
NYDR				S	Sg	04 43 11.7	-0.2
	19µm,0.3s						
NYDR	Nydri-Lefkada	0.11	60	P	Pg	04 43 09.4	-0.3
NYDR				S	Sg	04 43 11.4	-0.5
TSLK	Tsoukalades, L	0.17	19	P	Pg	04 43 10.9	+0.2
TSLK				S	Sg	04 43 14.1	+0.6
	44µm,0.3s						
TSLK	Tsoukalades, L	0.17	19	P	Pg	04 43 10.9	+0.2
TSLK				S	Sg	04 43 14.1	+0.6
TSLK				AML	AML	04 43 14.5	
	comp=N,90448µm,0.3s						
TSLK				AML	AML	04 43 14.6	
	comp=E,83288µm,0.4s						
FSK	Fiskardo	0.20	184	P	Pg	04 43 11.1	0.0
FSK				S	Sg	04 43 14.4	+0.2
	comp=E,38µm,0.3s						
FSK	Fiskardo	0.20	184	P	Pg	04 43 11.0	-0.1
FSK				S	Sg	04 43 14.2	0.0
FSK				AML	AML	04 43 14.8	
	comp=N,77454µm,0.4s						
FSK				AML	AML	04 43 15.8	
	comp=E,73213µm,0.2s						
KEF4	Livadi, Kephal	0.42	197	P	Pg	04 43 14.6	-0.3
KEF4				S	Sg	04 43 21.3	+0.7
KEF4	Livadi, Kephal	0.42	197	P	Pg	04 43 14.7	-0.3
KEF4				S	Sg	04 43 21.1	+0.5
DMLN	Damoulianata-K	0.45	201	P	Pg	04 43 15.2	-0.4
DMLN				S	Sg	04 43 22.4	+0.8
	comp=E,23µm,0.4s						
DMLN	Damoulianata-K	0.45	201	P	Pg	04 43 15.1	-0.4
DMLN				S	Sg	04 43 21.9	+0.3
LXRA	Lixouri, Kepha	0.47	194	P	Pg	04 43 15.6	-0.3
LXRA				S	Sg	04 43 23.1	+0.8
VLS	Valsamata	0.48	179	P	Pg	04 43 15.5	-0.6
VLS				S	Sg	04 43 22.4	-0.1
	comp=E,12µm,0.2s						
VLS	Valsamata	0.48	179	P	Pg	04 43 15.4	-0.7
VLS				S	Sg	04 43 22.1	-0.5
VLS				AML	AML	04 43 24.1	
	comp=N,23006µm,0.2s						
VLS				AML	AML	04 43 24.4	
	comp=E,23153µm,0.3s						
ARGA	Argostoli. Kep	0.49	189	P	Pg	04 43 16.7	+0.5
ARGA				S	Sg	04 43 23.5	+0.8
KEF3	Kipouria, Keph	0.49	202	P	Pg	04 43 15.3	-0.9
KEF3				S	Sg	04 43 22.6	-0.2
	comp=E,21µm,0.4s						
KEF3	Kipouria, Keph	0.49	202	P	Pg	04 43 15.3	-0.9
KEF3				S	Sg	04 43 22.2	-0.6
PSDA	Pessada-Kefalo	0.55	180	P	Pg	04 43 16.7	-0.6
PSDA				S	Sg	04 43 24.7	+0.2
PSDA	Pessada-Kefalo	0.55	180	P	Pg	04 43 16.6	-0.6
PSDA				S	Sg	04 43 24.9	+0.4
VTN	Vitineika	0.88	147	P	Pg	04 43 23.4	-0.2
IGT	Igoumenitsa	0.89	348	P	Pg	04 43 23.2	-0.6
IGT	Igoumenitsa	0.89	348	P	Pg	04 43 23.2	-0.6
IGT				AML	AML	04 43 41.4	
	comp=E,2310µm,0.7s						
IGT				AML	AML	04 43 43.4	
	comp=N,2215µm,0.3s						
RLS	Riolos of Patr	0.92	131	P	Pg	04 43 23.5	-0.8
RLS	Riolos of Patr	0.92	131	P	Pg	04 43 23.5	-0.8
RLS				AML	AML	04 43 44.0	
	comp=N,4348µm,0.8s						
RLS				AML	AML	04 43 44.5	
	comp=E,4399µm,0.5s						
LTHK	Lithakia	0.97	168	P	Pg	04 43 23.9	-1.4
LTHK				S	Sb	04 43 38.9	+1.2
LTHK	Lithakia	0.97	168	P	Pg	04 43 23.8	-1.4
EVR	Evrytania	0.99	75	P	Pg	04 43 24.9	-0.8
EVR				AML	AML	04 43 46.7	
	comp=N,1925µm,0.5s						
EVR				AML	AML	04 43 49.8	
	comp=E,2374µm,0.4s						
JAN	Janina	1.02	12	P	Pn	04 43 26.4	+0.1
JAN	Janina	1.02	12	P	Pn	04 43 26.5	+0.1
JAN				AML	AML	04 43 43.9	
	comp=N,1916µm,0.5s						
JAN				AML	AML	04 43 45.5	
	comp=E,2899µm,0.5s						
ANX	Ano Chora	1.05	93	P	Pg	04 43 26.1	-0.8
ANX				AML	AML	04 43 48.8	
	comp=E,6501µm,0.5s						
ANX				AML	AML	04 43 49.0	
	comp=N,10616µm,0.6s						
EFP	Efpalio	1.06	102	P	Pb	04 43 26.0	-0.7
EFP				AML	AML	04 43 48.7	
	comp=N,6500µm,0.4s						
EFP				AML	AML	04 43 48.9	
	comp=E,6882µm,0.5s						
DRO	Drossia	1.14	128	P	Pb	04 43 27.1	-0.8
DRO				AML	AML	04 43 51.9	
	comp=E,6056µm,0.3s						
DRO				AML	AML	04 43 54.3	
	comp=N,5780µm,0.4s						
LAKA	Lakka	1.18	111	P	Pb	04 43 27.9	-0.7
LAKA				AML	AML	04 43 53.5	
	comp=E,2172µm,1.0s						
LAKA				AML	AML	04 43 54.0	
	comp=N,1977µm,0.7s						
SERG	Sergoula	1.18	102	P	Pb	04 43 28.1	-0.6
SERG				AML	AML	04 43 49.8	
	comp=E,2319µm,0.2s						
SERG				AML	AML	04 43 53.4	
	comp=N,4977µm,0.4s						
KASA	Kassiopi	1.20	335	P	Pg	04 43 29.7	+0.2
TRIZ	Trizonia	1.21	104	P	Pb	04 43 28.3	-0.8
KEK	Kerkira	1.21	330	P	Pb	04 43 29.9	+0.6
KEK	Kerkira	1.21	330	P	Pb	04 43 29.8	+0.6
MAKR	Makrakomi, Fth	1.26	73	P	Pb	04 43 30.2	+0.1
KLV	Kalavryta, Ach	1.38	116	P	Pn	04 43 30.8	-0.6
AGG	Agios Georgios	1.41	75	P	Pb	04 43 32.9	+0.2
AGG				AML	AML	04 44 00.9	
	comp=E,6020µm,0.8s						
AGG				AML	AML	04 44 02.1	
	comp=N,4396µm,0.7s						
KPRO	Kipourio	1.43	25	P	Pg	04 43 33.8	-0.1
KPRO				AML	AML	04 43 59.8	
	comp=E,2147µm,0.7s						
KPRO				AML	AML	04 44 01.9	
	comp=N,2560µm,0.5s						
THL	Klokotos Trika	1.44	51	P	Pb	04 43 33.1	+0.1
GUR	Goura	1.56	117	P	Pn	04 43 34.0	0.0
GUR				AML	AML	04 44 05.6	
	comp=N,2578µm,0.4s						
GUR				AML	AML	04 44 06.7	
	comp=E,2459µm,0.4s						
THAL	Thalero	1.75	110	P	Pn	04 43 37.7	+1.3
ITM	Ithomi	1.82	144	P	Pb	04 43 39.5	-0.1
KZN	Kozani	1.88	29	P	Pb	04 43 41.6	+0.9
KRND	KRANIDI	2.40	121	P	Pb	04 43 48.0	-1.4
OHR	Ohrid	2.45	4	iPn	Pb	04 43 49.0	-1.4
VAY	Valandovo	3.06	29	iPn	Pb	04 43 58.1	-2.7
STIP	Stip	3.27	22	iPn	Pn	04 44 00.9	+3.6
ULC	Ulcinj	3.45	343	ePn	Pn	04 44 00.1	+0.2
ULC				iSn	Sn	04 44 40.8	+0.2
DRME	Dracevica, Mon	3.68	344	ePn	Pn	04 44 03.6	+0.6
DRME	Dracevica, Mon	3.68	344	⇓ iPn	Pn	04 44 03.7	+0.7
DRME				iSn	Sn	04 44 46.2	+0.1
BUM	Brajici-Budva	3.86	341	⇓ iPn	Pn	04 44 05.9	+0.5
BUM				iSn	Sn	04 44 50.0	-0.6
PDG	Podgorica	3.90	345	ePn	Pn	04 44 05.0	-0.9
TTG	Podgorica	3.90	345	⇓ iPn	Pn	04 44 06.6	+0.7
TTG				iSn	Sn	04 44 51.4	-0.1
PVY	Plav	3.96	353	⇓ iPn	Pn	04 44 08.7	+1.8
PVY				iSn	Sn	04 44 53.2	0.0
CEME	Cevo	4.08	342	⇓ iPn	Pn	04 44 08.7	+0.1
CEME				iSn	Sn	04 44 55.4	-0.8
HCY	Herceg Novi	4.10	338	ePn	Pn	04 44 08.0	-0.8
HCY	Herceg Novi	4.10	338	ePn	Pn	04 44 08.3	-0.5
HCY				iSn	Sn	04 44 56.1	-0.5
IVA	Berane	4.24	353	ePn	Pn	04 44 11.8	+1.1
KOME	Kolasin	4.26	349	⇑ iPn	Pn	04 44 11.9	+0.8
KOME				iSn	Sn	04 45 00.4	-0.2
NKME	Niksic	4.28	344	⇑ iPn	Pn	04 44 11.8	+0.5
NKME				iSn	Sn	04 45 00.6	-0.5
NKY	Niksic	4.32	344	⇑ iPn	Pn	04 44 12.7	+0.9
NKY				iSn	Sn	04 45 01.6	-0.4
TREB	Trebinje	4.39	338	ePn	Pn	04 44 12.0	-0.7
BRY	Bratogost	4.51	341	ePn	Pn	04 44 13.8	-0.7
BRY	Bratogost	4.51	341	⇑ iPn	Pn	04 44 14.3	-0.2
BRY				iSn	Sn	04 45 05.1	-1.7
UPM	Unac-Piva	4.71	345	ePn	Pn	04 44 17.9	+0.6
UPM	Unac-Piva	4.71	345	⇓ iPn	Pn	04 44 17.8	+0.5
UPM				iSn	Sn	04 45 11.0	-0.8
STON	Ston	4.74	333	ePn	Pn	04 44 16.3	-1.2
STON	Ston	4.74	333	ePn	Pn	04 44 16.6	-0.9
STON				Sn	Sn	04 45 08.3	-3.9
PLE	Pljevlja	4.75	349	ePn	Pn	04 44 18.8	+1.0
PLE				iSn	Sn	04 45 12.0	-0.7
IDI	Anoyia	4.82	133	Pn	Pn	04 44 19.5	+0.9
	comp=E,0.2nm,0.3s,baz=306,slow=14,SNR=1.5						
IDI				Sn	Sn	04 45 14.8	+0.4
	comp=E,2.4nm,0.3s,baz=277,slow=7.1,SNR=8.3						
LSTV	Lastovo	4.97	327	ePn	Pn	04 44 19.7	-0.9
VAE	Valguarnera	5.01	258	Pn	Pn	04 44 22.7	+1.4
	baz=130,slow=7.9,SNR=0.9						

VAE				Sn	Sn	04 45 22.2	+3.2
	comp=E,1.8nm,0.3s,baz=180,slow=20,SNR=1.7						
RUDO	Rudo	5.04	350	ePn	Pn	04 44 21.3	-0.3
BBLS	Lazići	5.28	351	ePn	Pn	04 44 24.9	0.0
MAKA	Makarska	5.35	331	ePn	Pn	04 44 25.5	-0.4
DIVS	Divibare	5.45	356	ePn	Pn	04 44 27.0	-0.4
RICI	Ricice	5.49	333	ePn	Pn	04 44 26.9	-0.8
HVAR	Hvar	5.49	327	ePn	Pn	04 44 27.1	-0.7
HVAR				Sn	Sn	04 45 25.3	-5.4
HAPS	Han Pijesak,BI	5.56	348	ePn	Pn	04 44 28.6	-0.3
ZIRJ	Zirje	6.22	325	ePn	Pn	04 44 37.2	-0.6
MGRS	Mrkonjic Grad	6.32	337	ePn	Pn	04 44 38.5	-0.8
MORI	Morici	6.37	326	ePn	Pn	04 44 39.8	0.0
FRGS	Fruska Gora	6.52	355	ePn	Pn	04 44 41.3	-0.6
BLY	Banja Luka	6.59	338	ePn	Pn	04 44 39.2	-3.7
DUGI	Dugi Otok	6.75	324	ePn	Pn	04 44 45.0	-0.2
UDBI	Udbina	6.88	330	ePn	Pn	04 44 47.8	+0.7
PLIT	Plitvice	7.23	331	ePn	Pn	04 44 51.7	-0.1
NVLJ	Novalja	7.28	326	ePn	Pn	04 44 52.2	-0.2
RABC	Rab	7.47	326	ePn	Pn	04 44 55.0	0.0
MOSL	Moslavina	7.51	339	ePn	Pn	04 44 53.8	-1.8
MORH	Mrgy, Hungar	7.68	350	ePn	Pn	04 44 54.6	-3.3
MLR	Muntele Rosu	7.90	29	Pn	Pn	04 45 05.1	+4.0
	comp=E,0.1nm,0.3s,baz=217,slow=15,SNR=1.9						
OZLJ	Ozalj	7.92	333	ePn	Pn	04 45 00.8	-0.3
RIY	Rijeka	8.06	328	ePn	Pn	04 45 02.4	-0.6
CRES	Cresnjev	8.10	334	ePn	Pn	04 45 02.9	-0.8
LOBO	Lobor	8.20	337	ePn	Pn	04 45 03.3	-1.6
CEY	Cerknica	8.42	329	ePn	Pn	04 45 06.4	-1.6
LJU	Ljubljana	8.63	331	ePn	Pn	04 45 10.3	-0.6
SOKA	Soboth	8.99	335	ePn	Pn	04 45 15.2	-0.7
	comp=E,2.0nm,0.4s						
OBKA	Obir	9.01	332	i Pn	Pn	04 45 17.2	+0.9
	comp=E,0.9nm,0.2s						
ARSA	Arzberg	9.35	338	ePn	Pn	04 45 21.6	+0.8
	comp=E,1.6nm,0.3s						
ABTA	Abfaltersbach	10.02	326	ePn	Pn	04 45 29.4	-0.7
	comp=E,1.4nm,0.4s						
ABTA				eSn	Sn	04 47 17.2	-5.1
	comp=E,1.3nm,0.4s						
BRTR	Keskin Array B	10.19	80	Pn	Pn	04 45 36.9	+4.4
	comp=E,0.1nm,0.3s,baz=276,slow=12,SNR=4.6						
MOA	Molln	10.27	335	i Pn	Pn	04 45 33.3	-0.1
	comp=E,1.8nm,0.3s						
WTTA	Wattenberg	10.80	326	ePn	Pn	04 45 41.2	+0.3
	comp=E,1.9nm,0.3s						
WATA	Walderalm	10.88	326	i Pn	Pn	04 45 41.4	-0.5
	comp=E,2.5nm,0.6s						
SQTA	Sankt Quirin	10.96	324	i Pn	Pn	04 45 44.1	+1.1
	comp=E,0.9nm,0.2s						
SQTA				i Sn	Sn	04 47 41.7	-3.8
	comp=E,1.9nm,0.4s						
MOTA	Moosalm	11.10	324	i Pn	Pn	04 45 45.7	+0.7
	comp=E,2.2nm,0.7s						
MOTA				i Sn	Sn	04 47 45.7	-3.2
	comp=E,1.0nm,0.3s						
DAVOX	Davos/Dischmat	11.30	319	Pn	Pn	04 45 48.3	+0.7
	comp=E,0.3nm,0.3s,baz=199,slow=12,SNR=1.6						
DAVOX				Sn	Sn	04 47 54.9	+1.2
	comp=E,0.5nm,0.3s,baz=325,slow=16,SNR=2.4						
GERES	GERESS Array B	11.32	336	Pn	Pn	04 45 47.8	-0.1
	comp=E,0.3nm,0.3s,baz=158,slow=15,SNR=5.6						
KHC	Kasperske Hory	11.62	337	ePN	Pn	04 45 53.3	+1.5
ESDC	Sonseca Array	19.05	281	P	P	04 47 28.8	+0.5
	comp=E,0.0nm,0.3s,baz=77,slow=12,SNR=2.4						
HFS	Hagfors	21.93	351	P	P	04 47 59.5	+0.2
	comp=E,2.8nm,0.5s,baz=163,slow=11,SNR=15						
FINES	FINESS Array B	23.06	7	P	P	04 48 10.2	-1.1
	comp=E,1.5nm,0.4s,baz=168,slow=10,SNR=15						
NB2	NORSAR Subarra	23.16	348	P	P	04 48 11.6	-0.6
	comp=Z,0.9nm,0.7s,baz=161,slow=11						
NOA	NORSAR Array B	23.16	348	P	P	04 48 11.9	-0.4
	comp=Z,0.5nm,0.6s,baz=160,slow=8.9,SNR=4.8						
TORD	Torodi Ar. Bea	30.44	218	P	P	04 49 18.9	+0.3
	comp=Z,0.3nm,0.5s,baz=34,slow=9.1,SNR=7.2						
ARCES	ARCESS Array B	31.05	3	P	P	04 49 23.4	-0.2
	comp=Z,2.0nm,1.0s,baz=191,slow=9.2,SNR=0.9						
DBIC	Dimbokro	39.28	222	LR	LR	05 07 45.0	
	comp=Z,39nm,18.6s,baz=182,slow=38						
MKAR	Makanchi Array	45.01	59	P	P	04 51 20.9	-0.5
	comp=Z,0.3nm,0.5s,baz=280,slow=7.3,SNR=7.0						
ZALV	Zalesovo Beam	45.34	48	P	P	04 51 23.4	-0.5
	comp=Z,1.4nm,0.4s,baz=281,slow=8.6,SNR=5.2						

NEIC ***28*** *04:45:04.5±1.9, 14°.81N±0°.02×93°.30W±0°.03, h10^{km}±2^{km}, mb4.1/3, Md4.2/13(MEX), Error ellipse: s-maj=4.6km s-min=4.1km az=66.0*

MEX ***28*** *04:45:06.5±0.6, 14°.73N×93°.38W, h19^{km}±53^{km}, MD4.1*

ISC 28 04:45:02.2±2.3**, 14°.88N**±0°.06×**93°.38W**±0°.05**, h1**^{km}±17^{km}**, n22, σ0^{s}.92**/30**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		0.83	11		Pn	04 45 21.9	+0.8
PCIG					Sn	04 45 33.3	-0.8
PCIG		0.83	11	eP	Pn	04 45 21.9	+0.8
PCIG				eS	Sn	04 45 33.7	-0.4
THIG		1.08	88		Pb	04 45 23.7	0.0
THIG					Sg	04 45 36.2	-0.8
THIG		1.08	88	eP	Pb	04 45 23.7	0.0
THIG				eP	Pb	04 45 23.7	0.0
THIG				eS	Sg	04 45 36.2	-0.8
THIG				eS	Sb	04 45 37.3	-1.1
RTAL	Retalhuleu	1.67	102		Pn	04 45 33.2	+0.5
CCIG	Comitan	1.84	41		Pb	04 45 36.8	0.0
CCIG	Comitan	1.84	41	eP	Pb	04 45 36.8	0.0
HUEH	Huehuetenango	1.87	76		Pb	04 45 37.2	-0.1
TGIG		1.90	8		Pb	04 45 37.5	-0.3
TGIG		1.90	8	eP	Pb	04 45 37.5	-0.3
TGIG				eS	Sb	04 46 01.2	-1.0
CMIG	Matias Romero	2.63	327		Pn	04 45 47.1	+1.3
CMIG	Matias Romero	2.63	327	eP	Pn	04 45 47.1	+1.3
HUIG	Huatulco	2.77	289	eP	Pn	04 45 47.7	-0.1
HUIG				eS	Sn	04 46 19.7	-2.2
MTO3	Montecristo	3.92	96		Pn	04 46 04.1	+0.3
ESQI	Esquipulas	3.92	94	Pn	Pn	04 46 04.2	+0.5
PETF	Flores	3.94	59		Pn	04 46 05.3	+1.4
SNET	Serv Nac Est T	4.20	106	Pn	Pn	04 46 06.8	-0.6
TLIG	Tlapa	5.65	299	Pn	Pn	04 46 29.4	+1.9
RIMA	Rio Macho	10.60	118		Pn	04 47 36.7	+1.2
344A	Westbrook Farm	16.68	8	Pn	Pn	04 48 57.4	+0.2
344A				IAmb	IAmb	04 49 07.6	
	comp=Z,30nm,1.4s						
W39A	Magazine	20.23	359	P	P	04 49 38.6	-0.2
W39A				IAmb	IAmb	04 50 03.9	
	comp=Z,4.4nm,1.1s						
WHAR	Wooly Hollow	20.35	3	P	P	04 49 39.8	-0.3
WHAR				IAmb	IAmb	04 49 44.1	
	comp=Z,17nm,1.5s						

IDC ***28*** *05:01:07.0±1.5, 33°.66S×178°.83W, h0^{km}, mb4.2/3, mb1 4.4/4, mb1mx3.8/28, mbtmp4.3/4, ML4.4/1, MS3.4/1, Ms1 3.4/1, ms1mx2.8/27, Error ellipse: s-maj=37.2km s-min=30.0km az=84.0*

WEL ***28*** *05:01:08.1±0.8, 33°S±12°×17°9W±3°2, h33^{km}, M4.5/12, mB5.0/5, ML5.0/12, MLv4.6/12, Mw(mB)4.3/5, Error ellipse: s-maj=0.0km s-min=0.0km az=110.9*

ISC 28 05:01:10.3±1.2**, 33°.55S**±0°.10×**178°.8W**±0°.2**, h48**^{km}**, n22, σ2^{s}.37**/36**, mb4.1**/3**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	4.33	10	P	Pn	05 02 11.5	-2.2
GLKZ				S	Sn	05 02 59.9	-3.0
RIZ	Raoul Island	4.35	10	S	Sn	05 02 59.1	-4.2
MXZ	Matakaoa Point	4.66	210	P	Pn	05 02 17.2	-0.9
MXZ				S	Sn	05 03 07.7	-3.2
WMGZ	Waiomatatini S	4.84	207	P	Pn	05 02 18.9	-1.6
WMGZ				S	Sn	05 03 14.2	-1.1
PKGZ	Pakihiroa	5.03	210	P	Pn	05 02 20.3	-3.0
PKGZ				S	Sn	05 03 19.1	-1.1
HAZ	Te Kaha	5.05	213	P	Pn	05 02 22.5	-0.9
HAZ				S	Sn	05 03 21.9	+1.5
PUZ	Puketiti	5.12	207	P	Pn	05 02 21.3	-3.1
PUZ				S	Sn	05 03 18.9	-3.4
RUGZ	Raukumara Rang	5.27	212	P	Pn	05 02 24.8	-1.8
RUGZ				S	Sn	05 03 24.6	-1.4
TWGZ	Tauwhareparae	5.32	209	P	Pn	05 02 25.4	-1.8
TWGZ				S	Sn	05 03 25.6	-1.5
CNGZ	Carnagh Statio	5.50	206	P	Pn	05 02 27.0	-2.6
CNGZ				S	Sn	05 03 31.9	+0.3
TKGZ	Te Karaka	5.60	208	P	Pn	05 02 29.7	-1.2
TKGZ				S	Sn	05 03 31.2	-2.8
MWZ	Matawai	5.64	211	P	Pn	05 02 30.8	-0.8
MWZ				S	Sn	05 03 33.3	-1.8
URZ	Urewera	5.77	214	Pn	Pn	05 02 32.1	-1.2
	11nm,0.3s,baz=108,slow=19,SNR=28						
URZ				Sn	Sn	05 03 36.7	-1.4
	20nm,0.3s,baz=188,slow=19,SNR=11						
URZ	Urewera	5.77	214	P	Pn	05 02 31.1	-2.2
URZ				S	Sn	05 03 35.1	-3.0
RAGZ	Rawiri	5.83	211	P	Pn	05 02 33.0	-1.2
RAGZ				S	Sn	05 03 36.1	-3.5
RIGZ	Rimuhau	5.86	208	P	Pn	05 02 32.9	-1.8
RIGZ				S	Sn	05 03 38.0	-2.5
DZM	Mont Dzumac	17.35	307	LR	LR	05 10 25.4	
	comp=Z,140nm,21.5s,baz=101,slow=32						
ASAR	Alice Springs	42.39	271	P	P	05 09 02.9	+2.6
	1.7nm,0.7s,baz=111,slow=7.5,SNR=26						
WRA	Warramunga Arr	43.66	276	P	P	05 09 13.4	+2.9
	2.0nm,0.5s,baz=118,slow=7.4,SNR=44						
QSPA	South Pole Qui	56.57	180	P	P	05 10 50.7	+2.9
	3.5nm,1.1s,baz=34,slow=4.0,SNR=9.8						
MKAR	Makanchi Array	119.27	309	PKP	PKiKP	05 19 56.9	+3.1
	0.3nm,0.7s,baz=86,slow=1.9,SNR=1.7						
FINES	FINESS Array B	147.84	338	PKPbc	PKPab	05 20 52.5	+0.8
	3.2nm,0.6s,baz=64,slow=3.2,SNR=12						

IDC ***28*** *05:01:46.8±3.6, 36°.86N×21°.65E, h0^{km}, mb4.1/6, mb1 3.8/9, mb1mx3.6/44, mbtmp3.8/9, ML2.9/3, Error ellipse: s-maj=65.3km s-min=22.8km az=46.0*

ATH ***28*** *05:01:50.1, 36°.68N×21°.49E, h39^{km}±4^{km}, ML3.2/7, Error ellipse: s-maj=6.7km s-min=2.3km az=50.0*

THE ***28*** *05:01:51.8, 36°.61N×21°.61E, h0^{km}±3^{km}, ML3.1/4, Error ellipse: s-maj=4.4km s-min=0.8km az=241.0*

ISC 28 05:01:46.8±1.5**, 36°.65N**±0°.05×**21°.35E**±0°.05**, h17**^{km}±9^{km}**, n59, σ1^{s}.33**/67**, mb4.1**/6**, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PYL	PYLOS	0.40	52	P	Pn	05 01 57.9	+0.1
PYL				S	Sb	05 02 02.5	+1.3
PYL	PYLOS	0.40	52	P	Pn	05 01 57.9	+0.1
PYL				S	Sb	05 02 04.0	+2.7
ITM	Ithomi	0.70	41	P	Pn	05 02 02.8	+0.8
ITM				S	Sn	05 02 12.7	+0.3
	3μm,0.4s						
ITM	Ithomi	0.70	41	P	Pn	05 02 02.7	+0.8
ITM				S	Sn	05 02 12.4	-0.1
ITM				AML	AML	05 02 13.9	
	comp=N,4772μm,0.3s						
ITM				AML	AML	05 02 16.6	
	comp=E,5202μm,0.4s						
VTN	Vitineika	1.27	354	P	Pg	05 02 17.1	+5.8
VLI	Veliai	1.28	87	P	Pg	05 02 11.9	+0.4
VLI				S	Sg	05 02 27.4	-0.7
	comp=E,660nm,0.5s						
VLI	Veliai	1.28	87	P	Pg	05 02 11.8	+0.4
VLI				AML	AML	05 02 33.1	
	comp=E,1053μm,0.6s						
VLI				AML	AML	05 02 36.0	
	comp=N,1370μm,0.6s						
DRO	Drossia	1.33	12	P	Pg	05 02 14.2	+1.8
DRO				AML	AML	05 02 42.8	
	comp=N,1430μm,0.4s						
DRO				AML	AML	05 02 43.7	
	comp=E,2030μm,0.5s						
MNVA	Monemvasia	1.36	88	P	Pg	05 02 13.5	+0.5
KTHR	Kythira	1.39	106	P	Pg	05 02 13.5	-0.1
KTHR				S	Sg	05 02 31.6	-0.1
	comp=E,758nm,0.4s						
RLS	Riolos of Patr	1.41	4	P	Pg	05 02 15.7	+1.8
KTHA	Kythira Island	1.44	105	P	Pg	05 02 14.4	-0.1
KTHA				S	Sg	05 02 32.9	-0.3
	comp=E,822nm,0.7s						
KTHA	Kythira Island	1.44	105	P	Pg	05 02 14.4	-0.1
KTHA				AML	AML	05 02 36.2	
	comp=N,1058μm,0.4s						
KTHA				AML	AML	05 02 40.8	
	comp=E,2216μm,0.7s						
GUR	Goura	1.51	31	P	Pg	05 02 16.3	+0.5
GUR				AML	AML	05 02 41.9	
	comp=E,1222μm,0.4s						
GUR				AML	AML	05 02 43.2	
	comp=N,1821μm,0.5s						
KLV	Kalavryta, Ach	1.53	24	P	Pg	05 02 16.6	+0.3
KLV				AML	AML	05 02 45.9	
	comp=E,525μm,0.5s						
KLV				AML	AML	05 02 47.2	
	comp=N,530μm,0.8s						
KRND	KRANIDI	1.62	63	P	Pb	05 02 16.2	+0.1
VLS	Valsamata	1.64	339	P	Pg	05 02 18.2	-0.1
LAKA	Lakka	1.66	17	P	Pg	05 02 19.2	+0.5
EPID	Epidavros	1.71	55	P	Pb	05 02 17.8	0.0
THAL	Thalero	1.73	37	P	Pb	05 02 18.9	+0.7
THAL				AML	AML	05 02 54.6	
	comp=E,2094μm,0.4s						
THAL				AML	AML	05 02 59.4	
	comp=N,2132μm,0.9s						
ANKY	Antikythira Is	1.76	116	P	Pg	05 02 20.4	-0.2
TRIZ	Trizonia	1.81	18	P	Pg	05 02 20.9	-0.5
EFP	Efpalio	1.83	14	P	Pg	05 02 22.0	+0.1
SERG	Sergoula	1.85	18	P	Pg	05 02 22.1	-0.1
LTK	Loutraki	1.88	43	P	Pb	05 02 20.2	-0.4
ANX	Ano Chora	1.99	13	P	Pg	05 02 24.6	-0.4
EVR	Evrytania	2.29	9	P	Pg	05 02 29.9	-0.8
MAKR	Makrakomi, Fth	2.44	15	P	Pb	05 02 30.8	+0.7
IDI	Anoyia	3.18	114	Pn	Pn	05 02 37.3	+1.3
	comp=N,0.8nm,0.3s,baz=312,slow=15,SNR=9.5						
IDI				Sn	Sn	05 03 15.0	+1.4
	comp=N,4.3nm,0.3s,baz=308,slow=20,SNR=5.9						
DRME	Dracevica, Mon	5.78	344	ePn	Pn	05 03 13.2	+1.5
PDG	Podgorica	5.99	345	ePn	Pn	05 03 15.8	+1.2
HCY	Herceg Novi	6.19	340	ePn	Pn	05 03 18.1	+0.7
TREB	Trebinje	6.48	340	ePn	Pn	05 03 21.7	+0.3
STON	Ston	6.82	337	ePn	Pn	05 03 26.1	+0.2
STON	Ston	6.82	337	ePn	Pn	05 03 26.9	+1.0
LSTV	Lastovo	7.01	332	ePn	Pn	05 03 30.1	+1.5
LSTV				Sn	Sn	05 04 42.5	-5.4
RUDO	Rudo	7.12	348	ePn	Pn	05 03 30.6	+0.5
BBLS	Lazići	7.36	349	ePn	Pn	05 03 34.6	+1.2
MAKA	Makarska	7.41	335	ePn	Pn	05 03 35.8	+1.7
DIVS	Divibare	7.51	353	ePn	Pn	05 03 35.9	+0.3
HVAR	Hvar	7.53	332	ePn	Pn	05 03 37.0	+1.3
RICI	Ricice	7.56	336	ePn	Pn	05 03 37.1	+1.0
HAPS	Han Pijesak,BI	7.65	347	ePn	Pn	05 03 35.2	-2.3
ZIRJ	Zirje	8.24	330	ePn	Pn	05 03 47.4	+1.8
MORI	Morici	8.39	331	ePn	Pn	05 03 50.0	+2.4
DUGI	Dugi Otok	8.76	329	ePn	Pn	05 03 55.0	+2.3
UDBI	Udbina	8.94	333	ePn	Pn	05 03 57.4	+2.3
NVLJ	Novalja	9.31	330	ePn	Pn	05 04 02.8	+2.7
MORH	Mrgy, Hungar	9.77	349	ePn	Pn	05 04 04.6	-1.8
BRTR	Keskin Array B	10.15	69	Pn	Pn	05 04 11.0	-0.8
	comp=N,0.0nm,0.3s,baz=261,slow=14,SNR=1.9						
CRES	Cresnjev	10.18	336	ePn	Pn	05 04 12.7	+0.6
CEY	Cerknica	10.46	332	ePn	Pn	05 04 17.6	+1.6
AKASG	Malin Array Be	15.14	19	Pn	Pn	05 05 18.2	-1.5
	comp=N,0.2nm,0.3s,baz=210,slow=11,SNR=1.4						
HFS	Hagfors	24.01	351	P	P	05 07 01.1	+0.7
	comp=N,4.2nm,0.9s,baz=164,slow=11,SNR=5.0						
BELG	Belogornoye	24.27	41	P	P	05 07 02.6	-0.2
	comp=N,11nm,0.6s,baz=318,slow=1.5,SNR=6.0						
FINES	FINESS Array B	24.99	5	P	P	05 07 09.8	+0.5
	comp=N,4.3nm,0.9s,baz=176,slow=9.4,SNR=5.6						
ARCES	ARCESS Array B	33.02	3	P	P	05 08 21.7	+1.0
	comp=N,2.0nm,0.9s,baz=190,slow=9.8,SNR=5.9						
MKAR	Makanchi Array	45.55	57	P	P	05 10 05.2	-0.4
	comp=N,0.2nm,0.3s,baz=268,slow=8.4,SNR=7.8						
ZALV	Zalesovo Beam	46.23	47	P	P	05 10 10.6	-0.1
	comp=N,1.3nm,0.3s,baz=267,slow=8.4,SNR=6.2						

NEIC ***28*** *05:16:53.2±1.2, 45°.00N±0°.04×74°.71W±0°.03, h5^{km}±7^{km}, Error ellipse: s-maj=5.9km s-min=2.8km az=201.0*

OTT ***28*** *05:16:53.4±0.1, 44°.99N×74°.72W, h12^{km}, MN3.7/26*

OTT 6km south from Cornwall, Ontario Felt Western Quebec Seismic Zone. Felt in Cornwall, Montreal, Qc. New York State, U.S.

ANF ***28*** *05:16:53.5±1.5, 44°.90N×74°.87W, h6^{km}±5^{km}, ML3.8/6, Error ellipse: s-maj=9.2km s-min=6.5km az=130.0*

LDO ***28*** *05:16:54±1.0, 44°.98N±0°.04×74°.73W±0°.03, h5^{km}±7^{km}, Md3.2, mb_Lg3.2/83(NEIC), mb_Lg3.7(OTT), Error ellipse: s-maj=5.7km s-min=2.7km az=200.0*

ISC 28 05:16:53.2±1.0**, 44°.99N**±0°.02×**74°.73W**±0°.02**, h10**^{km}±8^{km}**, n151, σ0^{s}.98**/187**, 1D, New York**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BMNY	Brushton-Moira	0.22	133	P	Pg	05 16 57.6	-0.1
	baz=311						
LONY	Lake Ozonia	0.38	164	P	Pg	05 17 00.4	-0.4
	baz=344						
LONY				S	Sg	05 17 05.5	-0.3
	baz=344						
LONY	Lake Ozonia	0.38	164	Pg	Pg	05 17 00.5	-0.2
LONY				Sg	Sg	05 17 05.5	-0.3
LONY	Lake Ozonia	0.38	164	PG	Pg	05 17 00.6	-0.2
LONY				SG	Sg	05 17 05.5	-0.3
LONY				Trac		05 17 06.0	
	comp=Z,2μm,0.1s						
WBO	Williamsburg	0.39	272	PG	Pg	05 17 01.1	+0.2
WBO				SG	Sg	05 17 06.3	+0.4
WBO				Trac		05 17 08.0	
	comp=Z,331nm,0.1s						
ALFO	Alfred	0.65	350	⇓PG	Pg	05 17 05.1	-0.7
ALFO				SG	Sg	05 17 13.9	-0.3
ALFO				Trac		05 17 14.0	
	comp=Z,2μm,0.2s						
ORIO	Orleans, Innes	0.72	310	PG	Pg	05 17 07.2	+0.1
ORIO				SG	Sg	05 17 16.7	+0.2
ORIO				Trac		05 17 17.1	
	comp=Z,419nm,0.1s						
OTT	Ottawa	0.81	300	PG	Pg	05 17 08.6	-0.2
OTT				SG	Sg	05 17 19.6	+0.3
OTT				Trac		05 17 20.3	
	comp=Z,452nm,0.1s						
FRNY	Flat Rock	0.82	100		Pg	05 17 08.2	-0.9
FRNY				Sg	Sg	05 17 19.4	-0.4
FRNY	Flat Rock	0.82	100	P	Pg	05 17 08.2	-0.9
	baz=280,SNR=994						
FRNY				S	Sg	05 17 19.5	-0.4
	baz=280						
GAX2	Gleen Almond T	0.89	324	PG	Pg	05 17 10.2	-0.1
GAX2				Trac		05 17 27.1	
	comp=Z,187nm,0.0s						
GAC	Glen Almond	0.89	324	PG	Pg	05 17 10.2	-0.2
GAC				PG	Pg	05 17 10.2	-0.2
GAC				SG	Sg	05 17 21.9	0.0
GAC				SG	Sg	05 17 21.9	0.0
GAC				Trac		05 17 22.3	
	comp=Z,164nm,0.1s						
GAC				Trac		05 17 22.4	
	comp=Z,375nm,0.1s						
GAX1	Gleen Almond T	0.89	324	PG	Pg	05 17 10.2	-0.1
GAX1				SG	Sg	05 17 21.9	0.0
GAX1				Trac		05 17 22.3	
	comp=Z,321nm,0.2s						
MNTQ	Montreal, Queb	0.93	56		Pg	05 17 10.4	-0.7
MNTQ	Montreal, Queb	0.93	56	PG	Pg	05 17 10.4	-0.7
MNTQ				SG	Sg	05 17 23.0	-0.3
MNTQ				Trac		05 17 23.6	
	comp=Z,294nm,0.1s						
KB3O	Grant Side Rd.	1.08	292	PG	Pg	05 17 13.0	-0.9
KB3O				SG	Sg	05 17 27.8	-0.1
KB3O				Trac		05 17 30.1	
	comp=Z,561nm,0.1s						
KB5O	Diamondview Rd	1.08	292	PG	Pg	05 17 13.0	-0.9
KB5O				SG	Sg	05 17 27.8	-0.2
NCB	Newcomb	1.08	160	Pn	Pg	05 17 12.2	-1.8
NCB	Newcomb	1.08	160	P	Pg	05 17 12.2	-1.8
	baz=340						
NCB				S	Sg	05 17 26.5	-1.5
	baz=340						
KB2O	John Shaw Road	1.08	292	PG	Pg	05 17 13.1	-0.9
KB2O				SG	Sg	05 17 28.4	+0.3
KB2O				Trac		05 17 33.1	
	comp=Z,381nm,0.1s						
KB4O	Donald B. Munr	1.08	291	PG	Pg	05 17 13.2	-0.9
KB4O				SG	Sg	05 17 28.2	+0.1
KB4O				Trac		05 17 31.0	
	comp=Z,663nm,0.1s						
KB6O	John Shaw Road	1.09	292	PG	Pg	05 17 13.3	-0.9
KB6O				SG	Sg	05 17 28.4	0.0
KB6O				Trac		05 17 34.2	
	comp=Z,619nm,0.1s						
KB1O	Rock site, Kin	1.10	292	PG	Pg	05 17 13.4	-1.0
KB1O				Trac		05 17 29.7	
	comp=Z,196nm,0.1s						
VABQ	Val Des Bois	1.10	326	PG	Pg	05 17 13.8	-0.6
VABQ				SG	Sg	05 17 28.4	-0.4
VABQ				Trac		05 17 28.6	
	comp=Z,277nm,0.1s						
WCNY	West Carthage	1.21	214	P	Pg	05 17 14.6	-1.8
	baz=33,SNR=174						
TRQ	Mont Tremblant	1.24	6	Pn	Pg	05 17 16.0	-0.9
TRQ	Mont Tremblant	1.24	6	PG	Pg	05 17 16.1	-0.9
TRQ				SG	Sg	05 17 32.7	-0.4
TRQ				SG	Sg	05 17 32.8	-0.4
TRQ				Trac		05 17 33.3	
	comp=Z,272nm,0.1s						
KGNO	Kingston	1.47	239	PG	Pn	05 17 19.5	-0.2
KGNO				SG	Sn	05 17 39.4	+0.4
KGNO				Trac		05 17 41.1	
	comp=Z,106nm,0.1s						
J59A	Piesco	1.53	174		Pn	05 17 20.1	-0.5
J59A	Piesco	1.53	174	P	Pn	05 17 19.8	-0.8
	baz=354						
J59A				P	Pn	05 17 19.8	-0.8
	baz=354						
VT1	Waterbury	1.56	114		Pn	05 17 20.6	-0.3
VT1	Waterbury	1.56	114	P	Pn	05 17 20.7	-0.2
	baz=296,SNR=35						
MCVT	Middlebury Col	1.62	129	P	Pn	05 17 21.4	-0.4
	baz=310,SNR=502						
MCVT				S	Sn	05 17 42.8	+0.2
	baz=310						
PLVO	Plevna	1.67	273		Pn	05 17 22.6	+0.2
PLVO	Plevna	1.67	273	PN	Pn	05 17 22.6	+0.2
PLVO				SG	Sn	05 17 44.3	+0.5
PLVO				Trac		05 17 49.5	
	comp=Z,157nm,0.1s						
J58A	Remsen	1.68	194		Pn	05 17 22.6	0.0
J58A	Remsen	1.68	194	P	Pn	05 17 22.6	0.0
	baz=14,SNR=354						
J58A				P	Pn	05 17 22.6	0.0
	baz=14,SNR=354						
J58A				S	Sn	05 17 44.6	+0.4
	baz=14						
J58A				S	Sn	05 17 44.6	+0.4
	baz=14						
STUQ	Sainte-Ursule	1.74	41	PN	Pn	05 17 24.0	+0.6
STUQ				SG	Sb	05 17 47.9	+0.8
STUQ				Trac		05 17 49.5	
	comp=Z,129nm,0.1s						
ACCN	Adirondack Com	1.78	154		Pn	05 17 23.8	-0.2
ACCN	Adirondack Com	1.78	154	P	Pn	05 17 23.8	-0.2
	baz=335,SNR=123						
ACCN				S	Sn	05 17 47.4	+0.9
	baz=335						
MOQ	Mont Orford	1.78	79		Pn	05 17 25.0	+1.0
MOQ	Mont Orford	1.78	79	PN	Pn	05 17 25.1	+1.0
MOQ				SG	Sb	05 17 49.1	+0.8
MOQ				Trac		05 17 51.5	
	comp=Z,206nm,0.2s						
GRQ	Grand Remous	1.80	334	PN	Pn	05 17 25.4	+1.1
GRQ				SG	Sb	05 17 49.3	+0.4
GRQ				Trac		05 17 51.9	
	comp=Z,256nm,0.2s						
J57A	Williamstown	1.82	210		Pn	05 17 25.1	+0.5
J57A				IAmb_Lg		05 17 50.7	
	comp=Z,140nm,0.8s						
J57A	Williamstown	1.82	210	P	Pn	05 17 25.1	+0.5
	baz=30,SNR=292						
J57A				P	Pn	05 17 25.1	+0.5
	baz=30,SNR=292						
PEMO	Pembroke	1.91	292	PN	Pn	05 17 25.7	0.0
PEMO				SN	Sn	05 17 48.7	-1.0
PEMO				LG	Lg	05 17 52.8	
PEMO				Trac		05 17 54.8	
	comp=Z,76nm,0.1s						
PECO	Prince Edward	1.94	238		Pn	05 17 26.9	+0.9
PECO	Prince Edward	1.94	238	PN	Pn	05 17 26.0	-0.1
PECO				SN	Sn	05 17 49.0	-1.5
PECO				LG	Lg	05 17 53.7	
PECO				Trac		05 17 56.4	
	comp=Z,88nm,0.1s						

DELO	Deloro Mine	2.11	258		Pn	05 17 30.0	+1.5
DELO	Deloro Mine	2.11	258	PN	Pn	05 17 28.0	-0.5
DELO				SN	Sn	05 17 53.5	-1.4
DELO				Trac		05 17 59.2	
	comp=Z,116nm,0.1s						
DELO				LG	Lg	05 17 59.6	
LBNH	Lisbon	2.14	110	P	Pn	05 17 30.1	+1.2
	baz=291						
LBNH				S	Sb	05 17 59.6	+1.1
	baz=291						
LBNH	Lisbon	2.14	110		Pn	05 17 29.7	+0.8
LBNH	Lisbon	2.14	110	P	Pn	05 17 29.9	+1.0
	baz=291,SNR=226						
LBNH				S	Sb	05 17 59.6	+1.1
	baz=291						
LBNH	Lisbon	2.14	110	PN	Pn	05 17 29.5	+0.6
LBNH				SN	Sn	05 17 53.5	-2.0
LBNH				LG	Lg	05 18 00.6	
CRLO	Chalk River	2.14	300	PN	Pn	05 17 28.5	-0.4
CRLO				SN	Sn	05 17 53.0	-2.5
CRLO				Trac		05 18 01.2	
	comp=Z,109nm,0.1s						
HNH	Hanover	2.17	125		Pn	05 17 30.3	+1.0
DPQ	Saint Jean	2.17	38	PN	Pn	05 17 30.5	+1.1
DPQ				SN	Sn	05 17 54.8	-1.5
DPQ				Trac		05 18 02.5	
	comp=Z,54nm,0.1s						
J61A	Chester	2.27	136		Pn	05 17 31.4	+0.7
J61A	Chester	2.27	136	P	Pn	05 17 31.4	+0.7
	baz=317,SNR=143						
J61A				P	Pn	05 17 31.4	+0.7
	baz=317,SNR=143						
BANO	Bancroft	2.27	272	PN	Pn	05 17 30.2	-0.5
BANO				SN	Sn	05 17 57.0	-1.7
BANO				LG	Lg	05 18 03.9	
J56A	Wolcott	2.30	223		Pn	05 17 31.9	+0.8
HCNY	Howe Caverns	2.30	174	P	Pn	05 17 32.4	+1.2
	baz=354,SNR=95						
HCNY				S	Sn	05 18 00.9	+1.3
	baz=354						
TRY	Troy	2.38	161		Pn	05 17 33.6	+1.3
TRY				IAmb_Lg		05 18 09.2	
	comp=Z,73nm,0.7s						
TRY	Troy	2.38	161	S	Sn	05 18 04.2	+2.7
	baz=342						
ALGO	Algonquin Park	2.53	294	PN	Pn	05 17 34.3	0.0
H62A	Milan	2.58	98		Pn	05 17 35.4	+0.5
H62A				IAmb_Lg		05 18 20.6	
	comp=Z,69nm,0.7s						
H62A	Milan	2.58	98	P	Pn	05 17 35.9	+0.9
	baz=280						
H62A				P	Pn	05 17 35.9	+0.9
	baz=280						
K57A	Scipio Center	2.60	210		Pn	05 17 35.9	+0.7
K57A				IAmb_Lg		05 18 18.1	
	comp=Z,69nm,0.9s						
K57A	Scipio Center	2.60	210	P	Pn	05 17 36.1	+0.8
	baz=29,SNR=37						
I62A	Tamworth	2.67	113		Pn	05 17 37.1	+0.8
I62A				IAmb_Lg		05 18 25.4	
	comp=Z,71nm,1.1s						
I62A	Tamworth	2.67	113	P	Pn	05 17 37.1	+0.8
	baz=296,SNR=46						
I62A				P	Pn	05 17 37.1	+0.8
	baz=296,SNR=46						
FFD	Franklin Falls	2.68	123		Pn	05 17 37.2	+0.9
FFD	Franklin Falls	2.68	123	P	Pn	05 17 37.3	+0.9
	baz=305						
L59A	Walton	2.81	185		Pn	05 17 39.4	+1.3
L59A				IAmb_Lg		05 18 26.4	
	comp=Z,90nm,0.7s						
L59A	Walton	2.81	185	P	Pn	05 17 39.7	+1.6
	baz=4.5,SNR=39						
L59A				P	Pn	05 17 39.7	+1.6
	baz=4.5,SNR=39						
J55A	Hilton	2.81	233	Pn	Pn	05 17 40.3	+2.2
J55A				IAmb_Lg		05 18 30.6	
	comp=Z,59nm,0.8s						
WLVO	Wesleyville	2.83	249	PN	Pn	05 17 38.3	-0.1
WLVO				Trac		05 18 30.1	
	comp=Z,56nm,0.1s						
BINY	Binghamton	2.94	199		Pn	05 17 40.7	+0.9
BINY	Binghamton	2.94	199	PN	Pn	05 17 40.5	+0.7
L61B	Northampton	2.94	149	P	Pn	05 17 41.5	+1.6
	baz=330						
L61B				Sb	Sb	05 18 22.1	+0.5
	baz=330						
L61B	Northampton	2.94	149	P	Pn	05 17 41.5	+1.6
	baz=330,SNR=27						
K62A	Royalston	2.94	141		Pn	05 17 40.6	+0.7
K62A	Royalston	2.94	141	P	Pn	05 17 40.9	+1.0
	baz=323,SNR=51						
K62A				P	Pn	05 17 40.9	+1.0
	baz=323,SNR=51						
G62A	West of Eustis	2.98	84	Pn	Pn	05 17 41.1	+0.6
G62A				IAmb_Lg		05 18 34.3	
	comp=Z,58nm,0.7s						
G62A	West of Eustis	2.98	84	P	Pn	05 17 41.1	+0.6
	baz=267,SNR=47						
G62A				P	Pn	05 17 41.1	+0.6
	baz=267,SNR=47						
QCQ	Quebec	3.00	52	PN	Pn	05 17 41.0	+0.2
QCQ				SN	Sn	05 18 15.6	-1.2
QCQ				Trac		05 18 27.4	
	comp=Z,64nm,0.2s						
I63A	Otisfield	3.11	106	Pn	Pn	05 17 42.9	+0.6
I63A	Otisfield	3.11	106	P	Pn	05 17 43.1	+0.8
	baz=289,SNR=64						
I63A				P	Pn	05 17 43.1	+0.8
	baz=289,SNR=64						
SADO	Sadowa	3.15	268	Pn	Pn	05 17 42.0	-0.7
SADO	Sadowa	3.15	268	PN	Pn	05 17 42.1	-0.7
SADO				SN	Sn	05 18 18.0	-2.3
SADO				LG	Lg	05 18 30.9	
SADO				Trac		05 18 37.8	
	comp=Z,141nm,0.3s						
BCLQ	Boischatel	3.15	51	PN	Pn	05 17 42.4	-0.3
BCLQ				SN	Sn	05 18 18.2	-2.1
BCLQ				Trac		05 18 30.3	
	comp=Z,94nm,0.2s						
BCLQ				LG	Lg	05 18 30.4	
QUA2	Belchertown	3.21	147		Pn	05 17 45.1	+1.4
MEDO	Medina	3.25	237	Pn	Pn	05 17 44.5	+0.4
MEDO				IAmb_Lg		05 18 39.5	
	comp=Z,69nm,0.8s						
MEDO	Medina	3.25	237	PN	Pn	05 17 42.8	-1.3
MEDO				SN	Sn	05 18 21.4	-1.4
MEDO				LG	Lg	05 18 35.3	
J54A	Appleton	3.30	240	IAmb_Lg		05 18 44.5	
	comp=Z,48nm,0.8s						
UNH	University of	3.37	123	P	Pn	05 17 46.3	+0.5
	baz=306,SNR=18						
HRV	Adam Dziewonsk	3.38	136	P	Pn	05 17 46.0	0.0
	baz=318						
HRV	Adam Dziewonsk	3.38	136	Pn	Pn	05 17 45.9	-0.1
HRV	Adam Dziewonsk	3.38	136	P	Pn	05 17 46.0	0.0
	baz=318,SNR=41						
KSCT	Kent School, K	3.39	164		Pn	05 17 47.4	+1.3
KSCT				IAmb_Lg		05 18 41.4	
	comp=Z,78nm,0.8s						
EEO	Eldee	3.46	300	PN	Pn	05 17 48.6	+1.6
EEO				SN	Sn	05 18 25.6	-2.5
EEO				Trac		05 18 43.7	
	comp=Z,30nm,0.1s						
F62A	Pittston Farm,	3.47	73		Pn	05 17 48.3	+1.1
KSPA	Keystone Colle	3.51	193		Pn	05 17 48.6	+0.8
KSPA				IAmb_Lg		05 18 44.4	
	comp=Z,55nm,0.7s						
KSPA	Keystone Colle	3.51	193	P	Pn	05 17 48.7	+0.9
	baz=12,SNR=13						
L56A	Greenwood	3.52	217		Pn	05 17 48.7	+0.8
WES	Weston	3.59	135	Pn	Pn	05 17 47.9	-0.9
BRNY	Black Rk. Fore	3.61	171	P	Pn	05 17 50.4	+1.2
	baz=352,SNR=9.6						
WVL	Waterville	3.64	95	IAmb_Lg		05 18 52.8	
	comp=Z,75nm,1.1s						
VLDQ	Val d'Or	3.65	330	PN	Pn	05 17 52.4	+2.8
VLDQ				SN	Sn	05 18 35.5	+2.9
VLDQ				Trac		05 18 55.1	
	comp=Z,76nm,0.3s						
VLDQ				LG	Lg	05 18 55.5	
UCCT	U. Connecticut	3.68	149	Pn	Pn	05 17 49.9	-0.2
BCX	Boston College	3.70	135	Pn	Pn	05 17 50.7	+0.3
WVNY	West Valley, N	3.82	229		Pn	05 17 52.8	+0.8
BRYW	Bryant College	3.85	142	Pn	Pn	05 17 52.4	0.0
PKME	Peaks-Kenny Pk	3.86	84	Pn	Pn	05 17 52.6	+0.1
TRNY	Table Rock, Ra	3.86	174		Pn	05 17 52.8	+0.2
TRNY				IAmb_Lg		05 19 01.4	
	comp=Z,44nm,0.9s						
ODNJ	Ogdensburg	3.91	179	Pn	Pn	05 17 54.0	+0.8
ODNJ				IAmb_Lg		05 18 56.9	
	comp=Z,45nm,0.7s						
ODNJ	Ogdensburg	3.91	179	P	Pn	05 17 54.1	+0.9
	baz=359,SNR=14						
WSPT	Westport, CT	3.95	164	IAmb_Lg		05 19 04.7	
	comp=Z,40nm,0.7s						
LMQ	La Malbaie	3.98	48	PN	Pn	05 17 54.1	-0.2
LMQ				Trac		05 18 57.6	
	comp=Z,44nm,0.2s						
E62A	Clayton Lake	3.99	64	Pn	Pn	05 17 55.8	+1.5
PAL	Palisades	4.03	171	Sb	Sb	05 18 55.3	+2.4
	baz=352						
PAL	Palisades	4.03	171	Pn	Pn	05 17 55.9	+1.1
PAL				IAmb_Lg		05 19 01.0	
	comp=Z,62nm,0.7s						
F63A	Nahmakanta, Br	4.03	78	Pn	Pn	05 17 55.4	+0.5
F63A				IAmb_Lg		05 19 01.8	
	comp=Z,63nm,1.2s						
F63A	Nahmakanta, Br	4.03	78	P	Pn	05 17 55.8	+0.9
	baz=262,SNR=7.4						
F63A				P	Pn	05 17 55.8	+0.9
	baz=262,SNR=7.4						
M57A	Sunshine Farm,	4.05	207		Pn	05 17 56.1	+0.9
M57A				IAmb_Lg		05 19 07.3	
	comp=Z,43nm,0.8s						
M63A	Gales Ferry	4.08	150	Pn	Pn	05 17 56.2	+0.5
M63A				IAmb_Lg		05 19 07.1	
	comp=Z,47nm,0.8s						
N59A	State Game Lan	4.14	191	S	Sn	05 18 44.8	-0.2
	baz=10						
N59A	State Game Lan	4.14	191		Pn	05 17 57.1	+0.7
N59A				IAmb_Lg		05 19 02.6	
	comp=Z,58nm,0.8s						
N62A	Caumsett State	4.16	167	IAmb_Lg		05 19 05.5	
	comp=Z,66nm,0.8s						
CPNY	Central Park	4.23	172	IAmb_Lg		05 19 09.4	
	comp=Z,66nm,0.8s						
BRNJ	Basking Ridge	4.31	178	IAmb_Lg		05 19 12.4	
	comp=Z,54nm,0.8s						
N58A	Sunbury	4.40	200		Pn	05 18 00.2	+0.2
N58A				IAmb_Lg		05 19 11.5	
	comp=Z,47nm,0.8s						
LUPA	Lehigh Univers	4.41	186	Pn	Pn	05 18 01.4	+1.2
ERPA	Erie	4.78	235	IAmb_Lg		05 19 26.5	
	comp=Z,55nm,0.7s						
M54A	Oil Creek Stat	5.01	228	IAmb_Lg		05 19 29.1	
	comp=Z,39nm,0.8s						
WUPA	West Chester U	5.09	188	IAmb_Lg		05 19 31.8	
	comp=Z,32nm,0.8s						
P60A	Greenville	5.22	188	IAmb_Lg		05 19 44.2	
	comp=Z,34nm,0.8s						
N54A	Moraine State	5.58	226	IAmb_Lg		05 19 54.1	
	comp=Z,35nm,0.8s						
K50A	Casco	6.12	252	IAmb_Lg		05 20 06.6	
	comp=Z,41nm,0.7s						
N53A	Lisbon	6.13	229	IAmb_Lg		05 20 07.0	
	comp=Z,36nm,1.0s						
MCWV	Mont Chateau	6.54	217	IAmb_Lg		05 20 19.6	
	comp=Z,27nm,1.0s						
Q56A	Snyder Ridge,	6.81	211	IAmb_Lg		05 20 25.3	
	comp=Z,29nm,0.8s						
E46A	Sault Ste Mari	6.85	285	IAmb_Lg		05 20 41.1	
	comp=Z,24nm,0.9s						
AAM	Ann Arbor	7.01	251	IAmb_Lg		05 20 37.6	
	comp=Z,29nm,0.7s						
P52A	Corning	7.66	228	IAmb_Lg		05 20 51.2	
	comp=Z,25nm,0.9s						
ACSO	Alum Creek Sta	7.72	235	IAmb_Lg		05 20 56.8	
	comp=Z,20nm,0.8s						
S57A	Dark Hollow, R	7.89	205	IAmb_Lg		05 21 12.2	
	comp=Z,17nm,1.0s						
T60A	Surry	7.99	192	IAmb_Lg		05 21 06.5	
	comp=Z,30nm,0.7s						
N49A	Columbus Grove	8.04	243	IAmb_Lg		05 21 03.9	
	comp=Z,24nm,0.8s						
P51A	Williamsport	8.27	231	IAmb_Lg		05 21 09.9	
	comp=Z,28nm,0.8s						
S51A	Beattyville	9.91	225	IAmb_Lg		05 22 07.7	
	comp=Z,20nm,1.0s						

*KRNET **28** 05:22:01.0±0.1, 39°.74N×71°.74E, h15^{km}, mb3.1*
*SOME **28** 05:22:01.3, 39°.87N×71°.78E, h0^{km}*
*NNC **28** 05:22:01.8±4.2, 39°.83N×71°.88E, h0^{km}, mb3.8, mpv3.4, Error ellipse: s-maj=31.7km s-min=13.9km az=4.0*
*ISU **28** 05:22:02, 40°.00N×71°.70E, h10^{km}*
ISC 28 05:22:00.6±0.9**, 39°.72N**±0°.04×**71°.58E**±0°.03**, h10^{km}, n41, σ2^{s}45**/70**, 25C-7D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	Karamyk	0.29	144	⇓iP	Pg	05 22 06.0	-0.5
	baz=70						
DRK				⇓iS	Sg	05 22 10.1	-0.4
	baz=70						
FRG	Fergana	0.68	13	eP	Pg	05 22 11.0	-2.7
FRG				eS	Sg	05 22 20.0	-2.5
BTK	Batken	0.68	301	eP	Pn	05 22 16.0	-0.3
BTK				eS	Sn	05 22 26.0	-1.0
BTK	Batken	0.68	301	⇑iP	Pn	05 22 15.6	-0.7
	baz=94						
BTK				⇑iS	Sn	05 22 26.7	-0.3
	baz=94						
MINT	Mingtut	0.88	328	eP	Pg	05 22 15.0	-2.5
MINT				eS	Sn	05 22 33.0	+1.1
OHH	Osh	1.23	49	eP	Pb	05 22 21.0	-2.9
OHH				eS	Sb	05 22 35.0	-4.8
OHH	Osh	1.23	49	⇑iP	Pb	05 22 22.1	-1.8
	baz=45						
OHH				⇑iS	Sb	05 22 37.2	-2.6
	baz=45						
SFK	Sufi-Kurgan	1.51	78	⇑eP	Pn	05 22 26.6	-1.3
	baz=78						
SFK				⇑eS	Sn	05 22 45.9	-1.9
	baz=78						
TRKS	Terek-Say	1.84	350	⇑iP	Pb	05 22 33.8	-0.6
	baz=46						
TRKS				⇑iS	Sb	05 22 57.6	0.0
	baz=46						
SALK	Salom-Alik	2.07	55	⇓eP	Pb	05 22 36.8	-1.5
	baz=54						
SALK				⇓eS	Sb	05 23 02.8	-1.4
	baz=54						
CHRV	Charvak	2.29	328	eP	Pn	05 22 40.0	+1.6
IUG	Iuzhnay	2.70	335	eP	Pg	05 22 51.6	-0.6
	245nm,0.1s						
IUG				eS	Sg	05 23 28.1	+1.0
	80nm,1.0s						
IUG	Iuzhnay	2.70	335	Pg	Pg	05 22 51.6	-0.6
	245nm,0.6s						
IUG				Lg	Lg	05 23 28.2	
	80nm,1.0s						
MNAS	Manas	2.85	14	⇑iP	Pn	05 22 48.7	+2.4
	baz=12						
MNAS				⇑iS	Sn	05 23 23.2	+2.4
	baz=12						
AML	Almayashu	2.90	33	⇑eP	Pn	05 22 48.7	+1.6
	baz=31						
AML				⇑iS	Sn	05 23 23.5	+1.3
	baz=31						
MRKS	Merke	3.27	22	eP	Pb	05 22 58.7	-0.1
	3.5nm,0.2s						
MRKS				eS	Sb	05 23 40.1	+1.5
	38nm,0.1s						
MRKS	Merke	3.27	22	Pg	Pb	05 22 58.7	-0.1
	3.5nm,0.7s						
MRKS				Lg	Lg	05 23 40.1	
	27nm,0.5s						
UCH	Uchtor	3.35	41	⇑iP	Pn	05 22 54.8	+1.4
	baz=39						
UCH				⇑iS	Sn	05 23 34.0	+0.5
	baz=39						
EKS2	Erkin-Say	3.38	29	⇑eP	Pn	05 22 55.3	+1.8
	baz=27						
EKS2				⇑iS	Sn	05 23 35.0	+1.3
	baz=27						
BRLS	Borolday	3.56	339	eP	Pb	05 23 03.3	-0.3
	1.6nm,0.3s						
BRLS				eS	Sb	05 23 48.0	+1.0
	13nm,0.4s						
BRLS	Borolday	3.56	339	Pg	Pb	05 23 03.3	-0.3
	1.6nm,0.3s						
BRLS				Lg	Lg	05 23 48.0	
	13nm,0.4s						
KBK	Karagaybulak	3.88	40	⇑iP	Pn	05 23 02.3	+1.8
	baz=39						
KBK				⇑iS	Sn	05 23 46.9	+0.7
	baz=39						
CHMS	Chumysh	4.06	35	⇓iP	Pn	05 23 04.7	+2.0
	baz=34						
CHMS				⇓iS	Sn	05 23 51.0	+0.7
	baz=34						
USP	Ospenovka	4.17	31	⇑eP	Pn	05 23 06.3	+2.0
	baz=30						
USP				⇑iS	Sn	05 23 54.1	+1.0
	baz=30						
ULHL	Ulahol	4.34	53	⇑eP	Pn	05 23 08.4	+1.6
	baz=52						
ULHL				⇑iS	Sn	05 23 57.3	-0.2
	baz=52						
TKM2	Tokmak 2	4.41	42	⇓Pg	Pn	05 23 10.3	+2.6
	6.1nm,0.6s						
TKM2				⇑Lg	Lg	05 24 13.5	
	12nm,0.7s						
TKM2	Tokmak 2	4.41	42	⇑eP	Pn	05 23 09.6	+1.9
	baz=41						
TKM2				⇑iS	Sn	05 23 59.2	+0.1
	baz=41						
KST	Kastek	4.68	43	eP	Pb	05 23 24.5	+1.7
	7.4nm,0.2s						
KST				eS	Sb	05 24 24.3	+5.0
	17nm,0.1s						
KST	Kastek	4.68	43	Pg	Pb	05 23 24.5	+1.7
	7.4nm,1.1s						
KST				Lg	Lg	05 24 24.3	
	17nm,1.1s						
DGS	Degeres	4.72	40	eP	Pb	05 23 23.8	+0.2
	5.0nm,0.4s						
DGS				eS	Sb	05 24 23.3	+2.8
	18nm,0.7s						
DGS	Degeres	4.72	40	Pg	Pb	05 23 23.8	+0.2
	4.9nm,0.6s						
DGS				Lg	Lg	05 24 23.3	
	18nm,0.7s						
KRBS	Karabastau	5.02	36	eP	Pb	05 23 30.1	+1.5
	3.2nm,1.0s						
KRBS				eS	Sb	05 24 33.9	+5.0
	8.7nm,0.3s						
KRBS	Karabastau	5.02	36	Pg	Pb	05 23 30.1	+1.5
	3.0nm,0.6s						
KRBS				Lg	Lg	05 24 33.9	
	8.7nm,0.7s						
TNSS	Tian-Shan	5.23	49	eP	Pb	05 23 34.4	+2.1
	3.3nm,0.3s						
TNSS				eS	Sb	05 24 41.3	+6.1
	5.8nm,0.3s						
TNSS	Tian-Shan	5.23	49	Pg	Pb	05 23 34.4	+2.1
	3.3nm,1.1s						
TNSS				Lg	Lg	05 24 41.3	
	5.8nm,0.9s						
KOTS	Kotyrbulak	5.44	48	eP	Pb	05 23 39.1	+3.3
	2.0nm,0.2s						
KOTS				eS	Sg	05 24 49.4	-5.8
	12nm,0.3s						
KOTS	Kotyrbulak	5.44	48	Pg	Pb	05 23 39.1	+3.3
	2.0nm,0.5s						
KOTS				Lg	Lg	05 24 49.4	
	12nm,0.6s						
KUU	Kurty	5.48	39	eP	Pb	05 23 38.0	+1.7
	1.0nm,0.4s						
KUU				eS	Sb	05 24 47.6	+5.4
	13nm,0.2s						
KUU	Kurty	5.48	39	Pg	Pb	05 23 38.0	+1.7
	1.0nm,0.4s						
KUU				Lg	Lg	05 24 47.6	
	13nm,0.9s						
KTBS	Karatobe	5.52	42	eP	Pb	05 23 40.0	+2.9
	0.9nm,0.1s						
KTBS				eS	Sg	05 24 50.8	-7.0
	10nm,0.5s						
KTBS	Karatobe	5.52	42	Pg	Pb	05 23 40.0	+2.9
	0.9nm,0.3s						
KTBS				Lg	Lg	05 24 50.8	
	10nm,0.5s						

IDC 28 05:43:26.0±3.2**, 9°.17S**×**122°.15E, h141^{km}**±35^{km}**, mb3.3**/1**, mb1 3.2**/4**, mb1mx2.8**/35**, mbtmp3.6**/4**, Error ellipse: s-maj=71.9km s-min=25.4km az=72.0, Savu Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	1.81	125	P	Pn	05 43 58.2	-0.2
	12nm,0.3s,baz=302,slow=19,SNR=2.8						
BATI				S	Sn	05 44 23.6	+0.3
	36nm,0.3s,baz=59,slow=20,SNR=13						
FITZ	Fitzroy Crossi	9.50	159	P	Pn	05 45 40.1	+0.6
	0.2nm,0.3s,baz=0.3,slow=12,SNR=1.9						
FITZ				S	Sn	05 47 24.4	-0.3
	0.4nm,0.3s,baz=150,slow=20,SNR=8.9						
WRA	Warramunga Arr	15.92	134	P	Pn	05 47 01.1	-1.2
	0.2nm,0.3s,baz=313,slow=12,SNR=9.5						
WRA				S	Sn	05 49 42.3	-17
	0.1nm,0.3s,baz=326,slow=24,SNR=6.4						
ASAR	Alice Springs	18.28	143	P	P	05 47 29.8	+0.7
	0.2nm,0.3s,baz=318,slow=9.7,SNR=17						
ASAR				S	S	05 50 44.6	-6.3
	0.1nm,0.3s,baz=319,slow=22,SNR=4.3						
MKAR	Makanchi Array	66.06	331	P	P	05 53 57.7	0.0
	0.4nm,0.5s,baz=141,slow=7.9,SNR=6.6						

*SJA **28** 05:44:35.2±1.1, 30°.46S×72°.35W, h10^{km}, ML5.2, MW5.2*
*GUC **28** 05:44:37.0±0.7, 30°.34S×72°.34W, h32^{km}±4^{km}, ML5.4*
*IDC **28** 05:44:38.2±0.5, 30°.36S×72°.01W, h0^{km}, mb4.6/16, mb1 4.7/21, mb1mx4.6/28, mbtmp4.6/21, ML4.5/5, MS5.1/19, Ms1 5.1/19, ms1mx4.9/28, Error ellipse: s-maj=20.8km s-min=12.6km az=90.0*
*MOS **28** 05:44:39.1±1.2, 30°.38S×72°.06W, h11^{km}, mb5.2/14, MS5.1/4, Error ellipse: s-maj=13.3km s-min=7.5km az=91.3*
*NEIC **28** 05:44:40, 30°.37S×72°.16W, h10^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.73; $M_{\theta\theta}$-0.34; $M_{\phi\phi}$-1.39; $M_{r\theta}$0.35; $M_{\theta\phi}$0.49; $M_{\phi r}$-2.13; Fault plane solution: $M_0$2.72000×10^{17} NP1:ϕ_s167.77000°, δ71.39000°, λ95.28000°. NP2:ϕ_s331.62000°, δ19.32000°, λ74.72000°. Principal axes: T 2.8075, Plg63.0000°, Azm86.0000°; N -0.1850, Plg5.0000°, Azm346.0000°; P -2.6225, Plg26.0000°, Azm254.0000°;*
*NEIC **28** 05:44:40.1±1.7, 30°.37S±0°.03×72°.15W±0°.04, h10^{km}±1^{km}, mb5.2/40, Ms_20 5.3/108, Mwb5.6/44, Mwr5.5/40, Mww5.6, ML5.4(GUC) Error ellipse: s-maj=6.4km s-min=4.7km az=90.0*
*VAO **28** 05:44:40.3±0.4, 30°.39S×71°.95W, h10^{km}, mb5.1*
*NEIC **28** 05:44:40, 30°.37S×72°.16W, h14^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.44; $M_{\theta\theta}$0.41; $M_{\phi\phi}$-1.86; $M_{r\theta}$0.07; $M_{\theta\phi}$0.05; $M_{\phi r}$-1.43; Fault plane solution: $M_0$2.21000×10^{17} NP1:ϕ_s0.48000°, δ24.55000°, λ92.72000°. NP2:ϕ_s177.48000°, δ65.48000°, λ88.76000°. Principal axes: T 1.9787, Plg69.0000°, Azm85.0000°; N 0.4117, Plg1.0000°, Azm178.0000°; P -2.3904, Plg20.0000°, Azm268.0000°;*
*NEIC **28** 05:44:41, 30°.34S×72°.17W, h16^{km}, Moment Tensor Solution. Duration: 2^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}2.34; $M_{\theta\theta}$-0.35; $M_{\phi\phi}$-1.98; $M_{r\theta}$-0.09; $M_{\theta\phi}$0.23; $M_{\phi r}$-1.78; Fault plane solution: $M_0$2.83000×10^{17} NP1: ϕ_s348.00000°, δ26.00000°, λ80.00000°. NP2: ϕ_s179.00000°, δ65.00000°, λ95.00000°. Principal axes: T 2.9832, Plg70.0000°, Azm98.0000°; N -0.3455, Plg4.0000°, Azm357.0000°; P -2.6376, Plg20.0000°, Azm265.0000°;*
*GCMT **28** 05:44:45.1±0.1, 30°.39S±0°.01×72°.26W±0°.01, h12^{km}, MW5.6/144, Moment Tensor Solution. s123, c207; s144, c285; Duration: 1^{s}6 Moment tensor: Scale 10^{17} Nm; M_{rr}2.49±.02; $M_{\theta\theta}$0.11±.02; $M_{\phi\phi}$-2.60±.03; $M_{r\theta}$0.25±.07; $M_{\theta\phi}$0.11±.02; $M_{\phi r}$-2.58±.07; Best double couple: $M_0$3.63400×10^{17} NP1:ϕ_s0.00000°, δ22.00000°, λ95.00000°. NP2:ϕ_s175.00000°, δ68.00000°, λ88.00000°. Principal axes: T 3.5790, Plg67.0000°, Azm82.0000°; N 0.1100, Plg2.0000°, Azm176.0000°; P -3.6890, Plg23.0000°, Azm267.0000°; nsta1 refers to body waves,*

cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 28 05:44:38.2±1.0, **30°.39S**±0°.03×**72°.23W**±0°.04, **h4**^{km}±5^{km}, **n507**, σ**1^{s}71**/472, **mb5.1**/39, **MS5.3**/81, **11C-13D**, **Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	**Fray Jorge**	0.59	119	⇓iP	Pg	05 44 49.5	-0.1
CO06				eS	Sb	05 44 59.9	0.0
CO06	**Fray Jorge**	0.59	119		Pg	05 44 49.5	-0.1
CO06				Sg	Sb	05 44 58.2	-1.6
CO05	**La Serena**	0.98	62	⇑iP	Pg	05 44 55.8	-1.2
CO05				iS	Sb	05 45 10.2	-0.9
CO05				IAML		05 45 16.0	
	comp=E,157µm,0.5s						
CO05	**La Serena**	0.98	62		Pg	05 44 56.1	-1.0
CO05				Sg	Sg	05 45 09.9	+0.2
GO04	**Tololo Observa**	1.26	80	⇑iP	Pg	05 45 00.3	-2.0
GO04				iS	Sg	05 45 18.0	-0.7
GO04				IAML		05 45 22.6	
	comp=N,170µm,0.4s						
GO04	**Tololo Observa**	1.26	80		Pg	05 45 01.7	-0.7
GO04	**Tololo Observa**	1.26	80	eP	Pg	05 45 01.2	-1.1
GO04	**Tololo Observa**	1.26	80	iP	Pg	05 45 01.3	-1.1
GO04				eS	Sn	05 45 20.1	-0.2
LCO	**Las Campanas**	1.91	45	P	Pn	05 45 11.0	-0.9
LCO	**Las Campanas**	1.91	45		Pn	05 45 11.0	-0.9
LCO	**Las Campanas**	1.91	45	iP	Pn	05 45 10.7	-1.2
LCO				eS	Sg	05 45 40.1	+0.3
LCO				IAML		05 45 44.7	
	comp=Z,145µm,1.1s						
VA06	**Catapilco**	2.31	160	eP	Pn	05 45 15.9	-1.2
VA06				iS	Sn	05 45 45.3	-0.6
VA06				IAML		05 45 58.7	
	comp=E,25µm,0.5s						
AROD	**Rodeo**	2.40	85	eP	Pb	05 45 20.4	-1.8
AROD	**Rodeo**	2.40	85	iP	Pb	05 45 20.2	-2.0
AROD				eS	Sb	05 45 51.8	-0.4
AC04	**Llanos de Chal**	2.40	25	eP	Pn	05 45 16.1	-2.3
AC04				eS	Sn	05 45 45.5	-2.7
AC04				IAML		05 46 08.8	
	comp=E,10µm,0.4s						
AC04	**Llanos de Chal**	2.40	25		Pn	05 45 17.0	-1.3
AC04	**Llanos de Chal**	2.40	25	iP	Pn	05 45 16.0	-2.3
ACDV	**Cuesta del Vie**	2.70	86	eP	Pb	05 45 25.5	-1.8
ACDV	**Cuesta del Vie**	2.70	86	iP	Pb	05 45 25.1	-2.2
ACDV				IAML		05 46 10.3	
	comp=Z,6µm,1.1s						
ACCO	**Cerro Coronel**	2.74	95	eP	Pn	05 45 25.3	+2.0
ACCO	**Cerro Coronel**	2.74	95	iP	Pn	05 45 25.4	+2.0
ACCO				eS	Sb	05 46 03.5	+1.4
ACCO				IAML		05 46 45.1	
	comp=Z,2µm,1.4s						
VA03	**San Esteban**	2.77	149	eP	Pn	05 45 24.1	+0.6
VA03				eS	Sn	05 45 57.4	0.0
VA03				IAML		05 46 13.2	
	comp=N,20µm,0.4s						
VA03	**San Esteban**	2.77	149		Pn	05 45 23.3	-0.2
VA03	**San Esteban**	2.77	149	iP	Pn	05 45 23.3	-0.2
ROCH	**El Roble**	2.78	158	eP	Pn	05 45 22.8	-1.0
ROCH				⇑iP	Pb	05 45 22.9	-5.7
ROCH				eS	Sn	05 45 54.7	-3.2
ROCH				iS	Sb	05 45 57.6	-5.5
ROCH				IAML		05 46 20.5	
	comp=N,18µm,0.6s						
ROCH				IAML		05 46 21.9	
	comp=N,7µm,0.6s						
ROC1	**El Roble**	2.78	158	iP	Pn	05 45 23.0	-0.8
RTLS	**Leoncito**	2.88	120	eP	Pb	05 45 28.0	-2.4
RTLS	**Leoncito**	2.88	120	iP	Pb	05 45 27.9	-2.5
RTLS				IAML		05 46 11.6	
	comp=Z,2µm,0.6s						
MT02	**Curacav**	3.01	162	eP	Pn	05 45 27.8	+1.1
MT02				eS	Sn	05 46 02.2	-1.0
MT02				IAML		05 46 18.2	
	comp=E,5µm,0.4s						
MT02	**Curacav**	3.01	162		Pn	05 45 26.3	-0.4
MT02	**Curacav**	3.01	162	iP	Pn	05 45 26.0	-0.7
AUSP	**Uspallata**	3.04	128	eP	Pb	05 45 30.1	-3.1
AUSP	**Uspallata**	3.04	128	iP	Pn	05 45 29.8	+2.3
PEL	**Peldehue**	3.05	155	P	Pn	05 45 27.0	-0.3
PEL	**Peldehue**	3.05	155	⇑iP	Pn	05 45 26.1	-1.2
PEL				IAML		05 46 21.3	
	comp=N,5µm,0.5s						
PEL	**Peldehue**	3.05	155		Pn	05 45 27.0	-0.3
PEL	**Peldehue**	3.05	155	iP	Pn	05 45 27.4	+0.1
MT05	**Renca**	3.25	157	eP	Pn	05 45 30.6	+0.5
MT05				iS	Sn	05 46 08.6	-0.7
MT05	**Renca**	3.25	157	iP	Pn	05 45 31.0	+0.9
ZON	**Zonda**	3.26	112	iP	Pn	05 45 33.0	+2.7
ZON				IAML		05 46 33.0	
	comp=Z,4µm,0.9s						
GO03	**Copiap**	3.29	33	eP	Pn	05 45 29.5	-1.2
GO03	**Copiap**	3.29	33	iP	Pn	05 45 29.0	-1.6
GO03				⇓eS	Sn	05 46 11.6	+1.3
VA05	**Santo Domingo**	3.30	171	eP	Pn	05 45 29.3	-1.4
VA05				iS	Sn	05 46 08.8	-1.6
VA05				IAML		05 46 36.2	
	comp=E,9µm,0.5s						
VA05	**Santo Domingo**	3.30	171		Pn	05 45 30.1	-0.6
SJA	**San Juan**	3.35	111	eP	Pn	05 45 32.6	+1.1
RTCV	**Cerro Valdivia**	3.49	116	eP	Pn	05 45 36.1	+2.7
RTCV	**Cerro Valdivia**	3.49	116	iP	Pn	05 45 36.0	+2.7
RTCV				IAML		05 46 30.0	
	comp=Z,2µm,2.6s						
MT09	**Talagante**	3.54	163	⇓iP	Pn	05 45 35.4	+1.3
MT09				eS	Sn	05 46 14.9	-1.6
MT09	**Talagante**	3.54	163		Pn	05 45 34.5	+0.4
MT01	**Popeta**	3.56	167	eP	Pn	05 45 33.5	-0.8
MT01				eS	Sn	05 46 15.2	-1.7
MT01				IAML		05 46 36.3	
	comp=E,4µm,0.7s						
MT01	**Popeta**	3.56	167	Pn	Pn	05 45 33.5	-0.8
MT01	**Popeta**	3.56	167	iP	Pn	05 45 33.0	-1.3
ASAL	**Salagasta**	3.64	128	eP	Pn	05 45 38.6	+3.2
ASAL	**Salagasta**	3.64	128	iP	Pn	05 45 38.4	+2.9
ASAL				IAML		05 46 58.4	
	comp=Z,2µm,1.9s						
ARCO	**CERRO ARCO**	3.73	132	eP	Pn	05 45 40.2	+3.4
ARCO	**CERRO ARCO**	3.73	132	iP	Pn	05 45 40.3	+3.5
ARCO				IAML		05 46 51.0	
	comp=Z,4µm,0.6s						
BO04	**La Punta**	3.84	159	eP	Pn	05 45 39.1	+0.8
BO04				eS	Sn	05 46 22.7	-1.2
LMEL	**Las Melosas**	3.85	154	IAML		05 46 43.5	
	comp=E,2µm,0.5s						
VCA	**Vinchina**	3.88	66	eP	Pn	05 45 41.9	+3.1
VCA	**Vinchina**	3.88	66	iP	Pn	05 45 41.6	+2.8
VCA				IAML		05 46 45.7	
	comp=Z,8µm,1.6s						
AAGR	**Agrelo**	3.95	134	iP	Pn	05 45 43.0	+3.2
AAGR				IAML		05 46 59.2	
	comp=Z,2µm,2.5s						
BO01	**Tunca**	4.11	167	IAML		05 46 58.9	
	comp=N,2µm,0.5s						
BO01	**Tunca**	4.11	167	Pn	Pn	05 45 41.0	-0.8
BO01	**Tunca**	4.11	167	iP	Pn	05 45 41.2	-0.6
BO01				eS	Sn	05 46 31.4	+1.1
AVFE	**Valle Fertil**	4.13	95	eP	Pn	05 45 43.2	+1.0
AVFE	**Valle Fertil**	4.13	95	iP	Pn	05 45 43.0	+0.8
AVFE				IAML		05 46 49.5	
	comp=Z,3µm,0.7s						
AVIZ	**Vizcacheras**	4.41	135	eP	Pn	05 45 49.5	+3.4
AC02	**Maricunga**	4.47	38		Pn	05 45 46.6	-0.7
AC02	**Maricunga**	4.47	38	iP	Pn	05 45 46.6	-0.7
BO02	**Sierra Bellavi**	4.56	165		Pn	05 45 47.9	-0.2
BO02	**Sierra Bellavi**	4.56	165	iP	Pn	05 45 48.0	-0.1
GO05	**Huala**	4.62	177		Pn	05 45 47.0	-1.8
GO05	**Huala**	4.62	177	iP	Pn	05 45 47.3	-1.5
ACLC	**CERRO LA CRUZ**	4.68	79	iP	Pn	05 45 51.0	+1.1
ACLC				IAML		05 46 59.8	
	comp=Z,4µm,1.8s						
TINO	**Tinogasta**	4.69	62	eP	Pn	05 45 52.6	+2.7
ACHE	**Chepes**	4.85	101	iP	Pn	05 45 53.7	+1.5
APLL	**PUNTA DE LOS L**	4.93	92	iP	Pn	05 45 53.9	+0.7
ML02	**Panimavida**	5.40	173	Pn	Pn	05 45 59.5	-0.1
CYA	**Choya**	5.94	73	eP	Pn	05 46 07.2	+0.2
CYA	**Choya**	5.94	73	iP	Pn	05 46 07.0	0.0
CYA				IAML		05 47 57.2	
	comp=Z,2µm,2.0s						
PB14	**IPOC Station P**	5.97	16	Pn	Pn	05 46 04.1	-3.5
PB14	**IPOC Station P**	5.97	16	iP	Pn	05 46 04.9	-2.8
PB14				IAML		05 47 59.3	
	comp=Z,1µm,1.6s						
H03N1	**Juan Fernandez**	6.44	240	T	T	05 53 33.5	
	baz=69,slow=72,SNR=609						
H03N2	**Juan Fernandez**	6.46	240	T	T	05 53 24.6	
	baz=69,slow=72,SNR=413						
H03N3	**Juan Fernandez**	6.46	240	T	T	05 53 22.9	
	baz=69,slow=72,SNR=337						
VA04	**Juan Fernndez**	6.47	238	Pn	Pn	05 46 13.4	-0.9
TCA	**Tanti**	6.63	100	eP	Pn	05 46 15.9	-0.7
FSA	**Cafayete**	6.97	54	eP	Pn	05 46 22.2	+0.9
PB10	**IPOC Station P**	7.01	13	iP	Pn	05 46 18.0	-3.7
PB10				IAML		05 48 17.5	
	comp=Z,390nm,1.7s						
AHML	**Horco Molle**	7.05	61	iP	Pn	05 46 19.5	-2.7
AHML				IAML		05 48 24.6	
	comp=Z,901nm,1.6s						
LVC	**Limon Verde**	8.30	22	eP	Pn	05 46 39.1	-0.7
LVC	**Limon Verde**	8.30	22	eP	Pn	05 46 38.8	-1.0
LC01	**Cunco**	8.49	178	Pn	Pn	05 46 40.4	-1.6
LR03	**Panguipulli**	9.22	181		Pn	05 46 51.5	-0.5
PLCA	**Paso Flores**	10.41	173	Pn	Pn	05 47 08.9	+0.6
	comp=Z,0.5nm,0.3s,baz=135,slow=20,SNR=7.0						
PLCA				LR	LR	05 50 37.1	
	comp=Z,4µm,19.1s,baz=352,slow=34						
PLCA	**Paso Flores**	10.41	173	eP	Pn	05 47 09.0	+0.6
PLCA	**Paso Flores**	10.41	173	eP	Pn	05 47 11.7	+3.3
LL04	**Puerto Octay**	10.50	181		Pn	05 47 08.3	-1.2
TRQA	**Tornquist**	11.42	135	P	Pn	05 47 21.9	-0.2
TRQA	**Tornquist**	11.42	135	Pn	Pn	05 47 21.9	-0.2
LPA	**La Plata**	12.86	114	eP	Pn	05 47 44.2	+2.3
LPA				PPP	PPP	05 47 57.5	
LPA				PP	PbPb	05 48 29.4	+5.9
LPA				pPP		05 48 46.1	
LPA				S	Sn	05 49 57.2	-8.3
LPA	**La Plata**	12.86	114	SN	Sn	05 50 03.0	-2.5
LPA				sS		05 50 09.1	
LPA				SS	SbSb	05 51 10.3	+12
LPA				SSS	SSS	05 51 43.0	
LPA				PCP	PcP	05 53 17.9	+0.7
LPA				PKIKP	PKiKP	06 01 10.7	-3.7
LPA				SKIKP		06 04 44.6	
LPA				KIKS		06 04 49.7	
LPA				SKIKS		06 08 14.3	
ITQB	**Itaqui**	13.54	91	eP	Pn	05 47 49.8	-1.4
CPUP	**Villa Florida**	13.73	77	Pn	Pn	05 47 52.7	-1.0
	comp=Z,0.5nm,0.3s,baz=225,slow=12,SNR=6.3						
CPUP				LR	LR	05 53 30.0	
	comp=Z,23µm,18.1s,baz=256,slow=39						
CPUP	**Villa Florida**	13.73	77	P	Pn	05 47 55.0	+1.3
CPUP	**Villa Florida**	13.73	77	eP	Pn	05 47 52.5	-1.3
CPUP	**Villa Florida**	13.73	77	eP	Pn	05 47 53.4	-0.3
CPUP	**Villa Florida**	13.73	77		Pn	05 47 55.0	+1.3
LPAZ	**La Paz**	14.53	16	Pn	Pn	05 48 05.3	0.0
	comp=Z,2.0nm,0.3s,baz=190,slow=8.9,SNR=12						
LPAZ				LR	LR	05 54 51.8	
	comp=Z,9µm,19.3s,baz=178,slow=42						
LPAZ	**La Paz**	14.53	16	eP	Pn	05 48 05.3	0.0
LPAZ	**La Paz**	14.53	16	eP	Pn	05 48 05.1	-0.2
PLTB	**Pedras Altas**	16.02	100	eP	Pn	05 48 21.1	-3.4
PLTB	**Pedras Altas**	16.02	100	eP	Pn	05 48 23.1	-1.4
CPSB	**Cacapava Do Su**	16.22	95	eP	Pn	05 48 26.3	-0.7
CPSB	**Cacapava Do Su**	16.22	95	eP	Pn	05 48 26.8	-0.2
SIV	**San Ignacio**	17.61	38	P	Pn	05 48 44.1	-0.5
	comp=Z,2.0nm,0.3s,baz=221,slow=11,SNR=51						
AQDB	**Aquidauana**	17.88	60	eP	Pn	05 48 46.9	-1.0
CNLB	**Canela**	18.58	92	eP	P	05 48 54.6	-1.8
CNLB	**Canela**	18.58	92	eP	P	05 48 55.1	-1.3
PTGB	**Pitanga**	18.75	77	eP	P	05 48 57.2	-1.1
PTGB	**Pitanga**	18.75	77	eP	P	05 48 57.4	-0.9
NNA	**Nana**	18.80	346	P	Pn	05 49 00.8	+1.4
	comp=Z,1.1nm,0.3s,baz=298,slow=18,SNR=1.5						
NNA				LR	LR	05 53 56.7	
	comp=Z,2µm,19.6s,baz=161,slow=30						
TRCB	**Terra Rica**	19.07	71	eP	P	05 49 01.4	-0.4
TRCB	**Terra Rica**	19.07	71	eP	P	05 49 01.6	-0.2
PTLB	**Pontes e Lacer**	19.12	42	eP	P	05 49 01.5	-0.8
PTLB	**Pontes e Lacer**	19.12	42	eP	P	05 49 02.0	-0.3
TER01	**Tubaro-SC**	20.20	91	eP	P	05 49 14.1	0.0
TER01	**Tubaro-SC**	20.20	91	eP	P	05 49 14.0	0.0
PP1B	**Ponte de Pedra**	20.30	55	eP	P	05 49 14.3	-1.0
PP1B	**Ponte de Pedra**	20.30	55	eP	P	05 49 14.2	-1.0
VILB	**Vilhena**	20.61	35	eP	P	05 49 18.1	-0.6
VILB	**Vilhena**	20.61	35	eP	P	05 49 17.9	-0.7
VILB	**Vilhena**	20.61	35	P	P	05 49 18.0	-0.7
PCMB	**Pacaembu**	20.75	70	eP	P	05 49 19.6	-0.6
PCMB	**Pacaembu**	20.75	70	eP	P	05 49 19.6	-0.6
GO09	**Cerro Castillo**	20.86	180	P	P	05 49 21.7	+0.6
SALV	**Santo Antonio**	20.92	50	eP	P	05 49 21.0	-0.9
SALV	**Santo Antonio**	20.92	50	eP	P	05 49 21.2	-0.7
TIJ01	**Guaruva-PR**	21.13	82	eP	P	05 49 23.4	-0.9
TIJ01	**Guaruva-PR**	21.13	82	eP	P	05 49 21.9	-2.5
ETMB	**Extrema**	21.23	17	eP	P	05 49 26.0	+0.7
ETMB	**Extrema**	21.23	17	eP	P	05 49 25.9	+0.7
ETMB	**Extrema**	21.23	17	P	P	05 49 25.8	+0.5
ITRB	**Iturama**	22.45	67	eP	P	05 49 37.1	-1.3
ITRB	**Iturama**	22.45	67	eP	P	05 49 36.8	-1.7
CZSB	**Cruzeiro do Su**	22.55	359	eP	P	05 49 40.9	+1.5
CZSB	**Cruzeiro do Su**	22.55	359	eP	P	05 49 41.0	+1.6
SAML	**Samuel**	22.95	23	P	P	05 49 42.6	-1.1
SAML				pmax	pmax		
	comp=Z,58nm,1.0s						
SAML				MLR	MLR		
	comp=Z,7µm,18.0s						
SAML	**Samuel**	22.95	23	P	P	05 49 42.6	-1.1
SAML				IAMs_20	IAMs_20	05 59 21.9	
	comp=Z,7µm,18.0s						
PET01	**Itanhaem-SP**	22.96	81	eP	P	05 49 41.4	-2.4
PET01	**Itanhaem-SP**	22.96	81	eP	P	05 49 42.3	-1.5
BB19B	**Bebedouro**	23.25	72	eP	P	05 49 44.6	-2.2
BB19B	**Bebedouro**	23.25	72	eP	P	05 49 44.7	-2.1
RCLB	**Rio Claro- Sao**	23.47	76	eP	P	05 49 47.1	-1.9
RCLB	**Rio Claro- Sao**	23.47	76	eP	P	05 49 47.0	-2.0
PDRB	**Porto dos Gac**	23.58	41	eP	P	05 49 48.8	-1.3
PDRB	**Porto dos Gac**	23.58	41	eP	P	05 49 48.8	-1.3
VAO	**Valinhos**	23.71	78	eP	P	05 49 50.1	-1.4
VAO	**Valinhos**	23.71	78	eP	P	05 49 50.3	-1.1
EFI	**East Falkland**	23.72	158	⇓eP	P	05 49 52.6	+1.5
EFI	**East Falkland**	23.72	158	IAMs_20	IAMs_20	05 59 24.7	
	comp=Z,7µm,18.0s						
ARAG	**Araguaiana, MT**	23.75	57	eP	P	05 49 49.9	-1.8
ARAG	**Araguaiana, MT**	23.75	57	eP	P	05 49 50.0	-1.8
ATAH	**Atahualpa**	23.85	345	P	P	05 49 54.6	+1.4
	comp=Z,2.4nm,0.7s,baz=135,slow=6.5,SNR=8.5						
USHA	**Ushuaia**	24.58	175	P	P	05 49 59.6	+0.4
	comp=Z,8.4nm,0.5s,baz=360,slow=10,SNR=10						
CLDB	**Colider**	24.71	42	eP	P	05 50 00.2	-0.5
CLDB	**Colider**	24.71	42	eP	P	05 50 00.4	-0.3
PARB	**Paraibuna**	24.72	80	eP	P	05 49 59.6	-1.3
PARB	**Paraibuna**	24.72	80	eP	P	05 49 59.4	-1.4
IPMB	**Ipameri, GO**	25.09	66	eP	P	05 50 01.7	-2.5
TBTG	**Tabatinga, AM**	26.16	5	eP	P	05 50 11.9	-1.9
TBTG	**Tabatinga, AM**	26.16	5	eP	P	05 50 15.2	+1.4
TBTG	**Tabatinga, AM**	26.16	5	eP	P	05 50 14.7	+1.0
MAN01	**Angra dos Reis**	26.31	80	eP	P	05 50 13.8	-1.4
MAN01	**Angra dos Reis**	26.31	80	eP	P	05 50 14.0	-1.3
BSCB	**Bom Sucesso**	26.39	76	eP	P	05 50 15.2	-0.9
BSCB	**Bom Sucesso**	26.39	76	eP	P	05 50 15.1	-0.9
BDFB	**Brasilia**	26.61	62	P	P	05 50 16.8	-1.3
	comp=Z,26nm,0.8s,baz=233,slow=9.7,SNR=27						
BDFB				LR	LR	06 01 20.6	
	comp=Z,5µm,19.7s,baz=233,slow=38						
SNDB	**Serra Nova Dou**	26.69	51	eP	P	05 50 17.6	-1.0
SNDB	**Serra Nova Dou**	26.69	51	eP	P	05 50 18.0	-0.6
VAS01	**Vassouras-RJ**	26.98	79	eP	P	05 50 21.3	0.0
VAS01	**Vassouras-RJ**	26.98	79	eP	P	05 50 21.1	-0.1
DUB01	**Friburgo-RJ**	27.97	80	eP	P	05 50 29.3	-0.9
DUB01	**Friburgo-RJ**	27.97	80	eP	P	05 50 28.9	-1.3
NPGB	**Novo Progresso**	28.11	38	eP	P	05 50 30.7	-0.7
NPGB	**Novo Progresso**	28.11	38	eP	P	05 50 29.8	-1.5
DIAM	**Diamantina, MG**	28.59	72	eP	P	05 50 36.0	+0.2
DIAM	**Diamantina, MG**	28.59	72	eP	P	05 50 34.3	-1.5
PEXB	**Peixe**	28.68	56	eP	P	05 50 35.5	-1.0
PEXB	**Peixe**	28.68	56	eP	P	05 50 34.9	-1.6
CAM01	**Campos-RJ**	28.68	80	eP	P	05 50 35.8	-0.6
MC01	**Montes Claros**	29.19	69	eP	P	05 50 40.4	-0.7
MC01	**Montes Claros**	29.19	69	eP	P	05 50 39.3	-1.8
MACA	**Manacapuru-AM**	29.20	24	eP	P	05 50 41.6	+0.5
MACA	**Manacapuru-AM**	29.20	24	eP	P	05 50 41.1	0.0
JANB	**Januaria**	29.82	65	eP	P	05 50 46.3	-0.4
JANB	**Januaria**	29.82	65	eP	P	05 50 44.8	-1.8
ALF01	**Guarapari-ES**	29.97	79	eP	P	05 50 48.1	+0.2
ALF01	**Guarapari-ES**	29.97	79	eP	P	05 50 47.9	+0.1
ITTB	**Itaituba**	30.21	34	eP	P	05 50 49.6	-0.4
ITTB	**Itaituba**	30.21	34	eP	P	05 50 48.4	-1.6
SJMB	**Sao Joao De Ma**	30.45	75	eP	P	05 50 52.0	-0.1
SJMB	**Sao Joao De Ma**	30.45	75	eP	P	05 50 50.2	-1.9
PTLC	**Puerto Leguiza**	30.49	355	eP	P	05 50 50.6	-1.9
BSFB	**Barra de Sao F**	30.67	75	eP	P	05 50 53.2	-0.8
BSFB	**Barra de Sao F**	30.67	75	eP	P	05 50 52.3	-1.8
RIB01	**Linhares ES**	30.82	76	eP	P	05 50 54.8	-0.6
SDBA	**SAO DESIDERIO**	30.97	61	eP	P	05 50 56.3	-0.6
SDBA	**SAO DESIDERIO**	30.97	61	eP	P	05 50 56.5	-0.4
PAC1	**Pacto, Paraso**	31.12	347	eP	P	05 50 59.3	+1.1
TULM	**Tulcn-Chalpat**	31.38	349	eP	P	05 51 03.2	+2.3
SMTB	**Santa Maria do**	31.44	52	eP	P	05 51 00.3	-0.6
SMTB	**Santa Maria do**	31.44	52	eP	P	05 51 00.8	-0.1
PTGA	**Pitinga**	31.71	24	P	P	05 51 02.7	-0.6
	comp=Z,23nm,0.9s,baz=207,slow=9.4,SNR=19						
NAN01	**Guarapari, ES**	31.74	74	eP	P	05 51 02.9	-0.7
PRPB	**Parauapebas**	32.01	46	eP	P	05 51 05.3	-0.6
PRPB	**Parauapebas**	32.01	46	eP	P	05 51 05.1	-0.8
RPN	**Rapa Nui**	32.59	266	IAMs_20	IAMs_20	06 00 28.9	
	comp=Z,5µm,22.0s						
SOTA	**Rioblanco**	32.61	352	eP	P	05 51 09.9	-1.8
GUA01	**Guaratinga, BA**	32.63	72	eP	P	05 51 10.6	-0.7
GUA01	**Guaratinga, BA**	32.63	72	eP	P	05 51 10.4	-0.9
PCON	**Cinco Dias**	32.78	352	eP	P	05 51 12.8	-0.4
MALB	**Monte Alegre**	33.10	34	eP	P	05 51 14.4	-1.0
MALB	**Monte Alegre**	33.10	34	eP	P	05 51 14.5	-1.0
CMC01	**Camacan, BA**	33.50	71	eP	P	05 51 18.7	-0.2
CMC01	**Camacan, BA**	33.50	71	eP	P	05 51 18.8	-0.2
PRAC	**Prado**	34.01	355	eP	P	05 51 21.6	-1.8
ORTC	**Ortega, Tolima**	34.23	355	eP	P	05 51 26.4	+1.1
VILC	**Villavicencio,**	34.33	357	eP	P	05 51 23.5	-2.8
GDU01	**Guandu, BA**	34.35	68	eP	P	05 51 24.8	-1.6
GDU01	**Guandu, BA**	34.35	68	eP	P	05 51 25.7	-0.7
PTGC	**Puerto Gaitan,**	34.39	0	eP	P	05 51 23.5	-3.2
YOTC	**Yotoco, Valle**	34.40	353	eP	P	05 51 26.4	-0.5
BOAV	**Boa Vista**	34.46	21	eP	P	05 51 27.6	+0.3
BOAV	**Boa Vista**	34.46	21	eP	P	05 51 26.9	-0.3
PMSA	**Palmer Station**	34.78	174	P	P	05 51 31.9	+2.4
	comp=Z,10nm,0.9s,baz=2.0,slow=6.6,SNR=4.6						
PMSA	**Palmer Station**	34.78	174	eP	P	05 51 30.4	+0.9
PMSA	**Palmer Station**	34.78	174	eP	P	05 51 31.6	+2.1
PMSA	**Palmer Station**	34.78	174	IAMs_20	IAMs_20	06 05 40.7	
	comp=Z,6µm,18.0s						
ANIL	**Santa Ana**	34.81	354	eP	P	05 51 30.3	-0.4
HOPE	**Hope Point**	35.02	143	IAMs_20	IAMs_20	06 05 19.2	
	comp=Z,7µm,18.0s						
ROSC	**El Rosal**	35.09	356	eP	P	05 51 34.1	+1.0
PLMC	**San Jos del P**	35.31	353	eP	P	05 51 32.2	-2.4
MCPB	**Macapa, AP**	35.49	36	eP	P	05 51 36.2	+0.1
MCPB	**Macapa, AP**	35.49	36	eP	P	05 51 35.8	-0.4
GUY2C	**Guyana, Caldas**	35.54	355	eP	P	05 51 37.0	0.0
NORC	**Norcasia**	35.84	356	eP	P	05 51 37.0	-2.1
SPBC	**San Pablo de B**	35.88	357	eP	P	05 51 36.1	-3.5
TMAB	**Tom-Au,PA,Br**	36.05	44	eP	P	05 51 41.3	+0.4
TMAB	**Tom-Au,PA,Br**	36.05	44	eP	P	05 51 41.2	+0.2
RUSC	**La Rusia**	36.08	359	eP	P	05 51 41.9	+0.1
CBOC	**Ciudad Bolivar**	36.23	354	eP	P	05 51 39.9	-2.7
HELC	**Santa Helena**	36.51	354	eP	P	05 51 45.8	+0.5
TAMC	**Tame, Arauca**	36.62	1	eP	P	05 51 42.8	-3.0
PTBC	**PUERTO BERRIO,**	36.78	356	eP	P	05 51 44.8	-2.4
BARC	**Barichara**	36.78	358	eP	P	05 51 48.6	+1.2
BRRC	**Barranca, Sant**	37.31	358	eP	P	05 51 50.6	-1.1
DBBC	**Dabeiba**	37.39	353	eP	P	05 51 53.5	+1.1
ZARC	**Zaragoza, Cauc**	37.75	356	eP	P	05 51 53.5	-1.9
ZARC	**Zaragoza, Cauc**	37.75	356	P	P	05 51 56.4	+1.0
ZARC				IAmb	IAmb	05 52 11.6	
	comp=Z,51nm,1.4s						
UREC	**San Jos de Ur**	38.05	355	eP	P	05 51 59.3	+1.3
ROSB	**Rosrio**	38.14	50	eP	P	05 51 59.2	+0.4
SMLC	**San Martn de**	39.01	357	eP	P	05 52 02.2	-3.8
SDV	**Santo Domingo**	39.08	3	P	P	05 52 06.9	+0.1
	comp=Z,12nm,0.8s,baz=213,slow=5.5,SNR=7.3						
SDV	**Santo Domingo**	39.08	3	eP	P	05 52 04.1	-2.7
SDV	**Santo Domingo**	39.08	3	eP	P	05 52 07.5	+0.7
SDV	**Santo Domingo**	39.08	3	eP	P	05 52 07.3	+0.5
MDP	**Montagnes des**	39.97	31	P	P	05 52 12.9	-1.1
	comp=Z,24nm,0.9s,baz=201,slow=8.8,SNR=7.3						
ARGC	**Ariguani, Magd**	40.06	357	eP	P	05 52 12.8	-1.9
PCRV	**Puerto La Cruz**	40.99	11	P	P	05 52 21.9	-0.6
	comp=Z,8.2nm,0.7s,baz=124,slow=6.8,SNR=3.3						
BIRV	**Birongo**	41.03	9	P	P	05 52 23.0	+0.2
BIRV				IAmb	IAmb	05 52 23.9	
	comp=Z,51nm,1.1s						
SMRC	**Santa Marta, M**	41.36	357	eP	P	05 52 25.4	0.0
JTS	**Las Juntas de**	42.26	341	⇓eP	P	05 52 35.4	+2.5
JTS				pmax	pmax		
	comp=Z,28nm,1.8s						
HATO	**Hato, Curacao**	42.44	5	IAMs_20	IAMs_20	06 11 40.0	
	comp=Z,2µm,19.0s						
GRGR	**Grenville**	43.48	15	IAMs_20	IAMs_20	06 10 57.4	
	comp=Z,3µm,18.0s						
BOAB	**BOACO BROADBAN**	44.51	341	IAMs_20	IAMs_20	06 13 58.5	
	comp=Z,3µm,18.0s						
FDF	**Fort de France**	46.11	15	IAMs_20	IAMs_20	06 13 23.1	
	comp=Z,4µm,20.0s						
TGUH	**Tegucigalpa,Un**	46.50	340	eP	P	05 53 09.0	+2.0
CRPR	**Cabo Rojo, PR**	48.37	7	P	P	05 53 20.9	-0.4
ANWB	**Willy Bob**	48.83	13	IAMs_20	IAMs_20	06 14 23.0	
	comp=Z,2µm,19.0s						
SMRT	**St. Maarten**	48.96	12	IAMs_20	IAMs_20	06 15 16.6	
	comp=Z,2µm,21.0s						
VNA3	**Neumayer Olymp**	52.77	159	P	P	05 53 54.9	+0.9
VNA1	**Neumayer--Stat**	53.06	158	P	P	05 53 57.5	+1.4
VNA2	**Neumayer--Watz**	53.41	158	P	P	05 53 59.0	+0.3
	baz=287,slow=7.7						
ASCN	**Ascension**	58.39	80	IAMs_20	IAMs_20	06 17 03.2	
	comp=Z,2µm,20.0s						
QSPA	**South Pole Qui**	59.84	180	LR	LR	06 21 46.8	
	comp=Z,831nm,18.3s,baz=173,slow=37						
QSPA	**South Pole Qui**	59.84	180	P	P	05 54 45.7	+1.0
QSPA				IAmb	IAmb	05 54 56.8	
	comp=Z,17nm,0.8s						
SHEL	**Horse Pasture**	62.02	93	IAMs_20	IAMs_20	06 17 38.3	
	comp=Z,2µm,20.0s						
NHSC	**New Hope**	63.60	353	P	P	05 55 11.4	+1.2
	baz=172						
NHSC	**New Hope**	63.60	353	P	P	05 55 10.7	+0.6
833A	**Chaparral WMA,**	63.88	333	P	P	05 55 14.3	+2.1
	baz=154						
HKT	**Hockley**	64.08	337	iP	P	05 55 15.5	+2.2
HKT				pmax	pmax		
	comp=Z,18nm,1.5s						
Y60A	**Bolivia**	64.30	354	P	P	05 55 15.0	+0.3
GOGA	**Godfrey**	64.34	350	P	P	05 55 15.2	+0.2
GOGA				pmax	pmax		
	comp=Z,16nm,1.1s						
GOGA	**Godfrey**	64.34	350	P	P	05 55 15.6	+0.6
	baz=169						
GOGA	**Godfrey**	64.34	350	P	P	05 55 15.2	+0.2
GOGA				IAmb	IAmb	05 55 16.0	
	comp=Z,16nm,1.1s						
JSC	**Jenkinsville**	64.89	352	P	P	05 55 19.2	+0.6
JSC				pmax	pmax		
	comp=Z,12nm,0.9s						
JSC	**Jenkinsville**	64.89	352	P	P	05 55 19.2	+0.6
JSC				IAmb	IAmb	05 55 20.4	
	comp=Z,12nm,0.9s						
SACV	**Santiago Islan**	64.99	53	IAMs_20	IAMs_20	06 23 09.6	
	comp=Z,2µm,20.0s						
Z47A	**Carrollton**	65.00	345	P	P	05 55 20.5	+1.2
Z47A				IAmb	IAmb	05 55 33.3	
	comp=Z,11nm,0.8s						
BIRD	**Birdtown, Kers**	65.15	353	P	P	05 55 20.9	+0.6
BIRD				IAmb	IAmb	05 55 21.7	
	comp=Z,21nm,1.1s						
435B	**Jarrell**	65.44	336	P	P	05 55 24.6	+2.4
	baz=156						
CNNC	**Cliffs of the**	65.50	355	P	P	05 55 24.5	+2.0
	baz=175						
W57A	**Gilead**	65.60	353	P	P	05 55 23.4	+0.2
W57A				IAmb	IAmb	05 55 24.5	
	comp=Z,14nm,0.9s						
KMSC	**Kings Mountain**	65.74	352	P	P	05 55 25.1	+1.0
	baz=171						
Y45A	**Yeager Farm, C**	65.97	344	P	P	05 55 26.7	+1.1
JCT	**Junction City**	65.97	334	P	P	05 55 27.8	+2.0
	baz=154						
V58A	**Windy Hill, Pi**	66.15	354	P	P	05 55 27.2	+0.5
V58A				IAmb	IAmb	05 55 28.0	
	comp=Z,19nm,0.9s						

V53A	**Saluda**	**66.46**	**351**	P	**P**	**05 55 29.2**	**+0.4**
V53A				IAmb	IAmb	05 55 30.1	
	comp=Z,16nm,0.8s						
TXAR	**Lajitas Array**	**66.52**	**330**	P	**P**	**05 55 30.2**	**+0.8**
	comp=Z,3.0nm,0.7s,baz=151,slow=7.7,SNR=27						
TXAR				LR	LR	06 20 32.9	
	comp=Z,787nm,18.1s,baz=0.0,slow=32						
TXAR	**Lajitas Array**	**66.52**	**330**	P	**P**	**05 55 30.4**	**+1.0**
TXAR	**Lajitas Array**	**66.52**	**330**	P	**P**	**05 55 30.4**	**+1.0**
TX32	**Lajitas Array**	**66.52**	**330**	P	**P**	**05 55 29.5**	**+0.2**
TAOE	**Nuku Hiva Isla**	**66.55**	**273**	*e*S	**S**	**06 04 19.3**	**-2.6**
	comp=Z,721nm,24.5s						
TAOE	**Nuku Hiva Isla**	**66.55**	**273**	*e*LR	LR	06 15 31.4	
	comp=Z,2µm,27.9s						
TKL	**Tuckaleechee C**	**66.59**	**350**	P	**P**	**05 55 29.9**	**+0.4**
TKL				pmax	pmax		
	comp=Z,19nm,0.9s						
TKL	**Tuckaleechee C**	**66.59**	**350**	P	**P**	**05 55 29.9**	**+0.4**
TKL				IAmb	IAmb	05 55 44.9	
	comp=Z,20nm,0.9s						
V52A	**Sevierville**	**66.74**	**350**	P	**P**	**05 55 30.8**	**+0.2**
X40A	**Basin Creek Fa**	**67.39**	**342**	P	**P**	**05 55 36.4**	**+1.7**
	baz=161						
CLTN	**Cedars of Leba**	**67.44**	**348**	P	**P**	**05 55 36.2**	**+1.2**
CLTN				IAmb	IAmb	05 55 36.4	
	comp=Z,13nm,0.8s						
VNDA	**Vanda**	**67.60**	**191**	P	**P**	**05 55 36.7**	**+1.2**
	comp=Z,4.7nm,1.2s,baz=146,slow=8.0,SNR=3.0						
VNDA				LR	LR	06 19 49.2	
	comp=Z,642nm,21.3s,baz=136,slow=31						
U49A	**Red Boiling Sp**	**67.75**	**348**	P	**P**	**05 55 37.6**	**+0.7**
U49A				IAmb	IAmb	05 55 55.0	
	comp=Z,29nm,1.3s						
WVT	**Waverly**	**67.77**	**346**	P	**P**	**05 55 37.8**	**+0.8**
	baz=165						
ABTX	**Abilene, Hawle**	**67.84**	**335**	P	**P**	**05 55 39.3**	**+1.7**
	baz=155						
W41B	**Gary Mavity, V**	**67.89**	**342**	P	**P**	**05 55 38.9**	**+1.1**
	baz=161						
WHAR	**Wooly Hollow**	**68.00**	**342**	P	**P**	**05 55 39.3**	**+0.7**
S57A	**Dark Hollow, R**	**68.09**	**354**	P	**P**	**05 55 39.7**	**+0.7**
S57A				IAmb	IAmb	05 55 40.7	
	comp=Z,18nm,0.9s						
W39A	**Magazine**	**68.32**	**341**	P	**P**	**05 55 42.2**	**+1.6**
	baz=160						
R55A	**Marlinton**	**68.71**	**353**	P	**P**	**05 55 44.3**	**+1.3**
R55A				IAmb	IAmb	05 55 45.1	
	comp=Z,22nm,1.0s						
U40A	**Yellville**	**69.16**	**342**	P	**P**	**05 55 46.8**	**+1.0**
	baz=161						
SYO	**Syowa Base**	**69.28**	**159**	⇑*e*X	P	05 55 54.6	+8.4
MNTX	**Cornudas Mount**	**69.30**	**330**	P	**P**	**05 55 47.4**	**+0.7**
	baz=150						
MNTX	**Cornudas Mount**	**69.30**	**330**	P	**P**	**05 55 47.9**	**+1.2**
MNTX				IAMs_20	IAMs_20	06 22 46.6	
	comp=Z,1µm,18.0s						
MBO	**M'Bour**	**69.35**	**58**	IAMs_20	IAMs_20	06 25 57.2	
	comp=Z,3µm,19.0s						
TUL1	**Leonard**	**69.57**	**340**	P	**P**	**05 55 49.1**	**+0.8**
	baz=158						
EPT	**El Paso**	**69.85**	**329**	IAMs_20	IAMs_20	06 22 29.3	
	comp=Z,1µm,19.0s						
P60A	**Greenville**	**69.92**	**357**	P	**P**	**05 55 51.9**	**+1.6**
	baz=177						
MCWV	**Mont Chateau**	**70.05**	**354**	P	**P**	**05 55 52.2**	**+1.0**
	baz=173						
P52A	**Corning**	**70.27**	**352**	P	**P**	**05 55 53.0**	**+0.5**
	baz=171						
CCM	**Cathedral Cave**	**70.37**	**344**	P	**P**	**05 55 54.2**	**+1.0**
	baz=163						
P49A	**Miami Univ. Ec**	**70.53**	**350**	P	**P**	**05 55 54.2**	**+0.1**
	baz=168						
PPT2	**Papeete2**	**70.62**	**261**	*e*S	**S**	**06 05 09.8**	**-0.5**
	comp=Z,1µm,24.8s						
PPT2	**Papeete2**	**70.62**	**261**	*e*LR	LR	06 17 28.6	
	comp=Z,3µm,24.2s,baz=117						
PPT	**Papeete**	**70.63**	**261**	LR	LR	06 18 54.2	
	comp=Z,873nm,19.5s,baz=122,slow=29						
ACSO	**Alum Creek Sta**	**70.97**	**351**	P	**P**	**05 55 57.3**	**+0.6**
	baz=170						
121A	**Cookes Peak, D**	**71.07**	**329**	P	**P**	**05 56 00.3**	**+2.6**
	baz=148						
P40A	**Paris**	**71.96**	**344**	P	**P**	**05 56 03.6**	**+0.8**
TUC	**Tucson**	**72.27**	**326**	P	**P**	**05 56 07.0**	**+2.1**
	baz=146						
L61B	**Northampton**	**72.48**	**360**	P	**P**	**05 56 07.4**	**+1.6**
	baz=180						
ERPA	**Erie**	**72.50**	**354**	P	**P**	**05 56 06.9**	**+1.0**
	baz=173						
ANMO	**Albuquerque**	**72.55**	**331**	*i* P	**P**	**05 56 07.6**	**+1.0**
ANMO				pmax	pmax		
	comp=Z,20nm,1.7s						
ANMO	**Albuquerque**	**72.55**	**331**	P	**P**	**05 56 08.9**	**+2.3**
	baz=149						
214A	**Organ Pipe Nat**	**72.98**	**325**	P	**P**	**05 56 11.5**	**+2.4**
	baz=144						
CBKS	**Cedar Bluff**	**73.47**	**338**	P	**P**	**05 56 13.6**	**+1.8**
	baz=155						
T25A	**Trinidad**	**73.63**	**334**	P	**P**	**05 56 15.4**	**+2.3**
	baz=151						
LIC	**Lamto**	**73.82**	**73**	*e*P	P	05 56 22.9	+8.5
	comp=Z,62nm,1.2s						
TIC	**Toumodi**	**74.06**	**72**	*e*P	P	05 56 24.3	+8.4
KIC	**Kosan Boka**	**74.13**	**73**	*e*P	P	05 56 24.9	+8.6
	comp=Z,45nm,0.9s						
DBIC	**Dimbokro**	**74.21**	**72**	P	**P**	**05 56 16.4**	**-0.3**
	comp=Z,13nm,0.8s,baz=276,slow=2.1,SNR=10						
DBIC				LR	LR	06 26 39.8	
	comp=Z,4µm,19.4s,baz=244,slow=34						
DBIC	**Dimbokro**	**74.21**	**72**	P	**P**	**05 56 16.6**	**-0.1**
DBIC				pmax	pmax		
	comp=Z,24nm,0.9s						
DBIC	**Dimbokro**	**74.21**	**72**	P	**P**	**05 56 16.6**	**-0.1**
DBIC				IAmb	IAmb	05 56 26.4	
	comp=Z,24nm,0.8s						
SDCO	**Great Sand Dun**	**74.58**	**333**	P	**P**	**05 56 21.0**	**+2.3**
	baz=151						
KSCO	**Kaye Shedlock'**	**74.63**	**336**	P	**P**	**05 56 20.7**	**+2.0**
	baz=153						
JFWS	**Jewell Farm**	**74.80**	**346**	P	**P**	**05 56 20.5**	**+1.0**
JFWS				pmax	pmax		
	comp=Z,52nm,1.5s						
JFWS	**Jewell Farm**	**74.80**	**346**	P	**P**	**05 56 20.5**	**+1.0**
S22A	**4UR Ranch, Cre**	**75.11**	**332**	P	**P**	**05 56 23.3**	**+1.6**
	baz=150						
GGN	**Saint George**	**75.31**	**4**	P	**P**	**05 56 23.2**	**+0.9**
MVCO	**Mesa Verde**	**75.34**	**331**	P	**P**	**05 56 25.1**	**+2.1**
	baz=148						
Q24A	**Divide**	**75.51**	**334**	P	**P**	**05 56 26.6**	**+2.5**
	baz=151						
BC3	**Big Chuckawall**	**75.67**	**324**	P	**P**	**05 56 26.5**	**+1.7**
	baz=142						
IRM	**Iron Mountain**	**75.91**	**324**	P	**P**	**05 56 28.6**	**+2.6**
	baz=143						
ISCO	**Idaho Springs**	**76.41**	**334**	P	**P**	**05 56 31.4**	**+2.2**
	baz=151						
MURC	**Murrieta**	**76.52**	**323**	P	**P**	**05 56 31.7**	**+2.1**
	baz=141						
GMRC	**Granite Mounta**	**76.66**	**324**	P	**P**	**05 56 33.0**	**+2.5**
	baz=142						
MAW	**Mawson**	**76.68**	**164**	P	**P**	**05 56 30.3**	**+0.3**
	comp=Z,2.3nm,0.5s,baz=184,slow=7.6,SNR=11						
MAW				LR	LR	06 29 26.0	
	comp=Z,3µm,21.0s,baz=226,slow=35						
MAW	**Mawson**	**76.68**	**164**	P	**P**	**05 56 30.6**	**+0.6**
MAW				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MAW	**Mawson**	**76.68**	**164**	P	**P**	**05 56 30.6**	**+0.6**
SUR	**Sutherland**	**76.74**	**120**	IAMs_20	IAMs_20	06 28 50.2	
	comp=Z,2µm,18.0s						
HEC	**Hector,Ludlow**	**77.04**	**324**	P	**P**	**05 56 35.7**	**+3.2**
	baz=142						
ECSD	**EROS Data Cent**	**77.07**	**342**	P	**P**	**05 56 33.6**	**+1.2**
	baz=158						
ECSD	**EROS Data Cent**	**77.07**	**342**	P	**P**	**05 56 33.4**	**+1.0**
RAR	**Rarotonga**	**77.55**	**253**	LR	LR	06 22 36.9	
	comp=Z,1µm,19.8s,baz=120,slow=29						
GSC	**Goldstone, Bar**	**77.65**	**324**	P	**P**	**05 56 38.8**	**+2.8**
	baz=142						
O20A	**White River Ci**	**77.72**	**333**	P	**P**	**05 56 38.4**	**+2.1**
	baz=149						
SRU	**San Rafael Swe**	**77.80**	**330**	P	**P**	**05 56 38.6**	**+1.8**
SRU				pmax	pmax		
	comp=Z,8.0nm,0.7s						
SRU	**San Rafael Swe**	**77.80**	**330**	P	**P**	**05 56 38.6**	**+1.8**
P18A	**Preston Nutter**	**78.11**	**331**	P	**P**	**05 56 40.8**	**+2.1**
P18A				IAmb	IAmb	05 56 54.4	
	comp=Z,20nm,1.1s						
MPMC	**Manual Prospec**	**78.59**	**324**	P	**P**	**05 56 43.4**	**+2.1**
	baz=141						
FURC	**Furnace Creek,**	**78.59**	**325**	P	**P**	**05 56 43.5**	**+2.6**
	baz=142						
CWC	**Cottonwood Cre**	**79.18**	**324**	P	**P**	**05 56 46.7**	**+2.2**
	baz=141						
K22A	**Casper**	**79.23**	**335**	P	**P**	**05 56 46.5**	**+1.9**
	baz=150						
VES	**Vestal, Richgr**	**79.24**	**323**	P	**P**	**05 56 46.9**	**+2.3**
	baz=140						
KOWA	**Kowa**	**79.32**	**66**	P	**P**	**05 56 45.6**	**+0.1**
KOWA				IAmb	IAmb	05 56 55.6	
	comp=Z,33nm,0.9s						
R11A	**Troy Canyon, C**	**79.45**	**327**	P	**P**	**05 56 48.1**	**+2.2**
	baz=143						
RSSD	**Black Hills**	**79.65**	**337**	P	**P**	**05 56 48.5**	**+1.6**
	baz=152						
DUG	**Dugway, Tooele**	**79.68**	**330**	IAMs_20	IAMs_20	06 27 18.5	
	comp=Z,952nm,19.0s						
HWUT	**Hardware Ranch**	**80.31**	**331**	IAMs_20	IAMs_20	06 29 06.1	
	comp=Z,858nm,19.0s						
PDAR	**Pinedale Array**	**80.48**	**333**	P	**P**	**05 56 52.1**	**+0.6**
	comp=Z,1.5nm,0.7s,baz=128,slow=4.1,SNR=10						
PDAR				LR	LR	06 29 34.7	
	comp=Z,269nm,19.4s,baz=147,slow=34						
PDAR	**Pinedale Array**	**80.48**	**333**	P	**P**	**05 56 51.9**	**+0.4**
BOSA	**Boshof**	**81.91**	**118**	P	**P**	**05 56 59.4**	**-0.1**
	comp=Z,1.0nm,0.5s,baz=224,slow=2.8,SNR=5.3						
BOSA				LR	LR	06 28 49.8	
	comp=Z,1µm,20.4s,baz=242,slow=32						
HLID	**Hailey**	**83.12**	**331**	P	**P**	**05 57 07.4**	**+2.1**
	baz=144						
HLID	**Hailey**	**83.12**	**331**	P	**P**	**05 57 06.5**	**+1.2**
TORD	**Torodi Ar. Bea**	**83.15**	**71**	P	**P**	**05 57 05.2**	**-0.7**
	comp=Z,20nm,0.8s,baz=237,slow=4.3,SNR=62						
TORD				LR	LR	06 32 33.1	
	comp=Z,4µm,18.8s,baz=245,slow=35						
TORD	**Torodi Ar. Bea**	**83.15**	**71**	P	**P**	**05 57 05.4**	**-0.5**
TORD				IAmb	IAmb	05 57 09.4	
	comp=Z,21nm,0.9s						
DGMT	**Dagmar**	**83.56**	**339**	P	**P**	**05 57 09.1**	**+1.8**
	baz=153						
CASY	**Casey**	**83.62**	**181**	P	**P**	**05 57 08.8**	**+1.3**
CASY				IAmb	IAmb	05 57 27.7	
	comp=Z,16nm,1.1s						
CASY	**Casey**	**83.62**	**181**	IAMs_20	IAMs_20	06 35 13.1	
	comp=Z,1µm,19.0s						
SCHQ	**Schefferville**	**85.00**	**3**	LR	LR	06 33 47.9	
	comp=Z,384nm,21.6s,baz=182,slow=35						
M04C	**Macdoel**	**85.14**	**325**	P	**P**	**05 57 17.1**	**+1.5**
	baz=139						
MQZ	**McQueen's Vall**	**85.38**	**221**	IAMs_20	IAMs_20	06 28 25.1	
	comp=Z,1µm,18.0s						
MSO	**Missoula**	**85.58**	**333**	IAMs_20	IAMs_20	06 33 16.5	
	comp=Z,763nm,18.0s						
SNZO	**South Karori**	**85.64**	**224**	IAMs_20	IAMs_20	06 27 47.4	
	comp=Z,995nm,18.0s						
BKZ	**Black Stump Fm**	**85.82**	**227**	IAMs_20	IAMs_20	06 28 21.4	
	comp=Z,1µm,20.0s						
URZ	**Urewera**	**85.96**	**228**	LR	LR	06 27 51.8	
	comp=Z,927nm,19.5s,baz=211,slow=30						
URZ	**Urewera**	**85.96**	**228**	IAMs_20	IAMs_20	06 27 41.2	
	comp=Z,1µm,20.0s						
HAWA	**Hanford**	**87.58**	**329**	IAMs_20	IAMs_20	06 32 18.4	
	comp=Z,792nm,18.0s						
MORF	**Marmelete**	**89.84**	**46**	*e*P	**P**	**05 57 39.3**	**+1.0**
MORF				*e*SKSac	**SKSac**	**06 08 09.4**	**-0.3**
MORF				IAMs_20	IAMs_20	06 38 42.4	
	comp=Z,2µm,18.3s						
MORF	**Marmelete**	**89.84**	**46**	*e*P	**P**	**05 57 39.2**	**+1.0**
MORF				*e*		06 08 09.4	
LIS	**Lisbon**	**90.43**	**44**	*e*P	**P**	**05 57 41.8**	**+0.9**
LIS				IAMs_20	IAMs_20	06 43 19.7	
	comp=N,5µm,41.0s						
LIS	**Lisbon**	**90.43**	**44**	*e*P	**P**	**05 57 41.8**	**+0.9**
MESJ	**Messejana**	**90.44**	**45**	*e*P	**P**	**05 57 41.9**	**+0.9**
MESJ				*e*SKSac	**SKSac**	**06 08 12.7**	**-0.4**
MESJ				IAMs_20	IAMs_20	06 37 33.1	
	comp=E,2µm,18.4s						
MESJ	**Messejana**	**90.44**	**45**	*e*P	**P**	**05 57 41.9**	**+0.9**
MESJ				*e*		06 08 12.7	
ESDC	**Sonseca Array**	**94.19**	**46**	LR	LR	06 40 27.9	
	comp=E,2µm,18.1s,baz=250,slow=36						
CART	**Cartagena**	**94.87**	**49**	IAMs_20	IAMs_20	06 41 27.0	
	comp=Z,771nm,20.0s						
MSVF	**Nonsavu**	**97.21**	**245**	LR	LR	06 32 49.2	
	comp=Z,318nm,21.4s,baz=170,slow=30						
YKA	**Yellowknife Ar**	**98.59**	**342**	P	Pdif	05 58 19.0	+1.3
	comp=Z,0.7nm,0.9s,baz=131,slow=5.6,SNR=2.7						
VOI	**Vohitsoka**	**101.69**	**124**	IAMs_20	IAMs_20	06 47 07.3	
	comp=Z,1µm,18.0s						
DZM	**Mont Dzumac**	**103.22**	**234**	*e*LR	LR	06 32 33.9	
	comp=Z,2µm,24.6s,baz=133						
KMBO	**Kilima Mbogo**	**106.16**	**101**	IAMs_20	IAMs_20	06 43 02.8	
	comp=Z,1µm,20.0s						
AQU	**L'Aquila**	**106.80**	**51**	IAMs_20	IAMs_20	06 47 57.0	
	comp=Z,1µm,20.0s						
A36M	**Sachs Harbour**	**108.46**	**345**	IAMs_20	IAMs_20	06 51 57.6	
	comp=Z,878nm,21.0s						
CLL	**Collm**	**110.29**	**42**	*e*PP	**PP**	**06 03 46.0**	**-0.2**
CLL				*e*PS	**PS**	**06 13 15.0**	**-0.5**
CLL				*e*PPS	PPS	06 14 12.0	
CLL				*e*SS	SS	06 19 14.0	0.0
CLL				*e*SSS	SSS	06 23 12.0	
CLL				*e*SSSS		06 27 12.0	
CLL				Lm	MLR	06 51 00.0	
	comp=Z,2µm,18.3s						
DIVS	**Divibare**	**111.91**	**51**	IAMs_20	IAMs_20	06 58 23.2	
	comp=Z,777nm,18.0s						
FURI	**Furi**	**112.46**	**93**	IAMs_20	IAMs_20	06 46 19.1	
	comp=Z,1µm,21.0s						
KLNR	**Kaliningrad**	**115.52**	**40**	⇑*i*PKIKP	**PKiKP**	**06 03 22.3**	**+1.4**
MLR	**Muntele Rosu**	**116.37**	**51**	IAMs_20	IAMs_20	06 59 20.2	
	comp=Z,1µm,18.0s						
ISP	**Isparta**	**117.29**	**60**	IAMs_20	IAMs_20	06 56 49.6	
	comp=Z,864nm,20.0s						
ATD	**Arta Tunnel**	**117.32**	**92**	IAMs_20	IAMs_20	06 53 37.8	
	comp=Z,1µm,20.0s						
CSS	**Mathiatis**	**118.53**	**64**	IAMs_20	IAMs_20	06 56 44.7	
	comp=Z,915nm,20.0s						
NACGM	**Naroch**	**119.28**	**41**	*i* PKP	**PKPdf**	**06 03 22.9**	**-5.3**
ANTO	**Ankara**	**119.59**	**59**	IAMs_20	IAMs_20	07 01 58.6	
	comp=Z,759nm,20.0s						
MNK	**Minsk**	**119.83**	**41**	*i* PKIKP	**PKiKP**	**06 03 29.6**	**+0.3**
MNK				*i*		06 04 51.4	
MNK				*i* PPP	PPP	06 07 22.0	
MNK				*i*		06 10 41.6	
MNK				*i* PS	**PS**	**06 14 39.0**	**-3.5**
MNK				*i* SS	SS	06 21 14.2	-4.9
MNK				*i* SSS	SSS	06 25 38.8	
MNK				pmax	pmax		
	comp=E,2.0nm,0.8s						
MNK				pmax	pmax		
	comp=N,26nm,1.2s						
MNK				pmax	pmax		
	comp=Z,11nm,0.9s						
MNK				MLR	MLR		
	comp=N,310nm,16.0s						
MNK				MLR	MLR		
	comp=E,69nm,20.0s						
MNK				MLR	MLR		
	comp=Z,685nm,20.0s						
MNK	**Minsk**	**119.83**	**41**	*i* PKP	**PKiKP**	**06 03 29.6**	**+0.3**
	comp=E,2.0nm,0.8s						
MNK				*i* PKP	**PKiKP**	**06 03 29.6**	**+0.3**
	comp=N,26nm,1.2s						
MNK				*i* PKP	**PKiKP**	**06 03 29.6**	**+0.3**
	comp=Z,11nm,0.8s,baz=79						
MNK				*i* PP	**PP**	**06 04 51.4**	**-1.8**
MNK				*i* PPP	PPP	06 07 22.1	
MNK				*i* SKS	**SKSdf**	**06 10 41.7**	**-0.1**
MNK				*i* PS	**PS**	**06 14 39.1**	**-3.4**
MNK				*i* SS	**SS**	**06 21 14.2**	**-4.8**
MNK				*i* SSS	SSS	06 25 38.9	
MNK				*i* LR	LR	06 51 38.0	
MNK				*i* LRM	MLR	06 54 17.5	
	comp=N,310nm,16.3s						
MNK				*i* LRM	MLR	06 54 24.9	
	comp=E,69nm,20.4s						
MNK				*i* LRM	MLR	06 54 47.3	
	comp=Z,685nm,20.4s						
AKASG	**Malin Array Be**	**119.84**	**46**	PKP	**PKPdf**	**06 03 29.0**	**-0.4**
	comp=Z,1.2nm,0.6s,baz=269,slow=2.6,SNR=8.3						
AKBB	**Malin Array Si**	**119.84**	**46**	⇑*i*PKIKP	**PKPdf**	**06 03 28.9**	**-0.5**
BRTR	**Keskin Array B**	**120.18**	**59**	PKP	**PKPdf**	**06 03 30.6**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=191,slow=2.6,SNR=4.7						
ASAR	**Alice Springs**	**120.69**	**208**	PKP	**PKPdf**	**06 03 31.7**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=146,slow=1.8,SNR=4.6						
WRA	**Warramunga Arr**	**123.81**	**210**	PKP	**PKPdf**	**06 03 38.1**	**-0.1**
	comp=Z,1.3nm,0.7s,baz=157,slow=1.8,SNR=10						
WRAB	**Tennant Creek**	**123.81**	**210**	⇓*i*PKIKP	**PKiKP**	**06 03 39.3**	**+0.9**
WRAB	**Tennant Creek**	**123.81**	**210**	IAMs_20	IAMs_20	06 51 17.5	
	comp=Z,903nm,19.0s						
RAYN	**Ar Rayn**	**124.67**	**81**	IAMs_20	IAMs_20	07 08 30.8	
	comp=Z,825nm,19.0s						
OBN	**Obninsk**	**124.89**	**42**	*i* PKIKP	**PKPdf**	**06 03 38.3**	**-0.6**
OBN				*i*		06 03 45.4	
OBN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
PMG	**Port Moresby**	**125.25**	**230**	IAMs_20	IAMs_20	06 46 04.2	
	comp=Z,570nm,21.0s						
SOC	**Sochi**	**125.48**	**56**	*i* PKIKP	**PKPdf**	**06 03 36.7**	**-3.8**
SOC				*e*PPP	PPP	06 08 10.3	
SOC				*e*PS	**PS**	**06 15 29.7**	**-3.4**
SOC				*e*SS	SS	06 22 28.6	-3.1
SOC				*e*SSS	SSS	06 27 06.1	
H11S2	**WAKE ISLAND Hy**	**125.58**	**272**	T	T	08 22 35.4	
	baz=114,slow=75,SNR=68						
H11S1	**WAKE ISLAND Hy**	**125.59**	**272**	T	T	08 22 33.6	
	baz=114,slow=75,SNR=72						
H11S3	**WAKE ISLAND Hy**	**125.59**	**272**	T	T	08 22 34.2	
	baz=114,slow=75,SNR=76						
H11N3	**WAKE ISLAND Hy**	**125.90**	**273**	T	T	08 23 00.4	
	baz=116,slow=76,SNR=8.8						
H11N1	**WAKE ISLAND Hy**	**125.91**	**273**	T	T	08 22 56.3	
	baz=116,slow=76,SNR=4.4						
H11N2	**WAKE ISLAND Hy**	**125.91**	**273**	T	T	08 23 05.0	
	baz=116,slow=76,SNR=16						
KLMR	**Klimovskoe**	**126.56**	**34**	*e*PKIKP	**PKPdf**	**06 03 41.2**	**-0.8**
KLMR				pmax	pmax		
	comp=Z,24nm,1.5s						
KLMR	**Klimovskoe**	**126.56**	**34**	*e*PKPdf	**PKPdf**	**06 03 41.2**	**-0.8**
KLMR				AMP		06 03 56.7	
	comp=Z,24nm,1.5s						
KLMR				*e*		06 07 02.2	
NEY	**Neytrino**	**127.59**	**57**	*d* *i*PKIKP	**PKiKP**	**06 03 45.9**	**+0.6**
KIV	**Kislovodsk**	**127.67**	**56**	*i* PKIKP	**PKPdf**	**06 03 44.2**	**-0.6**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,316nm,23.0s						
KBZ	**Khabaz**	**127.79**	**56**	⇓*i*PKIKP	**PKiKP**	**06 03 46.0**	**+0.6**
NCK	**Nalchik**	**128.26**	**57**	⇓*i*PKIKP	**PKiKP**	**06 03 47.2**	**+0.7**
GNI	**Garni**	**128.59**	**61**	⇓*i*PKIKP	**PKiKP**	**06 03 48.8**	**+1.4**
MAK	**Makhachkala**	**131.03**	**58**	*i* P	**Pdif**	**06 00 42.3**	**-0.1**
MAK				*i*		06 03 48.5	
MAK				*e*		06 10 56.0	
MAK				*e*SSS	SSS	06 28 32.5	
MAK				pmax	pmax		
	comp=Z,51nm,0.5s						
KIRV	**Kirov**	**131.78**	**37**	⇓*e*PKIKP	**PKiKP**	**06 03 53.2**	**+0.2**
UOSS	**Minazif**	**134.33**	**84**	IAMs_20	IAMs_20	07 07 11.6	
	comp=Z,940nm,20.0s						
SOEI	**Soe**	**137.05**	**204**	IAMs_20	IAMs_20	06 57 04.9	
	comp=Z,969nm,21.0s						
ARU	**Arti**	**137.07**	**38**	*i* PKIKP	**PKiKP**	**06 04 03.6**	**-0.2**
ARU				MLR	MLR		
	comp=Z,808nm,19.0s						
NRIK	**Noril'sk**	**139.32**	**11**	⇑*i*PKIKP	**PKiKP**	**06 04 10.2**	**+2.2**
KAPI	**Kappang**	**142.97**	**200**	IAMs_20	IAMs_20	07 04 17.5	
	comp=Z,479nm,20.0s						
BRVK	**Borovoye**	**144.60**	**39**	*c* *i*PKIKP	PKPbc	06 04 14.9	+0.5
YAK	**Yakutsk**	**145.27**	**342**	*e*PKIKP	**PKPdf**	**06 04 16.7**	**+0.2**
YAK				*e*		06 07 36.7	
YAK				*e*SS	SS	06 26 27.9	+1.1
YAK				pmax	pmax		
	comp=Z,29nm,1.0s						
YAK				pmax	pmax		
	comp=Z,198nm,4.7s						
YAK				pmax	pmax		
	comp=N,142nm,4.3s						
PALK	**Pallekele**	**145.76**	**127**	IAMs_20	IAMs_20	07 12 57.5	
	comp=Z,655nm,18.0s						
EKS2	**Erkin-Say**	**150.26**	**56**	P	**PKiKP**	**06 04 32.1**	**+0.5**
	SNR=13						
HYB	**Hyderabad**	**150.43**	**109**	*i* PKP	**PKPbc**	**06 04 32.0**	**+0.3**
USP	**Ospenovka**	**150.63**	**55**	P	**PKiKP**	**06 04 32.5**	**+0.3**
	SNR=13						
NIL	**Nilore**	**150.63**	**75**	IAMs_20	IAMs_20	07 11 39.6	
	comp=Z,696nm,21.0s						
AAK	**Ala-Archa**	**150.78**	**56**	⇑*e*PKIKP	**PKPdf**	**06 04 28.1**	**+1.6**
AAK	**Ala-Archa**	**150.78**	**56**	IAMs_20	IAMs_20	07 14 32.0	
	comp=Z,782nm,20.0s						
KBK	**Karagaybulak**	**151.10**	**56**	P	**PKiKP**	**06 04 34.3**	**+0.9**
	SNR=7.3						
KSM	**Kuching**	**151.14**	**185**	IAMs_20	IAMs_20	07 13 26.9	
	comp=Z,483nm,19.0s						
ZALV	**Zalesovo Beam**	**151.20**	**29**	PKP	**PKPdf**	**06 04 26.7**	**+0.2**
	comp=Z,1.9nm,0.7s,baz=263,slow=3.1,SNR=7.2						
ZALV				PKPbc	**PKPbc**	**06 04 32.5**	**+0.1**
	comp=Z,38nm,0.8s,baz=302,slow=2.8,SNR=81						
MYKOM	**Kota Tinggi**	**151.31**	**172**	IAMs_20	IAMs_20	07 08 43.3	
	comp=Z,572nm,19.0s						
TKM2	**Tokmak 2**	**151.50**	**55**	P	**PKiKP**	**06 04 34.5**	**+0.3**
	SNR=9.5						
SBUM	**Sibu**	**151.89**	**189**	IAMs_20	IAMs_20	07 12 18.2	
	comp=Z,458nm,20.0s						
ULHL	**Ulahol**	**152.13**	**56**	P	**PKiKP**	**06 04 36.5**	**+1.0**
	SNR=7.4						
KSH	**Kashi**	**152.51**	**62**	PKPbc	**PKPdf**	**06 04 30.0**	**+0.9**
KSH				PP	**PP**	**06 08 16.8**	**-2.5**
KSH				SKKS		06 15 10.5	
KSH				LR	LR		
	comp=Z,590nm,22.2s						
KSH				LR	LR		
	comp=Z,540nm,20.4s						
KSH				LR	LR		
	comp=Z,1µm,19.6s						
IPM	**Ipoh**	**153.45**	**165**	IAMs_20	IAMs_20	07 18 27.0	
	comp=Z,464nm,19.0s						
MJAR	**Matsushiro Arr**	**153.94**	**292**	PKPab	**PKPab**	**06 04 53.6**	**+1.1**
	comp=Z,1.4nm,0.6s,baz=96,slow=2.6,SNR=4.4						
MK31	**Makanchi Array**	**154.38**	**43**	⇓*i*PKIKP	**PKiKP**	**06 04 40.3**	**+0.5**
MKAR	**Makanchi Array**	**154.38**	**43**	PKP	**PKPdf**	**06 04 31.3**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=7.1,slow=0.3,SNR=6.2						
MKAR				PKPbc	**pPKPbc**	**06 04 40.1**	**+0.2**
	comp=Z,2.1nm,0.7s,baz=346,slow=2.0,SNR=12						
TLY	**Talaya**	**158.51**	**7**	IAMs_20	IAMs_20	07 28 16.5	
	comp=Z,490nm,20.0s						
HIA	**Hailar**	**159.07**	**338**	IAMs_20	IAMs_20	07 27 20.8	
	comp=Z,593nm,20.0s						
WMQ	**Urumqi**	**159.19**	**44**	*e*PKP	**PKPdf**	**06 04 39.3**	**+1.5**
WMQ				LR	LR		
	comp=Z,750nm,18.3s						
ZAK	**Zakamensk**	**159.75**	**8**	*e*PKP2	**PKPab**	**06 05 14.4**	**-2.5**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
SONM	**Songino Array**	**162.55**	**3**	PKPab	**PKPab**	**06 05 29.9**	**+0.7**
	comp=Z,1.1nm,0.8s,baz=343,slow=3.0,SNR=5.1						
GTA	**Gaotai**	**168.89**	**34**	*e*PKP	**PKPdf**	**06 04 48.5**	**+1.7**
GTA				PP	**PP**	**06 09 44.5**	**-2.0**
GTA				SKKS		06 16 34.3	
GTA				SS	**SS**	**06 30 41.5**	**+0.7**
GTA				LR	LR		
	comp=Z,430nm,21.8s						
GTA				LR	LR		
	comp=Z,440nm,20.7s						
GTA				LR	LR		
	comp=Z,700nm,22.2s						
HHC	**Hu-ho-hao-te**	**169.12**	**345**	*e*PKP	**PKPdf**	**06 04 43.3**	**-3.6**
HHC				AMB	AMB		
	comp=Z,250nm,5.4s						
HHC				LR	LR		
	comp=Z,630nm,17.0s						
HHC				LR	LR		
	comp=Z,860nm,18.7s						
HHC				LR	LR		
	comp=Z,1µm,19.6s						
NJ2	**Nanjing**	**170.36**	**283**	*e*PKP	**PKPdf**	**06 04 48.3**	**+0.6**
KMI	**Kunming**	**173.12**	**138**	PKP	**PKPdf**	**06 04 49.3**	**-0.2**
KMI				pPKP	sPKPdf	06 04 52.8	+3.1
LZH	**Lanzhou**	**173.44**	**29**	⇓PKP	**PKPdf**	**06 04 51.5**	**+2.2**
LZH				AMB	AMB		
	comp=Z,370nm,4.7s						
LZH				LR	LR		
	comp=Z,470nm,18.4s						
LZH				LR	LR		
	comp=Z,350nm,17.4s						
LZH				LR	LR		
	comp=Z,410nm,19.0s						
GYA	**Guiyang**	**175.97**	**166**	⇑PKP	**PKPdf**	**06 04 51.0**	**+0.7**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GYA				PP	PP	06 10 25.3	+4.5
GYA				SS	SS	06 31 44.0	-5.0
GYA				AMB	AMB		
	comp=Z,340nm,9.6s						
CD2	Chengdu	176.51	80	PKP	PKPdf	06 04 50.0	-0.2

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*IDC **28** 05:45:41.2±1.1, 22.°47S×68.°30W, h100^{km}±11^{km}, mb3.8/3, mb1 4.0/5, mb1mx3.8/25, mbtmp4.3/5, Error ellipse: s-maj=35.7km s-min=24.7km az=143.0*

*SJA **28** 05:45:41.5±0.7, 22.°43S×68.°50W, h118^{km}±4^{km}, ML4.1, MW4.0*

*GUC **28** 05:45:43.3±0.7, 22.°44S×68.°46W, h105^{km}±6^{km}, ML3.9*

ISC 28 05:45:42.2±0.9**, 22.°45S**±0.°04×**68.°52W**±0.°05**, h118**^{km}±7^{km}**, n48, σ1^{s}.00**/79**, 7C-7D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	0.40	246	P	Pn	05 45 59.4	-0.4
	375nm,0.3s,baz=81,slow=6.2,SNR=1462						
LVC				S	Sn	05 46 12.0	-0.9
	438nm,0.3s,baz=207,slow=20,SNR=22						
LVC	Limon Verde	0.40	246	eP	Pn	05 45 59.5	-0.2
LVC				eS	Sn	05 46 13.1	+0.2
PB09	IPOC Station P	0.93	314	⇓iP	Pn	05 46 04.0	+0.5
PB09				i S	Sn	05 46 19.2	-0.5
PB09				IAML		05 46 21.8	
	comp=E,2µm,0.4s						
PB06	IPOC Station P	1.01	255	⇑iP	Pn	05 46 04.5	+0.3
PB06				i S	Sn	05 46 21.3	+0.3
PB06				IAML		05 46 23.8	
	comp=E,2µm,0.6s						
PB06	IPOC Station P	1.01	255	eP	Pn	05 46 04.5	+0.3
PB06				eS	Sn	05 46 21.4	+0.5
PB06				IAML		05 46 23.0	
	comp=Z,2µm,1.2s						
PB06	IPOC Station P	1.01	255	eP	Pn	05 46 04.7	+0.5
PB06				eS	Sn	05 46 22.0	+1.1
PB06				IAML		05 46 23.2	
	comp=Z,2µm,0.9s						
PB15	IPOC Station P	1.16	229	⇑iP	Pn	05 46 06.5	+0.7
PB15				i S	Sn	05 46 25.1	+1.2
PB15				IAML		05 46 30.6	
	comp=E,8µm,0.3s						
PB15	IPOC Station P	1.16	229	eP	Pn	05 46 01.2	-4.7
PB15				eP	Pn	05 46 06.6	+0.7
PB15				eP	Pn	05 46 06.7	+0.8
PB15				eS	Sn	05 46 25.6	+1.8
PB15				IAML		05 46 31.3	
	comp=Z,4µm,0.2s						
PB03	IPOC Station P	1.21	289	⇑iP	Pn	05 46 06.6	+0.2
PB03				i S	Sn	05 46 24.6	-0.1
PB03				IAML		05 46 25.9	
	comp=N,3µm,0.4s						
PB03	IPOC Station P	1.21	289	eP	Pn	05 46 06.6	+0.2
PB03				⇓eS	Sn	05 46 24.6	-0.1
PB03				IAML		05 46 27.4	
	comp=Z,2µm,0.3s						
PB03	IPOC Station P	1.21	289	eP	Pn	05 46 01.2	-5.1
PB03				eP	Pn	05 46 06.6	+0.2
PB03				eP	Pn	05 46 06.7	+0.4
PB03				eS	Sn	05 46 25.2	+0.5
PB03				IAML		05 46 27.4	
	comp=Z,2µm,0.4s						
PB07	IPOC Station P	1.46	299	⇑iP	Pn	05 46 09.6	+0.5
PB07				i S	Sn	05 46 29.8	+0.2
PB07				IAML		05 46 31.3	
	comp=E,3µm,0.3s						
PB07	IPOC Station P	1.46	299	eP	Pn	05 46 09.6	+0.5
PB07				⇓eS	Sn	05 46 29.9	+0.2
PB07				IAML		05 46 32.8	
	comp=Z,807nm,0.3s						
PB04	IPOC Station P	1.51	274	⇑iP	Pn	05 46 10.0	+0.2
PB04				i S	Sn	05 46 31.1	+0.4
PB04				IAML		05 46 34.8	
	comp=E,1µm,0.6s						
PB04	IPOC Station P	1.51	274	eP	Pn	05 46 10.0	+0.2
PB04				⇓eS	Sn	05 46 31.1	+0.4
PB04	IPOC Station P	1.51	274	eP	Pn	05 46 04.7	-5.1
PB04				eP	Pn	05 46 10.2	+0.4
PB04				eS	Sn	05 46 31.6	+0.9
PB04				IAML		05 46 33.0	
	comp=Z,2µm,0.8s						
PB05	IPOC Station P	1.61	255	⇑iP	Pn	05 46 11.0	+0.1
PB05				i S	Sn	05 46 32.7	0.0
PB05				IAML		05 46 40.3	
	comp=E,998nm,0.8s						
PB05	IPOC Station P	1.61	255	eP	Pn	05 46 10.9	+0.1
PB05				eS	Sn	05 46 33.0	+0.4
PB05				IAML		05 46 39.0	
	comp=Z,495nm,1.2s						
PB05	IPOC Station P	1.61	255	eP	Pn	05 46 11.3	+0.4
PB05				eS	Sn	05 46 33.8	+1.2
PB01	IPOC Station P	1.66	327	⇓iP	Pn	05 46 11.7	+0.2
PB01				i S	Sn	05 46 33.9	+0.1
PB01				IAML		05 46 35.8	
	comp=E,801nm,0.1s						
PB01	IPOC Station P	1.66	327	eP	Pn	05 46 11.7	+0.2
PB01				⇓eS	Sn	05 46 36.4	+2.6
PB01				IAML		05 46 39.0	
	comp=Z,358nm,0.5s						
PB01	IPOC Station P	1.66	327	eP	Pn	05 46 01.2	-10
PB01				eP	Pn	05 46 11.8	+0.4
PB01				eS	Sn	05 46 34.4	+0.7
PB01				eS		05 46 35.2	
PB02	IPOC Station P	1.70	311	⇑iP	Pn	05 46 12.4	+0.4
PB02				i S	Sn	05 46 34.4	-0.2
PB02				IAML		05 46 39.0	
	comp=E,2µm,0.3s						
PB02	IPOC Station P	1.70	311	eP	Pn	05 46 12.4	+0.4
PB02				eS	Sn	05 46 35.5	+0.9
PB02				IAML		05 46 41.8	
	comp=Z,2µm,0.3s						
PB02	IPOC Station P	1.70	311	eP	Pn	05 46 06.7	-5.2
PB02				eP	Pn	05 46 11.8	-0.1
PB02				eP		05 46 12.4	
PB02				eS	Sn	05 46 35.2	+0.6
PB02				IAML		05 46 39.1	
	comp=Z,2µm,0.3s						
PB10	IPOC Station P	2.15	240	eP	Pn	05 46 17.4	0.0
PB10				IAML		05 47 00.0	
	comp=E,395nm,0.8s						
PATCX	Punta Patache	2.22	316	⇓iP	Pn	05 46 18.4	0.0
PATCX				i S	Sn	05 46 46.3	+0.2
PATCX				IAML		05 46 53.1	
	comp=E,1µm,0.3s						
PATCX	Punta Patache	2.22	316	eP	Pn	05 46 18.4	0.0
PATCX				eP		05 46 18.8	
PATCX				eP		05 46 19.1	
PB08	IPOC Station P	2.37	345	eP	Pn	05 46 21.8	+1.2
PB08				eP		05 46 22.0	
PB08				eS	Sn	05 46 51.6	+1.6
TA01	Diego Aracena	2.43	320	eP	Pn	05 46 21.5	+0.5
TA01				eS	Sn	05 46 38.0	-13
YJA	Yavi	2.80	85	eP	Pn	05 46 27.6	+1.4
YJA				eS	Sn	05 46 46.8	-13
PB11	IPOC Station P	2.87	338	eP	Pn	05 46 27.3	+0.4
PB11				eS	Sn	05 47 01.2	-0.2
HJA	Humahuaca	2.97	105	eP	Pn	05 46 29.9	+1.5
SLA	San Lorenzo	3.58	130	eP	Pn	05 47 04.3	+28
AZAP	Zapla	3.63	120	eP	Pn	05 46 37.5	+0.5
AZAP	Zapla	3.63	120	eP	Pn	05 46 37.9	+0.9
ASTB	Santa Barbara	4.03	113	eP	Pn	05 46 42.6	+0.4
ASTB	Santa Barbara	4.03	113	eP	Pn	05 46 43.0	+0.8
PB12	IPOC Station P	4.17	336	eP	Pn	05 46 43.5	-0.6
PB12				eS	Sn	05 47 31.2	-0.9
PB16	IPOC Station P	4.19	347	eP	Pn	05 46 45.7	+0.9
PB16				eS	Sn	05 47 23.4	-10
ALOL	LOMAS DE OLMED	4.39	109	eP	Pn	05 46 47.1	+0.1
LPAZ	La Paz	6.14	4	P	Pn	05 47 11.6	+0.5
	comp=E,3.5nm,0.3s,baz=181,slow=6.2,SNR=54						
LPAZ	La Paz	6.14	4	eP	Pn	05 47 12.0	+0.9
SIV	San Ignacio	9.52	49	P	Pn	05 47 53.1	-3.3
	comp=E,4.6nm,0.3s,baz=233,slow=8.8,SNR=96						
BDFB	Brasilia	20.52	74	P	P	05 50 09.6	-1.8
	comp=E,1.7nm,0.4s,baz=235,slow=12,SNR=6.1						
PTGA	Pitinga	23.13	22	P	P	05 50 37.7	-0.6
	comp=E,3.0nm,0.3s,baz=206,slow=16,SNR=9.8						
YKA	Yellowknife Ar	92.19	340	P	P	05 58 39.1	+1.1
	comp=E,0.9nm,0.6s,baz=126,slow=5.8,SNR=7.9						
MKAR	Makanchi Array	146.18	37	PKPbc	PKPab	06 05 09.2	-0.4
	comp=E,3.3nm,0.8s,baz=315,slow=2.5,SNR=5.3						

IDC 28 05:55:33.4±1.9**, 3.°83N×127.°20E, h0**^{km}**, mb3.8**/4**, mb1 3.9**/4**, mb1mx3.6**/31**, mbtmp3.8**/4**, Error ellipse: s-maj=146.3km s-min=25.8km az=65.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.64	164	P	P	06 00 55.8	-0.2
	2.6nm,0.6s,baz=344,slow=11,SNR=28						
ASAR	Alice Springs	28.10	167	P	P	06 01 26.9	-0.2
	0.1nm,0.3s,baz=350,slow=9.4,SNR=2.2						
STKA	Stephens Creek	38.06	160	P	P	06 02 54.2	+0.4
	1.1nm,0.5s,baz=327,slow=11,SNR=4.1						
MKAR	Makanchi Array	57.74	325	P	P	06 05 26.1	-0.2
	1.2nm,0.6s,baz=115,slow=6.7,SNR=5.2						

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*IDC **28** 06:07:09.8±0.7, 29.°59S×177.°26W, h0^{km}, mb4.7/7, mb1 4.8/8, mb1mx4.4/25, mbtmp4.7/8, ML3.9/1, MS4.2/3, Ms1 4.2/3, ms1mx3.5/35, Error ellipse: s-maj=23.1km s-min=14.7km az=38.0*

*NEIC **28** 06:07:13.1±2.0, 29.°79S±0.°10×177.°3W±0.°1, h16^{km}±4^{km}, mb4.8/13, Error ellipse: s-maj=18.6km s-min=5.7km az=45.0*

ISC 28 06:07:15.7±0.6**, 29.°79S**±0.°07×**177.°5W**±0.°1**, h35**^{km}**, n54, σ1^{s}.12**/49**, mb4.8**/13**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	0.67	323	Pn	Pn	06 07 27.5	-1.1
	4µm,0.3s,baz=115,slow=5.0,SNR=67						
RAO				Sn	Sn	06 07 38.2	+0.4
	5µm,0.3s,baz=77,slow=23,SNR=12						
RAO	Raoul Island	0.67	323		Pn	06 07 27.6	-1.0
URZ	Urewera	9.57	207	Pn	Pn	06 09 30.7	-0.2
	1.2nm,0.3s,baz=127,slow=20,SNR=1.3						
URZ				Sn	Sn	06 11 14.9	-2.4
	5.5nm,0.3s,baz=125,slow=20,SNR=2.9						
BFZ	Birch Farm	12.02	204	Pn	Pn	06 10 04.5	0.0
KHZ	Kahutara	14.54	207	Pn	Pn	06 10 37.9	-0.9
DZM	Mont Dzumac	16.38	294	LR	LR	06 16 29.9	
	comp=Z,506nm,18.1s,baz=226,slow=34						
ODZ	Otahua Downs	17.89	208		Pn	06 11 21.2	-0.5
ODZ				IAmb	IAmb	06 11 40.4	
	comp=Z,150nm,1.5s						
EIDS	Eidsvold	28.18	271	P	P	06 13 06.7	+1.7
EIDS				IAmb	IAmb	06 13 07.7	
	comp=Z,11nm,0.9s						
CTA	Charters Tower	34.17	278	P	P	06 13 59.4	+1.5
	comp=Z,10nm,0.4s,baz=97,slow=10,SNR=23						
CTAO	Charters Tower	34.17	278	P	P	06 13 58.9	+1.1
STKA	Stephens Creek	35.07	256	P	P	06 14 06.9	+1.4
	comp=Z,20nm,1.0s,baz=94,slow=9.1,SNR=26						
STKA	Stephens Creek	35.07	256	P	P	06 14 07.3	+1.8
BBOO	Buckleboo	39.59	253	P	P	06 14 43.3	-0.5
BBOO				IAmb	IAmb	06 15 01.0	
	comp=Z,13nm,1.1s						
ASAR	Alice Springs	43.61	266	P	P	06 15 16.5	-0.4
	comp=Z,2.2nm,0.3s,baz=107,slow=7.6,SNR=32						
ASAR				PcP	PcP	06 17 03.7	-0.3
	comp=Z,0.5nm,0.6s,baz=112,slow=4.4,SNR=1.9						
WR0	Warramunga Arr	44.36	271	P	P	06 15 22.2	-0.7
WR0				IAmb	IAmb	06 15 23.4	
	comp=Z,8.4nm,0.5s						
WRA	Warramunga Arr	44.55	271	P	P	06 15 23.8	-0.6
	comp=Z,8.6nm,0.4s,baz=112,slow=6.3,SNR=74						
WRA	Warramunga Arr	44.55	271	P	P	06 15 23.9	-0.5
FORT	Forrest	46.66	254	P	P	06 15 40.3	-0.6
FORT				IAmb	IAmb	06 15 43.9	
	comp=Z,18nm,0.9s						
KNRA	Kununurra	51.13	274	P	P	06 16 15.4	0.0
KNRA				IAmb	IAmb	06 16 16.6	
	comp=Z,22nm,1.1s						
FITZ	Fitzroy Crossi	52.83	269	LR	LR	06 37 55.1	
	comp=Z,101nm,18.3s,baz=128,slow=35						
CASY	Casey	55.90	208	P	P	06 16 49.6	0.0
QSPA	South Pole Qui	60.32	180	P	P	06 17 22.7	+1.9
	comp=Z,5.6nm,1.1s,baz=31,slow=2.9,SNR=11						
QSPA	South Pole Qui	60.32	180	P	P	06 17 22.4	+1.6
MAW	Mawson	73.04	200	P	P	06 18 42.7	+1.0
	comp=Z,4.4nm,0.9s,baz=109,slow=9.9,SNR=4.6						
MAW	Mawson	73.04	200	P	P	06 18 41.2	-0.4
VNA3	Neumayer Olymp	78.88	176	P	P	06 19 14.6	-0.4
VNA2	Neumayer--Watz	79.32	177	P	P	06 19 17.7	+0.4
	baz=170,slow=4.2						
H03S2	Juan Fernandez	80.41	123	T	T	07 48 53.1	
	baz=238,slow=74,SNR=5.8						
H03S1	Juan Fernandez	80.42	123	T	T	07 48 48.2	
	baz=238,slow=74,SNR=5.7						
H03S3	Juan Fernandez	80.43	123	T	T	07 48 56.0	
	baz=238,slow=74,SNR=6.5						
H03N3	Juan Fernandez	80.60	123	T	T	07 49 05.4	
	baz=242,slow=73,SNR=4.8						
H03N2	Juan Fernandez	80.60	123	T	T	07 49 06.0	
	baz=242,slow=73,SNR=6.0						
H03N1	Juan Fernandez	80.62	123	T	T	07 49 04.4	
	baz=242,slow=73,SNR=6.7						
LC01	Cunco	82.71	131	P	P	06 19 34.6	-1.4
LC01				IAmb	IAmb	06 20 00.8	
	comp=Z,9.5nm,1.1s						
PETK	Petropavlovsk-	85.34	345	P	P	06 19 48.1	-0.7
	comp=Z,4.6nm,0.9s,baz=104,slow=6.3,SNR=5.6						
PETK				LR	LR	06 52 08.0	
	comp=Z,347nm,20.6s,baz=70,slow=32						
KURBB	Kurchatov Arra	121.00	314	PKP	PKPdf	06 26 02.8	-1.3
	comp=Z,1.4nm,0.8s,baz=114,slow=2.1,SNR=7.5						
BVAR	Borovoye Array	126.29	316	PKP	PKPdf	06 26 13.7	-0.5
	comp=Z,2.3nm,0.9s,baz=205,slow=6.6,SNR=5.5						
ARCES	ARCESS Array B	138.09	348	PKhKP	PKPpre	06 26 29.4	
	comp=Z,3.0nm,0.9s,baz=27,slow=1.4,SNR=4.9						
FINES	FINESS Array B	144.73	341	PKP	PKPab	06 26 45.7	-1.2
	comp=Z,12nm,0.5s,baz=55,slow=3.7,SNR=90						
ONI	Oni	144.92	303	PKPbc	PKPab	06 26 48.7	+0.4
OBN	Obninsk	144.93	326	PKPbc	PKPab	06 26 46.7	-1.1
SIRT	Sirnak	146.10	294	PKPbc	PKPdf	06 26 52.2	+0.9
NB2	NORSAR Subarra	148.21	352	PKP	PKPbc	06 26 57.5	+0.1
	comp=Z,1.0nm,0.5s,baz=16,slow=3.2						
NOA	NORSAR Array B	148.21	352	PKPbc	PKPdf	06 26 56.4	+2.4
	comp=Z,5.3nm,0.9s,baz=15,slow=4.5,SNR=7.7						
HFS	Hagfors	148.73	349	PKPbc	PKPdf	06 26 57.7	+2.8
	comp=Z,5.0nm,0.6s,baz=33,slow=3.5,SNR=12						
GAZ	Gaziantep	150.28	294	PKPbc	PKPbc	06 27 02.6	-0.7
ASF	Jabal al Asfar	150.52	283	PKPbc	PKPbc	06 27 03.6	-0.5
	comp=Z,6.5nm,0.8s,baz=108,slow=2.1,SNR=7.5						
AKASG	Malin Array Be	151.09	324	PKPbc	PKPbc	06 27 03.6	-1.1
	comp=Z,3.9nm,0.5s,baz=48,slow=2.6,SNR=26						
MMAI	Mount Meron Ar	151.83	285	PKPbc	PKPbc	06 27 07.4	+0.3
	comp=Z,4.9nm,0.4s,baz=84,slow=7.6,SNR=17						
EIL	Elat	151.90	278	PKPbc	PKPbc	06 27 07.0	-0.2
	comp=Z,6.8nm,0.9s,baz=244,slow=5.8,SNR=5.2						
BRTR	Keskin Array B	152.71	300	PKPbc	PKPbc	06 27 08.1	-0.9
	comp=Z,2.3nm,0.9s,baz=147,slow=2.9,SNR=10						
CLL	Collm	157.12	343	ePKPab	PKPab	06 27 37.0	-0.9
GERES	GERESS Array B	159.14	339	PKPab	PKPab	06 27 46.0	-0.9
	comp=Z,0.8nm,0.8s,baz=45,slow=3.2,SNR=3.1						
TORD	Torodi Ar. Bea	163.42	177	PKP	PKPdf	06 27 15.3	-0.1
	comp=Z,0.9nm,1.0s,baz=5.7,slow=1.5,SNR=3.6						
TORD				PKPab	PKPab	06 28 07.3	+1.1
	comp=Z,1.3nm,0.9s,baz=193,slow=3.5,SNR=5.1						

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*NEIC **28** 06:07:50.7±1.1, 14.°3S±0.°1×170.°5E±0.°1, h622^{km}±9^{km}, mb4.3/12, Error ellipse: s-maj=20.7km s-min=20.0km az=131.0*

*IDC **28** 06:07:51.8±1.8, 14.°55S×170.°55E, h648^{km}±28^{km}, mb3.4/7, mb1 3.6/9, mb1mx3.3/30, mbtmp4.3/9, Error ellipse: s-maj=45.3km s-min=12.6km az=154.0*

ISC 28 06:07:49.1±0.7**, 14.°2S**±0.°1×**170.°43E**±0.°10**, h600**^{km}**, n40, σ1^{s}.44**/40**, mb4.3**/12**, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	Saraoutou	3.36	248	P	P	06 09 14.0	+3.7
LIFNC	LIFOU	7.23	204	P	P	06 09 41.7	+0.6
MARNC	Mare, Loyalty	7.61	197	P	P	06 09 45.0	+0.4
MSVF	Nonsavu	8.13	117	P	P	06 09 51.0	+1.2
	3.6nm,0.3s,baz=278,slow=14,SNR=11						
DZM	Mont Dzumac	8.71	205	P	P	06 09 57.0	+1.7
	1.8nm,0.3s,baz=226,slow=14,SNR=11						
DZM	Mont Dzumac	8.71	205	P	P	06 09 57.2	+2.0
DZM	Mont Dzumac	8.71	205	P	P	06 09 57.6	+2.4
NOUC	Port Laguerre	8.79	206	P	P	06 09 58.2	+2.3
PINNC	Pines Island,	8.85	198	P	P	06 09 57.6	+1.2
OUENC	Ouen Island, N	8.87	202	P	P	06 09 58.1	+1.5
OUENC	Ouen Island, N	8.87	202	P	P	06 09 58.5	+1.9
ONTNC	Ouen Toro	8.91	204	P	P	06 09 58.5	+1.4
ONTNC	Ouen Toro	8.91	204	P	P	06 09 58.1	+1.0
OUZ	Omahuta	21.14	173	P	P	06 11 52.8	-0.1
MANU	Manus Island	25.78	296		pP	06 14 05.0	-1.8
STKA	Stephens Creek	31.70	231	P	P	06 13 25.7	+0.4
	2.2nm,0.3s,baz=56,slow=8.7,SNR=13						
WB0	Warramunga Arr	34.86	256	P	P	06 13 51.8	-0.2
WB0				IAmb	IAmb	06 13 52.3	
	comp=Z,9.1nm,0.7s						
WB2	Warramunga Arr	34.91	255	P	P	06 13 52.3	-0.1
WB2				IAmb	IAmb	06 13 52.8	
	comp=Z,5.6nm,0.7s						
WRA	Warramunga Arr	34.92	255	P	P	06 13 52.2	-0.3
	comp=Z,4.4nm,0.6s,baz=85,slow=8.7,SNR=59						
WRA				S	S	06 18 42.9	0.0
	comp=Z,0.6nm,0.8s,baz=101,slow=14,SNR=3.5						
WRA	Warramunga Arr	34.92	255	P	P	06 13 51.9	-0.7
AS31	Alice Springs	35.72	249	P	P	06 13 59.1	0.0
AS31				IAmb	IAmb	06 13 59.4	
	comp=Z,4.2nm,0.3s						
ASAR	Alice Springs	35.72	249	P	P	06 13 58.8	-0.3
	comp=Z,5.8nm,0.4s,baz=76,slow=9.4,SNR=123						
ASAR				PcP	PcP	06 16 08.7	-1.4
	comp=Z,1.1nm,0.7s,baz=108,slow=2.1,SNR=4.7						
ASAR				S	S	06 18 51.0	-3.8
	comp=Z,1.3nm,0.8s,baz=81,slow=18,SNR=8.4						
BBOO	Buckleboo	36.34	233	P	P	06 14 03.8	-0.2
BBOO				IAmb	IAmb	06 14 04.2	
	comp=Z,9.5nm,1.1s						
FAKI	Fak Fak	39.31	283	P	P	06 14 29.2	+0.9
FAKI				IAmb	IAmb	06 14 41.2	
	comp=Z,8.5nm,0.8s						
KNRA	Kununurra	40.24	262	P	P	06 14 35.7	0.0
PSA00	Pilbara Seismi	48.53	254	P	P	06 15 38.8	-0.4
GIRL	Giralia	53.72	252	P	P	06 16 17.2	+0.7
CMAR	Chiang Mai Arr	77.54	293	P	P	06 18 46.1	+1.4
	comp=Z,5.4nm,1.1s,baz=120,slow=4.2,SNR=12						
CMAR	Chiang Mai Arr	77.54	293	P	P	06 18 45.5	+0.8
M19K	Big River Lodg	80.75	16	P	P	06 19 01.0	+0.4
L19K	White Mountain	80.86	16	P	P	06 19 01.4	+0.2
L19K				IAmb	IAmb	06 19 07.5	
	comp=Z,11nm,1.2s						
ILAR	Eielson Array	85.09	17	P	P	06 19 21.4	-0.8
	comp=Z,0.6nm,0.6s,baz=228,slow=4.5,SNR=12						
YKA	Yellowknife Ar	95.67	27	P	P	06 20 10.3	-0.9
	comp=Z,0.3nm,0.5s,baz=254,slow=4.3,SNR=4.1						
MKAR	Makanchi Array	98.93	316	P	Pdif	06 20 26.2	0.0
	comp=Z,0.3nm,0.6s,baz=85,slow=5.7,SNR=2.1						
KAN05	Bluff City Nor	99.75	54		pwP	06 22 49.3	+6.4
ARCES	ARCESS Array B	120.47	346	PKP	PKPdf	06 25 31.1	-1.6
	comp=Z,0.7nm,0.3s,baz=67,slow=2.3,SNR=15						
FINES	FINESS Array B	126.32	340	PKP	PKPdf	06 25 43.1	-1.1
	comp=Z,4.0nm,0.9s,baz=224,slow=8.0,SNR=3.6						
IDI	Anoyia	142.59	310	PKP	PKPdf	06 26 12.7	-2.6
	comp=Z,14nm,1.0s,baz=180,slow=1.7,SNR=5.7						
DAVOX	Davos/Dischmat	143.65	337	PKP	PKPbc	06 26 15.8	-0.2
	comp=Z,8.8nm,0.7s,baz=228,slow=1.9,SNR=16						
ESDC	Sonseca Array	154.13	350	PKPab	PKPab	06 26 59.1	+0.1
	comp=Z,0.3nm,0.5s,baz=1.3,slow=3.4,SNR=1.5						

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*SJA **28** 06:08:29.2±1.5, 30.°61S×72.°08W, h4^{km}±6^{km}, ML4.3, MW3.9*

*IDC **28** 06:08:30.8±0.8, 30.°75S×71.°68W, h0^{km}, mb4.3/7, mb1 4.3/12, mb1mx4.2/30, mbtmp4.1/12, ML3.7/5, MS3.6/1, Ms1 3.7/1, ms1mx3.4/18, Error ellipse: s-maj=27.0km s-min=21.9km az=93.0*

*GUC **28** 06:08:34.6±0.7, 30.°66S×71.°76W, h37^{km}±2^{km}, ML4.5*

*NEIC **28** 06:08:34.7±1.5, 30.°67S±0.°05×71.°80W±0.°09, h22^{km}±4^{km}, mb4.5/24, ML4.5(GUC), Error ellipse: s-maj=11.1km s-min=6.6km az=97.0*

*VAO **28** 06:08:36.1±0.5, 30.°61S×71.°57W, h27^{km}, mb4.5*

ISC 28 06:08:34.8±0.8**, 30.°69S**±0.°02×**71.°81W**±0.°04**, h28**^{km}±5^{km}**, n156, σ1^{s}.90**/189**, mb4.4**/13**, 7C-5D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.16	84	⇑iP	Pb	06 08 40.4	0.0
CO06				i S	Sb	06 08 43.9	-0.2
CO06				IAML		06 08 44.6	
	comp=E,140µm,0.2s						
CO06	Fray Jorge	0.16	84	Pg	Pb	06 08 40.5	+0.1
CO06				Sg	Sb	06 08 43.8	-0.3
CO05	La Serena	0.92	33	⇓iP	Pn	06 08 50.8	-1.0
CO05				eS	Sn	06 09 02.6	-1.5
CO05				IAML		06 09 05.3	
	comp=N,54µm,0.6s						
CO05	La Serena	0.92	33		Pn	06 08 51.0	-0.8
CO05				Sg	Sn	06 09 02.6	-1.5
GO04	Tololo Observa	1.02	60	⇓iP	Pn	06 08 52.5	-0.9
GO04				i S	Sb	06 09 05.2	-1.8
GO04	Tololo Observa	1.02	60	Pn	Pb	06 08 53.6	-0.4
GO04	Tololo Observa	1.02	60	eP	Pb	06 08 53.0	-1.0
VA06	Catapilco	1.92	167	⇓iP	Pn	06 09 06.3	+0.7
VA06				i S	Sb	06 09 30.7	-1.8
VA06				IAML		06 09 41.8	
	comp=N,4µm,0.6s						
LCO	Las Campanas	1.93	30	⇑iP	Pn	06 09 06.2	+0.2
LCO				i S	Sb	06 09 30.5	-2.9
LCO	Las Campanas	1.93	30	Pn	Pn	06 09 06.6	+0.5
AROD	Rodeo	2.09	76	eP	Pb	06 09 10.9	-1.3
AROD				eS	Sb	06 09 37.5	-0.3
VA01	Torpederas	2.33	177	Pn	Pn	06 09 11.8	+0.5
VA01	Torpederas	2.33	177	eP	Pn	06 09 12.0	+0.8
VA01				eS	Sb	06 09 44.7	+0.3
VA01				IAML		06 09 52.1	
	comp=Z,626nm,0.8s						
VA03	San Esteban	2.33	153	⇑iP	Pn	06 09 12.6	+1.2
VA03				i S	Sb	06 09 41.6	-3.0
VA03	San Esteban	2.33	153	eP	Pn	06 09 13.5	+2.1
VA03				eP	Pb	06 09 13.7	-2.5
VA03				eS	Sn	06 09 39.2	+0.1
VA03				eS	Sb	06 09 44.0	-0.6
VA03				IAML		06 09 56.6	
	comp=Z,2µm,0.7s						
ROCH	El Roble	2.37	163	eP	Pb	06 09 13.6	-3.4
ROCH				⇑iP	Pn	06 09 13.1	+1.0
ROCH				eS	Sb	06 09 43.1	-2.8
ROCH				i S	Sn	06 09 44.0	+3.7
ROCH				IAML		06 09 50.1	
	comp=N,3µm,0.4s						
ROCH				IAML		06 09 56.0	
	comp=N,2µm,0.4s						
ACDV	Cuesta del Vie	2.38	78	eP	Pb	06 09 15.7	-1.4
ACDV				eS	Sb	06 09 47.7	+1.5
ACDV				IAML		06 09 55.7	
	comp=Z,2µm,0.6s						
AC04	Llanos de Chal	2.56	15	⇓iP	Pn	06 09 14.2	-0.3
AC04				eS	Sb	06 09 53.0	+1.8
AC04				IAML		06 10 04.7	
	comp=N,1µm,0.6s						
AC04	Llanos de Chal	2.56	15	eP	Pn	06 09 08.7	-5.7
AC04				eP	Pb	06 09 14.2	-5.8
AC04				eS	Sn	06 09 47.2	+2.5
AC04				eS	Sb	06 09 47.7	-3.4
AUSP	Uspallata	2.58	127	eP	Pb	06 09 18.0	-2.5
AUSP				eS	Sb	06 09 47.7	-4.1
AUSP				eS	Sn	06 09 54.0	+8.6
MT02	Curacav	2.62	168	⇑iP	Pn	06 09 17.0	+1.7
MT02				eS	Sb	06 09 50.9	-2.1
MT02	Curacav	2.62	168		Pn	06 09 16.7	+1.4
MT02	Curacav	2.62	168	eP	Pn	06 09 13.7	-1.6
MT02				eP	Pb	06 09 17.7	-3.4
MT02				eS	Sb	06 09 52.0	-0.9
MT02				IAML		06 10 00.9	
	comp=Z,880nm,0.6s						
PEL	Peldehue	2.63	159	⇑iP	Pn	06 09 16.7	+1.3
PEL				eS	Sn	06 09 49.2	+2.8
PEL				IAML		06 10 07.7	
	comp=N,1µm,0.5s						
PEL	Peldehue	2.63	159		Pn	06 09 15.5	+0.1
PEL	Peldehue	2.63	159	eP	Pn	06 09 17.0	+1.6
PEL				eS	Sb	06 09 57.0	+4.0
ZON	Zonda	2.82	108	eP	Pb	06 09 21.3	-3.2
ZON				eS	Sb	06 09 55.7	-2.9
ZON				eS	Sn	06 10 02.2	+11
ZON				IAML		06 10 07.4	
	comp=Z,1µm,0.6s						
MT05	Renca	2.84	162	eP	Pn	06 09 21.2	+2.8
MT05				eS	Sn	06 09 54.0	+2.2
MT05				IAML		06 10 06.2	

	comp=E,2µm,0.3s						
MT05	**Renca**	**2.84**	**162**	Pn	**Pn**	**06 09 19.8**	**+1.4**
MT05	**Renca**	**2.84**	**162**	*e*P	**Pn**	**06 09 20.1**	**+1.7**
MT05				*e*S	**Sb**	**06 09 56.2**	**-3.1**
MT05				IAML		06 10 15.4	
	comp=Z,1µm,0.8s						
VA05	**Santo Domingo**	**2.96**	**177**		**Pn**	**06 09 20.4**	**+0.4**
RTCV	**Cerro Valdivia**	**3.04**	**113**	*e*P	**Pn**	**06 09 19.7**	**-1.3**
RTCV				*e*P	**Pb**	**06 09 25.0**	**-3.2**
RTCV				*e*S	**Sb**	**06 10 08.2**	**+3.4**
RTCV				*e*S	Sn	06 10 08.7	+12
RTCV				IAML		06 10 14.1	
	comp=Z,403nm,0.7s						
MT09	**Talagante**	**3.15**	**167**	*e*P	**Pn**	**06 09 24.3**	**+1.6**
MT09				*e*S	**Sn**	**06 10 01.6**	**+2.1**
MT09				IAML		06 10 19.0	
	comp=N,2µm,0.3s						
MT09	**Talagante**	**3.15**	**167**		**Pn**	**06 09 22.8**	**+0.1**
ASAL	**Salagasta**	**3.17**	**127**	*e*P	**Pb**	**06 09 27.0**	**-3.5**
ASAL				*e*S	**Sb**	**06 10 09.2**	**+0.5**
ASAL				IAML		06 10 26.8	
	comp=Z,728nm,0.7s						
MT01	**Popeta**	**3.20**	**172**	Pn	**Pn**	**06 09 23.6**	**+0.4**
MT01	**Popeta**	**3.20**	**172**	*e*P	**Pn**	**06 09 25.8**	**+2.6**
MT01				*e*P	Pb	06 09 26.0	-4.9
MT01				*e*S	**Sb**	**06 10 07.2**	**-2.3**
MT01				IAML		06 10 19.0	
	comp=Z,610nm,0.5s						
ARCO	**CERRO ARCO**	**3.26**	**132**	*e*P	**Pb**	**06 09 29.0**	**-3.1**
ARCO				*e*S	**Sb**	**06 10 08.2**	**-3.1**
ARCO				*e*S	Sn	06 10 13.7	+12
ARCO				IAML		06 10 21.9	
	comp=Z,921nm,0.8s						
GO03	**Copiap**	**3.38**	**25**	Pn	**Pn**	**06 09 25.6**	**-0.2**
GO03	**Copiap**	**3.38**	**25**	*e*P	**Pn**	**06 09 26.0**	**+0.2**
GO03				*e*S	**Sn**	**06 10 08.2**	**+3.2**
GO03				*e*S	**Sb**	**06 10 08.7**	**-6.1**
LMEL	**Las Melosas**	**3.43**	**157**	⇓*i*P	**Pn**	**06 09 29.2**	**+2.7**
LMEL				*e*S	**Sb**	**06 10 10.9**	**-5.4**
LMEL				IAML		06 10 21.6	
	comp=E,1µm,0.8s						
BO04	**La Punta**	**3.44**	**163**	⇑*i*P	**Pn**	**06 09 27.9**	**+1.3**
BO04				*e*S	**Sn**	**06 10 08.4**	**+1.9**
BO04				IAML		06 10 29.9	
	comp=E,645nm,0.7s						
AAGR	**Agrelo**	**3.48**	**134**	*e*P	**Pb**	**06 09 31.7**	**-4.2**
AAGR				*e*S	**Sb**	**06 10 19.7**	**+1.9**
AAGR				IAML		06 10 37.0	
	comp=Z,593nm,1.4s						
VCA	**Vinchina**	**3.69**	**59**	*e*P	Pb	06 09 34.0	-5.5
VCA				*e*S	**Sn**	**06 10 15.7**	**+2.8**
VCA				*e*S	Sb	06 10 31.7	+7.8
BO01	**Tunca**	**3.74**	**171**	Pn	**Pn**	**06 09 31.4**	**+0.7**
BO01	**Tunca**	**3.74**	**171**	*e*P	**Pn**	**06 09 32.8**	**+2.1**
BO01				IAML		06 10 41.3	
	comp=Z,306nm,0.7s						
AVFE	**Valle Fertil**	**3.75**	**91**	*e*P	**Pn**	**06 09 33.3**	**+2.4**
AVFE				*e*S	**Sb**	**06 10 19.7**	**-5.8**
AVFE				*e*S	Sn	06 10 24.5	+10
AVFE				IAML		06 10 35.3	
	comp=Z,923nm,0.8s						
BO02	**Sierra Bellavi**	**4.18**	**168**		**Pn**	**06 09 38.8**	**+2.0**
BO02	**Sierra Bellavi**	**4.18**	**168**	*e*P	**Pn**	**06 09 38.0**	**+1.2**
BO02				*e*S	**Sb**	**06 10 32.2**	**-5.6**
BO02				IAML		06 10 49.6	
	comp=Z,475nm,0.6s						
GO05	**Huala**	**4.31**	**181**		**Pn**	**06 09 38.1**	**-0.4**
ACLC	**CERRO LA CRUZ**	**4.40**	**75**	*e*P	**Pn**	**06 09 42.5**	**+2.5**
ACHE	**Chepes**	**4.45**	**97**	*e*P	**Pn**	**06 09 43.1**	**+2.6**
AC02	**Maricunga**	**4.51**	**32**	Pn	**Pn**	**06 09 42.3**	**+0.6**
AC02	**Maricunga**	**4.51**	**32**	*e*P	**Pn**	**06 09 39.2**	**-2.4**
AC02				*e*P	Pb	06 09 42.5	-11
AC02				*e*S	**Sb**	**06 10 49.0**	**+1.4**
APLL	**PUNTA DE LOS L**	**4.57**	**88**	*e*S	Sb	06 10 39.2	-10
RFA	**San Rafael**	**4.95**	**146**	*e*P	**Pn**	**06 09 50.8**	**+3.5**
RFA				*e*S	**Sb**	**06 11 06.2**	**+6.3**
RFA				IAML		06 11 13.5	
	comp=Z,158nm,0.9s						
ML02	**Panimavida**	**5.07**	**176**	Pn	**Pn**	**06 09 49.9**	**+1.0**
PB14	**IPOC Station P**	**6.17**	**12**	Pn	**Pn**	**06 10 01.8**	**-2.6**
H03N1	**Juan Fernandez**	**6.62**	**244**	T	T	06 17 04.6	
	baz=72,slow=72,SNR=2143						
H03N3	**Juan Fernandez**	**6.63**	**244**	T	T	06 17 04.0	
	baz=72,slow=72,SNR=1887						
H03N2	**Juan Fernandez**	**6.63**	**244**	T	T	06 17 05.2	
	baz=72,slow=72,SNR=2525						
PB15	**IPOC Station P**	**7.74**	**16**		**Pn**	**06 10 26.1**	**+0.3**
LC01	**Cunco**	**8.19**	**180**	Pn	**Pn**	**06 10 31.1**	**-0.7**
PB04	**IPOC Station P**	**8.46**	**11**	Pn	**Pn**	**06 10 33.6**	**-2.0**
LVC	**Limon Verde**	**8.46**	**19**	Pn	**Pn**	**06 10 35.2**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=203,slow=12,SNR=1.5						
LVC	**Limon Verde**	**8.46**	**19**	*e*P	**Pn**	**06 10 34.3**	**-1.5**
PB07	**IPOC Station P**	**9.09**	**11**	Pn	**Pn**	**06 10 42.1**	**-2.3**
PLCA	**Paso Flores**	**10.07**	**175**	Pn	**Pn**	**06 10 56.6**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=353,slow=19,SNR=2.2						
PLCA	**Paso Flores**	**10.07**	**175**	*e*P	**Pn**	**06 10 59.8**	**+2.2**
LL04	**Puerto Octay**	**10.21**	**183**	Pn	**Pn**	**06 10 59.9**	**+0.5**
TRQA	**Tornquist**	**10.95**	**135**	Pn	**Pn**	**06 11 10.1**	**+0.5**
ITQB	**Itaqui**	**13.18**	**89**	*e*P	**Pn**	**06 11 38.2**	**-1.9**
ITQB	**Itaqui**	**13.18**	**89**	Pn	**Pn**	**06 11 38.5**	**-1.6**
CPUP	**Villa Florida**	**13.46**	**75**	Pn	**Pn**	**06 11 42.0**	**-1.8**
	comp=Z,0.2nm,0.3s,baz=238,slow=15,SNR=2.1						
CPUP	**Villa Florida**	**13.46**	**75**	*e*P	**Pn**	**06 11 42.4**	**-1.4**
CPUP	**Villa Florida**	**13.46**	**75**	Pn	**Pn**	**06 11 42.4**	**-1.4**
LPAZ	**La Paz**	**14.73**	**14**	Pn	**Pn**	**06 12 03.2**	**+1.3**
	comp=Z,0.4nm,0.3s,baz=191,slow=6.9,SNR=18						
LPAZ				LR	LR	06 17 08.0	
	comp=Z,236nm,21.0s,baz=176,slow=35						
LPAZ	**La Paz**	**14.73**	**14**	*e*P	**Pn**	**06 12 01.1**	**-0.8**
LPAZ	**La Paz**	**14.73**	**14**	Pn	**Pn**	**06 12 01.0**	**-0.9**
PLTB	**Pedras Altas**	**15.62**	**99**	*e*P	**Pn**	**06 12 11.0**	**-2.0**
PLTB	**Pedras Altas**	**15.62**	**99**	Pn	**Pn**	**06 12 12.1**	**-0.9**
PLTB				IAmb	IAmb	06 12 31.7	
	comp=Z,32nm,1.5s						
CPSB	**Cacapava Do Su**	**15.84**	**94**	*e*P	**Pn**	**06 12 14.4**	**-1.4**
SIV	**San Ignacio**	**17.63**	**36**	P	**Pn**	**06 12 37.8**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=215,slow=12,SNR=23						
AQDB	**Aquidauana**	**17.72**	**59**	*e*P	**Pn**	**06 12 38.8**	**-0.8**
PTGB	**Pitanga**	**18.46**	**76**	*e*P	**P**	**06 12 47.6**	**-0.9**
PTLB	**Pontes e Lacer**	**19.11**	**40**	*e*P	**P**	**06 12 55.0**	**-0.5**
PTLB	**Pontes e Lacer**	**19.11**	**40**	P	**P**	**06 12 54.7**	**-0.8**
TER01	**Tubaro-SC**	**19.84**	**89**	*e*P	**P**	**06 13 03.3**	**-0.1**
PP1B	**Ponte de Pedra**	**20.18**	**54**	*e*P	**P**	**06 13 05.6**	**-1.7**
PCMB	**Pacaembu**	**20.52**	**69**	*e*P	**P**	**06 13 10.3**	**-0.7**
VILB	**Vilhena**	**20.66**	**34**	*e*P	**P**	**06 13 12.3**	**-0.1**
VILB	**Vilhena**	**20.66**	**34**	P	**P**	**06 13 11.9**	**-0.5**
VILB				IAmb	IAmb	06 13 16.3	
	comp=Z,18nm,1.0s						
TIJ01	**Guaruva-PR**	**20.82**	**81**	*e*P	**P**	**06 13 13.2**	**-1.2**
SALV	**Santo Antonio**	**20.84**	**49**	*e*P	**P**	**06 13 13.2**	**-1.2**
ETMB	**Extrema**	**21.42**	**15**	*e*P	**P**	**06 13 20.8**	**+0.2**
ETMB	**Extrema**	**21.42**	**15**	P	**P**	**06 13 20.3**	**-0.3**
ITRB	**Iturama**	**22.24**	**66**	*e*P	**P**	**06 13 28.1**	**-1.4**
CZSB	**Cruzeiro do Su**	**22.86**	**358**	*e*P	**P**	**06 13 36.5**	**+0.5**
CZSB	**Cruzeiro do Su**	**22.86**	**358**	P	**P**	**06 13 36.1**	**+0.1**
CZSB				IAmb	IAmb	06 13 53.2	
	comp=Z,24nm,1.1s						
SAML	**Samuel**	**23.09**	**22**	P	**P**	**06 13 37.8**	**-0.6**
PDRB	**Porto dos Gac**	**23.58**	**40**	*e*P	**P**	**06 13 43.5**	**+0.2**
ARAG	**Araguaiana, MT**	**23.62**	**55**	*e*P	**P**	**06 13 43.4**	**-0.2**
IPMB	**Ipameri, GO**	**24.89**	**65**	*e*P	**P**	**06 13 54.3**	**-1.1**
TBTG	**Tabatinga, AM**	**26.43**	**4**	*e*P	**P**	**06 14 10.1**	**+0.9**
TBTG	**Tabatinga, AM**	**26.43**	**4**	P	**P**	**06 14 09.1**	**-0.1**
BDFB	**Brasilia**	**26.44**	**61**	P	**P**	**06 14 08.4**	**-1.1**
	comp=Z,5.9nm,0.8s,baz=234,slow=9.1,SNR=7.7						
BDFB	**Brasilia**	**26.44**	**61**	P	**P**	**06 14 08.1**	**-1.5**
BDFB				IAmb	IAmb	06 14 21.1	
	comp=Z,12nm,0.7s						
SNDB	**Serra Nova Dou**	**26.60**	**50**	*e*P	**P**	**06 14 10.0**	**-0.9**
NPGB	**Novo Progresso**	**28.13**	**37**	*e*P	**P**	**06 14 23.7**	**-0.9**
PEXB	**Peixe**	**28.55**	**55**	*e*P	**P**	**06 14 27.7**	**-0.6**
MACA	**Manacapuru-AM**	**29.33**	**23**	*e*P	**P**	**06 14 34.9**	**-0.3**
JANB	**Januaria**	**29.62**	**64**	*e*P	**P**	**06 14 37.1**	**-0.9**
SJMB	**Sao Joao De Ma**	**30.18**	**74**	*e*P	**P**	**06 14 42.2**	**-0.5**
ITTB	**Itaituba**	**30.26**	**33**	*e*P	**P**	**06 14 42.6**	**-0.9**
BSFB	**Barra de Sao F**	**30.40**	**74**	*e*P	**P**	**06 14 43.7**	**-1.0**
SDBA	**SAO DESIDERIO**	**30.81**	**60**	*e*P	**P**	**06 14 48.2**	**-0.2**
SMTB	**Santa Maria do**	**31.35**	**51**	*e*P	**P**	**06 14 52.6**	**-0.5**
NAN01	**Guarapari, ES**	**31.48**	**73**	*e*P	**P**	**06 14 54.4**	**+0.2**
PMSA	**Palmer Station**	**34.45**	**174**	P	**P**	**06 15 21.2**	**+1.6**
BOAV	**Boa Vista**	**34.62**	**20**	*e*P	**P**	**06 15 21.5**	**-0.1**
BOAV	**Boa Vista**	**34.62**	**20**	P	**P**	**06 15 21.6**	**-0.1**
BOAV				IAmb	IAmb	06 15 21.8	
	comp=Z,6.6nm,0.9s						
PAYG	**Puerto Ayora**	**34.62**	**326**	P	**P**	**06 15 22.8**	**+1.1**
MCPB	**Macapa, AP**	**35.52**	**36**	*e*P	**P**	**06 15 28.7**	**-0.7**
ROSB	**Rosrio**	**38.07**	**49**	*e*P	**P**	**06 15 50.9**	**-0.3**
ZARC	**Zaragoza, Cauc**	**38.08**	**355**	P	**P**	**06 15 51.4**	**+0.2**
ZARC				IAmb	IAmb	06 15 54.2	
	comp=Z,5.2nm,1.0s						
SDV	**Santo Domingo**	**39.37**	**2**	*e*P	**P**	**06 16 03.1**	**+0.9**
SDV	**Santo Domingo**	**39.37**	**2**	P	**P**	**06 16 01.1**	**-1.1**
MLPR	**Magueyes Islan**	**48.60**	**6**	P	**P**	**06 17 15.9**	**-0.1**
CELP	**Cerrillos**	**48.75**	**7**	P	**P**	**06 17 17.4**	**+0.3**
PDPR	**Patillas Dam,**	**48.75**	**7**	P	**P**	**06 17 16.3**	**-0.8**
VNA3	**Neumayer Olymp**	**52.35**	**159**	P	**P**	**06 17 44.8**	**+1.0**
VNA2	**Neumayer--Watz**	**52.99**	**158**	P	**P**	**06 17 48.9**	**+0.4**
ASCN	**Ascension**	**58.08**	**80**	P	**P**	**06 18 25.7**	**-0.2**
545A	**Edgard**	**62.96**	**342**	P	**P**	**06 18 59.8**	**+1.1**
TXAR	**Lajitas Array**	**66.96**	**330**	P	**P**	**06 19 26.6**	**+1.6**
	comp=Z,0.7nm,0.8s,baz=151,slow=8.0,SNR=4.9						
DBIC	**Dimbokro**	**73.96**	**72**	P	**P**	**06 20 08.1**	**+0.2**
	comp=Z,2.9nm,0.4s,baz=225,slow=5.9,SNR=8.8						
MAW	**Mawson**	**76.29**	**164**	P	**P**	**06 20 21.2**	**+0.7**
	comp=Z,4.1nm,0.8s,baz=207,slow=7.2,SNR=3.5						
MAW	**Mawson**	**76.29**	**164**	IAmb	IAmb	06 20 22.7	
	comp=Z,1.5nm,1.0s						
SMCO	**Snowmass**	**76.83**	**333**	P	**P**	**06 20 25.7**	**+1.4**
SMCO				IAmb	IAmb	06 20 27.5	
	comp=Z,4.0nm,0.9s						
ECSD	**EROS Data Cent**	**77.47**	**342**	P	**P**	**06 20 28.2**	**+0.8**
ECSD				IAmb	IAmb	06 20 29.4	
	comp=Z,4.4nm,0.8s						
PDAR	**Pinedale Array**	**80.91**	**333**	P	**P**	**06 20 47.0**	**+0.5**
	comp=Z,0.5nm,0.8s,baz=194,slow=3.5,SNR=4.8						
BOSA	**Boshof**	**81.45**	**118**	P	**P**	**06 20 49.8**	**0.0**
	comp=Z,5.3nm,1.0s,baz=254,slow=2.1,SNR=4.4						
ELK	**Elko**	**81.66**	**328**	P	**P**	**06 20 50.7**	**+0.2**
ELK				IAmb	IAmb	06 20 53.1	
	comp=Z,3.0nm,0.9s						
TORD	**Torodi Ar. Bea**	**82.91**	**70**	P	**P**	**06 20 56.9**	**-0.5**
	comp=Z,1.4nm,0.5s,baz=280,slow=5.6,SNR=25						
WRA	**Warramunga Arr**	**123.73**	**210**	PKP	**PKPdf**	**06 27 29.9**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=155,slow=1.8,SNR=7.2						
H11S2	**WAKE ISLAND Hy**	**125.94**	**271**	T	T	08 46 19.5	
	baz=115,slow=74,SNR=35						
H11S1	**WAKE ISLAND Hy**	**125.96**	**271**	T	T	08 46 14.6	
	baz=115,slow=74,SNR=33						
H11S3	**WAKE ISLAND Hy**	**125.96**	**271**	T	T	08 46 17.8	
	baz=115,slow=74,SNR=27						
H11N3	**WAKE ISLAND Hy**	**126.27**	**273**	T	T	08 46 41.9	
	baz=116,slow=76,SNR=6.9						
H11N1	**WAKE ISLAND Hy**	**126.29**	**273**	T	T	08 46 41.6	
	baz=116,slow=76,SNR=4.4						
H11N2	**WAKE ISLAND Hy**	**126.29**	**273**	T	T	08 46 43.6	
	baz=116,slow=76,SNR=11						
KURBB	**Kurchatov Arra**	**150.27**	**39**	PKPbc	**PKPbc**	**06 28 23.2**	**+0.3**
	comp=Z,3.0nm,1.0s,baz=300,slow=3.2,SNR=11						
KURK	**Kurchatov**	**150.27**	**39**		**PKPbc**	**06 28 23.2**	**+0.3**
ZALV	**Zalesovo Beam**	**151.29**	**29**	PKPbc	**PKPbc**	**06 28 25.5**	**+0.4**
	comp=Z,7.7nm,0.8s,baz=298,slow=3.2,SNR=28						
MKAR	**Makanchi Array**	**154.35**	**44**	PKPbc	**PKiKP**	**06 28 32.6**	**+0.4**
	comp=Z,0.9nm,0.9s,baz=18,slow=4.3,SNR=3.7						
MKAR				PKPab	**PKPab**	**06 28 47.0**	**+0.6**
	comp=Z,1.6nm,0.9s,baz=296,slow=3.9,SNR=6.3						
SONM	**Songino Array**	**162.82**	**4**	PKPab	**PKPab**	**06 29 24.0**	**+0.9**
	comp=Z,0.2nm,0.4s,baz=343,slow=3.0,SNR=4.2						

IDC 28 06:21:03.4±16.0**, 16°.80S**×**173°.24W, h0**^{km}**, mb4.3**/5**, mb1 4.4**/5**, mb1mx4.0**/36**, mbtmp4.3**/5**, Error ellipse: s-maj=314.6km s-min=159.0km az=81.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**38.50**	**259**	P	P	06 28 28.7	+0.9
	3.3nm,0.4s,baz=83,slow=9.8,SNR=5.7						
STKA	**Stephens Creek**	**43.49**	**241**	P	P	06 29 09.1	+0.4
	0.9nm,0.3s,baz=71,slow=8.8,SNR=3.6						
WRA	**Warramunga Arr**	**49.69**	**258**	P	P	06 29 57.1	-0.5
	2.2nm,0.3s,baz=96,slow=7.9,SNR=84						
ASAR	**Alice Springs**	**49.84**	**253**	P	P	06 29 57.8	-0.9
	3.8nm,0.7s,baz=88,slow=8.2,SNR=67						
FITZ	**Fitzroy Crossi**	**58.08**	**259**	P	P	06 30 59.0	0.0
	0.6nm,0.3s,baz=113,slow=4.7,SNR=12						

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*IDC **28** 07:02:26.4±1.1, 18°.04N×95°.66E, h0^{km}, mb3.9/12, mb1 4.1/13, mb1mx3.8/61, mbtmp3.9/13, ML4.8/1, Error ellipse: s-maj=33.1km s-min=17.5km az=39.0*

*NEIC **28** 07:02:35.6±2.0, 18°.2N±0°.1×95°.8E±0°.1, h66^{km}±9^{km}, mb4.1/9, Error ellipse: s-maj=22.9km s-min=12.6km az=206.0*

ISC 28 07:02:34.0±0.9**, 18°.3N**±0°.1×**95°.72E**±0°.09**, h50**^{km}**, n25,** σ**1^{s}.16**/27**, mb3.9**/15**, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CM31	**Chiang Mai Arr**	**3.07**	**86**	Pn	**Pn**	**07 03 20.7**	**+0.6**
CMAR	**Chiang Mai Arr**	**3.07**	**86**	Pn	**Pn**	**07 03 19.3**	**-0.7**
	26nm,0.3s,baz=258,slow=18,SNR=25						
CMAR				Sn	**Sn**	**07 03 56.6**	**+1.0**
	67nm,0.3s,baz=261,slow=32,SNR=14						
CHTO	**Chiang Mai**	**3.11**	**80**		**Pn**	**07 03 20.9**	**+0.3**
SHL	**Shillong**	**8.08**	**335**	*e*P	**Pn**	**07 04 27.1**	**-1.8**
SHL				*e*S	**Sn**	**07 05 56.9**	**-2.0**
SHL	**Shillong**	**8.08**	**335**		**Pn**	**07 04 27.3**	**-1.6**
SMLA	**Simla**	**21.12**	**311**	*e*P	**P**	**07 07 15.6**	**+1.0**
KBL	**Kabul**	**28.74**	**310**	P	**P**	**07 08 28.3**	**+1.2**
KBL				IAmb	IAmb	07 08 42.7	
	comp=Z,3.7nm,0.8s						
AAK	**Ala-Archa**	**30.23**	**328**	P	**P**	**07 08 41.0**	**+0.9**
	comp=Z,2.5nm,0.9s,baz=205,slow=4.1,SNR=4.6						
AAK	**Ala-Archa**	**30.23**	**328**	P	**P**	**07 08 40.9**	**+0.8**
AAK				IAmb	IAmb	07 08 42.5	
	comp=Z,2.6nm,0.9s						
MK31	**Makanchi Array**	**30.52**	**342**	P	**P**	**07 08 42.0**	**-0.4**
MK31				IAmb	IAmb	07 08 43.1	
	comp=Z,1.8nm,0.8s						
MKAR	**Makanchi Array**	**30.52**	**342**	P	**P**	**07 08 42.2**	**-0.3**
	comp=Z,1.8nm,0.7s,baz=140,slow=9.6,SNR=12						
SONM	**Songino Array**	**30.75**	**14**	P	**P**	**07 08 45.6**	**+1.0**
	comp=Z,0.3nm,0.5s,baz=186,slow=13,SNR=1.5						
KURK	**Kurchatov**	**35.12**	**341**	P	**P**	**07 09 22.2**	**-0.3**
ZAA0	**Zalesovo Array**	**36.59**	**349**	P	**P**	**07 09 34.0**	**-1.0**
ZAA0				IAmb	IAmb	07 09 35.5	
	comp=Z,2.4nm,0.8s						
ZALV	**Zalesovo Beam**	**36.59**	**349**	P	**P**	**07 09 35.2**	**+0.1**
	comp=Z,2.1nm,0.7s,baz=168,slow=8.0,SNR=11						
ABKAR	**Akbulak array**	**42.22**	**325**	P	**P**	**07 10 22.3**	**+0.3**
ABKAR	**Akbulak array**	**42.22**	**325**	P	**P**	**07 10 22.4**	**+0.3**
ABKAR				IAmb	IAmb	07 10 23.2	
	comp=Z,4.6nm,0.8s						
AKTO	**Aktyubinsk**	**43.91**	**326**	P	**P**	**07 10 36.0**	**+0.2**
	comp=Z,3.3nm,0.7s,baz=124,slow=7.2,SNR=11						
KBZ	**Khabaz**	**50.88**	**312**	P	**P**	**07 11 30.9**	**+0.9**
	comp=Z,0.7nm,0.5s,baz=139,slow=6.2,SNR=3.5						
WRA	**Warramunga Arr**	**53.65**	**133**	P	**P**	**07 11 48.2**	**-2.6**
	comp=Z,0.4nm,0.7s,baz=320,slow=7.2,SNR=2.3						
ASAR	**Alice Springs**	**55.92**	**137**	P	**P**	**07 12 05.4**	**-1.8**
	comp=Z,0.3nm,0.8s,baz=324,slow=6.8,SNR=4.1						
BRTR	**Keskin Array B**	**57.21**	**306**	P	**P**	**07 12 17.0**	**+0.6**
	comp=Z,0.5nm,0.6s,baz=72,slow=4.7,SNR=2.5						
FINES	**FINESS Array B**	**64.39**	**330**	P	**P**	**07 13 04.9**	**+0.3**
	comp=Z,5.5nm,1.0s,baz=104,slow=8.0,SNR=1.6						
ARCES	**ARCESS Array B**	**66.11**	**339**	P	**P**	**07 13 16.8**	**+1.1**
	comp=Z,2.6nm,0.9s,baz=92,slow=6.5,SNR=3.6						
GERES	**GERESS Array B**	**71.26**	**316**	P	**P**	**07 13 48.9**	**+0.7**
	comp=Z,0.9nm,0.7s,baz=68,slow=7.4,SNR=3.1						

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*IDC **28** 07:03:42.0±2.5, 30°.36S×72°.00W, h0^{km}, mb3.8/1, mb1 3.7/5, mb1mx3.6/28, mbtmp3.6/5, ML3.4/4, Error ellipse: s-maj=105.5km s-min=31.2km az=100.0*

ISC 28 07:03:43.8±2.3**, 30°.4S**±0°.1×**71°.8W**±0°.6**, h10**^{km}**, n9,** σ**1^{s}.47**/6**, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H03N1	**Juan Fernandez**	**6.81**	**242**	T	T	07 12 27.1	
	baz=71,slow=72,SNR=23						
H03N2	**Juan Fernandez**	**6.82**	**242**	T	T	07 12 25.8	
	baz=71,slow=72,SNR=22						
H03N3	**Juan Fernandez**	**6.83**	**241**	T	T	07 12 22.8	
	baz=71,slow=72,SNR=19						
LVC	**Limon Verde**	**8.15**	**19**	Pn	**Pn**	**07 05 40.5**	**-2.0**
	0.2nm,0.3s,baz=233,slow=6.0,SNR=2.3						
PLCA	**Paso Flores**	**10.38**	**175**	Pn	**Pn**	**07 06 12.5**	**-0.2**
	0.1nm,0.3s,baz=349,slow=16,SNR=1.5						
LPAZ	**La Paz**	**14.41**	**14**	Pn	**Pn**	**07 07 09.7**	**+1.2**
	0.1nm,0.3s,baz=222,slow=12,SNR=2.7						
SIV	**San Ignacio**	**17.35**	**37**	P	**P**	**07 07 48.0**	**+0.5**
	0.1nm,0.3s,baz=225,slow=12,SNR=7.3						
TORD	**Torodi Ar. Bea**	**82.75**	**70**	P	**P**	**07 16 09.1**	**+0.7**
	0.7nm,0.8s,baz=251,slow=4.4,SNR=4.2						
ZALV	**Zalesovo Beam**	**151.00**	**29**	PKPbc	**PKiKP**	**07 23 36.4**	**-0.6**
	2.3nm,0.8s,baz=318,slow=3.9,SNR=9.6						

IDC 28 07:04:50.3±2.1**, 2°.68S**×**127°.24E, h0**^{km}**, mb3.3**/2**, mb1 3.6**/3**, mb1mx3.1**/47**, mbtmp3.4**/3**, ML3.6**/1**, Error ellipse: s-maj=152.5km s-min=28.3km az=66.0, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.51**	**159**	P	Pn	07 09 08.7	+0.4
	0.2nm,0.3s,baz=337,slow=11,SNR=11						
ASAR	**Alice Springs**	**21.84**	**163**	P	P	07 09 43.5	-1.0
	0.3nm,0.4s,baz=345,slow=11,SNR=7.7						
MKAR	**Makanchi Array**	**63.13**	**327**	P	P	07 15 20.3	+0.4
	0.4nm,0.6s,baz=116,slow=6.6,SNR=2.6						

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*NNC **28** 07:07:05.8±1.8, 50°.36N×79°.46E, h0^{km}, mb2.8, mpv2.5, Error ellipse: s-maj=41.4km s-min=5.4km az=35.0, Suspected Mining explosion.*

*IDC **28** 07:07:07.3±1.1, 50°.08N×78°.77E, h0^{km}, mb1 2.7/2, mb1mx2.6/51, mbtmp2.7/2, ML2.2/2, Error ellipse: s-maj=17.1km s-min=7.1km az=65.0*

ISC 28 07:07:04.1±1.2**, 50°.02N**±0°.05×**78°.10E**±0°.10**, h0**^{km}**, n8,** σ**0^{s}.64**/10**, 5C-4D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KURBB	**Kurchatov Arra**	**0.67**	**24**	Pg	**Pg**	**07 07 17.6**	**+0.7**
	1.5nm,0.3s,baz=166,slow=19,SNR=40						
KURBB				Lg	Lg	07 07 27.2	
	1.3nm,0.3s,baz=162,slow=33,SNR=12						
KURBB	**Kurchatov Arra**	**0.67**	**24**	⇑P	**Pb**	**07 07 18.3**	**-0.4**
	11nm,0.3s						
KURBB				⇑S	**Sb**	**07 07 27.7**	**-0.8**
	43nm,0.5s						
MAKZ	**Makanchi**	**4.12**	**140**	⇓Pg	**Pb**	**07 08 17.4**	**-0.1**
	1.5nm,0.7s						
MAKZ				⇓Lg	Lg	07 09 06.8	
	3.8nm,0.6s						
MK31	**Makanchi Array**	**4.26**	**138**	⇑Pn	**Pn**	**07 08 10.7**	**+0.4**
	0.1nm,0.3s,baz=281,slow=7.3,SNR=14						
MK31				⇓Pg	**Pb**	**07 08 20.0**	**0.0**
	0.5nm,0.4s,baz=328,slow=16,SNR=8.5						
MK31				⇑Lg	Lg	07 09 11.4	
	4.3nm,0.6s,baz=332,slow=27,SNR=11						
MKAR	**Makanchi Array**	**4.26**	**138**	Pn	**Pn**	**07 08 10.7**	**+0.4**
	0.2nm,0.3s,baz=322,slow=10,SNR=23						
MKAR				Sn	**Sn**	**07 08 59.7**	**-1.1**
	0.3nm,0.3s,baz=327,slow=16,SNR=1.4						
MKAR				Lg	Lg	07 09 12.1	
	1.0nm,0.3s,baz=341,slow=30,SNR=12						
ZALV	**Zalesovo Beam**	**5.72**	**44**	Pn	**Pn**	**07 08 30.5**	**+0.2**
	0.4nm,0.3s,baz=229,slow=14,SNR=7.0						
I46RU	**ZALESOVO INFRA**	**5.72**	**44**	*i*		07 40 00.0	
	baz=219,slow=290,SNR=1.4						
BRVK	**Borovoye**	**5.75**	**305**	⇓Pn	**Pn**	**07 08 30.6**	**-0.1**
	2.5nm,0.5s						
BRVK				⇑Lg	Lg	07 09 02.5	
	10nm,0.7s						

NNC 28 07:27:56.4±5.8**, 37°.82N**×**78°.07E, h14**^{km}±26^{km}**, mb3.5, mpv3.2, 5C-3D, Error ellipse: s-maj=56.0km s-min=40.0km az=77.0, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MDOK	**Medeo**	**5.39**	**352**	Pg	Pg	07 29 36.7	-2.9
	2.1nm,0.4s						
MDOK				Lg	Lg	07 30 51.3	
	8.1nm,0.8s						
TKM2	**Tokmak 2**	**5.43**	**340**	⇑Pg	Pb	07 29 35.6	+4.5
	0.9nm,0.3s						
TKM2				⇑Lg	Lg	07 30 46.1	
	2.0nm,0.5s						
PDGK	**Podgornoye**	**5.60**	**11**	⇑Pg	Pb	07 29 35.9	+1.9
	1.2nm,0.5s						
PDGK				⇓Lg	Lg	07 30 55.4	
	4.8nm,0.5s						
MAKZ	**Makanchi**	**9.43**	**17**	⇓Pn	Pn	07 30 12.2	+0.4
	2.1nm,0.9s						
MAKZ				⇓Sn	Sn	07 31 59.1	+1.5
	0.8nm,0.8s						
MK31	**Makanchi Array**	**9.49**	**18**	⇑Pn	Pn	07 30 12.5	-0.1
	0.1nm,0.3s,baz=197,slow=14,SNR=28						
MK31				⇑Sn	Sn	07 31 59.5	+0.5
	0.7nm,0.6s,baz=203,slow=26						

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*TRN **28** 07:47:12.7, 13°.92N×58°.65W, h63^{km}, MD3.8*

ISC 28 07:47:12.0±2.7**, 13°.93N**±0°.05×**58°.7W**±0°.1**, h10**^{km}**, n24,** σ**1^{s}.11**/40**, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBSP	**Saint Philip**	**1.12**	**223**	*e*P	**Pb**	**07 47 34.5**	**+1.1**
BBSP				*e*S	**Sb**	**07 47 48.7**	**+0.7**
BBGH	**Gun Hill**	**1.16**	**227**	*e*P	**Pb**	**07 47 35.3**	**+1.1**
BBGH				*e*S	**Sb**	**07 47 50.1**	**+0.8**
MPOM	**Morne Pois Mar**	**2.17**	**284**	*e*P	**Pn**	**07 47 48.0**	**-0.2**
MPOM				*e*S	**Sn**	**07 48 15.0**	**-0.2**
MCLT	**Moule a Chique**	**2.21**	**264**	*e*P	**Pn**	**07 47 48.5**	**-0.2**
MCLT				*e*S	**Sn**	**07 48 15.3**	**-0.8**
SLBI	**Saint Lucia, B**	**2.23**	**273**	*e*P	**Pn**	**07 47 48.2**	**-0.8**
SLBI				*e*S	**Sn**	**07 48 15.8**	**-0.8**
SLCP	**Castries, St.**	**2.24**	**272**	*e*P	**Pn**	**07 47 48.9**	**-0.3**
SLCP				*e*S	**Sn**	**07 48 16.1**	**-0.8**
LPMF	**Morne Lapointe**	**2.30**	**286**	*e*P	**Pn**	**07 47 49.9**	**-0.2**
ZAM	**Aeronautique**	**2.36**	**286**	*e*P	**Pn**	**07 47 50.8**	**-0.1**
BIM	**Bigot**	**2.39**	**284**	*e*P	**Pn**	**07 47 51.1**	**-0.2**
BIM				*e*S	**Sn**	**07 48 20.1**	**-0.5**
SSV	**Crater Summit**	**2.51**	**256**	*e*P	**Pn**	**07 47 53.0**	**0.0**
SSV				*e*S	**Sn**	**07 48 22.0**	**-1.8**
FDF	**Fort de France**	**2.52**	**289**	*e*P	**Pn**	**07 47 53.7**	**+0.6**
FDF				*e*S	**Sn**	**07 48 23.2**	**-0.7**
SVV	**Soufriere Volc**	**2.54**	**256**	*e*P	**Pn**	**07 47 53.6**	**+0.3**
SVV				*e*S	**Sn**	**07 48 23.7**	**-0.6**
BAMF	**Morne Balai**	**2.54**	**290**	*e*P	**Pn**	**07 47 54.2**	**+0.8**
GBMF	**Grand Be**	**2.55**	**290**	*e*P	**Pn**	**07 47 54.5**	**+0.9**
SVB	**Belmont**	**2.58**	**256**	*e*P	**Pn**	**07 47 54.2**	**+0.3**
SVB				*e*S	**Sn**	**07 48 25.0**	**-0.4**
SVOC	**Richmond Hill,**	**2.59**	**253**	*e*S	**Sn**	**07 48 25.4**	**-0.1**
PCM	**Pelee Case Pet**	**2.60**	**290**	*e*P	**Pn**	**07 47 54.5**	**+0.3**
GCMP	**Grenada, Carri**	**3.03**	**242**	*e*P	**Pn**	**07 48 00.7**	**+0.6**
GCMP				*e*S	**Sn**	**07 48 35.4**	**-1.1**
DSLB	**Salisbury**	**3.04**	**300**	*e*P	**Pn**	**07 48 00.4**	**+0.1**
DSLB				*e*S	**Sn**	**07 48 35.3**	**-1.5**
GRGR	**Grenville**	**3.40**	**239**	*e*P	**Pn**	**07 48 05.3**	**+0.1**
GRGR				*e*S	**Sn**	**07 48 43.7**	**-2.0**
GRFF	**Grenada Fort F**	**3.52**	**238**	*e*P	**Pn**	**07 48 07.4**	**+0.6**
GRFF				*e*S	**Sn**	**07 48 45.9**	**-2.6**
CBE	**Ff, Capester**	**3.54**	**307**	*e*P	**Pn**	**07 48 06.7**	**-0.4**
CBE				*e*S	**Sn**	**07 48 47.0**	**-1.9**
TRN	**Trinidad (W)**	**4.21**	**219**	*e*P	**Pn**	**07 48 16.6**	**+0.3**
TRN	**Trinidad (W)**	**4.21**	**219**	*e*S	**Sn**	**07 49 01.8**	**-3.7**

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*SJA **28** 07:48:51.0±0.9, 32°.13S×69°.41W, h141^{km}±3^{km}, ML4.2, MW4.4*

*IDC **28** 07:48:51.7±2.1, 32°.09S×69°.40W, h98^{km}±19^{km}, mb3.9/8, mb1 4.0/13, mb1mx3.9/31, mbtmp4.2/13, Error ellipse: s-maj=22.8km s-min=13.1km az=94.0*

*NEIC **28** 07:48:53.8±1.8, 32°.11S±0°.05×69°.43W±0°.08, h111^{km}±2^{km}, mb4.5/11, Md4.4(SJA), Error ellipse: s-maj=10.4km s-min=6.5km az=112.0*

ISC 28 07:48:54.0±0.6**, 32°.13S**±0°.04×**69°.38W**±0°.05**, h124**^{km}±5^{km}**, n90,** σ**1^{s}.51**/98**, mb4.2**/12**, Mendoza Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AUSP	**Uspallata**	**0.09**	**184**	*i* P	**Pn**	**07 49 11.2**	**0.0**
AUSP				*i* S	**Sn**	**07 49 26.7**	**+2.4**
RTLS	**Leoncito**	**0.34**	**12**	*i* P	**Pn**	**07 49 12.1**	**+0.2**

RTLS				*i* S	Sn	07 49 26.9	+1.5
RTLS				IAML		07 49 28.5	
	comp=Z,5µm,0.4s						
ASAL	Salagasta	0.65	135	*i* P	Pn	07 49 13.0	-0.5
ASAL				*i* S	Sn	07 49 29.5	+1.3
ASAL				IAML		07 49 29.5	
	comp=Z,1µm,0.4s						
RTCV	Cerro Valdivia	0.76	70	*i* P	Pn	07 49 13.6	-0.6
RTCV				IAML		07 49 30.4	
	comp=Z,334nm,2.4s						
RTCV				*i* S	Sn	07 49 30.6	+1.0
ARCO	CERRO ARCO	0.80	152	*i* P	Pn	07 49 14.0	-0.8
ARCO				*i* S	Sn	07 49 31.2	+0.8
ARCO				IAML		07 49 33.1	
	comp=Z,9µm,0.5s						
ZON	Zonda	0.83	46	Pn	Pn	07 49 13.9	-1.0
ZON	Zonda	0.83	46	*i* P	Pn	07 49 14.4	-0.5
ZON				IAML		07 49 35.6	
	comp=Z,3µm,0.8s						
AAGR	Agrelo	1.06	154	*i* P	Pn	07 49 16.7	-0.4
AAGR				IAML		07 49 41.5	
	comp=Z,1µm,1.4s						
VA03	San Esteban	1.18	237		Pn	07 49 17.9	-0.3
VA03	San Esteban	1.18	237	*i* P	Pn	07 49 17.0	-1.2
PEL	Peldehue	1.50	227		Pn	07 49 20.8	-0.9
PEL	Peldehue	1.50	227	*i* P	Pn	07 49 21.0	-0.7
ACCO	Cerro Coronel	1.56	10	*i* P	Pn	07 49 22.0	-0.7
ROC1	El Roble	1.62	238	*i* P	Pn	07 49 22.0	-1.3
MT05	Renca	1.70	222		Pn	07 49 23.6	-0.5
MT05	Renca	1.70	222	*i* P	Pn	07 49 23.0	-1.1
MT02	Curacav	1.86	232	Pn	Pn	07 49 24.5	-1.5
MT02	Curacav	1.86	232	*i* P	Pn	07 49 24.0	-1.9
VA01	Torpederas	2.11	244	Pn	Pn	07 49 27.0	-1.9
MT09	Talagante	2.13	219	Pn	Pn	07 49 28.2	-1.2
AVFE	Valle Fertil	2.20	49	*i* P	Pn	07 49 29.0	-1.3
AVFE				IAML		07 49 58.1	
	comp=Z,930nm,1.2s						
GO04	Tololo Observa	2.30	328		Pn	07 49 30.8	-0.9
GO04	Tololo Observa	2.30	328	*i* P	Pn	07 49 30.0	-1.7
MT01	Popeta	2.34	222	Pn	Pn	07 49 29.9	-1.9
MT01	Popeta	2.34	222	*i* P	Pn	07 49 30.0	-1.9
CO06	Fray Jorge	2.41	306		Pn	07 49 30.7	-2.1
VA05	Santo Domingo	2.42	230		Pn	07 49 30.8	-2.1
ACHE	Chepes	2.51	68	*i* P	Pn	07 49 33.0	-1.2
BO01	Tunca	2.67	212	Pn	Pn	07 49 34.5	-1.6
BO01	Tunca	2.67	212	*i* P	Pn	07 49 34.0	-2.1
CO05	La Serena	2.72	324		Pn	07 49 35.2	-1.6
RFA	San Rafael	2.74	164	*i* P	Pn	07 49 36.0	-1.1
RFA				IAML		07 50 10.4	
	comp=Z,619nm,0.4s						
BO02	Sierra Bellavi	2.90	203		Pn	07 49 38.6	-0.6
APLL	PUNTA DE LOS L	2.99	55	*i* P	Pn	07 49 39.0	-1.4
MRA	San Martin	3.12	96	*i* P	Pn	07 49 41.0	-1.0
MRA				IAML		07 50 20.5	
	comp=Z,1µm,0.7s						
LCO	Las Campanas	3.31	340	Pn	Pn	07 49 43.6	-1.1
LCO	Las Campanas	3.31	340	*i* P	Pn	07 49 43.0	-1.8
LCO				IAML		07 50 22.5	
	comp=Z,5µm,0.7s						
ACLC	CERRO LA CRUZ	3.41	38	*i* P	Pn	07 49 45.0	-1.0
ACLC				IAML		07 50 47.8	
	comp=Z,713nm,0.8s						
VCA	Vinchina	3.53	17	*i* P	Pn	07 49 47.0	-0.6
VCA				IAML		07 50 56.0	
	comp=Z,749nm,0.6s						
GO05	Huala	3.58	216		Pn	07 49 45.2	-2.8
ML02	Panimavida	4.00	205	Pn	Pn	07 49 51.6	-2.0
TCA	Tanti	4.15	80	*i* P	Pn	07 49 54.5	-1.3
AC04	Llanos de Chal	4.18	339	Pn	Pn	07 49 54.4	-1.7
GO03	Copiap	4.58	350		Pn	07 50 00.1	-1.4
AC02	Maricunga	5.28	2		Pn	07 50 10.6	-0.7
FSA	Cafayete	6.69	27	*i* P	Pn	07 50 29.0	-1.0
LC01	Cunco	7.05	196	Pn	Pn	07 50 31.9	-2.7
LC01	Cunco	7.05	196	*i* P	Pn	07 50 34.0	-0.6
TRQA	Tornquist	8.47	136		Pn	07 50 52.5	-1.2
PLCA	Paso Flores	8.64	186	P	Pn	07 50 54.6	-1.5
	comp=Z,0.3nm,0.3s,baz=337,slow=11,SNR=9.4						
PLCA				S	Sn	07 52 31.7	-0.1
	comp=Z,0.3nm,0.3s,baz=46,slow=18,SNR=3.3						
PLCA	Paso Flores	8.64	186	Pn	Pn	07 50 54.5	-1.6
PB15	IPOC Station P	8.89	359		Pn	07 50 57.7	-2.0
LVC	Limon Verde	9.49	3	P	Pn	07 51 04.7	-3.3
	comp=Z,2.7nm,0.3s,baz=186,slow=7.6,SNR=13						
LVC				S	Sn	07 52 43.8	-9.3
	comp=Z,1.1nm,0.3s,baz=264,slow=15,SNR=1.5						
LVC	Limon Verde	9.49	3		Pn	07 51 05.1	-2.8
CPUP	Villa Florida	12.00	64	P	Pn	07 51 38.5	-2.6
	comp=Z,0.5nm,0.3s,baz=233,slow=12,SNR=6.9						
CPUP				S	Sn	07 53 47.9	-5.4
	comp=Z,0.9nm,0.3s,baz=239,slow=18,SNR=2.9						
LPAZ	La Paz	15.81	4	P	Pn	07 52 28.8	-1.6
	comp=Z,0.5nm,0.3s,baz=195,slow=8.0,SNR=33						
LPAZ				S	S	07 55 33.4	+2.5
	comp=Z,0.0nm,0.3s,baz=222,slow=16,SNR=2.1						
SIV	San Ignacio	17.75	27	P	P	07 52 51.9	-0.7
	comp=Z,0.5nm,0.3s,baz=216,slow=12,SNR=12						
GO09	Cerro Castillo	19.25	186	P	Pn	07 53 09.8	-1.1
GO09				IAmb	IAmb	07 53 11.4	
	comp=Z,24nm,1.1s						
VILB	Vilhena	20.86	26	P	P	07 53 26.6	+0.3
EFI	East Falkland	21.22	160	P	P	07 53 28.9	-0.8
ETMB	Extrema	22.40	8	P	P	07 53 43.0	+0.7
USHA	Ushuaia	22.70	179	P	P	07 53 46.1	+1.0
	comp=Z,19nm,0.7s,baz=7.5,slow=8.3,SNR=17						
SAML	Samuel	23.77	15	P	P	07 53 55.6	+0.3
SAML				IAmb	IAmb	07 53 57.3	
	comp=Z,8.9nm,0.6s						
BDFB	Brasilia	25.44	55	P	P	07 54 10.6	0.0
	comp=Z,4.6nm,1.1s,baz=219,slow=12,SNR=3.4						
BAUV	El Baul	40.86	2	P	P	07 56 24.1	+0.3
BAUV				IAmb	IAmb	07 56 24.4	
	comp=Z,7.6nm,0.8s						
VNA3	Neumayer Olymp	50.26	159	P	P	07 57 40.5	+3.2
VNA2	Neumayer--Watz	50.89	158	P	P	07 57 43.8	+1.9
	baz=289,slow=8.2						
SNAA	Sanae	52.49	159	P	P	07 57 55.7	+1.8
SNAA	Sanae	52.49	159	P	P	07 57 54.9	+1.0
	comp=Z,2.1nm,0.8s,baz=276,slow=9.7						
SNAA	Sanae	52.49	159	P	P	07 57 55.1	+1.3
QSPA	South Pole Qui	58.10	180	P	P	07 58 36.0	+1.7
QSPA				IAmb	IAmb	07 59 05.2	
	comp=Z,5.7nm,1.1s						
TXAR	Lajitas Array	69.26	328	P	P	07 59 48.8	+1.0
	comp=Z,1.0nm,0.5s,baz=162,slow=8.5,SNR=12						
TXAR	Lajitas Array	69.26	328	P	P	07 59 48.5	+0.7
TX31	Lajitas Ar. Si	69.26	328	P	P	07 59 49.0	+1.1
TX31				IAmb	IAmb	08 00 04.7	
	comp=Z,8.4nm,1.4s						
TORD	Torodi Ar. Bea	81.46	69	P	P	08 00 58.4	+0.6
	comp=Z,1.3nm,0.7s,baz=273,slow=4.0,SNR=6.3						
PDAR	Pinedale Array	83.15	331	P	P	08 01 06.7	+0.4
	comp=Z,0.8nm,0.7s,baz=136,slow=5.3,SNR=6.7						
NVAR	Mina Array Bea	83.67	323	P	P	08 01 10.6	+1.6
	comp=Z,0.8nm,0.8s,baz=168,slow=5.4						
SCHQ	Schefferville	86.64	1	P	P	08 01 23.1	0.0
	comp=Z,4.7nm,0.8s,baz=150,slow=3.9,SNR=7.4						
SCHQ	Schefferville	86.64	1	IAmb	IAmb	08 01 34.5	
	comp=Z,8.2nm,1.1s						
ASAR	Alice Springs	120.22	205	PKP	PKPdf	08 07 30.1	-0.9
	comp=Z,0.5nm,0.7s,baz=138,slow=1.5,SNR=6.6						
ARCES	ARCESS Array B	121.39	24	PKP	PKiKP	08 07 32.0	+0.2
	comp=Z,2.6nm,0.9s,baz=235,slow=3.2,SNR=2.5						
WRA	Warramunga Arr	123.46	207	PKP	PKPdf	08 07 37.0	-0.2
	comp=Z,1.0nm,0.5s,baz=158,slow=1.7,SNR=14						
BVAR	Borovoye Array	144.40	42	PKP	PKPdf	08 08 14.9	-0.1
	comp=Z,1.0nm,0.7s,baz=257,slow=5.8,SNR=3.8						
KURBB	Kurchatov Arra	149.98	43	PKPbc	PKiKP	08 08 30.9	+0.6
	comp=Z,2.1nm,0.5s,baz=302,slow=3.1,SNR=21						
KURK	Kurchatov	149.99	42		PKiKP	08 08 30.9	+0.6
ZALV	Zalesovo Beam	151.45	33	PKPbc	PKiKP	08 08 34.0	+0.7
	comp=Z,5.8nm,0.6s,baz=298,slow=3.1,SNR=27						
MKAR	Makanchi Array	153.86	48	PKPbc	PKPbc	08 08 38.4	-0.1
	comp=Z,0.5nm,0.7s,baz=285,slow=2.5,SNR=2.6						
MKAR				PKPab	PKPab	08 08 52.9	+0.8
	comp=Z,0.9nm,0.6s,baz=285,slow=3.9,SNR=4.9						
MJAR	Matsushiro Arr	156.83	289	PKPab	PKPab	08 09 05.8	+0.6
	comp=Z,0.9nm,0.5s,baz=91,slow=3.7,SNR=2.8						
SONM	Songino Array	163.99	10	PKPab	PKPab	08 09 36.4	+0.4
	comp=Z,0.3nm,0.4s,baz=358,slow=2.4,SNR=2.8						
KSRS	Korea Array	164.83	295	PKPab	PKPab	08 09 38.2	-1.8
	comp=Z,4.1nm,1.0s,baz=87,slow=8.1,SNR=2.8						

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*NNC **28** 07:53:50.4±6.0, 37°.03N×69°.91E, h0^{km}, mb4.6, mpv4.9, Error ellipse: s-maj=54.8km s-min=25.4km az=176.0*

*IDC **28** 07:53:52.2±2.9, 36°.34N×70°.46E, h197^{km}±26^{km}, mb3.3/10, mb1 3.4/16, mb1mx3.2/47, mbtmp3.9/16, Error ellipse: s-maj=22.1km s-min=16.4km az=17.0*

ISC 28 07:53:53.2±0.6**, 36°.56N**±0°.06×**70°.39E**±0°.07**, h200^{km}, n30,** σ**1^{s}.17**/36**, mb3.5**/9**, 3C-3D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	Cherat	3.00	155	⇓P	Pn	07 54 43.6	+0.5
CEP				S	Sn	07 55 21.0	-1.0
CHCP	Chirah Chowk	3.73	140	P	Pn	07 54 52.5	+0.7
THW	Thamme Wali	3.92	163	P	Pn	07 54 54.1	0.0
AML	Almayashu	6.12	24	P	Pn	07 55 21.9	-0.5
	SNR=84						
UCH	Uchtor	6.50	28	P	Pn	07 55 28.0	+0.7
	SNR=82						
EKS2	Erkin-Say	6.63	22	P	Pn	07 55 29.6	+0.9
	SNR=28						
AAK	Ala-Archa	6.85	26	P	Pn	07 55 32.0	+0.5
	5.7nm,0.3s,baz=201,slow=6.6,SNR=46						
AAK				S	Sn	07 56 47.7	-1.8
	2.4nm,0.3s,baz=306,slow=19,SNR=11						
KBK	Karagaybulak	7.03	29	P	Pn	07 55 34.8	+0.8
	SNR=16						
CHMS	Chumysh	7.25	26	P	Pn	07 55 37.9	+1.2
	SNR=6.1						
ULHL	Ulahol	7.26	37	P	Pn	07 55 37.5	+0.5
	SNR=8.8						
USP	Ospenovka	7.40	24	P	Pn	07 55 39.0	+0.4
	SNR=27						
TKM2	Tokmak 2	7.51	31	P	Pn	07 55 40.8	+0.5
	SNR=84						
TKM2	Tokmak 2	7.51	31	⇓P	Pn	07 55 40.1	-0.1
	34nm,0.5s						
TKM2				⇑S	Sn	07 57 03.3	-1.9
	7.0nm,0.7s						
GEYT	Alibeck	9.88	282	P	Pn	07 56 13.0	+2.2
	0.2nm,0.3s,baz=64,slow=13,SNR=1.3						
GEYT				S	Sn	07 57 59.0	-2.3
	0.9nm,0.3s,baz=179,slow=26,SNR=2.9						
MKAR	Makanchi Array	13.54	37	P	Pn	07 56 57.5	+0.3
	0.3nm,0.3s,baz=223,slow=15,SNR=8.0						
AB31	Akbulak array	14.80	332	⇓P	Pn	07 57 12.2	-0.5
	1.2nm,0.3s,baz=146,slow=10,SNR=74						
AB31				⇑S	S	07 59 54.9	-2.0
	0.9nm,0.6s,baz=149,slow=24,SNR=3.0						
KURBB	Kurchatov Arra	15.23	20	P	Pn	07 57 17.9	-0.1
	0.1nm,0.3s,baz=211,slow=10,SNR=5.1						
BVAR	Borovoye Array	16.46	0	P	Pn	07 57 33.6	+0.7
	1.0nm,0.3s,baz=295,slow=28,SNR=10						
AKTO	Aktyubinsk	16.48	331	P	Pn	07 57 33.7	+0.5
	0.7nm,0.3s,baz=140,slow=11,SNR=15						
AKTO	Aktyubinsk	16.48	331	⇑P	P	07 57 33.0	+0.7
	7.2nm,0.9s						
AKTO				S	S	08 00 32.9	-1.5
	2.9nm,1.0s						
ZALV	Zalesovo Beam	20.07	25	P	P	07 58 12.3	+1.2
	1.6nm,0.3s,baz=223,slow=9.5,SNR=7.6						
SONM	Songino Array	28.71	56	P	P	07 59 32.6	+0.8
	0.3nm,0.4s,baz=264,slow=10.0,SNR=2.6						
FINES	FINESS Array B	37.16	326	P	P	08 00 45.9	+1.4
	6.3nm,1.0s,baz=126,slow=14,SNR=4.3						
ARCES	ARCESS Array B	40.90	338	P	P	08 01 16.8	+1.4
	4.3nm,1.1s,baz=111,slow=1.7,SNR=6.9						
NOA	NORSAR Array B	44.03	323	P	P	08 01 41.2	+0.4
	0.8nm,0.8s,baz=99,slow=7.8,SNR=1.8						
TORD	Torodi Ar. Bea	65.23	268	P	P	08 04 12.1	-1.5
	0.9nm,1.1s,baz=45,slow=5.4,SNR=4.1						
INK	Inuvik	73.92	9	P	P	08 05 06.9	+1.0
	0.3nm,0.4s,baz=360,slow=8.3,SNR=3.7						
YKA	Yellowknife Ar	81.20	2	P	P	08 05 46.1	-0.1
	0.8nm,0.9s,baz=5.3,slow=5.5,SNR=3.3						
WRA	Warramunga Arr	82.44	122	P	P	08 05 51.7	-1.7
	0.7nm,0.7s,baz=319,slow=5.0,SNR=12						
ASAR	Alice Springs	84.69	124	P	P	08 06 03.4	-1.3
	0.5nm,0.5s,baz=311,slow=5.1,SNR=11						

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*IDC **28** 07:58:05.8±1.8, 28°.08S×176°.85W, h0^{km}, mb3.8/4, mb1 4.1/5, mb1mx3.9/18, mbtmp3.9/5, ML3.5/1, MS3.5/6, Ms1 3.5/6, ms1mx3.2/29, Error ellipse: s-maj=45.3km s-min=23.7km az=115.0*

*NEIC **28** 07:58:12.8±1.1, 28°.16S±0°.10×177°.0W±0°.1, h35^{km}±1^{km}, mb4.2/9, Error ellipse: s-maj=25.3km s-min=10.4km az=122.0*

ISC 28 07:58:12.9±0.9**, 28°.2S**±0°.1×**176°.9W**±0°.2**, h49^{km}, n26,** σ**1^{s}.19**/18**, mb4.1**/8**, MS3.7**/4**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	1.38	220	Pn	Pn	07 58 35.7	-0.1
	458nm,0.3s,baz=91,slow=6.0,SNR=15						
RAO				Sn	Sn	07 58 54.4	+1.5
	1µm,0.3s,baz=90,slow=20,SNR=24						
RAO				LR	LR	07 59 08.3	
	comp=Z,521nm,19.7s,baz=95,slow=42						
RAO	Raoul Island	1.38	220		Pn	07 58 36.0	+0.2
NIUE	Niue	11.10	37	Pn	Pn	08 00 48.6	-0.5
URZ	Urewera	11.21	205	Pn	Pn	08 00 47.3	-3.2
	0.3nm,0.3s,baz=304,slow=22,SNR=1.7						
URZ				Sn	Sn	08 02 44.9	-9.4
	0.9nm,0.3s,baz=122,slow=24,SNR=1.9						
MSVF	Nonsavu	11.41	335	LR	LR	08 04 06.2	
	comp=Z,227nm,18.1s,baz=184,slow=32						
THZ	Tophouse	15.88	209	Pn	Pn	08 01 52.3	-0.9
RAR	Rarotonga	17.04	70	LR	LR	08 07 26.1	
	comp=Z,70nm,18.8s,baz=218,slow=33						
PPT	Papeete	27.25	73	LR	LR	08 13 27.3	
	comp=Z,25nm,19.1s,baz=262,slow=34						
STKA	Stephens Creek	35.96	254	P	P	08 05 09.2	+0.2
	0.7nm,0.5s,baz=87,slow=17,SNR=2.3						
STKA				LR	LR	08 18 10.4	
	comp=Z,156nm,18.9s,baz=27,slow=33						
STKA	Stephens Creek	35.96	254	IAmb	IAmb	08 05 36.7	
	comp=Z,1.2nm,1.4s						
AS31	Alice Springs	44.24	264	P	P	08 06 17.4	-0.3
ASAR	Alice Springs	44.24	264	P	P	08 06 16.9	-0.8
	comp=Z,0.4nm,0.6s,baz=96,slow=7.0,SNR=3.1						
ASAR				LR	LR	08 23 16.2	
	comp=Z,108nm,19.4s,baz=80,slow=34						
WB2	Warramunga Arr	45.02	269	P	P	08 06 23.9	-0.1
WB2				IAmb	IAmb	08 06 41.3	
	comp=Z,6.7nm,1.5s						
WRA	Warramunga Arr	45.03	269	P	P	08 06 23.0	-1.1
	comp=Z,0.9nm,0.6s,baz=110,slow=6.3,SNR=14						
WRA	Warramunga Arr	45.03	269	P	P	08 06 23.4	-0.6
WB0	Warramunga Arr	45.04	270	P	P	08 06 24.2	0.0
WB0				IAmb	IAmb	08 06 40.8	
	comp=Z,4.0nm,1.0s						
FITZ	Fitzroy Crossi	53.37	268	LR	LR	08 27 35.6	
	comp=Z,48nm,18.9s,baz=42,slow=33						
CASY	Casey	57.53	207	P	P	08 07 57.6	+0.7
CASY				IAmb	IAmb	08 08 01.9	
	comp=Z,4.1nm,0.9s						
QSPA	South Pole Qui	61.90	180	P	P	08 08 29.3	+2.0
QSPA				IAmb	IAmb	08 08 52.9	
	comp=Z,2.5nm,0.9s						
MJAR	Matsushiro Arr	77.00	324	P	P	08 10 01.0	+0.5
	comp=Z,0.8nm,0.6s,baz=154,slow=4.7,SNR=1.8						
H03S2	Juan Fernandez	80.87	123	T	T	09 40 21.6	
	baz=239						
H03S1	Juan Fernandez	80.88	123	T	T	09 40 22.6	
	baz=239						
H03S3	Juan Fernandez	80.89	123	T	T	09 40 21.6	
	baz=239						
FINES	FINESS Array B	143.39	342	PKP	PKPbc	08 17 38.3	-0.2
	comp=Z,3.2nm,0.9s,baz=43,slow=8.4,SNR=4.1						
AKASG	Malin Array Be	150.08	326	PKPbc	PKPbc	08 17 57.7	-0.1
	comp=Z,0.3nm,0.3s,baz=46,slow=2.8,SNR=1.8						
TORD	Torodi Ar. Bea	164.97	175	PKPab	PKPab	08 19 08.6	0.0
	comp=Z,0.6nm,0.9s,baz=209,slow=3.1,SNR=2.8						

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*MAN **28** 08:22:42.4, 6°.46N×126°.17E, h22^{km}, mb4.2, ML3.0, MS2.6*

IDC 28 08:22:33.4±2.4**, 6°.21N×126°.13E, h0^{km}, mb3.3**/4**, mb1 3.5**/4**, mb1mx3.3**/38**, mbtmp3.3**/4**, Error ellipse: s-maj=146.1km s-min=28.5km az=68.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	24.16	181	P	P	08 27 52.0	+0.6
	0.7nm,0.6s,baz=5.7,slow=10,SNR=1.8						
WRA	Warramunga Arr	27.21	163	P	P	08 28 18.9	-0.3
	0.1nm,0.3s,baz=342,slow=10,SNR=5.3						
ASAR	Alice Springs	30.65	166	P	P	08 28 49.6	-0.2
	0.2nm,0.6s,baz=338,slow=6.9,SNR=4.9						
MKAR	Makanchi Array	55.20	325	P	P	08 32 08.0	-0.1
	0.2nm,0.6s,baz=120,slow=8.5,SNR=1.6						

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*NNC **28** 08:26:06.7±5.8, 41°.02N×72°.85E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=56.8km s-min=16.3km az=173.0*

*KRNET **28** 08:26:08.4±0.1, 40°.96N×72°.68E, h15^{km}, mb2.5*

*SOME **28** 08:26:08.4, 41°.02N×72°.85E, h15^{km}*

ISC 28 08:26:07.4±1.0**, 40°.98N**±0°.02×**72°.72E**±0°.03**, h14^{km}**±11^{km}**, n20,** σ**1^{s}.16**/36**, 19C-3D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	Osh	0.46	173	⇑*i*P	Pb	08 26 17.1	-0.2
	baz=70						
OHH				⇑*i*S	Sg	08 26 23.2	+0.5
	baz=70						
SALK	Salom-Alik	0.84	96	⇑*e*P	Pn	08 26 25.0	0.0
	baz=95						
SALK				⇑*e*S	Sn	08 26 36.9	-0.4
	baz=95						
SFK	Sufi-Kurgan	1.14	148	⇑*e*P	Pg	08 26 29.7	+0.3
	baz=46						
SFK				⇑*e*S	Sn	08 26 45.6	+0.9
	baz=46						
TRKS	Terek-Say	1.31	295	⇑*i*P	Pb	08 26 31.8	-0.1
	baz=94						
TRKS				⇑*i*S	Sg	08 26 49.1	-0.6
	baz=94						
MNAS	Manas	1.51	354	⇑*i*P	Pg	08 26 37.0	+0.4
	baz=55						
MNAS				⇑*i*S	Sg	08 26 57.9	+1.6
	baz=55						
DRK	Karamyk	1.65	205	⇑*i*P	Pg	08 26 38.7	-0.5
	baz=5.0						
DRK				⇑*i*S	Sg	08 27 00.7	0.0
	baz=5.0						
BTK	Batken	1.71	238	⇑*i*P	Pg	08 26 39.8	-0.6
	baz=38						
BTK				⇑*i*S	Sg	08 27 02.5	-0.1
	baz=38						
MRKS	Merke	1.80	12	*e*P	Pg	08 26 42.4	+0.3
	6.3nm,0.1s						
MRKS				*e*S	Sg	08 27 06.1	+0.6
	32nm,0.2s						
MRKS	Merke	1.80	12	P	Pg	08 26 42.4	+0.3
	6.3nm,0.4s						
MRKS				S	Sg	08 27 06.1	+0.6
	32nm,0.4s						
MRKS	Merke	1.80	12	*e*P	Pg	08 26 42.4	+0.3
	baz=13						
MRKS				*e*S	Sg	08 27 06.1	+0.6
	baz=13						
UCH	Uchtor	1.84	47	⇑*i*P	Pg	08 26 43.0	+0.3
	baz=47						
UCH				⇑*i*S	Sg	08 27 08.0	+1.4
	baz=47						
EKS2	Erkin-Say	1.86	25	⇑*i*P	Pg	08 26 43.3	+0.2
	baz=25						
EKS2				⇑*i*S	Sg	08 27 08.7	+1.5
	baz=25						
IUG	Iuzhnay	2.33	301	*e*P	Pg	08 26 51.5	-0.6
	66nm,0.1s						
IUG				*e*S	Sg	08 27 21.5	-0.8
	66nm,0.1s						
IUG	Iuzhnay	2.33	301	Pg	Pg	08 26 51.5	-0.6
	66nm,0.3s						
IUG				Lg	Lg	08 27 21.5	
	67nm,0.3s						
USP	Ospenovka	2.64	30	⇓*i*P	Pb	08 26 54.4	-0.2
	baz=30						
USP				⇓*i*S	Sb	08 27 28.0	+1.1
	baz=30						
TKM2	Tokmak 2	2.89	47	⇑Pg	Pb	08 26 56.4	-2.5
	1.5nm,0.3s						
TKM2				⇓Lg	Lg	08 27 35.2	
	1.8nm,0.5s						
BRLS	Borolday	2.97	315	*e*P	Pb	08 27 00.9	+0.8
	7.1nm,0.1s						
BRLS				*e*S	Sb	08 27 37.8	+1.6
	7.1nm,0.3s						
BRLS	Borolday	2.97	315	Pg	Pb	08 27 00.9	+0.8
	1.4nm,0.3s						
BRLS				Lg	Lg	08 27 37.8	
	7.1nm,0.3s						
BTLS	Baital	4.17	13	*e*P	Pg	08 27 25.0	-2.4
	1.3nm,0.1s						
BTLS				*e*S	Sg	08 28 18.7	-2.7
	1.2nm,0.1s						
BTLS	Baital	4.17	13	Pg	Pg	08 27 25.0	-2.4
	1.3nm,0.5s						
BTLS				Lg	Lg	08 28 18.7	
	2.9nm,0.7s						

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*IDC **28** 08:44:44.3±10.0, 20°.37S×179°.46W, h650^{km}±133^{km}, mb2.9/5, mb1 3.2/6, mb1mx2.9/29, mbtmp4.0/6, Error ellipse: s-maj=91.6km s-min=51.8km az=156.0*

ISC 28 08:44:44.1±1.8**, 20°.5S**±0°.6×**179°.4W**±0°.3**, h650^{km}, n6,** σ**0^{s}.48**/6**, mb3.5**/5**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	13.32	261	P	P	08 47 35.6	+0.6
	0.4nm,0.3s,baz=77,slow=19,SNR=1.7						
STKA	Stephens Creek	36.63	244	P	P	08 50 58.4	-0.3
	0.8nm,0.5s,baz=91,slow=13,SNR=5.2						
ASAR	Alice Springs	43.27	257	P	P	08 51 51.3	0.0
	3.3nm,0.5s,baz=96,slow=7.6,SNR=59						
WRA	Warramunga Arr	43.33	262	P	P	08 51 51.3	-0.5
	1.7nm,0.3s,baz=97,slow=7.5,SNR=80						
TXAR	Lajitas Array	88.14	58	P	P	08 56 28.3	+0.2
	0.4nm,0.7s,baz=226,slow=5.0,SNR=3.4						
ILAR	Eielson Array	88.60	13	P	P	08 56 29.1	-0.2
	0.2nm,0.7s,baz=208,slow=5.1,SNR=1.3						

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*PRU **28** 08:54:19.4±0.0, 45°.31N×13°.38E, h0^{km}*

*LJU **28** 08:54:22.2, 45°.65N×13°.32E, h0^{km}, ML1.5, Suspected explosion*

*VIE **28** 08:54:22.8±0.4, 45°.65N×13°.33E, h4^{km}±4^{km}, mb2.5/12, ml2.4/18, Error ellipse: s-maj=3.6km s-min=1.7km az=0.0 50 km S of Cividale*

ISC 28 08:54:23.3±0.8**, 45°.65N**±0°.03×**13°.34E**±0°.03**, h0^{km}, n45,** σ**0^{s}.82**/61**, 1C, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRI	Trieste	0.30	79	*e*Pg	Pg	08 54 28.7	-0.3
TLI	Talmassons	0.32	329	*e*Pg	Pg	08 54 29.1	-0.3
SABO	M.te Sabotino	0.38	29	*e*Pg	Pg	08 54 30.4	-0.1
COLI	Coloredo	0.48	3	*e*Pg	Pg	08 54 32.1	-0.5
SKDS	Skadanscina	0.48	102	*i* Pg	Pg	08 54 31.8	-0.7
SKDS				IAML		08 54 43.3	
	comp=Z,30nm,0.2s						
VOJS	Vojsko	0.54	45	⇑*i*Pg	Pg	08 54 32.9	-0.7
VOJS				*i* Sg	Sg	08 54 41.6	+1.1
VOJS				IAML		08 54 43.3	
	comp=Z,12nm,0.1s						
JAVS	Javornik	0.56	64	*i* Pg	Pg	08 54 33.2	-0.8
JAVS				IAML		08 54 44.0	
	comp=Z,19nm,0.2s						
DRE	Drenchia	0.56	22	*e*Pg	Pg	08 54 33.3	-0.8
BUA	Buia	0.59	345	*e*Pg	Pg	08 54 34.0	-0.6
BAD	Bernadia	0.59	353	*e*Pg	Pg	08 54 33.7	-0.9
ROBS	Robic	0.61	11	*i* Pg	Pg	08 54 33.9	-1.0
VINO	Villanova	0.61	356	*e*Pg	Pg	08 54 33.9	-1.0
CADS	Cadrg	0.64	25	*i* Pg	Pg	08 54 34.8	-0.7
KNDS	Knezji Dol	0.74	99	*i* Pg	Pg	08 54 36.5	-1.0
KNDS				IAML		08 54 56.6	
	comp=Z,13nm,0.2s						
CEY	Cerknica	0.77	83	*i* Pg	Pg	08 54 36.6	-1.3
BRJN	Brijuni	0.80	159	*e*Pg	Pg	08 54 38.6	+0.1
BRJN				Sg	Sb	08 54 51.5	+0.2
SMRN	Sveta Marina	0.84	137	*e*Pg	Pg	08 54 39.5	+0.2
MYKA	Terra Mystica	1.00	12	*e*Pg	Pg	08 54 42.3	-0.1
	comp=Z,4.5nm,0.1s,SNR=8.6						
OBKA	Obir	1.20	44	*e*Pg	Pg	08 54 46.1	-0.2
	comp=Z,13nm,0.2s,SNR=31						
OBKA				*e*Sg	Sn	08 55 03.9	-0.6
	comp=Z,17nm,0.3s						
ABTA	Abfaltersbach	1.24	333	*e*Pg	Pb	08 54 47.1	-0.5
	comp=Z,7.0nm,0.2s,SNR=20						
ABTA				*e*Sg	Sn	08 55 05.0	-0.5
	comp=Z,6.1nm,0.3s						

RABC	Rab	1.36	131	ePn	Pg	08 54 49.1	-0.2
RABC				Sn	Sn	08 55 07.9	-0.2
KBA	Koelnbreinsper	1.43	0	ePg	Pb	08 54 51.2	+0.3
	comp=Z,13nm,0.2s,SNR=12						
KBA				eSg	Sn	08 55 11.6	+1.4
	comp=Z,4.9nm,0.2s						
OZLJ	Ozalj	1.49	91	ePn	Pg	08 54 51.6	-0.2
NVLJ	Novalja	1.53	135	ePn	Pn	08 54 51.6	-0.2
SOKA	Soboth	1.56	48	ePg	Pb	08 54 52.4	-0.7
	comp=Z,4.7nm,0.3s,SNR=12						
SOKA				eSg	Sb	08 55 14.4	+1.0
	comp=Z,1.8nm,0.2s						
PLIT	Plitvice	1.79	115	ePn	Pn	08 54 55.4	0.0
PTJ	Puntijarka	1.86	81	ePn	Pn	08 54 56.8	+0.4
LOBO	Lobor	1.97	74	ePn	Pn	08 54 58.4	+0.4
WTTA	Wattenberg	2.00	324	ePg	Pb	08 54 59.4	-1.2
	comp=Z,4.7nm,0.2s						
WTTA				eSg	Sg	08 55 27.7	+0.2
	comp=Z,7.0nm,0.4s						
UDBI	Udbina	2.05	122	ePn	Pn	08 54 59.6	+0.6
DUGI	Dugi Otok	2.06	143	ePn	Pn	08 54 59.0	-0.1
WATA	Walderalm	2.08	325	ePg	Pb	08 55 00.9	-1.0
	comp=Z,3.6nm,0.2s,SNR=6.5						
WATA				Sg	Sg	08 55 31.0	+0.9
	comp=Z,4.0nm,0.4s						
SQTA	Sankt Quirin	2.15	318	Pg	Pb	08 55 02.2	-1.0
	comp=Z,13nm,0.2s						
SQTA				eSg	Sg	08 55 33.3	+0.8
	comp=Z,6.6nm,0.3s						
ARSA	Arzberg	2.20	43	ePn	Pn	08 55 00.8	-0.3
	comp=Z,1.9nm,0.3s						
KALN	Kalnik	2.23	76	ePn	Pn	08 55 00.9	-0.5
FETA	Feichten	2.27	308	ePn	Pn	08 55 03.0	+0.8
	comp=Z,1.8nm,0.2s						
FETA				Pg	Pg	08 55 06.1	-0.6
	comp=Z,2.5nm,0.3s						
FETA				eSg	Sg	08 55 36.1	-0.1
	comp=Z,1.4nm,0.2s						
MOA	Molln	2.29	16	ePn	Pn	08 55 03.2	+0.9
	comp=Z,1.0nm,0.1s,SNR=8.8						
MOA				Sn	Sn	08 55 30.8	-0.5
	comp=Z,2.2nm,0.2s						
MOTA	Moosalm	2.29	318	ePg	Pb	08 55 04.0	-1.6
	comp=Z,3.6nm,0.2s,SNR=12						
MOTA				eSg	Sg	08 55 37.2	+0.2
	comp=Z,2.3nm,0.3s						
MORI	Morici	2.45	136	ePn	Pn	08 55 05.3	+0.8
ZIRJ	Zirje	2.58	140	ePn	Pn	08 55 06.3	0.0
CONA	Conrad Observa	2.86	36	ePn	Pn	08 55 10.8	+0.6
	comp=Z,1.2nm,0.2s,SNR=4.4						
CONA				eSn	Sn	08 55 46.3	+0.9
	comp=Z,0.7nm,0.3s						
DAVA	Damuels	2.90	306	Pg	Pg	08 55 18.3	-0.5
	comp=Z,1.4nm,0.2s						
KHC	Kasperske Hory	3.49	3	ePN	Pn	08 55 18.7	-0.1
KHC				eSN	Sn	08 56 04.0	+3.2
MODS	Modra-Piesok	3.83	43	e	Pn	08 55 22.7	-0.8
VYHS	Vyhne	4.71	51	e	Pn	08 55 34.7	-0.9

MAN ***28*** *09:11:36.2, 7°.92N×128°.39E, h176km, mb4.3, ML3.1, MS2.8*

IDC ***28*** *09:11:38.3±1.0, 4°.56N×128°.39E, h0km, mb3.7/7, mb1 3.8/7, mb1mx3.7/39, mbtmp3.7/7, MS2.9/2, Ms1 2.9/2, ms1mx2.5/37, Error ellipse: s-maj=63.8km s-min=17.9km az=80.0*

ISC 28 09:11:44.7±1.0**, 4°.5N**±0°.1×**128°.4E**±0°.4**, h46**km**, n8,** σ**0ˢ.92**/7**,** **mb3.4**/7**, North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOW	Kunigami	22.16	360	LR	LR	09 23 55.2	
	comp=Z,22nm,19.4s,baz=20,slow=33						
FITZ	Fitzroy Crossi	22.66	187	P	P	09 16 41.2	-0.9
	1.2nm,0.8s,baz=29,slow=10,SNR=1.3						
WRA	Warramunga Arr	25.03	167	P	P	09 17 03.9	-0.8
	0.9nm,0.8s,baz=345,slow=10,SNR=8.4						
WRA				LR	LR	09 28 18.7	
	comp=Z,34nm,18.5s,baz=165,slow=40						
ASAR	Alice Springs	28.56	169	P	P	09 17 37.5	+1.1
	0.2nm,0.5s,baz=357,slow=7.5,SNR=2.6						
KSRS	Korea Array	32.76	359	P	P	09 18 13.7	+0.5
	1.5nm,0.7s,baz=183,slow=9.8,SNR=5.9						
SONM	Songino Array	47.07	340	P	P	09 20 12.3	+0.2
	1.0nm,0.5s,baz=155,slow=8.8,SNR=8.4						
MKAR	Makanchi Array	57.83	324	P	P	09 21 31.4	-0.3
	0.9nm,0.4s,baz=112,slow=8.2,SNR=15						
ILAR	Eielson Array	83.68	25	P	P	09 24 07.7	-0.6
	0.3nm,0.8s,baz=246,slow=6.8,SNR=4.2						

MAN ***28*** *09:15:31.0, 11°.02N×125°.62E, h10km, mb4.6, ML3.4, MS3.3*

IDC 28 09:15:18.1±1.8**, 11°.45N×126°.69E, h0**km**, mb3.6**/5**, mb1 3.7**/5**, mb1mx3.4**/39**, mbtmp3.6**/5**, Error ellipse: s-maj=177.2km s-min=20.9km az=68.0, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	32.09	166	P	P	09 21 47.1	-0.1
	0.3nm,0.6s,baz=345,slow=9.4,SNR=1.7						
ASAR	Alice Springs	35.61	169	P	P	09 22 18.4	+0.6
	0.3nm,0.5s,baz=350,slow=6.9,SNR=7.8						
SONM	Songino Array	40.07	339	P	P	09 22 55.2	-0.2
	0.3nm,0.5s,baz=170,slow=9.6,SNR=2.3						
STKA	Stephens Creek	45.39	162	P	P	09 23 37.6	-0.9
	0.8nm,0.3s,baz=330,slow=8.1,SNR=4.4						
MKAR	Makanchi Array	51.35	322	P	P	09 24 24.4	0.0
	1.0nm,0.6s,baz=117,slow=8.4,SNR=8.1						

MAN 28 09:28:21.1, 13°.24N×120°.47E, h5km**, mb3.9, ML2.7, MS2.2, Mindoro**

IDC 28 09:52:53.0±1.6**, 21°.95N×145°.14E, h0**km**, mb3.7**/6**, mb1 3.9**/6**, mb1mx3.5**/54**, mbtmp3.7**/6**, MS3.1**/1**, Ms1 3.1**/1**, ms1mx2.2**/61**, Error ellipse: s-maj=49.5km s-min=32.1km az=84.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	24.69	191	LR	LR	10 05 55.3	
	comp=Z,42nm,19.9s,baz=266,slow=32						
SONM	Songino Array	40.32	319	P	P	10 00 33.7	+1.5
	0.2nm,0.5s,baz=139,slow=8.8,SNR=1.6						
WRA	Warramunga Arr	42.95	195	P	P	10 00 53.9	0.0
	0.4nm,0.9s,baz=14,slow=9.4,SNR=2.6						
MKAR	Makanchi Array	55.87	312	P	P	10 02 31.8	-0.7
	0.5nm,0.5s,baz=94,slow=7.9,SNR=6.2						
KURBB	Kurchatov Arra	58.59	317	P	P	10 02 51.1	-0.5
	1.4nm,0.5s,baz=94,slow=7.7,SNR=14						
ILAR	Eielson Array	60.99	27	P	P	10 03 07.6	-0.3
	1.2nm,0.7s,baz=268,slow=7.6,SNR=2.4						
BVAR	Borovoye Array	63.66	319	P	P	10 03 26.3	+0.3
	0.7nm,0.4s,baz=72,slow=9.5,SNR=3.8						
FINES	FINESS Array B	83.73	335	P	P	10 05 23.6	0.0
	2.0nm,0.8s,baz=66,slow=4.7,SNR=5.4						

BGR ***28*** *09:55:40.1±0.0, 52°.14N×153°.65E, h33km, mb5.3, Ms4.2*
KRSC ***28*** *09:56:29.9±1.4, 52°.47N×153°.10E, h536km±27km, ML5.5*
BJI ***28*** *09:56:30.6±0.0, 52°.64N×152°.93E, h528km, mB4.9/31, mb4.9/52*
SKHL ***28*** *09:56:31.2±0.2, 52°.50N×152°.80E, h534km±8km, mb5.6/12, msha5.1/8*
NEIC ***28*** *09:56:31.9±1.6, 52°.67N±0°.06×152°.7E±0°.1, h510km±5km, mb4.7/428, Error ellipse: s-maj=12.3km s-min=6.5km az=60.0*
MOS ***28*** *09:56:31.1±0.8, 52°.65N×152°.79E, h521km, mb4.8/57, Error ellipse: s-maj=6.2km s-min=4.2km az=83.2*
IDC ***28*** *09:56:33.0±0.5, 52°.68N×152°.70E, h527km±5km, mb4.2/43, mb1 4.3/50, mb1mx4.2/63, mbtmp5.1/50, Error ellipse: s-maj=6.8km s-min=5.2km az=121.0*

ISC 28 09:56:31.8±0.3**, 52°.55N**±0°.04×**152°.87E**±0°.03**, h523**km±3km**, h521**km**:pP-P, n1099,** σ**1ˢ.40**/1054**, mb4.7**/349**, 38C-63D, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIPR	Malaya Ipel'ka	2.39	95	P	P	09 57 41.4	+0.5
MIPR				S	S	09 58 36.8	-0.5
MIPR	Malaya Ipel'ka	2.39	95	i P	P	09 57 41.4	+0.5
MIPR				eS	S	09 58 36.8	-0.5
APC	Apacha	2.63	80	P	P	09 57 42.0	-0.1
APC				S	S	09 58 38.4	-1.3
APC	Apacha	2.63	80	i P	P	09 57 42.0	-0.1
APC				eS	S	09 58 38.4	-1.3
PAU	Pauzhetka	2.66	112	P	P	09 57 42.5	+0.1
PAU	Pauzhetka	2.66	112	eP	P	09 57 42.5	+0.1
PAU	Pauzhetka	2.66	112	eP	P	09 57 42.4	+0.1
PAU				AMB	AMB	09 57 43.9	
	960nm,0.4s						
PAU				eS	S	09 58 38.1	-1.9
PAU				A	A	09 58 42.0	
	500nm,0.9s						
PAU				A	A	09 58 42.0	
	320nm,0.9s						
SKR	Severo-Kuril’s	2.75	131	eP	P	09 57 42.6	-0.4
SKR				eS	S	09 58 40.3	-0.6
SKR				pmax	pmax		
	comp=Z,908nm,0.5s						
SKR				smax	smax		
	comp=N,2µm,0.7s						
SKR				smax	smax		
	comp=E,1µm,0.7s						
SKR	Severo-Kuril’s	2.75	131	eP	P	09 57 42.3	-0.7
SKR				eS	S	09 58 38.3	-2.6
SKR	Severo-Kuril’s	2.75	131	eP	P	09 57 42.5	-0.4
SKR				AMB	AMB	09 57 44.5	
	comp=E,900nm,0.5s						
SKR				eS	S	09 58 38.0	-2.9
SKR				A	A	09 58 47.6	
	comp=E,2µm,0.7s						
SKR				A	A	09 58 47.6	
	comp=E,1µm,0.7s						
PEA0B	Petropavlovsk-	2.98	77	ceP	P	09 57 44.4	+0.1
PEA0B	Petropavlovsk-	2.98	77	P	P	09 57 44.4	+0.1
PETK	Petropavlovsk-	2.98	77	P	P	09 57 43.7	-0.6
	comp=E,33nm,0.3s,baz=229,slow=3.7,SNR=654						
PETK				S	S	09 58 44.8	+1.1
	comp=E,7.0nm,0.3s,baz=320,slow=20,SNR=5.8						
PETK	Petropavlovsk-	2.98	77	P	P	09 57 43.4	-0.9
PETK	Petropavlovsk-	2.98	77	P	P	09 57 43.4	-0.9
ASAK	Asacha	3.08	91	P	P	09 57 45.2	+0.1
ASAK				S	S	09 58 43.5	-1.4
ASAK	Asacha	3.08	91	eP	P	09 57 45.2	+0.1
ASAK				eS	S	09 58 43.5	-1.4
KRMR	Karymshinskiy	3.21	83	P	P	09 57 46.8	+1.0
KRMR	Karymshinskiy	3.21	83	eP	P	09 57 46.8	+1.0
MTVR	Mutnovka	3.24	89	P	P	09 57 46.5	+0.2
MTVR				S	S	09 58 46.8	-0.3
MTVR	Mutnovka	3.24	89	eP	P	09 57 46.5	+0.2
MTVR				eS	S	09 58 46.8	-0.3
GNL	Ganaly	3.26	67	P	P	09 57 46.6	+0.3
GNL				S	S	09 58 46.0	-1.3
GNL	Ganaly	3.26	67	eP	P	09 57 46.6	+0.3
GNL				eS	S	09 58 46.0	-1.3
KDTR	Khodutka, Kamc	3.29	101	P	P	09 57 45.3	-1.1
KDTR				S	S	09 58 42.9	-4.4
KDTR	Khodutka, Kamc	3.29	101	eP	P	09 57 45.3	-1.1
KDTR				eS	S	09 58 42.9	-4.4
RUS	Russkaya	3.45	90	P	P	09 57 46.8	-0.7
RUS				S	S	09 58 46.8	-2.5
RUS	Russkaya	3.45	90	eP	P	09 57 46.8	-0.7
RUS				eS	S	09 58 46.8	-2.5
PET	Petropavlovsk	3.54	80	⇓iP	P	09 57 47.9	-0.2
PET				i S	S	09 58 48.5	-2.0
PET				pmax	pmax		
	comp=Z,1µm,0.6s						
PET				smax	smax		
	comp=N,899nm,0.7s						
PET				smax	smax		
	comp=E,1µm,0.6s						
PET				MLR	MLR		
	comp=Z,100nm,13.0s						
PET	Petropavlovsk	3.54	80	eP	P	09 57 47.7	-0.4
PET				eS	S	09 58 47.7	-2.8
PET	Petropavlovsk	3.54	80	eP	P	09 57 47.9	-0.2
PET				AMB	AMB	09 57 49.4	
	comp=Z,1µm,0.6s						
PET	Petropavlovsk	3.54	80	P	P	09 57 47.8	-0.2
KOK	Koryaka	3.57	76	P	P	09 57 48.7	+0.3
KOK	Koryaka	3.57	76	eP	P	09 57 48.7	+0.3
KOK	Koryaka	3.57	76	eP	P	09 57 48.7	+0.3
DALK	Dalny	3.60	80	P	P	09 57 48.2	-0.4
DALK				S	S	09 58 48.1	-3.3
DALK	Dalny	3.60	80	eP	P	09 57 48.2	-0.4
DALK				eS	S	09 58 48.1	-3.3
AVH	Avacha	3.62	76	P	P	09 57 48.8	0.0
AVH	Avacha	3.62	76	eP	P	09 57 48.8	0.0
KRER	Koryakskii	3.64	76	P	P	09 57 49.1	0.0
KRER	Koryakskii	3.64	76	eP	P	09 57 49.1	0.0
SMAR	Somma	3.66	76	P	P	09 57 49.4	+0.1
SMAR				S	S	09 58 51.0	-1.6
SMAR	Somma	3.66	76	eP	P	09 57 49.4	+0.1
SMAR				eS	S	09 58 51.0	-1.6
UGLR	Uglovaya	3.67	77	P	P	09 57 49.2	0.0
UGLR				S	S	09 58 51.2	-1.3
UGLR	Uglovaya	3.67	77	eP	P	09 57 49.2	0.0
UGLR				eS	S	09 58 51.2	-1.3
NLC	Nalytchevo	3.97	78	P	P	09 57 51.8	+0.5
NLC				S	S	09 58 54.3	-2.1
NLC	Nalytchevo	3.97	78	eP	P	09 57 51.8	+0.5
NLC				eS	S	09 58 54.3	-2.1
NLC	Nalytchevo	3.97	78	eP	P	09 57 51.8	+0.5
KII	Karymskiy	4.22	67	P	P	09 57 54.7	+1.3
KII				S	S	09 59 00.4	+0.2
KII	Karymskiy	4.22	67	eP	P	09 57 54.7	+1.3
KII				eS	S	09 59 00.4	+0.2
SPN	Mys Shipunski	4.37	80	P	P	09 57 52.9	-1.6
SPN				S	S	09 58 55.7	-6.6
SPN	Mys Shipunski	4.37	80	i P	P	09 57 52.9	-1.6
SPN				eS	S	09 58 55.7	-6.6
SPN	Mys Shipunski	4.37	80	eP	P	09 57 52.9	-1.6
ESO	Esso	4.81	43	P	P	09 58 04.6	+6.4
ESO				S	S	09 59 14.1	+5.1
ESO	Esso	4.81	43	eP	P	09 58 04.6	+6.4
ESO				eS	S	09 59 14.1	+5.1
KMNR	Kamenistaya	5.39	50	P	P	09 58 03.8	+0.4
KMNR	Kamenistaya	5.39	50	eP	P	09 58 03.8	+0.4
KOZ	Kozyrevsk	5.40	47	P	P	09 58 04.1	+0.7
KOZ	Kozyrevsk	5.40	47	eP	P	09 58 04.1	+0.7
KPT	Kopyto	5.50	49	P	P	09 58 04.6	+0.2
KPT	Kopyto	5.50	49	eP	P	09 58 04.6	+0.2
KIRR	Kirishev	5.55	49	P	P	09 58 05.2	+0.3
KIRR	Kirishev	5.55	49	eP	P	09 58 05.2	+0.3
BZWR	Bezymyannyi-We	5.63	49	P	P	09 58 06.7	+1.1
BZWR	Bezymyannyi-We	5.63	49	eP	P	09 58 06.7	+1.1
BZGR	Bezymyannyi-Gr	5.71	50	P	P	09 58 07.0	+0.7
BZGR	Bezymyannyi-Gr	5.71	50	eP	P	09 58 07.0	+0.7
LGNR	Loginova	5.79	49	P	P	09 58 07.8	+0.6
LGNR	Loginova	5.79	49	eP	P	09 58 07.8	+0.6
ZLN	Zelenaya	5.80	50	P	P	09 58 07.0	-0.1
ZLN	Zelenaya	5.80	50	eP	P	09 58 07.0	-0.1
KRSR	Krestovskiy	5.81	48	P	P	09 58 07.5	+0.3
KRSR				S	S	09 59 24.4	-1.0
KRSR	Krestovskiy	5.81	48	eP	P	09 58 07.5	+0.3
KRSR				eS	S	09 59 24.4	-1.0
CIRR	Tsirk	5.83	49	P	P	09 58 07.7	+0.2
CIRR	Tsirk	5.83	49	eP	P	09 58 07.7	+0.2
KLY	Klyuchi	5.90	47	P	P	09 58 08.7	+0.8
KLY				S	S	09 59 26.0	-0.8
KLY	Klyuchi	5.90	47	eP	P	09 58 08.7	+0.8
KLY				eS	S	09 59 26.0	-0.8
OKH	Okha	6.08	283	eP	P	09 58 10.9	+1.3
OKH				AMB	AMB	09 58 12.0	
	comp=Z,550nm,0.7s						
BDR	Baidarnaya	6.30	47	P	P	09 58 11.7	-0.1
BDR				S	S	09 59 31.1	-2.8
BDR	Baidarnaya	6.30	47	eP	P	09 58 11.7	-0.1
BDR				eS	S	09 59 31.1	-2.8
SRKR	Sorokina	6.34	46	P	P	09 58 12.0	-0.1
SRKR				S	S	09 59 32.6	-1.9
SRKR	Sorokina	6.34	46	eP	P	09 58 12.0	-0.1
SRKR				eS	S	09 59 32.6	-1.9
SMKR	Semkarok	6.43	48	P	P	09 58 12.3	-0.7
SMKR				S	S	09 59 32.2	-3.9
SMKR	Semkarok	6.43	48	eP	P	09 58 12.3	-0.7
SMKR				eS	S	09 59 32.2	-3.9
TYV	Tymovskoe	6.57	259	eP	P	09 58 16.2	+1.8
TYV				eS	S	09 59 39.8	+1.2
TYV				pmax	pmax		
	comp=Z,93nm,0.5s						
TYV				pmax	pmax		
	comp=Z,1µm,2.7s						
TYV				smax	smax		
	comp=N,39nm,1.7s						
TYV				smax	smax		
	comp=E,20nm,1.7s						
TYV				smax	smax		
	comp=N,2µm,4.4s						
TYV				smax	smax		
	comp=E,900nm,4.4s						
TYV	Tymovskoe	6.57	259	eP	P	09 58 14.4	0.0
TYV				AMB	AMB	09 58 16.5	
	comp=E,90nm,0.5s						
TYV				eS	S	09 59 37.7	-0.9
TYV				A	A	09 59 41.5	
	comp=E,30nm,2.0s						
TYV				A	A	09 59 41.5	
	comp=E,20nm,2.0s						
KBG	Krutoberegovo	6.84	53	P	P	09 58 14.7	-2.1
KBG				S	S	09 59 37.6	-5.5
KBG	Krutoberegovo	6.84	53	eP	P	09 58 14.7	-2.1
KBG				eS	S	09 59 37.6	-5.5
KBG	Krutoberegovo	6.84	53	eP	P	09 58 14.5	-2.3
KBTR	Krutoberegovo	6.87	54	P	P	09 58 15.2	-2.0
KBTR				S	S	09 59 38.5	-5.2
KBTR	Krutoberegovo	6.87	54	eP	P	09 58 15.2	-2.0
KBTR				eS	S	09 59 38.5	-5.2
MA2	Magadan	7.15	351	P	P	09 58 19.7	-0.2
	comp=E,16nm,0.3s,baz=156,slow=9.8,SNR=131						
MA2				S	S	09 59 47.8	-0.9
	baz=292,slow=23,SNR=0.8						
MA2	Magadan	7.15	351	eP	P	09 58 19.8	-0.1
NKL	Nikolayevsk	7.41	280	eP	P	09 58 23.7	+1.1
NKL				AMB	AMB	09 58 24.9	
	comp=E,540nm,0.7s						
NKL				eS	S	09 59 54.4	+0.8
NKL				A	A	09 59 55.0	
	comp=E,20nm,0.7s						
NKL				A	A	09 59 55.0	
	comp=E,10.0nm,0.7s						
UGL	Uglegorsk	7.67	247	⇑iP	P	09 58 27.5	+2.2
UGL				S	S	09 59 53.6	-4.9
UGL				pmax	pmax		
	comp=Z,242nm,0.8s						
UGL	Uglegorsk	7.67	247	i P	P	09 58 25.3	0.0
UGL				AMB	AMB	09 58 28.0	
	comp=Z,240nm,0.8s						
UGL				eS	S	09 59 57.3	-1.2
UGL				A	A	10 00 00.9	
	comp=Z,60nm,0.6s						
UGL				A	A	10 00 00.9	
	comp=Z,60nm,0.6s						
PALN	Palana	7.68	29	P	P	09 58 24.9	-0.2
PALN	Palana	7.68	29	eP	P	09 58 24.9	-0.2
KUR	Kuril'sk	8.03	206	⇑iP	P	09 58 30.8	+1.8
KUR				i S	S	10 00 07.6	+2.5
KUR				pmax	pmax		
	comp=Z,112nm,0.4s						
KUR				smax	smax		
	comp=N,262nm,0.4s						
KUR				smax	smax		
	comp=E,125nm,0.4s						
KUR	Kuril'sk	8.03	206	i P	P	09 58 28.0	-1.0
KUR				AMB	AMB	09 58 32.5	
	comp=E,110nm,0.4s						
KUR				i S	S	10 00 02.9	-2.2
KUR				A	A	10 00 16.8	
	comp=E,260nm,0.4s						
KUR				A	A	10 00 16.8	
	comp=E,130nm,0.4s						
BKI	Bering	8.19	66	P	P	09 58 31.7	+1.3
BKI				S	S	10 00 07.4	-0.4
BKI	Bering	8.19	66	eP	P	09 58 31.7	+1.3
BKI				eS	S	10 00 07.4	-0.4
BKI	Bering	8.19	66	eP	P	09 58 31.7	+1.3
YSS	Yuzh-Sakhalins	8.61	233	⇑iP	P	09 58 36.4	+1.5
YSS				eS	S	10 00 18.3	+2.3
YSS				pmax	pmax		
	comp=Z,120nm,0.6s						
YSS				smax	smax		
	comp=E,30nm,0.9s						
YSS	Yuzh-Sakhalins	8.61	233	eP	P	09 58 34.7	-0.2
YSS				AMB	AMB	09 58 37.2	
	comp=E,120nm,0.6s						
YSS				eS	S	10 00 14.2	-1.8
YSS				A	A	10 00 21.9	
	comp=E,10.0nm,0.8s						
YSS				A	A	10 00 21.9	
	comp=E,10.0nm,0.8s						
YSS	Yuzh-Sakhalins	8.61	233	P	P	09 58 36.9	+1.9
OSSR	Ossora	8.82	36	P	P	09 58 36.5	-0.2
OSSR	Ossora	8.82	36	eP	P	09 58 36.5	-0.2
YUK	Yuzh-Kuril'sk	9.71	211	eP	P	09 58 44.5	-1.8
YUK				eS	S	10 00 32.5	-4.3
YUK				pmax	pmax		
	comp=E,114nm,0.4s						
YUK				pmax	pmax		
	comp=Z,329nm,0.4s						
YUK	Yuzh-Kuril'sk	9.71	211	eP	P	09 58 44.5	-1.8
YUK				AMB	AMB	09 58 48.3	
	comp=Z,380nm,0.4s						
YUK				eS	S	10 00 34.5	-2.3
YUK				A	A	10 00 38.6	
	comp=Z,400nm,0.6s						
YUK				A	A	10 00 38.6	
	comp=Z,700nm,0.6s						
GRPR	Tuman	9.78	212	eP	P	09 58 45.7	-1.3
GRPR				S	S	10 00 34.0	-4.1
GRPR				pmax	pmax		
	comp=Z,416nm,0.5s						
GRPR				pmax	pmax		
	comp=N,151nm,0.4s						
GRPR	Tuman	9.78	212	eP	P	09 58 45.7	-1.3
GRPR				AMB	AMB	09 58 47.6	
	comp=N,420nm,0.5s						
GRPR				eS	S	10 00 34.0	-4.1
RUSJ	Misakicho	9.85	214	eP	P	09 58 47.9	+0.1
RUSJ				S	S	10 00 39.2	-0.3
GLVR	Golovnino	10.08	212	eP	P	09 58 48.7	-1.5
GLVR				S	S	10 00 39.1	-4.9
GLVR				pmax	pmax		
	comp=Z,710nm,0.5s						
GLVR				pmax	pmax		
	comp=E,209nm,0.6s						
GLVR				pmax	pmax		
	comp=N,84nm,0.3s						
GLVR	Golovnino	10.08	212	eP	P	09 58 48.7	-1.5
GLVR				AMB	AMB	09 58 50.7	
	comp=N,710nm,0.5s						
GLVR				eS	S	10 00 39.1	-4.9
NMR	Nemuro--Hokkai	10.35	210	⇑iP	P	09 58 48.8	-4.2
NMR				i S	S	10 00 40.6	-8.5
NMR	Nemuro--Hokkai	10.35	210	eP	P	09 58 48.8	-4.2
GRNR	Gornyy	10.38	267	⇑iP	P	09 58 54.4	+1.2
GRNR				pmax	pmax		
	comp=E,6.0nm,0.7s						
GRNR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SEY	Seymchan	10.42	359	P	P	09 58 54.2	+0.9
	comp=Z,31nm,0.3s,baz=179,slow=9.6,SNR=438						
SEY				S	S	10 00 49.3	-0.7
	baz=341,slow=21,SNR=7.9						
TILK	Tilichiki	10.77	38	P	P	09 58 57.8	+0.7
TILK	Tilichiki	10.77	38	eP	P	09 58 57.8	+0.7
JKA	Kamikawa-asahi	10.85	223	eP	P	09 58 58.2	0.0
JKA	Kamikawa-asahi	10.85	223	P	P	09 58 58.2	0.0
ASAJ	Asahikawa	10.85	223	P	P	09 58 58.0	-0.2
	comp=Z,13nm,0.3s,baz=295,slow=7.1,SNR=52						
ASAJ	Asahikawa	10.85	223	P	P	09 58 58.2	0.0
AKK	Akkeshi	10.95	213	eP	P	09 58 55.8	-3.4
KMSK	Kamenskaya	12.23	30	P	P	09 59 12.6	+0.3
KMSK	Kamenskaya	12.23	30	eP	P	09 59 12.6	+0.3
JEW	Eniwo	12.37	223	P	P	09 59 11.2	-3.0
ERM	Erimo	12.42	216	ceP	P	09 59 13.4	-1.2
ERM				pmax	pmax		
	comp=Z,217nm,0.5s						
ERM	Erimo	12.42	216	P	P	09 59 13.4	-1.2
KLR	Kul'dur	13.73	264	P	P	09 59 28.9	+0.6
	comp=Z,1.5nm,0.3s,baz=70,slow=9.2,SNR=36						
KLR				S	S	10 01 54.2	+0.5
	baz=330,slow=22,SNR=7.7						
KLR				ScP	ScP	10 06 54.2	+0.3
	comp=Z,0.4nm,0.3s,baz=20,slow=3.8,SNR=8.7						
KLR	Kul'dur	13.73	264	eP	P	09 59 28.4	+0.2

JTM	Tenmabayashi	14.26	219	P	P	09 59 32.0	-1.9
ZEA	Zeya	15.40	285	eP	P	09 59 44.4	-1.2
ZEA				eS	S	10 02 18.9	-6.2
ZEA				pmax	pmax		
	comp=E,30nm,0.6s						
ZEA				pmax	pmax		
	comp=N,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,40nm,1.0s						
ZEA				smax	smax		
	comp=N,400nm,5.8s						
ZEA				smax	smax		
	comp=E,500nm,4.6s						
ZEA				smax	smax		
	comp=E,30nm,1.4s						
ZEA				smax	smax		
	comp=N,30nm,1.3s						
ZEA	Zeya	15.40	285	eP	P	09 59 43.6	-2.0
YAK	Yakutsk	15.64	316	P	P	09 59 46.2	-1.7
	comp=N,2.5nm,0.3s,baz=279,slow=1.3,SNR=49						
YAK				S	S	10 02 26.2	-3.0
	comp=N,0.1nm,0.3s,baz=28,slow=22,SNR=20						
YAK	Yakutsk	15.64	316	d iP	P	09 59 46.1	-1.8
YAK				eS	S	10 02 27.0	-2.2
YAK				pmax	pmax		
	comp=Z,179nm,0.8s						
YAK				pmax	pmax		
	comp=E,72nm,1.1s						
YAK				pmax	pmax		
	comp=N,24nm,0.9s						
YAK				smax	smax		
	comp=E,622nm,2.2s						
YAK				smax	smax		
	comp=N,338nm,1.6s						
YAK	Yakutsk	15.64	316	eP	P	09 59 46.1	-1.8
YAK	Yakutsk	15.64	316	P	P	09 59 46.0	-1.8
USRK	Ussuriysk Ar.	16.15	247	P	P	09 59 52.2	-1.1
	baz=56,slow=10.0,SNR=13						
USRK	Ussuriysk Ar.	16.15	247	P	P	09 59 52.0	-1.4
AMKA	Amchitka	16.30	84	P	P	09 59 54.5	-0.3
BILL	Bilibino	16.83	18	i P	P	09 59 57.3	-2.4
BILL				i		10 02 48.6	
BILL				pmax	pmax		
	comp=Z,18nm,0.8s						
BILL	Bilibino	16.83	18	eP	P	09 59 57.3	-2.4
BILL	Bilibino	16.83	18	P	P	09 59 59.0	-0.7
JMM	Marumori	16.93	215	P	P	10 00 00.7	-0.4
MDJ	Mudanjiang	17.27	252	P	P	10 00 03.3	-0.9
MDJ				IAmb	IAmb	10 00 05.6	
	comp=Z,14nm,0.8s						
JSD	Sado	17.73	221	P	P	10 00 08.5	0.0
KIWB	Kanaga Island	18.33	80	P	P	10 00 13.8	+0.1
JYT	Yasato	18.61	214	P	P	10 00 17.2	+0.7
MJB9	Matsu-Tunnel	19.05	219	P	P	10 00 22.2	+1.7
MAJO	Matsushiro	19.05	219	P	P	10 00 21.7	+1.1
MAJO				pmax	pmax		
	comp=Z,270nm,0.7s						
MAJO	Matsushiro	19.05	219	P	P	10 00 21.7	+1.1
MAT	Matsushiro	19.05	219	P	P	10 00 21.1	+0.5
MAT				S	S	10 03 26.7	0.0
MJAR	Matsushiro Arr	19.05	219	P	P	10 00 21.5	+0.9
	comp=Z,3.0nm,0.3s,baz=27,slow=10,SNR=255						
MJAR				ScP	ScP	10 07 04.7	-0.1
	comp=Z,0.1nm,0.3s,baz=54,slow=2.3,SNR=7.8						
MJAR	Matsushiro Arr	19.05	219	P	P	10 00 21.8	+1.3
CN2	Changchun	20.17	255	eP	P	10 00 30.8	+0.2
CN2				eS	S	10 03 43.5	-1.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
JGF	Kuroka	20.20	219	P	P	10 00 32.0	+1.0
INU	Inuyama	20.56	220	P	P	10 00 34.5	+0.3
HIA	Hailar	21.04	274	P	P	10 00 37.7	-0.8
HIA				pmax	pmax		
	comp=Z,35nm,0.6s						
HIA	Hailar	21.04	274	P	P	10 00 37.7	-0.8
JWT	Wachi	21.26	223	P	P	10 00 40.9	+0.3
TIK	Tiksi	21.90	340	eP	P	10 00 45.5	-0.3
TIXI	Tiksi	21.91	340	P	P	10 00 45.5	-0.4
	comp=Z,36nm,0.8s,baz=137,slow=8.8,SNR=48						
TIXI				PcP	PcP	10 04 23.3	-0.3
	comp=Z,4.6nm,0.4s,baz=339,slow=2.6,SNR=3.6						
TIXI				ScP	ScP	10 07 11.1	+0.1
	comp=Z,6.3nm,0.7s,baz=86,slow=2.3,SNR=9.8						
TIXI	Tiksi	21.91	340	P	P	10 00 45.7	-0.1
JHS	Saijyo	22.48	227	P	P	10 00 52.8	+1.2
BOD	Bodaibo	22.57	299	eP	P	10 00 51.0	-1.1
BOD				pmax	pmax		
	comp=Z,33nm,1.0s						
BOD	Bodaibo	22.57	299	eP	P	10 00 51.0	-1.1
KS19	Wonju Array Si	23.05	239	P	P	10 00 56.7	+0.1
KS19				IAmb	IAmb	10 01 15.7	
	comp=Z,47nm,1.6s						
KSRS	Korea Array	23.05	239	P	P	10 00 57.9	+1.3
	comp=Z,7.4nm,0.7s,baz=44,slow=9.2,SNR=25						
KSRS				PcP	PcP	10 04 27.2	+0.7
	comp=Z,2.9nm,0.6s,baz=3.5,slow=2.3,SNR=9.6						
KSRS				ScP	ScP	10 07 16.0	+1.3
	comp=Z,6.7nm,0.9s,baz=40,slow=1.7,SNR=18						
JMN	Monobe	23.24	223	P	P	10 00 59.8	+1.5
TNA	Tin City	23.51	41	P	P	10 01 00.9	+0.6
ANM	Nome	24.36	44	P	P	10 01 09.3	+1.4
ANM				pmax	pmax		
	comp=Z,141nm,1.8s						
ANM	Nome	24.36	44	P	P	10 01 09.3	+1.4
JNU	Nakatsue	25.06	228	P	P	10 01 15.3	+0.7
	comp=Z,14nm,0.6s,baz=32,slow=0.9,SNR=10						
JNU	Nakatsue	25.06	228	P	P	10 01 15.6	+1.0
JCJ	Chichijima	26.65	202	P	P	10 01 29.8	+1.3
	comp=Z,79nm,0.5s,baz=280,slow=18,SNR=4.5						
GCSA	Galena City Sc	28.02	45	P	P	10 01 40.3	+0.4
	baz=269						
TTA	Tatalina	28.41	48	P	P	10 01 44.1	+0.4
TTA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TTA	Tatalina	28.41	48	P	P	10 01 44.9	+1.3
	baz=273,SNR=5.8						
TTA	Tatalina	28.41	48	P	P	10 01 44.1	+0.4
TTA				IAmb	IAmb	10 01 45.5	
	comp=Z,10nm,0.8s						
A21K	Barrow	28.98	31	P	P	10 01 48.8	+0.5
	baz=257						
A21K	Barrow	28.98	31	P	P	10 01 48.6	+0.2
L19K	White Mountain	29.00	50	P	P	10 01 49.7	+1.1
	baz=275						
J20K	Nowinta River	29.20	46	P	P	10 01 51.7	+1.3
	baz=272,SNR=5.0						
J20K	Nowinta River	29.20	46	P	P	10 01 51.5	+1.2
J20K				IAmb	IAmb	10 01 52.4	
	comp=Z,9.6nm,0.8s						
K20K	Telida	29.27	47	P	P	10 01 52.4	+1.4
	baz=274						
K20K	Telida	29.27	47	P	P	10 01 52.2	+1.2
ULN	Ulaanbaatar	29.31	279	d iP	P	10 01 51.7	0.0
ULN				pmax	pmax		
	comp=Z,8.0nm,0.6s						
ULN	Ulaanbaatar	29.31	279	eP	P	10 01 51.7	0.0
ULN	Ulaanbaatar	29.31	279	P	P	10 01 51.3	-0.4
ULN				IAmb	IAmb	10 01 53.0	
	comp=Z,10nm,0.6s						
N19K	Bonanza Creek	29.33	53	P	P	10 01 53.4	+1.8
	baz=278						
IMAR	Indian Mountai	29.36	42	P	P	10 01 52.5	+0.9
SONM	Songino Array	29.72	280	P	P	10 01 55.6	+0.4
	comp=Z,3.1nm,0.5s,baz=65,slow=8.0,SNR=26						
SONM				PcP	PcP	10 04 42.6	0.0
	comp=Z,4.4nm,0.6s,baz=72,slow=2.0,SNR=12						
SONM				ScP	ScP	10 07 33.8	-0.9
	comp=Z,3.4nm,0.9s,baz=69,slow=2.2,SNR=8.6						
SONM	Songino Array	29.72	280	P	P	10 01 55.6	+0.4
H21K	Melozitna Rive	29.74	43	P	P	10 01 56.0	+0.9
	baz=271,SNR=6.2						
H21K	Melozitna Rive	29.74	43	IAmb	IAmb	10 01 56.8	
	comp=Z,11nm,0.8s						
TLY	Talaya	29.78	288	P	P	10 01 56.4	+0.8
	comp=Z,15nm,0.8s,baz=51,slow=4.3,SNR=8.6						
TLY				PcP	PcP	10 04 42.7	+0.2
	comp=Z,4.7nm,0.7s,baz=229,slow=5.9,SNR=4.5						
TLY				ScP	ScP	10 07 34.5	-0.2
	comp=Z,3.1nm,0.6s,baz=358,slow=6.2,SNR=3.1						
CHUM	Lake Minchumin	30.02	46	P	P	10 01 59.2	+1.7
	baz=274						
Q19K	Cape Douglas,	30.06	56	P	P	10 01 59.3	+1.4
	baz=282						
Q19K	Cape Douglas,	30.06	56	P	P	10 01 59.2	+1.3
I21K	Tanana	30.10	44	P	P	10 01 59.4	+1.3
	baz=272						
I21K	Tanana	30.10	44	IAmb	IAmb	10 03 35.1	
	comp=Z,26nm,1.6s						
CAST	Castle Rocks	30.16	47	P	P	10 02 00.3	+1.6
	baz=275						
CAST	Castle Rocks	30.16	47	IAmb	IAmb	10 02 01.0	
	comp=Z,9.0nm,0.7s						
PPLA	Purkeypile	30.16	48	P	P	10 02 00.8	+1.9
	baz=276						
PPLA	Purkeypile	30.16	48	P	P	10 02 00.9	+2.0
PPLA				IAmb	IAmb	10 02 01.6	
	comp=Z,45nm,1.5s						
HHC	Hu-ho-hao-te	30.24	264	eP	P	10 02 00.0	+0.2
HHC				pmax	pmax		
	comp=Z,17nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,5.8s						
O20K	Slope Mountain	30.35	54	P	P	10 02 01.8	+1.4
	baz=281						
SPCR	Spurr Chakacha	30.37	52	P	P	10 02 02.5	+1.9
	baz=279						
ZAK	Zakamensk	30.49	286	eP	P	10 02 01.7	-0.1
ZAK				pmax	pmax		
	comp=Z,32nm,1.1s						
BPAW	Bear Paw Mtn.	30.59	46	P	P	10 02 03.7	+1.3
	baz=275						
MLY	Manley	30.63	44	P	P	10 02 04.0	+1.2
	baz=274						
OHAK	Old Harbor	30.63	60	P	P	10 02 03.2	+0.5
	baz=285						
KTH	Kantishna Hill	30.67	47	IAmb	IAmb	10 03 34.4	
	comp=Z,64nm,1.9s						
COLD	Coldfoot	30.78	40	P	P	10 02 05.0	+1.0
	baz=270,SNR=19						
COLD	Coldfoot	30.78	40	P	P	10 02 05.3	+1.3
COLD				IAmb	IAmb	10 02 05.7	
	comp=Z,22nm,0.5s						
KDAK	Kodiak Island	30.86	58	P	P	10 02 05.2	+0.5
	baz=284						
TRF	Thorofare Moun	30.96	47	P	P	10 02 07.2	+1.5
	baz=277						
TRF	Thorofare Moun	30.96	47	IAmb	IAmb	10 02 11.0	
	comp=Z,38nm,1.4s						
TOLK	Toolik Lake Re	31.04	37	P	P	10 02 07.1	+0.9
	baz=269,SNR=14						
TOLK	Toolik Lake Re	31.04	37	IAmb	IAmb	10 02 07.4	
	comp=Z,17nm,0.6s						
CUT	Chulitna	31.10	49	P	P	10 02 07.7	+1.0
	baz=278,SNR=5.9						
I23K	Minto, Yukon-K	31.20	44	P	P	10 02 09.0	+1.4
	baz=275,SNR=14						
I23K	Minto, Yukon-K	31.20	44	IAmb	IAmb	10 02 09.7	
	comp=Z,17nm,0.7s						
MOY	Mondy	31.32	289	eP	P	10 02 09.8	+0.9
MOY				pmax	pmax		
	comp=Z,47nm,1.5s						
BTO	Baotou	31.32	265	eP	P	10 02 09.0	-0.1
NEA2	Nenana	31.38	45	P	P	10 02 10.2	+1.1
	baz=276,SNR=14						
NEA2	Nenana	31.38	45	IAmb	IAmb	10 02 11.1	
	comp=Z,17nm,0.8s						
MCK	McKinley	31.53	46	P	P	10 02 11.7	+1.3
	baz=277,SNR=6.2						
MCK	McKinley	31.53	46	IAmb	IAmb	10 02 12.2	
	comp=Z,14nm,0.7s						
RC01	Rabbit Creek A	31.57	51	P	P	10 02 11.4	+0.6
	baz=281						
JOW	Kunigami	31.60	225	P	P	10 02 12.2	+0.7
	comp=Z,38nm,0.4s,baz=18,slow=7.1,SNR=22						
RND	Reindeer	31.61	47	IAmb	IAmb	10 02 12.4	
	comp=Z,28nm,1.1s						
O22K	Cooper Landing	31.69	53	P	P	10 02 12.3	+0.5
	baz=282						
MDM	Murphy Dome	31.70	44	IAmb	IAmb	10 02 13.6	
	comp=Z,10nm,0.5s						
PMR	Palmer	31.76	50	P	P	10 02 13.4	+1.0
	baz=281						
H24K	Noodor Dome	31.77	42	P	P	10 02 14.0	+1.5
	baz=275						
H24K	Noodor Dome	31.77	42	IAmb	IAmb	10 02 14.9	
	comp=Z,13nm,0.8s						
TCOL	CIGO, UAF Yank	31.86	44	P	P	10 02 14.6	+1.4
	baz=276,SNR=9.2						
COLA	College	31.87	44	P	P	10 02 14.4	+1.2
COLA				pmax	pmax		
	comp=Z,43nm,0.8s						
COLA	College	31.87	44	P	P	10 02 14.4	+1.2
SEW	Seward	31.91	53	P	P	10 02 14.4	+0.8
	baz=283						
CCB	Clear Creek Bu	31.91	44	P	P	10 02 14.6	+1.0
CCB				IAmb	IAmb	10 02 15.6	
	comp=Z,35nm,1.3s						
NJ2	Nanjing	32.00	244	eP	P	10 02 14.0	-0.8
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
POKR	Poker Plat Res	32.02	44	P	P	10 02 16.1	+1.5
	baz=276,SNR=15						
POKR	Poker Plat Res	32.02	44	IAmb	IAmb	10 02 17.1	
	comp=Z,24nm,0.6s						
SML	Sawmill	32.10	50	P	P	10 02 16.6	+1.2
	baz=281,SNR=10						
KNK	Knik Glacier	32.11	51	P	P	10 02 16.7	+1.2
	baz=282,SNR=10.0						
WAT6	Susitna Watana	32.23	48	P	P	10 02 17.0	+0.3
	baz=280						
PWL	Port Wells	32.28	52	P	P	10 02 17.4	+0.4
	baz=282						
IL31		32.29	44	IAmb	IAmb	10 02 18.3	
	comp=Z,16nm,1.0s						
ILAR	Eielson Array	32.29	44	P	P	10 02 17.6	+0.8
	comp=Z,12nm,0.8s,baz=283,slow=12,SNR=207						
ILAR				S	S	10 06 51.6	-1.3
	comp=Z,0.9nm,0.8s,baz=280,slow=19,SNR=6.2						
ILAR				ScP	ScP	10 07 42.0	-1.0
	comp=Z,2.3nm,0.9s,baz=279,slow=3.8,SNR=9.2						
HDA	Harding Lake	32.31	45	P	P	10 02 17.5	+0.4
	baz=278,SNR=5.3						
HDA	Harding Lake	32.31	45	IAmb	IAmb	10 02 18.2	
	comp=Z,15nm,0.8s						
DHY	Denali Highway	32.32	47	P	P	10 02 18.1	+0.8
	baz=280,SNR=8.1						
DHY	Denali Highway	32.32	47	IAmb	IAmb	10 02 18.8	
	comp=Z,15nm,0.7s						
SCM	Sheep Creek Mo	32.56	50	P	P	10 02 20.5	+1.2
	baz=282						
BMAR	Burnt Mountain	32.95	39	P	P	10 02 24.2	+1.7
J25K	Salcha River,	32.96	44	P	P	10 02 22.3	-0.3
	baz=279,SNR=8.0						
PAX	Paxson	33.19	47	P	P	10 02 25.6	+0.9
	baz=281						
KLU	Klutina	33.29	50	P	P	10 02 26.8	+1.3
	baz=283						
RIDG	Independent Ri	33.33	46	P	P	10 02 26.0	+0.2
	baz=281,SNR=5.2						
RIDG	Independent Ri	33.33	46	IAmb	IAmb	10 02 27.2	
	comp=Z,24nm,0.9s						
HARP	HAARP	33.45	48	P	P	10 02 28.4	+1.7
	baz=282						
SCRK	Sand Creek	33.66	45	P	P	10 02 28.8	+0.2
	baz=281,SNR=24						
SCRK	Sand Creek	33.66	45	IAmb	IAmb	10 02 29.4	
	comp=Z,26nm,0.7s						
DOT	Dot Lake	33.69	46	IAmb	IAmb	10 02 30.1	
	comp=Z,19nm,0.6s						
J26L	Joseph Creek	33.74	44	P	P	10 02 28.7	-0.6
	baz=280,SNR=6.0						
NRIK	Noril'sk	33.82	325	P	P	10 02 29.4	-0.3
	comp=Z,9.1nm,0.4s,baz=96,slow=8.4,SNR=17						
NRIK				PcP	PcP	10 04 53.5	+0.1
	comp=Z,8.4nm,0.4s,baz=103,slow=4.4,SNR=6.3						
NRIK				ScP	ScP	10 07 47.5	-0.7
	comp=Z,5.9nm,0.8s,baz=146,slow=3.5,SNR=4.8						
NRIK	Noril'sk	33.82	325	P	P	10 02 29.5	-0.3
N25K	Chitina, Valde	33.88	50	P	P	10 02 31.9	+1.4
	baz=284						
MENT	Mentasta	33.98	47	IAmb	IAmb	10 02 35.6	
	comp=Z,9.7nm,0.7s						
BMRM	Bremner River	34.03	51	P	P	10 02 33.3	+1.6
	baz=285						
L26K	Log Cabin Wild	34.13	47	P	P	10 02 34.3	+1.8
	baz=283						
L26K	Log Cabin Wild	34.13	47	IAmb	IAmb	10 03 50.7	
	comp=Z,34nm,1.8s						
M26K	Nabesna, AK	34.43	48	P	P	10 02 37.1	+2.0
	baz=284,SNR=11						
M26K	Nabesna, AK	34.43	48	IAmb	IAmb	10 02 38.0	
	comp=Z,25nm,1.0s						
L27K	Beaver Creek,	34.80	46	P	P	10 02 39.9	+1.9
	baz=284,SNR=18						
L27K	Beaver Creek,	34.80	46	IAmb	IAmb	10 02 40.7	
	comp=Z,34nm,0.8s						
M27K	Edge Creek, AK	34.94	48	P	P	10 02 41.6	+2.1
	baz=285,SNR=12						
BVCY	Beaver Creek	35.39	47	P	P	10 02 45.0	+2.0
	baz=286						
BARN	Barnard Glacie	35.39	50	IAmb	IAmb	10 02 45.9	
	comp=Z,22nm,0.6s						
CTG	Chitna Glacier	35.57	50	P	P	10 02 46.6	+2.0
	baz=287,SNR=5.1						
CTGM	Chitina Glacie	35.57	50	IAmb	IAmb	10 02 47.3	
	comp=Z,28nm,0.7s						
DAWY	Dawson	35.62	44	P	P	10 02 45.7	+0.8
	baz=284						
DAWY	Dawson	35.62	44	P	P	10 02 46.0	+1.1
YUK3	Moose Creek	35.74	48	P	P	10 02 47.6	+1.5
	baz=287						
I29M	Ogilvie Camp,	35.77	42	P	P	10 02 47.2	+1.1
	baz=283,SNR=11						
LOGN	Logan Glacier	35.77	50	P	P	10 02 47.8	+1.5
EPYK	Eagle Plains	36.17	40	P	P	10 02 50.7	+1.2
	baz=283						
EPYK	Eagle Plains	36.17	40	IAmb	IAmb	10 02 51.0	
	comp=Z,16nm,0.7s						
INK	Inuvik	36.95	36	P	P	10 02 56.5	+0.8
	comp=Z,28nm,0.5s,baz=291,slow=6.5,SNR=329						
INK				PcP	PcP	10 05 03.3	+0.5
	comp=Z,4.5nm,0.5s,baz=254,slow=5.1,SNR=5.9						
INK	Inuvik	36.95	36	P	P	10 02 56.7	+1.0
	baz=283,SNR=35						
INK	Inuvik	36.95	36	P	P	10 02 56.7	+1.0
INK				IAmb	IAmb	10 02 57.3	
	comp=Z,24nm,0.6s						
YUK6	Outpost Mounta	36.96	49	P	P	10 02 57.9	+1.7
	baz=289						
M30M	Minto, Yukon	37.15	46	P	P	10 02 59.7	+2.1
	baz=288,SNR=6.1						
MAYO	Mayo, Yukon	37.24	44	P	P	10 03 00.2	+2.0
	baz=288						
HYT	Haines Junctio	37.39	49	P	P	10 03 02.2	+2.5
	baz=290						
YULB	Yu-li	37.76	232	P	P	10 03 03.4	+0.5
LZH	Lanzhou	37.94	264	⇓P	P	10 03 05.8	+1.3
LZH				pP	pP	10 04 36.0	+0.1
LZH				pmax	pmax		
	comp=Z,52nm,1.4s						
N31M	Braeburn, Yuko	37.96	48	P	P	10 03 06.9	+2.7
	baz=290,SNR=7.2						
TPUB	Ta-pu	38.16	233	P	P	10 03 07.1	+0.8
GTA	Gaotai	38.27	272	⇓P	P	10 03 08.0	+0.8
GTA				pP	pP	10 04 43.5	+4.7
GTA				PcP	PcP	10 05 08.3	+0.6
GTA				S	S	10 08 24.5	+0.9
GTA				ScS	ScS	10 12 15.3	-2.2
GTA				pmax	pmax		
	comp=Z,30nm,1.0s						
GTA				pmax	pmax		
	comp=Z,110nm,5.5s						
M31M	Drury Creek, Y	38.33	46	P	P	10 03 09.1	+1.9
	baz=290						
FARO	Faro, Yukon	38.78	46	P	P	10 03 12.5	+1.7
	baz=291						
A36M	Sachs Harbour	38.80	29	P	P	10 03 11.7	+1.0
	baz=286,SNR=41						
ZAA0	Zalesovo Array	39.32	300	P	P	10 03 15.0	-0.2
ZAA0				IAmb	IAmb	10 03 15.5	
	comp=Z,21nm,0.7s						
ZALV	Zalesovo Beam	39.32	300	P	P	10 03 14.7	-0.6
	comp=Z,20nm,0.5s,baz=61,slow=7.2,SNR=80						
ZALV				PcP	PcP	10 05 10.3	-0.2
	comp=Z,10nm,0.7s,baz=33,slow=3.5,SNR=8.2						
ZALV				ScP	ScP	10 08 07.5	-1.6
	comp=Z,2.3nm,0.6s,baz=66,slow=3.7,SNR=6.3						
ZALV	Zalesovo Beam	39.32	300	P	P	10 03 15.0	-0.2
P33M	Teslin, Yukon	39.78	49	P	P	10 03 20.7	+1.8
	baz=294						
DGZ	Jazzator, Alta	39.91	293	d iP	P	10 03 21.2	+0.9
DGZ				pmax	pmax		
	comp=Z,28nm,0.5s						
TGTN	Hyland Airport	41.27	45	P	P	10 03 32.9	+2.1
	baz=295,SNR=9.5						
DLBC	Dease Lake	41.83	50	P	P	10 03 37.8	+2.5
	comp=Z,8.6nm,0.6s,baz=318,slow=2.9,SNR=19						
DLBC	Dease Lake	41.83	50	P	P	10 03 37.9	+2.7
DLBC				IAmb	IAmb	10 04 49.6	
	comp=Z,34nm,1.6s						
WRGLY	Wrigley	42.56	42	P	P	10 03 42.8	+1.9
	baz=296						
WMQ	Urumqi	42.95	285	eP	P	10 03 45.5	+1.2
WMQ				pmax	pmax		
	comp=Z,75nm,1.1s						
EUNU	Eureka	43.48	13	P	P	10 03 48.1	+0.1
EUNU				IAmb	IAmb	10 03 49.0	
	comp=Z,21nm,0.9s						
KURK	Kurchatov	44.23	299	P	P	10 03 54.8	+0.8
KURK						10 05 26.7	
KURK	Kurchatov	44.23	299	eP	P	10 03 54.8	+0.8
KURK	Kurchatov	44.23	299	P	P	10 03 54.5	+0.5
KURBB	Kurchatov Arra	44.32	299	P	P	10 03 54.8	+0.1
	comp=Z,68nm,0.5s,baz=60,slow=7.3,SNR=394						
KURBB				PcP	PcP	10 05 26.6	-0.8
	comp=Z,7.1nm,0.8s,baz=62,slow=3.7,SNR=4.8						
KURBB				ScP	ScP	10 08 28.1	-1.2
	comp=Z,5.0nm,0.8s,baz=60,slow=3.5,SNR=11						
KURBB	Kurchatov Arra	44.32	299	P	P	10 03 54.7	0.0
MK31	Makanchi Array	44.37	292	d iP	P	10 03 55.1	-0.1
MKAR	Makanchi Array	44.37	292	P	P	10 03 55.2	0.0
	comp=Z,37nm,0.6s,baz=62,slow=7.2,SNR=573						
MKAR				ScP	ScP	10 08 28.4	-1.3
	comp=Z,2.6nm,0.8s,baz=56,slow=4.5,SNR=5.6						
MKAR	Makanchi Array	44.37	292	P	P	10 03 55.4	+0.2
MAKZ	Makanchi	44.54	292	P	P	10 03 56.5	0.0
MAKZ				pmax	pmax		
	comp=Z,40nm,0.9s						
MAKZ	Makanchi	44.54	292	P	P	10 03 56.5	0.0
MAKZ				IAmb	IAmb	10 03 57.3	
	comp=Z,40nm,0.8s						
RES	Resolute Bay	45.41	20	P	P	10 04 02.9	+0.1
	comp=Z,16nm,0.6s,baz=312,slow=6.1,SNR=65						
RES				PcP	PcP	10 05 31.1	+0.3
	comp=Z,8.4nm,0.8s,baz=275,slow=4.6,SNR=5.7						
RES				ScP	ScP	10 08 33.8	+0.4
	comp=Z,1.9nm,0.6s,baz=269,slow=21,SNR=5.1						
RES	Resolute Bay	45.41	20	P	P	10 04 02.7	-0.1
RES				IAmb	IAmb	10 04 03.5	
	comp=Z,25nm,0.9s						
NOR	Nord	45.98	358	i P	P	10 04 05.4	-1.6
NOR				IAmb	IAmb	10 04 08.1	
	comp=Z,3.3nm,0.8s						
YKA	Yellowknife Ar	46.46	40	P	P	10 04 11.4	+0.5
	comp=Z,16nm,0.6s,baz=313,slow=5.8,SNR=294						
YKA				PcP	PcP	10 05 35.4	+0.6
	comp=Z,2.8nm,0.5s,baz=336,slow=2.7,SNR=13						
YKA				ScP	ScP	10 08 38.3	+0.3
	comp=Z,2.5nm,0.8s,baz=314,slow=3.0,SNR=9.5						
YKA				S	S	10 10 21.0	+1.0
	comp=Z,0.8nm,0.9s,baz=306,slow=12,SNR=3.7						
KBS	Kingsbay	46.74	350	i P	P	10 04 12.5	-0.4
KBS	Kingsbay	46.74	350	eP	P	10 04 12.9	+0.1
SPA0	Spitsbergen Ar	46.88	349	eP	P	10 04 13.2	-0.8
SPB2	Spitsbergen Ar	46.88	349	P	P	10 04 13.6	-0.4
BVAR	Borovoye Array	47.21	305	P	P	10 04 16.6	-0.1
	comp=Z,73nm,0.5s,baz=180,slow=1.5,SNR=366						
BVAR				PcP	PcP	10 05 37.3	-0.3
	comp=Z,5.8nm,0.5s,baz=205,slow=6.6,SNR=4.0						
BVAR				ScP	ScP	10 08 39.6	-1.7
	comp=Z,4.3nm,0.6s,baz=207,slow=6.2,SNR=6.6						
BRVK	Borovoye	47.24	305	P	P	10 04 17.2	+0.2
BRVK				pmax	pmax		
	comp=Z,110nm,0.6s						
BRVK	Borovoye	47.24	305	eP	P	10 04 17.2	+0.2
BRVK	Borovoye	47.24	305	P	P	10 04 17.2	+0.2
BRZS	Berezniki	47.79	301	eP	P	10 04 20.9	-0.2
BRZS				pmax	pmax		
	comp=Z,24nm,0.4s						
UZB	Uzynbulak	48.40	290	eP	P	10 04 25.9	-0.1
UZB				pmax	pmax		
	comp=Z,8.0nm,0.6s						
ARXS	Arharly	48.43	292	eP	P	10 04 26.2	+0.1
TULEG	Thule	48.47	12	i P	P	10 04 23.6	-2.2
TULEG				IAmb	IAmb	10 04 24.9	
	comp=Z,12nm,0.6s						
TULEG	Thule	48.47	12	P	P	10 04 25.1	-0.7
TULEG				IAmb	IAmb	10 04 25.6	
	comp=Z,15nm,0.7s						

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NEEM   North Greenlan    49.42   7  i P     P      10 04 31.0 -2.2
NEEM                                  IAmb  IAmb   10 04 32.5
       comp=Z,28nm,0.6s
MDOK   Medeo             49.52 291    P     P      10 04 34.2 -0.1
BJO1   Bjornoya          49.54 345  eP      P      10 04 33.5 -0.3
SVE    Sverdlovsk        49.58 314c iP      P      10 04 34.5 +0.2
SVE                                   pmax  pmax
       comp=Z,76nm,0.9s
SVE    Sverdlovsk        49.58 314  eP      P      10 04 34.5 +0.2
TARG   Taragay, Kyrgy    49.99 289    IAmb  IAmb   10 04 40.0
       comp=Z,16nm,0.7s
BTLS   Baital            50.03 295  eP      P      10 04 37.6 -0.2
BTLS                                  pmax  pmax
       comp=Z,10.0nm,0.7s
LSA    Lhasa             50.05 268    P     P      10 04 40.0 +1.2
LSA                                   pmax  pmax
       comp=Z,150nm,0.8s
LSA    Lhasa             50.05 268    P     P      10 04 40.3 +1.5
LSA                                   pmax  pmax
       comp=Z,27nm,0.7s
LSA    Lhasa             50.05 268    P     P      10 04 40.3 +1.5
LSA                                   IAmb  IAmb   10 04 41.2
       comp=Z,27nm,0.7s
PGC    Sidney            50.41  59    P     P      10 04 42.3 +1.8
TKM2   Tokmak 2          50.50 292    P     P      10 04 42.0 +0.5
       SNR=40
ULHL   Ulahol            50.56 291    P     P      10 04 42.6 +0.6
       SNR=34
ARU    Arti              50.74 314    P     P      10 04 42.3 -0.4
       comp=Z,22nm,0.3s,baz=41,slow=3.0,SNR=109
ARU                                   ScP   ScP    10 08 54.4 -2.0
       comp=Z,0.6nm,0.3s,baz=188,slow=1.0,SNR=3.8
ARU    Arti              50.74 314c iP      P      10 04 42.1 -0.6
ARU                                                10 05 49.3
ARU                                                10 06 42.4
ARU                                   S     S      10 11 20.2 +1.5
ARU                                   SS    SS     10 14 59.5 -1.8
ARU                                   pmax  pmax
       comp=Z,103nm,0.8s
ARU    Arti              50.74 314  eP      P      10 04 42.1 -0.6
ARU    Arti              50.74 314    P     P      10 04 42.4 -0.4
USP    Ospenovka         50.90 293    P     P      10 04 44.9 +0.7
       SNR=20
CHMS   Chumysh           50.93 292    P     P      10 04 45.1 +0.7
       SNR=5.6
KBK    Karagaybulak      51.03 292    P     P      10 04 46.0 +0.6
       SNR=17
D03D   Eldon             51.29  60    P     P      10 04 49.1 +2.2
       baz=309,SNR=8.1
AAK    Ala-Archa         51.30 292    P     P      10 04 47.9 +0.5
       comp=Z,52nm,0.6s,baz=113,slow=4.8,SNR=128
AAK    Ala-Archa         51.30 292  i P     P      10 04 47.8 +0.5
       SNR=62
AAK    Ala-Archa         51.30 292    P     P      10 04 47.9 +0.5
B05A   Bryant            51.35  58    P     P      10 04 49.0 +1.6
       baz=309,SNR=6.1
EKS2   Erkin-Say         51.69 293    P     P      10 04 50.8 +0.7
       SNR=39
HAMF   Hammerfest        51.84 341  eP      P      10 04 49.5 -1.0
KEV    Kevo              51.85 339    P     P      10 04 49.7 -0.8
KEV                                   pmax  pmax
       comp=Z,21nm,0.7s
KEV    Kevo              51.85 339    P     P      10 04 49.7 -0.8
KEV                                   IAmb  IAmb   10 04 52.4
       comp=Z,21nm,0.7s
E04D   Cinebar           52.19  60    P     P      10 04 55.6 +2.2
       baz=310,SNR=5.2
ARA0   ARCESS Array S    52.35 339  eP      P      10 04 53.6 -0.7
ARCES  ARCESS Array B    52.35 339    P     P      10 04 53.5 -0.8
       comp=Z,16nm,0.5s,baz=31,slow=7.4,SNR=122
ARCES  ARCESS Array B    52.35 339    P     P      10 04 53.8 -0.4
ARCES                                 pmax  pmax
       comp=Z,38nm,1.0s
ARCES  ARCESS Array B    52.35 339    P     P      10 04 53.8 -0.4
ARCES                                 IAmb  IAmb   10 04 54.4
       comp=Z,38nm,1.0s
PRGR   Permogore         52.46 325  eP      P      10 04 55.1  0.0
PRGR                                  pmax  pmax
       comp=Z,71nm,0.7s
KSH    Kashi             52.49 288    P     P      10 05 00.0 +4.1
KSH                                   pmax  pmax
       comp=Z,42nm,0.8s
EDM    Edmonton          52.52  49    P     P      10 04 56.9 +1.2
EDM                                   pmax  pmax
       comp=Z,26nm,0.6s
EDM    Edmonton          52.52  49    P     P      10 04 56.9 +1.2
EDM                                   IAmb  IAmb   10 04 57.5
       comp=Z,26nm,0.6s
B08A   Colville Reser    52.72  57    P     P      10 04 58.5 +1.2
KIRV   Kirov             53.12 320d iP      P      10 04 59.5 -0.4
KKAR   Karatay Array     53.23 295    P     P      10 05 00.9 -0.1
KKAR   Karatay Array     53.23 295    P     P      10 05 00.9 -0.1
KTK1   Kautokeino        53.25 340  eP      P      10 05 00.0 -0.6
JETT   Jettan, Norway    53.38 341  eP      P      10 05 02.0 +0.3
H04D   Lebanon           53.41  62    P     P      10 05 04.1 +1.9
       baz=311
HOOD   Mount Hood Mea    53.47  61    IAmb  IAmb   10 05 05.5
       comp=Z,20nm,0.7s
TRO    Tromso            53.60 342  eP      P      10 05 02.6 -0.5
I03D   Drain, OR         53.62  64    P     P      10 05 06.4 +2.7
       baz=311
C09A   Chrisman Ranch    53.62  57    P     P      10 05 04.4 +0.8
J01E   Myrtle Point      53.65  64    P     P      10 05 06.6 +2.7
       baz=312
G05D   Wamic, OR         53.70  61    P     P      10 05 06.3 +2.0
       baz=311
CMAR   Chiang Mai Arr    53.81 252    P     P      10 05 06.3 +0.9
       comp=Z,2.4nm,0.7s,baz=26,slow=6.7,SNR=11
CMAR                                  PcP   PcP    10 06 03.4 +0.5
       comp=Z,3.2nm,0.6s,baz=16,slow=3.1,SNR=13
CMAR                                  ScP   ScP    10 09 09.5 -0.9
       comp=Z,3.0nm,0.7s,baz=14,slow=4.2,SNR=15
CMAR   Chiang Mai Arr    53.81 252    P     P      10 05 04.6 -0.8
TAPN   Taplejung         53.84 269  eP      P      10 05 06.5 +0.6
       comp=Z,133nm,0.6s
NEW    Newport           53.91  56    P     P      10 05 06.8 +1.1
       baz=311,SNR=5.7
F07A   Phinny Hill Vi    54.01  60    IAmb  IAmb   10 05 09.1
       comp=Z,17nm,0.6s
I04A   Tendick Farm,     54.07  63    P     P      10 05 08.9 +2.0
       baz=312
K02D   Willamette Mer    54.11  65    P     P      10 05 09.3 +2.1
       baz=312
IUG    Iuzhnay           54.13 294  eP      P      10 05 08.0 +0.6
IUG                                   pmax  pmax
       comp=Z,312nm,0.4s
I05D   Terrebonne, OR    54.29  62    P     P      10 05 10.3 +1.8
       baz=312
ODAN   Odare             54.39 269  eP      P      10 05 10.5 +0.8
       comp=Z,45nm,0.6s
JIRN   Jiri              54.55 270  eP      P      10 05 11.5 +0.6
       comp=Z,74nm,0.7s
GUN    Gumba             54.55 271  eP      P      10 05 11.3 +0.4
       comp=Z,101nm,0.5s
J04D   Umpqua Nationa    54.60  63    P     P      10 05 13.6 +2.8
       baz=312
AB31   Akbulak array     54.71 307  i P     P      10 05 11.0 -0.2
ABKAR  Akbulak array     54.71 307    P     P      10 05 11.1 -0.1
ABKAR  Akbulak array     54.71 307    IAmb  IAmb   10 05 11.9
       comp=Z,76nm,0.6s
RAMN   Ramite            54.81 269  eP      P      10 05 13.1 +0.5
       comp=Z,278nm,0.4s
AKTO   Aktyubinsk        54.85 309    P     P      10 05 11.8 -0.4
       comp=Z,19nm,0.5s,baz=69,slow=8.9,SNR=78
AKTO                                  ScP   ScP    10 09 12.4 -2.1
       comp=Z,4.4nm,0.7s,baz=88,slow=5.9,SNR=5.3
SUMG   Summit            54.92   4  i P     P      10 05 11.5 -1.4
SUMG                                  IAmb  IAmb   10 05 12.9
       comp=Z,29nm,0.6s
SUMG   Summit            54.92   4    IAmb  IAmb   10 05 13.7
       comp=Z,47nm,1.0s
KKN    Kakani            55.01 271  eP      P      10 05 14.6 +0.7
       comp=Z,179nm,0.5s
J05D   Fort Rock, OR     55.05  63    P     P      10 05 16.7 +2.8
       baz=312,SNR=28
PKI    Pulchoki          55.09 271  eP      P      10 05 15.0 +0.4
PKIN   Phulchoki         55.09 271  eP      P      10 05 14.8 +0.2
       comp=Z,122nm,0.7s
KLMR   Klimovskoe        55.11 327  eP      P      10 05 12.3 -1.6
KLMR                                e                  10 07 22.9
KLMR                                  pmax  pmax
       comp=Z,45nm,0.7s
KLMR   Klimovskoe        55.11 327  eP      P      10 05 12.4 -1.5
KLMR                                  AMP          10 05 14.1
       comp=Z,45nm,0.7s
KLMR                                ePP     PP     10 07 22.9 -1.2
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L04D   Klamath Falls     55.17  64    P     P      10 05 17.3 +2.5
       baz=312,SNR=7.9
K04D   Chiloquin, OR     55.20  64    P     P      10 05 17.6 +2.6
       baz=312,SNR=5.3
DMN    Daman             55.24 271  eP      P      10 05 16.5 +0.8
       comp=Z,173nm,0.5s
GKN    Gorkha            55.25 272  eP      P      10 05 16.1 +0.6
       comp=Z,147nm,0.7s
DANN   Dangsing          55.53 273  eP      P      10 05 18.3 +0.6
       comp=Z,156nm,0.6s
N2IH   Innhavet          55.60 342  eP      P      10 05 16.1 -1.0
K05A   Summer Lake       55.61  63    IAmb  IAmb   10 05 21.5
       comp=Z,20nm,1.0s
M04C   Macdoel           55.72  64    P     P      10 05 21.0 +2.3
       baz=313
STEI   Steigen           55.76 342  eP      P      10 05 17.2 -1.0
N02D   Trinity Center    55.79  66    P     P      10 05 21.8 +2.8
       baz=313,SNR=5.9
LOF    Lofoten           55.90 343  eP      P      10 05 18.2 -1.0
KOLN   Koldanda          56.05 272  eP      P      10 05 21.6 +0.4
PYUN   Piuthan           56.18 273  eP      P      10 05 22.6 +0.5
       comp=Z,126nm,0.5s
SWI    Sorong            56.23 206    P     P      10 05 24.6 +2.4
       comp=Z,23nm,1.1s
FAUS   Fauske            56.23 342  eP      P      10 05 21.0 -0.5
SIJI   Sorong            56.23 206    P     P      10 05 22.9 +0.6
       comp=Z,15nm,0.5s,baz=0.6,slow=3.0,SNR=15
O02D   Mt. Diablo Mer    56.29  66    P     P      10 05 25.1 +2.6
       baz=313
FFC    Flin Flon         56.47  42    P     P      10 05 24.3 +0.9
FFC                                   pmax  pmax
       comp=Z,26nm,0.7s
FFC    Flin Flon         56.47  42    P     P      10 05 24.2 +0.9
FFC                                   IAmb  IAmb   10 05 25.0
       comp=Z,26nm,0.7s
MSO    Missoula          56.47  55    P     P      10 05 25.0 +1.3
       baz=313,SNR=12
FCC    Fort Churchill    56.55  35    P     P      10 05 23.8  0.0
FCC                                   pmax  pmax
       comp=Z,34nm,0.5s
FCC    Fort Churchill    56.55  35    P     P      10 05 23.8  0.0
FCC                                   IAmb  IAmb   10 05 24.3
       comp=Z,34nm,0.5s
PLID   Pearl Lake        56.60  58    IAmb  IAmb   10 05 27.1
       comp=Z,20nm,0.7s
O03E   Paynes Creek      56.76  66    P     P      10 05 27.4 +1.7
       baz=314,SNR=5.5
NBB30  Finnes            56.89 342  eP      P      10 05 25.4 -0.6
NBB17  Glomfjord B¥r     56.98 342  eP      P      10 05 26.2 -0.5
NBB13  Alf Garage        57.27 342  eP      P      10 05 27.9 -0.7
ILULI  Ilulissat         57.28  10  i P     P      10 05 27.0 -1.7
KONS   Konsvik           57.42 342  eP      P      10 05 29.3 -0.4
MOR8   Moi Rana          57.46 341  eP      P      10 05 28.1 -1.9
EGMT   Eagleton          57.70  52    P     P      10 05 33.1 +1.1
       baz=314
NIL    Nilore            58.10 285    P     P      10 05 36.3 +1.4
NIL                                   pmax  pmax
       comp=Z,132nm,0.9s
NIL    Nilore            58.10 285    P     P      10 05 36.3 +1.4
BELG   Belogornoye       58.18 316d iP      P      10 05 34.5 -0.5
BELG                                  pmax  pmax
       comp=Z,16nm,0.8s
ICESG  Greenland Ices    58.33   5  i P     P      10 05 35.1 -1.1
ICESG                                 IAmb  IAmb   10 05 36.3
       comp=Z,30nm,0.6s
BOZ    Bozeman (W)       58.48  55    P     P      10 05 39.2 +1.7
       baz=315,SNR=25
BOZ    Bozeman (W)       58.48  55    IAmb  IAmb   10 05 39.9
       comp=Z,15nm,0.8s
HLID   Hailey            58.48  58    P     P      10 05 39.3 +1.8
       baz=315,SNR=9.1
FIA1   FINESS Array S    58.76 333    IAmb  IAmb   10 05 39.1
       comp=Z,60nm,1.2s
FINES  FINESS Array B    58.76 333    P     P      10 05 38.2 -0.6
       comp=Z,17nm,0.4s,baz=36,slow=6.6,SNR=144
FINES                                 PcP   PcP    10 06 20.5 -1.2
       comp=Z,6.6nm,0.7s,baz=47,slow=4.1,SNR=4.2
SANI   Sanana            58.92 212    P     P      10 05 41.1 +0.5
       comp=Z,15nm,0.7s
YERR   Yerington         59.09  65    IAmb  IAmb   10 05 44.6
       comp=Z,13nm,0.7s
NSS    Namsos            59.40 342  eP      P      10 05 42.0 -1.0
SFJD   Kangerlussuaq     59.47  10  i P     P      10 05 41.8 -1.7
MOS    Moscow            59.62 324  eP      P      10 05 42.9 -1.8
MOS                                   pmax  pmax
       comp=Z,54nm,0.6s
KBL    Kabul             59.93 288    P     P      10 05 46.6 -0.8
KBL                                   pmax  pmax
       comp=Z,39nm,0.8s
KBL    Kabul             59.93 288    P     P      10 05 46.3 -1.1
       SNR=14
KBL    Kabul             59.93 288    P     P      10 05 46.6 -0.8
KBL                                   IAmb  IAmb   10 05 47.2
       comp=Z,39nm,0.8s
RLMT   Red Lodge         59.99  54    P     P      10 05 49.6 +1.9
       baz=316
DGMT   Dagmar            59.99  49    P     P      10 05 48.5 +1.1
       baz=317,SNR=7.8
DGMT   Dagmar            59.99  49    IAmb  IAmb   10 05 49.2
       comp=Z,24nm,0.8s
SBUM   Sibu              60.23 229    P     P      10 05 52.0 +2.7
LAO    LASA Array        60.34  51    P     P      10 05 51.3 +1.5
       baz=317,SNR=5.6
LAO    LASA Array        60.34  51    IAmb  IAmb   10 05 52.8
       comp=Z,22nm,1.1s
DY2G   Dye2              60.42   9  i P     P      10 05 48.4 -1.7
DY2G                                  IAmb  IAmb   10 05 49.2
       comp=Z,14nm,0.6s
OBN    Obninsk           60.49 324  i P     P      10 05 49.0 -1.4
OBN                                   pmax  pmax
       comp=Z,32nm,1.1s
TPH    Tonopah           60.85  65    IAmb  IAmb   10 05 56.1
       comp=Z,32nm,0.9s
VSU    Vasula            61.03 331  eP      P      10 05 54.0 +0.1
VSU    Vasula            61.03 331  i P     P      10 05 53.2 -0.8
HWUT   Hardware Ranch    61.35  58    IAmb  IAmb   10 05 59.4
       comp=Z,13nm,0.8s
VES    Vestal, Richgr    61.41  68    P     P      10 05 58.3 +1.4
       baz=316
AAL    Aland             61.44 335  eP      P      10 05 56.3 -0.3
VRH    Novokhopyorsk     61.52 318  eP      P      10 05 55.8 -1.5
VRH                                   pmax  pmax
       comp=Z,50nm,0.5s
BW06   Boulder Array     61.54  56    P     P      10 05 59.4 +1.5
       baz=317
CWC    Cottonwood Cre    61.54  67    P     P      10 05 59.8 +1.9
       baz=316
PDAR   Pinedale Array    61.54  56    P     P      10 05 59.1 +1.2
       comp=Z,26nm,1.0s,baz=343,slow=1.6,SNR=78
R11A   Troy Canyon, C    61.55  63    P     P      10 05 59.6 +1.6
       baz=316
LPSR   Galich'ya Gora    61.55 321  eP      P      10 05 56.4 -1.1
LPSR                                  pmax  pmax
       comp=Z,90nm,1.5s
MTSE   Matsula           61.66 333  eP      P      10 05 58.1 +0.1
DUG    Dugway, Tooele    61.71  60    P     P      10 06 01.0 +2.0
       baz=317,SNR=6.8
ISA    Isabella, Lake    61.88  67    P     P      10 06 01.0 +1.0
       baz=316
PMG    Port Moresby      61.90 186    P     P      10 06 01.9 +1.7
       comp=Z,18nm,0.6s,baz=14,slow=5.1,SNR=17
PMG    Port Moresby      61.90 186    P     P      10 06 02.2 +2.0
PMG                                   pmax  pmax
       comp=Z,22nm,0.8s
PMG    Port Moresby      61.90 186    P     P      10 06 02.2 +2.0
PMG                                   IAmb  IAmb   10 06 02.7
       comp=Z,22nm,0.8s
KSM    Kuching           61.97 230    P     P      10 06 03.0 +2.2
MOL    Molde             62.02 343  eP      P      10 06 00.1 -0.2
JLU    Jordanelle        62.14  59    IAmb  IAmb   10 06 04.4
       comp=Z,26nm,1.8s
MPMC   Manual Prospec    62.15  66    P     P      10 06 03.7 +1.8
       baz=317,SNR=7.2
FURC   Furnace Creek,    62.20  66    P     P      10 06 04.2 +2.2
       baz=317,SNR=14
DOMB   Dombas            62.22 342  eP      P      10 06 01.2 -0.5
ULM    Lac du Bonnet     62.29  43    P     P      10 06 02.2 -0.1
       comp=Z,7.8nm,0.3s,baz=322,slow=6.4,SNR=15
ULM    Lac du Bonnet     62.29  43    IAmb  IAmb   10 06 02.6
       comp=Z,10nm,0.5s
UPP    Uppsala           62.31 336  eP      P      10 06 01.9 -0.3
MPU    Maple Canyon      62.47  60    IAmb  IAmb   10 06 06.2
       comp=Z,10nm,0.6s
AKN    Aaknes            62.48 343  eP      P      10 06 03.4  0.0
NC303  NORSAR Array S    62.50 340    P     P      10 06 03.2 -0.4
NC303                                 IAmb  IAmb   10 06 04.0
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       comp=Z,34nm,0.7s
NC405  NORSAR Array S    62.53 340    P     P      10 06 02.5 -1.2
VSR    Storozhevoye      62.54 320  eP      P      10 06 02.9 -1.0
VSR                                   pmax  pmax
       comp=Z,20nm,0.5s
VORD   Divnogorie        62.68 319  eP      P      10 06 03.7 -1.1
VORD                                  pmax  pmax
       comp=Z,70nm,1.3s
NB2    NORSAR Subarra    62.70 340    P     P      10 06 04.1 -0.8
       comp=Z,11nm,0.5s,baz=25,slow=6.5
NOA    NORSAR Array B    62.70 340    P     P      10 06 04.4 -0.5
       comp=Z,34nm,0.8s,baz=28,slow=6.5,SNR=99
EDW2   Edwards Air Fo    62.72  68    P     P      10 06 07.3 +1.8
       baz=317,SNR=6.8
NC602  NORSAR Array S    62.91 340  eP      P      10 06 05.6 -0.6
DECC   Green Verdugo     62.98  68    P     P      10 06 09.1 +1.9
       baz=317
E28A   Huff              62.99  48    IAmb  IAmb   10 06 08.8
       comp=Z,30nm,1.1s
GSC    Goldstone, Bar    63.08  67    P     P      10 06 09.5 +1.7
       baz=317,SNR=5.6
RDMU   Red Mountain      63.14  58    IAmb  IAmb   10 06 10.9
       comp=Z,18nm,1.0s
K22A   Casper            63.15  54    P     P      10 06 09.2 +0.9
       baz=318,SNR=8.8
K22A   Casper            63.15  54    IAmb  IAmb   10 06 10.6
       comp=Z,8.8nm,0.7s
TMUT   Trail Mountain    63.22  60    IAmb  IAmb   10 06 11.4
       comp=Z,13nm,0.8s
MVU    Marysvale         63.26  61    IAmb  IAmb   10 06 12.2
       comp=Z,34nm,1.0s
RSSD   Black Hills       63.27  52    P     P      10 06 10.1 +1.0
RSSD                                  pmax  pmax
       comp=Z,29nm,1.0s
RSSD   Black Hills       63.27  52    P     P      10 06 10.0 +0.9
       baz=319
RSSD   Black Hills       63.27  52    P     P      10 06 10.1 +1.0
RSSD                                  IAmb  IAmb   10 06 10.9
       comp=Z,29nm,0.9s
P17A   Butcher Ranch,    63.33  59    IAmb  IAmb   10 06 12.2
       comp=Z,17nm,1.4s
FOO    Floro             63.37 343  eP      P      10 06 09.3 +0.3
TUQ    Turquoise Moun    63.47  66    P     P      10 06 12.4 +1.9
       baz=317,SNR=10.0
HYA    Hoyanger          63.56 343  eP      P      10 06 10.1 -0.2
GEYT   Alibeck           63.60 298    P     P      10 06 11.6 +0.6
       comp=Z,20nm,0.5s,baz=259,slow=0.8,SNR=18
GEYT   Alibeck           63.60 298    IAmb  IAmb   10 06 12.5
       comp=Z,46nm,1.1s
SKAR   Skarslia          63.62 341  eP      P      10 06 10.8  0.0
ISAL   Salakas           63.63 329  eP      P      10 06 11.2 +0.3
HEC    Hector,Ludlow     63.69  67    P     P      10 06 13.8 +2.1
       baz=317
SRU    San Rafael Swe    63.71  60    IAmb  IAmb   10 06 14.8
       comp=Z,14nm,0.9s
BBRC   Big Bear Solar    63.77  67    P     P      10 06 14.4 +1.9
       baz=317,SNR=6.2
AGMN   Agassiz Nation    63.80  44    P     P      10 06 11.9 -0.2
       baz=321
AGMN   Agassiz Nation    63.80  44    IAmb  IAmb   10 06 12.6
       comp=Z,13nm,0.8s
OSL    Oslo              63.81 340  eP      P      10 06 12.0 +0.1
HRA    Herat             63.92 293    IAmb  IAmb   10 06 14.7
       comp=Z,21nm,0.9s
SUE    Sulen             63.92 343  eP      P      10 06 12.8 +0.3
MNK    Minsk             63.96 328  i P     P      10 06 13.1 +0.1
MNK                                 i *PP   pP     10 07 58.5 -0.1
MNK                                 i              10 08 42.1
MNK                                 i S     S      10 14 07.1 -0.6
MNK                                 i SS    SS     10 18 37.9 +10
MNK                                   pmax  pmax
       comp=E,6.0nm,1.0s
MNK                                   pmax  pmax
       comp=Z,97nm,0.9s
MNK                                   pmax  pmax
       comp=N,47nm,1.0s
MNK                                   MLR   MLR
       comp=Z,109nm,19.0s
MNK                                   MLR   MLR
       comp=E,33nm,22.0s
MNK                                   MLR   MLR
       comp=N,180nm,16.0s
MNK    Minsk             63.96 328  i P     P      10 06 13.2 +0.1
       comp=E,6.0nm,1.0s
MNK                                 i P     P      10 06 13.2 +0.1
       comp=N,47nm,1.0s
MNK                                 i P     P      10 06 13.2 +0.1
       comp=Z,97nm,0.9s,baz=214
MNK                                 i pP    pP     10 07 58.5  0.0
MNK                                 i PP    PP     10 08 42.1 +0.4
MNK                                 i S     S      10 14 07.2 -0.5
MNK                                 i sS    sS     10 17 17.6 +1.4
MNK                                 i SS    SS     10 18 37.9 +10
MNK                                 i SSS   SSS    10 21 49.5
MNK                                 i LRM   MLR    10 37 21.0
       comp=Z,109nm,18.9s
MNK                                 i LRM   MLR    10 37 35.7
       comp=E,33nm,22.4s
MNK                                 i LRM   MLR    10 37 55.5
       comp=N,180nm,16.3s
NACGM  Naroch            63.98 329  i P     P      10 06 12.8 -0.3
GMRC   Granite Mounta    64.10  66    P     P      10 06 16.2 +1.8
       baz=318,SNR=8.4
MURC   Murrieta          64.10  68    P     P      10 06 15.8 +1.5
       baz=318
O20A   White River Ci    64.14  57    P     P      10 06 15.9 +1.2
       baz=318,SNR=16
O20A   White River Ci    64.14  57    IAmb  IAmb   10 06 16.7
       comp=Z,19nm,0.6s
KONO   Kongsberg         64.31 340  i P     P      10 06 14.0 -1.1
KONO                                  pmax  pmax
       comp=Z,21nm,0.8s
KONO   Kongsberg         64.31 340  eP      P      10 06 15.1  0.0
PABE   Paberze           64.34 331  eP      P      10 06 15.7 +0.3
ASK    Askoy             64.38 343  eP      P      10 06 15.4 -0.2
BER    Bergen            64.45 343  eP      P      10 06 15.9  0.0
BELC   Belle Mtn. Jos    64.48  67    P     P      10 06 18.0 +1.1
       baz=318
PFO    Pinyon Flats O    64.51  68    P     P      10 06 18.1 +1.0
       baz=318
B35A   Bob, Littlefor    64.64  43    IAmb  IAmb   10 06 17.9
       comp=Z,22nm,0.8s
ODD1   Odda              64.65 342  eP      P      10 06 17.4  0.0
N23A   Red Feather La    64.75  55    P     P      10 06 19.5 +0.9
       baz=319,SNR=6.6
IRM    Iron Mountain     64.85  66    P     P      10 06 21.0 +2.0
       baz=318,SNR=7.4
MYKOM  Kota Tinggi       64.86 236    P     P      10 06 21.0 +1.7
BC3    Big Chuckawall    65.04  67    P     P      10 06 22.1 +1.7
       baz=318
PDMCI  Parker Dam,Lak    65.30  66    P     P      10 06 23.8 +2.0
       baz=318
IVI    Ivigtut           65.36  11  i P     P      10 06 20.1 -1.6
IVI                                   IAmb  IAmb   10 06 21.4
       comp=Z,34nm,0.6s
SUSD   Miller            65.41  48    P     P      10 06 23.1 +0.7
       baz=321,SNR=7.9
IKP    In-Ko-Pah, Jac    65.42  68    P     P      10 06 24.5 +1.8
       baz=318
SMCO   Snowmass          65.51  57    IAmb  IAmb   10 06 25.7
       comp=Z,8.8nm,0.7s
F33A   5 Mile Ranch,     65.52  46    IAmb  IAmb   10 06 23.6
       comp=Z,14nm,0.7s
KMY    Karmoy            65.56 342  eP      P      10 06 23.2 +0.3
ISCO   Idaho Springs     65.73  56    P     P      10 06 26.6 +1.8
       baz=319,SNR=6.5
HOMB   Homborsund        65.80 340  eP      P      10 06 24.4 -0.1
GLA    Glamis            65.84  67    P     P      10 06 27.2 +1.9
       baz=318,SNR=5.5
GLA    Glamis            65.84  67    IAmb  IAmb   10 06 28.0
       comp=Z,14nm,0.9s
SUW    Suwalki           65.86 330  eP      P      10 06 24.2 -0.8
SUW    Suwalki           65.86 330  eP      P      10 06 24.5 -0.5
EYMN   Ely               65.88  42    P     P      10 06 25.0 -0.3
       baz=323,SNR=5.0
EYMN   Ely               65.88  42    IAmb  IAmb   10 06 25.8
       comp=Z,23nm,0.9s
WUAZ   Wupatki           65.92  63    P     P      10 06 28.0 +2.1
       baz=319,SNR=7.4
SNART  Snartemo          66.00 341  eP      P      10 06 26.1 +0.3
MVCO   Mesa Verde        66.19  60    P     P      10 06 28.9 +1.3
       baz=319,SNR=6.0
Y14A   Wickenburg        66.20  65    IAmb  IAmb   10 06 30.2
       comp=Z,9.6nm,0.6s
Q24A   Divide            66.60  56    P     P      10 06 31.3 +1.1
       baz=320
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NCK	Nalchik	66.65	312	*i*P	P	10 06 29.9	-0.2
NCK				pmax	pmax		
	comp=Z,39nm,1.0s						
S22A	4UR Ranch, Cre	66.66	58	P	P	10 06 32.5	+1.9
	baz=319,SNR=6.1						
AKASG	Malin Array Be	66.68	325	P	P	10 06 29.1	-1.0
	comp=Z,10nm,0.4s,baz=33,slow=6.2,SNR=81						
AKASG	Malin Array Be	66.68	325	*i*P	P	10 06 29.1	-1.0
AKASG				pmax	pmax		
	comp=Z,11nm,0.4s						
AKASG	Malin Array Be	66.68	325	IAmb	IAmb	10 06 30.1	
	comp=Z,27nm,0.8s						
AKBB	Malin Array Si	66.68	325	*i*P	P	10 06 28.6	-1.5
AKBB	Malin Array Si	66.68	325	IAmb	IAmb	10 06 30.0	
	comp=Z,29nm,0.8s						
F36A	Milaca	66.70	44	IAmb	IAmb	10 06 30.1	
	comp=Z,6.3nm,0.6s						
X16A	Lo Mia Camp, P	66.70	64	IAmb	IAmb	10 06 33.8	
	comp=Z,9.9nm,0.7s						
KIV	Kislovodsk	66.70	312	⇑P	P	10 06 31.1	+0.6
KIV	Kislovodsk	66.70	312	P	P	10 06 31.7	+1.1
KIV	Kislovodsk	66.70	312	*e*P	P	10 06 30.7	+0.2
KIV				pmax	pmax		
	comp=Z,23nm,1.0s						
KIV	Kislovodsk	66.70	312	*e*P	P	10 06 30.7	+0.2
KIV	Kislovodsk	66.70	312	P	P	10 06 30.7	+0.2
KIV				IAmb	IAmb	10 06 33.8	
	comp=Z,17nm,0.7s						
COEN	Coen	66.76	190	P	P	10 06 32.2	+1.2
COEN				IAmb	IAmb	10 06 33.6	
	comp=Z,26nm,1.0s						
KBZ	Khabaz	66.78	312	P	P	10 06 31.4	+0.5
	comp=Z,28nm,0.8s,baz=70,slow=4.3,SNR=48						
SHA1	Shidzhatmaz	66.89	312*d*	*i*P	P	10 06 31.9	+0.1
ECSD	EROS Data Cent	67.02	48	P	P	10 06 32.7	+0.3
	baz=322,SNR=45						
ZEI	Tsey	67.06	311	*e*P	P	10 06 31.7	-1.2
ZEI				pmax	pmax		
	comp=Z,8.0nm,1.1s						
BSD	Bornholm Skovb	67.20	335	*e*P	P	10 06 33.6	+0.4
BSD	Bornholm Skovb	67.20	335	*i*P	P	10 06 32.4	-0.8
BSD				IAmb	IAmb	10 06 33.0	
	comp=Z,36nm,0.6s						
NEY	Neytrino	67.24	312	*i*P	P	10 06 32.5	-1.5
NEY				pmax	pmax		
	comp=Z,4.0nm,1.4s						
SDCO	Great Sand Dun	67.35	57	P	P	10 06 36.2	+1.4
	baz=320,SNR=7.4						
ONI	Oni	67.42	311	IAmb	IAmb	10 06 36.6	
	comp=Z,30nm,1.0s						
SPMN	Marine on St.	67.51	44	P	P	10 06 35.2	-0.2
	baz=323,SNR=6.7						
SPMN	Marine on St.	67.51	44	IAmb	IAmb	10 06 35.9	
	comp=Z,16nm,0.7s						
MTN	Manton Dam	67.77	203	P	P	10 06 38.0	+0.8
MTN				IAmb	IAmb	10 06 39.5	
	comp=Z,24nm,0.7s						
214A	Organ Pipe Nat	67.79	66	P	P	10 06 39.2	+1.8
	baz=319						
KSCO	Kaye Shedlock'	67.83	55	P	P	10 06 38.2	+0.6
	baz=321						
SCHQ	Schefferville	68.03	23	P	P	10 06 37.8	-0.6
	comp=Z,19nm,0.4s,baz=338,slow=5.5,SNR=66						
SCHQ	Schefferville	68.03	23	IAmb	IAmb	10 06 38.2	
	comp=Z,22nm,0.6s						
BGNE	Belgrade	68.14	50	P	P	10 06 39.8	+0.5
	baz=322,SNR=8.2						
GKP	Gorka Klasztor	68.23	333	*e*P	P	10 06 39.7	+0.1
GKP	Gorka Klasztor	68.23	333	*e*P	P	10 06 40.1	+0.5
SOC	Sochi	68.32	314	*e*P	P	10 06 39.8	-0.5
SOC				*e**PP	pP	10 08 27.5	-0.1
SOC				*e*		10 09 17.3	
SOC				*e**SP	sP	10 09 21.8	-0.7
SOC				*e*S	S	10 15 00.2	+0.7
SOC				*e*SS	SS	10 19 33.7	-1.3
SOC				pmax	pmax		
	comp=Z,31nm,0.9s						
AKH	Akhalkalaki	68.33	310	⇑P	P	10 06 41.5	+0.9
COWI	Conover	68.33	41	IAmb	IAmb	10 06 40.2	
	comp=Z,12nm,0.7s						
T25A	Trinidad	68.37	57	P	P	10 06 41.9	+0.9
	baz=320						
BEL	Belsk	68.47	330	*e*P	P	10 06 41.6	+0.6
G40A	Rib Lake	68.57	43	IAmb	IAmb	10 06 42.5	
	comp=Z,14nm,1.1s						
TUC	Tucson	68.65	65	P	P	10 06 43.5	+0.9
TUC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TUC	Tucson	68.65	65	P	P	10 06 44.2	+1.6
	baz=320						
TUC	Tucson	68.65	65	P	P	10 06 43.5	+0.9
GNI	Garni	68.72	309	P	P	10 06 44.0	+1.0
GNI	Garni	68.72	309	P	P	10 06 43.6	+0.6
GNI				pmax	pmax		
	comp=Z,60nm,1.5s						
GNI	Garni	68.72	309	P	P	10 06 43.6	+0.6
ANMO	Albuquerque	68.98	60	*i*P	P	10 06 45.1	+0.4
ANMO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ANMO	Albuquerque	68.98	60	P	P	10 06 46.2	+1.5
	baz=320						
BATM	Batumi	69.00	311	⇓P	P	10 06 44.2	-0.3
F42A	Maple Grove Fa	69.01	41	IAmb	IAmb	10 06 45.0	
	comp=Z,13nm,0.7s						
SORM	Soroca	69.14	324	⇑P	P	10 06 44.5	-0.7
BCA	Borcka	69.16	311	⇑P	P	10 06 45.5	0.0
LVV	L'vov	69.20	327	*e*P	P	10 06 45.1	-0.4
CBKS	Cedar Bluff	69.41	53	P	P	10 06 46.8	-0.2
	baz=322						
CBKS	Cedar Bluff	69.41	53	IAmb	IAmb	10 06 47.8	
	comp=Z,23nm,0.9s						
K38A	Parkersburg	69.59	46	IAmb	IAmb	10 06 48.0	
	comp=Z,15nm,0.7s						
KWP	Kalwaria Pacla	69.79	328	*e*P	P	10 06 49.5	+0.5
RUE	Ruedersdorf	69.87	335	*e*P	P	10 06 49.7	+0.3
RUE	Ruedersdorf	69.87	335	*e*P	P	10 06 49.5	+0.1
	comp=Z,56nm,1.0s,baz=23,slow=5.9						
SCIA	State Center	69.99	47	P	P	10 06 50.8	+0.4
	baz=324,SNR=5.3						
SCIA	State Center	69.99	47	IAmb	IAmb	10 06 51.5	
	comp=Z,34nm,0.8s						
MILM	Milestii Mici	70.00	323	⇑P	P	10 06 49.6	-0.7
121A	Cookes Peak, D	70.12	62	P	P	10 06 53.5	+2.0
	baz=320						
319A	Douglas	70.19	64	IAmb	IAmb	10 06 54.6	
	comp=Z,14nm,0.7s						
OJC	Ojcow	70.19	330	*e*P	P	10 06 51.6	+0.2
R32A	Long Quarter,	70.21	52	IAmb	IAmb	10 06 52.3	
	comp=Z,24nm,1.3s						
H43A	Windswept, Lux	70.22	42	IAmb	IAmb	10 06 52.3	
	comp=Z,41nm,0.9s						
STHS	Stebnicka Huta	70.44	329	*e*P	P	10 06 52.8	-0.2
STHS	Stebnicka Huta	70.44	329	*e*P	P	10 06 52.8	-0.2
JFWS	Jewell Farm	70.46	44	P	P	10 06 52.3	-0.9
	baz=325,SNR=5.1						
JFWS	Jewell Farm	70.46	44	IAmb	IAmb	10 06 53.0	
	comp=Z,14nm,0.7s						
KOLS	Kolonicke sedl	70.54	328	*e*P	P	10 06 53.6	0.0
KOLS				pmax	pmax		
	comp=Z,48nm,1.3s						
KOLS	Kolonicke sedl	70.54	328	*e*P	P	10 06 53.5	0.0
VASR	Vaslui	70.61	323	⇓P	P	10 06 53.7	-0.2
FLTG	Flechtingen	70.65	336	*e*P	P	10 06 53.5	-0.5
	comp=Z,27nm,0.8s,baz=23,slow=5.9						
KSP	Ksiaz	70.66	332	*e*P	P	10 06 54.2	+0.1
KSU1	Kansas State U	70.68	51	P	P	10 06 54.4	-0.2
	baz=323,SNR=13						
BURAR	Bucovina Array	70.69	325	⇑P	P	10 06 54.6	0.0
NIE	Niedzica	70.74	329	*e*P	P	10 06 55.9	+1.2
NRDL	Niedersach Rie	70.77	337	*e*P	P	10 06 54.7	0.0
	comp=Z,25nm,0.9s,baz=23,slow=5.9						
UZH	Uzhgorod	70.80	328	*e*P	P	10 06 52.6	-2.4
UZH				*i*		10 07 07.4	
CRVS	Cervenica-Dubn	70.83	328	*e*P	P	10 06 55.1	-0.1
CRVS				pmax	pmax		
	comp=Z,24nm,0.7s						
CRVS	Cervenica-Dubn	70.83	328	*e*P	P	10 06 55.1	-0.1
OSTC	Ostas	70.94	332	⇓*e*P	P	10 06 56.0	+0.1
CHVC	Chvalec	70.96	333	*e*P	P	10 06 55.7	-0.3
OKC	Ostrava-Krasne	71.02	331	⇓*e*P	P	10 06 56.6	+0.3
OKC	Ostrava-Krasne	71.02	331	*e*P	P	10 06 56.6	+0.3
UPC	Upice	71.04	333	⇓*e*P	P	10 06 56.7	+0.2
UPC	Upice	71.04	333	*e*P	P	10 06 56.7	+0.2
DPC	Dobruska-Polom	71.10	332	⇓*e*P	P	10 06 57.0	+0.2
DPC	Dobruska-Polom	71.10	332	*e*P	P	10 06 57.0	+0.2
TESR	Tescani	71.13	324	⇓P	P	10 06 56.5	-0.5
CLL	Collm	71.14	335	⇓*i*P	P	10 06 56.6	-0.4
	comp=Z,49nm,0.9s						
CLL	Collm	71.14	335	⇓*i*P	P	10 06 56.6	-0.4
CLL				pmax	pmax		
	comp=Z,49nm,0.9s						
CLL	Collm	71.14	335	*e*P	P	10 06 56.5	-0.4
	comp=Z,49nm,0.9s,baz=23,slow=5.9						
TRPA	Tarpa	71.15	327	⇓P	P	10 06 57.6	+0.5
TRPA	Tarpa	71.15	327	*e*P	P	10 06 57.2	+0.1
GLMI	Grayling	71.17	39	P	P	10 06 57.2	-0.1
	baz=327						
VLDR	Vladesti	71.18	323	⇑P	P	10 06 57.5	+0.2
LANS	Liptovska Anna	71.23	330	*e*P	P	10 06 58.7	+1.1
LANS				pmax	pmax		
	comp=Z,34nm,1.0s						
LANS	Liptovska Anna	71.23	330	*e*P	P	10 06 58.7	+1.1
MORC	Moravsky Berou	71.26	331	⇓P	P	10 06 58.2	+0.4
MORC	Moravsky Berou	71.26	331	*e*P	P	10 06 57.9	+0.1
BRG	Berggiesshubel	71.28	334	*e*P	P	10 06 57.4	-0.5
	comp=Z,13nm,1.1s,baz=23,slow=5.9						
BRG	Berggiesshubel	71.28	334	*i*P	P	10 06 57.5	-0.3
BRG				Amp		10 06 58.6	
	comp=Z,8.0nm,0.7s						
CLZ	Clausthal	71.31	337	*e*P	P	10 06 58.3	+0.3
	comp=Z,40nm,1.0s,baz=23,slow=5.9						
FBE	Freiberg	71.40	334	*e*P	P	10 06 58.5	0.0
	comp=Z,32nm,1.1s,baz=23,slow=5.9						
ARCR	ARCALIA	71.45	326	⇓P	P	10 06 59.6	+0.8
TLCR		71.46	322	⇑P	P	10 06 58.6	-0.3
KECS	Kecovo	71.50	329	*e*P	P	10 06 59.2	0.0
KECS	Kecovo	71.50	329	*e*P	P	10 06 59.2	0.0
ODBI	Odobesti	71.62	323	⇓P	P	10 07 00.6	+0.7
VRI	Vrincioaia	71.65	324	⇓P	P	10 06 59.8	-0.4
P38A	Dawn	71.69	48	IAmb	IAmb	10 07 01.4	
	comp=Z,37nm,0.9s						
PLOR	Plostina	71.69	324	⇓P	P	10 07 00.3	-0.1
CFR	Carcaliu	71.72	322	⇑P	P	10 07 00.2	-0.3
COVR	Voineasa-Covas	71.86	324	⇑P	P	10 07 01.9	+0.5
PRA	Prague	71.88	333	⇓*e*P	P	10 07 02.2	+0.9
PRA	Prague	71.88	333	*e*P	P	10 07 02.2	+0.9
TPGR	Topolog	71.89	322	⇑P	P	10 07 01.6	+0.1
PRU	Pruhonice	71.92	333	⇓*e*P	P	10 07 01.7	+0.1
PRU	Pruhonice	71.92	333	*e*P	P	10 07 01.7	+0.1
VRAC	Vranov	71.95	332	*e*P	P	10 07 02.2	+0.4
CBBR	Cluj-Babes-Bol	72.00	326	⇑P	P	10 07 02.7	+0.6
VYHS	Vyhne	72.01	330	*e*P	P	10 07 02.4	+0.3
VYHS				pmax	pmax		
	comp=Z,21nm,0.6s						
VYHS	Vyhne	72.01	330	*e*P	P	10 07 02.4	+0.3
CJR	Cluj-Napoca	72.03	326	⇑P	P	10 07 02.9	+0.5
JAVC	Velka Javorina	72.04	331	*e*P	P	10 07 03.6	+1.2
DOPR	Dopca	72.05	324	⇑P	P	10 07 03.0	+0.6
MNTX	Cornudas Mount	72.06	61	P	P	10 07 04.4	+1.7
	baz=321,SNR=12						
KOLL	Kolacno	72.07	330	*e*P	P	10 07 03.0	+0.6
CROK	Carrier	72.08	53	IAmb	IAmb	10 07 03.6	
	comp=Z,13nm,1.0s						
TANN	Tannenbergstha	72.09	335	*e*P	P	10 07 02.5	-0.2
	comp=Z,9.5nm,0.9s,baz=23,slow=5.9						
MOX	Moxa	72.10	335	*e*P	P	10 07 02.5	-0.1
	comp=Z,27nm,1.1s,baz=23,slow=5.9						
MOX				*e*L	L	10 45 08.1	
	comp=Z,122nm,19.0s						
WERD	Werda	72.10	335	*e*P	P	10 07 02.6	-0.1
	comp=Z,19nm,0.9s,baz=23,slow=5.9						
PLN	Plauen	72.11	335	*e*P	P	10 07 02.6	0.0
	comp=Z,18nm,0.8s,baz=23,slow=5.9						
GUNZ	Gunzen	72.17	335	*e*P	P	10 07 03.2	+0.1
	comp=Z,278nm,3.1s,baz=23,slow=5.9						
PSZ	Piszkesteto	72.19	329	⇑P	P	10 07 03.9	+0.6
PSZ	Piszkesteto	72.19	329	*e*P	P	10 07 02.5	-0.8
PSZ	Piszkesteto	72.19	329	P	P	10 07 03.8	+0.6
PSZ				pmax	pmax		
	comp=Z,21nm,0.9s						
PSZ	Piszkesteto	72.19	329	P	P	10 07 03.8	+0.6
PSZ				IAmb	IAmb	10 07 04.6	
	comp=Z,21nm,0.9s						
HARR	Harsova	72.21	322	⇑P	P	10 07 02.6	-0.8
WERN	Wernitzgruen	72.23	335	*e*P	P	10 07 03.6	+0.2
	comp=Z,24nm,0.8s,baz=23,slow=5.9						
KRUC	Moravsky	72.23	332	*e*P	P	10 07 03.6	+0.2
MLR	Muntele Rosu	72.26	324	⇓P	P	10 07 04.4	+0.6
MLR	Muntele Rosu	72.26	324	P	P	10 07 03.2	-0.6
MLR				pmax	pmax		
	comp=Z,35nm,0.6s						
MLR	Muntele Rosu	72.26	324	P	P	10 07 03.1	-0.6
DRGR		72.26	327	⇓P	P	10 07 03.6	-0.1
NKC	Novy Kostel	72.26	335	⇓*e*P	P	10 07 03.3	-0.3
NKC	Novy Kostel	72.26	335	*e*P	P	10 07 03.3	-0.3
TLBR	Topalu	72.29	322	⇑P	P	10 07 03.9	+0.1
ISR	Istrita	72.36	323	⇑P	P	10 07 04.9	+0.6
SMOL	Smolenice	72.42	331	*e*P	P	10 07 05.5	+1.0
SMOL	Smolenice	72.42	331	*e*P	P	10 07 05.5	+1.0
T35A	Sooner Cattle	72.47	52	IAmb	IAmb	10 07 06.0	
	comp=Z,14nm,0.6s						
CTA	Charters Tower	72.55	187	P	P	10 07 07.1	+1.5
	comp=Z,4.4nm,0.5s,baz=1.0,slow=1.5,SNR=5.9						
CTAO	Charters Tower	72.55	187	P	P	10 07 06.8	+1.3
CTAO				pmax	pmax		
	comp=Z,12nm,0.8s						
CTAO	Charters Tower	72.55	187	P	P	10 07 06.8	+1.3
CTAO				IAmb	IAmb	10 07 07.7	
	comp=Z,12nm,0.8s						
MANZ	Manzenberg	72.58	335	*e*P	P	10 07 05.3	-0.2
	comp=Z,3.1nm,0.9s,baz=23,slow=5.9						
MODS	Modra-Piesok	72.59	331	*e*P	P	10 07 05.4	-0.1
MODS				pmax	pmax		
	comp=Z,34nm,1.0s						
MODS	Modra-Piesok	72.59	331	*e*P	P	10 07 05.4	-0.1
VOIR		72.63	324	⇑P	P	10 07 06.4	+0.6
ICOR	Ion Corvin	72.75	322	⇑P	P	10 07 06.9	+0.4
ROTZ	Rotzenmuhle	72.75	335	*e*P	P	10 07 06.6	+0.2
	comp=Z,5.9nm,0.9s,baz=23,slow=5.9						
SRO	Srobarova	72.78	330	*e*P	P	10 07 07.1	+0.6
SRO				pmax	pmax		
	comp=Z,32nm,1.0s						
SRO	Srobarova	72.78	330	*e*P	P	10 07 07.1	+0.6
ZST	Bratislava	72.80	331	*e*P	P	10 07 07.4	+0.7
ZST	Bratislava	72.80	331	*e*P	P	10 07 07.4	+0.7
HDIL	Hopedale	72.81	45	P	P	10 07 06.6	-0.3
	baz=326						
HDIL	Hopedale	72.81	45	IAmb	IAmb	10 07 07.4	
	comp=Z,20nm,0.7s						
ARR	Arges	72.83	325	⇑P	P	10 07 07.8	+0.8
BUD	Budapest	72.85	329	*e*P	P	10 07 07.2	+0.2
BCOK	Bluff Creek, N	72.94	53	IAmb	IAmb	10 07 09.2	
	comp=Z,20nm,0.8s						
KHC	Kasperske Hory	72.96	333	⇓*i*P	P	10 07 08.0	+0.3
KHC	Kasperske Hory	72.96	333	⇓*i*P	P	10 07 08.0	+0.3
KHC	Kasperske Hory	72.96	333	IAmb	IAmb	10 07 08.9	
	comp=Z,29nm,0.8s						
QUOK	Quay	72.97	52	IAmb	IAmb	10 07 09.2	
	comp=Z,47nm,1.2s						
CKRC	Cesky Krumlov	73.04	333	⇓*i*P	P	10 07 09.1	+1.0
SIRR	Siria	73.07	327	⇑P	P	10 07 07.6	-0.7
GRF	Grafenberg Arr	73.08	335	*e*P	P	10 07 08.8	+0.5
	comp=Z,53nm,0.8s,baz=23,slow=5.9						
GRF				*e*L	L	10 34 55.7	
	comp=Z,127nm,21.2s						
GRFO	Grafenberg	73.08	335	P	P	10 07 08.4	+0.1
GRFO				pmax	pmax		
	comp=Z,47nm,0.8s						
GRFO	Grafenberg	73.08	335	P	P	10 07 08.4	+0.1
WMOK	Wichita Mounta	73.09	55	P	P	10 07 09.4	+0.8
	baz=323,SNR=14						
WMOK	Wichita Mounta	73.09	55	IAmb	IAmb	10 07 10.1	
	comp=Z,13nm,0.6s						
WET	Wettzell	73.14	334	*e*P	P	10 07 09.1	+0.4
	comp=Z,45nm,1.2s,baz=23,slow=5.9						
GEC2	GERESS Array S	73.19	333	*e*P	P	10 07 09.0	-0.1
	comp=Z,16nm,0.7s,baz=23,slow=5.9						
GEC2	GERESS Array S	73.19	333	IAmb	IAmb	10 07 09.7	
	comp=Z,15nm,0.8s						
GERES	GERESS Array B	73.19	333	P	P	10 07 08.9	-0.1
	comp=Z,15nm,0.7s,baz=37,slow=5.5,SNR=35						
CSKK	Cskako	73.19	330	*e*P	P	10 07 09.3	+0.3
TNS	Taunus Mts	73.27	337	*e*P	P	10 07 09.5	+0.1
	comp=Z,38nm,0.7s,baz=23,slow=5.9						
AHRW	Bad Neuenahr-A	73.30	338	*e*P	P	10 07 09.6	+0.1
	comp=Z,39nm,1.2s,baz=23,slow=5.9						
R40A	Maddies Statio	73.34	48	IAmb	IAmb	10 07 10.2	
	comp=Z,14nm,0.7s						
S39A	Bolivar	73.35	49	IAmb	IAmb	10 07 10.4	
	comp=Z,20nm,1.1s						
FNO	Franklin	73.36	54	IAmb	IAmb	10 07 11.9	
	comp=Z,33nm,0.7s						
CONA	Conrad Observa	73.41	331	*i*P	P	10 07 10.9	+0.6
	comp=Z,23nm,0.6s,SNR=12						
SOP	Sopron	73.42	331	*e*P	P	10 07 10.9	+0.6
EGYH	Egyhazaskeszo	73.43	330	*e*P	P	10 07 10.9	+0.6
GZR	Gura Zlata	73.46	326	⇓P	P	10 07 10.3	-0.3
BTNL	Ternell	73.47	339	*d*P	P	10 07 10.4	-0.1
	comp=Z,19nm,0.8s						
MEM	Membach	73.47	339	*d*P	P	10 07 09.2	-1.3
	comp=Z,27nm,0.8s						
MEM				*d*PcP	PcP	10 07 22.8	-0.6
TRQ	Mont Tremblant	73.56	32	IAmb	IAmb	10 07 11.7	
	comp=Z,39nm,0.8s						
MPLH	Magyarpolny	73.59	330	*e*P	P	10 07 11.4	+0.2
TUL1	Leonard	73.62	52	P	P	10 07 12.3	+0.7
	baz=324,SNR=16						
TUL1	Leonard	73.62	52	IAmb	IAmb	10 07 13.0	
	comp=Z,32nm,0.8s						
SHME	Shamm	73.65	291	*i*P	P	10 07 11.3	-0.6
	SNR=6.9						
SHME	Shamm	73.65	291	P	P	10 07 11.3	-0.6
	SNR=6.9						
BZS	Buzias	73.66	327	⇑P	P	10 07 11.4	-0.2
BANOM	Banah	73.66	291	*i*P	P	10 07 11.8	-0.2
	SNR=12						
BANOM	Banah	73.66	291	P	P	10 07 12.0	0.0
	SNR=12						
X34A	Smith Ranch, M	73.67	54	IAmb	IAmb	10 07 13.9	
	comp=Z,15nm,0.8s						
AAM	Ann Arbor	73.67	40	P	P	10 07 12.0	+0.3
	baz=328						
K50A	Casco	73.67	39	IAmb	IAmb	10 07 13.4	
	comp=Z,24nm,0.8s						
COPA	Copaceanca	73.69	324	⇑P	P	10 07 11.5	-0.3
W35A	Tecumseh	73.70	53	IAmb	IAmb	10 07 13.6	
	comp=Z,17nm,0.8s						
BHOU	Houvegnez	73.71	339	*d*P	P	10 07 12.1	+0.2
	comp=Z,21nm,0.9s						
WB0	Warramunga Arr	73.78	198	IAmb	IAmb	10 07 14.5	
	comp=Z,20nm,0.7s						
BCLA	Clavier	73.81	339	*d*P	P	10 07 12.2	-0.2
U38A	Gravette	73.86	51	IAmb	IAmb	10 07 13.8	
	comp=Z,14nm,0.7s						
BGES	Gesves	73.89	339	*d*P	P	10 07 11.5	-1.3
	comp=Z,13nm,0.8s						
SFIN	Lafayette	73.89	44	P	P	10 07 12.9	-0.2
	baz=327						
MOA	Molln	73.94	332	*i*P	P	10 07 13.4	+0.1
	comp=Z,14nm,0.7s						
SNF	Seneffe	73.94	340	*d*P	P	10 07 12.4	-0.8
	comp=Z,20nm,0.7s						
WR0	Warramunga Arr	73.94	198	IAmb	IAmb	10 07 15.4	
	comp=Z,12nm,0.7s						
WRAB	Tennant Creek	73.95	198*c*	*i*P	P	10 07 14.5	+1.0
WRAB				pmax	pmax		
	comp=Z,15nm,0.7s						
WRAB	Tennant Creek	73.95	198	P	P	10 07 14.2	+0.7
WRAB				IAmb	IAmb	10 07 15.6	
	comp=Z,17nm,0.8s						
WB2	Warramunga Arr	73.96	198	IAmb	IAmb	10 07 15.6	
	comp=Z,20nm,0.7s						
WRA	Warramunga Arr	73.96	198	P	P	10 07 14.8	+1.1
	comp=Z,16nm,0.6s,baz=15,slow=5.8,SNR=162						
WRA				pP	pP	10 09 05.7	+2.5
	comp=Z,2.4nm,1.0s,baz=12,slow=6.2,SNR=5.1						
CCM	Cathedral Cave	74.00	48	P	P	10 07 13.6	-0.1
CCM				pmax	pmax		
	comp=Z,11nm,0.7s						
CCM	Cathedral Cave	74.00	48	P	P	10 07 13.5	-0.2
	baz=325						
CCM	Cathedral Cave	74.00	48	P	P	10 07 13.6	-0.1
CCM				IAmb	IAmb	10 07 14.5	
	comp=Z,10nm,0.7s						
HERR	Herculane	74.03	326	⇑P	P	10 07 13.3	-0.4
BMRD	Maredsous	74.03	339	*d*P	P	10 07 13.4	-0.3
	comp=Z,21nm,1.2s						
BMRD				*d*PcP	PcP	10 07 26.1	+0.4
RCHB	Rochefort	74.07	339	*d*P	P	10 07 13.5	-0.3
	comp=Z,12nm,1.0s						
RCHB				*d*PcP	PcP	10 07 25.4	-0.6
BR131	Keskin Array S	74.10	316	IAmb	IAmb	10 07 15.2	
	comp=Z,27nm,0.8s						
BRTR	Keskin Array B	74.10	316	P	P	10 07 14.3	-0.1
	comp=Z,15nm,0.8s,baz=47,slow=3.1,SNR=57						
BRTR				PP	PP	10 10 04.8	-3.5
	comp=Z,1.6nm,0.8s,baz=36,slow=7.1,SNR=3.7						
MORH	Mrgy, Hungar	74.10	329	⇓*i*P	P	10 07 12.9	-1.2
ARSA	Arzberg	74.12	331	*i*P	P	10 07 14.7	+0.5
	comp=Z,15nm,0.8s,SNR=7.3						
MDH	Madha	74.14	291	P	P	10 07 14.0	-0.8
MDH	Madha	74.14	291	P	P	10 07 13.7	-1.0
	SNR=5.5						
MASF	Masafi	74.17	291	P	P	10 07 15.0	0.0
	SNR=6.5						
MSFE	Esma-Masafi	74.18	291	*i*P	P	10 07 14.6	-0.4
	SNR=6.5						
FITZ	Fitzroy Crossi	74.22	207	P	P	10 07 16.4	+1.3
	comp=Z,6.1nm,0.7s,baz=354,slow=7.0,SNR=14						
DOU	Dourbes	74.27	339	*d*P	P	10 07 14.4	-0.6
	comp=Z,11nm,0.7s						
MGMO	Mountain Grove	74.27	49	IAmb	IAmb	10 07 15.4	
	comp=Z,8.8nm,0.7s						
WLF	Walferdange	74.33	338	*d*P	P	10 07 15.5	+0.1
	comp=Z,13nm,1.1s						
ABTX	Abilene, Hawle	74.33	57	P	P	10 07 16.4	+0.6
	baz=323,SNR=5.6						
ABTX	Abilene, Hawle	74.33	57	IAmb	IAmb	10 07 17.3	
	comp=Z,12nm,0.8s						
ANTO	Ankara	74.33	316	P	P	10 07 15.7	0.0
ANTO				pmax	pmax		
	comp=Z,32nm,0.7s						
ANTO	Ankara	74.33	316	P	P	10 07 15.7	0.0
ANTO				IAmb	IAmb	10 07 16.8	
	comp=Z,32nm,0.7s						
MDVR	Moldovita	74.36	326	⇓P	P	10 07 14.9	-0.7
BR231	Keskin MP Arra	74.36	316	P	P	10 07 16.4	+0.4
BR231				IAmb	IAmb	10 07 17.1	
	comp=Z,19nm,0.8s						
PUNG	Punghina	74.38	325	⇑P	P	10 07 15.3	-0.5
KOVH	Kovagotottos	74.38	329	*e*P	P	10 07 14.5	-1.2
WSAR	Wadi Sarin	74.39	288	P	P	10 07 16.8	+0.6
FVM	French Village	74.43	47	IAmb	IAmb	10 07 16.9	
	comp=Z,24nm,0.6s						
STU	Stuttgart	74.44	336	*e*P	P	10 07 16.1	+0.1
	comp=Z,55nm,0.7s,baz=23,slow=5.9						
RJOB	Jochberg	74.45	333	*e*P	P	10 07 16.5	+0.3
	comp=Z,20nm,1.0s,baz=23,slow=5.9						
BIDO	Bidbid	74.46	288	P	P	10 07 17.1	+0.5
UOSS	Minazif	74.47	291	*i*P	P	10 07 15.9	-0.7
	SNR=18						
UOSS	Minazif	74.47	291	P	P	10 07 15.9	-0.7
UOSS	Minazif	74.47	291	P	P	10 07 16.1	-0.5
P46A	Rosedale	74.48	44	IAmb	IAmb	10 07 16.9	
	comp=Z,36nm,0.8s						
MNTQ	Montreal, Queb	74.50	32	IAmb	IAmb	10 07 16.9	
	comp=Z,35nm,1.0s						
HATD	Hatta, Dubai	74.61	291	*i*P	P	10 07 17.0	-0.3
	SNR=17						
HATD	Hatta, Dubai	74.61	291	P	P	10 07 17.0	-0.3
	SNR=17						
GAZ	Gaziantep	74.62	312	IAmb	IAmb	10 09 01.3	
	comp=Z,33nm,0.7s						
U40A	Yellville	74.65	50	P	P	10 07 17.5	0.0
	baz=325,SNR=27						
U40A	Yellville	74.65	50	IAmb	IAmb	10 07 18.1	
	comp=Z,40nm,0.9s						
FRGS	Fruska Gora	74.66	328	⇓P	P	10 07 17.1	-0.2
FRGS	Fruska Gora	74.66	328	⇓*i*P	P	10 07 16.8	-0.6
WBK	Wadi Bani Khal	74.68	287	P	P	10 07 18.1	+0.3
NAZ	Nazwa, Dubai	74.75	291	*i*P	P	10 07 17.7	-0.4
	SNR=6.4						
NAZ	Nazwa, Dubai	74.75	291	P	P	10 07 17.9	-0.2
ASHO	Ashiyiah	74.76	291	*i*P	P	10 07 17.8	-0.5
	SNR=16						
ASHO	Ashiyiah	74.76	291	P	P	10 07 18.0	-0.2
	SNR=15						
JLN	Jalan Bani Buh	74.77	286	P	P	10 07 18.7	+0.3
SOKA	Soboth	74.78	331	*i*P	P	10 07 18.2	+0.1
	comp=Z,37nm,1.0s,SNR=10						
PERS	Pernice	74.79	331	*i*P	P	10 07 18.2	+0.1
TX31	Lajitas Ar. Si	74.82	62	IAmb	IAmb	10 07 21.0	
	comp=Z,22nm,0.7s						
TXAR	Lajitas Array	74.82	62	P	P	10 07 20.4	+1.8
	comp=Z,5.9nm,0.5s,baz=297,slow=4.9,SNR=62						
GROS	Grobnik	74.84	331	*i*P	P	10 07 18.2	-0.2

KALN	Kalnik	74.85	330	i P	P	10 07 18.0	-0.4
SMDO	Samad	74.87	288	P	P	10 07 19.1	+0.1
HOQ	Hoqain	74.89	289	P	P	10 07 18.9	-0.1
KBA	Koelnbreinsper	74.90	333	i P	P	10 07 19.5	+0.7
	comp=Z,118nm,1.0s,SNR=24						
SOHO	SOHO	74.91	290	i P	P	10 07 18.5	-0.6
	SNR=15						
SOHO	SOHO	74.91	290	P	P	10 07 18.5	-0.6
T42A	Van Buren	74.91	48	IAmb	IAmb	10 07 19.6	
	comp=Z,16nm,0.8s						
LOBO	Lobor	74.94	330	i P	P	10 07 18.6	-0.4
LONY	Lake Ozonia	74.97	33	P	P	10 07 18.5	-0.6
	baz=332						
LONY	Lake Ozonia	74.97	33	P	P	10 07 17.7	-1.4
LONY				IAmb	IAmb	10 07 19.2	
	comp=Z,11nm,0.7s						
FAQ	Al Faqa, Dubai	74.97	291	i P	P	10 07 18.8	-0.7
	SNR=8.6						
FAQ	Al Faqa, Dubai	74.97	291	P	P	10 07 18.9	-0.6
BFO	Black Forest	75.06	336	P	P	10 07 19.1	-0.5
BFO				pmax	pmax		
	comp=Z,23nm,0.8s						
BFO	Black Forest	75.06	336	eP	P	10 07 19.4	-0.1
	comp=Z,24nm,0.8s,baz=23,slow=5.9						
BFO	Black Forest	75.06	336	P	P	10 07 19.1	-0.5
BFO				IAmb	IAmb	10 07 20.3	
	comp=Z,23nm,0.8s						
OBKA	Obir	75.07	332	i P	P	10 07 19.8	0.0
	comp=Z,18nm,0.6s,SNR=5.6						
WATA	Walderalm	75.15	334	i P	P	10 07 20.6	+0.4
	comp=Z,16nm,0.5s,SNR=9.3						
W39A	Magazine	75.16	51	P	P	10 07 20.8	+0.5
	baz=325						
SIUC	Southern Illin	75.19	46	IAmb	IAmb	10 07 21.1	
	comp=Z,35nm,1.1s						
S44A	Carbondale	75.19	46	IAmb	IAmb	10 07 21.2	
	comp=Z,24nm,0.9s						
PTJ	Puntijarka	75.20	330	P	P	10 07 20.1	-0.3
WTTA	Wattenberg	75.20	334	i P	P	10 07 21.1	+0.6
	comp=Z,43nm,0.7s,SNR=13						
ASUD	Al Ashush, Dub	75.22	291	i P	P	10 07 20.7	-0.1
	SNR=7.6						
ASUD	Al Ashush, Dub	75.22	291	P	P	10 07 20.7	-0.1
	SNR=7.6						
MOSL	Moslavina	75.22	330	i P	P	10 07 19.5	-1.0
MYKA	Terra Mystica	75.22	332	i P	P	10 07 20.3	-0.3
	comp=Z,14nm,0.6s,SNR=5.2						
RETA	Reutte	75.23	334	i P	P	10 07 20.7	+0.1
	comp=Z,17nm,0.8s,SNR=5.2						
DZM	Mont Dzumac	75.23	167	P	P	10 07 23.7	+2.9
	comp=Z,6.9nm,0.8s,baz=58,slow=11,SNR=8.0						
DZM	Mont Dzumac	75.23	167	IAmb	IAmb	10 09 17.6	
	comp=Z,17nm,1.1s						
ERPA	Erie	75.24	38	P	P	10 07 20.6	-0.1
	baz=330						
ZAG	Zagreb	75.27	330	P	P	10 07 20.8	+0.1
MOTA	Moosalm	75.27	334	i P	P	10 07 21.0	+0.1
	comp=Z,46nm,1.0s,SNR=11						
F62A	Pittston Farm,	75.28	29	IAmb	IAmb	10 07 22.0	
	comp=Z,36nm,1.1s						
TEKS	Tekeris	75.29	327	⇓iP	P	10 07 19.6	-1.3
SQTA	Sankt Quirin	75.35	334	i P	P	10 07 21.8	+0.5
	comp=Z,26nm,0.7s,SNR=10.0						
P48A	Milroy	75.36	43	IAmb	IAmb	10 07 21.6	
	comp=Z,17nm,0.9s						
JMDO	Jabal Madar	75.37	288	P	P	10 07 21.6	-0.1
	SNR=18						
PBMO	Poplar Bluff	75.42	48	IAmb	IAmb	10 07 22.3	
	comp=Z,15nm,0.6s						
ALNE	Al Ain	75.42	290	i P	P	10 07 21.6	-0.3
	SNR=7.9						
ALNE	Al Ain	75.42	290	P	P	10 07 21.6	-0.3
	SNR=7.9						
CRES	Cresnjev	75.42	331	⇓iP	P	10 07 21.2	-0.4
CRES	Cresnjev	75.42	331	eP	P	10 07 21.1	-0.5
ABTA	Abfaltersbach	75.43	333	i P	P	10 07 21.9	+0.1
	comp=Z,18nm,0.6s,SNR=8.0						
ECH	Echery	75.45	337	IAmb	IAmb	10 07 22.5	
	comp=Z,31nm,0.9s						
AJN	Ajban	75.46	291	P	P	10 07 21.4	-0.7
MMNY	Mt. Morris Dam	75.47	36	IAmb	IAmb	10 07 22.0	
	comp=Z,34nm,0.7s						
LJU	Ljubljana	75.50	331	⇓iP	P	10 07 21.4	-0.6
ARQ	Araqi	75.53	289	P	P	10 07 22.5	-0.1
	SNR=6.3						
DIVS	Divibare	75.54	327	⇓iP	P	10 07 21.7	-0.7
DIVS	Divibare	75.54	327	IAmb	IAmb	10 07 22.6	
	comp=Z,36nm,0.8s						
UMR	Umm Al-Rimmam	75.56	300	eP	P	10 07 21.2	-1.4
MIB	Mutribah	75.56	300	eP	P	10 07 21.2	-1.4
M53A	WI Miller and	75.56	39	P	P	10 07 22.6	+0.1
	baz=330						
P49A	Miami Univ. Ec	75.59	42	P	P	10 07 22.5	-0.1
	baz=328						
P49A	Miami Univ. Ec	75.59	42	IAmb	IAmb	10 07 22.6	
	comp=Z,17nm,0.5s						
BSY	Bisya	75.60	288	P	P	10 07 23.0	0.0
	SNR=5.0						
OZLJ	Ozalj	75.61	331	i P	P	10 07 22.6	0.0
DAVA	Damuels	75.64	335	i P	P	10 07 23.1	+0.1
	comp=Z,33nm,1.1s,SNR=6.3						
NCB	Newcomb	75.66	33	IAmb	IAmb	10 07 23.4	
	comp=Z,18nm,0.8s						
FETA	Feichten	75.67	334	i P	P	10 07 23.5	+0.4
	comp=Z,22nm,0.7s,SNR=6.2						
ACSO	Alum Creek Sta	75.70	41	P	P	10 07 23.1	-0.1
	baz=329						
ACSO	Alum Creek Sta	75.70	41	IAmb	IAmb	10 07 24.0	
	comp=Z,18nm,1.1s						
VTS	Vitosha	75.72	324	⇓P	P	10 07 23.5	0.0
MIAR	Mount Ida	75.78	51	P	P	10 07 24.3	+0.6
	baz=325,SNR=7.9						
MIAR	Mount Ida	75.78	51	IAmb	IAmb	10 07 24.8	
	comp=Z,12nm,0.8s						
WHAR	Wooly Hollow	75.78	50	IAmb	IAmb	10 07 24.8	
	comp=Z,29nm,0.8s						
CEY	Cerknica	75.81	331	eP	P	10 07 22.4	-1.4
VT1	Waterbury	75.82	32	IAmb	IAmb	10 07 25.1	
	comp=Z,79nm,1.6s						
STAL	STALIGIAL	75.82	333	IAmb	IAmb	10 07 24.1	
	comp=Z,23nm,0.9s						
J58A	Remsen	75.84	34	IAmb	IAmb	10 07 24.2	
	comp=Z,29nm,0.9s						
KBD	Kabd	75.87	300	eP	P	10 07 22.9	-1.4
BLY	Banja Luka	75.87	329	eP	P	10 07 23.2	-0.8
M54A	Oil Creek Stat	75.89	38	P	P	10 07 24.1	-0.2
	baz=330,SNR=5.2						
HAPS	Han Pijesak,BI	75.89	328	⇓iP	P	10 07 24.1	-0.3
W41B	Gary Mavity, V	75.90	50	P	P	10 07 24.7	+0.3
	baz=326,SNR=16						
BBLS	Lazići	75.94	327	⇓iP	P	10 07 24.4	-0.2
JCT	Junction City	75.96	58	P	P	10 07 25.7	+0.8
	baz=323,SNR=7.4						
J59A	Piesco	76.01	34	IAmb	IAmb	10 07 25.2	
	comp=Z,18nm,0.8s						
WCI	Wyandotte Cave	76.03	44	P	P	10 07 25.4	+0.3
WCI				pmax	pmax		
	comp=Z,25nm,0.7s						
WCI	Wyandotte Cave	76.03	44	P	P	10 07 25.2	+0.1
	baz=328						
WCI	Wyandotte Cave	76.03	44	P	P	10 07 25.4	+0.3
WCI				IAmb	IAmb	10 07 26.4	
	comp=Z,25nm,0.7s						
N53A	Lisbon	76.05	39	IAmb	IAmb	10 07 25.9	
	comp=Z,26nm,0.9s						
QRN	Al-Qurain	76.09	299	eP	P	10 07 24.5	-1.1
L56A	Greenwood	76.12	36	P	P	10 07 24.6	-0.9
L56A				IAmb	IAmb	10 07 25.4	
	comp=Z,22nm,0.5s						
RDF	Al-Radifah	76.14	299	eP	P	10 07 24.4	-1.4
RIY	Rijeka	76.17	331	eP	P	10 07 25.1	-0.6
RUDO	Rudo	76.17	327	eP	P	10 07 24.7	-1.1
X40A	Basin Creek Fa	76.19	51	P	P	10 07 26.7	+0.7
	baz=325,SNR=6.2						
X40A	Basin Creek Fa	76.19	51	IAmb	IAmb	10 07 27.4	
	comp=Z,11nm,0.7s						
MGRS	Mrkonjic Grad	76.20	329	eP	P	10 07 25.9	0.0
N54A	Moraine State	76.24	38	P	P	10 07 26.3	+0.1
	baz=330,SNR=5.7						
N54A	Moraine State	76.24	38	IAmb	IAmb	10 07 26.9	
	comp=Z,19nm,0.8s						
O52A	Adamsville	76.25	40	IAmb	IAmb	10 07 26.8	
	comp=Z,25nm,0.8s						
M55A	Ridgway	76.26	37	IAmb	IAmb	10 07 26.9	
	comp=Z,18nm,0.6s						
P51A	Williamsport	76.31	41	IAmb	IAmb	10 07 26.8	
	comp=Z,16nm,0.9s						
CTI	Castel Tesino	76.31	333	IAmb	IAmb	10 07 26.8	
	comp=Z,30nm,1.0s						
ACCN	Adirondack Com	76.36	33	P	P	10 07 26.4	-0.4
ACCN				IAmb	IAmb	10 07 27.3	
	comp=Z,18nm,1.0s						
O53A	New Philadelph	76.38	40	P	P	10 07 26.9	-0.1
	baz=330,SNR=9.2						
O53A	New Philadelph	76.38	40	IAmb	IAmb	10 07 27.6	
	comp=Z,24nm,0.7s						
SMRN	Sveta Marina	76.53	331	i P	P	10 07 26.5	-1.2
BALB	Balikesir	76.54	319	IAmb	IAmb	10 07 28.4	
	comp=Z,44nm,0.9s						
P52A	Corning	76.55	41	P	P	10 07 27.4	-0.5
	baz=329						
Q51A	Peebles	76.58	42	IAmb	IAmb	10 07 28.9	
	comp=Z,28nm,0.8s						
RABC	Rab	76.60	331	i P	P	10 07 27.1	-1.0
BINY	Binghamton	76.62	35	P	P	10 07 27.6	-0.7
	baz=332						
UPM	Unac-Piva	76.70	327	eP	P	10 07 28.1	-0.8
WLAR	White Oak Lake	76.71	51	IAmb	IAmb	10 07 30.5	
	comp=Z,21nm,0.9s						
T47A	Sharon Grove	76.72	45	IAmb	IAmb	10 07 29.9	
	comp=Z,23nm,0.7s						
L59A	Walton	76.96	34	IAmb	IAmb	10 07 30.6	
	comp=Z,27nm,0.8s						
M57A	Sunshine Farm,	76.97	36	IAmb	IAmb	10 07 30.6	
	comp=Z,18nm,0.7s						
RICI	Ricice	77.01	329	i P	P	10 07 28.9	-1.5
BRY	Bratogost	77.09	327	eP	P	10 07 29.6	-1.4
WVT	Waverly	77.12	46	P	P	10 07 31.4	+0.3
WVT				pmax	pmax		
	comp=Z,11nm,0.6s						
WVT	Waverly	77.12	46	P	P	10 07 31.4	+0.3
	baz=327						
WVT	Waverly	77.12	46	P	P	10 07 31.4	+0.3
WVT				IAmb	IAmb	10 07 31.7	
	comp=Z,11nm,0.6s						
SENIN	Lac Senin/Sane	77.15	336	IAmb	IAmb	10 07 35.3	
	comp=Z,69nm,1.9s						
KSPA	Keystone Colle	77.26	35	P	P	10 07 31.4	-0.4
KSPA				IAmb	IAmb	10 08 03.3	
	comp=Z,68nm,1.8s						
PDG	Podgorica	77.27	327	⇓P	P	10 07 31.1	-0.6
PDG	Podgorica	77.27	327	⇓iP	P	10 07 30.9	-0.9
PDG	Podgorica	77.27	327	IAmb	IAmb	10 07 31.8	
	comp=Z,44nm,0.8s						
SSPA	Standing Stone	77.31	37	P	P	10 07 31.7	-0.3
	baz=331						
TREB	Trebinje	77.31	327	eP	P	10 07 30.1	-1.9
W45A	Hickory Valley	77.32	48	IAmb	IAmb	10 07 33.9	
	comp=Z,69nm,1.3s						
ZIRJ	Zirje	77.33	330	i P	P	10 07 31.0	-1.1
O56A	Blue Knob Stat	77.38	38	P	P	10 07 32.3	-0.2
	baz=331						
O56A	Blue Knob Stat	77.38	38	IAmb	IAmb	10 07 33.0	
	comp=Z,16nm,0.9s						
STON	Ston	77.39	328	⇓iP	P	10 07 30.3	-2.1
MCWV	Mont Chateau	77.42	39	P	P	10 07 32.9	+0.2
	baz=330						
HCY	Herceg Novi	77.51	327	eP	P	10 07 31.7	-1.4
DRME	Dracevica, Mon	77.51	327	⇓iP	P	10 07 32.4	-0.7
NATX	Nacogdoches	77.53	54	P	P	10 07 35.4	+2.0
	baz=325						
NATX	Nacogdoches	77.53	54	IAmb	IAmb	10 07 35.6	
	comp=Z,24nm,0.8s						
Q54A	Coxs Mills	77.62	40	IAmb	IAmb	10 07 34.9	
	comp=Z,23nm,1.1s						
S51A	Beattyville	77.66	43	IAmb	IAmb	10 07 34.6	
	comp=Z,12nm,0.7s						
T50A	Nancy	77.67	44	IAmb	IAmb	10 07 34.9	
	comp=Z,20nm,0.7s						
ASAR	Alice Springs	77.67	198	P	P	10 07 35.9	+1.7
	comp=Z,16nm,0.6s,baz=11,slow=5.2,SNR=193						
ASAR				pP	pP	10 09 27.6	+2.6
	comp=Z,1.1nm,0.7s,baz=4.1,slow=5.0,SNR=2.9						
U49A	Red Boiling Sp	77.69	45	IAmb	IAmb	10 07 35.0	
	comp=Z,17nm,0.7s						
R53A	Hurricane	77.74	41	IAmb	IAmb	10 07 35.2	
	comp=Z,19nm,0.7s						
CLTN	Cedars of Leba	77.81	45	IAmb	IAmb	10 07 35.8	
	comp=Z,18nm,0.8s						
N59A	State Game Lan	77.83	36	P	P	10 07 34.5	-0.4
	baz=332						
PLAL	Pickwick Lake	77.97	47	IAmb	IAmb	10 07 36.3	
	comp=Z,13nm,0.8s						
FNA	Florina	78.00	324	IAmb	IAmb	10 07 35.8	
	comp=Z,19nm,0.8s						
TIR	Tirane	78.03	326	⇑P	P	10 07 35.6	-0.3
CSS	Mathiatis	78.21	313	IAmb	IAmb	10 07 37.6	
	comp=Z,25nm,0.7s						
VLC	Villacollemand	78.40	333	IAmb	IAmb	10 07 39.1	
	comp=Z,36nm,0.7s						
BNI	Bardonecchia	78.53	336	IAmb	IAmb	10 07 40.2	
	comp=Z,19nm,0.7s						
TZTN	Tazewell	78.61	43	P	P	10 07 39.3	+0.1
	baz=329						
SWET	Sewanee	78.72	46	IAmb	IAmb	10 07 40.2	
	comp=Z,24nm,0.8s						
OSSC	Osservatorio P	78.75	333	IAmb	IAmb	10 07 40.2	
	comp=Z,25nm,0.6s						
SSB	Saint Sauveur	78.83	338	IAmb	IAmb	10 07 41.4	
	comp=Z,26nm,0.8s						
NRCA	Norcia	78.84	331	IAmb	IAmb	10 07 43.8	
	comp=Z,60nm,1.0s						
P60A	Greenville	78.85	36	P	P	10 07 39.8	-0.5
	baz=332						
X48A	Hartselle	78.87	47	IAmb	IAmb	10 07 40.9	
	comp=Z,9.4nm,0.6s						
VBMS	Vicksburg	79.15	51	P	P	10 07 43.3	+1.3
	baz=326						
V52A	Sevierville	79.19	44	IAmb	IAmb	10 07 42.7	
	comp=Z,17nm,0.5s						
FPAL	Fort Paine	79.43	46	IAmb	IAmb	10 07 44.1	
	comp=Z,14nm,0.7s						
CBN	Corbin Frederi	79.63	38	P	P	10 07 44.8	+0.4
	baz=332						
MATE	Matera	79.71	328	⇑P	P	10 07 44.5	-0.3
T57A	Hurt	79.96	40	IAmb	IAmb	10 07 46.7	
	comp=Z,12nm,0.6s						
Z51A	Franklin	80.66	46	IAmb	IAmb	10 07 50.5	
	comp=Z,23nm,0.9s						
KMSC	Kings Mountain	80.73	42	P	P	10 07 50.1	-0.2
	baz=330						
TIP	Timpagrande	81.02	327	⇓P	P	10 07 51.7	-0.1
GOGA	Godfrey	81.32	45	P	P	10 07 53.6	+0.2
	baz=329						
RAYN	Ar Rayn	81.55	298	i P	P	10 07 54.5	-0.3
	SNR=21						
RAYN	Ar Rayn	81.55	298	P	P	10 07 54.5	-0.3
RAYN				pmax	pmax		
	comp=Z,23nm,0.9s						
RAYN	Ar Rayn	81.55	298	P	P	10 07 54.5	-0.3
RAYN				IAmb	IAmb	10 07 55.5	
	comp=Z,23nm,0.9s						
CNNC	Cliffs of the	82.03	40	P	P	10 07 57.5	+0.6
	baz=332						
352A	Blakely	82.33	47	IAmb	IAmb	10 07 59.5	
	comp=Z,24nm,0.6s						
TIGA	Tifton	82.96	46	P	P	10 08 02.6	+0.9
	baz=329						
Y60A	Bolivia	82.98	41	P	P	10 08 02.1	+0.3
RGRS	Roger Stewart	83.14	43	P	P	10 08 03.3	+0.8
PGAV	Gavieira, Arco	84.46	346	eP	P	10 08 08.1	-1.0
STKA	Stephens Creek	84.64	190	P	P	10 08 10.8	+1.0
	comp=Z,2.3nm,0.7s,baz=1.3,slow=7.9,SNR=6.1						
STKA	Stephens Creek	84.64	190	P	P	10 08 11.2	+1.5
STKA				pmax	pmax		
	comp=Z,5.0nm,1.9s						
STKA	Stephens Creek	84.64	190	P	P	10 08 11.2	+1.5
POLO	Lamas de Olo	84.97	346	eP	P	10 08 10.5	-1.1
PVRL	Vila Real	85.05	345	eP	P	10 08 11.2	-0.8
	comp=Z,39nm,1.9s						
MVO	Moncorvo	85.06	345	eP	P	10 08 11.0	-1.0
	comp=Z,48nm,1.5s						
656A	Willston	85.20	46	P	P	10 08 14.3	+1.6
SOCY	Socotra	85.77	284	P	P	10 08 13.8	-2.0
MTE	Manteigas	85.88	345	eP	P	10 08 15.2	-0.8
	comp=Z,42nm,1.9s						
ESBB	Sonseca Array	85.97	342	P	P	10 08 16.0	-0.4
ESBB				IAmb	IAmb	10 08 16.2	
	comp=Z,11nm,1.1s						
ESDC	Sonseca Array	85.98	342	P	P	10 08 15.4	-1.0
	comp=Z,4.4nm,0.7s,baz=5.8,slow=4.7,SNR=16						
ESDC	Sonseca Array	85.98	342	P	P	10 08 15.8	-0.6
PAB	San Pablo	86.17	343	P	P	10 08 16.5	-0.9
PAB				pmax	pmax		
	comp=Z,18nm,1.3s						
PAB	San Pablo	86.17	343	P	P	10 08 16.5	-0.9
PAB				IAmb	IAmb	10 08 17.0	
	comp=Z,18nm,1.3s						
PCAS	Casmilo, Conde	86.37	346	eP	P	10 08 17.2	-1.0
	comp=Z,60nm,1.6s						
KEST	Kesra	86.51	331	P	P	10 08 19.2	+0.1
	comp=Z,11nm,0.6s,baz=314,slow=1.6,SNR=12						
KEST	Kesra	86.51	331	P	P	10 08 19.6	+0.5
PESTR	Estremoz	87.39	345	P	P	10 08 23.1	0.0
PESTR				IAmb	IAmb	10 09 56.6	
	comp=Z,26nm,1.6s						
TORD	Torodi Ar. Bea	110.01	330	PKiKP	PKiKP	10 14 03.2	-0.7
	comp=Z,0.8nm,0.6s,baz=16,slow=2.3,SNR=3.7						
TORD				PP	PP	10 14 38.8	-7.4
	comp=Z,2.2nm,0.8s,baz=5.3,slow=7.2,SNR=7.4						
DBIC	Dimbokro	118.04	335	PKP	PKPdf	10 14 18.5	-0.8
	comp=Z,2.8nm,0.4s,baz=335,slow=1.6,SNR=5.5						
ETMB	Extrema	126.96	51	PKPdf	PKPdf	10 14 36.1	-0.2
SAML	Samuel	127.60	47	PKIKP	PKiKP	10 14 38.0	-0.2
SAML	Samuel	127.60	47		PKiKP	10 14 38.0	-0.2
LPAZ	La Paz	131.55	57	PKP	PKPdf	10 14 45.7	0.0
	comp=Z,1.3nm,0.7s,baz=38,slow=4.4,SNR=6.5						
VILB	Vilhena	132.47	46	PKPdf	PKiKP	10 14 47.6	-0.4
SMTB	Santa Maria do	133.36	28	eP	PKiKP	10 14 49.7	-0.1
BOSA	Boshof	134.83	281	PKP	PKPdf	10 14 51.3	+0.4
	comp=Z,2.5nm,0.6s,baz=58,slow=4.1,SNR=3.6						
PTLB	Pontes e Lacer	135.15	46	PKPdf	PKPdf	10 14 52.4	+0.7
CMC01	Camacan, BA	141.62	19	eP	PKiKP	10 15 05.5	-1.0
AROD	Rodeo	141.89	71	i P	PKPdf	10 15 01.6	-2.5
ACDV	Cuesta del Vie	142.10	71	i P	PKPdf	10 15 01.1	-3.1
ACCO	Cerro Coronel	142.44	71	i P	PKPdf	10 15 03.0	-2.0
CYA	Choya	142.66	65	i P	PKPdf	10 15 03.0	-2.1
ACLC	CERRO LA CRUZ	142.77	67	i P	PKPdf	10 15 03.0	-2.4
ROC1	El Roble	143.03	76	i P	PKPbc	10 15 03.9	0.0
VA03	San Esteban	143.15	75		PKPbc	10 15 04.5	+0.5
RTLS	Leoncito	143.19	73	i P	PKPbc	10 15 05.0	+0.5
RTLL	Cerro Villicun	143.32	71	i P	PKPbc	10 15 04.8	+0.2
ZON	Zonda	143.37	72	PKIKP	PKPbc	10 15 05.4	+0.7
ZON	Zonda	143.37	72	PKPdf	PKPbc	10 15 05.4	+0.7
AVFE	Valle Fertil	143.41	69	i P	PKPab	10 15 04.8	+0.1
AUSP	Uspallata	143.45	73	i P	PKPbc	10 15 06.0	+0.8
RTCV	Cerro Valdivia	143.68	72	i P	PKPab	10 15 05.7	+0.1
APLL	PUNTA DE LOS L	143.74	68	i P	PKPbc	10 15 05.3	-0.6
NAN01	Guarapari, ES	143.90	21	eP	PKPab	10 15 06.9	+0.3
PCMB	Pacaembu	143.95	40	eP	PKPdf	10 15 07.6	+0.1
ASAL	Salagasta	144.03	73	i P	PKPdf	10 15 08.0	+0.6
ARCO	CERRO ARCO	144.16	73	i P	PKPbc	10 15 06.7	-0.6
AAGR	Agrelo	144.39	74	i P	PKPbc	10 15 08.1	+0.1
TRCB	Terra Rica	144.46	43	eP	PKPab	10 15 09.1	+0.3
SJMB	Sao Joao De Ma	144.48	23	eP	PKPab	10 15 08.7	-0.1
BSFB	Barra de Sao F	144.69	23	eP	PKPab	10 15 09.4	-0.2
AVIZ	Vizcacheras	144.85	74	i P	PKPab	10 15 09.9	-0.2
CPUP	Villa Florida	145.39	53	PKPbc	PKPbc	10 15 11.1	+0.2
	comp=Z,8.5nm,0.6s,baz=332,slow=3.4,SNR=14						
CPUP	Villa Florida	145.39	53	eP	PKPbc	10 15 11.2	+0.2
CPUP	Villa Florida	145.39	53		PKPbc	10 15 11.0	+0.1
TCA	Tanti	145.54	67	i P	PKPbc	10 15 10.9	-0.6
MRA	San Martin	145.71	69	i P	PKPbc	10 15 12.0	+0.1
LC01	Cunco	146.47	84		PKPdf	10 15 11.8	+0.5
LL04	Puerto Octay	147.38	87		PKPbc	10 15 15.1	-0.9
LL04				PKPbc	PKiKP	10 15 16.9	-0.8
PLCA	Paso Flores	148.41	86	PKPbc	PKiKP	10 15 19.9	0.0
	comp=Z,11nm,0.7s,baz=294,slow=3.4,SNR=50						
PLCA				pPKPbc	pPKPbc	10 17 20.8	+0.6
	comp=Z,1.9nm,0.7s,baz=323,slow=2.9,SNR=3.8						
PLCA	Paso Flores	148.41	86	eP	PKPbc	10 15 16.8	-2.0
PLCA	Paso Flores	148.41	86		pPKPab	10 17 21.0	-0.8
COYC	Coyhaique	150.13	95		PKiKP	10 15 23.7	+0.6

IDC 28 09:59:48.1±3.5**, 17°.69N×145°.88E, h245**^{km}±31^{km}**, mb3.2**/4**, mb1 3.5**/5**, mb1mx2.9**/56**, mbtmp3.9**/5**, Error ellipse: s-maj=119.6km s-min=23.6km az=114.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
GUMO	Guam	4.20	194	P	Pn	10 00 54.0	-0.1
	8.3nm,0.3s,baz=240,slow=15,SNR=1.8						
GUMO				S	S	10 01 42.2	-4.3
	11nm,0.3s,baz=151,slow=23,SNR=5.8						
WRA	Warramunga Arr	39.08	197	P	P	10 06 51.5	-0.4
	0.8nm,0.3s,baz=20,slow=8.3,SNR=28						
FITZ	Fitzroy Crossi	40.76	210	P	P	10 07 05.7	0.0
	2.0nm,0.8s,baz=22,slow=7.1,SNR=14						
ASAR	Alice Springs	42.74	196	P	P	10 07 21.6	0.0
	0.6nm,0.4s,baz=14,slow=6.7,SNR=17						
ILAR	Eielson Array	64.47	26	P	P	10 09 58.4	+0.1
	0.3nm,0.5s,baz=258,slow=6.3,SNR=2.0						

IDC 28 10:21:12.1±7.1**, 21°.43S×66°.88W, h209**^{km}±53^{km}**, mb4.3**/1**, mb1 3.8**/3**, mb1mx3.3**/29**, mbtmp4.4**/3**, Error ellipse: s-maj=75.7km s-min=28.1km az=9.0, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
LPAZ	La Paz	5.25	347	P	Pn	10 22 30.4	-0.1
	0.7nm,0.3s,baz=161,slow=2.5,SNR=20						
LPAZ				S	S	10 23 33.2	+1.0
	0.2nm,0.3s,baz=241,slow=21,SNR=4.1						
SIV	San Ignacio	7.72	46	P	Pn	10 23 01.8	+0.1
	5.0nm,0.3s,baz=235,slow=12,SNR=8.8						
SIV				S	S	10 24 29.5	+0.4
	2.3nm,0.3s,baz=320,slow=22,SNR=11						
TORD	Torodi Ar. Bea	75.56	69	P	P	10 32 34.2	+0.1
	4.2nm,0.4s,baz=257,slow=5.5,SNR=51						
MKAR	Makanchi Array	144.45	37	PKP	PKPbc	10 40 22.6	+0.2
	0.8nm,0.6s,baz=314,slow=4.0,SNR=5.5						

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*NEIC **28** 10:21:57.6±1.9, 4°.59S±0°.09×149°.65E±0°.10, h565^{km}±6^{km}, mb4.6/65, Error ellipse: s-maj=13.9km s-min=13.3km az=103.0*

*DJA **28** 10:21:57.3±0.3, 5°S±4°×15°0E±°, h574^{km}±4^{km}, M4.5/31, mB4.8/8, mb4.7/31, MLv4.7/3, Mw(mB)4.1/8*

*IDC **28** 10:21:57.8±0.5, 4°.66S×149°.61E, h573^{km}±5^{km}, mb3.7/24, mb1 3.9/28, mb1mx3.7/46, mbtmp4.7/28, Error ellipse: s-maj=9.3km s-min=6.8km az=91.0*

ISC 28 10:21:58.0±0.3**, 4°.63S**±0°.05×**149°.65E**±0°.06**, h577**^{km}**, n186, σ0^s.90**/200**, mb4.5**/64**, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
RABL	Rabaul	2.54	80	P	P	10 23 11.1	-1.7
RABL	Rabaul	2.54	80	P	P	10 23 11.5	-1.3
MANU	Manus Island	3.44	318	P	P	10 23 17.5	-0.5
PMG	Port Moresby	5.35	207	P	P	10 23 33.2	+0.8
	54nm,0.3s,baz=55,slow=5.9,SNR=176						
PMG				S	S	10 24 48.3	-1.1
	6.8nm,0.3s,baz=155,slow=22,SNR=18						
PMG	Port Moresby	5.35	207	P	P	10 23 33.0	+0.6
PMG	Port Moresby	5.35	207	P	P	10 23 33.3	+0.9
PMG	Port Moresby	5.35	207	P	P	10 23 33.3	+0.9
JAY	Jayapura	9.17	283	P	P	10 24 06.7	-1.5
	29nm,0.3s,baz=122,slow=4.8,SNR=124						
JAY	Jayapura	9.17	283	P	P	10 24 06.5	-1.7
	1µm94nm,0.9s						
SMPI	Sarmi	11.23	283	P	P	10 24 28.2	-0.7
	1µm108nm,0.8s						
COEN	Coen	11.25	214	P	P	10 24 29.4	+0.3
COEN	Coen	11.25	214	P	P	10 24 29.7	+0.6
HNR	Honiara	11.28	116	P	P	10 24 27.7	-1.6
	9.6nm,0.3s,baz=321,slow=8.3,SNR=4.4						
HNR	Honiara	11.28	116	P	P	10 24 27.5	-1.8
PATS	Pohnpei	14.30	37	P	P	10 24 58.9	-1.4
MTSU	Mount Surprise	14.40	201	P	P	10 25 02.0	+0.9
CTA	Charters Tower	15.72	192	P	P	10 25 14.6	+0.8
	7.6nm,0.3s,baz=3.1,slow=12,SNR=67						
CTA	Charters Tower	15.72	192	P	P	10 25 14.7	+0.9
CTAO	Charters Tower	15.72	192	P	P	10 25 14.4	+0.6
CTAO	Charters Tower	15.72	192	P	P	10 25 14.7	+0.9
FAKI	Fak Fak	17.45	275	P	P	10 25 30.9	+1.2
	49nm,0.8s						
FAKI	Fak Fak	17.45	275	P	P	10 25 29.1	-0.6
FAKI	Fak Fak	17.45	275	P	P	10 25 29.2	-0.5
QIS	Mount Isa	18.60	211	P	P	10 25 40.4	+0.2
RK1H	Rockhampton Ha	18.67	178	P	P	10 25 41.4	+0.7
SWI	Sorong	18.74	281	P	P	10 25 42.9	+1.3
	26nm,0.7s						
KDU	Kakadu	18.76	244	P	P	10 25 41.2	-0.5

MTN	Manton Dam	20.02	245	P	P	10 25 52.7	-0.5
MTN				IAmb	IAmb	10 25 57.7	
	comp=Z,23nm,1.2s						
EIDS	Eidsvold	20.67	176	P	P	10 25 59.3	+0.5
EIDS				IAmb	IAmb	10 26 00.0	
	comp=Z,15nm,0.8s						
EIDS	Eidsvold	20.67	176	P	P	10 25 59.3	+0.5
	comp=Z,22nm,1.2s						
WB0	Warramunga Arr	21.15	223	P	P	10 26 03.1	-0.2
WR0	Warramunga Arr	21.18	223	P	P	10 26 03.4	-0.2
WRAB	Tennant Creek	21.29	223	P	P	10 26 04.5	-0.1
WRAB	Tennant Creek	21.29	223	P	P	10 26 04.5	-0.1
WB2	Warramunga Arr	21.30	223	P	P	10 26 04.5	-0.2
WRA	Warramunga Arr	21.31	223	P	P	10 26 04.6	-0.1
	comp=Z,29nm,0.5s,baz=48,slow=9.1,SNR=754						
WRA				S	S	10 29 22.2	-1.4
	comp=Z,13nm,0.7s,baz=55,slow=13,SNR=12						
WRA				ScP	ScP	10 32 28.3	+0.7
	comp=Z,6.1nm,0.8s,baz=43,slow=2.8,SNR=10						
WRA	Warramunga Arr	21.31	223	P	P	10 26 04.5	-0.1
WRA				IAmb	IAmb	10 26 06.3	
	comp=Z,9.3nm,1.1s						
RMQ	Roma	21.75	182	P	P	10 26 09.1	+0.6
QLP	Quilpie	22.43	193	P	P	10 26 15.1	+0.5
KNRA	Kununurra	23.28	240	P	P	10 26 21.7	-0.6
KNRA				IAmb	IAmb	10 26 23.4	
	comp=Z,26nm,1.2s						
SANI	Sanana	23.76	275	P	P	10 26 27.1	+0.5
	comp=Z,8.7nm,0.9s						
SANI	Sanana	23.76	275	P	P	10 26 26.2	-0.4
DZM	Mont Dzumac	23.77	138	P	P	10 26 26.9	+0.2
	comp=Z,5.1nm,0.5s,baz=253,slow=8.6,SNR=14						
DZM	Mont Dzumac	23.77	138	P	P	10 26 27.1	+0.3
DZM				IAmb	IAmb	10 26 33.2	
	comp=Z,36nm,1.5s						
TARA	Tarawa	24.00	76	P	P	10 26 28.8	0.0
AS31	Alice Springs	24.26	217	P	P	10 26 30.8	-0.2
ASAR	Alice Springs	24.27	217	P	P	10 26 30.8	-0.3
	comp=Z,45nm,0.6s,baz=49,slow=7.8,SNR=526						
ASAR				S	S	10 30 07.7	-2.6
	comp=Z,1.5nm,0.8s,baz=31,slow=16,SNR=2.3						
ASAR				ScP	ScP	10 32 36.6	+1.1
	comp=Z,3.2nm,0.8s,baz=56,slow=3.0,SNR=12						
ASAR	Alice Springs	24.27	217	P	P	10 26 31.0	0.0
INKA	Innaminka	24.50	199	P	P	10 26 32.9	0.0
ARMA	Armidale	25.72	176	P	P	10 26 45.5	+1.7
ARMA				IAmb	IAmb	10 26 46.0	
	comp=Z,15nm,0.8s						
OOD	Oodnadatta	26.60	209	P	P	10 26 51.0	-0.4
CMSA	Cobar Meteorol	27.02	187	P	P	10 26 55.4	+0.3
FITZ	Fitzroy Crossi	27.03	238	P	P	10 26 54.0	-1.3
	comp=Z,17nm,0.6s,baz=31,slow=7.2,SNR=165						
FITZ				ScP	ScP	10 32 45.0	+1.4
	comp=Z,6.6nm,1.1s,baz=38,slow=6.9,SNR=3.5						
GTOI	Gorontalo	27.12	280	P	P	10 26 57.8	+1.5
	comp=Z,12nm,0.7s						
LCRK	Leigh Creek	27.85	201	P	P	10 27 02.0	-0.4
STKA	Stephens Creek	28.14	195	P	P	10 27 04.2	-0.6
	comp=Z,14nm,0.7s,baz=354,slow=9.8,SNR=34						
STKA				ScP	ScP	10 32 48.7	+1.9
	comp=Z,3.0nm,0.9s,baz=322,slow=7.0,SNR=4.2						
STKA	Stephens Creek	28.14	195	P	P	10 27 04.2	-0.6
WRKA	Warakurna	28.85	223	P	P	10 27 10.4	-0.8
TOLI2	Tolitoli	29.40	280	P	P	10 27 14.8	-1.3
TOLI2				IAmb	IAmb	10 27 36.3	
	comp=Z,18nm,1.0s						
MULG	Mulgathing	29.45	208	P	P	10 27 15.6	-0.7
YNG	Young	29.54	182	P	P	10 27 18.0	+1.0
KAPI	Kappang	29.79	268	P	P	10 27 19.4	0.0
	comp=Z,5.4nm,0.5s,baz=76,slow=1.0,SNR=6.5						
KAPI	Kappang	29.79	268	P	P	10 27 19.7	+0.2
KAPI				IAmb	IAmb	10 27 45.7	
	comp=Z,24nm,1.3s						
MPSI	Mapaga	30.13	279	P	P	10 27 21.6	-0.7
	comp=Z,21nm,0.5s						
HTT	Hallett	30.35	198	P	P	10 27 24.0	0.0
WHYH	Whyalla	30.42	200	P	P	10 27 24.6	+0.1
CNB	Canberra Magne	30.54	180	P	P	10 27 26.5	+0.9
CAN	Canberra	30.55	181	P	P	10 27 26.4	+0.7
CAN				IAmb	IAmb	10 27 27.6	
	comp=Z,28nm,0.9s						
CAN	Canberra	30.55	181	P	P	10 27 26.5	+0.9
MSVF	Nonsavu	30.69	117	P	P	10 27 28.0	+0.8
	comp=Z,8.8nm,0.5s,baz=259,slow=13,SNR=8.5						
MSVF	Nonsavu	30.69	117	P	P	10 27 28.8	+1.6
MSVF				IAmb	IAmb	10 27 29.2	
	comp=Z,16nm,0.7s						
BBOO	Buckleboo	30.78	203	P	P	10 27 26.9	-0.8
BBOO				IAmb	IAmb	10 27 27.7	
	comp=Z,22nm,0.8s						
BBOO	Buckleboo	30.78	203	P	P	10 27 26.9	-0.7
PLAI	Plampang	31.92	261	P	P	10 27 34.1	-3.5
	comp=Z,48nm,0.6s						
ARPS	Mount Arapiles	32.78	192	P	P	10 27 44.8	+0.2
TOO	Toolangi	33.01	186	P	P	10 27 47.3	+0.8
TOO				IAmb	IAmb	10 27 48.3	
	comp=Z,29nm,0.8s						
TOO	Toolangi	33.01	186	P	P	10 27 47.4	+0.9
FORT	Forrest	33.02	216	P	P	10 27 45.8	-0.8
FORT	Forrest	33.02	216	P	P	10 27 46.1	-0.5
BRAT	Ballarat	33.18	188	P	P	10 27 49.0	+1.1
PSA00	Pilbara Seismi	33.45	237	P	P	10 27 49.9	-0.5
PSA00				IAmb	IAmb	10 27 50.1	
	comp=Z,14nm,1.1s						
BBKI	Banjar Baru	34.74	271	P	P	10 28 03.8	+2.4
	comp=Z,19nm,0.9s						
MEEK	Meekatharra	36.85	230	P	P	10 28 18.0	-0.6
TAU	Tasmania Unive	38.17	183	P	P	10 28 30.4	+1.4
PCJI	Pacitan	38.38	263	P	P	10 28 31.2	0.0
	comp=Z,88nm,0.8s						
GIRL	Giralia	38.63	239	P	P	10 28 33.3	+0.2
TPUB	Ta-pu	39.66	316	P	P	10 28 40.6	-0.8
MORW	Morawa	40.05	229	P	P	10 28 43.1	-1.3
MORW				IAmb	IAmb	10 28 43.7	
	comp=Z,9.0nm,0.6s						
KLBR	Kellerberrin	40.18	224	P	P	10 28 44.1	-1.3
URZ	Urewera	41.78	147	P	P	10 28 58.2	+0.3
	comp=Z,6.7nm,0.5s,baz=121,slow=24,SNR=8.9						
MJAR	Matsushiro Arr	42.33	346	P	P	10 29 01.5	-0.8
	comp=Z,4.8nm,0.8s,baz=168,slow=8.1,SNR=7.8						
MAT	Matsushiro	42.33	346	P	P	10 29 01.6	-0.7
TUWZ	Tuamarina	42.60	153	P	P	10 29 04.8	+0.5
MDSI	Maura Dua	45.32	268	P	P	10 29 25.0	-0.8
	comp=Z,6.4nm,1.1s						
KSRS	Korea Array	46.50	336	P	P	10 29 33.9	-0.3
	comp=Z,3.0nm,0.7s,baz=153,slow=7.8,SNR=12						
KSRS				ScP	ScP	10 33 56.8	+1.1
	comp=Z,1.0nm,1.0s,baz=141,slow=5.4,SNR=5.1						
NJ2	Nanjing	46.79	323	*e*P	P	10 29 36.8	+0.3
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
PDSI	Padang	49.26	273	P	P	10 29 53.9	-1.4
USA0B	Ussuriysk Arra	51.14	344	P	P	10 30 09.2	+0.8
USA0B				IAmb	IAmb	10 30 11.5	
	comp=Z,20nm,1.4s						
USRK	Ussuriysk Ar.	51.14	344	P	P	10 30 08.8	+0.5
	comp=Z,1.3nm,0.5s,baz=168,slow=7.3,SNR=8.0						
USRK	Ussuriysk Ar.	51.14	344	P	P	10 30 09.2	+0.8
CMAR	Chiang Mai Arr	54.98	296	P	P	10 30 36.9	+0.8
	comp=Z,2.8nm,0.6s,baz=121,slow=5.6,SNR=17						
CMAR				pP	pP	10 32 25.5	+0.3
	comp=Z,0.9nm,0.3s,baz=166,slow=31,SNR=1.5						
CMAR	Chiang Mai Arr	54.98	296	P	P	10 30 37.2	+1.1
HHC	Hu-ho-hao-te	57.12	326	*e*P	P	10 30 55.3	+4.7
HHC				pmax	pmax		
	comp=Z,20nm,0.8s						
HHC				pmax	pmax		
	comp=Z,140nm,6.5s						
BTO	Baotou	57.83	325	*e*P	P	10 30 56.5	+1.1
PEA0B	Petropavlovsk-	57.92	6	P	P	10 30 56.1	+0.5
PEA0B				IAmb	IAmb	10 31 10.8	
	comp=Z,32nm,1.1s						
PETK	Petropavlovsk-	57.92	6	P	P	10 30 55.8	+0.1
	comp=Z,4.1nm,0.5s,baz=162,slow=6.2,SNR=24						
PETK	Petropavlovsk-	57.92	6	P	P	10 30 55.5	-0.2
GTA	Gaotai	63.43	319	*e*P	P	10 31 33.0	+0.7
GTA				sP	sP	10 34 15.8	-12
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SONM	Songino Array	64.54	329	P	P	10 31 39.6	+0.4
	comp=Z,2.2nm,0.5s,baz=148,slow=5.5,SNR=18						
SONM				pP	pwP	10 33 35.2	-0.5
	comp=Z,0.2nm,0.4s,baz=130,slow=53,SNR=2.3						
SONM	Songino Array	64.54	329	P	P	10 31 40.0	+0.9
CASY	Casey	67.28	196	P	P	10 31 55.6	0.0
CASY				IAmb	IAmb	10 31 56.2	
	comp=Z,9.8nm,0.8s						
ODAN	Odare	67.76	301	*e*P	P	10 31 59.7	0.0
RAMN	Ramite	68.46	301	*e*P	P	10 32 04.1	+0.2
	comp=Z,4.0nm,0.3s						
UNV	Unalaska Valle	68.81	26	P	P	10 32 05.0	-0.1
JIRN	Jiri	69.02	302	*e*P	P	10 32 07.5	+0.1
GUN	Gumba	69.36	302	*e*P	P	10 32 09.6	+0.2
	comp=Z,36nm,0.7s						
PKI	Pulchoki	69.66	301	*e*P	P	10 32 10.7	-0.5
PKIN	Phulchoki	69.67	301	*e*P	P	10 32 10.7	-0.5
	comp=Z,6.6nm,0.4s						
DMN	Daman	69.93	301	*e*P	P	10 32 12.9	+0.2
GKN	Gorkha	70.44	302	*e*P	P	10 32 15.3	-0.3
KOLN	Koldanda	71.25	301	*e*P	P	10 32 20.3	-0.1
DANN	Dangsing	71.28	302	*e*P	P	10 32 20.3	-0.4
	comp=Z,10nm,0.4s						
VNDA	Vanda	73.13	177	P	P	10 32 30.6	+0.5
	comp=Z,4.7nm,0.6s,baz=333,slow=7.3,SNR=25						
VNDA	Vanda	73.13	177	P	P	10 32 30.8	+0.8
WMQ	Urumqi	73.51	318	*e*P	P	10 32 34.3	+1.4
WMQ				pmax	pmax		
	comp=Z,14nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,140nm,4.1s						
WMQ				LR	LR		
	comp=N,330nm,26.5s						
WMQ				LR	LR		
	comp=E,1µm,28.9s						
WMQ				LR	LR		
	comp=Z,81nm,28.9s						
OHAK	Old Harbor	76.85	28	P	P	10 32 51.5	+0.5
OHAK				IAmb	IAmb	10 32 51.7	
	comp=Z,39nm,1.2s						
MK31	Makanchi Array	78.15	320	P	P	10 32 58.6	+0.2
MKAR	Makanchi Array	78.15	320	P	P	10 32 58.5	0.0
	comp=Z,1.3nm,0.5s,baz=97,slow=8.1,SNR=11						
MKAR				pP	pP	10 34 59.9	+0.6
	comp=Z,0.1nm,0.4s,baz=125,slow=38,SNR=1.8						
L19K	White Mountain	78.81	23	P	P	10 33 02.3	+0.7
ZAA0	Zalesovo Array	79.29	327	P	P	10 33 03.4	-0.8
ZALV	Zalesovo Beam	79.29	327	P	P	10 33 03.2	-1.0
	comp=Z,0.9nm,0.3s,baz=124,slow=3.9,SNR=5.3						
ZALV	Zalesovo Beam	79.29	327	P	P	10 33 03.4	-0.8
K20K	Telida	79.75	22	P	P	10 33 07.3	+0.8
J20K	Nowinta River	80.17	22	P	P	10 33 09.2	+0.6
PPLA	Purkeypile	80.24	23	P	P	10 33 08.7	-0.5
PPLA				IAmb	IAmb	10 33 09.6	
	comp=Z,34nm,1.5s						
CAST	Castle Rocks	80.55	23	P	P	10 33 10.4	-0.2
CAST				IAmb	IAmb	10 33 11.0	
	comp=Z,19nm,1.2s						
PWL	Port Wells	80.85	26	P	P	10 33 12.6	+0.3
PWL				IAmb	IAmb	10 33 14.3	
	comp=Z,26nm,0.9s						
I21K	Tanana	81.49	21	P	P	10 33 16.1	+0.7
I21K				IAmb	IAmb	10 33 16.9	
	comp=Z,18nm,1.3s						
KURK	Kurchatov	81.72	323	P	P	10 33 16.6	-0.3
KURBB	Kurchatov Arra	81.74	322	P	P	10 33 16.8	-0.2
	comp=Z,0.8nm,0.3s,baz=115,slow=4.3,SNR=8.4						
RND	Reindeer	81.81	24	P	P	10 33 16.4	-0.8
RND				IAmb	IAmb	10 33 17.1	
	comp=Z,14nm,0.7s						
MLY	Manley	81.87	22	P	P	10 33 17.1	-0.3
MCK	McKinley	81.93	23	P	P	10 33 17.3	-0.5
MCK				IAmb	IAmb	10 33 17.7	
	comp=Z,23nm,1.0s						
DHY	Denali Highway	82.25	24	P	P	10 33 20.0	+0.5
DHY				IAmb	IAmb	10 33 20.3	
	comp=Z,8.9nm,0.8s						
AAK	Ala-Archa	82.28	314	P	P	10 33 21.0	+0.9
	comp=Z,1.7nm,0.4s,baz=152,slow=5.0,SNR=5.4						
AAK	Ala-Archa	82.28	314	P	P	10 33 20.0	-0.2
NEA2	Nenana	82.28	22	P	P	10 33 18.8	-0.7
WRH	Wood River Hil	82.60	23	P	P	10 33 20.3	-0.7
WRH				IAmb	IAmb	10 33 20.9	
	comp=Z,16nm,1.2s						
CCB	Clear Creek Bu	82.79	23	P	P	10 33 21.1	-0.9
COLA	College	82.88	22	P	P	10 33 21.5	-0.8
COLA				IAmb	IAmb	10 33 22.1	
	comp=Z,12nm,0.8s						
COLD	Coldfoot	83.15	20	P	P	10 33 24.2	+0.5
IL31		83.20	23	P	P	10 33 22.8	-1.2
IL31				IAmb	IAmb	10 33 23.4	
	comp=Z,9.4nm,0.7s						
ILAR	Eielson Array	83.20	23	P	P	10 33 22.6	-1.5
	comp=Z,6.9nm,0.6s,baz=252,slow=4.9,SNR=138						
ILAR				pP	pP	10 35 26.1	-0.7
	comp=Z,0.9nm,0.7s,baz=248,slow=5.6,SNR=5.3						
ILAR	Eielson Array	83.20	23	P	P	10 33 22.8	-1.2
L26K	Log Cabin Wild	83.90	25	P	P	10 33 28.1	+0.5
L26K				IAmb	IAmb	10 33 28.7	
	comp=Z,6.9nm,0.6s						
MAW	Mawson	84.52	203	P	P	10 33 30.2	-0.2
	comp=Z,2.9nm,0.5s,baz=99,slow=6.4,SNR=16						
MAW	Mawson	84.52	203	P	P	10 33 30.4	0.0
L27K	Beaver Creek,	84.56	25	P	P	10 33 31.5	+0.6
NRIK	Noril'sk	84.80	342	P	P	10 33 31.3	-0.5
	comp=Z,2.2nm,0.5s,baz=151,slow=5.2,SNR=4.1						
BMAR	Burnt Mountain	85.19	21	P	P	10 33 34.5	+0.7
KKAR	Karatay Array	85.24	314	P	P	10 33 34.6	+0.1
QSPA	South Pole Qui	85.33	180	P	P	10 33 34.8	+0.2
	comp=Z,4.0nm,0.6s,baz=343,slow=0.7,SNR=35						
QSPA	South Pole Qui	85.33	180	P	P	10 33 34.6	0.0
QSPA				IAmb	IAmb	10 33 35.4	
	comp=Z,5.5nm,0.7s						
DAWY	Dawson	85.93	25	P	P	10 33 38.2	+0.8
DAWY				IAmb	IAmb	10 33 38.9	
	comp=Z,7.7nm,0.8s						
EPYK	Eagle Plains	87.72	23	P	P	10 33 46.2	+0.4
RUBB	Prince Rupert	87.97	35	P	P	10 33 47.0	-0.1
INK	Inuvik	89.43	21	P	P	10 33 52.8	-0.7
	comp=Z,3.8nm,0.9s,baz=292,slow=4.4,SNR=11						
INK	Inuvik	89.43	21	P	P	10 33 53.1	-0.5
INK				IAmb	IAmb	10 33 54.5	
	comp=Z,5.0nm,1.0s						
A36M	Sachs Harbour	92.85	18	P	P	10 34 09.2	-0.1
A36M				IAmb	IAmb	10 34 09.9	
	comp=Z,4.6nm,0.8s						
PDAR	Pinedale Array	101.05	47	P	Pdif	10 34 46.6	-0.5
	comp=Z,0.6nm,0.7s,baz=210,slow=2.6,SNR=5.3						
SNAA	Sanae	101.75	189	Pdiff	Pdif	10 34 49.6	+0.2
VNA3	Neumayer Olymp	103.05	187	Pdiff	Pdif	10 34 54.7	-0.4
PLCA	Paso Flores	121.76	145	PKP	PKiKP	10 39 47.8	+0.1
	comp=Z,0.8nm,0.8s,baz=280,slow=2.1,SNR=3.7						
GERES	GERESS Array B	122.24	327	PKP	PKPdf	10 39 47.9	-0.3
	comp=Z,0.9nm,0.6s,baz=1.4,slow=4.0,SNR=2.9						
SIV	San Ignacio	143.34	125	PKP	PKPab	10 40 26.5	-0.2
	comp=Z,5.2nm,0.7s,baz=225,slow=3.8,SNR=5.3						
STVI	Saint Thomas	143.55	65		PKPbc	10 40 27.7	+0.3
SAML	Samuel	144.60	112		PKPdf	10 40 30.7	+0.1
PCRV	Puerto La Cruz	145.57	79	PKPbc	PKPdf	10 40 33.0	+0.7
	comp=Z,11nm,0.5s,baz=311,slow=1.1,SNR=8.6						
TORD	Torodi Ar. Bea	147.26	287	PKPbc	PKPbc	10 40 37.9	-0.5
	comp=Z,5.1nm,0.5s,baz=84,slow=2.1,SNR=49						
TORD				pPKPbc	pPKPdf	10 42 48.4	-0.5
	comp=Z,1.6nm,1.0s,baz=57,slow=3.5,SNR=4.9						
TORD	Torodi Ar. Bea	147.26	287		PKPbc	10 40 37.7	-0.7
PTGA	Pitinga	149.94	99	PKPbc	PKPbc	10 40 45.2	+0.2
	comp=Z,16nm,0.8s,baz=192,slow=2.3,SNR=11						
PTGA				PKPab	PKPab	10 40 52.9	-0.4
	comp=Z,8.7nm,0.7s,baz=243,slow=7.0,SNR=6.3						
KOWA	Kowa	152.28	293	PKPbc	PKPbc	10 40 49.8	-0.4
	comp=Z,1.9nm,0.3s,baz=48,slow=2.7,SNR=6.2						
KOWA				PKPab	PKPab	10 41 02.8	-0.2
	comp=Z,2.8nm,0.4s,baz=63,slow=5.4,SNR=8.3						
KOWA	Kowa	152.28	293	PKPab	PKPab	10 41 03.1	+0.1
BDFB	Brasilia	153.32	139	PKPbc	PKiKP	10 40 53.5	+0.8
	comp=Z,1.2nm,0.3s,baz=160,slow=0.6,SNR=3.0						
BDFB	Brasilia	153.32	139	PKPdf	PKPdf	10 40 42.9	-1.6
BDFB					PKPbc	10 40 51.9	-0.7
DBIC	Dimbokro	154.55	276	PKPab	PKPab	10 41 12.7	-0.1
	comp=Z,2.9nm,0.5s,baz=140,slow=5.2,SNR=5.2						

NOU 28 10:27:16.8, 19°.57S×168°.77E, h15^{km}, MLv4.0/15**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTV	Rentapao	1.80	349	P	Pn	10 27 47.2	-0.1
LIFNC	LIFOU	1.87	230	P	Pn	10 27 47.3	-1.0
DVP	Devils Point	1.92	343	P	Pn	10 27 48.7	-0.2
MARNC	Mare, Loyalty	2.02	200	P	Pn	10 27 49.3	-1.1
YATNC	Mamie plateau,	3.04	215	P	Pn	10 28 02.8	-1.6
PINNC	Pines Island,	3.27	202	P	Pn	10 28 08.2	+0.7
DZM	Mont Dzumac	3.31	221	*e*Pn	Pn	10 28 07.6	-0.5
	49nm,0.3s						
DZM				*e*Sn	Sn	10 28 46.2	-1.0
	45nm,0.2s						
DZM	Mont Dzumac	3.31	221	P	Pn	10 28 08.0	-0.1
OUENC	Ouen Island, N	3.36	212	P	Pn	10 28 09.5	+0.7
NOUC	Port Laguerre	3.42	222	P	Pn	10 28 10.5	+1.0
ONTNC	Ouen Toro	3.48	218	P	Pn	10 28 11.0	+0.6
KOUNC	Koumac, New Ca	4.33	256	P	Pn	10 28 22.0	-0.1
SANVU	Saraoutou	4.36	340	P	Pn	10 28 23.0	+0.4

ARE ***28*** *10:28:57±2.9, 9°.86S±0°.06×78°.83W±0°.08, h30^{km}±6^{km}, ML4.1, mb4.1/10(NEIC), Error ellipse: s-maj=0.0km s-min=0.0km az=144.0*

NEIC ***28*** *10:29:00.6±4.7, 9°.88S±0°.04×78°.70W±0°.09, h64^{km}±10^{km}, Error ellipse: s-maj=13.8km s-min=5.9km az=102.0*

IDC ***28*** *10:29:03.0±1.8, 9°.78S×78°.63W, h79^{km}±16^{km}, mb3.4/6, mb1 3.7/10, mb1mx3.5/46, mbtmp3.8/10, MS3.1/7, Ms1 3.2/7, ms1mx3.0/21, Error ellipse: s-maj=32.4km s-min=7.9km az=71.0*

ISC 28 10:28:59.8±0.7**, 9°.81S**±0°.06×**78°.67W**±0°.09**, h55^{km}, n47, σ2^{s}.23**/37**, mb3.7**/5**, MS2.9**/4**, Near coast of northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAH	Atahualpa	2.67	6	P	Pn	10 29 43.6	+2.8
	56nm,0.3s,baz=240,slow=3.0,SNR=216						
ATAH				S	Sn	10 30 16.1	+4.0
	41nm,0.3s,baz=66,slow=14,SNR=4.3						
NNA	Nana	2.82	140	P	Pn	10 29 44.7	+2.2
	146nm,0.3s,baz=317,slow=10.0,SNR=125						
NNA				S	Sn	10 30 20.0	+4.7
	262nm,0.3s,baz=138,slow=17,SNR=24						
NNA	Nana	2.82	140		Pn	10 29 44.5	+2.1
CZSB	Cruzeiro do Su	6.25	71		Pn	10 30 31.1	+1.6
CZSB				Sn	Sn	10 31 41.7	+2.1
OTAV	Otavalo	9.98	1		Pn	10 31 22.7	+1.7
PAC1	Pacto, Paraso	10.01	359	*e*P	Pn	10 31 23.4	+2.3
TBTG	Tabatinga, AM	10.34	58	Pn	Pn	10 31 24.4	-1.0
TULM	Tulcn-Chalpat	10.49	5	*e*P	Pn	10 31 29.3	+1.3
PTLC	Puerto Leguiza	10.64	21	*e*P	Pn	10 31 25.1	-4.5
SOTA	Rioblanco	12.04	10	*e*P	Pn	10 31 50.3	+1.1
LPAZ	La Paz	12.12	123	P	Pn	10 31 52.0	+1.6
	0.2nm,0.3s,baz=291,slow=16,SNR=4.0						
LPAZ				LR	LR	10 36 57.2	
	comp=Z,169nm,19.8s,baz=272,slow=39						
LPAZ	La Paz	12.12	123	Pn	Pn	10 31 50.2	-0.2
ETMB	Extrema	12.28	91		Pn	10 31 50.6	-1.4
PB11	IPOC Station P	13.18	140	Pn	Pn	10 32 02.1	-2.4
PB01	IPOC Station P	14.25	143	Pn	Pn	10 32 18.3	-0.5
PB07	IPOC Station P	14.55	146	Pn	Pn	10 32 21.1	-1.8
ROSC	El Rosal	15.18	17	LR	LR	10 39 00.4	
	comp=Z,157nm,21.0s,baz=221,slow=39						
SAML	Samuel	15.31	88		Pn	10 32 31.0	-1.6
SAML					P	10 32 31.1	-5.2
LVC	Limon Verde	15.80	145	P	P	10 32 40.5	-1.6
	0.2nm,0.3s,baz=304,slow=7.4,SNR=2.0						
LVC				LR	LR	10 38 16.8	
	comp=Z,80nm,20.2s,baz=310,slow=35						
LVC	Limon Verde	15.80	145	Pn	Pn	10 32 37.0	-2.1
LVC				IAmb	IAmb	10 32 50.1	
	comp=Z,9.2nm,1.1s						
DBBC	Dabeiba	16.89	8	*e*P	Pn	10 32 40.4	-12
ZARC	Zaragoza, Cauc	17.60	13	P	Pn	10 32 59.2	-2.2
SIV	San Ignacio	18.22	112	P	Pn	10 33 09.0	+0.1
	comp=Z,0.3nm,0.3s,baz=290,slow=11,SNR=9.3						
PEZE	Perez Zeledon,	19.70	345	P	P	10 33 23.1	-1.8
PEZE				IAmb	IAmb	10 33 44.7	
	comp=Z,18nm,1.3s						
PTLB	Pontes e Lacer	19.87	108	P	Pn	10 33 27.9	-0.7
PTLB				IAmb	IAmb	10 33 28.9	
	comp=Z,11nm,0.9s						
BATAN	Batan	20.32	347		S	10 37 11.6	-4.8
CAO2	Cobano, Puntar	20.40	342	P	P	10 33 30.3	-2.1
CAO2				IAmb	IAmb	10 33 48.4	
	comp=Z,20nm,1.2s						
PTGA	Pitinga	20.68	65	P	P	10 33 35.4	0.0
	comp=Z,1.6nm,0.6s,baz=212,slow=11,SNR=4.5						
PTGA				LR	LR	10 43 12.4	
	comp=Z,18nm,19.0s,baz=250,slow=41						
JTS	Las Juntas de	20.92	342	LR	LR	10 40 06.2	
	comp=Z,61nm,18.9s,baz=230,slow=32						
BAUV	El Baul	21.42	30	P	P	10 33 45.2	+1.9
H03N2	Juan Fernandez	23.52	181	T	T	10 58 09.0	
	baz=0.6,slow=75,SNR=19						
H03N1	Juan Fernandez	23.52	180	T	T	10 58 10.2	
	baz=0.6,slow=75,SNR=17						
H03N3	Juan Fernandez	23.54	181	T	T	10 58 08.2	
	baz=0.6,slow=75,SNR=19						
BIRV	Birongo	23.63	32	P	P	10 34 06.1	0.0
CPUP	Villa Florida	26.04	132	LR	LR	10 46 22.7	
	comp=Z,54nm,18.5s,baz=314,slow=40						
PLCA	Paso Flores	31.63	168	P	P	10 35 18.4	+0.7
	comp=Z,0.9nm,0.8s,baz=322,slow=7.1,SNR=2.8						
PLCA				LR	LR	10 44 14.0	
	comp=Z,26nm,21.2s,baz=352,slow=29						
PLCA	Paso Flores	31.63	168	P	P	10 35 16.6	-1.1
PLCA				IAmb	IAmb	10 35 19.3	
	comp=Z,1.1nm,0.8s						
TXAR	Lajitas Array	45.77	329	P	P	10 37 17.2	+1.0
	comp=Z,0.6nm,0.7s,baz=148,slow=9.6,SNR=5.4						
PDAR	Pinedale Array	59.44	334	P	P	10 38 58.0	+0.8
	comp=Z,0.5nm,0.9s,baz=125,slow=7.8,SNR=3.7						
DBIC	Dimbokro	75.33	80	P	P	10 40 39.1	+1.2
	comp=Z,1.9nm,0.7s,baz=311,slow=4.6,SNR=4.1						
YKA	Yellowknife Ar	77.25	344	P	P	10 40 48.1	+0.3
	comp=Z,0.3nm,0.5s,baz=143,slow=5.9,SNR=8.4						
H11N3	WAKE ISLAND Hy	116.14	287	T	T	12 54 17.2	
	baz=96,SNR=3.1						
H11N2	WAKE ISLAND Hy	116.15	287	T	T	12 54 19.0	
	baz=96						
H11N1	WAKE ISLAND Hy	116.16	287	T	T	12 54 16.0	
	baz=96						
H11S2	WAKE ISLAND Hy	116.30	286	T	T	12 54 30.9	
	baz=93,slow=75,SNR=4.1						
H11S1	WAKE ISLAND Hy	116.30	286	T	T	12 54 33.5	
	baz=93,slow=75,SNR=3.6						
H11S3	WAKE ISLAND Hy	116.31	286	T	T	12 54 30.7	
	baz=93,slow=75,SNR=3.8						

NEIC ***28*** *10:32:11.4±2.3, 20°.21S±0°.04×173°.26W±0°.09, h10^{km}±1^{km}, mb4.4/15, Error ellipse: s-maj=15.6km s-min=6.2km az=252.0*

IDC ***28*** *10:32:14.1±2.3, 20°.10S×173°.89W, h0^{km}, mb4.0/7, mb1 4.2/7, mb1mx3.8/31, mbtmp4.0/7, MS3.3/2, Ms1 3.3/2, ms1mx2.8/29, Error ellipse: s-maj=103.6km s-min=26.6km az=149.0*

ISC 28 10:32:11.3±0.7**, 20°.4S**±0°.2×**173°.26W**±0°.10**, h10^{km}, n28, σ1^{s}.37**/25**, mb4.3**/13**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	3.40	68	Pn	Pn	10 33 03.5	-0.9
NIUE				Sn	Sn	10 33 42.3	-2.5
MARNC	Mare, Loyalty	17.51	263	P	Pn	10 36 15.4	-0.3
LIFNC	LIFOU	18.26	265	P	Pn	10 36 23.2	-1.8
DZM	Mont Dzumac	18.99	261	LR	LR	10 42 21.4	
	comp=Z,116nm,20.0s,baz=26,slow=33						
DZM	Mont Dzumac	18.99	261	P	P	10 36 32.5	-0.9
URZ	Urewera	19.68	203	P	P	10 36 41.4	+0.8
URZ				IAmb	IAmb	10 36 41.9	
	comp=Z,43nm,1.4s						
CTA	Charters Tower	37.92	263	P	P	10 39 29.1	-0.1
	comp=Z,5.4nm,0.7s,baz=161,slow=1.0,SNR=2.7						
CTAO	Charters Tower	37.92	263	P	P	10 39 28.4	-0.8
CTAO				IAmb	IAmb	10 39 30.7	
	comp=Z,3.3nm,0.7s						
TOO	Toolangi	39.59	235	P	P	10 39 42.8	-0.3
TOO				IAmb	IAmb	10 40 08.8	
	comp=Z,23nm,1.5s						
PMG	Port Moresby	39.67	280	LR	LR	10 53 03.8	
	comp=Z,30nm,18.4s,baz=26,slow=32						
PMG	Port Moresby	39.67	280	P	P	10 39 42.6	-1.3
PMG				IAmb	IAmb	10 39 45.5	
	comp=Z,7.4nm,0.9s						
STKA	Stephens Creek	41.85	245	P	P	10 40 02.4	+0.6
	comp=Z,1.4nm,0.7s,baz=2.5,slow=16,SNR=3.9						
STKA	Stephens Creek	41.85	245	P	P	10 40 01.4	-0.4
COEN	Coen	42.01	272	P	P	10 40 00.3	-3.0

COEN				IAmb	IAmb	10 40 17.4	
	comp=Z,7.1nm,1.1s						
MANU	Manus Island	42.51	290	P	P	10 40 06.7	-0.7
MANU				IAmb	IAmb	10 40 12.7	
	comp=Z,15nm,1.2s						
WR0	Warramunga Arr	48.82	261	P	P	10 40 56.8	-0.5
WR0				IAmb	IAmb	10 41 08.6	
	comp=Z,6.8nm,1.4s						
ASAR	Alice Springs	48.87	256	P	P	10 40 58.0	+0.5
	comp=Z,1.1nm,0.7s,baz=102,slow=8.1,SNR=13						
WB0	Warramunga Arr	48.99	261	P	P	10 40 58.8	+0.2
WB2	Warramunga Arr	49.00	261	P	P	10 40 58.9	+0.2
WB2				IAmb	IAmb	10 41 18.4	
	comp=Z,4.5nm,1.3s						
WRA	Warramunga Arr	49.01	261	P	P	10 40 58.8	+0.1
	comp=Z,0.8nm,0.8s,baz=96,slow=7.6,SNR=13						
WRA	Warramunga Arr	49.01	261	P	P	10 40 58.8	+0.1
MTN	Manton Dam	53.60	269	P	P	10 41 31.1	-2.1
KNRA	Kununurra	55.10	265	P	P	10 41 43.4	-0.6
SIJI	Sorong	57.52	282	P	P	10 42 01.2	-0.2
	comp=Z,7.8nm,0.6s,baz=66,slow=5.2,SNR=7.0						
PDAR	Pinedale Array	85.87	41	P	P	10 44 57.2	+5.5
	comp=Z,0.2nm,0.4s,baz=235,slow=3.2,SNR=2.4						
PDAR	Pinedale Array	85.87	41	P	P	10 44 52.5	+0.9
ILAR	Eielson Array	87.27	11	P	P	10 45 01.2	+3.5
	comp=Z,0.5nm,1.0s,baz=237,slow=5.2,SNR=4.3						
BRTR	Keskin Array B	149.94	316	PKPbc	PKPbc	10 52 05.1	+2.7
	comp=Z,0.9nm,0.8s,baz=35,slow=4.5,SNR=4.3						

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*IDC **28** 10:37:46.1±1.0,38.°31N×21.°77E,h0^{km},mb3.8/10, mb1 3.9/16,mb1mx3.7/54,mbtmp3.8/16,ML3.6/5,MS3.1/7, Ms1 3.1/7,ms1mx2.7/46,Error ellipse: s-maj=18.5km s-min=16.9km az=62.0*

*ATH **28** 10:37:47.5,38.°37N×21.°79E,h15^{km}±1^{km},ML3.5/22,Error ellipse: s-maj=1.7km s-min=0.8km az=159.0*

*THE **28** 10:37:48.0,38.°36N×21.°80E,h3^{km}±1^{km},ML3.6/11,Error ellipse: s-maj=1.7km s-min=0.8km az=290.0*

ISC 28 10:37:47.8±0.8,**38.°37N**±0.°02×**21.°78E**±0.°02,**h11**^{km}±6^{km}, **n153**,σ**1.^{s}46**/183,**mb3.9**/9,**MS3.3**/3,**18C-7D**,**Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAKA	Lakka	0.20	129	P	Pg	10 37 51.7	-0.5
LAKA				S	Sg	10 37 54.9	-0.3
	71µm,0.3s						
LAKA	Lakka	0.20	129	P	Pg	10 37 51.7	-0.5
LAKA				S	Sg	10 37 55.0	-0.2
LAKA				AML	AML	10 37 55.4	
	comp=N,40303µm,0.4s						
LAKA				AML	AML	10 37 55.8	
	comp=E,24218µm,0.2s						
TRIZ	Trizonia	0.23	91	P	Pg	10 37 52.4	-0.3
TRIZ				S	Sg	10 37 56.2	+0.2
	comp=E,13µm,0.3s						
TRIZ	Trizonia	0.23	91	P	Pg	10 37 52.4	-0.3
TRIZ				S	Sg	10 37 56.4	+0.4
ALIK	Aliki, Aigiali	0.28	112	P	Pg	10 37 53.4	-0.2
ALIK				S	Sg	10 37 58.0	+0.5
RLS	Riolos of Patr	0.39	218	P	Pg	10 37 55.5	-0.1
RLS				S	Sb	10 38 02.2	-0.6
	comp=E,13µm,0.3s						
RLS	Riolos of Patr	0.39	218	P	Pg	10 37 55.6	-0.1
RLS				S	Sb	10 38 02.2	-0.6
RLS				AML	AML	10 38 02.5	
	comp=N,30732µm,0.3s						
RLS				AML	AML	10 38 03.8	
	comp=E,28311µm,0.2s						
KLV	Kalavryta, Ach	0.44	138	P	Pg	10 37 55.7	-0.8
KLV				S	Sb	10 38 03.0	-1.2
KLV	Kalavryta, Ach	0.44	138	P	Pg	10 37 55.8	-0.8
KLV				S	Sg	10 38 02.9	+0.6
KLV				AML	AML	10 38 03.8	
	comp=N,6606µm,0.3s						
KLV				AML	AML	10 38 06.7	
	comp=E,8653µm,0.3s						
EVR	Evrytania	0.55	3	P	Pg	10 37 57.8	-0.8
EVR				S	Sb	10 38 08.0	+0.5
	comp=E,7µm,0.3s						
EVR	Evrytania	0.55	3	P	Pg	10 37 58.2	-0.4
EVR				S	Sg	10 38 05.1	-0.7
EVR				AML	AML	10 38 08.8	
	comp=N,11939µm,0.2s						
EVR				AML	AML	10 38 11.2	
	comp=E,16633µm,0.4s						
DLFA	Delphi	0.58	79	P	Pg	10 37 57.9	-1.1
DLFA				S	Sg	10 38 06.3	-0.4
DLFA				AML	AML	10 38 09.6	
	comp=E,9654µm,0.2s						
DLFA				AML	AML	10 38 09.8	
	comp=N,11560µm,0.4s						
MAKR	Makrakomi, Fth	0.70	23	P	Pg	10 38 01.1	-0.4
MAKR				S	Sb	10 38 12.4	+0.6
	comp=N,17µm,0.4s						
MAKR	Makrakomi, Fth	0.70	23	P	Pg	10 38 01.0	-0.4
MAKR				AML	AML	10 38 13.5	
	comp=E,40195µm,0.3s						
MAKR				AML	AML	10 38 14.3	
	comp=N,25948µm,0.3s						
THAL	Thalero	0.77	115	P	Pg	10 38 01.9	-0.9
THAL	Thalero	0.77	115	P	Pg	10 38 01.9	-0.9
THAL				AML	AML	10 38 19.7	
	comp=N,15769µm,0.3s						
THAL				AML	AML	10 38 20.7	
	comp=E,19348µm,0.3s						
AGG	Agios Georgios	0.78	33	P	Pg	10 38 01.9	-1.1
AGG				S	Sb	10 38 14.2	0.0
	comp=E,8µm,0.3s						
AGG	Agios Georgios	0.78	33	P	Pg	10 38 01.7	-1.4
AGG				S	Sg	10 38 13.4	+0.2
AGG				AML	AML	10 38 16.3	
	comp=N,12421µm,0.3s						
AGG				AML	AML	10 38 16.3	
	comp=E,18094µm,0.3s						
VLS	Valsamata	0.95	259	P	Pg	10 38 05.2	-1.0
VLS				S	Sb	10 38 20.6	+1.6
VLS	Valsamata	0.95	259	P	Pg	10 38 04.9	-1.2
VLS				AML	AML	10 38 21.9	
	comp=N,8248µm,0.2s						
VLS				AML	AML	10 38 21.9	
	comp=E,5641µm,0.2s						
PSDA	Pessada-Kefalo	0.97	255	P	Pg	10 38 05.6	-0.9
PSDA	Pessada-Kefalo	0.97	255	P	Pg	10 38 05.3	-1.2
TSLK	Tsoukalades, L	0.99	298	P	Pg	10 38 05.2	-1.7
LKR	Lokris	1.00	73	P	Pg	10 38 05.4	-1.7
LKR				S	Sb	10 38 20.8	+0.5
LKR	Lokris	1.00	73	P	Pg	10 38 05.5	-1.7
LKR				S	Sg	10 38 18.8	-1.4
LKR				AML	AML	10 38 23.1	
	comp=E,7879µm,0.2s						
LKR				AML	AML	10 38 24.1	
	comp=N,7680µm,0.3s						
ATAL	Atalanti	1.03	71	P	Pg	10 38 06.0	-1.7
ATAL				S	Sb	10 38 21.1	-0.1
	comp=N,2µm,0.5s						
ATAL	Atalanti	1.03	71	P	Pg	10 38 05.6	-2.0
ATAL				AML	AML	10 38 22.9	
	comp=N,5130µm,0.7s						
ATAL				AML	AML	10 38 25.9	
	comp=E,2575µm,0.3s						
ARGA	Argostoli. Kep	1.04	260	P	Pg	10 38 07.6	-0.2
KEF4	Livadi, Kephal	1.07	265	P	Pg	10 38 07.1	-1.3
KEF4	Livadi, Kephal	1.07	265	P	Pg	10 38 07.1	-1.3
DMLN	Damoulianata-K	1.11	264	P	Pg	10 38 08.1	-1.1
KEF3	Kipouria, Keph	1.14	262	P	Pg	10 38 07.9	-1.8
VIL2	Platees	1.19	97	P	Pb	10 38 10.3	-0.1
VIL2				AML	AML	10 38 32.1	
	comp=N,6625µm,0.4s						
VIL2				AML	AML	10 38 33.1	
	comp=E,13141µm,0.9s						
ITM	Ithomi	1.19	174	P	Pg	10 38 09.8	-1.0
ITM				S	Sn	10 38 28.4	+1.8
	comp=E,1µm,0.6s						
ITM	Ithomi	1.19	174	P	Pg	10 38 09.5	-1.3
ITM				AML	AML	10 38 30.6	
	comp=E,2573µm,0.3s						
ITM				AML	AML	10 38 34.0	
	comp=N,2229µm,0.5s						
THL	Klokotos Trika	1.21	9	P	Pg	10 38 10.5	-0.6
THL	Klokotos Trika	1.21	9	P	Pg	10 38 09.8	-1.3
THL				AML	AML	10 38 35.3	
	comp=N,2027µm,0.9s						
THL				AML	AML	10 38 35.5	
	comp=E,2949µm,0.8s						
VILL	Villia	1.23	99	P	Pg	10 38 10.6	-0.8
EPID	Epidavros	1.30	125	P	Pn	10 38 12.6	+0.6
EPID				S	Sn	10 38 29.9	+0.6
	comp=E,2µm,0.5s						
EPID	Epidavros	1.30	125	P	Pg	10 38 11.4	-1.4
KRND	KRANIDI	1.47	132	P	Pn	10 38 14.6	+0.4
KRND	KRANIDI	1.47	132	P	Pn	10 38 14.1	-0.1
NEO	Neokhori	1.47	50	P	Pn	10 38 14.5	+0.2
NEO				AML	AML	10 38 37.4	
	comp=N,2542µm,0.4s						
NEO				AML	AML	10 38 40.8	
	comp=E,1542µm,0.3s						
JAN	Janina	1.48	331	P	Pg	10 38 16.8	+0.6
XOR	Xorichti	1.49	48	P	Pn	10 38 14.5	-0.1
XOR	Xorichti	1.49	48	P	Pn	10 38 14.5	-0.1
XOR				AML	AML	10 38 39.5	
	comp=E,1479µm,0.3s						
XOR				AML	AML	10 38 42.4	
	comp=N,2891µm,0.8s						
ATH	Athens Observa	1.58	104	P	Pn	10 38 16.0	+0.3
ATH				S	Sn	10 38 37.2	+1.0
	comp=N,2µm,0.7s						
ATH	Athens Observa	1.58	104	P	Pn	10 38 16.1	+0.3
ATH				AML	AML	10 38 38.7	
	comp=E,3491µm,0.4s						
ATH				AML	AML	10 38 39.2	
	comp=N,2984µm,0.5s						
KPRO	Kipourio	1.62	349	P	Pb	10 38 18.3	+0.6
IGT	Igoumenitsa	1.62	316	P	Pn	10 38 17.6	+1.3
ATHU	Athens Univers	1.63	104	P	Pn	10 38 16.6	+0.1
ATHU				S	Sn	10 38 37.4	-0.1
	comp=N,682nm,0.7s						
ATHU	Athens Univers	1.63	104	P	Pn	10 38 16.5	0.0
ATHU				AML	AML	10 38 39.3	
	comp=N,1852µm,0.8s						
ATHU				AML	AML	10 38 43.8	
	comp=E,902µm,0.7s						
VLY	Voula,Athens	1.67	107	P	Pn	10 38 17.4	+0.3
VLY	Voula,Athens	1.67	107	P	Pn	10 38 17.1	+0.1
VLY				AML	AML	10 38 40.1	
	comp=N,2200µm,1.0s						
VLY				AML	AML	10 38 44.9	
	comp=E,2246µm,0.4s						
PTL	Penteli	1.68	100	P	Pn	10 38 17.5	+0.4
PTL				S	Sn	10 38 39.4	+0.8
PTL	Penteli	1.68	100	P	Pn	10 38 17.6	+0.4
PTL				AML	AML	10 38 41.0	
	comp=E,1712µm,0.5s						
PTL				AML	AML	10 38 46.0	
	comp=N,2010µm,1.3s						
DION	Dionisos Attik	1.72	99	P	Pn	10 38 18.2	+0.4
DION				S	Sn	10 38 40.9	+1.1
DION	Dionisos Attik	1.72	99	P	Pn	10 38 18.2	+0.4
DION				AML	AML	10 38 46.6	
	comp=N,4281µm,0.6s						
DION				AML	AML	10 38 51.6	
	comp=E,4076µm,17.9s						
KYMI	Kymi, Euboea I	1.84	81	P	Pn	10 38 19.6	+0.2
KYMI				AML	AML	10 38 58.3	
	comp=N,1671µm,1.3s						
KYMI				AML	AML	10 38 58.4	
	comp=E,1300µm,0.8s						
VLI	Veliai	1.89	150	P	Pn	10 38 19.5	-0.5
KZN	Kozani	1.94	360	P	Pb	10 38 22.9	-0.3
KEK	Kerkira	2.04	312	P	Pn	10 38 23.9	+1.7
KARY	Karystos	2.12	98	P	Pn	10 38 23.8	+0.6
FNA	Florina	2.43	353	P	Pn	10 38 30.1	+2.5
OHR	Ohrid	2.84	345	*i* Pn	Pb	10 38 37.2	-1.3
VAY	Valandovo	3.01	11	*i* Pn	Pb	10 38 39.2	-2.2
APE	Apeiranthos	3.25	112	⇑P	Pn	10 38 39.7	+1.0
APE				⇑S	Sn	10 39 18.4	+1.0
TIR	Tirane	3.32	334	⇑P	Pn	10 38 42.3	+2.6
STIP	Stip	3.34	5	*i* Pn	Pn	10 38 42.8	+2.9
IDI	Anoyia	3.96	140	Pn	Pn	10 38 49.7	+1.2
	comp=E,2.2nm,0.3s,baz=327,slow=17,SNR=2.9						
IDI				Sn	Sn	10 39 36.2	+1.2
	comp=E,2.5nm,0.3s,baz=102,slow=5.6,SNR=2.2						
IDI				LR	LR	10 40 41.5	
	comp=E,123nm,19.3s,baz=284,slow=45						
TIP	Timpagrande	4.00	283	⇓P	Pn	10 38 50.8	+1.6
TIP				⇑S	Sn	10 39 38.8	+2.7
DRME	Dracevica, Mon	4.30	333	*e*Pn	Pn	10 38 55.5	+2.4
VTS	Vitosha	4.39	14	⇑P	Pn	10 38 56.6	+2.1
VTS				⇑S	Sn	10 39 47.3	+1.6
PDG	Podgorica	4.49	335	⇓P	Pn	10 38 58.0	+2.2
PDG				⇑S	Sn	10 39 50.6	+2.7
PDG	Podgorica	4.49	335	*e*Pn	Pn	10 38 57.4	+1.6
MATE	Matera	4.54	302	⇑P	Pn	10 38 58.2	+1.9
HCY	Herceg Novi	4.78	329	*e*Pn	Pn	10 39 00.5	+0.7
TREB	Trebinje	5.07	330	*e*Pn	Pn	10 39 03.8	+0.1
BRY	Bratogost	5.15	332	*e*Pn	Pn	10 39 05.7	+0.7
BOVS	Bovan	5.26	359	⇑P	Pn	10 39 08.0	+1.6
BLKB	Belogradchik	5.29	7	⇓S	Sn	10 40 08.5	+0.7
UPM	Unac-Piva	5.30	337	*e*Pn	Pn	10 39 09.5	+2.4
STON	Ston	5.46	327	*e*Pn	Pn	10 39 09.1	0.0
STON	Ston	5.46	327	*e*Pn	Pn	10 39 09.1	0.0
RUDO	Rudo	5.55	342	*e*Pn	Pn	10 39 11.7	+1.3
LSTV	Lastovo	5.76	321	*e*Pn	Pn	10 39 12.7	-0.5
BBLS	Lazići	5.78	343	*e*Pn	Pn	10 39 15.2	+1.7
DIVS	Divibare	5.88	347	*e*Pn	Pn	10 39 15.9	+0.9
MAKA	Makarska	6.09	325	*e*Pn	Pn	10 39 18.2	+0.4
HAPS	Han Pijesak,BI	6.10	340	*e*Pn	Pn	10 39 19.2	+1.3
RICI	Ricice	6.21	327	*e*Pn	Pn	10 39 20.0	+0.6
HVAR	Hvar	6.28	322	*e*Pn	Pn	10 39 19.8	-0.5
TEKS	Tekeris	6.40	345	*e*Pn	Pn	10 39 20.5	-1.6
MDVR	Moldovita	6.41	360	⇑P	Pn	10 39 24.3	+2.1
HERR	Herculane	6.53	4	⇓P	Pn	10 39 26.3	+2.6
FRGS	Fruska Gora	6.94	348	*e*Pn	Pn	10 39 28.8	-0.7
MGRS	Mrkonjic Grad	7.00	331	*e*Pn	Pn	10 39 31.0	+0.8
ZIRJ	Zirje	7.03	321	*e*Pn	Pn	10 39 30.2	-0.4
GZR	Gura Zlata	7.06	6	⇓P	Pn	10 39 32.4	+1.3
GZR				⇑S	Sn	10 40 54.3	+3.0
MORI	Morici	7.15	322	*e*Pn	Pn	10 39 33.1	+0.8
BLY	Banja Luka	7.24	333	*e*Pn	Pn	10 39 35.4	+1.8
BZS	Buzias	7.24	359	⇑P	Pn	10 39 35.0	+1.4
ARR	Arges	7.31	16	⇑P	Pn	10 39 36.7	+2.1
VOIR		7.47	18	⇓P	Pn	10 39 39.4	+2.6
DUGI	Dugi Otok	7.56	320	*e*Pn	Pn	10 39 38.1	+0.1
UDBI	Udbina	7.63	326	*e*Pn	Pn	10 39 40.4	+1.4
MLR	Muntele Rosu	7.76	22	⇑P	Pn	10 39 43.1	+2.2
MLR	Muntele Rosu	7.76	22	Pn	Pn	10 39 44.4	+3.5
	comp=E,0.9nm,0.3s,baz=137,slow=17,SNR=6.5						
NEHR	Nehoiu	7.82	24	⇓P	Pn	10 39 43.4	+1.9
NVLJ	Novalja	8.07	322	*e*Pn	Pn	10 39 45.2	+0.3
MORH	Mrgy, Hungar	8.18	345	⇑P	Pn	10 39 48.0	+1.7
MORH	Mrgy, Hungar	8.18	345	*e*PN	Pn	10 39 46.6	+0.2
MORH	Mrgy, Hungar	8.18	345	*e*P	Pn	10 39 55.8	+9.5
MORH	Mrgy, Hungar	8.18	345	*e*SN	Sn	10 41 14.5	-4.2
MORH	Mrgy, Hungar	8.18	345	*e*Pn	Pn	10 39 46.7	+0.3
RABC	Rab	8.25	323	*e*Pn	Pn	10 39 48.1	+0.7
PLOR	Plostina	8.31	24	⇑P	Pn	10 39 50.8	+2.6
VRI	Vrincioaia	8.35	25	⇑P	Pn	10 39 50.1	+1.3
SMRN	Sveta Marina	8.76	322	*e*Pn	Pn	10 39 54.9	+0.5
CRES	Cresnjev	8.81	330	*e*Pn	Pn	10 39 54.3	-0.7
RIY	Rijeka	8.82	324	*e*Pn	Pn	10 39 54.3	-0.9
CEY	Cerknica	9.17	326	*e*Pn	Pn	10 39 59.6	-0.4
BRTR	Keskin Array B	9.33	78	Pn	Pn	10 40 04.4	+2.0
	comp=E,0.4nm,0.3s,baz=258,slow=13,SNR=8.6						
BRTR				LR	LR	10 44 35.9	
	comp=E,55nm,18.0s,baz=310,slow=44						
MPLH	Magyarpolny	9.33	342	*e*PN	Pn	10 40 05.3	+3.2
MPLH	Magyarpolny	9.33	342	*e*P	Pn	10 40 14.2	+12
PSZ	Piszkesteto	9.64	352	⇑P	Pn	10 40 07.4	+0.8
PSZ	Piszkesteto	9.64	352	*e*PN	Pn	10 40 09.0	+2.5
PSZ	Piszkesteto	9.64	352	*e*P	Pn	10 40 13.6	+7.0
PSZ	Piszkesteto	9.64	352	*e*SN	Sn	10 41 58.6	+3.7
SOKA	Soboth	9.68	331	*i* Pn	Pn	10 40 08.0	+0.9
	comp=E,2.4nm,0.3s						
SOKA				*i* Sn	Sn	10 41 53.0	-2.7
	comp=E,1.0nm,0.5s						
OBKA	Obir	9.73	329	*i* Pn	Pn	10 40 10.4	+2.7
	comp=E,1.3nm,0.2s						
OBKA				*i* Sn	Sn	10 41 53.6	-3.4
	comp=E,6.2nm,0.8s						
ARSA	Arzberg	9.99	335	*i* Pn	Pn	10 40 14.4	+3.2
	comp=E,0.9nm,0.2s						
MOA	Molln	10.95	332	*i* Pn	Pn	10 40 26.4	+2.1
	comp=E,1.2nm,0.2s						
MOA				*i* Sn	Sn	10 42 28.1	+1.4
	comp=E,1.3nm,0.3s						
VRAC	Vranov	11.55	343	LR	LR	10 46 21.9	
	comp=E,72nm,20.6s,baz=203,slow=44						
SQTA	Sankt Quirin	11.76	322	*i* Pn	Pn	10 40 36.3	+0.8
	comp=E,2.4nm,0.3s						
FETA	Feichten	11.86	320	*e*Sn	Sn	10 42 49.7	+0.5
	comp=E,2.7nm,0.7s						
MOTA	Moosalm	11.90	322	*i* Pn	Pn	10 40 37.8	+0.3
	comp=E,4.1nm,0.7s						
MOTA				*e*Sn	Sn	10 42 46.8	-3.4
	comp=E,4.2nm,0.8s						
GERES	GERESS Array B	11.99	333	Pn	Pn	10 40 41.6	+2.9
	comp=E,0.1nm,0.3s,baz=138,slow=21,SNR=2.0						
GERES				Sn	Sn	10 42 48.1	-4.3
	comp=E,0.2nm,0.3s,baz=153,slow=26,SNR=1.7						
GERES				LR	LR	10 46 02.4	
	comp=E,142nm,18.6s,baz=320,slow=41						
DAVOX	Davos/Dischmat	12.14	318	Pn	Pn	10 40 42.6	+1.9
	comp=E,0.4nm,0.3s,baz=8.6,slow=5.8,SNR=2.0						
AKASG	Malin Array Be	13.42	21	Pn	Pn	10 40 58.6	+0.6
	baz=206,slow=12,SNR=1.2						
ESDC	Sonseca Array	20.02	282	P	P	10 42 21.8	+1.1
	comp=E,1.4nm,0.8s,baz=74,slow=9.5,SNR=6.2						
HFS	Hagfors	22.38	349	P	P	10 42 45.9	+0.1
	comp=E,3.0nm,0.6s,baz=164,slow=12,SNR=14						
FINES	FINESS Array B	23.26	5	P	P	10 42 53.6	-1.4
	comp=E,3.9nm,0.9s,baz=169,slow=12,SNR=5.8						
NB2	NORSAR Subarra	23.64	347	P	P	10 42 58.4	-0.4
	comp=Z,2.3nm,0.8s,baz=154,slow=10						
NOA	NORSAR Array B	23.64	347	P	P	10 42 57.6	-1.2
	comp=Z,1.6nm,1.0s,baz=163,slow=9.6,SNR=7.2						
NOA				LR	LR	10 53 35.8	
	comp=Z,27nm,18.1s,baz=290,slow=40						
KIRV	Kirov	26.96	32	LR	LR	10 54 56.9	
	comp=Z,78nm,19.5s,baz=35,slow=38						
TORD	Torodi Ar. Bea	30.81	221	P	P	10 44 02.9	-0.8
	comp=Z,0.8nm,0.6s,baz=32,slow=8.7,SNR=4.8						
ARCES	ARCESS Array B	31.29	3	P	P	10 44 07.1	-0.4
	comp=Z,1.5nm,0.8s,baz=196,slow=9.2,SNR=13						
MKAR	Makanchi Array	44.36	59	P	P	10 45 58.2	+0.2
	comp=Z,2.1nm,0.3s,baz=277,slow=7.7,SNR=59						
ZALV	Zalesovo Beam	44.83	48	P	P	10 46 01.4	-0.2
	comp=Z,2.0nm,0.4s,baz=280,slow=8.9,SNR=9.5						
SONM	Songino Array	59.57	51	P	P	10 47 51.3	-0.2
	comp=Z,0.8nm,0.8s,baz=286,slow=7.6,SNR=3.9						
BOSA	Boshof	66.71	177	LR	LR	11 22 14.7	
	comp=Z,17nm,19.4s,baz=6.0,slow=40						
ILAR	Eielson Array	76.81	355	P	P	10 49 40.1	+1.0
	comp=Z,0.3nm,0.7s,baz=356,slow=4.8,SNR=3.3						

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*IDC **28** 10:44:25.6±1.3,2.°86S×129.°91E,h0^{km},mb3.8/3, mb1 4.0/5,mb1mx3.7/29,mbtmp3.9/5,ML3.8/2,Error ellipse: s-maj=39.9km s-min=21.8km az=92.0*

*DJA **28** 10:44:29.8±1.1,3°S±3°×13°0E±°,h23^{km}±9^{km},M3.5/8, MLv3.5/8*

ISC 28 10:44:29.1±1.6,**2.°73S**±0.°05×**129.°72E**±0.°04,**h29**^{km}±14^{km}, **n11**,σ**2.^{s}95**/18,**mb3.9**/3,**Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	1.00	232	P	Pn	10 44 48.4	+1.2
MSAI				S	Sn	10 45 03.9	+3.6
AAI	Ambon	1.80	238	P	Pb	10 45 02.8	+1.4
SIJI	Sorong	2.41	40	Pn	Pn	10 45 06.6	0.0
	23nm,0.3s,baz=79,slow=23,SNR=125						
SIJI				Sn	Sn	10 45 36.2	+1.0
	18nm,0.3s,baz=59,slow=22,SNR=10						
SWI	Sorong	2.41	40	P	Pn	10 45 08.2	+1.6
SWI				S	Sb	10 45 37.5	-3.7
FAKI	Fak Fak	2.53	94	P	Pn	10 45 09.4	+1.1
FAKI				S	Sn	10 45 41.5	+3.3
LBMI	Labuha	3.04	313	P	Pn	10 45 15.6	+0.3
LBMI				S	Sn	10 45 52.2	+1.4
SANI	Sanana	3.79	280	P	Pn	10 45 25.6	0.0
SANI				S	Sn	10 46 06.6	-2.7
WRA	Warramunga Arr	17.69	166	P	Pn	10 48 29.9	-3.7
	0.3nm,0.3s,baz=350,slow=12,SNR=14						
WRA				S	Sn	10 51 36.7	-13
	0.1nm,0.3s,baz=339,slow=26,SNR=2.0						
ASAR	Alice Springs	21.20	169	P	P	10 49 11.8	-0.8
	3.4nm,0.6s,baz=348,slow=11,SNR=27						
ASAR				S	S	10 53 01.0	-6.0
	0.2nm,0.5s,baz=354,slow=25,SNR=2.0						
MKAR	Makanchi Array	64.54	326	P	P	10 55 04.3	+0.8
	0.2nm,0.4s,baz=111,slow=7.8,SNR=4.6						
ZALV	Zalesovo Beam	67.67	333	P	P	10 55 27.4	+4.0
	0.5nm,0.4s,baz=122,slow=5.4,SNR=4.1						

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*IDC **28** 10:59:08.5±0.6,3.°90N×71.°30W,h0^{km},mb4.0/15, mb1 4.3/20,mb1mx4.2/39,mbtmp4.2/20,ML4.1/5,MS4.0/6, Ms1 4.0/6,ms1mx3.6/21,Error ellipse: s-maj=17.7km s-min=12.3km az=85.0*

*NEIC **28** 10:59:11.4±1.2,3.°89N±0.°02×71.°17W±0.°06,h15^{km}±4^{km}, mb4.7/51,Error ellipse: s-maj=9.8km s-min=0.6km az=70.0*

*VAO **28** 10:59:11.6±0.4,3.°85N×71.°25W,h16^{km},mb4.7*

*RSNC **28** 10:59:12.8±0.8,3.°82N×71.°36W,h4^{km}±4^{km},ML4.8,Mw4.7, Fault plane solution: NP1:ϕ_s124.00000°,δ40.00000°, λ-42.00000°.*

*GCMT **28** 10:59:15.4±0.3,3.°83N±0.°01×71.°21W±0.°02,h13^{km}±2^{km}, MW4.8/78,Moment Tensor Solution. s16,c19; s78,c107; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.17±.09; $M_{\theta\theta}$1.86±.10; $M_{\phi\phi}$-1.69±.09; $M_{r\theta}$-0.26±.18; $M_{\theta\phi}$0.81±.07; $M_{\phi r}$-0.95±.27; Best double couple: $M_0$2.18700×10^{16} NP1:ϕ_s301.00000°,δ65.00000°,λ-8.00000°. NP2: ϕ_s34.00000°,δ83.00000°,λ-154.00000°. Principal axes: T 2.1350, Plg12.0000°, Azm165.0000°; N 0.1050, Plg63.0000°, Azm49.0000°; P -2.2400, Plg23.0000°, Azm260.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 10:59:09.0±0.9,**3.°81N**±0.°02×**71.°23W**±0.°03,**h3**^{km}±5^{km}, **n181**,σ**1.^{s}71**/240,**mb4.5**/31,**4C-3D**,**Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTGC	Puerto Gaitan,	0.99	293	⇓*e*Pg	Pb	10 59 27.2	-1.6
PTGC				*e*S	Sb	10 59 39.5	-2.7
PTGC				*i*		10 59 47.7	
	comp=Z,7µm,0.5s						
GUVC	San Jose del G	1.88	228	*e*P	Pn	10 59 42.5	+0.4
GUVC				*e*S	Sn	11 00 06.8	+0.3
GUVC				*i*		11 00 16.3	
	comp=Z,12µm,0.3s						
VILC	Villavicencio,	2.48	277	⇑*e*P	Pn	10 59 51.5	+1.0
VILC				*e*S	Sn	11 00 22.9	+1.4
TAMC	Tame, Arauca	2.67	348	*e*P	Pn	10 59 54.7	+1.7
TAMC				*e*S	Sb	11 00 28.2	-2.5
RUSC	La Rusia	2.78	318	⇑*e*P	Pn	10 59 55.8	+0.9
RUSC				*e*S	Sn	11 00 30.2	+1.0
RUSC				*i*		11 00 49.4	
	comp=Z,2µm,0.5s						
MACC	Macarena, Meta	3.10	238	*e*P	Pn	11 00 01.9	+3.0
MACC				*e*S	Sb	11 00 41.7	-1.4
MACC				*i*		11 01 00.8	
	comp=Z,6µm,0.5s						
ROSC	El Rosal	3.25	288	Pn	Pn	11 00 02.9	+1.5
	comp=Z,74nm,0.3s,baz=299,slow=3.1,SNR=60						
ROSC				Lg	Lg	11 00 51.6	
	comp=Z,276nm,0.3s,baz=87,slow=21,SNR=5.1						
ROSC				LR	LR	11 00 55.0	
	comp=Z,683nm,19.9s,baz=136,slow=34						
ROSC	El Rosal	3.25	288	*e*P	Pn	11 00 03.4	+2.0
ROSC				*e*Pg	Pg	11 00 12.3	+0.9
ROSC				*e*S	Sn	11 00 40.0	-0.8
ROSC				*i*		11 01 01.3	
	comp=Z,1µm,0.6s						
ROSC	El Rosal	3.25	288	Pn	Pn	11 00 02.8	+1.4
ROSC				Sn	Sn	11 00 40.5	-0.3
SPBC	San Pablo de B	3.38	303	*e*P	Pn	11 00 03.3	+0.5
SPBC				*e*Pg	Pb	11 00 11.3	+1.7
SPBC				*e*S	Sn	11 00 42.3	-1.2
SPBC				*i*		11 01 13.3	
	comp=Z,1µm,0.8s						
BARC	Barichara	3.38	325	*e*P	Pn	11 00 03.7	+0.7
BARC				*e*Pg	Pb	11 00 10.7	+0.9
BARC				*e*S	Sb	11 00 49.2	-2.3
ELOV	Elorza	3.61	29	*e*P	Pn	11 00 06.6	+0.6
ELOV				*e*Pg	Pg	11 00 18.0	-0.4
ELOV				*e*S	Sn	11 00 52.4	+3.2
ELOV				*e*Sg	Sg	11 01 07.7	+2.5
PRAC	Prado	3.66	269	⇓*e*P	Pn	11 00 07.8	+1.2
PRAC				*e*S	Sn	11 00 51.1	+0.8
PRAC				*e*Sg	Sg	11 01 06.0	-0.5

PRAC				*i*		11 01 13.4	
	comp=Z,2µm,0.8s						
PAMC	Pamplona, Colo	3.80	337	*e*P	Pn	11 00 10.0	+1.0
PAMC				*e*Pg	Pb	11 00 19.5	+2.4
PAMC				*e*S	Sn	11 00 55.2	+0.7
PAMC				*i*		11 01 17.7	
	comp=Z,2µm,0.5s						
ORTC	Ortega, Tolima	4.01	272	*e*P	Pn	11 00 12.4	+0.8
ORTC				*e*Pg	Pb	11 00 22.6	+2.1
ORTC				*e*S	Sn	11 00 59.2	+0.1
ORTC				*i*		11 01 26.8	
	comp=Z,3µm,0.6s						
NORC	Norcasia	4.03	296	*e*P	Pn	11 00 11.9	+0.1
NORC				*e*S	Sn	11 01 00.3	+0.8
NORC				*i*		11 01 20.4	
	comp=Z,711nm,0.5s						
BRRC	Barranca, Sant	4.11	323⇑	*e*P	Pn	11 00 13.4	+0.6
BRRC				*e*S	Sn	11 01 01.6	+0.2
BRRC				*i*		11 01 27.8	
	comp=Z,768nm,0.6s						
PTBC	PUERTO BERRIO,	4.21	310	*e*P	Pn	11 00 14.0	-0.2
PTBC				*e*S	Sn	11 01 06.9	+3.0
PTBC				*i*		11 01 27.1	
	comp=Z,732nm,0.5s						
ANIL	Santa Ana	4.22	279	*e*P	Pn	11 00 14.9	+0.3
ANIL				*e*Pg	Pb	11 00 25.6	+1.4
ANIL				*e*S	Sb	11 01 16.8	+1.0
ANIL				*i*		11 01 35.7	
	comp=Z,3µm,0.3s						
BETC	Betania	4.36	255	*e*P	Pn	11 00 18.0	+1.7
BETC				*e*Pg	Pb	11 00 25.7	-0.6
BETC				*e*S	Sb	11 01 17.4	-2.0
BETC				*i*		11 01 33.7	
	comp=Z,2µm,0.5s						
GUY2C	Guyana, Caldas	4.36	289⇓	*e*P	Pn	11 00 17.5	+0.8
GUY2C				*e*S	Sn	11 01 07.1	-1.2
GUY2C				*i*		11 01 35.5	
	comp=Z,730nm,0.6s						
SOCV	Socops	4.46	5	*e*P	Pn	11 00 18.1	+0.5
SOCV				*e*Pg	Pb	11 00 31.7	+3.6
SOCV				*e*S	Sn	11 01 12.3	+2.1
SOCV				*e*Sg	Sg	11 01 31.8	-0.7
GARC	Garzon, Huila	4.56	249	*e*P	Pn	11 00 19.8	+0.6
GARC				*e*Pg	Pb	11 00 27.7	-2.2
GARC				*e*S	Sb	11 01 25.5	+0.1
GARC				*i*		11 01 34.7	
	comp=Z,4µm,0.3s						
MARP	Paez Belalcaza	4.82	259	*e*P	Pn	11 00 23.6	+0.7
MARP				*e*Pg	Pb	11 00 35.9	+1.6
MARP				*e*S	Sb	11 01 35.2	+2.3
MARP				*i*		11 01 49.1	
	comp=Z,368nm,0.7s						
OCAC	Ocana	4.87	335⇑	*e*P	Pn	11 00 24.0	+0.6
OCAC				*e*Pg	Pb	11 00 38.7	+3.6
OCAC				*e*S	Sn	11 01 21.3	+0.9
OCAC				*i*		11 01 50.4	
	comp=Z,2µm,0.6s						
OCAC	Ocana	4.87	335		Pn	11 00 23.9	+0.5
HELC	Santa Helena	4.90	299	*e*P	Pn	11 00 24.5	+0.5
HELC				*e*S	Sn	11 01 20.6	-0.8
SDV	Santo Domingo	5.08	7	Pn	Pn	11 00 26.0	-0.3
	comp=Z,21nm,0.3s,baz=336,slow=1.8,SNR=24						
SDV				Sn	Sn	11 01 22.6	-3.0
	comp=Z,112nm,0.3s,baz=309,slow=13,SNR=4.3						
SDV				Lg	Lg	11 01 48.6	
	comp=Z,138nm,0.3s,baz=64,slow=23,SNR=6.7						
SDV	Santo Domingo	5.08	7	*e*P	Pn	11 00 26.4	+0.1
SDV				*e*Pg	Pg	11 00 44.2	-2.2
SDV				*e*S	Sb	11 01 44.9	+4.6
SDV	Santo Domingo	5.08	7	*e*P	Pn	11 00 25.9	-0.5
SDV	Santo Domingo	5.08	7	Pn	Pn	11 00 26.1	-0.2
PTLC	Puerto Leguiza	5.08	225	*e*P	Pn	11 00 31.2	+5.0
PTLC				*e*Pg	Pg	11 00 46.6	+0.2
PTLC				*e*S	Sg	11 01 50.5	-1.8
PTLC				*i*		11 02 00.7	
	comp=Z,2µm,0.6s						
YOTC	Yotoco, Valle	5.11	272	*e*P	Pn	11 00 26.5	-0.2
YOTC				*e*S	Sn	11 01 23.4	-3.0
YOTC				*i*		11 01 56.4	
	comp=Z,334nm,0.7s						
ZARC	Zaragoza, Cauc	5.14	316	*e*P	Pn	11 00 27.5	+0.4
ZARC				*e*S	Sn	11 01 22.4	-4.6
ZARC	Zaragoza, Cauc	5.14	316	Pn	Pn	11 00 27.2	+0.2
PLMC	San Jos del P	5.16	282	*e*P	Pn	11 00 29.5	+2.2
PLMC				*e*S	Sn	11 01 31.4	+3.9
PLMC				*i*		11 01 39.2	
	comp=Z,418nm,0.4s						
CBOC	Ciudad Bolivar	5.19	293	*e*P	Pn	11 00 29.0	+1.2
CBOC				*e*S	Sn	11 01 27.2	-1.2
PCON	Cinco Dias	5.37	254	*e*P	Pn	11 00 31.6	+1.0
PCON				*e*Pg	Pb	11 00 44.5	+0.6
PCON				*e*S	Sb	11 01 49.8	+0.7
PCON				*i*		11 02 10.7	
	comp=Z,1µm,0.6s						
SOTA	Rioblanco	5.63	253	*e*P	Pn	11 00 35.8	+1.6
SOTA				*e*S	Sb	11 01 59.1	+2.7
SOTA				*i*		11 02 21.1	
	comp=Z,905nm,0.7s						
SMLC	San Martn de	5.71	330	*e*P	Pn	11 00 34.5	-0.3
SMLC				*e*S	Sn	11 01 40.3	-0.6
SMLC				*i*		11 02 22.0	
	comp=Z,312nm,0.7s						
UREC	San Jos de Ur	5.81	313	*e*P	Pn	11 00 36.3	+0.2
UREC				*e*S	Sn	11 01 39.9	-3.5
UREC				*i*		11 02 53.1	
	comp=Z,249nm,0.3s						
DBBC	Dabeiba	5.90	303	*e*P	Pn	11 00 38.8	+1.3
DBBC				*e*S	Sn	11 01 45.4	-0.3
PIZC	Pizarro, Choco	6.22	281	*e*P	Pn	11 00 44.4	+2.5
PIZC				*e*S	Sn	11 01 50.0	-3.6
SOLC	Bahia Solano	6.61	292	*e*P	Pn	11 00 49.0	+1.8
SOLC				*e*S	Sn	11 01 55.5	-7.7
GCUF	Volcan Galeras	6.63	247	*e*P	Pn	11 00 50.4	+2.4
GCUF				*e*S	Sb	11 02 16.2	-9.1
GCUF				*i*		11 02 45.5	
	comp=Z,471nm,0.5s						
TULM	Tulcn-Chalpat	7.24	245	*e*P	Pb	11 01 19.1	+3.4
TULM				*e*S	Sn	11 02 27.1	+7.7
URIC	Uribia, Colomb	7.88	355	*e*P	Pn	11 01 03.2	-1.4
URIC	Uribia, Colomb	7.88	355		Pn	11 01 03.1	-1.6
SMRC	Santa Marta, M	7.89	338	*e*P	Pn	11 01 00.8	-3.9
SMRC				*e*S	Sn	11 02 11.7	-23
OTAV	Otavalo	8.04	244		Pn	11 01 11.1	+3.8
TBTG	Tabatinga, AM	8.05	171	*e*P	Pn	11 01 07.8	+0.8
TBTG				*e*S	Sn	11 02 34.0	-4.6
TBTG	Tabatinga, AM	8.05	171	*e*P	Pn	11 01 07.5	+0.5
TBTG	Tabatinga, AM	8.05	171		Pn	11 01 08.3	+1.4
PCRV	Puerto La Cruz	9.10	46	Pn	Pn	11 01 22.3	+0.9
	comp=Z,4.4nm,0.3s,baz=332,slow=1.5,SNR=16						
PCRV				Sn	Sn	11 03 05.9	+1.4
	comp=Z,7.5nm,0.3s,baz=329,slow=22,SNR=4.6						
PCRV				Lg	Lg	11 03 54.1	
	comp=Z,10nm,0.3s,baz=76,slow=18,SNR=3.5						
PLCV	Puerto La Cruz	9.12	46		Pn	11 01 22.3	+0.6
BCIP	Isla Barro Col	10.07	302	Pn	Pn	11 01 34.9	+0.1
BOAV	Boa Vista	10.78	97	*e*P	Pn	11 01 44.5	+0.1
BOAV	Boa Vista	10.78	97	Pn	Pn	11 01 44.8	+0.3
CZSB	Cruzeiro do Su	11.56	187	*e*P	Pn	11 01 54.9	-0.2
CZSB	Cruzeiro do Su	11.56	187	Pn	Pn	11 01 54.9	-0.2
PTGA	Pitinga	12.12	112	Pn	Pn	11 02 02.8	0.0
	comp=Z,1.3nm,0.3s,baz=279,slow=18,SNR=16						
PTGA				Sn	Sn	11 04 13.3	-5.4
	comp=Z,4.7nm,0.3s,baz=353,slow=22,SNR=1.8						
PTGA				Lg	Lg	11 05 31.3	
	comp=Z,18nm,0.3s,baz=212,slow=23,SNR=9.7						
PTGA				LR	LR	11 07 11.4	
	comp=Z,532nm,21.3s,baz=292,slow=40						
BRU2	Volcan	12.42	294	Pn	Pn	11 02 07.5	+0.4
MACA	Manacapuru-AM	12.61	123	*e*P	Pn	11 02 10.1	+0.6
MACA	Manacapuru-AM	12.61	123	Pn	Pn	11 02 09.8	+0.3
ATAH	Atahualpa	13.02	213	Pn	Pn	11 02 15.2	-0.3
	comp=Z,0.6nm,0.3s,baz=11,slow=13,SNR=5.2						
ATAH				Sn	Sn	11 04 47.1	+6.0
	comp=Z,1.4nm,0.3s,baz=54,slow=8.2,SNR=1.6						
ATAH				LR	LR	11 07 42.9	
	comp=Z,919nm,20.9s,baz=42,slow=39						
SRBA	San Rafael, Bu	13.20	295	Pn	Pn	11 02 18.6	+0.9
PEZE	Perez Zeledon,	13.55	295	Pn	Pn	11 02 22.1	-0.3
BATAN	Batan	13.58	298	Pn	Pn	11 02 22.5	-0.2
SVB	Belmont	13.62	46	Pn	Pn	11 02 22.4	-0.9
RIMA	Rio Macho	13.87	296	Pn	Pn	11 02 27.0	+0.1
ETMB	Extrema	14.43	160	Pn	Pn	11 02 33.6	-0.8
BIM	Bigot	14.61	43	Pn	Pn	11 02 35.5	-1.3
OBIP	Obispado Ponce	14.85	17	Pn	Pn	11 02 39.5	-0.6
CELP	Cerrillos	14.89	17		Pn	11 02 40.5	-0.2
DR12	Loma Pena Alta	15.00	7		Pn	11 02 40.9	-1.2
SAML	Samuel	15.00	148	Pn	Pn	11 02 40.6	-1.5
SAML				P	P	11 02 40.7	-7.0
PDPR	Patillas Dam,	15.01	19	Pn	Pn	11 02 41.2	-1.1
JTS	Las Juntas de	15.06	296	LR	LR	11 08 46.3	
	comp=Z,770nm,21.4s,baz=175,slow=39						
SDDR	Presa de Saban	15.08	360	Pn	Pn	11 02 44.2	+1.0
SDDR				IAmb	IAmb	11 03 12.2	
	comp=Z,30nm,0.8s						
AOPR	Arecibo Observ	15.10	17	Pn	Pn	11 02 40.3	-3.1
CBYP	Canovanas	15.30	20		Pn	11 02 45.1	-1.2
CBYP				IAmb	IAmb	11 03 07.9	
	comp=Z,24nm,0.7s						
ACON	Acoyapa	16.01	301	Pn	Pn	11 02 56.0	+0.6
NNA	Nana	16.66	200	Lg	Lg	11 07 52.9	
	comp=Z,1.1nm,0.3s,baz=127,slow=14,SNR=2.4						
NNA				LR	LR	11 10 03.9	
	comp=Z,510nm,20.7s,baz=352,slow=39						
CNGN	Cerro Negro	17.57	300	P	Pn	11 03 15.5	+0.3
CNGN				IAmb	IAmb	11 03 42.0	
	comp=Z,52nm,1.3s						
MALB	Monte Alegre	17.86	108	*e*P	Pn	11 03 19.5	+0.8
MDP	Montagnes des	18.57	85	P	Pn	11 03 29.1	+1.5
	comp=Z,1.6nm,0.3s,baz=256,slow=9.3,SNR=11						
MDP				Lg	Lg	11 08 44.4	
	comp=Z,2.3nm,0.3s,baz=247,slow=12,SNR=4.2						
NPGB	Novo Progresso	19.16	124	*e*P	P	11 03 34.8	+1.0
PAYG	Puerto Ayora	19.56	257	P	P	11 03 38.4	+0.1
PAYG				IAmb	IAmb	11 04 01.3	
	comp=Z,38nm,1.3s						
MCPB	Macapa, AP	19.60	102	*e*P	P	11 03 39.9	+1.2
VILB	Vilhena	19.93	147	*e*P	P	11 03 42.6	+0.3
VILB	Vilhena	19.93	147	P	P	11 03 42.3	0.0
VILB				IAmb	IAmb	11 04 11.6	
	comp=Z,20nm,0.7s						
LPAZ	La Paz	20.20	171	P	Pn	11 03 48.4	+0.7
	comp=Z,26nm,0.7s,baz=352,slow=8.6,SNR=102						
LPAZ				Lg	Lg	11 09 38.6	
	comp=Z,12nm,0.7s,baz=200,slow=24,SNR=4.1						
LPAZ	La Paz	20.20	171	*e*P	P	11 03 47.5	+1.6
LPAZ	La Paz	20.20	171	P	P	11 03 46.1	+0.3
LPAZ				IAmb	IAmb	11 03 51.0	
	comp=Z,30nm,0.8s						
MTO3	Montecristo	20.75	302	P	P	11 03 51.0	-0.4
ESQI	Esquipulas	20.81	302	P	P	11 03 50.9	-1.0
ESQI				IAmb	IAmb	11 04 01.2	
	comp=Z,68nm,1.5s						
PDRB	Porto dos Gac	21.04	137	*e*P	P	11 03 56.2	+1.9
CLDB	Colider	21.18	134	*e*P	P	11 03 57.0	+1.2
APG	El Apazote	21.97	302	P	P	11 04 05.1	+0.5
	comp=Z,2.9nm,0.6s,baz=180,slow=17,SNR=3.1						
PB16	IPOC Station P	22.07	176	P	P	11 04 07.4	+1.4
PB16				IAmb	IAmb	11 04 10.2	
	comp=Z,13nm,0.6s						
SIV	San Ignacio	22.09	153	P	P	11 04 08.4	+2.7
	comp=Z,7.1nm,0.7s,baz=319,slow=8.0,SNR=36						
PETF	Flores	22.46	307	P	P	11 04 09.4	-0.1
PETF				IAmb	IAmb	11 04 20.8	
	comp=Z,46nm,1.4s						
PTLB	Pontes e Lacer	22.57	148	*e*P	P	11 04 10.3	-0.4
PTLB	Pontes e Lacer	22.57	148	P	P	11 04 11.5	+0.8
PTLB				IAmb	IAmb	11 04 21.0	
	comp=Z,19nm,1.2s						
PB11	IPOC Station P	23.47	176	P	P	11 04 19.6	-0.7
PB11				IAmb	IAmb	11 04 24.3	
	comp=Z,24nm,0.8s						
PRPB	Parauapebas	23.57	115	*e*P	P	11 04 22.9	+1.8
PB08	IPOC Station P	23.89	175	P	P	11 04 25.4	+0.8
CCIG	Comitan	24.00	303	P	P	11 04 25.3	-0.1
PB01	IPOC Station P	24.76	176	P	P	11 04 31.9	-0.3
PB01				IAmb	IAmb	11 04 39.4	
	comp=Z,20nm,0.9s						
SALV	Santo Antonio	24.89	142	*e*P	P	11 04 34.2	+0.8
SNDB	Serra Nova Dou	25.27	129	*e*P	P	11 04 39.1	+2.3
PB07	IPOC Station P	25.41	177	P	P	11 04 38.9	+0.6
PB07				IAmb	IAmb	11 04 46.4	
	comp=Z,28nm,1.2s						
PB04	IPOC Station P	26.00	178	P	P	11 04 44.1	+0.5
LVC	Limon Verde	26.36	175	P	P	11 04 48.7	+1.7
	comp=Z,12nm,0.8s,baz=347,slow=7.2,SNR=13						
LVC				LR	LR	11 17 07.8	
	comp=Z,674nm,18.3s,baz=322,slow=41						
LVC	Limon Verde	26.36	175	*e*P	P	11 04 48.3	+1.3
LVC	Limon Verde	26.36	175	P	P	11 04 47.7	+0.7
LVC				IAmb	IAmb	11 04 49.6	
	comp=Z,13nm,0.8s						
PP1B	Ponte de Pedra	26.70	143	*e*P	P	11 04 51.2	+1.4
SMTB	Santa Maria do	26.72	118	*e*P	P	11 04 49.7	-0.3
ARAG	Araguaiana, MT	27.30	136	*e*P	P	11 04 56.2	+1.1
PEXB	Peixe	27.74	125	*e*P	P	11 05 01.1	+1.9
ROSB	Rosrio	27.89	103	*e*P	P	11 05 00.5	0.0
AQDB	Aquidauana	28.54	148	*e*P	P	11 05 06.7	+0.5
AQDB	Aquidauana	28.54	148	P	P	11 05 06.4	+0.1
AC02	Maricunga	30.53	176	P	P	11 05 25.6	+1.2
AC02				IAmb	IAmb	11 05 39.1	
	comp=Z,17nm,1.4s						
SDBA	SAO DESIDERIO	30.72	122	*e*P	P	11 05 27.5	+1.8
PCMB	Pacaembu	31.94	143	*e*P	P	11 05 38.2	+1.9
JANB	Januaria	32.59	126	*e*P	P	11 05 43.5	+1.3
BB19B	Bebedouro	33.26	139	*e*P	P	11 05 49.8	+1.8
CO05	La Serena	33.54	180	P	P	11 05 48.8	-1.4
PTGB	Pitanga	33.93	148	*e*P	P	11 05 55.2	+1.5
SWET	Sewanee	34.09	338	P	P	11 05 53.7	-1.4
SWET				IAmb	IAmb	11 05 56.0	
	comp=Z,12nm,1.4s						
FRTB	Fartura	34.27	143	*e*P	P	11 05 57.3	+0.6
DIAM	Diamantina, MG	34.93	130	*e*P	P	11 06 03.6	+1.0
W45A	Hickory Valley	35.35	334	P	P	11 06 05.3	-0.6
WVT	Waverly	35.62	337	P	P	11 06 07.6	-0.6
WVT				IAmb	IAmb	11 06 15.6	
	comp=Z,16nm,1.4s						
Q56A	Snyder Ridge,	35.81	349	P	P	11 06 08.7	-1.1
Q56A				IAmb	IAmb	11 06 34.4	
	comp=Z,19nm,1.2s						
PBMO	Poplar Bluff	37.26	334	P	P	11 06 21.4	-0.8
PBMO				IAmb	IAmb	11 06 23.0	
	comp=Z,22nm,1.4s						
VAS01	Vassouras-RJ	37.55	135	*e*P	P	11 06 25.9	+1.1
T42A	Van Buren	37.76	334	P	P	11 06 26.0	-0.4
JCT	Junction City	37.84	318	P	P	11 06 26.7	-0.5
U40A	Yellville	38.03	331	P	P	11 06 28.0	-0.8
CPSB	Cacapava Do Su	38.04	155	*e*P	P	11 06 28.8	0.0
Z35A	Perchaven, San	38.12	323	P	P	11 06 28.6	-0.9
Z35A				IAmb	IAmb	11 06 53.8	
	comp=Z,11nm,0.7s						
DUB01	Friburgo-RJ	38.19	134	*e*P	P	11 06 31.3	+1.0
N49A	Columbus Grove	38.75	344	P	P	11 06 33.6	-1.0
N49A				IAmb	IAmb	11 07 00.3	
	comp=Z,29nm,1.4s						
FNO	Franklin	39.58	325	P	P	11 06 40.8	-0.9
FNO				IAmb	IAmb	11 06 52.6	
	comp=Z,12nm,1.0s						
TXAR	Lajitas Array	39.87	313	P	P	11 06 44.3	-0.1
	comp=Z,0.7nm,0.8s,baz=123,slow=9.4,SNR=4.1						
TX31	Lajitas Ar. Si	39.87	313	P	P	11 06 44.4	0.0
WMOK	Wichita Mounta	40.01	324	P	P	11 06 44.0	-1.4
L46A	Eue Claire	40.36	343	P	P	11 06 47.9	-0.2
P38A	Dawn	40.98	333	P	P	11 06 53.0	-0.3
J47A	Sunmer	41.08	345	P	P	11 06 54.0	-0.1
MNTX	Cornudas Mount	42.41	315	P	P	11 07 04.5	-0.7
PLCA	Paso Flores	44.33	179	P	P	11 07 20.7	+0.1
	comp=Z,1.3nm,0.8s,baz=360,slow=11,SNR=3.7						
PLCA	Paso Flores	44.33	179	P	P	11 07 21.0	+0.4
COYC	Coyhaique	49.17	181	P	P	11 07 58.6	+0.3
GLA	Glamis	50.01	311	P	P	11 08 05.5	+0.4
GLA				IAmb	IAmb	11 08 05.6	
	comp=Z,5.4nm,1.1s						
P18A	Preston Nutter	50.16	321	P	P	11 08 06.9	+0.5
P18A				IAmb	IAmb	11 08 13.9	
	comp=Z,9.9nm,1.4s						
SCHQ	Schefferville	50.99	3	P	P	11 08 12.4	+0.3
	comp=Z,5.1nm,0.6s,baz=204,slow=8.3,SNR=7.9						
PDAR	Pinedale Array	51.61	324	P	P	11 08 16.6	-0.6
	comp=Z,0.4nm,0.6s,baz=209,slow=39,SNR=1.8						
HOPE	Hope Point	64.70	158	P	P	11 09 48.1	-0.2
DBIC	Dimbokro	66.11	84	P	P	11 09 58.2	-0.1
	comp=Z,2.2nm,0.6s,baz=175,slow=6.0,SNR=2.2						
YKA	Yellowknife Ar	66.72	340	P	P	11 09 59.5	-1.8
	comp=Z,1.1nm,0.9s,baz=129,slow=7.9,SNR=5.5						
YKA	Yellowknife Ar	66.72	340	P	P	11 09 59.4	-1.9
ESDC	Sonseca Array	70.15	49	P	P	11 10 22.0	-1.3
	comp=Z,0.5nm,0.5s,baz=260,slow=8.9,SNR=2.7						
SUMG	Summit	71.60	10	*e*	P	11 10 30.6	-1.2
	baz=261,slow=6.2						
SUMG				*i* P	pP	11 10 32.8	0.0
SUMG				*i*		11 11 39.5	
SUMG	Summit	71.60	10	P	P	11 10 31.9	0.0
SUMG				IAmb	IAmb	11 10 40.9	
	comp=Z,6.8nm,0.9s						
TORD	Torodi Ar. Bea	72.52	77	P	P	11 10 37.9	-0.1
	comp=Z,0.9nm,0.6s,baz=287,slow=6.0,SNR=9.9						
ILAR	Eielson Array	80.47	335	P	P	11 11 21.2	-1.0
	comp=Z,0.3nm,0.8s,baz=319,slow=33,SNR=2.5						
O19K	Port Alsworth	83.28	330	P	P	11 11 36.6	-0.4
GERES	GERESS Array B	83.81	41	P	P	11 11 41.4	+1.2
	comp=Z,0.6nm,0.7s,baz=264,slow=2.0,SNR=2.2						
ARCES	ARCESS Array B	88.82	20	P	P	11 12 04.9	+0.7
	comp=Z,1.6nm,0.8s,baz=328,slow=8.9,SNR=1.6						
ZALV	Zalesovo Beam	119.06	16	PKP	PKPdf	11 17 58.4	-1.0
	comp=Z,0.4nm,0.3s,baz=278,slow=1.2,SNR=3.0						
KURBB	Kurchatov Arra	119.88	22	PKP	PKPdf	11 17 59.9	-1.2
	comp=Z,0.3nm,0.6s,baz=286,slow=2.3,SNR=2.2						
MKAR	Makanchi Array	124.45	22	PKP	PKPdf	11 18 08.9	-1.1
	comp=Z,0.3nm,0.5s,baz=332,slow=1.9,SNR=5.0						
SONM	Songino Array	128.53	2	PKP	PKPdf	11 18 17.6	-0.4
	comp=Z,0.3nm,0.5s,baz=92,slow=1.1,SNR=2.3						
KSRS	Korea Array	135.25	338	PKP	PKPdf	11 18 30.3	-0.4
	comp=Z,0.8nm,0.8s,baz=230,slow=39,SNR=2.2						
ASAR	Alice Springs	148.72	229	PKPbc	PKPdf	11 18 57.0	+2.0
	comp=Z,1.2nm,0.7s,baz=117,slow=3.3,SNR=12						
ASAR	Alice Springs	148.72	229		PKPdf	11 18 54.4	-0.7
WRA	Warramunga Arr	150.37	235	PKPbc	PKPdf	11 19 00.6	+2.8
	comp=Z,1.6nm,0.7s,baz=116,slow=2.1,SNR=5.8						
WRA	Warramunga Arr	150.37	235		PKPdf	11 18 56.9	-0.9

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*IDC **28** 11:00:15.2±0.6, 4°.05N×71°.38W, h0km, mb4.1/15, mb1 4.4/18, mb1mx4.3/37, mbtmp4.3/18, ML4.3/3, MS3.9/5, Ms1 3.9/5, ms1mx3.6/22, Error ellipse: s-maj=19.7km s-min=15.6km az=58.0*

*NEIC **28** 11:00:19.9±2.5, 4°.02N±0°.04×71°.23W±0°.08, h16km±3km, mb4.7/25, Error ellipse: s-maj=11.4km s-min=5.9km az=74.0*

ISC 28 11:00:18.0±0.5**, 3°.96N**±0°.07×**71°.25W**±0°.07**, h10km, n68, σ1s32**/57**, mb4.4**/22**, MS3.8**/3**, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROSC	El Rosal	3.18	286	Lg	Lg	11 01 49.9	
	406nm,0.3s,baz=212,slow=21,SNR=1.9						
ROSC	El Rosal	3.18	286	Pn	Pn	11 01 08.5	+0.1
OCAC	Ocana	4.73	334	Pn	Pn	11 01 27.7	-1.8
SDV	Santo Domingo	4.94	7	Lg	Lg	11 02 47.7	
	123nm,0.3s,baz=28,slow=21,SNR=1.4						
SDV	Santo Domingo	4.94	7	Pn	Pn	11 01 32.1	-0.4
ZARC	Zaragoza, Cauc	5.02	315	Pn	Pn	11 01 30.4	-3.1
BAUV	El Baul	5.89	33	Pn	Pn	11 01 46.4	+1.0
URIC	Uribia, Colomb	7.73	355	Pn	Pn	11 02 12.8	+2.2
PCRV	Puerto La Cruz	9.02	46	Pn	Pn	11 02 29.1	+0.8
	4.7nm,0.3s,baz=207,slow=12,SNR=2.0						
PCRV				LR	LR	11 06 35.6	
	comp=Z,2µm,20.3s,slow=42						
BOAV	Boa Vista	10.82	98	Pn	Pn	11 02 51.6	-1.5
PTGA	Pitinga	12.20	112	Lg	Lg	11 06 42.1	
	17nm,0.3s,baz=7.4,slow=20,SNR=2.5						
MACA	Manacapuru-AM	12.71	124	Pn	Pn	11 03 17.5	-1.4
SRBA	San Rafael, Bu	13.12	294	Pn	Pn	11 03 27.3	+2.7
ATAH	Atahualpa	13.12	213	Pn	Pn	11 03 25.0	+0.1
	0.7nm,0.3s,baz=350,slow=22,SNR=1.6						
SDDR	Presa de Saban	14.94	360	Pn	Pn	11 03 49.3	-0.1
CBYP	Canovanas	15.18	20	Pn	Pn	11 03 53.3	+0.7
CBYP				IAmb	IAmb	11 04 15.2	
	comp=Z,20nm,0.7s						
GTBY	Guantanamo Bay	16.32	347	P	Pn	11 04 09.8	+2.5
GTBY				IAmb	IAmb	11 04 30.9	
	comp=Z,75nm,1.4s						
NNA	Nana	16.78	199	Lg	Lg	11 08 58.5	
	comp=Z,1.2nm,0.3s,baz=200,slow=22,SNR=1.9						
MDP	Montagnes des	18.59	86	P	P	11 04 34.1	-1.4
	comp=Z,1.4nm,0.3s,baz=246,slow=11,SNR=5.1						
MDP				Lg	Lg	11 09 57.0	
	comp=Z,3.1nm,0.3s,baz=340,slow=22,SNR=5.9						
MDP				LR	LR	11 12 05.9	
	comp=Z,406nm,19.2s,baz=256,slow=38						
VILB	Vilhena	20.07	147	P	P	11 04 53.4	+1.7
VILB				IAmb	IAmb	11 05 06.6	
	comp=Z,26nm,0.7s						
LPAZ	La Paz	20.35	171	P	P	11 04 54.9	-0.4
	comp=Z,23nm,0.8s,baz=276,slow=1.5,SNR=5.7						
LPAZ	La Paz	20.35	171	P	P	11 04 57.1	+1.8
LPAZ				IAmb	IAmb	11 05 03.4	
	comp=Z,26nm,0.8s						
APG	El Apazote	21.87	301	P	P	11 05 09.3	-2.1
	comp=Z,6.2nm,0.7s,baz=138,slow=14,SNR=4.5						
APG				LR	LR	11 14 04.1	
	comp=Z,397nm,20.5s,baz=98,slow=38						
PB16	IPOC Station P	22.21	176	P	P	11 05 14.2	-1.2
PB16				IAmb	IAmb	11 05 17.9	
	comp=Z,12nm,0.7s						
SIV	San Ignacio	22.23	153	P	P	11 05 16.8	+1.7
	comp=Z,15nm,0.8s,baz=339,slow=10,SNR=7.4						
PB11	IPOC Station P	23.62	176	P	P	11 05 28.9	-0.7
PB11				IAmb	IAmb	11 05 31.0	
	comp=Z,24nm,0.7s						
CCIG	Comitan	23.90	302	P	P	11 05 33.6	+1.3
CCIG				IAmb	IAmb	11 05 33.7	
	comp=Z,52nm,1.5s						
PB08	IPOC Station P	24.03	175	P	P	11 05 36.4	+2.6
PATCX	Punta Patache	24.64	178	P	P	11 05 40.8	+1.8
PB01	IPOC Station P	24.90	176	P	P	11 05 43.2	+1.8
LVC	Limon Verde	26.50	175	P	P	11 05 56.9	+0.7
AQDB	Aquidauana	28.68	148	P	P	11 06 16.0	+0.7
BDFB	Brasilia	30.14	131	P	P	11 06 29.2	+0.8
	comp=Z,2.8nm,0.5s,baz=280,slow=13,SNR=3.9						
BDFB	Brasilia	30.14	131	P	P	11 06 30.2	+1.7
Z47A	Carrollton	33.07	334	P	P	11 06 55.7	+1.8
Z47A				IAmb	IAmb	11 06 56.1	
	comp=Z,14nm,0.9s						
PLAL	Pickwick Lake	34.59	335	P	P	11 07 06.6	-0.5
PLAL				IAmb	IAmb	11 07 09.5	
	comp=Z,19nm,1.2s						
ITAB	Concordia	36.09	150	P	P	11 07 19.5	-0.6
LCAR	Lake Charles	36.85	333	P	P	11 07 25.8	-0.7
LCAR				IAmb	IAmb	11 07 28.2	
	comp=Z,11nm,1.3s						
T42A	Van Buren	37.62	334	P	P	11 07 32.8	-0.3
U40A	Yellville	37.89	331	P	P	11 07 35.0	-0.4
U40A				IAmb	IAmb	11 07 37.5	
	comp=Z,9.7nm,0.8s						
TXAR	Lajitas Array	39.75	313	P	P	11 07 49.1	-2.1
	comp=Z,1.0nm,0.7s,baz=130,slow=9.1,SNR=5.2						
TXAR	Lajitas Array	39.75	313	P	P	11 07 51.1	-0.2
MNTX	Cornudas Mount	42.29	315	P	P	11 08 11.7	-0.3
MNTX				IAmb	IAmb	11 08 12.7	
	comp=Z,19nm,1.4s						
PLCA	Paso Flores	44.48	179	P	P	11 08 29.6	+0.1
	comp=Z,1.5nm,0.7s,baz=0.2,slow=9.9,SNR=5.3						
PLCA	Paso Flores	44.48	179	P	P	11 08 30.5	+0.9
PDAR	Pinedale Array	51.48	324	P	P	11 09 21.9	-2.1
	comp=Z,0.5nm,0.5s,baz=118,slow=8.8,SNR=4.0						
DBIC	Dimbokro	66.13	84	P	P	11 11 05.3	-0.8
	comp=Z,3.0nm,0.6s,baz=300,slow=6.3,SNR=5.4						
DBIC	Dimbokro	66.13	84	P	P	11 11 06.0	-0.2
DBIC				IAmb	IAmb	11 11 23.4	
	comp=Z,6.7nm,1.0s						
YKA	Yellowknife Ar	66.58	340	P	P	11 11 05.6	-2.6
	comp=Z,1.7nm,0.8s,baz=125,slow=8.0,SNR=4.0						
YKA	Yellowknife Ar	66.58	340	P	P	11 11 08.4	+0.3
ESDC	Sonseca Array	70.07	49	P	P	11 11 30.6	0.0
	comp=Z,1.6nm,1.1s,baz=235,slow=5.2,SNR=4.2						
ESDC	Sonseca Array	70.07	49	P	P	11 11 31.0	+0.4
SUMG	Summit	71.46	10	P	P	11 11 38.7	-0.1
TORD	Torodi Ar. Bea	72.51	78	P	P	11 11 44.2	-1.6
	comp=Z,1.5nm,0.6s,baz=282,slow=5.6,SNR=5.5						
ILAR	Eielson Array	80.33	335	P	P	11 12 26.6	-2.5
	comp=Z,0.8nm,0.9s,baz=115,slow=5.0,SNR=2.6						
NOA	NORSAR Array B	82.91	29	P	P	11 12 42.4	-0.5
	comp=Z,1.4nm,0.9s,baz=6.3,slow=17,SNR=3.2						
GERES	GERESS Array B	83.72	41	P	P	11 12 46.7	-0.7
	comp=Z,0.6nm,0.5s,baz=270,slow=5.9,SNR=2.3						
HFS	Hagfors	84.07	30	LR	LR	11 48 08.3	
	comp=Z,34nm,18.7s,baz=278,slow=34						
ARCES	ARCESS Array B	88.69	20	P	P	11 13 11.1	-0.2
	comp=Z,1.6nm,0.8s,baz=302,slow=2.3,SNR=1.4						
ARCES				LR	LR	11 51 49.6	
	comp=Z,26nm,19.0s,baz=250,slow=35						
ZALV	Zalesovo Beam	118.93	16	PKP	PKPdf	11 19 05.7	-1.2

	comp=Z,1.1nm,0.4s,baz=285,slow=2.1,SNR=7.7						
KURK	**Kurchatov**	**119.71**	**22**		**PKPdf**	**11 19 07.6**	**-0.8**
KURBB	**Kurchatov Arra**	**119.76**	**22**	PKP	**PKPdf**	**11 19 07.0**	**-1.6**
	comp=Z,0.4nm,0.4s,baz=312,slow=2.3,SNR=3.2						
MKAR	**Makanchi Array**	**124.33**	**22**	PKP	**PKPdf**	**11 19 15.8**	**-1.7**
	comp=Z,0.6nm,0.4s,baz=289,slow=2.9,SNR=15						
MKAR	**Makanchi Array**	**124.33**	**22**		**PKPdf**	**11 19 16.7**	**-0.8**
SONM	**Songino Array**	**128.39**	**2**	PKP	**PKPdf**	**11 19 24.7**	**-0.7**
	comp=Z,0.5nm,0.7s,baz=329,slow=2.9,SNR=2.9						
ASAR	**Alice Springs**	**148.79**	**229**	PKPbc	**PKPdf**	**11 20 03.7**	**+0.8**
	comp=Z,3.5nm,0.7s,baz=129,slow=3.0,SNR=9.5						
ASAR	**Alice Springs**	**148.79**	**229**		**PKPdf**	**11 19 59.9**	**-3.0**
ASAR				PKPbc	**pPKPdf**	**11 20 05.9**	**-0.5**
WRA	**Warramunga Arr**	**150.42**	**235**	PKP	**PKPdf**	**11 20 02.9**	**-2.7**
	comp=Z,1.4nm,0.7s,baz=110,slow=2.9,SNR=2.4						
WRA				PKPbc	**pPKPdf**	**11 20 08.3**	**-0.7**
	comp=Z,2.3nm,0.5s,baz=110,slow=2.6,SNR=4.8						

DJA 28 11:12:05.5±1.4**, 8°S**±4°×**12°4E**±°**, h24**^{km}±14^{km}**, M3.8**/8**, mb4.0**/2**, MLv3.6**/8**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMRI	**Maumere**	**1.87**	**242**	P	Pb	11 12 38.5	-0.5
SOEI	**Soe**	**2.01**	**170**	P	Pn	11 12 38.7	+0.6
SOEI				S	Sn	11 13 01.6	-1.0
EDFI	**Ende, Flores**	**2.41**	**246**	P	Pn	11 12 45.0	+1.5
EDFI				S	Sb	11 13 15.7	-1.8
BATI	**Baumata**	**2.44**	**186**	P	Pn	11 12 42.4	-1.6
BATI				S	Sn	11 13 10.9	-2.2
BSSI	**Bau Bau, Buton**	**3.76**	**295**	P	Pn	11 13 03.9	+1.9
BASI	**Baing, Sumba**	**4.10**	**233**	P	Pn	11 13 05.7	-1.0
BKSI	**Bulukumba**	**4.47**	**303**	P	Pn	11 13 10.9	-1.0
WBSI	**Waikabubak, Su**	**4.84**	**247**	P	Pn	11 13 15.2	-1.8
BNSI	**Bone**	**5.04**	**311**	P	Pn	11 13 19.2	-0.5
	0.1nm19nm,0.9s						

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*SOME **28** 11:42:33.2, 40°.93N×69°.88E, h5^{km}*
*NNC **28** 11:42:35.7±2.0, 40°.96N×69°.91E, h0^{km}, mb4.0, mpv3.7, Error ellipse: s-maj=15.0km s-min=9.3km az=46.0*
*KRNET **28** 11:42:36.9±0.1, 41°.12N×69°.80E, h18^{km}, mb3.1*
ISC 28 11:42:35.5±0.9**, 41°.14N**±0°.03×**69°.76E**±0°.04**, h10**^{km}**, n16, σ2^s.24**/30**, 8C-10D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAS	**Tashkent**	**0.40**	**298**	⇓*e*P	**Pn**	**11 42 45.6**	**-1.7**
	baz=99						
TAS				⇓*e*S	**Sb**	**11 42 51.5**	**+0.7**
	baz=99						
IUG	**Iuzhnay**	**1.03**	**11**	*e*P	**Pn**	**11 42 57.7**	**+1.5**
	914nm,0.2s						
IUG				*e*S	**Sn**	**11 43 14.7**	**+4.0**
	87nm,0.6s						
IUG	**Iuzhnay**	**1.03**	**11**	P	**Pn**	**11 42 57.7**	**+1.5**
	914nm,0.2s						
IUG				S	**Sn**	**11 43 14.7**	**+4.0**
	87nm,0.6s						
TRKS	**Terek-Say**	**1.11**	**69**	⇓*i*P	**Pn**	**11 42 57.4**	**0.0**
	baz=71						
TRKS				⇓*i*S	**Sn**	**11 43 11.9**	**-0.9**
	baz=71						
BTK	**Batken**	**1.35**	**143**	⇓*i*P	**Pg**	**11 43 01.5**	**+0.1**
	baz=43						
BTK				⇓*i*S	**Sg**	**11 43 18.9**	**0.0**
	baz=43						
BRLS	**Borolday**	**1.89**	**2**	*e*P	**Pb**	**11 43 08.8**	**-1.3**
	11nm,0.3s						
BRLS				*e*S	**Sb**	**11 43 33.7**	**-0.2**
	36nm,0.1s						
BRLS	**Borolday**	**1.89**	**2**	P	**Pb**	**11 43 08.8**	**-1.3**
	11nm,0.3s						
BRLS				S	**Sb**	**11 43 33.7**	**-0.2**
	2.4nm,0.6s						
GAR	**Garm**	**2.18**	**168**	⇑*i*P	**Pb**	**11 43 14.5**	**-0.6**
	baz=69						
GAR				⇑*i*S	**Sb**	**11 43 42.5**	**+0.3**
	baz=69						
DRK	**Karamyk**	**2.28**	**136**	⇑*i*P	**Pb**	**11 43 15.6**	**-1.3**
	baz=36						
DRK				⇑*i*S	**Sb**	**11 43 44.2**	**-1.0**
	baz=36						
MRKS	**Merke**	**3.05**	**57**	*e*P	**Pg**	**11 43 31.5**	**-2.4**
	4.3nm,0.2s						
MRKS				*e*S	**Sg**	**11 44 12.5**	**-0.9**
	11nm,0.4s						
MRKS	**Merke**	**3.05**	**57**	Pg	**Pg**	**11 43 31.5**	**-2.4**
	4.8nm,0.4s						
MRKS				Lg	Lg	11 44 12.5	
	11nm,0.4s						
AML	**Almayashu**	**3.11**	**70**	⇓*i*P	**Pb**	**11 43 27.4**	**-3.8**
	baz=70						
AML				⇓*i*S	**Sn**	**11 44 04.8**	**+2.3**
	baz=70						
EKS2	**Erkin-Say**	**3.37**	**62**	⇓*i*P	**Pb**	**11 43 31.0**	**-4.4**
	baz=61						
EKS2				⇓*i*S	**Sn**	**11 44 10.9**	**+2.5**
	baz=61						
UCH	**Uchtor**	**3.73**	**71**	⇑*e*P	**Pn**	**11 43 36.1**	**+2.6**
	baz=71						
UCH				⇑*i*S	**Sn**	**11 44 19.8**	**+2.1**
	baz=71						
TKM2	**Tokmak 2**	**4.70**	**66**	⇑Pg	**Pb**	**11 44 01.1**	**+2.9**
	1.4nm,0.7s						
TKM2				⇑Lg	Lg	11 45 06.5	
	2.5nm,0.6s						
BTLS	**Baital**	**5.01**	**37**	*e*P	**Pg**	**11 44 09.2**	**-2.2**
	1.0nm,0.1s						
BTLS				*e*S	**Sg**	**11 45 18.4**	**+2.2**
	5.8nm,0.3s						

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*JMA **28** 11:48:37.1±0.3, 31°.31N×128°.81E, h15^{km}±3^{km}, M3.5*
*IDC **28** 11:48:37.5±1.4, 31°.21N×128°.64E, h0^{km}, mb3.3/3, mb1 3.4/5, mb1mx3.3/49, mbtmp3.3/5, ML3.1/2, MS2.7/1, Ms1 2.7/1, ms1mx2.3/29, Error ellipse: s-maj=39.0km s-min=25.9km az=91.0*
*NIED **28** 11:48:37.1, 31°.31N×128°.81E, h15^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-3.42; $M_{\theta\theta}$2.99; $M_{\phi\phi}$0.43; $M_{r\theta}$3.13; $M_{\theta\phi}$0.57; $M_{\phi r}$1.26; Fault plane solution: $M_0$4.69000×10^{14} NP1: ϕ_s251.00000°, δ68.00000°, λ-95.00000°. NP2: ϕ_s83.00000°, δ22.00000°, λ-79.00000°.*
ISC 28 11:48:37.9±1.0**, 31°.24N**±0°.06×**128°.95E**±0°.06**, h6**^{km}**, n24, σ1^s.78**/25**, mb3.4**/3**, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	**Shimokoshiki**	**0.79**	**56**	P	**Pg**	**11 48 52.8**	**-0.2**
JSJ				S	**Sb**	**11 49 04.2**	**-0.8**
JSU	**Suzuyama**	**1.32**	**78**	P	**Pn**	**11 49 02.9**	**+0.1**
JFU	**Fukue jima 2**	**1.42**	**353**	P	**Pn**	**11 49 01.6**	**-2.6**
JNN	**Nakanoshima**	**1.61**	**150**	P	**Pn**	**11 49 06.0**	**-0.8**
JYAK	**Yakushimahirau**	**1.68**	**126**	P	**Pn**	**11 49 06.9**	**-0.8**
JTN	**Tanegashima 3**	**1.84**	**108**	P	**Pn**	**11 49 10.0**	**0.0**
JMTN	**Minamitane**	**1.88**	**116**	P	**Pn**	**11 49 10.5**	**0.0**
JTZ	**Takazaki**	**1.94**	**70**	P	**Pn**	**11 49 11.3**	**-0.1**
JIU3	**Izumi3**	**2.06**	**50**	P	**Pn**	**11 49 12.7**	**-0.3**
JNU	**Nakatsue**	**2.49**	**41**	Pn	**Pb**	**11 49 23.8**	**+0.7**
	5.7nm,0.3s,baz=313,slow=9.5,SNR=18						
JNU				Sn	**Sb**	**11 49 52.3**	**-1.7**
	3.7nm,0.3s,baz=239,slow=10,SNR=2.4						
KSRS	**Korea Array**	**6.25**	**353**	Pn	**Pn**	**11 50 10.7**	**0.0**
	0.5nm,0.3s,baz=174,slow=14,SNR=8.8						
KSRS				Lg	Lg	11 51 51.0	
	0.4nm,0.3s,baz=171,slow=30,SNR=4.7						
KSRS				LR	LR	11 52 33.8	
	comp=Z,60nm,19.6s,baz=170,slow=38						
SHHB	**Siheung-si**	**6.37**	**344**	P	**Pb**	**11 50 27.6**	**-1.5**
KSDEI	**Deokjeokdo**	**6.44**	**339**	P	**Pb**	**11 50 26.3**	**-4.0**
	SNR=7.0						
KSCHC	**Chuncheon**	**6.59**	**352**	P	**Pb**	**11 50 36.0**	**+3.1**
	SNR=19						
KSGAH	**Ganghwa**	**6.77**	**343**	P	**Pn**	**11 50 19.9**	**+2.1**
	SNR=43						
KSGAH				S		11 50 27.5	
KSMUS	**Musan**	**6.87**	**345**	P	**Pn**	**11 50 21.6**	**+2.4**
YPDB	**Yeonpyeongdo**	**6.89**	**338**	P	**Pn**	**11 50 20.9**	**+1.5**
	SNR=13						
YPDB				S		11 50 29.4	
KSCWO	**Cheorwon**	**6.93**	**351**	P	Pb	11 50 31.1	-7.5
	SNR=10						
YNCB	**YEONCHEON**	**6.98**	**347**	P	**Pn**	**11 50 23.0**	**+2.4**
DACB	**Daecheong-do R**	**7.45**	**333**	P	**Pn**	**11 50 30.0**	**+3.0**
	SNR=7.6						
KSBAR	**Backryungdo**	**7.57**	**334**	P	**Pn**	**11 50 29.6**	**+0.9**
SONM	**Songino Array**	**23.89**	**320**	P	**P**	**11 53 52.0**	**-0.3**
	0.9nm,0.8s,baz=125,slow=9.5,SNR=7.2						
ASAR	**Alice Springs**	**54.80**	**174**	P	**P**	**11 58 09.4**	**+0.7**
	0.2nm,0.7s,baz=3.2,slow=14,SNR=5.0						
ILAR	**Eielson Array**	**59.76**	**30**	P	**P**	**11 58 43.7**	**+0.4**
	0.2nm,0.6s,baz=284,slow=8.5,SNR=5.4						

IDC 28 11:56:46.0±999.0**, 50°.22N**×**56°.62E, h0**^{km}**, Error ellipse: s-maj=2277.0km s-min=20.9km az=78.0, Western Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I31KZ	**AKTYUBINSK INF**	**0.93**	**78**	*i*		12 02 30.0	
	baz=258,slow=320,SNR=9.5						
I46RU	**ZALESOVO INFRA**	**17.68**	**67**	*i*		13 46 40.0	
	baz=266,slow=301,SNR=0.9						
I34MN	**SONGINO INFRAS**	**32.27**	**75**	*i*		15 14 20.0	
	baz=291,slow=326,SNR=0.8						

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*IDC **28** 12:13:02.3±0.7, 30°.38N×131°.32E, h0^{km}, mb4.2/20, mb1 4.4/23, mb1mx4.2/57, mbtmp4.3/23, ML3.9/3, MS3.7/19, Ms1 3.7/19, ms1mx3.4/60, Error ellipse: s-maj=17.7km s-min=16.1km az=87.0*
*BJI **28** 12:13:05.6±0.0, 30°.16N×131°.45E, h39^{km}, mB4.7/24, mb4.5/43, Ms4.1/18, Ms7 3.8/16*
*NIED **28** 12:13:05.8, 30°.25N×131°.53E, h44^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.56; $M_{\theta\theta}$-0.26; $M_{\phi\phi}$0.82; $M_{r\theta}$-0.50; $M_{\theta\phi}$0.49; $M_{\phi r}$3.99; Fault plane solution: $M_0$4.11000×10^{15} NP1: ϕ_s173.00000°, δ86.00000°, λ-98.00000°. NP2: ϕ_s56.00000°, δ9.00000°, λ-28.00000°.*
*JMA **28** 12:13:05.8±0.1, 30°.25N×131°.53E, h44^{km}±1^{km}, M4.2*
JMA Felt I J1.
*MOS **28** 12:13:06.3±1.1, 30°.37N×131°.40E, h38^{km}, mb4.7/20, Error ellipse: s-maj=11.1km s-min=6.7km az=114.2*
*NEIC **28** 12:13:07.5±1.2, 30°.30N±0°.05×131°.37E±0°.03, h31^{km}±5^{km}, mb4.6/50, Error ellipse: s-maj=8.3km s-min=1.9km az=152.0*
ISC 28 12:13:08.8±0.8**, 30°.35N**±0°.04×**131°.35E**±0°.05**, h49**^{km}±7^{km}**, n206, σ1^s.36**/208**, mb4.6**/73**, MS3.8**/20**, 15C-2D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMTN	**Minamitane**	**0.39**	**277**	⇑P	**Pn**	**12 13 17.3**	**-1.5**
JMTN				*e*S	**Sn**	**12 13 26.3**	**+0.4**
JTN	**Tanegashima 3**	**0.44**	**314**	⇑P	**Pn**	**12 13 18.2**	**-1.2**
JTN				*e*S	**Sn**	**12 13 27.2**	**+0.3**
JYAK	**Yakushimahirau**	**0.73**	**262**	⇑P	**Pn**	**12 13 21.9**	**-1.1**
JYAK				S	**Sn**	**12 13 33.8**	**+0.5**
JTSR	**Tashiro 2**	**0.90**	**336**	⇑P	**Pn**	**12 13 24.4**	**-0.8**
JTSR				S	**Sn**	**12 13 38.0**	**+0.8**
JKC	**Kuchinoerabu**	**1.00**	**277**	⇑P	**Pn**	**12 13 26.0**	**-0.6**
JKC				S	**Sn**	**12 13 41.5**	**+1.9**
JNAR	**Kushima--Naru**	**1.18**	**357**	⇓P	**Pn**	**12 13 28.3**	**-0.6**
JNAR				S	**Sn**	**12 13 44.1**	**+0.2**
JNKG	**Nichinankitago**	**1.31**	**1**	⇓P	**Pn**	**12 13 30.1**	**-0.7**
JNKG				S	**Sn**	**12 13 47.3**	**+0.2**
JNN	**Nakanoshima**	**1.37**	**249**	⇑P	**Pn**	**12 13 30.8**	**-0.8**
JNN				S	**Sn**	**12 13 49.2**	**+0.5**
JSU	**Suzuyama**	**1.39**	**327**	⇑P	**Pn**	**12 13 31.2**	**-0.6**
JSU				*e*S	**Sn**	**12 13 50.6**	**+1.6**
JSU	**Suzuyama**	**1.39**	**327**		**Pn**	**12 13 31.4**	**-0.4**
JTZ	**Takazaki**	**1.56**	**352**	P	**Pn**	**12 13 34.0**	**-0.2**
JTZ				*e*S	**Sn**	**12 13 54.2**	**+0.9**
JTSN	**Tsuno**	**1.90**	**4**	P	**Pn**	**12 13 37.4**	**-1.4**
JTSN				*e*S	**Sn**	**12 14 00.6**	**-0.9**
JZO	**Okuchi**	**1.90**	**340**	⇑P	**Pn**	**12 13 38.4**	**-0.4**
JSJ	**Shimokoshiki**	**1.93**	**314**	⇑P	**Pn**	**12 13 38.0**	**-1.2**
JSJ				S	**Sn**	**12 14 02.5**	**+0.2**
JNU	**Nakatsue**	**2.79**	**352**	Pn	**Pn**	**12 13 50.6**	**-0.5**
	9.9nm,0.3s,baz=168,slow=0.8,SNR=176						
JNU				Sn	**Sn**	**12 14 23.1**	**-0.5**
	44nm,0.3s,baz=100,slow=22,SNR=9.3						
JNU	**Nakatsue**	**2.79**	**352**		**Pn**	**12 13 51.3**	**+0.2**
JNU	**Nakatsue**	**2.79**	**352**	P	**Pn**	**12 13 51.8**	**+0.7**
JMN	**Monobe**	**4.00**	**32**	Pn	**Pn**	**12 14 06.3**	**-1.3**
JOW	**Kunigami**	**4.42**	**218**	Pn	**Pn**	**12 14 11.4**	**-2.0**
	7.9nm,0.3s,baz=238,slow=9.7,SNR=51						
JOW				Sn	**Sn**	**12 14 59.7**	**-4.0**
	17nm,0.3s,baz=200,slow=28,SNR=13						
JOW	**Kunigami**	**4.42**	**218**	Pn	**Pn**	**12 14 12.0**	**-1.5**
JOW	**Kunigami**	**4.42**	**218**	P	**Pn**	**12 14 11.5**	**-2.0**
JTU	**Tsushima**	**4.48**	**339**	Pn	**Pn**	**12 14 14.5**	**+0.3**
JMZ	**Minamidaito 2**	**4.51**	**181**	Pn	**Pn**	**12 14 12.8**	**-1.9**
JHS	**Saijyo**	**4.87**	**17**	Pn	**Pn**	**12 14 19.2**	**-0.3**
JWT	**Wachi**	**5.99**	**34**	Pn	**Pn**	**12 14 34.0**	**-0.9**
INU	**Inuyama**	**6.90**	**42**	Pn	**Pn**	**12 14 46.9**	**-0.4**
INU	**Inuyama**	**6.90**	**42**	P	**Pn**	**12 14 47.3**	**-0.1**
JGF	**Kuroka**	**7.27**	**42**		**Pn**	**12 14 52.2**	**-0.4**
KSRS	**Korea Array**	**7.64**	**339**	Pn	**Pn**	**12 14 57.3**	**-0.2**
	0.6nm,0.3s,baz=158,slow=14,SNR=7.0						
KSRS				LR	LR	12 18 23.2	
	comp=Z,317nm,18.2s,baz=140,slow=42						
KSAR	**Wonju Array Be**	**7.64**	**339**	P	**Pn**	**12 14 58.3**	**+0.8**
KSAR	**Wonju Array Be**	**7.64**	**339**	Pn	**Pn**	**12 14 58.2**	**+0.8**
JHJ	**Hachijo jima 2**	**7.70**	**67**	Pn	**Pn**	**12 14 57.6**	**-0.7**
	28nm,0.3s,baz=72,slow=22,SNR=8.3						
JHJ				LR	LR	12 17 39.5	
	comp=Z,543nm,19.6s,baz=142,slow=36						
KS19	**Wonju Array Si**	**7.70**	**339**	Pn	**Pn**	**12 14 58.1**	**-0.2**
JHJ2	**Mitsune**	**7.72**	**67**	Pn	**Pn**	**12 14 57.4**	**-1.3**
JHJ2	**Mitsune**	**7.72**	**67**	P	**Pn**	**12 14 58.7**	**+0.1**
MAJO	**Matsushiro**	**8.42**	**41**	*i* P	**Pn**	**12 15 07.5**	**-0.8**
MAJO	**Matsushiro**	**8.42**	**41**		**Pn**	**12 15 07.3**	**-1.0**
MAJO	**Matsushiro**	**8.42**	**41**	P	**Pn**	**12 15 07.7**	**-0.6**
MAT	**Matsushiro**	**8.42**	**41**	P	**Pn**	**12 15 07.5**	**-0.8**
MAT				*e*S	**Sn**	**12 16 42.1**	**+0.1**
MJAR	**Matsushiro Arr**	**8.43**	**41**	Pn	**Pn**	**12 15 06.8**	**-1.4**
	0.7nm,0.3s,baz=229,slow=13,SNR=39						
MJAR				LR	LR	12 18 39.2	
	comp=Z,335nm,19.7s,baz=245,slow=40						
MJAR	**Matsushiro Arr**	**8.43**	**41**	P	**Pn**	**12 15 07.5**	**-0.8**
MJAR	**Matsushiro Arr**	**8.43**	**41**	Pn	**Pn**	**12 15 07.5**	**-0.8**
MJB9	**Matsu-Tunnel**	**8.43**	**41**		**Pn**	**12 15 08.6**	**+0.3**
JCJ	**Chichijima**	**10.05**	**106**	LR	LR	12 18 44.9	
	comp=Z,348nm,19.8s,baz=268,slow=34						
NJ2	**Nanjing**	**10.83**	**282**	*e*P	**Pn**	**12 15 42.5**	**+1.3**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
JMM	**Marumori**	**10.84**	**44**	Pn	**Pn**	**12 15 40.9**	**-0.3**
CN2	**Changchun**	**14.22**	**342**	*e*P	**P**	**12 16 36.0**	**+2.5**
CN2				*e*S	**S**	**12 19 14.0**	**-8.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				LR	LR		
	comp=N,400nm,14.0s						
CN2				LR	LR		
	comp=E,300nm,14.0s						
CN2				LR	LR		
	comp=Z,500nm,17.0s						
BJT	**Baijiatuau**	**15.70**	**312**	P	**P**	**12 16 48.8**	**-1.1**
BJT				pmax	pmax		
	comp=Z,49nm,1.2s						
BJT	**Baijiatuau**	**15.70**	**312**	P	**P**	**12 16 48.8**	**-1.1**
BJT				IAmb	IAmb	12 16 55.9	
	comp=Z,50nm,1.2s						
ASAJ	**Asahikawa**	**16.38**	**30**	LR	LR	12 23 18.5	
	comp=Z,274nm,21.6s,baz=186,slow=38						
KLR	**Kul'dur**	**18.86**	**1**	*i* P	**P**	**12 17 23.0**	**-1.7**
ENH	**Enshi**	**18.88**	**275**		**P**	**12 17 23.7**	**-1.4**
ENH				IAmb	IAmb	12 17 32.7	
	comp=Z,17nm,0.7s						
HHC	**Hu-ho-hao-te**	**19.16**	**309**	*e*P	**Pn**	**12 17 30.8**	**+1.3**
HHC				S	**S**	**12 20 57.3**	**-5.5**
HHC				pmax	pmax		
	comp=Z,21nm,0.8s						
HHC				pmax	pmax		
	comp=Z,170nm,6.0s						
HHC				LR	LR		
	comp=Z,310nm,14.5s						
HHC				LR	LR		
	comp=Z,420nm,15.3s						
HHC				LR	LR		
	comp=Z,330nm,16.2s						
BTO	**Baotou**	**20.11**	**306**	*e*P	Pn	12 17 44.0	+3.2
BTO				LR	LR		
	comp=Z,1µm,13.7s						
BTO				LR	LR		
	comp=Z,1µm,15.4s						
GUMO	**Guam**	**20.83**	**140**	LR	LR	12 24 26.0	
	comp=Z,91nm,21.3s,baz=97,slow=33						
GYA	**Guiyang**	**22.04**	**266**	⇑*i*P	**P**	**12 18 00.5**	**+1.0**
GYA				sP	pP	12 18 13.5	+2.4
GYA				pmax	pmax		
	comp=Z,28nm,1.0s						
ZEA	**Zeya**	**23.56**	**354**	*e*P	P	12 18 23.6	+8.9
ZEA				pmax	pmax		
	comp=N,10.0nm,0.5s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CD2	**Chengdu**	**23.73**	**278**	*e*P	**P**	**12 18 16.8**	**+0.3**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ULN	**Ulaanbaatar**	**25.55**	**320**	P	**P**	**12 18 33.4**	**+0.3**
ULN				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ULN	**Ulaanbaatar**	**25.55**	**320**	P	**P**	**12 18 33.4**	**+0.3**
ULN				IAmb	IAmb	12 18 36.2	
	comp=Z,5.6nm,0.6s						
KMI	**Kunming**	**25.82**	**265**	⇑P	**P**	**12 18 37.0**	**+1.2**
KMI				pP	pP	12 18 46.8	-1.4
KMI				pmax	pmax		
	comp=Z,14nm,0.6s						
SONM	**Songino Array**	**25.90**	**319**	P	**P**	**12 18 36.0**	**-0.2**
	comp=Z,3.8nm,0.6s,baz=140,slow=10.0,SNR=28						
SONM				LR	LR	12 30 19.0	
	comp=Z,191nm,18.1s,baz=164,slow=40						
SONM	**Songino Array**	**25.90**	**319**	P	**P**	**12 18 36.6**	**+0.4**
SONM				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SONM	**Songino Array**	**25.90**	**319**	P	**P**	**12 18 36.6**	**+0.4**
GTA	**Gaotai**	**27.29**	**298**	*e*P	**P**	**12 18 51.8**	**+2.9**
GTA				pP	pP	12 19 02.3	+0.7
GTA				sP	sP	12 19 06.0	-1.4
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,98nm,4.4s						
GTA				LR	LR		
	comp=Z,140nm,14.5s						
GTA				LR	LR		
	comp=Z,170nm,14.2s						
GTA				LR	LR		
	comp=Z,180nm,14.9s						
TLY	**Talaya**	**29.55**	**324**	LR	LR	12 32 15.3	
	comp=Z,90nm,18.4s,baz=130,slow=39						
PEA0B	**Petropavlovsk-**	**29.76**	**33**	*ce*P	**P**	**12 19 06.5**	**-4.0**
PETK	**Petropavlovsk-**	**29.76**	**33**	LR	LR	12 30 35.7	
	comp=Z,98nm,22.0s,baz=231,slow=35						
CHTO	**Chiang Mai**	**31.52**	**256**	P	**P**	**12 19 26.1**	**-0.3**
CHTO				pmax	pmax		
	comp=Z,11nm,0.6s						
CHTO	**Chiang Mai**	**31.52**	**256**	P	**P**	**12 19 26.1**	**-0.3**
CHTO				IAmb	IAmb	12 19 27.0	
	comp=Z,11nm,0.6s						
CMAR	**Chiang Mai Arr**	**31.68**	**256**	P	**P**	**12 19 27.7**	**-0.1**
	comp=Z,2.5nm,0.5s,baz=56,slow=7.5,SNR=13						
CMAR				LR	LR	12 34 46.5	
	comp=Z,143nm,18.1s,baz=57,slow=41						
CMAR	**Chiang Mai Arr**	**31.68**	**256**	*ce*P	**P**	**12 19 28.2**	**+0.4**
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
CMAR	**Chiang Mai Arr**	**31.68**	**256**	P	**P**	**12 19 26.8**	**-1.0**
H11N2	**WAKE ISLAND Hy**	**33.77**	**100**	T	T	12 55 49.2	
	baz=296,slow=75,SNR=8.4						
H11N1	**WAKE ISLAND Hy**	**33.77**	**100**	T	T	12 55 49.4	
	baz=296,slow=75,SNR=6.5						
H11N3	**WAKE ISLAND Hy**	**33.79**	**100**	T	T	12 55 52.4	
	baz=296,slow=75,SNR=8.1						
JAY	**Jayapura**	**33.88**	**163**	LR	LR	12 31 36.4	
	comp=Z,96nm,20.0s,baz=298,slow=33						
WMQ	**Urumqi**	**36.91**	**304**	*e*P	**P**	**12 20 16.0**	**+3.1**
WMQ				LR	LR		
	comp=Z,410nm,29.2s						
WMQ				LR	LR		
	comp=Z,1µm,29.1s						
KULM	**Kulim**	**38.17**	**235**	P	**P**	**12 20 23.8**	**+0.1**
KULM				IAmb	IAmb	12 20 25.8	
	comp=Z,11nm,0.9s						
TAPN	**Taplejung**	**38.17**	**277**	*e*P	**P**	**12 20 24.7**	**+0.7**
ODAN	**Odare**	**38.57**	**276**	*e*P	**P**	**12 20 27.6**	**+0.3**
RAMN	**Ramite**	**39.23**	**276**	*e*P	**P**	**12 20 33.0**	**+0.2**
	comp=Z,8.0nm,0.3s						
JIRN	**Jiri**	**39.39**	**278**	*e*P	**P**	**12 20 34.0**	**-0.3**
GUN	**Gumba**	**39.59**	**278**	*e*P	**P**	**12 20 36.0**	**0.0**
	comp=Z,54nm,0.4s						
PKI	**Pulchoki**	**40.08**	**278**	*e*P	**P**	**12 20 39.9**	**-0.1**
	comp=Z,10nm,0.4s						
PKIN	**Phulchoki**	**40.09**	**278**	*e*P	**P**	**12 20 39.7**	**-0.3**
	comp=Z,15nm,0.5s						
KKN	**Kakani**	**40.14**	**278**	*e*P	**P**	**12 20 40.4**	**+0.1**
	comp=Z,12nm,0.4s						
DMN	**Daman**	**40.33**	**278**	*e*P	**P**	**12 20 41.9**	**-0.1**
ZAA0	**Zalesovo Array**	**40.80**	**319**	P	**P**	**12 20 45.0**	**-0.1**
ZALV	**Zalesovo Beam**	**40.80**	**319**	P	**P**	**12 20 44.6**	**-0.5**
	comp=Z,2.0nm,0.7s,baz=103,slow=7.2,SNR=9.8						
ZALV				PcP	**PcP**	**12 22 45.5**	**+0.1**
	comp=Z,1.9nm,0.7s,baz=103,slow=4.7,SNR=8.6						
ZALV				LR	LR	12 39 12.2	
	comp=Z,125nm,19.1s,baz=106,slow=38						
ZALV	**Zalesovo Beam**	**40.80**	**319**	P	**P**	**12 20 44.7**	**-0.4**
MK31	**Makanchi Array**	**41.02**	**308**	P	**P**	**12 20 47.0**	**-0.2**
MK31				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MK31	**Makanchi Array**	**41.02**	**308**	P	**P**	**12 20 47.0**	**-0.2**
MKAR	**Makanchi Array**	**41.02**	**308**	P	**P**	**12 20 46.8**	**-0.4**
	comp=Z,3.2nm,0.7s,baz=94,slow=10,SNR=23						
MKAR				PcP	**PcP**	**12 22 46.9**	**+0.5**
	comp=Z,1.7nm,0.8s,baz=68,slow=4.6,SNR=8.1						
MKAR				LR	LR	12 39 12.7	
	comp=Z,88nm,19.8s,baz=94,slow=38						
MKAR	**Makanchi Array**	**41.02**	**308**	P	**P**	**12 20 47.6**	**+0.4**
MAKZ	**Makanchi**	**41.24**	**308**	P	**P**	**12 20 49.0**	**+0.1**
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MAKZ	**Makanchi**	**41.24**	**308**	P	**P**	**12 20 49.0**	**+0.1**
DANN	**Dangsing**	**41.29**	**280**	*e*P	**P**	**12 20 50.1**	**+0.1**
	comp=Z,12nm,0.4s						
TIXI	**Tiksi**	**41.38**	**359**	*i* P	**P**	**12 20 48.3**	**-1.4**
TIXI				pmax	pmax		
	comp=Z,11nm,3.6s						
KOLN	**Koldanda**	**41.58**	**279**	*e*P	**P**	**12 20 52.2**	**0.0**
	comp=Z,6.5nm,0.3s						
KURK	**Kurchatov**	**43.87**	**313**	P	**P**	**12 21 10.6**	**+0.4**
KURK	**Kurchatov**	**43.87**	**313**	P	**P**	**12 21 10.2**	**0.0**
KURK				IAmb	IAmb	12 21 10.8	
	comp=Z,6.3nm,0.6s						
KURBB	**Kurchatov Arra**	**43.92**	**313**	P	**P**	**12 21 10.6**	**0.0**
	comp=Z,3.8nm,0.6s,baz=96,slow=8.6,SNR=32						
TARG	**Taragay, Kyrgy**	**44.12**	**300**	P	**P**	**12 21 13.4**	**+0.5**
TARG				IAmb	IAmb	12 21 14.6	
	comp=Z,4.5nm,0.7s						
BOOM	**Boomskoye usch**	**45.47**	**301**	P	**P**	**12 21 24.3**	**+1.0**
BOOM				pmax	pmax		
	comp=Z,4.0nm,1.5s						
BOOM	**Boomskoye usch**	**45.47**	**301**	P	**P**	**12 21 24.3**	**+1.0**
KSH	**Kashi**	**45.69**	**297**	P	**P**	**12 21 29.0**	**+4.0**
KSH				sP	sP	12 21 42.5	-1.3
KSH				pmax	pmax		
	comp=Z,4.0nm,0.5s						
KNRA	**Kununurra**	**45.83**	**183**	P	**P**	**12 21 26.5**	**+0.5**
AAK	**Ala-Archa**	**46.52**	**302**	P	**P**	**12 21 31.9**	**+0.3**
	comp=Z,0.9nm,0.5s,baz=8.3,slow=22,SNR=4.2						
AAK	**Ala-Archa**	**46.52**	**302**	P	**P**	**12 21 32.2**	**+0.6**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AAK	**Ala-Archa**	**46.52**	**302**	P	**P**	**12 21 32.2**	**+0.6**
BVAR	**Borovoye Array**	**49.15**	**316**	P	**P**	**12 21 51.5**	**0.0**
	comp=Z,2.7nm,0.4s,baz=154,slow=7.2,SNR=16						
BVAR				PcP	**PcP**	**12 23 15.2**	**+1.0**
	comp=Z,1.4nm,0.6s,baz=198,slow=9.3,SNR=4.1						
BRVK	**Borovoye**	**49.21**	**316**	P	**P**	**12 21 53.1**	**+1.1**
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.4s						
BRVK	**Borovoye**	**49.21**	**316**	P	**P**	**12 21 53.1**	**+1.1**
KKAR	**Karatay Array**	**49.40**	**303**	P	**P**	**12 21 54.4**	**+0.8**
KKAR	**Karatay Array**	**49.40**	**303**	P	**P**	**12 21 54.4**	**+0.8**
WB0	**Warramunga Arr**	**49.91**	**176**	P	**P**	**12 21 56.9**	**-0.8**
WRAB	**Tennant Creek**	**50.07**	**176**	P	**P**	**12 21 58.6**	**-0.3**
WRAB				pmax	pmax		
	comp=Z,4.0nm,1.1s						
WRAB	**Tennant Creek**	**50.07**	**176**	P	**P**	**12 21 58.6**	**-0.3**

WRA	Warramunga Arr	50.08	176	P	P	12 21 58.7	-0.2
	comp=Z,0.6nm,0.8s,baz=354,slow=8.2,SNR=5.6						
WRA	Warramunga Arr	50.08	176	*i* P	P	12 22 01.2	+2.3
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WRA	Warramunga Arr	50.08	176	P	P	12 21 57.8	-1.1
WB2	Warramunga Arr	50.08	176	P	P	12 21 59.0	+0.1
GAR	Garm	50.11	297	P	P	12 21 59.2	0.0
WR0	Warramunga Arr	50.11	176	P	P	12 21 59.7	+0.6
WR0				IAmb	IAmb	12 22 18.2	
	comp=Z,4.6nm,0.9s						
CHGR	Chuyangaron	51.06	297	P	P	12 22 07.0	+0.7
ASAR	Alice Springs	53.76	177	P	P	12 22 27.1	+0.8
	comp=Z,0.7nm,0.5s,baz=9.8,slow=13,SNR=14						
ASAR	Alice Springs	53.76	177	P	P	12 22 25.8	-0.5
TTA	Tatalina	55.60	32	P	P	12 22 40.6	+1.4
TTA				pmax	pmax		
	comp=Z,7.0nm,1.4s						
TTA	Tatalina	55.60	32	P	P	12 22 40.6	+1.4
TTA				IAmb	IAmb	12 23 06.3	
	comp=Z,7.0nm,1.4s						
ABKAR	Akbulak array	55.92	311	P	P	12 22 41.6	-0.1
ABKAR				IAmb	IAmb	12 22 43.0	
	comp=Z,3.9nm,0.5s						
ABKAR	Akbulak array	55.92	311	P	P	12 22 42.0	+0.4
ARU	Arti	55.94	320	P	P	12 22 41.4	-0.3
	comp=Z,0.8nm,0.3s,baz=188,slow=8.3,SNR=4.9						
IMAR	Indian Mountai	56.58	28	P	P	12 22 47.4	+1.3
HRA	Herat	57.48	294	P	P	12 22 54.6	+1.3
KDAK	Kodiak Island	57.59	38	P	P	12 22 53.6	+0.3
KDAK				pmax	pmax		
	comp=Z,95nm,1.5s						
KDAK	Kodiak Island	57.59	38	P	P	12 22 53.6	+0.3
MLY	Manley	57.86	29	P	P	12 22 56.0	+0.8
MLY				IAmb	IAmb	12 23 11.2	
	comp=Z,7.5nm,1.1s						
NEA2	Nenana	58.60	30	P	P	12 23 01.8	+1.4
NEA2				IAmb	IAmb	12 23 08.0	
	comp=Z,11nm,1.2s						
ILAR	Eielson Array	59.52	29	P	P	12 23 07.0	+0.3
	comp=Z,0.5nm,0.6s,baz=296,slow=6.6,SNR=9.1						
ILAR	Eielson Array	59.52	29	P	P	12 23 06.8	+0.1
M26K	Nabesna, AK	61.62	32	P	P	12 23 22.5	+1.4
M26K				IAmb	IAmb	12 23 43.0	
	comp=Z,9.5nm,1.4s						
BCAR	Beaver Creek A	62.02	31	P	P	12 23 25.7	+1.8
BELG	Belogornoye	62.92	317	*i* P	P	12 23 28.0	-1.9
BELG				pmax	pmax		
	comp=Z,3.0nm,1.1s						
EPYK	Eagle Plains	63.36	27	P	P	12 23 34.2	+1.5
INK	Inuvik	64.03	24	P	P	12 23 38.1	+1.2
	comp=Z,2.0nm,1.0s,baz=27,slow=2.3,SNR=4.0						
INK	Inuvik	64.03	24	P	P	12 23 37.7	+0.8
INK				IAmb	IAmb	12 23 43.4	
	comp=Z,5.1nm,1.2s						
SPITS	Spitsbergen Ar	65.38	348	P	P	12 23 47.7	+2.1
SPITS				pmax	pmax		
	comp=Z,94nm,1.4s						
A36M	Sachs Harbour	65.45	19	P	P	12 23 47.1	+1.0
A36M				IAmb	IAmb	12 23 48.3	
	comp=Z,6.7nm,0.8s						
ARCES	ARCESS Array B	67.19	338	P	P	12 23 57.1	-0.2
	comp=Z,0.5nm,0.4s,baz=8.5,slow=2.5,SNR=12						
ARCES				LR	LR	13 00 00.3	
	comp=Z,65nm,20.0s,baz=270,slow=42						
ZEI	Tsey	68.37	308	*e*P	P	12 24 05.1	-0.4
ZEI				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KBZ	Khabaz	68.70	309	P	P	12 24 08.3	+1.1
	comp=Z,9.9nm,0.8s,baz=89,slow=4.3,SNR=18						
KBZ	Khabaz	68.70	309	*ce*P	P	12 24 08.8	+1.6
KBZ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KVAR	Kislovodsk Arr	68.75	309	LR	LR	12 57 32.4	
	comp=Z,68nm,18.1s,baz=279,slow=39						
KIV	Kislovodsk	68.76	309	*e*P	P	12 24 08.2	+0.5
KIV				pmax	pmax		
	comp=Z,13nm,1.0s						
KIV				MLR	MLR		
	comp=Z,63nm,17.0s						
GNI	Garni	68.77	305	*i* P	P	12 24 08.2	+0.2
GNI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SHA1	Shidzhatmaz	68.86	309	*i* P	P	12 24 08.6	0.0
NEY	Neytrino	69.00	309	*i* P	P	12 24 10.1	+0.7
NEY				pmax	pmax		
	comp=Z,3.0nm,1.0s						
FIA1	FINESS Array S	70.64	331	P	P	12 24 19.9	+1.1
FINES	FINESS Array B	70.64	331	P	P	12 24 18.1	-0.8
	comp=Z,6.1nm,0.4s,baz=64,slow=5.7,SNR=58						
FINES	FINESS Array B	70.64	331	P	P	12 24 19.8	+0.9
FINES	FINESS Array B	70.64	331	P	P	12 24 19.8	+0.9
MNK	Minsk	73.08	324	*i* P	P	12 24 24.2	-9.4
MNK				*i*		12 24 41.0	
MNK				*i* S	S	12 33 47.4	-10
MNK				*i*		12 34 29.0	
MNK				*i* SS	SS	12 38 34.8	-3.3
MNK				*i* SSS	SSS	12 41 50.7	
MNK				pmax	pmax		
	comp=N,31nm,1.0s						
MNK				pmax	pmax		
	comp=E,2.0nm,0.9s						
MNK				pmax	pmax		
	comp=Z,16nm,1.0s						
MNK				MLR	MLR		
	comp=Z,167nm,23.0s						
MNK				MLR	MLR		
	comp=N,436nm,23.0s						
MNK				MLR	MLR		
	comp=E,62nm,24.0s						
MNK	Minsk	73.08	324	*i* P	P	12 24 24.2	-9.4
	comp=E,2.0nm,0.8s						
MNK				*i* P	P	12 24 24.2	-9.4
	comp=N,31nm,1.0s						
MNK				*i* P	P	12 24 24.2	-9.4
	comp=Z,16nm,1.0s,baz=61						
MNK				*i* PcP	pP	12 24 41.0	-6.4
MNK				*i* PP	PP	12 27 06.3	-10
MNK				*i* PPP	PPP	12 28 51.0	
MNK				*i* S	S	12 33 47.5	-10
MNK				*i* SS	SS	12 38 34.9	-3.3
MNK				*i* SSS	SSS	12 41 50.8	
MNK				*i* LQ	LQ	12 54 14.9	
MNK				*i* LR	LR	12 58 03.2	
MNK				*i* LRM	MLR	13 01 26.6	
	comp=Z,167nm,23.2s						
MNK				*i* LRM	MLR	13 01 28.8	
	comp=N,436nm,23.1s						
MNK				*i* LRM	MLR	13 01 42.5	
	comp=E,62nm,23.9s						
NACGM	Naroch	73.45	324	*i* P	P	12 24 37.8	+2.0
AKASG	Malin Array Be	74.19	320	P	P	12 24 39.7	-0.5
	comp=E,2.3nm,0.3s,baz=57,slow=6.2,SNR=10						
AKASG	Malin Array Be	74.19	320	*ce*P	P	12 24 41.0	+0.8
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.3s						
AKASG	Malin Array Be	74.19	320	P	P	12 24 40.6	+0.4
AKBB	Malin Array Si	74.19	320	P	P	12 24 40.8	+0.6
AKBB				pmax	pmax		
	comp=Z,13nm,1.4s						
AKBB	Malin Array Si	74.19	320	P	P	12 24 40.8	+0.6
AKBB				IAmb	IAmb	12 24 41.1	
	comp=Z,13nm,1.4s						
RAYN	Ar Rayn	75.11	289	P	P	12 24 47.0	+0.9
RAYN				pmax	pmax		
	comp=Z,11nm,1.0s						
RAYN	Ar Rayn	75.11	289	P	P	12 24 47.0	+0.9
RAYN				IAmb	IAmb	12 24 48.9	
	comp=Z,11nm,0.9s						
HFS	Hagfors	76.44	333	LR	LR	13 02 45.7	
	comp=Z,86nm,18.4s,baz=7.5,slow=39						
NC405	NORSAR Array S	76.59	334	P	P	12 24 53.1	-0.7
NC405				IAmb	IAmb	12 25 14.0	
	comp=Z,11nm,1.0s						
BR131	Keskin Array S	76.67	308	P	P	12 24 55.7	+0.8
BR131				pmax	pmax		
	comp=Z,20nm,0.9s						
BR131	Keskin Array S	76.67	308	P	P	12 24 55.7	+0.8
BRTR	Keskin Array B	76.67	308	P	P	12 24 55.2	+0.4
	comp=Z,9.0nm,0.8s,baz=102,slow=5.4,SNR=39						
NB2	NORSAR Subarra	76.82	334	P	P	12 24 55.1	-0.1
	comp=Z,0.7nm,0.5s,baz=48,slow=5.9						
NOA	NORSAR Array B	76.82	334	P	P	12 24 55.1	-0.1
	comp=Z,1.1nm,0.5s,baz=50,slow=5.6,SNR=4.7						
SUMG	Summit	77.11	357	P	P	12 24 59.5	+2.4
SUMG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
SUMG	Summit	77.11	357	P	P	12 24 59.5	+2.4
SUMG				IAmb	IAmb	12 25 02.5	
	comp=Z,3.2nm,0.6s						
BUR08	Bucovina Ar. S	78.01	318	P	P	12 25 02.8	+0.6
BUR08				IAmb	IAmb	12 25 12.9	
	comp=Z,5.3nm,1.3s						
BURAR	Bucovina Array	78.01	318	P	P	12 25 03.9	+1.7
BURAR				IAmb	IAmb	12 25 04.6	
	comp=Z,2.4nm,0.6s						
CRVS	Cervenica-Dubn	79.41	321	*e*P	P	12 25 14.8	+5.1
CRVS	Cervenica-Dubn	79.41	321	*e*P	P	12 25 14.8	+5.1
OJC	Ojcow	79.55	323	P	P	12 25 12.3	+1.8
OJC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
OJC	Ojcow	79.55	323	P	P	12 25 12.2	+1.8
OJC				IAmb	IAmb	12 25 13.5	
	comp=Z,10.0nm,1.0s						
VRAC	Vranov	81.77	323	LR	LR	13 06 33.1	
	comp=Z,111nm,19.7s,baz=9.0,slow=39						
BFZ	Birch Farm	82.00	147	P	P	12 25 23.8	+0.4
CLL	Collm	82.31	326	*i* P	P	12 25 27.5	+2.4
CLL	Collm	82.31	326	*i* P	P	12 25 27.5	+2.4
BMO	Blue Mountains	82.56	42	P	P	12 25 27.2	+0.6
BMO				pmax	pmax		
	comp=Z,5.0nm,1.5s						
BMO	Blue Mountains	82.56	42	P	P	12 25 27.2	+0.6
CONA	Conrad Observa	83.00	322	*e*P	P	12 25 30.5	+1.7
	comp=Z,4.0nm,0.7s						
GERES	GERESS Array B	83.54	324	P	P	12 25 33.2	+1.5
	comp=Z,1.1nm,0.7s,baz=46,slow=5.8,SNR=4.2						
GERES	GERESS Array B	83.54	324	P	P	12 25 28.2	-3.4
SOKA	Soboth	84.22	322	*i* P	P	12 25 35.6	+0.4
	comp=Z,2.1nm,0.7s						
OBKA	Obir	84.58	322	*i* P	P	12 25 38.3	+1.3
	comp=Z,3.2nm,0.6s						
MYKA	Terra Mystica	84.99	322	*e*P	P	12 25 39.4	+0.4
	comp=Z,3.3nm,0.4s						
ZOU	Zoufplan	85.39	322	P	P	12 25 42.3	+1.1
ZOU				IAmb	IAmb	12 25 43.4	
	comp=Z,4.8nm,0.7s						
ABTA	Abfaltersbach	85.51	323	*e*P	P	12 25 41.7	+0.1
	comp=Z,3.4nm,0.6s						
STAL	STALIGIAL	85.72	322	P	P	12 25 43.5	+0.9
STAL				IAmb	IAmb	12 25 44.8	
	comp=Z,8.4nm,0.9s						
MOTA	Moosalm	85.84	324	*e*P	P	12 25 43.8	+0.4
	comp=Z,2.3nm,0.6s						
DAVOX	Davos/Dischmat	86.84	324	LR	LR	13 07 17.1	
	comp=Z,112nm,18.6s,baz=254,slow=38						
PDAR	Pinedale Array	88.25	40	P	P	12 25 54.7	-0.5
	comp=Z,1.0nm,0.7s,baz=308,slow=1.9,SNR=10						
MBAR	Mbarara	99.46	275	LR	LR	13 12 34.9	
	comp=Z,31nm,19.0s,baz=20,slow=36						

WEL 28 12:13:58.8±1.1**, 33°S**±23°×**18°0E**±3°6**, h388**^{km}±33^{km}**, M3.8**/7**, mB4.3**/7**, ML4.3**/12**, MLv4.2**/6**, Mw(mB)3.5**/7**, Error ellipse: s-maj=0.1km s-min=0.0km az=119.7, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.70	193	P	Pn	12 15 16.7	-0.2
MXZ				S	S	12 16 21.9	+1.4
WMGZ	Waiomatatini S	4.93	191	P	Pn	12 15 20.5	+1.1
WMGZ				S	S	12 16 25.9	+1.0
HAZ	Te Kaha	5.00	197	P	Pn	12 15 19.4	-0.7
HAZ				S	S	12 16 26.2	+0.1
PKGZ	Pakihiroa	5.06	194	P	Pn	12 15 20.4	-0.4
PKGZ				S	S	12 16 27.1	-0.4
PUZ	Puketiti	5.20	192	P	Pn	12 15 21.0	-1.3
PUZ				S	S	12 16 29.7	-0.5
RUGZ	Raukumara Rang	5.22	197	P	Pn	12 15 21.7	-0.9
RUGZ				S	S	12 16 28.6	-2.1
TWGZ	Tauwhareparae	5.36	194	P	Pn	12 15 25.3	+1.3
TWGZ				S	S	12 16 35.7	+2.5
OPRZ	Ohinepanea	5.46	207	P	Pn	12 15 26.6	+1.6
CNGZ	Carnagh Statio	5.61	192	P	Pn	12 15 28.3	+1.7
TKGZ	Te Karaka	5.64	194	P	Pn	12 15 25.6	-1.3
TKGZ				S	S	12 16 38.5	-0.1
URZ	Urewera	5.65	201	P	Pn	12 15 25.5	-1.6
URZ				S	S	12 16 38.8	-0.1
TLZ	Tolley Road	6.29	211	P	Pn	12 15 35.9	+1.8
MRHZ	Matea Rd	6.40	203	P	Pn	12 15 34.5	-0.8
NMHZ	Naumai	6.52	200	P	Pn	12 15 36.8	+0.2
NMHZ				S	S	12 16 57.9	+1.4
ARHZ	Aropaoanui	6.62	198	P	Pn	12 15 37.9	+0.1
ARHZ				S	S	12 16 59.2	+0.7
BKZ	Black Stump Fm	6.67	201	P	Pn	12 15 37.3	-1.2
BKZ				S	S	12 16 59.4	-0.3

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*IDC **28** 12:17:18.1±1.9, 22°.39N×121°.61E, h0^{km}, mb3.6/4, mb1 3.7/4, mb1mx3.4/58, mbtmp3.6/4, MS2.6/1, Ms1 2.6/1, ms1mx2.4/41, Error ellipse: s-maj=164.6km s-min=23.4km az=65.0*

*TAP **28** 12:17:20.6, 22°.32N×121°.05E, h7^{km}, ML3.9, C*

*JMA **28** 12:17:24.5±0.8, 22°.66N×121°.35E, h2^{km}±5^{km}, M3.6*

ISC 28 12:17:20.4±1.1**, 22°.33N**±0°.02×**121°.14E**±0°.03**, h7**^{km}±8^{km}**, n95,** σ**0^{s}97**/125**, mb3.5**/4**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
TAW	Tawu	0.23	277	*i* P	Pg	12 17 24.8	-0.1
	baz=295						
TAW				*i* S	Sg	12 17 27.3	-0.6
	baz=295						
EAST	Anshuo	0.27	281	*i* P	Pg	12 17 25.6	-0.2
	baz=297						
EAST				*i* S	Sg	12 17 28.9	-0.5
	baz=297						
ECL	Taimali	0.32	328	*i* P	Pg	12 17 27.2	+0.6
	baz=335						
ECL				S	Sb	12 17 32.8	-0.9
	baz=335						
SLIU	Shizi	0.33	250	*i* P	Pg	12 17 26.8	-0.1
	baz=249						
SLIU				*e*S	Sg	12 17 30.2	-1.1
	baz=249						
TTN	Taitung	0.42	1	*i* P	Pb	12 17 31.5	+1.3
	baz=354						
LDUT	Ludao	0.46	42	P	Pn	12 17 32.5	-0.9
	baz=31						
LDUT				S	Sb	12 17 41.0	+3.2
	baz=31						
LAY	Lan-yu	0.48	127	P	Pn	12 17 32.2	-1.5
	baz=105						
SCZT	Fangliau	0.48	275	*i* P	Pg	12 17 29.3	-0.4
	baz=293						
SCZT				*e*S	Sg	12 17 34.6	-1.4
	baz=293						
TSEB	Hengchuen, Pin	0.48	207	*i* P	Pb	12 17 31.5	+0.3
	baz=200						
TSEB				S	Sb	12 17 39.1	+0.7
	baz=200						
TWGBT	Beinan	0.49	354	*i* P	Pb	12 17 30.9	-0.4
	baz=4.0						
TWGBT				*i* S	Sb	12 17 39.5	+0.8
	baz=4.0						
TWKBT	Hengchun	0.49	218	*i* P	Pg	12 17 30.7	+0.9
	baz=208						
TWKBT				S	Sb	12 17 38.1	-0.6
	baz=208						
HEN	Hengchun	0.49	229	*i* P	Pg	12 17 30.6	+0.7
	baz=223						
HEN				S	Sg	12 17 37.7	+1.4
	baz=223						
TWK1	Hengchun	0.49	219	*i* P	Pg	12 17 30.8	+0.9
	baz=208						
TWK1				S	Sg	12 17 38.1	+1.7
	baz=208						
TWG	Pinlang	0.49	353	*i* P	Pb	12 17 30.9	-0.5
	baz=4.0						
TWG				S	Sb	12 17 39.8	+1.0
	baz=4.0						
MASBT	Mashibuluo	0.55	301	P	Pg	12 17 30.6	-0.3
	baz=317						
MASBT				*e*S	Sg	12 17 37.1	-0.9
	baz=317						
SSPT	Xinbi	0.55	286	*i* P	Pg	12 17 31.3	+0.3
	baz=301						
SSPT				S	Sg	12 17 39.2	+1.0
	baz=301						
LONT	Longtian	0.57	359	*i* P	Pb	12 17 32.4	-0.4
	baz=9.0						
LONT				*e*S	Sn	12 17 43.7	-1.0
	baz=9.0						
TSMG	Majia	0.59	310	P	Pg	12 17 31.5	-0.2
	baz=317						
TSMG				*e*S	Sg	12 17 38.8	-0.6
	baz=317						
SSD	Sandimen	0.62	312	*i* P	Pg	12 17 32.1	-0.3
	baz=326						
SSD				*e*S	Sg	12 17 40.2	-0.4
	baz=326						
EDH	Donghe	0.66	13	P	Pb	12 17 34.3	+0.1
	baz=39						
SGLT	Jiouru	0.72	304	P	Pg	12 17 35.0	+0.8
	baz=309						
SGLT				S	Sb	12 17 45.6	+0.4
	baz=309						
CHKT	Chengkung	0.80	15	*e*P	Pb	12 17 36.3	-0.2
	baz=23						
CHKT				*e*S	Sb	12 17 48.0	+0.5
	baz=23						
SLGT	Liugui	0.80	326	*e*P	Pn	12 17 38.8	+0.7
	baz=342						
SCST	Cishan	0.81	313	*i* P	Pb	12 17 37.1	+0.2
	baz=326						
SCST				S	Sb	12 17 48.6	+0.6
	baz=326						
TWM1	Shoushan	0.82	307	P	Pb	12 17 37.5	+0.5
	baz=322						
FULB	Fuli	0.88	9	*e*P	Pg	12 17 37.3	+0.1
	baz=17						
STYH	Taoyuan	0.90	338	*i* P	Pb	12 17 38.2	-0.1
	baz=353						
SGST	Jiashian	0.91	326	*e*P	Pg	12 17 37.6	-0.3
	baz=340						
CHN1	Nanshi	1.02	327	P	Pn	12 17 41.3	+0.2
	baz=335						
CHN1				*e*S	Sn	12 17 57.1	+1.4
	baz=335						
EYUL	Yuli	1.03	9	*e*P	Pb	12 17 40.5	0.0
	baz=16						
WTP	Ta-pu	1.03	332	*i* P	Pn	12 17 41.3	-0.1
	baz=340						
WTP				*e*S	Sn	12 17 57.8	+1.8
	baz=340						
SNST	Tainan City	1.06	326	*i* P	Pn	12 17 42.4	+0.7
	baz=330						
SNST				*e*S	Sn	12 17 58.5	+1.7
	baz=330						
YULB	Yu-li	1.07	8	*e*P	Pn	12 17 41.6	-0.2
	baz=14						
TPUB	Ta-pu	1.07	334	*i* P	Pn	12 17 42.0	+0.1
	baz=355						
TPUB				S	Sn	12 17 57.5	+0.4
	baz=355						
TWK	Hsinying	1.11	327	*i* P	Pn	12 17 43.0	+0.6
	baz=332						
CHN4	Tsaushan	1.13	334	*e*P	Pg	12 17 41.5	-0.7
	baz=351						
CHN4				*e*S	Sn	12 17 58.5	0.0
	baz=351						
YUS	Yu-Shan	1.17	352	*e*P	Pg	12 17 42.2	-0.6
	baz=10.0						
EHY	Hungye	1.18	8	*i* P	Pn	12 17 43.4	+0.1
	baz=15						
HGSD	Ruisui	1.19	13	*e*P	Pg	12 17 42.2	-1.0
	baz=19						
SCLT	Jiali	1.21	314	P	Pn	12 17 44.5	+0.8
	baz=320						
ALS	Alishan	1.22	345	*e*P	Pg	12 17 43.6	-0.1
	baz=2.0						
ALS				*e*S	Sn	12 18 04.3	+3.3
	baz=2.0						
ICHU	Yijhu	1.30	323	*e*P	Pn	12 17 44.4	-0.5
	baz=328						
CHN8	Yiju	1.32	320	*e*P	Pn	12 17 45.5	+0.2
	baz=326						
CHN5	Tsauling	1.33	342	P	Pg	12 17 46.5	+0.6
	baz=346						
CHY	Chiayi	1.34	331	*e*P	Pb	12 17 46.1	+0.3
	baz=335						
CHN2	Minshiung	1.34	333	*e*P	Pn	12 17 45.8	+0.2
	baz=337						
EGFH	Guangfu	1.36	11	*e*P	Pg	12 17 46.8	+0.3
	baz=17						
SSLB	Suanglung	1.46	353	P	Pb	12 17 47.6	-0.3
	baz=16						
WDLH	Douliu	1.46	338	*e*P	Pb	12 17 48.2	+0.3
	baz=342						
WDLH				*e*S	Sg	12 18 09.2	+1.8
	baz=342						
ESL	Shilin	1.50	10	*e*P	Pb	12 17 48.3	-0.3
	baz=16						
WTK	Tuku	1.52	333	*e*P	Pn	12 17 48.3	+0.3
	baz=338						
WJS	Zhushan	1.53	346	*e*P	Pg	12 17 49.7	-0.1
	baz=350						
SMLT	Sun Moon Lake	1.56	352	*i* P	Pg	12 17 50.1	-0.3
	baz=5.0						
TYC	Yuchr	1.59	351	*i* P	Pg	12 17 50.8	-0.1
	baz=4.0						
WNT	Mingjian	1.60	345	*e*P	Pb	12 17 50.3	+0.1
	baz=349						
CHGB	Renai	1.72	1	*e*P	Pg	12 17 53.5	+0.1
	baz=5.0						
VCHM	Qimei	1.80	299	*e*P	Pn	12 17 50.1	-1.7
	baz=304						
WHF	Hehuan Shan	1.81	4	*e*P	Pn	12 17 51.6	-0.7
	baz=22						
PHUB	P'eng-hu	1.86	310	*e*P	Pn	12 17 51.2	-1.5
	baz=315						
NACB	Ninganchiao	1.88	13	*i* P	Pn	12 17 53.7	+0.7
	baz=17						
ETLH	Xiulin Townshi	1.90	10	P	Pb	12 17 54.5	-0.9
	baz=27						
PNG	Penghu	1.91	310	*e*P	Pn	12 17 52.1	-1.2
	baz=316						
TDCB	Techi	1.92	1	P	Pb	12 17 56.0	+0.3
	baz=1.0						
WHP	Taichung City	1.95	355	*e*P	Pb	12 17 55.9	-0.4
	baz=7.0						
TWQ1	Liyutan	2.04	351	P	Pb	12 17 57.6	-0.1
	baz=353						
TWQ1				*e*S	Sg	12 18 24.9	-1.0
	baz=353						
WDJ	Dajia District	2.06	347	*e*P	Pb	12 17 58.6	+0.5
	baz=350						
WDJ				*e*S	Sg	12 18 25.7	-0.9
	baz=350						
NNSB	Datong	2.10	6	*i* P	Pb	12 17 58.4	-0.5
	baz=23						
NSY	Sanyi	2.11	351	*e*P	Pb	12 17 58.9	0.0
	baz=353						
NNS	Nan Shan	2.11	6	*e*P	Pb	12 17 59.3	+0.2
	baz=23						
LIOB	Emei	2.31	357	*e*P	Pb	12 18 01.4	-0.9
	baz=360						
ENTT	Nioudou	2.33	10	P	Pn	12 18 00.1	+0.9
	baz=25						
YHNB	Yeheng	2.34	5	P	Pn	12 18 01.0	+1.7
	baz=350						
NSK	Sanguang	2.34	5	*e*P	Pn	12 18 00.7	+1.3
	baz=22						
NDS	Dongshan	2.35	13	*e*P	Pn	12 18 01.1	+1.6
	baz=27						
NWLT	Wulai	2.46	8	*e*P	Pb	12 18 03.0	-2.0
	baz=22						
JYNG	Yonagunijimaku	2.69	38	P	Pn	12 18 04.5	+0.5
TIPB	Shuangxi	2.71	13	P	Pn	12 18 06.1	+1.7
	baz=15						
IRIF	Iriomote-Funau	3.11	50	P	Pn	12 18 11.3	+1.5
KNM	Kinmen	3.24	310	*e*P	Pn	12 18 12.3	+0.7
	baz=316						
JKRS	Kuro-shima	3.25	54	P	Pn	12 18 13.2	+1.4
PTMZ	Houxiangcun	3.27	326	*e*P	Pn	12 18 11.7	-0.4
	baz=332						
KNMB	Chin-men Tao	3.30	311	*e*P	Pn	12 18 11.8	-0.7
	baz=318						
JIJ	Ishigaki jima	3.42	53	P	Pn	12 18 15.9	+1.7
JIJ				S	Sn	12 18 54.3	-0.7
ZPLA	Ao Xicun	3.50	298	*e*P	Pn	12 18 13.8	-1.5
	baz=305						
JISG	Ishigakijimahi	3.68	52	P	Pn	12 18 17.8	+0.1
JISG				*e*S	Sn	12 18 59.3	-2.0
MATB	Ma-tsu	3.96	344	*e*P	Pn	12 18 21.5	0.0
	baz=349						
JTJ	Tarama	4.00	54	S	Sn	12 19 09.3	+0.1

MHZQ	Yeshan	4.22	333	P	Pn	12 18 25.7	+0.6
	baz=340						
LYJJ	Jianjiangzhen	4.38	344	eP	Pn	12 18 27.9	+0.6
	baz=349						
XPSS	Dashiqiu	4.66	350	eP	Pn	12 18 31.5	+0.4
	baz=354						
KSRS	Korea Array	16.17	20	LR	LR	12 27 03.8	
	comp=Z,21nm,20.8s,baz=0.0,slow=37						
SONM	Songino Array	28.06	339	P	P	12 23 12.5	0.0
	0.2nm,0.4s,baz=145,slow=8.3,SNR=2.7						
MKAR	Makanchi Array	39.65	318	P	P	12 24 53.5	+0.6
	0.7nm,0.8s,baz=113,slow=11,SNR=4.0						
WRA	Warramunga Arr	43.95	162	P	P	12 25 25.6	-2.7
	0.8nm,0.6s,baz=344,slow=8.6,SNR=8.5						
ASAR	Alice Springs	47.38	164	P	P	12 25 54.9	-0.4
	0.2nm,0.4s,baz=340,slow=7.0,SNR=2.9						

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*IDC **28** 12:57:11.6±0.5, 1°.89N×126°.45E, h0^{km}, mb4.2/16, mb1 4.2/18, mb1mx4.0/51, mbtmp4.1/18, ML3.8/2, MS3.6/2, Ms1 3.6/2, ms1mx2.7/49, Error ellipse: s-maj=35.5km s-min=9.8km az=73.0*

*DJA **28** 12:57:17.6±0.3, 2°N±3°×12°7E±°, h48^{km}±6^{km}, M4.2/12, mb4.5/7, mB4.8/3, MLv4.1/12, Mw(mB)4.0/3*

*NEIC **28** 12:57:18.0±1.2, 1°.93N±0°.09×126°.65E±0°.09, h44^{km}±7^{km}, mb4.3/22, Error ellipse: s-maj=16.3km s-min=8.8km az=224.0*

ISC 28 12:57:18.3±0.5, **1°.99N**±0°.04×**126°.73E**±0°.06, **h47**^{km}, **n62**, σ**1^s.49**/69, **mb4.3**/25, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.37	152	P	Pn	12 57 40.4	-0.6
TNTI				S	Sn	12 57 58.3	+0.4
TNTI	Ternate	1.37	152	Pn	Pn	12 57 40.3	-0.7
SGSI	Sangihe	2.07	324	P	Pn	12 57 50.0	-0.6
SGSI				S	Sn	12 58 14.1	-1.1
LBMI	Labuha	2.72	164	P	Pn	12 58 00.5	+0.9
LBMI				S	Sn	12 58 31.8	+0.5
KMSI	Cibinong	3.09	243	P	Pn	12 58 04.3	-0.3
KMSI				S	Sn	12 58 41.7	+1.3
GTOI	Gorontalo	3.96	250	P	Pn	12 58 15.3	-1.2
SANI	Sanana	4.08	191	P	Pn	12 58 17.5	-0.8
LUWI	Luwuk	4.98	233	P	Pn	12 58 31.6	+1.1
LUWI	Luwuk	4.98	233	Pn	Pn	12 58 29.2	-1.4
MRSI	Marisa	5.02	253	P	Pn	12 58 31.3	+0.1
	0.3nm866nm76nm,0.5s						
SIJI	Sorong	5.35	122	Pn	Pn	12 58 35.1	-0.6
	1.1nm,0.3s,baz=131,slow=24,SNR=4.0						
SIJI				LR	LR	13 01 00.4	
	comp=Z,276nm,20.5s,baz=277,slow=41						
APSI	Ampana	5.85	240	P	Pn	12 58 43.6	+1.1
	0.2nm619nm69nm,0.9s						
TOLI2	Tolitoli	6.01	262		Pn	12 58 42.4	-2.4
MPSI	Mapaga	7.03	257	P	Pn	12 59 00.6	+1.9
TTSI	Tana Toraja	8.53	234	P	Pn	12 59 17.7	-1.6
	807nm21nm,0.9s						
MYLDM	Lahad Datu	8.81	291		Pn	12 59 24.4	+1.4
MTN	Manton Dam	15.37	164	Pn	Pn	13 00 51.3	-0.9
MTN				IAmb	IAmb	13 01 02.7	
	comp=Z,31nm,1.4s						
KNRA	Kununurra	17.67	174	P	P	13 01 20.4	-1.2
KNRA				IAmb	IAmb	13 01 23.2	
	comp=Z,37nm,1.4s						
FITZ	Fitzroy Crossi	19.99	183	P	P	13 01 45.3	-1.7
	comp=Z,0.4nm,0.3s,baz=15,slow=8.4,SNR=13						
COEN	Coen	22.73	135	P	P	13 02 16.3	-0.2
WB0	Warramunga Arr	22.89	161	P	P	13 02 16.9	-1.3
WB0				IAmb	IAmb	13 02 23.6	
	comp=Z,9.1nm,0.8s						
WRAB	Tennant Creek	23.04	161	P	P	13 02 18.1	-1.5
WRAB				IAmb	IAmb	13 02 25.1	
	comp=Z,6.9nm,0.6s						
WRA	Warramunga Arr	23.04	161	P	P	13 02 17.7	-2.0
	comp=Z,4.3nm,0.5s,baz=340,slow=11,SNR=54						
WRA				PcP	PcP	13 06 07.8	-0.3
	comp=Z,0.4nm,0.6s,baz=340,slow=2.3,SNR=2.6						
WRA				S	S	13 06 31.5	+4.3
	comp=Z,0.5nm,0.9s,baz=348,slow=21,SNR=2.3						
WRA	Warramunga Arr	23.04	161	P	P	13 02 17.3	-2.4
WB2	Warramunga Arr	23.05	161	P	P	13 02 17.9	-1.9
WB2				IAmb	IAmb	13 02 25.2	
	comp=Z,8.3nm,0.7s						
WR0	Warramunga Arr	23.12	161	P	P	13 02 19.0	-1.5
WR0				IAmb	IAmb	13 02 22.1	
	comp=Z,12nm,1.4s						
AS31	Alice Springs	26.44	165	P	P	13 02 50.0	-0.9
ASAR	Alice Springs	26.44	165	P	P	13 02 49.8	-1.2
	comp=Z,0.8nm,0.4s,baz=343,slow=7.8,SNR=27						
ASAR				PcP	PcP	13 06 15.3	-0.2
	comp=Z,0.3nm,0.5s,baz=345,slow=2.0,SNR=4.6						
ASAR				S	S	13 07 28.1	+6.5
	comp=Z,0.3nm,0.9s,baz=343,slow=18,SNR=2.2						
ASAR	Alice Springs	26.44	165	P	P	13 02 50.3	-0.7
FORT	Forrest	32.61	178	P	P	13 03 45.9	+0.3
KSRS	Korea Array	35.31	2	P	P	13 04 08.7	-0.2
	comp=Z,0.6nm,0.5s,baz=178,slow=9.9,SNR=5.0						
BBOO	Buckleboo	35.72	166	P	P	13 04 11.5	-1.0
BBOO				IAmb	IAmb	13 04 16.4	
	comp=Z,5.7nm,0.8s						
EIDS	Eidsvold	36.00	141	P	P	13 04 14.1	-0.9
EIDS				IAmb	IAmb	13 04 34.3	
	comp=Z,7.8nm,1.4s						
STKA	Stephens Creek	36.52	158	P	P	13 04 18.3	-1.0
	comp=Z,3.4nm,0.8s,baz=344,slow=5.4,SNR=6.2						
STKA	Stephens Creek	36.52	158	P	P	13 04 17.7	-1.7
USRK	Ussuriysk Ar.	42.29	6	P	P	13 05 09.3	+2.1
	comp=Z,2.2nm,0.8s,baz=152,slow=45,SNR=3.4						
SONM	Songino Array	48.94	342	P	P	13 05 59.6	-0.4
	comp=Z,0.6nm,0.6s,baz=157,slow=9.3,SNR=5.3						
SONM	Songino Array	48.94	342	P	P	13 05 59.0	-0.9
SONM				IAmb	IAmb	13 06 05.4	
	comp=Z,1.3nm,1.0s						
MSVF	Nonsavu	54.20	113	LR	LR	13 29 36.2	
	comp=Z,134nm,21.0s,baz=177,slow=36						
PETK	Petropavlovsk-	57.03	22	P	P	13 07 00.2	+0.9
	comp=Z,1.9nm,0.6s,baz=191,slow=4.7,SNR=5.9						
PETK	Petropavlovsk-	57.03	22	P	P	13 07 00.5	+1.1
MK31	Makanchi Array	58.98	326	P	P	13 07 12.4	-0.7
MK31				IAmb	IAmb	13 07 19.7	
	comp=Z,1.6nm,0.9s						
MKAR	Makanchi Array	58.98	326	P	P	13 07 12.0	-1.1
	comp=Z,1.4nm,0.4s,baz=120,slow=8.2,SNR=19						
MKAR	Makanchi Array	58.98	326	P	P	13 07 12.6	-0.5
ZALV	Zalesovo Beam	62.13	333	P	P	13 07 33.2	-1.2
	comp=Z,0.6nm,0.3s,baz=134,slow=8.5,SNR=3.7						
KURBB	Kurchatov Arra	63.20	328	P	P	13 07 40.3	-1.3
	comp=Z,1.7nm,0.5s,baz=127,slow=6.4,SNR=16						
KURK	Kurchatov	63.20	328	P	P	13 07 40.6	-1.1
NRIK	Noril'sk	72.11	346	P	P	13 08 39.2	+1.8
	comp=Z,1.2nm,0.3s,baz=86,slow=8.1,SNR=3.9						
ABKAR	Akbulak array	73.49	321	P	P	13 08 45.2	-0.8
ABKAR	Akbulak array	73.49	321	P	P	13 08 45.6	-0.4
ABKAR				IAmb	IAmb	13 08 48.6	
	comp=Z,1.4nm,0.7s						
AKTO	Aktyubinsk	75.02	322	P	P	13 08 55.5	+0.6
	comp=Z,2.4nm,0.7s,baz=118,slow=8.2,SNR=4.6						
VNDA	Vanda	81.71	173	P	P	13 09 31.3	0.0
	comp=Z,1.0nm,0.6s,baz=313,slow=7.1,SNR=6.9						
VNDA	Vanda	81.71	173	P	P	13 09 31.0	-0.3
MAW	Mawson	82.14	200	P	P	13 09 32.9	-0.7
	comp=Z,0.9nm,0.6s,baz=69,slow=8.6,SNR=1.8						
MAW	Mawson	82.14	200	P	P	13 09 33.0	-0.7
TTA	Tatalina	82.44	27	P	P	13 09 36.3	+0.8
TTA				IAmb	IAmb	13 09 41.5	
	comp=Z,4.3nm,1.2s						
TOLK	Toolik Lake Re	85.85	21	P	P	13 09 54.1	+1.4
BMAR	Burnt Mountain	87.67	23	P	P	13 10 03.1	+1.5
BCAR	Beaver Creek A	88.91	27	P	P	13 10 07.9	+0.3
QSPA	South Pole Qui	91.91	180	P	P	13 10 21.4	-0.2
ARCES	ARCESS Array B	92.07	340	P	P	13 10 23.5	+1.4
	comp=Z,1.1nm,0.7s,baz=86,slow=5.5,SNR=1.6						
FINES	FINESS Array B	93.36	332	P	P	13 10 27.8	-0.4
	comp=Z,4.1nm,0.9s,baz=256,slow=13,SNR=3.7						

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*IDC **28** 13:06:09.0±2.2, 17°.76S×178°.77W, h610^{km}±20^{km}, mb2.9/6, mb1 3.2/7, mb1mx2.8/48, mbtmp3.8/7, Error ellipse: s-maj=85.8km s-min=19.2km az=149.0*

ISC 28 13:06:08.6±1.5, **17°.4S**±0°.5×**178°.9W**±0°.3, **h600**^{km}, **n8**, σ**1^s.62**/8, **mb3.4**/6, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	2.91	262	P	P	13 07 29.4	+2.0
	5.5nm,0.3s,baz=121,slow=2.4,SNR=18						
STKA	Stephens Creek	38.47	240	P	P	13 12 39.6	-1.2
	0.9nm,0.6s,baz=73,slow=11,SNR=4.3						
WRA	Warramunga Arr	44.25	259	P	P	13 13 26.7	+0.1
	0.5nm,0.5s,baz=96,slow=7.4,SNR=14						
ASAR	Alice Springs	44.47	254	P	P	13 13 28.3	+0.1
	3.0nm,0.6s,baz=88,slow=8.9,SNR=69						
ILAR	Eielson Array	85.47	13	P	P	13 17 44.2	+0.6
	0.3nm,0.5s,baz=225,slow=4.9,SNR=7.8						
TXAR	Lajitas Array	86.12	58	P	P	13 17 47.8	+0.2
	1.2nm,1.0s,baz=230,slow=6.6,SNR=6.1						
PDAR	Pinedale Array	87.29	44	P	P	13 17 53.0	0.0
	0.2nm,0.5s,baz=215,slow=3.0,SNR=2.4						
GERES	GERESS Array B	146.96	345	PKPbc	PKPab	13 24 45.7	-2.7
	0.6nm,0.5s,baz=64,slow=6.7,SNR=1.9						

IDC 28 13:10:37.1±2.4, **8°.20S**×**125°.53E**, **h0**^{km}, **mb3.4**/1, **mb1 3.6**/5, **mb1mx3.3**/53, **mbtmp3.4**/5, **ML3.1**/4, **Error ellipse: s-maj=54.5km s-min=27.2km az=65.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	2.71	223	Pn	Pn	13 11 22.8	+0.8
	3.5nm,0.3s,baz=63,slow=3.4,SNR=2.7						
BATI				Sn	Sn	13 11 52.0	-3.6
	5.4nm,0.3s,baz=315,slow=19,SNR=2.0						
FITZ	Fitzroy Crossi	9.84	179	Pn	Pn	13 12 57.8	-2.2
	0.1nm,0.3s,baz=8.7,slow=13,SNR=2.1						
FITZ				Sn	Sn	13 14 41.9	-9.3
	0.2nm,0.3s,baz=345,slow=19,SNR=3.9						
WRA	Warramunga Arr	14.46	145	Pn	Pn	13 14 03.3	+0.1
	0.1nm,0.3s,baz=320,slow=13,SNR=8.7						
WRA				Sn	Sn	13 16 37.5	-6.9
	0.1nm,0.3s,baz=309,slow=24,SNR=1.9						
ASAR	Alice Springs	17.35	153	P	P	13 14 42.2	-0.1
	0.0nm,0.3s,baz=322,slow=11,SNR=3.0						
ASAR				S	Sn	13 17 47.0	-7.7
	0.1nm,0.3s,baz=315,slow=20,SNR=2.3						
CMAR	Chiang Mai Arr	37.28	315	P	P	13 17 50.9	-0.2
	0.6nm,0.5s,baz=144,slow=7.8,SNR=4.1						

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*ISK **28** 13:11:02.7, 34°.75N×26°.64E, h30^{km}, ML3.5/15*

*ATH **28** 13:11:04.5, 34°.91N×26°.82E, h9^{km}±4^{km}, ML3.2/3, Error ellipse: s-maj=9.0km s-min=2.1km az=356.0*

*THE **28** 13:11:05.9, 35°.10N×26°.72E, h0^{km}±1^{km}, ML2.9/4, Error ellipse: s-maj=6.1km s-min=1.0km az=163.0*

*DDA **28** 13:11:06.5, 35°.19N×27°.09E, h6^{km}±4^{km}, ML2.6*

ISC 28 13:11:04.9±1.5, **35°.02N**±0°.09×**26°.78E**±0°.04, **h18**^{km}±4^{km}, **n33**, σ**1^s.31**/49, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZKR	Zakros	0.47	282	P	Pg	13 11 14.4	-0.1
ZKR				S	Sg	13 11 22.0	+1.1
	3µm,0.2s						
ZKR	Zakros	0.47	282	P	Pg	13 11 14.3	-0.2
ZKR				S	Sg	13 11 21.6	+0.7
ZKR				AML	AML	13 11 22.6	
	comp=N,5478µm,0.3s						
ZKR				AML	AML	13 11 25.6	
	comp=E,8386µm,0.3s						
ZKR	Zakros	0.47	282	PG	Pg	13 11 14.3	-0.2
ZKR				SG	Sg	13 11 21.8	+0.9
STIA	Sitia Lasithi	0.59	289	P	Pg	13 11 16.3	-0.4
STIA				S	Sg	13 11 25.1	+0.4
FRMA	Ierapetra Chan	0.86	270	P	Pg	13 11 20.1	-1.5
FRMA				S	Sg	13 11 31.3	-1.7
	comp=E,630nm,0.4s						
NPS	Neapolis	0.99	285	P	Pg	13 11 23.9	-0.2
NPS				S	Sg	13 11 37.9	+0.8
	comp=E,1µm,0.4s						
NPS	Neapolis	0.99	285	P	Pg	13 11 23.8	-0.2
NPS				S	Sg	13 11 38.0	+0.8
NPS				AML	AML	13 11 41.5	
	comp=E,3624µm,0.4s						
NPS				AML	AML	13 11 41.7	
	comp=N,2436µm,0.4s						
KSTL	Kastelli Herak	1.43	282	P	Pn	13 11 28.2	-1.7
KSTL				S	Sn	13 11 45.0	-3.2
	comp=N,312nm,0.5s						
IDI	Anoyia	1.57	281	P	Pn	13 11 34.1	+2.2
IDI				S	Sb	13 11 55.7	+2.7
IDI				AML	AML	13 12 02.3	
	comp=E,641µm,0.7s						
IDI				AML	AML	13 12 03.4	
	comp=N,788µm,0.4s						
ARG	Arkhangelos	1.63	42	P	Pn	13 11 34.1	+1.4
ARG				S	Sg	13 11 55.7	-1.7
ARG	Arkhangelos	1.63	42	P	Pb	13 11 34.9	+0.5
ARG	Arkhangelos	1.63	42	PN	Pb	13 11 34.6	+0.2
ARG				SN	Sg	13 11 56.4	-1.0
SANT	Santorini	1.73	322	PN	Pn	13 11 33.1	-1.0
SANT				SN	Sn	13 11 56.1	+0.4
KOSK	Kos Island	1.74	5	PN	Pn	13 11 35.4	+1.2
DAT	Datca	1.83	21	*i* P	Pn	13 11 36.5	+1.0
DAT				*i* S	Sn	13 11 58.2	-0.1
DAT				IAML		13 12 04.0	
	comp=E,89nm,0.7s						
DAT				IAML		13 12 07.0	
	comp=N,144nm,0.4s						
DAT	Datca	1.83	21	PN	Pn	13 11 36.7	+1.1
BODT	Bodrum	2.09	12	PN	Pn	13 11 40.5	+1.5
BDRM	Kayabasi	2.12	15	*i* P	Pn	13 11 40.9	+1.5
BDRM				*i* S	Sb	13 12 08.1	-0.6
BDRM				IAML		13 12 13.0	
	comp=E,32nm,0.8s						
BDRM				IAML		13 12 14.0	
	comp=N,56nm,0.6s						
TURN	Turunc	2.12	34	*i* P	Pn	13 11 40.4	+1.0
TURN				*i* S	Sb	13 12 09.1	+0.3
TURN				IAML		13 12 15.0	
	comp=N,51nm,0.3s						
TURN				IAML		13 12 20.0	
	comp=E,65nm,0.9s						
TURN	Turunc	2.12	34	PN	Pn	13 11 41.1	+1.6
APE	Apeiranthos	2.29	334	PN	Pn	13 11 42.1	+0.3
DALY	Dalyan (Mula)	2.36	40	*i* P	Pn	13 11 44.3	+1.6
DALY				IAML		13 12 28.0	
	comp=E,60nm,0.7s						
DALY				IAML		13 12 30.0	
	comp=N,61nm,0.4s						
DALY	Dalyan (Mula)	2.36	40	PN	Pn	13 11 44.2	+1.6
MLSB	Milas	2.42	19	PN	Pn	13 11 45.2	+1.7
FETY	Fethiye	2.48	49	*i* P	Pn	13 11 45.2	+0.8
FETY				IAML		13 12 16.0	
	comp=N,84nm,1.0s						
FETY				IAML		13 12 35.0	
	comp=E,65nm,1.0s						
FETY	Fethiye	2.48	49	PN	Pn	13 11 45.5	+1.1
MULA	Mugla, Merkez-	2.56	29	*i* P	Pb	13 11 49.1	-1.3
MULA				IAML		13 12 33.0	
	comp=N,26nm,1.1s						
MULA				IAML		13 12 34.0	
	comp=E,50nm,0.6s						
AKAS	Kas	2.60	61	PN	Pn	13 11 47.1	+0.9
CAME	Cameli-Denizli	2.81	46	PN	Pn	13 11 50.4	+1.3
TAVA	DENIZLI_Tavas	2.99	35	*i* P	Pn	13 11 53.0	+1.4
TAVA				*i* S	Sb	13 12 33.2	-0.8
TAVA				IAML		13 12 44.0	
	comp=E,27nm,0.7s						
TAVA				IAML		13 12 50.0	
	comp=N,32nm,0.6s						
AYDB	Zeytinkoy-Aydi	3.06	17	PN	Pn	13 11 54.2	+1.7
ELL	Elmali	3.08	55	PN	Pn	13 11 53.9	+1.2
KORT	Korkueli	3.51	55	PN	Pn	13 12 00.1	+1.4

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*IDC **28** 13:11:35.8±0.4, 15°.13N×59°.60E, h0^{km}, mb5.1/49, mb1 5.1/50, mb1mx5.0/62, mbtmp5.1/50, ML5.0/1, MS4.8/32, Ms1 4.8/32, ms1mx4.6/56, Error ellipse: s-maj=9.8km s-min=9.3km az=12.0*

*MOS **28** 13:11:35.9±1.0, 15°.16N×59°.54E, h10^{km}, mb5.6/74, MS4.8/29, Error ellipse: s-maj=5.5km s-min=3.2km az=102.6*

*BJI **28** 13:11:35.0±0.0, 15°.10N×59°.50E, h5^{km}, mB5.5/54, mb5.4/77, Ms5.2/74, Ms7 5.0/69*

*BGR **28** 13:11:36.8±0.0, 14°.18N×58°.22E, h10^{km}, mb5.4, Ms4.7*

*GCMT **28** 13:11:36.8±0.1, 15°.27N±0°.01×59°.29E±0°.01, h14^{km}, MW5.3/132, Moment Tensor Solution. s102,c169; s132,c246; Duration: 1^s.1 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.44±.02; $M_{\theta\theta}$0.89±.02; $M_{\phi\phi}$-0.45±.01; $M_{r\theta}$-0.53±.04; $M_{\theta\phi}$0.65±.01; $M_{\phi r}$0.23±.03; Best double couple: $M_0$1.14400×10^{17} NP1:ϕ_s207.00000°, δ53.00000°, λ-161.00000°. NP2:ϕ_s106.00000°, δ75.00000°, λ-39.00000°. Principal axes: T 1.2560, Plg14.0000°, Azm161.0000°; N -0.2220, Plg49.0000°, Azm267.0000°; P -1.0330, Plg38.0000°, Azm60.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DSN **28** 13:11:37.4±0.7, 15°.32N×59°.37E, h1^{km}, mb5.8/7, ML5.7/2, Ms4.9/17 Error ellipse: s-maj=12.8km s-min=7.5km az=94.0*

*NEIC **28** 13:11:38.9±2.9, 15°.23N±0°.08×59°.53E±0°.09, h10^{km}±1^{km}, mb5.6/130, Ms_20 5.0/84, Mwb5.4/40, Mww5.4, Error ellipse: s-maj=14.6km s-min=12.7km az=110.0*

*NEIC **28** 13:11:39.1, 15°.22N×59°.51E, h4^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.55; $M_{\theta\theta}$0.77; $M_{\phi\phi}$-0.23; $M_{r\theta}$-1.33; $M_{\theta\phi}$0.57; $M_{\phi r}$0.30; Fault plane solution: $M_0$1.63000×10^{17} NP1:ϕ_s210.72000°, δ27.48000°, λ-155.23000°. NP2:ϕ_s98.46000°, δ78.85000°, λ-64.72000°. Principal axes: T 1.6569, Plg29.0000°, Azm168.0000°; N -0.0537, Plg25.0000°, Azm273.0000°; P -1.6031, Plg50.0000°, Azm36.0000°;*

*OMAN **28** 13:11:42.0±0.1, 15°.61N×59°.28E, h10^{km}, mb6.6/30, ml5.8/4, ms4.7/19, Mwp5.5/15 Error ellipse: s-maj=1.1km s-min=1.0km az=305.0*

*NEIC **28** 13:11:43, 15°.10N×59°.37E, h12^{km}, Moment Tensor Solution. Duration: 8^s.0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.51; $M_{\theta\theta}$1.29; $M_{\phi\phi}$-0.77; $M_{r\theta}$0.14; $M_{\theta\phi}$0.72; $M_{\phi r}$0.03; Fault plane solution: $M_0$1.34000×10^{17} NP1:ϕ_s27.00000°, δ86.00000°, λ178.00000°. NP2:ϕ_s117.00000°, δ88.00000°, λ4.00000°. Principal axes: T 1.5262, Plg4.0000°, Azm342.0000°; N -0.5232, Plg86.0000°, Azm145.0000°; P -1.0029, Plg1.0000°, Azm252.0000°;*

ISC 28 13:11:38.6±0.5, **15°.27N**±0°.03×**59°.48E**±0°.03, **h13**^{km}±2^{km}, **h13**^{km}**:pP-P**, **n849**, σ**1^s.88**/918, **mb5.5**/276, **MS4.9**/123, **155C-191D**, **Fault plane solution: NP1:**ϕ_s121.44342°, δ83.75626°, λ-33.52189°. **NP2:**ϕ_s215.56419°, δ56.70296°, λ-172.52351°. **Principal axes:** T Plg18.1366°, Azm173.1042°; N Plg55.9685°, Azm292.1198°; P Plg27.7161°, Azm73.1949°; **Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHAO	Shalim	4.59	307	*i* P	Pn	13 12 47.7	0.0
	SNR=657						
SHAO	Shalim	4.59	307	P	Pn	13 12 48.5	+0.7
	SNR=664						
SHAO				P	Pn	13 12 48.5	+0.7
	SNR=664						
SHAO				S	Sn	13 13 38.1	-2.9
	SNR=18						
SHAO				S	Sn	13 13 38.1	-2.9
	SNR=18						
DMTO	DMTO	4.98	300	P	Pn	13 12 53.7	+0.7
	SNR=300						
DMTO				P	Pn	13 12 53.7	+0.7
	SNR=300						
DMTO				S	Sn	13 13 47.1	-3.4
DMTO				S	Sn	13 13 47.1	-3.4
DQM	DQM	4.99	339	P	Pn	13 12 53.1	0.0
	SNR=178						
DQM				P	Pn	13 12 53.1	0.0
	SNR=178						
DQM				S	Sn	13 13 48.1	-2.6
DQM				S	Sn	13 13 48.1	-2.6
RBK	Rabkut	5.53	294	P	Pn	13 13 00.9	+0.3
	SNR=70						
RBK				S	Sn	13 14 00.7	-3.4
WHFO	Wadi Hawf	6.07	296	P	Pn	13 13 08.5	+0.4
	SNR=41						
WHFO				S	Sn	13 14 14.8	-2.6
DOK	Doka	6.10	304	P	Pn	13 13 09.8	+1.3
	SNR=242						
DOK				P	Pn	13 13 09.8	+1.3
	SNR=242						
DOK				S	Sn	13 14 15.9	-2.3
DOK				S	Sn	13 14 15.9	-2.3
SOCY	Socotra	6.15	241	P	Pn	13 13 07.9	-1.3
	SNR=45						
SOCY	Socotra	6.15	241	Pn	Pn	13 13 07.7	-1.6
ABTO	Aybut	6.28	290	P	Pn	13 13 11.4	+0.4
	SNR=23						
ABTO				S	Sn	13 14 20.4	-2.3
JLN	Jalan Bani Buh	6.84	359	P	Pn	13 13 17.4	-1.3
	SNR=163						
JLN				P	Pn	13 13 17.4	-1.3
	SNR=163						
JLN				S	Sn	13 14 34.2	-2.2
	SNR=19						
JLN				S	Sn	13 14 34.2	-2.2
	SNR=19						
JMDO	Jabal Madar	7.18	350	P	Pn	13 13 23.0	-0.3
	SNR=86						
JMDO				P	Pn	13 13 23.0	-0.3
	SNR=86						
JMDO				P	Pn	13 13 23.0	-0.3
	SNR=243						
JMDO				P	Pn	13 13 23.0	-0.3
	SNR=243						
WBK	Wadi Bani Khal	7.31	356	P	Pn	13 13 24.3	-0.8
	SNR=123						
WBK				P	Pn	13 13 24.4	-0.8
	SNR=317						
WBK				S	Sn	13 14 44.0	-4.1
	SNR=26						
BSY	Bisya	7.74	344	P	Pn	13 13 31.0	0.0
	SNR=69						
BSY				P	Pn	13 13 31.0	0.0
	SNR=69						
BSY				S	Sn	13 14 54.3	-4.2
BSY				S	Sn	13 14 54.3	-4.2
SMDO	Samad	7.86	350	P	Pn	13 13 32.6	-0.2
	SNR=279						
SMDO				P	Pn	13 13 32.6	-0.2
	SNR=279						
SMDO				P	Pn	13 13 32.6	-0.2
	SNR=279						
SMDO				S	Sn	13 14 54.8	-6.8
SMDO				S	Sn	13 14 54.8	-6.8
SMDO				S	Sn	13 14 54.8	-6.8
WSAR	Wadi Sarin	7.96	354	Pn	Pn	13 13 33.9	-0.2
	19nm,0.3s,baz=189,slow=11,SNR=109						
WSAR				Sn	Sn	13 14 57.8	-6.3
	46nm,0.3s,baz=252,slow=22,SNR=8.7						
WSAR				LR	LR	13 16 26.1	
	comp=Z,7µm,19.7s,baz=172,slow=36						
WSAR	Wadi Sarin	7.96	354	P	Pn	13 13 34.3	+0.2
	SNR=188						
WSAR				S	Sn	13 14 59.0	-5.1
BIDO	Bidbid	8.30	351	P	Pn	13 13 38.9	+0.2
	SNR=35						
BIDO				P	Pn	13 13 38.9	+0.2
	SNR=35						
BIDO				S	Sn	13 15 06.1	-6.3
BIDO				S	Sn	13 15 06.1	-6.3
UMZA	Um Al Zommool	8.45	332	P	Pn	13 13 40.8	+0.1
UMZA				P	Pn	13 13 40.8	+0.1
UMZA				S	Sn	13 15 12.5	-3.5
UMZA				S	Sn	13 15 12.5	-3.5
ARQ	Araqi	8.49	341	P	Pn	13 13 41.8	+0.5
	SNR=50						
ARQ				P	Pn	13 13 41.8	+0.5
	SNR=50						
ARQ				P	Pn	13 13 41.8	+0.5
	SNR=50						
ARQ				S	Sn	13 15 14.0	-3.1
ARQ				S	Sn	13 15 14.0	-3.1
ARQ				S	Sn	13 15 14.0	-3.1
HOQ	Hoqain	8.52	346	P	Pn	13 13 41.1	-0.6
	SNR=69						
HOQ				P	Pn	13 13 41.1	-0.6
	SNR=69						
HOQ				P	Pn	13 13 41.1	-0.6
	SNR=69						
HOQ				S	Sn	13 15 11.1	-6.5
HOQ				S	Sn	13 15 11.1	-6.5

HOQ				S	Sn	13 15 11.1	-6.5
SOHO	SOHO	9.24	343	*i* P	Pn	13 13 51.2	-0.4
	SNR=22						
SOHO	SOHO	9.24	343	P	Pn	13 13 51.6	0.0
SOHO				P	Pn	13 13 51.6	0.0
SOHO				P	Pn	13 13 51.6	0.0
SOHO				S	Sn	13 15 32.2	-3.2
SOHO				S	Sn	13 15 32.2	-3.2
SOHO				S	Sn	13 15 32.2	-3.2
ALNE	Al Ain	9.41	339	*i* P	Pn	13 13 53.6	-0.4
	SNR=7.1						
ALNE	Al Ain	9.41	339	P	Pn	13 13 55.0	+1.0
	SNR=18						
ALNE				P	Pn	13 13 55.0	+1.0
	SNR=18						
ALNE				S	Sn	13 15 34.0	-5.8
ALNE				S	Sn	13 15 34.0	-5.8
ASHO	Ashiyiah	9.90	342	*i* P	Pn	13 13 59.9	-0.7
	SNR=22						
ASHO	Ashiyiah	9.90	342	P	Pn	13 14 00.6	0.0
	SNR=27						
ASHO				P	Pn	13 14 00.6	0.0
	SNR=27						
ASHO				S	Sn	13 15 45.0	-6.6
ASHO				S	Sn	13 15 45.0	-6.6
MZWR	Madinat Zayed	9.96	329	P	Pn	13 14 01.4	0.0
MZWR				S	Sn	13 15 48.8	-4.2
HATD	Hatta, Dubai	10.01	342	*i* P	Pn	13 14 01.4	-0.7
	SNR=32						
HATD	Hatta, Dubai	10.01	342	P	Pn	13 14 02.6	+0.5
	SNR=32						
HATD				P	Pn	13 14 02.6	+0.5
	SNR=32						
HATD				P	Pn	13 14 02.6	+0.5
	SNR=32						
HATD				S	Sn	13 15 48.5	-5.9
HATD				S	Sn	13 15 48.5	-5.9
HATD				S	Sn	13 15 48.5	-5.9
ASUD	Al Ashush, Dub	10.09	338	*i* P	Pn	13 14 03.4	+0.3
	SNR=19						
ASUD	Al Ashush, Dub	10.09	338	P	Pn	13 14 03.9	+0.8
	SNR=19						
ASUD				S	Sn	13 15 50.1	-6.1
UOSS	Minazif	10.10	343	*i* P	Pn	13 14 02.2	-1.2
	SNR=30						
UOSS	Minazif	10.10	343	P	Pn	13 14 02.9	-0.4
UOSS				P	Pn	13 14 02.9	-0.4
UOSS				P	Pn	13 14 02.9	-0.4
UOSS				S	Sn	13 15 48.4	-8.1
UOSS				S	Sn	13 15 48.4	-8.1
UOSS				S	Sn	13 15 48.4	-8.1
UOSS	Minazif	10.10	343	Pn	Pn	13 14 03.0	-0.4
FAQ	Al Faqa, Dubai	10.11	339	*i* P	Pn	13 14 02.4	-1.1
	SNR=33						
FAQ	Al Faqa, Dubai	10.11	339	P	Pn	13 14 03.0	-0.4
	SNR=33						
FAQ				P	Pn	13 14 03.0	-0.4
	SNR=33						
FAQ				P	Pn	13 14 03.0	-0.4
	SNR=33						
FAQ				S	Sn	13 15 50.6	-6.1
FAQ				S	Sn	13 15 50.6	-6.1
FAQ				S	Sn	13 15 50.6	-6.1
AJN	Ajban	10.16	336	*i* P	Pn	13 14 03.8	-0.4
	SNR=9.0						
AJN	Ajban	10.16	336	P	Pn	13 14 04.4	+0.2
	SNR=11						
AJN				P	Pn	13 14 04.4	+0.2
	SNR=11						
AJN				S	Sn	13 15 50.8	-7.2
AJN				S	Sn	13 15 50.8	-7.2
NAZ	Nazwa, Dubai	10.31	340	*i* P	Pn	13 14 05.7	-0.5
	SNR=20						
NAZ	Nazwa, Dubai	10.31	340	P	Pn	13 14 06.3	+0.1
	SNR=20						
NAZ				P	Pn	13 14 06.3	+0.1
	SNR=20						
MDH	Madha	10.41	344	P	Pn	13 14 06.3	-1.3
MSFE	Esma-Masafi	10.51	343	*i* P	Pn	13 14 08.2	-0.8
	SNR=28						
MASF	Masafi	10.52	343	P	Pn	13 14 10.1	+1.0
	SNR=29						
MASF				P	Pn	13 14 10.1	+1.0
	SNR=29						
MASF				S	Sn	13 16 02.8	-4.1
MASF				S	Sn	13 16 02.8	-4.1
BANOM	Banah	11.01	345	*i* P	Pn	13 14 14.4	-1.4
	SNR=16						
BANOM	Banah	11.01	345	P	Pn	13 14 15.3	-0.5
	SNR=16						
BANOM				P	Pn	13 14 15.3	-0.5
	SNR=16						
SHME	Shamm	11.17	344	*i* P	Pn	13 14 18.2	+0.2
	SNR=14						
SHME	Shamm	11.17	344	P	Pn	13 14 19.1	+1.1
	SNR=6.7						
SHME				P	Pn	13 14 19.1	+1.1
	SNR=6.7						
SLWR	Sila	11.41	321	P	Pn	13 14 21.7	+0.4
SLWR				S	Sn	13 16 21.0	-7.7
JRN	Qarnain Island	11.45	328	P	Pn	13 14 21.8	0.0
	SNR=7.0						
JRN				P	Pn	13 14 21.8	0.0
	SNR=7.0						
BHUJ	Bhuj	12.46	49	*e*P	Pn	13 14 30.0	-5.7
BHUJ				IAmb	IAmb	13 14 31.6	
	comp=Z,152nm,1.0s						
BHUJ				*i* x	x	13 14 38.8	
GOA	Goa	13.84	87	*e*P	Pn	13 14 53.1	-1.5
GOA				IAmb	IAmb	13 14 59.5	
	comp=Z,46nm,0.7s						
POO	Poona	14.13	75	*e*P	Pn	13 14 51.0	-7.6
POO				*e*P	P	13 14 59.5	-6.7
KAD	Karad	14.27	80	⇑*i*P	Pn	13 15 01.2	+0.8
RAYN	Ar Rayn	15.52	304	*i* P	Pn	13 15 14.6	-2.6
	SNR=185						
RAYN	Ar Rayn	15.52	304	P	Pn	13 15 14.7	-2.6
RAYN				pmax	pmax		
	comp=Z,265nm,0.9s						
RAYN	Ar Rayn	15.52	304	Pn	Pn	13 15 14.7	-2.6
RAYN				IAmb	IAmb	13 15 27.6	
	comp=Z,265nm,0.8s						
ATD	Arta Tunnel	16.60	259	Pn	P	13 15 33.5	-0.1
	comp=Z,1.1nm,0.3s,baz=105,slow=20,SNR=3.9						
ATD				LR	LR	13 20 03.5	
	comp=Z,2µm,20.0s,baz=64,slow=30						
ATD	Arta Tunnel	16.60	259	P	P	13 15 33.8	+0.2
	SNR=25						
RDF	Al-Radifah	17.49	323	*e*P	Pn	13 15 39.2	-3.1
KBD	Kabd	17.60	324	*e*P	Pn	13 15 40.5	-3.0
UMR	Umm Al-Rimmam	17.87	325	*e*P	Pn	13 15 43.6	-3.3
MIB	Mutribah	18.27	324	*e*P	Pn	13 15 48.8	-3.2
HYB	Hyderabad	18.43	81	*i* P	P	13 15 53.0	-0.9
	comp=Z,200nm,1.4s						
HYB				*e*S	S	13 19 27.0	+2.7
HYB	Hyderabad	18.43	81	⇓*i*P	P	13 15 53.3	-0.6
BHPL	Bhopal	18.69	62	⇓*i*P	Pn	13 15 56.9	-0.2
HRA	Herat	19.20	7		Pn	13 16 03.4	+0.1
KAAM	Kaadhehdhoo	19.85	136	P	Pn	13 16 10.2	-0.8
KAAM				IAmb	IAmb	13 16 13.5	
	comp=Z,385nm,1.1s						
MSEY	Mahe Island	20.21	192	*i* P	P	13 16 13.4	+0.1
	SNR=16						
MSEY	Mahe Island	20.21	192	P	P	13 16 12.6	-0.7
MSEY				pmax	pmax		
	comp=Z,396nm,1.4s						
MSEY	Mahe Island	20.21	192	P	P	13 16 12.6	-0.7
MSEY				IAmb	IAmb	13 16 17.2	
	comp=Z,396nm,1.4s						
MSEY	Mahe Island	20.21	192	IAMs_20	IAMs_20	13 21 32.4	
	comp=Z,8µm,21.0s						
SARP	Sargodha	20.48	34	P	P	13 16 17.1	+0.9
THW	Thamme Wali	20.70	30	P	P	13 16 19.7	+1.1
KBL	Kabul	21.03	22	P	P	13 16 24.9	+2.5
KBL				pmax	pmax		
	comp=Z,436nm,1.1s						
KBL	Kabul	21.03	22	P	P	13 16 25.1	+2.8
	SNR=101						
KBL				P	P	13 16 25.1	+2.8
	SNR=101						
KBL				P	P	13 16 25.1	+2.8
	SNR=101						
KBL	Kabul	21.03	22		P	13 16 24.9	+2.5
KBL				IAmb	IAmb	13 16 30.3	
	comp=Z,436nm,1.1s						
CEP	Cherat	21.62	29	P	P	13 16 30.7	+2.1
CEP				S	S	13 20 30.0	+2.0
NIL	Nilore	22.14	32	P	P	13 16 35.8	+1.8
NIL				pmax	pmax		
	comp=Z,308nm,1.4s						
NIL				MLR	MLR		
	comp=Z,4µm,19.0s						
NIL	Nilore	22.14	32	P	P	13 16 35.8	+1.8
NIL				IAmb	IAmb	13 16 38.9	
	comp=Z,308nm,1.4s						
NIL	Nilore	22.14	32	IAMs_20	IAMs_20	13 26 31.3	
	comp=Z,4µm,19.0s						
CHCP	Chirah Chowk	22.15	32	P	P	13 16 36.1	+1.9
PALK	Pallekele	22.27	109	P	P	13 16 35.0	-0.6
	comp=Z,51nm,1.1s,baz=28,slow=9.1,SNR=8.5						
PALK				S	S	13 20 42.1	+1.6
	comp=Z,8.6nm,0.8s,baz=14,slow=13,SNR=3.2						
PALK				LR	LR	13 24 00.6	
	comp=Z,3µm,18.5s,baz=39,slow=34						
PALK	Pallekele	22.27	109	P	P	13 16 35.8	+0.2
PALK				pmax	pmax		
	comp=Z,87nm,1.2s						
PALK				MLR	MLR		
	comp=Z,3µm,18.0s						
PALK	Pallekele	22.27	109	P	P	13 16 35.8	+0.2
GEYT	Alibeck	22.60	357	P	P	13 16 39.8	+0.8
	comp=Z,98nm,0.9s,baz=161,slow=9.4,SNR=55						
GEYT	Alibeck	22.60	357	P	P	13 16 39.5	+0.5
GEYT				IAmb	IAmb	13 16 42.0	
	comp=Z,112nm,0.9s						
GYA0	ALIBECK ARRAY	22.60	357	P	P	13 16 39.9	+1.0
GYA0B	ALIBECK ARRAY	22.60	357	P	P	13 16 39.5	+0.5
GYA0B				IAmb	IAmb	13 16 42.5	
	comp=Z,135nm,0.9s						
SMLA	Simla	22.61	43	*e*P	P	13 16 40.3	+1.3
SMLA				IAmb	IAmb	13 16 46.9	
	comp=Z,654nm,1.5s						
DHRM	DHARAMSHALA	22.81	39	*i* P	P	13 16 43.2	+1.7
DHRM				IAmb	IAmb	13 16 46.2	
	comp=Z,109nm,0.9s						
CHGR	Chuyangaron	24.81	18	P	P	13 17 00.9	+0.4
CHGR				IAmb	IAmb	13 17 03.3	
	comp=Z,256nm,1.3s						
PYUN	Piuthan	25.25	56	*e*P	P	13 17 06.6	+1.9
	comp=Z,975nm,1.4s						
GAR	Garm	25.49	20	P	P	13 17 07.5	+0.8
GAR				IAmb	IAmb	13 17 10.3	
	comp=Z,174nm,1.0s						
KOLN	Koldanda	25.60	57	*e*P	P	13 17 09.6	+1.7
	comp=Z,792nm,1.4s						
DGAR	Diego Garcia	25.95	149	P	P	13 17 10.8	-0.1
DGAR				pmax	pmax		
	comp=Z,216nm,1.3s						
DGAR	Diego Garcia	25.95	149	P	P	13 17 10.8	-0.1
DGAR				IAmb	IAmb	13 17 12.2	
	comp=Z,216nm,1.3s						
DANN	Dangsing	25.97	56	*e*P	P	13 17 12.7	+1.4
	comp=Z,215nm,1.0s						
DRK	Karamyk	26.43	22	P	P	13 17 17.2	+1.9
DRK				IAmb	IAmb	13 17 18.6	
	comp=Z,158nm,0.8s						
LODK	Lodwar	26.51	246	P	P	13 17 18.2	+2.1
	SNR=27						
LODK	Lodwar	26.51	246	P	P	13 17 18.0	+1.9
GKN	Gorkha	26.53	57	*e*P	P	13 17 17.6	+1.3
	comp=Z,488nm,1.4s						
ASF	Jabal al Asfar	26.56	313	P	P	13 17 18.8	+2.4
	comp=Z,15nm,0.7s,baz=101,slow=3.6,SNR=21						
EIL	Elat	26.73	307	P	P	13 17 20.2	+2.3
	comp=Z,29nm,0.9s,baz=138,slow=2.1,SNR=25						
DMN	Daman	26.77	58	*e*P	P	13 17 20.0	+1.5
SIRT	Sirnak	26.80	329	P	P	13 17 20.7	+2.2
KKN	Kakani	26.98	58	*e*P	P	13 17 21.9	+1.5
PKIN	Phulchoki	26.99	59	*e*P	P	13 17 21.6	+1.0
	comp=Z,319nm,1.4s						
PKI	Pulchoki	27.00	59	*e*P	P	13 17 21.7	+1.0
	comp=Z,461nm,1.6s						
KMBO	Kilima Mbogo	27.36	235	P	P	13 17 24.7	+0.8
	comp=Z,16nm,1.1s,baz=47,slow=15,SNR=5.4						
KMBO				LR	LR	13 27 54.1	
	comp=Z,1µm,18.7s,baz=75,slow=36						
KMBO	Kilima Mbogo	27.36	235	P	P	13 17 24.3	+0.3
KMBO	Kilima Mbogo	27.36	235	P	P	13 17 24.2	+0.3
KMBO				IAmb	IAmb	13 17 41.2	
	comp=Z,123nm,1.1s						
KIBK	Kibwezi	27.50	232	P	P	13 17 25.3	+0.3
	SNR=32						
KIBK	Kibwezi	27.50	232	P	P	13 17 24.8	-0.1
KIBK				IAmb	IAmb	13 17 42.9	
	comp=Z,112nm,1.2s						
GUN	Gumba	27.51	58	*e*P	P	13 17 26.8	+1.4
	comp=Z,781nm,1.6s						
JIRN	Jiri	27.68	59	*e*P	P	13 17 28.1	+1.2
	comp=Z,94nm,1.0s						
RAMN	Ramite	27.78	61	*e*P	P	13 17 29.1	+1.5
	comp=Z,22nm,0.6s						
GNI	Garni	27.93	335	P	P	13 17 31.1	+2.4
	comp=Z,53nm,0.9s,baz=165,slow=2.5,SNR=27						
GNI				LR	LR	13 30 01.5	
	comp=Z,3µm,21.9s,baz=148,slow=39						
GNI	Garni	27.93	335	P	P	13 17 30.8	+2.1
GNI	Garni	27.93	335	P	P	13 17 30.4	+1.7
GNI	Garni	27.93	335	IAMs_20	IAMs_20	13 29 58.7	
	comp=Z,4µm,20.0s						
MMAI	Mount Meron Ar	28.08	313	P	P	13 17 32.6	+2.6
	comp=Z,4.1nm,0.7s,baz=133,slow=14,SNR=7.1						
KSH	Kashi	28.15	28	P	P	13 17 27.5	-3.1
KSH				pP	pP	13 17 30.8	-2.6
KSH				sP	sP	13 17 34.3	-0.2
KSH				PcP	PcP	13 20 44.5	-0.1
KSH				S	S	13 22 10.0	-5.7
KSH				sS	pS	13 22 18.8	-0.2
KSH				SS	SS	13 23 23.0	-52
KSH				pmax	pmax		
	comp=Z,160nm,1.2s						
KSH				LR	LR		
	comp=Z,4µm,21.0s						
KSH				LR	LR		
	comp=Z,5µm,19.7s						
KSH				LR	LR		
	comp=Z,4µm,19.9s						
IUG	Iuzhnay	28.29	17	⇓*i*P	P	13 17 33.3	+1.5
	baz=17						
IUG	Iuzhnay	28.29	17	*d* *i*P	P	13 17 33.3	+1.5
ODAN	Odare	28.42	61	*e*P	P	13 17 34.7	+1.4
	comp=Z,58nm,0.7s						
TAPN	Taplejung	28.84	61	*e*P	P	13 17 38.5	+1.3
KARS	Kars	29.02	334	P	P	13 17 40.5	+2.1
KARS				pmax	pmax		
	comp=Z,144nm,0.7s						
KARS	Kars	29.02	334	P	P	13 17 40.5	+2.1
BRLS	Borolday	29.05	16	⇓*i*P	P	13 17 37.3	-1.2
	baz=16						
BRLS	Borolday	29.05	16	*d* *i*P	P	13 17 37.3	-1.2
KKAR	Karatay Array	29.30	17	P	P	13 17 42.2	+1.5
KKAR	Karatay Array	29.30	17	P	P	13 17 42.2	+1.5
DZA	Taraz	29.35	18	*e*P	P	13 17 41.6	+0.4
	baz=18						
DZA	Taraz	29.35	18	*e*P	P	13 17 41.5	+0.4
GAZ	Gaziantep	29.43	322	P	P	13 17 44.1	+2.0
AML	Almayashu	29.44	22	P	P	13 17 44.1	+1.7
	SNR=27						
AML	Almayashu	29.44	22	*i* P	P	13 17 44.1	+1.7
	SNR=27						
MAK	Makhachkala	29.44	342	*e*P	P	13 17 36.7	-5.2
MAK				*e*S	S	13 22 29.3	-6.4
MAK				pmax	pmax		
	comp=Z,183nm,1.3s						
MAK				MLR	MLR		
	comp=Z,1µm,15.0s						
GTK	Tadong	29.59	61	*e*P	P	13 17 45.5	+2.0
GTK				IAmb	IAmb	13 17 49.5	
	comp=Z,29nm,0.5s						
UCH	Uchtor	29.82	23	P	P	13 17 47.6	+1.8
	SNR=15						
EKS2	Erkin-Say	29.93	21	P	P	13 17 49.4	+3.0
	SNR=304						
AAK	Ala-Archa	30.17	22	P	P	13 17 50.3	+1.7
	comp=Z,52nm,0.9s,baz=200,slow=7.0,SNR=88						
AAK				LR	LR	13 32 22.9	
	comp=Z,2µm,18.2s,baz=214,slow=41						
AAK	Ala-Archa	30.17	22	*i* P	P	13 17 51.1	+2.5
	SNR=86						
AAK	Ala-Archa	30.17	22	P	P	13 17 51.2	+2.5
AAK				pmax	pmax		
	comp=Z,201nm,1.6s						
AAK				MLR	MLR		
	comp=Z,2µm,20.0s						
AAK	Ala-Archa	30.17	22	P	P	13 17 50.5	+1.9
AAK				P	P	13 17 50.5	+1.9
AAK	Ala-Archa	30.17	22	P	P	13 17 51.1	+2.5
AAK				IAmb	IAmb	13 17 52.7	
	comp=Z,201nm,1.6s						
AAK	Ala-Archa	30.17	22	IAMs_20	IAMs_20	13 31 51.8	
	comp=Z,2µm,20.0s						
GROC	Groznyy	30.20	340	*e*P	P	13 17 50.4	+1.8
GROC				*e*		13 18 47.6	
GROC				*e*S	S	13 22 51.6	+4.0
GROC				pmax	pmax		
	comp=Z,43nm,0.6s						
GROC				MLR	MLR		
	comp=Z,756nm,16.0s						
KBK	Karagaybulak	30.36	23	P	P	13 17 52.8	+2.6
	SNR=21						
FRU1	Bishkek	30.37	22	P	P	13 17 52.6	+2.4
FRU1				pmax	pmax		
	comp=Z,347nm,1.8s						
FRU1	Bishkek	30.37	22	P	P	13 17 52.6	+2.4
ZEI	Tsey	30.51	337	*e*P	P	13 17 52.2	+0.6
ZEI				pmax	pmax		
	comp=Z,18nm,0.9s						
ONI	Oni	30.51	336	P	P	13 17 53.1	+1.6
ONI				pmax	pmax		
	comp=Z,80nm,1.6s						
ONI	Oni	30.51	336	P	P	13 17 53.1	+1.6
ULHL	Ulahol	30.52	25	P	P	13 17 53.8	+2.1
	SNR=25						
CHMS	Chumysh	30.58	22	P	P	13 17 54.2	+2.1
	SNR=23						
BOOM	Boomskoye usch	30.60	24	P	P	13 17 54.4	+2.0
BOOM				pmax	pmax		
	comp=Z,67nm,0.8s						
BOOM	Boomskoye usch	30.60	24	P	P	13 17 54.4	+2.0
BOOM				IAmb	IAmb	13 17 56.7	
	comp=Z,67nm,0.8s						
USP	Ospenovka	30.72	22	P	P	13 17 55.4	+2.1
	SNR=44						
TARG	Taragay, Kyrgy	30.76	27	IAmb	IAmb	13 17 57.4	
	comp=Z,130nm,1.5s						
TKM2	Tokmak 2	30.83	23	P	P	13 17 56.3	+1.8
	SNR=43						
NCK	Nalchik	31.23	337	*i* P	P	13 17 59.2	+1.4
NCK				pmax	pmax		
	comp=Z,20nm,0.8s						
NCK				MLR	MLR		
	comp=Z,1µm,18.0s						
NEY	Neytrino	31.35	336	*i* P	P	13 18 00.9	+1.9
NEY				pmax	pmax		
	comp=Z,5.0nm,0.7s						
NEY				MLR	MLR		
	comp=Z,927nm,17.0s						
TNSS	Tian-Shan	31.46	25	*e*P	P	13 18 00.1	-0.2
	baz=25						
AAA	Alma-Ata	31.59	25	*e*P	P	13 17 59.6	-1.5
	baz=25						
AAA	Alma-Ata	31.59	25	*e*P	P	13 17 59.5	-1.5
MDOK	Medeo	31.61	25	*e*P	P	13 18 00.1	-1.1
	baz=25						
MDOK	Medeo	31.61	25	P	P	13 18 02.2	+0.9
PRZ	Przheval'sk	31.63	27	P	P	13 18 03.4	+1.9
PRZ				pmax	pmax		
	comp=Z,72nm,0.9s						
PRZ	Przheval'sk	31.63	27	P	P	13 18 03.4	+1.9
PRZ				IAmb	IAmb	13 18 04.5	
	comp=Z,72nm,0.9s						
KBZ	Khabaz	31.69	337	P	P	13 18 03.5	+1.7
	comp=Z,49nm,0.8s,baz=147,slow=7.0,SNR=94						
KBZ				LR	LR	13 32 43.8	
	comp=Z,2µm,19.4s,baz=144,slow=40						
SHA1	Shidzhatmaz	31.79	337	*d* *i*P	P	13 18 04.6	+1.6
KUU	Kurty	31.94	23	⇓*i*P	P	13 18 05.2	+1.1
	comp=Z,211nm,1.6s,baz=23						
KUU	Kurty	31.94	23	*d* *i*P	P	13 18 05.1	+1.1
KUU				pmax	pmax		
	comp=Z,211nm,1.6s						
KIV	Kislovodsk	31.96	337	*i* P	P	13 18 05.9	+1.6
	SNR=8.4						
KIV	Kislovodsk	31.96	337	*e*P	P	13 18 05.6	+1.3
KIV				*e*S	S	13 23 18.6	+3.2
KIV				pmax	pmax		
	comp=Z,60nm,1.1s						
KIV				pmax	pmax		
	comp=Z,51nm,4.0s						
KIV				MLR	MLR		
	comp=Z,911nm,15.0s						
KIV	Kislovodsk	31.96	337	P	P	13 18 05.9	+1.6
KIV				IAmb	IAmb	13 18 07.1	
	comp=Z,47nm,0.9s						
SHL	Shillong	31.97	66	⇓*i*P	P	13 18 04.9	+0.2
SATY	Saty	32.09	27	⇓*i*P	P	13 18 06.1	+0.6
	comp=Z,107nm,0.9s,baz=26						
SATY	Saty	32.09	27	*d* *i*P	P	13 18 06.9	+1.4
SATY				pmax	pmax		
	comp=Z,107nm,0.9s						
BTLS	Baital	32.13	20	⇓*i*P	P	13 18 07.4	+1.8
	comp=Z,67nm,0.9s,baz=20						
BTLS	Baital	32.13	20	*d* *i*P	P	13 18 07.4	+1.8
BTLS				pmax	pmax		
	comp=Z,67nm,0.9s						
CHKK	Chushkaly	32.16	24	*e*P	P	13 18 05.5	-0.4
	baz=24						
UZB	Uzynbulak	32.43	27	⇓*i*P	P	13 18 09.9	+1.4
	comp=Z,49nm,1.0s,baz=27						
UZB	Uzynbulak	32.43	27	*d* *i*P	P	13 18 09.9	+1.4
UZB				pmax	pmax		
	comp=Z,49nm,1.0s						
LSA	Lhasa	32.47	58	P	P	13 18 09.0	-0.4
LSA				S	S	13 23 21.0	-3.4
LSA				pmax	pmax		
	comp=Z,120nm,1.0s						
LSA				LR	LR		
	comp=Z,4µm,14.9s						
LSA				LR	LR		
	comp=Z,6µm,15.0s						
LSA				LR	LR		
	comp=Z,4µm,15.7s						
LSA	Lhasa	32.47	58	P	P	13 18 09.8	+0.4
LSA				pmax	pmax		
	comp=Z,29nm,1.0s						
LSA				MLR	MLR		
	comp=Z,1µm,19.0s						
LSA	Lhasa	32.47	58	P	P	13 18 09.8	+0.4
MBAR	Mbarara	32.49	244	P	P	13 18 10.0	+0.7
MBAR				pmax	pmax		
	comp=Z,34nm,1.4s						
MBAR				MLR	MLR		
	comp=Z,2µm,19.0s						
MBAR	Mbarara	32.49	244	P	P	13 18 10.0	+0.7
MBAR	Mbarara	32.49	244	IAMs_20	IAMs_20	13 30 33.7	
	comp=Z,2µm,19.0s						
ARXS	Arharly	32.79	25	*e*P	P	13 18 12.4	+0.8
SOC	Sochi	32.87	333	*e*P	P	13 18 11.8	-0.4
SOC				*e*		13 19 18.3	
SOC				*e*PPP	PPP	13 19 33.5	
SOC				*e*S	S	13 23 31.9	+2.5
SOC				*e*SS	SnSn	13 25 30.5	+4.2
SOC				*e*SSS	SSS	13 25 53.3	
SOC				pmax	pmax		
	comp=Z,25nm,0.8s						
SOC				MLR	MLR		
	comp=Z,2µm,19.0s						
BRTR	Keskin Array B	33.22	322	P	P	13 18 17.1	+1.6
	comp=Z,5.4nm,0.7s,baz=140,slow=12,SNR=30						
BRTR				PcP	PcP	13 20 57.5	-0.5
	comp=Z,3.1nm,0.8s,baz=117,slow=4.9,SNR=2.1						
BRTR				LR	LR	13 33 40.1	
	comp=Z,2µm,18.5s,baz=135,slow=40						
BRTR	Keskin Array B	33.22	322	*i* P	P	13 18 17.1	+1.6
BRTR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BR131	Keskin Array S	33.22	322	P	P	13 18 16.3	+0.9
BR131				pmax	pmax		
	comp=Z,33nm,1.1s						
BR131	Keskin Array S	33.22	322	P	P	13 18 16.3	+0.9
TDK	Taldyqorghan	33.68	25	*e*P	P	13 18 20.3	+1.0
	comp=Z,111nm,0.9s,baz=24						
TDK	Taldyqorghan	33.68	25	*e*P	P	13 18 20.2	+1.0
TDK				pmax	pmax		
	comp=Z,111nm,0.9s						
ANTO	Ankara	33.82	322	P	P	13 18 21.5	+0.9
ANTO				pmax	pmax		
	comp=Z,43nm,1.1s						

ANTO				MLR	MLR		
	comp=Z,2µm,21.0s						
ANTO	Ankara	33.82	322	P	P	13 18 21.5	+0.9
ELL	Elmali	33.88	315	P	P	13 18 22.5	+1.3
ELL				pmax	pmax		
	comp=Z,177nm,0.7s						
ELL	Elmali	33.88	315	P	P	13 18 22.5	+1.3
AB31	Akbulak array	33.89	1	iP	P	13 18 21.8	+0.8
ABKAR	Akbulak array	33.89	1	IAmb	IAmb	13 18 23.4	
	comp=Z,54nm,0.9s						
ITAN	ITANAGAR	33.93	64	⇓iP	P	13 18 22.9	+1.3
KOHI	KOHIMA	33.97	67	⇓iP	P	13 18 23.6	+1.4
ISP	Isparta	34.04	317	IAMs_20	IAMs_20	13 33 57.4	
	comp=Z,2µm,18.0s						
ANN	Anapa	34.84	332	eP	P	13 18 29.6	+0.3
ANN				eS	S	13 24 03.1	+3.3
ANN				eSS	SS	13 26 21.2	-10
ANN				pmax	pmax		
	comp=Z,78nm,0.8s						
ANN				MLR	MLR		
	comp=Z,2µm,17.0s						
AKTO	Aktyubinsk	35.09	358	P	P	13 18 32.0	+0.6
MDUB	Mudurnu	35.15	321	P	P	13 18 33.3	+1.2
OPO	Ambohidratompo	35.74	200	P	P	13 18 37.4	-0.1
	comp=Z,16nm,0.8s,baz=30,slow=8.3,SNR=22						
LKP	Lekhapani	35.82	64	⇓iP	P	13 18 38.6	+0.7
BRZS	Berezniki	36.24	14	⇓iP	P	13 18 42.6	+1.3
	comp=Z,62nm,1.3s,baz=14						
BRZS	Berezniki	36.24	14	d iP	P	13 18 42.6	+1.3
BRZS				pmax	pmax		
	comp=Z,61nm,1.3s						
RER	Riviere de l'E	36.39	186	IAMs_20	IAMs_20	13 28 45.5	
	comp=Z,3µm,20.0s						
MAKZ	Makanchi	36.61	26	P	P	13 18 45.5	+1.0
MAKZ				pmax	pmax		
	comp=Z,151nm,0.9s						
MAKZ				MLR	MLR		
	comp=Z,2µm,22.0s						
MAKZ	Makanchi	36.61	26	P	P	13 18 45.5	+1.0
MAKZ				IAMs_20	IAMs_20	13 34 51.8	
	comp=Z,2µm,22.0s						
MK31	Makanchi Array	36.73	26	P	P	13 18 46.7	+1.2
MK31	Makanchi Array	36.73	26	IAmb	IAmb	13 18 47.8	
	comp=Z,68nm,0.8s						
MKAR	Makanchi Array	36.73	26	P	P	13 18 46.9	+1.3
	comp=Z,67nm,0.7s,baz=212,slow=8.8,SNR=429						
MKAR				PcP	PcP	13 21 07.6	-0.3
	comp=Z,6.1nm,0.7s,baz=222,slow=2.9,SNR=5.8						
MKAR				LR	LR	13 35 17.6	
	comp=Z,2µm,21.8s,baz=218,slow=39						
APE	Apeiranthos	37.11	312	⇑P	P	13 18 50.9	+2.0
APE	Apeiranthos	37.11	312	⇑P	P	13 18 50.9	+2.0
WMQ	Urumqi	37.23	34	eP	P	13 18 51.3	+1.4
WMQ				PP	PnPn	13 20 18.3	+3.0
WMQ				pmax	pmax		
	comp=Z,85nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,610nm,3.6s						
WMQ				LR	LR		
	comp=Z,2µm,18.3s						
WMQ				LR	LR		
	comp=Z,2µm,18.3s						
WMQ				LR	LR		
	comp=Z,1µm,20.3s						
CHTO	Chiang Mai	37.85	79	P	P	13 18 55.5	+0.2
CHTO				pmax	pmax		
	comp=Z,93nm,1.8s						
CHTO				MLR	MLR		
	comp=Z,400nm,20.0s						
CHTO	Chiang Mai	37.85	79	P	P	13 18 55.5	+0.2
CM31	Chiang Mai Arr	37.85	79	P	P	13 18 56.3	+0.9
	SNR=5.9						
CM31	Chiang Mai Arr	37.85	79	P	P	13 18 56.2	+0.9
CM31				IAmb	IAmb	13 18 57.7	
	comp=Z,64nm,1.1s						
CMAR	Chiang Mai Arr	37.85	79	P	P	13 18 54.9	-0.5
	comp=Z,25nm,0.9s,baz=277,slow=9.7,SNR=148						
CMAR				PcP	PcP	13 21 11.7	-0.2
	comp=Z,1.9nm,0.6s,baz=275,slow=4.6,SNR=1.9						
CMAR				ScP	ScP	13 24 57.1	-2.1
	comp=Z,0.5nm,0.4s,baz=286,slow=3.7,SNR=2.2						
CMAR				LR	LR	13 36 19.4	
	comp=Z,433nm,18.2s,baz=309,slow=39						
MLSI	Meulaboh, Aceh	37.93	103	P	P	13 19 10.6	+15
LHMI	Lhok Sumawe	38.14	101	IAMs_20	IAMs_20	13 33 13.0	
	comp=Z,1µm,18.0s						
BELG	Belogornoye	38.22	348	d iP	P	13 18 57.7	-0.2
BELG				pmax	pmax		
	comp=Z,34nm,0.9s						
ZSN	Zaisan	38.37	28	⇓iP	P	13 18 60.0	+0.6
	baz=28						
ZSN	Zaisan	38.37	28	d iP	P	13 18 59.9	+0.6
KURBB	Kurchatov Arra	38.48	20	P	P	13 19 01.5	+1.3
	comp=Z,96nm,0.8s,baz=216,slow=8.3,SNR=412						
KURBB				PcP	PcP	13 21 12.5	-0.6
	comp=Z,6.5nm,0.7s,baz=225,slow=3.6,SNR=5.5						
KURBB	Kurchatov Arra	38.48	20	P	P	13 19 00.4	+0.2
VRH	Novokhopyorsk	38.58	342	eP	P	13 19 01.8	+0.8
VRH				pmax	pmax		
	comp=Z,290nm,0.8s						
KURK	Kurchatov	38.59	20	P	P	13 19 01.5	+0.4
KURK						13 21 12.5	
KURK	Kurchatov	38.59	20	P	P	13 19 02.3	+1.2
KURK				IAmb	IAmb	13 19 03.6	
	comp=Z,116nm,0.8s						
KURK	Kurchatov	38.59	20	IAMs_20	IAMs_20	13 36 09.3	
	comp=Z,3µm,22.0s						
BVAR	Borovoye Array	38.64	11	P	P	13 19 02.6	+1.1
	comp=Z,53nm,0.8s,baz=204,slow=18,SNR=149						
BVAR				PcP	PcP	13 21 13.1	-0.4
	comp=Z,3.7nm,0.8s,baz=193,slow=5.8,SNR=1.6						
BRVK	Borovoye	38.66	10	P	P	13 19 02.5	+0.9
BRVK				pmax	pmax		
	comp=Z,82nm,1.3s						
BRVK				MLR	MLR		
	comp=Z,2µm,18.0s						
BRVK	Borovoye	38.66	10	P	P	13 19 02.5	+0.9
BRVK	Borovoye	38.66	10	IAMs_20	IAMs_20	13 37 30.4	
	comp=Z,2µm,18.0s						
SEM	Semipalatinsk	38.87	21	⇓iP	P	13 19 05.2	+1.4
	comp=Z,78nm,0.9s,baz=21						
SEM	Semipalatinsk	38.87	21	d iP	P	13 19 05.1	+1.4
SEM				pmax	pmax		
	comp=Z,79nm,0.9s						
TPTI		39.00	104	P	P	13 19 18.6	+14
VORD	Divnogorie	39.14	340	eP	P	13 19 06.3	+0.6
VORD				pmax	pmax		
	comp=Z,20nm,0.6s						
TIRR	Tirgusor	39.22	324	⇑P	P	13 19 07.4	+0.9
TIRR	Tirgusor	39.22	324	⇑P	P	13 19 07.4	+0.9
TIRR	Tirgusor	39.22	324	IAMs_20	IAMs_20	13 37 48.9	
	comp=Z,3µm,20.0s						
ICOR	Ion Corvin	39.36	323	⇓P	P	13 19 08.9	+1.3
VSR	Storozhevoye	39.40	340	eP	P	13 19 07.9	0.0
VSR				pmax	pmax		
	comp=Z,120nm,1.5s						
TLCR		39.45	325	⇑P	P	13 19 09.7	+1.3
TLCR		39.45	325	⇑P	P	13 19 09.7	+1.3
TPGR	Topolog	39.46	325	⇑P	P	13 19 09.3	+0.8
KCSI	Kotacane, Aceh	39.46	103	P	P	13 19 22.5	+14
TLBR	Topalu	39.48	324	⇓P	P	13 19 09.9	+1.3
HARR	Harsova	39.63	324	⇑P	P	13 19 11.2	+1.3
HARR	Harsova	39.63	324	⇑P	P	13 19 11.2	+1.3
PURM	Purcari	39.76	328	⇑P	P	13 19 12.0	+1.1
ITM	Ithomi	39.77	310	P	P	13 19 12.3	+1.1
ITM				IAmb	IAmb	13 19 13.3	
	comp=Z,127nm,0.7s						
VORR	Voronezh	39.77	340	eP	P	13 19 12.0	+1.0
VORR				pmax	pmax		
	comp=Z,300nm,1.2s						
CFR	Carcaliu	39.82	325	⇑P	P	13 19 12.0	+0.6
CFR	Carcaliu	39.82	325	⇑P	P	13 19 12.0	+0.6
GSI	Gunungsitoli	40.07	107	P	P	13 19 14.9	+0.9
AGG	Agios Georgios	40.23	313	P	P	13 19 15.1	0.0
AGG				pmax	pmax		
	comp=Z,54nm,0.7s						
AGG	Agios Georgios	40.23	313	P	P	13 19 15.1	0.0
MILM	Milestii Mici	40.56	327	⇑P	P	13 19 18.3	+0.7
MILM	Milestii Mici	40.56	327	⇑P	P	13 19 18.3	+0.7
KIS	Kishinev	40.61	328	eP	P	13 19 18.0	-0.1
KIS				eLR	LR	13 36 49.0	
KIS	Kishinev	40.61	328	eP	P	13 19 18.0	-0.1
LPSR	Galich'ya Gora	40.65	341	eP	P	13 19 18.9	+0.6
LPSR				pmax	pmax		
	comp=Z,150nm,0.8s						
ISR	Istrita	40.68	324	⇑P	P	13 19 21.2	+2.5
ISR	Istrita	40.68	324	⇑P	P	13 19 21.2	+2.5
PSI	Prapat	40.79	104	P	P	13 19 19.4	-0.7
	comp=Z,1.9nm,0.4s,baz=263,slow=3.3,SNR=7.3						
BISRR	Bisoca	40.84	324	⇑P	P	13 19 22.9	+2.8
VASR	Vaslui	40.92	326	⇑P	P	13 19 21.8	+1.2
NEHR	Nehoiu	41.00	324	⇑P	P	13 19 23.9	+2.5
VRI	Vrincioaia	41.02	325	⇑P	P	13 19 23.3	+1.8
VRI	Vrincioaia	41.02	325	⇑P	P	13 19 23.3	+1.8
PLOR	Plostina	41.06	325	⇑P	P	13 19 23.9	+2.1
PLOR	Plostina	41.06	325	⇑P	P	13 19 23.9	+2.1
ARU	Arti	41.08	359	P	P	13 19 22.4	+0.7
	comp=Z,6.6nm,0.8s,baz=183,slow=5.0,SNR=33						
ARU	Arti	41.08	359	d iP	P	13 19 22.7	+0.9
ARU						13 20 57.0	
ARU						13 21 16.7	
ARU				S	S	13 25 38.9	+4.8
ARU				SS	SS	13 28 39.6	+3.0
ARU				pmax	pmax		
	comp=Z,38nm,1.0s						
ARU				MLR	MLR		
	comp=Z,823nm,17.0s						
ARU	Arti	41.08	359	P	P	13 19 21.9	+0.1
DGZ	Jazzator, Alta	41.18	28	d iP	P	13 19 23.7	+0.8
DGZ				pmax	pmax		
	comp=Z,117nm,1.8s						
MLR	Muntele Rosu	41.24	324	⇑P	P	13 19 25.4	+2.0
MLR	Muntele Rosu	41.24	324	⇑P	P	13 19 25.4	+2.0
MLR	Muntele Rosu	41.24	324	IAMs_20	IAMs_20	13 39 42.3	
	comp=Z,2µm,18.0s						
HUMR	Humele	41.25	322	⇑P	P	13 19 25.0	+1.7
COVR	Voineasa-Covas	41.30	324	⇑P	P	13 19 25.6	+1.8
VTS	Vitosha	41.31	319	⇑P	P	13 19 25.7	+1.7
VTS	Vitosha	41.31	319	⇑P	P	13 19 25.7	+1.7
VTS	Vitosha	41.31	319	P	P	13 19 24.9	+0.9
VTS				IAmb	IAmb	13 19 26.3	
	comp=Z,62nm,0.9s						
IAS	Iasi	41.40	327	⇓P	P	13 19 25.8	+1.3
IAS	Iasi	41.40	327	⇓P	P	13 19 25.8	+1.3
TESR	Tescani	41.46	326	⇑P	P	13 19 26.4	+1.3
SVE	Sverdlovsk	41.48	1	ceP	P	13 19 26.0	+0.9
SVE				eS	S	13 25 48.1	+8.1
SVE				pmax	pmax		
	comp=Z,67nm,1.1s						
STIP	Stip	41.54	317	iP	P	13 19 25.7	-0.1
SORM	Soroca	41.60	329	⇑P	P	13 19 26.4	+0.3
SORM	Soroca	41.60	329	⇑P	P	13 19 26.4	+0.3
KMI	Kunming	41.62	69	⇓P	P	13 19 27.8	+0.9
KMI				pP	sP	13 19 31.0	+0.1
KMI				S	S	13 25 44.8	+1.5
KMI				sS	sS	13 25 50.0	+2.1
KMI				pmax	pmax		
	comp=Z,77nm,1.0s						
KMI				LR	LR		
	comp=Z,540nm,18.6s						
KMI				LR	LR		
	comp=Z,660nm,19.7s						
KMI				LR	LR		
	comp=Z,840nm,20.4s						
KULM	Kulim	41.63	99	P	P	13 19 25.4	-1.5
FNA	Florina	41.66	315	P	P	13 19 27.1	+0.2
FNA				pmax	pmax		
	comp=Z,33nm,0.8s						
FNA	Florina	41.66	315	P	P	13 19 27.1	+0.2
OZUR		41.69	325	⇑P	P	13 19 28.2	+1.2
VOIR		41.72	323	⇑P	P	13 19 28.9	+1.6
VOIR		41.72	323	⇑P	P	13 19 28.9	+1.6
DOPR	Dopca	41.83	324	⇓P	P	13 19 29.3	+1.2
ARR	Arges	41.92	323	⇓P	P	13 19 30.1	+1.2
PRAR	RASCA	42.21	326	⇑P	P	13 19 32.3	+1.1
SRE	Strehaia	42.38	321	⇑P	P	13 19 34.9	+2.3
SRE	Strehaia	42.38	321	⇑P	P	13 19 34.9	+2.3
LOT	Lotru	42.47	323	⇑P	P	13 19 34.5	+1.0
MDB	Medias	42.51	324	⇓P	P	13 19 36.3	+2.7
MDB	Medias	42.51	324	⇓P	P	13 19 36.3	+2.7
GTA	Gaotai	42.66	48	⇓P	P	13 19 35.8	+0.7
GTA				pP	pwP	13 19 42.5	-1.2
GTA				sP	sP	13 19 47.3	+8.3
GTA				PP	PP	13 21 14.0	0.0
GTA				PcS	PcS	13 25 18.5	-0.7
GTA				S	S	13 25 59.0	+0.9
GTA				sS	sS	13 26 12.5	+10
GTA				SS	SS	13 29 01.3	-7.2
GTA				ScS	ScS	13 29 36.0	-0.6
GTA				pmax	pmax		
	comp=Z,24nm,1.4s						
GTA				pmax	pmax		
	comp=Z,230nm,3.8s						
GTA				LR	LR		
	comp=Z,700nm,20.0s						
GTA				LR	LR		
	comp=Z,1µm,21.4s						
GTA				LR	LR		
	comp=Z,2µm,23.6s						
BOVS	Bovan	42.78	319	⇑P	P	13 19 36.1	+0.2
BURAR	Bucovina Array	42.91	326	⇑P	P	13 19 38.6	+1.6
BURAR	Bucovina Array	42.91	326	⇑P	P	13 19 38.6	+1.6
AKASG	Malin Array Be	42.93	332	P	P	13 19 37.0	+0.1
	comp=Z,28nm,0.7s,baz=130,slow=7.2,SNR=105						
AKASG				PP	PP	13 21 18.5	+1.9
	comp=Z,1.6nm,0.6s,baz=141,slow=8.8,SNR=1.4						
AKASG				LR	LR	13 41 45.4	
	comp=Z,914nm,18.0s,baz=135,slow=42						
AKBB	Malin Array Si	42.93	332	ceP	P	13 19 37.0	+0.1
AKBB	Malin Array Si	42.93	332	IAmb	IAmb	13 19 38.1	
	comp=Z,67nm,0.8s						
HERR	Herculane	42.98	321	⇓P	P	13 19 38.5	+1.1
GZR	Gura Zlata	43.03	322	⇑P	P	13 19 39.2	+1.2
GZR	Gura Zlata	43.03	322	⇑P	P	13 19 39.2	+1.2
ARCR	ARCALIA	43.07	325	⇑P	P	13 19 39.8	+1.6
CJR	Cluj-Napoca	43.28	324	⇑P	P	13 19 41.6	+1.8
CJR	Cluj-Napoca	43.28	324	⇑P	P	13 19 41.7	+1.8
CD2	Chengdu	43.31	61	P	P	13 19 40.0	-0.4
CD2				sP	sP	13 19 44.8	+0.4
CD2				PP	PcP	13 21 27.0	-2.3
CD2				S	S	13 26 06.5	-1.3
CD2				sS	sS	13 26 14.0	+1.6
CD2				pmax	pmax		
	comp=Z,50nm,0.6s						
CD2				LR	LR		
	comp=Z,1µm,18.1s						
CD2				LR	LR		
	comp=Z,970nm,17.7s						
CD2				LR	LR		
	comp=Z,3µm,16.3s						
CBBR	Cluj-Babes-Bol	43.34	324	⇑P	P	13 19 42.5	+2.2
MDVR	Moldovita	43.35	321	⇓P	P	13 19 41.6	+1.0
ZAA0	Zalesovo Array	43.39	22	P	P	13 19 41.1	+0.5
ZALV	Zalesovo Beam	43.39	22	P	P	13 19 41.1	+0.6
	comp=Z,169nm,0.8s,baz=227,slow=8.4,SNR=485						
ZALV				PcP	PcP	13 21 27.5	-1.5
	comp=Z,9.6nm,0.9s,baz=227,slow=3.6,SNR=1.9						
ZALV				LR	LR	13 40 05.2	
	comp=Z,2µm,18.9s,baz=222,slow=39						
ZALV	Zalesovo Beam	43.39	22	P	P	13 19 40.8	+0.2
OBN	Obninsk	43.53	341	c iP	P	13 19 42.3	+0.6
OBN				i		13 19 50.0	
OBN				i		13 21 24.2	
OBN				i		13 21 30.7	
OBN				i SS	SS	13 29 14.0	-11
OBN				pmax	pmax		
	comp=Z,69nm,1.3s						
OBN				MLR	MLR		
	comp=Z,716nm,17.0s						
PDSI	Padang	43.59	108	P	P	13 19 56.5	+14
MOS	Moscow	43.74	342	eP	P	13 19 43.0	-0.4
MOS				e		13 21 27.4	
MOS				pmax	pmax		
	comp=Z,232nm,0.8s						
MOS				pmax	pmax		
	comp=Z,600nm,0.9s						
MOS				MLR	MLR		
	comp=Z,1µm,19.0s						
DRME	Dracevica, Mon	43.76	316	⇓iP	P	13 19 43.1	-0.7
PDG	Podgorica	43.82	316	⇓iP	P	13 19 43.3	-0.9
PDG	Podgorica	43.82	316	P	P	13 19 43.6	-0.6
PDG				IAMs_20	IAMs_20	13 41 19.4	
	comp=Z,2µm,18.0s						
DRGR		43.83	324	⇑P	P	13 19 45.9	+1.5
DRGR		43.83	324	⇑P	P	13 19 45.9	+1.5
BZS	Buzias	43.84	322	⇑P	P	13 19 45.5	+1.1
BZS	Buzias	43.84	322	⇑P	P	13 19 45.5	+1.1
BMR	Baia Mare	43.88	325	⇑P	P	13 19 46.3	+1.6
BMR	Baia Mare	43.88	325	⇑P	P	13 19 46.3	+1.6
KIRV	Kirov	43.88	352	ceP	P	13 19 44.9	+0.4
BANR	Banloc	44.01	321	⇓P	P	13 19 47.9	+2.1
DIVS	Divibare	44.09	319	⇓iP	P	13 19 46.4	-0.2
DIVS	Divibare	44.09	319	IAmb	IAmb	13 19 48.4	
	comp=Z,52nm,0.9s						
DIVS				IAMs_20	IAMs_20	13 41 02.8	
	comp=Z,1µm,19.0s						
SIRR	Siria	44.16	322	⇑P	P	13 19 48.9	+1.9
RUDO	Rudo	44.27	318	⇓iP	P	13 19 47.2	-0.7
TIP	Timpagrande	44.29	311	⇑P	P	13 19 49.7	+1.5
HCY	Herceg Novi	44.33	316	eP	P	13 19 47.7	-0.7
BBLS	Lazići	44.36	318	⇓iP	P	13 19 49.0	+0.3
UPM	Unac-Piva	44.39	317	eP	P	13 19 48.5	-0.6
BORR	Bors	44.52	323	⇓P	P	13 19 50.4	+0.5
LZH	Lanzhou	44.57	54	⇓P	P	13 19 51.0	+0.4
LZH				pP	sP	13 19 55.8	+1.2
LZH				sP	pwP	13 19 58.0	-1.2
LZH				PcP	PP	13 21 34.5	-0.2
LZH				PP	PcP	13 21 40.0	+6.4
LZH				S	S	13 26 30.0	+3.7
LZH				pmax	pmax		
	comp=Z,37nm,1.3s						
LZH				pmax	pmax		
	comp=Z,280nm,5.4s						
LZH				LR	LR		
	comp=Z,1µm,20.1s						
LZH				LR	LR		
	comp=Z,1µm,21.7s						
LZH				LR	LR		
	comp=Z,1µm,19.0s						
TEKS	Tekeris	44.60	319	eP	P	13 19 50.0	-0.5
TRPA	Tarpa	44.67	325	⇓P	P	13 19 52.2	+1.2
TRPA	Tarpa	44.67	325	eP	P	13 19 51.7	+0.7
FRGS	Fruska Gora	44.71	320	⇓P	P	13 19 52.1	+0.6
FRGS	Fruska Gora	44.71	320	⇓iP	P	13 19 51.6	+0.2
AMBH	Ambrzfalva	44.75	322	⇓P	P	13 19 52.3	+0.6
AMBH	Ambrzfalva	44.75	322	eP	P	13 19 53.2	+1.6
HAPS	Han Pijesak,BI	44.75	318	⇓iP	P	13 19 52.3	+0.4
MATE	Matera	44.85	313	⇑P	P	13 19 53.8	+1.2
LVV	L'vov	44.87	328	eP	P	13 19 52.7	+0.1
LVV				MLR	MLR		
	comp=E,800nm,18.0s						
LVV				MLR	MLR		
	comp=N,200nm,15.0s						
LVV				MLR	MLR		
	comp=Z,900nm,18.0s						
STON	Ston	45.04	316	eP	P	13 19 52.9	-1.1
STON	Ston	45.04	316	iP	P	13 19 53.0	-1.0
UZH	Uzhgorod	45.09	326	⇓eP	P	13 19 54.2	-0.1
UZH				e		13 19 57.0	
GYA	Guiyang	45.25	68	⇓iP	P	13 19 56.0	-0.1
GYA				sP	pwP	13 20 02.8	-1.9
GYA				S	S	13 26 37.0	+0.6
GYA				pmax	pmax		
	comp=Z,120nm,0.9s						
GYA				pmax	pmax		
	comp=Z,620nm,3.8s						
GYA				LR	LR		
	comp=Z,670nm,20.8s						
GYA				LR	LR		
	comp=Z,650nm,16.3s						
GYA				LR	LR		
	comp=Z,720nm,18.0s						
KOLS	Kolonicke sedl	45.27	326	eP	P	13 19 57.6	+1.8
KOLS				pmax	pmax		
	comp=Z,119nm,1.0s						
KOLS	Kolonicke sedl	45.27	326	eP	P	13 19 57.6	+1.8
KWP	Kalwaria Pacla	45.45	327	eP	P	13 19 58.5	+1.3
KWP				eL	L	13 39 17.9	
	comp=Z,759nm,27.8s						
BSZH	Besenyszg	45.51	323	⇓P	P	13 19 59.7	+2.0
BSZH	Besenyszg	45.51	323	eP	P	13 19 57.9	+0.2
LSTV	Lastovo	45.54	316	iP	P	13 19 57.9	-0.1
MAKA	Makarska	45.67	316	iP	P	13 19 59.2	+0.2
RICI	Ricice	45.68	317	iP	P	13 19 59.2	+0.1
CRVS	Cervenica-Dubn	45.70	325	eP	P	13 20 00.5	+1.3
CRVS				pmax	pmax		
	comp=Z,39nm,0.9s						
CRVS	Cervenica-Dubn	45.70	325	eP	P	13 20 00.5	+1.3
MYKOM	Kota Tinggi	45.76	103	IAMs_20	IAMs_20	13 37 53.3	
	comp=Z,1µm,19.0s						
MORH	Mrgy, Hungar	45.94	321	⇓P	P	13 20 01.8	+0.7
MORH	Mrgy, Hungar	45.94	321	eP	P	13 20 01.1	+0.1
MORH	Mrgy, Hungar	45.94	321	⇓iP	P	13 20 01.5	+0.4
COCO	West Island	45.96	124	IAMs_20	IAMs_20	13 35 09.5	
	comp=Z,1µm,20.0s						
HVAR	Hvar	46.01	316	iP	P	13 20 02.0	+0.3
KECS	Kecovo	46.01	324	eP	P	13 20 03.0	+1.4
KECS				pmax	pmax		
	comp=Z,38nm,0.8s						
KECS	Kecovo	46.01	324	eP	P	13 20 03.0	+1.4
PSZ	Piszkesteto	46.05	323	⇓P	P	13 20 02.6	+0.6
PSZ	Piszkesteto	46.05	323	eP	P	13 20 02.2	+0.1
PSZ	Piszkesteto	46.05	323	⇓P	P	13 20 02.6	+0.6
MGRS	Mrkonjic Grad	46.10	318	⇑iP	P	13 20 03.6	+1.1
BLY	Banja Luka	46.18	318	⇓iP	P	13 20 02.9	-0.1
MNK	Minsk	46.20	335	iP	P	13 20 01.8	-1.2
MNK				i		13 21 36.6	
MNK				i		13 21 50.6	
MNK				i PPP	PPP	13 22 32.1	
MNK				i S	S	13 26 50.2	+1.3
MNK				i SSS	SSS	13 31 10.5	
MNK				pmax	pmax		
	comp=Z,37nm,0.7s						
MNK				pmax	pmax		
	comp=N,24nm,1.0s						
MNK				pmax	pmax		
	comp=E,2.0nm,0.9s						
MNK				MLR	MLR		
	comp=E,107nm,21.0s						
MNK				MLR	MLR		
	comp=Z,1µm,20.0s						
MNK				MLR	MLR		
	comp=N,651nm,20.0s						
MNK	Minsk	46.20	335	iP	P	13 20 01.8	-1.2
	comp=E,2.0nm,0.9s						
MNK				iP	P	13 20 01.8	-1.2
	comp=N,24nm,1.1s						
MNK				iP	P	13 20 01.8	-1.2
	comp=Z,37nm,0.7s,baz=316						
MNK				i PcP	PcP	13 21 36.7	-2.0
MNK				i PP	PP	13 21 50.7	-0.8
MNK				i PPP	PPP	13 22 32.2	
MNK				i S	S	13 26 50.3	+1.3
MNK				i SS	SS	13 30 21.5	+7.2
MNK				i SSS	SSS	13 31 10.6	
MNK				i LQ	LQ	13 35 41.7	
MNK				i LR	LR	13 39 03.6	
MNK				i LRM	MLR	13 41 45.0	
	comp=E,107nm,21.0s						
MNK				i LRM	MLR	13 42 02.3	
	comp=Z,1µm,20.2s						
MNK				i LRM	MLR	13 42 06.7	
	comp=N,651nm,19.5s						
KOVH	Kovagotottos	46.21	320	eP	P	13 20 03.5	+0.2
BUD	Budapest	46.33	323	eP	P	13 20 04.6	+0.4
PAOL	Paolisi	46.50	313	P	P	13 20 06.1	+0.4
PAOL				IAmb	IAmb	13 20 21.1	
	comp=Z,54nm,1.2s						
NIE	Niedzica	46.62	325	eP	P	13 20 08.5	+2.0
NIE				eL	L	13 39 29.8	
	comp=Z,428nm,24.3s						
CSKK	Cskako	46.72	322	eP	P	13 20 07.8	+0.6
ZIRJ	Zirje	46.73	316	iP	P	13 20 07.7	+0.3
MATP	Matopo	46.74	222	P	P	13 20 06.9	-0.9
MATP	Matopo	46.74	222	eP	P	13 20 08.2	+0.3
MATP	Matopo	46.74	222	eP	P	13 20 08.2	+0.3
MORI	Morici	46.77	317	iP	P	13 20 07.8	+0.1
JMBI	JAMBI	46.79	107	P	P	13 20 21.8	+14
SRO	Srobarova	46.91	323	eP	P	13 20 09.6	+0.9
SRO	Srobarova	46.91	323	eP	P	13 20 09.6	+0.9
LANS	Liptovska Anna	46.94	325	eP	P	13 20 10.4	+1.4
LANS				pmax	pmax		
	comp=Z,44nm,0.8s						
LANS	Liptovska Anna	46.94	325	eP	P	13 20 10.4	+1.4
NACGM	Naroch	46.94	335	iP	P	13 20 09.5	+0.7
VYHS	Vyhne	46.95	324	eP	P	13 20 09.6	+0.5
VYHS				pmax	pmax		
	comp=Z,36nm,1.3s						
VYHS	Vyhne	46.95	324	eP	P	13 20 09.6	+0.5
UDBI	Udbina	47.01	317	iP	P	13 20 10.2	+0.6
MPLH	Magyarpolny	47.06	321	eP	P	13 20 10.0	0.0

MSNA	Messina	47.23	218	eP	P	13 20 12.1	+0.6
MSNA	Messina	47.23	218	eP	P	13 20 12.1	+0.6
PLIT	Plitvice	47.24	318	i P	P	13 20 11.5	+0.1
DUGI	Dugi Otok	47.26	317	i P	P	13 20 11.4	-0.1
EGYH	Egyhazaskeszo	47.30	322	eP	P	13 20 12.6	+0.8
OJC	Ojcow	47.33	326	eP	P	13 20 12.3	+0.4
OJC				eL	L	13 40 41.4	
	comp=Z,910nm,25.3s						
OJC	Ojcow	47.33	326	IAmb	IAmb	13 20 13.2	
	comp=Z,29nm,0.9s						
MOPA	Mopani	47.33	216	eP	P	13 20 12.3	0.0
MOPA	Mopani	47.33	216	eP	P	13 20 12.3	0.0
PRGR	Permogore	47.35	351	eP	P	13 20 10.2	-1.7
PRGR				pmax	pmax		
	comp=Z,37nm,1.0s						
PTJ	Puntijarka	47.46	319	P	P	13 20 13.5	+0.4
LOBO	Lobor	47.50	320	i P	P	13 20 13.3	-0.1
LHSI	Lahat	47.56	110	P	P	13 20 16.1	+1.9
	comp=Z,58nm,1.1s						
NVLJ	Novalja	47.60	317	i P	P	13 20 13.6	-0.5
OZLJ	Ozalj	47.65	319	i P	P	13 20 15.1	+0.6
ISAL	Salakas	47.67	335	eP	P	13 20 15.3	+0.7
BEL	Belsk	47.72	328	eP	P	13 20 16.3	+1.3
BEL				eL	L	13 42 51.9	
	comp=Z,874nm,21.5s						
BOJS	Bojanci	47.74	318	eP	P	13 20 15.6	+0.3
CRES	Cresnjev	47.74	319	⇓iP	P	13 20 15.5	+0.2
KLMR	Klimovskoe	47.75	347	eP	P	13 20 13.5	-1.5
KLMR				e		13 21 38.0	
KLMR				e		13 22 06.6	
KLMR				eS	S	13 27 13.2	+2.4
KLMR				pmax	pmax		
	comp=Z,300nm,1.2s						
KLMR	Klimovskoe	47.75	347	eP	P	13 20 13.6	-1.5
KLMR				AMP		13 20 16.6	
	comp=Z,300nm,1.2s						
KLMR				ePcP	PcP	13 21 38.1	-5.9
KLMR				ePP	PP	13 22 06.6	-0.1
KLMR				eS	S	13 27 13.3	+2.4
KLMR				eS	S	13 27 13.3	+2.4
KLMR				LQ	LQ	13 36 21.3	
KLMR				LQ	LQ	13 36 21.3	
KLMR				LR	LR	13 40 28.8	
SMOL	Smolenice	47.77	323	eP	P	13 20 16.0	+0.6
SMOL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SMOL	Smolenice	47.77	323	eP	P	13 20 16.0	+0.6
AQU	L'Aquila	47.78	314	P	P	13 20 16.7	+1.1
AQU				pmax	pmax		
	comp=Z,37nm,0.8s						
AQU	L'Aquila	47.78	314	P	P	13 20 16.7	+1.1
AQU				IAmb	IAmb	13 20 36.4	
	comp=Z,37nm,0.8s						
MODS	Modra-Piesok	47.79	323	eP	P	13 20 15.1	-0.5
MODS				pmax	pmax		
	comp=Z,49nm,1.0s						
MODS	Modra-Piesok	47.79	323	eP	P	13 20 15.1	-0.5
JAVC	Velka Javorina	47.80	324	eP	P	13 20 17.0	+1.3
JAVC				e		13 20 29.6	
ZST	Bratislava	47.81	323	eP	P	13 20 16.2	+0.5
ZST	Bratislava	47.81	323	eP	P	13 20 16.2	+0.5
SOP	Sopron	47.89	322	eP	P	13 20 16.6	+0.3
SUW	Suwalki	47.90	332	eP	P	13 20 16.9	+0.6
SUW				eL	L	13 41 04.1	
	comp=Z,765nm,26.5s						
SUW	Suwalki	47.90	332	eP	P	13 20 16.3	0.0
SUW	Suwalki	47.90	332	IAmb	IAmb	13 20 17.5	
	comp=Z,59nm,0.8s						
OKC	Ostrava-Krasne	48.03	325	eP	P	13 20 18.0	+0.6
OKC	Ostrava-Krasne	48.03	325	eP	P	13 20 18.0	+0.6
ENH	Enshi	48.10	63	P	P	13 20 16.5	-1.8
VISS	Visnje	48.13	319	i P	P	13 20 18.6	+0.3
NRCA	Norcia	48.14	314	IAmb	IAmb	13 20 21.2	
	comp=Z,57nm,0.7s						
QIZ	Qiongzhong	48.15	78	P	P	13 20 19.0	+0.2
QIZ				S	S	13 27 22.5	+4.8
QIZ				pmax	pmax		
	comp=Z,43nm,2.2s						
QIZ				LR	LR		
	comp=Z,2μm,14.7s						
QIZ				LR	LR		
	comp=Z,2μm,16.2s						
QIZ				LR	LR		
	comp=Z,2μm,21.1s						
RIY	Rijeka	48.16	318	⇓iP	P	13 20 18.4	-0.1
RIY	Rijeka	48.16	318	P	P	13 20 18.2	-0.3
XAN	Xi'an	48.17	58	P	P	13 20 18.3	-0.5
XAN				pP	pwP	13 20 25.3	-2.1
XAN				sP	sP	13 20 31.0	+8.3
XAN				pmax	pmax		
	comp=Z,38nm,1.4s						
XAN				pmax	pmax		
	comp=Z,330nm,4.9s						
XAN				LR	LR		
	comp=Z,1μm,16.5s						
XAN				LR	LR		
	comp=Z,1μm,16.7s						
XAN				LR	LR		
	comp=Z,2μm,15.2s						
SMRN	Sveta Marina	48.26	317	i P	P	13 20 18.9	-0.3
ARSA	Arzberg	48.32	321	i P	P	13 20 20.4	+0.7
	comp=Z,27nm,0.7s,SNR=11						
MORC	Moravsky Berou	48.34	325	⇑P	P	13 20 20.7	+0.9
MORC	Moravsky Berou	48.34	325	⇑P	P	13 20 20.7	+0.9
MORC	Moravsky Berou	48.34	325	eP	P	13 20 20.2	+0.4
MORC				e		13 20 32.8	
MORC	Moravsky Berou	48.34	325	P	P	13 20 20.4	+0.6
MORC				IAmb	IAmb	13 20 21.2	
	comp=Z,55nm,0.8s						
CEY	Cerknica	48.37	318	⇓iP	P	13 20 20.0	-0.1
SOKA	Soboth	48.37	320	i P	P	13 20 20.6	+0.4
	comp=Z,54nm,1.0s,SNR=19						
CONA	Conrad Observa	48.42	322	i P	P	13 20 21.0	+0.4
	comp=Z,55nm,1.0s,SNR=15						
LJU	Ljubljana	48.42	319	⇓iP	P	13 20 21.2	+0.7
LJU	Ljubljana	48.42	319	i P	P	13 20 21.2	+0.7
BRJN	Brijuni	48.47	317	i P	P	13 20 21.1	+0.2
PABE	Paberze	48.53	334	eP	P	13 20 21.4	+0.3
PABE	Paberze	48.53	334	IAmb	IAmb	13 20 22.4	
	comp=Z,55nm,0.7s						
LWLI	Liwa	48.54	111	P	P	13 20 23.5	+1.5
	comp=Z,132nm,0.8s						
OBKA	Obir	48.60	319	i P	P	13 20 22.6	+0.5
	comp=Z,49nm,1.2s,SNR=11						
KRUC	Moravsky	48.64	323	eP	P	13 20 22.4	+0.3
KRUC				e		13 20 34.9	
VRAC	Vranov	48.64	324	⇑P	P	13 20 23.3	+1.1
VRAC	Vranov	48.64	324	⇑P	P	13 20 23.3	+1.1
VRAC	Vranov	48.64	324	eP	P	13 20 22.8	+0.7
VRAC				e		13 20 35.2	
MURB	Monte Urbino	48.70	315	IAmb	IAmb	13 20 25.5	
	comp=Z,63nm,0.8s						
KRLC	Kraliky	48.91	325	eP	P	13 20 24.8	+0.6
KRLC	Kraliky	48.91	325	eP	P	13 20 24.8	+0.6
KLSI		49.01	110	P	P	13 20 25.4	-0.1
	comp=Z,298nmcomp=Z,19nm,1.3s						
KEST	Kesra	49.04	304	P	P	13 20 25.6	+0.1
	comp=Z,7.7nm,0.8s,baz=196,slow=4.0,SNR=6.8						
KEST				LR	LR	13 41 52.7	
	comp=Z,717nm,21.5s,baz=18,slow=37						
MOY	Mondy	49.09	33	eP	P	13 20 26.2	+0.5
MOY				pmax	pmax		
	comp=Z,108nm,1.7s						
KLI	Kotabumi	49.20	110	P	P	13 20 40.8	+14
MYKA	Terra Mystica	49.23	319	i P	P	13 20 26.8	0.0
	comp=Z,47nm,0.8s,SNR=14						
TREC	Trest	49.27	323	eP	P	13 20 27.6	+0.6
TREC	Trest	49.27	323	eP	P	13 20 27.6	+0.6
PUL	Pulkovo	49.29	341	ceP	P	13 20 27.8	+0.9
PUL				pmax	pmax		
	comp=Z,129nm,0.6s						
PPBI	Pangkal Pinang	49.30	107	P	P	13 20 39.5	+12
DPC	Dobruska-Polom	49.30	325	eP	P	13 20 27.6	+0.3
DPC				ex	x	13 20 38.4	
DPC				AMS	AMS	13 41 50.0	
	comp=Z,700nm,21.4s						
DPC	Dobruska-Polom	49.30	325	eP	P	13 20 27.6	+0.3
DPC				MLR	MLR		
	comp=Z,700nm,21.4s						
MOA	Molln	49.35	321	i P	P	13 20 28.0	+0.4
	comp=Z,33nm,0.7s,SNR=17						
OSTC	Ostas	49.46	325	eP	P	13 20 28.9	+0.5
OSTC				AMS	AMS	13 46 10.0	
	comp=Z,1μm,19.4s						
VSU	Vasula	49.51	338	eP	P	13 20 28.3	-0.3
VSU	Vasula	49.51	338	i P	P	13 20 27.6	-0.9
UPC	Upice	49.55	325	eP	P	13 20 29.8	+0.7
UPC	Upice	49.55	325	eP	P	13 20 29.8	+0.7
KSP	Ksiaz	49.56	325	eP	P	13 20 29.7	+0.6
KSP				eL	L	13 42 09.1	
	comp=Z,783nm,24.0s						
CHVC	Chvalec	49.57	325	eP	P	13 20 29.7	+0.4
STAL	STALIGIAL	49.67	318	IAmb	IAmb	13 20 31.3	
	comp=Z,66nm,0.9s						
ZAK	Zakamensk	49.68	36	eP	P	13 20 30.2	0.0
ZAK				pmax	pmax		
	comp=Z,51nm,1.1s						
CASP	Castiglione de	49.69	314	P	P	13 20 29.8	-0.5
CKRC	Cesky Krumlov	49.75	322	eP	P	13 20 31.6	+1.0
CKRC				ex	x	13 20 44.2	
CKRC				ex	x	13 20 44.7	
CKRC				AMS	AMS	13 41 40.0	
	comp=Z,900nm,20.6s						
VSL	Villasalto	49.84	309	IAmb	IAmb	13 20 46.9	
	comp=Z,49nm,0.9s						
ABTA	Abfaltersbach	49.98	319	i P	P	13 20 32.5	-0.1
	comp=Z,62nm,0.8s,SNR=23						
GEC2	GERESS Array S	50.12	322	eL	L	13 42 26.6	
	comp=Z,706nm,21.2s						
GERES	GERESS Array B	50.12	322	P	P	13 20 32.8	-0.7
	comp=Z,5.6nm,0.8s,baz=120,slow=7.9,SNR=18						
GERES				PcP	PcP	13 21 52.5	-0.5
	comp=Z,4.3nm,0.8s,baz=138,slow=7.7,SNR=4.6						
GERES				LR	LR	13 45 20.6	
	comp=Z,370nm,19.4s,baz=124,slow=40						
ZCCA	Zocca	50.12	316	P	P	13 20 34.4	+0.8
PRU	Pruhonice	50.14	324	eP	P	13 20 33.8	+0.3
PRU				ex	x	13 20 45.8	
PRU				eS	S	13 27 56.8	+12
PRU				AMS	AMS	13 43 20.0	
	comp=Z,900nm,13.9s						
PRU	Pruhonice	50.14	324	eP	P	13 20 33.8	+0.3
PRU				eS	S	13 27 56.8	+12
PRU				MLR	MLR		
	comp=Z,900nm,13.9s						
CTI	Castel Tesino	50.27	318	IAmb	IAmb	13 20 36.0	
	comp=Z,50nm,0.8s						
KHC	Kasperske Hory	50.31	322	eP	P	13 20 34.4	-0.6
KHC				ex	x	13 20 45.5	
KHC				eS	S	13 27 59.8	+12
KHC				AMS	AMS	13 46 00.0	
	comp=Z,1μm,19.8s						
KHC	Kasperske Hory	50.31	322	eP	P	13 20 34.4	-0.6
KHC				eS	S	13 27 59.8	+12
KHC				MLR	MLR		
	comp=Z,1μm,19.8s						
KHC	Kasperske Hory	50.31	322	IAmb	IAmb	13 20 35.7	
	comp=Z,38nm,0.9s						
GKP	Gorka Klasztor	50.32	328	eP	P	13 20 35.9	+1.0
GKP				eL	L	13 46 15.1	
	comp=Z,816nm,19.2s						
GKP	Gorka Klasztor	50.32	328	eP	P	13 20 35.7	+0.8
PVCC	Panska Ves	50.37	324	eP	P	13 20 35.8	+0.5
PVCC				ex	x	13 20 48.5	
PVCC	Panska Ves	50.37	324	eP	P	13 20 35.8	+0.5
SONM	Songino Array	50.39	40	P	P	13 20 36.4	+0.8
	comp=Z,21nm,0.7s,baz=236,slow=7.9,SNR=168						
SONM				PcP	PcP	13 21 52.5	-1.6
	comp=Z,7.2nm,1.0s,baz=265,slow=3.6,SNR=3.6						
SONM				LR	LR	13 46 15.5	
	comp=Z,1μm,18.6s,baz=268,slow=41						
SONM	Songino Array	50.39	40	P	P	13 20 36.4	+0.8
SONM				IAmb	IAmb	13 20 49.9	
	comp=Z,39nm,0.8s						
BTO	Baotou	50.46	50	eP	P	13 20 36.3	0.0
BTO				S	S	13 27 50.0	+0.2
BTO				LR	LR		
	comp=Z,3μm,17.4s						
BTO				LR	LR		
	comp=Z,5μm,19.7s						
TLY	Talaya	50.52	34	P	P	13 20 37.2	+0.8
	comp=Z,20nm,0.7s,baz=242,slow=8.6,SNR=14						
TLY				LR	LR	13 43 51.0	
	comp=Z,1μm,18.2s,baz=241,slow=38						
TLY	Talaya	50.52	34	eP	P	13 20 38.2	+1.8
TLY				eS	S	13 28 06.0	+16
TLY				pmax	pmax		
	comp=Z,186nm,1.6s						
TLY				MLR	MLR		
	comp=Z,3μm,16.0s						
TLY	Talaya	50.52	34	IAMs_20	IAMs_20	13 43 38.0	
	comp=Z,1μm,18.0s						
WET	Wettzell	50.74	322	eL	L	13 42 46.5	
	comp=Z,592nm,21.1s						
WTTA	Wattenberg	50.74	319	i P	P	13 20 37.7	-0.6
	comp=Z,60nm,0.6s,SNR=27						
WATA	Walderalm	50.80	319	i P	P	13 20 37.9	-1.0
	comp=Z,85nm,1.1s,SNR=18						
ULN	Ulaanbaatar	50.81	40	ceP	P	13 20 39.0	+0.1
ULN				pmax	pmax		
	comp=Z,66nm,1.7s						
ULN	Ulaanbaatar	50.81	40	P	P	13 20 37.8	-1.1
ULN	Ulaanbaatar	50.81	40	IAMs_20	IAMs_20	13 46 08.8	
	comp=Z,1μm,19.0s						
BRG	Berggiesshubel	50.89	324	eP	P	13 20 39.4	+0.2
	comp=Z,24nm,0.9s,baz=116,slow=7.5						
BRG	Berggiesshubel	50.89	324	i P	P	13 20 39.4	+0.2
BRG				Amp		13 20 40.5	
	comp=Z,21nm,0.9s						
BRG	Berggiesshubel	50.89	324	P	P	13 20 52.2	+13
BRG				Amp		13 20 53.1	
	comp=Z,14nm,1.0s						
BRG				Amp		13 46 19.0	
	comp=Z,0.9nm,23.2s						
BRG				Amp		13 46 19.0	
	comp=E,0.7nm,14.8s						
BRG				Amp		13 46 34.0	
	comp=N,0.8nm,20.1s						
SQTA	Sankt Quirin	50.99	319	i P	P	13 20 39.3	-0.9
	comp=N,85nm,0.7s,SNR=30						
MOTA	Moosalm	51.10	319	i P	P	13 20 40.1	-1.0
	comp=N,100nm,0.9s,SNR=28						
IRK	Irkutsk	51.13	34	eP	P	13 20 40.9	-0.1
IRK				pmax	pmax		
	comp=Z,133nm,2.3s						
FETA	Feichten	51.22	319	i P	P	13 20 41.4	-0.6
	comp=Z,57nm,1.0s,SNR=18						
FBE	Freiberg	51.24	324	eP	P	13 20 42.2	+0.4
	comp=Z,17nm,0.9s,baz=116,slow=7.5						
FUR	Furstenfeldbru	51.31	320	eP	P	13 20 42.1	-0.3
	comp=Z,223nm,0.8s,baz=116,slow=7.5						
FUR				eL	L	13 46 18.5	
	comp=Z,775nm,18.1s						
RETA	Reutte	51.37	319	i P	P	13 20 41.7	-1.3
	comp=Z,31nm,0.6s,SNR=8.5						
ROTZ	Rotzenmuhle	51.40	322	eP	P	13 20 43.0	-0.1
	comp=Z,8.3nm,1.0s,baz=116,slow=7.5						
NKC	Novy Kostel	51.45	323	eP	P	13 20 44.1	+0.6
NKC	Novy Kostel	51.45	323	eP	P	13 20 44.1	+0.6
WERN	Wernitzgruen	51.52	323	eP	P	13 20 44.5	+0.5
	comp=Z,42nm,0.9s,baz=116,slow=7.5						
TANN	Tannenbergstha	51.52	323	eP	P	13 20 44.2	+0.2
	comp=Z,13nm,1.0s,baz=116,slow=7.5						
MANZ	Manzenberg	51.55	323	eP	P	13 20 44.3	+0.1
	comp=Z,5.6nm,1.0s,baz=116,slow=7.5						
GUNZ	Gunzen	51.58	323	eP	P	13 20 44.9	+0.5
	comp=Z,36nm,1.1s,baz=116,slow=7.5						
CLL	Collm	51.61	325	i P	P	13 20 44.9	+0.3
	comp=Z,57nm,1.0s						
CLL				esP	pwP	13 20 51.0	-2.3
CLL				i		13 20 56.3	
CLL				eS	S	13 28 06.0	+0.8
CLL				e		13 32 31.0	
CLL				eSSS	SSS	13 33 18.0	
CLL				Lm	MLR	13 43 00.0	
	comp=N,1μm,21.2s						
CLL				Lm	MLR	13 43 00.0	
	comp=E,700nm,21.4s						
CLL	Collm	51.61	325	i P	P	13 20 44.9	+0.3
CLL				e		13 20 51.0	
CLL				eS	S	13 28 06.0	+0.8
CLL				pmax	pmax		
	comp=Z,57nm,1.0s						
CLL	Collm	51.61	325	eP	P	13 20 45.3	+0.7
	comp=Z,57nm,1.0s,baz=116,slow=7.5						
CLL				eL	L	13 43 43.9	
	comp=Z,483nm,21.5s						
CLL	Collm	51.61	325	IAmb	IAmb	13 20 46.9	
	comp=Z,52nm,0.9s						
DBJI	Dramaga	51.62	111	P	P	13 20 58.3	+13
WERD	Werda	51.63	323	eP	P	13 20 45.0	+0.2
	comp=Z,18nm,1.0s,baz=116,slow=7.5						
TIY	Taiyuan	51.65	54	eP	P	13 20 45.5	+0.3
TIY				S	S	13 28 10.5	+4.2
TIY				pmax	pmax		
	comp=Z,61nm,1.0s						
TIY				LR	LR		
	comp=Z,970nm,16.5s						
TIY				LR	LR		
	comp=Z,800nm,16.3s						
TIY				LR	LR		
	comp=Z,1μm,16.0s						
HHC	Hu-ho-hao-te	51.65	50	eP	P	13 20 46.0	+0.7
HHC				sP	pwP	13 20 53.5	-0.4
HHC				PP	PP	13 22 46.3	+3.5
HHC				S	S	13 28 03.0	-3.4
HHC				pmax	pmax		
	comp=Z,60nm,1.1s						
HHC				pmax	pmax		
	comp=Z,490nm,5.6s						
HHC				LR	LR		
	comp=Z,790nm,17.0s						
HHC				LR	LR		
	comp=Z,1μm,18.7s						
HHC				LR	LR		
	comp=Z,2μm,17.0s						
RUE	Ruedersdorf	51.73	326	eP	P	13 20 46.1	+0.7
RUE	Ruedersdorf	51.73	326	eP	P	13 20 46.2	+0.8
	comp=Z,127nm,0.9s,baz=116,slow=7.5						
PLN	Plauen	51.73	323	eP	P	13 20 45.8	+0.3
	comp=Z,24nm,0.9s,baz=116,slow=7.5						
DAVA	Damuels	51.86	319	i P	P	13 20 45.9	-0.9
	comp=Z,72nm,0.7s,SNR=26						
LBTB	Lobatse	51.91	220	P	P	13 20 47.0	-0.3
LBTB				pmax	pmax		
	comp=Z,201nm,1.0s						
LBTB	Lobatse	51.91	220	P	P	13 20 47.0	-0.3
FINES	FINESS Array B	51.92	340	P	P	13 20 47.5	+0.8
	comp=Z,130nm,0.7s,baz=129,slow=10.0,SNR=206						
FINES				LR	LR	13 45 51.8	
	comp=Z,805nm,19.2s,baz=140,slow=40						
GRA1	Grafenberg Arr	51.95	322	IAmb	IAmb	13 20 47.9	
	comp=Z,72nm,0.8s						
GRF	Grafenberg Arr	51.95	322	eP	P	13 20 47.0	-0.2
	comp=Z,89nm,0.9s,baz=116,slow=7.5						
GRF				eL	L	13 47 37.2	
	comp=Z,650nm,18.2s						
GRFO	Grafenberg	51.95	322	P	P	13 20 46.8	-0.4
GRFO				pmax	pmax		
	comp=Z,69nm,0.8s						
GRFO	Grafenberg	51.95	322	P	P	13 20 46.8	-0.4
GRFO				IAmb	IAmb	13 20 47.8	
	comp=Z,69nm,0.8s						
KSM	Kuching	51.97	100	IAMs_20	IAMs_20	13 41 33.0	
	comp=Z,993nm,19.0s						
MOX	Moxa	52.11	323	eP	P	13 20 49.0	+0.6
	comp=Z,289nm,2.7s,baz=116,slow=7.5						
MOX				eL	L	13 44 44.9	
	comp=Z,460nm,22.0s						
NEUB	Neuenburg	52.26	324	eP	P	13 20 50.0	+0.6
	comp=Z,113nm,0.8s,baz=116,slow=7.5						
WHN	Wuhan	52.30	63	⇓P	P	13 20 49.8	-0.3
WHN				S	S	13 28 16.3	+0.9
WHN				LR	LR		
	comp=Z,3μm,19.7s						
WHN				LR	LR		
	comp=Z,3μm,13.4s						
WHN				LR	LR		
	comp=Z,6μm,26.3s						
FLTG	Flechtingen	53.05	325	eP	P	13 20 55.6	+0.3
	comp=Z,64nm,1.0s,baz=116,slow=7.5						
BFO	Black Forest	53.20	320	P	P	13 20 56.1	-0.4
BFO				pmax	pmax		
	comp=Z,22nm,0.9s						
BFO	Black Forest	53.20	320	eL	L	13 46 33.0	
	comp=Z,861nm,20.8s						
BFO	Black Forest	53.20	320	P	P	13 20 56.1	-0.4
BNI	Bardonecchia	53.25	315	IAmb	IAmb	13 21 05.6	
	comp=Z,36nm,0.8s						
BNI				IAMs_20	IAMs_20	13 44 19.2	
	comp=Z,2μm,21.0s						
ASSE	Asse, Remlinge	53.27	325	eP	P	13 20 57.4	+0.6
	comp=Z,25nm,1.2s,baz=116,slow=7.5						
CLZ	Clausthal	53.32	324	eP	P	13 20 58.0	+0.6
	comp=Z,89nm,0.9s,baz=116,slow=7.5						
GTTG	Gottingen	53.43	324	eP	P	13 20 58.8	+0.7
	comp=Z,71nm,1.0s,baz=116,slow=7.5						
STKI	Sintang	53.52	101	P	P	13 21 13.7	+14
TSUM	Tsumeb	53.60	232	P	P	13 21 00.7	+0.7
CMJI	Cimerak	53.66	112	P	P	13 21 12.6	+12
NRDL	Niedersach Rie	53.74	325	eP	P	13 21 01.3	+1.0
	comp=Z,85nm,0.9s,baz=116,slow=7.5						
TNS	Taunus Mts	53.81	322	eP	P	13 21 00.6	-0.4
	comp=Z,42nm,1.2s,baz=116,slow=7.5						
TNS				eL	L	13 47 17.4	
	comp=Z,636nm,20.3s						
BSEG	Bad Segeberg	54.25	327	eL	L	13 47 12.3	
	comp=Z,942nm,20.4s						
RETH	Rethem/Aller,	54.26	325	eP	P	13 21 04.7	+0.6
	comp=Z,45nm,1.0s,baz=116,slow=7.5						
AHRW	Bad Neuenahr-A	54.74	322	eP	P	13 21 08.7	+1.0
	comp=Z,31nm,0.9s,baz=116,slow=7.5						
BOSA	Boshof	54.76	217	P	P	13 21 07.5	-0.7
	comp=Z,29nm,0.7s,baz=43,slow=7.2,SNR=77						
BOSA				LR	LR	13 42 00.2	
	comp=Z,2μm,20.4s,baz=52,slow=33						
BOSA	Boshof	54.76	217	P	P	13 21 07.0	-1.2
BOSA				IAmb	IAmb	13 21 21.5	
	comp=Z,72nm,0.9s						
BJI	Beijing	54.93	52	P	P	13 21 09.5	+0.3
BJI				pP	sP	13 21 14.3	+1.1
BJI				sP	pwP	13 21 16.8	-1.0
BJI				sS	sS	13 28 56.0	+0.6
BJI				pmax	pmax		
	comp=Z,52nm,0.8s						
BJI				pmax	pmax		
	comp=Z,330nm,3.9s						
BJI				LR	LR		
	comp=Z,1μm,18.7s						
BJI				LR	LR		
	comp=Z,2μm,20.4s						
BJI				LR	LR		
	comp=Z,3μm,20.0s						
APA	Apatity	54.94	348	⇓iP	P	13 21 05.2	-3.6
APA				pmax	pmax		
	comp=Z,15nm,1.0s						
APA				MLR	MLR		
	comp=Z,2μm,17.0s						
BUG	Bochum--Univer	54.95	323	eP	P	13 21 09.5	+0.4
	comp=Z,40nm,0.9s,baz=116,slow=7.5						
LVZ	Lovozero	54.98	349	P	P	13 21 08.7	-0.5
LVZ				pmax	pmax		
	comp=Z,176nm,1.9s						
LVZ	Lovozero	54.98	349	P	P	13 21 08.7	-0.5
LVZ				IAmb	IAmb	13 22 48.4	
	comp=Z,176nm,1.9s						
IBBN	Ibbenburen	54.99	324	eP	P	13 21 09.9	+0.5
	comp=Z,28nm,0.7s,baz=116,slow=7.5						
WLF	Walferdange	55.00	320	dP	P	13 21 09.8	+0.2
	comp=Z,34nm,0.9s						
WLF	Walferdange	55.00	320	P	P	13 21 08.2	-1.4
WLF				pmax	pmax		
	comp=Z,44nm,0.8s						
WLF	Walferdange	55.00	320	eP	P	13 21 09.6	0.0
	comp=Z,56nm,0.9s,baz=116,slow=7.5						
WLF	Walferdange	55.00	320	P	P	13 21 08.2	-1.4
WLF				IAmb	IAmb	13 21 10.5	
	comp=Z,44nm,0.8s						
TIA	Tai'an	55.13	56	⇓P	P	13 21 10.3	-0.5
TIA				pmax	pmax		
	comp=Z,41nm,1.0s						
TIA				pmax	pmax		
	comp=Z,290nm,4.1s						
TIA				LR	LR		
	comp=Z,810nm,16.3s						
TIA				LR	LR		
	comp=Z,670nm,14.8s						
TIA				LR	LR		
	comp=Z,850nm,18.2s						
BHOU	Houvegnez	55.32	321	dP	P	13 21 12.3	+0.4
	comp=Z,17nm,0.9s						
BTNL	Ternell	55.32	322	dP	P	13 21 12.5	+0.6
	comp=Z,16nm,1.0s						
MEM	Membach	55.40	322	dP	P	13 21 13.1	+0.6
	comp=Z,21nm,0.9s						
RCHB	Rochefort	55.73	321	dP	P	13 21 14.8	0.0
	comp=Z,19nm,1.0s						

BCLA	Clavier	55.77	321	dP	P	13 21 15.4	+0.3
	comp=Z,25nm,1.0s						
KNMB	Chin-men Tao	55.81	71	IAMs_20	IAMs_20	13 48 45.6	
	comp=Z,2µm,20.0s						
BGES	Gesves	55.88	321	dP	P	13 21 15.5	-0.5
	comp=Z,20nm,1.0s						
TORD	Torodi Ar. Bea	55.92	276	P	P	13 21 17.1	+0.4
	comp=Z,15nm,0.8s,baz=84,slow=6.5,SNR=77						
TORD				LR	LR	13 43 59.1	
	comp=Z,619nm,18.9s,baz=120,slow=35						
TORD	Torodi Ar. Bea	55.92	276	P	P	13 21 16.3	-0.5
WIN	Windhoek	56.00	229	IAmb	IAmb	13 21 32.2	
	comp=Z,61nm,0.8s						
BMRD	Maredsous	56.05	321	dP	P	13 21 17.2	+0.1
	comp=Z,9.8nm,1.0s						
DOU	Dourbes	56.09	321	dP	P	13 21 17.1	-0.3
	comp=Z,21nm,1.0s						
NJ2	Nanjing	56.24	62	⇓iP	P	13 21 18.8	0.0
NJ2				sP	sP	13 21 23.3	+0.5
NJ2				PP	PP	13 23 27.8	+3.7
NJ2				S	S	13 29 06.8	-1.6
NJ2				sS	sS	13 29 21.0	+7.8
NJ2				pmax	pmax		
	comp=Z,42nm,1.2s						
NJ2				pmax	pmax		
	comp=Z,260nm,3.5s						
NJ2				LR	LR		
	comp=Z,880nm,15.2s						
NJ2				LR	LR		
	comp=Z,460nm,16.1s						
NJ2				LR	LR		
	comp=Z,990nm,20.4s						
SNF	Seneffe	56.41	321	dP	P	13 21 20.1	+0.4
	comp=Z,45nm,0.8s						
NRIK	Noril'sk	56.84	12	P	P	13 21 22.9	+0.4
	comp=Z,32nm,0.8s,baz=211,slow=4.7,SNR=46						
NRIK				LR	LR	13 49 37.4	
	comp=Z,918nm,18.1s,baz=204,slow=40						
MTKI	Muara Teweh, K	57.08	101	P	P	13 21 37.7	+13
HOMB	Homborsund	57.08	331	eP	P	13 21 25.3	+1.0
NB2	NORSAR Subarra	57.22	334	P	P	13 21 24.2	-1.1
	comp=Z,51nm,1.2s,baz=119,slow=7.9						
NOA	NORSAR Array B	57.22	334	P	P	13 21 24.6	-0.7
	comp=Z,10nm,0.9s,baz=117,slow=7.5,SNR=12						
NOA				LR	LR	13 48 40.1	
	comp=Z,612nm,19.6s,baz=110,slow=39						
BBKI	Banjar Baru	57.87	104	P	P	13 21 31.6	+1.0
	comp=Z,2µmcomp=Z,58nm,1.0s						
SSLB	Suanglung	58.19	71	IAMs_20	IAMs_20	13 51 07.6	
	comp=Z,1µm,22.0s						
ARA0	ARCESS Array S	58.23	347	eP	P	13 21 32.0	-0.2
ARCES	ARCESS Array B	58.23	347	P	P	13 21 31.8	-0.5
	comp=Z,12nm,0.7s,baz=141,slow=7.8,SNR=42						
ARCES				LR	LR	13 50 34.1	
	comp=Z,873nm,18.3s,baz=135,slow=40						
ARCES	ARCESS Array B	58.23	347	P	P	13 21 32.1	-0.1
ARCES				pmax	pmax		
	comp=Z,27nm,1.0s						
ARCES	ARCESS Array B	58.23	347	P	P	13 21 32.1	-0.1
KTK1	Kautokeino	58.36	346	eP	P	13 21 32.9	-0.2
TWG	Pinlang	58.36	72	IAMs_20	IAMs_20	13 49 23.5	
	comp=Z,1µm,18.0s						
YHNB	Yeheng	58.52	70	IAMs_20	IAMs_20	13 51 10.3	
	comp=Z,2µm,22.0s						
YULB	Yu-li	58.53	72	IAMs_20	IAMs_20	13 50 22.6	
	comp=Z,1µm,21.0s						
BOD	Bodaibo	58.61	31	eP	P	13 21 34.5	-0.6
BOD				pmax	pmax		
	comp=Z,57nm,1.2s						
DOMB	Dombas	58.62	335	eP	P	13 21 36.3	+1.2
NACB	Ninganchiao	58.75	71	IAMs_20	IAMs_20	13 50 41.4	
	comp=Z,1µm,20.0s						
TBLU	Trondheim	58.76	336	eP	P	13 21 36.1	+0.1
NSS	Namsos	58.81	338	eP	P	13 21 36.0	-0.3
MOR8	Moi Rana	58.92	340	eP	P	13 21 36.6	-0.5
DL2	Dalian	58.97	54	P	P	13 21 37.5	-0.4
DL2				S	S	13 29 44.5	+0.4
DL2				pmax	pmax		
	comp=Z,72nm,1.0s						
DL2				LR	LR		
	comp=Z,840nm,16.6s						
DL2				LR	LR		
	comp=Z,470nm,14.2s						
DL2				LR	LR		
	comp=Z,920nm,17.7s						
KBKI	Kotabaru	59.06	103	P	P	13 21 52.0	+13
JAGI	Jajag, Banyuwa	59.09	110	IAMs_20	IAMs_20	13 50 54.5	
	comp=Z,873nm,20.0s						
HIA	Hailar	59.25	41	IAMs_20	IAMs_20	13 51 32.1	
	comp=Z,958nm,19.0s						
FAUS	Fauske	59.40	342	eP	P	13 21 40.3	0.0
JETT	Jettan, Norway	59.45	345	eP	P	13 21 41.8	+1.1
NBB17	Glomfjord B¥r	59.46	341	eP	P	13 21 40.9	+0.1
STOK	Stokkvaagen	59.48	340	eP	P	13 21 41.0	+0.1
HAMF	Hammerfest	59.48	347	eP	P	13 21 40.8	-0.1
MOL	Molde	59.49	335	eP	P	13 21 41.9	+0.8
AKN	Aaknes	59.54	334	eP	P	13 21 42.8	+1.3
KONS	Konsvik	59.54	340	eP	P	13 21 41.4	+0.1
NBB13	Alf Garage	59.55	341	eP	P	13 21 41.3	-0.1
NBB40	Tonnes	59.59	340	eP	P	13 21 41.8	+0.1
NBB30	Finnes	59.63	341	eP	P	13 21 42.0	+0.1
STEI	Steigen	59.76	342	eP	P	13 21 42.4	-0.4
TRO	Tromso	59.87	345	eP	P	13 21 43.2	-0.4
ESBB	Sonseca Array	60.03	307	P	P	13 21 44.6	-0.8
ESBB				IAmb	IAmb	13 21 45.6	
	comp=Z,22nm,0.8s						
ESDC	Sonseca Array	60.03	307	P	P	13 21 44.6	-0.8
	comp=Z,18nm,0.8s,baz=82,slow=6.2,SNR=87						
ESDC				LR	LR	13 50 48.1	
	comp=Z,218nm,19.1s,baz=330,slow=39						
ESDC	Sonseca Array	60.03	307	P	P	13 21 44.6	-0.8
ESDC				IAmb	IAmb	13 21 58.5	
	comp=Z,54nm,1.5s						
SUR	Sutherland	60.12	218	IAMs_20	IAMs_20	13 43 55.0	
	comp=Z,2µm,20.0s						
PAB	San Pablo	60.32	307	P	P	13 21 46.6	-0.7
PAB				pmax	pmax		
	comp=Z,28nm,1.0s						
PAB	San Pablo	60.32	307	P	P	13 21 46.6	-0.7
PAB				IAmb	IAmb	13 22 06.9	
	comp=Z,28nm,1.0s						
LOF	Lofoten	60.38	342	eP	P	13 21 47.0	-0.1
SNY	Shenyang	60.73	50	⇓P	P	13 21 48.8	-1.1
SNY				S	S	13 30 10.3	+3.7
SNY				pmax	pmax		
	comp=Z,28nm,1.9s						
SNY				pmax	pmax		
	comp=Z,140nm,4.4s						
SNY				LR	LR		
	comp=Z,980nm,18.8s						
SNY				LR	LR		
	comp=Z,1µm,14.5s						
SNY				LR	LR		
	comp=Z,2µm,20.6s						
KOWA	Kowa	61.16	278	IAMs_20	IAMs_20	13 48 23.4	
	comp=Z,1µm,18.0s						
MCH1	Michaelchurch	61.22	321	eP	P	13 21 52.7	-0.4
MCH1				IAmb	IAmb	13 21 53.2	
	comp=Z,43nm,0.8s						
EDMD	Edmundbyers	61.28	325	eP	P	13 21 53.4	-0.1
EDMD				IAmb	IAmb	13 21 54.3	
	comp=Z,70nm,1.0s						
MPSI	Mapaga	61.45	98	P	P	13 21 56.5	+1.2
	comp=Z,29nm,1.3s						
MPSI				P	pwP	13 22 07.9	+4.1
	comp=Z,29nm,1.3s						
TWSI	Taliwang, Sumb	61.68	109	P	P	13 22 06.7	+10
ESY	Stoneypath	61.92	326	⇑eP	P	13 21 57.6	-0.2
ESK	Eskdalemuir	62.10	325	eP	P	13 21 57.9	-1.0
EBL	Broad Law	62.12	325	eP	P	13 21 58.8	-0.4
RSBS	Rosebush, Pemb	62.27	321	eP	P	13 21 59.9	-0.3
RSBS				IAmb	IAmb	13 22 00.8	
	comp=Z,84nm,0.9s						
CN2	Changchun	62.28	48	⇓iP	P	13 22 00.0	-0.4
CN2				pP	pwP	13 22 07.0	-2.1
CN2				sP	sP	13 22 12.3	+7.9
CN2				S	S	13 30 23.0	-3.3
CN2				pmax	pmax		
	comp=Z,120nm,1.0s						
CN2				LR	LR		
	comp=Z,800nm,16.0s						
CN2				LR	LR		
	comp=Z,800nm,16.0s						
CN2				LR	LR		
	comp=Z,700nm,16.0s						
PBRG	Braganca	62.30	309	eP	P	13 22 00.4	-0.3
	comp=Z,43nm,1.3s						
TTSI	Tana Toraja	62.41	102	P	P	13 22 13.1	+11
MVO	Moncorvo	62.47	309	eP	P	13 22 02.1	+0.2
	comp=Z,41nm,1.7s						
PMRV	Marv??o	62.66	307	eP	P	13 22 02.6	-0.5
	comp=Z,50nm,1.8s						
PCBR	Castelo Branco	62.75	307	eP	P	13 22 03.2	-0.4
PESTR	Estremoz	62.80	306	eP	P	13 22 05.1	+1.1
	comp=Z,35nm,1.4s						
MTE	Manteigas	62.82	308	eP	P	13 22 04.2	0.0
	comp=Z,63nm,1.9s						
INVG	Invergeldie, C	62.82	326	eP	P	13 22 02.7	-1.1
INVG				IAmb	IAmb	13 22 04.9	
	comp=Z,36nm,0.8s						
INCN	Inchon	62.83	55	IAMs_20	IAMs_20	13 51 26.0	
	comp=Z,772nm,20.0s						
PVAQ	Vaqueiros	62.85	304	eP	P	13 22 03.9	-0.5
PBEJ	Beja	62.99	305	eP	P	13 22 04.9	-0.4
	comp=Z,34nm,1.4s						
PVRL	Vila Real	63.00	309	eP	P	13 22 05.6	+0.3
	comp=Z,42nm,1.9s						
KAPI	Kappang	63.00	104	P	P	13 22 04.3	-1.3
	comp=Z,19nm,0.9s,baz=326,slow=3.0,SNR=3.7						
POLO	Lamas de Olo	63.06	309	eP	P	13 22 06.1	+0.3
	comp=Z,29nm,1.3s						
PVIS	Viseu	63.10	308	eP	P	13 22 06.2	+0.1
	comp=Z,60nm,1.3s						
EVO	Evora	63.12	306	eP	P	13 22 05.8	-0.3
	comp=Z,44nm,1.2s						
PCVE	Castro Verde	63.12	305	eP	P	13 22 05.4	-0.7
	comp=Z,32nm,2.0s						
BNSI	Bone	63.13	103	P	P	13 22 19.7	+13
PCAB	Cabril	63.26	309	eP	P	13 22 07.3	+0.3
	comp=Z,90nm,1.8s						
MESJ	Messejana	63.26	305	eP	P	13 22 06.5	-0.6
PMTG	Montargil	63.30	306	eP	P	13 22 06.5	-0.8
	comp=Z,30nm,1.5s						
MRSI	Marisa	63.36	97	P	P	13 22 08.0	-0.1
	comp=Z,864nmcomp=Z,97nm,1.0s						
TJN	Taejon	63.40	57	ceP	P	13 22 06.5	-1.5
BKSI	Bulukumba	63.45	104	P	P	13 22 20.5	+12
PGAV	Gavieira, Arco	63.45	310	eP	P	13 22 08.2	-0.2
	comp=Z,82nm,1.6s						
COI	Coimbra	63.48	308	eP	P	13 22 09.1	+0.7
	comp=Z,64nm,1.6s						
APSI	Ampana	63.49	99	P	P	13 22 21.6	+13
KIC	Kosan Boka	63.51	270	eP	P	13 22 09.4	+0.3
	comp=Z,123nm,1.1s						
PNCL	Nicolau / Gran	63.51	305	eP	P	13 22 08.2	-0.5
LAWE	Loch Awe, Argy	63.52	326	eP	P	13 22 08.2	-0.2
PCAS	Casmilo, Conde	63.54	307	eP	P	13 22 09.1	+0.2
	comp=Z,74nm,1.4s						
DBIC	Dimbokro	63.55	270	P	P	13 22 08.8	-0.5
	comp=Z,9.6nm,0.8s,baz=98,slow=3.9,SNR=10						
DBIC				LR	LR	13 51 46.0	
	comp=Z,297nm,18.6s,baz=80,slow=38						
DBIC	Dimbokro	63.55	270	P	P	13 22 09.2	-0.1
DBIC				pmax	pmax		
	comp=Z,99nm,1.2s						
DBIC	Dimbokro	63.55	270	P	P	13 22 09.2	-0.1
TIC	Toumodi	63.71	270	eP	P	13 22 10.8	+0.4
PFVI	Vila Bisbo	63.74	304	eP	P	13 22 10.2	0.0
	comp=Z,98nm,1.7s						
KAC	Achnashellach	63.74	327	eP	P	13 22 09.3	-0.6
KS19	Wonju Array Si	63.81	55	IAmb	IAmb	13 22 10.7	
	comp=Z,33nm,0.8s						
HOPEN	Hopen	63.82	351	eP	P	13 22 11.4	+1.4
LIC	Lamto	63.82	269	eP	P	13 22 11.4	+0.3
	comp=Z,326nm,1.1s						
KSRS	Korea Array	63.85	56	P	P	13 22 09.6	-1.4
	comp=Z,23nm,0.7s,baz=267,slow=6.9,SNR=89						
KSRS				LR	LR	13 52 05.9	
	comp=Z,808nm,20.0s,baz=145,slow=38						
PMAFR	Mafra	64.12	306	eP	P	13 22 13.0	+0.3
JOW	Kunigami	64.57	67	P	P	13 22 14.5	-1.4
	comp=Z,40nm,1.0s,baz=300,slow=13,SNR=5.3						
LUWI	Luwuk	64.60	99	P	P	13 22 30.7	+14
ZEA	Zeya	64.69	37	eP	P	13 22 16.8	+0.6
ZEA				eS	S	13 31 00.4	+4.3
ZEA				pmax	pmax		
	comp=E,10.0nm,0.8s						
ZEA				pmax	pmax		
	comp=N,10.0nm,0.5s						
ZEA				pmax	pmax		
	comp=Z,20nm,0.9s						
ZEA				smax	smax		
	comp=E,200nm,4.1s						
ZEA				MLR	MLR		
	comp=E,400nm,14.0s						
ZEA				MLR	MLR		
	comp=N,400nm,17.0s						
ZEA				MLR	MLR		
	comp=Z,400nm,19.0s						
MDJ	Mudanjiang	65.31	48	P	P	13 22 19.8	-0.6
MDJ				pmax	pmax		
	comp=Z,20nm,1.6s						
MDJ				pmax	pmax		
	comp=Z,410nm,4.1s						
SPA0	Spitsbergen Ar	66.33	351	eP	P	13 22 27.1	+0.7
JNU	Nakatsue	66.38	60	P	P	13 22 26.6	-1.0
	comp=Z,41nm,1.0s,baz=310,slow=3.1,SNR=6.9						
MMRI	Maumere	66.56	107	P	P	13 22 38.4	+9.5
MMRI	Maumere	66.56	107	IAMs_20	IAMs_20	13 54 14.7	
	comp=Z,1µm,20.0s						
USA0B	Ussuriysk Arra	67.02	48	P	P	13 22 30.3	-1.0
USA0B				pmax	pmax		
	comp=Z,67nm,1.0s						
USA0B	Ussuriysk Arra	67.02	48	P	P	13 22 30.3	-1.0
USA0B				IAmb	IAmb	13 22 44.3	
	comp=Z,67nm,1.0s						
USRK	Ussuriysk Ar.	67.02	48	P	P	13 22 30.4	-0.9
	comp=Z,24nm,0.9s,baz=261,slow=6.3,SNR=28						
KLR	Kul'dur	67.03	43	P	P	13 22 30.4	-0.9
	comp=Z,15nm,1.0s,baz=277,slow=7.2,SNR=23						
KLR				LR	LR	13 55 14.3	
	comp=Z,958nm,19.4s,baz=206,slow=39						
KLR	Kul'dur	67.03	43	ceP	P	13 22 30.4	-0.9
KLR				pmax	pmax		
	comp=Z,42nm,1.5s						
YAK	Yakutsk	67.36	29	P	P	13 22 32.9	-0.3
	comp=Z,88nm,0.7s,baz=151,slow=0.2,SNR=80						
YAK	Yakutsk	67.36	29	d iP	P	13 22 32.7	-0.5
YAK				e		13 22 59.3	
YAK				eS	S	13 31 21.3	-6.9
YAK				e*SS	SKSac	13 32 06.1	-24
YAK				e		13 32 25.8	
YAK				eSS	SS	13 35 47.3	-0.5
YAK				pmax	pmax		
	comp=Z,197nm,0.9s						
YAK				pmax	pmax		
	comp=E,56nm,1.4s						
YAK				pmax	pmax		
	comp=N,23nm,1.3s						
YAK				pmax	pmax		
	comp=Z,236nm,4.8s						
YAK				pmax	pmax		
	comp=N,205nm,4.4s						
YAK				pmax	pmax		
	comp=E,98nm,4.4s						
YAK				smax	smax		
	comp=N,204nm,4.7s						
YAK				smax	smax		
	comp=E,128nm,4.2s						
YAK	Yakutsk	67.36	29	P	P	13 22 32.7	-0.5
YAK				IAMs_20	IAMs_20	13 54 26.3	
	comp=Z,941nm,20.0s						
SANI	Sanana	67.97	99	P	P	13 22 36.9	-1.0
	comp=Z,896nmcomp=Z,68nm,0.9s						
BATI	Baumata	68.43	108	P	P	13 22 52.6	+12
TNTI	Ternate	68.49	95	P	P	13 22 42.3	+1.2
	comp=Z,982nmcomp=Z,60nm,1.7s						
SOEI	Soe	68.83	107	P	P	13 22 43.6	+0.2
	comp=Z,2µmcomp=Z,204nm,0.9s						
JMN	Monobe	68.84	59	P	P	13 22 42.4	-0.7
LBMI	Labuha	69.01	97	P	P	13 22 47.2	+2.8
	comp=Z,1µmcomp=Z,76nm,0.9s						
TIXI	Tiksi	69.15	18	P	P	13 22 43.5	-0.8
	comp=Z,21nm,0.6s,baz=276,slow=4.9,SNR=75						
TIXI	Tiksi	69.15	18	P	P	13 22 43.6	-0.6
TIXI				pmax	pmax		
	comp=Z,164nm,1.6s						
TIXI				MLR	MLR		
	comp=Z,1µm,19.0s						
TIXI	Tiksi	69.15	18	P	P	13 22 43.6	-0.6
TIXI				IAMs_20	IAMs_20	13 56 10.4	
	comp=Z,1µm,19.0s						
MBWA	Marble Bar	69.33	120	IAMs_20	IAMs_20	13 49 26.7	
	comp=Z,944nm,22.0s						
JWT	Wachi	69.97	58	P	P	13 22 48.8	-1.2
GRNR	Gornyy	70.08	41	⇓iP	P	13 22 49.4	-1.0
GRNR				pmax	pmax		
	comp=Z,20nm,0.9s						
GRNR				MLR	MLR		
	comp=E,650nm,20.0s						
GRNR				MLR	MLR		
	comp=N,350nm,18.0s						
GRNR				MLR	MLR		
	comp=Z,850nm,18.0s						
MORW	Morawa	70.18	129	P	P	13 22 49.5	-1.8
MORW				IAmb	IAmb	13 23 04.3	
	comp=Z,53nm,0.9s						
INU	Inuyama	71.28	57	P	P	13 22 56.8	-1.1
MAJO	Matsushiro	72.12	56	i P	P	13 23 01.6	-1.4
MAJO				pmax	pmax		
	comp=Z,26nm,1.0s						
MAJO	Matsushiro	72.12	56	P	P	13 23 01.6	-1.4
MAJO				IAmb	IAmb	13 23 16.3	
	comp=Z,44nm,1.0s						
MAT	Matsushiro	72.12	56	P	P	13 23 01.8	-1.2
MAT				eS	S	13 32 28.2	+3.1
MJAR	Matsushiro Arr	72.12	56	P	P	13 23 02.0	-1.1
	comp=Z,14nm,0.8s,baz=275,slow=6.3,SNR=25						
MJAR	Matsushiro Arr	72.12	56	P	P	13 23 02.0	-1.1
BORG	Borgarnes	72.38	334	LR	LR	13 57 36.7	
	comp=Z,284nm,19.4s,baz=107,slow=38						
NWAO	Narrogin (SRO)	73.06	132	IAMs_20	IAMs_20	13 55 16.6	
	comp=Z,536nm,19.0s						
YSS	Yuzh-Sakhalins	74.45	45	eP	P	13 23 16.6	+0.1
YSS				e		13 23 29.2	
YSS				eS	S	13 32 53.9	+2.8
YSS				pmax	pmax		
	comp=Z,60nm,1.0s						
YSS				MLR	MLR		
	comp=Z,1µm,17.0s						
YSS	Yuzh-Sakhalins	74.45	45	P	P	13 23 15.9	-0.7
ASAJ	Asahikawa	74.64	48	P	P	13 23 16.4	-1.3
	comp=Z,14nm,0.8s,baz=270,slow=2.0,SNR=3.7						
KNRA	Kununurra	75.02	111	P	P	13 23 20.0	-0.3
KNRA				IAmb	IAmb	13 23 33.2	
	comp=Z,57nm,1.1s						
MA2	Magadan	77.63	31	P	P	13 23 34.6	+0.1
MA2				pmax	pmax		
	comp=Z,65nm,0.9s						
MA2	Magadan	77.63	31	P	P	13 23 34.6	+0.1
MA2				IAmb	IAmb	13 23 48.2	
	comp=Z,65nm,0.9s						
SEY	Seymchan	77.86	28	P	P	13 23 35.7	+0.1
	comp=Z,69nm,0.9s,baz=267,slow=5.5,SNR=93						
SUMG	Summit	77.91	342	P	P	13 23 36.1	-0.2
SUMG				pmax	pmax		
	comp=Z,135nm,1.4s						
SUMG	Summit	77.91	342	P	P	13 23 36.0	-0.2
WB0	Warramunga Arr	81.46	113	IAmb	IAmb	13 24 08.4	
	comp=Z,30nm,0.8s						
WRA	Warramunga Arr	81.47	113	P	P	13 23 54.5	-1.6
	comp=Z,9.3nm,0.7s,baz=301,slow=4.1,SNR=80						
WRA				PKKPbc	PKKPbc	13 42 28.9	-1.2
	comp=Z,1.2nm,0.7s,baz=109,slow=2.4,SNR=16						
WRA				LR	LR	13 57 27.9	
	comp=Z,851nm,20.8s,baz=345,slow=34						
WRA	Warramunga Arr	81.47	113	i P	P	13 23 54.5	-1.6
WRA				pmax	pmax		
	comp=Z,11nm,0.7s						
WRAB	Tennant Creek	81.48	113	P	P	13 23 54.8	-1.3
WRAB				pmax	pmax		
	comp=Z,37nm,0.8s						
WRAB	Tennant Creek	81.48	113	P	P	13 23 54.8	-1.3
WRAB				IAmb	IAmb	13 24 08.7	
	comp=Z,37nm,0.8s						
WB2	Warramunga Arr	81.48	113	IAmb	IAmb	13 24 08.7	
	comp=Z,38nm,0.8s						
BILL	Bilibino	82.09	21	i P	P	13 23 58.5	+0.1
BILL				i		13 24 04.0	
BILL				i		13 27 05.4	
BILL				pmax	pmax		
	comp=Z,17nm,1.0s						
BILL				MLR	MLR		
	comp=Z,1µm,19.0s						
BILL	Bilibino	82.09	21	P	P	13 23 58.8	+0.3
BILL				IAmb	IAmb	13 24 12.6	
	comp=Z,48nm,1.1s						
JAY	Jayapura	82.20	95	P	P	13 23 58.7	-1.4
	comp=Z,9.3nm,0.8s,baz=230,slow=7.1,SNR=4.1						
ASAR	Alice Springs	82.35	117	P	P	13 23 59.1	-1.6
	comp=Z,10nm,0.8s,baz=295,slow=5.1,SNR=96						
ASAR				PKKPbc	PKKPbc	13 42 26.7	-1.6
	comp=Z,0.5nm,0.8s,baz=129,slow=2.4,SNR=5.0						
AS31	Alice Springs	82.35	117	P	P	13 23 58.7	-2.0
MAW	Mawson	82.68	179	P	P	13 24 00.2	-1.1
	comp=Z,23nm,1.0s,baz=16,slow=8.1,SNR=24						
MAW				LR	LR	13 55 03.2	
	comp=Z,684nm,18.3s,baz=39,slow=32						
MAW	Mawson	82.68	179	P	P	13 24 00.7	-0.6
MAW				pmax	pmax		
	comp=Z,15nm,1.4s						
MAW	Mawson	82.68	179	P	P	13 24 00.7	-0.6
PETK	Petropavlovsk-	82.78	37	P	P	13 24 00.4	-2.0
	comp=Z,12nm,0.9s,baz=213,slow=5.1,SNR=6.5						
PETK				LR	LR	14 03 33.2	
	comp=Z,732nm,21.6s,baz=266,slow=38						
EUNU	Eureka	83.17	354	P	P	13 24 04.0	0.0
EUNU				IAmb	IAmb	13 24 18.2	
	comp=Z,46nm,1.4s						
PET	Petropavlovsk	83.36	37	eP	P	13 24 00.1	-5.2
PET				pmax	pmax		
	comp=Z,58nm,1.3s						
SYO	Syowa Base	85.25	187	⇑eP	P	13 24 14.4	0.0
SYO	Syowa Base	85.25	187	⇑iP	P	13 24 28.0	+14
CASY	Casey	89.66	162	IAMs_20	IAMs_20	13 59 01.2	
	comp=Z,691nm,19.0s						
STKA	Stephens Creek	91.43	123	P	P	13 24 41.9	-2.9
	comp=Z,1.7nm,0.7s,baz=163,slow=5.0,SNR=4.5						
RDOG	Red Dog Mine	91.45	15	P	P	13 24 51.3	+7.0
	baz=319						
A36M	Sachs Harbour	92.89	1	P	P	13 24 51.1	+0.3
	baz=355						
A36M	Sachs Harbour	92.89	1	P	P	13 24 50.2	-0.6
A36M				IAmb	IAmb	13 25 04.6	
	comp=Z,26nm,1.1s						
TOLK	Toolik Lake Re	93.76	10	P	P	13 24 55.8	+0.9
	baz=332						
COLD	Coldfoot	94.89	11	P	P	13 25 00.9	+0.8
	baz=331						
GCSA	Galena City Sc	95.56	15	P	P	13 25 03.9	+0.7
	baz=325						
H21K	Melozitna Rive	95.74	13	P	P	13 25 04.9	+0.9
	baz=329						
H21K	Melozitna Rive	95.74	13	IAmb	IAmb	13 25 18.1	
	comp=Z,38nm,1.1s						
INK	Inuvik	96.12	5	P	P	13 25 06.1	+0.4
	baz=347						
I21K	Tanana	96.33	13	P	P	13 25 07.6	+0.9
	baz=330						
J20K	Nowinta River	96.70	14	P	P	13 25 09.1	+0.7
	baz=327						
MLY	Manley	96.72	12	P	P	13 25 09.2	+0.6
	baz=331						
MLY	Manley	96.72	12	IAmb	IAmb	13 25 22.3	
	comp=Z,21nm,1.1s						
SCHQ	Schefferville	96.73	332	LR	LR	14 13 44.0	
	comp=Z,110nm,18.1s,baz=66,slow=38						
I23K	Minto, Yukon-K	96.89	12	P	P	13 25 09.5	+0.3
	baz=332						
CHUM	Lake Minchumin	97.37	14	P	Pdif	13 25 12.1	+0.5
	baz=329						
K20K	Telida	97.41	15	P	Pdif	13 25 12.3	+0.5
	baz=327						
K20K	Telida	97.41	15	IAmb	IAmb	13 25 25.5	
	comp=Z,26nm,1.1s						
COLA	College	97.43	11	i P	P	13 25 11.7	0.0
COLA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BPAW	Bear Paw Mtn.	97.48	13	P	Pdif	13 25 12.2	+0.2
	baz=330						
ILAR	Eielson Array	97.71	11	P	P	13 25 11.8	-1.2
	comp=Z,1.2nm,0.7s,baz=325,slow=4.7,SNR=11						
ILAR				PP	PP	13 29 08.9	-1.1
	comp=Z,3.2nm,0.8s,baz=312,slow=3.8,SNR=10						
ILAR				PKKP	PKKPdf	13 41 51.8	-0.2
	comp=Z,0.8nm,1.0s,baz=160,slow=2.4,SNR=3.0						
ILAR				LR	LR	14 16 06.4	
	comp=Z,296nm,18.7s,baz=318,slow=40						

CAST	Castle Rocks	97.83	14	P	Pdif	13 25 13.9	+0.3
	baz=329						
VNA3	Neumayer Olymp	97.85	198	P	P	13 25 12.9	-0.4
HDA	Harding Lake	98.02	11	P	P	13 25 13.6	-0.8
	baz=334						
J25K	Salcha River,	98.13	11	P	Pdif	13 25 15.5	+0.6
	baz=336						
MCK	McKinley	98.24	12	P	P	13 25 15.4	0.0
	baz=332						
I29M	Ogilvie Camp,	98.49	7	P	P	13 25 16.5	0.0
	baz=343						
J26L	Joseph Creek	98.54	10	P	Pdif	13 25 17.2	+0.3
	baz=338						
SCRK	Sand Creek	98.95	10	P	Pdif	13 25 19.4	+0.7
	baz=337						
DAWY	Dawson	99.58	8	P	Pdif	13 25 22.1	+0.7
	baz=342						
YKA	Yellowknife Ar	102.35	357	PP	PP	13 29 44.8	-0.4
	comp=Z,3.9nm,1.1s,baz=11,slow=7.1,SNR=6.4						
QSPA	South Pole Qui	105.17	180	PP	PP	13 29 58.5	-8.6
	comp=Z,5.0nm,1.1s,baz=279,slow=7.7,SNR=5.4						
DZM	Mont Dzumac	111.04	108	*e*LR	LR	13 30 15.6	
	comp=Z,208nm,24.2s						
SMRT	St. Maarten	114.42	298	IAMs_20	IAMs_20	14 24 02.6	
	comp=Z,509nm,21.0s						
SEUS	St. Eustatius	114.59	298	IAMs_20	IAMs_20	14 28 55.1	
	comp=Z,678nm,19.0s						
SABA	Saba	114.75	298	IAMs_20	IAMs_20	14 19 21.5	
	comp=Z,741nm,21.0s						
MSO	Missoula	117.90	355	P	PKPdf	13 30 24.2	-1.0
	baz=7.1						
BOZ	Bozeman (W)	118.89	353	P	PKPdf	13 30 27.2	-0.1
	baz=9.7						
BMO	Blue Mountains	120.09	357	PKIKP	PKPdf	13 30 29.0	-0.5
BMO	Blue Mountains	120.09	357		PKPdf	13 30 28.9	-0.5
K22A	Casper	120.94	348	P	PKPdf	13 30 30.3	-0.9
	baz=16						
HLID	Hailey	121.19	355	P	PKiKP	13 30 31.8	0.0
	baz=6.8						
PINE	Pine Mountain	121.22	0	PKPdf	PKiKP	13 30 32.3	+0.4
BW06	Boulder Array	121.38	351	P	PKPdf	13 30 31.4	-0.8
	baz=12						
BW06	Boulder Array	121.38	351		PKPdf	13 30 31.5	-0.7
PDAR	Pinedale Array	121.38	351	PKP	PKPdf	13 30 30.4	-1.7
	comp=Z,2.5nm,0.7s,baz=66,slow=2.7,SNR=26						
PDAR				PKKPbc	PKKPbc	13 40 31.4	-2.9
	comp=Z,0.5nm,0.8s,baz=204,slow=2.9,SNR=5.1						
PDAR	Pinedale Array	121.38	351	PKPdf	PKPdf	13 30 31.7	-0.5
VILB	Vilhena	121.61	264	*e*P	PKiKP	13 30 33.4	+0.2
J05D	Fort Rock, OR	121.73	1	P	PKiKP	13 30 32.9	0.0
	baz=359						
U40A	Yellville	122.38	334	P	PKPdf	13 30 33.1	-0.9
	baz=32						
L04D	Klamath Falls	122.78	2	P	PKPdf	13 30 34.1	-0.6
	baz=358						
HWUT	Hardware Ranch	122.81	352		PKPdf	13 30 34.6	-0.3
KSCO	Kaye Shedlock'	123.47	343	P	PKPdf	13 30 35.8	-0.4
	baz=21						
O20A	White River Ci	123.70	349	P	PKPdf	13 30 35.8	-0.9
	baz=14						
N02D	Trinity Center	124.00	2	P	PKiKP	13 30 37.4	0.0
	baz=357						
MIAR	Mount Ida	124.22	333	P	PKPdf	13 30 37.2	-0.3
	baz=32						
SDCO	Great Sand Dun	125.41	345	IAMs_20	IAMs_20	14 34 25.9	
	comp=Z,592nm,20.0s						
T25A	Trinidad	125.70	344	P	PKPdf	13 30 40.2	-0.4
	baz=19						
WMOK	Wichita Mounta	126.14	338	P	PKPdf	13 30 40.9	-0.4
	baz=26						
ANMO	Albuquerque	128.30	345	PKP	PKPdf	13 30 45.6	0.0
	comp=Z,0.3nm,0.3s,baz=309,slow=4.9,SNR=4.3						
FURC	Furnace Creek,	128.43	356	P	PKiKP	13 30 46.6	+0.4
	baz=4.4						
CWC	Cottonwood Cre	128.52	357	P	PKiKP	13 30 46.6	0.0
	baz=2.9						
LPAZ	La Paz	129.69	261	PKP	PKPdf	13 30 49.0	-0.1
	comp=Z,1.0nm,0.8s,baz=270,slow=2.0,SNR=2.5						
PLCA	Paso Flores	129.93	229	PKP	PKPdf	13 30 48.0	-0.3
	comp=Z,1.8nm,1.0s,baz=232,slow=8.3,SNR=3.3						
TXAR	Lajitas Array	132.76	340	PKP	PKPdf	13 30 53.1	-1.0
	comp=Z,1.8nm,0.8s,baz=158,slow=1.4,SNR=13						

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*NEIC **28** 13:22:53.1±1.7, 33°.5S±0°.1×178°.6W±0°.2, h10^{km}±2^{km}, mb4.5/18 Error ellipse: s-maj=24.9km s-min=19.2km az=75.0*

*IDC **28** 13:22:58.2±2.8, 33°.52S×178°.62W, h45^{km}±22^{km}, mb4.3/3, mb1 4.5/5, mb1mx3.9/36, mbtmp4.6/5, ML4.6/3, MS3.5/1, Ms1 3.5/1, ms1mx3.0/35, Error ellipse: s-maj=33.7km s-min=19.6km az=113.0*

*WEL **28** 13:23:56.8, 37°S±42°×17°9E±99°9, h56^{km}±19^{km}, M2.8/12, ML3.1/12, MLv2.8/12, Error ellipse: s-maj=3.6km s-min=0.5km az=97.3*

ISC 28 13:22:56.6±0.7**, 33°.42S**±0°.07×**178°.6W**±0°.1**, h41**^{km}**, n58,** σ**1^{s}60**/61**, mb4.6**/12**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	4.20	8	P	Pn	13 24 00.7	+2.6
	302nm,0.3s,baz=197,slow=19,SNR=3.2						
RAO				S	Sn	13 24 40.9	-5.0
	132nm,0.3s,baz=66,slow=19,SNR=1.6						
MXZ	Matakaoa Point	4.85	211	P	Pn	13 24 06.6	-0.5
MXZ	Matakaoa Point	4.85	211	Pn	Pn	13 24 04.5	-2.6
WMGZ	Waiomatatini S	5.03	208	P	Pn	13 24 08.5	-1.0
HAZ	Te Kaha	5.24	213	P	Pn	13 24 11.6	-0.8
PUZ	Puketiti	5.30	208	P	Pn	13 24 11.5	-1.9
RUGZ	Raukumara Rang	5.46	213	P	Pn	13 24 14.3	-1.3
TWGZ	Tauwhareparae	5.51	210	P	Pn	13 24 15.2	-0.9
CNGZ	Carnagh Statio	5.68	206	P	Pn	13 24 17.3	-1.2
TKGZ	Te Karaka	5.79	209	P	Pn	13 24 20.1	+0.2
MWZ	Matawai	5.83	212	P	Pn	13 24 18.1	-2.5
OPRZ	Ohinepanea	5.93	221	P	Pn	13 24 21.9	0.0
URZ	Urewera	5.96	215	P	Pn	13 24 21.8	-0.5
	8.2nm,0.3s,baz=300,slow=23,SNR=43						
URZ				S	Sn	13 25 29.3	0.0
	14nm,0.3s,baz=166,slow=18,SNR=3.9						
URZ	Urewera	5.96	215	P	Pn	13 24 21.6	-0.8
URZ	Urewera	5.96	215	Pn	Pn	13 24 20.1	-2.2
RIGZ	Rimuhau	6.05	208	P	Pn	13 24 21.6	-1.9
PRGZ	Paritu Road	6.19	207	P	Pn	13 24 22.3	-3.2
KARZ	Kaharoa	6.23	221	P	Pn	13 24 27.9	+1.9
TARZ	Mount Tarawera	6.25	218	P	Pn	13 24 27.0	+0.7
SNGZ	Shannon Statio	6.29	211	P	Pn	13 24 27.1	+0.3
MUGZ	Murupara	6.30	215	P	Pn	13 24 25.4	-1.6
RRRZ	Republican Roa	6.32	218	P	Pn	13 24 27.3	0.0
BKZ	Black Stump Fm	6.98	213	Pn	Pn	13 24 35.0	-1.3
OUENC	Ouen Island, N	16.89	307	Pn	Pn	13 26 48.7	-1.4
OUENC				IAmb	IAmb	13 26 57.5	
	comp=Z,17nm,0.8s						
DZM	Mont Dzumac	17.40	307	P	P	13 26 59.6	+2.2
	comp=Z,0.4nm,0.3s,baz=121,slow=17,SNR=7.9						
DZM				LR	LR	13 31 54.4	
	comp=Z,161nm,20.6s,baz=316,slow=31						
DZM	Mont Dzumac	17.40	307		Pn	13 26 54.4	-2.0
EIDS	Eidsvold	27.55	279	P	P	13 28 37.9	-1.8
EIDS				IAmb	IAmb	13 28 56.3	
	comp=Z,6.2nm,0.8s						
STKA	Stephens Creek	33.43	262	P	P	13 29 32.9	+1.3
	comp=Z,1.5nm,0.7s,baz=19,slow=11,SNR=3.6						
STKA	Stephens Creek	33.43	262	P	P	13 29 30.8	-0.8
CTAO	Charters Tower	33.92	284	P	P	13 29 36.5	+0.6
CTAO				IAmb	IAmb	13 29 39.9	
	comp=Z,6.7nm,0.7s						
BBOO	Buckleboo	37.77	258	P	P	13 30 06.2	-2.6
BBOO				IAmb	IAmb	13 30 14.0	
	comp=Z,23nm,1.4s						
PMG	Port Moresby	39.55	299	P	P	13 30 23.3	-0.6
PMG				IAmb	IAmb	13 30 26.2	
	comp=Z,6.3nm,1.0s						
COEN	Coen	39.73	290	P	P	13 30 27.1	+1.7
AS31	Alice Springs	42.55	270	P	P	13 30 48.6	+0.1
AS31				IAmb	IAmb	13 30 50.4	
	comp=Z,4.1nm,0.7s						
ASAR	Alice Springs	42.55	270	P	P	13 30 49.3	+0.7
	comp=Z,11nm,0.7s,baz=111,slow=7.3,SNR=155						
ASAR				PcP	PcP	13 32 41.1	+0.6
	comp=Z,2.0nm,0.8s,baz=119,slow=3.6,SNR=7.0						
ASAR	Alice Springs	42.55	270	P	P	13 30 48.4	-0.1
WR0	Warramunga Arr	43.63	276		P	13 30 57.5	+0.2
WR0				IAmb	IAmb	13 30 59.2	
	comp=Z,11nm,1.0s						
WB2	Warramunga Arr	43.80	276		P	13 30 59.1	+0.5
WRAB	Tennant Creek	43.80	276	P	P	13 30 58.4	-0.3
WRA	Warramunga Arr	43.81	276	P	P	13 30 59.2	+0.4
	comp=Z,12nm,0.7s,baz=118,slow=7.4,SNR=124						
WRA				PcP	PcP	13 32 44.8	0.0
	comp=Z,1.4nm,0.8s,baz=120,slow=3.2,SNR=5.1						
WRA	Warramunga Arr	43.81	276	P	P	13 30 58.4	-0.3
WB0	Warramunga Arr	43.84	276	P	P	13 30 59.4	+0.3
FORT	Forrest	44.87	258	P	P	13 31 04.3	-2.8
VNDA	Vanda	45.05	186	P	P	13 31 06.2	-1.7
VNDA				IAmb	IAmb	13 31 19.6	
	comp=Z,8.1nm,1.4s						
KNRA	Kununurra	50.51	277	P	P	13 31 50.9	-0.1
KNRA				IAmb	IAmb	13 31 53.8	
	comp=Z,8.0nm,0.8s						
QSPA	South Pole Qui	56.70	180	P	P	13 32 35.9	+0.1
QSPA				IAmb	IAmb	13 32 49.6	
	comp=Z,6.8nm,1.0s						
VNA3	Neumayer Olymp	75.33	176	P	P	13 34 37.3	+2.1
VNA3	Neumayer Olymp	75.33	176	PcP	PcP	13 34 47.2	-1.1
VNA2	Neumayer--Watz	75.76	177	P	P	13 34 39.7	+2.1
	baz=170,slow=5.1						
VNA2	Neumayer--Watz	75.76	177	PcP	PcP	13 34 49.3	-0.8
ARCES	ARCESS Array B	141.42	347	PKhKP	PKPpre	13 42 19.2	
	comp=Z,3.0nm,1.0s,baz=48,slow=1.3,SNR=1.9						
KBZ	Khabaz	146.29	300	PKPbc	PKPab	13 42 33.6	+0.2
	comp=Z,3.0nm,0.9s,baz=116,slow=5.4,SNR=5.8						
FINES	FINESS Array B	147.78	338	PKPbc	PKPbc	13 42 36.2	+0.1
	comp=Z,3.9nm,0.6s,baz=45,slow=4.1,SNR=16						
NOA	NORSAR Array B	151.64	350	PKPbc	PKiKP	13 42 48.0	+1.8
	comp=Z,1.5nm,1.0s,baz=17,slow=4.4,SNR=3.4						
AKASG	Malin Array Be	153.32	319	PKPbc	PKiKP	13 42 50.6	+0.7
	comp=Z,1.3nm,0.6s,baz=66,slow=2.4,SNR=6.9						
BRTR	Keskin Array B	153.47	293	PKPbc	PKiKP	13 42 51.7	+0.9
	comp=Z,0.9nm,0.5s,baz=117,slow=4.3,SNR=4.4						
TORD	Torodi Ar. Bea	159.82	181	PKPab	PKPab	13 43 31.3	+0.7
	comp=Z,1.2nm,0.7s,baz=179,slow=3.2,SNR=6.4						
CLL	Collm	160.23	338	*e*PKPab	PKPab	13 43 35.0	+3.5

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*IDC **28** 13:39:15.1±0.3, 3°.76N×126°.94E, h0^{km}, mb4.8/42, mb1 4.8/43, mb1mx4.7/53, mbtmp4.8/43, ML4.8/1, MS4.7/21, Ms1 4.7/21, ms1mx4.5/43, Error ellipse: s-maj=14.3km s-min=7.7km az=77.0*

*DJA **28** 13:39:18.3±0.7, 4°N±4°×12°7E±°, h17^{km}±6^{km}, M5.0/33, mB5.4/30, mb5.1/33, MLv5.1/13, Mw(mB)4.9/30, MwMwp5.1/13, Mwp5.4/13*

*GCMT **28** 13:39:21.3±0.2, 3°.84N±0°.01×127°.13E±0°.01, h102^{km}±2^{km}, MW5.5/110, Moment Tensor Solution. s10,c10; s110,c184; Duration: 1^{s}3 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.91±.04; $M_{\theta\theta}$1.76±.03; $M_{\phi\phi}$0.15±.04; $M_{r\theta}$0.19±.04; $M_{\theta\phi}$-0.61±.03; $M_{\phi r}$0.26±.03; Best double couple: $M_0$1.96500×10^{17} NP1:ϕ_s118.00000°, δ44.00000°, λ-77.00000°. NP2:ϕ_s279.00000°, δ47.00000°, λ-103.00000°. Principal axes: T 1.9680, Plg1.0000°, Azm18.0000°; N -0.0020, Plg9.0000°, Azm288.0000°; P -1.9630, Plg81.0000°, Azm117.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*KLM **28** 13:39:22, 3°.81N×127°.26E, h72^{km}, mb5.3*

*BJI **28** 13:39:22.6±0.0, 3°.54N×126°.85E, h90^{km}, mB5.4/48, mb4.9/68*

*NEIC **28** 13:39:23.3±2.3, 3°.66N±0°.08×126°.95E±0°.09, h69^{km}±6^{km}, mb5.2/57, Error ellipse: s-maj=14.5km s-min=10.4km az=61.0*

*MOS **28** 13:39:25.1±1.4, 3°.79N×127°.01E, h92^{km}, mb5.1/33, MS4.8/7, Error ellipse: s-maj=9.9km s-min=4.6km az=114.2*

ISC 28 13:39:22.6±0.4**, 3°.75N**±0°.03×**126°.98E**±0°.05**, h55**^{km}±3^{km}**, h55**^{km}**:pP-P, n446,** σ**1^{s}86**/473**, mb5.1**/117**, MS4.8**/46**, 28C-26D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	1.45	267	P	Pn	13 39 45.2	-1.4
TNTI	Ternate	2.99	173	P	Pn	13 40 07.8	+0.2
TNTI	Ternate	2.99	173		Pn	13 40 07.1	-0.4
DAV	Davao City (W)	3.58	337	Pn	Pn	13 40 15.3	-0.4
	56nm,0.3s,baz=58,slow=7.2,SNR=1.6						
DAV				Sn	Sn	13 40 50.0	-6.7
	128nm,0.3s,baz=122,slow=20,SNR=5.7						
DAV				Lg	Lg	13 41 13.4	
	77nm,0.3s,baz=252,slow=20,SNR=2.0						
KMSI	Cibinong	4.36	224	P	Pn	13 40 27.4	+1.1
LBMI	Labuha	4.39	173	P	Pn	13 40 27.0	+0.2
GTOI	Gorontalo	5.03	232	P	Pn	13 40 35.6	0.0
	0.4nm5μm1μm106nm,0.8s						
SANI	Sanana	5.85	190	P	Pn	13 40 43.4	-3.4
	0.7nm7μm2μm152nm,0.7s						
MRSI	Marisa	6.00	237	P	Pn	13 40 48.7	-0.1
	1.3nm8μm4μm296nm,1.0s						
SWI	Sorong	6.27	137	P	Pn	13 40 51.8	-0.8
	0.6nm19μm3μm203nm,0.8s						
SIJI	Sorong	6.28	137	Pn	Pn	13 40 51.2	-1.5
	23nm,0.3s,baz=333,slow=13,SNR=79						
SIJI				Sn	Sn	13 42 02.8	-0.4
	5.5nm,0.3s,baz=96,slow=22,SNR=1.8						
SIJI				LR	LR	13 43 31.8	
	comp=Z,12μm,21.0s,baz=340,slow=41						
LUWI	Luwuk	6.36	222	P	Pn	13 40 56.6	+2.8
	3.1nm8μm11μm646nm,1.1s						
LUWI	Luwuk	6.36	222		Pn	13 40 55.6	+1.8
TOLI2	Tolitoli	6.73	247	Pn	Pn	13 40 57.4	-1.5
APSI	Ampana	7.06	229	P	Pn	13 41 06.0	+2.5
	5μm5μm471nm,1.1s						
MSAI	Masohi	7.32	165	P	Pn	13 41 08.1	+1.2
	22nm,0.6s						
AAI	Ambon	7.49	171	P	Pn	13 41 10.8	+1.5
	7μm2μm112nm,0.8s						
MPSI	Mapaga	7.85	245	P	Pn	13 41 13.8	-0.4
	11μm1μm79nm,1.0s						
FAKI	Fak Fak	8.46	141	P	Pn	13 41 22.0	-0.7
	12μm2μm96nm,0.7s						
FAKI	Fak Fak	8.46	141	Pn	Pn	13 41 23.2	+0.5
MYLDM	Lahad Datu	8.57	280		Pn	13 41 25.6	+1.4
TTSI	Tana Toraja	9.84	227	P	Pn	13 41 42.3	+0.8
	5μm2μm127nm,1.1s						
SPSI	Sidrap Palu	10.52	223	P	Pn	13 41 52.8	+2.0
	1μm58nm,1.0s						
SPMM	Sapulut	10.53	276	P	Pn	13 41 52.0	+1.0
BNSI	Bone	10.62	220	P	Pn	13 41 54.0	+1.8
	1μm62nm,1.1s						
KKM	Kota Kinabalu	10.97	282	Pn	Pn	13 41 57.8	+0.8
KAPI	Kappang	11.31	220	Pn	Pn	13 42 03.9	+2.2
	0.7nm,0.3s,baz=57,slow=16,SNR=1.9						
BKSI	Bulukumba	11.32	217	P	Pn	13 42 01.6	-0.2
	727nm24nm,1.1s						
BSSI	Bau Bau, Buton	11.78	213	P	Pn	13 42 07.1	-0.9
	812nm38nm,1.2s						
SAUI	Saumlaki	12.43	160	P	P	13 42 23.9	-3.3
KBKI	Kotabaru	12.88	237	P	Pn	13 42 23.4	+0.3
	1μm44nm,0.9s						
MTKI	Muara Teweh, K	12.95	249	P	P	13 42 32.6	-0.4
MMRI	Maumere	13.19	201	P	Pn	13 42 30.2	+3.0
	94nm,0.8s						
SOEI	Soe	13.69	191	P	Pn	13 42 33.9	-0.3
	3μm128nm,1.0s						
SOEI	Soe	13.69	191	Pn	Pn	13 42 32.8	-1.4
BBKI	Banjar Baru	14.09	240	P	Pn	13 42 41.9	+2.4
	3μm73nm,0.9s						
BATI	Baumata	14.26	193	Pn	Pn	13 42 42.8	+1.0
	2.4nm,0.3s,baz=210,slow=5.1,SNR=2.7						
BATI	Baumata	14.26	193	P	P	13 42 49.4	+1.9
SBUM	Sibu	14.80	265	P	Pn	13 42 51.0	+2.2
JAY	Jayapura	15.06	114	Pn	P	13 42 54.8	-1.7
	1.4nm,0.3s,baz=278,slow=9.1,SNR=15						
JAY				LR	LR	13 47 50.4	
	comp=Z,3μm,21.5s,baz=288,slow=34						
JAY	Jayapura	15.06	114	P	P	13 42 58.5	+2.0
PLAI	Plampang	15.51	216	P	P	13 43 01.5	+0.1
	3μm223nm,0.8s						
STKI	Sintang	15.92	257	P	P	13 43 07.2	+1.2
	93nm,0.9s						
TWSI	Taliwang, Sumb	15.98	219	P	P	13 43 06.8	+0.1
	1μm98nm,0.8s						
DRS	Darwin Rock St	16.54	166	P	Pn	13 43 10.9	-0.2
PBKI	Pangkalan Bun	16.59	247	P	Pn	13 43 11.7	-0.1
	4μm186nm,1.3s						
SRBI	Singaraja	16.62	225	P	P	13 43 13.1	-0.6
	2μm267nm,1.2s						
KSM	Kuching	16.81	263	P	P	13 43 16.0	+0.1
KSM	Kuching	16.81	263	P	P	13 43 16.2	+0.4
KSM	Kuching	16.81	263	P	P	13 43 17.0	+1.1
KMMI	Kalianget	16.85	230	P	Pn	13 43 13.9	-1.0
	1μm88nm,0.9s						
MTN	Manton Dam	17.00	166	P	Pn	13 43 15.7	-1.0
	baz=17,SNR=18						
MTN	Manton Dam	17.00	166	Pn	Pn	13 43 13.3	-3.5
MTN	Manton Dam	17.00	166	P	Pn	13 43 15.9	-0.8
DNP	Denpasar	17.04	224	P	P	13 43 32.8	+14
KDU	Kakadu	17.22	162	P	Pn	13 43 19.2	-0.3
JAGI	Jajag, Banyuwa	17.64	226	P	P	13 43 26.4	+1.4
	2μm135nm,1.1s						
JAGI	Jajag, Banyuwa	17.64	226		Pn	13 43 20.2	-4.5
JAGI				IAmb	IAmb	13 43 28.3	
	comp=Z,93nm,0.7s						
JAGI	Jajag, Banyuwa	17.64	226	P	P	13 43 25.0	0.0
KNRA	Kununurra	19.39	175	P	P	13 43 43.9	-0.3
	baz=19,SNR=93						
KNRA	Kununurra	19.39	175	P	P	13 43 41.2	-3.0
KNRA				IAmb	IAmb	13 44 06.4	
	comp=Z,113nm,1.0s						
KNRA	Kununurra	19.39	175	P	P	13 43 44.6	+0.4
PCJI	Pacitan	19.73	233	P	P	13 43 45.2	-2.8
TWG	Pinlang	19.80	344	P	P	13 43 44.5	-4.2
TWG				IAmb	IAmb	13 43 48.0	
	comp=Z,59nm,0.8s						
UGM	Wanagama	20.10	235	P	P	13 43 52.5	+0.5
GUMO	Guam	20.18	60	LR	LR	13 50 11.8	
	comp=Z,2μm,21.7s,baz=236,slow=32						
YULB	Yu-li	20.28	345	P	P	13 43 50.2	-3.7
TPUB	Ta-pu	20.38	343	P	P	13 43 52.1	-2.9
TPUB				IAmb	IAmb	13 43 54.6	
	comp=Z,168nm,1.0s						
SSLB	Suanglung	20.75	344	P	P	13 43 55.4	-3.6
SSLB				IAmb	IAmb	13 44 01.5	
	comp=Z,76nm,0.9s						
YOJ	Yonaguni jima	20.94	350	P	Pn	13 44 02.9	-1.2
YHNB	Yeheng	21.48	346	P	P	13 44 04.9	-2.0
FITZ	Fitzroy Crossi	21.75	183	P	P	13 44 08.3	-1.4
	comp=Z,8.0nm,0.5s,baz=14,slow=12,SNR=40						
FITZ				S	S	13 48 05.6	-2.0
	comp=Z,15nm,1.1s,baz=184,slow=19,SNR=3.8						
FITZ	Fitzroy Crossi	21.75	183	P	P	13 44 08.7	-1.0
	baz=22,SNR=12						
LEM	Lembang	22.00	242	P	P	13 44 11.7	-1.0
	comp=Z,77nm,0.7s,baz=20,slow=8.3,SNR=9.9						
LEM				LR	LR	13 52 57.2	
	comp=Z,3μm,20.8s,baz=53,slow=37						
QZH	Quanzhou	22.56	340	⇓*i*P	P	13 44 18.3	-0.1
QZH				S	S	13 48 22.0	-0.1
QZH				pmax	pmax		
	comp=Z,570nm,6.3s						
QZH				LR	LR		
	comp=Z,1μm,17.0s						
QZH				LR	LR		
	comp=Z,1μm,15.5s						
QZH				LR	LR		
	comp=Z,2μm,19.2s						
QIZ	Qiongzhong	22.61	314	P	P	13 44 18.0	-0.9
QIZ				S	S	13 48 19.8	-3.2
QIZ				LR	LR		
	comp=Z,2μm,13.2s						
QIZ				LR	LR		
	comp=Z,2μm,18.6s						
QIZ				LR	LR		
	comp=Z,2μm,22.3s						
JOW	Kunigami	22.98	3	P	P	13 44 21.9	-0.8
	comp=Z,19nm,0.6s,baz=234,slow=8.6,SNR=5.0						
JOW	Kunigami	22.98	3	P	P	13 44 22.7	-0.1
JOW	Kunigami	22.98	3	P	P	13 44 23.5	+0.8
MYKOM	Kota Tinggi	23.19	266	P	P	13 44 25.0	+0.1
COEN	Coen	23.83	138	P	P	13 44 28.2	-2.6
COEN	Coen	23.83	138	P	P	13 44 31.0	+0.1
PMG	Port Moresby	23.98	123	P	P	13 44 31.6	-0.7
	comp=Z,4.8nm,0.8s,baz=275,slow=10,SNR=4.5						
PMG				LR	LR	13 54 43.9	
	comp=Z,2μm,21.3s,baz=336,slow=39						
UBPT	Khong Chiam	24.08	300	P	P	13 44 31.0	-2.1
JRMM	Jerantut	24.45	271	P	P	13 44 38.0	+1.4
WB0	Warramunga Arr	24.48	163	P	P	13 44 34.0	-2.9
WRAB	Tennant Creek	24.63	163	*ce*P	P	13 44 37.9	-0.2
WRAB				pmax	pmax		
	comp=Z,81nm,0.7s						
WRAB	Tennant Creek	24.63	163	P	P	13 44 35.4	-2.8
WRAB				IAmb	IAmb	13 44 40.2	
	comp=Z,92nm,0.8s						
WRAB	Tennant Creek	24.63	163	P	P	13 44 39.0	+0.9
WRA	Warramunga Arr	24.63	163	P	P	13 44 37.5	-0.7
	comp=Z,71nm,0.8s,baz=343,slow=10,SNR=210						
WRA				S	S	13 49 01.4	+5.5
	comp=Z,11nm,0.9s,baz=346,slow=21,SNR=5.8						
WRA				ScP	ScP	13 51 55.2	+5.9
	comp=Z,2.9nm,1.0s,baz=344,slow=2.9,SNR=3.7						
WRA	Warramunga Arr	24.63	163	P	P	13 44 36.0	-2.1
WB2	Warramunga Arr	24.64	163	P	P	13 44 36.2	-2.0
WB2				IAmb	IAmb	13 44 41.4	
	comp=Z,109nm,0.7s						
WR0	Warramunga Arr	24.71	163	P	P	13 44 36.5	-2.3
WR0				IAmb	IAmb	13 44 41.7	
	comp=Z,63nm,0.8s						
XMIS	Christmas Isla	25.52	236	P	P	13 44 43.5	-2.8
XMIS				IAmb	IAmb	13 44 50.2	
	comp=Z,118nm,0.8s						
MBWA	Marble Bar	25.76	196	P	P	13 44 50.7	+2.3
IPM	Ipoh	25.90	273	P	P	13 44 51.3	+1.5
PSA00	Pilbara Seismi	26.12	195	P	P	13 44 47.7	-3.9
PSA00	Pilbara Seismi	26.12	195	P	P	13 44 53.5	+1.8
KULM	Kulim	26.29	274	P	P	13 44 51.4	-1.9
KULM				IAmb	IAmb	13 45 02.5	
	comp=Z,184nm,1.8s						
QIS	Mount Isa	27.15	153	P	P	13 45 00.6	-0.4
	baz=27,SNR=20						
QIS	Mount Isa	27.15	153	P	P	13 45 01.1	+0.1
JCJ	Chichijima	27.39	31	P	P	13 45 01.2	-1.8
	comp=Z,88nm,0.8s,baz=270,slow=19,SNR=2.0						
MTSU	Mount Surprise	27.66	142	P	P	13 45 07.1	+1.5
	baz=28,SNR=8.8						
MTSU	Mount Surprise	27.66	142	P	P	13 45 07.3	+1.7
SSE	Sheshan	27.74	349	P	P	13 45 06.8	+0.7
SSE				S	S	13 49 50.0	+5.2
SSE				pmax	pmax		
	comp=Z,8.0nm,0.7s						
SSE				pmax	pmax		
	comp=Z,360nm,6.2s						
SSE				LR	LR		
	comp=Z,290nm,15.3s						
SSE				LR	LR		
	comp=Z,560nm,15.5s						
PSI	Prapat	28.03	269	P	P	13 45 07.2	-1.9
	comp=Z,11nm,0.9s,baz=98,slow=3.6,SNR=14						
PSI				LR	LR	13 58 06.7	
	comp=Z,1μm,18.3s,baz=80,slow=40						
RPSI	Rantau Prapat	28.03	269	P	P	13 45 07.2	-1.8
AS31	Alice Springs	28.08	166	P	P	13 45 07.8	-1.4
ASAR	Alice Springs	28.08	166	P	P	13 45 07.2	-2.0
	comp=Z,4.7nm,0.7s,baz=349,slow=7.3,SNR=50						
ASAR				PcP	PcP	13 48 23.7	+0.9
	comp=Z,4.9nm,0.8s,baz=348,slow=2.2,SNR=5.6						
ASAR				S	S	13 49 54.9	+4.5
	comp=Z,1.1nm,0.7s,baz=350,slow=21,SNR=2.9						
ASAR				ScP	ScP	13 52 04.8	+5.5
	comp=Z,1.1nm,0.8s,baz=345,slow=3.2,SNR=3.4						
ASAR				LR	LR	13 57 03.1	
	comp=Z,1μm,21.0s,baz=350,slow=38						
ASAR	Alice Springs	28.08	166	P	P	13 45 07.1	-2.2
WRKA	Warakurna	28.65	178	P	P	13 45 14.1	-0.2
	baz=29,SNR=66						
WRKA	Warakurna	28.65	178	P	P	13 45 15.4	+1.1
NJ2	Nanjing	29.17	346	*e*P	P	13 45 19.0	+0.2
NJ2				pP	sP	13 45 36.0	-2.7
WHN	Wuhan	29.20	337	⇑P	P	13 45 18.0	-1.1
WHN				LR	LR		
	comp=Z,3μm,14.4s						
WHN				LR	LR		
	comp=Z,1μm,14.1s						
WHN				LR	LR		
	comp=Z,4μm,14.9s						
JNU	Nakatsue	29.44	7	P	P	13 45 20.5	-0.8
	comp=Z,17nm,0.9s,baz=169,slow=6.7,SNR=4.6						
GYA	Guiyang	29.81	321	P	P	13 45 26.8	+2.1
GYA				pP	sP	13 45 49.5	+4.6
GYA				S	S	13 50 17.0	-0.8
GYA				sS	sS	13 50 52.0	+11
GYA				LR	LR		
	comp=Z,2μm,21.7s						
GYA				LR	LR		
	comp=Z,1μm,19.7s						

GYA				LR	LR		
	comp=Z,2µm,19.4s						
CMAR	**Chiang Mai Arr**	**31.08**	**300**	P	**P**	**13 45 35.0**	**-0.9**
	comp=Z,1.3nm,0.6s,baz=118,slow=7.5,SNR=5.0						
CMAR				PcP	**PcP**	**13 48 32.4**	**+1.8**
	comp=Z,3.3nm,1.0s,baz=158,slow=0.9,SNR=6.9						
CMAR				ScP	**ScP**	**13 52 14.4**	**+5.4**
	comp=Z,0.5nm,0.3s,baz=127,slow=2.4,SNR=5.3						
CMAR				LR	LR	13 57 26.7	
	comp=Z,835nm,20.9s,baz=137,slow=35						
ENH	**Enshi**	**31.13**	**330**	P	**P**	**13 45 34.8**	**-1.5**
ENH				IAmb	IAmb	13 45 36.3	
	comp=Z,38nm,0.9s						
CHTO	**Chiang Mai**	**31.23**	**301**	P	**P**	**13 45 34.4**	**-2.8**
CHTO				pmax	pmax		
	comp=Z,33nm,1.1s						
CHTO	**Chiang Mai**	**31.23**	**301**	P	**P**	**13 45 34.4**	**-2.8**
CHTO				IAmb	IAmb	13 45 38.5	
	comp=Z,33nm,1.1s						
CHTO	**Chiang Mai**	**31.23**	**301**	P	**P**	**13 45 37.9**	**+0.7**
MEEK	**Meekatharra**	**31.28**	**195**	P	**P**	**13 45 37.2**	**-0.4**
	baz=31,SNR=12						
MEEK	**Meekatharra**	**31.28**	**195**	P	**P**	**13 45 38.2**	**+0.6**
KMI	**Kunming**	**31.54**	**315**	⇓P	**P**	**13 45 40.3**	**+0.1**
KMI				pP	sP	13 46 00.5	+0.2
KMI				PP	**PnPn**	**13 46 45.5**	**+0.3**
KMI				S	**S**	**13 50 39.5**	**-5.7**
KMI				sS	sS	13 51 17.8	+10
KMI				pmax	pmax		
	comp=Z,13nm,0.5s						
KMI				LR	LR		
	comp=Z,1µm,18.7s						
KMI				LR	LR		
	comp=Z,960nm,16.4s						
KMI				LR	LR		
	comp=Z,2µm,21.8s						
JHJ	**Hachijo jima 2**	**31.57**	**21**	LR	LR	13 57 56.0	
	comp=Z,2µm,20.6s,baz=252,slow=36						
TJN	**Taejon**	**32.47**	**1**	*i* P	**P**	**13 45 48.6**	**+0.8**
OOD	**Oodnadatta**	**32.47**	**166**	P	**P**	**13 45 48.9**	**+1.0**
INU	**Inuyama**	**32.78**	**15**	P	**P**	**13 45 49.0**	**-1.6**
INU				IAmb	IAmb	13 46 01.8	
	comp=Z,25nm,1.0s						
KSRS	**Korea Array**	**33.55**	**1**	P	**P**	**13 45 56.5**	**-0.8**
	comp=Z,5.5nm,0.9s,baz=178,slow=9.3,SNR=16						
KSRS				PcP	**PcP**	**13 48 38.4**	**+1.4**
	comp=Z,4.5nm,0.9s,baz=182,slow=4.1,SNR=8.6						
KSRS				LR	LR	14 02 43.4	
	comp=Z,691nm,18.4s,baz=215,slow=42						
TIA	**Tai'an**	**33.55**	**345**	⇓P	**P**	**13 45 57.5**	**+0.1**
TIA				pmax	pmax		
	comp=Z,15nm,1.0s						
INKA	**Innaminka**	**34.01**	**158**	P	**P**	**13 46 02.7**	**+1.3**
MJAR	**Matsushiro Arr**	**34.23**	**16**	P	**P**	**13 46 01.7**	**-1.5**
	comp=Z,1.4nm,0.7s,baz=192,slow=8.9,SNR=3.1						
MJAR				PcP	**PcP**	**13 48 39.3**	**+0.3**
	comp=Z,1.6nm,0.8s,baz=172,slow=4.2,SNR=2.6						
MJAR	**Matsushiro Arr**	**34.23**	**16**	P	**P**	**13 46 01.9**	**-1.4**
MAJO	**Matsushiro**	**34.23**	**16**	*i* P	**P**	**13 46 02.8**	**-0.4**
MAJO				pmax	pmax		
	comp=Z,11nm,1.0s						
MAT	**Matsushiro**	**34.23**	**16**	P	**P**	**13 46 00.4**	**-2.8**
MORW	**Morawa**	**34.28**	**197**	P	**P**	**13 46 05.6**	**+1.8**
	baz=34,SNR=7.9						
MORW	**Morawa**	**34.28**	**197**	P	**P**	**13 46 00.1**	**-3.7**
MORW				IAmb	IAmb	13 46 24.5	
	comp=Z,31nm,1.3s						
MORW	**Morawa**	**34.28**	**197**	P	**P**	**13 46 05.5**	**+1.8**
FORT	**Forrest**	**34.35**	**178**	P	**P**	**13 46 05.0**	**+0.7**
FORT	**Forrest**	**34.35**	**178**	P	**P**	**13 46 05.5**	**+1.2**
XAN	**Xi'an**	**34.51**	**333**	P	**P**	**13 46 04.8**	**-0.9**
XAN				pmax	pmax		
	comp=Z,52nm,0.9s						
MULG	**Mulgathing**	**34.51**	**169**	P	**P**	**13 46 08.7**	**+3.0**
CD2	**Chengdu**	**34.77**	**324**	*e*P	**P**	**13 46 06.0**	**-2.1**
CD2				S	**S**	**13 51 31.3**	**-3.6**
CD2				LR	LR		
	comp=Z,4µm,20.6s						
CD2				LR	LR		
	comp=Z,2µm,18.1s						
CD2				LR	LR		
	comp=Z,3µm,17.7s						
DL2	**Dalian**	**35.33**	**353**	P	**P**	**13 46 14.8**	**+2.2**
DL2				sP	sP	13 46 42.5	+10
DL2				S	**S**	**13 51 48.8**	**+5.8**
DL2				pmax	pmax		
	comp=Z,56nm,0.8s						
DL2				pmax	pmax		
	comp=Z,610nm,5.2s						
DL2				LR	LR		
	comp=Z,1µm,15.2s						
DL2				LR	LR		
	comp=Z,650nm,16.0s						
DL2				LR	LR		
	comp=Z,950nm,16.9s						
BLDU	**Ballidu**	**35.56**	**195**	P	**P**	**13 46 14.3**	**-0.4**
	baz=36,SNR=14						
BLDU	**Ballidu**	**35.56**	**195**	P	**P**	**13 46 16.0**	**+1.3**
LCRK	**Leigh Creek**	**35.66**	**163**	P	**P**	**13 46 17.1**	**+1.5**
RMQ	**Roma**	**36.71**	**146**	P	**P**	**13 46 25.2**	**+0.6**
	baz=37,SNR=5.1						
MUN	**Mundaring**	**36.98**	**195**	P	**P**	**13 46 26.9**	**+0.1**
	baz=37,SNR=10						
MUN	**Mundaring**	**36.98**	**195**	P	**P**	**13 46 27.7**	**+0.8**
EIDS	**Eidsvold**	**37.22**	**142**	P	**P**	**13 46 29.7**	**+0.8**
	baz=37,SNR=6.1						
BBOO	**Buckleboo**	**37.37**	**167**	P	**P**	**13 46 29.7**	**-0.4**
	baz=37,SNR=22						
BBOO	**Buckleboo**	**37.37**	**167**	P	**P**	**13 46 28.5**	**-1.6**
BBOO				IAmb	IAmb	13 46 48.9	
	comp=Z,47nm,1.4s						
BBOO	**Buckleboo**	**37.37**	**167**	P	**P**	**13 46 31.1**	**+1.0**
BJI	**Beijing**	**37.42**	**346**	P	**P**	**13 46 30.3**	**-0.2**
BJI				pmax	pmax		
	comp=Z,92nm,1.1s						
BJI				LR	LR		
	comp=Z,630nm,16.6s						
BJI				LR	LR		
	comp=Z,760nm,17.0s						
BJI				LR	LR		
	comp=Z,1µm,17.5s						
NWAO	**Narrogin (SRO)**	**37.63**	**193**	P	**P**	**13 46 33.7**	**+1.3**
SNY	**Shenyang**	**38.03**	**356**	⇑P	**P**	**13 46 37.5**	**+1.9**
SNY				pP	**sP**	**13 47 00.3**	**+4.7**
SNY				S	**S**	**13 52 30.5**	**+6.4**
SNY				pmax	pmax		
	comp=Z,27nm,0.8s						
SNY				pmax	pmax		
	comp=Z,740nm,4.9s						
SNY				LR	LR		
	comp=Z,1µm,16.1s						
SNY				LR	LR		
	comp=Z,730nm,18.3s						
SNY				LR	LR		
	comp=Z,2µm,20.8s						
STKA	**Stephens Creek**	**38.06**	**160**	P	**P**	**13 46 35.5**	**-0.6**
	comp=Z,54nm,0.7s,baz=334,slow=8.3,SNR=86						
STKA				LR	LR	14 04 27.9	
	comp=Z,1µm,20.7s,baz=321,slow=40						
STKA	**Stephens Creek**	**38.06**	**160**	P	**P**	**13 46 35.0**	**-1.0**
LZH	**Lanzhou**	**38.61**	**329**	*e*P	**P**	**13 46 40.5**	**-0.3**
LZH				pP	sP	13 47 04.8	+3.4
LZH				sP	pP	13 47 16.8	+22
LZH				PcP	**PcP**	**13 48 55.5**	**+3.2**
LZH				pmax	pmax		
	comp=Z,56nm,1.2s						
LZH				pmax	pmax		
	comp=Z,390nm,5.6s						
LZH				LR	LR		
	comp=Z,2µm,16.8s						
LZH				LR	LR		
	comp=Z,3µm,16.3s						
LZH				LR	LR		
	comp=Z,2µm,16.8s						
HTT	**Hallett**	**38.67**	**164**	P	**P**	**13 46 43.1**	**+1.9**
	baz=39,SNR=6.4						
HTT	**Hallett**	**38.67**	**164**	P	**P**	**13 46 42.1**	**+0.9**
CMSA	**Cobar Meteorol**	**39.36**	**154**	P	**P**	**13 46 48.3**	**+1.4**
	baz=39,SNR=9.1						
CMSA	**Cobar Meteorol**	**39.36**	**154**	P	**P**	**13 46 48.3**	**+1.4**
HHC	**Hu-ho-hao-te**	**39.45**	**341**	*e*P	**P**	**13 46 47.5**	**-0.2**
HHC				S	**S**	**13 52 48.3**	**+2.4**
HHC				sS	sS	13 53 24.0	+15
HHC				pmax	pmax		
	comp=Z,35nm,0.9s						
HHC				pmax	pmax		
	comp=Z,540nm,5.3s						
HHC				LR	LR		
	comp=Z,1µm,14.5s						
HHC				LR	LR		
	comp=Z,730nm,16.2s						
HHC				LR	LR		
	comp=Z,1µm,16.2s						
BTO	**Baotou**	**39.75**	**340**	smax	smax		
	comp=N,44nm,0.3s						
BTO				smax	smax		
	comp=E,49nm,0.4s						
BTO	**Baotou**	**39.75**	**340**	*e*P	**P**	**13 46 51.0**	**+0.9**
BTO				S	**S**	**13 52 51.5**	**+1.2**
BTO				LR	LR		
	comp=E,4µm,19.3s						
BTO				LR	LR		
	comp=E,3µm,22.9s						
USRK	**Ussuriysk Ar.**	**40.52**	**6**	P	**P**	**13 46 56.3**	**0.0**
	comp=E,6.0nm,0.8s,baz=171,slow=7.0,SNR=8.7						
USRK	**Ussuriysk Ar.**	**40.52**	**6**	P	**P**	**13 46 56.1**	**-0.2**
ERM	**Erimo**	**40.75**	**19**	P	**P**	**13 47 01.1**	**+2.8**
MDJ	**Mudanjiang**	**40.76**	**3**	P	**P**	**13 47 00.3**	**+2.0**
MDJ				pmax	pmax		
	comp=E,20nm,1.0s						
MDJ				pmax	pmax		
	comp=E,620nm,5.0s						
ARMA	**Armidale**	**41.35**	**147**	P	**P**	**13 47 04.7**	**+1.2**
	baz=41,SNR=8.1						
ARMA	**Armidale**	**41.35**	**147**	P	**P**	**13 47 01.5**	**-2.0**
ARMA				IAmb	IAmb	13 47 23.5	
	comp=Z,40nm,1.2s						
ARMA	**Armidale**	**41.35**	**147**	P	**P**	**13 47 04.6**	**+1.1**
ASAJ	**Asahikawa**	**42.50**	**17**	P	**P**	**13 47 12.7**	**+0.1**
	comp=Z,8.5nm,0.7s,baz=232,slow=11,SNR=5.4						
JKA	**Kamikawa-asahi**	**42.50**	**17**	P	**P**	**13 47 12.7**	**+0.2**
LSA	**Lhasa**	**42.61**	**311**	P	**P**	**13 47 13.3**	**-1.0**
LSA				pmax	pmax		
	comp=Z,55nm,0.7s						
ARPS	**Mount Arapiles**	**42.63**	**162**	P	**P**	**13 47 14.5**	**+0.8**
	baz=43,SNR=24						
ARPS	**Mount Arapiles**	**42.63**	**162**	P	**P**	**13 47 14.8**	**+1.1**
GTA	**Gaotai**	**43.21**	**329**	⇓P	**P**	**13 47 18.3**	**-0.2**
GTA				pP	sP	13 47 40.5	+1.2
GTA				sP	pP	13 47 52.3	+19
GTA				PcP	**PcP**	**13 49 09.0**	**+1.8**
GTA				PcS	**PcS**	**13 52 59.8**	**0.0**
GTA				S	**S**	**13 53 38.0**	**-3.6**
GTA				sS	sS	13 54 18.5	+13
GTA				pmax	pmax		
	comp=Z,12nm,1.5s						
GTA				pmax	pmax		
	comp=Z,260nm,5.3s						
GTA				LR	LR		
	comp=Z,1µm,18.9s						
GTA				LR	LR		
	comp=Z,1µm,17.1s						
GTA				LR	LR		
	comp=Z,2µm,19.3s						
CAN	**Canberra**	**44.02**	**154**	P	**P**	**13 47 23.6**	**-1.4**
CAN				pmax	pmax		
	comp=Z,118nm,1.9s						
CAN	**Canberra**	**44.02**	**154**	P	**P**	**13 47 23.6**	**-1.4**
CAN				IAmb	IAmb	13 47 43.2	
	comp=Z,118nm,1.9s						
CAN	**Canberra**	**44.02**	**154**	P	**P**	**13 47 27.0**	**+2.0**
CNB	**Canberra Magne**	**44.18**	**153**	P	**P**	**13 47 28.4**	**+2.1**
TAPN	**Taplejung**	**44.20**	**306**	*e*P	**P**	**13 47 25.2**	**-1.8**
	comp=Z,62nm,0.8s						
ODAN	**Odare**	**44.26**	**305**	*e*P	**P**	**13 47 25.6**	**-1.7**
	comp=Z,58nm,0.7s						
TOO	**Toolangi**	**44.57**	**159**	P	**P**	**13 47 31.2**	**+1.8**
	baz=45,SNR=13						
TOO	**Toolangi**	**44.57**	**159**	P	**P**	**13 47 28.5**	**-0.8**
TOO				pmax	pmax		
	comp=Z,53nm,1.7s						
TOO	**Toolangi**	**44.57**	**159**	P	**P**	**13 47 28.5**	**-0.8**
TOO				IAmb	IAmb	13 48 18.8	
	comp=Z,52nm,1.7s						
TOO	**Toolangi**	**44.57**	**159**	P	**P**	**13 47 31.1**	**+1.8**
RAMN	**Ramite**	**44.94**	**305**	*e*P	**P**	**13 47 31.8**	**-1.0**
	comp=Z,25nm,0.5s						
KLR	**Kul'dur**	**45.49**	**4**	P	**P**	**13 47 35.8**	**-0.7**
	comp=Z,2.9nm,0.3s,baz=210,slow=3.0,SNR=15						
KLR	**Kul'dur**	**45.49**	**4**	*ce*P	**P**	**13 47 35.8**	**-0.7**
KLR				pmax	pmax		
	comp=Z,11nm,0.9s						
JIRN	**Jiri**	**45.56**	**306**	*e*P	**P**	**13 47 36.9**	**-0.9**
	comp=Z,164nm,1.1s						
GUN	**Gumba**	**45.91**	**306**	*e*P	**P**	**13 47 38.9**	**-1.7**
PKI	**Pulchoki**	**46.16**	**305**	*e*P	**P**	**13 47 40.7**	**-1.8**
PKIN	**Phulchoki**	**46.17**	**305**	*e*P	**P**	**13 47 40.3**	**-2.2**
PALK	**Pallekele**	**46.18**	**276**	P	**P**	**13 47 42.1**	**-0.4**
	comp=Z,6.8nm,0.9s,baz=212,slow=9.5,SNR=2.4						
PALK				LR	LR	14 09 31.6	
	comp=Z,406nm,18.9s,baz=205,slow=39						
DZM	**Mont Dzumac**	**46.34**	**125**	*e*P	**P**	**13 47 45.0**	**+1.3**
	comp=Z,18nm,0.8s						
DZM				*e*S	**S**	**13 54 21.9**	**-5.6**
	comp=Z,919nm,29.9s						
DZM				*e*LR	LR	14 00 50.0	
	comp=Z,1µm,24.4s						
DZM	**Mont Dzumac**	**46.34**	**125**	P	**P**	**13 47 44.6**	**+0.9**
	comp=Z,7.8nm,0.7s,baz=325,slow=16,SNR=4.1						
DZM	**Mont Dzumac**	**46.34**	**125**	P	**P**	**13 47 45.1**	**+1.3**
KKN	**Kakani**	**46.35**	**305**	*e*P	**P**	**13 47 41.6**	**-2.3**
	comp=Z,13nm,0.4s						
DMN	**Daman**	**46.42**	**305**	*e*P	**P**	**13 47 42.6**	**-1.9**
YATNC	**Mamie plateau,**	**46.70**	**125**	P	**P**	**13 47 47.8**	**+1.4**
GKN	**Gorkha**	**46.96**	**305**	*e*P	**P**	**13 47 46.4**	**-2.2**
ULN	**Ulaanbaatar**	**47.17**	**342**	*ce*P	**P**	**13 47 49.5**	**-0.4**
ULN				pmax	pmax		
	comp=Z,70nm,1.7s						
ULN	**Ulaanbaatar**	**47.17**	**342**	P	**P**	**13 47 47.3**	**-2.6**
ULN				IAmb	IAmb	13 47 52.7	
	comp=Z,36nm,1.0s						
SONM	**Songino Array**	**47.36**	**341**	P	**P**	**13 47 51.5**	**+0.2**
	comp=Z,5.0nm,0.5s,baz=155,slow=7.0,SNR=36						
SONM				PcP	**PcP**	**13 49 22.1**	**+0.8**
	comp=Z,16nm,0.9s,baz=163,slow=4.1,SNR=12						
SONM				LR	LR	14 09 45.3	
	comp=Z,1µm,21.5s,baz=158,slow=39						
SONM	**Songino Array**	**47.36**	**341**	P	**P**	**13 47 48.2**	**-3.1**
SONM				IAmb	IAmb	13 49 24.7	
	comp=Z,16nm,0.9s						
KOLN	**Koldanda**	**47.72**	**305**	*e*P	**P**	**13 47 53.0**	**-1.5**
DANN	**Dangsing**	**47.81**	**305**	*e*P	**P**	**13 47 53.5**	**-1.8**
	comp=Z,72nm,0.6s						
PYUN	**Piuthan**	**48.34**	**305**	*e*P	**P**	**13 47 57.4**	**-1.9**
ZEA	**Zeya**	**49.83**	**0**	*e*P	**P**	**13 48 10.2**	**+0.2**
ZEA				pmax	pmax		
	comp=N,10.0nm,0.5s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ZEA				MLR	MLR		
	comp=E,200nm,17.0s						
ZEA				MLR	MLR		
	comp=N,500nm,22.0s						
ZEA				MLR	MLR		
	comp=Z,600nm,17.0s						
ZAK	**Zakamensk**	**50.59**	**341**	*e*P	**P**	**13 48 15.7**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.9s						
TLY	**Talaya**	**51.59**	**342**	P	**P**	**13 48 23.4**	**+0.1**
	comp=Z,26nm,0.9s,baz=198,slow=5.1,SNR=15						
TLY	**Talaya**	**51.59**	**342**	*e*P	**P**	**13 48 25.0**	**+1.7**
TLY				pmax	pmax		
	comp=Z,108nm,1.0s						
TLY				MLR	MLR		
	comp=Z,1µm,15.0s						
IRK	**Irkutsk**	**51.88**	**342**	*e*P	**P**	**13 48 25.4**	**-0.1**
IRK				pmax	pmax		
	comp=Z,130nm,2.1s						
MOY	**Mondy**	**52.45**	**340**	*e*P	**P**	**13 48 31.0**	**+1.2**
MOY				pmax	pmax		
	comp=Z,125nm,2.3s						
WMQ	**Urumqi**	**52.85**	**325**	*e*P	**P**	**13 48 32.3**	**-0.6**
WMQ				pmax	pmax		
	comp=Z,32nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,330nm,3.9s						
WMQ				LR	LR		
	comp=Z,2µm,23.1s						
WMQ				LR	LR		
	comp=Z,940nm,20.5s						
WMQ				LR	LR		
	comp=Z,940nm,21.9s						
BOD	**Bodaibo**	**54.88**	**352**	*e*P	**P**	**13 48 47.5**	**+0.2**
BOD				pmax	pmax		
	comp=Z,24nm,1.8s						
PETK	**Petropavlovsk-**	**55.31**	**22**	P	**P**	**13 48 50.8**	**+0.2**
	comp=Z,13nm,0.9s,baz=200,slow=4.5,SNR=8.1						
PETK	**Petropavlovsk-**	**55.31**	**22**	P	**P**	**13 48 50.4**	**-0.2**
ZSN	**Zaisan**	**56.62**	**327**	*e*P	**P**	**13 48 58.5**	**-1.6**
	baz=327						
ZSN	**Zaisan**	**56.62**	**327**	*e*P	**P**	**13 48 58.5**	**-1.6**
DGZ	**Jazzator, Alta**	**56.70**	**330**	*i* P	**P**	**13 49 00.3**	**-0.4**
DGZ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MK31	**Makanchi Array**	**57.68**	**325**	P	**P**	**13 49 07.6**	**0.0**
MK31	**Makanchi Array**	**57.68**	**325**	P	**P**	**13 49 06.5**	**-1.0**
MK31				IAmb	IAmb	13 49 09.4	
	comp=Z,18nm,0.9s						
MKAR	**Makanchi Array**	**57.68**	**325**	P	**P**	**13 49 07.4**	**-0.2**
	comp=Z,8.4nm,0.4s,baz=124,slow=7.7,SNR=77						
MKAR				LR	LR	14 15 43.5	
	comp=Z,1µm,18.4s,baz=84,slow=38						
MKAR	**Makanchi Array**	**57.68**	**325**	P	**P**	**13 49 06.8**	**-0.8**
UZB	**Uzynbulak**	**57.77**	**320**	*e*P	**P**	**13 49 06.8**	**-1.7**
	comp=Z,31nm,1.8s,baz=320						
UZB	**Uzynbulak**	**57.77**	**320**	*e*P	**P**	**13 49 06.7**	**-1.7**
UZB				pmax	pmax		
	comp=Z,31nm,1.8s						
MAKZ	**Makanchi**	**57.87**	**325**	P	**P**	**13 49 08.3**	**-0.6**
MAKZ				pmax	pmax		
	comp=Z,28nm,1.0s						
MAKZ	**Makanchi**	**57.87**	**325**	P	**P**	**13 49 08.3**	**-0.6**
MAKZ				IAmb	IAmb	13 49 10.6	
	comp=Z,28nm,0.9s						
SATY	**Saty**	**58.12**	**320**	*e*P	**P**	**13 49 10.2**	**-0.7**
	comp=Z,51nm,2.2s,baz=320						
SATY	**Saty**	**58.12**	**320**	*e*P	**P**	**13 49 10.2**	**-0.7**
SATY				pmax	pmax		
	comp=Z,51nm,2.2s						
YAK	**Yakutsk**	**58.18**	**1**	P	**P**	**13 49 10.4**	**-0.3**
	comp=Z,37nm,0.8s,baz=359,slow=1.1,SNR=32						
YAK	**Yakutsk**	**58.18**	**1**	*e*P	**P**	**13 49 10.2**	**-0.5**
YAK				*e**PP	**sP**	**13 49 29.9**	**-1.5**
YAK				*e*		13 50 03.2	
YAK				*e*		13 51 24.6	
YAK				*e*S	**S**	**13 57 08.2**	**+0.2**
YAK				*e*SS	**SS**	**14 01 00.5**	**+0.1**
YAK				pmax	pmax		
	comp=Z,80nm,0.9s						
YAK				pmax	pmax		
	comp=N,12nm,1.1s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,295nm,5.8s						
YAK				pmax	pmax		
	comp=E,130nm,5.4s						
YAK				pmax	pmax		
	comp=N,163nm,5.3s						
YAK				smax	smax		
	comp=E,160nm,4.5s						
YAK	**Yakutsk**	**58.18**	**1**	P	**P**	**13 49 09.5**	**-1.2**
KSH	**Kashi**	**58.20**	**315**	P	**P**	**13 49 12.0**	**+0.5**
KSH				pP	sP	13 49 35.5	+2.9
KSH				PcP	**PcP**	**13 50 04.5**	**+2.0**
KSH				pmax	pmax		
	comp=E,23nm,1.5s						
KSH				LR	LR		
	comp=E,560nm,16.0s						
KSH				LR	LR		
	comp=E,1µm,18.0s						
KSH				LR	LR		
	comp=E,1µm,18.9s						
MA2	**Magadan**	**58.62**	**14**	*i* P	**P**	**13 49 14.3**	**+0.4**
MA2				pmax	pmax		
	comp=Z,18nm,1.2s						
ARXS	**Arharly**	**59.04**	**321**	*e*P	**P**	**13 49 15.5**	**-1.7**
MDOK	**Medeo**	**59.05**	**319**	*e*P	**P**	**13 49 16.2**	**-1.1**
	baz=319						
MDOK	**Medeo**	**59.05**	**319**	*e*P	**P**	**13 49 16.2**	**-1.1**
TDK	**Taldyqorghan**	**59.05**	**322**	*e*P	**P**	**13 49 16.4**	**-0.8**
	baz=322						
TDK	**Taldyqorghan**	**59.05**	**322**	*e*P	**P**	**13 49 16.4**	**-0.8**
TNSS	**Tian-Shan**	**59.06**	**319**	*e*P	**P**	**13 49 17.3**	**-0.4**
	baz=319						
AAA	**Alma-Ata**	**59.16**	**319**	*e*P	**P**	**13 49 16.4**	**-1.7**
	baz=319						
AAA	**Alma-Ata**	**59.16**	**319**	*e*P	**P**	**13 49 16.3**	**-1.7**
CHKK	**Chushkaly**	**59.40**	**320**	*e*P	**P**	**13 49 18.7**	**-0.9**
	baz=320						
KUU	**Kurty**	**59.84**	**320**	*e*P	**P**	**13 49 21.5**	**-1.1**
	comp=Z,42nm,1.1s,baz=320						
KUU	**Kurty**	**59.84**	**320**	*e*P	**P**	**13 49 21.5**	**-1.1**
KUU				pmax	pmax		
	comp=Z,42nm,1.1s						
TKM2	**Tokmak 2**	**59.90**	**318**	P	**P**	**13 49 24.1**	**+0.9**
	SNR=16						
KBK	**Karagaybulak**	**60.21**	**318**	P	**P**	**13 49 26.6**	**+1.2**
	SNR=11						
UCH	**Uchtor**	**60.33**	**317**	P	**P**	**13 49 27.9**	**+1.4**
	SNR=27						
AAK	**Ala-Archa**	**60.51**	**318**	P	**P**	**13 49 27.5**	**+0.1**
	comp=Z,4.0nm,0.9s,baz=113,slow=6.2,SNR=16						
ZAA0	**Zalesovo Array**	**60.68**	**333**	P	**P**	**13 49 26.2**	**-1.9**
ZAA0				IAmb	IAmb	13 49 28.8	
	comp=Z,14nm,1.1s						
ZALV	**Zalesovo Beam**	**60.68**	**333**	P	**P**	**13 49 26.8**	**-1.4**
	comp=Z,4.3nm,0.4s,baz=118,slow=6.1,SNR=24						
ZALV				PKP2bc		14 18 58.0	
	comp=Z,0.7nm,0.7s,baz=250,slow=3.0,SNR=4.6						
ZALV	**Zalesovo Beam**	**60.68**	**333**	P	**P**	**13 49 26.5**	**-1.6**
USP	**Ospenovka**	**60.77**	**318**	P	**P**	**13 49 29.7**	**+0.7**
	SNR=22						
QRZ	**Quartz Range**	**60.79**	**142**	P	**P**	**13 49 26.2**	**-2.9**
SEM	**Semipalatinsk**	**60.82**	**328**	*e*P	**P**	**13 49 27.9**	**-1.6**
	baz=328						
SEM	**Semipalatinsk**	**60.82**	**328**	*e*P	**P**	**13 49 27.8**	**-1.6**
AML	**Almayashu**	**60.84**	**317**	P	**P**	**13 49 30.4**	**+0.4**
	SNR=18						
EKS2	**Erkin-Say**	**61.00**	**318**	P	**P**	**13 49 33.1**	**+2.3**
	SNR=12						
BTLS	**Baital**	**61.82**	**320**	*e*P	**P**	**13 49 35.2**	**-0.8**
	comp=Z,17nm,1.8s,baz=320						
BTLS	**Baital**	**61.82**	**320**	*e*P	**P**	**13 49 35.2**	**-0.8**
BTLS				pmax	pmax		
	comp=Z,17nm,1.8s						
KURBB	**Kurchatov Arra**	**61.85**	**327**	P	**P**	**13 49 35.0**	**-1.1**
	comp=Z,15nm,0.6s,baz=125,slow=6.3,SNR=71						
KURBB	**Kurchatov Arra**	**61.85**	**327**	P	**P**	**13 49 34.0**	**-2.1**
KURK	**Kurchatov**	**61.86**	**327**	P	**P**	**13 49 35.7**	**-0.4**
KURK				pmax	pmax		
	comp=Z,43nm,0.8s						
KURK	**Kurchatov**	**61.86**	**327**	P	**P**	**13 49 35.7**	**-0.4**
SEY	**Seymchan**	**61.95**	**13**	P	**P**	**13 49 35.9**	**-0.7**
	comp=Z,3.7nm,0.9s,baz=209,slow=12,SNR=5.0						
BTK	**Batken**	**62.09**	**314**	P	**P**	**13 49 37.0**	**-1.1**
BTK				pmax	pmax		
	comp=Z,46nm,1.3s						
BTK	**Batken**	**62.09**	**314**	P	**P**	**13 49 37.0**	**-1.1**
BTK				IAmb	IAmb	13 49 40.0	
	comp=Z,46nm,1.3s						
GAR	**Garm**	**62.09**	**313**	P	**P**	**13 49 37.5**	**-0.7**
DZA	**Taraz**	**62.75**	**317**	*e*P	**P**	**13 49 41.7**	**-0.6**
	baz=317						
DZA	**Taraz**	**62.75**	**317**	*e*P	**P**	**13 49 41.7**	**-0.6**
IUG	**Iuzhnay**	**63.37**	**316**	*e*P	**P**	**13 49 45.8**	**-0.9**
	baz=316						
IUG	**Iuzhnay**	**63.37**	**316**	*e*P	**P**	**13 49 45.7**	**-0.9**
KKAR	**Karatay Array**	**63.39**	**317**	P	**P**	**13 49 44.4**	**-2.1**
KKAR	**Karatay Array**	**63.39**	**317**	P	**P**	**13 49 44.4**	**-2.1**
BRLS	**Borolday**	**63.82**	**317**	*e*P	**P**	**13 49 48.4**	**-1.1**
	baz=316						
BRLS	**Borolday**	**63.82**	**317**	*e*P	**P**	**13 49 48.3**	**-1.1**
BRZS	**Berezniki**	**64.81**	**325**	*e*P	**P**	**13 49 55.0**	**-0.8**
	comp=Z,45nm,2.7s,baz=324						
BRZS	**Berezniki**	**64.81**	**325**	*e*P	**P**	**13 49 54.9**	**-0.8**
BRZS				pmax	pmax		
	comp=Z,45nm,2.7s						
BRVK	**Borovoye**	**67.51**	**327**	P	**P**	**13 50 12.4**	**-0.6**
BRVK				pmax	pmax		
	comp=Z,17nm,0.7s						
BRVK	**Borovoye**	**67.51**	**327**	P	**P**	**13 50 12.3**	**-0.6**
BRVK				IAmb	IAmb	13 50 28.1	
	comp=Z,17nm,0.7s						
TIXI	**Tiksi**	**67.81**	**1**	P	**P**	**13 50 14.4**	**-0.1**
	comp=Z,6.7nm,0.4s,baz=174,slow=3.8,SNR=19						
TIXI	**Tiksi**	**67.81**	**1**	P	**P**	**13 50 13.8**	**-0.7**
TIXI				IAmb	IAmb	13 50 20.6	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,36nm,1.3s						
BILL	**Bilibino**	**69.47**	**15**	*i* P	P	13 50 17.2	-7.7
BILL				*i*		13 50 45.6	
BILL				pmax	pmax		
	comp=Z,5.0nm,1.3s						
BILL				MLR	MLR		
	comp=Z,239nm,17.0s						
NRIK	**Noril'sk**	**70.47**	**346**	P	**P**	**13 50 31.1**	**+0.1**
	comp=Z,18nm,0.7s,baz=135,slow=6.3,SNR=27						
NRIK				LR	LR	14 24 58.4	
	comp=Z,726nm,20.6s,baz=148,slow=39						
NRIK	**Noril'sk**	**70.47**	**346**	P	**P**	**13 50 31.4**	**+0.4**
NRIK				pmax	pmax		
	comp=Z,95nm,1.5s						
NRIK	**Noril'sk**	**70.47**	**346**	P	**P**	**13 50 31.4**	**+0.4**
GEYT	**Alibeck**	**71.08**	**309**	P	**P**	**13 50 35.5**	**+0.1**
	comp=Z,3.2nm,0.8s,baz=72,slow=29,SNR=3.8						
AB31	**Akbulak array**	**72.29**	**321**	*i* P	**P**	**13 50 41.6**	**-0.8**
ABKAR	**Akbulak array**	**72.29**	**321**	P	**P**	**13 50 41.8**	**-0.6**
ABKAR	**Akbulak array**	**72.29**	**321**	IAmb	IAmb	13 50 47.9	
	comp=Z,12nm,0.8s						
AKTO	**Aktyubinsk**	**73.80**	**322**	P	**P**	**13 50 50.6**	**-0.7**
SVE	**Sverdlovsk**	**74.07**	**328**	⇓*e*P	**P**	**13 50 54.2**	**+1.5**
SVE				pmax	pmax		
	comp=Z,34nm,1.1s						
ARU	**Arti**	**75.05**	**328***c*	*i*P	**P**	**13 50 58.2**	**-0.2**
ARU				*PP	**sP**	**13 51 20.5**	**+0.7**
ARU				S	**S**	**14 00 31.3**	**-1.0**
ARU				pmax	pmax		
	comp=Z,35nm,1.2s						
KIRV	**Kirov**	**80.33**	**329***c*	*e*P	**P**	**13 51 27.5**	**-0.2**
BELG	**Belogornoye**	**80.54**	**322**	*i* P	**P**	**13 51 29.3**	**+0.3**
BELG				pmax	pmax		
	comp=Z,17nm,1.0s						
GCSA	**Galena City Sc**	**80.72**	**25**	P	**P**	**13 51 31.5**	**+1.8**
	baz=259						
GROC	**Groznyy**	**81.02**	**313**	*e*P	**P**	**13 51 32.7**	**+0.9**
GROC				*e**SP	sP	13 52 01.1	+7.9
GROC				S	**S**	**14 01 40.7**	**+3.7**
GROC				pmax	pmax		
	comp=Z,13nm,0.5s						
M19K	**Big River Lodg**	**81.35**	**28**	P	**P**	**13 51 36.3**	**+3.1**
	baz=262						
GNI	**Garni**	**81.66**	**310**	*i* P	**P**	**13 51 36.6**	**+1.1**
GNI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
K20K	**Telida**	**81.70**	**27**	P	**P**	**13 51 38.2**	**+3.2**
	baz=262						
J20K	**Nowinta River**	**81.79**	**26**	P	**P**	**13 51 38.5**	**+3.1**
	baz=262						
IMAR	**Indian Mountai**	**82.22**	**24**	P	**P**	**13 51 38.5**	**+0.8**
SPCR	**Spurr Chakacha**	**82.29**	**29**	P	**P**	**13 51 41.5**	**+3.3**
	baz=264						
ZEI	**Tsey**	**82.39**	**312**	*e*P	**P**	**13 51 38.6**	**-0.7**
ZEI				pmax	pmax		
	comp=Z,11nm,0.9s						
PPLA	**Purkeypile**	**82.49**	**27**	P	**P**	**13 51 42.6**	**+3.3**
	baz=264						
CHUM	**Lake Minchumin**	**82.55**	**26**	P	**P**	**13 51 42.4**	**+3.0**
	baz=263						
H21K	**Melozitna Rive**	**82.56**	**24**	P	**P**	**13 51 41.8**	**+2.3**
	baz=263						
CAST	**Castle Rocks**	**82.60**	**27**	P	**P**	**13 51 41.0**	**+1.3**
	baz=264						
PRGR	**Permogore**	**82.60**	**332**	*e*P	**P**	**13 51 40.0**	**+0.3**
PRGR				*e*S	**S**	**14 01 49.4**	**-3.1**
PRGR				pmax	pmax		
	comp=Z,12nm,0.9s						
NCK	**Nalchik**	**82.63**	**313**	*i* P	**P**	**13 51 40.4**	**+0.1**
NCK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
AKH	**Akhalkalaki**	**82.65**	**311**	⇓P	**P**	**13 51 42.4**	**+1.7**
I21K	**Tanana**	**82.84**	**25**	P	**P**	**13 51 43.2**	**+2.3**
	baz=263						
KTH	**Kantishna Hill**	**83.13**	**27**	IAmb	IAmb	13 52 01.8	
	comp=Z,71nm,1.7s						
KBZ	**Khabaz**	**83.14**	**313**	P	**P**	**13 51 43.6**	**+0.7**
	comp=Z,2.3nm,0.7s,baz=97,slow=7.7,SNR=5.0						
NEY	**Neytrino**	**83.26**	**313**	*i* P	**P**	**13 51 44.6**	**+0.8**
NEY				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KIV	**Kislovodsk**	**83.30**	**314**	*e*P	**P**	**13 51 44.3**	**+0.4**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SHA1	**Shidzhatmaz**	**83.32**	**313**	*i* P	**P**	**13 51 44.2**	**+0.1**
MLY	**Manley**	**83.35**	**25**	P	**P**	**13 51 45.5**	**+1.9**
	baz=265						
TRF	**Thorofare Moun**	**83.41**	**27**	P	**P**	**13 51 45.3**	**+1.2**
	baz=265						
VNDA	**Vanda**	**83.42**	**173**	P	**P**	**13 51 45.0**	**+1.4**
	comp=Z,6.1nm,0.9s,baz=311,slow=5.2,SNR=9.4						
VNDA				LR	LR	14 29 03.9	
	comp=Z,224nm,19.9s,baz=328,slow=36						
VNDA	**Vanda**	**83.42**	**173**	P	**P**	**13 51 45.0**	**+1.4**
VNDA	**Vanda**	**83.42**	**173**	P	**P**	**13 51 41.3**	**-2.3**
COLD	**Coldfoot**	**83.77**	**23**	P	**P**	**13 51 47.6**	**+1.9**
	baz=265						
MAW	**Mawson**	**83.86**	**200**	P	**P**	**13 51 47.5**	**+1.5**
	comp=Z,4.3nm,1.0s,baz=54,slow=9.4,SNR=5.1						
I23K	**Minto, Yukon-K**	**83.94**	**25**	P	**P**	**13 51 48.4**	**+1.9**
	baz=266						
I23K	**Minto, Yukon-K**	**83.94**	**25**	P	**P**	**13 51 46.6**	**+0.1**
NEA2	**Nenana**	**84.03**	**26**	P	**P**	**13 51 48.8**	**+1.8**
	baz=266						
VRH	**Novokhopyorsk**	**84.12**	**321**	*e*P	**P**	**13 51 47.3**	**-0.4**
VRH				pmax	pmax		
	comp=Z,50nm,0.9s						
TOLK	**Toolik Lake Re**	**84.13**	**21**	P	**P**	**13 51 49.4**	**+1.9**
	baz=265						
SML	**Sawmill**	**84.20**	**28**	P	**P**	**13 51 50.4**	**+2.4**
	baz=267						
WAT6	**Susitna Watana**	**84.51**	**28**	P	**P**	**13 51 51.1**	**+1.4**
	baz=268						
COLA	**College**	**84.57**	**25**	*i* P	**P**	**13 51 49.4**	**-0.3**
COLA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
PPT2	**Papeete2**	**84.88**	**108**	*e*S	**S**	**14 02 09.4**	**-7.9**
	comp=Z,295nm,24.0s						
PPT2	**Papeete2**	**84.88**	**108**	*e*LR	LR	14 18 43.0	
	comp=Z,1µm,31.0s						
HDA	**Harding Lake**	**84.94**	**26**	P	**P**	**13 51 52.9**	**+1.3**
	baz=268						
ILAR	**Eielson Array**	**84.97**	**25**	P	**P**	**13 51 51.9**	**+0.1**
	comp=Z,1.5nm,0.8s,baz=242,slow=5.2,SNR=10						
KLU	**Klutina**	**85.33**	**29**	P	**P**	**13 51 56.4**	**+2.7**
	baz=269						
KLMR	**Klimovskoe**	**85.51**	**331**	*e*P	**P**	**13 51 53.9**	**-0.6**
KLMR				pmax	pmax		
	comp=Z,149nm,1.1s						
KLMR	**Klimovskoe**	**85.51**	**331**	*e*P	**P**	**13 51 54.0**	**-0.6**
KLMR				AMP		13 51 57.1	
	comp=Z,149nm,1.1s						
KLMR				LQ	LQ	14 24 07.5	
KLMR				LQ	LQ	14 24 07.5	
KLMR				LR	LR	14 26 54.4	
VORD	**Divnogorie**	**85.65**	**321**	*e*P	**P**	**13 51 55.5**	**+0.1**
VORD				pmax	pmax		
	comp=Z,40nm,1.0s						
VSR	**Storozhevoye**	**85.73**	**321**	*e*P	**P**	**13 51 55.9**	**+0.1**
VSR				pmax	pmax		
	comp=Z,50nm,1.0s						
LPSR	**Galich'ya Gora**	**85.86**	**322**	*e*P	**P**	**13 51 56.2**	**-0.2**
LPSR				pmax	pmax		
	comp=Z,90nm,0.9s						
BMAR	**Burnt Mountain**	**85.96**	**23**	P	**P**	**13 51 56.4**	**-0.3**
MOS	**Moscow**	**86.56**	**325**	*e*P	**P**	**13 51 58.4**	**-1.4**
MOS				pmax	pmax		
	comp=Z,136nm,1.3s						
MOS				MLR	MLR		
	comp=Z,800nm,20.0s						
OBN	**Obninsk**	**87.19**	**325**	*i* P	**P**	**13 52 02.7**	**-0.1**
OBN				*i*		13 52 31.4	
OBN				*i* S	**SKSac**	**14 02 25.6**	**0.0**
OBN				pmax	pmax		
	comp=Z,47nm,1.1s						
OBN				MLR	MLR		
	comp=Z,441nm,19.0s						
KMBO	**Kilima Mbogo**	**89.80**	**269**	P	**P**	**13 52 16.9**	**+0.4**
	comp=Z,12nm,1.0s,baz=59,slow=5.7,SNR=24						
INK	**Inuvik**	**90.05**	**22**	P	**P**	**13 52 15.9**	**-0.2**
	comp=Z,2.0nm,1.0s,baz=252,slow=12,SNR=5.0						
BRTR	**Keskin Array B**	**90.20**	**310**	P	**P**	**13 52 16.8**	**-0.9**
	comp=Z,9.6nm,0.9s,baz=119,slow=4.4,SNR=32						
ARCES	**ARCESS Array B**	**90.51**	**340**	P	**P**	**13 52 17.5**	**-0.8**
	comp=Z,12nm,0.8s,baz=90,slow=6.1,SNR=16						
ARCES				LR	LR	14 37 47.0	
	comp=Z,352nm,18.3s,baz=50,slow=39						
ARCES	**ARCESS Array B**	**90.51**	**340**	P	**P**	**13 52 16.7**	**-1.6**
FINES	**FINESS Array B**	**91.93**	**332**	P	**P**	**13 52 24.5**	**-0.5**
	comp=Z,8.7nm,0.9s,baz=57,slow=5.5,SNR=10						
FINES				LR	LR	14 38 17.0	
	comp=Z,651nm,19.5s,baz=65,slow=38						
AKASG	**Malin Array Be**	**92.03**	**321**	P	**P**	**13 52 24.9**	**-0.7**
	comp=Z,14nm,0.8s,baz=68,slow=4.7,SNR=37						
AKASG				LR	LR	14 38 13.7	
	comp=Z,219nm,19.6s,baz=70,slow=38						
AKASG	**Malin Array Be**	**92.03**	**321**	P	**P**	**13 52 25.0**	**-0.7**
AKBB	**Malin Array Si**	**92.03**	**321***c*	*e*P	**P**	**13 52 24.6**	**-1.1**
PURM	**Purcari**	**92.19**	**317**	⇑P	**P**	**13 52 26.6**	**+0.1**
MNK	**Minsk**	**92.25**	**325**	*i* P	**P**	**13 52 27.9**	**+1.3**
MNK				*i* *PP	**sP**	**13 52 50.8**	**+2.5**
MNK				*i*		13 56 09.2	
MNK				*i* PPP	PPP	13 58 08.7	
MNK				*i* S	**SKSac**	**14 02 52.9**	**-2.4**
MNK				*i* PS	PnS	14 04 46.4	+2.5
MNK				*i* SS	**SS**	**14 09 37.4**	**+1.4**
MNK				*i* SSS	SSS	14 13 17.0	
MNK				pmax	pmax		
	comp=E,2.0nm,0.8s						
MNK				pmax	pmax		
	comp=Z,26nm,0.7s						
MNK				pmax	pmax		
	comp=N,16nm,0.9s						
MNK				MLR	MLR		
	comp=Z,578nm,23.0s						
MNK				MLR	MLR		
	comp=E,65nm,22.0s						
MNK				MLR	MLR		
	comp=N,447nm,21.0s						
MNK	**Minsk**	**92.25**	**325**	*i* P	**P**	**13 52 27.9**	**+1.3**
	comp=E,2.0nm,0.8s						
MNK				*i* P	**P**	**13 52 27.9**	**+1.3**
	comp=N,16nm,0.8s						
MNK				*i* P	**P**	**13 52 27.9**	**+1.3**
	comp=Z,26nm,0.7s,baz=260						
MNK				*i* pP	**sP**	**13 52 50.8**	**+2.5**
MNK				*i* PP	**PP**	**13 56 09.3**	**+1.9**
MNK				*i* PPP	PPP	13 58 08.8	
MNK				*i* S	**SKSac**	**14 02 52.9**	**-2.4**
MNK				*i* sS	**ScS**	**14 03 34.2**	**+6.7**
MNK				*i* PS	PS	14 04 46.5	+3.8
MNK				*i* SS	**SS**	**14 09 37.5**	**+1.5**
MNK				*i* SSS	SSS	14 13 17.0	
MNK				*i* LR	LR	14 33 06.2	
MNK				*i* LRM	MLR	14 35 31.6	
	comp=Z,578nm,23.1s						
MNK				*i* LRM	MLR	14 35 40.3	
	comp=E,65nm,21.7s						
MNK				*i* LRM	MLR	14 35 59.1	
	comp=N,447nm,21.0s						
NACGM	**Naroch**	**92.81**	**325**	*i* P	**P**	**13 52 29.4**	**+0.2**
SORM	**Soroca**	**92.98**	**318**	⇓P	**P**	**13 52 30.4**	**+0.2**
SORM	**Soroca**	**92.98**	**318**	⇓P	**P**	**13 52 30.4**	**+0.2**
TAOE	**Nuku Hiva Isla**	**93.40**	**99**	*e*S	**S**	**14 03 29.0**	**-8.3**
	comp=N,291nm,28.0s						
TAOE	**Nuku Hiva Isla**	**93.40**	**99**	*e*LR	LR	14 22 37.6	
	comp=N,944nm,24.0s						
TAOE	**Nuku Hiva Isla**	**93.40**	**99**	*e*T	T	15 36 03.1	
	comp=N,14nm,0.2s						
CFR	**Carcaliu**	**93.59**	**316**	⇓P	**P**	**13 52 33.8**	**+0.8**
CFR	**Carcaliu**	**93.59**	**316**	⇓P	**P**	**13 52 33.8**	**+0.8**
QSPA	**South Pole Qui**	**93.66**	**180**	P	**P**	**13 52 31.0**	**-2.0**
QSPA				IAmb	IAmb	13 52 36.4	
	comp=Z,11nm,1.2s						
TESR	**Tescani**	**94.39**	**317**	⇓P	**P**	**13 52 36.9**	**+0.2**
VRI	**Vrincioaia**	**94.45**	**316**	⇑P	**P**	**13 52 38.7**	**+1.7**
VRI	**Vrincioaia**	**94.45**	**316**	⇑P	**P**	**13 52 38.7**	**+1.7**
PLOR	**Plostina**	**94.51**	**316**	⇑P	**P**	**13 52 37.9**	**+0.6**
PLOR	**Plostina**	**94.51**	**316**	⇑P	**P**	**13 52 37.9**	**+0.6**
BISRR	**Bisoca**	**94.52**	**316**	⇓P	**P**	**13 52 40.1**	**+2.7**
COVR	**Voineasa-Covas**	**94.81**	**316**	⇓P	**P**	**13 52 39.3**	**+0.6**
NEHR	**Nehoiu**	**94.83**	**316**	⇓P	**P**	**13 52 39.8**	**+1.0**
SUW	**Suwalki**	**95.05**	**325**	*e*P	**P**	**13 52 40.6**	**+1.1**
OZUR		**95.06**	**317**	⇑P	**P**	**13 52 41.3**	**+1.4**
MLR	**Muntele Rosu**	**95.06**	**316**	⇓P	**P**	**13 52 41.1**	**+1.1**
MLR	**Muntele Rosu**	**95.06**	**316**	⇓P	**P**	**13 52 41.1**	**+1.1**
BURAR	**Bucovina Array**	**95.15**	**318**	⇑P	**P**	**13 52 42.0**	**+1.8**
BURAR	**Bucovina Array**	**95.15**	**318**	⇑P	**P**	**13 52 42.1**	**+1.8**
BURAR	**Bucovina Array**	**95.15**	**318**	P	**P**	**13 52 40.3**	**0.0**
DOPR	**Dopca**	**95.35**	**317**	⇑P	**P**	**13 52 40.9**	**-0.3**
LVV	**L'vov**	**95.47**	**321**	*e*P	**P**	**13 52 42.1**	**+0.5**
VOIR		**95.69**	**316**	⇑P	**P**	**13 52 45.4**	**+2.6**
VOIR		**95.69**	**316**	⇑P	**P**	**13 52 45.4**	**+2.6**
ARCR	**ARCALIA**	**95.83**	**318**	⇓P	**P**	**13 52 45.0**	**+1.7**
ARR	**Arges**	**95.99**	**316**	⇑P	**P**	**13 52 44.8**	**+0.7**
BMR	**Baia Mare**	**96.28**	**319**	⇑P	**P**	**13 52 46.4**	**+1.1**
BMR	**Baia Mare**	**96.28**	**319**	⇑P	**P**	**13 52 46.4**	**+1.1**
KWP	**Kalwaria Pacla**	**96.35**	**321**	*e*P	**P**	**13 52 47.1**	**+1.5**
CJR	**Cluj-Napoca**	**96.42**	**318**	⇓P	**P**	**13 52 48.0**	**+2.0**
CJR	**Cluj-Napoca**	**96.42**	**318**	⇓P	**P**	**13 52 48.0**	**+2.0**
LOT	**Lotru**	**96.57**	**316**	⇓P	**P**	**13 52 47.0**	**+0.2**
KOLS	**Kolonicke sedl**	**96.79**	**320**	*e*P	**P**	**13 52 47.4**	**-0.2**
KOLS	**Kolonicke sedl**	**96.79**	**320**	*e*PDIFF	**P**	**13 52 47.4**	**-0.2**
TRPA	**Tarpa**	**96.80**	**319**	⇓P	**P**	**13 52 48.7**	**+1.1**
UZH	**Uzhgorod**	**96.85**	**320**	*e*P	**P**	**13 52 48.5**	**+0.7**
BEL	**Belsk**	**96.99**	**323**	*e*P	**P**	**13 52 50.4**	**+2.0**
DRGR		**96.99**	**318**	⇓P	**P**	**13 52 50.0**	**+1.3**
DRGR		**96.99**	**318**	⇓P	**P**	**13 52 50.0**	**+1.3**
GZR	**Gura Zlata**	**97.26**	**316**	⇑P	Pdif	13 52 51.1	+1.2
GZR	**Gura Zlata**	**97.26**	**316**	⇑P	Pdif	13 52 51.1	+1.1
CRVS	**Cervenica-Dubn**	**97.31**	**320**	*e*P	Pdif	13 52 51.1	+1.0
CRVS	**Cervenica-Dubn**	**97.31**	**320**	*e*PDIFF	Pdif	13 52 51.1	+1.0
VTS	**Vitosha**	**97.54**	**314**	⇓P	Pdif	13 52 51.6	+0.2
VTS	**Vitosha**	**97.54**	**314**	⇓P	Pdif	13 52 51.6	+0.2
HERR	**Herculane**	**97.62**	**316**	⇑P	Pdif	13 52 52.1	+0.6
RES	**Resolute Bay**	**97.74**	**10**	P	**P**	**13 52 51.3**	**0.0**
	comp=Z,1.6nm,0.9s,baz=311,slow=9.3,SNR=2.5						
NIE	**Niedzica**	**97.92**	**321**	*e*P	Pdif	13 52 54.1	+1.4
BZS	**Buzias**	**98.00**	**317**	⇑P	Pdif	13 52 53.3	+0.1
BZS	**Buzias**	**98.00**	**317**	⇑P	Pdif	13 52 53.3	+0.1
OJC	**Ojcow**	**98.02**	**322**	*e*P	Pdif	13 52 54.5	+1.3
MDVR	**Moldovita**	**98.14**	**316**	⇑P	Pdif	13 52 54.5	+0.6
NB2	**NORSAR Subarra**	**98.88**	**334**	P	**P**	**13 52 55.6**	**-1.1**
	comp=Z,13nm,1.2s,baz=65,slow=4.6						
NOA	**NORSAR Array B**	**98.88**	**334**	P	**P**	**13 52 55.9**	**-0.8**
	comp=Z,4.8nm,0.9s,baz=66,slow=4.6,SNR=9.5						
NOA				LR	LR	14 41 52.5	
	comp=Z,571nm,21.6s,baz=65,slow=38						
LSZ	**Lusaka**	**99.45**	**255**	LR	LR	14 34 06.6	
	comp=Z,318nm,21.4s,baz=137,slow=33						
MORH	**Mrgy, Hungar**	**99.86**	**318**	⇓P	**Pdif**	**13 53 02.6**	**+1.2**
MORH	**Mrgy, Hungar**	**99.86**	**318**	*e*P	**Pdif**	**13 53 02.5**	**+1.2**
KSP	**Ksiaz**	**99.97**	**323**	*e*P	**Pdif**	**13 53 03.6**	**+1.8**
DPC	**Dobruska-Polom**	**100.11**	**322**	*e*PDIFF	**Pdif**	**13 53 03.7**	**+1.2**
DPC	**Dobruska-Polom**	**100.11**	**322**	*e*P	**Pdif**	**13 53 03.7**	**+1.2**
KOVH	**Kovagotottos**	**100.26**	**318**	*e*P	**Pdif**	**13 53 04.7**	**+1.6**
MPLH	**Magyarpolny**	**100.32**	**319**	*e*P	**Pdif**	**13 53 07.3**	**+3.9**
PRU	**Pruhonice**	**101.31**	**323**	*e*PDIFF	**Pdif**	**13 53 08.8**	**+1.0**
PRU	**Pruhonice**	**101.31**	**323**	*e*P	**Pdif**	**13 53 08.8**	**+1.0**
BRG	**Berggiesshubel**	**101.37**	**324**	*e*P	**Pdif**	**13 53 09.4**	**+1.4**
BRG				Amp		13 53 11.8	
	comp=Z,8.0nm,1.0s						
CLL	**Collm**	**101.77**	**324**	*e*Pdif	**Pdif**	**13 53 11.0**	**+1.2**
CLL				LmH		14 40 00.0	
	comp=N,400nm,19.9s						
CLL				LmH		14 40 00.0	
	comp=E,300nm,21.1s						
CLL				LmV		14 45 00.0	
	comp=Z,500nm,21.2s						
CLL	**Collm**	**101.77**	**324**	*e*P	**Pdif**	**13 53 11.0**	**+1.2**
CLL				MLR	MLR		
	comp=Z,500nm,21.2s						
CKRC	**Cesky Krumlov**	**101.85**	**321**	*e*PDIFF	**Pdif**	**13 53 13.0**	**+2.7**
KHC	**Kasperske Hory**	**102.20**	**322**	*e*PDIFF	**Pdif**	**13 53 13.4**	**+1.6**
KHC	**Kasperske Hory**	**102.20**	**322**	*e*P	**Pdif**	**13 53 13.4**	**+1.6**
PDAR	**Pinedale Array**	**111.17**	**41**	PKKPbc	PKKPbc	14 08 46.6	-1.9
	comp=Z,0.9nm,0.8s,baz=134,slow=3.9,SNR=5.4						
PDAR				PKKPab	**PKKPab**	**14 08 57.5**	**-0.5**
	comp=Z,1.3nm,0.8s,baz=125,slow=4.7,SNR=6.8						
TXAR	**Lajitas Array**	**121.39**	**52**	PKP	**PKiKP**	**13 58 11.6**	**+0.8**
	comp=Z,0.5nm,0.7s,baz=197,slow=0.9,SNR=4.0						
TORD	**Torodi Ar. Bea**	**123.15**	**288**	PKP	**PKiKP**	**13 58 14.8**	**+0.3**
	comp=Z,4.9nm,0.8s,baz=46,slow=1.9,SNR=27						
TORD				PP	**PP**	**13 59 56.8**	**+2.3**
	comp=Z,1.7nm,1.0s,baz=69,slow=8.0,SNR=4.2						
JCT	**Junction City**	**123.85**	**49**	P	**PKiKP**	**13 58 17.7**	**+2.1**
	baz=299						
U40A	**Yellville**	**125.46**	**39**	P	**PKiKP**	**13 58 20.0**	**+1.4**
	baz=308						
W39A	**Magazine**	**125.57**	**41**	P	**PKiKP**	**13 58 20.2**	**+1.4**
	baz=307						
DBIC	**Dimbokro**	**130.82**	**282**	PKP	**PKiKP**	**13 58 29.5**	**-0.3**
	comp=Z,3.4nm,0.9s,baz=15,slow=5.0,SNR=2.7						
PLCA	**Paso Flores**	**139.94**	**159**	PKP	**PKiKP**	**13 58 46.7**	**-1.0**
	comp=Z,3.4nm,0.9s,baz=200,slow=5.7,SNR=6.5						
LPAZ	**La Paz**	**160.62**	**131**	PKP	**PKPdf**	**13 59 19.2**	**+1.0**
	comp=Z,4.2nm,1.0s,baz=48,slow=13,SNR=8.0						

IDC ***28*** *13:48:03.4±0.6, 54°.86N×166°.05E, h0km, mb4.2/28, mb1 4.3/30, mb1mx4.2/57, mbtmp4.2/30, ML3.6/2, Error ellipse: s-maj=15.4km s-min=10.0km az=156.0*

KRSC ***28*** *13:48:05.5±2.3, 54°.77N×165°.86E, h44km±16km, ML4.8*

MOS ***28*** *13:48:06.5±0.8, 54°.79N×166°.11E, h37km, mb4.5/15, Error ellipse: s-maj=5.6km s-min=5.3km az=68.8*

NEIC ***28*** *13:48:07.7±1.6, 54°.9N±0°.1×166°.1E±0°.2, h30km±5km, mb4.4/44, Error ellipse: s-maj=20.5km s-min=10.5km az=151.0*

ISC 28 13:48:07.0±0.4**, 54°.78N**±0°.04×**166°.02E**±0°.04**, h26**km**, n202,** σ**1**^{s}**33**/241**, mb4.3**/58**, 4C-1D, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	**Bering**	**0.43**	**357**	PN	**Pb**	**13 48 14.7**	**-1.3**
BKI				S	**Sb**	**13 48 20.4**	**-1.8**
BKI	**Bering**	**0.43**	**357**	*i* P	**Pb**	**13 48 14.7**	**-1.3**
BKI				*e*S	**Sb**	**13 48 20.4**	**-1.8**
KBTR	**Krutoberegovo**	**2.31**	**310**	PN	**Pn**	**13 48 42.7**	**-0.7**
KBTR				S	**Sn**	**13 49 08.8**	**-2.2**
KBTR	**Krutoberegovo**	**2.31**	**310**	*e*P	**Pn**	**13 48 42.7**	**-0.7**
KBTR				*e*S	**Sn**	**13 49 08.8**	**-2.2**
KBG	**Krutoberegovo**	**2.39**	**310**	PN	**Pn**	**13 48 44.5**	**+0.1**
KBG				S	**Sn**	**13 49 11.4**	**-1.5**
KBG	**Krutoberegovo**	**2.39**	**310**	*e*P	**Pn**	**13 48 44.5**	**+0.1**
KBG				*e*S	**Sn**	**13 49 11.4**	**-1.5**
MKZ	**Mys Kozlova**	**2.50**	**267**	PN	**Pn**	**13 48 46.3**	**+0.4**
MKZ				S	**Sn**	**13 49 14.6**	**-0.9**
MKZ	**Mys Kozlova**	**2.50**	**267**	*e*P	**Pn**	**13 48 46.3**	**+0.4**
MKZ				*e*S	**Sn**	**13 49 14.6**	**-0.9**
SMKR	**Semkarok**	**3.15**	**307**	PN	**Pn**	**13 48 56.0**	**+1.1**
SMKR				S	**Sn**	**13 49 32.1**	**+0.5**
SMKR	**Semkarok**	**3.15**	**307**	*e*P	**Pn**	**13 48 56.0**	**+1.1**
SMKR				*e*S	**Sn**	**13 49 32.1**	**+0.5**
BZGR	**Bezymyannyi-Gr**	**3.25**	**293**	PN	**Pn**	**13 48 57.8**	**+1.4**
BZGR				S	**Sn**	**13 49 34.4**	**+0.2**
BZGR	**Bezymyannyi-Gr**	**3.25**	**293**	*e*P	**Pn**	**13 48 57.8**	**+1.4**
BZGR				*e*S	**Sn**	**13 49 34.4**	**+0.2**
BDR	**Baidarnaya**	**3.26**	**305**	PN	**Pn**	**13 48 58.8**	**+2.4**
BDR	**Baidarnaya**	**3.26**	**305**	*e*P	**Pn**	**13 48 58.8**	**+2.4**
TUMD	**Tumrok D**	**3.26**	**280**	*e*P	**Pn**	**13 48 57.3**	**+0.9**
TUMD				*e*S	**Sn**	**13 49 33.4**	**-1.0**
LGNR	**Loginova**	**3.30**	**295**	PN	**Pn**	**13 48 56.9**	**-0.3**
LGNR	**Loginova**	**3.30**	**295**	*e*P	**Pn**	**13 48 56.9**	**-0.3**
SRKR	**Sorokina**	**3.32**	**306**	PN	**Pn**	**13 48 58.4**	**+1.1**
SRKR				S	**Sn**	**13 49 35.2**	**-0.8**
SRKR	**Sorokina**	**3.32**	**306**	*e*P	**Pn**	**13 48 58.4**	**+1.1**
SRKR				*e*S	**Sn**	**13 49 35.2**	**-0.8**
BZWR	**Bezymyannyi-We**	**3.37**	**293**	PN	**Pn**	**13 48 59.6**	**+1.6**
BZWR	**Bezymyannyi-We**	**3.37**	**293**	*e*P	**Pn**	**13 48 59.6**	**+1.6**
KLY	**Klyuchi**	**3.41**	**299**	PN	**Pn**	**13 48 58.3**	**-0.1**
KLY				S	**Sn**	**13 49 35.9**	**-2.1**
KLY	**Klyuchi**	**3.41**	**299**	*e*P	**Pn**	**13 48 58.3**	**-0.1**
KLY				*e*S	**Sn**	**13 49 35.9**	**-2.1**
TUMR	**Tumrok**	**3.42**	**281**	PN	**Pn**	**13 49 00.0**	**+1.4**
TUMR				S	**Sn**	**13 49 38.7**	**+0.4**
TUMR	**Tumrok**	**3.42**	**281**	*e*P	**Pn**	**13 49 00.0**	**+1.4**
TUMR				*e*S	**Sn**	**13 49 38.7**	**+0.4**
KRSR	**Krestovskiy**	**3.42**	**297**	PN	**Pn**	**13 48 59.0**	**+0.4**
KRSR	**Krestovskiy**	**3.42**	**297**	*e*P	**Pn**	**13 48 59.0**	**+0.4**
KIRR	**Kirishev**	**3.44**	**292**	PN	**Pn**	**13 49 00.2**	**+1.1**
KIRR	**Kirishev**	**3.44**	**292**	*e*P	**Pn**	**13 49 00.2**	**+1.1**
KMNR	**Kamenistaya**	**3.45**	**289**	PN	**Pn**	**13 49 00.3**	**+1.3**
KMNR	**Kamenistaya**	**3.45**	**289**	*e*P	**Pn**	**13 49 00.3**	**+1.3**
KPT	**Kopyto**	**3.51**	**292**	PN	**Pn**	**13 49 01.0**	**+1.1**
KPT	**Kopyto**	**3.51**	**292**	*e*P	**Pn**	**13 49 01.0**	**+1.1**
KOZ	**Kozyrevsk**	**3.73**	**293**	PN	**Pn**	**13 49 04.6**	**+1.8**
KOZ	**Kozyrevsk**	**3.73**	**293**	*e*P	**Pn**	**13 49 04.6**	**+1.8**
KII	**Karymskiy**	**3.91**	**262**	P	**Pn**	**13 49 06.0**	**+0.6**
KII	**Karymskiy**	**3.91**	**262**	*e*P	**Pn**	**13 49 06.0**	**+0.6**
KII				*e*S	**Sn**	**13 49 48.3**	**-2.1**
SPN	**Mys Shipunski**	**3.92**	**247**	S	**Sn**	**13 49 48.4**	**-2.2**
SPN	**Mys Shipunski**	**3.92**	**247**	*e*P	**Pn**	**13 49 05.7**	**+0.3**
SPN				*e*S	**Sn**	**13 49 48.4**	**-2.2**
SPN	**Mys Shipunski**	**3.92**	**247**	P	**Pn**	**13 49 05.7**	**+0.3**
NLC	**Nalytchevo**	**4.25**	**250**	PN	**Pn**	**13 49 10.5**	**+0.5**
NLC	**Nalytchevo**	**4.25**	**250**	*e*P	**Pn**	**13 49 10.5**	**+0.5**
NLC				*e*S	**Sn**	**13 49 57.0**	**-1.8**
ESO	**Esso**	**4.33**	**288**	P	**Pb**	**13 49 17.9**	**-4.4**
ESO	**Esso**	**4.33**	**288**	*e*P	**Pb**	**13 49 17.9**	**-4.4**
SDLR	**Sedlovina**	**4.47**	**253**	PN	**Pn**	**13 49 14.2**	**+1.2**
SDLR	**Sedlovina**	**4.47**	**253**	*e*P	**Pn**	**13 49 14.2**	**+1.2**
SDLR				*e*S	**Sn**	**13 50 03.2**	**-1.0**
SMAR	**Somma**	**4.52**	**253**	PN	**Pn**	**13 49 15.0**	**+1.2**
SMAR	**Somma**	**4.52**	**253**	*e*P	**Pn**	**13 49 15.0**	**+1.2**
UGLR	**Uglovaya**	**4.53**	**253**	PN	**Pn**	**13 49 14.9**	**+1.0**
UGLR	**Uglovaya**	**4.53**	**253**	*e*P	**Pn**	**13 49 14.9**	**+1.0**
UGLR				*e*S	**Sn**	**13 50 04.4**	**-1.2**
KRER	**Koryakskii**	**4.53**	**254**	PN	**Pn**	**13 49 15.5**	**+1.5**
KRER	**Koryakskii**	**4.53**	**254**	*e*P	**Pn**	**13 49 15.5**	**+1.5**
KRER				*e*S	**Sn**	**13 50 05.6**	**-0.3**
AVH	**Avacha**	**4.55**	**254**	PN	**Pn**	**13 49 15.7**	**+1.5**
AVH	**Avacha**	**4.55**	**254**	*e*P	**Pn**	**13 49 15.7**	**+1.5**
AVH				*e*S	**Sn**	**13 50 05.9**	**-0.3**
KOK	**Koryaka**	**4.60**	**254**	PN	**Pn**	**13 49 16.0**	**+1.2**
KOK	**Koryaka**	**4.60**	**254**	*e*P	**Pn**	**13 49 16.0**	**+1.2**
KOK				*e*S	**Sn**	**13 50 05.3**	**-2.1**
DALK	**Dalny**	**4.64**	**251**	PN	**Pn**	**13 49 15.9**	**+0.6**
DALK	**Dalny**	**4.64**	**251**	*e*P	**Pn**	**13 49 15.9**	**+0.6**
DALK				*e*S	**Sn**	**13 50 06.0**	**-2.2**
PET	**Petropavlovsk**	**4.70**	**251**	⇓*i*PN	**Pn**	**13 49 17.2**	**+1.1**
PET				pmax	pmax		
	comp=Z,93nm,0.6s						
PET				MLR	MLR		
	comp=Z,100nm,16.0s						
PET	**Petropavlovsk**	**4.70**	**251**	*e*P	**Pn**	**13 49 17.1**	**+1.0**
PET				*e*S	**Sn**	**13 50 07.8**	**-1.8**
PET	**Petropavlovsk**	**4.70**	**251**	Pn	**Pn**	**13 49 17.1**	**+1.0**
OSSR	**Ossora**	**4.76**	**341**	PN	**Pn**	**13 49 17.0**	**0.0**
OSSR	**Ossora**	**4.76**	**341**	*e*P	**Pn**	**13 49 17.0**	**0.0**
OSSR				*e*S	**Sn**	**13 50 11.4**	**+0.1**
GNL	**Ganaly**	**4.86**	**260**	PN	**Pn**	**13 49 20.0**	**+1.6**
GNL	**Ganaly**	**4.86**	**260**	*e*P	**Pn**	**13 49 20.0**	**+1.6**
GNL				*e*S	**Sn**	**13 50 13.4**	**-0.5**
RUS	**Russkaya**	**5.05**	**245**	PN	**Pn**	**13 49 21.6**	**+0.7**
RUS	**Russkaya**	**5.05**	**245**	*e*P	**Pn**	**13 49 21.6**	**+0.7**
RUS				*e*S	**Sn**	**13 50 15.9**	**-2.4**
KRMR	**Karymshinskiy**	**5.07**	**251**	PN	**Pn**	**13 49 24.7**	**+3.6**
KRMR	**Karymshinskiy**	**5.07**	**251**	*e*P	**Pn**	**13 49 24.7**	**+3.6**
KRMR				*e*S	**Sn**	**13 50 18.7**	**0.0**
PEA0B	**Petropavlovsk-**	**5.19**	**255**	PN	**Pn**	**13 49 25.2**	**+2.3**
PEA0B	**Petropavlovsk-**	**5.19**	**255**	Pn	**Pn**	**13 49 25.2**	**+2.3**
PETK	**Petropavlovsk-**	**5.19**	**255**	Pn	**Pn**	**13 49 24.2**	**+1.3**
	comp=Z,6.3nm,0.3s,baz=84,slow=15,SNR=70						
PETK				Sn	**Sn**	**13 50 22.2**	**+0.4**
	comp=Z,5.8nm,0.3s,baz=192,slow=12,SNR=11						
PETK	**Petropavlovsk-**	**5.19**	**255**	Pn	**Pn**	**13 49 24.8**	**+1.9**
MTVR	**Mutnovka**	**5.20**	**247**	PN	**Pn**	**13 49 24.6**	**+1.5**
MTVR	**Mutnovka**	**5.20**	**247**	*e*P	**Pn**	**13 49 24.6**	**+1.5**
MTVR				*e*S	**Sn**	**13 50 20.3**	**-1.9**
ASAK	**Asacha**	**5.40**	**247**	PN	**Pn**	**13 49 27.5**	**+1.7**
ASAK	**Asacha**	**5.40**	**247**	*e*P	**Pn**	**13 49 27.5**	**+1.7**
ASAK				*e*S	**Sn**	**13 50 26.0**	**-1.1**
PALN	**Palana**	**5.44**	**325**	P	**Pn**	**13 49 27.9**	**+1.6**
PALN	**Palana**	**5.44**	**325**	*e*P	**Pn**	**13 49 27.9**	**+1.6**
APC	**Apacha**	**5.56**	**254**	PN	**Pn**	**13 49 30.8**	**+2.8**
APC	**Apacha**	**5.56**	**254**	*e*P	**Pn**	**13 49 30.8**	**+2.8**
APC				*e*S	**Sn**	**13 50 31.5**	**+0.5**
KDTR	**Khodutka, Kamc**	**5.61**	**241**	PN	**Pn**	**13 49 28.6**	**-0.1**
KDTR	**Khodutka, Kamc**	**5.61**	**241**	*e*P	**Pn**	**13 49 28.6**	**-0.1**
KDTR				*e*S	**Sn**	**13 50 28.2**	**-4.0**
TILK	**Tilichiki**	**5.68**	**1**	PN	**Pn**	**13 49 30.5**	**+0.9**
TILK	**Tilichiki**	**5.68**	**1**	*e*P	**Pn**	**13 49 30.5**	**+0.9**
MIPR	**Malaya Ipel'ka**	**6.06**	**249**	PN	**Pn**	**13 49 36.8**	**+1.9**
MIPR	**Malaya Ipel'ka**	**6.06**	**249**	*e*P	**Pn**	**13 49 36.8**	**+1.9**
PAU	**Pauzhetka**	**6.46**	**243**	PN	**Pn**	**13 49 41.2**	**+1.0**
PAU	**Pauzhetka**	**6.46**	**243**	*e*P	**Pn**	**13 49 41.2**	**+1.0**
SKR	**Severo-Kuril's**	**7.28**	**240**	*e*PN	**Pn**	**13 49 52.5**	**+1.0**

SKR				pmax	pmax		
	comp=Z,41nm,0.7s						
SKR	**Severo-Kuril’s**	**7.28**	**240**	*e*P	**Pn**	**13 49 52.2**	**+0.7**
SKR				*e*S	**Sn**	**13 51 09.6**	**-3.5**
KMSK	**Kamenskaya**	**7.71**	**1**	P	**Pn**	**13 49 58.4**	**+1.0**
KMSK	**Kamenskaya**	**7.71**	**1**	*e*P	**Pn**	**13 49 58.4**	**+1.0**
MA2	**Magadan**	**9.56**	**306**	Pn	**Pn**	**13 50 24.1**	**+1.3**
	comp=Z,56nm,0.3s,baz=174,slow=0.5,SNR=7.9						
SPIA	**Saint Paul Isl**	**13.48**	**70**	Pn	**Pn**	**13 51 14.8**	**-1.6**
JKA	**Kamikawa-asahi**	**18.50**	**244**	P	**Pn**	**13 52 22.2**	**+1.0**
JKA				IAmb	IAmb	13 52 36.2	
	comp=Z,35nm,1.2s						
ASAJ	**Asahikawa**	**18.50**	**244**	P	**Pn**	**13 52 21.4**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=66,slow=12,SNR=1.6						
ASAJ	**Asahikawa**	**18.50**	**244**	P	**Pn**	**13 52 22.2**	**+1.0**
ASAJ				pmax	pmax		
	comp=Z,35nm,1.2s						
ERM	**Erimo**	**19.72**	**239**	P	**P**	**13 52 34.5**	**+0.2**
ERM				pmax	pmax		
	comp=Z,106nm,1.4s						
ERM	**Erimo**	**19.72**	**239**	P	**P**	**13 52 34.5**	**+0.2**
YAK	**Yakutsk**	**20.14**	**306**	P	**P**	**13 52 38.9**	**+0.1**
	comp=Z,5.8nm,0.5s,baz=255,slow=1.6,SNR=3.1						
YAK	**Yakutsk**	**20.14**	**306**	*e*P	**P**	**13 52 38.9**	**+0.1**
YAK				pmax	pmax		
	comp=Z,19nm,1.1s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.4s						
TTA	**Tatalina**	**20.98**	**52**	P	**P**	**13 52 48.2**	**+0.3**
TTA				pmax	pmax		
	comp=Z,11nm,1.1s						
TTA	**Tatalina**	**20.98**	**52**	P	**P**	**13 52 48.2**	**+0.3**
KLR	**Kul'dur**	**21.66**	**269**	P	**P**	**13 52 56.7**	**+1.5**
	comp=Z,4.3nm,0.6s,baz=81,slow=7.3,SNR=12						
M19K	**Big River Lodg**	**21.67**	**55**	P	**P**	**13 52 55.5**	**+0.2**
J20K	**Nowinta River**	**21.94**	**49**	P	**P**	**13 52 57.6**	**-0.5**
IMAR	**Indian Mountai**	**22.38**	**44**	P	**P**	**13 53 03.2**	**+0.5**
ZEA	**Zeya**	**22.48**	**283**	*e*P	**P**	**13 53 06.1**	**+2.1**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
OHAK	**Old Harbor**	**22.65**	**67**	P	**P**	**13 53 03.9**	**-1.8**
H21K	**Melozitna Rive**	**22.70**	**45**	P	**P**	**13 53 05.2**	**-1.1**
KDAK	**Kodiak Island**	**22.92**	**65**	P	**P**	**13 53 07.5**	**-1.1**
KDAK				pmax	pmax		
	comp=Z,76nm,1.4s						
KDAK	**Kodiak Island**	**22.92**	**65**	P	**P**	**13 53 07.5**	**-1.1**
TIXI	**Tiksi**	**23.16**	**331**	P	**P**	**13 53 11.0**	**+0.1**
	comp=Z,4.6nm,0.7s,baz=122,slow=9.6,SNR=5.0						
TIXI	**Tiksi**	**23.16**	**331**	P	**P**	**13 53 10.6**	**-0.4**
BPAW	**Bear Paw Mtn.**	**23.31**	**49**	P	**P**	**13 53 11.0**	**-1.6**
BPAW				IAmb	IAmb	13 53 36.1	
	comp=Z,17nm,1.4s						
CNPM	**China Poot**	**23.35**	**61**	P	**P**	**13 53 11.2**	**-1.8**
TRF	**Thorofare Moun**	**23.60**	**51**	P	**P**	**13 53 14.7**	**-0.8**
TRF				IAmb	IAmb	13 53 21.5	
	comp=Z,18nm,1.1s						
COLD	**Coldfoot**	**23.99**	**41**	P	**P**	**13 53 18.8**	**-0.2**
COLD				IAmb	IAmb	13 53 20.7	
	comp=Z,12nm,1.3s						
I23K	**Minto, Yukon-K**	**24.08**	**47**	P	**P**	**13 53 18.8**	**-1.0**
I23K				IAmb	IAmb	13 53 30.9	
	comp=Z,18nm,1.4s						
NEA2	**Nenana**	**24.17**	**48**	P	**P**	**13 53 19.8**	**-0.9**
SEW	**Seward**	**24.17**	**59**	P	**P**	**13 53 18.1**	**-2.6**
RND	**Reindeer**	**24.24**	**51**	P	**P**	**13 53 19.5**	**-1.9**
RND				pmax	pmax		
	comp=Z,9.0nm,1.0s						
RND	**Reindeer**	**24.24**	**51**	P	**P**	**13 53 19.5**	**-1.9**
RND				IAmb	IAmb	13 53 26.8	
	comp=Z,8.6nm,1.0s						
GHO	**Glory Hole Cre**	**24.27**	**55**	P	**P**	**13 53 20.9**	**-0.8**
GHO				IAmb	IAmb	13 53 44.2	
	comp=Z,30nm,1.5s						
TOLK	**Toolik Lake Re**	**24.49**	**38**	P	**P**	**13 53 23.7**	**+0.1**
TOLK				IAmb	IAmb	13 53 25.2	
	comp=Z,8.3nm,0.6s						
MDM	**Murphy Dome**	**24.55**	**47**	P	**P**	**13 53 23.2**	**-1.0**
MDM				IAmb	IAmb	13 53 27.4	
	comp=Z,8.4nm,1.1s						
SML	**Sawmill**	**24.55**	**55**	P	**P**	**13 53 23.1**	**-1.1**
SML				IAmb	IAmb	13 53 37.5	
	comp=Z,23nm,1.2s						
WRH	**Wood River Hil**	**24.59**	**48**	P	**P**	**13 53 24.8**	**+0.3**
WRH				IAmb	IAmb	13 53 26.3	
	comp=Z,9.5nm,0.8s						
PWL	**Port Wells**	**24.63**	**57**	P	**P**	**13 53 23.6**	**-1.4**
COLA	**College**	**24.70**	**47**	*i* P	**P**	**13 53 25.8**	**+0.3**
COLA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
COLA	**College**	**24.70**	**47**	P	**P**	**13 53 25.5**	**0.0**
COLA				IAmb	IAmb	13 53 29.2	
	comp=Z,19nm,1.2s						
CCB	**Clear Creek Bu**	**24.72**	**48**	P	**P**	**13 53 25.5**	**-0.2**
CCB				IAmb	IAmb	13 53 27.4	
	comp=Z,14nm,0.7s						
DHY	**Denali Highway**	**24.92**	**52**	P	**P**	**13 53 27.0**	**-0.7**
HDA	**Harding Lake**	**25.08**	**49**	P	**P**	**13 53 27.6**	**-1.4**
HDA				IAmb	IAmb	13 53 34.9	
	comp=Z,7.6nm,1.0s						
IL31		**25.11**	**48**	P	**P**	**13 53 28.6**	**-0.6**
IL31				IAmb	IAmb	13 53 36.1	
	comp=Z,9.2nm,1.0s						
ILAR	**Eielson Array**	**25.11**	**48**	P	**P**	**13 53 28.5**	**-0.8**
	comp=Z,4.1nm,0.6s,baz=255,slow=8.6,SNR=38						
ILAR				PcP	**PcP**	**13 57 01.9**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=270,slow=3.3,SNR=4.5						
ILAR	**Eielson Array**	**25.11**	**48**	P	**P**	**13 53 29.1**	**-0.2**
M24K	**Tolsona, Glenn**	**25.54**	**54**	P	**P**	**13 53 32.4**	**-0.8**
M24K				IAmb	IAmb	13 53 56.1	
	comp=Z,20nm,1.1s						
DOT	**Dot Lake**	**26.38**	**50**	P	**P**	**13 53 39.2**	**-1.5**
DOT				IAmb	IAmb	13 53 50.0	
	comp=Z,9.8nm,1.3s						
MAT	**Matsushiro**	**26.38**	**238**	P	**P**	**13 53 42.9**	**+1.9**
MJAR	**Matsushiro Arr**	**26.38**	**238**	P	**P**	**13 53 42.3**	**+1.4**
	comp=Z,2.3nm,0.6s,baz=32,slow=8.7,SNR=6.8						
SCRK	**Sand Creek**	**26.39**	**49**	P	**P**	**13 53 40.0**	**-1.0**
JHJ	**Hachijo jima 2**	**28.43**	**231**	P	**P**	**13 54 00.6**	**+1.2**
	comp=Z,307nm,1.2s,baz=60,slow=20,SNR=1.9						
INK	**Inuvik**	**30.36**	**40**	P	**P**	**13 54 15.9**	**-0.1**
	comp=Z,0.8nm,0.4s,baz=264,slow=4.9,SNR=8.5						
INK	**Inuvik**	**30.36**	**40**	P	**P**	**13 54 16.0**	**-0.1**
INK				pmax	pmax		
	comp=Z,7.0nm,1.5s						
INK	**Inuvik**	**30.36**	**40**	P	**P**	**13 54 16.0**	**-0.1**
INK				IAmb	IAmb	13 54 23.4	
	comp=Z,7.3nm,1.4s						
KSRS	**Korea Array**	**31.08**	**252**	P	**P**	**13 54 24.6**	**+1.8**
	comp=Z,2.1nm,0.7s,baz=44,slow=9.2,SNR=11						
DLBC	**Dease Lake**	**34.21**	**57**	P	**P**	**13 54 51.4**	**+1.4**
	comp=Z,1.1nm,0.7s,baz=207,slow=9.0,SNR=4.2						
H11N2	**WAKE ISLAND Hy**	**34.99**	**179**	T	T	14 32 17.4	
	baz=0.0,slow=76						
H11N3	**WAKE ISLAND Hy**	**35.01**	**179**	T	T	14 32 23.4	
	baz=0.0,slow=76						
H11N1	**WAKE ISLAND Hy**	**35.01**	**179**	T	T	14 32 23.6	
	baz=0.0,slow=76						
ULN	**Ulaanbaatar**	**36.51**	**284**	*ce*P	**P**	**13 55 10.3**	**+0.3**
ULN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
NRIK	**Noril'sk**	**36.57**	**324**	*ce*P	**P**	**13 55 10.5**	**+0.4**
NRIK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SONM	**Songino Array**	**36.90**	**285**	P	**P**	**13 55 15.0**	**+1.7**
	comp=Z,2.6nm,0.6s,baz=58,slow=8.0,SNR=14						
SONM				PcP	**PcP**	**13 57 34.2**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=83,slow=1.6,SNR=3.9						
SONM	**Songino Array**	**36.90**	**285**	P	**P**	**13 55 13.1**	**-0.2**
YKA	**Yellowknife Ar**	**39.51**	**46**	P	**P**	**13 55 35.0**	**0.0**
	comp=Z,0.4nm,0.3s,baz=309,slow=9.2,SNR=16						
YKA	**Yellowknife Ar**	**39.51**	**46**	P	**P**	**13 55 35.0**	**0.0**
RES	**Resolute Bay**	**40.41**	**24**	P	**P**	**13 55 42.0**	**-0.2**
	comp=Z,2.7nm,0.8s,baz=283,slow=23,SNR=6.4						
ZALV	**Zalesovo Beam**	**44.78**	**304**	P	**P**	**13 56 17.3**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=69,slow=8.0,SNR=2.0						
ZALV				PcP	**PcP**	**13 57 59.1**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=67,slow=4.8,SNR=3.4						
EDM	**Edmonton**	**44.93**	**57**	P	**P**	**13 56 19.3**	**0.0**
EDM				pmax	pmax		
	comp=Z,6.0nm,0.6s						
EDM	**Edmonton**	**44.93**	**57**	P	**P**	**13 56 19.3**	**0.0**
EDM				IAmb	IAmb	13 56 20.1	
	comp=Z,6.4nm,0.6s						
LZH	**Lanzhou**	**45.81**	**273**	*e*P	**P**	**13 56 28.8**	**+2.2**
LZH				pP	pP	13 56 32.3	-0.2
LZH				pmax	pmax		
	comp=Z,21nm,1.4s						
GTA	**Gaotai**	**45.85**	**279**	*e*P	**P**	**13 56 28.5**	**+1.7**
GTA				pP	pwP	13 56 39.8	-1.4
GTA				sP	sP	13 56 45.5	+10
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KURK	**Kurchatov**	**49.77**	**304**	P	**P**	**13 56 57.5**	**+0.7**
KURK	**Kurchatov**	**49.77**	**304**	P	**P**	**13 56 56.7**	**-0.1**
KURBB	**Kurchatov Arra**	**49.87**	**304**	P	**P**	**13 56 57.5**	**-0.1**
	comp=Z,3.9nm,0.5s,baz=55,slow=7.7,SNR=17						
MK31	**Makanchi Array**	**50.52**	**298**	P	**P**	**13 57 02.2**	**-0.5**
MK31				pmax	pmax		
	comp=Z,3.0nm,1.1s						
MK31	**Makanchi Array**	**50.52**	**298**	P	**P**	**13 57 02.2**	**-0.5**
MKAR	**Makanchi Array**	**50.52**	**298**	P	**P**	**13 57 02.2**	**-0.5**
	comp=Z,2.0nm,0.8s,baz=55,slow=7.1,SNR=8.5						
MKAR	**Makanchi Array**	**50.52**	**298**	P	**P**	**13 57 02.1**	**-0.6**
BRVK	**Borovoye**	**52.05**	**310**	*ce*P	**P**	**13 57 14.1**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.5s						
BRVK	**Borovoye**	**52.05**	**310**	P	**P**	**13 57 14.1**	**+0.1**
ARCES	**ARCESS Array B**	**52.71**	**344**	P	**P**	**13 57 18.1**	**-0.6**
	comp=Z,2.2nm,0.6s,baz=25,slow=11,SNR=9.9						
ARCES	**ARCESS Array B**	**52.71**	**344**	P	**P**	**13 57 17.6**	**-1.1**
PDAR	**Pinedale Array**	**53.64**	**66**	P	**P**	**13 57 26.6**	**+0.5**
	comp=Z,1.5nm,0.8s,baz=310,slow=5.6,SNR=8.3						
PSUT	**Pine Spring**	**54.30**	**72**	P	**P**	**13 57 30.5**	**-0.5**
PSUT				IAmb	IAmb	13 57 32.3	
	comp=Z,2.4nm,0.8s						
FRB	**Frobisher Bay**	**54.50**	**26**	P	**P**	**13 57 31.1**	**-0.7**
	comp=Z,15nm,0.6s,baz=324,slow=8.1,SNR=24						
SRU	**San Rafael Swe**	**55.71**	**69**	P	**P**	**13 57 41.5**	**+0.4**
SRU				pmax	pmax		
	comp=Z,6.0nm,0.6s						
SRU	**San Rafael Swe**	**55.71**	**69**	P	**P**	**13 57 41.5**	**+0.4**
O20A	**White River Ci**	**56.20**	**67**	P	**P**	**13 57 44.4**	**-0.2**
O20A				IAmb	IAmb	13 57 46.2	
	comp=Z,4.8nm,0.8s						
AAK	**Ala-Archa**	**57.40**	**299**	P	**P**	**13 57 54.0**	**+0.9**
	comp=Z,1.7nm,0.7s,baz=86,slow=1.5,SNR=7.1						
AAK	**Ala-Archa**	**57.40**	**299**	P	**P**	**13 57 54.0**	**+0.9**
KSH	**Kashi**	**58.92**	**295**	P	**P**	**13 58 07.5**	**+3.8**
KSH				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ABKAR	**Akbulak array**	**59.29**	**313**	P	**P**	**13 58 05.6**	**-0.4**
ABKAR				IAmb	IAmb	13 58 06.2	
	comp=Z,1.9nm,0.8s						
FINES	**FINESS Array B**	**59.88**	**339**	P	**P**	**13 58 09.8**	**0.0**
	comp=Z,4.0nm,0.8s,baz=0.0,slow=9.9,SNR=5.6						
FINES	**FINESS Array B**	**59.88**	**339**	P	**P**	**13 58 08.7**	**-1.1**
CMAR	**Chiang Mai Arr**	**61.92**	**262**	P	**P**	**13 58 24.5**	**+0.2**
	comp=Z,1.4nm,0.7s,baz=24,slow=6.7,SNR=8.4						
CMAR	**Chiang Mai Arr**	**61.92**	**262**	*ce*P	**P**	**13 58 25.7**	**+1.4**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SIJI	**Sorong**	**62.38**	**220**	P	**P**	**13 58 27.6**	**+0.3**
	comp=Z,4.5nm,0.7s,baz=349,slow=8.0,SNR=4.9						
NB2	**NORSAR Subarra**	**62.81**	**347**	P	**P**	**13 58 29.4**	**-0.3**
	comp=Z,2.2nm,0.5s,baz=17,slow=6.9						
NOA	**NORSAR Array B**	**62.81**	**347**	P	**P**	**13 58 29.4**	**-0.3**
	comp=Z,3.5nm,0.7s,baz=17,slow=6.7,SNR=12						
TX31	**Lajitas Ar. Si**	**66.77**	**72**	P	**P**	**13 58 56.5**	**+0.5**
TXAR	**Lajitas Array**	**66.77**	**72**	P	**P**	**13 58 56.4**	**+0.4**
	comp=Z,1.1nm,0.5s,baz=301,slow=4.6,SNR=8.0						
TXAR	**Lajitas Array**	**66.77**	**72**	P	**P**	**13 58 55.4**	**-0.7**
AKASG	**Malin Array Be**	**68.87**	**332**	P	**P**	**13 59 08.1**	**-0.7**
	comp=Z,0.4nm,0.5s,baz=25,slow=6.9,SNR=2.3						
BRTR	**Keskin Array B**	**77.42**	**324**	P	**P**	**13 59 59.6**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=113,slow=1.9,SNR=2.9						
WRA	**Warramunga Arr**	**79.20**	**210**	P	**P**	**14 00 09.1**	**-0.3**
	comp=Z,0.9nm,0.8s,baz=23,slow=6.3,SNR=3.0						
AS31	**Alice Springs**	**82.84**	**209**	P	**P**	**14 00 29.4**	**+0.6**
ASAR	**Alice Springs**	**82.84**	**209**	P	**P**	**14 00 30.0**	**+1.2**
	comp=Z,2.8nm,0.8s,baz=17,slow=5.4,SNR=15						
ASAR	**Alice Springs**	**82.84**	**209**	P	**P**	**14 00 28.9**	**+0.1**
ESDC	**Sonseca Array**	**85.53**	**352**	P	**P**	**14 00 42.6**	**+0.1**
	comp=Z,1.2nm,0.9s,baz=2.9,slow=5.7,SNR=3.2						

RSNC 28 13:48:42.7±0.9**, 3°.88N×71°.42W, h10**^{km}±4^{km}**, ML3.4, Mw3.5, 1D, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PTGC	**Puerto Gaitan,**	**0.78**	**294**	⇓*e*P	Pg	13 48 55.5	-2.2
PTGC				*e*S	Sg	13 49 07.7	-0.2
PTGC				*i*		13 49 14.8	
	comp=Z,558nm,0.2s						
GUVC	**San Jose del G**	**1.79**	**222**	*e*P	Pn	13 49 12.1	-1.6
GUVC				*e*S	Sn	13 49 35.1	-1.5
GUVC				*i*		13 49 39.6	
	comp=Z,906nm,0.2s						
VILC	**Villavicencio,**	**2.28**	**276**	*e*P	Pn	13 49 19.8	-0.7
VILC				*e*S	Sn	13 49 47.7	-1.0
TAMC	**Tame, Arauca**	**2.56**	**352**	*e*P	Pn	13 49 23.9	-0.4
TAMC				*e*S	Sn	13 49 56.0	+0.3
TAMC				*i*		13 50 04.4	
	comp=Z,192nm,0.3s						
RUSC	**La Rusia**	**2.59**	**320**	*e*P	Pn	13 49 24.3	-0.8
RUSC				*e*S	Sn	13 49 55.6	-1.4
RUSC				*i*		13 50 06.1	
	comp=Z,87nm,0.5s						
MACC	**Macarena, Meta**	**2.97**	**235**	*e*P	Pn	13 49 31.6	+1.7
MACC				*e*S	Sn	13 50 08.2	+2.5
MACC				*i*		13 50 21.2	
	comp=Z,235nm,0.3s						
SPBC	**San Pablo de B**	**3.17**	**304**	*e*P	Pn	13 49 31.1	-1.7
SPBC				*e*Pg	Pb	13 49 41.0	+1.7
SPBC				*e*S	Sn	13 50 10.0	-0.8
SPBC				*i*		13 50 30.1	
	comp=Z,52nm,0.3s						
BARC	**Barichara**	**3.21**	**327**	*e*P	Pn	13 49 31.7	-1.8
BARC				*e*Pg	Pb	13 49 40.8	+0.7
BARC				*e*S	Sn	13 50 10.4	-1.6
BARC				*e*Sg	Sg	13 50 24.6	-1.5
BARC				*i*		13 50 32.9	
	comp=Z,108nm,0.4s						
PRAC	**Prado**	**3.46**	**267**	*e*P	Pn	13 49 36.7	0.0
PRAC				*e*Pg	Pb	13 49 45.5	+1.3
PRAC				*e*S	Sn	13 50 19.0	+1.2
PRAC				*i*		13 50 38.7	
	comp=Z,68nm,0.5s						
ELOV	**Elorza**	**3.65**	**32**	*e*P	Pb	13 49 44.3	-3.1
ELOV				*e*Pg	Pg	13 49 47.3	-5.5
ELOV				*e*S	Sn	13 50 19.9	-2.5
ELOV				*e*Sg	Sb	13 50 35.9	+4.2
PAMC	**Pamplona, Colo**	**3.66**	**340**	*e*P	Pb	13 49 48.2	+0.3
PAMC				*e*S	Sn	13 50 22.4	-1.0
PAMC				*i*		13 50 40.6	
	comp=Z,95nm,0.3s						
ORTC	**Ortega, Tolima**	**3.81**	**271**	*e*P	Pn	13 49 40.6	-1.0
ORTC				*e*Pg	Pb	13 49 50.7	+0.5
ORTC				*e*S	Sn	13 50 26.0	-0.5
ORTC				*i*		13 50 52.5	
	comp=Z,88nm,0.6s						
NORC	**Norcasia**	**3.82**	**296**	*e*P	Pn	13 49 41.0	-0.7
NORC				*e*S	Sn	13 50 25.4	-1.4
NORC				*i*		13 50 48.4	
	comp=Z,22nm,0.5s						
PTBC	**PUERTO BERRIO,**	**4.01**	**311**	*e*P	Pn	13 49 42.5	-1.8
PTBC				*e*S	Sn	13 50 27.9	-3.5
PTBC				*i*		13 50 51.9	
	comp=Z,24nm,0.5s						
ANIL	**Santa Ana**	**4.02**	**279**	*e*P	Pn	13 49 42.7	-1.9
ANIL				*e*Pg	Pb	13 49 54.1	+0.4
ANIL				*e*S	Sn	13 50 32.4	+0.6
ANIL				*i*		13 50 59.3	
	comp=Z,124nm,0.4s						
GUY2C	**Guyana, Caldas**	**4.15**	**289**	*e*P	Pn	13 49 45.7	-0.9
GUY2C				*e*S	Sn	13 50 34.6	-0.8
GUY2C				*i*		13 50 40.1	
	comp=Z,22nm,0.6s						
BETC	**Betania**	**4.19**	**254**	*e*S	Sb	13 50 47.0	-0.2
GARC	**Garzon, Huila**	**4.40**	**248**	*e*P	Pn	13 49 42.7	-7.2
GARC				*e*Pg	Pb	13 49 57.2	-3.0
GARC				*e*S	Sn	13 50 42.6	+1.3
SOCV	**Socops**	**4.41**	**7**	*e*P	Pn	13 49 48.0	-1.8
SOCV				*e*Pg	Pb	13 49 58.5	-1.9
SOCV				*e*S	Sn	13 50 39.8	-1.5
MARP	**Paez Belalcaza**	**4.64**	**257**	*e*P	Pn	13 49 52.4	-0.8
MARP				*e*S	Sn	13 50 46.4	-0.9
MARP				*i*		13 51 12.9	
	comp=Z,16nm,0.4s						
YOTC	**Yotoco, Valle**	**4.91**	**271**	*e*P	Pn	13 49 55.5	-1.3
YOTC				*e*S	Sn	13 50 51.5	-2.2
YOTC				*i*		13 51 22.6	
	comp=Z,18nm,0.5s						
ZARC	**Zaragoza, Cauc**	**4.96**	**317**	*e*P	Pn	13 49 56.9	-0.3
ZARC				*e*S	Sn	13 50 52.1	-2.6
PTLC	**Puerto Leguiza**	**5.00**	**223**	*e*P	Pb	13 50 12.7	+2.4
PTLC				*e*S	Sg	13 51 17.1	-6.1
PTLC				*i*		13 51 31.1	
	comp=Z,54nm,0.6s						
PCON	**Cinco Dias**	**5.20**	**253**	*e*P	Pn	13 50 06.2	+5.1
PCON				*e*S	Sn	13 51 08.0	+6.5
PCON				*i*		13 51 35.8	
	comp=Z,67nm,0.5s						
SOTA	**Rioblanco**	**5.46**	**252**	*e*P	Pn	13 50 04.7	+0.1
SOTA				*i*		13 51 45.8	
	comp=Z,24nm,0.5s						
SMLC	**San Martn de**	**5.55**	**332**	*e*P	Pn	13 50 05.0	-0.4
SMLC				*e*S	Sn	13 51 07.5	-1.8
SMLC				*i*		13 51 45.8	
	comp=Z,16nm,0.5s						
DBBC	**Dabeiba**	**5.69**	**303**	*e*P	Pn	13 50 07.7	+0.2
DBBC				*e*S	Sn	13 51 10.8	-2.2
DBBC				*i*		13 51 19.5	
	comp=Z,53nm,0.6s						

IDC ***28*** *13:53:07.0±0.9, 3°.67N×126°.89E, h0^{km}, mb3.7/9, mb1 3.9/10, mb1mx3.7/41, mbtmp3.8/10, ML3.7/1, Error ellipse: s-maj=58.4km s-min=14.8km az=66.0*

DJA ***28*** *13:53:06.1±1.9, 4°N±15°×12°7E±°, h16^{km}±5^{km}, M4.2/7, MLv4.2/7*

ISC 28 13:53:12.1±0.8**, 3°.81N**±0°.09×**127°.01E**±0°.07**, h36**^{km}**, n14,** σ1^{s}.**33**/17**, mb3.9**/9**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.48**	**265**	P	**Pn**	**13 53 34.0**	**-2.3**
SGSI				S	**Sn**	**13 53 56.4**	**+2.0**
TNTI	**Ternate**	**3.04**	**173**	P	**Pn**	**13 53 58.4**	**+0.7**
KMSI	**Cibinong**	**4.42**	**223**	P	**Pn**	**13 54 17.6**	**+1.0**
LBMI	**Labuha**	**4.45**	**174**	P	**Pn**	**13 54 18.2**	**+1.1**
SIJI	**Sorong**	**6.30**	**137**	Pn	**Pn**	**13 54 43.0**	**+0.4**
	1.9nm,0.3s,baz=350,slow=14,SNR=8.8						
SIJI				Sn	**Sn**	**13 55 52.7**	**-0.7**
	baz=198,slow=19,SNR=1.3						
FITZ	**Fitzroy Crossi**	**21.81**	**184**	P	**P**	**13 58 00.7**	**-0.6**
	1.3nm,0.5s,baz=356,slow=2.5,SNR=10						
WRA	**Warramunga Arr**	**24.68**	**163**	P	**P**	**13 58 28.6**	**-1.3**
	3.8nm,0.8s,baz=344,slow=11,SNR=44						
ASAR	**Alice Springs**	**28.13**	**166**	P	**P**	**13 59 00.2**	**-0.8**
	0.3nm,0.5s,baz=349,slow=9.4,SNR=3.5						
CMAR	**Chiang Mai Arr**	**31.07**	**300**	P	**P**	**13 59 27.0**	**-0.1**
	0.4nm,0.4s,baz=89,slow=5.7,SNR=1.6						
STKA	**Stephens Creek**	**38.11**	**160**	P	**P**	**14 00 25.6**	**-2.2**
	2.4nm,0.5s,baz=325,slow=10.0,SNR=11						
SONM	**Songino Array**	**47.31**	**341**	P	**P**	**14 01 43.4**	**+1.1**
	0.4nm,0.6s,baz=152,slow=9.6,SNR=3.8						
SONM				PcP	**PcP**	**14 03 14.7**	**+1.7**
	0.4nm,0.7s,baz=151,slow=3.3,SNR=2.1						
MKAR	**Makanchi Array**	**57.65**	**325**	P	**P**	**14 02 59.0**	**+0.2**
	0.7nm,0.6s,baz=138,slow=6.4,SNR=3.6						
ZALV	**Zalesovo Beam**	**60.64**	**333**	P	**P**	**14 03 19.9**	**+0.6**
	0.3nm,0.3s,baz=126,slow=9.7,SNR=2.4						
KURBB	**Kurchatov Arra**	**61.82**	**327**	P	**P**	**14 03 27.9**	**+0.5**
	0.7nm,0.6s,baz=129,slow=7.3,SNR=5.3						

MAN 28 13:53:43.2, 6°.13N×126°.55E, h48^{km}, mb4.5, ML3.3, MS3.1, Mindanao

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SOME ***28*** *13:57:19.0, 44°.38N×83°.00E, h0^{km}*

NNC ***28*** *13:57:22.6±1.8, 44°.42N×82°.88E, h0^{km}, mb3.5, mpv3.3, Error ellipse: s-maj=17.6km s-min=7.2km az=129.0*

ISC 28 13:57:19.8±1.7**, 44°.37N**±0°.07×**83°.05E**±0°.07**, h17**^{km}**, n21,** σ1^{s}.**77**/29**, 5C-1D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**2.16**	**246**	*e*P	**Pb**	**13 57 59.2**	**+0.7**
	7.3nm,0.3s						
KTMS				*e*S	**Sg**	**13 58 29.0**	**-0.2**
	66nm,0.3s						
KTMS	**Ketmen**	**2.16**	**246**	Pg	**Pb**	**13 57 59.2**	**+0.7**
	7.3nm,0.3s						
KTMS				Lg	Lg	13 58 29.0	
	66nm,0.3s						
DJR	**Jarkent**	**2.34**	**270**	*e*P	**Pb**	**13 58 02.8**	**+1.2**
	5.4nm,0.3s						
DJR				*e*S	**Sg**	**13 58 34.7**	**-0.4**
	15nm,0.2s						
DJR	**Jarkent**	**2.34**	**270**	Pg	**Pb**	**13 58 02.8**	**+1.2**
	5.4nm,0.3s						
DJR				Lg	Lg	13 58 34.7	
	15nm,0.2s						
MK31	**Makanchi Array**	**2.49**	**348**	⇑Pn	**Pb**	**13 58 03.6**	**-0.4**
	1.2nm,0.3s,baz=163,slow=16,SNR=16						
MK31				⇑Lg	Lg	13 58 37.7	
	7.1nm,0.5s,baz=160,slow=29,SNR=8.0						
MAKZ	**Makanchi**	**2.56**	**343**	⇑Pn	**Pb**	**13 58 06.6**	**+1.4**
	4.8nm,0.6s						
MAKZ				⇑Lg	Lg	13 58 37.9	
	3.8nm,0.5s						
PDGK	**Podgornoye**	**2.78**	**249**	Pg	**Pb**	**13 58 09.8**	**+0.8**
	1.7nm,0.2s						
PDGK				Lg	Lg	13 58 46.6	
	6.0nm,0.4s						
PDGK	**Podgornoye**	**2.78**	**249**	⇑Pn	**Pb**	**13 58 09.3**	**+0.3**
	1.9nm,0.6s						
PDGK				⇓Lg	Lg	13 58 47.0	
	8.5nm,0.5s						
KAPS	**Kapalarasan**	**2.79**	**291**	*e*P	**Pb**	**13 58 11.0**	**+1.9**
	3.2nm,0.2s						
KAPS				*e*S	**Sg**	**13 58 48.7**	**-0.6**
	18nm,0.3s						
KAPS	**Kapalarasan**	**2.79**	**291**	Pg	**Pb**	**13 58 11.0**	**+1.9**
	3.2nm,0.2s						
KAPS				Lg	Lg	13 58 48.7	
	18nm,0.3s						
UZB	**Uzynbulak**	**3.17**	**249**	*e*P	**Pb**	**13 58 18.4**	**+2.8**
	3.4nm,0.3s						
UZB				*e*S	**Sg**	**13 59 01.1**	**-0.3**
	8.6nm,0.3s						
UZB	**Uzynbulak**	**3.17**	**249**	Pg	**Pb**	**13 58 18.4**	**+2.8**
	3.4nm,0.3s						
UZB				Lg	Lg	13 59 01.1	
	8.6nm,0.3s						
BLB	**Baldybastay**	**3.30**	**267**	Pg	**Pb**	**13 58 20.1**	**+2.2**
	13nm,0.4s						
BLB				Lg	Lg	13 59 04.5	
	24nm,0.3s						
ZSN	**Zaisan**	**3.33**	**22**	*e*P	**Pb**	**13 58 18.6**	**+0.2**
	2.0nm,0.1s						
ZSN				*e*S	**Sb**	**13 59 01.6**	**+2.8**
	17nm,0.2s						
ZSN	**Zaisan**	**3.33**	**22**	Pg	**Pb**	**13 58 18.6**	**+0.2**
ZSN				Lg	Lg	13 59 01.6	
TDK	**Taldyqorghan**	**3.38**	**283**	*e*P	**Pg**	**13 58 22.7**	**-1.8**
	31nm,0.4s						
TDK				*e*S	**Sg**	**13 59 08.7**	**+0.5**
	14nm,0.5s						
TDK	**Taldyqorghan**	**3.38**	**283**	Pg	**Pg**	**13 58 22.7**	**-1.8**
	31nm,0.4s						
TDK				Lg	Lg	13 59 08.7	
	14nm,0.5s						
SATY	**Saty**	**3.61**	**250**	*e*P	**Pb**	**13 58 24.9**	**+1.6**
	5.1nm,0.4s						
SATY				*e*S	**Sg**	**13 59 12.4**	**-3.4**
	9.7nm,0.2s						
SATY	**Saty**	**3.61**	**250**	Pg	**Pb**	**13 58 24.9**	**+1.6**
	5.1nm,0.4s						
SATY				Lg	Lg	13 59 12.4	
	9.7nm,0.2s						
ARXS	**Arharly**	**3.76**	**270**	*e*P	**Pb**	**13 58 27.6**	**+1.9**
	3.5nm,0.4s						
ARXS				*e*S	**Sg**	**13 59 17.4**	**-3.0**
	12nm,0.4s						
ARXS	**Arharly**	**3.76**	**270**	Pg	**Pb**	**13 58 27.6**	**+1.9**
	3.5nm,0.4s						
ARXS				Lg	Lg	13 59 17.4	
	12nm,0.4s						

*IDC **28** 13:58:12.8±0.9, 3°.64N×126°.73E, h0^{km}, mb4.0/8, mb1 4.2/9, mb1mx3.8/40, mbtmp4.1/9, ML4.2/1, Error ellipse: s-maj=71.1km s-min=15.0km az=68.0*
*DJA **28** 13:58:15.4±0.8, 4°N±7°×12°7E±°, h10^{km}, M4.0/9, mb4.1/5, MLv4.0/9*
*NEIC **28** 13:58:20.8±0.8, 3°.7N±0°.1×127°.0E±0°.1, h61^{km}±10^{km}, mb4.4/15, Error ellipse: s-maj=21.9km s-min=7.9km az=218.0*
ISC 28 13:58:19.1±0.8, **3°.74N**±0°.10×**127°.04E**±0°.07, **h48**^{km}, **n38**, σ**1^{s}.00**/40, **mb4.2**/15, **Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	1.51	268	P	Pn	13 58 42.9	-0.9
SGSI				S	Sn	13 59 03.9	+1.6
TNTI	Ternate	2.97	174	P	Pn	13 59 03.8	0.0
TNTI	Ternate	2.97	174		Pn	13 59 04.0	+0.3
LBMI	Labuha	4.38	174	P	Pn	13 59 24.0	+0.9
KMSI	Cibinong	4.39	224	P	Pn	13 59 22.6	-0.7
GTOI	Gorontalo	5.07	233	P	Pn	13 59 34.1	+1.4
	0.0nm5.2nm,0.5s						
SANI	Sanana	5.85	190	P	Pn	13 59 40.9	-2.4
MRSI	Marisa	6.04	238	P	Pn	13 59 48.0	+2.0
SWI	Sorong	6.22	137	P	Pn	13 59 49.7	+1.2
	0.2nm31nm,0.5s						
SIJI	Sorong	6.23	137	Pn	Pn	13 59 48.1	-0.5
	5.3nm,0.3s,baz=332,slow=13,SNR=26						
SIJI				Sn	Sn	14 00 59.7	+1.1
	0.8nm,0.3s,baz=49,slow=19,SNR=1.3						
TOLI2	Tolitoli	6.78	247	Pn	Pn	13 59 56.7	+0.6
APSI	Ampana	7.10	229	P	Pn	14 00 05.1	+4.6
FAKI	Fak Fak	8.42	142	Pn	Pn	14 00 19.6	+1.0
MTN	Manton Dam	16.97	166	Pn	Pn	14 02 12.1	-1.2
MTN				IAmb	IAmb	14 02 15.8	
	comp=Z,24nm,1.1s						
KNRA	Kununurra	19.37	175	P	P	14 02 41.1	+0.1
KNRA				IAmb	IAmb	14 02 44.0	
	comp=Z,14nm,0.8s						
FITZ	Fitzroy Crossi	21.75	184	P	P	14 03 05.5	-1.2
	comp=Z,2.3nm,0.5s,baz=21,slow=6.5,SNR=21						
WB0	Warramunga Arr	24.45	163	P	P	14 03 32.9	-0.9
WRAB	Tennant Creek	24.60	163	P	P	14 03 34.7	-0.3
WRAB				IAmb	IAmb	14 03 36.1	
	comp=Z,18nm,0.7s						
WRA	Warramunga Arr	24.61	163	P	P	14 03 34.6	-0.4
	comp=Z,17nm,0.7s,baz=343,slow=10,SNR=82						
WRA	Warramunga Arr	24.61	163	P	P	14 03 33.8	-1.3
WB2	Warramunga Arr	24.61	163	P	P	14 03 34.4	-0.7
WB2				IAmb	IAmb	14 03 36.2	
	comp=Z,20nm,0.7s						
WR0	Warramunga Arr	24.68	163	P	P	14 03 35.8	0.0
WR0				IAmb	IAmb	14 03 36.9	
	comp=Z,12nm,0.7s						
AS31	Alice Springs	28.05	167	P	P	14 04 05.6	-0.6
ASAR	Alice Springs	28.05	167	P	P	14 04 05.8	-0.4
	comp=Z,1.0nm,0.5s,baz=347,slow=7.2,SNR=31						
ASAR				PcP	PcP	14 07 21.2	+1.1
	comp=Z,0.4nm,0.4s,baz=346,slow=2.0,SNR=5.8						
ASAR	Alice Springs	28.05	167	P	P	14 04 05.6	-0.6
FORT	Forrest	34.34	178	P	P	14 05 00.3	-1.1
EIDS	Eidsvold	37.17	142	P	P	14 05 25.1	-0.7
EIDS				IAmb	IAmb	14 05 31.9	
	comp=Z,7.4nm,1.2s						
BBOO	Buckleboo	37.34	167	P	P	14 05 27.3	+0.2
STKA	Stephens Creek	38.03	160	P	P	14 05 32.9	0.0
	comp=Z,3.9nm,0.6s,baz=346,slow=9.1,SNR=9.3						
STKA	Stephens Creek	38.03	160	P	P	14 05 32.0	-0.9
TOO	Toolangi	44.54	159	P	P	14 06 25.7	-0.6
TOO				IAmb	IAmb	14 06 33.1	
	comp=Z,9.0nm,1.2s						
SONM	Songino Array	47.39	341	P	P	14 06 49.9	+1.2
	comp=Z,0.6nm,0.6s,baz=160,slow=9.1,SNR=3.8						
MK31	Makanchi Array	57.72	325	P	P	14 08 04.9	-0.2
MK31				IAmb	IAmb	14 08 08.8	
	comp=Z,1.4nm,0.9s						
MKAR	Makanchi Array	57.72	325	P	P	14 08 04.3	-0.8
	comp=Z,0.9nm,0.6s,baz=119,slow=7.6,SNR=12						
MKAR	Makanchi Array	57.72	325	P	P	14 08 04.8	-0.3
ZALV	Zalesovo Beam	60.72	333	P	P	14 08 25.2	-0.4
	comp=Z,0.3nm,0.3s,baz=138,slow=5.4,SNR=2.5						
KURBB	Kurchatov Arra	61.90	327	P	P	14 08 33.2	-0.5
	comp=Z,0.6nm,0.3s,baz=131,slow=6.9,SNR=2.1						
QSPA	South Pole Qui	93.65	180	P	P	14 11 31.7	+1.4
QSPA				IAmb	IAmb	14 11 46.5	
	comp=Z,0.6nm,1.1s						

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*GUC **28** 14:14:59.7±0.8, 32°.24S×71°.79W, h28^{km}±4^{km}, ML3.4*
*SJA **28** 14:15:03.0, 32°.50S×71°.74W, h10^{km}, ML4.0*
ISC 28 14:14:59.2±1.4, **32°.32S**±0°.03×**71°.89W**±0°.06, **h19**^{km}±4^{km}, **n40**, σ**1^{s}.36**/52, **7C-1D**, **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VA06	Catapilco	0.56	116	*e*P	Pg	14 15 10.2	-0.3
VA06				*e*S	Sb	14 15 17.5	-0.4
VA06				IAML		14 15 20.2	
	comp=N,6µm,0.5s						
VA01	Torpederas	0.73	164	⇑*e*P	Pg	14 15 14.7	+1.0
VA01				*e*S	Sn	14 15 25.2	+0.1
VA01	Torpederas	0.73	164	*i* P	Pb	14 15 14.0	+0.6
ROC1	El Roble	0.99	132	*i* P	Pb	14 15 17.0	-0.9
ROCH	El Roble	0.99	132	⇑*e*P	Pb	14 15 17.5	-0.4
ROCH				*e*P	Pb	14 15 17.5	-0.4
ROCH				*e*S	Sn	14 15 30.8	-1.1
ROCH				*e*S	Sg	14 15 30.9	-0.8
ROCH				IAML		14 15 31.8	
	comp=N,1µm,0.3s						
ROCH				IAML		14 15 33.1	
	comp=N,1µm,0.4s						
MT02	Curacav	1.14	146	⇑*e*P	Pb	14 15 20.1	-0.2
MT02				*e*S	Sg	14 15 35.1	-1.1
MT02	Curacav	1.14	146	*i* P	Pb	14 15 20.0	-0.2
VA03	San Esteban	1.22	112	⇑*e*P	Pb	14 15 20.7	-1.0
VA03				*e*S	Sb	14 15 36.1	-1.0
VA03	San Esteban	1.22	112	*i* P	Pb	14 15 21.0	-0.7
PEL	Peldehue	1.31	129	*e*P	Pn	14 15 22.6	+0.1
PEL				*e*S	Sn	14 15 39.3	-0.2
PEL				IAML		14 15 42.7	
	comp=N,2µm,0.3s						
PEL	Peldehue	1.31	129	*i* P	Pn	14 15 23.0	+0.5
VA05	Santo Domingo	1.36	170	⇑*e*P	Pn	14 15 24.0	+0.9
VA05				*e*S	Sg	14 15 43.1	-0.1
VA05				IAML		14 15 47.9	
	comp=E,1µm,0.3s						
MT05	Renca	1.45	138	*e*P	Pn	14 15 25.1	+0.7
MT05				*e*S	Sg	14 15 44.2	-1.9
MT05				IAML		14 15 46.2	
	comp=E,2µm,0.3s						
MT05	Renca	1.45	138	*i* P	Pn	14 15 25.0	+0.6
MT01	Popeta	1.64	161	*e*P	Pn	14 15 27.6	+0.7
MT01				*e*S	Sb	14 15 49.1	+0.1
MT01				IAML		14 15 55.6	
	comp=E,504nm,0.4s						
MT01	Popeta	1.64	161	*i* P	Pn	14 15 27.0	0.0
MT09	Talagante	1.64	153	*e*P	Pn	14 15 28.4	+1.3
MT09				*e*S	Sg	14 15 50.2	-2.2
MT09				IAML		14 15 58.8	
	comp=N,590nm,0.4s						
CO06	Fray Jorge	1.65	8	*e*P	Pn	14 15 26.6	-0.6
CO06				⇓*e*S	Sn	14 15 46.4	-1.4
CO06				IAML		14 15 56.0	
	comp=E,637nm,0.4s						
LMEL	Las Melosas	2.08	138	*e*P	Pn	14 15 34.6	+1.4
LMEL				*e*S	Sb	14 16 01.2	-0.9
LMEL				IAML		14 16 06.5	
	comp=N,408nm,0.2s						
AUSP	Uspallata	2.12	88	*i* P	Pb	14 15 37.0	-0.2
BO01	Tunca	2.18	162	*i* P	Pn	14 15 36.0	+1.6
RTLS	Leoncito	2.26	78	*i* P	Pb	14 15 39.1	-0.5
GO04	Tololo Observa	2.33	24	⇑*e*P	Pn	14 15 36.9	+0.2
GO04				*e*S	Sn	14 16 05.1	+0.2
CO05	La Serena	2.45	13	⇑*e*P	Pn	14 15 39.2	+1.0
CO05				*e*S	Sn	14 16 08.6	+1.0
ARCO	CERRO ARCO	2.55	103	*i* P	Pb	14 15 45.0	+0.5
BO02	Sierra Bellavi	2.64	160	*i* P	Pn	14 15 42.0	+1.2
AAGR	Agrelo	2.69	107	*i* P	Pb	14 15 46.0	-0.9
RTCV	Cerro Valdivia	2.88	82	*i* P	Pb	14 15 49.0	-1.0
ACCO	Cerro Coronel	2.97	55	*i* P	Pn	14 15 49.0	+3.5
AROD	Rodeo	2.98	45	*i* P	Pb	14 15 51.0	-0.9
RFA	San Rafael	3.77	132	*i* P	Pn	14 15 59.0	+2.7
AVFE	Valle Fertil	4.13	68	*i* P	Pn	14 16 05.0	+3.6
AC04	Llanos de Chal	4.16	10	*i* P	Pn	14 16 08.0	+6.4
ACHE	Chepes	4.60	77	*i* P	Pn	14 16 11.0	+3.2
VCA	Vinchina	4.78	43	*i* P	Pn	14 16 16.0	+5.7
GO03	Copiap	4.92	17	*i* P	Pn	14 16 20.0	+7.8
APLL	PUNTA DE LOS L	4.97	69	*i* P	Pn	14 16 19.0	+6.1
ACLC	CERRO LA CRUZ	5.13	57	*i* P	Pn	14 16 18.0	+2.8
MRA	San Martin	5.22	93	*i* P	Pn	14 16 18.0	+1.6
TCA	Tanti	6.29	83	*i* P	Pn	14 16 32.0	+1.0

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*IDC **28** 14:15:52.8±1.2, 25°.47N×141°.36E, h138^{km}±10^{km}, mb3.6/17, mb1 3.8/18, mb1mx3.5/50, mbtmp4.0/18, Error ellipse: s-maj=21.2km s-min=13.6km az=101.0*
*JMA **28** 14:15:54.0±0.1, 25°.48N×140°.97E, h83^{km}, M4.6*
ISC 28 14:15:54.2±0.8, **25°.59N**±0°.08×**141°.4E**±0°.1, **h150**^{km}, **n30**, σ**1^{s}.40**/35, **mb3.9**/17, **Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHH2	Haha-jima-NKT2	1.23	33	P	Pn	14 16 20.8	-0.3
JHH2				S	Sn	14 16 41.0	-0.6
CBIJ	Chichi jima	1.64	24	P	Pn	14 16 25.8	+0.5
CBIJ				*e*S	Sn	14 16 49.6	+0.4
JCJ	Chichijima	1.64	24	P	Pn	14 16 25.6	+0.4
	120nm,0.3s,baz=114,slow=23,SNR=48						
JCJ				S	Sn	14 16 49.0	-0.2
	168nm,0.3s,baz=276,slow=14,SNR=28						
JHJ	Hachijo jima 2	7.64	349	S	Sn	14 19 08.1	+0.2
	11nm,0.3s,baz=256,slow=18,SNR=1.8						
BSO3	Boso 3	9.21	355	P	Pn	14 18 03.4	-0.1
BSO4	Boso 4	9.41	354	*e*S	Sn	14 19 52.7	+2.1
JHU	Hanno	10.39	350	P	Pn	14 18 19.3	-0.1
JHU				*e*S	Sn	14 20 10.6	-3.7
JYT	Yasato	10.65	355	*e*S	Sn	14 20 17.1	-3.5
JAG	Ashikaga	10.93	352	P	Pn	14 18 24.9	-1.6
JHO	Hitachi	11.01	356	P	Pn	14 18 26.1	-1.4
MJAR	Matsushiro Arr	11.26	347	P	Pn	14 18 32.3	+1.5
	0.1nm,0.3s,baz=163,slow=12,SNR=1.7						
ASAJ	Asahikawa	18.50	3	P	Pn	14 20 03.5	+2.7
	0.5nm,0.3s,baz=185,slow=12,SNR=6.0						
CMAR	Chiang Mai Arr	39.90	269	P	P	14 23 14.3	+0.5
	0.9nm,0.6s,baz=65,slow=7.4,SNR=7.2						
WRA	Warramunga Arr	45.79	189	P	P	14 23 58.9	-2.1
	1.4nm,0.3s,baz=8.7,slow=8.4,SNR=49						
TIXI	Tiksi	46.63	355	P	P	14 24 08.0	+1.0
	1.1nm,0.4s,baz=146,slow=11,SNR=3.0						
ASAR	Alice Springs	49.51	189	P	P	14 24 28.8	-0.9
	0.1nm,0.3s,baz=21,slow=10,SNR=8.4						
ZALV	Zalesovo Beam	50.19	320	P	P	14 24 35.3	+0.8
	0.3nm,0.3s,baz=112,slow=7.0,SNR=2.8						
ZALV				PcP	PcP	14 25 50.9	-0.6
	0.3nm,0.4s,baz=102,slow=6.1,SNR=1.9						
MKAR	Makanchi Array	50.92	311	P	P	14 24 40.6	+0.4
	0.3nm,0.5s,baz=91,slow=9.1,SNR=5.7						
KURBB	Kurchatov Arra	53.62	315	P	P	14 24 59.4	-0.5
	1.6nm,0.3s,baz=92,slow=8.4,SNR=6.8						
ILAR	Eielson Array	59.35	28	P	P	14 25 41.8	+1.6
	1.9nm,0.8s,baz=267,slow=5.9,SNR=14						
INK	Inuvik	64.67	24	P	P	14 26 17.1	+1.5
	0.8nm,0.5s,baz=292,slow=5.1,SNR=9.5						
YKA	Yellowknife Ar	73.78	28	P	P	14 27 13.1	+1.3
	1.0nm,0.8s,baz=305,slow=4.7,SNR=2.9						
ARCES	ARCESS Array B	74.73	341	P	P	14 27 17.8	+0.5
	1.7nm,0.8s,baz=66,slow=9.1,SNR=7.6						
KBZ	Khabaz	78.54	313	P	P	14 27 39.5	+0.5
	1.8nm,0.7s,baz=65,slow=4.2,SNR=5.2						
FINES	FINESS Array B	78.99	334	P	P	14 27 41.0	-0.1
	1.8nm,0.3s,baz=67,slow=4.8,SNR=28						
AKASG	Malin Array Be	83.43	324	P	P	14 28 04.3	-0.5
	2.1nm,0.6s,baz=51,slow=4.7,SNR=11						
NB2	NORSAR Subarra	84.75	338	P	P	14 28 11.0	-0.3
	comp=Z,0.7nm,0.4s,baz=55,slow=5.1						
NOA	NORSAR Array B	84.75	338	P	P	14 28 10.4	-1.0
	comp=Z,0.9nm,0.4s,baz=37,slow=4.9,SNR=14						
BRTR	Keskin Array B	86.53	313	P	P	14 28 20.0	-0.7
	comp=Z,0.5nm,0.7s,baz=42,slow=4.5,SNR=1.9						
GERES	GERESS Array B	92.44	328	P	P	14 28 47.5	-0.7
	comp=Z,0.4nm,0.6s,baz=29,slow=2.2,SNR=2.5						

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*IDC **28** 14:18:23.8±1.9, 23°.54S×179°.88W, h542^{km}±19^{km}, mb3.2/7, mb1 3.4/10, mb1mx3.1/42, mbtmp4.2/10, Error ellipse: s-maj=33.2km s-min=17.1km az=150.0*
ISC 28 14:18:22.5±0.8, **23°.54S**±0°.09×**179°.8W**±0°.1, **h532**^{km}, **n25**, σ**2^{s}.11**/25, **mb3.7**/7, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	6.12	340	P	P	14 20 01.8	+0.2
	2.6nm,0.3s,baz=90,slow=22,SNR=9.2						
DZM	Mont Dzumac	12.78	274	P	P	14 21 09.9	+0.6
	0.1nm,0.3s,baz=86,slow=19,SNR=2.9						
HAZ	Te Kaha	14.33	188	P	P	14 21 28.1	+3.1
TOZ	Tahuroa Road	14.71	195	P	P	14 21 35.4	+6.3
TWGZ	Tauwhareparae	14.72	187	P	P	14 21 31.5	+2.3
URZ	Urewera	14.91	190	P	P	14 21 31.3	+0.1
	1.4nm,0.3s,baz=121,slow=23,SNR=9.6						
URZ				S	S	14 24 04.2	-2.6
	0.3nm,0.3s,baz=307,slow=20,SNR=1.6						
URZ	Urewera	14.91	190	P	P	14 21 31.6	+0.4
MWZ	Matawai	14.93	188	P	P	14 21 34.2	+2.8
TLZ	Tolley Road	15.28	194	P	P	14 21 39.6	+4.6
RTZ	Ruatahuna	15.28	190	P	P	14 21 36.1	+1.0
SNGZ	Shannon Statio	15.39	188	P	P	14 21 33.2	-3.0
TMVZ	Te Maari	16.00	193	P	P	14 21 44.9	+2.4
ETVZ	East Tongariro	16.02	193	P	P	14 21 44.7	+2.1
BHHZ	Black Hill Sta	16.29	191	P	P	14 21 44.3	-1.0
CTA	Charters Tower	31.66	270	P	P	14 24 03.5	+1.0
	2.6nm,0.4s,baz=32,slow=4.6,SNR=1.4						
ASAR	Alice Springs	42.28	260	P	P	14 25 29.9	+0.2
	1.3nm,0.6s,baz=95,slow=7.2,SNR=25						
ASAR				S	S	14 31 09.9	-2.1
	0.5nm,0.7s,baz=97,slow=14,SNR=6.1						
WRA	Warramunga Arr	42.62	266	P	P	14 25 31.9	-0.4
	1.6nm,0.5s,baz=102,slow=8.2,SNR=11						
FITZ	Fitzroy Crossi	51.05	265	P	P	14 26 36.7	+0.8
	1.4nm,0.6s,baz=71,slow=6.7,SNR=1.7						
SEY	Seymchan	88.96	348	P	P	14 30 20.4	+0.5
	1.5nm,0.6s,baz=30,slow=20,SNR=1.6						
ILAR	Eielson Array	91.64	13	P	P	14 30 31.6	-0.6
	0.8nm,1.0s,baz=212,slow=6.4,SNR=4.3						
PDAR	Pinedale Array	92.30	44	P	P	14 30 37.2	+1.0
	0.2nm,0.6s,baz=228,slow=2.3,SNR=2.1						
NB2	NORSAR Subarra	141.75	351	PKP	PKPdf	14 36 48.9	-4.1
	comp=Z,0.7nm,0.6s,baz=21,slow=3.6						
NOA	NORSAR Array B	141.75	351	PKhKP	PKPpre	14 36 48.0	
	comp=Z,1.0nm,0.6s,baz=16,slow=4.8,SNR=3.6						
AKASG	Malin Array Be	144.77	328	PKP	PKPdf	14 36 58.2	-0.3
	comp=Z,2.7nm,0.5s,baz=42,slow=4.2,SNR=15						
BRTR	Keskin Array B	147.51	308	PKPbc	PKPbc	14 37 06.6	-0.6
	comp=Z,0.8nm,0.6s,baz=129,slow=4.4,SNR=3.7						

IDC 28 14:22:07.0±2.3, **3°.73N**×**126°.83E**, **h0**^{km}, **mb3.5**/3, **mb1 3.7**/3, **mb1mx3.2**/44, **mbtmp3.5**/3, **Error ellipse: s-maj=165.6km s-min=29.5km az=66.0**, **Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.66	163	P	P	14 27 28.9	-0.8
	2.6nm,0.8s,baz=343,slow=10,SNR=13						
ASAR	Alice Springs	28.09	166	P	P	14 28 01.8	+1.2
	0.2nm,0.5s,baz=334,slow=10,SNR=2.5						
MKAR	Makanchi Array	57.61	325	P	P	14 31 58.8	-0.1
	0.3nm,0.7s,baz=115,slow=7.2,SNR=1.9						

KMA 28 14:33:37.2±0.4, **33°.50N**×**127°.15E**, **h11**^{km}±2^{km}, **Error ellipse: s-maj=4.0km s-min=1.1km az=133.0**, **South Korea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSJJU	Jeju	0.51	263	P	Pg	14 33 47.0	-0.1
GMDB	Geomundo	0.55	12	P	Pg	14 33 48.1	+0.1
	SNR=11						
GMDB				S	Sg	14 33 56.0	+0.6
KSSGP	Seogwipo	0.59	246	P	Pg	14 33 48.7	0.0
CJD	Chujado	0.85	303	P	Pg	14 33 53.5	-0.1
	SNR=12						
KSWAN	Wando	0.96	338	P	Pg	14 33 55.5	-0.2
YNDB	Yeoundo	1.08	30	P	Pb	14 33 57.7	-0.2
	SNR=8.9						
KOHB	KOHEUNG	1.12	5	P	Pb	14 33 58.4	-0.2
	SNR=8.6						
HANB	Haenam	1.16	336	P	Pb	14 33 58.6	-0.6
	SNR=8.0						
KSJDO	Jindo	1.19	325	P	Pb	14 33 59.7	-0.1
KSJAH	Jangheung	1.20	351	P	Pb	14 34 00.0	+0.1
BOSB	Boseong-gun	1.26	2	P	Pb	14 34 01.1	+0.1

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*NOU **28** 14:44:21.3, 18°.77S×177°.61W, h632^{km}, mb4.8/57, Fiji Islands Region*
*IDC **28** 14:44:21.9±1.0, 18°.83S×177°.70W, h626^{km}±10^{km}, mb3.5/11, mb1 3.8/15, mb1mx3.5/39, mbtmp4.5/15, Error ellipse: s-maj=17.0km s-min=12.6km az=128.0*
*NEIC **28** 14:44:22.6±2.1, 18°.9S±0°.1×177°.7W±0°.1, h621^{km}±6^{km}, mb4.8/31, Error ellipse: s-maj=19.8km s-min=15.0km az=135.0*
ISC 28 14:44:23.2±0.4, **18°.75S**±0°.07×**177°.69W**±0°.08, **h650**^{km}, **n147**, σ**1^{s}.50**/152, **mb4.8**/53, **11C-5D**, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKBA	Tubou, Lakemba	1.18	296	P	P	14 45 36.4	-3.3
TAVE	Taveuni	2.93	314	P	P	14 45 43.0	-3.3
DGTI	Dogotuki	3.46	314	P	P	14 45 45.5	-3.7
MSVF	Nonsavu	4.17	283	P	P	14 45 50.7	-2.9
	16nm,0.3s,baz=272,slow=23,SNR=45						
MSVF				S	S	14 47 04.8	-2.5
	baz=146,slow=22,SNR=6.3						
MSVF	Nonsavu	4.17	283	P	P	14 45 51.0	-2.6
MSVF	Nonsavu	4.17	283	P	P	14 45 51.3	-2.3
AFI	Afiamalu	7.45	51	P	P	14 46 16.2	-3.4
	20nm,0.3s,baz=356,slow=3.5,SNR=5.4						
AFI				S	S	14 47 47.3	-7.4
	14nm,0.3s,baz=43,slow=22,SNR=4.2						
DVP	Devils Point	13.45	272	P	P	14 47 15.7	+0.3
MARNC	Mare, Loyalty	13.68	256	P	P	14 47 15.5	-1.9
MARNC	Mare, Loyalty	13.68	256	P	P	14 47 17.4	0.0
	0.9nm,1.0s						
LIFNC	LIFOU	14.32	259	P	P	14 47 21.1	-2.3
LIFNC	LIFOU	14.32	259	P	P	14 47 23.0	-0.3
PINNC	Pines Island,	14.43	252	P	P	14 47 23.9	-0.3
PINNC	Pines Island,	14.43	252	P	P	14 47 24.7	+0.5
SANVU	Saraoutou	14.81	281	P	P	14 47 27.6	-0.2
SANVU	Saraoutou	14.81	281	P	P	14 47 28.0	+0.2
YATNC	Mamie plateau,	14.82	255	P	P	14 47 28.0	+0.1
DZM	Mont Dzumac	15.23	255	P	P	14 47 31.4	-0.4
	2.0nm,0.3s,baz=72,slow=21,SNR=21						
DZM	Mont Dzumac	15.23	255	P	P	14 47 32.3	+0.5
DZM				IAmb	IAmb	14 47 33.2	
	comp=Z,30nm,1.2s						
DZM	Mont Dzumac	15.23	255	P	P	14 47 31.4	-0.4
NOUC	Port Laguerre	15.37	255	P	P	14 47 32.5	-0.4
KOUNC	Koumac, New Ca	17.07	261	P	P	14 47 48.9	+0.5
OUZ	Omahuta	18.13	203	P	P	14 47 57.5	-0.3
OUZ				IAmb	IAmb	14 48 01.4	
	comp=Z,33nm,0.8s						
URZ	Urewera	19.96	192	P	P	14 48 11.9	-2.3
	comp=Z,3.3nm,0.3s,baz=300,slow=24,SNR=16						
URZ				S	S	14 51 13.3	-7.1
	comp=Z,0.3nm,0.3s,baz=127,slow=20,SNR=1.9						
URZ	Urewera	19.96	192	P	P	14 48 12.7	-1.6
BKZ	Black Stump Fm	20.95	193	P	P	14 48 20.6	-2.6
BKZ				IAmb	IAmb	14 48 28.1	
	comp=Z,28nm,1.4s						
BKZ	Black Stump Fm	20.95	193	P	P	14 48 22.2	-1.1
SNZO	South Karori	23.40	195	P	P	14 48 44.1	-0.7
QRZ	Quartz Range	23.54	199	P	P	14 48 46.1	0.0
KHZ	Kahutara	24.73	196	P	P	14 48 55.3	-1.3
	comp=Z,42nm,2.4s						
EIDS	Eidsvold	29.63	252	P	P	14 49 37.1	-2.2
EIDS				IAmb	IAmb	14 49 39.6	
	comp=Z,7.2nm,0.8s						
RK1H	Rockhampton Ha	30.00	256	P	P	14 49 42.4	-0.2
	comp=Z,15nm,1.0s						
ARMA	Armidale	30.12	241	P	P	14 49 41.3	-2.3
ARMA				IAmb	IAmb	14 49 45.6	
	comp=Z,28nm,1.3s						
ARMA	Armidale	30.12	241	P	P	14 49 42.5	-1.1
RMQ	Roma	31.84	250	P	P	14 49 58.5	+0.4
	comp=Z,22nm,0.6s						
CNB	Canberra Magne	33.46	234	P	P	14 50 12.1	+0.4
	comp=Z,54nm,0.7s						
CAN	Canberra	33.74	234	P	P	14 50 14.7	+0.7
CAN				IAmb	IAmb	14 50 15.3	
	comp=Z,22nm,0.6s						
CAN	Canberra	33.74	234	P	P	14 50 14.2	+0.2
	comp=Z,60nm,0.9s						
YNG	Young	33.87	236	P	P	14 50 15.0	0.0
CTAO	Charters Tower	33.99	262	P	P	14 50 16.1	-0.1
CTAO	Charters Tower	33.99	262	P	P	14 50 15.9	-0.3
	comp=Z,65nm,0.7s						
PMG	Port Moresby	35.27	280	P	P	14 50 27.7	+0.9
PMG	Port Moresby	35.27	280	P	P	14 50 27.2	+0.4
PMG	Port Moresby	35.27	280	P	P	14 50 27.2	+0.4
CMSA	Cobar Meteorol	35.34	242	P	P	14 50 27.1	0.0
	comp=Z,59nm,0.7s						
QLP	Quilpie	35.88	250	P	P	14 50 31.7	0.0
	comp=Z,191nm,0.5s						
MTSU	Mount Surprise	36.00	265	P	P	14 50 32.4	-0.4
	comp=Z,28nm,0.6s						
GLAD	Gladstone	36.73	226	P	P	14 50 38.8	+0.4
	comp=Z,22nm,1.2s						
TOO	Toolangi	37.17	232	P	P	14 50 43.0	+0.9
TOO				IAmb	IAmb	14 50 44.6	
	comp=Z,46nm,1.4s						
TOO	Toolangi	37.17	232	P	P	14 50 42.5	+0.4
	comp=Z,30nm,1.3s						
COEN	Coen	37.80	271	P	P	14 50 48.4	+1.0
COEN	Coen	37.80	271	P	P	14 50 47.6	+0.2
	comp=Z,135nm,1.0s						
MANU	Manus Island	38.04	292	P	P	14 50 50.0	+0.6
MANU				IAmb	IAmb	14 50 50.8	
	comp=Z,14nm,0.7s						
STKA	Stephens Creek	38.83	242	P	P	14 50 55.9	+0.5
	comp=Z,7.8nm,0.4s,baz=86,slow=8.9,SNR=54						
STKA	Stephens Creek	38.83	242	P	P	14 50 56.3	+0.9
INKA	Innaminka	39.07	249	P	P	14 50 58.1	+0.7
	comp=Z,64nm,1.7s						
ARPS	Mount Arapiles	39.71	235	P	P	14 51 02.6	+0.3
	comp=Z,15nm,1.1s						
QIS	Mount Isa	40.17	260	P	P	14 51 05.7	-0.6
	comp=Z,13nm,0.9s						
HTT	Hallett	41.31	240	P	P	14 51 15.4	+0.3
	comp=Z,22nm,1.5s						
LCRK	Leigh Creek	41.51	245	P	P	14 51 16.6	0.0
	comp=Z,38nm,1.0s						
OOD	Oodnadatta	43.55	249	P	P	14 51 32.9	+0.4
	comp=Z,41nm,1.6s						
BBOO	Buckleboo	43.60	242	P	P	14 51 33.2	+0.4
BBOO				IAmb	IAmb	14 51 33.7	
	comp=Z,21nm,0.6s						
BBOO	Buckleboo	43.60	242	P	P	14 51 32.6	-0.2
	comp=Z,33nm,0.8s						
JAY	Jayapura	43.80	287	P	P	14 51 35.4	+0.8
	comp=Z,429nmcomp=Z,50nm,0.6s						
WR0	Warramunga Arr	44.96	260	P	P	14 51 42.8	-0.6
MULG	Mulgathing	45.08	246	P	P	14 51 43.6	-0.5
	comp=Z,56nm,0.5s						
WB0	Warramunga Arr	45.12	261	P	P	14 51 44.2	-0.5
WB2	Warramunga Arr	45.14	260	P	P	14 51 44.4	-0.4
WRAB	Tennant Creek	45.14	260	P	P	14 51 44.4	-0.4
WRAB	Tennant Creek	45.14	260	P	P	14 51 44.0	-0.8
	comp=Z,48nm,0.7s						
WRA	Warramunga Arr	45.15	260	P	P	14 51 44.5	-0.4
	comp=Z,21nm,0.4s,baz=96,slow=7.7,SNR=798						
WRA				PcP	PcP	14 53 12.0	+1.2
	comp=Z,2.5nm,0.5s,baz=98,slow=2.9,SNR=4.6						
WRA	Warramunga Arr	45.15	260	P	P	14 51 44.4	-0.4
AS31	Alice Springs	45.22	255	P	P	14 51 45.6	+0.2
AS31				IAmb	IAmb	14 51 47.1	
	comp=Z,11nm,0.5s						
ASAR	Alice Springs	45.22	255	P	P	14 51 45.6	+0.3
	comp=Z,29nm,0.5s,baz=88,slow=8.2,SNR=1013						
ASAR				PcP	PcP	14 53 12.1	+1.0
	comp=Z,4.3nm,0.5s,baz=101,slow=3.9,SNR=8.8						
KDU	Kakadu	48.23	270	P	P	14 52 07.3	-0.5
	comp=Z,39nm,0.6s						
MTN	Manton Dam	49.46	269	P	P	14 52 16.8	-0.1
MTN	Manton Dam	49.46	269	P	P	14 52 16.1	-0.8
	comp=Z,72nm,0.6s						
DRS	Darwin Rock St	49.78	269	P	P	14 52 18.5	-0.7
	comp=Z,102nm,0.7s						
WRKA	Warakurna	50.24	253	P	P	14 52 22.0	-0.5
	comp=Z,43nm,0.5s						
FORT	Forrest	50.27	245	P	P	14 52 22.0	-0.6
FORT	Forrest	50.27	245	P	P	14 52 21.9	-0.6

	comp=Z,61nm,0.7s						
FAKI	Fak Fak	51.41	282	P	P	14 52 31.5	+0.5
FAKI	Fak Fak	51.41	282	P	P	14 52 31.0	0.0
	comp=Z,117nm,0.7s						
SIJI	Sorong	53.09	283	P	P	14 52 42.6	-0.3
	comp=Z,70nm,0.6s,baz=119,slow=2.8,SNR=81						
KLBR	Kellerberrin	59.06	244	P	P	14 53 23.6	0.0
NWAO	Narrogin (SRO)	59.42	242	P	P	14 53 26.4	+0.5
	comp=Z,19nm,0.9s						
VNDA	Vanda	59.66	185	P	P	14 53 29.3	+2.6
BLDU	Ballidu	60.04	245	P	P	14 53 29.8	-0.2
MJAR	Matsushiro Arr	68.99	323	P	P	14 54 25.7	-0.2
	comp=Z,3.3nm,0.6s,baz=149,slow=6.7,SNR=20						
MAT	Matsushiro	68.99	323	P	P	14 54 26.5	+0.6
JEM	Erimo	70.46	330	P	P	14 54 49.0	+15
JEM				IAmb	IAmb	14 56 42.4	
	comp=Z,52nm,1.1s						
QSPA	South Pole Qui	71.31	180	P	P	14 54 40.4	+1.2
TPUB	Ta-pu	73.28	302	P	P	14 54 50.4	-0.7
TPUB				IAmb	IAmb	14 54 58.3	
	comp=Z,94nm,1.5s						
LEM	Lembang	73.37	268	P	P	14 54 53.1	+1.1
	comp=Z,31nm,0.6s,baz=133,slow=20,SNR=4.1						
KSM	Kuching	73.47	277	P	P	14 54 52.0	-0.3
KSM				IAmb	IAmb	14 55 28.2	
	comp=Z,82nm,1.5s						
PETK	Petropavlovsk-	74.67	345	P	P	14 54 58.9	+0.7
	comp=Z,1.7nm,0.6s,baz=101,slow=7.7,SNR=5.7						
KSRS	Korea Array	75.78	318	P	P	14 55 05.3	+0.6
	comp=Z,1.0nm,0.7s,baz=139,slow=7.3,SNR=3.4						
USRK	Ussuriysk Ar.	77.69	325	P	P	14 55 17.4	+2.5
	comp=Z,0.8nm,0.5s,baz=140,slow=4.0,SNR=1.7						
NJ2	Nanjing	79.00	309	*e*P	P	14 55 24.5	+2.4
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
K05A	Summer Lake	80.43	39	P	P	14 55 31.9	+2.4
K05A				IAmb	IAmb	14 56 20.6	
	comp=Z,17nm,1.0s						
CN2	Changchun	81.10	322	*e*P	P	14 55 34.0	+1.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
U15A	North Rim	82.58	48	P	P	14 55 42.1	+1.4
L19K	White Mountain	82.68	11	P	P	14 55 41.9	+1.6
MAW	Mawson	83.30	200	P	P	14 55 44.6	+1.2
	comp=Z,2.3nm,0.5s,baz=150,slow=3.4,SNR=15						
MAW	Mawson	83.30	200	P	P	14 55 44.7	+1.4
TXAR	Lajitas Array	85.88	57	P	P	14 55 59.3	+2.6
	comp=Z,1.2nm,0.7s,baz=214,slow=6.7,SNR=13						
ILAR	Eielson Array	86.56	13	P	P	14 55 59.3	+0.4
	comp=Z,0.6nm,0.5s,baz=222,slow=4.6,SNR=17						
PDAR	Pinedale Array	87.50	43	P	P	14 56 05.8	+1.7
	comp=Z,0.7nm,0.6s,baz=204,slow=2.0,SNR=6.0						
KMI	Kunming	88.82	297	⇑P	P	14 56 11.5	+0.8
KMI				pmax	pmax		
	comp=Z,11nm,0.5s						
VNA3	Neumayer Olymp	89.86	176	P	P	14 56 15.5	+1.1
VNA2	Neumayer--Watz	90.30	177	P	P	14 56 17.7	+1.3
	baz=188,slow=4.9						
MKAR	Makanchi Array	110.21	314	PKiKP	PKiKP	15 01 42.9	-0.1
	comp=Z,1.2nm,0.5s,baz=64,slow=3.4,SNR=8.7						
KURBB	Kurchatov Arra	112.96	318	PKiKP	PKiKP	15 01 47.6	-0.4
	comp=Z,1.1nm,0.6s,baz=92,slow=1.9,SNR=5.2						
ARCES	ARCESS Array B	127.26	350	PKP	PKiKP	15 02 15.8	+0.2
	comp=Z,1.5nm,0.5s,baz=11,slow=1.8,SNR=8.9						
ARCES	ARCESS Array B	127.26	350		PKiKP	15 02 16.1	+0.5
FINES	FINESS Array B	134.18	344	PKP	PKiKP	15 02 30.3	+0.6
	comp=Z,1.6nm,0.5s,baz=87,slow=2.9,SNR=4.0						
NOA	NORSAR Array B	137.29	354	PKP	PKiKP	15 02 36.3	+0.1
	comp=Z,0.7nm,0.5s,baz=14,slow=4.0,SNR=2.0						
AKASG	Malin Array Be	141.62	332	PKhKP	PKPpre	15 02 38.2	
	comp=Z,2.0nm,0.4s,baz=40,slow=4.0,SNR=8.3						
TLCR		145.65	326	⇑P	PKiKP	15 02 52.5	-1.2
BRTR	Keskin Array B	145.86	314	PKPbc	PKPab	15 02 53.2	-1.2
	comp=Z,3.1nm,0.5s,baz=139,slow=5.5,SNR=8.0						
BRTR	Keskin Array B	145.86	314		PKiKP	15 02 53.4	-1.2
CRVS	Cervenica-Dubn	146.18	337	*e*PKP	PKPab	15 02 54.8	-0.3
CRVS				*e*		15 02 56.9	
ASF	Jabal al Asfar	146.19	300	PKPbc	PKiKP	15 02 54.1	-1.3
	comp=Z,2.5nm,0.6s,baz=72,slow=3.2,SNR=3.5						
OSTC	Ostas	146.39	344	*e*PKP	PKPab	15 02 54.9	-1.1
TRPA	Tarpa	146.40	335	⇑P	PKPab	15 02 54.5	-1.5
CHVC	Chvalec	146.40	344	*e*PKP	PKiKP	15 02 54.0	-1.2
CLL	Collm	146.43	348	⇓*i*PKPbc	PKiKP	15 02 54.4	-0.8
	comp=Z,12nm,0.5s						
CLL				*e*PKiKP	PKPab	15 02 58.0	+2.0
CLL				*e*SKPdf	SKPbc	15 05 29.0	-1.8
CLL	Collm	146.43	348		PKPab	15 02 54.6	-1.4
UPC	Upice	146.49	344	*e*PKP	PKiKP	15 02 54.7	-0.6
COVR	Voineasa-Covas	146.52	329	⇑P	PKiKP	15 02 54.6	-1.0
DPC	Dobruska-Polom	146.55	344	*e*PKP	PKPab	15 02 55.3	-1.3
DOPR	Dopca	146.82	330	⇑P	PKPab	15 02 56.5	-1.3
ISR	Istrita	146.87	328	⇓P	PKiKP	15 02 55.7	-0.7
SECR		147.17	328	⇓P	PKiKP	15 02 56.6	-0.3
VYHS	Vyhne	147.45	339	*e*PKP	PKiKP	15 02 57.0	-0.4
VYHS				*e*		15 03 02.0	
ARR	Arges	147.62	330	⇑P	PKPab	15 02 58.8	-2.4
KHC	Kasperske Hory	148.36	346	*e*PKP	PKiKP	15 02 59.7	+0.4
KHC	Kasperske Hory	148.36	346		PKiKP	15 03 00.0	+0.8
LEF	Lefka	148.40	307	⇑P	PKiKP	15 02 59.9	+0.1
GZR	Gura Zlata	148.46	332	⇑P	PKiKP	15 02 59.8	+0.1
CKRC	Cesky Krumlov	148.47	345	*e*PKP	PKPab	15 03 01.0	-3.5
GERES	GERESS Array B	148.60	345	PKPbc	PKiKP	15 03 00.2	+0.4
	comp=Z,1.6nm,0.5s,baz=42,slow=3.1,SNR=8.1						
BZS	Buzias	148.79	333	⇑P	PKiKP	15 03 00.7	+0.5
HERR	Herculane	149.02	332	⇓P	PKiKP	15 03 00.7	0.0
MORH	Mrgy, Hungar	149.47	337	⇑P	PKiKP	15 03 02.2	+0.6
FRGS	Fruska Gora	149.91	335	⇑P	PKiKP	15 03 03.5	+0.9
BOVS	Bovan	150.31	331	⇓P	PKiKP	15 03 03.5	+0.1

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*MOS **28** 14:47:14.7±1.0, 6°.69S×106°.10E, h37^{km}, mb5.7/42, MS4.2/5, Error ellipse: s-maj=9.5km s-min=4.5km az=117.0*

*BJI **28** 14:47:17.5±0.0, 7°.00S×106°.00E, h75^{km}, mB5.3/41, mb5.2/66, Ms4.9/48, Ms7 4.5/46*

*NEIC **28** 14:47:19.0±2.9, 7°.06S±0°.06×106°.00E±0°.05, h51^{km}±4^{km}, mb5.5/125, Mwb5.3/24, Mww5.4, Error ellipse: s-maj=8.6km s-min=7.4km az=207.0*

*KLM **28** 14:47:19, 7°.30S×105°.72E, h93^{km}, mb5.5*

*DJA **28** 14:47:20.7±0.2, 7°S±2°×10°6E±°, h80^{km}±2^{km}, M5.2/90, mB5.7/73, mb5.4/90, MLv5.8/27, Mw(mB)5.2/73, MwMwp5.0/34, Mwp5.3/34*

*IDC **28** 14:47:20.3±0.5, 6°.81S×106°.11E, h75^{km}±3^{km}, mb4.9/38, mb1 4.9/39, mb1mx4.8/44, mbtmp5.2/39, MS4.1/41, Ms1 4.1/41, ms1mx4.1/51, Error ellipse: s-maj=9.8km s-min=6.6km az=51.0*

*NEIC **28** 14:47:21.6, 6°.95S×105°.97E, h50^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.83; M$_{\theta\theta}$0.04; M$_{\phi\phi}$-0.87; M$_{r\theta}$0.14; M$_{\theta\phi}$-0.19; M$_{\phi r}$-0.51; Fault plane solution: M$_0$1.02000×10^{17} NP1:φ$_s$177.38000°, δ60.76000°, λ75.11000°. NP2:φ$_s$25.94000°, δ32.52000°, λ114.65000°. Principal axes: T 1.0065, Plg70.0000°, Azm55.0000°; N 0.0275, Plg13.0000°, Azm185.0000°; P -1.0340, Plg15.0000°, Azm278.0000°;*

*GCMT **28** 14:47:21.3±0.1, 7°.13S±0°.01×105°.92E±0°.01, h74^{km}, MW5.3/121, Moment Tensor Solution. s112,c170; s121,c202; Duration: 1s.1 Moment tensor: Scale 10^{17} Nm; M$_{rr}$1.07±.02; M$_{\theta\theta}$-0.20±.02; M$_{\phi\phi}$-0.87±.02; M$_{r\theta}$-0.01±.01; M$_{\theta\phi}$-0.90±.02; M$_{\phi r}$-0.22±.02; Best double couple: M$_0$1.30700×10^{17} NP1:φ$_s$45.00000°, δ42.00000°, λ105.00000°. NP2:φ$_s$205.00000°, δ50.00000°, λ77.00000°. Principal axes: T 1.1050, Plg79.0000°, Azm57.0000°; N 0.4030, Plg10.0000°, Azm214.0000°; P -1.5100, Plg4.0000°, Azm304.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **28** 14:47:23, 7°.17S×105°.86E, h60^{km}, Moment Tensor Solution. Duration: 6s.0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.46; M$_{\theta\theta}$-0.26; M$_{\phi\phi}$-1.20; M$_{r\theta}$0.01; M$_{\theta\phi}$-0.49; M$_{\phi r}$-0.17; Fault plane solution: M$_0$1.44000×10^{17} NP1:φ$_s$26.00000°, δ42.00000°, λ94.00000°. NP2:φ$_s$200.00000°, δ48.00000°, λ86.00000°. Principal axes: T 1.4718, Plg86.0000°, Azm71.0000°; N -0.0560, Plg3.0000°, Azm203.0000°; P -1.4158, Plg3.0000°, Azm293.0000°;*

ISC 28 14:47:20.6±0.3**, 6°.98S**±0°.03×**105°.94E**±0°.04**, h81**^{km}±2^{km}**, h81**^{km}**:pP-P, n845,** σ1s.55/916**, mb5.4**/167**, 146C-45D, Fault plane solution: NP1:**φ$_s$170.38768°**,** δ55.41962°**,** λ76.16567°. **NP2:**φ$_s$13.84318°**,** δ36.92268°**,** λ109.13020°. **Principal axes:** T Plg75.1547°**,** Azm39.0933°**;** N Plg11.3540°**,** Azm178.3442°**;** P Plg9.4373°**,** Azm270.2569°**; Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SBJI	Serang	0.87	12	P	Pn	14 47 40.4	+2.1
SBJI				S	Sn	14 47 54.7	+3.3
DBJI	Dramaga	0.90	62	P	Pn	14 47 40.2	+1.6
DBJI				S	Sn	14 47 54.7	+2.6
CBJI	Citeko	1.06	59	P	Pn	14 47 41.4	+1.0
TNG	Tangerang	1.06	41	P	Pn	14 47 42.5	+2.0
TNG				P	Pn	14 47 44.0	+3.5
TNG				S	Sn	14 48 01.6	+6.3
CNJI	Cibinong	1.22	106	P	Pn	14 47 41.4	-1.0
LEM	Lembang	1.67	85	P	Pn	14 47 50.2	+1.8
	6μm,0.3s,baz=174,slow=0.3,SNR=873						
LEM				S	Sn	14 48 14.1	+4.7
	3μm,0.3s,baz=57,slow=22,SNR=10						
BLSI	Bandar Lampung	1.74	336	P	Pn	14 47 51.5	+2.3
KASI	Kota Agung	2.04	315	P	Pn	14 47 54.8	+1.8
KLI	Kotabumi	2.36	333	P	Pn	14 48 00.2	+2.8
KLSI		2.57	332	P	Pn	14 48 03.4	+3.2
CMJI	Cimerak	2.61	108	P	Pn	14 47 59.9	-0.8
LWLI	Liwa	2.70	316	P	Pn	14 48 04.2	+2.1
MDSI	Maura Dua	3.03	325	P	Pn	14 48 09.2	+2.7
XMI	Christmas Isla	3.46	184	P	Pn	14 48 06.8	-5.5
XMIS	Christmas Isla	3.49	185	Pn	Pn	14 48 06.6	-6.2
XMIS	Christmas Isla	3.49	185	P	Pn	14 48 07.1	-5.6
MNAI	Manna	3.95	311	P	Pn	14 48 20.2	+1.3
MNAI	Manna	3.95	311	Pn	Pn	14 48 20.1	+1.3
MNAI	Manna	3.95	311	P	Pn	14 48 20.7	+1.8
PMBI	Palembang	4.19	344	P	Pn	14 48 24.4	+2.2
PMBI	Palembang	4.19	344		Pn	14 48 24.9	+2.7
PMBI	Palembang	4.19	344	P	Pn	14 48 22.1	-0.1
YOGI	Yogyakarta	4.40	101	P	Pn	14 48 23.7	-1.3
SMRI	Semarang	4.46	91	P	Pn	14 48 27.6	+1.7
SMRI	Semarang	4.46	91		Pn	14 48 27.1	+1.1
SMRI	Semarang	4.46	91	P	Pn	14 48 28.2	+2.3
UGM	Wanagama	4.64	102	P	Pn	14 48 28.4	+0.1
UGM	Wanagama	4.64	102	Pn	Pn	14 48 27.8	-0.5
UGM	Wanagama	4.64	102	P	Pn	14 48 28.4	+0.1
PPBI	Pangkal Pinang	4.79	2	P	Pn	14 48 34.0	+3.7
UWJI	Ujung Watu	5.00	84	P	Pn	14 48 34.6	+1.4
	5.4nm15μm1μm,0.6s						
MASI	Maura Aman, Be	5.30	316	P	Pn	14 48 39.4	+2.0
	20nm17μm49μm5μm,0.7s						
PCJI	Pacitan	5.33	103	P	Pn	14 48 37.9	+0.2
	8.2nm18μm25μm2μm,0.7s						
NGJI	Ngawi	5.49	94	P	Pn	14 48 41.2	+1.3
	6μm737nm,0.8s						
JMBI	JAMBI	5.78	337	P	Pn	14 48 46.9	+3.0
	2.8nm7μm782nm,0.8s						
KRJI	Kerinci	6.59	317	P	Pn	14 48 56.2	+1.1
	12nm15μm35μm2μm,0.7s						
DSRI	Dabo	6.60	348	P	Pn	14 48 57.9	+2.9
	1.0nm3μm3μm178nm,1.1s						
PBKI	Pangkalan Bun	7.11	54	P	Pn	14 49 04.3	+2.3
	3.2nm6μm254nm,1.1s						
PPSI	Pulau Pagai	7.24	305	P	Pn	14 49 03.6	-0.2
	48nm182μm16μm,0.7s						
KMMI	Kalianget	7.96	91	P	Pn	14 49 13.9	+0.2
	1.1nm10μm5μm213nm,0.6s						
PDSI	Padang	8.13	318	P	Pn	14 49 14.2	-1.9
	5μm10μm368nm,0.5s						
JAGI	Jajag, Banyuwa	8.27	101	P	Pn	14 49 18.4	+0.5
	7μm29μm2μm,0.8s						
JAGI	Jajag, Banyuwa	8.27	101	Pn	Pn	14 49 17.9	+0.1
JAGI	Jajag, Banyuwa	8.27	101	P	Pn	14 49 19.0	+1.1
PPI	Padang Panjang	8.52	319	P	Pn	14 49 19.4	-1.8
	1.3nm5μm293nm,0.7s						
BKNI	Bangkinang	8.75	326	P	Pn	14 49 24.6	+0.2
	6μm5μm449nm,0.8s						
BKNI	Bangkinang	8.75	326	Pn	Pn	14 49 24.5	0.0
BKNI	Bangkinang	8.75	326	P	Pn	14 49 23.5	-0.9
SISI	Saibi	8.84	309	P	Pn	14 49 23.7	-2.0
STKI	Sintang	8.91	39	P	Pn	14 49 30.2	+3.6
	3μm66nm,0.9s						
MYKOM	Kota Tinggi	8.96	346	P	Pn	14 49 30.0	+2.8
MYKOM	Kota Tinggi	8.96	346	Pn	Pn	14 49 28.9	+1.6
SRBI	Singaraja	9.26	97	P	Pn	14 49 31.7	+0.4
	7μm22μm2μm,0.8s						
IGBI	Denpasar	9.30	102	P	Pn	14 49 31.0	-0.9
	12μm754nm,0.6s						
DNP	Denpasar	9.34	101	P	Pn	14 49 32.1	-0.3
KSM	Kuching	9.46	28	P	Pn	14 49 38.0	+3.9
KSM	Kuching	9.46	28	Pn	Pn	14 49 36.4	+2.3
KSM	Kuching	9.46	28	P	Pn	14 49 36.4	+2.3
BBKI	Banjar Baru	9.52	69	P	Pn	14 49 38.0	+3.0
	2μm80nm,1.5s						
MNSI	Mandailing Nat	10.00	320	P	Pn	14 49 39.1	-2.3
	7μm273nm,0.4s						
MTKI	Muara Teweh, K	10.75	57	P	Pn	14 49 52.9	+1.1
	2μm32nm,0.7s						
KBKI	Kotabaru	10.82	71	P	Pn	14 49 56.0	+3.4
	2μm84nm,0.8s						
TWSI	Taliwang, Sumb	10.98	100	P	Pn	14 49 52.4	-2.4
	4μm4μm208nm,0.6s						
SBUM	Sibu	11.27	34	P	Pn	14 50 03.0	+4.3
SBUM	Sibu	11.27	34	Pn	Pn	14 50 02.1	+3.4
JRMM	Jerantut	11.33	342	P	Pn	14 49 58.0	-1.6
GSI	Gunungsitoli	11.72	314	P	Pn	14 50 00.0	-4.9
	15μm2μm,0.6s						
GSI	Gunungsitoli	11.72	314		Pn	14 50 00.7	-4.3
GSI	Gunungsitoli	11.72	314	P	Pn	14 50 01.3	-3.6
PLAI	Plampang	11.87	100	P	Pn	14 50 04.3	-2.6
	6μm6μm699nm,0.7s						
PLAI	Plampang	11.87	100	P	Pn	14 50 05.5	-1.4
PSI	Prapat	11.97	324	P	Pn	14 50 04.0	-4.5
	2.9nm,0.3s,baz=154,slow=9.8,SNR=51						
IPM	Ipoh	12.39	337		Pn	14 50 14.5	+0.4
IPM	Ipoh	12.39	337	P	Pn	14 50 14.7	+0.6
TSI	Tuntungan	12.75	324	P	Pn	14 50 19.0	+0.1
	4μm5μm157nm,0.7s						
KCSI	Kotacane, Aceh	13.24	322	P	Pn	14 50 19.5	-5.9
KULM	Kulim	13.28	336	P	Pn	14 50 25.0	-1.0
KULM	Kulim	13.28	336	Pn	Pn	14 50 24.9	-1.0
TPTI		13.41	319	P	Pn	14 50 22.1	-5.6
WBSI	Waikabubak, Su	13.57	102	P	Pn	14 50 23.8	-6.0
KAPI	Kappang	13.87	83	P	Pn	14 50 33.9	+0.3
	2.0nm,0.3s,baz=287,slow=11,SNR=8.9						
KAPI				LR	LR	14 56 17.1	
	comp=Z,1μm,18.2s,baz=282,slow=39						
KAPI	Kappang	13.87	83	P	Pn	14 50 35.7	+2.1
KAPI	Kappang	13.87	83		Pn	14 50 35.7	+2.1
KAPI	Kappang	13.87	83	P	Pn	14 50 35.8	+2.1
SPSI	Sidrap Palu	14.08	78	P	Pn	14 50 37.9	+1.5
	4μm1μm66nm,1.1s						
BKSI	Bulukumba	14.19	84	P	Pn	14 50 38.7	+0.8
	4μm2μm127nm,0.7s						
BNSI	Bone	14.32	80	P	Pn	14 50 40.6	+1.0
	4μm100nm,0.9s						
TTSI	Tana Toraja	14.36	75	P	P	14 50 43.7	-1.0
	3μm3μm109nm,2.3s						
BSSI	Bau Bau, Buton	14.48	88	P	Pn	14 50 41.0	-0.6
	2μm2μm124nm,0.7s						
MLSI	Meulaboh, Aceh	14.68	319	P	Pn	14 50 38.3	-5.8
SPMM	Sapulut	15.65	42	P	P	14 51 00.0	+0.9
EDFI	Ende, Flores	15.70	97	P	Pn	14 50 51.3	-6.0
MPSI	Mapaga	15.70	63	P	P	14 51 00.2	+0.6
	3μm2μm164nm,1.5s						
MMRI	Maumere	16.23	97	P	Pn	14 50 59.9	-3.9
	4μm17μm335nm,0.6s						
MMRI	Maumere	16.23	97	Pn	Pn	14 51 00.3	-3.5
MMRI				IAmb	IAmb	14 51 31.1	
	comp=Z,235nm,0.6s						
KKM	Kota Kinabalu	16.50	39	P	P	14 51 08.7	+0.1
KKM	Kota Kinabalu	16.50	39	P	P	14 51 10.4	+1.8
SRIT	Nakonsritamara	16.71	338	Pn	Pn	14 51 07.9	-1.8
APSI	Ampana	16.78	70	P	P	14 51 12.4	+0.8
	comp=Z,2μmcomp=Z,93nm,1.0s						
TOLI2	Tolitoli	16.85	62		P	14 51 13.0	+0.7
TOLI2	Tolitoli	16.85	62	P	P	14 51 13.9	+1.6
GIRL	Giralia	17.51	154		Pn	14 51 16.8	-2.7
GIRL				IAmb	IAmb	14 51 20.4	
	comp=Z,434nm,1.1s						
GIRL	Giralia	17.51	154	P	Pn	14 51 17.1	-2.4
MRSI	Marisa	17.59	66	P	Pn	14 51 21.2	+0.6
	comp=Z,3μmcomp=Z,2μmcomp=Z,165nm,0.7s						
LUWI	Luwuk	17.79	71	P	P	14 51 21.0	-1.7
	comp=Z,4μmcomp=Z,3μmcomp=Z,159nm,1.5s						
BATI	Baumata	17.81	102	P	P	14 51 20.3	-2.7
	comp=Z,15nm,0.3s,baz=288,slow=4.6,SNR=26						
BATI				S	Sn	14 54 38.4	-3.3
	comp=Z,18nm,0.3s,baz=220,slow=22,SNR=4.2						
BATI	Baumata	17.81	102	P	P	14 51 19.9	-3.1
	comp=Z,2μmcomp=Z,3μmcomp=Z,234nm,0.6s						
SOEI	Soe	18.34	100	P	P	14 51 26.6	-2.3
	comp=Z,4μmcomp=Z,535nm,0.8s						
SOEI	Soe	18.34	100	P	P	14 51 26.9	-2.0
SOEI				IAmb	IAmb	14 51 48.6	
	comp=Z,400nm,0.8s						
SOEI	Soe	18.34	100	P	P	14 51 29.3	+0.4
GTOI	Gorontalo	18.63	67	P	P	14 51 30.9	-1.1
	comp=Z,930nmcomp=Z,41nm,0.6s						
DLV	T Lat	18.96	8	P	Pn	14 51 37.2	-0.1
DLV	T Lat	18.96	8	P	Pn	14 51 37.8	+0.5
MBWA	Marble Bar	19.41	138	P	Pn	14 51 41.4	-0.9
KMSI	Cibinong	19.50	68	P	P	14 51 40.1	-1.3
	comp=Z,2μmcomp=Z,134nm,0.7s						
PSA00	Pilbara Seismi	19.77	139	P	P	14 51 44.5	+0.1
PSA00				IAmb	IAmb	14 51 48.9	
	comp=Z,149nm,0.8s						
PSA00	Pilbara Seismi	19.77	139	P	Pn	14 51 46.1	-0.5
SANI	Sanana	20.57	77	P	P	14 51 51.6	-1.4
	comp=Z,3μmcomp=Z,1μmcomp=Z,97nm,0.7s						
SANI	Sanana	20.57	77	P	P	14 51 53.2	+0.2
FITZ	Fitzroy Crossi	22.15	122	P	P	14 52 10.7	+0.7
	comp=Z,40nm,0.8s,baz=300,slow=5.6,SNR=34						
FITZ				S	S	14 56 05.9	-3.3
	comp=Z,30nm,0.8s,baz=129,slow=6.7,SNR=4.0						
FITZ				LR	LR	15 00 20.8	
	comp=Z,418nm,21.6s,baz=298,slow=35						
FITZ	Fitzroy Crossi	22.15	122	P	P	14 52 10.0	+0.1
	baz=22,SNR=53						
AAI	Ambon	22.39	83	P	P	14 52 09.0	-3.6
	comp=Z,2μmcomp=Z,143nm,0.7s						
LBMI	Labuha	22.40	75	P	P	14 52 12.1	-0.6
	comp=Z,2μmcomp=Z,3μmcomp=Z,248nm,1.2s						
TNTI	Ternate	22.72	71	P	P	14 52 16.1	+0.1
	comp=Z,5μmcomp=Z,335nm,1.9s						
TNTI	Ternate	22.72	71	P	P	14 52 15.8	-0.2
TNTI	Ternate	22.72	71	P	P	14 52 17.0	+1.0
MEEK	Meekatharra	22.97	150	P	P	14 52 20.7	+2.2
MORW	Morawa	23.95	158	P	P	14 52 28.7	+1.3
	baz=24,SNR=11						
MORW	Morawa	23.95	158	P	P	14 52 28.0	+0.6
MORW	Morawa	23.95	158	P	P	14 52 27.2	-0.2
KNRA	Kununurra	23.97	113	P	P	14 52 27.4	-0.2
KNRA				IAmb	IAmb	14 52 28.9	
	comp=Z,156nm,0.6s						
DAV	Davao City (W)	24.05	55	P	P	14 52 30.0	+1.5
	comp=Z,141nm,0.5s,baz=133,slow=1.6,SNR=19						
DAV				S	S	14 56 43.4	+3.2
	comp=Z,154nm,0.4s,baz=217,slow=9.3,SNR=2.7						
DAV				LR	LR	15 02 06.5	
	comp=Z,541nm,20.5s,baz=232,slow=37						
SAUI	Saumlaki	25.16	94	P	P	14 52 37.2	-1.4
	comp=Z,4μmcomp=Z,160nm,0.9s						
DRS	Darwin Rock St	25.18	104	P	P	14 52 39.7	+1.0
MTN	Manton Dam	25.48	105	P	P	14 52 42.3	+0.8
SWI	Sorong	25.96	78	P	P	14 52 43.5	-2.4
	comp=Z,2μmcomp=Z,2μmcomp=Z,107nm,0.6s						
SIJI	Sorong	25.97	78	LR	LR	15 03 45.5	
	comp=Z,362nm,20.6s,baz=262,slow=38						
QIZ	Qiongzhong	26.12	8	P	P	14 52 50.8	+3.6
QIZ				LR	LR		
	comp=Z,750nm,23.5s						
QIZ				LR	LR		
	comp=Z,1μm,14.7s						
QIZ				LR	LR		
	comp=Z,830nm,26.3s						
CM31	Chiang Mai Arr	26.20	345	P	P	14 52 47.2	-0.7
CMAR	Chiang Mai Arr	26.20	345	P	P	14 52 46.9	-1.0
	comp=Z,11nm,0.8s,baz=178,slow=9.0,SNR=56						
CMAR				PcP	PcP	14 56 14.4	+1.4
	comp=Z,9.1nm,0.7s,baz=203,slow=2.6,SNR=13						
CMAR				ScP	ScP	14 59 46.9	+1.1
	comp=Z,2.0nm,0.6s,baz=193,slow=3.3,SNR=8.0						
CMAR				LR	LR	15 05 00.0	
	comp=Z,729nm,19.6s,baz=219,slow=41						
CMAR	Chiang Mai Arr	26.20	345	P	P	14 52 47.4	-0.5
CMAR	Chiang Mai Arr	26.20	345	P	P	14 52 47.4	-0.5
CMAR					PcP	14 56 14.7	+1.6
FAKI	Fak Fak	26.51	83	P	P	14 52 50.8	-0.1
	comp=Z,2μmcomp=Z,116nm,0.7s						
FAKI	Fak Fak	26.51	83	P	P	14 52 49.7	-1.1
FAKI				IAmb	IAmb	14 52 52.9	
	comp=Z,80nm,0.8s						
FAKI				PcP	PcP	14 56 15.0	+1.0
FAKI	Fak Fak	26.51	83	P	P	14 52 50.7	-0.1
CHTO	Chiang Mai	26.54	345	P	P	14 52 51.5	+0.6
CHTO				pmax	pmax		
	comp=Z,16nm,0.9s						
CHTO	Chiang Mai	26.54	345	P	P	14 52 51.5	+0.6
CHTO	Chiang Mai	26.54	345	P	P	14 52 51.6	+0.6
MUN	Mundaring	26.66	160	P	P	14 52 51.8	-0.1
KLBR	Kellerberrin	26.86	157	P	P	14 52 54.4	+0.6
NWAO	Narrogin (SRO)	27.87	159	P	P	14 53 03.8	+1.0
H01W3	Cape Leeuwin H	28.78	166	T	T	15 23 46.7	
	baz=344,slow=76						
H01W1	Cape Leeuwin H	28.79	166	T	T	15 23 34.4	
	baz=344,slow=76						
H01W2	Cape Leeuwin H	28.80	166	T	T	15 23 47.7	
	baz=344,slow=76						
PALK	Pallekele	28.88	299	P	P	14 53 16.1	+4.0
	comp=Z,9.7nm,0.7s,baz=210,slow=9.0,SNR=6.6						
PALK				LR	LR	15 03 36.4	
	comp=Z,789nm,21.8s,baz=225,slow=34						
WB0	Warramunga Arr	30.39	118	P	P	14 53 25.6	+0.3
WB0				IAmb	IAmb	14 53 27.4	
	comp=Z,73nm,0.9s						
WRA	Warramunga Arr	30.41	118	P	P	14 53 25.3	-0.1
	comp=Z,40nm,0.7s,baz=291,slow=10,SNR=74						
WRA				PcP	PcP	14 56 24.1	+0.5
	comp=Z,10nm,0.4s,baz=311,slow=2.0,SNR=10						
WRA				S	S	14 58 19.6	-1.1
	comp=Z,2.1nm,0.9s,baz=281,slow=24,SNR=5.0						
WRA				LR	LR	15 07 28.2	
	comp=Z,390nm,20.6s,baz=285,slow=40						
WRA	Warramunga Arr	30.41	118	P	P	14 53 25.7	+0.2
WRA				PcP	PcP	14 56 24.3	+0.7
WRAB	Tennant Creek	30.41	118	P	P	14 53 25.5	0.0
WRAB				pmax	pmax		
	comp=Z,65nm,0.6s						
WRAB	Tennant Creek	30.41	118	P	P	14 53 25.5	0.0
WRAB				IAmb	IAmb	14 53 27.8	
	comp=Z,64nm,0.6s						
WRAB	Tennant Creek	30.41	118	P	P	14 53 25.7	+0.2
WB2	Warramunga Arr	30.42	118	P	P	14 53 25.7	+0.1
WB2				IAmb	IAmb	14 53 27.8	
	comp=Z,48nm,0.6s						
WB2				PcP	PcP	14 56 24.3	+0.7
WR0	Warramunga Arr	30.59	118	P	P	14 53 27.2	+0.2
WR0				IAmb	IAmb	14 53 29.0	
	comp=Z,69nm,0.7s						
FORT	Forrest	31.47	142	P	P	14 53 34.5	-0.1
ASAR	Alice Springs	31.56	125	P	P	14 53 35.6	0.0
	comp=Z,16nm,0.8s,baz=303,slow=8.4,SNR=51						
ASAR				PcP	PcP	14 56 27.4	+0.7
	comp=Z,11nm,0.6s,baz=325,slow=2.5,SNR=9.6						
ASAR				S	S	14 58 37.0	-1.6
	comp=Z,3.9nm,0.8s,baz=291,slow=13,SNR=4.4						
ASAR				LR	LR	15 06 47.5	
	comp=Z,544nm,20.4s,baz=302,slow=37						
ASAR	Alice Springs	31.56	125	P	P	14 53 35.8	+0.2
ASAR				PcP	PcP	14 56 27.3	+0.7
AS31	Alice Springs	31.56	125	P	P	14 53 35.8	+0.2
KMI	Kunming	32.06	355	⇓P	P	14 53 41.3	+1.2
KMI				pP	pP	14 53 59.0	0.0
KMI				PP	PP	14 54 54.0	0.0
KMI				S	S	14 58 48.8	+2.3
KMI				PcS	PcS	15 00 08.0	-5.3
KMI				LR	LR		
	comp=Z,880nm,16.7s						
KMI				LR	LR		
	comp=Z,2μm,15.5s						
KMI				LR	LR		
	comp=Z,880nm,17.3s						
H08S2	Diego Garcia H	33.18	267	T	T	15 28 20.2	
	baz=90,slow=75						
H08S3	Diego Garcia H	33.19	267	T	T	15 28 20.5	
	baz=90,slow=75						
H08S1	Diego Carcia H	33.20	267	T	T	15 28 21.2	
	baz=90,slow=75						
GYA	Guiyang	33.24	1	⇓*i*P	P	14 53 50.5	+0.2
GYA				pP	pP	14 54 12.3	+3.0
GYA				PcP	PcP	14 56 32.3	+1.1

GYA				S	S	14 59 06.3	+1.6
GYA				ScP	ScP	15 00 10.3	+1.8
GYA				pmax	pmax		
	comp=Z,28nm,0.8s						
GYA				pmax	pmax		
	comp=Z,230nm,4.1s						
GYA				LR	LR		
	comp=Z,1µm,15.6s						
TPUB	**Ta-pu**	33.34	25	P	P	14 53 51.4	+0.3
TPUB	**Ta-pu**	33.34	25	P	P	14 53 51.4	+0.3
YULB	**Yu-li**	33.71	26	P	P	14 53 55.6	+1.3
SSLB	**Suanglung**	33.91	25	P	P	14 53 57.2	+1.2
KOHI	**KOHIMA**	34.48	341	*e*P	P	14 53 60.0	-1.1
NACB	**Ninganchiao**	34.52	26	P	P	14 54 02.0	+0.8
YHNB	**Yeheng**	34.87	25	P	P	14 54 05.9	+1.6
YHNB				IAmb	IAmb	14 54 08.6	
	comp=Z,176nm,1.9s						
YHNB	**Yeheng**	34.87	25	P	P	14 54 05.7	+1.4
MOKO	**MOKOCHONG**	34.91	342	*e*P	P	14 54 04.3	-0.4
MOKO				*e*x	S	14 59 27.1	-3.4
JAY	**Jayapura**	34.91	84	LR	LR	15 11 28.6	
	comp=Z,216nm,18.3s,baz=272,slow=42						
JAY	**Jayapura**	34.91	84	P	P	14 54 02.1	-2.8
	comp=Z,366nmcomp=Z,34nm,0.8s						
OOD	**Oodnadatta**	34.96	130	P	P	14 54 05.3	+0.2
MULG	**Mulgathing**	35.12	135	P	P	14 54 06.6	+0.1
QIS	**Mount Isa**	35.28	116	P	P	14 54 08.3	+0.4
HYB	**Hyderabad**	36.33	312	*i* P	P	14 54 18.0	+1.0
HYB				*e*PcP	PcP	14 56 41.0	+0.8
HYB				*e*S	S	14 59 53.0	+0.7
HYB	**Hyderabad**	36.33	312	*e*P	P	14 54 15.3	-1.6
HYB				IAmb	IAmb	14 54 19.7	
	comp=Z,41nm,0.6s						
ENH	**Enshi**	37.19	5	P	P	14 54 23.7	-0.4
COEN	**Coen**	37.23	104	P	P	14 54 23.9	-0.7
COEN				IAmb	IAmb	14 54 25.6	
	comp=Z,38nm,0.8s						
COEN	**Coen**	37.23	104	P	P	14 54 24.3	-0.3
CD2	**Chengdu**	37.73	357	P	P	14 54 30.8	+2.2
CD2				pP	pP	14 54 48.0	+0.1
CD2				S	S	15 00 11.8	-1.4
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				LR	LR		
	comp=Z,1µm,13.3s						
CD2				LR	LR		
	comp=Z,1µm,11.4s						
CD2				LR	LR		
	comp=Z,1µm,15.1s						
BBOO	**Buckleboo**	37.98	137	P	P	14 54 30.6	-0.1
	baz=38,SNR=6.8						
BBOO	**Buckleboo**	37.98	137	P	P	14 54 30.4	-0.3
BBOO				IAmb	IAmb	14 55 57.3	
	comp=Z,127nm,1.9s						
BBOO	**Buckleboo**	37.98	137	P	P	14 54 31.8	+1.0
ODAN	**Odare**	38.14	333	*e*P	P	14 54 31.5	-0.9
	comp=Z,60nm,0.6s						
LCRK	**Leigh Creek**	38.22	132	P	P	14 54 33.4	+0.6
TAPN	**Taplejung**	38.42	333	*e*P	P	14 54 34.4	-0.4
	comp=Z,99nm,0.7s						
RAMN	**Ramite**	38.58	332	*e*P	P	14 54 35.5	-0.6
	comp=Z,30nm,0.3s						
INKA	**Innaminka**	38.89	126	P	P	14 54 39.1	+0.7
MTSU	**Mount Surprise**	38.98	110	P	P	14 54 40.0	+0.7
LSA	**Lhasa**	39.14	339	P	P	14 54 40.8	-0.2
LSA				pmax	pmax		
	comp=Z,69nm,0.5s						
LSA	**Lhasa**	39.14	339	P	P	14 54 41.0	+0.1
LSA	**Lhasa**	39.14	339	P	P	14 54 41.1	+0.1
LSA				pmax	pmax		
	comp=Z,21nm,0.7s						
LSA	**Lhasa**	39.14	339	P	P	14 54 41.1	+0.1
JIRN	**Jiri**	39.38	332	*e*P	P	14 54 42.0	-0.9
	comp=Z,94nm,0.6s						
PKI	**Pulchoki**	39.67	331	*e*P	P	14 54 44.3	-1.0
	comp=Z,20nm,0.3s						
GUN	**Gumba**	39.73	332	*e*P	P	14 54 45.1	-0.7
	comp=Z,130nm,0.7s						
DMN	**Daman**	39.85	330	*e*P	P	14 54 46.3	-0.4
KKN	**Kakani**	39.92	331	*e*P	P	14 54 46.1	-1.1
	comp=Z,50nm,0.6s						
JOW	**Kunigami**	39.98	32	P	P	14 54 48.6	+1.3
	comp=Z,33nm,0.3s,baz=181,slow=8.4,SNR=34						
JOW	**Kunigami**	39.98	32	P	P	14 54 48.2	+0.8
JOW				IAmb	IAmb	14 54 49.5	
	comp=Z,54nm,1.0s						
JOW	**Kunigami**	39.98	32	P	P	14 54 48.7	+1.3
HTT	**Hallett**	40.31	135	P	P	14 54 50.7	+0.5
GKN	**Gorkha**	40.41	330	*e*P	P	14 54 50.3	-0.9
	comp=Z,96nm,0.3s						
NJ2	**Nanjing**	40.72	17	⇑P	P	14 54 54.5	+1.1
NJ2				pP	pP	14 55 08.8	-4.2
NJ2				pmax	pmax		
	comp=Z,16nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,200nm,4.7s						
NJ2				LR	LR		
	comp=Z,350nm,12.0s						
NJ2				LR	LR		
	comp=Z,400nm,11.2s						
NJ2				LR	LR		
	comp=Z,520nm,16.7s						
KOLN	**Koldanda**	40.74	329	*e*P	P	14 54 53.4	-0.6
	comp=Z,133nm,0.7s						
PMG	**Port Moresby**	40.85	96	LR	LR	15 17 09.3	
	comp=Z,285nm,18.2s,baz=240,slow=44						
PMG	**Port Moresby**	40.85	96	P	P	14 54 55.0	+0.1
PMG				pmax	pmax		
	comp=Z,108nm,0.9s						
PMG	**Port Moresby**	40.85	96	P	P	14 54 55.0	+0.1
PMG				IAmb	IAmb	14 54 57.4	
	comp=Z,108nm,0.9s						
PMG	**Port Moresby**	40.85	96	P	P	14 54 55.5	+0.6
PMG	**Port Moresby**	40.85	96	P	P	14 54 55.5	+0.6
XAN	**Xi'an**	40.89	4	P	P	14 54 53.8	-1.1
XAN				pmax	pmax		
	comp=Z,28nm,0.8s						
BHPL	**Bhopal**	40.98	318	*e*P	P	14 54 56.3	+0.5
BHPL				IAmb	IAmb	14 54 58.0	
	comp=Z,26nm,0.8s						
DANN	**Dangsing**	41.13	330	*e*P	P	14 54 56.4	-0.9
CTA	**Charters Tower**	41.18	113	P	P	14 54 57.3	-0.2
	comp=Z,15nm,0.7s,baz=275,slow=14						
CTA				S	S	15 01 03.5	-1.8
	comp=Z,2.4nm,0.2s,baz=210,slow=6.8,SNR=2.0						
CTA	**Charters Tower**	41.18	113	P	P	14 54 57.3	-0.2
CTAO	**Charters Tower**	41.18	113	P	P	14 54 58.1	+0.6
CTAO				pmax	pmax		
	comp=Z,25nm,0.8s						
CTAO	**Charters Tower**	41.18	113	P	P	14 54 58.1	+0.6
CTAO	**Charters Tower**	41.18	113	P	P	14 54 58.2	+0.7
QLP	**Quilpie**	41.29	123	P	P	14 54 59.7	+1.4
PYUN	**Piuthan**	41.32	329	*e*P	P	14 54 58.6	-0.2
STKA	**Stephens Creek**	41.44	131	P	P	14 54 60.0	+0.5
	comp=Z,54nm,0.4s,baz=311,slow=7.5,SNR=173						
STKA				pP	pP	14 55 17.4	-1.5
	comp=Z,56nm,0.6s,baz=302,slow=8.2,SNR=9.1						
STKA				S	S	15 01 08.5	-0.3
	comp=Z,2.9nm,0.9s,baz=202,slow=23,SNR=2.0						
STKA				LR	LR	15 12 09.8	
	comp=Z,497nm,21.6s,baz=288,slow=36						
STKA	**Stephens Creek**	41.44	131	P	P	14 55 00.0	+0.5
MANU	**Manus Island**	41.57	85	IAmb	IAmb	14 55 02.4	
	comp=Z,203nm,1.9s						
JHNI	**Jhansi**	41.84	321	*e*P	P	14 55 02.4	-0.4
LZH	**Lanzhou**	42.88	358	⇓P	P	14 55 11.5	+0.3
LZH				pP	pP	14 55 31.0	+0.1
LZH				sP	sP	14 55 40.0	-0.2
LZH				PcP	PcP	14 57 02.5	+1.6
LZH				ScP	ScP	15 00 46.0	+1.2
LZH				ScS	ScS	15 05 04.3	-0.1
LZH				pmax	pmax		
	comp=Z,41nm,1.3s						
LZH				pmax	pmax		
	comp=Z,170nm,5.3s						
LZH				LR	LR		
	comp=Z,600nm,15.7s						
LZH				LR	LR		
	comp=Z,630nm,14.6s						
LZH				LR	LR		
	comp=Z,890nm,14.6s						
GUMO	**Guam**	43.72	62	P	P	14 55 17.4	-0.7
ARPS	**Mount Arapiles**	44.14	137	P	P	14 55 22.3	+1.1
CMSA	**Cobar Meteorol**	44.40	129	P	P	14 55 24.6	+1.2
JSU	**Suzuyama**	44.87	30	P	P	14 55 26.8	-0.3
JSU				IAmb	IAmb	14 55 27.8	
	comp=Z,58nm,0.7s						
AYAN	**Aya Nagar**	44.89	323	*e*P	P	14 55 27.0	-0.3
AJM	**Ajmer**	45.03	319	*e*P	P	14 55 28.9	+0.4
KUDL	**Kundal**	45.03	322	*e*P	P	14 55 28.4	0.0
RMQ	**Roma**	45.08	121	P	P	14 55 30.2	+1.3
GMDB	**Geomundo**	45.53	25	P	P	14 55 33.0	+0.7
	SNR=6.7						
RK1H	**Rockhampton Ha**	45.76	116	P	P	14 55 36.0	+1.7
YNDB	**Yeoundo**	46.08	25	P	P	14 55 38.0	+1.4
	SNR=9.7						
JNU	**Nakatsue**	46.39	29	P	P	14 55 38.5	-0.6
	comp=Z,19nm,0.6s,baz=254,slow=3.0,SNR=12						
JNU	**Nakatsue**	46.39	29	P	P	14 55 39.3	+0.3
JNU				IAmb	IAmb	14 55 44.6	
	comp=Z,138nm,1.9s						
GTA	**Gaotai**	46.50	353	⇑P	P	14 55 40.0	+0.1
GTA				pP	pP	14 55 56.0	-3.8
GTA				sP	sP	14 56 04.5	-4.5
GTA				PcP	PcP	14 57 13.8	+0.6
GTA				ScP	ScP	15 01 00.5	+0.9
GTA				S	S	15 02 22.8	+0.4
GTA				sS	sS	15 02 52.3	-3.8
GTA				ScS	ScS	15 05 24.3	-3.0
GTA				pmax	pmax		
	comp=Z,50nm,0.7s						
GTA				pmax	pmax		
	comp=Z,180nm,5.3s						
GTA				LR	LR		
	comp=Z,420nm,17.1s						
GTA				LR	LR		
	comp=Z,560nm,19.6s						
GTA				LR	LR		
	comp=Z,660nm,17.1s						
GEXS	**Deakin Univers**	46.55	138	P	P	14 55 42.8	+2.5
EIDS	**Eidsvold**	46.77	118	P	P	14 55 43.3	+1.0
	baz=47,SNR=9.6						
EIDS	**Eidsvold**	46.77	118	P	P	14 55 42.8	+0.6
EIDS				IAmb	IAmb	14 55 44.9	
	comp=Z,182nm,2.0s						
EIDS	**Eidsvold**	46.77	118	P	P	14 55 43.1	+0.9
SMLA	**Simla**	46.84	326	*e*P	P	14 55 41.6	-0.9
SMLA				*e*x	S	15 02 24.0	-3.1
TOO	**Toolangi**	47.04	136	P	P	14 55 46.2	+2.0
BHK	**Bhakra**	47.48	325	*e*P	P	14 55 47.8	+0.2
BTO	**Baotou**	47.49	4	*e*P	P	14 55 48.5	+0.9
BTO				S	S	15 02 39.3	+2.9
BTO				LR	LR		
	comp=Z,2µm,22.7s						
BTO				LR	LR		
	comp=Z,2µm,17.1s						
TJN	**Taejon**	47.58	24	P	P	14 55 49.5	+1.3
YNG	**Young**	47.62	131	P	P	14 55 50.3	+1.6
OKCB	**Cheongsan-myeo**	47.73	24	P	P	14 55 50.0	+0.6
	SNR=9.9						
HHC	**Hu-ho-hao-te**	47.87	6	*e*P	P	14 55 50.5	0.0
HHC				S	S	15 02 40.0	-1.8
HHC				pmax	pmax		
	comp=Z,30nm,0.7s						
HHC				pmax	pmax		
	comp=Z,220nm,5.1s						
HHC				LR	LR		
	comp=Z,670nm,17.9s						
HHC				LR	LR		
	comp=Z,340nm,17.9s						
HHC				LR	LR		
	comp=Z,640nm,16.2s						
DL2	**Dalian**	47.91	17	P	P	14 55 50.0	-0.8
DL2				sP	pP	14 56 13.8	+3.1
DL2				S	S	15 02 42.3	+0.1
DL2				pmax	pmax		
	comp=Z,32nm,0.8s						
DL2				pmax	pmax		
	comp=Z,220nm,5.3s						
DL2				LR	LR		
	comp=Z,360nm,11.2s						
DL2				LR	LR		
	comp=Z,330nm,18.8s						
DL2				LR	LR		
	comp=Z,340nm,26.0s						
YPDB	**Yeonpyeongdo**	48.04	21	P	P	14 55 52.1	+0.3
	SNR=8.7						
KSMGY	**Mungyeong**	48.10	24	P	P	14 55 53.5	+1.2
	SNR=8.1						
DHRM	**DHARAMSHALA**	48.16	326	*e*P	P	14 55 52.4	-0.7
DHRM				IAmb	IAmb	14 55 55.4	
	comp=Z,51nm,0.7s						
DHRM				*e*x	S	15 02 43.0	-3.4
JMN	**Monobe**	48.38	31	P	P	14 55 54.2	-0.3
JMN				IAmb	IAmb	14 57 32.3	
	comp=Z,135nm,1.6s						
KSGAH	**Ganghwa**	48.40	22	P	P	14 55 54.9	+0.4
	SNR=13						
CAN	**Canberra**	48.50	132	P	P	14 55 56.6	+1.0
CAN				IAmb	IAmb	14 55 58.8	
	comp=Z,30nm,0.8s						
CAN				PcP	PcP	14 57 21.6	+1.1
CAN	**Canberra**	48.50	132	P	P	14 55 55.9	+0.4
KSAR	**Wonju Array Be**	48.71	23	P	P	14 55 58.0	+1.1
KSAR						14 57 21.7	
KSAR	**Wonju Array Be**	48.71	23	P	P	14 55 58.0	+1.1
KSAR				PcP	PcP	14 57 21.7	+0.7
ARMA	**Armidale**	48.71	125	P	P	14 55 59.4	+2.2
	baz=49,SNR=17						
ARMA	**Armidale**	48.71	125	P	P	14 55 56.9	-0.4
ARMA				IAmb	IAmb	14 56 29.1	
	comp=Z,105nm,2.0s						
ARMA	**Armidale**	48.71	125	P	P	14 55 59.5	+2.2
KSRS	**Korea Array**	48.74	23	P	P	14 55 56.3	-0.8
	comp=Z,22nm,0.6s,baz=214,slow=7.7,SNR=108						
KSRS				pP	pP	14 56 15.5	-1.6
	comp=Z,5.7nm,0.7s,baz=218,slow=7.0,SNR=3.9						
KSRS				PcP	PcP	14 57 20.6	-0.5
	comp=Z,3.2nm,0.7s,baz=220,slow=3.9,SNR=6.3						
KSRS				ScP	ScP	15 01 07.9	-0.9
	comp=Z,1.8nm,0.9s,baz=212,slow=5.4,SNR=5.1						
KSRS				LR	LR	15 18 07.3	
	comp=Z,77nm,18.1s,baz=210,slow=38						
KS19	**Wonju Array Si**	48.76	23	P	P	14 55 58.0	+0.7
KS19				IAmb	IAmb	14 55 59.1	
	comp=Z,22nm,0.7s						
CNB	**Canberra Magne**	48.77	132	P	P	14 55 58.7	+1.1
JHS	**Saijyo**	48.99	30	P	P	14 55 58.7	-0.5
MGCD	**Mangrove Creek**	49.27	128	P	P	14 56 03.4	+2.0
NIL	**Nilore**	50.92	325	P	P	14 56 13.9	+0.1
NIL				pmax	pmax		
	comp=Z,123nm,1.1s						
NIL	**Nilore**	50.92	325	P	P	14 56 13.9	+0.1
TAU	**Tasmania Unive**	51.01	141	P	P	14 56 15.0	+0.6
INU	**Inuyama**	51.28	33	P	P	14 56 15.8	-0.6
MAT	**Matsushiro**	52.81	33	P	P	14 56 25.3	-2.5
MAT				*e*S	S	15 03 48.4	-1.9
MJAR	**Matsushiro Arr**	52.81	33	P	P	14 56 25.1	-2.7
	comp=Z,5.6nm,0.4s,baz=198,slow=9.1,SNR=47						
MJAR				pP	pP	14 56 46.8	-1.4
	comp=Z,1.7nm,0.5s,baz=250,slow=14,SNR=1.9						
MJAR				PcP	PcP	14 57 36.5	+0.3
	comp=Z,8.5nm,0.7s,baz=187,slow=4.6,SNR=9.0						
MJAR				LR	LR	15 19 40.1	
	comp=Z,97nm,20.9s,baz=215,slow=37						
WMQ	**Urumqi**	53.19	344	*e*P	P	14 56 31.0	+0.5
WMQ				pP	pP	14 56 50.5	-0.3
WMQ				sP	sP	14 56 54.3	-5.6
WMQ				S	S	15 03 50.3	-5.1
WMQ				pmax	pmax		
	comp=Z,34nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,130nm,3.6s						
WMQ				LR	LR		
	comp=Z,86nm,29.0s						
WMQ				LR	LR		
	comp=Z,770nm,28.9s						
HNR	**Honiara**	53.47	97	P	P	14 56 32.1	-0.9
HNR				pmax	pmax		
	comp=Z,120nm,0.7s						
HNR	**Honiara**	53.47	97	P	P	14 56 32.0	-0.9
CN2	**Changchun**	53.54	17	⇑*i*P	P	14 56 31.8	-1.2
CN2				pP	pP	14 56 53.0	-0.3
CN2				PcP	PcP	14 57 39.3	+0.5
CN2				S	S	15 03 56.0	-3.9
CN2				pmax	pmax		
	comp=Z,30nm,0.9s						
KSH	**Kashi**	53.93	331	P	P	14 56 34.3	-1.8
KSH				pP	pP	14 56 53.5	-3.0
KSH				sP	sP	14 57 02.3	-3.3
KSH				PcS	PcS	15 01 32.3	-7.7
KSH				S	S	15 04 00.3	-5.4
KSH				pmax	pmax		
	comp=Z,22nm,1.0s						
KBL	**Kabul**	54.04	322	P	P	14 56 36.3	-0.8
KBL				pmax	pmax		
	comp=Z,165nm,1.5s						
KBL	**Kabul**	54.04	322	P	P	14 56 36.3	-0.8
SONM	**Songino Array**	54.57	0	P	P	14 56 40.6	0.0
	comp=Z,22nm,0.5s,baz=184,slow=9.7,SNR=184						
SONM				PcP	PcP	14 57 43.0	+0.1
	comp=Z,8.6nm,0.5s,baz=166,slow=3.8,SNR=4.2						
SONM				ScP	ScP	15 01 33.6	-0.5
	comp=Z,4.1nm,0.8s,baz=184,slow=3.3,SNR=8.8						
SONM				LR	LR	15 22 45.0	
	comp=Z,385nm,19.8s,baz=178,slow=39						
SONM	**Songino Array**	54.57	0	P	P	14 56 41.0	+0.4
SONM				IAmb	IAmb	14 56 41.2	
	comp=Z,23nm,0.5s						
SONM				PcP	PcP	14 57 43.5	+0.7
ULN	**Ulaanbaatar**	54.61	1	P	P	14 56 40.9	0.0
ULN				pmax	pmax		
	comp=Z,25nm,0.6s						
ULN	**Ulaanbaatar**	54.61	1	P	P	14 56 40.9	0.0
ULN				IAmb	IAmb	14 56 41.7	
	comp=Z,25nm,0.6s						
PRZ	**Przheval'sk**	55.26	335	P	P	14 56 45.8	+0.1
PRZ				pmax	pmax		
	comp=Z,22nm,0.8s						
PRZ	**Przheval'sk**	55.26	335	P	P	14 56 45.8	+0.1
UZB	**Uzynbulak**	55.56	336	*e*P	P	14 56 46.3	-1.6
	baz=336						
UZB				*i* S	S	15 04 26.2	-1.2
	baz=336						
UZB	**Uzynbulak**	55.56	336	*e*P	P	14 56 46.2	-1.6
UZB				*i* S	S	15 04 26.1	-1.3
SATY	**Saty**	55.73	336	*e*P	P	14 56 48.2	-0.9
	baz=336						
SATY				*e*S	S	15 04 28.3	-1.4
	baz=336						
SATY	**Saty**	55.73	336	*e*P	P	14 56 48.1	-0.9
SATY				*e*S	S	15 04 28.2	-1.4
USRK	**Ussuriysk Ar.**	56.10	22	P	P	14 56 50.8	-0.8
	comp=Z,7.6nm,0.4s,baz=191,slow=5.2,SNR=46						
USRK				LR	LR	15 22 32.9	
	comp=Z,81nm,18.1s,baz=206,slow=38						
USA0B	**Ussuriysk Arra**	56.11	22	P	P	14 56 50.5	-1.0
USA0B				pmax	pmax		
	comp=Z,150nm,2.0s						
USA0B	**Ussuriysk Arra**	56.11	22	P	P	14 56 50.5	-1.0
USA0B				IAmb	IAmb	14 56 52.1	
	comp=Z,150nm,1.9s						
TNSS	**Tian-Shan**	56.32	335	*e*P	P	14 56 51.1	-2.5
	baz=335						
MDOK	**Medeo**	56.38	335	*e*P	P	14 56 51.6	-2.1
	baz=335						
MDOK				*e*S	S	15 04 35.8	-2.6
	baz=335						
MDOK	**Medeo**	56.38	335	*e*P	P	14 56 51.6	-2.1
MDOK				*e*S	S	15 04 35.7	-2.6
GAR	**Garm**	56.42	327	IAmb	IAmb	14 56 53.9	
	comp=Z,63nm,0.7s						
AAA	**Alma-Ata**	56.47	335	*e*P	P	14 56 52.8	-1.4
	baz=335						
AAA	**Alma-Ata**	56.47	335	*e*P	P	14 56 52.8	-1.4
UCH	**Uchtor**	56.75	332	P	P	14 56 56.1	-0.6
	SNR=12						
TKM2	**Tokmak 2**	56.81	334	P	P	14 56 56.1	-0.7
	SNR=84						
KBK	**Karagaybulak**	56.89	333	P	P	14 56 56.9	-0.4
	SNR=25						
BTK	**Batken**	56.92	328	IAmb	IAmb	14 56 58.6	
	comp=Z,49nm,1.0s						
ARXS	**Arharly**	56.92	336	*e*P	P	14 56 55.7	-1.7
CHKK	**Chushkaly**	56.97	335	*e*P	P	14 56 56.1	-1.6
	baz=335						
AML	**Almayashu**	57.05	332	P	P	14 56 58.2	-0.6
	SNR=39						
AML	**Almayashu**	57.05	332	*i* P	P	14 56 58.2	-0.6
	SNR=39						
AAK	**Ala-Archa**	57.08	333	P	P	14 56 57.9	-0.8
	comp=Z,2.5nm,0.4s,baz=148,slow=6.4,SNR=16						
AAK				PcP	PcP	14 57 53.8	+1.0
	comp=Z,12nm,0.7s,baz=166,slow=3.5,SNR=8.3						
AAK				LR	LR	15 23 57.2	
	comp=Z,258nm,21.0s,baz=135,slow=38						
AAK	**Ala-Archa**	57.08	333	*i* P	P	14 56 58.1	-0.6
	SNR=13						
AAK	**Ala-Archa**	57.08	333	P	P	14 56 58.2	-0.4
FRU1	**Bishkek**	57.15	333	P	P	14 56 58.8	-0.3
FRU1				pmax	pmax		
	comp=Z,24nm,0.9s						
FRU1	**Bishkek**	57.15	333	P	P	14 56 58.8	-0.3
FRU1				IAmb	IAmb	14 57 00.2	
	comp=Z,24nm,0.8s						
ZAK	**Zakamensk**	57.17	358	*e*P	P	14 56 57.7	-1.4
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
CHMS	**Chumysh**	57.25	333	P	P	14 56 58.7	-1.0
	SNR=5.4						
KUU	**Kurty**	57.27	335	*e*P	P	14 56 58.3	-1.5
	comp=Z,43nm,0.9s,baz=335						
KUU	**Kurty**	57.27	335	*e*P	P	14 56 58.3	-1.5
KUU				pmax	pmax		
	comp=Z,43nm,0.9s						
HIA	**Hailar**	57.29	11	IAmb	IAmb	14 57 00.8	
	comp=Z,22nm,0.6s						
ZSN	**Zaisan**	57.31	343	*e*P	P	14 56 58.8	-1.2
	baz=343						
ZSN	**Zaisan**	57.31	343	*e*P	P	14 56 58.8	-1.2
TDK	**Taldyqorghan**	57.35	337	*e*P	P	14 56 58.8	-1.7
	baz=337						
TDK	**Taldyqorghan**	57.35	337	*e*P	P	14 56 58.7	-1.7
EKS2	**Erkin-Say**	57.43	332	P	P	14 57 00.8	-0.3
	SNR=31						
JTM	**Tenmabayashi**	57.45	31	P	P	14 56 59.8	-1.4
MK31	**Makanchi Array**	57.51	341	*c i*P	P	14 57 00.6	-0.9
MK31	**Makanchi Array**	57.51	341	IAmb	IAmb	14 57 02.8	
	comp=Z,16nm,0.6s						
MKAR	**Makanchi Array**	57.51	341	P	P	14 57 00.6	-0.9
	comp=Z,20nm,0.4s,baz=156,slow=8.0,SNR=484						
MKAR				LR	LR	15 25 44.5	
	comp=Z,244nm,19.1s,baz=156,slow=40						
USP	**Ospenovka**	57.57	333	P	P	14 57 00.9	-1.1
	SNR=18						
MAKZ	**Makanchi**	57.63	341	P	P	14 57 01.1	-1.2
MAKZ				pmax	pmax		
	comp=Z,13nm,1.1s						
MAKZ	**Makanchi**	57.63	341	P	P	14 57 01.1	-1.2
ALNE	**Al Ain**	57.85	304	P	P	14 57 05.4	+1.1
UOSS	**Minazif**	57.87	305	P	P	14 57 05.1	+0.7
UOSS	**Minazif**	57.87	305	P	P	14 57 04.0	-0.4
UOSS				IAmb	IAmb	14 57 34.4	
	comp=Z,23nm,0.9s						
ASHO	**Ashiyiah**	57.88	305	P	P	14 57 05.7	+1.2
HATD	**Hatta, Dubai**	57.88	305	*i* P	P	14 57 05.9	+1.5
	SNR=6.0						
MDH	**Madha**	57.96	306	P	P	14 57 05.3	+0.4
KOUNC	**Koumac, New Ca**	57.97	110	P	P	14 57 06.2	+1.0
MSFE	**Esma-Masafi**	58.09	306	P	P	14 57 07.7	+1.8
BANOM	**Banah**	58.24	306	P	P	14 57 08.5	+1.5
FAQ	**Al Faqa, Dubai**	58.28	305	*i* P	P	14 57 08.4	+1.1
	SNR=7.9						
HRA	**Herat**	58.28	318	P	P	14 57 06.5	-0.9
HRA				IAmb	IAmb	14 57 08.3	
	comp=Z,46nm,1.6s						
NAZ	**Nazwa, Dubai**	58.33	305	P	P	14 57 08.7	+1.1
SHME	**Shamm**	58.42	306	P	P	14 57 09.4	+1.2
ASUD	**Al Ashush, Dub**	58.45	304	*i* P	P	14 57 10.3	+1.9
	SNR=9.6						
TLY	**Talaya**	58.46	358	P	P	14 57 08.1	+0.2
	comp=Z,4.5nm,0.4s,baz=268,slow=6.5,SNR=5.1						
TLY				LR	LR	15 25 17.5	
	comp=Z,232nm,18.1s,baz=170,slow=39						
TLY	**Talaya**	58.46	358	*e*P	P	14 57 08.4	+0.4
TLY				*e*S	S	15 05 07.6	+2.6
TLY				pmax	pmax		
	comp=Z,28nm,1.0s						
TLY				MLR	MLR		
	comp=Z,923nm,15.0s						
MOY	**Mondy**	58.56	356	*e*P	P	14 57 08.6	-0.2
MOY				pmax	pmax		
	comp=Z,20nm,1.7s						
TAS	**Tashkent**	58.63	328	P	P	14 57 09.3	-0.1

TAS				pmax	pmax		
	comp=Z,107nm,0.6s						
TAS	Tashkent	58.63	328	P	P	14 57 09.3	-0.1
DGZ	Jazzator, Alta	58.70	346	c iP	P	14 57 09.5	-0.4
DGZ				pmax	pmax		
	comp=Z,44nm,0.9s						
VOI	Vohitsoka	58.84	249	P	P	14 57 12.5	+1.1
IUG	Iuzhnay	58.85	329	eP	P	14 57 09.8	-1.2
	baz=329						
IUG				i S	S	15 05 08.8	-1.9
	baz=329						
IUG	Iuzhnay	58.85	329	eP	P	14 57 09.8	-1.2
IUG				i S	S	15 05 08.7	-1.9
BTLS	Baital	59.17	334	eP	P	14 57 11.2	-1.9
	baz=334						
BTLS	Baital	59.17	334	eP	P	14 57 11.1	-1.9
CASY	Casey	59.29	178	P	P	14 57 13.6	+0.1
CASY				IAmb	IAmb	14 57 16.1	
	comp=Z,35nm,0.9s						
KKAR	Karatay Array	59.32	330	P	P	14 57 13.0	-1.1
KKAR	Karatay Array	59.32	330	P	P	14 57 13.0	-1.1
ERM	Erimo	59.42	32	P	P	14 57 13.9	-0.9
BRLS	Borolday	59.60	330	eP	P	14 57 13.7	-2.4
	baz=330						
BRLS				eS	S	15 05 15.0	-5.1
	baz=330						
BRLS	Borolday	59.60	330	eP	P	14 57 13.6	-2.4
BRLS				eS	S	15 05 15.0	-5.1
DZM	Mont Dzumac	60.10	111	eP	P	14 57 19.9	-0.1
	comp=Z,53nm,1.4s						
DZM	Mont Dzumac	60.10	111	eLR	LR	15 15 10.2	
	comp=Z,1µm,34.0s						
DZM	Mont Dzumac	60.10	111	P	P	14 57 20.4	+0.4
DZM				IAmb	IAmb	14 57 22.3	
	comp=Z,131nm,2.0s						
DZM	Mont Dzumac	60.10	111	P	P	14 57 20.7	+0.7
KLR	Kul'dur	60.35	19	LR	LR	15 25 40.1	
	comp=Z,93nm,18.6s,baz=218,slow=38						
KLR	Kul'dur	60.35	19	c iP	P	14 57 19.7	-1.3
KLR				pmax	pmax		
	comp=Z,55nm,1.9s						
OUENC	Ouen Island, N	60.49	112	P	P	14 57 23.3	+0.7
OUENC				IAmb	IAmb	14 57 24.2	
	comp=Z,22nm,0.8s						
OUENC	Ouen Island, N	60.49	112	P	P	14 57 23.6	+1.0
SANVU	Saraoutou	60.51	104	P	P	14 57 22.7	0.0
SANVU	Saraoutou	60.51	104	P	P	14 57 23.5	+0.7
YATNC	Mamie plateau,	60.51	111	P	P	14 57 24.3	+1.6
ASAJ	Asahikawa	60.66	30	P	P	14 57 22.0	-1.2
	comp=Z,8.2nm,0.3s,baz=250,slow=10,SNR=33						
ASAJ				LR	LR	15 23 17.5	
	comp=Z,80nm,20.5s,baz=197,slow=36						
SEM	Semipalatinsk	61.34	342	eP	P	14 57 25.9	-2.1
	baz=341						
SEM	Semipalatinsk	61.34	342	eP	P	14 57 25.8	-2.1
MARNC	Mare, Loyalty	61.53	111	P	P	14 57 30.7	+1.1
KURBB	Kurchatov Arra	62.08	341	P	P	14 57 31.9	-0.7
	comp=Z,19nm,0.6s,baz=156,slow=6.0,SNR=140						
KURBB	Kurchatov Arra	62.08	341	P	P	14 57 31.4	-1.2
KURK	Kurchatov	62.13	341	P	P	14 57 32.3	-0.7
KURK				pmax	pmax		
	comp=Z,45nm,1.0s						
KURK	Kurchatov	62.13	341	P	P	14 57 32.3	-0.7
KURK				IAmb	IAmb	14 57 34.1	
	comp=Z,45nm,0.9s						
YSS	Yuzh-Sakhalins	62.84	27	eP	P	14 57 37.0	-0.8
YSS				pmax	pmax		
	comp=Z,50nm,1.0s						
GEYT	Alibeck	63.05	319	P	P	14 57 39.6	+0.1
	comp=Z,29nm,0.7s,baz=120,slow=8.7,SNR=33						
GEYT				pP	pP	14 57 59.0	-1.3
	comp=Z,48nm,0.7s,baz=116,slow=8.9,SNR=14						
GEYT				LR	LR	15 27 10.7	
	comp=Z,60nm,20.0s,baz=230,slow=38						
GEYT	Alibeck	63.05	319	IAmb	IAmb	14 58 00.0	
	comp=Z,51nm,0.8s						
GYA0B	ALIBECK ARRAY	63.05	319	IAmb	IAmb	14 57 60.0	
	comp=Z,58nm,0.8s						
ZEA	Zeya	63.10	14	eP	P	14 57 39.3	-0.1
ZEA				e		15 06 07.5	
ZEA				pmax	pmax		
	comp=N,10.0nm,0.7s						
ZEA				pmax	pmax		
	comp=E,10.0nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,30nm,0.7s						
ZEA				MLR	MLR		
	comp=Z,200nm,22.0s						
ZAA0	Zalesovo Array	63.25	346	IAmb	IAmb	14 57 40.1	
	comp=Z,26nm,0.3s						
ZALV	Zalesovo Beam	63.25	346	P	P	14 57 39.3	-1.1
	comp=Z,23nm,0.3s,baz=154,slow=6.3,SNR=187						
ZALV				pP	pP	14 57 58.9	-2.4
	comp=Z,5.0nm,0.3s,baz=127,slow=3.9,SNR=2.8						
ZALV				PKPPKP	P'P'df	15 26 38.0	+1.2
	comp=Z,0.6nm,0.3s,baz=284,slow=5.8,SNR=4.5						
ZALV				LR	LR	15 28 08.2	
	comp=Z,326nm,20.1s,baz=141,slow=39						
BRZS	Berezniki	63.66	337	eP	P	14 57 41.5	-1.8
	baz=337						
BRZS	Berezniki	63.66	337	eP	P	14 57 41.4	-1.8
BOD	Bodaibo	64.91	5	eP	P	14 57 50.0	-1.2
BOD				pmax	pmax		
	comp=Z,17nm,1.6s						
DCZ	Deep Cove	65.03	137	P	P	14 57 52.8	+0.5
MLZ	Mavora Lakes	65.66	137	IAmb	IAmb	14 57 59.1	
	comp=Z,47nm,0.8s						
RAYN	Ar Rayn	66.32	299	i P	P	14 58 01.7	+0.6
	SNR=12						
RAYN	Ar Rayn	66.32	299	P	P	14 58 02.0	+0.9
RAYN				pmax	pmax		
	comp=Z,14nm,0.8s						
RAYN	Ar Rayn	66.32	299	P	P	14 58 02.0	+0.9
KBD	Kabd	66.53	306	eP	P	14 58 02.1	-0.1
RDF	Al-Radifah	66.55	306	eP	P	14 58 01.9	-0.5
UMR	Umm Al-Rimmam	66.66	306	eP	P	14 58 03.4	+0.4
BVAR	Borovoye Array	66.94	338	P	P	14 58 03.8	-0.5
	comp=Z,38nm,0.6s,baz=186,slow=13,SNR=284						
BRVK	Borovoye	67.01	338	ceP	P	14 58 04.4	-0.3
BRVK				pmax	pmax		
	comp=Z,27nm,0.6s						
BRVK	Borovoye	67.01	338	P	P	14 58 04.0	-0.7
BRVK				IAmb	IAmb	14 58 05.3	
	comp=Z,40nm,0.5s						
MIB	Mutribah	67.06	306	eP	P	14 58 05.7	+0.1
MAW	Mawson	67.09	197	P	P	14 58 06.2	+1.1
	comp=Z,28nm,0.8s,baz=44,slow=6.9,SNR=52						
MAW				pP	pwP	14 58 27.0	-1.5
	comp=Z,12nm,0.8s,baz=54,slow=5.3,SNR=3.9						
MAW				LR	LR	15 20 51.0	
	comp=Z,116nm,21.8s,baz=55,slow=30						
MAW	Mawson	67.09	197	P	P	14 58 06.5	+1.5
	baz=67,SNR=38						
MAW	Mawson	67.09	197	P	P	14 58 06.1	+1.1
RPZ	Rata Peaks	67.29	135	P	P	14 58 07.5	+0.6
RPZ				IAmb	IAmb	14 58 09.9	
	comp=Z,50nm,0.7s						
RPZ	Rata Peaks	67.29	135	P	P	14 58 07.7	+0.8
ODZ	Otahua Downs	67.31	136	P	P	14 58 07.9	+1.0
QRZ	Quartz Range	67.80	131	P	P	14 58 11.2	+1.2
QRZ				IAmb	IAmb	14 58 11.8	
	comp=Z,75nm,0.9s						
QRZ	Quartz Range	67.80	131	P	P	14 58 11.1	+1.0
THZ	Tophouse	68.24	132	P	P	14 58 13.1	+0.1
KMBO	Kilima Mbogo	68.71	272	P	P	14 58 17.5	+0.9
	comp=Z,2.0nm,0.6s,baz=55,slow=12,SNR=11						
KMBO				LR	LR	15 23 12.4	
	comp=Z,446nm,21.6s,baz=94,slow=31						
KMBO	Kilima Mbogo	68.71	272	P	P	14 58 18.3	+1.7
KHZ	Kahutara	68.82	133	P	P	14 58 16.9	+0.4
KHZ				IAmb	IAmb	14 58 18.1	
	comp=Z,41nm,0.7s						
KHZ	Kahutara	68.82	133	P	P	14 58 17.0	+0.6
AB31	Akbulak array	68.86	330	i P	P	14 58 16.3	-0.1
ABKAR	Akbulak array	68.86	330	P	P	14 58 16.4	-0.1
ABKAR	Akbulak array	68.86	330	IAmb	IAmb	14 58 17.6	
	comp=Z,151nm,0.8s						
HIZ	Hauiti	69.21	128	P	P	14 58 21.2	+2.3
	comp=Z,499nm,1.4s						
SNZO	South Karori	69.50	131	P	P	14 58 20.6	0.0
	comp=Z,167nm,1.4s						
BKZ	Black Stump Fm	70.56	129	IAmb	IAmb	14 58 28.6	
	comp=Z,78nm,0.8s						
BKZ	Black Stump Fm	70.56	129	P	P	14 58 27.9	+0.6
BFZ	Birch Farm	70.56	131	IAmb	IAmb	14 58 29.9	
	comp=Z,71nm,0.8s						
AKTO	Aktyubinsk	70.57	330	P	P	14 58 27.0	0.0
	comp=Z,12nm,0.4s,baz=122,slow=8.4,SNR=50						
AKTO				LR	LR	15 33 55.9	
	comp=Z,135nm,18.2s,baz=164,slow=40						
MSVF	Nonsavu	70.90	106	P	P	14 58 30.8	+1.1
URZ	Urewera	70.93	128	LR	LR	15 29 34.2	
	comp=Z,219nm,22.0s,baz=212,slow=36						
URZ	Urewera	70.93	128	P	P	14 58 31.1	+1.6
YAK	Yakutsk	71.22	12	P	P	14 58 29.2	-1.4
	comp=Z,28nm,0.4s,baz=200,slow=0.5,SNR=35						
YAK	Yakutsk	71.22	12	c iP	P	14 58 29.2	-1.4
YAK				e		14 58 48.3	
YAK				e*PP	pP	14 58 51.2	-0.7
YAK				e		15 01 08.5	
YAK				eS	S	15 07 42.0	+0.9
YAK				e*SS	sS	15 08 21.1	+3.8
YAK				e		15 08 27.8	
YAK				eSS	SS	15 12 23.1	+6.4
YAK				pmax	pmax		
	comp=Z,29nm,0.9s						
YAK				pmax	pmax		
	comp=E,9.0nm,1.1s						
YAK				pmax	pmax		
	comp=N,9.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,150nm,4.1s						
YAK				pmax	pmax		
	comp=E,115nm,4.0s						
YAK				pmax	pmax		
	comp=N,45nm,4.0s						
YAK				smax	smax		
	comp=N,321nm,5.6s						
YAK				smax	smax		
	comp=E,205nm,5.1s						
YAK	Yakutsk	71.22	12	P	P	14 58 29.9	-0.7
DGTI	Dogotuki	72.56	105	P	P	14 58 40.4	+0.8
MAK	Makhachkala	72.57	319	eP	P	14 58 37.2	-1.9
MAK				e*PP	pP	14 58 59.3	-1.1
MAK				e		15 01 22.5	
MAK				ePPP	PPP	15 03 01.5	
MAK				eS	S	15 07 53.7	-3.8
MAK				e*SS	SKSac	15 08 36.9	0.0
MAK				eSS	SS	15 12 33.4	-4.9
MAK				pmax	pmax		
	comp=Z,227nm,1.2s						
GNI	Garni	73.20	315	LR	LR	15 34 26.4	
	comp=Z,76nm,20.0s,baz=110,slow=39						
GNI	Garni	73.20	315	P	P	14 58 44.6	+1.4
GNI	Garni	73.20	315	ceP	P	14 58 44.3	+1.2
GNI				pmax	pmax		
	comp=Z,29nm,1.3s						
SVE	Sverdlovsk	73.56	336	d iP	P	14 58 45.5	+0.9
SVE				eS	S	15 08 10.2	+2.1
SVE				pmax	pmax		
	comp=Z,143nm,0.9s						
GROC	Groznyy	73.80	319	eP	P	14 58 46.7	+0.3
GROC				e*PP	pP	14 59 05.1	-2.6
GROC				eS	S	15 08 10.0	-1.4
GROC				pmax	pmax		
	comp=Z,77nm,1.3s						
PETK	Petropavlovsk-	74.08	29	P	P	14 58 46.7	-1.2
	comp=Z,2.8nm,0.5s,baz=77,slow=22,SNR=31						
PETK				LR	LR	15 32 46.3	
	comp=Z,98nm,20.6s,baz=233,slow=37						
ARU	Arti	74.15	335	P	P	14 58 48.4	+0.3
	comp=Z,33nm,0.8s,baz=126,slow=3.6,SNR=104						
ARU	Arti	74.15	335	c iP	P	14 58 48.5	+0.4
ARU				*PP	pP	14 59 07.7	-1.8
ARU				S	S	15 08 16.0	+1.2
ARU				SS	SS	15 13 04.1	+2.3
ARU				pmax	pmax		
	comp=Z,156nm,1.2s						
ARU	Arti	74.15	335	P	P	14 58 48.4	+0.3
PET	Petropavlovsk	74.50	30	eP	P	14 58 49.8	-0.4
PET				e*PP	PcP	14 59 05.2	+0.9
PET				eS	S	15 08 18.5	-0.3
PET	Petropavlovsk	74.50	30	P	P	14 58 49.4	-0.8
PET				IAmb	IAmb	14 58 50.5	
	comp=Z,62nm,0.7s						
PET	Petropavlovsk	74.50	30	P	P	14 58 50.0	-0.2
AKH	Akhalkalaki	74.58	316	⇓P	P	14 58 52.8	+1.6
ZEI	Tsey	74.87	318	eP	P	14 58 51.9	-1.0
ZEI				pmax	pmax		
	comp=Z,12nm,0.8s						
SYO	Syowa Base	75.17	200	⇑iP	P	14 58 55.0	+1.2
SYO	Syowa Base	75.17	200	⇓ePcP	PcP	14 59 08.6	+1.6
MBAR	Mbarara	75.24	271	c iP	P	14 58 57.4	+1.8
MA2	Magadan	75.26	22	P	P	14 58 54.2	-0.2
	comp=Z,25nm,0.5s,baz=210,slow=11,SNR=4.6						
MA2	Magadan	75.26	22	ceP	P	14 58 53.7	-0.8
MA2				pmax	pmax		
	comp=Z,69nm,1.7s						
MA2	Magadan	75.26	22	P	P	14 58 53.6	-0.9
NCK	Nalchik	75.37	318	i P	P	14 58 55.5	0.0
NCK				pmax	pmax		
	comp=Z,34nm,0.8s						
NEY	Neytrino	75.85	318	i P	P	14 58 59.8	+1.3
NEY				pmax	pmax		
	comp=Z,12nm,1.2s						
KBZ	Khabaz	75.93	318	P	P	14 58 59.5	+0.9
	comp=Z,34nm,0.8s,baz=124,slow=4.4,SNR=73						
KBZ				LR	LR	15 37 06.7	
	comp=Z,93nm,18.6s,baz=123,slow=39						
PYA1	Pyatigorsk	75.94	319	i P	P	14 58 58.5	-0.2
SHA1	Shidzhatmaz	76.09	318	c iP	P	14 58 59.6	-0.3
KIV	Kislovodsk	76.16	318	⇓P	P	14 59 01.0	+0.8
KIV	Kislovodsk	76.16	318	i P	P	14 59 01.1	+1.0
	SNR=14						
KIV	Kislovodsk	76.16	318	eP	P	14 59 00.9	+0.8
KIV				eS	S	15 08 40.3	+2.5
KIV				pmax	pmax		
	comp=Z,52nm,1.0s						
KIV				MLR	MLR		
	comp=Z,96nm,18.0s						
VNDA	Vanda	76.18	169	P	P	14 58 60.0	+0.5
	comp=Z,23nm,0.9s,baz=319,slow=5.9,SNR=45						
VNDA				LR	LR	15 29 20.4	
	comp=Z,112nm,21.9s,baz=323,slow=33						
VNDA	Vanda	76.18	169	P	P	14 59 00.0	+0.5
VNDA	Vanda	76.18	169	P	P	14 59 00.0	+0.5
ASF	Jabal al Asfar	76.28	305	P	P	14 59 02.8	+1.7
	comp=Z,30nm,0.8s,baz=100,slow=2.7,SNR=58						
GOF	Gofitskoye	76.39	320	⇑eP	P	14 59 02.3	+1.1
GOF				pmax	pmax		
	comp=Z,84nm,1.1s						
BELG	Belogornoye	77.05	328	c iP	P	14 59 04.1	-0.6
BELG				pmax	pmax		
	comp=Z,24nm,1.5s						
NRIK	Noril'sk	77.20	353	P	P	14 59 05.0	-0.3
	comp=Z,39nm,0.3s,baz=133,slow=4.3,SNR=116						
NRIK				LR	LR	15 37 06.5	
	comp=Z,338nm,19.3s,baz=163,slow=39						
NRIK	Noril'sk	77.20	353	P	P	14 59 05.2	-0.1
NRIK				pmax	pmax		
	comp=Z,88nm,1.0s						
NRIK	Noril'sk	77.20	353	P	P	14 59 05.2	-0.1
NRIK				IAmb	IAmb	14 59 06.2	
	comp=Z,88nm,0.9s						
SBA	Scott Base	77.26	169	P	P	14 59 07.1	+1.5
SBA				pmax	pmax		
	comp=Z,22nm,0.8s						
SBA	Scott Base	77.26	169	P	P	14 59 07.1	+1.5
GAZ	Gaziantep	77.58	310	P	P	14 59 08.2	0.0
GAZ				IAmb	IAmb	14 59 09.6	
	comp=Z,38nm,0.8s						
SOC	Sochi	78.00	317	eP	P	14 59 09.4	-0.9
SOC				e		15 02 06.0	
SOC				ePPP	PPP	15 03 51.0	
SOC				eS	S	15 08 59.3	+1.7
SOC				e*SS	sS	15 09 38.0	+3.8
SOC				eSS	SS	15 14 03.4	+2.8
SOC				pmax	pmax		
	comp=Z,41nm,0.7s						
SOC				MLR	MLR		
	comp=Z,198nm,22.0s						
LBTB	Lobatse	78.36	246	P	P	14 59 14.4	+1.5
LBTB				pmax	pmax		
	comp=Z,26nm,0.8s						
LBTB	Lobatse	78.36	246	P	P	14 59 14.3	+1.5
LBTB				IAmb	IAmb	14 59 16.0	
	comp=Z,26nm,0.8s						
BOSA	Boshof	78.54	242	P	P	14 59 14.6	+0.8
	comp=Z,13nm,0.7s,baz=85,slow=6.1,SNR=25						
BOSA				LR	LR	15 29 01.0	
	comp=Z,127nm,19.4s,baz=52,slow=32						
BOSA	Boshof	78.54	242	P	P	14 59 14.8	+1.0
BOSA				pmax	pmax		
	comp=Z,16nm,0.8s						
BOSA	Boshof	78.54	242	P	P	14 59 14.8	+1.0
KIRV	Kirov	79.40	334	ceP	P	14 59 18.2	+0.6
VRH	Novokhopyorsk	79.76	325	eP	P	14 59 19.7	0.0
VRH				e*PP	pP	14 59 38.7	-2.6
VRH				eS	S	15 09 14.5	-1.4
VRH				pmax	pmax		
	comp=Z,140nm,0.7s						
VRH				smax	smax		
	comp=E,310nm,1.4s						
TIXI	Tiksi	79.91	7	P	P	14 59 18.8	-1.3
	comp=E,22nm,0.6s,baz=195,slow=2.5,SNR=28						
TIXI	Tiksi	79.91	7	P	P	14 59 18.8	-1.3
TIXI				IAmb	IAmb	14 59 20.1	
	comp=Z,27nm,0.7s						
CSS	Mathiatis	79.93	307	IAmb	IAmb	14 59 23.6	
	comp=Z,82nm,0.8s						
ANN	Anapa	79.97	318	eP	P	14 59 18.3	-2.7
ANN				i *PP	pP	14 59 35.7	-6.9
ANN				pmax	pmax		
	comp=Z,63nm,1.1s						
LEF	Lefka	80.32	307	⇑P	P	14 59 24.6	+1.5
BRTR	Keskin Array B	81.03	312	P	P	14 59 26.7	-0.3
	comp=Z,32nm,0.7s,baz=136,slow=7.0,SNR=181						
BRTR				PKKPbc	PKKPbc	15 18 04.8	-0.6
	comp=Z,0.8nm,0.8s,baz=224,slow=4.0,SNR=4.1						
BRTR				LR	LR	15 35 50.6	
	comp=Z,204nm,21.6s,baz=122,slow=36						
BRTR	Keskin Array B	81.03	312	i P	P	14 59 27.3	+0.3
BRTR				pmax	pmax		
	comp=Z,32nm,0.7s						
BR131	Keskin Array S	81.03	312	IAmb	IAmb	14 59 28.4	
	comp=Z,56nm,0.7s						
VORD	Divnogorie	81.06	324	eP	P	14 59 27.7	+1.0
VORD				e*PP	pP	14 59 45.6	-2.8
VORD				pmax	pmax		
	comp=Z,60nm,0.4s						
VSR	Storozhevoye	81.23	324	eP	P	14 59 27.6	0.0
VSR				e*PP	pP	14 59 47.2	-2.1
VSR				eS	S	15 09 29.6	-1.8
VSR				pmax	pmax		
	comp=Z,110nm,0.5s						
VSR				smax	smax		
	comp=N,70nm,1.2s						
VORR	Voronezh	81.39	325	eP	P	14 59 28.0	-0.4
VORR				pmax	pmax		
	comp=Z,250nm,1.0s						
BZK	Bozkurt	81.42	314	⇑P	P	14 59 30.6	+1.7
LPSR	Galich'ya Gora	81.91	325	eP	P	14 59 31.3	+0.2
LPSR				e*PP	pP	14 59 50.7	-2.1
LPSR				eS	S	15 09 33.1	-5.1
LPSR				pmax	pmax		
	comp=Z,80nm,0.8s						
LPSR				smax	smax		
	comp=E,50nm,1.9s						
SUR	Sutherland	82.21	238	P	P	14 59 35.7	+2.2
SUR				IAmb	IAmb	14 59 37.2	
	comp=Z,37nm,0.8s						
PRGR	Permogore	82.60	335	eP	P	14 59 34.0	-0.5
PRGR				e		14 59 52.5	
PRGR				eS	S	15 09 40.7	-4.3
PRGR				pmax	pmax		
	comp=Z,12nm,0.9s						
QSPA	South Pole Qui	83.01	180	P	P	14 59 37.0	+0.2
QSPA				IAmb	IAmb	14 59 38.4	
	comp=Z,40nm,1.0s						
MOS	Moscow	83.81	328	eP	P	14 59 40.6	-0.3
MOS				e*PP	pP	15 00 00.2	-2.4
MOS				S	S	15 09 53.3	-4.1
MOS				pmax	pmax		
	comp=Z,63nm,0.8s						
OBN	Obninsk	84.14	327	⇑P	P	14 59 43.4	+0.9
OBN	Obninsk	84.14	327	LR	LR	15 41 21.3	
	comp=Z,41nm,21.5s,baz=176,slow=38						
OBN	Obninsk	84.14	327	c iP	P	14 59 43.2	+0.6
OBN				i *PP	pP	15 00 02.1	-2.2
OBN				i		15 02 59.4	
OBN				i S	S	15 09 54.2	-6.5
OBN				pmax	pmax		
	comp=Z,69nm,0.9s						
OBN				MLR	MLR		
	comp=Z,145nm,17.0s						
NVL	N'lazarevskaya	84.82	199	eP	P	14 59 52.9	+7.1
NVL				pmax	pmax		
	comp=Z,18nm,0.9s						
KLMR	Klimovskoe	84.89	333	eP	P	14 59 44.9	-1.3
KLMR				pmax	pmax		
	comp=Z,65nm,0.9s						
KLMR	Klimovskoe	84.89	333	eP	P	14 59 44.9	-1.3
KLMR				AMP		14 59 48.1	
	comp=Z,65nm,0.9s						
PURM	Purcari	85.54	318	⇑P	P	14 59 51.1	+1.2
BILL	Bilibino	85.81	19	c iP	P	14 59 49.0	-1.7
BILL				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TLCR		85.92	316	⇑P	P	14 59 52.5	+0.7
TLCR		85.92	316	⇑P	P	14 59 52.5	+0.7
TIRR	Tirgusor	86.03	316	⇓P	P	14 59 53.6	+1.4
TIRR	Tirgusor	86.03	316	P	P	14 59 51.8	-0.5
TIRR				pmax	pmax		
	comp=Z,346nm,1.6s						
TIRR	Tirgusor	86.03	316	P	P	14 59 51.8	-0.5
TLBR	Topalu	86.30	316	⇑P	P	14 59 53.6	0.0
MILM	Milestii Mici	86.35	318	⇓P	P	14 59 54.8	+1.0
MILM	Milestii Mici	86.35	318	⇓P	P	14 59 54.8	+1.0
CFR	Carcaliu	86.39	316	⇑P	P	14 59 55.3	+1.3
CFR	Carcaliu	86.39	316	⇑P	P	14 59 55.3	+1.3
HARR	Harsova	86.42	316	⇓P	P	14 59 55.7	+1.5
HARR	Harsova	86.42	316	⇓P	P	14 59 55.7	+1.5
IDI	Anoyia	86.74	306	LR	LR	15 39 50.3	
	comp=Z,132nm,20.8s,baz=96,slow=36						
ALN	Alexandroupoli	86.94	312	P	P	14 59 57.6	+0.8
ALN				pmax	pmax		
	comp=Z,23nm,0.9s						
ALN	Alexandroupoli	86.94	312	P	P	14 59 57.6	+0.8
ALN				IAmb	IAmb	15 00 33.2	
	comp=Z,23nm,0.9s						
SORM	Soroca	86.94	319	⇑P	P	14 59 57.4	+0.7
SORM	Soroca	86.94	319	⇑P	P	14 59 57.4	+0.7
AKASG	Malin Array Be	87.03	322	P	P	14 59 56.4	-0.6
	comp=Z,12nm,0.7s,baz=87,slow=4.4,SNR=66						
AKASG				pP	pP	15 00 16.9	-2.0
	comp=Z,6.8nm,0.6s,baz=90,slow=4.4,SNR=5.0						
AKASG				PP	PP	15 03 19.7	-1.7
	comp=Z,1.1nm,0.6s,baz=96,slow=6.7,SNR=5.8						
AKASG				LR	LR	15 43 44.8	
	comp=Z,52nm,19.6s,baz=80,slow=39						
AKASG	Malin Array Be	87.03	322	i P	P	14 59 57.0	0.0
AKASG				pmax	pmax		
	comp=Z,15nm,0.7s						
AKASG	Malin Array Be	87.03	322	P	P	14 59 56.3	-0.7
AKBB	Malin Array Si	87.03	322	ceP	P	14 59 56.7	-0.3
AKBB	Malin Array Si	87.03	322	IAmb	IAmb	14 59 59.5	
	comp=Z,26nm,0.8s						
IAS	Iasi	87.24	318	⇑P	P	15 00 04.8	+6.6
IAS	Iasi	87.24	318	⇑P	P	15 00 04.8	+6.6
ODBI	Odobesti	87.26	317	⇓P	P	14 59 59.5	+1.2
KIWB	Kanaga Island	87.43	37	P	P	14 59 58.3	-0.7
ISR	Istrita	87.47	316	⇑P	P	15 00 00.7	+1.3
ISR	Istrita	87.47	316	⇑P	P	15 00 00.7	+1.3
VRI	Vrincioaia	87.51	317	⇑P	P	15 00 01.3	+1.8
VRI	Vrincioaia	87.51	317	⇑P	P	15 00 01.3	+1.8
PLOR	Plostina	87.56	317	⇑P	P	15 00 01.2	+1.5
PLOR	Plostina	87.56	317	⇑P	P	15 00 01.3	+1.5
SULR		87.58	315	⇑P	P	15 00 01.8	+2.0
TESR	Tescani	87.70	317	⇑P	P	15 00 01.8	+1.4
NEHR	Nehoiu	87.71	316	⇓P	P	15 00 02.2	+1.7
SECR		87.78	316	⇑P	P	15 00 01.3	+0.5
COVR	Voineasa-Covas	87.86	317	⇓P	P	15 00 02.4	+1.1
MLR	Muntele Rosu	87.96	316	⇑P	P	15 00 03.4	+1.5
MLR	Muntele Rosu	87.96	316	LR	LR	15 46 44.0	
	comp=Z,90nm,18.0s,baz=84,slow=40						
MLR	Muntele Rosu	87.96	316	⇑P	P	15 00 03.4	+1.5
MLR	Muntele Rosu	87.96	316	P	P	15 00 03.1	+1.2
PRAR	RASCA	88.17	318	⇓P	P	15 00 03.9	+1.3
OZUR		88.20	317	⇑P	P	15 00 03.7	+0.8
HUMR	Humele	88.44	315	⇑P	P	15 00 04.8	+0.9
DOPR	Dopca	88.44	317	⇑P	P	15 00 05.3	+1.3
VOIR		88.57	316	⇑P	P	15 00 05.1	+0.4
VOIR		88.57	316	⇑P	P	15 00 05.1	+0.4
MNK	Minsk	88.75	325	i P	P	15 00 06.1	+1.0

MNK				*i*		15 03 37.3	
MNK				*i* PPP	PPP	15 05 34.0	
MNK				*i* S	SKSac	15 10 27.0	-0.2
MNK				pmax	pmax		
	comp=N,28nm,1.0s						
MNK				pmax	pmax		
	comp=Z,77nm,0.9s						
MNK				pmax	pmax		
	comp=E,9.0nm,1.0s						
MNK				MLR	MLR		
	comp=Z,43nm,12.0s						
MNK				MLR	MLR		
	comp=N,533nm,22.0s						
MNK				MLR	MLR		
	comp=E,73nm,19.0s						
MNK	Minsk	88.75	325	*i* P	P	15 00 06.2	+1.0
	comp=E,9.0nm,1.1s						
MNK				*i* P	P	15 00 06.2	+1.0
	comp=N,28nm,1.0s						
MNK				*i* P	P	15 00 06.2	+1.0
	comp=Z,77nm,0.9s,baz=284						
MNK				*i* pP	pP	15 00 30.1	+3.0
MNK				*i* PP	PP	15 03 37.3	+2.2
MNK				*i* PPP	PPP	15 05 34.0	
MNK				*i* S	SKSac	15 10 27.0	-0.2
MNK				*i* sS	pS	15 11 10.4	-3.0
MNK				*i* SS	SS	15 16 49.8	+11
MNK				*i* SSS	SSS	15 20 29.0	
MNK				*i* LQ	LQ	15 34 33.8	
MNK				*i* LR	LR	15 37 39.3	
MNK				*i* LRM	MLR	15 41 26.5	
	comp=Z,43nm,12.3s						
MNK				*i* LRM	MLR	15 41 41.7	
	comp=N,533nm,22.4s						
MNK				*i* LRM	MLR	15 41 45.3	
	comp=E,73nm,18.8s						
ARR	Arges	88.84	316	⇑P	P	15 00 06.8	+0.9
BURAR	Bucovina Array	88.89	318	⇑P	P	15 00 08.0	+1.9
BURAR	Bucovina Array	88.89	318	⇑P	P	15 00 08.0	+1.9
BURAR	Bucovina Array	88.89	318	IAmb	IAmb	15 00 09.0	
	comp=Z,24nm,0.7s						
BUR08	Bucovina Ar. S	88.91	318	IAmb	IAmb	15 00 09.5	
	comp=Z,16nm,0.8s						
VTS	Vitosha	89.33	313	⇑P	P	15 00 09.6	+1.2
VTS	Vitosha	89.33	313	⇑P	P	15 00 09.6	+1.2
VTS	Vitosha	89.33	313	IAmb	IAmb	15 00 09.9	
	comp=Z,17nm,0.8s						
ARCR	ARCALIA	89.36	317	⇑P	P	15 00 10.0	+1.8
AGG	Agios Georgios	89.41	309	P	P	15 00 08.9	+0.2
AGG				pmax	pmax		
	comp=Z,48nm,1.2s						
AGG	Agios Georgios	89.41	309	P	P	15 00 08.9	+0.2
AGG				IAmb	IAmb	15 00 10.1	
	comp=Z,48nm,1.2s						
NACGM	Naroch	89.47	325	*i* P	P	15 00 09.2	+0.8
APA	Apatity	89.83	339	⇓*i*P	P	15 00 06.7	-3.2
APA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BMR	Baia Mare	90.04	318	⇑P	P	15 00 13.0	+1.6
BMR	Baia Mare	90.04	318	⇑P	P	15 00 13.0	+1.6
GZR	Gura Zlata	90.14	316	⇑P	P	15 00 14.0	+2.0
GZR	Gura Zlata	90.14	316	⇑P	P	15 00 14.0	+2.0
VSU	Vasula	90.28	329	*e*P	P	15 00 13.2	+1.0
HERR	Herculane	90.30	315	⇓P	P	15 00 13.9	+1.2
BOVS	Bovan	90.61	314	⇓P	P	15 00 14.7	+0.6
TRPA	Tarpa	90.76	318	⇓P	P	15 00 13.4	-1.2
MDVR	Moldovita	90.78	315	⇑P	P	15 00 16.2	+1.2
VNA2	Neumayer--Watz	90.88	198	P	P	15 00 16.9	+2.1
	baz=98,slow=4.3						
VNA2	Neumayer--Watz	90.88	198	sP	sP	15 00 42.2	-2.4
BZS	Buzias	90.98	316	⇑P	P	15 00 16.7	+0.9
BZS	Buzias	90.98	316	⇑P	P	15 00 16.7	+0.9
UZH	Uzhgorod	91.00	319	*e*P	P	15 00 15.1	-0.7
UZH				*e*		15 00 26.1	
KOLS	Kolonicke sedl	91.06	319	*e*P	P	15 00 17.9	+1.8
KOLS	Kolonicke sedl	91.06	319	*e*P	P	15 00 17.9	+1.8
PABE	Paberze	91.17	326	*e*P	P	15 00 17.5	+1.1
FIA1	FINESS Array S	91.25	332	P	P	15 00 17.3	+0.7
FINES	FINESS Array B	91.25	332	P	P	15 00 17.0	+0.4
	comp=Z,11nm,0.7s,baz=111,slow=6.4,SNR=46						
FINES				PKiKP	PKiKP	15 05 08.1	-0.5
	comp=Z,2.1nm,0.6s,baz=104,slow=3.6,SNR=3.5						
FINES				LR	LR	15 46 41.7	
	comp=Z,75nm,18.8s,baz=80,slow=39						
FINES	FINESS Array B	91.25	332	P	P	15 00 17.2	+0.5
FINES	FINESS Array B	91.25	332	P	P	15 00 17.2	+0.5
VNA1	Neumayer--Stat	91.26	198	P	P	15 00 18.9	+2.3
VNA1	Neumayer--Stat	91.26	198	sP	sP	15 00 44.1	-2.2
SUW	Suwalki	91.35	324	*e*P	P	15 00 17.5	+0.3
VNA3	Neumayer Olymp	91.41	197	P	P	15 00 19.1	+1.7
FRGS	Fruska Gora	92.17	315	⇑P	P	15 00 22.0	+0.6
PDG	Podgorica	92.22	312	⇓P	P	15 00 22.5	+0.9
PBUR	Paburge	92.39	326	*e*P	P	15 00 22.9	+0.8
MORH	Mrgy, Hungar	93.11	316	⇑P	P	15 00 26.4	+0.8
ARA0	ARCESS Array S	93.15	340	*e*P	P	15 00 25.1	-0.2
ARCES	ARCESS Array B	93.15	340	P	P	15 00 25.1	-0.3
	comp=Z,4.1nm,0.6s,baz=104,slow=4.7,SNR=31						
ARCES				PKiKP	PKiKP	15 05 11.1	-0.7
	comp=Z,0.6nm,0.4s,baz=163,slow=0.9,SNR=5.6						
ARCES				LR	LR	15 46 58.1	
	comp=Z,194nm,21.2s,baz=105,slow=38						
ARCES	ARCESS Array B	93.15	340	P	P	15 00 25.2	-0.1
KTK1	Kautokeino	93.85	339	*e*P	P	15 00 28.2	-0.3
HAMF	Hammerfest	93.97	341	*e*P	P	15 00 29.9	+0.9
UNV	Unalaska Valle	94.13	36	P	P	15 00 29.5	-0.6
	baz=264						
MORC	Moravsky Berou	94.24	319	⇑P	P	15 00 31.8	+1.0
MORC	Moravsky Berou	94.24	319	⇑P	P	15 00 31.8	+1.0
AKUT	Akutan	94.59	36	P	P	15 00 31.8	-0.4
HOPEN	Hopen	94.62	347	*e*P	P	15 00 33.1	+1.2
JETT	Jettan, Norway	94.92	339	*e*P	P	15 00 34.6	+1.2
TRO	Tromso	95.45	339	*e*P	P	15 00 36.2	+0.4
FAUS	Fauske	96.64	337	*e*P	P	15 00 41.2	0.0
GERES	GERESS Array B	96.67	318	P	P	15 00 41.8	-0.3
	comp=Z,0.7nm,0.5s,baz=93,slow=4.3,SNR=7.0						
GERES				PP	PP	15 04 37.8	+0.2
	comp=Z,0.4nm,0.6s,baz=64,slow=8.9,SNR=4.8						
GERES				LR	LR	15 49 08.5	
	comp=Z,52nm,20.9s,baz=102,slow=38						
STEI	Steigen	96.68	338	*e*P	P	15 00 41.2	-0.2
SPA0	Spitsbergen Ar	96.69	348	*e*P	P	15 00 41.0	-0.3
SPITS	Spitsbergen Ar	96.69	348	P	P	15 00 41.2	-0.2
SPITS				pmax	pmax		
	comp=Z,170nm,1.5s						
MOR8	Moi Rana	96.94	336	*e*P	P	15 00 42.4	-0.3
KONS	Konsvik	97.48	336	*e*P	Pdif	15 00 45.7	+0.6
NSS	Namsos	97.96	334	*e*P	Pdif	15 00 47.5	+0.2
NOA	NORSAR Array B	98.35	331	P	P	15 00 47.9	-1.3
	comp=Z,1.2nm,0.7s,baz=92,slow=4.0,SNR=3.4						
NOA				PKKPbc	PKKPbc	15 17 20.9	-1.6
	comp=Z,0.9nm,0.9s,baz=272,slow=2.2,SNR=3.9						
NOA				PKPPKP	P'P'df	15 25 43.9	+9.3
	comp=Z,1.5nm,0.8s,baz=297,slow=4.7,SNR=3.7						
NOA				LR	LR	15 51 12.9	
	comp=Z,99nm,18.1s,baz=250,slow=39						
NOA	NORSAR Array B	98.35	331	P	P	15 00 47.9	-1.3
GCSA	Galena City Sc	99.33	26	Pdiff	Pdif	15 00 53.8	+0.4
	baz=273						
J20K	Nowinta River	100.56	26	Pdiff	Pdif	15 00 59.8	+0.9
	baz=276						
M19K	Big River Lodg	100.67	28	Pdiff	Pdif	15 01 00.2	+0.7
	baz=275						
K20K	Telida	100.68	27	Pdiff	Pdif	15 01 00.1	+0.6
	baz=276						
N19K	Bonanza Creek	100.72	29	Pdiff	Pdif	15 01 00.4	+0.5
	baz=275						
BER	Bergen	101.27	330	*e*Pdif	Pdif	15 01 02.5	+0.3
I21K	Tanana	101.36	25	P	Pdif	15 01 02.9	+0.5
	baz=278						
PPT2	Papeete2	101.57	109	*e*LR	LR	15 34 26.6	
	comp=Z,358nm,23.8s						
TOLK	Toolik Lake Re	101.72	21	Pdiff	Pdif	15 01 04.2	+0.1
	baz=281						
COLD	Coldfoot	101.75	23	Pdiff	Pdif	15 01 04.5	+0.3
	baz=280						
BPAW	Bear Paw Mtn.	101.94	26	Pdiff	Pdif	15 01 05.4	+0.2
	baz=279						
ILAR	Eielson Array	103.57	25	PKiKP	PKiKP	15 05 30.8	+0.4
	comp=Z,0.6nm,0.8s,baz=267,slow=4.2,SNR=4.4						
ILAR				PKKPbc	PKKPbc	15 17 05.9	-1.6
	comp=Z,1.4nm,0.7s,baz=120,slow=1.6,SNR=17						
TORD	Torodi Ar. Bea	105.38	282	PKiKP	PKiKP	15 05 35.0	-0.2
	comp=Z,2.0nm,0.6s,baz=56,slow=1.5,SNR=14						
DAWY	Dawson	106.89	25	PKiKP	PKiKP	15 05 37.4	+0.8
	baz=289						
EPYK	Eagle Plains	107.11	22	PKiKP	PKiKP	15 05 37.1	+0.2
	baz=293						
INK	Inuvik	107.43	20	PKiKP	PKiKP	15 05 37.3	-0.1
	comp=Z,1.2nm,0.6s,baz=179,slow=3.4,SNR=6.5						
INK	Inuvik	107.43	20	PKiKP	PKiKP	15 05 37.6	+0.3
	baz=296						
ESDC	Sonseca Array	109.73	310	PKiKP	PKiKP	15 05 43.1	+0.4
	comp=Z,0.5nm,0.5s,baz=23,slow=2.9,SNR=4.2						
RES	Resolute Bay	111.28	6	PKiKP	PKiKP	15 05 44.5	0.0
	comp=Z,3.3nm,0.8s,baz=277,slow=2.1,SNR=12						
DBIC	Dimbokro	111.35	274	PKiKP	PKiKP	15 05 46.4	+0.1
	comp=Z,3.1nm,0.8s,baz=195,slow=1.0,SNR=2.0						
TAOE	Nuku Hiva Isla	112.28	102	*e*LR	LR	15 39 23.0	
	comp=Z,213nm,23.4s						
DLBC	Dease Lake	113.25	28	PKiKP	PKiKP	15 05 48.4	-0.4
	comp=Z,2.0nm,0.7s,baz=297,slow=4.5,SNR=4.4						
YKA	Yellowknife Ar	117.20	20	PKP	PKPdf	15 05 55.5	-0.6
	comp=Z,0.9nm,0.4s,baz=317,slow=2.7,SNR=25						
YKA				PKKPbc	PKKPbc	15 16 21.3	-1.7
	comp=Z,2.2nm,0.8s,baz=115,slow=5.4,SNR=5.5						
YKA	Yellowknife Ar	117.20	20	PKIKP	PKPdf	15 05 55.8	-0.3
YKA	Yellowknife Ar	117.20	20		PKPdf	15 05 55.8	-0.3
D03D	Eldon	121.99	37	P	PKiKP	15 06 07.3	+1.3
	baz=298						
B05A	Bryant	122.23	36	P	PKiKP	15 06 07.1	+0.7
	baz=299						
E04D	Cinebar	122.76	38	P	PKiKP	15 06 08.4	+0.9
	baz=298						
J01E	Myrtle Point	123.39	42	P	PKiKP	15 06 09.2	+0.3
	baz=295						
I03D	Drain, OR	123.55	41	P	PKiKP	15 06 10.2	+1.1
	baz=296,SNR=7.0						
BUCK	Buck Mountain	123.57	41		PKiKP	15 06 09.9	+0.6
H04D	Lebanon	123.58	40	P	PKiKP	15 06 10.4	+1.2
	baz=296,SNR=7.4						
K02D	Willamette Mer	123.76	42	P	PKiKP	15 06 10.4	+0.6
	baz=295						
L02E	Cave Junction	124.03	43	P	PKiKP	15 06 11.1	+0.9
	baz=294						
I04A	Tendick Farm,	124.12	41	P	PKiKP	15 06 10.4	0.0
	baz=296,SNR=8.5						
HUMO	Hull Mountain	124.27	42		PKiKP	15 06 11.8	+1.1
I05D	Terrebonne, OR	124.56	40	P	PKiKP	15 06 12.0	+0.8
	baz=298						
J04D	Umpqua Nationa	124.56	41	P	PKiKP	15 06 12.3	+0.8
	baz=296,SNR=6.2						
HAWA	Hanford	124.67	37		PKiKP	15 06 12.0	+0.6
YBH	Yreka Blue Hor	124.81	43	PKP	PKPdf	15 06 10.9	-0.6
	comp=Z,1.5nm,0.8s,baz=318,slow=12,SNR=3.6						
M02C	Callahan	124.85	44	P	PKiKP	15 06 12.7	+0.7
	baz=294						
L04D	Klamath Falls	124.88	42	P	PKiKP	15 06 12.7	+0.6
	baz=296,SNR=7.1						
NEW	Newport	125.05	34	PKP	PKPdf	15 06 11.3	-0.5
	comp=Z,4.5nm,0.8s,baz=52,slow=1.9,SNR=6.8						
NEW	Newport	125.05	34	P	PKiKP	15 06 12.9	+0.8
	baz=304						
PINE	Pine Mountain	125.07	40		PKiKP	15 06 13.0	+0.6
J05D	Fort Rock, OR	125.11	41	P	PKiKP	15 06 13.5	+1.0
	baz=297,SNR=10						
N02D	Trinity Center	125.13	44	P	PKiKP	15 06 13.2	+0.7
	baz=294						
M04C	Macdoel	125.38	43	P	PKiKP	15 06 13.8	+0.7
	baz=296,SNR=5.3						
O02D	Mt. Diablo Mer	125.39	45	P	PKiKP	15 06 13.9	+0.8
	baz=294						
O03E	Paynes Creek	126.03	44	P	PKiKP	15 06 14.4	0.0
	baz=295						
FFC	Flin Flon	127.38	20	PKIKP	PKPdf	15 06 16.1	+0.2
FFC	Flin Flon	127.38	20		PKPdf	15 06 16.1	+0.2
MSO	Missoula	127.64	34	P	PKiKP	15 06 17.3	-0.1
	baz=306						
EGMT	Eagleton	129.09	30	P	PKiKP	15 06 20.6	+0.4
	baz=312						
HLID	Hailey	129.25	37	P	PKiKP	15 06 21.8	+1.0
	baz=304						
BOZ	Bozeman (W)	129.67	34	P	PKiKP	15 06 22.1	+0.6
	baz=308						
CWC	Cottonwood Cre	130.31	47	P	PKiKP	15 06 23.9	+0.8
	baz=295						
MPMC	Manual Prospec	130.91	47	P	PKiKP	15 06 25.1	+0.7
	baz=296,SNR=7.3						
EDW2	Edwards Air Fo	131.02	49	P	PKiKP	15 06 25.5	+1.1
	baz=294						
R11A	Troy Canyon, C	131.21	44	P	PKiKP	15 06 25.2	+0.3
	baz=299,SNR=11						
RLMT	Red Lodge	131.26	33	P	PKiKP	15 06 26.0	+1.1
	baz=310						
GSC	Goldstone, Bar	131.73	48	P	PKiKP	15 06 27.0	+1.1
	baz=296						
SCHQ	Schefferville	131.93	354	PKP	PKPdf	15 06 24.8	+0.2
	comp=Z,9.3nm,0.6s,baz=345,slow=2.2,SNR=21						
SCHQ				SKPbc	SKPbc	15 09 43.7	+0.1
	comp=Z,11nm,0.6s,baz=24,slow=5.0,SNR=11						
SCHQ	Schefferville	131.93	354		PKiKP	15 06 25.5	-0.1
DUG	Dugway, Tooele	132.11	40	P	PKiKP	15 06 26.9	+0.3
	baz=303						
PLCA	Paso Flores	132.42	184	PKP	PKiKP	15 06 27.9	+0.7
	comp=Z,2.2nm,0.7s,baz=304,slow=4.4,SNR=8.2						
BW06	Boulder Array	132.59	36	P	PKiKP	15 06 27.6	0.0
	baz=308						
PDAR	Pinedale Array	132.59	36	PKP	PKPdf	15 06 26.9	+0.3
	comp=Z,2.9nm,0.6s,baz=274,slow=1.1,SNR=17						
PDAR				SKPbc	SKPbc	15 09 46.1	-0.4
	comp=Z,1.8nm,0.7s,baz=11,slow=0.9,SNR=7.9						
GMRC	Granite Mounta	132.80	48	P	PKiKP	15 06 28.7	+0.6
	baz=296,SNR=10						
BELC	Belle Mtn. Jos	132.89	49	P	PKiKP	15 06 29.8	+1.5
	baz=295						
ULM	Lac du Bonnet	133.17	19	PKP	PKPdf	15 06 27.0	0.0
	comp=Z,7.7nm,0.6s,baz=295,slow=2.3,SNR=11						
BC3	Big Chuckawall	133.45	49	P	PKiKP	15 06 30.5	+1.0
	baz=295						
IRM	Iron Mountain	133.46	49	P	PKiKP	15 06 30.4	+1.0
	baz=296						
K22A	Casper	134.37	34	P	PKPdf	15 06 30.4	+0.6
	baz=312						
RSSD	Black Hills	134.67	30	P	PKPdf	15 06 30.5	+0.1
	baz=316						
O20A	White River Ci	134.99	38	P	PKiKP	15 06 32.1	-0.4
	baz=308						
MVCO	Mesa Verde	136.57	41	P	PKiKP	15 06 35.1	-0.8
	baz=305						
W18A	Petrified Fore	136.90	44	P	PKiKP	15 06 36.1	-0.5
	baz=302						
S22A	4UR Ranch, Cre	137.32	39	P	PKiKP	15 06 37.4	-0.1
	baz=308						
SDCO	Great Sand Dun	138.15	38	P	PKPdf	15 06 37.3	+0.2
	baz=309						
T25A	Trinidad	139.21	38	P	PKPdf	15 06 39.8	+0.9
	baz=310						
ANMO	Albuquerque	139.23	42	*i* PKIKP	PKPdf	15 06 39.9	+0.9
ANMO	Albuquerque	139.23	42	P	PKiKP	15 06 40.4	-0.9
	baz=306						
ITAB	Concordia	139.91	211	*e*P	PKPdf	15 06 41.3	+1.1
FRTB	Fartura	141.51	218	*e*P	PKPdf	15 06 43.4	+0.1
MNTX	Cornudas Mount	141.81	46	P	PKPdf	15 06 40.3	-3.2
	baz=304						
MNTX	Cornudas Mount	141.81	46		PKPdf	15 06 40.1	-3.4
MC01	Montes Claros	142.04	231	*e*P	PKPdf	15 06 45.9	+1.4
SADO	Sadowa	142.09	6	PKhKP	PKPpre	15 06 37.7	
	comp=Z,7.6nm,0.8s,baz=285,slow=8.1,SNR=2.8						
KSU1	Kansas State U	142.10	29	P	PKPdf	15 06 38.9	-4.9
	baz=322						
LONY	Lake Ozonia	142.50	1	P	PKPdf	15 06 40.3	-4.1
	baz=359						
CPUP	Villa Florida	143.12	205	PKhKP	PKPpre	15 06 44.1	
	comp=Z,10nm,0.7s,baz=142,slow=3.2,SNR=15						
CPUP	Villa Florida	143.12	205	PKIKP	PKPbc	15 06 44.3	+1.2
CPUP	Villa Florida	143.12	205	*e*P	PKPdf	15 06 46.8	+0.8
CPUP	Villa Florida	143.12	205		PKPbc	15 06 44.2	+1.2
JANB	Januaria	143.28	233	*e*P	PKPdf	15 06 45.9	-0.8
ACCN	Adirondack Com	143.74	360		PKPbc	15 06 44.2	-0.1
T35A	Sooner Cattle	143.84	31		PKPbc	15 06 44.7	-0.2
PCMB	Pacaembu	143.85	218	*e*P	PKPdf	15 06 47.2	-0.3
HDIL	Hopedale	143.89	20	P	PKPab	15 06 44.2	0.0
	baz=334						
LCO	Las Campanas	144.08	185	PKIKP	PKPdf	15 06 47.5	-0.5
LCO	Las Campanas	144.08	185	PKPdf	PKPdf	15 06 47.5	-0.5
WMOK	Wichita Mounta	144.20	36	PKIKP	PKPab	15 06 45.7	+0.1
WMOK	Wichita Mounta	144.20	36	P	PKPbc	15 06 46.0	0.0
	baz=315,SNR=40						
WMOK	Wichita Mounta	144.20	36		PKPab	15 06 45.7	+0.1
K57A	Scipio Center	144.32	3		PKPab	15 06 45.9	+0.1
TX31	Lajitas Ar. Si	144.33	48	PKPdf	PKPbc	15 06 47.1	+0.5
TXAR	Lajitas Array	144.33	48	PKP	PKPdf	15 06 48.0	-0.2
	comp=Z,22nm,0.7s,baz=256,slow=1.0,SNR=204						
TXAR				pPKP	pPKPdf	15 07 07.6	-3.3
	comp=Z,8.2nm,0.7s,baz=204,slow=1.2,SNR=3.6						
TXAR				SKPbc	SKPbc	15 10 20.3	+0.1
	comp=Z,1.2nm,0.7s,baz=342,slow=2.0,SNR=3.5						
TXAR	Lajitas Array	144.33	48		PKPbc	15 06 47.1	+0.5
IPMB	Ipameri, GO	144.42	225	*e*P	PKPdf	15 06 48.7	+0.1
HRV	Adam Dziewonsk	144.55	357	PKIKP	PKPbc	15 06 47.0	+0.2
HRV	Adam Dziewonsk	144.55	357	P	PKPbc	15 06 46.9	+0.1
	baz=4.2						
HRV	Adam Dziewonsk	144.55	357		PKPbc	15 06 47.0	+0.2
ERPA	Erie	144.61	8	P	PKPab	15 06 46.9	+0.1
	baz=350,SNR=14						
ERPA	Erie	144.61	8		PKPbc	15 06 47.0	0.0
L61B	Northampton	144.65	358	P	PKPab	15 06 46.6	-0.4
	baz=2.2						
ITRB	Iturama	144.68	221	*e*P	PKPdf	15 06 50.4	+1.4
SFIN	Lafayette	144.75	17	P	PKPbc	15 06 47.7	+0.2
	baz=337						
BINY	Binghamton	144.88	2	P	PKPbc	15 06 47.9	0.0
	baz=357,SNR=20						
W35A	Tecumseh	144.98	34		PKPab	15 06 48.6	+0.2
TUL1	Leonard	144.99	32	P	PKPab	15 06 48.6	+0.1
	baz=320						
ABTX	Abilene, Hawle	145.11	40	P	PKPdf	15 06 49.7	+0.4
	baz=312,SNR=41						
M53A	WI Miller and	145.18	9	P	PKPbc	15 06 48.5	-0.4
	baz=348,SNR=19						
SDBA	SAO DESIDERIO	145.20	237	*e*P	PKPdf	15 06 51.0	+1.0
M54A	Oil Creek Stat	145.25	7	P	PKPbc	15 06 48.9	-0.2
	baz=350,SNR=35						
CCM	Cathedral Cave	145.36	24	PKIKP	PKPbc	15 06 49.5	0.0
CCM	Cathedral Cave	145.36	24	P	PKPbc	15 06 49.3	-0.3
	baz=329						
CCM	Cathedral Cave	145.36	24		PKPbc	15 06 49.5	0.0
N54A	Moraine State	145.75	8	P	PKPdf	15 06 50.4	+0.2
	baz=349,SNR=18						
BDFB	Brasilia	145.79	229	PKPbc	PKPab	15 06 52.2	+0.2
	comp=Z,40nm,0.7s,baz=138,slow=3.9,SNR=52						
ACSO	Alum Creek Sta	145.93	12	P	PKPbc	15 06 50.9	-0.3
	baz=344,SNR=17						
U40A	Yellville	146.08	28	P	PKPdf	15 06 51.1	+0.3
	baz=325						
PAL	Palisades	146.11	360	PKP2	PKPbc	15 06 51.9	+0.1
PAL	Palisades	146.11	360	P	PKPbc	15 06 51.7	0.0
	baz=0.1						
PAL	Palisades	146.11	360		PKPbc	15 06 51.9	+0.1
N59A	State Game Lan	146.17	2	P	PKPdf	15 06 51.4	+0.4
	baz=357,SNR=35						
N59A	State Game Lan	146.17	2		PKPbc	15 06 52.2	+0.2
P49A	Miami Univ. Ec	146.19	15	P	PKPbc	15 06 51.7	-0.4
	baz=341						
P49A	Miami Univ. Ec	146.19	15		PKPbc	15 06 51.6	-0.4
N58A	Sunbury	146.20	4		PKPbc	15 06 52.0	0.0
X37A	Clayton	146.22	33		PKPbc	15 06 52.1	-0.2
O53A	New Philadelph	146.25	10	P	PKPbc	15 06 51.8	-0.4
	baz=347,SNR=19						
O53A	New Philadelph	146.25	10	PKPdf	PKPbc	15 06 51.9	-0.4
O52A	Adamsville	146.27	11		PKPbc	15 06 52.2	-0.1
T42A	Van Buren	146.29	25		PKPbc	15 06 52.6	+0.2
SSPA	Standing Stone	146.31	5	P	PKPbc	15 06 51.8	-0.6
	baz=353						
SSPA	Standing Stone	146.31	5		PKPbc	15 06 52.5	+0.1
JCT	Junction City	146.39	43	P	PKPbc	15 06 52.6	-0.4
	baz=309						
LUPA	Lehigh Univers	146.50	2		PKPbc	15 06 52.3	-0.6
W39A	Magazine	146.57	30	P	PKPbc	15 06 52.9	-0.4
	baz=323,SNR=13						
O56A	Blue Knob Stat	146.60	6	P	PKPbc	15 06 52.9	-0.5
	baz=352,SNR=49						
O56A	Blue Knob Stat	146.60	6		PKPbc	15 06 52.8	-0.5
P52A	Corning	146.68	11	P	PKPdf	15 06 52.3	+0.5
	baz=345,SNR=32						
WHTX	Lake Whitney,	146.90	38	P	PKPab	15 06 55.4	-0.4
	baz=314,SNR=10						
WCI	Wyandotte Cave	146.97	18	PKP2	PKPbc	15 06 54.7	+0.4
WCI	Wyandotte Cave	146.97	18	P	PKPbc	15 06 54.4	0.0
	baz=337						
WCI	Wyandotte Cave	146.97	18		PKPbc	15 06 54.7	+0.4
MCWV	Mont Chateau	147.05	8	P	PKPbc	15 06 54.8	+0.2
	baz=349,SNR=16						
MIAR	Mount Ida	147.19	31	P	PKPbc	15 06 55.4	+0.4
	baz=322,SNR=92						
P60A	Greenville	147.28	2	P	PKPbc	15 06 54.9	-0.2
	baz=357						
P60A	Greenville	147.28	2		PKPbc	15 06 55.7	+0.5
AQDB	Aquidauana	147.29	213	*e*P	PKPbc	15 06 54.9	-0.8
W41B	Gary Mavity, V	147.33	28	P	PKPab	15 06 57.3	0.0
	baz=325,SNR=26						
X40A	Basin Creek Fa	147.60	30	P	PKPbc	15 06 56.8	+0.6
	baz=323,SNR=18						
435B	Jarrell	147.65	40	P	PKPbc	15 06 56.8	+0.4
	baz=312						
T47A	Sharon Grove	147.84	20		PKPbc	15 06 56.9	+0.2
833A	Chaparral WMA,	147.99	45	P	PKPbc	15 06 55.9	-1.5
	baz=307						
WVT	Waverly	148.36	22	PKP2	PKPbc	15 06 58.3	+0.2
WVT	Waverly	148.36	22	P	PKPbc	15 06 58.4	+0.2
	baz=333						
WVT	Waverly	148.36	22		PKPbc	15 06 58.3	+0.2
Z41A	Richland Creek	148.59	31	P	PKPbc	15 06 59.4	+0.6
	baz=322,SNR=6.5						
NATX	Nacogdoches	148.73	35	P	PKiKP	15 07 00.1	-0.6
	baz=318,SNR=5.4						
CBN	Corbin Frederi	148.77	5	P	PKPbc	15 06 59.1	0.0
	baz=354						
CLTN	Cedars of Leba	148.92	19		PKPbc	15 06 59.8	+0.2
TZTN	Tazewell	149.32	15	P	PKPbc	15 07 00.8	+0.1
	baz=341,SNR=13						
BLA	Blacksburg	149.35	10	P	PKPbc	15 07 00.4	-0.3
	baz=348,SNR=5.9						
V52A	Sevierville	149.97	16	PKPbc	PKPbc	15 07 02.5	+0.3
CPCT	Cooper Cave	150.07	17	PKPbc	PKPbc	15 07 02.6	+0.2
TKL	Tuckaleechee C	150.09	16	PKP	PKPdf	15 06 57.2	-0.2
	comp=Z,4.6nm,0.7s,baz=148,slow=2.6,SNR=7.0						
TKL				PKPbc	PKPbc	15 07 02.5	-0.1
	comp=Z,34nm,0.5s,baz=137,slow=3.1,SNR=28						
TKL	Tuckaleechee C	150.09	16	PKPbc	PKPbc	15 07 02.8	+0.3
LVC	Limon Verde	150.17	190	PKPbc	PKiKP	15 07 04.6	+0.2
	comp=Z,31nm,0.8s,baz=256,slow=2.7,SNR=26						
LVC				PKPab	PKPab	15 07 11.1	+1.6
	comp=Z,52nm,0.7s,baz=184,slow=1.5,SNR=22						
LVC	Limon Verde	150.17	190	*e*P	PKPdf	15 06 58.7	+0.3
VBMS	Vicksburg	150.57	29	P	PKiKP	15 07 04.2	-0.2
	baz=325						
KMSC	Kings Mountain	151.18	12	P	PKPbc	15 07 05.1	0.0
	baz=345						
KMSC	Kings Mountain	151.18	12	PKPbc	PKPbc	15 07 05.1	0.0
PB07	IPOC Station P	151.18	188		PKiKP	15 07 06.9	+0.6
CNNC	Cliffs of the	151.65	7	P	PKiKP	15 07 06.7	+0.2
	baz=352						
Y52A	Lilburn	151.69	18		PKiKP	15 07 07.0	+0.3
GOGA	Godfrey	152.28	17	P	PKiKP	15 07 08.1	+0.2
	baz=340						
TMAB	Tom-Au,PA,Br	152.48	251	*e*P	PKPdf	15 07 02.9	+1.2
PRPB	Parauapebas	152.51	242	*e*P	PKPdf	15 07 02.9	+1.1
BRAL	Brewton	153.03	25	P	PKiKP	15 07 10.7	+1.1
	baz=330						
PTLB	Pontes e Lacer	153.26	213	*e*P	PKPdf	15 07 03.6	+0.9
SIV	San Ignacio	153.81	209	PKP	PKPdf	15 07 04.3	+0.7
	comp=Z,3.3nm,0.6s,baz=108,slow=2.9,SNR=16						
SIV				PKPbc	PKiKP	15 07 12.5	+0.9
	comp=Z,10nm,0.8s,baz=120,slow=2.1,SNR=25						
SIV				PKPab	pPKPdf	15 07 26.3	+0.1
	comp=Z,29nm,0.8s,baz=125,slow=5.1,SNR=3.7						
TIGA	Tifton	154.08	19	P	PKiKP	15 07 11.8	+0.1
	baz=338						
CLDB	Colider	154.61	226	*e*P	PKPdf	15 07 05.7	+1.0
LPAZ	La Paz	156.15	194	PKP	PKPdf	15 07 08.4	+0.9
	comp=Z,2.3nm,0.8s,baz=256,slow=0.5,SNR=8.5						
LPAZ				PKPab	PKPab	15 07 36.7	+1.5
	comp=Z,9.6nm,0.9s,baz=119,slow=3.3,SNR=9.5						
LPAZ	La Paz	156.15	194	*e*P	PKPdf	15 07 08.0	+0.5
NPGB	Novo Progresso	156.72	234	*e*P	PKPdf	15 07 08.8	+1.2
CMIG	Matias Romero	157.31	62	PKP	PKPdf	15 07 08.6	+0.4
	comp=Z,1.5nm,0.6s,baz=183,slow=3.1,SNR=3.7						
CMIG				PKPab	sPKPdf	15 07 39.4	0.0
	comp=Z,10.0nm,0.7s,baz=320,slow=2.0,SNR=14						
ITTB	Itaituba	158.52	239	*e*P	PKPdf	15 07 10.8	+1.0
SAML	Samuel	160.82	215	PKIKP	PKPdf	15 07 13.1	+0.7
SAML	Samuel	160.82	215		PKPdf	15 07 13.1	+0.7
MACA	Manacapuru-AM	163.28	233	*e*P	PKPdf	15 07 16.5	+1.6
PTGA	Pitinga	163.99	242	PKPab	PKPab	15 08 10.4	+1.4
	comp=Z,7.0nm,0.8s,baz=107,slow=4.3,SNR=13						
PTGA	Pitinga	163.99	242		PKPab	15 08 10.4	+1.4
ATAH	Atahualpa	165.33	163	PKPab	PKPab	15 08 17.0	+2.0

	comp=Z,13nm,0.8s,baz=153,slow=7.2,SNR=5.7						
CZSB	**Cruzeiro do Su**	**165.33**	**185**	*e*P	**PKPdf**	**15 07 16.3**	**-0.4**
BOAV	**Boa Vista**	**165.77**	**252**		**PKPdf**	**15 07 17.8**	**+0.6**
TBTG	**Tabatinga, AM**	**168.16**	**201**	*e*P	**PKPdf**	**15 07 19.4**	**+0.4**
JTS	**Las Juntas de**	**168.74**	**72**	PKPab	**PKPab**	**15 08 30.3**	**+0.4**
	comp=Z,5.2nm,0.5s,baz=8.6,slow=18,SNR=4.7						
SDV	**Santo Domingo**	**176.11**	**299**	PKPab	**PKPab**	**15 09 03.0**	**+0.2**
	comp=Z,6.0nm,0.2s,baz=34,slow=5.4,SNR=4.6						
SDV	**Santo Domingo**	**176.11**	**299**	*e*P	**PKPdf**	**15 07 22.6**	**-0.1**
SDV	**Santo Domingo**	**176.11**	**299**		**PKPab**	**15 09 03.0**	**+0.2**

*SJA **28** 14:47:41.0±0.9, 24°.42S×67°.18W, h199^{km}±8^{km}, ML3.9, MW4.0*

*IDC **28** 14:47:42.5±1.5, 24°.34S×66°.95W, h168^{km}±12^{km}, mb3.5/6, mb1 3.6/12, mb1mx3.5/25, mbtmp3.9/12, Error ellipse: s-maj=20.9km s-min=15.3km az=17.0*

*VAO **28** 14:47:43.4±0.5, 24°.38S×67°.44W, h225^{km}±5^{km}, mb4.1*

*GUC **28** 14:47:44.4±0.6, 24°.44S×67°.44W, h190^{km}±12^{km}, ML4.3*

ISC 28 14:47:42.1±0.7**, 24°.37S**±0°.05×**67°.18W**±0°.04**, h178**^{km}±7^{km}**, n96,** σ1^{s}.**49**/114**, mb3.8**/6**, 2C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLA	**San Lorenzo**	**1.57**	**103**	*i* P	**Pn**	**14 48 16.1**	**+1.2**
SLA				*i* S	**Sn**	**14 48 41.4**	**+1.4**
SLA				IAML		14 48 41.5	
	comp=Z,436nm,0.8s						
HJA	**Humahuaca**	**2.00**	**55**	*i* P	**Pn**	**14 48 21.1**	**+1.6**
HJA				IAML		14 48 52.5	
	comp=Z,31nm,0.6s						
LVC	**Limon Verde**	**2.36**	**318**	P	**Pn**	**14 48 25.6**	**+2.0**
	comp=Z,49nm,0.3s,baz=154,slow=7.3,SNR=152						
LVC				S	**Sn**	**14 48 57.4**	**+1.6**
	comp=Z,244nm,0.3s,baz=282,slow=22,SNR=86						
LVC	**Limon Verde**	**2.36**	**318**	*e*P	**Pn**	**14 48 25.4**	**+1.8**
LVC				*e*S	**Sn**	**14 48 56.4**	**+0.6**
LVC	**Limon Verde**	**2.36**	**318**	*e*P	**Pn**	**14 48 25.4**	**+1.8**
LVC	**Limon Verde**	**2.36**	**318**	*i* P	**Pn**	**14 48 25.0**	**+1.4**
LVC				*i* S	**Sn**	**14 48 57.3**	**+1.6**
LVC				IAML		14 49 02.3	
	comp=Z,345nm,0.5s						
PB15	**IPOC Station P**	**2.39**	**298**	*e*P	**Pn**	**14 48 23.6**	**-0.2**
PB15				*e*S	**Sn**	**14 48 56.6**	**+0.5**
PB15	**IPOC Station P**	**2.39**	**298**	*i* P	**Pn**	**14 48 25.0**	**+1.2**
ASTB	**Santa Barbara**	**2.53**	**81**	*i* P	**Pn**	**14 48 26.2**	**+0.9**
ASTB				IAML		14 49 01.2	
	comp=Z,4.1nm,0.5s						
YJA	**Yavi**	**2.67**	**35**	*i* P	**Pn**	**14 48 29.0**	**+1.7**
YJA				IAML		14 49 09.2	
	comp=Z,12nm,0.8s						
PB06	**IPOC Station P**	**2.75**	**307**	*e*P	**Pn**	**14 48 29.4**	**+1.5**
PB06				*e*S	**Sn**	**14 49 03.3**	**-0.1**
AHML	**Horco Molle**	**2.93**	**146**	*i* P	**Pn**	**14 48 30.0**	**+0.1**
AHML				IAML		14 49 08.3	
	comp=Z,18nm,1.1s						
PB14	**IPOC Station P**	**2.94**	**264**	*e*P	**Pn**	**14 48 30.7**	**+0.3**
PB14				*e*S	**Sn**	**14 49 05.9**	**-1.9**
PB14				IAML		14 49 08.5	
	comp=E,332nm,0.2s						
PB14				IAML		14 49 11.6	
	comp=E,279nm,0.3s						
PB14	**IPOC Station P**	**2.94**	**264**	*i* P	**Pn**	**14 48 31.0**	**+0.6**
PB14				IAML		14 49 13.0	
	comp=Z,448nm,0.4s						
ALOL	**LOMAS DE OLMED**	**2.98**	**80**	*i* P	**Pn**	**14 48 31.0**	**+0.5**
AC02	**Maricunga**	**3.02**	**215**	⇑*i*P	**Pn**	**14 48 32.2**	**+0.8**
AC02	**Maricunga**	**3.02**	**215**	*i* P	**Pn**	**14 48 32.0**	**+0.6**
PB05	**IPOC Station P**	**3.15**	**298**	*e*P	**Pn**	**14 48 33.7**	**+0.9**
PB05				*e*S	**Sn**	**14 49 10.5**	**-1.7**
PB05				IAML		14 49 18.3	
	comp=N,938nm,0.2s						
PB09	**IPOC Station P**	**3.19**	**323**	⇑*i*P	**Pn**	**14 48 35.4**	**+2.1**
PB09				*i* S	**Sn**	**14 49 14.5**	**+1.4**
PB09	**IPOC Station P**	**3.19**	**323**	*i* P	**Pn**	**14 48 34.0**	**+0.7**
PB09				IAML		14 49 20.7	
	comp=Z,464nm,0.4s						
PB10	**IPOC Station P**	**3.20**	**285**	*e*P	**Pn**	**14 48 34.2**	**+1.0**
PB10				*e*S	**Sn**	**14 49 11.3**	**-1.6**
PB10				IAML		14 49 17.4	
	comp=E,627nm,0.4s						
PB10	**IPOC Station P**	**3.20**	**285**	*i* P	**Pn**	**14 48 34.0**	**+0.8**
PB10				IAML		14 49 15.8	
	comp=Z,387nm,0.2s						
PB03	**IPOC Station P**	**3.31**	**314**	*e*P	**Pn**	**14 48 35.9**	**+1.2**
PB03				*i* S	**Sn**	**14 49 15.1**	**-0.6**
PB03	**IPOC Station P**	**3.31**	**314**	*i* P	**Pn**	**14 48 35.5**	**+0.8**
PB03				IAML		14 49 20.7	
	comp=Z,1µm,0.1s						
PB04	**IPOC Station P**	**3.40**	**306**	*e*P	**Pn**	**14 48 36.7**	**+0.8**
PB04				*e*S	**Sn**	**14 49 16.0**	**-1.7**
PB04	**IPOC Station P**	**3.40**	**306**	*i* P	**Pn**	**14 48 36.5**	**+0.7**
PB07	**IPOC Station P**	**3.62**	**316**	*e*P	**Pn**	**14 48 39.7**	**+1.0**
PB07				*e*S	**Sn**	**14 49 21.2**	**-1.5**
PB07	**IPOC Station P**	**3.62**	**316**	*i* P	**Pn**	**14 48 39.0**	**+0.3**
PB07				IAML		14 49 25.2	
	comp=Z,824nm,0.2s						
PB02	**IPOC Station P**	**3.94**	**320**	*e*P	**Pn**	**14 48 43.0**	**+0.4**
PB02				*e*S	**Sn**	**14 49 27.5**	**-2.3**
PB02	**IPOC Station P**	**3.94**	**320**	*i* P	**Pn**	**14 48 43.0**	**+0.5**
PB02				IAML		14 49 35.3	
	comp=Z,736nm,0.3s						
PB01	**IPOC Station P**	**3.94**	**327**	*e*P	**Pn**	**14 48 43.2**	**+0.6**
PB01				*e*S	**Sn**	**14 49 28.1**	**-1.6**
PB01	**IPOC Station P**	**3.94**	**327**	*i* P	**Pn**	**14 48 43.0**	**+0.4**
PB01				IAML		14 49 34.5	
	comp=Z,339nm,0.2s						
GO03	**Copiap**	**4.22**	**220**	*i* P	**Pn**	**14 48 45.0**	**-1.2**
GO03	**Copiap**	**4.22**	**220**	*i* P	**Pn**	**14 48 45.7**	**-0.4**
PATCX	**Punta Patache**	**4.47**	**322**	*e*P	**Pn**	**14 48 49.7**	**+0.3**
PATCX	**Punta Patache**	**4.47**	**322**	*i* P	**Pn**	**14 48 50.0**	**+0.6**
PATCX				IAML		14 49 54.2	
	comp=Z,186nm,0.5s						
PB08	**IPOC Station P**	**4.59**	**336**	*i* P	**Pn**	**14 48 53.0**	**+1.8**
PB08				IAML		14 49 49.9	
	comp=Z,98nm,0.5s						
TA01	**Diego Aracena**	**4.69**	**323**	*e*P	**Pn**	**14 48 52.5**	**+0.4**
TA01				*e*S	**Sn**	**14 49 44.8**	**-2.2**
TA01	**Diego Aracena**	**4.69**	**323**	*i* P	**Pn**	**14 48 53.0**	**+0.8**
ACLC	**CERRO LA CRUZ**	**5.04**	**178**	*i* P	**Pn**	**14 48 57.0**	**+0.3**
ACLC				IAML		14 50 05.3	
	comp=Z,18nm,4.9s						
AC04	**Llanos de Chal**	**5.17**	**222**	*e*P	**Pn**	**14 48 56.4**	**-1.9**
AC04	**Llanos de Chal**	**5.17**	**222**	*i* P	**Pn**	**14 48 57.0**	**-1.3**
LCO	**Las Campanas**	**5.59**	**213**	*i* P	**Pn**	**14 49 02.0**	**-2.0**
LCO				IAML		14 50 05.5	
	comp=Z,352nm,0.7s						
APLL	**PUNTA DE LOS L**	**6.03**	**175**	*i* P	**Pn**	**14 49 07.0**	**-2.5**
APLL				IAML		14 50 14.7	
	comp=Z,36nm,0.6s						
ACCO	**Cerro Coronel**	**6.41**	**195**	*i* P	**Pn**	**14 49 15.0**	**+0.2**
PB12	**IPOC Station P**	**6.43**	**332**	*i* P	**Pn**	**14 49 14.0**	**-1.0**
PB12				IAML		14 50 28.7	
	comp=Z,32nm,0.9s						
GO04	**Tololo Observa**	**6.61**	**208**	*i* P	**Pn**	**14 49 16.0**	**-1.4**
ACHE	**Chepes**	**6.78**	**176**	*i* P	**Pn**	**14 49 18.0**	**-1.5**
TCA	**Tanti**	**7.31**	**162**	*i* P	**Pn**	**14 49 25.0**	**-1.4**
LPAZ	**La Paz**	**8.09**	**354**	P	**Pn**	**14 49 39.1**	**+1.8**
	comp=Z,1.4nm,0.3s,baz=178,slow=8.7,SNR=22						
LPAZ				S	**Sn**	**14 51 07.5**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=340,slow=19,SNR=5.1						
LPAZ	**La Paz**	**8.09**	**354**	*e*P	**Pn**	**14 49 39.3**	**+2.0**
MRA	**San Martin**	**8.12**	**171**	*i* P	**Pn**	**14 49 35.0**	**-2.1**
MRA				IAML		14 51 20.8	
	comp=Z,4.2nm,0.7s						
CPUP	**Villa Florida**	**9.12**	**104**	P	**Pn**	**14 49 49.2**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=286,slow=13,SNR=4.4						
SIV	**San Ignacio**	**10.12**	**36**	P	**Pn**	**14 50 01.7**	**-1.7**
	comp=Z,1.5nm,0.3s,baz=214,slow=13,SNR=27						
SIV				S	**Sn**	**14 51 47.9**	**-8.1**
	comp=Z,0.3nm,0.3s,baz=226,slow=14,SNR=3.2						
AQDB	**Aquidauana**	**11.31**	**72**	*e*P	**Pn**	**14 50 20.0**	**+1.3**
CPSB	**Cacapava Do Su**	**13.60**	**119**	*e*P	**P**	**14 50 50.8**	**-0.1**
SALV	**Santo Antonio**	**13.68**	**54**	*e*P	**P**	**14 50 51.2**	**-0.7**
PTGB	**Pitanga**	**13.77**	**95**	*e*P	**P**	**14 50 53.9**	**+1.0**
PCMB	**Pacaembu**	**14.92**	**83**	*e*P	**P**	**14 51 06.8**	**+1.2**
PDRB	**Porto dos Gac**	**16.11**	**40**	*e*P	**Pn**	**14 51 18.9**	**0.0**
ITRB	**Iturama**	**16.27**	**77**	*e*P	**Pn**	**14 51 22.0**	**+1.1**
PLCA	**Paso Flores**	**16.56**	**189**	P	**Pn**	**14 51 25.4**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=4.1,slow=14,SNR=1.6						
PLCA	**Paso Flores**	**16.56**	**189**	*e*P	**P**	**14 51 21.2**	**-2.4**
ARAG	**Araguaiana, MT**	**16.81**	**62**	*e*P	**Pn**	**14 51 28.4**	**+1.0**
CLDB	**Colider**	**17.25**	**41**	*e*P	**P**	**14 51 31.4**	**+0.1**
CZSB	**Cruzeiro do Su**	**17.37**	**341**	*e*P	**P**	**14 51 29.8**	**-2.9**
BB19B	**Bebedouro**	**17.52**	**83**	*e*P	**P**	**14 51 34.3**	**-0.1**
PET01	**Itanhaem-SP**	**18.14**	**94**	*e*P	**Pn**	**14 51 41.8**	**-1.3**
RCLB	**Rio Claro- Sao**	**18.14**	**88**	*e*P	**P**	**14 51 40.8**	**-0.3**
VAO	**Valinhos**	**18.57**	**90**	*e*P	**P**	**14 51 45.6**	**-0.2**
IPMB	**Ipameri, GO**	**18.79**	**74**	*e*P	**P**	**14 51 48.1**	**0.0**
SNDB	**Serra Nova Dou**	**19.47**	**54**	*e*P	**P**	**14 51 55.1**	**-0.3**
PARB	**Paraibuna**	**19.75**	**91**	*e*P	**P**	**14 51 59.3**	**+0.8**
BDFB	**Brasilia**	**19.98**	**68**	P	**P**	**14 52 00.6**	**-0.5**
	comp=Z,0.6nm,0.3s,baz=268,slow=9.1,SNR=5.3						
NPGB	**Novo Progresso**	**20.62**	**35**	*e*P	**P**	**14 52 06.3**	**-1.6**
PEXB	**Peixe**	**21.66**	**59**	*e*P	**P**	**14 52 17.2**	**-1.6**
VAS01	**Vassouras-RJ**	**21.90**	**89**	*e*P	**P**	**14 52 21.2**	**0.0**
ITTB	**Itaituba**	**22.74**	**31**	*e*P	**P**	**14 52 28.1**	**-1.0**
MC01	**Montes Claros**	**23.04**	**75**	*e*P	**P**	**14 52 30.6**	**-1.4**
JANB	**Januaria**	**23.41**	**71**	*e*P	**P**	**14 52 34.4**	**-0.9**
SDBA	**SAO DESIDERIO**	**24.22**	**65**	*e*P	**P**	**14 52 41.5**	**-1.2**
SMTB	**Santa Maria do**	**24.25**	**54**	*e*P	**P**	**14 52 42.0**	**-0.8**
PTGA	**Pitinga**	**24.52**	**18**	P	**P**	**14 52 46.6**	**+1.3**
	comp=Z,1.2nm,0.3s,baz=184,slow=16,SNR=3.0						
PRPB	**Parauapebas**	**24.61**	**45**	*e*P	**P**	**14 52 45.3**	**-0.9**
GUA01	**Guaratinga, BA**	**26.76**	**78**	*e*P	**P**	**14 53 05.2**	**-0.3**
GDU01	**Guandu, BA**	**28.11**	**73**	*e*P	**P**	**14 53 16.7**	**-0.8**
TXAR	**Lajitas Array**	**63.88**	**325**	P	**P**	**14 57 58.7**	**+2.7**
	comp=Z,0.2nm,0.6s,baz=147,slow=7.1,SNR=2.4						
DBIC	**Dimbokro**	**68.08**	**71**	P	**P**	**14 58 22.8**	**-0.2**
	comp=Z,1.4nm,0.5s,baz=241,slow=4.6,SNR=1.5						
TORD	**Torodi Ar. Bea**	**76.86**	**69**	P	**P**	**14 59 14.1**	**-0.8**
	comp=Z,0.7nm,0.4s,baz=261,slow=5.8,SNR=16						
PDAR	**Pinedale Array**	**77.38**	**329**	P	**P**	**14 59 19.8**	**+2.3**
	comp=Z,0.2nm,0.5s,baz=134,slow=7.8,SNR=3.1						
YKA	**Yellowknife Ar**	**94.42**	**340**	P	**P**	**15 00 43.1**	**+2.0**
	comp=Z,0.4nm,0.5s,baz=127,slow=5.1,SNR=4.1						
ASAR	**Alice Springs**	**128.05**	**205**	PKP	**PKiKP**	**15 06 28.5**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=154,slow=2.0,SNR=3.7						
WRA	**Warramunga Arr**	**131.22**	**207**	PKP	**PKiKP**	**15 06 35.1**	**+0.5**
	comp=Z,0.4nm,0.4s,baz=158,slow=1.7,SNR=11						
KURBB	**Kurchatov Arra**	**142.78**	**36**	PKP	**PKPdf**	**15 06 55.6**	**+1.7**
	comp=Z,0.5nm,0.7s,baz=290,slow=2.8,SNR=2.8						
ZALV	**Zalesovo Beam**	**143.80**	**28**	PKP	**PKPdf**	**15 06 56.1**	**+0.4**
	comp=Z,0.8nm,0.4s,baz=286,slow=2.9,SNR=2.2						
MKAR	**Makanchi Array**	**146.92**	**40**	PKPbc	**PKPab**	**15 07 05.0**	**-0.3**
	comp=Z,1.3nm,0.5s,baz=329,slow=2.6,SNR=13						

IDC 28 15:16:08.1±1.9**, 2°.53N**×**125°.00E, h0**^{km}**, mb3.4**/4**, mb1 3.6**/4**, mb1mx3.4**/50**, mbtmp3.4**/4**, Error ellipse: s-maj=191.9km s-min=25.6km az=63.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.14**	**158**	P	P	15 21 25.9	-0.1
	0.5nm,0.5s,baz=336,slow=11,SNR=9.9						
ASAR	**Alice Springs**	**27.45**	**162**	P	P	15 21 57.9	+1.9
	0.1nm,0.4s,baz=344,slow=9.9,SNR=1.3						
STKA	**Stephens Creek**	**37.67**	**157**	P	P	15 23 24.2	-1.0
	0.7nm,0.5s,baz=346,slow=9.0,SNR=3.1						
MKAR	**Makanchi Array**	**57.57**	**326**	P	P	15 25 59.1	-0.6
	0.3nm,0.4s,baz=133,slow=5.9,SNR=4.7						

*IDC **28** 15:25:49.4±1.2, 33°.24S×178°.61W, h0^{km}, mb4.3/3, mb1 4.5/5, mb1mx4.0/25, mbtmp4.3/5, ML4.0/2, MS3.5/2, Ms1 3.5/2, ms1mx2.9/30, Error ellipse: s-maj=37.4km s-min=28.0km az=59.0*

*WEL **28** 15:25:51.5±0.8, 33°S±7°×17°8W±1°6, h33^{km}, M4.2/14, mB4.8/10, ML4.8/18, MLv4.5/14, Mw(mB)4.1/10, Error ellipse: s-maj=0.0km s-min=0.0km az=112.5*

*NEIC **28** 15:25:57.2±0.7, 33°.48S±0°.04×178°.9W±0°.2, h35^{km}±10^{km}, mb4.2/10, Error ellipse: s-maj=23.9km s-min=4.0km az=102.0*

ISC 28 15:25:54.7±0.8**, 33°.37S**±0°.06×**178°.6W**±0°.1**, h41**^{km}**, n56,** σ1^{s}.**79**/77**, mb4.3**/8**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**4.13**	**8**	S	**Sn**	**15 27 37.1**	**-5.1**
MXZ	**Matakaoa Point**	**4.91**	**211**	P	**Pn**	**15 27 05.5**	**-0.5**
MXZ				S	**Sn**	**15 27 60.0**	**-1.5**
MXZ	**Matakaoa Point**	**4.91**	**211**	Pn	**Pn**	**15 27 05.1**	**-0.8**
WMGZ	**Waiomatatini S**	**5.08**	**208**	P	**Pn**	**15 27 06.3**	**-2.0**
WMGZ				S	**Sn**	**15 28 07.4**	**+1.6**
PKGZ	**Pakihiroa**	**5.28**	**210**	P	**Pn**	**15 27 08.6**	**-2.5**
PKGZ				S	**Sn**	**15 28 11.1**	**+0.3**
HAZ	**Te Kaha**	**5.30**	**213**	P	**Pn**	**15 27 10.7**	**-0.6**
HAZ				S	**Sn**	**15 28 12.7**	**+1.6**
PUZ	**Puketiti**	**5.37**	**208**	P	**Pn**	**15 27 09.9**	**-2.3**
PUZ				S	**Sn**	**15 28 10.8**	**-2.0**
RUGZ	**Raukumara Rang**	**5.52**	**213**	P	**Pn**	**15 27 12.7**	**-1.8**
RUGZ				S	**Sn**	**15 28 16.1**	**-0.6**
TWGZ	**Tauwhareparae**	**5.57**	**209**	P	**Pn**	**15 27 15.3**	**+0.3**
TWGZ				S	**Sn**	**15 28 18.3**	**+0.6**
CNGZ	**Carnagh Statio**	**5.74**	**206**	P	**Pn**	**15 27 15.2**	**-2.2**
KUZ	**Kuaotunu**	**5.78**	**233**	P	**Pn**	**15 27 19.0**	**+1.1**
TKGZ	**Te Karaka**	**5.84**	**209**	P	**Pn**	**15 27 16.5**	**-2.3**
TKGZ				S	**Sn**	**15 28 23.4**	**-1.1**
MWZ	**Matawai**	**5.89**	**212**	P	**Pn**	**15 27 17.0**	**-2.5**
MWZ				S	**Sn**	**15 28 24.0**	**-1.7**
OPRZ	**Ohinepanea**	**5.99**	**220**	P	**Pn**	**15 27 21.2**	**+0.4**
OPRZ				S	**Sn**	**15 28 28.2**	**+0.2**
URZ	**Urewera**	**6.02**	**215**	Pn	**Pn**	**15 27 19.9**	**-1.3**
	8.1nm,0.3s,baz=121,slow=24,SNR=40						
URZ				Sn	**Sn**	**15 28 26.5**	**-2.3**
	6.2nm,0.3s,baz=119,slow=23,SNR=3.6						
URZ	**Urewera**	**6.02**	**215**	P	**Pn**	**15 27 19.7**	**-1.4**
URZ				S	**Sn**	**15 28 29.7**	**+0.9**
URZ	**Urewera**	**6.02**	**215**		**Pn**	**15 27 19.6**	**-1.6**
RAGZ	**Rawiri**	**6.08**	**211**	P	**Pn**	**15 27 21.1**	**-0.9**
RAGZ				S	**Sn**	**15 28 27.6**	**-2.7**
RIGZ	**Rimuhau**	**6.11**	**208**	P	**Pn**	**15 27 19.4**	**-3.1**
RIGZ				S	**Sn**	**15 28 29.8**	**-1.3**
PRGZ	**Paritu Road**	**6.25**	**206**	P	**Pn**	**15 27 20.5**	**-3.9**
PRGZ				S	**Sn**	**15 28 30.7**	**-3.8**
SNGZ	**Shannon Statio**	**6.35**	**210**	P	**Pn**	**15 27 23.6**	**-2.1**
SNGZ				S	**Sn**	**15 28 34.9**	**-2.0**
MUGZ	**Murupara**	**6.36**	**215**	P	**Pn**	**15 27 24.0**	**-1.8**
MUGZ				S	**Sn**	**15 28 35.5**	**-1.6**
RTZ	**Ruatahuna**	**6.37**	**213**	P	**Pn**	**15 27 24.2**	**-1.9**
RRRZ	**Republican Roa**	**6.38**	**218**	P	**Pn**	**15 27 22.8**	**-3.3**
KNZ	**Kokohu**	**6.42**	**207**	P	**Pn**	**15 27 24.6**	**-2.0**
KNZ				S	**Sn**	**15 28 37.3**	**-1.2**
MHGZ	**Mahia Peninsul**	**6.45**	**205**	P	**Pn**	**15 27 25.9**	**-1.1**
TOZ	**Tahuroa Road**	**6.52**	**226**	P	**Pn**	**15 27 29.6**	**+1.7**
RAHZ	**Arahi**	**6.57**	**211**	P	**Pn**	**15 27 28.2**	**-0.5**
RAHZ				S	**Sn**	**15 28 41.3**	**-1.0**
MTHZ	**Maungataniwha**	**6.62**	**213**	P	**Pn**	**15 27 27.8**	**-1.7**
MTHZ				S	**Sn**	**15 28 41.3**	**-2.4**
MRHZ	**Matea Rd**	**6.81**	**215**	P	**Pn**	**15 27 30.4**	**-1.6**
NMHZ	**Naumai**	**6.84**	**212**	P	**Pn**	**15 27 30.9**	**-1.6**
ARHZ	**Aropaoanui**	**6.90**	**210**	P	**Pn**	**15 27 31.4**	**-1.8**
NIUE	**Niue**	**16.18**	**31**	Pn	**P**	**15 29 44.6**	**+2.7**
MARNC	**Mare, Loyalty**	**16.77**	**312**	Pn	**P**	**15 29 47.3**	**-1.0**
DZM	**Mont Dzumac**	**17.39**	**307**	P	**Pn**	**15 29 50.9**	**-3.4**
	0.2nm,0.3s,baz=103,slow=16,SNR=2.0						
EIDS	**Eidsvold**	**27.57**	**279**	P	**P**	**15 31 39.1**	**+1.2**
EIDS				IAmb	IAmb	15 31 54.2	
	comp=Z,3.1nm,0.9s						
STKA	**Stephens Creek**	**33.46**	**261**	P	**P**	**15 32 30.8**	**+0.9**
CTAO	**Charters Tower**	**33.93**	**284**	P	**P**	**15 32 35.4**	**+1.3**
CTAO				IAmb	IAmb	15 32 36.6	
	comp=Z,3.8nm,0.7s						
AS31	**Alice Springs**	**42.57**	**270**	P	**P**	**15 33 47.2**	**+0.5**
AS31				IAmb	IAmb	15 33 48.2	
	comp=Z,1.7nm,0.7s						
ASAR	**Alice Springs**	**42.57**	**270**	P	**P**	**15 33 47.1**	**+0.4**
	comp=Z,4.7nm,0.7s,baz=111,slow=7.3,SNR=85						
ASAR				PcP	**PcP**	**15 35 39.0**	**+0.3**
	comp=Z,1.0nm,0.8s,baz=120,slow=4.0,SNR=6.1						
ASAR	**Alice Springs**	**42.57**	**270**	P	**P**	**15 33 46.8**	**0.0**
WR0	**Warramunga Arr**	**43.65**	**276**	P	**P**	**15 33 55.1**	**-0.4**
WR0				IAmb	IAmb	15 33 57.0	
	comp=Z,5.6nm,1.1s						
WB2	**Warramunga Arr**	**43.82**	**276**	P	**P**	**15 33 56.8**	**0.0**
WB2				IAmb	IAmb	15 33 58.2	
	comp=Z,5.4nm,0.7s						
WRA	**Warramunga Arr**	**43.83**	**276**	P	**P**	**15 33 57.0**	**+0.1**
	comp=Z,6.3nm,0.8s,baz=116,slow=7.5,SNR=48						
WRA				PcP	**PcP**	**15 35 43.1**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=122,slow=2.8,SNR=2.8						
WRA				LR	LR	15 50 49.9	
	comp=Z,40nm,18.9s,baz=125,slow=34						
WRA	**Warramunga Arr**	**43.83**	**276**	P	**P**	**15 33 57.2**	**+0.3**
WB0	**Warramunga Arr**	**43.86**	**276**	P	**P**	**15 33 57.3**	**0.0**
FITZ	**Fitzroy Crossi**	**51.95**	**272**	LR	LR	15 56 34.3	
	comp=Z,49nm,18.3s,baz=90,slow=36						
QSPA	**South Pole Qui**	**56.75**	**180**	P	**P**	**15 35 36.2**	**+2.0**
	comp=Z,1.8nm,0.9s,baz=49,slow=1.4,SNR=7.4						
QSPA	**South Pole Qui**	**56.75**	**180**	P	**P**	**15 35 36.7**	**+2.5**
QSPA				IAmb	IAmb	15 35 47.5	
	comp=Z,3.2nm,0.9s						
VNA3	**Neumayer Olymp**	**75.39**	**176**	P	**P**	**15 37 34.3**	**+0.8**
VNA2	**Neumayer--Watz**	**75.81**	**177**	P	**P**	**15 37 36.8**	**+0.9**
	baz=178,slow=4.5						
KURBB	**Kurchatov Arra**	**122.76**	**312**	PKP	**PKiKP**	**15 44 45.5**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=101,slow=2.0,SNR=5.1						
FINES	**FINESS Array B**	**147.74**	**338**	PKPbc	**PKPab**	**15 45 35.1**	**-1.4**
	comp=Z,2.5nm,0.8s,baz=68,slow=5.1,SNR=6.2						
MMAI	**Mount Meron Ar**	**151.65**	**279**	PKPbc	**PKiKP**	**15 45 46.1**	**+0.9**
	comp=Z,1.1nm,0.6s,baz=99,slow=5.2,SNR=3.8						
AKASG	**Malin Array Be**	**153.29**	**319**	PKPbc	**PKiKP**	**15 45 48.8**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=78,slow=2.3,SNR=4.0						
TORD	**Torodi Ar. Bea**	**159.87**	**181**	PKPab	**PKPab**	**15 46 29.3**	**+0.5**
	comp=Z,0.8nm,0.8s,baz=208,slow=3.3,SNR=3.7						

*IDC **28** 15:32:42.7±1.1, 28°.31N×52°.63E, h0^{km}, mb3.8/14, mb1 3.9/18, mb1mx3.7/54, mbtmp3.8/18, ML3.4/4, MS3.5/7, Ms1 3.5/7, ms1mx3.0/52, Error ellipse: s-maj=23.6km s-min=17.6km az=178.0*

*TEH **28** 15:32:44.5, 28°.41N×52°.80E, h11^{km}, ML3.9*

*DSN **28** 15:32:47.5±1.5, 28°.10N×52°.59E, h15^{km}, ML3.8/9, Error ellipse: s-maj=23.5km s-min=8.2km az=11.0*

*THR **28** 15:32:47.0±0.6, 28°.58N×52°.85E, h14^{km}±8^{km}, ML3.6*

*OMAN **28** 15:32:49.0±0.1, 28°.22N×52°.90E, h10^{km}, mb5.2/6, ml3.9/8, ms2.6/1, Error ellipse: s-maj=3.0km s-min=1.5km az=230.0*

ISC 28 15:32:45.4±0.5**, 28°.37N**±0°.05×**52°.66E**±0°.04**, h16**^{km}**, n126,** σ1^{s}.**47**/140**, mb3.8**/14**, MS3.4**/6**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHRM	**Jahrom**	**0.82**	**80**	*e*Pg	**Pb**	**15 32 58.0**	**-3.5**
JHRM				*e*		15 33 16.1	
	comp=Z,16µm,0.5s						
SHI	**Shiraz**	**1.28**	**354**	*e*		15 33 31.5	
	comp=Z,19µm,0.6s						
SHI				*e*Pg	**Pn**	**15 33 07.7**	**-1.1**
AHBU	**AHRAM**	**1.29**	**293**	*e*Pg	**Pg**	**15 33 12.6**	**+2.2**
KAZ1	**Kazerun**	**1.54**	**325**	*e*Pg	**Pb**	**15 33 13.8**	**+0.2**
KAZ1				*e*		15 33 42.7	
	comp=Z,18µm,0.4s						
LAR1	**LAR**	**1.67**	**114**	*e*Pg	**Pb**	**15 33 15.1**	**-0.8**
KLNJ	**Kolanjah**	**2.79**	**341**	*e*Pn	**Pn**	**15 33 30.8**	**+1.0**
BNDS	**Bandar-Abbas**	**3.26**	**106**	*e*Pn	**Pn**	**15 33 38.6**	**+2.6**
BNDS				*e*Sg	**Sb**	**15 34 25.6**	**+3.1**
BNDS				IAML		15 34 46.8	
	comp=E,179nm,0.6s						
BNDS				IAML		15 34 55.0	
	comp=N,304nm,0.9s						
BNDS	**Bandar-Abbas**	**3.26**	**106**	*e*Pn	**Pn**	**15 33 38.6**	**+2.6**
GENO	**Geno**	**3.26**	**106**	*e*Pn	**Pn**	**15 33 36.8**	**+0.7**
GENO				*e*		15 34 52.6	
	comp=Z,3µm,0.7s						
IRAM	**Ramesheh**	**3.44**	**356**	*e*Pn	**Pn**	**15 33 39.1**	**+0.5**
IMEH	**Mehriz**	**3.46**	**29**	*e*Pn	**Pn**	**15 33 39.6**	**+0.7**
ISAD	**Sadrabad**	**3.65**	**14**	*e*Pn	**Pn**	**15 33 42.9**	**+1.4**
ISAD				*e*		15 34 46.8	
	comp=Z,970nm,0.7s						
IBRJ	**Brojen**	**3.73**	**341**	*e*Pn	**Pn**	**15 33 44.2**	**+1.5**
NGRK	**Negar Kerman**	**3.79**	**69**	*e*Pn	**Pn**	**15 33 43.4**	**-0.2**
NGRK				*e*		15 34 48.9	
	comp=Z,2µm,1.2s						
SHME	**Shamm**	**3.87**	**126**	P	**Pn**	**15 33 45.4**	**+1.1**
SHME	**Shamm**	**3.87**	**126**	P	**Pn**	**15 33 46.5**	**+2.2**
KHGB	**Koh Gabri**	**3.89**	**58**	*e*Pn	**Pn**	**15 33 45.0**	**+0.2**
KHGB				*e*		15 34 50.0	
	comp=Z,2µm,0.8s						
KRBR	**Kerman**	**3.94**	**65**	*e*Pn	**Pn**	**15 33 46.4**	**+0.9**
KRBR				IAML		15 34 56.7	
	comp=N,93nm,0.6s						
KRBR				IAML		15 35 03.4	
	comp=E,87nm,0.7s						
KRBR	**Kerman**	**3.94**	**65**	*e*Pn	**Pn**	**15 33 46.4**	**+0.9**
TVBK	**TV Kerman**	**3.94**	**65**	*e*Pn	**Pn**	**15 33 44.7**	**-0.9**
TVBK				*e*		15 34 58.8	
	comp=Z,3µm,0.6s						
BANOM	**Banah**	**4.06**	**126**	P	**Pn**	**15 33 47.9**	**+1.0**
BANOM				S	**Sn**	**15 34 37.0**	**+2.8**
BANOM	**Banah**	**4.06**	**126**	*e*Pn	**Pn**	**15 33 47.4**	**+0.5**
BANOM	**Banah**	**4.06**	**126**	P	**Pn**	**15 33 49.0**	**+2.0**
	SNR=10						
ICHK	**Chekchek**	**4.15**	**21**	*e*Pn	**Pn**	**15 33 48.4**	**0.0**
NAZ	**Nazwa, Dubai**	**4.31**	**141**	*e*Pn	**Pn**	**15 33 51.6**	**+1.3**
MASF	**Masafi**	**4.32**	**133**	P	**Pn**	**15 33 51.3**	**+0.7**
MASF				S	**Sn**	**15 34 41.6**	**+0.9**
MSFE	**Esma-Masafi**	**4.33**	**133**	P	**Pn**	**15 33 50.4**	**-0.3**
MSFE	**Esma-Masafi**	**4.33**	**133**	*e*Pn	**Pn**	**15 33 51.3**	**+0.6**
YZKH	**Yazd**	**4.35**	**22**	*e*Pn	**Pn**	**15 33 51.4**	**+0.4**
YZKH				IAML		15 35 22.1	
	comp=E,22nm,0.6s						
YZKH	**Yazd**	**4.35**	**22**	*e*Pn	**Pn**	**15 33 51.4**	**+0.4**
NASN	**Na'in**	**4.42**	**2**	*e*Pn	**Pn**	**15 33 53.3**	**+1.1**
NASN	**Na'in**	**4.42**	**2**	*e*Pn	**Pn**	**15 33 53.3**	**+1.1**
ASUD	**Al Ashush, Dub**	**4.43**	**147**	*e*Pn	**Pn**	**15 33 54.6**	**+2.6**
ASUD	**Al Ashush, Dub**	**4.43**	**147**	P	**Pn**	**15 33 55.0**	**+3.0**
	SNR=11						
ASUD				S	**Sn**	**15 34 44.2**	**+1.0**
KBD	**Kabd**	**4.43**	**282**	*e*P	**Pb**	**15 33 58.4**	**-4.5**
FAQ	**Al Faqa, Dubai**	**4.46**	**143**	P	**Pn**	**15 33 53.6**	**+1.2**
FAQ	**Al Faqa, Dubai**	**4.46**	**143**	*e*Pn	**Pn**	**15 33 53.2**	**+0.7**
MDH	**Madha**	**4.46**	**132**	P	**Pn**	**15 33 51.7**	**-0.8**
MDH	**Madha**	**4.46**	**132**	*e*Pn	**Pn**	**15 33 52.0**	**-0.5**
MDH	**Madha**	**4.46**	**132**	P	**Pn**	**15 33 53.0**	**+0.5**
KHNJ	**Kahnooj**	**4.48**	**94**	*e*Pn	**Pn**	**15 33 52.6**	**-0.1**
IZEF	**Zefreh**	**4.52**	**357**	*e*Pn	**Pn**	**15 33 53.4**	**-0.2**
CHMN	**Cheshme madani**	**4.53**	**70**	*e*Pn	**Pn**	**15 33 54.2**	**+0.5**
IPIR	**Pirpir**	**4.56**	**341**	*e*Pn	**Pn**	**15 33 56.3**	**+2.1**
UOSS	**Minazif**	**4.66**	**136**	P	**Pn**	**15 33 55.5**	**+0.3**
UOSS	**Minazif**	**4.66**	**136**	*e*Pn	**Pn**	**15 33 55.3**	**+0.1**
UOSS	**Minazif**	**4.66**	**136**	P	**Pn**	**15 33 55.6**	**+0.4**
UOSS				S	**Sn**	**15 34 49.3**	**+0.4**
HATD	**Hatta, Dubai**	**4.70**	**138**	P	**Pn**	**15 33 56.1**	**+0.3**
HATD	**Hatta, Dubai**	**4.70**	**138**	*e*Pn	**Pn**	**15 33 57.5**	**+1.7**
HATD	**Hatta, Dubai**	**4.70**	**138**	P	**Pn**	**15 33 59.7**	**+3.9**
HATD				S	**Sn**	**15 34 49.7**	**-0.3**
MZWR	**Madinat Zayed**	**4.72**	**166**	*e*Pn	**Pn**	**15 33 57.6**	**+1.7**
ASHO	**Ashiyiah**	**4.77**	**139**	P	**Pn**	**15 33 56.3**	**-0.4**
ASHO	**Ashiyiah**	**4.77**	**139**	*e*Pn	**Pn**	**15 33 58.7**	**+2.0**
ASHO	**Ashiyiah**	**4.77**	**139**	P	**Pn**	**15 33 58.9**	**+2.2**
	SNR=7.6						
ASHO				S	**Sn**	**15 34 52.5**	**+0.8**
MIB	**Mutribah**	**4.87**	**288**	*e*P	**Pn**	**15 34 00.2**	**+2.2**
ANAR	**Anarak**	**4.90**	**11**	*e*Pn	**Pn**	**15 33 59.2**	**+0.6**
IKLH	**Kolahrood**	**5.02**	**350**	*e*Pn	**Pn**	**15 34 01.4**	**+1.0**
KBAM	**BAM**	**5.15**	**80**	*e*Pn	**Pn**	**15 34 02.3**	**+0.3**
KBAM				*e*		15 35 06.9	
	comp=Z,706nm,0.9s						
QAMS	**Qamsar**	**5.46**	**349**	*e*Pn	**Pn**	**15 34 07.5**	**+1.1**
SOHO	**SOHO**	**5.47**	**140**	P	**Pn**	**15 34 05.0**	**-1.2**
SOHO				S	**Sn**	**15 35 07.2**	**-1.7**
SOHO	**SOHO**	**5.47**	**140**	*e*Pn	**Pn**	**15 34 07.0**	**+0.7**
SOHO	**SOHO**	**5.47**	**140**	P	**Pn**	**15 34 06.8**	**+0.5**
SOHO				S	**Sn**	**15 35 09.9**	**+1.0**
KRSH	**Karshahi**	**5.60**	**356**	*e*Pn	**Pn**	**15 34 08.5**	**+0.2**
TPRV	**Parvadeh(Tabas**	**5.80**	**36**	*e*Pn	**Pn**	**15 34 11.1**	**+0.2**
ISFB	**Sefidab**	**5.98**	**357**	*e*Pn	**Pn**	**15 34 13.2**	**-0.2**
UMZA	**Um Al Zommool**	**6.07**	**158**	*e*Pn	**Pn**	**15 34 15.3**	**+0.8**
UMZA	**Um Al Zommool**	**6.07**	**158**	P	**Pn**	**15 34 15.5**	**+1.0**
UMZA				P	**Pn**	**15 34 17.6**	**+3.1**
UMZA				S	**Sn**	**15 35 23.2**	**-0.4**
ARQ	**Araqi**	**6.10**	**144**	P	**Pn**	**15 34 16.0**	**+1.0**
ARQ				S	**Sn**	**15 35 25.4**	**+0.8**
BMDN	**Meydan**	**6.23**	**329**	*e*Pn	**Pn**	**15 34 20.0**	**+3.1**
HOQ	**Hoqain**	**6.34**	**138**	P	**Pn**	**15 34 18.9**	**+0.6**
HOQ				S	**Sn**	**15 35 30.2**	**-0.3**
TNSJ	**Nastanj**	**6.53**	**30**	*e*Pn	**Pn**	**15 34 21.8**	**+0.9**
ASAO	**Ashtian**	**6.56**	**341**	*e*Pn	**Pn**	**15 34 23.2**	**+1.8**
ASAO	**Ashtian**	**6.56**	**341**	*e*Pn	**Pn**	**15 34 23.3**	**+1.8**
IDOB	**Doab**	**6.63**	**326**	*e*Pn	**Pn**	**15 34 23.7**	**+1.3**
IVRN	**Varamin**	**6.66**	**353**	*e*Pn	**Pn**	**15 34 22.6**	**-0.1**
HSAM	**Samen**	**6.78**	**330**	*e*Pn	**Pn**	**15 34 24.8**	**+0.2**
ITEG	**Tejag**	**6.92**	**48**	*e*Pn	**Pn**	**15 34 27.4**	**+0.9**
BSY	**Bisya**	**6.94**	**143**	P	**Pn**	**15 34 28.2**	**+1.7**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BSY				S	Sn	15 35 42.8	-2.4
NHDN	Nehbandan	7.09	63	ePn	Pn	15 34 27.8	-1.0
IANJ	Anjilo	7.16	8	ePn	Pn	15 34 30.5	+0.8
SMDO	Samad	7.18	136	P	Pn	15 34 30.6	+0.7
SMDO				S	Sn	15 35 50.2	-1.1
ZHSF	Zahedan	7.22	78	ePn	Pn	15 34 31.4	+0.9
ZHSF	Zahedan	7.22	78	ePn	Pn	15 34 31.4	+0.9
IFIR	Firoozkooh	7.25	1	ePn	Pn	15 34 33.1	+2.0
DAMV	Damavand	7.27	356	ePn	Pn	15 34 31.8	+0.6
DAMV	Damavand	7.27	356	ePn	Pn	15 34 31.8	+0.6
IRAZ	Razeghan	7.39	342	ePn	Pn	15 34 33.3	+0.4
WSAR	Wadi Sarin	7.42	132	Pn	Pn	15 34 33.7	+0.6
	comp=Z,1.6nm,0.3s,baz=300,slow=6.9,SNR=21						
WSAR				Sn	Sn	15 35 53.7	-3.3
	comp=Z,1.4nm,0.3s,baz=285,slow=14,SNR=3.0						
WSAR				LR	LR	15 38 07.6	
	comp=Z,134nm,21.6s,baz=344,slow=44						
WSAR	Wadi Sarin	7.42	132	P	Pn	15 34 34.1	+1.0
WSAR				S	Sn	15 35 54.6	-2.4
AFRZ	Afriz	7.43	46	ePn	Pn	15 34 33.6	+0.2
ISHM	Shahmirzad	7.44	4	ePn	Pn	15 34 33.1	-0.5
QABG	Abgarm-Qazvin	7.77	341	ePn	Pn	15 34 39.2	+1.1
IGHG	Ghaleghazi	7.90	320	ePn	Pn	15 34 42.1	+2.2
RAYN	Ar Rayn	8.04	235	P	Pn	15 34 41.7	0.0
WBK	Wadi Bani Khal	8.09	134	P	Pn	15 34 41.2	-1.1
WBK				S	Sn	15 36 11.0	-2.4
SNGE	Sanandaj	8.09	327	ePn	Pn	15 34 42.6	+0.2
SNGE	Sanandaj	8.09	327	ePn	Pn	15 34 42.6	+0.2
QALM	Alamut, Qazvin	8.22	349	ePn	Pn	15 34 45.0	+0.7
IDHR	Dehrash	8.27	321	ePn	Pn	15 34 47.6	+2.6
SHRT	Shahrakht	8.40	49	ePn	Pn	15 34 49.4	+2.8
SHRT	Shahrakht	8.40	49	ePn	Pn	15 34 49.4	+2.8
QSDN	Sirdan	8.63	341	ePn	Pn	15 34 51.7	+1.8
SRVN	Saravan	8.68	94	ePn	Pn	15 34 49.6	-0.9
SBZV	Sabzevar	9.03	26	ePn	Pn	15 34 55.6	+0.2
GEYT	Alibeck	10.58	24	Pn	Pn	15 35 18.2	+1.8
	comp=Z,0.3nm,0.3s,baz=184,slow=20,SNR=2.0						
KBZ	Khabaz	17.22	335	P	P	15 36 47.1	+0.4
	comp=Z,0.1nm,0.3s,baz=186,slow=9.2,SNR=2.3						
BRTR	Keskin Array B	19.37	311	P	Pn	15 37 11.6	-0.2
	comp=Z,0.1nm,0.3s,baz=130,slow=13,SNR=4.3						
AKTO	Aktyubinsk	22.41	9	P	P	15 37 43.6	+0.3
	comp=Z,4.8nm,0.9s,baz=192,slow=8.5,SNR=10						
AKTO				LR	LR	15 48 17.9	
	comp=Z,115nm,20.7s,baz=157,slow=42						
AAK	Ala-Archa	22.69	45	P	P	15 37 47.9	+1.4
	comp=Z,3.6nm,0.9s,baz=221,slow=11,SNR=7.6						
AAK				LR	LR	15 48 09.3	
	comp=Z,106nm,19.5s,baz=263,slow=41						
BVAR	Borovoye Array	27.91	23	P	P	15 38 36.6	+1.9
	comp=Z,0.6nm,0.6s,baz=223,slow=14,SNR=4.3						
ARU	Arti	28.36	7	LR	LR	15 51 57.7	
	comp=Z,70nm,19.0s,baz=184,slow=41						
AKASG	Malin Array Be	28.48	328	P	P	15 38 39.1	-0.7
	comp=Z,0.1nm,0.3s,baz=129,slow=8.5,SNR=2.2						
MKAR	Makanchi Array	29.58	43	P	P	15 38 48.8	-0.8
	comp=Z,0.4nm,0.5s,baz=235,slow=7.7,SNR=7.7						
KURBB	Kurchatov Arra	29.61	34	P	P	15 38 49.7	0.0
	comp=Z,0.6nm,0.7s,baz=234,slow=8.5,SNR=4.0						
NACGM	Naroch	32.46	332	i P	P	15 39 27.2	+12
KMBO	Kilima Mbogo	32.84	209	LR	LR	15 54 07.3	
	comp=Z,109nm,19.1s,baz=53,slow=39						
ZALV	Zalesovo Beam	34.70	34	P	P	15 39 34.5	+0.2
	comp=Z,1.0nm,0.3s,baz=251,slow=9.0,SNR=5.6						
ZALV				LR	LR	15 55 30.4	
	comp=Z,109nm,18.6s,baz=238,slow=39						
KEST	Kesra	37.20	293	P	P	15 39 55.3	-0.8
	comp=Z,2.0nm,0.5s,baz=43,slow=4.7,SNR=4.1						
FINES	FINESS Array B	37.52	339	P	P	15 39 57.6	-0.7
	comp=Z,4.0nm,0.9s,baz=141,slow=9.8,SNR=6.5						
NB2	NORSAR Subarra	42.74	332	P	P	15 40 40.0	-1.8
	comp=Z,1.9nm,0.8s,baz=123,slow=8.6						
NOA	NORSAR Array B	42.74	332	P	P	15 40 40.5	-1.3
	comp=Z,0.8nm,0.6s,baz=128,slow=9.0,SNR=4.0						
ARCES	ARCESS Array B	44.09	347	P	P	15 40 52.5	0.0
	comp=Z,0.7nm,0.7s,baz=140,slow=7.7,SNR=3.6						
SONM	Songino Array	45.54	50	P	P	15 41 04.1	-0.4
	comp=Z,2.2nm,1.2s,baz=243,slow=9.8,SNR=5.4						
TORD	Torodi Ar. Bea	49.64	263	P	P	15 41 37.7	+1.0
	comp=Z,1.0nm,0.8s,baz=53,slow=7.6,SNR=5.5						
BOSA	Boshof	62.44	207	LR	LR	16 10 14.7	
	comp=Z,60nm,18.7s,baz=354,slow=36						
ASAR	Alice Springs	93.77	115	P	P	15 46 00.3	-1.7
	comp=Z,0.2nm,0.6s,baz=296,slow=3.9,SNR=4.4						

IDC ***28*** *15:41:16.8±2.1, 17°.94S×178°.33W, h640^{km}±22^{km}, mb3.1/9, mb1 3.2/10, mb1mx3.0/34, mbtmp4.1/10, Error ellipse: s-maj=50.5km s-min=18.7km az=151.0*

ISC 28 15:41:17.7±1.3**, 17°.9S**±0°.4×**178°.4W**±0°.2**, h650^{km}, n10, σ0^{s}.99**/11**, mb3.8**/9**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.39	272	P	P	15 42 41.5	-1.8
	1.8nm,0.3s,baz=265,slow=22,SNR=6.3						
PMG	Port Moresby	34.47	280	P	P	15 47 16.3	+1.7
	6.4nm,0.8s,baz=107,slow=6.6,SNR=5.0						
STKA	Stephens Creek	38.65	241	P	P	15 47 48.6	+0.2
	1.7nm,0.5s,baz=70,slow=8.1,SNR=5.4						
WRA	Warramunga Arr	44.65	260	P	P	15 48 35.2	-0.2
	1.5nm,0.4s,baz=95,slow=6.9,SNR=60						
ASAR	Alice Springs	44.81	254	P	P	15 48 36.8	+0.1
	6.7nm,0.9s,baz=90,slow=8.2,SNR=102						
ASAR				PcP	PcP	15 50 04.0	+0.1
	0.3nm,0.5s,baz=100,slow=3.9,SNR=4.6						
SIJI	Sorong	52.25	283	P	P	15 49 31.2	-0.3
	3.4nm,0.5s,baz=112,slow=19,SNR=4.6						
FITZ	Fitzroy Crossi	53.04	261	P	P	15 49 37.3	+0.3
	1.6nm,0.8s,baz=72,slow=6.8,SNR=2.1						
YBH	Yreka Blue Hor	78.51	39	P	P	15 52 14.4	+0.6
	0.6nm,0.6s,baz=196,slow=6.1,SNR=2.4						
ILAR	Eielson Array	85.88	13	P	P	15 52 49.2	-1.0
	0.3nm,0.4s,baz=214,slow=5.6,SNR=5.7						
TXAR	Lajitas Array	85.98	58	P	P	15 52 52.2	+0.6
	0.3nm,0.7s,baz=211,slow=5.1,SNR=2.7						

IDC 28 15:41:19.4±8.1**, 5°.96S**×**146°.26E, h143^{km}**±79^{km}**, mb2.2**/1**, mb1 2.6**/3**, mb1mx2.5**/29**, mbtmp3.0**/3**, Error ellipse: s-maj=93.5km s-min=60.8km az=129.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.54	165	P	Pn	15 42 13.5	0.0
	1.8nm,0.3s,baz=9.1,slow=4.4,SNR=13						
PMG				S	Sn	15 42 55.8	+0.5
	0.9nm,0.3s,baz=297,slow=4.0,SNR=3.5						
WRA	Warramunga Arr	18.09	219	P	P	15 45 21.1	+0.7
	0.1nm,0.3s,baz=41,slow=10,SNR=6.0						
ASAR	Alice Springs	21.24	213	P	P	15 45 53.9	-0.5
	0.1nm,0.4s,baz=28,slow=13,SNR=1.5						
TORD	Torodi Ar. Bea	144.37	284	PKP	PKPbc	16 00 39.1	+0.6
	0.2nm,0.4s,baz=60,slow=3.4,SNR=1.7						

CNRM ***28*** *16:09:11.1, 35°.61N×4°.79W, h110^{km}, ml2.0*
IGIL ***28*** *16:09:12.6, 35°.74N×4°.77W, h10^{km}, ML2.7*
MDD ***28*** *16:09:14.0±1.0, 35°.79N×4°.66W, h97^{km}±7^{km}, mb2.4/20, Error ellipse: s-maj=9.1km s-min=4.8km az=173.0, PRXIMO*
INMG ***28*** *16:09:13.7±1.6, 35°.78N×4°.70W, h93^{km}±7^{km}, ML2.6, Error ellipse: s-maj=5.1km s-min=3.3km az=165.0*
SFS ***28*** *16:09:13.0, 35°.70N×4°.60W, h97^{km}, ML2.3, ALBORAN W.*

ISC 28 16:09:10.5±1.2**, 35°.72N**±0°.03×**4°.67W**±0°.03**, h114^{km}**±6^{km}**, n65, σ1^{s}.62**/120**, 6C-2D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMIR	Smir Dam	0.58	267	P	Pn	16 09 30.1	+1.8
SMIR				S	Sn	16 09 41.7	+0.1
CEU	Ceuta	0.60	288	P	Pn	16 09 29.4	+1.1
CEU				S	Sn	16 09 39.9	-2.0
ECEU	Ceuta	0.60	288	P	Pn	16 09 30.8	+2.4
	3.7nm,0.1s,SNR=7.9						
ECEU				S	Sn	16 09 40.9	-1.1
	12nm,0.2s,SNR=7.9						
PALE	Palemas	0.78	130	P	Pn	16 09 30.1	+0.1
PALE				S	Sn	16 09 44.2	-0.4
CHEFC	Chefchaouen	0.82	222	P	Pn	16 09 31.3	+1.0
CHEFC				S	Sn	16 09 43.0	-2.3
EMIJ	Mijas	0.85	355	⇑P	Pn	16 09 30.6	+0.1
	13nm,0.1s,SNR=18						
EMIJ				S	Sn	16 09 43.4	-2.4
	17nm,0.1s,SNR=5.7						
EJIF	Jimena Fronter	0.98	319	⇑P	Pn	16 09 34.1	+2.4
	SNR=18						
EJIF				S	Sn	16 09 47.0	-0.8
	SNR=7.9						
EMAL	Malaga-Limoner	1.06	11	P	Pn	16 09 33.3	+0.7
EMAL				S	Sn	16 09 47.4	-2.0
EMAL	Malaga-Limoner	1.06	11	P	Pn	16 09 33.3	+0.7
EMAL				S	Sn	16 09 47.4	-2.0
LIJA	Lijar	1.33	334	P	Pn	16 09 37.8	+2.1
LIJA				S	Sn	16 09 52.0	-2.7
LIJA	Lijar	1.33	334	P	Pn	16 09 37.8	+2.1
LIJA				S	Sn	16 09 52.0	-2.7
EALB	Alboran	1.35	80	S	Sn	16 09 53.7	-1.2
	13nm,0.2s,SNR=7.9						
ELGU	Los Guajares,	1.43	36	⇑P	Pn	16 09 37.0	+0.2
	10nm,0.1s,SNR=18						
ELGU				S	Sn	16 09 55.4	-1.3
	19nm,0.2s,SNR=7.9						
GOG	Mont Gurugu	1.46	109	P	Pn	16 09 37.4	+0.4
GOG				S	Sn	16 09 59.5	+2.3
EGOR	Sierra Gorda,	1.46	18	P	Pn	16 09 39.1	+1.8
	2.3nm,0.2s,SNR=7.9						
EGOR				S	Sn	16 09 59.0	+1.4
	4.0nm,0.3s,SNR=7.9						
ESPR	Espera	1.50	321	S	Sn	16 09 58.9	+1.0
	19nm,0.3s,SNR=7.9						
EBER	Berja	1.86	50	⇑P	Pn	16 09 43.0	+0.9
	1.3nm,0.1s,SNR=18						
EBER				S	Sn	16 10 04.6	-1.6
	13nm,0.3s,SNR=6.2						
ARNO	Arenosillo	2.16	310	S	Sn	16 10 13.4	+0.9
JBK	JBK	2.21	128	P	Pn	16 09 47.0	+0.4
JBK				S	Sn	16 10 12.8	-1.3
ECAB	El Cabril	2.43	346	P	Pn	16 09 50.3	+1.1
	1.9nm,0.1s,SNR=52						
ECAB				S	Sn	16 10 17.4	-1.4
	17nm,0.1s,SNR=7.9						
EADA	Adamuz	2.45	2	⇑P	Pn	16 09 51.1	+1.7
	5.8nm,0.0s,SNR=18						
EADA				S	Sn	16 10 18.3	-0.9
	18nm,0.1s,SNR=15						
EQES	Quesada	2.45	31	P	Pn	16 09 51.2	+1.7
	1.3nm,0.1s,SNR=7.9						
EQES				S	Sn	16 10 19.2	-0.1
	1.9nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	2.60	322	P	Pn	16 09 52.6	+1.3
	2.5nm,0.1s,SNR=26						
EMIN				S	Sn	16 10 21.2	-1.5
	12nm,0.1s,SNR=20						
ZHG	ZHG	2.79	216	P	Pn	16 09 54.3	+0.4
ZHG				S	Sn	16 10 27.5	+0.3
MD31	MD31	2.84	181	P	Pn	16 09 55.3	+0.6
MD31				S	Sn	16 10 26.9	-1.7
MDT	Midelt	2.90	179	P	Pn	16 09 56.6	+1.2
MDT				S	Sn	16 10 27.1	-2.7
EGRO	El Granado	2.90	310	⇓P	Pn	16 09 56.4	+1.1
	4.2nm,0.1s,SNR=18						
EGRO				S	Sn	16 10 28.3	-1.4
	24nm,0.1s,SNR=49						
SESP	Santiago Espad	2.94	35	P	Pn	16 09 57.6	+1.6
	0.8nm,0.1s,SNR=7.9						
SESP				S	Sn	16 10 31.2	+0.1
	0.7nm,0.1s,SNR=7.9						
PVAQ	Vaqueiros	2.97	305	eP	Pn	16 09 57.2	+1.0
PVAQ				eS	Sn	16 10 30.2	-1.2
PVAQ				A	A	16 10 31.7	
	19nm,0.1s						
PVAQ	Vaqueiros	2.97	305	P	Pn	16 09 57.1	+0.9
PVAQ				S	Sn	16 10 30.3	-1.2
PBDV	Barranco-do-Ve	3.04	301	⇓iP	Pn	16 09 58.2	+1.1
PBDV				eS	Sn	16 10 31.7	-1.3
PBDV				A	A	16 10 33.5	
	12nm,0.1s						
PBAR	Barrancos	3.10	323	eP	Pn	16 09 59.4	+1.5
PBAR				eS	Sn	16 10 33.4	-1.1
PCVE	Castro Verde	3.31	306	eP	Pn	16 10 01.8	+1.1
PCVE				eS	Sn	16 10 38.1	-1.4
PCVE				A	A	16 10 40.6	
	9.9nm,0.3s						
PBEJ	Beja	3.44	313	eS	Sn	16 10 41.5	-1.2
PBEJ				A	A	16 10 42.4	
	16nm,0.1s						
MESJ	Messejana	3.55	308	eP	Pn	16 10 05.0	+1.2
MESJ				eS	Sn	16 10 43.4	-1.7
MESJ				IAML		16 10 45.9	
	comp=N,18nm,0.2s						
MESJ	Messejana	3.55	308	⇑eP	Pn	16 10 05.0	+1.2
MESJ				eS	Sn	16 10 43.6	-1.5
MESJ				A	A	16 10 45.5	
	comp=N,8.4nm,0.2s						
MESJ	Messejana	3.55	308	P	Pn	16 10 05.0	+1.2
MESJ				S	Sn	16 10 43.4	-1.7
EBAD	Badajoz	3.56	329	P	Pn	16 10 05.5	+1.4
	comp=N,0.9nm,0.1s,SNR=11						
EBAD				S	Sn	16 10 44.3	-1.1
	comp=N,10nm,0.2s,SNR=15						
MORF	Marmelete	3.58	298	eP	Pn	16 10 05.3	+1.0
MORF				eS	Sn	16 10 43.9	-2.0
MORF				IAML		16 10 45.6	
	comp=N,29nm,0.3s						
MORF	Marmelete	3.58	298	eP	Pn	16 10 05.4	+1.1
MORF				eS	Sn	16 10 44.3	-1.5
MORF				A	A	16 10 45.4	
	comp=N,19nm,0.2s						
MORF	Marmelete	3.58	298	P	Pn	16 10 05.3	+1.0
MORF				S	Sn	16 10 43.9	-2.0
PFVI	Vila Bisbo	3.63	294	eP	Pn	16 10 06.2	+1.2
PFVI				eS	Sn	16 10 45.5	-1.7
PFVI				A	A	16 10 47.8	
	comp=N,5.5nm,0.3s						
PFVI	Vila Bisbo	3.63	294	P	Pn	16 10 05.8	+0.8
	comp=N,1.6nm,0.1s,SNR=7.9						
PFVI				S	Sn	16 10 45.5	-1.7
	comp=N,9.2nm,0.2s,SNR=7.9						
PFVI	Vila Bisbo	3.63	294	P	Pn	16 10 06.0	+1.0
PFVI				S	Sn	16 10 46.8	-0.4
PTEO	Sao Teotonio	3.73	300	eP	Pn	16 10 07.9	+1.6
PTEO				eS	Sn	16 10 48.5	-1.0
PTEO				A	A	16 10 49.9	
	comp=N,10nm,0.4s						
PAB	San Pablo	3.83	4	P	Pn	16 10 08.9	+1.2
	comp=N,0.5nm,0.1s,SNR=7.9						
PAB				S	Sn	16 10 49.6	-2.4
	comp=N,1.8nm,0.2s,SNR=7.9						
ETOB	Tobarra	3.84	40	P	Pn	16 10 09.6	+1.7
	comp=N,3.2nm,0.2s,SNR=13						
ETOB				S	Sn	16 10 51.8	-0.5
	comp=N,0.7nm,0.2s						
EVO	Evora	3.88	317	eP	Pn	16 10 09.3	+1.1
EVO				eS	Sn	16 10 51.7	-1.2
EVO				A	A	16 10 52.5	
	comp=N,14nm,0.2s						
PNCL	Nicolau / Gran	3.91	309	eP	Pn	16 10 09.7	+1.1
PNCL				eS	Sn	16 10 51.6	-2.1
PNCL				A	A	16 10 53.3	
	comp=N,8.1nm,0.4s						
PESTR	Estremoz	3.91	324	eP	Pn	16 10 10.3	+1.6
PESTR				eS	Sn	16 10 52.4	-1.4
PESTR				A	A	16 10 55.1	
	comp=N,5.3nm,0.1s						
PESTR	Estremoz	3.91	324	P	Pn	16 10 09.7	+1.0
PESTR				S	Sn	16 10 54.8	+1.0
ESDC	Sonseca Array	3.99	8	P	Pn	16 10 11.2	+1.4
	comp=N,0.1nm,0.1s,baz=192,slow=13,SNR=3.9						
ESDC				S	Sn	16 10 53.3	-2.5
	comp=N,1.6nm,0.3s,baz=188,slow=23,SNR=5.3						
PMRV	Marv??o	4.29	331	eP	Pn	16 10 15.3	+1.5
PMRV				eS	Sn	16 11 01.4	-1.5
PMRV				A	A	16 11 03.8	
	comp=N,4.2nm,0.3s						
PMTG	Montargil	4.38	321	eP	Pn	16 10 16.9	+1.9
PMTG				eS	Sn	16 11 03.1	-2.0
PMTG				A	A	16 11 06.9	
	comp=N,4.2nm,0.3s						
EPLA	Plasencia	4.48	346	P	Pn	16 10 18.1	+1.7
	comp=N,0.9nm,0.1s,SNR=6.3						
EPLA				S	Sn	16 11 05.2	-2.4
	comp=N,2.9nm,0.1s						
PCBR	Castelo Branco	4.68	332	eP	Pn	16 10 21.1	+2.1
PCBR				eS	Sn	16 11 10.9	-1.3
PCBR				A	A	16 11 11.1	
	comp=N,3.6nm,0.3s						
GUD	Guadarrama	4.94	5	P	Pn	16 10 25.6	+3.0
	comp=N,0.2nm,0.1s,SNR=5.8						
GUD				S	Sn	16 11 16.1	-2.6
	comp=N,1.1nm,0.3s,SNR=7.9						
PSBE	So Bento	5.01	320	eS	Sn	16 11 18.8	-1.4
PSBE				A	A	16 11 24.3	
	comp=N,11nm,0.6s						
MTE	Manteigas	5.20	335	eS	Sn	16 11 22.7	-2.1
MTE				A	A	16 11 27.6	
	comp=N,5.9nm,0.4s						
ETOR	Torete	5.50	21	P	Pn	16 10 31.5	+1.4
	comp=N,7.9nm,0.1s,SNR=14						
ETOR				S	Sn	16 11 28.1	-4.0
	comp=N,5.9nm,0.2s,SNR=6.0						
EMOS	Mosqueruela	5.70	34	P	Pn	16 10 34.8	+1.8
	comp=N,0.0nm,0.1s,SNR=7.9						
MVO	Moncorvo	5.75	342	P	Pn	16 10 35.1	+1.7
	comp=N,0.2nm,0.1s,SNR=7.9						
POLO	Lamas de Olo	6.16	338	eP	Pn	16 10 41.6	+2.6
POLO				eS	Sn	16 11 46.2	-1.9
ECAL	Calabor	6.42	346	S	Sn	16 11 51.8	-2.6
	comp=N,1.6nm,0.4s,SNR=7.9						
ELOB	Lobios	6.69	338	S	Sn	16 11 58.2	-2.8
	comp=N,0.5nm,0.1s,SNR=5.9						

IDC 28 16:09:26.8±1.9**, 3°.93N**×**127°.20E, h0^{km}, mb3.7**/5**, mb1 3.9**/5**, mb1mx3.5**/33**, mbtmp3.7**/5**, Error ellipse: s-maj=102.7km s-min=27.1km az=68.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	21.94	184	P	P	16 14 22.4	+0.2
	3.2nm,1.1s,baz=8.1,slow=7.1,SNR=2.0						
WRA	Warramunga Arr	24.74	164	P	P	16 14 49.7	-0.5
	5.1nm,0.9s,baz=344,slow=10,SNR=14						
ASAR	Alice Springs	28.20	167	P	P	16 15 21.5	+0.1
	0.3nm,0.7s,baz=341,slow=11,SNR=8.6						
STKA	Stephens Creek	38.16	160	P	P	16 16 48.4	+0.3
	1.1nm,0.7s,baz=324,slow=13,SNR=1.7						
MKAR	Makanchi Array	57.66	325	P	P	16 19 18.9	-0.1
	0.3nm,0.6s,baz=125,slow=7.9,SNR=2.8						

IDC 28 16:16:54.2±1.8**, 0°.97N**×**124°.82E, h0^{km}, mb3.3**/3**, mb1 3.5**/4**, mb1mx3.3**/33**, mbtmp3.4**/4**, ML3.1**/1**, Error ellipse: s-maj=122.7km s-min=25.1km az=66.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	18.96	178	P	P	16 21 16.0	-1.2
	0.1nm,0.3s,baz=354,slow=9.2,SNR=1.0						
WRA	Warramunga Arr	22.78	156	P	P	16 21 59.7	+1.2
	0.7nm,0.4s,baz=336,slow=10,SNR=22						
ASAR	Alice Springs	26.03	161	P	P	16 22 28.4	-1.0
	0.1nm,0.6s,baz=334,slow=8.2,SNR=1.7						
MKAR	Makanchi Array	58.77	327	P	P	16 26 54.4	+0.2
	0.3nm,0.4s,baz=124,slow=9.2,SNR=4.9						

DJA ***28*** *16:18:34.4±3.2, 3°N±18°×14°6E±1°8, h35^{km}±23^{km}, M5.5/7, mB6.9/2, mb5.2/7, MLv5.5/1, Mw(mB)6.8/2, MwMwp4.6/1, Mwp5.0/1*
IDC ***28*** *16:19:27.9±1.4, 3°.48S×145°.92E, h0^{km}, mb3.9/7, mb1 4.2/9, mb1mx4.0/28, mbtmp4.0/9, ML4.1/1, MS3.5/8, Ms1 3.5/8, ms1mx3.2/30, Error ellipse: s-maj=35.8km s-min=19.4km az=96.0*
NEIC ***28*** *16:19:30.3±1.3, 3°.28S±0°.06×146°.5E±0°.2, h57^{km}±19^{km}, mb4.4/9, Error ellipse: s-maj=32.3km s-min=5.9km az=101.0*

ISC 28 16:19:27.4±0.9**, 3°.34S**±0°.06×**146°.4E**±0°.1**, h20^{km}, n27, σ1^{s}.59**/22**, mb3.8**/7**, MS3.6**/7**, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	Manus Island	1.59	36		Pn	16 19 54.4	-0.1
JAY	Jayapura	5.78	278	LR	LR	16 22 59.5	
	comp=Z,178nm,18.1s,baz=28,slow=40						
PMG	Port Moresby	6.07	173	Pn	Pn	16 20 57.5	+1.4
	2.7nm,0.3s,baz=1.7,slow=6.2,SNR=17						
PMG				Sn	Sn	16 22 06.3	+1.3
	baz=342,slow=20,SNR=1.0						
PMG	Port Moresby	6.07	173	P	Pn	16 20 57.8	+1.7
PMG	Port Moresby	6.07	173	P	Pn	16 20 57.8	+1.7
COEN	Coen	11.03	197		Pn	16 22 06.1	+2.0
MTN	Manton Dam	17.83	237	P	Pn	16 23 32.5	-2.0
MTN				IAmb	IAmb	16 24 00.2	
	comp=Z,32nm,1.4s						
WB0	Warramunga Arr	20.11	215	P	P	16 24 00.2	0.0
WB0				IAmb	IAmb	16 24 02.2	
	comp=Z,24nm,1.1s						
WR0	Warramunga Arr	20.18	214	P	P	16 24 00.7	-0.2
WR0				IAmb	IAmb	16 24 03.6	
	comp=Z,29nm,1.3s						
WRAB	Tennant Creek	20.27	215	P	P	16 24 01.9	0.0
WRAB				IAmb	IAmb	16 24 03.5	
	comp=Z,17nm,0.8s						
WB2	Warramunga Arr	20.28	215	P	P	16 24 01.9	-0.1
WB2				IAmb	IAmb	16 24 03.6	
	comp=Z,17nm,0.8s						
WRA	Warramunga Arr	20.28	215	P	P	16 24 01.8	-0.3
	comp=Z,0.5nm,0.3s,baz=38,slow=12,SNR=80						
WRA				LR	LR	16 31 45.2	
	comp=Z,71nm,18.2s,baz=60,slow=37						
WRA	Warramunga Arr	20.28	215	P	P	16 24 00.5	-1.5
KNRA	Kununurra	21.27	234	P	P	16 24 11.1	-1.7
AS31	Alice Springs	23.55	210		P	16 24 36.4	-0.4
ASAR	Alice Springs	23.55	210	P	P	16 24 36.5	-0.3
	comp=Z,6.3nm,0.9s,baz=44,slow=7.6,SNR=83						
ASAR				LR	LR	16 34 24.6	
	comp=Z,24nm,19.5s,baz=36,slow=39						
BATI	Baumata	23.60	252	P	P	16 24 36.6	-0.7
	comp=Z,12nm,0.8s,baz=180,slow=6.2,SNR=4.6						
FITZ	Fitzroy Crossi	25.09	233	P	P	16 24 50.1	-0.9
	comp=Z,11nm,1.0s,baz=44,slow=8.7,SNR=16						
CAN	Canberra	31.91	176	P	P	16 25 47.7	-4.0
KSRS	Korea Array	44.08	339	LR	LR	16 43 07.1	
	comp=Z,70nm,19.4s,baz=112,slow=32						
CMAR	Chiang Mai Arr	51.53	297	P	P	16 28 33.1	+0.8
	comp=Z,0.8nm,1.0s,baz=116,slow=5.8,SNR=5.0						
SONM	Songino Array	61.82	331	P	P	16 29 47.4	+2.2
	comp=Z,0.4nm,0.8s,baz=134,slow=6.2,SNR=2.9						
SONM				LR	LR	16 56 00.0	
	comp=Z,43nm,19.8s,baz=87,slow=36						
MKAR	Makanchi Array	75.10	320	P	P	16 31 09.3	+1.1
	comp=Z,0.7nm,1.0s,baz=76,slow=11,SNR=3.8						
ZALV	Zalesovo Beam	76.47	328	LR	LR	17 03 46.3	
	comp=Z,23nm,21.3s,baz=32,slow=35						
ILAR	Eielson Array	83.28	23	P	P	16 31 59.5	+7.1
	comp=Z,0.7nm,1.0s,baz=243,slow=5.3,SNR=4.7						
ARU	Arti	91.58	326	LR	LR	17 13 52.3	
	comp=Z,59nm,20.7s,baz=282,slow=36						
KIRV	Kirov	96.50	328	LR	LR	17 16 58.5	
	comp=Z,70nm,18.6s,baz=70,slow=36						

IDC ***28*** *16:24:43.2±2.8, 30°.41S×71°.57W, h0^{km}, mb4.0/1, mb1 3.9/2, mb1mx3.6/15, mbtmp3.8/2, ML3.4/1, Error ellipse: s-maj=118.4km s-min=75.3km az=91.0*
GUC ***28*** *16:24:46.9±0.7, 29°.70S×71°.90W, h48^{km}±3^{km}, ML3.6*

ISC 28 16:24:44.9±1.8**, 29°.66S**±0°.04×**71°.96W**±0°.08**, h12^{km}**±11^{km}**, n23, σ1^{s}.17**/29**, 3C-4D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO05	La Serena	0.68	113	⇓iP	Pn	16 24 59.5	-0.8
CO05				i S	Sb	16 25 08.5	+0.6
CO05				IAML		16 25 14.0	
	comp=E,6μm,0.9s						
CO06	Fray Jorge	1.05	165	⇑iP	Pg	16 25 04.8	-0.3
CO06				i S	Sg	16 25 18.7	-0.1
CO06				IAML		16 25 19.9	
	comp=E,742nm,0.3s						
GO04	Tololo Observa	1.13	117	⇓iP	Pn	16 25 07.1	+0.4
GO04				i S	Sn	16 25 20.8	-1.5
LCO	Las Campanas	1.27	60	⇓iP	Pn	16 25 08.4	-0.3
LCO				i S	Sn	16 25 26.3	+0.4
AC04	Llanos de Chal	1.64	28	⇑iP	Pn	16 25 11.9	-1.7
AC04				IAML		16 25 32.7	
GO03	Copiap	2.56	37	eP	Pn	16 25 25.9	-0.2
GO03				IAML		16 26 21.0	
	comp=N,224nm,0.6s						
VA06	Catapilco	2.95	169	eP	Pn	16 25 31.2	-0.3

VA06				iS	Sn	16 26 05.2	-1.6
VA06				IAML		16 26 08.9	
	comp=N,314nm,0.3s						
VA03	San Esteban	3.32	159	eP	Pn	16 25 38.8	+2.0
VA03				iS	Sn	16 26 14.4	-1.8
VA03				IAML		16 26 36.4	
	comp=N,208nm,0.2s						
ROCH	El Roble	3.40	166	⇑iP	Pb	16 25 38.4	-6.8
ROCH				eP	Pn	16 25 38.3	+0.4
ROCH				iS	Sn	16 26 16.8	-1.5
ROCH				iS	Sb	16 26 17.9	-8.6
ROCH				IAML		16 26 44.8	
	comp=E,171nm,0.4s						
ROCH				IAML		16 26 45.2	
	comp=E,160nm,0.3s						
PEL	Peldehue	3.64	163	eP	Pn	16 25 42.2	+1.1
PEL				iS	Sn	16 26 22.5	-1.5
MT02	Curacav	3.66	169	eP	Pn	16 25 41.8	+0.6
AC02	Maricunga	3.76	42	⇓iP	Pn	16 25 43.7	+0.6
FCH	Farellones	3.92	159	eP	Pn	16 25 46.5	+1.3
MT09	Talagante	4.19	169	eP	Pn	16 25 49.1	+0.4
MT01	Popeta	4.24	172	eP	Pn	16 25 49.0	-0.2
BO04	La Punta	4.47	165	eP	Pn	16 25 53.4	+1.0
BO04				iS	Sn	16 26 42.0	-2.4
H03N1	Juan Fernandez	7.03	236	Pn	Pn	16 26 24.2	-3.2
	baz=110,slow=18,SNR=57						
H03N1				T	T	16 34 00.5	
	baz=53						
H03N2	Juan Fernandez	7.04	236	Pn	Pn	16 26 24.6	-3.0
	baz=110,slow=18,SNR=23						
H03N2				T	T	16 33 57.5	
	baz=53,slow=74,SNR=57						
H03N3	Juan Fernandez	7.05	236	Pn	Pn	16 26 24.2	-3.4
	baz=110,slow=18,SNR=42						
H03N3				T	T	16 34 14.9	
	baz=53,slow=74,SNR=70						
LPAZ	La Paz	13.77	16	Pn	P	16 28 09.4	+0.3
	comp=E,0.1nm,0.3s,baz=201,slow=10,SNR=4.8						
TORD	Torodi Ar. Bea	82.68	70	P	P	16 37 08.6	-0.2
	comp=E,1.0nm,0.8s,baz=250,slow=4.4,SNR=6.1						
AAK	Ala-Archa	150.18	55	PKPbc	PKPbc	16 44 37.3	+1.5
	comp=E,1.1nm,0.6s,baz=233,slow=4.3,SNR=4.1						
ZALV	Zalesovo Beam	150.45	28	PKPbc	PKPbc	16 44 36.6	+0.7
	comp=E,2.2nm,0.7s,baz=288,slow=2.8,SNR=10						

*IDC **28** 16:43:53.6±0.8, 9°.44S×115°.09E, h0km, mb4.1/8, mb1 4.2/10, mb1mx3.8/40, mbtmp4.1/10, ML3.9/2, MS3.3/4, Ms1 3.3/4, ms1mx2.8/38, Error ellipse: s-maj=37.7km s-min=15.7km az=52.0*

*DJA **28** 16:44:00.3±0.4, 10°S±4°×11°5E±°, h42km±19km, M4.5/17, mb4.5/10, mB4.7/1, MLv4.6/17, Mw(mB)3.9/1*

*NEIC **28** 16:44:01.9±2.0, 9°.4S±0°.1×115°.05E±0°.08, h67km±8km, mb4.2/15, Error ellipse: s-maj=15.7km s-min=10.0km az=203.0*

ISC 28 16:43:60.0±0.9**, 9°.66S**±0°.06×**115°.06E**±0°.04**, h51**km±9km**, n66, σ1s.67**/78**, mb4.1**/16**, South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IGBI	Denpasar	0.84	6	P	Pn	16 44 16.2	+0.6
IGBI				S	Sn	16 44 27.3	+0.3
DNP	Denpasar	0.99	9	P	Pn	16 44 18.6	+1.0
DNP				S	Sn	16 44 32.9	+2.4
JAGI	Jajag, Banyuwa	1.48	323	P	Pn	16 44 24.9	+0.6
JAGI				S	Sn	16 44 42.1	-0.5
JAGI	Jajag, Banyuwa	1.48	323		Pn	16 44 24.3	0.0
JAGI	Jajag, Banyuwa	1.48	323	P	Pn	16 44 25.2	+0.9
SRBI	Singaraja	1.57	6	P	Pn	16 44 27.4	+1.9
SRBI				S	Sn	16 44 46.1	+1.4
TWSI	Taliwang, Sumb	2.02	63	P	Pn	16 44 33.0	+1.4
TWSI				S	Sn	16 44 56.2	+0.5
ABJI	Asem Bagus	2.02	336	P	Pn	16 44 34.3	+2.6
ABJI				S	Sn	16 44 58.5	+2.7
GMJI	Gumukmas	2.11	311	P	Pn	16 44 33.9	+1.1
GMJI				S	Sn	16 44 57.6	-0.3
BLJI	Banyuglugur	2.39	323	P	Pn	16 44 39.1	+2.4
BLJI				S	Sn	16 45 06.9	+2.1
PLAI	Plampang	2.81	73	P	Pn	16 44 44.4	+2.0
PLAI				S	Sn	16 45 15.6	+0.5
PLAI	Plampang	2.81	73	P	Pn	16 44 44.5	+2.0
KMMI	Kalianget	2.81	337	P	Pn	16 44 44.5	+2.0
PCJI	Pacitan	4.10	290	P	Pn	16 45 02.1	+1.9
PCJI				S	Sn	16 45 47.5	+0.5
UGM	Wanagama	4.81	291	P	Pn	16 45 11.0	+1.1
UGM	Wanagama	4.81	291		Pn	16 45 11.6	+1.6
UGM	Wanagama	4.81	291	P	Pn	16 45 11.6	+1.6
BSSI	Bau Bau, Buton	6.41	57	P	Pn	16 45 33.2	+1.2
	0.2nm520nm33nm,0.9s						
KAPI	Kappang	6.55	46	Pn	Pn	16 45 34.5	+0.7
	3.4nm,0.3s,baz=250,slow=5.3,SNR=5.4						
KAPI				Sn	Sn	16 46 46.7	-0.6
	4.2nm,0.3s,baz=65,slow=19,SNR=15						
KAPI				LR	LR	16 48 31.1	
	comp=Z,97nm,18.4s,baz=268,slow=44						
KAPI	Kappang	6.55	46		Pn	16 45 35.8	+2.0
KAPI	Kappang	6.55	46	P	Pn	16 45 36.0	+2.1
BKSI	Bulukumba	6.62	50	P	Pn	16 45 36.1	+1.4
	0.2nm33nm,0.5s						
CMJI	Cimerak	6.80	285	P	Pn	16 45 38.2	+1.0
	0.2nm41nm,1.2s						
MMRI	Maumere	7.16	82		Pn	16 45 44.4	+2.2
BNSI	Bone	7.24	44	P	Pn	16 45 45.2	+2.0
	0.2nm17nm,0.6s						
CNJI	Cibinong	8.18	286	P	Pn	16 45 57.8	+1.6
	62nm,1.2s						
SOEI	Soe	9.08	91		Pn	16 46 10.4	+1.8
GIRL	Giralia	12.94	183	P	Pn	16 46 58.6	-2.6
MNAI	Manna	13.11	293	P	Pn	16 47 04.5	+0.8
	74nm,1.5s						
MNAI	Manna	13.11	293	P	Pn	16 47 03.1	-0.6
	95nm,1.5s						
FITZ	Fitzroy Crossi	13.26	130	Pn	Pn	16 47 03.1	-2.5
	0.5nm,0.3s,baz=327,slow=9.4,SNR=20						
FITZ				Sn	Sn	16 49 20.5	-11
	0.5nm,0.3s,baz=191,slow=22,SNR=7.5						
FITZ				LR	LR	16 51 52.4	
	comp=Z,71nm,21.6s,baz=294,slow=36						
KNRA	Kununurra	14.64	115	P	Pn	16 47 22.0	-2.3
MTN	Manton Dam	16.08	103	P	Pn	16 47 43.0	+0.2
MEEK	Meekatharra	17.22	169	P	Pn	16 47 56.0	-1.1
SIJI	Sorong	18.34	63	Pn	P	16 48 09.6	-0.8
	0.4nm,0.3s,baz=233,slow=22,SNR=1.9						
WRA	Warramunga Arr	21.23	121	P	P	16 48 41.8	-0.1
	1.6nm,0.5s,baz=293,slow=12,SNR=19						
WRA				S	S	16 52 31.8	-3.6
	0.8nm,0.8s,baz=278,slow=24,SNR=1.6						
WRA				PcP	PcP	16 52 47.0	+1.3
	0.2nm,0.6s,baz=322,slow=1.8,SNR=5.5						
WRA				LR	LR	16 57 20.8	
	comp=Z,60nm,19.1s,baz=165,slow=38						
WRA	Warramunga Arr	21.23	121	P	P	16 48 41.1	-0.8
WRAB	Tennant Creek	21.24	121	P	P	16 48 43.6	+1.6
WRAB				IAmb	IAmb	16 48 49.1	
	comp=Z,13nm,1.4s						
WB2	Warramunga Arr	21.25	121	P	P	16 48 43.1	+1.1
WB2				IAmb	IAmb	16 48 49.1	
	comp=Z,12nm,1.4s						
WR0	Warramunga Arr	21.41	121	P	P	16 48 44.7	+0.8
WR0				IAmb	IAmb	16 48 52.7	
	comp=Z,6.5nm,0.9s						
AS31	Alice Springs	22.76	130		P	16 48 59.4	+1.2
AS31				IAmb	IAmb	16 49 01.5	
	comp=Z,2.1nm,0.6s						
ASAR	Alice Springs	22.76	130	P	P	16 48 59.2	+1.0
	comp=Z,5.3nm,0.6s,baz=304,slow=8.7,SNR=95						
ASAR				PcP	PcP	16 52 49.8	+1.1
	comp=Z,0.5nm,0.6s,baz=339,slow=1.9,SNR=5.6						
ASAR				S	S	16 53 07.7	+4.0
	comp=Z,0.6nm,0.6s,baz=308,slow=23,SNR=6.0						
ASAR	Alice Springs	22.76	130	P	P	16 48 58.9	+0.7
FORT	Forrest	24.25	152	P	P	16 49 13.7	+1.4
FORT				IAmb	IAmb	16 49 34.3	
	comp=Z,25nm,1.0s						
CMAR	Chiang Mai Arr	32.15	330	P	P	16 50 22.2	-0.8
	comp=Z,0.6nm,0.3s,baz=160,slow=8.6,SNR=7.6						
STKA	Stephens Creek	33.06	136	P	P	16 50 32.7	+1.8
	comp=Z,4.6nm,0.9s,baz=305,slow=9.0,SNR=6.5						
STKA	Stephens Creek	33.06	136	P	P	16 50 32.9	+2.0
TOO	Toolangi	39.04	140	P	P	16 51 23.7	+1.7
TOO				IAmb	IAmb	16 51 26.1	
	comp=Z,10nm,1.2s						
ARMA	Armidale	39.82	127	P	P	16 51 29.9	+1.2
H08S2	Diego Garcia H	42.11	269	T	T	17 36 53.7	
	baz=96						
H08S3	Diego Garcia H	42.12	269	T	T	17 36 53.7	
	baz=96						
H08S1	Diego Carcia H	42.13	269	T	T	17 36 53.7	
	baz=96						
USA0B	Ussuriysk Arra	55.76	15	P	P	16 53 28.3	-3.4
SONM	Songino Array	57.75	353	P	P	16 53 45.4	-0.5
	comp=Z,0.9nm,0.6s,baz=172,slow=8.0,SNR=7.6						
SONM				PcP	PcP	16 54 38.2	0.0
	comp=Z,0.5nm,0.5s,baz=178,slow=6.7,SNR=2.9						
SONM	Songino Array	57.75	353	P	P	16 53 43.7	-2.2
SONM				IAmb	IAmb	16 53 46.6	
	comp=Z,3.0nm,1.4s						
MSVF	Nonsavu	61.49	105	LR	LR	17 21 45.2	
	comp=Z,93nm,18.1s,baz=176,slow=37						
MKAR	Makanchi Array	63.35	335	P	P	16 54 23.1	-0.8
	comp=Z,0.7nm,0.4s,baz=154,slow=7.0,SNR=14						
MKAR	Makanchi Array	63.35	335	P	P	16 54 21.2	-2.8
MAW	Mawson	67.32	199	P	P	16 54 50.6	+1.3
ZALV	Zalesovo Beam	68.34	341	P	P	16 54 54.4	-1.5
	comp=Z,1.6nm,0.6s,baz=150,slow=4.6,SNR=7.6						
ZALV	Zalesovo Beam	68.34	341	P	P	16 54 54.0	-1.9
ABKAR	Akbulak array	75.91	326	P	P	16 55 39.6	-1.5
ABKAR				IAmb	IAmb	16 55 57.4	
	comp=Z,2.9nm,1.1s						
QSPA	South Pole Qui	80.34	180	P	P	16 56 06.7	+0.9
QSPA				IAmb	IAmb	16 56 09.4	
	comp=Z,7.9nm,1.5s						
BOSA	Boshof	85.27	242	P	P	16 56 33.8	+1.7
	comp=Z,1.6nm,0.7s,baz=66,slow=0.4,SNR=4.3						
BOSA	Boshof	85.27	242	P	P	16 56 33.0	+1.0
BDFB	Brasilia	149.78	214	PKPbc	PKiKP	17 03 47.4	+0.9
	comp=Z,1.9nm,0.5s,baz=154,slow=2.6,SNR=3.2						

JMA 28 16:46:04.4±0.1**, 33°.01N**×**140°.41E, h50**km±4km**, M4.0, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	Mitsune	0.51	282	P	Pn	16 46 15.9	+0.2
JHJ2				eS	Sn	16 46 23.8	-0.1
JHCJ	Hachijojimakas	0.52	277	P	Pn	16 46 15.8	-0.1
JHCJ				S	Sn	16 46 23.9	-0.2
JAOM	Aogashimamukai	0.77	225	P	Pn	16 46 19.3	+0.2
JAOM				eS	Sn	16 46 29.8	0.0
JMKN	Mikurajimanish	1.11	322	P	Pn	16 46 23.9	+0.2
JMKN				S	Sn	16 46 37.6	-0.4
JKO	Kozu shima	1.58	318	P	Pn	16 46 31.3	+1.3
BSO1	Boso 1	1.71	16	P	Pn	16 46 31.0	-0.2
JTHY	Toshimahigashi	1.78	329	S	Sn	16 46 54.8	+0.7
BSO3	Boso 3	1.79	3	P	Pn	16 46 32.9	+0.3
JIM2	Oshima 3	1.89	335	P	Pn	16 46 34.9	+0.7
JIM2				S	Sn	16 46 56.2	-0.7
JIZS	Izushimoda	2.13	324	P	Pn	16 46 38.8	+1.3
JIZS				S	Sn	16 47 03.9	+1.2
KTJ3	Kamata3	2.22	330	P	Pn	16 46 39.9	+1.2
KTJ3				S	Sn	16 47 05.2	+0.3
JOD2	Odawara 2	2.50	334	P	Pn	16 46 43.5	+0.9
JOD2				S	Sn	16 47 11.9	0.0
MAT	Matsushiro	3.96	333	P	Pn	16 47 05.8	+3.1
MAT				S	Sn	16 47 50.2	+2.3

IDC 28 16:49:51.1±2.3**, 3°.60N**×**126°.76E, h0**km**, mb3.6**/4**, mb1 3.8**/4**, mb1mx3.4**/34**, mbtmp3.6**/4**, Error ellipse: s-maj=194.0km s-min=28.2km az=65.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	24.55	163	P	P	16 55 13.1	+0.3
	1.8nm,0.7s,baz=342,slow=10,SNR=10						
ASAR	Alice Springs	27.98	166	P	P	16 55 42.7	-1.0
	0.1nm,0.5s,baz=359,slow=6.3,SNR=1.8						
STKA	Stephens Creek	37.99	159	P	P	16 57 11.7	+0.7
	1.5nm,0.8s,baz=324,slow=9.4,SNR=3.2						
MKAR	Makanchi Array	57.68	325	P	P	16 59 43.2	-0.3
	0.6nm,0.7s,baz=123,slow=7.4,SNR=3.0						

*IDC **28** 16:58:27.1±1.4, 8°.06S×125°.32E, h0km, mb3.6/3, mb1 3.8/7, mb1mx3.4/42, mbtmp3.6/7, ML3.5/4, MS2.9/1, Ms1 2.9/1, ms1mx2.3/31, Error ellipse: s-maj=40.2km s-min=20.4km az=83.0*

ISC 28 16:58:28.5±1.1**, 8°.24S**±0°.08×**125°.32E**±0°.10**, h10**km**, n8, σ2s.12**/11**, mb3.8**/3**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	2.54	220	Pn	Pn	16 59 12.3	+2.4
	7.1nm,0.3s,baz=89,slow=0.9,SNR=15						
BATI				Sn	Sb	16 59 44.8	-0.9
	7.5nm,0.3s,baz=191,slow=23,SNR=8.2						
FITZ	Fitzroy Crossi	9.80	178	Pn	Pn	17 00 50.9	+1.3
	0.3nm,0.3s,baz=354,slow=9.9,SNR=13						
FITZ				Sn	Sn	17 02 36.1	-3.6
	0.2nm,0.3s,baz=170,slow=23,SNR=1.4						
WRA	Warramunga Arr	14.54	144	Pn	Pn	17 01 55.9	+1.3
	0.3nm,0.3s,baz=314,slow=15,SNR=14						
WRA				Sn	Sn	17 04 33.7	-2.3
	0.3nm,0.3s,baz=313,slow=24,SNR=2.2						
ASAR	Alice Springs	17.40	153	P	P	17 02 34.5	+1.5
	0.1nm,0.3s,baz=323,slow=11,SNR=21						
ASAR				S	Sn	17 05 45.6	+0.1
	0.1nm,0.3s,baz=315,slow=21,SNR=6.6						
LEM	Lembang	17.60	273	LR	LR	17 11 44.7	
	comp=Z,38nm,19.2s,baz=3.5,slow=45						
CMAR	Chiang Mai Arr	37.16	316	P	P	17 05 39.4	-0.5
	0.3nm,0.3s,baz=126,slow=6.1,SNR=1.2						
MKAR	Makanchi Array	66.82	329	P	P	17 09 20.3	-0.2
	0.8nm,0.8s,baz=129,slow=7.1,SNR=6.6						
ZALV	Zalesovo Beam	70.73	336	P	P	17 09 42.5	-2.1
	0.3nm,0.3s,baz=151,slow=3.3,SNR=2.0						

*TAP **28** 17:02:08.0, 24°.14N×121°.72E, h9km, ML3.6, C*

*JMA **28** 17:02:07.2±0.1, 24°.11N×121°.73E, h0km, M2.9*

*ASIES **28** 17:02:08.0, 24°.17N×121°.68E, h15km, MW3.3*

ISC 28 17:02:08.1±0.8**, 24°.13N**±0°.01×**121°.74E**±0°.02**, h10**km±4km**, n98, σ0s.69**/171**, 18C-3D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ETL	Fush Village	0.11	285	⇑iP	Pg	17 02 10.6	-0.2
	baz=283						
ETL				S	Sg	17 02 12.5	-0.3
	baz=283						
NACB	Ninganchiao	0.14	288	⇑iP	Pg	17 02 10.9	-0.3
	baz=288						
NACB				iS	Sg	17 02 13.0	-0.5
	baz=288						
TWD	Chiawan	0.14	249	⇑iP	Pg	17 02 11.0	-0.2
	baz=249						
TWD				iS	Sg	17 02 13.2	-0.3
	baz=249						
EHP	Heping Village	0.18	1	P	Pg	17 02 12.1	+0.1
	baz=9.0						
EHP				S	Sg	17 02 14.9	+0.3
	baz=9.0						
HWA	Hwalien	0.20	218	P	Pg	17 02 12.9	+0.7
	baz=223						
HWA				eS	Sb	17 02 16.6	+1.6
	baz=223						
ETLH	Xiulin Townshi	0.24	288	⇑iP	Pg	17 02 13.0	-0.2
	baz=288						
ETLH				S	Sg	17 02 16.3	-0.3
	baz=288						
ETM	Tongmen	0.28	234	P	Pg	17 02 13.6	-0.2
	baz=233						
ETM				eS	Sg	17 02 17.4	0.0
	baz=233						
TEYL	Yanliau Villag	0.29	206	eP	Pg	17 02 14.5	+0.5
	baz=216						
TEYL				eS	Sb	17 02 20.9	+0.6
	baz=216						
ENA	Nanau	0.30	1	⇑iP	Pg	17 02 14.1	0.0
	baz=5.0						
ENA				iS	Sg	17 02 18.3	+0.2
	baz=5.0						
EWUT	Wuta	0.32	7	⇑iP	Pg	17 02 14.5	0.0
	baz=9.0						
EWUT				S	Sg	17 02 18.8	+0.2
	baz=9.0						
ESL	Shilin	0.42	222	P	Pg	17 02 16.1	-0.3
	baz=227						
ESL				eS	Sb	17 02 23.5	-0.6
	baz=227						
WHF	Hehuan Shan	0.43	272	⇑iP	Pg	17 02 16.4	-0.3
	baz=271						
WHF				iS	Sg	17 02 22.0	-0.5
	baz=271						
NNSB	Datong	0.44	313	⇑iP	Pg	17 02 16.7	-0.1
	baz=313						
NNSB				S	Sg	17 02 22.4	-0.2
	baz=313						
NNS	Nan Shan	0.45	313	⇑iP	Pg	17 02 16.9	-0.1
	baz=314						
NNS				iS	Sg	17 02 23.0	-0.1
	baz=314						
FUSS	Fushou	0.47	285	⇑P	Pg	17 02 17.4	+0.1
	baz=285						
FUSS				eS	Sg	17 02 22.8	-0.6
	baz=285						
TWC	Suao	0.49	12	⇑iP	Pg	17 02 17.7	+0.1
	baz=14						
TWC				S	Sg	17 02 24.6	+0.5
	baz=14						
NDS	Dongshan	0.50	358	⇓iP	Pg	17 02 18.1	+0.2
	baz=358						
NDS				S	Sg	17 02 24.9	+0.4
	baz=358						
NDT	Datong Townshi	0.51	337	⇑iP	Pg	17 02 18.4	+0.3
	baz=337						
NDT				S	Sb	17 02 25.8	-1.0
	baz=337						
CHGB	Renai	0.52	262	⇑iP	Pg	17 02 18.3	0.0
	baz=254						
CHGB				S	Sg	17 02 24.9	-0.3
	baz=254						
TWT	Tachien	0.53	284	P	Pg	17 02 18.9	+0.4
	baz=283						
TWT				S	Sg	17 02 25.7	+0.3
	baz=283						
ENTT	Nioudou	0.53	343	⇑iP	Pg	17 02 18.7	+0.2
	baz=344						
ENTT				S	Sb	17 02 26.2	-1.1
	baz=344						
EGFH	Guangfu	0.54	212	P	Pg	17 02 18.8	+0.2
	baz=221						
EGFH				S	Sn	17 02 29.0	-2.0
	baz=221						
OWD	Renai	0.54	251	P	Pg	17 02 18.7	0.0
	baz=252						
OWD				S	Sg	17 02 26.1	+0.2
	baz=252						
TDCB	Techi	0.54	283	⇑iP	Pg	17 02 18.9	+0.1
	baz=283						
TDCB				S	Sg	17 02 25.8	-0.1
	baz=283						
TWE	Neicheng	0.59	354	P	Pg	17 02 19.9	+0.2
	baz=356						
TWE				S	Sb	17 02 28.0	-1.0
	baz=356						
YHNB	Yeheng	0.63	329	⇑iP	Pg	17 02 20.6	+0.2
	baz=329						
YHNB				S	Sg	17 02 28.7	0.0
	baz=329						
ILA	Ilan	0.63	1	P	Pb	17 02 20.8	-0.5
	baz=355						
ILA				S	Sb	17 02 29.8	-0.4
	baz=355						
NSK	Sanguang	0.64	328	⇑iP	Pg	17 02 20.7	+0.1
	baz=328						
NSK				iS	Sg	17 02 29.2	+0.1
	baz=328						
NWLT	Wulai	0.68	342	eP	Pg	17 02 21.3	0.0
	baz=349						
NWLT				eS	Sg	17 02 29.9	-0.3
	baz=349						
HGSD	Ruisui	0.70	204	P	Pb	17 02 22.4	0.0
	baz=192						
HGSD				S	Sn	17 02 35.5	+0.6
	baz=192						
NTC	Toucheng	0.73	7	eP	Pb	17 02 22.5	-0.4
	baz=6.0						
NTC				eS	Sg	17 02 31.7	+0.1
	baz=6.0						
EHY	Hungye	0.73	212	P	Pg	17 02 21.7	-0.5
	baz=222						
EHY				eS	Sb	17 02 33.3	+0.4
	baz=222						
WHP	Taichung City	0.74	282	eP	Pb	17 02 22.7	-0.4
	baz=282						
WHP				eS	Sg	17 02 32.0	0.0
	baz=282						
WCS	Beigang Elemen	0.76	265	eP	Pg	17 02 22.9	+0.1
	baz=257						
WCS				eS	Sg	17 02 32.0	-0.7
	baz=257						
SSLB	Suanglung	0.79	245	eP	Pg	17 02 23.2	-0.3
	baz=255						
SSLB				eS	Sg	17 02 32.9	-1.0
	baz=255						
SMLT	Sun Moon Lake	0.80	252	P	Pg	17 02 23.6	0.0
	baz=253						
SMLT				eS	Sg	17 02 33.8	-0.4
	baz=253						
LIOB	Emei	0.83	308	eP	Pb	17 02 24.8	0.0
	baz=308						
NSTT	Nanjuang	0.84	307	⇑iP	Pg	17 02 24.6	+0.3
	baz=307						
NSTT				S	Sg	17 02 35.1	-0.1
	baz=307						
TYC	Yuchr	0.84	255	eP	Pb	17 02 24.0	-0.7
	baz=256						
YULB	Yu-li	0.84	209	eP	Pb	17 02 24.0	-0.8
	baz=221						
YULB				eS	Sn	17 02 36.8	-1.6
	baz=221						
TIPB	Shuangxi	0.84	5	eP	Pb	17 02 24.4	-0.4
	baz=356						
TIPB				S	Sg	17 02 35.1	-0.3
	baz=356						
NHDH	Xindian Distri	0.85	347	eP	Pg	17 02 24.7	+0.2
	baz=346						
NHDH				eS	Sb	17 02 35.4	-1.1
	baz=346						
TWA	Mucha	0.86	351	⇓P	Pg	17 02 25.0	+0.3
	baz=350						
TWA				S	Sg	17 02 36.4	+0.6
	baz=350						
EYUL	Yuli	0.87	206	eP	Pn	17 02 26.4	0.0
	baz=224						
TWB1	Santiao Chiao	0.90	15	eP	Pn	17 02 26.5	-0.4
	baz=6.0						
TWB1				eS	Sg	17 02 37.9	+0.6
	baz=6.0						
TWQ1	Liyutan	0.91	284	P	Pn	17 02 27.5	+0.5
	baz=285						
TAP	Taipei	0.93	347	P	Pn	17 02 26.8	-0.4
	baz=347						
TAP				S	Sg	17 02 38.5	+0.3
	baz=347						
NSY	Sanyi	0.94	288	P	Pn	17 02 27.0	-0.4
	baz=288						
NWF	Wu-fen Shan	0.94	2	P	Pg	17 02 26.6	+0.4
	baz=353						
NWF				S	Sb	17 02 38.4	-0.7
	baz=353						
SBCB	Hsinchu	0.95	314	eP	Pn	17 02 27.4	-0.2
	baz=314						
NMLH	Miaoli	0.95	295	eP	Pn	17 02 27.6	0.0
	baz=295						
YUS	Yu-Shan	0.96	229	eP	Pb	17 02 26.9	-0.3
	baz=230						
YUS				eS	Sg	17 02 39.8	+0.5
	baz=230						
HSN	Hsinchu	0.97	314	eP	Pn	17 02 27.8	0.0
	baz=316						
TCU	Taichung	0.97	271	eP	Pn	17 02 28.0	+0.2
	baz=272						
TCU				eS	Sn	17 02 41.8	+0.2
	baz=272						
WJS	Zhushan	0.97	252	eP	Pn	17 02 27.6	-0.3
	baz=252						
WJS				eS	Sn	17 02 41.7	0.0
	baz=252						
NCU	National Centr	0.97	329	eP	Pn	17 02 28.1	+0.2
	baz=335						
NCU				eS	Sn	17 02 43.0	+1.2
	baz=335						
NCUH	Zhongli	0.97	329	eP	Pn	17 02 27.7	-0.1
	baz=328						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NCUH				eS	Sn	17 02 42.9	+1.1
	baz=328						
WNT	Mingjian	0.99	256	P	Pn	17 02 28.4	+0.2
	baz=251						
WNT				S	Sn	17 02 43.3	+1.0
	baz=251						
TWS1	Kuangyinshan	1.01	343	eP	Pn	17 02 28.2	-0.2
	baz=343						
TWS1				eS	Sn	17 02 42.1	-0.5
	baz=343						
FULB	Fuli	1.01	204	P	Pb	17 02 27.6	-0.2
	baz=222						
YM01	YM01	1.02	351	P	Pn	17 02 28.2	-0.4
	baz=336						
YM01				eS	Sg	17 02 41.5	+0.4
	baz=336						
WDJ	Dajia District	1.02	282	eP	Pn	17 02 29.1	+0.6
	baz=283						
WDJ				eS	Sn	17 02 44.5	+1.4
	baz=283						
ALS	Alishan	1.05	234	P	Pb	17 02 28.4	-0.3
	baz=236						
ALS				eS	Sn	17 02 44.0	-0.2
	baz=236						
NTST	Danshui	1.06	346	eP	Pg	17 02 30.0	+1.5
	baz=353						
NTST				eS	Sn	17 02 45.1	+1.1
	baz=353						
WCHH	Zhanghua	1.08	268	eP	Pg	17 02 29.9	+1.0
	baz=268						
WCHH				eS	Sn	17 02 46.5	+2.1
	baz=268						
CHKT	Chengkung	1.08	198	eP	Pb	17 02 28.1	-0.8
	baz=192						
CHKT				eS	Sn	17 02 44.0	-0.4
	baz=192						
CHN5	Tsauling	1.11	242	⇓iP	Pg	17 02 30.1	+0.7
	baz=243						
CHN5				S	Sn	17 02 45.6	+0.4
	baz=243						
TWY	Chenhua	1.15	354	eP	Pg	17 02 31.0	+0.8
	baz=338						
JYNG	Yonagunijimaku	1.15	74	P	Pb	17 02 30.0	-0.1
JYNG				eS	Sn	17 02 45.4	-0.6
WDLH	Douliu	1.18	248	eP	Pg	17 02 31.5	+0.7
	baz=252						
YOJ	Yonaguni jima	1.21	74	eP	Pb	17 02 30.9	-0.2
	baz=67						
YOJ	Yonaguni jima	1.21	74	P	Pb	17 02 31.1	0.0
EDH	Donghe	1.22	199	eP	Pn	17 02 29.6	-1.6
	baz=188						
EDH				eS	Sg	17 02 48.8	+1.4
	baz=188						
WRL	Guolierlin Hig	1.26	260	eP	Pg	17 02 32.6	+0.2
	baz=261						
WRL				eS	Sg	17 02 50.2	+1.4
	baz=261						
CHN2	Minshiung	1.30	243	P	Pg	17 02 33.8	+0.7
	baz=247						
STYH	Taoyuan	1.30	223	eP	Pb	17 02 32.4	-0.2
	baz=226						
STYH				eS	Sg	17 02 51.8	+1.8
	baz=226						
CHN4	Tsaushan	1.30	234	eP	Pn	17 02 31.9	-0.6
	baz=224						
CHN4				eS	Sg	17 02 51.4	+1.2
	baz=224						
TPUB	Ta-pu	1.31	231	eP	Pg	17 02 33.2	0.0
	baz=222						
TPUB				eS	Sg	17 02 51.5	+1.2
	baz=222						
WTK	Tuku	1.31	251	eP	Pg	17 02 33.4	+0.1
	baz=253						
WTK				eS	Sg	17 02 52.2	+1.9
	baz=253						
LONT	Longtian	1.34	205	eP	Pn	17 02 31.1	-1.8
	baz=210						
WTP	Ta-pu	1.35	230	P	Pb	17 02 33.7	0.0
	baz=235						
CHY	Chiayi	1.36	243	eP	Pg	17 02 34.5	+0.3
	baz=247						
TWK	Hsinying	1.43	233	P	Pg	17 02 35.4	-0.2
	baz=237						
TWK				S	Sg	17 02 55.5	+1.3
	baz=237						
CHN1	Nanshi	1.45	230	P	Pb	17 02 35.5	+0.1
	baz=234						
CHN1				eS	Sg	17 02 56.8	+1.8
	baz=234						
WSF	Szhu	1.47	251	eP	Pg	17 02 36.0	-0.4
	baz=252						
WSF				eS	Sg	17 02 57.4	+1.9
	baz=252						
SGST	Jiashian	1.49	226	eP	Pb	17 02 35.5	-0.3
	baz=229						
SGST				eS	Sg	17 02 56.3	+0.3
	baz=229						
ICHU	Yijhu	1.54	240	eP	Pb	17 02 36.9	+0.1
	baz=244						
ICHU				eS	Sg	17 02 58.7	+1.0
	baz=244						
CHN8	Yiju	1.60	241	eP	Pb	17 02 37.0	-0.9
	baz=246						
ECL	Taimali	1.69	205	eP	Pn	17 02 37.1	-0.6
	baz=198						
SSD	Sandimen	1.71	217	eP	Pb	17 02 38.9	-0.8
	baz=233						
SSD				eS	Sg	17 03 02.5	-0.7
	baz=233						
TWM1	Shoushan	1.77	223	eP	Pg	17 02 41.5	-0.7
	baz=229						
MASBT	Mashibuluo	1.82	214	eP	Pn	17 02 39.6	+0.1
	baz=220						
IRIF	Iriomote-Funau	1.83	83	P	Pn	17 02 40.1	+0.4
IRIF				S	Sb	17 03 04.6	-0.1
HATJ	Hateruma jima	1.89	92	eS	Sb	17 03 05.8	-0.6
EAST	Anshuo	1.92	205	eP	Pn	17 02 40.7	-0.2
	baz=198						
JKRS	Kuro-shima	2.08	87	P	Pn	17 02 44.1	+1.0
JIJ	Ishigaki jima	2.21	83	P	Pn	17 02 44.9	0.0
JISG	Ishigakijimahi	2.39	79	P	Pn	17 02 47.5	+0.1
JISG				eS	Sn	17 03 17.1	+0.4

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*PRU **28** 17:06:37.1±0.0, 51°.54N×16°.06E, h0^{km}*
*VIE **28** 17:06:38.0±0.9, 51°.46N×16°.02E, h0^{km}, mb2.5/3, ml2.5/2, Error ellipse: s-maj=12.7km s-min=6.1km az=67.0 80 km WNW of Wroclaw Suspected Mining induced.*
*IDC **28** 17:06:38.2±1.1, 51°.46N×16°.02E, h0^{km}, mb1 3.4/5, mb1mx3.1/45, mbtmp3.2/5, ML2.6/5, Error ellipse: s-maj=16.8km s-min=9.2km az=121.0*
ISC 28 17:06:35.4±0.9**, 51°.55N**±0°.04×**16°.09E**±0°.03**, h0^{km}, n25, σ0^{s}.93**/53**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.72	170	ePg	Pb	17 06 50.7	-0.2
KSP				eSg	Sg	17 07 00.0	+1.5
CHVC	Chvalec	0.97	181	ePG	Pb	17 06 55.4	+0.4
CHVC				eSG	Sb	17 07 08.1	-0.3
OSTC	Ostas	1.00	175	ePG	Pb	17 06 56.1	+0.5
OSTC				eSG	Sb	17 07 09.2	-0.1
	comp=Z,17nm,0.3s						
UPC	Upice	1.05	183	ePG	Pb	17 06 56.7	+0.3
UPC				eSG	Sb	17 07 10.8	+0.1
	comp=Z,35nm,0.3s						
DPC	Dobruska-Polom	1.21	173	ePG	Pb	17 06 59.4	+0.2
DPC				eSG	Sg	17 07 14.8	+0.5
	comp=Z,11nm,0.3s						
PVCC	Panska Ves	1.41	224	ePG	Pb	17 07 03.1	+0.6
PVCC				eSG	Sn	17 07 21.5	0.0
	comp=Z,95nm,0.2s						
BRG	Berggiesshubel	1.51	244	Pg	Pg	17 07 05.0	+0.7
BRG				Sg	Sn	17 07 25.1	+1.0
BRG				Amp		17 07 26.1	
	comp=Z,21nm,0.3s						
KRLC	Kraliky	1.54	163	ePG	Pg	17 07 05.5	+0.6
KRLC				eSG	Sb	17 07 25.3	+0.3
PRU	Pruhonice	1.85	213	ePN	Pn	17 07 08.4	0.0
PRU				ePG	Pb	17 07 10.5	+0.4
PRU				eSG	Sb	17 07 34.3	+0.6
	comp=Z,20nm,0.3s						
CLL	Collm	1.95	264	ePn	Pn	17 07 10.0	+0.3
CLL				ePg	Pg	17 07 13.0	+0.3
CLL				i Sg	Sg	17 07 39.2	+1.2
	comp=Z,13nm,0.5s						
MORC	Moravsky Berou	2.00	152	ePN	Pn	17 07 11.2	+0.7
MORC				eSG	Sg	17 07 39.7	0.0
VRAC	Vranov	2.27	172	Pn	Pn	17 07 15.2	+1.1
	comp=Z,0.6nm,0.3s,baz=331,slow=19,SNR=6.0						
VRAC				Lg	Lg	17 07 46.6	
	comp=Z,1.8nm,0.3s,baz=96,slow=23,SNR=8.2						
VRAC	Vranov	2.27	172	ePN	Pn	17 07 14.5	+0.3
VRAC				eSG	Sg	17 07 47.8	-0.5
KRUC	Moravsky	2.50	175	ePN	Pn	17 07 17.5	+0.2
KRUC				eSG	Sg	17 07 54.6	-1.1
NKC	Novy Kostel	2.66	242	ePN	Pn	17 07 20.3	+0.8
NKC				ePG	Pg	17 07 26.3	0.0
NKC				eSG	Sg	17 08 01.8	+1.0
	comp=Z,20nm,0.4s						
OJC	Ojcow	2.70	118	ePg	Pg	17 07 27.1	0.0
OJC				eSg	Sg	17 08 03.7	+1.6
KHC	Kasperske Hory	2.91	215	ePN	Pn	17 07 23.2	+0.2
KHC				ePG	Pg	17 07 29.8	-1.3
KHC				eSN	Sn	17 07 57.8	-0.9
KHC				eSG	Sg	17 08 09.0	+0.1
	comp=Z,5.4nm,0.3s						
CKRC	Cesky Krumlov	2.97	203	ePN	Pn	17 07 25.8	+2.1
CKRC				ePG	Pg	17 07 31.8	-0.4
CKRC				eSG	Sg	17 08 11.5	+0.9
	comp=Z,5.1nm,0.3s						
GERES	GERESS Array B	3.12	210	Pn	Pn	17 07 27.5	+1.7
	comp=Z,0.7nm,0.3s,baz=28,slow=13,SNR=17						
GERES				Pg	Pg	17 07 33.7	-1.4
	comp=Z,1.2nm,0.3s,baz=30,slow=18,SNR=17						
GERES				Sn	Sn	17 08 02.4	-1.4
	comp=Z,0.7nm,0.3s,baz=28,slow=26,SNR=4.5						
GERES				Lg	Lg	17 08 13.6	
	comp=Z,1.7nm,0.3s,baz=30,slow=28,SNR=9.7						
LANS	Liptovska Anna	3.23	137	ePG	Pg	17 07 37.6	+0.3
LANS				eSG	Sg	17 08 19.5	+0.2
CONA	Conrad Observa	3.63	182	i Pn	Pn	17 07 35.0	+2.1
	comp=Z,0.3nm,0.1s						
CONA				eSg	Sg	17 08 31.8	-0.3
	comp=Z,3.0nm,0.2s						
MOA	Molln	3.89	198	i Pn	Pn	17 07 37.7	+1.3
	comp=Z,0.8nm,0.2s						
MOA				Sg	Sg	17 08 39.2	-1.1
	comp=Z,1.2nm,0.2s						
AKASG	Malin Array Be	8.31	91	Pn	Pn	17 08 37.4	+0.4
	comp=Z,0.3nm,0.3s,baz=278,slow=12,SNR=2.8						
FINES	FINESS Array B	11.33	25	Pn	Pn	17 09 17.9	-0.4
	comp=Z,0.1nm,0.3s,baz=219,slow=12,SNR=1.2						
ARCES	ARCESS Array B	18.58	10	Pn	P	17 10 51.3	-2.4
	baz=187,slow=13,SNR=1.2						

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*IDC **28** 17:17:37.2±4.7, 30°.27S×179°.14W, h0^{km}, mb3.2/2, mb1 3.5/2, mb1mx3.4/22, mbtmp3.2/2, Error ellipse: s-maj=236.1km s-min=74.5km az=167.0*
*WEL **28** 17:18:30.5±1.1, 32°S±7°×18°0W±1°8, h308^{km}±16^{km}, M4.4/8, mB4.7/6, ML4.8/10, MLv4.7/8, Mw(mB)4.0/6, Error ellipse: s-maj=0.0km s-min=0.0km az=106.9*
ISC 28 17:18:22.9±1.2**, 31°.63S**±0°.09×**179°.8W**±0°.2**, h400^{km}, n17, σ2^{s}.80**/25**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.85	35	S	S	17 20 13.6	-1.6
MXZ	Matakaoa Point	6.12	194	P	Pn	17 19 58.6	+1.9
MXZ				S	S	17 21 09.9	-3.3
KUZ	Kuaotunu	6.32	215	P	Pn	17 20 02.4	+3.5
WMGZ	Waiomatatini S	6.35	193	P	Pn	17 20 02.0	+2.8
WMGZ				S	S	17 21 17.9	+0.1
HAZ	Te Kaha	6.43	198	P	Pn	17 20 01.1	+1.1
HAZ				S	S	17 21 16.4	-3.0
PKGZ	Pakihiroa	6.49	195	P	P	17 20 04.9	+4.1
PKGZ				S	S	17 21 18.4	-2.2
OUZ	Omahuta	6.59	235	P	Pn	17 20 04.0	+2.1
PUZ	Puketiti	6.62	194	P	Pn	17 20 03.4	+1.2
PUZ				S	S	17 21 19.7	-3.7
RUGZ	Raukumara Rang	6.66	198	P	P	17 20 04.8	+1.4
RUGZ				S	S	17 21 19.4	-4.8
TWGZ	Tauwhareparae	6.78	195	P	P	17 20 07.2	+2.6
TWGZ				S	S	17 21 24.1	-2.6
ETAZ	East Tamaki Re	6.88	218	P	P	17 20 09.0	+3.3
CNGZ	Carnagh Statio	7.03	193	P	P	17 20 10.3	+2.9
TKGZ	Te Karaka	7.06	195	P	P	17 20 09.4	+1.6
TKGZ				S	S	17 21 29.6	-2.8
SNGZ	Shannon Statio	7.51	198	P	Pn	17 20 12.1	-0.2
ASAR	Alice Springs	41.54	269	P	P	17 25 31.2	-2.4
	0.2nm,0.6s,baz=100,slow=7.4,SNR=1.5						
WRA	Warramunga Arr	42.65	274	P	P	17 25 39.5	-2.9
	0.3nm,0.6s,baz=113,slow=8.1,SNR=1.9						
FINES	FINESS Array B	145.75	338	PKP	PKPdf	17 37 14.6	+0.8
	2.3nm,0.7s,baz=37,slow=3.5,SNR=6.1						

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*BJI **28** 17:25:53.1±0.0, 4°.73N×95°.00E, h58^{km}, mB5.0/15, mb4.6/33, Ms4.8/4, Ms7 4.4/4*
*IDC **28** 17:25:54.1±0.8, 4°.78N×95°.10E, h52^{km}±5^{km}, mb4.0/16, mb1 4.2/16, mb1mx3.9/32, mbtmp4.3/16, MS3.4/10, Ms1 3.4/10, ms1mx3.1/36, Error ellipse: s-maj=27.0km s-min=10.3km az=38.0*
*NEIC **28** 17:25:55.4±1.9, 4°.68N±0°.07×95°.14E±0°.07, h63^{km}±7^{km}, mb4.7/57, Error ellipse: s-maj=10.9km s-min=9.6km az=78.0*
*DJA **28** 17:25:55.3±0.8, 4°N±4°×9°5E±°, h53^{km}±10^{km}, M4.4/10, mb4.4/6, mB5.2/2, MLv4.4/10, Mw(mB)4.6/2*
ISC 28 17:25:53.2±0.4**, 4°.71N**±0°.05×**95°.04E**±0°.05**, h48^{km}, n145, σ1^{s}.56**/151**, mb4.6**/54**, MS3.5**/8**, 1C, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLSI	Meulaboh, Aceh	1.43	108	P	Pn	17 26 17.1	+0.4
MLSI				S	Sn	17 26 35.8	+1.5
LHMI	Lhok Sumawe	1.97	75	P	Pn	17 26 26.1	+2.0
LHMI	Lhok Sumawe	1.97	75	Pn	Pn	17 26 26.0	+1.9
LHMI				Sn	Sn	17 26 41.4	-6.2
TPTI		2.57	124	P	Pn	17 26 33.0	+0.6
TPTI				S	Sn	17 27 00.8	-1.7
SNSI	Sinabang, Aceh	2.62	151	P	Pn	17 26 31.8	-1.3
KCSI	Kotacane, Aceh	2.96	113	P	Pn	17 26 40.0	+2.2
TSI	Tuntungan	3.71	109	P	Pn	17 26 50.4	+2.3
GSI	Gunungsitoli	4.22	143	P	Pn	17 26 54.3	-0.8
GSI	Gunungsitoli	4.22	143		Pn	17 26 54.7	-0.4
GSI				Sn	Sn	17 27 39.2	-4.0
PSI	Prapat	4.31	116	P	Pn	17 26 59.1	+2.7
	baz=331,slow=14						
PSI				S	Sn	17 27 47.7	+2.2
	4.9nm,0.3s,baz=161,slow=23,SNR=3.6						
PSI				LR	LR	17 29 00.3	
	comp=Z,250nm,20.6s,baz=276,slow=43						
RPSI	Rantau Prapat	4.36	117		Pn	17 26 59.1	+2.2
RPSI					Sn	17 27 47.7	+1.2
KULM	Kulim	5.62	84	Pn	Pn	17 27 14.7	+0.4
KULM				Sn	Sn	17 28 15.0	-2.5
SRIT	Nakonsritamara	5.95	49	Pn	Pn	17 27 20.0	+1.1
IPM	Ipoh	5.97	92	Pn	Pn	17 27 19.6	+0.5
MNSI	Mandailing Nat	5.97	130	P	Pn	17 27 19.0	-0.1
BKNI	Bangkinang	7.40	126	Pn	Pn	17 27 39.3	+0.5
MYKOM	Kota Tinggi	9.26	108	Pn	Pn	17 28 03.2	-1.0
MNAI	Manna	11.98	139	Pn	Pn	17 28 37.9	-3.7
MDSI	Maura Dua	12.91	135	P	Pn	17 28 53.5	-0.6
	8.3nm,0.8s						
CM31	Chiang Mai Arr	14.19	15		Pn	17 29 13.0	+1.4
CMAR	Chiang Mai Arr	14.19	15	P	P	17 29 14.9	-2.9
	0.2nm,0.3s,baz=203,slow=11,SNR=14						
CMAR				S	Sn	17 31 42.1	-5.5
	0.1nm,0.3s,baz=178,slow=27,SNR=1.4						
CMAR				LR	LR	17 34 40.9	
	comp=Z,111nm,19.0s,baz=254,slow=37						
CMAR	Chiang Mai Arr	14.19	15	Pn	P	17 29 14.1	-3.7
PALK	Pallekele	14.49	281	S	Sn	17 31 43.3	-12
	0.6nm,0.3s,baz=340,slow=3.4,SNR=2.2						
PALK				LR	LR	17 34 03.8	
	comp=Z,113nm,22.0s,baz=210,slow=34						
PALK	Pallekele	14.49	281	Pn	P	17 29 19.1	-2.1
CHTO	Chiang Mai	14.53	15	Pn	Pn	17 29 17.6	+1.5
UBPT	Khong Chiam	14.68	44	Pn	Pn	17 29 18.0	-0.1
KSM	Kuching	15.58	101	P	Pn	17 29 30.5	+0.7
KOHI	KOHIMA	20.91	358	eP	P	17 30 29.4	-2.6
SHL	Shillong	20.96	352	eP	P	17 30 27.6	-4.9
BBKI	Banjar Baru	21.38	112	P	P	17 30 37.7	+0.7
	1μm16nm,0.8s						
KMI	Kunming	21.61	19	⇑P	P	17 30 43.3	+3.8
KMI				pP	sP	17 30 57.0	+0.1
KMI				pmax	pmax		
	comp=Z,8.0nm,0.7s						
RAMN	Ramite	23.54	341	eP	P	17 31 01.7	+2.1
	7.7nm,0.5s						
TAPN	Taplejung	23.58	344	eP	P	17 31 00.5	+0.5
JIRN	Jiri	24.34	341	eP	P	17 31 07.6	+0.5
LSA	Lhasa	25.13	352	P	P	17 31 13.3	-1.1
LSA				pmax	pmax		
	comp=Z,18nm,0.6s						
LSA	Lhasa	25.13	352	P	P	17 31 14.7	+0.3
GKN	Gorkha	25.20	338	eP	P	17 31 16.1	+1.4
	5.1nm,0.3s						
MPSI	Mapaga	25.20	99	P	P	17 31 16.4	+1.7
KOLN	Koldanda	25.39	336	eP	P	17 31 17.7	+1.2
H08S2	Diego Garcia H	25.63	242	T	T	17 58 23.4	
	baz=62,slow=76,SNR=375						
H08S3	Diego Garcia H	25.63	242	T	T	17 58 22.7	
	baz=62,slow=76,SNR=9.2						
H08S1	Diego Carcia H	25.64	242	T	T	17 58 09.5	
	baz=62,slow=76,SNR=76						
DANN	Dangsing	25.84	337	eP	P	17 31 21.4	+0.7
	28nm,0.7s						
PYUN	Piuthan	25.94	335	eP	P	17 31 22.7	+1.3
TOLI2	Tolitoli	25.95	97		P	17 31 19.8	-1.6
XAN	Xi'an	31.91	22	P	P	17 32 13.5	-0.8
XAN				pmax	pmax		
	comp=Z,24nm,0.6s						
GTA	Gaotai	34.82	6	eP	P	17 32 39.3	-0.4
GTA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
NJ2	Nanjing	35.18	37	eP	P	17 32 45.3	+2.6
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
NIL	Nilore	35.22	328	P	P	17 32 43.0	-0.1
NIL				IAmb	IAmb	17 32 46.0	
	comp=Z,5.2nm,0.7s						
JOW	Kunigami	38.60	52	P	P	17 33 12.3	+0.4
KSH	Kashi	38.71	336	P	P	17 33 12.8	0.0
KSH				pP	pP	17 33 27.3	+2.0
KSH				sP	sP	17 33 35.5	+4.7
KSH				S	S	17 39 07.5	+0.9
KSH				pmax	pmax		
	comp=Z,15nm,0.6s						
HHC	Hu-ho-hao-te	38.93	20	eP	P	17 33 17.0	+2.4
HHC				pmax	pmax		
	comp=Z,14nm,0.9s						
HHC				pmax	pmax		
	comp=Z,110nm,7.7s						
KNRA	Kununurra	39.04	122	P	P	17 33 13.1	-2.7
WMQ	Urumqi	39.49	352	eP	P	17 33 22.5	+3.3
WMQ				pmax	pmax		
	comp=Z,12nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,150nm,3.7s						
WMQ				LR	LR		
	comp=Z,420nm,29.3s						
WMQ				LR	LR		
	comp=Z,350nm,29.3s						
BJT	Baijiatuau	39.99	26	P	P	17 33 24.1	+0.8
BJT				IAmb	IAmb	17 33 25.6	
	comp=Z,11nm,0.8s						
BJI	Beijing	40.01	25	P	P	17 33 25.0	+1.5
BJI				PcP	PcP	17 35 28.3	+0.5
BJI				pmax	pmax		
	comp=Z,18nm,0.9s						
DRK	Karamyk	40.50	332	P	P	17 33 29.5	+1.5
GAR	Garm	40.84	330	P	P	17 33 30.1	-0.4
GAR				IAmb	IAmb	17 33 33.5	
	comp=Z,8.8nm,0.9s						
ULHL	Ulahol	40.96	339	P	P	17 33 33.4	+1.8
	SNR=5.3						
CHGR	Chuyangaron	41.17	329	P	P	17 33 32.7	-0.6
CHGR				IAmb	IAmb	17 33 35.3	
	comp=Z,14nm,0.9s						
BOOM	Boomskoye usch	41.28	338	P	P	17 33 34.7	+0.5
BOOM				IAmb	IAmb	17 33 36.3	
	comp=Z,14nm,0.7s						
BTK	Batken	41.42	332	P	P	17 33 36.2	+0.9
BTK				IAmb	IAmb	17 33 38.9	
	comp=Z,13nm,0.8s						
UCH	Uchtor	41.60	337	P	P	17 33 38.8	+1.7
	SNR=25						
TKM2	Tokmak 2	41.78	338	P	P	17 33 39.8	+1.5
	SNR=14						
KBK	Karagaybulak	41.80	338	P	P	17 33 40.6	+2.2
	SNR=22						
AML	Almayashu	41.84	336	P	P	17 33 41.1	+2.1
	SNR=5.4						
AAK	Ala-Archa	41.95	337	P	P	17 33 41.7	+2.1
	SNR=14						
AAK	Ala-Archa	41.95	337	P	P	17 33 41.4	+1.7
AAK				IAmb	IAmb	17 33 43.3	
	comp=Z,10nm,0.8s						
FRU1	Bishkek	42.05	337	P	P	17 33 41.5	+1.2
FRU1				IAmb	IAmb	17 33 44.4	
	comp=Z,11nm,0.8s						
EKS2	Erkin-Say	42.26	337	P	P	17 33 44.4	+2.4
	SNR=5.5						
HRA	Herat	42.38	318	P	P	17 33 43.6	+0.3
USP	Ospenovka	42.49	338	P	P	17 33 45.3	+1.5
	SNR=33						
H01W3	Cape Leeuwin H	43.29	157	T	T	18 19 57.4	
	baz=330						
H01W2	Cape Leeuwin H	43.30	157	T	T	18 20 34.6	
	baz=330						
H01W1	Cape Leeuwin H	43.30	157	T	T	18 20 14.5	
	baz=330						
MK31	Makanchi Array	43.36	347	P	P	17 33 50.6	-0.1
MKAR	Makanchi Array	43.36	347	P	P	17 33 50.9	+0.1
	comp=Z,3.0nm,0.6s,baz=169,slow=7.9,SNR=33						
MKAR	Makanchi Array	43.36	347	P	P	17 33 50.2	-0.5
MAKZ	Makanchi	43.44	347	P	P	17 33 51.2	-0.3
KKAR	Karatay Array	43.98	334	P	P	17 33 56.2	+0.3
SONM	Songino Array	44.06	11	P	P	17 33 56.1	-0.4
	comp=Z,1.2nm,0.9s,baz=191,slow=9.5,SNR=7.3						
SONM				PcP	PcP	17 35 42.0	+0.7
	comp=Z,1.7nm,0.8s,baz=206,slow=3.4,SNR=6.7						
SONM				LR	LR	17 53 05.5	
	comp=Z,63nm,20.3s,baz=215,slow=37						
SONM	Songino Array	44.06	11	P	P	17 33 56.1	-0.4
KSAR	Wonju Array Be	44.29	38	P	P	17 33 57.9	-0.4
KSRS	Korea Array	44.32	38	P	P	17 33 59.0	+0.4
	comp=Z,1.4nm,0.9s,baz=218,slow=10,SNR=5.3						
KSRS				LR	LR	17 56 28.5	
	comp=Z,32nm,18.1s,baz=179,slow=42						
WB0	Warramunga Arr	45.70	123	P	P	17 34 09.7	-0.2
WB0				IAmb	IAmb	17 34 10.8	
	comp=Z,13nm,0.7s						
WRA	Warramunga Arr	45.73	124	P	P	17 34 10.3	+0.1
	comp=Z,14nm,0.7s,baz=302,slow=9.1,SNR=131						
WRA				LR	LR	17 54 50.7	
	comp=Z,37nm,19.5s,baz=315,slow=38						
WRA	Warramunga Arr	45.73	124	P	P	17 34 09.3	-0.9
WRAB	Tennant Creek	45.74	124	P	P	17 34 10.1	-0.1
WB2	Warramunga Arr	45.74	124	P	P	17 34 09.7	-0.6
WB2				IAmb	IAmb	17 34 11.3	
	comp=Z,15nm,0.8s						
WR0	Warramunga Arr	45.91	124	P	P	17 34 11.5	0.0
JMN	Monobe	46.21	46	P	P	17 34 14.3	+0.6
JHS	Saijyo	46.32	44	P	P	17 34 15.4	+0.8
GEYT	Alibeck	47.16	320	P	P	17 34 23.1	+1.9
	comp=Z,4.6nm,0.7s,baz=108,slow=12,SNR=5.6						
GEYT	Alibeck	47.16	320	P	P	17 34 21.7	+0.6
GEYT				IAmb	IAmb	17 34 23.6	
	comp=Z,5.1nm,0.8s						
GYA0B	ALIBECK ARRAY	47.16	320	P	P	17 34 21.4	+0.3
GYA0B				IAmb	IAmb	17 34 23.6	
	comp=Z,6.4nm,0.8s						
AS31	Alice Springs	47.23	128	P	P	17 34 21.4	-0.5
ASAR	Alice Springs	47.23	128	P	P	17 34 21.9	0.0
	comp=Z,2.5nm,0.7s,baz=299,slow=7.9,SNR=54						
ASAR				PcP	PcP	17 35 53.2	+0.5
	comp=Z,0.9nm,0.7s,baz=312,slow=3.8,SNR=4.2						
ASAR				LR	LR	17 56 23.7	
	comp=Z,33nm,19.1s,baz=0.5,slow=39						
ASAR	Alice Springs	47.23	128	P	P	17 34 21.7	-0.2
ASAR				PcP	PcP	17 35 52.7	0.0
INU	Inuyama	49.26	46	P	P	17 34 37.1	-0.2
ZAA0	Zalesovo Array	49.80	352	P	P	17 34 40.6	-0.5
ZAA0				IAmb	IAmb	17 34 41.5	
	comp=Z,4.5nm,0.8s						
ZALV	Zalesovo Beam	49.80	352	P	P	17 34 40.9	-0.2
	comp=Z,4.1nm,0.6s,baz=183,slow=7.6,SNR=24						
ZALV	Zalesovo Beam	49.80	352	P	P	17 34 40.4	-0.6
MDJ	Mudanjiang	49.96	32	P	P	17 34 42.7	+0.3
MDJ				IAmb	IAmb	17 34 44.9	

	comp=Z,8.8nm,1.0s						
MJAR	Matsushiro Arr	50.67	45	LR	LR	17 57 14.8	
	comp=Z,41nm,20.4s,baz=35,slow=37						
USRK	Ussuriysk Ar.	50.98	34	P	P	17 34 50.5	+0.3
	comp=Z,2.3nm,0.6s,baz=249,slow=8.9,SNR=4.2						
USRK	Ussuriysk Ar.	50.98	34	P	P	17 34 49.7	-0.5
COEN	Coen	51.22	112	P	P	17 34 51.4	-1.0
COEN				IAmb	IAmb	17 35 28.7	
	comp=Z,7.8nm,1.1s						
BRVK	Borovoye	52.32	341	P	P	17 35 00.2	+0.1
BRVK				IAmb	IAmb	17 35 01.3	
	comp=Z,10nm,0.7s						
ABKAR	Akbulak array	53.43	332	P	P	17 35 08.9	+0.6
ABKAR	Akbulak array	53.43	332	P	P	17 35 09.1	+0.8
ABKAR				IAmb	IAmb	17 35 24.0	
	comp=Z,14nm,1.5s						
ARU	Arti	59.14	337	P	P	17 35 48.6	-0.2
ARU				IAmb	IAmb	17 35 50.5	
	comp=Z,7.1nm,1.1s						
KBZ	Khabaz	60.03	319	P	P	17 35 55.2	0.0
	comp=Z,2.1nm,0.9s,baz=164,slow=6.2,SNR=4.7						
SNOP	Sinop	64.69	315	P	P	17 36 25.8	-0.6
NRIK	Noril'sk	64.73	357	P	P	17 36 25.8	-0.4
	comp=Z,1.8nm,0.6s,baz=159,slow=8.8,SNR=4.7						
NRIK	Noril'sk	64.73	357	P	P	17 36 26.5	+0.3
NRIK				IAmb	IAmb	17 36 43.1	
	comp=Z,6.8nm,1.4s						
BR131	Keskin Array S	65.18	312	P	P	17 36 29.8	0.0
BR131				IAmb	IAmb	17 36 30.8	
	comp=Z,4.7nm,0.7s						
BRTR	Keskin Array B	65.18	312	P	P	17 36 29.9	0.0
	comp=Z,2.4nm,0.7s,baz=127,slow=7.1,SNR=18						
BRTR				pP	pP	17 36 45.1	+2.4
	comp=Z,1.8nm,0.7s,baz=128,slow=6.9,SNR=9.3						
BRTR	Keskin Array B	65.18	312	P	P	17 36 29.2	-0.6
TAU	Tasmania Unive	66.88	141	P	P	17 36 39.2	-1.3
TIXI	Tiksi	70.15	11	P	P	17 36 58.5	-1.8
TIXI				IAmb	IAmb	17 36 59.9	
	comp=Z,4.6nm,0.7s						
AKASG	Malin Array Be	71.19	322	P	P	17 37 06.6	-0.5
	comp=Z,1.1nm,0.6s,baz=90,slow=5.2,SNR=18						
AKASG	Malin Array Be	71.19	322	P	P	17 37 06.4	-0.7
AKBB	Malin Array Si	71.19	322	P	P	17 37 06.4	-0.6
MLR	Muntele Rosu	72.06	316	P	P	17 37 13.4	+0.7
BURAR	Bucovina Array	72.99	318	P	P	17 37 18.9	+0.8
BUR08	Bucovina Ar. S	73.00	318	P	P	17 37 18.7	+0.5
BUR08				IAmb	IAmb	17 37 23.0	
	comp=Z,12nm,1.4s						
BOSA	Boshof	74.70	239	LR	LR	18 03 36.4	
	comp=Z,33nm,20.6s,baz=6.0,slow=30						
LVZ	Lovozero	74.82	340	P	P	17 37 27.5	-0.8
LVZ				IAmb	IAmb	17 37 34.5	
	comp=Z,21nm,1.1s						
PABE	Paberze	75.47	326	P	P	17 37 32.8	+0.7
MAW	Mawson	75.64	192	LR	LR	18 07 34.7	
	comp=Z,44nm,18.1s,baz=40,slow=33						
FIA1	FINESS Array S	75.91	332	P	P	17 37 33.9	-0.7
FINES	FINESS Array B	75.92	332	P	P	17 37 34.8	+0.1
	comp=Z,8.3nm,1.0s,baz=110,slow=4.3,SNR=11						
FINES				pP	pwP	17 37 48.9	-1.4
	comp=Z,1.6nm,0.6s,baz=72,slow=6.8,SNR=1.1						
FINES	FINESS Array B	75.92	332	P	P	17 37 34.5	-0.2
OJC	Ojcow	76.97	320	P	P	17 37 41.8	+0.9
OJC				IAmb	IAmb	17 37 42.6	
	comp=Z,7.9nm,0.7s						
KEV	Kevo	78.10	341	P	P	17 37 46.8	0.0
KEV				IAmb	IAmb	17 38 12.1	
	comp=Z,7.4nm,0.9s						
ARCES	ARCESS Array B	78.53	340	P	P	17 37 48.0	-1.2
	comp=Z,3.8nm,0.8s,baz=81,slow=4.2,SNR=18						
ARCES				pP	pP	17 38 02.8	+0.3
	comp=Z,2.4nm,0.8s,baz=101,slow=4.8,SNR=2.7						
ARCES	ARCESS Array B	78.53	340	P	P	17 37 49.2	0.0
GEC2	GERESS Array S	80.78	319	P	P	17 38 03.0	+1.1
GERES	GERESS Array B	80.78	319	P	P	17 38 03.3	+1.4
	comp=Z,2.7nm,0.8s,baz=99,slow=8.2,SNR=12						
GERES				pP	pwP	17 38 18.7	+0.7
	comp=Z,1.5nm,0.8s,baz=100,slow=6.9,SNR=3.8						
GERES	GERESS Array B	80.78	319	P	P	17 38 02.6	+0.7
ZOU	Zoufplan	81.15	316	P	P	17 38 04.7	+0.6
ZOU				IAmb	IAmb	17 38 10.9	
	comp=Z,5.8nm,1.1s						
STAL	STALIGIAL	81.32	316	P	P	17 38 05.2	+0.5
STAL				IAmb	IAmb	17 38 17.8	
	comp=Z,13nm,1.5s						
CTI	Castel Tesino	82.05	316	P	P	17 38 09.4	+0.7
CTI				IAmb	IAmb	17 38 10.6	
	comp=Z,3.9nm,0.8s						
KEST	Kesra	83.79	305	P	P	17 38 19.8	+1.8
	comp=Z,3.6nm,0.9s,baz=0.0,slow=11,SNR=1.6						
TXAR	Lajitas Array	141.68	27	PKhKP	PKPpre	17 45 14.5	
	comp=Z,0.2nm,0.8s,baz=240,slow=3.6,SNR=1.8						

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*ATH **28** 17:39:25.7, 38°.72N×20°.61E, h10^{km}±1^{km}, ML2.4/4, Error ellipse: s-maj=1.8km s-min=0.9km az=288.0*

*THE **28** 17:39:25.8, 38°.72N×20°.62E, h11^{km}, ML2.5/9, Error ellipse: s-maj=1.6km s-min=0.5km az=95.0*

ISC 28 17:39:25.2±1.0, **38°.73N**±0°.03×**20°.61E**±0°.04, **h14**^{km}±4^{km}, **n25, σ0^{s}39**/44, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRAG	Dragano-Lefkad	0.05	217	P	Pg	17 39 27.8	0.0
DRAG				S	Sg	17 39 29.1	-0.5
	14µm,0.2s						
DRAG	Dragano-Lefkad	0.05	217	P	Pg	17 39 27.7	-0.1
DRAG				S	Sg	17 39 29.0	-0.6
NYDR	Nydri-Lefkada	0.07	100	P	Pg	17 39 27.9	0.0
NYDR				S	Sg	17 39 29.7	-0.1
	8µm,0.1s						
NYDR	Nydri-Lefkada	0.07	100	P	Pg	17 39 28.0	0.0
NYDR				S	Sg	17 39 29.6	-0.1
LKD2	Lefkada island	0.07	28	P	Pg	17 39 28.1	0.0
LKD2				S	Sg	17 39 30.0	0.0
	5µm,0.1s						
LKD2	Lefkada island	0.07	28	P	Pg	17 39 28.1	0.0
LKD2				S	Sg	17 39 29.4	-0.6
LKD2				AML	AML	17 39 30.1	
	comp=N,9997µm,0.1s						
LKD2				AML	AML	17 39 30.2	
	comp=E,8929µm,0.1s						
TSLK	Tsoukalades, L	0.10	18	P	Pg	17 39 28.6	+0.2
TSLK				S	Sg	17 39 31.1	+0.6
	comp=E,3µm,0.3s						
TSLK	Tsoukalades, L	0.10	18	P	Pg	17 39 28.6	+0.2
TSLK				S	Sg	17 39 30.9	+0.3
TSLK				AML	AML	17 39 31.2	
	comp=E,6581µm,0.3s						
TSLK				AML	AML	17 39 32.3	
	comp=N,6253µm,0.3s						
EVGI	Lefkada island	0.11	162	P	Pg	17 39 28.7	+0.3
EVGI				S	Sg	17 39 30.3	-0.3
	comp=N,3µm,0.1s						
EVGI	Lefkada island	0.11	162	P	Pg	17 39 28.6	+0.3
EVGI				S	Sg	17 39 30.3	-0.3
FSK	Fiskardo	0.27	189	P	Pg	17 39 31.4	+0.5
FSK				S	Sb	17 39 35.8	-0.5
	comp=N,1µm,0.3s						
FSK	Fiskardo	0.27	189	P	Pg	17 39 31.3	+0.5
FSK				S	Sg	17 39 35.3	+0.7
FSK				AML	AML	17 39 36.2	
	comp=N,1480µm,0.3s						
FSK				AML	AML	17 39 37.5	
	comp=E,3296µm,0.2s						
KEF4	Livadi, Kephal	0.49	198	P	Pg	17 39 35.0	+0.1
KEF4				S	Sb	17 39 43.0	+0.3
	comp=E,3µm,0.3s						
KEF4	Livadi, Kephal	0.49	198	P	Pg	17 39 34.9	0.0
KEF4				S	Sg	17 39 42.1	+0.7
DMLN	Damoulianata-K	0.52	201	P	Pg	17 39 35.0	-0.5
DMLN				S	Sb	17 39 43.6	0.0
	comp=E,315nm,0.3s						
VLS	Valsamata	0.55	182	P	Pg	17 39 35.8	-0.2
VLS				S	Sb	17 39 44.6	+0.2
	comp=E,280nm,0.1s						
VLS	Valsamata	0.55	182	P	Pg	17 39 35.6	-0.4
VLS				S	Sg	17 39 43.3	0.0
VLS				AML	AML	17 39 46.1	
	comp=N,608µm,0.2s						
VLS				AML	AML	17 39 46.4	
	comp=E,501µm,0.1s						
KEF3	Kipouria, Keph	0.56	202	P	Pg	17 39 36.1	-0.1
KEF3				S	Sb	17 39 45.2	+0.4
KEF3	Kipouria, Keph	0.56	202	P	Pg	17 39 35.9	-0.4
PSDA	Pessada-Kefalo	0.61	182	P	Pg	17 39 37.0	-0.2
PSDA				S	Sb	17 39 46.5	+0.3
IGT	Igoumenitsa	0.84	345	P	Pg	17 39 41.1	-0.3
RLS	Riolos of Patr	0.94	135	P	Pg	17 39 42.8	-0.6
LAKA	Lakka	1.18	114	P	Pn	17 39 46.7	-0.6
MAKR	Makrakomi, Fth	1.22	76	P	Pg	17 39 48.8	+0.1
AGG	Agios Georgios	1.37	77	P	Pb	17 39 51.3	+0.6

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*IDC **28** 17:45:03.7±0.7, 6°.77N×72°.97W, h166^{km}±6^{km}, mb3.9/17, mb1 4.2/24, mb1mx4.1/30, mbtmp4.5/24, Error ellipse: s-maj=10.9km s-min=9.1km az=57.0*

*VAO **28** 17:45:03.3±0.5, 6°.66N×73°.00W, h150^{km}±5^{km}, mb4.6*

*NEIC **28** 17:45:03.4±2.5, 6°.71N±0°.06×72°.99W±0°.07, h167^{km}±5^{km}, mb4.8/306, Error ellipse: s-maj=10.9km s-min=8.1km az=128.0*

*RSNC **28** 17:45:03.8±1.1, 6°.82N×73°.15W, h154^{km}±4^{km}, ML4.9, Mw4.9, Fault plane solution: NP1:ϕ$_s$159.00000°, δ82.00000°, λ18.00000°.*

ISC 28 17:45:02.4±0.4, **6°.81N**±0°.02×**73°.06W**±0°.03, **h158**^{km}±4^{km}, **n589, σ1^{s}59**/587, **mb4.8**/162, **45C-107D, Fault plane solution: NP1:**ϕ$_s$190.73621°, δ89.17844°, λ30.13248°. **NP2:**ϕ$_s$100.25936°, δ59.87093°, λ179.05010°. **Principal axes:** T Plg21.4119°, Azm59.6729°; N Plg59.8574°, Azm192.1513°; P Plg20.1692°, Azm321.3913°; **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	Barichara	0.25	210	⇑iP	Pn	17 45 24.6	+0.5
BARC				eS	Sn	17 45 39.8	-0.8
BARC				i		17 45 41.6	
	comp=Z,18µm,0.2s						
PAMC	Pamplona, Colo	0.64	34	⇓eP	Pn	17 45 27.4	+1.4
PAMC				eS	Sn	17 45 44.7	+0.7
PAMC				i		17 45 47.0	
	comp=Z,15µm,0.4s						
BRRC	Barranca, Sant	0.71	294	⇓iP	Pn	17 45 26.5	+0.6
BRRC				eS	Sn	17 45 43.5	-0.3
BRRC				i		17 45 47.1	
	comp=Z,13µm,0.3s						
RUSC	La Rusia	0.91	182	⇑eP	Pn	17 45 28.4	+0.5
RUSC				eS	Sn	17 45 47.2	-0.1
RUSC				i		17 45 49.1	
	comp=Z,15µm,0.4s						
TAMC	Tame, Arauca	1.31	106	⇓eP	Pn	17 45 32.8	+2.1
TAMC				eS	Sn	17 45 54.5	+1.9
PTBC	PUERTO BERRIO,	1.42	259	⇑eP	Pn	17 45 31.0	-0.7
PTBC				eS	Sn	17 45 52.5	-1.7
PTBC				i		17 45 54.6	
	comp=Z,10µm,0.4s						
OCAC	Ocana	1.44	350	⇑eP	Pn	17 45 32.7	+0.5
OCAC				eS	Sn	17 45 54.6	-0.5
OCAC				i		17 45 59.6	
	comp=Z,20µm,0.5s						
SPBC	San Pablo de B	1.53	221	⇑eP	Pn	17 45 33.3	+0.3
SPBC				eS	Sn	17 45 55.5	-1.1
SPBC				i		17 45 58.4	
	comp=Z,22µm,0.3s						
ZARC	Zaragoza, Cauc	1.91	291	⇓eP	Pn	17 45 36.7	-0.3
ZARC				eS	Sn	17 46 02.2	-1.5
ZARC				i		17 46 09.9	
	comp=Z,6µm,0.3s						
NORC	Norcasia	2.19	236	⇑eP	Pn	17 45 40.1	-0.1
NORC				eS	Sn	17 46 08.7	-0.7
NORC				i		17 46 14.8	
	comp=Z,4µm,0.4s						
SMLC	San Martn de	2.22	333	eP	Pn	17 45 40.6	0.0
SMLC				eS	Sn	17 46 09.3	-0.8
SMLC				i		17 46 16.6	
	comp=Z,4µm,0.3s						
ROSC	El Rosal	2.33	213	P	Pn	17 45 44.2	+2.0
	comp=Z,2µm,0.3s,baz=266,slow=14,SNR=540						
ROSC				S	Sn	17 46 13.9	+0.9
	comp=Z,2µm,0.3s,baz=322,slow=15,SNR=8.8						
ROSC	El Rosal	2.33	213	Pn	Pn	17 45 43.5	+1.2
ROSC				Sn	Sn	17 46 10.4	-2.6
HELC	Santa Helena	2.53	256	eP	Pn	17 45 45.3	+0.7
HELC				eS	Sn	17 46 16.4	-0.9
HELC				i		17 46 22.5	
	comp=Z,5µm,0.6s						
UREC	San Jos de Ur	2.63	291	eP	Pn	17 45 44.1	-1.3
UREC				eS	Sn	17 46 14.3	-4.5
UREC				i		17 46 27.9	
	comp=Z,3µm,0.3s						
PTGC	Puerto Gaitan,	2.75	160	eP	Pn	17 45 47.5	+0.4
PTGC				eS	Sn	17 46 20.6	-1.1
PTGC				i		17 46 24.2	
	comp=Z,4µm,0.6s						
VILC	Villavicencio,	2.75	193	⇑eP	Pn	17 45 47.6	+0.5
VILC				eS	Sn	17 46 21.7	-0.2
GUY2C	Guyana, Caldas	2.78	236	eP	Pn	17 45 48.3	+0.4
GUY2C				eS	Sn	17 46 23.5	+0.6
GUY2C				i		17 46 32.6	
	comp=Z,5µm,0.4s						
CMAN1	Manizales, Cal	3.00	235	eP	Pn	17 45 53.3	+2.9
CMAN1				eS	Sn	17 46 31.7	+4.2
CBOC	Ciudad Bolivar	3.08	252	eP	Pn	17 45 51.9	+0.6
CBOC				eS	Sn	17 46 27.9	-1.3
CBOC				i		17 46 34.7	
	comp=Z,2µm,0.5s						
DBBC	Dabeiba	3.14	274	⇓iP	Pn	17 45 52.0	+0.2
DBBC				eS	Sn	17 46 28.5	-1.7
SDV	Santo Domingo	3.17	49	P	Pn	17 45 54.1	+1.7
	comp=Z,112nm,0.3s,baz=230,slow=9.0,SNR=473						
SDV				S	Sn	17 46 31.2	+0.1
	comp=Z,470nm,0.3s,baz=212,slow=15,SNR=38						
SDV	Santo Domingo	3.17	49	eP	Pn	17 45 54.1	+1.7
SDV	Santo Domingo	3.17	49		Pn	17 45 53.6	+1.2
SDV				Sn	Sn	17 46 31.2	+0.1
CIBA1	Ibague, SGC	3.19	223	eP	Pn	17 45 55.0	+2.3
CIBA1				eS	Sn	17 46 32.5	+0.7
MOTC	Monteria, Cord	3.24	307	⇓iP	Pn	17 45 51.6	-1.5
MOTC				eS	Sn	17 46 29.4	-3.1
MOTC				i		17 46 48.5	
	comp=Z,2µm,0.3s						
ARGC	Ariguani, Magd	3.25	339	eP	Pn	17 45 54.6	+1.4
ARGC				eS	Sn	17 46 33.0	+0.2
ARGC				i		17 46 45.4	
	comp=Z,1µm,0.4s						
PRAC	Prado	3.57	211	eP	Pn	17 45 57.1	-0.4
PRAC				eS	Sn	17 46 40.5	+0.2
PRAC				i		17 46 46.6	
	comp=Z,6µm,0.3s						
ORTC	Ortega, Tolima	3.61	217	⇑eP	Pn	17 45 58.1	+0.2
ORTC				eS	Sn	17 46 41.1	0.0
ORTC				i		17 46 48.4	
	comp=Z,4µm,0.6s						
CVALL	Valledupar, Ce	3.68	357	eP	Pn	17 45 58.5	-0.2
CVALL				eS	Sn	17 46 39.8	-2.9
CVALL				i		17 46 48.6	
	comp=Z,2µm,0.5s						
SJCC	San Jacinto, C	3.72	326	eP	Pn	17 45 58.2	-1.0
SJCC				eS	Sn	17 46 40.0	-3.6
SJCC				i		17 46 47.0	
	comp=Z,1µm,0.5s						
PLMC	San Jos del P	3.72	240	⇑eP	Pn	17 45 60.0	+0.6
PLMC				eS	Sn	17 46 42.6	-1.1
PLMC				i		17 46 48.5	
	comp=Z,2µm,0.3s						
LCBC	Los crdobas,	3.86	302	eP	Pn	17 46 00.4	-0.7
LCBC				eS	Sn	17 46 46.2	-0.5
LCBC				i		17 46 48.9	
	comp=Z,1µm,0.3s						
GUVC	San Jose del G	4.26	174	eP	Pn	17 46 06.2	0.0
GUVC				eS	Sn	17 46 55.2	-0.9
GUVC				i		17 47 00.1	
	comp=Z,4µm,0.5s						
YOTC	Yotoco, Valle	4.31	230	⇑eP	Pn	17 46 06.8	-0.3
YOTC				eS	Sn	17 46 57.1	-0.4
YOTC				i		17 47 09.0	
	comp=Z,625nm,0.5s						
SOLC	Bahia Solano	4.36	263	eP	Pn	17 46 08.8	+1.2
SOLC				eS	Sn	17 46 48.1	-10
SMRC	Santa Marta, M	4.48	345	eP	Pn	17 46 08.6	-0.5
SMRC				eS	Sn	17 46 56.5	-4.7
SMRC				i		17 47 01.3	
	comp=Z,1µm,0.7s						
PIZC	Pizarro, Choco	4.66	247	eP	Pn	17 46 12.6	+1.2
PIZC				eS	Sn	17 47 05.4	+0.1
PIZC				i		17 47 15.4	
	comp=Z,1µm,0.8s						
MACC	Macarena, Meta	4.70	190	⇑eP	Pn	17 46 11.3	-0.8
MACC				eS	Sn	17 47 02.2	-4.2
MACC				i		17 47 08.5	
	comp=Z,1µm,0.5s						
PTAC	Punta Ardita,	4.73	274	eP	Pn	17 46 11.3	-1.0
PTAC				eS	Sn	17 47 04.5	-2.4
BETC	Betania	4.74	210	eP	Pn	17 46 12.0	-0.6
BETC				eS	Sn	17 47 01.1	-6.4
BETC				i		17 47 12.8	
	comp=Z,958nm,0.4s						
URIC	Uribia, Colomb	4.97	12	⇑iP	Pn	17 46 14.8	-0.7
URIC				eS	Sn	17 47 09.8	-3.1
URIC				i		17 47 17.4	
	comp=Z,330nm,0.4s						
GARC	Garzon, Huila	5.19	208	eP	Pn	17 46 18.2	-0.6
GARC				eS	Sn	17 47 15.6	-2.9
GARC				i		17 47 22.5	
	comp=Z,1µm,0.3s						
HATO	Hato, Curacao	6.70	37		Pn	17 46 36.9	-1.5
BCIP	Isla Barro Col	7.11	290	Pn	Pn	17 46 42.2	-1.7
PCRV	Puerto La Cruz	8.98	68	P	Pn	17 47 08.0	-0.8
	comp=Z,5.3nm,0.3s,baz=241,slow=5.6,SNR=17						
PCRV				S	Sn	17 48 47.4	-1.2
	comp=Z,5.6nm,0.3s,baz=120,slow=24,SNR=1.9						
PLCV	Puerto La Cruz	9.01	68		Sn	17 48 47.4	-2.1
BRU2	Volcan	9.74	282	Pn	Pn	17 47 16.8	-2.3
RGM0	Gandoca	9.85	287	Pn	Pn	17 47 19.9	-0.3
CDITO	Canoas	9.88	281		Pn	17 47 20.4	-0.3
DRK0	Durika	10.38	284		Pn	17 47 27.8	+0.3
BATAN	Batan	10.72	288		Pn	17 47 31.2	-0.6
PEZE	Perez Zeledon,	10.82	284		Pn	17 47 33.7	+0.5
CVTR	Volcan Turrial	11.06	287		Pn	17 47 36.3	-0.3
RIMA	Rio Macho	11.09	286		Pn	17 47 37.0	+0.2
TBTG	Tabatinga, AM	11.37	164	eP	Pn	17 47 37.5	-2.8
TBTG	Tabatinga, AM	11.37	164		Pn	17 47 36.8	-3.5
JAKH	Jacmel	11.37	3		Pn	17 47 38.6	-1.6
HDC	Heredia	11.39	287		Pn	17 47 40.4	-0.3
LGNH	Logne	11.64	2		Pn	17 47 42.8	-0.9
HOJ	Hope	11.69	342	i P	Pn	17 47 47.9	+3.4
GWJ	Greenwich	11.75	343	i P	Pn	17 47 48.6	+3.2
STH	Stony Hill	11.78	342	i P	Pn	17 47 48.0	+2.3
STH				i S	Sn	17 49 49.0	-7.1
JACO	JACO, Garabito	11.83	285		Pn	17 47 45.0	-1.3
COVE	Coope Vega, Sa	11.86	290		Pn	17 47 46.0	-0.7
SDD	Santo Domingo	11.98	15	Pn	Pn	17 47 44.8	-3.4
MTDJ	Mount Denham	12.16	339	Pn	Pn	17 47 51.1	+0.5
SDDR	Presa de Saban	12.22	8	Pn	Pn	17 47 51.5	+0.1
JTS	Las Juntas de	12.26	287	P	Pn	17 47 54.8	+2.9
	comp=Z,3.0nm,0.3s,baz=141,slow=9.5,SNR=12						
JTS				S	Sn	17 49 52.6	-15
	comp=Z,0.6nm,0.3s,baz=38,slow=19,SNR=1.1						
JTS	Las Juntas de	12.26	287		Pn	17 47 51.8	-0.1
ESPN	Las Esperanzas	12.31	297		Pn	17 47 51.4	-1.1
GRGR	Grenville	12.43	64	Pn	Pn	17 47 53.2	-0.9
DR12	Loma Pena Alta	12.43	16	Pn	Pn	17 47 51.8	-2.3
MLPR	Magueyes Islan	12.55	27	Pn	Pn	17 47 52.9	-2.6
CRPR	Cabo Rojo, PR	12.55	27	Pn	Pn	17 47 53.0	-2.6
PRSN	Puerto Rico Se	12.72	26		Pn	17 47 55.2	-2.5
DUNO	Dulce Nombre,	12.72	286	P	Pn	17 47 57.8	0.0
SC01	Santiago de lo	12.74	10	P	Pn	17 47 57.0	-1.0
OBIP	Obispado Ponce	12.81	29		Pn	17 47 56.3	-2.6
CELP	Cerrillos	12.86	29		Pn	17 47 58.0	-1.5
HZTE	Horizontes, Gu	12.98	288	P	Pn	17 47 59.2	-1.9
ACON	Acoyapa	13.00	294	P	Pn	17 48 00.0	-1.4
AOPR	Arecibo Observ	13.01	28	P	Pn	17 47 59.0	-2.5
PDPR	Patillas Dam,	13.08	31	Pn	Pn	17 48 01.2	-1.2
SJG	San Juan	13.10	30	P	Pn	17 48 01.1	-1.5
	comp=Z,23nm,0.3s,baz=204,slow=14,SNR=47						
SJG				S	Sn	17 50 15.9	-12
	comp=Z,2.2nm,0.3s,baz=347,slow=19,SNR=1.5						
SJG	San Juan	13.10	30	P	Pn	17 48 00.4	-2.2
TOSP	Speyside	13.14	69	Pn	Pn	17 48 01.8	-1.4
GTBY	Guantanamo Bay	13.19	352	Pn	Pn	17 48 03.0	-0.7
EMPR	Esperanza - Ma	13.23	28	Pn	Pn	17 48 01.4	-2.8
BOAV	Boa Vista	13.24	109	eP	Pn	17 48 02.4	-2.1
BOAV	Boa Vista	13.24	109	Pn	Pn	17 48 02.0	-2.5
SVB	Belmont	13.28	60		Pn	17 48 04.0	-0.9
GCPR	Guaynabo City	13.30	30		Pn	17 48 03.9	-1.2
CBYP	Canovanas	13.38	31		Pn	17 48 05.5	-0.8
CDVI	St. Croix	13.55	36	Pn	Pn	17 48 06.2	-2.1
BOAB	BOACO BROADBAN	13.63	295		Pn	17 48 08.1	-1.3
CUPR	Culebra, Puert	13.71	33		Pn	17 48 08.4	-2.0
MCLT	Moule a Chique	13.75	59	Pn	Pn	17 48 12.6	+1.7
STVI	Saint Thomas	13.93	34		Pn	17 48 11.0	-2.1
BIM	Bigot	14.04	56	Pn	Pn	17 48 12.3	-2.3
MATN	Matagalpa	14.06	297		Pn	17 48 13.1	-1.8
FDF	Fort de France	14.09	55		Pn	17 48 13.3	-2.0
SVN	Savane Anatole	14.14	55	Pn	Pn	17 48 15.4	-0.5
MPOM	Morne Pois Mar	14.18	57	Pn	Pn	17 48 15.0	-1.3
SABA	Saba	14.39	41	Pn	Pn	17 48 18.2	-0.8
CZSB	Cruzeiro do Su	14.45	179	eP	Pn	17 48 19.7	+0.1
CZSB	Cruzeiro do Su	14.45	179	P	Pn	17 48 19.4	-0.3
SMRT	St. Maarten	14.82	40	P	Pn	17 48 21.2	-3.1
ATAH	Atahualpa	14.84	201	P	P	17 48 27.8	+1.0
	comp=Z,2.6nm,0.3s,baz=11,slow=8.3,SNR=14						
ATAH				S	S	17 51 15.6	-0.4
	comp=Z,0.4nm,0.3s,baz=36,slow=15,SNR=2.9						
CRIN	San Cristobal	14.98	294	P	Pn	17 48 26.2	-0.1
PTGA	Pitinga	15.06	119	P	Pn	17 48 26.9	-0.3
	comp=Z,1.8nm,0.3s,baz=296,slow=15,SNR=22						
PTGA				S	Sn	17 51 07.8	-7.2
	comp=Z,1.4nm,0.3s,baz=214,slow=20,SNR=4.1						
H05N1	Guadeloupe/Mar	15.07	50	P	P	17 48 28.4	-0.6
	SNR=32						
ANWB	Willy Bob	15.41	45	P	Pn	17 48 30.2	-1.3
TGUH	Tegucigalpa,Un	15.72	298	P	Pn	17 48 34.1	-1.4
MACA	Manacapuru-AM	15.83	128	eP	P	17 48 37.6	+0.2
MACA	Manacapuru-AM	15.83	128	P	Pn	17 48 33.8	-3.0
MTO3	Montecristo	17.70	297	P	P	17 48 56.4	-1.7
MTO3				IAmb	IAmb	17 49 02.9	
	comp=Z,64nm,0.8s						
ESQI	Esquipulas	17.75	297	P	P	17 48 57.5	-1.0
ETMB	Extrema	17.87	157	eP	P	17 49 00.0	+0.3
ETMB	Extrema	17.87	157	P	P	17 48 58.5	-1.2
ETMB				IAmb	IAmb	17 49 01.1	
	comp=Z,35nm,0.7s						
SAML	Samuel	18.49	148	P	P	17 49 05.4	-1.1
SOR	Soroa	18.56	330	P	P	17 49 07.2	0.0
SOR				IAmb	IAmb	17 49 35.0	
	comp=Z,62nm,1.4s						
PAYG	Puerto Ayora	18.73	247	P	P	17 49 09.8	+0.6
PAYG				IAmb	IAmb	17 49 12.5	
	comp=Z,81nm,1.4s						
APG	El Apazote	18.92	297	P	P	17 49 11.6	+0.2
	comp=Z,2.0nm,0.3s,baz=130,slow=6.8,SNR=33						
NNA	Nana	19.05	191	P	Pn	17 49 14.3	-0.9
	comp=Z,1.6nm,0.3s,baz=5.6,slow=12,SNR=4.4						
NNA	Nana	19.05	191	P	P	17 49 11.0	-1.6
NNA				IAmb	IAmb	17 49 59.0	
	comp=Z,41nm,1.1s						
PETF	Flores	19.25	303	P	P	17 49 15.7	+0.9
MDP	Montagnes des	20.38	94	P	P	17 49 27.5	+0.6
	comp=Z,10nm,0.7s,baz=265,slow=9.7,SNR=9.3						
MDP				pP	pP	17 49 54.1	-0.5
	comp=Z,30nm,0.7s,baz=278,slow=14,SNR=7.1						
ITTB	Itaituba	20.55	122	eP	P	17 49 30.1	+1.4
MALB	Monte Alegre	20.64	114	eP	P	17 49 31.6	+1.9
MCPB	Macapa, AP	22.13	108	eP	P	17 49 46.9	+1.5
NPGB	Novo Progresso	22.39	128	eP	P	17 49 48.0	+0.1
VILB	Vilhena	23.43	147	eP	P	17 49 59.0	+1.5
VILB	Vilhena	23.43	147	P	P	17 49 56.0	-1.4
VILB				IAmb	IAmb	17 50 30.6	
	comp=Z,50nm,1.0s						
LPAZ	La Paz	23.46	168	P	P	17 49 57.9	-0.5
	comp=Z,7.5nm,0.7s,baz=350,slow=6.3,SNR=22						
LPAZ	La Paz	23.46	168	eP	P	17 49 58.7	+0.3
LPAZ	La Paz	23.46	168	P	P	17 49 56.4	-2.0
LPAZ				IAmb	IAmb	17 50 35.6	
	comp=Z,33nm,1.1s						
CMIG	Matias Romero	23.64	298	P	P	17 49 57.3	-2.1
	comp=Z,3.7nm,0.4s,baz=102,slow=5.7,SNR=8.6						
656A	Willston	24.15	339	P	P	17 50 02.7	-1.1
PDRB	Porto dos Gac	24.47	138	eP	P	17 50 07.4	+0.5
CLDB	Colider	24.57	136	eP	P	17 50 07.3	-0.6
PB16	IPOC Station P	25.23	172	P	P	17 50 12.6	-1.8
456A	Hilliard	25.23	342	P	P	17 50 13.7	0.0
PB12	IPOC Station P	25.41	174	P	P	17 50 14.0	-1.5
PB12				IAmb	IAmb	17 51 06.5	
	comp=Z,34nm,1.3s						
SIV	San Ignacio	25.57	152	P	P	17 50 16.5	-0.5
	comp=Z,0.9nm,0.3s,baz=317,slow=9.2,SNR=6.8						
553A	Crawfordville	25.60	337	P	P	17 50 16.3	-0.6

PTLB	Pontes e Lacer	26.06	148	*e*P	P	17 50 21.5	+0.2
PTLB	Pontes e Lacer	26.06	148	P	P	17 50 19.3	-2.0
257A	Skidaway Islan	26.12	344	P	P	17 50 21.0	-0.6
TIGA	Tifton	26.41	339	P	P	17 50 23.6	-0.7
250A	Grady	27.91	335	P	P	17 50 39.7	+2.1
250A				IAmb	IAmb	17 50 41.1	
	comp=Z,20nm,0.6s						
152A	Waverly Hall	27.92	339	P	P	17 50 39.8	+2.0
152A				IAmb	IAmb	17 50 41.2	
	comp=Z,17nm,0.8s						
GOGA	Godfrey	28.18	341	P	P	17 50 42.8	+2.8
	baz=158						
GOGA	Godfrey	28.18	341	P	P	17 50 41.2	+1.3
GOGA				IAmb	IAmb	17 50 42.8	
	comp=Z,47nm,1.7s						
JSC	Jenkinsville	28.37	346	P	P	17 50 42.8	+1.1
BIRD	Birdtown, Kers	28.53	347	P	P	17 50 45.3	+2.2
BIRD				IAmb	IAmb	17 51 03.9	
	comp=Z,41nm,1.6s						
HODGE	Hodges	28.58	344	P	P	17 50 46.3	+2.7
HODGE				IAmb	IAmb	17 51 36.2	
	comp=Z,19nm,1.3s						
Z51A	Franklin	28.67	339	P	P	17 50 45.4	+1.0
Y52A	Lilburn	28.79	341	P	P	17 50 47.3	+1.9
Y52A				IAmb	IAmb	17 50 48.4	
	comp=Z,26nm,1.3s						
346A	Big Creek Wild	28.87	330	P	P	17 50 47.4	+1.2
V58A	Windy Hill, Pi	29.38	350	P	P	17 50 51.0	+0.4
V58A				IAmb	IAmb	17 51 50.8	
	comp=Z,37nm,1.6s						
BG3	Lake Jocassee	29.48	343	P	P	17 50 54.2	+2.6
BG3				IAmb	IAmb	17 51 53.9	
	comp=Z,22nm,1.4s						
Z47A	Carrollton	29.73	334	P	P	17 50 56.0	+2.3
V55A	Taylorsville	29.86	347	P	P	17 50 57.9	+3.0
V55A				IAmb	IAmb	17 51 34.2	
	comp=Z,22nm,1.4s						
FPAL	Fort Paine	29.93	339	P	P	17 50 57.1	+1.6
VBMS	Vicksburg	30.07	329	P	P	17 50 59.3	+2.6
	baz=144						
T59A	Double "B" Far	30.30	353	P	P	17 51 00.8	+2.1
T59A				IAmb	IAmb	17 51 02.2	
	comp=Z,13nm,0.6s						
CPCT	Cooper Cave	30.39	341	P	P	17 51 01.9	+2.3
CPCT				IAmb	IAmb	17 51 33.5	
	comp=Z,62nm,2.0s						
X48A	Hartselle	30.39	337	P	P	17 51 01.5	+1.9
X48A				IAmb	IAmb	17 51 02.7	
	comp=Z,20nm,0.7s						
W50A	Signal Mountai	30.42	340	P	P	17 51 02.3	+2.4
W50A				IAmb	IAmb	17 51 03.0	
	comp=Z,14nm,0.6s						
V52A	Sevierville	30.47	343	P	P	17 51 02.7	+2.4
V52A				IAmb	IAmb	17 51 42.1	
	comp=Z,8.8nm,0.6s						
T57A	Hurt	30.58	350	P	P	17 51 02.9	+1.7
U54A	Nelsons Funny	30.64	346	P	P	17 51 04.0	+2.2
U54A				IAmb	IAmb	17 51 08.1	
	comp=Z,19nm,0.7s						
V51A	Loudon	30.66	342	P	P	17 51 04.4	+2.5
V51A				IAmb	IAmb	17 51 05.4	
	comp=Z,24nm,1.1s						
ARAG	Araguaiana, MT	30.71	137	*e*P	P	17 51 02.3	-0.3
Y45A	Yeager Farm, C	30.95	333	P	P	17 51 04.2	-0.2
PEXB	Peixe	30.97	127	*e*P	P	17 51 05.6	+0.6
BLA	Blacksburg	31.00	349	P	P	17 51 05.0	+0.1
BLA				IAmb	IAmb	17 51 50.9	
	comp=Z,39nm,1.6s						
JSRW	J. Sargeant Re	31.05	353	P	P	17 51 05.1	-0.3
TZTN	Tazewell	31.11	344	P	P	17 51 06.7	+0.8
TZTN				IAmb	IAmb	17 51 35.7	
	comp=Z,33nm,1.4s						
PLAL	Pickwick Lake	31.26	336	P	P	17 51 07.5	+0.3
PLAL				IAmb	IAmb	17 51 10.3	
	comp=Z,16nm,0.8s						
S57A	Dark Hollow, R	31.27	351	P	P	17 51 08.5	+1.2
S57A				IAmb	IAmb	17 51 49.2	
	comp=Z,46nm,1.9s						
R58B	Mineral	31.32	353	P	P	17 51 09.9	+2.2
R58B				IAmb	IAmb	17 51 59.0	
	comp=Z,27nm,1.5s						
HKT	Hockley	31.44	320	P	P	17 51 10.2	+1.4
V48A	Smith Brothers	31.44	338	P	P	17 51 10.8	+1.9
CBN	Corbin Frederi	31.50	353	P	P	17 51 13.1	+3.8
	baz=172						
CLTN	Cedars of Leba	31.58	339	P	P	17 51 11.1	+1.1
CLTN				IAmb	IAmb	17 51 12.8	
	comp=Z,11nm,0.5s						
S54A	Dingess, Beckl	31.75	348	P	P	17 51 13.6	+2.1
W45A	Hickory Valley	31.88	334	P	P	17 51 13.2	+0.6
NATX	Nacogdoches	31.98	324	P	P	17 51 15.5	+1.8
	baz=137						
NATX	Nacogdoches	31.98	324	P	P	17 51 15.0	+1.3
AQDB	Aquidauana	32.04	148	*e*P	P	17 51 14.6	+0.4
AQDB	Aquidauana	32.04	148	P	P	17 51 13.8	-0.4
CCAR	Cane Creek	32.05	330	P	P	17 51 15.6	+1.4
WVT	Waverly	32.17	337	P	P	17 51 16.8	+1.7
	baz=152						
WVT	Waverly	32.17	337	P	P	17 51 15.6	+0.5
WVT				IAmb	IAmb	17 51 17.7	
	comp=Z,25nm,1.1s						
ZAIG	Zacatecas	32.54	302	P	P	17 51 20.3	+1.3
833A	Chaparral WMA,	32.84	314	P	P	17 51 21.3	+0.2
	baz=126,SNR=6.5						
P60A	Greenville	32.94	356	P	P	17 51 24.9	+3.1
	baz=175						
X40A	Basin Creek Fa	33.04	329	P	P	17 51 24.3	+1.6
	baz=142,SNR=11						
X40A	Basin Creek Fa	33.04	329	P	P	17 51 23.2	+0.4
X40A				IAmb	IAmb	17 51 24.9	
	comp=Z,18nm,0.8s						
435B	Jarrell	33.12	319	P	P	17 51 24.9	+1.4
	baz=131,SNR=7.1						
435B	Jarrell	33.12	319	P	P	17 51 22.3	-1.3
MVL	Millersville	33.18	355	P	P	17 51 23.8	-0.1
MVL				IAmb	IAmb	17 51 27.7	
	comp=Z,9.6nm,0.5s						
W41B	Gary Mavity, V	33.29	331	P	P	17 51 26.4	+1.4
	baz=144,SNR=8.3						
BDFB	Brasilia	33.36	132	P	P	17 51 26.9	+1.0
	comp=Z,4.8nm,0.5s,baz=292,slow=9.9,SNR=11						
WHAR	Wooly Hollow	33.41	331	P	P	17 51 26.9	+1.0
WHAR				IAmb	IAmb	17 51 28.1	
	comp=Z,25nm,0.8s						
MIAR	Mount Ida	33.47	328	P	P	17 51 27.3	+0.8
	baz=141,SNR=7.4						
MIAR	Mount Ida	33.47	328	P	P	17 51 26.6	+0.1
WCI	Wyandotte Cave	33.50	341	P	P	17 51 29.1	+2.4
	baz=156						
WCI	Wyandotte Cave	33.50	341	P	P	17 51 28.0	+1.3
WCI				IAmb	IAmb	17 51 29.6	
	comp=Z,15nm,0.7s						
LCAR	Lake Charles	33.51	333	P	P	17 51 27.3	+0.5
LCAR				IAmb	IAmb	17 51 29.3	
	comp=Z,15nm,0.6s						
O56A	Blue Knob Stat	33.68	352	P	P	17 51 32.4	+4.1
	baz=170						
P52A	Corning	33.69	347	P	P	17 51 30.8	+2.5
	baz=164,SNR=7.4						
P52A	Corning	33.69	347	P	P	17 51 29.4	+1.1
P52A				IAmb	IAmb	17 51 32.5	
	comp=Z,19nm,0.6s						
LUPA	Lehigh Univers	33.71	357	P	P	17 51 30.4	+2.0
LUPA				IAmb	IAmb	17 51 32.7	
	comp=Z,23nm,0.8s						
BRNJ	Basking Ridge	33.76	358	P	P	17 51 30.7	+1.9
PBMO	Poplar Bluff	33.78	334	P	P	17 51 30.2	+1.1
FCAR	Ozark Folk Cen	33.81	332	P	P	17 51 30.0	+0.6
FCAR				IAmb	IAmb	17 51 31.4	
	comp=Z,29nm,0.9s						
WHTX	Lake Whitney,	33.84	321	P	P	17 51 31.9	+2.1
	baz=133						
SDBA	SAO DESIDERIO	33.88	124	*e*P	P	17 51 30.8	+0.4
SSPA	Standing Stone	33.96	353	P	P	17 51 34.3	+3.7
	baz=171						
N59A	State Game Lan	34.05	356	P	P	17 51 34.8	+3.3
	baz=175,SNR=6.1						
N59A	State Game Lan	34.05	356	P	P	17 51 34.2	+2.8
N59A				IAmb	IAmb	17 51 35.8	
	comp=Z,17nm,0.7s						
PAL	Palisades	34.06	359	P	P	17 51 34.0	+2.6
	baz=178						
W39A	Magazine	34.08	329	P	P	17 51 33.4	+1.6
	baz=141,SNR=13						
W39A	Magazine	34.08	329	P	P	17 51 32.5	+0.8
O52A	Adamsville	34.08	348	P	P	17 51 33.2	+1.5
O52A				IAmb	IAmb	17 51 36.1	
	comp=Z,14nm,0.6s						
S44A	Carbondale	34.09	337	P	P	17 51 32.2	+0.4
S44A				IAmb	IAmb	17 51 34.1	
	comp=Z,24nm,0.6s						
O53A	New Philadelph	34.09	349	P	P	17 51 34.4	+2.6
	baz=166						
O53A	New Philadelph	34.09	349	P	P	17 51 33.4	+1.6
O53A				IAmb	IAmb	17 51 35.6	
	comp=Z,34nm,1.3s						
SIUC	Southern Illin	34.09	337	P	P	17 51 32.5	+0.7
TRNY	Table Rock, Ra	34.20	358	P	P	17 51 35.4	+2.7
TRNY				IAmb	IAmb	17 51 36.3	
	comp=Z,13nm,0.7s						
JCT	Junction City	34.41	317	P	P	17 51 35.3	+0.6
	baz=128						
JCT	Junction City	34.41	317	P	P	17 51 35.0	+0.2
JCT				IAmb	IAmb	17 51 36.3	
	comp=Z,26nm,1.5s						
BLO	Bloomington	34.43	341	P	P	17 51 35.8	+1.1
ACSO	Alum Creek Sta	34.45	347	P	P	17 51 37.9	+3.0
	baz=162						
M63A	Gales Ferry	34.46	1	P	P	17 51 36.0	+1.1
X37A	Clayton	34.46	326		P	17 51 35.4	+0.3
X37A				IAmb	IAmb	17 51 37.2	
	comp=Z,16nm,1.1s						
U40A	Yellville	34.53	331	P	P	17 51 37.3	+1.6
	baz=144,SNR=52						
U40A	Yellville	34.53	331	P	P	17 51 37.0	+1.3
ITRB	Iturama	34.55	140	*e*P	P	17 51 36.6	+0.6
N54A	Moraine State	34.56	351	P	P	17 51 40.0	+4.2
	baz=168						
N54A	Moraine State	34.56	351	P	P	17 51 38.4	+2.5
N54A				IAmb	IAmb	17 51 40.5	
	comp=Z,12nm,0.8s						
M57A	Sunshine Farm,	34.57	355	P	P	17 51 39.1	+3.2
M57A				IAmb	IAmb	17 51 39.9	
	comp=Z,12nm,0.5s						
Z35A	Perchaven, San	34.64	323	P	P	17 51 35.7	-0.9
KSPA	Keystone Colle	34.69	356	P	P	17 51 39.3	+2.4
IPMB	Ipameri, GO	34.77	135	*e*P	P	17 51 38.3	+0.3
FVM	French Village	34.80	336	P	P	17 51 38.5	+0.5
MGMO	Mountain Grove	34.91	333	P	P	17 51 39.2	+0.3
MGMO				IAmb	IAmb	17 51 40.7	
	comp=Z,14nm,0.8s						
M54A	Oil Creek Stat	35.05	351	P	P	17 51 42.9	+2.9
	baz=168						
M54A	Oil Creek Stat	35.05	351	P	P	17 51 42.0	+2.0
M54A				IAmb	IAmb	17 51 44.0	
	comp=Z,19nm,1.1s						
CCM	Cathedral Cave	35.21	335	P	P	17 51 42.9	+1.4
	baz=148						
CCM	Cathedral Cave	35.21	335	P	P	17 51 42.5	+1.1
BINY	Binghamton	35.34	356	P	P	17 51 45.5	+3.0
	baz=175						
BINY	Binghamton	35.34	356	P	P	17 51 44.5	+2.0
BINY				IAmb	IAmb	17 51 46.4	
	comp=Z,15nm,0.6s						
U38A	Gravette	35.35	330	P	P	17 51 42.4	-0.3
U38A				IAmb	IAmb	17 51 44.0	
	comp=Z,16nm,0.9s						
L56A	Greenwood	35.41	354	P	P	17 51 43.1	0.0
L56A				IAmb	IAmb	17 51 47.1	
	comp=Z,17nm,0.9s						
PCMB	Pacaembu	35.42	143	*e*P	P	17 51 43.9	+0.4
TRCB	Terra Rica	35.57	146	*e*P	P	17 51 45.4	+0.7
HRV	Adam Dziewonsk	35.58	2	P	P	17 51 47.3	+2.8
	baz=182						
ABTX	Abilene, Hawle	35.65	320	P	P	17 51 46.5	+1.2
	baz=130,SNR=15						
ABTX	Abilene, Hawle	35.65	320	P	P	17 51 45.8	+0.5
ABTX				IAmb	IAmb	17 51 47.5	
	comp=Z,28nm,0.7s						
TUL1	Leonard	35.68	327	P	P	17 51 46.1	+0.7
	baz=139,SNR=9.7						
TUL1	Leonard	35.68	327		P	17 51 45.3	-0.2
TUL1				IAmb	IAmb	17 51 46.9	
	comp=Z,24nm,0.8s						
SFIN	Lafayette	35.71	341	P	P	17 51 47.5	+1.9
	baz=156						
SFIN	Lafayette	35.71	341	P	P	17 51 47.0	+1.4
WVNY	West Valley, N	35.79	353	P	P	17 51 47.9	+1.6
WVNY				IAmb	IAmb	17 51 50.4	
	comp=Z,20nm,0.6s						
S39A	Bolivar	35.83	332	P	P	17 51 47.1	+0.4
S39A				IAmb	IAmb	17 51 49.1	
	comp=Z,17nm,0.7s						
JANB	Januaria	35.83	127	*e*P	P	17 51 47.2	+0.1
X34A	Smith Ranch, M	35.87	324	P	P	17 51 48.1	+1.0
X34A				IAmb	IAmb	17 51 49.3	
	comp=Z,19nm,0.7s						
P43A	Skaggs, Pawnee	35.88	338	P	P	17 51 47.8	+0.7
P43A				IAmb	IAmb	17 51 49.2	
	comp=Z,26nm,0.8s						
K57A	Scipio Center	35.91	356	P	P	17 51 48.8	+1.5
K57A				IAmb	IAmb	17 51 51.1	
	comp=Z,19nm,0.7s						
FNO	Franklin	36.09	325		P	17 51 48.5	-0.5
CPUP	Villa Florida	36.31	156	*e*P	P	17 51 51.0	+0.1
QUOK	Quay	36.37	327		P	17 51 51.5	+0.2
J58A	Remsen	36.46	357	IAmb	IAmb	17 51 55.6	
	comp=Z,14nm,0.7s						
TXAR	Lajitas Array	36.52	312	P	P	17 51 54.0	+1.2
	comp=Z,13nm,0.7s,baz=128,slow=9.2,SNR=152						
TXAR				PcP	PcP	17 54 15.2	+2.0
	comp=Z,3.4nm,0.7s,baz=134,slow=6.3,SNR=9.0						
TXAR	Lajitas Array	36.52	312	P	P	17 51 53.5	+0.7
TX31	Lajitas Ar. Si	36.52	312	P	P	17 51 53.6	+0.8
TX32	Lajitas Array	36.52	312	P	P	17 51 53.7	+0.8
TX32				IAmb	IAmb	17 51 54.9	
	comp=Z,15nm,0.8s						
WMOK	Wichita Mounta	36.52	323	P	P	17 51 53.2	+0.4
	baz=134						
HDIL	Hopedale	36.61	339	P	P	17 51 54.0	+0.7
	baz=152						
P40A	Paris	36.79	335	IAmb	IAmb	17 51 56.6	
	comp=Z,30nm,0.8s						
T35A	Sooner Cattle	36.82	328	IAmb	IAmb	17 51 56.5	
	comp=Z,22nm,0.9s						
HPIG		36.88	307	P	P	17 51 56.1	0.0
HPIG				IAmb	IAmb	17 51 58.1	
	comp=Z,28nm,1.1s						
NCB	Newcomb	37.03	359	IAmb	IAmb	17 52 36.1	
	comp=Z,60nm,1.8s						
BLOK	Blackwell	37.08	327	IAmb	IAmb	17 51 59.1	
	comp=Z,54nm,1.3s						
MC01	Montes Claros	37.09	129	*e*P	P	17 51 57.3	-0.4
LBNH	Lisbon	37.30	1	P	P	17 52 02.0	+3.0
	baz=182						
PTGB	Pitanga	37.42	148	*e*P	P	17 52 00.8	+0.4
KAN14	Manchester OK	37.63	326	IAmb	IAmb	17 52 02.8	
	comp=Z,20nm,0.6s						
LONY	Lake Ozonia	37.69	358	P	P	17 52 04.8	+2.5
	baz=178						
LONY	Lake Ozonia	37.69	358	P	P	17 52 04.3	+2.0
LONY				IAmb	IAmb	17 53 02.4	
	comp=Z,50nm,1.9s						
J47A	Sunmer	37.73	346	P	P	17 52 04.5	+1.7
DELO	Deloro Mine	37.77	355	P	P	17 52 03.2	+0.1
DELO				IAmb	IAmb	17 52 06.2	
	comp=Z,13nm,0.5s						
SADO	Sadowa	38.18	353	IAmb	IAmb	17 52 09.8	
	comp=Z,14nm,0.5s						
DIAM	Diamantina, MG	38.25	131	*e*P	P	17 52 08.1	+0.5
G62A	West of Eustis	38.32	3	P	P	17 52 09.4	+1.8
RCLB	Rio Claro- Sao	38.33	140	*e*P	P	17 52 08.5	+0.5
PKME	Peaks-Kenny Pk	38.45	4	P	P	17 52 11.2	+2.5
	baz=186						
KSU1	Kansas State U	38.53	330	P	P	17 52 09.7	+0.3
	baz=141,SNR=7.3						
KSU1	Kansas State U	38.53	330	P	P	17 52 09.5	+0.1
MNTQ	Montreal, Queb	38.55	359	IAmb	IAmb	17 52 13.0	
	comp=Z,58nm,1.6s						
L40A	Anamosa	38.63	338	IAmb	IAmb	17 52 12.1	
	comp=Z,13nm,0.7s						
GDU01	Guandu, BA	39.00	122	*e*P	P	17 52 13.7	0.0
MNTX	Cornudas Mount	39.02	314	P	P	17 52 15.1	+1.3
	baz=123,SNR=51						
MNTX	Cornudas Mount	39.02	314	P	P	17 52 14.6	+0.8
MNTX				IAmb	IAmb	17 52 16.7	
	comp=Z,31nm,0.8s						
JFWS	Jewell Farm	39.03	340	P	P	17 52 14.5	+1.0
	baz=152,SNR=9.9						
JFWS	Jewell Farm	39.03	340	P	P	17 52 13.8	+0.3
VAO	Valinhos	39.10	140	*e*P	P	17 52 15.1	+0.5
BSCB	Bom Sucesso	39.18	136	*e*P	P	17 52 15.9	+0.7
SCIA	State Center	39.26	336	P	P	17 52 16.8	+1.3
	baz=147,SNR=6.0						
ITAB	Concordia	39.45	150	*e*P	P	17 52 17.3	+0.1
I42A	Draeger Farm,	39.46	342	P	P	17 52 17.7	+0.6
I42A				IAmb	IAmb	17 52 19.0	
	comp=Z,16nm,0.9s						
LMN	Caledonia Moun	39.55	9	P	P	17 52 19.0	+1.2
ITQB	Itaqui	39.56	157	*e*P	P	17 52 18.6	+0.5
E62A	Clayton Lake	39.78	4	P	P	17 52 21.6	+1.8
E62A				IAmb	IAmb	17 52 23.0	
	comp=Z,31nm,0.8s						
PET01	Itanhaem-SP	39.85	142	*e*P	P	17 52 20.3	-0.3
CMC01	Camacan, BA	39.87	124	*e*P	P	17 52 20.3	-0.6
CBKS	Cedar Bluff	39.94	327	P	P	17 52 22.0	+0.7
	baz=136						
CBKS	Cedar Bluff	39.94	327	IAmb	IAmb	17 52 22.6	
	comp=Z,45nm,1.5s						
PQI	Presque Isle	39.95	5	P	P	17 52 22.8	+1.7
PQI				IAmb	IAmb	17 52 24.0	
	comp=Z,25nm,0.7s						
I40A	Norwalk	40.02	340	P	P	17 52 22.2	+0.5
I40A				IAmb	IAmb	17 52 23.4	
	comp=Z,16nm,0.9s						
PARB	Paraibuna	40.21	139	*e*P	P	17 52 24.4	+0.7
D62A	Allapoint, All	40.27	4	P	P	17 52 26.0	+2.2
GUA01	Guaratinga, BA	40.28	126	*e*P	P	17 52 25.2	+1.0
LMQ	La Malbaie	40.66	3	P	P	17 52 28.1	+1.1
LMQ				IAmb	IAmb	17 52 30.0	
	comp=Z,31nm,0.7s						
BATG	Bathurst New B	40.76	7	P	P	17 52 29.3	+1.5
BATG				IAmb	IAmb	17 52 30.4	
	comp=Z,38nm,0.8s						
121A	Cookes Peak, D	41.20	313	P	P	17 52 34.2	+2.4
	baz=121,SNR=10						
121A	Cookes Peak, D	41.20	313	P	P	17 52 32.0	+0.2
121A				IAmb	IAmb	17 52 35.2	
	comp=Z,28nm,1.1s						
VLDQ	Val d'Or	41.33	356	IAmb	IAmb	17 52 47.9	
	comp=Z,54nm,1.9s						
RIB01	Linhares ES	41.34	129	*e*P	P	17 52 33.1	+0.2
T25A	Trinidad	41.54	321	P	P	17 52 36.9	+2.3
	baz=129,SNR=9.9						
T25A	Trinidad	41.54	321	IAmb	IAmb	17 52 37.4	
	comp=Z,13nm,0.6s						
ANMO	Albuquerque	41.56	317	P	P	17 52 36.5	+1.7
	baz=125						
ANMO	Albuquerque	41.56	317	P	P	17 52 36.1	+1.3
KSCO	Kaye Shedlock’	41.69	325	P	P	17 52 37.2	+1.5
	baz=133						
319A	Douglas	41.73	311	P	P	17 52 36.7	+0.5
319A				IAmb	IAmb	17 52 38.8	
	comp=Z,22nm,0.7s						
ALF01	Guarapari-ES	41.86	131	*e*P	P	17 52 37.9	+0.8
SPMN	Marine on St.	41.94	339	P	P	17 52 38.5	+1.1
	baz=150						
ECSD	EROS Data Cent	42.18	334	P	P	17 52 39.6	+0.1
	baz=144,SNR=18						
ECSD	EROS Data Cent	42.18	334	P	P	17 52 39.4	-0.1
ECSD				IAmb	IAmb	17 52 40.6	
	comp=Z,19nm,1.1s						
SDCO	Great Sand Dun	42.60	321	P	P	17 52 45.1	+1.8
	baz=128,SNR=14						
SDCO	Great Sand Dun	42.60	321	IAmb	IAmb	17 52 46.2	
	comp=Z,16nm,0.7s						
Q24A	Divide	43.14	323	P	P	17 52 49.1	+1.4
	baz=130						
TUC	Tucson	43.30	311	P	P	17 52 50.3	+1.6
	baz=118						
TUC	Tucson	43.30	311	P	P	17 52 49.6	+0.8
TUC				IAmb	IAmb	17 52 51.4	
	comp=Z,16nm,0.8s						
S22A	4UR Ranch, Cre	43.43	320	P	P	17 52 52.1	+2.1
	baz=127,SNR=18						
X18A	Snowflake	43.77	314	IAmb	IAmb	17 52 55.7	
	comp=Z,21nm,1.0s						
SUSD	Miller	43.77	333	P	P	17 52 52.9	+0.6
	baz=141,SNR=27						
EYMN	Ely	43.90	342	P	P	17 52 54.0	+0.8
	baz=153,SNR=6.8						
EYMN	Ely	43.90	342	P	P	17 52 53.3	+0.1
EYMN				IAmb	IAmb	17 52 54.8	
	comp=Z,23nm,0.5s						
W18A	Petrified Fore	43.92	315	P	P	17 52 56.0	+2.2
	baz=121,SNR=15						
W18A	Petrified Fore	43.92	315	IAmb	IAmb	17 52 56.9	
	comp=Z,45nm,0.9s						
ISCO	Idaho Springs	43.95	323	P	P	17 52 56.1	+2.0
	baz=130,SNR=29						
ISCO	Idaho Springs	43.95	323	P	P	17 52 55.2	+1.1
ISCO				IAmb	IAmb	17 52 57.1	
	comp=Z,17nm,0.9s						
MVCO	Mesa Verde	44.20	318	P	P	17 52 57.6	+1.5
	baz=124,SNR=10						
MVCO	Mesa Verde	44.20	318	P	P	17 52 57.5	+1.5
MVCO				IAmb	IAmb	17 52 58.9	
	comp=Z,37nm,1.4s						
214A	Organ Pipe Nat	44.68	309	P	P	17 53 01.4	+1.7
	baz=116,SNR=7.8						
214A	Organ Pipe Nat	44.68	309	IAmb	IAmb	17 53 02.5	
	comp=Z,20nm,0.8s						
N23A	Red Feather La	44.85	324	P	P	17 53 03.1	+1.9
	baz=130,SNR=13						
B35A	Bob, Littlefor	44.97	341	P	P	17 53 01.4	-0.3
WUAZ	Wupatki	45.27	315	P	P	17 53 06.5	+2.0
	baz=120,SNR=43						
WUAZ	Wupatki	45.27	315	IAmb	IAmb	17 53 08.0	
	comp=Z,47nm,0.8s						
AGMN	Agassiz Nation	45.66	339	P	P	17 53 08.0	+0.9
	baz=148,SNR=7.5						
AGMN	Agassiz Nation	45.66	339	IAmb	IAmb	17 53 08.3	
	comp=Z,14nm,0.5s						
Y14A	Wickenburg	45.70	312	IAmb	IAmb	17 53 10.3	
	comp=Z,27nm,0.8s						
O20A	White River Ci	45.74	322	P	P	17 53 09.9	+1.7
	baz=127,SNR=7.0						
RSSD	Black Hills	45.98	329	P	P	17 53 11.6	+1.7
	baz=135						
RSSD	Black Hills	45.98	329	P	P	17 53 10.7	+0.7
K22A	Casper	46.31	326	P	P	17 53 14.1	+1.6
	baz=131						
U15A	North Rim	46.37	315	IAmb	IAmb	17 53 16.4	
	comp=Z,31nm,1.0s						
SRU	San Rafael Swe	46.59	319	P	P	17 53 15.0	+0.3
SRU				IAmb	IAmb	17 53 17.4	
	comp=Z,18nm,0.8s						
GLA	Glamis	46.69	310	P	P	17 53 17.3	+1.8
	baz=115,SNR=11						
GLA	Glamis	46.69	310	IAmb	IAmb	17 53 18.1	
	comp=Z,27nm,0.8s						
P18A	Preston Nutter	46.70	320	IAmb	IAmb	17 53 18.6	
	comp=Z,30nm,1.4s						
PDMCI	Parker Dam,Lak	46.71	312	P	P	17 53 17.0	+1.5
	baz=116						
MDND	Maddock	46.73	336	P	P	17 53 16.7	+1.2
	baz=143,SNR=7.3						
W13A	Hualapai Mount	46.88	313	P	P	17 53 17.0	-0.1
P17A	Butcher Ranch,	46.93	320	IAmb	IAmb	17 53 20.0	
	comp=Z,22nm,0.9s						
KNB	Kanab	47.03	316	IAmb	IAmb	17 53 21.4	
	comp=Z,40nm,0.9s						
MTPU	Mount Pierson	47.11	317	P	P	17 53 20.3	+1.2
TMUT	Trail Mountain	47.13	319	IAmb	IAmb	17 53 35.7	
	comp=Z,24nm,0.7s						
ULM	Lac du Bonnet	47.32	340	P	P	17 53 20.3	+0.4
	comp=Z,15nm,0.4s,baz=145,slow=7.4,SNR=28						
ULM	Lac du Bonnet	47.32	340	IAmb	IAmb	17 53 21.2	
	comp=Z,19nm,0.5s						
LCMT	Little Creek M	47.32	315	IAmb	IAmb	17 53 23.5	
	comp=Z,31nm,1.0s						
PLCA	Paso Flores	47.36	177	P	P	17 53 19.1	-1.4
	comp=Z,1.5nm,0.8s,baz=332,slow=14,SNR=3.9						
PLCA				ScP	ScP	17 58 26.2	-1.7
	comp=Z,2.8nm,0.8s,baz=35,slow=19,SNR=4.8						
MVU	Marysvale	47.37	318	P	P	17 53 22.3	+1.4
SWSC	Sam W. Stewart	47.39	309	P	P	17 53 22.4	+1.6
	baz=114						
IRM	Iron Mountain	47.39	311	P	P	17 53 22.5	+1.7
	baz=116,SNR=9.9						
BC3	Big Chuckawall	47.41	310	P	P	17 53 22.3	+1.2
	baz=115,SNR=6.8						
SZCU	Shurtz Canyon	47.50	316	IAmb	IAmb	17 53 23.8	
	comp=Z,15nm,0.5s						
TCRU	Three Creeks R	47.59	318	IAmb	IAmb	17 53 25.5	
	comp=Z,39nm,0.9s						
CBX	Cerro Bola	47.81	308	P	P	17 53 25.9	+1.7

MONP2	Monument Peak	47.85	309	P	P	17 53 26.3	+1.7
	baz=113						
BELC	Belle Mtn. Jos	47.97	310	P	P	17 53 27.0	+1.5
	baz=115,SNR=7.1						
GMRC	Granite Mounta	48.05	311	P	P	17 53 27.5	+1.5
	baz=116,SNR=5.6						
BW06	Boulder Array	48.12	324	P	P	17 53 27.6	+1.0
	baz=128,SNR=17						
BW06	Boulder Array	48.12	324	P	P	17 53 27.0	+0.4
PDAR	Pinedale Array	48.12	324	P	P	17 53 27.5	+0.9
	comp=Z,7.3nm,0.6s,baz=127,slow=9.0,SNR=61						
PDAR				PcP	PcP	17 54 52.2	+0.5
	comp=Z,1.4nm,0.7s,baz=122,slow=4.5,SNR=2.7						
PDAR				ScP	ScP	17 58 31.9	+0.4
	comp=Z,0.8nm,0.8s,baz=131,slow=6.5,SNR=4.7						
SCHQ	Schefferville	48.15	5	P	P	17 53 28.0	+1.7
	comp=Z,37nm,0.6s,baz=192,slow=7.0,SNR=74						
SCHQ				ScP	ScP	17 58 31.2	+0.2
	comp=Z,8.6nm,0.8s,baz=142,slow=0.7,SNR=6.0						
SCHQ	Schefferville	48.15	5	P	P	17 53 27.9	+1.6
PFO	Pinyon Flats O	48.16	310	P	P	17 53 28.4	+1.5
	baz=114						
TCUT	Toone Canyon	48.27	321	P	P	17 53 28.5	+0.7
SHPR	Sheep Range	48.44	314	P	P	17 53 30.2	+1.1
PSUT	Pine Spring	48.50	317	IAmb	IAmb	17 53 32.3	
	comp=Z,12nm,0.7s						
TUQ	Turquoise Moun	48.52	312	P	P	17 53 31.2	+1.6
	baz=116,SNR=16						
HEC	Hector,Ludlow	48.57	311	P	P	17 53 31.8	+1.9
	baz=115,SNR=12						
DUG	Dugway, Tooele	48.66	319	P	P	17 53 32.5	+1.8
	baz=122,SNR=19						
MURC	Murrieta	48.72	309	P	P	17 53 32.6	+1.5
	baz=113						
BBRC	Big Bear Solar	48.78	310	P	P	17 53 34.4	+2.7
	baz=114						
LAO	LASA Array	48.88	330	P	P	17 53 33.1	+1.0
	baz=134,SNR=5.9						
LAO	LASA Array	48.88	330	P	P	17 53 31.5	-0.6
LAO				IAmb	IAmb	17 53 33.5	
	comp=Z,11nm,0.7s						
SHOC	Shoshone, Teco	48.98	313	P	P	17 53 35.0	+2.0
	baz=116						
AHID	Auburn Hatcher	49.03	323	IAmb	IAmb	17 53 35.4	
	comp=Z,16nm,0.9s						
SPR3	Spring Creek 3	49.05	317	IAmb	IAmb	17 53 36.4	
	comp=Z,19nm,1.1s						
GSC	Goldstone, Bar	49.12	312	P	P	17 53 35.9	+1.8
	baz=115,SNR=15						
GSC	Goldstone, Bar	49.12	312	IAmb	IAmb	17 53 36.7	
	comp=Z,21nm,0.8s						
DGMT	Dagmar	49.19	333	P	P	17 53 36.3	+1.9
	baz=137,SNR=14						
DGMT	Dagmar	49.19	333	P	P	17 53 35.5	+1.2
BGU	Big Grassy Mou	49.19	320	P	P	17 53 35.1	+0.4
BGU				IAmb	IAmb	17 53 36.9	
	comp=Z,27nm,0.8s						
REDW	Red Top Meadow	49.24	324	IAmb	IAmb	17 53 37.4	
	comp=Z,27nm,0.6s						
SNOW	Snow King Moun	49.24	324	IAmb	IAmb	17 53 38.6	
	comp=Z,15nm,0.6s						
LOHW	Long Hollow	49.24	324	IAmb	IAmb	17 53 37.4	
	comp=Z,14nm,0.6s						
TPAW	Teton Pass	49.37	324	P	P	17 53 36.5	+0.3
TPAW				IAmb	IAmb	17 53 38.4	
	comp=Z,20nm,1.1s						
RLMT	Red Lodge	49.42	327	P	P	17 53 37.7	+1.2
	baz=130						
FLWY	Flagg Ranch	49.58	325	P	P	17 53 38.5	+0.8
R11A	Troy Canyon, C	49.59	316	P	P	17 53 39.6	+1.8
	baz=118,SNR=20						
FURC	Furnace Creek,	49.65	313	P	P	17 53 40.1	+2.1
	baz=116						
H17A	Grant Village	49.70	325	P	P	17 53 40.8	+2.2
	baz=128						
EDW2	Edwards Air Fo	49.83	311	P	P	17 53 40.9	+1.3
	baz=114,SNR=8.1						
LRMC	Laurel Mtn Rad	49.84	311	P	P	17 53 41.2	+1.5
	baz=114						
MPMC	Manual Prospec	49.94	312	P	P	17 53 41.5	+1.1
	baz=115						
YMR	Madison River	50.09	325	IAmb	IAmb	17 53 44.3	
	comp=Z,12nm,0.6s						
ISA	Isabella, Lake	50.51	311	P	P	17 53 45.9	+1.3
	baz=114						
ELK	Elko	50.53	319	P	P	17 53 45.5	+0.6
CWC	Cottonwood Cre	50.53	312	P	P	17 53 46.5	+1.6
	baz=115						
BOZ	Bozeman (W)	51.02	326	P	P	17 53 49.9	+1.5
	baz=127,SNR=22						
VES	Vestal, Richgr	51.03	311	P	P	17 53 50.9	+2.4
	baz=113,SNR=7.5						
BCYI	Bear Canyon	51.29	323	P	P	17 53 50.2	-0.4
HLID	Hailey	51.48	322	P	P	17 53 53.4	+1.5
	baz=123,SNR=20						
HLID	Hailey	51.48	322	P	P	17 53 52.2	+0.3
SMMC	Simmler	51.52	310	P	P	17 53 53.6	+1.5
	baz=112						
EGMT	Eagleton	51.55	329	P	P	17 53 53.5	+1.3
	baz=131,SNR=5.8						
EGMT	Eagleton	51.55	329	IAmb	IAmb	17 53 54.6	
	comp=Z,30nm,1.4s						
LHV	Little Huntoon	51.60	314	IAmb	IAmb	17 53 55.7	
	comp=Z,29nm,1.4s						
MDPB	Devils Postpil	51.75	313	P	P	17 53 55.1	+1.0
RYN	Ryan	51.78	315	P	P	17 53 54.9	+0.7
PAGB	Antelope Grade	51.86	311	IAmb	IAmb	17 53 57.1	
	comp=Z,23nm,0.9s						
MFID	Camas Ranch	52.27	321	IAmb	IAmb	17 54 01.1	
	comp=Z,19nm,0.8s						
YERR	Yerington	52.44	315	IAmb	IAmb	17 54 01.6	
	comp=Z,19nm,0.8s						
PNTR	Pine Nut	52.73	315	IAmb	IAmb	17 54 04.0	
	comp=Z,18nm,0.8s						
PAHR	Pah Rah Range	52.85	316	P	P	17 54 02.6	+0.6
VCNR	Virginia City	52.86	315	IAmb	IAmb	17 54 04.9	
	comp=Z,16nm,1.0s						
MSO	Missoula	53.05	326	P	P	17 54 04.5	+1.3
	baz=126						
MSO	Missoula	53.05	326	P	P	17 54 03.3	0.0
FFC	Flin Flon	53.12	339	P	P	17 54 04.1	+0.6
FFC				IAmb	IAmb	17 54 04.5	
	comp=Z,7.1nm,0.5s						
MPK	Martis Peak	53.12	315	IAmb	IAmb	17 54 07.7	
	comp=Z,30nm,1.1s						
PLID	Pearl Lake	53.27	323	P	P	17 54 04.3	-0.7
PLID				IAmb	IAmb	17 54 06.7	
	comp=Z,13nm,0.8s						
MOD	Modoc Plateau	54.44	318	P	P	17 54 13.2	-0.3
F10A	Beach Ranch, E	54.47	323	IAmb	IAmb	17 54 15.1	
	comp=Z,13nm,0.6s						
O03E	Paynes Creek	54.78	315	P	P	17 54 16.5	+0.6
	baz=114,SNR=7.1						
I07A	Izee	54.92	320	IAmb	IAmb	17 54 19.1	
	comp=Z,14nm,0.9s						
G08A	Pilot Rock	55.16	322	IAmb	IAmb	17 54 20.8	
	comp=Z,23nm,0.8s						
WDC	Whiskeytown Da	55.41	315	P	P	17 54 19.0	-1.3
M04C	Macdoel	55.42	317	P	P	17 54 21.9	+1.4
	baz=115,SNR=13						
O02D	Mt. Diablo Mer	55.42	315	P	P	17 54 20.1	-0.4
	baz=113,SNR=7.6						
NEW	Newport	55.64	326	P	P	17 54 22.6	+0.7
	baz=123,SNR=5.6						
J05D	Fort Rock, OR	55.66	319	P	P	17 54 23.8	+1.5
	baz=116,SNR=20						
N02D	Trinity Center	55.68	316	P	P	17 54 21.8	-0.6
	baz=114,SNR=5.4						
L04D	Klamath Falls	55.92	317	P	P	17 54 25.0	+0.9
	baz=115,SNR=9.9						
M02C	Callahan	55.95	316	P	P	17 54 24.2	-0.1
	baz=114						
YBH	Yreka Blue Hor	55.99	317	IAmb	IAmb	17 54 25.0	
	comp=Z,7.0nm,0.6s						
D08A	Wollman Farm,	56.03	324	P	P	17 54 24.6	0.0
F07A	Phinny Hill Vi	56.05	322	IAmb	IAmb	17 54 28.2	
	comp=Z,13nm,0.6s						
I05D	Terrebonne, OR	56.20	320	P	P	17 54 27.8	+1.8
	baz=117						
J04D	Umpqua Nationa	56.22	318	P	P	17 54 27.5	+1.2
	baz=116,SNR=7.0						
E07A	Sunnyside	56.33	323	P	P	17 54 26.2	-0.6
HUMO	Hull Mountain	56.52	317	IAmb	IAmb	17 55 51.2	
	comp=Z,24nm,2.0s						
JCC	Jacoby Creek,	56.54	315	IAmb	IAmb	17 54 32.2	
	comp=Z,22nm,0.8s						
G05D	Wamic, OR	56.60	321	P	P	17 54 31.2	+2.4
	baz=118,SNR=5.1						
I04A	Tendick Farm,	56.66	319	P	P	17 54 29.6	+0.4
	baz=116,SNR=7.3						
EDM	Edmonton	56.66	332	P	P	17 54 28.6	-0.5
L02E	Cave Junction	56.77	317	P	P	17 54 30.5	+0.5
	baz=114						
HOOD	Mount Hood Mea	56.85	321	P	P	17 54 31.1	+0.4
DBO	Dodson Butte	56.92	318	IAmb	IAmb	17 54 40.9	
	comp=Z,16nm,1.4s						
B08A	Colville Reser	56.94	325	IAmb	IAmb	17 54 32.8	
	comp=Z,13nm,0.8s						
K02D	Willamette Mer	57.03	317	P	P	17 54 32.4	+0.5
	baz=114,SNR=5.5						
LTY	Liberty	57.16	323	IAmb	IAmb	17 54 35.0	
	comp=Z,14nm,0.7s						
H04D	Lebanon	57.18	320	P	P	17 54 33.4	+0.6
	baz=116						
BUCK	Buck Mountain	57.20	319	P	P	17 54 33.3	+0.2
I03D	Drain, OR	57.23	318	P	P	17 54 33.9	+0.8
	baz=115,SNR=5.5						
J01E	Myrtle Point	57.40	318	P	P	17 54 35.8	+1.5
	baz=114						
I02E	Swisshome, OR	57.73	319	P	P	17 54 38.6	+1.9
	baz=115						
G03D	McMinnville, O	57.82	320	P	P	17 54 38.9	+1.7
	baz=116						
B05A	Bryant	58.49	324	P	P	17 54 42.4	+0.6
	baz=118						
D03D	Eldon	58.74	323	P	P	17 54 44.4	+0.7
	baz=117						
NLWA	Neilton Lookou	59.15	322	IAmb	IAmb	17 54 49.3	
	comp=Z,20nm,1.1s						
LLLB	Lillooet	59.51	326	IAmb	IAmb	17 54 50.9	
	comp=Z,17nm,1.1s						
CBB	Campbell River	61.21	324	IAmb	IAmb	17 55 03.2	
	comp=Z,21nm,1.0s						
YKA	Yellowknife Ar	63.30	340	P	P	17 55 14.8	+0.8
	comp=Z,10nm,0.6s,baz=124,slow=8.0,SNR=54						
YKA	Yellowknife Ar	63.30	340	P	P	17 55 13.7	-0.3
WRGLY	Wrigley	66.94	338	P	P	17 55 38.8	+1.3
	baz=124						
TIC	Toumodi	67.51	86	*e*P	P	17 55 43.8	+1.7
LIC	Lamto	67.54	86	*e*P	P	17 55 41.4	-0.8
	comp=Z,39nm,1.1s						
DBIC	Dimbokro	67.67	86	P	P	17 55 42.6	-0.4
	comp=Z,2.9nm,0.5s,baz=275,slow=4.4,SNR=13						
DBIC				pP	pP	17 56 23.7	+1.9
	comp=Z,5.2nm,0.7s,baz=289,slow=5.5,SNR=4.8						
DBIC	Dimbokro	67.67	86	P	P	17 55 42.4	-0.7
DBIC				IAmb	IAmb	17 57 15.2	
	comp=Z,32nm,1.7s						
KIC	Kosan Boka	67.81	86	*e*P	P	17 55 43.1	-0.8
	comp=Z,6.9nm,0.5s						
TGTN	Hyland Airport	67.98	335	P	P	17 55 46.2	+2.1
	baz=118						
SUMG	Summit	68.99	11	P	P	17 55 51.3	+0.6
SUMG				IAmb	IAmb	17 55 52.5	
	comp=Z,17nm,0.7s						
ESDC	Sonseca Array	69.61	50	P	P	17 55 53.6	-1.1
	comp=Z,0.5nm,0.6s,baz=275,slow=5.9,SNR=5.3						
FARO	Faro, Yukon	70.45	334	P	P	17 56 00.9	+1.6
	baz=114						
M31M	Drury Creek, Y	70.89	334	P	P	17 56 03.8	+1.8
	baz=113						
N31M	Braeburn, Yuko	71.23	333	P	P	17 56 06.0	+1.9
	baz=111						
M30M	Minto, Yukon	72.07	334	P	P	17 56 10.7	+1.7
	baz=111,SNR=6.3						
A36M	Sachs Harbour	72.46	345	P	P	17 56 12.1	+1.0
	baz=125,SNR=30						
A36M	Sachs Harbour	72.46	345	IAmb	IAmb	17 56 12.8	
	comp=Z,26nm,0.8s						
INK	Inuvik	73.06	340	P	P	17 56 15.9	+1.2
	baz=116,SNR=7.1						
INK	Inuvik	73.06	340	P	P	17 56 15.1	+0.4
EPYK	Eagle Plains	73.42	338	P	P	17 56 18.2	+1.3
	baz=112						
YUK3	Moose Creek	73.44	333	P	P	17 56 19.3	+2.0
	baz=107						
CTG	Chitna Glacier	73.61	332	P	P	17 56 20.7	+2.4
	baz=106						
TORD	Torodi Ar. Bea	73.68	78	P	P	17 56 18.6	-0.7
	comp=Z,0.5nm,0.3s,baz=288,slow=6.4,SNR=12						
TORD				pP	pP	17 56 59.6	+1.2
	comp=Z,0.9nm,0.5s,baz=287,slow=5.4,SNR=4.2						
M27K	Edge Creek, AK	74.24	333	P	P	17 56 24.3	+2.3
	baz=106						
L27K	Beaver Creek,	74.42	334	P	P	17 56 24.8	+2.0
	baz=106						
M26K	Nabesna, AK	74.76	333	P	P	17 56 26.6	+1.8
	baz=105						
L26K	Log Cabin Wild	75.07	334	P	P	17 56 28.8	+2.2
	baz=105						
L26K	Log Cabin Wild	75.07	334	P	P	17 56 27.3	+0.7
BMRM	Bremner River	75.16	331	P	P	17 56 29.0	+1.9
	baz=103						
N25K	Chitina, Valde	75.30	332	P	P	17 56 30.2	+2.2
	baz=103						
J26L	Joseph Creek	75.54	335	P	P	17 56 30.9	+1.6
	baz=105						
SCRK	Sand Creek	75.59	335	P	P	17 56 31.3	+1.7
	baz=104						
RIDG	Independent Ri	75.90	334	P	P	17 56 33.3	+1.9
	baz=104						
RIDG	Independent Ri	75.90	334	IAmb	IAmb	17 56 34.1	
	comp=Z,20nm,1.0s						
PAX	Paxson	76.00	333	P	P	17 56 33.5	+1.5
	baz=103						
J25K	Salcha River,	76.33	335	P	P	17 56 34.8	+1.0
	baz=103						
SCM	Sheep Creek Mo	76.62	332	P	P	17 56 36.9	+1.5
	baz=101						
HDA	Harding Lake	76.95	335	P	P	17 56 38.2	+1.0
	baz=102,SNR=6.3						
IL31		77.00	335	IAmb	IAmb	17 58 57.4	
	comp=Z,36nm,2.0s						
ILAR	Eielson Array	77.00	335	P	P	17 56 38.2	+0.8
	comp=Z,2.9nm,0.7s,baz=110,slow=4.5,SNR=23						
ILAR				PP	PP	17 59 34.2	+1.5
	comp=Z,0.7nm,0.7s,baz=104,slow=8.5,SNR=4.5						
KNK	Knik Glacier	77.08	331	P	P	17 56 39.5	+1.6
	baz=100						
SML	Sawmill	77.08	332	P	P	17 56 39.4	+1.4
	baz=100						
PMR	Palmer	77.42	332	P	P	17 56 41.1	+1.4
	baz=99						
RND	Reindeer	77.59	333	P	P	17 56 41.6	+0.8
RND				IAmb	IAmb	17 56 43.1	
	comp=Z,15nm,0.7s						
H24K	Noodor Dome	77.62	336	P	P	17 56 42.3	+1.4
	baz=101						
NEA2	Nenana	77.89	335	P	P	17 56 43.5	+1.1
	baz=100						
I23K	Minto, Yukon-K	78.10	335	P	P	17 56 44.9	+1.4
	baz=100						
TRF	Thorofare Moun	78.24	333	P	P	17 56 45.6	+1.2
	baz=98						
BPAW	Bear Paw Mtn.	78.64	334	P	P	17 56 47.5	+1.0
	baz=98						
MLY	Manley	78.66	335	P	P	17 56 47.7	+1.1
	baz=98						
COLD	Coldfoot	78.78	337	P	P	17 56 49.2	+2.0
	baz=99						
PPLA	Purkeypile	79.02	333	P	P	17 56 49.8	+1.1
	baz=97						
PPLA	Purkeypile	79.02	333	IAmb	IAmb	17 56 50.2	
	comp=Z,14nm,0.6s						
CAST	Castle Rocks	79.03	333	P	P	17 56 49.5	+0.8
	baz=97,SNR=7.3						
CAST	Castle Rocks	79.03	333	P	P	17 56 48.4	-0.2
CHUM	Lake Minchumin	79.19	334	P	P	17 56 50.5	+1.0
	baz=97						
I21K	Tanana	79.20	335	P	P	17 56 50.2	+0.7
	baz=97						
H21K	Melozitna Rive	79.60	336	P	P	17 56 52.7	+1.0
	baz=97						
L20K	Farewell, AK	79.75	332	P	P	17 56 53.2	+0.6
	baz=95						
O19K	Port Alsworth	79.78	330	P	P	17 56 53.3	+0.6
	baz=94						
K20K	Telida	79.92	333	P	P	17 56 54.3	+0.8
	baz=95						
J20K	Nowinta River	80.02	334	P	P	17 56 55.0	+1.0
	baz=95,SNR=7.7						
J20K	Nowinta River	80.02	334	P	P	17 56 54.5	+0.6
J20K				IAmb	IAmb	17 56 55.8	
	comp=Z,54nm,1.8s						
L19K	White Mountain	80.18	332	P	P	17 56 55.6	+0.7
	baz=94						
O18K	Koktuh Hills	80.20	330	P	P	17 56 55.8	+0.8
	baz=93						
TTA	Tatalina	80.77	333	P	P	17 56 58.7	+0.7
	baz=93						
GCSA	Galena City Sc	81.24	334	P	P	17 57 01.7	+1.3
	baz=93						
NB2	NORSAR Subarra	81.31	29	P	P	17 57 01.8	+0.9
	comp=Z,2.5nm,0.8s,baz=268,slow=5.3						
NOA	NORSAR Array B	81.31	29	P	P	17 57 01.8	+0.9
	comp=Z,1.4nm,0.6s,baz=268,slow=5.3,SNR=4.8						
GERES	GERESS Array B	82.79	42	P	P	17 57 08.6	-0.4
	comp=Z,0.4nm,0.5s,baz=248,slow=1.1,SNR=2.6						
ARCES	ARCESS Array B	86.66	20	P	P	17 57 28.7	+0.9
	comp=Z,2.0nm,0.6s,baz=281,slow=3.7,SNR=14						
VNA3	Neumayer Olymp	88.14	163	P	P	17 57 34.2	-0.6
FINES	FINESS Array B	88.42	28	P	P	17 57 37.0	+0.7
	comp=Z,4.6nm,0.9s,baz=232,slow=6.3,SNR=1.7						
VNA2	Neumayer--Watz	88.67	163	P	P	17 57 36.1	-1.2
	baz=306,slow=5.9						
ZALV	Zalesovo Beam	116.66	14	PKP	PKiKP	18 03 28.2	+0.5
	comp=Z,1.9nm,0.3s,baz=288,slow=2.0,SNR=16						
MKAR	Makanchi Array	122.31	20	PKP	PKiKP	18 03 39.0	0.0
	comp=Z,0.8nm,0.3s,baz=314,slow=2.3,SNR=31						
SONM	Songino Array	125.59	0	PKP	PKiKP	18 03 46.3	+0.6
	comp=Z,0.9nm,0.5s,baz=292,slow=1.3,SNR=12						
STKA	Stephens Creek	139.19	228	PKP	PKPdf	18 04 08.8	-2.3
	comp=Z,1.8nm,0.6s,baz=39,slow=4.3,SNR=4.2						
CD2	Chengdu	142.37	4	PKP	PKPdf	18 04 13.3	-3.6
SHL	Shillong	144.64	24	PKPdf	PKPab	18 04 19.6	-0.6
AS31	Alice Springs	149.15	234		PKPdf	18 04 28.8	+0.2
AS31				PKPab	PKPbc	18 04 32.7	-0.3
ASAR	Alice Springs	149.16	234	PKP	PKPdf	18 04 29.0	+0.3
	comp=Z,9.5nm,0.6s,baz=117,slow=2.2,SNR=105						
ASAR				PKPbc	PKPbc	18 04 32.8	-0.2
	comp=Z,10nm,0.5s,baz=119,slow=3.6,SNR=60						
ASAR	Alice Springs	149.16	234	PKPdf	PKPdf	18 04 24.7	-3.9
ASAR				PKPbc	PKPdf	18 04 28.9	+0.3
ASAR				PKPab	PKiKP	18 04 32.4	-1.7
WR0	Warramunga Arr	150.20	241		PKPbc	18 04 35.3	-0.3
WB2	Warramunga Arr	150.38	241		PKPbc	18 04 35.7	-0.3
WRA	Warramunga Arr	150.39	241	PKP	PKPdf	18 04 31.1	+0.5
	comp=Z,10nm,0.5s,baz=108,slow=2.8,SNR=107						
WRA				PKPbc	PKPbc	18 04 35.8	-0.2
	comp=Z,10nm,0.4s,baz=109,slow=2.7,SNR=51						
CMAR	Chiang Mai Arr	153.68	17	PKP	PKPdf	18 04 36.8	+1.2
	comp=Z,0.4nm,0.5s,baz=276,slow=1.4,SNR=4.4						
CMAR				PKPbc	PKiKP	18 04 44.0	+0.4
	comp=Z,1.1nm,0.4s,baz=312,slow=2.9,SNR=11						
FITZ	Fitzroy Crossi	158.60	237	PKPab	PKPab	18 05 17.8	-0.1
	comp=Z,2.8nm,0.7s,baz=117,slow=2.8,SNR=5.8						

IDC ***28*** *17:54:08.3±2.6, 5°.54S×130°.76E, h47^{km}±37^{km}, mb3.3/1, mb1 3.7/5, mb1mx3.3/27, mbtmp3.7/5, ML3.8/4 Error ellipse: s-maj=79.9km s-min=23.6km az=88.0*

DJA ***28*** *17:54:12.0±0.4, 5°S±2°×13°1E±°, h74^{km}±24^{km}, M4.2/12, mb4.4/3, mB4.9/3, MLv4.1/12, Mw(mB)4.2/3*

ISC 28 17:54:09.9±0.9, **5°.41S**±0°.04×**131°.33E**±0°.06, **h100**^{km}, **n19**, σ**2^{s}.99**/26, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.67	302	P	Pn	17 54 42.1	+3.8
SAUI	Saumlaki	2.56	181	P	Pn	17 54 52.9	+3.1
SAUI				S	Sn	17 55 21.4	+1.0
SAUI	Saumlaki	2.56	181	P	Pn	17 54 53.1	+3.3
FAKI	Fak Fak	2.64	20	P	Pn	17 54 53.5	+2.6
FAKI				S	Sn	17 55 23.6	+1.2
FAKI	Fak Fak	2.64	20	P	Pn	17 54 54.0	+3.1
MSAI	Masohi	3.15	310	P	Pn	17 54 58.9	+1.2
MSAI				S	Sn	17 55 33.7	-0.9
AAI	Ambon	3.56	299	P	Pn	17 55 04.9	+1.7
AAI				S	Sn	17 55 45.0	+0.5
SIJI	Sorong	4.51	359	P	Pn	17 55 16.9	+0.9
	5.0nm,0.3s,baz=51,slow=17,SNR=45						
SIJI				S	Sn	17 56 04.5	-3.0
	4.0nm,0.3s,baz=210,slow=22,SNR=5.0						
SWI	Sorong	4.52	359	P	Pn	17 55 17.9	+1.8
SWI				S	Sn	17 56 02.0	-5.5
LBMI	Labuha	6.09	321	P	Pn	17 55 39.7	+2.2
	0.1nm14nm,1.0s						
SANI	Sanana	6.29	302	P	Pn	17 55 41.7	+1.5
	0.1nm575nm21nm,0.4s						
SANI	Sanana	6.29	302	P	Pn	17 55 42.0	+1.8
DRS	Darwin Rock St	6.99	183	P	Pn	17 55 50.7	+1.0
KDU	Kakadu	7.32	171	P	Pn	17 55 54.9	+0.7
MTN	Manton Dam	7.39	181	P	Pn	17 55 56.6	+1.4
FITZ	Fitzroy Crossi	13.78	203	P	Pn	17 57 17.8	-3.3
	0.2nm,0.3s,baz=16,slow=7.9,SNR=14						
FITZ				S	Sn	17 59 40.7	-12
	0.5nm,0.3s,baz=213,slow=20,SNR=7.4						
WRA	Warramunga Arr	14.74	169	P	Pn	17 57 32.2	-1.2
	0.6nm,0.3s,baz=350,slow=14,SNR=46						
WRA				S	Sn	18 00 06.5	-10
	0.5nm,0.3s,baz=1.4,slow=22,SNR=7.7						
ASAR	Alice Springs	18.32	172	P	Pn	17 58 18.9	+1.2
	0.3nm,0.3s,baz=350,slow=8.5,SNR=28						
ASAR				S	S	18 01 32.5	-8.3
	0.1nm,0.3s,baz=355,slow=26,SNR=4.8						
MKAR	Makanchi Array	67.64	326	P	P	18 04 58.9	+2.6
	0.2nm,0.3s,baz=114,slow=7.9,SNR=4.8						

IDC ***28*** *17:58:49.4±7.2, 6°.93N×73°.12W, h161^{km}±48^{km}, mb3.3/1, mb1 3.5/2, mb1mx3.0/23, mbtmp3.7/2, Error ellipse: s-maj=88.5km s-min=54.0km az=57.0*

RSNC ***28*** *17:58:50.8±1.2, 6°.80N×73°.15W, h146^{km}±5^{km}, ML3.2, Mw3.6, Fault plane solution: NP1:φ$_s$0.00000°, δ28.00000°, λ-142.00000°.*

ISC 28 17:58:48.9±1.0, **6°.85N**±0°.03×**73°.12W**±0°.04, **h157**^{km}±7^{km}, **n27**, σ**1^{s}.16**/51, **3C-3D**, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.27	194	⇓*i*P	Pn	17 59 10.7	+0.2
BARC				*e*S	Sn	17 59 25.7	-1.4
BARC				*i*		17 59 26.8	
	comp=Z,385nm,0.3s						
PAMC	Pamplona, Colo	0.64	40	⇓*i*P	Pn	17 59 13.5	+1.1
PAMC				*e*S	Sn	17 59 30.6	+0.3
PAMC				*i*		17 59 32.7	
	comp=Z,297nm,0.6s						
BRRC	Barranca, Sant	0.64	293	⇓*i*P	Pn	17 59 12.6	+0.8
BRRC				*e*S	Sn	17 59 29.4	0.0
BRRC				*i*		17 59 34.1	
	comp=Z,158nm,0.1s						
RUSC	La Rusia	0.95	178	*e*P	Pn	17 59 14.6	0.0
RUSC				*e*S	Sn	17 59 32.4	-1.9
RUSC				*i*		17 59 34.1	
	comp=Z,224nm,0.3s						
PTBC	PUERTO BERRIO,	1.37	257	*e*P	Pn	17 59 17.4	-0.3
PTBC				*e*S	Sn	17 59 38.0	-1.8
PTBC				*i*		17 59 43.8	
	comp=Z,164nm,0.2s						
TAMC	Tame, Arauca	1.38	107	⇑*i*P	Pn	17 59 18.9	+1.0
TAMC				*e*S	Sn	17 59 40.1	+0.1
TAMC				*i*		17 59 41.4	
	comp=Z,94nm,0.3s						
OCAC	Ocana	1.39	352	*e*P	Pn	17 59 19.1	+0.9
OCAC				*e*S	Sn	17 59 40.8	+0.2
OCAC				*i*		17 59 45.5	
	comp=Z,533nm,0.2s						
SPBC	San Pablo de B	1.52	219	*e*P	Pn	17 59 19.6	+0.2
SPBC				*e*S	Sn	17 59 41.5	-1.3
SPBC				*i*		17 59 48.2	
	comp=Z,215nm,0.5s						
ZARC	Zaragoza, Cauc	1.84	290	*e*P	Pn	17 59 23.2	+0.5
ZARC				*e*S	Sn	17 59 49.4	+0.7
ZARC				*i*		17 59 55.1	
	comp=Z,228nm,0.5s						
SMLC	San Martn de	2.16	334	*e*P	Pn	17 59 27.0	+0.7
SMLC				*e*S	Sn	17 59 55.1	-0.1
SMLC				*i*		17 59 58.2	
	comp=Z,133nm,0.2s						
NORC	Norcasia	2.16	234	*e*P	Pn	17 59 26.8	+0.3
NORC				*e*S	Sn	17 59 54.5	-0.9
NORC				*i*		17 59 57.8	
	comp=Z,128nm,0.3s						
ROSC	El Rosal	2.33	211	P	Pn	17 59 30.2	+1.5
	comp=Z,20nm,0.3s,baz=61,slow=23,SNR=8.1						
ROSC				S	Sn	18 00 02.2	+2.7
	comp=Z,47nm,0.3s,baz=195,slow=21,SNR=14						
HELC	Santa Helena	2.49	255	*e*P	Pn	17 59 32.4	+1.8

HELC				eS	Sn	18 00 02.4	-0.4
HELC				i		18 00 09.5	
	comp=Z,145nm,0.3s						
UREC	San Jos de Ur	2.56	291	eP	Pn	17 59 31.0	-0.1
UREC				eS	Sn	18 00 00.7	-3.1
UREC				i		18 00 15.6	
	comp=Z,118nm,0.2s						
GUY2C	Guyana, Caldas	2.76	234	eP	Pn	17 59 35.1	+1.1
GUY2C				eS	Sn	18 00 09.2	+0.3
GUY2C				i		18 00 18.3	
	comp=Z,69nm,0.4s						
VILC	Villavicencio,	2.78	192	eP	Pn	17 59 34.1	+0.1
VILC				eS	Sn	18 00 08.1	-0.8
PTGC	Puerto Gaitan,	2.81	160⇑	eP	Pn	17 59 33.7	-0.5
PTGC				eS	Sn	18 00 06.5	-2.9
PTGC				i		18 00 08.6	
	comp=Z,79nm,0.4s						
CBOC	Ciudad Bolivar	3.04	251	eP	Pn	17 59 38.5	+1.3
CBOC				eS	Sn	18 00 14.5	-0.2
CBOC				i		18 00 18.5	
	comp=Z,38nm,0.6s						
DBBC	Dabeiba	3.08	273	eP	Pn	17 59 38.6	+1.0
DBBC				eS	Sn	18 00 14.4	-0.9
MOTC	Monteria, Cord	3.17	307	eP	Pn	17 59 38.2	-0.5
MOTC				eS	Sn	18 00 16.5	-0.8
MOTC				i		18 00 33.1	
	comp=Z,60nm,0.4s						
PRAC	Prado	3.58	210	eP	Pn	17 59 44.3	+0.2
PRAC				eS	Sn	18 00 26.0	-0.8
PRAC				i		18 00 32.1	
	comp=Z,52nm,0.2s						
ORTC	Ortega, Tolima	3.61	216	eP	Pn	17 59 44.9	+0.5
ORTC				eS	Sn	18 00 28.3	+0.8
ORTC				i		18 00 34.9	
	comp=Z,58nm,0.3s						
SJCC	San Jacinto, C	3.65	326	eP	Pn	17 59 44.8	-0.2
SJCC				eS	Sn	18 00 26.3	-2.2
SJCC				i		18 00 30.9	
	comp=Z,69nm,0.5s						
PLMC	San Jos del P	3.70	239⇑	eP	Pn	17 59 46.6	+1.1
PLMC				eS	Sn	18 00 28.3	-1.2
PLMC				i		18 00 32.9	
	comp=Z,47nm,0.3s						
LPAZ	La Paz	23.51	168	P	P	18 03 46.3	+0.8
	comp=Z,1.6nm,0.7s,baz=0.0,slow=6.1,SNR=2.4						
ASAR	Alice Springs	149.13	234	PKPbc	PKPbc	18 18 19.5	-0.1
	comp=Z,0.1nm,0.5s,baz=113,slow=3.2,SNR=4.6						
WRA	Warramunga Arr	150.35	241	PKPbc	PKPbc	18 18 22.3	-0.4
	comp=Z,0.2nm,0.4s,baz=109,slow=2.8,SNR=5.9						

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*IDC **28** 18:07:48.5±2.6, 3°.58N×95°.35E, h0km, mb3.4/3, mb1 3.5/5, mb1mx3.2/51, mbtmp3.3/5, ML3.3/2, Error ellipse: s-maj=80.8km s-min=27.9km az=56.0*
*DJA **28** 18:07:52.0±1.2, 5°N±3°×9°6E±°, h11km±3km, M3.4/6, MLv3.4/6*
ISC 28 18:07:54.0±1.1, **4°.50N**±0°.05×**96°.44E**±0°.08, **h10**km, **n13**, σ1s.29/14, **mb3.5**/3, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MLSI	Meulaboh, Aceh	0.23	188	P	Pb	18 07 59.1	+0.3
MLSI				S	Sb	18 08 03.3	+1.3
LHMI	Lhok Sumawe	0.89	35	P	Pg	18 08 10.8	-0.2
LHMI				S	Sb	18 08 24.6	+1.3
TPTI		1.44	149	P	Pn	18 08 19.1	-1.0
TPTI				S	Sn	18 08 38.7	-0.3
KCSI	Kotacane, Aceh	1.65	126	P	Pn	18 08 23.2	+0.2
KCSI				S	Sb	18 08 46.8	+1.5
TSI	Tuntungan	2.34	115	P	Pn	18 08 34.2	+1.7
PSI	Prapat	3.00	124	Pn	Pb	18 08 46.1	-1.5
	1.5nm,0.3s,baz=320,slow=18,SNR=5.1						
PSI				Sn	Sb	18 09 26.2	+1.9
	1.6nm,0.3s,baz=46,slow=5.5,SNR=4.6						
CMAR	Chiang Mai Arr	14.09	10	Pn	P	18 11 26.3	+4.8
	0.1nm,0.3s,baz=202,slow=12,SNR=5.2						
H08S2	Diego Garcia H	26.77	243	T	T	18 40 54.8	
	baz=67						
H08S3	Diego Garcia H	26.77	243	T	T	18 40 56.5	
	baz=67						
H08S1	Diego Carcia H	26.78	243	T	T	18 40 47.2	
	baz=67						
MKAR	Makanchi Array	43.88	346	P	P	18 16 01.2	+0.6
	0.9nm,1.0s,baz=165,slow=9.9,SNR=3.0						
WRA	Warramunga Arr	44.47	124	P	P	18 16 04.6	-1.1
	0.3nm,0.5s,baz=301,slow=9.2,SNR=3.8						
ASAR	Alice Springs	46.02	129	P	P	18 16 16.8	-1.2
	0.2nm,0.5s,baz=300,slow=7.7,SNR=5.2						

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*NEIC **28** 18:20:18.1±2.3, 17°.18N±0°.07×96°.72W±0°.02, h52km±5km, mb4.5/243, Md4.6/25(MEX), Error ellipse: s-maj=9.6km s-min=2.2km az=179.0*
*IDC **28** 18:20:19.8±0.9, 17°.07N×96°.75W, h63km±7km, mb3.9/12, mb1 4.0/16, mb1mx3.8/45, mbtmp4.1/16, MS3.1/3, Ms1 3.1/3, ms1mx2.9/27, Error ellipse: s-maj=17.6km s-min=8.1km az=23.0*
*MEX **28** 18:20:19.4±0.8, 17°.03N×96°.82W, h67km±3km, MD4.6*
ISC 28 18:20:18.3±0.5, **17°.08N**±0°.04×**96°.79W**±0°.04, **h61**km±4km, **n317**, σ1s.**53**/315, **mb4.5**/92, **Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VHO	Vista Hermosa	0.05	94	eP	Pn	18 20 28.0	+0.4
VHO				eS	Sn	18 20 34.9	+0.5
OXBJ	Oaxaca	0.06	98		Pn	18 20 27.7	0.0
OXBJ					Sn	18 20 34.8	+0.4
OXBJ	Oaxaca	0.06	98	eP	Pn	18 20 27.7	0.0
OXBJ				eS	Sn	18 20 34.8	+0.4
YOIG	Yosondua	0.76	253	eP	Pn	18 20 33.5	-0.1
YOIG				i S	Sn	18 20 44.5	-0.2
TXIG	Tlaxiaco	0.95	281	eP	Pn	18 20 36.0	-0.1
TXIG				eS	Sn	18 20 48.1	-1.0
TOIG	Toxpalan	1.05	346	eP	Pn	18 20 37.5	+0.3
PEIG	Puerto Escondi	1.13	198	eP	Pn	18 20 37.5	-0.6
HLIG	Huajuapan de L	1.22	308	eP	Pn	18 20 39.7	+0.2
TPIG	Tehuac#an	1.44	338		Pn	18 20 43.1	+0.6
TPIG	Tehuac#an	1.44	338	eP	Pn	18 20 43.1	+0.6
PNIG	Pinotepa	1.45	242		Pn	18 20 40.8	-1.6
PNIG	Pinotepa	1.45	242	eP	Pn	18 20 40.8	-1.6
HUIG	Huatulco	1.46	153		Pn	18 20 43.6	+1.2
HUIG	Huatulco	1.46	153	eP	Pn	18 20 43.6	+1.2
FTIG	Fresnillo de T	1.52	303	eP	Pn	18 20 43.7	+0.2
MGIG	Malinaltepec	1.77	275	eP	Pn	18 20 46.5	-0.3
CMIG	Matias Romero	1.82	89	P	Pn	18 20 48.1	+0.7
	71nm,0.3s,baz=259,slow=12,SNR=175						
CMIG				S	Sn	18 21 10.3	+0.8
	206nm,0.3s,baz=276,slow=10.0,SNR=8.4						
CMIG				LR	LR	18 21 41.9	
	comp=Z,344nm,20.1s,baz=236,slow=46						
CMIG	Matias Romero	1.82	89	eP	Pn	18 20 48.0	+0.7
TUIG	Tuzandepetl	2.45	67		Pn	18 20 56.8	+0.8
TUIG	Tuzandepetl	2.45	67	eP	Pn	18 20 56.8	+0.8
TGIG		3.52	94		Pn	18 21 13.0	+2.3
TGIG		3.52	94	eP	Pn	18 21 13.0	+2.3
PCIG		3.69	111		Pn	18 21 15.2	+2.4
PCIG		3.69	111	eP	Pn	18 21 15.2	+2.4
CCIG	Comitan	4.53	99		Pn	18 21 23.1	-1.5
CCIG	Comitan	4.53	99	eP	Pn	18 21 26.9	+2.4
MOIG	Morelia	4.91	302	Pn	Pn	18 21 30.0	+0.1
HUEH	Huehuetenango	5.37	108		Pn	18 21 36.2	0.0
APG	El Apazote	6.42	108	P	Pn	18 21 50.4	-0.2
	3.9nm,0.3s,baz=318,slow=12,SNR=25						
APG				S	Sn	18 23 00.4	-2.2
	11nm,0.3s,baz=328,slow=0.9,SNR=7.3						
PETF	Flores	6.63	90		Pn	18 21 53.1	0.0
MTO3	Montecristo	7.63	109		Pn	18 22 07.5	+0.3
ZAIG	Zacatecas	7.85	317	Pn	Pn	18 22 12.2	+2.1
SNET	Serv Nac Est T	8.03	114	Pn	Pn	18 22 12.3	-0.1
TGUH	Tegucigalpa,Un	9.65	107	Pn	Pn	18 22 33.9	-0.8
CRIN	San Cristobal	10.37	113	Pn	Pn	18 22 46.1	+1.7
ACON	Acoyapa	12.34	113	Pn	Pn	18 23 11.2	-0.1
HZTE	Horizontes, Gu	12.57	119	Pn	Pn	18 23 14.4	-0.1
JTS	Las Juntas de	13.33	119	P	P	18 23 27.4	-5.1
	2.0nm,0.3s,baz=171,slow=24,SNR=4.5						
JTS				LR	LR	18 27 38.2	
	comp=Z,51nm,19.9s,baz=356,slow=33						
JTS	Las Juntas de	13.33	119		Pn	18 23 24.4	-0.4
CAO2	Cobano, Puntar	13.53	121	Pn	Pn	18 23 28.4	+0.9
JCT	Junction City	13.62	349	Pn	Pn	18 23 28.3	-0.4
435B	Jarrell	13.66	357		Pn	18 23 28.9	-0.3
TXAR	Lajitas Array	13.73	334	P	Pn	18 23 32.9	+2.6
	0.0nm,0.3s,baz=154,slow=15,SNR=5.5						
TXAR				LR	LR	18 29 04.4	
	comp=Z,46nm,21.0s,baz=0.0,slow=38						
TXAR	Lajitas Array	13.73	334		Pn	18 23 27.7	-2.5
TX31	Lajitas Ar. Si	13.74	334	Pn	Pn	18 23 28.8	-1.5
TX32	Lajitas Array	13.74	334		Pn	18 23 29.1	-1.2
JACO	JACO, Garabito	13.91	120	Pn	Pn	18 23 31.9	-0.7
SOR	Soroa	14.15	64	Pn	Pn	18 23 32.5	-3.2
RIMA	Rio Macho	14.52	118	P	Pn	18 23 40.5	-0.2
NATX	Nacogdoches	14.75	7	Pn	Pn	18 23 41.7	-1.8
342A	Flagon Creek P	14.80	15	Pn	Pn	18 23 40.9	-3.3
WHTX	Lake Whitney,	14.86	358	Pn	Pn	18 23 41.9	-3.0
PEZE	Perez Zeledon,	14.87	119	Pn	Pn	18 23 44.1	-1.2
237A	Washetta, Mont	14.89	3	Pn	Pn	18 23 43.0	-2.2
SRBA	San Rafael, Bu	15.22	119	P	P	18 23 51.1	-2.4
DRK0	Durika	15.30	119	P	Pn	18 23 50.5	-0.3
ABTX	Abilene, Hawle	15.69	351	Pn	Pn	18 23 54.3	-1.4
346A	Big Creek Wild	15.73	24	Pn	Pn	18 23 52.1	-3.9
346A				IAmb	IAmb	18 24 29.6	
	comp=Z,49nm,0.8s						
Z35A	Perchaven, San	16.19	359	P	P	18 24 02.3	-1.8
Z35A				IAmb	IAmb	18 24 27.2	
	comp=Z,25nm,0.9s						
Z38A	Mt. Pleasant	16.20	5	P	Pn	18 24 01.2	-0.8
Z38A				IAmb	IAmb	18 24 08.0	
	comp=Z,30nm,0.7s						
143A	Socs Landing,	16.30	16	P	Pn	18 24 02.2	-1.0
143A				IAmb	IAmb	18 24 07.6	
	comp=Z,22nm,0.6s						
MNTX	Cornudas Mount	16.52	333		P	18 24 06.9	-0.8
LOOK	Love County	16.85	359		Pn	18 24 09.0	-1.1
LOOK				IAmb	IAmb	18 24 37.8	
	comp=Z,25nm,0.8s						
WLAR	White Oak Lake	16.87	11	P	Pn	18 24 08.7	-1.6
WLAR				IAmb	IAmb	18 24 53.0	
	comp=Z,26nm,0.8s						
553A	Crawfordville	17.26	39	P	Pn	18 24 12.1	-3.1
X34A	Smith Ranch, M	17.48	357		P	18 24 17.0	-1.3
X34A				IAmb	IAmb	18 24 56.2	
	comp=Z,40nm,1.2s						
X37A	Clayton	17.49	4		Pn	18 24 15.9	-2.0
MIAR	Mount Ida	17.63	9		P	18 24 19.1	-0.9
MIAR				IAmb	IAmb	18 24 22.2	
	comp=Z,38nm,0.8s						
250A	Grady	17.64	31	P	P	18 24 18.3	-1.8
250A				IAmb	IAmb	18 24 23.0	
	comp=Z,26nm,0.9s						
WMOK	Wichita Mounta	17.68	355	P	Pn	18 24 19.0	-1.3
X40A	Basin Creek Fa	17.70	11	P	Pn	18 24 18.4	-2.2
Z47A	Carrollton	17.88	24	P	Pn	18 24 20.1	-2.6
Z47A				IAmb	IAmb	18 24 55.3	
	comp=Z,46nm,1.2s						
656A	Willston	17.90	44	P	Pn	18 24 19.6	-3.5
Y45A	Yeager Farm, C	17.94	20	P	P	18 24 21.5	-1.9
Y45A				IAmb	IAmb	18 24 29.1	
	comp=Z,28nm,0.8s						
W39A	Magazine	18.25	8	P	P	18 24 24.7	-2.0
W39A				IAmb	IAmb	18 24 42.0	
	comp=Z,24nm,0.8s						
BCIP	Isla Barro Col	18.27	113	P	P	18 24 25.2	-2.0
BCIP				IAmb	IAmb	18 24 56.6	
	comp=Z,59nm,1.1s						
121A	Cookes Peak, D	18.32	329		P	18 24 27.8	0.0
OK025	Westminster Rd	18.44	359	P	P	18 24 26.7	-2.2
OK025				IAmb	IAmb	18 24 29.9	
	comp=Z,50nm,1.6s						
BCOK	Bluff Creek, N	18.52	358	P	Pn	18 24 29.1	-1.5
BCOK				IAmb	IAmb	18 24 55.0	
	comp=Z,29nm,0.7s						
WHAR	Wooly Hollow	18.58	12		Pn	18 24 30.4	-0.9
TIGA	Tifton	18.66	38	P	Pn	18 24 29.6	-2.7
TUL1	Leonard	18.78	3	P	P	18 24 30.9	-1.7
TUL1				IAmb	IAmb	18 24 33.2	
	comp=Z,28nm,0.6s						
OK031	S. Brethren Rd	18.80	360	P	P	18 24 31.0	-1.9
152A	Waverly Hall	18.97	33	P	P	18 24 32.7	-2.1
152A				IAmb	IAmb	18 24 59.0	
	comp=Z,27nm,1.1s						
QUOK	Quay	19.02	0		P	18 24 34.3	-0.9
456A	Hilliard	19.12	42	P	P	18 24 33.7	-2.7
BNM	Barren Site	19.16	334	P	P	18 24 36.7	-0.3
FCAR	Ozark Folk Cen	19.19	12	P	Pn	18 24 36.5	-2.0
FCAR				IAmb	IAmb	18 24 38.1	
	comp=Z,16nm,0.7s						
W45A	Hickory Valley	19.24	19	P	P	18 24 34.2	-3.5
W45A				IAmb	IAmb	18 24 59.4	
	comp=Z,32nm,1.1s						
Z51A	Franklin	19.26	31	P	P	18 24 36.5	-1.4
Z51A				IAmb	IAmb	18 25 02.3	
	comp=Z,15nm,0.4s						
HHAR	Hobbs	19.30	7	P	P	18 24 36.8	-1.5
LENM	Lemitar	19.32	334	P	P	18 24 39.1	+0.4
U32A	Winter Ranch,	19.33	355	P	P	18 24 37.0	-1.6
X48A	Hartselle	19.38	25	P	P	18 24 36.6	-2.6
CROK	Carrier	19.38	357		P	18 24 38.5	-0.7
CROK				IAmb	IAmb	18 25 04.3	
	comp=Z,26nm,0.7s						
U38A	Gravette	19.40	6	P	P	18 24 38.8	-0.6
PLAL	Pickwick Lake	19.46	22		P	18 24 37.4	-2.6
PLAL				IAmb	IAmb	18 24 40.8	
	comp=Z,18nm,0.6s						
U40A	Yellville	19.52	10	P	Pn	18 24 40.2	-2.3
U40A				IAmb	IAmb	18 24 42.2	
	comp=Z,24nm,0.7s						
LCAR	Lake Charles	19.57	14	P	P	18 24 40.4	-0.8
BLOK	Blackwell	19.61	359		P	18 24 40.5	-1.1
BLOK				IAmb	IAmb	18 24 43.9	
	comp=Z,58nm,1.4s						
255A	Hazlehurst	19.67	39	P	P	18 24 39.9	-2.4
GC02	Grant County #	19.72	357	P	P	18 24 41.4	-1.5
GNAR	Gosnell	19.75	16	P	P	18 24 40.2	-3.0
TUC	Tucson	19.76	323	P	Pn	18 24 45.6	+0.2
T35A	Sooner Cattle	19.76	1	P	P	18 24 41.5	-1.9
ANMO	Albuquerque	19.78	336	P	Pn	18 24 46.2	+0.4
	comp=Z,0.1nm,0.3s,baz=151,slow=11,SNR=7.7						
ANMO	Albuquerque	19.78	336	P	P	18 24 43.6	-0.1
KAN14	Manchester OK	19.83	357	P	P	18 24 41.9	-2.1
KAN14				IAmb	IAmb	18 24 47.0	
	comp=Z,16nm,0.6s						
KAN13	South Haven SW	19.87	358	P	P	18 24 42.6	-1.9
KAN13				IAmb	IAmb	18 25 06.0	
	comp=Z,21nm,0.7s						
HALT	Halls	19.89	18	P	P	18 24 43.2	-1.6
KAN17	Caldwell West	19.91	358	P	P	18 24 42.3	-2.6
KAN05	Bluff City Nor	19.98	357	P	P	18 24 45.0	-0.7
KAN01	Argonia South	20.02	358	P	P	18 24 44.2	-1.9
KAN01				IAmb	IAmb	18 25 09.0	
	comp=Z,13nm,0.6s						
LNXT	Lenox	20.03	17	P	P	18 24 43.9	-2.3
FPAL	Fort Paine	20.07	28		P	18 24 45.1	-1.6
FPAL				IAmb	IAmb	18 24 51.4	
	comp=Z,18nm,0.5s						
GOGA	Godfrey	20.21	34	P	P	18 24 46.7	-1.5
GOGA				IAmb	IAmb	18 24 48.5	
	comp=Z,24nm,0.9s						
GLAT	Glass	20.24	18	P	P	18 24 47.9	-0.6
Y52A	Lilburn	20.25	32	P	P	18 24 46.9	-1.8
Y52A				IAmb	IAmb	18 25 16.8	
	comp=Z,15nm,0.8s						
MGMO	Mountain Grove	20.39	10	P	P	18 24 49.9	-0.3
PBMO	Poplar Bluff	20.42	15	P	P	18 24 49.9	-0.5
PBMO				IAmb	IAmb	18 24 51.6	
	comp=Z,34nm,1.1s						
SWET	Sewanee	20.50	26	P	P	18 24 49.7	-1.7
T42A	Van Buren	20.50	13	P	P	18 24 50.1	-1.3
T42A				IAmb	IAmb	18 24 52.6	
	comp=Z,20nm,0.9s						
WVT	Waverly	20.58	21	P	P	18 24 51.0	-1.1
WVT				IAmb	IAmb	18 24 52.1	
	comp=Z,19nm,0.9s						
V48A	Smith Brothers	20.60	24	P	P	18 24 51.2	-1.2
V48A				IAmb	IAmb	18 24 52.5	
	comp=Z,11nm,0.6s						
W50A	Signal Mountai	20.75	27	P	P	18 24 52.1	-2.0
S39A	Bolivar	20.76	8	P	P	18 24 53.7	-0.4
S39A				IAmb	IAmb	18 24 55.7	
	comp=Z,24nm,0.8s						
X18A	Snowflake	21.00	328	P	P	18 24 54.8	-2.1
T25A	Trinidad	21.09	343	P	P	18 24 58.5	+0.7
T25A				IAmb	IAmb	18 25 25.2	
	comp=Z,25nm,1.1s						
CLTN	Cedars of Leba	21.09	24	P	P	18 24 56.3	-1.5
T45A	Paducah	21.13	18	P	P	18 24 56.6	-1.5
W52A	Murphy	21.30	30	P	P	18 24 58.0	-2.0
CPCT	Cooper Cave	21.32	29	P	P	18 24 58.0	-2.1
CPCT				IAmb	IAmb	18 25 03.0	
	comp=Z,20nm,0.5s						
R32A	Long Quarter,	21.33	356	P	P	18 24 60.0	-0.3
R32A				IAmb	IAmb	18 25 26.1	
	comp=Z,16nm,0.9s						
CCM	Cathedral Cave	21.46	12	P	P	18 25 00.0	-1.6
HODGE	Hodges	21.48	35	P	P	18 24 59.4	-2.5
HODGE				IAmb	IAmb	18 25 31.6	
	comp=Z,34nm,1.6s						
R40A	Maddies Statio	21.50	10	P	P	18 25 00.6	-1.5
FVM	French Village	21.57	14	P	P	18 25 00.4	-2.4
S44A	Carbondale	21.58	16	P	P	18 25 01.3	-1.6
S44A				IAmb	IAmb	18 25 22.7	
	comp=Z,14nm,0.7s						
T47A	Sharon Grove	21.60	21	P	P	18 25 01.2	-1.9
T47A				IAmb	IAmb	18 25 03.7	
	comp=Z,25nm,1.1s						
SIUC	Southern Illin	21.61	16	P	P	18 25 00.4	-2.8
SIUC				IAmb	IAmb	18 25 22.9	
	comp=Z,14nm,0.8s						
U49A	Red Boiling Sp	21.68	25	P	P	18 25 02.1	-1.8
U49A				IAmb	IAmb	18 25 03.8	
	comp=Z,19nm,0.6s						
V51A	Loudon	21.68	28	P	P	18 25 01.7	-2.3
V51A				IAmb	IAmb	18 25 06.1	
	comp=Z,22nm,0.6s						
X16A	Lo Mia Camp, P	21.69	326	P	P	18 25 05.3	+1.0
BG3	Lake Jocassee	21.71	32	P	P	18 25 02.5	-1.9
BG3				IAmb	IAmb	18 25 07.3	
	comp=Z,13nm,0.6s						
CBKS	Cedar Bluff	21.81	354	P	P	18 25 05.3	-0.1
CBKS				IAmb	IAmb	18 25 10.7	
	comp=Z,11nm,0.7s						
TKL	Tuckaleechee C	21.83	30	P	P	18 25 03.7	-1.9
	comp=Z,8.9nm,0.6s,baz=182,slow=9.9,SNR=18						
TKL	Tuckaleechee C	21.83	30	P	P	18 25 04.6	-1.0
TKL				IAmb	IAmb	18 25 08.1	
	comp=Z,12nm,0.7s						
KSU1	Kansas State U	21.95	0	P	P	18 25 07.0	+0.2
KSU1				IAmb	IAmb	18 25 26.9	
	comp=Z,15nm,0.8s						
SDCO	Great Sand Dun	21.97	341		P	18 25 07.2	-0.3
V52A	Sevierville	22.07	30	P	P	18 25 06.6	-1.6
V52A				IAmb	IAmb	18 25 09.7	
	comp=Z,9.3nm,0.7s						
SJCC	San Jacinto, C	22.18	106	P	P	18 25 09.9	+0.3
V53A	Saluda	22.31	31	P	P	18 25 09.2	-1.6
KSCO	Kaye Shedlock'	22.44	348	P	P	18 25 12.2	-0.2
KSCO				IAmb	IAmb	18 25 30.7	
	comp=Z,13nm,0.5s						
WUAZ	Wupatki	22.49	328	P	P	18 25 13.1	+0.1
T50A	Nancy	22.50	26	P	P	18 25 10.3	-2.5
T50A				IAmb	IAmb	18 25 13.7	
	comp=Z,32nm,1.6s						
MVCO	Mesa Verde	22.56	335		P	18 25 13.9	+0.2
P38A	Dawn	22.65	7	P	P	18 25 12.4	-1.9
P38A				IAmb	IAmb	18 25 30.5	
	comp=Z,13nm,0.7s						
TZTN	Tazewell	22.66	29	P	P	18 25 12.2	-2.4
TZTN				IAmb	IAmb	18 25 15.9	
	comp=Z,18nm,1.1s						
KMSC	Kings Mountain	22.67	35	P	P	18 25 12.3	-2.4
Y58A	Scranton	22.74	39	P	P	18 25 12.6	-2.8
GLA	Glamis	22.75	318	P	P	18 25 15.5	0.0
P40A	Paris	22.75	10	P	P	18 25 14.0	-1.5
P40A				IAmb	IAmb	18 25 55.4	
	comp=Z,12nm,0.8s						
Q44A	Meyer Farm, Va	22.78	16	P	P	18 25 14.3	-1.4
Q44A				IAmb	IAmb	18 25 47.5	
	comp=Z,33nm,1.1s						
OLIL	Olney	22.88	18	P	P	18 25 15.0	-1.7
OLIL				IAmb	IAmb	18 25 16.3	
	comp=Z,21nm,0.8s						
WCI	Wyandotte Cave	23.00	22	P	P	18 25 15.9	-2.0
WCI				IAmb	IAmb	18 25 18.4	
	comp=Z,18nm,0.8s						
CBOC	Ciudad Bolivar	23.18	116	eP	P	18 25 23.7	+3.5
V55A	Taylorsville	23.27	34	P	P	18 25 18.9	-1.7
V55A				IAmb	IAmb	18 25 20.9	
	comp=Z,13nm,0.7s						
P43A	Skaggs, Pawnee	23.36	14	P	P	18 25 19.7	-1.7
P43A				IAmb	IAmb	18 25 43.9	
	comp=Z,22nm,1.1s						
W57A	Gilead	23.42	37	P	P	18 25 20.1	-2.0
W57A				IAmb	IAmb	18 25 52.2	
	comp=Z,43nm,1.6s						
R49A	Shelbyville	23.46	23	P	P	18 25 20.3	-2.1
R49A				IAmb	IAmb	18 25 23.3	
	comp=Z,10nm,0.8s						
U54A	Nelsons Funny	23.47	31	P	P	18 25 20.4	-2.2
U54A				IAmb	IAmb	18 25 24.1	
	comp=Z,22nm,0.8s						
S51A	Beattyville	23.55	27	P	P	18 25 21.3	-1.9
S51A				IAmb	IAmb	18 25 23.3	
	comp=Z,10nm,0.8s						
N33A	J Bar K, Exete	23.59	359	P	P	18 25 23.9	+0.4
SMLC	San Martn de	23.60	108	eP	P	18 25 24.9	+0.9
U15A	North Rim	23.67	328	P	P	18 25 25.1	+0.4
N35A	Tabor	23.72	2	P	P	18 25 22.6	-2.2
N35A				IAmb	IAmb	18 25 36.3	
	comp=Z,20nm,0.9s						
SMCO	Snowmass	23.75	340	P	P	18 25 24.3	-1.1
BLO	Bloomington	23.77	20	P	P	18 25 23.6	-1.6
BLO				IAmb	IAmb	18 25 25.2	
	comp=Z,15nm,0.7s						
R50A	Paris	23.79	25	P	P	18 25 23.9	-1.5
R50A				IAmb	IAmb	18 25 25.5	
	comp=Z,36nm,1.6s						
N38A	Joes South For	23.83	7	P	P	18 25 24.6	-1.2
N38A				IAmb	IAmb	18 25 42.0	
	comp=Z,20nm,0.8s						
ISCO	Idaho Springs	23.91	343	P	P	18 25 27.0	+0.2
ISCO				IAmb	IAmb	18 25 44.9	
	comp=Z,25nm,1.6s						
P46A	Rosedale	23.96	18	P	P	18 25 25.5	-1.4
P46A				IAmb	IAmb	18 25 27.2	
	comp=Z,14nm,0.6s						
GUY2C	Guyana, Caldas	24.06	117	eP	P	18 25 32.3	+3.6
N41A	Harden Midland	24.10	11	P	P	18 25 26.6	-1.6
N41A				IAmb	IAmb	18 25 53.3	
	comp=Z,14nm,0.9s						
BGNE	Belgrade	24.28	358	P	P	18 25 30.2	+0.4
V58A	Windy Hill, Pi	24.38	37	P	P	18 25 29.3	-1.5
KNB	Kanab	24.39	328	P	P	18 25 31.8	+0.7
KNB				IAmb	IAmb	18 25 59.4	
	comp=Z,15nm,1.2s						
P48A	Milroy	24.40	22	P	P	18 25 29.1	-1.9
URIC	Uribia, Colomb	24.59	99	P	P	18 25 31.5	-1.4
URIC				IAmb	IAmb	18 25 36.8	
	comp=Z,27nm,1.3s						
SFIN	Lafayette	24.69	18	P	P	18 25 32.7	-0.8
SFIN				IAmb	IAmb	18 26 09.1	
	comp=Z,27nm,1.5s						
BLA	Blacksburg	24.71	33	P	P	18 25 31.5	-2.4
BLA				IAmb	IAmb	18 25 34.9	
	comp=Z,17nm,0.9s						
P49A	Miami Univ. Ec	24.72	23	P	P	18 25 32.1	-1.8
S54A	Dingess, Beckl	24.73	30	P	P	18 25 32.8	-1.2
S54A				IAmb	IAmb	18 26 14.0	
	comp=Z,18nm,1.2s						
Q51A	Peebles	24.82	26	P	P	18 25 32.7	-2.1
Q51A				IAmb	IAmb	18 25 36.5	
	comp=Z,16nm,0.7s						
R53A	Hurricane	24.85	29	P	P	18 25 34.4	-0.7
R53A				IAmb	IAmb	18 25 38.1	
	comp=Z,13nm,0.7s						
ORTC	Ortega, Tolima	24.86	119	eP	P	18 25 37.6	+2.2
MTPU	Mount Pierson	24.88	330	P	P	18 25 37.3	+1.6
SZCU	Shurtz Canyon	24.97	328	P	P	18 25 38.4	+2.0
SRU	San Rafael Swe	25.01	334	P	P	18 25 37.4	+0.6
Q16A	Castle Valley	25.13	333	P	P	18 25 38.6	+0.8
Q16A				IAmb	IAmb	18 26 07.0	
	comp=Z,11nm,0.8s						
T57A	Hurt	25.17	35	P	P	18 25 37.7	-0.3
T57A				IAmb	IAmb	18 25 38.8	
	comp=Z,7.8nm,0.6s						
Q52A	Bidwell	25.23	27	P	P	18 25 37.0	-1.5
SHPR	Sheep Range	25.28	324	P	P	18 25 40.8	+1.6
P51A	Williamsport	25.32	25	P	P	18 25 38.2	-1.2
P18A	Preston Nutter	25.34	335	P	P	18 25 40.4	+0.6
P18A				IAmb	IAmb	18 26 09.1	
	comp=Z,15nm,1.0s						

L40A	**Anamosa**	**25.36**	**10**	P	**P**	**18 25 39.9**	**+0.3**
L40A				IAmb	IAmb	18 25 40.6	
	comp=Z,8.9nm,0.7s						
M44A	**Midewin, Midew**	**25.37**	**15**	P	**P**	**18 25 40.2**	**+0.5**
P17A	**Butcher Ranch,**	**25.41**	**334**		**P**	**18 25 40.8**	**+0.5**
P17A				IAmb	IAmb	18 26 08.8	
	comp=Z,13nm,1.2s						
PAMC	**Pamplona, Colo**	**25.43**	**109**	*e*P	**P**	**18 25 44.6**	**+3.5**
O49A	**Covington**	**25.44**	**23**	P	**P**	**18 25 39.1**	**-1.2**
TMUT	**Trail Mountain**	**25.46**	**333**	P	**P**	**18 25 41.2**	**+0.3**
N47A	**Urbana**	**25.58**	**20**	P	**P**	**18 25 40.0**	**-1.7**
R55A	**Marlinton**	**25.69**	**31**	P	**P**	**18 25 40.3**	**-2.4**
R55A				IAmb	IAmb	18 25 45.1	
	comp=Z,17nm,0.7s						
K38A	**Parkersburg**	**25.72**	**7**	P	**P**	**18 25 41.4**	**-1.5**
RUSC	**La Rusia**	**25.72**	**113**	*e*P	**P**	**18 25 46.5**	**+2.8**
P52A	**Corning**	**25.84**	**27**	P	**P**	**18 25 43.0**	**-1.1**
Q54A	**Coxs Mills**	**25.90**	**29**	P	**P**	**18 25 44.4**	**-0.2**
Q54A				IAmb	IAmb	18 25 47.4	
	comp=Z,12nm,0.7s						
S57A	**Dark Hollow, R**	**25.90**	**34**	P	**P**	**18 25 44.1**	**-0.4**
S57A				IAmb	IAmb	18 25 45.7	
	comp=Z,9.8nm,0.8s						
ACSO	**Alum Creek Sta**	**25.99**	**25**	P	**P**	**18 25 42.8**	**-2.6**
ACSO				IAmb	IAmb	18 25 46.2	
	comp=Z,18nm,0.8s						
P53A	**Whipple**	**26.05**	**28**	P	**P**	**18 25 45.0**	**-0.9**
PSUT	**Pine Spring**	**26.08**	**328**	P	**P**	**18 25 46.7**	**+0.2**
T59A	**Double "B" Far**	**26.10**	**37**	P	**P**	**18 25 45.2**	**-1.2**
T59A				IAmb	IAmb	18 25 47.7	
	comp=Z,28nm,1.6s						
RWWY	**Rawlins**	**26.11**	**342**	P	**P**	**18 25 46.9**	**+0.2**
RWWY				IAmb	IAmb	18 26 16.4	
	comp=Z,16nm,0.9s						
N49A	**Columbus Grove**	**26.14**	**22**	P	**P**	**18 25 45.0**	**-1.6**
N49A				IAmb	IAmb	18 25 48.2	
	comp=Z,19nm,1.1s						
JFWS	**Jewell Farm**	**26.35**	**11**	P	**P**	**18 25 47.8**	**-0.8**
JFWS				IAmb	IAmb	18 26 05.8	
	comp=Z,16nm,0.8s						
O52A	**Adamsville**	**26.37**	**26**	P	**P**	**18 25 46.7**	**-2.1**
NLU	**North Lily Min**	**26.38**	**333**	P	**P**	**18 25 49.8**	**+0.7**
JSRW	**J. Sargeant Re**	**26.43**	**35**	P	**P**	**18 25 46.9**	**-2.4**
K43A	**Burlington**	**26.55**	**14**	P	**P**	**18 25 48.7**	**-1.6**
ECSD	**EROS Data Cent**	**26.57**	**0**		**P**	**18 25 49.8**	**-0.8**
JLU	**Jordanelle**	**26.65**	**335**	P	**P**	**18 25 52.2**	**+0.5**
SPR3	**Spring Creek 3**	**26.68**	**328**	P	**P**	**18 25 52.9**	**+0.9**
SDV	**Santo Domingo**	**26.73**	**104**	P	**P**	**18 25 54.4**	**+1.9**
	comp=Z,4.6nm,0.3s,baz=298,slow=9.8,SNR=5.9						
SDV	**Santo Domingo**	**26.73**	**104**	P	**P**	**18 25 53.4**	**+0.8**
SDV				IAmb	IAmb	18 25 57.5	
	comp=Z,7.9nm,0.6s						
SOCV	**Socops**	**26.74**	**106**	*e*P	**P**	**18 25 51.6**	**-0.8**
O53A	**New Philadelph**	**26.75**	**27**	P	**P**	**18 25 50.4**	**-1.9**
O53A				IAmb	IAmb	18 25 52.8	
	comp=Z,32nm,1.4s						
MCWV	**Mont Chateau**	**26.90**	**30**	P	**P**	**18 25 50.9**	**-2.7**
MCWV				IAmb	IAmb	18 25 54.2	
	comp=Z,9.6nm,0.6s						
L48A	**N Adams**	**26.95**	**21**	P	**P**	**18 25 52.1**	**-2.0**
L48A				IAmb	IAmb	18 25 53.7	
	comp=Z,16nm,0.7s						
I37A	**Lemond, Waseca**	**27.01**	**5**	P	**P**	**18 25 54.0**	**-0.5**
I37A				IAmb	IAmb	18 25 57.0	
	comp=Z,12nm,0.6s						
O54A	**Avella**	**27.07**	**28**	P	**P**	**18 25 53.9**	**-1.2**
O54A				IAmb	IAmb	18 25 56.1	
	comp=Z,20nm,1.1s						
TCUT	**Toone Canyon**	**27.07**	**335**	P	**P**	**18 25 55.4**	**-0.1**
TCUT				IAmb	IAmb	18 26 24.3	
	comp=Z,14nm,0.8s						
I40A	**Norwalk**	**27.24**	**10**	P	**P**	**18 25 56.1**	**-0.4**
I40A				IAmb	IAmb	18 26 01.1	
	comp=Z,12nm,1.1s						
N53A	**Lisbon**	**27.37**	**27**	P	**P**	**18 25 56.3**	**-1.5**
AAM	**Ann Arbor**	**27.54**	**21**	P	**P**	**18 25 57.5**	**-1.7**
AAM				IAmb	IAmb	18 26 38.7	
	comp=Z,16nm,1.0s						
I42A	**Draeger Farm,**	**27.55**	**12**	P	**P**	**18 25 57.2**	**-2.1**
I42A				IAmb	IAmb	18 26 22.8	
	comp=Z,11nm,0.9s						
RSSD	**Black Hills**	**27.65**	**349**	P	**P**	**18 26 00.8**	**+0.3**
P57A	**Homestead Farm**	**27.67**	**32**	P	**P**	**18 25 59.5**	**-1.0**
P57A				IAmb	IAmb	18 26 43.8	
	comp=Z,19nm,1.4s						
PDAR	**Pinedale Array**	**27.83**	**340**	P	**P**	**18 26 05.3**	**+3.2**
	comp=Z,0.4nm,0.7s,baz=146,slow=12,SNR=4.2						
N54A	**Moraine State**	**27.87**	**28**	P	**P**	**18 26 02.1**	**-0.1**
M53A	**WI Miller and**	**27.96**	**26**	P	**P**	**18 26 02.3**	**-0.7**
O56A	**Blue Knob Stat**	**27.99**	**31**	P	**P**	**18 26 01.1**	**-2.3**
O56A				IAmb	IAmb	18 26 33.9	
	comp=Z,24nm,1.4s						
HVU	**Hansel Valley**	**28.18**	**334**	P	**P**	**18 26 04.7**	**-0.6**
SDMD	**Soldier's Deli**	**28.23**	**34**	P	**P**	**18 26 04.1**	**-1.4**
SPMN	**Marine on St.**	**28.26**	**6**	P	**P**	**18 26 04.8**	**-0.9**
SPMN				IAmb	IAmb	18 26 09.4	
	comp=Z,9.3nm,0.5s						
M54A	**Oil Creek Stat**	**28.45**	**28**	P	**P**	**18 26 05.6**	**-1.9**
ELK	**Elko**	**28.46**	**330**	P	**P**	**18 26 09.7**	**+1.9**
	comp=Z,1.5nm,0.8s,baz=146,slow=5.0,SNR=6.4						
SSPA	**Standing Stone**	**28.60**	**31**	P	**P**	**18 26 06.0**	**-2.7**
SSPA				IAmb	IAmb	18 26 42.2	
	comp=Z,20nm,1.5s						
KVN	**Kaiserville**	**28.72**	**324**	P	**P**	**18 26 10.8**	**+0.6**
REDW	**Red Top Meadow**	**28.80**	**338**	P	**P**	**18 26 11.8**	**+1.0**
LOHW	**Long Hollow**	**28.93**	**339**	P	**P**	**18 26 12.7**	**+0.8**
MOOW	**Moose Ponds**	**29.10**	**339**	P	**P**	**18 26 13.8**	**+0.4**
N58A	**Sunbury**	**29.34**	**32**	P	**P**	**18 26 13.5**	**-1.8**
N58A				IAmb	IAmb	18 26 26.6	
	comp=Z,12nm,1.2s						
CBYP	**Canovanas**	**29.48**	**83**	P	**P**	**18 26 16.3**	**-0.6**
COWI	**Conover**	**29.63**	**11**	P	**P**	**18 26 17.9**	**0.0**
WVNY	**West Valley, N**	**29.65**	**28**	P	**P**	**18 26 16.6**	**-1.5**
N59A	**State Game Lan**	**29.89**	**33**	P	**P**	**18 26 19.7**	**-0.5**
N59A				IAmb	IAmb	18 26 56.4	
	comp=Z,23nm,1.6s						
L56A	**Greenwood**	**29.91**	**29**	P	**P**	**18 26 20.3**	**-0.2**
L56A				IAmb	IAmb	18 26 21.1	
	comp=Z,11nm,0.9s						
MMNY	**Mt. Morris Dam**	**30.22**	**28**	P	**P**	**18 26 22.0**	**-1.0**
MEDO	**Medina**	**30.32**	**27**	P	**P**	**18 26 22.3**	**-1.7**
HLID	**Hailey**	**30.34**	**334**		**P**	**18 26 26.2**	**+1.9**
BRNJ	**Basking Ridge**	**30.36**	**35**	P	**P**	**18 26 24.6**	**+0.2**
CDVI	**St. Croix**	**30.55**	**84**	P	**P**	**18 26 27.2**	**+1.0**
J55A	**Hilton**	**30.68**	**28**	P	**P**	**18 26 26.6**	**-0.6**
BINY	**Binghamton**	**30.72**	**31**	P	**P**	**18 26 27.1**	**-0.5**
TRNY	**Table Rock, Ra**	**30.87**	**34**	P	**P**	**18 26 28.6**	**-0.2**
TRNY				IAmb	IAmb	18 27 00.6	
	comp=Z,10nm,1.1s						
AGMN	**Agassiz Nation**	**31.15**	**1**	P	**P**	**18 26 31.3**	**+0.1**
AGMN				IAmb	IAmb	18 26 47.3	
	comp=Z,12nm,0.7s						
DLMT	**Dillon**	**31.15**	**338**	P	**P**	**18 26 32.5**	**+1.0**
L59A	**Walton**	**31.18**	**32**	P	**P**	**18 26 31.1**	**-0.6**
L59A				IAmb	IAmb	18 27 12.5	
	comp=Z,22nm,1.4s						
SADO	**Sadowa**	**31.34**	**25**	P	**P**	**18 26 32.4**	**-0.5**
SADO				IAmb	IAmb	18 26 46.7	
	comp=Z,20nm,1.5s						
PECO	**Prince Edward**	**31.57**	**28**	P	**P**	**18 26 34.3**	**-0.7**
J57A	**Williamstown**	**31.63**	**30**	P	**P**	**18 26 34.3**	**-1.2**
DELO	**Deloro Mine**	**31.77**	**27**	P	**P**	**18 26 35.1**	**-1.5**
J58A	**Remsen**	**31.93**	**30**	P	**P**	**18 26 37.9**	**-0.3**
J59A	**Piesco**	**32.39**	**31**	P	**P**	**18 26 41.3**	**-0.9**
PLVO	**Plevna**	**32.41**	**26**	P	**P**	**18 26 41.5**	**-0.8**
NCB	**Newcomb**	**32.90**	**31**	P	**P**	**18 26 45.3**	**-1.3**
NCB				IAmb	IAmb	18 26 47.5	
	comp=Z,9.5nm,0.8s						
ULM	**Lac du Bonnet**	**33.10**	**1**	P	**P**	**18 26 48.7**	**+0.4**
	comp=Z,2.8nm,0.9s,baz=241,slow=8.0,SNR=2.2						
ULM	**Lac du Bonnet**	**33.10**	**1**	IAmb	IAmb	18 27 12.2	
	comp=Z,6.6nm,1.0s						
YBH	**Yreka Blue Hor**	**33.13**	**323**	LR	LR	18 40 47.9	
	comp=Z,114nm,19.2s,baz=317,slow=37						
LONY	**Lake Ozonia**	**33.21**	**30**	P	**P**	**18 26 48.3**	**-1.1**
F10A	**Beach Ranch, E**	**33.47**	**334**	P	**P**	**18 26 54.1**	**+2.4**
F10A				IAmb	IAmb	18 27 24.1	
	comp=Z,7.6nm,1.2s						
HNH	**Hanover**	**33.68**	**33**	P	**P**	**18 26 53.3**	**-0.1**
FRNY	**Flat Rock**	**33.84**	**30**		**P**	**18 26 54.5**	**-0.3**
FRNY				IAmb	IAmb	18 26 55.4	
	comp=Z,8.2nm,0.9s						
LBNH	**Lisbon**	**34.24**	**32**	P	**P**	**18 26 59.8**	**+1.5**
I62A	**Tamworth**	**34.30**	**33**	P	**P**	**18 26 59.4**	**+0.6**
MNTQ	**Montreal, Queb**	**34.32**	**29**	P	**P**	**18 26 58.1**	**-0.8**
TRQ	**Mont Tremblant**	**34.44**	**28**	P	**P**	**18 26 59.1**	**-0.9**
TRQ				IAmb	IAmb	18 27 00.7	
	comp=Z,10nm,1.0s						
ETMB	**Extrema**	**40.35**	**129**		**P**	**18 27 50.7**	**+0.4**
SAML	**Samuel**	**42.10**	**125**		**P**	**18 28 04.4**	**-0.3**
LPAZ	**La Paz**	**43.56**	**138**	P	**P**	**18 28 17.7**	**+0.6**
	comp=Z,1.0nm,0.6s,baz=286,slow=12,SNR=4.3						
SCHQ	**Schefferville**	**44.15**	**25**	P	**P**	**18 28 21.3**	**+0.5**
	comp=Z,3.5nm,0.4s,baz=226,slow=6.1,SNR=14						
SCHQ	**Schefferville**	**44.15**	**25**	IAmb	IAmb	18 28 24.2	
	comp=Z,21nm,1.5s						
PTLB	**Pontes e Lacer**	**49.23**	**129**		**P**	**18 29 01.2**	**+0.2**
PTLB				IAmb	IAmb	18 29 02.3	
	comp=Z,5.0nm,1.3s						
INK	**Inuvik**	**56.23**	**344**	P	**P**	**18 29 52.6**	**+0.8**
	comp=Z,2.2nm,0.6s,baz=120,slow=7.3,SNR=9.9						
INK				pP	**pP**	**18 30 09.4**	**+0.8**
	comp=Z,1.3nm,0.6s,baz=108,slow=7.4,SNR=2.9						
INK	**Inuvik**	**56.23**	**344**	IAmb	IAmb	18 30 26.1	
	comp=Z,10nm,1.6s						
BDFB	**Brasilia**	**58.06**	**121**	P	**P**	**18 30 06.6**	**+0.9**
	comp=Z,3.4nm,0.6s,baz=280,slow=7.7,SNR=4.7						
ILAR	**Eielson Array**	**58.22**	**337**	P	**P**	**18 30 07.4**	**+1.4**
	comp=Z,1.4nm,0.9s,baz=139,slow=5.1,SNR=11						
ILAR				pP	**pP**	**18 30 23.9**	**+1.0**
	comp=Z,1.2nm,0.8s,baz=129,slow=4.4,SNR=8.1						
BWN	**Browne**	**58.91**	**336**	P	**P**	**18 30 10.9**	**+0.1**
I23K	**Minto, Yukon-K**	**59.32**	**337**	P	**P**	**18 30 14.7**	**+1.1**
PLCA	**Paso Flores**	**62.47**	**158**	P	**P**	**18 30 36.9**	**+1.6**
	comp=Z,4.9nm,0.9s,baz=328,slow=7.6,SNR=8.8						
PLCA	**Paso Flores**	**62.47**	**158**	IAmb	IAmb	18 30 37.7	
	comp=Z,5.2nm,0.9s						
ESDC	**Sonseca Array**	**81.42**	**51**	P	**P**	**18 32 30.0**	**+1.0**
	comp=Z,0.8nm,0.8s,baz=282,slow=4.7,SNR=4.8						
ESDC				pP	**pP**	**18 32 47.8**	**+1.0**
	comp=Z,2.4nm,1.0s,baz=286,slow=8.3,SNR=6.3						
ESDC	**Sonseca Array**	**81.42**	**51**	IAmb	IAmb	18 32 48.8	
	comp=Z,6.8nm,1.4s						
ARCES	**ARCESS Array B**	**84.64**	**17**	P	**P**	**18 32 46.8**	**+1.8**
	comp=Z,0.9nm,0.8s,baz=292,slow=4.8,SNR=1.0						
STKA	**Stephens Creek**	**125.45**	**243**	PKP	**PKiKP**	**18 39 13.3**	**0.0**
	comp=Z,1.0nm,0.7s,baz=100,slow=7.1,SNR=3.3						
WRA	**Warramunga Arr**	**131.58**	**258**	PKP	**PKPdf**	**18 39 25.1**	**+0.1**
	comp=Z,0.8nm,0.8s,baz=82,slow=2.8,SNR=6.3						
ASAR	**Alice Springs**	**132.22**	**253**	PKP	**PKiKP**	**18 39 26.6**	**-0.7**
	comp=Z,0.4nm,1.0s,baz=108,slow=2.8,SNR=4.3						

NDI ***28*** *18:32:53.2±1.6, 12°.55N×93°.84E, h35^{km}±24^{km}, ML3.6, mb4.4(NEIC)*

NEIC ***28*** *18:32:56.4±1.4, 12°.53N±0°.09×93°.7E±0°.1, h112^{km}±9^{km}, mb4.4/19, Error ellipse: s-maj=19.0km s-min=13.0km az=73.0*

IDC ***28*** *18:32:56.5±3.9, 12°.52N×93°.71E, h116^{km}±34^{km}, mb3.5/10, mb1 3.7/12, mb1mx3.2/67, mbtmp3.9/12, MS3.1/1, Ms1 3.1/1, ms1mx2.4/43, Error ellipse: s-maj=34.4km s-min=12.4km az=67.0*

ISC 28 18:32:54.2±0.5**, 12°.55N**±0°.05×**93°.57E**±0°.08**, h93^{km}, n47, σ1^{s}21**/45**, mb4.2**/21**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
DGPR	**DIGLIPUR**	**0.88**	**315**	*e*P	**Pn**	**18 33 12.5**	**-0.4**
DGPR				*e*S	**Sn**	**18 33 26.1**	**-0.7**
DGPR				IAML		18 33 33.0	
	comp=N,780nm,0.4s						
DGPR				IAML		18 33 33.0	
	comp=E,1μm,0.2s						
PBA	**Port Blair**	**1.20**	**222**	*e*P	**Pn**	**18 33 16.5**	**0.0**
PBA				*e*S	**Sn**	**18 33 34.0**	**+0.8**
PBA				IAML		18 33 37.3	
	comp=E,2μm,0.1s						
PBA				IAML		18 33 37.8	
	comp=N,1μm,0.5s						
CM31	**Chiang Mai Arr**	**7.83**	**41**		**Pn**	**18 34 47.3**	**+1.8**
CMAR	**Chiang Mai Arr**	**7.83**	**41**	P	**Pn**	**18 34 47.3**	**+1.8**
	comp=N,2.7nm,0.3s,baz=231,slow=15,SNR=125						
CMAR				S	**Sn**	**18 36 12.7**	**+0.2**
	comp=N,0.2nm,0.3s,baz=234,slow=28,SNR=4.9						
CMAR	**Chiang Mai Arr**	**7.83**	**41**		**Pn**	**18 34 46.6**	**+1.1**
CHTO	**Chiang Mai**	**8.10**	**39**		**Pn**	**18 34 50.8**	**+1.7**
KULM	**Kulim**	**10.04**	**135**	Pn	**Pn**	**18 35 16.6**	**+1.0**
PSI	**Prapat**	**11.04**	**151**	P	**Pn**	**18 35 31.7**	**+2.4**
	comp=N,0.7nm,0.3s,baz=337,slow=13,SNR=5.1						
RPSI	**Rantau Prapat**	**11.13**	**151**		**Pn**	**18 35 31.7**	**+1.2**
SHL	**Shillong**	**13.05**	**353**	*e*P	**Pn**	**18 35 56.1**	**-0.1**
SHL				*e*S	Sn	18 38 09.1	-11
KOHI	**KOHIMA**	**13.12**	**2**	*e*P	**Pn**	**18 35 55.5**	**-1.5**
MOKO	**MOKOCHONG**	**13.73**	**4**	*e*P	**Pn**	**18 36 03.3**	**-1.9**
GTK	**Tadong**	**15.42**	**343**	*e*P	**P**	**18 36 29.8**	**+0.5**
MNAI	**Manna**	**19.21**	**150**	P	**P**	**18 37 09.2**	**-1.9**
ENH	**Enshi**	**22.99**	**37**	P	**P**	**18 37 49.8**	**-1.4**
ENH				IAmb	IAmb	18 38 10.6	
	comp=Z,19nm,1.6s						
NJ2	**Nanjing**	**30.27**	**46**	*e*P	P	18 39 04.0	+7.5
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KSH	**Kashi**	**31.05**	**333**	P	P	18 39 10.0	+6.5
KSH				pmax	pmax		
	comp=Z,6.0nm,0.3s						
WMQ	**Urumqi**	**31.57**	**352**	*e*P	P	18 39 01.3	-6.6
GAR	**Garm**	**33.45**	**326**	P	**P**	**18 39 25.9**	**+1.4**
GAR				IAmb	IAmb	18 39 26.4	
	comp=Z,9.7nm,1.4s						
MK31	**Makanchi Array**	**35.44**	**347**	P	**P**	**18 39 41.1**	**-0.4**
MK31				IAmb	IAmb	18 39 50.3	
	comp=Z,3.0nm,1.2s						
MKAR	**Makanchi Array**	**35.44**	**347**	P	**P**	**18 39 41.2**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=161,slow=10,SNR=5.1						
MKAR	**Makanchi Array**	**35.44**	**347**	P	**P**	**18 39 40.1**	**-1.3**
MAKZ	**Makanchi**	**35.52**	**346**	P	**P**	**18 39 42.7**	**+0.6**
MAKZ				IAmb	IAmb	18 40 17.0	
	comp=Z,5.0nm,1.2s						
SONM	**Songino Array**	**36.78**	**14**	P	**P**	**18 39 52.5**	**-0.5**
	comp=Z,0.8nm,0.6s,baz=209,slow=2.6,SNR=8.5						
SONM	**Songino Array**	**36.78**	**14**	IAmb	IAmb	18 39 54.7	
	comp=Z,3.5nm,1.3s						
KSRS	**Korea Array**	**39.45**	**45**	P	**P**	**18 40 15.3**	**-0.1**
	comp=Z,0.7nm,0.8s,baz=232,slow=7.7,SNR=2.1						
KURBB	**Kurchatov Arra**	**39.91**	**345**	P	**P**	**18 40 20.0**	**+1.0**
	comp=Z,0.4nm,0.5s,baz=156,slow=8.1,SNR=2.9						
ZAA0	**Zalesovo Array**	**41.88**	**352**	P	**P**	**18 40 33.4**	**-1.7**
ZAA0				IAmb	IAmb	18 40 36.7	
	comp=Z,4.7nm,1.1s						
ZALV	**Zalesovo Beam**	**41.88**	**352**	P	**P**	**18 40 36.1**	**+1.0**
	comp=Z,1.9nm,0.6s,baz=176,slow=8.7,SNR=7.6						
ZALV				LR	LR	19 01 51.6	
	comp=Z,22nm,19.6s,baz=56,slow=41						
ZALV	**Zalesovo Beam**	**41.88**	**352**	P	**P**	**18 40 35.2**	**+0.1**
FITZ	**Fitzroy Crossi**	**43.92**	**133**	P	**P**	**18 40 51.0**	**-1.1**
	comp=Z,1.1nm,0.3s,baz=345,slow=9.2,SNR=19						
ABKAR	**Akbulak array**	**45.91**	**330**	P	**P**	**18 41 07.3**	**-0.1**
ABKAR	**Akbulak array**	**45.91**	**330**	P	**P**	**18 41 07.8**	**+0.4**
ABKAR				IAmb	IAmb	18 41 31.4	
	comp=Z,1.8nm,1.1s						
WB0	**Warramunga Arr**	**51.44**	**128**	P	**P**	**18 41 48.5**	**-1.8**
WB0				IAmb	IAmb	18 42 07.9	
	comp=Z,12nm,1.6s						
WRA	**Warramunga Arr**	**51.50**	**128**	P	**P**	**18 41 49.8**	**-0.9**
	comp=Z,0.3nm,0.5s,baz=304,slow=9.7,SNR=12						
WRA	**Warramunga Arr**	**51.50**	**128**	P	**P**	**18 41 49.2**	**-1.6**
WB2	**Warramunga Arr**	**51.51**	**128**	P	**P**	**18 41 49.4**	**-1.4**
WB2				IAmb	IAmb	18 42 08.6	
	comp=Z,7.7nm,1.4s						
WR0	**Warramunga Arr**	**51.67**	**128**	P	**P**	**18 41 50.5**	**-1.5**
WR0				IAmb	IAmb	18 42 22.6	
	comp=Z,11nm,1.5s						
AIS	**Amsterdam Isla**	**52.28**	**196**	P	**P**	**18 41 56.6**	**+0.5**
JKA	**Kamikawa-asahi**	**52.35**	**43**	P	**P**	**18 41 57.9**	**+1.2**
AS31	**Alice Springs**	**53.40**	**132**	P	**P**	**18 42 02.5**	**-2.2**
ASAR	**Alice Springs**	**53.40**	**132**	P	**P**	**18 42 03.4**	**-1.3**
	comp=Z,0.4nm,0.3s,baz=311,slow=7.5,SNR=27						
TIXI	**Tiksi**	**62.80**	**12**	P	**P**	**18 43 09.2**	**-0.3**
TIXI				IAmb	IAmb	18 43 09.7	
	comp=Z,3.7nm,0.4s						
FIA1	**FINESS Array S**	**68.35**	**331**	P	**P**	**18 43 45.6**	**+0.2**
FINES	**FINESS Array B**	**68.35**	**331**	P	**P**	**18 43 45.3**	**-0.2**
	comp=Z,8.0nm,1.1s,baz=101,slow=7.4,SNR=3.4						
ARCES	**ARCESS Array B**	**70.71**	**340**	P	**P**	**18 44 00.1**	**+0.3**
	comp=Z,2.0nm,0.9s,baz=104,slow=6.6,SNR=5.0						
ARCES	**ARCESS Array B**	**70.71**	**340**	IAmb	IAmb	18 44 14.1	
	comp=Z,16nm,1.4s						

IDC ***28*** *18:33:20.7±6.0, 36°.24N×70°.65E, h162^{km}±54^{km}, mb3.1/7, mb1 3.2/11, mb1mx2.9/64, mbtmp3.6/11, MS3.3/1, Ms1 3.5/1, ms1mx2.5/26, Error ellipse: s-maj=44.0km s-min=21.1km az=29.0*

NNC ***28*** *18:33:30.2±5.2, 36°.80N×71°.07E, h242^{km}±96^{km}, mb2.8, mpv3.8, Error ellipse: s-maj=89.6km s-min=43.7km az=99.0*

ISC 28 18:33:24.5±0.8**, 36°.44N**±0°.07×**70°.75E**±0°.09**, h200^{km}, n24, σ1^{s}61**/28**, mb3.1**/6**, 4C-3D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
AML	**Almayashu**	**6.12**	**21**	P	**Pn**	**18 34 54.2**	**+0.6**
	SNR=42						
DHRM	**DHARAMSHALA**	**6.21**	**131**	*ex*	**Sn**	**18 36 07.2**	**+1.2**
UCH	**Uchtor**	**6.47**	**26**	P	**Pn**	**18 34 59.0**	**+0.8**
	SNR=18						
EKS2	**Erkin-Say**	**6.64**	**20**	P	**Pn**	**18 35 01.1**	**+1.1**
	SNR=9.2						
AAK	**Ala-Archa**	**6.83**	**24**	P	**Pn**	**18 35 03.4**	**+0.8**
	1.0nm,0.3s,baz=155,slow=4.5,SNR=20						
AAK				S	**Sn**	**18 36 18.7**	**-1.7**
	0.6nm,0.3s,baz=328,slow=22,SNR=21						
AAK	**Ala-Archa**	**6.83**	**24**	P	**Pn**	**18 35 03.3**	**+0.8**
	SNR=7.7						
AAK	**Ala-Archa**	**6.83**	**24**	P	**Pn**	**18 35 03.1**	**+0.5**
	2.2nm,0.5s						
AAK				⇑S	**Sn**	**18 36 18.5**	**-1.9**
	14nm,0.9s						
KBK	**Karagaybulak**	**7.00**	**26**	P	**Pn**	**18 35 06.3**	**+1.5**
	SNR=5.9						
TKM2	**Tokmak 2**	**7.47**	**29**	P	**Pn**	**18 35 12.3**	**+1.4**
	SNR=9.3						
TKM2	**Tokmak 2**	**7.47**	**29**	⇑P	**Pn**	**18 35 11.1**	**+0.2**
	5.0nm,0.5s						
TKM2				⇓S	**Sn**	**18 36 33.1**	**-2.5**
	3.0nm,0.7s						
KUDL	**Kundal**	**9.59**	**148**	*ex*	**Sn**	**18 37 21.8**	**-4.0**
AB31	**Akbulak array**	**15.04**	**332**	⇑P	**P**	**18 36 47.7**	**+0.2**
	0.8nm,0.6s,baz=143,slow=12,SNR=18						
AB31				⇓S	**S**	**18 39 29.7**	**-4.1**
	0.4nm,0.5s,baz=140,slow=29						
KURBB	**Kurchatov Arra**	**15.24**	**19**	P	**Pn**	**18 36 49.1**	**-0.3**
	0.0nm,0.3s,baz=210,slow=11,SNR=4.0						
BVAR	**Borovoye Array**	**16.58**	**359**	P	**Pn**	**18 37 06.0**	**+0.4**
	0.3nm,0.3s,baz=177,slow=14,SNR=3.0						
AKTO	**Aktyubinsk**	**16.73**	**331**	P	**P**	**18 37 05.4**	**-0.8**
	0.4nm,0.3s,baz=138,slow=9.5,SNR=14						
AKTO	**Aktyubinsk**	**16.73**	**331**	⇓P	**Pn**	**18 37 07.6**	**+0.2**
	6.4nm,0.8s						
AKTO				⇑S	**S**	**18 40 10.9**	**+0.3**
	2.3nm,1.1s						
ZALV	**Zalesovo Beam**	**20.05**	**25**	P	**P**	**18 37 44.2**	**+2.0**
	0.5nm,0.4s,baz=229,slow=11,SNR=4.0						
BELG	**Belogornoye**	**22.81**	**322**	P	**P**	**18 38 10.5**	**+0.8**
	3.9nm,0.7s,baz=237,slow=22,SNR=2.2						
CMAR	**Chiang Mai Arr**	**30.61**	**118**	LR	LR	18 53 25.6	
	comp=Z,59nm,19.1s,baz=32,slow=39						
ARCES	**ARCESS Array B**	**41.12**	**338**	P	**P**	**18 40 49.9**	**+1.4**
	1.4nm,0.8s,baz=116,slow=6.1,SNR=1.8						
NOA	**NORSAR Array B**	**44.30**	**323**	P	**P**	**18 41 15.1**	**+0.9**
	0.5nm,0.8s,baz=92,slow=7.2,SNR=1.9						
TORD	**Torodi Ar. Bea**	**65.51**	**269**	P	**P**	**18 43 45.8**	**-0.9**
	0.1nm,0.4s,baz=51,slow=5.4,SNR=1.6						
WRA	**Warramunga Arr**	**82.13**	**122**	P	**P**	**18 45 23.3**	**+0.3**
	0.3nm,0.7s,baz=316,slow=5.7,SNR=6.6						
ASAR	**Alice Springs**	**84.39**	**125**	P	**P**	**18 45 34.5**	**+0.1**
	0.3nm,0.7s,baz=320,slow=5.0,SNR=5.3						

IDC ***28*** *18:44:05.5±4.6, 5°.48S×151°.78E, h31^{km}±24^{km}, mb3.8/7, mb1 4.0/8, mb1mx3.7/37, mbtmp4.0/8, ML2.2/1, MS3.0/4, Ms1 3.1/4, ms1mx2.7/32, Error ellipse: s-maj=68.7km s-min=19.8km az=118.0*

NEIC ***28*** *18:44:09.9±1.8, 5°.54S±0°.08×151°.7E±0°.1, h67^{km}±6^{km}, mb4.1/12, Error ellipse: s-maj=18.0km s-min=7.2km az=119.0*

ISC 28 18:44:08.8±0.7**, 5°.49S**±0°.09×**151°.6E**±0°.1**, h57^{km}, n30, σ1^{s}34**/31**, mb4.0**/12**, MS3.0**/3**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.41**	**24**		**Pn**	**18 44 33.3**	**+0.9**
RABL				Sn	**Sn**	**18 44 53.0**	**+3.0**
MANU	**Manus Island**	**5.42**	**309**	Pn	Pn	18 45 32.3	+5.1
PMG	**Port Moresby**	**5.86**	**228**	Pn	**Pn**	**18 45 34.6**	**+1.4**
	3.6nm,0.3s,baz=30,slow=10,SNR=21						
PMG				Sn	**Sn**	**18 46 41.3**	**+2.2**
	3.8nm,0.3s,baz=203,slow=11,SNR=3.7						
PMG				LR	LR	18 47 59.2	
	comp=Z,111nm,19.2s,baz=40,slow=39						
PMG	**Port Moresby**	**5.86**	**228**		**Pn**	**18 45 33.7**	**+0.5**
COEN	**Coen**	**11.81**	**224**	Pn	**Pn**	**18 46 55.0**	**+0.4**
EIDS	**Eidsvold**	**19.77**	**181**	P	**Pn**	**18 48 35.3**	**-1.0**
EIDS				IAmb	IAmb	18 48 40.5	
	comp=Z,12nm,1.4s						
MTN	**Manton Dam**	**21.46**	**249**	P	**P**	**18 48 52.9**	**+0.2**
DZM	**Mont Dzumac**	**21.88**	**140**	LR	LR	18 55 04.9	
	comp=Z,56nm,18.8s,baz=14,slow=30						
DZM	**Mont Dzumac**	**21.88**	**140**	P	**P**	**18 48 56.9**	**-0.3**
DZM				IAmb	IAmb	18 49 14.7	
	comp=Z,14nm,1.3s						
WB0	**Warramunga Arr**	**21.94**	**228**	P	**P**	**18 48 57.4**	**-0.4**
WB0				IAmb	IAmb	18 49 01.0	
	comp=Z,4.0nm,0.7s						
WR0	**Warramunga Arr**	**21.95**	**228**	P	**P**	**18 48 58.0**	**+0.1**
WR0				IAmb	IAmb	18 49 02.0	
	comp=Z,4.2nm,0.8s						
WRAB	**Tennant Creek**	**22.07**	**228**	P	**P**	**18 48 58.8**	**-0.4**
WRAB				IAmb	IAmb	18 49 01.9	
	comp=Z,5.8nm,0.6s						
WB2	**Warramunga Arr**	**22.07**	**228**	P	**P**	**18 48 59.0**	**-0.3**
WB2				IAmb	IAmb	18 49 02.0	
	comp=Z,5.9nm,0.6s						
WRA	**Warramunga Arr**	**22.08**	**228**	P	**P**	**18 48 59.2**	**-0.2**
	comp=Z,4.6nm,0.5s,baz=52,slow=10,SNR=58						
WRA				ScP	**ScP**	**18 56 30.8**	**+2.7**
	comp=Z,0.7nm,1.0s,baz=48,slow=2.7,SNR=4.9						
WRA				LR	LR	18 57 39.7	
	comp=Z,35nm,18.3s,baz=50,slow=37						
WRA	**Warramunga Arr**	**22.08**	**228**	P	**P**	**18 48 58.6**	**-0.7**
KNRA	**Kununurra**	**24.58**	**244**	P	**P**	**18 49 23.9**	**+0.2**
AS31	**Alice Springs**	**24.83**	**222**	P	**P**	**18 49 26.1**	**+0.1**
ASAR	**Alice Springs**	**24.83**	**222**	P	**P**	**18 49 26.7**	**+0.7**
	comp=Z,3.9nm,0.6s,baz=57,slow=9.0,SNR=69						
ASAR				ScP	**ScP**	**18 56 38.2**	**+2.7**
	comp=Z,0.2nm,0.7s,baz=39,slow=3.6,SNR=4.5						
ASAR	**Alice Springs**	**24.83**	**222**	P	**P**	**18 49 26.3**	**+0.3**
FITZ	**Fitzroy Crossi**	**28.27**	**241**	P	**P**	**18 49 57.0**	**+0.1**
	comp=Z,3.8nm,0.5s,baz=46,slow=5.6,SNR=26						
JSU	**Suzuyama**	**41.95**	**333**	P	**P**	**18 51 51.6**	**-2.6**
KSAR	**Wonju Array Be**	**48.09**	**335**	P	**P**	**18 52 41.0**	**-1.8**
CMAR	**Chiang Mai Arr**	**57.08**	**296**	LR	LR	19 17 44.5	
	comp=Z,16nm,19.3s,baz=345,slow=35						
SONM	**Songino Array**	**66.27**	**329**	P	**P**	**18 54 52.2**	**+1.0**
	comp=Z,0.5nm,0.6s,baz=140,slow=4.9,SNR=4.2						
SONM	**Songino Array**	**66.27**	**329**	P	**P**	**18 54 50.4**	**-0.8**
MKAR	**Makanchi Array**	**80.05**	**319**	P	**P**	**18 56 13.1**	**+0.6**
	comp=Z,0.1nm,0.4s,baz=104,slow=6.1,SNR=1.9						
ZALV	**Zalesovo Beam**	**81.05**	**327**	P	**P**	**18 56 17.1**	**-0.5**
	comp=Z,0.6nm,0.6s,baz=122,slow=5.6,SNR=4.1						
ILAR	**Eielson Array**	**83.25**	**22**	P	**P**	**18 56 28.1**	**-0.8**
	comp=Z,0.6nm,0.8s,baz=247,slow=5.5,SNR=5.6						
TORD	**Torodi Ar. Bea**	**149.35**	**287**	PKPbc	**PKiKP**	**19 03 52.6**	**-1.0**
	comp=Z,0.7nm,0.3s,baz=108,slow=2.7,SNR=14						
TORD	**Torodi Ar. Bea**	**149.35**	**287**		**PKiKP**	**19 03 52.3**	**-1.3**

IDC 28 18:51:58.7±6.6**, 30°.80S**×**177°.82W, h0^{km}, mb3.7**/2**, mb1 4.0**/2**, mb1mx3.7**/20**, mbtmp3.7**/2**, Error ellipse: s-maj=267.0km s-min=58.3km az=156.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.24**	**267**	P	P	19 00 01.4	-0.6
	0.7nm,0.8s,baz=106,slow=7.6,SNR=12						
WRA	**Warramunga Arr**	**44.27**	**272**	P	P	19 00 10.7	+0.4
	0.6nm,0.4s,baz=113,slow=7.8,SNR=24						
FINES	**FINESS Array B**	**145.57**	**340**	PKPbc	PKPdf	19 11 37.4	-0.8
	3.9nm,1.0s,baz=35,slow=5.1,SNR=4.7						

IDC ***28*** *19:00:28.5±2.8, 20°.65S×177°.97W, h530^{km}±23^{km}, mb3.3/8,* *mb1 3.5/10, mb1mx3.4/25, mbtmp4.2/10, Error ellipse: s-maj=42.0km s-min=18.7km az=135.0*

*NEIC **28** 19:00:28±1.5, 20.°8S±0.°1×178.°0W±0.°1, h518km±8km, mb4.3/26, Error ellipse: s-maj=21.4km s-min=19.8km az=156.0*

ISC 28 19:00:29.0±0.7, **20.°7S**±0.°1×**178.°0W**±0.°1, **h534**km, **n50**, σ**0.°88**/49, **mb4.2**/21, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.75	308	P	P	19 01 55.3	-0.6
	27nm,0.3s,baz=140,slow=6.1,SNR=89						
MSVF	Nonsavu	4.75	308		P	19 01 54.6	-1.3
PINNC	Pines Island,	13.62	259	P	P	19 03 24.6	+0.3
DZM	Mont Dzumac	14.51	262	P	P	19 03 34.2	+0.4
	0.4nm,0.3s,baz=100,slow=14,SNR=2.3						
BKZ	Black Stump Fm	18.96	193	P	P	19 04 14.0	-2.3
BKZ				IAmb	IAmb	19 04 43.2	
	comp=Z,21nm,1.4s						
EIDS	Eidsvold	28.75	255	P	P	19 05 44.0	+0.4
ARMA	Armidale	28.93	244	P	P	19 05 45.9	+0.6
ARMA				IAmb	IAmb	19 06 13.9	
	comp=Z,27nm,1.5s						
CTAO	Charters Tower	33.42	265	P	P	19 06 23.8	+0.1
CTAO				IAmb	IAmb	19 06 24.9	
	comp=Z,6.9nm,0.6s						
PMG	Port Moresby	35.35	283	P	P	19 06 40.3	+0.3
PMG				IAmb	IAmb	19 07 07.2	
	comp=Z,7.1nm,1.1s						
COEN	Coen	37.56	274	P	P	19 06 58.0	-0.1
COEN				IAmb	IAmb	19 07 00.1	
	comp=Z,12nm,1.1s						
STKA	Stephens Creek	37.65	244	P	P	19 06 59.5	+0.8
	comp=Z,2.4nm,0.5s,baz=79,slow=12,SNR=11						
STKA	Stephens Creek	37.65	244	P	P	19 06 59.0	+0.4
BBOO	Buckleboo	42.41	244	P	P	19 07 35.9	-0.9
WR0	Warramunga Arr	44.34	262	P	P	19 07 51.1	-0.9
WR0				IAmb	IAmb	19 07 53.0	
	comp=Z,6.9nm,1.1s						
AS31	Alice Springs	44.42	257	P	P	19 07 52.4	-0.2
ASAR	Alice Springs	44.42	257	P	P	19 07 52.6	0.0
	comp=Z,5.2nm,0.7s,baz=99,slow=7.6,SNR=76						
ASAR				PcP	PcP	19 09 24.9	+0.1
	comp=Z,0.5nm,0.6s,baz=111,slow=3.4,SNR=7.2						
ASAR	Alice Springs	44.42	257	P	P	19 07 52.3	-0.4
WB0	Warramunga Arr	44.51	263	P	P	19 07 53.1	-0.2
WB0				IAmb	IAmb	19 07 53.5	
	comp=Z,7.2nm,0.6s						
WB2	Warramunga Arr	44.52	262	P	P	19 07 52.7	-0.7
WB2				IAmb	IAmb	19 07 53.7	
	comp=Z,8.5nm,1.1s						
WRA	Warramunga Arr	44.53	262	P	P	19 07 53.1	-0.3
	comp=Z,3.5nm,0.6s,baz=97,slow=7.8,SNR=38						
WRA	Warramunga Arr	44.53	262	P	P	19 07 52.7	-0.7
MTN	Manton Dam	49.12	271	P	P	19 08 27.7	-0.5
MTN				IAmb	IAmb	19 08 31.4	
	comp=Z,14nm,1.1s						
FORT	Forrest	49.16	247	P	P	19 08 28.0	-0.3
KNRA	Kununurra	50.60	266	P	P	19 08 38.7	-0.4
SOEI	Soe	56.47	272	P	P	19 09 21.3	+0.5
SOEI				IAmb	IAmb	19 09 23.1	
	comp=Z,14nm,0.8s						
PSA00	Pilbara Seismi	57.57	257	P	P	19 09 27.5	-0.6
PSA00				IAmb	IAmb	19 09 28.5	
	comp=Z,14nm,0.9s						
TOLI2	Tolitoli	63.61	282	P	P	19 10 09.0	+1.0
TOLI2				IAmb	IAmb	19 10 33.4	
	comp=Z,5.4nm,1.0s						
QSPA	South Pole Qui	69.34	180	P	P	19 10 43.4	+0.6
KKM	Kota Kinabalu	69.78	285	P	P	19 10 46.1	-0.2
UGM	Wanagama	69.92	269	P	P	19 10 46.8	-0.3
MJAR	Matsushiro Arr	70.37	324	P	P	19 10 48.6	-0.6
	comp=Z,2.0nm,0.6s,baz=152,slow=6.3,SNR=17						
MJAR	Matsushiro Arr	70.37	324	P	P	19 10 48.7	-0.5
MAJO	Matsushiro	70.37	324	P	P	19 10 48.6	-0.6
MAJO				IAmb	IAmb	19 10 58.8	
	comp=Z,13nm,1.3s						
KSM	Kuching	73.40	278	P	P	19 11 07.7	+0.4
KSM				IAmb	IAmb	19 11 07.9	
	comp=Z,13nm,1.2s						
TPUB	Ta-pu	74.07	303	P	P	19 11 09.8	-1.1
KSRS	Korea Array	77.03	319	P	P	19 11 27.5	+0.5
	comp=Z,0.9nm,0.7s,baz=117,slow=5.6,SNR=5.6						
K05A	Summer Lake	82.17	39	P	P	19 11 54.6	+0.4
TXAR	Lajitas Array	87.22	57	P	P	19 12 19.4	+0.4
	comp=Z,0.4nm,0.7s,baz=211,slow=4.1,SNR=3.5						
TXAR	Lajitas Array	87.22	57	P	P	19 12 19.6	+0.6
ILAR	Eielson Array	88.55	13	P	P	19 12 22.8	-1.5
	comp=Z,0.4nm,0.5s,baz=215,slow=6.0,SNR=7.6						
CMAR	Chiang Mai Arr	90.15	290	P	P	19 12 34.6	+1.8
	comp=Z,1.3nm,0.9s,baz=119,slow=3.4,SNR=6.4						
CMAR	Chiang Mai Arr	90.15	290	P	P	19 12 34.0	+1.2
KURBB	Kurchatov Arra	114.19	317	PKiKP	PKPdf	19 18 06.3	-1.2
	comp=Z,0.5nm,0.8s,baz=89,slow=1.5,SNR=2.8						
BVAR	Borovoye Array	119.23	320	PKP	PKPdf	19 18 16.1	-1.1
	comp=Z,0.5nm,0.4s,baz=213,slow=10,SNR=4.9						
AKASG	Malin Array Be	143.20	331	PKP	PKPab	19 18 59.1	-0.9
	comp=Z,1.2nm,0.6s,baz=43,slow=4.5,SNR=14						
BRTR	Keskin Array B	146.96	312	PKPbc	PKPdf	19 19 11.4	+2.3
	comp=Z,0.7nm,0.6s,baz=143,slow=6.4,SNR=5.0						
BRTR	Keskin Array B	146.96	312		PKPdf	19 19 11.1	+2.0
MMAI	Mount Meron Ar	147.89	299	PKPbc	PKPbc	19 19 15.1	+0.5
	comp=Z,1.0nm,0.5s,baz=74,slow=6.2,SNR=6.9						
GERES	GERESS Array B	150.41	344	PKPbc	PKPbc	19 19 19.9	-0.3
	comp=Z,0.6nm,0.6s,baz=46,slow=4.2,SNR=4.8						
GERES	GERESS Array B	150.41	344		PKPbc	19 19 19.6	-0.6

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*NEIC **28** 19:10:22.2±1.5, 18.°07S±0.°06×69.°59W±0.°08, h144km±5km, mb4.4/7, Error ellipse: s-maj=11.5km s-min=8.6km az=74.0*

*IDC **28** 19:10:23.0±1.9, 18.°10S×69.°29W, h140km±10km, mb3.7/3, mb1 3.7/7, mb1mx3.4/29, mbtmp4.2/7, Error ellipse: s-maj=38.1km s-min=10.6km az=102.0*

ISC 28 19:10:21.6±0.8, **18.°03S**±0.°05×**69.°42W**±0.°08, **h138**km±7km, **n34**, σ**1.°36**/42, **Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB16	IPOC Station P	0.32	195	Pn	Pn	19 10 42.1	+0.6
PB16				Sn	Sn	19 10 56.4	-0.1
AP01	Chacalluta	0.94	249	Pn	Pn	19 10 44.8	+0.2
AP01				Sn	Sn	19 11 01.8	-0.4
PB12	IPOC Station P	1.04	236	Pn	Pn	19 10 45.8	+0.2
PB12				Sn	Sn	19 11 03.1	-0.8
PB11	IPOC Station P	1.74	187	Pn	Pn	19 10 53.5	+0.4
PB11				Sn	Sn	19 11 17.2	0.0
PB08	IPOC Station P	2.12	173	Pn	Pn	19 10 58.9	+1.1
PB08				Sn	Sn	19 11 26.6	+1.0
LPAZ	La Paz	2.13	36	P	Pn	19 11 00.2	+2.1
	67nm,0.3s,baz=231,slow=2.5,SNR=1432						
LPAZ				S	Sn	19 11 28.1	+2.0
	baz=242,slow=21,SNR=1.0						
TA01	Diego Aracena	2.62	196	Pn	Pn	19 11 02.8	-0.9
PATCX	Punta Patache	2.86	194	Pn	Pn	19 11 08.7	+1.9
PB01	IPOC Station P	3.00	181	Pn	Pn	19 11 09.2	+0.6
PB07	IPOC Station P	3.71	187		Pn	19 11 18.4	+0.6
PB09	IPOC Station P	3.75	177	Pn	Pn	19 11 19.8	+1.4
PB04	IPOC Station P	4.34	189		Pn	19 11 26.2	+0.1
LVC	Limon Verde	4.58	174	P	Pn	19 11 31.4	+1.8
	13nm,0.3s,baz=3.8,slow=8.7,SNR=42						
LVC				S	Sn	19 12 21.6	-0.9
	5.5nm,0.3s,baz=77,slow=22,SNR=8.2						
LVC	Limon Verde	4.58	174		Pn	19 11 30.9	+1.3
PB06	IPOC Station P	4.66	182		Pn	19 11 30.4	0.0
PB15	IPOC Station P	5.15	180		Pn	19 11 37.0	0.0
PB10	IPOC Station P	5.56	191	Pn	Pn	19 11 41.4	-0.9
PB14	IPOC Station P	6.63	188		Pn	19 11 55.0	-1.9
SIV	San Ignacio	8.24	77	P	Pn	19 12 16.7	-1.6
	1.1nm,0.3s,baz=262,slow=9.9,SNR=8.0						
SIV				S	Sn	19 13 45.2	-4.8
	0.3nm,0.3s,baz=360,slow=22,SNR=8.4						
ETMB	Extrema	8.74	21		Pn	19 12 23.7	-1.2
AC02	Maricunga	8.77	178		Pn	19 12 24.8	-1.0
SAML	Samuel	10.87	35	Pn	Pn	19 12 51.9	-1.5
MT02	Curacav	15.25	185		Pn	19 13 49.7	+0.1
MT01	Popeta	15.86	186	P	Pn	19 13 57.5	+0.4
MT01				IAmb	IAmb	19 14 00.6	
	comp=Z,38nm,1.5s						
ITAB	Concordia	18.39	123	P	P	19 14 27.3	+1.3
ITAB				IAmb	IAmb	19 14 38.6	
	comp=Z,15nm,0.9s						
PTGA	Pitinga	19.54	29	P	P	19 14 38.7	+0.1
	comp=Z,1.1nm,0.3s,baz=311,slow=23,SNR=10						
PLTB	Pedras Altas	19.79	137	P	P	19 14 40.5	-0.6
PLTB				IAmb	IAmb	19 14 43.4	
	comp=Z,24nm,1.4s						
BDFB	Brasilia	20.63	87	P	P	19 14 52.2	+1.8
	comp=Z,3.0nm,0.5s,baz=268,slow=9.8,SNR=5.3						
BDFB	Brasilia	20.63	87	P	P	19 14 52.3	+1.8
BDFB				IAmb	IAmb	19 14 54.0	
	comp=Z,2.9nm,0.6s						
DBIC	Dimbokro	68.26	75	P	P	19 21 08.8	+0.8
	comp=Z,2.6nm,0.6s,baz=270,slow=7.7,SNR=4.8						
DBIC	Dimbokro	68.26	75	P	P	19 21 07.6	-0.4
DBIC				IAmb	IAmb	19 21 22.4	
	comp=Z,8.8nm,1.2s						
TORD	Torodi Ar. Bea	76.68	71	P	P	19 21 58.5	+0.6
	comp=Z,0.8nm,0.4s,baz=256,slow=5.5,SNR=16						
TORD	Torodi Ar. Bea	76.68	71	P	P	19 21 58.2	+0.3
SONM	Songino Array	150.08	6	PKPbc	PKiKP	19 29 57.3	+0.3
	comp=Z,0.3nm,0.6s,baz=306,slow=1.8,SNR=6.0						

DJA 28 19:41:55.6±0.6, **6.°S**±3.°×**13.°0E**±.°, **h206**km±10km, **M3.7**/9, **mb3.5**/4, **mB5.1**/3, **MLv3.8**/9, **Mw(mB)4.5**/3, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.53	145	P	Pn	19 42 42.2	+2.0
SAUI				S	S	19 43 14.8	+0.2
MSAI	Masohi	2.69	340	P	Pn	19 42 41.9	-0.2
AAI	Ambon	2.74	323	P	Pn	19 42 42.2	-0.4
FAKI	Fak Fak	3.82	39	P	Pn	19 42 55.5	+0.1
FAKI				S	S	19 43 38.8	-3.1
SWI	Sorong	5.20	16	P	Pn	19 43 12.8	0.0
SWI				S	S	19 44 08.9	-4.5
SANI	Sanana	5.41	315	P	Pn	19 43 15.9	+0.4
	0.0nm7.8nm,1.2s						
LBMI	Labuha	5.72	336	P	Pn	19 43 19.6	+0.2
	0.0nm6.6nm,1.0s						

IDC 28 19:55:11.1±3.5, **6.°04S**×**147.°24E**, **h0**km, **mb3.0**/1, **mb1 3.4**/3, **mb1mx3.0**/36, **mbtmp3.3**/3, **ML2.3**/2, **Error ellipse: s-maj=84.9km s-min=43.3km az=93.0**, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.35	181	Pn	Pn	19 56 06.1	+1.4
	2.9nm,0.3s,baz=44,slow=4.8,SNR=9.9						
PMG				Sn	Sn	19 56 43.6	-1.6
	baz=33,slow=22,SNR=1.4						
WRA	Warramunga Arr	18.66	221	P	P	19 59 30.1	-0.7
	0.0nm,0.3s,baz=48,slow=11,SNR=2.4						
ASAR	Alice Springs	21.72	215	P	P	20 00 03.6	-0.5
	0.4nm,0.5s,baz=52,slow=8.2,SNR=7.2						
TORD	Torodi Ar. Bea	145.34	284	PKPbc	PKPbc	20 14 51.0	-0.8
	0.2nm,0.4s,baz=62,slow=4.1,SNR=1.5						

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*IDC **28** 20:14:26.1±1.4, 52.°96N×33.°40W, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.4/61, mbtmp3.7/5, MS3.4/2, Ms1 3.5/2, ms1mx2.7/40, Error ellipse: s-maj=43.4km s-min=32.8km az=12.0*

ISC 28 20:14:27.4±1.2, **53.°0N**±0.°2×**33.°4W**±0.°2, **h10**km, **n9**, σ**1.°26**/7, **mb3.6**/5, **Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESDC	Sonseca Array	24.09	112	LR	LR	20 26 59.2	
	comp=Z,66nm,18.4s,baz=335,slow=31						
ARCES	ARCESS Array B	31.22	36	P	P	20 20 45.2	-1.2
	2.3nm,0.9s,baz=292,slow=11,SNR=3.6						
BRTR	Keskin Array B	46.47	78	P	P	20 22 56.3	+1.8
	0.2nm,0.7s,baz=308,slow=7.1,SNR=2.4						
TORD	Torodi Ar. Bea	48.54	132	P	P	20 23 09.7	-0.9
	0.7nm,1.1s,baz=329,slow=7.6,SNR=2.5						
PDAR	Pinedale Array	49.80	291	P	P	20 23 20.8	+0.5
	0.2nm,0.5s,baz=61,slow=6.4,SNR=2.1						
MKAR	Makanchi Array	66.53	42	P	P	20 25 17.4	+0.2
	0.4nm,0.5s,baz=330,slow=6.2,SNR=5.9						
KSRS	Korea Array	88.51	15	LR	LR	21 06 12.9	
	comp=Z,25nm,18.5s,baz=35,slow=35						
WRA	Warramunga Arr	145.71	21	PKPbc	PKPab	20 34 06.7	+0.1
	0.3nm,0.7s,baz=336,slow=3.2,SNR=1.8						
ASAR	Alice Springs	149.21	23	PKPbc	PKPbc	20 34 15.2	-0.7
	0.4nm,1.0s,baz=356,slow=2.9,SNR=2.2						

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*NEIC **28** 20:21:08.3±1.3, 2.°92N±0.°10×122.°4E±0.°1, h547km±8km, mb4.3/60, Error ellipse: s-maj=15.8km s-min=13.2km az=59.0*

*IDC **28** 20:21:08.4±0.8, 2.°87N×122.°42E, h556km±9km, mb3.3/22, mb1 3.4/27, mb1mx3.3/45, mbtmp4.3/27, Error ellipse: s-maj=12.5km s-min=7.7km az=79.0*

*DJA **28** 20:21:09.1±0.4, 3.°N±5.°×12.°3E±.°, h517km±4km, M4.3/18, mb4.5/13, mB4.8/12, MLv4.7/18, Mw(mB)4.0/12*

ISC 28 20:21:08.2±0.3, **2.°84N**±0.°05×**122.°38E**±0.°06, **h552**km, **n171**, σ**1.°05**/184, **mb4.2**/59, **Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTOI	Gorontalo	2.28	164	P	P	20 22 17.3	-2.2
GTOI				S	S	20 23 12.5	-4.8
TOLI2	Tolitoli	2.35	223		P	20 22 18.2	-1.5
TOLI2	Tolitoli	2.35	223	P	P	20 22 18.3	-1.5
MRSI	Marisa	2.39	191	P	P	20 22 19.0	-1.0
MRSI				S	S	20 23 15.3	-3.0
KMSI	Cibinong	2.76	145	P	P	20 22 21.2	-0.8
MPSI	Mapaga	3.52	225	P	P	20 22 25.8	-1.0
APSI	Ampana	3.80	191	P	P	20 22 28.0	-0.8
APSI				S	S	20 23 33.7	-0.7
LUWI	Luwuk	3.88	174	P	P	20 22 27.8	-1.6
LUWI				S	S	20 23 31.9	-3.5
LUWI	Luwuk	3.88	174	P	P	20 22 27.8	-1.6
LUWI	Luwuk	3.88	174	P	P	20 22 28.1	-1.3
MYLDM	Lahad Datu	4.52	301	P	P	20 22 34.5	+0.3
DAV	Davao City (W)	5.27	37	P	P	20 22 41.8	+1.3
	23nm,0.3s,baz=238,slow=13,SNR=3.8						
DAV				S	S	20 23 56.8	+1.0
	34nm,0.3s,baz=274,slow=23,SNR=8.3						
DAV	Davao City (W)	5.27	37	P	P	20 22 40.5	0.0
TNTI	Ternate	5.39	112	P	P	20 22 39.1	-2.4
	1.1nm3μm83nm,0.5s						
TNTI	Ternate	5.39	112		P	20 22 39.6	-1.9
TNTI	Ternate	5.39	112	P	P	20 22 39.8	-1.7
SANI	Sanana	6.05	143	P	P	20 22 44.9	-2.5
	0.9nm4μm116nm,0.7s						
SANI	Sanana	6.05	143	P	P	20 22 45.1	-2.3
SMKI	Samarinda	6.12	238	P	P	20 22 49.8	+1.7
LBMI	Labuha	6.17	124	P	P	20 22 47.5	-1.1
	0.8nm2μm89nm,0.8s						
TTSI	Tana Toraja	6.39	204	P	P	20 22 50.8	+0.3
	0.6nm2μm146nm,1.0s						
BKB	Balikpapan	6.83	233	P	P	20 22 55.1	+0.4
	1.4nm6μm388nm,0.7s						
BKB	Balikpapan	6.83	233	P	P	20 22 55.7	+0.9
KKM	Kota Kinabalu	6.92	298	P	P	20 22 54.8	-0.9
SPSI	Sidrap Palu	7.25	201	P	P	20 22 58.4	-0.3
	0.3nm644nm74nm,0.8s						
BNSI	Bone	7.55	198	P	P	20 23 01.7	+0.1
	0.2nm57nm,0.9s						
KAPI	Kappang	8.24	199	P	P	20 23 07.9	-0.5
	1.5nm,0.3s,baz=36,slow=12,SNR=6.0						
KAPI	Kappang	8.24	199	P	P	20 23 08.6	+0.2
KAPI	Kappang	8.24	199	P	P	20 23 09.1	+0.7
MTKI	Muara Teweh, K	8.38	243	P	P	20 23 10.8	+1.0
AAI	Ambon	8.71	138	P	P	20 23 13.5	+0.4
	1μm79nm,0.6s						
KBKI	Kotabaru	8.71	226	P	P	20 23 13.7	+0.6
	492nm42nm,0.6s						
MSAI	Masohi	8.98	133	P	P	20 23 16.9	+1.1
	548nm32nm,0.5s						
SWI	Sorong	9.61	112	P	P	20 23 21.6	-0.6
	1μm57nm,0.5s						
SIJI	Sorong	9.61	112	P	P	20 23 20.6	-1.7
	13nm,0.3s,baz=332,slow=18,SNR=66						
SBUM	Sibu	10.16	268	P	P	20 23 28.8	+0.9
BNDI	Bandanaira	10.49	134	P	P	20 23 31.6	+0.4
FAKI	Fak Fak	11.40	120	P	P	20 23 40.2	-0.4
FAKI	Fak Fak	11.40	120	P	P	20 23 40.3	-0.4
PLAI	Plampang	12.47	202	P	P	20 23 52.0	+0.3
SOEI	Soe	12.66	171	P	P	20 23 53.7	0.0
TWSI	Taliwang, Sumb	12.75	205	P	P	20 23 57.0	+2.5
BATI	Baumata	13.03	174	P	P	20 23 58.0	+0.5
	3.4nm,0.3s,baz=27,slow=4.2,SNR=6.0						
BATI				S	S	20 26 17.7	+0.9
	1.4nm,0.3s,baz=288,slow=20,SNR=1.8						
DRS	Darwin Rock St	17.37	151	P	P	20 24 41.1	+0.8
LEM	Lembang	17.59	237	P	P	20 24 43.9	+1.3
	1.6nm,0.3s,baz=3.5,slow=19,SNR=5.5						
MTN	Manton Dam	17.84	151	P	P	20 24 46.0	+1.4
MTN				IAmb	IAmb	20 25 00.5	
	comp=Z,26nm,1.4s						
MTN	Manton Dam	17.84	151	P	P	20 24 45.6	+1.0
KDU	Kakadu	18.40	147	P	P	20 24 49.8	+0.1
MYKOM	Kota Tinggi	18.55	267	P	P	20 24 52.0	+0.8
TPUB	Ta-pu	20.41	355	P	P	20 25 09.6	+1.7
YULB	Yu-li	20.45	357	P	P	20 25 08.9	+0.5
YULB				IAmb	IAmb	20 25 18.1	
	comp=Z,10nm,0.9s						
FITZ	Fitzroy Crossi	21.05	171	P	P	20 25 14.2	+0.4
	comp=Z,0.8nm,0.7s,baz=9.7,slow=5.2,SNR=7.2						
IPM	Ipoh	21.38	275	P	P	20 25 17.1	+0.3
IPM				IAmb	IAmb	20 25 17.8	
	comp=Z,8.6nm,0.8s						
IPM	Ipoh	21.38	275	P	P	20 25 17.2	+0.3
BKNI	Bangkinang	21.48	264	P	P	20 25 18.4	+0.6
KULM	Kulim	21.81	277	P	P	20 25 20.6	-0.1
PSI	Prapat	23.43	270	P	P	20 25 35.3	0.0
	comp=Z,2.1nm,0.3s,baz=57,slow=5.2,SNR=6.8						
JOW	Kunigami	24.51	13	P	P	20 25 44.2	-0.3
	comp=Z,9.4nm,0.5s,baz=204,slow=6.3,SNR=7.7						
JOW	Kunigami	24.51	13	P	P	20 25 44.1	-0.4
JOW	Kunigami	24.51	13	P	P	20 25 44.3	-0.3
GSI	Gunungsitoli	24.84	267	P	P	20 25 47.0	-0.7
GSI				IAmb	IAmb	20 25 47.5	
	comp=Z,15nm,0.8s						
GSI	Gunungsitoli	24.84	267	P	P	20 25 46.8	-0.9
WB0	Warramunga Arr	25.38	153	P	P	20 25 51.4	-0.9
LHMI	Lhok Sumawe	25.48	276	P	P	20 25 53.9	+0.6
WRAB	Tennant Creek	25.50	153	P	P	20 25 53.0	-0.4
WRA	Warramunga Arr	25.51	153	P	P	20 25 52.1	-1.3
	comp=Z,0.9nm,0.4s,baz=336,slow=9.7,SNR=21						
WRA				PcP	PcP	20 29 06.9	+0.6
	comp=Z,0.2nm,0.5s,baz=347,slow=6.2,SNR=1.0						
WRA				ScP	ScP	20 31 53.5	-0.3
	comp=Z,0.6nm,0.5s,baz=336,slow=2.9,SNR=11						
WRA	Warramunga Arr	25.51	153	P	P	20 25 51.7	-1.8
CMAR	Chiang Mai Arr	27.71	306	P	P	20 26 13.8	+0.9
	comp=Z,1.4nm,0.5s,baz=127,slow=7.0,SNR=12						
CMAR	Chiang Mai Arr	27.71	306	P	P	20 26 13.5	+0.7
CHTO	Chiang Mai	27.90	306	P	P	20 26 14.5	+0.1
CHTO				IAmb	IAmb	20 26 15.9	
	comp=Z,11nm,1.1s						
CHTO	Chiang Mai	27.90	306	P	P	20 26 15.2	+0.7
WRKA	Warakurna	28.30	169	P	P	20 26 18.5	+0.5
AS31	Alice Springs	28.64	158	P	P	20 26 21.2	+0.3
ASAR	Alice Springs	28.64	158	P	P	20 26 21.1	+0.2
	comp=Z,0.3nm,0.3s,baz=332,slow=7.7,SNR=17						
ASAR				ScP	ScP	20 32 03.2	-0.1
	comp=Z,1.4nm,0.5s,baz=340,slow=3.0,SNR=36						
ASAR	Alice Springs	28.64	158	P	P	20 26 22.5	+1.6
QIS	Mount Isa	28.74	145	P	P	20 26 22.5	+0.7
ENH	Enshi	29.89	337	P	P	20 26 32.4	+0.8
ENH				IAmb	IAmb	20 26 33.3	
	comp=Z,7.3nm,0.7s						
JMN	Monobe	32.55	18	P	P	20 26 53.9	-0.5
OOD	Oodnadatta	33.05	158	P	P	20 26 59.4	+0.9
JHS	Saijyo	33.51	16	P	P	20 27 02.0	-0.4
JWT	Wachi	34.46	19	P	P	20 27 10.0	-0.4
MULG	Mulgathing	34.78	162	P	P	20 27 13.8	+0.8
KSRS	Korea Array	34.82	8	P	P	20 27 13.5	+0.3
	comp=Z,2.1nm,0.7s,baz=187,slow=9.1,SNR=8.8						
INU	Inuyama	35.08	21	P	P	20 27 14.3	-1.1
INU				IAmb	IAmb	20 27 39.1	
	comp=Z,22nm,1.4s						
INU	Inuyama	35.08	21	P	P	20 27 14.7	-0.8
LCRK	Leigh Creek	36.39	157	P	P	20 27 27.4	+1.0
MJAR	Matsushiro Arr	36.58	22	P	P	20 27 26.4	-1.4
	comp=Z,4.4nm,0.8s,baz=191,slow=8.6,SNR=15						
MJAR	Matsushiro Arr	36.58	22	P	P	20 27 26.1	-1.8
MJAR				IAmb	IAmb	20 27 44.9	
	comp=Z,7.0nm,1.4s						
JYT	Yasato	37.07	24	P	P	20 27 29.9	-2.0
BBOO	Buckleboo	37.75	161	P	P	20 27 37.9	+0.4
BBOO				IAmb	IAmb	20 27 51.5	
	comp=Z,19nm,1.4s						
JMM	Marumori	38.73	24	P	P	20 27 44.3	-1.0
STKA	Stephens Creek	39.06	154	P	P	20 27 48.7	+0.6
	comp=Z,1.3nm,0.5s,baz=345,slow=8.8,SNR=4.4						
STKA	Stephens Creek	39.06	154	P	P	20 27 48.4	+0.3
HTT	Hallett	39.32	158	P	P	20 27 51.0	+0.7
LSA	Lhasa	39.88	315	P	P	20 27 56.5	+1.1
LSA				pmax	pmax		
	comp=Z,54nm,0.6s						
LSA	Lhasa	39.88	315	P	P	20 27 56.5	+1.1
TAPN	Taplejung	41.14	310	*e*P	P	20 28 05.6	+0.4
	comp=Z,24nm,0.4s						
ODAN	Odare	41.14	309	*e*P	P	20 28 05.5	+0.3
	comp=Z,18nm,0.6s						
GTA	Gaotai	41.78	333	*e*P	P	20 28 10.5	+0.6
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
RAMN	Ramite	41.80	308	*e*P	P	20 28 11.0	+0.6
	comp=Z,27nm,0.5s						
USA0B	Ussuriysk Arra	42.05	10	P	P	20 28 11.2	-0.6
USA0B				IAmb	IAmb	20 28 12.3	
	comp=Z,8.3nm,0.6s						
USRK	Ussuriysk Ar.	42.05	10	P	P	20 28 11.5	-0.2
	comp=Z,6.8nm,0.5s,baz=196,slow=6.1,SNR=29						
JIRN	Jiri	42.46	309	*e*P	P	20 28 16.2	+0.4
	comp=Z,23nm,0.4s						
PKI	Pulchoki	43.03	309	*e*P	P	20 28 20.0	-0.1
PKIN	Phulchoki	43.04	309	*e*P	P	20 28 20.0	-0.2
KKN	Kakani	43.23	309	*e*P	P	20 28 21.6	0.0
	comp=Z,14nm,0.4s						
ARMA	Armidale	43.28	142	P	P	20 28 22.3	+0.5
ARMA				IAmb	IAmb	20 28 47.4	
	comp=Z,17nm,1.4s						
DMN	Daman	43.28	308	*e*P	P	20 28 22.1	+0.1
	comp=Z,17nm,0.7s						
ARPS	Mount Arapiles	43.38	157	P	P	20 28 23.5	+1.3
GKN	Gorkha	43.84	309	*e*P	P	20 28 26.2	0.0
	comp=Z,23nm,0.8s						
KOLN	Koldanda	44.54	308	*e*P	P	20 28 32.2	+0.5
DANN	Dangsing	44.68	309	*e*P	P	20 28 33.1	+0.2
	comp=Z,67nm,0.7s						
JKA	Kamikawa-asahi	44.83	21	P	P	20 28 32.9	-0.4
PYUN	Piuthan	45.17	308	*e*P	P	20 28 37.2	+0.7
	comp=Z,59nm,0.5s						
CAN	Canberra	45.42	149	P	P	20 28 39.5	+1.4
CAN				IAmb	IAmb	20 28 44.1	
	comp=Z,27nm,1.3s						
CAN	Canberra	45.42	149	P	P	20 28 40.2	+2.1
SONM	Songino Array	46.90	345	P	P	20 28 49.1	-0.1
	comp=Z,1.1nm,0.4s,baz=161,slow=9.4,SNR=15						
SONM				ScP	ScP	20 33 10.7	-1.3
	comp=Z,0.4nm,0.6s,baz=153,slow=4.4,SNR=2.8						
SONM	Songino Array	46.90	345	P	P	20 28 49.2	-0.1
DZM	Mont Dzumac	49.66	122	P	P	20 29 11.5	+1.4
	comp=Z,6.2nm,1.1s,baz=45,slow=16,SNR=2.1						
NIL	Nilore	55.09	310	P	P	20 29 48.9	+0.2
NIL				IAmb	IAmb	20 29 49.8	
	comp=Z,5.5nm,0.5s						
KSH	Kashi	55.67	317	P	P	20 29 54.3	+1.5
KSH				PcP	PcP	20 30 45.3	+1.2
KSH				pmax	pmax		
	comp=Z,4.0nm,1.1s						
MK31	Makanchi Array	55.89	328	P	P	20 29 54.2	+0.1
MKAR	Makanchi Array	55.89	328	P	P	20 29 54.3	+0.3
	comp=Z,3.4nm,0.3s,baz=127,slow=8.1,SNR=95						
MKAR				PcP	PcP	20 30 43.4	-1.2
	comp=Z,0.4nm,0.5s,baz=108,slow=4.7,SNR=2.0						
MKAR				ScP	ScP	20 33 49.2	-1.8
	comp=Z,0.3nm,0.7s,baz=134,slow=3.9,SNR=1.8						
MKAR	Makanchi Array	55.89	328	P	P	20 29 54.1	+0.1
MAKZ	Makanchi	56.07	328	P	P	20 29 55.3	+0.1
TKM2	Tokmak 2	57.60	321	P	P	20 30 06.8	+0.7
	SNR=6.7						
PETK	Petropavlovsk-	57.95	24	P	P	20 30 07.8	-0.2
	comp=Z,1.8nm,0.8s,baz=281,slow=19,SNR=5.4						
UCH	Uchtor	57.95	319	P	P	20 30 10.0	+1.2
	SNR=6.0						
AAK	Ala-Archa	58.16	320	P	P	20 30 10.5	+0.7
AML	Almayashu	58.44	319	P	P	20 30 13.2	+1.2
	SNR=7.2						
USP	Ospenovka	58.47	321	P	P	20 30 12.4	+0.6
	SNR=5.8						
DRK	Karamyk	58.53	315	P	P	20 30 12.4	-0.1
EKS2	Erkin-Say	58.64	320	P	P	20 30 13.3	+0.3

	SNR=5.1						
KBL	Kabul	58.66	309	P	P	20 30 13.3	-0.1
KBL				IAmb	IAmb	20 30 14.1	
	comp=Z,5.5nm,0.7s						
YAK	Yakutsk	59.30	4	P	P	20 30 16.8	0.0
YAK				IAmb	IAmb	20 30 17.9	
	comp=Z,9.0nm,0.8s						
GAR	Garm	59.38	314	P	P	20 30 17.9	-0.1
GAR				IAmb	IAmb	20 30 18.8	
	comp=Z,9.3nm,0.6s						
BTK	Batken	59.46	316	P	P	20 30 19.4	+0.9
ZAA0	Zalesovo Array	59.49	335	P	P	20 30 17.2	-1.0
ZALV	Zalesovo Beam	59.49	335	P	P	20 30 17.2	-1.0
	comp=Z,1.2nm,0.3s,baz=138,slow=6.6,SNR=10						
ZALV	Zalesovo Beam	59.49	335	P	P	20 30 17.4	-0.8
CHGR	Chuyangaron	60.08	314	P	P	20 30 22.6	-0.1
CHGR				IAmb	IAmb	20 30 22.9	
	comp=Z,7.2nm,0.6s						
KURK	Kurchatov	60.23	330	P	P	20 30 23.1	-0.1
KURK				IAmb	IAmb	20 30 23.8	
	comp=Z,12nm,0.6s						
MA2	Magadan	60.68	16	P	P	20 30 26.6	+0.6
KKAR	Karatay Array	60.98	319	P	P	20 30 28.3	-0.1
THZ	Tophouse	63.74	140	P	P	20 30 47.1	+0.8
THZ				IAmb	IAmb	20 30 49.4	
	comp=Z,33nm,1.3s						
BKZ	Black Stump Fm	64.90	136	P	P	20 30 53.9	+0.2
BKZ				IAmb	IAmb	20 31 01.7	
	comp=Z,26nm,1.4s						
BKZ	Black Stump Fm	64.90	136	P	P	20 30 54.4	+0.7
BRVK	Borovoye	65.82	329	P	P	20 30 58.8	-0.3
BRVK				IAmb	IAmb	20 30 59.2	
	comp=Z,3.3nm,0.4s						
SOCY	Socotra	68.29	282	P	P	20 31 13.4	-1.7
ABKAR	Akbulak array	70.12	322	P	P	20 31 25.0	-0.3
ABKAR				IAmb	IAmb	20 31 25.8	
	comp=Z,3.5nm,0.7s						
ABKAR	Akbulak array	70.12	322	P	P	20 31 25.1	-0.3
AKTO	Aktyubinsk	71.69	323	P	P	20 31 34.4	-0.1
	comp=Z,5.0nm,0.5s,baz=114,slow=7.5,SNR=29						
ARU	Arti	73.40	329	P	P	20 31 43.2	-1.0
ARU				IAmb	IAmb	20 31 44.0	
	comp=Z,3.2nm,0.7s						
RAYN	Ar Rayn	76.84	293	P	P	20 32 03.7	-0.6
AKUT	Akutan	77.11	35	P	P	20 32 04.6	-0.3
VOI	Vohitsoka	77.73	247	P	P	20 32 08.9	-0.2
VOI				IAmb	IAmb	20 32 28.4	
	comp=Z,18nm,1.4s						
KBZ	Khabaz	80.44	314	P	P	20 32 22.6	-0.2
	comp=Z,1.4nm,0.9s,baz=318,slow=15,SNR=2.5						
KVAR	Kislovodsk Arr	80.61	314	P	P	20 32 23.4	-0.6
	comp=Z,1.5nm,0.7s,baz=11,slow=10,SNR=1.5						
TTA	Tatalina	83.65	27	P	P	20 32 39.3	+0.4
K20K	Telida	84.57	27	P	P	20 32 43.9	+0.5
K20K				IAmb	IAmb	20 32 51.3	
	comp=Z,12nm,1.5s						
IMAR	Indian Mountai	84.92	24	P	P	20 32 45.1	+0.2
KMBO	Kilima Mbogo	85.19	269	P	P	20 32 48.0	+0.3
	comp=Z,2.8nm,1.0s,baz=61,slow=11,SNR=4.2						
I21K	Tanana	85.60	25	P	P	20 32 48.5	+0.3
I21K				IAmb	IAmb	20 32 58.3	
	comp=Z,8.7nm,1.5s						
BPAW	Bear Paw Mtn.	85.98	26	P	P	20 32 49.9	-0.3
BPAW				IAmb	IAmb	20 33 08.3	
	comp=Z,6.6nm,1.4s						
I23K	Minto, Yukon-K	86.70	25	P	P	20 32 53.0	-0.4
BRTR	Keskin Array B	87.23	309	P	P	20 32 56.6	-0.1
	comp=Z,0.7nm,0.8s,baz=111,slow=7.0,SNR=3.7						
H24K	Noodor Dome	87.32	24	P	P	20 32 56.7	+0.3
H24K				IAmb	IAmb	20 33 14.4	
	comp=Z,5.3nm,1.4s						
ILAR	Eielson Array	87.76	25	P	P	20 32 56.9	-1.5
	comp=Z,0.3nm,0.6s,baz=243,slow=5.7,SNR=5.9						
BMAR	Burnt Mountain	88.56	23	P	P	20 33 02.9	+0.7
ARCES	ARCESS Array B	89.77	340	P	P	20 33 06.0	-1.6
	comp=Z,0.6nm,0.5s,baz=347,slow=7.4,SNR=1.9						
TXAR	Lajitas Array	125.54	51	PKP	PKPdf	20 39 07.9	0.0
	comp=Z,0.5nm,1.1s,baz=338,slow=1.0,SNR=1.8						

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*NEIC **28** 20:21:32.6±1.4, 19°.96S±0°.02×71°.00W±0°.07, h11^{km}±4^{km}, mb4.5/15, Mwr4.2/33, ML4.1(GUC), Error ellipse: s-maj=9.2km s-min=2.2km az=106.0*

*NEIC **28** 20:21:32.6, 19°.96S×71°.00W, h14^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.89; M$_{\theta\theta}$0.10; M$_{\phi\phi}$-1.99; M$_{r\theta}$0.49; M$_{\theta\phi}$0.46; M$_{\phi r}$-1.29; Fault plane solution: M$_0$2.42000×10^{15} NP1:ϕ_s162.68000°, δ62.42000°, λ84.48000°. NP2:ϕ_s354.48000°, δ28.08000°, λ100.44000°. Principal axes: T 2.3320, Plg72.0000°, Azm60.0000°; N 0.1746, Plg5.0000°, Azm165.0000°; P -2.5066, Plg17.0000°, Azm257.0000°;*

*GUC **28** 20:21:34.6±0.7, 19°.89S×71°.03W, h32^{km}±4^{km}, ML4.1*

*IDC **28** 20:21:35.0±6.3, 19°.80S×70°.52W, h22^{km}±39^{km}, mb3.7/7, mb1 3.9/8, mb1mx3.7/30, mbtmp3.9/8, ML3.9/1, MS3.3/2, Ms1 3.3/2, ms1mx3.0/24, Error ellipse: s-maj=31.4km s-min=22.0km az=88.0*

*VAO **28** 20:21:37.2±1.0, 19°.94S×71°.12W, h68^{km}, mb4.3*

ISC 28 20:21:32.7±2.0**, 19°.93S**±0°.03×**71°.05W**±0°.06**, h15**^{km}±12^{km}**, n106,** σ1^{s}.**42**/110**, mb4.3**/12**, 11C, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TA02	Huaiquique	0.93	111	⇑*i*P	Pb	20 21 50.4	-0.1
TA02				*e*S	Sg	20 22 02.8	-0.2
TA02	Huaiquique	0.93	111		Pb	20 21 50.5	0.0
TA02				Sn	Sn	20 22 03.5	-0.9
TA01	Diego Aracena	1.04	128	⇑*i*P	Pb	20 21 52.2	-0.2
TA01				*e*S	Sb	20 22 05.4	-0.4
TA01	Diego Aracena	1.04	128		Pb	20 21 52.2	-0.2
TA01				Sn	Sg	20 22 05.7	-0.5
PATCX	Punta Patache	1.23	136	⇑*i*P	Pn	20 21 54.8	-0.6
PATCX				*e*S	Sb	20 22 09.7	-1.6
PATCX				IAML		20 22 20.3	
	comp=E,3μm,0.5s						
PATCX	Punta Patache	1.23	136		Pn	20 21 55.0	-0.4
PATCX				Sn	Sb	20 22 10.5	-0.8
PB11	IPOC Station P	1.33	83	⇑*i*P	Pn	20 21 56.3	-0.5
PB11				*i* S	Sn	20 22 13.1	-1.3
PB11				IAML		20 22 15.6	
	comp=E,10μm,0.6s						
PB11	IPOC Station P	1.33	83	Pn	Pn	20 21 56.4	-0.5
PB11				Sn	Sn	20 22 14.1	-0.3
PB12	IPOC Station P	1.48	28	*i* P	Pn	20 21 57.9	-0.9
PB12				*e*S	Sn	20 22 15.3	-2.7
PB12				IAML		20 22 23.4	
	comp=E,2μm,0.4s						
PB12	IPOC Station P	1.48	28		Pn	20 21 58.0	-0.9
AP01	Chacalluta	1.69	24	*e*P	Pn	20 22 01.9	+0.1
AP01				*e*S	Sn	20 22 18.5	-4.6
AP01				IAML		20 22 34.1	
	comp=N,4μm,0.8s						
AP01	Chacalluta	1.69	24		Pn	20 22 02.0	+0.3
PB02	IPOC Station P	1.76	142	⇑*i*P	Pn	20 22 02.6	-0.2
PB02				*e*S	Sn	20 22 23.2	-1.7
PB02				IAML		20 22 36.6	
	comp=N,9μm,0.5s						
PB08	IPOC Station P	1.80	97	⇑*i*P	Pn	20 22 03.2	-0.3
PB08				*e*S	Sn	20 22 26.9	+0.6
PB08				IAML		20 22 30.5	
	comp=N,2μm,0.7s						
PB08	IPOC Station P	1.80	97		Pn	20 22 03.6	0.0
PB01	IPOC Station P	1.84	127	*i* P	Pn	20 22 04.0	+0.1
PB01				IAML		20 22 36.0	
	comp=E,3μm,0.6s						
PB01	IPOC Station P	1.84	127		Pn	20 22 04.0	+0.1
PB07	IPOC Station P	2.10	149	⇑*i*P	Pn	20 22 07.2	-0.3
PB07				IAML		20 22 45.5	
	comp=N,1μm,0.5s						
PB07	IPOC Station P	2.10	149		Pn	20 22 07.0	-0.4
PB16	IPOC Station P	2.16	43	⇑*i*P	Pn	20 22 08.6	-0.1
PB16				*e*S	Sn	20 22 35.5	0.0
PB16				IAML		20 22 44.7	
	comp=N,2μm,0.6s						
PB16	IPOC Station P	2.16	43		Pn	20 22 08.8	+0.1
PB03	IPOC Station P	2.43	150	*i* P	Pn	20 22 11.6	-0.6
PB03				IAML		20 23 02.2	
	comp=E,702nm,0.4s						
PB09	IPOC Station P	2.51	138	⇑*i*P	Pn	20 22 14.3	+1.0
PB09				IAML		20 22 59.3	
	comp=N,2μm,0.5s						
PB09	IPOC Station P	2.51	138		Pn	20 22 14.2	+1.0
PB04	IPOC Station P	2.54	161	*i* P	Pn	20 22 12.8	-0.8
PB04				*e*S	Sg	20 22 53.5	-0.8
PB04				IAML		20 23 05.7	
	comp=N,1μm,0.8s						
PB04	IPOC Station P	2.54	161	Pn	Pn	20 22 12.9	-0.7
PB05	IPOC Station P	3.01	165	⇑*i*P	Pn	20 22 18.9	-1.1
PB05				IAML		20 23 24.2	
	comp=N,419nm,1.0s						
PB06	IPOC Station P	3.09	154	⇑*i*P	Pn	20 22 20.5	-0.6
PB06				IAML		20 23 19.1	
	comp=N,741nm,0.7s						
PB06	IPOC Station P	3.09	154		Pn	20 22 20.3	-0.8
LVC	Limon Verde	3.33	144	Pn	Pn	20 22 24.3	-0.4
	comp=N,13nm,0.3s,baz=9.7,slow=8.3,SNR=57						
LVC				Sn	Sn	20 23 03.8	-0.5
	comp=N,36nm,0.3s,baz=317,slow=11,SNR=4.5						
LVC				Lg	Lg	20 23 17.7	
	comp=N,66nm,0.3s,baz=195,slow=20,SNR=4.2						
LVC	Limon Verde	3.33	144	*e*P	Pn	20 22 26.0	+1.3
LVC	Limon Verde	3.33	144		Pn	20 22 25.8	+1.1
PB15	IPOC Station P	3.58	156		Pn	20 22 27.0	-0.9
PB10	IPOC Station P	3.60	173	Pn	Pn	20 22 26.4	-1.6
LPAZ	La Paz	4.57	38	Pn	Pn	20 22 43.1	+1.2
	comp=N,1.3nm,0.3s,baz=210,slow=5.3,SNR=30						
LPAZ				LR	LR	20 24 36.8	
	comp=N,354nm,19.3s,baz=236,slow=44						
LPAZ	La Paz	4.57	38	*e*P	Pn	20 22 44.5	+2.6
LPAZ	La Paz	4.57	38		Pn	20 22 43.8	+1.9
PB14	IPOC Station P	4.71	173		Pn	20 22 42.0	-1.5
AC02	Maricunga	7.10	166	Pn	Pn	20 23 16.6	0.0
SIV	San Ignacio	10.27	69	Pn	Pn	20 23 58.0	-1.8
	comp=N,2.0nm,0.3s,baz=275,slow=9.3,SNR=22						
ETMB	Extrema	11.09	26		Pn	20 24 10.8	-0.1
PTLB	Pontes e Lacer	12.20	70	*e*P	Pn	20 24 29.2	+3.2
PTLB	Pontes e Lacer	12.20	70	Pn	Pn	20 24 27.1	+1.0
VILB	Vilhena	12.51	58	*e*P	Pn	20 24 33.8	+3.4
VILB	Vilhena	12.51	58	Pn	Pn	20 24 31.4	+1.1
SAML	Samuel	13.31	36		Pn	20 24 43.0	+1.8
CPUP	Villa Florida	14.14	119	LR	LR	20 31 16.4	
	comp=N,108nm,18.6s,baz=305,slow=42						
CPUP	Villa Florida	14.14	119	*e*P	Pn	20 24 54.9	+2.4
SALV	Santo Antonio	15.16	77	*e*P	Pn	20 25 09.2	+2.8
H03N1	Juan Fernandez	15.17	206	T	T	20 40 50.5	
	baz=32,slow=72,SNR=53						
H03N2	Juan Fernandez	15.18	206	T	T	20 40 50.3	
	baz=32,slow=72,SNR=29						
H03N3	Juan Fernandez	15.19	206	T	T	20 40 46.2	
	baz=32,slow=72,SNR=33						
PDRB	Porto dos Gac	16.07	61	*e*P	Pn	20 25 18.8	+0.5
PTGB	Pitanga	18.20	109	*e*P	P	20 25 47.3	+2.1
ARAG	Araguaiana, MT	18.79	80	*e*P	P	20 25 51.1	-0.6
ITAB	Concordia	18.79	116	*e*P	Pn	20 25 52.2	0.0
ITAB	Concordia	18.79	116	P	P	20 25 51.0	-0.7
ITAB				IAmb	IAmb	20 26 08.3	
	comp=Z,44nm,1.4s						
CPSB	Cacapava Do Su	19.03	127	*e*P	P	20 25 53.9	-0.3
PLTB	Pedras Altas	19.60	130	*e*P	Pn	20 26 02.4	+0.5
TRQA	Tornquist	19.71	158	P	Pn	20 26 03.0	-0.1
NPGB	Novo Progresso	19.90	52	*e*P	P	20 26 04.3	+0.4
PLCA	Paso Flores	20.74	179	P	Pn	20 26 13.9	-1.4
	comp=Z,1.9nm,0.8s,baz=2.8,slow=20,SNR=2.6						
PLCA	Paso Flores	20.74	179	P	P	20 26 13.7	+0.8
BB19B	Bebedouro	21.13	97	*e*P	P	20 26 16.5	-0.8
IPMB	Ipameri, GO	21.69	89	*e*P	P	20 26 22.5	-0.8
PTGA	Pitinga	21.95	31	P	P	20 26 22.6	-3.4
	comp=Z,7.3nm,0.5s,baz=196,slow=15,SNR=4.6						
RCLB	Rio Claro- Sao	22.07	101	*e*P	P	20 26 27.1	-0.2
BDFB	Brasilia	22.34	83	P	P	20 26 24.8	-5.6
	comp=Z,0.9nm,0.4s,baz=251,slow=16,SNR=2.1						
BDFB	Brasilia	22.34	83	P	P	20 26 29.2	-1.2
PEXB	Peixe	23.19	74	*e*P	P	20 26 39.1	-0.1
BOAV	Boa Vista	24.48	26	*e*P	P	20 26 51.1	-0.3
BOAV	Boa Vista	24.48	26	P	P	20 26 50.8	-0.7
BOAV				IAmb	IAmb	20 27 00.6	
	comp=Z,12nm,0.8s						
BSCB	Bom Sucesso	24.64	97	*e*P	P	20 26 51.6	-1.4
SMTB	Santa Maria do	25.21	67	*e*P	P	20 26 57.0	-1.2
DIAM	Diamantina, MG	25.91	91	*e*P	P	20 27 03.9	-0.8
JANB	Januaria	25.95	84	*e*P	P	20 27 03.3	-1.6
SDBA	SAO DESIDERIO	26.18	77	*e*P	P	20 27 05.6	-1.4
BAUV	El Baul	28.84	6	P	P	20 27 30.2	-0.5
BAUV				IAmb	IAmb	20 27 35.2	
	comp=Z,12nm,0.8s						
GUA01	Guaratinga, BA	29.84	89	*e*P	P	20 27 38.0	-1.6
CMC01	Camacan, BA	30.37	86	*e*P	P	20 27 42.6	-1.8
GO09	Cerro Castillo	31.29	182	P	P	20 27 51.3	-0.8
WVT	Waverly	57.97	344	P	P	20 31 24.1	-0.6
WVT				IAmb	IAmb	20 31 31.7	
	comp=Z,5.6nm,1.4s						
TXAR	Lajitas Array	58.21	326	P	P	20 31 29.5	+2.9
	comp=Z,0.1nm,0.5s,baz=165,slow=7.5,SNR=3.0						
TXAR	Lajitas Array	58.21	326	P	P	20 31 27.6	+1.0
Q56A	Snyder Ridge,	59.15	353	P	P	20 31 34.2	+1.3
M55A	Ridgway	61.50	353	P	P	20 31 49.6	+0.7
M55A				IAmb	IAmb	20 32 17.3	
	comp=Z,12nm,1.2s						
VNA3	Neumayer Olymp	62.20	161	P	P	20 31 53.9	+0.6
DBIC	Dimbokro	70.24	75	P	P	20 32 43.1	-2.7
	comp=Z,1.7nm,0.7s,baz=266,slow=5.8,SNR=1.6						
DBIC	Dimbokro	70.24	75	P	P	20 32 44.4	-1.4
QSPA	South Pole Qui	70.25	180	P	P	20 32 47.1	+1.9
QSPA				IAmb	IAmb	20 33 11.4	
	comp=Z,2.8nm,1.2s						
KOWA	Kowa	74.26	68	P	P	20 33 08.6	-1.2
KOWA				IAmb	IAmb	20 33 17.9	
	comp=Z,1.7nm,0.6s						
TORD	Torodi Ar. Bea	78.74	72	P	P	20 33 33.9	-1.4
	comp=Z,3.3nm,0.6s,baz=252,slow=5.2,SNR=38						
TORD	Torodi Ar. Bea	78.74	72	P	P	20 33 34.1	-1.1
TORD				IAmb	IAmb	20 33 43.5	
	comp=Z,6.3nm,0.8s						
ESDC	Sonseca Array	86.15	45	P	P	20 34 13.5	+0.1
	comp=Z,1.0nm,0.9s,baz=233,slow=6.2,SNR=3.2						
H11S2	WAKE ISLAND Hy	125.67	279	T	T	22 59 59.8	
	baz=101,slow=74,SNR=11						
H11S1	WAKE ISLAND Hy	125.68	279	T	T	22 59 53.8	
	baz=101,slow=74,SNR=3.5						
H11S3	WAKE ISLAND Hy	125.69	279	T	T	22 59 59.8	
	baz=101,slow=74,SNR=3.1						
H11N3	WAKE ISLAND Hy	125.72	280	T	T	23 00 01.0	
	baz=101,slow=74						
H11N2	WAKE ISLAND Hy	125.73	280	T	T	23 00 03.6	
	baz=101,slow=74						
H11N1	WAKE ISLAND Hy	125.73	280	T	T	23 00 04.3	
	baz=101						
ASAR	Alice Springs	130.30	210	PKP	PKiKP	20 40 44.7	+0.6
	comp=Z,0.2nm,0.9s,baz=139,slow=2.2,SNR=1.3						
WRA	Warramunga Arr	133.21	214	PKP	PKPdf	20 40 48.9	0.0
	comp=Z,0.2nm,0.7s,baz=116,slow=1.5,SNR=1.4						
ZALV	Zalesovo Beam	141.34	23	PKP	PKPdf	20 41 03.5	+0.8
	comp=Z,1.1nm,0.5s,baz=304,slow=1.5,SNR=6.5						
ZALV	Zalesovo Beam	141.34	23		PKPdf	20 41 03.3	+0.6
MKAR	Makanchi Array	145.48	33	PKPbc	PKPbc	20 41 10.8	+0.5
	comp=Z,1.3nm,0.9s,baz=343,slow=6.3,SNR=5.4						
SONM	Songino Array	152.09	4	PKPbc	PKPbc	20 41 28.0	+0.3
	comp=Z,0.9nm,0.6s,baz=7.4,slow=0.8,SNR=7.3						

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*VIE **28** 20:24:59.8±0.3, 46°.34N×13°.66E, h8^{km}, ml0.3/1, Error ellipse: s-maj=4.4km s-min=1.2km az=91.0 8 km NW of Camporosso*

LJU 28 20:24:59.3, 46°.32N×13°.60E, h9^{km}, ML0.5, 4D, Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROBS	Robic	0.10	222	⇓*i*Pg	Pg	20 25 01.8	+0.1
ROBS				*i* Sg	Sg	20 25 03.5	+0.1
ROBS				IAML		20 25 03.6	
	comp=Z,6.2nm,0.1s						
ROBS	Robic	0.10	222	*i* Sg	Sg	20 25 05.5	+2.1
ROBS				IAML		20 25 05.6	
	comp=Z,3.8nm,0.0s						
CADS	Cadrg	0.13	133	*i* Pg	Pg	20 25 02.2	0.0
CADS				*i* Sg	Sg	20 25 04.6	+0.3
CADS				IAML		20 25 04.7	
	comp=Z,4.3nm,0.1s						
CADS	Cadrg	0.13	133	*i* Sg	Sg	20 25 06.5	+2.2
CADS				IAML		20 25 06.6	
	comp=Z,2.2nm,0.1s						
PRED	Cave del Predi	0.13	349	⇓*e*Pg	Pg	20 25 02.3	0.0
PRED				*e*Sg	Sg	20 25 04.6	+0.1
DRE	Drenchia	0.14	168	⇓*e*Pg	Pg	20 25 02.6	+0.1
DRE				*e*Sg	Sg	20 25 05.1	+0.3
LSR	Lussari	0.17	343	⇓*e*Pg	Pg	20 25 03.1	+0.1
LSR				*e*Sg	Sg	20 25 06.0	+0.5
GORS	Gorjuse	0.27	89	*i* Pg	Pg	20 25 05.0	+0.2
MYKA	Terra Mystica	0.32	5	*e*Pg	Pg	20 25 05.7	+0.1
	comp=Z,0.4nm,0.2s						
MYKA				*e*Sg	Sg	20 25 09.9	+0.1
	comp=Z,0.3nm,0.1s						

IDC 28 20:29:33.6±9.0**, 13°.96S**×**167°.16E, h148**^{km}±81^{km}**, mb3.3**/3**, mb1 3.4**/4**, mb1mx3.2**/26**, mbtmp3.7**/4**, Error ellipse: s-maj=70.9km s-min=43.0km az=170.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	8.10	185	P	Pn	20 31 29.2	+0.7
	0.5nm,0.3s,baz=349,slow=16,SNR=8.9						
DZM				S	Sn	20 32 57.7	-1.0
	0.3nm,0.3s,baz=323,slow=20,SNR=3.6						
STKA	Stephens Creek	29.41	228	P	P	20 35 23.9	+0.6
	1.7nm,0.5s,baz=52,slow=9.3,SNR=8.5						
WRA	Warramunga Arr	31.91	255	P	P	20 35 45.5	+0.1
	0.2nm,0.4s,baz=84,slow=8.5,SNR=7.2						
ASAR	Alice Springs	32.85	248	P	P	20 35 53.0	-0.6
	0.2nm,0.3s,baz=78,slow=9.6,SNR=13						
ARCES	ARCESS Array B	119.48	345	PKP	PKPdf	20 48 04.8	-0.4
	2.2nm,1.1s,baz=90,slow=1.3,SNR=6.5						

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*IDC **28** 20:54:34.3±1.6, 1°.63N×96°.91E, h0^{km}, mb3.6/6, mb1 3.6/7, mb1mx3.5/33, mbtmp3.6/7, ML2.3/1, Error ellipse: s-maj=35.5km s-min=22.3km az=53.0*

*DJA **28** 20:54:38.0±0.6, 2°N±4°×9°7E±°, h10^{km}, M3.5/6, MLv3.5/6*

ISC 28 20:54:38.5±1.0**, 1°.81N**±0°.07×**96°.88E**±0°.06**, h28**^{km}**, n18,** σ1^{s}.**23**/19**, mb3.6**/6**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNSI	Sinabang, Aceh	0.82	317	P	Pb	20 54 53.9	-0.3
SNSI				S	Sb	20 55 03.0	-1.8
GSI	Gunungsitoli	0.85	126	P	Pb	20 54 55.5	+0.7
TPTI		1.48	12	P	Pn	20 55 02.6	-0.7
TPTI				S	Sb	20 55 22.6	-1.1
KCSI	Kotacane, Aceh	1.92	28	P	Pn	20 55 09.5	0.0
KCSI				S	Sb	20 55 37.1	+0.5
PSI	Prapat	2.27	64	Pn	Pn	20 55 13.4	-0.9
	0.9nm,0.3s,baz=225,slow=9.4,SNR=6.5						
PSI				Sn	Sb	20 55 44.5	-2.1
	2.5nm,0.3s,baz=242,slow=20,SNR=5.5						
TSI	Tuntungan	2.38	45	P	Pn	20 55 16.8	+1.1
MLSI	Meulaboh, Aceh	2.49	349	P	Pn	20 55 17.6	+0.3
MNSI	Mandailing Nat	2.88	110	P	Pb	20 55 29.1	-0.1
CMAR	Chiang Mai Arr	16.67	7	Pn	Pn	20 58 30.4	+0.1
	baz=199,slow=10,SNR=1.6						
H08S2	Diego Garcia H	26.08	249	T	T	21 27 26.8	
	baz=69,slow=75,SNR=94						
H08S3	Diego Garcia H	26.08	249	T	T	21 27 23.7	
	baz=69,slow=75,SNR=84						
H08S1	Diego Carcia H	26.09	249	T	T	21 27 30.5	
	baz=69,slow=75,SNR=25						
WRA	Warramunga Arr	42.62	122	P	P	21 02 32.8	-0.1
	0.2nm,0.5s,baz=299,slow=9.0,SNR=4.7						
ASAR	Alice Springs	44.01	127	P	P	21 02 41.6	-2.4
	0.2nm,0.5s,baz=265,slow=8.9,SNR=1.6						
KSRS	Korea Array	45.54	35	P	P	21 02 55.7	-0.2
	0.7nm,0.8s,baz=237,slow=9.8,SNR=2.1						
MKAR	Makanchi Array	46.58	346	P	P	21 03 05.7	+1.7
	0.4nm,0.4s,baz=162,slow=8.8,SNR=10						
SONM	Songino Array	46.59	9	P	P	21 03 04.9	+0.8
	0.4nm,0.5s,baz=217,slow=3.9,SNR=4.6						
ZALV	Zalesovo Beam	52.91	351	P	P	21 03 53.6	+1.6
	2.8nm,0.6s,baz=177,slow=7.3,SNR=15						

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*BJI **28** 21:42:14.5±0.0, 67°.52N×143°.16E, h6^{km}, mB5.0/24, mb4.4/44, Ms4.7/20, Ms7 4.4/19*

*NERS **28** 21:42:14.5±0.0, 68°.07N×143°.20E, h33^{km}*

*IDC **28** 21:42:15.1±0.5, 67°.58N×142°.92E, h0^{km}, mb4.1/25, mb1 4.2/30, mb1mx4.1/58, mbtmp4.1/30, ML4.0/4, MS3.7/22, Ms1 3.8/22, ms1mx3.6/51, Error ellipse: s-maj=11.6km s-min=10.6km az=118.0*

*YARS **28** 21:42:16.6±0.0, 67°.65N×142°.60E, h3^{km}*

*MOS **28** 21:42:16.1±0.9, 67°.54N×142°.90E, h13^{km}, mb4.8/11, Error ellipse: s-maj=13.3km s-min=6.8km az=86.6*

*NEIC **28** 21:42:18.1±1.2, 67°.54N±0°.07×142°.8E±0°.2, h10^{km}±1^{km}, mb4.6/79, Error ellipse: s-maj=11.8km s-min=10.7km az=158.0*

ISC 28 21:42:17.6±0.3**, 67°.61N**±0°.03×**142°.77E**±0°.03**, h10**^{km}**, n230,** σ1^{s}.**67**/276**, mb4.5**/94**, MS3.8**/25**, 4C, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOMR	Moma	1.16	171	*i* Pg	Pb	21 42 38.8	-0.9
	461nm,0.6s						
MOMR				*e*Sg	Sb	21 42 54.1	-0.6
	4μm,0.5s						
YBGR	Belaya Gora	1.58	53	*i* Pg	Pn	21 42 45.4	-0.2
YBGR				*e*Pg	Pn	21 42 45.4	-0.2
YBGR				*i* Pg	Pn	21 42 45.4	-0.2
YBGR				*e*Sg	Sb	21 43 07.0	0.0
	2μm,0.2s						
YBGR				*e*Sg	Sb	21 43 07.0	0.0
	1μm,0.2s						
UNR	Ust'-Nera	3.06	176	*e*Pn	Pn	21 43 06.8	+0.9
UNR				*e*Pg	Pb	21 43 12.4	+0.4
	8.5nm,1.0s						
UNR				*e*Sn	Sn	21 43 44.2	+1.6
UNR				*e*Sn	Sn	21 43 44.2	+1.6
UNR				*e*Sg	Sb	21 43 53.3	+4.0
	44nm,0.9s						
UNR				*e*Sg	Sb	21 43 53.3	+4.0
	4μm,2.3s						
BTGS	Batagay	3.11	275	*e*Pn	Pn	21 43 06.1	-0.6
BTGS				*e*Pg	Pb	21 43 11.5	-1.4
	300nm,0.3s						
BTGS				*e*Sn	Sn	21 43 42.7	-1.1
BTGS				*e*Sn	Sn	21 43 42.7	-1.1
BTGS				*e*Sg	Sb	21 43 51.7	+0.9
	14μm,0.7s						
BTGS				*e*Sg	Sb	21 43 51.7	+0.9
	4μm,0.5s						
ATKR	Artyk	3.58	163	*e*Pg	Pb	21 43 22.1	+1.1
	12nm,0.4s						
ATKR				*e*Sg	Sg	21 44 10.1	-2.2
	325nm,0.7s						
ATKR				*e*Sg	Sg	21 44 10.1	-2.2
	252nm,1.2s						
SUUS	Susuman	5.36	152	*e*P	Pn	21 43 38.4	+0.9
SUUS				*e*Pg	Pg	21 43 58.2	-1.8
SUUS				Pgmax		21 43 59.9	
	30nm,0.4s						
SUUS				*e*Sg	Sg	21 45 09.4	+0.1
SUUS				Sgmax		21 45 17.2	
	310nm,0.7s						
SEY	Seymchan	6.18	135	Pn	Pn	21 43 47.6	-1.2
	0.4nm,0.3s,baz=320,slow=14,SNR=7.8						
SEY				Pg	Pb	21 43 55.2	-10
	0.8nm,0.3s,baz=308,slow=17,SNR=7.7						
SEY				Lg	Lg	21 45 29.0	
	1.9nm,0.3s,baz=360,slow=19,SNR=5.6						
SEY				LR	LR	21 46 02.2	
	comp=Z,202nm,18.0s,baz=290,slow=37						
SEY	Seymchan	6.18	135	*e*P	Pn	21 43 48.1	-0.7
SEY				*e*		21 45 16.3	
	10.0nm,0.2s						
SEY				*e*Sg	Sg	21 45 34.1	-1.7
SEY				Sgmax		21 45 40.0	
	90nm,0.8s						
SEY				Sgmax		21 45 40.0	
	40nm,0.8s						
TIXI	Tiksi	6.31	316	Pn	Pn	21 43 51.0	+0.5
	7.1nm,0.3s,baz=125,slow=15,SNR=122						
TIXI				Pg	Pb	21 44 00.3	-7.1
	8.0nm,0.3s,baz=125,slow=18,SNR=11						
TIXI				Sn	Sn	21 45 00.7	-1.9
	25nm,0.3s,baz=132,slow=14,SNR=7.1						
TIXI				Lg	Lg	21 45 31.8	
	46nm,0.3s,baz=44,slow=17,SNR=11						
TIXI	Tiksi	6.31	316	*e*Pn	Pn	21 43 50.6	0.0
TIXI				*e*Pg	Pb	21 44 09.7	+2.3
	4.7nm,0.0s						
TIXI				*e*Sn	Sn	21 45 01.5	-1.1
TIXI				*e*Sn	Sn	21 45 01.5	-1.1
TIXI				*e*Sg	Sb	21 45 31.7	+8.9
	661nm,0.6s						

TIXI	**Tiksi**	**6.31**	**316**	P	**Pn**	**21 43 51.6**	**+1.1**
TIXI						21 45 02.9	
TIXI	**Tiksi**	**6.31**	**316**		**Pn**	**21 43 51.6**	**+1.1**
TIXI				Sn	**Sn**	**21 45 02.9**	**+0.3**
TLAR	**Talaya**	**7.72**	**143**	*e*P	**Pn**	**21 44 11.3**	**+1.4**
TLAR				*e*Sg	**Sg**	**21 46 25.8**	**+0.8**
TLAR				Sgmax		21 46 31.0	
	70nm,0.9s						
YAK	**Yakutsk**	**7.89**	**231**	Pn	**Pn**	**21 44 11.7**	**-0.5**
	0.2nm,0.3s,baz=38,slow=4.6,SNR=12						
YAK				Pg	Pb	21 44 23.8	-10
	0.1nm,0.3s,baz=31,slow=8.0,SNR=6.9						
YAK				Sn	**Sn**	**21 45 39.3**	**-2.0**
	0.3nm,0.3s,baz=300,slow=20,SNR=6.7						
YAK				Lg	Lg	21 46 27.0	
	0.2nm,0.3s,baz=78,slow=20,SNR=5.8						
YAK				LR	LR	21 47 45.5	
	comp=Z,718nm,19.3s,baz=89,slow=42						
YAK	**Yakutsk**	**7.89**	**231**	*i* Pn	**Pn**	**21 44 12.6**	**+0.4**
YAK				*i* Pn	**Pn**	**21 44 12.6**	**+0.4**
YAK				*i* Pn	**Pn**	**21 44 12.6**	**+0.4**
YAK				*e*Pg	**Pb**	**21 44 38.6**	**+4.4**
	32nm,0.8s						
YAK				*e*Sn	**Sn**	**21 45 40.6**	**-0.8**
YAK				*e*Sn	**Sn**	**21 45 40.6**	**-0.8**
YAK				*e*Sg	Sg	21 46 22.5	-7.9
	218nm,1.1s						
YAK	**Yakutsk**	**7.89**	**231**	*e*P	**Pn**	**21 44 12.4**	**+0.2**
YAK				*e*		21 45 41.6	
YAK				pmax	pmax		
	comp=Z,19nm,0.8s						
YAK				smax	smax		
	comp=N,31nm,0.5s						
YAK				smax	smax		
	comp=E,27nm,0.8s						
YAK	**Yakutsk**	**7.89**	**231**	Pn	**Pn**	**21 44 12.0**	**-0.2**
YAK				Sn	**Sn**	**21 45 39.4**	**-2.0**
MGD	**Magadan 1**	**8.36**	**151**	*e*Sg	**Sg**	**21 46 44.9**	**-0.6**
MA2	**Magadan**	**8.81**	**152**	Lg	Lg	21 46 53.8	
	comp=E,1.2nm,0.3s,baz=18,slow=20,SNR=4.4						
MA2	**Magadan**	**8.81**	**152**	*e*Sg	**Sg**	**21 47 01.1**	**+1.3**
MA2				Sgmax		21 47 18.2	
	comp=E,30nm,0.8s						
MA2				Sgmax		21 47 18.2	
	comp=E,50nm,0.8s						
BILL	**Bilibino**	**8.88**	**76**	*i* P	**Pn**	**21 44 26.4**	**+0.7**
BILL				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BILL				MLR	MLR		
	comp=Z,258nm,14.0s						
BILL	**Bilibino**	**8.88**	**76**	Pn	**Pn**	**21 44 27.8**	**+2.1**
ZEA	**Zeya**	**15.77**	**216**	*e*P	**Pn**	**21 45 59.2**	**-0.3**
ZEA				MLR	MLR		
	comp=E,200nm,4.0s						
ZEA				MLR	MLR		
	comp=N,700nm,5.0s						
ZEA				MLR	MLR		
	comp=Z,700nm,5.0s						
PETK	**Petropavlovsk-**	**16.23**	**146**	Pn	**Pn**	**21 46 07.4**	**+2.0**
	comp=Z,0.1nm,0.3s,baz=347,slow=6.1,SNR=4.0						
PETK				LR	LR	21 52 21.9	
	comp=Z,176nm,20.0s,baz=71,slow=38						
PETK	**Petropavlovsk-**	**16.23**	**146**	P	**P**	**21 46 10.5**	**+2.0**
PETK	**Petropavlovsk-**	**16.23**	**146**		**P**	**21 46 10.5**	**+2.0**
BOD	**Bodaibo**	**16.25**	**247**	*e*P	**Pn**	**21 46 03.7**	**-2.0**
BOD				pmax	pmax		
	comp=Z,21nm,1.1s						
KLR	**Kul'dur**	**19.25**	**202**	P	**P**	**21 46 41.5**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=8.1,slow=9.6,SNR=8.6						
KLR				Lg	Lg	21 52 16.8	
	comp=Z,0.1nm,0.3s,baz=310,slow=17,SNR=2.0						
KLR				LR	LR	21 54 24.6	
	comp=Z,272nm,19.9s,baz=12,slow=38						
NRIK	**Noril'sk**	**19.76**	**300**	P	**P**	**21 46 48.1**	**+1.0**
	comp=Z,0.5nm,0.3s,baz=78,slow=12,SNR=7.7						
NRIK				S	**S**	**21 50 21.5**	**-7.9**
	comp=Z,0.2nm,0.3s,baz=345,slow=20,SNR=3.4						
NRIK	**Noril'sk**	**19.76**	**300**	*ce*P	**P**	**21 46 48.5**	**+1.3**
NRIK				pmax	pmax		
	comp=Z,11nm,1.0s						
NRIK	**Noril'sk**	**19.76**	**300**	P	**P**	**21 46 48.2**	**+1.0**
HIA	**Hailar**	**21.74**	**224**	P	**P**	**21 47 09.3**	**+0.5**
HIA				pmax	pmax		
	comp=Z,20nm,1.1s						
HIA	**Hailar**	**21.74**	**224**	P	**P**	**21 47 09.2**	**+0.5**
HIA				IAmb	IAmb	21 47 18.9	
	comp=Z,20nm,1.1s						
ASAJ	**Asahikawa**	**23.55**	**180**	P	**P**	**21 47 26.4**	**-1.4**
	comp=Z,12nm,1.0s,baz=342,slow=16,SNR=2.3						
ASAJ				LR	LR	21 56 51.1	
	comp=Z,227nm,18.2s,baz=93,slow=37						
MDJ	**Mudanjiang**	**24.08**	**204**	P	**P**	**21 47 33.1**	**+0.3**
TOLK	**Toolik Lake Re**	**24.10**	**56**	P	**P**	**21 47 32.5**	**-0.4**
TOLK				IAmb	IAmb	21 47 34.8	
	comp=Z,33nm,1.4s						
IRK	**Irkutsk**	**24.10**	**250**	*e*P	**P**	**21 47 33.6**	**+0.6**
IRK				pmax	pmax		
	comp=Z,74nm,3.9s						
IMAR	**Indian Mountai**	**24.11**	**64**	P	**P**	**21 47 33.0**	**+0.1**
USRK	**Ussuriysk Ar.**	**24.16**	**199**	P	**P**	**21 47 33.3**	**-0.2**
	comp=Z,3.4nm,0.7s,baz=10,slow=6.3,SNR=5.8						
USRK				LR	LR	21 57 28.9	
	comp=Z,343nm,20.0s,baz=8.9,slow=38						
USRK	**Ussuriysk Ar.**	**24.16**	**199**	P	**P**	**21 47 32.8**	**-0.7**
H21K	**Melozitna Rive**	**24.61**	**64**	P	**P**	**21 47 37.3**	**-0.2**
H21K				IAmb	IAmb	21 47 41.9	
	comp=Z,14nm,1.2s						
COLD	**Coldfoot**	**24.63**	**59**	P	**P**	**21 47 38.1**	**+0.5**
COLD				IAmb	IAmb	21 47 42.3	
	comp=Z,24nm,1.1s						
TLY	**Talaya**	**24.79**	**250**	P	**P**	**21 47 38.7**	**-0.6**
	comp=Z,1.7nm,0.6s,baz=68,slow=5.4,SNR=1.8						
TLY				LR	LR	21 58 01.0	
	comp=Z,323nm,19.1s,baz=26,slow=38						
J20K	**Nowinta River**	**24.99**	**68**	P	**P**	**21 47 41.3**	**+0.3**
J20K				IAmb	IAmb	21 47 42.6	
	comp=Z,24nm,1.4s						
TTA	**Tatalina**	**25.08**	**71**	P	**P**	**21 47 42.4**	**+0.6**
TTA				pmax	pmax		
	comp=Z,17nm,1.5s						
TTA	**Tatalina**	**25.08**	**71**	P	**P**	**21 47 42.4**	**+0.6**
TTA				IAmb	IAmb	21 47 53.6	
	comp=Z,17nm,1.5s						
I21K	**Tanana**	**25.16**	**64**	P	**P**	**21 47 42.9**	**+0.4**
I21K				IAmb	IAmb	21 47 46.8	
	comp=Z,17nm,1.0s						
K20K	**Telida**	**25.51**	**69**	P	**P**	**21 47 47.2**	**+1.5**
K20K				IAmb	IAmb	21 47 49.0	
	comp=Z,12nm,1.3s						
CN2	**Changchun**	**25.59**	**210**	*e*P	**P**	**21 47 46.3**	**-0.2**
CN2				S	**S**	**21 52 05.8**	**-8.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				LR	LR		
	comp=Z,300nm,10.0s						
CN2				LR	LR		
	comp=Z,400nm,10.0s						
CN2				LR	LR		
	comp=Z,700nm,14.0s						
MLY	**Manley**	**25.68**	**64**	P	**P**	**21 47 47.6**	**+0.3**
MLY				IAmb	IAmb	21 47 52.5	
	comp=Z,11nm,1.2s						
MOY	**Mondy**	**25.76**	**253**	*e*P	**P**	**21 47 51.7**	**+3.5**
MOY				pmax	pmax		
	comp=Z,38nm,1.6s						
ZAK	**Zakamensk**	**25.99**	**248**	*e*P	**P**	**21 47 51.3**	**+1.1**
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
H24K	**Noodor Dome**	**26.18**	**61**	P	**P**	**21 47 52.0**	**+0.3**
H24K				IAmb	IAmb	21 48 09.6	
	comp=Z,12nm,1.2s						
BMAR	**Burnt Mountain**	**26.34**	**56**	P	**P**	**21 47 53.6**	**+0.4**
MDM	**Murphy Dome**	**26.58**	**63**	P	**P**	**21 47 55.7**	**+0.3**
COLA	**College**	**26.76**	**63**	*i* P	**P**	**21 47 56.5**	**-0.4**
COLA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ULN	**Ulaanbaatar**	**26.83**	**241**	P	**P**	**21 47 58.6**	**+0.7**
ULN				pmax	pmax		
	comp=Z,6.0nm,1.4s						
ULN	**Ulaanbaatar**	**26.83**	**241**	P	**P**	**21 47 58.6**	**+0.7**
SONM	**Songino Array**	**27.07**	**241**	P	**P**	**21 48 01.3**	**+1.2**
	comp=Z,2.1nm,0.9s,baz=24,slow=7.8,SNR=9.9						
SONM				LR	LR	21 59 33.4	
	comp=Z,288nm,18.4s,baz=34,slow=38						
SONM	**Songino Array**	**27.07**	**241**	P	**P**	**21 48 01.2**	**+1.1**
MCK	**McKinley**	**27.09**	**65**	P	**P**	**21 48 00.6**	**+0.6**
MCK				pmax	pmax		
	comp=Z,21nm,1.4s						
MCK	**McKinley**	**27.09**	**65**	P	**P**	**21 48 00.6**	**+0.6**
MCK				IAmb	IAmb	21 48 03.9	
	comp=Z,21nm,1.4s						
IL31		**27.15**	**62**	P	**P**	**21 48 00.8**	**+0.4**
IL31				IAmb	IAmb	21 48 04.0	
	comp=Z,12nm,1.1s						
ILAR	**Eielson Array**	**27.15**	**62**	P	**P**	**21 48 00.3**	**-0.2**
	comp=Z,5.1nm,0.8s,baz=298,slow=7.8,SNR=42						
ILAR				LR	LR	21 59 11.2	
	comp=Z,137nm,18.2s,baz=356,slow=38						
ILAR	**Eielson Array**	**27.15**	**62**	P	**P**	**21 48 00.7**	**+0.2**
ILAR	**Eielson Array**	**27.15**	**62**	P	**P**	**21 48 00.7**	**+0.2**
INK	**Inuvik**	**29.18**	**49**	P	**P**	**21 48 17.2**	**-1.2**
	comp=Z,0.7nm,0.8s,baz=350,slow=18,SNR=1.8						
INK				LR	LR	22 01 49.7	
	comp=Z,207nm,19.9s,baz=313,slow=40						
BCAR	**Beaver Creek A**	**29.98**	**62**	P	**P**	**21 48 25.8**	**+0.1**
EUNU	**Eureka**	**29.99**	**15**	P	**P**	**21 48 26.4**	**+0.7**
ZAA0	**Zalesovo Array**	**30.09**	**272**	P	**P**	**21 48 27.2**	**+0.5**
ZALV	**Zalesovo Beam**	**30.09**	**272**	P	**P**	**21 48 27.2**	**+0.5**
	comp=Z,1.4nm,0.8s,baz=44,slow=8.8,SNR=6.5						
ZALV				LR	LR	22 01 40.0	
	comp=Z,89nm,21.1s,baz=12,slow=39						
ZALV	**Zalesovo Beam**	**30.09**	**272**	*i* P	**P**	**21 48 27.7**	**+1.0**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ZALV	**Zalesovo Beam**	**30.09**	**272**	P	**P**	**21 48 27.3**	**+0.6**
M27K	**Edge Creek, AK**	**30.43**	**63**	P	**P**	**21 48 30.1**	**+0.3**
M27K				IAmb	IAmb	21 48 30.9	
	comp=Z,13nm,1.1s						
MJAR	**Matsushiro Arr**	**31.22**	**187**	LR	LR	22 00 34.4	
	comp=Z,81nm,18.1s,baz=335,slow=35						
BJI	**Beijing**	**31.25**	**221**	P	**P**	**21 48 37.8**	**+0.8**
BJI				pP	**pP**	**21 48 42.0**	**+1.8**
BJI				sP	**sP**	**21 48 45.0**	**+3.5**
BJI				pmax	pmax		
	comp=Z,10.0nm,1.2s						
BJT	**Baijiatuau**	**31.27**	**221**	P	**P**	**21 48 37.3**	**0.0**
BJT				pmax	pmax		
	comp=Z,11nm,0.5s						
BJT	**Baijiatuau**	**31.27**	**221**	P	**P**	**21 48 37.3**	**0.0**
KSRS	**Korea Array**	**31.34**	**203**	P	**P**	**21 48 35.7**	**-2.1**
	comp=Z,0.6nm,0.4s,baz=354,slow=11,SNR=2.1						
KSRS				LR	LR	22 01 30.7	
	comp=Z,203nm,20.7s,baz=20,slow=37						
HHC	**Hu-ho-hao-te**	**31.74**	**228**	*e*P	**P**	**21 48 42.5**	**+1.0**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,120nm,6.5s						
HHC				LR	LR		
	comp=Z,380nm,8.7s						
HHC				LR	LR		
	comp=Z,410nm,9.5s						
HHC				LR	LR		
	comp=Z,460nm,8.6s						
BTO	**Baotou**	**32.41**	**230**	*e*P	**P**	**21 48 47.8**	**+0.4**
BTO				S	**S**	**21 54 00.5**	**-1.1**
BTO				LR	LR		
	comp=Z,2µm,6.8s						
KURK	**Kurchatov**	**34.99**	**274**	P	**P**	**21 49 10.4**	**+0.8**
KURK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KURK	**Kurchatov**	**34.99**	**274**	P	**P**	**21 49 10.3**	**+0.8**
KURK				IAmb	IAmb	21 49 16.1	
	comp=Z,8.2nm,1.1s						
BRVK	**Borovoye**	**36.29**	**283**	P	**P**	**21 49 21.1**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BRVK	**Borovoye**	**36.29**	**283**	P	**P**	**21 49 21.1**	**+0.4**
ARCES	**ARCESS Array B**	**36.59**	**328**	P	**P**	**21 49 21.6**	**-1.5**
	comp=Z,5.6nm,1.1s,baz=11,slow=10,SNR=2.5						
ARCES				PcP	**PcP**	**21 51 43.1**	**-2.7**
	comp=Z,1.8nm,0.9s,baz=34,slow=3.1,SNR=5.4						
ARCES				LR	LR	22 06 45.1	
	comp=Z,74nm,18.7s,baz=230,slow=40						
GTA	**Gaotai**	**36.74**	**242**	*e*P	**P**	**21 49 26.3**	**+1.4**
GTA				pP	sP	21 49 30.5	+1.2
GTA				sP	pP	21 49 33.5	+5.4
GTA				pmax	pmax		
	comp=Z,2.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,120nm,5.8s						
GTA				LR	LR		
	comp=Z,220nm,16.4s						
GTA				LR	LR		
	comp=Z,360nm,16.4s						
GTA				LR	LR		
	comp=Z,330nm,16.0s						
MK31	**Makanchi Array**	**36.79**	**267**	*c i*P	**P**	**21 49 25.1**	**0.0**
MK31	**Makanchi Array**	**36.79**	**267**	P	**P**	**21 49 25.1**	**0.0**
MKAR	**Makanchi Array**	**36.79**	**267**	P	**P**	**21 49 25.2**	**+0.1**
	comp=Z,3.0nm,0.7s,baz=28,slow=5.0,SNR=20						
MKAR				LR	LR	22 05 41.0	
	comp=Z,68nm,18.5s,baz=18,slow=38						
MKAR	**Makanchi Array**	**36.79**	**267**	P	**P**	**21 49 25.7**	**+0.6**
MKAR	**Makanchi Array**	**36.79**	**267**	P	**P**	**21 49 25.7**	**+0.6**
MAKZ	**Makanchi**	**36.90**	**267**	P	**P**	**21 49 26.1**	**+0.1**
MAKZ				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MAKZ	**Makanchi**	**36.90**	**267**	P	**P**	**21 49 26.1**	**+0.1**
WMQ	**Urumqi**	**37.24**	**259**	*e*P	**P**	**21 49 31.0**	**+2.0**
WMQ				pmax	pmax		
	comp=Z,10.0nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,100nm,3.9s						
WMQ				LR	LR		
	comp=Z,110nm,8.3s						
WMQ				LR	LR		
	comp=Z,260nm,10.7s						
WMQ				LR	LR		
	comp=Z,130nm,18.9s						
ARU	**Arti**	**37.86**	**296**	*c i*P	**P**	**21 49 33.3**	**-0.7**
ARU						21 50 57.3	
ARU						21 51 50.2	
ARU				S	**S**	**21 55 22.4**	**-2.3**
ARU				SS	**SnSn**	**21 57 55.5**	**-10**
ARU				pmax	pmax		
	comp=Z,11nm,1.5s						
NJ2	**Nanjing**	**38.26**	**214**	*e*P	**P**	**21 49 37.5**	**-0.1**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
LZH	**Lanzhou**	**38.45**	**235**	*e*P	**P**	**21 49 41.5**	**+2.1**
LZH				pP	sP	21 49 45.5	+1.6
LZH				sP	pP	21 49 50.3	+7.7
LZH				pmax	pmax		
	comp=Z,14nm,1.3s						
LZH				LR	LR		
	comp=Z,380nm,13.4s						
LZH				LR	LR		
	comp=Z,330nm,12.3s						
LZH				LR	LR		
	comp=Z,250nm,12.8s						
YKA	**Yellowknife Ar**	**38.81**	**46**	LR	LR	22 07 47.6	
	comp=Z,109nm,19.4s,baz=0.0,slow=40						
SUMG	**Summit**	**40.06**	**1**	P	**P**	**21 49 54.0**	**+1.3**
SUMG	**Summit**	**40.06**	**1**	P	**P**	**21 49 54.0**	**+1.3**
KLMR	**Klimovskoe**	**40.32**	**313**	*e*P	**P**	**21 49 51.6**	**-2.9**
KLMR				pmax	pmax		
	comp=Z,30nm,1.5s						
KLMR	**Klimovskoe**	**40.32**	**313**	*e*P	**P**	**21 49 51.6**	**-2.9**
KLMR				AMP		21 49 59.6	
	comp=Z,30nm,1.5s						
KLMR				*e*PP	**PP**	**21 51 24.0**	**-2.9**
BOOM	**Boomskoye usch**	**42.85**	**269**	P	**P**	**21 50 17.3**	**+1.6**
BOOM				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BOOM	**Boomskoye usch**	**42.85**	**269**	P	**P**	**21 50 17.3**	**+1.6**
FRU1	**Bishkek**	**43.08**	**271**	P	**P**	**21 50 17.7**	**+0.3**
FRU1				pmax	pmax		
	comp=Z,9.0nm,1.1s						
FRU1	**Bishkek**	**43.08**	**271**	P	**P**	**21 50 17.7**	**+0.3**
FRU1				IAmb	IAmb	21 50 20.2	
	comp=Z,9.1nm,1.1s						
ABKAR	**Akbulak array**	**43.18**	**288**	P	**P**	**21 50 18.8**	**+0.7**
ABKAR	**Akbulak array**	**43.18**	**288**	P	**P**	**21 50 18.8**	**+0.7**
ABKAR				IAmb	IAmb	21 50 20.7	
	comp=Z,6.6nm,1.1s						
AAK	**Ala-Archa**	**43.28**	**271**	P	**P**	**21 50 20.5**	**+1.4**
AAK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
AAK	**Ala-Archa**	**43.28**	**271**	P	**P**	**21 50 20.5**	**+1.4**
FIA1	**FINESS Array S**	**43.33**	**321**	P	**P**	**21 50 20.8**	**+1.7**
FINES	**FINESS Array B**	**43.33**	**321**	P	**P**	**21 50 18.2**	**-0.9**
	comp=Z,8.7nm,1.0s,baz=0.0,slow=9.7,SNR=11						
FINES	**FINESS Array B**	**43.33**	**321**	*i* P	**P**	**21 50 20.0**	**+0.9**
FINES				pmax	pmax		
	comp=Z,9.0nm,1.0s						
FINES	**FINESS Array B**	**43.33**	**321**	P	**P**	**21 50 19.8**	**+0.7**
KKAR	**Karatay Array**	**44.40**	**274**	P	**P**	**21 50 29.1**	**+1.1**
KKAR	**Karatay Array**	**44.40**	**274**	P	**P**	**21 50 29.1**	**+1.1**
BELG	**Belogornoye**	**44.86**	**300**	*i* P	**P**	**21 50 31.2**	**-0.2**
BELG				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KSH	**Kashi**	**45.40**	**267**	P	P	21 50 41.8	+5.7
KSH				pP	sP	21 50 45.8	+5.2
KSH				pmax	pmax		
	comp=Z,4.0nm,1.0s						
OBN	**Obninsk**	**46.00**	**310**	P	**P**	**21 50 38.4**	**-2.0**
	comp=Z,1.7nm,0.5s,baz=332,slow=5.2,SNR=3.1						
OBN	**Obninsk**	**46.00**	**310**	*i* P	**P**	**21 50 38.9**	**-1.5**
OBN				*i*		21 52 16.5	
OBN				*e*		21 52 32.0	
OBN				pmax	pmax		
	comp=Z,14nm,1.6s						
OBN				MLR	MLR		
	comp=Z,161nm,15.0s						
NB2	**NORSAR Subarra**	**46.90**	**330**	P	**P**	**21 50 47.7**	**+0.2**
	comp=Z,8.4nm,1.1s,baz=23,slow=7.9						
NOA	**NORSAR Array B**	**46.90**	**330**	P	**P**	**21 50 45.0**	**-2.6**
	comp=Z,0.9nm,0.9s,baz=359,slow=15,SNR=3.4						
NOA	**NORSAR Array B**	**46.90**	**330**	P	**P**	**21 50 45.0**	**-2.6**
BTK	**Batken**	**46.90**	**272**	P	**P**	**21 50 48.5**	**+0.6**
BTK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BTK	**Batken**	**46.90**	**272**	P	**P**	**21 50 48.5**	**+0.6**
BTK				IAmb	IAmb	21 50 53.9	
	comp=Z,6.0nm,0.8s						
FCC	**Fort Churchill**	**47.22**	**36**	P	**P**	**21 50 50.4**	**+0.5**
FCC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
FCC	**Fort Churchill**	**47.22**	**36**	P	**P**	**21 50 50.4**	**+0.5**
GAR	**Garm**	**48.01**	**272**	P	**P**	**21 50 57.5**	**+1.0**
LSA	**Lhasa**	**48.52**	**246**	P	**P**	**21 51 01.8**	**+0.8**
LSA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
LSA	**Lhasa**	**48.52**	**246**	P	**P**	**21 51 01.8**	**+0.8**
LSA				IAmb	IAmb	21 51 11.0	
	comp=Z,4.1nm,0.7s						
CHGR	**Chuyangaron**	**48.76**	**273**	P	**P**	**21 51 02.6**	**+0.3**
FFC	**Flin Flon**	**48.88**	**44**	P	**P**	**21 51 03.0**	**+0.1**
FFC				pmax	pmax		
	comp=Z,10.0nm,1.2s						
FFC	**Flin Flon**	**48.88**	**44**	P	**P**	**21 51 03.0**	**+0.1**
FFC				IAmb	IAmb	21 51 03.4	
	comp=Z,9.5nm,1.1s						
MNK	**Minsk**	**48.98**	**315**	*i* P	**P**	**21 51 04.6**	**+1.0**
MNK				*i*		21 52 28.3	
MNK				*i*		21 52 58.1	
MNK				*i* PPP	PPP	21 53 48.7	
MNK				*i* S	**S**	**21 58 08.2**	**+0.8**
MNK				*i*		22 00 57.0	
MNK				*i* SS	**SS**	**22 01 42.3**	**+4.9**
MNK				*i* SSS	SSS	22 03 03.1	
MNK				pmax	pmax		
	comp=E,3.0nm,1.0s						
MNK				pmax	pmax		
	comp=Z,16nm,0.9s						
MNK				pmax	pmax		
	comp=N,16nm,1.3s						
MNK				MLR	MLR		
	comp=Z,47nm,14.0s						
MNK				MLR	MLR		
	comp=N,259nm,19.0s						
MNK				MLR	MLR		
	comp=E,21nm,16.0s						
MNK	**Minsk**	**48.98**	**315**	*i* P	**P**	**21 51 04.6**	**+1.0**
	comp=E,3.0nm,1.0s						
MNK				*i* P	**P**	**21 51 04.6**	**+1.0**
	comp=N,16nm,1.2s						
MNK				*i* P	**P**	**21 51 04.6**	**+1.0**
	comp=Z,16nm,0.9s,baz=208						
MNK				*i* PcP	**PcP**	**21 52 28.4**	**+0.9**
MNK				*i* PP	**PP**	**21 52 58.2**	**+1.5**
MNK				*i* PPP	PPP	21 53 48.8	
MNK				*i* S	**S**	**21 58 08.2**	**+0.9**
MNK				*i* SS	**SS**	**22 01 42.4**	**+4.9**
MNK				*i* SSS	SSS	22 03 03.1	
MNK				*i* LR	LR	22 11 14.3	
MNK				*i* LRM	MLR	22 13 47.2	
	comp=Z,47nm,13.6s						
MNK				*i* LRM	MLR	22 13 57.1	
	comp=N,259nm,19.0s						
MNK				*i* LRM	MLR	22 14 05.8	
	comp=E,21nm,16.3s						
KMI	**Kunming**	**49.01**	**231**	⇑P	**P**	**21 51 05.0**	**+0.5**
KMI				pP	sP	21 51 10.5	+1.5
KMI				pmax	pmax		
	comp=E,9.0nm,0.7s						
HOOD	**Mount Hood Mea**	**51.07**	**65**	P	**P**	**21 51 20.3**	**+0.5**
HOOD				IAmb	IAmb	21 51 22.1	
	comp=Z,11nm,0.9s						
AKASG	**Malin Array Be**	**52.01**	**312**	P	**P**	**21 51 26.2**	**-0.4**
	comp=Z,4.2nm,0.7s,baz=29,slow=8.4,SNR=10						
AKASG				PcP	**PcP**	**21 52 37.8**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=122,slow=6.7,SNR=1.6						
AKASG	**Malin Array Be**	**52.01**	**312**	P	**P**	**21 51 27.1**	**+0.6**
AKBB	**Malin Array Si**	**52.01**	**312**	P	**P**	**21 51 26.4**	**-0.1**
AKBB				pmax	pmax		
	comp=Z,6.0nm,0.9s						
AKBB	**Malin Array Si**	**52.01**	**312**	P	**P**	**21 51 26.4**	**-0.1**
AKBB				IAmb	IAmb	21 51 27.1	
	comp=Z,6.0nm,0.8s						
JIRN	**Jiri**	**52.14**	**250**	*e*P	**P**	**21 51 29.6**	**+1.3**
	comp=Z,18nm,0.8s						
KKN	**Kakani**	**52.35**	**251**	*e*P	**P**	**21 51 31.1**	**+1.5**
	comp=Z,13nm,0.7s						
GKN	**Gorkha**	**52.39**	**251**	*e*P	**P**	**21 51 31.2**	**+1.3**
DANN	**Dangsing**	**52.40**	**253**	*e*P	**P**	**21 51 31.2**	**+1.1**
	comp=Z,20nm,0.7s						
KBL	**Kabul**	**52.41**	**270**	P	**P**	**21 51 30.6**	**+0.6**
KBL				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KBL	**Kabul**	**52.41**	**270**	P	**P**	**21 51 30.6**	**+0.6**
ODAN	**Odare**	**52.44**	**248**	*e*P	**P**	**21 51 31.7**	**+1.4**
	comp=Z,26nm,1.1s						
PKIN	**Phulchoki**	**52.50**	**250**	*e*P	**P**	**21 51 31.8**	**+1.0**
PKI	**Pulchoki**	**52.50**	**250**	*e*P	**P**	**21 51 32.0**	**+1.1**
DMN	**Daman**	**52.58**	**251**	*e*P	**P**	**21 51 32.8**	**+1.4**
	comp=Z,18nm,0.7s						
RAMN	**Ramite**	**52.64**	**249**	*e*P	**P**	**21 51 32.7**	**+0.9**
PINE	**Pine Mountain**	**52.66**	**65**	P	**P**	**21 51 32.7**	**+1.0**
PINE				IAmb	IAmb	21 51 33.7	
	comp=Z,5.7nm,0.9s						
KOLN	**Koldanda**	**52.98**	**252**	*e*P	**P**	**21 51 35.7**	**+1.4**
GEYT	**Alibeck**	**53.58**	**282**	P	**P**	**21 51 36.6**	**-1.9**
	comp=Z,2.7nm,0.7s,baz=49,slow=14,SNR=2.6						
GEYT				LR	LR	22 16 49.3	
	comp=Z,52nm,18.7s,baz=345,slow=39						
GEYT	**Alibeck**	**53.58**	**282**	P	**P**	**21 51 39.2**	**+0.7**
GEYT				IAmb	IAmb	21 51 41.2	
	comp=Z,6.7nm,1.1s						
KIV	**Kislovodsk**	**53.81**	**298**	*e*P	**P**	**21 51 40.4**	**+0.3**
KIV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KIV	**Kislovodsk**	**53.81**	**298**	P	**P**	**21 51 40.9**	**+0.8**
KIV				IAmb	IAmb	21 51 42.7	
	comp=Z,9.8nm,1.0s						
KBZ	**Khabaz**	**53.94**	**298**	P	**P**	**21 51 41.7**	**+0.9**
	comp=Z,6.3nm,0.9s,baz=20,slow=3.4,SNR=9.2						
SHA1	**Shidzhatmaz**	**54.01**	**298**	*i* P	**P**	**21 51 42.5**	**+0.8**
ULM	**Lac du Bonnet**	**54.53**	**42**	LR	LR	22 18 43.7	
	comp=Z,82nm,18.1s,baz=312,slow=40						
ONI	**Oni**	**54.76**	**297**	P	**P**	**21 51 48.5**	**+1.6**
ONI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
ONI	**Oni**	**54.76**	**297**	P	**P**	**21 51 48.5**	**+1.6**
ONI				IAmb	IAmb	21 51 51.9	
	comp=Z,8.5nm,1.1s						
KWP	**Kalwaria Pacla**	**54.76**	**316**	P	**P**	**21 51 48.3**	**+1.5**
KWP	**Kalwaria Pacla**	**54.76**	**316**	P	**P**	**21 51 48.2**	**+1.5**
YHH	**Holmes Hill**	**55.14**	**56**	P	**P**	**21 51 50.4**	**+0.4**
YHH				IAmb	IAmb	21 51 54.5	
	comp=Z,5.4nm,1.1s						
HRA	**Herat**	**55.15**	**276**	P	**P**	**21 51 50.5**	**+0.5**
HRA				IAmb	IAmb	21 51 52.3	
	comp=Z,3.8nm,0.8s						

RLMT	Red Lodge	55.34	55	P	P	21 51 52.1	+0.7
RLMT				IAmb	IAmb	21 51 56.0	
	comp=Z,8.3nm,0.9s						
CLL	Collm	55.58	324	i P	P	21 51 53.1	+0.4
	comp=Z,9.0nm,1.0s						
CLL	Collm	55.58	324	P	P	21 51 53.4	+0.7
CLL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
CLL	Collm	55.58	324	P	P	21 51 53.4	+0.7
CLL				IAmb	IAmb	21 51 54.0	
	comp=Z,9.4nm,1.0s						
FLWY	Flagg Ranch	55.82	57	P	P	21 51 56.1	+1.3
FLWY				IAmb	IAmb	21 51 59.4	
	comp=Z,5.1nm,0.8s						
SCHQ	Schefferville	55.90	20	P	P	21 51 53.3	-1.6
	comp=Z,3.4nm,0.8s,baz=15,slow=12,SNR=2.4						
SCHQ				LR	LR	22 15 43.5	
	comp=Z,110nm,21.9s,baz=311,slow=36						
SCHQ	Schefferville	55.90	20	P	P	21 51 54.2	-0.7
BUR08	Bucovina Ar. S	55.90	314	P	P	21 51 55.5	+0.3
BUR08				IAmb	IAmb	21 52 09.8	
	comp=Z,14nm,1.5s						
BURAR	Bucovina Array	55.92	314	P	P	21 51 55.6	+0.2
MORC	Moravsky Berou	55.94	320	P	P	21 51 56.1	+0.7
MORC				pmax	pmax		
	comp=Z,15nm,1.4s						
MORC	Moravsky Berou	55.94	320	P	P	21 51 56.1	+0.7
LANS	Liptovska Anna	56.04	319	eP	P	21 51 58.1	+2.0
LANS	Liptovska Anna	56.04	319	eP	P	21 51 58.1	+2.0
MOOW	Moose Ponds	56.10	57	P	P	21 51 57.6	+0.7
TPAW	Teton Pass	56.27	57	P	P	21 51 58.7	+0.6
TPAW				IAmb	IAmb	21 52 00.6	
	comp=Z,5.0nm,1.0s						
LOHW	Long Hollow	56.27	57	P	P	21 51 59.0	+1.0
LOHW				IAmb	IAmb	21 52 03.1	
	comp=Z,5.3nm,1.2s						
REDW	Red Top Meadow	56.41	57	P	P	21 52 00.2	+1.2
REDW				IAmb	IAmb	21 52 03.9	
	comp=Z,9.3nm,1.2s						
CMAR	Chiang Mai Arr	56.42	232	P	P	21 51 58.3	-0.8
	comp=Z,0.3nm,0.4s,baz=7.4,slow=9.1,SNR=2.5						
CMAR				LR	LR	22 18 56.5	
	comp=Z,124nm,18.4s,baz=24,slow=39						
CMAR	Chiang Mai Arr	56.42	232	P	P	21 51 59.1	0.0
CMAR	Chiang Mai Arr	56.42	232	P	P	21 51 59.1	0.0
KARS	Kars	56.63	296	P	P	21 52 02.3	+1.8
KARS				pmax	pmax		
	comp=Z,23nm,0.9s						
KARS	Kars	56.63	296	P	P	21 52 02.3	+1.8
AHID	Auburn Hatcher	56.87	58	P	P	21 52 03.5	+1.2
PSZ	Piszkesteto	57.07	318	P	P	21 52 04.9	+1.4
PSZ				pmax	pmax		
	comp=Z,14nm,1.1s						
PSZ	Piszkesteto	57.07	318	P	P	21 52 04.9	+1.4
ELK	Elko	57.31	62	P	P	21 52 06.1	+0.6
ELK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
ELK	Elko	57.31	62	P	P	21 52 06.1	+0.6
PD31	Pinedale Array	57.37	56	P	P	21 52 06.1	+0.3
PDAR	Pinedale Array	57.37	56	P	P	21 52 06.0	+0.1
	comp=Z,1.5nm,0.7s,baz=15,slow=2.6,SNR=17						
PDAR				LR	LR	22 18 57.2	
	comp=Z,82nm,20.6s,baz=328,slow=38						
PDAR	Pinedale Array	57.37	56	P	P	21 52 06.2	+0.3
UBPT	Khong Chiam	57.59	224	P	P	21 52 07.9	+0.6
MLR	Muntele Rosu	57.66	312	P	P	21 52 09.0	+1.3
MLR				pmax	pmax		
	comp=Z,21nm,1.3s						
MLR	Muntele Rosu	57.66	312	P	P	21 52 09.0	+1.3
GERES	GERESS Array B	57.73	323	P	P	21 52 08.3	+0.2
	comp=Z,0.3nm,0.5s,baz=78,slow=10,SNR=3.5						
TCUT	Toone Canyon	58.25	59	P	P	21 52 12.6	+0.5
JLU	Jordanelle	58.70	59	P	P	21 52 15.9	+0.7
SPR3	Spring Creek 3	59.18	62	P	P	21 52 19.9	+1.2
SPR3				IAmb	IAmb	21 52 24.2	
	comp=Z,7.0nm,1.1s						
LCH	Last Change Ra	59.63	66	P	P	21 52 22.6	+1.1
LCH				IAmb	IAmb	21 52 23.5	
	comp=Z,3.1nm,0.9s						
PSUT	Pine Spring	59.76	62	P	P	21 52 23.5	+1.0
PSUT				IAmb	IAmb	21 52 24.3	
	comp=Z,4.8nm,0.9s						
Q16A	Castle Valley	60.31	60	P	P	21 52 27.0	+0.7
ECSD	EROS Data Cent	60.34	46	P	P	21 52 25.5	-0.7
BRTR	Keskin Array B	60.58	303	P	P	21 52 28.2	+0.2
	comp=Z,0.9nm,0.8s,baz=48,slow=7.3,SNR=5.3						
BRTR	Keskin Array B	60.58	303	i P	P	21 52 29.1	+1.0
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WVT	Waverly	69.80	42	P	P	21 53 26.8	-0.9
WVT				pmax	pmax		
	comp=Z,5.0nm,0.9s						
WVT	Waverly	69.80	42	P	P	21 53 26.8	-0.9
WVT				IAmb	IAmb	21 53 27.5	
	comp=Z,4.9nm,0.8s						
ESDC	Sonseca Array	70.11	333	P	P	21 53 29.4	-0.2
	comp=Z,2.6nm,0.9s,baz=4.0,slow=6.7,SNR=12						
ESDC	Sonseca Array	70.11	333	P	P	21 53 29.9	+0.3
ESDC				IAmb	IAmb	21 53 31.0	
	comp=Z,5.9nm,1.2s						
RAYN	Ar Rayn	71.21	286	P	P	21 53 36.9	+0.4
RAYN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
RAYN	Ar Rayn	71.21	286	P	P	21 53 36.9	+0.4
RAYN				IAmb	IAmb	21 53 38.3	
	comp=Z,4.0nm,0.9s						
CPCT	Cooper Cave	71.27	39	P	P	21 53 35.0	-1.6
TXAR	Lajitas Array	71.55	58	LR	LR	22 27 59.5	
	comp=Z,115nm,19.1s,baz=0.0,slow=38						
FPAL	Fort Paine	71.86	40	P	P	21 53 39.5	-0.8
WRA	Warramunga Arr	87.52	188	P	P	21 55 03.2	-1.9
	comp=Z,0.3nm,0.9s,baz=2.6,slow=5.1,SNR=3.0						
ASAR	Alice Springs	91.24	188	P	P	21 55 21.3	-1.3
	comp=Z,0.2nm,0.7s,baz=4.0,slow=4.4,SNR=2.2						
TORD	Torodi Ar. Bea	94.68	322	P	P	21 55 37.0	-1.8
	comp=Z,0.8nm,0.9s,baz=359,slow=6.8,SNR=3.5						
MAW	Mawson	145.84	222	PKPbc	PKPdf	22 01 52.8	-1.6
	comp=Z,3.1nm,0.9s,baz=38,slow=5.2,SNR=4.3						
MAW	Mawson	145.84	222	PKP2	PKPdf	22 01 55.5	+1.1
MAW	Mawson	145.84	222		PKPdf	22 01 55.5	+1.1
PLCA	Paso Flores	147.53	51	PKPbc	PKPdf	22 01 59.5	+1.2
	comp=Z,3.2nm,0.9s,baz=330,slow=5.7,SNR=6.4						
PLCA	Paso Flores	147.53	51	PKP2	PKPbc	22 02 01.3	+0.4
PLCA	Paso Flores	147.53	51		PKPbc	22 02 01.3	+0.4
QSPA	South Pole Qui	157.40	180	PKPab	PKPab	22 02 40.1	-3.6
	comp=Z,1.8nm,0.9s,baz=48,slow=1.5,SNR=3.5						

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*NEIC **28** 21:45:31.2±0.9, 19°.33N±0°.05×65°.34W±0°.03, h30^{km}±10^{km}, Error ellipse: s-maj=8.0km s-min=2.8km az=209.0*

*RSPR **28** 21:45:32.9, 19°.28N×65°.34W, h57^{km}±9^{km}, MD3.2/8*

ISC 28 21:45:30.7±1.8**, 19°.27N**±0°.09×**65°.39W**±0°.06**, h16**^{km}**, n40, σ0^{s}.43**/40**, 9C-1D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CUPR	Culebra, Puert	0.96	174	⇑eP	Pg	21 45 49.2	0.0
CUPR	Culebra, Puert	0.96	174	eS	Sg	21 46 02.5	+0.6
CUPR	Culebra, Puert	0.96	174		Pg	21 45 49.2	0.0
CUPR					Sg	21 46 02.5	+0.6
CUPR	Culebra, Puert	0.96	174	IAML		21 46 03.2	
	comp=N,265nm,0.7s						
STVI	Saint Thomas	1.00	156	⇑eP	Pg	21 45 49.7	-0.3
STVI	Saint Thomas	1.00	156	eS	Sb	21 46 02.8	+0.4
STVI	Saint Thomas	1.00	156		Pg	21 45 49.7	-0.3
STVI					Sb	21 46 02.8	+0.4
STVI	Saint Thomas	1.00	156	IAML		21 46 08.2	
	comp=N,172nm,0.6s						
CBYP	Canovanas	1.08	204	⇓eP	Pb	21 45 50.9	-0.2
CBYP	Canovanas	1.08	204		Pb	21 45 50.9	-0.2
CBYP	Canovanas	1.08	204	IAML		21 46 10.3	
	comp=E,309nm,0.2s						
TBVI	Tortola	1.11	139	⇑eP	Pg	21 45 51.5	-0.7
TBVI	Tortola	1.11	139	eS	Sb	21 46 05.8	0.0
GCPR	Guaynabo City	1.16	215		Pn	21 45 51.4	-0.8
EMPR	Esperanza - Ma	1.34	234		Pb	21 45 55.0	-0.4
EMPR				IAML		21 46 19.3	
	comp=N,211nm,0.6s						
EMPR				IAML		21 46 22.2	
	comp=E,261nm,0.4s						
SJG	San Juan	1.36	212		Pn	21 45 55.1	+0.1
SJG				IAML		21 46 17.4	
	comp=E,107nm,0.5s						
PDPR	Patillas Dam,	1.38	206		Pn	21 45 54.9	-0.4
PDPR				IAML		21 46 16.5	
	comp=E,96nm,0.4s						
IGPR	InterUniversit	1.46	208	⇑eP	Pn	21 45 56.5	+0.1
IGPR	InterUniversit	1.46	208	eS	Sn	21 46 15.2	-0.1
AOPR	Arecibo Observ	1.59	235	⇑eP	Pb	21 45 58.8	-0.9
AOPR	Arecibo Observ	1.59	235	eS	Sn	21 46 18.4	0.0
AOPR	Arecibo Observ	1.59	235		Pn	21 45 57.5	-0.6
AOPR	Arecibo Observ	1.59	235		Sn	21 46 18.4	0.0
CDVI	St. Croix	1.62	159	⇑eP	Pb	21 46 00.4	+0.3
CDVI	St. Croix	1.62	159	eS	Sg	21 46 22.4	-0.4
CDVI	St. Croix	1.62	159		Pb	21 46 00.4	+0.3
CDVI					Sg	21 46 22.4	-0.4
CELP	Cerrillos	1.64	224	⇑eP	Pn	21 45 59.1	+0.3
CELP	Cerrillos	1.64	224	eS	Sn	21 46 19.6	0.0
CELP	Cerrillos	1.64	224		Pn	21 45 59.1	+0.3
CELP					Sn	21 46 19.6	0.0
CELP	Cerrillos	1.64	224	IAML		21 46 23.5	
	comp=E,67nm,0.6s						
CELP				IAML		21 46 28.3	
	comp=N,68nm,0.5s						
OBIP	Obispado Ponce	1.68	224	⇑eP	Pn	21 45 59.7	+0.3
OBIP	Obispado Ponce	1.68	224		Pn	21 45 59.7	+0.3
PRSN	Puerto Rico Se	1.97	238		Pn	21 46 03.8	+0.5
MLPR	Magueyes Islan	2.03	231	Pn	Pn	21 46 05.3	+1.0
MLPR				IAML		21 47 05.3	
	comp=E,45nm,3.1s						
CRPR	Cabo Rojo, PR	2.06	233	⇑eP	Pn	21 46 04.8	+0.2
CRPR	Cabo Rojo, PR	2.06	233	eS	Sn	21 46 30.1	+0.1
CRPR	Cabo Rojo, PR	2.06	233		Pn	21 46 04.8	+0.2
CRPR					Sn	21 46 30.1	+0.1
CRPR	Cabo Rojo, PR	2.06	233	IAML		21 46 45.9	
	comp=N,55nm,1.9s						
CRPR				IAML		21 47 02.9	
	comp=E,48nm,4.0s						
DR12	Loma Pena Alta	3.81	263	Pn	Pn	21 46 29.4	+0.6
SDDR	Presa de Saban	5.59	268	Pn	Pn	21 46 53.9	+0.6

IDC 28 21:59:25.8±1.5**, 3°.72N**×**126°.73E, h0**^{km}**, mb3.3**/4**, mb1 3.5**/4**, mb1mx3.2**/34**, mbtmp3.3**/4**, Error ellipse: s-maj=140.3km s-min=23.3km az=69.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.68	163	P	P	22 04 48.6	0.0
	0.6nm,0.6s,baz=344,slow=11,SNR=5.7						
ASAR	Alice Springs	28.10	166	P	P	22 05 19.7	+0.1
	0.2nm,0.8s,baz=348,slow=8.5,SNR=1.6						
SONM	Songino Array	47.31	341	P	P	22 08 02.5	+1.2
	0.2nm,0.6s,baz=155,slow=6.2,SNR=1.6						
MKAR	Makanchi Array	57.56	325	P	P	22 09 16.4	-1.0
	0.6nm,0.7s,baz=119,slow=7.3,SNR=7.9						

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*GUC **28** 22:13:53.9±0.7, 23°.55S×68°.37W, h125^{km}±5^{km}, ML3.4*

*IDC **28** 22:13:54.0±2.5, 23°.44S×68°.22W, h134^{km}±15^{km}, mb3.1/2, mb1 3.3/4, mb1mx3.2/24, mbtmp3.6/4, Error ellipse: s-maj=50.9km s-min=31.8km az=180.0*

ISC 28 22:13:51.6±1.4**, 23°.6S**±0°.1×**68°.10W**±0°.10**, h119**^{km}±11^{km}**, n20, σ1^{s}.40**/31**, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	1.25	323	P	Pn	22 14 18.3	+1.7
	30nm,0.3s,baz=147,slow=8.2,SNR=395						
LVC				S	Sn	22 14 36.4	+1.0
	60nm,0.3s,baz=90,slow=17,SNR=96						
LVC	Limon Verde	1.25	323	eP	Pn	22 14 18.1	+1.6
LVC				eS	Sn	22 14 35.9	+0.5
PB15	IPOC Station P	1.32	288	eP	Pn	22 14 17.9	+0.8
PB15				eS	Sn	22 14 35.8	-0.7
PB06	IPOC Station P	1.63	304	eP	Pn	22 14 21.5	+0.8
PB06				eS	Sn	22 14 42.3	-0.5
PB06				IAML		22 14 45.5	
	comp=N,773nm,0.3s						
PB05	IPOC Station P	2.08	291	eP	Pn	22 14 26.4	+0.3
PB05				eS	Sn	22 14 51.5	-1.0
PB09	IPOC Station P	2.10	330	eP	Pn	22 14 28.1	+1.6
PB09				eS	Sn	22 14 54.1	+1.0
PB09				IAML		22 15 02.6	
	comp=E,149nm,0.5s						
PB03	IPOC Station P	2.18	315	eP	Pn	22 14 27.9	+0.4
PB03				eS	Sn	22 14 54.8	-0.1
PB03				IAML		22 14 56.1	
	comp=N,291nm,0.3s						
PB10	IPOC Station P	2.25	272	eP	Pn	22 14 28.7	+0.6
PB10				eS	Sn	22 14 54.7	-1.5
PB10				IAML		22 15 01.1	
	comp=E,220nm,0.3s						
PB04	IPOC Station P	2.28	304	eP	Pn	22 14 29.2	+0.5
PB04				eS	Sn	22 14 56.0	-1.1
PB04				IAML		22 14 59.4	
	comp=E,298nm,0.5s						
PB07	IPOC Station P	2.50	319	eP	Pn	22 14 32.5	+0.9
PB07				eS	Sn	22 15 01.9	-0.4
PB07				IAML		22 15 07.7	
	comp=E,198nm,0.5s						
PB02	IPOC Station P	2.83	324	eP	Pn	22 14 36.7	+0.9
PB02				eS	Sn	22 15 09.2	-0.5
PB01	IPOC Station P	2.87	333	eP	Pn	22 14 37.4	+1.1
PB01				i S	Sn	22 15 10.0	-0.6
PB01				IAML		22 15 19.1	
	comp=N,133nm,0.3s						
LPAZ	La Paz	7.30	360	P	Pn	22 15 37.1	+1.0
	comp=N,0.2nm,0.3s,baz=156,slow=8.1,SNR=2.9						
SIV	San Ignacio	10.07	42	P	Pn	22 16 13.5	+0.4
	comp=N,0.7nm,0.3s,baz=219,slow=12,SNR=16						
SIV				S	Sn	22 17 59.0	-5.3
	comp=N,0.1nm,0.3s,baz=282,slow=17,SNR=1.7						
VNA1	Neumayer--Stat	58.05	160	P	P	22 23 41.6	+10
VNA2	Neumayer--Watz	58.41	160	P	P	22 23 44.3	+10
	baz=337,slow=17						
TXAR	Lajitas Array	62.79	325	P	P	22 24 04.4	-0.3
	comp=N,0.1nm,0.5s,baz=160,slow=5.5,SNR=1.6						
TORD	Torodi Ar. Bea	77.38	70	P	P	22 25 35.4	+1.5
	comp=N,0.4nm,0.4s,baz=261,slow=4.7,SNR=12						
ZALV	Zalesovo Beam	143.52	27	PKP	PKPdf	22 33 12.3	+0.4
	comp=N,0.4nm,0.5s,baz=291,slow=3.5,SNR=3.7						
MKAR	Makanchi Array	146.87	38	PKPbc	PKPdf	22 33 18.1	+0.2
	comp=N,0.5nm,0.6s,baz=315,slow=2.9,SNR=9.2						

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*IDC **28** 22:19:25.5±0.6, 15°.09S×173°.56W, h0^{km}, mb4.4/13, mb1 4.7/13, mb1mx4.4/37, mbtmp4.4/13, MS4.0/14, Ms1 4.1/14, ms1mx3.9/32, Error ellipse: s-maj=29.2km s-min=15.6km az=136.0*

*NOU **28** 22:19:26.2, 15°.06S×173°.22W, h19^{km}, mb4.7/18, Tonga Islands*

*NEIC **28** 22:19:31.1±1.1, 15°.17S±0°.10×173°.34W±0°.09, h35^{km}±1^{km}, mb4.8/76, Error ellipse: s-maj=16.8km s-min=14.2km az=149.0*

*GCMT **28** 22:19:37.1±0.4, 15°.10S±0°.03×173°.12W±0°.03, h34^{km}±1^{km}, MW5.0/69, Moment Tensor Solution. s20,c23; s69,c83; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.67±.31; $M_{\theta\theta}$0.53±.24; $M_{\phi\phi}$-1.21±.21; $M_{r\theta}$-1.90±.29; $M_{\theta\phi}$3.54±.12; $M_{\phi r}$-0.16±.23; Best double couple: $M_0$4.15400×10^{16} NP1:ϕ_s185.00000°,δ62.00000°,λ170.00000°. NP2: ϕ_s279.00000°,δ81.00000°,λ28.00000°. Principal axes: T 4.0820, Plg26.0000°, Azm146.0000°; N 0.1390, Plg61.0000°, Azm295.0000°; P -4.2250, Plg13.0000°, Azm49.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 22:19:29.9±0.4**, 15°.22S**±0°.07×**173°.33W**±0°.08**, h30**^{km}**, n247, σ0^{s}.93**/227**, mb4.7**/63**, MS4.1**/12**, 5C-5D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	1.99	49	Pn	Pn	22 19 55.5	-6.1
	304nm,0.3s,baz=27,slow=2.7,SNR=92						
AFI				Sn	Sn	22 20 15.5	-10
	652nm,0.3s,baz=35,slow=23,SNR=12						
AFI				LR	LR	22 20 29.2	
	comp=Z,1μm,20.5s,baz=190,slow=30						
NIUE	Niue	5.03	140		Pn	22 20 40.7	-2.5
NIUE	Niue	5.03	140	P	Pn	22 20 41.2	-2.1
	608nm,0.8s						
MSVF	Nonsavu	8.63	252	Pn	Pn	22 21 34.2	+1.2
	0.1nm,0.3s,baz=107,slow=19,SNR=1.3						
MSVF				LR	LR	22 24 21.7	
	comp=Z,2μm,19.3s,baz=44,slow=35						
MSVF	Nonsavu	8.63	252	Pn	Pn	22 21 36.0	+3.1
KNTN	Kanton	12.47	7	Pn	Pn	22 22 22.1	-3.3
RAR	Rarotonga	14.19	117	LR	LR	22 27 24.1	
	comp=Z,274nm,19.9s,baz=294,slow=33						
RAO	Raoul Island	14.59	196	LR	LR	22 27 32.6	
	comp=Z,841nm,21.5s,baz=4.0,slow=33						
PINNC	Pines Island,	19.60	245	P	Pn	22 23 56.8	-0.5
PINNC				IAmb	IAmb	22 24 06.0	
	comp=Z,44nm,1.1s						
OUENC	Ouen Island, N	20.07	246	P	P	22 24 01.3	+0.4
DZM	Mont Dzumac	20.32	247	eP	Pn	22 24 07.0	+1.0
	comp=Z,69nm,1.4s						
DZM				eLR	LR	22 28 59.1	
	comp=Z,953nm,25.4s						
DZM	Mont Dzumac	20.32	247	P	P	22 24 03.0	-0.8
	comp=Z,19nm,1.2s,baz=350,slow=11,SNR=3.9						
DZM				LR	LR	22 30 44.6	
	comp=Z,612nm,19.0s,baz=86,slow=34						
DZM	Mont Dzumac	20.32	247	P	P	22 24 03.6	-0.2
KOUNC	Koumac, New Ca	21.94	253	P	P	22 24 20.2	-0.9
	comp=Z,17nm,1.4s						
PAE	Paea	22.91	99	eT	T	22 47 51.0	
	comp=Z,2.8nm,0.2s						
PPT	Papeete	22.91	99	LR	LR	22 32 18.2	
	comp=Z,97nm,18.3s,baz=336,slow=33						
PPT2	Papeete2	22.91	99	eLQ	LQ	22 28 56.4	
	comp=Z,2μm,27.8s						
PPT2				eLR	LR	22 29 59.4	
	comp=Z,115nm,26.5s						
PPT2	Papeete2	22.91	99	eT	T	22 47 52.5	
	comp=Z,5.7nm,0.3s						
OUZ	Omahuta	23.11	208	P	P	22 24 33.6	+0.2
	comp=Z,33nm,2.3s						
URZ	Urewera	24.45	198	P	P	22 24 45.6	-0.5
	comp=Z,7.5nm,0.6s,baz=300,slow=23,SNR=3.2						
URZ				LR	LR	22 33 02.5	
	comp=Z,860nm,18.9s,baz=31,slow=33						
URZ	Urewera	24.45	198	P	P	22 24 45.4	-0.7
PMOR	Pomariorio Ree	24.56	93	eT	T	22 49 53.2	
	comp=Z,5.4nm,0.3s						
HNR	Honiara	26.72	279	LR	LR	22 34 01.0	
	comp=Z,123nm,19.3s,baz=123,slow=33						
BFZ	Birch Farm	26.94	198	P	P	22 25 08.8	+0.1
BFZ				IAmb	IAmb	22 25 18.2	
	comp=Z,19nm,0.9s						
QRZ	Quartz Range	28.32	203	P	P	22 25 20.7	-0.2
	comp=Z,34nm,2.1s						
TAOE	Nuku Hiva Isla	33.04	83	eLR	LR	22 34 41.7	
	comp=Z,288nm,23.3s						
TAOE	Nuku Hiva Isla	33.04	83	eT	T	23 00 24.7	
	comp=Z,28nm,0.2s						
ARMA	Armidale	35.49	239	P	P	22 26 23.1	-1.1
ARMA				IAmb	IAmb	22 26 25.4	
	comp=Z,8.3nm,0.9s						
H11S2	WAKE ISLAND Hy	38.85	329	T	T	23 07 55.7	
	baz=149,slow=76,SNR=9.9						
H11S3	WAKE ISLAND Hy	38.86	329	T	T	23 07 55.3	
	baz=149,slow=76,SNR=12						
H11S1	WAKE ISLAND Hy	38.87	329	T	T	23 07 56.5	
	baz=149,slow=76,SNR=7.8						
CNB	Canberra Magne	38.91	232	P	P	22 26 52.4	-0.7
	comp=Z,19nm,1.5s						
CAN	Canberra	39.19	232	P	P	22 26 54.2	-1.2
CAN				IAmb	IAmb	22 27 02.2	
	comp=Z,18nm,1.2s						
H11N3	WAKE ISLAND Hy	39.79	330	T	T	23 09 22.1	
	baz=149,slow=76,SNR=13						
H11N1	WAKE ISLAND Hy	39.80	330	T	T	23 09 15.4	
	baz=149,slow=76,SNR=20						
H11N2	WAKE ISLAND Hy	39.81	330	T	T	23 09 22.6	
	baz=149,slow=76,SNR=14						
COEN	Coen	42.06	266	P	P	22 27 18.9	-0.4
COEN	Coen	42.06	266	P	P	22 27 18.4	-0.9
	comp=Z,6.6nm,1.7s						
TOO	Toolangi	42.63	231	P	P	22 27 22.9	-0.8
TOO				IAmb	IAmb	22 27 26.1	
	comp=Z,14nm,0.9s						
TOO	Toolangi	42.63	231	P	P	22 27 23.3	-0.4
	comp=Z,20nm,1.0s						
STKA	Stephens Creek	44.18	240	P	P	22 27 33.6	-2.7
	comp=Z,3.0nm,0.5s,baz=87,slow=11,SNR=7.3						
STKA	Stephens Creek	44.18	240	P	P	22 27 35.1	-1.1
HTT	Hallett	46.69	238	P	P	22 27 55.4	-0.8
	comp=Z,6.5nm,0.8s						
LCRK	Leigh Creek	46.80	242	P	P	22 27 55.9	-1.1
OOD	Oodnadatta	48.74	246	P	P	22 28 11.2	-0.9
	comp=Z,4.4nm,0.7s						
BBOO	Buckleboo	48.96	240	P	P	22 28 12.3	-1.4
BBOO				IAmb	IAmb	22 28 21.3	
	comp=Z,23nm,1.4s						
WB0	Warramunga Arr	49.91	257	P	P	22 28 19.8	-1.4
WB0				IAmb	IAmb	22 28 29.3	
	comp=Z,6.8nm,0.9s						
WRAB	Tennant Creek	49.94	257	P	P	22 28 20.0	-1.4
	comp=Z,6.7nm,1.9s						
WRA	Warramunga Arr	49.95	257	P	P	22 28 20.0	-1.5
	comp=Z,3.3nm,0.7s,baz=92,slow=7.3,SNR=41						
WRA				PcP	PcP	22 29 41.0	-0.5
	comp=Z,0.5nm,0.6s,baz=93,slow=2.5,SNR=1.1						
WRA	Warramunga Arr	49.95	257	P	P	22 28 19.8	-1.7
AS31	Alice Springs	50.23	252	P	P	22 28 21.9	-1.6
ASAR	Alice Springs	50.23	252	P	P	22 28 21.9	-1.6
	comp=Z,13nm,0.6s,baz=87,slow=8.1,SNR=112						
MULG	Mulgathing	50.36	243	P	P	22 28 23.1	-1.3
	comp=Z,11nm,1.1s						
WRKA	Warakurna	55.32	250	P	P	22 29 00.0	-1.2
	comp=Z,12nm,1.3s						
FORT	Forrest	55.55	243	P	P	22 29 01.2	-1.5
SIJI	Sorong	56.49	279	P	P	22 29 08.5	-1.2
	comp=Z,2.4nm,0.3s,baz=150,slow=20,SNR=2.1						
BNDI	Bandanaira	56.77	275	P	P	22 29 09.9	-1.8
	comp=Z,67nm,0.4s						
FITZ	Fitzroy Crossi	58.31	258	P	P	22 29 22.4	-0.1
	comp=Z,1.8nm,0.9s,baz=72,slow=16,SNR=1.8						
PSA00	Pilbara Seismi	63.32	253	P	P	22 29 55.6	-0.9
PSA00				IAmb	IAmb	22 30 08.3	
	comp=Z,7.7nm,1.4s						
PSA00	Pilbara Seismi	63.32	253	P	P	22 29 55.8	-0.7
PSA00				IAmb	IAmb	22 29 57.1	
	comp=Z,29nm,1.4s						
VNDA	Vanda	63.56	186	P	P	22 29 59.0	+1.8
	comp=Z,5.2nm,0.9s,baz=7.0,slow=5.8,SNR=12						
VNDA	Vanda	63.56	186	P	P	22 29 58.7	+1.6
VNDA				IAmb	IAmb	22 30 00.1	
	comp=Z,8.2nm,1.0s						
KMRM	Mail Ridge	71.88	38	P	P	22 30 51.0	+0.8
EDW2	Edwards Air Fo	72.37	45	P	P	22 30 54.9	+1.6
	baz=236						
O02D	Mt. Diablo Mer	72.40	38	P	P	22 30 55.0	+1.6
	baz=231						
PETK	Petropavlovsk-	72.48	342	P	P	22 30 52.4	-1.1
	comp=Z,5.7nm,1.0s,baz=122,slow=9.4,SNR=4.3						
CMB	Columbia Colle	72.59	41	P	P	22 30 54.5	0.0
N02D	Trinity Center	72.95	38	P	P	22 30 57.9	+1.4
	baz=231						
O03E	Paynes Creek	73.07	39	P	P	22 30 57.9	+0.6
	baz=232						
M02C	Callahan	73.12	37	P	P	22 30 59.0	+1.4
	baz=231						
MPMC	Manual Prospec	73.37	44	P	P	22 31 00.6	+1.2
	baz=236						
GSC	Goldstone, Bar	73.42	45	P	P	22 31 00.1	+0.5
	baz=237						
YBH	Yreka Blue Hor	73.42	37	P	P	22 30 59.7	+0.3
K02D	Willamette Mer	73.48	36	P	P	22 31 01.2	+1.5
	baz=230						
BC3	Big Chuckawall	73.49	47	P	P	22 31 01.3	+1.3
	baz=238						
HEC	Hector,Ludlow	73.49	46	P	P	22 31 01.1	+1.2
	baz=238						
VCNR	Virginia City	73.80	41	P	P	22 31 01.4	-0.4
VCNR				IAmb	IAmb	22 31 09.7	
	comp=Z,12nm,1.3s						
HUMO	Hull Mountain	73.83	36	P	P	22 31 01.7	0.0
GMRC	Granite Mounta	73.94	46	P	P	22 31 03.9	+1.2
	baz=238						
L04D	Klamath Falls	73.96	37	P	P	22 31 03.7	+1.1
	baz=231						
M04C	Macdoel	73.96	38	P	P	22 31 03.8	+1.1
	baz=232						
IRM	Iron Mountain	73.97	47	P	P	22 31 04.2	+1.5
	baz=238						
I03D	Drain, OR	74.30	35	P	P	22 31 05.5	+1.1
	baz=230						
TPH	Tonopah	74.66	43	P	P	22 31 07.0	+0.2
J04D	Umpqua Nationa	74.71	36	P	P	22 31 08.4	+1.4

	baz=231						
KDAK	Kodiak Island	74.74	11	P	P	22 31 06.5	-0.1
KDAK				IAmb	IAmb	22 31 19.1	
	comp=Z,18nm,1.2s						
QSPA	South Pole Qui	74.82	180	P	P	22 31 08.6	+1.3
I04A	Tendick Farm,	74.89	36	P	P	22 31 08.6	+0.7
	baz=231						
MOD	Modoc Plateau	74.94	38	P	P	22 31 08.3	0.0
MOD				IAmb	IAmb	22 31 16.7	
	comp=Z,9.7nm,0.9s						
K05A	Summer Lake	75.09	37	P	P	22 31 09.8	+0.5
H04D	Lebanon	75.17	35	P	P	22 31 10.7	+1.3
	baz=230						
J05D	Fort Rock, OR	75.24	37	P	P	22 31 11.2	+1.2
	baz=232						
PINE	Pine Mountain	75.72	36	P	P	22 31 13.5	+0.6
I05D	Terrebonne, OR	75.83	36	P	P	22 31 14.4	+1.1
	baz=232						
R11A	Troy Canyon, C	75.89	43	P	P	22 31 14.7	+0.8
	baz=237						
R11A	Troy Canyon, C	75.89	43	P	P	22 31 13.4	-0.5
TUC	Tucson	76.23	51	P	P	22 31 17.3	+1.5
	baz=242						
TUC	Tucson	76.23	51	P	P	22 31 15.8	0.0
TUC				IAmb	IAmb	22 31 22.6	
	comp=Z,11nm,1.2s						
WVOR	Wild Horse Val	76.26	38	P	P	22 31 15.9	+0.1
WVOR				IAmb	IAmb	22 31 22.9	
	comp=Z,14nm,1.1s						
G05D	Wamic, OR	76.41	35	P	P	22 31 17.5	+1.0
	baz=231						
I07A	Izee	76.72	37	P	P	22 31 18.4	0.0
I07A				IAmb	IAmb	22 31 20.4	
	comp=Z,12nm,1.1s						
U15A	North Rim	77.13	46	P	P	22 31 20.9	-0.2
U15A				IAmb	IAmb	22 31 29.5	
	comp=Z,7.3nm,1.0s						
WUAZ	Wupatki	77.33	48	P	P	22 31 23.1	+1.0
	baz=241						
WUAZ	Wupatki	77.33	48	P	P	22 31 22.1	0.0
WUAZ				IAmb	IAmb	22 31 29.0	
	comp=Z,8.2nm,1.1s						
ELK	Elko	77.41	41	P	P	22 31 22.3	-0.2
ELK				IAmb	IAmb	22 31 29.4	
	comp=Z,11nm,1.5s						
B05A	Bryant	77.89	32	P	P	22 31 25.4	+0.7
	baz=230						
BMO	Blue Mountains	78.45	37	P	P	22 31 27.5	-0.5
BMO				IAmb	IAmb	22 31 29.4	
	comp=Z,8.7nm,1.1s						
121A	Cookes Peak, D	78.59	52	P	P	22 31 30.9	+1.7
	baz=244						
DUG	Dugway, Tooele	78.69	43	P	P	22 31 30.4	+0.9
	baz=239						
DUG	Dugway, Tooele	78.69	43	P	P	22 31 29.7	+0.2
PMR	Palmer	78.94	12	P	P	22 31 30.0	-0.1
	baz=204						
L20K	Farewell, AK	78.95	9	P	P	22 31 28.4	-1.8
	baz=199						
TTA	Tatalina	79.07	8	P	P	22 31 31.9	+0.9
	baz=197,SNR=6.7						
TTA	Tatalina	79.07	8	P	P	22 31 31.7	+0.7
TTA				IAmb	IAmb	22 31 32.9	
	comp=Z,12nm,1.0s						
F10A	Beach Ranch, E	79.14	36	P	P	22 31 31.7	-0.1
F10A				IAmb	IAmb	22 31 32.9	
	comp=Z,8.3nm,0.9s						
GHO	Glory Hole Cre	79.14	12	P	P	22 31 31.6	+0.2
BMRM	Bremner River	79.33	14	P	P	22 31 32.7	+0.3
	baz=208						
BMRM	Bremner River	79.33	14	P	P	22 31 32.5	+0.1
HLID	Hailey	79.45	39	P	P	22 31 34.5	+0.8
	baz=237						
HLID	Hailey	79.45	39	P	P	22 31 34.3	+0.6
HLID				IAmb	IAmb	22 31 35.6	
	comp=Z,12nm,0.9s						
LLLB	Lillooet	79.50	30	P	P	22 31 34.3	+0.8
KLU	Klutina	79.50	13	P	P	22 31 32.8	-0.6
	baz=207						
SCM	Sheep Creek Mo	79.52	12	P	P	22 31 33.5	0.0
	baz=205						
SCM	Sheep Creek Mo	79.52	12	P	P	22 31 33.6	+0.2
HVU	Hansel Valley	79.53	41	P	P	22 31 34.6	+0.5
HVU				IAmb	IAmb	22 31 35.8	
	comp=Z,9.4nm,0.9s						
ISLE	Juniper Island	79.56	15	P	P	22 31 34.0	+0.2
C09A	Chrisman Ranch	79.63	34	P	P	22 31 34.0	-0.3
K20K	Telida	79.75	9	P	P	22 31 35.5	+0.9
	baz=199,SNR=6.4						
K20K	Telida	79.75	9	P	P	22 31 34.9	+0.2
K20K				IAmb	IAmb	22 31 36.1	
	comp=Z,11nm,1.1s						
N25K	Chitina, Valde	79.90	13	P	P	22 31 36.0	+0.5
	baz=208						
M24K	Tolsona, Glenn	80.00	13	P	P	22 31 36.6	+0.6
	baz=206						
MNTX	Cornudas Mount	80.07	53	P	P	22 31 38.0	+0.9
	baz=245						
MNTX	Cornudas Mount	80.07	53	P	P	22 31 37.5	+0.4
NJ2	Nanjing	80.11	307	*e*P	P	22 31 39.0	+1.8
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
WAT6	Susitna Watana	80.11	12	P	P	22 31 36.4	-0.4
	baz=205,SNR=6.2						
CAST	Castle Rocks	80.11	10	P	P	22 31 34.8	-1.8
	baz=201						
BARN	Barnard Glacie	80.12	15	P	P	22 31 37.2	+0.3
KTH	Kantishna Hill	80.43	10	P	P	22 31 37.6	-0.7
KTH				IAmb	IAmb	22 31 39.4	
	comp=Z,12nm,1.0s						
TRF	Thorofare Moun	80.44	10	P	P	22 31 38.1	-0.4
	baz=202						
TRF	Thorofare Moun	80.44	10	P	P	22 31 38.4	-0.1
TRF				IAmb	IAmb	22 31 40.2	
	comp=Z,20nm,1.1s						
TX32	Lajitas Array	80.46	56	P	P	22 31 38.9	-0.4
TX32				IAmb	IAmb	22 31 41.8	
	comp=Z,16nm,1.4s						
TXAR	Lajitas Array	80.46	56	P	P	22 31 40.8	+1.4
	comp=Z,2.2nm,0.9s,baz=224,slow=6.5,SNR=12						
TXAR	Lajitas Array	80.46	56	P	P	22 31 39.5	+0.1
BCYI	Bear Canyon	80.47	39	P	P	22 31 39.3	+0.1
CHUM	Lake Minchumin	80.51	9	P	P	22 31 38.1	-0.5
	baz=200						
J20K	Nowinta River	80.52	8	P	P	22 31 39.5	+0.8
	baz=199,SNR=8.1						
J20K	Nowinta River	80.52	8	P	P	22 31 39.3	+0.6
J20K				IAmb	IAmb	22 31 40.3	
	comp=Z,17nm,0.9s						
NEW	Newport	80.53	34	P	P	22 31 39.2	+0.1
	baz=234						
SKAG	Skagway	80.56	19	P	P	22 31 40.3	+1.3
	baz=217						
DHY	Denali Highway	80.63	12	P	P	22 31 39.6	0.0
	baz=205						
ANMO	Albuquerque	80.64	50	P	P	22 31 41.5	+1.2
	baz=244						
ANMO	Albuquerque	80.64	50	P	P	22 31 40.6	+0.3
RND	Reindeer	80.66	11	P	P	22 31 40.0	+0.5
RND				IAmb	IAmb	22 31 40.7	
	comp=Z,22nm,1.2s						
MCK	McKinley	80.94	11	P	P	22 31 40.7	-0.3
	baz=204,SNR=9.9						
M26K	Nabesna, AK	80.96	14	P	P	22 31 41.5	+0.3
	baz=210,SNR=6.5						
M26K	Nabesna, AK	80.96	14	P	P	22 31 41.7	+0.5
CN2	Changchun	80.99	320	*e*P	P	22 31 44.3	+2.6
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HYT	Haines Junctio	81.03	17	P	P	22 31 42.5	+0.9
	baz=215						
YUK3	Moose Creek	81.03	15	P	P	22 31 42.0	+0.2
	baz=212						
AHID	Auburn Hatcher	81.10	41	P	P	22 31 42.4	-0.2
AHID				IAmb	IAmb	22 31 44.2	
	comp=Z,12nm,1.2s						
M27K	Edge Creek, AK	81.19	14	P	P	22 31 43.3	+0.8
	baz=211,SNR=7.5						
L26K	Log Cabin Wild	81.43	13	P	P	22 31 44.3	+0.7
	baz=209						
MSO	Missoula	81.50	37	P	P	22 31 44.4	-0.1
	baz=237						
MSO	Missoula	81.50	37	P	P	22 31 44.2	-0.3
MSO				IAmb	IAmb	22 31 45.5	
	comp=Z,14nm,1.2s						
S22A	4UR Ranch, Cre	81.60	47	P	P	22 31 47.0	+1.5
	baz=243						
NEA2	Nenana	81.71	10	P	P	22 31 44.9	-0.1
	baz=204,SNR=5.0						
RIDG	Independent Ri	81.74	12	P	P	22 31 45.5	+0.2
	baz=208						
RIDG	Independent Ri	81.74	12	P	P	22 31 45.3	0.0
RIDG				IAmb	IAmb	22 31 45.8	
	comp=Z,13nm,1.1s						
WRH	Wood River Hil	81.77	11	P	P	22 31 45.2	-0.1
BCAR	Beaver Creek A	81.82	14	P	P	22 31 45.3	-0.4
MLY	Manley	81.83	9	P	P	22 31 45.0	-0.7
	baz=202						
HDA	Harding Lake	81.92	11	P	P	22 31 46.2	0.0
	baz=206,SNR=6.1						
CCB	Clear Creek Bu	81.98	11	P	P	22 31 46.4	-0.1
BW06	Boulder Array	82.09	42	P	P	22 31 47.8	-0.1
	baz=241						
BW06	Boulder Array	82.09	42	P	P	22 31 47.7	-0.2
PDAR	Pinedale Array	82.09	42	P	P	22 31 48.0	+0.1
	comp=Z,3.2nm,0.8s,baz=216,slow=3.0,SNR=25						
PDAR				LR	LR	23 02 56.2	
	comp=Z,168nm,18.4s,baz=312,slow=32						
H21K	Melozitna Rive	82.11	8	P	P	22 31 47.9	+0.8
	baz=200						
SCRK	Sand Creek	82.13	13	P	P	22 31 47.4	0.0
	baz=208,SNR=6.7						
SCRK	Sand Creek	82.13	13	P	P	22 31 47.3	-0.1
SCRK				IAmb	IAmb	22 31 49.0	
	comp=Z,8.3nm,0.9s						
YMR	Madison River	82.15	40	P	P	22 31 48.4	+0.3
YMR				IAmb	IAmb	22 31 50.6	
	comp=Z,18nm,1.2s						
I23K	Minto, Yukon-K	82.17	10	P	P	22 31 47.5	+0.1
	baz=203						
TCOL	CIGO, UAF Yank	82.18	11	P	P	22 31 47.5	+0.1
	baz=205						
COLA	College	82.18	11	P	P	22 31 47.4	-0.1
BOZ	Bozeman (W)	82.21	39	P	P	22 31 49.1	+0.8
	baz=239						
IL31		82.26	11	P	P	22 31 47.7	-0.2
IL31				IAmb	IAmb	22 31 49.5	
	comp=Z,7.6nm,1.1s						
ILAR	Eielson Array	82.26	11	P	P	22 31 47.5	-0.4
	comp=Z,3.2nm,0.8s,baz=218,slow=6.2,SNR=22						
ILAR				LR	LR	23 04 52.3	
	comp=Z,92nm,18.1s,baz=224,slow=33						
ILAR	Eielson Array	82.26	11	P	P	22 31 47.7	-0.2
IMAR	Indian Mountai	82.29	8	P	P	22 31 48.4	+0.4
J25K	Salcha River,	82.41	12	P	P	22 31 49.1	+0.3
	baz=207,SNR=8.7						
POKR	Poker Plat Res	82.47	11	P	P	22 31 49.3	+0.3
	baz=205,SNR=8.3						
POKR	Poker Plat Res	82.47	11	P	P	22 31 48.9	-0.1
SDCO	Great Sand Dun	82.55	48	P	P	22 31 51.1	+0.7
	baz=244						
SDCO	Great Sand Dun	82.55	48	P	P	22 31 50.0	-0.5
M30M	Minto, Yukon	82.66	16	P	P	22 31 50.3	+0.2
	baz=215						
J26L	Joseph Creek	82.68	13	P	P	22 31 51.1	+0.9
	baz=209,SNR=9.6						
DAWY	Dawson	83.24	14	P	P	22 31 53.6	+0.5
	baz=213,SNR=7.5						
Q24A	Divide	83.32	47	P	P	22 31 55.6	+1.1
	baz=244						
ISCO	Idaho Springs	83.36	46	P	P	22 31 55.2	+0.6
	baz=244						
ISCO	Idaho Springs	83.36	46	P	P	22 31 54.7	+0.1
RLMT	Red Lodge	83.42	40	P	P	22 31 55.5	+0.8
	baz=241						
RLMT	Red Lodge	83.42	40	P	P	22 31 55.6	+0.9
RLMT				IAmb	IAmb	22 31 56.8	
	comp=Z,10nm,0.9s						
N23A	Red Feather La	83.62	45	P	P	22 31 56.6	+0.8
	baz=244						
COLD	Coldfoot	83.96	9	P	P	22 31 58.3	+1.6
	baz=202						
COLD	Coldfoot	83.96	9	P	P	22 31 57.2	+0.5
COLD				IAmb	IAmb	22 31 58.8	
	comp=Z,8.5nm,1.2s						
K22A	Casper	84.01	43	P	P	22 31 58.8	+1.0
	baz=243						
EGMT	Eagleton	84.55	37	P	P	22 32 01.0	+0.7
	baz=240						
ABTX	Abilene, Hawle	84.91	54	P	P	22 32 03.1	+0.8
	baz=248						
ABTX	Abilene, Hawle	84.91	54	P	P	22 32 02.4	+0.1
BMAR	Burnt Mountain	85.07	11	P	P	22 32 03.2	+0.9
LAO	LASA Array	86.03	39	P	P	22 32 09.0	+1.3
	baz=243						
RSSD	Black Hills	86.29	42	P	P	22 32 09.7	+0.5
	baz=245						
RSSD	Black Hills	86.29	42	P	P	22 32 09.6	+0.5
RSSD				IAmb	IAmb	22 32 10.2	
	comp=Z,7.8nm,0.9s						
MAW	Mawson	87.98	199	LR	LR	23 09 23.2	
	comp=Z,207nm,19.7s,baz=69,slow=34						
INK	Inuvik	88.08	14	P	P	22 32 17.0	+0.1
	baz=218						
HHC	Hu-ho-hao-te	88.96	313	*e*P	P	22 32 22.3	+0.4
HHC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,170nm,6.2s						
PLCA	Paso Flores	89.58	132	LR	LR	23 04 41.7	
	comp=Z,64nm,19.6s,baz=262,slow=30						
YKA	Yellowknife Ar	89.91	23	P	P	22 32 25.4	-0.3
	comp=Z,3.2nm,0.9s,baz=220,slow=2.7,SNR=4.8						
YKA				LR	LR	23 07 27.4	
	comp=Z,109nm,19.8s,baz=0.0,slow=32						
YKA	Yellowknife Ar	89.91	23	P	P	22 32 25.8	+0.1
A36M	Sachs Harbour	92.72	13	P	P	22 32 38.9	+0.4
	baz=226						
A36M	Sachs Harbour	92.72	13	P	P	22 32 39.2	+0.7
VNA3	Neumayer Olymp	93.02	175	P	P	22 32 40.9	+0.7
VNA2	Neumayer--Watz	93.52	175	P	P	22 32 43.3	+0.8
VNA1	Neumayer--Stat	93.72	175	P	P	22 32 44.1	+0.7
ULM	Lac du Bonnet	93.75	39	LR	LR	23 10 14.4	
	comp=Z,181nm,18.3s,baz=294,slow=32						
GTA	Gaotai	97.12	309	*e*P	Pdif	22 33 00.0	+0.3
GTA				pP	pP	22 33 05.0	-3.4
GTA				sP	sP	22 33 08.5	-3.1
GTA				pmax	pmax		
	comp=Z,1.0nm,1.1s						
ARCES	ARCESS Array B	124.44	352	PKP	PKPdf	22 38 24.7	-0.8
	comp=Z,1.8nm,0.6s,baz=0.0,slow=0.2,SNR=8.4						
ARCES	ARCESS Array B	124.44	352		PKPdf	22 38 24.9	-0.6
DPC	Dobruska-Polom	144.10	349	*e*PKP	PKPdf	22 39 03.1	+0.4
DPC				*e*x	x	22 39 10.4	
BURAR	Bucovina Array	144.23	338	⇑P	PKPdf	22 39 04.0	+0.9
TRPA	Tarpa	144.67	342	⇓P	PKPab	22 39 02.2	-0.1
VYHS	Vyhne	145.34	346	*e*PKP	PKPbc	22 39 04.0	-0.7
DOPR	Dopca	145.56	337	⇓P	PKPab	22 39 07.1	+1.4
KHC	Kasperske Hory	145.72	352	*e*PKP	PKPab	22 39 06.6	+0.4
MLR	Muntele Rosu	145.74	336	⇑P	PKPab	22 39 07.1	+0.5
DRGR		145.80	340	⇑P	PKPab	22 39 06.6	-0.1
MODS	Modra-Piesok	145.81	347	*e*PKP	PKPab	22 39 08.0	+1.4
CKRC	Cesky Krumlov	145.91	351	*e*PKP	PKPab	22 39 07.9	+1.0
CKRC				*e*x	x	22 39 14.2	
GERES	GERESS Array B	145.98	352	PKPbc	PKPdf	22 39 06.2	+0.2
	comp=Z,1.7nm,0.7s,baz=12,slow=6.8,SNR=5.7						
GERES	GERESS Array B	145.98	352		PKPbc	22 39 06.4	-0.3
BRTR	Keskin Array B	146.06	321	PKPbc	PKPab	22 39 07.9	-0.1
	comp=Z,8.0nm,0.9s,baz=114,slow=1.5,SNR=20						
BRTR	Keskin Array B	146.06	321		PKPbc	22 39 07.6	+0.2
VOIR		146.13	337	⇑P	PKPab	22 39 08.8	+0.8
ARR	Arges	146.35	337	⇓P	PKPab	22 39 09.4	+0.6
GZR	Gura Zlata	147.00	339	⇓P	PKiKP	22 39 12.2	-0.2
BZS	Buzias	147.19	340	⇑P	PKPbc	22 39 10.5	+0.3
VTS	Vitosha	149.21	336	⇓P	PKiKP	22 39 17.2	0.0
ESDC	Sonseca Array	153.92	19	PKPbc	PKiKP	22 39 27.4	+0.6
	comp=Z,0.3nm,0.7s,baz=360,slow=3.4,SNR=1.9						
ESDC				PKPab	PKPab	22 39 40.4	+0.6
	comp=Z,0.8nm,0.8s,baz=327,slow=3.4,SNR=3.6						

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*IDC **28** 22:29:25.9±1.3, 3°.77N×126°.93E, $h0^{km}$, mb3.3/5, mb1 3.4/6, mb1mx3.2/50, mbtmp3.3/6, ML2.6/1, MS3.8/1, Ms1 3.8/1, ms1mx3.0/19, Error ellipse: s-maj=76.6km s-min=20.4km az=68.0*

ISC 28 22:29:31.1±1.1, **3°.8N**±0°.2×**127°.0E**±0°.3, **$h36^{km}$, n6,** $\sigma 1^{s}.29$/6, **mb3.2**/5, **Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	6.28	137	Pn	Pn	22 31 01.1	-0.1
	0.1nm,0.3s,baz=309,slow=20,SNR=1.2						
FITZ	Fitzroy Crossi	21.79	184	P	P	22 34 19.6	-0.5
	1.8nm,1.0s,baz=4.8,slow=12,SNR=1.5						
FITZ				LR	LR	22 42 29.7	
	comp=Z,249nm,20.6s,baz=348,slow=36						
WRA	Warramunga Arr	24.66	163	P	P	22 34 47.1	-1.5
	0.4nm,0.6s,baz=344,slow=11,SNR=5.0						
ASAR	Alice Springs	28.10	167	P	P	22 35 21.2	+1.5
	0.2nm,0.9s,baz=344,slow=11,SNR=1.5						
SONM	Songino Array	47.34	341	P	P	22 38 01.8	+0.3
	0.1nm,0.4s,baz=165,slow=8.0,SNR=1.5						
MKAR	Makanchi Array	57.67	325	P	P	22 39 17.6	-0.4
	0.2nm,0.4s,baz=118,slow=7.7,SNR=6.2						

IDC 28 22:32:10.7±3.5, **11°.93N**×**144°.02E, $h0^{km}$, mb3.8**/3, **mb1 4.0**/3, **mb1mx3.5**/48, **mbtmp3.8**/3, **MS3.9**/1, **Ms1 3.9**/1, **ms1mx3.2**/23, **Error ellipse: s-maj=89.3km s-min=35.8km az=137.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	1.85	27	Pn	Pn	22 32 44.3	+0.6
	23nm,0.3s,baz=293,slow=7.7,SNR=11						
GUMO				Sn	Sn	22 33 06.9	-0.9
	38nm,0.3s,baz=168,slow=20,SNR=12						
FITZ	Fitzroy Crossi	34.91	212	LR	LR	22 55 10.5	
	comp=Z,170nm,18.6s,baz=28,slow=40						
SONM	Songino Array	47.62	326	P	P	22 40 49.2	+0.6
	0.3nm,0.7s,baz=145,slow=6.5,SNR=2.4						
ILAR	Eielson Array	70.42	25	P	P	22 43 26.9	+0.4
	0.2nm,0.4s,baz=256,slow=5.7,SNR=4.5						
FINES	FINESS Array B	92.31	335	P	P	22 45 21.2	-1.5
	3.5nm,0.9s,baz=48,slow=2.1,SNR=1.7						

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*IDC **28** 22:32:21.8±0.4, 3°.80N×126°.80E, $h0^{km}$, mb4.5/31, mb1 4.6/32, mb1mx4.4/47, mbtmp4.5/32, ML4.3/1, MS4.4/1, Ms1 4.4/1, ms1mx3.6/12, Error ellipse: s-maj=17.9km s-min=7.8km az=79.0*

*BJI **28** 22:32:27.0±0.0, 3°.80N×127°.00E, $h60^{km}$, mB5.1/35, mb4.9/56, Ms4.8/57, Ms7 4.6/51*

*DJA **28** 22:32:28.4±0.4, 4°N±4°×12°7E±°, $h10^{km}$, M4.8/20, mb5.0/20, mB5.3/19, MLv5.0/14, Mw(mB)4.7/19, MwMwp4.9/9, Mwp5.2/9*

*NEIC **28** 22:32:28.7±1.6, 3°.75N±0°.06×126°.86E±0°.07, $h46^{km}\pm6^{km}$, mb4.9/102, Error ellipse: s-maj=10.9km s-min=8.0km az=67.0*

*KLM **28** 22:32:30, 3°.80N×127°.14E, $h80^{km}$, mb5.3*

ISC 28 22:32:29.6±0.5, **3°.74N**±0°.04×**126°.86E**±0°.05, **$h58^{km}$**±4^{km}, **$h58^{km}$:pP-P, n282,** $\sigma 1^{s}.58$/297, **mb4.9**/93, **MS4.6**/21, **8C-12D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	Sangihe	1.33	268	P	Pn	22 32 50.9	-1.0
TNTI	Ternate	2.99	170	P	Pn	22 33 14.1	-0.5
TNTI	Ternate	2.99	170		Pn	22 33 14.2	-0.4
TNTI				Sn	Sn	22 33 46.8	-2.5
DAV	Davao City (W)	3.54	339	Pn	Pn	22 33 25.4	+3.2
	69nm,0.3s,baz=302,slow=5.1,SNR=6.7						
DAV				Sn	Sn	22 34 07.2	+4.3
	58nm,0.3s,baz=89,slow=22,SNR=5.9						
DAV	Davao City (W)	3.54	339		Pn	22 33 21.6	-0.6
KMSI	Cibinong	4.26	222	P	Pn	22 33 33.2	+1.2
LBMI	Labuha	4.40	172	P	Pn	22 33 33.5	-0.4
GTOI	Gorontalo	4.93	231	P	Pn	22 33 42.4	+1.3
	0.4nm1μm65nm,0.6s						
SANI	Sanana	5.82	189	P	Pn	22 33 53.1	-0.2
	0.5nm2μm917nm39nm,0.8s						
MRSI	Marisa	5.88	237	P	Pn	22 33 56.6	+2.3
	1.2nm4μm324nm,0.7s						
LUWI	Luwuk	6.26	221	P	Pn	22 34 02.5	+3.1
	2.6nm4μm8μm291nm,0.9s						
LUWI	Luwuk	6.26	221		Pn	22 33 58.8	-0.6
SWI	Sorong	6.34	136	P	Pn	22 33 59.0	-1.6
	0.5nm6μm2μm114nm,0.7s						
SIJI	Sorong	6.35	136	Pn	Pn	22 33 58.6	-2.1
	6.0nm,0.3s,baz=344,slow=14,SNR=13						
SIJI				Sn	Sn	22 35 11.7	-0.3
	1.1nm,0.3s,baz=330,slow=23,SNR=1.3						
TOLI2	Tolitoli	6.61	247	Pn	Pn	22 34 02.1	-2.1
APSI	Ampana	6.96	229	P	Pn	22 34 13.9	+4.9
	1.1nm3μm182nm,0.8s						
MPSI	Mapaga	7.73	244	P	Pn	22 34 20.3	+0.7
	0.3nm6μm769nm41nm,1.0s						
MYLDM	Lahad Datu	8.45	280	Pn	Pn	22 34 29.7	+0.2
FAKI	Fak Fak	8.53	141	P	Pn	22 34 29.0	-1.5
	5μm753nm72nm,1.1s						
FAKI	Fak Fak	8.53	141	Pn	Pn	22 34 29.8	-0.8
TTSI	Tana Toraja	9.74	226	P	Pn	22 34 48.3	+1.2
	3μm2μm109nm,1.3s						
SPMM	Sapulut	10.41	276	P	Pn	22 35 00.0	+3.7
KKM	Kota Kinabalu	10.85	283		Pn	22 35 02.4	+0.1
KAPI	Kappang	11.22	219	Pn	Pn	22 35 06.5	-0.9
	0.9nm,0.3s,baz=95,slow=18,SNR=1.7						
SAUI	Saumlaki	12.46	159	Pn	Pn	22 35 23.3	-1.0
MTKI	Muara Teweh, K	12.83	249	P	P	22 35 36.5	-1.8
MMRI	Maumere	13.13	201	P	P	22 35 50.7	+9.0
BBKI	Banjar Baru	13.98	239	P	P	22 35 48.5	-2.6
	2μm62nm,1.7s						
BATI	Baumata	14.21	193	Pn	Pn	22 35 48.7	+0.7
	0.5nm,0.3s,baz=96,slow=2.2,SNR=1.9						
SBUM	Sibu	14.67	265	P	P	22 35 57.0	-1.8
SBUM	Sibu	14.67	265		Pn	22 35 55.7	+1.7
JAY	Jayapura	15.17	114	Pn	P	22 36 02.5	-1.9
	0.2nm,0.3s,baz=217,slow=15,SNR=1.1						
PLAI	Plampang	15.42	216	P	P	22 36 07.3	+0.1
	2μm228nm,1.2s						
STKI	Sintang	15.80	257	P	P	22 36 14.3	+2.9
	53nm,1.3s						
TWSI	Taliwang, Sumb	15.89	219	P	P	22 36 11.7	-0.7
	877nm93nm,0.9s						
SRBI	Singaraja	16.52	225	P	P	22 36 21.0	+1.6
	2μm204nm,1.3s						
KSM	Kuching	16.68	263		P	22 36 22.0	+0.8
MTN	Manton Dam	17.01	166	Pn	Pn	22 36 21.4	-2.4
IGBI	Denpasar	17.09	223	P	P	22 36 26.7	+1.1
	1μm92nm,1.0s						
BLJI	Banyuglugur	17.47	229	P	P	22 36 35.9	+6.0
	2μm67nm,0.8s						
JAGI	Jajag, Banyuwa	17.54	226	P	P	22 36 33.7	+3.0
JAGI	Jajag, Banyuwa	17.54	226	P	P	22 36 30.6	-0.1
KNRA	Kununurra	19.38	174		P	22 36 50.5	-0.3
DLV	T Lat	19.93	295	P	P	22 36 57.4	+0.4
UGM	Wanagama	19.99	235	P	P	22 36 56.0	-1.6
UGM				IAmb	IAmb	22 37 11.0	
	comp=Z,117nm,1.3s						
GUMO	Guam	20.30	60	LR	LR	22 43 42.2	
	comp=Z,1μm,21.7s,baz=231,slow=34						
TPUB	Ta-pu	20.36	343	P	P	22 36 58.1	-3.3
TPUB				IAmb	IAmb	22 37 03.1	
	comp=Z,70nm,0.8s						
SSLB	Suanglung	20.73	345	P	P	22 37 02.3	-3.2
SSLB				IAmb	IAmb	22 37 13.5	
	comp=Z,28nm,0.7s						
YOJ	Yonaguni jima	20.93	350	P	P	22 37 04.9	-2.8
YOJ				IAmb	IAmb	22 37 21.2	
	comp=Z,113nm,1.1s						
FITZ	Fitzroy Crossi	21.73	183	P	P	22 37 15.8	-0.5
	comp=Z,4.3nm,0.5s,baz=16,slow=11,SNR=23						
FITZ				S	S	22 41 19.3	+5.6
	comp=Z,7.7nm,1.1s,baz=346,slow=17,SNR=2.3						
LEM	Lembang	21.89	241	P	P	22 37 15.8	-2.3
	comp=Z,19nm,0.6s,baz=38,slow=8.3,SNR=4.1						
QIZ	Qiongzhong	22.52	314	P	P	22 37 24.0	-0.8
QIZ				sS	sS	22 41 51.0	+0.9
QIZ				LR	LR		
	comp=Z,900nm,19.1s						
QIZ				LR	LR		
	comp=Z,980nm,23.1s						
QIZ				LR	LR		
	comp=Z,1μm,18.6s						
JOW	Kunigami	23.00	3	P	P	22 37 27.4	-2.2
	comp=Z,19nm,0.8s,baz=141,slow=13,SNR=3.6						
JOW	Kunigami	23.00	3	P	P	22 37 28.9	-0.8
COEN	Coen	23.90	138	P	P	22 37 37.5	-0.7
UBPT	Khong Chiam	23.98	300	P	P	22 37 37.6	-1.3
UBPT				IAmb	IAmb	22 37 45.3	
	comp=Z,43nm,1.0s						
WB0	Warramunga Arr	24.51	163	P	P	22 37 42.5	-1.2
WB0				IAmb	IAmb	22 37 53.3	
	comp=Z,26nm,0.8s						
WRA	Warramunga Arr	24.66	163	P	P	22 37 44.5	-0.6

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      comp=Z,16nm,0.7s,baz=343,slow=10,SNR=96
WRA                                S       S          22 42 08.1 +5.4
      comp=Z,3.7nm,1.1s,baz=346,slow=22,SNR=1.9
WRA   Warramunga Arr    24.66 163  P       P          22 37 44.0 -1.1
WB2   Warramunga Arr    24.66 163  P       P          22 37 43.9 -1.2
WB2                                IAmb    IAmb       22 37 46.5
      comp=Z,26nm,0.8s
IPM   Ipoh              25.77 273  P       P          22 37 55.1 -0.2
IPM                                IAmb    IAmb       22 38 02.9
      comp=Z,67nm,1.6s
BKNI  Bangkinang        26.02 263  P       P          22 37 56.7 -0.8
PSA00 Pilbara Seismi    26.08 195  P       P          22 37 57.9  0.0
PSA00 Pilbara Seismi    26.08 195  P       P          22 37 57.4 -0.6
PSA00                              IAmb    IAmb       22 38 04.2
      comp=Z,12nm,1.0s
KULM  Kulim             26.17 274  P       P          22 37 58.1 -0.8
KULM                               IAmb    IAmb       22 38 06.6
      comp=Z,63nm,1.5s
SSE   Sheshan           27.73 350  P       P          22 38 13.0 +0.3
SSE                                pmax    pmax
      comp=Z,11nm,0.7s
SSE                                pmax    pmax
      comp=Z,97nm,5.9s
SSE                                LR      LR
      comp=Z,280nm,17.9s
SSE                                LR      LR
      comp=Z,240nm,17.3s
PSI   Prapat            27.90 269  P       P          22 38 13.1 -1.5
      comp=Z,4.5nm,0.8s,baz=50,slow=2.2,SNR=6.7
AS31  Alice Springs     28.09 166  P       P          22 38 16.7 +0.6
ASAR  Alice Springs     28.09 166  P       P          22 38 16.8 +0.8
      comp=Z,1.3nm,0.5s,baz=338,slow=7.8,SNR=15
ASAR                               S       S          22 43 04.2 +7.1
      comp=Z,1.2nm,0.9s,baz=349,slow=19,SNR=1.5
ASAR  Alice Springs     28.09 166  P       P          22 38 16.2 +0.1
GIRL  Giralia           28.98 205  P       P          22 38 24.8 +0.9
NJ2   Nanjing           29.15 346 eP       P          22 38 28.5 +3.2
NJ2                                pmax    pmax
      comp=Z,7.0nm,0.5s
NJ2                                LR      LR
      comp=Z,460nm,21.2s
NJ2                                LR      LR
      comp=Z,760nm,18.0s
NJ2                                LR      LR
      comp=Z,1µm,19.8s
GSI   Gunungsitoli      29.35 266  P       P          22 38 27.1 -0.2
GSI                                IAmb    IAmb       22 38 33.1
      comp=Z,32nm,1.0s
GYA   Guiyang           29.74 321  P       P          22 38 30.5 -0.3
GYA                                sP      sP         22 38 54.0 +2.2
GYA                                S       S          22 43 25.0 +1.9
GYA                                pmax    pmax
      comp=Z,230nm,5.7s
GYA                                LR      LR
      comp=Z,890nm,19.4s
GYA                                LR      LR
      comp=Z,890nm,20.0s
GYA                                LR      LR
      comp=Z,1µm,19.8s
JMN   Monobe            30.55  12  P       P          22 38 37.5 -0.2
JMN                                IAmb    IAmb       22 38 49.1
      comp=Z,28nm,1.2s
CM31  Chiang Mai Arr    30.98 300  P       P          22 38 41.1 -0.6
CMAR  Chiang Mai Arr    30.98 300  P       P          22 38 41.3 -0.4
      comp=Z,2.6nm,0.6s,baz=122,slow=7.9,SNR=14
CMAR  Chiang Mai Arr    30.98 300  P       P          22 38 40.6 -1.1
ENH   Enshi             31.08 330  P       P          22 38 40.7 -1.7
ENH                                IAmb    IAmb       22 38 41.7
      comp=Z,23nm,0.8s
CHTO  Chiang Mai        31.13 301  P       P          22 38 41.8 -1.1
KMI   Kunming           31.46 315 ⇑P       P          22 38 47.0 +0.9
KMI                                sP      sP         22 39 10.3 +3.1
KMI                                S       S          22 43 47.0 -3.4
KMI                                sS      sS         22 44 14.0 -0.6
KMI                                pmax    pmax
      comp=Z,10.0nm,0.5s
KMI                                LR      LR
      comp=Z,750nm,19.0s
KMI                                LR      LR
      comp=Z,670nm,22.7s
KMI                                LR      LR
      comp=Z,1µm,23.1s
JWT   Wachi             32.37  13  P       P          22 38 51.5 -2.1
JWT                                IAmb    IAmb       22 39 00.8
      comp=Z,40nm,1.4s
INU   Inuyama           32.83  15  P       P          22 38 56.7 -1.0
INU                                IAmb    IAmb       22 39 01.8
      comp=Z,28nm,1.5s
TIA   Tai'an            33.54 346  P       P          22 39 03.5 -0.4
KSRS  Korea Array       33.57   2  P       P          22 39 03.1 -1.0
      comp=Z,2.0nm,0.6s,baz=179,slow=11,SNR=9.1
MORW  Morawa            34.23 197  P       P          22 39 09.9 -0.1
MORW                               IAmb    IAmb       22 39 24.4
      comp=Z,35nm,1.6s
MJAR  Matsushiro Arr    34.28  16  P       P          22 39 09.9 -0.4
      comp=Z,2.3nm,1.0s,baz=196,slow=8.7,SNR=4.1
FORT  Forrest           34.34 178  P       P          22 39 11.0 +0.1
FORT                               IAmb    IAmb       22 39 16.4
      comp=Z,27nm,1.1s
XAN   Xi'an             34.47 333  P       P          22 39 09.8 -2.2
XAN                                sP      sP         22 39 34.0 +0.6
XAN                                pmax    pmax
      comp=Z,40nm,0.8s
XAN                                pmax    pmax
      comp=Z,130nm,4.5s
XAN                                LR      LR
      comp=Z,810nm,18.2s
XAN                                LR      LR
      comp=Z,680nm,17.2s
XAN                                LR      LR
      comp=Z,1µm,15.1s
CD2   Chengdu           34.71 324  P       P          22 39 14.8 +0.6
CD2                                S       S          22 44 42.8 +2.5
CD2                                pmax    pmax
      comp=Z,20nm,0.6s
CD2                                LR      LR
      comp=Z,2µm,16.7s
CD2                                LR      LR
      comp=Z,1µm,16.7s
CD2                                LR      LR
      comp=Z,1µm,16.2s
DL2   Dalian            35.33 353  P       P          22 39 25.5 +6.2
DL2                                S       S          22 45 00.5  +11
DL2                                pmax    pmax
      comp=Z,45nm,0.9s
DL2                                LR      LR
      comp=N,750nm,14.1s
DL2                                LR      LR
      comp=E,350nm,16.8s
DL2                                LR      LR
      comp=Z,830nm,19.0s
JMM   Marumori          36.28  19  P       P          22 39 27.1 -0.3
JMM                                IAmb    IAmb       22 39 45.5
      comp=Z,17nm,1.0s
EIDS  Eidsvold          37.28 142  P       P          22 39 35.8 -0.4
EIDS                               IAmb    IAmb       22 39 49.8
      comp=Z,18nm,1.6s
BBOO  Buckleboo         37.38 167  P       P          22 39 35.9 -1.0
BBOO                               IAmb    IAmb       22 39 38.9
      comp=Z,13nm,1.2s
BJT   Baijiatuau        37.39 346  P       P          22 39 36.3 -0.6
BJI   Beijing           37.41 346  P       P          22 39 37.0  0.0
BJI                                PP      PnPn       22 41 05.0 +0.4
BJI                                pmax    pmax
      comp=Z,51nm,1.2s
BJI                                LR      LR
      comp=Z,200nm,22.6s
BJI                                LR      LR
      comp=Z,710nm,23.0s
BJI                                LR      LR
      comp=Z,380nm,19.6s
SNY   Shenyang          38.04 356 ⇑P       P          22 39 43.0 +0.7
SNY                                pP      pP         22 39 56.5 -0.2
SNY                                sP      sP         22 40 06.5 +3.2
SNY                                pmax    pmax
      comp=Z,23nm,0.8s
SNY                                pmax    pmax
      comp=Z,150nm,6.2s
SNY                                LR      LR
      comp=Z,700nm,17.7s
SNY                                LR      LR
      comp=Z,590nm,15.4s
SNY                                LR      LR
      comp=Z,840nm,20.0s
STKA  Stephens Creek    38.09 159  P       P          22 39 43.6 +0.7
      comp=Z,9.2nm,0.6s,baz=336,slow=8.8,SNR=24
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STKA  Stephens Creek    38.09 159  P       P          22 39 42.2 -0.8
LZH   Lanzhou           38.56 329 eP       P          22 39 46.5 -0.5
LZH                                sP      sP         22 40 10.8 +2.2
LZH                                pmax    pmax
      comp=Z,41nm,1.3s
LZH                                LR      LR
      comp=Z,1µm,18.7s
LZH                                LR      LR
      comp=Z,910nm,17.7s
LZH                                LR      LR
      comp=Z,1µm,17.7s
HHC   Hu-ho-hao-te      39.43 342 eP       P          22 39 54.0 -0.1
HHC                                pmax    pmax
      comp=Z,16nm,0.9s
HHC                                pmax    pmax
      comp=Z,180nm,6.8s
HHC                                LR      LR
      comp=Z,330nm,16.2s
HHC                                LR      LR
      comp=Z,370nm,17.0s
HHC                                LR      LR
      comp=Z,740nm,17.0s
BTO   Baotou            39.72 340 eP       P          22 39 57.8 +1.3
BTO                                S       S          22 45 57.8 +1.5
BTO                                LR      LR
      comp=Z,3µm,18.8s
BTO                                LR      LR
      comp=Z,2µm,18.4s
CN2   Changchun         39.91 358 eP       P          22 40 04.8 +6.8
CN2                                pmax    pmax
      comp=Z,10.0nm,0.6s
CN2                                LR      LR
      comp=N,500nm,15.0s
CN2                                LR      LR
      comp=E,600nm,15.0s
CN2                                LR      LR
      comp=Z,700nm,16.0s
USA0B Ussuriysk Arra    40.55   6  P       P          22 40 02.2 -1.0
USRK  Ussuriysk Ar.     40.55   6  P       P          22 40 02.1 -1.1
      comp=Z,1.5nm,0.5s,baz=196,slow=7.7,SNR=6.5
USRK  Ussuriysk Ar.     40.55   6  P       P          22 40 02.3 -0.9
ARMA  Armidale          41.41 147  P       P          22 40 11.5 +0.9
ARMA                               IAmb    IAmb       22 40 30.4
      comp=Z,38nm,1.6s
LSA   Lhasa             42.53 311 ⇑P       P          22 40 20.3  0.0
LSA                                pmax    pmax
      comp=Z,28nm,0.6s
LSA   Lhasa             42.53 311  P       P          22 40 20.2  0.0
LSA                                IAmb    IAmb       22 40 28.7
      comp=Z,12nm,0.7s
ASAJ  Asahikawa         42.55  17  P       P          22 40 18.4 -1.2
      comp=Z,14nm,1.0s,baz=236,slow=3.6,SNR=2.5
GTA   Gaotai            43.15 329 ⇑P       P          22 40 23.3 -1.5
GTA                                pP      pP         22 40 40.3 +0.6
GTA                                sS      sS         22 47 12.5 +0.4
GTA                                pmax    pmax
      comp=Z,74nm,6.0s
GTA                                LR      LR
      comp=Z,570nm,17.8s
GTA                                LR      LR
      comp=Z,740nm,17.4s
GTA                                LR      LR
      comp=Z,1µm,17.8s
TAPN  Taplejung         44.11 306 eP       P          22 40 31.6 -1.3
      comp=Z,24nm,0.6s
ODAN  Odare             44.17 305 eP       P          22 40 31.9 -1.3
      comp=Z,45nm,0.9s
TOO   Toolangi          44.60 159  P       P          22 40 36.6 +0.3
TOO                                IAmb    IAmb       22 40 50.8
      comp=Z,30nm,1.8s
RAMN  Ramite            44.85 305 eP       P          22 40 38.0 -0.7
      comp=Z,19nm,0.5s
JIRN  Jiri              45.47 306 eP       P          22 40 41.9 -1.8
      comp=Z,24nm,0.7s
KLR   Kul'dur           45.52   4  P       P          22 40 42.2 -1.1
      comp=Z,3.8nm,0.6s,baz=166,slow=7.2,SNR=11
HIA   Hailar            45.77 353  P       P          22 40 45.1 -0.2
HIA                                IAmb    IAmb       22 40 52.5
      comp=Z,13nm,0.7s
PKI   Pulchoki          46.07 305 eP       P          22 40 46.7 -1.7
KKN   Kakani            46.26 306 eP       P          22 40 48.1 -1.7
DZM   Mont Dzumac       46.44 125 eP       P          22 40 51.8 +0.7
      comp=Z,47nm,1.3s
GKN   Gorkha            46.87 305 eP       P          22 40 52.8 -1.7
ULN   Ulaanbaatar       47.15 342  P       P          22 40 55.7 -0.6
ULN                                IAmb    IAmb       22 40 58.1
      comp=Z,18nm,1.1s
SONM  Songino Array     47.33 341  P       P          22 40 57.9 +0.1
      comp=Z,3.6nm,0.5s,baz=159,slow=7.9,SNR=30
SONM                               PcP     PcP        22 42 28.6 +0.7
      comp=Z,4.8nm,0.8s,baz=170,slow=2.3,SNR=3.6
SONM  Songino Array     47.33 341  P       P          22 40 57.2 -0.5
KOLN  Koldanda          47.62 305 eP       P          22 40 59.1 -1.3
DANN  Dangsing          47.71 306 eP       P          22 40 59.6 -1.6
      comp=Z,46nm,0.6s
HYB   Hyderabad         49.23 290 i P      P          22 41 13.0 +0.2
TLY   Talaya            51.56 342  P       P          22 41 29.7 -0.1
      comp=Z,11nm,0.8s,baz=152,slow=5.7,SNR=4.7
TLY   Talaya            51.56 342  P       P          22 41 30.0 +0.3
TLY                                IAmb    IAmb       22 41 31.2
      comp=Z,14nm,0.8s
WMQ   Urumqi            52.79 325 eP       P          22 41 39.3 +0.2
WMQ                                sP      sP         22 42 02.5 +1.5
WMQ                                pmax    pmax
      comp=Z,19nm,1.1s
WMQ                                pmax    pmax
      comp=Z,100nm,4.5s
WMQ                                LR      LR
      comp=Z,880nm,18.1s
WMQ                                LR      LR
      comp=Z,790nm,15.5s
WMQ                                LR      LR
      comp=Z,700nm,19.3s
PEA0B Petropavlovsk-    55.37  22  P       P          22 41 58.1 +0.4
PETK  Petropavlovsk-    55.37  22  P       P          22 41 58.2 +0.6
      comp=Z,1.4nm,0.5s,baz=196,slow=5.9,SNR=4.7
PETK  Petropavlovsk-    55.37  22  P       P          22 41 58.0 +0.3
ZSN   Zaisan            56.57 327 eP       P          22 42 04.0 -2.3
      baz=327
MK31  Makanchi Array    57.62 325  P       P          22 42 13.0 -0.8
MK31                               IAmb    IAmb       22 42 14.3
      comp=Z,8.2nm,0.8s
MKAR  Makanchi Array    57.62 325  P       P          22 42 12.9 -0.9
      comp=Z,10.0nm,0.8s,baz=118,slow=7.6,SNR=58
MKAR                               ScP     ScP        22 47 08.9 +7.3
      comp=Z,0.9nm,0.7s,baz=119,slow=5.1,SNR=4.3
UZB   Uzynbulak         57.70 320 eP       P          22 42 11.7 -2.8
      baz=320
MAKZ  Makanchi          57.81 325  P       P          22 42 14.1 -1.0
MAKZ                               IAmb    IAmb       22 42 16.1
      comp=Z,15nm,1.0s
TARG  Taragay, Kyrgy    57.83 318  P       P          22 42 16.0 +0.2
TARG                               IAmb    IAmb       22 42 26.5
      comp=Z,6.6nm,0.9s
NIL   Nilore            58.02 308  P       P          22 42 16.0 -0.9
SATY  Saty              58.05 320 eP       P          22 42 15.2 -1.8
      baz=320
KSH   Kashi             58.13 315  P       P          22 42 18.8 +1.2
KSH                                pP      pP         22 42 32.0 -1.2
KSH                                sP      sP         22 42 37.8 -1.9
KSH                                PcP     PcP        22 43 09.3 +0.6
KSH                                ScS     ScS        22 51 58.0 -4.5
KSH                                pmax    pmax
      comp=Z,9.0nm,1.3s
KSH                                LR      LR
      comp=Z,550nm,14.4s
KSH                                LR      LR
      comp=Z,420nm,16.5s
KSH                                LR      LR
      comp=Z,740nm,22.0s
YAK   Yakutsk           58.20   2  P       P          22 42 16.9 -0.5
MDOK  Medeo             58.98 319 eP       P          22 42 20.7 -2.8
      baz=319
TDK   Taldyqorghan      58.99 322 eP       P          22 42 20.3 -3.0
      baz=322
BOOM  Boomskoye usch    59.41 318  P       P          22 42 26.1 -0.4
KUU   Kurty             59.77 320 eP       P          22 42 27.3 -1.4
      comp=Z,12nm,0.9s,baz=320
TKM2  Tokmak 2          59.82 318  P       P          22 42 30.8 +1.4
      SNR=9.3
UCH   Uchtor            60.25 317  P       P          22 42 34.1 +1.4
      SNR=16
FRU1  Bishkek           60.42 318  P       P          22 42 32.8 -0.5
FRU1                               IAmb    IAmb       22 42 43.1
      comp=Z,13nm,1.4s
AAK   Ala-Archa         60.44 318  P       P          22 42 34.0 +0.5
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      comp=Z,2.8nm,0.9s,baz=182,slow=10,SNR=9.7
AAK   Ala-Archa         60.44 318  P       P          22 42 33.8 +0.3
ZAA0  Zalesovo Array    60.64 333  P       P          22 42 32.7 -1.7
ZAA0                               IAmb    IAmb       22 42 38.3
      comp=Z,13nm,1.6s
ZALV  Zalesovo Beam     60.64 333  P       P          22 42 33.0 -1.5
      comp=Z,2.1nm,0.4s,baz=128,slow=6.8,SNR=15
ZALV  Zalesovo Beam     60.64 333  P       P          22 42 32.6 -1.8
USP   Ospenovka         60.70 318  P       P          22 42 36.5 +1.3
      SNR=15
SEM   Semipalatinsk     60.76 328 eP       P          22 42 33.1 -2.6
      baz=328
AML   Almayashu         60.77 317  P       P          22 42 37.3 +1.2
      SNR=15
EKS2  Erkin-Say         60.93 318  P       P          22 42 37.9 +1.1
      SNR=11
DRK   Karamyk           61.09 314  P       P          22 42 38.3  0.0
KBL   Kabul             61.62 307  P       P          22 42 40.6 -1.1
KBL                                IAmb    IAmb       22 42 41.7
      comp=Z,8.1nm,0.8s
THZ   Tophouse          61.63 142  P       P          22 42 41.3 -0.1
BTLS  Baital            61.75 320 eP       P          22 42 40.7 -1.5
      baz=320
KURK  Kurchatov         61.80 327  P       P          22 42 41.2 -1.2
BTK   Batken            62.01 314  P       P          22 42 43.8 -0.3
BTK                                IAmb    IAmb       22 42 49.0
      comp=Z,8.2nm,0.8s
GAR   Garm              62.01 313  P       P          22 42 44.0 -0.2
BKZ   Black Stump Fm    62.51 138  P       P          22 42 46.7 -0.7
CHGR  Chuyangaron       62.75 312  P       P          22 42 48.5 -0.6
IUG   Iuzhnay           63.30 316 eP       P          22 42 51.6 -1.1
      baz=316
KKAR  Karatay Array     63.31 317  P       P          22 42 51.9 -0.8
TAS   Tashkent          63.53 315  P       P          22 42 53.8 -0.4
BRLS  Borolday          63.74 317 eP       P          22 42 53.7 -1.9
      baz=316
BRZS  Berezniki         64.75 325 eP       P          22 43 00.3 -1.7
      baz=325
HRA   Herat             67.03 306  P       P          22 43 16.3 -0.9
BRVK  Borovoye          67.45 327  P       P          22 43 19.1 -0.1
BRVK                               IAmb    IAmb       22 43 24.5
      comp=Z,11nm,0.8s
TIXI  Tiksi             67.83   1  P       P          22 43 20.7 -0.6
TIXI                               IAmb    IAmb       22 43 22.1
      comp=Z,17nm,1.3s
NRIK  Noril'sk          70.45 346  P       P          22 43 37.8 +0.3
      comp=Z,9.5nm,0.5s,baz=128,slow=5.5,SNR=17
NRIK  Noril'sk          70.45 346  P       P          22 43 37.6 +0.1
NRIK                               IAmb    IAmb       22 43 39.4
      comp=Z,11nm,0.7s
GEYT  Alibeck           70.99 309  P       P          22 43 41.6 +0.1
      comp=Z,2.8nm,0.7s,baz=107,slow=8.4,SNR=2.7
GEYT  Alibeck           70.99 309          P          22 43 40.8 -0.6
GYA0B ALIBECK ARRAY     70.99 309  P       P          22 43 40.9 -0.5
ABKAR Akbulak array     72.22 321  P       P          22 43 48.1 -0.5
ABKAR Akbulak array     72.22 321  P       P          22 43 48.2 -0.5
ABKAR                              IAmb    IAmb       22 43 54.5
      comp=Z,9.9nm,1.2s
SOCY  Socotra           72.48 282  P       P          22 43 49.1 -1.9
SOCY                               IAmb    IAmb       22 43 54.7
      comp=Z,25nm,1.1s
ARU   Arti              75.00 328  P       P          22 44 04.6 -0.1
ARU                                IAmb    IAmb       22 44 19.2
      comp=Z,10nm,1.0s
RAYN  Ar Rayn           80.59 293  P       P          22 44 35.5 -1.1
TTA   Tatalina          80.83  27  P       P          22 44 38.4 +1.3
      baz=260
TTA   Tatalina          80.83  27  P       P          22 44 37.4 +0.3
L19K  White Mountain    81.24  28  P       P          22 44 40.9 +1.7
      baz=261
K20K  Telida            81.77  27  P       P          22 44 44.0 +2.1
      baz=262
J20K  Nowinta River     81.86  26  P       P          22 44 44.5 +2.1
      baz=262
J20K  Nowinta River     81.86  26  P       P          22 44 43.6 +1.2
J20K                               IAmb    IAmb       22 44 44.7
      comp=Z,9.1nm,1.1s
VOI   Vohitsoka         82.19 247  P       P          22 44 45.1 -0.1
IMAR  Indian Mountai    82.28  24  P       P          22 44 45.4 +0.8
H21K  Melozitna Rive    82.62  24  P       P          22 44 47.9 +1.5
      baz=263
H21K  Melozitna Rive    82.62  24  P       P          22 44 47.1 +0.7
H21K                               IAmb    IAmb       22 44 48.6
      comp=Z,9.8nm,1.2s
CAST  Castle Rocks      82.67  27  P       P          22 44 47.5 +0.8
CAST                               IAmb    IAmb       22 44 56.4
      comp=Z,8.1nm,1.1s
KARS  Kars              82.86 310  P       P          22 44 48.7 +0.4
I21K  Tanana            82.91  25  P       P          22 44 49.7 +1.8
      baz=264
I21K  Tanana            82.91  25  P       P          22 44 48.3 +0.4
I21K                               IAmb    IAmb       22 44 57.4
      comp=Z,9.7nm,1.0s
KBZ   Khabaz            83.06 313  P       P          22 44 48.0 -1.1
      comp=Z,1.0nm,0.7s,baz=129,slow=6.5,SNR=1.9
BPAW  Bear Paw Mtn.     83.22  26  P       P          22 44 51.0 +1.5
      baz=265
BPAW  Bear Paw Mtn.     83.22  26  P       P          22 44 49.3 -0.3
BPAW                               IAmb    IAmb       22 44 53.4
      comp=Z,19nm,1.4s
SIRT  Sirnak            83.31 307  P       P          22 44 50.9 +0.2
MLY   Manley            83.42  25  P       P          22 44 52.1 +1.5
      baz=265
MLY   Manley            83.42  25  P       P          22 44 51.4 +0.8
VNDA  Vanda             83.42 173  P       P          22 44 51.5 +1.3
      comp=Z,2.5nm,0.8s,baz=303,slow=5.6,SNR=10.0
VNDA  Vanda             83.42 173  P       P          22 44 50.9 +0.7
TRF   Thorofare Moun    83.47  27  P       P          22 44 51.8 +0.8
      baz=265
MAW   Mawson            83.81 200  P       P          22 44 52.6 +0.3
      comp=Z,1.9nm,0.9s,baz=56,slow=11,SNR=2.9
MAW   Mawson            83.81 200  P       P          22 44 53.0 +0.6
COLD  Coldfoot          83.83  23  P       P          22 44 54.4 +1.8
      baz=265
COLD  Coldfoot          83.83  23  P       P          22 44 52.9 +0.3
COLD                               IAmb    IAmb       22 45 04.1
      comp=Z,9.0nm,0.9s
I23K  Minto, Yukon-K    84.01  25  P       P          22 44 55.0 +1.6
      baz=266
I23K  Minto, Yukon-K    84.01  25  P       P          22 44 54.3 +0.8
I23K                               IAmb    IAmb       22 44 57.1
      comp=Z,25nm,1.5s
MCK   McKinley          84.10  26  P       P          22 44 54.5 +0.5
      baz=266
KNK   Knik Glacier      84.19  29  P       P          22 44 55.4 +0.9
      baz=267
KNK   Knik Glacier      84.19  29  P       P          22 44 54.9 +0.4
TOLK  Toolik Lake Re    84.19  21  P       P          22 44 56.2 +1.8
      baz=265
TOLK  Toolik Lake Re    84.19  21  P       P          22 44 55.0 +0.6
TOLK                               IAmb    IAmb       22 44 56.9
      comp=Z,12nm,1.0s
CCB   Clear Creek Bu    84.64  26  IAmb    IAmb       22 44 57.8
      comp=Z,11nm,1.5s
H24K  Noodor Dome       84.67  24  P       P          22 44 58.8 +1.9
      baz=267
PPT2  Papeete2          85.00 108 eS       S          22 55 23.8 -1.0
      comp=Z,165nm,24.5s
PPT2  Papeete2          85.00 108 eLR      LR         23 11 50.7
      comp=Z,333nm,25.5s
ILAR  Eielson Array     85.04  25  P       P          22 44 57.6 -1.1
      comp=Z,0.6nm,0.8s,baz=222,slow=8.1,SNR=5.0
ILAR  Eielson Array     85.04  25  P       P          22 44 59.4 +0.7
KLMR  Klimovskoe        85.46 331 eP       P          22 44 59.6 -1.3
KLMR                               AMP                22 45 02.1
      comp=Z,60nm,1.1s
BMAR  Burnt Mountain    86.02  23  P       P          22 45 04.9 +1.3
OBN   Obninsk           87.13 325  P       P          22 45 09.0 -0.2
BCAR  Beaver Creek A    87.31  27  P       P          22 45 10.7 +0.7
KIBK  Kibwezi           88.97 268  P       P          22 45 19.1 +0.1
KIBK                               IAmb    IAmb       22 45 21.0
      comp=Z,8.1nm,1.1s
GHAJ  Ghor Haditha      89.18 301  P       P          22 45 19.9 +0.5
KMBO  Kilima Mbogo      89.68 269  P       P          22 45 23.5 +1.0
      comp=Z,3.5nm,0.9s,baz=139,slow=1.9,SNR=8.0
KMBO  Kilima Mbogo      89.68 269  P       P          22 45 22.5 +0.1
KMBO                               IAmb    IAmb       22 45 24.7
      comp=Z,8.4nm,1.2s
BR131 Keskin Array S    90.11 310  P       P          22 45 22.5 -1.4
BR131                              IAmb    IAmb       22 45 24.8
      comp=Z,7.3nm,0.9s
BRTR  Keskin Array B    90.11 310  P       P          22 45 23.2 -0.7
      comp=Z,3.7nm,0.9s,baz=114,slow=5.1,SNR=16
BRTR  Keskin Array B    90.11 310  P       P          22 45 22.6 -1.3
ARCES ARCESS Array B    90.48 340  P       P          22 45 24.2 -0.5
      comp=Z,5.1nm,0.7s,baz=78,slow=5.9,SNR=17
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ARCES	ARCESS Array B	90.48	340	P	P	22 45 23.8	-1.0
FINES	FINESS Array B	91.88	332	P	P	22 45 30.1	-1.3
	comp=Z,5.8nm,0.9s,baz=29,slow=4.4,SNR=7.3						
FINES	FINESS Array B	91.88	332	P	P	22 45 29.8	-1.5
AKASG	Malin Array Be	91.97	321	P	P	22 45 31.3	-0.7
	comp=Z,4.2nm,0.7s,baz=68,slow=4.6,SNR=22						
AKASG	Malin Array Be	91.97	321	P	P	22 45 31.2	-0.8
AKASG				IAmb	IAmb	22 45 32.6	
	comp=Z,5.6nm,1.1s						
MNK	Minsk	92.19	325	*i* P	P	22 45 33.6	+0.7
	comp=E,2.0nm,0.9s						
MNK				*i* P	P	22 45 33.6	+0.7
	comp=N,13nm,0.9s						
MNK				*i* P	P	22 45 33.6	+0.7
	comp=Z,10.0nm,0.8s,baz=260						
MNK				*i* PP	PP	22 49 13.6	+0.1
MNK				*i* PPP	PPP	22 51 12.9	
MNK				*i* S	SKSac	22 56 01.9	+0.7
MNK				*i* S	SKSac	22 56 01.9	+0.7
MNK				*i* PS	PnS	22 57 49.5	-0.5
MNK				*i* SS	SS	23 02 43.6	+2.1
MNK				*i* SSS	SSS	23 06 22.6	
MNK				*i* LR	LR	23 26 25.2	
MNK				*i* LRM	MLR	23 28 20.8	
	comp=N,186nm,19.8s						
MNK				*i* LRM	MLR	23 28 46.4	
	comp=E,44nm,23.0s						
MNK				*i* LRM	MLR	23 28 51.5	
	comp=Z,286nm,21.7s						
NACGM	Naroch	92.75	325	*i* P	P	22 45 36.9	+1.4
SORM	Soroca	92.91	318	⇓P	P	22 45 35.4	-1.0
VLDR	Vladesti	93.44	316	⇓P	P	22 45 39.5	+0.5
TAOE	Nuku Hiva Isla	93.52	99	*e*LR	LR	23 15 48.5	
	comp=Z,465nm,23.6s						
TESR	Tescani	94.32	317	⇓P	P	22 45 42.0	-1.0
VRI	Vrincioaia	94.38	316	⇓P	P	22 45 43.0	-0.2
PLOR	Plostina	94.43	316	⇑P	P	22 45 44.2	+0.7
MLR	Muntele Rosu	94.98	316	⇓P	P	22 45 46.4	+0.2
SUW	Suwalki	94.99	325	P	P	22 45 45.2	-0.6
BURAR	Bucovina Array	95.08	318	⇓P	P	22 45 47.2	+0.6
BUR08	Bucovina Ar. S	95.08	318	P	P	22 45 46.4	-0.2
ARR	Arges	95.91	316	⇓P	P	22 45 50.5	+0.1
BMR	Baia Mare	96.20	319	⇓P	P	22 45 52.3	+0.8
CJR	Cluj-Napoca	96.34	318	⇓P	P	22 45 53.2	+0.9
KOLS	Kolonicke sedl	96.72	320	*e*PDIFF	P	22 45 55.6	+1.7
TRPA	Tarpa	96.73	319	⇓P	P	22 45 54.2	+0.3
DRGR		96.92	318	⇓P	P	22 45 54.9	0.0
GZR	Gura Zlata	97.19	316	⇑P	Pdif	22 45 56.4	+0.2
SIRR	Siria	97.75	317	⇓P	Pdif	22 45 58.9	+0.3
BZS	Buzias	97.93	317	⇑P	P	22 45 58.7	-0.7
MDVR	Moldovita	98.06	316	⇑P	P	22 45 59.5	-0.6
NOA	NORSAR Array B	98.83	334	P	P	22 46 01.9	-1.3
	comp=Z,2.8nm,0.9s,baz=65,slow=4.6,SNR=4.3						
DPC	Dobruska-Polom	100.05	322	*e*PDIFF	Pdif	22 46 09.6	+0.8
DPC				*e*sP	sP	22 46 33.4	+1.7
VRAC	Vranov	100.21	321	*e*PDIFF	Pdif	22 46 10.8	+1.3
VRAC				*e*sPDIFF		22 46 33.8	
KRUC	Moravsky	100.41	321	*e*PDIFF	Pdif	22 46 10.4	0.0
KRUC				*e*sPDIFF		22 46 34.4	
PRU	Pruhonice	101.25	322	*e*sP	sPdif	22 46 38.0	+1.1
BRG	Berggiesshubel	101.31	323	*e*P	Pdif	22 46 20.6	+6.2
BRG				Amp		22 46 21.6	
	comp=Z,11nm,1.2s						
CLL	Collm	101.70	324	*e*Pdif	Pdif	22 46 17.0	+0.9
CLL				*e*sPdif	sPdif	22 46 39.0	+0.1
CLL				*e*(PPS)		23 00 12.0	
CLL				*e*SSSS		23 12 06.0	
CLL				LmV		23 39 00.0	
	comp=Z,300nm,18.9s						
CKRC	Cesky Krumlov	101.79	321	*e*PDIFF	Pdif	22 46 18.7	+2.1
CKRC				*e*sP	sPdif	22 46 42.5	+3.2
KHC	Kasperske Hory	102.13	322	*e*PDIFF	Pdif	22 46 18.6	+0.5
KHC				*e*sP	sPdif	22 46 42.8	+1.9
GERES	GERESS Array B	102.16	322	P	Pdif	22 46 18.2	-0.1
	comp=Z,1.1nm,0.8s,baz=23,slow=5.3,SNR=1.9						
VNA3	Neumayer Olymp	107.19	193	PKiKP	PKiKP	22 50 49.8	+1.0
TXAR	Lajitas Array	121.49	52	PKP	PKiKP	22 51 18.6	+1.0
	comp=Z,0.4nm,0.8s,baz=257,slow=2.4,SNR=2.4						
TORD	Torodi Ar. Bea	123.04	288	PKP	PKPdf	22 51 20.4	-0.2
	comp=Z,1.9nm,0.8s,baz=64,slow=1.4,SNR=13						
PLCA	Paso Flores	139.97	159	PKP	PKPdf	22 51 51.5	-0.5
	comp=Z,1.4nm,1.0s,baz=291,slow=14,SNR=1.8						
LPAZ	La Paz	160.70	131	PKP	PKPdf	22 52 25.8	+1.0
	comp=Z,0.9nm,0.9s,baz=207,slow=4.5,SNR=2.1						
BDFB	Brasilia	167.14	203	PKP	PKPdf	22 52 30.7	+0.6
	comp=Z,1.7nm,0.7s,baz=131,slow=9.3,SNR=2.2						

IDC ***28*** *22:32:45.8±0.5, 3°.81N×126°.83E, h0^{km}, mb4.8/25, mb1 4.8/26, mb1mx4.6/47, mbtmp4.8/26, ML4.3/1, MS4.1/4, Ms1 4.1/4, ms1mx3.9/11, Error ellipse: s-maj=20.7km s-min=13.8km az=74.0*

MOS ***28*** *22:32:48.0±0.7, 3°.83N×126°.72E, h23^{km}, mb5.3/44, Error ellipse: s-maj=14.4km s-min=6.7km az=117.7*

GCMT ***28*** *22:32:49.3±0.2, 3°.98N±0°.02×127°.11E±0°.01, h14^{km}, MW5.0/128, Moment Tensor Solution. s66,c82; s128,c184; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.12±.13; $M_{\theta\theta}$-0.26±.08; $M_{\phi\phi}$-3.87±.11; $M_{r\theta}$0.41±.21; $M_{\theta\phi}$-0.85±.07; $M_{\phi r}$2.37±.24; Best double couple: $M_0$4.74400×10^{16} NP1:ϕ_s194.00000°, δ30.00000°, λ92.00000°. NP2:ϕ_s11.00000°, δ60.00000°, λ89.00000°. Principal axes: T 4.7760, Plg75.0000°, Azm278.0000°; N -0.0700, Plg1.0000°, Azm12.0000°; P -4.7120, Plg15.0000°, Azm102.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***28*** *22:32:50.3±1.7, 3°.85N±0°.08×126°.87E±0°.09, h24^{km}±4^{km}, mb5.4/109 Error ellipse: s-maj=13.5km s-min=10.4km az=53.0*

ISC 28 22:32:48.4±2.3**, 3°.87N**±0°.05×**126°.86E**±0°.07**, h15**^{km}±14^{km}**, n224, σ0^{s}.86**/227**, mb5.3**/87**, MS4.1**/5**, 1C, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	3.12	171	Pn	Pn	22 33 35.5	-1.5
SIJI	Sorong	6.44	137	Pn	Pn	22 34 22.7	-0.1
	6.8nm,0.3s,baz=339,slow=15,SNR=6.4						
SIJI				Sn	Sn	22 35 35.0	-1.2
	baz=130,slow=20,SNR=1.2						
TOLI2	Tolitoli	6.66	246	Pn	Pn	22 34 27.0	+1.2
FAKI	Fak Fak	8.63	141	Pn	Pn	22 34 54.5	+1.7
SAUI	Saumlaki	12.58	159	Pn	Pn	22 35 46.5	-0.5
SOEI	Soe	13.78	191	Pn	Pn	22 36 05.3	+1.9
JAY	Jayapura	15.22	114	LR	LR	22 42 08.5	
	comp=Z,933nm,20.7s,baz=338,slow=37						
MTN	Manton Dam	17.14	166		Pn	22 36 47.8	+0.3
JAGI	Jajag, Banyuwa	17.63	226		Pn	22 36 53.9	+0.1
YULB	Yu-li	20.14	345	P	P	22 37 21.5	-0.7
TPUB	Ta-pu	20.24	343	P	P	22 37 22.0	-1.2
TPUB				IAmb	IAmb	22 37 27.4	
	comp=Z,164nm,0.9s						
SSLB	Suanglung	20.61	344	P	P	22 37 28.0	+0.8
SSLB				IAmb	IAmb	22 37 30.2	
	comp=Z,88nm,0.8s						
YHNB	Yeheng	21.35	346	P	P	22 37 37.3	+2.1
PMBI	Palembang	23.09	253	P	P	22 37 55.5	+1.7
UBPT	Khong Chiam	23.92	300	P	P	22 38 01.2	-0.8
UBPT				IAmb	IAmb	22 38 02.9	
	comp=Z,214nm,1.3s						
WRA	Warramunga Arr	24.78	163	LR	LR	22 50 06.5	
	comp=Z,295nm,19.4s,baz=340,slow=42						
WRA	Warramunga Arr	24.78	163	P	P	22 38 09.4	-0.4
WRA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
WRA	Warramunga Arr	24.78	163	P	P	22 38 09.4	-0.4
WB2	Warramunga Arr	24.78	163	P	P	22 38 10.4	+0.6
WB2				IAmb	IAmb	22 38 24.0	
	comp=Z,89nm,0.9s						
IPM	Ipoh	25.77	272	P	P	22 38 19.9	+0.9
IPM				IAmb	IAmb	22 38 27.2	
	comp=Z,119nm,1.3s						
BKNI	Bangkinang	26.04	263	P	P	22 38 22.1	+0.7
BKNI				IAmb	IAmb	22 38 58.2	
	comp=Z,103nm,1.1s						
KULM	Kulim	26.16	274	P	P	22 38 24.1	+1.6
KULM				IAmb	IAmb	22 38 30.9	
	comp=Z,107nm,1.3s						
PSA00	Pilbara Seismi	26.20	195	P	P	22 38 22.6	-0.1
PSI	Prapat	27.91	269	P	P	22 38 37.5	-0.8
	comp=Z,16nm,0.9s,baz=39,slow=3.8,SNR=3.6						
RPSI	Rantau Prapat	27.92	268	P	P	22 38 37.5	-0.7
ASAR	Alice Springs	28.22	166	LR	LR	22 51 47.8	
	comp=Z,376nm,21.1s,baz=38,slow=40						
ASAR	Alice Springs	28.22	166	P	P	22 38 41.6	+0.7
ASAR	Alice Springs	28.22	166	P	P	22 38 41.6	+0.7
GIRL	Giralia	29.09	205	P	P	22 38 49.6	+1.0
GSI	Gunungsitoli	29.36	266	P	P	22 38 51.1	-0.1
GSI				IAmb	IAmb	22 38 57.4	
	comp=Z,37nm,1.0s						
CM31	Chiang Mai Arr	30.92	300	P	P	22 39 05.0	+0.2
CMAR	Chiang Mai Arr	30.92	300	P	P	22 39 04.6	-0.3
	comp=Z,2.9nm,0.3s,baz=120,slow=7.7,SNR=11						
CMAR				PcP	PcP	22 42 02.2	+0.8
	comp=Z,1.0nm,0.3s,baz=151,slow=1.1,SNR=4.7						
CMAR	Chiang Mai Arr	30.92	300	P	P	22 39 04.3	-0.6
CMAR	Chiang Mai Arr	30.92	300	P	P	22 39 04.3	-0.6
ENH	Enshi	30.98	330		P	22 39 04.5	-0.8
ENH				IAmb	IAmb	22 39 06.0	
	comp=Z,45nm,0.8s						
CHTO	Chiang Mai	31.06	301	P	P	22 39 05.0	-1.2
CHTO				pmax	pmax		
	comp=Z,20nm,0.7s						
CHTO	Chiang Mai	31.06	301	P	P	22 39 05.0	-1.2
INU	Inuyama	32.71	15	P	P	22 39 19.4	-1.0
KSAR	Wonju Array Be	33.43	1	P	P	22 39 27.4	+0.7
KSAR	Wonju Array Be	33.43	1	P	P	22 39 27.4	+0.7
KSRS	Korea Array	33.44	2	P	P	22 39 26.6	-0.2
	comp=Z,6.2nm,0.8s,baz=178,slow=10,SNR=9.1						
KSRS				PcP	PcP	22 42 09.6	+1.6
	comp=Z,3.5nm,0.9s,baz=191,slow=5.4,SNR=5.0						
KSRS				LR	LR	22 54 39.6	
	comp=Z,375nm,19.0s,baz=208,slow=39						
MJAR	Matsushiro Arr	34.15	16	P	P	22 39 34.5	+1.5
	comp=Z,2.8nm,0.8s,baz=193,slow=9.7,SNR=5.2						
BJT	Baijiatuau	37.27	346	P	P	22 40 00.8	+1.1
BJT				pmax	pmax		
	comp=Z,254nm,1.4s						
BJT	Baijiatuau	37.27	346	P	P	22 40 00.8	+1.1
EIDS	Eidsvold	37.38	142	P	P	22 39 59.8	-1.1
STKA	Stephens Creek	38.21	160	P	P	22 40 06.3	-1.5
	comp=Z,19nm,0.7s,baz=337,slow=8.4,SNR=9.0						
STKA	Stephens Creek	38.21	160	P	P	22 40 07.1	-0.7
STKA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
STKA	Stephens Creek	38.21	160	P	P	22 40 07.1	-0.7
MDJ	Mudanjiang	40.65	3	P	P	22 40 29.0	+1.0
MDJ				pmax	pmax		
	comp=Z,24nm,1.7s						
MDJ				pmax	pmax		
	comp=Z,280nm,4.0s						
MDJ	Mudanjiang	40.65	3		P	22 40 28.5	+0.5
ASAJ	Asahikawa	42.42	17	P	P	22 40 42.0	-0.5
	comp=Z,9.0nm,0.8s,baz=146,slow=9.7,SNR=4.2						
LSA	Lhasa	42.45	311	P	P	22 40 42.8	-0.7
LSA				pmax	pmax		
	comp=Z,14nm,0.8s						
LSA	Lhasa	42.45	311	P	P	22 40 42.8	-0.7
GTA	Gaotai	43.05	329	⇑P	P	22 40 47.3	-0.5
GTA				pP	sP	22 40 57.5	+3.2
GTA				sP	pP	22 41 02.3	+10
GTA				PcP	PcP	22 42 39.3	+1.4
GTA				ScP	ScP	22 46 30.5	+1.7
GTA				PcS	PcS	22 46 33.0	+2.6
GTA				S	S	22 47 11.0	-2.3
GTA				sS	sS	22 47 27.5	+6.7
GTA	Gaotai	43.05	329	ScS	ScS	22 50 48.8	+0.4
GTA				pmax	pmax		
	comp=Z,9.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,63nm,5.1s						
GTA				LR	LR		
	comp=N,580nm,18.9s						
GTA				LR	LR		
	comp=E,740nm,18.2s						
GTA				LR	LR		
	comp=Z,1μm,18.2s						
KLR	Kul'dur	45.39	4	P	P	22 41 05.7	-0.6
	comp=Z,6.0nm,0.6s,baz=260,slow=2.3,SNR=8.5						
HIA	Hailar	45.64	353	P	P	22 41 09.5	+1.2
HIA				pmax	pmax		
	comp=Z,44nm,1.1s						
HIA	Hailar	45.64	353		P	22 41 09.5	+1.2
HIA				IAmb	IAmb	22 41 12.9	
	comp=Z,44nm,1.1s						
ULN	Ulaanbaatar	47.03	342	P	P	22 41 20.2	+0.8
ULN				pmax	pmax		
	comp=Z,52nm,1.1s						
ULN	Ulaanbaatar	47.03	342	P	P	22 41 20.2	+0.8
ULN				IAmb	IAmb	22 41 22.3	
	comp=Z,52nm,1.1s						
SONM	Songino Array	47.21	341	P	P	22 41 21.5	+0.7
	comp=Z,12nm,0.9s,baz=161,slow=9.8,SNR=19						
SONM				PcP	PcP	22 42 52.8	+0.7
	comp=Z,12nm,0.8s,baz=163,slow=3.1,SNR=9.3						
SONM	Songino Array	47.21	341	P	P	22 41 22.1	+1.3
SONM				pmax	pmax		
	comp=Z,23nm,1.1s						
SONM	Songino Array	47.21	341	P	P	22 41 22.1	+1.3
SONM				IAmb	IAmb	22 41 23.6	
	comp=Z,23nm,1.1s						
ZAK	Zakamensk	50.44	341	*e*P	P	22 41 45.4	-0.1
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.7s						
TLY	Talaya	51.44	342	P	P	22 41 54.1	+1.2
	comp=Z,19nm,0.8s,baz=184,slow=7.0,SNR=8.1						
TLY	Talaya	51.44	342	*e*P	P	22 41 53.7	+0.8
TLY				pmax	pmax		
	comp=Z,151nm,1.5s						
TLY				MLR	MLR		
	comp=Z,801nm,17.0s						
TLY	Talaya	51.44	342	P	P	22 41 54.1	+1.2
TLY				IAmb	IAmb	22 41 55.4	
	comp=Z,48nm,1.1s						
IRK	Irkutsk	51.74	342	*e*P	P	22 41 54.8	-0.3
IRK				pmax	pmax		
	comp=Z,101nm,1.7s						
BOD	Bodaibo	54.75	352	*e*P	P	22 42 17.5	+0.3
BOD				pmax	pmax		
	comp=Z,50nm,1.5s						
PETK	Petropavlovsk-	55.25	22	P	P	22 42 20.3	-0.6
	comp=Z,7.4nm,0.8s,baz=197,slow=4.6,SNR=4.9						
PETK	Petropavlovsk-	55.25	22	P	P	22 42 22.0	+1.1
PETK	Petropavlovsk-	55.25	22	P	P	22 42 22.0	+1.1
MK31	Makanchi Array	57.52	325	P	P	22 42 37.5	+0.2
MK31				pmax	pmax		
	comp=Z,20nm,1.0s						
MK31	Makanchi Array	57.52	325	P	P	22 42 37.5	+0.2
MK31				IAmb	IAmb	22 42 38.5	
	comp=Z,20nm,0.9s						
MKAR	Makanchi Array	57.52	325	P	P	22 42 35.5	-1.7
	comp=Z,23nm,0.9s,baz=126,slow=6.3,SNR=14						
MKAR				PcP	PcP	22 43 31.1	+0.4
	comp=Z,10nm,0.8s,baz=125,slow=6.1,SNR=4.3						
MKAR				ScP	ScP	22 47 32.9	+2.6
	comp=Z,1.4nm,0.8s,baz=86,slow=5.9,SNR=3.7						
MKAR	Makanchi Array	57.52	325	P	P	22 42 37.6	+0.3
MKAR	Makanchi Array	57.52	325	P	P	22 42 37.6	+0.3
MAKZ	Makanchi	57.70	325	P	P	22 42 38.6	0.0
MAKZ				pmax	pmax		
	comp=Z,36nm,1.0s						
MAKZ	Makanchi	57.70	325	P	P	22 42 38.5	0.0
MAKZ				IAmb	IAmb	22 42 40.3	
	comp=Z,36nm,1.0s						
TARG	Taragay, Kyrgy	57.73	318	P	P	22 42 39.3	0.0
NIL	Nilore	57.95	308	P	P	22 42 39.9	-0.6
NIL				pmax	pmax		
	comp=Z,80nm,1.4s						
NIL	Nilore	57.95	308	P	P	22 42 39.9	-0.6
KSH	Kashi	58.04	315	P	P	22 42 42.5	+1.3
KSH				pmax	pmax		
	comp=Z,27nm,1.5s						
YAK	Yakutsk	58.07	2	P	P	22 42 41.0	+0.3
BOOM	Boomskoye usch	59.31	318	P	P	22 42 49.8	-0.2
BOOM				pmax	pmax		
	comp=Z,31nm,1.6s						
BOOM	Boomskoye usch	59.31	318	P	P	22 42 49.8	-0.2
BOOM				IAmb	IAmb	22 42 51.5	
	comp=Z,31nm,1.6s						
FRU1	Bishkek	60.33	318	P	P	22 42 58.0	+1.1
FRU1				pmax	pmax		
	comp=Z,11nm,0.9s						
FRU1	Bishkek	60.33	318	P	P	22 42 58.0	+1.1
AAK	Ala-Archa	60.34	318	P	P	22 42 57.2	0.0
	comp=Z,5.5nm,0.9s,baz=124,slow=6.7,SNR=12						
AAK	Ala-Archa	60.34	318	P	P	22 42 57.0	-0.1
AAK				pmax	pmax		
	comp=Z,43nm,1.7s						
AAK	Ala-Archa	60.34	318	P	P	22 42 57.0	-0.1
AAK				IAmb	IAmb	22 42 59.8	
	comp=Z,43nm,1.6s						
ZAA0	Zalesovo Array	60.52	333	P	P	22 42 57.3	-0.6
ZALV	Zalesovo Beam	60.52	333	P	P	22 42 57.4	-0.6
	comp=Z,4.8nm,0.7s,baz=116,slow=6.8,SNR=7.4						
ZALV	Zalesovo Beam	60.52	333	P	P	22 42 57.6	-0.3
ZALV	Zalesovo Beam	60.52	333	P	P	22 42 57.6	-0.3
DRK	Karamyk	61.01	314	P	P	22 43 01.5	-0.4
DRK				IAmb	IAmb	22 43 04.0	
	comp=Z,27nm,1.1s						
KBL	Kabul	61.54	307	P	P	22 43 04.8	-0.7
KBL				pmax	pmax		
	comp=Z,31nm,1.2s						
KBL	Kabul	61.54	307	P	P	22 43 04.8	-0.7
KBL				IAmb	IAmb	22 43 05.9	
	comp=Z,30nm,1.1s						
KURK	Kurchatov	61.70	327	P	P	22 43 05.8	-0.1
KURK				pmax	pmax		
	comp=Z,33nm,0.9s						
KURK	Kurchatov	61.70	327	P	P	22 43 05.8	-0.1
KURK				IAmb	IAmb	22 43 09.3	
	comp=Z,33nm,0.8s						
LBZ	Lake Benmore	61.72	146	P	P	22 43 06.7	+0.4
THZ	Tophouse	61.73	142	P	P	22 43 06.7	+0.3
THZ				IAmb	IAmb	22 43 07.2	
	comp=Z,27nm,1.0s						
BTK	Batken	61.92	314	P	P	22 43 08.3	+0.5
BTK				pmax	pmax		
	comp=Z,76nm,1.6s						
BTK	Batken	61.92	314	P	P	22 43 08.3	+0.5
GAR	Garm	61.93	313	P	P	22 43 07.7	-0.2
CHGR	Chuyangaron	62.67	312	P	P	22 43 12.4	-0.5
KKAR	Karatay Array	63.22	317	P	P	22 43 16.6	+0.3
KKAR	Karatay Array	63.22	317	P	P	22 43 16.6	+0.3
TAS	Tashkent	63.44	315	P	P	22 43 18.8	+1.0
TAS				pmax	pmax		
	comp=Z,96nm,1.3s						
TAS	Tashkent	63.44	315	P	P	22 43 18.8	+1.0
HRA	Herat	66.96	306	P	P	22 43 39.7	-1.4
HRA				IAmb	IAmb	22 43 41.5	
	comp=Z,26nm,1.3s						
BRVK	Borovoye	67.35	327	P	P	22 43 43.3	+0.4
BRVK				pmax	pmax		
	comp=Z,34nm,1.0s						
BRVK	Borovoye	67.35	327	P	P	22 43 43.3	+0.4
BRVK				IAmb	IAmb	22 43 45.8	
	comp=Z,34nm,0.9s						
TIXI	Tiksi	67.70	1	P	P	22 43 44.2	-0.5
TIXI				pmax	pmax		
	comp=Z,85nm,1.7s						
TIXI	Tiksi	67.70	1	P	P	22 43 44.2	-0.5
NRIK	Noril'sk	70.33	346	P	P	22 44 01.9	+0.8
	comp=Z,25nm,0.9s,baz=141,slow=5.0,SNR=12						
NRIK	Noril'sk	70.33	346	P	P	22 44 01.7	+0.6
NRIK				pmax	pmax		
	comp=Z,29nm,1.0s						
NRIK	Noril'sk	70.33	346	P	P	22 44 01.7	+0.6
NRIK				IAmb	IAmb	22 44 02.7	
	comp=Z,30nm,0.9s						
UOSS	Minazif	70.85	295	P	P	22 44 03.8	-1.4
GEYT	Alibeck	70.91	309	P	P	22 44 05.5	+0.1
	comp=Z,3.8nm,0.7s,baz=189,slow=18,SNR=4.1						
GEYT	Alibeck	70.91	309	P	P	22 44 04.8	-0.6
GYA0B	ALIBECK ARRAY	70.91	309	P	P	22 44 04.8	-0.6
ABKAR	Akbulak array	72.13	321	P	P	22 44 12.1	-0.3
ABKAR	Akbulak array	72.13	321	P	P	22 44 12.2	-0.2
ABKAR				IAmb	IAmb	22 44 14.7	
	comp=Z,61nm,1.8s						
ARU	Arti	74.89	328	P	P	22 44 28.4	-0.1
ARU				IAmb	IAmb	22 44 37.3	
	comp=Z,23nm,1.0s						
RAYN	Ar Rayn	80.55	293	P	P	22 44 59.9	-0.9
RAYN				pmax	pmax		
	comp=Z,24nm,1.3s						
RAYN	Ar Rayn	80.55	293	P	P	22 44 59.9	-0.9
TTA	Tatalina	80.72	27	P	P	22 45 02.3	+1.3
TTA				pmax	pmax		
	comp=Z,36nm,1.4s						
TTA	Tatalina	80.72	27	P	P	22 45 02.3	+1.3
TTA				IAmb	IAmb	22 45 04.0	
	comp=Z,36nm,1.4s						
N19K	Bonanza Creek	81.11	29	P	P	22 45 04.1	+1.1
N19K				IAmb	IAmb	22 45 05.7	
	comp=Z,43nm,1.3s						
L19K	White Mountain	81.13	28		P	22 45 04.1	+1.0
L19K				IAmb	IAmb	22 45 06.3	
	comp=Z,33nm,1.2s						
M19K	Big River Lodg	81.30	28	P	P	22 45 05.4	+1.4
K20K	Telida	81.66	27		P	22 45 06.6	+0.8
K20K				IAmb	IAmb	22 45 08.5	
	comp=Z,40nm,1.2s						
J20K	Nowinta River	81.74	26		P	22 45 06.8	+0.6
J20K				IAmb	IAmb	22 45 09.8	
	comp=Z,64nm,1.5s						
IMAR	Indian Mountai	82.16	24	P	P	22 45 08.6	+0.1
VOI	Vohitsoka	82.24	247		P	22 45 08.8	-1.2
VOI				IAmb	IAmb	22 45 10.7	
	comp=Z,28nm,1.1s						
H21K	Melozitna Rive	82.51	24	P	P	22 45 11.2	+0.9
H21K				IAmb	IAmb	22 45 12.9	
	comp=Z,61nm,1.5s						
CAST	Castle Rocks	82.55	27	P	P	22 45 11.0	+0.4
CAST				IAmb	IAmb	22 45 12.6	
	comp=Z,47nm,1.6s						
KARS	Kars	82.78	310	P	P	22 45 13.1	+0.7
KARS				pmax	pmax		
	comp=Z,68nm,0.9s						
KARS	Kars	82.78	310	P	P	22 45 13.1	+0.7
I21K	Tanana	82.79	25	P	P	22 45 12.2	+0.4
I21K				IAmb	IAmb	22 45 14.4	
	comp=Z,38nm,1.1s						
KBZ	Khabaz	82.98	313	P	P	22 45 12.9	-0.2
	comp=Z,3.6nm,0.9s,baz=235,slow=3.7,SNR=6.1						
KTH	Kantishna Hill	83.08	27	P	P	22 45 14.2	+0.8
KTH				IAmb	IAmb	22 45 15.8	
	comp=Z,58nm,1.5s						
SIRT	Sirnak	83.24	307	P	P	22 45 14.4	-0.4
MLY	Manley	83.30	25	P	P	22 45 15.7	+1.2
MLY				IAmb	IAmb	22 45 16.6	
	comp=Z,39nm,1.2s						
VNDA	Vanda	83.55	173	P	P	22 45 15.3	0.0
	comp=Z,5.2nm,0.9s,baz=294,slow=4.0,SNR=6.5						
VNDA	Vanda	83.55	173	P	P	22 45 15.4	0.0
VNDA				pmax	pmax		
	comp=Z,12nm,1.0s						
VNDA	Vanda	83.55	173	P	P	22 45 15.4	0.0
COLD	Coldfoot	83.71	23		P	22 45 17.7	+1.2
COLD				IAmb	IAmb	22 45 19.3	
	comp=Z,33nm,1.2s						
PMR	Palmer	83.76	29	P	P	22 45 16.8	0.0
PMR				pmax	pmax		
	comp=Z,47nm,1.3s						
PMR	Palmer	83.76	29		P	22 45 16.8	0.0
PMR				IAmb	IAmb	22 45 18.0	
	comp=Z,48nm,1.3s						
I23K	Minto, Yukon-K	83.89	25	P	P	22 45 18.6	+1.2
MAW	Mawson	83.93	200	P	P	22 45 17.2	-0.3
	comp=Z,6.1nm,1.1s,baz=51,slow=9.2,SNR=5.5						
MAW	Mawson	83.93	200	P	P	22 45 17.1	-0.3
MAW				pmax	pmax		
	comp=Z,4.0nm,1.4s						
MAW	Mawson	83.93	200	P	P	22 45 17.1	-0.3
NEA2	Nenana	83.98	26	P	P	22 45 18.1	+0.2
NEA2				IAmb	IAmb	22 45 20.5	
	comp=Z,18nm,1.0s						
MCK	McKinley	83.98	26	P	P	22 45 18.2	+0.2
MCK				pmax	pmax		
	comp=Z,73nm,1.4s						
MCK	McKinley	83.98	26		P	22 45 18.2	+0.2
RND	Reindeer	84.00	27	P	P	22 45 18.1	0.0
RND				pmax	pmax		
	comp=Z,127nm,1.9s						
RND	Reindeer	84.00	27		P	22 45 18.1	0.0
TOLK	Toolik Lake Re	84.07	21	P	P	22 45 19.6	+1.3
MDM	Murphy Dome	84.36	25		P	22 45 20.1	+0.2
H24K	Noodor Dome	84.55	24	P	P	22 45 22.2	+1.4
IL31		84.92	25	P	P	22 45 22.3	-0.3
ILAR	Eielson Array	84.92	25	P	P	22 45 22.3	-0.4
	comp=Z,3.9nm,1.1s,baz=253,slow=5.4,SNR=4.7						
ILAR	Eielson Array	84.92	25	P	P	22 45 22.1	-0.6
ILAR	Eielson Array	84.92	25		P	22 45 22.1	-0.6
DIV	Divide	85.36	29		P	22 45 25.6	+0.6

PAX	Paxson	85.52	27	P	P	22 45 26.1	+0.3
PAX				pmax	pmax		
	comp=Z,29nm,1.4s						
PAX	Paxson	85.52	27		P	22 45 26.1	+0.3
PAX				IAmb	IAmb	22 45 27.7	
	comp=Z,29nm,1.4s						
BMAR	Burnt Mountain	85.90	23		P	22 45 29.3	+1.8
BMRM	Bremner River	85.93	29	P	P	22 45 28.2	+0.4
BMRM				IAmb	IAmb	22 45 42.3	
	comp=Z,42nm,1.2s						
GLB	Gilahina Butte	86.31	29		P	22 45 30.4	+0.7
OBN	Obninsk	87.02	325		P	22 45 33.3	+0.1
BCAR	Beaver Creek A	87.19	27	P	P	22 45 35.8	+1.8
GAZ	Gaziantep	87.41	307		P	22 45 35.2	-0.5
GAZ				IAmb	IAmb	22 45 35.5	
	comp=Z,28nm,1.2s						
BNN	Bunyan	88.39	309		P	22 45 40.3	-0.1
KIBK	Kibwezi	88.97	268	P	P	22 45 43.5	0.0
KIBK				IAmb	IAmb	22 45 45.3	
	comp=Z,28nm,1.2s						
GHAJ	Ghor Haditha	89.12	301	P	P	22 45 44.2	+0.5
GHAJ				IAmb	IAmb	22 45 45.3	
	comp=Z,24nm,1.0s						
KMBO	Kilima Mbogo	89.69	269	P	P	22 45 47.7	+0.6
	comp=Z,9.8nm,1.0s,baz=68,slow=5.5,SNR=15						
KMBO	Kilima Mbogo	89.69	269	P	P	22 45 47.1	0.0
KMBO				pmax	pmax		
	comp=Z,24nm,1.2s						
KMBO	Kilima Mbogo	89.69	269	P	P	22 45 47.1	0.0
KMBO				IAmb	IAmb	22 45 48.9	
	comp=Z,24nm,1.2s						
INK	Inuvik	89.98	22	P	P	22 45 47.4	+0.4
INK				pmax	pmax		
	comp=Z,16nm,1.5s						
INK	Inuvik	89.98	22		P	22 45 47.4	+0.4
BR131	Keskin Array S	90.03	310	P	P	22 45 46.9	-1.2
BR131				pmax	pmax		
	comp=Z,12nm,1.0s						
BR131	Keskin Array S	90.03	310	P	P	22 45 46.9	-1.2
BR131				IAmb	IAmb	22 45 49.1	
	comp=Z,12nm,0.9s						
BRTR	Keskin Array B	90.03	310	P	P	22 45 47.3	-0.8
	comp=Z,6.2nm,0.8s,baz=120,slow=4.2,SNR=11						
BRTR	Keskin Array B	90.03	310		P	22 45 47.2	-0.9
ARCES	ARCESS Array B	90.36	340	P	P	22 45 48.6	-0.1
	comp=Z,12nm,0.8s,baz=76,slow=6.4,SNR=11						
ARCES	ARCESS Array B	90.36	340	P	P	22 45 48.1	-0.7
ARCES				pmax	pmax		
	comp=Z,82nm,1.8s						
ARCES	ARCESS Array B	90.36	340		P	22 45 48.0	-0.7
FINES	FINESS Array B	91.77	332	P	P	22 45 55.0	-0.4
	comp=Z,6.0nm,0.9s,baz=60,slow=4.2,SNR=5.1						
AKASG	Malin Array Be	91.87	321	P	P	22 45 55.5	-0.7
	comp=Z,11nm,0.9s,baz=69,slow=4.6,SNR=19						
AKASG	Malin Array Be	91.87	321	P	P	22 45 55.4	-0.7
AKASG				pmax	pmax		
	comp=Z,24nm,1.3s						
AKASG	Malin Array Be	91.87	321		P	22 45 55.4	-0.8
AKASG				IAmb	IAmb	22 45 56.8	
	comp=Z,24nm,1.3s						
AKBB	Malin Array Si	91.87	321	P	P	22 45 55.2	-0.9
AKBB				pmax	pmax		
	comp=Z,27nm,1.2s						
AKBB	Malin Array Si	91.87	321	P	P	22 45 55.2	-0.9
AKBB				IAmb	IAmb	22 45 56.5	
	comp=Z,27nm,1.1s						
QSPA	South Pole Qui	93.77	180	P	P	22 46 05.8	+1.1
SUW	Suwalki	94.89	325	*e*P	P	22 46 09.9	0.0
MLR	Muntele Rosu	94.89	316	P	P	22 46 10.2	-0.2
MLR				pmax	pmax		
	comp=Z,35nm,1.2s						
MLR	Muntele Rosu	94.89	316		P	22 46 10.2	-0.2
BURAR	Bucovina Array	94.99	318		P	22 46 10.6	-0.1
BURAR				IAmb	IAmb	22 46 12.3	
	comp=Z,20nm,0.9s						
BUR08	Bucovina Ar. S	94.99	318		P	22 46 10.8	+0.1
BUR08				IAmb	IAmb	22 46 12.0	
	comp=Z,19nm,1.0s						
KWP	Kalwaria Pacla	96.19	321	*e*P	P	22 46 16.6	+0.6
BEL	Belsk	96.83	323	*e*P	P	22 46 20.3	+1.5
NIE	Niedzica	97.76	321	*e*P	Pdif	22 46 24.9	+1.6
OJC	Ojcow	97.86	322	*e*P	Pdif	22 46 24.0	+0.4
OJC	Ojcow	97.86	322	P	P	22 46 23.3	-0.2
OJC				pmax	pmax		
	comp=Z,14nm,1.0s						
OJC	Ojcow	97.86	322	P	P	22 46 23.3	-0.2
OJC				IAmb	IAmb	22 46 24.8	
	comp=Z,14nm,1.0s						
NOA	NORSAR Array B	98.72	334	P	P	22 46 26.0	-1.2
	comp=Z,3.7nm,0.9s,baz=66,slow=4.6,SNR=5.1						
DIVS	Divibare	99.33	316		Pdif	22 46 29.8	-0.6
DIVS				IAmb	IAmb	22 46 31.3	
	comp=Z,13nm,1.2s						
MORC	Moravsky Berou	99.38	322	P	Pdif	22 46 30.7	+0.2
MORC	Moravsky Berou	99.38	322	P	Pdif	22 46 30.6	+0.2
MORC				IAmb	IAmb	22 46 32.1	
	comp=Z,15nm,1.2s						
KSP	Ksiaz	99.81	323	*e*P	Pdif	22 46 33.1	+0.8
BRG	Berggiesshubel	101.21	323	P	Pdif	22 46 39.2	+0.8
BRG				Amp		22 46 40.2	
	comp=Z,9.6nm,1.1s						
GERES	GERESS Array B	102.06	322	P	Pdif	22 46 42.7	+0.2
	comp=Z,2.0nm,0.8s,baz=23,slow=4.4,SNR=5.6						
GERES	GERESS Array B	102.06	322		Pdif	22 46 41.6	-0.9
TXAR	Lajitas Array	121.41	52	PKP	PKiKP	22 51 42.5	+0.2
	comp=Z,0.5nm,0.8s,baz=270,slow=1.8,SNR=2.0						
TORD	Torodi Ar. Bea	123.00	288	PKP	PKPdf	22 51 44.0	-1.3
	comp=Z,4.2nm,0.9s,baz=53,slow=1.8,SNR=12						
TORD	Torodi Ar. Bea	123.00	288		PKPdf	22 51 44.9	-0.4
DBIC	Dimbokro	130.68	282	PKP	PKPdf	22 52 00.4	+0.3
	comp=Z,2.4nm,0.8s,baz=159,slow=9.6,SNR=2.1						
P61A	Hammonton	132.31	23		PKPpre	22 51 53.7	
PLCA	Paso Flores	140.09	159	PKP	PKPdf	22 52 15.7	-1.3
	comp=Z,1.9nm,0.8s,baz=156,slow=20,SNR=2.0						
LPAZ	La Paz	160.78	131	PKP	PKPdf	22 52 48.5	-1.3
	comp=Z,2.2nm,0.9s,baz=158,slow=0.9,SNR=5.2						

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*SNET **28** 22:45:00.3±1.4, 13.°87N×90.°38W, h115^{km}±7^{km}, ML3.2*

*GCG **28** 22:45:02.7±0.7, 13.°66N×90.°02W, h50^{km}, MD3.0*

ISC 28 22:45:02.1±2.6, **13.°9N**±0.°1×**90.°29W**±0.°09, **h114**^{km}±18^{km}, **n15**, σ**0.^{s}98**/20, **1D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLOZ	Alcaldia de Sa	0.52	73	*e*P	Pn	22 45 18.7	-0.9
SLOZ				*e*S	Sn	22 45 33.1	+0.5
SLOZ				IAML		22 45 40.5	
	comp=Z,251nm,0.7s						
CEVE	Cerro Verde	0.65	94	*e*P	Pn	22 45 20.2	-0.5
CEVE				IAML		22 45 38.0	
	comp=Z,801nm,0.4s						
NBG	Las Nubes	0.71	356	*e*P	Pn	22 45 21.4	+0.1
JAYA	Jayaque - finc	0.85	105	*e*P	Pn	22 45 21.8	-0.6
JAYA				*e*S	Sn	22 45 38.1	+0.5
JAYA				IAML		22 45 42.1	
	comp=Z,1μm,0.3s						
TACO	Tacachico	0.92	84⇓	*e*P	Pn	22 45 21.8	-1.0
TACO				IAML		22 45 22.7	
	comp=Z,122nm,0.4s						
TACO				*e*S	Sn	22 45 38.8	+0.3
LALI	Alcalda de L	1.02	112	*e*P	Pn	22 45 23.5	-0.3
LALI				*e*S	Sn	22 45 39.8	-0.4
UEES	Universidad Ev	1.04	99	*e*P	Pn	22 45 23.8	-0.3
SJTE	Alcalda de S	1.28	102	*e*P	Pn	22 45 26.2	-0.5
PAVA	Las Pavas	1.33	97	*e*P	Pn	22 45 26.6	-0.7
PAVA				IAML		22 45 27.1	
	comp=Z,287nm,0.4s						
MRL	Marmol	1.33	26	*e*P	Pn	22 45 27.0	-0.5
MRL				*e*S	Sn	22 45 46.6	-0.1
STG3	Santiaguito 3,	1.49	304	*e*S	Sn	22 45 50.5	+0.7
SCLA	Alcaldia de Sa	1.53	96	*e*P	Pn	22 45 28.9	-0.7
SCLA				IAML		22 45 29.9	
	comp=Z,57nm,0.5s						
SCLA				*e*S	Sn	22 45 53.5	+3.1
PQSS	Presa 15 de Se	1.70	98	*e*P	Pn	22 45 30.9	-0.7
COEB	Comit de Eme	1.76	102	*e*P	Pn	22 45 31.8	-0.5
LCND	La Caada	2.41	103	IAML		22 46 16.9	
	comp=Z,163nm,0.3s						

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*IDC **28** 23:27:43.7±0.7, 5.°06S×102.°08E, h0^{km}, mb4.3/25, mb1 4.4/25, mb1mx4.1/72, mbtmp4.3/25, MS3.3/5, Ms1 3.3/5, ms1mx3.0/45, Error ellipse: s-maj=25.8km s-min=12.3km az=53.0*

*DJA **28** 23:27:45.6±0.6, 5°S±4°×10°2E±°, h11^{km}±4^{km}, M4.6/14, mb4.8/3, mB4.7/2, MLv4.5/14, Mw(mB)4.0/2*

*NEIC **28** 23:27:47.8±1.6, 5.°21S±0.°07×101.°98E±0.°07, h27^{km}±5^{km}, mb4.5/38, Error ellipse: s-maj=10.9km s-min=9.2km az=58.0*

ISC 28 23:27:48.6±0.5, **5.°23S**±0.°07×**101.°96E**±0.°06, **h36**^{km}, **n112**, σ**1.^{s}23**/106, **mb4.5**/46, **MS3.2**/4, **Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNAI	Manna	1.32	49	P	Pn	23 28 10.3	-0.1
MNAI				S	Sn	23 28 29.9	+3.1
MNAI	Manna	1.32	49	Pn	Pn	23 28 09.9	-0.5
MNAI				Sn	Sn	23 28 26.2	-0.5
MASI	Maura Aman, Be	2.09	8	P	Pn	23 28 20.9	-0.2
LWLI	Liwa	2.11	84	P	Pn	23 28 22.7	+1.3
MDSI	Maura Dua	2.33	72	P	Pn	23 28 25.0	+0.6
KASI	Kota Agung	2.55	97	P	Pn	23 28 27.3	-0.1
KLSI		2.82	79	P	Pn	23 28 31.6	+0.5
KLI	Kotabumi	2.91	83	P	Pn	23 28 34.3	+1.9
KRJI	Kerinci	3.15	351	P	Pn	23 28 36.4	+0.6
BLSI	Bandar Lampung	3.28	93	P	Pn	23 28 36.7	-0.8
PMBI	Palembang	3.62	51	P	Pn	23 28 53.6	+11
PMBI	Palembang	3.62	51	Pn	Pn	23 28 40.9	-1.2
JMBI	JAMBI	3.94	25	P	Pn	23 28 48.0	+1.4
PDSI	Padang	4.54	341	P	Pn	23 28 54.2	-0.6
SISI	Saibi	4.81	323	P	Pn	23 28 58.2	-0.4
PPI	Padang Panjang	4.99	342	P	Pn	23 29 00.5	-0.4
	0.2nm986nm36nm,0.5s						
CBJI	Citeko	5.01	104	P	Pn	23 29 03.9	+2.6
	1.5nm143nm,0.5s						
DSRI	Dabo	5.39	29	P	Pn	23 29 07.3	+0.8
LEM	Lembang	5.85	106	Pn	Pn	23 29 07.0	-6.0
	3.1nm,0.3s,baz=103,slow=22,SNR=1.6						
LEM				LR	LR	23 31 52.7	
	comp=Z,209nm,20.5s,baz=174,slow=43						
GSI	Gunungsitoli	7.82	326	Pn	Pn	23 29 38.4	-1.5
UGM	Wanagama	8.92	108	Pn	Pn	23 29 54.2	-0.8
KULM	Kulim	10.53	353	Pn	Pn	23 30 17.2	+0.2
JAGI	Jajag, Banyuwa	12.53	106	Pn	Pn	23 30 42.9	-1.6
KKM	Kota Kinabalu	18.11	52		Pn	23 31 57.0	-0.6
KKM				IAmb	IAmb	23 32 03.7	
	comp=Z,29nm,1.1s						
TOLI2	Tolitoli	19.83	72	P	P	23 32 16.4	-0.1
TOLI2				IAmb	IAmb	23 32 22.7	
	comp=Z,11nm,0.6s						
MMRI	Maumere	20.41	101	P	P	23 32 21.7	-1.1
MMRI				IAmb	IAmb	23 32 45.9	
	comp=Z,13nm,0.7s						
UBPT	Khong Chiam	20.67	10	P	P	23 32 24.2	-1.2
UBPT				IAmb	IAmb	23 32 26.0	
	comp=Z,23nm,0.8s						
LUWI	Luwuk	21.19	79	P	P	23 32 31.6	+0.4
LUWI				IAmb	IAmb	23 32 36.4	
	comp=Z,22nm,1.1s						
BATI	Baumata	22.07	104	P	P	23 32 38.0	-2.6
	comp=Z,25nm,0.6s,baz=289,slow=2.5,SNR=8.2						
SOEI	Soe	22.57	103	P	P	23 32 46.2	+0.1
SOEI				IAmb	IAmb	23 33 09.3	
	comp=Z,11nm,0.7s						
CM31	Chiang Mai Arr	23.72	353	P	P	23 32 56.9	-0.5
CMAR	Chiang Mai Arr	23.72	353	P	P	23 32 55.9	-1.6
	comp=Z,5.9nm,0.9s,baz=184,slow=8.9,SNR=18						
CMAR				LR	LR	23 43 25.7	
	comp=Z,62nm,18.4s,baz=210,slow=40						
CMAR	Chiang Mai Arr	23.72	353	P	P	23 32 56.4	-1.1
CHTO	Chiang Mai	24.07	353	P	P	23 33 00.7	0.0
FITZ	Fitzroy Crossi	26.44	121	P	P	23 33 22.2	-0.1
	comp=Z,6.3nm,0.9s,baz=295,slow=7.0,SNR=6.4						
KNRA	Kununurra	28.30	114	P	P	23 33 37.5	-1.4
H08S2	Diego Garcia H	29.37	264	T	T	00 04 33.0	
	baz=87,slow=75,SNR=292						
H08S3	Diego Garcia H	29.38	264	T	T	00 04 33.6	
	baz=87,slow=75,SNR=314						
H08S1	Diego Carcia H	29.39	264	T	T	00 04 32.7	
	baz=87,slow=75,SNR=63						
H01W3	Cape Leeuwin H	31.59	161	T	T	00 07 03.6	
	baz=338,slow=76,SNR=19						
H01W2	Cape Leeuwin H	31.60	161	T	T	00 07 01.4	
	baz=338,slow=76,SNR=23						
H01W1	Cape Leeuwin H	31.61	161	T	T	00 07 03.4	
	baz=338,slow=76,SNR=24						
WB0	Warramunga Arr	34.72	117	P	P	23 34 35.4	0.0
WB0				IAmb	IAmb	23 34 35.9	
	comp=Z,4.9nm,0.7s						
WRA	Warramunga Arr	34.73	118	P	P	23 34 35.4	-0.1
	comp=Z,5.5nm,0.7s,baz=288,slow=12,SNR=43						
WRA				LR	LR	23 48 26.5	
	comp=Z,29nm,20.5s,baz=315,slow=36						
WRA	Warramunga Arr	34.73	118	P	P	23 34 35.3	-0.3
WB2	Warramunga Arr	34.74	118	P	P	23 34 35.4	-0.2
ODAN	Odare	34.87	337	*e*P	P	23 34 37.9	+1.0
TAPN	Taplejung	35.19	338	*e*P	P	23 34 40.9	+1.2
RAMN	Ramite	35.27	336	*e*P	P	23 34 42.4	+2.1
	comp=Z,7.1nm,0.3s						
ASAR	Alice Springs	35.81	124	P	P	23 34 45.2	+0.3
	comp=Z,2.8nm,0.4s,baz=302,slow=7.8,SNR=49						
ASAR				LR	LR	23 51 11.8	
	comp=Z,45nm,20.1s,baz=348,slow=39						
ASAR	Alice Springs	35.81	124	P	P	23 34 44.9	0.0
AS31	Alice Springs	35.82	124	P	P	23 34 45.1	+0.2
JIRN	Jiri	36.06	336	*e*P	P	23 34 50.5	+3.2
	comp=Z,7.0nm,0.3s						
LSA	Lhasa	36.24	344	P	P	23 34 49.4	+0.5
LSA				IAmb	IAmb	23 35 01.1	
	comp=Z,3.6nm,0.6s						
PKIN	Phulchoki	36.32	335	*e*P	P	23 34 53.0	+3.6
KKN	Kakani	36.56	335	*e*P	P	23 34 55.1	+3.8
GKN	Gorkha	37.02	334	*e*P	P	23 34 59.5	+4.3
	comp=Z,9.2nm,0.3s						
NJ2	Nanjing	40.41	22	*e*P	P	23 35 24.5	+1.1
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
COEN	Coen	41.50	105	P	P	23 35 31.3	-1.4
COEN				IAmb	IAmb	23 35 59.2	
	comp=Z,16nm,1.4s						
BBOO	Buckleboo	41.99	135	P	P	23 35 36.0	-0.5
BBOO				IAmb	IAmb	23 35 44.2	
	comp=Z,20nm,1.5s						
GTA	Gaotai	44.46	358	*e*P	P	23 35 57.0	+0.7
GTA				pP	sP	23 36 12.5	+2.0
GTA				sP	pP	23 36 18.5	+12
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CTAO	Charters Tower	45.51	113	P	P	23 36 04.8	-0.1
CTAO				IAmb	IAmb	23 36 07.0	
	comp=Z,11nm,1.2s						
STKA	Stephens Creek	45.57	131	P	P	23 36 06.0	+0.7
	comp=Z,1.6nm,0.5s,baz=269,slow=3.3,SNR=7.3						
STKA				LR	LR	23 57 59.6	
	comp=Z,58nm,18.5s,baz=15,slow=40						
STKA	Stephens Creek	45.57	131	P	P	23 36 05.8	+0.5
HHC	Hu-ho-hao-te	46.69	10	*e*P	P	23 36 14.5	+0.5
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,130nm,7.3s						
NIL	Nilore	47.25	327	P	P	23 36 18.2	-0.2
KSRS	Korea Array	48.87	28	P	P	23 36 31.1	+0.3
	comp=Z,1.4nm,0.5s,baz=224,slow=5.5,SNR=6.1						
JHS	Saijyo	49.61	34	P	P	23 36 35.5	-1.1
WMQ	Urumqi	50.49	347	*e*P	P	23 36 45.0	+1.9
KSH	Kashi	50.57	334	P	P	23 36 43.0	-0.8
KSH				sP	sP	23 36 57.8	-0.5
KSH				pmax	pmax		
	comp=Z,6.0nm,0.6s						
JWT	Wachi	51.11	35	P	P	23 36 46.3	-1.5
DRK	Karamyk	52.47	331	P	P	23 36 58.7	+0.4
DRK				IAmb	IAmb	23 37 08.7	
	comp=Z,12nm,1.3s						
SONM	Songino Array	52.98	4	P	P	23 37 02.4	+0.7
	comp=Z,5.9nm,0.7s,baz=182,slow=9.4,SNR=29						
SONM	Songino Array	52.98	4	P	P	23 37 01.7	0.0
SONM				IAmb	IAmb	23 37 03.4	
	comp=Z,5.4nm,0.8s						
BOOM	Boomskoye usch	53.05	336	P	P	23 37 02.8	+0.5
BOOM				IAmb	IAmb	23 37 03.8	
	comp=Z,3.9nm,0.9s						
BTK	Batken	53.40	330	P	P	23 37 05.7	+0.8
MAT	Matsushiro	53.62	36	P	P	23 37 04.2	-2.3
MJAR	Matsushiro Arr	53.62	36	P	P	23 37 04.7	-1.8
	comp=Z,3.5nm,0.7s,baz=212,slow=7.4,SNR=10						
AAK	Ala-Archa	53.77	335	P	P	23 37 08.4	+0.7
	comp=Z,0.5nm,0.5s,baz=233,slow=7.3,SNR=3.6						
MK31	Makanchi Array	54.65	344	P	P	23 37 14.0	+0.2
MK31				IAmb	IAmb	23 37 14.7	
	comp=Z,4.3nm,0.7s						
MKAR	Makanchi Array	54.65	344	P	P	23 37 13.9	+0.2
	comp=Z,6.4nm,0.7s,baz=148,slow=9.3,SNR=65						
MKAR	Makanchi Array	54.65	344	P	P	23 37 13.6	-0.2
MAKZ	Makanchi	54.75	343	P	P	23 37 14.1	-0.4
MAKZ				IAmb	IAmb	23 37 29.6	
	comp=Z,6.8nm,1.3s						
KKAR	Karatay Array	55.90	333	P	P	23 37 22.6	-0.3
USA0B	Ussuriysk Arra	56.13	26	P	P	23 37 23.8	-0.7
USRK	Ussuriysk Ar.	56.13	26	P	P	23 37 24.1	-0.4
	comp=Z,11nm,0.7s,baz=216,slow=5.1,SNR=19						
USRK	Ussuriysk Ar.	56.13	26	P	P	23 37 23.8	-0.7
KURBB	Kurchatov Arra	59.18	343	P	P	23 37 45.8	+0.1
	comp=Z,2.8nm,0.8s,baz=160,slow=6.7,SNR=9.5						
KURK	Kurchatov	59.24	343	P	P	23 37 46.1	0.0
KURK				IAmb	IAmb	23 37 47.1	
	comp=Z,4.2nm,0.8s						
KLR	Kul'dur	60.12	22	P	P	23 37 51.5	-0.8
	comp=Z,3.0nm,0.9s,baz=211,slow=6.2,SNR=8.7						
ZAA0	Zalesovo Array	60.69	348	P	P	23 37 55.6	-0.5
ZALV	Zalesovo Beam	60.69	348	P	P	23 37 55.8	-0.2
	comp=Z,6.0nm,0.4s,baz=166,slow=5.2,SNR=36						
ZALV	Zalesovo Beam	60.69	348	P	P	23 37 55.6	-0.4
BVAR	Borovoye Array	63.87	339	P	P	23 38 17.2	-0.2
	comp=Z,1.8nm,0.7s,baz=191,slow=13,SNR=12						
BRVK	Borovoye	63.93	339	P	P	23 38 17.3	-0.5
BRVK				IAmb	IAmb	23 38 18.8	
	comp=Z,3.4nm,1.1s						
ABKAR	Akbulak array	65.39	331	P	P	23 38 26.9	-0.5
ABKAR	Akbulak array	65.39	331	P	P	23 38 27.4	0.0
ABKAR				IAmb	IAmb	23 38 28.3	
	comp=Z,6.2nm,0.8s						
AKTO	Aktyubinsk	67.10	331	P	P	23 38 38.1	-0.2
	comp=Z,0.6nm,0.4s,baz=98,slow=23,SNR=1.7						
MAW	Mawson	67.68	195	P	P	23 38 44.7	+3.0
	comp=Z,1.5nm,0.8s,baz=33,slow=21,SNR=2.2						
ARU	Arti	70.92	336	P	P	23 39 01.9	-0.1
	comp=Z,0.5nm,0.4s,baz=95,slow=13,SNR=3.6						
ARU	Arti	70.92	336	P	P	23 39 01.7	-0.2
ARU				IAmb	IAmb	23 39 14.2	
	comp=Z,7.3nm,1.4s						
NRIK	Noril'sk	75.06	355	P	P	23 39 25.3	-0.9
	comp=Z,0.9nm,0.4s,baz=165,slow=4.2,SNR=4.9						
BRTR	Keskin Array B	76.93	313	P	P	23 39 37.5	-0.2
	comp=Z,0.6nm,0.9s,baz=122,slow=7.5,SNR=1.8						
SEY	Seymchan	77.89	21	P	P	23 39 42.0	-0.4
	comp=Z,1.7nm,0.7s,baz=22,slow=21,SNR=3.8						
TIXI	Tiksi	78.73	8	P	P	23 39 45.2	-1.6
	comp=Z,1.1nm,0.5s,baz=222,slow=3.5,SNR=7.7						
TIXI	Tiksi	78.73	8	P	P	23 39 45.5	-1.3
AKASG	Malin Array Be	83.21	322	P	P	23 40 10.8	-0.3
	comp=Z,0.1nm,0.3s,baz=90,slow=4.1,SNR=4.0						
BURAR	Bucovina Array	84.95	319	P	P	23 40 21.4	+1.2
BUR08	Bucovina Ar. S	84.97	319	P	P	23 40 20.8	+0.5
BUR08				IAmb	IAmb	23 40 37.7	
	comp=Z,5.6nm,1.4s						
FINES	FINESS Array B	87.86	332	P	P	23 40 33.9	-0.1
	comp=Z,7.0nm,1.1s,baz=115,slow=6.3,SNR=4.0						
TXAR	Lajitas Array	145.91	42	PKPbc	PKPab	23 47 25.8	+0.2
	comp=Z,2.0nm,0.8s,baz=294,slow=0.9,SNR=14						
TXAR	Lajitas Array	145.91	42		PKPbc	23 47 24.6	-0.5

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*IDC **28** 23:29:16.1±0.6, 19.°29N×65.°31W, h0^{km}, mb3.9/11, mb1 4.1/13, mb1mx3.8/60, mbtmp4.0/13, ML3.6/2, MS3.7/1, Ms1 3.7/1, ms1mx2.8/46, Error ellipse: s-maj=18.9km s-min=14.8km az=42.0*

*NEIC **28** 23:29:21.6±2.6, 19.°22N±0.°07×65.°37W±0.°05, h65^{km}±13^{km}, Error ellipse: s-maj=10.8km s-min=6.9km az=187.0*

*RSPR **28** 23:29:21.2, 19.°05N×65.°29W, h99^{km}±6^{km}, MD3.8/13*

*OSPL **28** 23:29:27.9±0.4, 18.°96N×65.°88W, h0^{km}±123^{km}, ML3.1*

ISC 28 23:29:21.9±0.5, **19.°23N**±0.°05×**65.°38W**±0.°04, **h50**^{km}, **n92**, σ**1.^{s}56**/99, **mb3.9**/13, **17C-1D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CUPR	Culebra, Puert	0.92	174⇑	*e*P	Pn	23 29 37.9	-0.6
CUPR	Culebra, Puert	0.92	174	*e*S	Sn	23 29 51.3	+0.5
CUPR	Culebra, Puert	0.92	174		Pn	23 29 37.9	-0.6
CUPR				IAML		23 29 52.0	
	comp=N,4μm,0.6s						
CUPR	Culebra, Puert	0.92	174		Sn	23 29 51.3	+0.5
STVI	Saint Thomas	0.96	155⇑	*e*P	Pn	23 29 38.3	-0.8
STVI	Saint Thomas	0.96	155	*e*S	Sn	23 29 53.2	+1.5
STVI	Saint Thomas	0.96	155		Pn	23 29 38.3	-0.8
STVI					Sn	23 29 53.2	+1.5
STVI	Saint Thomas	0.96	155	IAML		23 29 57.2	
	comp=N,2μm,0.5s						
CBYP	Canovanas	1.05	205⇑	*e*P	Pn	23 29 39.5	-1.0
CBYP	Canovanas	1.05	205		Pn	23 29 39.5	-1.0
TBVI	Tortola	1.08	138⇑	*e*P	Pn	23 29 40.0	-0.7
TBVI	Tortola	1.08	138	*e*S	Sn	23 29 55.6	+0.9
GCPR	Guaynabo City	1.13	216⇑	*e*P	Pn	23 29 40.1	-1.3
GCPR	Guaynabo City	1.13	216	*e*S	Sn	23 29 57.4	+1.5
GCPR	Guaynabo City	1.13	216		Pn	23 29 40.1	-1.3
GCPR					Sn	23 29 57.4	+1.5
EMPR	Esperanza - Ma	1.32	236⇑	*e*P	Pn	23 29 45.2	+1.3
EMPR	Esperanza - Ma	1.32	236	*e*S	Sn	23 30 03.8	+3.4
EMPR	Esperanza - Ma	1.32	236		Pn	23 29 43.5	-0.4
EMPR	Esperanza - Ma	1.32	236		Sn	23 30 03.8	+3.4
SJG	San Juan	1.33	213	Pn	Pn	23 29 43.4	-0.7
	comp=N,47nm,0.3s,baz=42,slow=9.9,SNR=61						
SJG				Sn	Sn	23 29 58.7	-2.0
	comp=N,125nm,0.3s,baz=258,slow=23,SNR=12						
SJG				LR	LR	23 30 07.5	
	comp=N,78nm,20.8s,baz=78,slow=36						
SJG	San Juan	1.33	213		Pn	23 29 43.4	-0.7
PDPR	Patillas Dam,	1.35	207⇑	*e*P	Pn	23 29 43.8	-0.6
PDPR	Patillas Dam,	1.35	207		Pn	23 29 43.0	-1.3
IGPR	InterUniversit	1.43	209⇑	*e*P	Pn	23 29 45.0	-0.5
IGPR	InterUniversit	1.43	209	*e*S	Sn	23 30 03.4	+0.3
AOPR	Arecibo Observ	1.57	236⇑	*e*P	Pn	23 29 47.0	-0.4
AOPR	Arecibo Observ	1.57	236	*e*S	Sn	23 30 07.7	+1.1
AOPR	Arecibo Observ	1.57	236		Pn	23 29 47.0	-0.4
AOPR					Sn	23 30 07.7	+1.1
CDVI	St. Croix	1.58	158⇓	*e*P	Pn	23 29 48.9	+1.4
CDVI	St. Croix	1.58	158	*e*S	Sn	23 30 11.0	+4.2
CDVI	St. Croix	1.58	158		Pn	23 29 48.9	+1.4
CDVI					Sn	23 30 11.0	+4.2
CELP	Cerrillos	1.61	225⇑	*e*P	Pn	23 29 47.5	-0.5
CELP	Cerrillos	1.61	225	*e*S	Sn	23 30 07.8	+0.1
CELP	Cerrillos	1.61	225		Pn	23 29 47.5	-0.5
CELP					Sn	23 30 07.8	+0.1
CELP	Cerrillos	1.61	225	IAML		23 30 14.8	
	comp=N,757nm,0.5s						
CELP				IAML		23 30 14.8	
	comp=E,884nm,0.5s						
OBIP	Obispado Ponce	1.66	225⇑	*e*P	Pn	23 29 48.2	-0.3
OBIP	Obispado Ponce	1.66	225	*e*S	Sn	23 30 08.8	+0.1
OBIP	Obispado Ponce	1.66	225		Pn	23 29 48.2	-0.3
OBIP					Sn	23 30 08.8	+0.1
OBIP	Obispado Ponce	1.66	225	IAML		23 30 12.4	
	comp=N,643nm,0.9s						
AGPR	Aguadilla, PR	1.81	246⇑	*e*P	Pn	23 29 50.7	+0.2
AGPR	Aguadilla, PR	1.81	246	*e*S	Sn	23 30 14.5	+2.2
AGPR	Aguadilla, PR	1.81	246		Pn	23 29 50.7	+0.2
AGPR					Sn	23 30 14.5	+2.2
AGPR	Aguadilla, PR	1.81	246	IAML		23 30 17.9	
	comp=E,560nm,0.8s						
AGPR				IAML		23 30 21.4	
	comp=N,595nm,0.5s						
AGPR	Aguadilla, PR	1.81	246	*i* P	Pn	23 29 50.5	-0.1
AGPR				IAML		23 30 17.5	
	comp=Z,261nm,0.6s						
GBPR	Guanica, Bosqu	1.89	229⇑	*e*P	Pn	23 29 53.0	+1.2
LSP	Las Mesas	1.93	237⇑	*e*P	Pn	23 29 52.1	-0.2
PRSN	Puerto Rico Se	1.95	239		Pn	23 29 52.6	0.0
PRSN				IAML		23 30 24.0	
	comp=E,2μm,0.3s						
MLPR	Magueyes Islan	2.01	232⇑	*e*P	Pn	23 29 54.3	+0.8
MLPR	Magueyes Islan	2.01	232	*e*S	Sn	23 30 19.2	+1.8
MLPR	Magueyes Islan	2.01	232		Pn	23 29 54.3	+0.8
MLPR					Sn	23 30 19.2	+1.8
MLPR	Magueyes Islan	2.01	232	IAML		23 30 24.1	
	comp=E,431nm,0.9s						
CRPR	Cabo Rojo, PR	2.04	234⇑	*e*P	Pn	23 29 54.2	+0.3
CRPR	Cabo Rojo, PR	2.04	234		Pn	23 29 53.1	-0.7
CRPR				IAML		23 30 29.6	
	comp=N,564nm,0.6s						
CRPR	Cabo Rojo, PR	2.04	234	*i* P	Pn	23 29 54.1	+0.3

CRPR				IAML		23 30 35.3	
	comp=Z,384nm,0.7s						
IDE	**Isla Desecheo**	**2.15**	**247**	⇑*e*P	**Pn**	**23 29 56.0**	**+0.7**
SMRT	**St. Maarten**	**2.48**	**118**	Pn	**Pn**	**23 29 59.8**	**-0.1**
SMRT				IAML		23 30 46.1	
	comp=E,553nm,0.5s						
SMRT				IAML		23 30 47.3	
	comp=N,635nm,0.7s						
SABA	**Saba**	**2.58**	**128**	Pn	**Pn**	**23 29 59.5**	**-1.8**
SABA				IAML		23 30 52.6	
	comp=N,648nm,0.7s						
DR12	**Loma Pena Alta**	**3.81**	**264**	Pn	**Pn**	**23 30 17.9**	**-0.3**
SC01	**Santiago de lo**	**5.05**	**273**	Pn	**Pn**	**23 30 36.5**	**+1.3**
SDDR	**Presa de Saban**	**5.59**	**268**		**Pn**	**23 30 42.7**	**+0.1**
SDDR	**Presa de Saban**	**5.59**	**268**	*i* P	**Pn**	**23 30 43.6**	**+1.0**
LONE2	**Loma La Sidra**	**5.81**	**264**	*i* P	**Pn**	**23 30 46.5**	**+0.9**
JAKH	**Jacmel**	**6.83**	**263**	Pn	**Pn**	**23 30 59.6**	**0.0**
LGNH	**Logne**	**6.88**	**265**	Pn	**Pn**	**23 31 00.1**	**-0.1**
BIRV	**Birongo**	**8.74**	**186**	Pn	**Pn**	**23 31 22.9**	**-3.0**
PCRV	**Puerto La Cruz**	**9.03**	**175**	Pn	**Pn**	**23 31 28.9**	**-0.9**
	comp=N,0.4nm,0.3s,baz=34,slow=7.3,SNR=1.6						
PCRV				Sn	**Sn**	**23 33 08.0**	**-2.0**
	comp=N,0.5nm,0.3s,baz=359,slow=14,SNR=1.7						
GTBY	**Guantanamo Bay**	**9.20**	**276**	Pn	**Pn**	**23 31 28.5**	**-3.5**
URIC	**Uribia, Colomb**	**9.83**	**221**	Pn	**Pn**	**23 31 38.8**	**-1.8**
BBSR	**BB Station**	**13.10**	**3**	Pn	**Pn**	**23 32 21.5**	**-3.8**
ZARC	**Zaragoza, Cauc**	**14.86**	**220**		**Pn**	**23 32 48.1**	**-1.0**
MDP	**Montagnes des**	**18.75**	**137**	P	**Pn**	**23 33 38.3**	**+0.6**
	comp=N,0.3nm,0.3s,baz=338,slow=7.6,SNR=2.3						
PTGA	**Pitinga**	**20.53**	**164**	P	**P**	**23 33 57.0**	**+0.7**
	comp=N,3.1nm,0.7s,baz=3.8,slow=13,SNR=8.7						
R58B	**Mineral**	**21.61**	**332**	P	**P**	**23 34 06.2**	**-1.5**
SDMD	**Soldier's Deli**	**22.42**	**336**	P	**P**	**23 34 14.9**	**-1.4**
SDMD				IAmb	IAmb	23 34 33.7	
	comp=Z,4.2nm,0.7s						
WUPA	**West Chester U**	**22.44**	**339**	P	**P**	**23 34 15.6**	**-0.9**
OTAV	**Otavalo**	**22.81**	**216**	P	**P**	**23 34 16.5**	**-4.7**
OTAV				IAmb	IAmb	23 34 39.2	
	comp=Z,4.7nm,0.9s						
TKL	**Tuckaleechee C**	**23.05**	**319**	P	**P**	**23 34 24.3**	**+1.3**
	comp=Z,2.0nm,0.9s,baz=355,slow=19,SNR=1.6						
TKL				S	**S**	**23 38 30.6**	**+0.4**
	comp=Z,1.6nm,0.5s,baz=235,slow=19,SNR=1.2						
APG	**El Apazote**	**24.33**	**264**	P	**P**	**23 34 37.7**	**+2.3**
	comp=Z,2.5nm,0.7s,baz=94,slow=7.8,SNR=4.5						
NNA	**Nana**	**33.01**	**201**	LR	LR	23 50 08.2	
	comp=Z,136nm,20.8s,baz=284,slow=38						
TX31	**Lajitas Ar. Si**	**36.18**	**294**	P	**P**	**23 36 16.6**	**-3.4**
TX31				IAmb	IAmb	23 36 25.6	
	comp=Z,2.0nm,0.7s						
TXAR	**Lajitas Array**	**36.18**	**294**	P	**P**	**23 36 20.2**	**+0.2**
	comp=Z,0.9nm,0.8s,baz=116,slow=11,SNR=7.8						
TXAR	**Lajitas Array**	**36.18**	**294**	P	**P**	**23 36 16.6**	**-3.4**
BDFB	**Brasilia**	**38.63**	**153**	P	**P**	**23 36 41.7**	**+0.9**
	comp=Z,1.0nm,0.5s,baz=158,slow=4.9,SNR=3.5						
PDAR	**Pinedale Array**	**43.90**	**312**	P	**P**	**23 37 24.8**	**+0.8**
	comp=Z,0.8nm,0.7s,baz=110,slow=5.0,SNR=4.8						
NVAR	**Mina Array Bea**	**49.45**	**304**	P	**P**	**23 38 08.9**	**+1.5**
	baz=84,slow=8.3						
ESDC	**Sonseca Array**	**56.15**	**55**	P	**P**	**23 38 57.7**	**+1.0**
	comp=Z,0.7nm,1.1s,baz=259,slow=6.4,SNR=2.0						
DBIC	**Dimbokro**	**60.03**	**93**	P	**P**	**23 39 24.6**	**+0.5**
	comp=Z,1.6nm,0.7s,baz=210,slow=4.3,SNR=3.7						
TORD	**Torodi Ar. Bea**	**64.37**	**84**	P	**P**	**23 39 53.4**	**+0.2**
	comp=Z,1.4nm,0.7s,baz=286,slow=6.6,SNR=9.8						
ILAR	**Eielson Array**	**69.17**	**333**	P	**P**	**23 40 24.4**	**+1.4**
	comp=Z,1.1nm,0.7s,baz=108,slow=4.4,SNR=14						
SEY	**Seymchan**	**92.90**	**344**	P	**P**	**23 42 30.7**	**+1.4**
	comp=Z,1.8nm,0.8s,baz=65,slow=21,SNR=2.3						
WRA	**Warramunga Arr**	**161.40**	**265**	PKP	**PKPdf**	**23 49 19.5**	**+1.6**
	comp=Z,0.4nm,0.7s,baz=46,slow=1.4,SNR=5.0						
WRA				PKPab	**PKPab**	**23 50 02.3**	**0.0**
	comp=Z,0.2nm,0.7s,baz=50,slow=5.3,SNR=1.1						
ASAR	**Alice Springs**	**161.52**	**253**	PKP	**PKPdf**	**23 49 18.7**	**+0.8**
	comp=Z,0.4nm,0.7s,baz=51,slow=3.8,SNR=3.0						
ASAR				PKPab	**PKPab**	**23 50 02.9**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=116,slow=3.4,SNR=4.5						

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*IDC **28** 23:33:24.8±1.8, 34°.52N×24°.64E, h0^{km}, mb3.3/2, mb1 3.4/4, mb1mx3.2/60, mbtmp3.3/4, ML3.9/2, Error ellipse: s-maj=48.0km s-min=29.4km az=128.0*

*THE **28** 23:33:29.9, 34°.68N×24°.55E, h18^{km}±1^{km}, ML2.6/9, Error ellipse: s-maj=1.6km s-min=0.8km az=176.0*

*ATH **28** 23:33:30.1, 34°.73N×24°.54E, h27^{km}±5^{km}, ML2.8/6, Error ellipse: s-maj=5.2km s-min=1.3km az=270.0*

ISC 28 23:33:29.5±1.2**, 34°.67N**±0°.07×**24°.55E**±0°.03**, h27**^{km}±8^{km}**, n22, **σ0^{s}**.71**/36**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.41**	**32**	P	**Pb**	**23 33 37.8**	**-0.6**
SIVA				S	**Sb**	**23 33 44.5**	**+0.1**
	5μm,0.4s						
SIVA	**Sivas**	**0.41**	**32**	P	**Pb**	**23 33 37.8**	**-0.6**
SIVA				S	**Sb**	**23 33 43.8**	**-0.6**
SIVA				AML	AML	23 33 47.2	
	comp=E,11141μm,0.4s						
SIVA				AML	AML	23 33 47.4	
	comp=N,9492μm,0.3s						
GVD	**Gavdhos**	**0.41**	**294**	P	**Pb**	**23 33 38.5**	**0.0**
GVD				S	**Sb**	**23 33 44.6**	**+0.1**
	comp=N,2μm,0.5s						
GVD	**Gavdhos**	**0.41**	**294**	P	**Pb**	**23 33 38.4**	**0.0**
GVD				S	**Sb**	**23 33 44.2**	**-0.3**
GVD				AML	AML	23 33 47.7	
	comp=N,4459μm,0.5s						
GVD				AML	AML	23 33 55.1	
	comp=E,4542μm,0.4s						
TMBK	**Timbaki Herakl**	**0.44**	**24**	P	**Pb**	**23 33 38.8**	**-0.1**
TMBK				S	**Sb**	**23 33 45.5**	**+0.3**
	comp=E,940nm,0.3s						
IDI	**Anoyia**	**0.68**	**25**	P	**Pb**	**23 33 41.9**	**-1.0**
IDI				S	**Sb**	**23 33 52.4**	**+0.5**
	comp=E,528nm,0.5s						
IDI	**Anoyia**	**0.68**	**25**	P	**Pb**	**23 33 41.9**	**-1.0**
IDI				S	**Sb**	**23 33 51.8**	**-0.1**
IDI				AML	AML	23 33 55.6	
	comp=E,1269μm,0.6s						
IDI				AML	AML	23 33 56.2	
	comp=N,862μm,0.5s						
PRNS	**Prines Rethymn**	**0.69**	**357**	P	**Pb**	**23 33 42.2**	**-0.8**
PRNS				S	**Sb**	**23 33 52.9**	**+0.6**
	comp=N,385nm,0.4s						
KSTL	**Kastelli Herak**	**0.76**	**34**	P	**Pn**	**23 33 45.3**	**+0.8**
KSTL				S	**Sn**	**23 33 56.4**	**+1.3**
	comp=N,215nm,0.6s						
HRKL	**Herakleio**	**0.79**	**35**	P	**Pn**	**23 33 45.0**	**+0.2**
VAM	**Vamos**	**0.79**	**339**	P	**Pb**	**23 33 44.1**	**-0.5**
VAM				S	**Sn**	**23 33 56.1**	**+0.4**
	comp=N,562nm,0.5s						
VAM	**Vamos**	**0.79**	**339**	P	**Pb**	**23 33 44.1**	**-0.5**
VAM				AML	AML	23 34 01.7	
	comp=E,1152μm,0.5s						
VAM				AML	AML	23 34 03.9	
	comp=N,1248μm,0.5s						
IMMV	**Iera Moni Meta**	**0.91**	**330**	P	**Pb**	**23 33 46.5**	**-0.3**
IMMV				S	**Sb**	**23 33 59.1**	**+0.6**
	comp=N,598nm,0.5s						
IMMV	**Iera Moni Meta**	**0.91**	**330**	P	**Pb**	**23 33 46.1**	**-0.7**
IMMV				S	**Sb**	**23 33 57.1**	**-1.5**
IMMV				AML	AML	23 34 05.0	
	comp=N,859μm,0.3s						
IMMV				AML	AML	23 34 08.9	
	comp=E,1461μm,0.6s						
NPS	**Neapolis**	**1.06**	**56**	P	**Pb**	**23 33 49.1**	**-0.1**
NPS				S	**Sb**	**23 34 02.6**	**-0.1**
	comp=E,255nm,0.7s						
NPS	**Neapolis**	**1.06**	**56**	P	**Pb**	**23 33 49.2**	**-0.1**
NPS				S	**Sb**	**23 34 02.6**	**-0.1**
NPS				AML	AML	23 34 09.5	
	comp=E,626μm,0.7s						
NPS				AML	AML	23 34 09.9	
	comp=N,460μm,0.8s						
ZKR	**Zakros**	**1.44**	**72**	P	**Pb**	**23 33 55.6**	**-0.2**
SANT	**Santorini**	**1.85**	**23**	P	**Pb**	**23 34 01.5**	**-1.3**
GERES	**GERESS Array B**	**16.28**	**334**	Pn	**Pn**	**23 37 18.0**	**+1.7**
	comp=N,0.1nm,0.3s,baz=151,slow=14,SNR=3.2						
AKASG	**Malin Array Be**	**16.38**	**11**	Pn	**Pn**	**23 37 17.4**	**0.0**
	comp=N,1.0nm,0.3s,baz=200,slow=10,SNR=6.8						
TORD	**Torodi Ar. Bea**	**29.79**	**230**	P	**P**	**23 39 33.1**	**-1.0**
	comp=N,0.3nm,1.0s,baz=42,slow=10,SNR=1.3						
MKAR	**Makanchi Array**	**44.47**	**56**	P	**P**	**23 41 37.5**	**-0.7**
	comp=N,0.2nm,0.4s,baz=270,slow=7.0,SNR=5.9						

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*INET **28** 23:47:28.8, 10°.26N×86°.43W, h15^{km}, MW4.6*

*IDC **28** 23:47:33.3±0.7, 10°.69N×86°.11W, h0^{km}, mb4.4/18, mb1 4.6/19, mb1mx4.4/41, mbtmp4.4/19, ML4.1/1, MS4.1/10, Ms1 4.1/10, ms1mx3.7/33, Error ellipse: s-maj=24.4km s-min=11.7km az=39.0*

*UCR **28** 23:47:34.3±1.5, 10°.32N×86°.40W, h7^{km}±9^{km}, MW5.0, mb5.0(NEIC)*

*NEIC **28** 23:47:37.1±1.9, 10°.46N±0°.07×86°.19W±0°.06, h21^{km}±4^{km}, mb5.0/218, ML4.8(UCR), Error ellipse: s-maj=11.2km s-min=5.5km az=217.0*

*BJI **28** 23:47:39.0±0.0, 10°.50N×86°.10W, h33^{km}, Ms5.4/3, Ms7 5.2/4*

ISC 28 23:47:36.6±1.4**, 10°.45N**±0°.04×**86°.25W**±0°.05**, h24**^{km}±10^{km}**, n451, **σ1^{s}**.13**/409**, mb5.0**/120**, MS4.2**/13**, 4C, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAJU	**San Juanillo,**	**0.66**	**125**	*e*P	**Pb**	**23 47 48.5**	**-0.9**
HZTE	**Horizontes, Gu**	**0.70**	**68**	*e*P	**Pn**	**23 47 51.5**	**+0.5**
HZTE				*e*S	**Sn**	**23 48 05.4**	**+4.3**
HZTE	**Horizontes, Gu**	**0.70**	**68**		**Pn**	**23 47 51.2**	**+0.2**
GUAI	**GUAI**	**0.75**	**104**	*i* P	**Pb**	**23 47 50.8**	**-0.2**
GUAI				*i* S	**Sn**	**23 48 01.5**	**-0.9**
GRZA	**Playa Garza**	**0.81**	**131**	*e*P	**Pb**	**23 47 50.7**	**-1.2**
DUNO	**Dulce Nombre,**	**0.83**	**116**	Pg	**Pb**	**23 47 49.3**	**-3.1**
DUNO				Sg	**Sb**	**23 48 02.8**	**-0.4**
GBS3	**Finca Las Img**	**0.85**	**67**	*i* P	**Pn**	**23 47 53.2**	**+0.1**
NICO	**Nicoya**	**0.85**	**112**	*e*P	**Pn**	**23 47 53.0**	**-0.1**
NICO				*e*S	**Sn**	**23 48 04.7**	**-0.2**
LAPC	**Finca la Perla**	**0.87**	**69**	⇑*i*P	**Pn**	**23 47 53.5**	**+0.2**
PLVR	**Palo Verde**	**0.89**	**96**	*e*P	**Pb**	**23 47 53.3**	**-0.2**
PLVR				*e*S	**Sn**	**23 48 06.7**	**+0.6**
BUEV	**Buena Vista**	**0.90**	**67**	*i* P	**Pn**	**23 47 54.1**	**+0.3**
GB1A	**Borinquen Arri**	**0.92**	**66**	*i* P	**Pn**	**23 47 54.4**	**+0.3**
GPS3	**Bodega del ICE**	**0.92**	**71**	*i* P	**Pn**	**23 47 54.4**	**+0.2**
VRLE	**La Escondida,**	**0.94**	**69**	*e*P	**Pn**	**23 47 54.6**	**+0.3**
INDI	**Punta indio, G**	**0.94**	**128**	*e*P	**Pb**	**23 47 52.3**	**-1.9**
BUAI	**Buenos Aires**	**1.00**	**65**	*i* P	**Pn**	**23 47 56.0**	**+0.8**
LIM1	**Limonal**	**1.01**	**76**	*i* P	**Pn**	**23 47 55.7**	**+0.3**
GUAB	**Guayabo de Bag**	**1.04**	**76**	⇑*i*P	**Pn**	**23 47 56.0**	**+0.2**
COLC	**Colonia**	**1.05**	**78**	*i* P	**Pn**	**23 47 56.1**	**+0.2**
MICM	**Guayabo**	**1.07**	**76**	*i* P	**Pn**	**23 47 56.7**	**+0.6**
HORNC	**Hornillas**	**1.09**	**76**	⇑*i*P	**Pn**	**23 47 56.7**	**+0.3**
CUI	**Cuipilapa**	**1.09**	**79**	*e*P	**Pn**	**23 48 00.2**	**+3.8**
ACAL	**Aguas Claras**	**1.21**	**81**	*i* P	**Pb**	**23 47 58.8**	**-0.1**
JTS	**Las Juntas de**	**1.29**	**97**	Pg	**Pn**	**23 47 58.1**	**-1.1**
	180nm,0.3s,baz=9.3,slow=19,SNR=77						
JTS				Lg	Lg	23 48 18.2	
	506nm,0.3s,baz=262,slow=20,SNR=5.2						
JTS	**Las Juntas de**	**1.29**	**97**	*e*P	**Pn**	**23 47 59.1**	**0.0**
JTS	**Las Juntas de**	**1.29**	**97**		**Pn**	**23 47 58.8**	**-0.3**
CAO2	**Cobano, Puntar**	**1.36**	**124**	Pn	**Pn**	**23 47 59.0**	**-1.1**
LAFE	**Finca La Fe, P**	**1.47**	**116**	*e*P	**Pn**	**23 48 00.1**	**-1.4**
ARE1	**Arenal 1**	**1.51**	**89**	*e*P	**Pb**	**23 48 03.5**	**-0.4**
CEDE	**Laguna Cedeo**	**1.52**	**88**	*i* P	**Pb**	**23 48 03.9**	**-0.3**
FORC	**Fortuna**	**1.56**	**89**	*i* P	**Pb**	**23 48 03.9**	**-0.9**
JACO	**JACO, Garabito**	**1.75**	**116**		**Pn**	**23 48 05.2**	**-0.3**
SRA1	**San Ramn**	**1.78**	**102**	*e*P	**Pn**	**23 48 06.9**	**+0.9**
COVE	**Coope Vega, Sa**	**1.84**	**81**	*e*P	**Pn**	**23 48 07.3**	**+0.6**
COVE	**Coope Vega, Sa**	**1.84**	**81**		**Pn**	**23 48 06.2**	**-0.5**
ACON	**Acoyapa**	**1.84**	**35**	*e*P	**Pn**	**23 48 07.5**	**+0.8**
ACON	**Acoyapa**	**1.84**	**35**	Pn	**Pn**	**23 48 07.4**	**+0.6**
CRPO	**Crater poas**	**2.01**	**97**	*e*P	**Pn**	**23 48 10.4**	**+1.1**
BOAB	**BOACO BROADBAN**	**2.07**	**16**	Pn	**Pn**	**23 48 10.3**	**+0.4**
CNGN	**Cerro Negro**	**2.08**	**348**	Pn	**Pn**	**23 48 10.1**	**0.0**
HDC	**Heredia**	**2.15**	**102**	*e*P	**Pn**	**23 48 12.4**	**+1.3**
HDC	**Heredia**	**2.15**	**102**	Pn	**Pn**	**23 48 11.2**	**+0.1**
HDC3	**Heredia 3**	**2.15**	**102**	*e*P	**Pn**	**23 48 12.3**	**+1.2**
LCR2	**La Lucha 2**	**2.32**	**107**	*e*P	**Pn**	**23 48 14.1**	**+0.6**
CRIN	**San Cristobal**	**2.37**	**341**	Pn	**Pn**	**23 48 13.9**	**-0.2**
RIMA	**Rio Macho**	**2.45**	**106**	*e*P	**Pn**	**23 48 17.0**	**+1.7**
RIMA	**Rio Macho**	**2.45**	**106**	Pn	**Pn**	**23 48 16.2**	**+0.9**
MATN	**Matagalpa**	**2.48**	**7**	Pn	**Pn**	**23 48 16.1**	**+0.4**
CVTR	**Volcan Turrial**	**2.49**	**100**	*e*P	**Pb**	**23 48 19.2**	**-1.7**
CVTR	**Volcan Turrial**	**2.49**	**100**	Pn	**Pn**	**23 48 16.4**	**+0.3**
ESPN	**Las Esperanzas**	**2.58**	**48**	*e*P	**Pn**	**23 48 18.2**	**+1.3**
ESPN	**Las Esperanzas**	**2.58**	**48**	Pn	**Pn**	**23 48 17.0**	**+0.1**
CDM	**Cerro de Muert**	**2.61**	**110**	*e*P	**Pn**	**23 48 18.5**	**+0.8**
EDDO	**Dominical**	**2.64**	**117**	*e*P	**Pn**	**23 48 19.7**	**+2.0**
PEZE	**Perez Zeledon,**	**2.75**	**112**		**Pn**	**23 48 19.0**	**-0.4**
MRVA	**Moravia de Chi**	**2.84**	**102**	*e*P	**Pn**	**23 48 22.6**	**+2.1**
BATAN	**Batan**	**2.85**	**97**	*e*P	**Pn**	**23 48 23.5**	**+2.8**
BATAN	**Batan**	**2.85**	**97**		**Pn**	**23 48 22.0**	**+1.3**
SRBA	**San Rafael, Bu**	**3.10**	**113**	*e*P	**Pb**	**23 48 32.3**	**+1.2**
SRBA	**San Rafael, Bu**	**3.10**	**113**	Pn	**Pn**	**23 48 24.3**	**+0.2**
EDPN	**Palmar Norte**	**3.13**	**118**	*e*P	**Pb**	**23 48 34.1**	**+2.6**
DRK0	**Durika**	**3.19**	**111**	*e*P	**Pn**	**23 48 26.1**	**+0.7**
DRK0	**Durika**	**3.19**	**111**		**Pn**	**23 48 25.4**	**0.0**
EDBA	**Buenos Aires**	**3.20**	**113**	*e*P	**Pn**	**23 48 28.7**	**+3.3**
EDSV	**San Vito**	**3.62**	**116**	*e*P	**Pb**	**23 48 42.4**	**+2.5**
TGUH	**Tegucigalpa,Un**	**3.72**	**345**	Pn	**Pn**	**23 48 33.9**	**+1.2**
CDITO	**Canoas**	**3.82**	**119**		**Pn**	**23 48 34.8**	**+0.8**
BRU2	**Volcan**	**3.88**	**115**		**Pn**	**23 48 36.5**	**+1.5**
SNET	**Serv Nac Est T**	**4.34**	**318**	Pn	**Pn**	**23 48 42.5**	**+1.3**
MTO3	**Montecristo**	**4.96**	**323**		**Pn**	**23 48 50.9**	**+1.1**
ESQI	**Esquipulas**	**5.08**	**324**		**Pn**	**23 48 52.2**	**+0.9**
PRVC	**Isla de Provid**	**5.60**	**58**		**Pn**	**23 48 59.4**	**+0.9**
APG	**El Apazote**	**6.11**	**318**	Pn	**Pn**	**23 49 08.0**	**+2.3**
	1.8nm,0.3s,baz=146,slow=7.5,SNR=19						
BCIP	**Isla Barro Col**	**6.45**	**101**	Pn	**Pn**	**23 49 10.5**	**+0.4**
HUEH	**Huehuetenango**	**7.04**	**314**	Pn	**Pn**	**23 49 20.7**	**+2.2**
PETF	**Flores**	**7.32**	**332**		**Pn**	**23 49 24.9**	**+2.8**
CCIG	**Comitan**	**8.15**	**316**	Pn	**Pn**	**23 49 36.1**	**+2.5**
CMIG	**Matias Romero**	**10.67**	**309**	Pn	**Pn**	**23 50 09.1**	**+1.1**
	1.4nm,0.3s,baz=116,slow=12,SNR=13						
CMIG				Sn	**Sn**	**23 52 04.6**	**-2.2**
	0.3nm,0.3s,baz=223,slow=22,SNR=0.9						
SJCC	**San Jacinto, C**	**10.91**	**92**		**Pn**	**23 50 11.6**	**+0.2**
ZARC	**Zaragoza, Cauc**	**11.63**	**104**		**Pn**	**23 50 22.2**	**+1.0**
SDV	**Santo Domingo**	**15.48**	**94**	*e*P	**Pn**	**23 51 13.8**	**+0.1**
SDV	**Santo Domingo**	**15.48**	**94**	Pn	**Pn**	**23 51 13.3**	**-0.3**
MOIG	**Morelia**	**17.08**	**304**		**P**	**23 51 36.4**	**+0.6**
BAUV	**El Baul**	**18.02**	**93**		**Pn**	**23 51 45.9**	**+0.3**
656A	**Willston**	**19.14**	**10**	P	**P**	**23 51 58.9**	**+0.7**
656A				IAmb	IAmb	23 52 06.0	
	comp=Z,75nm,0.8s						
BIRV	**Birongo**	**19.65**	**88**	P	**P**	**23 52 02.8**	**-1.2**
553A	**Crawfordville**	**19.71**	**5**	P	**Pn**	**23 52 06.1**	**+0.2**
451A	**Vernon**	**20.07**	**1**	P	Pn	23 52 10.0	-0.2
451A				IAmb	IAmb	23 52 15.4	
	comp=Z,90nm,0.8s						
OBIP	**Obispado Ponce**	**20.47**	**66**	P	**P**	**23 52 13.3**	**+0.6**
CELP	**Cerrillos**	**20.50**	**66**	P	**P**	**23 52 14.0**	**+0.8**
BRAL	**Brewton**	**20.63**	**358**	P	**P**	**23 52 15.3**	**+0.9**
BRAL				IAmb	IAmb	23 52 17.1	
	comp=Z,92nm,1.2s						
SJG	**San Juan**	**20.90**	**66**	P	**P**	**23 52 16.2**	**-1.3**
	comp=Z,4.2nm,0.5s,baz=319,slow=20,SNR=1.4						
352A	**Blakely**	**20.96**	**3**		**P**	**23 52 18.4**	**+0.4**
352A				IAmb	IAmb	23 52 23.1	
	comp=Z,74nm,0.9s						
TIGA	**Tifton**	**21.03**	**6**	P	**P**	**23 52 18.2**	**-0.5**
	baz=187						
TIGA	**Tifton**	**21.03**	**6**	P	**P**	**23 52 18.2**	**-0.5**
TIGA				IAmb	IAmb	23 52 25.2	
	comp=Z,50nm,0.8s						
441A	**DeRidder**	**21.20**	**343**	P	**P**	**23 52 20.6**	**+0.1**
PCRV	**Puerto La Cruz**	**21.27**	**89**	P	**P**	**23 52 22.1**	**+0.6**
	comp=Z,19nm,0.8s,baz=27,slow=2.7,SNR=1.4						
344A	**Westbrook Farm**	**21.31**	**349**	P	**P**	**23 52 23.0**	**+1.3**
344A				IAmb	IAmb	23 52 33.2	
	comp=Z,81nm,0.8s						
PLCV	**Puerto La Cruz**	**21.32**	**89**	P	**P**	**23 52 22.1**	**+0.1**
HKT	**Hockley**	**21.36**	**337**	P	**P**	**23 52 22.8**	**+0.6**
HKT				IAmb	IAmb	23 52 39.7	
	comp=Z,44nm,1.1s						
250A	**Grady**	**21.42**	**360**	P	**P**	**23 52 22.8**	**-0.2**
250A				IAmb	IAmb	23 52 27.9	
	comp=Z,103nm,1.6s						
342A	**Flagon Creek P**	**21.57**	**346**	P	**P**	**23 52 25.1**	**+0.6**
833A	**Chaparral WMA,**	**21.64**	**327**	P	**P**	**23 52 26.1**	**+0.8**
	baz=142						
255A	**Hazlehurst**	**21.66**	**9**	P	**P**	**23 52 26.2**	**+0.8**
255A				IAmb	IAmb	23 52 29.2	
	comp=Z,62nm,0.9s						
TBTG	**Tabatinga, AM**	**21.82**	**131**	*e*P	**P**	**23 52 27.9**	**+0.5**
TBTG	**Tabatinga, AM**	**21.82**	**131**	P	**P**	**23 52 27.7**	**+0.3**
VBMS	**Vicksburg**	**22.02**	**350**	P	**P**	**23 52 30.0**	**+0.7**
VBMS				IAmb	IAmb	23 52 38.9	
	comp=Z,40nm,0.8s						
152A	**Waverly Hall**	**22.16**	**3**	P	**P**	**23 52 30.9**	**+0.1**
146A	**Union**	**22.23**	**354**	P	**P**	**23 52 31.3**	**-0.3**
146A				IAmb	IAmb	23 52 34.6	
	comp=Z,86nm,1.1s						
154A	**Montrose**	**22.25**	**7**	P	**P**	**23 52 32.4**	**+0.6**
CZSB	**Cruzeiro do Su**	**22.54**	**143**	*e*P	**P**	**23 52 34.5**	**-0.6**
CZSB	**Cruzeiro do Su**	**22.54**	**143**	P	**P**	**23 52 36.5**	**+1.4**
NATX	**Nacogdoches**	**22.59**	**341**	P	**P**	**23 52 35.6**	**+0.2**
	baz=158						
NATX	**Nacogdoches**	**22.59**	**341**	P	**P**	**23 52 35.5**	**0.0**
NATX				IAmb	IAmb	23 52 38.0	
	comp=Z,50nm,0.9s						
143A	**Socs Landing,**	**22.65**	**349**	P	**P**	**23 52 35.9**	**-0.1**
Z51A	**Franklin**	**22.78**	**2**	IAmb	IAmb	23 52 39.8	
	comp=Z,51nm,1.0s						
435B	**Jarrell**	**22.81**	**334**	P	**P**	**23 52 38.1**	**+0.4**
	baz=150						
435B	**Jarrell**	**22.81**	**334**	IAmb	IAmb	23 52 48.5	
	comp=Z,36nm,0.8s						
GOGA	**Godfrey**	**23.00**	**6**	P	**P**	**23 52 40.4**	**+0.7**
	baz=187,SNR=12						
GOGA	**Godfrey**	**23.00**	**6**	P	**P**	**23 52 39.5**	**-0.2**
GOGA				IAmb	IAmb	23 52 41.6	
	comp=Z,49nm,1.0s						
NHSC	**New Hope**	**23.23**	**13**	P	**P**	**23 52 43.6**	**+1.5**
	baz=195						
NHSC	**New Hope**	**23.23**	**13**	P	**P**	**23 52 42.7**	**+0.6**
NHSC				IAmb	IAmb	23 52 44.1	
	comp=Z,58nm,0.8s						
Y49A	**Blount Mountai**	**23.30**	**360**	IAmb	IAmb	23 52 44.0	
	comp=Z,32nm,0.8s						
Y52A	**Lilburn**	**23.39**	**5**	P	**P**	**23 52 43.8**	**+0.1**
Z41A	**Richland Creek**	**23.48**	**346**	P	**P**	**23 52 43.5**	**-1.0**
	baz=163,SNR=7.4						
JCT	**Junction City**	**23.58**	**330**	P	**P**	**23 52 45.7**	**+0.1**
	baz=145						
JCT	**Junction City**	**23.58**	**330**	P	**P**	**23 52 45.0**	**-0.7**
X48A	**Hartselle**	**23.90**	**358**	P	**P**	**23 52 49.0**	**+0.4**
HODGE	**Hodges**	**23.95**	**8**	P	**P**	**23 52 48.5**	**-0.5**
WLAR	**White Oak Lake**	**23.97**	**346**	IAmb	IAmb	23 52 50.7	
	comp=Z,38nm,1.0s						
FPAL	**Fort Paine**	**23.99**	**1**	P	**P**	**23 52 48.8**	**-0.6**
FPAL				IAmb	IAmb	23 52 50.9	
	comp=Z,34nm,0.9s						
X51A	**Calhoun**	**24.04**	**3**	P	**P**	**23 52 49.4**	**-0.5**
X51A				IAmb	IAmb	23 52 51.1	
	comp=Z,56nm,0.8s						
Y57A	**Sumter**	**24.06**	**12**	P	**P**	**23 52 49.9**	**-0.2**
Y57A				IAmb	IAmb	23 52 52.2	
	comp=Z,63nm,1.1s						
JSC	**Jenkinsville**	**24.16**	**10**	P	**P**	**23 52 50.8**	**-0.2**
PLAL	**Pickwick Lake**	**24.48**	**356**	IAmb	IAmb	23 52 55.0	
	comp=Z,29nm,0.8s						
PAULI	**Pauline**	**24.59**	**9**	P	**P**	**23 52 55.4**	**+0.5**
BG3	**Lake Jocassee**	**24.62**	**7**	P	**P**	**23 52 55.6**	**+0.4**
SWET	**Sewanee**	**24.66**	**1**	P	**P**	**23 52 55.3**	**-0.3**
SWET				IAmb	IAmb	23 52 57.4	
	comp=Z,62nm,1.0s						
BIRD	**Birdtown, Kers**	**24.66**	**12**	IAmb	IAmb	23 52 57.0	
	comp=Z,54nm,0.9s						
X40A	**Basin Creek Fa**	**24.67**	**347**	P	**P**	**23 52 55.2**	**-0.4**
	baz=164						
X58A	**Rowland**	**24.81**	**14**	IAmb	IAmb	23 52 58.0	
	comp=Z,36nm,1.0s						
TXAR	**Lajitas Array**	**24.86**	**322**	P	**P**	**23 52 58.5**	**+1.0**
	comp=Z,11nm,0.8s,baz=138,slow=9.7,SNR=66						
TXAR				PcP	**PcP**	**23 56 35.5**	**+2.1**
	comp=Z,3.2nm,0.9s,baz=144,slow=4.7,SNR=7.7						
TXAR	**Lajitas Array**	**24.86**	**322**	P	**P**	**23 52 58.4**	**+0.8**
TX32	**Lajitas Array**	**24.86**	**322**	P	**P**	**23 52 58.7**	**+1.1**
TX32				IAmb	IAmb	23 53 09.3	
	comp=Z,17nm,0.8s						
MIAR	**Mount Ida**	**24.90**	**346**	P	**P**	**23 52 57.2**	**-0.5**
	baz=162,SNR=18						
MIAR	**Mount Ida**	**24.90**	**346**	P	**P**	**23 52 56.9**	**-0.8**
MIAR				IAmb	IAmb	23 53 05.5	
	comp=Z,22nm,0.8s						
Z35A	**Perchaven, San**	**24.92**	**338**	P	**P**	**23 52 57.2**	**-0.7**
Z35A				IAmb	IAmb	23 53 00.6	
	comp=Z,35nm,0.9s						
CPCT	**Cooper Cave**	**24.94**	**3**	P	**P**	**23 52 58.4**	**+0.4**
CPCT				IAmb	IAmb	23 53 00.9	
	comp=Z,51nm,1.0s						
KMSC	**Kings Mountain**	**24.98**	**10**	P	**P**	**23 52 59.1**	**+0.6**
	baz=191,SNR=23						
KMSC	**Kings Mountain**	**24.98**	**10**	P	**P**	**23 52 57.9**	**-0.6**
V48A	**Smith Brothers**	**25.18**	**359**	IAmb	IAmb	23 53 00.7	
	comp=Z,25nm,1.1s						
TKL	**Tuckaleechee C**	**25.20**	**5**	P	**P**	**23 53 00.1**	**-0.3**
	comp=Z,24nm,0.6s,baz=153,slow=4.4,SNR=32						
TKL	**Tuckaleechee C**	**25.20**	**5**	P	**P**	**23 53 00.4**	**0.0**
TKL				IAmb	IAmb	23 53 03.5	
	comp=Z,32nm,0.8s						
W41B	**Gary Mavity, V**	**25.21**	**348**	P	**P**	**23 52 59.1**	**-1.4**
	baz=166,SNR=14						
H06E1	**SOCORRO T-PHAS**	**25.24**	**292**	T	T	00 19 21.1	
	SNR=35						
W57A	**Gilead**	**25.24**	**12**	P	**P**	**23 53 00.3**	**-0.5**
W57A				IAmb	IAmb	23 53 01.6	
	comp=Z,36nm,0.8s						
ABTX	**Abilene, Hawle**	**25.29**	**333**	P	**P**	**23 53 01.1**	**-0.2**
	baz=148,SNR=12						
ABTX	**Abilene, Hawle**	**25.29**	**333**	P	**P**	**23 53 01.4**	**+0.1**
ABTX				IAmb	IAmb	23 53 12.0	
	comp=Z,22nm,0.8s						
V53A	**Saluda**	**25.30**	**7**	P	**P**	**23 53 01.7**	**+0.3**
V53A				IAmb	IAmb	23 53 03.1	
	comp=Z,34nm,0.7s						
WHAR	**Wooly Hollow**	**25.33**	**348**	P	**P**	**23 53 00.8**	**-0.8**
WHAR				IAmb	IAmb	23 53 02.0	
	comp=Z,30nm,1.0s						
V52A	**Sevierville**	**25.39**	**5**	IAmb	IAmb	23 53 03.1	
	comp=Z,30nm,0.8s						
CLTN	**Cedars of Leba**	**25.53**	**360**	P	**P**	**23 53 02.0**	**-1.3**
CLTN				IAmb	IAmb	23 53 06.2	
	comp=Z,28nm,0.9s						
W39A	**Magazine**	**25.57**	**346**	P	**P**	**23 53 03.7**	**-0.1**
	baz=162,SNR=14						
W39A	**Magazine**	**25.57**	**346**	P	**P**	**23 53 03.3**	**-0.5**
W39A				IAmb	IAmb	23 53 11.2	
	comp=Z,23nm,0.9s						
WVT	**Waverly**	**25.61**	**357**	P	**P**	**23 53 02.8**	**-1.3**
	baz=176						
WVT	**Waverly**	**25.61**	**357**	P	**P**	**23 53 02.8**	**-1.3**
WVT				IAmb	IAmb	23 53 07.6	
	comp=Z,55nm,1.8s						
V55A	**Taylorsville**	**25.70**	**9**	P	**P**	**23 53 05.1**	**+0.2**
V55A				IAmb	IAmb	23 53 06.2	
	comp=Z,26nm,0.9s						
U49A	**Red Boiling Sp**	**25.95**	**1**	P	**P**	**23 53 06.6**	**-0.6**
U49A				IAmb	IAmb	23 53 07.7	
	comp=Z,32nm,0.8s						
V58A	**Windy Hill, Pi**	**26.05**	**13**	P	**P**	**23 53 07.5**	**-0.6**
TZTN	**Tazewell**	**26.09**	**5**	P	**P**	**23 53 08.3**	**-0.2**
	baz=186						
TZTN	**Tazewell**	**26.09**	**5**	P	**P**	**23 53 08.4**	**-0.1**
TZTN				IAmb	IAmb	23 53 15.2	
	comp=Z,26nm,1.0s						
U54A	**Nelsons Funny**	**26.26**	**8**	P	**P**	**23 53 10.3**	**+0.2**
U56A	**King**	**26.32**	**11**	P	**P**	**23 53 10.5**	**-0.2**
U56A				IAmb	IAmb	23 53 12.0	
	comp=Z,32nm,0.8s						
T47A	**Sharon Grove**	**26.43**	**358**	P	**P**	**23 53 10.7**	**-0.9**
T47A				IAmb	IAmb	23 53 11.6	
	comp=Z,40nm,1.0s						
U40A	**Yellville**	**26.48**	**348**	P	**P**	**23 53 11.2**	**-0.7**
	baz=165,SNR=11						
U40A	**Yellville**	**26.48**	**348**	P	**P**	**23 53 11.3**	**-0.7**
PBMO	**Poplar Bluff**	**26.48**	**352**	P	**P**	**23 53 10.8**	**-1.3**
T50A	**Nancy**	**26.48**	**3**	P	**P**	**23 53 11.6**	**-0.5**
WMOK	**Wichita Mounta**	**26.75**	**337**	P	**P**	**23 53 15.2**	**+0.7**
	baz=152,SNR=26						
WMOK	**Wichita Mounta**	**26.75**	**337**		**P**	**23 53 15.0**	**+0.5**
WMOK				IAmb	IAmb	23 53 29.8	
	comp=Z,32nm,1.0s						
BOAV	**Boa Vista**	**26.77**	**106**	*e*P	**P**	**23 53 14.8**	**-0.1**
BOAV	**Boa Vista**	**26.77**	**106**	P	**P**	**23 53 15.3**	**+0.4**
TUL1	**Leonard**	**26.79**	**343**	P	**P**	**23 53 13.7**	**-1.1**
	baz=159						
TUL1	**Leonard**	**26.79**	**343**	IAmb	IAmb	23 53 21.3	
	comp=Z,23nm,0.8s						
T42A	**Van Buren**	**26.82**	**351**	P	**P**	**23 53 13.7**	**-1.4**
OK031	**S. Brethren Rd**	**27.15**	**341**	IAmb	IAmb	23 53 17.8	
	comp=Z,20nm,0.9s						

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BLA   Blacksburg        27.16  10 P     P      23 53 18.6 +0.4
      baz=192,SNR=6.4
BLA   Blacksburg        27.16  10 P     P      23 53 17.6 -0.6
BLA                                 IAmb  IAmb   23 53 19.6
      comp=Z,77nm,1.4s
T57A  Hurt              27.18  12 P     P      23 53 18.1 -0.2
T57A                                IAmb  IAmb   23 53 19.2
      comp=Z,25nm,0.8s
S44A  Carbondale        27.26 355 IAmb  IAmb   23 53 26.0
      comp=Z,23nm,0.8s
SIUC  Southern Illin    27.28 355 IAmb  IAmb   23 53 19.7
      comp=Z,32nm,1.0s
QUOK  Quay              27.31 341 IAmb  IAmb   23 53 19.3
      comp=Z,15nm,0.6s
MNTX  Cornudas Mount    27.58 323 P     P      23 53 21.5 -0.5
      baz=136
MNTX  Cornudas Mount    27.58 323 P     P      23 53 21.7 -0.3
S54A  Dingess, Beckl    27.59   8 IAmb  IAmb   23 53 22.7
      comp=Z,23nm,0.8s
WCI   Wyandotte Cave    27.66 360 P     P      23 53 21.8 -0.8
      baz=180
WCI   Wyandotte Cave    27.66 360 P     P      23 53 21.1 -1.5
R49A  Shelbyville       27.74   2 P     P      23 53 22.5 -0.8
R49A                                IAmb  IAmb   23 53 23.4
      comp=Z,32nm,0.8s
R50A  Paris             27.77   3 P     P      23 53 22.7 -0.8
R50A                                IAmb  IAmb   23 53 24.0
      comp=Z,32nm,0.8s
CCM   Cathedral Cave    27.85 352 P     P      23 53 23.3 -1.0
      baz=169
CCM   Cathedral Cave    27.85 352 P     P      23 53 22.5 -1.8
CCM                                 IAmb  IAmb   23 53 24.4
      comp=Z,19nm,0.9s
S39A  Bolivar           27.86 348 P     P      23 53 22.6 -1.8
T35A  Sooner Cattle     27.93 342       P      23 53 24.7 -0.4
S57A  Dark Hollow, R    27.97  12 P     P      23 53 25.1 -0.3
S57A                                IAmb  IAmb   23 53 25.9
      comp=Z,14nm,0.7s
R53A  Hurricane         28.03   7 P     P      23 53 24.6 -1.3
R55A  Marlinton         28.25  10 P     P      23 53 28.1  0.0
R55A                                IAmb  IAmb   23 53 29.2
      comp=Z,37nm,0.8s
ETMB  Extrema           28.33 135 eP    P      23 53 29.8 +1.0
ETMB  Extrema           28.33 135 P     P      23 53 29.4 +0.6
PTGA  Pitinga           28.41 111 P     P      23 53 31.3 +1.7
      comp=Z,4.7nm,0.8s,baz=312,slow=8.4,SNR=11
Q51A  Peebles           28.57   5 P     P      23 53 30.2 -0.6
BLO   Bloomington       28.60 360 P     P      23 53 28.9 -2.1
BLO                                 IAmb  IAmb   23 53 31.2
      comp=Z,29nm,0.8s
Q52A  Bidwell           28.61   6 P     P      23 53 30.2 -0.9
CBN   Corbin Frederi    28.76  15 P     P      23 53 32.2 -0.2
CBN                                 IAmb  IAmb   23 53 33.7
      comp=Z,34nm,0.8s
MACA  Manacapuru-AM     28.83 117 eP    P      23 53 35.1 +1.8
MACA  Manacapuru-AM     28.83 117 P     P      23 53 33.7 +0.4
MACA                                IAmb  IAmb   23 53 39.1
      comp=Z,28nm,0.9s
P48A  Milroy            28.90   1 IAmb  IAmb   23 53 33.1
      comp=Z,40nm,0.8s
P49A  Miami Univ. Ec    29.00   2 P     P      23 53 33.3 -1.2
      baz=183,SNR=9.8
P49A  Miami Univ. Ec    29.00   2 IAmb  IAmb   23 53 34.0
      comp=Z,30nm,0.8s
P46A  Rosedale          29.06 358 IAmb  IAmb   23 53 35.2
      comp=Z,31nm,0.8s
Q56A  Snyder Ridge,     29.16  11 P     P      23 53 36.2 +0.2
P52A  Corning           29.29   7 P     P      23 53 36.7 -0.5
      baz=188,SNR=37
MCWV  Mont Chateau      29.64  10 P     P      23 53 40.1 -0.2
      baz=193,SNR=7.8
MCWV  Mont Chateau      29.64  10 IAmb  IAmb   23 53 41.0
      comp=Z,26nm,0.7s
O44A  Mansfield         29.65 357 IAmb  IAmb   23 53 40.4
      comp=Z,29nm,0.7s
P38A  Dawn              29.77 349 IAmb  IAmb   23 53 47.5
      comp=Z,16nm,0.6s
ACSO  Alum Creek Sta    29.80   5 P     P      23 53 41.3 -0.4
      baz=186,SNR=16
ACSO  Alum Creek Sta    29.80   5 P     P      23 53 41.2 -0.4
O52A  Adamsville        29.80   7 P     P      23 53 40.9 -0.8
SFIN  Lafayette         29.82 359 P     P      23 53 40.4 -1.3
      baz=178,SNR=9.1
P57A  Homestead Farm    29.83  13 P     P      23 53 42.5 +0.6
P57A                                IAmb  IAmb   23 53 43.5
      comp=Z,33nm,0.8s
SAML  Samuel            29.98 129 P     P      23 53 43.7 +0.2
KSU1  Kansas State U    29.99 344 P     P      23 53 43.2 -0.2
      baz=159
O53A  New Philadelph    30.01   8 P     P      23 53 43.3 -0.2
      baz=190,SNR=29
O53A  New Philadelph    30.01   8 P     P      23 53 42.9 -0.7
O54A  Avella            30.07   9 IAmb  IAmb   23 53 45.9
      comp=Z,17nm,0.8s
HDIL  Hopedale          30.11 355 P     P      23 53 43.6 -0.7
      baz=174,SNR=12
N47A  Urbana            30.31   1 IAmb  IAmb   23 53 47.6
      comp=Z,20nm,1.1s
N41A  Harden Midland    30.41 353 IAmb  IAmb   23 53 52.6
      comp=Z,16nm,0.8s
O56A  Blue Knob Stat    30.47  12 P     P      23 53 47.8 +0.2
      baz=195,SNR=7.6
O56A  Blue Knob Stat    30.47  12 IAmb  IAmb   23 53 48.2
      comp=Z,14nm,0.8s
ANMO  Albuquerque       30.56 326 P     P      23 53 50.1 +1.4
      baz=138
ANMO  Albuquerque       30.56 326 P     P      23 53 49.6 +0.9
MVL   Millersville      30.71  15 IAmb  IAmb   23 53 51.0
      comp=Z,23nm,1.0s
P60A  Greenville        30.73  16 P     P      23 53 49.9 +0.1
      baz=200
N54A  Moraine State     30.89   9 P     P      23 53 50.2 -1.1
      baz=192
SSPA  Standing Stone    30.96  12 P     P      23 53 51.8 -0.1
      baz=196
SSPA  Standing Stone    30.96  12 P     P      23 53 51.7 -0.2
M53A  WI Miller and     31.26   8 P     P      23 53 54.2 -0.3
      baz=190,SNR=16
N35A  Tabor             31.41 346 IAmb  IAmb   23 53 55.8
      comp=Z,33nm,0.9s
M54A  Oil Creek Stat    31.48  10 P     P      23 53 55.5 -0.9
      baz=192
M54A  Oil Creek Stat    31.48  10 IAmb  IAmb   23 53 56.1
      comp=Z,14nm,0.9s
LUPA  Lehigh Univers    31.54  16 P     P      23 53 57.4 +0.5
LUPA                                IAmb  IAmb   23 53 58.1
      comp=Z,18nm,0.9s
L42A  Oliver, Polo      31.57 355 P     P      23 53 55.5 -1.7
M55A  Ridgway           31.59  11 P     P      23 53 56.9 -0.5
M55A                                IAmb  IAmb   23 53 57.8
      comp=Z,18nm,0.9s
N59A  State Game Lan    31.73  15 P     P      23 53 59.3 +0.6
      baz=200,SNR=13
N59A  State Game Lan    31.73  15 P     P      23 53 59.0 +0.3
ERPA  Erie              32.02   9 P     P      23 54 00.5 -0.7
      baz=191,SNR=6.5
SDCO  Great Sand Dun    32.22 331 P     P      23 54 03.8 +0.5
      baz=142,SNR=14
KSPA  Keystone Colle    32.33  15 IAmb  IAmb   23 54 04.8
      comp=Z,21nm,0.8s
JFWS  Jewell Farm       32.53 355 P     P      23 54 04.3 -1.4
      baz=172,SNR=10
WVNY  West Valley, N    32.53  11 IAmb  IAmb   23 54 05.9
      comp=Z,18nm,0.9s
S22A  4UR Ranch, Cre    32.88 329 P     P      23 54 10.1 +0.9
      baz=140
BINY  Binghamton        32.88  14 P     P      23 54 08.8  0.0
      baz=199,SNR=12
L59A  Walton            33.11  15 IAmb  IAmb   23 54 11.6
      comp=Z,25nm,0.8s
MVCO  Mesa Verde        33.35 327 P     P      23 54 13.9 +0.8
      baz=137
I42A  Draeger Farm,     33.40 357 IAmb  IAmb   23 54 13.1
      comp=Z,25nm,0.9s
113A  Mohawk Valley,    33.69 315 P     P      23 54 17.2 +1.3
ITTB  Itaituba          33.77 114 eP    P      23 54 17.7 +0.9
WUAZ  Wupatki           33.82 322 P     P      23 54 20.3 +3.0
      baz=131,SNR=7.5
WUAZ  Wupatki           33.82 322 P     P      23 54 18.4 +1.2
TRY   Troy              33.99  17 IAmb  IAmb   23 54 19.4
      comp=Z,27nm,0.8s
L61B  Northampton       34.02  18 P     P      23 54 18.3 -0.3
      baz=204
J57A  Williamstown      34.03  13 IAmb  IAmb   23 54 19.1
      comp=Z,25nm,0.9s
MALB  Monte Alegre      34.10 109 eP    P      23 54 19.9 +0.2
GLMI  Grayling          34.28   2 P     P      23 54 19.5 -1.4
      baz=183
ECSD  EROS Data Cent    34.36 347 P     P      23 54 20.1 -1.5
      baz=162,SNR=8.6
J59A  Piesco            34.44  15 IAmb  IAmb   23 54 22.3
      comp=Z,15nm,0.8s
GLA   Glamis            34.58 315 P     P      23 54 26.6 +2.9
      baz=124
GLA   Glamis            34.58 315 P     P      23 54 25.4 +1.6
GLA                                 IAmb  IAmb   23 54 27.4
      comp=Z,28nm,1.5s
SADO  Sadowa            34.74   9 IAmb  IAmb   23 54 24.3
      comp=Z,23nm,0.8s
VILB  Vilhena           34.78 131 eP    P      23 54 26.9 +1.3
PDMCI Parker Dam,Lak    34.84 317 P     P      23 54 28.4 +2.5
      baz=126
G40A  Rib Lake          34.86 355 IAmb  IAmb   23 54 25.4
      comp=Z,16nm,0.9s
W13A  Hualapai Mount    35.14 319 P     P      23 54 29.8 +1.0
NPGB  Novo Progresso    35.33 118 eP    P      23 54 30.7 +0.3
BC3   Big Chuckawall    35.35 315 P     P      23 54 33.2 +2.7
      baz=124
PLVO  Plevna            35.36  11 P     P      23 54 28.8 -1.4
PLVO                                IAmb  IAmb   23 54 29.7
      comp=Z,15nm,0.9s
O20A  White River Ci    35.42 330 P     P      23 54 33.2 +2.2
      baz=140
IRM   Iron Mountain     35.43 316 P     P      23 54 33.8 +2.8
      baz=125
LONY  Lake Ozonia       35.50  14 P     P      23 54 30.5 -1.0
      baz=200,SNR=13
COWI  Conover           35.61 357 IAmb  IAmb   23 54 31.7
      comp=Z,12nm,0.8s
MCPB  Macapa, AP        35.67 105 eP    P      23 54 33.1 -0.2
F36A  Milaca            35.83 351 IAmb  IAmb   23 54 34.0
      comp=Z,11nm,0.8s
BELC  Belle Mtn. Jos    35.92 315 P     P      23 54 38.6 +3.2
      baz=124
PFO   Pinyon Flats O    36.03 314 LR    LR     00 10 07.2
      comp=Z,156nm,21.5s,baz=140,slow=38
MURC  Murrieta          36.55 314 P     P      23 54 43.5 +2.9
      baz=122
HEC   Hector,Ludlow     36.62 316 P     P      23 54 44.5 +3.2
      baz=124
PDRB  Porto dos Gac     36.62 126 eP    P      23 54 41.9 +0.5
MOQ   Mont Orford       36.76  17 P     P      23 54 41.6 -0.7
SHPR  Sheep Range       36.82 319 P     P      23 54 43.6 +0.6
CLDB  Colider           36.96 124 eP    P      23 54 44.8 +0.5
TRQ   Mont Tremblant    37.02  14 P     P      23 54 43.4 -1.1
TRQ                                 IAmb  IAmb   23 54 44.1
      comp=Z,14nm,1.0s
PTLB  Pontes e Lacer    37.20 133 eP    P      23 54 45.9 -0.3
GWY   Greenwater Val    37.61 318 P     P      23 54 51.4 +1.6
PKME  Peaks-Kenny Pk    37.62  20 P     P      23 54 49.2 -0.3
      baz=208
DUG   Dugway, Tooele    37.84 326 P     P      23 54 53.0 +1.4
      baz=134
LRMC  Laurel Mtn Rad    37.89 316 P     P      23 54 54.3 +2.1
      baz=123
FURC  Furnace Creek,    37.90 318 P     P      23 54 54.6 +2.6
      baz=125
BW06  Boulder Array     38.08 332 P     P      23 54 53.2 -0.5
      baz=141
PD31  Pinedale Array    38.08 332 P     P      23 54 53.1 -0.6
PDAR  Pinedale Array    38.08 332 P     P      23 54 53.3 -0.4
      comp=Z,1.8nm,0.6s,baz=129,slow=10,SNR=14
PDAR                                PcP   PcP    23 57 09.8 +1.1
      comp=Z,1.1nm,0.6s,baz=136,slow=4.9,SNR=5.9
PDAR  Pinedale Array    38.08 332 P     P      23 54 53.1 -0.6
MPMC  Manual Prospec    38.09 317 P     P      23 54 56.1 +2.3
      baz=124,SNR=6.0
R11A  Troy Canyon, C    38.23 322 P     P      23 54 57.9 +2.9
      baz=129,SNR=5.2
F64A  Sherman           38.47  20 P     P      23 54 56.0 -0.7
F64A                                IAmb  IAmb   23 54 57.6
      comp=Z,24nm,0.9s
AGMN  Agassiz Nation    38.58 350 P     P      23 54 55.5 -2.1
      baz=165,SNR=7.8
MDND  Maddock           38.94 346 P     P      23 54 59.2 -1.4
      baz=159,SNR=7.7
PKM   Mcpherson Peak    39.07 314 P     P      23 55 04.5 +2.5
      baz=120
TPH   Tonopah           39.08 320 P     P      23 55 03.5 +1.3
TPH                                 IAmb  IAmb   23 55 05.7
      comp=Z,74nm,1.4s
LOHW  Long Hollow       39.22 332 P     P      23 55 03.6 +0.3
D62A  Allapoint, All    39.31  19 IAmb  IAmb   23 55 03.9
      comp=Z,34nm,0.9s
RLMT  Red Lodge         39.80 334 P     P      23 55 06.9 -1.2
      baz=143
PRPB  Parauapebas       39.87 113 eP    P      23 55 08.8 +0.1
LAO   LASA Array        39.90 338 P     P      23 55 09.3 +0.6
      baz=148
SALV  Santo Antonio     40.01 130 eP    P      23 55 10.0 +0.1
MDPB  Devils Postpil    40.02 318 P     P      23 55 11.6 +1.5
TMAB  Tom-Au,PA,Br      40.06 106 eP    P      23 55 10.4  0.0
YHH   Holmes Hill       40.24 333 P     P      23 55 13.6 +1.8
ULM   Lac du Bonnet     40.47 350 P     P      23 55 09.8 -3.5
      comp=Z,9.5nm,0.9s,baz=167,slow=8.6,SNR=8.4
ULM                                 PcP   PcP    23 57 16.1 +0.3
      comp=Z,6.9nm,0.7s,baz=166,slow=3.1,SNR=5.7
ULM                                 LR    LR     00 11 57.3
      comp=Z,135nm,19.1s,baz=262,slow=36
BATG  Bathurst New B    40.48  21 P     P      23 55 13.0 -0.4
BATG                                IAmb  IAmb   23 55 13.9
      comp=Z,26nm,0.9s
BMN   Battle Mountai    40.52 323 P     P      23 55 14.9 +0.8
BMN                                 IAmb  IAmb   23 55 17.4
      comp=Z,17nm,0.9s
DGMT  Dagmar            40.77 342 P     P      23 55 15.6 -0.3
      baz=152,SNR=6.1
DGMT  Dagmar            40.77 342 IAmb  IAmb   23 55 23.2
      comp=Z,28nm,0.9s
GBN   Guysborough       40.78  27 P     P      23 55 15.2 -0.7
HLID  Hailey            41.05 329 P     P      23 55 18.8 +0.4
      baz=135
CMB   Columbia Colle    41.11 318 P     P      23 55 18.9  0.0
BOZ   Bozeman (W)       41.21 333 P     P      23 55 19.9 +0.2
      baz=140,SNR=6.9
SNDB  Serra Nova Dou    41.26 122 eP    P      23 55 21.4 +1.1
EGMT  Eagleton          42.34 337 P     P      23 55 28.3 -0.5
      baz=144
ARAG  Araguaiana, MT    42.88 127 eP    P      23 55 32.8 -0.6
AQDB  Aquidauana        42.99 136 eP    P      23 55 35.3 +1.1
SMTB  Santa Maria do    42.99 115 eP    P      23 55 35.2 +0.7
MSO   Missoula          43.19 332 P     P      23 55 35.6 -0.1
      baz=138
O03E  Paynes Creek      43.26 320 P     P      23 55 37.6 +1.2
      baz=123
RPN   Rapa Nui          43.55 210 LR    LR     00 09 57.9
      comp=Z,134nm,18.5s,baz=36,slow=31
O02D  Mt. Diablo Mer    43.83 319 P     P      23 55 41.1 +0.1
      baz=122,SNR=6.4
PEXB  Peixe             43.86 120 eP    P      23 55 41.3 -0.1
ROSB  Rosrio            43.98 105 eP    P      23 55 43.1 +0.6
M04C  Macdoel           44.12 321 P     P      23 55 43.9 +0.6
      baz=125,SNR=6.1
YBH   Yreka Blue Hor    44.63 321 P     P      23 55 47.2 -0.2
J05D  Fort Rock, OR     44.63 323 P     P      23 55 48.3 +0.8
      baz=126
L04D  Klamath Falls     44.65 322 P     P      23 55 48.3 +0.7
      baz=124,SNR=6.9
PINE  Pine Mountain     44.77 324 P     P      23 55 48.8 +0.2
PINE                                IAmb  IAmb   23 55 51.0
      comp=Z,12nm,0.8s
J04D  Umpqua Nationa    45.12 323 P     P      23 55 52.8 +1.4
      baz=126
DRLN  Deer Lake         45.48  26 P     P      23 55 52.9 -1.0
I04A  Tendick Farm,     45.62 323 P     P      23 55 55.7 +0.6
      baz=126,SNR=7.1
HAWA  Hanford           45.63 328 P     P      23 55 54.8 -0.4
NEW   Newport           45.72 331 PcP   PcP    23 57 33.8 +0.3
      comp=Z,1.2nm,0.5s,baz=135,slow=5.7,SNR=3.0
K02D  Willamette Mer    45.75 321 P     P      23 55 57.8 +1.6
      baz=123
G05D  Wamic, OR         45.87 326 P     P      23 55 58.5 +1.5
      baz=128
BDFB  Brasilia          45.89 124 P     P      23 55 56.4 -1.3
      comp=Z,1.8nm,0.6s,baz=306,slow=10,SNR=4.5
BDFB                                LR    LR     00 15 50.9
      comp=Z,241nm,19.2s,baz=326,slow=37
BDFB  Brasilia          45.89 124 P     P      23 55 57.7  0.0
E07A  Sunnyside         45.91 328 IAmb  IAmb   23 55 59.4
      comp=Z,12nm,0.8s
CPUP  Villa Florida     46.12 143 eP    P      23 56 01.1 +1.9
J01E  Myrtle Point      46.17 322 P     P      23 56 01.4 +2.0
      baz=124
BUCK  Buck Mountain     46.20 323 IAmb  IAmb   23 56 01.3
      comp=Z,20nm,1.1s
H04D  Lebanon           46.24 324 P     P      23 56 00.6 +0.6
      baz=126
F05D  White Salmon      46.34 326 P     P      23 56 01.9 +1.1
      baz=128
ITRB  Iturama           46.34 130 eP    P      23 56 01.7 +0.6
I02E  Swisshome, OR     46.65 323 P     P      23 56 04.7 +1.5
      baz=124
PCMB  Pacaembu          46.85 133 eP    P      23 56 04.9 -0.1
SCHQ  Schefferville     46.87  15 P     P      23 56 02.3 -2.4
      comp=Z,15nm,0.7s,baz=217,slow=6.2,SNR=22
SCHQ                                LR    LR     00 16 16.1
      comp=Z,226nm,18.3s,baz=258,slow=37
SCHQ  Schefferville     46.87  15 P     P      23 56 02.6 -2.1
SCHQ                                IAmb  IAmb   23 56 03.2
      comp=Z,19nm,0.8s
SDBA  SAO DESIDERIO     46.93 118 eP    P      23 56 05.9 +0.1
G03D  McMinnville, O    46.95 324 P     P      23 56 06.4 +0.9
      baz=126,SNR=6.1
IPMB  Ipameri, GO       47.00 127 eP    P      23 56 07.4 +1.1
B06A  Marblemount       48.02 329 P     P      23 56 13.4 -0.4
B06A                                IAmb  IAmb   23 56 15.6
      comp=Z,12nm,1.0s
PTGB  Pitanga           48.31 137 eP    P      23 56 16.4 -0.1
JANB  Januaria          48.68 121 eP    P      23 56 18.3 -1.1
MC01  Montes Claros     49.79 122 eP    P      23 56 28.9 +1.0
ITAB  Concordia         49.98 139 eP    P      23 56 28.8 -0.3
DIAM  Diamantina, MG    50.81 124 eP    P      23 56 36.5 +0.8
VAO   Valinhos          50.84 131 eP    P      23 56 37.0 +1.3
CPSB  Cacapava Do Su    51.43 143 eP    P      23 56 40.9 +1.0
GDU01 Guandu, BA        52.16 116 eP    P      23 56 45.8 +0.1
CMC01 Camacan, BA       52.92 118 eP    P      23 56 51.5 +0.2
PLCA  Paso Flores       52.95 165 P     P      23 56 52.7 +1.5
      comp=Z,1.5nm,0.9s,baz=330,slow=20,SNR=1.9
GUA01 Guaratinga, BA    53.22 120 eP    P      23 56 53.5  0.0
BSFB  Barra de Sao F    53.40 123 eP    P      23 56 56.1 +1.3
YKA   Yellowknife Ar    55.84 345 P     P      23 57 10.2 -1.5
      comp=Z,3.9nm,0.9s,baz=127,slow=8.9,SNR=6.5
YKA                                 PcP   PcP    23 58 11.2 +0.7
      comp=Z,1.7nm,0.7s,baz=137,slow=5.6,SNR=5.5
DLBC  Dease Lake        58.21 335 P     P      23 57 28.2 -0.5
      comp=Z,5.5nm,1.0s,baz=168,slow=9.3,SNR=4.3
DLBC                                PcP   PcP    23 58 20.9 +0.9
      comp=Z,6.4nm,1.0s,baz=31,slow=6.6,SNR=4.7
DLBC  Dease Lake        58.21 335 P     P      23 57 28.9 +0.1
RES   Resolute Bay      64.39 357 P     P      23 58 08.3 -1.9
      comp=Z,4.9nm,0.7s,baz=173,slow=10.0,SNR=28
EPYK  Eagle Plains      65.34 340 P     P      23 58 16.1 -0.5
      baz=123
INK   Inuvik            65.45 343 P     P      23 58 16.2 -1.0
      comp=Z,6.3nm,1.0s,baz=125,slow=7.8,SNR=14
INK                                 PcP   PcP    23 58 49.5 +0.5
      comp=Z,1.6nm,0.7s,baz=80,slow=1.4,SNR=6.1
INK   Inuvik            65.45 343 P     P      23 58 16.5 -0.7
      baz=127,SNR=7.1
L27K  Beaver Creek,     65.56 336 P     P      23 58 17.5 -0.7
      baz=117
A36M  Sachs Harbour     65.85 348 P     P      23 58 18.1 -1.6
      baz=137,SNR=8.4
DOT   Dot Lake          66.73 336 P     P      23 58 25.4 -0.2
DOT                                 IAmb  IAmb   23 59 20.0
      comp=Z,31nm,1.7s
SCRK  Sand Creek        66.84 336 P     P      23 58 26.4  0.0
      baz=115
J26L  Joseph Creek      66.90 337 P     P      23 58 27.0 +0.3
      baz=116,SNR=5.4
RIDG  Independent Ri    67.08 336 P     P      23 58 27.9 +0.1
      baz=114
J25K  Salcha River,     67.65 336 P     P      23 58 31.4 -0.1
      baz=114,SNR=5.3
HDA   Harding Lake      68.20 336 P     P      23 58 34.4 -0.4
      baz=112
HDA   Harding Lake      68.20 336 IAmb  IAmb   23 58 41.9
      comp=Z,13nm,1.1s
IL31                    68.31 336 IAmb  IAmb   23 58 43.1
      comp=Z,23nm,1.7s
ILAR  Eielson Array     68.31 336 P     P      23 58 34.8 -0.7
      comp=Z,3.4nm,1.0s,baz=107,slow=4.4,SNR=19
ILAR                                LR    LR     00 32 26.1
      comp=Z,134nm,20.0s,baz=152,slow=40
ILAR  Eielson Array     68.31 336 P     P      23 58 34.9 -0.6
PPT   Papeete           68.46 246 LR    LR     00 20 00.5
      comp=Z,119nm,18.2s,baz=38,slow=28
BMAR  Burnt Mountain    68.56 339 P     P      23 58 37.0 -0.1
RND   Reindeer          68.61 335 P     P      23 58 37.5  0.0
MCK   McKinley          68.76 335 P     P      23 58 37.6 -0.8
      baz=110
H24K  Noodor Dome       69.11 337 P     P      23 58 40.2 -0.3
      baz=112
H24K  Noodor Dome       69.11 337 IAmb  IAmb   23 58 47.3
      comp=Z,18nm,1.6s
BPAW  Bear Paw Mtn.     69.74 335 P     P      23 58 43.7 -0.8
      baz=108,SNR=6.1
BPAW  Bear Paw Mtn.     69.74 335 P     P      23 58 44.1 -0.4
BPAW                                IAmb  IAmb   23 58 52.4
      comp=Z,13nm,1.1s
MLY   Manley            69.94 336 P     P      23 58 45.1 -0.5
      baz=109
MLY   Manley            69.94 336 IAmb  IAmb   23 58 46.6
      comp=Z,7.9nm,0.9s
CAST  Castle Rocks      69.99 334 P     P      23 58 44.8 -1.2
      baz=107
COLD  Coldfoot          70.48 338 P     P      23 58 50.0 +1.1
      baz=110
I21K  Tanana            70.49 336 P     P      23 58 48.4 -0.5
      baz=108
L20K  Farewell, AK      70.52 333 P     P      23 58 48.2 -1.1
      baz=105
M19K  Big River Lodg    70.60 332 P     P      23 58 49.6 -0.2
      baz=104
TOLK  Toolik Lake Re    70.76 340 P     P      23 58 50.4 -0.2
      baz=111
K20K  Telida            70.83 334 P     P      23 58 50.5 -0.6
      baz=105
J20K  Nowinta River     71.09 335 P     P      23 58 51.9 -0.8
      baz=106
IMAR  Indian Mountai    71.43 336 P     P      23 58 53.7 -1.0
TTA   Tatalina          71.58 333 P     P      23 58 54.9 -0.9
      baz=103
MDT   Midelt            77.44  59 LR    LR     00 31 19.1
      comp=Z,115nm,18.1s,baz=328,slow=34
ESDC  Sonseca Array     77.50  52 P     P      23 59 28.4 -2.2
      comp=Z,1.6nm,0.8s,baz=285,slow=6.9,SNR=7.6
ESDC  Sonseca Array     77.50  52 P     P      23 59 28.2 -2.4
KOWA  Kowa              80.01  77 P     P      23 59 43.0 -1.8
KOWA                                IAmb  IAmb   23 59 52.8
      comp=Z,34nm,1.9s
ADK   Adak              82.14 321 P     P      23 59 55.6 +0.3
TORD  Torodi Ar. Bea    85.70  77 P     P      00 00 12.0 -2.3
      comp=Z,1.3nm,1.1s,baz=293,slow=4.1,SNR=6.7
SEY   Seymchan          94.24 337 P     P      00 00 53.1 -0.5
      comp=Z,1.1nm,0.7s,baz=10.0,slow=23,SNR=1.7
AKASG Malin Array Be    97.47  35 LR    LR     00 42 13.8
      comp=Z,132nm,20.2s,baz=150,slow=34
OBN   Obninsk           99.14  29 LR    LR     00 41 08.2
      comp=Z,131nm,20.5s,baz=178,slow=32
SONM  Songino Array    120.89 350 PKP   PKPdf  00 06 27.3  0.0
      comp=Z,0.7nm,0.7s,baz=350,slow=1.4,SNR=4.9
MKAR  Makanchi Array   122.10   9 PKP   PKPdf  00 06 28.7 -0.8
      comp=Z,0.6nm,0.7s,baz=321,slow=1.8,SNR=4.2
MKAR  Makanchi Array   122.10   9       PKPdf  00 06 29.2 -0.3
KSRS  Korea Array      122.58 328 PKP   PKPdf  00 06 31.1 +0.5
      comp=Z,3.8nm,0.8s,baz=8.5,slow=1.4,SNR=12
WMQ   Urumqi           125.71   5 ePKP  PKiKP  00 06 38.3 +1.3
WMQ                                 LR    LR
      comp=Z,640nm,16.1s
HHC   Hu-ho-hao-te     126.37 343 ePKP  PKPdf  00 06 36.8 -1.2
HHC                                 LR    LR
      comp=Z,520nm,18.7s
HHC                                 LR    LR
      comp=Z,420nm,19.6s
GTA   Gaotai           130.08 354 ePKP  PKiKP  00 06 46.5 +0.6
GTA                                 LR    LR
      comp=Z,370nm,18.9s
GTA                                 LR    LR
      comp=Z,440nm,19.6s
NJ2   Nanjing          131.39 331 ⇑PKP  PKiKP  00 06 49.5 +0.9
CD2   Chengdu          137.77 347 PKP   PKPdf  00 06 59.0 -0.7
ASAR  Alice Springs    139.57 246 PKP   PKPdf  00 07 03.1  0.0
      comp=Z,0.8nm,0.7s,baz=115,slow=2.0,SNR=9.1
ASAR  Alice Springs    139.57 246       PKPdf  00 07 02.7 -0.4
FITZ  Fitzroy Crossi   148.21 253 PKPbc PKPdf  00 07 20.3 +2.0
      comp=Z,2.3nm,0.6s,baz=67,slow=7.7,SNR=3.9
CMAR  Chiang Mai Arr   150.82 350 PKPbc PKPbc  00 07 28.1  0.0
      comp=Z,6.4nm,0.9s,baz=322,slow=2.6,SNR=4.7
```

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CMAR	Chiang Mai Arr	150.82	350	PKPdf	PKPdf	00 07 22.8	+0.3
CMAR				PKPbc	PKPbc	00 07 28.8	+0.8

IDC ***28*** *23:55:60.0±1.4,46.°08S×167.°18E,h0^{km},mb3.6/3,*
mb1 3.9/4,mb1mx3.4/41,mbtmp3.7/4,ML3.2/1,MS3.7/1,
Ms1 3.7/1,ms1mx2.8/23,Error ellipse: s-maj=59.5km
s-min=35.9km az=5.0
WEL ***28*** *23:56:13.7±1.0,46°S±4°×16°7E±°,h57^{km}±8^{km},M4.2/9,*
ML4.5/9,MLv4.2/9,Error ellipse: s-maj=0.0km
s-min=0.0km az=98.1
ISC 28 23:56:11.7±0.8,**45.°87S**±0.°06×**166.°94E**±0.°06,**h88**^{km}±6^{km},
n60,σ**1^s.00**/64,**mb3.5**/3,**Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PYZ	Puysegur Point	0.34	212	P	Pn	23 56 25.5	+0.4
PYZ				S	Sn	23 56 34.5	-0.6
DCZ	Deep Cove	0.43	20	P	Pn	23 56 25.8	+0.1
DCZ				S	Sn	23 56 35.3	-0.8
WHZ	Wether Hill Ro	0.70	92	P	Pn	23 56 28.7	+0.7
WHZ				S	Sn	23 56 40.1	-0.1
MLZ	Mavora Lakes	0.97	59	P	Pn	23 56 31.9	+1.0
MLZ				S	Sn	23 56 46.0	+0.7
APZ	The Paps	1.20	143	P	Pn	23 56 34.9	+1.3
APZ				S	Sn	23 56 50.7	+0.5
MSZ	Milford Sound	1.39	30	P	Pn	23 56 36.6	+0.8
MSZ				S	Sn	23 56 53.9	-0.3
SYZ	Scrubby Hill	1.67	114	P	Pn	23 56 40.2	+0.9
EAZ	Earnscleugh	1.78	70	P	Pn	23 56 42.0	+1.1
EAZ				S	Sn	23 57 03.0	-0.2
WKZ	Wanaka	1.80	55	P	Pn	23 56 42.7	+1.5
TUZ	Tuapeka	1.88	93	P	Pn	23 56 43.3	+1.1
JCZ	Jackson Bay	2.23	37	P	Pn	23 56 47.8	+1.0
HHSZ	Highcliff Hill	2.56	92	P	Pn	23 56 52.0	+0.8
ODZ	Otahua Downs	2.73	74	P	Pn	23 56 53.2	-0.4
LBZ	Lake Benmore	2.74	58	P	Pn	23 56 53.4	-0.2
FOZ	Fox Glacier	3.11	42	P	Pn	23 56 58.8	+0.2
TMZ	Timaru	3.24	64	P	Pn	23 56 59.5	-0.8
GCSZ	Gaunt Creek Bo	3.52	45	P	Pn	23 57 03.8	-0.3
ARCZ	Arundel	3.57	59	P	Pn	23 57 03.8	-1.1
RPZ	Rata Peaks	3.64	55	P	Pn	23 57 04.9	-0.9
WACZ	Wakanui South	3.98	63	P	Pn	23 57 09.7	-0.7
OXZ	Oxford	4.44	57	P	Pn	23 57 15.2	-1.5
INZ	Inchbonnie	4.51	47	P	Pn	23 57 17.1	-0.5
MQZ	McQueen's Vall	4.61	64	P	Pn	23 57 17.2	-1.7
AKCZ	Akaroa Harbour	4.69	67	P	Pn	23 57 19.6	-0.5
OKCZ	Okains Bay	4.86	66	P	Pn	23 57 21.9	-0.4
AMCZ	Amberley	4.89	59	P	Pn	23 57 22.2	-0.6
LTZ	Lake Taylor	4.92	53	P	Pn	23 57 21.9	-1.3
DSZ	Denniston Nort	5.42	42	P	Pn	23 57 29.4	-0.7
KHZ	Kahutara	5.87	56	P	Pn	23 57 34.8	-1.3
THZ	Tophouse	5.96	49	P	Pn	23 57 36.1	-1.2
QRZ	Quartz Range	6.48	41	P	Pn	23 57 44.1	-0.4
NNZ	Nelson	6.60	47	P	Pn	23 57 46.7	+0.7
TCW	Tory Channel	7.08	51	P	Pn	23 57 53.3	+0.8
DUWZ	D'Urville Isla	7.18	48	P	Pn	23 57 54.9	+0.9
MSWZ	Moikau Station	7.49	56	P	Pn	23 57 58.1	-0.2
CAW	Cannon Point	7.59	54	P	Pn	23 57 58.5	-1.0
KIW	Kapiti Island	7.67	52	P	Pn	23 58 00.1	-0.4
MTW	Mount Morrison	7.80	56	P	Pn	23 58 01.7	-0.7
KHEZ	Kahui Hut	8.39	41	P	Pn	23 58 11.6	+1.1
NEZ	North Egmont	8.45	41	P	Pn	23 58 12.8	+1.5
PKE	Pukeiti	8.46	40	P	Pn	23 58 12.5	+1.1
BFZ	Birch Farm	8.54	56	P	Pn	23 58 11.1	-1.4
NGZ	Ngauruhoe	9.25	47	P	Pn	23 58 24.3	+2.0
OTVZ	Oturere	9.29	47	P	Pn	23 58 23.2	+0.3
HIZ	Hauiti	9.41	41	P	Pn	23 58 23.6	-0.7
URZ	Urewera	10.72	48	Pn	Pn	23 58 35.7	-6.4
	0.2nm,0.3s,baz=301,slow=24,SNR=1.6						
URZ				Sn	Sn	00 00 29.1	-11
	1.0nm,0.3s,baz=120,slow=24,SNR=1.8						
WCZ	Waipu Caves	11.39	32	P	Pn	23 58 52.6	+1.3
OUZ	Omahuta	11.78	28	P	Pn	23 58 58.3	+1.8
RAO	Raoul Island	20.42	41	LR	LR	00 07 35.5	
	comp=Z,228nm,21.5s,baz=130,slow=34						
ASAR	Alice Springs	34.66	298	P	P	00 02 54.1	+1.4
	0.5nm,0.7s,baz=132,slow=6.5,SNR=5.9						
ASAR				PcP	PcP	00 05 25.0	0.0
	0.3nm,0.6s,baz=129,slow=3.9,SNR=2.3						
WRA	Warramunga Arr	37.22	303	P	P	00 03 16.0	+1.4
	0.3nm,0.5s,baz=135,slow=8.2,SNR=2.8						
WRA				PcP	PcP	00 05 32.7	0.0
	0.4nm,0.9s,baz=134,slow=2.7,SNR=2.2						
H01W1	Cape Leeuwin H	41.00	266	T	T	00 47 38.4	
	baz=121,slow=75,SNR=24						
H01W2	Cape Leeuwin H	41.01	266	T	T	00 47 36.7	
	baz=121,slow=75,SNR=32						
H01W3	Cape Leeuwin H	41.01	266	T	T	00 47 35.2	
	baz=121,slow=75,SNR=22						
FITZ	Fitzroy Crossi	43.94	295	P	P	00 04 08.5	-1.3
	1.6nm,0.9s,baz=126,slow=14,SNR=2.0						
TORD	Torodi Ar. Bea	145.07	206	PKP	PKPdf	00 15 39.2	+0.2
	3.0nm,0.7s,baz=157,slow=1.9,SNR=22						
BRTR	Keskin Array B	145.59	277	PKPbc	PKiKP	00 15 41.4	-2.1
	0.7nm,0.6s,baz=134,slow=4.0,SNR=4.2						
ARCES	ARCESS Array B	149.53	334	PKPbc	PKPbc	00 15 48.5	-0.9
	1.1nm,0.6s,baz=80,slow=6.5,SNR=1.4						
AKASG	Malin Array Be	151.75	295	PKPbc	PKiKP	00 15 56.2	+0.7
	0.1nm,0.3s,baz=81,slow=2.5,SNR=4.8						
FINES	FINESS Array B	152.60	319	PKPbc	PKiKP	00 15 57.6	+0.7
	7.1nm,1.1s,baz=110,slow=8.3,SNR=7.4						

IDC ***29*** *00:02:33.0±1.8,0.°29S×132.°39E,h0^{km},mb3.9/2,*
mb1 4.0/4,mb1mx3.5/39,mbtmp3.9/4,ML3.7/2,MS3.1/6,
Ms1 3.1/6,ms1mx2.8/44,Error ellipse: s-maj=28.6km
s-min=20.1km az=66.0
DJA ***29*** *00:02:36.7±1.0,0°S±4°×13°2E±°,h12^{km}±8^{km},M4.3/9,*
mb4.6/3,MLv4.2/9
ISC 29 00:02:37.9±1.6,**0.°41S**±0.°10×**132.°45E**±0.°09,**h33**^{km},**n15,**
σ**3^s.36**/16,**MS3.3**/3,**Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	1.27	249	Pn	Pn	00 02 57.4	-2.0
	96nm,0.3s,baz=56,slow=14,SNR=219						
SIJI				Sn	Sb	00 03 18.4	+1.0
	515nm,0.3s,baz=195,slow=23,SNR=16						
SWI	Sorong	1.27	249	P	Pn	00 02 58.3	-1.1
SWI				S	Sb	00 03 18.9	+1.5
FAKI	Fak Fak	2.50	185	P	Pn	00 03 17.5	+1.2
FAKI				S	Sn	00 03 45.7	0.0
MSAI	Masohi	4.57	230	P	Pn	00 03 46.5	+1.7
LBMI	Labuha	4.96	267	P	Pn	00 03 50.6	+0.5
SANI	Sanana	6.66	256	P	Pn	00 04 13.8	+0.3
	0.1nm14nm,0.7s						
SAUI	Saumlaki	7.61	189	P	Pn	00 04 26.7	+0.2
BATI	Baumata	13.08	222	LR	LR	00 12 05.8	
	comp=Z,117nm,18.2s,baz=292,slow=44						
FITZ	Fitzroy Crossi	18.81	200	P	P	00 06 53.3	-1.5
	0.1nm,0.3s,baz=16,slow=9.4,SNR=2.9						
FITZ				S	Sn	00 10 15.1	-10
	0.2nm,0.3s,baz=43,slow=12,SNR=2.4						
FITZ				LR	LR	00 16 05.7	
	comp=Z,38nm,18.6s,baz=48,slow=43						
WRA	Warramunga Arr	19.50	175	P	P	00 07 02.5	+0.1
	0.4nm,0.3s,baz=353,slow=12,SNR=16						
WRA				S	S	00 10 32.2	-8.9
	0.1nm,0.3s,baz=353,slow=20,SNR=3.7						
WRA				LR	LR	00 15 13.0	
	comp=Z,28nm,21.7s,baz=345,slow=39						
ASAR	Alice Springs	23.16	177	P	P	00 07 42.0	+0.3
	5.2nm,1.0s,baz=358,slow=9.7,SNR=28						
ASAR				S	S	00 11 58.5	+7.3
	1.8nm,1.1s,baz=356,slow=24,SNR=4.8						
MJAR	Matsushiro Arr	37.15	8	LR	LR	00 21 59.3	
	comp=Z,53nm,21.8s,baz=100,slow=32						
KSRS	Korea Array	37.91	354	LR	LR	00 26 27.0	
	comp=Z,25nm,18.1s,baz=114,slow=38						
ASAJ	Asahikawa	45.25	10	LR	LR	00 28 52.2	
	comp=Z,40nm,20.6s,baz=358,slow=35						
MKAR	Makanchi Array	64.22	324	P	P	00 13 09.4	-0.2
	1.0nm,0.9s,baz=118,slow=6.0,SNR=4.2						

PDG ***29*** *00:20:43.7±1.0,38.°74N×20.°46E,h0^{km}±11^{km},ML3.8/11,*
Error ellipse: s-maj=1.2km s-min=1.7km az=0.0
MOS ***29*** *00:20:43.2±1.2,38.°74N×20.°43E,h9^{km},mb4.5/8,Error*
ellipse: s-maj=7.7km s-min=5.5km az=84.3
IDC ***29*** *00:20:43.5±0.7,38.°80N×20.°58E,h0^{km},mb4.1/13,*
mb1 4.0/24,mb1mx3.8/60,mbtmp3.9/24,ML3.6/10,MS3.8/3,
Ms1 3.8/3,ms1mx3.1/50,Error ellipse: s-maj=13.0km
s-min=12.1km az=161.0
NEIC ***29*** *00:20:44.7±2.0,38.°75N±0.°05×20.°55E±0.°05,h5^{km}±4^{km},*
mb4.3/21,ML3.9(ATH),ML4.2(THE),Error ellipse:
s-maj=7.6km s-min=4.7km az=213.0
THE ***29*** *00:20:44.3,38.°73N×20.°63E,h8^{km},ML4.2/12,Error*
ellipse: s-maj=0.9km s-min=0.4km az=108.0
IASPEI ***29*** *00:20:44.3±0.8,38.°73N±0.°02×20.°64E±0.°03,h11^{km}±4^{km},*
mb4.1/24,Error ellipse: s-maj=3.7km s-min=2.4km
az=88.1,GT5 selection from ISC bulletin GT5 identified by
Bondr and McLaughlin (2009) selection criteria Bondr and
McLaughlin, A new ground truth data set for seismic
studies, <i>Seism. Res. Let.</i>, 80, 465-472,
2009
ATH ***29*** *00:20:44.5,38.°72N×20.°65E,h6^{km}±1^{km},ML3.9/22,Error*
ellipse: s-maj=1.4km s-min=0.6km az=292.0
ISC 29 00:20:44.7±0.6,**38.°73N**±0.°02×**20.°62E**±0.°02,**h11**^{km}±3^{km},
n280,σ**1^s.49**/339,**mb4.1**/24,**14C-7D,Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRAG	Dragano-Lefkad	0.06	215	P	Pg	00 20 45.8	-1.1
DRAG				S	Pg	00 20 47.1	+0.1
	999µm,0.2s						
DRAG	Dragano-Lefkad	0.06	215	P	Pg	00 20 45.9	-1.1
DRAG				S	Pg	00 20 47.1	+0.1
DRAG	Dragano-Lefkad	0.06	215		Pg	00 20 47.1	+0.1
LKD2	Lefkada island	0.06	29	P	Pg	00 20 45.9	-1.2
LKD2				S	Pg	00 20 47.4	+0.3
	607µm,0.5s						
LKD2	Lefkada island	0.06	29	P	Pg	00 20 46.0	-1.0
LKD2				S	Pg	00 20 47.4	+0.3
LKD2				AML	AML	00 20 47.6	
LKD2				AML	AML	00 20 48.0	
LKD2	Lefkada island	0.06	29		Pg	00 20 47.4	+0.3
NYDR	Nydri-Lefkada	0.07	107	P	Pg	00 20 45.8	-1.2
NYDR				S	Pg	00 20 47.1	+0.1
	485µm,0.4s						
NYDR	Nydri-Lefkada	0.07	107	P	Pg	00 20 45.9	-1.1
NYDR				S	Pg	00 20 47.0	+0.1
NYDR	Nydri-Lefkada	0.07	107		Pg	00 20 47.1	+0.1
TSLK	Tsoukalades, L	0.10	18	P	Pg	00 20 46.7	-0.7
TSLK				S	Sg	00 20 48.7	-0.6
	246µm,0.7s						
TSLK	Tsoukalades, L	0.10	18	P	Pg	00 20 46.9	-0.5
TSLK				S	Sg	00 20 48.4	-0.9
TSLK				AML	AML	00 20 50.6	
TSLK				AML	AML	00 20 51.3	
TSLK	Tsoukalades, L	0.10	18		Pg	00 20 46.7	-0.7
TSLK					Sg	00 20 48.7	-0.6
EVGI	Lefkada island	0.12	165	P	Pg	00 20 46.9	-0.7
EVGI				S	Pg	00 20 48.6	+1.0
	121µm,0.2s						
EVGI	Lefkada island	0.12	165	P	Pg	00 20 46.9	-0.7
EVGI				S	Sg	00 20 48.4	-1.3
EVGI	Lefkada island	0.12	165		Pg	00 20 48.6	+1.0
FSK	Fiskardo	0.28	189	P	Pg	00 20 50.0	-0.3
FSK				S	Sg	00 20 54.2	+0.1
	64µm,0.2s						
FSK	Fiskardo	0.28	189	P	Pg	00 20 50.0	-0.3
FSK				S	Sg	00 20 54.4	+0.3
FSK				AML	AML	00 20 55.4	
	comp=N,85147µm,0.2s						
FSK				AML	AML	00 20 55.5	
FSK	Fiskardo	0.28	189		Pg	00 20 50.0	-0.3
FSK					Sg	00 20 54.2	+0.1
KEF4	Livadi, Kephal	0.50	198	P	Pg	00 20 53.7	-0.7
KEF4				S	Sg	00 21 00.9	-0.1
	comp=N,91µm,0.3s						
KEF4	Livadi, Kephal	0.50	198	P	Pg	00 20 53.6	-0.9
KEF4				S	Sb	00 21 01.9	-0.8
KEF4	Livadi, Kephal	0.50	198		Pg	00 20 53.7	-0.7
DMLN	Damoulianata-K	0.53	201	P	Pg	00 20 54.1	-0.9
DMLN				S	Sb	00 21 02.8	-0.9
	comp=N,13µm,0.7s						
DMLN	Damoulianata-K	0.53	201	P	Pg	00 20 54.2	-0.8
DMLN				S	Sg	00 21 02.3	+0.3
LXRA	Lixouri, Kepha	0.55	195	P	Pg	00 20 54.7	-0.8
LXRA				S	Sg	00 21 02.4	-0.3
VLS	Valsamata	0.56	182	P	Pg	00 20 54.3	-1.2
VLS				S	Sg	00 21 02.9	0.0
	comp=N,12µm,0.2s						
VLS	Valsamata	0.56	182	P	Pg	00 20 54.5	-1.1
VLS				S	Sg	00 21 02.8	-0.1
VLS				AML	AML	00 21 04.4	
	comp=E,20548µm,0.2s						
VLS				AML	AML	00 21 06.6	
	comp=N,25158µm,0.3s						
ARGA	Argostoli. Kep	0.57	191	P	Pg	00 20 55.6	-0.1
KEF3	Kipouria, Keph	0.57	202	P	Pg	00 20 54.3	-1.5
KEF3				S	Sg	00 21 03.3	0.0
	comp=N,28µm,0.7s						
KEF3	Kipouria, Keph	0.57	202	P	Pg	00 20 54.2	-1.5
KEF3				S	Sg	00 21 02.5	-0.8
PSDA	Pessada-Kefalo	0.62	182	P	Pg	00 20 55.4	-1.3
PSDA				S	Sg	00 21 05.5	+0.7
PSDA	Pessada-Kefalo	0.62	182	P	Pg	00 20 55.7	-1.1
PSDA				S	Sg	00 21 03.8	-1.0
IGT	Igoumenitsa	0.83	345	P	Pg	00 20 59.7	-1.0
IGT	Igoumenitsa	0.83	345	P	Pg	00 21 00.2	-0.5
IGT				S	Sb	00 21 13.0	+0.7
IGT				AML	AML	00 21 18.2	
	comp=N,17359µm,0.4s						
IGT				AML	AML	00 21 18.4	
	comp=E,13162µm,0.5s						
VTN	Vitineika	0.93	151	P	Pg	00 21 02.1	-0.5
VTN	Vitineika	0.93	151	P	Pg	00 21 02.3	-0.3
JAN	Janina	0.94	11	P	Pg	00 21 01.7	-1.2
JAN	Janina	0.94	11	P	Pg	00 21 02.2	-0.6
JAN				AML	AML	00 21 22.6	
	comp=E,12685µm,1.1s						
JAN				AML	AML	00 21 25.3	
	comp=N,8245µm,0.5s						
EVR	Evrytania	0.95	78	P	Pg	00 21 02.2	-0.8
EVR				S	Sb	00 21 16.5	+0.6
	comp=N,4µm,0.7s						
EVR	Evrytania	0.95	78	P	Pg	00 21 02.3	-0.8
EVR				AML	AML	00 21 27.2	
	comp=E,9931µm,0.8s						
EVR				AML	AML	00 21 29.0	
	comp=N,7570µm,0.6s						
RLS	Riolos of Patr	0.95	135	P	Pg	00 21 01.5	-1.5
RLS	Riolos of Patr	0.95	135	P	Pg	00 21 01.8	-1.2
RLS				AML	AML	00 21 24.9	
	comp=E,10606µm,0.5s						
RLS				AML	AML	00 21 25.5	
	comp=N,13133µm,0.7s						
ZAK2	Zakynthos	0.97	167	P	Pg	00 21 02.8	-0.6
ANX	Ano Chora	1.03	97	P	Pg	00 21 03.2	-1.3
ANX				AML	AML	00 21 22.1	
	comp=N,22205µm,0.4s						
ANX				AML	AML	00 21 31.3	
	comp=E,26800µm,0.6s						
LTHK	Lithakia	1.04	170	P	Pg	00 21 02.5	-2.1
LTHK	Lithakia	1.04	170	P	Pg	00 21 02.6	-2.0
EFP	Efpalio	1.05	106	P	Pg	00 21 03.4	-1.6
EFP	Efpalio	1.05	106	P	Pg	00 21 03.6	-1.4
EFP				AML	AML	00 21 26.5	
	comp=E,12192µm,0.5s						
EFP				AML	AML	00 21 26.7	
	comp=N,16064µm,0.4s						
KASA	Kassiopi	1.14	333	P	Pn	00 21 06.5	-0.1
KASA				AML	AML	00 21 29.0	
	comp=E,10430µm,0.7s						
KASA				AML	AML	00 21 29.4	
	comp=N,7556µm,0.5s						
DRO	Drossia	1.16	132	P	Pg	00 21 05.2	-1.8
DRO	Drossia	1.16	132	P	Pg	00 21 05.3	-1.7
DRO				AML	AML	00 21 31.2	
	comp=N,12833µm,0.4s						
DRO				AML	AML	00 21 31.6	
	comp=E,18862µm,0.5s						
KEK	Kerkira	1.17	327	P	Pb	00 21 06.5	-0.4
KEK	Kerkira	1.17	327	P	Pb	00 21 06.6	-0.3
KEK				S	Sn	00 21 23.7	+0.8
KEK				AML	AML	00 21 30.8	
	comp=E,5786µm,0.6s						
KEK				AML	AML	00 21 33.4	
	comp=N,5088µm,0.5s						
SERG	Sergoula	1.17	105	P	Pg	00 21 05.4	-1.8
SERG	Sergoula	1.17	105	P	Pg	00 21 05.8	-1.4
SERG				S	Sg	00 21 22.1	-0.4
SERG				AML	AML	00 21 32.6	
	comp=N,12169µm,0.4s						
SERG				AML	AML	00 21 35.7	
	comp=E,13084µm,0.5s						
LAKA	Lakka	1.18	114	P	Pg	00 21 05.8	-1.5
LAKA				S	Sg	00 21 21.4	-1.2
LAKA				AML	AML	00 21 29.9	
	comp=N,6713µm,1.0s						
LAKA				AML	AML	00 21 32.5	
	comp=E,6314µm,0.9s						
TRIZ	Trizonia	1.20	107	P	Pg	00 21 05.8	-1.9
MAKR	Makrakomi, Fth	1.21	76	P	Pg	00 21 07.0	-1.0
MAKR				AML	AML	00 21 31.7	
	comp=N,16611µm,0.7s						
MAKR				AML	AML	00 21 36.9	
	comp=E,24652µm,0.5s						
SRN	Sarande	1.24	338	P	Pb	00 21 07.8	-0.4
SRN				S	Sn	00 21 24.6	-0.2
	comp=E,8µm,0.8s						
THL	Klokotos Trika	1.37	52	P	Pn	00 21 09.8	+0.1
THL				AML	AML	00 21 37.7	
	comp=N,8014µm,0.9s						
THL				AML	AML	00 21 39.8	
	comp=E,6085µm,0.7s						
AGG	Agios Georgios	1.37	77	P	Pn	00 21 09.9	+0.2
AGG				AML	AML	00 21 36.0	
	comp=N,6453µm,0.7s						
AGG				AML	AML	00 21 39.6	
	comp=E,10742µm,0.9s						
AGG	Agios Georgios	1.37	77	P	Pn	00 21 10.3	+0.5
AGG						00 21 31.7	
AGG	Agios Georgios	1.37	77		Pn	00 21 10.2	+0.5
AGG					Sg	00 21 31.6	+2.9
KLV	Kalavryta, Ach	1.39	119	P	Pn	00 21 08.8	-1.3
KLV				AML	AML	00 21 37.1	
	comp=N,5072µm,1.2s						
KLV				AML	AML	00 21 38.6	
	comp=E,3946µm,0.7s						
GUR	Goura	1.57	120	P	Pn	00 21 12.1	-0.6
GUR				AML	AML	00 21 45.6	
	comp=N,11834µm,0.5s						
GUR				AML	AML	00 21 47.5	
	comp=E,8029µm,1.0s						
THAL	Thalero	1.75	113	P	Pn	00 21 15.6	+0.6
THAL				AML	AML	00 21 51.5	
	comp=N,7454µm,0.4s						
THAL				AML	AML	00 21 53.7	
	comp=E,14776µm,0.6s						
ITM	Ithomi	1.86	146	P	Pn	00 21 17.7	+1.1
ITM				AML	AML	00 21 58.1	
	comp=N,3820µm,0.7s						
ITM				AML	AML	00 22 00.6	
	comp=E,5241µm,1.3s						
ITM	Ithomi	1.86	146	Pn	Pb	00 21 18.2	-0.6
ATAL	Atalanti	1.88	90	P	Pb	00 21 19.0	0.0
KBN	Korca	1.89	4		Pb	00 21 18.9	-0.5
KBN				Sn	Sb	00 21 43.6	+0.6
VLO	Vlora	1.94	334	P	Pb	00 21 18.7	-1.3
VLO	Vlora	1.94	334		Pb	00 21 18.7	-1.3
LTK	Loutraki	1.98	110	P	Pb	00 21 20.2	-0.6
PYL	PYLOS	2.04	154	P	Pn	00 21 19.5	+0.5
XOR	Xorichti	2.10	72	P	Pn	00 21 21.3	+1.5
NEO	Neokhori	2.11	73	P	Pb	00 21 23.0	0.0
FNA	Florina	2.13	16	P	Pb	00 21 22.0	-1.4
FNA	Florina	2.13	16	Pn	Pb	00 21 22.0	-1.4
OHR	Ohrid	2.38	3	*i* Pn	Pb	00 21 26.1	-1.5
KRND	KRANIDI	2.41	123	P	Pn	00 21 25.7	+1.6
TIR	Tirane	2.67	348	⇑P	Pn	00 21 29.6	+1.9
TIR				⇑S	Sn	00 22 02.3	+2.1
TIR	Tirane	2.67	348	P	Pn	00 21 28.7	+1.0
TIR	Tirane	2.67	348		Pn	00 21 28.7	+1.0
VAY	Valandovo	2.99	29	*i* Pn	Pn	00 21 33.5	+1.5
TIP	Timpagrande	3.04	280	Pn	Pn	00 21 32.4	-0.5
STIP	Stip	3.19	22	*i* Pn	Pb	00 21 39.1	-2.3
ULC	Ulcinj	3.39	342	⇑*i*Pn	Pn	00 21 37.4	-0.2
ULC				*i* Sn	Sn	00 22 18.5	+0.6
MATE	Matera	3.57	304	⇑P	Pn	00 21 40.8	+0.7
DRME	Dracevica, Mon	3.62	343	*e*Pn	Pn	00 21 40.9	+0.2
DRME	Dracevica, Mon	3.62	343	*e*Pn	Pn	00 21 40.9	+0.2
DRME				*i* Sn	Sn	00 22 22.8	-0.6
CEL	Celeste	3.74	264		Pn	00 21 42.6	+0.2
BUM	Brajici-Budva	3.80	340	*e*Pn	Pn	00 21 43.1	-0.1
BUM				*i* Sn	Sn	00 22 27.9	-0.1
PDG	Podgorica	3.84	345	⇓P	Pn	00 21 44.7	+1.0
PDG	Podgorica	3.84	345	⇑*i*Pn	Pn	00 21 44.0	+0.3
PDG	Podgorica	3.84	345	Pn	Pn	00 21 43.6	-0.1
TTG	Podgorica	3.84	345	⇑*i*Pn	Pn	00 21 44.2	+0.5
TTG				*i* Sn	Sn	00 22 28.5	-0.2
CEME	Cevo	4.02	342	*e*Pn	Pn	00 21 46.0	-0.3
CEME				*i* Sn	Sn	00 22 33.6	+0.1
HCY	Herceg Novi	4.05	337	*e*Pn	Pn	00 21 45.3	-1.3
HCY	Herceg Novi	4.05	337	*e*Pn	Pn	00 21 45.7	-0.9
HCY				*i* Sn	Sn	00 22 33.2	-0.8
IVA	Berane	4.17	353	*e*Pn	Pn	00 21 49.9	+1.5
KOME	Kolasin	4.20	349	*e*Pn	Pn	00 21 50.2	+1.4
KOME				*i* Sn	Sn	00 22 38.3	+0.5
NKME	Niksic	4.22	343	*e*Pn	Pn	00 21 49.6	+0.5
NKME				*i* Sn	Sn	00 22 38.5	+0.1
APE	Apeiranthos	4.23	112	⇓P	Pn	00 21 54.0	+4.9
NKY	Niksic	4.26	344	*e*Pn	Pn	00 21 49.0	-0.6
NKY				*i* Sn	Sn	00 22 39.4	+0.1
TREB	Trebinje	4.34	337	*e*Pn	Pn	00 21 49.2	-1.4
VTS	Vitosha	4.36	26	⇑P	Pn	00 21 54.1	+3.1
VTS	Vitosha	4.36	26	P	Pn	00 21 52.6	+1.5
VTS	Vitosha	4.36	26	Pn	Pn	00 21 52.6	+1.5
BRY	Bratogost	4.45	340	*e*Pn	Pn	00 21 51.8	-0.5
BRY	Bratogost	4.45	340	⇓*i*Pn	Pn	00 21 52.1	-0.2
BRY				*i* Sn	Sn	00 22 43.3	-0.9
SANT	Santorini	4.51	120	Pn	Pn	00 21 55.9	+2.9
UPM	Unac-Piva	4.65	344	*e*Pn	Pn	00 21 56.8	+1.7
UPM	Unac-Piva	4.65	344	⇓*i*Pn	Pn	00 21 55.6	+0.5
UPM				*i* Sn	Sn	00 22 48.4	-0.7
PLE	Pljevlja	4.69	349	*e*Pn	Pn	00 21 56.7	+1.2
PLE				*i* Sn	Sn	00 22 49.3	-0.6
STON	Ston	4.69	333	*e*Pn	Pn	00 21 54.1	-1.3
STON	Ston	4.69	333	*e*Pn	Pn	00 21 54.1	-1.3
ALN	Alexandroupoli	4.71	61	P	Pn	00 21 56.7	+1.1
ALN	Alexandroupoli	4.71	61	Pn	Pn	00 21 56.7	+1.1
SGRT	San Giovanni R	4.80	311		Pn	00 21 56.6	-0.4
IDI	Anoyia	4.85	134	Pn	Pn	00 21 57.9	+0.3
	comp=E,1.9nm,0.3s,baz=324,slow=16,SNR=21						
IDI				Sn	Sn	00 22 56.3	+2.4
	comp=E,6.5nm,0.3s,baz=247,slow=10,SNR=7.5						
LSTV	Lastovo	4.92	326	*e*Pn	Pn	00 21 57.4	-1.2
BOVS	Bovan	4.97	9	⇑P	Pn	00 22 02.0	+2.8
RUDO	Rudo	4.97	349	*e*Pn	Pn	00 21 58.7	-0.6
VAE	Valguarnera	5.05	258	Pn	Pn	00 22 01.1	+0.6
	comp=E,0.7nm,0.3s,baz=25,slow=17,SNR=3.3						
VAE				Sn	Sn	00 23 02.3	+3.4
	comp=E,1.8nm,0.3s,baz=181,slow=17,SNR=1.9						
RAFF	Raffo Rosso	5.17	255	Pn	Pn	00 22 00.5	-1.5
PAOL	Paolisi	5.19	298	Pn	Pn	00 22 02.4	+0.1
BBLS	Lazići	5.21	350	*e*Pn	Pn	00 22 02.5	-0.1
MAKA	Makarska	5.30	330	*e*Pn	Pn	00 22 03.0	-0.8
DIVS	Divibare	5.38	355	*e*Pn	Pn	00 22 04.4	-0.6
DIVS	Divibare	5.38	355	Pn	Pn	00 22 04.8	-0.2
RICI	Ricice	5.44	332	*e*Pn	Pn	00 22 04.7	-1.0
RICI				Sn	Sn	00 23 06.4	-1.8
HVAR	Hvar	5.45	326	*e*Pn	Pn	00 22 04.9	-0.9
BALB	Balikesir	5.71	79	Pn	Pn	00 22 12.8	+3.3
CORL	Corleone	5.81	264	Pn	Pn	00 22 13.0	+2.1
ZIRJ	Zirje	6.18	324	*e*Pn	Pn	00 22 14.4	-1.5
MGRS	Mrkonjic Grad	6.27	336	*e*Pn	Pn	00 22 16.4	-0.7
DOB	Doboj	6.28	343	*e*Pn	Pn	00 22 15.9	-1.4
HERR	Herculane	6.29	12	⇑P	Pn	00 22 21.0	+3.6
MORI	Morici	6.32	326	*e*Pn	Pn	00 22 17.3	-0.6
MORI				Sn	Sn	00 23 28.2	-1.7
FRGS	Fruska Gora	6.45	355	⇑P	Pn	00 22 20.2	+0.6
FRGS	Fruska Gora	6.45	355	*e*Pn	Pn	00 22 18.9	-0.7
BLY	Banja Luka	6.54	338	*e*Pn	Pn	00 22 20.1	-0.7
AQU	L'Aquila	6.58	306	P	Pn	00 22 23.0	+1.6
AQU	L'Aquila	6.58	306	*e*Pn	Pn	00 22 22.9	+1.6
AQU	L'Aquila	6.58	306		Pn	00 22 23.0	+1.6
DUGI	Dugi Otok	6.71	323	*e*Pn	Pn	00 22 22.9	-0.3
UDBI	Udbina	6.84	329	*e*Pn	Pn	00 22 25.3	+0.3
GZR	Gura Zlata	6.85	13	⇓P	Pn	00 22 27.6	+2.5
BZS	Buzias	6.92	6	⇑P	Pn	00 22 28.0	+2.0
NRCA	Norcia	7.01	308		Pn	00 22 28.1	+0.7
PLIT	Plitvice	7.18	330	*e*Pn	Pn	00 22 29.4	-0.3
NVLJ	Novalja	7.24	325	*e*Pn	Pn	00 22 29.7	-0.8
ARR	Arges	7.27	23	⇑P	Pn	00 22 35.9	+4.9

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DEV   Deva               7.34  13 ⇑P    Pn     00 22 34.2 +2.4
MOSL  Moslavina          7.45 339 ePn   Pn     00 22 32.0 -1.3
KOVH  Kovagotottos       7.58 347 eP    Pn     00 22 33.6 -1.5
KOVH                              eS    Sn     00 23 54.4 -6.6
MORH  Mrgy, Hungar       7.62 350 ePn   Pn     00 22 34.7 -0.9
MLR   Muntele Rosu       7.83  29 ⇓P    Pn     00 22 43.4 +4.8
MLR   Muntele Rosu       7.83  29  Pn   Pn     00 22 45.1 +6.5
      comp=E,0.6nm,0.3s,baz=292,slow=13,SNR=8.2
MLR                                LR   LR     00 26 15.5
      comp=E,255nm,19.4s,baz=193,slow=43
BOJS  Bojanci            7.85 331 i Pn  Pn     00 22 38.5 -0.3
BOJS                              i Sn  Sn     00 24 04.3 -3.4
OZLJ  Ozalj              7.87 333 ePn   Pn     00 22 38.1 -0.9
KALN  Kalnik             8.01 339 ePn   Pn     00 22 38.8 -2.2
RIY   Rijeka             8.01 327 ePn   Pn     00 22 39.5 -1.5
RIY   Rijeka             8.01 327 ePn   Pn     00 22 40.2 -0.8
BRJN  Brijuni            8.02 322 ePn   Pn     00 22 40.1 -1.0
GBRS  Gornja Briga       8.05 329 i Pn  Pn     00 22 41.7 +0.2
CRES  Cresnjev           8.05 333 ePn   Pn     00 22 40.4 -1.2
LOBO  Lobor              8.14 337 ePn   Pn     00 22 41.7 -1.1
VISS  Visnje             8.26 331 i Pn  Pn     00 22 44.3 -0.2
CEY   Cerknica           8.37 329 ePn   Pn     00 22 43.2 -2.8
PLOR  Plostina           8.40  30 ⇓P    Pn     00 22 51.0 +4.7
CASP  Castiglione de     8.44 302  Pn   Pn     00 22 48.9 +2.0
VRI   Vrincioaia         8.44  30 ⇑P    Pn     00 22 50.1 +3.1
OSSC  Osservatorio P     8.54 307  Pn   Pn     00 22 49.5 +1.2
LJU   Ljubljana          8.58 330 ePn   Pn     00 22 47.5 -1.3
SOKA  Soboth             8.94 334 ePn   Pn     00 22 53.1 -0.7
      comp=E,6.3nm,0.5s,SNR=7.7
OBKA  Obir               8.96 332 ePn   Pn     00 22 53.7 -0.5
      comp=E,4.6nm,0.5s,SNR=13
OBKA                              eSn   Sn     00 24 32.5 -2.7
      comp=E,6.5nm,0.3s
ZCCA  Zocca              9.15 311  Pn   Pn     00 22 58.3 +1.7
PSZ   Piszkesteto        9.20 357  P    Pn     00 22 57.5 +0.2
PSZ   Piszkesteto        9.20 357  Pn   Pn     00 22 57.5 +0.2
ARSA  Arzberg            9.29 338 ePn   Pn     00 22 57.9 -0.7
      comp=E,3.9nm,0.6s,SNR=5.1
TEOL  Teolo              9.38 318       Pn     00 22 59.4 -0.4
VLC   Villacollemand     9.40 308  Pn   Pn     00 23 01.9 +1.8
KEST  Kesra              9.47 255  Pn   Pn     00 23 01.7 +0.5
      comp=E,0.1nm,0.3s,baz=214,slow=20,SNR=1.2
KEST  Kesra              9.47 255       Pn     00 23 03.2 +2.0
STAL  STALIGIAL          9.52 325       Pn     00 23 00.8 -0.9
ZOU   Zoufplan           9.63 327  Pn   Pn     00 23 02.2 -1.2
CONA  Conrad Observa     9.82 341 ePn   Pn     00 23 05.5 -0.4
      comp=E,0.4nm,0.2s
CTI   Castel Tesino      9.87 321  P    Pn     00 23 06.0 -0.6
CTI   Castel Tesino      9.87 321  Pn   Pn     00 23 06.0 -0.6
MODS  Modra-Piesok       9.94 347 eP    Pn     00 23 07.7 +0.3
MODS  Modra-Piesok       9.94 347 ePN   Pn     00 23 07.7 +0.3
ABTA  Abfaltersbach      9.98 326 ePn   Pn     00 23 08.4 +0.4
      comp=E,3.2nm,0.6s
ABTA                               Sn   Sn     00 24 59.0 -1.0
      comp=E,3.2nm,0.5s
BR131 Keskin Array S    10.15  80       Pn     00 23 13.5 +3.0
BRTR  Keskin Array B    10.15  80  Pn   Pn     00 23 14.2 +3.6
      comp=E,0.2nm,0.3s,baz=269,slow=12,SNR=4.8
SALO  Salr              10.16 316  Pn   Pn     00 23 11.3 +0.8
MOA   Molln             10.22 335 ePn   Pn     00 23 10.3 -1.0
      comp=E,2.9nm,0.5s,SNR=8.7
MOA                               eSn   Sn     00 25 03.8 -2.0
      comp=E,2.8nm,0.5s
WTTA  Wattenberg        10.76 325 ePn   Pn     00 23 18.2 -0.6
      comp=E,1.9nm,0.3s
WATA  Walderalm         10.84 325 ePn   Pn     00 23 19.9  0.0
      comp=E,4.9nm,0.6s,SNR=5.7
WATA                              eSn   Sn     00 25 19.7 -1.6
      comp=E,3.6nm,0.5s
SQTA  Sankt Quirin      10.92 324 ePn   Pn     00 23 21.6 +0.6
      comp=E,3.0nm,0.6s
VRAC  Vranov            10.96 346  Pn   Pn     00 23 21.9 +0.5
      comp=E,0.2nm,0.3s,baz=155,slow=12,SNR=4.4
VRAC                               LR   LR     00 27 55.8
      comp=E,272nm,18.7s,baz=184,slow=40
CKRC  Cesky Krumlov     11.06 338 ePN   Pn     00 23 23.2 +0.4
MOTA  Moosalm           11.06 324 ePn   Pn     00 23 22.9  0.0
      comp=E,3.7nm,0.5s,SNR=8.6
MOTA                               Sn   Sn     00 25 25.0 -1.7
      comp=E,6.8nm,0.7s
MORC  Moravsky Berou    11.26 350  P    Pn     00 23 26.0 +0.5
MORC  Moravsky Berou    11.26 350  Pn   Pn     00 23 26.0 +0.5
DAVOX Davos/Dischmat    11.26 319  Pn   Pn     00 23 25.3 -0.4
      comp=E,0.2nm,0.3s,baz=132,slow=18,SNR=1.8
DAVOX                              Sn   Sn     00 25 28.3 -3.3
      comp=E,0.2nm,0.3s,baz=148,slow=23,SNR=1.4
GEC2  GERESS Array S    11.27 336  Pn   Pn     00 23 25.2 -0.6
GERES GERESS Array B    11.27 336  Pn   Pn     00 23 24.5 -1.3
      comp=E,0.4nm,0.3s,baz=158,slow=14,SNR=9.9
GERES                              Sn   Sn     00 25 25.1 -6.6
      comp=E,0.4nm,0.3s,baz=151,slow=23,SNR=5.0
GERES GERESS Array B    11.27 336  P    Pn     00 23 24.8 -0.9
GERES GERESS Array B    11.27 336       Pn     00 23 24.8 -0.9
RETA  Reutte            11.32 324 ePn   Pn     00 23 27.8 +1.4
      comp=E,1.3nm,0.4s
RETA                              eSn   Sn     00 25 31.3 -1.7
      comp=E,2.1nm,0.4s
KHC   Kasperske Hory    11.56 336 ePN   Pn     00 23 28.3 -1.4
KHC                               eSN   Sn     00 25 34.3 -4.4
KHC   Kasperske Hory    11.56 336 eP    Pn     00 23 28.3 -1.4
KHC                               e            00 25 34.3
KHC   Kasperske Hory    11.56 336  Pn   Pn     00 23 28.5 -1.2
DAVA  Damuels           11.60 321 ePn   Pn     00 23 30.9 +0.5
      comp=E,0.6nm,0.3s
SENIN Lac Senin/Sane    12.42 312  Pn   Pn     00 23 42.1 +0.5
MMAI  Mount Meron Ar    13.27 111  Pn   Pn     00 23 50.7 -2.5
      comp=E,0.5nm,0.3s,baz=306,slow=11,SNR=10
MMAI                               Sn   Sn     00 26 13.4 -7.4
      comp=E,0.5nm,0.3s,baz=313,slow=23,SNR=1.7
AKASG Malin Array Be    13.43  24  Pn   Pn     00 23 53.8 -1.3
      comp=E,0.3nm,0.3s,baz=209,slow=11,SNR=1.7
GHAJ  Ghor Haditha      14.31 117       Pn     00 24 06.2 -1.0
ASF   Jabal al Asfar    14.79 111  Pn   Pn     00 24 14.5 +0.7
      comp=E,0.1nm,0.3s,baz=300,slow=8.1,SNR=1.6
EIL   Elat              14.90 123  Pn   Pn     00 24 12.2 -3.1
      comp=E,0.2nm,0.3s,baz=288,slow=9.6,SNR=2.3
EIL                                Sn   Sn     00 26 46.6  -14
      comp=E,0.2nm,0.3s,baz=211,slow=20,SNR=1.6
PABE  Paberze           16.93   7  Pn   Pn     00 24 40.5 -0.9
PABE                               IAmb IAmb   00 24 59.2
      comp=Z,30nm,1.2s
SIRT  Sirnak            17.21  87  Pn   Pn     00 24 45.8 +0.6
SHA1  Shidzhatmaz       17.30  66 i P   P      00 24 47.9 +0.1
KIV   Kislovodsk        17.36  65 eP    P      00 24 51.5 +3.2
KIV                                pmax pmax
      comp=Z,8.0nm,1.1s
KBZ   Khabaz            17.47  66  Pn   P      00 24 50.7 +1.3
      comp=Z,0.1nm,0.3s,baz=252,slow=10,SNR=5.9
KBZ   Khabaz            17.47  66 i P   P      00 24 52.3 +2.9
PYA1  Pyatigorsk        17.66  65 i P   P      00 24 54.0 +2.4
NCK   Nalchik           17.94  67 i P   P      00 24 56.8 +2.2
NCK                                pmax pmax
      comp=Z,5.0nm,0.9s
GNI   Garni             18.68  78  LR   LR     00 32 49.9
      comp=Z,924nm,19.4s,baz=325,slow=39
ESBB  Sonseca Array     19.06 281  P    P      00 25 06.3 -0.8
ESDC  Sonseca Array     19.06 281  P    Pn     00 25 08.2 +0.3
      comp=Z,0.1nm,0.3s,baz=77,slow=11,SNR=12
ESDC  Sonseca Array     19.06 281  P    P      00 25 06.9 -0.1
HFS   Hagfors           21.86 351  P    P      00 25 37.4 +0.2
      comp=Z,2.4nm,0.4s,baz=156,slow=11,SNR=14
NC602 NORSAR Array S    22.75 348  P    P      00 25 46.9 +0.3
FINES FINESS Array B    22.99   7  P    P      00 25 48.6 -0.5
      comp=Z,8.0nm,0.9s,baz=171,slow=9.8,SNR=15
FINES FINESS Array B    22.99   7 i P   P      00 25 49.7 +0.6
FINES                              pmax pmax
      comp=Z,8.0nm,0.9s
FINES FINESS Array B    22.99   7  P    P      00 25 49.1  0.0
FIA1  FINESS Array S    22.99   7  P    P      00 25 49.4 +0.3
ESK   Eskdalemuir       23.03 324  P    P      00 25 50.7 +1.0
ESK                                pmax pmax
      comp=Z,42nm,1.3s
ESK   Eskdalemuir       23.03 324  P    P      00 25 50.7 +1.0
NB2   NORSAR Subarra    23.09 348  P    P      00 25 50.0 -0.3
      comp=Z,1.3nm,0.7s,baz=161,slow=11
NOA   NORSAR Array B    23.09 348  P    P      00 25 50.0 -0.3
      comp=Z,1.7nm,0.8s,baz=158,slow=9.3,SNR=6.7
NOA   NORSAR Array B    23.09 348  P    P      00 25 50.0 -0.3
BELG  Belogornoye       23.16  45  P    P      00 25 51.5 +0.6
      comp=Z,10nm,0.9s,baz=305,slow=6.8,SNR=5.0
BELG  Belogornoye       23.16  45 i P   P      00 25 53.2 +2.3
BELG                               pmax pmax
      comp=Z,3.0nm,1.0s
KLMR  Klimovskoe        25.10  22 eP    P      00 26 04.7 -4.4
KLMR                               pmax pmax
      comp=Z,17nm,1.5s
KLMR  Klimovskoe        25.10  22 eP    P      00 26 04.8 -4.4
KLMR                               AMP         00 26 06.4
      comp=Z,17nm,1.5s
AKTO  Aktyubinsk        28.79  54  P    P      00 26 42.8 +0.4
      comp=Z,1.4nm,0.5s,baz=269,slow=11,SNR=4.3
ABKAR Akbulak array     29.87  56  P    P      00 26 53.5 +1.4
ABKAR Akbulak array     29.87  56  P    P      00 26 52.6 +0.5
ABKAR                              IAmb IAmb   00 27 06.0
      comp=Z,2.9nm,1.1s
TORD  Torodi Ar. Bea    30.51 218  P    P      00 26 59.0 +1.0
      comp=Z,0.6nm,0.5s,baz=31,slow=9.4,SNR=14
ARCES ARCESS Array B    30.98   3  P    P      00 27 01.1 -0.6
      comp=Z,4.0nm,0.9s,baz=179,slow=8.7,SNR=3.8
BRVK  Borovoye          36.64  50 i P   P      00 27 52.1 +1.1
BRVK                               pmax pmax
      comp=Z,5.0nm,1.3s
KKAR  Karatay Array     37.51  67  P    P      00 27 59.0 +0.5
KKAR  Karatay Array     37.51  67  P    P      00 27 59.0 +0.5
CHGR  Chuyangaron       37.53  74  P    P      00 27 59.6 +0.8
CHGR                               IAmb IAmb   00 28 04.8
      comp=Z,8.2nm,0.8s
GAR   Garm              38.30  73  P    P      00 28 06.9 +1.5
GAR                                IAmb IAmb   00 28 09.4
      comp=Z,6.4nm,0.7s
BTK   Batken            38.40  72  P    P      00 28 07.3 +1.1
BTK                                pmax pmax
      comp=Z,3.0nm,1.1s
BTK   Batken            38.40  72  P    P      00 28 07.3 +1.1
DBIC  Dimbokro          39.35 222  P    P      00 28 13.8 -0.5
      comp=Z,1.3nm,0.5s,baz=16,slow=9.4,SNR=5.7
DBIC  Dimbokro          39.35 222  P    P      00 28 13.5 -0.7
DBIC                               IAmb IAmb   00 28 25.4
      comp=Z,5.7nm,1.1s
AAK   Ala-Archa         40.47  67  P    P      00 28 25.4 +1.9
      comp=Z,1.0nm,0.5s,baz=264,slow=4.6
AAK   Ala-Archa         40.47  67  P    P      00 28 24.9 +1.4
BOOM  Boomskoye usch    41.54  67  P    P      00 28 33.9 +1.5
BOOM                               pmax pmax
      comp=Z,7.0nm,1.5s
BOOM  Boomskoye usch    41.54  67  P    P      00 28 33.9 +1.5
BOOM                               IAmb IAmb   00 28 34.6
      comp=Z,6.9nm,1.5s
NIL   Nilore            42.30  80  P    P      00 28 40.1 +1.6
NIL                                pmax pmax
      comp=Z,8.0nm,1.1s
NIL   Nilore            42.30  80  P    P      00 28 40.1 +1.6
NIL                                IAmb IAmb   00 28 51.0
      comp=Z,7.6nm,1.1s
MK31  Makanchi Array    44.95  59  P    P      00 28 59.3 -0.3
MK31                               pmax pmax
      comp=Z,3.0nm,1.2s
MK31  Makanchi Array    44.95  59  P    P      00 28 59.3 -0.3
MK31                               IAmb IAmb   00 29 04.1
      comp=Z,2.7nm,1.1s
MKAR  Makanchi Array    44.95  59  P    P      00 28 59.4 -0.2
      comp=Z,1.1nm,0.5s,baz=283,slow=6.6,SNR=19
MKAR                               PcP  PcP    00 30 42.9 +2.1
      comp=Z,0.7nm,0.8s,baz=264,slow=3.5,SNR=2.1
MKAR  Makanchi Array    44.95  59  P    P      00 28 59.2 -0.4
ZAA0  Zalesovo Array    45.27  49  P    P      00 29 01.6 -0.4
ZAA0                               IAmb IAmb   00 29 08.4
      comp=Z,3.3nm,0.7s
ZALV  Zalesovo Beam     45.27  49  P    P      00 29 01.5 -0.5
      comp=Z,3.7nm,0.4s,baz=276,slow=8.5,SNR=20
ZALV  Zalesovo Beam     45.27  49 i P   P      00 29 02.2 +0.2
ZALV                               pmax pmax
      comp=Z,4.0nm,0.4s
ZALV  Zalesovo Beam     45.27  49  P    P      00 29 02.0  0.0
SCHQ  Schefferville     58.10 317  P    P      00 30 38.9 +1.0
      comp=Z,3.7nm,0.8s,baz=56,slow=11,SNR=5.5
SCHQ  Schefferville     58.10 317  P    P      00 30 38.4 +0.4
SONM  Songino Array     60.05  51  P    P      00 30 52.3 +0.6
      comp=Z,0.5nm,0.7s,baz=284,slow=9.2,SNR=3.2
WRA   Warramunga Arr   120.48  92  PKP  PKPdf  00 39 37.0 +0.3
      comp=Z,0.3nm,0.5s,baz=325,slow=2.1,SNR=5.1
ASAR  Alice Springs    122.16  96  PKP  PKPdf  00 39 40.1 +0.2
      comp=Z,0.5nm,0.5s,baz=315,slow=1.1,SNR=9.7
```

IDC ***29*** *00:21:52.4±2.2, 31°.93N×49°.39E, h0^{km}, mb3.8/5, mb1 3.7/7, mb1mx3.4/60, mbtmp3.7/7, ML3.3/2, MS4.4/1, Ms1 4.4/1, ms1mx2.8/48, Error ellipse: s-maj=51.9km s-min=25.2km az=160.0*

TEH ***29*** *00:21:54.7, 31°.96N×49°.52E, h11^{km}, ML3.3*

KISR ***29*** *00:21:55.2±0.9, 31°.80N×49°.39E, h164^{km}±66^{km}, ML4.1*

THR ***29*** *00:21:55.1±0.9, 31°.91N×49°.53E, h14^{km}±9^{km}, ML3.0*

ISC 29 00:21:56.2±0.7**, 31°.96N**±0°.03×**49°.50E**±0°.04**, h20^{km}, n81, σ1^s.55**/87**, mb3.8**/5**, Western Iran**

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Code  Station Name        Δ°  AZ°    Phase ID       Time     Res
                                   Op    ISC      h  m  s   ISC
AMIS  Naft Sefid         0.34 211 ePg   Pb     00 22 02.2 -1.5
AHWZ  Ahwaz              0.96 229 ePg   Pb     00 22 14.3 +0.1
SHK1  Shahrekord         1.23  72 ePg   Pn     00 22 17.6 -0.9
SHK1                              e            00 22 42.7
      comp=Z,4µm,0.4s
IPIR  Pirpir             1.38  58 ePg   Pb     00 22 20.8 -0.8
IPIR                              e            00 22 27.0
      comp=Z,6µm,0.2s
IPIR                              eSg   Sb     00 22 41.7 +2.8
IBRJ  Brojen             1.50  92 ePg   Pb     00 22 23.1 -0.4
IBRJ                              e            00 22 55.1
      comp=Z,2µm,0.6s
ABEH  Behbahan           1.50 154 ePg   Pb     00 22 23.4  0.0
KHMZ  Khomeyn            1.81  12 ePg   Pb     00 22 28.9  0.0
KHMZ  Khomeyn            1.81  12 ePg   Pb     00 22 28.9  0.0
DHL1  Dehloran           2.01 292 ePn   Pn     00 22 30.1 +1.1
KLNJ  Kolanjah           2.03 117 ePn   Pb     00 22 31.0 -1.6
KLNJ                              e            00 23 05.0
      comp=Z,3µm,0.5s
IKFM  Kafar-mosalman     2.09 319 ePn   Pn     00 22 31.7 +1.6
IKFM                              e            00 23 14.9
      comp=Z,4µm,0.6s
IDOB  Doab               2.13 329 ePn   Pn     00 22 31.7 +0.8
IGAR  Gharneh            2.20  78 ePn   Pn     00 22 33.0 +1.1
IGAR                              e            00 23 07.2
      comp=Z,2µm,0.3s
IKLH  Kolahrood          2.22  52 ePn   Pb     00 22 34.0 -1.8
IKLH                              e            00 23 18.0
      comp=Z,2µm,0.5s
HSAM  Samen              2.37 342 ePn   Pn     00 22 35.7 +1.5
HSAM                              e            00 23 21.9
      comp=Z,1µm,0.6s
QAMS  Qamsar             2.38  42 ePn   Pb     00 22 37.2 -1.4
IRAM  Ramesheh           2.46  93 ePn   Pn     00 22 36.9 +1.5
IZEF  Zefreh             2.57  68 ePn   Pn     00 22 38.5 +1.6
IZEF                              e            00 23 22.7
      comp=Z,853nm,0.4s
ASAO  Ashtian            2.62  10 ePn   Pb     00 22 40.1 -2.5
ASAO                               IAML        00 23 31.4
      comp=N,68nm,0.8s
ASAO                               IAML        00 23 31.8
      comp=E,60nm,0.5s
ASAO  Ashtian            2.62  10 ePn   Pb     00 22 40.1 -2.5
MIB   Mutribah           2.84 221 eP    Pn     00 22 41.6 +1.1
MIB                               eS    Sn     00 23 16.1 +2.1
UMR   Umm Al-Rimmam      2.85 213 eP    Pn     00 22 41.2 +0.7
UMR                               eS    Sn     00 23 17.0 +2.7
IBZA  Bozab              2.85 332 ePn   Pn     00 22 41.9 +1.0
IBZA                              e            00 23 19.0
      comp=Z,939nm,0.6s
HAGD  Aghdareh           2.87 354 ePn   Pn     00 22 42.8 +1.8
NASN  Na'in              2.92  73 ePn   Pn     00 22 43.7 +1.8
NASN                               IAML        00 23 33.6
      comp=N,27nm,0.1s
NASN                               IAML        00 23 36.0
      comp=E,30nm,0.5s
NASN  Na'in              2.92  73 ePn   Pn     00 22 43.7 +1.8
GHVR  GHOM               2.93  30 ePn   Pn     00 22 44.1 +2.4
GHVR                              eSg   Sb     00 23 26.8 +3.5
GHVR                               IAML        00 23 34.3
      comp=N,24nm,0.6s
GHVR                               IAML        00 23 39.9
      comp=E,48nm,0.9s
GHVR  GHOM               2.93  30 ePn   Pn     00 22 44.1 +2.4
KRSH  Karshahi           2.99  47 ePn   Pn     00 22 44.5 +1.9
KCHF  Cheshme Sefid,     3.09 319 ePn   Pn     00 22 46.0 +1.9
IALM  Almabolaq          3.10 339 ePn   Pn     00 22 45.4 +1.2
KER   Kermanshah         3.13 321 ePn   Pn     00 22 46.1 +1.6
IQOM  Qom                3.16  24 ePn   Pn     00 22 46.8 +1.7
KBD   Kabd               3.18 210 eP    Pn     00 22 46.1 +0.9
KBD                               eS    Sn     00 23 23.8 +1.3
KBD                                IAML        00 23 26.6
      comp=Z,420nm,0.4s
ISFB  Sefidab            3.31  43 ePn   Pn     00 22 48.5 +1.5
IGHG  Ghaleghazi         3.41 315 ePn   Pn     00 22 51.2 +2.7
IGHG                              e            00 24 14.1
      comp=Z,1µm,1.1s
IRAZ  Razeghan           3.45   6 ePn   Pn     00 22 50.9 +1.8
AHBU  AHRAM              3.46 153 ePn   Pn     00 22 49.7 +0.8
RDF   Al-Radifah         3.46 210 eP    Pn     00 22 49.8 +0.8
RDF                               eS    Sn     00 23 30.3 +0.9
RDF                                IAML        00 23 39.4
      comp=Z,336nm,0.6s
QRN   Al-Qurain          3.48 203 eP    Pn     00 22 50.2 +0.9
QRN                               eS    Sn     00 23 30.4 +0.4
QRN                                IAML        00 23 34.8
      comp=Z,434nm,0.3s
IVRN  Varamin            3.55  31 ePn   Pn     00 22 51.9 +1.6
ISAD  Sadrabad           3.56  90 ePn   Pn     00 22 51.4 +0.8
SNGE  Sanandaj           3.60 331 ePn   Pn     00 22 50.9 -0.2
SNGE                               IAML        00 23 54.0
      comp=N,30nm,0.4s
SNGE  Sanandaj           3.60 331 ePn   Pn     00 22 50.9 -0.2
ILIN  Lien               3.63 325 ePn   Pn     00 22 52.4 +0.9
IDHR  Dehrash            3.77 317 ePn   Pn     00 22 55.3 +1.9
IDHR                              e            00 23 56.4
      comp=Z,799nm,0.4s
ANAR  Anarak             3.78  70 ePn   Pn     00 22 55.3 +1.9
IMHD  Mahdasht           3.84  14 ePn   Pn     00 22 55.7 +1.4
CHTH  Charan             4.16  19 ePn   Pn     00 23 00.8 +2.0
ICHK  Chekchek           4.18  85 ePn   Pn     00 22 59.7 +0.7
IDMV  Damavand           4.18  30 ePn   Pn     00 23 00.4 +1.3
DAMV  Damavand           4.20  29 ePn   Pn     00 23 01.0 +1.6
DAMV                               IAML        00 24 15.3
      comp=N,18nm,0.7s
DAMV                               IAML        00 24 19.5
      comp=E,12nm,0.3s
DAMV  Damavand           4.20  29 ePn   Pn     00 23 01.0 +1.6
YZKH  Yazd               4.34  83 ePn   Pn     00 23 02.6 +1.5
YZKH                               IAML        00 24 22.2
      comp=N,7.5nm,0.5s
YZKH                               IAML        00 24 23.6
      comp=E,8.0nm,0.5s
YZKH  Yazd               4.34  83 ePn   Pn     00 23 02.7 +1.5
IMEH  Mehriz             4.40  96 ePn   Pn     00 23 03.6 +1.5
ILAS  Lasjerd            4.47  39 ePn   Pn     00 23 04.4 +1.4
QSDN  Sirdan             4.54 357 ePn   Pn     00 23 04.8 +0.8
QALM  Alamut, Qazvin     4.56  12 ePn   Pn     00 23 06.0 +1.7
IFIR  Firoozkooh         4.56  36 ePn   Pn     00 23 05.6 +1.2
JIR1  Jirandeh           4.74   3 ePn   Pn     00 23 07.6 +0.9
IPRN  Peran              4.88  28 ePn   Pn     00 23 11.3 +2.8
ISHM  Shahmirzad         4.97  38 ePn   Pn     00 23 11.6 +1.7
IANJ  Anjilo             5.08  45 ePn   Pn     00 23 12.2 +0.8
IGLO  Ghaloghah          5.78  37 ePn   Pn     00 23 21.7 +0.7
TPRV  Parvadeh(Tabas     6.17  78 ePn   Pn     00 23 27.6 +1.4
TNSJ  Nastanj            6.30  70 ePn   Pn     00 23 28.5 +0.4
NGRK  Negar Kerman       6.64 108 ePn   Pn     00 23 33.7 +0.7
SHRO  Shahrood           6.74  52 ePn   Pn     00 23 35.8 +1.7
SHRO  Shahrood           6.74  52 ePn   Pn     00 23 35.8 +1.7
GENO  Geno               7.37 126 ePn   Pn     00 23 42.0 -0.9
BSRN  Basiran            8.18  87 ePn   Pn     00 23 55.2 +1.2
BSRN  Basiran            8.18  87 ePn   Pn     00 23 55.2 +1.2
GEYT  Alibeck            9.24  48  Pn   Pn     00 24 10.2 +1.8
      comp=E,0.5nm,0.3s,baz=230,slow=19,SNR=2.2
BRTR  Keskin Array B    15.00 305  Pn   P      00 25 30.1 -2.4
      comp=E,0.1nm,0.3s,baz=131,slow=13,SNR=2.6
MKAR  Makanchi Array    29.11  50  P    P      00 27 55.6  0.0
      comp=E,0.3nm,0.7s,baz=246,slow=9.7,SNR=1.9
FINES FINESS Array B    33.20 340  P    P      00 28 30.2 -1.1
      comp=E,3.9nm,0.9s,baz=147,slow=13,SNR=2.3
ZALV  Zalesovo Beam     33.40  38  P    P      00 28 32.8 -0.4
      comp=E,0.3nm,0.4s,baz=247,slow=10,SNR=2.6
DAVOX Davos/Dischmat    33.63 308  LR   LR     00 44 06.3
      comp=E,578nm,18.4s,baz=84,slow=40
HFS   Hagfors           36.77 331  P    P      00 29 00.7 -1.4
      comp=E,1.7nm,0.6s,baz=134,slow=10,SNR=5.8
TORD  Torodi Ar. Bea    47.53 258  P    P      00 30 29.1 -1.4
      comp=E,0.4nm,0.4s,baz=59,slow=8.3,SNR=5.5
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MED_RC ***29*** *00:28:08.0±0.2, 38°.91N×37°.81E, h24^{km}±1^{km}, MW5.1/31, Moment Tensor Solution. Body waves: s9,c13;Mantle waves: s31,c54; Duration: 1^s.3 Moment tensor: Scale 10^{16}Nm; M_{rr}0.22±.20; $M_{\theta\theta}$-3.46±.18; $M_{\phi\phi}$3.25±.17; $M_{r\theta}$-0.29±.20; $M_{\theta\phi}$4.39±.12; $M_{\phi r}$1.31±.18; Best double couple: $M_0$5.69000×10^{16} NP1:ϕ_s72.00000°, δ76.00000°, λ2.00000°. NP2:ϕ_s341.00000°, δ88.00000°, λ166.00000°. Principal axes: T 5.6200, Plg11.0000°, Azm295.0000°; N 0.1300, Plg76.0000°, Azm153.0000°; P -5.7500, Plg8.0000°, Azm27.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=35s.*

BGR ***29*** *00:28:08.9±0.0, 38°.30N×37°.76E, h10^{km}, mb4.8, Ms4.0*

ISK ***29*** *00:28:08.4, 38°.83N×37°.85E, h7^{km}, ML5.1/56*

DDA ***29*** *00:28:08.3, 38°.84N×37°.82E, h17^{km}, MW5.0*

BJI ***29*** *00:28:09.5±0.0, 38°.80N×37°.80E, h5^{km}, mB5.1/23, mb4.7/51, Ms4.9/34, Ms7 4.5/31*

IDC ***29*** *00:28:09.8±0.4, 38°.86N×37°.81E, h0^{km}, mb4.5/29, mb1 4.5/43, mb1mx4.4/55, mbtmp4.4/43, ML4.1/12, MS4.3/23, Ms1 4.3/23, ms1mx4.2/39, Error ellipse: s-maj=9.4km s-min=7.3km az=172.0*

GCMT ***29*** *00:28:10.9±0.2, 38°.82N±0°.01×37°.75E±0°.01, h20^{km}±1^{km}, MW5.1/121, Moment Tensor Solution. s51,c64; s121,c194; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.67±.14; $M_{\theta\theta}$-3.54±.14; $M_{\phi\phi}$2.87±.12; $M_{r\theta}$1.19±.24; $M_{\theta\phi}$4.19±.10; $M_{\phi r}$2.37±.27; Best double couple: $M_0$5.91000×10^{16} NP1:ϕ_s338.00000°, δ72.00000°, λ161.00000°. NP2:ϕ_s74.00000°, δ72.00000°, λ19.00000°. Principal axes: T 6.2090, Plg26.0000°, Azm296.0000°; N -0.6010, Plg64.0000°, Azm116.0000°; P -5.6100, Plg0.0000°, Azm206.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

MOS ***29*** *00:28:10.2±1.2, 38°.91N×37°.80E, h11^{km}, mb5.1/47, MS4.1/16 Error ellipse: s-maj=4.1km s-min=3.0km az=103.8*

NEIC ***29*** *00:28:11.9±1.9, 38°.82N±0°.04×37°.74E±0°.06, h10^{km}±1^{km}, mb4.9/130, ML5.1(ISK), Error ellipse: s-maj=7.7km s-min=6.9km az=56.0*

DSN ***29*** *00:28:15.0±1.7, 38°.81N×37°.98E, h22^{km}, mb5.5/14, Error ellipse: s-maj=25.9km s-min=11.3km az=102.0*

ISC 29 00:28:11.6±0.2**, 38°.85N**±0°.01×**37°.81E**±0°.01**, h10^{km}, n682, σ1^s.71**/702**, mb4.9**/139**, MS4.5**/31**, 74C-61D, Turkey**

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Code  Station Name        Δ°  AZ°    Phase ID       Time     Res
                                   Op    ISC      h  m  s   ISC
HEKM  Malatya_Hekimh     0.12  74⇑iP    Pg     00 28 12.3 -2.4
HEKM                              i S   Sg     00 28 15.1 -1.9
DARE  Darende-Malaty     0.37 223  PG   Pg     00 28 16.5 -2.5
DARE                               SG   Sg     00 28 22.4 -1.6
DARE  Darende-Malaty     0.37 223  Pg   Pg     00 28 16.3 -2.7
CUGUR Gurin_SVAS         0.43 254⇓iP    Pg     00 28 17.8 -2.4
CUGUR                              IAML        00 28 23.0
      comp=N,12µm,0.3s
CUGUR                             i S   Sg     00 28 24.2 -1.7
CUGUR                              IAML        00 28 26.0
      comp=E,172µm,0.4s
ARPR  Arapgir-MALATY     0.48  59  PG   Pg     00 28 18.2 -2.8
ARPR  Arapgir-MALATY     0.48  59  Pg   Pg     00 28 18.3 -2.8
CUKAN kangal_SIVAS       0.54 331⇑iP    Pg     00 28 19.3 -2.9
CUKAN                             i S   Sg     00 28 27.4 -1.9
CUKAN                              IAML        00 28 28.0
      comp=N,43µm,0.3s
CUKAN                              IAML        00 28 28.0
      comp=E,37µm,0.4s
AKCD  Akcadag            0.56 171⇓iP    Pg     00 28 19.3 -3.1
AKCD                               IAML        00 28 28.0
      comp=E,212µm,0.6s
AKCD                              i S   Sg     00 28 28.1 -1.7
AKCD                               IAML        00 28 29.0
      comp=N,165µm,0.7s
KEMA  Kemaliye           0.68  51⇓iP    Pg     00 28 21.0 -3.8
KEMA                               IAML        00 28 31.0
      comp=E,3µm,0.2s
KEMA                              i S   Sg     00 28 31.1 -2.7
KEMA                               IAML        00 28 34.0
      comp=N,28µm,0.4s
MALT  Malatya            0.72 137  P    Pg     00 28 22.1 -3.4
MALT  Malatya            0.72 137  PG   Pg     00 28 22.2 -3.4
MALT                               SG   Sg     00 28 32.0 -2.9
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MALT	Malatya	0.72	137	Pg	Pg	00 28 22.1	-3.4
ELBS	KAHRAMANMARAS	0.74	226	⇓iP	Pg	00 28 23.1	-2.8
ELBS				i S	Sg	00 28 34.2	-1.4
ELBS				IAML		00 28 36.0	
	comp=E,71µm,1.2s						
ELBS				IAML		00 28 40.0	
	comp=N,73µm,0.8s						
ILIC	ilic-Erzincan	0.85	44	PG	Pg	00 28 24.2	-3.8
ILIC				SG	Sg	00 28 37.3	-1.7
ILIC	ilic-Erzincan	0.85	44	Pg	Pg	00 28 24.5	-3.5
CUAYA	Sivas-Altinyay	0.93	297	⇑iP	Pg	00 28 26.1	-3.4
CUAYA				i S	Sb	00 28 40.9	-1.4
ELZG	Elazig	0.98	110	⇑iP	Pg	00 28 26.7	-3.9
ELZG				i S	Sb	00 28 42.5	-1.4
CUZAR	Zara_SIVAS	1.04	358	⇓iP	Pg	00 28 28.9	-2.8
CUZAR				i S	Sn	00 28 46.7	-0.4
SCER	sogukcermik	1.14	333	⇑iP	Pb	00 28 30.1	-3.5
SCER				i S	Sb	00 28 47.4	-1.1
SARI	SarD1z-Kayseri	1.17	249	PN	Pb	00 28 31.1	-2.9
SARI				SN	Sn	00 28 48.7	-1.7
SARI	SarD1z-Kayseri	1.17	249	Pn	Pb	00 28 31.2	-2.9
SVSK	Karacayir	1.24	330	PN	Pn	00 28 31.8	-3.2
SVSK	Karacayir	1.24	330	Pn	Pn	00 28 31.9	-3.2
SVRC	Sivrice-ELAZID	1.26	111	PN	Pn	00 28 31.3	-4.2
SVRC	Sivrice-ELAZID	1.26	111	Pn	Pn	00 28 31.4	-4.2
REFA	Refahiye_ERZN	1.29	35	⇓iP	Pn	00 28 33.0	-2.9
REFA				IAML		00 28 51.0	
	comp=E,2µm,0.6s						
REFA				i S	Sg	00 28 51.4	-1.9
CUSAR	Sarkisla-SIVAS	1.34	296	⇑iP	Pn	00 28 33.5	-3.1
CUSAR				i S	Sg	00 28 56.5	+1.6
TNCL	Tunceli-Merkez	1.38	78	⇑iP	Pn	00 28 33.5	-3.5
TNCL				i S	Sg	00 28 54.0	-2.0
TNCL				IAML		00 28 59.0	
	comp=N,25µm,0.6s						
TNCL				IAML		00 28 59.0	
	comp=E,38µm,0.7s						
SUSE	Susehri	1.40	13	⇓iP	Pb	00 28 36.3	-1.6
SUSE				i S	Sg	00 28 58.3	+1.7
ATAB	Bozova	1.43	164	⇓iP	Pn	00 28 35.9	-1.7
ATAB				i S	Sn	00 28 54.5	-1.9
ATAB				IAML		00 29 00.0	
	comp=E,51µm,1.0s						
ATAB				IAML		00 29 01.0	
	comp=N,32µm,0.6s						
KAHM	Kahramanmaras,	1.48	206	⇓iP	Pn	00 28 36.2	-2.1
KAHM				i S	Sg	00 28 58.5	-0.5
KAHM				IAML		00 29 03.0	
	comp=N,13µm,0.5s						
KAHM				IAML		00 29 03.0	
	comp=E,19µm,1.0s						
GZT	Gaziantep	1.50	187	⇓iP	Pn	00 28 36.9	-1.8
GZT				i S	Sg	00 28 58.9	-0.9
GZT				IAML		00 29 04.0	
	comp=N,52µm,0.5s						
GZT				IAML		00 29 05.0	
	comp=E,45µm,0.7s						
KMRS	Kahramanmaras	1.52	208	PN	Pn	00 28 37.1	-1.7
KMRS	Kahramanmaras	1.52	208	Pn	Pn	00 28 37.2	-1.7
BNN	Bunyan	1.53	271	PN	Pn	00 28 37.2	-1.9
BNN	Bunyan	1.53	271		Pn	00 28 36.8	-2.3
BNN				Sn	Sg	00 28 59.3	-1.5
KHMN	Narli-Kahraman	1.54	200	PN	Pn	00 28 36.9	-2.2
KHMN	Narli-Kahraman	1.54	200	Pn	Pn	00 28 36.7	-2.4
KOVA	Elazig, Kovanc	1.57	94	⇑iP	Pn	00 28 37.1	-2.6
KOVA				i S	Sg	00 29 00.0	-2.2
KOVA				IAML		00 29 10.0	
	comp=N,12µm,1.0s						
RSDY	Resadiye-TOKAT	1.59	347	PN	Pn	00 28 38.2	-1.7
SAIM	ADANA	1.61	238	⇓iP	Pn	00 28 37.7	-2.4
SAIM				i S	Sg	00 29 01.5	-1.8
SAIM				IAML		00 29 03.0	
	comp=N,9µm,0.7s						
ALUC	Giresun/Alucra	1.67	26	⇓iP	Pb	00 28 40.2	-2.4
ALUC				i S	Sb	00 29 02.7	-1.1
ALUC				IAML		00 29 13.0	
	comp=E,17µm,0.6s						
EUZM	Uzumlu	1.70	59	⇓iP	Pn	00 28 39.4	-2.0
EUZM				i S	Sg	00 29 03.7	-2.7
GUNE	Kayseri	1.70	273	⇑iP	Pb	00 28 40.8	-2.3
GUNE				i S	Sg	00 29 09.0	+2.6
ANDN	Andirin	1.71	223	⇓iP	Pn	00 28 40.1	-1.5
ANDN				i S	Sg	00 29 05.9	-0.7
ANDN				IAML		00 29 15.0	
	comp=N,14µm,1.0s						
ANDN				IAML		00 29 20.0	
	comp=Z,8µm,0.7s						
KELT	Kelkit	1.72	40	⇓iP	Pn	00 28 40.2	-1.6
KELT				i S	Sg	00 29 04.2	-2.7
KELT				IAML		00 29 11.0	
	comp=E,7µm,1.4s						
KELT				IAML		00 29 12.0	
	comp=N,1µm,0.2s						
GAZ	Gaziantep	1.73	196	PN	Pn	00 28 39.1	-2.7
GAZ	Gaziantep	1.73	196		Pn	00 28 39.2	-2.7
GAZ				Sn	Sg	00 29 05.6	-1.8
TOKT	Tokat	1.77	327	PN	Pn	00 28 40.7	-1.6
TOKA	Tokat	1.80	326	⇑iP	Pn	00 28 41.3	-1.5
TOKA				i S	Sb	00 29 06.2	-1.1
HACI	Hacifakili, Ak	1.82	299	⇑iP	Pn	00 28 41.8	-1.4
HACI				i S	Sg	00 29 07.9	-2.4
KAMA	Osmaniye	1.89	209	⇓iP	Pn	00 28 42.0	-1.9
KAMA				i S	Sg	00 29 10.6	-1.5
KAMA				IAML		00 29 16.0	
	comp=E,5µm,0.8s						
SANL	SANLIURFA_Merk	1.91	150	⇑iP	Pn	00 28 42.4	-1.9
SANL				i S	Sg	00 29 10.6	-2.6
SANL				IAML		00 29 15.0	
	comp=E,27µm,0.8s						
SANL				IAML		00 29 18.0	
	comp=N,17µm,0.6s						
ERBA	Erbaa	2.01	336	⇑iP	Pn	00 28 44.4	-1.2
ERBA				i S	Sg	00 29 13.4	-2.6
DYBB	Diyarbakir	2.04	115	PN	Pn	00 28 44.1	-1.9
DIYA	Diyarbakir	2.04	116	⇑iP	Pn	00 28 44.4	-1.6
DIYA				i S	Sg	00 29 14.4	-2.7
DIYA				IAML		00 29 20.0	
	comp=N,15µm,1.2s						
DIYA				IAML		00 29 21.0	
	comp=E,16µm,1.2s						
YAHY	KAYSERI_Yahyal	2.06	249	⇓iP	Pn	00 28 45.5	-0.8
YAHY				i S	Sg	00 29 15.3	-2.4
SURC	SANLIURFA_SURC	2.06	162	⇓iP	Pn	00 28 44.5	-1.8
SURC				i S	Sg	00 29 15.8	-2.1
SURC				IAML		00 29 20.0	
	comp=E,17µm,1.0s						
SURC				IAML		00 29 20.0	
	comp=N,18µm,0.9s						
GUMT	Gumushane	2.07	38	PN	Pn	00 28 44.5	-2.0
KOZT	Kozan	2.07	230	PN	Pn	00 28 44.9	-1.5
YOZ	Yozgat	2.09	293	PN	Pn	00 28 45.3	-1.5
SIRC	Yozgat	2.13	284	⇑iP	Pn	00 28 45.7	-1.6
SIRC				i S	Sg	00 29 18.6	-1.3
ORDU	Ordu-Boztepe	2.14	1	i P	Pn	00 28 46.3	-1.2
KUZU	Kuzuini	2.15	196	⇓iP	Pn	00 28 45.8	-1.7
KUZU				i S	Sg	00 29 20.0	-0.6
CKRK	Yozgat, Cekere	2.17	305	⇑iP	Pn	00 28 46.2	-1.7
CKRK				i S	Sg	00 29 19.0	-2.2
CKRK				IAML		00 29 22.0	
	comp=N,3µm,0.8s						
CKRK				IAML		00 29 26.0	
	comp=E,2µm,0.9s						
YEDI	Yedisu-Bingol	2.21	74	PN	Pn	00 28 46.0	-2.5
BNGB	Bingl	2.25	85	PN	Pn	00 28 46.3	-2.6
AVNS	Nevsehir-Avano	2.31	270	⇑iP	Pn	00 28 48.5	-1.4
AVNS				i S	Sg	00 29 24.1	-1.8
AKO	Adana	2.32	234	i P	Pn	00 28 49.3	-0.6
AKO				i S	Sg	00 29 26.0	-0.1
KOZK	Kozakli-Nevseh	2.32	280	PN	Pn	00 28 48.7	-1.2
AMSY	Amasya-Merkez	2.35	320	i P	Pb	00 28 51.9	-2.2
AMSY				i S	Sg	00 29 25.0	-2.1
BAYT	Aydıntepe-Bayb	2.38	49	PN	Pn	00 28 48.4	-2.4
KOPT	Kop Dagi	2.39	60	⇓iP	Pn	00 28 50.2	-0.9
KOPT				i S	Sg	00 29 27.0	-1.5
KUPE	Kupecik-Ladik(	2.44	327	PN	Pn	00 28 50.2	-1.4
CEYT	Ceyhan	2.45	222	PN	Pn	00 28 50.1	-1.5
HKOY	Hamitkoy-Ladik	2.48	326	PN	Pn	00 28 50.9	-1.2
MAZI	Mazidag	2.50	123	PN	Pn	00 28 49.9	-2.5
SLHN	Bingol, Solhan	2.51	86	⇑iP	Pn	00 28 51.1	-1.5
SLHN				i S	Sg	00 29 29.6	-2.8
NIDE	Nigde/Merkez-G	2.52	251	i P	Pn	00 28 51.9	-0.9
NIDE				i S	Sg	00 29 31.6	-1.1
KARO	Karliova-Bingo	2.57	79	PN	Pn	00 28 50.8	-2.6
MACK	Trabzon	2.58	35	⇓iP	Pn	00 28 52.5	-1.0
MACK				i S	Sg	00 29 32.6	-1.9
MACK				IAML		00 29 35.0	
	comp=E,7µm,0.8s						
COAL	Corum-Alaca	2.60	304	⇑iP	Pn	00 28 52.6	-1.2
COAL				i S	Sg	00 29 33.7	-1.3
COAL				IAML		00 29 44.0	
	comp=E,2µm,1.1s						
KVT	Kavak	2.61	329	PN	Pn	00 28 52.7	-1.2
KTUT	Trabzon	2.62	35	PN	Pn	00 28 52.9	-1.0
YURE	YUREGIR	2.65	221	i P	Pn	00 28 52.5	-1.9
KARA	Karaisali	2.69	235	PN	Pn	00 28 53.3	-1.6
EMRE	Erzurum,Aziziy	2.73	63	i P	Pn	00 28 54.8	-0.9
HAVZ	Havza	2.75	325	⇑iP	Pn	00 28 54.5	-1.2
SVAN	Silvan-Diyarba	2.75	104	⇑iP	Pn	00 28 51.0	-4.8
SVAN	Silvan-Diyarba	2.75	104	PN	Pn	00 28 53.7	-2.1
TAHT	Tahtakopru-Hat	2.78	208	PN	Pn	00 28 54.6	-1.6
MARD	Mardin	2.80	122	⇑iP	Pn	00 28 54.4	-2.1
SAMS	Samsun-Alacam	2.80	334	⇓iP	Pn	00 28 56.1	-0.4
KRIK	Erzurum-spir	2.83	57	⇓iP	Pn	00 28 56.4	-0.7
GULA	Gulagac	2.84	261	PN	Pn	00 28 56.1	-1.0
GULE	Gulek	2.85	238	⇑iP	Pn	00 28 53.6	-3.8
VRTB	Varto-Mus	2.86	83	⇑iP	Pn	00 28 57.0	-0.4
VRTB	Varto-Mus	2.86	83	PN	Pn	00 28 55.0	-2.4
BTMN	Batman	2.88	108	⇑iP	Pn	00 28 56.1	-1.6
MUSM	Mu-Merkez	2.90	91	⇑iP	Pn	00 28 55.3	-2.6
CTAK	Corum_Osmancik	2.94	309	⇑iP	Pn	00 28 58.2	-0.4
ERZM	Erzurum	2.95	68	i P	Pn	00 28 58.1	-0.7
KRTS	Karatas	2.98	221	PN	Pn	00 28 57.2	-1.7
DED	Mersin	3.03	233	⇓iP	Pn	00 28 58.3	-1.4
KIRS	Kırehir-Merke	3.04	277	⇑iP	Pn	00 28 58.7	-1.2
YAYL	Yayladag	3.11	206	i P	Pn	00 29 02.0	+1.1
YAYL	Yayladag	3.11	206	PN	Pn	00 28 59.5	-1.4
AKSY	AKSARAY - Alti	3.17	268	⇑iP	Pn	00 28 58.8	-2.8
MIDY	Mardin/Midyat-	3.17	116	⇑iP	Pn	00 28 59.4	-2.3
CHOM	Cayeli-Rize	3.20	44	PN	Pn	00 29 00.7	-1.2
DELI	KIRIKKALE	3.22	292	⇑iP	Pn	00 29 01.0	-1.3
KAMT	Kaman	3.23	281	PN	Pn	00 29 01.5	-0.9
KERG	Konya-Eregli	3.23	245	⇓iP	Pn	00 29 01.6	-0.9
MERS	Mersin	3.26	234	PN	Pn	00 29 01.9	-1.0
SERE	Sereflikochisa	3.31	273	PN	Pn	00 29 02.9	-0.7
KOPR	Koprukoy-ERZUR	3.34	69	PN	Pn	00 29 02.2	-1.8
EKAR	Karacoban	3.34	82	i P	Pg	00 29 14.9	-0.7
SRTM	Siirt_Merkez	3.34	103	⇓iP	Pn	00 29 00.5	-3.6
BR131	Keskin Array S	3.35	287	P	Pn	00 29 02.5	-1.7
BR131	Keskin Array S	3.35	287		Pn	00 29 02.5	-1.7
BRTR	Keskin Array B	3.35	287	Pn	Pn	00 29 03.1	-1.1
	comp=E,13nm,0.3s,baz=112,slow=17,SNR=100						
BRTR				Lg	Lg	00 29 56.5	
	comp=E,29nm,0.3s,baz=105,slow=29,SNR=2.9						
BRTR				LR	LR	00 30 47.3	
	comp=E,6µm,20.3s,baz=62,slow=47						
BRTR	Keskin Array B	3.35	287	PN	Pn	00 29 02.9	-1.3
BRTR	Keskin Array B	3.35	287		Pn	00 29 02.6	-1.7
YESY	Yesilyurt	3.37	253	PN	Pn	00 29 03.3	-1.1
BLIS	Bitlis-Merkez	3.40	96	i P	Pb	00 29 10.4	-1.7
DIKM	Dikmen	3.41	326	PN	Pn	00 29 03.9	-1.0
SULT	Sultanhani-AKS	3.43	260	PN	Pn	00 29 04.3	-0.9
KAGI	orum-Kargı	3.43	313	i P	Pn	00 29 03.6	-1.5
DDEM	Demirkent	3.66	55	⇓iP	Pn	00 29 07.5	-0.8
CANT	Cankiri	3.68	300	PN	Pn	00 29 07.7	-0.9
DBAD	Bademkaya	3.69	53	⇓iP	Pn	00 29 08.0	-0.9
MLAZ	Malazgirt-MUS	3.71	84	PN	Pn	00 29 08.1	-1.0
SNOP	Sinop	3.74	329	PN	Pn	00 29 08.9	-0.5
SNOP	Sinop	3.74	329	Pn	Pn	00 29 08.2	-1.2
KIZK	Mersin	3.74	232	PN	Pn	00 29 08.5	-0.9
SIRT	Sirnak	3.89	109	PN	Pn	00 29 09.5	-2.0
SIRT	Sirnak	3.89	109	Pn	Pn	00 29 09.3	-2.3
SENK	Senkaya-Erzuru	3.90	62	PN	Pn	00 29 10.5	-1.3
BCA	Borcka	3.91	47	PN	Pn	00 29 10.2	-1.5
SILI	Silifke-Mersin	3.95	232	PN	Pn	00 29 11.5	-0.8
KRMN	Karaman	3.96	246	PN	Pn	00 29 11.8	-0.7
ANTO	Ankara	4.02	286	P	Pn	00 29 12.6	-0.7
ANTO	Ankara	4.02	286		Pn	00 29 12.6	-0.7
BR231	Keskin MP Arra	4.03	286		Pn	00 29 13.4	0.0
KEBE	Keben-Mersin	4.04	235	PN	Pn	00 29 12.9	-0.6
IKL	Isikli	4.18	233	PN	Pn	00 29 15.2	-0.2
TEVE	Tevekalti-Mers	4.22	237	PN	Pn	00 29 15.9	-0.1
BZK	Bozkurt	4.26	318	Pn	Pn	00 29 17.0	+0.6
AKKU	Akkuyu-Mersin	4.32	233	PN	Pn	00 29 16.8	-0.5
TVAN	Van	4.39	92	⇓iP	Pn	00 29 20.6	+2.0
EREN	Erenkoy	4.40	222	PN	Pn	00 29 18.5	0.0
KARS	Kars	4.44	65	P	Pn	00 29 19.9	+0.8
KARS	Kars	4.44	65	PN	Pn	00 29 18.3	-0.8
KARS	Kars	4.44	65	Pn	Pn	00 29 19.9	+0.8
CLDR	Caldiran	4.77	85	PN	Pn	00 29 22.7	-1.0
HWQ	Hawqa	4.80	199	eP	Pn	00 29 25.7	+1.7
CUKT	Cukurca	4.85	107	PN	Pn	00 29 23.9	-0.8
SOC	Sochi	4.95	16	d iP	Pn	00 29 23.2	-2.8
SOC				e		00 30 21.7	
SOC				pmax	pmax		
	comp=Z,25nm,0.6s						
SOC				MLR	MLR		
	comp=Z,2µm,10.0s						
AKH	Akhalkalaki	5.05	58	⇑P	Pb	00 29 37.5	-2.8
BHL	Bhannes	5.23	200	eP	Pn	00 29 31.2	+1.3
CSS	Mathiatis	5.28	224		Pn	00 29 29.7	-0.9
MDUB	Mudurnu	5.35	290		Pn	00 29 31.1	-0.5
DQRL	Deir Qamar	5.44	200	eP	Pn	00 29 35.7	+2.9
GNI	Garni	5.52	74	Pn	Pn	00 29 35.2	+1.2
	comp=Z,4.8nm,0.3s,baz=293,slow=7.7,SNR=25						
GNI	Garni	5.52	74	P	Pn	00 29 35.8	+1.8
GNI	Garni	5.52	74	c eP	Pn	00 29 36.5	+2.5
GNI				pmax	pmax		
	comp=Z,98nm,1.0s						
RCY	Rachaya	5.57	197	eP	Pn	00 29 37.2	+2.6
ONI	Oni	5.69	47	P	Pn	00 29 36.0	-0.2
ONI	Oni	5.69	47		Pn	00 29 36.0	-0.2
SHBL	Chebaa	5.73	198	eP	Pn	00 29 38.7	+1.8
ISP	Isparta	5.82	262	P	Pn	00 29 37.3	-0.7
ISP	Isparta	5.82	262		Pn	00 29 37.3	-0.7
ANN	Anapa	5.96	357	eP	Pn	00 29 42.7	+2.9
ANN				eS	Sn	00 30 52.4	+4.3
ANN				pmax	pmax		
	comp=Z,95nm,1.4s						
ANN				MLR	MLR		
	comp=Z,2µm,11.0s						
ANN				MLR	MLR		
	comp=N,787nm,11.0s						
ANN				MLR	MLR		
	comp=E,2µm,11.0s						
ZEI	Tsey	6.07	48	eP	Pn	00 29 40.3	-1.3
ZEI				pmax	pmax		
	comp=Z,17nm,0.9s						
SHA1	Shidzhatmaz	6.10	35	i P	Pn	00 29 43.2	+1.2
MMAI	Mount Meron Ar	6.13	199	Pn	Pn	00 29 41.9	-0.5
	comp=Z,5.5nm,0.3s,baz=12,slow=12,SNR=21						
MMAI				Lg	Lg	00 31 21.7	
	comp=Z,12nm,0.3s,baz=32,slow=22,SNR=2.1						
MMAI				LR	LR	00 32 38.2	
	comp=Z,2µm,18.6s,baz=320,slow=44						
KBZ	Khabaz	6.20	37	Pn	Pn	00 29 42.9	-0.3
	comp=Z,1.0nm,0.3s,baz=205,slow=4.8,SNR=5.9						
KBZ				LR	LR	00 32 13.2	
	comp=Z,3µm,20.9s,baz=238,slow=39						
KBZ	Khabaz	6.20	37	i P	Pn	00 29 43.6	+0.4
KIV	Kislovodsk	6.29	34	⇑P	Pn	00 29 48.3	+3.9
KIV	Kislovodsk	6.29	34	P	Pn	00 29 44.3	-0.1
KIV	Kislovodsk	6.29	34	eP	Pn	00 29 44.5	+0.1
KIV				eS	Sn	00 30 58.2	+1.9
KIV				pmax	pmax		
	comp=Z,50nm,1.1s						
KIV				MLR	MLR		
	comp=Z,574nm,9.0s						
KIV	Kislovodsk	6.29	34	Pn	Pn	00 29 44.8	+0.3
NCK	Nalchik	6.38	41	i P	Pn	00 29 45.9	+0.3
PYA1	Pyatigorsk	6.55	36	i P	Pn	00 29 46.6	-1.4
ELL	Elmali	6.59	254	P	Pn	00 29 49.9	+1.1
ELL	Elmali	6.59	254	Pn	Pn	00 29 49.9	+1.1
SIM	Simferopol'	6.69	337	eP	Pn	00 29 49.1	-0.8
SIM				S	Sn	00 31 05.8	-0.4
SIM				pmax	pmax		
	comp=Z,24nm,0.6s						
ASF	Jabal al Asfar	6.70	187	Pn	Pn	00 29 49.8	-0.4
	comp=Z,1.8nm,0.3s,baz=16,slow=4.0,SNR=25						
ASF				Lg	Lg	00 31 44.6	
	comp=Z,13nm,0.3s,baz=14,slow=22,SNR=2.1						
GOF	Gofitskoye	7.33	30	⇑eP	Pn	00 29 56.4	-2.3
GOF				eS	Sn	00 31 25.3	+3.4
GOF				pmax	pmax		
	comp=Z,44nm,1.0s						
GOF				smax	smax		
	comp=E,150nm,1.2s						
GOF				smax	smax		
	comp=N,227nm,1.0s						
BTLR	Botlikh	7.44	56	i P	Pn	00 30 02.9	+2.7
GROC	Groznyy	7.44	52	eP	Pn	00 30 06.2	+6.0
GROC				pmax	pmax		
	comp=Z,26nm,1.0s						
GROC				MLR	MLR		
	comp=Z,203nm,7.0s						
GHAJ	Ghor Haditha	7.74	194		Pn	00 30 04.3	0.0
BALB	Balikesir	7.75	279		Pn	00 30 04.7	+0.4
MAK	Makhachkala	8.41	58	eP	Pn	00 30 12.1	-1.4
MAK				eS	Sn	00 31 49.5	+1.0
MAK				pmax	pmax		
	comp=Z,454nm,1.5s						
MAK				MLR	MLR		
	comp=Z,5µm,12.0s						
TIRR	Tirgusor	8.99	312	⇓P	Pn	00 30 22.6	+1.2
TIRR	Tirgusor	8.99	312	⇓P	Pn	00 30 22.6	+1.2
TIRR	Tirgusor	8.99	312		Pn	00 30 21.4	0.0
TLCR		9.21	316	⇓P	Pn	00 30 22.8	-1.6
TLCR		9.21	316	⇓P	Pn	00 30 22.8	-1.6
TPGR	Topolog	9.22	314	⇓P	Pn	00 30 25.2	+0.5
HARR	Harsova	9.41	312	⇓P	Pn	00 30 28.8	+1.7
HARR	Harsova	9.41	312	⇓P	Pn	00 30 28.8	+1.7
EIL	Elat	9.45	195	Pn	Pn	00 30 27.7	-0.1
	comp=Z,0.1nm,0.3s,baz=37,slow=18,SNR=2.2						
EIL				Lg	Lg	00 33 18.2	
	comp=Z,2.6nm,0.3s,baz=278,slow=15,SNR=4.1						
CFR	Carcaliu	9.58	314	⇑P	Pn	00 30 29.9	+0.4
CFR	Carcaliu	9.58	314	⇑P	Pn	00 30 29.9	+0.4
PURM	Purcari	9.64	325	⇑P	Pn	00 30 29.9	-0.4
VLDR	Vladesti	10.03	317	⇑P	Pn	00 30 35.5	-0.2
MILM	Milestii Mici	10.42	324	⇓P	Pn	00 30 41.8	+0.8
MILM	Milestii Mici	10.42	324	eP	Pn	00 30 43.0	+2.0
MILM				pmax	pmax		
	comp=Z,60nm,0.8s						
MILM				MLR	MLR		
	comp=Z,2µm,15.5s						
ISR	Istrita	10.46	310	⇑P	Pn	00 30 44.1	+2.4
ISR	Istrita	10.46	310	⇑P	Pn	00 30 44.1	+2.4
KIS	Kishinev	10.47	324	⇑P	Pn	00 30 41.6	-0.1
KIS	Kishinev	10.47	324	eP	Pn	00 30 45.0	+3.3
KIS				MLR	MLR		
	comp=Z,600nm,15.0s						
ODBI	Odobesti	10.54	314	⇑P	Pn	00 30 44.1	+1.5
SECR		10.71	309	⇑P	Pn	00 30 47.2	+2.3
VRI	Vrincioaia	10.78	314	⇓P	Pn	00 30 47.4	+1.4
VRI	Vrincioaia	10.78	314	⇓P	Pn	00 30 47.4	+1.4
PLOR	Plostina	10.82	314	⇓P	Pn	00 30 48.0	+1.5
PLOR	Plostina	10.82	314	⇓P	Pn	00 30 48.0	+1.5
IDI	Anoyia	10.91	255	Pn	Pn	00 30 49.5	+1.6
	comp=Z,0.6nm,0.3s,baz=75,slow=16,SNR=1.9						
IDI				LR	LR	00 35 09.7	
	comp=Z,2µm,19.5s,baz=70,slow=38						
MLR	Muntele Rosu	11.02	311	⇑P	Pn	00 30 50.5	+1.2
MLR	Muntele Rosu	11.02	311	Pn	Pn	00 30 51.3	+2.0
	comp=Z,0.7nm,0.3s,baz=114,slow=12,SNR=6.8						
MLR	Muntele Rosu	11.02	311		Pn	00 30 50.4	+1.1
COVR	Voineasa-Covas	11.07	313	⇓P	Pn	00 30 49.9	-0.1
IAS	Iasi	11.21	321	⇑P	Pn	00 30 52.5	+0.7
IAS	Iasi	11.21	321	⇑P	Pn	00 30 52.5	+0.7
TESR	Tescani	11.22	317	⇑P	Pn	00 30 53.5	+1.4
VOIR		11.53	309	⇓P	Pn	00 30 59.2	+2.9
VOIR		11.53	309	⇓P	Pn	00 30 59.2	+2.9
SORM	Soroca	11.54	327	⇓P	Pn	00 30 56.2	-0.1
SORM	Soroca	11.54	327	⇓P	Pn	00 30 56.2	-0.1
DOPR	Dopca	11.61	312	⇑P	Pn	00 30 57.2	-0.1
VTS	Vitosha	11.68	293	⇓P	Pn	00 31 00.8	+2.4
VTS	Vitosha	11.68	293	⇓P	Pn	00 31 00.8	+2.4
VTS	Vitosha	11.68	293		Pn	00 30 58.5	+0.1
ARR	Arges	11.75	308	⇓P	Pn	00 31 07.0	+7.7
PRAR	RASCA	11.99	319	⇑P	Pn	00 31 03.3	+0.8
LOT	Lotru	12.32	307	⇑P	Pn	00 31 08.0	+0.8
VSR	Storozhevoye	12.41	4	eP	Pn	00 31 08.0	-0.2
VSR				pmax	pmax		
	comp=Z,20nm,0.6s						
VRH	Novokhopyorsk	12.66	11	eP	Pn	00 31 11.3	-0.3
VRH				pmax	pmax		
	comp=Z,60nm,1.0s						
BURAR	Bucovina Array	12.68	318	⇑P	Pn	00 31 11.1	-0.9
BURAR	Bucovina Array	12.68	318	⇑P	Pn	00 31 11.1	-0.9
BURAR	Bucovina Array	12.68	318	Pn	Pn	00 31 10.2	-1.8
BUR08	Bucovina Ar. S	12.71	318		Pn	00 31 10.5	-1.9
VORR	Voronezh	12.87	4	eP	Pn	00 31 14.0	-0.4
VORR				pmax	pmax		
	comp=Z,250nm,1.2s						
GZR	Gura Zlata	12.93	305	⇑P	Pn	00 31 18.5	+3.1
CJR	Cluj-Napoca	13.05	312	⇑P	Pn	00 31 18.4	+1.3
CJR	Cluj-Napoca	13.05	312	⇑P	Pn	00 31 18.4	+1.3
AKASG	Malin Array Be	13.32	336	Pn	Pn	00 31 18.5	-2.0
	comp=Z,2.1nm,0.3s,baz=135,slow=13,SNR=9.9						
AKASG	Malin Array Be	13.32	336	i P	Pn	00 31 21.7	+1.1
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.5s						
AKASG	Malin Array Be	13.32	336	Pn	Pn	00 31 19.4	-1.1
AKBB	Malin Array Si	13.32	336	c eP	Pn	00 31 19.2	-1.4
AKBB	Malin Array Si	13.32	336		Pn	00 31 18.6	-2.0
MDVR	Moldovita	13.38	301	⇓P	Pn	00 31 24.6	+3.0
DRGR		13.62	311	⇓P	Pn	00 31 26.6	+1.8
DRGR		13.62	311	⇓P	Pn	00 31 26.6	+1.8
BMR	Baia Mare	13.64	315	⇑P	Pn	00 31 25.8	+0.8
BMR	Baia Mare	13.64	315	⇑P	Pn	00 31 25.8	+0.8
BZS	Buzias	13.76	305	⇑P	Pn	00 31 28.8	+2.1
BZS	Buzias	13.76	305	⇑P	Pn	00 31 28.8	+2.1
LPSR	Galich'ya Gora	13.78	3	eP	Pn	00 31 26.4	-0.5
LPSR				pmax	pmax		
	comp=Z,30nm,0.8s						
DIVS	Divibare	14.34	297	Pn	Pn	00 31 36.1	+1.3
TRPA	Tarpa	14.43	315	⇑P	Pn	00 31 36.4	+0.5
TRPA	Tarpa	14.43	315	eP	Pn	00 31 34.8	-1.0
AMBH	Ambrzfalva	14.63	306	eP	P	00 31 45.7	+0.8
LVV	L'vov	14.72	323	eP	P	00 31 46.1	+0.1
LVV				MLR	MLR		
	comp=E,1µm,13.0s						
LVV				MLR	MLR		
	comp=N,300nm,12.0s						
LVV				MLR	MLR		
	comp=Z,600nm,14.0s						
UZH	Uzhgorod	14.85	316	eP	Pn	00 31 40.7	-0.9
UZH				eS	Sn	00 34 24.4	-1.7
UZH				MLR	MLR		
	comp=N,359nm,16.0s						
UZH				MLR	MLR		
	comp=E,290nm,16.0s						
UZH				MLR	MLR		
	comp=Z,96nm,16.0s						
KOLS	Kolonicke sedl	15.04	317	eP	P	00 31 47.1	-2.4
KOLS	Kolonicke sedl	15.04	317	ePN	P	00 31 47.1	-2.4
KOLS	Kolonicke sedl	15.04	317	eP	P	00 31 54.2	+4.7
BELG	Belogornoye	15.17	24	Pn	Pn	00 31 41.6	-4.1
	comp=Z,0.1nm,0.3s,baz=175,slow=15,SNR=2.7						
BELG				LR	LR	00 38 33.4	
	comp=Z,554nm,19.5s,baz=189,slow=41						
BELG	Belogornoye	15.17	24	i P	Pn	00 31 45.0	-0.7
KWP	Kalwaria Pacla	15.25	320	eP	P	00 31 53.0	+1.3
KWP	Kalwaria Pacla	15.25	320	P	P	00 31 49.4	-2.4
KWP				pmax	pmax		
	comp=Z,343nm,0.9s						
KWP	Kalwaria Pacla	15.25	320	P	P	00 31 49.4	-2.4
BSZH	Besenyszg	15.33	309	⇑P	P	00 31 50.8	-1.9
BSZH	Besenyszg	15.33	309	eP	P	00 31 54.5	+1.8
CRVS	Cervenica-Dubn	15.46	316	eP	Pn	00 31 49.9	+0.2
CRVS	Cervenica-Dubn	15.46	316	ePN	Pn	00 31 49.9	+0.2
CRVS	Cervenica-Dubn	15.46	316	eP	P	00 31 59.9	+5.7
KECS	Kecovo	15.78	313	eP	P	00 32 03.8	+6.1
KECS	Kecovo	15.78	313	eP	P	00 32 03.8	+6.1
PSZ	Piszkesteto	15.84	311	⇓P	P	00 31 56.6	-1.8
PSZ	Piszkesteto	15.84	311	eP	P	00 31 57.5	-0.9
PSZ	Piszkesteto	15.84	311	⇓P	P	00 31 56.6	-1.8
PSZ	Piszkesteto	15.84	311	Pn	P	00 31 55.4	-3.1
GEYT	Alibeck	15.95	87	Pn	P	00 31 57.4	-2.3
	comp=Z,0.2nm,0.3s,baz=270,slow=9.5,SNR=3.3						
GEYT				LR	LR	00 39 13.1	
	comp=Z,580nm,19.4s,baz=260,slow=42						
GEYT	Alibeck	15.95	87		Pn	00 31 55.9	-0.3
GYA0B	ALIBECK ARRAY	15.95	87		P	00 31 56.5	-3.3
BUD	Budapest	16.17	308	eP	P	00 32 02.8	+0.8
KOVH	Kovagotottos	16.22	303	eP	P	00 32 01.5	-1.1
OBN	Obninsk	16.30	357	⇓P	Pn	00 31 59.0	-1.3
OBN	Obninsk	16.30	357	Pn	Pn	00 31 58.2	-2.1
	comp=Z,0.9nm,0.3s,baz=160,slow=18,SNR=2.4						

OBN	Obninsk	16.30	357	⇑eP	Pn	00 31 57.0	-3.4
OBN				eS	Sn	00 35 05.4	+4.3
OBN				pmax	pmax		
	comp=Z,26nm,1.0s						
OBN				MLR	MLR		
	comp=Z,992nm,16.0s						
OBN	Obninsk	16.30	357	Pn	Pn	00 31 59.7	-0.6
TIP	Timpagrande	16.37	278	⇓P	P	00 32 04.1	-0.2
TIP	Timpagrande	16.37	278	P	P	00 32 02.2	-2.2
TIP				IAmb	IAmb	00 32 09.9	
	comp=Z,151nm,1.0s						
NIE	Niedzica	16.38	316	eP	P	00 32 08.2	+3.8
RAYN	Ar Rayn	16.62	155	P	P	00 32 05.8	-1.4
RAYN				pmax	pmax		
	comp=Z,11nm,1.0s						
RAYN	Ar Rayn	16.62	155	P	P	00 32 05.8	-1.4
LANS	Liptovska Anna	16.70	314	eP	P	00 32 08.6	+0.7
LANS	Liptovska Anna	16.70	314	e	P	00 32 08.6	+0.7
LANS	Liptovska Anna	16.70	314	eP	P	00 32 13.6	+5.7
VYHS	Vyhne	16.73	311	eP	P	00 32 10.3	+1.9
VYHS	Vyhne	16.73	311	e	P	00 32 10.2	+1.9
VYHS	Vyhne	16.73	311	eP	P	00 32 15.5	+7.2
MOS	Moscow	16.90	360	eP	Pn	00 32 05.7	-2.3
MOS				eS	Sn	00 35 14.4	-1.4
MOS				pmax	pmax		
	comp=Z,63nm,1.0s						
MOS				MLR	MLR		
	comp=N,700nm,16.0s						
MOS				MLR	MLR		
	comp=Z,800nm,16.0s						
MPLH	Magyarpolny	16.96	306	eP	P	00 32 10.3	-0.5
KOLL	Kolacno	17.03	311	eP	P	00 32 15.9	+4.3
MNK	Minsk	17.05	340	eP	Pn	00 32 09.0	-0.9
SGRT	San Giovanni R	17.07	287		P	00 32 12.5	+0.3
OJC	Ojcow	17.10	318	eP	P	00 32 13.4	+1.0
OJC	Ojcow	17.10	318	P	P	00 32 11.3	-1.0
OJC				pmax	pmax		
	comp=Z,114nm,1.7s						
OJC	Ojcow	17.10	318	P	P	00 32 11.3	-1.0
JAVC	Velka Javorina	17.59	311	ePN	P	00 32 18.8	+1.0
MODS	Modra-Piesok	17.61	309	eP	P	00 32 19.8	+1.8
MODS	Modra-Piesok	17.61	309	eP	P	00 32 19.8	+1.8
ZST	Bratislava	17.64	309	eP	P	00 32 20.2	+1.9
ZST	Bratislava	17.64	309	eP	P	00 32 20.2	+1.9
NACGM	Naroch	17.71	339	i P	P	00 32 28.5	+10
PAOL	Paolisi	17.95	284	P	P	00 32 21.1	-0.8
MORC	Moravsky Berou	18.10	314	⇑P	P	00 32 23.5	+0.1
MORC	Moravsky Berou	18.10	314	⇑P	P	00 32 23.5	+0.1
MORC	Moravsky Berou	18.10	314	ePN	P	00 32 23.2	-0.2
MORC	Moravsky Berou	18.10	314	P	P	00 32 22.2	-1.2
SUW	Suwalki	18.16	331	eP	P	00 32 23.0	-0.9
SUW	Suwalki	18.16	331	eP	Pn	00 32 19.3	-4.3
SUW	Suwalki	18.16	331	P	P	00 32 22.7	-1.2
SUW				pmax	pmax		
	comp=Z,60nm,0.9s						
SUW	Suwalki	18.16	331	P	P	00 32 22.7	-1.2
SUW				IAmb	IAmb	00 32 40.4	
	comp=Z,60nm,0.9s						
ARSA	Arzberg	18.28	305	eP	P	00 32 25.2	-0.2
	comp=Z,18nm,1.6s						
CONA	Conrad Observa	18.30	307	eP	P	00 32 25.9	+0.2
	comp=Z,20nm,1.1s						
AKTO	Aktyubinsk	18.40	44	P	P	00 32 24.1	-2.6
	comp=Z,0.4nm,0.3s,baz=234,slow=11,SNR=16						
AKTO				LR	LR	00 41 25.9	
	comp=Z,1µm,18.7s,baz=238,slow=43						
AKTO	Aktyubinsk	18.40	44	P	P	00 32 24.2	-2.5
VRAC	Vranov	18.42	311	⇑P	Pn	00 32 30.2	+3.2
VRAC	Vranov	18.42	311	P	Pn	00 32 27.3	+0.3
	comp=Z,0.8nm,0.3s,baz=105,slow=14,SNR=3.9						
VRAC	Vranov	18.42	311	⇑P	Pn	00 32 30.2	+3.2
VRAC	Vranov	18.42	311	ePN	Pn	00 32 27.9	+0.9
KRUC	Moravsky	18.43	311	ePN	Pn	00 32 27.8	+0.7
OBKA	Obir	18.69	302	eP	Pn	00 32 29.9	-0.4
	comp=Z,12nm,1.3s						
AQU	L'Aquila	18.84	289	P	P	00 32 30.0	-1.7
AQU				pmax	pmax		
	comp=Z,59nm,1.0s						
AQU	L'Aquila	18.84	289	P	P	00 32 30.0	-1.7
AQU				IAmb	IAmb	00 33 04.1	
	comp=Z,59nm,1.0s						
AB31	Akbulak array	18.95	50	i P	P	00 32 30.6	-2.0
ABKAR	Akbulak array	18.95	50	P	P	00 32 29.9	-2.7
ABKAR	Akbulak array	18.95	50	P	P	00 32 30.2	-2.5
ABKAR				IAmb	IAmb	00 33 01.1	
	comp=Z,25nm,1.1s						
DPC	Dobruska-Polom	19.07	314	eP	Pn	00 32 32.9	-1.9
DPC				AMS	AMS	00 43 00.0	
	comp=Z,1µm,20.8s						
DPC	Dobruska-Polom	19.07	314	eP	Pn	00 32 32.9	-1.9
DPC				MLR	MLR		
	comp=Z,1µm,20.8s						
PABE	Paberze	19.08	335	eP	P	00 32 29.3	-4.7
PABE				IAmb	IAmb	00 32 58.2	
	comp=Z,46nm,1.1s						
PABE	Paberze	19.08	335	P	Pn	00 32 33.8	-1.0
PABE				IAmb	IAmb	00 32 59.1	
	comp=Z,109nm,1.4s						
NRCA	Norcia	19.08	290	P	Pn	00 32 33.3	-1.8
OSTC	Ostas	19.23	315	eP	Pn	00 32 37.0	+0.3
OSTC				AMS	AMS	00 40 10.0	
	comp=Z,1µm,23.8s						
CORL	Corleone	19.23	275	P	Pn	00 32 35.2	-1.6
CORL				IAmb	IAmb	00 32 42.7	
	comp=Z,65nm,1.2s						
MOA	Molln	19.28	305	eP	Pn	00 32 37.4	0.0
	comp=Z,45nm,1.4s						
UPC	Upice	19.32	314	eP	Pn	00 32 38.5	+0.7
UPC	Upice	19.32	314	eP	Pn	00 32 38.5	+0.7
KSP	Ksiaz	19.32	315	eP	Pn	00 32 39.7	+1.8
MYKA	Terra Mystica	19.33	302	eP	Pn	00 32 42.7	+4.7
	comp=Z,8.2nm,0.6s						
CHVC	Chvalec	19.33	314	eP	Pn	00 32 39.1	+1.1
CLTB	Caltabellotta	19.36	274	P	Pn	00 32 37.1	-1.3
CLTB				IAmb	IAmb	00 32 42.3	
	comp=Z,178nm,1.7s						
CKRC	Cesky Krumlov	19.59	308	eP	Pn	00 32 41.7	+0.6
ZOU	Zoufplan	19.76	301	P	Pn	00 32 41.8	-1.5
ZOU				IAmb	IAmb	00 32 51.6	
	comp=Z,170nm,1.6s						
STAL	STALIGIAL	19.86	300	P	Pn	00 32 42.1	-2.3
PRU	Pruhonice	19.92	312	eP	Pn	00 32 44.7	-0.3
PRU				AMS	AMS	00 42 00.0	
	comp=Z,1µm,19.1s						
PRU	Pruhonice	19.92	312	eP	Pn	00 32 44.7	-0.3
PRU				MLR	MLR		
	comp=Z,1µm,19.1s						
GEC2	GERESS Array S	19.98	308	eP	Pn	00 32 44.5	-1.2
	comp=Z,59nm,1.4s,baz=109,slow=13						
GEC2				eL	L	00 41 25.0	
	comp=Z,689nm,21.6s						
GEC2	GERESS Array S	19.98	308	P	P	00 32 43.1	-0.9
GERES	GERESS Array B	19.98	308	P	Pn	00 32 43.8	-1.9
	comp=Z,0.4nm,0.3s,baz=106,slow=9.8,SNR=17						
GERES	GERESS Array B	19.98	308	P	Pn	00 32 43.5	-2.3
SHME	Shamm	20.01	124	P	Pn	00 32 44.2	-2.0
PRA	Prague	20.02	312	eP	Pn	00 32 49.1	+3.0
PRA	Prague	20.02	312	eP	Pn	00 32 49.1	+3.0
HRA	Herat	20.09	95	P	Pn	00 32 47.1	-0.3
ABTA	Abfaltersbach	20.11	301	eP	Pn	00 32 46.4	-0.9
	comp=Z,17nm,1.3s						
PVCC	Panska Ves	20.14	313	eP	Pn	00 32 45.1	-2.5
PVCC				AMS	AMS	00 42 30.0	
	comp=Z,1µm,15.7s						
PVCC	Panska Ves	20.14	313	eP	Pn	00 32 45.1	-2.5
PVCC				MLR	MLR		
	comp=Z,1µm,15.7s						
KHC	Kasperske Hory	20.16	309	eP	Pn	00 32 45.2	-2.6
KHC				ex	x	00 32 58.5	
KHC				ex	x	00 33 21.0	
KHC				AMS	AMS	00 42 20.0	
	comp=Z,2µm,7.1s						
KHC	Kasperske Hory	20.16	309	eP	Pn	00 32 45.2	-2.6
KHC				e		00 33 21.0	
KHC				MLR	MLR		
	comp=Z,2µm,7.1s						
KHC	Kasperske Hory	20.16	309	P	P	00 32 44.3	-1.7
PBUR	Paburge	20.18	334	IAmb	IAmb	00 32 50.5	
	comp=Z,217nm,1.4s						
BANOM	Banah	20.20	124	i P	Pn	00 32 46.8	-1.6
	SNR=38						
TEOL	Teolo	20.41	297	P	P	00 32 47.6	-1.1
NAZ	Nazwa, Dubai	20.46	127	i P	Pn	00 32 51.4	-0.1
	SNR=23						
OSSC	Osservatorio P	20.49	292	P	Pn	00 32 49.1	-2.7
OSSC				IAmb	IAmb	00 32 55.5	
	comp=Z,50nm,1.1s						
MSFE	Esma-Masafi	20.50	126	i P	Pn	00 32 51.5	-0.5
	SNR=24						
ASUD	Al Ashush, Dub	20.52	129	i P	Pn	00 32 50.8	-1.4
	SNR=9.1						
CTI	Castel Tesino	20.54	299	P	P	00 32 49.1	-1.2
CTI				pmax	pmax		
	comp=Z,75nm,0.9s						
CTI	Castel Tesino	20.54	299	P	P	00 32 49.1	-1.2
CTI				IAmb	IAmb	00 32 59.4	
	comp=Z,75nm,0.9s						
FAQ	Al Faqa, Dubai	20.59	128	i P	Pn	00 32 51.6	-1.4
	SNR=12						
WET	Wettzell	20.59	308	eP	P	00 32 49.4	-1.3
	comp=Z,54nm,1.2s,baz=109,slow=13						
WET				eL	L	00 40 43.0	
	comp=Z,439nm,21.4s						
MDH	Madha	20.63	125	i P	Pn	00 32 51.1	-2.4
	SNR=22						
BRG	Berggiesshubel	20.65	313	eP	Pn	00 32 51.6	-1.9
BRG				Amp		00 32 54.8	
	comp=Z,7.0nm,0.9s						
BRG	Berggiesshubel	20.65	313	P	Pn	00 32 56.7	+3.1
BRG				Amp		00 32 59.9	
	comp=Z,32nm,1.2s						
CASP	Castiglione de	20.73	290	P	P	00 32 50.9	-1.3
CASP				IAmb	IAmb	00 32 58.3	
	comp=Z,56nm,1.1s						
ZCCA	Zocca	20.76	294	P	Pn	00 32 53.2	-1.8
ZCCA				IAmb	IAmb	00 33 27.3	
	comp=Z,68nm,1.1s						
WTTA	Wattenberg	20.82	302	eP	P	00 32 52.4	-1.0
	comp=Z,47nm,1.3s,SNR=6.3						
UOSS	Minazif	20.83	126	i P	P	00 32 52.2	-1.2
	SNR=37						
UOSS	Minazif	20.83	126	P	P	00 32 52.7	-0.6
HATD	Hatta, Dubai	20.87	127	i P	Pn	00 32 53.4	-2.9
	SNR=51						
WATA	Walderalm	20.88	302	eP	P	00 32 52.6	-1.3
	comp=Z,49nm,1.1s,SNR=8.5						
VSU	Vasula	20.90	344	eP	P	00 32 49.1	-4.7
VSU	Vasula	20.90	344	i P	P	00 32 50.4	-3.4
ASHO	Ashiyiah	20.92	127	i P	Pn	00 32 54.2	-2.8
	SNR=60						
SQTA	Sankt Quirin	21.09	302	eP	P	00 32 56.1	-0.1
	comp=Z,33nm,1.0s,SNR=10						
KIRV	Kirov	21.13	17	P	P	00 32 54.8	-1.5
	comp=Z,43nm,0.9s,baz=203,slow=5.0,SNR=11						
KIRV				LR	LR	00 42 04.6	
	comp=Z,716nm,20.9s,baz=209,slow=40						
VLC	Villacollemand	21.16	293	P	P	00 32 57.5	+0.7
VLC				IAmb	IAmb	00 33 24.4	
	comp=Z,56nm,1.1s						
MOTA	Moosalm	21.19	302	eP	P	00 32 56.3	-1.0
	comp=Z,88nm,0.9s,SNR=26						
ALNE	Al Ain	21.20	129	i P	P	00 32 56.8	-0.6
	SNR=42						
SALO	Salr	21.24	297	P	P	00 32 57.0	-0.7
SALO				IAmb	IAmb	00 33 04.4	
	comp=Z,82nm,1.3s						
NKC	Novy Kostel	21.25	311	eP	P	00 33 01.0	+3.2
NKC				AMS	AMS	00 44 10.0	
	comp=Z,1µm,18.7s						
NKC	Novy Kostel	21.25	311	eP	P	00 33 01.0	+3.2
NKC				MLR	MLR		
	comp=Z,1µm,18.7s						
PRMA	PARMA	21.27	295	P	P	00 32 57.4	-0.6
FUR	Furstenfeldbru	21.29	305	eP	P	00 32 58.2	0.0
	comp=Z,99nm,1.3s,baz=109,slow=13						
FUR				eL	L	00 45 22.1	
	comp=Z,614nm,22.0s						
SLIT	Slitere, Latvi	21.35	337	eP	P	00 32 54.1	-4.7
FETA	Feichten	21.36	301	eP	P	00 32 59.1	-0.1
	comp=Z,35nm,1.1s,SNR=11						
CLL	Collm	21.38	314	eP	P	00 32 59.0	0.0
	comp=Z,29nm,1.5s						
CLL				i		00 33 00.8	
CLL				i		00 33 03.7	
	comp=Z,158nm,1.8s						
CLL				ePPP	PPP	00 33 21.0	
CLL				eS	S	00 36 55.0	-1.2
CLL	Collm	21.38	314	eP	P	00 32 59.0	0.0
CLL				i		00 33 03.7	
CLL				eS	S	00 36 55.0	-1.2
CLL				pmax	pmax		
	comp=Z,29nm,1.5s						
CLL	Collm	21.38	314	eL	L	00 41 58.7	
	comp=Z,401nm,21.4s						
CLL	Collm	21.38	314	P	P	00 32 57.5	-1.6
CLL				IAmb	IAmb	00 33 05.3	
	comp=Z,66nm,1.2s						
RETA	Reutte	21.45	303	eP	P	00 32 59.0	-1.0
	comp=Z,30nm,0.8s,SNR=12						
PUL	Pulkovo	21.48	350	i P	P	00 33 00.3	+0.2
PUL				pmax	pmax		
	comp=Z,90nm,0.8s						
RUE	Ruedersdorf	21.50	317	eP	P	00 32 55.8	-4.6
SOHO	SOHO	21.62	127	i P	P	00 33 00.9	-1.0
	SNR=46						
GRA1	Grafenberg Arr	21.80	308	P	P	00 33 02.8	-0.8
GRA1				IAmb	IAmb	00 33 09.4	
	comp=Z,78nm,1.3s						
GRF	Grafenberg Arr	21.80	308	P	P	00 33 02.8	-0.8
GRF				pmax	pmax		
	comp=Z,78nm,1.3s						
GRF	Grafenberg Arr	21.80	308	eP	P	00 33 04.1	+0.5
	comp=Z,79nm,1.4s,baz=109,slow=13						
GRF				eL	L	00 42 32.8	
	comp=Z,737nm,19.5s						
GRFO	Grafenberg	21.80	308	P	P	00 33 02.5	-1.1
GRFO				pmax	pmax		
	comp=Z,72nm,1.3s						
GRFO	Grafenberg	21.80	308	P	P	00 33 02.5	-1.1
GRFO				IAmb	IAmb	00 33 09.4	
	comp=Z,72nm,1.3s						
MSSA	Maissana	21.80	294	P	P	00 33 03.2	-0.5
MSSA				IAmb	IAmb	00 33 25.5	
	comp=Z,53nm,1.0s						
DAVOX	Davos/Dischmat	21.89	300	P	P	00 33 05.5	+0.7
	comp=Z,19nm,0.8s,baz=101,slow=6.9,SNR=17						
MOX	Moxa	21.90	311	eP	P	00 33 07.0	+2.3
	comp=Z,48nm,1.3s,baz=109,slow=13						
MOX				eL	L	00 42 45.1	
	comp=Z,734nm,21.4s						
DAVA	Damuels	21.99	302	eP	P	00 33 05.1	-0.8
	comp=Z,81nm,1.0s,SNR=18						
KLMR	Klimovskoe	22.06	2	eP	P	00 33 03.7	-2.6
KLMR				eS	S	00 37 07.3	-2.0
KLMR				pmax	pmax		
	comp=Z,175nm,1.3s						
KLMR	Klimovskoe	22.06	2	eP	P	00 33 03.7	-2.6
KLMR				AMP		00 33 15.7	
	comp=Z,175nm,1.3s						
KLMR				eS	S	00 37 07.3	-2.0
KLMR				eS	S	00 37 07.3	-2.0
KLMR				LQ	LQ	00 40 00.0	
KLMR				LQ	LQ	00 40 00.0	
KLMR				LR	LR	00 41 43.6	
ARU	Arti	22.32	31	P	P	00 33 08.4	-0.7
	comp=Z,7.0nm,0.7s,baz=219,slow=7.9,SNR=29						
ARU				LR	LR	00 43 10.0	
	comp=Z,411nm,20.1s,baz=242,slow=40						
ARU	Arti	22.32	31	d iP	P	00 33 08.5	-0.7
ARU						00 33 31.0	
ARU				S	S	00 37 15.2	+0.8
ARU				pmax	pmax		
	comp=Z,31nm,0.8s						
ARU				MLR	MLR		
	comp=Z,565nm,17.0s						
ARU	Arti	22.32	31	P	P	00 33 08.2	-0.9
ARU				IAmb	IAmb	00 33 15.5	
	comp=Z,55nm,0.9s						
BSD	Bornholm Skovb	22.39	324	i P	P	00 33 10.8	+0.8
BLEU	Blekinge	22.75	327	i P	P	00 33 14.0	+0.3
STU	Stuttgart	22.79	305	P	P	00 33 13.4	-0.8
STU				pmax	pmax		
	comp=Z,138nm,1.7s						
STU	Stuttgart	22.79	305	P	P	00 33 13.4	-0.8
KEST	Kesra	22.82	271	P	P	00 33 15.8	+1.0
	comp=Z,49nm,0.9s,baz=45,slow=4.1,SNR=14						
KEST	Kesra	22.82	271	P	P	00 33 14.6	-0.1
BFO	Black Forest	23.24	304	P	P	00 33 17.7	-1.2
BFO				pmax	pmax		
	comp=Z,64nm,1.5s						
BFO	Black Forest	23.24	304	eL	L	00 44 29.2	
	comp=Z,563nm,18.9s						
BFO	Black Forest	23.24	304	P	P	00 33 17.7	-1.2
BFO				IAmb	IAmb	00 33 50.3	
	comp=Z,64nm,1.5s						
PRGR	Permogore	23.32	9	eP	P	00 33 17.3	-2.3
PRGR				pmax	pmax		
	comp=Z,12nm,0.8s						
SVE	Sverdlovsk	23.44	32	deP	P	00 33 19.7	-1.1
SVE				eS	S	00 37 38.2	+4.2
SVE				pmax	pmax		
	comp=Z,96nm,1.3s						
SVE				MLR	MLR		
	comp=Z,911nm,16.0s						
SENIN	Lac Senin/Sane	23.57	298	P	P	00 33 20.4	-2.1
SENIN				IAmb	IAmb	00 33 27.5	
	comp=Z,34nm,0.8s						
WSAR	Wadi Sarin	23.59	125	P	P	00 33 21.7	-0.8
	comp=Z,9.3nm,0.8s,baz=293,slow=13,SNR=4.1						
WSAR				LR	LR	00 43 36.1	
	comp=Z,1µm,19.1s,baz=330,slow=39						
TNS	Taunus Mts	23.66	308	eL	L	00 44 03.8	
	comp=Z,516nm,20.0s						
DEL	Delary	23.69	326	i P	P	00 33 25.4	+2.1
FIA1	FINESS Array S	23.77	346	P	P	00 33 23.1	-0.8
FINES	FINESS Array B	23.77	346	P	P	00 33 23.5	-0.4
	comp=Z,15nm,0.6s,baz=150,slow=8.4,SNR=39						
FINES	FINESS Array B	23.77	346	i P	P	00 33 23.8	-0.1
FINES				pmax	pmax		
	comp=Z,15nm,0.6s						
BNI	Bardonecchia	23.87	295	P	P	00 33 24.2	-1.1
BNI				pmax	pmax		
	comp=Z,76nm,0.9s						
BNI	Bardonecchia	23.87	295	P	P	00 33 24.2	-1.1
ECH	Echery	23.98	303	P	P	00 33 25.3	-0.8
ECH				pmax	pmax		
	comp=Z,127nm,1.3s						
ECH	Echery	23.98	303	P	P	00 33 25.3	-0.8
TAS	Tashkent	24.15	74	P	P	00 33 28.3	+0.5
TAS				pmax	pmax		
	comp=Z,136nm,1.4s						
TAS	Tashkent	24.15	74	P	P	00 33 28.3	+0.5
CHGR	Chuyangaron	24.39	81	P	P	00 33 30.8	+0.6
BRLS	Borolday	24.47	70	eP	P	00 33 31.8	+1.1
BRLS				pmax	pmax		
	comp=Z,17nm,1.6s						
IUG	Iuzhnay	24.65	72	eP	P	00 33 33.1	+0.7
IUG				pmax	pmax		
	comp=Z,290nm,0.8s						
BORU	Boraas	24.88	327	i P	P	00 33 35.6	+1.3
KK31	Karatay Array	24.96	70	P	P	00 33 35.5	+0.3
KKAR	Karatay Array	24.96	70	P	P	00 33 34.3	-0.9
KKAR	Karatay Array	24.96	70	P	P	00 33 34.3	-0.9
GAR	Garm	25.22	79	P	P	00 33 38.5	+0.8
KBL	Kabul	25.34	90	P	P	00 33 40.2	+1.3
KBL				pmax	pmax		
	comp=Z,85nm,1.2s						
KBL	Kabul	25.34	90	P	P	00 33 40.2	+1.3
SSB	Saint Sauveur	25.40	295	P	P	00 33 38.9	-0.2
SSB				pmax	pmax		
	comp=Z,54nm,1.6s						
SSB	Saint Sauveur	25.40	295	P	P	00 33 38.9	-0.2
SSB				IAmb	IAmb	00 34 02.4	
	comp=Z,54nm,1.6s						
BTK	Batken	25.44	77	P	P	00 33 39.3	-0.3
BTK				pmax	pmax		
	comp=Z,25nm,1.0s						
BTK	Batken	25.44	77	P	P	00 33 39.3	-0.3
BTK				IAmb	IAmb	00 33 56.2	
	comp=Z,25nm,0.9s						
HFS	Hagfors	26.17	332	P	P	00 33 46.4	+0.5
	comp=Z,9.0nm,1.0s,baz=155,slow=8.2,SNR=4.7						
DRK	Karamyk	26.28	78	P	P	00 33 48.8	+1.3
DRK				IAmb	IAmb	00 33 57.3	
	comp=Z,20nm,0.9s						
BRVK	Borovoye	26.41	47	i P	P	00 33 49.5	+1.4
BRVK				pmax	pmax		
	comp=Z,22nm,1.2s						
BRVK				MLR	MLR		
	comp=Z,812nm,17.0s						
BRVK	Borovoye	26.41	47	P	P	00 33 47.8	-0.3
BRVK				IAmb	IAmb	00 33 52.5	
	comp=Z,28nm,1.3s						
BVAR	Borovoye Array	26.45	47	P	P	00 33 48.5	-0.1
	comp=Z,21nm,1.1s,baz=239,slow=16,SNR=23						
EKS2	Erkin-Say	27.38	70	P	P	00 34 01.0	+3.8
	SNR=6.9						
BTLS	Baital	27.49	65	eP	P	00 34 02.1	+4.1
BTLS				pmax	pmax		
	comp=Z,10.0nm,1.5s						
ATD	Arta Tunnel	27.57	169	LR	LR	00 43 24.8	
	comp=Z,449nm,18.3s,baz=2.0,slow=33						
NOA	NORSAR Array B	27.68	332	P	P	00 34 00.9	+1.3
	comp=Z,2.2nm,1.0s,baz=128,slow=9.6,SNR=2.8						
AAK	Ala-Archa	27.91	70	P	P	00 34 03.1	+1.2
	comp=Z,5.5nm,1.0s,baz=252,slow=6.4,SNR=12						
AAK				LR	LR	00 45 34.5	
	comp=Z,1µm,19.4s,baz=283,slow=37						
AAK	Ala-Archa	27.91	70	P	P	00 34 05.4	+3.4
	SNR=6.1						
AAK	Ala-Archa	27.91	70	i P	P	00 34 05.4	+3.4
	SNR=8.2						
AAK	Ala-Archa	27.91	70	i P	P	00 34 03.2	+1.2
AAK				pmax	pmax		
	comp=Z,18nm,1.0s						
AAK				MLR	MLR		
	comp=Z,3µm,19.0s						
AAK	Ala-Archa	27.91	70	P	P	00 34 02.7	+0.8
FRU1	Bishkek	28.00	70	P	P	00 34 03.1	+0.5
FRU1				pmax	pmax		
	comp=Z,65nm,1.6s						
FRU1	Bishkek	28.00	70	P	P	00 34 03.1	+0.5
CHMS	Chumysh	28.07	70	P	P	00 34 06.8	+3.6
	SNR=8.6						
KBK	Karagaybulak	28.24	70	P	P	00 34 08.9	+4.0
	SNR=6.8						
TKM2	Tokmak 2	28.70	70	P	P	00 34 12.8	+3.7
	SNR=11						
NIL	Nilore	28.93	89	P	P	00 34 12.0	+1.0
NIL				pmax	pmax		
	comp=Z,61nm,1.8s						
NIL	Nilore	28.93	89	P	P	00 34 12.0	+1.0
NIL				IAmb	IAmb	00 34 16.7	
	comp=Z,61nm,1.8s						
BOOM	Boomskoye usch	28.99	70	P	P	00 34 12.2	+0.6
BOOM				pmax	pmax		
	comp=Z,22nm,1.4s						
BOOM	Boomskoye usch	28.99	70	P	P	00 34 12.2	+0.6
BOOM				IAmb	IAmb	00 34 17.9	
	comp=Z,22nm,1.4s						
LVZ	Lovozero	29.16	358	P	P	00 34 13.1	+0.5
LVZ				pmax	pmax		
	comp=Z,90nm,1.6s						
LVZ	Lovozero	29.16	358	P	P	00 34 13.1	+0.5
ULHL	Ulahol	29.24	71	P	P	00 34 15.8	+2.0
	SNR=10						
KSH	Kashi	29.45	76	P	P	00 34 17.3	+1.7
KSH				PcS	PcS	00 41 05.5	+1.2
KSH				pmax	pmax		
	comp=Z,11nm,1.7s						
KSH				LR	LR		
	comp=Z,1µm,16.1s						
KSH				LR	LR		
	comp=Z,460nm,14.6s						
KSH				LR	LR		
	comp=Z,520nm,14.8s						
FURI	Furi	29.83	178	P	P	00 34 20.3	+1.0
FURI				IAmb	IAmb	00 34 46.0	
	comp=Z,17nm,1.1s						
ARXS	Arharly	30.22	67	eP	P	00 34 26.5	+4.2
TARG	Taragay, Kyrgy	30.46	72	P	P	00 34 26.0	+1.2
KURK	Kurchatov	30.92	54	P	P	00 34 27.7	-0.6
KURK				pmax	pmax		
	comp=Z,17nm,1.0s						
KURK	Kurchatov	30.92	54	P	P	00 34 27.7	-0.6
KURK				IAmb	IAmb	00 34 32.5	
	comp=Z,17nm,0.9s						
ARCES	ARCESS Array B	31.45	352	P	P	00 34 33.1	+0.3
	comp=Z,12nm,0.7s,baz=161,slow=7.7,SNR=19						
ARCES	ARCESS Array B	31.45	352	P	P	00 34 33.0	+0.1
ARCES				IAmb	IAmb	00 34 39.2	
	comp=Z,15nm,1.1s						
ESBB	Sonseca Array	32.14	285	P	P	00 34 38.5	-0.8
ESDC	Sonseca Array	32.15	285	P	P	00 34 37.9	-1.5
	comp=Z,5.0nm,0.8s,baz=67,slow=8.9,SNR=21						

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ESDC  Sonseca Array     32.15 285    P       P        00 34 38.4  -0.9
PAB   San Pablo         32.46 285    P       P        00 34 42.3  +0.2
PAB                                  pmax    pmax
      comp=Z,8.0nm,1.1s
PAB   San Pablo         32.46 285    P       P        00 34 42.3  +0.2
MAKZ  Makanchi          32.99  62    P       P        00 34 46.9  +0.2
MAKZ                                 pmax    pmax
      comp=Z,11nm,1.1s
MAKZ  Makanchi          32.99  62    P       P        00 34 46.9  +0.2
MK31  Makanchi Array    33.21  62  i P       P        00 34 49.5  +0.9
MK31  Makanchi Array    33.21  62    P       P        00 34 49.0  +0.4
MK31                                 IAmb    IAmb     00 35 02.9
      comp=Z,15nm,1.4s
MKAR  Makanchi Array    33.21  62    P       P        00 34 48.7  +0.1
      comp=Z,1.6nm,0.5s,baz=267,slow=8.9,SNR=18
MKAR                                 PcP     PcP      00 37 33.0  +2.0
      comp=Z,1.8nm,0.7s,baz=271,slow=3.2,SNR=4.2
MKAR  Makanchi Array    33.21  62    P       P        00 34 48.8  +0.3
MDT   Midelt            34.67 273    P       P        00 35 01.4  -0.2
      comp=Z,3.8nm,1.0s,baz=79,slow=14,SNR=4.4
MTE   Manteigas         34.68 287   eP       P        00 35 05.1  +3.7
      comp=Z,54nm,1.5s
MTE   Manteigas         34.68 287    P       P        00 35 02.0  +0.6
MTE                                  IAmb    IAmb     00 35 05.6
      comp=Z,19nm,0.8s
PCBR  Castelo Branco    34.75 286   eP       P        00 35 06.0  +4.0
      comp=Z,32nm,1.5s
ZAA0  Zalesovo Array    35.06  49    P       P        00 35 03.3  -1.2
ZALV  Zalesovo Beam     35.06  49    P       P        00 35 02.9  -1.5
      comp=Z,3.9nm,0.5s,baz=266,slow=9.4,SNR=14
ZALV                                 PcP     PcP      00 37 39.1  +3.1
      comp=Z,0.9nm,0.7s,baz=238,slow=4.4,SNR=1.9
ZALV                                 LR      LR       00 53 18.0
      comp=Z,241nm,19.0s,baz=262,slow=43
ZALV  Zalesovo Beam     35.06  49  i P       P        00 35 03.5  -0.9
ZALV                                 pmax    pmax
      comp=Z,4.0nm,0.4s
ZALV  Zalesovo Beam     35.06  49    P       P        00 35 03.0  -1.4
PESTR Estremoz          35.07 285    P       P        00 35 05.4  +0.6
LODK  Lodwar            35.33 184    P       P        00 35 07.3  +0.2
PVAQ  Vaqueiros         35.56 282   eP       P        00 35 10.6  +1.6
      comp=Z,38nm,1.5s
PCVE  Castro Verde      35.74 283   eP       P        00 35 10.5   0.0
      comp=Z,56nm,1.6s
WMQ   Urumqi            37.33  66   eP       P        00 35 26.3  +2.2
WMQ                                  pP      sP       00 35 29.8  +0.8
WMQ                                  sP      pP       00 35 32.8  +5.2
WMQ                                  pmax    pmax
      comp=Z,17nm,1.1s
WMQ                                  pmax    pmax
      comp=Z,220nm,3.9s
WMQ                                  LR      LR
      comp=Z,920nm,14.9s
WMQ                                  LR      LR
      comp=Z,1µm,14.7s
WMQ                                  LR      LR
      comp=Z,660nm,17.1s
DANN  Dangsing          39.32  91   eP       P        00 35 43.8  +2.5
      comp=Z,227nm,1.5s
KOLN  Koldanda          39.47  92   eP       P        00 35 43.8  +1.4
      comp=Z,153nm,1.4s
KMBO  Kilima Mbogo      39.78 181    P       P        00 35 47.8  +2.7
      comp=Z,3.4nm,0.8s,baz=18,slow=11,SNR=8.5
KMBO  Kilima Mbogo      39.78 181  i P       P        00 35 48.2  +3.1
KMBO                                 pmax    pmax
      comp=Z,3.0nm,0.8s
KMBO  Kilima Mbogo      39.78 181    P       P        00 35 45.7  +0.6
MBAR  Mbarara           39.79 191    P       P        00 35 45.7  +0.7
      comp=Z,2.2nm,0.3s,baz=4.4,slow=7.5,SNR=7.6
MBAR  Mbarara           39.79 191    P       P        00 35 44.9  -0.2
GKN   Gorkha            40.17  91   eP       P        00 35 50.1  +1.9
NRIK  Noril'sk          40.27  25    P       P        00 35 48.3   0.0
      comp=Z,20nm,1.0s,baz=247,slow=4.9,SNR=12
NRIK                                 LR      LR       00 54 44.9
      comp=Z,250nm,21.0s,baz=241,slow=40
NRIK  Noril'sk          40.27  25ceP         P        00 35 48.5  +0.2
NRIK                                 pmax    pmax
      comp=Z,26nm,1.0s
NRIK  Noril'sk          40.27  25    P       P        00 35 47.9  -0.4
NRIK                                 IAmb    IAmb     00 35 54.9
      comp=Z,29nm,1.1s
SPB2  Spitsbergen Ar    40.43 353    P       P        00 35 50.0  +0.4
SPITS Spitsbergen Ar    40.44 353    P       P        00 35 49.7  +0.1
      comp=Z,27nm,0.9s,baz=142,slow=9.6,SNR=13
KKN   Kakani            40.77  91   eP       P        00 35 54.8  +1.6
TORD  Torodi Ar. Bea    40.91 241    P       P        00 35 52.4  -1.9
      comp=Z,11nm,0.9s,baz=42,slow=6.6,SNR=18
TORD                                 LR      LR       00 56 25.9
      comp=Z,422nm,18.5s,baz=0.0,slow=42
TORD  Torodi Ar. Bea    40.91 241    P       P        00 35 52.9  -1.4
PKIN  Phulchoki         40.96  91   eP       P        00 35 55.5  +0.6
      comp=Z,136nm,1.4s
PKI   Pulchoki          40.97  91   eP       P        00 35 56.3  +1.3
      comp=Z,160nm,1.4s
JIRN  Jiri              41.54  91   eP       P        00 36 01.6  +1.8
RAMN  Ramite            42.20  91   eP       P        00 36 05.1  +0.1
      comp=Z,18nm,0.6s
ODAN  Odare             42.86  91   eP       P        00 36 10.2  -0.2
      comp=Z,194nm,1.3s
TAPN  Taplejung         42.88  90   eP       P        00 36 11.0  +0.4
      comp=Z,55nm,1.0s
KOWA  Kowa              44.03 248    LR      LR       00 56 18.8
      comp=Z,245nm,20.8s,baz=17,slow=38
KOWA  Kowa              44.03 248    P       P        00 36 17.9  -1.7
KOWA                                 IAmb    IAmb     00 36 44.2
      comp=Z,30nm,1.6s
LSA   Lhasa             44.48  85    P       P        00 36 25.5  +1.9
LSA                                  pmax    pmax
      comp=Z,120nm,1.1s
LSA   Lhasa             44.48  85    P       P        00 36 23.5  -0.1
LSA                                  pmax    pmax
      comp=Z,28nm,1.0s
LSA   Lhasa             44.48  85    P       P        00 36 23.5  -0.1
LSA                                  IAmb    IAmb     00 36 29.1
      comp=Z,28nm,1.0s
TLY   Talaya            46.54  51   eP       P        00 36 43.2  +4.0
TLY                                  pmax    pmax
      comp=Z,26nm,0.9s
TLY                                  MLR     MLR
      comp=Z,1µm,17.0s
TLY   Talaya            46.54  51    P       P        00 36 40.1  +0.9
TLY                                  IAmb    IAmb     00 37 05.4
      comp=Z,27nm,1.4s
ZAK   Zakamensk         46.58  53   eP       P        00 36 42.0  +2.4
ZAK                                 e                 00 38 17.2
ZAK                                  pmax    pmax
      comp=Z,10.0nm,1.4s
ZAK                                  pmax    pmax
      comp=Z,6.0nm,1.2s
GTA   Gaotai            47.24  69   eP       P        00 36 47.8  +2.8
GTA                                  PcP     PcP      00 38 18.8  +2.6
GTA                                  pmax    pmax
      comp=Z,4.0nm,1.1s
GTA                                  pmax    pmax
      comp=Z,120nm,4.5s
GTA                                  LR      LR
      comp=Z,610nm,19.3s
GTA                                  LR      LR
      comp=Z,360nm,22.2s
GTA                                  LR      LR
      comp=Z,440nm,19.6s
SONM  Songino Array     49.18  56    P       P        00 36 59.9  +0.1
      comp=Z,3.3nm,0.8s,baz=280,slow=7.9,SNR=11
SONM                                 PcP     PcP      00 38 23.5  +0.5
      comp=Z,1.4nm,0.8s,baz=259,slow=3.2,SNR=4.4
SONM  Songino Array     49.18  56    P       P        00 37 00.3  +0.5
SUMG  Summit            49.34 337    P       P        00 37 02.2  +1.2
SUMG                                 pmax    pmax
      comp=Z,1.0nm,0.7s
SUMG  Summit            49.34 337    P       P        00 37 02.2  +1.2
ULN   Ulaanbaatar       49.60  56    P       P        00 37 02.9  -0.2
ULN                                  pmax    pmax
      comp=Z,13nm,0.9s
ULN   Ulaanbaatar       49.60  56    P       P        00 37 02.9  -0.2
ULN                                  IAmb    IAmb     00 37 07.9
      comp=Z,13nm,0.8s
DBIC  Dimbokro          50.02 241    P       P        00 37 05.1  -1.3
      comp=Z,4.4nm,0.5s,baz=48,slow=7.9,SNR=9.2
DBIC                                 LR      LR       01 01 49.8
      comp=Z,246nm,18.3s,baz=52,slow=40
DBIC  Dimbokro          50.02 241    P       P        00 37 04.9  -1.6
DBIC                                 IAmb    IAmb     00 37 08.8
      comp=Z,17nm,1.2s
TIC   Toumodi           50.15 242   eP       P        00 37 06.1  -1.4
KIC   Kosan Boka        50.17 241   eP       P        00 37 04.8  -2.7
      comp=Z,44nm,1.2s
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LIC   Lamto             50.46 241   eP       P        00 37 08.9  -0.9
      comp=Z,31nm,0.8s
BOD   Bodaibo           51.14  42   eP       P        00 37 14.3  -0.1
BOD                                  pmax    pmax
      comp=Z,17nm,1.4s
LZH   Lanzhou           51.45  71 ⇑P         P        00 37 21.3  +4.1
LZH                                  sP      sP       00 37 29.5  +7.3
LZH                                  pmax    pmax
      comp=Z,17nm,1.2s
LZH                                  LR      LR
      comp=Z,940nm,17.8s
LZH                                  LR      LR
      comp=Z,430nm,17.7s
LZH                                  LR      LR
      comp=Z,500nm,16.6s
CD2   Chengdu           53.64  77   eP       P        00 37 33.0  -0.4
TIXI  Tiksi             53.99  23    LR      LR       01 05 10.7
      comp=Z,360nm,19.9s,baz=288,slow=41
TIXI  Tiksi             53.99  23ceP         P        00 37 36.5  +1.3
TIXI                                 pmax    pmax
      comp=Z,10.0nm,1.4s
TIXI                                 MLR     MLR
      comp=Z,369nm,19.0s
TIXI  Tiksi             53.99  23    P       P        00 37 35.3  +0.1
BTO   Baotou            54.08  64   eP       P        00 37 38.5  +1.9
BTO                                  S       S        00 45 15.5  +2.5
BTO                                  LR      LR
      comp=Z,2µm,21.0s
HHC   Hu-ho-hao-te      55.06  63   eP       P        00 37 45.0  +1.3
HHC                                  S       S        00 45 26.0  -0.2
HHC                                  pmax    pmax
      comp=Z,20nm,1.1s
HHC                                  pmax    pmax
      comp=Z,230nm,6.1s
HHC                                  LR      LR
      comp=Z,990nm,19.6s
HHC                                  LR      LR
      comp=Z,540nm,18.7s
HHC                                  LR      LR
      comp=Z,390nm,18.6s
KMI   Kunming           55.69  84 ⇓P         P        00 37 51.5  +3.0
KMI                                  sP      sP       00 37 56.0  +2.4
KMI                                  pmax    pmax
      comp=Z,20nm,1.2s
KMI                                  LR      LR
      comp=Z,250nm,16.1s
KMI                                  LR      LR
      comp=Z,290nm,17.9s
KMI                                  LR      LR
      comp=Z,340nm,17.3s
XAN   Xi'an             56.09  71    P       P        00 37 53.5  +2.4
XAN                                  pP      sP       00 38 02.8  +6.7
XAN                                  pmax    pmax
      comp=Z,12nm,1.3s
CHTO  Chiang Mai        56.13  92    P       P        00 37 52.5  +1.0
CHTO                                 pmax    pmax
      comp=Z,17nm,0.9s
CHTO  Chiang Mai        56.13  92    P       P        00 37 52.5  +1.0
CHTO                                 IAmb    IAmb     00 37 55.6
      comp=Z,17nm,0.9s
CM31  Chiang Mai Arr    56.33  93    P       P        00 37 54.0  +1.0
CMAR  Chiang Mai Arr    56.33  93    P       P        00 37 52.3  -0.7
      comp=Z,15nm,0.9s,baz=298,slow=7.4,SNR=38
CMAR                                 PcP     PcP      00 38 53.9  +3.6
      comp=Z,1.0nm,0.3s,baz=282,slow=5.5,SNR=4.1
CMAR                                 PP      PP       00 39 59.7  +1.4
      comp=Z,0.7nm,0.3s,baz=288,slow=11,SNR=4.4
CMAR  Chiang Mai Arr    56.33  93  i P       P        00 37 54.0  +1.0
CMAR                                 pmax    pmax
      comp=Z,15nm,0.9s
CMAR  Chiang Mai Arr    56.33  93    P       P        00 37 53.9  +1.0
HIA   Hailar            57.06  51  i P       P        00 37 59.9  +2.2
HIA                                  pmax    pmax
      comp=Z,12nm,1.1s
HIA   Hailar            57.06  51    P       P        00 37 59.7  +2.0
HIA                                  IAmb    IAmb     00 38 01.6
      comp=Z,11nm,1.0s
YAK   Yakutsk           57.40  34  i P       P        00 38 01.6  +1.8
YAK                                  pmax    pmax
      comp=Z,7.0nm,0.9s
EUNU  Eureka            57.40 350    P       P        00 38 00.7  +1.0
EUNU                                 IAmb    IAmb     00 38 04.4
      comp=Z,10.0nm,0.9s
GYA   Guiyang           58.04  80 ⇑P         P        00 38 06.8  +1.7
GYA                                  pmax    pmax
      comp=Z,10.0nm,0.9s
ENH   Enshi             58.29  75    P       P        00 38 07.9  +1.3
BJI   Beijing           58.59  62    P       P        00 38 08.3  -0.2
BJI                                  pmax    pmax
      comp=Z,4.0nm,1.5s
BJI                                  LR      LR
      comp=Z,1µm,22.2s
BJI                                  LR      LR
      comp=Z,440nm,22.2s
BJT   Baijiatuau        58.60  62    P       P        00 38 09.7  +1.1
BJT                                  pmax    pmax
      comp=Z,16nm,1.4s
BJT   Baijiatuau        58.60  62    P       P        00 38 09.7  +1.1
BJT                                  IAmb    IAmb     00 38 16.8
      comp=Z,16nm,1.4s
SLVN  Son La            58.61  87    P       P        00 38 10.0  +1.0
SLVN                                 IAmb    IAmb     00 38 14.0
      comp=Z,14nm,0.8s
WHN   Wuhan             61.79  72 ⇓P         P        00 38 42.5   +12
RES   Resolute Bay      62.52 347    P       P        00 38 35.7  +0.9
RES                                  pmax    pmax
      comp=Z,2.0nm,0.9s
RES   Resolute Bay      62.52 347    P       P        00 38 35.7  +0.9
CN2   Changchun         62.99  54   eP       P        00 38 38.5   0.0
CN2                                  pmax    pmax
      comp=Z,10.0nm,0.5s
CN2                                  LR      LR
      comp=Z,500nm,15.0s
CN2                                  LR      LR
      comp=Z,800nm,15.0s
CN2                                  LR      LR
      comp=Z,1µm,16.0s
WIN   Windhoek          64.10 201    P       P        00 38 47.3  +1.2
WIN                                  pmax    pmax
      comp=Z,19nm,1.3s
WIN   Windhoek          64.10 201    P       P        00 38 47.2  +1.2
WIN                                  IAmb    IAmb     00 38 51.5
      comp=Z,19nm,1.3s
KLR   Kul'dur           64.12  47    LR      LR       01 11 43.0
      comp=Z,280nm,18.6s,baz=310,slow=41
KLR   Kul'dur           64.12  47ceP         P        00 38 44.9  -0.9
KLR                                  pmax    pmax
      comp=Z,4.0nm,0.9s
KLR                                  MLR     MLR
      comp=Z,307nm,18.0s
NJ2   Nanjing           64.34  69   eP       P        00 38 47.3  -0.2
NJ2                                  pmax    pmax
      comp=Z,7.0nm,0.6s
QIZ   Qiongzhong        64.51  85    P       P        00 38 47.0  -1.9
QIZ                                  S       S        00 47 28.3  +0.1
QIZ                                  LR      LR
      comp=Z,500nm,22.3s
QIZ                                  LR      LR
      comp=Z,560nm,18.6s
LBTB  Lobatse           64.55 192    P       P        00 38 50.2  +1.3
LBTB                                 pmax    pmax
      comp=Z,15nm,1.1s
LBTB  Lobatse           64.55 192    P       P        00 38 50.2  +1.3
LBTB                                 IAmb    IAmb     00 38 57.2
      comp=Z,15nm,1.1s
IPM   Ipoh              66.47 104    P       P        00 39 04.0  +2.4
BILL  Bilibino          66.67  19⇑eP         P        00 39 03.0  +1.0
BILL                                e                 00 39 34.0
BILL                                e                 00 41 31.7
BILL                                 pmax    pmax
      comp=Z,28nm,3.1s
SCHQ  Schefferville     66.72 322    P       P        00 39 02.0  -0.6
      comp=Z,3.9nm,0.6s,baz=105,slow=5.9,SNR=3.7
SCHQ  Schefferville     66.72 322    P       P        00 39 01.6  -1.0
USRK  Ussuriysk Ar.     66.86  51    P       P        00 39 03.5  -0.1
USRK  Ussuriysk Ar.     66.86  51    P       P        00 39 03.5  -0.1
KSAR  Wonju Array Be    67.83  59    P       P        00 39 10.0  +0.1
KSAR  Wonju Array Be    67.83  59    P       P        00 39 10.0  +0.1
KSRS  Korea Array       67.85  59    P       P        00 39 07.7  -2.3
      comp=Z,9.6nm,1.1s,baz=303,slow=4.7,SNR=5.0
BOSA  Boshof            68.13 192    P       P        00 39 11.1  -0.7
      comp=Z,7.2nm,0.9s,baz=5.1,slow=3.7,SNR=8.4
BOSA                                 LR      LR       01 08 06.2
      comp=Z,287nm,18.5s,baz=13,slow=35
BOSA  Boshof            68.13 192    P       P        00 39 11.5  -0.3
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BOSA                                 pmax    pmax
      comp=Z,12nm,1.1s
BOSA  Boshof            68.13 192    P       P        00 39 11.4  -0.3
BOSA                                 IAmb    IAmb     00 39 18.1
      comp=Z,12nm,1.1s
A36M  Sachs Harbour     68.82 354    P       P        00 39 15.5  -0.1
PDSI  Padang            69.59 109    P       P        00 39 24.3  +3.1
      comp=Z,12nm,0.6s
SUR   Sutherland        72.60 195    P       P        00 39 40.0  +0.8
TOLK  Toolik Lake Re    72.69   3    P       P        00 39 40.8  +1.5
BMAR  Burnt Mountain    74.03   1    P       P        00 39 47.6  +0.4
COLD  Coldfoot          74.08   3    P       P        00 39 48.9  +1.5
COLD                                 IAmb    IAmb     00 39 52.2
      comp=Z,8.9nm,0.9s
PETK  Petropavlovsk-    74.71  33    LR      LR       01 19 06.1
      comp=Z,173nm,18.3s,baz=307,slow=41
YUK   Yuzh-Kuril'sk     75.04  45   eP       P        00 39 51.2  -2.1
YUK                                 e                 00 40 04.5
YUK                                 e                 00 42 39.1
YUK                                 ePPP     PPP      00 44 26.1
YUK                                 eS       S        00 49 30.4  -0.8
YUK                                 eSS      SS       00 54 20.1  +1.1
YUK                                  pmax    pmax
      comp=Z,203nm,1.1s
YUK                                  pmax    pmax
      comp=Z,180nm,0.8s
IMAR  Indian Mountai    75.12   5    P       P        00 39 53.4   0.0
MJAR  Matsushiro Arr    75.12  55    P       P        00 39 56.0  +2.0
      comp=Z,5.1nm,1.0s,baz=311,slow=5.9,SNR=6.5
MJAR  Matsushiro Arr    75.12  55    P       P        00 39 56.0  +2.0
KSM   Kuching           75.48 100    P       P        00 40 00.0  +3.7
H21K  Melozitna Rive    75.50   5    P       P        00 39 56.4  +0.8
H21K                                 IAmb    IAmb     00 40 02.1
      comp=Z,26nm,1.4s
MLY   Manley            76.24   4    P       P        00 40 00.2  +0.3
MLY                                  IAmb    IAmb     00 40 04.8
      comp=Z,12nm,1.1s
MDM   Murphy Dome       76.42   3    P       P        00 40 01.9  +1.0
MDM                                  IAmb    IAmb     00 40 05.8
      comp=Z,21nm,1.2s
COLA  College           76.52   2  i P       P        00 40 02.6  +1.2
COLA                                 pmax    pmax
      comp=Z,11nm,1.1s
YKA   Yellowknife Ar    76.59 347    P       P        00 40 01.8  -0.1
      comp=Z,4.0nm,0.8s,baz=34,slow=6.3,SNR=8.8
ILAR  Eielson Array     76.66   2    P       P        00 40 01.7  -0.5
      comp=Z,1.4nm,0.9s,baz=299,slow=2.5,SNR=9.8
ILAR                                 PP      PP       00 42 56.4  +2.7
      comp=Z,1.0nm,1.0s,baz=301,slow=1.6,SNR=4.1
ILAR  Eielson Array     76.66   2    P       P        00 40 02.2   0.0
ILAR  Eielson Array     76.66   2    P       P        00 40 02.2   0.0
EGAK  Eagle             76.71 360    P       P        00 40 03.6  +1.1
EGAK                                 IAmb    IAmb     00 40 07.9
      comp=Z,18nm,1.5s
CCB   Clear Creek Bu    76.75   2    P       P        00 40 03.4  +0.7
CCB                                  IAmb    IAmb     00 40 06.9
      comp=Z,7.2nm,0.9s
J20K  Nowinta River     76.88   5    P       P        00 40 04.3  +0.8
J20K                                 IAmb    IAmb     00 40 09.1
      comp=Z,9.8nm,0.8s
WRH   Wood River Hil    76.92   3    P       P        00 40 03.7  +0.1
WRH                                  IAmb    IAmb     00 40 11.9
      comp=Z,8.2nm,0.9s
HDA   Harding Lake      77.02   2    P       P        00 40 04.7  +0.4
HDA                                  IAmb    IAmb     00 40 11.8
      comp=Z,11nm,0.8s
BPAW  Bear Paw Mtn.     77.16   4    P       P        00 40 05.7  +0.6
DAWY  Dawson            77.41 359    P       P        00 40 07.3  +0.8
DAWY                                 IAmb    IAmb     00 40 11.8
      comp=Z,9.1nm,1.1s
SCRK  Sand Creek        77.51   1    P       P        00 40 08.1  +0.9
SCRK                                 IAmb    IAmb     00 40 12.9
      comp=Z,10nm,1.1s
K20K  Telida            77.70   5    P       P        00 40 08.8  +0.7
K20K                                 IAmb    IAmb     00 40 12.7
      comp=Z,11nm,1.1s
KTH   Kantishna Hill    77.71   4    P       P        00 40 09.0  +0.8
KTH                                  IAmb    IAmb     00 40 12.7
      comp=Z,12nm,1.0s
RIDG  Independent Ri    77.73   1    P       P        00 40 09.3  +0.9
CAST  Castle Rocks      77.77   5    P       P        00 40 09.2  +0.7
CAST                                 IAmb    IAmb     00 40 12.9
      comp=Z,17nm,1.0s
DOT   Dot Lake          77.84   1    P       P        00 40 10.5  +1.6
DOT                                  IAmb    IAmb     00 40 14.6
      comp=Z,17nm,1.2s
RND   Reindeer          77.95   3    P       P        00 40 11.1  +1.5
RND                                  pmax    pmax
      comp=Z,9.0nm,1.0s
RND   Reindeer          77.95   3    P       P        00 40 11.1  +1.5
RND                                  IAmb    IAmb     00 40 13.0
      comp=Z,9.5nm,1.0s
BCAR  Beaver Creek A    78.43 360    P       P        00 40 11.8  -0.4
L27K  Beaver Creek,     78.44 360    P       P        00 40 12.9  +0.7
L19K  White Mountain    78.80   6    P       P        00 40 14.7  +0.5
L19K                                 IAmb    IAmb     00 40 18.3
      comp=Z,12nm,1.2s
M19K  Big River Lodg    79.11   6    P       P        00 40 16.8  +0.8
M19K                                 IAmb    IAmb     00 40 21.6
      comp=Z,32nm,1.7s
MPSI  Mapaga            83.62  95    P       P        00 40 43.3  +2.7
      comp=Z,17nm,1.1s
TOLI2 Tolitoli          83.83  94    P       P        00 40 42.0  +0.4
TOLI2                                IAmb    IAmb     00 40 45.8
      comp=Z,12nm,0.9s
F36A  Milaca            85.04 328    P       P        00 40 47.0  -0.3
F36A                                 IAmb    IAmb     00 40 53.4
      comp=Z,14nm,1.1s
MRSI  Marisa            85.12  93    P       P        00 40 51.6  +3.4
      comp=Z,31nm,1.3s
ROSB  Rosrio            85.52 263   eP       P        00 40 53.4  +3.2
KAPI  Kappang           86.86  99    P       P        00 40 58.0  +1.2
KAPI                                 pmax    pmax
      comp=Z,38nm,1.2s
KAPI  Kappang           86.86  99    P       P        00 40 58.0  +1.2
SUSD  Miller            88.37 331    P       P        00 41 02.8  -0.9
NEW   Newport           90.45 344    P       P        00 41 14.1  +0.7
NEW                                  pmax    pmax
      comp=Z,13nm,1.1s
NEW   Newport           90.45 344    P       P        00 41 14.1  +0.7
NEW                                  IAmb    IAmb     00 41 21.0
      comp=Z,12nm,1.1s
PDAR  Pinedale Array    93.53 337    P       P        00 41 28.2  +0.2
      comp=Z,0.9nm,0.9s,baz=47,slow=2.8,SNR=6.0
PDAR                                 LR      LR       01 26 38.6
      comp=Z,211nm,18.8s,baz=13,slow=38
PDAR  Pinedale Array    93.53 337    P       P        00 41 28.0   0.0
BMO   Blue Mountains    93.72 343    P       P        00 41 29.0  +0.4
BMO                                  pmax    pmax
      comp=Z,3.0nm,0.9s
BMO   Blue Mountains    93.72 343    P       P        00 41 29.0  +0.4
BDFB  Brasilia          96.46 255    LR      LR       01 27 56.1
      comp=Z,188nm,19.1s,baz=103,slow=37
PTGB  Pitanga          104.96 250   eP       Pdif     00 42 21.0  +1.7
TBTG  Tabatinga, AM    106.40 278   eP       Pdif     00 42 28.6  +2.8
ITAB  Concordia        106.47 248   eP       Pdif     00 42 28.3  +2.5
WRA   Warramunga Arr   107.18 102    Pdiff   Pdif     00 42 32.3  +3.1
      comp=Z,0.4nm,0.9s,baz=315,slow=4.2,SNR=2.7
PLCA  Paso Flores      126.36 244   eP       PKiKP    00 47 17.6  +2.7
```

IDC ***29*** *00:47:48.6±1.1, 30°.62S×70°.51W, h0^{km}, mb3.7/3, mb1 3.8/4, mb1mx3.7/20, mbtmp3.7/4, ML3.3/1, MS2.8/1, Ms1 2.7/1, ms1mx2.6/19, Error ellipse: s-maj=55.2km s-min=28.3km az=93.0*

NEIC ***29*** *00:47:50.2±1.5, 30°.32S±0°.03×71°.67W±0°.06, h27^{km}±8^{km}, Error ellipse: s-maj=8.5km s-min=2.1km az=112.0*

GUC ***29*** *00:47:50.4±0.6, 30°.34S×71°.54W, h17^{km}±2^{km}, ML4.2*

ISC 29 00:47:47.1±1.4, **30°.35S**±0°.03×**71°.80W**±0°.07, **h7**^{km}±8^{km}, **n49,** σ1^{s}.**17**/60, **mb3.9**/3, **4C-3D, Near coast of central Chile**

```
Code  Station Name         Δ°   AZ°     Phase ID          Time        Res
                                      Op       ISC       h  m  s      ISC
CO06  Fray Jorge          0.35 156⇓i P       Pn        00 47 58.1  -0.5
CO06                               i S       Sb        00 48 03.7  +2.2
CO06                                 IAML              00 48 04.4
      comp=E,63µm,0.2s
CO06  Fray Jorge          0.35 156   Pg      Pn        00 47 58.0  -0.6
CO06                                 Sg      Sb        00 48 03.6  +2.1
CO05  La Serena           0.65  49⇓i P       Pb        00 48 01.1  +0.2
CO05                               i S       Sg        00 48 08.8  +0.5
CO05                                 IAML              00 48 09.4
      comp=N,13µm,0.3s
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CO05	La Serena	0.65	49	Pg	Pb	00 48 01.1	+0.2
CO05				Sg	Sg	00 48 08.5	+0.3
GO04	Tololo Observa	0.89	79	⇓iP	Pg	00 48 04.5	+0.3
GO04				i S	Sg	00 48 15.0	-0.7
GO04	Tololo Observa	0.89	79	Pg	Pg	00 48 04.4	+0.2
GO04				Sg	Sg	00 48 14.9	-0.9
LCO	Las Campanas	1.65	36	eP	Pn	00 48 15.8	-0.9
LCO				i S	Sn	00 48 35.9	-2.3
LCO	Las Campanas	1.65	36	Pn	Pn	00 48 16.2	-0.5
AC04	Llanos de Chal	2.23	17	eP	Pn	00 48 24.2	-0.3
AC04				i S	Sb	00 48 56.7	+1.0
AC04	Llanos de Chal	2.23	17	Pn	Pn	00 48 24.4	-0.1
VA06	Catapilco	2.24	169	⇑iP	Pn	00 48 25.8	+1.2
VA06				IAML		00 49 01.4	
	comp=E,2μm,0.3s						
VA03	San Esteban	2.63	156	Pn	Pn	00 48 32.0	+2.0
VA01	Torpederas	2.66	177	Pn	Pn	00 48 31.1	+0.7
ROCH	El Roble	2.70	166	⇑iP	Pn	00 48 32.5	+1.4
ROCH				eP	Pb	00 48 35.8	0.0
ROCH				i S	Sb	00 49 10.7	+1.5
ROCH				i S	Sg	00 49 11.2	-2.6
ROCH				IAML		00 49 16.9	
	comp=N,2μm,0.8s						
ROCH				IAML		00 49 17.1	
	comp=N,1μm,0.5s						
ZON	Zonda	2.94	115	Pn	Pn	00 48 34.2	0.0
PEL	Peldehue	2.94	161	eP	Pn	00 48 36.0	+1.8
PEL				IAML		00 49 25.5	
	comp=N,613nm,0.3s						
PEL	Peldehue	2.94	161	Pn	Pn	00 48 35.7	+1.5
MT02	Curacav	2.95	169	⇑iP	Pn	00 48 35.4	+1.0
MT02				IAML		00 49 25.5	
	comp=N,241nm,0.7s						
MT02	Curacav	2.95	169	Pn	Pn	00 48 35.7	+1.3
GO03	Copiap	3.08	27	Pn	Pn	00 48 37.3	+1.2
MT05	Renca	3.16	164	IAML		00 49 28.9	
	comp=E,1μm,0.3s						
MT05	Renca	3.16	164	Pn	Pn	00 48 38.8	+1.4
VA05	Santo Domingo	3.30	177	Pn	Pn	00 48 40.5	+1.4
MT09	Talagante	3.48	169	⇑iP	Pn	00 48 43.4	+1.7
MT09				IAML		00 49 43.7	
	comp=N,410nm,0.5s						
MT09	Talagante	3.48	169	Pn	Pn	00 48 43.5	+1.7
MT01	Popeta	3.53	173	Pn	Pn	00 48 43.5	+1.1
BO01	Tunca	4.07	172	Pn	Pn	00 48 50.8	+1.0
AC02	Maricunga	4.22	35	Pn	Pn	00 48 52.8	+0.5
BO02	Sierra Bellavi	4.51	169	Pn	Pn	00 48 57.0	+1.1
GO05	Huala	4.64	181	Pn	Pn	00 48 57.6	0.0
ML02	Panimavida	5.40	177	Pn	Pn	00 49 09.8	+1.7
PB14	IPOC Station P	5.84	13	Pn	Pn	00 49 13.8	-0.6
LVC	Limon Verde	8.14	19	Pn	Pn	00 49 47.9	+1.9
LC01	Cunco	8.52	180	Pn	Pn	00 49 51.1	+0.2
PLCA	Paso Flores	10.41	175	Pn	Pn	00 50 16.8	0.0
	comp=N,0.1nm,0.3s,baz=356,slow=14,SNR=1.7						
PLCA				LR	LR	00 53 28.6	
	comp=N,53nm,21.6s,baz=10,slow=34						
PLCA	Paso Flores	10.41	175	Pn	Pn	00 50 17.0	+0.2
LL04	Puerto Octay	10.54	183	Pn	Pn	00 50 19.5	+0.9
TRQA	Tornquist	11.18	136	Pn	Pn	00 50 27.9	+0.5
ITQB	Itaqui	13.17	91	Pn	Pn	00 50 52.7	-1.9
CPUP	Villa Florida	13.36	76	Pn	Pn	00 50 57.8	+0.6
ITAB	Concordia	17.52	85	P	P	00 51 53.3	+0.2
TRCB	Terra Rica	18.71	71		P	00 52 05.1	-1.2
TRCB				IAmb	IAmb	00 52 27.0	
	comp=Z,41nm,1.4s						
QSPA	South Pole Qui	59.87	180	P	P	00 57 53.8	+0.6
	comp=Z,1.2nm,0.8s,baz=144,slow=3.8,SNR=5.5						
QSPA	South Pole Qui	59.87	180	P	P	00 57 53.4	+0.1
QSPA				IAmb	IAmb	00 58 18.5	
	comp=Z,2.4nm,1.4s						
TXAR	Lajitas Array	66.67	330	P	P	00 58 47.7	+9.0
	comp=Z,0.1nm,0.4s,baz=128,slow=6.9,SNR=2.0						
TORD	Torodi Ar. Bea	82.79	70	P	P	01 00 11.1	-1.3
	comp=Z,0.6nm,0.7s,baz=263,slow=5.0,SNR=8.0						
TORD	Torodi Ar. Bea	82.79	70	P	P	01 00 11.1	-1.3
KURBB	Kurchatov Arra	150.00	39	PKPbc	PKPbc	01 07 37.5	-0.5
	comp=Z,0.3nm,0.7s,baz=296,slow=3.0,SNR=2.6						
KURBB				PKPab	PKPab	01 07 44.5	+0.8
	comp=Z,0.3nm,0.5s,baz=312,slow=2.6,SNR=2.8						
ZALV	Zalesovo Beam	150.99	29	PKPbc	PKPbc	01 07 39.8	-0.4
	comp=Z,1.8nm,0.7s,baz=301,slow=3.6,SNR=10						
ZALV				PKPab	pPKPab	01 07 49.0	-0.8
	comp=Z,1.5nm,0.5s,baz=302,slow=3.1,SNR=8.1						

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*NEIC **29** 01:04:06.2±1.9, 4°.03N±0°.05×126°.49E±0°.06, h34km±4km, mb4.4/33, Error ellipse: s-maj=9.3km s-min=7.7km az=99.0*

*DJA **29** 01:04:08.4±0.4, 4°N±3°×12°7E±°, h10km, M4.5/11, mb4.4/5, mB4.9/3, MLv4.6/11, Mw(mB)4.2/3*

*IDC **29** 01:04:10.5±2.9, 4°.08N×126°.53E, h75km±27km, mb3.8/17, mb1 4.0/18, mb1mx3.7/43, mbtmp4.2/18, Error ellipse: s-maj=31.9km s-min=11.0km az=75.0*

ISC 29 01:04:06.9±0.4, **4°.08N**±0°.05×**126°.60E**±0°.07, **h45km, n78,** σ1s.**47**/72, **mb4.4**/31, **Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	Sangihe	1.14	250	P	Pn	01 04 27.1	+0.6
SGSI				S	Sn	01 04 43.2	+2.2
DAV	Davao City (W)	3.14	341	P	Pn	01 04 59.3	+5.5
	46nm,0.3s,baz=117,slow=4.5,SNR=2.0						
DAV	Davao City (W)	3.14	341	Pn	Pn	01 04 52.8	-1.1
TNTI	Ternate	3.38	167	P	Pn	01 04 59.0	+1.8
TNTI	Ternate	3.38	167	Pn	Pn	01 04 55.7	-1.5
KMSI	Cibinong	4.36	217	P	Pn	01 05 17.3	+6.6
LBMI	Labuha	4.78	169	P	Pn	01 05 19.1	+2.7
GTOI	Gorontalo	4.96	226	P	Pn	01 05 21.6	+2.7
MRSI	Marisa	5.87	233	P	Pn	01 05 35.2	+3.7
	0.9nm3μm97nm,0.5s						
SANI	Sanana	6.12	186	P	Pn	01 05 33.5	-1.4
TOLI2	Tolitoli	6.52	243	Pn	Pn	01 05 36.9	-3.5
APSI	Ampana	7.01	225	P	Pn	01 05 55.7	+8.7
MYLDM	Lahad Datu	8.15	278	Pn	Pn	01 05 59.0	-3.7
FAKI	Fak Fak	8.96	141	Pn	Pn	01 06 13.2	-0.6
TTSI	Tana Toraja	9.80	224	P	Pn	01 06 35.5	+10
MMRI	Maumere	13.36	199	Pn	Pn	01 07 12.0	-2.0
SOEI	Soe	13.94	190	Pn	Pn	01 07 19.1	-2.9
SBUM	Sibu	14.45	264	Pn	Pn	01 07 28.7	-0.1
TWSI	Taliwang, Sumb	16.00	217	P	P	01 07 53.9	+2.0
KSM	Kuching	16.48	261		Pn	01 07 54.6	-0.5
KSM				IAmb	IAmb	01 08 09.4	
	comp=Z,25nm,1.2s						
MTN	Manton Dam	17.41	165	P	Pn	01 08 05.5	-1.2
JAGI	Jajag, Banyuwa	17.60	225		Pn	01 08 07.2	-1.8
JAGI				IAmb	IAmb	01 08 22.5	
	comp=Z,25nm,1.2s						
KNRA	Kununurra	19.75	174	P	P	01 08 31.0	-2.2
KNRA				IAmb	IAmb	01 08 47.1	
	comp=Z,31nm,1.3s						
TPUB	Ta-pu	19.96	344	P	P	01 08 35.0	-0.5
TPUB				IAmb	IAmb	01 08 41.7	
	comp=Z,25nm,0.9s						
FITZ	Fitzroy Crossi	22.06	182	P	P	01 08 59.1	+1.0
	comp=Z,2.6nm,0.4s,baz=3.6,slow=9.7,SNR=22						
WB0	Warramunga Arr	24.91	162	P	P	01 09 26.6	+0.8
WRAB	Tennant Creek	25.05	163	P	P	01 09 28.1	+0.9
WRAB				IAmb	IAmb	01 09 43.1	
	comp=Z,10nm,0.9s						
WRA	Warramunga Arr	25.06	163	P	P	01 09 27.6	+0.4
	comp=Z,7.1nm,0.8s,baz=344,slow=11,SNR=39						
WRA	Warramunga Arr	25.06	163	P	P	01 09 28.3	+1.0
WB2	Warramunga Arr	25.06	163	P	P	01 09 28.2	+0.9
WB2				IAmb	IAmb	01 09 38.2	
	comp=Z,9.3nm,0.6s						
WR0	Warramunga Arr	25.13	162	P	P	01 09 28.3	+0.4
WR0				IAmb	IAmb	01 09 46.0	
	comp=Z,8.2nm,0.9s						
AS31	Alice Springs	28.48	166	P	P	01 09 57.6	-0.4
ASAR	Alice Springs	28.48	166	P	P	01 09 58.3	+0.2
	comp=Z,1.0nm,0.6s,baz=342,slow=6.7,SNR=27						
ASAR	Alice Springs	28.48	166	P	P	01 09 55.0	-3.1
CMAR	Chiang Mai Arr	30.58	300	P	P	01 10 17.8	+1.0
	comp=Z,1.0nm,0.4s,baz=114,slow=6.8,SNR=6.6						
CMAR	Chiang Mai Arr	30.58	300	P	P	01 10 17.6	+0.8
CHTO	Chiang Mai	30.73	301	P	P	01 10 20.0	+1.9
KSRS	Korea Array	33.23	2	P	P	01 10 39.6	-0.1
	comp=Z,0.9nm,0.5s,baz=180,slow=9.8,SNR=4.4						
XAN	Xi'an	34.05	333	P	P	01 10 45.8	-1.2
XAN				pP	pP	01 10 56.0	-2.1
XAN				sP	pwP	01 11 01.0	-0.9
XAN				pmax	pmax		
	comp=Z,21nm,0.8s						
EIDS	Eidsvold	37.71	142	P	P	01 11 19.4	+1.0
LZH	Lanzhou	38.13	330	eP	P	01 11 22.0	-0.1
LZH				pP	pP	01 11 34.0	+0.6
LZH				sP	sP	01 11 45.5	+7.1
LZH				pmax	pmax		
	comp=Z,17nm,1.2s						
LZH				LR	LR		
	comp=N,440nm,17.6s						
LZH				LR	LR		
	comp=E,270nm,16.6s						
LZH				LR	LR		
	comp=Z,290nm,17.1s						
STKA	Stephens Creek	38.50	159	P	P	01 11 26.1	+1.1
	comp=Z,5.2nm,0.9s,baz=354,slow=8.2,SNR=7.4						
STKA	Stephens Creek	38.50	159	P	P	01 11 25.8	+0.8
HHC	Hu-ho-hao-te	39.02	342	eP	P	01 11 34.3	+4.9
HHC				pmax	pmax		
	comp=Z,13nm,0.6s						
HHC				pmax	pmax		
	comp=Z,310nm,5.8s						
HHC				LR	LR		
	comp=N,230nm,15.3s						
HHC				LR	LR		
	comp=E,240nm,15.3s						
HHC				LR	LR		
	comp=Z,320nm,17.0s						
KLR	Kul'dur	45.20	5	P	P	01 12 20.1	+0.7
	comp=Z,0.7nm,0.4s,baz=153,slow=11,SNR=2.3						
SONM	Songino Array	46.92	341	P	P	01 12 33.0	-0.2
	comp=Z,1.5nm,0.6s,baz=158,slow=8.5,SNR=7.9						
SONM	Songino Array	46.92	341	IAmb	IAmb	01 12 34.9	
	comp=Z,1.3nm,0.7s						
WMQ	Urumqi	52.36	325	eP	P	01 13 17.5	+2.9
PETK	Petropavlovsk-	55.15	22	P	P	01 13 35.0	+0.2
	comp=Z,2.1nm,0.8s,baz=264,slow=2.9,SNR=1.5						
MK31	Makanchi Array	57.19	325	P	P	01 13 48.9	-0.6
MKAR	Makanchi Array	57.19	325	P	P	01 13 48.7	-0.8
	comp=Z,1.7nm,0.5s,baz=118,slow=7.9,SNR=27						
MKAR	Makanchi Array	57.19	325	P	P	01 13 48.9	-0.6
MAKZ	Makanchi	57.38	325	P	P	01 13 52.6	+1.8
MAKZ				IAmb	IAmb	01 14 08.6	
	comp=Z,4.1nm,0.9s						
ZAA0	Zalesovo Array	60.22	333	P	P	01 14 09.9	-0.4
ZALV	Zalesovo Beam	60.22	333	P	P	01 14 08.9	-1.4
	comp=Z,1.3nm,0.6s,baz=128,slow=6.6,SNR=8.8						
DRK	Karamyk	60.67	313	P	P	01 14 13.3	-0.8
DRK				IAmb	IAmb	01 14 16.3	
	comp=Z,5.4nm,1.1s						
KBL	Kabul	61.21	307	P	P	01 14 16.9	-0.8
KBL				IAmb	IAmb	01 14 21.1	
	comp=Z,2.5nm,1.1s						
KURK	Kurchatov	61.38	327	P	P	01 14 17.7	-0.6
BTK	Batken	61.59	314	P	P	01 14 20.6	+0.5
BTK				IAmb	IAmb	01 14 24.6	
	comp=Z,6.9nm,1.5s						
GAR	Garm	61.59	313	P	P	01 14 19.9	-0.3
CHGR	Chuyangaron	62.34	312	P	P	01 14 25.3	+0.2
KKAR	Karatay Array	62.89	317	P	P	01 14 28.4	-0.2
HRA	Herat	66.62	306	P	P	01 14 52.8	-0.6
HRA				IAmb	IAmb	01 15 08.4	
	comp=Z,3.6nm,1.3s						
BRVK	Borovoye	67.03	327	P	P	01 14 55.8	+0.5
BRVK				IAmb	IAmb	01 15 06.5	
	comp=Z,3.2nm,0.7s						
TIXI	Tiksi	67.49	1	P	P	01 14 58.4	+0.6
TIXI				IAmb	IAmb	01 15 01.5	
	comp=Z,2.9nm,0.8s						
NRIK	Noril'sk	70.06	346	P	P	01 15 14.8	+0.9
	comp=Z,2.7nm,0.5s,baz=114,slow=4.7,SNR=10						
NRIK	Noril'sk	70.06	346	P	P	01 15 14.1	+0.3
ABKAR	Akbulak array	71.80	321	P	P	01 15 23.7	-1.2
ARU	Arti	74.57	328	P	P	01 15 41.0	0.0
ARU				IAmb	IAmb	01 15 41.9	
	comp=Z,3.1nm,0.6s						
VNDA	Vanda	83.79	173	P	P	01 16 32.1	+1.2
	comp=Z,0.9nm,0.8s,baz=294,slow=10.0,SNR=5.1						
VNDA	Vanda	83.79	173	IAmb	IAmb	01 16 38.7	
	comp=Z,3.2nm,1.1s						
ILAR	Eielson Array	84.84	25	P	P	01 16 36.7	+0.1
	comp=Z,0.3nm,0.6s,baz=265,slow=5.3,SNR=4.3						
KLMR	Klimovskoe	85.04	331	eP	P	01 16 36.0	-1.6
KLMR				AMP		01 16 38.3	
	comp=Z,28nm,1.3s						
BRTR	Keskin Array B	89.70	310	P	P	01 17 00.5	-0.3
	comp=Z,0.7nm,0.8s,baz=142,slow=5.2,SNR=3.4						
ARCES	ARCESS Array B	90.08	340	P	P	01 17 03.2	+1.5
	comp=Z,2.6nm,0.9s,baz=83,slow=7.4,SNR=3.9						
FINES	FINESS Array B	91.46	332	P	P	01 17 08.3	0.0
	comp=Z,3.2nm,0.9s,baz=70,slow=8.0,SNR=3.8						
TXAR	Lajitas Array	121.48	52	PKP	PKiKP	01 22 58.0	+1.5
	comp=Z,0.2nm,0.7s,baz=284,slow=3.6,SNR=2.1						
TORD	Torodi Ar. Bea	122.69	288	PKP	PKPdf	01 22 58.9	+0.1
	comp=Z,0.3nm,0.6s,baz=58,slow=2.6,SNR=2.6						

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*MAN **29** 01:04:30.2, 5°.65N×125°.91E, h28km, mb5.4, ML4.4, MS4.6*

*IDC **29** 01:04:41.7±0.5, 4°.08N×126°.38E, h0km, mb4.4/20, mb1 4.5/24, mb1mx4.3/43, mbtmp4.4/24, ML4.1/3, MS3.8/4, Ms1 3.8/4, ms1mx3.3/26, Error ellipse: s-maj=25.5km s-min=8.9km az=76.0*

*NEIC **29** 01:04:46.8±2.0, 4°.33N±0°.06×126°.69E±0°.08, h30km±4km, mb4.8/45, Error ellipse: s-maj=12.3km s-min=8.1km az=66.0*

ISC 29 01:04:48.6±0.3, **4°.24N**±0°.05×**126°.61E**±0°.07, **h50km, n99,** σ1s.**51**/97, **mb4.6**/41, **Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	2.99	340	Pn	Pn	01 05 30.8	-2.8
	17nm,0.3s,baz=223,slow=19,SNR=2.0						
DAV				Lg	Lg	01 06 20.3	
	108nm,0.3s,baz=313,slow=18,SNR=3.9						
DAV				LR	LR	01 07 01.0	
	comp=Z,3μm,18.2s,baz=91,slow=45						
TNTI	Ternate	3.53	168	Pn	Pn	01 05 39.5	-1.5
TOLI2	Tolitoli	6.60	242	Pn	Pn	01 06 22.1	-1.0
SWI	Sorong	6.88	137	P	Pn	01 06 24.9	-2.0
MYLDM	Lahad Datu	8.13	277	Pn	Pn	01 06 43.4	-0.7
FAKI	Fak Fak	9.08	142	P	Pn	01 06 56.5	-0.6
FAKI	Fak Fak	9.08	142	Pn	Pn	01 06 55.4	-1.7
KMPI	Kaimana, Papua	10.58	138	P	Pn	01 07 18.2	+0.6
BNSI	Bone	10.77	217	P	Pn	01 07 29.4	+9.2
KAPI	Kappang	11.47	217	Pn	Pn	01 07 25.2	-4.6
	baz=90,slow=9.4,SNR=2.6						
KAPI				LR	LR	01 12 12.9	
	comp=Z,543nm,21.8s,baz=52,slow=40						
KAPI	Kappang	11.47	217	Pn	Pn	01 07 30.2	+0.4
SAUI	Saumlaki	13.01	159	Pn	Pn	01 07 49.1	-1.9
MMRI	Maumere	13.52	199	P	P	01 08 12.9	+7.3
BBKI	Banjar Baru	14.03	237	P	P	01 08 11.6	+0.3
SOEI	Soe	14.10	190	P	P	01 08 12.5	+0.3
SOEI	Soe	14.10	190	Pn	Pn	01 08 04.7	-1.1
SBUM	Sibu	14.47	263	Pn	Pn	01 08 10.5	-0.2
BATI	Baumata	14.65	192	Pn	Pn	01 08 06.2	-6.8
	2.2nm,0.3s,baz=327,slow=17,SNR=3.7						
GENI	Genyem	15.15	116	P	P	01 08 24.5	+0.7
JAY	Jayapura	15.60	115	Pn	Pn	01 08 24.0	-1.5
	0.3nm,0.3s,baz=0.0,slow=12,SNR=3.6						
PLAI	Plampang	15.69	214	P	P	01 08 33.6	+3.9
KSM	Kuching	16.51	261		P	01 08 38.7	-0.2
MTN	Manton Dam	17.56	165	Pn	Pn	01 08 48.0	-1.9
TPUB	Ta-pu	19.81	344	P	P	01 09 05.4	-10
TPUB				IAmb	IAmb	01 09 22.4	
	comp=Z,32nm,0.9s						
KNRA	Kununurra	19.91	174	P	P	01 09 14.0	-2.2
KNRA				IAmb	IAmb	01 09 27.0	
	comp=Z,24nm,0.8s						
FITZ	Fitzroy Crossi	22.22	182	P	P	01 09 41.5	+0.4
	comp=Z,11nm,0.8s,baz=25,slow=5.2,SNR=12						
JOW	Kunigami	22.52	4	P	P	01 09 46.5	+2.2
	comp=Z,18nm,0.7s,baz=200,slow=2.4,SNR=4.3						
WB0	Warramunga Arr	25.06	162	P	P	01 10 06.4	-2.1
WB0				IAmb	IAmb	01 10 28.9	
	comp=Z,31nm,0.9s						
WRAB	Tennant Creek	25.20	163	P	P	01 10 08.8	-1.0
WRAB				IAmb	IAmb	01 10 23.6	
	comp=Z,26nm,0.8s						
WRA	Warramunga Arr	25.21	163	P	P	01 10 09.0	-0.8
	comp=Z,24nm,0.8s,baz=343,slow=11,SNR=12						
WRA				S	S	01 14 37.8	+5.9
	comp=Z,1.1nm,0.8s,baz=347,slow=19,SNR=2.6						
WRA	Warramunga Arr	25.21	163	IAmb	IAmb	01 10 15.3	
	comp=Z,0.8nm,0.8s						
WB2	Warramunga Arr	25.21	163	P	P	01 10 09.6	-0.2
WB2				IAmb	IAmb	01 10 23.7	
	comp=Z,27nm,0.8s						
IPM	Ipoh	25.51	272	P	P	01 10 15.2	+2.5
IPM				IAmb	IAmb	01 10 19.7	
	comp=Z,22nm,1.1s						
BKNI	Bangkinang	25.84	262	P	P	01 10 18.7	+3.0
AS31	Alice Springs	28.64	166	P	P	01 10 41.6	+0.9
ASAR	Alice Springs	28.64	166	P	P	01 10 40.0	-0.7
	comp=Z,3.8nm,0.6s,baz=344,slow=7.0,SNR=12						
ASAR				PcP	PcP	01 13 53.3	+2.5
	comp=Z,1.2nm,0.6s,baz=357,slow=2.8,SNR=3.9						
ASAR				S	S	01 15 25.7	-0.4
	comp=Z,0.9nm,1.0s,baz=333,slow=16,SNR=2.9						
ASAR				LR	LR	01 23 20.8	
	comp=Z,96nm,19.4s,baz=341,slow=39						
JTU	Tsushima	30.24	5	P	P	01 10 53.4	-1.3
JTU				IAmb	IAmb	01 10 59.9	
	comp=Z,12nm,0.8s						
CMAR	Chiang Mai Arr	30.51	300	P	P	01 10 57.9	+0.5
	comp=Z,2.4nm,0.7s,baz=117,slow=7.1,SNR=7.8						
ENH	Enshi	30.53	330	P	P	01 10 56.8	-0.5
ENH				IAmb	IAmb	01 10 57.8	
	comp=Z,14nm,1.0s						
CHTO	Chiang Mai	30.66	300	P	P	01 10 58.0	-0.7
CHTO				IAmb	IAmb	01 11 00.8	
	comp=Z,5.7nm,0.7s						
KSRS	Korea Array	33.08	2	P	P	01 11 20.6	+1.0
	comp=Z,1.6nm,0.6s,baz=183,slow=10,SNR=4.5						
KSRS				LR	LR	01 24 36.7	
	comp=Z,101nm,21.5s,baz=204,slow=36						
MJAR	Matsushiro Arr	33.87	17	P	P	01 11 25.5	-1.1
	comp=Z,0.6nm,0.5s,baz=189,slow=9.1,SNR=4.2						
FORT	Forrest	34.85	178	P	P	01 11 37.7	+2.7
BJT	Baijiatuau	36.84	347	P	P	01 11 50.2	-1.8
BJT				IAmb	IAmb	01 12 00.5	
	comp=Z,11nm,0.7s						
EIDS	Eidsvold	37.83	142	P	P	01 11 59.4	-1.1
STKA	Stephens Creek	38.65	159	P	P	01 12 07.2	-0.2
	comp=Z,19nm,0.8s,baz=341,slow=8.9,SNR=6.8						
STKA	Stephens Creek	38.65	159	IAmb	IAmb	01 12 13.5	
	comp=Z,3.7nm,0.8s						
SHL	Shillong	39.48	306	P	P	01 12 14.2	-0.5
USRK	Ussuriysk Ar.	40.08	6	P	P	01 12 21.3	+2.2
	comp=Z,1.3nm,0.4s,baz=196,slow=7.1,SNR=4.2						
USRK	Ussuriysk Ar.	40.08	6	P	P	01 12 19.1	0.0
ARMA	Armidale	41.96	147	P	P	01 12 35.3	+0.4
LSA	Lhasa	42.01	311	P	P	01 12 35.7	-0.2
ASAJ	Asahikawa	42.14	17	P	P	01 12 37.9	+1.8
	comp=Z,14nm,1.0s,baz=234,slow=8.7,SNR=4.2						
JKA	Kamikawa-asahi	42.14	17	P	P	01 12 34.7	-1.4
GTA	Gaotai	42.60	329	eP	P	01 12 50.5	+10
GTA				pP	pwP	01 12 56.5	-0.2
GTA				sP	sP	01 12 58.8	+1.0
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
YSS	Yuzh-Sakhalins	44.78	16	P	P	01 12 57.4	+0.1
KLR	Kul'dur	45.04	5	P	P	01 13 00.1	+0.8
	comp=Z,1.2nm,0.4s,baz=180,slow=8.8,SNR=4.4						
ULN	Ulaanbaatar	46.60	342	P	P	01 13 12.6	+0.8
SONM	Songino Array	46.78	341	P	P	01 13 13.6	+0.4
	comp=Z,1.9nm,0.6s,baz=152,slow=8.9,SNR=7.4						
SONM	Songino Array	46.78	341	P	P	01 13 13.3	0.0
PETK	Petropavlovsk-	55.00	22	P	P	01 14 16.8	+1.9
	comp=Z,3.3nm,0.6s,baz=191,slow=6.4,SNR=2.5						
MK31	Makanchi Array	57.07	325	P	P	01 14 29.7	-0.1
MK31				IAmb	IAmb	01 14 41.9	
	comp=Z,3.8nm,0.7s						
MKAR	Makanchi Array	57.07	325	P	P	01 14 29.7	0.0
	comp=Z,5.3nm,0.6s,baz=123,slow=8.1,SNR=13						
MKAR				PcP	PcP	01 15 24.8	+0.6
	comp=Z,2.6nm,0.6s,baz=115,slow=2.4,SNR=4.2						
MKAR				ScP	ScP	01 19 24.2	+4.2
	comp=Z,0.6nm,0.7s,baz=161,slow=2.4,SNR=2.9						
MKAR	Makanchi Array	57.07	325	P	P	01 14 29.5	-0.3
PRZ	Przheval'sk	57.24	319	P	P	01 14 31.2	-0.1
PRZ				IAmb	IAmb	01 14 35.1	
	comp=Z,6.6nm,0.7s						
MAKZ	Makanchi	57.26	325	P	P	01 14 30.8	-0.3
MAKZ				IAmb	IAmb	01 14 51.9	
	comp=Z,11nm,1.2s						
YAK	Yakutsk	57.70	2	P	P	01 14 34.4	+0.6
ZAA0	Zalesovo Array	60.08	333	P	P	01 14 49.7	-0.8
ZAA0				IAmb	IAmb	01 15 17.5	
	comp=Z,5.6nm,1.2s						
ZALV	Zalesovo Beam	60.08	333	P	P	01 14 49.8	-0.8
	comp=Z,2.8nm,0.4s,baz=125,slow=6.8,SNR=17						
ZALV	Zalesovo Beam	60.08	333	P	P	01 14 50.0	-0.5
DRK	Karamyk	60.57	313	P	P	01 14 53.6	-1.0
DRK				IAmb	IAmb	01 15 07.4	
	comp=Z,5.5nm,0.6s						
KBL	Kabul	61.12	307	P	P	01 14 57.0	-1.3
KURK	Kurchatov	61.25	327	P	P	01 14 58.4	-0.2
BTK	Batken	61.48	314	P	P	01 15 00.9	+0.4
BTK				IAmb	IAmb	01 15 04.7	
	comp=Z,4.2nm,1.0s						
GAR	Garm	61.49	312	P	P	01 15 00.3	-0.3
GAR				IAmb	IAmb	01 15 29.0	
	comp=Z,11nm,1.0s						
CHGR	Chuyangaron	62.24	312	P	P	01 15 03.9	-1.7
CHGR				IAmb	IAmb	01 15 16.2	
	comp=Z,6.8nm,0.8s						
KKAR	Karatay Array	62.78	317	P	P	01 15 09.2	+0.2
BRVK	Borovoye	66.90	327	P	P	01 15 36.1	+0.5
BRVK				IAmb	IAmb	01 16 03.1	
	comp=Z,9.3nm,0.9s						
TIXI	Tiksi	67.33	1	P	P	01 15 37.5	-0.5
NRIK	Noril'sk	69.91	346	P	P	01 15 55.2	+1.2
	comp=Z,4.5nm,0.5s,baz=126,slow=6.3,SNR=9.6						
NRIK	Noril'sk	69.91	346	P	P	01 15 55.0	+0.9
NRIK				IAmb	IAmb	01 16 15.7	
	comp=Z,14nm,1.4s						
ABKAR	Akbulak array	71.68	321	P	P	01 16 05.1	-0.2
RAYN	Ar Rayn	80.17	293	P	P	01 16 53.9	-0.4
IMAR	Indian Mountai	81.93	24	P	P	01 17 03.3	+0.7
SIRT	Sirnak	82.81	307	P	P	01 17 08.1	+0.1
VNDA	Vanda	83.95	173	P	P	01 17 13.1	+0.2
	comp=Z,1.0nm,0.6s,baz=289,slow=14,SNR=2.4						
ILAR	Eielson Array	84.69	25	P	P	01 17 17.7	+0.7
	comp=Z,0.8nm,0.8s,baz=244,slow=4.9,SNR=6.5						
BMAR	Burnt Mountain	85.65	23	P	P	01 17 20.8	-1.0
KIBK	Kibwezi	88.74	268	P	P	01 17 36.6	-1.2
KIBK				IAmb	IAmb	01 17 43.3	
	comp=Z,5.6nm,1.1s						
BRTR	Keskin Array B	89.60	310	P	P	01 17 40.2	-1.2
	comp=Z,0.9nm,0.7s,baz=121,slow=4.3,SNR=4.7						
ARCES	ARCESS Array B	89.93	340	P	P	01 17 42.0	-0.1
	comp=Z,1.5nm,0.6s,baz=83,slow=5.9,SNR=4.2						
FINES	FINESS Array B	91.33	332	P	P	01 17 48.6	-0.2
	comp=Z,4.4nm,0.8s,baz=56,slow=7.1,SNR=6.4						
AKASG	Malin Array Be	91.42	321	P	P	01 17 49.0	-0.5
	comp=Z,0.4nm,0.5s,baz=64,slow=4.2,SNR=3.9						
BRG	Berggiesshubel	100.76	323	eP	Pdif	01 18 32.3	+0.5
BRG				Amp		01 18 34.4	
	comp=Z,3.6nm,0.9s						
TXAR	Lajitas Array	121.38	52	PKP	PKiKP	01 23 38.4	+1.1
	comp=Z,0.4nm,0.7s,baz=300,slow=1.8,SNR=3.6						
TXAR	Lajitas Array	121.38	52		PKPdf	01 23 35.9	-1.4
TORD	Torodi Ar. Bea	122.64	288	PKP	PKPdf	01 23 39.0	-0.8
	comp=Z,0.4nm,0.6s,baz=77,slow=1.8,SNR=4.6						
TORD	Torodi Ar. Bea	122.64	288		PKPdf	01 23 38.1	-1.8
U38A	Gravette	124.30	40	PKPdf	PKiKP	01 23 42.5	-0.4

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*ISK **29** 01:07:19.2, 38°.79N×37°.85E, h12km, ML2.3/4*

DDA 29 01:07:19.2, 38°.83N×37°.80E, h7km±4km, ML2.1, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HEKM	Malatya_Hekimh	0.14	69	i P	Pg	01 07 22.3	+0.1
HEKM				i S	Sg	01 07 25.0	+0.7
HEKM				IAML		01 07 25.0	
	comp=N,3μm,0.2s						
HEKM				IAML		01 07 25.0	
	comp=E,802nm,0.1s						
DARE	Darende-Malaty	0.36	224	PG	Pg	01 07 26.8	+0.6
DARE				SG	Sg	01 07 32.3	+1.4
CUGUR	Gurin_SVAS	0.42	256	i P	Pb	01 07 28.7	-0.4
CUGUR				i S	Sg	01 07 34.2	+1.1
CUGUR				IAML		01 07 36.0	
	comp=E,320nm,0.4s						
ARPR	Arapgir-MALATY	0.50	58	PG	Pg	01 07 29.2	+0.4
AKCD	Akcadag	0.54	169	i P	Pg	01 07 29.8	+0.1
AKCD				i S	Sb	01 07 38.1	-1.1
AKCD				IAML		01 07 40.0	

	comp=E,267nm,0.2s						
CUKAN	**kangal_SIVAS**	**0.55**	**332**	*i* P	Pg	01 07 30.1	+0.2
CUKAN				*i* S	Sg	01 07 37.0	0.0
CUKAN				IAML		01 07 39.0	
	comp=E,56nm,0.6s						
KEMA	**Kemaliye**	**0.70**	**51**	*i* P	Pg	01 07 32.1	-0.5
KEMA				*i* S	Sg	01 07 40.3	-1.4
KEMA				IAML		01 07 43.0	
	comp=E,54nm,0.5s						
KEMA				IAML		01 07 45.0	
	comp=N,40nm,0.4s						
MALT	**Malatya**	**0.71**	**136**	PG	Pg	01 07 32.4	-0.6
MALT				SG	Sg	01 07 42.0	-0.3
ELBS	**KAHRAMANMARAS_**	**0.72**	**226**	*i* P	Pb	01 07 34.6	+0.4
CUAYA	**Sivas-Altinyay**	**0.93**	**298**	*i* P	Pb	01 07 37.8	+0.2
ELZG	**Elazig**	**0.99**	**109**	*i* P	Pg	01 07 37.1	-1.1
SARI	**SarD1z-Kayseri**	**1.16**	**249**	PN	Pn	01 07 42.3	+0.3

IDC 29 01:13:16.8±2.0**, 4°.11N**×**126°.37E, h0^{km}, mb3.4**/4**, mb1 3.6**/4**, mb1mx3.4**/42**, mbtmp3.4**/4**, Error ellipse: s-maj=125.2km s-min=25.7km az=69.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**22.08**	**182**	P	P	01 18 14.6	+1.0
	0.5nm,0.3s,baz=22,slow=10,SNR=2.1						
WRA	**Warramunga Arr**	**25.15**	**162**	P	P	01 18 43.8	-0.1
	0.5nm,0.5s,baz=340,slow=10,SNR=7.8						
ASAR	**Alice Springs**	**28.57**	**165**	P	P	01 19 13.8	-0.8
	0.1nm,0.3s,baz=342,slow=8.9,SNR=1.8						
MKAR	**Makanchi Array**	**57.04**	**325**	P	P	01 23 04.7	+0.1
	0.5nm,0.7s,baz=122,slow=6.4,SNR=5.4						

IDC 29 01:40:23.5±4.5**, 22°.41N**×**94°.80E, h0^{km}, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.4**/41**, mbtmp3.7**/3**, Error ellipse: s-maj=378.7km s-min=25.3km az=60.0, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**26.35**	**340**	P	P	01 46 01.2	0.0
	1.0nm,0.5s,baz=148,slow=9.9,SNR=18						
WRA	**Warramunga Arr**	**57.12**	**135**	P	P	01 50 11.9	-0.2
	0.6nm,0.6s,baz=321,slow=7.3,SNR=10						
ASAR	**Alice Springs**	**59.52**	**138**	P	P	01 50 29.0	+0.1
	0.3nm,0.5s,baz=318,slow=7.0,SNR=8.6						

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*ISK **29** 01:46:19.5, 38°.83N×37°.84E, h3^{km}, ML3.4/20*
*DDA **29** 01:46:19.5, 38°.86N×37°.84E, h18^{km}, MW3.8*
ISC 29 01:46:20.2±0.8**, 38°.84N**±0°.02×**37°.86E**±0°.02**, h14^{km}**±6^{km}**, n45, σ1^{s}.01**/62**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HEKM	**Malatya_Hekimh**	**0.09**	**62**	*i* P	**Pg**	**01 46 23.6**	**+0.1**
HEKM				*i* S	**Sg**	**01 46 25.9**	**+0.2**
HEKM				IAML		01 46 26.0	
	comp=N,143µm,0.3s						
HEKM				IAML		01 46 27.0	
	comp=E,77µm,0.4s						
DARE	**Darende-Malaty**	**0.40**	**228**	PG	**Pg**	**01 46 27.8**	**-0.4**
DARE				SG	**Sg**	**01 46 34.0**	**+0.3**
ARPR	**Arapgir-MALATY**	**0.45**	**55**	PG	**Pb**	**01 46 29.8**	**-0.3**
ARPR				SG	**Sb**	**01 46 36.6**	**-0.1**
CUGUR	**Gurin_SVAS**	**0.47**	**256**	*i* P	**Pg**	**01 46 29.2**	**-0.5**
CUGUR				*i* S	**Sg**	**01 46 36.1**	**+0.1**
CUGUR				IAML		01 46 37.0	
	comp=N,12µm,0.5s						
CUGUR				IAML		01 46 37.0	
	comp=E,15µm,0.5s						
CUKAN	**kangal_SIVAS**	**0.57**	**328**	*i* P	**Pb**	**01 46 31.9**	**-0.2**
CUKAN				*i* S	**Sg**	**01 46 37.9**	**-1.2**
CUKAN				IAML		01 46 39.0	
	comp=N,6µm,0.5s						
CUKAN				IAML		01 46 39.0	
	comp=E,4µm,0.4s						
KEMA	**Kemaliye**	**0.66**	**49**	*i* P	**Pg**	**01 46 32.8**	**-0.3**
KEMA				*i* S	**Sg**	**01 46 41.5**	**-0.2**
KEMA				IAML		01 46 44.0	
	comp=N,1µm,0.4s						
KEMA				IAML		01 46 44.0	
	comp=E,1µm,0.3s						
MALT	**Malatya**	**0.69**	**139**	PG	**Pg**	**01 46 33.5**	**-0.2**
MALT				SG	**Sb**	**01 46 43.9**	**+0.4**
ELBS	**KAHRAMANMARAS_**	**0.77**	**228**	*i* P	**Pg**	**01 46 34.5**	**-0.7**
ELBS				*i* S	**Sg**	**01 46 44.7**	**-0.6**
ELBS				IAML		01 46 46.0	
	comp=N,2µm,0.5s						
ELBS				IAML		01 46 47.0	
	comp=E,3µm,0.7s						
ELZG	**Elazig**	**0.94**	**111**	*i* P	**Pb**	**01 46 37.9**	**-0.6**
ELZG				*i* S	**Sn**	**01 46 51.8**	**-0.8**
ELZG				IAML		01 46 55.0	
	comp=E,2µm,0.4s						
ELZG				IAML		01 46 58.0	
	comp=N,2µm,0.5s						
CUAYA	**Sivas-Altinyay**	**0.97**	**297**	*i* P	**Pb**	**01 46 37.8**	**-1.1**
CUZAR	**Zara_SIVAS**	**1.05**	**356**	*i* P	**Pn**	**01 46 40.7**	**-0.1**
SARI	**SarD1z-Kayseri**	**1.21**	**250**	PN	**Pb**	**01 46 42.9**	**-0.1**
SVRC	**Sivrice-ELAZID**	**1.22**	**112**	PN	**Pn**	**01 46 42.8**	**-0.3**
SVSK	**Karacayir**	**1.27**	**329**	PN	**Pg**	**01 46 44.2**	**-0.5**
REFA	**Refahiye_ERZN**	**1.28**	**33**	*i* P	Pn	01 46 44.6	+6.0
REFA				*i* S	Sn	01 47 01.9	+10
REFA				IAML		01 47 06.0	
	comp=E,207nm,0.8s						
REFA				IAML		01 47 07.0	
	comp=N,235nm,0.5s						
TNCL	**Tunceli-Merkez**	**1.34**	**78**	*i* P	**Pb**	**01 46 45.2**	**0.0**
TNCL				*i* S	**Sg**	**01 47 03.4**	**-0.2**
TNCL				IAML		01 47 07.0	
	comp=N,754nm,0.4s						
TNCL				IAML		01 47 08.0	
	comp=E,1µm,0.4s						
CUSAR	**Sarkisla-SIVAS**	**1.38**	**295**	*i* P	**Pb**	**01 46 45.4**	**-0.6**
SUSE	**Susehri**	**1.40**	**11**	*i* P	**Pg**	**01 46 47.7**	**+0.6**
ATAB	**Bozova**	**1.41**	**166**	*i* P	**Pg**	**01 46 47.8**	**+0.5**
ATAB				*i* S	**Sg**	**01 47 07.7**	**+2.1**
ATAB				IAML		01 47 17.0	
	comp=E,710nm,0.6s						
KAHM	**Kahramanmaras,**	**1.49**	**208**	*i* P	**Pg**	**01 46 49.4**	**+0.6**
KAHM				*i* S	**Sg**	**01 47 08.8**	**+0.7**
GZT	**Gaziantep**	**1.50**	**189**	*i* P	**Pg**	**01 46 49.6**	**+0.6**
GZT				*i* S	**Sg**	**01 47 09.2**	**+0.7**
GZT				IAML		01 47 14.0	
	comp=N,514nm,0.5s						
GZT				IAML		01 47 18.0	
	comp=E,541nm,0.7s						
KMRS	**Kahramanmaras**	**1.53**	**210**	PN	**Pb**	**01 46 48.6**	**+0.2**
KOVA	**Elazig, Kovanc**	**1.53**	**94**	*i* P	**Pb**	**01 46 48.9**	**+0.4**
BNN	**Bunyan**	**1.57**	**271**	PN	**Pb**	**01 46 48.7**	**-0.5**
RSDY	**Resadiye-TOKAT**	**1.61**	**345**	PN	**Pb**	**01 46 49.7**	**-0.1**
SAIM	**ADANA**	**1.64**	**239**	*i* P	**Pg**	**01 46 50.8**	**-0.9**
SAIM				*i* S	**Sg**	**01 47 12.8**	**-0.2**
SAIM				IAML		01 47 14.0	
	comp=N,224nm,0.7s						
SAIM				IAML		01 47 20.0	
	comp=E,260nm,0.3s						
ALUC	**Giresun/Alucra**	**1.66**	**25**	*i* P	**Pb**	**01 46 51.2**	**+0.4**
ALUC				*i* S	**Sg**	**01 47 15.8**	**+2.1**
ALUC				IAML		01 47 18.0	
	comp=N,446nm,0.7s						
ALUC				IAML		01 47 23.0	
	comp=E,334nm,0.5s						
EUZM	**Uzumlu**	**1.67**	**58**	*i* P	**Pg**	**01 46 52.2**	**-0.1**
EUZM				*i* S	**Sg**	**01 47 14.3**	**+0.2**
ANDN	**Andirin**	**1.73**	**224**	*i* P	**Pg**	**01 46 52.6**	**-0.9**
GAZ	**Gaziantep**	**1.74**	**197**	PN	**Pb**	**01 46 51.1**	**-0.9**
GUNE	**Kayseri**	**1.75**	**273**	*i* P	**Pg**	**01 46 53.1**	**-0.7**
GUNE				*i* S	**Sg**	**01 47 19.4**	**+3.0**
GUNE				IAML		01 47 27.0	
	comp=N,530nm,1.0s						
TOKT	**Tokat**	**1.80**	**326**	PN	**Pb**	**01 46 52.7**	**-0.3**
TOKA	**Tokat**	**1.83**	**325**	*i* P	**Pg**	**01 46 54.6**	**-0.7**
HACI	**Hacifakili, Ak**	**1.86**	**298**	*i* P	**Pb**	**01 46 53.8**	**-0.3**
SANL	**SANLIURFA_Merk**	**1.89**	**151**	*i* P	**Pb**	**01 46 54.9**	**+0.4**
SANL				*i* S	**Sg**	**01 47 21.1**	**+0.2**
SANL				IAML		01 47 26.0	
	comp=E,316nm,0.8s						
DYBB	**Diyarbakir**	**2.00**	**116**	PN	**Pb**	**01 46 55.4**	**-1.0**
ERBA	**Erbaa**	**2.03**	**336**	*i* P	**Pb**	**01 46 57.6**	**+0.7**
KOZT	**Kozan**	**2.10**	**230**	PN	**Pb**	**01 46 56.4**	**-1.7**
YOZ	**Yozgat**	**2.13**	**293**	PN	**Pb**	**01 46 57.2**	**-1.5**
YEDI	**Yedisu-Bingol**	**2.17**	**73**	PN	**Pb**	**01 46 57.7**	**-1.7**
BNGB	**Bingl**	**2.21**	**85**	PN	**Pb**	**01 46 58.1**	**-1.9**
MAZI	**Mazidag**	**2.46**	**123**	PN	**Pb**	**01 47 02.1**	**-2.2**
CEYT	**Ceyhan**	**2.47**	**223**	PN	**Pb**	**01 47 02.4**	**-2.0**
CMRD	**Camardi-Nigde**	**2.54**	**243**	PN	**Pn**	**01 47 03.1**	**+1.9**
KARA	**Karaisali**	**2.72**	**235**	PN	**Pn**	**01 47 05.1**	**+1.6**

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*IDC **29** 01:51:42.0±0.6, 4°.05N×126°.41E, h0^{km}, mb4.2/17, mb1 4.4/19, mb1mx4.2/40, mbtmp4.2/19, ML4.2/2, MS3.7/18, Ms1 3.7/18, ms1mx3.5/37, Error ellipse: s-maj=35.7km s-min=9.1km az=72.0*
*DJA **29** 01:51:45.6±0.6, 4°N±4°×12°7E±°, h18^{km}±3^{km}, M4.5/13, mb4.6/11, mB4.8/7, MLv4.7/13, Mw(mB)4.1/7*
*NEIC **29** 01:51:47.2±2.1, 4°.18N±0°.06×126°.77E±0°.09, h32^{km}±5^{km}, mb4.6/31, Error ellipse: s-maj=13.4km s-min=7.9km az=62.0*
ISC 29 01:51:48.5±0.4**, 4°.17N**±0°.05×**126°.70E**±0°.06**, h45^{km}, n99, σ1^{s}.56**/87**, mb4.5**/35**, MS3.7**/16**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.26**	**248**	P	**Pn**	**01 52 08.3**	**-1.4**
SGSI				S	**Sn**	**01 52 23.6**	**-1.9**
DAV	**Davao City (W)**	**3.09**	**339**	Pn	**Pn**	**01 52 34.2**	**-0.6**
	27nm,0.3s,baz=231,slow=13,SNR=1.2						
DAV				Lg	Lg	01 53 19.8	
	37nm,0.3s,baz=17,slow=22,SNR=4.8						
DAV	**Davao City (W)**	**3.09**	**339**	Pn	**Pn**	**01 52 34.4**	**-0.4**
TNTI	**Ternate**	**3.44**	**169**	P	**Pn**	**01 52 39.1**	**-0.6**
TNTI	**Ternate**	**3.44**	**169**		**Pn**	**01 52 37.8**	**-1.9**
KMSI	**Cibinong**	**4.49**	**217**	P	**Pn**	**01 52 58.5**	**+4.5**
LBMI	**Labuha**	**4.84**	**170**	P	**Pn**	**01 52 56.5**	**-2.4**
GTOI	**Gorontalo**	**5.09**	**226**	P	**Pn**	**01 53 02.6**	**+0.3**
	0.2nm412nm45nm,0.8s						
MRSI	**Marisa**	**6.00**	**232**	P	**Pn**	**01 53 15.9**	**+1.0**
	0.9nm2µm220nm,0.6s						
SANI	**Sanana**	**6.22**	**187**	P	**Pn**	**01 53 15.4**	**-2.4**
	0.2nm815nm34nm,0.8s						
TOLI2	**Tolitoli**	**6.64**	**243**	Pn	**Pn**	**01 53 22.4**	**-1.3**
SWI	**Sorong**	**6.76**	**138**	P	**Pn**	**01 53 24.1**	**-1.2**
	0.1nm41nm,1.1s						
SIJI	**Sorong**	**6.77**	**138**	Pn	**Pn**	**01 53 25.3**	**-0.1**
	4.6nm,0.3s,baz=353,slow=16,SNR=11						
SIJI				Sn	**Sn**	**01 54 41.1**	**-0.2**
	baz=202,slow=23,SNR=1.2						
SIJI				LR	LR	01 56 30.2	
	comp=Z,688nm,19.1s,baz=324,slow=42						
APSI	**Ampana**	**7.13**	**225**	P	**Pn**	**01 53 32.1**	**+1.7**
	0.5nm1µm156nm,0.9s						
MPSI	**Mapaga**	**7.79**	**241**	P	Pn	01 53 46.0	+6.6
MYLDM	**Lahad Datu**	**8.23**	**277**	Pn	**Pn**	**01 53 46.9**	**+1.4**
FAKI	**Fak Fak**	**8.96**	**142**	P	**Pn**	**01 53 57.4**	**+1.9**
	28nm,0.9s						
FAKI	**Fak Fak**	**8.96**	**142**	Pn	**Pn**	**01 53 54.9**	**-0.6**
TTSI	**Tana Toraja**	**9.93**	**224**	P	**Pn**	**01 54 12.9**	**+4.2**
SPSI	**Sidrap Palu**	**10.64**	**221**	P	Pn	01 54 25.6	+7.1
BNSI	**Bone**	**10.76**	**218**	P	Pn	01 54 28.8	+8.7
KAPI	**Kappang**	**11.46**	**217**	LR	LR	01 59 14.8	
	comp=Z,338nm,21.7s,baz=60,slow=40						
BKSI	**Bulukumba**	**11.49**	**215**	P	Pn	01 54 37.3	+7.2
SAUI	**Saumlaki**	**12.91**	**159**	Pn	**Pn**	**01 54 50.4**	**+0.8**
SOEI	**Soe**	**14.04**	**190**	P	P	01 55 21.1	+9.2
SOEI	**Soe**	**14.04**	**190**	Pn	**Pn**	**01 55 05.7**	**+0.7**
BBKI	**Banjar Baru**	**14.06**	**238**	P	**P**	**01 55 11.6**	**-0.4**
SBUM	**Sibu**	**14.55**	**264**	Pn	**Pn**	**01 55 13.6**	**+1.8**
JAY	**Jayapura**	**15.49**	**115**	LR	LR	02 00 23.3	
	comp=Z,435nm,21.6s,baz=350,slow=33						
PLAI	**Plampang**	**15.68**	**215**	P	**P**	**01 55 31.6**	**+1.7**
TWSI	**Taliwang, Sumb**	**16.13**	**217**	P	**P**	**01 55 35.2**	**+0.3**
	398nm19nm,0.8s						
KSM	**Kuching**	**16.59**	**261**		**Pn**	**01 55 38.7**	**+0.7**
MTN	**Manton Dam**	**17.47**	**165**	Pn	**Pn**	**01 55 47.1**	**-1.9**
NGJI	**Ngawi**	**19.04**	**233**	P	Pn	01 56 20.9	+13
KNRA	**Kununurra**	**19.82**	**174**		**P**	**01 56 14.9**	**-0.7**
KNRA				IAmb	IAmb	01 56 40.2	
	comp=Z,28nm,0.8s						
GUMO	**Guam**	**20.23**	**61**	LR	LR	02 03 11.1	
	comp=Z,104nm,22.0s,baz=278,slow=34						
LEM	**Lembang**	**21.95**	**240**	LR	LR	02 05 49.7	
	comp=Z,171nm,21.6s,baz=354,slow=39						
FITZ	**Fitzroy Crossi**	**22.15**	**183**	P	**P**	**01 56 39.7**	**-1.0**
	comp=Z,12nm,0.8s,baz=20,slow=6.0,SNR=16						
PMG	**Port Moresby**	**24.45**	**124**	LR	LR	02 07 16.9	
	comp=Z,138nm,19.4s,baz=316,slow=38						
WB0	**Warramunga Arr**	**24.96**	**163**	P	**P**	**01 57 06.8**	**-1.2**
WB0				IAmb	IAmb	01 57 17.7	
	comp=Z,22nm,0.9s						
WRAB	**Tennant Creek**	**25.11**	**163**	P	**P**	**01 57 07.8**	**-1.5**
WRAB				IAmb	IAmb	01 57 20.8	
	comp=Z,20nm,0.8s						
WRA	**Warramunga Arr**	**25.11**	**163**	P	**P**	**01 57 08.8**	**-0.6**
	comp=Z,7.1nm,0.8s,baz=343,slow=10,SNR=42						
WRA				S	**S**	**02 01 33.8**	**+2.6**
	comp=Z,0.8nm,0.9s,baz=350,slow=14,SNR=2.6						
WRA	**Warramunga Arr**	**25.11**	**163**	P	**P**	**01 57 07.8**	**-1.6**
WB2	**Warramunga Arr**	**25.11**	**163**	P	**P**	**01 57 07.9**	**-1.5**
WR0	**Warramunga Arr**	**25.19**	**162**	P	**P**	**01 57 08.8**	**-1.2**
WR0				IAmb	IAmb	01 57 21.6	
	comp=Z,15nm,0.9s						
IPM	**Ipoh**	**25.60**	**272**	P	**P**	**01 57 14.9**	**+1.0**
KULM	**Kulim**	**25.98**	**274**	P	**P**	**01 57 18.9**	**+1.5**
KULM				IAmb	IAmb	01 57 23.9	
	comp=Z,18nm,1.1s						
PSA00	**Pilbara Seismi**	**26.45**	**194**	P	**P**	**01 57 21.1**	**-0.3**
JCJ	**Chichijima**	**27.18**	**31**	LR	LR	02 09 14.1	
	comp=Z,41nm,19.5s,baz=138,slow=38						
PSI	**Prapat**	**27.75**	**268**	LR	LR	02 09 10.5	
	comp=Z,198nm,22.0s,baz=83,slow=38						
AS31	**Alice Springs**	**28.54**	**166**	P	**P**	**01 57 39.7**	**-0.5**
ASAR	**Alice Springs**	**28.55**	**166**	P	**P**	**01 57 39.1**	**-1.1**
	comp=Z,2.3nm,0.6s,baz=341,slow=6.3,SNR=34						
ASAR				S	**S**	**02 02 28.9**	**+3.5**
	comp=Z,0.5nm,1.0s,baz=350,slow=25,SNR=2.4						
ASAR				LR	LR	02 10 28.8	
	comp=Z,95nm,20.1s,baz=358,slow=40						
ASAR	**Alice Springs**	**28.55**	**166**	P	**P**	**01 57 39.5**	**-0.7**
NJ2	**Nanjing**	**28.70**	**346**	*e*P	**P**	**01 57 43.5**	**+2.0**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**30.62**	**300**	P	**P**	**01 57 58.0**	**-0.8**
	comp=Z,1.1nm,0.3s,baz=121,slow=7.0,SNR=6.7						
CMAR				LR	LR	02 10 54.8	
	comp=Z,113nm,19.0s,baz=163,slow=38						
CMAR	**Chiang Mai Arr**	**30.62**	**300**	P	**P**	**01 57 59.1**	**+0.4**
CHTO	**Chiang Mai**	**30.77**	**300**	P	**P**	**01 58 00.4**	**+0.4**
CHTO				IAmb	IAmb	01 58 06.1	
	comp=Z,8.8nm,1.1s						
KSRS	**Korea Array**	**33.15**	**2**	P	**P**	**01 58 18.4**	**-2.2**
	comp=Z,1.2nm,0.7s,baz=178,slow=9.4,SNR=3.4						
EIDS	**Eidsvold**	**37.72**	**142**	P	**P**	**01 58 58.9**	**-1.2**
BBOO	**Buckleboo**	**37.83**	**167**	P	**P**	**01 59 00.1**	**-0.9**
LZH	**Lanzhou**	**38.11**	**329**	*e*P	**P**	**01 59 03.5**	**0.0**
LZH				pP	pP	01 59 14.0	-0.8
LZH				sP	sP	01 59 26.5	+6.7
LZH				pmax	pmax		
	comp=Z,19nm,1.2s						
STKA	**Stephens Creek**	**38.55**	**159**	P	**P**	**01 59 06.7**	**-0.2**
	comp=Z,11nm,0.9s,baz=334,slow=8.0,SNR=23						
STKA				LR	LR	02 16 38.4	
	comp=Z,87nm,18.2s,baz=14,slow=39						
STKA	**Stephens Creek**	**38.55**	**159**	P	**P**	**01 59 06.0**	**-1.0**
HHC	**Hu-ho-hao-te**	**38.97**	**342**	*e*P	**P**	**01 59 14.5**	**+3.9**
HHC				pmax	pmax		
	comp=Z,13nm,0.6s						
HHC				pmax	pmax		
	comp=Z,150nm,6.8s						
HHC				LR	LR		
	comp=N,270nm,14.5s						
HHC				LR	LR		
	comp=E,220nm,15.3s						
HHC				LR	LR		
	comp=Z,260nm,15.3s						
USRK	**Ussuriysk Ar.**	**40.14**	**6**	P	**P**	**01 59 22.3**	**+2.2**
	comp=Z,1.2nm,0.6s,baz=226,slow=12,SNR=1.4						
ARMA	**Armidale**	**41.85**	**147**	P	**P**	**01 59 34.0**	**-0.4**
KLR	**Kul'dur**	**45.10**	**5**	P	**P**	**02 00 01.9**	**+1.6**
	comp=Z,0.6nm,0.3s,baz=170,slow=12,SNR=2.4						
SONM	**Songino Array**	**46.88**	**341**	P	**P**	**02 00 13.2**	**-1.3**
	comp=Z,0.7nm,0.5s,baz=146,slow=10,SNR=6.9						
WMQ	**Urumqi**	**52.35**	**325**	*e*P	**P**	**02 00 58.3**	**+2.2**
MKAR	**Makanchi Array**	**57.18**	**325**	P	**P**	**02 01 29.2**	**-1.8**
	comp=Z,1.1nm,0.5s,baz=118,slow=7.0,SNR=13						
MKAR				LR	LR	02 26 42.3	
	comp=Z,152nm,20.6s,baz=94,slow=37						
MKAR	**Makanchi Array**	**57.18**	**325**	P	**P**	**02 01 29.1**	**-1.9**
PRZ	**Przheval'sk**	**57.36**	**319**	P	**P**	**02 01 32.1**	**-0.4**
PRZ				IAmb	IAmb	02 01 43.3	
	comp=Z,8.7nm,1.1s						
MAKZ	**Makanchi**	**57.37**	**325**	P	**P**	**02 01 31.6**	**-0.7**
MAKZ				IAmb	IAmb	02 01 42.1	
	comp=Z,6.3nm,1.3s						
NIL	**Nilore**	**57.63**	**308**	P	**P**	**02 01 33.2**	**-1.3**
NIL				IAmb	IAmb	02 01 35.4	
	comp=Z,10nm,1.2s						
ZALV	**Zalesovo Beam**	**60.19**	**333**	P	**P**	**02 01 49.4**	**-2.3**
	comp=Z,0.6nm,0.5s,baz=144,slow=5.8,SNR=4.0						
ZALV				LR	LR	02 29 35.3	
	comp=Z,61nm,20.2s,baz=100,slow=38						
ZALV	**Zalesovo Beam**	**60.19**	**333**	P	**P**	**02 01 49.8**	**-1.9**
KURK	**Kurchatov**	**61.36**	**327**	P	**P**	**02 01 58.0**	**-1.7**
KURK				IAmb	IAmb	02 02 01.4	
	comp=Z,5.3nm,0.8s						
BTK	**Batken**	**61.60**	**314**	P	**P**	**02 02 02.6**	**+0.9**
BTK				IAmb	IAmb	02 02 25.2	
	comp=Z,3.8nm,0.8s						
GAR	**Garm**	**61.60**	**312**	P	**P**	**02 02 01.5**	**-0.3**
GAR				IAmb	IAmb	02 02 03.5	
	comp=Z,7.0nm,0.9s						
KKAR	**Karatay Array**	**62.89**	**317**	P	**P**	**02 02 09.4**	**-0.8**
BRVK	**Borovoye**	**67.01**	**327**	P	**P**	**02 02 36.1**	**-0.7**
BRVK				IAmb	IAmb	02 02 52.0	
	comp=Z,6.6nm,1.2s						
TIXI	**Tiksi**	**67.41**	**1**	P	**P**	**02 02 40.0**	**+1.0**
TIXI				IAmb	IAmb	02 02 52.6	
	comp=Z,10nm,1.5s						
NRIK	**Noril'sk**	**70.00**	**346**	P	**P**	**02 02 55.3**	**+0.2**
	comp=Z,2.7nm,0.5s,baz=125,slow=8.1,SNR=5.8						
NRIK				LR	LR	02 35 25.6	
	comp=Z,114nm,20.2s,baz=132,slow=38						
NRIK	**Noril'sk**	**70.00**	**346**	P	**P**	**02 02 55.7**	**+0.6**
GEYT	**Alibeck**	**70.60**	**309**	LR	LR	02 38 48.8	
	comp=Z,52nm,18.4s,baz=295,slow=40						
ABKAR	**Akbulak array**	**71.79**	**321**	P	**P**	**02 03 04.8**	**-1.6**
VNDA	**Vanda**	**83.86**	**173**	P	**P**	**02 04 13.8**	**+0.9**
	comp=Z,1.0nm,0.8s,baz=318,slow=4.6,SNR=3.0						
ILAR	**Eielson Array**	**84.72**	**25**	P	**P**	**02 04 18.4**	**+0.8**
	comp=Z,1.2nm,1.1s,baz=224,slow=5.0,SNR=4.2						
KLMR	**Klimovskoe**	**85.01**	**331**	*e*P	**P**	**02 04 16.6**	**-2.5**
KLMR				AMP		02 04 27.7	
	comp=Z,20nm,1.2s						
OBN	**Obninsk**	**86.69**	**325**	P	**P**	**02 04 27.4**	**0.0**
BRTR	**Keskin Array B**	**89.72**	**310**	P	**P**	**02 04 41.9**	**-0.5**
	comp=Z,1.1nm,0.9s,baz=57,slow=4.8,SNR=4.6						
BRTR				LR	LR	02 51 34.0	
	comp=Z,41nm,18.0s,baz=44,slow=40						
ARCES	**ARCESS Array B**	**90.03**	**340**	P	**P**	**02 04 45.1**	**+2.0**
	comp=Z,4.6nm,1.2s,baz=28,slow=3.3,SNR=4.0						
ARCES				LR	LR	02 52 38.8	
	comp=Z,73nm,18.4s,baz=290,slow=41						
FINES	**FINESS Array B**	**91.43**	**332**	P	**P**	**02 04 50.1**	**+0.3**
	comp=Z,6.3nm,1.0s,baz=70,slow=6.3,SNR=6.3						
AKASG	**Malin Array Be**	**91.53**	**321**	P	**P**	**02 04 50.3**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=62,slow=6.1,SNR=2.3						
AKASG	**Malin Array Be**	**91.53**	**321**	IAmb	IAmb	02 04 52.1	
	comp=Z,3.0nm,1.3s						
A36M	**Sachs Harbour**	**91.58**	**17**	P	**P**	**02 04 49.4**	**-0.8**
A36M				IAmb	IAmb	02 04 49.9	
	comp=Z,5.4nm,1.4s						
NOA	**NORSAR Array B**	**98.38**	**334**	LR	LR	02 57 25.2	
	comp=Z,29nm,18.9s,baz=320,slow=40						
TORD	**Torodi Ar. Bea**	**122.75**	**288**	PKP	**PKPdf**	**02 10 39.7**	**-0.9**
	comp=Z,0.2nm,0.7s,baz=111,slow=1.7,SNR=1.8						
RIMA	**Rio Macho**	**146.55**	**65**	PKPbc	**PKPbc**	**02 11 25.4**	**-1.1**

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*IDC **29** 02:03:31.6±1.1, 8°.33N×71°.55W, h0^{km}, mb3.5/4, mb1 3.9/8, mb1mx3.7/30, mbtmp3.7/8, ML3.5/2, Error ellipse: s-maj=31.2km s-min=24.4km az=8.0*
*FUNV **29** 02:03:32.6, 8°.45N×71°.46W, h1^{km}, MW3.4*
ISC 29 02:03:32.3±1.2**, 8°.56N**±0°.03×**71°.42W**±0°.02**, h1^{km}**±9^{km}**, n49, σ1^{s}.59**/85**, mb3.6**/4**, Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCV	**Socops**	**0.62**	**116**	*e*P	**Pg**	**02 03 44.4**	**+0.2**
SOCV				*e*S	**Sg**	**02 03 53.0**	**+0.7**
SOCV	**Socops**	**0.62**	**116**	*e*P	**Pg**	**02 03 44.4**	**+0.2**
SOCV				*e*S	**Sg**	**02 03 53.3**	**+1.0**
SDV	**Santo Domingo**	**0.84**	**67**	*e*P	**Pg**	**02 03 50.2**	**+1.7**
SDV				*e*S	**Sg**	**02 04 01.0**	**+1.6**
CAPV	**Capacho**	**1.13**	**232**	*e*P	**Pg**	**02 03 53.0**	**-1.0**
CAPV				*e*S	**Sg**	**02 04 06.0**	**-2.6**
PAMC	**Pamplona, Colo**	**1.76**	**226**	*e*P	**Pn**	**02 04 05.0**	**+0.6**
PAMC				*e*S	**Sb**	**02 04 29.5**	**+1.1**
MCQV	**Machiques**	**1.84**	**323**	*e*P	**Pb**	**02 04 06.5**	**-0.4**
MCQV				*e*S	**Sb**	**02 04 30.1**	**-0.4**
OCAC	**Ocana**	**1.91**	**260**	*e*P	**Pn**	**02 04 06.5**	**+0.3**
OCAC				*e*S	**Sn**	**02 04 32.0**	**+1.1**
TAMC	**Tame, Arauca**	**2.15**	**190**	*e*P	**Pn**	**02 04 10.7**	**+1.3**
TAMC				*e*S	**Sb**	**02 04 41.7**	**+2.5**
LL6C	**La Loma 6 Bece**	**2.17**	**303**	*e*P	**Pn**	**02 04 10.4**	**+0.8**
LL6C				*e*S	**Sb**	**02 04 39.4**	**-0.5**
ELOV	**Elorza**	**2.46**	**129**	*e*P	**Pn**	**02 04 15.8**	**+2.1**
ELOV				*e*S	**Sb**	**02 04 47.8**	**-0.6**
ELOV	**Elorza**	**2.46**	**129**	*e*P	**Pn**	**02 04 13.5**	**-0.2**
ELOV				*e*S	**Sn**	**02 04 41.9**	**-2.6**
DABV	**Dabajuro**	**2.47**	**18**	*e*P	**Pn**	**02 04 15.0**	**+1.3**
SIQV	**Siquisique**	**2.61**	**37**	*e*P	**Pn**	**02 04 17.1**	**+1.3**
SIQV				*e*S	**Sn**	**02 04 49.1**	**+1.0**
BARC	**Barichara**	**2.63**	**222**	*e*P	**Pn**	**02 04 17.7**	**+1.6**
BARC				*e*S	**Sb**	**02 04 55.4**	**+2.2**
SMLC	**San Martn de**	**2.64**	**275**	*e*P	**Pn**	**02 04 15.9**	**-0.1**
SMLC				*e*S	**Sb**	**02 04 51.5**	**-1.7**
BRRC	**Barranca, Sant**	**2.69**	**238**	*e*P	**Pn**	**02 04 18.4**	**+1.5**
BRRC				*e*S	**Sb**	**02 04 55.6**	**+0.6**
ARGC	**Ariguani, Magd**	**3.08**	**295**	*e*P	**Pn**	**02 04 22.8**	**+0.7**
ARGC				*e*S	**Sn**	**02 05 01.3**	**+1.7**
RUSC	**La Rusia**	**3.13**	**212**	*e*P	**Pn**	**02 04 24.8**	**+1.6**
RUSC				*e*S	**Sn**	**02 05 03.1**	**+1.6**
URIC	**Uribia, Colomb**	**3.17**	**350**	*e*P	**Pn**	**02 04 23.8**	**+0.4**
URIC				*e*S	**Sn**	**02 05 00.2**	**-1.7**
MAPV	**Macapo**	**3.18**	**66**	*e*P	**Pn**	**02 04 24.4**	**+0.8**
MAPV				*e*S	**Sn**	**02 05 01.5**	**-0.7**
BAUV	**El Baul**	**3.36**	**83**	*e*P	**Pn**	**02 04 26.7**	**+0.7**
BAUV				*e*S	**Sn**	**02 05 05.2**	**-1.3**
ZARC	**Zaragoza, Cauc**	**3.57**	**253**	*e*P	**Pn**	**02 04 29.1**	**+0.2**
ZARC				*e*S	**Sn**	**02 05 13.5**	**+1.7**
JACV	**Jacura**	**3.58**	**45**	*e*P	**Pn**	**02 04 29.6**	**+0.6**
JACV				*e*S	**Sn**	**02 05 11.5**	**-0.5**
PTBC	**PUERTO BERRIO,**	**3.62**	**237**	*e*P	**Pn**	**02 04 29.2**	**-0.4**
PTBC				*e*S	**Sn**	**02 05 15.1**	**+2.0**
MONV	**Montecano**	**3.66**	**23**	*e*P	**Pn**	**02 04 31.4**	**+1.3**
MONV				*e*S	**Sn**	**02 05 13.9**	**-0.1**
SPBC	**San Pablo de B**	**3.91**	**223**	*e*P	**Pn**	**02 04 34.9**	**+1.2**
SPBC				*e*S	**Sn**	**02 05 22.9**	**+2.6**
SJCC	**San Jacinto, C**	**3.94**	**290**	*e*P	**Pn**	**02 04 35.9**	**+1.8**
SJCC				*e*S	**Sn**	**02 05 24.0**	**+2.9**
BENV	**Beln**	**4.02**	**69**	*e*P	**Pn**	**02 04 35.3**	**+0.2**
BENV				*e*S	**Sn**	**02 05 22.1**	**-0.8**
UREC	**San Jos de Ur**	**4.15**	**259**	*e*P	**Pn**	**02 04 38.4**	**+1.4**
UREC				*e*S	**Sn**	**02 05 29.0**	**+2.8**
MOTC	**Monteria, Cord**	**4.21**	**273**	*e*P	**Pn**	**02 04 39.0**	**+1.3**
MOTC				*e*S	**Sn**	**02 05 31.0**	**+3.5**
PTGC	**Puerto Gaitan,**	**4.39**	**189**	*e*P	**Pn**	**02 04 40.8**	**+0.5**
NORC	**Norcasia**	**4.54**	**229**	*e*P	**Pn**	**02 04 44.8**	**+2.5**
NORC				*e*S	**Sn**	**02 05 36.2**	**+0.4**
ROSC	**El Rosal**	**4.69**	**218**	Pn	**Pn**	**02 04 41.8**	**-2.8**
	0.6nm,0.3s,baz=45,slow=20,SNR=1.4						
ROSC	**El Rosal**	**4.69**	**218**	*e*P	**Pn**	**02 04 46.5**	**+1.8**
HELC	**Santa Helena**	**4.71**	**240**	*e*P	**Pn**	**02 04 45.7**	**+0.8**
HELC				*e*S	**Sn**	**02 05 39.5**	**-0.9**
GUY2C	**Guyana, Caldas**	**5.13**	**230**	*e*P	**Pn**	**02 04 52.0**	**+1.1**
GUY2C				*e*S	**Sn**	**02 05 52.5**	**+1.4**
CBOC	**Ciudad Bolivar**	**5.29**	**240**	*e*P	**Pn**	**02 04 55.1**	**+2.4**
CBOC				*e*S	**Sn**	**02 05 56.8**	**+2.4**
PRAC	**Prado**	**5.92**	**216**	*e*P	**Pn**	**02 05 02.2**	**+0.8**
PRAC				*e*S	**Sn**	**02 06 09.3**	**-0.6**
ORTC	**Ortega, Tolima**	**5.99**	**220**	*e*P	**Pn**	**02 05 02.2**	**0.0**
ORTC				*e*S	**Sn**	**02 06 10.0**	**-1.5**
PLMC	**San Jos del P**	**6.05**	**233**	*e*P	**Pn**	**02 05 05.2**	**+2.2**
PLMC				*e*S	**Sn**	**02 06 15.4**	**+2.4**
PCRV	**Puerto La Cruz**	**6.88**	**76**	Pn	**Pn**	**02 05 17.6**	**+3.1**
	1.0nm,0.3s,baz=210,slow=8.3,SNR=6.4						
PTGA	**Pitinga**	**14.68**	**128**	Pn	**Pn**	**02 06 58.9**	**-2.4**
	0.2nm,0.3s,baz=319,slow=12,SNR=5.2						
APG	**El Apazote**	**19.71**	**291**	P	**P**	**02 08 00.7**	**-2.9**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	0.7nm,0.3s,baz=336,slow=5.8,SNR=8.5						
TXAR	**Lajitas Array**	36.64	309	P	**P**	**02 10 39.9**	**-0.9**
	0.3nm,0.8s,baz=142,slow=10,SNR=2.6						
PDAR	**Pinedale Array**	47.71	322	P	**P**	**02 12 11.3**	**+0.3**
	0.6nm,0.5s,baz=127,slow=10,SNR=6.0						
ESDC	**Sonseca Array**	67.25	51	P	**P**	**02 14 28.9**	**+0.1**
	0.4nm,0.8s,baz=264,slow=7.7,SNR=2.2						
ILAR	**Eielson Array**	76.11	335	P	**P**	**02 15 23.6**	**+2.0**
	0.2nm,0.6s,baz=122,slow=7.5,SNR=4.1						
ASAR	**Alice Springs**	151.49	235	PKPbc	**PKPbc**	**02 23 27.9**	**-1.3**
	0.2nm,0.8s,baz=110,slow=3.3,SNR=5.5						
WRA	**Warramunga Arr**	152.64	243	PKPbc	**PKPbc**	**02 23 30.2**	**-1.6**
	0.6nm,0.6s,baz=109,slow=2.8,SNR=8.1						

IDC 29 02:05:45.7±1.8**, 4.°23N×126.°60E, h0^{km}, mb3.8**/5**, mb1 4.0**/5**, mb1mx3.6**/36**, mbtmp3.8**/5**, MS3.0**/2**, Ms1 3.0**/2**, ms1mx2.6**/35**, Error ellipse: s-maj=98.9km s-min=25.9km az=68.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	**Kappang**	11.45	217	LR	LR	02 13 40.3	
	comp=Z,46nm,18.2s,baz=79,slow=41						
LEM	**Lembang**	21.90	240	LR	LR	02 20 09.0	
	comp=Z,60nm,18.9s,baz=174,slow=39						
FITZ	**Fitzroy Crossi**	22.21	182	P	P	02 10 45.0	+1.1
	1.4nm,0.3s,baz=4.8,slow=9.1						
WRA	**Warramunga Arr**	25.20	163	P	P	02 11 13.3	0.0
	1.4nm,0.6s,baz=342,slow=10,SNR=19						
ASAR	**Alice Springs**	28.63	166	P	P	02 11 43.1	-1.1
	0.6nm,0.6s,baz=340,slow=6.8,SNR=14						
STKA	**Stephens Creek**	38.65	159	P	P	02 13 11.3	+0.2
	2.6nm,0.7s,baz=342,slow=9.7,SNR=6.6						
MKAR	**Makanchi Array**	57.07	325	P	P	02 15 33.9	0.0
	0.3nm,0.5s,baz=126,slow=7.4,SNR=3.5						

IDC ***29*** *02:43:59.9±1.6, 4.°19N×126.°73E, h0^{km}, mb3.6/6, mb1 3.8/6, mb1mx3.5/47, mbtmp3.6/6, MS2.8/1, Ms1 2.8/1, ms1mx2.3/43, Error ellipse: s-maj=104.1km s-min=21.1km az=68.0*

ISC 29 02:44:06.3±1.6**, 4.°1N**±0.°3×**126.°6E**±0.°7**, h45^{km}, n7, σ0.^{s}83**/6**, mb3.6**/6**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	**Kappang**	11.34	217	LR	LR	02 51 10.1	
	comp=Z,46nm,19.0s,baz=87,slow=37						
FITZ	**Fitzroy Crossi**	22.08	182	P	**P**	**02 48 58.0**	**+0.4**
	2.4nm,1.0s,baz=18,slow=7.2,SNR=2.4						
WRA	**Warramunga Arr**	25.08	163	P	**P**	**02 49 26.5**	**-0.3**
	1.3nm,0.8s,baz=343,slow=11,SNR=16						
ASAR	**Alice Springs**	28.51	166	P	**P**	**02 49 56.6**	**-1.1**
	0.2nm,0.5s,baz=341,slow=6.8,SNR=2.7						
STKA	**Stephens Creek**	38.53	159	P	**P**	**02 51 25.4**	**+0.8**
	1.6nm,0.7s,baz=323,slow=10,SNR=3.8						
MKAR	**Makanchi Array**	57.17	325	P	**P**	**02 53 48.9**	**+0.2**
	0.5nm,0.8s,baz=121,slow=6.9,SNR=2.9						
KURBB	**Kurchatov Arra**	61.35	327	P	**P**	**02 54 17.3**	**-0.2**
	0.5nm,0.5s,baz=130,slow=6.3,SNR=2.5						

IDC ***29*** *02:47:35.8±1.0, 30.°42N×79.°40E, h0^{km}, mb3.6/11, mb1 3.8/13, mb1mx3.6/55, mbtmp3.7/13, ML3.4/2, MS3.9/1, Ms1 3.9/1, ms1mx2.6/50, Error ellipse: s-maj=31.4km s-min=18.3km az=59.0*

NDI ***29*** *02:47:38.7±1.8, 30.°62N×79.°68E, h15^{km}±18^{km}, ML4.0, mb4.1(NEIC)*

NEIC ***29*** *02:47:52.8±2.7, 31.°4N±0.°1×78.°73E±0.°03, h35^{km}±2^{km}, mb4.1/7, Error ellipse: s-maj=18.5km s-min=3.4km az=167.0*

ISC 29 02:47:38.5±0.6**, 30.°47N**±0.°04×**79.°36E**±0.°05**, h17^{km}, n44, σ1.^{s}56**/44**, mb3.7**/13**, Western Xizang-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTH	**Pithoragarh**	1.18	141	*e*PG	**Pg**	**02 48 01.4**	**0.0**
PTH				*e*SG	**Sg**	**02 48 15.9**	**-0.9**
SMLA	**Simla**	2.00	290	*e*P	**Pb**	**02 48 15.1**	**+0.7**
SMLA				*e*S	**Sb**	**02 48 41.1**	**+2.1**
SMLA				IAML		02 48 43.2	
	comp=N,2μm,0.4s						
SMLA				IAML		02 48 44.0	
	comp=E,1μm,0.5s						
KKR	**Kurukshetra**	2.26	258	*e*P	**Pg**	**02 48 20.4**	**-1.4**
NDI	**New Delhi**	2.58	227	*e*P	**Pb**	**02 48 24.2**	**-0.1**
NDI				*e*P	**Pg**	**02 48 25.0**	**-3.0**
NDI				*e*S	**Sb**	**02 48 58.5**	**+2.7**
BHK	**Bhakra**	2.70	291	*e*P	**Pb**	**02 48 25.4**	**-1.0**
SONA	**Sohna**	2.98	223	*e*P	**Pb**	**02 48 30.0**	**-1.1**
DHRM	**DHARAMSHALA**	3.16	305	*e*P	**Pb**	**02 48 31.2**	**-3.2**
DHRM				*e*S	**Sn**	**02 49 08.0**	**+2.8**
DHRM				IAML		02 49 10.3	
	comp=E,632nm,0.4s						
DHRM				IAML		02 49 10.9	
	comp=N,578nm,0.5s						
KUDL	**Kundal**	3.42	228	*e*P	**Pb**	**02 48 35.1**	**-3.4**
CHCP	**Chirah Chowk**	6.07	303	P	**Pn**	**02 49 10.0**	**+2.4**
NIL	**Nilore**	6.08	303	Pn	**Pn**	**02 49 07.9**	**+0.3**
THW	**Thamme Wali**	6.90	292	P	**Pn**	**02 49 20.6**	**+1.7**
CEP	**Cherat**	7.15	300	P	**Pn**	**02 49 23.0**	**+0.6**
BHPL	**Bhopal**	7.41	194	*e*P	**Pn**	**02 49 27.9**	**+2.0**
BHPL				*e*S	**Sn**	**02 50 49.4**	**-0.2**
KSH	**Kashi**	9.44	344	P	**Pn**	**02 49 51.8**	**-2.1**
KSH				sP		02 50 00.8	
KSH				S	Sn	02 51 29.5	-10
KSH				pmax	pmax		
	comp=Z,11nm,0.4s						
KBL	**Kabul**	9.61	298	Pn	**Pn**	**02 49 56.7**	**+0.4**
DRK	**Karamyk**	10.91	327	Pn	**Pn**	**02 50 13.0**	**-1.2**
TARG	**Taragay, Kyrgy**	11.30	354		**Pn**	**02 50 18.8**	**-0.8**
CHGR	**Chuyangaron**	11.71	317	Pn	**Pn**	**02 50 22.9**	**-2.0**
BTK	**Batken**	11.84	326	Pn	**Pn**	**02 50 26.0**	**-0.6**
BOOM	**Boomskoye usch**	12.31	348	Pn	**Pn**	**02 50 33.5**	**+0.4**
AAK	**Ala-Archa**	12.75	344	Pn	**Pn**	**02 50 40.1**	**+0.9**
	comp=Z,0.6nm,0.3s,baz=183,slow=9.9,SNR=7.4						
AAK	**Ala-Archa**	12.75	344		**Pn**	**02 50 39.0**	**-0.2**
KKAR	**Karatay Array**	14.45	333		**Pn**	**02 50 59.2**	**-3.0**
MK31	**Makanchi Array**	16.46	7	Pn	**P**	**02 51 31.0**	**-0.2**
MKAR	**Makanchi Array**	16.46	7	Pn	**Pn**	**02 51 26.6**	**-2.0**
	comp=Z,0.1nm,0.3s,baz=190,slow=14,SNR=1.4						
MKAR	**Makanchi Array**	16.46	7	Pn	**P**	**02 51 30.2**	**-1.0**
KURBB	**Kurchatov Arra**	20.14	358	P	Pn	02 52 11.1	-2.4
	comp=Z,0.8nm,0.7s,baz=189,slow=9.5,SNR=13						
KURK	**Kurchatov**	20.23	359	P	Pn	02 52 12.7	-1.9
KURK				IAmb	IAmb	02 52 14.3	
	comp=Z,3.3nm,0.8s						
BVAR	**Borovoye Array**	23.47	346	P	**P**	**02 52 47.1**	**0.0**
	comp=Z,1.1nm,0.5s,baz=188,slow=18,SNR=8.9						
BRVK	**Borovoye**	23.53	346	P	**P**	**02 52 47.8**	**+0.2**
BRVK				IAmb	IAmb	02 53 03.8	
	comp=Z,2.2nm,0.9s						
ZALV	**Zalesovo Beam**	23.79	8	P	**P**	**02 52 50.1**	**-0.1**
	comp=Z,0.8nm,0.4s,baz=223,slow=10,SNR=6.5						
ABKAR	**Akbulak array**	23.84	327	P	**P**	**02 52 51.8**	**+1.1**
ABKAR				IAmb	IAmb	02 52 57.9	
	comp=Z,1.7nm,0.6s						
AKTO	**Aktyubinsk**	25.56	327	P	**P**	**02 53 06.5**	**+0.2**
	comp=Z,0.9nm,0.6s,baz=131,slow=10,SNR=5.8						
SONM	**Songino Array**	27.00	42	P	**P**	**02 53 19.3**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=251,slow=4.5,SNR=3.7						
JOW	**Kunigami**	42.82	82	LR	LR	03 16 40.8	
	comp=Z,136nm,18.1s,baz=143,slow=41						
FINES	**FINESS Array B**	46.33	328	P	**P**	**02 56 03.9**	**+0.7**
	comp=Z,3.2nm,0.8s,baz=119,slow=6.7,SNR=10						
TIXI	**Tiksi**	48.99	19	P	P	02 56 31.1	+7.4
TIXI				IAmb	IAmb	02 56 37.1	
	comp=Z,6.4nm,0.3s						
ARCES	**ARCESS Array B**	49.35	338	P	**P**	**02 56 27.7**	**+1.2**
	comp=Z,2.9nm,0.8s,baz=108,slow=7.8,SNR=7.7						
ARCES	**ARCESS Array B**	49.35	338	IAmb	IAmb	02 56 43.0	
	comp=Z,9.6nm,1.2s						
NOA	**NORSAR Array B**	53.33	326	P	**P**	**02 56 56.6**	**+0.1**
	comp=Z,1.1nm,0.8s,baz=106,slow=6.5,SNR=1.8						
PSA00	**Pilbara Seismi**	64.74	138	P	P	02 58 33.7	+18
WRA	**Warramunga Arr**	72.84	126	P	**P**	**02 59 06.7**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=320,slow=6.1,SNR=7.1						
TORD	**Torodi Ar. Bea**	72.92	275	P	**P**	**02 59 07.2**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=50,slow=4.3,SNR=4.4						
ASAR	**Alice Springs**	75.06	129	P	**P**	**02 59 19.1**	**-0.5**
	comp=Z,0.1nm,0.4s,baz=315,slow=6.2,SNR=4.7						

IDC 29 03:06:35.0±16.0**, 27.°68N×142.°87E, h0^{km}, mb3.0**/2**, mb1 3.4**/3**, mb1mx3.0**/44**, mbtmp3.2**/3**, ML3.2**/1**, Error ellipse: s-maj=490.8km s-min=47.4km az=63.0, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSRS	**Korea Array**	15.91	312	Pn	Pn	03 10 20.7	+0.4
	0.1nm,0.3s,baz=116,slow=11,SNR=4.5						
WRA	**Warramunga Arr**	48.06	191	P	P	03 15 15.5	-0.9
	0.1nm,0.4s,baz=7.4,slow=8.2,SNR=7.1						
ASAR	**Alice Springs**	51.78	190	P	P	03 15 45.5	+0.9
	0.1nm,0.7s,baz=11,slow=10,SNR=1.8						

IDC 29 03:11:03.0±1.7**, 4.°09N×126.°25E, h0^{km}, mb3.7**/5**, mb1 3.9**/6**, mb1mx3.5**/52**, mbtmp3.8**/6**, ML3.9**/1**, MS3.2**/2**, Ms1 3.2**/2**, ms1mx2.5**/56**, Error ellipse: s-maj=75.6km s-min=25.0km az=63.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	7.03	134	Pn	Pn	03 12 46.4	-1.0
	2.1nm,0.3s,baz=311,slow=22,SNR=4.3						
SIJI				LR	LR	03 15 41.7	
	comp=Z,90nm,19.1s,baz=182,slow=40						
BATI	**Baumata**	14.43	190	LR	LR	03 21 45.9	
	comp=Z,142nm,18.3s,baz=288,slow=44						
FITZ	**Fitzroy Crossi**	22.06	182	P	P	03 16 00.3	+0.7
	1.9nm,0.7s,baz=25,slow=10,SNR=3.3						
WRA	**Warramunga Arr**	25.17	162	P	P	03 16 29.9	-0.4
	1.7nm,0.8s,baz=339,slow=11,SNR=12						
ASAR	**Alice Springs**	28.58	165	P	P	03 17 00.6	-0.5
	0.3nm,0.4s,baz=342,slow=7.0,SNR=8.3						
STKA	**Stephens Creek**	38.64	159	P	P	03 18 29.1	+0.7
	2.1nm,0.7s,baz=335,slow=8.4,SNR=5.5						
MKAR	**Makanchi Array**	56.99	325	P	P	03 20 50.5	0.0
	0.4nm,0.4s,baz=127,slow=9.4,SNR=3.6						

STR ***29*** *03:12:22.0±1.0, 46°N±6°×1°0E±°, h13^{km}±10^{km}, MLv2.4/8, preliminary*

LDG ***29*** *03:12:22.6±0.1, 45.°61N×9.°98E, h4^{km}, Ml2.1/22, Error ellipse: s-maj=2.3km s-min=1.9km az=107.0*

VIE ***29*** *03:12:22.7±0.6, 45.°67N×10.°00E, h4^{km}, mb2.2/7, ml2.3/15, Error ellipse: s-maj=4.5km s-min=2.1km az=43.0 57 km S of Sondrio*

ROM 29 03:12:22.7±0.1**, 45.°672N**±0.°009×**9.°995E**±0.°009**, h7^{km}**±1^{km}**, ML2.0**/16**, 2D, Error ellipse: s-maj=0.9km s-min=0.6km az=207.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAPR	**Capriolo**	0.05	231	P	Pg	03 12 24.7	+0.3
CAPR				S	Sg	03 12 26.4	+0.8
CNCS	**Concesio**	0.17	113	P	Pg	03 12 26.3	+0.1
CNCS				S	Sg	03 12 29.3	+0.8
MDI	**Monti di Nese**	0.23	298	⇓P	Pg	03 12 27.2	0.0
MDI				S	Sg	03 12 31.2	+0.9
LEOD	**Capriano del C**	0.23	157	P	Pg	03 12 28.1	+0.8
ORZI	**Orzinuovi**	0.27	190	P	Pg	03 12 28.5	+0.5
ORZI				S	Sb	03 12 34.5	-0.1
VOBA	**Vobarno**	0.36	94	P	Pg	03 12 29.9	+0.2
VOBA				S	Sb	03 12 36.2	-1.0
BAG8	**Bagolino**	0.36	65	P	Pg	03 12 30.6	+0.7
BAG8				S	Sb	03 12 36.4	-1.0
SALO	**Salr**	0.38	98	P	Pg	03 12 30.4	+0.4
SALO				AML	AML		
	comp=N,219μm,1.3s						
SALO				AML	AML		
	comp=E,172μm,1.5s						
MERA	**Merate**	0.40	270	P	Pg	03 12 30.4	-0.1
CTL8	**Castelleone**	0.43	203	P	Pg	03 12 31.7	+0.7
CTL8				AML	AML		
	comp=E,428μm,0.7s						
CTL8				AML	AML		
	comp=N,582μm,0.7s						
CTL8				AML	AML		
	comp=N,582μm,0.7s						
CTL8				AML	AML		
	comp=N,154μm,1.6s						
CTL8				AML	AML		
	comp=E,428μm,0.7s						
CTL8				AML	AML		
	comp=E,144μm,1.6s						
MAGA	**Magasa**	0.46	77	P	Pg	03 12 31.7	+0.1
MAGA				S	Sb	03 12 39.7	-0.5
MAGA				AML	AML		
	comp=E,330μm,0.8s						
MAGA				AML	AML		
	comp=N,331μm,0.9s						
MAGA				AML	AML		
	comp=E,330μm,0.8s						
GARGN	**Gargnano BS**	0.47	87	*e*Pg	Pg	03 12 32.2	+0.4
GARGN				*e*Sg	Sb	03 12 39.4	-1.0
ZEN8	**San Zeno di Mo**	0.52	93	P	Pb	03 12 33.9	-0.2
MABI	**Malga Bissina**	0.53	43	P	Pg	03 12 33.3	+0.4
MABI				S	Sg	03 12 41.0	+1.1
MABI				AML	AML		
	comp=N,105μm,0.7s						
MABI				AML	AML		
	comp=E,97μm,0.1s						
MABI				AML	AML		
	comp=N,105μm,0.7s						
RONC	**Roncone**	0.54	55	P	Pg	03 12 33.7	+0.6
BALD	**Monte Baldo**	0.58	89	*e*Pg	Pg	03 12 34.5	+0.7
BALD				*e*Sg	Sb	03 12 42.6	-1.1
VARA	**Varagna**	0.65	76	P	Pb	03 12 36.0	-0.5
MUGIO	**Muggio**	0.71	291	P	Pg	03 12 35.7	-0.7
MUGIO				AML	AML		
	comp=E,52μm,1.4s						
MUGIO				AML	AML		
	comp=N,59μm,0.4s						
MUGIO				AML	AML		
	comp=E,52μm,1.4s						
BERNI	**Berninapass**	0.74	1	P	Pg	03 12 37.4	+0.3
GAGG	**Gaggia**	0.79	58	*e*Pg	Pg	03 12 38.3	+0.4
GAGG				*e*Sg	Sb	03 12 50.3	+0.5
GAGG	**Gaggia**	0.79	58	P	Pb	03 12 38.4	-0.5
BRMO	**Bormio**	0.85	18	P	Pg	03 12 39.3	+0.3
BRMO				AML	AML		
	comp=E,22μm,1.3s						
BRMO				AML	AML		
	comp=N,25μm,1.6s						
MARN	**Marana (Italy)**	0.85	92	*e*Pg	Pg	03 12 39.4	+0.3
MARN				*e*Sg	Sb	03 12 52.2	+0.7
DOSS	**Dosso del Somm**	0.86	76	*e*Pg	Pg	03 12 39.6	+0.3
DOSS	**Dosso del Somm**	0.86	76	P	Pg	03 12 39.5	+0.2
DOSS				AML	AML		
	comp=E,184μm,0.3s						
DOSS				AML	AML		
	comp=N,116μm,0.6s						
VARE	**Varese**	0.88	283	P	Pb	03 12 40.5	+0.2
VARE				AML	AML		
	comp=E,95μm,1.2s						
VARE				AML	AML		
	comp=N,106μm,1.4s						
CARE	**Lago del Cares**	0.90	33	*e*Pg	Pb	03 12 40.6	-0.2
GAZZ	**Gazzo Veronese**	0.95	125	*e*Pg	Pb	03 12 41.6	+0.1
PANI	**Panarotta**	1.01	67	*e*Pg	Pb	03 12 42.7	+0.1
MOSI	**Grossmontoni**	1.02	22	P	Pb	03 12 42.7	-0.1
MOSI				AML	AML		
	comp=E,71μm,1.6s						
MOSI				AML	AML		
	comp=N,120μm,0.7s						
OZOL	**Ozolo**	1.04	45	*e*Pg	Pn	03 12 43.4	-0.3
DAVOX	**Davos/Dischmat**	1.11	356	P	Pb	03 12 44.4	+0.1
GORR	**Gorreto**	1.18	205	P	Pg	03 12 45.2	0.0
APPI	**Appiano**	1.18	46	P	Pg	03 12 45.2	-0.1
APPI				AML	AML		
	comp=E,171μm,1.0s						
APPI				AML	AML		
	comp=N,172μm,0.3s						
GRAM	**Graiana**	1.18	178	P	Pg	03 12 45.2	-0.2
FUSIO	**Fusio**	1.21	311	P	Pg	03 12 45.3	-0.7
CTI	**Castel Tesino**	1.22	71	P	Pg	03 12 46.0	0.0
CTI				AML	AML		
	comp=N,136μm,1.1s						
CTI				AML	AML		
	comp=E,122μm,0.5s						
KOSI	**Kohlern**	1.25	50	P	Pn	03 12 47.4	+0.7
KOSI				AML	AML		
	comp=N,81μm,1.3s						
KOSI				AML	AML		
	comp=E,62μm,1.0s						
CGRP	**Cima Grappa**	1.28	80	P	Pn	03 12 46.5	-0.6
MSSA	**Maissana**	1.40	194	P	Pn	03 12 45.2	-3.4
ABSI	**Aberstueckl**	1.40	41	P	Pg	03 12 49.8	+0.2
ABSI				AML	AML		
	comp=E,79μm,0.8s						
ABSI				AML	AML		
	comp=N,56μm,0.9s						
PLONS	**Plons/SG**	1.44	343	P	Pg	03 12 50.3	-0.1
FETA	**Feichten**	1.44	20	*e*Pg	Pg	03 12 51.1	+0.7
	comp=N,0.1nm,0.1s,SNR=5.7						
FETA				Sg	Sg	03 13 10.6	+1.5
	comp=N,0.5nm,0.2s						
MMK	**Mattmark**	1.47	286	P	Pn	03 12 49.5	-0.2
MMK				AML	AML		
	comp=E,42μm,0.4s						
MMK				AML	AML		
	comp=N,50μm,0.6s						
VARN	**Col Varnada, M**	1.51	77	P	Pn	03 12 49.8	-0.4
VARN				AML	AML		
	comp=N,98μm,0.3s						
VARN				AML	AML		
	comp=E,83μm,1.0s						
EMBD	**Embd, Matterta**	1.60	291	Sn	Sn	03 13 12.8	+0.3
EMBD	**Embd, Matterta**	1.60	291	Pg	Pg	03 12 53.9	+0.5
DAVA	**Damuels**	1.62	357	*e*Pg	Pg	03 12 54.1	+0.4
	comp=E,0.7nm,0.1s						
BNALP	**Bannalp**	1.62	318	P	Pb	03 12 53.2	+0.2
SQTA	**Sankt Quirin**	1.76	28	*e*Pg	Pg	03 12 56.2	-0.3
	comp=E,1.7nm,0.2s,SNR=6.9						
SQTA				Sg	Sg	03 13 20.3	+0.9
	comp=E,4.7nm,0.3s						
MOTA	**Moosalm**	1.84	24	*e*Pg	Pg	03 12 57.7	-0.3
	comp=E,0.3nm,0.1s						
MOTA				Sg	Sg	03 13 24.6	+2.8
	comp=E,1.0nm,0.2s						
DIX	**Grande Dixence**	1.85	284	Sn	Sb	03 13 19.7	-0.8
DIX	**Grande Dixence**	1.85	284	Pn	Pn	03 12 54.7	-0.3
DIX				Pg	Pb	03 12 57.1	+0.1
RETA	**Reutte**	1.89	16	Pn	Pn	03 12 56.3	+0.8
	comp=E,0.7nm,0.3s						
RETA				Sg	Sg	03 13 26.2	+2.7
	comp=E,1.1nm,0.2s						
WTTA	**Wattenberg**	1.96	35	*e*Pg	Pg	03 13 00.2	0.0
	comp=E,1.0nm,0.1s						
WTTA				*e*Sg	Sg	03 13 27.9	+2.3
	comp=E,4.2nm,0.4s						
PII	**Pisa**	1.99	169	⇓P	Pn	03 12 56.3	-0.3
WATA	**Walderalm**	1.99	33	*e*Pg	Pb	03 12 59.8	+0.5
	comp=E,1.1nm,0.2s,SNR=6.1						
ABTA	**Abfaltersbach**	2.05	57	*e*Pn	Pn	03 12 58.9	+1.2
	comp=E,0.2nm,0.1s						
AIGLE	**Aigle**	2.22	289	Sn	Sn	03 13 28.8	+1.1
AIGLE	**Aigle**	2.22	289	Pn	Pn	03 13 00.6	+0.6
SULZ	**Cheisacher**	2.27	326	Sg	Sg	03 13 35.7	+0.3
SULZ	**Cheisacher**	2.27	326	Pn	Pn	03 12 59.5	-1.0
LPG	**La Plagne**	2.28	267	*e*Pn	Pn	03 12 59.4	-1.6
LPG	**La Plagne**	2.28	267	*e*Pg	Pg	03 13 05.8	-0.7
LPG				*e*Sn	Sn	03 13 26.2	-3.3
	comp=E,1.8nm,0.3s						
LPL	**La Plagne**	2.30	267	*e*P	Pn	03 13 01.8	+0.7
LPL	**La Plagne**	2.30	267	*e*Pg	Pb	03 13 05.5	+1.0
LPL				*e*Sn	Sn	03 13 26.1	-3.6
	comp=E,3.2nm,0.4s						
SLE	**Schleitheim**	2.33	334	Pg	Pb	03 13 03.8	-1.3
SLE	**Schleitheim**	2.33	334	Pn	Pn	03 13 01.4	-0.1
MBDF	**Montbardon**	2.47	249	*e*Pn	Pn	03 13 00.7	-2.7
MBDF	**Montbardon**	2.47	249	*e*P	Pn	03 13 04.0	+0.6
MBDF				*e*Sn	Sn	03 13 29.7	-4.1
	comp=E,0.5nm,0.2s						
GUT	**Gutenstein**	2.48	346	Pn	Pn	03 13 03.5	0.0
GUT	**Gutenstein**	2.48	346	Sn	Sn	03 13 34.3	+0.4
SBF	**Sospel**	2.57	226	*e*Pn	Pn	03 13 02.4	-2.3
SBF				*e*Sn	Sn	03 13 32.3	-3.9
	comp=E,8.1nm,0.5s						
KIZ	**Kirchzarten**	2.69	329	Sg	Sg	03 13 49.8	+0.6
KIZ	**Kirchzarten**	2.69	329	Pn	Pn	03 13 06.7	+0.3
GIMEL	**St. Georges /**	2.73	290	Pn	Pn	03 13 07.4	+0.3
CHMF	**Charmoille**	2.80	306	Pn	Pn	03 13 07.8	-0.1
CHMF				Sn	Sn	03 13 39.4	-2.5
CABF	**La Chapelle**	2.87	290	*e*P	Pn	03 13 09.1	+0.1
CABF				*e*Sn	Sn	03 13 40.1	-3.7
CABF				*e*Sg	Sg	03 13 53.6	-1.4
	comp=E,0.6nm,0.3s						
CALF	**Calern**	2.91	230	Pn	Pn	03 13 08.7	-0.8
ORIF	**Oris-en-Rattie**	3.00	257	*e*Pn	Pn	03 13 09.0	-1.7
ORIF				*e*Sn	Sn	03 13 42.8	-4.1
	comp=E,3.4nm,0.5s						
ARCI	**Arcidosso**	3.01	159	S	Sg	03 13 58.0	-1.5
HINF	**Hinteralfeld**	3.04	316	*e*Pn	Pn	03 13 10.0	-1.3
HINF				*e*Sn	Sn	03 13 44.1	-3.9
	comp=E,2.9nm,0.6s						
HINF				*e*Sg	Sg	03 13 58.6	-1.9
	comp=E,1.6nm,0.4s						
FRF	**La Foret Royal**	3.19	230	*e*Pn	Pn	03 13 10.7	-2.5
FRF				*e*Sn	Sn	03 13 46.5	-4.9
	comp=E,0.6nm,0.2s						
ECH	**Echery**	3.20	324	Pn	Pn	03 13 13.3	-0.1
PGF	**Pioggiola**	3.20	193	*e*Pn	Pn	03 13 09.4	-4.1
PGF				*e*Sn	Sn	03 13 46.8	-5.2
	comp=E,1.5nm,0.4s						
OBKA	**Obir**	3.28	74	*e*Pn	Pn	03 13 14.9	+0.4
	comp=E,0.3nm,0.3s						
OBKA				Sg	Sg	03 14 10.4	+2.5
	comp=E,1.2nm,0.3s						
CDF	**Champ du Feu**	3.31	327	*e*Pn	Pn	03 13 13.6	-1.4
CDF	**Champ du Feu**	3.31	327	*e*P	Pn	03 13 17.2	+2.2
CDF				*e*Sn	Sn	03 13 50.5	-4.1
	comp=E,0.5nm,0.2s						
CDF				*e*Sg	Sg	03 14 07.7	-1.4
	comp=E,0.9nm,0.3s						
LMR	**La Mourre**	3.42	228	*e*Pn	Pn	03 13 14.5	-1.8
LMR				*e*Sn	Sn	03 13 52.5	-4.6
	comp=E,1.2nm,0.3s						
HAU	**Haudompre**	3.42	314	*e*P	Pn	03 13 16.9	+0.5
HAU				*e*Sn	Sn	03 13 52.8	-4.4
	comp=E,1.7nm,0.3s						
VIVF	**Saint-Julien-l**	3.84	260	*e*P	Pn	03 13 24.0	+1.7
VIVF				*e*Sn	Sn	03 14 02.1	-5.6
	comp=E,0.6nm,0.3s						
PAGF	**Fort de Pagny**	4.10	316	*e*Pn	Pn	03 13 24.4	-1.3
PAGF				*e*Sn	Sn	03 14 09.1	-4.8
PAGF				*e*Sg	Sg	03 14 32.9	-1.4
	comp=E,2.2nm,0.2s						
SMF	**Signal de Mont**	4.39	285	*e*Pn	Pn	03 13 28.3	-1.4
SMF				*e*Sn	Sn	03 14 16.0	-5.0
	comp=E,0.6nm,0.2s						
LOR	**Lormes**	4.53	293	*e*Pn	Pn	03 13 31.2	-0.5
	baz=114						
LOR				*e*Sn	Sn	03 14 19.5	-5.0
	comp=E,1.9nm,0.4s						
LOR	**Lormes**	4.53	293	Sn	Sn	03 14 23.4	-1.1
LOR	**Lormes**	4.53	293	Pn	Pn	03 13 31.5	-0.2
SSF	**Saint Saulge**	4.70	290	*e*Pn	Pn	03 13 31.7	-2.3
SSF				*e*Sn	Sn	03 14 23.0	-5.7
	comp=E,0.4nm,0.2s						
AVF	**Avril sur Loir**	4.74	286	*e*Pn	Pn	03 13 32.5	-2.0
AVF				*e*Sn	Sn	03 14 23.9	-5.8
	comp=E,0.3nm,0.3s						

IDC ***29*** *03:23:07.5±0.6, 56.°38N×112.°40E, h0^{km}, mb4.0/19, mb1 4.2/23, mb1mx4.0/41, mbtmp4.0/23, ML3.4/4, MS3.2/6, Ms1 3.2/6, ms1mx2.9/44, Error ellipse: s-maj=16.0km s-min=13.0km az=150.0*

MOS ***29*** *03:23:07.4±1.1, 56.°44N×112.°34E, h10^{km}, mb4.3/6, Error ellipse: s-maj=9.2km s-min=5.7km az=78.9*

MOS Felt (III) at Mamakan; (II) at Balahninskiy.

NEIC ***29*** *03:23:09.2±1.4, 56.°46N±0.°08×112.°3E±0.°1, h10^{km}±1^{km}, mb4.2/18, Error ellipse: s-maj=14.3km s-min=12.5km az=139.0*

BYKL ***29*** *03:23:09.3±0.2, 56.°37N×112.°38E, h9^{km}±2^{km}, FELT I=III MSK at Mamakan, II at Balakhninskiy*

ISC 29 03:23:08.0±1.1**, 56.°45N**±0.°03×**112.°39E**±0.°02**, h4^{km}**±7^{km}**, n118, σ2.^{s}52**/178**, mb4.2**/24**, MS3.2**/4**, 10C-8D, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOA	**Uoyan**	0.48	230	⇑*i*Pg	**Pg**	**03 23 17.2**	**-0.1**
YOA				Pmax		03 23 18.1	
	4μm,0.2s						
YOA				*e*Sg	**Sg**	**03 23 23.6**	**0.0**

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YOA                                    Smax            03 23 32.3
          36µm,0.7s
SVKR  Severomuysk      0.73 116⇑iPg    Pg         03 23 22.2 +0.1
SVKR                            e                 03 23 27.2
SVKR                             max              03 23 27.3
          4µm,0.2s
SVKR                            eSg    Sg         03 23 31.4  -0.1
SVKR                             Smax             03 23 32.2
          23µm,0.6s
SVKR                            eSb    Sn         03 23 39.3 +2.5
KMO   Kumora           0.87 230⇑iPg    Pg         03 23 23.7  -1.0
KMO                             e                 03 23 25.7
KMO                              max              03 23 27.9
          992nm,0.5s
KMO                             e                 03 23 29.0
KMO                             eSg    Sg         03 23 35.6  -0.3
KMO                              Smax             03 23 37.8
          6µm,0.6s
UKT   Uakit            1.19 143⇓iPg    Pb         03 23 29.9  -1.2
          975nm,0.7s
UKT                            ⇑iPg    Pb         03 23 29.9  -1.2
          555nm,0.7s
UKT                            ⇑iPg    Pb         03 23 29.9  -1.2
          753nm,0.7s
UKT                              Pmax             03 23 30.2
          1µm,0.8s
UKT                             eSg    Sb         03 23 44.8  -2.0
UKT                             eSb    Sn         03 23 48.3 +0.3
UKT                              max              03 23 49.6
          3µm,0.4s
UKT   Uakit            1.19 143 ePG    Pg         03 23 32.5 +1.8
BOD   Bodaibo          1.64  32⇓iPg    Pb         03 23 39.5 +0.8
BOD                              Pmax             03 23 40.0
          2µm,0.5s
BOD                             eSg    Sg         03 24 01.9 +1.4
BOD                              Smax             03 24 04.0
          13µm,0.4s
BOD   Bodaibo          1.64  32 ePN    Pb         03 23 39.4 +0.8
BOD                             i                 03 23 40.2
BOD                             e                 03 24 02.0
BOD                             i                 03 24 04.0
YLYR  Ulyunkhan        1.72 204⇓iPg    Pn         03 23 39.0 +0.3
          1µm,0.6s
YLYR                           ⇓iPg    Pn         03 23 39.0 +0.3
          791nm,0.6s
YLYR                           ⇑iPg    Pn         03 23 39.0 +0.3
          1µm,0.6s
YLYR                             Pmax             03 23 39.3
          1µm,0.5s
YLYR                            eSg    Sn         03 24 01.3 +0.2
YLYR                             Smax             03 24 04.7
          7µm,0.4s
YLYR  Ulyunkhan        1.72 204⇑iPN    Pn         03 23 39.0 +0.3
YLYR                            e                 03 24 01.2
YLYR                             pmax  pmax
          comp=Z,1µm,0.3s
YLYR                             smax  smax
          comp=E,6µm,0.6s
NIZ   Nizh Angarsk     1.73 248 ePg    Pn         03 23 39.6 +0.8
NIZ                             ePb    Pb         03 23 40.3   0.0
NIZ                              max              03 23 47.4
          comp=E,700nm,0.5s
NIZ                             eSg    Sb         03 24 02.6 +0.2
NIZ                             eSb    Sg         03 24 04.1 +0.5
NIZ                              max              03 24 11.8
          comp=E,4µm,0.8s
NIZ   Nizh Angarsk     1.73 248 ePN    Pb         03 23 40.1  -0.2
NIZ                             e                 03 24 03.0
NIZ                              pmax  pmax
          comp=Z,730nm,0.7s
NIZ                              smax  smax
          comp=N,4µm,0.9s
NLYR  Nelyaty          1.84  87⇓iPg    Pb         03 23 42.3 +0.1
NLYR                             Pmax             03 23 46.1
          comp=N,2µm,0.8s
NLYR                            eSg    Sb         03 24 07.1 +1.5
NLYR                             Smax             03 24 12.4
          comp=N,6µm,0.8s
NLYR  Nelyaty          1.84  87⇓iPN    Pb         03 23 42.3 +0.1
NLYR                            e                 03 24 05.5
NLYR                             pmax  pmax
          comp=Z,2µm,0.8s
NLYR                             smax  smax
          comp=N,6µm,1.3s
SYVR  Suvo             3.11 207 ePn    Pn         03 23 58.1 +0.3
SYVR                            e                 03 24 01.1
SYVR                            ePg    Pb         03 24 03.6  -0.3
SYVR                             Pmax             03 24 05.6
          comp=N,224nm,0.7s
SYVR                            e                 03 24 25.8
SYVR                            eSg    Sb         03 24 43.1 +1.0
SYVR                             Smax             03 24 56.8
          comp=N,1µm,1.2s
SYVR  Suvo             3.11 207 ePN    Pn         03 23 58.2 +0.4
SYVR                            e                 03 24 03.8
SYVR                            e                 03 24 42.8
SYVR                             pmax  pmax
          comp=Z,216nm,0.4s
SYVR                             smax  smax
          comp=N,929nm,0.6s
CRS   Chara            3.28  80⇓iPn    Pn         03 24 02.4 +2.3
CRS                             ePg    Pb         03 24 08.0 +1.3
CRS                             e                 03 24 12.0
CRS                              max              03 24 12.5
          comp=N,1µm,0.9s
CRS                             eSn    Sn         03 24 40.5 +1.0
CRS                             eSg    Sg         03 24 51.4  -1.8
CRS                              Smax             03 24 54.8
          comp=N,4µm,1.4s
CRS   Chara            3.28  80⇓iPN    Pn         03 24 02.3 +2.2
CRS                             e                 03 24 08.8
CRS                             e                 03 24 51.3
CRS                              pmax  pmax
          comp=Z,1µm,0.8s
CRS                              smax  smax
          comp=E,4µm,1.4s
OGRR  Ongureny         3.94 226 ePn    Pn         03 24 11.4 +2.3
OGRR                            ePg    Pb         03 24 19.5 +1.6
OGRR                             Pmax             03 24 27.2
          comp=E,115nm,0.6s
OGRR                            eSn    Sn         03 24 53.9  -1.8
OGRR                            eSg    Sb         03 25 10.3 +4.5
OGRR                             Smax             03 25 26.9
          comp=E,519nm,0.8s
OGRR  Ongureny         3.94 226 ePN    Pn         03 24 12.0 +2.9
OGRR                            e                 03 24 21.4
OGRR                            e                 03 25 10.8
OGRR                             pmax  pmax
          comp=Z,114nm,0.5s
OGRR                             smax  smax
          comp=E,576nm,1.3s
KELR  Kotokel          4.46 216 ePn    Pn         03 24 17.5 +1.2
KELR                            ePg    Pb         03 24 28.5 +1.7
KELR                            e                 03 24 57.0
KELR                            eSg    Sb         03 25 25.8 +4.9
CIT   Chita            4.49 171 ePg    Pb         03 24 28.7 +1.4
CIT                              Pmax             03 24 29.7
          comp=E,234nm,0.4s
CIT                             eSn    Sn         03 25 07.3  -2.0
CIT                             eSg    Sb         03 25 25.6 +3.9
CIT                              Smax             03 25 35.7
          comp=E,3µm,0.6s
CIT   Chita            4.49 171 ePN    Pn         03 24 15.9  -0.8
CIT                             e                 03 24 28.0
CIT                             eS     Sn         03 25 07.3  -2.0
CIT                             e                 03 25 25.6
CIT                              pmax  pmax
          comp=Z,202nm,1.2s
CIT                              smax  smax
          comp=E,2µm,0.7s
TUP   Tupik            4.76 112 ePn    Pn         03 24 21.0 +0.5
TUP                             e                 03 24 32.2
TUP                             ePg    Pb         03 24 34.6 +2.6
TUP                              Pmax             03 24 36.8
          comp=E,129nm,0.7s
TUP                             eSn    Sn         03 25 13.9  -2.1
TUP                             eSg    Sg         03 25 36.3  -4.5
TUP                              Smax             03 25 42.6
          comp=E,2µm,0.8s
TUP   Tupik            4.76 112 ePN    Pn         03 24 20.8 +0.3
TUP                             e                 03 24 34.3
TUP                             eS     Sn         03 25 15.6  -0.4
TUP                             e                 03 25 36.2
TUP                              pmax  pmax
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          comp=Z,123nm,0.6s
TUP                              smax  smax
          comp=N,2µm,0.9s
TRG   Tyrgan           5.09 226 ePn    Pn         03 24 25.5 +0.4
TRG                             ePg    Pb         03 24 39.3 +1.7
TRG                              Pmax             03 24 47.9
          comp=N,51nm,0.4s
TRG                             eSn    Sn         03 25 21.0  -3.3
TRG                             eSg    Sb         03 25 44.2 +5.1
TRG                              Smax             03 25 56.5
          comp=N,345nm,0.8s
TRG   Tyrgan           5.09 226 ePN    Pn         03 24 25.7 +0.6
TRG                             e                 03 24 39.6
TRG                             eS     Sn         03 25 21.9  -2.4
TRG                             e                 03 25 43.2
TRG                              pmax  pmax
          comp=Z,51nm,0.4s
TRG                              smax  smax
          comp=E,346nm,0.6s
UUDB  Ulan-Yde         5.36 213 ePn    Pn         03 24 29.4 +0.7
UUDB                            ePg    Pb         03 24 43.6 +1.4
UUDB                             Pmax             03 24 52.7
          comp=E,161nm,1.1s
UUDB                            eSg    Sb         03 25 53.0 +6.2
UUDB                             Smax             03 26 09.6
          comp=E,1µm,1.6s
FFNB  Fofonovo         5.50 219 ePn    Pn         03 24 31.2 +0.5
FFNB                            e                 03 24 43.0
FFNB                            ePg    Pb         03 24 47.7 +3.1
FFNB                            eSg    Sg         03 25 58.4  -6.2
KAB   Kabansk          5.54 220 eSg    Sb         03 25 59.0 +7.1
KAB                              Smax             03 26 16.5
          comp=E,1µm,1.5s
STDB  Stepnoy Dvoret   5.55 222 ePn    Pn         03 24 32.3 +1.0
STDB                            ePg    Pb         03 24 48.1 +2.8
STDB                            eSn    Sn         03 25 33.0  -2.4
STDB                            eSg    Sb         03 25 59.3 +7.2
BGT   Bolshoye Golou   6.01 226 ePn    Pn         03 24 39.0 +1.4
BGT                             e                 03 24 47.6
BGT                             ePg    Pb         03 24 55.9 +2.6
BGT                              Pmax             03 25 29.3
          comp=E,46nm,0.7s
BGT                             e                 03 25 47.8
BGT                             eSg    Sb         03 26 12.7 +7.2
BGT                              Smax             03 26 36.9
          comp=E,285nm,1.0s
IRK   Irkutsk          6.34 232 eSn    Sn         03 25 52.1  -2.9
IRK                             eSg    Sg         03 26 23.9  -7.6
IRK                              Smax             03 26 33.0
          comp=E,859nm,0.9s
LSTR  Listvyanka       6.38 227 ePn    Pn         03 24 43.1 +0.4
LSTR                            ePg    Pb         03 25 03.1 +3.6
LSTR                             Pmax             03 25 05.5
          comp=E,30nm,0.5s
LSTR                            eSn    Sn         03 25 52.9  -3.0
LSTR                            eSg    Sg         03 26 25.2  -7.5
LSTR                             Smax             03 26 30.0
          comp=E,209nm,1.7s
IVK   Ivanovka         6.60 229 ePn    Pn         03 24 46.2 +0.5
IVK                             ePg    Pb         03 25 07.4 +4.1
IVK                              Pmax             03 25 33.6
          comp=E,34nm,0.8s
IVK                             eSn    Sn         03 25 58.4  -2.9
IVK                             eSg    Sb         03 26 31.0 +8.6
IVK                              Smax             03 26 54.0
          comp=E,142nm,1.2s
KPC   Khapcheranga     6.75 180⇑iPn    Pn         03 24 46.8  -1.1
KPC                             ePg    Pb         03 25 09.3 +3.4
KPC                              Pmax             03 25 14.6
          comp=E,63nm,1.0s
KPC                             e                 03 26 20.0
KPC                             eSg    Sb         03 26 35.3 +8.4
KPC                              Smax             03 26 44.9
          comp=E,1µm,1.1s
KPC   Khapcheranga     6.75 180 ePN    Pn         03 24 46.9  -1.0
KPC                             e                 03 25 08.6
KPC                             e                 03 26 35.0
KPC                              pmax  pmax
          comp=Z,63nm,0.8s
KPC                              smax  smax
          comp=E,1µm,1.0s
TLY   Talaya           7.02 231  Pn    Pn         03 24 51.2  -0.2
          comp=E,0.0nm,0.3s,baz=60,slow=10,SNR=3.5
TLY                              Lg    Lg         03 26 45.3
          comp=E,0.1nm,0.3s,baz=111,slow=20,SNR=5.8
TLY                              LR    LR         03 26 55.3
          comp=E,43nm,21.6s,baz=16,slow=33
TLY   Talaya           7.02 231 ePn    Pn         03 24 51.5 +0.1
TLY                             e                 03 25 02.2
TLY                             ePg    Pb         03 25 13.8 +3.5
TLY                              Pmax             03 25 24.8
          comp=E,25nm,0.6s
TLY                             eSn    Sn         03 26 07.8  -3.8
TLY                             eSg    Sb         03 26 43.8 +9.4
TLY                              Smax             03 26 58.4
          comp=E,176nm,1.1s
TLY   Talaya           7.02 231 ePN    Pn         03 24 52.2 +0.8
TLY                             e                 03 25 14.8
TLY                             e                 03 26 44.8
TLY                              pmax  pmax
          comp=Z,55nm,0.5s
TLY                              smax  smax
          comp=E,194nm,0.4s
ARS   Arshan           7.39 236 ePn    Pn         03 24 57.3 +0.6
ARS                             e                 03 25 09.1
ARS                             ePg    Pb         03 25 21.7 +4.9
ARS                              Pmax             03 25 33.5
          comp=E,66nm,0.5s
ARS                             eSn    Sn         03 26 17.4  -3.5
ARS                             eSg    Sg         03 26 56.5  -8.8
ARS                              Smax             03 27 02.6
          comp=E,906nm,0.7s
ZAK   Zakamensk        8.15 226 ePn    Pn         03 25 08.8 +1.8
ZAK                             e                 03 25 20.8
ZAK                             ePg    Pb         03 25 35.4 +5.7
ZAK                              Pmax             03 26 04.7
          comp=E,22nm,1.4s
ZAK                             eSn    Sn         03 26 35.6  -3.9
ZAK                             e                 03 26 59.7
ZAK                             eSg    Sg         03 27 19.4   -10
ZAK                              Smax             03 27 42.1
          comp=E,184nm,1.3s
MOY   Mondy            8.23 239 ePn    Pn         03 25 09.8 +1.6
MOY                              max              03 25 47.8
          comp=E,59nm,1.2s
MOY                             eSn    Sn         03 26 37.4  -4.2
MOY                             eSg    Sg         03 27 22.4   -10
MOY                              Smax             03 27 49.0
          comp=E,324nm,1.4s
MOY   Mondy            8.23 239 ePN    Pn         03 25 09.9 +1.7
MOY                             e                 03 25 39.2
MOY                             eS     Sn         03 26 38.9  -2.7
ORL   Orlik            8.30 247 ePn    Pn         03 25 10.3 +1.2
ORL                              max              03 25 31.1
          comp=E,38nm,0.7s
ORL                             eSn    Sn         03 26 39.4  -3.8
ORL                             eSg    Sg         03 27 24.9  -9.3
ORL                              Smax             03 27 36.5
          comp=E,231nm,1.3s
ORL   Orlik            8.30 247 ePN    Pn         03 25 10.5 +1.4
ORL                             e                 03 25 38.7
ORL                             eS     Sn         03 26 41.4  -1.8
ORL                              pmax  pmax
          comp=Z,55nm,0.7s
ORL                              smax  smax
          comp=N,226nm,1.6s
HIA   Hailar           8.45 145 ePn    Pn         03 25 11.3 +0.2
HIA                             eSn    Sn         03 26 42.5  -4.4
HIA                             eSg    Sg         03 27 29.2   -10
HIA   Hailar           8.45 145  PN    Pn         03 25 12.0 +0.9
HIA   Hailar           8.45 145  Pn    Pn         03 25 12.0 +0.9
ZEA   Zeya             8.94 101 ePN    Pn         03 25 19.5 +1.7
ZEA                             e                 03 26 52.4
ZEA                             e                 03 27 49.5
ZEA                              MLR   MLR
          comp=E,400nm,5.0s
ZEA                              MLR   MLR
          comp=Z,400nm,6.0s
ULN   Ulaanbaatar      9.19 203 ePg    Pn         03 25 54.3  +33
ULN                             eSn    Sn         03 27 00.3  -5.0
ULN                             eSg               03 27 52.0
ULN   Ulaanbaatar      9.19 203 i P    Pn         03 25 22.0 +0.6
ULN   Ulaanbaatar      9.19 203  Pn    Pn         03 25 22.0 +0.6
```

```
SONM  Songino Array    9.37 206  Pn    Pn         03 25 24.2 +0.4
          comp=Z,0.7nm,0.3s,baz=9.7,slow=14,SNR=12
SONM                             Lg    Lg         03 27 59.9
          comp=Z,4.3nm,0.3s,baz=30,slow=24,SNR=8.2
YAK   Yakutsk         10.46  51 eP     Pn         03 25 34.3  -4.2
YAK                             e                 03 27 30.1
YAK                              pmax  pmax
          comp=Z,7.0nm,0.9s
YAK                              smax  smax
          comp=E,17nm,0.7s
YAK                              smax  smax
          comp=N,68nm,1.1s
YAK                              pmax  pmax
          comp=N,266nm,0.9s
YAK                              pmax  pmax
          comp=E,275nm,1.0s
YAK                              MLR   MLR
          comp=Z,827nm,6.0s
YAK   Yakutsk         10.46  51  Pn    Pn         03 25 39.0 +0.6
KNGR  Kungurtug, Tuv  10.60 243 ePn    Pn         03 25 41.7 +1.1
KNGR                            eSn    Sn         03 27 34.0  -5.7
KNGR                            eSg               03 28 35.9
KLR   Kul'dur         13.72 114  Pn    Pn         03 26 23.6 +0.5
          comp=Z,0.7nm,0.3s,baz=309,slow=14,SNR=11
KLR                              Lg    Lg         03 30 15.0
          comp=Z,0.4nm,0.3s,baz=206,slow=17,SNR=4.0
CN2   Changchun       15.14 141 eP     P          03 26 50.8 +3.1
CN2                              pmax  pmax
          comp=Z,10.0nm,0.6s
CN2                              LR    LR
          comp=N,300nm,10.0s
CN2                              LR    LR
          comp=E,400nm,10.0s
CN2                              LR    LR
          comp=Z,300nm,11.0s
ZAA0  Zalesovo Array  15.89 273  Pn    Pn         03 26 50.7  -1.5
ZALV  Zalesovo Beam   15.89 273  Pn    Pn         03 26 51.0  -1.3
          comp=Z,0.4nm,0.3s,baz=61,slow=13,SNR=9.6
ZALV                             Lg    Lg         03 31 27.2
          comp=Z,0.1nm,0.3s,baz=80,slow=26,SNR=4.0
ZALV  Zalesovo Beam   15.89 273 i P    Pn         03 26 54.4 +2.2
ZALV                             pmax  pmax
          comp=Z,2.0nm,0.5s
ZALV  Zalesovo Beam   15.89 273  Pn    Pn         03 26 51.5  -0.7
DGZ   Jazzator, Alta  16.39 256 i P    Pn         03 26 57.9  -0.9
DGZ                              pmax  pmax
          comp=Z,8.0nm,0.9s
BJT   Baijiatuau      16.63 170  P     Pn         03 27 01.0  -0.7
BJT                              pmax  pmax
          comp=Z,6.0nm,0.5s
BJT   Baijiatuau      16.63 170  Pn    Pn         03 27 01.0  -0.7
TIXI  Tiksi           16.77  18  Pn    Pn         03 26 59.0  -4.3
          comp=Z,3.6nm,0.3s,baz=199,slow=8.0,SNR=23
TIXI                             Sn    Sn         03 29 55.9   -14
          comp=Z,1.8nm,0.3s,baz=31,slow=12,SNR=9.1
TIXI                             Lg    Lg         03 31 57.5
          comp=Z,1.4nm,0.3s,baz=56,slow=4.1,SNR=4.0
TIXI  Tiksi           16.77  18ceP     Pn         03 26 59.0  -4.3
TIXI                             pmax  pmax
          comp=Z,14nm,0.6s
NRIK  Noril'sk        16.99 329  P     Pn         03 27 01.9  -4.2
          comp=Z,1.6nm,0.3s,baz=124,slow=8.6,SNR=7.5
NRIK                             LR    LR         03 34 13.2
          comp=Z,130nm,18.8s,baz=120,slow=39
NRIK  Noril'sk        16.99 329  P     Pn         03 27 04.3  -1.8
NRIK                             pmax  pmax
          comp=Z,10.0nm,0.8s
NRIK  Noril'sk        16.99 329  Pn    Pn         03 27 04.3  -1.8
NRIK                             IAmb  IAmb       03 27 15.1
          comp=Z,9.6nm,0.8s
USRK  Ussuriysk Ar.   17.44 126  Lg    Lg         03 32 15.4
          baz=319,slow=28,SNR=5.7
KURK  Kurchatov       20.70 268  P     Pn         03 27 51.0  -0.2
KURK  Kurchatov       20.70 268  P     P          03 27 48.4  -0.5
KURBB Kurchatov Arra  20.80 268  P     P          03 27 51.0 +1.1
          comp=Z,7.6nm,0.6s,baz=60,slow=11,SNR=44
KURBB                            Lg    Lg         03 34 06.0
          comp=Z,1.7nm,1.2s,baz=71,slow=32,SNR=5.2
MK31  Makanchi Array  20.88 255  P     P          03 27 50.6  -0.2
MK31                             pmax  pmax
          comp=Z,6.0nm,0.9s
MK31  Makanchi Array  20.88 255  P     P          03 27 50.6  -0.2
MK31                             IAmb  IAmb       03 27 53.5
          comp=Z,5.9nm,0.8s
MKAR  Makanchi Array  20.88 255  P     P          03 27 51.6 +0.7
          comp=Z,5.3nm,0.6s,baz=57,slow=8.8,SNR=26
MKAR                             LR    LR         03 36 31.4
          comp=Z,56nm,19.3s,baz=74,slow=38
MKAR  Makanchi Array  20.88 255  P     P          03 27 50.6  -0.2
SEY   Seymchan        20.91  55  P     P          03 27 52.6 +1.5
          comp=Z,3.6nm,0.8s,baz=242,slow=19,SNR=4.6
MAKZ  Makanchi        21.03 256  P     P          03 27 51.9  -0.7
MAKZ                             pmax  pmax
          comp=Z,6.0nm,0.8s
MAKZ  Makanchi        21.03 256  P     P          03 27 51.9  -0.7
MAKZ                             IAmb  IAmb       03 27 55.1
          comp=Z,6.4nm,0.8s
KSRS  Korea Array     21.66 145  LR    LR         03 37 03.7
          comp=Z,81nm,18.4s,baz=352,slow=39
BVAR  Borovoye Array  24.21 280  P     P          03 28 24.8  -0.6
          comp=Z,3.3nm,0.5s,baz=160,slow=9.3,SNR=14
BRVK  Borovoye        24.25 280ceP     P          03 28 25.0  -0.8
BRVK                             pmax  pmax
          comp=Z,9.0nm,1.0s
BRVK  Borovoye        24.25 280  P     P          03 28 25.0  -0.8
BRVK                             IAmb  IAmb       03 28 29.2
          comp=Z,7.6nm,0.8s
BOOM  Boomskoye usch  27.12 255  P     P          03 28 51.3  -0.7
BOOM                             pmax  pmax
          comp=Z,2.0nm,0.8s
BOOM  Boomskoye usch  27.12 255  P     P          03 28 51.2  -0.7
BOOM                             IAmb  IAmb       03 29 09.3
          comp=Z,2.2nm,0.8s
AAK   Ala-Archa       27.79 256  P     P          03 28 58.6 +0.6
          comp=Z,1.6nm,0.8s,baz=249,slow=1.9,SNR=5.4
AAK   Ala-Archa       27.79 256  P     P          03 28 58.9 +0.9
AAK                              pmax  pmax
          comp=Z,6.0nm,1.5s
AAK   Ala-Archa       27.79 256  P     P          03 28 58.9 +0.9
AAK                              IAmb  IAmb       03 29 24.5
          comp=Z,6.2nm,1.5s
ABKAR Akbulak array   31.78 280  P     P          03 29 33.6 +0.5
ABKAR                            IAmb  IAmb       03 29 36.2
          comp=Z,2.1nm,0.9s
GAR   Garm            32.60 256  P     P          03 29 40.6 +0.1
GAR                              IAmb  IAmb       03 29 53.7
          comp=Z,5.9nm,1.0s
ARCES ARCESS Array B  37.90 325  P     P          03 30 25.9 +0.3
          comp=Z,2.0nm,0.9s,baz=71,slow=8.7,SNR=6.4
ARCES                            PcP   PcP        03 32 41.7 +0.3
          comp=Z,1.5nm,0.8s,baz=66,slow=4.1,SNR=3.8
ARCES                            LR    LR         03 52 04.5
          comp=Z,52nm,18.1s,baz=240,slow=46
FIA1  FINESS Array S  41.71 314  P     P          03 30 56.5  -0.8
FINES FINESS Array B  41.71 314  P     P          03 30 58.1 +0.8
          comp=Z,2.8nm,0.6s,baz=64,slow=8.7,SNR=11
KBZ   Khabaz          44.45 284  LR    LR         03 54 08.1
          comp=Z,41nm,19.9s,baz=46,slow=42
COLA  College         44.62  37 i P    P          03 31 19.2  -1.6
COLA                             pmax  pmax
          comp=Z,2.0nm,0.8s
IL31                  45.00  37  P     P          03 31 25.7 +1.9
IL31                             IAmb  IAmb       03 31 30.4
          comp=Z,4.7nm,1.2s
ILAR  Eielson Array   45.00  37  P     P          03 31 25.4 +1.5
          comp=Z,1.0nm,0.7s,baz=303,slow=8.2,SNR=18
ILAR                             PcP   PcP        03 33 05.3 +0.6
          comp=Z,0.7nm,0.8s,baz=296,slow=3.2,SNR=4.1
AKASG Malin Array Be  46.85 300  P     P          03 31 38.9 +0.3
          comp=Z,1.8nm,0.6s,baz=44,slow=8.9,SNR=16
NB2   NORSAR Subarra  47.61 320  P     P          03 31 44.7 +0.2
          comp=Z,6.2nm,1.0s,baz=51,slow=7.9
NOA   NORSAR Array B  47.61 320  P     P          03 31 44.8 +0.2
          comp=Z,1.1nm,0.6s,baz=48,slow=7.2,SNR=5.5
BURAR Bucovina Array  50.88 299  P     P          03 32 10.7 +1.0
BRTR  Keskin Array B  52.20 287  P     P          03 32 20.5 +0.7
          comp=Z,0.9nm,0.8s,baz=66,slow=3.1,SNR=4.6
GERES GERESS Array B  55.32 307  P     P          03 32 42.0  -0.5
          comp=Z,0.5nm,0.5s,baz=110,slow=8.5,SNR=4.3
GERES GERESS Array B  55.32 307  P     P          03 32 42.0  -0.5
YKA   Yellowknife Ar  55.90  24  P     P          03 32 45.5  -0.7
          comp=Z,1.8nm,0.7s,baz=343,slow=6.5,SNR=5.9
C09A  Chrisman Ranch  67.86  34  P     P          03 34 06.7  -0.3
SCHQ  Schefferville   69.08 360  P     P          03 34 15.0 +0.5
          comp=Z,5.5nm,0.9s,baz=27,slow=0.5,SNR=3.9
SCHQ  Schefferville   69.08 360  IAmb  IAmb       03 34 17.6
```

	comp=Z,9.0nm,0.9s						
ESDC	**Sonseca Array**	**70.21**	**313**	P	**P**	**03 34 22.3**	**+0.5**
	comp=Z,1.8nm,0.7s,baz=28,slow=6.1,SNR=19						
BMO	**Blue Mountains**	**70.79**	**35**	P	**P**	**03 34 25.4**	**+0.1**
BMO				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BMO	**Blue Mountains**	**70.79**	**35**	P	**P**	**03 34 25.4**	**+0.1**
BMO				IAmb	IAmb	03 34 29.7	
	comp=Z,3.3nm,1.0s						
PDAR	**Pinedale Array**	**75.02**	**31**	P	**P**	**03 34 51.1**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=328,slow=5.3,SNR=5.3						
WRA	**Warramunga Arr**	**78.31**	**159**	P	**P**	**03 35 08.4**	**-0.5**
	comp=Z,1.7nm,0.7s,baz=348,slow=5.8,SNR=17						
WRA	**Warramunga Arr**	**78.31**	**159**	IAmb	IAmb	03 35 09.3	
	comp=Z,0.1nm,0.8s						
ASAR	**Alice Springs**	**81.85**	**160**	P	**P**	**03 35 27.1**	**-1.0**
	comp=Z,0.9nm,0.7s,baz=356,slow=5.1,SNR=14						
TORD	**Torodi Ar. Bea**	**90.18**	**294**	P	**P**	**03 36 09.6**	**0.0**
	comp=Z,0.9nm,0.8s,baz=34,slow=4.8,SNR=6.8						

*NEIC **29** 03:40:18.8±2.7, 19°.64N±0°.04×70°.77W±0°.05, h28^{km}±6^{km}, mb4.0/12, Error ellipse: s-maj=7.3km s-min=4.5km az=64.0*

*OSPL **29** 03:40:19.2±1.8, 19°.67N×70°.72W, h10^{km}±10^{km}, ML3.7*

ISC 29 03:40:16.9±0.6**, 19°.71N**±0°.04×**70°.74W**±0°.04**, h10^{km}, n56, σ1^s.52**/59**, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SC01	**Santiago de lo**	**0.28**	**178**	Pg	**Pg**	**03 40 23.9**	**+1.3**
SC01					**Sg**	**03 40 29.0**	**+2.6**
SC01	**Santiago de lo**	**0.28**	**178**	*i* P	**Pg**	**03 40 23.9**	**+1.3**
SC01				IAML		03 40 37.4	
	comp=Z,10µm,0.5s						
LONA1	**Toro Cenizo, N**	**0.89**	**112**	*i* P	**Pg**	**03 40 34.5**	**+0.4**
LONA1				*e*S	**Sg**	**03 40 46.3**	**+0.7**
LONA1				IAML		03 40 54.8	
	comp=Z,3µm,0.4s						
SDDR	**Presa de Saban**	**0.89**	**216**		**Pg**	**03 40 33.5**	**-0.5**
SDDR				Sn	**Sg**	**03 40 43.6**	**-2.0**
SDDR	**Presa de Saban**	**0.89**	**216**	*i* P	**Pg**	**03 40 33.7**	**-0.4**
SDDR				IAML		03 40 51.4	
	comp=Z,2µm,0.5s						
LONE2	**Loma La Sidra**	**1.34**	**211**	*i* P	**Pn**	**03 40 41.9**	**+0.1**
LONE2				IAML		03 41 03.1	
	comp=Z,2µm,0.4s						
SDD	**Santo Domingo**	**1.47**	**148**	Pn	**Pn**	**03 40 42.0**	**-1.5**
SDD	**Santo Domingo**	**1.47**	**148**	*i* P	**Pn**	**03 40 42.1**	**-1.3**
SDD				*e*S	**Sn**	**03 41 00.9**	**-1.9**
DR12	**Loma Pena Alta**	**1.58**	**125**	Pn	**Pn**	**03 40 44.4**	**-0.6**
LOBA2	**Hotel Casa Bon**	**1.65**	**192**	*i* P	**Pn**	**03 40 45.5**	**-0.5**
GRTK	**Grand Turk**	**1.83**	**348**	Pn	**Pn**	**03 40 48.7**	**+0.3**
GRTK	**Grand Turk**	**1.83**	**348**	*i* P	**Pn**	**03 40 49.2**	**+0.8**
PAPH	**Port-au-Prince**	**1.89**	**232**	*i* P	**Pn**	**03 40 50.6**	**+1.3**
LOPE2	**Hotel El Peder**	**1.92**	**210**	IAML		03 41 21.8	
	comp=Z,905nm,0.8s						
LGNH	**Logne**	**2.13**	**236**		**Pn**	**03 40 53.3**	**+0.8**
JAKH	**Jacmel**	**2.23**	**229**	Pn	**Pn**	**03 40 55.0**	**+1.1**
JAKH	**Jacmel**	**2.23**	**229**	*i* P	**Pn**	**03 40 55.4**	**+1.5**
AGPR	**Aguadilla, PR**	**3.65**	**109**	Pn	**Pn**	**03 41 13.6**	**+0.2**
PRSN	**Puerto Rico Se**	**3.71**	**113**		**Pn**	**03 41 14.9**	**+0.6**
CRPR	**Cabo Rojo, PR**	**3.83**	**116**	Pn	**Pn**	**03 41 16.9**	**+0.9**
MLPR	**Magueyes Islan**	**3.91**	**116**	Pn	**Pn**	**03 41 18.2**	**+1.2**
AOPR	**Arecibo Observ**	**4.01**	**109**	Pn	**Pn**	**03 41 17.8**	**-0.7**
GTBY	**Guantanamo Bay**	**4.12**	**274**	Pn	**Pn**	**03 41 18.6**	**-1.3**
OBIP	**Obispado Ponce**	**4.25**	**112**	Pn	**Pn**	**03 41 22.3**	**+0.5**
CELP	**Cerrillos**	**4.26**	**112**	Pn	**Pn**	**03 41 22.3**	**+0.4**
GCPR	**Guaynabo City**	**4.62**	**107**	Pn	**Pn**	**03 41 25.1**	**-1.7**
SJG	**San Juan**	**4.63**	**109**	Pn	**Pn**	**03 41 26.4**	**-0.5**
PDPR	**Patillas Dam,**	**4.77**	**110**	Pn	**Pn**	**03 41 29.1**	**+0.2**
CBYP	**Canovanas**	**4.84**	**106**	Pn	**Pn**	**03 41 29.1**	**-0.8**
CUPR	**Culebra, Puert**	**5.35**	**104**	Pn	**Pn**	**03 41 34.9**	**-1.9**
STVI	**Saint Thomas**	**5.64**	**103**	Pn	**Pn**	**03 41 39.6**	**-1.2**
CDVI	**St. Croix**	**5.99**	**108**	Pn	**Pn**	**03 41 45.4**	**-0.2**
SMRT	**St. Maarten**	**7.44**	**102**	Pn	**Pn**	**03 42 04.3**	**-1.4**
URIC	**Uribia, Colomb**	**8.05**	**189**	Pn	**Pn**	**03 42 14.8**	**+0.8**
ANWB	**Willy Bob**	**8.73**	**102**	Pn	**Pn**	**03 42 24.9**	**+1.6**
LCCY	**Blossom Villag**	**8.80**	**271**	Pn	**Pn**	**03 42 24.0**	**-0.2**
SOCV	**Socops**	**11.36**	**181**	*e*P	**Pn**	**03 43 00.7**	**+1.3**
UREC	**San Jos de Ur**	**12.76**	**202**	*e*P	**Pn**	**03 43 20.2**	**+1.6**
RUSC	**La Rusia**	**13.92**	**190**	*e*P	**Pn**	**03 43 37.1**	**+2.3**
SPBC	**San Pablo de B**	**14.35**	**193**	*e*P	**Pn**	**03 43 42.4**	**+2.1**
NORC	**Norcasia**	**14.62**	**196**	*e*P	**Pn**	**03 43 47.9**	**+3.8**
CBOC	**Ciudad Bolivar**	**14.69**	**201**	*e*P	**Pn**	**03 43 48.5**	**+3.4**
GUY2C	**Guyana, Caldas**	**15.09**	**198**	*e*P	**Pn**	**03 43 54.1**	**+3.4**
ORTC	**Ortega, Tolima**	**16.31**	**196**	*e*P	**Pn**	**03 44 07.8**	**+1.6**
JSC	**Jenkinsville**	**17.26**	**329**		**Pn**	**03 44 17.1**	**-0.9**
JSC				IAmb	IAmb	03 44 17.6	
	comp=Z,22nm,1.5s						
W57A	**Gilead**	**17.42**	**334**	P	**Pn**	**03 44 19.9**	**-0.1**
W57A				IAmb	IAmb	03 44 38.5	
	comp=Z,18nm,1.4s						
V55A	**Taylorsville**	**18.54**	**332**	P	**P**	**03 44 34.5**	**+0.8**
V55A				IAmb	IAmb	03 44 40.9	
	comp=Z,18nm,1.4s						
R58B	**Mineral**	**19.22**	**343**	P	**P**	**03 44 42.5**	**+1.4**
R58B				IAmb	IAmb	03 44 49.9	
	comp=Z,10nm,1.4s						
S57A	**Dark Hollow, R**	**19.36**	**340**	P	**P**	**03 44 43.3**	**+0.7**
BOAV	**Boa Vista**	**19.90**	**149**	P	**P**	**03 44 47.4**	**-1.3**
CCIG	**Comitan**	**20.63**	**264**	Pn	**P**	**03 44 57.9**	**+1.0**
CCIG				IAmb	IAmb	03 45 14.0	
	comp=Z,6.0nm,0.8s						
WMOK	**Wichita Mounta**	**28.96**	**307**	P	**P**	**03 46 17.0**	**+0.4**
ETMB	**Extrema**	**29.68**	**171**	P	**P**	**03 46 21.2**	**-1.9**
LPAZ	**La Paz**	**35.87**	**176**	P	**P**	**03 47 17.2**	**-0.7**
PB11	**IPOC Station P**	**39.24**	**178**	P	**P**	**03 47 42.9**	**-3.0**
BDFB	**Brasilia**	**41.64**	**146**	P	**P**	**03 48 03.6**	**-2.1**
BDFB				IAmb	IAmb	03 48 11.7	
	comp=Z,4.2nm,1.1s						

*IDC **29** 03:58:52.4±0.9, 45°.14N×28°.18W, h0^{km}, mb3.7/12, mb1 3.8/13, mb1mx3.6/65, mbtmp3.7/13, ML3.6/1, MS3.7/16, Ms1 3.7/16, ms1mx3.4/48, Error ellipse: s-maj=27.6km s-min=19.4km az=29.0*

ISC 29 03:58:54.5±0.9**, 45°.1N**±0°.2×**28°.2W**±0°.1**, h14^{km}, n26, σ0^s.87**/15**, mb3.7**/12**, MS3.6**/15**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESDC	**Sonseca Array**	**18.66**	**98**	P	**Pn**	**04 03 12.3**	**0.0**
	0.0nm,0.3s,baz=303,slow=13,SNR=4.6						
ESDC				LR	LR	04 09 00.9	
	comp=Z,183nm,18.5s,baz=285,slow=33						
DAVOX	**Davos/Dischmat**	**26.34**	**73**	LR	LR	04 14 06.2	
	comp=Z,152nm,20.0s,baz=270,slow=35						
SCHQ	**Schefferville**	**26.38**	**306**	LR	LR	04 13 00.9	
	comp=Z,98nm,21.2s,baz=74,slow=32						
JMIC	**Jan Mayen**	**27.66**	**14**	LR	LR	04 13 27.0	
	comp=Z,97nm,21.2s,baz=66,slow=32						
GERES	**GERESS Array B**	**28.55**	**67**	LR	LR	04 14 23.0	
	comp=Z,122nm,18.4s,baz=284,slow=33						
FRB	**Frobisher Bay**	**29.26**	**324**	LR	LR	04 13 31.5	
	comp=Z,138nm,21.6s,baz=185,slow=30						
KEST	**Kesra**	**29.83**	**95**	LR	LR	04 14 54.5	
	comp=Z,144nm,20.5s,baz=334,slow=32						
FINES	**FINESS Array B**	**35.10**	**43**	P	**P**	**04 05 46.9**	**-0.1**
	2.9nm,0.9s,baz=254,slow=12,SNR=4.5						
ARCES	**ARCESS Array B**	**36.04**	**29**	LR	LR	04 19 18.5	
	comp=Z,61nm,18.3s,baz=255,slow=34						
KOWA	**Kowa**	**36.74**	**138**	P	**P**	**04 06 00.4**	**-1.0**
	1.3nm,0.5s,baz=336,slow=8.6,SNR=4.7						
AKASG	**Malin Array Be**	**38.04**	**60**	P	**P**	**04 06 11.5**	**-0.6**
	0.5nm,0.4s,baz=282,slow=8.2,SNR=3.9						
AKASG				LR	LR	04 21 11.2	
	comp=Z,98nm,18.4s,baz=0.0,slow=35						
TORD	**Torodi Ar. Bea**	**40.74**	**132**	P	**P**	**04 06 36.7**	**+1.8**
	0.9nm,0.8s,baz=335,slow=7.1,SNR=5.0						
TORD				LR	LR	04 22 17.6	
	comp=Z,160nm,18.2s,baz=340,slow=34						
DBIC	**Dimbokro**	**43.34**	**145**	LR	LR	04 22 47.0	
	comp=Z,77nm,20.5s,baz=354,slow=33						
ULM	**Lac du Bonnet**	**44.44**	**302**	LR	LR	04 23 30.3	
	comp=Z,173nm,18.3s,baz=318,slow=33						
BRTR	**Keskin Array B**	**44.97**	**74**	LR	LR	04 26 32.4	
	comp=Z,39nm,18.5s,baz=314,slow=37						
INK	**Inuvik**	**54.13**	**334**	P	**P**	**04 08 19.0**	**+0.5**
	0.6nm,0.8s,baz=29,slow=5.7,SNR=3.0						
PDAR	**Pinedale Array**	**56.23**	**299**	P	**P**	**04 08 33.6**	**-0.7**
	0.6nm,0.9s,baz=76,slow=6.3,SNR=3.9						
PDAR				LR	LR	04 31 13.6	
	comp=Z,126nm,18.4s,baz=319,slow=34						
ROSC	**El Rosal**	**56.77**	**239**	LR	LR	04 32 34.8	
	comp=Z,54nm,18.9s,baz=34,slow=36						
BVAR	**Borovoye Array**	**60.06**	**44**	P	**P**	**04 09 02.0**	**+1.4**
	0.8nm,0.7s,baz=234,slow=14,SNR=2.3						
TXAR	**Lajitas Array**	**60.06**	**283**	P	**P**	**04 09 01.4**	**+0.3**
	0.2nm,0.6s,baz=32,slow=5.3,SNR=2.0						
TXAR				LR	LR	04 35 02.4	
	comp=Z,83nm,18.4s,baz=0.0,slow=36						
ILAR	**Eielson Array**	**60.51**	**334**	P	**P**	**04 09 04.4**	**+0.9**
	0.2nm,0.8s,baz=47,slow=6.0,SNR=2.3						
KURBB	**Kurchatov Arra**	**65.49**	**42**	P	**P**	**04 09 36.5**	**-0.4**
	0.5nm,0.8s,baz=314,slow=6.8,SNR=4.2						
MKAR	**Makanchi Array**	**69.94**	**43**	P	**P**	**04 10 04.7**	**-0.3**
	1.7nm,1.1s,baz=325,slow=6.9,SNR=2.8						
SONM	**Songino Array**	**79.21**	**29**	P	**P**	**04 10 58.8**	**-0.2**
	0.6nm,0.8s,baz=324,slow=7.3,SNR=4.4						
WRA	**Warramunga Arr**	**151.01**	**36**	PKPbc	**PKiKP**	**04 18 46.7**	**-0.9**
	0.6nm,0.6s,baz=317,slow=2.7,SNR=9.1						
ASAR	**Alice Springs**	**154.10**	**40**	PKPbc	**PKiKP**	**04 18 53.8**	**-0.2**
	0.5nm,0.8s,baz=341,slow=2.1,SNR=5.3						

*IDC **29** 04:09:48.2±3.3, 11°.18S×162°.64E, h55^{km}±27^{km}, mb3.3/5, mb1 3.6/7, mb1mx3.4/37, mbtmp3.7/7, ML3.9/2, Error ellipse: s-maj=32.3km s-min=19.3km az=58.0*

ISC 29 04:09:47.5±1.1**, 11°.1S**±0°.1×**162°.7E**±0°.2**, h46^{km}, n13, σ1^s.46**/8**, mb3.5**/5**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**3.15**	**301**	P	**Pn**	**04 10 33.8**	**-0.9**
	30nm,0.3s,baz=155,slow=12,SNR=3.1						
HNR				S	**Sn**	**04 11 13.1**	**+1.9**
	145nm,0.3s,baz=355,slow=23,SNR=7.3						
DZM	**Mont Dzumac**	**11.49**	**162**	P	**Pn**	**04 12 30.2**	**+1.0**
	0.4nm,0.3s,baz=65,slow=16,SNR=8.3						
WRA	**Warramunga Arr**	**28.65**	**249**	P	**P**	**04 15 38.8**	**-1.3**
	0.3nm,0.5s,baz=79,slow=9.1,SNR=5.4						
H11S2	**WAKE ISLAND Hy**	**29.67**	**8**	T	T	04 46 41.0	
	baz=188,slow=76,SNR=364						
H11S3	**WAKE ISLAND Hy**	**29.67**	**8**	T	T	04 46 38.5	
	baz=188,slow=76,SNR=245						
H11S1	**WAKE ISLAND Hy**	**29.68**	**8**	T	T	04 46 44.4	
	baz=188,slow=76,SNR=262						
ASAR	**Alice Springs**	**30.10**	**242**	P	**P**	**04 15 51.9**	**-1.1**
	0.1nm,0.4s,baz=63,slow=10.0,SNR=5.1						
H11N1	**WAKE ISLAND Hy**	**30.90**	**8**	T	T	04 48 14.3	
	baz=188,slow=76,SNR=172						
H11N3	**WAKE ISLAND Hy**	**30.90**	**8**	T	T	04 48 13.7	
	baz=188,slow=76,SNR=140						
H11N2	**WAKE ISLAND Hy**	**30.91**	**8**	T	T	04 48 14.6	
	baz=188,slow=76,SNR=153						
SONM	**Songino Array**	**76.95**	**325**	P	**P**	**04 21 36.1**	**+0.7**
	0.9nm,0.7s,baz=141,slow=4.9,SNR=7.5						
ILAR	**Eielson Array**	**84.54**	**19**	P	**P**	**04 22 14.3**	**-1.0**
	0.3nm,0.7s,baz=238,slow=5.0,SNR=4.9						
MKAR	**Makanchi Array**	**91.51**	**317**	P	**P**	**04 22 50.0**	**+0.8**
	0.3nm,0.6s,baz=101,slow=4.6,SNR=2.7						

*IDC **29** 04:25:45.5±5.3, 0°.87S×99°.99E, h90^{km}±35^{km}, mb3.3/5, mb1 3.4/7, mb1mx3.2/44, mbtmp3.6/7, Error ellipse: s-maj=134.4km s-min=18.2km az=57.0*

*DJA **29** 04:25:46.2±0.3, 1°S±3°×10°0E±°, h65^{km}±5^{km}, M3.9/12, mb4.2/1, mB5.3/2, MLv3.7/12, Mw(mB)4.7/2*

ISC 29 04:25:45.7±0.8**, 0°.78S**±0°.06×**100°.09E**±0°.06**, h100^{km}, n18, σ1^s.56**/21**, mb3.4**/5**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PDSI	**Padang**	**0.40**	**109**	P	**Pn**	**04 26 00.1**	**-0.8**
PDSI				S	**Sn**	**04 26 08.8**	**-3.4**
PPI	**Padang Panjang**	**0.45**	**44**	P	**Pn**	**04 26 00.0**	**-1.1**
PPI				S	**Sn**	**04 26 09.1**	**-3.6**
SISI	**Saibi**	**1.14**	**241**	P	**Pn**	**04 26 07.1**	**-0.5**
SISI				S	**Sn**	**04 26 21.4**	**-2.8**
BKNI	**Bangkinang**	**1.45**	**41**	P	**Pn**	**04 26 11.4**	**0.0**
MNSI	**Mandailing Nat**	**1.64**	**342**	P	**Pn**	**04 26 13.3**	**-0.5**
PPSI	**Pulau Pagai**	**1.97**	**182**	P	**Pn**	**04 26 17.6**	**-0.4**
GSI	**Gunungsitoli**	**3.25**	**309**	P	**Pn**	**04 26 34.5**	**-0.4**
PSI	**Prapat**	**3.74**	**342**	P	**Pn**	**04 26 40.2**	**-1.4**
	2.2nm,0.3s,baz=166,slow=12,SNR=6.7						
DSRI	**Dabo**	**4.50**	**86**	P	**Pn**	**04 26 51.5**	**-0.2**
MNAI	**Manna**	**4.57**	**141**	P	**Pn**	**04 26 53.2**	**+0.5**
TPTI		**4.95**	**324**	P	**Pn**	**04 26 57.2**	**-0.6**
MLSI	**Meulaboh, Aceh**	**6.22**	**324**	P	**Pn**	**04 27 14.8**	**-0.2**
CMAR	**Chiang Mai Arr**	**19.15**	**357**	P	**Pn**	**04 30 03.9**	**+0.7**
	0.3nm,0.3s,baz=180,slow=12,SNR=1.6						
WRA	**Warramunga Arr**	**38.55**	**122**	P	**P**	**04 32 59.4**	**+0.4**
	0.2nm,0.3s,baz=306,slow=9.2,SNR=6.7						
ASAR	**Alice Springs**	**39.91**	**127**	P	**P**	**04 33 11.7**	**+1.4**
	0.1nm,0.3s,baz=302,slow=7.8,SNR=5.8						
SONM	**Songino Array**	**48.73**	**6**	P	**P**	**04 34 21.4**	**+1.1**
	0.4nm,0.8s,baz=193,slow=5.9,SNR=2.7						
MKAR	**Makanchi Array**	**49.88**	**344**	P	**P**	**04 34 30.5**	**+1.6**
	0.9nm,0.4s,baz=153,slow=8.6,SNR=27						
ZALV	**Zalesovo Beam**	**55.99**	**349**	P	**P**	**04 35 14.2**	**+0.6**
	0.7nm,0.3s,baz=167,slow=7.3,SNR=6.0						

IDC 29 04:36:39.2±1.7**, 2°.23S**×**138°.96E, h0^{km}, mb3.2**/2**, mb1 3.6**/3**, mb1mx3.3**/33**, mbtmp3.4**/3**, ML3.5**/1**, Error ellipse: s-maj=31.0km s-min=24.9km az=2.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**1.77**	**99**	Pn	Pn	04 37 10.6	-0.6
	2.4nm,0.3s,baz=253,slow=11,SNR=16						
JAY				Sn	Sg	04 37 37.1	+1.0
	8.0nm,0.3s,baz=119,slow=18,SNR=10						
WRA	**Warramunga Arr**	**18.17**	**194**	P	Pn	04 40 52.9	-0.3
	0.2nm,0.3s,baz=17,slow=12,SNR=11						
ASAR	**Alice Springs**	**21.86**	**193**	P	P	04 41 33.6	-0.1
	0.7nm,0.8s,baz=22,slow=11,SNR=7.4						
MKAR	**Makanchi Array**	**69.56**	**322**	P	P	04 47 50.4	+0.2
	0.2nm,0.6s,baz=124,slow=9.4,SNR=1.8						

MAN 29 04:42:34.0, 6°.29N×125°.93E, h28^{km}, mb4.2, ML3.0, MS2.6, Mindanao

NNC 29 04:43:24.6±9.1**, 37°.16N**×**69°.31E, h0^{km}, mb3.7, mpv3.4, 2C-3D, Error ellipse: s-maj=73.7km s-min=63.4km az=30.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK09	**Karatay Array**	**6.03**	**8**	⇓Pn	Pn	04 44 55.4	+0.3
	1.2nm,0.7s,baz=191,slow=14						
KK09				⇓Sn	Sn	04 46 07.3	+2.5
	3.0nm,0.5s,baz=193,slow=25						
AAK	**Ala-Archa**	**6.77**	**34**	⇑Pn	Pn	04 45 05.9	+0.5
	1.5nm,0.4s						
TKM2	**Tokmak 2**	**7.51**	**38**	⇓Pn	Pn	04 45 15.4	-0.2
	1.7nm,0.6s						
TKM2				⇑Sn	Sn	04 46 40.1	-1.5
	3.7nm,0.9s						

IDC 29 04:54:45.0±1.9**, 4°.66S**×**152°.15E, h0^{km}, mb3.6**/5**, mb1 3.8**/5**, mb1mx3.6**/38**, mbtmp3.6**/5**, Error ellipse: s-maj=75.0km s-min=24.4km az=120.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.84**	**226**	Sn	Sn	04 57 49.7	+4.5
	7.4nm,0.3s,baz=129,slow=21,SNR=7.3						
WRA	**Warramunga Arr**	**23.06**	**227**	P	P	04 59 52.8	+0.6
	0.5nm,0.4s,baz=51,slow=9.8,SNR=11						
ASAR	**Alice Springs**	**25.82**	**221**	P	P	05 00 18.8	+0.6
	0.3nm,0.5s,baz=60,slow=8.8,SNR=7.7						
FITZ	**Fitzroy Crossi**	**29.16**	**241**	P	P	05 00 47.2	-1.0
	1.7nm,0.9s,baz=66,slow=10.0,SNR=2.5						
SONM	**Songino Array**	**65.86**	**328**	P	P	05 05 33.4	+0.8
	0.6nm,0.6s,baz=145,slow=4.0,SNR=5.0						
ILAR	**Eielson Array**	**82.27**	**22**	P	P	05 07 08.2	+0.1
	0.2nm,0.7s,baz=252,slow=5.6,SNR=5.1						
TORD	**Torodi Ar. Bea**	**149.65**	**288**	PKPbc	PKPbc	05 14 36.2	-1.5
	0.5nm,0.3s,baz=79,slow=2.1,SNR=13						

WEL 29 05:03:36.3±0.7**, 45°S**±5°×**16°7E**±°**, h39^{km}**±8^{km}**, M3.9**/14**, ML4.0**/16**, MLv3.9**/14**, Error ellipse: s-maj=0.0km s-min=0.0km az=121.4, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DCZ	**Deep Cove**	**0.34**	**201**	P	Pn	05 03 46.2	+1.4
DCZ				S	Sn	05 03 53.6	+2.3
MLZ	**Mavora Lakes**	**0.60**	**112**	P	Pn	05 03 49.3	+0.8
MLZ				S	Sn	05 03 59.1	+2.1
MSZ	**Milford Sound**	**0.64**	**42**	P	Pn	05 03 50.3	+1.4
MSZ				S	Sn	05 04 00.9	+3.1
WHZ	**Wether Hill Ro**	**0.86**	**150**	P	Pn	05 03 52.6	+0.6
PYZ	**Puysegur Point**	**1.11**	**204**	P	Pn	05 03 55.5	+0.1
WKZ	**Wanaka**	**1.24**	**76**	P	Pn	05 03 57.9	+0.7
WKZ				S	Sn	05 04 13.8	+1.1
EAZ	**Earnscleugh**	**1.41**	**94**	P	Pn	05 04 00.3	+0.9
EAZ				S	Sn	05 04 16.9	+0.2
JCZ	**Jackson Bay**	**1.50**	**45**	P	Pn	05 04 01.4	+0.6
APZ	**The Paps**	**1.75**	**165**	P	Pn	05 04 04.0	-0.1
TUZ	**Tuapeka**	**1.81**	**117**	P	Pn	05 04 05.1	+0.2
SYZ	**Scrubby Hill**	**1.88**	**138**	P	Pn	05 04 05.9	0.0
LBZ	**Lake Benmore**	**2.17**	**71**	P	Pn	05 04 09.7	-0.2
ODZ	**Otahua Downs**	**2.35**	**89**	P	Pn	05 04 12.2	-0.2
ODZ				S	Sn	05 04 37.6	-2.5
FOZ	**Fox Glacier**	**2.41**	**49**	P	Pn	05 04 12.9	-0.2
HHSZ	**Highcliff Hill**	**2.42**	**109**	P	Pn	05 04 13.6	+0.3
HHSZ				S	Sn	05 04 39.4	-2.3
TMZ	**Timaru**	**2.73**	**75**	P	Pn	05 04 16.7	-0.9
GCSZ	**Gaunt Creek Bo**	**2.83**	**51**	P	Pn	05 04 18.6	-0.4
ARCZ	**Arundel**	**3.00**	**68**	P	Pn	05 04 20.1	-1.3
RPZ	**Rata Peaks**	**3.03**	**63**	P	Pn	05 04 20.9	-0.9
WVZ	**Waitaha Valley**	**3.21**	**51**	P	Pn	05 04 24.0	-0.2
WACZ	**Wakanui South**	**3.45**	**71**	P	Pn	05 04 26.1	-1.3
MHCZ	**Mount Hutt**	**3.45**	**64**	P	Pn	05 04 26.0	-1.4
INZ	**Inchbonnie**	**3.84**	**52**	P	Pn	05 04 33.1	+0.3
OXZ	**Oxford**	**3.85**	**63**	P	Pn	05 04 32.0	-1.0
MQZ	**McQueen's Vall**	**4.08**	**71**	P	Pn	05 04 34.4	-1.7
LTZ	**Lake Taylor**	**4.28**	**58**	P	Pn	05 04 37.6	-1.4
AMCZ	**Amberley**	**4.31**	**65**	P	Pn	05 04 38.6	-0.7
OKCZ	**Okains Bay**	**4.35**	**73**	P	Pn	05 04 38.8	-1.1
DSZ	**Denniston Nort**	**4.71**	**45**	P	Pn	05 04 44.0	-0.9
THZ	**Tophouse**	**5.29**	**52**	P	Pn	05 04 54.1	+1.4
QRZ	**Quartz Range**	**5.76**	**43**	P	Pn	05 04 58.8	-0.5
NNZ	**Nelson**	**5.92**	**51**	P	Pn	05 05 03.4	+2.1
TUWZ	**Tuamarina**	**6.09**	**55**	P	Pn	05 05 06.1	+2.4
DUWZ	**D'Urville Isla**	**6.50**	**50**	P	Pn	05 05 10.2	+0.8
KHEZ	**Kahui Hut**	**7.67**	**43**	P	Pn	05 05 25.4	-0.1
NEZ	**North Egmont**	**7.73**	**43**	P	Pn	05 05 26.4	+0.1
OTVZ	**Oturere**	**8.61**	**49**	P	Pn	05 05 40.3	+1.8
MBAZ	**Motutapu North**	**10.14**	**37**	P	Pn	05 05 59.8	+0.6

ATH 29 05:14:08.3, 39°.96N×**23°.64E, h7^{km}**±2^{km}**, ML1.9**/6**, Error ellipse: s-maj=2.9km s-min=0.9km az=132.0, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAIG	**Paliouri**	**0.05**	**142**	P	Pg	05 14 10.0	+0.1
PAIG				S	Sg	05 14 10.7	-0.3
PAIG				AML	AML	05 14 10.9	
	comp=N,49196µm,0.1s						
PAIG				AML	AML	05 14 10.9	
	comp=E,45689µm,0.1s						
PLG	**Polygyros**	**0.44**	**340**	P	Pg	05 14 16.8	0.0
PLG				S	Sg	05 14 22.8	+0.2
PLG				AML	AML	05 14 23.0	
	comp=N,368µm,0.1s						
PLG				AML	AML	05 14 23.4	
	comp=E,280µm,0.1s						
OUR	**Ouranopolis**	**0.45**	**35**	P	Pg	05 14 17.4	+0.3
OUR				S	Sg	05 14 23.2	+0.1
OUR				AML	AML	05 14 27.0	
	comp=N,308µm,0.2s						
OUR				AML	AML	05 14 27.3	
	comp=E,263µm,0.2s						
XOR	**Xorichti**	**0.69**	**210**	P	Pg	05 14 21.4	-0.2
XOR				S	Sg	05 14 31.2	+0.6
XOR				AML	AML	05 14 34.5	
	comp=E,213µm,0.8s						
XOR				AML	AML	05 14 35.4	
	comp=N,279µm,0.4s						
SOH	**Sokhos**	**0.89**	**346**	P	Pg	05 14 25.4	0.0
SOH				AML	AML	05 14 40.2	
	comp=E,83µm,0.4s						
SOH				AML	AML	05 14 42.4	
	comp=N,137µm,0.5s						
THAS	**Thassos island**	**1.04**	**52**	P	Pg	05 14 28.1	-0.3
THAS				S	Sg	05 14 42.1	+0.1
THAS				AML	AML	05 14 42.6	
	comp=N,129µm,0.4s						
THAS				AML	AML	05 14 45.9	
	comp=E,96µm,0.7s						
SRS	**Serrai**	**1.15**	**358**	P	Pg	05 14 29.9	-0.6
KAVA	**Kavala**	**1.23**	**32**	P	Pb	05 14 31.5	-0.3
THL	**Klokotos Trika**	**1.32**	**253**	P	Pn	05 14 32.7	-0.4
KNT	**Kendrikon**	**1.32**	**335**	P	Pn	05 14 33.3	+0.1
NVR	**Nevrokopi**	**1.40**	**7**	P	Pn	05 14 34.5	+0.2

THE 29 05:15:06.8, 38°.48N×**20°.45E, h12^{km}**±1^{km}**, ML1.7**/4**, Error ellipse: s-maj=2.0km s-min=0.5km az=106.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FSK	**Fiskardo**	**0.09**	**103**	P	Pg	05 15 09.6	+0.1
FSK				S	Sg	05 15 11.2	-0.3
	912nm,0.1s						
EVGI	**Lefkada island**	**0.21**	**48**	P	Pg	05 15 11.1	-0.3
EVGI				S	Sg	05 15 15.1	+0.6
	318nm,0.2s						
KEF4	**Livadi, Kephal**	**0.22**	**186**	P	Pg	05 15 11.6	+0.1
KEF4				S	Sg	05 15 15.7	+0.9
DMLN	**Damoulianata-K**	**0.25**	**195**	P	Pg	05 15 12.0	0.0
DMLN				S	Sg	05 15 16.0	+0.5
	315nm,0.3s						
KEF3	**Kipouria, Keph**	**0.29**	**197**	P	Pg	05 15 12.2	-0.5
KEF3				S	Sg	05 15 16.7	0.0
VLS	**Valsamata**	**0.32**	**160**	P	Pg	05 15 13.0	-0.3
VLS				S	Sg	05 15 18.0	+0.3
	170nm,0.1s						
PSDA	**Pessada-Kefalo**	**0.38**	**164**	P	Pg	05 15 14.2	-0.2
PSDA				S	Sg	05 15 20.1	+0.7

*IDC **29** 05:18:47.5±6.1, 23°.90N×108°.73W, h0^{km}, mb3.7/2, mb1 4.0/5, mb1mx3.7/40, mbtmp3.7/5, ML3.7/3, MS3.4/16, Ms1 3.4/16, ms1mx3.2/38, Error ellipse: s-maj=111.3km s-min=26.7km az=146.0*

*NEIC **29** 05:18:50.3±1.9, 23°.96N±0°.09×109°.13W±0°.05, h10^{km}±2^{km}, mb4.2/57, Md4.2/6(MEX), Error ellipse: s-maj=15.2km s-min=8.3km az=186.0*

*MEX **29** 05:18:53.0±1.0, 24°.34N×109°.13W, h10^{km}, MD4.2*

ISC 29 05:18:52.1±0.8**, 24°.08N**±0°.09×**109°.12W**±0°.05**, h22^{km}, n117, σ1^s.25**/101**, mb4.3**/10**, MS3.3**/10**, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLBS	**Sierra La Lagu**	**0.85**	**243**		**Pn**	**05 19 08.8**	**0.0**
SLBS	**Sierra La Lagu**	**0.85**	**243**	*e*P	**Pn**	**05 19 09.3**	**+0.5**
LPIG	**La Paz**	**1.08**	**271**		**Pn**	**05 19 10.1**	**-1.8**
LPIG					**Sb**	**05 19 25.1**	**-0.7**
LPIG	**La Paz**	**1.08**	**271**	*i* P	**Pn**	**05 19 10.1**	**-1.8**
LPIG				*i* S	**Sb**	**05 19 25.1**	**-0.7**
TSIG	**Topolobambo**	**1.51**	**3**	*e*P	Pn	05 19 12.5	-5.4
SSIG	**Sanalona**	**1.95**	**67**	*e*P	**Pn**	**05 19 21.9**	**-2.0**
CSIG	**Choix**	**2.82**	**14**	*e*P	**Pn**	**05 19 32.4**	**-3.4**
HPIG		**4.22**	**47**		**Pn**	**05 19 54.7**	**-0.6**
HSIG		**5.18**	**342**	Pn	**Pn**	**05 20 07.3**	**-1.0**
ZAIG	**Zacatecas**	**6.16**	**101**		**Pn**	**05 20 21.0**	**-1.0**
TX31	**Lajitas Ar. Si**	**7.15**	**42**	Pn	**Pn**	**05 20 34.9**	**-0.6**
TX32	**Lajitas Array**	**7.15**	**42**		**Pn**	**05 20 35.2**	**-0.3**
TXAR	**Lajitas Array**	**7.15**	**42**	Pn	**Pn**	**05 20 34.0**	**-1.5**
	0.3nm,0.3s,baz=208,slow=11,SNR=20						
TXAR				Sn	**Sn**	**05 21 51.5**	**-4.6**
	0.6nm,0.3s,baz=211,slow=21,SNR=1.5						
TXAR				Lg	Lg	05 22 29.5	
	0.6nm,0.3s,baz=229,slow=29,SNR=3.9						
TXAR	**Lajitas Array**	**7.15**	**42**		**Pn**	**05 20 35.3**	**-0.2**
319A	**Douglas**	**7.27**	**359**	Pn	**Pn**	**05 20 35.0**	**-2.0**
MNTX	**Cornudas Mount**	**8.28**	**23**		**Pn**	**05 20 49.2**	**-1.7**
121A	**Cookes Peak, D**	**8.50**	**8**	Pn	**Pn**	**05 20 53.5**	**-0.6**
Y22D	**IRIS PASSCAL I**	**10.14**	**10**	Pn	**Pn**	**05 21 18.7**	**+2.2**

LENM	Lemitar	10.22	10	Pn	Pn	05 21 17.2	-0.5
BNM	Barren Site	10.27	12		Pn	05 21 19.9	+1.6
X18A	Snowflake	10.44	356		Pn	05 21 22.4	+1.8
JCT	Junction City	10.45	50	Pn	Pn	05 21 22.5	+1.8
X16A	Lo Mia Camp, P	10.50	349		Pn	05 21 22.4	+1.0
W18A	Petrified Fore	11.01	357	Pn	Pn	05 21 30.0	+1.5
ANMO	Albuquerque	11.07	11	Pn	Pn	05 21 29.9	+0.6
	0.1nm,0.3s,baz=198,slow=14,SNR=6.0						
ANMO				LR	LR	05 26 17.3	
	comp=Z,114nm,20.7s,baz=188,slow=40						
ANMO	Albuquerque	11.07	11	Pn	Pn	05 21 30.5	+1.2
109C	Camp Elliot, M	11.23	323	Pn	Pn	05 21 32.2	+0.9
PFO	Pinyon Flats O	11.46	328	LR	LR	05 25 04.1	
	comp=Z,204nm,21.8s,baz=129,slow=32						
PFO	Pinyon Flats O	11.46	328	Pn	Pn	05 21 34.9	+0.3
WUAZ	Wupatki	11.56	351	Pn	Pn	05 21 37.2	+1.2
W13A	Hualapai Mount	11.73	340	Pn	Pn	05 21 40.1	+1.8
LCMT	Little Creek M	13.37	346	Pn	Pn	05 22 02.0	+1.4
SHPR	Sheep Range	13.43	339	Pn	Pn	05 22 03.4	+1.9
QSM	Queen of Sheba	13.60	332	Pn	Pn	05 22 05.4	+1.7
T25A	Trinidad	13.63	16	Pn	Pn	05 22 05.8	+1.5
GWY	Greenwater Val	13.71	333		Pn	05 22 04.7	-0.6
SZCU	Shurtz Canyon	13.89	347	Pn	Pn	05 22 08.4	+0.5
WMOK	Wichita Mounta	13.92	38		Pn	05 22 07.0	-1.1
SDCO	Great Sand Dun	13.97	12		Pn	05 22 11.0	+2.1
MTPU	Mount Pierson	14.16	350	Pn	Pn	05 22 12.6	+1.0
PRN	Pahroc Range	14.22	340		Pn	05 22 12.6	+0.3
LOOK	Love County	14.36	44	Pn	Pn	05 22 15.0	+0.9
NATX	Nacogdoches	14.89	56	Pn	Pn	05 22 22.6	+1.4
Q16A	Castle Valley	14.89	354	Pn	Pn	05 22 23.3	+1.8
Q16A				IAmb	IAmb	05 22 29.0	
	comp=Z,31nm,1.8s						
PSUT	Pine Spring	14.96	345		Pn	05 22 23.8	+1.4
PSUT				IAmb	IAmb	05 22 45.6	
	comp=Z,7.1nm,1.2s						
CMIG	Matias Romero	15.03	115	LR	LR	05 28 13.7	
	comp=Z,278nm,21.6s,baz=296,slow=39						
SMCO	Snowmass	15.16	6	Pn	Pn	05 22 26.4	+1.2
SMCO				IAmb	IAmb	05 22 33.3	
	comp=Z,11nm,1.1s						
TMUT	Trail Mountain	15.27	354		Pn	05 22 27.4	+0.7
SPR3	Spring Creek 3	15.52	345		Pn	05 22 31.0	+1.2
KSCO	Kaye Shedlock'	15.87	19	Pn	Pn	05 22 35.6	+1.4
KSCO				IAmb	IAmb	05 22 47.6	
	comp=Z,41nm,2.0s						
OK031	S. Brethren Rd	15.89	39	Pn	Pn	05 22 35.5	+1.2
OK031				IAmb	IAmb	05 22 46.5	
	comp=Z,28nm,1.1s						
ISCO	Idaho Springs	15.95	10		Pn	05 22 37.2	+1.8
NLU	North Lily Min	16.02	352		Pn	05 22 37.4	+1.2
KAN09	Caldwell North	16.33	35	P	Pn	05 22 41.9	+1.9
KAN09				IAmb	IAmb	05 22 51.3	
	comp=Z,31nm,1.1s						
DUG	Dugway, Tooele	16.36	350		Pn	05 22 41.9	+1.3
DUG				IAmb	IAmb	05 22 53.1	
	comp=Z,14nm,1.2s						
CBKS	Cedar Bluff	16.71	26	Pn	Pn	05 22 45.4	+0.5
CBKS				IAmb	IAmb	05 22 50.3	
	comp=Z,41nm,1.2s						
R32A	Long Quarter,	16.82	29	P	P	05 22 49.4	+1.1
R32A				IAmb	IAmb	05 22 56.7	
	comp=Z,16nm,0.9s						
MIAR	Mount Ida	17.08	49	P	P	05 22 52.4	+1.3
MIAR				IAmb	IAmb	05 22 54.6	
	comp=Z,13nm,1.1s						
YERR	Yerington	17.16	332	P	P	05 22 52.3	+0.2
YERR				IAmb	IAmb	05 22 59.1	
	comp=Z,22nm,1.8s						
ELK	Elko	17.39	344	LR	LR	05 29 50.4	
	comp=Z,129nm,20.5s,baz=330,slow=38						
HWUT	Hardware Ranch	17.60	354	P	P	05 22 57.5	+0.5
HWUT				IAmb	IAmb	05 22 59.1	
	comp=Z,28nm,2.0s						
RWWY	Rawlins	17.63	5	P	P	05 22 58.2	+0.8
RWWY				IAmb	IAmb	05 23 01.0	
	comp=Z,14nm,1.3s						
BMN	Battle Mountai	17.67	339	P	P	05 22 58.6	+0.9
CCIG	Comitan	17.72	113	P	Pn	05 22 56.6	-1.1
CCIG				IAmb	IAmb	05 23 27.3	
	comp=Z,38nm,1.7s						
HVU	Hansel Valley	17.91	351	P	P	05 23 01.1	+0.6
U40A	Yellville	18.60	45	P	P	05 23 07.7	-0.2
BW06	Boulder Array	18.64	359	P	P	05 23 08.8	+0.2
ORV	Oroville	18.64	329	P	P	05 23 08.0	-0.2
PDAR	Pinedale Array	18.64	359	P	P	05 23 08.6	+0.1
	comp=Z,0.1nm,0.3s,baz=165,slow=11,SNR=20						
PDAR				LR	LR	05 30 34.1	
	comp=Z,54nm,21.3s,baz=312,slow=38						
K22A	Casper	18.64	6	P	P	05 23 09.0	+0.5
K22A				IAmb	IAmb	05 23 16.4	
	comp=Z,45nm,1.8s						
AHID	Auburn Hatcher	18.71	355	P	P	05 23 09.9	+0.7
AHID				IAmb	IAmb	05 23 11.6	
	comp=Z,19nm,1.8s						
S39A	Bolivar	19.14	41	P	P	05 23 14.1	+0.2
N33A	J Bar K, Exete	19.28	28	P	P	05 23 16.1	+0.7
MGMO	Mountain Grove	19.46	44	P	P	05 23 18.2	+0.9
MGMO				IAmb	IAmb	05 23 28.1	
	comp=Z,26nm,1.1s						
LOHW	Long Hollow	19.52	357	P	P	05 23 18.8	+0.7
BGNE	Belgrade	19.56	25	P	P	05 23 19.4	+1.0
APG	El Apazote	19.75	114	LR	LR	05 30 55.9	
	comp=Z,230nm,21.7s,baz=284,slow=38						
WVOR	Wild Horse Val	19.93	339	P	Pn	05 23 24.4	+0.1
WVOR				IAmb	IAmb	05 23 34.1	
	comp=Z,18nm,1.8s						
N35A	Tabor	20.19	31	P	P	05 23 26.0	+0.8
RSSD	Black Hills	20.42	11	P	P	05 23 28.8	+0.9
RSSD				IAmb	IAmb	05 23 31.8	
	comp=Z,13nm,1.6s						
YMP	Mirror Lake Pl	20.63	358	P	P	05 23 29.9	-0.4
YMP				IAmb	IAmb	05 23 42.6	
	comp=Z,21nm,1.6s						
CCM	Cathedral Cave	20.65	43		P	05 23 29.8	-0.5
CCM				IAmb	IAmb	05 23 41.8	
	comp=Z,14nm,1.3s						
YBH	Yreka Blue Hor	20.93	331	LR	LR	05 32 27.3	
	comp=Z,116nm,19.1s,baz=317,slow=39						
RLMT	Red Lodge	20.99	360	P	P	05 23 34.9	+0.8
P40A	Paris	21.10	39	P	P	05 23 36.5	+1.4
P40A				IAmb	IAmb	05 23 40.4	
	comp=Z,13nm,1.1s						
PLAL	Pickwick Lake	21.25	54	P	P	05 23 35.9	-0.9
KRMB	Red Mountain	21.32	328	P	P	05 23 37.2	-0.4
KRMB				IAmb	IAmb	05 24 01.0	
	comp=Z,16nm,1.4s						
N38A	Joes South For	21.33	35	P	P	05 23 37.7	+0.2
N38A				IAmb	IAmb	05 23 53.8	
	comp=Z,14nm,1.1s						
SNET	Serv Nac Est T	21.45	115	P	P	05 23 37.7	-1.4
SIUC	Southern Illin	21.77	47	P	P	05 23 40.4	-1.8
BMO	Blue Mountains	21.77	344	P	P	05 23 43.3	+1.0
BMO				IAmb	IAmb	05 24 04.7	
	comp=Z,8.3nm,1.6s						
SUSD	Miller	21.95	20	P	P	05 23 43.8	-0.4
ECSD	EROS Data Cent	22.13	25	P	P	05 23 46.6	+0.4
ECSD				IAmb	IAmb	05 23 52.2	
	comp=Z,13nm,1.1s						
SCIA	State Center	22.16	33	P	P	05 23 46.4	0.0
DBO	Dodson Butte	22.28	332	P	P	05 23 47.0	-0.8
DBO				IAmb	IAmb	05 24 00.5	
	comp=Z,23nm,1.8s						
LAO	LASA Array	22.68	5	P	P	05 23 52.4	+0.4
FPAL	Fort Paine	22.95	58	P	P	05 23 53.9	-1.0
FPAL				IAmb	IAmb	05 23 59.2	
	comp=Z,12nm,1.1s						
CLTN	Cedars of Leba	23.01	53	P	P	05 23 55.8	+0.3
E28A	Huff	23.45	15	P	P	05 24 00.3	+0.5
HOOD	Mount Hood Mea	23.50	337	P	P	05 24 01.9	+1.3
HOOD				IAmb	IAmb	05 24 08.8	
	comp=Z,5.8nm,0.8s						
WCI	Wyandotte Cave	24.01	49	P	P	05 24 05.3	0.0
BG3	Lake Jocassee	25.18	58	P	P	05 24 16.9	+1.0
JTS	Las Juntas de	26.79	117	LR	LR	05 35 49.7	
	comp=Z,58nm,19.1s,baz=98,slow=39						
ULM	Lac du Bonnet	28.09	18	LR	LR	05 35 32.4	
	comp=Z,42nm,19.1s,baz=312,slow=36						
ROSC	El Rosal	38.57	114	LR	LR	05 44 46.1	
	comp=Z,44nm,20.1s,baz=340,slow=41						
YKA	Yellowknife Ar	38.58	356	LR	LR	05 42 41.9	
	comp=Z,50nm,19.1s,baz=0.0,slow=37						
GGN	Saint George	40.06	48	P	P	05 26 25.9	+0.2
SCHQ	Schefferville	43.77	34	LR	LR	05 43 54.8	
	comp=Z,54nm,21.7s,baz=216,slow=34						
INK	Inuvik	46.68	348	P	P	05 27 19.7	+1.0
	comp=Z,1.5nm,1.0s,baz=131,slow=4.6,SNR=3.7						
ILAR	Eielson Array	47.45	339	P	P	05 27 25.5	+0.7
	comp=Z,0.6nm,0.8s,baz=136,slow=8.3,SNR=8.5						
H03N2	Juan Fernandez	64.02	152	T	T	06 39 29.7	
	baz=331,slow=77,SNR=18						
H03N1	Juan Fernandez	64.03	152	T	T	06 39 26.0	
	baz=331,slow=77,SNR=21						
H03N3	Juan Fernandez	64.04	152	T	T	06 39 28.2	
	baz=331,slow=77,SNR=18						
PETK	Petropavlovsk-	72.95	321	LR	LR	05 58 11.1	
	comp=Z,22nm,19.3s,baz=99,slow=32						
NOA	NORSAR Array B	82.54	25	LR	LR	06 09 58.6	
	comp=Z,28nm,19.7s,baz=285,slow=37						
MJAR	Matsushiro Arr	92.47	312	LR	LR	06 09 00.2	
	comp=Z,18nm,19.5s,baz=295,slow=32						
KSRS	Korea Array	98.62	318	LR	LR	06 11 03.8	
	comp=Z,11nm,20.6s,baz=330,slow=32						

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*DDA **29** 05:59:09.3, 38°.84N×37°.83E, h17^{km}, MW3.5*
*ISK **29** 05:59:09.1, 38°.81N×37°.85E, h5^{km}, ML3.3/23*
ISC 29 05:59:09.6±1.0**, 38°.82N**±0°.02×**37°.84E**±0°.02**, h10**^{km}±9^{km},
n49, σ1^{s}.**17**/57**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HEKM	Malatya_Hekimh	0.11	60	*i* P	Pb	05 59 13.2	-0.8
HEKM				*i* S	Sg	05 59 15.8	+1.0
HEKM				IAML		05 59 16.0	
	comp=N,63μm,0.2s						
HEKM				IAML		05 59 17.0	
	comp=E,34μm,0.6s						
DARE	Darende-Malaty	0.37	228	PG	Pg	05 59 17.2	+0.2
DARE				SG	Sb	05 59 23.8	-0.5
CUGUR	Gurin_SVAS	0.45	258	*i* P	Pg	05 59 18.6	+0.1
CUGUR				*i* S	Sb	05 59 25.6	-1.0
CUGUR				IAML		05 59 26.0	
	comp=N,19μm,0.4s						
CUGUR				IAML		05 59 26.0	
	comp=E,21μm,0.4s						
ARPR	Arapgir-MALATY	0.47	55	PG	Pb	05 59 19.5	-0.7
AKCD	Akcadag	0.53	173	*i* P	Pg	05 59 19.1	-0.9
AKCD				*i* S	Sb	05 59 28.7	-0.2
CUKAN	kangal_SIVAS	0.57	330	*i* P	Pg	05 59 20.0	-0.8
CUKAN				*i* S	Sg	05 59 28.2	-0.1
CUKAN				IAML		05 59 29.0	
	comp=N,3μm,0.4s						
CUKAN				IAML		05 59 29.0	
	comp=E,2μm,0.6s						
KEMA	Kemaliye	0.68	49	*i* P	Pg	05 59 22.6	-0.2
KEMA				*i* S	Sb	05 59 32.0	-1.2
KEMA				IAML		05 59 33.0	
	comp=E,1μm,0.3s						
KEMA				IAML		05 59 35.0	
	comp=N,831nm,0.2s						
MALT	Malatya	0.69	137	PG	Pb	05 59 23.2	-0.6
MALT				SG	Sb	05 59 33.8	+0.4
ELBS	KAHRAMANMARAS_	0.74	228	*i* P	Pg	05 59 23.4	-0.5
ELBS				*i* S	Sb	05 59 35.4	+0.4
ELBS				IAML		05 59 36.0	
	comp=N,1μm,0.4s						
ELBS				IAML		05 59 39.0	
	comp=E,856nm,0.6s						
ILIC	ilic-Erzincan	0.85	42	PG	Pb	05 59 26.1	-0.5
CUAYA	Sivas-Altinyay	0.96	298	*i* P	Pg	05 59 27.6	-0.4
CUAYA				*i* S	Sb	05 59 41.3	+0.1
CUAYA				IAML		05 59 44.0	
	comp=E,296nm,0.3s						
ELZG	Elazig	0.96	109	*i* P	Pg	05 59 27.0	-1.1
CUZAR	Zara_SIVAS	1.07	357	*i* P	Pb	05 59 29.8	-0.5
SARI	SarD1z-Kayseri	1.18	250	PN	Pg	05 59 32.5	+0.1
SVRC	Sivrice-ELAZID	1.23	111	PN	Pg	05 59 33.0	-0.4
SVSK	Karacayir	1.27	330	PN	Pg	05 59 34.9	+0.8
REFA	Refahiye_ERZN	1.30	33	*i* P	Pn	05 59 33.5	+4.7
ATAB	Bozova	1.40	165	*i* P	Pg	05 59 38.3	+1.9
SUSE	Susehri	1.41	11	*i* P	Pg	05 59 37.6	+0.8
KAHM	Kahramanmaras,	1.46	207	*i* P	Pg	05 59 39.2	+1.5
GZT	Gaziantep	1.48	188	*i* P	Pg	05 59 39.9	+1.8
KMRS	Kahramanmaras	1.51	210	PN	Pg	05 59 38.5	-0.1
KOVA	Elazig, Kovanc	1.55	94	*i* P	Pg	05 59 39.1	-0.3
BNN	Bunyan	1.55	272	PN	Pg	05 59 39.4	-0.1
SAIM	ADANA	1.61	239	*i* P	Pg	05 59 40.2	-0.5
RSDY	Resadiye-TOKAT	1.62	346	PN	Pg	05 59 40.3	-0.5
HCB	Kahramanmara	1.65	207	*i* P	Pg	05 59 40.7	-0.6
ERZN	Erzincan	1.65	62	PN	Pg	05 59 40.4	-1.0
ALUC	Giresun/Alucra	1.68	25	*i* P	Pb	05 59 40.8	0.0
ANDN	Andirin	1.71	224	*i* P	Pg	05 59 43.4	+1.0
GAZ	Gaziantep	1.72	197	PN	Pb	05 59 41.5	+0.1
TOKT	Tokat	1.80	327	PN	Pb	05 59 42.8	+0.1
HACI	Hacifakili, Ak	1.85	299	*i* P	Pg	05 59 44.0	-1.2
DYBB	Diyarbakir	2.01	115	PN	Pb	05 59 45.5	-0.8
YAHY	KAYSERI_Yahyal	2.07	250	*i* P	Pb	05 59 47.1	-0.3
KOZT	Kozan	2.07	230	PN	Pb	05 59 47.5	+0.1
YOZ	Yozgat	2.12	293	PN	Pb	05 59 47.0	-1.2
SIRC	Yozgat	2.15	285	*i* P	Pb	05 59 47.6	-1.2
ORDU	Ordu-Boztepe	2.17	0	*i* P	Pb	05 59 48.2	-0.8
YEDI	Yedisu-Bingol	2.19	73	PN	Pb	05 59 48.3	-1.2
KOZK	Kozakli-Nevseh	2.34	280	PN	Pb	05 59 50.7	-1.3
CEYT	Ceyhan	2.45	223	PN	Pb	05 59 51.8	-1.9
MAZI	Mazidag	2.47	123	PN	Pb	05 59 51.8	-2.4
CMRD	Camardi-Nigde	2.52	244	PN	Pb	05 59 52.9	-2.2
COAL	Corum-Alaca	2.63	304	*i* P	Pb	05 59 56.5	-0.3
KARA	Karaisali	2.69	235	PN	Pb	05 59 55.5	-2.4
TAHT	Tahtakopru-Hat	2.77	209	PN	Pb	05 59 56.4	-2.9
GULA	Gulagac	2.86	262	PN	Pb	05 59 58.1	-2.7
DELI	KIRIKKALE	3.25	292	*i* P	Pn	06 00 03.0	+2.2

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*DDA **29** 06:08:54.4, 39°.02N×44°.50E, h7^{km}±2^{km}, MW3.8*
*IDC **29** 06:08:56.0±2.2, 38°.99N×44°.59E, h0^{km}, mb3.5/4,*
mb1 3.5/8, mb1mx3.4/35, mbtmp3.3/8, ML2.7/4, MS3.1/3,
Ms1 3.1/3, ms1mx2.6/46, Error ellipse: s-maj=31.4km
s-min=12.9km az=126.0
*AZER **29** 06:08:55.9±0.1, 39°.08N×44°.43E, h5^{km}, ml3.7/20, Error*
ellipse: s-maj=1.9km s-min=1.3km az=243.0
*ISK **29** 06:08:56.4, 38°.99N×44°.30E, h5^{km}, ML3.5/19*
*TEH **29** 06:08:56.2, 39°.00N×44°.46E, h6^{km}, ML3.4*
*THR **29** 06:08:58.3±0.5, 39°.08N×44°.52E, h14^{km}±5^{km}, ML3.0*
*NSSP **29** 06:08:58.6, 39°.12N×44°.43E, h7^{km}, Ms3.3*
ISC 29 06:08:55.0±1.1**, 39°.00N**±0°.02×**44°.48E**±0°.01**, h1**^{km}±9^{km},
n114, σ1^{s}.**66**/144**, mb3.2**/4**, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAKU	Maku	0.39	24	*e*Pg	Pb	06 09 04.7	-0.2
MAKU				*e*Sg	Sb	06 09 09.8	-1.6
MAKU				IAML		06 09 12.9	
	comp=N,3μm,0.3s						
MAKU				IAML		06 09 13.9	
	comp=E,1μm,0.3s						
MAKU	Maku	0.39	24	*e*Pg	Pb	06 09 04.7	-0.2
CLDR	Caldiran	0.46	288	*i* P	Pg	06 09 03.8	-0.2
CLDR				*i* S	Sb	06 09 11.1	-2.6
CLDR				IAML		06 09 13.0	
	comp=E,16μm,0.4s						
CLDR				IAML		06 09 14.0	
	comp=N,13μm,0.3s						
CLDR	Caldiran	0.46	288	PG	Pg	06 09 03.9	0.0
CLDR				SG	Sg	06 09 09.9	-0.1
CLDR	Caldiran	0.46	288	*e*Pg	Pg	06 09 03.9	0.0
OZAP	Van, Ozalp-Mer	0.51	229	*i* P	Pg	06 09 05.4	+0.6
VMUR	Van-Muradiye	0.71	270	*i* P	Pg	06 09 08.4	-0.2
VMUR				*i* S	Sb	06 09 18.7	-2.0
VMUR				IAML		06 09 20.0	
	comp=N,2μm,0.3s						
VMUR				IAML		06 09 23.0	
	comp=E,2μm,0.3s						
HYR	Heyderabad	0.77	22	P	Pn	06 09 11.9	-1.3
	SNR=39						
HYR				S	Sn	06 09 24.2	-1.3
NAX	Nakhchivan	0.81	77	P	Pn	06 09 13.2	-0.5
	SNR=107						
NAX				S	Sn	06 09 27.3	+0.9
DYDN	Diyadin	0.82	312	*i* P	Pg	06 09 09.9	-0.9
DYDN				*i* S	Sn	06 09 24.1	-2.9
DYDN				IAML		06 09 26.0	
	comp=E,1μm,0.4s						
DYDN				IAML		06 09 36.0	
	comp=N,1μm,0.4s						
ERCV	ERCIS-VAN	0.89	272	PG	Pg	06 09 11.8	-0.3
ERCV	ERCIS-VAN	0.89	272	*e*Pg	Pb	06 09 13.0	-0.4
SBZ	Shahbuz	0.92	64	P	Pn	06 09 15.1	-0.1
	SNR=355						
SBZ				S	Sn	06 09 30.0	+0.8
IGDI	IGDIR	0.92	340	*i* P	Pn	06 09 14.1	-1.1
IGDI	IGDIR	0.92	340	*e*Pg	Pn	06 09 14.1	-1.1
VANB	Van	0.94	245	PG	Pb	06 09 13.8	-0.5
VANB				SG	Sb	06 09 27.3	-0.1
VANB	Van	0.94	245	*e*Pg	Pb	06 09 13.9	-0.4
TVAN	Van	0.96	241	*i* P	Pg	06 09 13.2	-0.3
IMRD	Marand	0.99	106	*e*Pg	Pn	06 09 15.7	-0.6
TASB	TASBURUN-IGDIR	1.00	349	PG	Pn	06 09 16.3	0.0
TASB				SG	Sn	06 09 31.7	+0.5
ISHB	Shabestar	1.14	128	*e*Pg	Pn	06 09 17.2	-1.2
ISHB				*e*Sg	Sn	06 09 34.1	-0.7
GNI	Garni	1.17	10	Pg	Pn	06 09 18.7	0.0
	comp=N,55nm,0.3s,baz=7.1,slow=5.4,SNR=40						
GNI				LR	LR	06 09 23.4	
	comp=N,14nm,19.8s,baz=65,slow=24						
GNI				Lg	Lg	06 09 35.8	
	comp=N,131nm,0.3s,baz=47,slow=21,SNR=8.2						
GNI	Garni	1.17	10	*i* P	Pn	06 09 18.9	+0.2
GNI				*i* S	Sn	06 09 33.7	-1.6
ORD	Ordubad	1.18	93	P	Pn	06 09 19.6	+0.9
	SNR=108						
ORD				S	Sn	06 09 39.9	+4.4
METS	Metsamor	1.19	345	*i* P	Pn	06 09 19.1	+0.2
METS				*i* S	Sn	06 09 33.8	-2.0
VNNZ	Vanand	1.22	335	*i* P	Pn	06 09 20.3	+1.0
VNNZ				*i* S	Sn	06 09 36.2	-0.2
KOTA	Agri, Merkez-K	1.27	309	*i* P	Pn	06 09 18.7	-1.5
AGRB	Hanur-Agry	1.29	297	PN	Pg	06 09 19.8	0.0
AGRB	Hanur-Agry	1.29	297	*e*Pn	Pg	06 09 20.5	+0.7
KAPZ	Kaputan	1.33	7	*i* P	Pg	06 09 21.7	+1.2
KAPZ				*i* S	Sn	06 09 38.6	-0.8
AKDM	Akdamar-Van	1.35	241	PN	Pg	06 09 20.7	-0.3
AKDM				SN	Sn	06 09 39.2	-0.8
AKDM	Akdamar-Van	1.35	241	*e*Pn	Pg	06 09 21.0	0.0
ADCV	BITLIS_Adilcev	1.39	263	*i* P	Pg	06 09 21.1	-0.5
ADCV	BITLIS_Adilcev	1.39	263	*e*Pn	Pg	06 09 21.1	-0.5
ITBZ	Tabriz	1.51	120	*e*Pn	Pg	06 09 23.7	-0.3
MLAZ	Malazgirt-MUS	1.51	276	PN	Pg	06 09 23.4	-0.6
MLAZ				SN	Sg	06 09 43.6	0.0
HAKT	HAKKARI	1.56	203	*i* P	Pg	06 09 25.0	0.0
HAKT				*i* S	Sg	06 09 46.4	+1.2
HAKT				IAML		06 09 51.0	
	comp=N,378nm,0.5s						
HAKT				IAML		06 09 55.0	
	comp=E,409nm,0.6s						
DIGO	Kars	1.65	329	*i* P	Pg	06 09 28.4	+1.7
EATA	Eleskirt	1.77	300	*i* P	Pb	06 09 27.8	-0.7
IAZR	Azarshahr	1.77	138	*e*Pn	Pg	06 09 29.5	+0.6
IAZR				*e*		06 10 02.1	
	comp=Z,7μm,0.8s						
EAK	Akyaka	1.81	338	*i* P	Pg	06 09 30.6	+0.8
EAK				*i* S	Sg	06 09 57.4	+4.0
EAK				IAML		06 10 09.0	
	comp=E,385nm,1.1s						
PERV	Siirt/Pervari-	1.85	236	*i* P	Pb	06 09 29.5	-0.2
CUKT	Cukurca	1.88	202	PN	Pb	06 09 29.7	-0.6
CUKT	Cukurca	1.88	202	*e*Pg	Pg	06 09 32.6	+1.5
BLIS	Bitlis-Merkez	1.94	253	*i* P	Pb	06 09 29.6	-1.7
KARS	Kars	1.95	327	PN	Pb	06 09 30.9	-0.6
GDB	GEDABAY	1.98	29	P	Pg	06 09 33.2	+0.2
	SNR=60						
GDB				S	Sg	06 10 00.9	+2.3
AHAR	Ahar	2.07	103	*e*Pg	Pg	06 09 34.9	+0.2
AHAR				*e*		06 09 42.7	
	comp=Z,3μm,0.3s						
IHRS	Heris	2.12	108	*e*Pn	Pg	06 09 34.6	-1.0
IHRS				*e*		06 10 08.7	
	comp=Z,6μm,0.6s						
QZX	Qazax, Azerbai	2.17	18	P	Pg	06 09 35.6	-1.0
	SNR=39						
QZX				S	Sg	06 10 08.6	+4.0
GANJ	Ganja	2.17	40	P	Pg	06 09 35.9	-0.7
	SNR=52						
GANJ				S	Sg	06 10 07.2	+2.4
SIRT	Sirnak	2.20	228	PN	Pb	06 09 34.2	-1.4
SIRT	Sirnak	2.20	228	*e*Pn	Pb	06 09 35.3	-0.3
SRTM	Siirt_Merkez	2.25	244	*i* P	Pb	06 09 35.4	-1.1
SRTM				*i* S	Sg	06 10 06.8	-0.5
SRTM				IAML		06 10 16.0	
	comp=N,452nm,0.9s						
HOMI	Horasan	2.25	298	*i* P	Pg	06 09 37.5	-0.7
QRD	Qoradiz	2.25	77	P	Pg	06 09 38.1	-0.1
	SNR=8.9						
QRD				S	Sg	06 10 10.3	+2.9
KOPR	Koprukoy-ERZUR	2.26	297	PN	Pb	06 09 34.9	-1.9
SENK	Senkaya-Erzuru	2.27	314	PN	Pb	06 09 35.3	-1.6
IBST	Bostanabad	2.29	124	*e*Pn	Pb	06 09 37.1	-0.3
IBST				*e*		06 10 18.1	
	comp=Z,2μm,0.7s						
AGDM	Agdam	2.31	61	P	Pg	06 09 39.6	+0.3
	SNR=15						
AGDM				S	Sg	06 10 11.3	+1.9
DMNI	Dmanisi	2.34	355	P	Pg	06 09 41.1	+1.2
DMNI				S	Sg	06 10 12.7	+2.5
BGD	Bogdanovka	2.36	344	P	Pg	06 09 43.8	+3.5
BGD				S	Sg	06 10 16.4	+5.5
VRTB	Varto-Mus	2.36	275	*i* P	Pg	06 09 39.0	-1.3
VRTB	Varto-Mus	2.36	275	PN	Pb	06 09 36.0	-2.5
MAHB	Mahabad	2.43	156	*e*Pn	Pb	06 09 39.6	0.0
MAHB				*e*		06 09 50.3	
	comp=Z,1μm,0.4s						
BRDA	Brd	2.44	58	P	Pg	06 09 40.8	-0.9
	SNR=4.5						
BLQ	Beylaqan	2.49	72	P	Pg	06 09 40.9	-1.9
	SNR=19						
BLQ				S	Sg	06 10 14.1	-0.9
DGRG	David-gareji	2.54	15	P	Pg	06 09 42.2	-1.6
TRLG	Trialeti	2.55	354	P	Pg	06 09 44.2	+0.2
TRLG				S	Sg	06 10 28.7	+12
ERZM	Erzurum	2.58	292	*i* P	Pg	06 09 43.3	-1.1
GRMI	Germi	2.67	93	*e*Pn	Pb	06 09 42.9	-0.8
GRMI				*e*Sg	Sg	06 10 21.1	+0.3
GRMI				IAML		06 10 22.9	
	comp=E,95nm,0.7s						
GRMI				IAML		06 10 28.8	
	comp=N,156nm,0.8s						
GRMI	Germi	2.67	93	*e*Pn	Pb	06 09 42.9	-0.8
BRNG	Burnasheti	2.67	349	P	Pg	06 09 46.7	+0.5
MNGR	Mingechevir, A	2.67	48	P	Pb	06 09 43.0	-0.7
	SNR=4.9						
MNGR				S	Sg	06 10 19.7	-1.3
BTNK	Botanikuri	2.69	5	P	Pg	06 09 46.0	-0.6
SVAN	Silvan-Diyarba	2.71	253	PN	Pb	06 09 41.2	-3.2
DDFL	Dedoflistskaro	2.75	27	P	Pg	06 09 51.7	+4.0
DDFL				S	Sg	06 10 39.4	+16
IHSH	Hashtrud	2.77	127	*e*Pn	Pb	06 09 43.9	-1.6
IHSH				*e*		06 10 15.8	
	comp=Z,1μm,0.6s						
YRD	Yardimli	2.93	90	P	Pb	06 09 47.5	-0.7
	SNR=20						
YRD				S	Sg	06 10 25.9	-3.3
BNGB	Bingl	2.96	271	PN	Pn	06 09 44.5	+1.1
LRK	Lerik	3.03	96	P	Pb	06 09 49.4	-0.5
	SNR=15						
LRK				S	Sg	06 10 30.5	-2.0
ABS	Abastumani	3.03	336	P	Pg	06 09 54.4	+1.1
ABS				S	Sg	06 10 36.4	+3.8
SEKA	Sheki	3.03	42	P	Pb	06 09 48.7	-1.2
	SNR=10						
GLBA	Clilabad	3.05	84	P	Pb	06 09 49.4	-0.7
	SNR=12						
GLBA				S	Sb	06 10 29.0	+1.2
KRIK	Erzurum-spir	3.05	297	*i* P	Pg	06 09 52.8	-0.8
YEDI	Yedisu-Bingol	3.09	279	PN	Pn	06 09 46.5	+1.4
ZKTA	Zakatala	3.10	31	P	Pb	06 09 49.0	-2.0
	SNR=8.7						
ZKTA				S	Sg	06 10 36.9	+2.3
LGD	Lagodekhi	3.13	25	P	Pg	06 09 55.5	+0.3
LGD				S	Sg	06 10 34.3	-1.4
BCA	Borcka	3.28	319	PN	Pb	06 09 49.9	-4.2
ASTR	Astara	3.40	96	P	Pb	06 09 54.1	-1.9
	SNR=9.3						
ASTR				S	Sg	06 10 41.7	-2.4
MAZI	Mazidag	3.53	245	PN	Pn	06 09 52.2	+1.1
XNQ	Khinaliq	3.55	51	P	Pb	06 09 55.7	-3.0
	SNR=4.3						
PQL	Pirkuli	3.63	59	P	Pb	06 09 56.7	-3.4
PNSH	Pansheti	3.63	2	P	Pb	06 09 59.8	-0.4
ONI	Oni	3.67	348	P	Pg	06 10 04.0	-1.4
MTEO	Meteo	3.68	1	P	Pg	06 10 05.4	-0.1

MTEO				S	Sg	06 10 56.7	+3.5
ERZN	Erzincan	3.74	281	PN	Pn	06 09 56.0	+2.0
ZNJK	Zanjan	4.06	124	ePn	Pb	06 10 02.5	-5.0
ZNJK				eSg	Sg	06 11 05.2	-0.2
ZNJK				IAML		06 11 21.3	
	comp=E,7.9nm,0.7s						
ZNJK				IAML		06 11 30.7	
	comp=N,6.6nm,0.7s						
ZNJK	Zanjan	4.06	124	ePn	Pb	06 10 02.5	-5.0
SNGE	Sanandaj	4.52	149	ePn	Pb	06 10 09.5	-5.9
SNGE	Sanandaj	4.52	149	ePn	Pb	06 10 09.5	-5.8
IDHR	Dehrash	4.55	160	ePn	Pn	06 10 08.3	+3.0
KBZ	Khabaz	4.87	346	Pn	Pn	06 10 13.8	+4.3
	comp=N,0.1nm,0.3s,baz=131,slow=11,SNR=2.4						
KVAR	Kislovodsk Arr	5.13	345	LR	LR	06 12 12.9	
	comp=N,112nm,18.2s,baz=102,slow=38						
QABG	Abgarm-Qazvin	5.22	127	ePn	Pn	06 10 17.9	+3.4
BRTR	Keskin Array B	8.43	278	Pn	Pn	06 11 03.3	+4.8
	comp=N,0.1nm,0.3s,baz=106,slow=14,SNR=4.1						
AKTO	Aktyubinsk	14.91	36	LR	LR	06 19 58.1	
	comp=N,68nm,18.4s,baz=353,slow=44						
AKASG	Malin Array Be	15.90	322	Pn	P	06 12 41.5	-2.2
	comp=N,0.3nm,0.3s,baz=131,slow=11,SNR=1.8						
ARU	Arti	19.78	24	P	Pn	06 13 27.9	+0.1
	comp=N,0.0nm,0.3s,baz=194,slow=8.6,SNR=5.4						
VRAC	Vranov	22.39	307	LR	LR	06 26 37.3	
	comp=N,81nm,19.1s,baz=350,slow=47						
BVAR	Borovoye Array	22.65	43	P	P	06 13 58.8	+1.4
	comp=N,0.4nm,0.5s,baz=228,slow=18,SNR=3.7						
GERES	GERESS Array B	24.11	304	P	P	06 14 14.5	+2.2
	comp=N,0.3nm,0.5s,baz=83,slow=10.0,SNR=1.6						
FINES	FINESS Array B	25.19	339	P	P	06 14 23.0	+1.2
	comp=N,8.0nm,1.1s,baz=146,slow=7.7,SNR=1.9						
ESDC	Sonseca Array	37.11	287	P	P	06 16 08.4	+1.3
	comp=N,0.5nm,1.0s,baz=66,slow=8.2,SNR=4.8						

IDC 29 06:21:38.8±9.8,**31°.79S**×**177°.44W**,**h0^{km}**,**mb3.5**/2,**mb1 3.8**/2,**mb1mx3.5**/28,**mbtmp3.5**/2,**Error ellipse: s-maj=471.0km s-min=40.3km az=159.0**,**Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	43.53	268	P	P	06 29 44.7	+0.3
	0.2nm,0.3s,baz=108,slow=7.8,SNR=2.3						
WRA	Warramunga Arr	44.64	273	P	P	06 29 52.8	-0.6
	0.5nm,0.5s,baz=131,slow=9.1,SNR=2.7						
FINES	FINESS Array B	146.61	340	PKPbc	PKPdf	06 41 20.7	+0.7
	3.3nm,1.0s,baz=40,slow=2.4,SNR=3.3						

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*ISK **29** 06:23:31.9,37°.10N×36°.83E,h8^{km},ML2.8/16*

*DDA **29** 06:23:32.4,37°.08N×36°.81E,h6^{km}±2^{km},ML3.0*

ISC 29 06:23:32.6±1.0,**37°.10N**±0°.03×**36°.82E**±0°.02,**h8**^{km}±8^{km},**n27**,σ**0^s.42**/38,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAMA	Osmaniye	0.15	307	iP	Pg	06 23 35.9	0.0
KAMA				IAML		06 23 38.0	
	comp=N,6μm,0.1s						
KAMA				IAML		06 23 38.0	
	comp=E,4μm,0.1s						
KAMA				iS	Sg	06 23 38.4	+0.3
GAZ	Gaziantep	0.32	76	PG	Pg	06 23 38.4	-0.6
GAZ				SG	Sg	06 23 42.9	-0.4
KUZU	Kuzuini	0.38	147	iP	Pg	06 23 40.6	+0.6
KUZU				iS	Sg	06 23 45.5	+0.5
KUZU				IAML		06 23 46.0	
	comp=E,4μm,0.4s						
KUZU				IAML		06 23 47.0	
	comp=N,2μm,0.2s						
KHMN	Narli-Kahraman	0.40	42	PG	Pg	06 23 40.4	0.0
KHMN				SG	Sg	06 23 46.3	+0.6
KMRS	Kahramanmaras	0.41	9	PG	Pg	06 23 40.6	-0.1
KMRS				SG	Sg	06 23 46.9	+0.7
KAHM	Kahramanmaras,	0.44	18	iP	Pg	06 23 41.2	-0.1
KAHM				iS	Sg	06 23 47.3	+0.3
GZT	Gaziantep	0.65	66	iP	Pg	06 23 45.4	+0.3
CEYT	Ceyhan	0.86	265	PG	Pb	06 23 49.3	-0.5
KOZT	Kozan	0.88	296	PG	Pg	06 23 49.5	0.0
KOZT				SG	Sb	06 24 01.9	-0.2
TAHT	Tahtakopru-Hat	0.88	216	PG	Pg	06 23 49.3	-0.2
TAHT				SG	Sb	06 24 02.3	+0.2
YURE	YUREGIR	0.99	255	iP	Pn	06 23 52.7	-0.1
YAYL	Yayladag	1.20	209	PN	Pn	06 23 55.6	-0.3
ATAB	Bozova	1.23	72	iP	Pn	06 23 56.8	+0.5
ATAB				iS	Sg	06 24 11.3	-1.0
ATAB				IAML		06 24 15.0	
	comp=N,308nm,0.2s						
ELBS	KAHRAMANMARAS	1.25	11	iP	Pn	06 23 57.1	+0.5
ELBS				iS	Sn	06 24 14.2	+0.4
KRTS	Karatas	1.27	246	PN	Pb	06 23 56.6	-0.2
SARI	SarD1z-Kayseri	1.35	346	PN	Pn	06 23 57.9	-0.1
KARA	Karaisali	1.42	277	PN	Pn	06 23 58.5	-0.3
AKCD	Akcadag	1.48	36	iP	Pb	06 24 00.6	0.0
AKCD				iS	Sn	06 24 20.0	+0.5
AKCD				IAML		06 24 24.0	
	comp=N,228nm,0.2s						
AKCD				IAML		06 24 25.0	
	comp=E,219nm,0.4s						
CMRD	Camardi-Nigde	1.56	292	PN	Pn	06 24 00.8	-0.1
DARE	Darende-Malaty	1.56	19	PN	Pn	06 24 00.7	-0.2
SANL	SANLIURFA_Merk	1.74	87	iP	Pb	06 24 04.6	-0.2
MALT	Malatya	1.76	46	PN	Pn	06 24 03.8	+0.2
MERS	Mersin	1.85	264	PN	Pn	06 24 04.8	0.0
ELZG	Elazig	2.21	50	iP	Pb	06 24 12.1	-1.0
KIZK	Mersin	2.23	255	PN	Pn	06 24 10.5	+0.6
SVRC	Sivrice-ELAZID	2.35	56	PN	Pn	06 24 11.7	0.0
DYBB	Diyarbakir	2.77	71	PN	Pn	06 24 17.4	-0.1

IDC 29 06:25:36.3±69.0,**19°.30S**×**178°.19W**,**h0^{km}**,**mb4.0**/3,**mb1 4.2**/3,**mb1mx3.7**/34,**mbtmp4.0**/3,**Error ellipse: s-maj=1263.0km s-min=179.4km az=81.0**,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	38.16	243	P	P	06 32 58.0	+0.4
	1.5nm,0.9s,baz=95,slow=12,SNR=3.1						
WRA	Warramunga Arr	44.60	261	P	P	06 33 50.6	-0.1
	1.0nm,0.5s,baz=97,slow=8.3,SNR=6.0						
ASAR	Alice Springs	44.63	256	P	P	06 33 50.5	-0.5
	1.6nm,0.5s,baz=92,slow=7.7,SNR=24						

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*IDC **29** 06:36:29.1±0.9,50°.01N×98°.12E,h0^{km},mb3.8/6,mb1 3.7/12,mb1mx3.5/59,mbtmp3.7/12,ML3.0/5,MS3.2/10,Ms1 3.2/10,ms1mx2.9/58,Error ellipse: s-maj=21.4km s-min=8.9km az=173.0*

*NEIC **29** 06:36:30.6±2.0,50°.1N±0°.1×98°.09E±0°.06,h10^{km}±1^{km},mb4.2/9,Error ellipse: s-maj=21.6km s-min=3.8km az=196.0*

*MOS **29** 06:36:30.6±1.5,49°.98N×98°.02E,h31^{km},mb4.0/5,Error ellipse: s-maj=9.6km s-min=8.9km az=176.6*

*ASRS **29** 06:36:31.4±0.2,50°N±2°×98°.1E±0°.7,h10^{km},MLh4.9/8*

ISC 29 06:36:30.6±0.5,**50°.29N**±0°.04×**98°.14E**±0°.02,**h10**^{km},**n87**,σ**2^s.71**/121,**mb4.0**/10,**MS3.2**/7,**6C-3D**,**Tuva-Buryatia-Mongolia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KNGR	Kungurtug, Tuv	0.51	308	Pg	Pb	06 36 41.7	0.0
KNGR				Sg	Sb	06 36 51.0	+1.8
MOY	Mondy	2.27	52	Pn	Pb	06 37 12.0	+0.3
MOY				Pg	Pg	06 37 13.3	-0.8
MOY				Sg	Sg	06 37 44.7	+1.3
MOY	Mondy	2.27	52	ePN	Pb	06 37 12.1	+0.4
MOY				e		06 37 44.7	
MOY				i		06 37 48.5	
ORL	Orlik	2.48	24	⇓iPN	Pg	06 37 15.9	-2.3
ORL				e		06 37 51.9	
ORL				pmax	pmax		
	comp=Z,267nm,0.7s						
ORL				smax	smax		
	comp=E,1μm,1.3s						
KZLR	Kyzyl	2.73	303	Pg	Pb	06 37 20.7	+1.2
KZLR				Sg	Sg	06 37 58.4	+0.3
ZAK	Zakamensk	3.29	86	Pn	Pn	06 37 23.5	+1.2
ZAK				Pg	Pb	06 37 28.8	-0.4
ZAK				Sg	Sb	06 38 13.3	+4.0
ZAK	Zakamensk	3.29	86	⇑iPN	Pn	06 37 23.5	+1.2
ZAK				e		06 38 13.1	
ZAK				pmax	pmax		
	comp=Z,340nm,0.7s						
ZAK				smax	smax		
	comp=N,4μm,1.2s						
TLY	Talaya	3.74	66	Pn	Pn	06 37 31.4	+2.9
	comp=N,0.0nm,0.3s,baz=250,slow=16,SNR=3.2						
TLY				Pg	Pb	06 37 38.7	+1.9
	comp=N,0.2nm,0.3s,baz=254,slow=12,SNR=30						
TLY				Lg	Lg	06 38 30.2	
	comp=N,0.9nm,0.3s,baz=108,slow=13,SNR=14						
TLY	Talaya	3.74	66	Pg	Pb	06 37 38.2	+1.3
TLY				S	Sn	06 38 12.1	-0.5
TLY				Sg	Sg	06 38 28.7	-2.1
TLY	Talaya	3.74	66	ePN	Pn	06 37 31.6	+3.1
TLY				e		06 38 27.8	
TLY				pmax	pmax		
	comp=Z,68nm,0.8s						
TLY				smax	smax		
	comp=N,864nm,1.4s						
TLY	Talaya	3.74	66		Pb	06 37 39.0	+2.2
IRK	Irkutsk	4.32	61	Pg	Pb	06 37 49.4	+2.8
IRK				S	Sn	06 38 25.6	-1.0
IRK				Sg	Sg	06 38 46.6	-2.6
IRK	Irkutsk	4.32	61	ePN	Pb	06 37 48.2	+1.6
IRK				e		06 38 45.4	
IRK				pmax	pmax		
	comp=Z,213nm,0.1s						
IRK				smax	smax		
	comp=N,3μm,0.5s						
CERR	Cheremushki	4.92	304	Pg	Pg	06 38 02.2	-2.5
CERR				Sg	Sg	06 39 06.0	-2.4
DJO	Djoy, Khakassi	4.99	303	Pn	Pn	06 37 48.7	+3.1
DJO				Pg	Pb	06 38 01.6	+3.6
DJO				S	Sn	06 38 45.0	+1.7
DJO				Sg	Sg	06 39 08.2	-2.5
TBTR	Tabat	5.33	303	Pn	Pn	06 37 46.9	-3.3
TBTR				Pg	Pb	06 38 00.2	-3.5
TBTR				Sg	Sb	06 39 11.6	+4.0
ABNR	Abakan	5.38	312	Pn	Pn	06 37 53.8	+2.9
ABNR				Pg	Pb	06 38 08.2	+3.5
ABNR				Sg	Sg	06 39 21.8	-1.5
TRG	Tyrgan	5.69	61	Pg	Pb	06 38 09.7	-0.2
TRG				Sg	Sg	06 39 26.8	-6.3
SONM	Songino Array	5.96	111	Pn	Pn	06 37 57.5	-1.5
	comp=N,0.6nm,0.3s,baz=294,slow=14,SNR=22						
SONM				Pg	Pb	06 38 14.6	0.0
	comp=N,9.7nm,0.3s,baz=296,slow=18,SNR=51						
SONM				Lg	Lg	06 39 34.5	
	comp=N,25nm,0.3s,baz=303,slow=14,SNR=12						
SONM				LR	LR	06 39 54.9	
	comp=N,46nm,20.7s,baz=351,slow=35						
SONM	Songino Array	5.96	111		Pb	06 38 10.8	-3.8
ULN	Ulaanbaatar	6.34	109	Pg	Pb	06 38 21.9	+0.8
ULN				Sg	Sg	06 39 47.8	-6.1
ULN	Ulaanbaatar	6.34	109	PN	Pn	06 38 02.9	-1.3
ULN	Ulaanbaatar	6.34	109		Pn	06 38 02.9	-1.3
SHRR	Shira	6.45	314	Pn	Pn	06 38 03.4	-2.1
SHRR				S	Sn	06 39 17.3	-1.8
SHRR				Sg	Sg	06 39 50.9	-6.5
ULGR	Ulagan, Altay	6.51	277	Pn	Pn	06 38 08.6	+2.0
ULGR				Pg	Pb	06 38 26.5	+2.5
ULGR				S	Sn	06 39 21.8	+0.9
ULGR				Sg	Sg	06 39 58.9	-0.6
KRAR	Krasnoyarsk	6.55	333	⇑ePN	Pn	06 38 08.5	+1.6
GZL	Zheleznogorsk	6.59	337	Sg	Sg	06 39 56.5	-5.4
LUZB	Luzhba, Kemero	6.63	304	Pn	Pn	06 38 11.3	+3.2
LUZB				Pg	Pb	06 38 29.6	+3.7
LUZB				Sg	Sg	06 39 58.5	-4.8
OGRR	Ongureny	6.74	56	ePN	Pn	06 38 11.5	+2.0
OGRR				e		06 38 33.9	
OGRR				e		06 40 03.9	
OGRR				pmax	pmax		
	comp=Z,83nm,2.2s						
OGRR				smax	smax		
	comp=E,405nm,1.5s						
AKAR	Aktash	6.74	274	Pn	Pn	06 38 10.4	+0.7
AKAR				Pg	Pb	06 38 31.7	+3.8
AKAR				Sg	Sg	06 40 00.3	-6.6
CHBI	Chibit, Altay	6.82	274	Pn	Pn	06 38 12.5	+1.8
CHBI				Pg	Pb	06 38 35.3	+6.1
CHBI				S	Sn	06 39 29.7	+1.3
CHBI				Sg	Sg	06 40 07.2	-2.1
TASR	Tashtagol	6.86	295	Pn	Pn	06 38 12.9	+1.7
TASR				Pg	Pb	06 38 34.4	+4.4
TASR				Sg	Sg	06 40 04.3	-6.5
DGZ	Jazzator, Alta	6.93	269	Pn	Pn	06 38 12.7	+0.3
DGZ				Pg	Pb	06 38 33.2	+2.1
DGZ				S	Sn	06 39 31.1	-0.2
DGZ				Sg	Sg	06 40 10.3	-2.7
DGZ	Jazzator, Alta	6.93	269	⇑ePN	Pn	06 38 08.7	-3.7
ARTR	Artybash	7.01	287	Pg	Pb	06 38 37.6	+5.1
ARTR				Sg	Sg	06 40 09.9	-5.7
ELT	Eltsovka	7.96	297	Pg	Pb	06 38 52.2	+3.6
ELT				Sg	Sg	06 40 41.0	-4.8
BRCR	Berchikul'	7.99	316	Pg	Pb	06 38 49.3	+0.3
BRCR				S	Sn	06 39 56.0	-1.0
BRCR				Sg	Sg	06 40 38.5	-8.2
VCHU	Verkh-Chumysh,	8.08	301	Pg	Pg	06 38 57.9	-7.3
VCHU				Sg	Sg	06 40 44.9	-4.8
POMOR	Pomortsevo, Ku	8.22	305	Sg	Sg	06 40 54.0	-0.1
BJR1	Bachatsky 1, K	8.41	303	Pg	Pb	06 39 03.0	+6.8
BJR1				Sg	Sg	06 40 55.9	-4.3
SALR	Pechorkino, Sa	8.66	303	Pg	Pg	06 39 09.1	-7.2
SALR				Sg	Sg	06 41 04.0	-4.3
KEM	Kemerovo	8.88	309	Sg	Sg	06 41 13.6	-1.6
ZAA0	Zalesovo Array	8.98	299		Pn	06 38 42.0	+1.8
ZALV	Zalesovo Beam	8.98	299	Pn	Pn	06 38 41.0	+0.8
	baz=106,slow=11,SNR=4.1						
ZALV				Lg	Lg	06 41 11.4	
	comp=E,1.4nm,0.3s,baz=109,slow=22,SNR=4.1						
ZALV				LR	LR	06 42 42.5	
	comp=E,44nm,20.9s,baz=48,slow=41						
ZALV	Zalesovo Beam	8.98	299	P	Pn	06 38 41.5	+1.3
ZALV	Zalesovo Beam	8.98	299		Pn	06 38 41.5	+1.3
YLYR	Ulyunkhan	9.15	55	Pg	Pn	06 39 16.9	+34
YLYR				S	Sn	06 40 30.5	+4.8
YLYR				Sg		06 41 17.2	
ASR1	Anjero-Sudjens	9.30	313	Sg	Sn	06 41 26.2	+57
GTA	Gaotai	10.95	173	eP	Pn	06 39 09.0	+1.6
GTA				pP		06 39 13.3	
GTA				sP		06 39 16.3	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,49nm,4.9s						
GTA				smax	smax		
	comp=N,37nm,1.1s						
GTA				smax	smax		
	comp=E,100nm,1.1s						
GTA				LR	LR		
	comp=N,330nm,9.5s						
GTA				LR	LR		
	comp=E,1μm,11.6s						
GTA				LR	LR		
	comp=Z,350nm,10.9s						
MK31	Makanchi Array	11.07	258	⇑eP	Pn	06 39 08.4	-0.6
MKAR	Makanchi Array	11.07	258	Pn	Pn	06 39 07.8	-1.2
	comp=Z,0.1nm,0.3s,baz=80,slow=12,SNR=2.5						
MKAR				Sn	Sn	06 41 09.6	-3.3
	comp=Z,0.6nm,0.3s,baz=65,slow=16,SNR=5.5						
MKAR				Lg	Lg	06 42 22.8	
	comp=Z,1.4nm,0.3s,baz=54,slow=29,SNR=7.3						
MKAR	Makanchi Array	11.07	258	Pn	Pn	06 39 06.0	-3.1
KURK	Kurchatov	12.44	279	P	Pn	06 39 28.1	+0.5
KURK	Kurchatov	12.44	279		Pn	06 39 26.6	-1.0
KURBB	Kurchatov Arra	12.50	279	Pn	Pn	06 39 28.1	-0.4
	comp=Z,0.1nm,0.3s,baz=90,slow=15,SNR=4.5						
HIA	Hailar	13.99	86	⇑eP	Pn	06 39 48.4	-0.4
HIA				pmax	pmax		
	comp=Z,4.0nm,0.3s						
BVAR	Borovoye Array	17.39	290	P	Pn	06 40 33.9	+0.7
	comp=Z,0.2nm,0.3s,baz=129,slow=12,SNR=3.9						
BRVK	Borovoye	17.45	290	⇓eP	Pn	06 40 32.3	-1.7
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AAK	Ala-Archa	17.95	254	LR	LR	06 47 30.8	
	comp=Z,32nm,19.2s,baz=48,slow=37						
NRIK	Noril'sk	19.78	349	⇑eP	Pn	06 41 02.6	+0.5
NRIK				pmax	pmax		
	comp=Z,10.0nm,1.8s						
KKAR	Karatay Array	20.19	260	P	P	06 41 04.2	-1.1
KKAR	Karatay Array	20.19	260	P	P	06 41 04.2	-1.1
KLR	Kul'dur	21.64	80	LR	LR	06 49 38.5	
	comp=Z,53nm,18.7s,baz=100,slow=36						
KLR	Kul'dur	21.64	80	⇓eP	P	06 41 19.1	-1.7
KLR				pmax	pmax		
	comp=Z,10.0nm,2.2s						
BTK	Batken	21.70	252	P	P	06 41 21.3	-0.3
BTK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BTK	Batken	21.70	252	P	P	06 41 21.3	-0.3
GAR	Garm	22.65	251	P	P	06 41 29.6	-2.4
GAR				IAmb	IAmb	06 41 45.8	
	comp=Z,12nm,1.1s						
ARU	Arti	24.14	300	P	P	06 41 47.6	+1.1
	comp=Z,0.5nm,0.3s,baz=157,slow=12,SNR=3.4						
ARU	Arti	24.14	300	P	P	06 41 45.4	-1.1
ARU				IAmb	IAmb	06 42 06.6	
	comp=Z,7.7nm,1.1s						
ABKAR	Akbulak array	24.52	282	P	P	06 41 49.7	-0.2
KSRS	Korea Array	24.82	110	P	P	06 41 52.6	-0.2
	comp=Z,0.7nm,0.5s,baz=315,slow=7.0,SNR=2.1						
KSRS				LR	LR	06 52 08.7	
	comp=Z,38nm,19.0s,baz=353,slow=38						
AKTO	Aktyubinsk	25.38	286	P	P	06 41 59.0	+1.1
	comp=Z,3.2nm,1.0s,baz=84,slow=12,SNR=4.7						
AKTO				LR	LR	06 51 01.1	
	comp=Z,76nm,20.0s,baz=319,slow=34						
AKTO	Aktyubinsk	25.38	286	P	P	06 41 59.0	+1.1
TIXI	Tiksi	25.53	22	P	P	06 41 59.9	+1.0
	comp=Z,1.1nm,0.4s,baz=355,slow=1.3,SNR=5.7						
TIXI	Tiksi	25.53	22	P	P	06 42 00.6	+1.7
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.4s						
TIXI	Tiksi	25.53	22	P	P	06 42 00.6	+1.7
TIXI				IAmb	IAmb	06 42 23.1	
	comp=Z,6.4nm,1.4s						
KIRV	Kirov	28.94	306	LR	LR	06 54 41.2	
	comp=Z,131nm,18.6s,baz=40,slow=38						
CMAR	Chiang Mai Arr	31.77	179	LR	LR	06 55 42.2	
	comp=Z,35nm,19.0s,baz=75,slow=37						
FINES	FINESS Array B	39.85	314	P	P	06 44 05.0	+1.2
	comp=Z,6.3nm,1.1s,baz=97,slow=7.1,SNR=2.5						
FINES	FINESS Array B	39.85	314	P	P	06 44 04.7	+0.9
BUR08	Bucovina Ar. S	46.18	296	P	P	06 44 55.9	+0.5
BUR08				IAmb	IAmb	06 45 07.3	
	comp=Z,3.1nm,1.2s						
NOA	NORSAR Array B	46.61	318	LR	LR	07 05 45.1	
	comp=Z,38nm,19.3s,baz=340,slow=38						
CHGN	Chignik	56.37	41	P	P	06 46 13.2	+1.7
OSSC	Osservatorio P	56.51	299	P	P	06 46 13.8	+1.0
BARN	Barnard Glacie	59.11	29	P	P	06 46 31.4	+0.4
BATI	Baumata	64.23	152	LR	LR	07 15 15.8	
	comp=Z,95nm,18.4s,baz=243,slow=36						
ASAR	Alice Springs	80.16	147	P	P	06 48 39.4	-1.4
	comp=Z,0.6nm,0.9s,baz=347,slow=6.9,SNR=3.8						

IDC 29 07:05:30.2±58.0,**15°.53S**×**166°.02E**,**h0^{km}**,**mb3.8**/3,**mb1 4.0**/3,**mb1mx3.4**/35,**mbtmp3.8**/3,**Error ellipse: s-maj=966.0km s-min=73.9km az=64.0**,**Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	27.56	229	P	P	07 11 18.4	-0.6
	0.8nm,0.5s,baz=56,slow=15,SNR=2.8						
WRA	Warramunga Arr	30.46	257	P	P	07 11 44.0	-0.9
	0.2nm,0.3s,baz=89,slow=8.9,SNR=2.1						
ASAR	Alice Springs	31.26	250	P	P	07 11 52.0	0.0
	0.8nm,0.4s,baz=74,slow=9.8,SNR=23						

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*KRNET **29** 07:09:11.8±0.1,41°.63N×74°.34E,h13^{km},mb2.2*

*NNC **29** 07:09:13.0±3.2,41°.62N×74°.13E,h0^{km},mb2.9,mpv2.6,Error ellipse: s-maj=23.8km s-min=10.7km az=0.0*

*SOME **29** 07:09:13.2,41°.62N×74°.13E,h10^{km}*

ISC 29 07:09:12.3±1.5,**41°.59N**±0°.06×**74°.09E**±0°.03,**h14**^{km}±10^{km},**n21**,σ**1^s.36**/39,**7C-7D**,**Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	0.62	332	⇑iP	Pb	07 09 25.2	+0.1
	baz=16						
AML				⇑iS	Sb	07 09 34.9	+1.1
	baz=16						
UCH	Uchtor	0.71	26	⇓iP	Pg	07 09 23.8	-2.5
	baz=12						
UCH				⇓iS	Sg	07 09 32.6	-3.1
	baz=12						
MRKS	Merke	1.32	331	eP	Pg	07 09 38.5	+0.8
	1.1nm,0.4s						
MRKS				eS	Sg	07 09 55.9	+1.0
	2.7nm,0.4s						
MRKS	Merke	1.32	331	P	Pg	07 09 38.0	+0.3
	0.9nm,0.1s						
MRKS				S	Sg	07 09 55.8	+0.9
	3.1nm,0.3s						
BOOM	Boomskoye usch	1.65	56	⇓iP	Pn	07 09 39.6	-1.4
	baz=54						
BOOM				⇓iS	Sn	07 09 59.9	-2.1
	baz=54						
ULHL	Ulahol	1.73	67	⇑eP	Pn	07 09 41.0	-1.2
	baz=66						
ULHL				⇑iS	Sn	07 10 02.1	-2.2
	baz=66						
TKM2	Tokmak 2	1.74	40	⇓P	Pn	07 09 42.8	+0.6
	0.5nm,0.2s						
TKM2				⇑S	Sb	07 10 06.6	+0.7
	1.6nm,0.6s						
TKM2	Tokmak 2	1.74	40	⇑iP	Pn	07 09 41.6	-0.7
	baz=36						
TKM2				⇑iS	Sn	07 10 03.4	-1.0
	baz=36						
KST	Kastek	2.01	43	eP	Pg	07 09 50.6	-0.3
	3.0nm,0.4s						
KST				eS	Sg	07 10 17.1	+0.2
	3.9nm,0.4s						
KST	Kastek	2.01	43	Pg	Pg	07 09 50.5	-0.4
	2.7nm,0.4s						
KST				Lg	Lg	07 10 17.4	
	4.2nm,0.4s						
DGS	Degeres	2.07	36	eP	Pg	07 09 52.0	0.0
	2.4nm,0.3s						
DGS				eS	Sg	07 10 19.5	+0.7
	3.4nm,0.6s						
DGS	Degeres	2.07	36	Pg	Pg	07 09 52.0	0.0
	2.5nm,0.5s						
DGS				Lg	Lg	07 10 19.9	
	2.0nm,0.4s						
TRKS	Terek-Say	2.21	269	⇓iP	Pg	07 09 54.1	-0.6
	baz=67						
TRKS				⇓iS	Sg	07 10 25.1	+1.6
	baz=67						
MTBS	Maitube	2.32	48	eP	Pb	07 09 54.9	+0.9
	1.8nm,0.3s						
MTBS				eS	Sb	07 10 24.4	+1.9
	3.0nm,0.2s						
IZV	Izvestkoviy	2.37	51	eP	Pg	07 09 57.8	+0.1
	1.6nm,0.3s						
IZV				eS	Sg	07 10 29.1	+0.8
	3.3nm,0.3s						
KRBS	Karabastau	2.41	29	eP	Pb	07 09 57.0	+1.6
	1.5nm,0.0s						
KRBS				eS	Sb	07 10 27.7	+2.7
	2.6nm,0.3s						
KRBS	Karabastau	2.41	29	Pg	Pb	07 09 56.1	+0.6
	2.5nm,0.2s						
KRBS				Lg	Lg	07 10 26.4	
	2.2nm,0.3s						
MDOK	Medeo	2.70	53	eP	Pg	07 10 04.7	+0.7
	1.3nm,0.2s						
MDOK				eS	Sg	07 10 41.1	+2.2
	2.0nm,0.4s						
KUU	Kurty	2.84	35	eP	Pg	07 10 06.7	+0.1
	1.4nm,0.2s						
KUU				eS	Sg	07 10 44.8	+1.4
	5.0nm,0.1s						
IUG	Iuzhnay	3.08	282	eP	Pg	07 10 10.4	-0.9
	46nm,0.3s						
IUG				eS	Sg	07 10 51.0	-0.2
	2.4nm,0.3s						
BTLS	Baital	3.45	359	eP	Pg	07 10 16.8	-1.6
	0.8nm,0.3s						
BTLS				eS	Sg	07 11 02.3	-0.8
	1.9nm,0.8s						

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*NOU **29** 07:11:02.9,40°.15S×173°.29E,h192^{km},MLv3.6/8,Cook*

Strait, New Zealand

WEL 29 07:11:06.5±0.8**, 40°S**±3°×**17°3E**±°**, h162**km±7km**, M2.8**/13**, ML2.8**/8**, MLv2.8**/13**, Error ellipse: s-maj=0.0km s-min=0.0km az=93.5, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUWZ	**D'Urville Isla**	0.64	141	P	Pn	07 11 30.9	+0.9
DUWZ				S	Sn	07 11 49.9	+1.8
QRZ	**Quartz Range**	0.84	231	P	Pn	07 11 31.4	+0.2
QRZ				S	Sn	07 11 51.0	+0.7
QRZ	**Quartz Range**	0.84	231	P	Pn	07 11 31.4	+0.1
NNZ	**Nelson**	0.91	181	P	Pn	07 11 32.3	+0.5
NNZ				S	Sn	07 11 52.5	+1.2
NMEZ	**Namu Road**	0.96	23	P	Pn	07 11 32.0	-0.2
NBEZ	**Newall Road No**	1.10	20	P	Pn	07 11 33.0	-0.2
KHEZ	**Kahui Hut**	1.11	26	P	Pn	07 11 33.4	-0.2
PREZ	**Palmer Road**	1.12	32	P	Pn	07 11 33.5	-0.1
TCW	**Tory Channel**	1.13	144	P	Pn	07 11 34.6	+1.1
TCW				S	Sn	07 11 55.4	+1.0
LREZ	**Lake Rotokare**	1.14	43	P	Pn	07 11 33.8	+0.1
LREZ				S	Sn	07 11 55.5	+1.0
NEZ	**North Egmont**	1.16	28	P	Pn	07 11 33.6	-0.4
PKE	**Pukeiti**	1.20	23	P	Pn	07 11 33.8	-0.4
PKE				S	Sn	07 11 56.2	+0.8
TUWZ	**Tuamarina**	1.20	160	P	Pn	07 11 34.8	+0.7
TUWZ				S	Sn	07 11 56.4	+0.9
DREZ	**Durham Road**	1.27	29	P	Pn	07 11 34.5	-0.4
KIW	**Kapiti Island**	1.28	116	P	Pn	07 11 35.3	+0.4
KIW				S	Sn	07 11 56.6	-0.2
WAZ	**Wanganui**	1.34	66	P	Pn	07 11 35.9	+0.5
WAZ				S	Sn	07 11 60.0	+2.3
SNZO	**South Karori**	1.42	136	P	Pn	07 11 36.8	+0.7
MHEZ	**Mangahewa**	1.42	31	P	Pn	07 11 36.1	-0.1
WEL	**Wellington**	1.43	134	P	Pn	07 11 36.8	+0.5
BSWZ	**Blackbirch Sta**	1.46	166	P	Pn	07 11 37.2	+0.7
OHWZ	**Ohakea**	1.47	87	P	Pn	07 11 37.6	+0.9
OHWZ				S	Sn	07 12 00.8	+0.9
CAW	**Cannon Point**	1.50	123	P	Pn	07 11 37.5	+0.4
THZ	**Tophouse**	1.50	194	P	Pn	07 11 37.1	0.0
BHW	**Baring Head**	1.57	135	P	Pn	07 11 37.9	+0.2
VRZ	**Vera Road**	1.58	42	P	Pn	07 11 37.0	-0.9
MRZ	**Mangatainoka R**	1.70	103	P	Pn	07 11 39.0	-0.1
HOWZ	**Holdsworth Sta**	1.72	111	P	Pn	07 11 39.4	0.0
MSWZ	**Moikau Station**	1.79	129	P	Pn	07 11 40.1	0.0
PKVZ	**Pokaka**	1.81	57	P	Pn	07 11 39.5	-0.9
MTW	**Mount Morrison**	1.81	119	P	Pn	07 11 40.4	+0.1
POWZ	**Post Office Ro**	1.82	94	P	Pn	07 11 39.9	-0.5
DSZ	**Denniston Nort**	1.88	219	P	Pn	07 11 40.5	-0.5
PLWZ	**Palliser**	1.89	133	P	Pn	07 11 41.0	-0.2
TRVZ	**Turoa**	1.94	60	P	Pn	07 11 40.8	-1.2
TIWZ	**Tintock**	1.96	105	P	Pn	07 11 41.9	-0.1
WNVZ	**Wahianoa**	1.96	61	P	Pn	07 11 41.1	-1.0
DRZ	**Dome Shelter**	1.96	59	P	Pn	07 11 41.5	-0.8
FWVZ	**Far West T-bar**	1.96	59	P	Pn	07 11 41.1	-1.1
WHVZ	**Whangaehu Hut**	1.97	60	P	Pn	07 11 41.4	-1.0
PRWZ	**Pori Road**	1.98	98	P	Pn	07 11 42.3	+0.1
TWVZ	**Taurewa**	2.00	53	P	Pn	07 11 41.0	-1.5
MOVZ	**Moawhango**	2.02	65	P	Pn	07 11 41.3	-1.4
TUVZ	**Tukino**	2.02	60	P	Pn	07 11 41.8	-1.0
NGZ	**Ngauruhoe**	2.04	57	P	Pn	07 11 41.7	-1.3
TRWZ	**Traveller**	2.06	123	P	Pn	07 11 42.7	-0.3
SNVZ	**South Ngauruho**	2.06	58	P	Pn	07 11 42.0	-1.2
TMWZ	**Te Maipa**	2.06	114	P	Pn	07 11 43.1	0.0
WTVZ	**West Tongariro**	2.07	56	P	Pn	07 11 41.9	-1.4
NNVZ	**North Ngauruho**	2.07	56	P	Pn	07 11 42.1	-1.4
OTVZ	**Oturere**	2.09	58	P	Pn	07 11 42.3	-1.3
KRVZ	**Karewarewa**	2.11	56	P	Pn	07 11 42.4	-1.5
KHZ	**Kahutara**	2.12	177	P	Pn	07 11 43.2	-0.4
KHZ	**Kahutara**	2.12	177	P	Pn	07 11 43.3	-0.3
DVHZ	**Dannevirke**	2.12	91	P	Pn	07 11 43.0	-0.8
NTVZ	**North Tongarir**	2.13	56	P	Pn	07 11 42.6	-1.4
ETVZ	**East Tongariro**	2.13	58	P	Pn	07 11 42.9	-1.2
TMVZ	**Te Maari**	2.14	57	P	Pn	07 11 43.1	-1.1
PNHZ	**Pukenui**	2.19	81	P	Pn	07 11 43.7	-0.9
BFZ	**Birch Farm**	2.21	101	P	Pn	07 11 44.3	-0.5
BFZ	**Birch Farm**	2.21	101	P	Pn	07 11 44.5	-0.3
BHHZ	**Black Hill Sta**	2.21	69	P	Pn	07 11 43.1	-1.8
KATZ	**Kakaramea**	2.22	54	P	Pn	07 11 43.7	-1.3
CPWZ	**Castlepoint**	2.22	107	P	Pn	07 11 45.1	+0.2
RATZ	**Rangitukua**	2.33	53	P	Pn	07 11 45.2	-1.1
WPHZ	**Waipukurau**	2.35	85	P	Pn	07 11 45.6	-0.8
ANWZ	**Angora Road**	2.36	95	P	Pn	07 11 46.0	-0.5
KRHZ	**Kereru**	2.38	75	P	Pn	07 11 45.5	-1.3
WATZ	**Wairara**	2.41	49	P	Pn	07 11 45.8	-1.4
PRHZ	**Porangahau**	2.48	90	P	Pn	07 11 47.2	-0.8
KWHZ	**Kaweka Forest**	2.49	70	P	Pn	07 11 47.2	-1.0
LTZ	**Lake Taylor**	2.62	198	P	Pn	07 11 48.4	-1.3
BKZ	**Black Stump Fm**	2.65	66	P	Pn	07 11 48.0	-2.0
BKZ	**Black Stump Fm**	2.65	66	P	Pn	07 11 48.0	-2.1
PXZ	**Pawanui**	2.67	85	P	Pn	07 11 49.1	-1.2
GVZ	**Greta Valley S**	2.68	186	P	Pn	07 11 49.2	-1.2
MCHZ	**McNeill Hill**	2.68	72	P	Pn	07 11 49.3	-1.1
KAHZ	**Kahuranaki**	2.72	80	P	Pn	07 11 49.8	-1.1
MRHZ	**Matea Rd**	2.76	59	P	Pn	07 11 48.8	-2.6
INZ	**Inchbonnie**	2.83	211	P	Pn	07 11 50.7	-1.5
NMHZ	**Naumai**	2.89	67	P	Pn	07 11 52.1	-1.1
AMCZ	**Amberley**	2.92	191	P	Pn	07 11 52.0	-1.4
ARHZ	**Aropaoanui**	2.96	71	P	Pn	07 11 52.7	-1.2
MTHZ	**Maungataniwha**	3.03	63	P	Pn	07 11 52.2	-2.6
OXZ	**Oxford**	3.19	198	P	Pn	07 11 54.3	-2.4
RTZ	**Ruatahuna**	3.25	60	P	Pn	07 11 54.3	-3.2
TGRZ	**Tauranga**	3.40	42	P	Pn	07 11 58.8	-0.7
TGRZ				P	Pn	07 11 59.7	+0.2
OKCZ	**Okains Bay**	3.43	184	P	Pn	07 11 57.3	-2.4
MQZ	**McQueen's Vall**	3.45	189	P	Pn	07 11 57.1	-2.8
MHCZ	**Mount Hutt**	3.50	202	P	Pn	07 11 58.3	-2.4
URZ	**Urewera**	3.53	56	P	Pn	07 11 57.3	-3.8
URZ	**Urewera**	3.53	56	P	Pn	07 11 58.1	-3.0
KNZ	**Kokohu**	3.54	70	P	Pn	07 11 58.6	-2.6
RACZ	**Rakaia**	3.55	195	P	Pn	07 11 58.9	-2.3
AKCZ	**Akaroa Harbour**	3.58	186	P	Pn	07 11 59.4	-2.3
MHGZ	**Mahia Peninsul**	3.66	73	P	Pn	07 12 00.6	-2.2
PRGZ	**Paritu Road**	3.73	70	P	Pn	07 12 01.1	-2.6
RIGZ	**Rimuhau**	3.74	66	P	Pn	07 12 00.7	-3.0
MWZ	**Matawai**	3.76	60	P	Pn	07 12 00.6	-3.5
WACZ	**Wakanui South**	3.82	197	P	Pn	07 12 02.3	-2.3
TKGZ	**Te Karaka**	3.92	63	P	Pn	07 12 02.9	-3.1
ARCZ	**Arundel**	4.00	204	P	Pn	07 12 04.2	-2.8
RUGZ	**Raukumara Rang**	4.07	56	P	Pn	07 12 03.9	-4.2
HAZ	**Te Kaha**	4.26	55	P	Pn	07 12 05.7	-4.7
TMZ	**Timaru**	4.45	203	P	Pn	07 12 10.0	-2.9
WMGZ	**Waiomatatini S**	4.63	59	P	Pn	07 12 11.0	-4.2
OUZ	**Omahuta**	5.08	2	P	Pn	07 12 16.2	-5.0
JCZ	**Jackson Bay**	5.09	221	P	Pn	07 12 18.8	-2.6
ODZ	**Otahua Downs**	5.15	202	P	Pn	07 12 19.2	-2.9
ODZ	**Otahua Downs**	5.15	202	P	Pn	07 12 20.5	-1.6
	23nm,1.8s						

KRSC 29 07:15:48.2±2.1**, 51°.01N**×**160°.43E, h81**km±25km**, ML3.7, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDTR	**Khodutka, Kamc**	1.68	300	*e*P	Pn	07 16 17.1	+1.3
KDTR				*e*S	Sn	07 16 37.4	+0.6
RUS	**Russkaya**	1.86	321	*e*P	Pn	07 16 19.9	+1.7
RUS				*e*S	Sn	07 16 42.0	+0.9
MTVR	**Mutnovka**	2.03	318	*e*P	Pn	07 16 22.6	+1.9
MTVR				*e*S	Sn	07 16 47.4	+2.0
ASAK	**Asacha**	2.09	312	*e*P	Pn	07 16 23.9	+2.5
ASAK				*e*S	Sn	07 16 49.4	+2.7
SPN	**Mys Shipunski**	2.11	353	*e*S	Sn	07 16 47.2	+0.2
NLC	**Nalytchevo**	2.27	343	*e*S	Sn	07 16 53.8	+3.0
DALK	**Dalny**	2.28	334	*e*S	Sn	07 16 53.7	+2.7
PET	**Petropavlovsk**	2.30	332	*e*S	Sn	07 16 54.1	+2.6
KRMR	**Karymshinskiy**	2.31	323	*e*P	Pn	07 16 28.0	+3.7
KRMR				*e*S	Sn	07 16 55.7	+3.8
UGLR	**Uglovaya**	2.42	336	*e*P	Pn	07 16 28.0	+2.2
SDLR	**Sedlovina**	2.47	338	*e*P	Pn	07 16 29.5	+3.0
AVH	**Avacha**	2.49	336	*e*P	Pn	07 16 29.8	+3.1
AVH				*e*S	Sn	07 16 59.1	+2.8
GNL	**Ganaly**	3.10	331	*e*P	Pn	07 16 37.0	+2.1
MKZ	**Mys Kozlova**	3.64	12	*e*P	Pn	07 16 43.8	+1.6
TUMD	**Tumrok D**	4.21	360	*e*S	Sn	07 17 39.5	+1.7
TUMR	**Tumrok**	4.29	358	*e*P	Pn	07 16 54.8	+3.7
KBTR	**Krutoberegovo**	5.40	14	*e*P	Pn	07 17 09.0	+2.8

DJA 29 07:15:59.0±0.5**, 1°N**±9°×**12°1E**±°**, h10**km**, M2.5**/4**, MLv2.5**/4**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRSI	**Marisa**	0.55	119	P	Pg	07 16 09.8	+0.1
MRSI				S	Sb	07 16 18.9	+0.2
GTOI	**Gorontalo**	1.56	94	P	Pn	07 16 24.5	-2.2

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*DJA **29** 07:16:47.4±0.4, 4°S±4°×12°7E±°, h10km, M4.2/10, mb4.5/5, mB4.9/2, MLv4.0/10, Mw(mB)4.2/2*

*IDC **29** 07:16:50.9±2.3, 3°.56S×126°.79E, h57km±24km, mb3.6/4, mb1 3.9/8, mb1mx3.4/37, mbtmp4.0/8, ML3.9/4, Error ellipse: s-maj=18.9km s-min=14.6km az=96.0*

ISC 29 07:16:49.3±0.8**, 3°.58S**±0°.06×**126°.71E**±0°.06**, h35**km**, n22, σ1s.93**/23**, mb3.9**/4**, Buru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAI	**Ambon**	1.49	94	P	Pn	07 17 14.6	+1.0
AAI				S	Sn	07 17 31.9	+0.1
AAI	**Ambon**	1.49	94	S	Sn	07 17 32.2	+0.4
AAI	**Ambon**	1.49	94	P	Pn	07 17 14.5	+1.0
SANI	**Sanana**	1.68	335	P	Pn	07 17 16.2	0.0
SANI	**Sanana**	1.68	335	P	Pn	07 17 16.3	0.0
MSAI	**Masohi**	2.23	84	P	Pn	07 17 29.8	+6.0
LBMI	**Labuha**	3.03	15	P	Pn	07 17 36.7	+1.9
LBMI	**Labuha**	3.03	15	P	Pn	07 17 37.4	+2.6
SWI	**Sorong**	5.29	59	P	Pn	07 18 07.5	+1.6
	0.3nm47nm,0.6s						
SWI	**Sorong**	5.29	59	P	Pn	07 18 15.1	+9.2
SIJI	**Sorong**	5.29	59	P	Pn	07 18 07.8	+1.9
	6.6nm,0.3s,baz=281,slow=23,SNR=16						
SIJI				S	Sn	07 19 06.0	+0.2
	5.9nm,0.3s,baz=16,slow=22,SNR=20						
FAKI	**Fak Fak**	5.57	83	P	Pn	07 18 11.9	+2.1
	0.1nm28nm,1.2s						
GTOI	**Gorontalo**	5.59	319	P	Pn	07 18 13.8	+3.8
	0.1nm6.7nm,0.5s						
APSI	**Ampana**	5.71	298	P	Pn	07 18 15.3	+3.6
MRSI	**Marisa**	6.24	310	P	Pn	07 18 19.9	+0.9
KAPI	**Kappang**	7.08	258	P	Pn	07 18 34.5	+4.0
	1.3nm,0.3s,baz=86,slow=23,SNR=5.8						
FITZ	**Fitzroy Crossi**	14.46	184	P	Pn	07 20 12.3	+0.7
	0.1nm,0.3s,baz=30,slow=11,SNR=2.3						
WRA	**Warramunga Arr**	17.88	156	P	Pn	07 20 54.8	-0.7
	0.9nm,0.3s,baz=343,slow=13,SNR=42						
ASAR	**Alice Springs**	21.14	161	P	P	07 21 31.1	-0.3
	2.2nm,0.4s,baz=344,slow=12,SNR=36						
ASAR				S	S	07 25 25.1	+0.2
	0.3nm,0.7s,baz=348,slow=21,SNR=4.3						
STKA	**Stephens Creek**	31.43	155	P	P	07 23 06.1	-1.4
	0.5nm,0.4s,baz=315,slow=13,SNR=4.3						
PETK	**Petropavlovsk-**	62.20	21	P	P	07 27 06.3	-0.9
	1.3nm,0.6s,baz=204,slow=3.2,SNR=1.6						
MKAR	**Makanchi Array**	63.60	328	P	P	07 27 14.8	-1.9
	0.4nm,0.4s,baz=118,slow=8.4,SNR=1.8						

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*IDC **29** 07:22:52.7±2.7, 6°.22S×130°.10E, h124km±31km, mb3.6/2, mb1 3.7/6, mb1mx3.2/36, mbtmp4.0/6, Error ellipse: s-maj=53.5km s-min=17.9km az=81.0*

ISC 29 07:22:50.5±0.9**, 6°.22S**±0°.07×**130°.1E**±0°.2**, h100**km**, n6, σ3s.27**/8**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	5.46	13	P	Pn	07 24 11.2	+1.8
	2.5nm,0.3s,baz=46,slow=21,SNR=15						
SIJI				S	Sn	07 25 07.3	-3.6
	6.9nm,0.3s,baz=257,slow=23,SNR=18						
FITZ	**Fitzroy Crossi**	12.56	200	P	Pn	07 25 48.6	+2.9
	0.2nm,0.3s,baz=27,slow=10,SNR=15						
FITZ				S	Sn	07 27 59.0	-4.9
	0.4nm,0.3s,baz=301,slow=22,SNR=8.4						
WRA	**Warramunga Arr**	14.26	163	P	Pn	07 26 08.8	+0.9
	0.9nm,0.3s,baz=338,slow=13,SNR=16						
WRA				S	Sn	07 28 35.8	-9.3
	1.1nm,0.3s,baz=328,slow=22,SNR=7.4						
ASAR	**Alice Springs**	17.74	168	P	P	07 26 52.1	+1.5
	0.6nm,0.3s,baz=348,slow=9.6,SNR=38						
ASAR				S	Sn	07 29 58.8	-10
	0.2nm,0.3s,baz=282,slow=21,SNR=5.5						
STKA	**Stephens Creek**	27.71	159	P	P	07 28 28.2	-1.2
	0.6nm,0.4s,baz=334,slow=8.1,SNR=4.8						
MKAR	**Makanchi Array**	67.61	327	P	P	07 33 36.5	-0.1
	1.3nm,0.6s,baz=124,slow=8.0,SNR=10						

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*NEIC **29** 07:34:17.6±2.0, 15°.78S±0°.10×175°.28W±0°.09, h303km±5km, mb4.4/80, Error ellipse: s-maj=14.7km s-min=12.2km az=155.0*

*IDC **29** 07:34:17.6±1.7, 15°.77S×175°.28W, h309km±16km, mb3.9/14, mb1 4.1/16, mb1mx3.9/38, mbtmp4.5/16, Error ellipse: s-maj=17.3km s-min=11.1km az=132.0*

*NOU **29** 07:34:18.4, 15°.82S×175°.08W, h334km, mb4.5/26, Tonga Islands*

ISC 29 07:34:16.8±0.3**, 15°.81S**±0°.07×**175°.29W**±0°.06**, h300**km**, n198, σ0s.67**/189**, mb4.4**/64**, 7C-17D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	3.89	61	P	Pn	07 35 23.4	+1.4
	95nm,0.3s,baz=57,slow=1.6,SNR=45						
DGTI	**Dogotuki**	4.81	263	P	Pn	07 35 37.5	+5.3
	168nm,0.9s						
NIUE	**Niue**	6.07	123		Pn	07 35 48.0	+1.1
NIUE				Sn	S	07 36 59.5	-0.1
MSVF	**Nonsavu**	6.66	252	Pn	Pn	07 35 54.6	+0.4
MARNC	**Mare, Loyalty**	16.78	248	P	Pn	07 37 54.8	-1.3
	1.7nm,0.6s						
PINNC	**Pines Island,**	17.64	245	P	Pn	07 38 05.5	-0.7
DZM	**Mont Dzumac**	18.36	247	P	P	07 38 09.7	-0.8
	0.4nm,0.3s,baz=83,slow=20,SNR=2.3						
DZM	**Mont Dzumac**	18.36	247	P	P	07 38 13.3	+2.8
DZM				IAmb	IAmb	07 38 18.1	
	comp=Z,12nm,0.8s						
OUZ	**Omahuta**	21.75	205	P	P	07 38 46.1	+1.6
OUZ				IAmb	IAmb	07 38 51.8	
	comp=Z,27nm,1.3s						
URZ	**Urewera**	23.35	195	P	P	07 38 57.8	-1.2
	comp=Z,11nm,0.6s,baz=300,slow=23,SNR=8.6						
URZ	**Urewera**	23.35	195	P	P	07 38 57.9	-1.0
URZ				IAmb	IAmb	07 38 58.3	
	comp=Z,16nm,0.9s						
URZ	**Urewera**	23.35	195	P	P	07 38 58.0	-1.0
BKZ	**Black Stump Fm**	24.36	196	P	P	07 39 07.6	-0.6
	comp=Z,29nm,1.6s						
QRZ	**Quartz Range**	27.08	201	P	P	07 39 31.9	-0.5
QRZ	**Quartz Range**	27.08	201	P	P	07 39 31.9	-0.5
THZ	**Tophouse**	27.80	199	P	P	07 39 38.0	-0.8
THZ				IAmb	IAmb	07 39 53.6	
	comp=Z,24nm,1.4s						
MLZ	**Mavora Lakes**	32.61	202	P	P	07 40 20.4	-0.6
MLZ				IAmb	IAmb	07 40 23.1	
	comp=Z,12nm,0.9s						
EIDS	**Eidsvold**	32.81	248	P	P	07 40 22.7	-0.2
EIDS				IAmb	IAmb	07 40 37.6	
	comp=Z,11nm,1.3s						
WHZ	**Wether Hill Ro**	33.12	202	P	P	07 40 25.9	+0.6
ARMA	**Armidale**	33.58	238	P	P	07 40 29.7	+0.1
ARMA				IAmb	IAmb	07 40 46.8	
	comp=Z,13nm,1.2s						
CTAO	**Charters Tower**	36.78	258	P	P	07 40 56.4	-0.3
CTAO				IAmb	IAmb	07 40 57.9	
	comp=Z,8.2nm,0.6s						
CTAO	**Charters Tower**	36.78	258	P	P	07 40 56.6	-0.1
CNB	**Canberra Magne**	37.07	232	P	P	07 40 58.6	-0.4
	comp=Z,30nm,1.3s						
PMG	**Port Moresby**	37.15	275	P	P	07 41 00.5	+0.6
PMG				IAmb	IAmb	07 41 07.6	
	comp=Z,19nm,0.8s						
CAN	**Canberra**	37.34	232	P	P	07 41 01.3	0.0
CAN				IAmb	IAmb	07 41 01.5	
	comp=Z,13nm,0.9s						
CAN	**Canberra**	37.34	232	P	P	07 41 01.0	-0.3
CMSA	**Cobar Meteorol**	38.78	239	P	P	07 41 13.1	-0.1
QLP	**Quilpie**	39.08	247	P	P	07 41 15.9	+0.1
COEN	**Coen**	40.14	267	P	P	07 41 26.2	+1.6
TOO	**Toolangi**	40.80	230	P	P	07 41 29.8	+0.1
TOO				IAmb	IAmb	07 41 30.6	
	comp=Z,23nm,0.9s						
TOO	**Toolangi**	40.80	230	P	P	07 41 29.5	-0.3
TAU	**Tasmania Unive**	41.79	222	P	P	07 41 37.5	-0.1
TAU				IAmb	IAmb	07 41 47.9	
	comp=Z,43nm,1.4s						
STKA	**Stephens Creek**	42.26	240	P	P	07 41 40.7	-0.8
	comp=Z,3.7nm,0.6s,baz=93,slow=10,SNR=8.6						
STKA	**Stephens Creek**	42.26	240	P	P	07 41 41.1	-0.4
HTT	**Hallett**	44.78	238	P	P	07 42 01.2	-0.4
	comp=Z,10nm,1.3s						
OOD	**Oodnadatta**	46.78	247	P	P	07 42 16.8	-0.3
	comp=Z,13nm,2.5s						
BBOO	**Buckleboo**	47.03	240	P	P	07 42 18.4	-0.6
BBOO	**Buckleboo**	47.03	240	P	P	07 42 18.6	-0.4
WB2	**Warramunga Arr**	47.97	257	P	P	07 42 25.9	-0.4
WRAB	**Tennant Creek**	47.97	257	P	P	07 42 26.0	-0.3
WRA	**Warramunga Arr**	47.98	257	P	P	07 42 26.1	-0.4
	comp=Z,19nm,0.5s,baz=92,slow=6.9,SNR=275						
WRA				PcP	PcP	07 43 49.1	-0.5
	comp=Z,3.2nm,0.7s,baz=90,slow=3.8,SNR=6.7						
WRA	**Warramunga Arr**	47.98	257	P	P	07 42 25.3	-1.1
AS31	**Alice Springs**	48.25	252	P	P	07 42 28.5	0.0
ASAR	**Alice Springs**	48.25	252	P	P	07 42 28.4	-0.1
	comp=Z,123nm,0.6s,baz=87,slow=8.0,SNR=1989						
ASAR				PcP	PcP	07 43 50.1	-0.3
	comp=Z,3.2nm,0.7s,baz=96,slow=4.1,SNR=4.8						
ASAR	**Alice Springs**	48.25	252	P	P	07 42 28.8	+0.3
MULG	**Mulgathing**	48.41	243	P	P	07 42 29.1	-0.4
MTN	**Manton Dam**	51.88	266	P	P	07 42 55.3	-0.4
MTN				IAmb	IAmb	07 42 56.6	
	comp=Z,20nm,0.9s						
MTN	**Manton Dam**	51.88	266	P	P	07 42 55.2	-0.4
DRS	**Darwin Rock St**	52.18	266	P	P	07 42 57.6	-0.2
WRKA	**Warakurna**	53.34	250	P	P	07 43 05.8	-0.4
FORT	**Forrest**	53.61	243	P	P	07 43 07.2	-0.8
FORT	**Forrest**	53.61	243	P	P	07 43 07.6	-0.4
KNRA	**Kununurra**	53.70	262	P	P	07 43 08.4	-0.5
KNRA				IAmb	IAmb	07 43 16.0	
	comp=Z,9.4nm,0.7s						
KNRA	**Kununurra**	53.70	262	P	P	07 43 08.7	-0.2
	comp=Z,17nm,0.7s						
SIJI	**Sorong**	54.73	280	P	P	07 43 17.0	+0.7
	comp=Z,14nm,0.5s,baz=84,slow=7.8,SNR=14						
SWI	**Sorong**	54.74	280	P	P	07 43 17.2	+0.9
	comp=Z,42nm,0.9s						
SANI	**Sanana**	59.39	277	P	P	07 43 48.9	+0.1
	comp=Z,16nm,0.7s						
PSA00	**Pilbara Seismi**	61.34	254	P	P	07 44 01.4	-0.4
PSA00	**Pilbara Seismi**	61.34	254	P	P	07 44 01.1	-0.7
PSA00				IAmb	IAmb	07 44 02.2	
	comp=Z,8.8nm,0.9s						
EDFI	**Ende, Flores**	61.79	268	P	P	07 44 04.6	-0.4
	comp=Z,19nm,0.8s						
SBA	**Scott Base**	62.71	184	P	P	07 44 11.7	+1.9
SBA				IAmb	IAmb	07 44 12.0	
	comp=Z,7.5nm,0.8s						
VNDA	**Vanda**	62.80	185	P	P	07 44 11.2	+0.8
	comp=Z,3.4nm,0.9s,baz=22,slow=6.7,SNR=10						
VNDA	**Vanda**	62.80	185	P	P	07 44 11.2	+0.8
MPSI	**Mapaga**	65.91	278	P	P	07 44 31.6	0.0
	comp=Z,22nm,0.8s						
GIRL	**Giralia**	66.37	252	P	P	07 44 35.0	+0.6
MJAR	**Matsushiro Arr**	68.09	321	P	P	07 44 44.9	+0.1
	comp=Z,0.9nm,0.4s,baz=153,slow=5.7,SNR=4.4						
MAT	**Matsushiro**	68.09	321	P	P	07 44 44.8	0.0
JWT	**Wachi**	69.03	318	P	P	07 44 51.1	+0.5
JMN	**Monobe**	69.08	316	P	P	07 44 51.9	+1.0
JAGI	**Jajag, Banyuwa**	69.11	267	P	P	07 44 50.3	-1.3
UNV	**Unalaska Valle**	69.78	6	P	P	07 44 54.2	-0.4
PCJI	**Pacitan**	72.03	266	P	P	07 45 09.5	+0.4
	comp=Z,69nm,1.1s						
PEA0B	**Petropavlovsk-**	72.48	343	P	P	07 45 10.4	-0.4
PETK	**Petropavlovsk-**	72.48	343	P	P	07 45 10.2	-0.6
	comp=Z,5.3nm,0.7s,baz=111,slow=9.3,SNR=13						
UGM	**Wanagama**	72.73	266	P	P	07 45 13.2	-0.1
KMRM	**Mail Ridge**	73.51	39	P	P	07 45 18.6	+1.3
KMRM				IAmb	IAmb	07 45 19.1	
	comp=Z,10nm,0.9s						
KRMB	**Red Mountain**	74.19	38	P	P	07 45 22.4	+1.2
KRMB				IAmb	IAmb	07 45 49.1	
	comp=Z,22nm,1.5s						
QSPA	**South Pole Qui**	74.24	180	P	P	07 45 21.6	+0.4
QSPA				IAmb	IAmb	07 45 22.2	
	comp=Z,7.9nm,0.8s						
YBH	**Yreka Blue Hor**	75.03	38	P	P	07 45 27.0	+1.0
PNTR	**Pine Nut**	75.39	42	P	P	07 45 29.2	+1.0
PNTR				IAmb	IAmb	07 45 29.6	
	comp=Z,5.3nm,0.8s						
HUMO	**Hull Mountain**	75.42	37	P	P	07 45 29.2	+1.1
YERR	**Yerington**	75.56	42	P	P	07 45 29.4	+0.3
KDAK	**Kodiak Island**	75.69	12	P	P	07 45 29.3	+0.2
KVN	**Kaiserville**	76.33	42	P	P	07 45 33.5	0.0
TPH	**Tonopah**	76.37	44	P	P	07 45 34.1	+0.4
TPH				IAmb	IAmb	07 45 34.5	
	comp=Z,8.5nm,0.7s						
P18K	**Big Mountain,**	76.69	10	P	P	07 45 34.6	-0.2
P18K				IAmb	IAmb	07 45 35.2	
	comp=Z,9.2nm,0.7s						
PINE	**Pine Mountain**	77.31	37	P	P	07 45 39.1	+0.2
N19K	**Bonanza Creek**	78.16	10	P	P	07 45 42.2	-0.8
N19K				IAmb	IAmb	07 46 02.3	
	comp=Z,6.0nm,1.1s						
J08A	**Circle Bar Ran**	78.52	39	P	P	07 45 45.3	0.0
X16A	**Lo Mia Camp, P**	78.55	49	P	P	07 45 46.7	+0.9
X16A				IAmb	IAmb	07 45 47.6	
	comp=Z,5.1nm,1.2s						
NJ2	**Nanjing**	78.96	308	*e*P	P	07 45 49.0	+1.2
NJ2				pmax	pmax		
	comp=Z,13nm,0.6s						
HAWA	**Hanford**	79.66	36	P	P	07 45 50.8	-0.5
HAWA				IAmb	IAmb	07 45 52.6	
	comp=Z,4.6nm,1.0s						
KNK	**Knik Glacier**	79.87	13	P	P	07 45 51.9	-0.2
KNK				IAmb	IAmb	07 45 54.4	
	comp=Z,14nm,1.2s						
BMO	**Blue Mountains**	80.05	38	P	P	07 45 53.6	+0.1
MFID	**Camas Ranch**	80.15	40	P	P	07 45 54.0	-0.1
D08A	**Wollman Farm,**	80.39	35	P	P	07 45 54.7	-0.4
D08A				IAmb	IAmb	07 45 56.3	
	comp=Z,4.1nm,0.9s						
SCM	**Sheep Creek Mo**	80.49	13	P	P	07 45 55.2	-0.3
PLID	**Pearl Lake**	80.95	38	P	P	07 45 58.0	-0.5
J20K	**Nowinta River**	81.38	9	P	P	07 46 00.3	+0.3
J20K				IAmb	IAmb	07 46 01.0	
	comp=Z,6.9nm,0.9s						
MNTX	**Cornudas Mount**	81.93	54	P	P	07 46 03.8	+0.2
TXAR	**Lajitas Array**	82.35	57	P	P	07 46 06.7	+0.7
	comp=Z,0.9nm,0.9s,baz=218,slow=7.9,SNR=8.1						
L26K	**Log Cabin Wild**	82.44	14	P	P	07 46 06.0	+0.5
ANMO	**Albuquerque**	82.46	51	P	P	07 46 05.7	-0.8
ANMO				IAmb	IAmb	07 46 07.7	
	comp=Z,5.4nm,1.1s						
WRH	**Wood River Hil**	82.70	12	P	P	07 46 06.2	-0.6
WRH				IAmb	IAmb	07 46 07.4	
	comp=Z,15nm,1.3s						
HDA	**Harding Lake**	82.87	12	P	P	07 46 07.5	-0.2
HDA				IAmb	IAmb	07 46 08.1	
	comp=Z,12nm,1.3s						
CCB	**Clear Creek Bu**	82.91	12	P	P	07 46 07.5	-0.4
CCB				IAmb	IAmb	07 46 07.9	
	comp=Z,11nm,1.2s						
H21K	**Melozitna Rive**	82.97	9	P	P	07 46 08.6	+0.4
I23K	**Minto, Yukon-K**	83.08	11	P	P	07 46 08.3	-0.3
I23K				IAmb	IAmb	07 46 09.3	
	comp=Z,3.9nm,0.8s						
IL31		83.20	12	P	P	07 46 08.8	-0.5
IL31				IAmb	IAmb	07 46 09.8	
	comp=Z,4.4nm,0.7s						
ILAR	**Eielson Array**	83.20	12	P	P	07 46 08.6	-0.7
	comp=Z,2.1nm,0.5s,baz=220,slow=5.5,SNR=59						
TPAW	**Teton Pass**	83.24	41	P	P	07 46 11.0	+0.7
TPAW				IAmb	IAmb	07 46 11.6	
	comp=Z,6.1nm,0.8s						
POKR	**Poker Plat Res**	83.41	11	P	P	07 46 09.9	-0.4
BW06	**Boulder Array**	83.79	42	P	P	07 46 12.9	-0.3
BW06				IAmb	IAmb	07 46 13.5	
	comp=Z,3.5nm,0.8s						
PD31	**Pinedale Array**	83.79	42	P	P	07 46 13.0	-0.2
PD31				IAmb	IAmb	07 46 13.5	
	comp=Z,3.0nm,0.8s						
PDAR	**Pinedale Array**	83.79	42	P	P	07 46 12.8	-0.4
	comp=Z,3.0nm,0.7s,baz=210,slow=3.0,SNR=32						
PDAR	**Pinedale Array**	83.79	42	P	P	07 46 13.1	0.0
SMCO	**Snowmass**	83.91	47	P	P	07 46 13.6	-0.4
H24K	**Noodor Dome**	83.97	11	P	P	07 46 12.4	-0.9
H24K				IAmb	IAmb	07 46 14.3	

	comp=Z,6.0nm,1.4s						
DAWY	Dawson	84.27	15	P	P	07 46 15.0	+0.2
DAWY				IAmb	IAmb	07 46 15.8	
	comp=Z,5.9nm,0.9s						
SDCO	Great Sand Dun	84.34	48	P	P	07 46 15.6	-0.5
BJI	Beijing	84.43	314	P	P	07 46 17.3	+1.2
BJI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
BMAR	Burnt Mountain	86.00	11	P	P	07 46 23.9	+0.7
TOLK	Toolik Lake Re	86.22	9	P	P	07 46 24.4	+0.1
TOLK				IAmb	IAmb	07 46 24.5	
	comp=Z,4.4nm,1.2s						
EDM	Edmonton	86.79	32	P	P	07 46 26.9	-0.4
MAW	Mawson	86.82	199	P	P	07 46 27.1	-0.2
	comp=Z,7.2nm,0.6s,baz=138,slow=4.9,SNR=36						
MAW	Mawson	86.82	199	P	P	07 46 27.3	0.0
HHC	Hu-ho-hao-te	87.97	313	*e*P	P	07 46 33.0	-0.4
HHC				pmax	pmax		
	comp=Z,12nm,0.7s						
HHC				pmax	pmax		
	comp=Z,140nm,4.9s						
BTO	Baotou	88.97	313	*e*P	P	07 46 39.5	+1.5
INK	Inuvik	89.10	14	P	P	07 46 36.7	-1.1
	comp=Z,0.5nm,0.5s,baz=223,slow=3.6,SNR=6.5						
INK	Inuvik	89.10	14	P	P	07 46 37.2	-0.6
CMAR	Chiang Mai Arr	91.02	289	P	P	07 46 49.0	+1.1
	comp=Z,2.1nm,0.7s,baz=101,slow=2.6,SNR=9.5						
VNA3	Neumayer Olymp	92.61	175	P	P	07 46 53.8	-0.4
VNA2	Neumayer--Watz	93.08	176	P	P	07 46 56.1	-0.4
	baz=191,slow=3.6						
A36M	Sachs Harbour	93.72	14	P	P	07 46 59.0	-0.1
SONM	Songino Array	93.94	319	P	P	07 47 00.8	-0.1
	comp=Z,0.5nm,0.6s,baz=144,slow=5.0,SNR=2.9						
MKAR	Makanchi Array	109.81	315	PKiKP	PKiKP	07 52 11.2	-1.2
	comp=Z,1.0nm,0.6s,baz=127,slow=1.7,SNR=5.6						
ARCES	ARCESS Array B	124.74	351	PKP	PKPdf	07 52 39.5	-0.8
	comp=Z,4.1nm,0.6s,baz=6.2,slow=1.7,SNR=22						
ARCES	ARCESS Array B	124.74	351		PKPdf	07 52 39.7	-0.6
FINES	FINESS Array B	131.93	346	PKP	PKPdf	07 52 54.6	+0.5
	comp=Z,3.4nm,0.8s,baz=208,slow=6.5,SNR=5.4						
NOA	NORSAR Array B	134.59	356	PKP	PKPdf	07 52 58.9	-0.4
	comp=Z,0.5nm,0.7s,baz=333,slow=0.1,SNR=2.0						
AKASG	Malin Array Be	139.99	336	PKP	PKPdf	07 53 08.6	-0.9
	comp=Z,0.9nm,0.6s,baz=39,slow=3.5,SNR=3.9						
KMBO	Kilima Mbogo	143.71	245	PKP	PKPbc	07 53 16.1	+0.1
	comp=Z,6.6nm,0.6s,baz=71,slow=6.0,SNR=20						
KMBO	Kilima Mbogo	143.71	245	PKPdf	PKPbc	07 53 16.0	0.0
KSP	Ksiaz	143.83	348	*e*PKP	PKPbc	07 53 15.0	+0.1
KOLS	Kolonicke sedl	143.97	340	*e*PKP	PKPab	07 53 15.1	+0.3
BUR08	Bucovina Ar. S	144.02	336	PKPdf	PKPbc	07 53 15.8	+0.1
BURAR	Bucovina Array	144.03	336	⇓P	PKPbc	07 53 16.1	+0.3
BURAR	Bucovina Array	144.03	336		PKPbc	07 53 15.5	-0.2
NIE	Niedzica	144.15	343	*e*PKP	PKPdf	07 53 16.7	-0.3
UPC	Upice	144.20	348	*e*PKP	PKPbc	07 53 15.9	-0.1
GAZ	Gaziantep	144.23	313		PKPab	07 53 16.1	-0.2
DPC	Dobruska-Polom	144.29	347	*e*PKP	PKPab	07 53 15.9	-0.1
OKC	Ostrava-Krasne	144.34	345	*e*PKP	PKPab	07 53 16.0	-0.2
MORC	Moravsky Berou	144.55	346	⇑P	PKPbc	07 53 17.4	+0.2
MORC	Moravsky Berou	144.55	346	*e*PKP	PKPab	07 53 17.0	-0.1
TRPA	Tarpa	144.58	339	⇓P	PKPab	07 53 17.0	-0.1
IZVR	Izvoarele	144.59	332	⇑P	PKPbc	07 53 17.4	+0.1
LANS	Liptovska Anna	144.63	343	*e*PKP	PKPdf	07 53 17.9	+0.1
BMR	Baia Mare	144.63	338	⇓P	PKPbc	07 53 17.3	-0.1
CFR	Carcaliu	144.70	331	⇑P	PKPbc	07 53 17.4	-0.2
TPGR	Topolog	144.80	330	⇓P	PKPbc	07 53 17.1	-0.9
ARCR	ARCALIA	144.80	337	⇓P	PKPdf	07 53 18.2	+0.1
VRI	Vrincioaia	144.81	333	⇓P	PKPbc	07 53 17.9	-0.1
PLOR	Plostina	144.85	333	⇑P	PKPbc	07 53 18.3	+0.1
PRU	Pruhonice	144.99	349	*e*PKP	PKPdf	07 53 18.2	-0.2
COVR	Voineasa-Covas	145.05	333	⇑P	PKPbc	07 53 18.8	0.0
HARR	Harsova	145.16	331	⇑P	PKPab	07 53 19.6	+0.1
VRAC	Vranov	145.21	346	*e*PKP	PKPdf	07 53 18.7	-0.1
BR131	Keskin Array S	145.29	319		PKPdf	07 53 19.5	+0.1
BRTR	Keskin Array B	145.29	319	PKPbc	PKPdf	07 53 19.6	+0.2
	comp=Z,10nm,0.9s,baz=105,slow=2.7,SNR=38						
BRTR	Keskin Array B	145.29	319	PKPdf	PKPdf	07 53 19.1	-0.3
DOPR	Dopca	145.30	334	⇓P	PKPab	07 53 20.3	+0.3
VYHS	Vyhne	145.40	343	*e*PKP	PKPbc	07 53 20.0	+0.3
MLR	Muntele Rosu	145.44	333	⇓P	PKPab	07 53 20.5	-0.2
MLR	Muntele Rosu	145.44	333	PKPdf	PKPdf	07 53 18.9	-0.6
ISR	Istrita	145.47	332	⇓P	PKPbc	07 53 20.3	+0.2
KRUC	Moravsky	145.48	346	*e*PKP	PKPbc	07 53 19.6	-0.3
DRGR		145.66	338	⇓P	PKPbc	07 53 20.3	-0.3
SECR		145.75	333	⇓P	PKPbc	07 53 20.8	-0.1
VOIR		145.87	334	⇓P	PKPbc	07 53 21.3	0.0
KHC	Kasperske Hory	145.98	350	*e*PKP	PKPdf	07 53 20.2	0.0
KHC	Kasperske Hory	145.98	350		PKPdf	07 53 19.4	-0.7
ARR	Arges	146.10	334	⇓P	PKPab	07 53 22.9	-0.3
CKRC	Cesky Krumlov	146.15	349	*e*PKP	PKPab	07 53 22.7	-0.5
GEC2	GERESS Array S	146.24	349		PKPdf	07 53 20.2	-0.4
GERES	GERESS Array B	146.24	349	PKPbc	PKPbc	07 53 21.6	-0.7
	comp=Z,1.1nm,0.5s,baz=64,slow=3.1,SNR=4.4						
SIRR	Siria	146.49	339	⇓P	PKPbc	07 53 23.1	+0.1
GZR	Gura Zlata	146.82	336	⇑P	PKPbc	07 53 23.8	-0.2
BZS	Buzias	147.06	338	⇓P	PKPbc	07 53 24.1	-0.5
HERR	Herculane	147.39	336	⇓P	PKPbc	07 53 25.0	-0.5
STAL	STALIGIAL	148.91	349	PKPdf	PKPdf	07 53 23.8	-1.2
STAL					PKPbc	07 53 28.1	-1.3
VTS	Vitosha	148.91	333	⇓P	PKPbc	07 53 29.7	0.0
VTS	Vitosha	148.91	333	PKPdf	PKPdf	07 53 24.7	-0.7
VTS					PKPbc	07 53 30.0	+0.3
SALO	Salr	149.88	352		PKPdf	07 53 25.6	-1.0
SALO				PKPbc	PKPbc	07 53 31.4	-0.4
FNA	Florina	151.21	333		PKPbc	07 53 34.3	-0.8
ESDC	Sonseca Array	155.04	16	PKPbc	PKPdf	07 53 43.1	+8.7
	comp=Z,0.3nm,0.7s,baz=359,slow=3.7,SNR=1.6						
ESDC				PKPab	PKPab	07 53 59.9	-0.4
	comp=Z,1.7nm,1.0s,baz=333,slow=4.6,SNR=5.3						
TORD	Torodi Ar. Bea	176.06	132	PKPab	PKPab	07 55 32.5	-0.9
	comp=Z,0.8nm,0.7s,baz=251,slow=4.6,SNR=4.4						
TORD	Torodi Ar. Bea	176.06	132		PKPdf	07 53 50.3	-1.7
TORD					PKPab	07 55 32.7	-0.7

JMA 29 07:37:12.5, 35°.94N×136°.33E, h6^{km}±1^{km}, M2.9, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKG	Kaga	0.34	0	P	Pg	07 37 19.5	+0.4
JKG				S	Sg	07 37 24.4	+0.9
JYTA	Yamagatataniai	0.48	136	P	Pg	07 37 21.7	0.0
JYTA				S	Sg	07 37 28.1	+0.2
JICN	Ichinomiyachia	0.76	147	P	Pg	07 37 27.4	+0.3
JWT	Wachi	1.00	229	P	Pg	07 37 31.2	-0.5
JKY	Yasaka	1.04	253	P	Pg	07 37 31.9	-0.6
JKY				S	Sg	07 37 45.9	-0.2
MAT	Matsushiro	1.63	68	P	Pn	07 37 42.2	+0.4
MAT				*e*S	Sg	07 38 04.9	-0.1

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*JMA **29** 07:38:31.9±0.1, 38°.32N×141°.86E, h47^{km}±1^{km}, M4.1 Broadband fault plane solution: P waves. NP1: ϕ_s194.00000°, δ20.00000°, λ84.00000°. NP2: ϕ_s20.00000°, δ70.00000°, λ92.00000°. Principal axes: T Plg65.0000°, Azm293.0000°; N Plg2.0000°, Azm199.0000°; P Plg25.0000°, Azm108.0000°;*

JMA Felt III J1.

*NIED **29** 07:38:32.0, 38°.32N×141°.86E, h47^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.77; $M_{\theta\theta}$-0.10; $M_{\phi\phi}$-0.68; $M_{r\theta}$0.02; $M_{\theta\phi}$-0.30; $M_{\phi r}$0.78; Fault plane solution: $M_0$1.11000×10^{15} NP1: ϕ_s8.00000°, δ68.00000°, λ78.00000°. NP2: ϕ_s217.00000°, δ25.00000°, λ117.00000°.*

*NEIC **29** 07:38:32.5±1.3, 38°.33N±0°.06×141°.9E±0°.1, h49^{km}±5^{km}, mb4.4/18 Error ellipse: s-maj=13.3km s-min=7.8km az=117.0*

*IDC **29** 07:38:33.0±0.6, 38°.31N×141°.97E, h60^{km}±5^{km}, mb3.7/18, mb1 3.9/23, mb1mx3.8/40, mbtmp4.0/23, MS3.0/6, Ms1 3.0/6, ms1mx2.8/43, Error ellipse: s-maj=15.4km s-min=12.3km az=99.0*

ISC 29 07:38:31.9±0.5, **38°.28N**±0°.04×**141°.94E**±0°.06, **h49**^{km}±4^{km}, **h49**^{km}**:pP-P, n101,** σ1^{s}.**11**/109, **mb4.3**/30, **13D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	Ishinomakikobu	0.37	274	⇓P	Pn	07 38 40.9	-0.7
JIKH				S	Sn	07 38 46.9	-1.6
JIO	Ouri	0.49	290	⇓P	Pn	07 38 42.1	-0.9
JIO				S	Sn	07 38 49.1	-1.8
JKMT	Kesennumamotoy	0.64	325	⇓P	Pn	07 38 44.0	-0.8
JKMT				S	Sn	07 38 52.3	-1.8
OFUJ	Ofunato	0.82	345	⇓P	Pn	07 38 46.4	-0.8
OFUJ				S	Sn	07 38 56.5	-1.9
JMK	Ichinoseki	0.87	320	⇓P	Pn	07 38 47.3	-0.6
JMK				S	Sn	07 38 58.1	-1.5
JMM	Marumori	0.99	246	⇓P	Pn	07 38 48.6	-0.9
JMM				S	Sn	07 38 59.9	-2.6
JMM	Marumori	0.99	246		Pn	07 38 48.5	-1.0
JOU	Okura	1.00	275	⇓P	Pn	07 38 49.1	-0.6
JOU				S	Sn	07 39 02.0	-0.8
JFK	Kawauchi	1.24	223	⇓P	Pn	07 38 52.3	-0.7
JFK				S	Sn	07 39 07.3	-1.3
JOM	Ohasama	1.29	337	⇓P	Pn	07 38 53.1	-0.4
JYK	Kaneyama	1.39	298	⇓P	Pn	07 38 54.3	-0.6
JYS	Shirataka	1.48	268	⇓P	Pn	07 38 55.6	-0.5
JFT	Otama	1.48	239	⇓P	Pn	07 38 56.0	-0.1
JRG	Rokugo	1.51	318	⇓P	Pn	07 38 56.1	-0.4
JYT	Yasato	2.48	215		Pn	07 39 10.0	+0.2
JTM	Tenmabayashi	2.59	345		Pn	07 39 11.4	+0.1
JSD	Sado	2.91	266		Pn	07 39 15.0	-0.7
MJAR	Matsushiro Arr	3.44	241	P	Pn	07 39 23.4	+0.4
	1.8nm,0.3s,baz=41,slow=9.6,SNR=24						
MJAR				S	Sn	07 40 03.5	+1.0
	0.8nm,0.3s,baz=92,slow=12,SNR=4.0						
MJAR				LR	LR	07 40 57.2	
	comp=Z,203nm,18.2s,baz=55,slow=42						
MJAR	Matsushiro Arr	3.44	241		Pn	07 39 23.8	+0.8
MAJO	Matsushiro	3.44	241	Pn	Pn	07 39 24.3	+1.3
MAT	Matsushiro	3.44	241	P	Pn	07 39 23.9	+0.9
MAT				*e*S	Sn	07 40 01.2	-1.4
MJB9	Matsu-Tunnel	3.44	241	Pn	Pn	07 39 25.0	+2.0
ERM	Erimo	3.84	14	Pn	Pn	07 39 27.2	-1.3
JGF	Kuroka	4.54	235		Pn	07 39 40.4	+2.3
INU	Inuyama	4.92	235		Pn	07 39 45.6	+2.3
JHJ2	Mitsune	5.44	199	Pn	Pn	07 39 50.7	+0.2
JHJ	Hachijo jima 2	5.44	199	P	Pn	07 39 50.2	-0.3
	16nm,0.3s,baz=72,slow=22,SNR=15						
JHJ				S	Sn	07 40 49.3	-2.5
	31nm,0.3s,baz=85,slow=23,SNR=5.9						
ASAJ	Asahikawa	5.85	5	P	Pn	07 39 55.7	-0.3
	2.2nm,0.3s,baz=217,slow=10.0,SNR=21						
ASAJ				LR	LR	07 42 20.0	
	comp=Z,64nm,20.7s,baz=195,slow=39						
JKA	Kamikawa-asahi	5.85	5		Pn	07 39 56.0	0.0
JWT	Wachi	6.04	242		Pn	07 40 01.9	+3.2
JHS	Saijyo	7.81	248	Pn	Pn	07 40 25.8	+2.8
JMN	Monobe	7.96	238	Pn	Pn	07 40 26.2	+1.3
USA0B	Ussuriysk Arra	9.54	311		Pn	07 40 46.8	+0.2
USRK	Ussuriysk Ar.	9.54	311	P	Pn	07 40 46.2	-0.4
	baz=124,slow=14,SNR=13						
USRK				LR	LR	07 44 06.3	
	comp=Z,98nm,20.8s,baz=125,slow=35						
USRK	Ussuriysk Ar.	9.54	311		Pn	07 40 46.9	+0.3
KSRS	Korea Array	11.11	270	P	Pn	07 41 11.6	+3.5
	0.4nm,0.3s,baz=77,slow=14,SNR=5.1						
KSRS				LR	LR	07 44 52.2	
	comp=Z,90nm,18.1s,baz=73,slow=34						
JCJ	Chichijima	11.16	179	S	Sn	07 43 01.6	-11
	3.7nm,0.3s,baz=151,slow=20,SNR=1.4						
PETK	Petropavlovsk-	18.40	31	LR	LR	07 49 27.7	
	comp=Z,48nm,18.6s,baz=135,slow=36						
SONM	Songino Array	27.46	302	P	P	07 44 13.5	+0.2
	0.6nm,0.5s,baz=118,slow=8.6,SNR=4.9						
SONM	Songino Array	27.46	302	P	P	07 44 13.1	-0.2
ENH	Enshi	27.87	263	P	P	07 44 16.1	-1.0
H11N2	WAKE ISLAND Hy	28.46	123	T	T	08 14 35.0	
	baz=316,slow=76,SNR=2008						
H11N1	WAKE ISLAND Hy	28.47	124	T	T	08 14 34.4	
	baz=316,slow=76,SNR=2897						
H11N3	WAKE ISLAND Hy	28.48	123	T	T	08 14 35.1	
	baz=316,slow=76,SNR=2350						
H11S1	WAKE ISLAND Hy	29.22	125	T	T	08 15 34.2	
	baz=318,slow=76,SNR=478						
H11S3	WAKE ISLAND Hy	29.22	126	T	T	08 15 33.1	
	baz=318,slow=76,SNR=885						
H11S2	WAKE ISLAND Hy	29.23	126	T	T	08 15 35.4	
	baz=318,slow=76,SNR=334						
TLY	Talaya	29.85	309	P	P	07 44 33.0	-1.4
TLY				IAmb	IAmb	07 44 49.5	
	comp=Z,5.8nm,0.6s						
BILL	Bilibino	32.71	17	P	P	07 44 59.6	+0.2
BILL				IAmb	IAmb	07 45 03.6	
	comp=Z,11nm,1.4s						
ZAA0	Zalesovo Array	41.39	311	P	P	07 46 12.9	-0.2
ZAA0				IAmb	IAmb	07 46 13.4	
	comp=Z,3.2nm,0.8s						
ZALV	Zalesovo Beam	41.39	311	P	P	07 46 12.9	-0.2
	comp=Z,3.0nm,0.4s,baz=88,slow=7.7,SNR=12						
ZALV				pP	pP	07 46 28.2	+2.2
	comp=Z,1.6nm,0.5s,baz=82,slow=7.5,SNR=2.7						
ZALV				PcP	PcP	07 48 10.7	+0.3
	comp=Z,0.6nm,0.4s,baz=88,slow=3.7,SNR=3.7						
ZALV	Zalesovo Beam	41.39	311	P	P	07 46 13.1	0.0
MK31	Makanchi Array	43.82	301	P	P	07 46 32.9	0.0
MK31				IAmb	IAmb	07 46 43.8	
	comp=Z,17nm,1.4s						
MKAR	Makanchi Array	43.82	301	P	P	07 46 32.8	-0.2
	comp=Z,2.3nm,0.6s,baz=86,slow=9.9,SNR=12						
KURK	Kurchatov	45.50	307	P	P	07 46 46.0	-0.2
KURBB	Kurchatov Arra	45.57	307	P	P	07 46 46.4	-0.4
	comp=Z,8.1nm,0.8s,baz=83,slow=8.2,SNR=52						
TAPN	Taplejung	46.28	273	*e*P	P	07 46 52.8	-0.3
JIRN	Jiri	47.33	274	*e*P	P	07 47 01.8	+0.4
	comp=Z,5.5nm,0.5s						
RAMN	Ramite	47.34	273	*e*P	P	07 47 01.5	+0.2
	comp=Z,6.6nm,0.4s						
GUN	Gumba	47.46	275	*e*P	P	07 47 02.6	+0.3
	comp=Z,8.6nm,0.3s						
KKN	Kakani	47.98	275	*e*P	P	07 47 06.3	+0.1
PKI	Pulchoki	47.98	275	*e*P	P	07 47 05.7	-0.7
ILAR	Eielson Array	48.22	33	P	P	07 47 05.8	-1.5
	comp=Z,0.3nm,0.6s,baz=269,slow=6.3,SNR=1.7						
ILAR				pP	pP	07 47 20.9	+0.6
	comp=Z,0.5nm,0.6s,baz=256,slow=6.0,SNR=2.8						
GKN	Gorkha	48.39	276	*e*P	P	07 47 09.0	-0.3
DANN	Dangsing	48.91	276	*e*P	P	07 47 13.6	+0.1
KOLN	Koldanda	49.31	276	*e*P	P	07 47 16.4	0.0
	comp=Z,3.8nm,0.3s						
AAK	Ala-Archa	50.27	298	P	P	07 47 22.8	-0.7
AAK				IAmb	IAmb	07 47 26.1	
	comp=Z,4.9nm,1.5s						
PSI	Prapat	52.79	239	LR	LR	08 10 59.7	
	comp=Z,24nm,18.4s,baz=20,slow=37						
KKAR	Karatay Array	52.87	299	P	P	07 47 42.5	-0.2
INK	Inuvik	53.09	28	P	P	07 47 44.4	+0.6
	comp=Z,0.9nm,0.8s,baz=302,slow=3.0,SNR=2.3						
INK				pP	pP	07 47 59.9	+2.8
	comp=Z,0.9nm,0.6s,baz=316,slow=9.6,SNR=3.2						
INK	Inuvik	53.09	28	P	P	07 47 44.8	+0.9
ABKAR	Akbulak array	57.46	310	P	P	07 48 15.3	-0.3
ABKAR				IAmb	IAmb	07 48 33.5	
	comp=Z,1.9nm,0.7s						
WB0	Warramunga Arr	58.18	188	P	P	07 48 20.8	-0.1
WB2	Warramunga Arr	58.35	188	P	P	07 48 22.0	-0.1
WRA	Warramunga Arr	58.35	188	P	P	07 48 22.0	-0.1
	comp=Z,2.4nm,0.5s,baz=6.9,slow=6.4,SNR=22						
WRA	Warramunga Arr	58.35	188	P	P	07 48 22.2	0.0
WRA					pP	07 48 36.0	+0.3
EUNU	Eureka	58.89	9	P	P	07 48 25.6	+0.3
RES	Resolute Bay	61.29	15	P	P	07 48 41.9	+0.3
ASAR	Alice Springs	62.08	188	P	P	07 48 47.8	+0.1
	comp=Z,1.1nm,0.7s,baz=360,slow=3.8,SNR=12						
ASAR				pP	sP	07 49 05.0	-1.8
	comp=Z,1.0nm,0.6s,baz=5.2,slow=5.4,SNR=7.6						
YKA	Yellowknife Ar	62.52	31	P	P	07 48 50.7	+0.6
	comp=Z,0.5nm,0.6s,baz=292,slow=6.5,SNR=1.7						
ARCES	ARCESS Array B	62.98	339	P	P	07 48 53.2	+0.1
	comp=Z,4.0nm,1.0s,baz=47,slow=7.8,SNR=11						
ARCES				pP	sP	07 49 10.8	-1.4
	comp=Z,2.4nm,1.0s,baz=98,slow=4.3,SNR=1.4						
ARCES	ARCESS Array B	62.98	339	P	P	07 48 52.1	-0.9
FINES	FINESS Array B	67.90	332	P	P	07 49 24.2	-0.7
	comp=Z,3.3nm,0.8s,baz=73,slow=6.4,SNR=8.6						
FINES	FINESS Array B	67.90	332	P	P	07 49 25.1	+0.1
KBZ	Khabaz	70.41	311	P	P	07 49 40.8	0.0
	comp=Z,1.1nm,0.5s,baz=65,slow=11,SNR=3.6						
NC405	NORSAR Array S	72.99	337	P	P	07 49 55.2	-0.8
NB2	NORSAR Subarra	73.19	337	P	P	07 49 57.4	+0.1
	comp=Z,1.5nm,0.7s,baz=38,slow=6.5						
NOA	NORSAR Array B	73.19	337	P	P	07 49 57.3	0.0
	comp=Z,1.9nm,0.8s,baz=38,slow=5.8,SNR=7.5						
AKASG	Malin Array Be	73.56	322	P	P	07 49 59.1	-0.4
	comp=Z,1.6nm,0.4s,baz=45,slow=5.9,SNR=10.0						
AKASG	Malin Array Be	73.56	322	P	P	07 49 59.9	+0.4
AKASG				IAmb	IAmb	07 50 00.0	
	comp=Z,3.5nm,1.5s						
AKBB	Malin Array Si	73.56	322	P	P	07 49 59.2	-0.3
AKBB				IAmb	IAmb	07 50 21.3	
	comp=Z,7.5nm,1.4s						
PDAR	Pinedale Array	76.50	46	P	P	07 50 17.1	+0.1
	comp=Z,0.2nm,0.6s,baz=83,slow=2.2,SNR=3.8						
PDAR				pP	pP	07 50 32.4	+1.6
	comp=Z,0.5nm,0.5s,baz=272,slow=1.9,SNR=6.2						
PDAR	Pinedale Array	76.50	46	P	P	07 50 17.9	+1.0
BURAR	Bucovina Array	77.59	322	P	P	07 50 23.2	+0.4
BRTR	Keskin Array B	78.33	312	P	P	07 50 27.3	+0.1
	comp=Z,0.4nm,0.4s,baz=98,slow=3.5,SNR=2.2						
GERES	GERESS Array B	81.87	328	P	P	07 50 46.0	+0.1
	comp=Z,0.4nm,0.4s,baz=46,slow=3.3,SNR=1.3						
STAL	STALIGIAL	84.32	327	P	P	07 50 57.5	-1.1
STAL				IAmb	IAmb	07 51 08.5	
	comp=Z,5.6nm,1.1s						
TXAR	Lajitas Array	89.03	53	P	P	07 51 21.3	-0.7
	comp=Z,0.3nm,0.8s,baz=286,slow=3.7,SNR=2.2						
TXAR				pP	pP	07 51 37.6	+1.5
	comp=Z,0.7nm,0.6s,baz=306,slow=3.6,SNR=7.4						
H03N2	Juan Fernandez	146.72	94	T	T	10 42 40.5	
	baz=291,slow=76,SNR=17						
H03N3	Juan Fernandez	146.73	94	T	T	10 42 44.7	
	baz=291,slow=76,SNR=18						
H03N1	Juan Fernandez	146.74	94	T	T	10 42 38.6	
	baz=291,slow=76,SNR=24						

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*IDC **29** 07:53:46.1±3.6, 34°.75N×22°.25E, h0^{km}, mb3.9/3, mb1 3.8/4, mb1mx3.5/33, mbtmp3.7/4, ML2.8/1, Error ellipse: s-maj=67.7km s-min=31.5km az=12.0*

*THE **29** 07:53:58.9, 35°.09N×23°.08E, h7^{km}±2^{km}, ML3.1/4, Error ellipse: s-maj=3.2km s-min=1.3km az=73.0*

*ATH **29** 07:53:58.3, 35°.09N×23°.01E, h13^{km}±9^{km}, ML3.1/2, Error ellipse: s-maj=10.0km s-min=2.9km az=263.0*

ISC 29 07:53:59.5±2.8, **35°.1N**±0°.1×**23°.1E**±0°.2, **h61**^{km}±15^{km}**, n16,** σ1^{s}.**17**/21, **mb4.0**/3, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANKY	Antikythira Is	0.78	14	P	Pn	07 54 13.7	-1.0
ANKY				S	Sn	07 54 25.7	-0.2
	1µm,0.6s						
ANKY	Antikythira Is	0.78	14	P	Pn	07 54 13.8	-0.9
ANKY				AML	AML	07 54 26.4	
	comp=N,3235µm,0.6s						
ANKY				AML	AML	07 54 26.9	
	comp=E,1773µm,0.7s						
IMMV	Iera Moni Meta	0.82	64	P	Pn	07 54 14.5	-0.7
IMMV				S	Sn	07 54 26.8	0.0
	comp=E,1µm,0.7s						
IMMV	Iera Moni Meta	0.82	64	P	Pn	07 54 14.5	-0.7
IMMV				S	Sn	07 54 26.9	+0.1
IMMV				AML	AML	07 54 28.0	
	comp=N,3154µm,0.6s						
IMMV				AML	AML	07 54 29.6	
	comp=E,2494µm,0.5s						
GVD	Gavdhos	0.87	108	P	Pn	07 54 16.1	+0.3
GVD	Gavdhos	0.87	108	P	Pn	07 54 16.2	+0.3
VAM	Vamos	0.97	72	P	Pn	07 54 16.9	-0.2
VAM				S	Sn	07 54 30.7	+0.6
	comp=E,2µm,0.6s						
VAM	Vamos	0.97	72	P	Pn	07 54 17.0	-0.2
KTHA	Kythira Island	1.14	359	P	Pn	07 54 19.9	+0.5
KTHA				S	Sn	07 54 37.8	+3.5
	comp=E,485nm,0.6s						
KTHA	Kythira Island	1.14	359	P	Pn	07 54 19.8	+0.3
IDI	Anoyia	1.50	83	P	Pn	07 54 24.5	+0.3
IDI	Anoyia	1.50	83	P	Pn	07 54 24.7	+0.6
BRTR	Keskin Array B	9.58	58	Pn	Pn	07 56 16.0	+1.2
	comp=E,0.1nm,0.3s,baz=242,slow=14,SNR=3.3						
FINES	FINESS Array B	26.42	3	P	P	07 59 27.8	-2.3
	comp=E,5.9nm,1.1s,baz=174,slow=14,SNR=1.4						
MKAR	Makanchi Array	45.23	56	P	P	08 02 11.0	+0.5
	comp=E,0.3nm,0.4s,baz=275,slow=7.8,SNR=5.6						
ZALV	Zalesovo Beam	46.27	46	P	P	08 02 18.7	+0.1
	comp=E,0.6nm,0.3s,baz=269,slow=9.3,SNR=2.4						

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*NIED **29** 08:10:43.3, 31°.30N×128°.59E, h8^{km}, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-2.92; $M_{\theta\theta}$-0.40; $M_{\phi\phi}$3.32; $M_{r\theta}$1.24; $M_{\theta\phi}$5.97; $M_{\phi r}$-2.52; Fault plane solution: $M_0$7.22000×10^{14} NP1: ϕ_s358.00000°, δ71.00000°, λ-148.00000°. NP2: ϕ_s256.00000°, δ60.00000°, λ-22.00000°.*

JMA 29 08:10:43.2±0.3, **31°.30N×128°.59E, h8**^{km}±3^{km}**, M3.6, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	1.03	68	P	Pg	08 11 02.3	-0.8
JFU	Fukue jima 2	1.36	6	P	Pn	08 11 08.4	-0.1
JSU	Suzuyama	1.61	82	P	Pn	08 11 12.1	+0.2
JTN	Tanegashima 3	2.15	107	P	Pn	08 11 19.7	+0.3
JMTN	Minamitane	2.18	114	P	Pn	08 11 20.4	+0.6
JTZ	Takazaki	2.21	74	P	Pn	08 11 21.1	+0.9

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*KRNET **29** 08:15:58.1±0.1, 39°.59N×74°.32E, h14^{km}, mb3.3*

*NNC **29** 08:16:04.4±1.8, 39°.97N×74°.34E, h0^{km}, mb3.6, mpv3.3, Error ellipse: s-maj=14.6km s-min=6.9km az=169.0*

*SOME **29** 08:16:10.3, 40°.35N×74°.57E, h5^{km}*

ISC 29 08:15:58.8±1.6, **39°.53N**±0°.06×**74°.19E**±0°.03, **h2**^{km}±12^{km}, **n48,** σ1^{s}.**05**/82, **31C-12D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	0.71	313	⇓*e*P	Pg	08 16 12.6	+0.1
	baz=5.0						
SFK				⇓*e*S	Sb	08 16 23.6	-1.0
	baz=5.0						
SALK	Salom-Alik	1.38	348	⇑*e*P	Pn	08 16 23.3	-2.0
	baz=44						
SALK				⇑*e*S	Sb	08 16 42.5	-1.1
	baz=44						
OHH	Osh	1.47	313	⇑*i*P	Pn	08 16 26.1	-0.3
	baz=9.0						
OHH				⇑*i*S	Sg	08 16 47.3	+1.4
	baz=9.0						
DRK	Karamyk	1.85	269	⇑*e*P	Pg	08 16 34.0	-0.2
	baz=68						
DRK				⇑*i*S	Sg	08 17 00.8	+2.6
	baz=68						
AML	Almayashu	2.62	352	⇑*i*P	Pn	08 16 43.4	+0.8
	baz=50						
AML				⇑*i*S	Sn	08 17 16.4	+1.1
	baz=50						
BTK	Batken	2.65	283	⇓*i*P	Pb	08 16 45.3	-1.7
	baz=81						
BTK				⇓*i*S	Sb	08 17 19.9	-0.2
	baz=81						
UCH	Uchtor	2.71	5	⇑*e*P	Pn	08 16 44.2	+0.4
	baz=3.0						
UCH				⇑*i*S	Sn	08 17 17.7	+0.3
	baz=3.0						
TRKS	Terek-Say	3.06	312	⇑*e*P	Pn	08 16 49.6	+1.2
	baz=9.0						
TRKS				⇑*i*S	Sn	08 17 27.3	+1.5
	baz=9.0						
ULHL	Ulahol	3.13	29	⇑*e*P	Pn	08 16 49.3	-0.1
	baz=28						
ULHL				⇑*i*S	Sn	08 17 26.7	-0.7
	baz=28						
EKS2	Erkin-Say	3.14	354	⇑*e*P	Pn	08 16 50.5	+1.0
	baz=53						
EKS2				⇑*i*S	Sn	08 17 28.5	+0.8
	baz=53						
KBK	Karagaybulak	3.18	10	⇑*e*P	Pn	08 16 50.6	+0.6
	baz=9.0						
KBK				⇑*i*S	Sn	08 17 28.7	+0.1
	baz=9.0						
MNAS	Manas	3.22	337	⇑*e*P	Pn	08 16 52.0	+1.5
	baz=35						
MNAS				⇑*i*S	Sn	08 17 31.2	+1.7
	baz=35						
BOOM	Boomskoye usch	3.24	24	⇓*e*P	Pn	08 16 51.3	+0.4
	baz=22						
BOOM				⇓*i*S	Sn	08 17 29.8	-0.3
	baz=22						
MRKS	Merke	3.29	348	*e*P	Pb	08 16 57.3	-0.8
	8.1nm,0.3s						
MRKS				*e*S	Sb	08 17 35.0	-3.6

	13nm,0.3s						
KDJ	Kajisay	3.45	40	⇑iP	Pn	08 16 54.0	+0.3
	baz=40						
KDJ				⇑iS	Sn	08 17 34.4	-0.9
	baz=40						
TARG	Taragay, Kyrgy	3.52	50	⇓iP	Pn	08 16 54.8	-0.1
	baz=50						
TARG				⇓iS	Sn	08 17 36.1	-1.3
	baz=50						
TKM2	Tokmak 2	3.55	17	⇑Pn	Pn	08 16 54.9	-0.3
	2.6nm,0.3s						
TKM2				⇓Lg	Lg	08 17 42.3	
	29nm,1.2s						
TKM2	Tokmak 2	3.55	17	⇑eP	Pn	08 16 55.7	+0.5
	baz=16						
TKM2				⇑iS	Sn	08 17 37.5	-0.3
	baz=16						
USP	Ospenovka	3.74	3	⇑iP	Pn	08 16 58.6	+1.0
	baz=2.0						
USP				⇑iS	Sn	08 17 42.3	0.0
	baz=2.0						
KST	Kastek	3.76	20	eP	Pb	08 17 06.5	+0.5
	9.6nm,0.3s						
KST				eS	Sb	08 17 51.0	-1.0
	20nm,0.5s						
KST	Kastek	3.76	20	Pg	Pb	08 17 06.4	+0.5
KST				Lg	Lg	08 17 51.3	
DGS	Degeres	3.90	17	eP	Pb	08 17 09.5	+1.3
	5.9nm,0.3s						
DGS				eS	Sb	08 17 56.5	+0.5
	16nm,0.7s						
IZV	Izvestkoviy	3.95	27	eP	Pb	08 17 08.9	-0.4
	4.4nm,0.7s						
IZV				eS	Sb	08 17 55.7	-1.9
	12nm,0.8s						
MTBS	Maitube	3.97	24	eP	Pb	08 17 10.1	+0.5
	3.9nm,0.3s						
MTBS				eS	Sb	08 17 57.4	-0.8
	9.9nm,0.4s						
MTBS	Maitube	3.97	24	Pg	Pb	08 17 09.9	+0.3
	5.3nm,0.4s						
MTBS				Lg	Lg	08 17 57.3	
	8.8nm,0.5s						
TNSS	Tian-Shan	4.07	30	eP	Pb	08 17 11.8	+0.3
	2.2nm,0.5s						
TNSS				eS	Sb	08 18 00.7	-0.7
	5.8nm,0.4s						
TNSS	Tian-Shan	4.07	30	Pg	Pb	08 17 11.6	+0.1
TNSS				Lg	Lg	08 18 00.7	
MDOK	Medeo	4.22	30	eP	Pb	08 17 13.8	0.0
	4.2nm,0.3s						
MDOK				eS	Sb	08 18 04.0	-1.4
	8.4nm,0.2s						
MDOK	Medeo	4.22	30	⇑Pg	Pb	08 17 13.5	-0.3
	3.1nm,0.5s						
MDOK				⇑Lg	Lg	08 18 03.7	
	5.7nm,0.6s						
MDOK	Medeo	4.22	30	Pg	Pb	08 17 13.9	0.0
	4.5nm,0.5s						
MDOK				Lg	Lg	08 18 04.0	
	7.5nm,0.6s						
KOTS	Kotyrbulak	4.30	30	eP	Pb	08 17 16.2	+1.0
	6.6nm,0.3s						
KOTS				eS	Sb	08 18 08.4	+0.6
	21nm,0.4s						
KRBS	Karabastau	4.31	15	eP	Pb	08 17 15.4	+0.1
	2.1nm,0.5s						
KRBS				eS	Sb	08 18 07.3	-0.5
	9.5nm,0.4s						
KRBS	Karabastau	4.31	15	Pg	Pb	08 17 15.5	+0.1
	3.8nm,0.5s						
KRBS				Lg	Lg	08 18 07.3	
	7.7nm,0.4s						
KK09	Karatay Array	4.54	323	⇓Pn	Pn	08 17 09.2	+0.6
	1.3nm,0.5s,baz=131,slow=13						
KK09				⇑Sn	Sn	08 18 01.1	-0.9
	3.8nm,0.8s						
KK09				⇑Lg	Lg	08 18 18.6	
	4.5nm,0.6s,baz=135,slow=26						
KTBS	Karatobe	4.58	23	eP	Pb	08 17 19.8	-0.1
	1.9nm,0.6s						
KTBS				eS	Sb	08 18 15.1	-0.4
	18nm,0.4s						
KUU	Kurty	4.65	20	eP	Pb	08 17 21.4	+0.4
	1.5nm,0.3s						
KUU				eS	Sb	08 18 17.7	+0.2
	10.0nm,0.6s						
KUU	Kurty	4.65	20	Pg	Pb	08 17 21.2	+0.2
	1.2nm,0.3s						
KUU				Lg	Lg	08 18 17.7	
	8.5nm,0.5s						
SATY	Saty	4.75	41	eP	Pb	08 17 23.1	+0.3
	1.1nm,0.1s						
SATY				eS	Sb	08 18 20.7	+0.3
	5.1nm,0.4s						
SATY	Saty	4.75	41	Pg	Pb	08 17 23.1	+0.3
	2.7nm,0.5s						
SATY				Lg	Lg	08 18 20.7	
	4.8nm,0.3s						
BRLS	Borolday	4.79	318	eP	Pg	08 17 29.1	-1.5
	1.8nm,0.1s						
BRLS				eS	Sg	08 18 31.7	-1.0
	8.2nm,0.3s						
BRLS	Borolday	4.79	318	Pg	Pg	08 17 28.9	-1.7
	2.9nm,0.4s						
BRLS				Lg	Lg	08 18 31.7	
	7.3nm,0.5s						
UZB	Uzynbulak	5.13	44	eP	Pb	08 17 29.3	0.0
	2.0nm,0.2s						
UZB				eS	Sb	08 18 32.3	+0.9
	3.0nm,0.6s						
UZB	Uzynbulak	5.13	44	Pg	Pb	08 17 29.2	-0.1
	2.8nm,0.3s						
UZB				Lg	Lg	08 18 32.3	
	2.9nm,0.6s						
ARXS	Arharly	5.41	29	eP	Pb	08 17 35.0	+0.9
	4.2nm,0.5s						
ARXS				eS	Sb	08 18 42.0	+2.5
	6.0nm,0.5s						
ARXS	Arharly	5.41	29	Pg	Pb	08 17 33.6	-0.5
	4.2nm,0.5s						
ARXS				Lg	Lg	08 18 39.8	
	6.0nm,0.5s						
PDGK	Podgornoye	5.50	45	Pg	Pb	08 17 35.4	-0.3
	1.3nm,0.7s						
PDGK				Lg	Lg	08 18 43.0	
	2.0nm,0.6s						
PDGK	Podgornoye	5.50	45	⇓Pg	Pb	08 17 35.5	-0.3
	6.4nm,1.1s						
PDGK				⇓Lg	Lg	08 18 46.3	
	8.3nm,0.9s						
BTLS	Baital	5.51	359	eP	Pb	08 17 36.5	+0.8
	0.5nm,0.5s						
BTLS				eS	Sb	08 18 45.0	+2.8
	2.3nm,1.1s						

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*NEIC **29** 08:36:06.8±1.7, 19°.23N±0°.10×65°.42W±0°.04, h6^{km}±11^{km}, Error ellipse: s-maj=14.2km s-min=5.5km az=188.0*

*RSPR **29** 08:36:09.7, 19°.32N×65°.34W, h30^{km}±27^{km}, MD3.5/11*

ISC 29 08:36:06.9±1.4, **19°.25N**±0°.07×**65°.40W**±0°.04, **h16**^{km}, **n42**, σ**0^{s}86**/45, **11C, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CUPR	Culebra, Puert	0.95	173	⇑iP	Pn	08 36 26.1	+0.6
CUPR	Culebra, Puert	0.95	173	eS	Sn	08 36 38.5	-0.2
CUPR	Culebra, Puert	0.95	173		Pn	08 36 26.2	+0.6
CUPR					Sn	08 36 38.9	+0.2
CUPR				IAML		08 36 42.5	
	comp=N,699nm,0.6s						
STVI	Saint Thomas	0.99	155	⇑eP	Pg	08 36 26.5	+0.4
STVI	Saint Thomas	0.99	155	eS	Sg	08 36 39.0	-0.1
STVI	Saint Thomas	0.99	155		Pg	08 36 26.4	+0.3
STVI					Sn	08 36 40.6	+0.8
STVI				IAML		08 36 41.9	
	comp=N,760nm,0.2s						
CBYP	Canovanas	1.07	204	⇑eP	Pn	08 36 27.1	-0.2
CBYP	Canovanas	1.07	204		Pg	08 36 27.3	-0.2
TBVI	Tortola	1.11	138	⇑eP	Pg	08 36 28.1	-0.3
TBVI	Tortola	1.11	138	eS	Sn	08 36 42.5	-0.4
GCPR	Guaynabo City	1.14	215		Pb	08 36 28.1	-0.2
EMPR	Esperanza - Ma	1.32	234	⇑eP	Pg	08 36 32.1	-0.3
EMPR	Esperanza - Ma	1.32	234	eS	Sb	08 36 48.4	+0.4
EMPR	Esperanza - Ma	1.32	234		Pg	08 36 32.0	-0.3
EMPR				IAML		08 36 56.8	
	comp=E,640nm,0.7s						
EMPR				IAML		08 36 58.8	
	comp=N,583nm,0.8s						
SJG	San Juan	1.34	212		Pb	08 36 31.3	-0.4
SJG				IAML		08 36 59.0	
	comp=N,289nm,0.6s						
PDPR	Patillas Dam,	1.36	206		Pb	08 36 31.5	-0.5
IGPR	InterUniversit	1.45	208	⇑eP	Pn	08 36 32.7	+0.3
IGPR	InterUniversit	1.45	208	eS	Sb	08 36 51.8	+0.2
IGPR	InterUniversit	1.45	208		Sb	08 36 51.8	+0.2
AOPR	Arecibo Observ	1.57	235	⇑eP	Pb	08 36 34.6	-1.0
AOPR	Arecibo Observ	1.57	235	eS	Sn	08 36 54.9	+0.8
AOPR	Arecibo Observ	1.57	235		Pb	08 36 34.6	-1.0
AOPR					Pn	08 36 34.9	+0.8
AOPR				IAML		08 37 02.4	
	comp=N,658nm,0.5s						
CDVI	St. Croix	1.61	158		Pg	08 36 37.0	-0.9
OBIP	Obispado Ponce	1.66	224	⇑iP	Pb	08 36 36.1	-1.0
OBIP	Obispado Ponce	1.66	224	eS	Sb	08 36 57.5	-0.3
OBIP	Obispado Ponce	1.66	224		Pb	08 36 36.3	-0.8
OBIP				IAML		08 37 04.8	
	comp=N,220nm,1.0s						
AGPR	Aguadilla, PR	1.80	245	⇑eP	Pn	08 36 38.0	+0.7
AGPR	Aguadilla, PR	1.80	245	eS	Sn	08 37 00.7	+0.9
AGPR	Aguadilla, PR	1.80	245		Pb	08 36 38.8	-0.7
AGPR				IAML		08 37 15.3	
	comp=N,215nm,0.8s						
AGPR				IAML		08 37 25.8	
	comp=E,168nm,1.7s						
GBPR	Guanica, Bosqu	1.89	228	⇑eP	Pb	08 36 40.4	-0.7
LSP	Las Mesas	1.92	236	⇑eP	Pb	08 36 40.3	-1.3
PRSN	Puerto Rico Se	1.95	238		Pb	08 36 40.6	-1.4
PRSN				IAML		08 37 17.7	
	comp=E,407nm,0.3s						
MLPR	Magueyes Islan	2.02	231	⇑eP	Pb	08 36 41.8	-1.4
MLPR	Magueyes Islan	2.02	231	eS	Sb	08 37 07.1	-0.9
MLPR	Magueyes Islan	2.02	231		Pb	08 36 41.7	-1.4
MLPR				IAML		08 37 19.8	
	comp=E,135nm,1.0s						
CRPR	Cabo Rojo, PR	2.04	233	⇑eP	Pn	08 36 41.6	+1.0
CRPR	Cabo Rojo, PR	2.04	233	eS	Sn	08 37 07.2	+1.4
CRPR	Cabo Rojo, PR	2.04	233		Pb	08 36 42.0	-1.7
CRPR				IAML		08 37 26.0	
	comp=N,201nm,0.9s						
SMRT	St. Maarten	2.51	118	Pn	Pn	08 36 48.0	+1.0
SMRT				IAML		08 37 25.0	
	comp=N,172nm,0.2s						
SMRT				IAML		08 37 29.6	
	comp=E,205nm,0.6s						
DR12	Loma Pena Alta	3.79	264	Pn	Pn	08 37 05.8	+1.0
SDDR	Presa de Saban	5.58	268	Pn	Pn	08 37 31.4	+2.1
GRTK	Grand Turk	5.83	294	Pn	Pn	08 37 32.2	-0.5

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*IDC **29** 08:36:07.6±0.7, 38°.77N×20°.65E, h0^{km}, mb4.0/15, mb1 4.0/26, mb1mx3.9/51, mbtmp4.0/26, ML3.6/12, MS3.6/22, Ms1 3.6/22, ms1mx3.4/60, Error ellipse: s-maj=13.0km s-min=12.7km az=94.0*

*IASPEI **29** 08:36:08.9±0.8, 38°.72N±0°.02×20°.61E±0°.03, h9^{km}±4^{km}, mb4.1/22, MS3.6/14, Error ellipse: s-maj=3.9km s-min=2.4km az=91.1, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*TIR **29** 08:36:08.1, 38°.70N×20°.61E, h7^{km}±2^{km}, Ml4.5*

*THE **29** 08:36:09.6, 38°.73N×20°.62E, h4^{km}±1^{km}, ML4.2/7, Error ellipse: s-maj=1.7km s-min=0.5km az=247.0*

*NEIC **29** 08:36:09.9±2.2, 38°.70N±0°.03×20°.54E±0°.06, h10^{km}±1^{km}, mb4.1/22, ML4.4(THE), ML3.9(ATH), Error ellipse: s-maj=8.4km s-min=3.9km az=245.0*

*PDG **29** 08:36:09.2±0.6, 38°.69N×20°.35E, h16^{km}±2^{km}, ML4.3/2, Error ellipse: s-maj=1.3km s-min=1.6km az=0.0*

*ATH **29** 08:36:09.2, 38°.72N×20°.61E, h8^{km}±1^{km}, ML4.1/18, Error ellipse: s-maj=1.7km s-min=0.9km az=277.0*

ISC 29 08:36:08.7±0.6, **38°.72N**±0°.01×**20°.60E**±0°.02, **h8**^{km}±3^{km}, **n253**, σ**1^{s}57**/287, **mb4.1**/22, **MS3.6**/14, **21C-17D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRAG	Dragano-Lefkad	0.04	213	P	Pg	08 36 10.6	+0.2
DRAG				S	Sg	08 36 11.9	+0.3
	1675µm,0.3s						
DRAG	Dragano-Lefkad	0.04	213	P	Pg	08 36 10.6	+0.2
DRAG				S	Sg	08 36 12.1	+0.5
NYDR	Nydri-Lefkada	0.07	94	P	Pg	08 36 10.8	+0.1
NYDR				S	Sg	08 36 12.4	+0.2
	444µm,0.4s						
NYDR	Nydri-Lefkada	0.07	94	P	Pg	08 36 10.9	+0.1
NYDR				S	Sg	08 36 12.3	+0.2
LKD2	Lefkada island	0.08	31	P	Pg	08 36 10.7	-0.2
LKD2				S	Sg	08 36 12.4	-0.1
	576µm,0.3s						
LKD2	Lefkada island	0.08	31	P	Pg	08 36 10.6	-0.2
LKD2				S	Sg	08 36 12.3	-0.1
LKD2				AML	AML	08 36 12.9	
LKD2				AML	AML	08 36 13.1	
LKD2	Lefkada island	0.08	31	P	Pg	08 36 10.7	-0.2
	baz=23						
LKD2				S	Sg	08 36 12.4	-0.1
	baz=23						
EVGI	Lefkada island	0.11	157	P	Pg	08 36 11.8	+0.6
EVGI				S	Sg	08 36 14.2	+1.3
	196µm,0.2s						
EVGI	Lefkada island	0.11	157	P	Pg	08 36 11.8	+0.6
EVGI				S	Sg	08 36 13.8	+0.9
TSLK	Tsoukalades, L	0.11	21	P	Pg	08 36 11.5	+0.1
TSLK				S	Sg	08 36 13.6	+0.4
	499µm,0.6s						
TSLK	Tsoukalades, L	0.11	21	P	Pg	08 36 11.5	+0.1
TSLK				S	Sg	08 36 13.6	+0.4
TSLK				AML	AML	08 36 14.4	
TSLK				AML	AML	08 36 15.7	
FSK	Fiskardo	0.26	187	P	Pg	08 36 14.8	+0.9
FSK				S	Sb	08 36 19.6	-0.7
	60µm,0.9s						
FSK	Fiskardo	0.26	187	P	Pg	08 36 14.7	+0.8
FSK				S	Sg	08 36 18.7	+1.3
FSK				AML	AML	08 36 20.5	
FSK				AML	AML	08 36 20.9	
	comp=N,56300µm,0.3s						
KEF4	Livadi, Kephal	0.48	197	P	Pg	08 36 16.6	-1.4
KEF4				S	Sg	08 36 26.1	+1.8
DMLN	Damoulianata-K	0.51	201	P	Pg	08 36 17.9	-0.8
DMLN				S	Sg	08 36 26.9	+1.6
VLS	Valsamata	0.54	181	P	Pg	08 36 18.0	-1.2
VLS				S	Sg	08 36 27.5	+1.2
VLS				AML	AML	08 36 32.1	
	comp=E,26444µm,0.3s						
VLS				AML	AML	08 36 33.9	
	comp=N,21076µm,0.3s						
ARGA	Argostoli. Kep	0.55	190	P	Pg	08 36 20.3	+1.0
KEF3	Kipouria, Keph	0.55	201	P	Pg	08 36 19.1	-0.3
KEF3				S	Sg	08 36 27.4	+0.8
PSDA	Pessada-Kefalo	0.60	181	P	Pg	08 36 20.5	+0.1
PSDA				S	Sg	08 36 29.0	+0.7
IGT	Igoumenitsa	0.84	346	P	Pg	08 36 24.6	-0.3
IGT				S	Sb	08 36 37.7	+0.7
	comp=N,12µm,0.7s						
IGT	Igoumenitsa	0.84	346	P	Pg	08 36 24.4	-0.5
IGT				AML	AML	08 36 42.4	
	comp=E,22776µm,0.7s						
IGT				AML	AML	08 36 42.7	
	comp=N,24565µm,0.7s						
IGT	Igoumenitsa	0.84	346	P	Pg	08 36 25.4	+0.5
	baz=346						
IGT				S	Sb	08 36 37.7	+0.7
	baz=346						
VTN	Vitineika	0.92	150	P	Pb	08 36 27.2	+0.2
RLS	Riolos of Patr	0.95	134	P	Pg	08 36 27.1	+0.2
RLS	Riolos of Patr	0.95	134	P	Pg	08 36 26.9	0.0
RLS				AML	AML	08 36 49.0	
	comp=N,37520µm,0.6s						
RLS				AML	AML	08 36 50.0	
	comp=E,15930µm,0.8s						
JAN	Janina	0.96	12	P	Pb	08 36 27.9	+0.3
JAN	Janina	0.96	12	P	Pb	08 36 28.0	+0.3
EVR	Evrytania	0.96	78	P	Pg	08 36 27.1	-0.1
EVR	Evrytania	0.96	78	P	Pg	08 36 27.3	0.0
EVR				AML	AML	08 36 44.7	
	comp=N,13540µm,0.8s						
EVR				AML	AML	08 36 50.6	
	comp=E,12866µm,1.0s						
LTHK	Lithakia	1.02	170	P	Pg	08 36 27.5	-0.9
LTHK				AML	AML	08 36 53.4	
	comp=N,17594µm,0.5s						
LTHK				AML	AML	08 36 57.9	
	comp=E,14041µm,0.6s						
UPR	University Cam	1.02	115	P	Pb	08 36 29.1	+0.4
ANX	Ano Chora	1.04	96	P	Pg	08 36 28.7	0.0
ANX	Ano Chora	1.04	96	P	Pg	08 36 28.6	0.0
ANX				AML	AML	08 36 52.7	
	comp=N,40932µm,0.6s						
ANX				AML	AML	08 36 53.1	
	comp=E,28698µm,0.8s						
EFP	Efpalio	1.06	106	P	Pg	08 36 28.7	-0.4
EFP	Efpalio	1.06	106	P	Pg	08 36 28.5	-0.6
EFP				AML	AML	08 36 52.1	
	comp=E,24010µm,0.5s						
EFP				AML	AML	08 36 52.3	
	comp=N,24793µm,0.7s						
KASA	Kassiopi	1.15	333	P	Pg	08 36 30.4	-0.5
DRO	Drossia	1.16	131	P	Pg	08 36 30.4	-0.6
DRO	Drossia	1.16	131	P	Pg	08 36 30.5	-0.5
DRO				AML	AML	08 36 56.5	
	comp=N,29966µm,0.7s						
DRO				AML	AML	08 36 57.3	
	comp=E,27948µm,0.5s						
KEK	Kerkira	1.17	328	P	Pg	08 36 31.4	+0.1
KEK	Kerkira	1.17	328	P	Pg	08 36 31.5	+0.3
SERG	Sergoula	1.18	105	P	Pg	08 36 30.9	-0.5
SERG				AML	AML	08 36 51.9	
	comp=N,19394µm,0.3s						
SERG				AML	AML	08 36 57.6	
	comp=E,21876µm,0.8s						
LAKA	Lakka	1.18	113	P	Pg	08 36 30.8	-0.6
LAKA				AML	AML	08 36 54.7	
	comp=E,14630µm,1.1s						
LAKA				AML	AML	08 36 54.8	
	comp=N,9360µm,0.7s						
TRIZ	Trizonia	1.21	107	P	Pb	08 36 31.2	-0.6
MAKR	Makrakomi, Fth	1.23	76	P	Pb	08 36 32.2	-0.1
SRN	Sarande	1.25	338	P	Pg	08 36 33.1	+0.4
	baz=339						
SRN				S	Sn	08 36 51.4	+1.8
	baz=339						
SRN				AMP			
	comp=N,10.0nm,0.4s,baz=339						
AGG	Agios Georgios	1.38	77	P	Pb	08 36 35.0	+0.2
AGG	Agios Georgios	1.38	77	P	Pb	08 36 35.0	+0.2
AGG				AML	AML	08 37 01.4	
	comp=E,20490µm,1.1s						
AGG				AML	AML	08 37 01.8	
	comp=N,15841µm,0.7s						
AGG	Agios Georgios	1.38	77		Pb	08 36 35.3	+0.5
AGG				Sn	Sg	08 36 56.1	+2.9
THL	Klokotos Trika	1.39	52	P	Pn	08 36 34.3	0.0
KLV	Kalavryta, Ach	1.39	119	P	Pn	08 36 33.9	-0.6
KLV				AML	AML	08 36 59.3	
	comp=N,2264µm,0.6s						
KLV				AML	AML	08 37 05.3	
	comp=E,10500µm,0.8s						
LSK	Leskovik	1.43	360	P	Pg	08 36 36.6	+0.4
	baz=0.0						
LSK				S	Sg	08 36 57.0	+2.3
	baz=0.0						
LSK				AMP			
	comp=E,25nm,0.8s,baz=0.0						
DLFA	Delphi	1.50	99	P	Pn	08 36 36.5	+0.4
DLFA				AML	AML	08 37 04.1	
	comp=E,7816µm,0.9s						
DLFA				AML	AML	08 37 06.7	
	comp=N,6530µm,1.1s						
GUR	Goura	1.57	119	P	Pn	08 36 37.1	0.0
GUR				AML	AML	08 37 08.0	
	comp=N,17618µm,0.8s						
GUR				AML	AML	08 37 11.3	
	comp=E,20645µm,0.5s						
THAL	Thalero	1.76	112	P	Pg	08 36 42.3	-0.1
ITM	Ithomi	1.86	145	Pn	Pb	08 36 43.1	+0.1
LKR	Lokris	1.88	91	P	Pb	08 36 43.9	+0.6
ATAL	Atalanti	1.89	90	P	Pb	08 36 44.2	+0.6
KBN	Korca	1.91	4		Pb	08 36 44.8	+0.9
KBN	Korca	1.91	4	P	Pb	08 36 44.7	+0.9
	baz=4.0						
KBN				S	Sg	08 37 12.6	+2.5
	baz=4.0						
KBN				AMP			
	comp=N,12nm,1.2s,baz=4.0						
VLO	Vlora	1.95	334		Pn	08 36 42.1	+0.1
LTK	Loutraki	1.98	110	P	Pb	08 36 45.3	+0.2
PYL	PYLOS	2.03	153	P	Pn	08 36 44.9	+1.6
NEO	Neokhori	2.12	73	P	Pb	08 36 46.7	-0.8
FNA	Florina	2.15	16		Pb	08 36 47.2	-0.7
FNA	Florina	2.15	16	P	Pb	08 36 47.8	-0.1
	baz=15						
EPID	Epidavros	2.27	118	P	Pn	08 36 48.5	+2.0
OHR	Ohrid	2.40	4	i Pn	Pb	08 36 50.9	-1.2
ATH	Athens Observa	2.56	106	P	Pb	08 36 53.4	-1.5
ATH				AML	AML	08 37 29.9	
	comp=E,3098µm,0.6s						
ATH				AML	AML	08 37 38.4	
	comp=N,1946µm,0.6s						
TIR	Tirane	2.69	348	⇑P	Pn	08 36 53.4	+1.2
TIR	Tirane	2.69	348		Pn	08 36 53.8	+1.5
TIR	Tirane	2.69	348	P	Pn	08 36 53.5	+1.3
	baz=349						
TIR				AMP			
	comp=E,2.0nm,1.6s,baz=349						
PHP	Peshkopia	2.96	358	P	Pn	08 36 57.8	+1.6
	baz=358						
PHP				AMP			
	comp=N,3.6nm,1.2s,baz=358						
VAY	Valandovo	3.01	30	i Pn	Pb	08 37 01.0	-1.5
TIP	Timpagrande	3.03	280	⇓P	Pn	08 36 58.4	+1.3
TIP	Timpagrande	3.03	280		Pn	08 36 57.2	+0.1
STIP	Stip	3.21	22	i Pn	Pb	08 37 03.8	-2.2
ULC	Ulcinj	3.40	343	⇓iPn	Pn	08 37 02.0	-0.2
MATE	Matera	3.57	304	⇓P	Pn	08 37 04.7	+0.2
MATE				⇓S	Sn	08 37 45.0	-1.8
DRME	Dracevica, Mon	3.63	343	ePn	Pn	08 37 05.6	+0.4
BCI	Bajram Curri	3.67	354	P	Pn	08 37 07.6	+1.8
	baz=354						
CEL	Celeste	3.72	264		Pn	08 37 07.1	+0.5
BUM	Brajici-Budva	3.81	341	⇑iPn	Pn	08 37 07.6	-0.2
PDG	Podgorica	3.85	345	⇑P	Pn	08 37 08.9	+0.7
PDG				⇓S	Sn	08 37 53.4	-0.2
PDG	Podgorica	3.85	345	ePn	Pn	08 37 08.0	-0.2
PDG	Podgorica	3.85	345		Pn	08 37 09.5	+1.3
TTG	Podgorica	3.85	345	⇑iPn	Pn	08 37 08.3	+0.1
PVY	Plav	3.90	353	⇑iPn	Pn	08 37 10.2	+1.1
PVY				i Sn	Sn	08 37 55.7	+0.5
CEME	Cevo	4.03	342	⇓iPn	Pn	08 37 10.7	-0.1
CEME				i Sn	Sn	08 37 56.6	-1.7
HCY	Herceg Novi	4.06	337	ePn	Pn	08 37 10.3	-0.8
IVA	Berane	4.18	353	⇑iPn	Pn	08 37 14.2	+1.3
APE	Apeiranthos	4.23	111	⇑P	Pb	08 37 19.3	-4.2
APE				⇓S	Sb	08 38 11.6	-3.1
TREB	Trebinje	4.35	338	ePn	Pn	08 37 13.8	-1.3
VTS	Vitosha	4.38	26	⇑P	Pn	08 37 19.5	+3.9
VTS				⇑S	Sn	08 38 09.6	+2.6
VTS	Vitosha	4.38	26		Pn	08 37 17.6	+1.9
BRY	Bratogost	4.46	340	ePn	Pn	08 37 16.2	-0.6
BRY	Bratogost	4.46	340	⇑iPn	Pn	08 37 16.3	-0.6
UPM	Unac-Piva	4.66	345	ePn	Pn	08 37 20.3	+0.7
UPM	Unac-Piva	4.66	345	⇑iPn	Pn	08 37 20.5	+0.9
STON	Ston	4.70	333	ePn	Pn	08 37 18.7	-1.2
STON	Ston	4.70	333	ePn	Pn	08 37 18.9	-0.9
ALN	Alexandroupoli	4.72	61	Pn	Pn	08 37 22.5	+2.3
SGRT	San Giovanni R	4.80	311		Pn	08 37 21.9	+0.5
IDI	Anoyia	4.85	134	Pn	Pn	08 37 22.8	+0.8
	comp=N,2.0nm,0.3s,baz=326,slow=14,SNR=12						
IDI				Sn	Sn	08 38 19.9	+1.6
	comp=N,6.3nm,0.3s,baz=357,slow=15,SNR=4.5						
LSTV	Lastovo	4.93	326	ePn	Pn	08 37 22.5	-0.6
BOVS	Bovan	4.98	9	⇓P	Pn	08 37 25.4	+1.6
RUDO	Rudo	4.98	350	ePn	Pn	08 37 21.7	-2.1
VAE	Valguarnera	5.04	258	Pn	Pn	08 37 26.4	+1.7
	comp=N,1.8nm,0.3s,baz=164,slow=22,SNR=1.8						
VAE				Sn	Sn	08 38 22.6	-0.5
	comp=N,4.3nm,0.3s,baz=248,slow=8.1,SNR=2.2						
VAE				LR	LR	08 40 06.9	
	comp=N,328nm,18.2s,baz=54,slow=47						
RAFF	Raffo Rosso	5.15	255	Pn	Pn	08 37 25.3	-0.9
PAOL	Paolisi	5.19	298		Pn	08 37 28.3	+1.7
BBLS	Lazići	5.22	350	ePn	Pn	08 37 26.5	-0.7

MAKA	Makarska	5.31	330	*e*Pn	Pn	08 37 27.8	-0.5
DIVS	Divibare	5.39	355	*e*Pn	Pn	08 37 29.0	-0.6
DIVS	Divibare	5.39	355		Pn	08 37 29.4	-0.1
RICI	Ricice	5.44	332	*e*Pn	Pn	08 37 29.3	-0.9
HVAR	Hvar	5.45	326	*e*Pn	Pn	08 37 28.8	-1.5
TEKS	Tekeris	5.88	352	*e*Pn	Pn	08 37 34.3	-1.9
MDVR	Moldovita	6.12	7	⇓P	Pn	08 37 41.9	+2.5
ZIRJ	Zirje	6.19	324	*e*Pn	Pn	08 37 39.5	-0.8
MGRS	Mrkonjic Grad	6.28	336	*e*Pn	Pn	08 37 41.9	+0.3
HERR	Herculane	6.30	12	⇓P	Pn	08 37 44.0	+2.0
MORI	Morici	6.33	326	*e*Pn	Pn	08 37 42.0	-0.3
FRGS	Fruska Gora	6.46	355	⇑P	Pn	08 37 45.1	+0.9
FRGS	Fruska Gora	6.46	355	*e*Pn	Pn	08 37 43.1	-1.0
BLY	Banja Luka	6.54	338	*e*Pn	Pn	08 37 44.5	-0.8
AQU	L'Aquila	6.58	306	*e*Pn	Pn	08 37 46.7	+0.9
AQU	L'Aquila	6.58	306		Pn	08 37 48.2	+2.5
HUMR	Humele	6.67	28	⇓P	Pn	08 37 50.2	+3.3
DUGI	Dugi Otok	6.72	323	*e*Pn	Pn	08 37 47.3	-0.4
UDBI	Udbina	6.84	330	*e*Pn	Pn	08 37 50.0	+0.5
GZR	Gura Zlata	6.86	13	⇑P	Pn	08 37 51.3	+1.6
BZS	Buzias	6.93	6	⇑P	Pn	08 37 52.2	+1.6
NRCA	Norcia	7.01	308		Pn	08 37 53.3	+1.5
ARR	Arges	7.29	23	⇓P	Pn	08 37 59.0	+3.4
RABC	Rab	7.43	326	*i* Pn	Pn	08 37 57.3	-0.1
MOSL	Moslavina	7.46	339	*e*Pn	Pn	08 37 56.0	-1.8
VOIR		7.48	25	⇓P	Pn	08 38 01.7	+3.5
SIRR	Siria	7.58	6	⇑P	Pn	08 38 01.8	+2.3
KOVH	Kovagotottos	7.59	347	*e*P	Pn	08 37 59.4	-0.2
MORH	Mrgy, Hungar	7.63	350	*e*P	Pn	08 38 00.3	+0.1
MORH	Mrgy, Hungar	7.63	350	*e*Pn	Pn	08 37 59.5	-0.6
ISR	Istrita	7.78	33	⇑P	Pn	08 38 06.3	+4.1
MLR	Muntele Rosu	7.84	29	⇓P	Pn	08 38 05.8	+2.6
MLR	Muntele Rosu	7.84	29	Pn	Pn	08 38 03.7	+0.5
	comp=N,0.2nm,0.3s,baz=208,slow=5.5,SNR=7.4						
MLR				LR	LR	08 41 30.2	
	comp=N,365nm,18.6s,baz=192,slow=41						
OZLJ	Ozalj	7.88	333	*e*Pn	Pn	08 38 03.5	0.0
SMRN	Sveta Marina	7.93	325	*e*Pn	Pn	08 38 03.9	-0.4
PTJ	Puntijarka	7.96	336	*e*Pn	Pn	08 38 03.4	-1.4
RIY	Rijeka	8.02	327	*e*Pn	Pn	08 37 59.8	-5.7
CRES	Cresnjev	8.06	333	*e*Pn	Pn	08 38 05.0	-1.1
DOPR	Dopca	8.06	25	⇓P	Pn	08 38 09.8	+3.7
HARR	Harsova	8.10	40	⇓P	Pn	08 38 10.8	+4.3
LOBO	Lobor	8.15	337	*e*Pn	Pn	08 38 06.1	-1.2
BISRR	Bisoca	8.19	32	⇑P	Pn	08 38 11.0	+3.0
COVR	Voineasa-Covas	8.24	28	⇑P	Pn	08 38 12.3	+3.7
CEY	Cerknica	8.38	329	*e*Pn	Pn	08 38 10.1	-0.3
PLOR	Plostina	8.42	30	⇑P	Pn	08 38 14.6	+3.6
VRI	Vrincioaia	8.46	30	⇑P	Pn	08 38 14.9	+3.3
LJU	Ljubljana	8.59	330	*e*Pn	Pn	08 38 14.7	+1.4
MPLH	Magyarpolny	8.74	346	*e*P	Pn	08 38 15.2	-0.2
SOKA	Soboth	8.95	335	*e*Pn	Pn	08 38 17.2	-1.1
	comp=N,6.7nm,0.6s,SNR=12						
OBKA	Obir	8.97	332	*e*Pn	Pn	08 38 17.7	-0.9
	comp=N,3.9nm,0.4s,SNR=4.9						
OBKA				Sn	Sn	08 39 56.9	-3.0
	comp=N,18nm,0.7s						
ZCCA	Zocca	9.15	311	Pn	Pn	08 38 25.1	+4.1
PSZ	Piszkesteto	9.21	357	⇓P	Pn	08 38 22.7	+0.8
PSZ	Piszkesteto	9.21	357	*e*P	Pn	08 38 23.1	+1.2
PSZ	Piszkesteto	9.21	357	Pn	Pn	08 38 21.3	-0.6
ARSA	Arzberg	9.30	338	*e*Pn	Pn	08 38 22.3	-0.8
	comp=N,3.2nm,0.5s						
VLC	Villacollemand	9.40	309	Pn	Pn	08 38 26.1	+1.6
BURAR	Bucovina Array	9.51	19	⇑P	Pn	08 38 28.3	+2.3
STAL	STALIGIAL	9.52	325		Pn	08 38 26.6	+0.5
ZOU	Zoufplan	9.64	327	Pn	Pn	08 38 28.7	+0.9
CONA	Conrad Observa	9.83	341	*e*Pn	Pn	08 38 30.2	-0.2
	comp=N,0.3nm,0.2s						
VYHS	Vyhne	9.86	353	*e*SN	Sn	08 40 18.5	-3.0
CTI	Castel Tesino	9.87	321	Pn	Pn	08 38 29.9	-1.1
ABTA	Abfaltersbach	9.98	326	*e*Pn	Pn	08 38 32.3	-0.3
	comp=N,0.8nm,0.4s						
ABTA				*e*Sn	Sn	08 40 18.5	-6.2
	comp=N,13nm,0.6s						
MSSA	Maissana	10.02	307	Pn	Pn	08 38 36.2	+3.3
BRTR	Keskin Array B	10.17	80	Pn	Pn	08 38 39.0	+4.0
	comp=N,0.3nm,0.3s,baz=266,slow=12,SNR=6.4						
BRTR				LR	LR	08 43 16.6	
	comp=N,343nm,20.4s,baz=268,slow=42						
BRTR	Keskin Array B	10.17	80		Pn	08 38 36.8	+1.7
MOA	Molln	10.22	335	*e*Pn	Pn	08 38 35.8	+0.1
	comp=N,3.8nm,0.3s,SNR=8.9						
MOA				*e*Sn	Sn	08 40 27.3	-3.3
	comp=N,3.1nm,0.3s						
WTTA	Wattenberg	10.77	325	*e*Pn	Pn	08 38 43.4	0.0
	comp=N,1.1nm,0.3s,SNR=5.5						
WATA	Walderalm	10.85	325	*e*Pn	Pn	08 38 44.6	+0.2
	comp=N,2.1nm,0.4s,SNR=7.0						
WATA				*e*Sn	Sn	08 40 45.2	-0.7
	comp=N,17nm,0.8s						
SQTA	Sankt Quirin	10.93	324	*i* Pn	Pn	08 38 46.1	+0.6
	comp=N,0.6nm,0.2s						
SQTA				*e*Sn	Sn	08 40 44.0	-3.9
	comp=N,5.5nm,0.6s						
VRAC	Vranov	10.97	346	Pn	Pn	08 38 45.7	-0.2
	comp=N,0.2nm,0.3s,baz=174,slow=10,SNR=4.6						
VRAC				LR	LR	08 44 19.0	
	comp=N,572nm,18.0s,baz=176,slow=45						
FETA	Feichten	11.01	322	*e*Pn	Pn	08 38 49.7	+3.1
	comp=N,1.1nm,0.5s						
FETA				Sn	Sn	08 40 49.2	-0.7
	comp=N,3.9nm,0.6s						
MOTA	Moosalm	11.07	324	*e*Pn	Pn	08 38 48.6	+1.2
	comp=N,2.6nm,0.4s,SNR=5.6						
MOTA				*e*Sn	Sn	08 40 47.1	-4.3
	comp=N,4.3nm,0.7s						
CKRC	Cesky Krumlov	11.07	338	*e*PN	Pn	08 38 48.3	+1.0
DAVOX	Davos/Dischmat	11.26	319	Pn	Pn	08 38 51.6	+1.4
	comp=N,0.3nm,0.3s,baz=177,slow=16,SNR=4.8						
DAVOX				Sn	Sn	08 40 54.1	-2.2
	comp=N,0.4nm,0.3s,baz=349,slow=22,SNR=2.4						
MORC	Moravsky Berou	11.27	350	Pn	Pn	08 38 51.4	+1.3
GEC2	GERESS Array S	11.28	336	Pn	Pn	08 38 50.8	+0.6
GERES	GERESS Array B	11.28	336	Pn	Pn	08 38 50.1	-0.2
	comp=N,0.2nm,0.3s,baz=159,slow=12,SNR=5.9						
GERES				Sn	Sn	08 40 48.9	-7.5
	comp=N,0.4nm,0.3s,baz=147,slow=26,SNR=2.0						
GERES				LR	LR	08 43 35.9	
	comp=N,181nm,20.4s,baz=268,slow=40						
GERES	GERESS Array B	11.28	336	Pn	Pn	08 38 50.3	0.0
RETA	Reutte	11.33	324	*e*Pn	Pn	08 38 53.2	+2.3
	comp=N,2.0nm,0.8s						
RETA				*e*Sn	Sn	08 40 54.2	-3.5
	comp=N,4.4nm,0.6s						
KHC	Kasperske Hory	11.57	336	*e*PN	Pn	08 38 53.8	-0.3
KHC				*e*SN	Sn	08 40 57.9	-5.6
KHC	Kasperske Hory	11.57	336	Pn	Pn	08 38 55.1	+0.9
DAVA	Damuels	11.61	321	*e*Sn	Sn	08 41 01.0	-3.6
	comp=N,3.7nm,0.5s						
SENIN	Lac Senin/Sane	12.42	312		Pn	08 39 07.2	+1.2
MMAI	Mount Meron Ar	13.28	111	Pn	Pn	08 39 16.7	-0.9
	comp=N,0.8nm,0.3s,baz=321,slow=11,SNR=2.0						
AKASG	Malin Array Be	13.45	24	Pn	Pn	08 39 19.0	-0.7
	comp=N,0.2nm,0.3s,baz=210,slow=11,SNR=1.5						
AKASG	Malin Array Be	13.45	24		Pn	08 39 19.6	-0.1
CLL	Collm	13.68	339	*i* PP	P	08 39 33.4	+1.6
	comp=Z,36nm,1.6s						
CLL	Collm	13.68	339	Pn	Pn	08 39 23.5	+0.7
ASF	Jabal al Asfar	14.79	111	Pn	Pn	08 39 36.9	-1.4
	comp=Z,0.2nm,0.3s,baz=243,slow=4.5,SNR=2.1						
EIL	Elat	14.90	123	LR	LR	08 47 00.1	
	comp=Z,53nm,20.4s,baz=272,slow=44						
KBZ	Khabaz	17.48	66	P	Pn	08 40 12.8	0.0
	comp=Z,0.1nm,0.3s,baz=252,slow=11,SNR=2.7						
GNI	Garni	18.69	78	LR	LR	08 48 56.2	
	comp=Z,141nm,19.8s,baz=268,slow=41						
ESBB	Sonseca Array	19.05	281	P	P	08 40 31.5	+0.1
ESBB				IAmb	IAmb	08 40 50.7	
	comp=Z,14nm,1.4s						
ESDC	Sonseca Array	19.05	281	P	P	08 40 30.8	-0.7
	comp=Z,0.1nm,0.3s,baz=72,slow=12,SNR=8.5						
ESDC				LR	LR	08 47 41.1	
	comp=Z,101nm,20.4s,baz=325,slow=36						
ESDC	Sonseca Array	19.05	281	P	P	08 40 31.7	+0.2
PAB	San Pablo	19.36	280	P	P	08 40 35.6	+0.8
MDT	Midelt	21.26	262	LR	LR	08 49 15.6	
	comp=Z,111nm,18.7s,baz=55,slow=37						
HFS	Hagfors	21.88	351	P	P	08 41 01.7	-0.1
	comp=Z,5.5nm,0.9s,baz=165,slow=12,SNR=6.2						
HFS				LR	LR	08 49 34.1	
	comp=Z,234nm,18.3s,baz=192,slow=37						
NC602	NORSAR Array S	22.76	348	P	P	08 41 11.6	+0.4
NAO01	NORSAR Array S	22.97	348	P	P	08 41 14.4	+1.0
NAO01				IAmb	IAmb	08 41 42.5	
	comp=Z,3.8nm,0.8s						
FINES	FINESS Array B	23.00	7	P	P	08 41 13.7	0.0
	comp=Z,9.4nm,0.8s,baz=164,slow=9.0,SNR=11						
FINES				LR	LR	08 51 22.4	
	comp=Z,153nm,18.4s,baz=194,slow=40						
FINES	FINESS Array B	23.00	7	P	P	08 41 13.6	-0.2
FIA1	FINESS Array S	23.00	7	P	P	08 41 13.4	-0.3
NC405	NORSAR Array S	23.09	349	P	P	08 41 13.9	-0.8
NB2	NORSAR Subarra	23.10	348	P	P	08 41 14.1	-0.7
	comp=Z,1.5nm,0.7s,baz=156,slow=10						
NOA	NORSAR Array B	23.10	348	P	P	08 41 14.1	-0.7
	comp=Z,1.5nm,0.8s,baz=158,slow=9.6,SNR=6.1						
NOA				LR	LR	08 51 53.1	
	comp=Z,125nm,18.4s,baz=165,slow=41						
BELG	Belogornoye	23.17	45	P	P	08 41 14.9	-0.6
	comp=Z,12nm,0.7s,baz=119,slow=9.0,SNR=5.2						
BELG				LR	LR	08 50 54.7	
	comp=Z,55nm,21.0s,baz=117,slow=38						
KIRV	Kirov	27.17	34	LR	LR	08 53 24.2	
	comp=Z,177nm,19.3s,baz=234,slow=38						
AKTO	Aktyubinsk	28.81	54	LR	LR	08 54 33.9	
	comp=Z,130nm,18.4s,baz=299,slow=38						
GEYT	Alibeck	29.31	80	LR	LR	08 56 58.0	
	comp=Z,48nm,19.2s,baz=245,slow=43						
ABKAR	Akbulak array	29.89	56	P	P	08 42 16.4	-0.2
ABKAR	Akbulak array	29.89	56	P	P	08 42 17.1	+0.4
TORD	Torodi Ar. Bea	30.49	218	P	P	08 42 22.6	+0.3
	comp=Z,1.0nm,0.8s,baz=30,slow=8.0,SNR=6.2						
TORD	Torodi Ar. Bea	30.49	218	P	P	08 42 22.1	-0.2
TORD				IAmb	IAmb	08 42 46.7	
	comp=Z,3.1nm,1.2s						
ARCES	ARCESS Array B	30.99	3	P	P	08 42 25.5	-0.7
	comp=Z,4.1nm,0.9s,baz=140,slow=6.4,SNR=4.4						
ARCES				LR	LR	08 55 01.6	
	comp=Z,114nm,18.7s,baz=185,slow=37						
ARCES	ARCESS Array B	30.99	3	P	P	08 42 26.0	-0.2
ARCES				IAmb	IAmb	08 42 37.1	
	comp=Z,4.3nm,1.2s						
BRVK	Borovoye	36.66	50	P	P	08 43 17.4	+1.8
BRVK				IAmb	IAmb	08 43 23.4	
	comp=Z,4.0nm,0.9s						
BVAR	Borovoye Array	36.72	50	P	P	08 43 16.1	-0.1
	comp=Z,0.8nm,0.5s,baz=264,slow=14,SNR=6.8						
KKAR	Karatay Array	37.52	67	P	P	08 43 23.6	+0.5
CHGR	Chuyangaron	37.54	74	P	P	08 43 24.1	+0.6
CHGR				IAmb	IAmb	08 43 29.0	
	comp=Z,9.3nm,0.9s						
BTK	Batken	38.41	72	P	P	08 43 32.0	+1.2
BTK				IAmb	IAmb	08 43 42.6	
	comp=Z,3.6nm,0.8s						
DBIC	Dimbokro	39.33	222	P	P	08 43 39.8	+1.3
	comp=Z,1.4nm,0.6s,baz=68,slow=12,SNR=3.1						
DBIC				LR	LR	09 00 44.1	
	comp=Z,91nm,19.1s,baz=34,slow=38						
AAK	Ala-Archa	40.48	67	P	P	08 43 46.7	-1.3
	comp=Z,0.8nm,0.5s,baz=76,slow=23,SNR=1.7						
AAK	Ala-Archa	40.48	67	P	P	08 43 48.1	0.0
BOOM	Boomskoye usch	41.55	67	P	P	08 43 57.8	+0.8
BOOM				IAmb	IAmb	08 44 03.9	
	comp=Z,2.4nm,0.7s						
KURBB	Kurchatov Arra	41.86	54	P	P	08 43 58.5	-0.5
	comp=Z,0.9nm,0.6s,baz=285,slow=9.4,SNR=4.8						
KURK	Kurchatov	41.90	54	P	P	08 43 59.9	+0.5
KURK				IAmb	IAmb	08 44 21.2	
	comp=Z,2.8nm,0.8s						
NIL	Nilore	42.31	80	P	P	08 44 02.8	-0.3
NIL				IAmb	IAmb	08 44 13.7	
	comp=Z,7.7nm,1.0s						
MK31	Makanchi Array	44.97	59	P	P	08 44 23.4	-0.9
MKAR	Makanchi Array	44.97	59	P	P	08 44 23.8	-0.4
	comp=Z,1.6nm,0.5s,baz=274,slow=7.2,SNR=15						
ZAA0	Zalesovo Array	45.28	49	P	P	08 44 26.8	+0.2
ZALV	Zalesovo Beam	45.28	49	P	P	08 44 26.4	-0.2
	comp=Z,3.6nm,0.4s,baz=283,slow=8.1,SNR=9.6						
ZALV				LR	LR	09 05 44.3	
	comp=Z,74nm,19.4s,baz=38,slow=39						
ZALV	Zalesovo Beam	45.28	49	P	P	08 44 26.9	+0.3
SCHQ	Schefferville	58.11	317	P	P	08 46 03.8	+1.3
	comp=Z,4.5nm,0.8s,baz=72,slow=6.4,SNR=2.4						
SCHQ				LR	LR	09 10 24.3	
	comp=Z,95nm,18.3s,baz=230,slow=35						
SONM	Songino Array	60.07	51	P	P	08 46 15.8	-0.5
	comp=Z,0.2nm,0.3s,baz=297,slow=6.3,SNR=1.8						
WSPT	Westport, CT	68.41	306	P	P	08 47 10.8	-0.1
KSRS	Korea Array	78.94	51	P	P	08 48 12.8	-0.1
	comp=Z,0.6nm,0.5s,baz=318,slow=6.0,SNR=2.9						
PETK	Petropavlovsk-	81.28	25	LR	LR	09 27 56.4	
	comp=Z,43nm,18.4s,baz=37,slow=38						
CPUP	Villa Florida	97.36	242	LR	LR	09 35 43.6	
	comp=Z,32nm,18.1s,baz=38,slow=37						
WRA	Warramunga Arr	120.49	92	PKP	PKPdf	08 55 00.2	-1.0
	comp=Z,0.3nm,0.6s,baz=326,slow=1.8,SNR=4.9						
ASAR	Alice Springs	122.17	96	PKP	PKPdf	08 55 03.8	-0.6
	comp=Z,0.4nm,0.6s,baz=304,slow=1.3,SNR=12						
QSPA	South Pole Qui	128.57	180	PKP	PKPdf	08 55 15.4	+0.1
	comp=Z,0.7nm,0.7s,baz=263,slow=2.7,SNR=6.1						

IDC 29 08:50:53.2±5.3**, 3°.77N×127°.15E, h73^{km}**±54^{km}**, mb3.9**/4**, mb1 3.9**/5**, mb1mx3.2**/53**, mbtmp4.1**/5**, ML3.6**/1**, MS2.7**/2**, Ms1 2.7**/2**, ms1mx2.5**/36**, Error ellipse: s-maj=60.7km s-min=24.8km az=68.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	6.18	138	P	Pn	08 52 21.1	-0.8
	1.4nm,0.3s,baz=334,slow=15,SNR=5.3						
SIJI				S	Sn	08 53 32.8	+1.6
	0.6nm,0.3s,baz=229,slow=23,SNR=1.7						
GUMO	Guam	20.03	60	LR	LR	09 02 35.1	
	comp=Z,46nm,19.7s,baz=101,slow=35						
KSRS	Korea Array	33.53	1	LR	LR	09 14 09.8	
	comp=Z,6.3nm,19.5s,baz=300,slow=42						
STKA	Stephens Creek	38.02	160	P	P	08 58 04.1	-0.3
	3.3nm,0.7s,baz=328,slow=8.8,SNR=10						
PETK	Petropavlovsk-	55.23	22	P	P	09 00 18.6	-0.1
	1.8nm,0.8s,baz=235,slow=6.8,SNR=1.4						
MKAR	Makanchi Array	57.76	325	P	P	09 00 36.5	-0.3
	0.5nm,0.5s,baz=119,slow=7.9,SNR=7.5						
KURBB	Kurchatov Arra	61.93	327	P	P	09 01 05.7	+0.5
	1.8nm,0.3s,baz=131,slow=6.5,SNR=4.2						

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*DJA **29** 08:53:00.8±0.3, 8°S±3°×12°8E±°, h206^{km}±10^{km}, M4.3/12, mb4.1/6, mB4.8/3, MLv4.4/12, Mw(mB)4.1/3*

*IDC **29** 08:53:00.6±1.8, 7°.80S×127°.75E, h182^{km}±18^{km}, mb3.6/5, mb1 3.9/9, mb1mx3.4/45, mbtmp4.3/9, Error ellipse: s-maj=24.1km s-min=18.5km az=128.0*

*NEIC **29** 08:53:01.2±2.0, 7°.70S±0°.10×127°.72E±0°.03, h179^{km}±11^{km}, mb4.1/11, Error ellipse: s-maj=14.1km s-min=4.3km az=185.0*

ISC 29 08:53:01.3±0.5**, 7°.81S**±0°.05×**127°.74E**±0°.06**, h200^{km}, n44, σ1^{s}.94**/50**, mb4.0**/8**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	3.54	93	P	Pn	08 53 58.6	+1.2
SAUI	Saumlaki	3.54	93	Pn	Pn	08 53 56.3	-1.1
SOEI	Soe	3.94	240	P	Pn	08 54 01.8	-0.7
SOEI				S	Sn	08 54 49.4	-1.1
SOEI	Soe	3.94	240		Pn	08 54 01.6	-0.9
SOEI				Sn	Sn	08 54 49.0	-1.4
AAI	Ambon	4.12	6	P	Pn	08 54 03.6	-1.0
MSAI	Masohi	4.59	15	P	Pn	08 54 09.8	-0.7
BATI	Baumata	4.68	239	P	Pn	08 54 11.9	+0.2
	36nm,0.3s,baz=142,slow=2.8,SNR=18						
BATI				S	Sn	08 55 05.5	-1.5
	38nm,0.3s,baz=168,slow=17,SNR=13						
BATI	Baumata	4.68	239	P	Pn	08 54 11.9	+0.2
MTN	Manton Dam	6.02	147		Pn	08 54 29.8	+0.9
EDFI	Ende, Flores	6.06	261	P	Pn	08 54 29.9	+0.4
	0.0nm6.5nm,0.6s						
FAKI	Fak Fak	6.61	43	P	Pn	08 54 34.2	-2.4
	0.1nm30nm,1.1s						
FAKI	Fak Fak	6.61	43	Pn	Pn	08 54 34.7	-2.0
SIJI	Sorong	7.74	27	P	Pn	08 54 50.5	-0.8
	9.6nm,0.3s,baz=226,slow=11,SNR=19						
SIJI				S	Sn	08 56 14.6	-4.2
	1.4nm,0.3s,baz=275,slow=23,SNR=1.8						
SWI	Sorong	7.74	27	P	Pn	08 54 50.3	-1.0
	0.2nm25nm,0.6s						
KNRA	Kununurra	7.89	173		Pn	08 54 54.2	+1.0
WBSI	Waikabubak, Su	8.45	257	P	Pn	08 54 59.6	-0.9
	23nm,0.7s						
PLAI	Plampang	9.91	263	P	Pn	08 55 17.3	-2.2
	18nm,0.8s						
FITZ	Fitzroy Crossi	10.43	191	P	Pn	08 55 25.7	-0.5
	4.3nm,0.3s,baz=24,slow=10.0,SNR=85						
FITZ				S	Sn	08 57 16.5	-6.2
	2.4nm,0.3s,baz=124,slow=21,SNR=3.2						
WB0	Warramunga Arr	13.53	152		Pn	08 56 04.7	-0.8
WRA	Warramunga Arr	13.66	153	P	Pn	08 56 06.3	-0.9
	0.9nm,0.3s,baz=322,slow=13,SNR=32						
WRA				S	S	08 58 32.2	-7.2
	5.6nm,0.3s,baz=326,slow=23,SNR=16						
WB2	Warramunga Arr	13.66	153		Pn	08 56 06.8	-0.4
WR0	Warramunga Arr	13.77	152		P	08 56 10.4	-0.2
PSA00	Pilbara Seismi	15.66	208		Pn	08 56 35.3	+3.7
COEN	Coen	16.34	113	Pn	Pn	08 56 42.2	+2.2
COEN				IAmb	IAmb	08 57 06.8	
	comp=Z,6.8nm,0.9s						
AS31	Alice Springs	16.84	160	P	Pn	08 56 50.0	+4.1
ASAR	Alice Springs	16.84	160	P	P	08 56 41.6	-3.1
	comp=Z,0.2nm,0.3s,baz=342,slow=11,SNR=14						
ASAR				S	S	08 59 47.6	-2.7
	comp=Z,1.0nm,0.3s,baz=329,slow=17,SNR=6.9						
ASAR	Alice Springs	16.84	160	P	Pn	08 56 49.6	+3.7
KKM	Kota Kinabalu	17.93	320	P	Pn	08 56 57.9	-0.8
SBUM	Sibu	18.53	303	P	Pn	08 57 05.0	-0.7
SBUM				IAmb	IAmb	08 57 06.6	
	comp=Z,8.8nm,0.9s						
CMAR	Chiang Mai Arr	38.58	313	P	P	09 00 05.8	+0.7
	comp=Z,1.1nm,0.3s,baz=138,slow=7.0,SNR=5.7						
INU	Inuyama	43.81	11	P	P	09 00 47.9	+0.4
SONM	Songino Array	58.52	343	P	P	09 02 38.1	+1.3
	comp=Z,0.4nm,0.5s,baz=181,slow=7.5,SNR=2.1						
SONM	Songino Array	58.52	343	P	P	09 02 36.5	-0.3
PEA0B	Petropavlovsk-	65.80	19	P	P	09 03 27.4	+2.5
MK31	Makanchi Array	67.69	328	P	P	09 03 38.8	+1.8
MK31				IAmb	IAmb	09 04 06.2	
	comp=Z,11nm,1.5s						
MKAR	Makanchi Array	67.69	328	P	P	09 03 38.0	+0.9
	comp=Z,0.6nm,0.6s,baz=121,slow=8.4,SNR=5.2						
MKAR	Makanchi Array	67.69	328	P	P	09 03 38.1	+1.1
BOOM	Boomskoye usch	68.75	321	P	P	09 03 45.4	+1.5
BOOM				IAmb	IAmb	09 03 46.6	
	comp=Z,2.5nm,0.8s						
ZALV	Zalesovo Beam	71.33	335	P	P	09 03 59.6	+0.6
	comp=Z,1.6nm,0.4s,baz=124,slow=5.3,SNR=7.2						
ZALV	Zalesovo Beam	71.33	335	P	P	09 03 59.3	+0.2
KURBB	Kurchatov Arra	72.04	330	P	P	09 04 04.8	+1.4
	comp=Z,1.8nm,0.5s,baz=138,slow=5.3,SNR=15						
KURK	Kurchatov	72.05	330	P	P	09 04 04.0	+0.6
KURK				IAmb	IAmb	09 04 06.2	
	comp=Z,3.8nm,0.9s						
KKAR	Karatay Array	72.48	320	P	P	09 04 06.0	-0.2
TORD	Torodi Ar. Bea	126.75	281	PKP	PKiKP	09 11 44.1	+1.5
	comp=Z,0.7nm,0.6s,baz=28,slow=1.9,SNR=5.0						

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*IDC **29** 09:37:09.4±3.2, 26°.91N×52°.76E, h0^{km}, mb3.9/4, mb1 3.9/4, mb1mx3.3/51, mbtmp3.9/4, MS3.3/1, Ms1 3.2/1, ms1mx2.5/44, Error ellipse: s-maj=85.7km s-min=30.9km az=148.0*

*THR **29** 09:37:12.6±0.4, 27°.07N×52°.72E, h18^{km}±5^{km}, ML3.1*

*TEH **29** 09:37:12.1, 27°.03N×52°.85E, h8^{km}, ML3.8*

*DSN **29** 09:37:14.7±0.8, 27°.07N×53°.03E, h10^{km}, ML3.0/5, Error ellipse: s-maj=18.6km s-min=6.7km az=40.0*

ISC 29 09:37:11.5±1.0**, 26°.95N**±0°.08×**52°.71E**±0°.06**, h10^{km}, n44, σ1^{s}.05**/46**, mb3.8**/4**, Persian Gulf**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QIR1	Qir	1.55	11	*e*Pg	Pn	09 37 39.5	+0.2
QIR1				*e*		09 38 18.8	
	comp=Z,13µm,0.4s						
LAR1	LAR	1.65	64	*e*Pg	Pb	09 37 41.5	-0.6
LAR1				*e*Sg	Sn	09 38 01.6	-0.3
LAR1				*e*		09 38 12.8	
	comp=Z,15µm,0.6s						
JHRM	Jahrom	1.73	26	*e*Pn	Pn	09 37 42.3	+0.5
JHRM				*e*		09 38 15.0	
	comp=Z,15µm,0.4s						
AHBU	AHRAM	2.28	327	*e*Pn	Pb	09 37 52.3	-0.5
SHI	Shiraz	2.69	356	*e*Pn	Pn	09 37 56.3	+1.2
GENO	Geno	3.12	81	*e*Pn	Pn	09 38 02.8	+1.8
BANOM	Banah	3.38	107	P	Pn	09 38 03.8	-0.6
BANOM	Banah	3.38	107	*e*Pn	Pn	09 38 06.4	+2.0
MSFE	Esma-Masafi	3.48	116	P	Pn	09 38 06.1	+0.3
MSFE				S	Sn	09 38 46.8	-0.4
MSFE	Esma-Masafi	3.48	116	*e*Pn	Pn	09 38 06.8	+1.0
MDH	Madha	3.62	116	P	Pn	09 38 08.6	+0.8
MDH	Madha	3.62	116	*e*Pn	Pn	09 38 08.0	+0.3
UOSS	Minazif	3.73	122	P	Pn	09 38 10.1	+1.0
HATD	Hatta, Dubai	3.74	124	P	Pn	09 38 10.7	+1.4
HATD	Hatta, Dubai	3.74	124	*e*Pn	Pn	09 38 10.5	+1.2
ASHO	Ashiyiah	3.77	126	P	Pn	09 38 10.6	+0.9
ASHO				S	Sn	09 38 54.3	+0.1
ASHO	Ashiyiah	3.77	126	*e*Pn	Pn	09 38 10.7	+0.9
KLNJ	Kolanjah	4.16	347	*e*Pn	Pn	09 38 16.9	+1.4
KRBR	Kerman	4.67	49	*e*Pn	Pn	09 38 23.5	+1.0
KRBR				IAML		09 39 24.9	
	comp=E,21nm,0.6s						
KRBR				IAML		09 39 33.0	
	comp=N,12nm,0.4s						
KRBR	Kerman	4.67	49	*e*Pn	Pn	09 38 23.5	+1.0
TVBK	TV Kerman	4.68	49	*e*Pn	Pn	09 38 23.3	+0.7
TVBK				*e*		09 38 26.2	
	comp=Z,605nm,0.5s						
IMEH	Mehriz	4.73	20	*e*Pn	Pn	09 38 23.7	+0.5
IRAM	Ramesheh	4.85	357	*e*Pn	Pn	09 38 26.3	+1.5
CHMN	Cheshme madani	5.15	55	*e*Pn	Pn	09 38 30.2	+1.1
CHMN				*e*		09 38 34.1	
	comp=Z,991nm,0.3s						
ICHK	Chekchek	5.48	15	*e*Pn	Pn	09 38 34.3	+0.8
KBAM	BAM	5.52	65	*e*Pn	Pn	09 38 35.3	+1.3
KBAM				*e*		09 38 37.8	
	comp=Z,448nm,0.4s						
YZKH	Yazd	5.67	16	*e*Pn	Pn	09 38 36.8	+0.9
YZKH	Yazd	5.67	16	*e*Pn	Pn	09 38 36.8	+0.9
NASN	Na'in	5.83	1	*e*Pn	Pn	09 38 38.9	+0.5
NASN	Na'in	5.83	1	*e*Pn	Pn	09 38 38.9	+0.5
ANAR	Anarak	6.28	8	*e*Pn	Pn	09 38 45.9	+1.5
BSRN	Basiran	7.50	47	*e*Pn	Pn	09 39 02.7	+1.5
BSRN	Basiran	7.50	47	*e*Pn	Pn	09 39 02.7	+1.5
ASAO	Ashtian	7.92	344	*e*Pn	Pn	09 39 08.2	+1.2
ASAO	Ashtian	7.92	344	*e*Pn	Pn	09 39 08.2	+1.2
HSAM	Samen	8.06	335	*e*Pn	Pn	09 39 08.8	-0.1
SRVN	Saravan	8.64	85	*e*Pn	Pn	09 39 18.3	+1.5
SNGE	Sanandaj	9.33	332	*e*Pn	Pn	09 39 27.3	+1.0
SNGE	Sanandaj	9.33	332	*e*Pn	Pn	09 39 27.3	+1.0
KBZ	Khabaz	18.53	337	LR	LR	09 49 24.9	
	comp=Z,85nm,18.3s,baz=11,slow=40						
KURBB	Kurchatov Arra	30.76	33	P	P	09 43 27.4	+0.4
	comp=Z,0.3nm,0.2s,baz=229,slow=8.6,SNR=1.3						
ZALV	Zalesovo Beam	35.85	32	P	P	09 44 10.0	-1.3
	comp=Z,1.3nm,0.4s,baz=236,slow=7.9,SNR=5.3						
FINES	FINESS Array B	38.85	340	P	P	09 44 36.4	-0.2
	comp=Z,1.6nm,0.6s,baz=145,slow=9.9,SNR=9.6						
TORD	Torodi Ar. Bea	49.54	264	P	P	09 46 02.6	-0.3
	comp=Z,0.5nm,0.7s,baz=61,slow=6.8,SNR=5.2						

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*IDC **29** 09:42:27.3±1.1, 7°.65S×105°.76E, h0^{km}, mb3.7/10, mb1 3.8/11, mb1mx3.6/47, mbtmp3.8/11, ML4.2/1, Error ellipse: s-maj=40.7km s-min=16.5km az=44.0*

*DJA **29** 09:42:30.2±0.4, 8°S±3°×10°6E±°, h10^{km}, M3.9/11, MLv3.9/11*

ISC 29 09:42:33.0±0.8**, 7°.60S**±0°.07×**106°.09E**±0°.05**, h32^{km}, n30, σ1^{s}.23**/28**, mb3.8**/10**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNJI	Cibinong	1.07	74	P	Pn	09 42 51.6	-0.2
CNJI				S	Sn	09 43 06.6	+0.9
DBJI	Dramaga	1.23	32	P	Pn	09 42 55.1	+1.1
CBJI	Citeko	1.40	33	P	Pn	09 42 54.6	-1.7
SBJI	Serang	1.47	2	P	Pb	09 42 58.9	-0.9
SBJI				S	Sb	09 43 18.9	+0.7
TNG	Tangerang	1.52	21	P	Pb	09 43 00.7	0.0
LEM	Lembang	1.70	63	Pn	Pb	09 43 03.9	0.0
	82nm,0.3s,baz=295,slow=3.5,SNR=43						
LEM				Sn	Sb	09 43 27.4	+2.5
	60nm,0.3s,baz=187,slow=22,SNR=5.5						
LEM	Lembang	1.70	63	P	Pb	09 43 02.9	-0.9
CMJI	Cimerak	2.35	95	P	Pn	09 43 09.2	-0.2

KASI	**Kota Agung**	**2.60**	**322**	P	**Pn**	**09 43 13.9**	**+1.0**
KLSI		**3.19**	**335**	P	**Pn**	**09 43 23.2**	**+2.2**
MDSI	**Maura Dua**	**3.63**	**328**	P	**Pn**	**09 43 28.2**	**+1.1**
UGM	**Wanagama**	**4.41**	**94**	P	**Pn**	**09 43 38.0**	**+0.2**
PCJI	**Pacitan**	**5.08**	**97**	P	**Pn**	**09 43 47.2**	**+0.3**
FITZ	**Fitzroy Crossi**	**21.71**	**121**	P	**P**	**09 47 23.2**	**+1.7**
	1.8nm,0.9s,baz=275,slow=12,SNR=1.6						
H01W3	**Cape Leeuwin H**	**28.14**	**166**	T	T	10 18 09.9	
	baz=340,slow=79,SNR=32						
H01W1	**Cape Leeuwin H**	**28.16**	**166**	T	T	10 18 11.6	
	baz=340,slow=79,SNR=28						
H01W2	**Cape Leeuwin H**	**28.16**	**166**	T	T	10 18 07.5	
	baz=340,slow=79,SNR=39						
WRA	**Warramunga Arr**	**30.00**	**117**	P	**P**	**09 48 39.0**	**0.0**
	0.3nm,0.6s,baz=289,slow=10,SNR=2.3						
WRA				PcP	**PcP**	**09 51 40.7**	**-0.4**
	0.4nm,0.8s,baz=313,slow=2.1,SNR=2.0						
ASAR	**Alice Springs**	**31.09**	**124**	P	**P**	**09 48 49.4**	**+0.6**
	0.4nm,0.5s,baz=302,slow=8.0,SNR=6.2						
H08S2	**Diego Garcia H**	**33.29**	**268**	T	T	10 24 27.4	
	baz=91,slow=75,SNR=8.6						
H08S3	**Diego Garcia H**	**33.30**	**268**	T	T	10 24 32.4	
	baz=91,slow=75,SNR=6.4						
H08S1	**Diego Carcia H**	**33.31**	**268**	T	T	10 24 26.8	
	baz=91,slow=75,SNR=7.9						
STKA	**Stephens Creek**	**40.92**	**131**	P	**P**	**09 50 13.9**	**+1.2**
	1.4nm,0.8s,baz=326,slow=7.4,SNR=3.3						
SONM	**Songino Array**	**55.19**	**0**	P	**P**	**09 52 02.2**	**-0.6**
	0.3nm,0.5s,baz=167,slow=7.0,SNR=2.8						
MKAR	**Makanchi Array**	**58.15**	**341**	P	**P**	**09 52 22.0**	**-1.8**
	0.4nm,0.4s,baz=160,slow=8.8,SNR=5.9						
KURBB	**Kurchatov Arra**	**62.71**	**341**	P	**P**	**09 52 53.6**	**-1.1**
	0.5nm,0.5s,baz=153,slow=6.1,SNR=5.6						
ZALV	**Zalesovo Beam**	**63.89**	**346**	P	**P**	**09 53 00.2**	**-2.3**
	0.9nm,0.4s,baz=150,slow=6.0,SNR=3.3						
BVAR	**Borovoye Array**	**67.57**	**338**	P	**P**	**09 53 25.1**	**-1.2**
	1.2nm,0.6s,baz=180,slow=16,SNR=6.5						
BRTR	**Keskin Array B**	**81.55**	**312**	P	**P**	**09 54 47.2**	**-0.7**
	1.6nm,0.8s,baz=145,slow=4.9,SNR=7.4						
TXAR	**Lajitas Array**	**144.64**	**48**	PKP	**PKPdf**	**10 02 06.9**	**-0.4**
	0.4nm,0.6s,baz=333,slow=2.7,SNR=7.3						

MAN 29 09:47:59.8, 6°.91N×125°.09E, h9^{km}, mb3.9, ML2.7, MS2.3, Mindanao

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NIED ***29*** *09:48:14.1, 31°.16N×129°.12E, h5^{km}, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-3.37; $M_{\theta\theta}$2.36; $M_{\phi\phi}$1.01; $M_{r\theta}$0.47; $M_{\theta\phi}$3.18; $M_{\phi r}$2.91; Fault plane solution: $M_0$5.25000×10^{15} NP1: ϕ_s205.00000°, δ65.00000°, λ-120.00000°. NP2: ϕ_s79.00000°, δ39.00000°, λ-43.00000°.*

JMA ***29*** *09:48:14.1±0.2, 31°.16N×129°.12E, h5^{km}±2^{km}, M4.4*

JMA Felt II J1.

IDC ***29*** *09:48:15.5±0.6, 31°.20N×129°.26E, h0^{km}, mb3.9/18, mb1 4.1/23, mb1mx4.0/42, mbtmp3.9/23, ML3.3/5, MS3.6/23, Ms1 3.6/23, ms1mx3.5/44, Error ellipse: s-maj=16.6km s-min=11.6km az=102.0*

BJI ***29*** *09:48:18.0±0.0, 31°.30N×129°.30E, h25^{km}, mB4.7/12, mb4.2/22, Ms4.3/12, Ms7 4.1/12*

NEIC ***29*** *09:48:20.4±1.4, 31°.29N±0°.05×129°.29E±0°.07, h25^{km}±5^{km}, mb4.6/19, Error ellipse: s-maj=10.1km s-min=6.5km az=125.0*

MOS ***29*** *09:48:22.0±2.0, 31°.43N×129°.41E, h35^{km}, mb4.6/15, Error ellipse: s-maj=11.9km s-min=6.3km az=99.6*

KMA ***29*** *09:48:24.4, 31°.60N×128°.70E, h15^{km}*

ISC 29 09:48:17.7±0.4, **31°.17N**±0°.04×**129°.27E**±0°.04, **h10^{km}, n147,** σ1^{s}**67**/138, **mb4.3**/42, **MS3.8**/20, **9C-12D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSJ	**Shimokoshiki**	**0.64**	**36**	⇓P	**Pg**	**09 48 27.7**	**-2.3**
JKC	**Kuchinoerabu**	**1.06**	**131**	⇓P	**Pb**	**09 48 35.9**	**-2.2**
JKC				*e*S	**Sg**	**09 48 51.1**	**-0.8**
JSU	**Suzuyama**	**1.07**	**71**	P	**Pg**	**09 48 36.6**	**-1.6**
JSU				*e*S	**Sg**	**09 48 52.0**	**-0.1**
JSU	**Suzuyama**	**1.07**	**71**	Pn	**Pg**	**09 48 37.2**	**-1.0**
JYAK	**Yakushimahirau**	**1.41**	**131**	⇓P	**Pn**	**09 48 40.9**	**-2.5**
JNN	**Nakanoshima**	**1.42**	**158**	P	**Pn**	**09 48 41.3**	**-2.3**
JFU	**Fukue jima 2**	**1.55**	**343**	⇑P	**Pn**	**09 48 42.2**	**-3.2**
JFU				*e*S	**Sn**	**09 49 02.0**	**-3.6**
JTN	**Tanegashima 3**	**1.55**	**109**	⇓P	**Pn**	**09 48 43.6**	**-1.8**
JMTN	**Minamitane**	**1.60**	**118**	P	**Pn**	**09 48 44.1**	**-1.9**
JTZ	**Takazaki**	**1.71**	**64**	⇓P	**Pn**	**09 48 46.4**	**-1.2**
JIU3	**Izumi3**	**1.90**	**43**	⇓P	**Pn**	**09 48 48.8**	**-1.4**
JNU	**Nakatsue**	**2.38**	**35**	Pn	**Pn**	**09 48 55.5**	**-1.3**
	14nm,0.3s,baz=251,slow=5.4,SNR=39						
JNU				Lg	Lg	09 49 31.2	
	38nm,0.3s,baz=174,slow=15,SNR=2.6						
JNU	**Nakatsue**	**2.38**	**35**		**Pn**	**09 48 56.2**	**-0.6**
GMDB	**Geomundo**	**3.32**	**330**	P	**Pn**	**09 49 07.0**	**-2.7**
	SNR=26						
JTU	**Tsushima**	**3.35**	**2**	Pn	**Pn**	**09 49 08.9**	**-1.2**
YNDB	**Yeoundo**	**3.48**	**340**	P	**Pn**	**09 49 10.0**	**-2.0**
	SNR=20						
CJD	**Chujado**	**3.75**	**319**	P	**Pn**	**09 49 13.0**	**-2.7**
	SNR=12						
KSNAH	**Namhae**	**3.81**	**343**	P	**Pn**	**09 49 14.8**	**-1.6**
	SNR=6.5						
BOSB	**Boseong-gun**	**3.98**	**335**	P	**Pn**	**09 49 17.0**	**-1.8**
	SNR=16						
KSSCH	**SUNCHEON**	**4.25**	**337**	P	**Pn**	**09 49 20.8**	**-1.6**
	SNR=14						
JOW	**Kunigami**	**4.41**	**192**	Pn	**Pn**	**09 49 25.2**	**+0.5**
	2.2nm,0.3s,baz=2.3,slow=11,SNR=6.9						
JOW				LR	LR	09 51 17.8	
	comp=Z,404nm,18.8s,baz=139,slow=41						
JOW	**Kunigami**	**4.41**	**192**	Pn	**Pn**	**09 49 27.5**	**+2.9**
JMN	**Monobe**	**4.66**	**56**	Pn	**Pn**	**09 49 29.4**	**+1.3**
HUK2	**Heuksan-myeon**	**4.76**	**319**	P	**Pn**	**09 49 27.2**	**-2.3**
	SNR=9.8						
JHS	**Saijyo**	**5.00**	**39**	Pn	**Pn**	**09 49 33.0**	**+0.2**
KSJEO	**Jeonju**	**5.04**	**341**	P	**Pn**	**09 49 32.0**	**-1.4**
	SNR=9.0						
KSCPR	**CHUPUNGNYEONG**	**5.16**	**348**	P	**Pn**	**09 49 34.3**	**-0.6**
	SNR=7.3						
OKCB	**Cheongsan-myeo**	**5.31**	**347**	P	**Pn**	**09 49 36.5**	**-0.6**
	SNR=6.3						
TJN	**Taejon**	**5.43**	**344**	*de*P	**Pn**	**09 49 37.5**	**-1.3**
KSBON	**Boeun**	**5.46**	**347**	P	**Pn**	**09 49 39.0**	**-0.1**
	SNR=7.5						
KOJ2	**Gongju-si**	**5.58**	**342**	P	**Pn**	**09 49 41.0**	**+0.2**
	SNR=6.3						
KSCEA	**Cheonan**	**5.88**	**344**	P	**Pn**	**09 49 44.1**	**-0.9**
	SNR=11						
KSYOW	**Yeongwol**	**6.03**	**354**	P	**Pn**	**09 49 46.6**	**-0.4**
	SNR=6.9						
HAWB	**Hwaseong-si**	**6.26**	**341**	P	**Pn**	**09 49 49.0**	**-1.0**
	SNR=12						
KSAR	**Wonju Array Be**	**6.37**	**350**	P	**Pn**	**09 49 51.3**	**-0.2**
KSAR	**Wonju Array Be**	**6.37**	**350**	Pn	**Pn**	**09 49 51.3**	**-0.2**
KSRS	**Korea Array**	**6.37**	**350**	Pn	**Pn**	**09 49 50.8**	**-0.8**
	1.1nm,0.3s,baz=176,slow=15,SNR=31						
KSRS				Sn	**Sn**	**09 51 02.8**	**-1.7**
	1.4nm,0.3s,baz=173,slow=25,SNR=3.2						
KSRS				Lg	Lg	09 51 31.0	
	1.1nm,0.3s,baz=168,slow=30,SNR=5.3						
KS19	**Wonju Array Si**	**6.43**	**350**	Pn	**Pn**	**09 49 50.9**	**-1.5**
JWT	**Wachi**	**6.57**	**50**	Pn	**Pn**	**09 49 54.5**	**+0.1**
INCN	**Inchon**	**6.67**	**342**	P	**Pn**	**09 49 54.0**	**-1.8**
INCN	**Inchon**	**6.67**	**342**		**Pn**	**09 49 54.0**	**-1.8**
KSGAH	**Ganghwa**	**6.93**	**341**	P	**Pn**	**09 49 58.4**	**-0.9**
	SNR=6.5						
KSMUS	**Musan**	**7.02**	**344**	P	**Pn**	**09 50 00.8**	**+0.2**
	SNR=5.8						
INU	**Inuyama**	**7.71**	**55**	Pn	**Pn**	**09 50 09.4**	**-0.6**
JGF	**Kuroka**	**8.08**	**55**	Pn	**Pn**	**09 50 13.8**	**-1.3**
JHJ	**Hachijo jima 2**	**9.12**	**75**	LR	LR	09 53 57.6	
	comp=Z,211nm,18.8s,baz=288,slow=37						
MJAR	**Matsushiro Arr**	**9.16**	**52**	Pn	**Pn**	**09 50 30.9**	**+1.0**
	0.1nm,0.3s,baz=235,slow=13,SNR=6.8						
MJAR				LR	LR	09 54 42.9	
	comp=Z,184nm,19.3s,baz=240,slow=42						
MJA0	**Matsu Arr-Jizo**	**9.19**	**52**	*e*P	**Pn**	**09 50 31.7**	**+1.4**
JCJ	**Chichijima**	**11.99**	**107**	LR	LR	09 55 20.4	
	comp=Z,62nm,18.6s,baz=306,slow=35						
WHN	**Wuhan**	**12.84**	**271**	⇑P	Pn	09 51 28.0	+7.7
CN2	**Changchun**	**12.97**	**348**	*e*P	Pn	09 51 41.8	+20
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				LR	LR		
	comp=N,700nm,15.0s						
CN2				LR	LR		
	comp=E,2μm,15.0s						
CN2				LR	LR		
	comp=Z,800nm,15.0s						
USRK	**Ussuriysk Ar.**	**13.19**	**9**	Pn	**Pn**	**09 51 27.7**	**+2.7**
	baz=198,slow=12,SNR=2.6						
USRK				LR	LR	09 56 10.8	
	comp=Z,243nm,18.7s,baz=187,slow=36						
ASAJ	**Asahikawa**	**16.66**	**35**	Pn	**Pn**	**09 52 10.2**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=216,slow=7.8,SNR=8.1						
XAN	**Xi'an**	**17.39**	**285**	P	**Pn**	**09 52 19.5**	**-1.0**
XAN				pP	sP	09 52 31.3	+5.7
XAN				sP	pP	09 52 36.8	+12
XAN				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KLR	**Kul'dur**	**18.14**	**5**	P	**P**	**09 52 32.5**	**+2.5**
	comp=Z,0.3nm,0.3s,baz=185,slow=7.9,SNR=25						
KLR				LR	LR	09 58 46.4	
	comp=Z,81nm,19.8s,baz=178,slow=35						
KLR	**Kul'dur**	**18.14**	**5**	⇑*i*P	**P**	**09 52 30.8**	**+0.8**
KLR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
LZH	**Lanzhou**	**21.71**	**290**	*e*P	**P**	**09 53 10.8**	**+1.7**
LZH				pP	sP	09 53 17.5	+4.5
LZH				pmax	pmax		
	comp=Z,20nm,1.2s						
LZH				LR	LR		
	comp=Z,960nm,17.2s						
LZH				LR	LR		
	comp=Z,580nm,16.1s						
LZH				LR	LR		
	comp=Z,550nm,16.6s						
ZEA	**Zeya**	**22.61**	**357**	*e*P	**P**	**09 53 19.9**	**+1.5**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ZEA				MLR	MLR		
	comp=N,200nm,15.0s						
ZEA				MLR	MLR		
	comp=Z,200nm,14.0s						
ULN	**Ulaanbaatar**	**23.78**	**321**	P	**P**	**09 53 30.0**	**-0.6**
ULN				pmax	pmax		
	comp=Z,17nm,1.3s						
ULN	**Ulaanbaatar**	**23.78**	**321**	P	**P**	**09 53 30.0**	**-0.6**
ULN				IAmb	IAmb	09 53 36.2	
	comp=Z,17nm,1.3s						
SONM	**Songino Array**	**24.12**	**320**	P	**P**	**09 53 32.3**	**-1.5**
	comp=Z,3.4nm,0.9s,baz=133,slow=9.6,SNR=16						
SONM				LR	LR	10 03 39.2	
	comp=Z,313nm,19.4s,baz=156,slow=38						
SONM	**Songino Array**	**24.12**	**320**	*e*P	**P**	**09 53 32.7**	**-1.1**
SONM				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SONM	**Songino Array**	**24.12**	**320**	P	**P**	**09 53 32.5**	**-1.3**
GTA	**Gaotai**	**25.33**	**297**	*e*P	**P**	**09 53 43.8**	**-1.0**
GTA				pP	sP	09 53 48.8	0.0
GTA				sP	pP	09 53 52.0	+4.4
GTA				S	**S**	**09 58 10.5**	**-0.6**
GTA				sS	sS	09 58 23.0	+7.2
GTA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,93nm,5.3s						
GTA				LR	LR		
	comp=Z,460nm,15.6s						
GTA				LR	LR		
	comp=Z,240nm,14.9s						
GTA				LR	LR		
	comp=Z,370nm,14.9s						
ZAK	**Zakamensk**	**27.27**	**322**	*e*P	P	09 53 52.4	-10
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
TLY	**Talaya**	**27.85**	**325**	LR	LR	10 05 57.6	
	comp=Z,167nm,18.2s,baz=130,slow=38						
PETK	**Petropavlovsk-**	**30.08**	**35**	LR	LR	10 05 31.0	
	comp=Z,86nm,21.9s,baz=197,slow=34						
CMAR	**Chiang Mai Arr**	**30.19**	**252**	P	**P**	**09 54 28.8**	**+0.4**
	comp=Z,0.7nm,0.3s,baz=30,slow=12,SNR=4.1						
CMAR				LR	LR	10 08 52.6	
	comp=Z,43nm,19.8s,baz=68,slow=41						
CMAR	**Chiang Mai Arr**	**30.19**	**252**	*e*P	**P**	**09 54 32.8**	**+4.4**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CMAR	**Chiang Mai Arr**	**30.19**	**252**	P	**P**	**09 54 28.0**	**-0.4**
YAK	**Yakutsk**	**30.88**	**0**	⇑*e*P	**P**	**09 54 35.6**	**+1.6**
YAK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
DGZ	**Jazzator, Alta**	**36.26**	**313**	⇑*e*P	**P**	**09 55 24.1**	**+2.9**
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.2s						
ZALV	**Zalesovo Beam**	**39.01**	**319**	P	**P**	**09 55 42.5**	**-1.7**
	comp=Z,0.5nm,0.3s,baz=92,slow=7.2,SNR=1.7						
ZALV				LR	LR	10 13 29.4	
	comp=Z,142nm,20.2s,baz=42,slow=39						
ZALV	**Zalesovo Beam**	**39.01**	**319**	*e*P	**P**	**09 55 48.5**	**+4.3**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ZALV	**Zalesovo Beam**	**39.01**	**319**	P	**P**	**09 55 42.6**	**-1.6**
MKAR	**Makanchi Array**	**39.11**	**307**	P	**P**	**09 55 43.6**	**-1.5**
	comp=Z,0.9nm,0.7s,baz=98,slow=7.5,SNR=6.6						
MKAR				LR	LR	10 12 52.4	
	comp=Z,120nm,18.9s,baz=94,slow=38						
MKAR	**Makanchi Array**	**39.11**	**307**	P	**P**	**09 55 44.1**	**-1.1**
MKAR	**Makanchi Array**	**39.11**	**307**	P	**P**	**09 55 44.0**	**-1.1**
TIXI	**Tiksi**	**40.54**	**360**	⇑*e*P	**P**	**09 55 57.3**	**+0.6**
TIXI	**Tiksi**	**40.54**	**360**	P	**P**	**09 55 56.1**	**-0.5**
KURK	**Kurchatov**	**42.01**	**313**	P	**P**	**09 56 08.1**	**-1.0**
KURK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
KURK	**Kurchatov**	**42.01**	**313**	P	**P**	**09 56 08.1**	**-1.0**
KURBB	**Kurchatov Arra**	**42.05**	**313**	P	**P**	**09 56 07.9**	**-1.5**
	comp=Z,2.5nm,1.0s,baz=97,slow=8.8,SNR=11						
AAK	**Ala-Archa**	**44.57**	**301**	⇓*e*P	P	09 56 35.3	+5.2
AAK				pmax	pmax		
	comp=Z,12nm,1.3s						
NRIK	**Noril'sk**	**44.88**	**340**	P	**P**	**09 56 32.5**	**+0.6**
	comp=Z,1.3nm,0.5s,baz=104,slow=8.3,SNR=3.8						
NRIK				LR	LR	10 18 01.5	
	comp=Z,74nm,19.0s,baz=82,slow=40						
NRIK	**Noril'sk**	**44.88**	**340**	*d i*P	**P**	**09 56 35.0**	**+3.0**
NRIK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
NRIK	**Noril'sk**	**44.88**	**340**	P	**P**	**09 56 31.5**	**-0.4**
NRIK				IAmb	IAmb	09 56 35.9	
	comp=Z,6.3nm,1.1s						
BRVK	**Borovoye**	**47.38**	**315**	P	**P**	**09 56 51.4**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,11nm,0.8s						
BRVK	**Borovoye**	**47.38**	**315**	P	**P**	**09 56 51.4**	**-0.4**
KKAR	**Karatay Array**	**47.45**	**302**	P	**P**	**09 56 52.4**	**-0.2**
KKAR	**Karatay Array**	**47.45**	**302**	P	**P**	**09 56 52.4**	**-0.2**
FITZ	**Fitzroy Crossi**	**49.10**	**185**	P	**P**	**09 57 04.5**	**-0.9**
	comp=Z,0.6nm,0.4s,baz=22,slow=5.4,SNR=1.8						
WB0	**Warramunga Arr**	**50.88**	**174**	P	**P**	**09 57 18.4**	**-0.5**
WB0				IAmb	IAmb	09 57 45.7	
	comp=Z,13nm,1.4s						
WRAB	**Tennant Creek**	**51.04**	**174**	⇑*e*P	P	09 57 31.9	+12
WRAB				pmax	pmax		
	comp=Z,4.0nm,1.1s						
WRA	**Warramunga Arr**	**51.05**	**174**	P	**P**	**09 57 19.0**	**-1.2**
	comp=Z,0.6nm,0.7s,baz=354,slow=8.1,SNR=8.4						
WRA				LR	LR	10 17 19.8	
	comp=Z,24nm,21.4s,baz=35,slow=34						
WRA	**Warramunga Arr**	**51.05**	**174**	P	**P**	**09 57 22.0**	**+1.8**
WRA	**Warramunga Arr**	**51.05**	**174**	P	**P**	**09 57 22.0**	**+1.8**
WB2	**Warramunga Arr**	**51.05**	**174**	P	**P**	**09 57 19.5**	**-0.7**
WB2				IAmb	IAmb	09 57 37.6	
	comp=Z,15nm,1.5s						
ABKAR	**Akbulak array**	**54.03**	**311**	P	**P**	**09 57 41.7**	**-0.4**
ABKAR				IAmb	IAmb	09 57 53.9	
	comp=Z,2.7nm,0.8s						
ABKAR	**Akbulak array**	**54.03**	**311**	P	**P**	**09 57 41.8**	**-0.4**
ARU	**Arti**	**54.16**	**320**	*i* P	**P**	**09 57 44.2**	**+1.3**
ASAR	**Alice Springs**	**54.70**	**175**	P	**P**	**09 57 47.7**	**+0.5**
	comp=Z,0.7nm,0.6s,baz=5.7,slow=14,SNR=16						
ASAR				LR	LR	10 20 39.2	
	comp=Z,24nm,20.0s,baz=31,slow=36						
ASAR	**Alice Springs**	**54.70**	**175**	P	**P**	**09 57 48.6**	**+1.4**
ASAR	**Alice Springs**	**54.70**	**175**	P	**P**	**09 57 48.6**	**+1.4**
IMAR	**Indian Mountai**	**56.71**	**28**	P	**P**	**09 57 59.9**	**-1.2**
GEYT	**Alibeck**	**57.71**	**298**	LR	LR	10 26 28.6	
	comp=Z,108nm,19.0s,baz=40,slow=40						
KIRV	**Kirov**	**58.82**	**323**	⇓*i*P	**P**	**09 58 19.6**	**+3.6**
H24K	**Noodor Dome**	**59.12**	**28**	P	**P**	**09 58 17.9**	**-0.2**
COLA	**College**	**59.27**	**30**	⇓*e*P	**P**	**09 58 21.7**	**+2.7**
COLA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ILAR	**Eielson Array**	**59.69**	**30**	P	**P**	**09 58 20.6**	**-1.5**
	comp=Z,1.3nm,0.8s,baz=282,slow=6.9,SNR=13						
ILAR	**Eielson Array**	**59.69**	**30**	*e*P	**P**	**09 58 21.1**	**-0.9**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ILAR	**Eielson Array**	**59.69**	**30**	P	**P**	**09 58 21.0**	**-1.0**
BMAR	**Burnt Mountain**	**60.18**	**26**	P	**P**	**09 58 25.4**	**0.0**
MENT	**Mentasta**	**61.42**	**31**	P	**P**	**09 58 33.6**	**-0.2**
BCAR	**Beaver Creek A**	**62.24**	**31**	P	**P**	**09 58 40.1**	**+0.6**
EPYK	**Eagle Plains**	**63.44**	**27**	P	**P**	**09 58 47.0**	**-0.4**
EPYK				IAmb	IAmb	09 58 51.8	
	comp=Z,7.2nm,1.1s						
STKA	**Stephens Creek**	**63.78**	**168**	P	**P**	**09 58 48.9**	**-1.0**
	comp=Z,1.1nm,0.8s,baz=0.0,slow=8.1,SNR=2.0						
STKA	**Stephens Creek**	**63.78**	**168**	*e*P	P	09 58 56.0	+6.2
STKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
INK	**Inuvik**	**64.02**	**24**	P	**P**	**09 58 50.3**	**-0.7**
INK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
INK	**Inuvik**	**64.02**	**24**	P	**P**	**09 58 50.3**	**-0.7**
INK				IAmb	IAmb	09 58 55.3	
	comp=Z,5.6nm,1.1s						
A36M	**Sachs Harbour**	**65.28**	**19**	P	**P**	**09 58 58.2**	**-1.0**
A36M				IAmb	IAmb	09 59 03.5	
	comp=Z,6.1nm,0.8s						
ARCES	**ARCESS Array B**	**65.77**	**338**	LR	LR	10 31 49.0	
	comp=Z,142nm,18.2s,baz=265,slow=40						
KBZ	**Khabaz**	**66.80**	**308**	P	**P**	**09 59 09.9**	**+0.5**
	comp=Z,2.9nm,0.9s,baz=71,slow=4.5,SNR=4.0						
KBZ				LR	LR	10 34 33.4	
	comp=Z,34nm,18.5s,baz=30,slow=42						
KBZ	**Khabaz**	**66.80**	**308**	⇑*e*P	**P**	**09 59 12.7**	**+3.3**
KBZ				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KIV	**Kislovodsk**	**66.86**	**308**	*e*P	**P**	**09 59 14.1**	**+4.1**
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
EUNU	**Eureka**	**67.29**	**6**	P	**P**	**09 59 11.3**	**-0.8**
EUNU				IAmb	IAmb	09 59 16.7	
	comp=Z,5.0nm,0.8s						
PUL	**Pulkovo**	**67.87**	**327**	⇓*e*P	**P**	**09 59 20.5**	**+4.5**
PUL				pmax	pmax		
	comp=Z,84nm,0.6s						
FIA1	**FINESS Array S**	**69.05**	**330**	P	**P**	**09 59 21.0**	**-2.3**
FIA1				IAmb	IAmb	09 59 22.6	
	comp=Z,6.9nm,1.1s						
FINES	**FINESS Array B**	**69.05**	**330**	P	**P**	**09 59 22.2**	**-1.1**
	comp=Z,1.8nm,0.7s,baz=80,slow=8.6,SNR=6.4						
FINES				LR	LR	10 31 58.3	
	comp=Z,137nm,21.0s,baz=38,slow=38						
FINES	**FINESS Array B**	**69.05**	**330**	P	**P**	**09 59 21.9**	**-1.4**
SOCY	**Socotra**	**71.28**	**273**	P	**P**	**09 59 38.1**	**+0.2**
NEEM	**North Greenlan**	**71.64**	**0**	*i* P	**P**	**09 59 38.3**	**-1.0**
AKASG	**Malin Array Be**	**72.40**	**319**	P	**P**	**09 59 44.2**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=54,slow=6.7,SNR=1.6						
AKASG				LR	LR	10 33 19.3	
	comp=Z,108nm,18.0s,baz=20,slow=37						
YKA	**Yellowknife Ar**	**73.69**	**26**	P	**P**	**09 59 50.7**	**-0.7**
	comp=Z,0.8nm,0.6s,baz=318,slow=4.2,SNR=5.1						
YKA	**Yellowknife Ar**	**73.69**	**26**	*ce*P	**P**	**09 59 54.5**	**+3.2**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRTR	**Keskin Array B**	**74.76**	**307**	P	**P**	**09 59 57.8**	**-0.5**
	comp=Z,1.1nm,1.0s,baz=90,slow=2.9,SNR=2.9						
BRTR				LR	LR	10 38 00.6	
	comp=Z,85nm,18.3s,baz=40,slow=40						
BRTR	**Keskin Array B**	**74.76**	**307**	*e*P	P	10 00 03.8	+5.6
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NOA	**NORSAR Array B**	**75.31**	**334**	P	**P**	**09 59 59.5**	**-1.3**
	comp=Z,1.4nm,0.9s,baz=50,slow=5.9,SNR=2.6						
NOA				LR	LR	10 37 03.8	
	comp=Z,41nm,18.5s,baz=340,slow=39						
NOA	**NORSAR Array B**	**75.31**	**334**	*e*P	**P**	**10 00 05.4**	**+4.5**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SUMG	**Summit**	**76.19**	**356**	P	**P**	**10 00 07.0**	**+0.9**
SUMG				pmax	pmax		
	comp=Z,5.0nm,1.1s						
SUMG	**Summit**	**76.19**	**356**	*i* P	**P**	**10 00 06.5**	**+0.4**
SUMG	**Summit**	**76.19**	**356**	P	**P**	**10 00 07.0**	**+0.9**
SUMG				IAmb	IAmb	10 00 27.2	
	comp=Z,5.2nm,1.1s						
GERES	**GERESS Array B**	**81.83**	**323**	LR	LR	10 42 48.3	
	comp=Z,163nm,18.7s,baz=324,slow=40						
PDAR	**Pinedale Array**	**88.76**	**39**	P	**P**	**10 01 11.2**	**-0.9**
	comp=Z,0.6nm,0.8s,baz=259,slow=1.5,SNR=6.5						
PDAR	**Pinedale Array**	**88.76**	**39**	P	**P**	**10 01 10.2**	**-1.8**
ULM	**Lac du Bonnet**	**89.61**	**27**	P	**P**	**10 01 14.4**	**-1.2**
	comp=Z,7.9nm,0.9s,baz=317,slow=6.9,SNR=7.3						
ULM	**Lac du Bonnet**	**89.61**	**27**	*e*P	**P**	**10 01 15.6**	**0.0**
ULM				pmax	pmax		
	comp=Z,7.0nm,1.0s						

MAN 29 09:49:19.7, 6°.71N×124°.71E, h10^{km}, mb4.0, ML2.8, MS2.4, Mindanao

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IDC ***29*** *10:07:05.9±0.9, 4°.05N×126°.29E, h0^{km}, mb4.0/8, mb1 4.1/9, mb1mx3.8/38, mbtmp4.0/9, ML4.0/1, MS3.5/16, Ms1 3.5/16, ms1mx3.2/50, Error ellipse: s-maj=71.8km s-min=15.7km az=69.0*

DJA ***29*** *10:07:08.2±1.4, 4°N±9°×12°7E±°, h19^{km}±5^{km}, M4.0/10, mb4.0/6, mB5.1/1, MLv4.0/10, Mw(mB)4.4/1*

NEIC ***29*** *10:07:14.0±1.3, 4°.04N±0°.09×126°.4E±0°.1, h60^{km}±6^{km}, mb4.2/11, Error ellipse: s-maj=21.0km s-min=10.3km az=65.0*

ISC 29 10:07:11.8±0.6, **4°.15N**±0°.08×**126°.64E**±0°.07, **h45^{km}, n47,** σ1^{s}**01**/35, **mb4.0**/13, **MS3.7**/13, **Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.20**	**247**	P	**Pn**	**10 07 31.8**	**-0.4**
SGSI				S	**Sn**	**10 07 47.7**	**+0.4**
TNTI	**Ternate**	**3.44**	**168**	P	**Pn**	**10 08 03.7**	**+0.9**
TNTI	**Ternate**	**3.44**	**168**	Pn	**Pn**	**10 08 04.6**	**+1.7**
LBMI	**Labuha**	**4.83**	**170**	P	**Pn**	**10 08 22.8**	**+0.7**
	0.2nm25nm,0.6s						
GTOI	**Gorontalo**	**5.03**	**226**	P	**Pn**	**10 08 25.9**	**+1.1**
	0.0nm8.0nm,0.6s						
MRSI	**Marisa**	**5.95**	**232**	P	**Pn**	**10 08 37.9**	**+0.5**
	0.3nm1μm60nm,0.6s						
SANI	**Sanana**	**6.19**	**186**	P	**Pn**	**10 08 41.5**	**+0.7**
TOLI2	**Tolitoli**	**6.58**	**243**	Pn	**Pn**	**10 08 45.1**	**-1.0**
SIJI	**Sorong**	**6.80**	**137**	Pn	**Pn**	**10 08 49.4**	**+0.3**
	2.6nm,0.3s,baz=335,slow=19,SNR=5.9						
SIJI				Sn	**Sn**	**10 10 04.4**	**-0.9**
	0.6nm,0.3s,baz=208,slow=23,SNR=1.3						
SIJI				LR	LR	10 11 53.7	
	comp=Z,250nm,19.0s,baz=34,slow=41						
KAPI	**Kappang**	**11.41**	**217**	LR	LR	10 14 40.0	
	comp=Z,92nm,20.3s,baz=62,slow=41						
SMPI	**Sarmi**	**13.52**	**117**	P	**Pn**	**10 10 18.5**	**-2.6**
JAY	**Jayapura**	**15.54**	**115**	LR	LR	10 15 47.7	
	comp=Z,185nm,19.8s,baz=2.0,slow=33						
KNRA	**Kununurra**	**19.81**	**174**	P	**P**	**10 11 37.8**	**-1.0**
KNRA				IAmb	IAmb	10 11 50.0	
	comp=Z,33nm,1.4s						
GUMO	**Guam**	**20.29**	**61**	LR	LR	10 18 21.8	
	comp=Z,49nm,21.2s,baz=234,slow=33						
LEM	**Lembang**	**21.90**	**240**	LR	LR	10 22 24.4	
	comp=Z,86nm,19.1s,baz=336,slow=43						
FITZ	**Fitzroy Crossi**	**22.13**	**183**	P	**P**	**10 12 03.2**	**-0.5**
	comp=Z,2.2nm,0.6s,baz=5.8,slow=9.6,SNR=7.3						
JOW	**Kunigami**	**22.61**	**4**	LR	LR	10 21 40.4	
	comp=Z,18nm,18.9s,baz=152,slow=38						
PMG	**Port Moresby**	**24.49**	**123**	LR	LR	10 22 31.9	
	comp=Z,82nm,19.7s,baz=338,slow=38						
WB0	**Warramunga Arr**	**24.96**	**162**	P	**P**	**10 12 30.8**	**-0.5**
WB0				IAmb	IAmb	10 12 42.5	
	comp=Z,4.9nm,0.9s						
WRAB	**Tennant Creek**	**25.11**	**163**	P	**P**	**10 12 31.9**	**-0.7**
WRAB				IAmb	IAmb	10 12 57.3	
	comp=Z,4.9nm,1.0s						
WRA	**Warramunga Arr**	**25.11**	**163**	P	**P**	**10 12 32.0**	**-0.6**
	comp=Z,0.9nm,0.4s,baz=344,slow=11,SNR=23						
WRA	**Warramunga Arr**	**25.11**	**163**	P	**P**	**10 12 31.7**	**-0.9**
WB2	**Warramunga Arr**	**25.11**	**163**	P	**P**	**10 12 32.4**	**-0.3**
WB2				IAmb	IAmb	10 12 43.1	
	comp=Z,14nm,1.4s						
WR0	**Warramunga Arr**	**25.19**	**162**	P	**P**	**10 12 33.0**	**-0.3**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
WR0				IAmb	IAmb	10 12 57.8	
	comp=Z,7.2nm,1.0s						
PSI	Prapat	27.70	268	LR	LR	10 24 22.0	
	comp=Z,71nm,20.6s,baz=42,slow=38						
AS31	Alice Springs	28.54	166	P	P	10 13 03.8	+0.4
ASAR	Alice Springs	28.54	166	P	P	10 13 03.5	0.0
	comp=Z,0.5nm,0.5s,baz=340,slow=6.7,SNR=20						
ASAR	Alice Springs	28.54	166	P	P	10 13 04.0	+0.6
CMAR	Chiang Mai Arr	30.58	300	LR	LR	10 26 29.1	
	comp=Z,39nm,18.1s,baz=166,slow=38						
BBOO	Buckleboo	37.83	167	P	P	10 14 23.5	-0.6
STKA	Stephens Creek	38.55	159	P	P	10 14 30.5	+0.2
	comp=Z,0.9nm,0.3s,baz=342,slow=7.6,SNR=8.5						
STKA	Stephens Creek	38.55	159	P	P	10 14 31.3	+1.1
STKA				IAmb	IAmb	10 14 31.6	
	comp=Z,2.5nm,1.4s						
SONM	Songino Array	46.87	341	P	P	10 15 37.3	-0.4
	comp=Z,0.3nm,0.5s,baz=154,slow=9.2,SNR=3.4						
SONM				LR	LR	10 35 46.4	
	comp=Z,109nm,20.2s,baz=146,slow=37						
MK31	Makanchi Array	57.16	325	P	P	10 16 54.3	+0.2
MKAR	Makanchi Array	57.16	325	P	P	10 16 53.1	-1.0
	comp=Z,0.7nm,0.5s,baz=119,slow=8.0,SNR=8.2						
MKAR	Makanchi Array	57.16	325	P	P	10 16 53.4	-0.7
KURK	Kurchatov	61.34	327	P	P	10 17 22.5	-0.4
KURK				IAmb	IAmb	10 17 23.0	
	comp=Z,2.7nm,0.8s						
RAO	Raoul Island	62.65	126	LR	LR	10 42 09.0	
	comp=Z,265nm,20.1s,baz=127,slow=33						
NRIK	Noril'sk	70.00	346	P	P	10 18 20.9	+2.5
	comp=Z,1.6nm,0.5s,baz=137,slow=8.4,SNR=3.7						
ABKAR	Akbulak array	71.77	321	P	P	10 18 28.7	-0.9
AKTO	Aktyubinsk	73.28	322	LR	LR	10 53 26.0	
	comp=Z,77nm,18.4s,baz=44,slow=38						
ARU	Arti	74.53	328	LR	LR	10 51 43.9	
	comp=Z,39nm,18.3s,baz=272,slow=36						
KIRV	Kirov	79.82	329	LR	LR	10 57 23.4	
	comp=Z,39nm,18.9s,baz=356,slow=38						
BELG	Belogornoye	80.02	322	LR	LR	10 57 27.9	
	comp=Z,46nm,18.2s,baz=155,slow=38						
BMAR	Burnt Mountain	85.72	23	P	P	10 19 47.7	+1.8
FINES	FINESS Array B	91.42	332	P	P	10 20 12.6	-0.3
	comp=Z,5.4nm,1.0s,baz=46,slow=4.0,SNR=2.3						
NOA	NORSAR Array B	98.37	334	LR	LR	11 10 19.4	
	comp=Z,24nm,18.1s,baz=260,slow=39						

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*DRS **29** 10:08:47.2±0.0, 42°.88N×46°.73E, h12^{km}*

*NORS **29** 10:08:47.8±0.0, 42°.88N×46°.72E, h2^{km}, MPVA3.5*

ISC 29 10:08:47.3±0.8**, 42°.90N**±0°.03×**46°.76E**±0°.02**, h12**^{km}±6^{km}**, n31, σ1^{s}.74**/59**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
KRNR	Karanay	0.13	122	*e*Pg	Pg	10 08 50.6	0.0
	275nm,0.1s						
KRNR				*e*Sg	Sg	10 08 53.0	0.0
	172nm,0.4s						
DBC	Dubki	0.13	24	*i* Pg	Pg	10 08 50.8	+0.1
	170nm,0.7s						
DBC				*e*Sg	Sg	10 08 53.8	+0.7
	112nm,0.2s						
UNCR	Uncukul	0.18	171	*i* Pg	Pg	10 08 51.0	-0.4
	411nm,0.3s						
UNCR				*e*Sg	Sg	10 08 53.8	-0.4
	1µm,0.6s						
DLMR	Dylym	0.20	332	*e*Pg	Pg	10 08 51.6	-0.1
	869nm,0.3s						
DLMR				*e*Sg	Sg	10 08 55.0	+0.3
	48nm,0.3s						
BUJR	Buynaksk	0.27	105	*i* Pg	Pg	10 08 53.4	+0.5
	172nm,0.4s						
BUJR				*e*Sg	Sg	10 08 57.6	+1.0
	87nm,0.4s						
ARKR	Arakani	0.34	149	*i* Pg	Pg	10 08 54.2	0.0
	112nm,0.2s						
ARKR				*e*Sg	Sg	10 08 59.3	+0.5
	601nm,0.2s						
XNZR	Khunzakh	0.36	186	*e*Pg	Pg	10 08 54.4	-0.1
	86nm,0.1s						
XNZR				*e*Sg	Sg	10 08 59.6	+0.3
	314nm,0.3s						
BTLR	Botlikh	0.46	240	*e*Pg	Pg	10 08 56.1	-0.2
	48nm,0.3s						
BTLR				*e*Sg	Sg	10 09 02.6	+0.2
DVE	Vedeno	0.47	278	*e*Pg	Pg	10 08 55.9	-0.6
DVE				*e*Sg	Sb	10 09 03.3	-1.2
GNBR	Gunib	0.53	163	*e*Pg	Pg	10 08 58.2	+0.5
	87nm,0.4s						
GNBR				*e*Sg	Sb	10 09 06.6	+0.3
GROC	Groznyy	0.77	294	*e*Pg	Pn	10 09 03.9	-0.2
GROC				*e*Sg	Sb	10 09 14.2	+1.1
SGKR	Sergokala	0.80	123	*e*Pg	Pg	10 09 02.7	0.0
	68nm,0.2s						
SGKR				*e*Sg	Sb	10 09 14.6	+0.7
	486nm,0.2s						
KMKR	Kumukh	0.81	162	*e*Pg	Pb	10 09 03.4	0.0
	50nm,0.4s						
KMKR				*e*Sg	Sb	10 09 15.4	+1.0
	48nm,0.4s						
URKR	Urkarakh	0.98	138	*e*Pg	Pg	10 09 06.3	+0.1
	35nm,0.2s						
URKR				*e*Sg	Sb	10 09 20.7	+1.5
	128nm,0.3s						
LGD	Lagodekhi	1.13	200	P	Pg	10 09 08.6	-0.4
KMGR	Komgaron	1.40	277	*e*Pg	Pg	10 09 15.3	+1.1
KMGR				*e*Sg	Sg	10 09 37.3	+4.9
DDFL	Dedoflistskaro	1.53	198	P	Pg	10 09 20.6	+3.9
DDFL				S	Sg	10 09 45.6	+9.2
AKT	Akhty	1.59	153	*e*Pg	Pg	10 09 18.5	+0.6
AKT				*e*Sg	Sg	10 09 39.2	+0.7
PNSH	Pansheti	1.60	261	P	Pn	10 09 08.7	-7.0
PNSH				S	Sn	10 09 29.6	-6.7
KSMR	Kasumkent	1.65	141	*i* Pg	Pb	10 09 18.0	+0.3
	39nm,0.3s						
KSMR				*e*Sg	Sg	10 09 40.6	+0.3
MTEO	Meteo	1.65	263	P	Pn	10 09 17.4	+0.8
MTEO				S	Sg	10 09 40.2	-0.3
TRKR	Terskaya	1.69	300	*e*Pg	Pg	10 09 20.9	+1.1
TRKR				*e*Sg	Sg	10 09 44.0	+2.2
GUDG	Gudauri	1.74	256	P	Pg	10 09 23.0	+2.4
GUDG				S	Sg	10 09 46.1	+2.9
DGRG	David-gareji	1.77	216	P	Pg	10 09 22.3	+0.9
DGRG				S	Sg	10 09 49.7	+5.3
LACR	Lac	1.81	269	*e*Pg	Pb	10 09 20.5	0.0
LACR				*e*Sg	Sg	10 09 45.4	-0.2
STDR	Stavd-Durt	2.03	284	*e*Pg	Pb	10 09 25.1	+1.0
STDR				*e*Sg	Sg	10 09 53.2	+0.7
ZEI	Tsey	2.10	268	*e*Pg	Pb	10 09 25.7	+0.1
ZEI				*e*Sg	Sg	10 09 54.2	-0.7
DIGR	Digorskoe uzhe	2.33	271	*e*Pn	Pb	10 09 27.9	-1.6
DIGR				*e*Sn	Sb	10 09 59.8	+1.4
TRLG	Trialeti	2.39	236	P	Pb	10 09 31.1	+0.7
TRLG				S	Sg	10 10 02.0	-2.3
ONI	Oni	2.45	264	P	Pb	10 09 30.7	-0.8
ONI				S	Sg	10 10 05.7	-0.4
DMNI	Dmanisi	2.47	231	P	Pb	10 09 31.4	-0.4
DMNI				S	Sg	10 10 04.2	-2.5

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*NIED **29** 10:15:04.0, 31°.18N×129°.13E, h7^{km}, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.05; $M_{\theta\theta}$0.71; $M_{\phi\phi}$0.34; $M_{r\theta}$-0.63; $M_{\theta\phi}$3.11; $M_{\phi r}$2.26; Fault plane solution: $M_0$4.00000×10^{14} NP1: ϕ_s186.00000°, δ76.00000°, λ-143.00000°. NP2: ϕ_s86.00000°, δ54.00000°, λ-17.00000°.*

JMA 29 10:15:04.0±0.2**, 31°.18N×129°.13E, h7**^{km}±2^{km}**, M3.5, Kyushu**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
JSJ	Shimokoshiki	0.70	45	P	Pg	10 15 17.4	-0.2
JKC	Kuchinoerabu	1.16	128	P	Pg	10 15 26.0	-0.3
JSU	Suzuyama	1.18	74	P	Pg	10 15 25.9	-0.7
JSU				*e*S	Sg	10 15 41.8	-0.2
JNN	Nakanoshima	1.48	154	P	Pn	10 15 31.4	+0.3
JFU	Fukue jima 2	1.51	348	P	Pn	10 15 31.5	+0.1
JYAK	Yakushimahirau	1.52	128	P	Pn	10 15 30.5	-1.0
JZO	Okuchi	1.58	52	P	Pn	10 15 32.3	-0.1

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*TUL **29** 10:17:42.4±2.1, 36°.51N±0°.03×99°.03W±0°.02, h6^{km}±7^{km}, ML3.0, mb_Lg2.8/45(NEIC), Error ellipse: s-maj=4.2km s-min=2.3km az=179.0*

*ANF **29** 10:17:43.4±0.4, 36°.49N×98°.98W, h4^{km}±3^{km}, ML3.5/10, Error ellipse: s-maj=4.4km s-min=2.2km az=80.0*

*NEIC **29** 10:17:43.6±1.6, 36°.51N±0°.03×98°.96W±0°.05, h5^{km}±7^{km}, Error ellipse: s-maj=5.6km s-min=4.1km az=95.0*

ISC 29 10:17:43.0±1.1**, 36°.52N**±0°.02×**98°.98W**±0°.03**, h4**^{km}±11^{km}**, n79, σ0^{s}.67**/92**, Oklahoma**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
U32A	Winter Ranch,	0.14	188	Pg	Pg	10 17 45.5	-0.1
U32A				Sg	Sg	10 17 47.9	+0.4
U32A	Winter Ranch,	0.14	188	P	Pg	10 17 45.6	-0.1
	baz=350,SNR=1000						
U32A				S	Sg	10 17 48.0	+0.5
	baz=350						
CROK	Carrier	0.80	90	Pg	Pg	10 17 58.6	+0.2
CROK				Sg	Sg	10 18 09.2	+0.5
KAN14	Manchester OK	0.93	61		Pg	10 18 00.6	-0.2
KAN14				Sg	Sg	10 18 13.0	+0.3
KAN10	Anthony SW Sta	0.93	49	Pg	Pg	10 18 00.6	-0.2
KAN10				Sg	Sg	10 18 13.2	+0.3
GC02	Grant County #	0.96	69	Pg	Pg	10 18 01.1	-0.3
GC02				Sg	Sg	10 18 14.5	+0.7
KAN16	Harper SW Stat	1.02	46	Pg	Pg	10 18 02.1	-0.4
KAN16				Sg	Sg	10 18 16.6	+0.9
KAN05	Bluff City Nor	1.07	56		Pg	10 18 03.1	-0.3
KAN05				Sg	Sg	10 18 17.6	+0.4
KAN08	Anthony NE Sta	1.07	48	Pg	Pg	10 18 03.2	-0.4
KAN08				Sg	Sb	10 18 19.1	+0.5
KAN12	Harper NE Stat	1.11	45		Pg	10 18 03.8	-0.4
KAN12				Sg	Sb	10 18 19.7	+0.2
KAN17	Caldwell West	1.11	61		Pg	10 18 03.8	-0.4
KAN17				Sg	Sg	10 18 18.5	0.0
KAN06	Argonia West S	1.16	50		Pg	10 18 04.7	-0.5
KAN06				Sg	Sg	10 18 20.3	+0.1
KAN01	Argonia South	1.17	57	Pg	Pg	10 18 05.0	-0.4
KAN01				Sg	Sg	10 18 20.3	-0.2
KAN09	Caldwell North	1.25	60		Pg	10 18 06.4	-0.6
KAN13	South Haven SW	1.30	67		Pn	10 18 07.2	-0.8
BCOK	Bluff Creek, N	1.40	127		Pn	10 18 09.1	-0.3
BLOK	Blackwell	1.44	80		Pn	10 18 09.9	+0.1
OK025	Westminster Rd	1.62	125	Pn	Pn	10 18 12.8	+0.4
OKCFA	Oklahoma City	1.65	131	Pn	Pn	10 18 13.5	+0.6
OKCFA				IAmb_Lg		10 18 39.1	
	comp=Z,47nm,0.7s						
OKCFA	Oklahoma City	1.65	131	P	Pn	10 18 13.1	+0.3
	baz=311,SNR=11						
OKCFA				S	Sb	10 18 35.6	+0.4
	baz=311						
OKCSW	OKLAHOMA CITY	1.67	131		Pn	10 18 13.6	+0.5
WMOK	Wichita Mounta	1.78	175	Pn	Pn	10 18 14.5	-0.1
WMOK				IAmb_Lg		10 18 43.4	
	comp=Z,72nm,0.8s						
WMOK	Wichita Mounta	1.78	175	P	Pn	10 18 14.2	-0.4
	baz=354,SNR=17						
WMOK				S	Sb	10 18 38.7	-0.2
	baz=354						
FNO	Franklin	1.79	134	Pn	Pn	10 18 15.3	+0.6
OK031	S. Brethren Rd	1.82	107		Pn	10 18 15.5	+0.4
QUOK	Quay	1.86	100		Pn	10 18 15.5	-0.2
R32A	Long Quarter,	1.92	6		Pn	10 18 16.8	+0.4
R32A	Long Quarter,	1.92	6	P	Pn	10 18 16.8	+0.4
	baz=188						
R32A				S	Sb	10 18 42.8	-0.1
	baz=188						
T35A	Sooner Cattle	2.02	78		Pn	10 18 18.3	+0.4
T35B	Sooner Cattle	2.02	78	P	Pn	10 18 18.1	+0.3
	baz=259,SNR=19						
T35B				S	Sb	10 18 46.5	+0.7
	baz=259						
X34A	Smith Ranch, M	2.12	154	Pn	Pb	10 18 21.0	-1.0
W35A	Tecumseh	2.18	128	Pn	Pn	10 18 20.4	+0.3
CBKS	Cedar Bluff	2.37	345	Pn	Pn	10 18 24.2	+1.5
CBKS	Cedar Bluff	2.37	345	P	Pn	10 18 24.1	+1.3
	baz=166,SNR=34						
CBKS				S	Sb	10 18 55.6	-0.4
	baz=166						
TUL1	Leonard	2.65	102		Pn	10 18 27.2	+0.8
LOOK	Love County	2.91	149		Pn	10 18 31.5	+1.4
LOOK				IAmb_Lg		10 19 18.5	
	comp=Z,24nm,0.7s						
KSU1	Kansas State U	3.19	35	Pn	Pn	10 18 33.8	-0.1
KSU1				IAmb_Lg		10 19 32.2	
	comp=Z,37nm,1.2s						
KSU1	Kansas State U	3.19	35	P	Pn	10 18 34.6	+0.6
	baz=217						
Z35A	Perchaven, San	3.48	155		Pn	10 18 39.1	+1.2
Z35A	Perchaven, San	3.48	155	P	Pn	10 18 38.5	+0.6
	baz=336						
X37A	Clayton	3.51	122		Pn	10 18 38.7	+0.3
X37A				IAmb_Lg		10 19 44.5	
	comp=Z,29nm,0.7s						
X37A	Clayton	3.51	122	P	Pn	10 18 38.4	0.0
	baz=304,SNR=16						
U38A	Gravette	3.70	90	Pn	Pn	10 18 41.5	+0.5
KSCO	Kaye Shedlock'	3.82	312	Pn	Pn	10 18 43.5	+0.8
KSCO				IAmb_Lg		10 19 49.5	
	comp=Z,23nm,0.8s						
ABTX	Abilene, Hawle	3.92	188	Pn	Pn	10 18 44.8	+0.7
N33A	J Bar K, Exete	4.38	15		Pn	10 18 50.2	-0.2
T25A	Trinidad	4.40	280	Pn	Pn	10 18 51.4	+0.6
T25A				IAmb_Lg		10 20 03.0	
	comp=Z,29nm,1.1s						
W39A	Magazine	4.42	106		Pn	10 18 51.1	+0.3
W39A				IAmb_Lg		10 20 11.5	
	comp=Z,23nm,0.8s						
S39A	Bolivar	4.67	74		Pn	10 18 54.8	+0.5
S39A				IAmb_Lg		10 20 08.8	
	comp=Z,16nm,0.7s						
S39A	Bolivar	4.67	74	P	Pn	10 18 54.3	+0.1
	baz=257,SNR=7.2						
MIAR	Mount Ida	4.82	112	Pn	Pn	10 18 56.5	+0.1
MIAR	Mount Ida	4.82	112	P	Pn	10 18 56.3	-0.1
	baz=295,SNR=13						
BGNE	Belgrade	4.93	7		Pn	10 18 57.6	-0.2
U40A	Yellville	4.94	90		Pn	10 18 58.3	+0.3
U40A				IAmb_Lg		10 20 25.6	
	comp=Z,15nm,0.8s						
N35A	Tabor	5.06	30		Pn	10 19 02.5	+2.8
P38A	Dawn	5.30	52	Pn	Pn	10 19 03.6	+0.7
P38A				IAmb_Lg		10 20 37.4	
	comp=Z,19nm,0.8s						
X40A	Basin Creek Fa	5.40	110	Pn	Pn	10 19 04.2	-0.2
X40A				IAmb_Lg		10 20 39.7	
	comp=Z,11nm,1.0s						
MGMO	Mountain Grove	5.42	81	Pn	Pn	10 19 05.5	+0.9
MGMO				IAmb_Lg		10 20 36.7	
	comp=Z,12nm,0.9s						
WHAR	Wooly Hollow	5.56	101	Pn	Pn	10 19 07.7	+1.1
WHAR				IAmb_Lg		10 20 48.9	
	comp=Z,13nm,0.9s						
WLAR	White Oak Lake	5.57	119	IAmb_Lg		10 20 53.5	
	comp=Z,10nm,0.8s						
R40A	Maddies Statio	5.63	70	Pn	Pn	10 19 07.5	+0.1
L34A	Svendsen Farm,	5.81	20		Pn	10 19 09.0	-0.9
435B	Jarrell	5.83	168	Pn	Pn	10 19 09.2	-1.1
435B				IAmb_Lg		10 20 58.1	
	comp=Z,16nm,0.7s						
JCT	Junction City	6.06	187		Pn	10 19 13.2	-0.3
K31A	O'Neill	6.10	2	Pn	Pn	10 19 14.6	+0.6
ISCO	Idaho Springs	6.17	304		Pn	10 19 14.4	-0.8
N38A	Joes South For	6.20	45		Pn	10 19 14.6	-0.6
P40A	Paris	6.24	59	Pn	Pn	10 19 16.8	+0.9
P40A				IAmb_Lg		10 21 02.0	
	comp=Z,19nm,0.7s						
ANMO	Albuquerque	6.28	258	Pn	Pn	10 19 16.0	-0.6
LCAR	Lake Charles	6.33	92	Pn	Pn	10 19 15.9	-1.2
CCM	Cathedral Cave	6.35	74	Pn	Pn	10 19 16.9	-0.5
CCM				IAmb_Lg		10 21 03.4	
	comp=Z,9.7nm,0.7s						
FVM	French Village	6.98	75	IAmb_Lg		10 21 26.5	
	comp=Z,11nm,0.9s						
MNTX	Cornudas Mount	7.16	230	Pn	Pn	10 19 28.2	-0.4
MNTX				IAmb_Lg		10 21 32.3	
	comp=Z,9.1nm,0.7s						
ECSD	EROS Data Cent	7.43	13	Pn	Pn	10 19 33.3	+1.0
S44A	Carbondale	7.86	78	Pn	Pn	10 19 39.2	+1.2
SIUC	Southern Illin	7.89	78	Pn	Pn	10 19 38.5	+0.1
K22A	Casper	8.45	319	IAmb_Lg		10 22 21.3	
	comp=Z,12nm,1.1s						
RSSD	Black Hills	8.52	335	IAmb_Lg		10 22 20.7	
	comp=Z,6.6nm,0.9s						
JFWS	Jewell Farm	9.27	44	IAmb_Lg		10 22 45.5	
	comp=Z,11nm,1.0s						

WEL 29 10:32:56.2±0.8**, 33°S**±10°×**17°8W**±2°6**, h33**^{km}**, M4.4**/9**, mB4.8**/4**, ML4.6**/13**, MLv4.5**/9**, Mw(mB)4.1**/4**, Error ellipse: s-maj=0.0km s-min=0.0km az=110.7, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
GLKZ	Green Lake	3.50	8	P	Pn	10 33 48.0	-0.2
GLKZ				S	Sn	10 34 28.3	-0.2
MXZ	Matakaoa Point	5.48	208	P	Pn	10 34 14.7	-0.8
MXZ				S	Sn	10 35 17.3	0.0
WMGZ	Waiomatatini S	5.67	206	P	Pn	10 34 20.2	+2.1
WMGZ				S	Sn	10 35 23.7	+1.7
PKGZ	Pakihiroa	5.85	208	P	Pn	10 34 22.0	+1.3
PKGZ				S	Sn	10 35 28.3	+1.7
HAZ	Te Kaha	5.86	210	P	Pn	10 34 22.7	+2.0
HAZ				S	Sn	10 35 30.5	+3.8
PUZ	Puketiti	5.95	206	P	Pn	10 34 22.0	+0.1
PUZ				S	Sn	10 35 28.5	-0.3
RUGZ	Raukumara Rang	6.08	210	P	Pn	10 34 25.7	+1.8
RUGZ				S	Sn	10 35 34.3	+1.9
TWGZ	Tauwhareparae	6.14	207	P	Pn	10 34 25.9	+1.2
TWGZ				S	Sn	10 35 34.7	+0.9
CNGZ	Carnagh Statio	6.33	204	P	Pn	10 34 27.1	-0.1
TKGZ	Te Karaka	6.42	207	P	Pn	10 34 28.5	+0.1
TKGZ				S	Sn	10 35 40.1	-0.4
MWZ	Matawai	6.46	209	P	Pn	10 34 29.5	+0.6
MWZ				S	Sn	10 35 42.4	+0.9
URZ	Urewera	6.57	212	P	Pn	10 34 31.4	+1.0
URZ				S	Sn	10 35 45.4	+1.1
RIGZ	Rimuhau	6.69	206	P	Pn	10 34 30.3	-1.8
RIGZ				S	Sn	10 35 47.4	+0.3
SNGZ	Shannon Statio	6.92	208	P	Pn	10 34 33.2	-2.0
SNGZ				S	Sn	10 35 53.1	+0.4
RTZ	Ruatahuna	6.92	211	P	Pn	10 34 36.0	+0.6
RTZ				S	Sn	10 35 53.6	+0.5
KNZ	Kokohu	7.00	205	P	Pn	10 34 34.6	-1.7
KNZ				S	Sn	10 35 51.7	-3.0
BKZ	Black Stump Fm	7.59	211	P	Pn	10 34 43.4	-1.1
BKZ				S	Sn	10 36 08.5	-0.9
KWHZ	Kaweka Forest	7.84	210	P	Pn	10 34 48.3	+0.4
KWHZ				S	Sn	10 36 15.3	-0.2

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*IDC **29** 10:38:37.1±1.5, 25°.33S×175°.87W, h0^{km}, mb4.2/7, mb1 4.3/8, mb1mx3.9/36, mbtmp4.2/8, ML5.4/2, MS3.5/5, Ms1 3.5/5, ms1mx3.0/37, Error ellipse: s-maj=39.3km s-min=29.9km az=139.0*

ISC 29 10:38:41.5±1.2**, 25°.3S**±0°.1×**175°.9W**±0°.2**, h31**^{km}**, n13, σ1^{s}.50**/10**, mb4.2**/7**, MS3.5**/4**, South of Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
RAO	Raoul Island	4.34	204	Pn	Pn	10 39 44.7	-0.6
	338nm,0.3s,baz=310,slow=16,SNR=4.2						
MSVF	Nonsavu	9.41	322	Pn	Pn	10 40 53.8	-1.2
	0.9nm,0.3s,baz=114,slow=18,SNR=5.2						
DZM	Mont Dzumac	16.50	278	LR	LR	10 48 11.4	
	comp=Z,104nm,18.2s,baz=54,slow=35						
HNR	Honiara	27.87	300	LR	LR	10 54 53.0	
	comp=Z,66nm,18.7s,baz=212,slow=35						
STKA	Stephens Creek	37.73	250	LR	LR	11 00 21.6	
	comp=Z,78nm,18.9s,baz=24,slow=35						
PMG	Port Moresby	38.49	288	P	P	10 46 01.1	+0.1
	4.6nm,0.7s,baz=145,slow=7.3,SNR=2.2						
ASAR	Alice Springs	45.51	261	P	P	10 46 59.3	+0.9
	1.5nm,1.0s,baz=104,slow=7.2,SNR=7.2						
ASAR				LR	LR	11 05 28.3	
	comp=Z,68nm,18.2s,baz=84,slow=35						
WRA	Warramunga Arr	46.05	266	P	P	10 47 01.8	-0.9
	1.5nm,0.8s,baz=101,slow=8.3,SNR=5.8						
WRA				LR	LR	11 05 58.0	
	comp=Z,53nm,18.3s,baz=115,slow=36						
FITZ	Fitzroy Crossi	54.45	265	P	P	10 48 04.8	-1.5
	2.4nm,0.9s,baz=117,slow=4.5,SNR=2.3						
USRK	Ussuriysk Ar.	84.00	325	P	P	10 51 09.9	+1.2
	3.9nm,0.9s,baz=132,slow=4.1,SNR=8.8						
TXAR	Lajitas Array	88.03	56	P	P	10 51 28.3	-0.8
	0.4nm,0.9s,baz=238,slow=8.4,SNR=3.1						
CMAR	Chiang Mai Arr	93.52	289	P	P	10 51 57.3	+2.6
	1.8nm,0.8s,baz=137,slow=3.1,SNR=10						
AKASG	Malin Array Be	148.12	329	PKPbc	PKiKP	10 58 24.4	-1.1
	0.3nm,0.3s,baz=37,slow=3.5,SNR=5.5						

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*IDC **29** 10:40:53.1±8.4, 8°.61S×124°.76E, h0^{km}, mb3.8/1, mb1 3.6/4, mb1mx3.2/43, mbtmp3.5/4, ML3.5/3, Error ellipse: s-maj=116.3km s-min=41.8km az=170.0*

ISC 29 10:41:04.1±2.2**, 9°.3S**±0°.2×**124°.86E**±0°.09**, h33**^{km}**, n13, σ2^{s}.09**/10**, Timor region**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
SOEI	Soe	0.72	234	P	Pn	10 41 17.5	-0.5
BATI	Baumata	1.46	234	Pn	Pn	10 41 27.7	-0.5
	70nm,0.3s,baz=28,slow=4.9,SNR=56						
BATI				Sn	Sn	10 41 46.2	-0.1
	44nm,0.3s,baz=115,slow=23,SNR=9.9						
MMRI	Maumere	2.68	285	P	Pn	10 41 32.9	-12
DRS	Darwin Rock St	6.68	118	P	Pn	10 42 46.5	+6.5
PLAI	Plampang	7.01	274	P	Pn	10 42 33.7	-11
MTN	Manton Dam	7.08	120	P	Pn	10 42 52.4	+7.0
SANI	Sanana	7.33	9	P	Pn	10 42 42.3	-6.6
KNRA	Kununurra	7.36	149	P	Pn	10 42 54.5	+5.1
KDU	Kakadu	8.18	115	P	Pn	10 43 06.9	+6.3
FITZ	Fitzroy Crossi	8.74	175	Pn	Pn	10 43 09.4	+1.1
	0.3nm,0.3s,baz=1.3,slow=10,SNR=16						
FITZ				Sn	Sn	10 44 46.8	+1.1
	1.0nm,0.3s,baz=166,slow=13,SNR=8.9						
WRA	Warramunga Arr	13.97	140	Pn	Pn	10 44 22.5	+2.7
	0.3nm,0.3s,baz=315,slow=14,SNR=8.3						
WRA				Sn	Sn	10 46 49.7	-4.2
	0.0nm,0.3s,baz=309,slow=26,SNR=2.7						
ASAR	Alice Springs	16.67	150	P	P	10 44 57.9	+0.4
	0.2nm,0.3s,baz=323,slow=12,SNR=20						
ASAR				S	Sn	10 47 58.2	-1.4
	0.1nm,0.3s,baz=301,slow=22,SNR=2.3						
STKA	Stephens Creek	27.28	148	P	P	10 46 44.6	-1.0
	0.6nm,0.5s,baz=333,slow=6.8,SNR=3.4						

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*VAO **29** 10:41:31.5±0.5, 10°.26S×71°.30W, h647^{km}±7^{km}, mb4.1*

*IDC **29** 10:41:32.3±0.9, 10°.18S×71°.17W, h637^{km}±12^{km}, mb3.2/10, mb1 3.4/16, mb1mx3.2/37, mbtmp4.3/16, Error ellipse: s-maj=20.1km s-min=11.6km az=46.0*

*NEIC **29** 10:41:32.1±2.3, 10°.2S±0°.1×71°.2W±0°.2, h626^{km}±9^{km}, mb4.2/29, Error ellipse: s-maj=22.9km s-min=16.7km az=60.0*

ISC 29 10:41:32.6±0.5**, 10°.25S**±0°.07×**71°.26W**±0°.08**, h650**^{km}**, n100, σ1^{s}.24**/105**, mb4.1**/19**, Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
CZSB	Cruzeiro do Su	2.88	330	*e*P	P	10 42 53.7	-1.8
CZSB	Cruzeiro do Su	2.88	330	P	P	10 42 53.4	-2.0
ETMB	Extrema	4.99	85	*e*P	P	10 43 07.1	-1.5
ETMB	Extrema	4.99	85	P	P	10 43 06.9	-1.8
LPAZ	La Paz	6.73	153	P	P	10 43 21.9	-1.4
	3.0nm,0.3s,baz=336,slow=8.9,SNR=64						
LPAZ				S	S	10 44 51.1	-2.5
	baz=105,slow=22,SNR=1.4						
LPAZ	La Paz	6.73	153	*e*P	P	10 43 20.2	-3.1
LPAZ	La Paz	6.73	153	*e*P	P	10 43 21.8	-1.4
ATAH	Atahualpa	7.70	293	P	P	10 43 31.2	-0.4
	0.8nm,0.3s,baz=105,slow=5.4,SNR=7.0						
SAML	Samuel	8.07	81	P	P	10 43 33.4	-1.1
PB16	IPOC Station P	8.21	168	P	P	10 43 34.7	-1.7
PB12	IPOC Station P	8.36	174	P	P	10 43 34.9	-2.3
PATCX	Punta Patache	10.56	174	P	P	10 43 57.4	-0.6
VILB	Vilhena	11.16	105	*e*P	P	10 44 03.2	-0.5
VILB	Vilhena	11.16	105	P	P	10 44 02.3	-1.4
SIV	San Ignacio	11.45	121	P	P	10 44 05.5	-0.8
	1.7nm,0.3s,baz=292,slow=9.4,SNR=33						
LVC	Limon Verde	12.49	170	P	P	10 44 16.8	+0.5
	2.9nm,0.3s,baz=356,slow=4.9,SNR=19						
LVC				S	S	10 46 33.6	+3.8
	0.2nm,0.3s,baz=315,slow=17,SNR=2.9						
LVC	Limon Verde	12.49	170	P	P	10 44 16.9	+0.7
OTAV	Otavalo	12.64	325	P	P	10 44 19.6	+1.8
MACA	Manacapuru-AM	12.64	57	P	P	10 44 16.7	-0.6

PAC1	**Pacto, Paraso**	**12.86**	**324**	*e*P	**P**	**10 44 18.6**	**-0.9**
PTLB	**Pontes e Lacer**	**12.90**	**115**	P	**P**	**10 44 20.0**	**+0.4**
GARC	**Garzon, Huila**	**13.05**	**341**	*e*P	**P**	**10 44 20.6**	**-0.8**
SOTA	**Rioblanco**	**13.41**	**336**	*e*P	**P**	**10 44 23.5**	**-1.4**
PDRB	**Porto dos Gac**	**14.33**	**97**	*e*P	**P**	**10 44 33.4**	**+0.5**
PTGC	**Puerto Gaitan,**	**14.38**	**356**	*e*P	**P**	**10 44 34.2**	**+0.9**
ORTC	**Ortega, Tolima**	**14.62**	**344**	*e*P	**P**	**10 44 34.2**	**-1.3**
PTGA	**Pitinga**	**14.68**	**51**	P	**P**	**10 44 37.1**	**+1.0**
	3.4nm,0.3s,baz=321,slow=22,SNR=47						
PTGA				S	**S**	**10 47 07.3**	**+1.7**
	baz=218,slow=20,SNR=5.9						
YOTC	**Yotoco, Valle**	**15.02**	**340**	*e*P	**P**	**10 44 37.1**	**-2.2**
CLDB	**Colider**	**15.22**	**94**	*e*P	**P**	**10 44 41.1**	**+0.1**
ROSC	**El Rosal**	**15.30**	**348**	P	**P**	**10 44 42.5**	**+0.4**
	2.6nm,0.3s,baz=216,slow=19,SNR=2.4						
PLMC	**San Jos del P**	**15.87**	**341**	*e*P	**P**	**10 44 45.9**	**-1.1**
NPGB	**Novo Progresso**	**16.04**	**80**	*e*P	**P**	**10 44 48.3**	**-0.3**
SPBC	**San Pablo de B**	**16.04**	**350**	*e*P	**P**	**10 44 48.8**	**+0.2**
RUSC	**La Rusia**	**16.14**	**353**	*e*P	**P**	**10 44 49.8**	**-0.1**
ITTB	**Itaituba**	**16.47**	**70**	*e*P	**P**	**10 44 52.7**	**+0.3**
BOAV	**Boa Vista**	**16.50**	**41**	*e*P	**P**	**10 44 52.3**	**-0.4**
BOAV	**Boa Vista**	**16.50**	**41**	P	**P**	**10 44 53.5**	**+0.8**
BOAV				IAmb	IAmb	10 44 55.8	
	comp=Z,4.4nm,1.0s						
TAMC	**Tame, Arauca**	**16.58**	**358**	*e*P	**P**	**10 44 51.8**	**-1.8**
AC02	**Maricunga**	**16.62**	**173**	P	**P**	**10 44 56.1**	**+1.9**
AC02				IAmb	IAmb	10 45 15.1	
	comp=Z,12nm,1.4s						
CBOC	**Ciudad Bolivar**	**16.69**	**343**	*e*P	**P**	**10 44 54.7**	**0.0**
PP1B	**Ponte de Pedra**	**17.49**	**116**	*e*P	**P**	**10 45 01.1**	**-0.6**
ZARC	**Zaragoza, Cauc**	**17.99**	**348**	*e*P	**P**	**10 45 05.4**	**-0.8**
ZARC	**Zaragoza, Cauc**	**17.99**	**348**	P	**P**	**10 45 06.2**	**0.0**
AQDB	**Aquidauana**	**18.11**	**126**	*e*P	**P**	**10 45 07.9**	**+0.7**
UREC	**San Jos de Ur**	**18.38**	**346**	*e*P	**P**	**10 45 08.3**	**-1.5**
SOCV	**Socops**	**18.42**	**1**	*e*P	**P**	**10 45 11.3**	**+1.1**
OCAC	**Ocana**	**18.48**	**354**	P	**P**	**10 45 10.0**	**-0.8**
OCAC				IAmb	IAmb	10 45 32.5	
	comp=Z,3.2nm,0.3s						
MALB	**Monte Alegre**	**18.83**	**65**	*e*P	**P**	**10 45 14.5**	**+0.5**
SDV	**Santo Domingo**	**19.02**	**2**	*e*P	**P**	**10 45 16.4**	**+0.6**
SMLC	**San Martn de**	**19.13**	**351**	*e*P	**P**	**10 45 13.2**	**-3.4**
BAUV	**El Baul**	**19.34**	**10**	P	**P**	**10 45 18.9**	**+0.5**
MOTC	**Monteria, Cord**	**19.41**	**347**	P	**P**	**10 45 21.0**	**+2.0**
MOTC				IAmb	IAmb	10 45 22.1	
	comp=Z,9.1nm,1.1s						
SNDB	**Serra Nova Dou**	**19.67**	**97**	*e*P	**P**	**10 45 22.4**	**+0.9**
ARAG	**Araguaiana, MT**	**19.71**	**108**	*e*P	**P**	**10 45 22.0**	**+0.2**
SJCC	**San Jacinto, C**	**20.39**	**349**	P	**P**	**10 45 28.1**	**+0.2**
SJCC				IAmb	IAmb	10 45 31.8	
	comp=Z,14nm,1.0s						
CPUP	**Villa Florida**	**20.72**	**142**	*e*P	**P**	**10 45 31.0**	**+0.4**
BIRV	**Birongo**	**21.18**	**14**	P	**P**	**10 45 35.2**	**+0.3**
BIRV				IAmb	IAmb	10 45 52.1	
	comp=Z,13nm,1.0s						
PCRV	**Puerto La Cruz**	**21.34**	**18**	P	**P**	**10 45 35.5**	**-0.8**
	comp=Z,7.9nm,0.9s,baz=236,slow=4.8,SNR=1.9						
MCPB	**Macapa, AP**	**21.48**	**64**	*e*P	**P**	**10 45 38.1**	**+0.5**
SMRC	**Santa Marta, M**	**21.48**	**352**	*e*P	**P**	**10 45 33.7**	**-3.9**
URIC	**Uribia, Colomb**	**21.82**	**358**	P	**P**	**10 45 37.7**	**-2.9**
URIC				IAmb	IAmb	10 45 49.2	
	comp=Z,15nm,1.2s						
PEXB	**Peixe**	**22.60**	**97**	*e*P	**P**	**10 45 48.0**	**+0.4**
BDFB	**Brasilia**	**23.27**	**106**	P	**P**	**10 45 53.8**	**+0.2**
	comp=Z,0.8nm,0.3s,baz=281,slow=9.2,SNR=3.1						
SMTB	**Santa Maria do**	**23.38**	**89**	*e*P	**P**	**10 45 54.3**	**-0.2**
IPMB	**Ipameri, GO**	**23.62**	**112**	*e*P	**P**	**10 45 56.3**	**-0.3**
DIAM	**Diamantina, MG**	**27.88**	**110**	*e*P	**P**	**10 46 33.2**	**-0.7**
CRPR	**Cabo Rojo, PR**	**28.37**	**8**	P	**P**	**10 46 37.7**	**-0.3**
SJG	**San Juan**	**28.63**	**10**	P	**P**	**10 46 38.9**	**-1.2**
	comp=Z,5.6nm,0.6s,baz=210,slow=8.1,SNR=1.6						
SJG	**San Juan**	**28.63**	**10**	P	**P**	**10 46 39.4**	**-0.7**
APG	**El Apazote**	**31.49**	**323**	P	**P**	**10 47 05.8**	**+0.9**
	comp=Z,1.5nm,0.4s,baz=40,slow=18,SNR=2.1						
CMIG	**Matias Romero**	**35.83**	**319**	P	**P**	**10 47 41.6**	**+0.9**
	comp=Z,2.2nm,0.5s,baz=130,slow=6.0,SNR=8.9						
SWET	**Sewanee**	**47.30**	**344**	P	**P**	**10 49 09.9**	**-0.2**
SWET				IAmb	IAmb	10 49 10.2	
	comp=Z,4.8nm,0.6s						
V48A	**Smith Brothers**	**48.04**	**343**	P	**P**	**10 49 15.1**	**-0.5**
V48A				IAmb	IAmb	10 49 15.9	
	comp=Z,6.2nm,0.8s						
S54A	**Dingess, Beckl**	**48.72**	**349**	P	**P**	**10 49 20.8**	**+0.3**
S54A				IAmb	IAmb	10 49 21.5	
	comp=Z,10nm,0.7s						
T47A	**Sharon Grove**	**49.29**	**343**	P	**P**	**10 49 24.2**	**-0.5**
TXAR	**Lajitas Array**	**50.25**	**323**	P	**P**	**10 49 32.5**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=166,slow=9.3,SNR=18						
TXAR				PcP	**PcP**	**10 50 40.0**	**+1.4**
	comp=Z,0.2nm,0.5s,baz=132,slow=5.8,SNR=4.6						
SIUC	**Southern Illin**	**50.59**	**342**	P	**P**	**10 49 33.8**	**-0.2**
U40A	**Yellville**	**50.62**	**337**	P	**P**	**10 49 34.2**	**-0.2**
U40A				IAmb	IAmb	10 49 35.0	
	comp=Z,4.9nm,0.6s						
CCM	**Cathedral Cave**	**51.56**	**340**	P	**P**	**10 49 40.6**	**-0.4**
CCM				IAmb	IAmb	10 49 42.0	
	comp=Z,4.6nm,0.7s						
PMSA	**Palmer Station**	**54.68**	**176**	*e*P	**P**	**10 50 01.3**	**-1.2**
BGNE	**Belgrade**	**57.06**	**336**	P	**P**	**10 50 18.9**	**-0.4**
BGNE				IAmb	IAmb	10 50 20.5	
	comp=Z,18nm,0.9s						
SDCO	**Great Sand Dun**	**57.50**	**328**	P	**P**	**10 50 23.2**	**+0.5**
X16A	**Lo Mia Camp, P**	**58.52**	**321**	P	**P**	**10 50 31.1**	**+1.6**
F33A	**5 Mile Ranch,**	**60.20**	**340**	P	**P**	**10 50 39.9**	**-0.2**
F33A				IAmb	IAmb	10 50 40.4	
	comp=Z,6.5nm,0.5s						
BW06	**Boulder Array**	**63.31**	**329**	P	**P**	**10 51 00.9**	**+0.4**
PD31	**Pinedale Array**	**63.31**	**329**	P	**P**	**10 51 00.9**	**+0.4**
PDAR	**Pinedale Array**	**63.31**	**329**	P	**P**	**10 51 01.3**	**+0.8**
	comp=Z,0.7nm,0.4s,baz=123,slow=9.4,SNR=7.2						
PDAR	**Pinedale Array**	**63.31**	**329**	P	**P**	**10 51 00.9**	**+0.4**
HWUT	**Hardware Ranch**	**63.52**	**327**	P	**P**	**10 51 02.7**	**+0.9**
ULM	**Lac du Bonnet**	**63.97**	**343**	P	**P**	**10 51 03.8**	**-0.4**
	comp=Z,4.8nm,0.3s,baz=157,slow=4.6,SNR=12						
ULM	**Lac du Bonnet**	**63.97**	**343**	P	**P**	**10 51 04.1**	**-0.1**
ULM				IAmb	IAmb	10 51 04.1	
	comp=Z,6.8nm,0.3s						
REDW	**Red Top Meadow**	**64.39**	**329**	P	**P**	**10 51 07.8**	**+0.5**
TORD	**Torodi Ar. Bea**	**76.05**	**74**	P	**P**	**10 52 16.6**	**+0.5**
	comp=Z,1.0nm,0.4s,baz=250,slow=4.6,SNR=22						
TORD	**Torodi Ar. Bea**	**76.05**	**74**	P	**P**	**10 52 16.1**	**0.0**
YKA	**Yellowknife Ar**	**79.88**	**341**	P	**P**	**10 52 36.2**	**+0.7**
	comp=Z,1.5nm,0.7s,baz=136,slow=4.3,SNR=11						
ASAR	**Alice Springs**	**138.26**	**216**	SKPbc	**SKPbc**	**11 02 22.4**	**+1.0**
	comp=Z,0.2nm,0.4s,baz=136,slow=3.9,SNR=7.7						
WRA	**Warramunga Arr**	**140.81**	**220**	PKP	**PKPdf**	**10 59 52.4**	**+1.2**
	comp=Z,0.2nm,0.4s,baz=129,slow=1.9,SNR=2.2						
WRA				SKPbc	**SKPbc**	**11 02 28.7**	**+0.6**
	comp=Z,0.4nm,0.4s,baz=137,slow=2.5,SNR=6.2						
SONM	**Songino Array**	**142.49**	**3**	PKP	**PKPdf**	**10 59 52.3**	**-1.2**
	comp=Z,0.6nm,0.5s,baz=324,slow=1.8,SNR=6.2						
SONM	**Songino Array**	**142.49**	**3**		**PKPdf**	**10 59 52.4**	**-1.1**
KSRS	**Korea Array**	**147.87**	**331**	PKPbc	**PKiKP**	**11 00 08.2**	**+0.1**
	comp=Z,1.4nm,0.6s,baz=20,slow=2.0,SNR=5.6						

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*IDC **29** 10:51:42.8±1.2, 4°.34N×127°.01E, h0^{km}, mb3.7/6, mb1 3.8/7, mb1mx3.5/38, mbtmp3.7/7, ML3.8/2, MS3.2/2, Ms1 3.2/2, ms1mx2.4/37, Error ellipse: s-maj=69.2km s-min=18.0km az=67.0*

*NEIC **29** 10:51:44.2±1.7, 4°.4N±0°.1×127°.1E±0°.2, h8^{km}±8^{km}, mb4.2/8, Error ellipse: s-maj=26.7km s-min=14.5km az=57.0*

ISC 29 10:51:44.1±1.0**, 4°.3N**±0°.1×**127°.1E**±0°.1**, h10^{km}, n23, σ1^{s}.04**/21**, mb3.8**/9**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**3.56**	**175**	Pn	**Pn**	**10 52 38.4**	**-1.0**
SIJI	**Sorong**	**6.67**	**141**	Pn	**Pn**	**10 53 21.8**	**-0.4**
	0.4nm,0.3s,baz=333,slow=14,SNR=1.3						
TOLI2	**Tolitoli**	**7.05**	**243**	Pn	**Pn**	**10 53 28.1**	**+0.7**
BATI	**Baumata**	**14.85**	**193**	Pn	**Pn**	**10 55 14.1**	**-0.2**
	1.7nm,0.3s,baz=131,slow=15,SNR=3.5						
JAY	**Jayapura**	**15.24**	**116**	LR	LR	10 59 49.1	
	comp=Z,70nm,21.8s,baz=334,slow=32						
KNRA	**Kununurra**	**19.96**	**175**		**P**	**10 56 17.7**	**+1.1**
KNRA				IAmb	IAmb	10 56 29.7	
	comp=Z,10nm,0.9s						
FITZ	**Fitzroy Crossi**	**22.34**	**184**	P	**P**	**10 56 41.2**	**-1.1**
	comp=Z,1.6nm,0.7s,baz=354,slow=8.3,SNR=1.8						
WB0	**Warramunga Arr**	**25.02**	**163**		**P**	**10 57 10.6**	**+2.1**
WB0				IAmb	IAmb	10 57 20.1	
	comp=Z,6.5nm,1.1s						
WRA	**Warramunga Arr**	**25.17**	**164**	P	**P**	**10 57 10.1**	**+0.2**
	comp=Z,1.3nm,0.8s,baz=345,slow=10,SNR=7.6						
WB2	**Warramunga Arr**	**25.17**	**164**	P	**P**	**10 57 11.4**	**+1.5**
WR0	**Warramunga Arr**	**25.24**	**163**	P	**P**	**10 57 12.0**	**+1.5**
WR0				IAmb	IAmb	10 57 28.4	
	comp=Z,3.1nm,0.8s						
AS31	**Alice Springs**	**28.62**	**167**	P	**P**	**10 57 41.0**	**0.0**
ASAR	**Alice Springs**	**28.63**	**167**	P	**P**	**10 57 41.7**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=340,slow=6.7,SNR=9.3						
ASAR	**Alice Springs**	**28.63**	**167**	P	**P**	**10 57 41.2**	**+0.2**
STKA	**Stephens Creek**	**38.58**	**160**	P	**P**	**10 59 08.2**	**+0.8**
	comp=Z,1.8nm,0.8s,baz=333,slow=11,SNR=4.4						
STKA	**Stephens Creek**	**38.58**	**160**	P	**P**	**10 59 08.9**	**+1.6**
TLY	**Talaya**	**51.06**	**341**	LR	LR	11 26 23.8	
	comp=Z,26nm,19.1s,baz=360,slow=41						
MK31	**Makanchi Array**	**57.25**	**325**	P	**P**	**11 01 31.9**	**0.0**
MK31				IAmb	IAmb	11 01 32.0	
	comp=Z,5.0nm,1.4s						
MKAR	**Makanchi Array**	**57.25**	**325**	P	**P**	**11 01 31.7**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=126,slow=7.6,SNR=3.6						
MKAR	**Makanchi Array**	**57.25**	**325**	P	**P**	**11 01 30.8**	**-1.1**
KURBB	**Kurchatov Arra**	**61.41**	**327**	P	**P**	**11 02 00.6**	**+0.1**
	comp=Z,0.8nm,0.5s,baz=125,slow=6.1,SNR=10.0						
KURK	**Kurchatov**	**61.41**	**327**	P	**P**	**11 01 59.6**	**-0.9**
ABKAR	**Akbulak array**	**71.89**	**321**	P	**P**	**11 03 06.8**	**-0.7**

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*TIF **29** 11:16:00.5, 43°.69N×44°.93E, h10^{km}±1^{km}*

*NORS **29** 11:16:01.3±0.0, 43°.67N×45°.01E, h15^{km}, MPVA3.9*

*MOS **29** 11:16:02.2±0.6, 43°.73N×44°.97E, h18^{km}, mb3.9/2, Error ellipse: s-maj=5.8km s-min=4.8km az=111.9*

*DRS **29** 11:16:04.1±0.0, 43°.72N×44°.75E, h24^{km}*

ISC 29 11:16:01.6±0.9**, 43°.72N**±0°.03×**45°.00E**±0°.02**, h13^{km}**±7^{km}**, n78, σ1^{s}.29**/143**, 3C-4D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRKR	**Terskaya**	**0.20**	**273**	*e*PG	**Pb**	**11 16 07.0**	**-0.1**
TRKR				*e*S	**Sg**	**11 16 10.2**	**+1.2**
TRKR				pmax	pmax		
	comp=Z,210nm,0.6s						
TRKR				smax	smax		
	comp=N,1µm,0.6s						
TRKR	**Terskaya**	**0.20**	**273**	*e*Pg	**Pb**	**11 16 06.9**	**-0.2**
TRKR				*e*Sg	**Sg**	**11 16 12.1**	**+3.1**
BTKR	**Batakoyurt**	**0.48**	**225**	*e*PG	**Pb**	**11 16 11.2**	**-0.8**
BTKR				*e*S	**Sb**	**11 16 19.7**	**+0.8**
BTKR	**Batakoyurt**	**0.48**	**225**	*e*Pg	**Pb**	**11 16 11.2**	**-0.8**
BTKR				*e*Sg	**Sb**	**11 16 19.7**	**+0.8**
PRTR	**Priterechnaya**	**0.52**	**274**	*e*PG	**Pn**	**11 16 13.5**	**-1.3**
PRTR				*e*S	**Sn**	**11 16 22.4**	**-1.2**
PRTR	**Priterechnaya**	**0.52**	**274**	*e*Pg	**Pn**	**11 16 13.5**	**-1.3**
PRTR				*e*Sg	**Sn**	**11 16 22.4**	**-1.2**
KMGR	**Komgaron**	**0.67**	**189**	*e*PG	**Pn**	**11 16 16.4**	**-0.4**
KMGR				*e*S	**Sb**	**11 16 25.1**	**+0.8**
KMGR	**Komgaron**	**0.67**	**189**	*e*Pg	**Pn**	**11 16 16.4**	**-0.4**
KMGR				*e*Sg	**Sb**	**11 16 25.1**	**+0.8**
VLKR	**Vladikavkaz**	**0.71**	**200**	*e*PG	**Pb**	**11 16 15.8**	**-0.1**
VLKR				*e*S	**Sg**	**11 16 24.3**	**-0.4**
VLKR	**Vladikavkaz**	**0.71**	**200**	*e*Pg	**Pb**	**11 16 15.8**	**-0.1**
VLKR				*e*Sg	**Sg**	**11 16 24.3**	**-0.4**
ARNR	**Ardon**	**0.75**	**225**	*e*PG	**Pn**	**11 16 17.2**	**-0.7**
ARNR				*e*S	**Sb**	**11 16 28.2**	**+1.5**
ARNR	**Ardon**	**0.75**	**225**	*e*Pg	**Pn**	**11 16 17.2**	**-0.7**
ARNR				*e*Sg	**Sb**	**11 16 28.2**	**+1.5**
STDR	**Stavd-Durt**	**0.77**	**244**	*e*PG	**Pn**	**11 16 17.9**	**-0.3**
STDR				*e*S	**Sn**	**11 16 30.9**	**+1.3**
STDR	**Stavd-Durt**	**0.77**	**244**	*e*Pg	**Pn**	**11 16 17.9**	**-0.3**
STDR				*e*Sg	**Sn**	**11 16 30.9**	**+1.3**
GROC	**Groznyy**	**0.77**	**131**	*e*PG	**Pn**	**11 16 17.7**	**-0.5**
GROC				*e*S	**Sn**	**11 16 29.0**	**-0.7**
GROC	**Groznyy**	**0.77**	**131**	*e*Pg	**Pb**	**11 16 16.8**	**-0.1**
GROC				*e*Sg	**Sn**	**11 16 29.1**	**-0.5**
KORR	**Kora**	**0.93**	**228**	*e*PG	**Pn**	**11 16 21.5**	**+1.1**
KORR				*e*S	**Sn**	**11 16 34.8**	**+1.2**
KORR	**Kora**	**0.93**	**228**	*e*Pg	**Pn**	**11 16 21.5**	**+1.1**
KORR				*e*Sg	**Sn**	**11 16 34.8**	**+1.2**
LSNR	**Lesken**	**0.96**	**243**	*e*PG	**Pn**	**11 16 20.9**	**0.0**
LSNR				*e*S	**Sn**	**11 16 36.7**	**+2.2**
LSNR				pmax	pmax		
	comp=Z,39nm,0.6s						
LSNR				smax	smax		
	comp=N,51nm,0.3s						
LSNR	**Lesken**	**0.96**	**243**	*e*Pg	**Pn**	**11 16 20.9**	**0.0**
LSNR				*e*Sg	**Sn**	**11 16 35.9**	**+1.5**
LACR	**Lac**	**1.03**	**210**	*e*PG	**Pb**	**11 16 21.0**	**-0.3**
LACR				*e*S	**Sn**	**11 16 36.2**	**0.0**
LACR	**Lac**	**1.03**	**210**	*e*Pg	**Pb**	**11 16 21.0**	**-0.3**
LACR				*e*Sg	**Sn**	**11 16 36.2**	**0.0**
NCK	**Nalchik**	**1.05**	**258**	*e*PG	**Pn**	**11 16 22.5**	**+0.5**
NCK				*e*S	**Sn**	**11 16 38.4**	**+1.9**
NCK	**Nalchik**	**1.05**	**258**	*e*Pg	**Pn**	**11 16 22.6**	**+0.5**
NCK				*e*Sg	**Sn**	**11 16 38.4**	**+1.9**
MTEO	**Meteo**	**1.09**	**199**	P	**Pb**	**11 16 20.9**	**-1.7**
MTEO				S	**Sb**	**11 16 37.9**	**+1.0**
DVE	**Vedeno**	**1.12**	**132**	*e*PG	**Pg**	**11 16 23.0**	**-0.1**
DVE				*e*S	**Sn**	**11 16 39.5**	**+1.2**
DVE	**Vedeno**	**1.12**	**132**	*e*Pg	**Pg**	**11 16 23.0**	**-0.1**
DVE				*e*Sg	**Sn**	**11 16 39.5**	**+1.2**
PNSH	**Pansheti**	**1.12**	**195**	P	Pb	11 16 13.1	-10
PNSH				S	**Sb**	**11 16 29.4**	**-8.0**
ZEI	**Tsey**	**1.23**	**221**	*e*PG	**Pn**	**11 16 23.8**	**-0.9**
ZEI				*e*S	**Sb**	**11 16 40.6**	**0.0**
ZEI	**Tsey**	**1.23**	**221**	*e*Pg	**Pn**	**11 16 23.8**	**-0.9**
ZEI				*e*Sg	**Sb**	**11 16 40.6**	**0.0**
GUDG	**Gudauri**	**1.31**	**197**	P	**Pn**	**11 16 25.5**	**-0.3**
GUDG				S	**Sb**	**11 16 42.8**	**-0.2**
GUDG	**Gudauri**	**1.31**	**197**	PG	**Pn**	**11 16 25.5**	**-0.3**
GUDG				S	**Sb**	**11 16 42.8**	**-0.2**
DIGR	**Digorskoe uzhe**	**1.32**	**232**	*e*PG	**Pn**	**11 16 25.0**	**-1.0**
DIGR				*e*S	**Sb**	**11 16 43.6**	**+0.3**
DIGR	**Digorskoe uzhe**	**1.32**	**232**	*e*Pg	**Pn**	**11 16 25.0**	**-1.0**
DIGR				*e*Sg	**Sb**	**11 16 43.6**	**+0.3**
DLMR	**Dylym**	**1.35**	**118**	*e*PG	**Pg**	**11 16 27.3**	**-0.2**
DLMR				*e*S	**Sg**	**11 16 46.4**	**+1.4**
DLMR				pmax	pmax		
	comp=Z,127nm,0.2s						
DLMR	**Dylym**	**1.35**	**118**	*e*Pg	**Pg**	**11 16 27.3**	**-0.2**
	comp=Z,127nm,0.2s						
DLMR				*e*Sg	**Sg**	**11 16 46.5**	**+1.4**
	comp=Z,115nm,0.2s						
BTLR	**Botlikh**	**1.38**	**139**	*e*PG	**Pb**	**11 16 26.9**	**-0.4**
BTLR				*e*S	**Sg**	**11 16 45.8**	**-0.1**
BTLR				pmax	pmax		
	comp=Z,68nm,0.5s						
BTLR	**Botlikh**	**1.38**	**139**	*e*Pg	**Pb**	**11 16 26.9**	**-0.4**
	comp=Z,68nm,0.5s						
BTLR				*e*Sg	**Sg**	**11 16 45.9**	**-0.1**
	comp=Z,435nm,0.3s						
PYA1	**Pyatigorsk**	**1.42**	**285**	*d i*PG	**Pg**	**11 16 27.6**	**-1.3**
DBC	**Dubki**	**1.50**	**117**	*e*PG	**Pg**	**11 16 29.2**	**-1.2**
DBC				*e*S	**Sg**	**11 16 50.2**	**+0.3**
DBC				pmax	pmax		
	comp=Z,43nm,0.5s						
DBC	**Dubki**	**1.50**	**117**	*e*Pg	**Pg**	**11 16 29.2**	**-1.2**
	comp=Z,43nm,0.5s						
DBC				*e*Sg	**Sg**	**11 16 50.3**	**+0.3**
	comp=Z,7.0nm,0.4s						
KBZ	**Khabaz**	**1.53**	**271**	*d i*PG	**Pb**	**11 16 28.4**	**-1.4**
ONI	**Oni**	**1.60**	**226**	P	**Pn**	**11 16 29.9**	**+0.2**
ONI				S	**Sn**	**11 16 51.0**	**+0.8**
ONI	**Oni**	**1.60**	**226**	*e*PG	**Pb**	**11 16 30.3**	**-0.7**
ONI				*e*S	**Sb**	**11 16 51.5**	**+0.4**
ONI	**Oni**	**1.60**	**226**	*e*Pg	**Pb**	**11 16 30.3**	**-0.7**
ONI				*e*Sg	**Sb**	**11 16 51.5**	**+0.4**
UNCR	**Uncukul**	**1.65**	**127**	*i* PN	**Pb**	**11 16 31.1**	**-0.8**
UNCR				*e*S	**Sg**	**11 16 53.6**	**-1.0**
UNCR				pmax	pmax		
	comp=Z,46nm,0.3s						
UNCR	**Uncukul**	**1.65**	**127**	*i* Pg	**Pb**	**11 16 31.1**	**-0.8**
	comp=Z,46nm,0.3s						
UNCR				*e*Sg	**Sg**	**11 16 53.6**	**-1.0**
	comp=Z,78nm,0.2s						
KRNR	**Karanay**	**1.65**	**122**	*e*PN	**Pb**	**11 16 31.3**	**-0.6**
KRNR				*e*S	**Sg**	**11 16 54.1**	**-0.5**
KRNR				pmax	pmax		
	comp=Z,7.0nm,0.1s						
KRNR	**Karanay**	**1.65**	**122**	*e*Pg	**Pb**	**11 16 31.3**	**-0.6**
	comp=Z,7.0nm,0.1s						
KRNR				*e*Sg	**Sg**	**11 16 54.2**	**-0.5**
	comp=Z,153nm,0.5s						
SHA1	**Shidzhatmaz**	**1.70**	**272**	*e*PN	**Pb**	**11 16 32.2**	**-0.7**
SHA1				*e*S	**Sg**	**11 16 54.9**	**-1.5**
SHA1	**Shidzhatmaz**	**1.70**	**272**	*e*Pg	**Pb**	**11 16 32.2**	**-0.7**
SHA1				*e*Sg	**Sg**	**11 16 54.9**	**-1.5**
XNZR	**Khunzakh**	**1.71**	**133**	*e*PN	**Pb**	**11 16 32.8**	**-0.2**
XNZR				*e*S	**Sb**	**11 16 55.4**	**+0.9**
XNZR	**Khunzakh**	**1.71**	**133**	*e*Pg	**Pb**	**11 16 32.7**	**-0.3**
	comp=Z,48nm,0.3s						
XNZR				*e*Sg	**Sg**	**11 16 55.9**	**-0.7**
	comp=Z,57nm,0.4s						
NEY	**Neytrino**	**1.73**	**255**	*e*PN	**Pb**	**11 16 32.3**	**-1.0**
NEY				*e*S	**Sb**	**11 16 55.0**	**+0.1**
NEY	**Neytrino**	**1.73**	**255**	*e*Pg	**Pb**	**11 16 32.3**	**-1.0**
NEY				*e*Sg	**Sb**	**11 16 55.0**	**+0.1**
BUJR	**Buynaksk**	**1.78**	**119**	*e*PN	**Pg**	**11 16 34.4**	**-1.3**
BUJR				*e*S	**Sg**	**11 16 59.6**	**+0.9**
BUJR				pmax	pmax		
	comp=Z,90nm,0.3s						
BUJR	**Buynaksk**	**1.78**	**119**	*e*Pg	**Pg**	**11 16 34.4**	**-1.3**
	comp=Z,90nm,0.3s						
BUJR				*e*Sg	**Sg**	**11 16 59.7**	**+0.9**
	comp=Z,107nm,0.5s						
ARKR	**Arakani**	**1.83**	**127**	*e*PN	**Pb**	**11 16 34.3**	**-0.7**
ARKR				pmax	pmax		
	comp=Z,17nm,0.4s						
ARKR	**Arakani**	**1.83**	**127**	*e*Pg	**Pb**	**11 16 34.3**	**-0.7**
	comp=Z,17nm,0.4s						
ARKR				*e*Sg	**Sg**	**11 16 59.4**	**-1.1**
	comp=Z,245nm,0.4s						
GOF	**Gofitskoye**	**1.94**	**314**⇑	*e*PN	**Pg**	**11 16 35.9**	**-3.0**
GOF				*e*S	**Sg**	**11 17 06.1**	**+2.0**
GOF				pmax	pmax		
	comp=Z,40nm,0.6s						
GOF				smax	smax		
	comp=N,109nm,0.6s						
GOF				smax	smax		
	comp=E,114nm,0.7s						
GNBR	**Gunib**	**1.96**	**132**	*e*PN	**Pb**	**11 16 36.3**	**-0.8**
GNBR				pmax	pmax		
	comp=Z,17nm,0.3s						
GNBR	**Gunib**	**1.96**	**132**	*e*Pg	**Pb**	**11 16 36.3**	**-0.8**
	comp=Z,17nm,0.2s						
GNBR				*e*Sg	**Sb**	**11 17 02.8**	**+1.4**
	comp=Z,108nm,0.4s						
MAK	**Makhachkala**	**1.97**	**112**	*e*PN	**Pg**	**11 16 38.0**	**-1.5**
MAK				pmax	pmax		
	comp=Z,135nm,0.2s						
MAK				MLR	MLR		
	comp=Z,1µm,3.0s						
LGD	**Lagodekhi**	**2.09**	**154**	P	**Pb**	**11 16 38.3**	**-1.1**
LGD				S	**Sb**	**11 17 06.5**	**+1.3**
LGD	**Lagodekhi**	**2.09**	**154**	PN	**Pb**	**11 16 38.3**	**-1.1**
LGD				S	**Sb**	**11 17 06.5**	**+1.3**
KMKR	**Kumukh**	**2.21**	**135**	*e*PN	**Pb**	**11 16 39.7**	**-1.8**
KMKR				*e*S	**Sb**	**11 17 09.6**	**+0.8**
KMKR				pmax	pmax		
	comp=Z,18nm,0.2s						
KMKR	**Kumukh**	**2.21**	**135**	*e*Pn	**Pb**	**11 16 39.8**	**-1.8**
	comp=Z,18nm,0.2s						
KMKR				*e*Sn	**Sb**	**11 17 09.7**	**+0.8**
	comp=Z,24nm,0.4s						
TRLG	**Trialeti**	**2.27**	**197**	P	**Pn**	**11 16 39.4**	**+0.4**
TRLG				S	**Sn**	**11 17 09.1**	**+2.1**
TRLG	**Trialeti**	**2.27**	**197**	PN	**Pn**	**11 16 39.4**	**+0.4**
TRLG				S	**Sn**	**11 17 09.1**	**+2.1**
DGRG	**David-gareji**	**2.28**	**173**	P	**Pn**	**11 16 40.2**	**+1.2**
DGRG	**David-gareji**	**2.28**	**173**	PN	**Pn**	**11 16 40.2**	**+1.2**
AKT	**Akhty**	**3.01**	**137**	*e*PN	**Pn**	**11 16 50.3**	**+1.3**
AKT				*e*S	**Sb**	**11 17 28.7**	**-3.0**
AKT				pmax	pmax		
	comp=Z,7.0nm,0.4s						
AKT	**Akhty**	**3.01**	**137**	*e*Pn	**Pn**	**11 16 50.4**	**+1.3**
	comp=Z,7.0nm,0.4s						
AKT				*e*Sn	**Sb**	**11 17 28.8**	**-3.0**
	comp=Z,24nm,0.4s						
GNI	**Garni**	**3.57**	**183**⇓	*e*PN	**Pn**	**11 16 55.8**	**-1.0**
ANN	**Anapa**	**5.54**	**284**	*e*P	**Pn**	**11 17 25.3**	**+1.5**
ANN				pmax	pmax		
	comp=Z,122nm,1.3s						
BRVK	**Borovoye**	**19.13**	**52**⇑	*e*P	**Pn**	**11 20 25.9**	**+0.9**
BRVK				pmax	pmax		
	comp=Z,5.0nm,2.1s						
AAK	**Ala-Archa**	**21.49**	**83**⇓	*e*P	**P**	**11 20 50.3**	**+0.2**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
KHC	**Kasperske Hory**	**22.23**	**295**⇑	*e*P	**P**	**11 20 59.0**	**+1.1**
KHC				pmax	pmax		
	comp=Z,4.0nm,1.1s						

IDC 29 11:19:33.3±1.8**, 4°.29N×126°.70E, h0^{km}, mb3.7**/5**, mb1 3.8**/5**, mb1mx3.5**/40**, mbtmp3.7**/5**, MS2.8**/3**, Ms1 2.8**/3**, ms1mx2.4**/50**, Error ellipse: s-maj=113.8km s-min=23.7km az=68.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**6.86**	**138**	LR	LR	11 23 59.4	
	comp=Z,58nm,18.9s,baz=276,slow=39						
KAPI	**Kappang**	**11.56**	**217**	LR	LR	11 27 06.6	
	comp=Z,42nm,19.2s,baz=87,slow=39						
FITZ	**Fitzroy Crossi**	**22.27**	**183**	P	P	11 24 33.1	+0.9
	2.7nm,0.7s,baz=342,slow=5.8,SNR=3.8						
WRA	**Warramunga Arr**	**25.23**	**163**	P	P	11 25 00.6	-0.5
	1.4nm,0.7s,baz=342,slow=11,SNR=8.0						
JCJ	**Chichijima**	**27.07**	**32**	LR	LR	11 34 42.1	
	comp=Z,32nm,19.9s,baz=104,slow=34						
ASAR	**Alice Springs**	**28.66**	**166**	P	P	11 25 31.8	-0.3
	0.3nm,0.7s,baz=340,slow=6.9,SNR=9.0						
STKA	**Stephens Creek**	**38.66**	**160**	P	P	11 26 59.0	+0.1
	1.8nm,0.8s,baz=336,slow=12,SNR=4.3						
MKAR	**Makanchi Array**	**57.08**	**325**	P	P	11 29 21.5	0.0
	0.3nm,0.4s,baz=121,slow=7.8,SNR=6.7						

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*IDC **29** 11:52:31.4±2.4, 1°.31S×14°.98W, h0^{km}, mb4.1/8, mb1 4.3/10, mb1mx3.8/59, mbtmp4.2/10, ML4.3/2, MS3.5/10, Ms1 3.6/10, ms1mx3.3/30, Error ellipse: s-maj=58.3km s-min=24.6km az=77.0*

*NEIC **29** 11:52:32.3±2.5, 1°.29S±0°.10×15°.04W±0°.10, h10^{km}±1^{km}, mb4.5/13, Error ellipse: s-maj=18.2km s-min=14.9km az=132.0*

ISC 29 11:52:31.9±0.6**, 1°.30S**±0°.08×**15°.00W**±0°.09**, h11^{km}, n40, σ1^{s}.64**/33**, mb4.4**/13**, MS3.5**/8**, North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10N2	**ASCENSION HYDR**	**6.51**	**176**	Pn	**Pn**	**11 54 07.1**	**-0.3**
	baz=352,slow=12,SNR=10.0						
H10N2				T	T	12 00 47.8	
	baz=354,slow=74,SNR=89						
H10N3	**ASCENSION HYDR**	**6.52**	**176**	Pn	**Pn**	**11 54 07.2**	**-0.3**
	baz=352,slow=12,SNR=16						
H10N3				T	T	12 00 52.2	
	baz=354,slow=74,SNR=105						
H10N1	**ASCENSION HYDR**	**6.53**	**175**	Pn	**Pn**	**11 54 07.3**	**-0.3**
	baz=352,slow=12,SNR=14						
H10N1				T	T	12 00 58.0	
	baz=354,slow=74,SNR=107						
ASCN	**Ascension**	**6.62**	**175**	Pn	**Pn**	**11 54 08.1**	**-1.1**
H10S3	**ASCENSION HYDR**	**7.61**	**178**	T	T	12 02 10.9	
	baz=354,slow=74,SNR=50						
H10S2	**ASCENSION HYDR**	**7.62**	**177**	T	T	12 02 20.7	
	baz=226,slow=74,SNR=23						
LIC	**Lamto**	**12.45**	**53**	*e*P	**Pn**	**11 55 31.1**	**+2.0**
	58nm,0.9s						
TIC	**Toumodi**	**12.71**	**51**	*e*P	**Pn**	**11 55 32.4**	**-0.3**
KIC	**Kosan Boka**	**12.76**	**53**	*e*P	**Pn**	**11 55 33.5**	**+0.2**
	34nm,0.7s						
DBIC	**Dimbokro**	**12.85**	**52**	Pn	**Pn**	**11 55 34.6**	**0.0**
	2.0nm,0.3s,baz=260,slow=13,SNR=40						
DBIC				Sn	**Sn**	**11 57 51.8**	**-6.0**
	1.5nm,0.3s,baz=180,slow=14,SNR=2.7						
DBIC				LR	LR	11 59 39.1	
	comp=Z,222nm,18.8s,baz=248,slow=33						
DBIC	**Dimbokro**	**12.85**	**52**		**Pn**	**11 55 34.9**	**+0.3**
KOWA	**Kowa**	**19.09**	**34**	P	**P**	**11 56 55.6**	**+0.8**
	0.7nm,0.3s,baz=215,slow=12,SNR=17						
KOWA				S	Sn	12 00 14.8	-15
	0.5nm,0.3s,baz=64,slow=17,SNR=2.0						
KOWA				LR	LR	12 03 42.2	
	comp=Z,171nm,18.0s,baz=204,slow=35						
KOWA	**Kowa**	**19.09**	**34**	P	**P**	**11 56 54.8**	**+0.1**
KOWA				IAmb	IAmb	11 57 20.7	
	comp=Z,9.9nm,0.6s						
TORD	**Torodi Ar. Bea**	**21.91**	**49**	P	**P**	**11 57 26.6**	**+1.2**

	comp=Z,2.7nm,0.5s,baz=234,slow=11,SNR=17						
TORD				LR	LR	12 05 12.7	
	comp=Z,192nm,18.3s,baz=175,slow=35						
TORD	Torodi Ar. Bea	21.91	49	P	P	11 57 26.2	+0.8
ESDC	Sonseca Array	42.01	13	LR	LR	12 17 10.2	
	comp=Z,72nm,18.2s,baz=255,slow=35						
LSZ	Lusaka	44.81	110	P	P	12 00 48.2	+1.8
	comp=Z,5.0nm,0.5s,baz=305,slow=5.6,SNR=12						
BOAV	Boa Vista	45.66	275	P	P	12 00 52.1	-1.0
BOAV				IAmb	IAmb	12 00 52.7	
	comp=Z,4.8nm,0.8s						
LBTB	Lobatse	45.72	124	P	P	12 00 52.3	-1.1
LBTB				IAmb	IAmb	12 00 54.9	
	comp=Z,5.6nm,0.7s						
SUR	Sutherland	45.73	136	P	P	12 00 53.8	+0.2
BOSA	Boshof	47.03	129	P	P	12 01 04.3	+0.5
	comp=Z,8.6nm,0.6s,baz=302,slow=7.7,SNR=10						
BOSA	Boshof	47.03	129	P	P	12 01 04.5	+0.7
BOSA				IAmb	IAmb	12 01 05.2	
	comp=Z,8.9nm,0.7s						
CPUP	Villa Florida	47.69	235	LR	LR	12 18 38.5	
	comp=Z,35nm,21.8s,baz=43,slow=33						
SAML	Samuel	48.55	259	P	P	12 01 13.4	-2.2
SAML				IAmb	IAmb	12 01 14.6	
	comp=Z,3.2nm,0.8s						
SENIN	Lac Senin/Sane	51.37	20	P	P	12 01 37.7	+0.9
DAVOX	Davos/Dischmat	52.63	21	P	P	12 01 49.2	+3.0
	comp=Z,4.0nm,0.9s,baz=278,slow=7.0,SNR=7.5						
LPAZ	La Paz	54.39	251	LR	LR	12 25 00.9	
	comp=Z,50nm,18.3s,baz=68,slow=36						
GERES	GERESS Array B	55.78	23	P	P	12 02 09.2	+0.2
	comp=Z,1.2nm,0.7s,baz=57,slow=4.9,SNR=4.7						
BBSR	BB Station	57.64	310	P	P	12 02 21.8	-0.6
BR231	Keskin MP Arra	59.80	41	P	P	12 02 36.5	-1.0
BURAR	Bucovina Array	60.00	30	P	P	12 02 37.8	-0.8
BRTR	Keskin Array B	60.32	42	P	P	12 02 41.0	0.0
	comp=Z,0.8nm,0.7s,baz=232,slow=6.1,SNR=3.7						
PLCA	Paso Flores	63.62	224	LR	LR	12 25 58.3	
	comp=Z,26nm,21.6s,baz=116,slow=32						
PLCA	Paso Flores	63.62	224	P	P	12 03 03.9	+0.7
PLCA				IAmb	IAmb	12 03 30.2	
	comp=Z,3.3nm,1.4s						
AKASG	Malin Array Be	64.01	30	P	P	12 03 08.6	+3.3
	comp=Z,0.1nm,0.2s,baz=216,slow=40,SNR=1.8						
NOA	NORSAR Array B	65.36	14	LR	LR	12 31 12.8	
	comp=Z,31nm,18.2s,baz=230,slow=36						
FINES	FINESS Array B	69.98	20	P	P	12 03 43.0	-0.1
	comp=Z,3.0nm,0.9s,baz=232,slow=10,SNR=1.7						
FINES				LR	LR	12 32 53.1	
	comp=Z,32nm,21.2s,baz=266,slow=35						
SNAA	Sanae	70.70	176	P	P	12 03 46.5	-1.0
SNAA				IAmb	IAmb	12 04 02.4	
	comp=Z,4.0nm,1.3s						
ARCES	ARCESS Array B	75.74	14	LR	LR	12 37 47.1	
	comp=Z,53nm,18.6s,baz=285,slow=36						
ARCES	ARCESS Array B	75.74	14	P	P	12 04 18.4	+1.1

IDC 29 11:56:08.9±14.0**,14°.46S×165°.78E,h0**^{km}**,mb3.7**/3**, mb1 3.8**/4**,mb1mx3.4**/51**,mbtmp3.7**/4**,ML3.1**/1**,Error ellipse: s-maj=251.3km s-min=39.0km az=57.0,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	7.60	175	Pn	Pn	11 58 00.8	-0.3
	0.3nm,0.3s,baz=63,slow=22,SNR=1.4						
DZM				Sn	Sn	11 59 28.2	+0.1
	baz=187,slow=21,SNR=1.5						
STKA	Stephens Creek	28.09	228	P	P	12 02 03.4	+0.9
	1.2nm,0.5s,baz=52,slow=7.9,SNR=4.7						
WRA	Warramunga Arr	30.50	255	P	P	12 02 24.0	0.0
	0.3nm,0.8s,baz=87,slow=9.6,SNR=1.9						
ASAR	Alice Springs	31.43	248	P	P	12 02 31.6	-0.6
	0.3nm,0.6s,baz=74,slow=9.7,SNR=10						

IDC 29 12:00:33.9±4.2**,17°.20S×66°.40E,h0**^{km}**,mb4.0**/6**, mb1 4.2**/6**,mb1mx3.6**/63**,mbtmp4.0**/6**,MS3.6**/5**,Ms1 3.6**/5**, ms1mx3.1**/46**,Error ellipse: s-maj=118.1km s-min=30.1km az=61.0,Mauritius-Reunion region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S1	Diego Carcia H	11.19	33	T	T	12 14 14.1	
	baz=209,slow=76,SNR=139						
H08S2	Diego Garcia H	11.20	33	T	T	12 14 14.8	
	baz=209,slow=76,SNR=62						
H08S3	Diego Garcia H	11.21	33	T	T	12 14 15.5	
	baz=209,slow=76,SNR=92						
PSI	Prapat	37.75	61	LR	LR	12 19 51.9	
	comp=Z,62nm,19.1s,baz=244,slow=31						
LEM	Lembang	41.52	81	LR	LR	12 21 33.5	
	comp=Z,80nm,21.6s,baz=226,slow=30						
H01W3	Cape Leeuwin H	45.91	122	T	T	12 57 39.4	
	baz=280,slow=75,SNR=84						
H01W2	Cape Leeuwin H	45.91	122	T	T	12 57 35.8	
	baz=280,slow=75,SNR=94						
H01W1	Cape Leeuwin H	45.93	122	T	T	12 57 37.2	
	baz=280,slow=75,SNR=88						
CMAR	Chiang Mai Arr	47.75	44	P	P	12 09 13.1	0.0
	0.4nm,0.4s,baz=241,slow=9.0,SNR=6.6						
MAW	Mawson	50.43	182	LR	LR	12 25 25.7	
	comp=Z,52nm,20.9s,baz=50,slow=30						
FITZ	Fitzroy Crossi	56.24	101	P	P	12 10 16.0	-0.5
	3.6nm,0.9s,baz=242,slow=9.0,SNR=4.5						
FITZ				LR	LR	12 30 27.3	
	comp=Z,62nm,20.9s,baz=180,slow=32						
ASAR	Alice Springs	63.09	108	P	P	12 11 03.6	-0.1
	3.6nm,0.8s,baz=272,slow=5.8,SNR=61						
WRA	Warramunga Arr	64.06	104	P	P	12 11 10.5	+0.3
	5.9nm,0.8s,baz=265,slow=6.4,SNR=37						
MKAR	Makanchi Array	65.28	12	P	P	12 11 17.5	0.0
	0.6nm,0.9s,baz=224,slow=8.1,SNR=2.5						
KURBB	Kurchatov Arra	68.36	8	P	P	12 11 37.0	0.0
	0.7nm,0.8s,baz=206,slow=5.9,SNR=1.8						
DBIC	Dimbokro	74.27	282	LR	LR	12 43 48.7	
	comp=Z,44nm,18.2s,baz=48,slow=35						

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*IDC **29** 12:11:03.0±1.3, 32°.27S×178°.28W, h0^{km}, mb4.2/3, mb1 4.3/4, mb1mx3.7/39, mbtmp4.1/4, ML3.9/1, MS3.5/10, Ms1 3.6/10, ms1mx3.4/34, Error ellipse: s-maj=44.7km s-min=33.1km az=130.0*

*NEIC **29** 12:11:03.6±1.5, 32°.6S±0°.1×178°.0W±0°.2, h10^{km}±1^{km}, mb4.9/15, Error ellipse: s-maj=26.8km s-min=17.8km az=97.0*

ISC 29 12:11:04.6±0.7**,32°.47S**±0°.07×**178°.0W**±0°.1**,h20**^{km}**,n73, σ1**^{s}**87**/82**,mb4.8**/12**,MS3.6**/12**,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	3.20	1	P	Pn	12 11 49.7	-4.1
GLKZ				S	Sn	12 12 28.2	-3.1
MXZ	Matakaoa Point	5.91	210	S	Sn	12 13 38.0	-0.2
WMGZ	Waiomatatini S	6.09	208	P	Pn	12 12 33.4	-0.1
WMGZ				S	Sn	12 13 43.6	+1.1
PKGZ	Pakihiroa	6.29	210	P	Pn	12 12 35.2	-1.0
PKGZ				S	Sn	12 13 46.3	-1.1
HAZ	Te Kaha	6.30	212	P	Pn	12 12 34.8	-1.6
HAZ				S	Sn	12 13 49.3	+1.5
PUZ	Puketiti	6.37	208	P	Pn	12 12 34.1	-3.2
PUZ				S	Sn	12 13 48.2	-1.3
RUGZ	Raukumara Rang	6.52	212	P	Pn	12 12 37.6	-1.9
RUGZ				S	Sn	12 13 52.7	-0.6
TWGZ	Tauwhareparae	6.57	209	P	Pn	12 12 40.2	+0.1
TWGZ				S	Sn	12 13 54.7	+0.2
CNGZ	Carnagh Statio	6.75	206	P	Pn	12 12 39.8	-2.6
CNGZ				S	Sn	12 13 55.9	-2.9
TKGZ	Te Karaka	6.85	208	P	Pn	12 12 41.9	-1.9
TKGZ				S	Sn	12 13 59.7	-1.5
MWZ	Matawai	6.89	211	P	Pn	12 12 41.7	-2.9
MWZ				S	Sn	12 14 00.0	-2.4
URZ	Urewera	7.02	213	Pn	Pn	12 12 45.5	-0.7
	2.3nm,0.3s,baz=301,slow=23,SNR=12						
URZ				Sn	Sn	12 14 04.1	-1.3
	19nm,0.3s,baz=42,slow=22,SNR=12						
URZ	Urewera	7.02	213	P	Pn	12 12 44.9	-1.3
URZ				S	Sn	12 14 04.6	-0.8
URZ	Urewera	7.02	213		Pn	12 12 44.0	-2.2
RAGZ	Rawiri	7.08	211	P	Pn	12 12 45.7	-1.4
RAGZ				S	Sn	12 14 06.6	-0.3
RIGZ	Rimuhau	7.11	208	P	Pn	12 12 45.5	-2.0
RIGZ				S	Sn	12 14 05.2	-2.6
RTZ	Ruatahuna	7.37	212	P	Pn	12 12 50.1	-1.0
RTZ				S	Sn	12 14 13.4	-0.7
KNZ	Kokohu	7.42	207	P	Pn	12 12 47.6	-4.0
KNZ				S	Sn	12 14 11.8	-3.5
MTHZ	Maungataniwha	7.62	212	S	Sn	12 14 19.3	-1.1
NMHZ	Naumai	7.84	211	P	Pn	12 12 55.5	-2.1
NMHZ				S	Sn	12 14 24.8	-1.0
BKZ	Black Stump Fm	8.04	212	P	Pn	12 12 57.9	-2.3
BKZ				S	Sn	12 14 28.1	-2.5
BKZ	Black Stump Fm	8.04	212		Pn	12 12 59.0	-1.2
MCHZ	McNeill Hill	8.18	210	P	Pn	12 13 01.1	-1.0
MCHZ				S	Sn	12 14 30.2	-3.7
ETVZ	East Tongariro	8.38	216	P	Pn	12 13 05.8	+0.8
OTVZ	Oturere	8.43	216	P	Pn	12 13 04.1	-1.6
MRZ	Mangatainoka R	9.66	210	P	Pn	12 13 19.3	-3.1
MRZ				S	Sn	12 15 03.4	-7.0
DZM	Mont Dzumac	17.26	303	*e*Pn	P	12 15 15.7	+10
	68nm,1.1s						
DZM				*e*LR	LR	12 19 19.4	
	comp=Z,548nm,24.1s						
EIDS	Eidsvold	27.91	277	P	P	12 16 54.0	+0.7
EIDS				IAmb	IAmb	12 17 06.8	
	comp=Z,8.7nm,0.8s						
PPT2	Papeete2	29.59	67	*e*LR	LR	12 24 11.3	
	comp=Z,190nm,27.5s						
PPT	Papeete	29.61	67	LR	LR	12 27 08.1	
	comp=Z,117nm,21.1s,baz=241,slow=32						
STKA	Stephens Creek	34.06	260	LR	LR	12 29 40.2	
	comp=Z,120nm,21.1s,baz=55,slow=33						
CTAO	Charters Tower	34.18	282	P	P	12 17 51.1	+2.4
CTAO				IAmb	IAmb	12 18 02.4	
	comp=Z,20nm,1.2s						
BBOO	Buckleboo	38.45	257	P	P	12 18 27.2	+2.1
BBOO				IAmb	IAmb	12 18 37.0	
	comp=Z,19nm,1.4s						
TAOE	Nuku Hiva Isla	42.16	65	*e*LR	LR	12 30 00.6	
	comp=Z,97nm,27.8s						
AS31	Alice Springs	43.04	269	P	P	12 19 03.0	-0.1
ASAR	Alice Springs	43.04	269	P	P	12 19 02.9	-0.2
	comp=Z,1.3nm,0.6s,baz=112,slow=7.3,SNR=11						
ASAR	Alice Springs	43.04	269	P	P	12 19 01.7	-1.4
WR0	Warramunga Arr	44.03	274	P	P	12 19 10.8	-0.3
WR0				IAmb	IAmb	12 19 37.5	
	comp=Z,18nm,1.2s						
WB2	Warramunga Arr	44.20	274	P	P	12 19 12.3	-0.2
WRAB	Tennant Creek	44.21	274	P	P	12 19 12.3	-0.3
WRAB				IAmb	IAmb	12 19 24.7	
	comp=Z,16nm,0.7s						
WRA	Warramunga Arr	44.21	274	P	P	12 19 11.9	-0.7
	comp=Z,4.5nm,0.3s,baz=114,slow=7.7,SNR=42						
WRA	Warramunga Arr	44.21	274	P	P	12 19 12.3	-0.3
WB0	Warramunga Arr	44.24	275	P	P	12 19 12.6	-0.2
WB0				IAmb	IAmb	12 19 25.0	
	comp=Z,16nm,0.6s						
FORT	Forrest	45.55	257	P	P	12 19 22.2	-0.9
JAY	Jayapura	48.87	299	LR	LR	12 36 34.3	
	comp=Z,40nm,19.5s,baz=19,slow=32						
FITZ	Fitzroy Crossi	52.38	271	LR	LR	12 41 48.7	
	comp=Z,134nm,19.3s,baz=150,slow=35						
CASY	Casey	53.32	209		P	12 20 23.1	+1.2
CASY				IAmb	IAmb	12 20 34.7	
	comp=Z,28nm,1.4s						
QSPA	South Pole Qui	57.65	180	P	P	12 20 54.4	+1.2
QSPA				IAmb	IAmb	12 21 18.1	
	comp=Z,13nm,0.8s						
MAW	Mawson	70.38	201	P	P	12 22 19.8	+3.3
	comp=Z,0.8nm,0.8s,baz=120,slow=8.1,SNR=1.7						
MAW	Mawson	70.38	201	P	P	12 22 16.9	+0.3
LEM	Lembang	73.20	273	LR	LR	12 55 41.0	
	comp=Z,51nm,19.3s,baz=231,slow=37						
SNAA	Sanae	76.09	178	P	P	12 22 50.2	-0.2
SNAA	Sanae	76.09	178	P	P	12 22 50.5	+0.1
SNAA				IAmb	IAmb	12 23 14.3	
	comp=Z,6.4nm,0.8s						
VNA3	Neumayer Olymp	76.24	176	P	P	12 22 51.3	+0.1
VNA2	Neumayer--Watz	76.68	177	P	P	12 22 53.8	+0.2
VNA1	Neumayer--Stat	76.91	177	P	P	12 22 54.0	-0.9
PSI	Prapat	85.65	276	LR	LR	13 00 37.6	
	comp=Z,27nm,21.9s,baz=96,slow=35						
KSRS	Korea Array	85.92	320	LR	LR	12 57 52.6	
	comp=Z,11nm,22.0s,baz=30,slow=33						
PEA0B	Petropavlovsk-	87.81	346	P	P	12 23 52.8	+1.0
CMAR	Chiang Mai Arr	94.08	289	LR	LR	13 10 09.4	
	comp=Z,8.0nm,18.2s,baz=120,slow=38						
SEY	Seymchan	97.99	347	LR	LR	13 08 31.1	
	comp=Z,36nm,18.1s,baz=170,slow=35						
CPUP	Villa Florida	98.70	129	LR	LR	13 04 04.5	
	comp=Z,22nm,18.1s,baz=26,slow=32						
MKAR	Makanchi Array	119.09	309	PKP	PKiKP	12 29 53.4	+1.7
	comp=Z,0.7nm,1.1s,baz=223,slow=28,SNR=2.2						
MKAR	Makanchi Array	119.09	309		PKPdf	12 29 51.0	-0.6
KURK	Kurchatov	122.47	313		PKPdf	12 29 57.9	0.0
KURBB	Kurchatov Arra	122.50	313	PKP	PKiKP	12 29 59.4	+1.1
	comp=Z,0.3nm,0.3s,baz=90,slow=2.4,SNR=1.5						
FINES	FINESS Array B	147.08	339	PKPbc	PKPbc	12 30 45.0	-0.2
	comp=Z,1.9nm,0.5s,baz=45,slow=3.6,SNR=15						
FINES	FINESS Array B	147.08	339		PKPdf	12 30 44.0	+0.9
NB2	NORSAR Subarra	150.79	351	PKP	PKiKP	12 30 56.6	+1.2
	comp=Z,1.5nm,0.9s,baz=17,slow=2.6						
NOA	NORSAR Array B	150.79	351	PKPbc	PKPbc	12 30 54.9	+0.1
	comp=Z,0.8nm,0.8s,baz=181,slow=8.0,SNR=1.7						
AKASG	Malin Array Be	152.92	320	PKPbc	PKiKP	12 31 00.2	+0.2
	comp=Z,0.4nm,0.4s,baz=60,slow=2.3,SNR=4.7						
AKASG	Malin Array Be	152.92	320	PKPdf	PKPdf	12 30 51.1	-1.6
AKASG					PKiKP	12 31 00.5	+0.4
AKASG				PKPab	PKPab	12 31 11.0	-0.1
BRTR	Keskin Array B	153.53	295	PKPbc	PKiKP	12 31 03.7	+1.8
	comp=Z,0.4nm,0.4s,baz=137,slow=3.4,SNR=2.1						

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*IDC **29** 12:13:45.8±2.1, 6°.26S×129°.90E, h140^{km}±28^{km}, mb3.0/1, mb1 3.6/6, mb1mx3.1/42, mbtmp4.0/6, Error ellipse: s-maj=39.8km s-min=20.3km az=96.0*

ISC 29 12:13:45.1±1.0**,6°.27S**±0°.07×**130°.1E**±0°.2**,h146**^{km}**,n6, σ1**^{s}**71**/8**,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	5.49	12	P	Pn	12 15 06.2	+1.1
	4.5nm,0.3s,baz=204,slow=22,SNR=28						
SIJI				S	Sn	12 16 05.3	-2.2
	4.6nm,0.3s,baz=87,slow=22,SNR=12						
BATI	Baumata	7.48	238	P	Pn	12 15 31.2	-0.4
	5.4nm,0.3s,baz=95,slow=5.3,SNR=2.3						
FITZ	Fitzroy Crossi	12.54	200	P	Pn	12 16 37.1	-1.5
	1.3nm,0.3s,baz=12,slow=8.7,SNR=42						
FITZ				S	Sn	12 18 47.0	-10
	0.5nm,0.3s,baz=82,slow=23,SNR=2.6						
WRA	Warramunga Arr	14.20	164	P	Pn	12 16 59.6	-0.2
	0.3nm,0.3s,baz=347,slow=12,SNR=6.8						
ASAR	Alice Springs	17.68	168	P	Pn	12 17 44.7	+2.2
	0.7nm,0.3s,baz=344,slow=9.8,SNR=76						
ASAR				S	S	12 20 56.5	-1.1
	0.2nm,0.3s,baz=278,slow=32,SNR=2.3						
MKAR	Makanchi Array	67.67	327	P	P	12 24 27.0	+0.4
	0.3nm,0.6s,baz=120,slow=7.4,SNR=2.2						

MAN 29 12:29:40.0,13°.74N×120°.72E,h18^{km}**,mb4.1,ML2.8, MS2.5,Mindoro**

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*JMA **29** 12:32:26.2±0.4, 31°.28N×128°.68E, h13^{km}±4^{km}, M4.1*

*NIED **29** 12:32:26.2, 31°.28N×128°.68E, h13^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.35; $M_{\theta\theta}$0.09; $M_{\phi\phi}$0.26; $M_{r\theta}$0.11; $M_{\theta\phi}$1.13; $M_{\phi r}$-0.20; Fault plane solution: $M_0$1.17000×10^{15} NP1: ϕ_s359.00000°, δ79.00000°, λ-165.00000°. NP2: ϕ_s267.00000°, δ76.00000°, λ-11.00000°.*

*IDC **29** 12:32:28.2±0.9, 31°.38N×128°.43E, h0^{km}, mb3.7/8, mb1 3.8/13, mb1mx3.6/43, mbtmp3.7/13, ML3.3/5, MS3.2/6, Ms1 3.2/6, ms1mx2.8/51 Error ellipse: s-maj=21.1km s-min=17.3km az=90.0*

ISC 29 12:32:28.6±0.8**,31°.35N**±0°.06×**128°.81E**±0°.06**,h10**^{km}**,n24, σ1**^{s}**65**/24**,mb3.8**/8**,MS3.3**/4**,1C-1D,Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	Shimokoshiki	0.84	67	⇓P	Pg	12 32 43.9	-0.8
JSJ				*e*S	Sb	12 32 57.1	+0.6
JFU	Fukue jima 2	1.30	358	⇑P	Pn	12 32 51.3	-1.5
JSU	Suzuyama	1.41	83	P	Pn	12 32 53.7	-0.7
JKC	Kuchinoerabu	1.48	126	P	Pn	12 32 53.8	-1.5
JYAK	Yakushimahirau	1.83	127	P	Pn	12 32 57.6	-2.5
JTN	Tanegashima 3	1.98	110	P	Pn	12 33 00.9	-1.3
JTZ	Takazaki	2.02	74	P	Pn	12 33 02.3	-0.4
JMTN	Minamitane	2.03	117	P	Pn	12 33 01.6	-1.2
JNU	Nakatsue	2.49	44	Pn	Pb	12 33 14.5	+1.1
	26nm,0.3s,baz=273,slow=6.9,SNR=89						
JNU				Sn	Sg	12 33 46.4	-2.1
	15nm,0.3s,baz=244,slow=7.4,SNR=4.9						
KSRS	Korea Array	6.13	353	Pn	Pn	12 33 59.5	+0.3
	1.0nm,0.3s,baz=175,slow=14,SNR=27						
KSRS				Sn	Sn	12 35 07.3	-2.1
	1.5nm,0.3s,baz=174,slow=24,SNR=5.7						
KSRS				Lg	Lg	12 35 35.6	
	1.5nm,0.3s,baz=174,slow=28,SNR=4.2						
KSRS				LR	LR	12 36 11.8	
	comp=Z,56nm,21.1s,baz=176,slow=37						
MJAR	Matsushiro Arr	9.36	54	Pn	Pn	12 34 47.0	+3.4
	0.0nm,0.3s,baz=342,slow=19,SNR=2.0						
ASAJ	Asahikawa	16.74	37	Pn	P	12 36 24.6	-0.8
	0.2nm,0.3s,baz=259,slow=6.5,SNR=4.3						
ASAJ				LR	LR	12 41 44.1	
	comp=Z,61nm,20.2s,baz=194,slow=33						
KLR	Kul'dur	18.00	6	P	P	12 36 40.1	+0.9
	0.1nm,0.3s,baz=155,slow=9.2,SNR=2.3						
SONM	Songino Array	23.73	320	P	P	12 37 40.5	-0.4
	1.3nm,0.8s,baz=142,slow=10,SNR=9.3						
SONM				LR	LR	12 47 52.8	
	comp=Z,96nm,18.9s,baz=151,slow=39						
TLY	Talaya	27.47	325	LR	LR	12 50 12.5	
	comp=Z,77nm,19.2s,baz=166,slow=39						
PETK	Petropavlovsk-	30.15	35	LR	LR	12 50 12.5	
	comp=Z,59nm,18.4s,baz=136,slow=35						
ZALV	Zalesovo Beam	38.61	319	LR	LR	12 56 55.8	
	comp=Z,52nm,18.3s,baz=356,slow=38						
MKAR	Makanchi Array	38.68	307	P	P	12 39 51.9	-0.6
	0.2nm,0.5s,baz=101,slow=7.8,SNR=2.5						
KURBB	Kurchatov Arra	41.64	312	P	P	12 40 15.0	-1.9
	0.4nm,0.7s,baz=100,slow=9.7,SNR=3.3						
BVAR	Borovoye Array	46.91	315	P	P	12 40 58.1	-0.9
	1.1nm,0.7s,baz=157,slow=9.6,SNR=7.9						
WRA	Warramunga Arr	51.27	173	P	P	12 41 34.1	+1.3
	0.8nm,0.7s,baz=351,slow=8.0,SNR=5.3						
ASAR	Alice Springs	54.92	174	P	P	12 42 01.5	+1.8
	0.6nm,0.7s,baz=4.6,slow=14,SNR=25						
ILAR	Eielson Array	59.72	30	P	P	12 42 35.9	+2.7
	0.5nm,0.7s,baz=276,slow=6.7,SNR=9.9						
FINES	FINESS Array B	68.69	330	P	P	12 43 31.2	-0.7
	1.5nm,0.8s,baz=97,slow=10,SNR=4.4						

IDC 29 12:40:47.6±3.0**,7°.11S×129°.11E,h136**^{km}±43^{km}**,mb3.0**/1**, mb1 3.2**/5**,mb1mx2.8**/35**,mbtmp3.5**/5**,Error ellipse: s-maj=70.8km s-min=21.5km az=91.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	6.56	19	P	Pn	12 42 21.9	+0.2
	1.2nm,0.3s,baz=324,slow=23,SNR=7.4						
SIJI				S	Sn	12 43 27.6	-7.7
	0.8nm,0.3s,baz=208,slow=23,SNR=2.2						
FITZ	Fitzroy Crossi	11.44	197	P	Pn	12 43 27.1	+0.2
	0.2nm,0.3s,baz=31,slow=8.7,SNR=28						
FITZ				S	Sn	12 45 29.0	-4.2
	0.4nm,0.3s,baz=258,slow=18,SNR=5.5						
WRA	Warramunga Arr	13.73	159	P	Pn	12 43 55.1	-1.7
	0.7nm,0.3s,baz=334,slow=13,SNR=17						
WRA				S	Sn	12 46 17.1	-11
	0.2nm,0.3s,baz=336,slow=23,SNR=2.4						
ASAR	Alice Springs	17.10	165	P	Pn	12 44 39.4	+0.9
	0.2nm,0.3s,baz=345,slow=14,SNR=14						
ASAR				S	S	12 47 42.9	-6.6
	0.1nm,0.3s,baz=348,slow=35,SNR=2.5						
MKAR	Makanchi Array	67.83	327	P	P	12 51 31.0	-0.1
	0.2nm,0.6s,baz=125,slow=7.1,SNR=2.0						

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*IASPEI **29** 12:58:40.9±0.8, 38°.71N±0°.02×20°.62E±0°.03, h9^{km}±4^{km}, Error ellipse: s-maj=4.2km s-min=2.7km az=102.6, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*THE **29** 12:58:41.3, 38°.72N×20°.61E, h8^{km}±1^{km}, ML3.5/11, Error ellipse: s-maj=1.1km s-min=0.4km az=83.0*

*ATH **29** 12:58:41.5, 38°.71N×20°.63E, h7^{km}±1^{km}, ML3.3/18, Error ellipse: s-maj=1.5km s-min=0.6km az=290.0*

ISC 29 12:58:40.8±0.8**,38°.72N**±0°.02×**20°.61E**±0°.03**,h10**^{km}±4^{km}**, n66,**σ**0**^{s}**97**/91**,Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRAG	Dragano-Lefkad	0.05	219	P	Pg	12 58 42.6	-0.2
DRAG				S	Sg	12 58 43.7	-0.6
	159μm,0.2s						
DRAG	Dragano-Lefkad	0.05	219	P	Pg	12 58 42.7	-0.2
DRAG				S	Sg	12 58 43.6	-0.7
NYDR	Nydri-Lefkada	0.07	96	P	Pg	12 58 43.0	0.0
NYDR				S	Sg	12 58 44.5	0.0
	44μm,0.2s						
NYDR	Nydri-Lefkada	0.07	96	P	Pg	12 58 43.0	0.0
NYDR				S	Sg	12 58 44.4	-0.2
LKD2	Lefkada island	0.08	27	P	Pg	12 58 43.2	0.0
LKD2				S	Sg	12 58 45.0	+0.1
	92μm,0.2s						
LKD2	Lefkada island	0.08	27	P	Pg	12 58 43.2	0.0
LKD2				S	Sg	12 58 44.9	0.0
LKD2				AML	AML	12 58 45.2	
LKD2				AML	AML	12 58 45.4	
EVGI	Lefkada island	0.10	161	P	Pg	12 58 43.8	+0.3
EVGI				S	Sg	12 58 45.9	+0.5
	18μm,0.2s						
EVGI	Lefkada island	0.10	161	P	Pg	12 58 43.8	+0.3
EVGI				S	Sg	12 58 45.9	+0.5
TSLK	Tsoukalades, L	0.11	18	P	Pg	12 58 43.9	+0.3
TSLK				S	Sg	12 58 46.4	+0.9
	97μm,0.3s						
TSLK	Tsoukalades, L	0.11	18	P	Pg	12 58 44.1	+0.5
TSLK				S	Sg	12 58 46.3	+0.7
TSLK				AML	AML	12 58 46.6	
TSLK				AML	AML	12 58 48.2	
FSK	Fiskardo	0.26	189	P	Pg	12 58 46.7	+0.5
FSK				S	Sg	12 58 51.1	+1.3
	9μm,0.2s						
FSK	Fiskardo	0.26	189	P	Pg	12 58 46.7	+0.5
FSK				S	Sg	12 58 51.0	+1.2
FSK				AML	AML	12 58 51.8	
	comp=E,25710μm,0.2s						
FSK				AML	AML	12 58 52.7	
	comp=N,8338μm,0.2s						
KEF4	Livadi, Kephal	0.48	198	P	Pg	12 58 50.3	0.0
KEF4				S	Sb	12 58 58.3	-0.3
	comp=N,19μm,0.4s						
KEF4	Livadi, Kephal	0.48	198	P	Pg	12 58 50.5	+0.2
KEF4				S	Sg	12 58 57.6	+0.9
DMLN	Damoulianata-K	0.52	201	P	Pg	12 58 50.9	0.0
DMLN				S	Sg	12 58 58.9	+1.2
	comp=N,4μm,0.5s						
DMLN	Damoulianata-K	0.52	201	P	Pg	12 58 50.9	0.0
DMLN				S	Sg	12 58 58.9	+1.2
VLS	Valsamata	0.54	182	P	Pg	12 58 51.1	-0.3
VLS				S	Sg	12 58 59.6	+1.1
	comp=N,2μm,0.3s						
VLS	Valsamata	0.54	182	P	Pg	12 58 51.2	-0.2
VLS				S	Sg	12 58 58.8	+0.3
VLS				AML	AML	12 59 02.8	
	comp=E,4187μm,0.3s						
VLS				AML	AML	12 59 03.1	
	comp=N,4775μm,0.2s						
ARGA	Argostoli. Kep	0.55	191	P	Pg	12 58 52.5	+0.9
ARGA				S	Sg	12 58 59.2	+0.4
KEF3	Kipouria, Keph	0.56	202	P	Pg	12 58 51.2	-0.5
KEF3				S	Sg	12 58 59.7	+0.7
	comp=N,6μm,0.4s						
KEF3	Kipouria, Keph	0.56	202	P	Pg	12 58 51.2	-0.5
KEF3				S	Sg	12 58 59.6	+0.6
PSDA	Pessada-Kefalo	0.61	182	P	Pg	12 58 52.3	-0.3
PSDA				S	Sb	12 59 02.0	-0.1
	comp=N,425nm,0.2s						
PSDA	Pessada-Kefalo	0.61	182	P	Pg	12 58 52.3	-0.3
PSDA				S	Sg	12 59 01.8	+1.3
IGT	Igoumenitsa	0.84	345	P	Pg	12 58 57.2	+0.2
IGT	Igoumenitsa	0.84	345	P	Pg	12 58 57.2	+0.2

IGT				AML	AML	12 59 14.6	
	comp=N,2642µm,0.3s						
IGT				AML	AML	12 59 14.9	
	comp=E,3067µm,0.5s						
VTN	**Vitineika**	**0.92**	**151**	P	**Pg**	**12 58 59.1**	**+0.6**
RLS	**Riolos of Patr**	**0.94**	**134**	P	**Pg**	**12 58 58.8**	**-0.2**
RLS	**Riolos of Patr**	**0.94**	**134**	P	**Pg**	**12 58 58.7**	**-0.2**
RLS				AML	AML	12 59 20.9	
	comp=N,3564µm,0.6s						
RLS				AML	AML	12 59 22.0	
	comp=E,2242µm,0.7s						
JAN	**Janina**	**0.95**	**11**	P	**Pg**	**12 58 59.7**	**+0.5**
JAN				AML	AML	12 59 21.8	
	comp=E,2306µm,0.8s						
JAN				AML	AML	12 59 21.9	
	comp=N,1665µm,0.5s						
EVR	**Evrytania**	**0.95**	**78**	P	**Pg**	**12 58 59.3**	**+0.1**
EVR	**Evrytania**	**0.95**	**78**	P	**Pg**	**12 58 59.4**	**+0.1**
EVR				AML	AML	12 59 17.4	
	comp=N,1684µm,0.4s						
EVR				AML	AML	12 59 18.3	
	comp=E,1785µm,0.5s						
LTHK	**Lithakia**	**1.02**	**170**	P	**Pg**	**12 58 59.6**	**-0.9**
LTHK				AML	AML	12 59 25.8	
	comp=N,2348µm,0.6s						
LTHK				AML	AML	12 59 27.0	
	comp=E,1934µm,0.6s						
ANX	**Ano Chora**	**1.03**	**97**	P	**Pg**	**12 59 00.5**	**-0.2**
ANX	**Ano Chora**	**1.03**	**97**	P	**Pg**	**12 59 00.8**	**+0.1**
ANX				AML	AML	12 59 24.8	
	comp=N,13801µm,0.5s						
ANX				AML	AML	12 59 25.0	
	comp=E,9671µm,0.5s						
EFP	**Efpalio**	**1.05**	**106**	P	**Pg**	**12 59 00.8**	**-0.3**
EFP	**Efpalio**	**1.05**	**106**	P	**Pg**	**12 59 00.9**	**-0.3**
EFP				AML	AML	12 59 23.6	
	comp=N,6959µm,0.4s						
EFP				AML	AML	12 59 24.2	
	comp=E,4664µm,0.4s						
KASA	**Kassiopi**	**1.15**	**333**	P	**Pg**	**12 59 03.2**	**+0.3**
DRO	**Drossia**	**1.16**	**131**	P	**Pg**	**12 59 02.5**	**-0.5**
DRO	**Drossia**	**1.16**	**131**	P	**Pg**	**12 59 02.3**	**-0.7**
DRO				AML	AML	12 59 28.2	
	comp=E,5453µm,0.5s						
DRO				AML	AML	12 59 29.9	
	comp=N,4127µm,0.6s						
LAKA	**Lakka**	**1.17**	**114**	P	**Pg**	**12 59 02.7**	**-0.7**
LAKA				AML	AML	12 59 26.7	
	comp=E,2007µm,0.5s						
LAKA				AML	AML	12 59 32.0	
	comp=N,1946µm,0.6s						
KEK	**Kerkira**	**1.18**	**328**	P	**Pg**	**12 59 04.0**	**+0.6**
KEK				AML	AML	12 59 29.9	
	comp=E,1667µm,0.5s						
KEK				AML	AML	12 59 32.2	
	comp=N,1119µm,0.7s						
TRIZ	**Trizonia**	**1.20**	**107**	P	**Pb**	**12 59 03.2**	**-0.4**
MAKR	**Makrakomi, Fth**	**1.22**	**76**	P	**Pb**	**12 59 04.5**	**+0.4**
MAKR				AML	AML	12 59 29.8	
	comp=N,5122µm,0.5s						
MAKR				AML	AML	12 59 31.7	
	comp=E,4712µm,0.4s						
KPRO	**Kipourio**	**1.36**	**25**	P	**Pb**	**12 59 07.3**	**+0.8**
AGG	**Agios Georgios**	**1.37**	**77**	P	**Pb**	**12 59 07.1**	**+0.5**
THL	**Klokotos Trika**	**1.38**	**52**	P	**Pn**	**12 59 06.9**	**+0.8**
THL				AML	AML	12 59 32.5	
	comp=N,2171µm,0.7s						
THL				AML	AML	12 59 32.8	
	comp=E,3169µm,0.6s						
KLV	**Kalavryta, Ach**	**1.39**	**119**	P	**Pn**	**12 59 05.9**	**-0.4**
THAL	**Thalero**	**1.75**	**112**	P	**Pb**	**12 59 13.4**	**+0.4**
THAL				AML	AML	12 59 45.0	
	comp=E,3840µm,0.5s						
THAL				AML	AML	12 59 47.7	
	comp=N,2039µm,0.7s						
KZN	**Kozani**	**1.82**	**29**	P	**Pb**	**12 59 15.1**	**+0.8**
KZN				AML	AML	12 59 49.0	
	comp=E,717µm,0.6s						
KZN				AML	AML	12 59 50.4	
	comp=N,431µm,0.5s						
ITM	**Ithomi**	**1.86**	**146**	P	**Pn**	**12 59 14.3**	**+1.6**
LKR	**Lokris**	**1.87**	**91**	P	**Pn**	**12 59 14.6**	**+1.8**
ATAL	**Atalanti**	**1.89**	**90**	P	**Pn**	**12 59 14.9**	**+1.8**
LTK	**Loutraki**	**1.98**	**110**	P	**Pb**	**12 59 16.9**	**0.0**
PYL	**PYLOS**	**2.03**	**154**	P	**Pn**	**12 59 16.9**	**+1.8**
VIL2	**Platees**	**2.15**	**103**	P	**Pb**	**12 59 19.8**	**0.0**
DBRK	**Dubrovnik**	**4.37**	**335**	*e*Pn	**Pn**	**12 59 46.9**	**-0.3**
DBRK				Sn	**Sn**	**13 00 35.4**	**-2.7**
STON	**Ston**	**4.70**	**333**	*e*Pn	**Pn**	**12 59 51.4**	**-0.4**
LSTV	**Lastovo**	**4.93**	**326**	*e*Pn	**Pn**	**12 59 54.9**	**-0.1**
LSTV				Sn	**Sn**	**13 00 47.4**	**-4.7**
MAKA	**Makarska**	**5.31**	**330**	*e*Pn	**Pn**	**13 00 00.2**	**+0.1**
RICI	**Ricice**	**5.45**	**332**	*e*Pn	**Pn**	**13 00 02.9**	**+0.8**
ZIRJ	**Zirje**	**6.19**	**324**	*e*Pn	**Pn**	**13 00 11.9**	**-0.3**
MORI	**Morici**	**6.33**	**326**	*e*Pn	**Pn**	**13 00 14.3**	**+0.1**
DUGI	**Dugi Otok**	**6.72**	**323**	*e*Pn	**Pn**	**13 00 20.1**	**+0.6**
UDBI	**Udbina**	**6.84**	**330**	*e*Pn	**Pn**	**13 00 23.2**	**+2.0**
SOKA	**Soboth**	**8.95**	**335**	*e*Pn	**Pn**	**13 00 50.3**	**+0.2**
	comp=N,0.4nm,0.3s						
OBKA	**Obir**	**8.97**	**332**	*e*Pn	**Pn**	**13 00 54.0**	**+3.5**
	comp=N,0.7nm,0.4s						

IDC 29 13:24:00.5±1.9**, 15°.46S×175°.26W, h0^{km}, mb3.6**/3**, mb1 3.9**/4**, mb1mx3.4**/37**, mbtmp3.7**/4**, ML4.0**/1**, Error ellipse: s-maj=197.5km s-min=30.5km az=157.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.70**	**66**	Pn	Pn	13 24 59.1	+0.1
	13nm,0.3s,baz=40,slow=4.1,SNR=7.0						
AFI				Sn	Sn	13 25 34.2	-9.3
	14nm,0.3s,baz=294,slow=20,SNR=7.1						
STKA	**Stephens Creek**	**42.46**	**240**	P	P	13 31 57.3	-0.1
	0.4nm,0.3s,baz=90,slow=14,SNR=1.9						
WRA	**Warramunga Arr**	**48.09**	**257**	P	P	13 32 41.9	-0.4
	0.3nm,0.7s,baz=92,slow=6.8,SNR=5.3						
ASAR	**Alice Springs**	**48.39**	**252**	P	P	13 32 44.7	0.0
	1.0nm,0.7s,baz=88,slow=7.6,SNR=32						

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*IDC **29** 13:31:40.2±1.8, 10°.99S×124°.65E, h0^{km}, mb3.4/1, mb1 3.5/4, mb1mx3.1/34, mbtmp3.3/4, ML3.3/3, Error ellipse: s-maj=77.3km s-min=21.4km az=53.0*

*DJA **29** 13:31:45.7±0.4, 11°S±9°×12°4E±°, h85^{km}±18^{km}, M3.7/7, mb3.8/4, MLv3.7/7*

ISC 29 13:31:43.9±0.9**, 11°.37S**±0°.06×**124°.2E**±0°.1**, h35^{km}, n11, σ1.^{s}70**/17**, South of Timor**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	**1.25**	**337**	Pn	**Pn**	**13 32 05.9**	**+0.9**
	28nm,0.3s,baz=303,slow=2.6,SNR=57						
BATI				Sn	**Sn**	**13 32 18.6**	**-2.0**
	49nm,0.3s,baz=328,slow=1.9,SNR=15						
BATI	**Baumata**	**1.25**	**337**	P	**Pn**	**13 32 06.0**	**+1.1**
BATI				S	**Sn**	**13 32 21.8**	**+1.2**
SOEI	**Soe**	**1.60**	**4**	P	**Pn**	**13 32 10.9**	**+1.0**
SOEI				S	**Sn**	**13 32 29.5**	**+0.1**
EDFI	**Ende, Flores**	**3.56**	**317**	P	**Pn**	**13 32 36.4**	**-0.4**
WBSI	**Waikabubak, Su**	**4.99**	**290**	P	**Pn**	**13 32 56.2**	**-0.2**
PLAI	**Plampang**	**6.77**	**291**	P	**Pn**	**13 33 21.0**	**+0.1**
	0.1nm16nm,1.1s						
FITZ	**Fitzroy Crossi**	**6.84**	**168**	Pn	**Pn**	**13 33 25.4**	**+3.6**
	0.2nm,0.3s,baz=352,slow=10,SNR=25						
FITZ				Sn	**Sn**	**13 34 38.9**	**+0.3**
	0.9nm,0.3s,baz=335,slow=15,SNR=10						
TWSI	**Taliwang, Sumb**	**7.63**	**289**	P	**Pn**	**13 33 32.5**	**-0.1**
WRA	**Warramunga Arr**	**12.99**	**132**	Pn	**Pn**	**13 34 46.5**	**+0.4**
	0.2nm,0.3s,baz=307,slow=14,SNR=10						
WRA				Sn	**Sn**	**13 37 06.8**	**-2.6**
	0.2nm,0.3s,baz=293,slow=23,SNR=6.8						
ASAR	**Alice Springs**	**15.35**	**144**	Pn	**Pn**	**13 35 19.3**	**+1.2**
	0.2nm,0.3s,baz=318,slow=12,SNR=16						
ASAR				Sn	**Sn**	**13 38 03.9**	**-3.2**
	0.1nm,0.3s,baz=308,slow=21,SNR=5.9						
MKAR	**Makanchi Array**	**68.93**	**331**	P	**P**	**13 42 45.3**	**-0.1**
	0.3nm,0.7s,baz=142,slow=7.7,SNR=2.6						

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*JMA **29** 13:42:52.8±0.3, 35°.44N×137°.14E, h301^{km}±3^{km}, M2.8*

*IDC **29** 13:42:53.7±1.4, 35°.89N×138°.16E, h328^{km}±12^{km}, mb2.8/3, mb1 3.0/4, mb1mx2.5/56, mbtmp3.5/4, Error ellipse: s-maj=49.0km s-min=19.0km az=57.0*

ISC 29 13:42:53.2±1.3**, 35°.5N**±0°.1×**137°.00E**±0°.09**, h300^{km}, n15, σ0.^{s}44**/16**, mb2.9**/3**, Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYTA	**Yamagatataniai**	**0.22**	**285**	P	**Pn**	**13 43 31.3**	**+0.1**
JGF	**Kuroka**	**0.30**	**77**	P	**Pn**	**13 43 30.9**	**-0.5**
JAO	**Obara**	**0.34**	**142**	P	**Pn**	**13 43 31.2**	**-0.4**
JNY	**Yasuok**	**0.73**	**104**	P	**Pn**	**13 43 31.8**	**-0.8**
JIE	**Ise**	**1.17**	**192**	P	**Pn**	**13 43 34.0**	**-0.5**
JWT	**Wachi**	**1.33**	**259**	P	**Pn**	**13 43 35.9**	**+0.6**
JWT				*e*S	**S**	**13 44 08.2**	**-0.6**
MJAR	**Matsushiro Arr**	**1.40**	**44**	P	**Pn**	**13 43 35.8**	**+0.1**
	0.1nm,0.3s,baz=206,slow=7.2,SNR=16						
JKN2	**Miekihoku**	**1.43**	**205**	P	**Pn**	**13 43 35.5**	**-0.4**
JWY	**Kouya**	**1.75**	**222**	P	**Pn**	**13 43 38.2**	**0.0**
JTNC	**Tanabenakahech**	**2.06**	**214**	P	**Pn**	**13 43 40.2**	**-0.3**
JAG	**Ashikaga**	**2.18**	**65**	P	**Pn**	**13 43 41.2**	**-0.1**
JHJ	**Hachijo jima 2**	**3.33**	**136**	P	**Pn**	**13 43 52.4**	**0.0**
	2.6nm,0.3s,baz=11,slow=17,SNR=1.7						
JHJ				S	**S**	**13 44 40.1**	**+0.4**
	2.5nm,0.3s,baz=228,slow=18,SNR=1.6						
CMAR	**Chiang Mai Arr**	**37.66**	**253**	P	P	13 49 47.9	+7.6
	0.6nm,0.3s,baz=55,slow=7.8,SNR=4.3						
WRA	**Warramunga Arr**	**55.23**	**183**	P	**P**	**13 51 56.0**	**+0.2**
	0.4nm,0.9s,baz=0.1,slow=7.4,SNR=5.2						
ASAR	**Alice Springs**	**58.95**	**183**	P	**P**	**13 52 21.9**	**+0.3**
	0.2nm,0.8s,baz=17,slow=6.8,SNR=1.9						

IDC 29 13:53:45.7±2.0**, 8°.28S×125°.64E, h0^{km}, mb3.1**/1**, mb1 3.4**/5**, mb1mx3.1**/39**, mbtmp3.3**/5**, ML3.1**/4**, Error ellipse: s-maj=49.6km s-min=28.9km az=74.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	**2.74**	**225**	Pn	Pn	13 54 31.4	+0.4
	4.8nm,0.3s,baz=110,slow=6.8,SNR=4.0						
BATI				Sn	Sn	13 54 51.4	-14
	3.7nm,0.3s,baz=44,slow=21,SNR=3.6						
FITZ	**Fitzroy Crossi**	**9.76**	**180**	Pn	Pn	13 56 07.6	+0.1
	0.2nm,0.3s,baz=7.5,slow=11,SNR=6.8						
FITZ				Sn	Sn	13 57 48.7	-9.3
	0.3nm,0.3s,baz=280,slow=17,SNR=4.4						
WRA	**Warramunga Arr**	**14.33**	**145**	Pn	Pn	13 57 09.2	-0.9
	0.1nm,0.3s,baz=317,slow=13,SNR=6.3						
WRA				Sn	Sn	13 59 44.8	-5.2
	0.1nm,0.3s,baz=280,slow=19,SNR=4.6						
ASAR	**Alice Springs**	**17.23**	**154**	P	Pn	13 57 48.3	+0.3
	0.0nm,0.3s,baz=321,slow=11,SNR=4.9						
ASAR				S	Sn	14 00 51.4	-9.1
	baz=310,slow=20,SNR=1.6						
MKAR	**Makanchi Array**	**67.01**	**329**	P	P	14 04 40.5	-0.1
	0.1nm,0.5s,baz=145,slow=5.3,SNR=1.2						

TAP 29 14:04:35.7, 23°.18N×121°.04E, h16^{km}, ML1.1, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELDTW	**Lidau**	**0.02**	**307**	*i* P	Pg	14 04 39.0	+0.4
	baz=316						
ELDTW				*i* S	Sg	14 04 41.0	+0.4
	baz=316						
FULB	**Fuli**	**0.24**	**84**	*i* P	Pb	14 04 41.8	+0.1
	baz=84						
FULB				*i* S	Sb	14 04 46.0	+0.3
	baz=84						
STYH	**Taoyuan**	**0.24**	**269**	*e*P	Pb	14 04 41.8	+0.1
	baz=268						
STYH				*e*S	Sb	14 04 45.8	+0.1
	baz=268						
LONT	**Longtian**	**0.28**	**162**	P	Pg	14 04 41.1	-0.6
	baz=162						
LONT				*e*S	Sb	14 04 47.0	+0.1
	baz=162						
EYUL	**Yuli**	**0.31**	**56**	*e*P	Pb	14 04 43.0	+0.1
	baz=56						
EYUL				*e*S	Sg	14 04 47.1	+0.4
	baz=56						
CHKT	**Chengkung**	**0.31**	**104**	*e*P	Pb	14 04 43.2	+0.3
	baz=103						
CHKT				S	Sb	14 04 48.6	+0.9
	baz=103						
EDH	**Donghe**	**0.32**	**129**	*e*P	Pb	14 04 43.2	+0.2
	baz=129						
EDH				*e*S	Sb	14 04 48.5	+0.6
	baz=129						
YUS	**Yu-Shan**	**0.32**	**346**	*e*P	Pb	14 04 43.3	-0.1
	baz=347						
YUS				*e*S	Sb	14 04 48.4	-0.2
	baz=347						
YULB	**Yu-li**	**0.32**	**48**	P	Pb	14 04 43.2	+0.1
	baz=47						
YULB				S	Sb	14 04 48.3	+0.2
	baz=47						
TWG	**Pinlang**	**0.35**	**175**	P	Pb	14 04 43.7	0.0
	baz=173						
TWGBT	**Beinan**	**0.36**	**174**	*e*P	Pb	14 04 43.8	+0.1
	baz=173						
TWGBT				*e*S	Sb	14 04 49.4	+0.3
	baz=173						
TPUB	**Ta-pu**	**0.40**	**289**	*e*P	Pb	14 04 44.5	+0.1
	baz=288						
TPUB				*e*S	Sb	14 04 50.5	+0.3
	baz=288						
ALS	**Alishan**	**0.40**	**327**	*e*P	Pg	14 04 44.1	+0.2
	baz=328						
ALS				*e*S	Sb	14 04 50.8	+0.2
	baz=328						
WTP	**Ta-pu**	**0.40**	**280**	P	Pb	14 04 44.1	-0.3
	baz=280						
WTP				S	Sb	14 04 50.8	+0.5
	baz=280						
SLGT	**Liugui**	**0.40**	**243**	*e*S	Sb	14 04 51.3	+0.9
	baz=243						
EHY	**Hungye**	**0.42**	**38**	*e*P	Pb	14 04 44.7	-0.1
	baz=39						
EHY				*e*S	Sb	14 04 50.8	-0.2
	baz=39						
TTN	**Taitung**	**0.43**	**166**	*e*P	Pb	14 04 45.2	+0.3
	baz=165						
TTN				*e*S	Sb	14 04 52.3	+1.1
	baz=165						
CHN4	**Tsaushan**	**0.44**	**293**	P	Pb	14 04 45.4	+0.2
	baz=293						
CHN4				S	Sb	14 04 52.2	+0.6
	baz=293						
CHN1	**Nanshi**	**0.47**	**271**	*e*P	Pb	14 04 45.4	-0.2
	baz=271						
CHN1				*e*S	Sb	14 04 52.2	-0.2
	baz=271						
HGSD	**Ruisui**	**0.47**	**48**	*e*P	Pb	14 04 46.0	+0.3
	baz=48						
HGSD				*e*S	Sb	14 04 53.5	+1.0
	baz=48						
TWK	**Hsinying**	**0.51**	**280**	*e*P	Pg	14 04 46.0	+0.1
	baz=280						
TWK				*e*S	Sb	14 04 53.9	+0.3
	baz=280						
CHN5	**Tsauling**	**0.53**	**322**	*e*P	Pb	14 04 46.8	+0.1
	baz=321						
CHN5				*e*S	Sb	14 04 54.9	+0.6
	baz=321						
ECL	**Taimali**	**0.58**	**188**	*e*P	Pb	14 04 47.3	-0.2
	baz=186						
ECL				*e*S	Sb	14 04 56.2	+0.7
	baz=186						

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*NEIC **29** 14:28:43.1±2.5, 19°.50N±0°.09×65°.50W±0°.05, h36^{km}±44^{km}, Error ellipse: s-maj=13.0km s-min=7.2km az=188.0*

*RSPR **29** 14:28:43.5, 19°.55N×65°.48W, h63^{km}±11^{km}, MD3.4/8*

ISC 29 14:28:39.6±1.9**, 19°.57N**±0°.09×**65°.45W**±0°.05**, h16^{km}, n46, σ0.^{s}55**/46**, 9C-4D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CUPR	**Culebra, Puert**	**1.27**	**173**	⇓*e*P	**Pb**	**14 29 03.4**	**+0.3**
CUPR	**Culebra, Puert**	**1.27**	**173**	*e*S	**Sg**	**14 29 20.3**	**-0.3**
CUPR	**Culebra, Puert**	**1.27**	**173**		**Pn**	**14 29 02.8**	**+0.1**
CUPR				IAML		14 29 27.7	
	comp=E,160nm,0.8s						
CUPR	**Culebra, Puert**	**1.27**	**173**		**Sg**	**14 29 20.3**	**-0.3**
STVI	**Saint Thomas**	**1.30**	**159**	⇑*e*P	**Pg**	**14 29 04.9**	**+0.2**
STVI	**Saint Thomas**	**1.30**	**159**	*e*S	**Sg**	**14 29 21.6**	**-0.1**
STVI	**Saint Thomas**	**1.30**	**159**		**Pn**	**14 29 03.4**	**+0.3**
STVI	**Saint Thomas**	**1.30**	**159**		**Sg**	**14 29 21.6**	**-0.1**
CBYP	**Canovanas**	**1.35**	**197**	⇑*e*P	**Pb**	**14 29 04.7**	**+0.1**
CBYP	**Canovanas**	**1.35**	**197**	*e*S	**Sn**	**14 29 21.2**	**-0.2**
CBYP	**Canovanas**	**1.35**	**197**		**Pn**	**14 29 02.7**	**-1.1**
CBYP				IAML		14 29 24.1	
	comp=E,312nm,0.3s						
CBYP	**Canovanas**	**1.35**	**197**		**Sn**	**14 29 21.2**	**-0.2**
GCPR	**Guaynabo City**	**1.39**	**206**	⇓*e*P	**Pn**	**14 29 04.6**	**+0.2**
GCPR	**Guaynabo City**	**1.39**	**206**	*e*S	**Sb**	**14 29 23.0**	**+0.2**
GCPR	**Guaynabo City**	**1.39**	**206**		**Pn**	**14 29 03.9**	**-0.4**
GCPR	**Guaynabo City**	**1.39**	**206**		**Sb**	**14 29 23.0**	**+0.2**
TBVI	**Tortola**	**1.39**	**145**	⇑*e*P	**Pg**	**14 29 06.2**	**-0.2**
TBVI	**Tortola**	**1.39**	**145**	*e*S	**Sg**	**14 29 24.2**	**-0.4**
EMPR	**Esperanza - Ma**	**1.49**	**223**	⇑*e*P	**Pb**	**14 29 07.0**	**+0.1**
EMPR	**Esperanza - Ma**	**1.49**	**223**	*e*S	**Sb**	**14 29 25.4**	**-0.3**
EMPR	**Esperanza - Ma**	**1.49**	**223**		**Pb**	**14 29 07.0**	**+0.1**
EMPR					**Sb**	**14 29 25.4**	**-0.3**
EMPR	**Esperanza - Ma**	**1.49**	**223**	IAML		14 29 32.9	
	comp=E,293nm,0.6s						
EMPR				IAML		14 29 49.8	
	comp=N,260nm,1.3s						
SJG	**San Juan**	**1.59**	**205**		**Pn**	**14 29 06.9**	**-0.3**
SJG				IAML		14 29 34.5	
	comp=N,136nm,0.7s						
SJG				IAML		14 29 37.2	
	comp=N,129nm,0.8s						
PDPR	**Patillas Dam,**	**1.64**	**199**		**Pn**	**14 29 07.9**	**+0.2**
IGPR	**InterUniversit**	**1.71**	**201**	⇑*e*P	**Pn**	**14 29 09.8**	**+1.0**
IGPR	**InterUniversit**	**1.71**	**201**	*e*S	**Sn**	**14 29 30.8**	**+0.4**
AOPR	**Arecibo Observ**	**1.73**	**226**	⇑*e*P	**Pb**	**14 29 10.3**	**-0.8**
AOPR	**Arecibo Observ**	**1.73**	**226**	*e*S	**Sn**	**14 29 31.0**	**+0.1**
AOPR	**Arecibo Observ**	**1.73**	**226**		**Pn**	**14 29 08.6**	**-0.5**
AOPR				IAML		14 29 39.4	
	comp=E,544nm,0.5s						
AOPR				IAML		14 29 42.8	
	comp=N,374nm,0.5s						
AOPR	**Arecibo Observ**	**1.73**	**226**		**Sn**	**14 29 31.0**	**+0.1**
OBIP	**Obispado Ponce**	**1.87**	**216**	⇓*e*P	**Pb**	**14 29 12.6**	**-0.9**
OBIP	**Obispado Ponce**	**1.87**	**216**	*e*S	**Sn**	**14 29 34.8**	**+0.5**
OBIP	**Obispado Ponce**	**1.87**	**216**		**Pn**	**14 29 11.5**	**+0.5**
OBIP				IAML		14 29 45.4	
	comp=N,88nm,0.8s						
OBIP	**Obispado Ponce**	**1.87**	**216**		**Sn**	**14 29 34.8**	**+0.5**
CDVI	**St. Croix**	**1.92**	**160**		**Pb**	**14 29 13.7**	**-0.6**
LSP	**Las Mesas**	**2.08**	**228**	⇑*e*P	**Pn**	**14 29 15.1**	**+1.2**
LSP	**Las Mesas**	**2.08**	**228**	*e*S	**Sn**	**14 29 39.9**	**+0.4**
GBPR	**Guanica, Bosqu**	**2.09**	**221**	⇓*e*P	**Pb**	**14 29 16.7**	**-0.4**
PRSN	**Puerto Rico Se**	**2.09**	**230**		**Pn**	**14 29 14.5**	**+0.4**
PRSN				IAML		14 29 45.0	
	comp=N,166nm,0.3s						
PRSN				IAML		14 29 50.1	
	comp=E,150nm,0.3s						
MLPR	**Magueyes Islan**	**2.19**	**224**	⇑*e*P	**Pn**	**14 29 16.5**	**+1.1**
MLPR	**Magueyes Islan**	**2.19**	**224**		**Pn**	**14 29 15.8**	**+0.4**
CRPR	**Cabo Rojo, PR**	**2.21**	**226**	⇑*e*P	**Pn**	**14 29 16.7**	**+1.1**
CRPR	**Cabo Rojo, PR**	**2.21**	**226**		**Pn**	**14 29 16.0**	**+0.3**
CRPR				IAML		14 30 01.3	
	comp=N,77nm,1.0s						
CRPR				IAML		14 30 01.9	
	comp=E,67nm,0.8s						
DR12	**Loma Pena Alta**	**3.80**	**259**	Pn	**Pn**	**14 29 37.3**	**-0.2**
ANWB	**Willy Bob**	**3.96**	**118**	Pn	**Pn**	**14 29 40.9**	**+1.2**
SDDR	**Presa de Saban**	**5.54**	**265**		**Pn**	**14 30 02.2**	**+0.6**

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*IDC **29** 14:42:25.2±2.0, 5°.33S×145°.71E, h66^{km}±18^{km}, mb3.8/12, mb1 4.0/16, mb1mx3.8/30, mbtmp4.2/16, MS3.1/2, Ms1 3.0/2, ms1mx2.7/21, Error ellipse: s-maj=19.6km s-min=10.9km az=60.0*

*NEIC **29** 14:42:27.2±2.0, 5°.40S±0°.03×145°.66E±0°.08, h78^{km}±7^{km}, mb4.7/54, Error ellipse: s-maj=11.7km s-min=4.8km az=85.0*

*DJA **29** 14:42:29.3±0.4, 6°S±3°×14°5E±°, h91^{km}±6^{km}, M4.5/20, mB5.2/5, mb4.5/20, MLv4.4/5, Mw(mB)4.6/5*

ISC 29 14:42:27.4±0.4**, 5°.45S**±0°.05×**145°.61E**±0°.06**, h86^{km}, n109, σ1.^{s}23**/111**, mb4.7**/45**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	**Manus Island**	**3.81**	**27**	Pn	**Pn**	**14 43 23.7**	**-0.2**
PMG	**Port Moresby**	**4.22**	**159**	P	**Pn**	**14 43 29.9**	**+0.5**
	28nm,0.3s,baz=2.9,slow=7.6,SNR=55						
PMG				S	**Sn**	**14 44 16.9**	**-0.7**
	24nm,0.3s,baz=135,slow=20,SNR=6.6						
PMG	**Port Moresby**	**4.22**	**159**	Pn	**Pn**	**14 43 30.0**	**+0.6**
JAY	**Jayapura**	**5.70**	**301**	P	**Pn**	**14 43 48.6**	**-1.0**
	1.7nm,0.3s,baz=116,slow=23,SNR=16						
JAY				S	**Sn**	**14 44 53.2**	**-0.5**
	baz=174,slow=20,SNR=1.0						
JAY	**Jayapura**	**5.70**	**301**	P	**Pn**	**14 43 50.1**	**+0.5**
	0.1nm32nm,0.7s						
RABL	**Rabaul**	**6.65**	**79**	Pn	**Pn**	**14 44 01.5**	**-1.1**
SMPI	**Sarmi**	**7.70**	**296**	P	**Pn**	**14 44 16.7**	**-0.1**
	0.1nm30nm,1.0s						
COEN	**Coen**	**8.79**	**196**	Pn	**Pn**	**14 44 32.6**	**+0.9**
FAKI	**Fak Fak**	**13.56**	**280**	Pn	**Pn**	**14 45 35.2**	**-1.1**
SAUI	**Saumlaki**	**14.43**	**259**	P	**Pn**	**14 45 48.4**	**+0.8**
	8µm128nm,0.9s						
SAUI	**Saumlaki**	**14.43**	**259**	P	**P**	**14 45 54.5**	**+2.6**
CTAO	**Charters Tower**	**14.56**	**178**	P	**P**	**14 45 53.8**	**+0.4**
SIJI	**Sorong**	**15.03**	**287**	P	**Pn**	**14 45 53.6**	**-1.6**
	0.8nm,0.3s,baz=84,slow=6.4,SNR=9.1						
SWI	**Sorong**	**15.03**	**287**	P	**Pn**	**14 45 56.0**	**+0.7**
	56nm,0.8s						
MTN	**Manton Dam**	**16.06**	**242**	Pn	**Pn**	**14 46 07.5**	**-0.8**
AAI	**Ambon**	**17.45**	**275**	P	**Pn**	**14 46 25.2**	**-0.2**
	22nm,0.7s						
PATS	**Pohnpei**	**17.60**	**46**	P	**Pn**	**14 46 27.8**	**+0.6**
WB0	**Warramunga Arr**	**17.93**	**217**	P	**Pn**	**14 46 31.9**	**+0.6**
WR0	**Warramunga Arr**	**18.00**	**216**	P	**Pn**	**14 46 32.9**	**+0.8**
WRAB	**Tennant Creek**	**18.09**	**216**	P	**P**	**14 46 32.2**	**-0.2**
WB2	**Warramunga Arr**	**18.09**	**216**	P	**P**	**14 46 32.4**	**-0.2**
WRA	**Warramunga Arr**	**18.10**	**216**	P	**P**	**14 46 32.1**	**-0.5**
	0.5nm,0.3s,baz=41,slow=10,SNR=6.8						
WRA				S	**S**	**14 49 47.6**	**-7.5**
	0.1nm,0.3s,baz=43,slow=20,SNR=2.8						
WRA				PcP	**PcP**	**14 51 03.9**	**+0.7**
	0.2nm,0.3s,baz=14,slow=1.6,SNR=7.0						
LBMI	**Labuha**	**18.70**	**284**	P	**Pn**	**14 46 40.4**	**-0.1**
	17nm,1.0s						
KNRA	**Kununurra**	**19.41**	**237**		**P**	**14 46 46.1**	**-0.9**
KNRA				IAmb	IAmb	14 46 49.7	
	comp=Z,26nm,1.2s						
SANI	**Sanana**	**19.87**	**279**	P	**P**	**14 46 51.6**	**-0.3**
	comp=Z,12nm,0.6s						
EIDS	**Eidsvold**	**20.49**	**166**	P	**P**	**14 46 55.9**	**-2.6**
AS31	**Alice Springs**	**21.33**	**211**	P	**P**	**14 47 08.2**	**+0.5**
ASAR	**Alice Springs**	**21.33**	**211**	P	**P**	**14 47 07.7**	**0.0**
	comp=Z,1.1nm,0.4s,baz=40,slow=7.7,SNR=54						
ASAR				S	**S**	**14 50 57.7**	**-2.3**
	comp=Z,0.7nm,1.0s,baz=30,slow=17,SNR=3.1						
ASAR				PcP	**PcP**	**14 51 09.8**	**+0.8**
	comp=Z,0.9nm,0.9s,baz=49,slow=2.1,SNR=4.3						
ASAR	**Alice Springs**	**21.33**	**211**	P	**P**	**14 47 07.8**	**+0.1**
SOEI	**Soe**	**21.58**	**257**	P	**P**	**14 47 12.7**	**+2.2**
SOEI				IAmb	IAmb	14 47 39.0	
	comp=Z,18nm,0.7s						
BATI	**Baumata**	**22.24**	**256**	P	**P**	**14 47 18.6**	**+1.2**
	comp=Z,22nm,0.5s,baz=208,slow=2.1,SNR=5.0						
KMSI	**Cibinong**	**22.41**	**285**	P	**P**	**14 47 19.9**	**+0.6**
	comp=Z,48nm,0.7s						
FITZ	**Fitzroy Crossi**	**23.20**	**236**	P	**P**	**14 47 27.5**	**+0.3**
	comp=Z,2.7nm,0.5s,baz=57,slow=13,SNR=16						
GTOI	**Gorontalo**	**23.36**	**284**	P	**P**	**14 47 30.1**	**+1.4**
	comp=Z,490nmcomp=Z,47nm,0.5s						
EDFI	**Ende, Flores**	**23.96**	**261**	P	**P**	**14 47 33.3**	**-0.8**
	comp=Z,3.7nm,0.6s						
MRSI	**Marisa**	**24.36**	**283**	P	**P**	**14 47 37.0**	**-0.7**
	comp=Z,737nmcomp=Z,19nm,0.6s						
TOLI2	**Tolitoli**	**25.64**	**284**	P	**P**	**14 47 48.4**	**-0.9**
TOLI2				IAmb	IAmb	14 47 51.4	
	comp=Z,11nm,0.8s						
MPSI	**Mapaga**	**26.31**	**282**	P	**P**	**14 47 55.4**	**0.0**
STKA	**Stephens Creek**	**26.56**	**188**	P	**P**	**14 47 59.0**	**+1.6**
	comp=Z,1.0nm,0.5s,baz=342,slow=16,SNR=2.0						
STKA				LR	LR	14 58 30.2	
	comp=Z,64nm,18.3s,baz=24,slow=36						
STKA	**Stephens Creek**	**26.56**	**188**	P	**P**	**14 47 59.2**	**+1.9**
BBOO	**Buckleboo**	**28.64**	**197**	P	**P**	**14 48 16.9**	**+0.9**
BBOO				IAmb	IAmb	14 48 26.0	
	comp=Z,21nm,1.4s						
MYLDM	**Lahad Datu**	**29.06**	**291**	P	**P**	**14 48 21.4**	**+1.5**

MYLDM				IAmb	IAmb	14 48 49.4	
	comp=Z,27nm,1.2s						
CAN	Canberra	29.89	174	P	P	14 48 29.1	+2.0
FORT	Forrest	30.12	211	P	P	14 48 29.7	+0.6
JAGI	Jajag, Banyuwa	31.36	263	P	P	14 48 40.3	0.0
JAGI				IAmb	IAmb	14 49 08.8	
	comp=Z,18nm,1.0s						
KKM	Kota Kinabalu	31.49	291	P	P	14 48 40.9	-0.7
KKM				IAmb	IAmb	14 48 48.7	
	comp=Z,24nm,1.1s						
KSM	Kuching	35.92	280	P	P	14 49 20.8	+0.9
KSM				IAmb	IAmb	14 49 21.6	
	comp=Z,12nm,1.1s						
MORW	Morawa	36.52	227	P	P	14 49 25.2	+0.3
MORW				IAmb	IAmb	14 49 35.6	
	comp=Z,12nm,1.2s						
JMN	Monobe	40.52	345	P	P	14 49 58.0	-0.2
JMN				IAmb	IAmb	14 50 23.1	
	comp=Z,17nm,1.1s						
JNU	Nakatsue	40.83	341	P	P	14 49 58.9	-1.9
JNU				IAmb	IAmb	14 49 59.9	
	comp=Z,16nm,0.9s						
JWT	Wachi	41.64	347	P	P	14 50 06.3	-1.0
JWT				IAmb	IAmb	14 50 31.9	
	comp=Z,21nm,1.2s						
JHS	Saijyo	41.92	345	P	P	14 50 08.6	-1.1
MYKOM	Kota Tinggi	42.33	279	P	P	14 50 13.4	+0.1
MYKOM				IAmb	IAmb	14 50 30.8	
	comp=Z,17nm,1.2s						
MJAR	Matsushiro Arr	42.34	351	P	P	14 50 10.7	-2.4
	comp=Z,2.2nm,0.9s,baz=168,slow=10,SNR=5.4						
MJAR	Matsushiro Arr	42.34	351	P	P	14 50 11.2	-1.9
MAJO	Matsushiro	42.35	351	P	P	14 50 11.8	-1.3
MAJO				IAmb	IAmb	14 50 27.0	
	comp=Z,11nm,1.2s						
MAT	Matsushiro	42.35	351	P	P	14 50 11.7	-1.4
NJ2	Nanjing	45.17	327	*e*P	P	14 50 37.5	+1.7
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
IPM	Ipoh	45.61	282	P	P	14 50 39.3	-0.3
IPM				IAmb	IAmb	14 50 52.8	
	comp=Z,20nm,1.4s						
KSRS	Korea Array	45.76	340	LR	LR	15 08 09.6	
	comp=Z,10nm,19.3s,baz=125,slow=34						
KULM	Kulim	46.15	283	P	P	14 50 43.4	-0.4
JTM	Tenmabayashi	46.20	355	P	P	14 50 43.2	-0.5
ERM	Erimo	47.29	358	P	P	14 50 53.2	+1.0
JEW	Eniwo	48.21	356	P	P	14 50 58.9	-0.4
GSI	Gunungsitoli	48.44	277	P	P	14 51 00.5	-1.1
GSI				IAmb	IAmb	14 51 14.7	
	comp=Z,18nm,1.2s						
LHMI	Lhok Sumawe	49.74	282	P	P	14 51 11.3	-0.2
CM31	Chiang Mai Arr	51.77	298	P	P	14 51 27.3	+0.5
CM31				IAmb	IAmb	14 51 29.0	
	comp=Z,6.3nm,0.6s						
CMAR	Chiang Mai Arr	51.77	298	P	P	14 51 27.4	+0.6
	comp=Z,3.5nm,0.6s,baz=117,slow=6.0,SNR=28						
CMAR	Chiang Mai Arr	51.77	298	P	P	14 51 27.6	+0.8
CHTO	Chiang Mai	51.91	299	P	P	14 51 27.8	0.0
CD2	Chengdu	53.91	315	*e*P	P	14 51 42.5	+0.2
HHC	Hu-ho-hao-te	55.65	329	*e*P	P	14 51 56.0	+1.2
HHC				pmax	pmax		
	comp=Z,21nm,0.8s						
HHC				pmax	pmax		
	comp=Z,100nm,6.2s						
PEA0B	Petropavlovsk-	59.23	8	P	P	14 52 20.1	+0.5
PETK	Petropavlovsk-	59.23	8	P	P	14 52 19.1	-0.5
	comp=Z,1.0nm,0.4s,baz=177,slow=8.0,SNR=7.6						
PETK	Petropavlovsk-	59.23	8	P	P	14 52 19.5	-0.1
PET	Petropavlovsk	59.30	9	P	P	14 52 19.6	-0.4
SONM	Songino Array	63.26	332	P	P	14 52 47.1	-0.1
	comp=Z,0.3nm,0.5s,baz=151,slow=5.7,SNR=2.8						
SONM	Songino Array	63.26	332	P	P	14 52 47.0	-0.1
YAK	Yakutsk	68.40	352	P	P	14 53 19.0	-0.6
YAK				IAmb	IAmb	14 53 22.6	
	comp=Z,6.2nm,0.6s						
WMQ	Urumqi	71.48	320	*e*P	P	14 53 41.3	+2.3
MK31	Makanchi Array	76.20	321	P	P	14 54 05.9	-0.5
MKAR	Makanchi Array	76.20	321	P	P	14 54 06.5	+0.1
	comp=Z,0.3nm,0.3s,baz=96,slow=9.0,SNR=11						
MKAR	Makanchi Array	76.20	321	P	P	14 54 06.2	-0.3
MAKZ	Makanchi	76.40	321	P	P	14 54 07.5	-0.1
ZALV	Zalesovo Beam	77.82	328	P	P	14 54 14.2	-1.1
	comp=Z,1.1nm,0.6s,baz=86,slow=6.1,SNR=6.3						
NIL	Nilore	78.49	306	P	P	14 54 19.9	+0.3
BOOM	Boomskoye usch	78.91	315	P	P	14 54 22.0	+0.1
BOOM				IAmb	IAmb	14 54 23.1	
	comp=Z,3.4nm,0.7s						
OHAK	Old Harbor	79.49	29	P	P	14 54 24.8	+0.5
MLY	Manley	84.14	22	P	P	14 54 48.5	-0.3
MLY				IAmb	IAmb	14 54 49.8	
	comp=Z,5.3nm,0.7s						
RND	Reindeer	84.19	24	P	P	14 54 48.3	-0.8
RND				IAmb	IAmb	14 54 49.2	
	comp=Z,8.4nm,0.6s						
NRIK	Noril'sk	84.34	342	P	P	14 54 48.7	-0.9
	comp=Z,2.8nm,0.6s,baz=127,slow=2.2,SNR=9.5						
DHY	Denali Highway	84.67	25	P	P	14 54 51.3	-0.3
DHY				IAmb	IAmb	14 54 52.8	
	comp=Z,4.8nm,0.7s						
WRH	Wood River Hil	84.93	23	P	P	14 54 51.8	-0.9
WRH				IAmb	IAmb	14 54 52.8	
	comp=Z,4.8nm,0.9s						
CCB	Clear Creek Bu	85.12	23	P	P	14 54 52.4	-1.2
CCB				IAmb	IAmb	14 54 53.4	
	comp=Z,5.7nm,0.7s						
TCOL	CIGO, UAF Yank	85.19	23	P	P	14 54 53.4	-0.6
TCOL				IAmb	IAmb	14 54 54.2	
	comp=Z,6.6nm,0.8s						
COLA	College	85.19	23	P	P	14 54 53.2	-0.7
COLA				IAmb	IAmb	14 54 54.2	
	comp=Z,6.6nm,0.8s						
IL31		85.53	23	P	P	14 54 54.2	-1.4
IL31				IAmb	IAmb	14 54 55.2	
	comp=Z,6.6nm,0.8s						
ILAR	Eielson Array	85.53	23	P	P	14 54 54.4	-1.3
	comp=Z,4.9nm,0.7s,baz=250,slow=5.2,SNR=65						
ILAR	Eielson Array	85.53	23	P	P	14 54 54.0	-1.7
DOT	Dot Lake	86.27	25	P	P	14 54 59.8	+0.4
DOT				IAmb	IAmb	14 55 00.3	
	comp=Z,4.8nm,0.8s						
PLCA	Paso Flores	123.33	148	PKP	PKiKP	15 01 15.9	+0.7
	comp=Z,0.7nm,0.4s,baz=319,slow=2.3,SNR=7.7						
TORD	Torodi Ar. Bea	143.62	285	PKP	PKPbc	15 01 50.7	-0.4
	comp=Z,2.0nm,0.5s,baz=68,slow=3.2,SNR=27						
TORD	Torodi Ar. Bea	143.62	285		PKPab	15 01 50.4	+0.3
KIC	Kosan Boka	150.50	273	*e*PKP1	PKiKP	15 02 10.9	-0.2
	comp=Z,19nm,0.7s						
DBIC	Dimbokro	150.61	274	PKPbc	PKiKP	15 02 11.2	-0.1
	comp=Z,17nm,0.7s,baz=95,slow=2.0,SNR=22						
DBIC	Dimbokro	150.61	274		PKiKP	15 02 11.0	-0.2
TIC	Toumodi	150.77	274	*e*PKP1	PKiKP	15 02 11.4	-0.2
LIC	Lamto	150.78	273	*e*PKP1	PKiKP	15 02 11.5	-0.1
	comp=Z,84nm,0.7s						
BDFB	Brasilia	155.07	147	PKPbc	PKPbc	15 02 21.3	
	comp=Z,3.3nm,0.9s,baz=152,slow=8.0,SNR=3.8						

IDC ***29*** *15:04:51.8±1.6, 0°.96S×130°.37E, h0^{km}, mb3.6/2, mb1 3.8/3, mb1mx3.4/34, mbtmp3.6/3, ML3.5/1, Error ellipse: s-maj=28.3km s-min=12.7km az=168.0*

DJA ***29*** *15:04:51.7±0.6, 0°S±6°×13°2E±°, h10^{km}, M3.7/7, mb3.9/1, MLv3.6/7*

ISC 29 15:04:50.7±1.6, **0°.5S**±0°.1×**132°.20E**±0°.09, **h10**^{km}**, n8,** σ**1**^{s}**.82**/10**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	1.00	248	Pg	Pg	15 05 08.4	-1.6
	33nm,0.3s,baz=249,slow=22,SNR=409						
SIJI				Lg	Lg	15 05 22.2	
	191nm,0.3s,baz=4.6,slow=23,SNR=36						
SWI	Sorong	1.01	248	P	Pg	15 05 08.6	-1.5
SWI				S	Sb	15 05 22.9	-0.7
FAKI	Fak Fak	2.41	179	P	Pn	15 05 31.4	+1.1
FAKI				S	Sn	15 06 01.5	+1.6
MSAI	Masohi	4.32	229	P	Pn	15 05 58.0	+1.4
LBMI	Labuha	4.70	268	P	Pn	15 06 05.0	+3.3
WRA	Warramunga Arr	19.45	174	P	P	15 09 17.2	-0.4
	0.2nm,0.3s,baz=352,slow=11,SNR=9.1						
WRA				S	Sn	15 12 46.0	-11
	0.1nm,0.3s,baz=346,slow=25,SNR=4.8						
ASAR	Alice Springs	23.10	176	P	P	15 09 56.8	-0.1
	3.1nm,0.7s,baz=352,slow=7.8,SNR=46						

MKAR	Makanchi Array	64.13	324	P	P	15 15 24.2	-1.2
	0.2nm,0.6s,baz=118,slow=8.1,SNR=2.9						

IDC 29 15:23:58.2±7.9**, 7°.42S**×**129°.11E, h121**^{km}±83^{km}**, mb3.1**/1**, mb1 3.2**/5**, mb1mx2.9**/29**, mbtmp3.6**/5**, ML3.6**/4**, Error ellipse: s-maj=71.0km s-min=26.3km az=32.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	6.05	242	P	Pn	15 25 27.2	+1.9
	6.0nm,0.3s,baz=90,slow=2.3,SNR=8.9						
BATI				S	Sn	15 26 32.9	-0.5
	8.3nm,0.3s,baz=285,slow=22,SNR=7.1						
FITZ	Fitzroy Crossi	11.14	197	P	Pn	15 26 32.8	-1.3
	0.2nm,0.3s,baz=14,slow=8.5,SNR=18						
FITZ				S	Sn	15 28 27.1	-10
	0.2nm,0.3s,baz=74,slow=15,SNR=2.0						
WRA	Warramunga Arr	13.45	158	P	Pn	15 27 03.4	-0.9
	0.3nm,0.3s,baz=344,slow=12,SNR=24						
WRA				S	Sn	15 29 24.3	-8.3
	0.4nm,0.3s,baz=339,slow=22,SNR=5.6						
ASAR	Alice Springs	16.80	165	P	P	15 27 48.2	+1.7
	0.1nm,0.3s,baz=336,slow=9.4,SNR=18						
ASAR				S	Sn	15 30 46.3	-7.2
	0.1nm,0.3s,baz=339,slow=26,SNR=2.2						
MKAR	Makanchi Array	68.09	327	P	P	15 34 44.8	-0.1
	0.1nm,0.4s,baz=127,slow=6.0,SNR=3.8						

MAN 29 15:44:28.0, 9°.62N×**125°.59E, h148**^{km}**, mb3.9, ML2.7, MS2.2, Mindanao**

THE ***29*** *15:54:37.7, 38°.72N×20°.63E, h10^{km}, ML3.4/8, Error ellipse: s-maj=1.0km s-min=0.7km az=275.0*

IDC ***29*** *15:54:37.2±3.5, 39°.05N×20°.69E, h0^{km}, mb3.6/4, mb1 3.7/6, mb1mx3.4/45, mbtmp3.6/6, ML3.4/2, Error ellipse: s-maj=75.7km s-min=23.6km az=47.0*

ATH ***29*** *15:54:37.6, 38°.73N×20°.63E, h11^{km}, ML3.3/18, Error ellipse: s-maj=1.4km s-min=0.7km az=290.0*

ISC 29 15:54:36.9±0.7**, 38°.75N**±0°.02×**20°.61E**±0°.03**, h15**^{km}±3^{km}**, n86,** σ**1**^{s}**.06**/109**, mb3.8**/4**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKD2	Lefkada island	0.05	47	P	Pg	15 54 39.8	0.0
LKD2				S	Sg	15 54 41.2	-0.4
LKD2				AML	AML	15 54 41.6	
	comp=N,59299µm,0.2s						
LKD2				AML	AML	15 54 41.7	
	comp=E,46663µm,0.1s						
DRAG	Dragano-Lefkad	0.07	202	P	Pg	15 54 39.6	-0.3
DRAG	Dragano-Lefkad	0.07	202	P	Pg	15 54 39.7	-0.3
DRAG				S	Sg	15 54 41.5	-0.4
NYDR	Nydri-Lefkada	0.08	120	P	Pg	15 54 39.8	-0.1
NYDR				S	Sg	15 54 41.4	-0.5
	comp=E,108µm,0.3s						
NYDR	Nydri-Lefkada	0.08	120	P	Pg	15 54 39.8	-0.1
NYDR				S	Sg	15 54 41.5	-0.3
TSLK	Tsoukalades, L	0.08	26	P	Pg	15 54 40.2	+0.3
TSLK				S	Sg	15 54 42.4	+0.4
	comp=E,32µm,0.4s						
TSLK	Tsoukalades, L	0.08	26	P	Pg	15 54 40.3	+0.3
TSLK				S	Sg	15 54 42.4	+0.4
TSLK				AML	AML	15 54 42.8	
	comp=E,66090µm,0.4s						
TSLK				AML	AML	15 54 43.9	
	comp=N,59987µm,0.5s						
EVGI	Lefkada island	0.14	165	P	Pg	15 54 40.6	0.0
EVGI				S	Sg	15 54 43.0	-0.1
	comp=N,42µm,0.3s						
EVGI	Lefkada island	0.14	165	P	Pg	15 54 40.6	0.0
EVGI				S	Sg	15 54 42.8	-0.3
FSK	Fiskardo	0.30	187	P	Pg	15 54 43.4	+0.3
FSK				S	Sg	15 54 47.9	+0.6
FSK				AML	AML	15 54 48.5	
	comp=N,29154µm,0.3s						
FSK				AML	AML	15 54 49.8	
	comp=E,36750µm,0.2s						
KEF4	Livadi, Kephal	0.52	196	P	Pg	15 54 46.8	-0.2
KEF4				S	Sg	15 54 54.3	+0.3
DMLN	Damoulianata-K	0.55	200	P	Pg	15 54 47.3	-0.4
DMLN				S	Sg	15 54 55.7	+0.7
	comp=E,6µm,0.4s						
DMLN	Damoulianata-K	0.55	200	P	Pg	15 54 47.3	-0.4
DMLN				S	Sg	15 54 55.6	+0.7
LXRA	Lixouri, Kepha	0.57	194	P	Pg	15 54 48.0	-0.1
VLS	Valsamata	0.57	182	P	Pg	15 54 47.9	-0.4
VLS				AML	AML	15 55 00.8	
	comp=E,6870µm,0.3s						
VLS				AML	AML	15 55 01.3	
	comp=N,7084µm,0.3s						
ARGA	Argostoli. Kep	0.58	190	P	Pg	15 54 49.0	+0.6
KEF3	Kipouria, Keph	0.59	201	P	Pg	15 54 47.5	-0.9
KEF3				S	Sg	15 54 55.3	-0.9
PSDA	Pessada-Kefalo	0.64	182	P	Pg	15 54 48.8	-0.6
PSDA				S	Sg	15 54 58.4	+0.5
	comp=N,860nm,0.2s						
PSDA	Pessada-Kefalo	0.64	182	P	Pg	15 54 49.0	-0.4
PSDA				S	Sg	15 54 58.3	+0.5
IGT	Igoumenitsa	0.81	345	P	Pg	15 54 52.9	+0.3
IGT				AML	AML	15 55 09.5	
	comp=E,2136µm,0.4s						
IGT				AML	AML	15 55 10.8	
	comp=N,2297µm,0.2s						
JAN	Janina	0.92	12	P	Pb	15 54 55.7	+1.0
JAN				AML	AML	15 55 12.8	
	comp=E,3648µm,0.4s						
JAN				AML	AML	15 55 13.0	
	comp=N,2288µm,0.5s						
EVR	Evrytania	0.95	80	P	Pb	15 54 55.1	0.0
EVR				AML	AML	15 55 18.6	
	comp=E,1300µm,0.5s						
EVR				AML	AML	15 55 20.3	
	comp=N,979µm,0.4s						
VTN	Vitineika	0.95	151	P	Pb	15 54 55.5	+0.5
RLS	Riolos of Patr	0.97	136	P	Pg	15 54 55.0	-0.6
RLS				AML	AML	15 55 16.2	
	comp=E,1053µm,0.3s						
RLS				AML	AML	15 55 18.8	
	comp=N,1596µm,0.4s						
ANX	Ano Chora	1.04	98	P	Pb	15 54 56.5	-0.2
ANX	Ano Chora	1.04	98	P	Pb	15 54 56.8	+0.1
ANX				AML	AML	15 55 15.1	
	comp=N,4622µm,0.4s						
ANX				AML	AML	15 55 16.1	
	comp=E,4378µm,0.3s						
LTHK	Lithakia	1.06	170	P	Pb	15 54 56.1	-0.8
LTHK				S	Sn	15 55 12.2	+0.6
	comp=E,2µm,0.4s						
LTHK	Lithakia	1.06	170	P	Pb	15 54 56.2	-0.7
LTHK				AML	AML	15 55 18.5	
	comp=N,3474µm,0.6s						
LTHK				AML	AML	15 55 19.3	
	comp=E,2968µm,0.4s						
EFP	Efpalio	1.07	107	P	Pg	15 54 56.8	-0.7
EFP				S	Sn	15 55 13.3	+1.4
	comp=E,3µm,0.2s						
EFP	Efpalio	1.07	107	P	Pg	15 54 56.8	-0.7
EFP				AML	AML	15 55 16.0	
	comp=N,6702µm,0.2s						
EFP				AML	AML	15 55 16.4	
	comp=E,4420µm,0.2s						
KASA	Kassiopi	1.12	332	P	Pb	15 54 59.3	+1.3
KEK	Kerkira	1.15	327	P	Pn	15 54 59.9	+1.4
DRO	Drossia	1.18	132	P	Pb	15 54 58.6	-0.4
DRO	Drossia	1.18	132	P	Pb	15 54 58.6	-0.4
DRO				AML	AML	15 55 20.0	
	comp=N,3379µm,0.3s						
DRO				AML	AML	15 55 20.1	
	comp=E,4200µm,0.2s						
SERG	Sergoula	1.18	106	P	Pn	15 54 59.1	+0.2
SERG				AML	AML	15 55 19.7	
	comp=E,4096µm,0.2s						
SERG				AML	AML	15 55 19.8	
	comp=N,4974µm,0.4s						
LAKA	Lakka	1.19	115	P	Pb	15 54 58.9	-0.3
LAKA				AML	AML	15 55 23.4	
	comp=E,859µm,0.4s						
LAKA				AML	AML	15 55 24.6	
	comp=N,1180µm,0.4s						
TRIZ	Trizonia	1.21	108	P	Pn	15 54 59.4	+0.1
TRIZ	Trizonia	1.21	108	P	Pn	15 54 59.5	+0.1
SRN	Sarande	1.22	337	P	Pb	15 55 01.3	+1.6
SRN				S	Sg	15 55 18.2	+1.9
	comp=N,308nm,0.5s						
ALIK	Aliki, Aigiali	1.28	112	P	Pb	15 55 00.4	-0.2
KPRO	Kipourio	1.33	26	P	Pb	15 55 02.5	+0.8
KPRO				AML	AML	15 55 27.8	
	comp=E,1802µm,0.5s						
KPRO				AML	AML	15 55 30.0	
	comp=N,2822µm,0.8s						
THL	Klokotos Trika	1.36	53	P	Pg	15 55 02.8	-0.3
THL				AML	AML	15 55 28.8	
	comp=N,2032µm,0.6s						
THL				AML	AML	15 55 29.0	
	comp=E,3435µm,0.6s						
AGG	Agios Georgios	1.37	78	P	Pg	15 55 03.1	-0.2
AGG				AML	AML	15 55 30.4	
	comp=N,1241µm,0.4s						
AGG				AML	AML	15 55 31.6	
	comp=E,962µm,0.5s						
GUR	Goura	1.59	120	P	Pn	15 55 05.2	+0.6
GUR	Goura	1.59	120	P	Pn	15 55 05.1	+0.6
GUR				AML	AML	15 55 35.8	
	comp=N,2193µm,0.4s						
GUR				AML	AML	15 55 38.1	
	comp=E,1520µm,0.4s						
VIL2	Platees	2.15	104	P	Pb	15 55 15.8	+0.1
EPID	Epidavros	2.28	119	P	Pb	15 55 17.8	+0.1
OHR	Ohrid	2.36	3	*i* Pn	Pb	15 55 18.6	-0.5
STIP	Stip	3.18	22	*i* Pn	Pb	15 55 30.7	-2.3
DRME	Dracevica, Mon	3.60	343	*e*Pn	Pn	15 55 33.5	+1.4
PDG	Podgorica	3.81	345	*e*Pn	Pn	15 55 35.6	+0.5
HCY	Herceg Novi	4.03	337	*e*Pn	Pn	15 55 38.1	+0.1
TREB	Trebinje	4.32	337	*e*Pn	Pn	15 55 42.2	+0.2
DBRK	Dubrovnik	4.34	335	*e*Pn	Pn	15 55 42.3	0.0
DBRK				Sn	Sn	15 56 31.2	-1.4
BRY	Bratogost	4.43	340	*e*Pn	Pn	15 55 44.0	+0.3
UPM	Unac-Piva	4.63	344	*e*Pn	Pn	15 55 47.7	+1.2
STON	Ston	4.67	333	*e*Pn	Pn	15 55 46.1	-0.7
STON	Ston	4.67	333	*e*Pn	Pn	15 55 46.8	0.0
STON				Sn	Sn	15 56 36.2	-4.5
IDI	Anoyia	4.87	134	Pn	Pn	15 55 53.6	+3.9
	comp=E,0.4nm,0.3s,baz=240,slow=13,SNR=0.9						
IDI				Sn	Sn	15 56 47.9	+2.1
	comp=E,0.6nm,0.3s,baz=74,slow=23,SNR=2.0						
LSTV	Lastovo	4.91	326	*e*Pn	Pn	15 55 49.8	-0.2
LSTV				Sn	Sn	15 56 43.4	-3.2
RUDO	Rudo	4.95	350	*e*Pn	Pn	15 55 50.8	+0.1
BBLS	Lazići	5.19	350	*e*Pn	Pn	15 55 54.1	0.0
MAKA	Makarska	5.28	330	*e*Pn	Pn	15 55 55.5	+0.3
MAKA				Sn	Sn	15 56 53.8	-2.1
DIVS	Divibare	5.36	355	*e*Pn	Pn	15 55 57.0	+0.6
RICI	Ricice	5.42	332	*e*Pn	Pn	15 55 57.4	+0.3
HVAR	Hvar	5.43	326	*e*Pn	Pn	15 55 57.3	0.0
HVAR				Sn	Sn	15 56 55.5	-3.9
ZIRJ	Zirje	6.16	324	*e*Pn	Pn	15 56 07.5	+0.2
MORI	Morici	6.30	326	*e*Pn	Pn	15 56 09.8	+0.5
FRGS	Fruska Gora	6.43	355	*e*Pn	Pn	15 56 09.8	-1.2
BLY	Banja Luka	6.51	338	*e*Pn	Pn	15 56 05.0	-7.2
DUGI	Dugi Otok	6.69	323	*e*Pn	Pn	15 56 15.4	+0.8
UDBI	Udbina	6.81	329	*e*Pn	Pn	15 56 17.7	+1.3
MORH	Mrgy, Hungar	7.60	350	*e*Pn	Pn	15 56 25.8	-1.2
RIY	Rijeka	7.99	327	*e*Pn	Pn	15 56 32.4	-0.1
BRJN	Brijuni	8.00	322	*e*Pn	Pn	15 56 32.4	-0.2
CRES	Cresnjev	8.03	333	*e*Pn	Pn	15 56 32.9	-0.1
CEY	Cerknica	8.35	329	*e*Pn	Pn	15 56 37.7	+0.3
OBKA	Obir	8.94	332	*e*Pn	Pn	15 56 46.3	+0.7
	comp=E,0.8nm,0.3s						
ARSA	Arzberg	9.27	338	*e*Pn	Pn	15 56 50.5	+0.5
	comp=E,1.3nm,0.4s						
ABTA	Abfaltersbach	9.96	326	*e*Pn	Pn	15 56 59.7	+0.2
	comp=E,1.1nm,0.3s						
MOA	Molln	10.20	335	*e*Pn	Pn	15 57 03.2	+0.5
	comp=E,1.0nm,0.3s						
GERES	GERESS Array B	11.25	336	Pn	Pn	15 57 17.0	-0.2
	comp=E,0.2nm,0.3s,baz=149,slow=14,SNR=4.7						
HFS	Hagfors	21.84	351	P	P	15 59 28.4	-0.2
	comp=E,3.0nm,0.8s,baz=171,slow=12,SNR=1.3						
FINES	FINESS Array B	22.97	7	P	P	15 59 39.2	-1.3
	comp=E,4.4nm,1.0s,baz=171,slow=9.8,SNR=4.8						
MKAR	Makanchi Array	44.94	59	P	P	16 02 52.7	+1.5
	comp=E,0.2nm,0.5s,baz=283,slow=7.2,SNR=4.3						
ZALV	Zalesovo Beam	45.26	49	P	P	16 02 53.6	+0.1
	comp=E,0.4nm,0.3s,baz=274,slow=9.6,SNR=2.3						

IDC ***29*** *16:07:32.9±0.7, 23°.90N×123°.24E, h0^{km}, mb4.0/13, mb1 4.0/16, mb1mx3.8/50, mbtmp3.9/16, ML3.0/3, MS3.1/4, Ms1 3.1/4, ms1mx2.7/41, Error ellipse: s-maj=23.7km s-min=17.5km az=69.0*

JMA ***29*** *16:07:37.2±0.2, 23°.85N×123°.39E, h30^{km}±2^{km}, M3.9*

NIED ***29*** *16:07:37.2, 23°.85N×123°.39E, h30^{km}, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.88; $M_{\theta\theta}$-0.86; $M_{\phi\phi}$-0.03; $M_{r\theta}$0.99; $M_{\theta\phi}$-0.45; $M_{\phi r}$0.74; Fault plane solution: $M_0$1.57000×10^{15} NP1:ϕ_s55.00000°, δ71.00000°, λ82.00000°. NP2:ϕ_s260.00000°, δ20.00000°, λ113.00000°.*

NEIC ***29*** *16:07:39.0±1.7, 23°.94N±0°.05×123°.28E±0°.07, h37^{km}±7^{km}, mb4.4/36 Error ellipse: s-maj=9.5km s-min=7.1km az=85.0*

ISC 29 16:07:37.4±1.1**, 23°.91N**±0°.05×**123°.35E**±0°.03**, h31**^{km}±7^{km}**, n78,** σ**0**^{s}**.92**/85**, mb4.3**/28**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HATJ	Hateruma jima	0.44	70	P	Pb	16 07 46.3	-0.7
HATJ				S	Sb	16 07 52.8	-0.7
IRIF	Iriomote-Funau	0.55	39	P	Pn	16 07 48.3	-0.8
IRIF				S	Sn	16 07 56.6	-0.7
YOJ	Yonaguni jima	0.64	331	P	Pb	16 07 50.6	+0.4
YOJ				S	Sb	16 08 00.0	+1.2
YOJ	Yonaguni jima	0.64	331		Pb	16 07 50.5	+0.4
YOJ				Sn	Sn	16 07 58.2	-1.2
JYNG	Yonagunijimaku	0.66	326	P	Pb	16 07 50.9	+0.4
JYNG				S	Sb	16 07 59.8	+0.4
JKRS	Kuro-shima	0.68	61	P	Pn	16 07 50.6	-0.4
JKRS				S	Sn	16 08 00.3	-0.3
JIJ	Ishigaki jima	0.85	58	P	Pn	16 07 52.8	-0.5
JIJ				S	Sn	16 08 04.1	-0.7
JISG	Ishigakijimahi	1.11	52	P	Pn	16 07 56.6	-0.2
JTJ	Tarama	1.43	59	P	Pn	16 08 01.8	+0.5
JTJ				S	Sn	16 08 19.9	+0.8
NACB	Ninganchiao	1.63	280		Pn	16 08 04.3	+0.2
YULB	Yu-li	1.95	255		Pn	16 08 08.2	-0.3
YHNB	Yeheng	1.96	293		Pb	16 08 10.6	-1.9
TATO	Taipei	2.01	302		Pb	16 08 11.0	-2.3
SSLB	Suanglung	2.20	267		Pn	16 08 12.2	+0.3
TWG	Pinlang	2.36	243		Pn	16 08 13.3	-0.7
TPUB	Ta-pu	2.57	257		Pn	16 08 18.5	+1.5
KNMB	Chin-men Tao	4.57	278	Pn	Pn	16 08 45.3	+0.9
JOW	Kunigami	5.32	56	Pn	Pn	16 08 56.6	+1.8
	1.7nm,0.3s,baz=258,slow=18,SNR=7.3						
JOW				Sn	Sn	16 09 54.6	-0.5
	1.8nm,0.3s,baz=98,slow=18,SNR=1.4						
JOW	Kunigami	5.32	56		Pn	16 08 57.6	+2.8
INCN	Inchon	13.82	11	Pn	Pn	16 10 51.3	0.0
KSRS	Korea Array	14.06	15	Pn	Pn	16 10 55.6	+1.1
	0.1nm,0.3s,baz=193,slow=12,SNR=2.9						
KSRS				LR	LR	16 17 04.2	
	comp=Z,72nm,18.9s,baz=188,slow=41						
MJAR	Matsushiro Arr	17.95	42	P	Pn	16 11 44.1	-0.7
	0.0nm,0.3s,baz=213,slow=13,SNR=1.7						
MJAR				LR	LR	16 18 13.1	
	comp=Z,30nm,21.0s,baz=260,slow=36						
KKM	Kota Kinabalu	19.04	202	P	P	16 11 57.6	+0.3
KKM				IAmb	IAmb	16 12 06.6	
	comp=Z,20nm,1.1s						
CMAR	Chiang Mai Arr	23.38	261	LR	LR	16 22 27.4	
	comp=Z,20nm,18.2s,baz=226,slow=38						
SONM	Songino Array	27.43	335	P	P	16 13 19.3	-1.2
	comp=Z,0.7nm,0.6s,baz=150,slow=9.7,SNR=6.2						
SONM				LR	LR	16 25 34.1	
	comp=Z,112nm,19.3s,baz=152,slow=40						
SONM	Songino Array	27.43	335	IAmb	IAmb	16 13 22.2	
	comp=Z,3.2nm,1.4s						
MK31	Makanchi Array	39.92	315	P	P	16 15 08.7	0.0
MKAR	Makanchi Array	39.92	315	P	P	16 15 09.0	+0.3
	comp=Z,0.6nm,0.5s,baz=100,slow=10.0,SNR=18						
MKAR	Makanchi Array	39.92	315	P	P	16 15 08.3	-0.5
MAKZ	Makanchi	40.13	315	P	P	16 15 09.9	-0.5
ZALV	Zalesovo Beam	41.56	326	P	P	16 15 21.4	-0.7
	comp=Z,1.4nm,0.6s,baz=107,slow=8.9,SNR=7.9						

COEN	Coen	42.33	151	P	P	16 15 29.5	+0.8
COEN				IAmb	IAmb	16 15 35.3	
	comp=Z,12nm,1.4s						
WRA	Warramunga Arr	44.88	165	P	P	16 15 48.8	-0.4
	comp=Z,1.0nm,0.7s,baz=348,slow=8.4,SNR=8.3						
WR0	Warramunga Arr	44.94	165	P	P	16 15 49.9	+0.1
WR0				IAmb	IAmb	16 16 10.1	
	comp=Z,9.6nm,1.4s						
AS31	Alice Springs	48.38	167	P	P	16 16 17.1	+0.4
ASAR	Alice Springs	48.38	167	P	P	16 16 17.2	+0.6
	comp=Z,0.5nm,0.7s,baz=353,slow=7.0,SNR=15						
AMKA	Amchitka	50.57	42	P	P	16 16 32.8	-0.2
ABKAR	Akbulak array	55.05	314	P	P	16 17 06.3	+0.1
STKA	Stephens Creek	58.15	162	P	P	16 17 28.4	+0.1
STKA				IAmb	IAmb	16 17 51.6	
	comp=Z,2.4nm,1.5s						
TTA	Tatalina	64.76	30	P	P	16 18 13.3	+0.5
TTA				IAmb	IAmb	16 18 14.8	
	comp=Z,1.7nm,0.9s						
J20K	Nowinta River	65.51	28	P	P	16 18 18.9	+1.4
J20K				IAmb	IAmb	16 18 34.1	
	comp=Z,5.6nm,1.4s						
IMAR	Indian Mountai	65.55	26	P	P	16 18 17.7	0.0
H21K	Melozitna Rive	65.96	27	P	P	16 18 21.9	+1.5
H21K				IAmb	IAmb	16 18 34.3	
	comp=Z,6.6nm,1.4s						
CAST	Castle Rocks	66.49	29	P	P	16 18 25.3	+1.5
BPAW	Bear Paw Mtn.	66.89	28	P	P	16 18 27.6	+1.2
TOLK	Toolik Lake Re	66.92	23	P	P	16 18 27.7	+1.2
TOLK				IAmb	IAmb	16 18 29.1	
	comp=Z,2.9nm,0.8s						
KDAK	Kodiak Island	66.98	35	P	P	16 18 26.8	-0.3
I23K	Minto, Yukon-K	67.45	27	P	P	16 18 30.4	+0.5
I23K				IAmb	IAmb	16 18 38.0	
	comp=Z,7.2nm,1.4s						
RND	Reindeer	67.93	29	P	P	16 18 33.3	+0.2
MDM	Murphy Dome	67.95	27	P	P	16 18 34.1	+1.0
H24K	Noodor Dome	67.95	26	P	P	16 18 34.8	+1.6
H24K				IAmb	IAmb	16 18 45.8	
	comp=Z,5.1nm,1.5s						
WRH	Wood River Hil	68.09	28	P	P	16 18 35.0	+1.1
WRH				IAmb	IAmb	16 18 52.9	
	comp=Z,5.1nm,1.4s						
ILAR	Eielson Array	68.55	27	P	P	16 18 38.2	+1.4
	comp=Z,0.4nm,0.8s,baz=280,slow=5.6,SNR=8.8						
BMAR	Burnt Mountain	68.96	24	P	P	16 18 41.2	+1.8
DOT	Dot Lake	69.99	28	P	P	16 18 45.9	+0.1
GLB	Gilahina Butte	70.63	31	P	P	16 18 50.5	+0.7
DAWY	Dawson	71.88	27	P	P	16 18 58.1	+0.8
DAWY				IAmb	IAmb	16 19 15.0	
	comp=Z,6.0nm,1.4s						
WMR	Waimanalo Ridg	72.00	74	P	P	16 18 57.5	-1.2
FINES	FINESS Array B	72.68	330	P	P	16 19 02.0	0.0
	comp=Z,3.9nm,0.8s,baz=56,slow=5.2,SNR=8.0						
INK	Inuvik	72.73	22	P	P	16 19 02.8	+0.6
	comp=Z,2.4nm,0.8s,baz=309,slow=7.2,SNR=11						
INK	Inuvik	72.73	22	P	P	16 19 02.5	+0.3
INK				IAmb	IAmb	16 19 10.2	
	comp=Z,8.2nm,1.4s						
A36M	Sachs Harbour	73.80	18	P	P	16 19 07.6	-0.8
A36M				IAmb	IAmb	16 19 10.8	
	comp=Z,2.3nm,0.8s						
AKASG	Malin Array Be	74.39	319	P	P	16 19 11.6	-0.7
	comp=Z,2.0nm,0.8s,baz=58,slow=6.1,SNR=7.4						
BR131	Keskin Array S	74.93	307	P	P	16 19 16.3	+0.5
BR131				IAmb	IAmb	16 19 17.9	
	comp=Z,4.7nm,0.8s						
BRTR	Keskin Array B	74.93	307	P	P	16 19 17.1	+1.2
	comp=Z,2.4nm,0.7s,baz=104,slow=6.3,SNR=14						
BRTR	Keskin Array B	74.93	307	P	P	16 19 16.6	+0.8
OUZ	Omahuta	75.65	139	P	P	16 19 20.3	+0.6
PABE	Paberze	75.73	325	P	P	16 19 20.6	+0.7
BUR08	Bucovina Ar. S	77.93	317	P	P	16 19 33.1	+0.5
BUR08				IAmb	IAmb	16 19 45.9	
	comp=Z,6.8nm,1.4s						
BURAR	Bucovina Array	77.93	317	P	P	16 19 33.4	+0.8
RES	Resolute Bay	78.61	10	P	P	16 19 35.9	+0.2
NC405	NORSAR Array S	79.14	333	P	P	16 19 38.0	-0.9
NC405				IAmb	IAmb	16 20 01.4	
	comp=Z,1.8nm,0.6s						
NC303	NORSAR Array S	79.23	333	P	P	16 19 39.2	-0.1
NC303				IAmb	IAmb	16 19 49.2	
	comp=Z,2.3nm,0.7s						
NB201	NORSAR Array S	79.35	333	P	P	16 19 40.0	-0.1
NOA	NORSAR Array B	79.39	333	P	P	16 19 38.9	-1.4
	comp=Z,1.6nm,0.7s,baz=59,slow=5.4,SNR=3.7						
NC204	NORSAR Array S	79.46	333	P	P	16 19 40.6	-0.1
YKA	Yellowknife Ar	82.45	23	P	P	16 19 56.2	-0.3
	comp=Z,0.7nm,0.6s,baz=316,slow=3.9,SNR=12						
GERES	GERESS Array B	84.31	321	P	P	16 20 06.5	0.0
	comp=Z,0.3nm,0.4s,baz=76,slow=4.1,SNR=2.2						

GUC 29 16:12:17.2±0.8, 27°.74S×69°.34W, h92km±14km, ML3.8, 1C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO03	Copiap	0.81	280	eP	Pn	16 12 36.3	+1.3
GO03				iS	Sn	16 12 50.2	+1.9
GO03				IAML		16 12 51.2	
	comp=E,14μm,0.1s						
AC02	Maricunga	0.92	12	⇑iP	Pn	16 12 38.6	+1.9
AC02				iS	Sn	16 12 54.0	+2.9
AC02				IAML		16 12 56.2	
	comp=E,3μm,0.1s						
VCA	Vinchina	1.41	135	IAML		16 13 12.5	
	comp=N,1μm,0.3s						
AC04	Llanos de Chal	1.60	253	eP	Pn	16 12 45.5	+1.1
AC04				iS	Sn	16 13 06.6	+1.6
AC04				IAML		16 13 10.0	
	comp=E,1μm,0.2s						
LCO	Las Campanas	1.75	223	eP	Pn	16 12 47.7	+1.2
LCO				eS	Sn	16 13 11.7	+3.0
CO05	La Serena	2.74	217	eP	Pn	16 13 00.2	+0.9
CO05				IAML		16 14 04.2	
	comp=N,376nm,0.2s						
GO04	Tololo Observa	2.75	207	eP	Pn	16 13 01.3	+1.8
CYA	Choya	3.20	104	⇓iP	Pn	16 13 08.3	+2.8
CYA				IAML		16 13 46.2	
	comp=N,138nm,0.2s						
PB14	IPOC Station P	3.24	343	eP	Pn	16 13 04.8	-1.5
CO06	Fray Jorge	3.55	214	eP	Pn	16 13 10.0	-0.2
AHML	Horco Molle	3.69	76	⇓iP	Pn	16 13 14.4	+2.3
PB10	IPOC Station P	4.34	345	eP	Pn	16 13 18.0	-3.0
PB15	IPOC Station P	4.51	358	eP	Pn	16 13 21.9	-1.6
PB05	IPOC Station P	4.92	351	eP	Pn	16 13 25.3	-3.6
PB05				IAML		16 14 38.0	
PB06	IPOC Station P	5.01	358	eP	Pn	16 13 27.8	-2.4
LVC	Limon Verde	5.12	4	eP	Pn	16 13 29.6	-2.2
VA03	San Esteban	5.12	192	eP	Pn	16 13 33.1	+1.6
VA03				iS	Sn	16 14 31.0	+1.5

PGC ***29*** *16:18:22.7±3.4, 49°.39N×129°.75W, h10km, ML3.1/35, MLSn3.2/33, Mw3.8/33, 221km Wsw of Pt. Hardy, Bc Vancouver Island, Canada Region*

IDC ***29*** *16:18:26.9±1.5, 49°.65N×129°.25W, h0km, mb3.7/4, mb1 4.0/12, mb1mx3.8/43, mbtmp3.8/12, ML3.7/7, MS3.4/9, Ms1 3.4/9, ms1mx3.1/43, Error ellipse: s-maj=24.1km s-min=10.4km az=67.0*

ISC 29 16:18:26.0±2.3, 49°.62N±0°.06×129°.35W±0°.07, h2km±14km, n109, σ1s.38/106, mb3.4/4, MS3.5/6, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BPBC	Brooks Peninsu	1.15	62	Pn	Pg	16 18 47.3	-0.8
HOLB	Holberg	1.29	37	Pn	Pn	16 18 49.3	-1.7
HOLB				Sn	Sb	16 19 07.8	-0.2
PACB	Port Alice, BC	1.45	55	Pn	Pn	16 18 51.4	-1.8
PACB				Sn	Sn	16 19 11.1	-1.7
EDB	Eliza Dome	1.47	79	Pn	Pn	16 18 51.4	-2.1
MAYB	Maynard	1.61	60	Pn	Pn	16 18 53.8	-1.7
PHC	Port Hardy	1.64	48	Pn	Pn	16 18 54.3	-1.6
PHC				Sn	Sn	16 19 16.8	-0.8
KEMF	NEPTUNE Canada	1.68	174	Pn	Pn	16 18 46.3	-10
TLCB	Telegraph Cove	1.87	59	Pn	Pn	16 18 57.8	-1.1
TLCB				Sn	Sn	16 19 23.4	+0.4
WOSB	Woss	1.88	72	Pn	Pn	16 18 58.1	-1.1
GDR	Gold River	2.16	84	Pn	Pn	16 19 01.0	-2.0
GDR				Sn	Sn	16 19 29.5	-0.8
NCRB	Newcastle Ridg	2.26	68	Pn	Pn	16 19 04.0	-0.6
SPLB	Strathcona Par	2.41	82	Pn	Pn	16 19 05.5	-1.0
BTB	Buttle Lake	2.50	92	Pn	Pn	16 19 06.5	-1.3
OZB	Mount Ozzard	2.61	103	Pn	Pn	16 19 06.8	-2.4
CBB	Campbell River	2.61	79	Pn	Pn	16 19 08.4	-0.8
MWAB	Mount Washingt	2.63	86	Pn	Pn	16 19 08.6	-1.0
BBB	Bella Bella	2.69	16	Pn	Pn	16 19 09.3	-0.8
	46nm,0.3s,baz=215,slow=15,SNR=312						
BBB				Sn	Sn	16 19 40.7	-2.5
	62nm,0.3s,baz=46,slow=14,SNR=11						
BBB	Bella Bella	2.69	16	Pn	Pn	16 19 09.4	-0.8
BBB				Sn	Sn	16 19 41.0	-2.3
BFSB	Bamfield	2.87	104	Pn	Pn	16 19 11.3	-1.5
B928	Bamfield	2.87	104	Pn	Pn	16 19 10.2	-2.5
B927	Port Alberni	2.99	96	Pn	Pn	16 19 13.0	-1.4
MGB	Mount Grey	3.11	100	Pn	Pn	16 19 14.5	-1.7
TXB	Texada	3.19	87	Pn	Pn	16 19 16.2	-1.0
BNB	Barry Inlet	3.33	334	Pn	Pn	16 19 17.3	-1.8
GHNB	Nanoose	3.35	93	Pn	Pn	16 19 19.2	-0.1
PFB	Port Renfrew	3.39	106	Pn	Pn	16 19 18.9	-1.1
BUTB	Butedale	3.49	9	Pn	Pn	16 19 20.1	-1.3
BUTB				Sn	Sn	16 20 00.8	-2.6
B926	Mesachie Lake	3.51	101	Pn	Pn	16 19 20.4	-1.2
CLRS	Cowichan Lake	3.51	101	Pn	Pn	16 19 20.0	-1.6
NLLB	Nanaimo Lost L	3.52	94	Pn	Pn	16 19 21.8	+0.1
SHB	Sechelt	3.56	88	Pn	Pn	16 19 21.6	-0.7
BNKB	Banks Island	3.73	355	Pn	Pn	16 19 22.5	-2.2
GOBB	Galiano Island	3.88	98	Pn	Pn	16 19 27.3	+0.7
BNAB	Bonilla	3.96	349	Pn	Pn	16 19 25.3	-2.5
HWKB	Hawksbury Isla	3.99	2	Pn	Pn	16 19 25.6	-2.6
HWKB				Sn	Sn	16 20 11.9	-3.6
WPB	Watts Point	3.99	87	Pn	Pn	16 19 29.2	+1.1
B009	North Saanich	3.99	102	Pn	Pn	16 19 27.0	-1.1
B010	North Saanich	3.99	102	Pn	Pn	16 19 27.3	-0.8
PGC	Sidney	3.99	102	Pn	Pn	16 19 27.3	-0.8
PA12	PA12 Sannich	3.99	102	Pn	Pn	16 19 27.3	-0.8
B011	North Saanich	3.99	102	Pn	Pn	16 19 26.9	-1.2
SNB	Saturna Island	4.14	99	Pn	Pn	16 19 30.4	+0.2
OSD	Olympics--Snow	4.15	114	Pn	Pn	16 19 29.0	-1.5
WSLR	Whistler	4.19	81	Pn	Pn	16 19 31.6	+0.7
GRNB	Grenville Isla	4.25	355	Pn	Pn	16 19 30.1	-1.6
GRNB				Sn	Sn	16 20 19.5	-2.5
MCW	Mount Constitu	4.38	100	Pn	Pn	16 19 33.5	0.0
HNBB	Haney	4.43	92	Pn	Pn	16 19 34.2	0.0
KITB	Kitimat	4.49	5	Pn	Pn	16 19 33.9	-1.0
HDW	Hoodsport	4.62	113	Pn	Pn	16 19 34.6	-2.2
RUBB	Prince Rupert	4.75	354	Pn	Pn	16 19 37.3	-1.3
VDB	Vedder Mountai	4.78	94	Pn	Pn	16 19 39.1	+0.2
A05A	Maple Falls	4.79	95	Pn	Pn	16 19 39.6	+0.5
CMW	Cultus Mountai	4.90	101	Pn	Pn	16 19 40.7	-0.1
LLLB	Lillooet	4.91	76	Pn	Pn	16 19 41.0	+0.2
MBW	Mount Baker	4.95	97	Pn	Pn	16 19 42.1	+0.5
JCW	Jim Creek	5.09	103	Pn	Pn	16 19 43.3	-0.1
HOPB	Hope	5.17	90	Pn	Pn	16 19 45.2	+0.8
B06A	Marblemount	5.28	99	Pn	Pn	16 19 46.1	+0.2
RPW	Rockport	5.28	100	Pn	Pn	16 19 46.0	0.0
GPW	Glacier Peak	5.62	102	Pn	Pn	16 19 51.0	+0.2
FSB	Fort Saint Jam	5.77	31	Pn	Pn	16 19 53.2	+0.6
FMW	Mount Fremont	5.79	115	Pn	Pn	16 19 52.1	-0.9
LTY	Liberty	6.24	109	Pn	Pn	16 19 58.6	-0.5
PNT	Penticton	6.35	89	Pn	Pn	16 20 00.6	0.0
B08A	Colville Reser	6.71	97	Pn	Pn	16 20 05.2	-0.4
SLEB	Sale Mountain	7.33	74	Pn	Pn	16 20 15.8	+1.5
MNB	Mounoet Dainar	7.40	65	P	Pn	16 20 15.9	+0.8
C09A	Chrisman Ranch	7.55	100	P	Pn	16 20 17.2	+0.2
NEW	Newport	8.16	95	Pn	Pn	16 20 25.7	+0.2
	1.8nm,0.3s,baz=294,slow=12,SNR=22						
NEW				LR	LR	16 23 39.5	
	comp=Z,456nm,20.4s,baz=247,slow=39						
DLBC	Dease Lake	8.85	358	Pn	Pn	16 20 36.2	+1.4
	0.2nm,0.3s,baz=200,slow=18,SNR=1.7						
DLBC	Dease Lake	8.85	358	P	Pn	16 20 36.9	+2.1
YBH	Yreka Blue Hor	9.15	147	Pn	Pn	16 20 40.0	+0.9
	0.1nm,0.3s,baz=349,slow=14,SNR=8.4						
PRDA	Priddis	9.73	77	P	Pn	16 20 49.0	+2.0
BSMT	Bassoo Peak	9.78	95	P	Pn	16 20 47.5	-0.4
FBMT	Ferry Basin	10.15	97	P	Pn	16 20 52.8	0.0
SWMT	Swartz Lake	10.39	96	P	Pn	16 20 55.9	-0.2
SLMT	Seeley Lake	10.80	97	P	Pn	16 21 01.7	0.0
BPMT	Black Pine Rid	11.11	101	P	Pn	16 21 06.8	+0.7
OVMT	Ovando	11.18	97	P	Pn	16 21 07.3	+0.4
ELMT	Elliston	11.69	99	P	Pn	16 21 14.4	+0.5
HRY	Holter Researc	12.05	97	P	Pn	16 21 17.2	-1.6
TPMT	Tepee Creek	12.98	105	P	Pn	16 21 32.9	+1.3
ELK	Elko	13.31	126	LR	LR	16 26 28.4	
	comp=Z,123nm,19.7s,baz=320,slow=36						
YKA	Yellowknife Ar	15.25	27	Pn	Pn	16 22 00.7	-1.4
	0.1nm,0.3s,baz=210,slow=12,SNR=7.3						
PDAR	Pinedale Array	15.30	109	Pn	P	16 22 06.0	-2.2
	0.1nm,0.3s,baz=316,slow=11,SNR=17						
PDAR				LR	LR	16 28 56.7	
	comp=Z,72nm,18.8s,baz=302,slow=41						
ILAR	Eielson Array	17.81	335	P	P	16 22 37.3	+1.8
	0.0nm,0.3s,baz=139,slow=8.7,SNR=6.0						
INK	Inuvik	18.86	355	P	Pn	16 22 48.0	+0.5
	0.1nm,0.3s,baz=155,slow=10,SNR=9.0						
INK	Inuvik	18.86	355	P	Pn	16 22 48.6	+1.1
KUKN	Kugluktuk,NWT	19.60	16	P	Pn	16 22 58.3	+1.8
COLD	Coldfoot	20.56	337	P	Pn	16 23 08.6	+0.8
ULM	Lac du Bonnet	21.46	75	P	P	16 23 16.4	+1.0
	21nm,0.9s,baz=285,slow=12,SNR=16						
ULM				LR	LR	16 32 07.1	
	comp=Z,182nm,19.2s,baz=278,slow=38						
ULM	Lac du Bonnet	21.46	75	P	P	16 23 16.7	+1.3
ANMO	Albuquerque	22.28	123	P	P	16 23 26.1	+1.5
	1.4nm,0.8s,baz=326,slow=15,SNR=5.6						
ANMO				LR	LR	16 32 58.3	
	comp=Z,28nm,19.7s,baz=309,slow=39						
A36M	Sachs Harbour	22.52	3	P	P	16 23 28.2	+1.6
EPLO	Experimental L	22.94	76	P	P	16 23 31.9	+0.7
ATKO	Atikokan Iron	24.50	77	P	P	16 23 45.5	-1.0
PKLO	Pickle Lake	24.65	71	P	P	16 23 44.6	-3.1
TXAR	Lajitas Array	28.11	127	P	P	16 24 20.1	+0.8
	0.3nm,0.8s,baz=326,slow=8.0,SNR=3.3						
SCHQ	Schefferville	37.51	57	LR	LR	16 41 13.1	
	comp=Z,102nm,20.9s,baz=175,slow=36						
H11N2	WAKE ISLAND Hy	58.27	263	T	T	17 31 06.2	
	baz=43,slow=75,SNR=59						
H11N3	WAKE ISLAND Hy	58.28	263	T	T	17 31 02.2	
	baz=43,slow=75,SNR=56						
H11N1	WAKE ISLAND Hy	58.29	263	T	T	17 31 08.2	
	baz=43,slow=75,SNR=46						
H11S1	WAKE ISLAND Hy	59.29	263	T	T	17 32 53.9	
	baz=50,slow=74,SNR=4.9						
H11S2	WAKE ISLAND Hy	59.30	263	T	T	17 32 54.6	
	baz=50,slow=74,SNR=7.7						
H11S3	WAKE ISLAND Hy	59.31	263	T	T	17 32 55.3	
	baz=50						
ROSC	El Rosal	64.20	115	LR	LR	17 00 54.8	
	comp=Z,21nm,18.3s,baz=147,slow=40						
JOW	Kunigami	77.50	297	LR	LR	17 00 02.5	
	comp=Z,64nm,21.7s,baz=150,slow=32						
MKAR	Makanchi Array	80.13	339	P	P	16 30 37.9	+0.6
	0.4nm,0.9s,baz=20,slow=4.6,SNR=3.5						
CMAR	Chiang Mai Arr	99.89	314	LR	LR	17 18 11.1	
	comp=Z,16nm,18.0s,baz=215,slow=36						

PGC 29 16:20:53.5±0.0, 56°.04N×120°.87W, h5km, MLSn3.2/10, Mw3.9/10, 23km south of Fort St. John, Bc British Columbia, Canada, British Columbia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BMBC	Bull Mountain	0.70	271	P	Pg	16 21 06.5	-0.6
BMBC				S	Sg	16 21 15.6	-0.6
NBC5	NorthernBC 5	1.79	327	Pn	Pn	16 21 24.5	-0.7
NBC5				Sg	Sn	16 21 47.6	-0.8
FSJB	Fort St James	2.52	233	Pn	Pn	16 21 32.9	-2.1
FSJB				Sg	Sb	16 22 11.2	+0.8
FSB	Fort Saint Jam	2.52	233	Pn	Pn	16 21 35.2	+0.1
FSB				Sg	Sg	16 22 12.7	-1.6
NBC6	NorthernBC 6	2.57	355	Pn	Pn	16 21 34.8	-1.0
NBC6				Pg	Pb	16 21 39.9	-0.2
NBC6				Sn	Sn	16 22 06.3	-1.0
NBC6				Sg	Sb	16 22 12.4	+0.5
NBC3	NorthernBC 3	3.61	2	Pn	Pn	16 21 48.8	-1.4
NBC3				Sn	Sn	16 22 30.9	-2.2
NBC3				Sg	Sg	16 22 46.2	-3.3
NBC2	NorthernBC 2	3.85	348	Pn	Pn	16 21 52.1	-1.2
NBC2				Sn	Sn	16 22 35.0	-4.0
BLBC	Blue River	4.11	166	Sg	Sg	16 23 03.5	-2.1
MNB	Mounoet Dainar	4.11	158	Pn	Pn	16 21 58.6	+1.3
MNB				Sn	Sn	16 22 48.5	+2.7
KITB	Kitimat	4.88	249	Pn	Pn	16 22 06.7	-0.7
KITB				Sg	Sb	16 23 23.2	+5.0
SLEB	Sale Mountain	5.14	160	Pn	Pn	16 22 10.5	-0.8
SLEB				Sg	Sg	16 23 33.5	-5.1
EDM	Edmonton	5.20	120	Pn	Pn	16 22 12.8	+0.8
EDM				Sn	Sn	16 23 09.1	-3.2
BUTB	Butedale	5.33	239	Sn	Sn	16 23 16.1	+0.6
BUTB				Sg	Sg	16 23 38.1	-6.3
LLLB	Lillooet	5.47	187	Pn	Pn	16 22 16.4	+0.8
RUBB	Prince Rupert	5.64	256	Sg	Sb	16 23 46.0	+5.9
PRDA	Priddis	6.50	140	Pn	Pn	16 22 31.2	+1.3
PRDA				Pg	Pg	16 22 55.7	-2.2
PRDA				Sn	Sn	16 23 40.4	-3.9
PRDA				Sg	Sg	16 24 19.9	-2.2
TGTN	Hyland Airport	6.71	328	Pn	Pn	16 22 30.5	-2.3
TGTN				Sn	Sn	16 23 41.8	-7.7
PNT	Penticton	6.77	173	Sg	Sg	16 24 22.6	-8.3

INET 29 16:45:13.8, 9°.59N×84°.80W, h15km, MD1.9, ML3.5, Costa Rica

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NEIC ***29*** *16:46:11.7±2.8, 18°.53N±0°.05×70°.48W±0°.02, h10km±2km, ML4.1/29, Error ellipse: s-maj=7.7km s-min=3.1km az=186.0*

OSPL ***29*** *16:46:13.0±2.1, 18°.44N×70°.45W, h0km±12km, ML3.9*

ISC 29 16:46:11.7±1.1, 18°.46N±0°.04×70°.47W±0°.03, h9km±10km, n36, σ1s.06/42, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LOSC1	San Cristbal	0.34	98	iP	Pg	16 46 19.7	+1.2
LOSC1				IAML		16 46 28.4	
	comp=Z,30μm,0.6s						
SDD	Santo Domingo	0.52	90		Pg	16 46 22.4	+0.5
SDD					Sg	16 46 29.3	+0.5
SDD	Santo Domingo	0.52	90	iP	Pg	16 46 22.4	+0.5
LOBA2	Hotel Casa Bon	0.70	238	iP	Pg	16 46 24.3	-1.0
LOBA2				IAML		16 46 36.5	
	comp=Z,1μm,0.3s						
SDDR	Presa de Saban	0.94	304		Pg	16 46 29.6	-0.2
SDDR				Sn	Sg	16 46 42.2	+0.2
SDDR				IAML		16 46 46.8	
	comp=Z,6μm,0.5s						
SDDR				IAML		16 46 47.3	
	comp=Z,5μm,0.5s						
SDDR	Presa de Saban	0.94	304	iP	Pg	16 46 29.6	-0.2
SDDR				IAML		16 46 46.0	
	comp=Z,4μm,0.3s						
LONE2	Loma La Sidra	0.96	276	iP	Pg	16 46 30.1	-0.1
LONE2				IAML		16 46 48.2	
	comp=Z,7μm,0.6s						
SC01	Santiago de lo	1.00	346		Pg	16 46 30.8	-0.1
SC01				Sn	Sg	16 46 43.3	-0.6
SC01				IAML		16 46 49.9	
	comp=N,5μm,0.5s						
SC01				IAML		16 46 57.0	
	comp=E,5μm,0.6s						
SC01	Santiago de lo	1.00	346	iP	Pg	16 46 31.1	+0.2
SC01				eS	Sb	16 46 45.5	+1.1
SC01				IAML		16 46 47.6	
	comp=Z,2μm,0.3s						
DR12	Loma Pena Alta	1.08	72		Pg	16 46 31.3	-1.2
LONA1	Toro Cenizo, N	1.08	32	iP	Pg	16 46 31.8	-0.7
LONA1				eS	Sg	16 46 46.5	-0.1
LONA1				IAML		16 46 51.9	
	comp=Z,3μm,0.5s						
LOPE2	Hotel El Peder	1.29	251	iP	Pn	16 46 35.8	0.0
LOPE2				IAML		16 47 06.4	
	comp=Z,1μm,0.7s						
PAPH	Port-au-Prince	1.74	272	iP	Pn	16 46 42.4	+0.3
PAPH				eS	Sn	16 47 06.2	+1.8
PAPH				IAML		16 47 18.2	
	comp=Z,900nm,0.5s						
JAKH	Jacmel	1.96	264	Pn	Pn	16 46 45.9	+0.9
JAKH				IAML		16 47 14.8	
	comp=E,3μm,1.0s						
JAKH				IAML		16 47 15.4	
	comp=N,4μm,0.5s						
JAKH	Jacmel	1.96	264	iP	Pn	16 46 46.0	+0.9
LGNH	Logne	2.03	272		Pn	16 46 46.7	+0.6
LGNH				IAML		16 47 21.9	
	comp=N,2μm,0.7s						
LGNH				IAML		16 47 24.3	
	comp=E,2μm,0.7s						
LGNH	Logne	2.03	272	iP	Pn	16 46 48.0	+1.9
GRTK	Grand Turk	3.10	348		Pn	16 47 00.6	-0.2
GRTK				IAML		16 47 41.6	
	comp=E,457nm,0.4s						
PRSN	Puerto Rico Se	3.16	94		Pn	16 47 02.6	+0.9
CRPR	Cabo Rojo, PR	3.22	97	Pn	Pn	16 47 03.0	+0.6
CRPR				IAML		16 47 57.6	
	comp=E,364nm,0.9s						
MLPR	Magueyes Islan	3.29	98	Pn	Pn	16 47 03.9	+0.5
MLPR				IAML		16 47 54.7	
	comp=E,346nm,0.8s						
MLPR				IAML		16 47 57.0	
	comp=N,311nm,0.6s						
AOPR	Arecibo Observ	3.53	91		Pn	16 47 06.1	-0.6
OBIP	Obispado Ponce	3.69	96		Pn	16 47 07.7	-1.2
OBIP				IAML		16 48 06.7	
	comp=N,239nm,0.6s						
SJG	San Juan	4.11	94		Pn	16 47 13.2	-1.5
SJG				IAML		16 48 17.6	
	comp=N,360nm,0.5s						
GTBY	Guantanamo Bay	4.63	289	Pn	Pn	16 47 21.0	-0.8
CUPR	Culebra, Puert	4.92	91	Pn	Pn	16 47 24.8	-1.1
MTDJ	Mount Denham	6.72	269	Pn	Pn	16 47 50.9	+0.2
URIC	Uribia, Colomb	6.88	193	Pn	Pn	16 47 50.9	-1.8
SDV	Santo Domingo	9.52	181	Pn	Pn	16 48 29.6	+0.5
SJCC	San Jacinto, C	9.66	209	Pn	Pn	16 48 33.0	+2.0
BIM	Bigot	9.82	112	Pn	Pn	16 48 31.9	-1.3
MPOM	Morne Pois Mar	10.04	112	Pn	Pn	16 48 35.5	-0.6
SVB	Belmont	10.25	119	Pn	Pn	16 48 38.7	-0.4
GRGR	Grenville	10.57	125	Pn	Pn	16 48 42.0	-1.4
PRVC	Isla de Provid	11.63	246	Pn	Pn	16 48 59.3	+1.3
BCIP	Isla Barro Col	12.96	226	Pn	Pn	16 49 13.6	-2.5

WEL 29 17:01:54.6±2.2, 39°S±8°×17°5E±2°0, h5km±10km, M0.6/3, ML1.2/6, MLv0.6/3, Error ellipse: s-maj=0.0km s-min=0.0km az=81.5, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWVZ	Taurewa	0.14	26	P	Pg	17 01 57.6	+0.1
FWVZ	Far West T-bar	0.16	111	P	Pg	17 01 58.4	+0.5
FWVZ				S	Sg	17 02 01.4	+1.2
TRVZ	Turoa	0.18	124	P	Pg	17 01 58.8	+0.5
WTVZ	West Tongariro	0.20	66	P	Pg	17 02 00.3	+1.7
SNVZ	South Ngauruho	0.22	87	P	Pg	17 01 59.1	+0.1
OTVZ	Oturere	0.24	82	P	Pg	17 01 58.9	-0.5
OTVZ				S	Sg	17 02 03.3	+0.7
NTVZ	North Tongarir	0.27	68	P	Pb	17 02 01.6	-0.4
TMVZ	Te Maari	0.28	73	P	Pg	17 01 59.9	-0.2

WEL 29 17:02:03.3±0.5, 40°S±3°×17°6E±°, h37km±6km, M2.0/10, ML2.3/13, MLv2.0/10, Error ellipse: s-maj=0.0km s-min=0.0km az=98.7, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WPHZ	Waipukurau	0.12	79	P	Pn	17 02 11.2	-4.7
WPHZ				S	Sn	17 02 17.2	-11
DVHZ	Dannevirke	0.23	203	P	Pn	17 02 12.1	0.0
DVHZ				S	Sn	17 02 18.3	-2.1
TSZ	Takapari Road	0.25	276	P	Pn	17 02 12.5	+0.7
TSZ				S	Sn	17 02 18.8	-0.8
PRHZ	Porangahau	0.32	124	P	Pn	17 02 12.8	+1.2
PRHZ				S	Sn	17 02 20.1	+1.6
ANWZ	Angora Road	0.40	159	P	Pn	17 02 13.8	+1.5
ANWZ				S	Sn	17 02 21.7	+2.6
KRHZ	Kereru	0.45	8	P	Pn	17 02 14.3	+1.2
KRHZ				S	Sn	17 02 22.4	+2.3
PRWZ	Pori Road	0.53	207	P	Pn	17 02 15.9	+1.5
KAHZ	Kahuranaki	0.54	57	P	Pn	17 02 15.3	+0.7
BFZ	Birch Farm	0.59	183	P	Pn	17 02 15.9	+0.5
BFZ				S	Sn	17 02 25.0	+1.2
BHHZ	Black Hill Sta	0.62	344	P	Pn	17 02 16.8	+1.0
BHHZ				S	Sn	17 02 25.8	+1.3

KWHZ	Kaweka Forest	0.67	9	P	Pn	17 02 17.2	+0.7
KWHZ				S	Sn	17 02 27.3	+1.6
MCHZ	McNeill Hill	0.72	26	P	Pn	17 02 17.2	+0.2
MCHZ				S	Sn	17 02 28.5	+1.9
MRZ	Mangatainoka R	0.79	223	P	Pn	17 02 18.8	+0.9
MOVZ	Moawhango	0.79	329	P	Pn	17 02 19.8	+1.8
CPWZ	Castlepoint	0.82	184	P	Pn	17 02 19.5	+1.1
WNVZ	Wahianoa	0.93	325	P	Pn	17 02 22.0	+2.0
BKZ	Black Stump Fm	0.93	10	P	Pn	17 02 20.6	+0.7
MTVZ	Mangateitei	0.94	318	P	Pn	17 02 22.4	+2.3
TUVZ	Tukino	0.95	329	P	Pn	17 02 22.5	+2.2
HOWZ	Holdsworth Sta	1.00	216	P	Pn	17 02 21.3	+0.5
SNVZ	South Ngauruho	1.03	331	P	Pn	17 02 23.4	+2.0
OTVZ	Oturere	1.04	332	P	Pn	17 02 23.5	+2.0
ETVZ	East Tongariro	1.05	335	P	Pn	17 02 23.5	+1.9
TMWZ	Te Maipa	1.06	196	P	Pn	17 02 21.8	+0.2
NMHZ	Naumai	1.07	22	P	Pn	17 02 22.7	+0.9
TMVZ	Te Maari	1.07	335	P	Pn	17 02 23.7	+1.9
OGWZ	Otaki Gorge	1.12	229	P	Pn	17 02 23.0	+0.6
MTW	Mount Morrison	1.23	209	P	Pn	17 02 23.8	0.0
MTHZ	Maungataniwha	1.31	19	P	Pn	17 02 25.6	+0.6
MWZ	Matawai	2.00	29	P	Pn	17 02 33.9	-0.7
MWZ				P	Pn	17 02 34.0	-0.5

MAN 29 17:26:40.0, 13°.54N × 119°.61E, h20^{km}, mb3.8, ML2.6, MS2.1, Philippine Islands region

*ISK **29** 17:34:34.5, 38°.84N × 37°.83E, h5^{km}, ML3.6/20*
*IDC **29** 17:34:35.1±2.4, 38°.86N × 37°.82E, h0^{km}, mb3.7/3, mb1 3.6/5, mb1mx3.4/27, mbtmp3.5/5, ML2.6/2, MS2.7/2, Ms1 2.7/2, ms1mx2.4/43, Error ellipse: s-maj=47.4km s-min=13.9km az=172.0*
*DDA **29** 17:34:35.2, 38°.86N × 37°.83E, h16^{km}, MW3.9*
ISC 29 17:34:35.8±0.8, **38°.85N**±0°.02 × **37°.84E**±0°.02, **h11**^{km}±6^{km}, **n66**, σ**1^{s}.25**/88, **mb3.8**/3, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HEKM	Malatya_Hekimh	0.10	75	*i* P	Pg	17 34 38.8	+0.2
HEKM				*i* S	Sg	17 34 41.1	+0.4
DARE	Darende-Malaty	0.40	225	PG	Pg	17 34 43.2	-0.5
DARE				SG	Sg	17 34 49.3	+0.3
ARPR	Arapgir-MALATY	0.45	58	PG	Pb	17 34 44.9	-1.0
ARPR				SG	Sb	17 34 52.1	-0.6
CUGUR	Gurin_SVAS	0.46	254	*i* P	Pg	17 34 44.6	-0.2
CUGUR				*i* S	Sb	17 34 51.8	-1.2
CUKAN	kangal_SIVAS	0.55	328	*i* P	Pg	17 34 45.9	-0.6
CUKAN				*i* S	Sg	17 34 53.5	-0.2
AKCD	Akcadag	0.56	173	*i* P	Pg	17 34 46.5	-0.3
AKCD				*i* S	Sb	17 34 55.8	0.0
KEMA	Kemaliye	0.66	51	*i* P	Pg	17 34 48.1	-0.4
KEMA				*i* S	Sb	17 34 57.7	-0.7
MALT	Malatya	0.71	139	PG	Pg	17 34 48.8	-0.7
MALT				SG	Sb	17 34 59.7	-0.3
ILIC	ilic-Erzincan	0.82	43	PG	Pn	17 34 51.8	-1.6
CUAYA	Sivas-Altinyay	0.95	296	*i* P	Pb	17 34 52.6	-1.7
ELZG	Elazig	0.96	111	*i* P	Pb	17 34 53.2	-1.3
ELZG				*i* S	Sn	17 35 07.6	-1.6
CUZAR	Zara_SIVAS	1.03	357	*i* P	Pn	17 34 55.6	-0.7
SCER	sogukcermik	1.15	331	*i* P	Pb	17 34 56.2	-1.5
SCER				*i* S	Sg	17 35 13.4	+0.6
SARI	SarD1z-Kayseri	1.20	249	PN	Pg	17 34 58.0	-0.9
SARI				SN	Sg	17 35 15.9	+1.4
SVRC	Sivrice-ELAZID	1.24	112	PN	Pn	17 34 58.4	-0.8
SVSK	Karacayir	1.25	329	PN	Pg	17 34 59.2	-0.5
TNCL	Tunceli-Merkez	1.35	78	*i* P	Pb	17 35 00.1	-1.1
TNCL				*i* S	Sg	17 35 18.6	-0.7
CUSAR	Sarkisla-SIVAS	1.36	295	*i* P	Pb	17 35 00.3	-1.0
CUSAR				*i* S	Sg	17 35 20.3	+0.6
SUSE	Susehri	1.38	12	*i* P	Pg	17 35 03.5	+1.2
SUSE				*i* S	Sg	17 35 23.3	+3.1
ATAB	Bozova	1.43	165	*i* P	Pg	17 35 02.5	-0.7
ATAB				*i* S	Sg	17 35 22.2	+0.5
KAHM	Kahramanmaras,	1.50	207	*i* P	Pg	17 35 04.8	+0.4
KAHM				*i* S	Sg	17 35 24.4	+0.6
GZT	Gaziantep	1.51	188	*i* P	Pg	17 35 05.2	+0.4
GZT				*i* S	Sg	17 35 25.9	+1.5
KMRS	Kahramanmaras	1.54	209	PN	Pb	17 35 04.1	-0.2
KOVA	Elazig, Kovanc	1.55	95	*i* P	Pb	17 35 03.9	-0.6
KOVA				*i* S	Sg	17 35 26.0	+0.4
KHMN	Narli-Kahraman	1.56	200	PN	Pg	17 35 04.6	-1.0
BNN	Bunyan	1.56	271	PN	Pb	17 35 04.0	-0.7
RSDY	Resadiye-TOKAT	1.59	346	PN	Pg	17 35 05.4	-0.9
URFA	Urfa	1.61	151	PN	Pb	17 35 05.5	0.0
ERZN	Erzincan	1.63	63	PN	Pb	17 35 05.8	-0.2
SAIM	ADANA	1.64	238	*i* P	Pb	17 35 05.7	-0.3
SAIM				*i* S	Sg	17 35 28.7	+0.3
ALUC	Giresun/Alucra	1.65	25	*i* P	Pg	17 35 06.5	-0.9
ALUC				*i* S	Sg	17 35 29.2	+0.2
KELT	Kelkit	1.69	40	*i* P	Pg	17 35 07.0	-1.3
KELT				*i* S	Sg	17 35 29.9	-0.4
ANDN	Andirin	1.73	223	*i* P	Pb	17 35 06.8	-0.9
GAZ	Gaziantep	1.75	197	PN	Pb	17 35 07.5	-0.4
TOKT	Tokat	1.77	326	PN	Pb	17 35 07.8	-0.5
TOKA	Tokat	1.81	325	*i* P	Pb	17 35 08.5	-0.4
HACI	Hacifakili, Ak	1.84	298	*i* P	Pb	17 35 09.4	-0.2
KAMA	Osmaniye	1.91	209	*i* P	Pg	17 35 11.1	-1.2
SANL	SANLIURFA_Merk	1.91	151	*i* P	Pb	17 35 09.4	-1.2
ERBA	Erbaa	2.01	336	*i* P	Pb	17 35 11.3	-1.0
ERBA				*i* S	Sg	17 35 39.5	-0.8
DYBB	Diyarbakir	2.02	116	PN	Pb	17 35 10.9	-1.6
DIYA	Diyarbakir	2.02	117	*i* P	Pb	17 35 10.9	-1.5
YAHY	KAYSERI_Yahyal	2.09	249	*i* P	Pg	17 35 14.1	-1.7
KOZT	Kozan	2.10	230	PN	Pb	17 35 12.1	-1.7
YOZ	Yozgat	2.11	293	PN	Pb	17 35 12.3	-1.8
SIRC	Yozgat	2.15	284	*i* P	Pb	17 35 12.5	-2.3
KUZU	Kuzuini	2.16	197	*i* P	Pb	17 35 13.4	-1.5
YEDI	Yedisu-Bingol	2.18	74	PN	Pb	17 35 13.8	-1.5
CKRK	Yozgat, Cekere	2.18	305	*i* P	Pb	17 35 14.6	-0.7
CKRK				*i* S	Sg	17 35 45.4	-0.5
BNGB	Bingl	2.22	86	PN	Pb	17 35 14.2	-1.7
AVNS	Nevsehir-Avano	2.34	270	*i* P	Pb	17 35 15.5	-2.5
KOZK	Kozakli-Nevseh	2.34	280	PN	Pb	17 35 15.9	-2.2
AKO	Adana	2.34	234	*i* P	Pb	17 35 17.6	-0.5
AMSY	Amasya-Merkez	2.36	320	*i* P	Pb	17 35 18.6	+0.2
KOPT	Kop Dagi	2.36	60	*i* P	Pg	17 35 20.3	-0.7
CEYT	Ceyhan	2.48	223	PN	Pb	17 35 17.5	-2.7
SLHN	Bingol, Solhan	2.48	87	*i* P	Pg	17 35 22.0	-1.4
NIDE	Nigde/Merkez-G	2.55	251	*i* P	Pb	17 35 18.9	-2.8
MACK	Trabzon	2.56	35	*i* P	Pb	17 35 19.7	-2.0
SVAN	Silvan-Diyarba	2.73	104	*i* P	Pb	17 35 24.2	-0.3
BRTR	Keskin Array B	3.38	286	Pn	Pn	17 35 29.9	+1.4
	1.2nm,0.3s,baz=100,slow=15,SNR=32						
BRTR				Lg	Lg	17 36 23.6	
	2.2nm,0.3s,baz=106,slow=26,SNR=3.9						
BRTR				LR	LR	17 37 13.8	
	comp=Z,26nm,20.4s,baz=264,slow=47						
KBZ	Khabaz	6.18	36	Pn	Pn	17 36 09.0	+2.1
	0.1nm,0.3s,baz=288,slow=19,SNR=1.2						
KEST	Kesra	22.84	271	LR	LR	17 50 27.3	
	comp=Z,71nm,18.2s,baz=278,slow=42						
FINES	FINESS Array B	23.76	346	P	P	17 39 50.1	+2.3
	5.3nm,0.9s,baz=146,slow=13,SNR=4.6						
MKAR	Makanchi Array	33.18	62	P	P	17 41 15.1	+2.8
	0.1nm,0.5s,baz=289,slow=4.4,SNR=1.8						
ZALV	Zalesovo Beam	35.03	49	P	P	17 41 28.8	+0.6
	0.6nm,0.5s,baz=261,slow=8.6,SNR=2.7						

*ATH **29** 17:54:11.6, 34°.55N × 26°.52E, h16^{km}±9^{km}, ML3.0/1, Error ellipse: s-maj=13.6km s-min=2.3km az=60.0*
*DDA **29** 17:54:13.0, 34°.53N × 26°.35E, h15^{km}±553^{km}, ML2.4*
ISC 29 17:54:11.2±2.0, **34°.6N**±0°.1 × **26°.52E**±0°.06, **h10**^{km}, **n13**, σ**2^{s}.17**/16, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZKR	Zakros	0.61	336	P	Pg	17 54 23.4	+0.2
ZKR				S	Sg	17 54 32.0	+0.7
ZKR				AML	AML	17 54 32.7	
	comp=E,2780µm,0.3s						
ZKR				AML	AML	17 54 32.7	
	comp=N,3452µm,0.3s						
NPS	Neapolis	1.03	314	P	Pg	17 54 30.4	-0.6
SIVA	Sivas	1.48	289	P	Pn	17 54 38.8	+0.8
IDI	Anoyia	1.53	299	P	Pn	17 54 39.4	+0.8
GVD	Gavdhos	2.02	279	P	Pn	17 54 47.1	+1.7
VAM	Vamos	2.08	295	P	Pb	17 54 48.5	-0.7
IMMV	Iera Moni Meta	2.27	294	P	Pn	17 54 50.9	+2.1
DAT	Datca	2.34	21	*i* P	Pn	17 54 51.6	+1.8
TURN	Turunc	2.63	32	*i* P	Pb	17 54 57.4	-1.0
DALY	Dalyan (Mula)	2.85	37	*i* P	Pb	17 55 00.9	-1.3
DALY				IAML		17 56 24.0	
	comp=N,22nm,2.3s						
FETY	Fethiye	2.95	44	*i* P	Pb	17 55 01.5	-2.4
FETY				*i* S	Sb	17 55 38.6	-1.4
FETY				IAML		17 56 11.0	
	comp=N,12nm,1.6s						
AYDN	Tasoluk	3.29	19	*i* P	Pn	17 55 06.5	+3.5
TAVA	DENIZLI_Tavas	3.50	33	*i* P	Pn	17 55 09.7	+4.0
TAVA				*i* S	Sb	17 55 52.9	-3.0
TAVA				IAML		17 56 50.0	
	comp=N,6.6nm,2.8s						

DJA 29 18:26:18.9±0.5, **7°S**±4° × **13°0E**±°, **h192**^{km}±11^{km}, **M3.9**/7, **mB4.5**/2, **mb3.8**/7, **MLv3.9**/6, **Mw(mB)3.7**/2, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.89	113	P	Pn	18 26 56.2	+0.5
SAUI				S	Sn	18 27 24.3	0.0
FAKI	Fak Fak	5.08	32	P	Pn	18 27 34.3	+0.1
	0.1nm11nm,1.0s						
SOEI	Soe	5.78	244	P	Pn	18 27 43.2	-0.1
	0.1nm14nm,0.9s						
BATI	Baumata	6.51	243	P	Pn	18 27 53.1	+0.3
	0.1nm12nm,0.9s						
EDFI	Ende, Flores	7.92	259	P	Pn	18 28 11.4	+0.2
WBSI	Waikabubak, Su	10.32	256	P	Pn	18 28 41.9	-0.6

*JMA **29** 18:29:47.5, 24°.68N × 122°.33E, h41^{km}±2^{km}, M2.7*
*TAP **29** 18:29:48.2, 24°.69N × 122°.21E, h6^{km}, ML3.4, D*
ISC 29 18:29:46.8±1.0, **24°.73N**±0°.02 × **122°.36E**±0°.02, **h12**^{km}±8^{km}, **n101**, σ**1^{s}.04**/172, **1C**, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGS		0.40	286	*i* P	Pg	18 29 55.1	+0.4
	baz=302						
EGS				*i* S	Sg	18 29 59.4	-0.7
	baz=302						
TWB1	Santiao Chiao	0.43	309	P	Pg	18 29 55.6	+0.3
	baz=329						
TWB1				*i* S	Sg	18 30 00.8	-0.2
	baz=329						
TWC	Suao	0.48	255	*i* P	Pg	18 29 55.9	-0.3
	baz=255						
TWC				*i* S	Sg	18 30 01.3	-1.2
	baz=255						
NTC	Toucheng	0.49	284	P	Pg	18 29 55.4	-1.1
	baz=295						
NTC				*e*S	Sb	18 30 03.7	-0.9
	baz=295						
TIPB	Shuangxi	0.54	296	*i* P	Pg	18 29 57.5	+0.2
	baz=309						
TIPB				S	Sg	18 30 03.9	-0.5
	baz=309						
ILA	Ilan	0.55	273	P	Pg	18 29 57.8	+0.2
	baz=280						
ILA				S	Sg	18 30 04.4	-0.5
	baz=280						
NDS	Dongshan	0.59	260	P	Pg	18 29 58.1	-0.1
	baz=262						
NDS				S	Sg	18 30 05.5	-0.6
	baz=262						
EWUT	Wuta	0.60	242	P	Pg	18 29 58.3	-0.2
	baz=237						
EWUT				S	Sg	18 30 05.8	-0.6
	baz=237						
JYNG	Yonagunijimaku	0.60	118	P	Pg	18 29 59.6	+1.1
JYNG				S	Sg	18 30 08.2	+1.7
NWF	Wu-fen Shan	0.62	303	*i* P	Pb	18 29 60.0	+0.3
	baz=314						
NWF				*i* S	Sb	18 30 08.5	+0.1
	baz=314						
TWE	Neicheng	0.63	269	*i* P	Pg	18 29 58.3	-0.7
	baz=273						
TWE				*i* S	Sg	18 30 06.4	-0.8
	baz=273						
ENA	Nanau	0.64	242	P	Pg	18 29 58.7	-0.5
	baz=237						
ENA				*i* S	Sg	18 30 06.9	-0.7
	baz=237						
YOJ	Yonaguni jima	0.65	114	P	Pg	18 30 00.4	+0.9
YOJ				S	Sg	18 30 09.8	+1.7
EHP	Heping Village	0.70	233	*e*P	Pg	18 30 00.4	0.0
	baz=227						
EHP				S	Sg	18 30 08.9	-0.7
	baz=227						
ENTT	Nioudou	0.72	263	P	Pg	18 30 01.0	+0.2
	baz=264						
ENTT				S	Sg	18 30 09.8	-0.6
	baz=264						
TWA	Mucha	0.74	289	*i* P	Pb	18 30 02.1	+0.4
	baz=297						
TWA				*i* S	Sb	18 30 11.6	-0.3
	baz=297						
NWLT	Wulai	0.78	273	*e*P	Pg	18 30 02.0	+0.2
	baz=277						
NWLT				S	Sb	18 30 12.2	-0.6
	baz=277						
NDT	Datong Townshi	0.78	261	P	Pg	18 30 01.6	-0.3
	baz=262						
NDT				S	Sg	18 30 10.8	-1.2
	baz=262						
NHDH	Xindian Distri	0.79	287	P	Pb	18 30 03.4	+0.9
	baz=293						
NHDH				S	Sb	18 30 12.4	-0.7
	baz=293						
YM01	YM01	0.82	300	⇑P	Pb	18 30 03.2	+0.1
	baz=308						
YM01				S	Sb	18 30 14.1	-0.1
	baz=308						
TAP	Taipei	0.83	292	P	Pb	18 30 03.4	+0.3
	baz=298						
TAP				*i* S	Sb	18 30 14.9	+0.6
	baz=298						
TWY	Chenhua	0.87	308	P	Pg	18 30 04.0	+0.4
	baz=316						
TWY				S	Sb	18 30 16.1	+0.5
	baz=316						
ETL	Fush Village	0.88	230	P	Pg	18 30 03.5	-0.3
	baz=225						
ETL				S	Sg	18 30 15.0	-0.3
	baz=225						
ANP	Anpu	0.88	301	P	Pg	18 30 04.2	+0.3
	baz=308						
ANP				S	Sb	18 30 16.2	+0.2
	baz=308						
NACB	Ninganchiao	0.89	231	P	Pg	18 30 03.3	-0.6
	baz=227						
NACB				S	Sg	18 30 14.5	-1.1
	baz=227						
YHNB	Yeheng	0.90	266	P	Pg	18 30 04.0	0.0
	baz=268						
YHNB				S	Sg	18 30 14.9	-0.9
	baz=268						
NSK	Sanguang	0.91	267	P	Pg	18 30 04.3	0.0
	baz=268						
NSK				*i* S	Sg	18 30 15.3	-0.9
	baz=268						
TWS1	Kuangyinshan	0.93	293	P	Pb	18 30 05.6	+0.8
	baz=300						
TWS1				S	Sb	18 30 17.6	+0.5
	baz=300						
NTST	Danshui	0.93	298	P	Pb	18 30 05.7	+0.9
	baz=304						
NTST				*i* S	Sb	18 30 18.1	+1.0
	baz=304						
NNSB	Datong	0.94	251	P	Pg	18 30 04.1	-0.8
	baz=250						
NNSB				S	Sg	18 30 16.1	-1.0
	baz=250						
NNS	Nan Shan	0.94	252	P	Pg	18 30 04.8	-0.2
	baz=251						
NNS				*i* S	Sg	18 30 15.9	-1.4
	baz=251						
TWD	Chiawan	0.95	227	*i* P	Pg	18 30 04.6	-0.5
	baz=222						
TWD				*i* S	Sg	18 30 16.8	-0.8
	baz=222						
ETLH	Xiulin Townshi	0.95	237	P	Pg	18 30 04.6	-0.6
	baz=233						
ETLH				*e*S	Sg	18 30 16.7	-0.9
	baz=233						
HWA	Hwalien	1.02	222	P	Pg	18 30 06.2	-0.2
	baz=217						
HWA				*e*S	Sb	18 30 20.8	+1.1
	baz=217						
NCU	National Centr	1.09	283	S	Sb	18 30 21.5	-0.2
	baz=286						
NCUH	Zhongli	1.09	283	P	Pg	18 30 07.6	-0.2
	baz=286						
NCUH				S	Sb	18 30 21.6	-0.2
	baz=286						
FUSS	Fushou	1.12	245	*i* P	Pg	18 30 08.2	-0.2
	baz=243						
FUSS				S	Sg	18 30 22.3	-0.8
	baz=243						
WHF	Hehuan Shan	1.16	240	*i* P	Pg	18 30 08.5	-0.6
	baz=237						
WHF				*i* S	Sg	18 30 22.6	-1.5
	baz=237						
TWT	Tachien	1.18	246	P	Pg	18 30 09.4	0.0
	baz=245						
TWT				S	Sb	18 30 24.3	-0.1
	baz=245						
TDCB	Techi	1.19	247	P	Pg	18 30 09.7	0.0
	baz=245						
TDCB				S	Sg	18 30 24.4	-0.9
	baz=245						
LIOB	Emei	1.22	266	*i* P	Pb	18 30 10.7	+0.8
	baz=267						
LIOB				*e*S	Sb	18 30 25.2	-0.5
	baz=267						
NSTT	Nanjuang	1.24	266	P	Pg	18 30 10.3	-0.3
	baz=266						
NSTT				*i* S	Sn	18 30 27.1	+0.5
	baz=266						
ESL	Shilin	1.25	223	*i* P	Pg	18 30 10.4	-0.3
	baz=218						
ESL				S	Sn	18 30 27.9	+1.2
	baz=218						
SBCB	Hsinchu	1.25	273	P	Pb	18 30 10.7	+0.4
	baz=275						
SBCB				S	Sb	18 30 26.1	-0.2
	baz=275						
HSN	Hsinchu	1.26	273	*e*P	Pg	18 30 09.6	-1.4
	baz=277						
HSN				*e*S	Sg	18 30 25.4	-2.1
	baz=277						
CHGB	Renai	1.27	238	P	Pg	18 30 10.8	-0.4
	baz=236						
CHGB				S	Sg	18 30 26.6	-1.2
	baz=236						
IRIF	Iriomote-Funau	1.31	107	P	Pn	18 30 09.8	-1.1
IRIF				*e*S	Sb	18 30 26.2	-2.0
OWD	Renai	1.33	234	P	Pg	18 30 11.6	-0.7
	baz=232						
OWD				S	Sg	18 30 28.0	-1.6
	baz=232						
EGFH	Guangfu	1.36	219	P	Pg	18 30 12.3	-0.6
	baz=214						
EGFH				S	Sg	18 30 29.5	-1.0
	baz=214						
WHP	Taichung City	1.36	251	P	Pg	18 30 12.8	-0.2
	baz=250						
WHP				S	Sg	18 30 29.4	-1.3
	baz=250						
NMLH	Miaoli	1.44	263	*e*S	Sg	18 30 29.4	-3.6
	baz=263						
WCS	Beigang Elemen	1.48	243	P	Pn	18 30 13.4	+0.2
	baz=241						
WCS				*e*S	Sb	18 30 32.1	-0.9
	baz=241						
HATJ	Hateruma jima	1.48	117	P	Pn	18 30 13.1	-0.2
HATJ				S	Sn	18 30 31.6	-1.0
TWQ1	Liyutan	1.49	255	P	Pg	18 30 15.4	0.0
	baz=255						
TWQ1				S	Sg	18 30 33.5	-1.3
	baz=255						
HGSD	Ruisui	1.50	215	P	Pn	18 30 14.3	+0.7
	baz=210						
HGSD				*e*S	Sb	18 30 32.8	-0.8
	baz=210						
EHY	Hungye	1.54	218	P	Pn	18 30 14.7	+0.5
	baz=214						
EHY				S	Sn	18 30 34.3	+0.1
	baz=214						
SMLT	Sun Moon Lake	1.58	238	*i* P	Pn	18 30 16.1	+1.4
	baz=235						
JKRS	Kuro-shima	1.58	108	P	Pn	18 30 13.8	-0.9
JKRS				S	Sn	18 30 33.3	-1.8
SSLB	Suanglung	1.59	234	P	Pn	18 30 16.3	+1.5
	baz=231						
SSLB				S	Sn	18 30 35.5	+0.2
	baz=231						
TYC	Yuchr	1.60	239	P	Pb	18 30 16.8	+0.5
	baz=237						
TYC				S	Sn	18 30 35.7	+0.3
	baz=237						
TCU	Taichung	1.64	249	*e*P	Pn	18 30 15.5	0.0
	baz=248						
YULB	Yu-li	1.65	216	P	Pn	18 30 15.1	-0.5
	baz=212						
YULB				*e*S	Sn	18 30 37.4	+0.7
	baz=212						
JIJ	Ishigaki jima	1.67	102	P	Pn	18 30 15.0	-0.8
JIJ				*e*S	Sn	18 30 34.8	-2.4
EYUL	Yuli	1.68	215	P	Pn	18 30 16.6	+0.6
	baz=211						
EYUL				S	Sn	18 30 38.1	+0.7
	baz=211						
JISG	Ishigakijimahi	1.78	94	P	Pn	18 30 17.0	-0.4
JISG				*e*S	Sn	18 30 39.6	-0.4
YUS	Yu-Shan	1.78	226	*e*P	Pn	18 30 19.6	+1.7
	baz=223						
FULB	Fuli	1.81	213	P	Pn	18 30 18.3	+0.4
	baz=209						
FULB				S	Sn	18 30 41.3	+0.5
	baz=209						
CHKT	Chengkung	1.86	209	*i* P	Pn	18 30 19.6	+1.1
	baz=205						
CHKT				S	Sn	18 30 40.7	-1.2
	baz=205						
ALS	Alishan	1.87	230	P	Pn	18 30 20.6	+1.8
	baz=227						
CHN5	Tsauling	1.91	234	*e*P	Pn	18 30 19.8	+0.6
	baz=232						
WDLH	Douliu	1.96	238	*e*P	Pn	18 30 20.4	+0.6
	baz=236						
ELDTW	Lidau	1.97	219	*i* P	Pn	18 30 20.6	+0.6
	baz=215						
ELDTW				S	Sn	18 30 44.1	-0.6
	baz=215						
WRL	Guolierlin Hig	1.99	246	*e*P	Pn	18 30 21.7	+1.5
	baz=244						
EDH	Donghe	2.00	209	*e*P	Pn	18 30 20.0	-0.4
	baz=205						
EDH				S	Sn	18 30 46.0	+0.6
	baz=205						
WTK	Tuku	2.08	240	*e*P	Pn	18 30 22.6	+1.1
	baz=238						
CHN4	Tsaushan	2.12	230	*e*P	Pn	18 30 22.6	+0.5
	baz=227						
CHN4				*e*S	Sn	18 30 48.0	-0.4
	baz=227						
STYH	Taoyuan	2.12	223	*e*P	Pn	18 30 23.4	+1.3
	baz=220						
TPUB	Ta-pu	2.13	228	*e*P	Pn	18 30 22.8	+0.6
	baz=226						
LONT	Longtian	2.14	212	*e*P	Pn	18 30 22.6	+0.3
	baz=209						
LONT				*e*S	Sn	18 30 48.8	0.0
	baz=209						
WTP	Ta-pu	2.18	227	*e*P	Pn	18 30 25.1	+2.3
	baz=225						
LDUT	Ludao	2.21	202	*e*P	Pn	18 30 24.7	+1.5
	baz=198						
LDUT				*e*S	Sn	18 30 50.8	+0.3
	baz=198						
WSF	Szhu	2.23	241	*e*P	Pn	18 30 25.4	+1.8
	baz=239						
TWGBT	Beinan	2.24	212	*e*P	Pn	18 30 23.4	-0.2
	baz=208						
TWG	Pinlang	2.24	212	*e*P	Pn	18 30 23.4	-0.3
	baz=208						
TWG				*e*S	Sn	18 30 51.4	+0.1
	baz=208						
TWK	Hsinying	2.25	230	*e*P	Pn	18 30 25.6	+1.7
	baz=227						

CHN1	Nanshi	2.27	228	eP	Pn	18 30 24.5	+0.3
	baz=225						
SGST	Jiashian	2.31	225	eP	Pn	18 30 25.4	+0.7
	baz=222						
SGST				eS	Sn	18 30 52.9	-0.2
	baz=222						
SLGT	Liugui	2.33	222	eP	Pn	18 30 27.3	+2.3
	baz=220						
CHN8	Yiju	2.40	235	eP	Pn	18 30 26.2	+0.4
	baz=233						
ECL	Taimali	2.49	211	eP	Pn	18 30 28.2	+1.1
	baz=208						
ECL				eS	Sn	18 30 58.5	+1.1
	baz=208						
SCLT	Jiali	2.51	232	eP	Pn	18 30 29.9	+2.4
	baz=230						
SSD	Sandimen	2.53	219	eP	Pn	18 30 30.3	+2.6
	baz=216						
TSMG	Majia	2.56	218	eP	Pn	18 30 31.0	+2.9
	baz=215						
TAI1	Yung-k'ang	2.58	230	eP	Pn	18 30 31.0	+2.7
	baz=227						
SGLT	Jiouru	2.63	221	eP	Pn	18 30 31.2	+2.1
	baz=218						
MASBT	Mashibuluo	2.64	217	eP	Pn	18 30 31.0	+1.8
	baz=214						
EAST	Anshuo	2.72	211	eP	Pn	18 30 31.4	+1.1
	baz=208						
PNG	Penghu	2.81	246	eP	Pn	18 30 32.9	+1.4
	baz=245						
PHUB	P'eng-hu	2.82	245	eP	Pn	18 30 32.2	+0.6
	baz=243						
SCZT	Fangliau	2.84	214	eP	Pn	18 30 34.6	+2.7
	baz=212						
AXDP	Jialang	3.99	273	eP	Pn	18 30 48.8	+1.1
	baz=273						

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*IDC **29** 18:35:33.6±4.8, 30.°68N×128.°48E, h0^{km}, mb3.2/1, mb1 3.4/4, mb1mx3.0/41, mbtmp3.2/4, ML2.3/3, MS2.9/1, Ms1 2.9/1, ms1mx2.3/18, Error ellipse: s-maj=76.8km s-min=55.5km az=154.0*

*NIED **29** 18:35:38.4, 31.°09N×128.°67E, h18^{km}, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.47; $M_{\theta\theta}$2.66; $M_{\phi\phi}$-1.19; $M_{r\theta}$-0.39; $M_{\theta\phi}$0.37; $M_{\phi r}$1.22; Fault plane solution: $M_0$2.67000×10^{14} NP1: ϕ_s118.00000°, δ62.00000°, λ-41.00000°. NP2: ϕ_s231.00000°, δ55.00000°, λ-145.00000°.*

*JMA **29** 18:35:38.4±0.4, 31.°09N×128.°67E, h18^{km}±4^{km}, M3.5*

*KMA **29** 18:36:09.4±8.8, 33.°03N×127.°61E, h24^{km}±7^{km}, Error ellipse: s-maj=159.0km s-min=2.9km az=330.0*

ISC 29 18:35:38.5±1.5**, 31.°08N**±0.°06×**128.°74E**±0.°07**, h10**^{km}**, n17, σ0.^{s}93**/22**, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSJ	Shimokoshiki	1.03	54	P	Pg	18 35 57.6	-0.7
JSJ				eS	Sg	18 36 11.7	0.0
JKC	Kuchinoerabu	1.40	116	P	Pn	18 36 03.7	-0.3
JKC				eS	Sn	18 36 23.2	+0.7
JSU	Suzuyama	1.53	73	P	Pn	18 36 05.6	-0.3
JFU	Fukue jima 2	1.57	0	P	Pn	18 36 06.0	-0.5
JFU				eS	Sn	18 36 26.0	-1.0
JNN	Nakanoshima	1.57	141	P	Pn	18 36 06.3	-0.2
JYAK	Yakushimahirau	1.74	118	P	Pn	18 36 08.1	-0.7
JMTN	Minamitane	1.98	109	P	Pn	18 36 12.7	+0.6
JTZ	Takazaki	2.17	67	P	Pn	18 36 15.3	+0.6
JIU3	Izumi3	2.30	50	P	Pn	18 36 17.3	+0.8
JNU	Nakatsue	2.73	41	Pn	Pn	18 36 24.4	+2.0
	0.3nm,0.3s,baz=39,slow=17,SNR=2.2						
JNU				Sn	Sg	18 37 05.2	-1.0
	15nm,0.3s,baz=16,slow=17,SNR=11						
CJD	Chujado	3.54	325	P	Pn	18 36 34.0	+0.4
	SNR=7.2						
KOHB	KOHEUNG	3.74	341	P	Pn	18 36 36.2	-0.1
	SNR=6.9						
BOSB	Boseong-gun	3.90	341	P	Pn	18 36 38.4	0.0
	SNR=6.3						
HUK2	Heuksan-myeon	4.54	323	P	Pn	18 36 47.7	+0.4
	SNR=7.1						
KSRS	Korea Array	6.40	354	Pn	Pn	18 37 13.6	+0.8
	0.3nm,0.3s,baz=175,slow=15,SNR=3.9						
KSRS				Sn	Sn	18 38 25.9	0.0
	1.5nm,0.3s,baz=173,slow=25,SNR=12						
KSRS				LR	LR	18 39 52.2	
	comp=Z,95nm,19.6s,baz=180,slow=38						
MJAR	Matsushiro Arr	9.58	53	Pn	Pn	18 37 58.9	+2.5
	0.0nm,0.3s,baz=230,slow=12,SNR=3.1						
ILAR	Eielson Array	59.99	30	P	P	18 45 44.8	-0.1
	0.2nm,0.6s,baz=278,slow=8.1,SNR=2.2						

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*THE **29** 18:45:14.6, 38.°74N×20.°62E, h10^{km}, ML3.7/9, Error ellipse: s-maj=1.5km s-min=0.5km az=300.0*

*ATH **29** 18:45:15.0, 38.°73N×20.°64E, h8^{km}±1^{km}, ML3.4/14, Error ellipse: s-maj=1.6km s-min=0.7km az=292.0*

*IDC **29** 18:45:36.9±10.0, 39.°73N×21.°70E, h122^{km}±39^{km}, mb3.3/3, mb1 3.2/5, mb1mx3.0/36, mbtmp3.5/5, Error ellipse: s-maj=185.6km s-min=31.5km az=33.0*

ISC 29 18:45:14.5±0.7**, 38.°74N**±0.°02×**20.°61E**±0.°03**, h10**^{km}±4^{km}**, n91, σ1.^{s}00**/111**, mb3.9**/3**, 5C-2D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRAG	Dragano-Lefkad	0.06	211	P	Pg	18 45 16.6	0.0
DRAG				S	Sg	18 45 17.9	-0.3
DRAG	Dragano-Lefkad	0.06	211	P	Pg	18 45 16.6	0.0
DRAG				S	Sg	18 45 17.8	-0.4
LKD2	Lefkada island	0.06	33	P	Pg	18 45 16.6	-0.1
LKD2				S	Sg	18 45 18.1	-0.2
	176µm,0.2s						
LKD2	Lefkada island	0.06	33	P	Pg	18 45 16.6	-0.1
LKD2				S	Sg	18 45 17.9	-0.3
LKD2				AML	AML	18 45 18.3	
LKD2				AML	AML	18 45 18.5	
NYDR	Nydri-Lefkada	0.07	109	P	Pg	18 45 16.6	0.0
NYDR				S	Sg	18 45 18.0	-0.3
	212µm,0.3s						
NYDR	Nydri-Lefkada	0.07	109	P	Pg	18 45 16.7	0.0
NYDR				S	Sg	18 45 18.0	-0.3
TSLK	Tsoukalades, L	0.09	20	P	Pg	18 45 17.3	+0.3
TSLK				S	Sg	18 45 19.8	+1.0
	81µm,0.5s						
TSLK	Tsoukalades, L	0.09	20	P	Pg	18 45 17.4	+0.4
TSLK				S	Sg	18 45 19.5	+0.7
TSLK				AML	AML	18 45 19.8	
TSLK				AML	AML	18 45 21.9	
EVGI	Lefkada island	0.12	164	P	Pg	18 45 17.6	+0.2
EVGI				S	Sg	18 45 19.9	+0.5
	20µm,0.2s						
EVGI	Lefkada island	0.12	164	P	Pg	18 45 17.6	+0.2
EVGI				S	Sg	18 45 19.7	+0.3
FSK	Fiskardo	0.28	188	P	Pg	18 45 20.5	+0.4
FSK				S	Sg	18 45 25.1	+1.2
	19µm,0.3s						
FSK	Fiskardo	0.28	188	P	Pg	18 45 20.7	+0.5
FSK				S	Sg	18 45 24.9	+1.0
FSK				AML	AML	18 45 26.1	
	comp=E,46722µm,0.4s						
FSK				AML	AML	18 45 26.2	
	comp=N,27802µm,0.3s						
KEF4	Livadi, Kephal	0.50	197	P	Pg	18 45 24.1	-0.1
KEF4				S	Sg	18 45 32.2	+1.4
	comp=N,35µm,0.3s						
KEF4	Livadi, Kephal	0.50	197	P	Pg	18 45 24.1	-0.1
KEF4				S	Sb	18 45 32.5	-0.2
DMLN	Damoulianata-K	0.53	201	P	Pg	18 45 24.6	-0.2
DMLN				S	Sg	18 45 33.2	+1.4
	comp=N,6µm,0.5s						
DMLN	Damoulianata-K	0.53	201	P	Pg	18 45 24.7	-0.1
DMLN				S	Sg	18 45 32.9	+1.1
LXRA	Lixouri, Kepha	0.55	195	P	Pg	18 45 25.2	0.0
LXRA				S	Sg	18 45 33.7	+1.2
VLS	Valsamata	0.56	182	P	Pg	18 45 24.8	-0.5
VLS				S	Sg	18 45 34.0	+1.3
	comp=N,4µm,0.2s						
VLS	Valsamata	0.56	182	P	Pg	18 45 25.1	-0.2
VLS				S	Sg	18 45 33.8	+1.1
ARGA	Argostoli. Kep	0.57	191	P	Pg	18 45 26.4	+0.9
ARGA				S	Sg	18 45 34.0	+1.0
KEF3	Kipouria, Keph	0.57	202	P	Pg	18 45 24.8	-0.8
KEF3				S	Sg	18 45 33.6	+0.5
	comp=N,11µm,0.5s						
KEF3	Kipouria, Keph	0.57	202	P	Pg	18 45 24.9	-0.7
KEF3				S	Sg	18 45 32.8	-0.3
PSDA	Pessada-Kefalo	0.62	182	P	Pg	18 45 26.0	-0.5
PSDA				S	Sg	18 45 35.7	+1.0
PSDA	Pessada-Kefalo	0.62	182	P	Pg	18 45 26.3	-0.3
PSDA				S	Sg	18 45 35.2	+0.5
IGT	Igoumenitsa	0.82	345	P	Pg	18 45 30.6	+0.2
IGT				AML	AML	18 45 48.6	
	comp=N,2920µm,0.6s						
IGT				AML	AML	18 45 49.9	
	comp=E,2279µm,0.4s						
VTN	Vitineika	0.93	151	P	Pg	18 45 32.7	+0.2
EVR	Evrytania	0.95	79	P	Pg	18 45 32.7	-0.1
EVR	Evrytania	0.95	79	P	Pg	18 45 32.6	-0.2
EVR				AML	AML	18 45 55.4	
	comp=N,2265µm,0.6s						
EVR				AML	AML	18 45 56.9	
	comp=E,1772µm,0.9s						
RLS	Riolos of Patr	0.95	135	P	Pg	18 45 32.3	-0.5
RLS	Riolos of Patr	0.95	135	P	Pg	18 45 32.4	-0.5
ANX	Ano Chora	1.03	98	P	Pg	18 45 33.8	-0.5
ANX	Ano Chora	1.03	98	P	Pg	18 45 34.3	0.0
ANX				AML	AML	18 45 58.2	
	comp=N,6470µm,0.7s						
ANX				AML	AML	18 46 00.8	
	comp=E,5214µm,0.7s						
LTHK	Lithakia	1.04	170	P	Pg	18 45 33.1	-1.4
LTHK	Lithakia	1.04	170	P	Pg	18 45 33.1	-1.4
LTHK				AML	AML	18 45 58.4	
	comp=N,3341µm,0.6s						
LTHK				AML	AML	18 46 06.1	
	comp=E,3194µm,0.6s						
EFP	Efpalio	1.06	107	P	Pg	18 45 34.2	-0.6
EFP	Efpalio	1.06	107	P	Pg	18 45 34.2	-0.6
EFP				AML	AML	18 45 57.1	
	comp=N,4269µm,0.5s						
EFP				AML	AML	18 45 57.6	
	comp=E,3376µm,0.5s						
KEK	Kerkira	1.16	327	P	Pn	18 45 37.6	+0.8
DRO	Drossia	1.16	132	P	Pb	18 45 36.1	-0.6
DRO	Drossia	1.16	132	P	Pb	18 45 36.0	-0.6
SERG	Sergoula	1.18	105	P	Pb	18 45 36.5	-0.4
SERG	Sergoula	1.18	105	P	Pb	18 45 36.5	-0.4
SERG				AML	AML	18 45 56.7	
	comp=E,3577µm,0.3s						
SERG				AML	AML	18 45 56.9	
	comp=N,5097µm,0.3s						
LAKA	Lakka	1.18	114	P	Pb	18 45 36.4	-0.6
LAKA				AML	AML	18 46 05.5	
	comp=N,1800µm,0.5s						
LAKA				AML	AML	18 46 05.5	
	comp=E,2214µm,0.6s						
MAKR	Makrakomi, Fth	1.22	76	P	Pb	18 45 37.7	+0.1
MAKR				AML	AML	18 46 07.3	
	comp=N,4170µm,0.7s						
MAKR				AML	AML	18 46 11.9	
	comp=E,2889µm,0.8s						
KPRO	Kipourio	1.35	25	P	Pb	18 45 40.5	+0.6
KPRO				AML	AML	18 46 09.1	
	comp=N,2406µm,0.7s						
KPRO				AML	AML	18 46 10.8	
	comp=E,2034µm,0.7s						
THL	Klokotos Trika	1.37	52	P	Pb	18 45 40.2	+0.1
AGG	Agios Georgios	1.37	77	P	Pb	18 45 40.6	+0.4
AGG				AML	AML	18 46 10.2	
	comp=E,2794µm,0.9s						
AGG				AML	AML	18 46 13.3	
	comp=N,1893µm,0.5s						
KLV	Kalavryta, Ach	1.39	119	P	Pn	18 45 39.4	-0.6
GUR	Goura	1.58	120	P	Pn	18 45 43.0	+0.4
GUR				AML	AML	18 46 13.5	
	comp=N,3093µm,1.0s						
GUR				AML	AML	18 46 13.7	
	comp=E,3076µm,0.6s						
ITM	Ithomi	1.87	146	P	Pb	18 45 48.3	-0.4
VIL2	Platees	2.15	103	P	Pb	18 45 53.6	+0.1
OHR	Ohrid	2.38	3	i Pn	Pb	18 45 57.7	+0.3
KRND	KRANIDI	2.42	123	P	Pb	18 45 56.8	-1.2
TIR	Tirane	2.67	348	⇑P	Pn	18 45 59.7	+2.2
TIP	Timpagrande	3.04	280	⇑P	Pn	18 46 03.3	+0.7
STIP	Stip	3.19	22	i Pn	Pb	18 46 09.4	-1.8
DRME	Dracevica, Mon	3.62	343	ePn	Pn	18 46 11.1	+0.6
PDG	Podgorica	3.83	345	⇑P	Pn	18 46 14.1	+0.7
PDG				⇓S	Sn	18 46 56.4	-2.1
PDG	Podgorica	3.83	345	ePn	Pn	18 46 11.5	-2.0
HCY	Herceg Novi	4.04	337	ePn	Pn	18 46 15.9	-0.5
TREB	Trebinje	4.33	337	ePn	Pn	18 46 19.4	-1.0
DBRK	Dubrovnik	4.35	335	ePn	Pn	18 46 20.9	+0.3
DBRK				Sn	Sn	18 47 09.6	-1.9
VTS	Vitosha	4.36	26	P	Pn	18 46 23.9	+3.0
BRY	Bratogost	4.45	340	ePn	Pn	18 46 18.5	-3.6
UPM	Unac-Piva	4.65	344	ePn	Pn	18 46 26.8	+1.9
STON	Ston	4.69	333	ePn	Pn	18 46 24.4	-0.8
STON	Ston	4.69	333	ePn	Pn	18 46 24.4	-0.8
LSTV	Lastovo	4.92	326	ePn	Pn	18 46 28.5	+0.1
RUDO	Rudo	4.97	350	ePn	Pn	18 46 22.7	-6.4
BBLS	Lazići	5.21	350	ePn	Pn	18 46 33.3	+0.9
MAKA	Makarska	5.30	330	ePn	Pn	18 46 34.9	+1.3
DIVS	Divibare	5.38	355	ePn	Pn	18 46 34.3	-0.5
RICI	Ricice	5.43	332	ePn	Pn	18 46 35.2	-0.3
RICI				Sn	Sn	18 47 36.3	-1.7
HVAR	Hvar	5.44	326	ePn	Pn	18 46 36.7	+1.0
ZIRJ	Zirje	6.18	324	ePn	Pn	18 46 45.2	-0.5
MORI	Morici	6.32	326	ePn	Pn	18 46 47.6	0.0
BLY	Banja Luka	6.53	338	ePn	Pn	18 46 46.2	-4.4
DUGI	Dugi Otok	6.71	323	ePn	Pn	18 46 53.5	+0.5
UDBI	Udbina	6.83	329	ePn	Pn	18 46 56.1	+1.3
MLR	Muntele Rosu	7.82	29	⇑P	Pn	18 47 14.3	+5.8
CRES	Cresnjev	8.05	333	ePn	Pn	18 47 11.1	-0.3
CEY	Cerknica	8.37	329	ePn	Pn	18 47 14.4	-1.4
PLOR	Plostina	8.40	30	⇑P	Pn	18 47 22.8	+6.6
VRI	Vrincioaia	8.44	30	⇓P	Pn	18 47 23.7	+6.9
OBKA	Obir	8.96	332	ePn	Pn	18 47 26.1	+2.2
	comp=E,1.2nm,0.4s						
ABTA	Abfaltersbach	9.97	326	ePn	Pn	18 47 40.4	+2.5
	comp=E,0.7nm,0.4s						
BRTR	Keskin Array B	10.15	80	P	Pn	18 47 46.7	+6.3
	comp=E,0.1nm,0.3s,baz=267,slow=13,SNR=2.2						
MOA	Molln	10.21	335	ePn	Pn	18 47 43.1	+2.1
	comp=E,0.6nm,0.2s						
GERES	GERESS Array B	11.27	336	P	Pn	18 48 07.6	+12
	comp=E,0.2nm,0.3s,baz=166,slow=13,SNR=2.0						
FINES	FINESS Array B	22.98	7	P	P	18 50 19.8	+0.8
	comp=E,5.5nm,0.9s,baz=185,slow=12,SNR=3.6						
MKAR	Makanchi Array	44.95	59	P	P	18 53 29.7	+0.2
	comp=E,0.1nm,0.4s,baz=274,slow=7.1,SNR=1.9						
ZALV	Zalesovo Beam	45.27	49	P	P	18 53 31.6	-0.3
	comp=E,0.5nm,0.3s,baz=282,slow=8.7,SNR=4.0						

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*MOS **29** 18:52:49.2±1.6, 23.°48S×64.°73W, h15^{km}, mb5.9/11, MS5.4/30, Error ellipse: s-maj=9.1km s-min=5.9km az=98.8*

*BJI **29** 18:52:49.3±0.0, 23.°21S×64.°50W, h10^{km}, mB5.8/62, Ms5.8/72, Ms7 5.7/67*

*NEIC **29** 18:52:49.5±2.5, 23.°56S±0.°06×64.°65W±0.°07, h11^{km}±1^{km}, mb6.1/474, Ms_20 5.5/223, Mwb5.6/42, Mww5.8, Md5.5(SJA), Error ellipse: s-maj=11.1km s-min=10.2km az=251.0*

*NEIC **29** 18:52:49.4, 23.°56S×64.°66W, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.63; $M_{\theta\theta}$0.02; $M_{\phi\phi}$-1.65; $M_{r\theta}$0.29; $M_{\theta\phi}$0.25; $M_{\phi r}$2.45; Fault plane solution: $M_0$2.97000×10^{17} NP1: ϕ_s159.71000°, δ18.23000°, λ66.66000°. NP2: ϕ_s4.15000°, δ73.31000°, λ97.44000°. Principal axes: T 2.9843, Plg61.0000°, Azm285.0000°; N -0.0270, Plg7.0000°, Azm182.0000°; P -2.9573, Plg28.0000°, Azm88.0000°;*

*SJA **29** 18:52:49.7±0.5, 23.°57S×64.°84W, h20^{km}±4^{km}, ML5.6, MW5.9*

*IDC **29** 18:52:51.1±2.6, 23.°46S×64.°68W, h20^{km}±15^{km}, mb5.2/21, mb1 5.2/28, mb1mx5.1/32, mbtmp5.2/28, ML4.7/6, MS5.3/20, Ms1 5.3/20, ms1mx5.3/24, Error ellipse: s-maj=13.6km s-min=9.2km az=73.0*

*VAO **29** 18:52:51.4±0.2, 23.°39S×64.°53W, h10^{km}, mb5.5*

*NEIC **29** 18:52:55, 23.°84S×64.°71W, h24^{km}, Moment Tensor Solution. Duration: 12.^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}6.32; $M_{\theta\theta}$-1.41; $M_{\phi\phi}$-4.91; $M_{r\theta}$0.72; $M_{\theta\phi}$-1.90; $M_{\phi r}$1.81; Fault plane solution: $M_0$6.36000×10^{17} NP1: ϕ_s204.00000°, δ36.00000°, λ91.00000°. NP2: ϕ_s23.00000°, δ54.00000°, λ89.00000°. Principal axes: T 6.6301, Plg81.0000°, Azm290.0000°; N -0.5789, Plg0.0000°, Azm24.0000°; P -6.0512, Plg9.0000°, Azm114.0000°;*

*GCMT **29** 18:52:58.5±0.1, 23.°59S±0.°01×64.°56W±0.°01, h22^{km}, MW5.8/138, Moment Tensor Solution. s124, c223; s138, c353; Duration: 1.^{s}9 Moment tensor: Scale 10^{17} Nm; M_{rr}3.84±.05; $M_{\theta\theta}$0.07±.04; $M_{\phi\phi}$-3.90±.04; $M_{r\theta}$-0.73±.09; $M_{\theta\phi}$-1.77±.04; $M_{\phi r}$4.00±.10; Best double couple: $M_0$5.88600×10^{17} NP1: ϕ_s222.00000°, δ29.00000°, λ129.00000°. NP2: ϕ_s360.00000°, δ68.00000°, λ71.00000°. Principal axes: T 5.8640, Plg62.0000°, Azm240.0000°; N 0.0510, Plg18.0000°, Azm7.0000°; P -5.9070, Plg21.0000°, Azm104.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 29 18:52:51.4±0.3**, 23.°48S**±0.°03×**64.°72W**±0.°03**, h22**^{km}±2^{km}**, h22**^{km}**:pP-P, n1122, σ1.^{s}90**/963**, mb6.0**/289**, MS5.5**/161**, 279C-120D, Fault plane solution: NP1:**ϕ_s328.82529°, δ82.71282°, λ52.92820°. **NP2:**ϕ_s229.29492°, δ37.68008°, λ168.02336°. **Principal axes:** T Plg40.4904°, Azm204.7361°; N Plg36.7230°, Azm334.2993°; P Plg28.0303°, Azm87.7002°; **Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASTB	Santa Barbara	0.53	153	eP	Pb	18 53 01.0	-1.2
HJA	Humahuaca	0.69	293	eP	Pb	18 53 03.3	-1.7
HJA				eS	Sb	18 53 13.4	-0.9
HJA				IAML		18 53 18.2	
	comp=Z,197µm,1.4s						
ALOL	LOMAS DE OLMED	0.75	117	eP	Pb	18 53 05.6	-0.3
SLA	San Lorenzo	1.43	210	eP	Pn	18 53 16.8	+0.5
SLA				eS	Sn	18 53 33.5	-1.1
SLA	San Lorenzo	1.43	210	eP	Pn	18 53 11.2	-5.2
SLA				eS	Sb	18 53 36.5	+1.1
SLA				IAML		18 53 40.7	
	comp=Z,199µm,0.6s						
FSA	Cafayete	2.86	203	eP	Pn	18 53 36.2	+0.2
FSA				eS	Sb	18 54 17.1	+0.4
AHML	Horco Molle	3.34	190	eP	Pn	18 53 41.0	-1.5
AHML				eS	Sb	18 54 29.1	-1.1
AHML	Horco Molle	3.34	190	eP	Pn	18 53 36.2	-6.3
AHML				eP	Pn	18 53 42.0	-0.5
AHML				eS	Sb	18 54 30.2	-0.1
AHML				eS	Sb	18 54 35.4	+5.1
AHML				eS	Sb	18 54 36.2	+5.9
AHML				IAML		18 54 38.9	
	comp=Z,38µm,1.0s						
LVC	Limon Verde	3.96	282	Pn	Pn	18 53 53.2	+2.0
	comp=Z,25nm,0.3s,baz=95,slow=10,SNR=150						
LVC				LR	LR	18 55 50.6	
	comp=Z,70µm,19.2s,baz=77,slow=45						
LVC	Limon Verde	3.96	282	eP	Pn	18 53 54.1	+2.9
LVC	Limon Verde	3.96	282	eP	Pn	18 53 54.0	+2.8
LVC	Limon Verde	3.96	282	Pn	Pn	18 53 52.7	+1.5
LVC	Limon Verde	3.96	282	eP	Pn	18 53 54.6	+3.4
PB15	IPOC Station P	4.38	273	⇑eP	Pn	18 54 00.7	+3.9
PB15	IPOC Station P	4.38	273		Pn	18 53 59.4	+2.5
PB15	IPOC Station P	4.38	273	eP	Pn	18 54 00.7	+3.9
PB09	IPOC Station P	4.50	291		Pn	18 53 58.3	-0.3
PB09	IPOC Station P	4.50	291	eP	Pn	18 53 59.2	+0.7
PB06	IPOC Station P	4.54	279	eP	Pn	18 54 02.4	+3.4
PB06	IPOC Station P	4.54	279		Pn	18 54 00.3	+1.3
PB06	IPOC Station P	4.54	279	eP	Pn	18 53 42.9	-16
PB03	IPOC Station P	4.86	286	eP	Pn	18 54 06.4	+3.0
PB01	IPOC Station P	5.04	298	⇑eP	Pn	18 54 09.7	+3.9
PB01	IPOC Station P	5.04	298		Pn	18 54 08.7	+2.9
PB01	IPOC Station P	5.04	298	eP	Pn	18 54 09.0	+3.2
PB01				eS	Sn	18 55 10.7	+7.2
CYA	Choya	5.04	191	eP	Pn	18 54 05.4	-0.4
CYA				eS	Sb	18 55 23.7	+4.5
CYA				IAML		18 55 43.5	
	comp=Z,11µm,1.2s						
PB07	IPOC Station P	5.08	289		Pn	18 54 09.1	+2.5
PB07	IPOC Station P	5.08	289	eP	Pn	18 54 09.0	+2.5
PB05	IPOC Station P	5.09	276	eP	Pn	18 54 08.6	+2.1
PB04	IPOC Station P	5.14	282	Pn	Pn	18 54 07.0	-0.3
PB04	IPOC Station P	5.14	282	eP	Pn	18 54 09.3	+2.0
PB04				eS	Sb	18 55 20.7	-1.4
PB04				IAML		18 56 20.9	
	comp=Z,2µm,4.7s						
AC02	Maricunga	5.21	229	Pn	Pn	18 54 11.2	+2.6
PB02	IPOC Station P	5.25	293	eP	Pn	18 54 11.6	+2.8
PB08	IPOC Station P	5.29	308		Pn	18 54 13.4	+3.7
PB08	IPOC Station P	5.29	308	eP	Pn	18 54 13.3	+3.7
PB08				eP	Pn	18 54 14.0	+4.4
PB14	IPOC Station P	5.32	256	Pn	Pn	18 54 11.4	+1.4
PB10	IPOC Station P	5.36	268	⇑eP	Pn	18 54 13.4	+3.3
PB10	IPOC Station P	5.36	268	Pn	Pn	18 54 12.0	+1.8
PB10	IPOC Station P	5.36	268	eP	Pn	18 54 14.0	+3.9
PB10				eS	Sn	18 55 17.2	+5.9
PB10				IAML		18 55 27.8	
	comp=Z,3µm,2.9s						
PATCX	Punta Patache	5.69	297		Pn	18 54 16.6	+1.8
PATCX	Punta Patache	5.69	297	eP	Pn	18 54 18.0	+3.2
PATCX				eS	Sn	18 55 24.2	+4.7
PATCX				IAML		18 55 34.4	
	comp=Z,2µm,3.1s						
HMBC	Humberstone	5.76	303	⇑eP	Pn	18 54 19.5	+3.7
TA01	Diego Aracena	5.84	299	⇑eP	Pn	18 54 20.6	+3.9
TA01				eS	Sn	18 55 25.4	+2.4
TA01	Diego Aracena	5.84	299	Pn	Pn	18 54 18.6	+1.9
TA01	Diego Aracena	5.84	299	eP	Pn	18 54 20.0	+3.3
TA01				eS	Sn	18 55 30.2	+7.1
TA01				IAML		18 55 35.8	
	comp=Z,1µm,2.0s						
PB11	IPOC Station P	5.90	308	⇑eP	Pn	18 54 21.5	+3.8
PB11	IPOC Station P	5.90	308	Pn	Pn	18 54 17.7	0.0
PB11	IPOC Station P	5.90	308	eP	Pn	18 54 22.0	+4.3
TA02	Huaiquique	5.95	301		Pn	18 54 20.3	+2.0
ACLC	CERRO LA CRUZ	6.25	198	eP	Pn	18 54 22.0	-0.6
GO03	Copiap	6.45	229	Pn	Pn	18 54 26.4	+1.2
GO03	Copiap	6.45	229	eP	Pn	18 54 26.1	+0.9
PB16	IPOC Station P	6.80	318	eP	Pn	18 54 35.0	+4.6
PB16				eP	Pn	18 54 36.2	+5.7
APLL	PUNTA DE LOS L	7.08	193	eP	Pn	18 54 31.9	-2.0
PB12	IPOC Station P	7.13	312	Pn	Pn	18 54 35.7	+1.1
PB12	IPOC Station P	7.13	312	eP	Pn	18 54 38.0	+3.4
CPUP	Villa Florida	7.29	114	Pn	Pn	18 54 35.8	-0.8
	comp=Z,54nm,0.3s,baz=296,slow=12,SNR=418						
CPUP				Lg	Lg	18 56 38.7	
	comp=Z,136nm,0.3s,baz=186,slow=3.7,SNR=3.4						
CPUP	Villa Florida	7.29	114	eP	Pn	18 54 35.8	-0.8
CPUP	Villa Florida	7.29	114		Pn	18 54 35.4	-1.2
AC04	Llanos de Chal	7.41	229	Pn	Pn	18 54 38.3	-0.1
AC04	Llanos de Chal	7.41	229	eP	Pn	18 54 39.0	+0.6
LCO	Las Campanas	7.70	223	P	Pn	18 54 41.8	-0.7
LCO	Las Campanas	7.70	223	Pn	Pn	18 54 41.8	-0.7
TCA	Tanti	7.83	179	eP	Pn	18 54 42.8	-1.4
LPAZ	La Paz	7.84	335	Pn	Pn	18 54 45.3	+0.5
	comp=Z,2.9nm,0.3s,baz=145,slow=10,SNR=49						
LPAZ				Sn	Sn	18 56 14.2	+1.0
	comp=Z,7.8nm,0.3s,baz=133,slow=18,SNR=1.2						
LPAZ	La Paz	7.84	335	eP	Pn	18 54 45.9	+1.1
LPAZ	La Paz	7.84	335		Pn	18 54 45.6	+0.8
AROD	Rodeo	7.90	211	eP	Pn	18 54 46.5	+1.2
ACCO	Cerro Coronel	8.07	208	eP	Pn	18 54 48.0	+0.3
SIV	San Ignacio	8.20	25	Pn	Pn	18 54 48.9	-0.3
	comp=Z,38nm,0.3s,baz=209,slow=14,SNR=356						
SIV				Sn	Sn	18 56 21.0	-0.2
	comp=Z,82nm,0.3s,baz=214,slow=18,SNR=1.4						
SIV				Lg	Lg	18 57 03.5	
	comp=Z,63nm,0.3s,baz=283,slow=19,SNR=1.6						
GO04	Tololo Observa	8.60	218		Pn	18 54 53.8	-1.1
CO05	La Serena	8.67	221		Pn	18 54 54.0	-1.6
ZON	Zonda	8.77	203	P	Pn	18 54 57.1	0.0
ZON	Zonda	8.77	203		Pn	18 54 57.1	0.0
AQDB	Aquidauana	8.88	72	eP	Pn	18 54 58.4	-0.2
AQDB	Aquidauana	8.88	72		Pn	18 54 58.4	-0.2
CO06	Fray Jorge	9.45	219	Pn	Pn	18 55 03.3	-3.0
ITQB	Itaqui	9.51	132	eP	Pn	18 55 06.2	-1.0
ITQB	Itaqui	9.51	132		Pn	18 55 04.5	-2.6
PTLB	Pontes e Lacer	9.56	34	eP	Pn	18 55 07.6	-0.2
PTLB	Pontes e Lacer	9.56	34		Pn	18 55 08.2	+0.4
VA03	San Esteban	10.59	208		Pn	18 55 20.4	-1.6
PP1B	Ponte de Pedra	10.91	59	eP	Pn	18 55 24.7	-1.7
PEL	Peldehue	10.97	207	P	Pn	18 55 26.5	-0.7
PEL	Peldehue	10.97	207	Pn	Pn	18 55 26.5	-0.7

TRCB	Terra Rica	11.14	89	*e*P	Pn	18 55 28.6	-1.0
TRCB	Terra Rica	11.14	89		Pn	18 55 28.5	-1.0
MT05	Renca	11.21	207		Pn	18 55 28.0	-2.4
MT02	Curacav	11.26	209		Pn	18 55 27.2	-3.9
VILB	Vilhena	11.31	23	*e*P	Pn	18 55 31.7	-0.2
VILB	Vilhena	11.31	23		Pn	18 55 32.7	+0.8
SALV	Santo Antonio	11.35	50	*e*P	Pn	18 55 31.1	-1.4
PTGB	Pitanga	11.62	99	*e*P	Pn	18 55 35.5	-0.7
MT09	Talagante	11.64	207		Pn	18 55 33.7	-2.7
MT01	Popeta	11.83	208		Pn	18 55 34.8	-4.1
ITAB	Concordia	11.98	111	*e*P	Pn	18 55 40.2	-0.7
ITAB	Concordia	11.98	111		Pn	18 55 39.4	-1.5
CPSB	Cacapava Do Su	12.20	127	*e*P	Pn	18 55 42.0	-1.9
BO01	Tunca	12.22	206		Pn	18 55 40.2	-4.0
BO02	Sierra Bellavi	12.46	204		Pn	18 55 44.8	-2.7
PCMB	Pacaembu	12.57	84	*e*P	Pn	18 55 48.2	-1.0
LPA	La Plata	12.84	154	*e*P	Pn	18 55 46.8	-5.8
LPA				sP	P	18 55 52.9	-10
LPA				PP	PnPn	18 55 59.5	-1.1
LPA				PPP	PPP	18 56 10.9	
LPA				pPP		18 56 34.4	
LPA				PP	PbPb	18 56 54.8	+20
LPA				S	Sn	18 58 15.7	+0.9
LPA				SS	SnSn	18 58 27.8	+0.4
LPA				SSS	SSS	18 58 39.1	
LPA				PCP	PcP	19 01 26.4	-1.1
LPA				SCS	ScS	19 08 34.2	-1.6
LPA				PKIKP	PKiKP	19 09 21.0	-3.7
LPA				SKIKP		19 12 51.6	
LPA				PKIKS		19 12 58.6	
LPA				SKIKS		19 16 29.4	
GO05	Huala	13.10	207		Pn	18 55 52.6	-3.6
ML02	Panimavida	13.55	204		Pn	18 55 59.8	-2.6
ETMB	Extrema	13.66	354	*e*P	Pn	18 56 03.4	-0.6
ETMB	Extrema	13.66	354		Pn	18 56 03.1	-0.8
ITRB	Iturama	13.87	77	*e*P	Pn	18 56 05.5	-1.4
FRTB	Fartura	13.91	92	*e*P	Pn	18 56 05.0	-2.5
PDRB	Porto dos Gac	14.04	34	*e*P	Pn	18 56 06.6	-2.5
TIJ01	Guaruva-PR	14.44	101	*e*P	Pn	18 56 13.7	-0.9
TRQA	Tornquist	14.72	171	P	Pn	18 56 16.1	-2.3
TRQA	Tornquist	14.72	171		Pn	18 56 16.1	-2.3
TER01	Tubaro-SC	14.89	113	*e*P	Pn	18 56 20.1	-0.6
CLDB	Colider	15.15	36	*e*P	Pn	18 56 22.0	-2.2
PET01	Itanhaem-SP	15.98	96	*e*P	Pn	18 56 34.4	-0.5
NNA	Nana	16.23	313	Pn	Pn	18 56 36.9	-1.4
	comp=Z,4.4nm,0.3s,baz=157,slow=12,SNR=20						
NNA				Sn	Sn	18 59 38.7	+0.8
	comp=Z,0.5nm,0.3s,baz=182,slow=6.6,SNR=1.6						
NNA				LR	LR	19 03 48.7	
	comp=Z,6µm,20.5s,baz=132,slow=40						
NNA	Nana	16.23	313		P	18 56 40.7	-0.5
LC01	Cunco	16.54	200		Pn	18 56 39.7	-2.3
LC01				IAmb	IAmb	18 56 45.5	
	comp=Z,2µm,1.4s						
SNDB	Serra Nova Dou	17.14	50	*e*P	Pn	18 56 48.0	-1.7
BDFB	Brasilia	17.55	67	P	Pn	18 56 53.7	-1.3
	comp=Z,1.5nm,0.3s,baz=237,slow=15,SNR=30						
BDFB				Lg	Lg	19 02 01.2	
	comp=Z,5.4nm,0.3s,baz=120,slow=14,SNR=4.6						
BDFB				LR	LR	19 04 20.8	
	comp=Z,17µm,18.8s,baz=245,slow=39						
BDFB	Brasilia	17.55	67	P	Pn	18 56 54.4	-0.6
BDFB				pmax	pmax		
	comp=Z,134nm,0.9s						
BDFB	Brasilia	17.55	67	P	Pn	18 56 54.4	-0.6
PLCA	Paso Flores	17.89	195	P	Pn	18 56 57.5	-1.5
	comp=Z,0.4nm,0.3s,baz=14,slow=13,SNR=30						
PLCA				Lg	Lg	19 02 16.3	
	comp=Z,0.4nm,0.3s,baz=103,slow=21,SNR=3.2						
PLCA				LR	LR	19 04 12.6	
	comp=Z,5µm,18.9s,baz=9.5,slow=38						
PLCA	Paso Flores	17.89	195	P	Pn	18 56 57.0	-2.0
LL04	Puerto Octay	18.55	199	P	P	18 57 03.9	-2.8
BSCB	Bom Sucesso	18.63	86	*e*P	P	18 57 06.4	-1.3
NPGB	Novo Progresso	18.65	30	*e*P	Pn	18 57 08.2	-0.1
MAN01	Angra dos Reis	19.09	92	*e*P	Pn	18 57 13.5	-0.2
VAS01	Vassouras-RJ	19.64	91	*e*P	Pn	18 57 19.9	-0.4
TBTG	Tabatinga, AM	19.82	345	*e*P	P	18 57 21.5	+0.7
LL01	San Ignacio de	19.91	197	P	P	18 57 19.6	-1.9
DIAM	Diamantina, MG	20.32	79	*e*P	Pn	18 57 27.7	-0.8
MACA	Manacapuru-AM	20.57	12	*e*P	P	18 57 29.5	+0.6
MACA	Manacapuru-AM	20.57	12	P	P	18 57 28.9	+0.1
LL07	Hotel Espejo d	20.63	199	P	P	18 57 26.2	-3.1
LL07				IAmb	IAmb	18 57 29.5	
	comp=Z,979nm,1.1s						
MC01	Montes Claros	20.63	75	*e*P	P	18 57 30.3	+0.6
DUB01	Friburgo-RJ	20.65	91	*e*P	P	18 57 30.3	+0.5
ITTB	Itaituba	20.88	26	*e*P	P	18 57 32.7	+0.3
ATAH	Atahualpa	20.90	319	P	Pn	18 57 34.3	-1.2
	comp=Z,63nm,1.0s,baz=140,slow=8.6,SNR=48						
ATAH				S	S	19 01 26.2	+0.9
	comp=Z,8.7nm,0.7s,baz=132,slow=19,SNR=1.5						
ATAH				LR	LR	19 07 46.6	
	comp=Z,10µm,18.8s,baz=145,slow=43						
GO07	Milladeo Hill,	20.94	199	P	P	18 57 30.2	-2.5
JANB	Januaria	20.98	70	*e*P	P	18 57 33.3	-0.2
CAM01	Campos-RJ	21.34	90	*e*P	P	18 57 38.2	+1.0
PRPB	Parauapebas	22.40	42	*e*P	P	18 57 48.8	+0.2
ALF01	Guarapari-ES	22.41	87	*e*P	P	18 57 48.6	-0.1
BSFB	Barra de Sao F	22.73	83	*e*P	P	18 57 52.0	-0.1
COYC	Coyhaique	22.84	193	P	P	18 57 50.6	-2.5
COYC				IAmb	IAmb	18 57 54.2	
	comp=Z,1µm,1.8s						
RIB01	Linhares ES	23.01	84	*e*P	P	18 57 56.5	+1.4
PTGA	Pitinga	23.07	12	P	P	18 57 54.7	-1.0
	comp=Z,77nm,1.0s,baz=198,slow=11,SNR=91						
PTGA				S	S	19 02 06.4	+0.7
	comp=Z,14nm,0.7s,baz=264,slow=22,SNR=1.6						
PTGA				Lg	Lg	19 04 56.9	
	comp=Z,59nm,0.9s,baz=286,slow=23,SNR=2.4						
PTGA				LR	LR	19 08 11.4	
	comp=Z,15µm,20.3s,baz=190,slow=40						
NAN01	Guarapari, ES	23.67	81	*e*P	P	18 58 02.5	+0.9
MALB	Monte Alegre	23.76	27	*e*P	P	18 58 03.0	+0.5
CMC01	Camacan, BA	25.07	76	*e*P	P	18 58 13.7	-0.8
GDU01	Guandu, BA	25.69	72	*e*P	P	18 58 20.1	-0.1
BOAV	Boa Vista	26.04	10	*e*P	P	18 58 22.5	-0.8
BOAV	Boa Vista	26.04	10	P	P	18 58 22.5	-0.8
MCPB	Macapa, AP	26.06	30	*e*P	P	18 58 24.5	+1.0
TMAB	Tom-Au,PA,Br	26.44	40	*e*P	P	18 58 26.4	-0.6
MACC	Macarena, Meta	26.97	340	*e*P	P	18 58 26.3	-5.5
GUVC	San Jose del G	26.99	342	*e*P	P	18 58 29.1	-2.7
OTAV	Otavalo	27.09	329	P	P	18 58 33.8	+0.5
OTAV				pmax	pmax		
	comp=Z,175nm,1.6s						
OTAV				MLR	MLR		
	comp=Z,13µm,18.0s						
OTAV	Otavalo	27.09	329	P	P	18 58 33.8	+0.5
OTAV	Otavalo	27.09	329	IAMs_20	IAMs_20	19 10 51.0	
	comp=Z,13µm,18.0s						
TULM	Tulcn-Chalpat	27.20	330	*e*P	P	18 58 33.0	-1.3
GCUF	Volcan Galeras	27.45	332	*e*P	P	18 58 35.8	-0.8
GARC	Garzon, Huila	27.58	336	*e*P	P	18 58 34.9	-2.6
SOTA	Rioblanco	27.97	334	*e*P	P	18 58 39.7	-1.5
PCON	Cinco Dias	28.06	335	*e*P	P	18 58 41.6	-0.5
MARP	Paez Belalcaza	28.36	336	*e*P	P	18 58 42.5	-1.9
ROSB	Rosrio	28.56	47	*e*P	P	18 58 45.5	-0.4
TUMC	Tumaco	28.61	330	*e*P	P	18 58 44.5	-1.9
EFI	East Falkland	28.62	171⇑	*e*P	P	18 58 44.9	-1.2
EFI				pmax	pmax		
	comp=Z,105nm,1.5s						
EFI				MLR	MLR		
	comp=Z,23µm,14.0s						
EFI	East Falkland	28.62	171	IAMs_20	IAMs_20	19 11 05.6	
	comp=Z,10µm,19.0s						
VILC	Villavicencio,	28.78	341	*e*P	P	18 58 47.3	-0.7
PRAC	Prado	28.79	339	*e*P	P	18 58 47.3	-0.7
ORTC	Ortega, Tolima	29.09	338	*e*P	P	18 58 47.3	-3.4
MG02	Cerro Sombrero	29.46	186	P	P	18 58 51.8	-1.8
YOTC	Yotoco, Valle	29.55	336	*e*P	P	18 58 50.2	-4.7
ROSC	El Rosal	29.66	340	P	P	18 58 55.5	-0.7
	comp=Z,21nm,0.4s,baz=193,slow=3.3,SNR=19						
ROSC	El Rosal	29.66	340	*e*P	P	18 58 55.0	-1.2
RUSC	La Rusia	30.31	343	*e*P	P	18 58 58.8	-3.2
SPBC	San Pablo de B	30.36	341	*e*P	P	18 58 57.9	-4.1
GUY2C	Guyana, Caldas	30.36	339	*e*P	P	18 58 57.9	-4.6
PLMC	San Jos del P	30.38	337	*e*P	P	18 58 55.9	-6.2
NORC	Norcasia	30.52	340	*e*P	P	18 58 57.9	-5.5
TAMC	Tame, Arauca	30.52	346	*e*P	P	18 58 58.8	-4.6
BARC	Barichara	31.01	344	*e*P	P	18 59 04.5	-3.3
CBOC	Ciudad Bolivar	31.18	338	*e*P	P	18 59 08.4	-0.9
PTBC	PUERTO BERRIO,	31.31	341	*e*P	P	18 59 05.5	-4.8
HELC	Santa Helena	31.32	339	*e*P	P	18 59 07.4	-3.3
USHA	Ushuaia	31.44	184	P	P	18 59 10.4	-0.6
	comp=Z,12nm,0.8s,baz=5.6,slow=6.2,SNR=4.4						
PAMC	Pamplona, Colo	31.60	345	*e*P	P	18 59 10.3	-3.1
SOCV	Socops	32.13	349	*e*P	P	18 59 12.2	-5.3
DBBC	Dabeiba	32.32	338	*e*P	P	18 59 16.0	-3.2
ZARC	Zaragoza, Cauc	32.34	341	*e*P	P	18 59 12.2	-7.1
ZARC	Zaragoza, Cauc	32.34	341	P	P	18 59 16.6	-2.7
OCAC	Ocana	32.62	344	*e*P	P	18 59 17.9	-4.0
SDV	Santo Domingo	32.68	349	*e*P	P	18 59 18.9	-3.6
UREC	San Jos de Ur	32.79	340	*e*P	P	18 59 17.9	-5.3
PTAC	Punta Ardita,	33.02	336	*e*P	P	18 59 17.9	-7.3
SMLC	San Martn de	33.36	343	*e*P	P	18 59 21.8	-6.4
PCRV	Puerto La Cruz	33.45	0	P	P	18 59 27.4	-1.6
	comp=Z,8.5nm,0.7s,baz=232,slow=1.9,SNR=4.2						
PCRV				PKP2bc		19 33 22.4	
	comp=Z,25nm,1.1s,baz=345,slow=5.5,SNR=3.1						
SJCC	San Jacinto, C	34.71	342	*e*P	P	18 59 37.1	-3.0
SJCC	San Jacinto, C	34.71	342	P	P	18 59 38.1	-2.0
SJCC				IAmb	IAmb	18 59 41.8	
	comp=Z,348nm,1.2s						
BCIP	Isla Barro Col	35.65	334	P	P	18 59 47.7	-0.4
BCIP				pmax	pmax		
	comp=Z,95nm,1.1s						
BCIP				MLR	MLR		
	comp=Z,6µm,20.0s						
BCIP	Isla Barro Col	35.65	334	P	P	18 59 47.7	-0.4
SMRC	Santa Marta, M	35.66	344	*e*P	P	18 59 34.2	-14
URIC	Uribia, Colomb	35.68	348	*e*P	P	18 59 40.9	-7.4
HATO	Hato, Curacao	35.68	353	IAMs_20	IAMs_20	19 17 12.8	
	comp=Z,7µm,20.0s						
DRK0	Durika	37.24	329	P	P	19 00 01.9	-0.1
DRK0				IAmb	IAmb	19 00 05.5	
	comp=Z,252nm,1.0s						
SRBA	San Rafael, Bu	37.27	329	P	P	19 00 02.8	+0.7
SRBA				PcP	PcP	19 02 23.2	+1.7
HOPE	Hope Point	37.32	153	P	P	19 00 00.8	-1.1
HOPE				pmax	pmax		
	comp=Z,993nm,1.8s						
HOPE				MLR	MLR		
	comp=Z,7µm,19.0s						
HOPE	Hope Point	37.32	153	P	P	19 00 00.8	-1.1
HOPE	Hope Point	37.32	153	IAMs_20	IAMs_20	19 14 07.3	
	comp=Z,7µm,19.0s						
RIMA	Rio Macho	37.98	328	P	P	19 00 09.5	+1.4
RIMA				IAmb	IAmb	19 00 11.7	
	comp=Z,387nm,1.7s						
FDF	Fort de France	38.13	6	IAMs_20	IAMs_20	19 18 11.2	
	comp=Z,10µm,19.0s						
CVTR	Volcan Turrial	38.15	329	P	P	19 00 10.4	+0.6
JTS	Las Juntas de	38.96	327	P	P	19 00 15.4	-0.8
JTS				pmax	pmax		
	comp=Z,354nm,1.3s						
JTS				MLR	MLR		
	comp=Z,4µm,20.0s						
JTS	Las Juntas de	38.96	327	P	P	19 00 15.4	-0.8
SEUS	St. Eustatius	40.75	3	IAMs_20	IAMs_20	19 18 32.6	
	comp=Z,9µm,20.0s						
SABA	Saba	40.87	2	IAMs_20	IAMs_20	19 18 12.7	
	comp=Z,10µm,22.0s						
ANWB	Willy Bob	40.99	4	IAMs_20	IAMs_20	19 19 56.9	
	comp=Z,6µm,18.0s						
BOAB	BOACO BROADBAN	41.17	328	P	P	19 00 35.9	+1.4
BOAB				IAmb	IAmb	19 00 38.5	
	comp=Z,749nm,1.4s						
PMSA	Palmer Station	41.29	180	P	P	19 00 34.0	-0.9
	comp=Z,54nm,1.2s,baz=47,slow=8.0,SNR=3.8						
PMSA	Palmer Station	41.29	180	*e*P	P	19 00 37.7	+2.8
PMSA	Palmer Station	41.29	180	IAMs_20	IAMs_20	19 18 06.9	
	comp=Z,7µm,20.0s						
CELP	Cerrillos	41.34	357	P	P	19 00 33.5	-2.3
SJG	San Juan	41.36	358	P	P	19 00 33.3	-2.7
	comp=Z,18nm,0.8s,baz=210,slow=5.2,SNR=6.4						
SJG	San Juan	41.36	358	P	P	19 00 33.6	-2.4
SJG				pmax	pmax		
	comp=Z,53nm,1.2s						
SJG				MLR	MLR		
	comp=Z,8µm,18.0s						
SJG	San Juan	41.36	358	P	P	19 00 33.6	-2.4
SJG	San Juan	41.36	358	IAMs_20	IAMs_20	19 20 19.7	
	comp=Z,8µm,18.0s						
CUPR	Culebra, Puert	41.53	359	P	P	19 00 35.8	-1.6
CUPR				PcP	PcP	19 02 36.4	+1.7
MATN	Matagalpa	41.71	328	P	P	19 00 38.7	-0.3
MATN				IAmb	IAmb	19 00 41.6	
	comp=Z,458nm,1.6s						
SDDR	Presa de Saban	42.68	351	IAMs_20	IAMs_20	19 20 41.1	
	comp=Z,6µm,20.0s						
SC01	Santiago de lo	43.04	352	P	P	19 00 48.3	-1.4
MTDJ	Mount Denham	43.30	342	IAMs_20	IAMs_20	19 21 49.5	
	comp=Z,5µm,20.0s						
TGUH	Tegucigalpa,Un	43.34	327	*e*P	P	19 00 48.8	-3.5
TGUH	Tegucigalpa,Un	43.34	327	P	P	19 00 52.4	+0.1
TGUH				IAmb	IAmb	19 00 55.2	
	comp=Z,476nm,1.2s						
GTBY	Guantanamo Bay	44.31	346	P	P	19 00 58.2	-1.7
GTBY				IAMs_20	IAMs_20	19 22 01.4	
	comp=Z,4µm,18.0s						
MTO3	Montecristo	44.70	325	P	P	19 01 03.8	+0.4
MTO3				IAmb	IAmb	19 01 05.8	
	comp=Z,171nm,0.9s						
ESQI	Esquipulas	44.82	325	P	P	19 01 05.0	+0.8
PETF	Flores	47.07	326	P	P	19 01 21.9	+0.1
CCIG	Comitan	47.75	323	P	P	19 01 27.0	-0.2
CCIG				IAmb	IAmb	19 01 29.1	
	comp=Z,154nm,1.0s						
SOR	Soroa	49.31	338	P	P	19 01 38.7	-0.3
SOR				pmax	pmax		
	comp=Z,187nm,1.1s						
SOR	Soroa	49.31	338	P	P	19 01 38.7	-0.3
SOR				IAmb	IAmb	19 01 40.4	
	comp=Z,187nm,1.1s						
061Z	Ochoppi	51.49	341	P	P	19 01 55.1	-0.3
061Z				IAmb	IAmb	19 01 57.2	
	comp=Z,254nm,1.0s						
DWPF	Disney Wildern	53.76	342	P	P	19 02 12.1	-0.1
	baz=161						
656A	Willston	55.27	341	P	P	19 02 23.0	-0.1
656A				IAmb	IAmb	19 02 24.7	
	comp=Z,169nm,1.1s						
SHEL	Horse Pasture	55.70	94	IAMs_20	IAMs_20	19 23 33.4	
	comp=Z,4µm,20.0s						
MOIG	Morelia	55.72	317	P	P	19 02 25.9	-1.0
MOIG				IAmb	IAmb	19 02 29.8	
	comp=Z,229nm,1.1s						
553A	Crawfordville	56.62	340	P	P	19 02 32.6	-0.1
VNA3	Neumayer Olymp	56.98	162	P	P	19 02 34.3	-0.6
VNA1	Neumayer--Stat	57.14	161	P	P	19 02 36.4	+0.3
VNA2	Neumayer--Watz	57.52	161	P	P	19 02 38.2	-0.6
	baz=288,slow=8.5						
TIGA	Tifton	57.52	341	P	P	19 02 38.6	-0.5
	baz=159,SNR=6.3						
TIGA	Tifton	57.52	341	P	P	19 02 38.9	-0.3
TIGA				IAmb	IAmb	19 02 40.6	
	comp=Z,150nm,1.1s						
352A	Blakely	57.97	340	P	P	19 02 41.7	-0.7
352A				IAmb	IAmb	19 02 43.7	
	comp=Z,275nm,1.1s						
NHSC	New Hope	58.17	345	P	P	19 02 43.9	+0.2
	baz=163,SNR=19						
NHSC	New Hope	58.17	345	IAMs_20	IAMs_20	19 29 54.3	
	comp=Z,4µm,21.0s						
BRAL	Brewton	58.40	338	P	P	19 02 45.1	-0.3
	baz=156,SNR=21						
BRAL				S	S	19 10 45.1	-2.0
	baz=156						
BRAL	Brewton	58.40	338	P	P	19 02 45.0	-0.4
ZAIG	Zacatecas	58.88	319	P	P	19 02 50.1	+0.8
ZAIG				IAmb	IAmb	19 02 52.4	
	comp=Z,95nm,0.9s						
SNAA	Sanae	59.16	161	P	P	19 02 49.2	-1.1
SNAA	Sanae	59.16	161	P	P	19 02 48.1	-2.2
SNAA				pmax	pmax		
	comp=Z,142nm,1.3s						
SNAA				MLR	MLR		
	comp=Z,3µm,19.0s						
SNAA	Sanae	59.16	161	P	P	19 02 48.1	-2.2
SNAA				IAmb	IAmb	19 02 52.4	
	comp=Z,142nm,1.3s						
SNAA				IAMs_20	IAMs_20	19 26 33.8	
	comp=Z,3µm,19.0s						
GOGA	Godfrey	59.33	342	P	P	19 02 50.8	-0.9
GOGA				pmax	pmax		
	comp=Z,124nm,1.2s						
GOGA				MLR	MLR		
	comp=Z,2µm,18.0s						
GOGA	Godfrey	59.33	342	P	P	19 02 51.0	-0.7
	baz=160,SNR=23						
GOGA				S	S	19 10 55.5	-3.6
	baz=160						
GOGA	Godfrey	59.33	342	P	P	19 02 50.8	-0.9
GOGA				IAmb	IAmb	19 02 53.0	
	comp=Z,124nm,1.2s						
X58A	Rowland	59.36	346	P	P	19 02 51.3	-0.7
X58A				IAmb	IAmb	19 02 53.5	
	comp=Z,164nm,1.1s						
JSC	Jenkinsville	59.55	344	P	P	19 02 52.9	-0.4
JSC				pmax	pmax		
	comp=Z,159nm,1.1s						
JSC	Jenkinsville	59.55	344	P	P	19 02 52.9	-0.4
JSC				IAmb	IAmb	19 02 55.1	
	comp=Z,159nm,1.1s						
BIRD	Birdtown, Kers	59.70	345	P	P	19 02 53.9	-0.4
BIRD				IAmb	IAmb	19 02 56.1	
	comp=Z,175nm,1.0s						
CNNC	Cliffs of the	59.72	348	P	P	19 02 53.7	-0.6
	baz=166						
HODGE	Hodges	59.76	343	P	P	19 02 53.6	-1.1
HODGE				IAmb	IAmb	19 02 56.6	
	comp=Z,179nm,1.2s						
MBO	M'Bour	59.98	56	IAMs_20	IAMs_20	19 29 53.0	
	comp=Z,3µm,20.0s						
W57A	Gilead	60.08	346	P	P	19 02 56.1	-0.8
W57A				IAmb	IAmb	19 02 58.4	
	comp=Z,137nm,1.0s						
PAULI	Pauline	60.21	344	P	P	19 02 57.7	-0.1
PAULI				IAmb	IAmb	19 02 59.7	
	comp=Z,155nm,1.1s						
KMSC	Kings Mountain	60.39	344	P	P	19 02 58.7	-0.3
	baz=162,SNR=45						
KMSC				S	S	19 11 11.4	-1.4
	baz=162						
342A	Flagon Creek P	60.61	333	P	P	19 03 01.2	+0.6
VBMS	Vicksburg	60.62	335	P	P	19 03 00.2	-0.4
	baz=153,SNR=14						
Y49A	Blount Mountai	60.64	339	IAmb	IAmb	19 03 01.8	
	comp=Z,125nm,1.0s						
HKT	Hockley	60.95	329*c*	*i*P	P	19 03 02.6	-0.3
HKT				pmax	pmax		
	comp=Z,107nm,1.2s						
W52A	Murphy	61.03	342	IAmb	IAmb	19 03 05.0	
	comp=Z,158nm,1.1s						
V53A	Saluda	61.27	343	IAmb	IAmb	19 03 06.8	
	comp=Z,156nm,1.1s						
U56A	King	61.31	346	IAmb	IAmb	19 03 07.5	
	comp=Z,162nm,1.1s						
T59A	Double "B" Far	61.33	348	IAmb	IAmb	19 03 06.7	
	comp=Z,128nm,1.1s						
833A	Chaparral WMA,	61.40	325	P	P	19 03 06.1	0.0
	baz=144,SNR=81						
TKL	Tuckaleechee C	61.52	342	IAmb	IAmb	19 03 07.9	
	comp=Z,193nm,1.1s						
CPCT	Cooper Cave	61.53	342	IAmb	IAmb	19 03 08.1	
	comp=Z,154nm,1.1s						
W50A	Signal Mountai	61.54	341	IAmb	IAmb	19 03 08.2	
	comp=Z,203nm,1.1s						
V51A	Loudon	61.82	342	IAmb	IAmb	19 03 09.8	
	comp=Z,120nm,1.2s						
NATX	Nacogdoches	61.95	331	P	P	19 03 10.3	+0.6
	baz=149,SNR=30						
NATX				S	S	19 11 34.3	+1.6
	baz=149						
BLA	Blacksburg	62.15	346	P	P	19 03 11.1	+0.1
	baz=164,SNR=20						
BLA				S	S	19 11 34.4	-0.7
	baz=164						
BLA	Blacksburg	62.15	346	IAmb	IAmb	19 03 13.0	
	comp=Z,274nm,1.4s						
BLA				IAMs_20	IAMs_20	19 33 49.7	
	comp=Z,3µm,20.0s						
PLAL	Pickwick Lake	62.22	338	P	P	19 03 10.6	-0.9
TZTN	Tazewell	62.29	343	P	P	19 03 11.3	-0.6
	baz=160,SNR=22						
TZTN				S	S	19 11 34.2	-2.7
	baz=160						
TZTN	Tazewell	62.29	343	IAmb	IAmb	19 03 13.9	
	comp=Z,216nm,1.4s						
TZTN				IAMs_20	IAMs_20	19 33 25.5	
	comp=Z,4µm,19.0s						
R58B	Mineral	62.35	348	IAmb	IAmb	19 03 13.9	
	comp=Z,106nm,1.1s						
S57A	Dark Hollow, R	62.37	347	IAmb	IAmb	19 03 14.1	
	comp=Z,144nm,1.4s						
Z41A	Richland Creek	62.45	334	P	P	19 03 13.2	+0.2
	baz=151,SNR=11						
435B	Jarrell	62.48	328	P	P	19 03 13.5	+0.2
	baz=146,SNR=16						
CBN	Corbin Frederi	62.49	349	P	P	19 03 12.6	-0.6
	baz=167						
V48A	Smith Brothers	62.50	340	P	P	19 03 12.2	-1.2
CLTN	Cedars of Leba	62.67	340	IAmb	IAmb	19 03 16.2	
	comp=Z,206nm,1.1s						
U49A	Red Boiling Sp	62.89	341	IAmb	IAmb	19 03 16.8	
	comp=Z,137nm,1.2s						
S54A	Dingess, Beckl	62.92	345	IAmb	IAmb	19 03 17.8	
	comp=Z,188nm,1.0s						
WLAR	White Oak Lake	62.95	334	P	P	19 03 16.8	+0.5
T50A	Nancy	63.09	342	P	P	19 03 15.2	-2.0
T50A				IAmb	IAmb	19 03 18.1	
	comp=Z,129nm,1.1s						
WVT	Waverly	63.18	339	P	P	19 03 16.1	-1.7
WVT				pmax	pmax		
	comp=Z,341nm,1.1s						
WVT				MLR	MLR		
	comp=Z,1µm,20.0s						
WVT	Waverly	63.18	339	P	P	19 03 16.4	-1.4
	baz=156						
WVT				S	S	19 11 42.9	-5.1
	baz=156						
WVT	Waverly	63.18	339	P	P	19 03 16.1	-1.7
JCT	Junction City	63.34	326	P	P	19 03 18.8	-0.3
	baz=144,SNR=51						
JCT	Junction City	63.34	326	IAmb	IAmb	19 03 20.9	
	comp=Z,165nm,1.0s						
WHTX	Lake Whitney,	63.42	329	P	P	19 03 19.6	0.0
	baz=146,SNR=18						
WHTX				S	S	19 11 50.5	-0.8
	baz=146						
X40A	Basin Creek Fa	63.53	334	P	P	19 03 19.4	-0.8
	baz=151,SNR=14						
NVL	N'lazarevskaya	63.61	159	*e*P	P	19 03 24.7	+4.4
NVL				*e*		19 04 02.6	
NVL				*e*		19 05 45.9	
NVL				*e*S	S	19 11 54.9	+2.2
NVL				*e*SS	SS	19 16 02.8	+3.1
NVL				pmax	pmax		
	comp=Z,194nm,1.8s						
NVL				MLR	MLR		
	comp=N,3µm,18.0s						
NVL				MLR	MLR		
	comp=E,2µm,18.0s						
NVL				MLR	MLR		
	comp=Z,1µm,18.0s						
P60A	Greenville	63.78	351	P	P	19 03 21.1	-0.6
	baz=169,SNR=9.4						
P57A	Homestead Farm	63.85	349	IAmb	IAmb	19 03 24.5	
	comp=Z,116nm,1.1s						
HPIG		63.85	319	IAmb	IAmb	19 03 25.1	
	comp=Z,103nm,1.1s						
MIAR	Mount Ida	63.88	334	P	P	19 03 21.9	-0.6
MIAR				pmax	pmax		
	comp=Z,304nm,1.4s						
MIAR	Mount Ida	63.88	334	P	P	19 03 21.9	-0.6
	baz=150,SNR=68						
MIAR				S	S	19 11 54.1	-2.7
	baz=150						
MIAR	Mount Ida	63.88	334	P	P	19 03 21.9	-0.6
W41B	Gary Mavity, V	63.90	335	P	P	19 03 22.0	-0.7
	baz=152,SNR=44						
W41B				S	S	19 11 52.4	-4.7
	baz=152						
Q54A	Coxs Mills	63.94	346	IAmb	IAmb	19 03 24.3	
	comp=Z,126nm,1.4s						
WHAR	Wooly Hollow	64.02	335	IAmb	IAmb	19 03 25.6	
	comp=Z,254nm,1.4s						
R50A	Paris	64.13	343	IAmb	IAmb	19 03 26.0	
	comp=Z,208nm,1.4s						
Q52A	Bidwell	64.25	345	IAmb	IAmb	19 03 26.2	
	comp=Z,137nm,1.1s						
LCAR	Lake Charles	64.28	336	P	P	19 03 24.1	-1.0
LCAR				IAmb	IAmb	19 03 27.1	
	comp=Z,227nm,1.3s						

R49A	**Shelbyville**	**64.37**	**342**	IAmb	IAmb	19 03 26.4	
	comp=Z,116nm,1.2s						
MCWV	**Mont Chateau**	**64.38**	**347**	P	**P**	**19 03 25.4**	**-0.2**
	baz=165,SNR=13						
MCWV				S	**S**	**19 12 01.7**	**-1.1**
	baz=165						
MCWV	**Mont Chateau**	**64.38**	**347**	IAmb	IAmb	19 03 27.7	
	comp=Z,124nm,1.1s						
MCWV				IAMs_20	IAMs_20	19 32 00.6	
	comp=Z,2µm,18.0s						
BRNJ	**Basking Ridge**	**64.48**	**352**	IAmb	IAmb	19 03 28.2	
	comp=Z,126nm,1.2s						
FCAR	**Ozark Folk Cen**	**64.49**	**336**	P	**P**	**19 03 25.7**	**-0.8**
FCAR				IAmb	IAmb	19 03 28.2	
	comp=Z,231nm,1.4s						
TXAR	**Lajitas Array**	**64.50**	**323**	P	**P**	**19 03 26.4**	**-0.4**
	comp=Z,13nm,0.8s,baz=148,slow=7.1,SNR=104						
TXAR				LR	LR	19 32 00.6	
	comp=Z,672nm,21.9s,baz=0.0,slow=36						
TXAR				PKPPKP	**P'P'df**	**19 32 13.8**	**+2.6**
	comp=Z,1.6nm,1.3s,baz=222,slow=1.2,SNR=3.6						
CPNY	**Central Park**	**64.51**	**352**	IAmb	IAmb	19 03 28.7	
	comp=Z,277nm,1.8s						
W39A	**Magazine**	**64.53**	**334**	P	**P**	**19 03 26.8**	**+0.1**
	baz=150,SNR=53						
Q51A	**Peebles**	**64.58**	**344**	IAmb	IAmb	19 03 28.2	
	comp=Z,101nm,1.1s						
WCI	**Wyandotte Cave**	**64.64**	**341**	P	**P**	**19 03 26.0**	**-1.3**
WCI				pmax	pmax		
	comp=Z,164nm,1.2s						
WCI				MLR	MLR		
	comp=Z,2µm,18.0s						
WCI	**Wyandotte Cave**	**64.64**	**341**	P	**P**	**19 03 26.0**	**-1.3**
	baz=158						
WCI				S	**S**	**19 12 01.4**	**-4.7**
	baz=158						
WCI	**Wyandotte Cave**	**64.64**	**341**	P	**P**	**19 03 26.0**	**-1.3**
WCI				IAmb	IAmb	19 03 28.0	
	comp=Z,164nm,1.1s						
WCI	**Wyandotte Cave**	**64.64**	**341**	IAMs_20	IAMs_20	19 35 11.7	
	comp=Z,2µm,18.0s						
O56A	**Blue Knob Stat**	**64.72**	**348**	P	**P**	**19 03 28.0**	**+0.1**
	baz=166,SNR=19						
O56A	**Blue Knob Stat**	**64.72**	**348**	IAmb	IAmb	19 03 30.1	
	comp=Z,156nm,1.3s						
O56A				IAMs_20	IAMs_20	19 34 22.6	
	comp=Z,3µm,20.0s						
PAL	**Palisades**	**64.72**	**352**	P	**P**	**19 03 27.4**	**-0.4**
	baz=171,SNR=9.1						
PAL				S	**S**	**19 12 05.7**	**-1.1**
	baz=171						
PAL	**Palisades**	**64.72**	**352**	IAmb	IAmb	19 03 29.3	
	comp=Z,102nm,1.1s						
PAL				IAMs_20	IAMs_20	19 32 23.5	
	comp=Z,3µm,21.0s						
P52A	**Corning**	**64.86**	**345**	P	**P**	**19 03 27.8**	**-0.9**
	baz=162,SNR=33						
P52A				S	**S**	**19 12 06.0**	**-2.7**
	baz=162						
P52A	**Corning**	**64.86**	**345**	IAmb	IAmb	19 03 30.8	
	comp=Z,228nm,1.2s						
P52A				IAMs_20	IAMs_20	19 32 23.4	
	comp=Z,3µm,21.0s						
N59A	**State Game Lan**	**64.88**	**351**	P	**P**	**19 03 29.0**	**0.0**
	baz=169,SNR=16						
N59A				S	**S**	**19 12 05.9**	**-3.1**
	baz=169						
N59A	**State Game Lan**	**64.88**	**351**	IAMs_20	IAMs_20	19 33 11.9	
	comp=Z,3µm,21.0s						
YLE	**Yale**	**64.91**	**353**	IAmb	IAmb	19 03 31.1	
	comp=Z,108nm,1.0s						
P51A	**Williamsport**	**64.93**	**344**	IAmb	IAmb	19 03 31.1	
	comp=Z,157nm,1.3s						
M65A	**Busby, Falmout**	**64.94**	**355**	IAMs_20	IAMs_20	19 35 18.4	
	comp=Z,3µm,18.0s						
SSPA	**Standing Stone**	**64.95**	**349**	P	**P**	**19 03 29.2**	**-0.2**
	baz=167						
SSPA	**Standing Stone**	**64.95**	**349**	P	**P**	**19 03 30.1**	**+0.7**
SSPA				IAmb	IAmb	19 03 31.4	
	comp=Z,192nm,1.5s						
SSPA	**Standing Stone**	**64.95**	**349**	IAMs_20	IAMs_20	19 33 47.8	
	comp=Z,3µm,20.0s						
O54A	**Avella**	**64.99**	**347**	IAmb	IAmb	19 03 31.3	
	comp=Z,336nm,1.9s						
ABTX	**Abilene, Hawle**	**64.99**	**328**	P	**P**	**19 03 29.7**	**-0.2**
	baz=145,SNR=62						
ABTX				S	**S**	**19 12 08.5**	**-2.3**
	baz=145						
S44A	**Carbondale**	**65.08**	**339**	IAmb	IAmb	19 03 31.0	
	comp=Z,140nm,1.2s						
SIUC	**Southern Illin**	**65.08**	**339**	IAmb	IAmb	19 03 31.8	
	comp=Z,131nm,1.1s						
T42A	**Van Buren**	**65.12**	**337**	IAmb	IAmb	19 03 32.2	
	comp=Z,226nm,1.4s						
U40A	**Yellville**	**65.18**	**335**	P	**P**	**19 03 30.2**	**-0.8**
	baz=152,SNR=57						
U40A				S	**S**	**19 12 10.4**	**-2.4**
	baz=152						
U40A	**Yellville**	**65.18**	**335**	IAmb	IAmb	19 03 32.3	
	comp=Z,195nm,1.3s						
O53A	**New Philadelph**	**65.23**	**346**	P	**P**	**19 03 30.6**	**-0.6**
	baz=163,SNR=19						
O53A				S	**S**	**19 12 11.1**	**-2.2**
	baz=163						
O53A	**New Philadelph**	**65.23**	**346**	IAmb	IAmb	19 03 32.8	
	comp=Z,159nm,1.2s						
O53A				IAMs_20	IAMs_20	19 35 26.4	
	comp=Z,3µm,19.0s						
O52A	**Adamsville**	**65.25**	**346**	IAmb	IAmb	19 03 32.8	
	comp=Z,171nm,1.3s						
LIC	**Lamto**	**65.29**	**71**	*e*P	**P**	**19 03 32.5**	**+0.3**
	comp=Z,276nm,1.3s						
UCCT	**U. Connecticut**	**65.31**	**354**	IAmb	IAmb	19 03 33.5	
	comp=Z,247nm,1.9s						
L64A	**Middleborough**	**65.33**	**355**	IAmb	IAmb	19 03 34.0	
	comp=Z,252nm,1.6s						
BRYW	**Bryant College**	**65.37**	**354**	IAmb	IAmb	19 03 34.4	
	comp=Z,183nm,1.1s						
BRYW				IAMs_20	IAMs_20	19 35 34.7	
	comp=Z,3µm,18.0s						
P49A	**Miami Univ. Ec**	**65.41**	**343**	P	**P**	**19 03 31.1**	**-1.3**
	baz=160,SNR=13						
P49A				S	**S**	**19 12 11.1**	**-4.4**
	baz=160						
P49A	**Miami Univ. Ec**	**65.41**	**343**	IAmb	IAmb	19 03 33.1	
	comp=Z,171nm,1.1s						
P49A				IAMs_20	IAMs_20	19 34 52.1	
	comp=Z,2µm,20.0s						
TIC	**Toumodi**	**65.50**	**70**	*e*P	**P**	**19 03 34.1**	**+0.6**
M57A	**Sunshine Farm,**	**65.50**	**350**	IAmb	IAmb	19 03 35.2	
	comp=Z,174nm,1.2s						
KSPA	**Keystone Colle**	**65.51**	**351**	P	**P**	**19 03 33.1**	**+0.1**
KSPA				IAmb	IAmb	19 03 35.0	
	comp=Z,156nm,1.2s						
P48A	**Milroy**	**65.53**	**342**	IAmb	IAmb	19 03 33.6	
	comp=Z,117nm,1.1s						
HHAR	**Hobbs**	**65.54**	**334**	IAmb	IAmb	19 03 34.8	
	comp=Z,169nm,1.1s						
BLO	**Bloomington**	**65.58**	**342**	IAmb	IAmb	19 03 34.2	
	comp=Z,206nm,1.1s						
KIC	**Kosan Boka**	**65.60**	**71**	*e*P	**P**	**19 03 34.7**	**+0.5**
	comp=Z,116nm,0.6s						
ACSO	**Alum Creek Sta**	**65.63**	**345**	P	**P**	**19 03 32.8**	**-0.9**
	baz=162,SNR=32						
ACSO	**Alum Creek Sta**	**65.63**	**345**	IAmb	IAmb	19 03 35.0	
	comp=Z,136nm,0.9s						
OLIL	**Olney**	**65.65**	**340**	IAmb	IAmb	19 03 34.2	
	comp=Z,106nm,1.1s						
DBIC	**Dimbokro**	**65.65**	**71**	P	**P**	**19 03 34.9**	**+0.4**
	comp=Z,65nm,0.7s,baz=236,slow=6.0,SNR=93						
DBIC				S	**S**	**19 12 17.5**	**-2.0**
	comp=Z,1.6nm,0.9s,baz=201,slow=8.6,SNR=1.5						
DBIC				LR	LR	19 31 33.7	
	comp=Z,7µm,18.1s,baz=244,slow=35						
DBIC	**Dimbokro**	**65.65**	**71**	IAmb	IAmb	19 03 37.2	
	comp=Z,103nm,0.9s						
N54A	**Moraine State**	**65.66**	**347**	P	**P**	**19 03 34.1**	**+0.1**
	baz=165,SNR=34						
N54A				S	**S**	**19 12 16.8**	**-1.8**
	baz=165						
N53A	**Lisbon**	**65.69**	**347**	IAmb	IAmb	19 03 36.0	
	comp=Z,182nm,1.3s						
FVM	**French Village**	**65.73**	**338**	IAmb	IAmb	19 03 35.6	
	comp=Z,234nm,1.2s						
QUA2	**Belchertown**	**65.80**	**354**	IAmb	IAmb	19 03 37.1	
	comp=Z,210nm,1.8s						
QUA2				IAMs_20	IAMs_20	19 35 15.2	
	comp=Z,3µm,19.0s						
WES	**Weston**	**65.81**	**355**	IAMs_20	IAMs_20	19 35 37.5	
	comp=Z,3µm,18.0s						
M55A	**Ridgway**	**65.92**	**348**	IAmb	IAmb	19 03 37.5	
	comp=Z,206nm,1.2s						
O49A	**Covington**	**65.92**	**344**	IAmb	IAmb	19 03 36.6	
	comp=Z,138nm,1.1s						
HRV	**Adam Dziewonsk**	**65.95**	**354**	P	**P**	**19 03 35.6**	**-0.1**
	baz=173						
HRV	**Adam Dziewonsk**	**65.95**	**354**	IAMs_20	IAMs_20	19 31 40.2	
	comp=Z,3µm,21.0s						
TUL1	**Leonard**	**65.97**	**333**	P	**P**	**19 03 35.8**	**-0.3**
	baz=149,SNR=41						
TUL1				S	**S**	**19 12 21.6**	**-1.0**
	baz=149						
L61B	**Northampton**	**66.00**	**354**	P	**P**	**19 03 35.8**	**-0.4**
	baz=172,SNR=16						
L61B				S	**S**	**19 12 26.0**	**+3.3**
	baz=172						
L59A	**Walton**	**66.03**	**352**	IAmb	IAmb	19 03 38.5	
	comp=Z,186nm,1.2s						
CCM	**Cathedral Cave**	**66.08**	**337**	P	**P**	**19 03 35.6**	**-1.1**
CCM				pmax	pmax		
	comp=Z,188nm,1.0s						
CCM				MLR	MLR		
	comp=Z,2µm,19.0s						
CCM	**Cathedral Cave**	**66.08**	**337**	P	**P**	**19 03 35.9**	**-0.8**
	baz=153						
CCM				S	**S**	**19 12 20.6**	**-3.2**
	baz=153						
CCM	**Cathedral Cave**	**66.08**	**337**	P	**P**	**19 03 35.6**	**-1.1**
CCM				IAmb	IAmb	19 03 37.9	
	comp=Z,188nm,1.0s						
Q44A	**Meyer Farm, Va**	**66.09**	**339**	IAmb	IAmb	19 03 37.7	
	comp=Z,149nm,1.0s						
M54A	**Oil Creek Stat**	**66.12**	**348**	P	**P**	**19 03 36.7**	**-0.2**
	baz=165,SNR=33						
M54A				S	**S**	**19 12 22.4**	**-1.8**
	baz=165						
M54A	**Oil Creek Stat**	**66.12**	**348**	IAmb	IAmb	19 03 38.8	
	comp=Z,198nm,1.1s						
N51A	**Ashland**	**66.13**	**345**	IAmb	IAmb	19 03 38.9	
	comp=Z,176nm,1.2s						
BINY	**Binghamton**	**66.17**	**351**	P	**P**	**19 03 37.2**	**0.0**
	baz=169,SNR=50						
BINY				S	**S**	**19 12 25.0**	**+0.3**
	baz=169						
BINY	**Binghamton**	**66.17**	**351**	IAMs_20	IAMs_20	19 33 39.0	
	comp=Z,3µm,21.0s						
P46A	**Rosedale**	**66.19**	**341**	IAmb	IAmb	19 03 37.8	
	comp=Z,142nm,1.1s						
M53A	**WI Miller and**	**66.26**	**347**	P	**P**	**19 03 37.5**	**-0.3**
	baz=164,SNR=16						
M53A				S	**S**	**19 12 23.9**	**-2.0**
	baz=164						
M53A	**WI Miller and**	**66.26**	**347**	IAmb	IAmb	19 03 39.5	
	comp=Z,183nm,1.1s						
M53A				IAMs_20	IAMs_20	19 32 21.5	
	comp=Z,3µm,21.0s						
WMOK	**Wichita Mounta**	**66.31**	**330**	P	**P**	**19 03 37.9**	**-0.5**
	baz=146,SNR=67						
WMOK				S	**S**	**19 12 25.2**	**-1.6**
	baz=146						
WMOK	**Wichita Mounta**	**66.31**	**330**	IAmb	IAmb	19 03 40.6	
	comp=Z,182nm,1.6s						
TRY	**Troy**	**66.39**	**353**	IAmb	IAmb	19 03 40.7	
	comp=Z,136nm,1.1s						
M52A	**Chesterland**	**66.50**	**346**	IAmb	IAmb	19 03 40.9	
	comp=Z,206nm,1.4s						
QSPA	**South Pole Qui**	**66.73**	**180**	P	**P**	**19 03 40.3**	**-0.4**
QSPA				IAmb	IAmb	19 03 48.9	
	comp=Z,143nm,1.1s						
QSPA	**South Pole Qui**	**66.73**	**180**	IAMs_20	IAMs_20	19 35 16.0	
	comp=Z,3µm,20.0s						
ERPA	**Erie**	**66.77**	**348**	P	**P**	**19 03 40.9**	**-0.2**
	baz=165,SNR=32						
ERPA				S	**S**	**19 12 30.1**	**-2.0**
	baz=165						
SFIN	**Lafayette**	**66.86**	**342**	P	**P**	**19 03 39.9**	**-1.7**
	baz=158,SNR=35						
SFIN	**Lafayette**	**66.86**	**342**	IAmb	IAmb	19 03 42.0	
	comp=Z,168nm,1.1s						
FFD	**Franklin Falls**	**66.92**	**355**	IAMs_20	IAMs_20	19 32 08.7	
	comp=Z,3µm,22.0s						
ACCN	**Adirondack Com**	**67.04**	**353**	IAmb	IAmb	19 03 44.7	
	comp=Z,170nm,1.9s						
O44A	**Mansfield**	**67.06**	**340**	IAmb	IAmb	19 03 43.8	
	comp=Z,234nm,1.4s						
HNH	**Hanover**	**67.21**	**354**	IAmb	IAmb	19 03 46.9	
	comp=Z,182nm,1.3s						
HNH				IAMs_20	IAMs_20	19 36 23.4	
	comp=Z,3µm,19.0s						
J58A	**Remsen**	**67.21**	**352**	IAmb	IAmb	19 03 46.6	
	comp=Z,129nm,1.2s						
MNTX	**Cornudas Mount**	**67.26**	**323**	P	**P**	**19 03 43.3**	**-1.2**
	baz=140,SNR=162						
MNTX	**Cornudas Mount**	**67.26**	**323**	IAmb	IAmb	19 03 46.4	
	comp=Z,129nm,1.1s						
J56A	**Wolcott**	**67.35**	**350**	IAmb	IAmb	19 03 46.2	
	comp=Z,181nm,1.1s						
J57A	**Williamstown**	**67.36**	**351**	IAmb	IAmb	19 03 46.5	
	comp=Z,165nm,1.2s						
MEDO	**Medina**	**67.50**	**349**	IAmb	IAmb	19 03 46.3	
	comp=Z,138nm,1.1s						
MSTX	**Muleshoe**	**67.63**	**326**	P	**P**	**19 03 46.2**	**-0.7**
	baz=142						
J54A	**Appleton**	**67.64**	**349**	IAmb	IAmb	19 03 48.2	
	comp=Z,121nm,1.1s						
P40A	**Paris**	**67.68**	**337**	IAmb	IAmb	19 03 48.7	
	comp=Z,184nm,1.1s						
HDIL	**Hopedale**	**67.69**	**340**	P	**P**	**19 03 45.6**	**-1.3**
	baz=156,SNR=22						
HDIL	**Hopedale**	**67.69**	**340**	IAmb	IAmb	19 03 47.5	
	comp=Z,169nm,1.0s						
HDIL				IAMs_20	IAMs_20	19 37 04.4	
	comp=Z,3µm,19.0s						
LBNH	**Lisbon**	**67.71**	**354**	P	**P**	**19 03 46.9**	**0.0**
	baz=173,SNR=12						
LBNH				S	**S**	**19 12 43.8**	**+0.6**
	baz=173						
LBNH	**Lisbon**	**67.71**	**354**	IAMs_20	IAMs_20	19 32 42.6	
	comp=Z,3µm,21.0s						
AAM	**Ann Arbor**	**67.75**	**345**	P	**P**	**19 03 46.4**	**-0.8**
	baz=161,SNR=6.2						
AAM	**Ann Arbor**	**67.75**	**345**	IAmb	IAmb	19 03 48.4	
	comp=Z,100nm,1.1s						
AAM				IAMs_20	IAMs_20	19 34 11.9	
	comp=Z,3µm,20.0s						
U32A	**Winter Ranch,**	**67.77**	**331**	IAmb	IAmb	19 03 49.7	
	comp=Z,211nm,1.1s						
WVL	**Waterville**	**67.86**	**356**	IAmb	IAmb	19 03 50.5	
	comp=Z,136nm,1.5s						
VT1	**Waterbury**	**67.88**	**354**	IAMs_20	IAMs_20	19 36 35.8	
	comp=Z,3µm,19.0s						
M44A	**Midewin, Midew**	**68.07**	**341**	IAmb	IAmb	19 03 49.7	
	comp=Z,135nm,1.1s						
LONY	**Lake Ozonia**	**68.36**	**352**	P	**P**	**19 03 50.9**	**-0.2**
	baz=170,SNR=22						
LONY				S	**S**	**19 12 50.8**	**-0.2**
	baz=170						
HQIL	**Hanson Quary C**	**68.39**	**342**	IAmb	IAmb	19 03 52.3	
	comp=Z,133nm,1.1s						
HQIL				IAMs_20	IAMs_20	19 36 11.0	
	comp=Z,3µm,18.0s						
PKME	**Peaks-Kenny Pk**	**68.53**	**357**	P	**P**	**19 03 52.1**	**0.0**
	baz=175,SNR=6.8						
PKME	**Peaks-Kenny Pk**	**68.53**	**357**	IAMs_20	IAMs_20	19 36 47.4	
	comp=Z,3µm,20.0s						
G62A	**West of Eustis**	**68.57**	**356**	IAmb	IAmb	19 03 55.2	
	comp=Z,152nm,1.5s						
DELO	**Deloro Mine**	**68.68**	**350**	IAmb	IAmb	19 03 55.6	
	comp=Z,210nm,1.5s						
L44A	**Lake County Fo**	**68.75**	**342**	P	**P**	**19 03 52.4**	**-1.2**
	baz=157						
L44A	**Lake County Fo**	**68.75**	**342**	IAmb	IAmb	19 03 55.0	
	comp=Z,194nm,1.1s						
KSU1	**Kansas State U**	**69.03**	**334**	P	**P**	**19 03 55.0**	**-0.4**
	baz=149,SNR=42						
KSU1				S	**S**	**19 12 58.1**	**-1.1**
	baz=149						
L42A	**Oliver, Polo**	**69.12**	**340**	IAmb	IAmb	19 03 56.8	
	comp=Z,215nm,1.3s						
SADO	**Sadowa**	**69.18**	**349**	IAmb	IAmb	19 03 58.4	
	comp=Z,260nm,1.6s						
N38A	**Joes South For**	**69.22**	**337**	IAmb	IAmb	19 03 57.5	
	comp=Z,113nm,1.0s						
121A	**Cookes Peak, D**	**69.23**	**322**	P	**P**	**19 03 58.2**	**+1.2**
	baz=138,SNR=110						
319A	**Douglas**	**69.25**	**320**	IAmb	IAmb	19 04 00.1	
	comp=Z,132nm,1.0s						
Y22D	**IRIS PASSCAL I**	**69.90**	**324**	P	**P**	**19 04 02.3**	**+1.2**
	baz=139						
Y22D	**IRIS PASSCAL I**	**69.90**	**324**	IAmb	IAmb	19 04 11.1	
	comp=Z,270nm,1.4s						
I45A	**Fountain**	**70.02**	**344**	IAmb	IAmb	19 04 01.9	
	comp=Z,116nm,1.1s						
CBKS	**Cedar Bluff**	**70.11**	**332**	P	**P**	**19 04 02.3**	**+0.2**
	baz=146,SNR=87						
CBKS				S	**S**	**19 13 12.3**	**+0.3**
	baz=146						
JFWS	**Jewell Farm**	**70.13**	**340**	P	**P**	**19 04 00.9**	**-1.2**
	baz=155,SNR=58						
JFWS				S	**S**	**19 13 07.5**	**-4.4**
	baz=155						
JFWS	**Jewell Farm**	**70.13**	**340**	IAmb	IAmb	19 04 03.4	
	comp=Z,224nm,1.1s						
JFWS	**Jewell Farm**	**70.13**	**340**	IAMs_20	IAMs_20	19 37 31.0	
	comp=Z,3µm,20.0s						
N35A	**Tabor**	**70.17**	**336**	IAmb	IAmb	19 04 03.7	
	comp=Z,114nm,0.8s						
SCIA	**State Center**	**70.20**	**338**	P	**P**	**19 04 01.9**	**-0.6**
	baz=152,SNR=11						
SCIA	**State Center**	**70.20**	**338**	IAmb	IAmb	19 04 03.9	
	comp=Z,153nm,1.0s						
SCIA				IAMs_20	IAMs_20	19 38 60.0	
	comp=Z,2µm,18.0s						
ANMO	**Albuquerque**	**70.31**	**324**	P	**P**	**19 04 04.4**	**+0.8**
ANMO				pmax	pmax		
	comp=Z,214nm,1.3s						
ANMO				MLR	MLR		
	comp=Z,1µm,18.0s						
ANMO	**Albuquerque**	**70.31**	**324**	P	**P**	**19 04 04.5**	**+0.9**
	baz=140						
ANMO	**Albuquerque**	**70.31**	**324**	P	**P**	**19 04 04.4**	**+0.8**
ANMO				IAmb	IAmb	19 04 06.6	
	comp=Z,214nm,1.2s						
KOWA	**Kowa**	**70.33**	**64**	P	**P**	**19 04 04.1**	**+0.2**
KOWA				IAmb	IAmb	19 04 06.6	
	comp=Z,127nm,1.0s						
KOWA				IAMs_20	IAMs_20	19 32 11.8	
	comp=Z,4µm,21.0s						
KOWA	**Kowa**	**70.33**	**64**	P	**P**	**19 04 05.0**	**+1.1**
GLMI	**Grayling**	**70.36**	**345**	P	**P**	**19 04 02.8**	**-0.7**
	baz=161,SNR=19						
GLMI	**Grayling**	**70.36**	**345**	IAMs_20	IAMs_20	19 35 00.0	
	comp=Z,2µm,21.0s						
I42A	**Draeger Farm,**	**70.62**	**342**	IAmb	IAmb	19 04 06.4	
	comp=Z,182nm,0.9s						
TUC	**Tucson**	**70.81**	**320**	P	**P**	**19 04 07.6**	**+1.0**
	baz=136						
TUC				S	S	19 13 30.3	+10
	baz=136						
G45A	**Suttons Bay**	**70.81**	**344**	IAmb	IAmb	19 04 07.3	
	comp=Z,172nm,0.9s						
H43A	**Windswept, Lux**	**70.83**	**343**	IAmb	IAmb	19 04 07.5	
	comp=Z,179nm,0.8s						
T25A	**Trinidad**	**70.94**	**327**	P	**P**	**19 04 08.4**	**+1.0**
	baz=142,SNR=54						
T25A				S	S	19 13 32.6	+10
	baz=142						
T25A	**Trinidad**	**70.94**	**327**	IAmb	IAmb	19 04 10.5	
	comp=Z,192nm,1.1s						
I40A	**Norwalk**	**71.12**	**341**	IAmb	IAmb	19 04 09.3	
	comp=Z,132nm,1.1s						
KSCO	**Kaye Shedlock'**	**71.57**	**330**	P	**P**	**19 04 12.0**	**+0.9**
	baz=144,SNR=39						
BGNE	**Belgrade**	**71.61**	**334**	P	**P**	**19 04 10.8**	**-0.4**
	baz=148,SNR=34						
BGNE				S	**S**	**19 13 28.7**	**-0.6**
	baz=148						
214A	**Organ Pipe Nat**	**71.78**	**318**	P	**P**	**19 04 13.5**	**+1.1**
	baz=134,SNR=20						
214A	**Organ Pipe Nat**	**71.78**	**318**	IAmb	IAmb	19 04 15.7	
	comp=Z,193nm,1.5s						
SDCO	**Great Sand Dun**	**71.96**	**327**	P	**P**	**19 04 14.8**	**+1.1**
	baz=141,SNR=53						
SDCO	**Great Sand Dun**	**71.96**	**327**	IAmb	IAmb	19 04 17.5	
	comp=Z,272nm,1.2s						
PMOZ	**Porto Moniz, M**	**72.04**	**41**	*e*S	**SKiKP**	**19 13 45.2**	**-4.9**
PMOZ	**Porto Moniz, M**	**72.04**	**41**	*e*LR	LR	19 31 05.7	
	comp=Z,2µm,18.0s						
I37A	**Lemond, Waseca**	**72.13**	**339**	IAmb	IAmb	19 04 15.7	
	comp=Z,222nm,1.1s						
W18A	**Petrified Fore**	**72.23**	**322**	P	**P**	**19 04 16.4**	**+1.2**
	baz=137,SNR=30						
W18A	**Petrified Fore**	**72.23**	**322**	IAmb	IAmb	19 04 19.1	
	comp=Z,288nm,1.4s						
G40A	**Rib Lake**	**72.25**	**341**	IAmb	IAmb	19 04 16.4	
	comp=Z,231nm,1.5s						
E43A	**Lone Tree Farm**	**72.39**	**344**	IAmb	IAmb	19 04 17.1	
	comp=Z,132nm,0.9s						
S22A	**4UR Ranch, Cre**	**72.63**	**326**	P	**P**	**19 04 18.6**	**+0.9**
	baz=140,SNR=62						
COWI	**Conover**	**72.71**	**342**	IAMs_20	IAMs_20	19 41 35.2	
	comp=Z,2µm,18.0s						
Q24A	**Divide**	**72.73**	**328**	P	**P**	**19 04 19.3**	**+1.0**
	baz=142,SNR=106						
Q24A				S	**S**	**19 13 44.4**	**+1.5**
	baz=142						
K31A	**O'Neill**	**72.88**	**334**	IAmb	IAmb	19 04 20.7	
	comp=Z,224nm,1.1s						
SPMN	**Marine on St.**	**73.01**	**340**	P	**P**	**19 04 18.7**	**-0.6**
	baz=153,SNR=23						
SPMN	**Marine on St.**	**73.01**	**340**	IAmb	IAmb	19 04 20.6	
	comp=Z,127nm,0.8s						
ECSD	**EROS Data Cent**	**73.01**	**336**	P	**P**	**19 04 18.5**	**-0.9**
	baz=150,SNR=69						
ECSD				S	**S**	**19 13 41.1**	**-4.1**
	baz=150						
ECSD	**EROS Data Cent**	**73.01**	**336**	IAmb	IAmb	19 04 21.0	
	comp=Z,185nm,1.2s						
MVCO	**Mesa Verde**	**73.10**	**325**	P	**P**	**19 04 21.1**	**+0.7**
	baz=138,SNR=140						
MVCO				S	**SKiKP**	**19 13 49.9**	**-1.8**
	baz=138						
TAOE	**Nuku Hiva Isla**	**73.21**	**267**	*e*P	**P**	**19 04 21.4**	**0.0**
	comp=Z,260nm,1.5s						
TAOE				*e*S	**S**	**19 13 49.0**	**+0.1**
	comp=Z,3µm,26.1s						
TAOE	**Nuku Hiva Isla**	**73.21**	**267**	*e*LR	LR	19 26 47.5	
	comp=Z,3µm,22.2s						
SYO	**Syowa Base**	**73.28**	**159**	⇑*i*pP	**P**	**19 04 21.0**	**+0.3**
SYO	**Syowa Base**	**73.28**	**159**	⇑*i*sP	**P**	**19 04 22.6**	**+1.9**
SYO	**Syowa Base**	**73.28**	**159**	⇓*e*PcP	**PcP**	**19 04 34.0**	**-3.1**
WUAZ	**Wupatki**	**73.44**	**322**	P	**P**	**19 04 23.8**	**+1.5**
	baz=136,SNR=81						
WUAZ	**Wupatki**	**73.44**	**322**	IAmb	IAmb	19 04 26.6	
	comp=Z,166nm,1.1s						
ISCO	**Idaho Springs**	**73.61**	**328**	P	**P**	**19 04 24.5**	**+1.0**
	baz=141,SNR=148						
ISCO	**Idaho Springs**	**73.61**	**328**	IAmb	IAmb	19 04 27.3	
	comp=Z,153nm,1.1s						
GLA	**Glamis**	**73.77**	**318**	P	**P**	**19 04 25.4**	**+1.2**
	baz=133,SNR=19						
SMCO	**Snowmass**	**73.80**	**327**	IAmb	IAmb	19 04 28.2	
	comp=Z,185nm,1.1s						
F36A	**Milaca**	**73.81**	**339**	IAmb	IAmb	19 04 25.4	
	comp=Z,148nm,0.9s						
PDMCI	**Parker Dam,Lak**	**74.20**	**319**	P	**P**	**19 04 27.9**	**+1.3**
	baz=134,SNR=9.3						
SUR	**Sutherland**	**74.24**	**119**	IAMs_20	IAMs_20	19 34 12.7	
	comp=Z,3µm,19.0s						
IKP	**In-Ko-Pah, Jac**	**74.30**	**317**	P	**P**	**19 04 28.6**	**+1.2**
	baz=132,SNR=14						
SWSC	**Sam W. Stewart**	**74.30**	**317**	P	**P**	**19 04 28.6**	**+1.4**
	baz=132,SNR=6.9						
TORD	**Torodi Ar. Bea**	**74.43**	**68**	P	**P**	**19 04 28.2**	**-0.2**
	comp=Z,160nm,0.7s,baz=249,slow=5.1,SNR=482						
TORD				LR	LR	19 36 56.9	
	comp=Z,4µm,18.0s,baz=245,slow=36						
SUSD	**Miller**	**74.50**	**335**	P	**P**	**19 04 27.8**	**-0.3**
	baz=148,SNR=23						
SUSD	**Miller**	**74.50**	**335**	IAmb	IAmb	19 04 29.8	
	comp=Z,182nm,0.9s						
BC3	**Big Chuckawall**	**74.56**	**318**	P	**P**	**19 04 30.1**	**+1.2**
	baz=133,SNR=39						
SBA	**Scott Base**	**74.58**	**190**	IAMs_20	IAMs_20	19 35 16.7	
	comp=Z,2µm,20.0s						
U15A	**North Rim**	**74.61**	**322**	IAmb	IAmb	19 04 33.2	
	comp=Z,166nm,1.1s						
N23A	**Red Feather La**	**74.62**	**329**	P	**P**	**19 04 30.0**	**+0.7**
	baz=141,SNR=77						
MONP2	**Monument Peak**	**74.65**	**317**	P	**P**	**19 04 30.8**	**+1.2**
	baz=132,SNR=16						
IRM	**Iron Mountain**	**74.71**	**318**	P	**P**	**19 04 30.9**	**+1.2**
	baz=133,SNR=42						
NEE2	**Needles Airpor**	**74.81**	**319**	P	**P**	**19 04 31.3**	**+1.1**

	baz=133						
EYMN	**Ely**	**75.06**	**342**	P	**P**	**19 04 30.4**	**-0.9**
	baz=155,SNR=15						
EYMN				S	**S**	**19 14 03.5**	**-4.5**
	baz=155						
EYMN	**Ely**	**75.06**	**342**	IAMs_20	IAMs_20	19 43 02.4	
	comp=Z,2µm,18.0s						
109C	**Camp Elliot, M**	**75.08**	**316**	P	**P**	**19 04 32.9**	**+1.1**
	baz=131						
BELC	**Belle Mtn. Jos**	**75.13**	**318**	P	**P**	**19 04 33.7**	**+1.5**
	baz=132,SNR=18						
PFO	**Pinyon Flats O**	**75.15**	**317**	P	**P**	**19 04 33.7**	**+1.3**
PFO				pmax	pmax		
	comp=Z,140nm,1.5s						
PFO	**Pinyon Flats O**	**75.15**	**317**	P	**P**	**19 04 33.7**	**+1.3**
	baz=132,SNR=17						
PFO	**Pinyon Flats O**	**75.15**	**317**	P	**P**	**19 04 33.6**	**+1.3**
O20A	**White River Ci**	**75.16**	**327**	P	**P**	**19 04 33.5**	**+1.2**
	baz=139,SNR=158						
GMRC	**Granite Mounta**	**75.45**	**319**	P	**P**	**19 04 35.1**	**+1.0**
	baz=133,SNR=90						
VNDA	**Vanda**	**75.56**	**189**	P	**P**	**19 04 35.0**	**+1.0**
	comp=Z,8.7nm,1.0s,baz=145,slow=6.5,SNR=10.0						
VNDA				S	**S**	**19 14 13.3**	**+0.2**
	comp=Z,2.2nm,1.1s,baz=146,slow=4.9,SNR=1.6						
VNDA				LR	LR	19 35 58.7	
	comp=Z,3µm,20.3s,baz=140,slow=34						
SRU	**San Rafael Swe**	**75.58**	**325**	IAmb	IAmb	19 04 38.4	
	comp=Z,213nm,1.1s						
MURC	**Murrieta**	**75.61**	**317**	P	**P**	**19 04 36.1**	**+1.3**
	baz=131,SNR=22						
TSUM	**Tsumeb**	**75.77**	**105**	P	**P**	**19 04 35.1**	**-1.3**
Q16A	**Castle Valley**	**75.78**	**324**	IAmb	IAmb	19 04 40.2	
	comp=Z,242nm,1.4s						
P18A	**Preston Nutter**	**75.81**	**325**	IAmb	IAmb	19 04 39.7	
	comp=Z,209nm,1.1s						
RWWY	**Rawlins**	**75.84**	**329**	IAmb	IAmb	19 04 40.2	
	comp=Z,234nm,1.1s						
BBRC	**Big Bear Solar**	**75.87**	**318**	P	**P**	**19 04 38.2**	**+1.6**
	baz=132						
SZCU	**Shurtz Canyon**	**75.89**	**322**	IAmb	IAmb	19 04 41.0	
	comp=Z,226nm,1.6s						
HEC	**Hector,Ludlow**	**75.89**	**318**	P	**P**	**19 04 37.7**	**+1.2**
	baz=132,SNR=51						
CCUT	**Cedar City**	**76.01**	**322**	IAmb	IAmb	19 04 42.0	
	comp=Z,189nm,1.1s						
TUQ	**Turquoise Moun**	**76.05**	**319**	P	**P**	**19 04 38.6**	**+1.2**
	baz=133,SNR=40						
SCI2	**San Clemente I**	**76.06**	**316**	P	**P**	**19 04 38.4**	**+1.0**
	baz=130						
TMUT	**Trail Mountain**	**76.07**	**325**	IAmb	IAmb	19 04 41.0	
	comp=Z,154nm,1.2s						
D32A	**Dogwood Acres,**	**76.09**	**338**	IAmb	IAmb	19 04 38.8	
	comp=Z,111nm,0.8s						
B35A	**Bob, Littlefor**	**76.09**	**341**	IAmb	IAmb	19 04 38.7	
	comp=Z,119nm,0.9s						
TTIG	**Tnine Tigouga,**	**76.14**	**48**	P	**P**	**19 04 42.0**	**+3.9**
RDMU	**Red Mountain**	**76.16**	**326**	IAmb	IAmb	19 04 41.8	
	comp=Z,243nm,1.2s						
CIS	**Catalina Islan**	**76.25**	**316**	P	**P**	**19 04 39.8**	**+1.3**
	baz=130						
K22A	**Casper**	**76.26**	**330**	P	**P**	**19 04 39.8**	**+1.2**
	baz=141,SNR=81						
K22A				S	**S**	**19 14 27.1**	**+5.2**
	baz=141						
RSSD	**Black Hills**	**76.30**	**332**	P	**P**	**19 04 39.5**	**+0.7**
RSSD				pmax	pmax		
	comp=Z,97nm,1.1s						
RSSD				MLR	MLR		
	comp=Z,1µm,19.0s						
RSSD	**Black Hills**	**76.30**	**332**	P	**P**	**19 04 39.3**	**+0.5**
	baz=143						
RSSD				S	**S**	**19 14 22.7**	**+0.3**
	baz=143						
RSSD	**Black Hills**	**76.30**	**332**	P	**P**	**19 04 39.5**	**+0.7**
RRX	**Edison Barstow**	**76.33**	**318**	P	**P**	**19 04 40.5**	**+1.7**
	baz=132						
FMP	**Fort Macarthur**	**76.37**	**316**	P	**P**	**19 04 40.5**	**+1.3**
	baz=131						
GSC	**Goldstone, Bar**	**76.49**	**318**	P	**P**	**19 04 41.4**	**+1.5**
	baz=132,SNR=53						
GSC	**Goldstone, Bar**	**76.49**	**318**	IAmb	IAmb	19 04 43.3	
	comp=Z,200nm,1.4s						
MWC	**Mount Wilson**	**76.56**	**317**	IAmb	IAmb	19 04 43.5	
	comp=Z,209nm,1.5s						
SHOC	**Shoshone, Teco**	**76.57**	**319**	P	**P**	**19 04 41.6**	**+1.4**
	baz=132						
PASC	**Pasadena Art C**	**76.60**	**317**	IAmb	IAmb	19 04 43.6	
	comp=Z,176nm,1.4s						
AGMN	**Agassiz Nation**	**76.71**	**339**	P	**P**	**19 04 40.1**	**-0.6**
	baz=151,SNR=53						
AGMN	**Agassiz Nation**	**76.71**	**339**	IAmb	IAmb	19 04 42.5	
	comp=Z,141nm,0.9s						
AGMN				IAMs_20	IAMs_20	19 41 37.2	
	comp=Z,2µm,21.0s						
DECC	**Green Verdugo**	**76.75**	**317**	P	**P**	**19 04 42.7**	**+1.4**
	baz=131,SNR=6.1						
SNCC	**San Nicolas Is**	**76.86**	**315**	P	**P**	**19 04 42.8**	**+0.9**
	baz=130						
PRN	**Pahroc Range**	**76.87**	**321**	IAmb	IAmb	19 04 46.7	
	comp=Z,222nm,1.4s						
OUK	**Oukaimeden**	**76.94**	**47**	P	**P**	**19 04 46.0**	**+3.1**
EDW2	**Edwards Air Fo**	**76.94**	**317**	P	**P**	**19 04 43.1**	**+0.7**
	baz=131,SNR=28						
NLU	**North Lily Min**	**77.01**	**325**	IAmb	IAmb	19 04 47.1	
	comp=Z,192nm,1.4s						
LRMC	**Laurel Mtn Rad**	**77.14**	**318**	P	**P**	**19 04 44.6**	**+1.0**
	baz=131,SNR=51						
JLU	**Jordanelle**	**77.15**	**325**	IAmb	IAmb	19 04 47.8	
	comp=Z,353nm,1.4s						
OSI	**Osito Audit: C**	**77.23**	**317**	P	**P**	**19 04 45.0**	**+0.9**
	baz=130						
FURC	**Furnace Creek,**	**77.30**	**319**	P	**P**	**19 04 45.8**	**+1.5**
	baz=132,SNR=37						
SCZ2	**Santa Cruz Isl**	**77.41**	**316**	P	**P**	**19 04 46.2**	**+1.2**
	baz=130						
MPMC	**Manual Prospec**	**77.41**	**319**	P	**P**	**19 04 45.9**	**+0.8**
	baz=132,SNR=49						
OUZM	**OUZ**	**77.51**	**48**	P	**P**	**19 04 48.0**	**+2.3**
SPR3	**Spring Creek 3**	**77.57**	**323**	IAmb	IAmb	19 04 49.3	
	comp=Z,155nm,1.2s						
DUG	**Dugway, Tooele**	**77.58**	**324**	P	**P**	**19 04 47.1**	**+1.2**
	baz=136,SNR=93						
DUG	**Dugway, Tooele**	**77.58**	**324**	IAmb	IAmb	19 04 50.1	
	comp=Z,161nm,1.2s						
MDND	**Maddock**	**77.61**	**337**	P	**P**	**19 04 46.3**	**+0.5**
	baz=148,SNR=80						
MDND				S	**S**	**19 14 34.8**	**-1.3**
	baz=148						
ARVC	**Arvin**	**77.63**	**317**	P	**P**	**19 04 47.5**	**+1.3**
	baz=130,SNR=6.6						
VAH	**Vaihoa**	**77.71**	**259**	*e*P	**P**	**19 04 46.9**	**-0.2**
	comp=Z,406nm,1.4s						
SBC	**Santa Barbara**	**77.74**	**316**	P	**P**	**19 04 48.0**	**+1.2**
	baz=130						
ISA	**Isabella, Lake**	**77.75**	**318**	P	**P**	**19 04 48.4**	**+1.4**
	baz=131,SNR=47						
PD31	**Pinedale Array**	**77.79**	**328**	IAmb	IAmb	19 04 49.9	
	comp=Z,172nm,1.4s						
PDAR	**Pinedale Array**	**77.79**	**328**	P	**P**	**19 04 47.2**	**0.0**
	comp=Z,23nm,0.8s,baz=137,slow=7.4,SNR=103						
BW06	**Boulder Array**	**77.79**	**328**	P	**P**	**19 04 47.6**	**+0.4**
	baz=139,SNR=89						
BW06				S	**S**	**19 14 39.8**	**+1.0**
	baz=139						
BW06	**Boulder Array**	**77.79**	**328**	IAmb	IAmb	19 04 49.9	
	comp=Z,190nm,1.4s						
R11A	**Troy Canyon, C**	**77.83**	**321**	P	**P**	**19 04 48.7**	**+1.2**
	baz=133,SNR=136						
R11A	**Troy Canyon, C**	**77.83**	**321**	IAmb	IAmb	19 04 52.0	
	comp=Z,190nm,1.4s						
ZGR	**Zagora**	**77.83**	**50**	P	**P**	**19 04 50.0**	**+2.4**
SCHQ	**Schefferville**	**78.01**	**359**	P	**P**	**19 04 46.8**	**-1.1**
	comp=Z,12nm,0.9s,baz=193,slow=6.4,SNR=7.9						
SCHQ				LR	LR	19 41 29.6	
	comp=Z,847nm,19.4s,baz=201,slow=37						
CWC	**Cottonwood Cre**	**78.02**	**319**	P	**P**	**19 04 49.9**	**+1.4**
	baz=131						
PMOR	**Pomariorio Ree**	**78.03**	**259**	*e*P	**P**	**19 04 48.5**	**-0.4**
	comp=Z,400nm,1.4s						
PKM	**Mcpherson Peak**	**78.09**	**316**	P	**P**	**19 04 50.3**	**+1.3**
	baz=130,SNR=26						
SPUT	**South Promonto**	**78.18**	**325**	IAmb	IAmb	19 04 52.5	
	comp=Z,234nm,1.2s						
BGU	**Big Grassy Mou**	**78.22**	**325**	IAmb	IAmb	19 04 53.3	
	comp=Z,205nm,1.3s						
VES	**Vestal, Richgr**	**78.25**	**318**	P	**P**	**19 04 50.7**	**+1.1**
	baz=130,SNR=35						
TZRR	**Tazzarine**	**78.26**	**49**	P	**P**	**19 04 53.0**	**+3.1**
ULM	**Lac du Bonnet**	**78.42**	**340**	P	**P**	**19 04 49.2**	**-1.0**
	comp=Z,49nm,0.8s,baz=151,slow=5.8,SNR=42						
ULM				S	**S**	**19 14 40.9**	**-3.8**
	comp=Z,1.6nm,0.5s,baz=229,slow=22,SNR=1.9						
ULM	**Lac du Bonnet**	**78.42**	**340**	IAmb	IAmb	19 04 51.8	
	comp=Z,215nm,1.4s						
SMMC	**Simmler**	**78.48**	**317**	P	**P**	**19 04 52.4**	**+1.5**
	baz=130,SNR=9.0						
TIN	**Tinemaha, Big**	**78.51**	**319**	P	**P**	**19 04 52.7**	**+1.5**
	baz=131,SNR=5.5						
AVE	**Averroes**	**78.52**	**46**	P	**P**	**19 04 54.5**	**+3.3**
AHID	**Auburn Hatcher**	**78.55**	**327**	IAmb	IAmb	19 04 55.0	
	comp=Z,319nm,1.2s						
PPT2	**Papeete2**	**78.61**	**256**	*e*S	**S**	**19 14 48.3**	**-0.1**
	comp=Z,923nm,26.5s						
PPT2	**Papeete2**	**78.61**	**256**	*e*LQ	LQ	19 25 58.3	
	comp=Z,1µm,24.8s						
PPT2				*e*LR	LR	19 29 21.8	
	comp=Z,5µm,27.2s						
PPT	**Papeete**	**78.62**	**256**	LR	LR	19 31 49.2	
	comp=Z,1µm,20.3s,baz=130,slow=30						
HVU	**Hansel Valley**	**78.69**	**325**	IAmb	IAmb	19 04 55.1	
	comp=Z,151nm,1.1s						
VOG	**Valley Oaks Go**	**78.74**	**318**	P	**P**	**19 04 52.5**	**+0.2**
	baz=130						
REDW	**Red Top Meadow**	**78.87**	**328**	IAmb	IAmb	19 04 56.3	
	comp=Z,184nm,1.1s						
SNOW	**Snow King Moun**	**78.89**	**328**	IAmb	IAmb	19 04 56.6	
	comp=Z,186nm,1.2s						
PAGB	**Antelope Grade**	**78.90**	**317**	IAmb	IAmb	19 04 56.5	
	comp=Z,181nm,1.3s						
LOHW	**Long Hollow**	**78.93**	**328**	IAmb	IAmb	19 04 56.6	
	comp=Z,390nm,1.6s						
TPAW	**Teton Pass**	**79.01**	**328**	IAmb	IAmb	19 04 57.2	
	comp=Z,175nm,1.3s						
BOSA	**Boshof**	**79.10**	**116**	P	**P**	**19 04 54.2**	**-0.6**
	comp=Z,11nm,0.6s,baz=260,slow=3.9,SNR=12						
BOSA				LR	LR	19 37 03.2	
	comp=Z,2µm,18.1s,baz=256,slow=34						
MOOW	**Moose Ponds**	**79.10**	**328**	IAmb	IAmb	19 04 57.5	
	comp=Z,183nm,1.4s						
ZHG	**ZHG**	**79.12**	**46**	P	**P**	**19 04 57.0**	**+2.4**
GOLM	**Goulmima**	**79.23**	**49**	P	**P**	**19 04 58.0**	**+2.7**
MLAC	**Mammoth, Mammo**	**79.25**	**319**	P	**P**	**19 04 57.0**	**+1.5**
	baz=131,SNR=7.0						
LAO	**LASA Array**	**79.28**	**332**	P	**P**	**19 04 55.4**	**+0.2**
	baz=142,SNR=33						
LAO	**LASA Array**	**79.28**	**332**	IAmb	IAmb	19 04 57.7	
	comp=Z,194nm,1.2s						
ELK	**Elko**	**79.28**	**323**	LR	LR	19 41 07.4	
	comp=Z,914nm,18.4s,baz=148,slow=36						
FLWY	**Flagg Ranch**	**79.33**	**328**	IAmb	IAmb	19 04 59.2	
	comp=Z,276nm,1.1s						
RLMT	**Red Lodge**	**79.43**	**330**	P	**P**	**19 04 57.0**	**+0.8**
	baz=139,SNR=89						
RLMT				S	**S**	**19 14 56.7**	**+0.6**
	baz=139						
RLMT	**Red Lodge**	**79.43**	**330**	IAmb	IAmb	19 04 59.2	
	comp=Z,261nm,1.3s						
H17A	**Grant Village**	**79.50**	**328**	P	**P**	**19 04 58.3**	**+1.7**
	baz=138,SNR=38						
LKWY	**Lake**	**79.54**	**329**	IAMs_20	IAMs_20	19 46 07.1	
	comp=Z,2µm,19.0s						
YUF	**Upper Falls**	**79.70**	**329**	IAmb	IAmb	19 05 02.5	
	comp=Z,250nm,1.6s						
RYN	**Ryan**	**79.72**	**320**	IAmb	IAmb	19 05 01.9	
	comp=Z,351nm,1.8s						
KVN	**Kaiserville**	**79.75**	**321**	IAmb	IAmb	19 05 01.6	
	comp=Z,184nm,1.3s						
DGMT	**Dagmar**	**79.86**	**335**	P	**P**	**19 04 59.2**	**+1.0**
	baz=144,SNR=36						
DGMT	**Dagmar**	**79.86**	**335**	IAmb	IAmb	19 05 01.3	
	comp=Z,251nm,1.0s						
YHH	**Holmes Hill**	**79.92**	**329**	IAmb	IAmb	19 05 03.2	
	comp=Z,241nm,1.1s						
MDT	**Midelt**	**80.11**	**48**	P	**P**	**19 05 01.9**	**+1.8**
YHL	**Hebgen Lake**	**80.13**	**328**	IAmb	IAmb	19 05 03.7	
	comp=Z,203nm,1.4s						
MORF	**Marmelete**	**80.23**	**42**	*e*P	**P**	**19 05 00.4**	**-0.1**
MORF				*e*S	**S**	**19 15 06.3**	**+1.7**
MORF				IAMs_20	IAMs_20	19 40 45.2	
	comp=Z,5µm,17.1s						
MORF	**Marmelete**	**80.23**	**42**	*e*P	**P**	**19 05 02.3**	**+1.8**
	comp=Z,109nm,1.4s						
MORF	**Marmelete**	**80.23**	**42**	*e*P	**P**	**19 05 00.4**	**-0.1**
MORF				*e*S	**S**	**19 15 06.3**	**+1.7**
PTEO	**Sao Teotonio**	**80.34**	**42**	*e*P	**P**	**19 05 02.6**	**+1.6**
	comp=Z,290nm,1.7s						
YERR	**Yerington**	**80.38**	**320**	IAmb	IAmb	19 05 05.6	
	comp=Z,248nm,1.4s						
LCRM	**LCR**	**80.46**	**47**	P	**P**	**19 05 04.0**	**+2.0**
PBDV	**Barranco-do-Ve**	**80.64**	**43**	*e*P	**P**	**19 05 04.3**	**+1.7**
	comp=Z,235nm,1.5s						
PNTR	**Pine Nut**	**80.66**	**320**	IAmb	IAmb	19 05 06.5	
	comp=Z,138nm,1.0s						
HLID	**Hailey**	**80.81**	**326**	P	**P**	**19 05 04.8**	**+1.2**
	baz=135,SNR=345						
HLID	**Hailey**	**80.81**	**326**	IAmb	IAmb	19 05 08.0	
	comp=Z,280nm,1.1s						
PCVE	**Castro Verde**	**80.81**	**42**	*e*P	**P**	**19 05 04.7**	**+1.2**
PNCL	**Nicolau / Gran**	**80.82**	**42**	*e*P	**P**	**19 05 05.5**	**+2.0**
	comp=Z,79nm,1.9s						
VCNR	**Virginia City**	**80.82**	**320**	IAmb	IAmb	19 05 08.0	
	comp=Z,205nm,1.4s						
MESJ	**Messejana**	**80.83**	**42**	*e*P	**P**	**19 05 03.6**	**0.0**
MESJ				*e*S	**S**	**19 15 12.5**	**+1.7**
MESJ				IAMs_20	IAMs_20	19 40 52.5	
	comp=Z,4µm,23.3s						
MESJ	**Messejana**	**80.83**	**42**	*e*P	**P**	**19 05 05.0**	**+1.4**
	comp=Z,79nm,2.0s						
MESJ	**Messejana**	**80.83**	**42**	*e*P	**P**	**19 05 03.6**	**0.0**
MESJ				*e*S	**S**	**19 15 12.4**	**+1.7**
PVAQ	**Vaqueiros**	**80.87**	**43**	*e*P	**P**	**19 05 04.7**	**+0.9**
	comp=Z,129nm,1.5s						
PVAQ	**Vaqueiros**	**80.87**	**43**	*e*S	**S**	**19 15 15.5**	**+4.3**
PVAQ	**Vaqueiros**	**80.87**	**43**	*e*LR	LR	19 33 38.3	
	comp=Z,4µm,16.0s						
BOZ	**Bozeman (W)**	**80.89**	**329**	P	**P**	**19 05 04.6**	**+0.6**
	baz=137,SNR=72						
PAHR	**Pah Rah Range**	**80.93**	**320**	IAmb	IAmb	19 05 08.4	
	comp=Z,296nm,1.3s						
RUBR	**Rubicon Trail**	**80.96**	**320**	IAmb	IAmb	19 05 08.9	
	comp=Z,412nm,1.7s						
CHEFC	**Chefchaouen**	**80.98**	**46**	P	**P**	**19 05 08.0**	**+3.3**
MPK	**Martis Peak**	**81.05**	**320**	IAmb	IAmb	19 05 09.4	
	comp=Z,334nm,1.4s						
PBEJ	**Beja**	**81.17**	**42**	*e*P	**P**	**19 05 06.3**	**+0.9**
	comp=Z,60nm,1.6s						
DLMT	**Dillon**	**81.19**	**328**	P	**P**	**19 05 06.8**	**+1.2**
DLMT				IAmb	IAmb	19 05 09.5	
	comp=Z,220nm,1.4s						
MAW	**Mawson**	**81.30**	**162**	P	**P**	**19 05 05.2**	**-0.5**
	comp=Z,12nm,0.9s,baz=217,slow=6.0,SNR=23						
MAW				LR	LR	19 38 56.4	
	comp=Z,2µm,21.4s,baz=242,slow=34						
MAW	**Mawson**	**81.30**	**162**	P	**P**	**19 05 05.7**	**0.0**
MAW				pmax	pmax		
	comp=Z,13nm,1.3s						
MAW	**Mawson**	**81.30**	**162**	P	**P**	**19 05 05.7**	**0.0**
EVO	**Evora**	**81.40**	**42**	*e*P	**P**	**19 05 07.6**	**+1.0**
	comp=Z,62nm,1.7s						
MFID	**Camas Ranch**	**81.44**	**325**	P	**P**	**19 05 06.6**	**-0.3**
PSBE	**So Bento**	**81.55**	**40**	*e*P	**P**	**19 05 08.8**	**+1.4**
	comp=Z,201nm,1.9s						
PMTG	**Montargil**	**81.61**	**41**	*e*P	**P**	**19 05 08.7**	**+1.0**
	comp=Z,178nm,1.9s						
AKLM	**AKL**	**81.61**	**47**	P	**P**	**19 05 10.0**	**+2.0**
EGMT	**Eagleton**	**81.84**	**331**	P	**P**	**19 05 09.0**	**+0.2**
	baz=139,SNR=56						
EGMT	**Eagleton**	**81.84**	**331**	P	**P**	**19 05 08.0**	**-0.8**
EGMT				IAmb	IAmb	19 05 11.8	
	comp=Z,279nm,1.2s						
PESTR	**Estremoz**	**81.86**	**41**	*e*P	**P**	**19 05 10.3**	**+1.2**
	comp=Z,144nm,1.4s						
PESTR	**Estremoz**	**81.86**	**41**	P	**P**	**19 05 12.0**	**+2.9**
FIGM	**Figuig**	**82.04**	**50**	P	**P**	**19 05 11.3**	**+1.0**
PCAS	**Casmilo, Conde**	**82.07**	**40**	*e*P	**P**	**19 05 11.0**	**+0.9**
	comp=Z,128nm,1.6s						
COI	**Coimbra**	**82.22**	**40**	*e*P	**P**	**19 05 13.0**	**+2.1**
	comp=Z,145nm,1.6s						
PMRV	**Marv??o**	**82.34**	**41**	*e*P	**P**	**19 05 12.8**	**+1.2**
	comp=Z,50nm,1.6s						
PMRV	**Marv??o**	**82.34**	**41**	*e*S	**S**	**19 15 32.6**	**+6.3**
PMRV	**Marv??o**	**82.34**	**41**	*e*LR	LR	19 34 08.8	
	comp=Z,2µm,20.0s						
JBK	**JBK**	**82.38**	**48**	P	**P**	**19 05 14.0**	**+1.8**
PCBR	**Castelo Branco**	**82.54**	**41**	*e*P	**P**	**19 05 13.1**	**+0.5**
	comp=Z,46nm,1.3s						
PLID	**Pearl Lake**	**82.69**	**326**	IAmb	IAmb	19 05 16.5	
	comp=Z,196nm,1.1s						
O03E	**Paynes Creek**	**82.73**	**320**	P	**P**	**19 05 13.7**	**0.0**
	baz=129,SNR=28						
PVIS	**Viseu**	**82.84**	**40**	*e*P	**P**	**19 05 15.7**	**+1.5**
	comp=Z,89nm,1.8s						
MTE	**Manteigas**	**82.85**	**40**	*e*P	**P**	**19 05 15.4**	**+1.1**
	comp=Z,91nm,1.6s						
MTE	**Manteigas**	**82.85**	**40**	*e*S	**S**	**19 15 38.0**	**+6.3**
MTE	**Manteigas**	**82.85**	**40**	*e*LQ	LQ	19 30 46.1	
MTE				*e*LR	LR	19 35 02.7	
	comp=Z,3µm,20.0s						
MOD	**Modoc Plateau**	**82.89**	**322**	IAmb	IAmb	19 05 17.6	
	comp=Z,148nm,1.4s						
MSO	**Missoula**	**82.89**	**328**	P	**P**	**19 05 15.3**	**+0.9**
	baz=136,SNR=35						
O02D	**Mt. Diablo Mer**	**83.25**	**319**	P	**P**	**19 05 16.9**	**+0.5**
	baz=128,SNR=21						
PVRL	**Vila Real**	**83.30**	**40**	*e*P	**P**	**19 05 17.7**	**+1.1**
	comp=Z,113nm,1.5s						
POLO	**Lamas de Olo**	**83.32**	**39**	*e*P	**P**	**19 05 17.0**	**+0.3**
	comp=Z,44nm,2.0s						
PCAB	**Cabril**	**83.40**	**39**	*e*P	**P**	**19 05 17.9**	**+0.8**
	comp=Z,141nm,1.8s						
PGAV	**Gavieira, Arco**	**83.42**	**39**	*e*P	**P**	**19 05 19.4**	**+2.2**
	comp=Z,123nm,1.7s						
PGAV	**Gavieira, Arco**	**83.42**	**39**	*e*LR	LR	19 37 24.7	
	comp=Z,2µm,18.0s						
KCPM	**Cahto Peak**	**83.43**	**318**	IAmb	IAmb	19 05 20.8	
	comp=Z,134nm,1.3s						
MVO	**Moncorvo**	**83.64**	**40**	*e*P	**P**	**19 05 19.2**	**+0.9**
	comp=Z,129nm,1.9s						
MVO	**Moncorvo**	**83.64**	**40**	*e*S	**S**	**19 15 45.9**	**+6.3**
MVO	**Moncorvo**	**83.64**	**40**	*e*LQ	LQ	19 32 25.9	
MVO				*e*LR	LR	19 36 45.8	
	comp=Z,3µm,18.0s						
M04C	**Macdoel**	**83.69**	**321**	P	**P**	**19 05 19.3**	**+0.6**
	baz=129,SNR=36						
N02D	**Trinity Center**	**83.70**	**320**	P	**P**	**19 05 18.6**	**-0.1**
	baz=129,SNR=28						
KMRM	**Mail Ridge**	**83.83**	**319**	IAmb	IAmb	19 05 22.7	
	comp=Z,151nm,1.2s						
I07A	**Izee**	**83.86**	**324**	IAmb	IAmb	19 05 22.7	
	comp=Z,120nm,1.2s						
F10A	**Beach Ranch, E**	**83.92**	**326**	IAmb	IAmb	19 05 23.8	
	comp=Z,178nm,1.2s						
M02C	**Callahan**	**84.04**	**320**	P	**P**	**19 05 20.6**	**+0.2**
	baz=128,SNR=16						
YBH	**Yreka Blue Hor**	**84.17**	**320**	LR	LR	19 45 06.7	
	comp=Z,504nm,19.3s,baz=140,slow=37						
K04D	**Chiloquin, OR**	**84.18**	**322**	P	**P**	**19 05 22.0**	**+0.9**
	baz=129						
FFC	**Flin Flon**	**84.19**	**339**	P	**P**	**19 05 21.1**	**+0.4**
FFC				pmax	pmax		
	comp=Z,69nm,1.3s						
FFC				MLR	MLR		
	comp=Z,2µm,21.0s						
FFC	**Flin Flon**	**84.19**	**339**	P	**P**	**19 05 21.1**	**+0.4**
FFC				IAMs_20	IAMs_20	19 49 41.0	
	comp=Z,2µm,21.0s						
PBRG	**Braganca**	**84.20**	**40**	*e*P	**P**	**19 05 21.9**	**+0.7**
	comp=Z,144nm,1.7s						
L04D	**Klamath Falls**	**84.24**	**321**	P	**P**	**19 05 21.8**	**+0.3**
	baz=129,SNR=20						
PAB	**San Pablo**	**84.27**	**42**	P	**P**	**19 05 21.2**	**-0.4**
PAB				pmax	pmax		
	comp=Z,119nm,1.4s						
PAB				MLR	MLR		
	comp=Z,4µm,20.0s						
PAB	**San Pablo**	**84.27**	**42**	P	**P**	**19 05 21.2**	**-0.4**
PAB				IAmb	IAmb	19 05 25.0	
	comp=Z,119nm,1.4s						
PAB	**San Pablo**	**84.27**	**42**	P	**P**	**19 05 23.3**	**+1.7**
J05D	**Fort Rock, OR**	**84.30**	**322**	P	**P**	**19 05 22.7**	**+0.9**
	baz=130,SNR=44						
G08A	**Pilot Rock**	**84.36**	**325**	IAmb	IAmb	19 05 24.8	
	comp=Z,116nm,1.4s						
PINE	**Pine Mountain**	**84.46**	**323**	IAmb	IAmb	19 05 26.0	
	comp=Z,251nm,1.4s						
WALA	**Waterton Lakes**	**84.47**	**330**	P	**P**	**19 05 22.4**	**-0.1**
ESDC	**Sonseca Array**	**84.59**	**43**	P	**P**	**19 05 23.2**	**+0.1**
	comp=Z,37nm,1.1s,baz=240,slow=4.5,SNR=82						
ESDC				LR	LR	19 42 59.2	
	comp=Z,3µm,18.0s,baz=250,slow=36						
ESDC	**Sonseca Array**	**84.59**	**43**	P	**P**	**19 05 23.8**	**+0.6**
J04D	**Umpqua Nationa**	**84.77**	**322**	P	**P**	**19 05 25.0**	**+0.8**
	baz=129,SNR=13						
HUMO	**Hull Mountain**	**84.86**	**321**	P	**P**	**19 05 24.3**	**-0.1**
L02E	**Cave Junction**	**84.96**	**320**	P	**P**	**19 05 26.1**	**+1.2**
	baz=128,SNR=16						
I05D	**Terrebonne, OR**	**85.03**	**323**	P	**P**	**19 05 26.6**	**+1.3**
	baz=130,SNR=16						
CART	**Cartagena**	**85.27**	**46**	IAmb	IAmb	19 05 28.8	
	comp=Z,146nm,1.4s						
CART	**Cartagena**	**85.27**	**46**	P	**P**	**19 05 27.5**	**+0.9**
I04A	**Tendick Farm,**	**85.29**	**322**	P	**P**	**19 05 27.8**	**+1.2**
	baz=129,SNR=13						
K02D	**Willamette Mer**	**85.32**	**321**	P	**P**	**19 05 28.0**	**+1.1**
	baz=128,SNR=38						
DBO	**Dodson Butte**	**85.34**	**321**	IAmb	IAmb	19 05 29.9	
	comp=Z,248nm,1.6s						
HAWA	**Hanford**	**85.39**	**325**	P	**P**	**19 05 27.5**	**+0.4**
HAWA				IAmb	IAmb	19 05 30.0	
	comp=Z,166nm,1.1s						
NEW	**Newport**	**85.44**	**328**	P	**P**	**19 05 27.0**	**-0.2**
	baz=133,SNR=17						
IVI	**Ivigtut**	**85.44**	**8**	*i* P	**P**	**19 05 26.2**	**-0.6**
IVI				IAmb	IAmb	19 05 30.5	
	comp=Z,12nm,0.8s						
D08A	**Wollman Farm,**	**85.52**	**326**	IAmb	IAmb	19 05 30.5	
	comp=Z,239nm,1.3s						
G05D	**Wamic, OR**	**85.60**	**324**	P	**P**	**19 05 29.6**	**+1.5**
	baz=130,SNR=35						
E07A	**Sunnyside**	**85.67**	**325**	IAmb	IAmb	19 05 31.4	
	comp=Z,99nm,1.1s						
C09A	**Chrisman Ranch**	**85.69**	**327**	P	**P**	**19 05 28.6**	**+0.2**
C09A				IAmb	IAmb	19 05 31.0	
	comp=Z,152nm,1.0s						
I03D	**Drain, OR**	**85.76**	**322**	P	**P**	**19 05 29.7**	**+0.8**
	baz=128,SNR=9.9						
J01E	**Myrtle Point**	**85.76**	**321**	P	**P**	**19 05 30.0**	**+1.1**
	baz=128,SNR=7.0						
KEBM	**Edson Butte**	**85.82**	**321**	IAmb	IAmb	19 05 33.0	
	comp=Z,209nm,1.1s						
HOOD	**Mount Hood Mea**	**85.83**	**324**	IAmb	IAmb	19 05 33.1	
	comp=Z,200nm,1.3s						
BUCK	**Buck Mountain**	**85.86**	**322**	IAmb	IAmb	19 05 32.0	
	comp=Z,309nm,1.6s						
H04D	**Lebanon**	**85.93**	**323**	P	**P**	**19 05 29.9**	**+0.2**
	baz=129						
F05D	**White Salmon**	**86.08**	**324**	P	**P**	**19 05 31.6**	**+1.1**
	baz=130,SNR=12						
I02E	**Swisshome, OR**	**86.29**	**322**	P	**P**	**19 05 32.4**	**+0.9**
	baz=128						
LTY	**Liberty**	**86.55**	**326**	IAmb	IAmb	19 05 35.2	
	comp=Z,119nm,0.9s						
B08A	**Colville Reser**	**86.59**	**327**	IAmb	IAmb	19 05 35.8	
	comp=Z,278nm,1.9s						
G03D	**McMinnville, O**	**86.65**	**323**	P	**P**	**19 05 34.4**	**+1.2**
	baz=128,SNR=8.6						
FRB	**Frobisher Bay**	**86.98**	**358**	P	**P**	**19 05 34.0**	**-0.3**
	comp=Z,16nm,0.9s,baz=158,slow=6.5,SNR=8.1						
FRB				LR	LR	19 44 47.9	
	comp=Z,2µm,21.3s,baz=162,slow=36						
F04D	**Rainier, OR**	**87.05**	**324**	P	**P**	**19 05 36.2**	**+1.1**
	baz=129						
C06D	**Leavenworth**	**87.10**	**326**	P	**P**	**19 05 35.3**	**-0.1**
	baz=130						
E04D	**Cinebar**	**87.11**	**324**	P	**P**	**19 05 35.6**	**+0.1**
	baz=129,SNR=12						
EDM	**Edmonton**	**87.23**	**333**	P	**P**	**19 05 35.2**	**-0.7**
EDM				pmax	pmax		
	comp=Z,448nm,1.8s						
EDM	**Edmonton**	**87.23**	**333**	P	**P**	**19 05 35.2**	**-0.7**
D04E	**Lakebay**	**87.61**	**325**	P	**P**	**19 05 38.8**	**+1.0**
	baz=129,SNR=11						
E03A	**Lebam**	**87.64**	**324**	IAmb	IAmb	19 05 41.3	
	comp=Z,181nm,1.2s						
B05A	**Bryant**	**87.94**	**326**	P	**P**	**19 05 39.4**	**+0.1**
	baz=129,SNR=46						
D03D	**Eldon**	**88.00**	**325**	P	**P**	**19 05 40.5**	**+0.8**
	baz=129,SNR=24						
WISH	**Wishkah**	**88.10**	**324**	IAmb	IAmb	19 05 43.4	
	comp=Z,137nm,1.1s						
NLWA	**Neilton Lookou**	**88.32**	**324**	IAmb	IAmb	19 05 44.8	

	comp=Z,117nm,1.2s						
A04D	**Lummi Island**	**88.54**	**326**	P	**P**	**19 05 43.1**	**+0.9**
	baz=129,SNR=5.8						
B04A	**Port Angeles**	**88.54**	**325**	IAmb	IAmb	19 05 45.2	
	comp=Z,76nm,1.0s						
PGC	**Sidney**	**88.88**	**325**	IAmb	IAmb	19 05 47.2	
	comp=Z,162nm,1.1s						
LLLB	**Lillooet**	**89.32**	**328**	IAmb	IAmb	19 05 48.6	
	comp=Z,209nm,1.3s						
CASY	**Casey**	**90.45**	**178**	IAMs_20	IAMs_20	19 48 48.8	
	comp=Z,2µm,19.0s						
DY2G	**Dye2**	**90.75**	**7**	*i* P	**P**	**19 05 51.4**	**-1.1**
DY2G				IAmb	IAmb	19 05 56.6	
	comp=Z,12nm,0.6s						
KEST	**Kesra**	**91.44**	**51**	P	**P**	**19 05 56.8**	**+0.6**
	comp=Z,34nm,0.9s,baz=254,slow=2.3,SNR=20						
KEST				LR	LR	19 49 43.6	
	comp=Z,6µm,18.2s,baz=198,slow=37						
ICESG	**Greenland Ices**	**94.08**	**9**	*i* P	**P**	**19 06 07.3**	**-0.6**
ICESG				IAmb	IAmb	19 06 08.8	
	comp=Z,5.5nm,0.7s						
BORG	**Borgarnes**	**94.11**	**17**	LR	LR	19 44 56.8	
	comp=Z,914nm,19.1s,baz=262,slow=33						
YKA	**Yellowknife Ar**	**94.37**	**339**	P	**P**	**19 06 08.7**	**-0.2**
	comp=Z,13nm,0.7s,baz=119,slow=5.7,SNR=70						
YKA	**Yellowknife Ar**	**94.37**	**339**	P	**P**	**19 06 08.5**	**-0.5**
MBAR	**Mbarara**	**94.77**	**93**⇑	*e*P	**P**	**19 06 09.9**	**-2.4**
MXZ	**Matakaoa Point**	**95.19**	**225**	IAMs_20	IAMs_20	19 39 39.0	
	comp=Z,2µm,22.0s						
URZ	**Urewera**	**95.57**	**224**	IAMs_20	IAMs_20	19 40 51.7	
	comp=Z,2µm,20.0s						
LTZ	**Lake Taylor**	**95.75**	**218**	IAmb	IAmb	19 06 18.8	
	comp=Z,108nm,2.0s						
LTZ				IAMs_20	IAMs_20	19 42 05.2	
	comp=Z,2µm,19.0s						
THZ	**Tophouse**	**96.03**	**219**	P	**P**	**19 06 16.6**	**-0.8**
THZ				IAmb	IAmb	19 06 21.1	
	comp=Z,74nm,1.5s						
WLF	**Walferdange**	**96.06**	**38**	*d*x	**PcP**	**19 06 18.9**	**+1.7**
BFO	**Black Forest**	**96.68**	**40**	*e*L	L	19 49 50.3	
	comp=Z,1µm,19.5s						
DAVOX	**Davos/Dischmat**	**96.90**	**42**	P	**P**	**19 06 20.7**	**-0.4**
	comp=Z,7.1nm,0.9s,baz=288,slow=4.0,SNR=12						
DAVA	**Damuels**	**97.13**	**41**	*e*P	Pdif	19 06 23.6	+1.4
	comp=Z,20nm,1.1s						
AQU	**L'Aquila**	**97.22**	**47**	IAMs_20	IAMs_20	19 56 49.6	
	comp=Z,2µm,18.0s						
TEOL	**Teolo**	**97.39**	**44**	P	**P**	**19 06 22.6**	**-0.5**
SUMG	**Summit**	**97.45**	**8**	*i* P	Pdif	19 06 24.0	+0.6
SUMG				IAmb	IAmb	19 06 58.1	
	comp=Z,2.9nm,1.0s						
FETA	**Feichten**	**97.53**	**42**	*e*P	Pdif	19 06 25.7	+1.6
	comp=Z,18nm,1.3s,SNR=6.0						
TNS	**Taunus Mts**	**97.63**	**38**	*e*L	L	19 52 57.7	
	comp=Z,2µm,18.4s						
CTI	**Castel Tesino**	**97.67**	**43**	P	**P**	**19 06 23.5**	**-1.1**
CTI				pmax	pmax		
	comp=Z,30nm,1.5s						
CTI	**Castel Tesino**	**97.67**	**43**	P	**P**	**19 06 23.5**	**-1.1**
RETA	**Reutte**	**97.76**	**42**	*e*P	Pdif	19 06 26.6	+1.7
	comp=Z,12nm,1.1s						
MOTA	**Moosalm**	**97.90**	**42**	*e*P	Pdif	19 06 26.7	+1.0
	comp=Z,22nm,1.3s,SNR=8.7						
SQTA	**Sankt Quirin**	**97.91**	**42**	*e*P	Pdif	19 06 26.8	+1.1
	comp=Z,35nm,1.4s,SNR=8.7						
WATA	**Walderalm**	**98.19**	**42**	*e*P	Pdif	19 06 28.3	+1.4
	comp=Z,32nm,1.6s,SNR=8.8						
WTTA	**Wattenberg**	**98.19**	**42**	*e*P	Pdif	19 06 28.1	+1.1
	comp=Z,34nm,1.3s,SNR=7.9						
FUR	**Furstenfeldbru**	**98.36**	**41**	*e*L	L	19 51 50.1	
	comp=Z,2µm,18.4s						
ABTA	**Abfaltersbach**	**98.51**	**43**	*e*P	Pdif	19 06 30.1	+1.8
	comp=Z,14nm,1.3s,SNR=7.1						
GRF	**Grafenberg Arr**	**98.99**	**40**	*e*Pdiff	Pdif	19 06 31.8	+1.5
GRF				*e*L	L	19 51 06.3	
	comp=Z,2µm,19.8s						
MYKA	**Terra Mystica**	**99.17**	**43**	*e*P	**Pdif**	**19 06 32.9**	**+1.7**
	comp=Z,7.4nm,1.0s						
MOX	**Moxa**	**99.63**	**39**	*e*L	L	19 50 04.3	
	comp=Z,1µm,20.5s						
OBKA	**Obir**	**99.69**	**44**	*e*P	**Pdif**	**19 06 35.6**	**+2.1**
	comp=Z,16nm,1.6s,SNR=6.8						
WET	**Wettzell**	**99.74**	**41**	*e*L	L	19 51 34.7	
	comp=Z,2µm,19.2s						
RES	**Resolute Bay**	**99.84**	**352**	P	**Pdif**	**19 06 32.4**	**-1.1**
	comp=Z,4.7nm,1.0s,baz=181,slow=6.7,SNR=6.9						
SOKA	**Soboth**	**100.06**	**43**	*e*P	**Pdif**	**19 06 37.0**	**+1.8**
	comp=Z,3.7nm,0.8s						
GEC2	**GERESS Array S**	**100.11**	**41**	*e*L	L	19 51 50.8	
	comp=Z,1µm,19.5s						
GERES	**GERESS Array B**	**100.11**	**41**	P	**Pdif**	**19 06 34.4**	**-1.0**
	comp=Z,0.9nm,0.8s,baz=306,slow=7.6,SNR=3.9						
KHC	**Kasperske Hory**	**100.16**	**41**⇑	*e*P	**Pdif**	**19 06 35.6**	**+0.1**
KHC				pmax	pmax		
	comp=Z,34nm,2.1s						
KHC				MLR	MLR		
	comp=Z,2µm,18.0s						
BSEG	**Bad Segeberg**	**100.33**	**35**	*e*L	L	19 51 16.6	
	comp=Z,1µm,21.2s						
ARSA	**Arzberg**	**100.60**	**43**	P	**Pdif**	**19 06 39.3**	**+1.8**
	comp=Z,6.9nm,1.3s						
CLL	**Collm**	**100.71**	**39**	*e*Pdif	**Pdif**	**19 06 38.0**	**+0.2**
CLL				*e*SKSac	**SKSac**	**19 17 24.0**	**+8.6**
CLL				*e*Sdif	**Sdif**	**19 18 15.0**	**+1.2**
CLL				*e*PS	**PS**	**19 19 48.0**	**+1.1**
CLL				*e*SS	**SS**	**19 25 06.0**	**-5.7**
CLL				*e*SSS	SSS	19 29 06.0	
CLL				Lm	MLR	19 54 00.0	
	comp=N,800nm,18.6s						
CLL				Lm	MLR	19 54 00.0	
	comp=E,1µm,19.9s						
CLL				Lm	MLR	19 54 00.0	
	comp=Z,2µm,18.4s						
CLL	**Collm**	**100.71**	**39**	*e*P	**Pdif**	**19 06 38.0**	**+0.2**
CLL				*e*S	**Sdif**	**19 18 15.0**	**+1.2**
CLL				MLR	MLR		
	comp=Z,2µm,18.4s						
CLL	**Collm**	**100.71**	**39**	*e*L	L	19 54 48.1	
	comp=Z,2µm,18.4s						
NEEM	**North Greenlan**	**101.03**	**3**	*i* P	**Pdif**	**19 06 39.7**	**+0.6**
CONA	**Conrad Observa**	**101.07**	**43**	P	**Pdif**	**19 06 40.3**	**+0.7**
	comp=Z,7.9nm,1.4s						
PDG	**Podgorica**	**101.24**	**49**	IAMs_20	IAMs_20	19 55 18.9	
	comp=Z,1µm,19.0s						
VRAC	**Vranov**	**102.05**	**41**	*e*PP	**PP**	**19 10 55.6**	**-0.3**
DIVS	**Divibare**	**102.34**	**47**	IAMs_20	IAMs_20	19 55 32.9	
	comp=Z,1µm,19.0s						
VYHS	**Vyhne**	**103.13**	**43**	*e*P	**Pdif**	**19 06 53.1**	**+4.4**
VYHS	**Vyhne**	**103.13**	**43**	*e*PDIFF	**Pdif**	**19 06 53.1**	**+4.4**
A36M	**Sachs Harbour**	**103.64**	**344**	P	**Pdif**	**19 06 50.1**	**-0.3**
	baz=125						
INK	**Inuvik**	**104.14**	**339**	Pdiff	**Pdif**	**19 06 52.0**	**-0.7**
	comp=Z,3.5nm,1.1s,baz=138,slow=3.0,SNR=5.0						
INK				PP	**PP**	**19 11 10.9**	**-0.1**
	comp=Z,8.6nm,1.1s,baz=108,slow=7.2,SNR=6.3						
INK	**Inuvik**	**104.14**	**339**	P	**Pdif**	**19 06 53.6**	**+1.0**
	baz=118						
DAWY	**Dawson**	**104.42**	**334**	P	**Pdif**	**19 06 53.5**	**-0.6**
	baz=114						
M27K	**Edge Creek, AK**	**104.79**	**332**	IAMs_20	IAMs_20	20 00 44.6	
	comp=Z,2µm,18.0s						
MCARA	**McCarthy VSAT**	**104.93**	**331**	IAMs_20	IAMs_20	19 59 06.6	
	comp=Z,2µm,19.0s						
BCAR	**Beaver Creek A**	**105.02**	**333**	Pdif	**Pdif**	**19 06 57.3**	**+0.5**
L27K	**Beaver Creek,**	**105.03**	**333**	Pdiff	**Pdif**	**19 06 57.4**	**+0.6**
	baz=112						
L27K	**Beaver Creek,**	**105.03**	**333**	IAMs_20	IAMs_20	20 01 44.4	
	comp=Z,1µm,19.0s						
M26K	**Nabesna, AK**	**105.29**	**332**	IAMs_20	IAMs_20	20 01 12.9	
	comp=Z,1µm,18.0s						
UZH	**Uzhgorod**	**105.34**	**43**	*e*P	**Pdif**	**19 07 10.9**	**+12**
L26K	**Log Cabin Wild**	**105.66**	**332**	IAMs_20	IAMs_20	20 03 11.1	
	comp=Z,2µm,19.0s						
SCRK	**Sand Creek**	**106.26**	**333**	Pdiff	**Pdif**	**19 07 02.6**	**+0.2**
	baz=110						
SCRK	**Sand Creek**	**106.26**	**333**	IAMs_20	IAMs_20	20 00 20.0	
	comp=Z,1µm,20.0s						
J26L	**Joseph Creek**	**106.27**	**334**	Pdiff	**Pdif**	**19 07 02.3**	**-0.1**
	baz=110						
KLU	**Klutina**	**106.27**	**330**	Pdiff	**Pdif**	**19 07 02.4**	**-0.1**
	baz=109						
RIDG	**Independent Ri**	**106.54**	**333**	Pdiff	**Pdif**	**19 07 04.9**	**+1.3**
	baz=109						
MLR	**Muntele Rosu**	**106.80**	**47**	IAMs_20	IAMs_20	19 59 05.9	
	comp=Z,2µm,21.0s						
J25K	**Salcha River,**	**107.05**	**334**	Pdiff	**Pdif**	**19 07 06.4**	**+0.6**
	baz=109						
DHY	**Denali Highway**	**107.41**	**332**	IAMs_20	IAMs_20	20 04 52.4	
	comp=Z,1µm,20.0s						
TAU	**Tasmania Unive**	**107.65**	**204**	IAMs_20	IAMs_20	19 46 26.9	
	comp=Z,2µm,19.0s						
ILAR	**Eielson Array**	**107.71**	**334**	Pdiff	**Pdif**	**19 07 07.6**	**-1.1**
	comp=Z,0.7nm,0.8s,baz=151,slow=2.9,SNR=7.5						
ILAR				PP	**PP**	**19 11 31.6**	**-5.9**
	comp=Z,2.0nm,0.9s,baz=106,slow=5.8,SNR=7.4						
ISP	**Isparta**	**107.96**	**56**	IAMs_20	IAMs_20	20 02 53.5	
	comp=Z,1µm,20.0s						
POKR	**Poker Plat Res**	**108.04**	**334**	IAMs_20	IAMs_20	20 01 56.8	
	comp=Z,1µm,18.0s						
COLA	**College**	**108.14**	**334**	IAMs_20	IAMs_20	19 54 08.6	
	comp=Z,1µm,22.0s						
TCOL	**CIGO, UAF Yank**	**108.14**	**334**	IAMs_20	IAMs_20	19 54 08.6	
	comp=Z,1µm,22.0s						
MCK	**McKinley**	**108.28**	**332**	IAMs_20	IAMs_20	20 04 11.2	
	comp=Z,1µm,20.0s						
MDM	**Murphy Dome**	**108.32**	**334**	IAMs_20	IAMs_20	20 03 07.2	
	comp=Z,1µm,20.0s						
H24K	**Noodor Dome**	**108.42**	**334**	IAMs_20	IAMs_20	20 03 36.9	
	comp=Z,1µm,19.0s						
BPAW	**Bear Paw Mtn.**	**109.25**	**332**	Pdiff	**Pdif**	**19 07 16.5**	**+0.9**
	baz=104						
CSS	**Mathiatis**	**109.36**	**60**	IAMs_20	IAMs_20	19 58 06.8	
	comp=Z,2µm,21.0s						
CAST	**Castle Rocks**	**109.56**	**332**	IAMs_20	IAMs_20	20 01 11.1	
	comp=Z,1µm,21.0s						
TOLK	**Toolik Lake Re**	**109.78**	**337**	IAMs_20	IAMs_20	20 07 41.6	
	comp=Z,1µm,18.0s						
I21K	**Tanana**	**109.91**	**333**	IAMs_20	IAMs_20	19 54 58.0	
	comp=Z,1µm,20.0s						
N19K	**Bonanza Creek**	**110.09**	**329**	IAMs_20	IAMs_20	20 03 35.2	
	comp=Z,2µm,20.0s						
ANTO	**Ankara**	**110.20**	**54**	IAMs_20	IAMs_20	20 00 26.9	
	comp=Z,1µm,20.0s						
AKASG	**Malin Array Be**	**110.23**	**43**	PKiKP	**PKiKP**	**19 11 21.1**	**-0.3**
	comp=Z,1.3nm,0.6s,baz=276,slow=2.2,SNR=7.4						
AKASG				PP	**PP**	**19 11 53.4**	**-2.8**
	comp=Z,0.2nm,0.4s,baz=256,slow=7.6,SNR=4.2						
AKASG				PKKPbc	**PKKPbc**	**19 22 22.4**	**-1.4**
	comp=Z,0.4nm,0.6s,baz=49,slow=2.6,SNR=4.0						
AKASG				PKKPab	**PKKPab**	**19 22 32.6**	**+0.6**
	comp=Z,2.1nm,0.9s,baz=61,slow=3.8,SNR=10						
MNK	**Minsk**	**110.25**	**38**	*i* PKIKP	**PKiKP**	**19 11 27.1**	**+5.8**
MNK				*i*		19 11 56.8	
MNK				*i* PPP	PPP	19 14 16.1	
MNK				*i* SS	SS	19 27 25.7	+3.9
MNK				pmax	pmax		
	comp=N,7.0nm,1.0s						
MNK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MNK				pmax	pmax		
	comp=E,2.0nm,1.0s						
MNK				MLR	MLR		
	comp=Z,923nm,17.0s						
MNK	**Minsk**	**110.25**	**38**	*i* PKP	**PKiKP**	**19 11 27.1**	**+5.8**
	comp=E,2.0nm,1.0s						
MNK				*i* PKP	**PKiKP**	**19 11 27.1**	**+5.8**
	comp=N,7.0nm,1.0s						
MNK				*i* PKP	**PKiKP**	**19 11 27.1**	**+5.8**
	comp=Z,10.0nm,1.0s,baz=258						
MNK				*i* PP	**PP**	**19 11 56.8**	**+0.6**
MNK				*i* PPP	PPP	19 14 16.1	
MNK				*i* SKP		19 14 57.6	
MNK				*i* PKS	**PKSdf**	**19 14 58.8**	**+1.2**
MNK				*i* SKS		19 17 30.6	
MNK				*i* SKKS	SKKSac	19 19 17.5	+20
MNK				*i* PS	**PS**	**19 21 40.2**	**+14**
MNK				*i* SS	**SS**	**19 27 25.7**	**+3.9**
MNK				*i* SSS	SSS	19 33 20.8	
MNK				*i* LQ	LQ	19 47 58.0	
MNK				*i* LR	LR	19 52 16.2	
MNK				*i* LRM	MLR	20 00 12.3	
	comp=Z,923nm,17.0s						
MNK				*i* LRM	MLR	20 01 10.8	
	comp=E,135nm,17.8s						
MNK				*i* LRM	MLR	20 02 35.1	
	comp=N,713nm,17.6s						
M19K	**Big River Lodg**	**110.27**	**330**	IAMs_20	IAMs_20	20 02 34.0	
	comp=Z,1µm,20.0s						
H21K	**Melozitna Rive**	**110.35**	**334**	IAMs_20	IAMs_20	20 04 50.9	
	comp=Z,1µm,18.0s						
L19K	**White Mountain**	**110.54**	**330**	IAMs_20	IAMs_20	20 04 27.8	
	comp=Z,1µm,21.0s						
J20K	**Nowinta River**	**110.61**	**332**	IAMs_20	IAMs_20	20 03 18.0	
	comp=Z,1µm,21.0s						
BRTR	**Keskin Array B**	**110.80**	**55**	PKiKP	**PKiKP**	**19 11 22.7**	**-0.3**
	comp=Z,1.1nm,0.7s,baz=166,slow=2.9,SNR=6.7						
BRTR				PP	**PP**	**19 11 59.8**	**-1.0**
	comp=Z,1.1nm,0.8s,baz=258,slow=6.8,SNR=2.2						
BRTR				PKKPab	**PKKPab**	**19 22 30.9**	**+0.6**
	comp=Z,1.2nm,0.8s,baz=99,slow=4.8,SNR=7.0						
BRTR				PKKP	**PKKPdf**	**19 22 39.4**	**-0.6**
	comp=Z,1.3nm,0.9s,baz=128,slow=2.0,SNR=4.5						
A21K	**Barrow**	**112.63**	**340**	IAMs_20	IAMs_20	20 02 33.8	
	comp=Z,2µm,21.0s						
DZM	**Mont Dzumac**	**112.72**	**232**	*e*PS	PS	19 21 44.4	-4.7
	comp=Z,322nm,26.6s						
DZM	**Mont Dzumac**	**112.72**	**232**	*e*LR	LR	19 45 10.5	
	comp=Z,1µm,24.6s						
APA	**Apatity**	**114.56**	**25**⇓	*i*PKIKP	PKPdf	19 11 19.3	-10
APA				pmax	pmax		
	comp=Z,9.0nm,1.5s						
APA				MLR	MLR		
	comp=Z,2µm,17.0s						
RDOG	**Red Dog Mine**	**114.60**	**336**	IAMs_20	IAMs_20	20 08 14.0	
	comp=Z,1µm,18.0s						
OBN	**Obninsk**	**115.31**	**39**⇑	*i*PKIKP	**PKPdf**	**19 11 31.8**	**+0.9**
OBN				*e*		19 12 30.4	
OBN				*e*PPP	PPP	19 15 02.1	
OBN				pmax	pmax		
	comp=Z,52nm,2.5s						
OBN				MLR	MLR		
	comp=Z,1µm,18.0s						
ANM	**Nome**	**115.50**	**332**	IAMs_20	IAMs_20	20 06 57.3	
	comp=Z,2µm,18.0s						
MOS	**Moscow**	**115.96**	**38**	*i* PKIKP	**PKPdf**	**19 11 29.3**	**-2.8**
MOS				*e*PS	**PS**	**19 22 15.1**	**-3.0**
MOS				pmax	pmax		
	comp=Z,40nm,1.3s						
MOS				MLR	MLR		
	comp=Z,1µm,18.0s						
MOS				MLR	MLR		
	comp=N,900nm,19.0s						
MOS				MLR	MLR		
	comp=E,1µm,19.0s						
SOC	**Sochi**	**116.00**	**52**	*i* PKIKP	**PKPdf**	**19 11 29.0**	**-3.7**
SOC				*e*PPP	PPP	19 15 06.2	
SOC				*e*PS	**PS**	**19 22 20.6**	**+1.6**
SOC				*e*SS	SS	19 28 44.8	+6.1
SOC				*e*SSS	SSS	19 33 06.3	
KLMR	**Klimovskoe**	**117.12**	**32**	*e*PKIKP	**PKPdf**	**19 11 31.3**	**-3.0**
KLMR				pmax	pmax		
	comp=Z,45nm,1.4s						
KLMR	**Klimovskoe**	**117.12**	**32**	*e*PKPdf	**PKPdf**	**19 11 31.3**	**-3.0**
KLMR				AMP		19 11 37.6	
	comp=Z,45nm,1.4s						
KLMR				*e*SKP		19 15 05.5	
KLMR				LQ	LQ	19 54 06.0	
KLMR				LQ	LQ	19 54 06.0	
KLMR				LR	LR	19 58 36.5	
KIV	**Kislovodsk**	**118.19**	**51**	*i* PKIKP	**PKPdf**	**19 11 36.8**	**-0.2**
KIV				*e*		19 12 52.4	
KIV				*e*PS	**PS**	**19 22 38.3**	**-0.8**
KIV				*e*SS	SS	19 29 09.3	+2.0
KIV				*e*SSS	SSS	19 33 31.2	
KIV				pmax	pmax		
	comp=Z,12nm,1.0s						
KIV				MLR	MLR		
	comp=Z,595nm,22.0s						
GAMB	**Gambell**	**118.30**	**331**	IAMs_20	IAMs_20	20 08 46.1	
	comp=Z,1µm,18.0s						
KBZ	**Khabaz**	**118.31**	**52**	PKP	**PKPdf**	**19 11 36.9**	**-0.1**
	comp=Z,7.6nm,0.9s,baz=231,slow=1.4,SNR=9.4						
GOF	**Gofitskoye**	**118.55**	**50**⇑	*e*PKIKP	**PKiKP**	**19 11 38.1**	**+0.5**
NCK	**Nalchik**	**118.79**	**52**⇑	*i*PKIKP	**PKPdf**	**19 11 37.5**	**-0.6**
ZEI	**Tsey**	**118.94**	**53**	*i* PKIKP	**PKPdf**	**19 11 37.5**	**-1.1**
ZEI				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GNI	**Garni**	**119.27**	**56**	IAMs_20	IAMs_20	20 01 49.9	
	comp=Z,984nm,22.0s						
STKA	**Stephens Creek**	**119.48**	**206**	PKP	**PKPdf**	**19 11 39.8**	**-0.1**
	comp=Z,2.5nm,0.9s,baz=154,slow=8.4,SNR=3.6						
STKA				PKKPbc	**PKKPbc**	**19 21 50.9**	**-0.8**
	comp=Z,1.1nm,0.7s,baz=14,slow=7.8,SNR=3.3						
PRGR	**Permogore**	**120.03**	**31**	*e*PKIKP	**PKPdf**	**19 11 39.7**	**-0.1**
PRGR				*e*		19 13 00.8	
PRGR				pmax	pmax		
	comp=Z,13nm,0.7s						
MAK	**Makhachkala**	**121.59**	**53**	*i* P	**Pdif**	**19 08 06.6**	**-4.3**
MAK				*i*		19 11 39.8	
MAK				*e*		19 13 13.7	
MAK				*e*		19 18 43.7	
MAK				pmax	pmax		
	comp=Z,628nm,1.4s						
BELG	**Belogornoye**	**121.80**	**42***c*	*i*PKIKP	**PKPdf**	**19 11 43.3**	**-0.2**
KIRV	**Kirov**	**122.28**	**34**	PKP	**PKPdf**	**19 11 44.0**	**-0.2**
	comp=Z,5.0nm,0.5s,baz=263,slow=5.0,SNR=5.9						
KIRV	**Kirov**	**122.28**	**34**⇑	*i*PKIKP	**PKiKP**	**19 11 44.7**	**+0.3**
NWAO	**Narrogin (SRO)**	**123.88**	**182**	IAMs_20	IAMs_20	20 05 23.2	
	comp=Z,1µm,20.0s						
BILL	**Bilibino**	**125.76**	**339**⇓	*i*PKIKP	**PKiKP**	**19 11 51.3**	**+0.2**
BILL				*e*		19 13 41.3	
BILL				*e*PPP	PPP	19 16 21.4	
BILL				*e*SS	SS	19 30 38.1	-3.9
BILL				pmax	pmax		
	comp=Z,36nm,1.7s						
CTAO	**Charters Tower**	**127.21**	**217**	IAMs_20	IAMs_20	19 57 58.0	
	comp=Z,1µm,21.0s						
ARU	**Arti**	**127.54**	**36**	*i* PKIKP	**PKiKP**	**19 11 55.3**	**+0.4**
ARU						19 13 55.7	
ARU						19 19 06.4	
ARU				SP	SP	19 23 51.3	-6.2
ARU				SS	**SS**	**19 31 07.5**	**+2.7**
ARU				MLR	MLR		
	comp=Z,2µm,19.0s						
ARU	**Arti**	**127.54**	**36**	PKPdf	**PKiKP**	**19 11 55.7**	**+0.7**
DGAR	**Diego Garcia**	**128.10**	**121**	IAMs_20	IAMs_20	20 04 52.4	
	comp=Z,1µm,19.0s						
AKTO	**Aktyubinsk**	**128.47**	**43**	PKIKP	**PKPdf**	**19 11 56.4**	**0.0**
ASAR	**Alice Springs**	**129.77**	**202**	PKP	**PKPdf**	**19 11 59.0**	**-0.9**
	comp=Z,9.1nm,0.8s,baz=148,slow=2.1,SNR=50						
ASAR				PP	**PP**	**19 14 07.1**	**-2.3**
	comp=Z,0.9nm,0.9s,baz=156,slow=7.1,SNR=1.4						
ASAR				PKKP	**PKKPdf**	**19 22 02.5**	**+0.1**
	comp=Z,0.6nm,0.8s,baz=336,slow=1.6,SNR=6.4						
ASAR	**Alice Springs**	**129.77**	**202**	PKIKP	**PKPdf**	**19 11 59.7**	**-0.2**
ASAR	**Alice Springs**	**129.77**	**202**	PKPdf	**PKPdf**	**19 11 59.7**	**-0.2**
AS31	**Alice Springs**	**129.77**	**202**	PKPdf	**PKPdf**	**19 11 59.6**	**-0.2**
AB31	**Akbulak array**	**129.90**	**45**	*i* PKIKP	**PKPdf**	**19 11 58.9**	**-0.2**
ABKAR	**Akbulak array**	**129.90**	**45**	PKPdf	**PKiKP**	**19 12 00.5**	**+0.6**
TIXI	**Tiksi**	**131.18**	**354**	PKP	**PKPdf**	**19 12 00.2**	**-0.7**
	comp=Z,14nm,0.9s,baz=56,slow=2.6,SNR=26						
TIXI	**Tiksi**	**131.18**	**354***d*	*i*PKIKP	**PKiKP**	**19 12 01.4**	**-0.4**
TIXI				MLR	MLR		
	comp=Z,2µm,22.0s						
TIXI	**Tiksi**	**131.18**	**354**	IAMs_20	IAMs_20	20 10 36.2	
	comp=Z,1µm,22.0s						
NRIK	**Noril'sk**	**131.21**	**13**	PKP	**PKPdf**	**19 12 01.1**	**+0.1**
	comp=Z,11nm,0.9s,baz=233,slow=1.4,SNR=18						
NRIK	**Noril'sk**	**131.21**	**13**⇓	*i*PKIKP	**PKiKP**	**19 12 02.3**	**+0.3**
NRIK				MLR	MLR		
	comp=Z,804nm,21.0s						
WRA	**Warramunga Arr**	**133.01**	**205**	PKP	**PKPdf**	**19 12 06.2**	**+0.1**
	comp=Z,6.4nm,0.5s,baz=172,slow=1.7,SNR=55						
WRA				PP	**PP**	**19 14 27.6**	**-2.8**
	comp=Z,4.6nm,1.3s,baz=162,slow=4.8,SNR=7.1						
WRA	**Warramunga Arr**	**133.01**	**205**	PKIKP	**PKPdf**	**19 12 06.4**	**+0.4**
WRA	**Warramunga Arr**	**133.01**	**205**	PKPdf	**PKPdf**	**19 12 06.4**	**+0.4**
WRAB	**Tennant Creek**	**133.02**	**205**	IAMs_20	IAMs_20	20 12 09.0	
	comp=Z,1µm,18.0s						
SEY	**Seymchan**	**133.41**	**338**	PKP	**PKPdf**	**19 12 04.6**	**-0.7**
	comp=Z,14nm,0.8s,baz=351,slow=23,SNR=28						
PMG	**Port Moresby**	**134.84**	**227**	IAMs_20	IAMs_20	20 04 47.7	
	comp=Z,951nm,20.0s						
PSA00	**Pilbara Seismi**	**135.00**	**186**	PKPdf	**PKPdf**	**19 12 07.1**	**-2.6**
BRVK	**Borovoye**	**135.05**	**37***c*	*i*PKIKP	**PKiKP**	**19 12 10.0**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,67nm,2.5s						
BRVK				MLR	MLR		
	comp=Z,1µm,19.0s						
MBWA	**Marble Bar**	**135.42**	**186**	IAMs_20	IAMs_20	20 08 22.1	
	comp=Z,1µm,22.0s						
MA2	**Magadan**	**136.18**	**335**	IAMs_20	IAMs_20	20 21 39.5	
	comp=Z,1µm,21.0s						
PETK	**Petropavlovsk-**	**136.44**	**324**	PKhKP	PKPpre	19 12 05.5	
	comp=Z,1.7nm,0.5s,baz=12,slow=1.0,SNR=10						
PETK				PKP	**PKPdf**	**19 12 11.1**	**-0.3**
	comp=Z,5.6nm,0.7s,baz=343,slow=1.5,SNR=8.8						
PETK	**Petropavlovsk-**	**136.44**	**324**	PKIKP	**PKPdf**	**19 12 11.5**	**+0.2**
PETK	**Petropavlovsk-**	**136.44**	**324**	PKPdf	**PKPdf**	**19 12 11.5**	**+0.2**
BRZS	**Berezniki**	**137.63**	**40**	*e*PKP	**PKPdf**	**19 12 13.8**	**+0.1**
	baz=40						
BRZS				*e*PP	**PP**	**19 15 01.2**	**+1.0**
	baz=40						
BRZS	**Berezniki**	**137.63**	**40**	*e*PKIKP	**PKPdf**	**19 12 13.7**	**+0.1**
BRZS				*e*		19 15 01.2	
BRLS	**Borolday**	**137.88**	**51**	*e*PKP	**PKPdf**	**19 12 14.2**	**-0.2**
	baz=52						
BRLS				*e*PP	**PP**	**19 15 01.2**	**-1.0**
	baz=52						
BRLS	**Borolday**	**137.88**	**51**	*e*PKIKP	**PKPdf**	**19 12 14.1**	**-0.2**
BRLS				*e*		19 15 01.1	
IUG	**Iuzhnay**	**138.21**	**52**	*e*PKP	**PKPdf**	**19 12 15.2**	**+0.1**
	baz=52						
IUG				*e*PP	**PP**	**19 15 05.8**	**+1.5**
	baz=52						
IUG	**Iuzhnay**	**138.21**	**52**	*e*PKIKP	**PKPdf**	**19 12 15.2**	**+0.1**
IUG				*e*		19 15 05.8	
DZA	**Taraz**	**138.98**	**51**	*e*PKP	**PKPdf**	**19 12 15.9**	**-0.5**
	baz=51						
DZA	**Taraz**	**138.98**	**51**	*e*PKIKP	**PKPdf**	**19 12 15.9**	**-0.5**
YAK	**Yakutsk**	**140.23**	**349**	PKhKP	PKPpre	19 12 11.3	
	comp=Z,7.7nm,0.8s,baz=203,slow=1.0,SNR=8.0						
YAK				PP	**PP**	**19 15 13.9**	**-1.5**
	comp=Z,3.3nm,0.5s,baz=47,slow=4.9,SNR=6.0						
YAK	**Yakutsk**	**140.23**	**349**	*i* PKHKP	PKPpre	19 12 10.6	
YAK				*e*		19 15 13.6	
YAK				*e*SS	SS	19 33 35.6	-1.2
YAK				pmax	pmax		
	comp=Z,13nm,0.9s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,288nm,2.1s						
YAK				pmax	pmax		
	comp=N,175nm,2.2s						
YAK				pmax	pmax		
	comp=E,126nm,2.3s						
YAK	**Yakutsk**	**140.23**	**349**	IAMs_20	IAMs_20	20 20 33.6	
	comp=Z,772nm,19.0s						
BTLS	**Baital**	**140.25**	**47**	*e*PKP	**PKPdf**	**19 12 18.8**	**+0.2**
	baz=47						
BTLS				*e*PP	**PP**	**19 15 16.5**	**-0.2**
	baz=47						
BTLS	**Baital**	**140.25**	**47**	*e*PKIKP	**PKPdf**	**19 12 18.8**	**+0.2**
BTLS				*e*		19 15 16.4	
KURBB	**Kurchatov Arra**	**140.71**	**37**	PKIKP	**PKPdf**	**19 12 17.2**	**-2.0**
KURK	**Kurchatov**	**140.72**	**37**	IAMs_20	IAMs_20	20 15 11.7	
	comp=Z,1µm,20.0s						
AAK	**Ala-Archa**	**141.29**	**50**	*i* PKIKP	**PKPdf**	**19 12 16.8**	**-4.0**
SEM	**Semipalatinsk**	**141.76**	**36**	*e*PKP	**PKPdf**	**19 12 16.7**	**-4.7**
	baz=36						
SEM	**Semipalatinsk**	**141.76**	**36**	*e*PKIKP	**PKPdf**	**19 12 16.7**	**-4.7**
ZALV	**Zalesovo Beam**	**141.94**	**29**	PKhKP	PKPpre	19 12 16.1	
	comp=Z,1.6nm,0.5s,baz=298,slow=3.2,SNR=7.7						
ZALV				PKP	**PKPdf**	**19 12 22.2**	**+0.9**
	comp=Z,39nm,0.8s,baz=282,slow=2.2,SNR=34						
TKM2	**Tokmak 2**	**141.98**	**50**	PKIKP	**PKPdf**	**19 12 17.2**	**-4.9**
KUU	**Kurty**	**142.18**	**48**	*e*PKP	**PKPdf**	**19 12 21.9**	**-0.2**
	baz=48						
KUU	**Kurty**	**142.18**	**48**	*e*PKIKP	**PKPdf**	**19 12 21.9**	**-0.2**
AAA	**Alma-Ata**	**142.81**	**49**	*e*PKP	**PKPdf**	**19 12 23.1**	**-0.3**
	baz=49						
AAA	**Alma-Ata**	**142.81**	**49**	*e*PKIKP	**PKPdf**	**19 12 23.0**	**-0.3**
TNSS	**Tian-Shan**	**142.88**	**49**	*e*PKP	**PKPdf**	**19 12 22.1**	**-1.8**
	baz=49						
MDOK	**Medeo**	**142.91**	**49**	*e*PKP	**PKPdf**	**19 12 21.1**	**-2.6**
	baz=49						
MDOK				*e*PP	**PP**	**19 15 35.6**	**+2.5**
	baz=49						
MDOK	**Medeo**	**142.91**	**49**	*e*PKIKP	**PKPdf**	**19 12 21.0**	**-2.6**
MDOK				*e*		19 15 35.6	
ARXS	**Arharly**	**143.07**	**47**	*e*PKIKP	**PKPdf**	**19 12 24.4**	**+0.6**
AJM	**Ajmer**	**143.15**	**77**	*e*x	PKPab	19 12 20.6	+0.7
TDK	**Taldyqorghan**	**143.15**	**45**	*e*PKP	PKPbc	19 12 20.5	-0.2
	baz=45						
TDK				*e*PP	**PP**	**19 15 34.4**	**+0.1**
	baz=45						
TDK	**Taldyqorghan**	**143.15**	**45**	*e*PKIKP	PKPbc	19 12 20.5	-0.3

TDK				*e*		19 15 34.3	
KSH	**Kashi**	**143.19**	**55**	PKP	PKPab	19 12 19.8	0.0
KSH				PP	**PP**	**19 15 31.5**	**-3.4**
KSH				SKKS		19 22 19.0	
KSH				AMB	AMB		
	comp=Z,1µm,5.5s						
KSH				LR	LR		
	comp=Z,1µm,19.9s						
KSH				LR	LR		
	comp=Z,2µm,19.9s						
KSH				LR	LR		
	comp=Z,3µm,20.6s						
SATY	**Saty**	**143.88**	**48**	*e*PKP	PKPbc	19 12 22.8	-0.3
	baz=48						
SATY	**Saty**	**143.88**	**48**	*e*PKIKP	PKPbc	19 12 22.8	-0.3
PRZ	**Przheval'sk**	**144.08**	**49**	PKIKP	**PKPdf**	**19 12 25.4**	**-0.4**
PRZ	**Przheval'sk**	**144.08**	**49**	PKPdf	**PKPdf**	**19 12 25.4**	**-0.4**
JAY	**Jayapura**	**144.22**	**227**	PKP	PKPbc	19 12 25.7	+0.9
JAY				PKP	**PKiKP**	**19 12 28.5**	**-1.7**
UZB	**Uzynbulak**	**144.27**	**48**	*e*PKP	PKPbc	19 12 24.7	+0.4
	baz=48						
UZB	**Uzynbulak**	**144.27**	**48**	*e*PKIKP	PKPbc	19 12 24.6	+0.3
AKL	**Akola**	**144.50**	**87**	*e*P	**PKPdf**	**19 12 26.4**	**-0.5**
PDGK	**Podgornoye**	**144.52**	**47**	PKIKP	**PKPdf**	**19 12 25.8**	**-0.6**
MAKZ	**Makanchi**	**144.59**	**41**	PKIKP	**PKPdf**	**19 12 25.7**	**-0.6**
MAKZ				MLR	MLR		
	comp=Z,2µm,20.0s						
MAKZ	**Makanchi**	**144.59**	**41**	PKPdf	**PKPdf**	**19 12 25.7**	**-0.6**
DHRM	**DHARAMSHALA**	**144.60**	**67**	*e*P	**PKPab**	**19 12 25.4**	**-0.2**
NKL	**Nikolayevsk**	**144.66**	**333**	*i* PKIKP	PKPbc	19 12 24.9	0.0
NKL				MLR	MLR		
	comp=E,86nm,24.0s						
BHK	**Bhakra**	**144.75**	**68**	*e*P	**PKPdf**	**19 12 26.6**	**-0.5**
MK31	**Makanchi Array**	**144.78**	**40**	*i* PKIKP	PKPbc	19 12 25.8	+0.2
MKAR	**Makanchi Array**	**144.78**	**40**	PKP	PKPbc	19 12 25.8	+0.2
	comp=E,40nm,0.8s,baz=310,slow=3.6,SNR=139						
MKAR	**Makanchi Array**	**144.78**	**40**	PKIKP	PKPbc	19 12 25.9	+0.3
MKAR	**Makanchi Array**	**144.78**	**40**	PKPdf	PKPbc	19 12 25.9	+0.3
KUDL	**Kundal**	**144.87**	**74**	*e*P	**PKPab**	**19 12 26.2**	**-0.1**
SAUI	**Saumlaki**	**145.03**	**208**	PKP	**PKPdf**	**19 12 28.9**	**+0.9**
HYB	**Hyderabad**	**145.13**	**93**	*i* PKP	**PKPbc**	**19 12 27.0**	**-0.6**
HYB				*e*sPKP		19 12 31.5	
HYB	**Hyderabad**	**145.13**	**93**	*e*P	**PKPdf**	**19 12 28.1**	**0.0**
BHPL	**Bhopal**	**145.31**	**83**	*e*P	**PKPbc**	**19 12 27.7**	**-0.3**
TYV	**Tymovskoe**	**145.40**	**329**	*e*PKIKP	**PKPab**	**19 12 28.8**	**+1.2**
TYV				pmax	pmax		
	comp=Z,2µm,2.8s						
TYV				pmax	pmax		
	comp=Z,193nm,1.1s						
SMLA	**Simla**	**145.41**	**69**	*e*P	**PKPab**	**19 12 28.4**	**+0.1**
AYAN	**Aya Nagar**	**145.44**	**73**	*e*P	**PKPdf**	**19 12 28.2**	**0.0**
NDI	**New Delhi**	**145.52**	**73**	*e*P	**PKPbc**	**19 12 28.6**	**+0.1**
NDI	**New Delhi**	**145.52**	**73**	*e*P	**PKPab**	**19 12 30.0**	**+1.2**
BATI	**Baumata**	**145.54**	**195**	PKP	**PKPab**	**19 12 30.0**	**+0.8**
BOD	**Bodaibo**	**145.68**	**1**	*e*PKP2	**PKPdf**	**19 12 27.3**	**-0.4**
BOD				pmax	pmax		
	comp=Z,520nm,1.8s						
KUR	**Kuril'sk**	**145.79**	**317***c*	*i*PKP2	**PKPab**	**19 12 29.1**	**-0.1**
SOEI	**Soe**	**145.82**	**196**	PKP	**PKPab**	**19 12 31.1**	**+0.8**
ZSN	**Zaisan**	**145.93**	**38**	*e*PKP	**PKPdf**	**19 12 28.5**	**-0.1**
	baz=38						
ZSN	**Zaisan**	**145.93**	**38**	*e*PKP2	**PKPdf**	**19 12 28.4**	**-0.1**
SMPI	**Sarmi**	**145.93**	**225**	PKP	**PKPab**	**19 12 31.0**	**+0.3**
SMPI				PKP	**PKPbc**	**19 12 31.4**	**+1.2**
DGZ	**Jazzator, Alta**	**145.93**	**33***c*	*e*PKP2	**PKPbc**	**19 12 29.1**	**-0.3**
DGZ				MLR	MLR		
	comp=Z,1µm,19.0s						
JHNI	**Jhansi**	**146.56**	**79**	*e*P	**PKPbc**	**19 12 32.1**	**+0.3**
WBSI	**Waikabubak, Su**	**146.84**	**187**	PKP	**PKPbc**	**19 12 32.6**	**-0.3**
WBSI				PKP	**PKPab**	**19 12 34.5**	**+0.4**
UGL	**Uglegorsk**	**146.87**	**327**	*e*PKIKP	**PKPdf**	**19 12 27.6**	**-2.4**
UGL				pmax	pmax		
	comp=Z,3µm,10.0s						
EDFI	**Ende, Flores**	**147.37**	**192**	PKP	**PKPdf**	**19 12 32.2**	**+0.1**
MMRI	**Maumere**	**147.37**	**193**	PKP	**PKPbc**	**19 12 34.2**	**-0.1**
MMRI				PKP	**PKPab**	**19 12 35.2**	**-0.9**
SRPI	**Serui, Papua**	**147.58**	**222**	PKP	**PKPbc**	**19 12 35.2**	**+0.2**
SRPI				PKP	**PKPab**	**19 12 36.0**	**-1.1**
YUK	**Yuzh-Kuril'sk**	**147.62**	**317**	*e*PKIKP	**PKPdf**	**19 12 31.2**	**-0.2**
YUK				*e*		19 16 04.0	
YUK				*e*PPP	PPP	19 19 17.3	
YUK				*e*		19 28 39.6	
YUK				*e*SS	SS	19 35 05.8	+2.4
YUK				*e*SSS	SSS	19 40 41.6	
PLAI	**Plampang**	**147.80**	**185**	PKP	**PKPdf**	**19 12 33.2**	**+0.5**
PLAI				PKP	**PKPbc**	**19 12 35.4**	**-0.1**
YSS	**Yuzh-Sakhalins**	**147.85**	**324**	*i* PKIKP	**PKPdf**	**19 12 31.6**	**-0.1**
YSS				*e*		19 16 03.3	
YSS				*e*SS	SS	19 35 10.0	+4.5
YSS				pmax	pmax		
	comp=Z,2µm,3.4s						
YSS				pmax	pmax		
	comp=Z,140nm,0.8s						
YSS	**Yuzh-Sakhalins**	**147.85**	**324**	IAMs_20	IAMs_20	20 26 10.1	
	comp=Z,939nm,20.0s						
IGBI	**Denpasar**	**147.91**	**180**	PKP	**PKPbc**	**19 12 34.6**	**-1.2**
IGBI				PKP	**PKiKP**	**19 12 36.7**	**-1.0**
TWSI	**Taliwang, Sumb**	**147.95**	**183**	PKP	**PKPdf**	**19 12 32.8**	**-0.1**
TWSI				PKP	**PKPbc**	**19 12 33.4**	**-2.5**
DNP	**Denpasar**	**148.04**	**180**	PKP	**PKPbc**	**19 12 35.0**	**-1.2**
DNP				PKP	**PKPab**	**19 12 38.6**	**-0.2**
GRNR	**Gornyy**	**148.19**	**334**	⇓*i*PKP2	**PKPbc**	**19 12 34.1**	**-1.4**
GRNR				pmax	pmax		
	comp=Z,30nm,1.1s						
GRNR				MLR	MLR		
	comp=E,150nm,14.0s						
CMJI	**Cimerak**	**148.22**	**167**	PKP	**PKPbc**	**19 12 36.6**	**0.0**
CMJI				PKP	**sPKPab**	**19 12 48.9**	**-1.0**
JAGI	**Jajag, Banyuwa**	**148.23**	**178**	PKP	**PKPbc**	**19 12 35.6**	**-1.1**
JAGI				PKP	**PKiKP**	**19 12 36.8**	**-1.6**
JAGI	**Jajag, Banyuwa**	**148.23**	**178**	IAMs_20	IAMs_20	20 15 21.2	
	comp=Z,798nm,20.0s						
PCJI	**Pacitan**	**148.27**	**172**	PKP	**PKPbc**	**19 12 35.6**	**-1.2**
PCJI				PKP	**PKiKP**	**19 12 38.8**	**+0.3**
CNJI	**Cibinong**	**148.38**	**164**	PKP	**PKPbc**	**19 12 37.0**	**-0.1**
CNJI				PKP	**sPKPdf**	**19 12 44.0**	**0.0**
ZEA	**Zeya**	**148.46**	**346**	*e*PKIKP	**PKPdf**	**19 12 33.8**	**+1.3**
ZEA				*e*		19 16 02.6	
ZEA				pmax	pmax		
	comp=E,10.0nm,1.1s						
ZEA				pmax	pmax		
	comp=N,20nm,1.7s						
ZEA				pmax	pmax		
	comp=Z,90nm,1.7s						
ZEA				pmax	pmax		
	comp=Z,1µm,10.3s						
ZEA				MLR	MLR		
	comp=E,200nm,24.0s						
ZEA				MLR	MLR		
	comp=N,400nm,22.0s						
ZEA				MLR	MLR		
	comp=Z,600nm,24.0s						
SRBI	**Singaraja**	**148.63**	**180**	PKP	**PKPdf**	**19 12 34.4**	**+0.4**
SRBI				PKP	**PKPbc**	**19 12 37.8**	**+0.1**
FAKI	**Fak Fak**	**148.99**	**214**	PKP	**PKPdf**	**19 12 36.2**	**+1.5**
FAKI				PKP	**PKiKP**	**19 12 40.2**	**+0.2**
FAKI	**Fak Fak**	**148.99**	**214**	IAMs_20	IAMs_20	20 11 39.7	
	comp=Z,1µm,22.0s						
DBJI	**Dramaga**	**149.01**	**163**	PKP	**PKPdf**	**19 12 35.8**	**+1.1**
DBJI				PKP	**PKiKP**	**19 12 39.9**	**-0.2**
JMP	**Maruseppu**	**149.19**	**318**	P	**PKPbc**	**19 12 38.5**	**+0.2**
SMRI	**Semarang**	**149.29**	**171**	PKP	**PKPab**	**19 12 46.9**	**+3.1**
JWK2	**Keihoku**	**149.31**	**322**	P	**PKPbc**	**19 12 38.7**	**+0.2**
KASI	**Kota Agung**	**149.31**	**159**	PKP	**PKPdf**	**19 12 36.8**	**+1.6**
KASI				PKP	**PKPbc**	**19 12 37.4**	**-2.1**
BRCI	**Bahraich**	**149.37**	**75**	*e*x	**PKPbc**	**19 12 40.7**	**+1.5**
BLSP	**Bilaspur**	**149.45**	**86**	*e*P	**PKPdf**	**19 12 36.2**	**+1.1**
WMQ	**Urumqi**	**149.58**	**41**	PKPbc	**PKPdf**	**19 12 36.0**	**+1.2**
WMQ				PP	**PP**	**19 16 12.0**	**-0.2**
WMQ				SKKS		19 23 03.3	
WMQ				AMB	AMB		
	comp=Z,600nm,4.5s						
WMQ				LR	LR		
	comp=Z,1µm,16.3s						
WMQ				LR	LR		
	comp=Z,2µm,18.5s						
WMQ				LR	LR		
	comp=Z,1µm,18.7s						
ASAJ	**Asahikawa**	**149.59**	**319**	PKPbc	**PKPbc**	**19 12 37.5**	**-1.7**
	comp=Z,74nm,1.1s,baz=209,slow=4.5,SNR=18						
ASAJ	**Asahikawa**	**149.59**	**319**	P	**PKPdf**	**19 12 36.2**	**+1.5**
KMMI	**Kalianget**	**149.63**	**177**	PKP	**PKPdf**	**19 12 37.4**	**+1.7**
KMMI				PKP	**PKPbc**	**19 12 40.4**	**+0.2**
LWLI	**Liwa**	**149.63**	**157**	PKP	**PKiKP**	**19 12 42.9**	**+1.4**
BLSI	**Bandar Lampung**	**149.70**	**160**	PKP	**PKPbc**	**19 12 38.5**	**-2.0**
BLSI				PKP	**PKiKP**	**19 12 41.8**	**+0.3**
MOY	**Mondy**	**149.78**	**18**	*e*PKHKP	PKPpre	19 12 36.9	
MOY				*e*		19 16 12.5	
MOY				pmax	pmax		
	comp=Z,569nm,2.2s						
KLI	**Kotabumi**	**150.05**	**159**	PKP	**PKPbc**	**19 12 40.9**	**-0.4**
KLI				PKP	**pPKPbc**	**19 12 49.4**	**+0.4**
IRK	**Irkutsk**	**150.06**	**14**	*e*PKIKP	**PKPdf**	**19 12 36.0**	**+0.8**
IRK				pmax	pmax		
	comp=N,417nm,2.3s						
BSSI	**Bau Bau, Buton**	**150.13**	**190**	PKP	**PKPdf**	**19 12 36.8**	**+0.3**
MDSI	**Maura Dua**	**150.17**	**157**	PKP	**PKPdf**	**19 12 37.7**	**+1.2**
KLSI		**150.17**	**158**	PKP	**PKPdf**	**19 12 37.7**	**+1.2**
AAI	**Ambon**	**150.21**	**207**	PKP	**PKPdf**	**19 12 37.2**	**+0.6**
GUMO	**Guam**	**150.33**	**256**	PKPbc	**PKPbc**	**19 12 41.3**	**-0.6**
	comp=N,167nm,1.0s,baz=232,slow=4.0,SNR=4.5						
JEM	**Erimo**	**150.34**	**315**	P	**PKiKP**	**19 12 42.8**	**+0.9**
JEM	**Erimo**	**150.34**	**315**		**PKiKP**	**19 12 43.2**	**+1.3**
TLY	**Talaya**	**150.45**	**15**	PKPbc	**PKPbc**	**19 12 41.0**	**-0.2**
	comp=N,32nm,0.9s,baz=103,slow=7.7,SNR=7.4						
TLY	**Talaya**	**150.45**	**15**	*e*PKIKP	**PKPbc**	**19 12 40.6**	**-0.5**
TLY				*e*SS	SS	19 35 41.7	+8.1
TLY				pmax	pmax		
	comp=Z,260nm,1.6s						
LHSI	**Lahat**	**150.54**	**156**	PKP	**PKiKP**	**19 12 43.1**	**-0.1**
PYUN	**Piuthan**	**150.61**	**74**	*e*P	**PKPdf**	**19 12 37.4**	**+0.3**
	comp=Z,152nm,1.0s						
MASI	**Maura Aman, Be**	**150.65**	**153**	PKP	**PKiKP**	**19 12 45.4**	**+1.9**
SISI	**Saibi**	**150.74**	**145**	PKP	**PKPbc**	**19 12 40.5**	**-2.4**
SISI				PKP	**pPKPdf**	**19 12 46.2**	**+1.0**
JEW	**Eniwo**	**150.99**	**318**	P	**PKPbc**	**19 12 42.5**	**-0.1**
BKSI	**Bulukumba**	**150.99**	**190**	PKP	**PKPdf**	**19 12 38.9**	**+1.1**
KOLN	**Koldanda**	**151.16**	**75**	*e*P	**PKPdf**	**19 12 38.0**	**+0.1**
KLR	**Kul'dur**	**151.21**	**337**	PKP	**PKPdf**	**19 12 37.2**	**+0.1**
	comp=Z,17nm,0.9s,baz=47,slow=2.7,SNR=11						
KLR				PKPbc	**PKiKP**	**19 12 43.2**	**-0.2**
	comp=Z,50nm,0.9s,baz=28,slow=2.7,SNR=44						
KRJI	**Kerinci**	**151.24**	**150**	PKP	**PKPdf**	**19 12 40.1**	**+1.8**
KRJI				PKP	**PKiKP**	**19 12 44.8**	**0.0**
SWI	**Sorong**	**151.25**	**215**	PKP	**PKPdf**	**19 12 40.9**	**+2.7**
SWI				PKP	**PKPbc**	**19 12 44.3**	**+0.2**
DANN	**Dangsing**	**151.28**	**74**	*e*P	**PKPdf**	**19 12 38.9**	**+0.7**
	comp=Z,331nm,0.9s						
KAPI	**Kappang**	**151.35**	**189**	IAMs_20	IAMs_20	20 15 19.3	
	comp=Z,1µm,20.0s						
CIT	**Chita**	**151.47**	**2**	*e*PKIKP	**PKPdf**	**19 12 39.6**	**+2.2**
CIT				*e*		19 12 46.4	
CIT				pmax	pmax		
	comp=Z,389nm,2.0s						
ZAK	**Zakamensk**	**151.56**	**16**	*e*PKIKP	**PKPdf**	**19 12 38.7**	**+1.0**
ZAK				pmax	pmax		
	comp=Z,72nm,1.2s						
ZAK				pmax	pmax		
	comp=Z,18nm,1.1s						
PDSI	**Padang**	**151.80**	**147**	PKP	**PKiKP**	**19 12 47.4**	**+1.6**
BNSI	**Bone**	**151.90**	**190**	PKP	**PKPbc**	**19 12 42.5**	**-3.1**
BNSI				PKP	**PKiKP**	**19 12 46.0**	**0.0**
JSH	**Shimam**	**151.95**	**319**	P	**PKPbc**	**19 12 44.8**	**-0.1**
JOT	**Ohata**	**152.02**	**316**	P	**PKiKP**	**19 12 45.7**	**+0.3**
GSI	**Gunungsitoli**	**152.06**	**140**	PKP	**PKPdf**	**19 12 42.1**	**+2.7**
GSI				PKP	**pPKPdf**	**19 12 48.0**	**+0.8**
GKN	**Gorkha**	**152.07**	**74**	*e*P	**PKPdf**	**19 12 39.3**	**+0.1**
PPI	**Padang Panjang**	**152.16**	**147**	PKP	**PKPab**	**19 12 51.8**	**-3.9**
JTM	**Tenmabayashi**	**152.32**	**315**	P	**PKiKP**	**19 12 46.0**	**0.0**
DMN	**Daman**	**152.50**	**75**	*e*P	**PKPdf**	**19 12 40.2**	**+0.2**
	comp=Z,442nm,1.6s						
SANI	**Sanana**	**152.57**	**204**	PKP	**PKPdf**	**19 12 40.9**	**+0.7**
KKN	**Kakani**	**152.65**	**75**	*e*P	**PKPdf**	**19 12 40.3**	**+0.1**
	comp=Z,19nm,0.7s						
PKIN	**Phulchoki**	**152.76**	**75**	*e*P	**PKPdf**	**19 12 40.3**	**-0.1**
PKI	**Pulchoki**	**152.77**	**75**	*e*P	**PKPdf**	**19 12 40.3**	**-0.2**
MNSI	**Mandailing Nat**	**152.79**	**144**	PKP	**PKiKP**	**19 12 48.9**	**+1.1**
JOM	**Ohasama**	**152.81**	**312**	P	**PKPbc**	**19 12 46.8**	**-0.1**
BOK	**Bokaro**	**153.09**	**83**	*e*P	**PKPdf**	**19 12 40.8**	**+0.2**
GUN	**Gumba**	**153.17**	**74**	*e*P	**PKPdf**	**19 12 41.2**	**+0.1**
BBKI	**Banjar Baru**	**153.22**	**179**	PKP	**PKiKP**	**19 12 49.2**	**+0.5**
TTSI	**Tana Toraja**	**153.27**	**190**	PKP	**PKPdf**	**19 12 43.3**	**+2.1**
TTSI				PKP	**sPKPdf**	**19 12 50.5**	**-1.0**
KBKI	**Kotabaru**	**153.37**	**182**	PKP	**PKiKP**	**19 12 49.5**	**+0.5**
JIRN	**Jiri**	**153.46**	**75**	*e*P	**PKPdf**	**19 12 41.4**	**-0.1**
RAMN	**Ramite**	**153.84**	**76**	*e*P	**PKPdf**	**19 12 41.9**	**-0.1**
	comp=Z,8.9nm,0.5s						
JMM	**Marumori**	**153.89**	**309**	P	**PKiKP**	**19 12 49.5**	**+0.1**
HIA	**Hailar**	**154.02**	**353***c*	*i*PKIKP	**PKPdf**	**19 12 41.3**	**+0.1**
JYA	**Atsumi**	**154.31**	**312**	P	**PKiKP**	**19 12 51.3**	**+1.1**
ODAN	**Odare**	**154.55**	**77**	*e*P	**PKPdf**	**19 12 42.5**	**-0.4**
SONM	**Songino Array**	**154.68**	**14**	PKP	**PKPdf**	**19 12 43.3**	**+0.9**
	comp=Z,14nm,0.9s,baz=290,slow=0.9,SNR=53						
SONM				PKPbc	**pPKPdf**	**19 12 49.6**	**-0.5**
	comp=Z,18nm,0.8s,baz=319,slow=0.4,SNR=19						
SONM	**Songino Array**	**154.68**	**14**	PKPdf	**PKPdf**	**19 12 43.6**	**+1.2**
ULN	**Ulaanbaatar**	**154.79**	**13***c*	*i*PKIKP	**PKPdf**	**19 12 43.7**	**+1.2**
ULN				pmax	pmax		
	comp=Z,66nm,1.7s						
ULN	**Ulaanbaatar**	**154.79**	**13**	PKPdf	**PKPdf**	**19 12 43.7**	**+1.2**
ULN	**Ulaanbaatar**	**154.79**	**13**	IAMs_20	IAMs_20	20 25 55.8	
	comp=Z,947nm,22.0s						
TAPN	**Taplejung**	**154.82**	**75**	*e*P	**PKPdf**	**19 12 41.8**	**-1.6**
APSI	**Ampana**	**154.98**	**195**	PKP	**PKPbc**	**19 12 48.1**	**-4.3**
USRK	**Ussuriysk Ar.**	**155.19**	**330**	PKP	**PKPdf**	**19 12 43.6**	**+0.6**
	comp=Z,3.5nm,0.8s,baz=220,slow=1.5,SNR=14						
USRK				PKPbc	**pPKPdf**	**19 12 51.4**	**+0.7**
	comp=Z,7.0nm,0.7s,baz=137,slow=0.4,SNR=10						
USRK				PP	**PP**	**19 16 43.1**	**-0.5**
	comp=Z,1.7nm,0.8s,baz=42,slow=5.9,SNR=4.3						
USRK	**Ussuriysk Ar.**	**155.19**	**330**	PKPdf	**PKPdf**	**19 12 42.9**	**0.0**
MDJ	**Mudanjiang**	**155.88**	**334**	PKP	**PKPdf**	**19 12 46.0**	**+2.1**
MDJ	**Mudanjiang**	**155.88**	**334**	IAMs_20	IAMs_20	20 39 28.6	
	comp=Z,910nm,20.0s						
JRY	**Ryogami san**	**156.06**	**307**	P	**PKPdf**	**19 12 44.9**	**+0.5**
MJAR	**Matsushiro Arr**	**156.33**	**309**	PKP	**PKPdf**	**19 12 45.6**	**+0.8**
	comp=Z,1.5nm,0.9s,baz=84,slow=2.2,SNR=4.5						
MJAR				PKPbc	**sPKPdf**	**19 12 55.8**	**+0.7**
	comp=Z,3.7nm,0.6s,baz=99,slow=2.6,SNR=12						
MJAR				PKPab	**PKPab**	**19 13 12.9**	**-0.1**
	comp=Z,17nm,1.1s,baz=73,slow=2.7,SNR=9.2						
MAJO	**Matsushiro**	**156.33**	**309**	IAMs_20	IAMs_20	20 13 19.2	
	comp=Z,935nm,20.0s						
MAT	**Matsushiro**	**156.33**	**309**	*e*PKP	**PKPdf**	**19 12 43.0**	**-1.8**
MAT	**Matsushiro**	**156.33**	**309**	P	**PKPdf**	**19 12 43.4**	**-1.4**
STKI	**Sintang**	**156.44**	**170**	PKP	**PKPdf**	**19 12 48.9**	**+3.3**
DGPR	**DIGLIPUR**	**156.47**	**112**	*e*x	**PKPab**	**19 13 14.7**	**+0.6**
MPSI	**Mapaga**	**156.57**	**192**	PKP	**PKPdf**	**19 12 47.6**	**+1.9**
JGN	**Niukaw**	**157.12**	**309**	P	**PKPdf**	**19 12 46.7**	**+0.9**
KSM	**Kuching**	**157.60**	**167**	IAMs_20	IAMs_20	20 23 01.6	
	comp=Z,749nm,20.0s						
INU	**Inuyama**	**157.73**	**307**	IAMs_20	IAMs_20	20 25 06.1	
	comp=Z,710nm,20.0s						
CN2	**Changchun**	**158.06**	**340**	*e*PKP	**PKPdf**	**19 12 46.8**	**+0.1**
CN2				PP	**PP**	**19 16 57.8**	**-1.3**
CN2				AMB	AMB		
	comp=Z,500nm,7.0s						
CN2				LR	LR		
	comp=Z,700nm,19.0s						
CN2				LR	LR		
	comp=Z,700nm,19.0s						
CN2				LR	LR		
	comp=Z,900nm,20.0s						
JIE	**Ise**	**158.37**	**305**	P	**PKPdf**	**19 12 48.9**	**+1.6**
SHL	**Shillong**	**158.61**	**80**	*e*P	**PKPdf**	**19 12 48.2**	**0.0**
SHL				*i* x	**PKPab**	**19 13 23.4**	**0.0**
SBUM	**Sibu**	**158.89**	**171**	IAMs_20	IAMs_20	20 29 15.7	
	comp=Z,827nm,20.0s						
GTA	**Gaotai**	**159.40**	**36**	⇑PKP	**PKPdf**	**19 12 49.3**	**+0.7**
GTA				pPKP	pPKPdf	19 12 54.5	-1.9
GTA				PKPab	**PKPab**	**19 13 27.5**	**+1.3**
GTA				PP	**PP**	**19 17 11.5**	**+4.4**
GTA				SKKS		19 23 50.0	
GTA				AMB	AMB		
	comp=Z,470nm,6.9s						
GTA				LR	LR		
	comp=Z,680nm,18.5s						
GTA				LR	LR		
	comp=Z,600nm,18.2s						
GTA				LR	LR		
	comp=Z,710nm,18.9s						
JAD	**Aida**	**159.98**	**309**	P	**PKPdf**	**19 12 49.6**	**+0.4**
SNY	**Shenyang**	**160.43**	**341**	⇑PKP	**PKPdf**	**19 12 50.0**	**+0.5**
SNY				PP	**PP**	**19 17 12.0**	**+0.1**
SNY				AMB	AMB		
	comp=Z,560nm,8.3s						
SNY				LR	LR		
	comp=Z,520nm,18.4s						
SNY				LR	LR		
	comp=Z,940nm,20.0s						
SNY				LR	LR		
	comp=Z,1µm,17.1s						
KSRS	**Korea Array**	**162.34**	**325**	PKP	**PKPdf**	**19 12 52.4**	**+0.8**
	comp=Z,3.0nm,0.9s,baz=145,slow=1.8,SNR=10.0						
KSRS				PKPab	**PKPab**	**19 13 40.0**	**+1.1**
	comp=Z,22nm,1.0s,baz=47,slow=3.8,SNR=20						
KSRS				PP	**PP**	**19 17 23.6**	**+1.0**
	comp=Z,0.8nm,0.8s,baz=46,slow=3.5,SNR=1.7						
BTO	**Baotou**	**162.35**	**13**	*e*PKP	**PKPdf**	**19 12 53.0**	**+1.3**
BTO				PP	**PP**	**19 17 18.8**	**-3.5**
BTO				LR	LR		
	comp=Z,3µm,19.0s						
BTO				LR	LR		
	comp=Z,2µm,19.8s						
KSAR	**Wonju Array Be**	**162.37**	**325**	PKIKP	**PKPdf**	**19 12 52.2**	**+0.6**
KSAR	**Wonju Array Be**	**162.37**	**325**	PKPdf	**PKPdf**	**19 12 52.2**	**+0.6**
HHC	**Hu-ho-hao-te**	**162.40**	**9**	*e*PKP	**PKPdf**	**19 12 53.0**	**+1.2**
HHC				SS	SS	19 37 39.3	-2.7
HHC				AMB	AMB		
	comp=Z,390nm,11.9s						
HHC				LR	LR		
	comp=Z,1µm,17.0s						
HHC				LR	LR		
	comp=Z,750nm,17.0s						
HHC				LR	LR		
	comp=Z,2µm,18.7s						
BJI	**Beijing**	**163.47**	**358**	PKP	**PKPdf**	**19 12 53.0**	**+0.4**
BJI				PP	**PP**	**19 17 26.5**	**-1.4**
BJI				AMB	AMB		
	comp=Z,610nm,9.3s						
BJI				LR	LR		
	comp=Z,410nm,18.3s						
BJI				LR	LR		
	comp=Z,980nm,16.9s						
BJI				LR	LR		
	comp=Z,1µm,19.5s						
DL2	**Dalian**	**163.70**	**342**	PKP	**PKPdf**	**19 12 54.5**	**+1.6**
DL2				PKPab	**PKPab**	**19 13 42.3**	**-2.4**
DL2				PP	**PP**	**19 17 33.0**	**+3.7**
DL2				AMB	AMB		
	comp=Z,500nm,6.6s						
DL2				LR	LR		
	comp=Z,780nm,19.1s						
DL2				LR	LR		
	comp=Z,310nm,17.3s						
DL2				LR	LR		
	comp=Z,1µm,18.8s						
CMAR	**Chiang Mai Arr**	**163.95**	**105**	PKP	**PKPdf**	**19 12 54.0**	**+0.3**
	comp=Z,3.1nm,0.9s,baz=267,slow=2.6,SNR=21						
CMAR				PKPab	**PKPab**	**19 13 46.2**	**-0.4**
	comp=Z,8.7nm,0.7s,baz=246,slow=6.1,SNR=26						
CMAR				PP	**PP**	**19 17 36.4**	**+3.8**
	comp=Z,4.1nm,1.1s,baz=277,slow=6.2,SNR=4.3						
CMAR	**Chiang Mai Arr**	**163.95**	**105**	PKPdf	**PKPdf**	**19 12 54.2**	**+0.4**
LZH	**Lanzhou**	**164.00**	**36**	⇓PKP	**PKPdf**	**19 12 55.5**	**+2.0**
LZH				PP	**PP**	**19 17 30.5**	**-1.2**
LZH				SKKS		19 24 19.0	
LZH				SS	**SS**	**19 37 58.3**	**-1.7**
LZH				AMB	AMB		
	comp=Z,530nm,5.8s						
LZH				LR	LR		
	comp=Z,1µm,17.9s						
LZH				LR	LR		
	comp=Z,1µm,18.4s						
LZH				LR	LR		
	comp=Z,590nm,17.9s						
TIY	**Taiyuan**	**165.60**	**9**	⇑PKP	**PKPdf**	**19 12 55.3**	**+0.6**
TIY				PKPab	**PKPab**	**19 13 52.3**	**-0.9**
TIY				PP	**PP**	**19 17 36.5**	**-2.7**
TIY				AMB	AMB		
	comp=Z,410nm,7.5s						
TIY				LR	LR		
	comp=Z,590nm,15.1s						
TIY				LR	LR		
	comp=Z,730nm,18.0s						
TIY				LR	LR		
	comp=Z,1µm,20.4s						
TIA	**Tai'an**	**167.21**	**353**	PKP	**PKPdf**	**19 12 57.0**	**+1.1**
TIA				PP	**PP**	**19 17 46.0**	**-1.4**
TIA				AMB	AMB		
	comp=Z,550nm,6.8s						
TIA				LR	LR		
	comp=Z,690nm,16.9s						
TIA				LR	LR		
	comp=Z,520nm,16.7s						
TIA				LR	LR		
	comp=Z,910nm,17.5s						
CD2	**Chengdu**	**167.36**	**52**	PKP	**PKPdf**	**19 12 54.5**	**-1.8**
CD2				PP	**PP**	**19 17 52.3**	**+2.7**
CD2				SKKS		19 24 33.3	
CD2				SS	**SS**	**19 38 34.8**	**-0.3**
CD2				AMB	AMB		
	comp=Z,1µm,7.9s						
CD2				LR	LR		
	comp=Z,1µm,20.1s						
CD2				LR	LR		
	comp=Z,900nm,23.0s						
CD2				LR	LR		
	comp=Z,2µm,21.6s						
XAN	**Xi'an**	**168.09**	**26**	PKP	**PKPdf**	**19 12 57.5**	**+0.8**
KMI	**Kunming**	**168.44**	**79**	⇑PKP	**PKPdf**	**19 12 56.8**	**-0.6**
KMI				pPKP	pPKPdf	19 12 59.0	-6.2
SSE	**Sheshan**	**170.77**	**327**	PKP	**PKPdf**	**19 13 00.0**	**+1.7**
SSE				PP	**PP**	**19 18 07.3**	**+1.2**
SSE				SS	SS	19 39 10.5	+2.8
SSE				AMB	AMB		
	comp=Z,410nm,7.4s						
SSE				LR	LR		
	comp=Z,410nm,23.8s						
SSE				LR	LR		
	comp=Z,130nm,21.3s						
NJ2	**Nanjing**	**170.89**	**340**	⇑PKP	**PKPdf**	**19 12 59.5**	**+1.2**
NJ2				PKPab	**PKPab**	**19 14 16.3**	**-0.4**
NJ2				PP	**PP**	**19 18 05.0**	**-1.2**
NJ2				SS	SS	19 39 10.8	+2.7
NJ2				AMB	AMB		
	comp=Z,830nm,6.3s						
NJ2				LR	LR		
	comp=Z,830nm,15.2s						
NJ2				LR	LR		
	comp=Z,730nm,17.1s						
NJ2				LR	LR		
	comp=Z,1µm,23.5s						
GYA	**Guiyang**	**171.63**	**67**	⇑PKP	**PKPdf**	**19 12 59.5**	**+0.4**
GYA				PKPab	**PKPab**	**19 14 21.8**	**+1.2**
GYA				PP	**PP**	**19 18 12.0**	**+0.2**
GYA				SKKS		19 24 54.5	
GYA				SS	**SS**	**19 39 18.8**	**0.0**
GYA				AMB	AMB		
	comp=Z,770nm,8.4s						
GYA				LR	LR		
	comp=Z,700nm,15.8s						
GYA				LR	LR		
	comp=Z,420nm,16.8s						
GYA				LR	LR		
	comp=Z,1µm,17.9s						
WHN	**Wuhan**	**172.91**	**7**	⇓PKP	**PKPdf**	**19 13 00.5**	**+1.2**
WHN				PKPab	**PKPab**	**19 14 28.0**	**+2.4**
WHN				PP	**PP**	**19 18 14.0**	**-2.0**
WHN				SS	SS	19 39 25.0	-2.5
WHN				AMB	AMB		
	comp=Z,1µm,4.8s						
WHN				LR	LR		
	comp=Z,4µm,19.7s						
WHN				LR	LR		
	comp=Z,780nm,14.2s						
WHN				LR	LR		
	comp=Z,3µm,21.6s						
QIZ	**Qiongzhong**	**173.27**	**130**	PKP	**PKPdf**	**19 12 57.5**	**-2.3**
QIZ				PKPab	**PKPab**	**19 14 27.5**	**-0.2**
QIZ				PP	**PP**	**19 18 18.8**	**-0.3**
QIZ				SKKS		19 25 03.0	
QIZ				SS	**SS**	**19 39 36.5**	**+3.1**
QIZ				LR	LR		
	comp=Z,620nm,19.1s						
QIZ				LR	LR		
	comp=Z,860nm,20.6s						
QIZ				LR	LR		
	comp=Z,1µm,19.6s						
QZH	**Quanzhou**	**176.64**	**296**	*i* PKP	**PKPdf**	**19 13 02.0**	**+1.4**
QZH				PKPab	**PKPab**	**19 14 44.3**	**+1.6**
QZH				PP	**PP**	**19 18 35.0**	**-0.8**

QZH				SS	SS	19 39 59.5	-7.2
QZH				LR	LR		
	comp=Z,670nm,19.8s						
QZH				LR	LR		
	comp=Z,630nm,16.8s						
QZH				LR	LR		
	comp=Z,840nm,17.5s						

IDC ***29*** *18:56:20.0±0.5, 23°.46S×64°.67W, h0^{km}, mb4.8/16, mb1 5.0/18, mb1mx4.8/32, mbtmp4.8/18, ML3.5/1 Error ellipse: s-maj=20.6km s-min=14.3km az=42.0*

NEIC ***29*** *18:56:21.6±1.8, 23°.48S±0°.06×64°.59W±0°.06, h10^{km}±1^{km}, mb5.5/53, Ms_20 5.5/232, Error ellipse: s-maj=13.5km s-min=5.5km az=139.0*

SJA ***29*** *18:56:22.6±0.7, 23°.49S×64°.75W, h15^{km}, ML5.5, MW5.3*

GCMT ***29*** *18:56:28.6±0.3, 23°.68S±0°.02×64°.38W±0°.02, h39^{km}, MW5.5/70, Moment Tensor Solution. s48,c59; s70,c88; Duration: 1^{s}3 Moment tensor: Scale 10^{17}Nm; M_{rr}2.33±.10; $M_{\theta\theta}$-0.64±.06; $M_{\phi\phi}$-1.69±.06; $M_{r\theta}$0.34±.04; $M_{\theta\phi}$-0.46±.03; $M_{\phi r}$0.55±.04; Best double couple: $M_0$2.19200×10^{17} NP1:ϕ_s199.00000°, δ37.00000°, λ86.00000°. NP2:ϕ_s23.00000°, δ53.00000°, λ93.00000°. Principal axes: T 2.4280, Plg81.0000°, Azm307.0000°; N -0.4700, Plg2.0000°, Azm202.0000°; P -1.9570, Plg8.0000°, Azm111.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 18:56:22.2±0.3**, 23°.45S**±0°.03×**64°.56W**±0°.05**, h10^{km}, n331, σ1^{s}25**/206**, mb5.4**/39**, MS5.5**/44**, 1C-1D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASTB	**Santa Barbara**	**0.50**	**168**	*e*P	**Pg**	**18 56 33.4**	**+1.3**
ALOL	**LOMAS DE OLMED**	**0.64**	**124**	*e*P	**Pb**	**18 56 38.0**	**+2.4**
HJA	**Humahuaca**	**0.81**	**287**	*e*P	Pg	18 56 35.5	-2.5
AZAP	**Zapla**	**0.90**	**211**	*e*P	**Pg**	**18 56 38.0**	**-1.5**
AZAP				*e*S	**Sb**	**18 56 54.0**	**+1.8**
AZAP				IAML		18 56 56.1	
	comp=Z,165μm,0.3s						
SLA	**San Lorenzo**	**1.53**	**214**	*e*P	**Pn**	**18 56 49.1**	**-0.6**
SLA				*e*S	**Sn**	**18 57 09.5**	**-0.3**
SLA				IAML		18 57 10.5	
	comp=Z,71μm,0.7s						
YJA	**Yavi**	**1.54**	**325**	*e*P	**Pn**	**18 56 50.8**	**+0.6**
YJA				*e*S	**Sn**	**18 57 12.9**	**+2.4**
FSA	**Cafayete**	**2.94**	**206**	*e*P	**Pn**	**18 57 09.3**	**+0.1**
FSA				*e*S	**Sn**	**18 57 48.9**	**+4.1**
LVC	**Limon Verde**	**4.09**	**281**	Pn	**Pn**	**18 57 24.6**	**-0.6**
	comp=Z,3.0nm,0.3s,baz=210,slow=20,SNR=0.9						
LVC	**Limon Verde**	**4.09**	**281**		**Pn**	**18 57 28.5**	**+3.4**
PB15	**IPOC Station P**	**4.52**	**272**	Pn	**Pn**	**18 57 33.1**	**+2.2**
PB15	**IPOC Station P**	**4.52**	**272**	*e*P	**Pn**	**18 57 33.0**	**+2.1**
PB15				*e*P	Pb	18 57 33.9	-7.9
PB09	**IPOC Station P**	**4.63**	**290**	Pn	**Pn**	**18 57 32.7**	**+0.3**
PB09	**IPOC Station P**	**4.63**	**290**	*e*P	**Pn**	**18 57 35.5**	**+3.2**
PB03	**IPOC Station P**	**4.99**	**285**	*e*P	**Pn**	**18 57 39.0**	**+1.7**
PB01	**IPOC Station P**	**5.15**	**297**	Pn	**Pn**	**18 57 40.1**	**+0.6**
PB07	**IPOC Station P**	**5.21**	**288**	Pn	**Pn**	**18 57 41.1**	**+0.7**
PB08	**IPOC Station P**	**5.39**	**307**	Pn	**Pn**	**18 57 45.1**	**+2.1**
PATCX	**Punta Patache**	**5.81**	**296**	*e*P	**Pn**	**18 57 50.0**	**+1.5**
TA01	**Diego Aracena**	**5.95**	**298**	*e*P	**Pn**	**18 57 52.0**	**+1.6**
PB11	**IPOC Station P**	**6.00**	**307**	Pn	**Pn**	**18 57 52.5**	**+1.3**
TA02	**Huaiquique**	**6.06**	**300**	Pn	**Pn**	**18 57 51.2**	**-0.7**
PB16	**IPOC Station P**	**6.88**	**317**	*e*P	**Pn**	**18 58 08.2**	**+4.5**
CPUP	**Villa Florida**	**7.17**	**115**	Pn	**Pn**	**18 58 09.3**	**+2.3**
	baz=189,slow=20,SNR=0.7						
CPUP				Lg	Lg	19 00 10.8	
	comp=Z,18nm,0.3s,baz=224,slow=19,SNR=1.2						
PB12	**IPOC Station P**	**7.22**	**311**	*e*P	**Pn**	**18 58 11.0**	**+3.0**
PB12				*e*S	**Sn**	**18 59 33.9**	**+3.7**
LPAZ	**La Paz**	**7.88**	**334**	Sn	**Sn**	**18 59 45.2**	**-1.8**
	comp=Z,4.3nm,0.3s,baz=130,slow=21,SNR=1.4						
SIV	**San Ignacio**	**8.12**	**25**	Pn	**Pn**	**18 58 21.5**	**+1.3**
	baz=88,slow=22,SNR=0.8						
SIV				Sn	**Sn**	**18 59 49.5**	**-2.6**
	baz=230,slow=23,SNR=0.8						
ITAB	**Concordia**	**11.86**	**111**	Pn	**Pn**	**18 59 11.6**	**+0.2**
VA04	**Juan Fernndez**	**16.11**	**228**		**Pn**	**19 00 10.6**	**+1.7**
VA04				IAmb	IAmb	19 00 12.3	
	comp=Z,507nm,1.2s						
LC01	**Cunco**	**16.61**	**200**	P	**Pn**	**19 00 15.2**	**0.0**
LR03	**Panguipulli**	**17.43**	**200**	P	**Pn**	**19 00 24.3**	**-1.2**
LL04	**Puerto Octay**	**18.61**	**199**	P	**P**	**19 00 37.4**	**-2.3**
LL03	**Petrohue**	**18.82**	**199**	P	**P**	**19 00 40.1**	**-1.9**
LL01	**San Ignacio de**	**19.97**	**197**	P	**P**	**19 00 52.0**	**-2.6**
MACA	**Manacapuru-AM**	**20.52**	**11**	P	**P**	**19 01 00.3**	**-0.4**
MACA				IAmb	IAmb	19 01 03.3	
	comp=Z,137nm,1.1s						
ATAH	**Atahualpa**	**20.97**	**318**	P	**P**	**19 01 06.4**	**+0.3**
	comp=Z,8.7nm,0.7s,baz=147,slow=13,SNR=1.6						
GO07	**Milladeo Hill,**	**21.01**	**199**	P	**P**	**19 01 03.2**	**-2.6**
GO07				IAmb	IAmb	19 01 09.3	
	comp=Z,140nm,0.5s						
COYC	**Coyhaique**	**22.90**	**194**	IAMs_20	IAMs_20	19 06 53.1	
	comp=Z,7μm,18.0s						
PTGA	**Pitinga**	**23.02**	**12**	P	**P**	**19 01 27.9**	**+0.3**
	comp=Z,19nm,0.7s,baz=213,slow=14,SNR=2.5						
BOAV	**Boa Vista**	**25.99**	**9**	P	**P**	**19 01 53.8**	**-1.5**
BOAV				IAmb	IAmb	19 01 54.8	
	comp=Z,95nm,1.5s						
MG01	**Puerto William**	**31.52**	**183**	P	**P**	**19 02 42.9**	**-1.3**
MG01				IAmb	IAmb	19 02 46.3	
	comp=Z,93nm,1.1s						
SDV	**Santo Domingo**	**32.68**	**349**	IAMs_20	IAMs_20	19 15 10.3	
	comp=Z,14μm,18.0s						
GRGR	**Grenville**	**35.48**	**5**	IAMs_20	IAMs_20	19 16 19.6	
	comp=Z,13μm,20.0s						
HATO	**Hato, Curacao**	**35.67**	**353**	IAMs_20	IAMs_20	19 17 23.3	
	comp=Z,10μm,18.0s						
HOPE	**Hope Point**	**37.28**	**153**	P	**P**	**19 03 34.4**	**+0.3**
HOPE				IAmb	IAmb	19 03 35.6	
	comp=Z,158nm,1.1s						
SRBA	**San Rafael, Bu**	**37.33**	**328**	P	**P**	**19 03 35.2**	**+0.1**
SVN	**Savane Anatole**	**38.20**	**5**	IAMs_20	IAMs_20	19 18 13.8	
	comp=Z,11μm,19.0s						
HDC	**Heredia**	**38.36**	**328**	IAMs_20	IAMs_20	19 17 05.4	
	comp=Z,4μm,22.0s						
JTS	**Las Juntas de**	**39.02**	**327**	IAMs_20	IAMs_20	19 17 34.0	
	comp=Z,4μm,20.0s						
SEUS	**St. Eustatius**	**40.72**	**2**	IAMs_20	IAMs_20	19 18 33.5	
	comp=Z,9μm,20.0s						
SMRT	**St. Maarten**	**41.27**	**2**	IAMs_20	IAMs_20	19 18 59.1	
	comp=Z,9μm,20.0s						
SNET	**Serv Nac Est T**	**44.10**	**324**	IAMs_20	IAMs_20	19 19 41.6	
	comp=Z,3μm,20.0s						
GTBY	**Guantanamo Bay**	**44.33**	**346**	IAMs_20	IAMs_20	19 22 00.8	
	comp=Z,4μm,18.0s						
GRTK	**Grand Turk**	**45.15**	**351**	IAMs_20	IAMs_20	19 23 41.1	
	comp=Z,5μm,18.0s						
ASCN	**Ascension**	**50.47**	**81**	IAMs_20	IAMs_20	19 22 46.5	
	comp=Z,11μm,19.0s						
DWPF	**Disney Wildern**	**53.78**	**341**	IAMs_20	IAMs_20	19 28 46.3	
	comp=Z,2μm,18.0s						
SACV	**Santiago Islan**	**55.34**	**50**	IAMs_20	IAMs_20	19 25 08.8	
	comp=Z,4μm,19.0s						
BBSR	**BB Station**	**55.51**	**360**	IAMs_20	IAMs_20	19 29 05.2	
	comp=Z,2μm,18.0s						
553A	**Crawfordville**	**56.65**	**339**	P	P	19 06 03.7	-1.8
553A				IAmb	IAmb	19 06 06.3	
	comp=Z,85nm,1.1s						
VNA3	**Neumayer Olymp**	**56.95**	**162**	P	**P**	**19 06 06.8**	**-0.6**
VNA1	**Neumayer--Stat**	**57.12**	**161**	P	**P**	**19 06 08.2**	**-0.2**
VNA2	**Neumayer--Watz**	**57.49**	**161**	P	**P**	**19 06 10.3**	**-0.9**
	baz=293,slow=7.0						
TIGA	**Tifton**	**57.54**	**341**	P	**P**	**19 06 11.3**	**-0.6**
	baz=159						
NHSC	**New Hope**	**58.18**	**345**	P	**P**	**19 06 17.1**	**+0.8**
	baz=163						
NHSC	**New Hope**	**58.18**	**345**	P	**P**	**19 06 15.2**	**-1.2**
NHSC				IAMs_20	IAMs_20	19 29 53.8	
	comp=Z,4μm,21.0s						
BRAL	**Brewton**	**58.43**	**337**	P	**P**	**19 06 17.6**	**-0.5**
	baz=156						
BRAL	**Brewton**	**58.43**	**337**	IAMs_20	IAMs_20	19 34 08.3	
	comp=Z,3μm,18.0s						
SNAA	**Sanae**	**59.13**	**161**	P	**P**	**19 06 21.6**	**-1.1**
SNAA	**Sanae**	**59.13**	**161**	P	**P**	**19 06 21.8**	**-0.9**
	comp=Z,21nm,1.1s,baz=303,slow=5.0,SNR=4.6						
GOGA	**Godfrey**	**59.35**	**342**	IAMs_20	IAMs_20	19 32 53.6	
	comp=Z,2μm,18.0s						
BIRD	**Birdtown, Kers**	**59.72**	**345**	P	P	19 06 25.4	-1.6
BIRD				IAmb	IAmb	19 06 26.9	
	comp=Z,43nm,1.3s						
W57A	**Gilead**	**60.09**	**345**	P	P	19 06 28.2	-1.4
W57A				IAmb	IAmb	19 06 29.3	
	comp=Z,36nm,1.2s						
KMSC	**Kings Mountain**	**60.41**	**344**	P	**P**	**19 06 31.0**	**-0.7**
	baz=162						
VBMS	**Vicksburg**	**60.66**	**335**	P	**P**	**19 06 32.7**	**-0.8**
	baz=153						
V55A	**Taylorsville**	**61.05**	**345**	P	**P**	**19 06 35.0**	**-1.2**
V55A				IAmb	IAmb	19 06 36.4	
	comp=Z,51nm,1.1s						
U56A	**King**	**61.33**	**345**	IAmb	IAmb	19 06 38.3	
	comp=Z,43nm,1.2s						
143A	**Socs Landing,**	**61.44**	**334**	P	**P**	**19 06 37.8**	**-1.1**
833A	**Chaparral WMA,**	**61.46**	**325**	P	**P**	**19 06 38.3**	**-0.7**
	baz=144						
Y45A	**Yeager Farm, C**	**61.76**	**336**	P	**P**	**19 06 39.7**	**-1.3**
SWET	**Sewanee**	**61.77**	**340**	P	P	19 06 38.9	-2.1
SWET				IAmb	IAmb	19 06 40.3	
	comp=Z,62nm,1.2s						
NATX	**Nacogdoches**	**62.00**	**331**	P	**P**	**19 06 42.4**	**-0.2**
	baz=149						
NATX	**Nacogdoches**	**62.00**	**331**	P	**P**	**19 06 41.6**	**-1.0**
PLAL	**Pickwick Lake**	**62.25**	**338**	IAmb	IAmb	19 06 43.1	
	comp=Z,64nm,1.3s						
Z41A	**Richland Creek**	**62.49**	**333**	P	**P**	**19 06 45.6**	**-0.3**
	baz=151						
CBN	**Corbin Frederi**	**62.50**	**349**	IAMs_20	IAMs_20	19 35 48.5	
	comp=Z,2μm,18.0s						
435B	**Jarrell**	**62.54**	**328**	P	**P**	**19 06 46.1**	**-0.1**
	baz=146						
CLTN	**Cedars of Leba**	**62.70**	**340**	IAmb	IAmb	19 06 46.4	
	comp=Z,49nm,1.2s						
WLAR	**White Oak Lake**	**62.99**	**333**	P	**P**	**19 06 48.5**	**-0.6**
WVT	**Waverly**	**63.21**	**339**	P	P	19 06 49.1	-1.5
	baz=156						
WVT	**Waverly**	**63.21**	**339**	IAMs_20	IAMs_20	19 34 15.9	
	comp=Z,1μm,20.0s						
JCT	**Junction City**	**63.40**	**326**	P	**P**	**19 06 51.5**	**-0.5**
	baz=144						
GNAR	**Gosnell**	**63.81**	**337**	P	P	19 06 53.1	-1.5
MIAR	**Mount Ida**	**63.92**	**334**	P	**P**	**19 06 54.7**	**-0.7**
	baz=150						
W41B	**Gary Mavity, V**	**63.94**	**335**	P	**P**	**19 06 54.4**	**-1.1**
	baz=152						
LCAR	**Lake Charles**	**64.32**	**336**	P	P	19 06 56.5	-1.4
LCAR				IAmb	IAmb	19 06 57.2	
	comp=Z,33nm,1.2s						
Z35A	**Perchaven, San**	**64.49**	**330**	P	P	19 06 57.6	-1.5
TXAR	**Lajitas Array**	**64.57**	**322**	P	**P**	**19 06 58.6**	**-1.3**
	comp=Z,2.1nm,0.7s,baz=161,slow=5.2,SNR=6.6						
TXAR	**Lajitas Array**	**64.57**	**322**	P	**P**	**19 06 59.1**	**-0.8**
W39A	**Magazine**	**64.57**	**334**	P	**P**	**19 06 59.4**	**-0.2**
	baz=150						
WCI	**Wyandotte Cave**	**64.66**	**341**	P	P	19 06 58.6	-1.5
	baz=158						
WCI	**Wyandotte Cave**	**64.66**	**341**	IAMs_20	IAMs_20	19 35 12.2	
	comp=Z,2μm,18.0s						
PAL	**Palisades**	**64.71**	**352**	IAMs_20	IAMs_20	19 32 22.7	
	comp=Z,3μm,21.0s						
O56A	**Blue Knob Stat**	**64.72**	**348**	P	**P**	**19 07 00.4**	**-0.1**
	baz=166						
P52A	**Corning**	**64.87**	**345**	IAMs_20	IAMs_20	19 32 22.8	
	comp=Z,3μm,21.0s						
ABTX	**Abilene, Hawle**	**65.05**	**328**	P	**P**	**19 07 01.9**	**-0.9**
	baz=145						
LIC	**Lamto**	**65.15**	**71**	*e*P	**P**	**19 07 02.9**	**-0.9**
	comp=Z,131nm,1.6s						
O53A	**New Philadelph**	**65.25**	**346**	P	P	19 07 02.6	-1.3
	baz=163						
O53A	**New Philadelph**	**65.25**	**346**	IAMs_20	IAMs_20	19 35 25.8	
	comp=Z,3μm,19.0s						
TIC	**Toumodi**	**65.36**	**70**	*e*P	**P**	**19 07 05.5**	**+0.3**
P49A	**Miami Univ. Ec**	**65.43**	**343**	P	P	19 07 02.9	-2.2
	baz=160						
KIC	**Kosan Boka**	**65.46**	**71**	*e*P	**P**	**19 07 06.2**	**+0.3**
	comp=Z,75nm,1.1s						
DBIC	**Dimbokro**	**65.51**	**70**	P	**P**	**19 07 06.1**	**-0.1**
	comp=Z,72nm,1.2s,baz=238,slow=6.0,SNR=8.4						
DBIC	**Dimbokro**	**65.51**	**70**	P	**P**	**19 07 06.7**	**+0.5**
ACSO	**Alum Creek Sta**	**65.64**	**345**	P	P	19 07 05.0	-1.4
	baz=162						
N54A	**Moraine State**	**65.67**	**347**	P	**P**	**19 07 06.7**	**+0.1**
	baz=164						
N54A	**Moraine State**	**65.67**	**347**	IAMs_20	IAMs_20	19 32 18.0	
	comp=Z,2μm,21.0s						
BCX	**Boston College**	**65.74**	**355**	IAMs_20	IAMs_20	19 35 45.7	
	comp=Z,3μm,19.0s						
L61B	**Northampton**	**66.00**	**353**	P	**P**	**19 07 08.4**	**-0.3**
	baz=172						
TUL1	**Leonard**	**66.02**	**333**	P	**P**	**19 07 08.5**	**-0.5**
	baz=149						
CCM	**Cathedral Cave**	**66.12**	**337**	P	P	19 07 08.2	-1.3
	baz=153						
CCM	**Cathedral Cave**	**66.12**	**337**	IAMs_20	IAMs_20	19 36 42.9	
	comp=Z,2μm,19.0s						
M54A	**Oil Creek Stat**	**66.13**	**348**	P	**P**	**19 07 09.5**	**-0.1**
	baz=165						
BINY	**Binghamton**	**66.17**	**351**	P	**P**	**19 07 09.8**	**-0.1**
	baz=169						
M53A	**WI Miller and**	**66.27**	**347**	P	**P**	**19 07 09.9**	**-0.6**
	baz=164						
WMOK	**Wichita Mounta**	**66.36**	**330**	P	**P**	**19 07 10.1**	**-1.2**
	baz=146						
OK025	**Westminster Rd**	**66.41**	**331**	IAMs_20	IAMs_20	19 40 22.4	
	comp=Z,3μm,18.0s						
ERPA	**Erie**	**66.78**	**348**	P	**P**	**19 07 13.1**	**-0.6**
	baz=165						
ERPA	**Erie**	**66.78**	**348**	IAMs_20	IAMs_20	19 38 14.5	
	comp=Z,2μm,19.0s						
SFIN	**Lafayette**	**66.88**	**341**	P	P	19 07 12.0	-2.4
	baz=158						
MNTX	**Cornudas Mount**	**67.33**	**323**	P	**P**	**19 07 16.3**	**-1.2**
	baz=140						
MSTX	**Muleshoe**	**67.69**	**326**	P	**P**	**19 07 19.0**	**-0.8**
	baz=142						
KAN09	**Caldwell North**	**67.84**	**332**	IAmb	IAmb	19 07 20.7	
	comp=Z,48nm,1.1s						
LONY	**Lake Ozonia**	**68.36**	**352**	P	**P**	**19 07 23.1**	**-0.5**
	baz=170						
PKME	**Peaks-Kenny Pk**	**68.52**	**356**	IAMs_20	IAMs_20	19 36 46.5	
	comp=Z,3μm,20.0s						
KSU1	**Kansas State U**	**69.08**	**334**	P	**P**	**19 07 27.1**	**-1.1**
	baz=149						
SADO	**Sadowa**	**69.19**	**349**	P	P	19 07 27.1	-1.7
	comp=Z,9.1nm,0.9s,baz=76,slow=1.5,SNR=5.1						
SADO	**Sadowa**	**69.19**	**349**	P	**P**	**19 07 27.6**	**-1.2**
SADO				IAmb	IAmb	19 07 28.5	
	comp=Z,44nm,1.4s						
121A	**Cookes Peak, D**	**69.30**	**322**	P	**P**	**19 07 30.7**	**+0.7**
	baz=138						
PQI	**Presque Isle**	**69.86**	**357**	IAMs_20	IAMs_20	19 35 20.0	
	comp=Z,2μm,19.0s						
JFWS	**Jewell Farm**	**70.15**	**340**	P	P	19 07 33.2	-1.6
	baz=155						
CBKS	**Cedar Bluff**	**70.16**	**331**	P	**P**	**19 07 35.2**	**+0.2**
	baz=146						
KOWA	**Kowa**	**70.19**	**64**	IAMs_20	IAMs_20	19 32 12.5	
	comp=Z,4μm,21.0s						
SCIA	**State Center**	**70.23**	**338**	P	**P**	**19 07 34.6**	**-0.7**
	baz=152						
ANMO	**Albuquerque**	**70.37**	**324**	P	**P**	**19 07 36.6**	**0.0**
	baz=140						
ANMO	**Albuquerque**	**70.37**	**324**	IAMs_20	IAMs_20	19 37 01.4	
	comp=Z,1μm,18.0s						
GLMI	**Grayling**	**70.37**	**345**	P	**P**	**19 07 35.3**	**-0.9**
	baz=161						
TUC	**Tucson**	**70.88**	**320**	P	**P**	**19 07 39.3**	**-0.3**
	baz=136						
TUC	**Tucson**	**70.88**	**320**	P	P	19 07 37.4	-2.2
T25A	**Trinidad**	**71.00**	**327**	P	**P**	**19 07 40.9**	**+0.4**
	baz=142						
KSCO	**Kaye Shedlock'**	**71.63**	**330**	P	**P**	**19 07 43.8**	**-0.3**
	baz=144						
BGNE	**Belgrade**	**71.66**	**334**	P	**P**	**19 07 43.0**	**-1.0**
	baz=148						
BGNE	**Belgrade**	**71.66**	**334**	P	P	19 07 42.6	-1.4
214A	**Organ Pipe Nat**	**71.86**	**318**	P	**P**	**19 07 46.2**	**+0.7**
	baz=134						
SDCO	**Great Sand Dun**	**72.02**	**327**	P	**P**	**19 07 47.0**	**+0.4**
	baz=141						
W18A	**Petrified Fore**	**72.30**	**322**	P	**P**	**19 07 47.9**	**-0.4**
	baz=137						
S22A	**4UR Ranch, Cre**	**72.69**	**326**	P	**P**	**19 07 51.1**	**+0.4**
	baz=140						
Q24A	**Divide**	**72.79**	**328**	P	**P**	**19 07 51.6**	**+0.3**
	baz=141						
SPMN	**Marine on St.**	**73.04**	**340**	P	**P**	**19 07 51.4**	**-0.7**
	baz=153						
ECSD	**EROS Data Cent**	**73.05**	**336**	P	**P**	**19 07 51.4**	**-0.9**
	baz=150						
ECSD	**EROS Data Cent**	**73.05**	**336**	IAMs_20	IAMs_20	19 41 34.2	
	comp=Z,1μm,19.0s						
MVCO	**Mesa Verde**	**73.16**	**325**	P	**P**	**19 07 53.6**	**+0.2**
	baz=138						
SYO	**Syowa Base**	**73.25**	**159**	⇓*e*P	P	19 07 48.7	-4.5
SYO	**Syowa Base**	**73.25**	**159**	⇑*e*pP	**P**	**19 07 52.6**	**-0.6**
WUAZ	**Wupatki**	**73.51**	**322**	P	**P**	**19 07 55.8**	**+0.4**
	baz=136						
ISCO	**Idaho Springs**	**73.67**	**328**	P	**P**	**19 07 56.7**	**+0.3**
	baz=141						
SMCO	**Snowmass**	**73.86**	**327**	P	**P**	**19 07 57.5**	**-0.1**
SMCO				IAmb	IAmb	19 07 59.2	
	comp=Z,32nm,1.2s						
SUR	**Sutherland**	**74.12**	**119**	IAMs_20	IAMs_20	19 34 13.4	
	comp=Z,3μm,19.0s						
TORD	**Torodi Ar. Bea**	**74.29**	**68**	P	**P**	**19 08 00.4**	**+0.2**
	comp=Z,49nm,0.7s,baz=255,slow=5.5,SNR=24						
SUSD	**Miller**	**74.53**	**335**	P	**P**	**19 08 00.3**	**-0.7**
	baz=148						
SBA	**Scott Base**	**74.62**	**190**	IAMs_20	IAMs_20	19 35 17.2	
	comp=Z,2μm,20.0s						
N23A	**Red Feather La**	**74.67**	**329**	P	**P**	**19 08 02.9**	**+0.7**
	baz=141						
MONP2	**Monument Peak**	**74.73**	**317**	P	**P**	**19 08 02.6**	**-0.1**
	baz=132						
IRM	**Iron Mountain**	**74.79**	**318**	P	**P**	**19 08 02.5**	**-0.2**
	baz=133						
BELC	**Belle Mtn. Jos**	**75.21**	**318**	P	**P**	**19 08 06.0**	**+0.7**
	baz=132						
O20A	**White River Ci**	**75.22**	**327**	P	**P**	**19 08 06.2**	**+0.9**
	baz=139						
TPFO	**Pinon Flats**	**75.23**	**317**	P	**P**	**19 08 05.6**	**+0.2**
	baz=132						
PFO	**Pinyon Flats O**	**75.23**	**317**	P	**P**	**19 08 05.5**	**+0.1**
	baz=132						
PFO	**Pinyon Flats O**	**75.23**	**317**	P	**P**	**19 08 04.9**	**-0.5**
GMRC	**Granite Mounta**	**75.52**	**319**	P	**P**	**19 08 07.2**	**+0.1**
	baz=133						
VNDA	**Vanda**	**75.61**	**189**	P	**P**	**19 08 06.9**	**+0.1**
	comp=Z,11nm,1.2s,baz=165,slow=2.7,SNR=3.4						
VNDA	**Vanda**	**75.61**	**189**	P	**P**	**19 08 06.7**	**-0.2**
TSUM	**Tsumeb**	**75.64**	**105**	P	**P**	**19 08 08.4**	**+0.2**
TSUM				IAmb	IAmb	19 08 09.9	
	comp=Z,41nm,1.1s						
TSUM	**Tsumeb**	**75.64**	**105**	IAMs_20	IAMs_20	19 34 22.6	
	comp=Z,4μm,20.0s						
MURC	**Murrieta**	**75.69**	**317**	P	**P**	**19 08 08.7**	**+0.8**
	baz=131						
HEC	**Hector,Ludlow**	**75.97**	**318**	P	**P**	**19 08 10.7**	**+1.1**
	baz=132						
TUQ	**Turquoise Moun**	**76.12**	**319**	P	**P**	**19 08 11.1**	**+0.7**
	baz=132						
K22A	**Casper**	**76.31**	**329**	P	**P**	**19 08 12.3**	**+0.9**
	baz=141						
CIS	**Catalina Islan**	**76.33**	**316**	P	P	19 08 09.7	-1.8
	baz=130						
RSSD	**Black Hills**	**76.35**	**332**	P	**P**	**19 08 12.2**	**+0.5**
	baz=143						
GSC	**Goldstone, Bar**	**76.57**	**318**	P	**P**	**19 08 14.1**	**+1.1**
	baz=132						
AGMN	**Agassiz Nation**	**76.74**	**339**	P	**P**	**19 08 12.9**	**-0.6**
	baz=151						
AGMN	**Agassiz Nation**	**76.74**	**339**	P	**P**	**19 08 12.2**	**-1.3**
AGMN				IAmb	IAmb	19 08 13.9	
	comp=Z,21nm,0.8s						
EDW2	**Edwards Air Fo**	**77.02**	**317**	P	**P**	**19 08 15.7**	**+0.2**
	baz=131						
LRMC	**Laurel Mtn Rad**	**77.22**	**318**	P	**P**	**19 08 17.0**	**+0.3**
	baz=131						
FURC	**Furnace Creek,**	**77.38**	**319**	P	**P**	**19 08 18.4**	**+1.0**
	baz=132						
MPMC	**Manual Prospec**	**77.48**	**319**	P	**P**	**19 08 18.4**	**+0.1**
	baz=132						
DUG	**Dugway, Tooele**	**77.64**	**324**	P	**P**	**19 08 19.3**	**+0.4**
	baz=136						
MDND	**Maddock**	**77.64**	**337**	P	**P**	**19 08 18.7**	**+0.1**
	baz=147						
MDND	**Maddock**	**77.64**	**337**	P	**P**	**19 08 17.4**	**-1.2**
ISA	**Isabella, Lake**	**77.83**	**318**	P	**P**	**19 08 20.4**	**+0.3**
	baz=131						
BW06	**Boulder Array**	**77.85**	**328**	P	**P**	**19 08 20.4**	**+0.2**
	baz=138						
BW06	**Boulder Array**	**77.85**	**328**	P	**P**	**19 08 19.3**	**-0.9**
PD31	**Pinedale Array**	**77.85**	**328**	P	**P**	**19 08 19.3**	**-0.9**
PDAR	**Pinedale Array**	**77.85**	**328**	P	**P**	**19 08 19.6**	**-0.5**
	comp=Z,6.8nm,0.9s,baz=148,slow=8.7,SNR=7.2						
PDAR	**Pinedale Array**	**77.85**	**328**	P	**P**	**19 08 19.4**	**-0.8**
R11A	**Troy Canyon, C**	**77.90**	**321**	P	**P**	**19 08 21.2**	**+0.7**
	baz=133						
CWC	**Cottonwood Cre**	**78.09**	**319**	P	**P**	**19 08 22.3**	**+0.6**
	baz=131						
PKM	**Mcpherson Peak**	**78.17**	**316**	P	**P**	**19 08 22.7**	**+0.6**
	baz=130						
VES	**Vestal, Richgr**	**78.32**	**317**	P	**P**	**19 08 22.6**	**-0.1**
	baz=130						
ULM	**Lac du Bonnet**	**78.45**	**340**	P	P	19 08 21.2	-1.8
	comp=Z,10.0nm,0.7s,baz=131,slow=6.0,SNR=4.7						
ULM	**Lac du Bonnet**	**78.45**	**340**	P	P	19 08 21.2	-1.8
SMMC	**Simmler**	**78.56**	**317**	P	**P**	**19 08 24.7**	**+0.7**
	baz=130						
TIN	**Tinemaha, Big**	**78.59**	**319**	P	**P**	**19 08 25.5**	**+1.3**
	baz=131						
BOSA	**Boshof**	**78.98**	**116**	P	**P**	**19 08 26.1**	**-0.7**
	comp=Z,16nm,1.1s,baz=245,slow=5.9,SNR=5.3						
BOSA	**Boshof**	**78.98**	**116**	P	**P**	**19 08 26.1**	**-0.7**
BOSA				IAmb	IAmb	19 08 27.6	
	comp=Z,36nm,1.1s						
LAO	**LASA Array**	**79.32**	**332**	P	**P**	**19 08 28.2**	**+0.2**
	baz=142						
ELK	**Elko**	**79.35**	**323**	P	**P**	**19 08 28.0**	**-0.5**
RLMT	**Red Lodge**	**79.48**	**330**	P	**P**	**19 08 29.1**	**0.0**
	baz=139						
RLMT	**Red Lodge**	**79.48**	**330**	IAmb	IAmb	19 08 30.2	
	comp=Z,43nm,1.1s						
H17A	**Grant Village**	**79.55**	**328**	P	**P**	**19 08 30.7**	**+1.1**
	baz=138						
DGMT	**Dagmar**	**79.90**	**334**	P	**P**	**19 08 31.4**	**+0.3**
	baz=144						
MDT	**Midelt**	**79.99**	**48**	P	**P**	**19 08 32.4**	**+0.3**
	comp=Z,12nm,1.1s,baz=246,slow=7.4,SNR=4.1						
LBTB	**Lobatse**	**80.56**	**113**	P	**P**	**19 08 34.5**	**-0.9**
LBTB				IAmb	IAmb	19 08 36.3	
	comp=Z,43nm,1.2s						
PNTR	**Pine Nut**	**80.73**	**320**	P	P	19 08 34.3	-1.7
PNTR				IAmb	IAmb	19 08 37.5	
	comp=Z,54nm,1.3s						
HLID	**Hailey**	**80.87**	**326**	P	**P**	**19 08 37.7**	**+1.2**
	baz=135						
BOZ	**Bozeman (W)**	**80.94**	**329**	P	**P**	**19 08 37.1**	**+0.2**
	baz=137						
MAW	**Mawson**	**81.28**	**162**	P	**P**	**19 08 37.5**	**-0.7**
	comp=Z,6.8nm,0.9s,baz=180,slow=5.6,SNR=3.2						
EGMT	**Eagleton**	**81.89**	**331**	P	**P**	**19 08 41.4**	**-0.3**
	baz=139						
O03E	**Paynes Creek**	**82.81**	**320**	P	**P**	**19 08 45.9**	**-0.9**
	baz=129						
O02D	**Mt. Diablo Mer**	**83.33**	**319**	P	**P**	**19 08 49.2**	**-0.2**
	baz=128						
M04C	**Macdoel**	**83.77**	**321**	P	**P**	**19 08 51.3**	**-0.4**
	baz=129						
N02D	**Trinity Center**	**83.77**	**320**	P	**P**	**19 08 50.9**	**-0.8**
	baz=128						
M02C	**Callahan**	**84.12**	**320**	P	**P**	**19 08 53.3**	**-0.2**
	baz=128						
PAB	**San Pablo**	**84.16**	**42**	P	**P**	**19 08 53.0**	**-0.7**
PAB				IAmb	IAmb	19 08 55.9	
	comp=Z,46nm,1.4s						
PAB	**San Pablo**	**84.16**	**42**	IAMs_20	IAMs_20	19 42 47.2	
	comp=Z,4μm,20.0s						
L04D	**Klamath Falls**	**84.31**	**321**	P	**P**	**19 08 54.0**	**-0.5**
	baz=129						
J05D	**Fort Rock, OR**	**84.37**	**322**	P	**P**	**19 08 54.5**	**-0.3**
	baz=130						
ESDC	**Sonseca Array**	**84.47**	**42**	P	**P**	**19 08 55.0**	**-0.3**
	comp=Z,12nm,1.1s,baz=236,slow=4.8,SNR=7.5						
ESDC	**Sonseca Array**	**84.47**	**42**	P	**P**	**19 08 55.2**	**-0.1**
ESDC				IAmb	IAmb	19 08 56.9	
	comp=Z,27nm,1.4s						
L02E	**Cave Junction**	**85.03**	**320**	P	**P**	**19 08 58.4**	**+0.4**
	baz=128						
I05D	**Terrebonne, OR**	**85.10**	**323**	P	**P**	**19 08 58.9**	**+0.6**
	baz=130						
CART	**Cartagena**	**85.16**	**46**	IAMs_20	IAMs_20	19 39 52.5	

	comp=Z,2μm,21.0s						
K02D	Willamette Mer	85.39	321	P	P	19 09 00.6	+0.7
	baz=128						
NEW	Newport	85.49	328	P	P	19 08 58.4	-1.7
	comp=Z,1.4nm,0.5s,baz=103,slow=7.7,SNR=3.2						
G05D	Wamic, OR	85.66	324	P	P	19 09 01.6	+0.5
	baz=130						
C09A	Chrisman Ranch	85.75	327	P	P	19 09 00.6	-0.8
C09A				IAmb	IAmb	19 09 02.0	
	comp=Z,47nm,1.3s						
B05A	Bryant	88.00	326	P	P	19 09 11.2	-1.1
	baz=129						
D03D	Eldon	88.06	325	P	P	19 09 12.8	+0.1
	baz=128						
VSL	Villasalto	93.10	48	IAMs_20	IAMs_20	19 52 45.0	
	comp=Z,2μm,19.0s						
BNI	Bardonecchia	94.00	42	IAMs_20	IAMs_20	19 47 42.7	
	comp=Z,4μm,20.0s						
YKA	Yellowknife Ar	94.40	339	P	P	19 09 40.8	-0.9
	comp=Z,2.1nm,0.6s,baz=120,slow=5.9,SNR=12						
MBAR	Mbarara	94.63	93	IAMs_20	IAMs_20	19 45 32.5	
	comp=Z,3μm,21.0s						
CLTB	Caltabellotta	94.93	51	IAMs_20	IAMs_20	19 51 55.5	
	comp=Z,6μm,19.0s						
BKZ	Black Stump Fm	95.54	223	IAMs_20	IAMs_20	19 40 01.1	
	comp=Z,3μm,21.0s						
ECH	Echery	95.83	40	IAMs_20	IAMs_20	19 51 39.8	
	comp=Z,2μm,18.0s						
LTZ	Lake Taylor	95.86	218	IAMs_20	IAMs_20	19 42 06.0	
	comp=Z,2μm,19.0s						
CEL	Celeste	97.13	51	IAMs_20	IAMs_20	19 52 28.0	
	comp=Z,3μm,20.0s						
STU	Stuttgart	97.29	40	IAMs_20	IAMs_20	19 50 10.3	
	comp=Z,2μm,19.0s						
TIP	Timpagrande	98.12	51	IAMs_20	IAMs_20	19 55 17.1	
	comp=Z,3μm,19.0s						
VOI	Vohitsoka	99.43	119	IAMs_20	IAMs_20	19 50 53.2	
	comp=Z,3μm,19.0s						
GERES	GERESS Array B	100.00	41	P	Pdif	19 10 06.8	-0.7
	comp=Z,1.2nm,0.8s,baz=262,slow=6.8,SNR=4.3						
KMBO	Kilima Mbogo	100.39	96	IAMs_20	IAMs_20	19 51 38.9	
	comp=Z,3μm,19.0s						
LODK	Lodwar	100.45	91	IAMs_20	IAMs_20	19 49 01.0	
	comp=Z,4μm,20.0s						
KIBK	Kibwezi	100.62	97	IAMs_20	IAMs_20	19 53 13.7	
	comp=Z,4μm,18.0s						
PDG	Podgorica	101.12	49	IAMs_20	IAMs_20	19 55 18.4	
	comp=Z,1μm,19.0s						
TIR	Tirane	101.15	50	IAMs_20	IAMs_20	19 56 29.0	
	comp=Z,3μm,18.0s						
PSZ	Piszkesteto	103.48	44	IAMs_20	IAMs_20	19 53 04.6	
	comp=Z,2μm,19.0s						
SANT	Santorini	103.53	56	IAMs_20	IAMs_20	19 56 03.4	
	comp=Z,1μm,20.0s						
A36M	Sachs Harbour	103.66	344	IAMs_20	IAMs_20	19 56 48.7	
	comp=Z,3μm,21.0s						
CTGM	Chitina Glacie	104.06	331	IAMs_20	IAMs_20	19 58 56.4	
	comp=Z,2μm,19.0s						
GLB	Gilahina Butte	105.35	331	IAMs_20	IAMs_20	20 00 20.5	
	comp=Z,1μm,21.0s						
FURI	Furi	105.58	87	IAMs_20	IAMs_20	19 53 50.1	
	comp=Z,4μm,19.0s						
RIDG	Independent Ri	106.59	333	IAMs_20	IAMs_20	20 00 53.0	
	comp=Z,1μm,20.0s						
KNK	Knik Glacier	107.46	330	IAMs_20	IAMs_20	20 00 12.2	
	comp=Z,1μm,20.0s						
HDA	Harding Lake	107.67	333	IAMs_20	IAMs_20	20 01 29.8	
	comp=Z,1μm,19.0s						
TAU	Tasmania Unive	107.73	204	IAMs_20	IAMs_20	19 46 22.8	
	comp=Z,2μm,19.0s						
GHO	Glory Hole Cre	107.77	330	IAMs_20	IAMs_20	20 01 38.5	
	comp=Z,1μm,20.0s						
TIRR	Tirgusor	108.08	49	IAMs_20	IAMs_20	20 00 12.6	
	comp=Z,4μm,20.0s						
CUT	Chulitna	108.55	331	IAMs_20	IAMs_20	20 03 27.0	
	comp=Z,1μm,21.0s						
KTH	Kantishna Hill	109.13	332	IAMs_20	IAMs_20	20 03 44.4	
	comp=Z,1μm,21.0s						
CSS	Mathiatis	109.23	59	IAMs_20	IAMs_20	19 58 07.5	
	comp=Z,2μm,21.0s						
MLY	Manley	109.41	333	IAMs_20	IAMs_20	20 04 45.9	
	comp=Z,920nm,20.0s						
TOLK	Toolik Lake Re	109.81	337	IAMs_20	IAMs_20	20 07 42.4	
	comp=Z,1μm,18.0s						
GHAJ	Ghor Haditha	110.05	64	IAMs_20	IAMs_20	19 58 26.4	
	comp=Z,3μm,20.0s						
ANTO	Ankara	110.07	54	IAMs_20	IAMs_20	20 00 27.5	
	comp=Z,1μm,20.0s						
ATD	Arta Tunnel	110.36	86	IAMs_20	IAMs_20	19 57 52.7	
	comp=Z,3μm,18.0s						
K20K	Telida	110.47	331	IAMs_20	IAMs_20	20 01 56.7	
	comp=Z,1μm,20.0s						
A21K	Barrow	112.66	340	IAMs_20	IAMs_20	20 02 34.5	
	comp=Z,2μm,21.0s						
CAN	Canberra	113.45	210	IAMs_20	IAMs_20	19 48 52.1	
	comp=Z,966nm,21.0s						
MSEY	Mahe Island	115.23	107	IAMs_20	IAMs_20	19 57 08.4	
	comp=Z,2μm,19.0s						
RAYN	Ar Rayn	116.50	74	IAMs_20	IAMs_20	19 59 41.6	
	comp=Z,2μm,19.0s						
GNI	Garni	119.14	56	IAMs_20	IAMs_20	20 01 50.5	
	comp=Z,984nm,22.0s						
SOCY	Socotra	120.81	89	IAMs_20	IAMs_20	20 03 57.5	
	comp=Z,2μm,19.0s						
BILL	Bilibino	125.79	339	IAMs_20	IAMs_20	20 18 04.6	
	comp=Z,699nm,19.0s						
UOSS	Minazif	126.33	76	IAMs_20	IAMs_20	20 06 30.9	
	comp=Z,3μm,22.0s						
ABKAR	Akbulak array	129.78	45	PKPdf	PKPdf	19 15 30.8	-0.8
ASAR	Alice Springs	129.84	202	PKP	PKPdf	19 15 31.4	-1.3
	comp=Z,5.1nm,1.0s,baz=141,slow=2.1,SNR=6.3						
TIXI	Tiksi	131.17	354	PKP	PKPdf	19 15 32.5	-1.1
	comp=Z,4.7nm,1.0s,baz=144,slow=15,SNR=4.0						
KAAM	Kaadhehdhoo	132.93	113	IAMs_20	IAMs_20	20 09 31.0	
	comp=Z,2μm,18.0s						
WRA	Warramunga Arr	133.09	205	PKP	PKPdf	19 15 38.0	-0.9
	comp=Z,12nm,1.1s,baz=173,slow=1.7,SNR=8.7						
WRA	Warramunga Arr	133.09	205		PKPdf	19 15 35.6	-3.3
SEY	Seymchan	133.44	338	PKP	PKPdf	19 15 38.0	-0.2
	comp=Z,9.1nm,1.1s,baz=95,slow=5.5,SNR=4.2						
PMG	Port Moresby	134.96	227	IAMs_20	IAMs_20	20 04 48.4	
	comp=Z,951nm,20.0s						
AAK	Ala-Archa	141.17	50	IAMs_20	IAMs_20	20 24 12.1	
	comp=Z,1μm,19.0s						
NIL	Nilore	141.80	65	IAMs_20	IAMs_20	20 20 24.6	
	comp=Z,2μm,20.0s						
ZALV	Zalesovo Beam	141.85	29	PKhKP	PKPpre	19 15 46.8	
	comp=Z,1.5nm,0.7s,baz=308,slow=5.3,SNR=1.5						
ZALV				PKP	PKPdf	19 15 53.6	-0.3
	comp=Z,12nm,0.9s,baz=287,slow=2.3,SNR=5.3						
PALK	Pallekele	142.99	110	IAMs_20	IAMs_20	20 08 20.9	
	comp=Z,1μm,22.0s						
MKAR	Makanchi Array	144.67	41	PKP	PKPab	19 15 57.9	+0.1
	comp=Z,30nm,1.1s,baz=296,slow=3.6,SNR=7.0						
MKAR	Makanchi Array	144.67	41		PKPab	19 15 57.7	-0.1
HYB	Hyderabad	144.99	93	*i* PKP	PKPab	19 15 59.5	-0.3
SAUI	Saumlaki	145.12	208	IAMs_20	IAMs_20	20 10 47.7	
	comp=Z,1μm,19.0s						
SOEI	Soe	145.88	196	IAMs_20	IAMs_20	20 20 16.0	
	comp=Z,2μm,19.0s						
MMRI	Maumere	147.42	193	IAMs_20	IAMs_20	20 15 52.7	
	comp=Z,605nm,21.0s						
JAGI	Jajag, Banyuwa	148.25	178		PKPdf	19 16 08.8	+2.6
FAKI	Fak Fak	149.09	214	IAMs_20	IAMs_20	20 11 40.5	
	comp=Z,1μm,22.0s						
ASAJ	Asahikawa	149.66	319	PKPbc	PKPdf	19 16 11.5	+4.0
	comp=Z,40nm,1.2s,baz=318,slow=3.3,SNR=5.1						
TLY	Talaya	150.39	15	IAMs_20	IAMs_20	20 21 46.8	
	comp=Z,1μm,21.0s						
KLR	Kul'dur	151.24	338	PKPbc	PKPdf	19 16 14.9	+5.1
	comp=Z,18nm,1.0s,baz=77,slow=2.9,SNR=8.1						
GSI	Gunungsitoli	151.99	139	IAMs_20	IAMs_20	20 22 47.7	
	comp=Z,2μm,18.0s						
BKNI	Bangkinang	153.09	147	IAMs_20	IAMs_20	20 17 43.2	
	comp=Z,1μm,19.0s						
HIA	Hailar	154.01	354	IAMs_20	IAMs_20	20 29 28.1	
	comp=Z,1μm,20.0s						
SONM	Songino Array	154.62	14	PKP	PKPdf	19 16 15.0	0.0
	comp=Z,8.2nm,1.1s,baz=266,slow=0.3,SNR=5.0						
SONM				PKPbc	sPKPdf	19 16 22.8	+3.0
	comp=Z,4.0nm,0.7s,baz=282,slow=1.5,SNR=5.7						
BKB	Balikpapan	155.40	184	IAMs_20	IAMs_20	20 21 57.7	
	comp=Z,1μm,19.0s						
MJAR	Matsushiro Arr	156.43	309	PKPbc	PKPbc	19 16 27.0	
	comp=Z,0.8nm,0.6s,baz=166,slow=11,SNR=4.3						
MJAR				PKPab	PKPab	19 16 44.4	-1.7
	comp=Z,3.9nm,1.1s,baz=45,slow=2.0,SNR=4.0						
IPM	Ipoh	156.56	141	IAMs_20	IAMs_20	20 29 33.7	
	comp=Z,1μm,18.0s						
KULM	Kulim	156.99	139	IAMs_20	IAMs_20	20 26 39.4	
	comp=Z,1μm,19.0s						
TOLI2	Tolitoli	157.19	194	IAMs_20	IAMs_20	20 22 36.7	
	comp=Z,505nm,22.0s						
LSA	Lhasa	157.43	69	IAMs_20	IAMs_20	20 22 02.6	
	comp=Z,1μm,20.0s						
KSM	Kuching	157.59	166	IAMs_20	IAMs_20	20 23 02.5	
	comp=Z,749nm,20.0s						
KSRS	Korea Array	162.40	325	PKPab	PKPab	19 17 11.7	-0.1
	comp=Z,5.1nm,1.0s,baz=48,slow=4.8,SNR=5.9						
CMAR	Chiang Mai Arr	163.82	105	PKP	PKPdf	19 16 25.3	-1.0
	comp=Z,3.0nm,1.1s,baz=258,slow=2.5,SNR=4.4						
CMAR				PKPab	PKPab	19 17 18.4	-0.3
	comp=Z,6.3nm,0.9s,baz=252,slow=4.9,SNR=14						
CMAR	Chiang Mai Arr	163.82	105		PKPdf	19 16 25.4	-0.9

IDC 29 18:59:59.9±2.3,6°.07S×128°.88E,h0^{km},mb3.6/1, mb1 3.9/3,mb1mx3.5/35,mbtmp3.7/3,ML3.9/2,Error ellipse: s-maj=156.9km s-min=31.5km az=68.0

DJA 29 19:00:14.7±0.5,6°S±3°×13°0E±°,h224^{km}±11^{km},M3.8/8, mB4.6/1,mb3.6/6,MLv4.0/8,Mw(mB)3.9/1

ISC 29 19:00:16.8±1.0,6°.20S±0°.09×130°.0E±0°.1,h200^{km},n9, σ1^{s}.92/11,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	2.19	144	P	Pn	19 00 57.9	+0.6
SAUI				S	Sn	19 01 30.8	+1.8
FAKI	Fak Fak	3.95	35	P	Pn	19 01 16.4	-1.6
SWI	Sorong	5.44	13	P	Pn	19 01 34.6	-2.3
	0.1nm11nm,0.8s						
LBMI	Labuha	6.06	336	P	Pn	19 01 44.2	-0.7
	0.1nm11nm,1.0s						
SOEI	Soe	6.69	238	P	Pn	19 01 51.2	-2.0
	0.1nm12nm,2.0s						
BATI	Baumata	7.43	237	P	Pn	19 02 00.3	-2.5
	0.1nm14nm,0.8s						
WRA	Warramunga Arr	14.30	163	Pn	Pn	19 03 29.5	-1.0
	0.5nm,0.3s,baz=341,slow=12,SNR=12						
WRA				Sn	S	19 06 00.4	-9.2
	0.5nm,0.3s,baz=336,slow=22,SNR=8.9						
ASAR	Alice Springs	17.77	168	P	Pn	19 04 13.7	+1.5
	0.5nm,0.3s,baz=346,slow=10.0,SNR=49						
ASAR				S	S	19 07 24.4	+0.2
	0.1nm,0.3s,baz=354,slow=27,SNR=2.1						
MKAR	Makanchi Array	67.56	327	P	P	19 10 53.7	+2.0
	0.4nm,0.6s,baz=128,slow=7.9,SNR=4.3						

JMA 29 19:01:03.7±0.3,31°.18N×129°.08E,h13^{km}±3^{km},M4.0

JMA Felt I J1.

NIED 29 19:01:03.8,31°.18N×129°.08E,h13^{km},MW4.0,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.40; $M_{\theta\theta}$0.17; $M_{\phi\phi}$0.23; $M_{r\theta}$-0.06; $M_{\theta\phi}$0.88; $M_{\phi r}$0.80; Fault plane solution: $M_0$1.24000×10^{15} NP1: ϕ_s186.00000°,δ77.00000°,λ-134.00000°. NP2: ϕ_s83.00000°,δ46.00000°,λ-18.00000°.

IDC 29 19:01:05.0±1.1,31°.16N×129°.12E,h0^{km},mb3.3/5, mb1 3.5/10,mb1mx3.4/45,mbtmp3.4/10,ML2.9/5,MS3.0/2, Ms1 3.0/2,ms1mx2.6/32 Error ellipse: s-maj=28.3km s-min=17.6km az=101.0

ISC 29 19:01:06.3±0.8,31°.18N±0°.05×129°.33E±0°.06,h11^{km},n16, σ1^{s}.09/19,mb3.5/5,1C,Kyushu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	Shimokoshiki	0.60	34	P	Pg	19 01 17.5	-0.5
JSU	Suzuyama	1.02	71	P	Pg	19 01 26.2	+0.2
JSU				*e*S	Sn	19 01 41.7	+0.8
JKC	Kuchinoerabu	1.03	133	P	Pg	19 01 25.8	-0.4
JYAK	Yakushimahirau	1.38	132	P	Pn	19 01 30.4	-1.2
JTN	Tanegashima 3	1.51	110	⇑P	Pn	19 01 33.2	-0.2
JMTN	Minamitane	1.56	119	P	Pn	19 01 33.7	-0.3
JNU	Nakatsue	2.34	34	Pn	Pb	19 01 48.3	-0.3
	11nm,0.3s,baz=278,slow=5.5,SNR=50						
JNU				Sn	Sb	19 02 18.5	+0.9
	4.6nm,0.3s,baz=153,slow=18,SNR=2.0						
JOW	Kunigami	4.42	192	Pn	Pn	19 02 14.2	+0.8
	0.9nm,0.3s,baz=324,slow=30,SNR=1.9						
KSRS	Korea Array	6.37	350	Pn	Pn	19 02 40.1	0.0
	0.3nm,0.3s,baz=170,slow=14,SNR=7.1						
KSRS				Sn	Sn	19 03 50.2	-2.5
	0.4nm,0.3s,baz=38,slow=39,SNR=2.6						
KSRS				Lg	Lg	19 04 20.5	
	1.0nm,0.3s,baz=180,slow=33,SNR=4.7						
KSRS				LR	LR	19 05 06.2	
	comp=Z,80nm,19.7s,baz=176,slow=38						
MJAR	Matsushiro Arr	9.12	52	Pn	Pn	19 03 19.8	+1.9
	0.0nm,0.3s,baz=241,slow=13,SNR=4.2						
MJAR				LR	LR	19 07 14.9	
	comp=Z,140nm,18.1s,baz=255,slow=40						
KLR	Kul'dur	18.13	5	P	P	19 05 18.9	+0.6
	0.0nm,0.3s,baz=270,slow=9.0,SNR=2.4						
SONM	Songino Array	24.15	320	P	P	19 06 21.5	-1.0
	0.6nm,0.9s,baz=157,slow=8.0,SNR=4.2						
MKAR	Makanchi Array	39.14	307	P	P	19 08 33.5	-0.4
	0.4nm,0.6s,baz=94,slow=11,SNR=4.4						
WRA	Warramunga Arr	51.05	174	P	P	19 10 07.5	-1.2
	0.4nm,0.7s,baz=355,slow=8.1,SNR=2.2						
ASAR	Alice Springs	54.71	175	P	P	19 10 37.0	+1.3
	0.4nm,0.5s,baz=4.5,slow=14,SNR=2.4						
ILAR	Eielson Array	59.66	30	P	P	19 11 10.2	0.0
	0.6nm,0.9s,baz=270,slow=7.2,SNR=4.1						

IDC 29 19:16:41.0±1.4,51°.70N×172°.82W,h0^{km},mb3.4/6, mb1 3.8/7,mb1mx3.5/55,mbtmp3.4/7,ML4.0/1,Error ellipse: s-maj=42.5km s-min=26.4km az=153.0

AEIC 29 19:16:45.8±1.2,51°.63N±0°.08×172°.70W±0°.08, h41^{km}±10^{km},ML2.9/18,Error ellipse: s-maj=13.8km s-min=3.2km az=208.0

NEIC 29 19:16:46.4±1.0,51°.68N±0°.04×172°.66W±0°.03, h32^{km}±11^{km},Error ellipse: s-maj=6.4km s-min=2.6km az=176.0

ISC 29 19:16:45.4±1.0,51°.7N±0°.1×172°.66W±0°.05,h27^{km},n19, σ0^{s}.42/22,mb3.2/6,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOFP	Korovin Flat P	1.07	305		Pb	19 17 05.1	-0.3
ATKA	Atka Island	1.09	300		Pn	19 17 04.6	-0.3
ATKA					Sb	19 17 19.5	+0.2
KOKL	Mount Kliuchef	1.15	305		Pb	19 17 06.3	-0.4
KOKL					Sb	19 17 22.1	+0.8
KONE	Korovin Northe	1.15	309		Pb	19 17 06.7	0.0
KOWE	Korovin West	1.20	306		Pb	19 17 07.4	-0.1
GSIG	Igitkin Island	2.05	280		Pn	19 17 18.2	+0.1
GSMY	Great Sitkin M	2.14	281		Pn	19 17 19.4	+0.1
GSTR	Great Sitkin T	2.15	283		Pn	19 17 19.4	0.0
GSTD	Great Sitkin T	2.19	281		Pn	19 17 20.3	+0.2
GSTD					Sn	19 17 47.0	+0.6
ADK	Adak	2.51	276		Pn	19 17 24.8	+0.5
NIKH	Nikolski High	2.67	59		Pn	19 17 27.1	+0.5
TASE	Tanaga Southea	3.34	275		Pn	19 17 36.6	+0.7
ILAR	Eielson Array	18.69	36	P	P	19 21 01.2	0.0
	0.4nm,0.3s,baz=233,slow=8.4,SNR=30						
INK	Inuvik	25.05	34	P	P	19 22 06.6	-0.3
	1.7nm,0.5s,baz=260,slow=9.4,SNR=21						
YKA	Yellowknife Ar	32.22	48	P	P	19 23 10.8	0.0
	0.1nm,0.4s,baz=276,slow=6.8,SNR=5.4						
PDAR	Pinedale Array	42.54	76	P	P	19 24 38.9	+0.1
	0.2nm,0.4s,baz=343,slow=2.8,SNR=4.1						
TXAR	Lajitas Array	54.81	86	P	P	19 26 13.4	+0.4
	0.1nm,0.5s,baz=310,slow=4.6,SNR=2.1						
MKAR	Makanchi Array	62.78	312	P	P	19 27 07.2	-0.8
	0.2nm,0.8s,baz=37,slow=6.0,SNR=1.0						
ASAR	Alice Springs	88.41	227	P	P	19 29 34.5	-0.3
	0.2nm,0.7s,baz=39,slow=4.9,SNR=5.3						

IDC 29 19:23:01.5±3.6,23°.85S×64°.98W,h0^{km},mb1 3.8/3, mb1mx3.5/35,mbtmp3.7/3,ML3.7/3,Error ellipse: s-maj=71.1km s-min=27.0km az=41.0,Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CPUP	Villa Florida	7.37	111	Pn	Pn	19 24 52.1	+1.8
	0.4nm,0.3s,baz=286,slow=13,SNR=3.9						
CPUP				Lg	Lg	19 26 55.4	
	2.7nm,0.3s,baz=288,slow=10,SNR=2.4						
LPAZ	La Paz	8.08	338	Pn	Pn	19 25 02.9	+2.1
	0.2nm,0.3s,baz=149,slow=13,SNR=1.8						
LPAZ				Sn	Sn	19 26 31.3	-1.9
	0.3nm,0.3s,baz=39,slow=19,SNR=2.2						
SIV	San Ignacio	8.64	26	Pn	Pn	19 25 07.2	-0.7
	1.4nm,0.3s,baz=210,slow=10,SNR=12						
SIV				Sn	Sn	19 26 36.1	-10
	0.5nm,0.3s,baz=64,slow=22,SNR=1.2						
MKAR	Makanchi Array	145.22	41	PKPbc	PKPbc	19 42 38.7	-2.0
	0.3nm,0.7s,baz=328,slow=3.1,SNR=2.6						

TAP 29 19:23:35.0,24°.40N×121°.42E,h2^{km},ML0.8,B,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNSB	Datong	0.04	314	P	Pg	19 23 36.8	+0.8
	baz=314						
NNSB				S	Sg	19 23 37.7	+1.1
	baz=314						
NNS	Nan Shan	0.06	316	*i* P	Pg	19 23 36.7	+0.5
	baz=320						
NNS				S	Sg	19 23 37.7	+0.6
	baz=320						
ETLH	Xiulin Townshi	0.20	163	*e*S	Sg	19 23 43.8	+2.3
	baz=162						
FUSS	Fushou	0.22	227	*i* P	Pg	19 23 40.8	+1.6
	baz=226						
YHNB	Yeheng	0.27	352	*e*P	Pb	19 23 42.3	-0.5
	baz=351						
TWE	Neicheng	0.39	35	*i* P	Pb	19 23 44.6	-0.2
	baz=37						
TWE				*e*S	Sb	19 23 51.9	+0.6
	baz=37						
ILA	Ilan	0.47	39	P	Pb	19 23 46.1	0.0
	baz=40						
ILA				*e*S	Sb	19 23 54.4	+0.8
	baz=40						

JMA 29 19:24:02.4±0.4,25°.01N×123°.51E,h6^{km},M1.5,Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IRIF	Iriomote-Funau	0.70	163	P	Pg	19 24 16.0	+0.1
IRIF				*e*S	Sg	19 24 25.4	+0.4
JIJ	Ishigaki jima	0.86	138	P	Pg	19 24 18.7	-0.3
JIJ				*e*S	Sg	19 24 30.2	0.0
JKRS	Kuro-shima	0.89	149	P	Pb	19 24 20.2	-0.1
JKRS				*e*S	Sb	19 24 31.9	-0.6
HATJ	Hateruma jima	0.99	164	*e*S	Sg	19 24 34.4	+0.3

NNC 29 20:33:53.0±7.5,37°.01N×71°.18E,h0^{km},mb3.8,mpv3.4, 2C-3D,Error ellipse: s-maj=66.5km s-min=57.8km az=66.0,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK09	Karatay Array	6.13	355	⇑Pn	Pn	20 35 25.8	+1.0
	2.3nm,0.5s,baz=180,slow=12						
KK09				⇓Sn	Sn	20 36 36.9	+1.1
	1.8nm,0.4s,baz=150,slow=22						
AAK	Ala-Archa	6.18	23	⇓Pn	Pn	20 35 26.0	+0.3
	1.5nm,0.5s						
AAK				⇑Sn	Sn	20 36 38.1	+1.0
	4.8nm,1.1s						
TKM2	Tokmak 2	6.81	29	⇓Pn	Pn	20 35 33.2	-1.2
	2.8nm,0.8s						

IDC 29 20:34:22.0±6.3,27°.74S×64°.52E,h0^{km},mb3.5/4, mb1 3.7/4,mb1mx3.2/36,mbtmp3.5/4,Error ellipse: s-maj=174.2km s-min=45.1km az=60.0,Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H01W2	Cape Leeuwin H	42.63	112	T	T	21 27 59.6	
	baz=265,slow=75,SNR=4.3						
H01W3	Cape Leeuwin H	42.63	112	T	T	21 28 01.8	
	baz=265,slow=75,SNR=4.9						
H01W1	Cape Leeuwin H	42.65	112	T	T	21 28 02.8	
	baz=265,slow=75,SNR=3.8						
CMAR	Chiang Mai Arr	56.74	40	P	P	20 44 07.8	-0.1
	0.6nm,0.9s,baz=231,slow=6.8,SNR=4.9						
ASAR	Alice Springs	61.90	103	P	P	20 44 43.3	-0.5
	1.0nm,1.2s,baz=255,slow=5.7,SNR=4.6						
WRA	Warramunga Arr	63.60	100	P	P	20 44 55.6	+0.5
	0.6nm,0.9s,baz=254,slow=5.5,SNR=2.8						
MKAR	Makanchi Array	75.90	12	P	P	20 46 10.2	+0.1
	0.2nm,0.8s,baz=202,slow=6.2,SNR=1.3						

IDC 29 20:54:36.6±1.1,23°.44S×64°.65W,h0^{km},mb3.7/2, mb1 3.8/6,mb1mx3.7/26,mbtmp3.7/6,ML3.4/4,Error ellipse: s-maj=22.6km s-min=17.9km az=50.0

ISC 29 20:54:41.5±0.9,23°.47S±0°.09×64°.63W±0°.09,h35^{km},n8, σ0^{s}.51/10,mb4.4/3,Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	Limon Verde	4.04	281	Pn	Pn	20 55 40.9	-0.2
	0.3nm,0.3s,baz=99,slow=6.1,SNR=2.3						
CPUP	Villa Florida	7.21	115	Pn	Pn	20 56 24.6	+0.1
	0.6nm,0.3s,baz=289,slow=11,SNR=15						
CPUP				Pg		20 56 49.9	
	1.7nm,0.3s,baz=289,slow=15,SNR=4.8						
CPUP				Lg	Lg	20 58 26.6	
	1.8nm,0.3s,baz=215,slow=20,SNR=3.2						
LPAZ	La Paz	7.87	335	Pn	Pn	20 56 34.0	-0.1
	0.1nm,0.3s,baz=153,slow=9.1,SNR=1.5						
LPAZ				Sn	Sn	20 58 03.1	+0.8
	0.4nm,0.3s,baz=212,slow=10,SNR=1.9						
SIV	San Ignacio	8.16	25	Pn	Pn	20 56 36.9	-0.7
	3.2nm,0.3s,baz=213,slow=14,SNR=26						
SIV				Sn	Sn	20 58 09.1	+0.5
	1.7nm,0.3s,baz=241,slow=23,SNR=1.9						
SIV				Lg	Lg	20 58 55.7	
	1.5nm,0.3s,baz=323,slow=20,SNR=2.1						
USHA	Ushuaia	31.45	184	P	P	21 00 59.8	+0.4
	3.1nm,0.5s,baz=9.5,slow=12,SNR=1.1						
TXAR	Lajitas Array	64.55	322	P	P	21 05 14.8	-0.5
	0.1nm,0.7s,baz=154,slow=7.0,SNR=2.2						
TORD	Torodi Ar. Bea	74.36	68	P	P	21 06 16.4	+0.3
	3.5nm,0.7s,baz=254,slow=6.1,SNR=24						
MKAR	Makanchi Array	144.73	40	PKP	PKPdf	21 14 14.5	0.0
	0.6nm,0.6s,baz=276,slow=4.2,SNR=5.7						

IDC 29 21:05:37.8±1.0,73°.54N×116°.21E,h0^{km},mb3.7/6, mb1 3.9/8,mb1mx3.5/60,mbtmp3.7/8,ML5.3/1,Error ellipse: s-maj=26.4km s-min=17.2km az=169.0

YARS 29 21:05:45.1±0.0,73°.43N×117°.49E,h5^{km}

ISC 29 21:05:39.6±0.9,73°.73N±0°.09×116°.81E±0°.06,h10^{km},n11, σ1^{s}.86/17,mb3.5/6,Near coast of northern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIXI	Tiksi	4.16	114	Pn	Pn	21 06 44.0	+1.0
	6.6nm,0.3s,baz=305,slow=10,SNR=55						
TIXI				Pg	Pb	21 06 51.7	-1.1
	5.7nm,0.3s,baz=308,slow=11,SNR=9.6						
TIXI				Sn	Sn	21 07 31.5	-0.1
	7.7nm,0.3s,baz=298,slow=18,SNR=11						
TIXI				Lg	Lg	21 07 44.9	
	8.7nm,0.3s,baz=138,slow=8.7,SNR=4.6						
TIXI	Tiksi	4.16	114	*e*Pn	Pn	21 06 44.4	+1.4
TIXI				*e*Pg	Pg	21 06 56.3	-2.8
	20nm,0.1s						
TIXI				*e*Sn	Sn	21 07 31.7	+0.1
TIXI				*e*Sn	Sn	21 07 31.7	+0.1
TIXI				*e*Sg	Sg	21 07 53.8	+0.8
	50nm,0.2s						
NRIK	Noril'sk	10.17	259	Pn	Pn	21 08 01.2	-4.2
	0.5nm,0.3s,baz=35,slow=14,SNR=2.4						
NRIK				Pg		21 08 40.4	
	0.3nm,0.3s,baz=50,slow=17,SNR=1.5						
NRIK				Sn	Sn	21 09 44.8	-15
	0.6nm,0.3s,baz=312,slow=10.0,SNR=2.1						
NRIK				Lg	Lg	21 10 49.9	
	0.5nm,0.3s,baz=189,slow=22,SNR=2.2						
YCRN	Chernyshevskiy	10.87	190	*e*Pn	Pn	21 08 17.6	+2.7
YCRN				*e*Pg		21 08 58.5	
	2.0nm,0.2s						
YCRN				*e*S	Sn	21 10 18.3	+1.9
	80nm,0.7s						

YCRN				*e*Lg	Lg	21 11 22.4	
YCRN				*e*Lg	Lg	21 11 22.4	
SEY	Seymchan	16.65	112	Pn	P	21 09 34.7	-0.3
	0.1nm,0.3s,baz=28,slow=13,SNR=1.6						
ZALV	Zalesovo Beam	23.76	231	P	P	21 10 49.2	-2.4
	0.9nm,0.6s,baz=24,slow=7.9,SNR=2.5						
ARCES	ARCESS Array B	26.38	308	P	P	21 11 15.2	-0.2
	3.6nm,1.0s,baz=32,slow=8.6,SNR=1.4						
SONM	Songino Array	26.39	196	P	P	21 11 13.4	-2.4
	0.7nm,0.8s,baz=13,slow=8.6,SNR=2.8						
KURBB	Kurchatov Arra	28.28	236	P	P	21 11 30.3	-2.3
	0.3nm,0.4s,baz=23,slow=8.9,SNR=2.9						
ILAR	Eielson Array	31.40	55	P	P	21 12 02.8	+2.7
	0.5nm,0.7s,baz=328,slow=10,SNR=8.1						
TXAR	Lajitas Array	73.72	36	P	P	21 17 13.8	+0.4
	0.7nm,0.7s,baz=350,slow=3.9,SNR=3.5						

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*NEIC **29** 21:11:00.9±1.0, 43°.77N±0°.05×105°.27W±0°.05, h0km±2km, ML3.4/62, Error ellipse: s-maj=9.5km s-min=4.3km az=326.0*

*IDC **29** 21:11:01.0±0.8, 44°.07N×105°.76W, h0km, mb3.9/3, mb1 3.8/9, mb1mx3.5/53, mbtmp3.6/9, ML3.0/4, Error ellipse: s-maj=21.5km s-min=7.2km az=146.0*

*ANF **29** 21:11:01.1±0.4, 43°.71N×105°.33W, h1km, ML3.6/13, Error ellipse: s-maj=5.4km s-min=4.1km az=124.0*

ISC 29 21:11:00.7±0.6**, 43°.79N**±0°.03×**105°.43W**±0°.03**, h0**km**, n89, σ1ˢ81**/102**, mb4.1**/3**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	1.06	71	P	Pg	21 11 19.3	-1.7
	baz=247						
RSSD	Black Hills	1.06	71	Pg	Pg	21 11 19.3	-1.7
RSSD				Sn	Sn	21 11 36.4	-2.2
K22A	Casper	1.39	215	P	Pn	21 11 26.4	-1.1
	baz=39,SNR=420						
K22A				S	Sg	21 11 45.9	+0.5
	baz=39						
K22A	Casper	1.39	215		Pn	21 11 26.4	-1.1
K22A				Sg	Sg	21 11 47.1	+1.7
K22A				IAML		21 11 50.4	
	comp=E,582nm,0.3s						
RWWY	Rawlins	2.48	213		Pn	21 11 43.6	+1.1
RWWY				Sn	Sn	21 12 16.1	+2.5
RWWY				IAML		21 12 19.2	
	comp=E,240nm,0.7s						
N23A	Red Feather La	2.92	188	P	Pn	21 11 49.3	+0.7
	baz=8.9,SNR=79						
N23A				Sb	Sb	21 12 28.8	-1.4
	baz=8.9						
LAO	LASA Array	2.95	349	P	Pn	21 11 49.6	+0.8
	baz=168						
LAO	LASA Array	2.95	349		Pn	21 11 49.1	+0.3
LAO				IAML		21 12 47.2	
	comp=E,181nm,0.8s						
RLMT	Red Lodge	3.05	297	P	Pn	21 11 51.9	+1.5
	baz=115,SNR=25						
RLMT				S	Sb	21 12 34.4	+0.6
	baz=115						
RLMT	Red Lodge	3.05	297		Pn	21 11 51.6	+1.2
RLMT				IAML		21 12 42.9	
	comp=E,84nm,0.4s						
RLMT				IAML		21 12 44.2	
	comp=E,94nm,0.3s						
BW06	Boulder Array	3.18	253	Pn	Pn	21 11 53.4	+1.2
	baz=72,SNR=86						
BW06				Pb	Pb	21 11 59.1	+0.8
	baz=72						
BW06				Sb	Sb	21 12 38.6	+1.0
	baz=72						
BW06	Boulder Array	3.18	253		Pn	21 11 53.3	+1.1
BW06				IAML		21 12 41.7	
	comp=E,93nm,0.3s						
BW06				IAML		21 12 44.8	
	comp=E,86nm,0.3s						
PD31	Pinedale Array	3.18	253		Pn	21 11 53.7	+1.5
PDAR	Pinedale Array	3.18	253	Pn	Pn	21 11 53.5	+1.2
	comp=E,6.0nm,0.3s,baz=69,slow=16,SNR=173						
PDAR				Pg	Pb	21 11 58.5	+0.2
	comp=E,30nm,0.3s,baz=68,slow=20,SNR=77						
PDAR				Lg	Lg	21 12 37.4	
	comp=E,18nm,0.3s,baz=104,slow=19,SNR=4.6						
PDAR	Pinedale Array	3.18	253	Pn	Pn	21 11 53.1	+0.9
YMP	Mirror Lake Pl	3.52	287		Pn	21 11 58.4	+1.4
LKWY	Lake	3.66	284		Pn	21 12 00.9	+2.2
LKWY				IAML		21 12 27.2	
	comp=E,77nm,0.6s						
H17A	Grant Village	3.75	281	P	Pn	21 12 03.3	+3.2
	baz=98,SNR=21						
H17A	Grant Village	3.75	281		Pn	21 12 02.7	+2.6
H17A				IAML		21 13 04.8	
	comp=N,47nm,0.8s						
H17A				IAML		21 13 07.6	
	comp=E,35nm,0.8s						
LOHW	Long Hollow	3.75	269		Pn	21 12 01.8	+1.8
YUF	Upper Falls	3.76	286	Pn	Pn	21 12 01.6	+1.4
FLWY	Flagg Ranch	3.81	276		Pn	21 12 02.7	+1.8
FLWY				IAML		21 13 11.2	
	comp=E,69nm,2.2s						
FLWY				IAML		21 13 16.2	
	comp=E,49nm,1.0s						
MOOW	Moose Ponds	3.85	271		Pn	21 12 03.5	+2.1
SNOW	Snow King Moun	3.88	267	Pn	Pn	21 12 02.9	+1.1
SNOW				IAML		21 13 08.8	
	comp=E,64nm,1.0s						
SNOW				IAML		21 13 11.4	
	comp=E,52nm,1.1s						
YNR	Norris Junctio	3.88	286	Pn	Pn	21 12 03.2	+1.4
REDW	Red Top Meadow	3.96	266		Pn	21 12 04.4	+1.4
REDW				IAML		21 13 10.8	
	comp=E,73nm,0.9s						
REDW				IAML		21 13 25.5	
	comp=E,44nm,1.2s						
ISCO	Idaho Springs	3.99	182	P	Pn	21 12 03.9	+0.5
	baz=3.0,SNR=20						
ISCO				Sb	Sb	21 13 02.6	+1.5
	baz=3.0						
ISCO	Idaho Springs	3.99	182	Pn	Pn	21 12 02.8	-0.6
ISCO				IAML		21 13 10.1	
	comp=E,32nm,0.8s						
YHH	Holmes Hill	4.01	286	Pn	Pn	21 12 05.0	+1.3
YHH				IAML		21 13 18.8	
	comp=N,35nm,0.9s						
TPAW	Teton Pass	4.02	268		Pn	21 12 05.2	+1.5
TPAW				IAML		21 13 27.1	
	comp=N,35nm,1.1s						
TPAW				IAML		21 13 33.2	
	comp=N,71nm,1.0s						
FXWY	Fox Creek	4.06	270		Pn	21 12 05.5	+1.3
O20A	White River Ci	4.21	211	P	Pn	21 12 07.6	+1.2
	baz=30,SNR=17						
O20A	White River Ci	4.21	211	Pn	Pn	21 12 05.8	-0.5
O20A				IAML		21 13 15.8	
	comp=E,62nm,0.7s						
O20A				IAML		21 13 20.1	
	comp=N,51nm,0.7s						
YHL	Hebgen Lake	4.26	286		Pn	21 12 08.2	+1.1
YHL				IAML		21 13 24.7	
	comp=N,45nm,1.1s						
YHL				IAML		21 13 26.6	
	comp=E,52nm,1.0s						
AHID	Auburn Hatcher	4.26	258		Pn	21 12 08.8	+1.8
AHID				IAML		21 13 24.9	
	comp=E,52nm,0.7s						
AHID				IAML		21 13 27.9	
	comp=E,62nm,0.9s						
E28A	Huff	4.36	49		Pn	21 12 08.2	+0.1
ECR	Eagle Creek	4.39	262	Pn	Pn	21 12 10.6	+1.8
RDMU	Red Mountain	4.45	225		Pn	21 12 10.9	+1.3
RDMU				IAML		21 13 28.0	
	comp=N,42nm,1.0s						
RDMU				IAML		21 13 29.0	
	comp=E,45nm,1.0s						
SUSD	Miller	4.71	80	Pb	Pb	21 12 22.4	-1.7
	baz=263						
SUSD	Miller	4.71	80	Pn	Pn	21 12 11.7	-1.2
SMCO	Snowmass	4.75	195	Pn	Pn	21 12 14.3	+0.4
SMCO				IAML		21 13 33.3	
	comp=E,41nm,0.4s						
SMCO				IAML		21 13 40.3	
	comp=E,36nm,0.9s						
DGMT	Dagmar	4.76	10	P	Pn	21 12 15.9	+2.3
	baz=190						
DGMT				Sb	Sb	21 13 27.4	+4.7
	baz=190						
DGMT	Dagmar	4.76	10		Pn	21 12 14.1	+0.5
BOZ	Bozeman (W)	4.77	294	Pn	Pn	21 12 15.7	+1.7
	baz=111						
BOZ				Pb	Pb	21 12 28.2	+2.9
	baz=111,SNR=5.8						
BOZ				Sb	Sg	21 13 31.7	-2.3
	baz=111						
BOZ	Bozeman (W)	4.77	294		Pn	21 12 15.4	+1.4
BOZ				IAML		21 13 34.1	
	comp=E,26nm,1.3s						
BOZ				IAML		21 13 34.0	
	comp=E,24nm,1.2s						
EGMT	Eagleton	5.20	326		Pn	21 12 20.5	+0.8
KSCO	Kaye Shedlock'	5.22	155	P	Pn	21 12 19.3	-0.8
	baz=338,SNR=9.0						
KSCO	Kaye Shedlock'	5.22	155	Pn	Pn	21 12 19.1	-1.0
DLMT	Dillon	5.35	290	Pn	Pn	21 12 23.6	+1.6
JLU	Jordanelle	5.49	237		Pn	21 12 25.2	+1.2
P18A	Preston Nutter	5.50	223		Pn	21 12 25.3	+1.2
CTU	Camp Tracy	5.62	239		Pn	21 12 27.4	+1.8
SPUT	South Promonto	5.75	247	Pn	Pn	21 12 28.5	+1.2
MDND	Maddock	5.75	43	Pb	Pb	21 12 44.7	+3.0
	baz=226,SNR=7.4						
MDND				Sn	Sn	21 13 33.4	-0.4
	baz=226						
MDND				Sb	Sb	21 13 56.0	+4.8
	baz=226						
MDND	Maddock	5.75	43		Pn	21 12 26.0	-1.2
HVU	Hansel Valley	5.76	252		Pn	21 12 29.2	+1.5
BCYI	Bear Canyon	5.77	278		Pn	21 12 29.7	+2.0
P17A	Butcher Ranch,	5.87	224		Pn	21 12 30.3	+1.2
BGNE	Belgrade	5.88	111	Pb	Pb	21 12 43.5	-0.5
	baz=296						
BGNE	Belgrade	5.88	111	Pn	Pn	21 12 26.7	-2.4
SRU	San Rafael Swe	6.04	221		Pn	21 12 31.7	+0.2
TMUT	Trail Mountain	6.24	226		Pn	21 12 35.1	+0.8
NLU	North Lily Min	6.27	235		Pn	21 12 35.6	+1.0
BGU	Big Grassy Mou	6.32	246	Pn	Pn	21 12 36.9	+1.7
ECSD	EROS Data Cent	6.39	87	P	Pn	21 12 35.0	-1.0
	baz=273						
ECSD	EROS Data Cent	6.39	87	Pn	Pn	21 12 34.7	-1.4
Q16A	Castle Valley	6.51	223	Pn	Pn	21 12 38.6	+0.7
HLID	Hailey	6.52	271	Pn	Pn	21 12 39.6	+1.6
CBKS	Cedar Bluff	6.57	137	Pn	Pn	21 12 37.8	-0.8
DUG	Dugway, Tooele	6.57	239	P	Pn	21 12 39.5	+0.9
	baz=55,SNR=8.7						
DUG	Dugway, Tooele	6.57	239		Pn	21 12 39.5	+0.9
T25A	Trinidad	6.69	173	Sb	Sb	21 14 26.1	+7.5
	baz=354						
MSO	Missoula	6.72	300	P	Pn	21 12 43.0	+2.2
	baz=114						
MSO	Missoula	6.72	300	Pn	Pn	21 12 41.0	+0.3
F33A	5 Mile Ranch,	6.81	69		Pn	21 12 39.1	-2.8
MVCO	Mesa Verde	6.98	201	Pn	Pn	21 12 43.0	-1.3
MSU	Marysvale	7.33	226		Pn	21 12 50.2	+1.0
ELK	Elko	7.88	251	Pn	Pn	21 12 58.1	+1.4
	comp=E,0.9nm,0.3s,baz=69,slow=8.1,SNR=14						
ELK				Lg	Lg	21 15 03.9	
	comp=E,0.1nm,0.3s,baz=203,slow=12,SNR=1.5						
ELK	Elko	7.88	251		Pn	21 12 58.3	+1.5
I10CA	LAC DU BONNET	9.07	42	*i*		22 06 50.0	
	baz=222,slow=319,SNR=4.2						
ULM	Lac du Bonnet	9.18	42	Pn	Pn	21 13 12.2	-2.0
	comp=E,1.6nm,0.3s,baz=238,slow=11,SNR=10.0						
ULM				Lg	Lg	21 15 39.4	
	comp=E,0.4nm,0.3s,baz=310,slow=21,SNR=1.5						
ULM	Lac du Bonnet	9.18	42		Pn	21 13 12.8	-1.5
NEW	Newport	9.28	303	Lg	Lg	21 15 45.9	
	comp=E,0.1nm,0.3s,baz=191,slow=13,SNR=2.5						
YBH	Yreka Blue Hor	12.87	267	Pn	Pn	21 14 07.1	+2.2
	comp=E,0.1nm,0.3s,baz=87,slow=11,SNR=1.6						
TXAR	Lajitas Array	14.50	174	Pn	P	21 14 33.7	-0.5
	baz=358,slow=9.0,SNR=1.6						
TXAR				Pg		21 15 30.1	
	comp=E,0.0nm,0.3s,baz=359,slow=14,SNR=2.5						
TXAR				Lg	Lg	21 18 41.0	
	comp=E,0.0nm,0.3s,baz=5.8,slow=28,SNR=3.0						
YKA	Yellowknife Ar	19.49	347	P	P	21 15 26.0	-3.0
	comp=E,0.0nm,0.3s,baz=161,slow=9.6,SNR=2.3						
ARCES	ARCESS Array B	61.40	18	P	P	21 21 16.5	-1.5
	comp=E,1.1nm,0.6s,baz=337,slow=8.8,SNR=4.4						
ZALV	Zalesovo Beam	82.24	354	P	P	21 23 22.5	-0.9
	comp=E,0.4nm,0.3s,baz=20,slow=4.6,SNR=2.4						
MKAR	Makanchi Array	89.54	355	P	P	21 23 59.2	-0.6
	comp=E,0.4nm,0.6s,baz=8.8,slow=4.5,SNR=5.7						

DJA 29 21:12:24.8±0.3**, 0°S**±4°×**12°4E**±°**, h48**km±13km**, M3.7**/11**, mb4.0**/3**, MLv3.5**/11**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	Cibinong	0.68	0	P	Pn	21 12 38.7	+0.5
KMSI				S	Sn	21 12 50.7	+2.8
MRSI	Marisa	2.12	286	P	Pn	21 12 55.9	-1.9
APSI	Ampana	2.46	251	P	Pn	21 13 03.7	+1.2
SANI	Sanana	2.78	134	P	Pn	21 13 04.7	-2.2
LBMI	Labuha	3.56	98	P	Pn	21 13 16.6	-1.0
SPSI	Sidrap Palu	5.69	228	P	Pn	21 13 48.4	+1.6
	0.0nm7.3nm,0.5s						
BSSI	Bau Bau, Buton	6.93	210	P	Pn	21 14 05.5	+1.6

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*MOS **29** 21:28:35.6±1.2, 45°.85N×26°.65E, h128km, mb3.9/7, Error ellipse: s-maj=7.2km s-min=5.9km az=66.0*

*SIGU **29** 21:28:36.2, 45°.80N×26°.72E, h131km, mb3.6*

*IDC **29** 21:28:36.3±0.4, 45°.88N×26°.53E, h122km±5km, mb3.4/9, mb1 3.5/16, mb1mx3.3/58, mbtmp3.8/16, MS3.8/1, Ms1 3.8/1, ms1mx2.5/36, Error ellipse: s-maj=17.1km s-min=12.5km az=144.0*

*NEIC **29** 21:28:36.8±1.6, 45°.75N±0°.05×26°.75E±0°.05, h128km±4km, Error ellipse: s-maj=7.6km s-min=5.4km az=183.0*

*BUC **29** 21:28:36.8±0.2, 45°.73N×26°.72E, h124km±2km, ml4.4/64, Error ellipse: s-maj=1.6km s-min=1.3km az=176.0*

*CFUSG **29** 21:28:37.1, 45°.93N×27°.13E, h115km, mb3.4/1, MD3.6/1, Romania Magtype MSH 3.4 from 1 stations*

*SOF **29** 21:28:37.5, 45°.73N×26°.60E, h65km, MD3.8*

ISC 29 21:28:36.7±0.5**, 45°.76N**±0°.03×**26°.71E**±0°.02**, h130**km±4km**, n211, σ1ˢ24**/281**, mb3.8**/18**, 85C-67D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLOR	Plostina	0.10	336	⇑P	Pn	21 28 54.1	-0.3
PLOR				⇓S	Sn	21 29 07.2	-0.6
PLOR	Plostina	0.10	336	P	Pn	21 28 54.1	-0.3
PLOR	Plostina	0.10	336		Pn	21 28 54.1	-0.3
VRI	Vrincioaia	0.11	7	⇑P	Pn	21 28 54.2	-0.1
VRI				⇓S	Sn	21 29 07.3	-0.5
VRI	Vrincioaia	0.11	7	P	Pn	21 28 54.2	-0.1
VRI	Vrincioaia	0.11	7		Pn	21 28 54.2	-0.1
BISRR	Bisoca	0.21	180	⇓P	Pn	21 28 54.8	+0.1
ODBI	Odobesti	0.24	89	⇓P	Pn	21 28 55.2	+0.7
COVR	Voineasa-Covas	0.36	284	⇑P	Pn	21 28 54.8	-0.3
COVR				⇓S	Sn	21 29 08.1	-0.9
NEHR	Nehoiu	0.44	221	⇑P	Pn	21 28 55.5	0.0
NEHR				⇑S	Sn	21 29 09.4	-0.2
GHRR		0.57	58	⇑S	Sn	21 29 11.7	+0.8
MLR	Muntele Rosu	0.60	244	⇑P	Pn	21 28 56.4	-0.1
MLR				⇑S	Sn	21 29 10.4	-1.1
MLR	Muntele Rosu	0.60	244	P	Pn	21 28 56.3	-0.1
	298nm,0.3s,baz=148,slow=2.8,SNR=1857						
MLR				S	Sn	21 29 10.7	-0.8
	364nm,0.3s,baz=233,slow=22,SNR=50						
MLR	Muntele Rosu	0.60	244	Pn	Pn	21 28 55.4	-1.1
MLR				Sn	Sn	21 29 10.8	-0.7
ISR	Istrita	0.65	190	⇓P	Pn	21 28 56.8	0.0
TUDR		0.69	103	⇑P	Pn	21 28 56.5	-0.4
TUDR				⇓S	Sn	21 29 12.2	-0.1
TUDR		0.69	103		Pn	21 28 56.5	-0.4
OZUR		0.73	298	⇓P	Pn	21 28 56.7	-0.5
OZUR				⇓S	Sn	21 29 11.8	-1.1
TESR	Tescani	0.75	357	⇑P	Pn	21 28 57.0	-0.4
TESR	Tescani	0.75	357		Pn	21 28 57.0	-0.4
SLCR	Slobozia Conac	0.76	102	⇓P	Pn	21 28 57.2	-0.3
SLCR				⇑S	Sn	21 29 12.4	-0.8
IZVR	Izvoarele	0.77	106	⇑P	Pn	21 28 57.2	-0.3
IZVR				⇑S	Sn	21 29 12.3	-1.0
VARL	Varlezi	0.81	80	⇓P	Pn	21 28 57.8	-0.1
BIR	Birlad	0.82	51	⇑P	Pn	21 28 58.1	+0.2
BIR				⇓S	Sn	21 29 13.9	-0.1
SCHL	Schela	0.83	108	⇑P	Pn	21 28 57.7	-0.3
SCHL				⇓S	Sn	21 29 13.2	-0.9
SCHL	Schela	0.83	108		Pn	21 28 57.7	-0.3
SECR		0.85	212	⇑P	Pn	21 28 58.6	+0.3
SECR				⇑S	Sn	21 29 15.0	+0.4
SECR		0.85	212		Pn	21 28 58.6	+0.3
PGOR	Pogoanele	0.87	167	⇓P	Pn	21 28 58.6	+0.2
PGOR				⇑S	Sn	21 29 15.3	+0.5
PGOR	Pogoanele	0.87	167		Pn	21 28 58.5	+0.2
SCTR	Scanteiesti	0.91	95	⇑P	Pn	21 28 58.8	+0.2
SCTR				⇑S	Sn	21 29 14.7	-0.7
DOPR	Dopca	0.95	283	⇓P	Pn	21 28 59.0	-0.1
DOPR				⇑S	Sn	21 29 15.4	-0.7
TATR	Tatarca	0.95	99	⇑P	Pn	21 28 59.1	+0.1
TATR				⇓S	Sn	21 29 15.3	-0.8
TATR	Tatarca	0.95	99		Pn	21 28 59.1	+0.1
VLDR	Vladesti	0.96	84	⇓P	Pn	21 28 59.3	+0.2
VLDR				⇓S	Sn	21 29 15.7	-0.6
VLDR	Vladesti	0.96	84		Pn	21 28 59.3	+0.2
PLAR	PLOIESTI	0.97	210	⇓P	Pn	21 28 59.6	+0.3
PLAR				⇓S	Sn	21 29 17.1	+0.7
GISR	Galati	1.00	108	⇑P	Pn	21 28 59.5	0.0
GISR				⇑S	Sn	21 29 16.2	-0.6
GIUM	Giurgiulesti	1.09	104	⇓P	Pn	21 29 00.7	+0.3
GIUM				⇑S	Sn	21 29 17.8	-0.6
SULR		1.13	197	⇑P	Pn	21 29 00.9	+0.2
SULR		1.13	197		Pn	21 29 00.9	+0.2
VASR	Vaslui	1.16	40	⇓P	Pn	21 29 01.4	+0.3
VASR				⇓S	Sn	21 29 19.2	-0.5
CFR	Carcaliu	1.16	120	⇓P	Pn	21 29 00.6	-0.5
CFR				⇑S	Sn	21 29 18.4	-1.2
GIRR	Girov	1.21	353	⇓P	Pn	21 29 01.9	+0.3
VOIR		1.21	255	⇑P	Pn	21 29 01.2	-0.5
VOIR				⇓S	Sn	21 29 19.0	-1.6
VOIR		1.21	255	P	Pn	21 29 01.2	-0.5
VOIR		1.21	255		Pn	21 29 01.2	-0.5
AMRR	Amara	1.23	159	⇑P	Pn	21 29 01.8	0.0
AMRR				⇑S	Sn	21 29 20.5	-0.4
JOSR	Joseni	1.26	319	⇓P	Pn	21 29 02.1	0.0
MTUR	Matau	1.27	246	⇓P	Pn	21 29 02.5	+0.2
LEHL	Lehliu	1.29	176	⇑P	Pn	21 29 02.5	0.0
LEHL				⇑S	Sn	21 29 21.7	-0.3
HARR	Harsova	1.37	141	⇓P	Pn	21 29 03.0	-0.3
INCR	INCERC-Sediu C	1.37	197	⇑P	Pn	21 29 03.1	-0.3
INCR				⇑S	Sn	21 29 22.8	-0.8
BUC1	Bucharest	1.49	199	⇑P	Pn	21 29 04.4	-0.2
BUC1				⇓S	Sn	21 29 24.9	-1.0
TPGR	Topolog	1.51	126	⇓P	Pn	21 29 04.2	-0.6
TPGR				⇑S	Sn	21 29 24.5	-1.8
ARR	Arges	1.51	256	⇓P	Pn	21 29 04.8	-0.1
ARR				⇓S	Sn	21 29 25.6	-0.8
STFAR	Stefanesti-Arg	1.52	235	⇓P	Pn	21 29 05.1	+0.1
STFAR				⇑S	Sn	21 29 26.6	0.0
TLBR	Topalu	1.54	142	⇓P	Pn	21 29 04.9	-0.3
TLBR				⇓S	Sn	21 29 25.3	-1.6
IAS	Iasi	1.55	22	⇓P	Pn	21 29 05.3	0.0
IAS				⇓S	Sn	21 29 26.0	-1.1
RASA	Rasa	1.58	168	⇓P	Pn	21 29 05.2	-0.4
TLCR		1.59	110	⇑P	Pn	21 29 05.4	-0.3
TLCR				⇑S	Sn	21 29 26.7	-1.2
SGRR	Singureni	1.62	199	⇓P	Pn	21 29 05.7	-0.4
SGRR				⇓S	Sn	21 29 27.0	-1.6
PRAR	RASCA	1.64	348	⇑P	Pn	21 29 06.9	+0.6
MDB	Medias	1.67	284	⇑P	Pn	21 29 07.9	+1.2
CVDA	Cernavoda	1.71	146	⇑P	Pn	21 29 06.9	-0.2
CVDA				⇑S	Sn	21 29 28.7	-1.7
HUMR	Humele	1.73	225	⇓P	Pn	21 29 06.8	-0.6
HUMR				⇑S	Sn	21 29 29.3	-1.6
TIRR	Tirgusor	1.77	137	⇓P	Pn	21 29 07.5	-0.4
TIRR				⇑S	Sn	21 29 29.7	-2.0
TIRR	Tirgusor	1.77	137	P	Pn	21 29 07.5	-0.4
TIRR						21 29 29.5	
TIRR	Tirgusor	1.77	137		Pn	21 29 07.5	-0.4
TIRR				Sn	Sn	21 29 29.5	-2.2
ICOR	Ion Corvin	1.82	154	⇑P	Pn	21 29 08.6	+0.2
ICOR				⇓S	Sn	21 29 31.0	-1.7
JURR	Jurilovca	1.82	122	⇑P	Pn	21 29 08.4	0.0
RMVG	GOVORA	1.85	248	⇑S	Sn	21 29 34.0	+0.6
MILM	Milestii Mici	1.86	51	⇑P	Pn	21 29 09.0	+0.1
MILM	Milestii Mici	1.86	51	*d i*P	Pn	21 29 09.0	+0.1
MILM				*i* S	Sn	21 29 32.0	-1.6
MILM				pmax	pmax		
	comp=Z,900nm,0.1s						
MILM				smax	smax		
	comp=N,1µm,0.5s						
MILM				smax	smax		
	comp=E,1µm,0.2s						
MILM	Milestii Mici	1.86	51	⇑*i*P	Pn	21 29 09.0	+0.1
MILM				Pm		21 29 09.2	
MILM				*i* S	Sn	21 29 32.0	-1.6
MILM				Sm		21 29 33.0	
KIS	Kishinev	1.92	49	⇑P	Pn	21 29 09.8	+0.2
KIS				⇑S	Sn	21 29 33.7	-1.0
KIS	Kishinev	1.92	49	*d i*P	Pn	21 29 09.6	+0.1
KIS				*e*S	Sn	21 29 33.0	-1.8
KIS				pmax	pmax		
	comp=Z,740nm,0.2s						
KIS				smax	smax		
	comp=N,1µm,0.4s						
KIS				smax	smax		
	comp=E,2µm,0.5s						
KIS	Kishinev	1.92	49	⇑*i*P	Pn	21 29 09.6	+0.1
KIS				Pm		21 29 09.8	
KIS				*e*S	Sn	21 29 32.9	-1.8
KIS				Sm		21 29 34.0	
COPA	Copaceanca	1.94	214	⇓P	Pn	21 29 09.2	-0.6
COPA				⇓S	Sn	21 29 33.3	-1.9
MFTR	Murfatlar	2.00	142	⇓P	Pn	21 29 10.1	-0.4
LOT	Lotru	2.09	262	⇓P	Pn	21 29 11.8	0.0
LOT				⇑S	Sn	21 29 38.3	-0.4
BURAR	Bucovina Array	2.12	332	⇑P	Pn	21 29 13.6	+1.5
BURAR				⇓S	Sn	21 29 41.3	+1.8
BURAR	Bucovina Array	2.12	332	Pn	Pn	21 29 13.3	+1.1
BUR08	Bucovina Ar. S	2.15	332	Pn	Pn	21 29 13.3	+0.7
EFOR	EFORIE	2.17	140	⇑P	Pn	21 29 12.6	0.0
EFOR				⇑S	Sn	21 29 39.4	-0.7
RAZG	Razgrad	2.20	184	⇑P	Pn	21 29 12.6	-0.5
TSSL	Sulina	2.21	105	⇑P	Pn	21 29 13.2	+0.1
TSSL				⇓S	Sn	21 29 40.9	-0.2
ZIMR		2.31	205	⇓P	Pn	21 29 14.0	-0.4
PSN	Preselentsi	2.33	153	P	Pn	21 29 14.8	+0.1
PSN	Preselentsi	2.33	153	P	Pn	21 29 14.7	+0.1
PURM	Purcari	2.33	70	⇓P	Pn	21 29 14.8	+0.1
PURM				⇑S	Sn	21 29 42.8	-1.0
MANR	Mangalia	2.36	145	⇑P	Pn	21 29 14.8	-0.2
CJR	Cluj-Napoca	2.36	295	⇓P	Pn	21 29 15.3	+0.2
VLAD	Vladila	2.41	224	⇓P	Pn	21 29 14.7	-0.9
SZH	Strazhica	2.55	193	P	Pn	21 29 17.0	-0.5
SZH	Strazhica	2.55	193	P	Pn	21 29 16.8	-0.7
CHRU	Chernivtsi	2.60	348	*i* P	Pn	21 29 18.2	+0.2
CHRU				Pm		21 29 18.9	
CHRU				*i* S	Sn	21 29 48.8	-1.1
CHRU				Sm		21 29 51.6	
PRD	Provadia	2.61	169	P	Pn	21 29 18.4	+0.2
SORM	Soroca	2.63	25	⇑P	Pn	21 29 18.2	-0.3
KALB	Balgarevo	2.65	152	⇑P	Pn	21 29 18.9	+0.1
DEV	Deva	2.66	274	⇑P	Pn	21 29 19.5	+0.6
ROIA	ROIAK	2.71	170	P	Pn	21 29 19.6	+0.1
SRE	Strehaia	2.71	247	⇑P	Pn	21 29 18.8	-0.7
GZR	Gura Zlata	2.79	264	⇓P	Pn	21 29 20.7	+0.2
KSV	Kosov	2.79	337	*e*P	Pn	21 29 20.6	+0.1
KSV				Pm		21 29 21.4	
KSV				*i* S	Sn	21 29 54.2	-0.2
KSV				Sm		21 29 55.9	
KMPD	K-Podol'skiy	2.81	357	⇓*i*P	Pn	21 29 20.6	-0.1
KMPD				*i* S	Sn	21 29 54.1	-0.7
BMR	Baia Mare	2.92	312	⇓P	Pn	21 29 23.1	+0.9
BAIL	Bailesti	2.96	235	⇑P	Pn	21 29 22.2	-0.4
DRGR		2.96	292	⇑P	Pn	21 29 22.3	-0.5
RMGR	Halanga-Turnu	3.04	250	⇑P	Pn	21 29 23.0	-0.8
PUNG	Punghina	3.06	242	⇑P	Pn	21 29 22.5	-1.5
HERR	Herculane	3.15	255	⇑P	Pn	21 29 24.2	-1.0
STNU	Starunia	3.31	334	*i* S	Sn	21 30 06.7	+0.2
HORU	Horodok	3.46	357	⇑*i*P	Pn	21 29 29.0	-0.2
HORU				Pm		21 29 29.6	
HORU				*i* S	Sn	21 30 10.2	+0.3
HORU				Sm		21 30 24.2	
BZS	Buzias	3.57	270	⇓P	Pn	21 29 30.1	-0.5
MDVR	Moldovita	3.66	256	⇑P	Pn	21 29 31.1	-0.9
TRPA	Tarpa	3.71	311	*e*P	Pn	21 29 32.4	-0.1
MORS	Morshin	3.88	332	*e*P	Pn	21 29 35.5	+0.8

MORS				*i* S	Sn	21 30 20.7	+1.0
BANR	**Banloc**	**3.93**	**266**	⇑P	**Pn**	**21 29 36.1**	**+0.7**
BANR				⇑S	**Sn**	**21 30 20.1**	**-0.9**
VTS	**Vitosha**	**4.01**	**220**	⇑P	**Pn**	**21 29 36.3**	**-0.4**
VTS	**Vitosha**	**4.01**	**220**	P	**Pn**	**21 29 36.3**	**-0.4**
VTS	**Vitosha**	**4.01**	**220**	P	**Pn**	**21 29 36.1**	**-0.6**
VTS	**Vitosha**	**4.01**	**220**		**Pn**	**21 29 36.3**	**-0.4**
UZH	**Uzhgorod**	**4.16**	**315**	*e*P	**Pn**	**21 29 39.0**	**+0.6**
UZH				*e*		21 30 27.0	
FRGS	**Fruska Gora**	**4.89**	**265**	*e*Pn	**Pn**	**21 29 47.8**	**-0.5**
DIVS	**Divibare**	**5.05**	**253**	*e*Pn	**Pn**	**21 29 48.8**	**-1.7**
DIVS	**Divibare**	**5.05**	**253**		**Pn**	**21 29 49.4**	**-1.1**
PSZ	**Piszkesteto**	**5.15**	**297**	P	**Pn**	**21 29 52.3**	**+0.6**
PSZ	**Piszkesteto**	**5.15**	**297**	Pn	**Pn**	**21 29 52.3**	**+0.6**
STIP	**Stip**	**5.22**	**220**	*i* P	**Pn**	**21 29 49.3**	**-3.4**
AKASG	**Malin Array Be**	**5.22**	**18**	P	**Pn**	**21 29 51.2**	**-1.4**
	comp=E,13nm,0.3s,baz=243,slow=13,SNR=28						
AKASG				S	**Sn**	**21 30 46.6**	**-5.2**
	comp=E,16nm,0.3s,baz=201,slow=22,SNR=10.0						
AKBB	**Malin Array Si**	**5.22**	**18**	P	**Pn**	**21 29 51.9**	**-0.7**
AKBB	**Malin Array Si**	**5.22**	**18**	Pn	**Pn**	**21 29 51.9**	**-0.7**
SIM	**Simferopol'**	**5.28**	**96**	*e*P	**Pn**	**21 29 51.6**	**-1.9**
SIM				S	**Sn**	**21 30 51.5**	**-1.8**
SIM				pmax	pmax		
	comp=Z,34nm,0.4s						
SIM	**Simferopol'**	**5.28**	**96**	⇓*e*P	**Pn**	**21 29 51.5**	**-1.9**
SIM				Pm		21 29 52.7	
	comp=Z,24nm,0.4s						
SIM				*e*S	**Sn**	**21 30 49.1**	**-4.2**
SIM				Sm		21 30 52.7	
	comp=N,64nm,0.8s						
SIM				Sm		21 30 53.2	
	comp=E,46nm,0.8s						
VAY	**Valandovo**	**5.36**	**216**	*i* P	**Pn**	**21 29 52.4**	**-2.1**
BBLS	**Lazići**	**5.53**	**253**	*e*Pn	**Pn**	**21 29 55.6**	**-1.3**
MORH	**Mrgy, Hungar**	**5.64**	**278**	*e*P	**Pn**	**21 29 57.6**	**-0.6**
MORH	**Mrgy, Hungar**	**5.64**	**278**	*e*Pn	**Pn**	**21 29 58.3**	**+0.1**
PDG	**Podgorica**	**6.31**	**241**	*e*Pn	**Pn**	**21 30 05.0**	**-2.3**
PDG	**Podgorica**	**6.31**	**241**	Pn	**Pn**	**21 30 07.0**	**-0.4**
DRME	**Dracevica, Mon**	**6.50**	**239**	*e*Pn	**Pn**	**21 30 08.6**	**-1.2**
TREB	**Trebinje**	**6.73**	**246**	*e*Pn	**Pn**	**21 30 13.6**	**+0.7**
BLY	**Banja Luka**	**6.80**	**265**	*e*Pn	**Pn**	**21 30 12.7**	**-1.2**
STON	**Ston**	**7.08**	**249**	*e*Pn	**Pn**	**21 30 18.6**	**+1.0**
ANN	**Anapa**	**7.63**	**93**	*e*P	**Pn**	**21 30 24.0**	**-1.0**
ANN				*e*S	**Sn**	**21 31 50.6**	**+0.8**
ANN				pmax	pmax		
	comp=Z,169nm,0.9s						
BRTR	**Keskin Array B**	**7.89**	**137**	P	**Pn**	**21 30 29.8**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=320,slow=6.4,SNR=2.3						
BRTR				S	**Sn**	**21 31 55.7**	**-0.9**
	baz=321,slow=20,SNR=2.6						
BRTR	**Keskin Array B**	**7.89**	**137**	Pn	**Pn**	**21 30 28.3**	**-0.5**
MNK	**Minsk**	**8.79**	**4**	*i* P	**Pn**	**21 30 37.9**	**-2.6**
MNK				*i* S	**Sn**	**21 32 15.0**	**-2.7**
MNK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MNK				pmax	pmax		
	comp=N,9.0nm,0.8s						
MNK				pmax	pmax		
	comp=E,2.0nm,0.8s						
MNK	**Minsk**	**8.79**	**4**	*i* P	**Pn**	**21 30 37.9**	**-2.5**
	comp=E,2.0nm,0.8s						
MNK				*i* P	**Pn**	**21 30 37.9**	**-2.5**
	comp=N,9.0nm,0.8s						
MNK				*i* P	**Pn**	**21 30 37.9**	**-2.5**
	comp=Z,3.0nm,0.7s,baz=186						
MNK				*i* S	**Sn**	**21 32 15.1**	**-2.6**
KHC	**Kasperske Hory**	**9.51**	**295**	⇑*e*P	**Pn**	**21 30 48.7**	**-1.7**
TIP	**Timpagrande**	**9.86**	**232**	Pn	**Pn**	**21 30 54.5**	**-0.6**
VSR	**Storozhevoye**	**9.90**	**52**	*e*P	**Pn**	**21 30 54.9**	**-0.6**
VSR				pmax	pmax		
	comp=Z,20nm,0.4s						
PABE	**Paberze**	**9.91**	**351**	Pn	**Pn**	**21 30 55.6**	**+0.1**
NRCA	**Norcia**	**10.18**	**258**		**Pn**	**21 30 59.2**	**-0.1**
LPSR	**Galich'ya Gora**	**10.52**	**45**	*e*P	**Pn**	**21 31 02.5**	**-1.3**
LPSR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
OBN	**Obninsk**	**11.27**	**30**	P	**Pn**	**21 31 11.7**	**-1.9**
	comp=Z,1.8nm,0.3s,baz=195,slow=12,SNR=12						
OBN	**Obninsk**	**11.27**	**30**	⇓*e*P	**Pn**	**21 31 11.5**	**-2.1**
OBN				*e*S	Sn	21 33 07.5	-10
OBN				pmax	pmax		
	comp=Z,51nm,2.5s						
OBN	**Obninsk**	**11.27**	**30**		**Pn**	**21 31 11.5**	**-2.1**
VRH	**Novokhopyorsk**	**11.35**	**56**	*e*P	**Pn**	**21 31 12.4**	**-2.4**
VRH				pmax	pmax		
	comp=Z,30nm,0.6s						
KIV	**Kislovodsk**	**11.49**	**93**	*e*P	**Pn**	**21 31 18.1**	**+1.3**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KIV	**Kislovodsk**	**11.49**	**93**	Pn	**Pn**	**21 31 16.2**	**-0.5**
SHA1	**Shidzhatmaz**	**11.52**	**94**	⇑*e*P	**Pn**	**21 31 17.8**	**+0.4**
KBZ	**Khabaz**	**11.69**	**94**	P	**Pn**	**21 31 22.3**	**+2.9**
	comp=Z,0.1nm,0.3s,baz=315,slow=8.6,SNR=3.1						
PYA1	**Pyatigorsk**	**11.75**	**92**	⇑*e*P	**Pn**	**21 31 21.2**	**+1.1**
NCK	**Nalchik**	**12.24**	**95**	⇓*e*P	**Pn**	**21 31 28.1**	**+1.4**
NCK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
SENIN	**Lac Senin/Sane**	**13.49**	**280**	Pn	**Pn**	**21 31 42.3**	**-0.7**
BTLR	**Botlikh**	**14.33**	**96**	⇓*e*P	**Pn**	**21 31 52.4**	**-1.1**
GNI	**Garni**	**14.34**	**107**	*ce*P	**Pn**	**21 31 55.3**	**+1.6**
GNI				pmax	pmax		
	comp=Z,18nm,1.2s						
GNBR	**Gunib**	**14.94**	**96**	⇑*e*P	**Pn**	**21 32 01.7**	**+0.5**
BELG	**Belogornoye**	**15.20**	**57**	P	**Pn**	**21 32 02.8**	**-1.4**
	comp=Z,0.7nm,0.3s,baz=36,slow=23,SNR=5.3						
BELG	**Belogornoye**	**15.20**	**57**	⇑*e*P	**Pn**	**21 32 03.9**	**-0.3**
BELG				pmax	pmax		
	comp=Z,1.0nm,0.9s						
FINES	**FINESS Array B**	**15.72**	**359**	P	**Pn**	**21 32 07.3**	**-3.3**
	comp=Z,0.1nm,0.3s,baz=172,slow=12,SNR=1.6						
FINES	**FINESS Array B**	**15.72**	**359**	P	**Pn**	**21 32 10.7**	**+0.1**
FINES	**FINESS Array B**	**15.72**	**359**	Pn	**Pn**	**21 32 10.7**	**+0.1**
HFS	**Hagfors**	**16.35**	**336**	P	**Pn**	**21 32 17.3**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=129,slow=11,SNR=2.4						
NOA	**NORSAR Array B**	**17.80**	**335**	P	**P**	**21 32 32.8**	**-2.1**
	comp=Z,0.0nm,0.3s,baz=144,slow=10,SNR=2.3						
KIRV	**Kirov**	**18.82**	**39**	⇑*e*P	**P**	**21 32 46.5**	**+0.6**
AKTO	**Aktyubinsk**	**21.33**	**66**	P	**P**	**21 33 14.3**	**+1.1**
	comp=Z,1.0nm,0.4s,baz=266,slow=10,SNR=3.7						
ARU	**Arti**	**22.47**	**50**	P	**P**	**21 33 24.9**	**+0.1**
	comp=Z,1.4nm,0.4s,baz=262,slow=7.8,SNR=9.6						
ARU	**Arti**	**22.47**	**50**	*d i*P	**P**	**21 33 24.8**	**0.0**
ARU				*PP	**pP**	**21 33 46.8**	**-2.3**
ARU						21 33 58.1	
ARU				S	**S**	**21 37 23.9**	**+2.2**
ARU				SS	**SnSn**	**21 38 14.5**	**+9.3**
ARU				pmax	pmax		
	comp=Z,17nm,2.2s						
ARU	**Arti**	**22.47**	**50**	P	**P**	**21 33 24.6**	**-0.2**
ARU				IAmb	IAmb	21 33 26.0	
	comp=Z,4.8nm,0.4s						
ABKAR	**Akbulak array**	**22.61**	**69**	P	**P**	**21 33 26.7**	**+0.4**
ESDC	**Sonseca Array**	**23.25**	**266**	P	**P**	**21 33 31.2**	**-1.3**
	comp=Z,0.4nm,0.7s,baz=67,slow=10.0,SNR=4.3						
ESDC	**Sonseca Array**	**23.25**	**266**	P	**P**	**21 33 33.4**	**+1.0**
ARCES	**ARCESS Array B**	**23.85**	**359**	P	**P**	**21 33 36.9**	**-0.6**
	comp=Z,4.6nm,1.0s,baz=174,slow=8.8,SNR=13						
BRVK	**Borovoye**	**28.90**	**59**	⇑*e*P	**P**	**21 34 23.2**	**+0.2**
BRVK				*i* *PP	**pP**	**21 34 51.8**	**+0.8**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BRVK	**Borovoye**	**28.90**	**59**	P	**P**	**21 34 23.6**	**+0.6**
BRVK				IAmb	IAmb	21 34 25.6	
	comp=Z,1.4nm,0.7s						
JMIC	**Jan Mayen**	**30.45**	**338**	LR	LR	21 47 45.7	
	comp=Z,165nm,18.1s,baz=264,slow=38						
AAK	**Ala-Archa**	**34.00**	**78**	⇑*e*P	**P**	**21 35 10.2**	**+2.2**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ZAA0	**Zalesovo Array**	**37.38**	**56**	P	**P**	**21 35 37.2**	**+0.7**
ZAA0				IAmb	IAmb	21 35 38.7	
	comp=Z,2.8nm,0.9s						
ZALV	**Zalesovo Beam**	**37.38**	**56**	P	**P**	**21 35 37.4**	**+0.9**
	comp=Z,2.0nm,0.4s,baz=279,slow=9.9,SNR=8.3						
ZALV	**Zalesovo Beam**	**37.38**	**56**	*e*P	**P**	**21 35 38.0**	**+1.5**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ZALV	**Zalesovo Beam**	**37.38**	**56**	P	**P**	**21 35 36.7**	**+0.2**
MAKZ	**Makanchi**	**37.54**	**68**	P	**P**	**21 35 39.2**	**+1.2**
MAKZ				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MAKZ	**Makanchi**	**37.54**	**68**	P	**P**	**21 35 39.1**	**+1.2**
MAKZ				IAmb	IAmb	21 35 40.0	
	comp=Z,1.2nm,0.9s						
MK31	**Makanchi Array**	**37.75**	**68**	P	**P**	**21 35 40.9**	**+1.2**
MK31				pmax	pmax		
	comp=Z,1.0nm,1.1s						
MK31	**Makanchi Array**	**37.75**	**68**	P	**P**	**21 35 40.9**	**+1.2**
MKAR	**Makanchi Array**	**37.75**	**68**	P	**P**	**21 35 41.3**	**+1.6**
	comp=Z,0.8nm,0.4s,baz=269,slow=8.5,SNR=24						
MKAR	**Makanchi Array**	**37.75**	**68**	P	**P**	**21 35 40.2**	**+0.5**
NRIK	**Noril'sk**	**37.94**	**30**	⇓*e*P	**P**	**21 35 41.1**	**+0.1**
NRIK				pmax	pmax		
	comp=Z,3.0nm,1.5s						
TORD	**Torodi Ar. Bea**	**38.80**	**221**	P	**P**	**21 35 49.3**	**+0.5**
	comp=Z,0.5nm,0.3s,baz=29,slow=8.8,SNR=19						
DGZ	**Jazzator, Alta**	**40.06**	**62**	⇑*e*P	**P**	**21 36 00.8**	**+1.7**
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.7s						
DBIC	**Dimbokro**	**47.55**	**225**	P	**P**	**21 36 59.0**	**-0.1**
DBIC				pmax	pmax		
	comp=Z,11nm,1.4s						
DBIC	**Dimbokro**	**47.55**	**225**	P	**P**	**21 36 59.0**	**-0.1**
TLY	**Talaya**	**48.91**	**54**	⇓*e*P	**P**	**21 37 09.5**	**+0.4**
TLY				pmax	pmax		
	comp=Z,15nm,1.1s						
SONM	**Songino Array**	**52.26**	**57**	P	**P**	**21 37 35.9**	**+1.4**
	comp=Z,0.7nm,0.5s,baz=294,slow=7.7,SNR=6.2						
SONM	**Songino Array**	**52.26**	**57**	*e*P	**P**	**21 37 36.5**	**+2.1**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SONM	**Songino Array**	**52.26**	**57**	P	**P**	**21 37 35.9**	**+1.4**
SONM				IAmb	IAmb	21 37 37.2	
	comp=Z,1.2nm,1.1s						
CMAR	**Chiang Mai Arr**	**64.69**	**89**	P	**P**	**21 39 00.5**	**-0.4**
	comp=Z,0.5nm,0.4s,baz=309,slow=8.1,SNR=5.5						
YKA	**Yellowknife Ar**	**67.75**	**342**	P	**P**	**21 39 19.6**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=5.9,slow=5.0,SNR=1.6						

IDC 29 21:31:01.5±3.4**, 33°.45S**×**178°.39W, h0^{km}, mb3.7**/2**, mb1 3.9**/3**, mb1mx3.6**/36**, mbtmp3.7**/3**, ML3.1**/1**, Error ellipse: s-maj=76.9km s-min=38.3km az=118.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**6.03**	**216**	Pn	Pn	21 32 31.7	-0.2
	0.5nm,0.3s,baz=300,slow=23,SNR=2.0						
URZ				Sn	Sn	21 33 41.7	0.0
	0.5nm,0.3s,baz=122,slow=23,SNR=2.7						
ASAR	**Alice Springs**	**42.70**	**270**	P	P	21 39 00.6	+0.2
	1.1nm,0.7s,baz=112,slow=7.4,SNR=12						
WRA	**Warramunga Arr**	**43.97**	**276**	P	P	21 39 10.3	-0.3
	0.5nm,0.5s,baz=115,slow=7.6,SNR=9.5						
FINES	**FINESS Array B**	**147.86**	**338**	PKPbc	PKPbc	21 50 46.9	-0.7
	3.8nm,1.0s,baz=46,slow=4.0,SNR=3.5						

*DDA **29** 22:06:29.9, 38°.85N×37°.84E, h17^{km}, MW3.5*
*ISK **29** 22:06:29.6, 38°.83N×37°.84E, h3^{km}, ML3.3/23*
ISC 29 22:06:30.4±0.8**, 38°.85N**±0°.02×**37°.85E**±0°.02**, h13^{km}**±6^{km}**, n63, σ1^{s}.04**/88**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HEKM	**Malatya_Hekimh**	**0.09**	**71**	*i* P	**Pg**	**22 06 33.7**	**+0.1**
HEKM				*i* S	**Sg**	**22 06 36.1**	**+0.3**
DARE	**Darende-Malaty**	**0.40**	**226**	PG	**Pg**	**22 06 38.0**	**-0.4**
DARE				SG	**Sb**	**22 06 44.1**	**-1.3**
ARPR	**Arapgir-MALATY**	**0.45**	**57**	PG	**Pb**	**22 06 39.7**	**-0.7**
CUGUR	**Gurin_SVAS**	**0.47**	**255**	*i* P	**Pg**	**22 06 39.3**	**-0.3**
CUGUR				*i* S	**Sb**	**22 06 46.3**	**-1.1**
CUKAN	**kangal_SIVAS**	**0.55**	**328**	*i* P	**Pg**	**22 06 40.9**	**-0.4**
CUKAN				*i* S	**Sg**	**22 06 48.5**	**-0.2**
AKCD	**Akcadag**	**0.56**	**174**	*i* P	**Pb**	**22 06 41.0**	**-1.1**
AKCD				*i* S	**Sb**	**22 06 50.2**	**+0.2**
KEMA	**Kemaliye**	**0.66**	**50**	*i* P	**Pg**	**22 06 42.9**	**-0.3**
KEMA				*i* S	**Sb**	**22 06 53.4**	**+0.5**
MALT	**Malatya**	**0.70**	**139**	PG	**Pg**	**22 06 43.6**	**-0.5**
MALT				SG	**Sb**	**22 06 53.9**	**-0.3**
ILIC	**ilic-Erzincan**	**0.82**	**43**	PG	**Pg**	**22 06 46.0**	**-0.4**
CUAYA	**Sivas-Altinyay**	**0.95**	**296**	*i* P	**Pg**	**22 06 47.7**	**-1.1**
ELZG	**Elazig**	**0.96**	**111**	*i* P	**Pg**	**22 06 48.1**	**-0.8**
ELZG				*i* S	**Sb**	**22 07 02.1**	**+0.4**
CUZAR	**Zara_SIVAS**	**1.04**	**357**	*i* P	**Pb**	**22 06 50.4**	**0.0**
SCER	**sogukcermik**	**1.16**	**331**	*i* P	**Pb**	**22 06 52.0**	**-0.3**
SCER				*i* S	**Sn**	**22 07 08.2**	**0.0**
SARI	**SarD1z-Kayseri**	**1.20**	**249**	PN	**Pg**	**22 06 52.8**	**-0.8**
SARI				SN	**Sn**	**22 07 10.1**	**+0.7**
SVRC	**Sivrice-ELAZID**	**1.24**	**112**	PN	**Pn**	**22 06 52.9**	**-0.7**
SVRC				SN	**Sn**	**22 07 11.5**	**+1.3**
SVSK	**Karacayir**	**1.25**	**329**	PN	**Pg**	**22 06 54.4**	**-0.1**
TNCL	**Tunceli-Merkez**	**1.35**	**78**	*i* P	**Pb**	**22 06 55.4**	**-0.3**
TNCL				*i* S	**Sg**	**22 07 13.7**	**-0.2**
CUSAR	**Sarkisla-SIVAS**	**1.37**	**295**	*i* P	**Pb**	**22 06 55.3**	**-0.7**
CUSAR				*i* S	**Sg**	**22 07 15.1**	**+0.6**
SUSE	**Susehri**	**1.39**	**11**	*i* P	**Pg**	**22 06 57.7**	**+0.6**
ATAB	**Bozova**	**1.42**	**165**	*i* P	**Pb**	**22 06 56.5**	**-0.3**
GZT	**Gaziantep**	**1.51**	**189**	*i* P	**Pg**	**22 06 59.7**	**+0.3**
GZT				*i* S	**Sg**	**22 07 21.0**	**+2.0**
KMRS	**Kahramanmaras**	**1.53**	**209**	PN	**Pb**	**22 06 58.3**	**-0.4**
KOVA	**Elazig, Kovanc**	**1.54**	**95**	*i* P	**Pb**	**22 06 58.9**	**0.0**
KOVA				*i* S	**Sg**	**22 07 20.6**	**+0.4**
BNN	**Bunyan**	**1.56**	**271**	PN	**Pb**	**22 06 58.9**	**-0.4**
RSDY	**Resadiye-TOKAT**	**1.60**	**346**	PN	**Pg**	**22 07 00.3**	**-0.8**
URFA	**Urfa**	**1.60**	**151**	PN	**Pb**	**22 06 59.4**	**-0.5**
ERZN	**Erzincan**	**1.63**	**63**	PN	**Pb**	**22 07 00.4**	**-0.1**
SAIM	**ADANA**	**1.64**	**238**	*i* P	**Pb**	**22 06 59.7**	**-0.8**
SAIM				*i* S	**Sg**	**22 07 23.6**	**+0.6**
ALUC	**Giresun/Alucra**	**1.66**	**25**	*i* P	**Pg**	**22 07 01.6**	**-0.6**
ALUC				*i* S	**Sg**	**22 07 25.4**	**+1.7**
KELT	**Kelkit**	**1.70**	**40**	*i* P	**Pg**	**22 07 02.0**	**-1.0**
KELT				*i* S	**Sg**	**22 07 24.9**	**-0.2**
ANDN	**Andirin**	**1.73**	**223**	*i* P	**Pb**	**22 07 01.9**	**-0.2**
ANDN				*i* S	**Sg**	**22 07 26.8**	**+0.7**
GUNE	**Kayseri**	**1.73**	**272**	*i* P	**Pg**	**22 07 04.0**	**+0.3**
GAZ	**Gaziantep**	**1.75**	**197**	PN	**Pb**	**22 07 01.5**	**-0.9**
TOKT	**Tokat**	**1.78**	**326**	PN	**Pb**	**22 07 02.4**	**-0.6**
TOKA	**Tokat**	**1.81**	**325**	*i* P	**Pb**	**22 07 03.7**	**+0.2**
TOKA				*i* S	**Sb**	**22 07 26.5**	**+0.4**
HACI	**Hacifakili, Ak**	**1.85**	**298**	*i* P	**Pb**	**22 07 03.3**	**-0.8**
HACI				*i* S	**Sg**	**22 07 29.8**	**-0.2**
SANL	**SANLIURFA_Merk**	**1.90**	**151**	*i* P	**Pb**	**22 07 04.9**	**-0.1**
DIYA	**Diyarbakir**	**2.01**	**117**	*i* P	**Pb**	**22 07 06.1**	**-0.8**
DYBB	**Diyarbakir**	**2.01**	**116**	PN	**Pb**	**22 07 05.6**	**-1.3**
ERBA	**Erbaa**	**2.02**	**336**	*i* P	**Pb**	**22 07 05.9**	**-1.0**
ERBA				*i* S	**Sg**	**22 07 35.6**	**+0.4**
SURC	**SANLIURFA_SURC**	**2.06**	**163**	*i* P	**Pb**	**22 07 06.3**	**-1.4**
SURC				*i* S	**Sg**	**22 07 36.3**	**-0.2**
YAHY	**KAYSERI_Yahyal**	**2.09**	**250**	*i* P	**Pb**	**22 07 07.4**	**-0.8**
YAHY				*i* S	**Sg**	**22 07 39.4**	**+1.9**
KOZT	**Kozan**	**2.10**	**230**	PN	**Pb**	**22 07 06.8**	**-1.5**
YOZ	**Yozgat**	**2.12**	**293**	PN	**Pb**	**22 07 07.4**	**-1.3**
ORDU	**Ordu-Boztepe**	**2.14**	**0**	*i* P	**Pn**	**22 07 06.7**	**+0.8**
KUZU	**Kuzuini**	**2.16**	**197**	*i* P	**Pb**	**22 07 07.6**	**-1.8**
YEDI	**Yedisu-Bingol**	**2.18**	**73**	PN	**Pb**	**22 07 08.2**	**-1.6**
CKRK	**Yozgat, Cekere**	**2.19**	**305**	*i* P	**Pb**	**22 07 08.2**	**-1.8**
CKRK				*i* S	**Sg**	**22 07 40.5**	**-0.3**
BNGB	**Bingl**	**2.21**	**85**	PN	**Pb**	**22 07 08.6**	**-1.8**
AVNS	**Nevsehir-Avano**	**2.34**	**270**	*i* P	**Pb**	**22 07 10.2**	**-2.3**
KOZK	**Kozakli-Nevseh**	**2.35**	**280**	PN	**Pb**	**22 07 10.6**	**-2.0**
KOPT	**Kop Dagi**	**2.36**	**60**	*i* P	**Pb**	**22 07 13.7**	**+0.7**
CEYT	**Ceyhan**	**2.47**	**223**	PN	**Pb**	**22 07 12.1**	**-2.6**
MAZI	**Mazidag**	**2.48**	**123**	PN	**Pn**	**22 07 12.1**	**+1.5**
SLHN	**Bingol, Solhan**	**2.48**	**86**	*i* P	**Pg**	**22 07 17.7**	**-0.3**
CMRD	**Camardi-Nigde**	**2.54**	**243**	PN	**Pn**	**22 07 13.0**	**+1.5**
NIDE	**Nigde/Merkez-G**	**2.56**	**252**	*i* P	**Pb**	**22 07 15.4**	**-0.8**
MACK	**Trabzon**	**2.56**	**35**	*i* P	**Pb**	**22 07 14.3**	**-2.0**
COAL	**Corum-Alaca**	**2.62**	**303**	*i* P	**Pn**	**22 07 13.9**	**+1.4**
EMRE	**Erzurum,Aziziy**	**2.70**	**63**	*i* P	**Pg**	**22 07 20.8**	**-1.3**
SVAN	**Silvan-Diyarba**	**2.72**	**104**	*i* P	**Pb**	**22 07 18.8**	**-0.2**
MARD	**Mardin**	**2.77**	**123**	*i* P	**Pb**	**22 07 17.4**	**-2.5**
KRIK	**Erzurum-spir**	**2.81**	**57**	*i* P	**Pg**	**22 07 22.7**	**-1.6**

IDC 29 22:15:53.5±2.9**, 6°.52S**×**129°.71E, h155^{km}**±40^{km}**, mb2.9**/1**, mb1 2.8**/5**, mb1mx2.8**/28**, mbtmp3.3**/5**, Error ellipse: s-maj=68.9km s-min=21.9km az=90.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.83**	**16**	P	Pn	22 17 17.8	-0.3
	0.6nm,0.3s,baz=198,slow=23,SNR=1.9						
SIJI				S	Sn	22 18 20.9	-3.4
	0.6nm,0.3s,baz=232,slow=23,SNR=1.5						
FITZ	**Fitzroy Crossi**	**12.17**	**199**	P	Pn	22 18 42.6	+0.7
	baz=360,slow=10						
FITZ				S	Sn	22 20 44.9	-12
	baz=10,slow=18						
WRA	**Warramunga Arr**	**14.08**	**162**	P	Pn	22 19 07.1	+0.8
	0.1nm,0.3s,baz=342,slow=12,SNR=1.4						
WRA				S	Sn	22 21 31.4	-11
	0.1nm,0.3s,baz=334,slow=20,SNR=1.2						
ASAR	**Alice Springs**	**17.52**	**167**	P	P	22 19 45.9	-1.3
	0.1nm,0.3s,baz=335,slow=8.6,SNR=4.7						
MKAR	**Makanchi Array**	**67.67**	**327**	P	P	22 26 34.2	+0.2
	0.2nm,0.5s,baz=132,slow=6.0,SNR=2.6						

*IDC **29** 22:18:03.7±3.1, 6°.30S×147°.28E, h0^{km}, mb3.6/2, mb1 3.9/5, mb1mx3.6/26, mbtmp3.8/5, ML3.7/2, Error ellipse: s-maj=64.1km s-min=37.6km az=87.0*
ISC 29 22:18:10.1±2.5**, 6°.5S**±0°.1×**147°.7E**±0°.3**, h63^{km}, n6, σ0^{s}.89**/8**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**2.90**	**190**	Pn	**Pn**	**22 18 54.2**	**+0.4**
	15nm,0.3s,baz=340,slow=8.9,SNR=13						
PMG				Sn	**Sn**	**22 19 26.4**	**-1.1**
	13nm,0.3s,baz=148,slow=7.9,SNR=3.5						
CTA	**Charters Tower**	**13.54**	**186**	Pn	**Pn**	**22 21 19.6**	**+0.3**
	0.4nm,0.3s,baz=10,slow=4.0,SNR=2.1						
WRA	**Warramunga Arr**	**18.57**	**223**	P	**P**	**22 22 21.7**	**-0.5**
	0.2nm,0.3s,baz=46,slow=12,SNR=8.0						
ASAR	**Alice Springs**	**21.57**	**216**	P	**P**	**22 22 54.8**	**+0.2**
	1.2nm,0.4s,baz=54,slow=8.6,SNR=16						
ASAR				S	**S**	**22 26 51.5**	**+1.2**
	0.8nm,0.9s,baz=40,slow=18,SNR=3.9						
FITZ	**Fitzroy Crossi**	**24.36**	**240**	P	**P**	**22 23 21.4**	**-0.9**
	1.0nm,0.3s,baz=65,slow=11,SNR=2.1						
TORD	**Torodi Ar. Bea**	**145.86**	**284**	PKPbc	**PKPab**	**22 37 44.0**	**0.0**
	0.2nm,0.3s,baz=74,slow=3.7,SNR=4.9						

*ATH **29** 22:41:09.9, 41°.61N×20°.07E, h32^{km}±6^{km}, ML3.1/3, Error ellipse: s-maj=8.1km s-min=1.9km az=295.0*
*TIR **29** 22:41:09.6, 41°.60N×20°.21E, h12^{km}±2^{km}, Md3.0, Ml3.0*
*SKO **29** 22:41:10.9, 41°.58N×20°.13E, h20^{km}*
*PDG **29** 22:41:10.6±0.6, 41°.58N×20°.11E, h9^{km}±1^{km}, ML3.0/13, Error ellipse: s-maj=0.8km s-min=1.1km az=0.0*
*BEO **29** 22:41:11.5±0.3, 41°.59N×20°.20E, h5^{km}±3^{km}, ML2.8/13*
ISC 29 22:41:10.3±1.1**, 41°.61N**±0°.02×**20°.17E**±0°.02**, h0^{km}**±10^{km}**, n93, σ0^{s}.90**/140**, 12C-10D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.35**	**221**	*e*Pg	**Pg**	**22 41 17.2**	**+0.2**
TIR				*e*Sg	**Sg**	**22 41 23.9**	**+2.3**
TIR	**Tirane**	**0.35**	**221**	P	**Pg**	**22 41 17.4**	**+0.3**
TIR				S	**Sg**	**22 41 22.8**	**+1.1**
TIR				AML	AML	22 41 25.3	
	comp=E,9038µm,0.2s						
TIR				AML	AML	22 41 26.0	
	comp=N,7804µm,0.3s						
TIR	**Tirane**	**0.35**	**221**	⇓*i*Pg	**Pg**	**22 41 17.3**	**+0.3**
TIR	**Tirane**	**0.35**	**221**	P	**Pg**	**22 41 17.3**	**+0.2**
	baz=226						
TIR				S	**Sg**	**22 41 22.9**	**+1.2**
	baz=226						
TIR				AMP			
	comp=N,6.2nm,0.3s,baz=226						
OHR	**Ohrid**	**0.69**	**137**	*e*Pg	**Pg**	**22 41 23.3**	**-0.2**
OHR				*e*Sg	**Sg**	**22 41 33.6**	**+1.2**
OHR	**Ohrid**	**0.69**	**137**	⇑*i*Pg	**Pg**	**22 41 23.2**	**-0.3**
OHR				*i* Sg	**Sb**	**22 41 34.7**	**-0.6**
OHR				*e*Lg	Lg	22 41 35.0	
	comp=N,803nm,0.4s						
BCI	**Bajram Curri**	**0.76**	**354**	P	**Pg**	**22 41 25.3**	**+0.4**
	baz=353						
BCI				S	**Sb**	**22 41 36.2**	**-1.0**
	baz=353						
BCI				AMP			
	comp=N,3.0nm,0.9s,baz=353						
ULC	**Ulcinj**	**0.78**	**297**	*i* Pg	**Pg**	**22 41 24.8**	**-0.5**
ULC	**Ulcinj**	**0.78**	**297**	⇑*i*Pg	**Pg**	**22 41 24.7**	**-0.5**
ULC				*e*Sg	**Sg**	**22 41 36.4**	**+1.1**
DRME	**Dracevica, Mon**	**0.94**	**308**	*e*Pn	**Pg**	**22 41 27.6**	**-0.7**
DRME	**Dracevica, Mon**	**0.94**	**308**	*e*Pg	**Pg**	**22 41 27.5**	**-0.7**
DRME				*i* Sg	**Sb**	**22 41 42.1**	**-0.2**
PVY	**Plav**	**0.99**	**351**	*e*Pg	**Pg**	**22 41 29.5**	**+0.1**
PVY				*e*Sg	**Sn**	**22 41 45.4**	**-1.0**
SKO	**Skopje**	**1.01**	**69**	*i* Pg	**Pb**	**22 41 30.4**	**-0.3**
SKO				*i* Sg	**Sb**	**22 41 44.3**	**-0.2**
PDG	**Podgorica**	**1.06**	**320**	⇓P	**Pg**	**22 41 30.7**	**0.0**
PDG				⇑S	**Sn**	**22 41 48.0**	**0.0**
PDG	**Podgorica**	**1.06**	**320**	*e*Pg	**Pg**	**22 41 30.5**	**-0.2**
PDG				*e*Sg	**Sb**	**22 41 46.7**	**+0.6**
PDG	**Podgorica**	**1.06**	**320**	*e*Pn	**Pg**	**22 41 30.2**	**-0.5**
PDG	**Podgorica**	**1.06**	**320**	*i* Pg	**Pg**	**22 41 30.6**	**-0.2**
TTG	**Podgorica**	**1.06**	**320**	*e*Pg	**Pg**	**22 41 29.8**	**-0.9**
TTG				*i* Sg	**Sn**	**22 41 46.9**	**-1.1**
KBN	**Korca**	**1.09**	**155**	P	**Pg**	**22 41 30.9**	**-0.3**
	baz=155						
KBN				S	**Sg**	**22 41 46.5**	**+1.1**
	baz=155						
KBN				AMP			
	comp=E,1.6nm,0.6s,baz=155						
BUM	**Brajici-Budva**	**1.18**	**306**	*e*Pg	**Pg**	**22 41 32.1**	**-0.8**
BUM				*e*Sg	**Sn**	**22 41 50.3**	**-0.5**
FNA	**Florina**	**1.23**	**132**	P	**Pg**	**22 41 33.0**	**-0.9**
FNA				AML	AML	22 41 54.8	
	comp=E,1597µm,0.3s						
FNA				AML	AML	22 41 54.9	
	comp=N,2110µm,0.4s						
FNA	**Florina**	**1.23**	**132**	⇓*i*Pg	**Pg**	**22 41 32.9**	**-0.9**
FNA				*i* Sg	**Sg**	**22 41 50.5**	**+0.7**
FNA	**Florina**	**1.23**	**132**	P	**Pg**	**22 41 32.9**	**-0.9**
	baz=132						
FNA				S	**Sg**	**22 41 50.4**	**+0.6**
	baz=132						
IVA	**Berane**	**1.27**	**351**	*e*Pg	**Pg**	**22 41 34.5**	**-0.3**
IVA				*i* Sg	**Sn**	**22 41 54.9**	**+1.6**
CEME	**Cevo**	**1.32**	**315**	⇑*i*Pg	**Pg**	**22 41 34.7**	**-0.9**
CEME				*e*Sg	**Sn**	**22 41 55.2**	**+0.8**
KOME	**Kolasin**	**1.33**	**339**	⇑*i*Pg	**Pg**	**22 41 35.4**	**-0.4**
KOME				*i* Sg	**Sn**	**22 41 56.4**	**+1.8**
NEST	**Nestorio**	**1.37**	**151**	P	**Pg**	**22 41 34.9**	**-1.7**
NEST				AML	AML	22 42 01.8	
	comp=E,681µm,0.5s						
NEST				AML	AML	22 42 02.9	
	comp=N,508µm,0.6s						
NKME	**Niksic**	**1.47**	**322**	*e*Pg	**Pn**	**22 41 37.3**	**-0.8**
NKME				*i* Sg	**Sn**	**22 42 00.3**	**+2.3**
NKY	**Niksic**	**1.48**	**324**	⇑*i*Pg	**Pn**	**22 41 38.1**	**-0.3**
NKY				*e*Sg	**Sn**	**22 42 01.0**	**+2.5**
LSK	**Leskovik**	**1.50**	**167**	P	**Pn**	**22 41 38.5**	**0.0**
	baz=168						
LSK				S	**Sg**	**22 41 59.0**	**+0.6**
	baz=168						
LSK				AMP			
	comp=E,1.3nm,0.8s,baz=168						
HCY	**Herceg Novi**	**1.50**	**304**	*e*Pn	**Pn**	**22 41 38.0**	**-0.5**
HCY	**Herceg Novi**	**1.50**	**304**	⇑*i*Pg	**Pn**	**22 41 37.5**	**-1.0**
HCY				*e*Sg	**Sn**	**22 42 00.4**	**+1.6**
STIP	**Stip**	**1.51**	**86**	*i* Pn	**Pg**	**22 41 40.4**	**+1.2**
SJES	**Sjenica**	**1.65**	**355**	*e*Pn	**Pg**	**22 41 42.1**	**+0.1**
SJES				*e*Sn	**Sg**	**22 42 03.2**	**-0.3**
PRVS	**Prvonek**	**1.67**	**57**	*e*Pn	**Pn**	**22 41 40.5**	**-0.4**
PRVS				*e*Sn	**Sg**	**22 42 03.7**	**-0.4**
BARS	**Barje**	**1.71**	**45**	*i* Pn	**Pn**	**22 41 41.4**	**0.0**
SRN	**Sarande**	**1.74**	**184**	P	**Pn**	**22 41 42.2**	**+0.5**
	baz=186						
SRN				S	**Sb**	**22 42 06.8**	**+1.4**
	baz=186						
SRN				AMP			
	comp=N,0.5nm,0.6s,baz=186						
TREB	**Trebinje**	**1.75**	**310**	*e*Pn	**Pn**	**22 41 42.1**	**+0.2**
TREB				*e*Sn	**Sb**	**22 42 05.7**	**0.0**
TREB	**Trebinje**	**1.75**	**310**	*e*Pn	**Pn**	**22 41 42.0**	**+0.2**
SELS	**Selova**	**1.75**	**23**	*e*Pn	**Pn**	**22 41 41.3**	**-0.6**
SELS				*e*Sn	**Sg**	**22 42 06.2**	**-0.4**
BRY	**Bratogost**	**1.77**	**317**	*e*Pn	**Pn**	**22 41 43.0**	**+0.7**
BRY	**Bratogost**	**1.77**	**317**	*e*Pn	**Pn**	**22 41 42.6**	**+0.3**
BRY				*e*Sn	**Sg**	**22 42 07.6**	**+0.4**
KZN	**Kozani**	**1.78**	**137**	P	**Pn**	**22 41 42.3**	**0.0**
GRG	**Griva**	**1.80**	**111**	*i* Pn	**Pn**	**22 41 42.1**	**-0.6**

PLE	Pljevlja	1.81	342	ePn	Pb	22 41 43.6	-0.8
PLE				eSn	Sg	22 42 08.8	+0.3
VAY	Valandovo	1.82	98	ePn	Pn	22 41 43.1	+0.2
VAY	Valandovo	1.82	98	i Pn	Pn	22 41 42.4	-0.5
DBRK	Dubrovnik	1.84	306	i Pn	Pn	22 41 43.2	+0.1
DBRK				Sn	Sb	22 42 08.1	-0.3
UPM	Unac-Piva	1.85	330	ePn	Pb	22 41 45.3	+0.3
UPM	Unac-Piva	1.85	330	ePn	Pn	22 41 43.9	+0.5
UPM				eSn	Sg	22 42 09.2	-0.4
KPRO	Kipourio	1.89	151	P	Pn	22 41 44.0	+0.1
KEK	Kerkira	1.92	189	P	Pn	22 41 43.3	-1.0
BOSS	Bosilegrad	1.93	62	ePn	Pn	22 41 44.7	+0.3
BOSS				eSn	Sn	22 42 09.7	+0.4
JAN	Janina	2.02	165	P	Pn	22 41 45.8	+0.2
RUDO	Rudo	2.09	344	ePn	Pn	22 41 47.3	+0.7
STON	Ston	2.23	305	ePn	Pb	22 41 50.7	-0.7
STON				eSn	Sn	22 42 18.0	+1.4
STON	Ston	2.23	305	ePn	Pn	22 41 49.8	+1.4
STON	Ston	2.23	305	ePn	Pn	22 41 48.8	+0.4
GRUS	Gruza	2.31	10	ePn	Pn	22 41 49.9	+0.3
GRUS				eSn	Sb	22 42 20.2	-1.7
BBLS	Lazići	2.32	346	ePn	Pn	22 41 50.9	+1.1
BBLS				eSn	Sn	22 42 19.8	+0.7
BBLS	Lazići	2.32	346	ePn	Pn	22 41 50.9	+1.1
DIVS	Divibare	2.49	357	ePn	Pn	22 41 52.7	+0.6
DIVS				eSn	Sn	22 42 24.0	+0.8
DIVS	Divibare	2.49	357	ePn	Pn	22 41 52.4	+0.3
VTS	Vitosha	2.49	65	⇓P	Pn	22 41 51.9	-0.3
VTS	Vitosha	2.49	65	ePn	Pn	22 41 52.4	+0.2
VTS				eSn	Sn	22 42 22.3	-1.0
TRUS	Trudelj	2.61	4	ePn	Pn	22 41 55.5	+1.7
LSTV	Lastovo	2.70	296	ePn	Pn	22 41 54.3	-0.6
MATE	Matera	2.79	251	⇓P	Pn	22 41 54.8	-1.3
MATE				⇓S	Sn	22 42 27.5	-3.0
MAKA	Makarska	2.87	307	ePn	Pn	22 41 57.4	+0.1
MAKA				Sn	Sn	22 42 32.1	-0.4
RICI	Ricice	2.93	311	ePn	Pn	22 41 58.2	+0.1
HVAR	Hvar	3.17	301	ePn	Pn	22 42 00.7	-0.7
MDVR	Moldovita	3.36	19	⇑P	Pn	22 42 03.8	-0.3
FRGS	Fruska Gora	3.55	356	⇑P	Pn	22 42 07.6	+0.9
FRGS				⇑S	Sn	22 42 49.8	+0.4
FRGS	Fruska Gora	3.55	356	ePn	Pn	22 42 07.1	+0.4
FRGS				eSn	Sn	22 42 50.3	+0.9
FRGS	Fruska Gora	3.55	356	ePn	Pn	22 42 06.9	+0.2
MGRS	Mrkonjic Grad	3.60	322	ePn	Pb	22 42 12.3	-2.6
HERR	Herculane	3.65	26	⇑P	Pn	22 42 09.2	+1.1
BLY	Banja Luka	3.82	326	ePn	Pb	22 42 20.2	+1.6
ZIRJ	Zirje	3.92	303	ePn	Pn	22 42 11.5	-0.1
MORI	Morici	3.99	306	ePn	Pn	22 42 13.1	+0.5
BZS	Buzias	4.14	14	⇓P	Pn	22 42 14.7	0.0
BZS				⇓S	Sn	22 43 05.5	+1.8
BZS	Buzias	4.14	14	ePn	Pn	22 42 14.1	-0.6
BZS				eSn	Sn	22 43 03.5	-0.2
GZR	Gura Zlata	4.23	26	⇑P	Pn	22 42 16.4	+0.4
UDBI	Udbina	4.35	314	ePn	Pn	22 42 18.7	+1.0
DUGI	Dugi Otok	4.45	304	ePn	Pn	22 42 18.7	-0.3
ARR	Arges	4.96	39	⇓P	Pn	22 42 26.5	+0.4
RABC	Rab	5.04	310	ePn	Pn	22 42 26.7	-0.3
VOIR		5.21	41	⇓P	Pn	22 42 30.3	+0.8
CRES	Cresnjev	5.42	323	ePn	Pn	22 42 31.6	-0.8
BRJN	Brijuni	5.73	307	ePn	Pn	22 42 36.0	-0.6
CEY	Cerknica	5.86	317	ePn	Pn	22 42 38.5	+0.1
OBKA	Obir	6.35	322	ePn	Pn	22 42 45.8	+0.5
	comp=N,0.5nm,0.2s						
OBKA				eSn	Sn	22 44 00.1	+1.6
	comp=N,1.6nm,0.5s						
ABTA	Abfaltersbach	7.53	316	ePn	Pn	22 43 02.0	+0.7
	comp=N,1.6nm,0.6s						
ABTA				Sn	Sn	22 44 26.8	-0.5
	comp=N,1.9nm,0.6s						

*NEIC **29** 23:06:50.3±2.5, 30°.42S±0°.07×177°.4W±0°.3, h22km±15km, mb4.2/12, Error ellipse: s-maj=33.5km s-min=8.9km az=95.0*

*IDC **29** 23:06:51.3±3.9, 30°.31S×178°.00W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.8/17, mbtmp3.9/3, MS3.1/2, Ms1 3.2/2, ms1mx2.8/25, Error ellipse: s-maj=87.4km s-min=21.0km az=118.0*

ISC 29 23:06:47.7±1.6**, 30°.48S**±0°.06×**177°.4W**±0°.2**, h10km, n22, σ1ˢ39**/22**, mb4.2**/7**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.32	338	Pn	Pg	23 07 14.6	+1.6
	94nm,0.3s,baz=330,slow=19,SNR=1.3						
RAO				Sn	Sb	23 07 28.8	-0.7
	567nm,0.3s,baz=278,slow=23,SNR=7.0						
RAO	Raoul Island	1.32	338		Pn	23 07 12.3	+0.1
RAO					Sb	23 07 28.1	-1.4
MXZ	Matakaoa Point	7.93	206	Pn	Pn	23 08 42.9	-0.1
OUZ	Omahuta	8.96	236	Pn	Pn	23 08 58.9	+1.7
DZM	Mont Dzumac	16.76	296	Pn	Pn	23 10 39.9	-2.8
DZM				IAmb	IAmb	23 10 56.0	
	comp=Z,10nm,1.0s						
LIFNC	LIFOU	16.90	301	Pn	Pn	23 10 43.9	-0.6
AFI	Afiamalu	17.27	19	LR	LR	23 16 44.1	
	comp=Z,35nm,20.0s,baz=239,slow=34						
ODZ	Otahua Downs	17.33	210	Pn	Pn	23 10 50.4	+0.7
ODZ				IAmb	IAmb	23 11 00.8	
	comp=Z,17nm,1.2s						
WHZ	Wether Hill Ro	19.19	213	P	P	23 11 09.9	-1.7
TARA	Tarawa	32.98	342	P	P	23 13 22.6	-0.3
CTAO	Charters Tower	34.36	279	P	P	23 13 34.1	-0.9
CTAO				IAmb	IAmb	23 13 47.3	
	comp=Z,4.0nm,1.1s						
STKA	Stephens Creek	35.00	257	P	P	23 13 42.9	+2.5
	comp=Z,3.3nm,0.9s,baz=105,slow=12,SNR=5.5						
STKA	Stephens Creek	35.00	257	P	P	23 13 41.0	+0.5
ASAR	Alice Springs	43.66	267	P	P	23 14 53.0	+0.2
	comp=Z,0.6nm,0.6s,baz=106,slow=7.3,SNR=8.0						
PATS	Pohnpei	43.83	324	P	P	23 14 52.1	-2.0
WB2	Warramunga Arr	44.65	272	P	P	23 15 00.8	0.0
WB2				IAmb	IAmb	23 15 02.2	
	comp=Z,2.0nm,0.7s						
WRAB	Tennant Creek	44.65	272	P	P	23 15 01.5	+0.6
WRAB				IAmb	IAmb	23 15 05.5	
	comp=Z,5.5nm,1.1s						
WRA	Warramunga Arr	44.66	272	P	P	23 15 00.4	-0.5
	comp=Z,1.5nm,0.7s,baz=112,slow=7.6,SNR=20						
WRA	Warramunga Arr	44.66	272	P	P	23 15 00.8	-0.1
WB0	Warramunga Arr	44.68	272	P	P	23 15 01.2	+0.1
WB0				IAmb	IAmb	23 15 03.2	
	comp=Z,4.7nm,1.1s						
LPAZ	La Paz	97.60	114	LR	LR	23 56 33.9	
	comp=Z,13nm,19.0s,baz=228,slow=30						
FINES	FINESS Array B	145.41	340	PKPbc	PKPbc	23 26 27.4	+2.2
	comp=Z,1.7nm,0.8s,baz=72,slow=4.5,SNR=1.3						

*IDC **29** 23:14:40.4±9.7, 30°.11S×179°.07W, h404km±101km, mb2.9/2, mb1 3.3/3, mb1mx3.0/18, mbtmp4.0/3, Error ellipse: s-maj=94.8km s-min=50.3km az=19.0*

ISC 29 23:14:38.1±2.5**, 30°.0S**±0°.1×**179°.1W**±0°.3**, h350km, n45, σ1ˢ67**/64**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.23	54	P	Pn	23 15 16.5	-8.4
GLKZ				S	S	23 15 48.9	-13
MXZ	Matakaoa Point	7.86	195	P	Pn	23 16 33.5	+3.0
MXZ				S	S	23 18 01.2	-0.9
WMGZ	Waiomatatini S	8.08	194	P	Pn	23 16 37.1	+4.0
WMGZ				S	S	23 18 07.9	+1.0
WCZ	Waipu Caves	8.12	221	P	P	23 16 38.1	+1.6
HAZ	Te Kaha	8.18	198	P	Pn	23 16 34.7	+0.5
HAZ				S	S	23 18 11.4	+2.5
PKGZ	Pakihiroa	8.23	196	P	Pn	23 16 33.4	-1.5
PKGZ				S	S	23 18 09.7	-0.4
PUZ	Puketiti	8.36	195	P	Pn	23 16 37.2	+0.8
PUZ				S	S	23 18 07.2	-5.8
RUGZ	Raukumara Rang	8.40	198	P	Pn	23 16 35.2	-1.8
RUGZ				S	S	23 18 11.1	-2.9
TWGZ	Tauwhareparae	8.52	196	P	Pn	23 16 40.6	+2.3
TWGZ				S	S	23 18 16.1	-0.5
OPRZ	Ohinepanea	8.64	204	P	P	23 16 42.4	+0.1
CNGZ	Carnagh Statio	8.77	194	P	Pn	23 16 42.5	+1.3
MWZ	Matawai	8.79	198	P	Pn	23 16 41.7	+0.2
MWZ				S	S	23 18 21.8	-0.6
TKGZ	Te Karaka	8.81	196	P	Pn	23 16 41.7	0.0
TKGZ				S	S	23 18 23.5	+0.8
URZ	Urewera	8.84	200	P	Pn	23 16 43.9	+1.9
	5.2nm,0.3s,baz=269,slow=4.7,SNR=20						
URZ				S	S	23 18 24.0	+0.7
	1.3nm,0.3s,baz=301,slow=24,SNR=2.1						
URZ	Urewera	8.84	200	P	Pn	23 16 42.8	+0.8
RAGZ	Rawiri	8.97	198	P	P	23 16 46.0	-0.1
RIGZ	Rimuhau	9.08	196	P	P	23 16 47.7	+0.4
RIGZ				S	S	23 18 28.0	-0.8
MUGZ	Murupara	9.14	201	P	Pn	23 16 46.8	+1.1
RTZ	Ruatahuna	9.20	200	P	Pn	23 16 43.8	-2.7
RTZ				S	S	23 18 30.6	-0.9
PRGZ	Paritu Road	9.26	195	P	P	23 16 49.6	+0.4
PRGZ				S	S	23 18 33.5	+0.8
KNZ	Kokohu	9.40	196	P	Pn	23 16 49.5	+0.8
KNZ				S	S	23 18 31.9	-3.8
TLZ	Tolley Road	9.44	207	P	P	23 16 54.0	+2.7
RAHZ	Arahi	9.45	199	P	Pn	23 16 50.9	+1.5
MTHZ	Maungataniwha	9.46	200	P	Pn	23 16 49.6	0.0
MTHZ				S	S	23 18 36.2	-1.0
KUTZ	Kaahu Road	9.47	205	P	P	23 16 53.6	+2.1
MHGZ	Mahia Peninsul	9.47	194	P	P	23 16 52.3	+0.7
MHGZ				S	S	23 18 34.0	-3.3
MRHZ	Matea Rd	9.58	202	P	Pn	23 16 52.1	+1.1
NMHZ	Naumai	9.70	199	P	P	23 16 54.9	+0.7
ARHZ	Aropaoanui	9.80	198	P	Pn	23 16 54.7	+1.1
ARHZ				S	S	23 18 43.6	-1.0
BKZ	Black Stump Fm	9.86	201	P	Pn	23 16 54.1	-0.1
BKZ				S	S	23 18 43.5	-2.4
MCHZ	McNeill Hill	10.05	199	P	Pn	23 16 57.7	+1.2
MCHZ				S	S	23 18 50.0	-0.1
NTVZ	North Tongarir	10.07	204	P	P	23 16 59.0	+0.7
TMVZ	Te Maari	10.07	204	P	P	23 16 58.7	+0.3
ETVZ	East Tongariro	10.09	204	P	Pn	23 16 57.9	+0.8
KWHZ	Kaweka Forest	10.12	200	P	Pn	23 16 58.0	+0.6
KWHZ				S	S	23 18 52.0	+0.4
OTVZ	Oturere	10.13	204	P	Pn	23 16 57.8	+0.2
TWVZ	Taurewa	10.13	205	P	Pn	23 16 59.0	+1.5
SNVZ	South Ngauruho	10.16	204	P	Pn	23 16 59.2	+1.2
TUVZ	Tukino	10.22	204	P	Pn	23 16 59.3	+0.5
FWVZ	Far West T-bar	10.25	204	P	Pn	23 16 60.0	+0.8
WNVZ	Wahianoa	10.30	204	P	Pn	23 16 59.4	-0.2
WNVZ				S	S	23 18 56.3	+0.6
MOVZ	Moawhango	10.31	203	P	Pn	23 16 59.9	+0.1
MOVZ				S	S	23 18 56.0	0.0
ASAR	Alice Springs	42.22	267	P	P	23 21 56.4	-1.9
	0.6nm,0.6s,baz=99,slow=6.4,SNR=7.4						
WRA	Warramunga Arr	43.17	272	P	P	23 22 03.0	-2.8
	0.7nm,0.6s,baz=110,slow=7.2,SNR=19						
FINES	FINESS Array B	144.45	339	PKP	PKPbc	23 33 28.3	-3.5
	2.6nm,0.9s,baz=66,slow=3.4,SNR=5.5						

NOU 29 23:42:00.4, 16°.48S×167°.12E, h23km, ML3.5/4**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	1.03	4	P	Pn	23 42 19.2	-0.2

*KRSC **29** 23:45:52.3±1.2, 54°.36N×161°.98E, h38km±13km, ML4.5*

*MOS **29** 23:45:53.9±0.9, 54°.43N×161°.92E, h45km, mb4.6/8, Error ellipse: s-maj=7.9km s-min=4.3km az=80.9*

*NEIC **29** 23:45:55.2±1.7, 54°.60N±0°.10×161°.8E±0°.1, h40km±9km, mb4.6/15, Error ellipse: s-maj=14.8km s-min=9.2km az=156.0*

*IDC **29** 23:45:55.7±2.1, 54°.64N×161°.57E, h45km±21km, mb3.6/19, mb1 3.9/22, mb1mx3.7/38, mbtmp3.9/22, ML3.3/3, MS3.1/4, Ms1 3.1/4, ms1mx2.7/44, Error ellipse: s-maj=19.6km s-min=13.0km az=134.0*

ISC 29 23:45:53.4±1.3**, 54°.45N**±0°.04×**161°.87E**±0°.03**, h29km**±10km**, n147, σ1ˢ39**/167**, mb4.2**/32**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKZ	Mys Kozlova	0.13	322	PN	Pn	23 46 00.3	+0.8
MKZ	Mys Kozlova	0.13	322	eP	Pn	23 46 00.3	+0.8
TUMD	Tumrok D	1.13	312	eP	Pn	23 46 13.5	+0.1
TUMR	Tumrok	1.30	311	PN	Pb	23 46 16.4	-0.8
TUMR	Tumrok	1.30	311	eP	Pb	23 46 16.4	-0.8
KMNR	Kamenistaya	1.61	325	PN	Pb	23 46 21.5	-0.9
KMNR	Kamenistaya	1.61	325	eP	Pb	23 46 21.5	-0.9
BZGR	Bezymyannyi-Gr	1.63	336	PN	Pb	23 46 21.8	-1.1
BZGR	Bezymyannyi-Gr	1.63	336	eP	Pb	23 46 21.8	-1.1
ZLN	Zelenaya	1.68	339	PN	Pb	23 46 22.8	-0.9
ZLN	Zelenaya	1.68	339	eP	Pb	23 46 22.8	-0.9
BZWR	Bezymyannyi-We	1.71	333	PN	Pb	23 46 22.8	-1.4
BZWR	Bezymyannyi-We	1.71	333	eP	Pb	23 46 22.8	-1.4
KIRR	Kirishev	1.74	330	PN	Pb	23 46 23.3	-1.4
KIRR	Kirishev	1.74	330	eP	Pb	23 46 23.3	-1.4
SPN	Mys Shipunski	1.74	220	PN	Pn	23 46 21.0	-0.7
SPN				S	Sn	23 46 39.9	-3.0
SPN	Mys Shipunski	1.74	220	eP	Pn	23 46 21.0	-0.7
SPN				eS	Sn	23 46 39.9	-3.0
LGNR	Loginova	1.77	338	PN	Pb	23 46 24.4	-0.9
LGNR	Loginova	1.77	338	eP	Pb	23 46 24.4	-0.9
CIRR	Tsirk	1.78	339	PN	Pb	23 46 24.3	-1.2
CIRR	Tsirk	1.78	339	eP	Pb	23 46 24.3	-1.2
KPT	Kopyto	1.79	329	PN	Pb	23 46 23.9	-1.6
KPT	Kopyto	1.79	329	eP	Pb	23 46 23.9	-1.6
KBTR	Krutoberegovo	1.84	17	PN	Pn	23 46 24.4	+1.4
KBTR				S	Sb	23 46 49.4	+0.5
KBTR	Krutoberegovo	1.84	17	eP	Pn	23 46 24.4	+1.4
KBTR				eS	Sb	23 46 49.4	+0.5
KBG	Krutoberegovo	1.87	15	PN	Pb	23 46 25.9	-0.9
KBG				S	Sb	23 46 51.6	+1.9
KBG	Krutoberegovo	1.87	15	eP	Pb	23 46 25.9	-0.9
KBG				eS	Sb	23 46 51.6	+1.9
KRSR	Krestovskiy	1.92	338	PN	Pn	23 46 25.5	+1.3
KRSR	Krestovskiy	1.92	338	eP	Pn	23 46 25.5	+1.3
KOZ	Kozyrevsk	1.97	325	PN	Pb	23 46 26.9	-1.7
KOZ	Kozyrevsk	1.97	325	eP	Pb	23 46 26.9	-1.7
NLC	Nalytchevo	1.97	230	PN	Pn	23 46 25.2	+0.4
NLC	Nalytchevo	1.97	230	eP	Pn	23 46 25.2	+0.4
KLY	Klyuchi	1.99	340	PN	Pn	23 46 26.2	+1.2
KLY	Klyuchi	1.99	340	eP	Pn	23 46 26.2	+1.2
SDLR	Sedlovina	2.12	238	PN	Pn	23 46 28.2	+1.2
SDLR				S	Sn	23 46 52.7	+0.2
SDLR	Sedlovina	2.12	238	eP	Pn	23 46 28.2	+1.2
SDLR				eS	Sn	23 46 52.7	+0.2
SMKR	Semkarok	2.15	354	PN	Pb	23 46 29.4	-2.2
SMKR	Semkarok	2.15	354	eP	Pb	23 46 29.4	-2.2
BDR	Baidarnaya	2.15	350	PN	Pb	23 46 29.4	-2.3
BDR	Baidarnaya	2.15	350	eP	Pb	23 46 29.4	-2.3
SMAR	Somma	2.17	238	PN	Pn	23 46 29.1	+1.3
SMAR	Somma	2.17	238	eP	Pn	23 46 29.1	+1.3
KRER	Koryakskii	2.18	239	PN	Pn	23 46 29.5	+1.7
KRER				S	Sn	23 46 55.0	+1.1
KRER	Koryakskii	2.18	239	eP	Pn	23 46 29.5	+1.7
KRER				eS	Sn	23 46 55.0	+1.1
UGLR	Uglovaya	2.19	237	PN	Pn	23 46 29.1	+1.1
UGLR				S	Sn	23 46 55.0	+0.8
UGLR	Uglovaya	2.19	237	eP	Pn	23 46 29.1	+1.1
UGLR				eS	Sn	23 46 55.0	+0.8
AVH	Avacha	2.20	239	PN	Pn	23 46 29.8	+1.7
AVH				S	Sn	23 46 55.8	+1.4
AVH	Avacha	2.20	239	eP	Pn	23 46 29.8	+1.7
AVH				eS	Sn	23 46 55.8	+1.4
KOK	Koryaka	2.24	240	PN	Pn	23 46 30.2	+1.6
KOK				S	Sn	23 46 56.3	+1.0
KOK	Koryaka	2.24	240	eP	Pn	23 46 30.2	+1.6
KOK				eS	Sn	23 46 56.3	+1.0
SRKR	Sorokina	2.24	350	PN	Pn	23 46 30.5	+1.9
SRKR	Sorokina	2.24	350	eP	Pn	23 46 30.5	+1.9
DALK	Dalny	2.33	234	PN	Pn	23 46 30.8	+1.0
DALK	Dalny	2.33	234	eP	Pn	23 46 30.8	+1.0
ESO	Esso	2.34	310	PN	Pb	23 46 37.0	+2.1
ESO	Esso	2.34	310	eP	Pb	23 46 37.0	+2.1
PET	Petropavlovsk	2.39	234	ePN	Pn	23 46 32.4	+1.9
PET				eS	Sn	23 46 58.8	0.0
PET				smax	smax		
	comp=N,751nm,0.6s						
PET				smax	smax		
	comp=E,333nm,0.4s						
PET				MLR	MLR		
	comp=Z,100nm,10.0s						
PET	Petropavlovsk	2.39	234	eP	Pn	23 46 32.1	+1.6
PET				eS	Sn	23 46 58.9	+0.1
PET	Petropavlovsk	2.39	234		Pn	23 46 31.9	+1.4
GNL	Ganaly	2.43	253	PN	Pn	23 46 33.3	+2.0
GNL	Ganaly	2.43	253	eP	Pn	23 46 33.3	+2.0
BKI	Bering	2.49	71	PN	Pn	23 46 33.2	+1.3
BKI				S	Sn	23 47 01.5	+0.2
BKI	Bering	2.49	71	eP	Pn	23 46 33.2	+1.3
BKI				eS	Sn	23 47 01.5	+0.2
KRMR	Karymshinskiy	2.76	235	PN	Pn	23 46 38.7	+3.1
KRMR				S	Sn	23 47 10.8	+2.9
KRMR	Karymshinskiy	2.76	235	eP	Pn	23 46 38.7	+3.1
KRMR				eS	Sn	23 47 10.8	+2.9
PEA0B	Petropavlovsk-	2.82	243	PN	Pn	23 46 38.0	+1.5
PEA0B	Petropavlovsk-	2.82	243		Pn	23 46 38.0	+1.5
PETK	Petropavlovsk-	2.82	243	P	Pn	23 46 36.8	+0.4
	comp=Z,4.5nm,0.3s,baz=74,slow=16,SNR=63						
PETK				S	Sn	23 47 10.1	+0.7
	comp=Z,12nm,0.3s,baz=82,slow=22,SNR=7.0						
PETK				LR	LR	23 47 46.5	
	comp=Z,152nm,18.1s,baz=62,slow=40						
PETK	Petropavlovsk-	2.82	243		Pn	23 46 37.5	+1.1
RUS	Russkaya	2.85	226	PN	Pn	23 46 38.6	+1.7
RUS				S	Sn	23 47 11.4	+1.2
RUS	Russkaya	2.85	226	eP	Pn	23 46 38.6	+1.7
RUS				eS	Sn	23 47 11.4	+1.2
MTVR	Mutnovka	2.96	230	PN	Pn	23 46 39.8	+1.3
MTVR	Mutnovka	2.96	230	eP	Pn	23 46 39.8	+1.3
ASAK	Asacha	3.15	230	PN	Pn	23 46 43.8	+2.7
ASAK	Asacha	3.15	230	eP	Pn	23 46 43.8	+2.7
APC	Apacha	3.19	243	PN	Pn	23 46 44.0	+2.4
APC	Apacha	3.19	243	eP	Pn	23 46 44.0	+2.4
KDTR	Khodutka, Kamc	3.50	222	PN	Pn	23 46 47.5	+1.7
KDTR				S	Sn	23 47 26.5	+0.4
KDTR	Khodutka, Kamc	3.50	222	eP	Pn	23 46 47.5	+1.7
KDTR				eS	Sn	23 47 26.5	+0.4
SMY	Shemya	7.48	98	PN	Pn	23 47 41.0	+0.5
SMY	Shemya	7.48	98	Pn	Pn	23 47 41.0	+0.5
SEY	Seymchan	9.82	334	LR	LR	23 52 32.3	
	comp=Z,90nm,18.1s,baz=220,slow=41						
SPIA	Saint Paul Isl	15.86	69	Pn	Pn	23 49 33.7	-0.6
SPIA				IAmb	IAmb	23 49 52.7	
	comp=Z,366nm,1.3s						
ASAJ	Asahikawa	16.23	238	P	Pn	23 49 38.5	-0.6
	comp=Z,0.3nm,0.3s,baz=244,slow=33,SNR=2.2						
ERM	Erimo	17.54	232	P	Pn	23 49 53.6	-2.0
ERM				pmax	pmax		
	comp=Z,32nm,1.2s						
ERM	Erimo	17.54	232	Pn	Pn	23 49 53.6	-2.0
ERM				IAmb	IAmb	23 50 00.4	
	comp=Z,32nm,1.1s						
KLR	Kul'dur	19.24	267	P	P	23 50 15.2	+0.1
	comp=Z,0.2nm,0.3s,baz=343,slow=22,SNR=3.5						
KLR				LR	LR	23 57 52.7	
	comp=Z,43nm,18.8s,baz=6.5,slow=38						
TIXI	Tiksi	22.31	333	P	P	23 50 46.7	-1.4
	comp=Z,1.8nm,0.5s,baz=94,slow=7.3,SNR=4.7						
TIXI	Tiksi	22.31	333	P	P	23 50 46.7	-1.4
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TIXI	Tiksi	22.31	333	P	P	23 50 46.7	-1.4
K20K	Telida	23.97	51	P	P	23 51 06.1	+1.2
MAJO	Matsushiro	24.22	232	P	P	23 51 07.4	0.0
MAJO				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MAJO	Matsushiro	24.22	232	P	P	23 51 07.4	0.0
MAJO				IAmb	IAmb	23 51 16.3	
	comp=Z,7.0nm,0.8s						
MJAR	Matsushiro Arr	24.22	232	P	P	23 51 07.2	-0.3
	comp=Z,1.4nm,0.6s,baz=32,slow=9.9,SNR=4.6						
IMAR	Indian Mountai	24.29	44	P	P	23 51 08.2	+0.3
ILAR	Eielson Array	27.11	47	P	P	23 51 33.8	+0.5
	comp=Z,1.0nm,1.1s,baz=260,slow=7.3,SNR=5.7						
BMAR	Burnt Mountain	28.02	41	P	P	23 51 41.8	+0.3
BCAR	Beaver Creek A	29.53	50	P	P	23 51 55.9	+0.9
INK	Inuvik	32.15	39	P	P	23 52 18.6	+0.7
	comp=Z,1.2nm,0.8s,baz=289,slow=4.8,SNR=6.7						
SONM	Songino Array	34.62	282	PcP	PcP	23 55 13.2	-0.4
	comp=Z,0.1nm,0.4s,baz=68,slow=1.9,SNR=4.2						
H11N2	WAKE ISLAND Hy	34.88	172	T	T	00 29 50.9	
	baz=355,slow=76,SNR=2449						
H11N3	WAKE ISLAND Hy	34.89	172	T	T	00 29 51.7	
	baz=355,slow=76,SNR=2583						
H11N1	WAKE ISLAND Hy	34.89	172	T	T	00 29 51.2	
	baz=355,slow=76,SNR=2666						
H11S1	WAKE ISLAND Hy	36.07	172	T	T	00 31 17.8	
	baz=352,slow=76,SNR=31						
H11S3	WAKE ISLAND Hy	36.08	172	T	T	00 31 18.6	
	baz=352,slow=76,SNR=29						
H11S2	WAKE ISLAND Hy	36.09	172	T	T	00 31 21.8	
	baz=352,slow=76,SNR=18						
BBB	Bella Bella	40.31	63	P	P	23 53 27.6	-0.1
EUNU	Eureka	40.37	14	P	P	23 53 28.2	+0.1
EUNU				IAmb	IAmb	23 53 29.7	
	comp=Z,3.9nm,0.8s						
YKA	Yellowknife Ar	41.45	44	P	P	23 53 38.2	+1.2
	comp=Z,0.4nm,0.7s,baz=303,slow=6.5,SNR=4.4						
NOR	Nord	44.18	360	i P	P	23 53 59.1	+0.2
KWAJ	Kwajalein Atol	45.76	172	P	P	23 54 13.1	+1.0
KWAJ				pmax	pmax		
	comp=Z,141nm,1.0s						
KWAJ	Kwajalein Atol	45.76	172	P	P	23 54 13.1	+1.0
NEEM	North Greenlan	46.77	9	i P	P	23 54 19.3	-0.5
NEEM				IAmb	IAmb	23 54 20.9	
	comp=Z,5.9nm,1.0s						
EDM	Edmonton	47.11	55	P	P	23 54 22.0	-0.5
EDM				pmax	pmax		
	comp=Z,4.0nm,0.8s						
EDM	Edmonton	47.11	55	P	P	23 54 22.0	-0.5
EDM				IAmb	IAmb	23 54 25.9	
	comp=Z,4.3nm,0.8s						
MLOA	Mauna Loa Obse	47.51	120	P	P	23 54 28.3	+2.0
KURK	Kurchatov	47.91	302	P	P	23 54 28.6	0.0
KURK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
KURK	Kurchatov	47.91	302	P	P	23 54 28.6	0.0
KURK				IAmb	IAmb	23 54 46.8	
	comp=Z,3.9nm,1.4s						
MKAR	Makanchi Array	48.52	296	P	P	23 54 31.4	-2.0
	comp=Z,0.4nm,0.7s,baz=57,slow=5.1,SNR=4.1						
ARCES	ARCESS Array B	52.32	342	P	P	23 55 00.3	-1.4
	comp=Z,3.9nm,0.9s,baz=355,slow=9.5,SNR=2.1						
SUMG	Summit	52.48	8	P	P	23 55 04.3	+0.9
SUMG				pmax	pmax		
	comp=Z,13nm,1.1s						
SUMG	Summit	52.48	8	i P	P	23 55 03.0	-0.4
SUMG	Summit	52.48	8	P	P	23 55 04.3	+0.9
SUMG				IAmb	IAmb	23 55 05.2	
	comp=Z,13nm,1.1s						
KVN	Kaiserville	53.98	71	P	P	23 55 16.6	+1.9
KVN	Kaiserville	53.98	71	P	P	23 55 16.6	+1.9
BOOM	Boomskoye usch	54.76	295	P	P	23 55 19.6	-0.7
BOOM				pmax	pmax		
	comp=Z,4.0nm,1.4s						
BOOM	Boomskoye usch	54.76	295	P	P	23 55 19.6	-0.7
BOOM				IAmb	IAmb	23 55 31.7	
	comp=Z,3.7nm,1.4s						
PDAR	Pinedale Array	55.95	63	P	P	23 55 27.9	-1.1
	comp=Z,0.4nm,0.7s,baz=304,slow=5.2,SNR=2.9						
FINES	FINESS Array B	59.28	337	P	P	23 55 50.2	-1.5
	comp=Z,3.4nm,0.8s,baz=37,slow=7.6,SNR=18						
CMAR	Chiang Mai Arr	59.49	259	P	P	23 55 54.0	+0.3
	comp=Z,1.5nm,0.3s,baz=39,slow=7.4,SNR=1.7						
NB2	NORSAR Subarra	62.52	344	P	P	23 56 12.7	-1.1
	comp=Z,6.7nm,1.0s,baz=21,slow=6.5						
NOA	NORSAR Array B	62.52	344	P	P	23 56 11.4	-2.5
	comp=Z,1.7nm,0.8s,baz=22,slow=6.6,SNR=4.5						
AKASG	Malin Array Be	67.98	330	P	P	23 56 47.5	-1.8
	comp=Z,0.4nm,0.3s,baz=27,slow=7.1,SNR=5.1						
TXAR	Lajitas Array	69.15	69	P	P	23 56 58.7	+1.6
	comp=Z,0.6nm,0.6s,baz=298,slow=4.0,SNR=10.0						
KBZ	Khabaz	69.26	317	P	P	23 56 56.9	-0.4
	comp=Z,2.1nm,0.8s,baz=240,slow=7.7,SNR=2.5						
KBZ				LR	LR	00 29 23.4	
	comp=Z,44nm,18.5s,baz=6.5,slow=38						
GERES	GERESS Array B	73.64	339	P	P	23 57 23.2	-0.7
	comp=Z,0.8nm,0.5s,baz=30,slow=6.1,SNR=2.6						
RETA	Reutte	75.53	340	eP	P	23 57 35.0	+0.1
	comp=Z,4.1nm,1.0s						
OBKA	Obir	75.66	337	eP	P	23 57 35.7	+0.1
	comp=Z,2.3nm,0.7s						
SQTA	Sankt Quirin	75.70	340	eP	P	23 57 35.2	-0.6
	comp=Z,2.7nm,0.9s						
ABTA	Abfaltersbach	75.88	339	eP	P	23 57 35.5	-1.3
	comp=Z,5.5nm,1.2s						
FETA	Feichten	75.99	340	i P	P	23 57 37.9	+0.4
	comp=Z,2.7nm,1.0s						
BRTR	Keskin Array B	76.23	321	P	P	23 57 37.9	-1.1

	comp=Z,0.4nm,0.5s,baz=28,slow=3.8,SNR=2.4						
WRA	Warramunga Arr	77.77	206	P	P	23 57 48.0	+0.5
	comp=Z,0.9nm,0.7s,baz=19,slow=6.0,SNR=11						
WRA	Warramunga Arr	77.77	206	P	P	23 57 48.0	+0.5
ASAR	Alice Springs	81.44	206	P	P	23 58 08.6	+1.1
	comp=Z,1.3nm,0.7s,baz=8.2,slow=5.1,SNR=13						
ESDC	Sonseca Array	85.46	349	P	P	23 58 28.3	+0.2
	comp=Z,0.9nm,0.9s,baz=3.4,slow=5.4,SNR=4.7						

*VAO **29** 23:48:12.8±0.5, 22.°77S×68.°71W, h122^{km}, mb4.3*
*NEIC **29** 23:48:13.7±2.3, 22.°85S±0.°03×68.°58W±0.°10, h115^{km}±12^{km}, Error ellipse: s-maj=13.8km s-min=2.3km az=107.0*
*IDC **29** 23:48:13.8±0.4, 22.°67S×68.°59W, h104^{km}±3^{km}, mb3.8/10, mb1 3.9/13, mb1mx3.8/23, mbtmp4.1/13, Error ellipse: s-maj=17.8km s-min=12.6km az=12.0*
*GUC **29** 23:48:14.0±0.8, 22.°82S×68.°49W, h104^{km}±5^{km}, ML4.2*
ISC 29 23:48:13.5±0.5, **22.°84S**±0.°04×**68.°53W**±0.°05, **h108**^{km}±4^{km}, **n120**, σ**1^{s}04**/138, **mb4.2**/9, **7C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	Limon Verde	0.42	302	P	Pn	23 48 30.1	+0.1
	629nm,0.3s,baz=168,slow=2.9						
LVC				S	Sn	23 48 42.4	-0.1
	1µm,0.3s,baz=336,slow=21,SNR=26						
LVC	Limon Verde	0.42	302	eP	Pn	23 48 29.4	-0.7
LVC				eS	Sn	23 48 41.2	-1.2
LVC	Limon Verde	0.42	302	eP	Pn	23 48 30.4	+0.3
LVC	Limon Verde	0.42	302		Pn	23 48 30.1	+0.1
LVC				Sn	Sn	23 48 41.7	-0.8
PB15	IPOC Station P	0.95	247	⇑iP	Pn	23 48 34.9	+0.7
PB15				eS	Sn	23 48 50.8	+1.0
PB15	IPOC Station P	0.95	247		Pn	23 48 34.1	-0.1
PB15				Sn	Sn	23 48 50.9	+1.1
PB06	IPOC Station P	0.97	277	⇑iP	Pn	23 48 34.8	+0.4
PB06				eS	Sn	23 48 50.2	0.0
PB06				IAML		23 48 51.7	
	comp=N,11µm,0.5s						
PB06	IPOC Station P	0.97	277		Pn	23 48 34.5	0.0
PB06				Sn	Sn	23 48 50.6	+0.4
PB09	IPOC Station P	1.23	327	⇓iP	Pn	23 48 38.1	+1.0
PB09				eS	Sn	23 48 56.0	+0.9
PB09	IPOC Station P	1.23	327		Pn	23 48 38.2	+1.0
PB09				Sn	Sn	23 48 56.8	+1.7
PB03	IPOC Station P	1.38	304	⇑iP	Pn	23 48 39.1	+0.2
PB03				eS	Sn	23 48 57.5	-0.7
PB03				IAML		23 48 59.3	
	comp=N,5µm,0.7s						
PB05	IPOC Station P	1.55	269	⇑iP	Pn	23 48 40.8	0.0
PB05				eS	Sn	23 49 00.4	-1.2
PB05				IAML		23 49 08.6	
	comp=E,2µm,0.5s						
PB04	IPOC Station P	1.58	288	⇑iP	Pn	23 48 41.4	0.0
PB04				eS	Sn	23 49 01.6	-0.9
PB04				IAML		23 49 11.9	
	comp=N,4µm,0.3s						
PB04	IPOC Station P	1.58	288	Pn	Pn	23 48 41.5	+0.1
PB07	IPOC Station P	1.67	311	⇑iP	Pn	23 48 42.8	+0.3
PB07				i S	Sn	23 49 04.3	-0.3
PB07				IAML		23 49 06.2	
	comp=E,3µm,0.4s						
PB07	IPOC Station P	1.67	311		Pn	23 48 42.9	+0.3
PB02	IPOC Station P	1.97	320	⇑iP	Pn	23 48 46.5	+0.3
PB02				eS	Sn	23 49 10.2	-0.9
PB02				IAML		23 49 17.9	
	comp=E,3µm,0.5s						
PB10	IPOC Station P	1.98	250	eP	Pn	23 48 45.8	-0.4
PB10				IAML		23 49 19.7	
	comp=N,2µm,0.4s						
PB10	IPOC Station P	1.98	250	Pn	Pn	23 48 45.7	-0.4
PB01	IPOC Station P	1.99	333	eP	Pn	23 48 47.0	+0.6
PB01				eS	Sn	23 49 11.8	+0.2
PB01				IAML		23 49 14.2	
	comp=N,3µm,0.4s						
PB01	IPOC Station P	1.99	333		Pn	23 48 46.9	+0.4
PB14	IPOC Station P	2.48	224	eP	Pn	23 48 52.4	-0.4
PB14				IAML		23 49 30.7	
	comp=E,959nm,0.2s						
PB14	IPOC Station P	2.48	224	Pn	Pn	23 48 52.4	-0.4
PATCX	Punta Patache	2.51	323	i P	Pn	23 48 52.5	-0.6
PATCX				IAML		23 49 35.3	
	comp=N,968nm,0.5s						
PATCX	Punta Patache	2.51	323		Pn	23 48 52.7	-0.4
TA01	Diego Aracena	2.73	325	eP	Pn	23 48 55.6	-0.3
TA01	Diego Aracena	2.73	325		Pn	23 48 56.7	+0.8
PB08	IPOC Station P	2.74	348	eP	Pn	23 48 57.6	+1.2
PB08	IPOC Station P	2.74	348		Pn	23 48 57.6	+1.2
HMBC	Humberstone	2.84	333	eP	Pn	23 48 56.8	-0.7
HMBC				IAML		23 49 55.7	
	comp=N,968nm,0.3s						
TA02	Huaiquique	2.96	329		Pn	23 49 01.1	+2.2
PB11	IPOC Station P	3.23	341	Pn	Pn	23 49 03.5	+0.8
AC02	Maricunga	4.02	188		Pn	23 49 14.3	+0.8
PB12	IPOC Station P	4.53	338	Pn	Pn	23 49 20.9	+0.9
PB16	IPOC Station P	4.57	348		Pn	23 49 22.0	+0.9
GO03	Copiap	4.98	198	Pn	Pn	23 49 24.3	-1.8
AC04	Llanos de Chal	5.82	203	Pn	Pn	23 49 34.3	-3.1
LCO	Las Campanas	6.45	197	Pn	Pn	23 49 43.3	-2.9
LPAZ	La Paz	6.52	3	P	Pn	23 49 49.5	+1.9
	comp=N,1.9nm,0.3s,baz=181,slow=4.6,SNR=31						
LPAZ	La Paz	6.52	3	Pn	Pn	23 49 48.5	+1.0
GO04	Tololo Observa	7.59	195	Pn	Pn	23 49 59.5	-2.0
CO06	Fray Jorge	8.29	199	Pn	Pn	23 50 09.9	-1.0
ZON	Zonda	8.68	181	Pn	Pn	23 50 16.9	+0.7
SIV	San Ignacio	9.79	47	P	Pn	23 50 28.9	-2.4
	comp=N,6.0nm,0.3s,baz=235,slow=11,SNR=118						
SIV				S	Sn	23 52 09.4	-10
	comp=N,0.5nm,0.3s,baz=213,slow=17,SNR=1.8						
CPUP	Villa Florida	10.77	111	P	Pn	23 50 45.7	+1.2
	comp=N,0.1nm,0.3s,baz=81,slow=3.8,SNR=5.1						
CPUP	Villa Florida	10.77	111	eP	Pn	23 50 45.1	+0.6
PTLB	Pontes e Lacer	11.52	52	Pn	Pn	23 50 52.8	-1.8
AQDB	Aquidauana	12.16	81	Pn	Pn	23 51 01.6	-1.5
VILB	Vilhena	12.62	40	eP	Pn	23 51 08.9	-0.3
VILB	Vilhena	12.62	40		Pn	23 51 09.3	0.0
ITQB	Itaqui	12.66	125	eP	Pn	23 51 08.9	-0.7
ITQB	Itaqui	12.66	125	Pn	Pn	23 51 08.7	-0.9
ETMB	Extrema	13.13	10		Pn	23 51 13.5	-2.5
PP1B	Ponte de Pedra	13.82	70	eP	Pn	23 51 25.1	+0.2
SALV	Santo Antonio	13.93	63	eP	Pn	23 51 26.5	+0.3
H03N1	Juan Fernandez	13.97	219	T	T	00 04 02.1	
	baz=42,slow=72,SNR=16						
H03N2	Juan Fernandez	13.98	219	T	T	00 04 14.2	
	baz=42,slow=72,SNR=17						
H03N3	Juan Fernandez	13.99	219	T	T	00 04 18.1	
	baz=42,slow=72,SNR=12						
TRCB	Terra Rica	14.66	93	eP	Pn	23 51 36.1	+0.5
TRCB	Terra Rica	14.66	93		Pn	23 51 35.2	-0.4
SAML	Samuel	14.73	21		Pn	23 51 36.6	+0.1
PTGB	Pitanga	15.19	100	eP	P	23 51 45.1	+0.3
CPSB	Cacapava Do Su	15.45	122	eP	Pn	23 51 47.3	+1.9
ITAB	Concordia	15.49	110	eP	Pn	23 51 46.2	+0.2
CZSB	Cruzeiro do Su	15.55	344		P	23 51 47.2	-1.6
CZSB				IAmb	IAmb	23 52 03.2	
	comp=Z,15nm,1.1s						
PDRB	Porto dos Gac	15.85	47	eP	Pn	23 51 49.4	-1.2
PLTB	Pedras Altas	15.96	127		Pn	23 51 52.4	+0.6
PCMB	Pacaembu	16.04	89	eP	Pn	23 51 52.6	-0.3
TRQA	Tornquist	16.18	161		Pn	23 51 55.5	+1.0
TRQA				IAmb	IAmb	23 51 58.2	
	comp=Z,14nm,1.1s						
LC01	Cunco	16.27	189	Pn	Pn	23 51 53.9	-1.7
LC01				IAmb	IAmb	23 51 58.5	
	comp=Z,8.9nm,1.0s						
CLDB	Colider	17.01	48	eP	P	23 52 05.0	0.0
CNLB	Canela	17.13	116	eP	P	23 52 06.0	-0.3
ITRB	Iturama	17.22	83	eP	Pn	23 52 08.5	+1.1
ARAG	Araguaiana, MT	17.29	69	eP	P	23 52 08.0	-0.1
FRTB	Fartura	17.46	95	eP	P	23 52 10.2	+0.3
PLCA	Paso Flores	17.93	185	P	P	23 52 15.8	+0.8
	comp=Z,0.1nm,0.3s,baz=337,slow=8.1,SNR=3.9						
PLCA	Paso Flores	17.93	185	eP	P	23 52 14.0	-1.0
TIJ01	Guaruva-PR	18.00	102	eP	P	23 52 16.8	+0.9
TER01	Tubaro-SC	18.37	112	eP	P	23 52 20.7	+0.8
TBTG	Tabatinga, AM	18.59	356	P	Pn	23 52 23.2	-0.6
TBTG				IAmb	IAmb	23 52 26.9	
	comp=Z,18nm,0.6s						
BB19B	Bebedouro	18.64	88	eP	P	23 52 23.7	+0.8
RCLB	Rio Claro- Sao	19.39	93	eP	P	23 52 32.0	+0.9
IPMB	Ipameri, GO	19.64	79	eP	P	23 52 33.9	0.0
SNDB	Serra Nova Dou	19.65	60	eP	P	23 52 32.6	-1.3
VAO	Valinhos	19.86	95	eP	P	23 52 35.9	-0.3
NPGB	Novo Progresso	20.18	41	eP	P	23 52 37.6	-2.0
BDFB	Brasilia	20.63	73	P	P	23 52 43.4	-1.2
	comp=Z,3.7nm,0.6s,baz=252,slow=12,SNR=7.5						
BDFB	Brasilia	20.63	73	P	P	23 52 44.3	-0.4
BDFB				IAmb	IAmb	23 52 46.9	
	comp=Z,5.5nm,1.0s						
MACA	Manacapuru-AM	20.98	22	eP	P	23 52 46.7	-1.5
MACA	Manacapuru-AM	20.98	22	P	P	23 52 46.8	-1.5
PEXB	Peixe	22.02	64	eP	P	23 52 57.5	-1.8
BSCB	Bom Sucesso	22.11	90	eP	P	23 52 59.6	-0.7
ITTB	Itaituba	22.14	36	eP	P	23 52 58.5	-2.1
PTGA	Pitinga	23.50	22	P	P	23 53 12.2	-1.6
	comp=Z,5.2nm,0.5s,baz=196,slow=13,SNR=18						
DIAM	Diamantina, MG	23.69	84	eP	P	23 53 15.7	0.0
JANB	Januaria	24.15	76	eP	P	23 53 20.2	+0.5
SMTB	Santa Maria do	24.42	59	eP	P	23 53 21.8	-0.3
PRPB	Parauapebas	24.49	50	eP	P	23 53 21.7	-1.2
SDBA	SAO DESIDERIO	24.75	69	eP	P	23 53 24.3	-0.9
MALB	Monte Alegre	25.04	36	eP	P	23 53 26.2	-1.5
BSFB	Barra de Sao F	26.16	86	eP	P	23 53 36.7	-1.2
BOAV	Boa Vista	26.27	18	P	P	23 53 39.9	+1.0
MCPB	Macapa, AP	27.49	38	eP	P	23 53 49.2	-0.7
GUA01	Guaratinga, BA	27.71	82	eP	P	23 53 51.9	+0.1
GDU01	Guandu, BA	28.90	77	eP	P	23 54 01.6	-0.9
VNA3	Neumayer Olymp	58.70	161	P	P	23 58 00.3	+0.9
VNA2	Neumayer--Watz	59.28	160	P	P	23 58 04.2	+0.9
	baz=282,slow=8.5						
SNAA	Sanae	60.91	161	P	P	23 58 15.5	+0.9
TXAR	Lajitas Array	61.92	325	P	P	23 58 22.6	+0.7
	comp=Z,0.1nm,0.6s,baz=146,slow=6.6,SNR=1.7						
DBIC	Dimbokro	68.78	73	P	P	23 59 06.7	+0.3
	comp=Z,1.0nm,0.5s,baz=226,slow=4.4,SNR=6.3						
PDAR	Pinedale Array	75.44	330	P	P	23 59 46.8	+1.0
	comp=Z,0.5nm,0.8s,baz=193,slow=5.9,SNR=4.0						
ULM	Lac du Bonnet	76.69	342	P	P	23 59 52.8	+0.4
	comp=Z,3.4nm,0.7s,baz=131,slow=3.8,SNR=3.0						
TORD	Torodi Ar. Bea	77.47	70	P	P	23 59 57.8	+0.2
	comp=Z,0.9nm,0.4s,baz=256,slow=5.2,SNR=16						
TORD				pP	pP	00 00 26.4	+0.2
	comp=Z,6.3nm,0.8s,baz=251,slow=4.9,SNR=13						
BOSA	Boshof	82.51	118	P	P	00 00 25.1	+0.4
	comp=Z,3.0nm,0.9s,baz=306,slow=6.2,SNR=3.5						
MAW	Mawson	82.96	163	P	P	00 00 27.5	+1.4
	comp=Z,2.0nm,0.5s,baz=203,slow=7.5,SNR=10						
MAW				pP	pP	00 00 56.0	+1.4
	comp=Z,5.3nm,0.3s,baz=67,slow=18,SNR=16						
YKA	Yellowknife Ar	92.56	340	P	P	00 01 13.1	+1.0
	comp=Z,1.3nm,0.7s,baz=125,slow=5.8,SNR=9.4						
ASAR	Alice Springs	128.89	207	PKP	PKiKP	00 07 10.2	+0.3
	comp=Z,0.8nm,0.6s,baz=137,slow=1.9,SNR=8.8						
ASAR				pPKP	pPKPdf	00 07 39.2	-0.5
	comp=Z,0.8nm,0.8s,baz=144,slow=1.7,SNR=4.7						
WRA	Warramunga Arr	131.98	209	PKP	PKiKP	00 07 15.9	-0.2
	comp=Z,0.8nm,0.6s,baz=157,slow=1.8,SNR=16						
WRA				pPKP	pPKPdf	00 07 45.4	-0.2
	comp=Z,0.7nm,0.8s,baz=155,slow=1.5,SNR=3.3						
ZALV	Zalesovo Beam	143.00	26	PKP	PKPdf	00 07 32.3	-1.9
	comp=Z,0.5nm,0.5s,baz=336,slow=3.3,SNR=5.2						
ZALV				pPKP	pPKPdf	00 08 04.2	-0.6
	comp=Z,0.7nm,0.6s,baz=344,slow=1.8,SNR=2.6						
MKAR	Makanchi Array	146.49	37	PKPbc	PKPab	00 07 42.1	-1.1
	comp=Z,1.8nm,0.7s,baz=319,slow=3.5,SNR=13						
MKAR				pPKPbc	pPKPdf	00 08 11.6	+0.4
	comp=Z,1.0nm,0.8s,baz=267,slow=3.2,SNR=3.6						

*IDC **30** 00:02:07.0±2.9, 48.°09N×149.°09E, h384^{km}±37^{km}, mb2.7/3, mb1 3.0/5, mb1mx2.6/35, mbtmp3.6/5, Error ellipse: s-maj=57.5km s-min=21.6km az=122.0*
ISC 30 00:02:10.1±2.0, **47.°6N**±0.°1×**148.°7E**±0.°2, **h377**^{km}, **n17**, σ**1^{s}68**/21, **mb3.1**/3, **Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	Nemuro 2	4.70	207	P	Pn	00 03 28.1	+0.2
NEM2				eS	S	00 04 31.7	+0.8
JTKR	Abashiri--Toko	4.92	224	P	Pn	00 03 32.8	+2.6
JAK	Akkeshi	5.38	213	P	Pn	00 03 35.5	+0.3
JAK				eS	S	00 04 45.2	+1.0
ASAJ	Asahikawa	5.49	233	P	Pn	00 03 39.2	+3.0
	1.6nm,0.3s,baz=50,slow=4.1,SNR=7.3						
ASAJ	Asahikawa	5.49	233	P	Pn	00 03 39.3	+3.0
JAR	Ashorobuto	5.51	221	P	Pn	00 03 38.3	+1.8
JOB	Onbets	5.80	218	P	Pn	00 03 40.3	+0.6
JOB				eS	S	00 04 54.1	+1.6
JCH	Churui	6.24	219	P	Pn	00 03 44.9	+0.3
JCH				eS	S	00 05 01.4	0.0
JEM	Erimo	6.82	217	P	P	00 03 52.7	+0.6
JKB	Kayabe	7.88	226	P	Pn	00 04 02.9	-0.4
JKB				eS	S	00 05 35.2	-0.6
JYM2	Yakumo 2	8.05	230	P	Pn	00 04 06.5	+1.3
JTM	Tenmabayashi	8.72	222	eS	S	00 05 51.4	-2.6
JANG	Nango	8.87	218	eS	S	00 05 55.0	-2.2
KLR	Kul'dur	11.37	285	P	P	00 04 41.8	-1.7
	0.2nm,0.3s,baz=81,slow=9.8,SNR=5.8						
ILAR	Eielson Array	37.79	39	P	P	00 08 42.8	-8.5
	0.2nm,0.6s,baz=286,slow=8.0,SNR=5.5						
WRA	Warramunga Arr	68.45	195	P	P	00 12 31.6	-1.0
	0.5nm,0.8s,baz=9.4,slow=6.7,SNR=5.5						
ASAR	Alice Springs	72.17	194	P	P	00 12 55.0	+0.2
	0.2nm,0.4s,baz=12,slow=6.2,SNR=2.9						

IDC 30 00:02:58.9±2.1, **1.°58N**×**126.°23E**, **h0**^{km}, **mb3.3**/3, **mb1 3.6**/3, **mb1mx3.3**/33, **mbtmp3.4**/3, **Error ellipse: s-maj=179.9km s-min=26.6km az=65.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.83	160	P	P	00 08 03.6	-0.1
	1.3nm,0.7s,baz=338,slow=11,SNR=11						
ASAR	Alice Springs	26.19	164	P	P	00 08 35.6	+0.2
	0.3nm,0.6s,baz=355,slow=16,SNR=4.8						
MKAR	Makanchi Array	59.03	326	P	P	00 13 00.7	-0.1
	0.1nm,0.4s,baz=118,slow=7.3,SNR=4.5						

*IDC **30** 00:28:43.0±2.3, 10.°03S×160.°02E, h0^{km}, mb3.8/3, mb1 4.1/3, mb1mx3.7/30, mbtmp3.8/3, Error ellipse: s-maj=56.1km s-min=15.6km az=105.0*
*NEIC **30** 00:28:47.4±1.5, 10.°00S±0.°04×159.°71E±0.°08, h10^{km}±1^{km}, mb4.4/11, Error ellipse: s-maj=14.5km s-min=6.4km az=109.0*
ISC 30 00:28:46.4±0.7, **9.°96S**±0.°07×**159.°76E**±0.°10, **h10**^{km}, **n19**, σ**1^{s}08**/21, **mb4.2**/10, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	0.55	20	Pn	Pb	00 28 59.0	+0.7
	458nm,0.3s,baz=153,slow=9.0,SNR=51						
HNR				Sn	Sn	00 29 09.7	+0.1
	3µm,0.3s,baz=60,slow=20,SNR=29						
HNR				LR	LR	00 29 16.1	
	comp=Z,103nm,21.0s,baz=29,slow=55						
HNR	Honiara	0.55	20	Pg	Pb	00 28 59.1	+0.9
HNR					Sn	00 29 09.4	-0.2
SANVU	Saraoutou	9.09	128	Pn	Pn	00 30 58.3	+0.6
RABL	Rabaul	9.46	307	Pn	Pn	00 31 03.3	+0.3
PINNC	Pines Island,	14.58	151	Pn	Pn	00 32 12.2	-0.8
ARMA	Armidale	21.73	199	P	P	00 33 38.5	+0.5
ARMA				IAmb	IAmb	00 33 42.4	
	comp=Z,32nm,1.5s						
WR0	Warramunga Arr	26.28	245	P	P	00 34 22.5	+0.2
WR0				IAmb	IAmb	00 34 30.9	
	comp=Z,8.8nm,1.2s						
WB0	Warramunga Arr	26.35	245	P	P	00 34 23.0	0.0
WB0				IAmb	IAmb	00 34 29.7	
	comp=Z,8.5nm,1.4s						
WRAB	Tennant Creek	26.44	245	P	P	00 34 20.9	-2.9
WRAB				IAmb	IAmb	00 34 22.1	
	comp=Z,4.1nm,1.1s						
WB2	Warramunga Arr	26.44	245	P	P	00 34 23.8	0.0
WB2				IAmb	IAmb	00 34 26.0	
	comp=Z,8.0nm,1.4s						
WRA	Warramunga Arr	26.45	245	P	P	00 34 23.6	-0.3
	comp=Z,1.2nm,0.7s,baz=73,slow=8.9,SNR=14						
WRA	Warramunga Arr	26.45	245	P	P	00 34 22.9	-1.0
AS31	Alice Springs	28.19	238	P	P	00 34 39.0	-0.5
ASAR	Alice Springs	28.19	238	P	P	00 34 39.1	-0.4
	comp=Z,0.4nm,0.3s,baz=63,slow=10.0,SNR=7.4						
FAKI	Fak Fak	28.20	283	P	P	00 34 39.2	-0.5
FAKI				IAmb	IAmb	00 34 49.4	
	comp=Z,15nm,1.2s						
BBOO	Buckleboo	31.54	220	P	P	00 35 11.0	+2.0
BBOO				IAmb	IAmb	00 35 20.3	
	comp=Z,20nm,1.2s						
NNZ	Nelson	33.38	161	P	P	00 35 25.2	+0.2
SNZO	South Karori	33.90	160	P	P	00 35 29.2	-0.3
ILAR	Eielson Array	84.44	20	P	P	00 41 16.9	-2.0
	comp=Z,1.0nm,1.2s,baz=235,slow=6.0,SNR=2.4						

*JMA **30** 00:55:25.8±0.1, 23.°37N×122.°05E, h32^{km}, M3.0*
*TAP **30** 00:55:26.9, 23.°38N×122.°04E, h32^{km}, ML3.5, C*
ISC 30 00:55:26.1±1.0, **23.°37N**±0.°02×**122.°05E**±0.°02, **h30**^{km}±10^{km}, **n125**, σ**0^{s}75**/197, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ECBN	Changbin	0.55	265	eP	Pb	00 55 37.5	+0.2
	baz=254						
ECBN				eS	Sb	00 55 45.4	+0.4
	baz=254						
TEGC	Jichi Village	0.58	306	eP	Pb	00 55 37.9	+0.1
	baz=306						
TEGC				S	Sb	00 55 46.3	+0.5
	baz=306						
HGSD	Ruisui	0.59	282	eP	Pb	00 55 37.5	-0.4
	baz=282						
HGSD				eS	Sb	00 55 45.5	-0.5
	baz=282						
EGFH	Guangfu	0.64	298	P	Pb	00 55 38.6	-0.3
	baz=308						
EGFH				eS	Sb	00 55 47.8	+0.3
	baz=308						
TEYL	Yanliau Villag	0.65	320	eP	Pb	00 55 39.0	+0.1
	baz=333						
TEYL				S	Sn	00 55 48.4	0.0
	baz=333						
EYUL	Yuli	0.67	268	P	Pn	00 55 39.1	-0.4
	baz=261						
EYUL				S	Sb	00 55 48.5	+0.2
	baz=261						
EHY	Hungye	0.68	282	P	Pn	00 55 39.3	-0.4
	baz=281						
CHKT	Chengkung	0.68	247	eP	Pn	00 55 38.7	-0.9
	baz=239						
CHKT				S	Sb	00 55 47.5	-1.1
	baz=239						
TWF1	Yuli	0.69	269	P	Pn	00 55 39.3	-0.5
	baz=261						
TWF1				eS	Sb	00 55 48.8	-0.1
	baz=261						
YULB	Yu-li	0.69	272	eP	Pn	00 55 39.4	-0.4
	baz=271						
YULB				eS	Sn	00 55 49.8	+0.3
	baz=271						
FULB	Fuli	0.71	257	eP	Pn	00 55 39.3	-0.9
	baz=246						
FULB				eS	Sb	00 55 49.1	-0.4
	baz=246						
ESL	Shilin	0.72	308	P	Pn	00 55 39.4	-0.8
	baz=308						
ESL				eS	Sb	00 55 48.7	-1.0
	baz=308						
HWA	Hwalien	0.73	326	eP	Pn	00 55 40.1	-0.2
	baz=327						
HWA				eS	Sn	00 55 50.7	+0.2
	baz=327						
ETM	Tongmen	0.78	320	eP	Pn	00 55 40.5	-0.6
	baz=319						
ETM				S	Sn	00 55 50.7	-1.1
	baz=319						
EDH	Donghe	0.79	240	eP	Pn	00 55 40.3	-0.9
	baz=235						
EDH				S	Sn	00 55 50.1	-1.8
	baz=235						
ECS	Chishang	0.81	251	P	Pn	00 55 41.4	-0.1
	baz=250						
ECS				S	Sn	00 55 52.3	-0.1
	baz=250						
TWD	Chiawan	0.82	330	P	Pn	00 55 41.1	-0.5
	baz=330						
TWD				eS	Sn	00 55 51.5	-1.2
	baz=330						
LDUT	Ludao	0.87	218	eP	Pn	00 55 41.7	-0.6
	baz=217						
LDUT				eS	Sn	00 55 51.5	-2.5
	baz=217						
ETL	Fush Village	0.88	334	P	Pn	00 55 42.1	-0.3
	baz=333						
ETL				eS	Sn	00 55 53.4	-0.8
	baz=333						
NACB	Ninganchiao	0.90	333	eP	Pn	00 55 42.2	-0.5
	baz=332						
NACB				eS	Sn	00 55 53.9	-0.9
	baz=332						
LONT	Longtian	0.96	242	P	Pn	00 55 43.3	-0.2
	baz=236						
LONT				eS	Sn	00 55 55.8	-0.4
	baz=236						
ELDTW	Lidau	0.96	260	P	Pn	00 55 43.1	-0.5
	baz=248						
ELDTW				eS	Sn	00 55 55.3	-1.1
	baz=248						
EHP	Heping Village	0.98	343	eP	Pn	00 55 43.7	-0.1
	baz=343						
EHP				S	Sn	00 55 56.3	-0.3
	baz=343						
ETLH	Xiulin Townshi	0.98	328	eP	Pn	00 55 43.6	-0.3
	baz=328						
ETLH				eS	Sn	00 55 56.2	-0.6
	baz=328						
OWD	Renai	0.99	306	eP	Pn	00 55 44.1	+0.1
	baz=306						
OWD				eS	Sn	00 55 56.2	-0.9
	baz=306						
YUS	Yu-Shan	1.01	277	P	Pn	00 55 44.9	+0.2
	baz=276						
TTN	Taitung	1.03	234	eP	Pn	00 55 44.7	+0.2
	baz=233						
TTN				eS	Sn	00 55 57.7	-0.2
	baz=233						
TWGBT	Beinan	1.05	239	eP	Pn	00 55 44.5	-0.2
	baz=231						
TWGBT				S	Sn	00 55 57.6	-0.6
	baz=231						
TWG	Pinlang	1.05	239	P	Pn	00 55 44.5	-0.2
	baz=231						
TWG				S	Sn	00 55 57.7	-0.7
	baz=231						
WHF	Hehuan Shan	1.05	317	eP	Pn	00 55 45.0	-0.2
	baz=317						
WHF				S	Sn	00 55 58.4	-0.7
	baz=317						
CHGB	Renai	1.06	311	eP	Pn	00 55 45.3	+0.2
	baz=310						
CHGB				eS	Sn	00 55 58.5	-0.3
	baz=310						
SSLB	Suanglung	1.09	293	P	Pn	00 55 45.4	+0.1
	baz=292						
ENA	Nanau	1.09	345	P	Pn	00 55 45.4	+0.1
	baz=345						
ENA				S	Sn	00 55 59.3	-0.2
	baz=345						
EWUT	Wuta	1.10	347	P	Pn	00 55 45.7	+0.3
	baz=346						
EWUT				S	Sn	00 55 59.6	-0.1
	baz=346						
FUSS	Fushou	1.15	320	P	Pn	00 55 46.6	+0.3
	baz=319						
FUSS				eS	Sn	00 56 00.3	-0.8
	baz=319						
ALS	Alishan	1.15	277	eP	Pb	00 55 47.3	-0.2
	baz=277						
SMLT	Sun Moon Lake	1.17	296	P	Pn	00 55 47.1	+0.6
	baz=296						
STYH	Taoyuan	1.19	261	P	Pn	00 55 47.1	+0.5
	baz=254						
STYH				S	Sn	00 56 01.4	-0.3
	baz=254						
WPL	Puli Township	1.19	303	eP	Pn	00 55 46.7	0.0
	baz=302						
TWT	Tachien	1.19	318	P	Pn	00 55 47.6	+0.7
	baz=316						
TWT				eS	Sn	00 56 01.5	-0.6
	baz=316						
TDCB	Techi	1.20	317	eP	Pn	00 55 47.7	+0.7

	baz=317						
TDCB				S	Sn	00 56 01.9	-0.5
	baz=317						
STYT	**Tauyuan**	**1.20**	**261**	P	**Pn**	**00 55 47.2**	**+0.3**
	baz=253						
STYT				S	Sn	00 56 01.9	-0.4
	baz=253						
TYC	**Yuchr**	**1.22**	**296**	P	**Pn**	**00 55 47.6**	**+0.6**
	baz=296						
NNSB	**Datong**	**1.22**	**330**	P	**Pn**	**00 55 47.5**	**+0.3**
	baz=329						
NNSB				*e*S	Sn	00 56 02.5	-0.3
	baz=329						
DPDB	**Guoxing**	**1.22**	**303**	*e*P	**Pn**	**00 55 48.0**	**+0.8**
	baz=302						
NNS	**Nan Shan**	**1.23**	**330**	P	**Pn**	**00 55 47.8**	**+0.4**
	baz=329						
NNS				S	Sn	00 56 02.8	-0.3
	baz=329						
WCS	**Beigang Elemen**	**1.25**	**304**	*e*P	**Pn**	**00 55 48.3**	**+0.9**
	baz=303						
TWC	**Suao**	**1.25**	**352**	P	**Pn**	**00 55 48.1**	**+0.6**
	baz=4.0						
ECL	**Taimali**	**1.27**	**233**	*e*P	**Pn**	**00 55 47.0**	**-0.7**
	baz=243						
ECL				*e*S	Sn	00 56 01.9	-1.8
	baz=243						
CHN5	**Tsauling**	**1.28**	**281**	*e*P	**Pb**	**00 55 49.6**	**0.0**
	baz=280						
WJS	**Zhushan**	**1.29**	**291**	*e*P	**Pb**	**00 55 49.7**	**-0.1**
	baz=290						
NDS	**Dongshan**	**1.30**	**347**	P	**Pn**	**00 55 48.8**	**+0.7**
	baz=338						
NDS				*e*S	Sn	00 56 04.8	+0.3
	baz=338						
TPUB	**Ta-pu**	**1.30**	**267**	*e*P	**Pb**	**00 55 49.8**	**-0.2**
	baz=266						
TPUB				*e*S	Sb	00 56 06.4	0.0
	baz=266						
NDT	**Datong Townshi**	**1.32**	**338**	*e*P	**Pn**	**00 55 49.3**	**+0.8**
	baz=337						
NDT				*e*S	Sn	00 56 05.3	+0.1
	baz=337						
WTP	**Ta-pu**	**1.32**	**265**	*e*P	**Pb**	**00 55 50.0**	**-0.3**
	baz=264						
CHN4	**Tsaushan**	**1.34**	**270**	*e*P	**Pn**	**00 55 48.8**	**+0.1**
	baz=269						
ENTT	**Nioudou**	**1.34**	**341**	*e*P	**Pn**	**00 55 49.6**	**+0.8**
	baz=341						
SLGT	**Liugui**	**1.34**	**254**	*e*P	**Pn**	**00 55 49.7**	**+0.9**
	baz=247						
WNT	**Mingjian**	**1.35**	**292**	P	**Pb**	**00 55 50.8**	**0.0**
	baz=292						
WHP	**Taichung City**	**1.36**	**312**	*e*P	**Pn**	**00 55 50.0**	**+0.9**
	baz=312						
WNT1	**Nantou City**	**1.36**	**293**	*e*P	**Pb**	**00 55 51.0**	**0.0**
	baz=293						
SGST	**Jiashian**	**1.38**	**258**	*e*P	**Pn**	**00 55 49.7**	**+0.5**
	baz=251						
SGST				*e*S	Sn	00 56 07.4	+0.9
	baz=251						
TWE	**Neicheng**	**1.39**	**346**	*e*P	**Pn**	**00 55 50.3**	**+0.9**
	baz=346						
LAY	**Lan-yu**	**1.40**	**199**	*e*P	**Pn**	**00 55 49.8**	**+0.2**
	baz=198						
YOJ	**Yonaguni jima**	**1.40**	**39**	*e*P	**Pb**	**00 55 51.0**	**-0.6**
	baz=39						
YOJ	**Yonaguni jima**	**1.40**	**39**	P	**Pb**	**00 55 50.9**	**-0.7**
YOJ				*e*S	Sn	00 56 07.9	+0.9
WWF	**Wufeng**	**1.41**	**299**	*e*P	**Pb**	**00 55 52.0**	**+0.3**
	baz=298						
CHN1	**Nanshi**	**1.41**	**263**	*e*P	**Pb**	**00 55 51.6**	**-0.1**
	baz=256						
CHN1				*e*S	Sb	00 56 10.5	+1.1
	baz=256						
WDLH	**Douliu**	**1.42**	**283**	*e*P	**Pb**	**00 55 51.9**	**-0.1**
	baz=283						
SNST	**Tainan City**	**1.43**	**264**	*e*P	**Pb**	**00 55 51.9**	**-0.2**
	baz=264						
YHNB	**Yeheng**	**1.44**	**335**	*e*P	**Pn**	**00 55 51.0**	**+0.8**
	baz=334						
YHNB				*e*S	Sn	00 56 07.9	-0.1
	baz=334						
TWK	**Hsinying**	**1.44**	**266**	*e*P	**Pb**	**00 55 51.8**	**-0.5**
	baz=265						
TWK				*e*S	Sb	00 56 10.7	+0.5
	baz=265						
SSD	**Sandimen**	**1.44**	**245**	*e*P	**Pn**	**00 55 50.6**	**+0.4**
	baz=239						
NSK	**Sanguang**	**1.45**	**334**	*e*P	**Pn**	**00 55 51.1**	**+0.8**
	baz=334						
NSK				*e*S	Sn	00 56 07.9	-0.4
	baz=334						
TSMG	**Majia**	**1.45**	**243**	*e*P	**Pn**	**00 55 50.7**	**+0.4**
	baz=242						
TCU	**Taichung**	**1.48**	**302**	*e*P	**Pb**	**00 55 53.2**	**+0.3**
	baz=302						
EAST	**Anshuo**	**1.48**	**229**	*e*P	**Pn**	**00 55 51.0**	**+0.3**
	baz=237						
NWLT	**Wulai**	**1.49**	**341**	*e*P	**Pn**	**00 55 51.7**	**+0.9**
	baz=328						
NWLT				*e*S	Sn	00 56 09.4	+0.1
	baz=328						
NTC	**Toucheng**	**1.49**	**352**	*e*P	**Pn**	**00 55 52.1**	**+1.3**
	baz=3.0						
CHY	**Chiayi**	**1.50**	**275**	*e*P	**Pb**	**00 55 53.1**	**-0.1**
	baz=285						
CHY				*e*S	Sb	00 56 12.7	+0.9
	baz=285						
MASBT	**Mashibuluo**	**1.50**	**240**	*e*P	**Pn**	**00 55 51.5**	**+0.5**
	baz=233						
TWQ1	**Liyutan**	**1.52**	**310**	*e*P	**Pb**	**00 55 53.4**	**-0.3**
	baz=309						
TWQ1				*e*S	Sb	00 56 12.8	+0.2
	baz=309						
WCHH	**Zhanghua**	**1.54**	**298**	*e*P	**Pb**	**00 55 53.8**	**-0.1**
	baz=297						
WTK	**Tuku**	**1.56**	**282**	*e*P	**Pb**	**00 55 53.5**	**-0.7**
	baz=281						
NSY	**Sanyi**	**1.57**	**312**	*e*P	**Pb**	**00 55 54.5**	**0.0**
	baz=312						
NSTT	**Nanjuang**	**1.58**	**323**	*e*P	**Pb**	**00 55 54.1**	**-0.5**
	baz=322						
NSTT				*e*S	Sn	00 56 12.7	+1.2
	baz=322						
LIOB	**Emei**	**1.58**	**324**	*e*P	**Pb**	**00 55 54.6**	**-0.1**
	baz=307						
TWM1	**Shoushan**	**1.59**	**250**	*e*P	**Pb**	**00 55 55.0**	**+0.2**
	baz=249						
TIPB	**Shuangxi**	**1.61**	**353**	*e*P	**Pb**	**00 55 54.0**	**-1.1**
	baz=2.0						
WDJ	**Dajia District**	**1.62**	**307**	*e*P	**Pb**	**00 55 54.5**	**-0.7**
	baz=307						
WRL	**Guolierlin Hig**	**1.62**	**289**	*e*P	**Pn**	**00 55 54.1**	**+1.5**
	baz=289						
ICHU	**Yijhu**	**1.62**	**270**	*e*P	**Pb**	**00 55 54.7**	**-0.7**
	baz=269						
ICHU				*e*S	Sb	00 56 14.7	-0.8
	baz=269						
SLIU	**Shizi**	**1.62**	**225**	*e*P	**Pn**	**00 55 53.0**	**+0.3**
	baz=232						
TWB1	**Santiao Chiao**	**1.63**	**358**	*e*P	**Pb**	**00 55 55.1**	**-0.5**
	baz=359						
SCZT	**Fangliau**	**1.65**	**233**	*e*P	**Pn**	**00 55 53.2**	**+0.3**
	baz=232						
NHDH	**Xindian Distri**	**1.66**	**343**	*e*P	**Pb**	**00 55 54.8**	**-1.2**
	baz=343						
TWA	**Mucha**	**1.66**	**345**	*e*P	**Pb**	**00 55 54.8**	**-1.2**
	baz=334						
TWA				*e*S	Sb	00 56 15.3	-1.3
	baz=334						
TATO	**Taipei**	**1.68**	**342**	*e*P	**Pn**	**00 55 54.8**	**+1.3**
	baz=331						
TATO				*e*S	Sn	00 56 15.2	+1.3
	baz=331						
CHN8	**Yiju**	**1.69**	**270**	*e*P	**Pn**	**00 55 54.7**	**+1.2**
	baz=269						
NWF	**Wu-fen Shan**	**1.71**	**352**	*e*P	**Pb**	**00 55 56.0**	**-1.0**
	baz=352						
WFSB	**Wu-fen Shan**	**1.71**	**352**	*e*P	**Pb**	**00 55 55.8**	**-1.1**
	baz=3.0						
WFSB				*e*S	Sn	00 56 15.5	+0.8
	baz=3.0						
HATJ	**Hateruma jima**	**1.75**	**67**	P	**Pn**	**00 55 54.8**	**+0.4**
HATJ				S	Sn	00 56 15.3	-0.4
NCUH	**Zhongli**	**1.78**	**334**	*e*P	**Pn**	**00 55 56.4**	**+1.7**
	baz=334						
TSEB	**Hengchuen, Pin**	**1.81**	**216**	*e*P	**Pn**	**00 55 56.4**	**+1.3**
	baz=226						
TSEB				*e*S	Sn	00 56 18.5	+1.5
	baz=226						
IRIF	**Iriomote-Funau**	**1.82**	**58**	P	**Pn**	**00 55 56.0**	**+0.7**
IRIF				S	Sn	00 56 18.3	+1.0
HEN	**Hengchun**	**1.82**	**222**	*e*P	**Pn**	**00 55 55.6**	**+0.3**
	baz=221						
HEN				*e*S	Sn	00 56 17.6	+0.3
	baz=221						
TWKBT	**Hengchun**	**1.82**	**219**	*e*P	**Pn**	**00 55 56.5**	**+1.1**
	baz=227						
TWKBT				*e*S	Sn	00 56 18.3	+0.8
	baz=227						
TWK1	**Hengchun**	**1.82**	**219**	*e*P	**Pn**	**00 55 56.8**	**+1.4**
	baz=227						
TWK1				*e*S	Sn	00 56 17.7	+0.2
	baz=227						
YM01	**YM01**	**1.82**	**346**	*e*P	**Pn**	**00 55 55.6**	**+0.2**
	baz=331						
YM08	**YM08**	**1.86**	**347**	*e*P	**Pn**	**00 55 56.5**	**+0.5**
	baz=332						
JKRS	**Kuro-shima**	**1.99**	**64**	P	**Pn**	**00 55 58.5**	**+0.8**
JKRS				S	Sn	00 56 21.9	+0.2
JIJ	**Ishigaki jima**	**2.16**	**62**	P	**Pn**	**00 56 00.5**	**+0.5**
JIJ				S	Sn	00 56 24.8	-1.0
PHUB	**P'eng-hu**	**2.28**	**274**	*e*P	**Pn**	**00 56 02.8**	**+1.1**
	baz=273						
PHUB				*e*S	Sn	00 56 29.1	+0.4
	baz=273						
PNG	**Penghu**	**2.30**	**275**	*e*P	**Pn**	**00 56 03.4**	**+1.5**
	baz=275						
JISG	**Ishigakijimahi**	**2.40**	**59**	P	**Pn**	**00 56 03.4**	**+0.1**
JISG				*e*S	Sn	00 56 31.3	-0.4
VCHM	**Qimei**	**2.41**	**267**	*e*P	**Pn**	**00 56 04.0**	**+0.5**
	baz=266						
JTJ	**Tarama**	**2.74**	**62**	P	**Pn**	**00 56 08.5**	**+0.5**
JTJ				S	Sn	00 56 39.6	-0.5
PTMZ	**Houxiangcun**	**3.15**	**303**	*e*P	**Pn**	**00 56 14.6**	**+1.0**
	baz=300						
PTMZ				*e*S	Sn	00 56 49.5	-0.7
	baz=300						
MATB	**Ma-tsu**	**3.37**	**326**	*e*P	**Pn**	**00 56 17.1**	**+0.5**
	baz=312						
MATB				*e*S	Sn	00 56 54.7	-0.9
	baz=312						
KNM	**Kinmen**	**3.47**	**288**	*e*P	**Pn**	**00 56 20.3**	**+2.3**
	baz=285						
KNM				*e*S	Sn	00 56 60.0	+1.9
	baz=285						
KNMB	**Chin-men Tao**	**3.52**	**289**	*e*P	**Pn**	**00 56 19.4**	**+0.7**
	baz=287						
KNMB				*e*S	Sn	00 56 58.4	-1.0
	baz=287						
LYJJ	**Jianjiangzhen**	**3.79**	**327**	*e*P	**Pn**	**00 56 23.1**	**+0.7**
	baz=316						
MHZQ	**Yeshan**	**3.86**	**315**	*e*P	**Pn**	**00 56 24.3**	**+0.8**
	baz=313						
MHZQ				*e*S	Sn	00 57 06.7	-1.1
	baz=313						
XPSS	**Dashiqiu**	**3.93**	**335**	*e*P	**Pn**	**00 56 24.9**	**+0.6**
	baz=335						
AXDP	**Jialang**	**4.03**	**293**	*e*P	**Pn**	**00 56 26.7**	**+1.0**
	baz=292						

ISK ***30*** *01:04:39.4, 34°.43N×28°.59E, h85km, ML3.9/27*

NIC ***30*** *01:04:40.9±0.0, 34°.51N×28°.71E, h89km±5km, Ml4.1/3*

IDC ***30*** *01:04:41.3±1.2, 34°.54N×28°.71E, h53km±17km, mb3.4/4, mb1 3.8/12, mb1mx3.4/59, mbtmp3.8/12, ML3.9/8, Error ellipse: s-maj=18.1km s-min=8.2km az=9.0*

DDA ***30*** *01:04:43.8, 34°.60N×28°.49E, h40km±7km, MW4.1*

HLW ***30*** *01:04:44.2, 34°.30N×28°.68E, h26km±18km, Md4.1, Ml4.2*

THE ***30*** *01:04:44.7, 34°.64N×28°.58E, h54km±7km, ML3.3/4, Error ellipse: s-maj=7.2km s-min=1.3km az=84.0*

ISC 30 01:04:41.4±1.0**, 34°.49N**±0°.03×**28°.69E**±0°.03**, h58**km±14km**, n142, **σ1s.**51**/189**, mb3.5**/4**, 5C-4D, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**1.78**	**345**	P	**Pn**	**01 05 10.8**	**+1.1**
ARG				S	Sn	01 05 30.8	-0.5
	575nm,0.4s						
ARG	**Arkhangelos**	**1.78**	**345**	PN	**Pn**	**01 05 10.9**	**+1.1**
ARG				SN	Sn	01 05 31.9	+0.6
ARG	**Arkhangelos**	**1.78**	**345**	⇓*i*P	**Pn**	**01 05 10.8**	**+1.1**
ARG				S	Sn	01 05 31.8	+0.6
KSL	**Kastellorizon**	**1.81**	**24**	P	**Pn**	**01 05 10.9**	**+0.7**
KSL	**Kastellorizon**	**1.81**	**24**	⇑P	**Pn**	**01 05 11.4**	**+1.2**
KSL				S	Sn	01 05 33.8	+1.8
AKAS	**Kas**	**1.89**	**23**	PN	**Pn**	**01 05 12.2**	**+0.8**
AKAS				SN	Sn	01 05 36.4	+2.2
AKAS	**Kas**	**1.89**	**23**	*i* P	**Pn**	**01 05 12.9**	**+1.4**
AKAS				*i* S	Sn	01 05 34.9	+0.7
DEMR	**Demre-Antalya**	**2.00**	**29**	PN	**Pn**	**01 05 13.9**	**+1.1**
ZKR	**Zakros**	**2.12**	**288**	P	**Pn**	**01 05 15.1**	**+0.6**
ZKR	**Zakros**	**2.12**	**288**	PN	**Pn**	**01 05 13.3**	**-1.2**
ZKR	**Zakros**	**2.12**	**288**	P	**Pn**	**01 05 15.1**	**+0.6**
FETY	**Fethiye**	**2.16**	**8**	P	**Pn**	**01 05 15.6**	**+0.6**
FETY	**Fethiye**	**2.16**	**8**	PN	**Pn**	**01 05 16.2**	**+1.2**
FETY	**Fethiye**	**2.16**	**8**	*i* P	**Pn**	**01 05 15.6**	**+0.6**
FETY				*i* S	Sn	01 05 39.6	-1.1
STIA	**Sitia Lasithi**	**2.25**	**289**	P	**Pn**	**01 05 16.9**	**+0.7**
STIA				S	Sn	01 05 41.3	-1.5
AKUM	**Antalya-Kumluc**	**2.27**	**36**	*i* P	**Pn**	**01 05 16.6**	**+0.2**
AKUM				*i* S	Sn	01 05 42.8	-0.5
TURN	**Turunc**	**2.31**	**351**	PN	**Pn**	**01 05 18.0**	**+1.1**
DALY	**Dalyan (Mula)**	**2.32**	**359**	PN	**Pn**	**01 05 18.0**	**+0.9**
DALY	**Dalyan (Mula)**	**2.32**	**359**	*i* P	**Pn**	**01 05 18.0**	**+0.9**
DALY				*i* S	Sn	01 05 43.6	-0.9
OSC1	**CSNet OBS 1**	**2.37**	**114**	⇓*e*P	**Pn**	**01 05 18.4**	**+0.7**
OSC1				S	Sn	01 05 47.8	+2.2
DAT	**Datca**	**2.41**	**338**	P	**Pn**	**01 05 19.1**	**+0.6**
DAT				S	Sn	01 05 44.6	-2.2
DAT	**Datca**	**2.41**	**338**	PN	**Pn**	**01 05 18.9**	**+0.5**
DAT	**Datca**	**2.41**	**338**	*i* P	**Pn**	**01 05 19.1**	**+0.6**
DAT				*i* S	Sn	01 05 44.4	-2.4
ELL	**Elmali**	**2.46**	**23**	PN	**Pn**	**01 05 20.5**	**+1.3**
ELL				SN	Sn	01 05 50.2	+2.1
ELL	**Elmali**	**2.46**	**23**	P	**Pn**	**01 05 20.6**	**+1.4**
CAME	**Cameli-Denizli**	**2.50**	**11**	PN	**Pn**	**01 05 20.7**	**+1.0**
KEMT	**Kemer-ANTALYA**	**2.60**	**35**	PN	**Pn**	**01 05 22.4**	**+1.5**
NPS	**Neapolis**	**2.64**	**288**	P	**Pn**	**01 05 22.6**	**+1.0**
KOSK	**Kos Island**	**2.65**	**329**	PN	**Pn**	**01 05 21.9**	**+0.3**
CAEL	**Denizli, Camel**	**2.67**	**11**	*i* P	**Pn**	**01 05 24.1**	**+1.9**
CAEL				*i* S	Sn	01 05 53.9	+0.4
BDRM	**Kayabasi**	**2.76**	**339**	*i* P	**Pn**	**01 05 23.5**	**+0.3**
BDRM				*i* S	Sn	01 05 52.7	-2.6
MULA	**Mugla, Merkez-**	**2.77**	**354**	*i* P	**Pn**	**01 05 25.7**	**+2.3**
MULA				*i* S	Sn	01 05 56.0	+0.2
BODT	**Bodrum**	**2.80**	**337**	P	**Pn**	**01 05 23.8**	**+0.1**
BODT				S	Sn	01 05 54.2	-2.0
BODT	**Bodrum**	**2.80**	**337**	PN	**Pn**	**01 05 23.9**	**+0.2**
GOLH	**Golhisar**	**2.83**	**14**	*i* P	**Pn**	**01 05 26.7**	**+2.5**
GOLH				*i* S	Sn	01 05 58.9	+1.7
KORT	**Korkueli**	**2.84**	**28**	PN	**Pn**	**01 05 25.7**	**+1.3**
YKAV	**Yalikavak-Bodr**	**2.86**	**337**	PN	**Pn**	**01 05 24.3**	**-0.3**
ANTB	**Antalya**	**2.89**	**33**	PN	**Pn**	**01 05 26.5**	**+1.6**
MLSB	**Milas**	**2.89**	**345**	PN	**Pn**	**01 05 25.5**	**+0.5**
TAVA	**DENIZLI_Tavas**	**2.97**	**3**	*i* P	**Pn**	**01 05 27.8**	**+1.7**
TAVA				*i* S	Sn	01 06 00.0	-0.6
AKMS	**Akamas**	**3.05**	**79**	⇓*e*P	**Pn**	**01 05 27.3**	**+0.2**
AKMS				AML	AML	01 06 00.8	
	2.0nm,0.3s						
AKMS				AML	AML	01 06 00.9	
	2.5nm,0.5s						
HRKL	**Herakleio**	**3.06**	**287**	PN	**Pn**	**01 05 26.9**	**-0.3**
DDIM	**Aydin, Didim**	**3.18**	**339**	*i* P	**Pn**	**01 05 29.6**	**+0.7**
DDIM				*i* S	Sn	01 06 03.1	-2.5
BUCA	**Burdur, Bucak-**	**3.21**	**28**	*i* P	**Pn**	**01 05 31.5**	**+2.1**
BUCA				*i* S	Sn	01 06 09.7	+3.2
NATA	**Nata**	**3.21**	**84**	⇓*i*P	**Pn**	**01 05 30.1**	**+0.7**
IDI	**Anoyia**	**3.22**	**285**	P	**Pn**	**01 05 30.5**	**+0.9**
	27nm,0.3s,baz=110,slow=13,SNR=194						
IDI				S	Sn	01 06 06.8	+0.1
	17nm,0.3s,baz=34,slow=22,SNR=10						
IDI	**Anoyia**	**3.22**	**285**	P	**Pn**	**01 05 30.4**	**+0.9**
IDI				S	Sn	01 06 06.2	-0.5
	162nm,0.6s						
AYDN	**Tasoluk**	**3.23**	**349**	*i* P	**Pn**	**01 05 30.8**	**+1.1**
AYDN				*i* S	Sn	01 06 03.1	-3.8
SANT	**Santorini**	**3.23**	**306**	P	**Pn**	**01 05 29.4**	**-0.3**
SANT	**Santorini**	**3.23**	**306**	PN	**Pn**	**01 05 29.4**	**-0.3**
ALFC	**Alefka**	**3.29**	**77**	⇑P	**Pn**	**01 05 30.6**	**+0.3**
ALFC				AML	AML	01 06 05.9	
	1.1nm,0.2s						
ALFC				AML	AML	01 06 06.2	
	1.2nm,0.2s						
OSC2	**CSNet OBS 4**	**3.30**	**114**	P	**Pn**	**01 05 31.5**	**+1.0**
OSC2				S	Sn	01 06 10.1	+1.6
CMBO	**Columbo, Santo**	**3.33**	**307**	P	**Pn**	**01 05 30.8**	**-0.1**
BCK	**Bucak**	**3.34**	**27**	PN	**Pn**	**01 05 32.3**	**+1.2**
MATC	**Matruh**	**3.37**	**202**	P	**Pn**	**01 05 33.6**	**+2.2**
	baz=203						
BRDR	**BURDUR-Merkez**	**3.38**	**19**	*i* P	**Pn**	**01 05 33.8**	**+2.0**
BRDR				*i* S	Sn	01 06 12.2	+1.4
GCAM	**G?zelcaml?**	**3.41**	**340**	PN	**Pn**	**01 05 32.9**	**+0.9**
GCAM	**G?zelcaml?**	**3.41**	**340**	*i* P	**Pn**	**01 05 32.5**	**+0.4**
GCAM				*i* S	Sn	01 06 08.0	-3.2
GAZI	**Gazipasa**	**3.44**	**59**	PN	**Pn**	**01 05 33.2**	**+0.8**
GAZI	**Gazipasa**	**3.44**	**59**	*i* P	**Pn**	**01 05 32.7**	**+0.2**
GAZI				*i* S	Sn	01 06 08.5	-3.4
AYDB	**Zeytinkoy-Aydi**	**3.51**	**350**	PN	**Pn**	**01 05 33.9**	**+0.4**
LEF	**Lefka**	**3.51**	**79**	PN	**Pn**	**01 05 33.4**	**-0.1**
LEF	**Lefka**	**3.51**	**79**	*i* P	**Pn**	**01 05 32.9**	**-0.6**
LEF				*i* S	Sn	01 06 09.4	-4.4
SMG	**Samos**	**3.54**	**336**	P	**Pn**	**01 05 34.0**	**+0.1**
BASM	**Basmaki-Afyon**	**3.59**	**17**	PN	**Pn**	**01 05 35.5**	**+0.9**
AKDN	**Akdeniz- Kıbrı**	**3.61**	**76**	PN	**Pn**	**01 05 36.4**	**+1.7**
APE	**Apeiranthos**	**3.63**	**316**	PN	**Pn**	**01 05 34.5**	**-0.6**
ISP	**Isparta**	**3.64**	**24**	PN	**Pn**	**01 05 35.6**	**+0.3**
ASGA	**Asgata**	**3.77**	**84**	⇑*e*P	**Pn**	**01 05 37.2**	**+0.2**
ASGA				AML	AML	01 06 20.0	
	0.7nm,0.2s						
ASGA				AML	AML	01 06 20.3	
	0.8nm,0.2s						
VAM	**Vamos**	**3.80**	**285**	P	**Pn**	**01 05 38.2**	**+0.9**
DGB	**zmir**	**3.84**	**338**	*i* P	**Pn**	**01 05 37.7**	**-0.2**
DGB				*i* S	Sn	01 06 17.6	-4.1
GMLD	**Gumuldur**	**3.85**	**339**	PN	**Pn**	**01 05 38.7**	**+0.6**
CSS	**Mathiatis**	**3.85**	**82**	PN	**Pn**	**01 05 38.7**	**+0.6**
CSS	**Mathiatis**	**3.85**	**82**	⇑P	**Pn**	**01 05 38.5**	**+0.4**
BOZY	**Bozyazi-Mersin**	**3.86**	**64**	PN	**Pn**	**01 05 39.3**	**+1.1**
SEDI	**Konya, Seydise**	**3.86**	**39**	*i* P	**Pn**	**01 05 40.6**	**+2.2**
SEDI				*i* S	Sn	01 06 22.4	-0.1
SEYD	**Seydisehir-KON**	**3.87**	**40**	PN	**Pn**	**01 05 39.7**	**+1.2**
BAGO	**Egridir - ISPA**	**3.88**	**25**	*i* P	**Pn**	**01 05 41.2**	**+2.6**
ATHAL	**Athalassa**	**3.93**	**79**	P	**Pn**	**01 05 40.1**	**+1.0**
KZIL	**AFYON_Kizioren**	**3.94**	**17**	*i* P	**Pn**	**01 05 40.2**	**+0.9**
HDMB	**Hadim**	**3.95**	**50**	PN	**Pn**	**01 05 40.9**	**+1.2**
AKIN	**Akıncılar- Kıb**	**3.97**	**81**	PN	**Pn**	**01 05 40.7**	**+1.0**
TEKE	**Tekeli-Mersin**	**3.98**	**64**	PN	**Pn**	**01 05 41.2**	**+1.4**
IMMV	**Iera Moni Meta**	**3.98**	**285**	P	**Pn**	**01 05 41.2**	**+1.3**
IMMV				S	Sn	01 06 24.2	-1.1
	188nm,0.9s						
KULA	**Kula-Manisa**	**4.01**	**360**	PN	**Pn**	**01 05 41.2**	**+0.8**
ERMK	**Ermenek**	**4.06**	**57**	*i* P	**Pn**	**01 05 43.4**	**+2.3**
LFK	**Lefkose**	**4.06**	**77**	PN	**Pn**	**01 05 42.4**	**+1.4**
MVOU	**Mavrovouni**	**4.10**	**81**	⇑P	**Pn**	**01 05 42.0**	**+0.5**
BLCB	**Balcova**	**4.11**	**342**	P	**Pn**	**01 05 41.3**	**-0.2**
BLCB				S	Sn	01 06 24.5	-3.8
BLCB	**Balcova**	**4.11**	**342**	PN	**Pn**	**01 05 41.9**	**+0.4**
BERE	**Bereket-Mersin**	**4.14**	**62**	PN	**Pn**	**01 05 43.2**	**+1.0**
SLUM	**Salum**	**4.18**	**225**	P	**Pn**	**01 05 43.9**	**+1.3**
	baz=228						
SLUM				AMP		01 06 00.0	
	baz=228						
RODP	**Rodopos**	**4.18**	**286**	P	**Pn**	**01 05 44.2**	**+1.6**
RODP				S	Sn	01 06 29.8	-0.4
	28nm,1.1s						
URLA	**Izmir**	**4.21**	**337**	PN	**Pn**	**01 05 43.2**	**+0.1**
USAK	**Uak-Merkez**	**4.22**	**4**	*i* P	**Pn**	**01 05 44.2**	**+0.9**
USAK				*i* S	Sn	01 06 28.4	-2.9
GOMA	**Golmarmara-Man**	**4.25**	**352**	PN	**Pn**	**01 05 42.6**	**-1.0**
YVAC	**Isparta, Yalva**	**4.30**	**28**	*i* P	**Pn**	**01 05 47.6**	**+3.3**
YVAC				*i* S	Sn	01 06 33.7	+0.5
GULN	**MERSIN_Gulnar**	**4.31**	**66**	*i* P	**Pn**	**01 05 45.8**	**+1.4**
GULN				*i* S	Sn	01 06 30.9	-2.6
DOGA	**KONYA_Doganhis**	**4.33**	**33**	*i* P	**Pn**	**01 05 47.2**	**+2.3**
DOGA				*i* S	Sn	01 06 35.1	+0.9
KKBE	**Karaman, Kazim**	**4.40**	**51**	*i* P	**Pn**	**01 05 48.4**	**+2.8**
AKHS	**Akhisar**	**4.43**	**351**	*i* P	**Pn**	**01 05 45.8**	**-0.3**
PARAL	**Paralimni**	**4.44**	**82**	P	**Pn**	**01 05 46.9**	**+0.8**
DEMI	**Demirci**	**4.54**	**0**	*i* P	**Pn**	**01 05 48.6**	**+1.0**
DEMI				*i* S	Sn	01 06 37.0	-2.1
KONT	**Konya--Tatoy**	**4.55**	**40**	*i* P	**Pn**	**01 05 50.0**	**+2.3**
EREN	**Erenkoy**	**4.62**	**75**	*i* P	**Pn**	**01 05 49.9**	**+1.4**
EREN				*i* S	Sn	01 06 39.1	-1.8
GDZ	**Gediz**	**4.63**	**8**	*i* P	**Pn**	**01 05 49.9**	**+1.0**
KIZK	**Mersin**	**4.87**	**64**	*i* P	**Pn**	**01 05 53.7**	**+1.6**
HMYD	**Mayadein**	**5.01**	**158**	P	**Pn**	**01 05 56.1**	**+2.0**
	baz=157						
HNAT	**Natroun**	**5.12**	**161**	P	**Pn**	**01 05 57.3**	**+1.9**
	baz=160						
HNAT				AMP		01 06 00.0	
	baz=160						
HNAT				S	Sn	01 06 49.2	-4.0
	baz=160						
VLY	**Voula,Athens**	**5.19**	**312**	P	**Pn**	**01 05 56.8**	**+0.4**
ATHU	**Athens Univers**	**5.26**	**313**	P	**Pn**	**01 05 57.8**	**+0.4**
KOT	**Kottamia**	**5.27**	**149**	P	**Pn**	**01 05 58.6**	**+1.0**
	baz=147						
KOT				AMP		01 06 00.0	
	baz=147						
HHAG	**Hagoal**	**5.37**	**147**	P	**Pn**	**01 06 00.1**	**+1.1**
	baz=145						
HHAG				AMP		01 06 00.0	
	baz=145						
HSAF	**As Saff**	**5.43**	**153**	P	**Pn**	**01 06 01.2**	**+1.4**
	baz=151						
GLL	**Jalalah**	**5.53**	**152**	P	**Pn**	**01 06 02.4**	**+1.2**
	baz=150						
RYAN	**Fayoum**	**5.56**	**165**	P	**Pn**	**01 06 02.5**	**+1.0**
	baz=164						
RYAN				AMP		01 07 00.0	
	baz=164						
DQRL	**Deir Qamar**	**5.76**	**96**	*e*P	**Pn**	**01 06 04.1**	**-0.3**
MMAI	**Mount Meron Ar**	**5.79**	**103**	P	**Pn**	**01 06 04.8**	**+0.1**
	20nm,0.3s,baz=296,slow=11,SNR=158						
MMAI				S	Sn	01 07 09.8	+0.1
	12nm,0.3s,baz=285,slow=37,SNR=5.6						
BHL	**Bhannes**	**5.80**	**94**	*e*P	**Pn**	**01 06 04.1**	**-0.9**
SUZ	**Suez**	**5.82**	**142**	P	**Pn**	**01 06 06.6**	**+1.5**
	baz=140						
SWA2		**5.91**	**209**	P	**Pn**	**01 06 07.1**	**+0.8**
	baz=210						
SWA2				AMP		01 07 00.0	
	baz=210						
SWA2				S	Sn	01 07 08.4	-4.3
	baz=210						
SHBL	**Chebaa**	**5.98**	**99**	*e*P	**Pn**	**01 06 07.2**	**-0.1**
RCY	**Rachaya**	**6.02**	**97**	*e*P	**Pn**	**01 06 08.1**	**+0.1**
NBNS	**Bani Suef**	**6.26**	**158**	P	**Pn**	**01 06 12.2**	**+1.0**
	baz=157						
NBNS				AMP		01 07 00.0	
	baz=157						
BRTR	**Keskin Array B**	**6.55**	**36**	P	**Pn**	**01 06 16.2**	**+1.0**
	0.4nm,0.3s,baz=218,slow=16,SNR=16						
BRTR				S	Sn	01 07 26.5	-2.0
	0.9nm,0.3s,baz=306,slow=27,SNR=14						
TAMRE	**El Minia**	**7.05**	**164**	P	**Pn**	**01 06 23.0**	**+1.1**
	baz=163						
EIL	**Elat**	**7.17**	**130**	P	**Pn**	**01 06 24.1**	**+0.6**
	7.0nm,0.3s,baz=323,slow=5.1,SNR=87						
EIL				S	Sn	01 07 38.7	-4.9
	6.9nm,0.3s,baz=218,slow=23,SNR=9.0						
ASF	**Jabal al Asfar**	**7.25**	**106**	P	**Pn**	**01 06 25.3**	**+0.6**
	3.4nm,0.3s,baz=288,slow=5.3,SNR=63						
ASF				S	Sn	01 07 45.6	-0.1
	0.6nm,0.3s,baz=191,slow=19,SNR=1.8						
HFRF	**Wahat Farafira**	**7.33**	**183**	P	**Pn**	**01 06 26.9**	**+1.1**
	baz=183						
VAE	**Valguarnera**	**11.94**	**289**	P	**Pn**	**01 07 29.5**	**+0.7**
	0.5nm,0.3s,baz=256,slow=19,SNR=1.6						
VAE				S	Sn	01 09 30.1	-10
	1.0nm,0.3s,baz=151,slow=19,SNR=2.0						
GERES	**GERESS Array B**	**18.14**	**327**	P	**P**	**01 08 49.5**	**+0.6**
	0.3nm,0.3s,baz=146,slow=7.1,SNR=2.3						
WATA	**Walderalm**	**18.16**	**320**	*e*P	**P**	**01 08 49.1**	**-0.1**
	1.4nm,0.5s						
SQTA	**Sankt Quirin**	**18.29**	**319**	*e*P	**P**	**01 08 50.6**	**+0.1**
	5.9nm,1.1s						
MOTA	**Moosalm**	**18.42**	**319**	*e*P	**P**	**01 08 51.7**	**-0.3**
	3.0nm,0.8s						
FETA	**Feichten**	**18.43**	**318**	*e*P	**P**	**01 08 51.6**	**-0.5**
	0.5nm,0.4s						

RETA	**Reutte**	**18.69**	**319**	*e*P	**P**	**01 08 55.0**	**+0.2**
	0.5nm,0.2s						
DAVOX	**Davos/Dischmat**	**18.77**	**316**	P	**P**	**01 08 56.4**	**+0.5**
	0.2nm,0.3s,baz=140,slow=7.9,SNR=2.0						
DAVA	**Damuels**	**19.06**	**318**	*e*P	**P**	**01 08 58.9**	**-0.1**
	1.3nm,0.2s						
ESDC	**Sonseca Array**	**26.47**	**291**	P	**P**	**01 10 13.7**	**+0.7**
	0.8nm,0.4s,baz=84,slow=10,SNR=22						
TORD	**Torodi Ar. Bea**	**32.40**	**236**	P	**P**	**01 11 05.8**	**+0.1**
	0.3nm,0.7s,baz=42,slow=10,SNR=4.1						
ARCES	**ARCESS Array B**	**35.14**	**358**	P	**P**	**01 11 28.8**	**-0.2**
	2.5nm,1.0s,baz=186,slow=7.8,SNR=1.0						
MKAR	**Makanchi Array**	**41.73**	**56**	P	**P**	**01 12 24.6**	**0.0**
	0.4nm,0.6s,baz=302,slow=7.0,SNR=3.8						

SJA 30 01:10:59.0, 29°.47S×70°.00W, h10^{km}, ML4.2, Central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCO	**Las Campanas**	**0.76**	**307**	*i* P	Pg	01 11 14.0	+0.2
AROD	**Rodeo**	**0.83**	**147**	*i* P	Pn	01 11 17.0	-0.1
ACCO	**Cerro Coronel**	**1.38**	**144**	*i* P	Pn	01 11 22.0	-2.6
AC04	**Llanos de Chal**	**1.57**	**323**	*i* P	Pb	01 11 28.0	-0.2
ASTB	**Santa Barbara**	**7.41**	**43**	*i* P	Pn	01 12 46.0	-1.3
HJA	**Humahuaca**	**7.47**	**34**	*i* P	Pn	01 12 50.0	+1.5
ALOL	**LOMAS DE OLMED**	**7.79**	**45**	*i* P	Pn	01 12 52.0	-0.5

*IDC **30** 01:12:13.0±1.1, 5°.92N×127°.10E, h0^{km}, mb4.4/7, mb1 4.5/7, mb1mx3.9/38, mbtmp4.4/7, MS2.6/2, Ms1 2.8/2, ms1mx2.4/43, Error ellipse: s-maj=60.5km s-min=15.0km az=62.0*

*MAN **30** 01:12:20.5, 5°.76N×126°.51E, h1^{km}, mb4.6, ML3.5, MS3.3*

*NEIC **30** 01:12:23.0±1.8, 5°.61N±0°.09×126°.5E±0°.2, h67^{km}±8^{km}, mb4.3/15, Error ellipse: s-maj=24.0km s-min=12.7km az=78.0*

ISC 30 01:12:23.5±0.8, 5°.8N±0°.1×126°.8E±0°.2, h83^{km}, n34, σ0^{s}.92/31, mb4.2/16, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**1.73**	**317**	Pn	Pn	01 12 47.0	-5.0
	84nm,0.3s,baz=277,slow=8.1,SNR=13						
DAV				Sn	**Sn**	**01 13 13.1**	**-0.5**
	111nm,0.3s,baz=328,slow=18,SNR=3.8						
DAV				LR	LR	01 13 41.3	
	comp=Z,325nm,18.4s,baz=154,slow=47						
DAV	**Davao City (W)**	**1.73**	**317**		**Pn**	**01 12 49.9**	**-2.1**
TOLI2	**Tolitoli**	**7.56**	**232**	Pn	Pn	01 14 03.1	-8.0
KAPI	**Kappang**	**12.81**	**213**	LR	LR	01 20 56.3	
	comp=Z,19nm,19.0s,baz=58,slow=40						
SBUM	**Sibu**	**14.87**	**258**		**Pn**	**01 15 50.2**	**+0.7**
KNRA	**Kununurra**	**21.42**	**175**	P	**P**	**01 17 04.1**	**-0.7**
KNRA				IAmb	IAmb	01 17 04.5	
	comp=Z,50nm,1.2s						
PMBI	**Palembang**	**23.60**	**249**	P	**P**	**01 17 27.6**	**+0.5**
FITZ	**Fitzroy Crossi**	**23.76**	**183**	P	**P**	**01 17 28.0**	**-0.5**
	comp=Z,1.9nm,0.6s,baz=358,slow=9.9,SNR=2.5						
WB0	**Warramunga Arr**	**26.48**	**164**	P	**P**	**01 17 53.3**	**+0.1**
WB0				IAmb	IAmb	01 17 57.4	
	comp=Z,5.4nm,0.7s						
WRAB	**Tennant Creek**	**26.63**	**164**	P	**P**	**01 17 56.4**	**+2.0**
WRAB				IAmb	IAmb	01 17 58.9	
	comp=Z,4.5nm,0.8s						
WRA	**Warramunga Arr**	**26.64**	**164**	P	**P**	**01 17 53.8**	**-0.7**
	comp=Z,2.9nm,0.7s,baz=344,slow=10,SNR=40						
WRA	**Warramunga Arr**	**26.64**	**164**	P	**P**	**01 17 53.5**	**-1.1**
WB2	**Warramunga Arr**	**26.64**	**164**	P	**P**	**01 17 54.6**	**0.0**
WB2				IAmb	IAmb	01 18 01.9	
	comp=Z,12nm,1.2s						
WR0	**Warramunga Arr**	**26.71**	**164**	P	**P**	**01 17 54.1**	**-1.0**
CMAR	**Chiang Mai Arr**	**29.91**	**297**	LR	LR	01 31 02.0	
	comp=Z,16nm,18.4s,baz=172,slow=37						
ASAR	**Alice Springs**	**30.09**	**167**	P	**P**	**01 18 25.2**	**-0.1**
	comp=Z,11nm,0.4s,baz=343,slow=6.5,SNR=10						
BBOO	**Buckleboo**	**39.39**	**168**	P	**P**	**01 19 44.9**	**-0.3**
STKA	**Stephens Creek**	**40.04**	**160**	P	**P**	**01 19 50.5**	**-0.1**
	comp=Z,0.8nm,0.3s,baz=340,slow=13,SNR=2.9						
STKA	**Stephens Creek**	**40.04**	**160**	P	**P**	**01 19 48.6**	**-2.0**
MK31	**Makanchi Array**	**55.90**	**324**	P	**P**	**01 21 53.4**	**+0.6**
MK31				IAmb	IAmb	01 22 10.3	
	comp=Z,1.6nm,1.1s						
MKAR	**Makanchi Array**	**55.90**	**324**	P	**P**	**01 21 53.4**	**+0.6**
	comp=Z,0.8nm,0.3s,baz=119,slow=7.4,SNR=16						
MKAR	**Makanchi Array**	**55.90**	**324**	P	**P**	**01 21 53.0**	**+0.2**
MAKZ	**Makanchi**	**56.09**	**324**	P	**P**	**01 21 54.8**	**+0.7**
MAKZ				IAmb	IAmb	01 22 16.5	
	comp=Z,2.2nm,1.1s						
KURK	**Kurchatov**	**60.04**	**327**	P	**P**	**01 22 21.8**	**+0.2**
KURK				IAmb	IAmb	01 22 22.3	
	comp=Z,3.5nm,0.6s						
GAR	**Garm**	**60.57**	**312**	P	**P**	**01 22 26.0**	**+0.4**
KKAR	**Karatay Array**	**61.76**	**316**	P	**P**	**01 22 32.6**	**-0.9**
BRVK	**Borovoye**	**65.70**	**326**	P	**P**	**01 22 59.9**	**+0.7**
BRVK				IAmb	IAmb	01 23 12.5	
	comp=Z,3.3nm,1.2s						
ABKAR	**Akbulak array**	**70.59**	**320**	P	**P**	**01 23 29.5**	**-0.3**
AKTO	**Aktyubinsk**	**72.08**	**321**	P	**P**	**01 23 39.1**	**+0.3**
	baz=90,slow=10						
ARU	**Arti**	**73.23**	**327**	P	**P**	**01 23 45.8**	**+0.4**
ARU				IAmb	IAmb	01 24 01.4	
	comp=Z,6.4nm,1.2s						
ARCES	**ARCESS Array B**	**88.54**	**340**	P	**P**	**01 25 07.6**	**+1.0**
	comp=Z,2.2nm,0.9s,baz=69,slow=4.9,SNR=1.3						
FINES	**FINESS Array B**	**90.04**	**332**	P	**P**	**01 25 14.6**	**+0.9**
	comp=Z,5.7nm,1.1s,baz=90,slow=7.6,SNR=3.8						
TORD	**Torodi Ar. Bea**	**122.29**	**289**	PKP	**PKiKP**	**01 31 11.6**	**+1.5**
	comp=Z,0.4nm,0.6s,baz=51,slow=2.3,SNR=4.1						
TORD	**Torodi Ar. Bea**	**122.29**	**289**		**PKiKP**	**01 31 10.4**	**+0.3**

*GUC **30** 01:14:06.2±0.8, 35°.04S×70°.61W, h14^{km}±3^{km}, ML3.3*

*SJA **30** 01:14:06.0, 35°.13S×70°.76W, h10^{km}, ML4.0*

ISC 30 01:14:05.8±1.3, 35°.08S±0°.04×70°.67W±0°.04, h11^{km}±9^{km}, n27, σ1^{s}.02/41, 10C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BO02	**Sierra Bellavi**	**0.31**	**342**	⇑*i*P	**Pg**	**01 14 12.2**	**+0.1**
BO02				*i* S	**Sg**	**01 14 16.7**	**+0.6**
BO02				IAML		01 14 17.0	
	comp=N,8μm,0.1s						
BO02	**Sierra Bellavi**	**0.31**	**342**	*i* P	**Pg**	**01 14 12.0**	**0.0**
BO01	**Tunca**	**0.77**	**333**	⇑*i*P	**Pg**	**01 14 20.4**	**-0.4**
BO01				*i* S	**Sg**	**01 14 31.0**	**+0.1**
BO01				IAML		01 14 31.4	
	comp=E,983nm,0.1s						
BO01	**Tunca**	**0.77**	**333**	*i* P	**Pg**	**01 14 20.0**	**-0.7**
ML02	**Panimavida**	**0.91**	**222**	⇓*i*P	**Pb**	**01 14 24.1**	**+0.4**
ML02				*i* S	**Sn**	**01 14 37.6**	**-0.3**
GO05	**Huala**	**1.04**	**274**	⇑*i*P	**Pn**	**01 14 26.3**	**-0.1**
GO05				*i* S	**Sn**	**01 14 41.4**	**+0.4**
GO05				IAML		01 14 42.9	
	comp=E,2μm,0.2s						
GO05	**Huala**	**1.04**	**274**	*i* P	**Pg**	**01 14 26.0**	**+0.2**
BO04	**La Punta**	**1.09**	**2**	⇑*i*P	**Pb**	**01 14 25.2**	**-1.6**
BO04				*i* S	**Sb**	**01 14 39.1**	**-2.0**
BO04				IAML		01 14 41.4	
	comp=E,722nm,0.2s						
EDS3	**Malargue**	**1.24**	**124**	*i* P	**Pn**	**01 14 28.0**	**-1.3**
LMEL	**Las Melosas**	**1.29**	**17**	*e*P	**Pn**	**01 14 28.6**	**-1.4**
LMEL				*i* S	**Sb**	**01 14 45.2**	**-1.7**
LMEL				IAML		01 14 46.5	
	comp=N,2μm,0.2s						
MT01	**Popeta**	**1.31**	**338**	⇑*i*P	**Pn**	**01 14 29.2**	**-0.9**
MT01				*i* S	**Sb**	**01 14 46.7**	**-0.5**
MT01				IAML		01 14 48.4	
	comp=E,960nm,0.2s						
MT01	**Popeta**	**1.31**	**338**	*i* P	**Pn**	**01 14 29.0**	**-1.1**
MT09	**Talagante**	**1.33**	**348**	⇑*i*P	**Pn**	**01 14 29.5**	**-1.0**
MT09				*i* S	**Sb**	**01 14 47.2**	**-0.8**
MT09				IAML		01 14 48.4	
	comp=N,2μm,0.1s						
VA05	**Santo Domingo**	**1.62**	**331**	⇑*i*P	**Pn**	**01 14 34.6**	**+0.2**
VA05				*i* S	**Sb**	**01 14 56.1**	**-0.2**
VA05				IAML		01 15 00.4	
	comp=E,1μm,0.4s						
MT05	**Renca**	**1.69**	**358**	*e*P	**Pn**	**01 14 35.5**	**+0.1**
MT05				IAML		01 15 00.7	
	comp=E,811nm,0.2s						
MT05	**Renca**	**1.69**	**358**	*i* P	**Pn**	**01 14 35.0**	**-0.3**
RFA	**San Rafael**	**1.83**	**81**	*i* P	**Pn**	**01 14 38.0**	**+0.6**
MT02	**Curacav**	**1.86**	**348**	⇑*i*P	**Pn**	**01 14 38.1**	**+0.5**
MT02				*i* S	**Sb**	**01 15 02.3**	**-0.9**
MT02				IAML		01 15 02.8	
	comp=N,231nm,0.2s						
MT02	**Curacav**	**1.86**	**348**	*i* P	**Pn**	**01 14 38.0**	**+0.3**
PEL	**Peldehue**	**1.94**	**360**	⇑*i*P	**Pn**	**01 14 39.3**	**+0.6**
PEL				*i* S	**Sb**	**01 15 05.0**	**-0.3**
PEL				IAML		01 15 07.2	
	comp=N,369nm,0.2s						
PEL	**Peldehue**	**1.94**	**360**	*i* P	**Pn**	**01 14 39.0**	**+0.3**
ROC1	**El Roble**	**2.12**	**352**	*i* P	**Pn**	**01 14 42.0**	**+0.5**
ROCH	**El Roble**	**2.13**	**352**	⇑*i*P	**Pn**	**01 14 42.6**	**+1.1**
ROCH				*e*P	**Pn**	**01 14 42.5**	**+1.1**
ROCH				*i* S	**Sb**	**01 15 09.7**	**-1.3**
ROCH				*i* S	**Sn**	**01 15 10.2**	**+2.2**
ROCH				IAML		01 15 12.3	
	comp=N,658nm,0.4s						
VA01	**Torpederas**	**2.21**	**338**	*i* P	**Pn**	**01 14 44.0**	**+1.6**
VA03	**San Esteban**	**2.32**	**2**	*i* P	**Pn**	**01 14 46.0**	**+2.0**
AAGR	**Agrelo**	**2.51**	**38**	*i* P	**Pb**	**01 14 52.0**	**+1.0**
MRA	**San Martin**	**4.91**	**59**	*i* P	**Pn**	**01 15 21.0**	**+1.4**

*JMA **30** 01:39:41.7±0.2, 31°.36N×128°.69E, h14^{km}±2^{km}, M4.2*

*NIED **30** 01:39:41.7, 31°.36N×128°.69E, h14^{km}, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.97; $M_{\theta\theta}$0.45; $M_{\phi\phi}$0.52; $M_{r\theta}$-0.49; $M_{\theta\phi}$2.26; $M_{\phi r}$0.94; Fault plane solution: $M_0$2.62000×10^{15} NP1: ϕ_s185.00000°, δ71.00000°, λ-151.00000°. NP2: ϕ_s85.00000°, δ62.00000°, λ-22.00000°.*

*IDC **30** 01:39:42.1±1.1, 31°.22N×128°.43E, h0^{km}, mb3.5/5, mb1 3.7/8, mb1mx3.6/43, mbtmp3.6/8, ML3.7/2, MS3.6/13, Ms1 3.6/13, ms1mx3.3/33 Error ellipse: s-maj=30.3km s-min=18.2km az=87.0*

ISC 30 01:39:42.5±0.8, 31°.34N±0°.05×128°.83E±0°.06, h10^{km}, n26, σ1^{s}.43/22, mb3.6/5, MS3.6/10, 1C, Northwest of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	**Shimokoshiki**	**0.83**	**66**	⇑P	**Pb**	**01 39 58.9**	**-0.1**
JSJ				S	**Sn**	**01 40 11.5**	**-1.1**
JFU	**Fukue jima 2**	**1.31**	**357**	P	**Pn**	**01 40 05.4**	**-1.6**
JFU				S	**Sb**	**01 40 22.1**	**-2.1**
JSU	**Suzuyama**	**1.40**	**83**	P	**Pb**	**01 40 08.9**	**+0.1**
JNN	**Nakanoshima**	**1.74**	**149**	P	**Pn**	**01 40 13.2**	**+0.3**
JYAK	**Yakushimahirau**	**1.81**	**127**	P	**Pn**	**01 40 13.4**	**-0.4**
JTN	**Tanegashima 3**	**1.97**	**110**	P	**Pn**	**01 40 16.3**	**+0.3**
JTZ	**Takazaki**	**2.01**	**73**	P	**Pn**	**01 40 17.6**	**+1.1**
JMTN	**Minamitane**	**2.01**	**117**	P	**Pn**	**01 40 17.5**	**+0.9**
JIU3	**Izumi3**	**2.07**	**54**	P	**Pn**	**01 40 17.6**	**+0.2**
JIU3				S	**Sn**	**01 40 43.4**	**+0.1**
JNU	**Nakatsue**	**2.48**	**44**	Pn	**Pg**	**01 40 29.2**	**-0.9**
	23nm,0.3s,baz=221,slow=6.5,SNR=42						
JNU				Sn	**Sg**	**01 41 02.5**	**+0.2**
	17nm,0.3s,baz=3.0,slow=23,SNR=3.8						
JOW	**Kunigami**	**4.52**	**186**	Pn	**Pn**	**01 40 50.6**	**-0.5**
	baz=114,slow=19,SNR=1.6						
KSRS	**Korea Array**	**6.14**	**353**	Pn	**Pn**	**01 41 15.6**	**+2.2**
	1.0nm,0.3s,baz=176,slow=14,SNR=9.4						
KSRS				Sn	**Sn**	**01 42 28.4**	**+4.7**
	0.8nm,0.3s,baz=167,slow=30,SNR=3.9						
KSRS				Lg	Lg	01 42 50.9	
	3.1nm,0.3s,baz=178,slow=31,SNR=6.0						
KSRS				LR	LR	01 43 46.3	
	comp=Z,238nm,18.1s,baz=175,slow=39						
MJAR	**Matsushiro Arr**	**9.36**	**54**	LR	LR	01 45 37.2	
	comp=Z,162nm,18.3s,baz=230,slow=36						
ASAJ	**Asahikawa**	**16.74**	**37**	LR	LR	01 49 42.7	
	comp=Z,150nm,19.3s,baz=182,slow=35						
GUMO	**Guam**	**23.01**	**137**	LR	LR	01 52 27.5	
	comp=Z,83nm,18.6s,baz=101,slow=33						
SONM	**Songino Array**	**23.75**	**320**	P	**P**	**01 44 55.3**	**+0.2**
	0.4nm,0.6s,baz=135,slow=10,SNR=2.4						
SONM				LR	LR	01 55 05.3	
	comp=Z,231nm,20.3s,baz=126,slow=39						
TLY	**Talaya**	**27.49**	**325**	LR	LR	01 57 32.6	
	comp=Z,154nm,19.4s,baz=130,slow=39						
CMAR	**Chiang Mai Arr**	**29.88**	**252**	LR	LR	01 57 48.7	
	comp=Z,33nm,18.5s,baz=45,slow=37						
PETK	**Petropavlovsk-**	**30.15**	**35**	LR	LR	01 57 46.5	
	comp=Z,67nm,19.0s,baz=174,slow=36						
ZALV	**Zalesovo Beam**	**38.63**	**319**	LR	LR	02 04 08.1	
	comp=Z,124nm,18.7s,baz=73,slow=38						
MKAR	**Makanchi Array**	**38.70**	**307**	P	**P**	**01 47 06.3**	**-0.2**
	0.6nm,0.9s,baz=89,slow=10,SNR=2.4						
MKAR				LR	LR	02 03 12.1	
	comp=Z,62nm,18.2s,baz=88,slow=37						
WRA	**Warramunga Arr**	**51.26**	**173**	P	**P**	**01 48 47.1**	**+0.4**
	0.7nm,0.8s,baz=354,slow=8.3,SNR=3.4						
ASAR	**Alice Springs**	**54.91**	**174**	P	**P**	**01 49 13.8**	**+0.2**
	0.5nm,0.8s,baz=6.2,slow=9.4,SNR=2.2						
FINES	**FINESS Array B**	**68.71**	**330**	P	**P**	**01 50 45.8**	**-0.2**
	3.2nm,0.9s,baz=67,slow=11,SNR=3.9						
FINES				LR	LR	02 26 19.4	
	comp=Z,97nm,20.3s,baz=307,slow=41						
AKASG	**Malin Array Be**	**72.02**	**319**	LR	LR	02 25 15.7	
	comp=Z,87nm,18.8s,baz=0.0,slow=38						
BRTR	**Keskin Array B**	**74.35**	**307**	LR	LR	02 29 00.2	
	comp=Z,59nm,19.2s,baz=354,slow=40						

*IDC **30** 02:31:19.1±12.0, 6°.82N×94°.06E, h0^{km}, mb3.8/7, mb1 3.9/7, mb1mx3.6/50, mbtmp3.8/7, Error ellipse: s-maj=277.1km s-min=76.5km az=132.0*

*NEIC **30** 02:31:22.4±2.0, 7°.03N±0°.07×94°.4E±0°.1, h16^{km}±8^{km}, mb4.1/4, Error ellipse: s-maj=21.7km s-min=9.5km az=74.0*

ISC 30 02:31:22.9±0.9, 7°.0N±0°.1×94°.5E±0°.1, h26^{km}, n21, σ1^{s}.16/18, mb3.8/9, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	**Lhok Sumawe**	**3.06**	**125**	Pn	**Pn**	**02 32 09.1**	**-0.5**
SRIT	**Nakonsritamara**	**5.34**	**73**	Pn	**Pn**	**02 32 40.9**	**-0.1**
KULM	**Kulim**	**6.40**	**105**	Pn	**Pn**	**02 32 53.3**	**-2.3**
H08S3	**Diego Garcia H**	**26.29**	**237**	T	T	03 03 31.9	
	baz=56,slow=75,SNR=16						
H08S2	**Diego Garcia H**	**26.30**	**237**	T	T	03 03 30.8	
	baz=56,slow=75,SNR=13						
H08S1	**Diego Carcia H**	**26.31**	**237**	T	T	03 03 31.4	
	baz=56,slow=75,SNR=8.2						
GAR	**Garm**	**38.56**	**329**	P	**P**	**02 38 42.2**	**-1.6**
GAR				IAmb	IAmb	02 38 53.5	
	comp=Z,9.9nm,1.2s						
MK31	**Makanchi Array**	**40.99**	**347**	P	**P**	**02 39 04.7**	**+0.9**
MK31				IAmb	IAmb	02 39 30.2	
	comp=Z,2.9nm,1.4s						
MKAR	**Makanchi Array**	**40.99**	**347**	P	**P**	**02 39 04.1**	**+0.4**
	comp=Z,0.5nm,0.7s,baz=169,slow=8.4,SNR=4.8						
MKAR	**Makanchi Array**	**40.99**	**347**	P	**P**	**02 39 03.8**	**+0.1**
KURBB	**Kurchatov Arra**	**45.45**	**346**	P	**P**	**02 39 40.8**	**+1.2**
	comp=Z,0.7nm,0.6s,baz=176,slow=8.5,SNR=5.3						
ZALV	**Zalesovo Beam**	**47.44**	**352**	P	**P**	**02 39 56.3**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=186,slow=4.3,SNR=2.3						
ZALV	**Zalesovo Beam**	**47.44**	**352**	P	**P**	**02 39 55.3**	**+0.1**
WRA	**Warramunga Arr**	**47.52**	**125**	P	**P**	**02 39 58.4**	**+2.0**
WB2	**Warramunga Arr**	**47.53**	**125**	P	**P**	**02 39 58.1**	**+1.6**
BVAR	**Borovoye Array**	**49.89**	**341**	P	**P**	**02 40 14.5**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=174,slow=14,SNR=3.9						
ABKAR	**Akbulak array**	**51.12**	**332**		**P**	**02 40 24.2**	**+0.7**
AKTO	**Aktyubinsk**	**52.84**	**332**	P	**P**	**02 40 36.6**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=108,slow=6.8,SNR=3.9						
BRTR	**Keskin Array B**	**63.22**	**311**	P	**P**	**02 41 48.5**	**-0.9**
	comp=Z,0.8nm,0.8s,baz=111,slow=6.3,SNR=5.1						
BRTR	**Keskin Array B**	**63.22**	**311**	P	**P**	**02 41 48.8**	**-0.7**
FINES	**FINESS Array B**	**73.61**	**332**	P	**P**	**02 42 54.0**	**+0.3**
	comp=Z,9.4nm,1.1s,baz=111,slow=6.1,SNR=5.0						

IDC 30 02:31:43.6±6.1, 23°.17S×179°.97E, h497^{km}±42^{km}, mb3.0/2, mb1 3.3/2, mb1mx2.9/34, mbtmp3.9/2, Error ellipse: s-maj=178.0km s-min=45.8km az=157.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**42.13**	**260**	P	P	02 38 51.8	-0.2
	0.5nm,0.4s,baz=97,slow=7.1,SNR=4.3						
ASAR				PcP	PcP	02 40 34.4	-0.8
	0.4nm,0.6s,baz=99,slow=5.9,SNR=2.0						
WRA	**Warramunga Arr**	**42.43**	**265**	P	P	02 38 54.2	-0.1
	1.5nm,0.5s,baz=102,slow=8.6,SNR=31						
WRA				ScP	ScP	02 43 38.9	-0.5
	0.6nm,1.0s,baz=94,slow=3.9,SNR=4.6						
ARCES	**ARCESS Array B**	**131.16**	**348**	PKP	PKPdf	02 49 57.0	-0.9
	4.7nm,1.1s,baz=46,slow=3.9,SNR=3.8						
AKASG	**Malin Array Be**	**144.34**	**328**	PKP	PKPbc	02 50 21.9	-0.3
	1.7nm,0.5s,baz=43,slow=4.0,SNR=10						
BRTR	**Keskin Array B**	**147.11**	**308**	PKPbc	PKPbc	02 50 30.4	-0.3
	0.7nm,0.7s,baz=90,slow=4.3,SNR=4.6						

*IDC **30** 02:41:46.9±2.5, 46°.48N×152°.56E, h0^{km}, mb3.8/7, mb1 4.0/8, mb1mx3.6/47, mbtmp3.8/8, ML2.2/1, Error ellipse: s-maj=65.8km s-min=28.4km az=179.0*

*MOS **30** 02:41:56.3±1.4, 47°.07N×152°.64E, h59^{km}, mb4.3/5, Error ellipse: s-maj=25.8km s-min=11.3km az=76.8*

*NEIC **30** 02:41:57.2±0.7, 46°.9N±0°.1×152°.7E±0°.2, h59^{km}±6^{km}, mb4.2/14, Error ellipse: s-maj=22.4km s-min=16.7km az=148.0*

*SKHL **30** 02:41:58.5±0.8, 47°.40N×152°.50E, h72^{km}±2^{km}, mb4.5/3*

ISC 30 02:41:57.8±1.0, 47°.1N±0°.1×152°.8E±0°.1, h56^{km}, n53, σ1^{s}.40/47, mb3.9/13, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**3.91**	**243**	PN	**Pn**	**02 42 55.5**	**+0.3**
KUR				S	**Sn**	**02 43 41.6**	**+1.8**
KUR				pmax	pmax		
	comp=Z,45nm,0.3s						
KUR				smax	smax		
	comp=N,169nm,0.5s						
KUR	**Kuril'sk**	**3.91**	**243**	*e*P	**Pn**	**02 42 55.6**	**+0.3**
KUR				AMB	AMB	02 42 57.2	
	comp=N,45nm,0.3s						
KUR				*e*S	**Sn**	**02 43 39.0**	**-0.8**
KUR				A	A	02 43 55.4	
	comp=N,170nm,0.5s						
KUR				A	A	02 43 55.4	
	comp=N,120nm,0.5s						
SKR	**Severo-Kuril’s**	**4.19**	**30**	*e*PN	**Pn**	**02 42 59.1**	**0.0**
SKR				pmax	pmax		
	comp=Z,1μm,3.6s						
SKR				MLR	MLR		
	comp=Z,1μm,12.0s						
SKR	**Severo-Kuril’s**	**4.19**	**30**	*e*P	**Pn**	**02 42 59.1**	**0.0**
SKR				AMB	AMB	02 43 03.3	
	comp=Z,40nm,0.6s						
SKR				*e*S	**Sn**	**02 43 43.9**	**-2.9**
SKR				A	A	02 43 51.5	
	comp=Z,90nm,0.5s						
SKR				A	A	02 43 51.5	
	comp=Z,110nm,0.5s						
PAU	**Pauzhetka**	**5.09**	**29**	*e*P	**Pn**	**02 43 12.2**	**+0.8**
PAU				AMB	AMB	02 43 27.7	
	comp=Z,60nm,0.8s						
PAU				*e*S	**Sn**	**02 44 07.6**	**-1.2**
PAU				A	A	02 44 09.2	
	comp=Z,20nm,0.4s						
PAU				A	A	02 44 09.2	
	comp=Z,60nm,0.4s						
PEA0B	**Petropavlovsk-**	**6.78**	**26**	PN	**Pn**	**02 43 37.4**	**+2.8**
PEA0B	**Petropavlovsk-**	**6.78**	**26**	Pn	**Pn**	**02 43 37.4**	**+2.8**
PETK	**Petropavlovsk-**	**6.78**	**26**	Pn	**Pn**	**02 43 36.7**	**+2.2**
	comp=Z,0.2nm,0.3s,baz=185,slow=14,SNR=2.8						
PETK	**Petropavlovsk-**	**6.78**	**26**	PN	**Pn**	**02 43 37.4**	**+2.8**
PETK	**Petropavlovsk-**	**6.78**	**26**	Pn	**Pn**	**02 43 37.4**	**+2.8**
PET	**Petropavlovsk**	**7.02**	**30**	*e*P	**Pn**	**02 43 37.4**	**-0.4**
JNU	**Nakatsue**	**21.73**	**238**	P	**P**	**02 46 41.0**	**-3.2**
JNU				IAmb	IAmb	02 46 41.8	
	comp=Z,19nm,0.7s						
TIK	**Tiksi**	**27.06**	**344**	*e*P	**P**	**02 47 35.3**	**+0.9**
TIXI	**Tiksi**	**27.07**	**344**	P	**P**	**02 47 35.3**	**+0.8**
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.2s						
TIXI	**Tiksi**	**27.07**	**344**	P	**P**	**02 47 35.3**	**+0.8**
TIXI				IAmb	IAmb	02 47 36.0	
	comp=Z,4.0nm,1.2s						
H11N2	**WAKE ISLAND Hy**	**29.63**	**152**	T	T	03 19 26.3	
	baz=340,slow=76,SNR=214						
H11N1	**WAKE ISLAND Hy**	**29.64**	**152**	T	T	03 19 22.8	
	baz=340,slow=76,SNR=136						
H11N3	**WAKE ISLAND Hy**	**29.65**	**152**	T	T	03 19 16.2	
	baz=340,slow=76,SNR=122						
H11S1	**WAKE ISLAND Hy**	**30.72**	**154**	T	T	03 20 38.3	
	baz=341,slow=76,SNR=148						
H11S3	**WAKE ISLAND Hy**	**30.73**	**154**	T	T	03 20 43.7	
	baz=341,slow=76,SNR=136						
H11S2	**WAKE ISLAND Hy**	**30.73**	**154**	T	T	03 20 39.2	
	baz=341,slow=76,SNR=97						
IMAR	**Indian Mountai**	**33.61**	**36**		**P**	**02 48 32.7**	**+0.4**
COLD	**Coldfoot**	**35.16**	**35**	P	**P**	**02 48 46.6**	**+1.0**
COLD				IAmb	IAmb	02 49 10.7	
	comp=Z,4.1nm,1.4s						
TOLK	**Toolik Lake Re**	**35.55**	**32**	P	**P**	**02 48 50.4**	**+1.2**
MDM	**Murphy Dome**	**35.83**	**39**	P	**P**	**02 48 53.6**	**+2.1**
MDM				IAmb	IAmb	02 48 59.1	
	comp=Z,4.8nm,1.4s						
BMAR	**Burnt Mountain**	**37.34**	**34**	P	**P**	**02 49 04.9**	**+0.6**
BCAR	**Beaver Creek A**	**38.77**	**41**	P	**P**	**02 49 18.0**	**+1.5**
INK	**Inuvik**	**41.46**	**33**	P	**P**	**02 49 39.9**	**+1.4**
	comp=Z,0.5nm,0.6s,baz=281,slow=7.6,SNR=5.0						
INK	**Inuvik**	**41.46**	**33**	P	**P**	**02 49 39.7**	**+1.1**
INK				IAmb	IAmb	02 49 58.8	
	comp=Z,5.0nm,1.4s						
MK31	**Makanchi Array**	**46.59**	**297**	P	**P**	**02 50 19.2**	**-0.8**
MK31				pmax	pmax		
	comp=Z,2.0nm,1.3s						
MK31	**Makanchi Array**	**46.59**	**297**	P	**P**	**02 50 19.2**	**-0.8**
MK31				IAmb	IAmb	02 50 27.9	
	comp=Z,2.1nm,1.2s						
MKAR	**Makanchi Array**	**46.59**	**297**	P	**P**	**02 50 17.8**	**-2.2**
	comp=Z,0.2nm,0.4s,baz=68,slow=7.6,SNR=1.7						
EUNU	**Eureka**	**48.82**	**11**	P	**P**	**02 50 37.9**	**+1.0**
ABKAR	**Akbulak array**	**58.04**	**310**	P	**P**	**02 51 44.2**	**-0.4**
SUMG	**Summit**	**60.36**	**4**	P	**P**	**02 52 01.0**	**+0.2**
SUMG				pmax	pmax		
	comp=Z,10.0nm,1.3s						
SUMG	**Summit**	**60.36**	**4**	P	**P**	**02 52 01.0**	**+0.2**
FIA1	**FINESS Array S**	**63.63**	**335**	P	**P**	**02 52 22.1**	**-0.2**
FINES	**FINESS Array B**	**63.63**	**335**	P	**P**	**02 52 22.2**	**-0.2**
	comp=Z,2.7nm,0.6s,baz=34,slow=6.1,SNR=9.3						
PDAR	**Pinedale Array**	**64.71**	**54**	P	**P**	**02 52 30.4**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=282,slow=4.2,SNR=3.6						
NC300	**NORSAR Array S**	**67.58**	**341**	P	**P**	**02 52 48.4**	**+0.5**
NC204	**NORSAR Array S**	**67.71**	**341**	P	**P**	**02 52 48.8**	**0.0**
NB2	**NORSAR Subarra**	**67.83**	**341**	P	**P**	**02 52 49.2**	**-0.3**
	comp=Z,0.7nm,0.6s,baz=27,slow=6.5						
NOA	**NORSAR Array B**	**67.83**	**341**	P	**P**	**02 52 49.5**	**0.0**
	comp=Z,0.6nm,0.5s,baz=31,slow=6.6,SNR=4.5						
AKASG	**Malin Array Be**	**71.14**	**326**	P	**P**	**02 53 09.5**	**-0.5**
	comp=Z,1.3nm,0.3s,baz=34,slow=6.2,SNR=10						
AKASG	**Malin Array Be**	**71.14**	**326**	P	**P**	**02 53 09.1**	**-0.9**
AKASG				IAmb	IAmb	02 53 13.4	
	comp=Z,1.7nm,1.2s						
BUR08	**Bucovina Ar. S**	**75.16**	**326**	P	**P**	**02 53 33.8**	**-0.2**
BUR08				IAmb	IAmb	02 54 01.8	
	comp=Z,11nm,1.5s						
BURAR	**Bucovina Array**	**75.18**	**326**	P	**P**	**02 53 33.2**	**-0.8**
IZAB	**Izabela**	**76.35**	**330**	*e*P	P	02 53 48.7	+8.1
TXAR	**Lajitas Array**	**77.50**	**60**	P	**P**	**02 53 47.0**	**-0.5**
	comp=Z,0.2nm,0.6s,baz=313,slow=5.4,SNR=5.0						
TXAR	**Lajitas Array**	**77.50**	**60**	P	**P**	**02 53 47.0**	**-0.5**
H03N2	**Juan Fernandez**	**138.96**	**90**	T	T	05 36 45.5	
	baz=308,slow=77,SNR=19						
H03N1	**Juan Fernandez**	**138.97**	**90**	T	T	05 36 48.1	
	baz=308,slow=77,SNR=18						
H03N3	**Juan Fernandez**	**138.97**	**90**	T	T	05 36 45.5	
	baz=308,slow=77,SNR=16						

*IPEC **30** 02:53:20.5±0.2, 49°.86N×18°.55E, h1^{km}, ML1.1/3, Error ellipse: s-maj=2.2km s-min=1.1km az=161.0*

PRU 30 02:53:21.1±0.0, 49°.88N×18°.49E, h0^{km}, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.23**	**259**	*e*PG	Pg	02 53 25.4	0.0
OKC				*e*SG	Sg	02 53 29.4	+1.1
	comp=Z,19nm,0.6s						
MORC	**Moravsky Berou**	**0.62**	**261**	*e*Pg	Pg	02 53 33.3	+0.3
	baz=82						
MORC				*e*Sg	Sg	02 53 41.3	+0.2
	4.5nm,0.3s,baz=82						
LANS	**Liptovska Anna**	**0.97**	**139**	*e*	Sb	02 53 54.1	0.0

LANS	Liptovska Anna	0.97	139	*e*PG	Pg	02 53 39.0	-0.7
LANS				*e*SG	Sb	02 53 54.1	0.0
LANS				*e*LG	Lg	02 53 58.2	
LANS	Liptovska Anna	0.97	139	pmax	pmax		
	comp=N,6.0nm,0.6s						
LANS	Liptovska Anna	0.97	139	*e*P	Pg	02 53 39.0	-0.7
VRAC	Vranov	1.36	246	*e*Pg	Pg	02 53 46.3	-0.8
	baz=66						
VRAC				*e*Sg	Sg	02 54 04.1	-0.7
	comp=N,2.4nm,0.2s,baz=66						
VRAC	Vranov	1.36	246	*e*PG	Pg	02 53 46.4	-0.7
VRAC				*e*SG	Sg	02 54 04.2	-0.6
VYHS	Vyhne	1.41	171	*e*	Sg	02 54 05.5	-0.7
VYHS	Vyhne	1.41	171	*e*PG	Pn	02 53 46.5	-1.5
VYHS				*e*SG	Sg	02 54 05.5	-0.7
VYHS	Vyhne	1.41	171	*e*P	Pn	02 53 46.5	-1.5
DPC	Dobruska-Polom	1.47	289	*e*PG	Pn	02 53 48.2	-0.7
DPC				*e*SG	Sg	02 54 08.2	-0.2
DPC	Dobruska-Polom	1.47	289	*e*	Sg	02 54 08.2	-0.2
DPC	Dobruska-Polom	1.47	289	*e*P	Pn	02 53 48.2	-0.7
KRUC	Moravsky	1.59	240	*e*Pg	Pn	02 53 49.7	-0.8
	baz=60						
KRUC				*e*Sg	Sn	02 54 11.1	-0.7
	comp=N,1.2nm,0.2s,baz=60						
KRUC	Moravsky	1.59	240	*e*PG	Pn	02 53 49.8	-0.7
KRUC				*e*SG	Sn	02 54 11.2	-0.6

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*IDC **30** 03:16:44.8±2.7, 19°.92S×178°.09W, h611^{km}±20^{km}, mb2.9/4, mb1 3.2/5, mb1mx2.9/23, mbtmp3.9/5, Error ellipse: s-maj=67.5km s-min=18.2km az=150.0*

*NEIC **30** 03:16:46.0±0.9, 19°.9S±0°.2×178°.3W±0°.1, h597^{km}±16^{km}, mb4.1/12, Error ellipse: s-maj=26.3km s-min=15.2km az=140.0*

ISC 30 03:16:44.8±0.9**, 19°.8S**±0°.1×**178°.2W**±0°.1**, h600**^{km}**, n24, σ1ˢ23**/26**, mb3.7**/9**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.11	299	P	P	03 18 12.5	+1.3
	1.8nm,0.3s,baz=171,slow=9.2,SNR=6.1						
MSVF	Nonsavu	4.11	299	P	P	03 18 11.5	+0.3
URZ	Urewera	18.89	192	P	P	03 20 27.0	-1.4
URZ				IAmb	IAmb	03 20 31.2	
	comp=Z,10.0nm,1.0s						
QRZ	Quartz Range	22.46	199		P	03 20 59.2	-1.2
THZ	Tophouse	23.22	197	P	P	03 21 07.8	+0.6
MLZ	Mavora Lakes	27.96	201	P	P	03 21 48.8	0.0
MLZ				IAmb	IAmb	03 21 51.4	
	comp=Z,7.9nm,0.8s						
WHZ	Wether Hill Ro	28.48	201	P	P	03 21 53.8	+0.6
CTAO	Charters Tower	33.41	263	P	P	03 22 36.1	+0.5
CTAO				IAmb	IAmb	03 22 39.3	
	comp=Z,5.3nm,1.1s						
COEN	Coen	37.38	273	P	P	03 23 08.9	+0.4
COEN				IAmb	IAmb	03 23 09.4	
	comp=Z,4.5nm,0.8s						
BBOO	Buckleboo	42.74	243	P	P	03 23 50.9	-0.1
BBOO				IAmb	IAmb	03 24 04.4	
	comp=Z,6.0nm,1.1s						
WB0	Warramunga Arr	44.53	262	P	P	03 24 04.6	-0.2
WB0				IAmb	IAmb	03 24 22.2	
	comp=Z,2.7nm,1.1s						
ASAR	Alice Springs	44.54	256	P	P	03 24 04.9	-0.1
	comp=Z,0.8nm,0.4s,baz=89,slow=8.4,SNR=12						
ASAR				S	S	03 29 56.7	-1.6
	comp=Z,0.6nm,0.8s,baz=95,slow=18,SNR=5.5						
ASAR	Alice Springs	44.54	256	P	P	03 24 04.7	-0.3
WB2	Warramunga Arr	44.54	261	P	P	03 24 04.6	-0.4
WRA	Warramunga Arr	44.55	261	P	P	03 24 04.4	-0.7
	comp=Z,0.2nm,0.3s,baz=98,slow=7.6,SNR=5.1						
WRA				S	S	03 29 58.7	+0.3
	comp=Z,0.6nm,0.9s,baz=100,slow=14,SNR=2.2						
WRA	Warramunga Arr	44.55	261	P	P	03 24 04.5	-0.5
VNDA	Vanda	58.64	185		P	03 25 46.7	+1.5
MJAR	Matsushiro Arr	69.52	324	P	P	03 26 54.6	+0.1
	comp=Z,1.2nm,0.6s,baz=166,slow=5.7,SNR=4.3						
ILAR	Eielson Array	87.62	13	P	P	03 28 29.6	-0.3
	comp=Z,0.9nm,0.9s,baz=220,slow=5.4,SNR=8.1						
VNA3	Neumayer Olymp	88.90	176	P	P	03 28 35.2	-0.7
VNA2	Neumayer--Watz	89.34	177	P	P	03 28 37.7	-0.2
AKASG	Malin Array Be	142.28	331	PKP	PKPdf	03 35 06.0	-3.8
	comp=Z,0.5nm,0.3s,baz=42,slow=4.3,SNR=5.2						
BRTR	Keskin Array B	146.22	313	PKPbc	PKPdf	03 35 19.4	+2.2
	comp=Z,0.5nm,0.5s,baz=140,slow=4.6,SNR=4.5						
BRTR	Keskin Array B	146.22	313		PKPdf	03 35 18.9	+1.7

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*IDC **30** 03:30:10.9±0.6, 11°.16N×125°.87E, h0^{km}, mb4.1/16, mb1 4.2/16, mb1mx4.0/47, mbtmp4.1/16, MS3.2/6, Ms1 3.2/6, ms1mx2.9/47, Error ellipse: s-maj=30.6km s-min=13.3km az=73.0*

*MAN **30** 03:30:12.7, 11°.36N×126°.35E, h67^{km}, mb5.0, ML3.9, MS3.9*

*NEIC **30** 03:30:23.1±1.5, 11°.22N±0°.09×125°.8E±0°.1, h90^{km}±7^{km}, mb4.3/23, Error ellipse: s-maj=20.1km s-min=13.4km az=85.0*

ISC 30 03:30:23.4±0.5**, 11°.20N**±0°.07×**125°.8E**±0°.1**, h100**^{km}**, n66, σ0ˢ96**/58**, mb4.2**/34**, Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	4.11	183	Pn	Pn	03 31 24.7	+0.4
JOW	Kunigami	15.72	8	LR	LR	03 39 51.2	
	comp=Z,69nm,19.0s,baz=302,slow=37						
GUMO	Guam	18.76	81	LR	LR	03 41 13.6	
	comp=Z,77nm,20.3s,baz=104,slow=35						
BATI	Baumata	21.38	186	P	P	03 35 03.4	+0.3
	28nm,0.6s,baz=314,slow=2.9,SNR=4.1						
MTN	Manton Dam	24.47	167	P	P	03 35 34.7	+1.4
MTN				IAmb	IAmb	03 35 55.6	
	comp=Z,15nm,1.1s						
JHJ	Hachijo jima 2	25.30	28	LR	LR	03 45 53.3	
	comp=Z,45nm,18.4s,baz=175,slow=37						
KULM	Kulim	25.57	259		P	03 35 44.1	+0.7
KULM				IAmb	IAmb	03 35 52.3	
	comp=Z,12nm,1.0s						
KSRS	Korea Array	26.21	4	P	P	03 35 48.1	-0.7
	comp=Z,1.2nm,0.7s,baz=184,slow=12,SNR=4.3						
KSRS				LR	LR	03 46 01.6	
	comp=Z,45nm,19.3s,baz=175,slow=36						
KNRA	Kununurra	26.87	174	P	P	03 35 54.9	0.0
KNRA				IAmb	IAmb	03 36 05.7	
	comp=Z,16nm,0.9s						
CMAR	Chiang Mai Arr	26.93	289	P	P	03 35 55.7	+0.1
	comp=Z,1.8nm,0.6s,baz=101,slow=7.8,SNR=8.2						
MJAR	Matsushiro Arr	27.60	22	LR	LR	03 47 01.6	
	comp=Z,75nm,18.4s,baz=245,slow=37						
FITZ	Fitzroy Crossi	29.12	180	P	P	03 36 13.5	-1.5
	comp=Z,1.9nm,0.7s,baz=12,slow=9.9,SNR=6.2						
COEN	Coen	30.35	145	P	P	03 36 26.5	+0.5
COEN				IAmb	IAmb	03 36 26.6	
	comp=Z,7.6nm,1.1s						
WB0	Warramunga Arr	31.91	165	P	P	03 36 37.3	-2.4
WB0				IAmb	IAmb	03 37 04.0	
	comp=Z,2.9nm,0.8s						
WRAB	Tennant Creek	32.06	165	P	P	03 36 40.2	-0.8
WRAB				IAmb	IAmb	03 36 55.2	
	comp=Z,2.6nm,0.7s						
WRA	Warramunga Arr	32.07	165	P	P	03 36 38.6	-2.5
	comp=Z,0.8nm,0.6s,baz=330,slow=11,SNR=15						
WRA	Warramunga Arr	32.07	165	P	P	03 36 38.8	-2.2
WB2	Warramunga Arr	32.07	165	P	P	03 36 40.4	-0.7
WB2				IAmb	IAmb	03 36 56.6	
	comp=Z,5.2nm,1.1s						
WR0	Warramunga Arr	32.14	164	P	P	03 36 39.9	-1.7
WR0				IAmb	IAmb	03 36 57.3	
	comp=Z,2.7nm,0.8s						
PSA00	Pilbara Seismi	33.09	190	P	P	03 36 49.9	0.0
AS31	Alice Springs	35.55	167	P	P	03 37 10.5	-0.7
ASAR	Alice Springs	35.55	167	P	P	03 37 09.6	-1.5
	comp=Z,0.7nm,0.4s,baz=350,slow=6.4,SNR=15						
ASAR	Alice Springs	35.55	167	P	P	03 37 11.6	+0.4
GTA	Gaotai	36.36	325	*e*P	P	03 37 18.5	+0.4
GTA				pP	pP	03 37 22.8	-18
GTA				sP	sP	03 37 25.8	-27
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
TAPN	Taplejung	39.20	300	*e*P	P	03 37 42.0	-0.4
	comp=Z,5.9nm,0.4s						
ODAN	Odare	39.33	299	*e*P	P	03 37 43.1	-0.3
SONM	Songino Array	39.99	340	P	P	03 37 47.6	-0.9
	comp=Z,0.7nm,0.6s,baz=163,slow=9.8,SNR=6.7						
RAMN	Ramite	40.04	299	*e*P	P	03 37 49.2	-0.1
	comp=Z,9.6nm,0.4s						
H11N1	WAKE ISLAND Hy	40.40	73	T	T	04 21 14.6	
	baz=265,slow=74,SNR=5.1						
H11N2	WAKE ISLAND Hy	40.41	73	T	T	04 21 14.6	
	baz=265,slow=74,SNR=5.0						
H11N3	WAKE ISLAND Hy	40.42	73	T	T	04 21 17.0	
	baz=265,slow=74,SNR=5.1						
JIRN	Jiri	40.58	300	*e*P	P	03 37 53.3	-0.6
	comp=Z,21nm,0.8s						
GUN	Gumba	40.91	300	*e*P	P	03 37 56.3	-0.3
	comp=Z,27nm,0.9s						
KOLN	Koldanda	42.83	299	*e*P	P	03 38 11.5	-0.5
DANN	Dangsing	42.83	300	*e*P	P	03 38 11.1	-1.1
BBOO	Buckleboo	44.85	168	P	P	03 38 27.1	-0.6
STKA	Stephens Creek	45.42	161	P	P	03 38 31.4	-1.0
	comp=Z,4.8nm,0.9s,baz=344,slow=11,SNR=5.3						
STKA	Stephens Creek	45.42	161	P	P	03 38 31.5	-0.8
PETK	Petropavlovsk-	48.98	25	P	P	03 38 59.4	-0.4
	comp=Z,2.4nm,0.7s,baz=227,slow=9.7,SNR=4.3						
PETK	Petropavlovsk-	48.98	25	P	P	03 38 59.6	-0.1
MK31	Makanchi Array	51.02	323	P	P	03 39 15.7	+0.4
MK31				IAmb	IAmb	03 39 16.7	
	comp=Z,4.2nm,0.8s						
MKAR	Makanchi Array	51.02	323	P	P	03 39 15.9	+0.6
	comp=Z,4.2nm,0.6s,baz=118,slow=8.3,SNR=43						
MAKZ	Makanchi	51.21	322	P	P	03 39 17.0	+0.3
MAKZ				IAmb	IAmb	03 39 18.2	
	comp=Z,6.2nm,1.1s						
ZALV	Zalesovo Beam	53.60	331	P	P	03 39 34.1	-0.1
	comp=Z,0.5nm,0.4s,baz=116,slow=6.6,SNR=3.8						
KURK	Kurchatov	55.05	325	P	P	03 39 44.9	+0.1
KURBB	Kurchatov Arra	55.05	325	P	P	03 39 45.1	+0.4
	comp=Z,4.4nm,0.5s,baz=126,slow=7.0,SNR=40						
KKAR	Karatay Array	57.28	314	P	P	03 40 01.1	+0.3
BRVK	Borovoye	60.72	325	P	P	03 40 24.6	+0.3
NRIK	Noril'sk	63.00	346	LR	LR	04 10 38.3	
	comp=Z,30nm,20.0s,baz=348,slow=38						
ABKAR	Akbulak array	65.88	319	P	P	03 40 58.2	-0.3
ARU	Arti	68.20	327	P	P	03 41 12.6	-0.5
IMAR	Indian Mountai	75.94	25	P	P	03 42 01.2	+2.1
H21K	Melozitna Rive	76.31	25	P	P	03 42 02.4	+1.2
H21K				IAmb	IAmb	03 42 09.9	
	comp=Z,3.2nm,1.1s						
I23K	Minto, Yukon-K	77.74	26	P	P	03 42 11.1	+2.0
CCB	Clear Creek Bu	78.41	26	P	P	03 42 13.7	+0.9
CCB				IAmb	IAmb	03 42 15.5	
	comp=Z,3.8nm,1.1s						
ILAR	Eielson Array	78.80	26	P	P	03 42 15.6	+0.6
	comp=Z,0.4nm,0.8s,baz=230,slow=5.4,SNR=6.7						
BMAR	Burnt Mountain	79.59	23	P	P	03 42 19.7	+0.3
ARCES	ARCESS Array B	83.17	340	P	P	03 42 39.2	+1.1
	comp=Z,3.7nm,1.0s,baz=42,slow=5.6,SNR=3.6						
ARCES	ARCESS Array B	83.17	340	P	P	03 42 39.0	+0.9
BR131	Keskin Array S	84.60	309	P	P	03 42 46.3	+0.1
BR131				IAmb	IAmb	03 42 47.5	
	comp=Z,2.0nm,0.8s						
BRTR	Keskin Array B	84.60	309	P	P	03 42 46.0	-0.2
	comp=Z,0.8nm,0.7s,baz=135,slow=3.7,SNR=6.5						
BRTR	Keskin Array B	84.60	309	P	P	03 42 45.6	-0.6
FINES	FINESS Array B	84.86	332	P	P	03 42 46.9	+0.1
	comp=Z,0.8nm,0.5s,baz=114,slow=4.6,SNR=7.5						
AKASG	Malin Array Be	85.56	321	P	P	03 42 50.1	-0.4
	comp=Z,1.4nm,0.6s,baz=61,slow=4.5,SNR=5.4						
AKASG	Malin Array Be	85.56	321	P	P	03 42 50.3	-0.3
PLCA	Paso Flores	147.24	157	PKPbc	PKPab	03 49 56.4	-1.1
	comp=Z,1.8nm,0.7s,baz=276,slow=4.2,SNR=6.1						

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*MAN **30** 03:33:40.3, 6°.24N×124°.47E, h26^{km}, mb4.5, ML3.3, MS3.2*

IDC 30 03:33:24.8±2.6**, 6°.27N×126°.77E, h0**^{km}**, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.3**/47**, mbtmp3.7**/3**, Error ellipse: s-maj=206.8km s-min=26.8km az=66.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	27.09	164	P	P	03 39 10.4	+0.9
	0.6nm,0.4s,baz=344,slow=11,SNR=6.2						
ASAR	Alice Springs	30.56	167	P	P	03 39 39.2	-1.2
	0.4nm,0.6s,baz=350,slow=6.0,SNR=2.2						
MKAR	Makanchi Array	55.52	324	P	P	03 43 01.8	-0.1
	0.4nm,0.4s,baz=122,slow=7.4,SNR=7.4						

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*IDC **30** 03:41:42.3±0.9, 27°.73S×65°.28E, h0^{km}, mb4.1/11, mb1 4.3/11, mb1mx3.9/39, mbtmp4.1/11, MS3.4/7, Ms1 3.4/7, ms1mx3.1/47, Error ellipse: s-maj=32.4km s-min=20.0km az=70.0*

*NEIC **30** 03:41:44.0±0.8, 27°.7S±0°.1×65°.15E±0°.07, h10^{km}±1^{km}, mb4.5/14, Error ellipse: s-maj=21.9km s-min=10.4km az=187.0*

ISC 30 03:41:43.8±0.7**, 27°.7S**±0°.1×**65°.2E**±0°.2**, h10**^{km}**, n42, σ0ˢ56**/31**, mb4.5**/16**, MS3.5**/7**, Indian Ocean Triple Junction**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	21.13	20	T	T	04 08 25.3	
	baz=201						
H08S2	Diego Garcia H	21.13	20	T	T	04 08 28.2	
	baz=201,slow=74,SNR=5.7						
H08S3	Diego Garcia H	21.15	20	T	T	04 08 28.9	
	baz=201,slow=74,SNR=4.0						
BOSA	Boshof	35.12	259	LR	LR	04 00 24.6	
	comp=Z,32nm,19.0s,baz=14,slow=32						
MAW	Mawson	39.92	181	LR	LR	04 01 24.3	
	comp=Z,63nm,20.4s,baz=55,slow=30						
H01W2	Cape Leeuwin H	42.07	112	T	T	04 34 04.8	
	baz=265,slow=74,SNR=8.2						
H01W3	Cape Leeuwin H	42.07	112	T	T	04 34 02.6	
	baz=265,slow=74,SNR=6.6						
H01W1	Cape Leeuwin H	42.09	112	T	T	04 34 21.2	
	baz=265,slow=74,SNR=7.6						
MORW	Morawa	44.45	104	P	P	03 49 56.2	+0.9
CMAR	Chiang Mai Arr	56.35	39	P	P	03 51 25.9	+0.6
	1.0nm,0.3s,baz=233,slow=7.5,SNR=6.6						
CMAR				LR	LR	04 12 36.1	
	comp=Z,14nm,18.6s,baz=190,slow=33						
SNAA	Sanae	57.05	200	P	P	03 51 29.6	-0.1
SNAA				IAmb	IAmb	03 51 30.4	
	comp=Z,3.4nm,1.2s						
ASAR	Alice Springs	61.31	103	P	P	03 51 59.5	-0.5
	comp=Z,3.9nm,0.7s,baz=250,slow=6.2,SNR=35						
AS31	Alice Springs	61.31	103	P	P	03 51 59.5	-0.5
AS31				IAmb	IAmb	03 52 00.0	
	comp=Z,2.0nm,0.6s						
QSPA	South Pole Qui	62.42	180	P	P	03 52 07.0	+0.2
	comp=Z,3.0nm,0.8s,baz=274,slow=3.8,SNR=7.3						
QSPA	South Pole Qui	62.42	180	P	P	03 52 07.1	+0.2
QSPA				IAmb	IAmb	03 52 15.9	
	comp=Z,4.3nm,0.9s						
WRA	Warramunga Arr	63.00	99	P	P	03 52 10.9	-0.4
	comp=Z,3.4nm,0.9s,baz=248,slow=6.1,SNR=16						
WRA	Warramunga Arr	63.00	99	P	P	03 52 11.5	+0.2
WB2	Warramunga Arr	63.01	99	P	P	03 52 10.5	-0.9
WRAB	Tennant Creek	63.01	99	P	P	03 52 11.2	-0.2
WB0	Warramunga Arr	63.11	99	P	P	03 52 11.9	-0.1
WB0				IAmb	IAmb	03 52 28.1	
	comp=Z,11nm,1.5s						
WR0	Warramunga Arr	63.17	99	P	P	03 52 11.9	-0.5
WR0				IAmb	IAmb	03 52 12.3	
	comp=Z,3.7nm,0.8s						
VNDA	Vanda	64.57	166	P	P	03 52 21.2	+0.6
	comp=Z,1.7nm,0.8s,baz=287,slow=5.1,SNR=4.0						
VNDA				LR	LR	04 17 19.4	
	comp=Z,46nm,21.8s,baz=256,slow=33						
VNDA	Vanda	64.57	166	P	P	03 52 20.9	+0.2
VNDA				IAmb	IAmb	03 52 43.1	
	comp=Z,8.0nm,1.5s						
STKA	Stephens Creek	65.12	114	P	P	03 52 24.3	-0.8
	comp=Z,2.8nm,0.7s,baz=255,slow=6.8,SNR=3.8						
STKA	Stephens Creek	65.12	114	P	P	03 52 23.9	-1.1
KKAR	Karatay Array	70.65	4		P	03 52 59.3	-0.1
BRTR	Keskin Array B	73.27	335	P	P	03 53 15.7	+0.3
	comp=Z,0.7nm,0.7s,baz=156,slow=9.5,SNR=5.3						
BRTR	Keskin Array B	73.27	335	P	P	03 53 16.4	+1.0
MKAR	Makanchi Array	75.77	12	P	P	03 53 29.1	-0.5
	comp=Z,0.7nm,0.7s,baz=186,slow=5.8,SNR=3.1						
MKAR	Makanchi Array	75.77	12	P	P	03 53 29.6	0.0
ABKAR	Akbulak array	76.78	356	P	P	03 53 35.2	0.0
KURK	Kurchatov	79.00	9	P	P	03 53 46.9	-0.7
KURK				IAmb	IAmb	03 53 50.8	
	comp=Z,2.3nm,0.9s						
BELG	Belogornoye	81.25	349	LR	LR	04 26 42.5	
	comp=Z,23nm,20.8s,baz=227,slow=33						
ZALV	Zalesovo Beam	83.09	12	P	P	03 54 09.5	+0.2
	comp=Z,2.3nm,0.6s,baz=193,slow=5.8,SNR=9.0						
ZALV	Zalesovo Beam	83.09	12	P	P	03 54 09.3	0.0
SONM	Songino Array	83.83	27	P	P	03 54 14.0	+0.5
	comp=Z,0.4nm,0.3s,baz=215,slow=1.8,SNR=4.9						
AKASG	Malin Array Be	84.32	338	P	P	03 54 15.5	-0.2
	comp=Z,0.1nm,0.2s,baz=153,slow=3.9,SNR=4.7						
AKASG	Malin Array Be	84.32	338	P	P	03 54 14.7	-1.0
TLY	Talaya	85.98	23	LR	LR	04 31 04.3	
	comp=Z,42nm,21.1s,baz=160,slow=34						
NOA	NORSAR Array B	98.67	337	LR	LR	04 41 43.9	
	comp=Z,18nm,18.0s,baz=250,slow=36						
YKA	Yellowknife Ar	145.23	360	PKPbc	PKPbc	04 01 20.1	-0.6
	comp=Z,1.6nm,0.8s,baz=17,slow=3.6,SNR=5.8						
YKA	Yellowknife Ar	145.23	360		PKPab	04 01 20.7	-0.1

IDC 30 04:00:53.5±2.1**, 23°.81N×92°.63E, h0**^{km}**, mb3.7**/4**, mb1 3.9**/5**, mb1mx3.5**/51**, mbtmp3.6**/5**, Error ellipse: s-maj=81.9km s-min=22.3km az=68.0, India-Bangladesh border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	7.94	131	Pn	Pn	04 02 52.4	+2.1
	baz=309,slow=12,SNR=8.7						
MKAR	Makanchi Array	24.39	343	P	P	04 06 13.9	+0.4
	0.3nm,0.4s,baz=162,slow=9.9,SNR=5.7						
SONM	Songino Array	26.36	21	P	P	04 06 31.4	-0.1
	0.8nm,0.8s,baz=206,slow=8.3,SNR=4.7						
WRA	Warramunga Arr	59.53	133	P	P	04 10 58.4	-0.6
	0.9nm,0.5s,baz=322,slow=7.5,SNR=25						
ASAR	Alice Springs	61.91	137	P	P	04 11 15.2	0.0
	0.7nm,0.5s,baz=320,slow=6.7,SNR=13						

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*SJA **30** 04:03:56.0, 31°.16S×72°.35W, h10^{km}, ML4.1*

*GUC **30** 04:03:58.8±0.8, 31°.24S×71°.81W, h35^{km}±6^{km}, ML3.5*

ISC 30 04:03:54.8±3.2**, 31°.20S**±0°.03×**72°.18W**±0°.08**, h2**^{km}±23^{km}**, n50, σ1ˢ59**/63**, 5C-4D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CO06	Fray Jorge	0.71	42	⇓*i*P	Pb	04 04 11.0	+1.2
CO06				*i* S	Sb	04 04 20.1	+0.2
CO06				IAML		04 04 21.0	
	comp=N,4μm,0.3s						
CO05	La Serena	1.52	33	⇑*i*P	Pn	04 04 23.7	+0.9
CO05				*i* S	Sb	04 04 42.6	-0.7
CO05				IAML		04 04 44.3	
	comp=N,889nm,0.2s						
VA06	Catapilco	1.55	151	⇑*i*P	Pn	04 04 24.0	+0.6
VA06				*i* S	Sn	04 04 41.9	-2.1
VA06				IAML		04 04 45.8	
	comp=N,1μm,0.7s						
GO04	Tololo Observa	1.57	50	⇑*i*P	Pn	04 04 24.1	+0.3
GO04				*i* S	Sn	04 04 43.3	-1.7
GO04				IAML		04 04 48.9	
	comp=N,5μm,0.3s						
GO04	Tololo Observa	1.57	50	*i* P	Pn	04 04 24.0	+0.1
ROCH	El Roble	2.03	151	⇓*i*P	Pn	04 04 31.1	+1.0
ROCH				⇓*i*P	Pn	04 04 31.1	+1.0
ROCH				*i* S	Sn	04 04 56.3	+0.1
ROCH				*i* S	Sb	04 04 56.6	-1.6
ROCH				IAML		04 05 02.2	
	comp=N,637nm,0.2s						
ROCH				IAML		04 05 02.3	
	comp=N,796nm,0.5s						
ROC1	El Roble	2.03	151	*i* P	Pn	04 04 31.0	+0.8
VA03	San Esteban	2.09	139	⇑*i*P	Pn	04 04 31.9	+1.1
VA03				*i* S	Sn	04 04 56.0	-1.4
VA03				IAML		04 05 02.4	
	comp=E,1μm,0.6s						
VA03	San Esteban	2.09	139	*i* P	Pn	04 04 32.0	+1.2
MT02	Curacav	2.24	157	*e*P	Pn	04 04 33.7	+0.9
MT02				*i* S	Sn	04 05 00.4	-0.5
MT02				IAML		04 05 10.8	
	comp=N,146nm,0.4s						
MT02	Curacav	2.24	157	*i* P	Pn	04 04 35.0	+2.2
PEL	Peldehue	2.32	147	*e*P	Pn	04 04 35.0	+1.1
PEL				*i* S	Sn	04 05 04.5	+1.4
PEL				IAML		04 05 08.4	
	comp=E,414nm,0.4s						
PEL	Peldehue	2.32	147	*i* P	Pn	04 04 36.0	+2.0
VA05	Santo Domingo	2.50	169	*e*P	Pn	04 04 37.0	+0.7
VA05				IAML		04 05 26.9	
	comp=E,279nm,0.4s						
MT05	Renca	2.50	151	*e*P	Pb	04 04 40.0	-0.5
MT05				*e*S	Sn	04 05 07.3	-0.4
MT05				IAML		04 05 20.6	
	comp=E,660nm,0.4s						
MT05	Renca	2.50	151	*i* P	Pb	04 04 41.0	+0.5
LCO	Las Campanas	2.53	31	*e*P	Pn	04 04 37.9	+0.7
LCO				*i* S	Sn	04 05 07.7	-0.9
LCO	Las Campanas	2.53	31	*i* P	Pn	04 04 38.0	+0.9
RTLS	Leoncito	2.54	104	*i* P	Pb	04 04 40.0	-1.2
AROD	Rodeo	2.55	67	*i* P	Pb	04 04 40.0	-1.5
AUSP	Uspallata	2.59	114	*i* P	Pn	04 04 40.0	+2.0
FCH	Farellones	2.66	143	*e*P	Pn	04 04 40.7	+1.8
FCH				*i* S	Sn	04 05 11.6	-0.3
FCH				IAML		04 05 26.9	
ACCO	Cerro Coronel	2.75	78	*i* P	Pb	04 04 43.0	-1.8
MT09	Talagante	2.76	159	⇑*i*P	Pn	04 04 42.1	+1.9
MT09				*e*S	Sn	04 05 15.1	+1.0
MT09				IAML		04 05 27.2	
	comp=N,229nm,0.2s						
MT01	Popeta	2.77	164	*e*P	Pn	04 04 41.3	+1.2
MT01				IAML		04 05 26.3	
	comp=E,141nm,0.4s						
MT01	Popeta	2.77	164	*i* P	Pn	04 04 41.0	+0.9
ZON	Zonda	3.02	97	*i* P	Pb	04 04 48.0	-1.2
BO04	La Punta	3.08	155	*e*P	Pn	04 04 45.9	+1.5
BO04				IAML		04 05 33.3	
	comp=N,137nm,0.1s						
LMEL	Las Melosas	3.12	148	IAML		04 05 32.8	
	comp=E,125nm,0.7s						
AC04	Llanos de Chal	3.14	18	⇓*i*P	Pn	04 04 46.1	+0.8
AC04				IAML		04 05 40.6	
	comp=N,116nm,0.4s						
AC04	Llanos de Chal	3.14	18	*i* P	Pn	04 04 46.0	+0.8
ASAL	Salagasta	3.17	117	*i* P	Pb	04 04 50.0	-1.8
RTCV	Cerro Valdivia	3.18	103	*i* P	Pn	04 04 49.0	+3.2
ARCO	CERRO ARCO	3.21	121	*i* P	Pb	04 04 51.0	-1.6
BO01	Tunca	3.31	164	*e*P	Pn	04 04 49.3	+1.7
BO01				IAML		04 05 49.2	
	comp=N,259nm,1.0s						
BO01	Tunca	3.31	164	*i* P	Pn	04 04 50.0	+2.4
AAGR	Agrelo	3.41	124	*i* P	Pn	04 04 53.0	+4.0
BO02	Sierra Bellavi	3.77	162	*e*P	Pn	04 04 55.5	+1.6
BO02	Sierra Bellavi	3.77	162	*i* P	Pn	04 04 56.0	+2.0
GO05	Huala	3.80	177	*e*P	Pn	04 04 55.0	+0.6
GO05	Huala	3.80	177	*i* P	Pn	04 04 55.0	+0.6
VCA	Vinchina	4.24	56	*i* P	Pn	04 05 05.0	+4.5
RFA	San Rafael	4.74	140	*i* P	Pn	04 05 09.0	+1.8
ACLC	CERRO LA CRUZ	4.86	70	*i* P	Pn	04 05 11.0	+2.0
APLL	PUNTA DE LOS L	4.93	82	*i* P	Pn	04 05 12.0	+2.1
AC02	Maricunga	5.11	32	*i* P	Pn	04 05 14.0	+1.3
MRA	San Martin	5.64	104	*i* P	Pn	04 05 21.0	+1.3
CYA	Choya	6.19	65	*i* P	Pn	04 05 28.0	+0.8
TCA	Tanti	6.50	93	*i* P	Pn	04 05 32.0	+0.5
AZAP	Zapla	9.38	44	*i* P	Pn	04 06 13.0	+1.8

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*NEIC **30** 04:28:16.6±2.4, 10°.59N±0°.07×62°.54W±0°.05, h76^{km}±8^{km}, mb4.4/37, Mwr3.7(CAR), Error ellipse: s-maj=10.1km s-min=6.2km az=156.0*

*TRN **30** 04:28:17.6, 10°.69N×62°.64W, h30^{km}, MD4.2*

*IDC **30** 04:28:17.5±2.5, 10°.77N×62°.70W, h87^{km}±26^{km}, mb3.5/12, mb1 3.7/12, mb1mx3.6/38, mbtmp3.9/12, MS2.5/1, Ms1 2.5/1, ms1mx2.2/24, Error ellipse: s-maj=28.4km s-min=16.1km az=27.0*

*FUNV **30** 04:28:18.6, 10°.62N×62°.54W, h32^{km}, MW3.7*

*CAR **30** 04:28:18.6±8.6, 10°.62N±0°.06×62°.54W±0°.05, h32^{km}±5^{km}, Error ellipse: s-maj=0.0km s-min=0.0km az=58.0*

ISC 30 04:28:16.0±0.7**, 10°.60N**±0°.04×**62°.59W**±0°.03**, h77**^{km}±7^{km}**, n134, σ1ˢ52**/159**, mb4.2**/30**, 1C, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRUV	Carupano	0.64	276	*e*P	Pn	04 28 32.4	+1.6
CRUV				*e*S	Sn	04 28 40.0	-1.8
TPP	Pointe-a-Pierr	1.16	104	*e*P	Pn	04 28 40.3	+3.5

TRN	Trinidad (W)	1.17	88	⇑iP	Pn	04 28 38.8	+1.9
TRN				eS	Sn	04 28 53.1	+0.5
TBH	Brigand Hill	1.50	94	eP	Pn	04 28 44.3	+3.1
TBH				eS	Sn	04 29 03.2	+2.9
CUMV	Cumana_UDO	1.59	264	eP	Pn	04 28 45.0	+2.6
CUMV				eS	Sn	04 29 04.1	+1.8
GRFF	Grenada Fort F	1.66	30	eP	Pn	04 28 44.3	+0.9
GRFF				eS	Sn	04 29 04.2	+0.1
GRGR	Grenville	1.77	31	eP	Pn	04 28 46.0	+1.1
GRGR				eS	Sn	04 29 06.6	-0.2
GRGR	Grenville	1.77	31		Pn	04 28 45.6	+0.8
GRGR				Sn	Sn	04 29 08.0	+1.2
GRHS	Sauteurs	1.86	30	eP	Pn	04 28 46.8	+0.8
GRHS				eS	Sn	04 29 08.7	-0.1
BOT	Bacolet	1.92	73	eP	Pn	04 28 49.2	+2.5
BOT				eS	Sn	04 29 12.0	+1.7
PLCV	Puerto La Cruz	2.02	258		Pn	04 28 50.4	+2.3
PLCV					Sn	04 29 13.1	+0.6
PCRV	Puerto La Cruz	2.06	258	P	Pn	04 28 50.4	+1.7
	27nm,0.3s,baz=77,slow=4.5,SNR=29						
PCRV				S	Sn	04 29 13.1	-0.5
	51nm,0.3s,baz=110,slow=6.8,SNR=8.2						
PCRV	Puerto La Cruz	2.06	258	eP	Pn	04 28 50.3	+1.6
PCRV				eS	Sn	04 29 14.1	+0.5
TOSP	Speyside	2.13	71	eP	Pn	04 28 51.9	+2.3
TOSP				eS	Sn	04 29 16.3	+1.1
TOSP	Speyside	2.13	71		Pn	04 28 50.7	+1.1
GCMP	Grenada, Carri	2.19	31	eP	Pn	04 28 51.5	+1.1
GCMP				eS	Sn	04 29 16.1	-0.6
RIOV	Rio Grande	2.63	163	eP	Pn	04 28 58.6	+2.2
RIOV				eS	Sn	04 29 27.4	+0.1
PRGV	PARIAGUAN	2.73	228	eP	Pn	04 28 59.6	+1.8
PRGV				eS	Sn	04 29 30.9	+1.1
SVOC	Richmond Hill,	2.87	28	eS	Sn	04 29 33.6	+0.6
SVB	Belmont	2.96	26	eP	Pn	04 29 02.2	+1.4
SVB				eS	Sn	04 29 35.7	+0.4
SVB	Belmont	2.96	26		Pn	04 29 01.4	+0.6
SVV	Soufriere Volc	3.02	26	eP	Pn	04 29 03.5	+1.9
SSV	Crater Summit	3.03	27	eP	Pn	04 29 04.2	+2.3
SSV				eS	Sn	04 29 37.5	+0.3
MCLT	Moule a Chique	3.48	27	eP	Pn	04 29 10.3	+2.3
MCLT				eS	Sn	04 29 49.6	+1.5
MCLT	Moule a Chique	3.48	27	Pn	Pn	04 29 07.8	-0.1
BIRV	Birongo	3.62	268		Pn	04 29 12.8	+3.0
SLCP	Castries, St.	3.73	25	eP	Pn	04 29 13.6	+2.3
SLCP				eS	Sn	04 29 53.9	-0.2
SLBI	Saint Lucia, B	3.75	25	eP	Pn	04 29 14.2	+2.6
SLBI				eS	Sn	04 29 54.3	-0.1
BIM	Bigot	4.16	21	eP	Pn	04 29 18.6	+1.4
BIM	Bigot	4.16	21	eS	Sn	04 30 03.8	-0.9
BIM	Bigot	4.16	21	Pn	Pn	04 29 18.6	+1.4
MPOM	Morne Pois Mar	4.18	24	eP	Pn	04 29 19.0	+1.6
MPOM	Morne Pois Mar	4.18	24	eS	Sn	04 30 04.7	-0.2
MPOM	Morne Pois Mar	4.18	24	Pn	Pn	04 29 18.4	+1.0
FDF	Fort de France	4.34	19	eP	Pn	04 29 21.4	+1.8
FDF	Fort de France	4.34	19	eS	Sn	04 30 06.7	-2.3
FDF	Fort de France	4.34	19	Pn	Pn	04 29 20.7	+1.1
SVN	Savane Anatole	4.44	18		Pn	04 29 22.2	+1.2
ILAM	Ilet Lapin Mar	4.47	22	eP	Pn	04 29 23.4	+2.0
MDN	Morne-Daniel	4.83	14	eP	Pn	04 29 28.5	+2.2
MDN	Morne-Daniel	4.83	14	eS	Sn	04 30 18.9	-2.0
DSLB	Salisbury	4.94	13	eP	Pn	04 29 29.8	+2.1
DSLB	Salisbury	4.94	13	eS	Sn	04 30 22.8	-0.9
BENV	Beln	4.97	263	eP	Pn	04 29 29.8	+1.5
BENV				eS	Sn	04 30 24.1	-0.4
TDBA	Terre de Bas,	5.30	10	eP	Pn	04 29 34.4	+1.8
TBG	Guadaloupe-3	5.30	10	eP	Pn	04 29 34.3	+1.7
MAGL	Barre de l'ile	5.46	13	eP	Pn	04 29 37.3	+2.4
MAGL	Barre de l'ile	5.46	13	eS	Sn	04 30 35.5	-1.0
CBE	Ff, Capester	5.52	10	eP	Pn	04 29 37.5	+1.8
CBE	Ff, Capester	5.52	10	eS	Sn	04 30 36.8	-1.1
BAUV	El Baul	5.62	253	eP	Pn	04 29 39.8	+2.7
BAUV	El Baul	5.62	253	eS	Sn	04 30 39.8	-0.5
BAUV	El Baul	5.62	253	eP	Pn	04 29 37.9	+0.8
BAUV				eS	Sn	04 30 38.1	-2.3
ANBD	Bethesda, Anti	6.46	7	eP	Pn	04 29 50.0	+1.6
ANBD	Bethesda, Anti	6.46	7	eS	Sn	04 30 58.7	-2.1
SKI	Saint Kitts	6.69	359	eP	Pn	04 29 54.0	+2.3
SEUS	St. Eustatius	6.86	357	eP	Pn	04 29 55.9	+1.9
SEUS	St. Eustatius	6.86	357	Pn	Pn	04 29 56.0	+2.0
SABA	Saba	7.00	355	Pn	Pn	04 29 57.5	+1.5
ANWB	Willy Bob	7.07	6	Pn	Pn	04 29 57.9	+1.1
CDVI	St. Croix	7.41	344		Pn	04 30 01.9	+0.4
SMRT	St. Maarten	7.42	356	eP	Pn	04 30 03.5	+1.9
SMRT	St. Maarten	7.42	356	Pn	Pn	04 30 03.4	+1.7
STVI	Saint Thomas	8.04	344		Pn	04 30 10.9	+0.9
PDPR	Patillas Dam,	8.09	336	Pn	Pn	04 30 10.3	-0.4
CUPR	Culebra, Puert	8.09	342		Pn	04 30 11.4	+0.6
SJG	San Juan	8.22	336	S	Sn	04 31 35.4	-8.6
	1.2nm,0.3s,baz=351,slow=18,SNR=2.0						
CBYP	Canovanas	8.25	338	Pn	Pn	04 30 13.7	+0.5
OBIP	Obispado Ponce	8.36	333	Pn	Pn	04 30 13.9	-0.5
CELP	Cerrillos	8.37	333	Pn	Pn	04 30 14.6	0.0
GCPR	Guaynabo City	8.38	337	Pn	Pn	04 30 15.2	+0.5
BOAV	Boa Vista	8.41	166	Pn	Pn	04 30 14.3	-0.8
MLPR	Magueyes Islan	8.50	330	Pn	Pn	04 30 18.7	+2.3
CRPR	Cabo Rojo, PR	8.56	330	Pn	Pn	04 30 18.6	+1.3
AOPR	Arecibo Observ	8.69	333	Pn	Pn	04 30 19.8	+0.8
URIC	Uribia, Colomb	9.29	278	Pn	Pn	04 30 28.3	+1.1
DR12	Loma Pena Alta	10.46	322		Pn	04 30 45.0	+1.8
MDP	Montagnes des	11.27	118	P	Pn	04 30 51.3	-2.9
	1.4nm,0.3s,baz=307,slow=14,SNR=32						
MDP				S	Sn	04 32 47.7	-11
	13nm,0.3s,baz=59,slow=17,SNR=21						
PTGA	Pitinga	11.56	167	P	Pn	04 30 57.6	-0.6
	7.6nm,0.3s,baz=324,slow=22,SNR=79						
PTGA				S	Sn	04 32 58.6	-6.9
	3.4nm,0.3s,baz=273,slow=20,SNR=12						
PTGA				LR	LR	04 35 44.7	
	comp=Z,22nm,18.3s,baz=304,slow=38						
SC01	Santiago de lo	11.78	319	Pn	Pn	04 31 04.1	+3.0
ZARC	Zaragoza, Cauc	12.50	257	Pn	Pn	04 31 11.1	0.0
MACA	Manacapuru-AM	13.80	172	Pn	Pn	04 31 27.6	-0.8
SAML	Samuel	19.43	182		Pn	04 32 38.2	0.0
DRK0	Durika	20.39	268	P	P	04 32 44.5	-2.6
DRK0				IAmb	IAmb	04 32 49.7	
	comp=Z,26nm,0.5s						
ETMB	Extrema	20.60	190	P	P	04 32 49.6	+0.5
SIV	San Ignacio	26.47	177	P	P	04 33 48.3	+2.1
	comp=Z,1.2nm,0.6s,baz=12,slow=9.4,SNR=6.8						
I42A	Draeger Farm,	40.24	330	P	P	04 35 45.3	+0.1
TXAR	Lajitas Array	42.59	302	P	P	04 36 04.9	+0.1
	comp=Z,0.3nm,0.5s,baz=117,slow=9.2,SNR=11						
TXAR				PcP	PcP	04 37 54.9	-1.1
	comp=Z,0.3nm,0.6s,baz=111,slow=4.9,SNR=4.8						
TXAR	Lajitas Array	42.59	302	P	P	04 36 05.3	+0.4
TX31	Lajitas Ar. Si	42.59	302	P	P	04 36 05.8	+1.0
TX31				IAmb	IAmb	04 36 31.6	
	comp=Z,4.5nm,1.2s						
TX32	Lajitas Array	42.59	302	P	P	04 36 05.7	+0.9
I37A	Lemond, Waseca	42.63	327	P	P	04 36 04.8	0.0
I37A				IAmb	IAmb	04 36 05.2	
	comp=Z,8.7nm,0.6s						
ECSD	EROS Data Cent	44.23	324	P	P	04 36 18.1	+0.4
MNTX	Cornudas Mount	44.72	305	P	P	04 36 22.3	+0.5
ANMO	Albuquerque	46.65	308	P	P	04 36 37.5	+0.3
	comp=Z,0.5nm,0.5s,baz=60,slow=13,SNR=3.7						
ANMO	Albuquerque	46.65	308	P	P	04 36 37.7	+0.5
AGMN	Agassiz Nation	46.77	330	P	P	04 36 36.9	-0.8
AGMN				IAmb	IAmb	04 36 37.5	
	comp=Z,4.7nm,1.1s						
SDCO	Great Sand Dun	46.98	312	P	P	04 36 39.5	-0.4
P18A	Preston Nutter	51.13	313	P	P	04 37 12.2	+0.7
P18A				IAmb	IAmb	04 37 17.2	
	comp=Z,3.0nm,1.2s						
DGMT	Dagmar	51.27	325	P	P	04 37 12.9	+0.8
BW06	Boulder Array	51.85	317	P	P	04 37 16.0	-0.8
BW06				IAmb	IAmb	04 37 27.8	
	comp=Z,3.8nm,1.5s						
PD31	Pinedale Array	51.85	317	P	P	04 37 16.2	-0.7
PDAR	Pinedale Array	51.85	317	P	P	04 37 15.8	-1.0
	comp=Z,0.7nm,0.5s,baz=114,slow=10.0,SNR=13						
PDAR	Pinedale Array	51.85	317	P	P	04 37 16.1	-0.7
YHL	Hebgen Lake	53.77	319	P	P	04 37 31.8	+0.8
YHL				IAmb	IAmb	04 37 33.4	
	comp=Z,7.1nm,1.4s						
DBIC	Dimbokro	57.15	89	P	P	04 37 56.5	+1.2
	comp=Z,0.7nm,0.4s,baz=250,slow=3.7,SNR=3.7						
DBIC	Dimbokro	57.15	89	P	P	04 37 56.3	+1.0
EDM	Edmonton	58.67	327	P	P	04 38 04.4	-1.0
ESDC	Sonseca Array	59.25	50	P	P	04 38 09.6	-0.1
	comp=Z,0.4nm,0.8s,baz=250,slow=7.5,SNR=1.8						
ESDC				PcP	PcP	04 38 57.5	+0.2
	comp=Z,0.4nm,0.8s,baz=255,slow=5.1,SNR=2.4						
TORD	Torodi Ar. Bea	62.81	81	P	P	04 38 35.2	+1.1
	comp=Z,1.0nm,0.5s,baz=288,slow=6.9,SNR=17						
TORD	Torodi Ar. Bea	62.81	81	P	P	04 38 35.5	+1.3
YKA	Yellowknife Ar	63.72	336	P	P	04 38 37.4	-1.8
	comp=Z,0.4nm,0.5s,baz=107,slow=8.8,SNR=7.9						
DAWY	Dawson	74.76	334	P	P	04 39 48.1	+0.6
DAWY				IAmb	IAmb	04 40 09.3	
	comp=Z,4.3nm,1.3s						
CTGM	Chitina Glacie	75.33	330	P	P	04 39 51.4	+0.3
CTGM				IAmb	IAmb	04 40 14.1	
	comp=Z,8.4nm,1.2s						
M27K	Edge Creek, AK	75.70	332	P	P	04 39 53.2	+0.1
M27K				IAmb	IAmb	04 40 09.2	
	comp=Z,7.0nm,1.3s						
SCRK	Sand Creek	76.77	333	P	P	04 39 58.4	-0.7
BMRM	Bremner River	76.93	330	P	P	04 39 59.9	-0.1
N25K	Chitina, Valde	76.94	331	P	P	04 40 00.1	0.0
N25K				IAmb	IAmb	04 40 21.5	
	comp=Z,14nm,1.4s						
ILAR	Eielson Array	78.05	334	P	P	04 40 04.8	-1.4
	comp=Z,0.8nm,0.6s,baz=99,slow=4.6,SNR=17						
SCM	Sheep Creek Mo	78.25	331	P	P	04 40 07.2	-0.2
WRH	Wood River Hil	78.57	334	P	P	04 40 08.4	-0.6
WRH				IAmb	IAmb	04 40 08.9	
	comp=Z,6.5nm,1.5s						
MDM	Murphy Dome	78.62	334	P	P	04 40 08.3	-1.0
MDM				IAmb	IAmb	04 40 08.5	
	comp=Z,2.3nm,0.8s						
GHO	Glory Hole Cre	79.01	331	P	P	04 40 11.2	-0.3
ARCES	ARCESS Array B	79.48	21	P	P	04 40 13.8	0.0
	comp=Z,1.6nm,0.8s,baz=338,slow=1.3,SNR=3.7						
TRF	Thorofare Moun	79.57	333	P	P	04 40 14.1	-0.6
TRF				IAmb	IAmb	04 40 14.8	
	comp=Z,3.5nm,0.8s						
FINES	FINESS Array B	80.14	29	P	P	04 40 17.5	0.0
	comp=Z,8.4nm,1.1s,baz=242,slow=4.4,SNR=12						
CNPM	China Poot	80.26	329	P	P	04 40 18.4	+0.1
BURAR	Bucovina Array	80.79	43	P	P	04 40 23.4	+1.9
BURAR				IAmb	IAmb	04 40 24.5	
	comp=Z,2.8nm,0.9s						
IMAR	Indian Mountai	80.87	336	P	P	04 40 20.7	-0.7
M19K	Big River Lodg	81.58	331	P	P	04 40 25.0	-0.2
M19K				IAmb	IAmb	04 40 52.1	
	comp=Z,5.1nm,1.2s						
N19K	Bonanza Creek	81.75	330	P	P	04 40 25.6	-0.7
N19K				IAmb	IAmb	04 40 42.3	
	comp=Z,14nm,1.2s						
L19K	White Mountain	81.77	332	P	P	04 40 25.6	-0.7
L19K				IAmb	IAmb	04 40 49.8	
	comp=Z,8.1nm,1.4s						
SVW2	Sparrevohn	82.25	331	P	P	04 40 28.0	-0.7
SVW2				IAmb	IAmb	04 40 55.9	
	comp=Z,16nm,1.4s						
BRTR	Keskin Array B	88.05	50	P	P	04 40 58.2	-0.1
	comp=Z,0.8nm,0.7s,baz=273,slow=3.9,SNR=4.6						

MAN 30 04:49:28.5, 9°.92N×123°.99E, h34^{km}, mb4.1, ML2.8, MS2.5, Negros

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*IDC **30** 04:50:54.0±1.2, 32°.62S×177°.96W, h0^{km}, mb4.6/2, mb1 4.7/4, mb1mx4.1/29, mbtmp4.5/4, ML3.8/2, MS3.5/4, Ms1 3.4/4, ms1mx3.1/27, Error ellipse: s-maj=37.5km s-min=30.3km az=131.0*

*NEIC **30** 04:50:57.9±1.0, 32°.7S±0°.1×178°.23W±0°.05, h10^{km}±2^{km}, mb4.6/10, Error ellipse: s-maj=24.1km s-min=7.3km az=181.0*

ISC 30 04:50:57.6±0.8**, 32°.52S**±0°.07×**178°.1W**±0°.1**, h20^{km}, n63,** σ1^{s}**57**/85**, mb4.8**/8**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.25	2	P	Pn	04 51 43.5	-4.0
GLKZ				S	Sn	04 52 21.5	-4.1
RAO	Raoul Island	3.26	2	Pn	Pn	04 51 50.8	+3.2
MXZ	Matakaoa Point	5.85	210	Pn	Pn	04 52 22.1	-1.1
MXZ	Matakaoa Point	5.85	210	P	Pn	04 52 21.5	-1.7
MXZ				S	Sn	04 53 29.9	+0.3
WMGZ	Waiomatatini S	6.03	208	P	Pn	04 52 27.6	+2.1
WMGZ				S	Sn	04 53 35.0	+1.0
PKGZ	Pakihiroa	6.22	210	P	Pn	04 52 27.1	-1.2
PKGZ				S	Sn	04 53 38.5	-0.4
HAZ	Te Kaha	6.24	212	S	Sn	04 53 43.6	+4.4
PUZ	Puketiti	6.31	208	P	Pn	04 52 28.1	-1.4
PUZ				S	Sn	04 53 40.1	-0.8
RUGZ	Raukumara Rang	6.46	212	P	Pn	04 52 31.2	-0.4
RUGZ				S	Sn	04 53 45.5	+0.7
TWGZ	Tauwhareparae	6.51	209	P	Pn	04 52 35.0	+2.7
TWGZ				S	Sn	04 53 47.0	+1.1
CNGZ	Carnagh Statio	6.69	206	P	Pn	04 52 33.2	-1.4
CNGZ				S	Sn	04 53 50.9	+0.7
TKGZ	Te Karaka	6.79	208	P	Pn	04 52 33.7	-2.3
TKGZ				S	Sn	04 53 52.0	-0.6
MWZ	Matawai	6.83	211	P	Pn	04 52 35.7	-1.0
MWZ				S	Sn	04 53 54.0	+0.2
URZ	Urewera	6.96	213	Pn	Pn	04 52 37.1	-1.2
	2.2nm,0.3s,baz=300,slow=23,SNR=14						
URZ				Sn	Sn	04 53 56.1	-0.7
	10.0nm,0.3s,baz=303,slow=23,SNR=10						
URZ	Urewera	6.96	213	Pn	Pn	04 52 36.7	-1.6
URZ	Urewera	6.96	213	P	Pn	04 52 37.3	-1.0
URZ				S	Sn	04 53 55.4	-1.4
RAGZ	Rawiri	7.01	211	P	Pn	04 52 41.4	+2.2
RAGZ				S	Sn	04 53 59.1	+0.7
RIGZ	Rimuhau	7.05	208	P	Pn	04 52 38.0	-1.7
RIGZ				S	Sn	04 53 58.0	-1.2
WCZ	Waipu Caves	7.16	240	P	Pn	04 52 47.9	+6.7
PRGZ	Paritu Road	7.19	206	P	Pn	04 52 38.6	-3.0
PRGZ				S	Sn	04 54 01.8	-0.9
SNGZ	Shannon Statio	7.29	210	P	Pn	04 52 42.6	-0.3
SNGZ				S	Sn	04 54 05.4	+0.3
KNZ	Kokohu	7.36	207	P	Pn	04 52 41.1	-2.7
KNZ				S	Sn	04 54 04.3	-2.4
RAHZ	Arahi	7.51	210	P	Pn	04 52 46.7	+0.8
RAHZ				S	Sn	04 54 09.3	-1.2
MTHZ	Maungataniwha	7.56	212	P	Pn	04 52 48.0	+1.4
MTHZ				S	Sn	04 54 10.8	-1.0
NMHZ	Naumai	7.78	211	P	Pn	04 52 50.5	+0.8
NMHZ				S	Sn	04 54 16.0	-1.2
BKZ	Black Stump Fm	7.97	212	P	Pn	04 52 53.3	+1.0
BKZ				S	Sn	04 54 19.7	-2.3
KWHZ	Kaweka Forest	8.21	211	P	Pn	04 52 53.0	-2.7
KWHZ				S	Sn	04 54 25.2	-2.7
ETVZ	East Tongariro	8.32	216	P	Pn	04 52 56.9	-0.2
KAHZ	Kahuranaki	8.34	208	P	Pn	04 52 54.0	-3.3
KAHZ				S	Sn	04 54 28.0	-2.9
OTVZ	Oturere	8.36	216	P	Pn	04 52 57.1	-0.7
OTVZ				S	Sn	04 54 29.6	-2.1
SNVZ	South Ngauruho	8.39	216	P	Pn	04 52 57.8	-0.4
RPZ	Rata Peaks	14.07	214	Pn	Pn	04 54 13.0	-2.8
MSVF	Nonsavu	15.14	346	LR	LR	04 59 21.6	
	comp=Z,111nm,19.9s,baz=154,slow=33						
MLZ	Mavora Lakes	16.71	216	P	P	04 54 54.4	+1.7
DZM	Mont Dzumac	17.25	303	P	P	04 54 59.8	+0.9
	0.3nm,0.3s,baz=164,slow=13,SNR=4.2						
DZM				LR	LR	05 01 00.9	
	comp=Z,292nm,18.2s,baz=57,slow=35						
STKA	Stephens Creek	34.02	260	LR	LR	05 10 01.1	
	comp=Z,33nm,20.1s,baz=28,slow=34						
CTAO	Charters Tower	34.16	282	P	P	04 57 42.1	+0.6
CTAO				IAmb	IAmb	04 57 49.3	
	comp=Z,18nm,1.4s						
COEN	Coen	39.86	288	P	P	04 58 31.6	+1.5
COEN				IAmb	IAmb	04 58 46.3	
	comp=Z,11nm,1.2s						
AS31	Alice Springs	43.00	269	P	P	04 58 56.0	+0.3
AS31				IAmb	IAmb	04 59 00.3	
	comp=Z,1.8nm,0.5s						
ASAR	Alice Springs	43.00	269	P	P	04 58 55.7	-0.1
	comp=Z,4.0nm,0.7s,baz=108,slow=7.4,SNR=31						
ASAR				PcP	PcP	05 00 45.6	-0.4
	comp=Z,0.2nm,0.5s,baz=115,slow=4.2,SNR=1.0						
ASAR	Alice Springs	43.00	269	P	P	04 58 55.4	-0.4
WR0	Warramunga Arr	44.00	274	P	P	04 59 03.7	-0.2
WR0				IAmb	IAmb	04 59 04.5	
	comp=Z,22nm,1.5s						
WB2	Warramunga Arr	44.17	274	P	P	04 59 05.2	-0.1
WB2				IAmb	IAmb	04 59 06.5	
	comp=Z,11nm,0.5s						
WRAB	Tennant Creek	44.17	274	P	P	04 59 05.0	-0.3
WRAB				IAmb	IAmb	04 59 06.4	
	comp=Z,8.1nm,0.6s						
WRA	Warramunga Arr	44.18	274	P	P	04 59 05.1	-0.2
	comp=Z,5.6nm,0.4s,baz=113,slow=7.9,SNR=103						
WRA				PcP	PcP	05 00 50.1	+0.1
	comp=Z,0.3nm,0.6s,baz=130,slow=3.3,SNR=1.1						
WRA				LR	LR	05 17 33.1	
	comp=Z,67nm,18.2s,baz=30,slow=36						
WRA	Warramunga Arr	44.18	274	P	P	04 59 04.0	-1.3
WB0	Warramunga Arr	44.21	275	P	P	04 59 05.4	-0.1
FORT	Forrest	45.50	257	P	P	04 59 14.6	-1.1
VNA3	Neumayer Olymp	76.20	176	P	P	05 02 45.5	+1.6
VNA3	Neumayer Olymp	76.20	176	PcP	PcP	05 02 56.8	+0.8
VNA2	Neumayer--Watz	76.63	177	P	P	05 02 47.6	+1.3
	baz=174,slow=6.4						
VNA2	Neumayer--Watz	76.63	177	PcP	PcP	05 02 59.3	+1.5
VNA1	Neumayer--Stat	76.86	177	P	P	05 02 48.9	+1.3
VNA1	Neumayer--Stat	76.86	177	PcP	PcP	05 02 60.0	+1.2
FINES	FINESS Array B	147.11	339	PKPbc	PKPbc	05 10 37.8	-0.6
	comp=Z,8.0nm,0.8s,baz=52,slow=4.8,SNR=17						
FINES	FINESS Array B	147.11	339		PKPbc	05 10 38.0	-0.4
NOA	NORSAR Array B	150.84	351	PKPbc	PKPbc	05 10 47.7	-0.2
	comp=Z,1.8nm,1.0s,baz=18,slow=4.2,SNR=2.3						
AKASG	Malin Array Be	152.93	320	PKPbc	PKPbc	05 10 52.4	-0.5
	comp=Z,0.6nm,0.5s,baz=54,slow=2.4,SNR=4.3						
AKASG	Malin Array Be	152.93	320		PKiKP	05 10 53.2	+0.1
BRTR	Keskin Array B	153.51	295	PKPbc	PKiKP	05 10 55.0	+0.1
	comp=Z,1.0nm,0.6s,baz=148,slow=4.6,SNR=6.1						
BRTR	Keskin Array B	153.51	295	PKPbc	PKPbc	05 10 53.5	-1.3
TORD	Torodi Ar. Bea	160.71	179	PKPab	PKPab	05 11 37.9	-0.5
	comp=Z,0.5nm,0.7s,baz=180,slow=2.8,SNR=4.1						
TORD	Torodi Ar. Bea	160.71	179		PKPab	05 11 37.5	-0.9

MAN 30 04:51:11.4, 19°.21N×121°.29E, h32^{km}, mb4.5, ML3.4, MS3.2, Philippine Islands region

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KMA 30 05:08:55.5±0.4**, 36°.04N×128°.28E, h2^{km}**±1^{km}**, Error ellipse: s-maj=6.1km s-min=1.8km az=44.0, South Korea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSKCH	Geochang	0.51	215	P	Pg	05 09 05.4	+0.1
	SNR=6.0						
KSJEO	Jeonju	0.81	263	P	Pg	05 09 11.0	0.0
	SNR=11						
KSJEU	Jeongeup	1.22	244	P	Pg	05 09 18.8	-0.2
	SNR=8.7						
KSKWJ	Gwangju	1.37	231	P	Pn	05 09 21.6	0.0
	SNR=5.7						
KSKWJ	Gwangju	1.37	231	P	Pn	05 09 21.6	0.0
	SNR=5.5						
YKDB	Yokjido	1.41	180	P	Pn	05 09 22.0	-0.2
	SNR=7.3						

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*BJI **30** 05:42:32.3±0.0, 28°.47N×130°.80E, h10^{km}, mB4.8/17, mb4.4/32, Ms4.0/14, Ms7 3.9/12*

*MOS **30** 05:42:33.9±0.9, 28°.55N×130°.62E, h9^{km}, mb4.8/20, Error ellipse: s-maj=14.1km s-min=6.6km az=110.9*

*IDC **30** 05:42:34.5±0.8, 28°.65N×130°.58E, h0^{km}, mb4.3/22, mb1 4.3/26, mb1mx4.1/64, mbtmp4.3/26, ML3.7/3, MS3.5/16, Ms1 3.6/16, ms1mx3.3/53, Error ellipse: s-maj=19.3km s-min=17.9km az=139.0*

*NEIC **30** 05:42:36.7±1.2, 28°.58N±0°.05×130°.57E±0°.07, h10^{km}±1^{km}, mb4.7/50, Error ellipse: s-maj=10.6km s-min=8.8km az=102.0*

*JMA **30** 05:42:38.2±0.1, 28°.60N×130°.66E, h64^{km}±2^{km}, M4.1*

JMA Felt I J1.

ISC 30 05:42:38.1±1.0**, 28°.59N**±0°.03×**130°.68E**±0°.04**, h25^{km}**±6^{km}**, n187,** σ1^{s}**30**/210**, mb4.6**/61**, MS3.8**/16**, 6C-4D, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JZK	Kikaishima	0.68	246	P	Pb	05 42 52.3	+0.9
JZK				eS	Sn	05 43 03.3	+1.3
JAM	Amami Oshima	0.96	260	P	Pn	05 42 55.7	-0.3
JAM				eS	Sb	05 43 08.5	0.0
JAMN	Amaminishikomi	1.37	256	P	Pn	05 43 01.7	+0.1
JAMN				eS	Sn	05 43 18.8	-0.2
JTAJ	Takarajima	1.41	294	P	Pn	05 43 01.7	-0.5
JTAJ				eS	Sn	05 43 19.2	-0.8
JNN	Nakanoshima	1.43	331	P	Pn	05 43 02.2	-0.3
JYAK	Yakushimahirau	1.65	355	P	Pn	05 43 05.6	+0.1
JYAK				eS	Sn	05 43 25.2	-0.7
JTK	Tokunoshima	1.73	243	P	Pn	05 43 06.5	0.0
JTK				eS	Sn	05 43 27.7	-0.1
JMTN	Minamitane	1.81	6	P	Pn	05 43 07.9	+0.2
JMTN				eS	Sn	05 43 29.1	-0.8
JKC	Kuchinoerabu	1.91	347	P	Pn	05 43 08.9	-0.2
JKC				eS	Sn	05 43 31.2	-1.2
JTN	Tanegashima 3	2.07	7	P	Pn	05 43 11.5	+0.2
JTN				eS	Sn	05 43 35.3	-1.1
JOKE	Okinoerabujima	2.23	237	P	Pn	05 43 13.8	+0.3
JOKE				eS	Sn	05 43 39.7	-0.6
JYRO	Yoronjima	2.52	232	P	Pn	05 43 17.3	-0.1
JYRO				eS	Sn	05 43 45.5	-1.8
JTSR	Tashiro 2	2.58	5	P	Pn	05 43 18.6	+0.3
JTSR				eS	Sn	05 43 48.0	-0.8
JKDJ	Kitadaitoujima	2.69	168	P	Pn	05 43 19.6	-0.1
JKDJ				eS	Sn	05 43 49.6	-1.9
JOW	Kunigami	2.76	231	Pn	Pn	05 43 20.8	0.0
	42nm,0.3s,baz=100,slow=24,SNR=80						
JOW				Sn	Sn	05 43 51.4	-2.0
	54nm,0.3s,baz=64,slow=27,SNR=12						
JOW	Kunigami	2.76	231	P	Pn	05 43 20.7	0.0
JOW				eS	Sn	05 43 52.1	-1.3
JMZ	Minamidaito 2	2.80	170	P	Pn	05 43 21.3	0.0
JMZ				eS	Sn	05 43 51.8	-2.5
JMZ	Minamidaito 2	2.80	170	Pn	Pn	05 43 21.0	-0.4
JIH	Iheya	2.86	238	P	Pn	05 43 22.0	-0.1
JIH				eS	Sn	05 43 54.2	-1.6
JSU	Suzuyama	2.91	356	P	Pn	05 43 22.8	-0.1
JSU				eS	Sn	05 43 55.2	-1.9
JSU	Suzuyama	2.91	356	Pn	Pn	05 43 22.9	+0.1
JNU	Nakatsue	4.52	2	Pn	Pn	05 43 44.4	-0.6
	4.2nm,0.3s,baz=351,slow=1.0,SNR=25						
JNU				Sn	Sn	05 44 33.4	-3.4
	6.7nm,0.3s,baz=49,slow=18,SNR=7.0						
JNU	Nakatsue	4.52	2	Pn	Pn	05 43 44.7	-0.3
JMN	Monobe	5.81	27		Pn	05 44 03.2	+0.5
JHS	Saijyo	6.72	17	Pn	Pn	05 44 15.2	+0.1
JWT	Wachi	7.78	30	Pn	Pn	05 44 31.0	+1.2
TJN	Taejon	8.25	341	⇑eP	Pn	05 44 39.8	+3.6
JGF	Kuroka	8.99	37	Pn	Pn	05 44 46.8	+0.4
JHJ	Hachijo jima 2	9.03	58	LR	LR	05 47 43.1	
	comp=Z,182nm,21.4s,baz=296,slow=34						
JHJ2	Mitsune	9.05	58	Pn	Pn	05 44 48.4	+1.2
KSRS	Korea Array	9.14	346	Pn	Pn	05 44 51.1	+2.8
	0.4nm,0.3s,baz=164,slow=14,SNR=18						
KSRS				LR	LR	05 48 36.2	
	comp=Z,112nm,21.6s,baz=170,slow=40						
KS19	Wonju Array Si	9.20	346	Pn	Pn	05 44 47.6	-1.5
YHNB	Yeheng	9.20	247	Pn	Pn	05 44 47.4	-1.8
NACB	Ninganchiao	9.26	244	Pn	Pn	05 44 47.2	-2.9
YULB	Yu-li	9.90	241	Pn	Pn	05 44 55.4	-3.4
SSLB	Suanglung	9.96	244	Pn	Pn	05 44 56.5	-3.2
MAJO	Matsushiro	10.15	37	⇓eP	Pn	05 45 00.7	-1.6
MAJO				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MJAR	Matsushiro Arr	10.15	37	Pn	Pn	05 45 03.3	+1.0
	comp=Z,0.1nm,0.3s,baz=239,slow=13,SNR=1.9						
MJAR				LR	LR	05 48 59.7	
	comp=Z,108nm,20.8s,baz=220,slow=38						
MJAR	Matsushiro Arr	10.15	37		Pn	05 45 03.1	+0.8
JCJ	Chichijima	10.29	96	Pn	Pn	05 45 05.8	+1.6
	comp=Z,11nm,0.3s,baz=274,slow=11,SNR=7.3						
JCJ				LR	LR	05 48 29.3	
	comp=Z,170nm,20.6s,baz=90,slow=34						
JCJ	Chichijima	10.29	96	Pn	Pn	05 45 05.7	+1.5
TPUB	Ta-pu	10.47	242	Pn	Pn	05 45 04.8	-1.9
NJ2	Nanjing	10.79	292	eP	Pn	05 45 10.0	-0.9
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KNMB	Chin-men Tao	11.75	252	Pn	Pn	05 45 23.3	-0.8
USRK	Ussuriysk Ar.	15.61	3	Pn	P	05 46 20.5	+0.1
	baz=176,slow=8.0,SNR=4.6						

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CN2   Changchun          15.75 346  eP    Pn    05 46 15.8 -2.4
CN2                                 ePP   pP    05 46 28.5 +0.5
CN2                                 eS    Sn    05 49 11.0 -1.0
CN2                                  LR   LR
      comp=Z,340nm,14.0s
CN2                                  LR   LR
      comp=Z,110nm,14.0s
BJI   Beijing            16.53 317   P    Pn    05 46 25.3 -2.9
BJI                                  pmax pmax
      comp=Z,5.0nm,1.0s
BJI                                  LR   LR
      comp=Z,350nm,15.7s
BJI                                  LR   LR
      comp=Z,150nm,16.7s
BJI                                  LR   LR
      comp=Z,370nm,16.0s
ERM   Erimo              16.80  34⇑eP    Pn    05 46 26.6 -5.0
ERM                                  pmax pmax
      comp=Z,60nm,1.3s
XAN   Xi'an              19.36 292   P    P     05 47 01.5 -0.4
XAN                                  pP   Pn    05 47 05.5 +2.4
XAN                                  sP   pP    05 47 08.8 +0.8
XAN                                  pmax pmax
      comp=Z,16nm,1.0s
HHC   Hu-ho-hao-te       19.86 313  eP    P     05 47 08.3 +0.8
HHC                                  pmax pmax
      comp=Z,12nm,0.7s
HHC                                  pmax pmax
      comp=Z,140nm,6.3s
HHC                                  LR   LR
      comp=Z,190nm,10.6s
HHC                                  LR   LR
      comp=Z,170nm,11.5s
HHC                                  LR   LR
      comp=Z,280nm,11.1s
GUMO  Guam               19.92 136   LR   LR    05 53 24.4
      comp=Z,55nm,19.7s,baz=106,slow=32
KLR   Kul'dur            20.63   2   P    P     05 47 15.1 -0.5
      comp=Z,9.0nm,0.8s,baz=186,slow=7.5,SNR=25
BTO   Baotou             20.75 311  eP    Pn    05 47 22.0 +2.4
BTO                                  LR   LR
      comp=Z,770nm,14.7s
BTO                                  LR   LR
      comp=Z,550nm,16.1s
GYA   Guiyang            21.40 270 ⇑P    P     05 47 26.8 +2.6
GYA                                  pmax pmax
      comp=Z,14nm,1.0s
GYA                                  LR   LR
      comp=Z,300nm,17.1s
LZH   Lanzhou            23.83 295  eP    P     05 47 53.8 +4.4
LZH                                  sP   sP    05 48 01.5 +2.8
LZH                                  pmax pmax
      comp=Z,11nm,1.3s
LZH                                  LR   LR
      comp=N,200nm,15.2s
LZH                                  LR   LR
      comp=E,210nm,16.3s
LZH                                  LR   LR
      comp=Z,150nm,15.6s
ZEA   Zeya               25.25 355  eP    P     05 48 01.8 -0.2
ZEA                                  pmax pmax
      comp=Z,10.0nm,0.9s
ULN   Ulaanbaatar        26.56 323⇑eP    P     05 48 14.0 -0.2
ULN                                  pmax pmax
      comp=Z,6.0nm,1.7s
SONM  Songino Array      26.89 322   P    P     05 48 15.7 -1.5
      comp=Z,1.2nm,0.7s,baz=142,slow=10,SNR=6.9
SONM                                 LR   LR    06 00 28.3
      comp=Z,197nm,18.4s,baz=124,slow=40
SONM  Songino Array      26.89 322   P    P     05 48 16.0 -1.1
SONM                                 pmax pmax
      comp=Z,1.0nm,0.9s
SONM  Songino Array      26.89 322   P    P     05 48 16.0 -1.1
CMAR  Chiang Mai Arr     30.72 258   LR   LR    06 03 09.4
      comp=Z,86nm,18.9s,baz=132,slow=40
PETK  Petropavlovsk-     31.55  32   LR   LR    06 02 39.1
      comp=Z,60nm,19.8s,baz=217,slow=38
SHL   Shillong           34.58 274   P    P     05 49 24.3 -0.9
SHL                                  pmax pmax
      comp=Z,9.0nm,0.5s
SHL   Shillong           34.58 274   P    P     05 49 24.3 -0.9
SHL                                  IAmb IAmb  05 49 24.5
      comp=Z,8.8nm,0.5s
WMQ   Urumqi             37.43 306  eP    P     05 49 50.5 +1.2
WMQ                                  sP   pP    05 49 57.8 +1.8
WMQ                                  pmax pmax
      comp=Z,27nm,1.1s
WMQ                                  pmax pmax
      comp=Z,150nm,5.7s
ODAN  Odare              38.21 278  eP    P     05 49 55.5 -0.8
      comp=Z,9.2nm,0.4s
JIRN  Jiri               39.08 280  eP    P     05 50 03.3 -0.5
GUN   Gumba              39.30 280  eP    P     05 50 05.6  0.0
      comp=Z,11nm,0.4s
PKI   Pulchoki           39.78 280  eP    P     05 50 08.8 -0.7
PKIN  Phulchoki          39.78 280  eP    P     05 50 09.0 -0.5
      comp=Z,11nm,0.7s
KKN   Kakani             39.84 280  eP    P     05 50 09.6 -0.3
DMN   Daman              40.03 280  eP    P     05 50 11.6  0.0
GKN   Gorkha             40.35 281  eP    P     05 50 13.7 -0.4
      comp=Z,12nm,0.5s
DANN  Dangsing           41.04 281  eP    P     05 50 19.9  0.0
KOLN  Koldanda           41.30 281  eP    P     05 50 21.6 -0.4
MK31  Makanchi Array     41.66 309   P    P     05 50 24.8 +0.3
MK31                                 pmax pmax
      comp=Z,1.0nm,1.1s
MK31  Makanchi Array     41.66 309   P    P     05 50 24.8 +0.3
MKAR  Makanchi Array     41.66 309   P    P     05 50 22.8 -1.6
      comp=Z,0.7nm,0.5s,baz=91,slow=9.4,SNR=10
MKAR                                 PcP  PcP   05 52 20.9 -0.1
      comp=Z,0.7nm,0.9s,baz=101,slow=2.9,SNR=2.8
MKAR  Makanchi Array     41.66 309   P    P     05 50 24.1 -0.3
ZAA0  Zalesovo Array     41.76 320   P    P     05 50 25.1 -0.1
ZALV  Zalesovo Beam      41.76 320   P    P     05 50 23.4 -1.7
      comp=Z,3.6nm,0.3s,baz=111,slow=8.0,SNR=21
ZALV                                 LR   LR    06 09 30.7
      comp=Z,104nm,18.1s,baz=102,slow=39
ZALV  Zalesovo Beam      41.76 320   P    P     05 50 25.2 +0.1
ZALV  Zalesovo Beam      41.76 320   P    P     05 50 25.2 +0.1
MAKZ  Makanchi           41.87 309   P    P     05 50 25.0 -1.2
MAKZ                                 pmax pmax
      comp=Z,1.0nm,0.7s
MAKZ  Makanchi           41.87 309   P    P     05 50 25.0 -1.2
TIXI  Tiksi              43.12 359   P    P     05 50 36.4 +0.5
      comp=Z,3.3nm,0.5s,baz=167,slow=4.6,SNR=6.2
TIXI  Tiksi              43.12 359   P    P     05 50 36.6 +0.7
TIXI                                 pmax pmax
      comp=Z,14nm,1.3s
TIXI  Tiksi              43.12 359   P    P     05 50 36.5 +0.7
TIXI                                 IAmb IAmb  05 50 38.1
      comp=Z,14nm,1.3s
COEN  Coen               43.99 162   P    P     05 50 43.1 -0.4
KNRA  Kununurra          44.05 183   P    P     05 50 43.6 -0.3
TARG  Taragay, Kyrgy     44.52 302   P    P     05 50 47.4 -0.8
KURK  Kurchatov          44.67 315   P    P     05 50 47.7 -1.0
KURK                                 pmax pmax
      comp=Z,2.0nm,0.8s
KURK  Kurchatov          44.67 315   P    P     05 50 47.7 -1.0
KURBB Kurchatov Arra     44.71 314   P    P     05 50 47.7 -1.3
      comp=Z,1.6nm,0.5s,baz=96,slow=9.3,SNR=18
KURBB                                PcP  PcP   05 52 31.3 +0.2
      comp=Z,0.2nm,0.5s,baz=93,slow=3.2,SNR=1.6
AAK   Ala-Archa          46.97 303   P    P     05 51 05.6 -1.6
      comp=Z,0.7nm,0.3s,baz=45,slow=14,SNR=2.8
AAK   Ala-Archa          46.97 303⇓eP    P     05 51 07.7 +0.5
AAK                                  pmax pmax
      comp=Z,10.0nm,1.7s
AAK   Ala-Archa          46.97 303   IAmb IAmb  05 51 08.8
      comp=Z,3.3nm,1.3s
NRIK  Noril'sk           47.71 341   P    P     05 51 12.1 -0.3
      comp=Z,2.6nm,0.4s,baz=112,slow=9.6,SNR=5.8
NRIK  Noril'sk           47.71 341   P    P     05 51 12.3 -0.1
NRIK                                 pmax pmax
      comp=Z,7.0nm,0.9s
NRIK  Noril'sk           47.71 341   P    P     05 51 12.2 -0.1
NRIK                                 IAmb IAmb  05 51 12.6
      comp=Z,6.5nm,0.9s
WB0   Warramunga Arr     48.21 175   P    P     05 51 16.0 -0.7
WB0                                  IAmb IAmb  05 51 33.5
      comp=Z,12nm,1.5s
WRAB  Tennant Creek      48.37 175deP    P     05 51 18.6 +0.6
WRAB                                 pmax pmax
      comp=Z,10.0nm,1.7s
WRA   Warramunga Arr     48.38 175   P    P     05 51 18.1  0.0
      comp=Z,3.3nm,0.6s,baz=352,slow=8.4,SNR=7.0
WRA   Warramunga Arr     48.38 175 i P    P     05 51 19.0 +1.0
WRA                                  pmax pmax
      comp=Z,3.0nm,0.6s
WRA   Warramunga Arr     48.38 175   P    P     05 51 18.2 +0.2
WB2   Warramunga Arr     48.38 175   P    P     05 51 19.4 +1.3
WB2                                  IAmb IAmb  05 51 22.4
      comp=Z,11nm,1.2s
WR0   Warramunga Arr     48.41 175   P    P     05 51 18.9 +0.6
WR0                                  IAmb IAmb  05 51 28.3
      comp=Z,5.4nm,0.8s
KKAR  Karatay Array      49.87 304   P    P     05 51 29.2 -0.2
KKAR  Karatay Array      49.87 304   P    P     05 51 29.2 -0.2
BVAR  Borovoye Array     50.01 317   P    P     05 51 30.5 +0.2
      comp=Z,6.4nm,0.6s,baz=152,slow=6.7,SNR=30
BRVK  Borovoye           50.08 317   P    P     05 51 30.4 -0.3
BRVK                                 pmax pmax
      comp=Z,12nm,0.5s
BRVK  Borovoye           50.08 317   P    P     05 51 30.4 -0.3
GAR   Garm               50.42 299   P    P     05 51 31.8 -1.9
ABKAR Akbulak array      56.65 312   P    P     05 52 18.6 -0.5
ABKAR                                IAmb IAmb  05 52 20.3
      comp=Z,3.3nm,0.7s
ARU   Arti               56.92 321   P    P     05 52 20.6 -0.3
      comp=Z,0.8nm,0.3s,baz=130,slow=3.3,SNR=5.1
ARU   Arti               56.92 321c iP    P     05 52 20.7 -0.2
ARU                                             05 53 13.4
ARU                                             05 54 25.4
ARU                                  S    S     06 00 15.1 +2.0
ARU                                  SS   SS    06 03 59.0 -2.2
ARU                                  pmax pmax
      comp=Z,10.0nm,1.0s
AKTO  Aktyubinsk         57.75 314   P    P     05 52 27.1 +0.2
      comp=Z,3.2nm,0.7s,baz=86,slow=11,SNR=8.2
AKTO                                 LR   LR    06 19 08.3
      comp=Z,142nm,20.1s,baz=103,slow=38
J20K  Nowinta River      58.23  30   P    P     05 52 31.6 +1.6
K20K  Telida             58.27  31   P    P     05 52 32.5 +2.2
K20K                                 IAmb IAmb  05 52 46.2
      comp=Z,6.9nm,1.4s
IMAR  Indian Mountai     58.39  28   P    P     05 52 32.6 +1.5
H21K  Melozitna Rive     58.78  28   P    P     05 52 36.0 +2.2
I21K  Tanana             59.14  29   P    P     05 52 38.6 +2.3
I21K                                 IAmb IAmb  05 52 50.2
      comp=Z,12nm,1.4s
PPLA  Purkeypile         59.14  31   P    P     05 52 38.3 +1.8
CAST  Castle Rocks       59.16  31   P    P     05 52 38.4 +1.9
CAST                                 IAmb IAmb  05 52 54.2
      comp=Z,4.9nm,1.2s
TRF   Thorofare Moun     59.97  31   P    P     05 52 44.0 +1.7
TRF                                  IAmb IAmb  05 52 55.1
      comp=Z,9.1nm,1.4s
TOLK  Toolik Lake Re     59.98  25   P    P     05 52 43.5 +1.4
TOLK                                 IAmb IAmb  05 53 03.2
      comp=Z,4.6nm,1.2s
GEYT  Alibeck            60.02 299   LR   LR    06 22 46.3
      comp=Z,30nm,18.6s,baz=40,slow=40
MCK   McKinley           60.55  30   P    P     05 52 46.9 +0.9
MCK                                  pmax pmax
      comp=Z,6.0nm,0.9s
MCK   McKinley           60.55  30   P    P     05 52 46.9 +0.9
MCK                                  IAmb IAmb  05 52 48.5
      comp=Z,6.0nm,0.9s
RND   Reindeer           60.61  31   P    P     05 52 47.4 +0.8
RND                                  pmax pmax
      comp=Z,6.0nm,0.8s
RND   Reindeer           60.61  31   P    P     05 52 47.4 +0.8
RND                                  IAmb IAmb  05 52 48.0
      comp=Z,6.2nm,0.8s
SEW   Seward             60.69  34   P    P     05 52 47.6 +0.7
MDM   Murphy Dome        60.74  29   P    P     05 52 49.2 +1.9
MDM                                  IAmb IAmb  05 52 49.7
      comp=Z,4.6nm,0.8s
GHO   Glory Hole Cre     60.75  32   P    P     05 52 48.5 +1.0
H24K  Noodor Dome        60.81  28   P    P     05 52 49.0 +1.1
H24K                                 IAmb IAmb  05 53 03.4
      comp=Z,7.3nm,1.4s
CCB   Clear Creek Bu     60.95  29   P    P     05 52 50.1 +1.4
CCB                                  IAmb IAmb  05 52 53.8
      comp=Z,4.5nm,1.4s
PWL   Port Wells         61.14  34   P    P     05 52 51.7 +1.5
ILAR  Eielson Array      61.33  29   P    P     05 52 50.8 -0.5
      comp=Z,0.8nm,0.7s,baz=268,slow=6.1,SNR=9.9
ILAR  Eielson Array      61.33  29   P    P     05 52 51.9 +0.6
ILAR  Eielson Array      61.33  29   P    P     05 52 51.9 +0.6
HDA   Harding Lake       61.34  29   P    P     05 52 52.3 +0.9
HDA                                  IAmb IAmb  05 52 52.5
      comp=Z,3.9nm,0.7s
KIRV  Kirov              61.61 324   P    P     05 52 53.6 +0.4
      comp=Z,14nm,0.4s,baz=104,slow=1.6,SNR=4.0
BMAR  Burnt Mountain     61.95  26   P    P     05 52 57.8 +2.3
SCRK  Sand Creek         62.69  30   P    P     05 53 01.6 +1.0
SCRK                                 IAmb IAmb  05 53 02.1
      comp=Z,3.2nm,0.7s
DOT   Dot Lake           62.71  30   P    P     05 53 01.7 +1.1
DOT                                  IAmb IAmb  05 53 01.8
      comp=Z,3.5nm,0.7s
M26K  Nabesna, AK        63.41  31   P    P     05 53 06.8 +1.4
M26K                                 IAmb IAmb  05 53 33.7
      comp=Z,5.7nm,1.0s
BELG  Belogornoye        63.81 317⇓eP    P     05 53 08.7 +0.7
BELG                                 pmax pmax
      comp=Z,2.0nm,1.0s
BCAR  Beaver Creek A     63.83  30   P    P     05 53 09.4 +1.3
INK   Inuvik             65.86  24   P    P     05 53 20.5 -0.6
      comp=Z,1.1nm,0.8s,baz=294,slow=6.4,SNR=7.4
INK   Inuvik             65.86  24   P    P     05 53 22.4 +1.3
INK                                  pmax pmax
      comp=Z,5.0nm,1.4s
INK   Inuvik             65.86  24   P    P     05 53 22.4 +1.3
INK                                  IAmb IAmb  05 53 44.1
      comp=Z,4.8nm,1.4s
KLMR  Klimovskoe         66.02 328  eP    P     05 53 21.0 -1.2
KLMR                                 pmax pmax
      comp=Z,20nm,1.4s
KLMR  Klimovskoe         66.02 328  eP    P     05 53 21.1 -1.2
KLMR                                 AMP        05 53 26.3
      comp=Z,20nm,1.4s
SPB2  Spitsbergen Ar     66.97 348   P    P     05 53 28.7 +0.6
SPITS Spitsbergen Ar     66.97 348   P    P     05 53 28.8 +0.6
SPITS                                pmax pmax
      comp=Z,54nm,1.3s
A36M  Sachs Harbour      67.30  19   P    P     05 53 31.8 +1.5
A36M                                 IAmb IAmb  05 53 53.2
      comp=Z,6.1nm,0.8s
KEV   Kevo               68.04 339   P    P     05 53 35.9 +0.9
KEV                                  pmax pmax
      comp=Z,8.0nm,1.1s
KEV   Kevo               68.04 339   P    P     05 53 35.9 +0.9
KEV                                  IAmb IAmb  05 53 56.8
      comp=Z,8.5nm,1.1s
ARCES ARCESS Array B     68.61 339   P    P     05 53 38.5  0.0
      comp=Z,0.9nm,0.5s,baz=62,slow=8.4,SNR=11
ARCES                                LR   LR    06 26 47.9
      comp=Z,50nm,19.6s,baz=210,slow=39
ARCES ARCESS Array B     68.61 339   P    P     05 53 39.8 +1.2
ARCES ARCESS Array B     68.61 339   P    P     05 53 39.8 +1.2
KBZ   Khabaz             69.36 309   P    P     05 53 45.1 +1.5
      comp=Z,8.2nm,0.8s,baz=86,slow=4.6,SNR=13
KBZ   Khabaz             69.36 309c iP    P     05 53 45.2 +1.5
KBZ                                  pmax pmax
      comp=Z,11nm,0.9s
KIV   Kislovodsk         69.42 310  eP    P     05 53 42.7 -1.5
KIV                                  pmax pmax
      comp=Z,8.0nm,1.1s
FIA1  FINESS Array S     71.88 331   P    P     05 53 59.1 +0.4
FINES FINESS Array B     71.88 331   P    P     05 53 58.2 -0.5
      comp=Z,1.8nm,0.3s,baz=64,slow=5.8,SNR=28
FINES FINESS Array B     71.88 331 i P    P     05 53 59.0 +0.3
FINES                                pmax pmax
      comp=Z,2.0nm,0.3s
FINES FINESS Array B     71.88 331   P    P     05 53 58.6 -0.1
MNK   Minsk              74.15 324 i P    P     05 54 10.8 -1.5
MNK                                i PPP  PPP   05 58 47.6
MNK                                i S    S     06 03 42.8 -1.1
MNK                                i SS   SS    06 08 29.7 +1.2
MNK                                i SSS  SSS   06 11 37.1
MNK                                  MLR  MLR
      comp=N,660nm,21.0s
MNK                                  MLR  MLR
      comp=Z,111nm,15.0s
MNK                                  MLR  MLR
      comp=E,54nm,25.0s
MNK   Minsk              74.15 324 i P    P     05 54 10.8 -1.5
MNK                                i P    P     05 54 10.8 -1.5
MNK                                i P    P     05 54 10.8 -1.5
      baz=62
MNK                                i PP   PP    05 56 43.9  -14
MNK                                i PPP  PPP   05 58 47.6
MNK                                i S    S     06 03 42.9 -1.0
MNK                                i SS   SS    06 08 29.8 +1.3
MNK                                i SSS  SSS   06 11 37.2
MNK                                i LQ   LQ    06 21 56.3
MNK                                i LR   LR    06 26 31.1
MNK                                i LRM  MLR   06 28 45.2
      comp=N,660nm,21.3s
MNK                                i LRM  MLR   06 28 54.9
      comp=Z,111nm,14.8s
MNK                                i LRM  MLR   06 29 00.0
      comp=E,54nm,24.5s
NACGM Naroch             74.54 324 i P    P     05 54 18.8 +4.3
RAYN  Ar Rayn            75.12 289   P    P     05 54 18.9 +0.4
RAYN                                 pmax pmax
      comp=Z,5.0nm,1.0s
RAYN  Ar Rayn            75.12 289   P    P     05 54 18.9 +0.4
RAYN                                 IAmb IAmb  05 54 21.7
      comp=Z,5.1nm,0.9s
AKASG Malin Array Be     75.15 320   P    P     05 54 17.5 -0.6
      comp=Z,1.6nm,0.5s,baz=54,slow=6.3,SNR=16
AKASG                                LR   LR    06 30 32.0
      comp=Z,66nm,19.2s,baz=10.0,slow=38
AKASG Malin Array Be     75.15 320   P    P     05 54 18.8 +0.7
AKASG                                pmax pmax
      comp=Z,4.0nm,1.3s
AKASG Malin Array Be     75.15 320   P    P     05 54 18.8 +0.7
AKBB  Malin Array Si     75.15 320   P    P     05 54 18.2 +0.1
AKBB                                 pmax pmax
      comp=Z,6.0nm,0.9s
AKBB  Malin Array Si     75.15 320   P    P     05 54 18.1 +0.1
AKBB                                 IAmb IAmb  05 54 19.7
      comp=Z,6.3nm,0.9s
YKA   Yellowknife Ar     75.47  26   P    P     05 54 20.9 +1.2
      comp=Z,0.7nm,0.8s,baz=307,slow=4.1,SNR=4.3
BR131 Keskin Array S     77.30 308   P    P     05 54 30.8  0.0
BR131                                pmax pmax
      comp=Z,13nm,0.9s
BR131 Keskin Array S     77.30 308   P    P     05 54 30.8  0.0
BRTR  Keskin Array B     77.30 308   P    P     05 54 31.1 +0.3
      comp=Z,7.1nm,0.8s,baz=100,slow=3.2,SNR=32
BRTR                                 LR   LR    06 33 37.2
      comp=Z,37nm,20.0s,baz=356,slow=40
BRTR  Keskin Array B     77.30 308   P    P     05 54 30.7 -0.1
NOA   NORSAR Array B     78.15 334   P    P     05 54 34.9  0.0
      comp=Z,0.5nm,0.4s,baz=55,slow=7.1,SNR=4.5
NOA                                  LR   LR    06 35 35.5
      comp=Z,52nm,18.8s,baz=280,slow=41
CLL   Collm              83.44 326  eP    P     05 55 04.0 +0.6
CLL   Collm              83.44 326  eP    P     05 55 04.0 +0.6
SCHQ  Schefferville      95.56  10   LR   LR    06 42 58.2
      comp=Z,45nm,19.0s,baz=7.5,slow=38
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*IDC **30** 05:44:32.0±1.5, 3°.06S×130°.42E, h0^{km}, mb3.8/2, mb1 3.9/5, mb1mx3.6/51, mbtmp3.7/5, ML3.3/3, Error ellipse: s-maj=58.2km s-min=22.7km az=87.0*

ISC 30 05:44:32.9±1.1, **3°.04S**±0°.09×**130°.6E**±0°.3, **h10**^{km}, **n5**, σ**1^{s}.12**/6, **Seram**

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Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                     Op    ISC         h  m  s    ISC
SIJI  Sorong              2.25  17   Pn    Pn     05 45 10.3  0.0
      5.1nm,0.3s,baz=144,slow=22,SNR=6.4
SIJI                                 Sn    Sn     05 45 37.7 -0.5
      8.3nm,0.3s,baz=265,slow=20,SNR=8.1
FITZ  Fitzroy Crossi     15.74 198   Pn    Pn     05 48 13.6 -1.3
      0.0nm,0.3s,baz=12,slow=9.3,SNR=1.4
WRA   Warramunga Arr     17.18 168   P     Pn     05 48 32.7 -0.6
      0.2nm,0.3s,baz=346,slow=13,SNR=13
ASAR  Alice Springs      20.75 171   P     P      05 49 15.1 +1.1
      3.6nm,0.5s,baz=349,slow=9.9,SNR=35
MKAR  Makanchi Array     65.30 326   P     P      05 55 15.8 +0.5
      0.3nm,0.4s,baz=115,slow=8.3,SNR=6.1
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*IDC **30** 05:45:21.5±1.1, 3°.15S×130°.60E, h0^{km}, mb4.1/5, mb1 4.2/8, mb1mx3.9/51, mbtmp4.1/8, ML4.1/3, MS3.0/3, Ms1 3.0/3, ms1mx2.7/39, Error ellipse: s-maj=57.2km s-min=17.7km az=79.0*

*NEIC **30** 05:45:27.3±2.3, 3°.09S±0°.05×130°.58E±0°.07, h33^{km}±8^{km}, mb4.1/12, Error ellipse: s-maj=11.1km s-min=6.3km az=104.0*

ISC 30 05:45:24.6±0.7, **3°.23S**±0°.06×**130°.61E**±0°.10, **h24**^{km}, **n24**, σ**2^{s}.95**/23, **mb4.1**/5, **Seram**

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Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                     Op    ISC         h  m  s    ISC
FAKI  Fak Fak             1.66  80   Pn    Pn     05 45 53.7 +1.4
SIJI  Sorong              2.43  16   Pn    Pn     05 46 01.4 -1.5
      50nm,0.3s,baz=221,slow=7.9,SNR=15
SIJI                                 Sn    Sn     05 46 27.9 -4.0
      22nm,0.3s,baz=262,slow=22,SNR=6.3
SIJI                                 LR    LR     05 46 58.9
      comp=Z,165nm,20.5s,baz=186,slow=41
SOEI  Soe                 9.04 224   Pn    Pn     05 47 34.9 +1.0
BATI  Baumata             9.78 225   LR    LR     05 51 35.0
      comp=Z,171nm,18.2s,baz=352,slow=38
KAPI  Kappang            10.98 260   LR    LR     05 53 19.4
      comp=Z,82nm,18.6s,baz=96,slow=44
FITZ  Fitzroy Crossi     15.56 198   Pn    Pn     05 49 01.8 -0.8
      0.1nm,0.3s,baz=138,slow=23,SNR=3.5
FITZ                                 Sn    Sn     05 51 51.6 -2.9
      0.1nm,0.3s,baz=133,slow=21,SNR=1.3
COEN  Coen               16.36 131   Pn    Pn     05 49 13.8 +0.9
WRAB  Tennant Creek      17.00 168   P     Pn     05 49 23.5 +2.5
WRAB                                 IAmb  IAmb   05 49 30.9
      comp=Z,8.9nm,1.1s
WRA   Warramunga Arr     17.01 168   P     Pn     05 49 20.5 -0.6
      comp=Z,1.5nm,0.3s,baz=340,slow=13,SNR=27
WRA                                  S     Sn     05 52 22.4 -7.2
      comp=Z,0.4nm,0.3s,baz=356,slow=23,SNR=2.4
WRA   Warramunga Arr     17.01 168   P     P      05 49 24.5 +1.7
WB2   Warramunga Arr     17.01 168   P     P      05 49 24.1 +1.3
WB2                                  IAmb  IAmb   05 49 46.9
      comp=Z,15nm,1.4s
AS31  Alice Springs      20.57 171         Pn     05 50 04.9 +0.7
AS31                                 IAmb  IAmb   05 50 05.9
      comp=Z,7.1nm,0.7s
ASAR  Alice Springs      20.57 171   P     P      05 50 04.6 +2.7
      comp=Z,10.0nm,0.3s,baz=350,slow=10,SNR=28
ASAR                                 S     S      05 53 43.4 -7.6
      comp=Z,0.2nm,0.3s,baz=352,slow=25,SNR=1.7
ASAR  Alice Springs      20.57 171   P     Pn     05 50 04.8 +0.6
KSM   Kuching            20.82 283   P     P      05 50 06.0 +1.2
KSM                                  IAmb  IAmb   05 50 07.6
      comp=Z,11nm,0.6s
STKA  Stephens Creek     30.32 161   P     P      05 51 35.0 +0.6
      comp=Z,1.1nm,0.3s,baz=334,slow=7.9,SNR=5.8
CAN   Canberra           36.20 154   P     P      05 52 29.0 +3.4
SONM  Songino Array      55.10 340   P     P      05 54 54.8 -0.1
      comp=Z,0.6nm,0.8s,baz=150,slow=6.0,SNR=3.9
SONM  Songino Array      55.10 340   IAmb  IAmb   05 54 56.0
      comp=Z,3.1nm,1.3s
MK31  Makanchi Array     65.45 326   P     P      05 56 06.0 +0.4
MK31                                 IAmb  IAmb   05 56 06.6
      comp=Z,1.9nm,1.1s
MKAR  Makanchi Array     65.45 326   P     P      05 56 05.9 +0.2
      comp=Z,0.7nm,0.3s,baz=125,slow=8.4,SNR=15
MAKZ  Makanchi           65.63 326   P     P      05 56 07.3 +0.4
ZALV  Zalesovo Beam      68.50 333   P     P      05 56 25.3 +0.4
      comp=Z,0.3nm,0.3s,baz=101,slow=7.5,SNR=2.1
KURK  Kurchatov          69.65 328   P     P      05 56 33.0 +0.9
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*NOU **30** 05:48:35.0, 33°.19S×177°.99W, h338^{km}, MLv5.0/7, South of Kermadec Islands*

*IDC **30** 05:49:13.4±3.1, 35°.07S×178°.93E, h176^{km}±34^{km}, mb3.8/3, mb1 3.9/5, mb1mx3.3/36, mbtmp4.2/5, Error ellipse: s-maj=51.3km s-min=33.0km az=131.0*

*WEL **30** 05:49:16.4±0.8, 35°S±5°×17°9E±°, h33^{km}, M4.4/19, ML4.6/24, MLv4.4/19, Error ellipse: s-maj=0.0km s-min=0.0km az=99.8*

ISC 30 05:49:15.3±1.3, **35°.30S**±0°.09×**179°.0E**±0°.1, **h226**^{km}±10^{km}, **n84**, σ**1^{s}.57**/110, **mb4.0**/3, **Off east coast of North Island**

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Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                     Op    ISC         h  m  s    ISC
MXZ   Matakaoa Point      2.33 194   P     Pn     05 49 58.7 -0.2
MXZ                                  S     S      05 50 30.7 -2.5
WMGZ  Waiomatatini S      2.56 190   P     Pn     05 50 02.1 +0.6
WMGZ                                 S     S      05 50 37.5 -0.1
HAZ   Te Kaha             2.64 201   P     Pn     05 50 02.1 -0.2
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HAZ				S	S	05 50 37.5	-1.6
PKGZ	**Pakihiroa**	2.69	196	P	Pn	05 50 03.0	+0.1
PKGZ				S	S	05 50 40.3	+0.1
PUZ	**Puketiti**	2.83	192	P	Pn	05 50 03.9	-0.6
PUZ				S	S	05 50 42.1	-0.9
RUGZ	**Raukumara Rang**	2.87	201	P	Pn	05 50 05.0	+0.1
RUGZ				S	S	05 50 40.6	-3.2
TWGZ	**Tauwhareparae**	2.99	196	P	Pn	05 50 07.6	+1.4
TWGZ				S	S	05 50 46.7	+0.5
KUZ	**Kuaotunu**	3.02	240	P	Pn	05 50 05.0	-1.5
WHRZ	**Whale Island**	3.03	212	S	S	05 50 48.5	+1.6
GRZ	**Great Barrier**	3.03	251	P	Pn	05 50 03.8	-2.9
OPRZ	**Ohinepanea**	3.21	217	P	Pn	05 50 09.2	+0.5
CNGZ	**Carnagh Statio**	3.24	191	P	Pn	05 50 08.8	-0.2
MWZ	**Matawai**	3.25	201	P	Pn	05 50 09.5	+0.3
MWZ				S	S	05 50 49.9	-1.6
MARZ	**Manawahe**	3.27	214	P	Pn	05 50 10.6	+1.3
MARZ				S	S	05 50 54.2	+2.4
TKGZ	**Te Karaka**	3.27	196	P	Pn	05 50 09.7	+0.4
TKGZ				S	S	05 50 51.3	-0.4
URZ	**Urewera**	3.32	207	P	Pn	05 50 09.9	-0.1
	5.5nm,0.3s,baz=122,slow=24,SNR=42						
URZ				S	S	05 50 50.5	-2.4
	39nm,0.3s,baz=308,slow=20,SNR=13						
URZ	**Urewera**	3.32	207	P	Pn	05 50 09.6	-0.3
URZ				S	S	05 50 52.8	-0.1
URZ	**Urewera**	3.32	207	P	Pn	05 50 10.1	+0.2
RAGZ	**Rawiri**	3.43	201	P	Pn	05 50 11.9	+0.6
RAGZ				S	S	05 50 55.9	+0.5
RIGZ	**Rimuhau**	3.54	196	P	Pn	05 50 12.6	0.0
RIGZ				S	S	05 50 57.0	-0.6
RTZ	**Ruatahuna**	3.68	205	P	Pn	05 50 14.0	-0.3
RTZ				S	S	05 51 00.0	-0.7
TOZ	**Tahuroa Road**	3.72	228	P	Pn	05 50 17.7	+3.1
SNGZ	**Shannon Statio**	3.72	200	P	Pn	05 50 15.0	+0.3
SNGZ				S	S	05 51 01.5	+0.1
PRGZ	**Paritu Road**	3.73	193	P	Pn	05 50 14.7	0.0
PRGZ				S	S	05 51 02.1	+0.5
KNZ	**Kokohu**	3.86	195	P	Pn	05 50 15.8	-0.5
KNZ				S	S	05 51 03.2	-1.3
ALRZ	**Allen Road**	3.89	212	P	Pn	05 50 17.2	+0.5
RAHZ	**Arahi**	3.92	202	P	Pn	05 50 17.1	+0.1
RAHZ				S	S	05 51 04.8	-0.9
MTHZ	**Maungataniwha**	3.94	205	P	Pn	05 50 17.9	+0.6
MTHZ				S	S	05 51 05.8	-0.4
MHGZ	**Mahia Peninsul**	3.94	192	P	Pn	05 50 17.6	+0.3
MHGZ				S	S	05 51 04.3	-1.9
TLZ	**Tolley Road**	4.11	221	P	Pn	05 50 20.7	+1.3
NMHZ	**Naumai**	4.18	204	P	Pn	05 50 20.4	+0.2
NMHZ				S	S	05 51 11.9	+0.5
ARHZ	**Aropaoanui**	4.27	201	P	Pn	05 50 21.1	-0.1
ARHZ				S	S	05 51 12.4	-0.9
BKZ	**Black Stump Fm**	4.35	207	P	Pn	05 50 21.8	-0.4
BKZ				S	S	05 51 14.6	-0.6
BKZ	**Black Stump Fm**	4.35	207	P	Pn	05 50 21.9	-0.4
OUZ	**Omahuta**	4.42	269	P	Pn	05 50 20.2	-2.9
MCHZ	**McNeill Hill**	4.53	203	P	Pn	05 50 24.1	-0.3
MCHZ				S	S	05 51 19.1	+0.1
KWHZ	**Kaweka Forest**	4.60	206	P	Pn	05 50 24.7	-0.7
KWHZ				S	S	05 51 20.2	-0.6
HIZ	**Hauiti**	4.62	225	P	Pn	05 50 27.5	+2.0
HIZ	**Hauiti**	4.62	225	P	Pn	05 50 27.6	+2.1
NTVZ	**North Tongarir**	4.63	214	P	Pn	05 50 25.6	-0.2
WTVZ	**West Tongariro**	4.68	214	P	Pn	05 50 26.1	-0.3
NNVZ	**North Ngauruho**	4.68	214	P	Pn	05 50 26.4	-0.1
OTVZ	**Oturere**	4.69	214	P	Pn	05 50 26.2	-0.4
SNVZ	**South Ngauruho**	4.71	214	P	Pn	05 50 26.7	-0.3
NGZ	**Ngauruhoe**	4.72	214	P	Pn	05 50 26.9	-0.1
TUVZ	**Tukino**	4.78	213	P	Pn	05 50 27.3	-0.4
KAHZ	**Kahuranaki**	4.79	200	P	Pn	05 50 27.2	-0.6
FWVZ	**Far West T-bar**	4.81	214	P	Pn	05 50 27.7	-0.5
TRVZ	**Turoa**	4.85	214	P	Pn	05 50 27.9	-0.7
WNVZ	**Wahianoa**	4.85	213	P	Pn	05 50 27.8	-0.8
PKVZ	**Pokaka**	4.93	215	P	Pn	05 50 29.2	-0.4
PXZ	**Pawanui**	5.02	199	P	Pn	05 50 29.1	-1.4
PNHZ	**Pukenui**	5.11	205	P	Pn	05 50 30.3	-1.5
PRHZ	**Porangahau**	5.30	200	P	Pn	05 50 32.9	-1.2
TSZ	**Takapari Road**	5.33	206	P	Pn	05 50 32.8	-1.6
DVHZ	**Dannevirke**	5.47	203	P	Pn	05 50 34.5	-1.8
ANWZ	**Angora Road**	5.53	200	P	Pn	05 50 35.9	-1.0
PRWZ	**Pori Road**	5.77	204	P	Pn	05 50 38.9	-1.1
BFZ	**Birch Farm**	5.80	201	P	Pn	05 50 38.8	-1.5
BFZ	**Birch Farm**	5.80	201	P	Pn	05 50 39.0	-1.3
TIWZ	**Tintock**	5.99	203	P	Pn	05 50 41.4	-1.5
MRZ	**Mangatainoka R**	6.00	206	P	Pn	05 50 40.8	-2.0
HOWZ	**Holdsworth Sta**	6.23	205	P	Pn	05 50 43.3	-2.5
OGWZ	**Otaki Gorge**	6.28	208	P	Pn	05 50 44.4	-2.1
TMWZ	**Te Maipa**	6.29	202	P	Pn	05 50 44.9	-1.8
KIW	**Kapiti Island**	6.42	209	P	Pn	05 50 45.7	-2.6
MTW	**Mount Morrison**	6.46	204	P	Pn	05 50 46.3	-2.5
CAW	**Cannon Point**	6.57	207	P	Pn	05 50 47.4	-2.8
TRWZ	**Traveller**	6.62	202	P	Pn	05 50 48.6	-2.2
MSWZ	**Moikau Station**	6.78	205	P	Pn	05 50 50.4	-2.4
DUWZ	**D'Urville Isla**	6.80	215	P	Pn	05 50 50.4	-2.6
BHW	**Baring Head**	6.91	207	P	Pn	05 50 51.3	-3.2
PLWZ	**Palliser**	6.92	204	P	Pn	05 50 51.5	-3.1
TCW	**Tory Channel**	6.97	211	P	Pn	05 50 52.0	-3.3
TUWZ	**Tuamarina**	7.29	211	P	Pn	05 50 56.1	-3.3
QRZ	**Quartz Range**	7.51	221	P	Pn	05 50 59.3	-2.9
QRZ	**Quartz Range**	7.51	221	P	Pn	05 51 01.4	-0.8
BSWZ	**Blackbirch Sta**	7.56	211	P	Pn	05 51 00.1	-2.7
KHZ	**Kahutara**	8.28	209	P	Pn	05 51 08.6	-3.5
MSVF	**Nonsavu**	17.51	357	P	P	05 53 02.1	-2.2
	0.4nm,0.3s,baz=158,slow=16,SNR=1.8						
ASAR	**Alice Springs**	40.62	274	P	P	05 56 35.8	+2.3
	2.1nm,0.4s,baz=116,slow=7.7,SNR=20						
WRA	**Warramunga Arr**	42.06	279	P	P	05 56 47.0	+1.7
	3.9nm,0.6s,baz=120,slow=7.6,SNR=39						
FITZ	**Fitzroy Crossi**	50.06	276	P	P	05 57 49.4	+1.9
	1.6nm,0.8s,baz=102,slow=9.3,SNR=1.6						
FINES	**FINESS Array B**	148.70	335	PKPbc	PKiKP	06 08 37.5	+1.3
	10nm,1.1s,baz=63,slow=2.3,SNR=6.3						

LDG ***30*** *05:54:56.6±0.1, 51°.34N×5°.57E, h4^{km}, Ml2.7/24, Error ellipse: s-maj=1.0km s-min=0.7km az=175.0*
BNS ***30*** *05:54:56.5±0.3, 51°.36N×5°.57E, h5^{km}±9^{km}, ML2.2*
UCC ***30*** *05:54:56.9±0.8, 51°.32N×5°.54E, h11^{km}±1^{km}, ML2.1*
BGR ***30*** *05:54:57.1±0.4, 51°.31N×5°.62E, h10^{km}, ML2.4/6, Error ellipse: s-maj=4.4km s-min=3.3km az=142.0*
STR ***30*** *05:54:57.7±0.8, 51°N±5°×°±°, h6^{km}, MLv2.4/4, preliminary*
ISC 30 05:54:54.8±1.1**, 51°.35N**±0°.03×**5°.56E**±0°.02**, h13**^{km}±9^{km}**, n80, σ1^{s}.22**/144**, 5C-43D, The Netherlands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOPT	**Opiter**	0.24	168	κP	Pb	05 55 01.2	+0.2
BOPT				*d*S	Sb	05 55 05.3	+0.2
BMOL	**Mol**	0.33	245	*b*P	Pb	05 55 02.7	+0.3
BMOL				*d*S	Sb	05 55 07.6	+0.1
RODG	**Roetgen-Dahlhe**	0.44	118	*e*Pg	Pb	05 55 05.0	+0.6
RODG				*e*Sg	Sb	05 55 11.6	+0.8
BEBN	**Eben Emael**	0.56	172	κP	Pb	05 55 06.9	+0.5
BEBN				*d*S	Sg	05 55 14.1	+1.0
	comp=N,72nm,0.2s						
BLCH	**La Chartreuse**	0.71	178	*d*S	Sg	05 55 18.4	+0.5
MEM	**Membach**	0.80	159	*d*P	Pb	05 55 11.2	+0.8
MEM				κP	Pb	05 55 11.2	+0.8
MEM				*d*S	Sb	05 55 21.6	+0.6
	comp=E,26nm,0.3s						
MEM	**Membach**	0.80	159	*e*Pg	Pb	05 55 11.3	+0.9
	SNR=7.6						
MEM				*e*Sg	Sb	05 55 21.6	+0.6
	SNR=3.0						
GSH	**Grosshau**	0.81	140	*e*Pg	Pn	05 55 11.5	-0.3
GSH				*e*Sg	Sb	05 55 21.2	-0.2
	comp=E,45nm,0.1s						
DREG	**Dreilaegerbach**	0.81	148	*e*Pg	Pn	05 55 11.6	-0.2
BTNL	**Ternell**	0.85	154	κP	Pb	05 55 12.1	+0.8
BTNL				*d*S	Sb	05 55 23.1	+0.5
	comp=N,21nm,0.1s						
KLL	**Kalltalsperre**	0.85	146	*e*Pg	Pn	05 55 12.4	0.0
PLH	**Pulheim**	0.87	113	*e*Pg	Pn	05 55 12.3	-0.3
PLH				*e*Sg	Sb	05 55 23.2	+0.1
LAUG	**Laupendahl**	0.87	89	*e*Pg	Pn	05 55 12.4	-0.2
UCC	**Uccle**	0.94	234	*d*P	Pb	05 55 13.9	+1.1
UCC				*d*S	Sb	05 55 26.2	+1.1
UCC	**Uccle**	0.94	234	*e*Pg	Pn	05 55 14.8	+1.2
	SNR=3.2						
UCC				*e*Sg	Sb	05 55 27.6	+2.5
	SNR=2.8						
BCLA	**Clavier**	0.95	190	*b*P	Pb	05 55 13.7	+0.8
BCLA				*d*S	Sb	05 55 26.4	+1.0
	comp=E,39nm,0.2s						
BCES	**Court-Saint-Et**	0.97	220	*d*P	Pb	05 55 14.1	+0.8
WTSB	**Winterswijk**	0.99	51	*e*Pg	Pn	05 55 15.5	+1.2
	SNR=6.4						
WTSB				*e*Sg	Sn	05 55 28.8	+0.7
	SNR=3.6						
OLFT	**Oleftalsperre**	1.02	147	*e*Pg	Pn	05 55 15.0	+0.3
OLFT				*e*Sg	Sg	05 55 27.4	-0.2
BHOU	**Houvegnez**	1.04	164	κP	Pn	05 55 15.8	+0.9
BHOU				*d*S	Sb	05 55 28.9	+0.9
	comp=E,83nm,0.2s						
BUG	**Bochum--Univer**	1.08	85	*e*Pg	Pn	05 55 16.8	+1.3
	SNR=2.5						
BUG				*e*Sg	Sn	05 55 31.3	+1.1
	SNR=4.9						
BRQR	**Ronquire**	1.12	229	*b*P	Pb	05 55 16.8	+0.8
BMRD	**Maredsous**	1.16	206	*d*P	Pn	05 55 18.0	+1.3
BMRD				*d*S	Sb	05 55 33.7	+2.1
	comp=N,26nm,0.1s						
SNF	**Seneffe**	1.17	224	*d*P	Pb	05 55 17.4	+0.7
BSKQ	**Steenkerk**	1.17	234	*d*P	Pb	05 55 17.5	+0.8
BSKQ				*d*S	Sg	05 55 32.6	+0.1
	comp=E,32nm,0.1s						
ENTS	**Ennepetalsperr**	1.17	95	*e*Pg	Pn	05 55 17.9	+1.1
ENTS				*e*Sg	Sn	05 55 32.2	-0.3
TDN	**Todenfeld**	1.17	131	*e*Pg	Pn	05 55 17.7	+0.9
TDN				*e*Sg	Sg	05 55 31.7	-0.8
	comp=E,48nm,0.3s						
HOBG	**Hohbusch**	1.18	107	*e*Sg	Sn	05 55 34.0	+1.2
	comp=E,103nm,0.9s						
RCHB	**Rochefort**	1.21	190	κP	Pn	05 55 18.4	+1.0
RCHB				*d*S	Sb	05 55 34.5	+1.4
	comp=N,40nm,0.2s						
AHRW	**Bad Neuenahr-A**	1.26	130	*e*Sg	Sn	05 55 36.5	+1.8
	SNR=2.7						
HILG	**Hillesheim**	1.28	146	*e*Pg	Pn	05 55 19.8	+1.6
LKLB	**Kalborn**	1.30	164	κP	Pb	05 55 20.3	+1.3
LKLB				*d*S	Sg	05 55 35.6	-1.0
	comp=N,18nm,0.2s						
LOH	**Wallersheim-Lo**	1.32	152	*e*Pg	Pb	05 55 19.7	+0.2
LOH				*e*Sg	Sg	05 55 35.8	-1.7
	comp=N,30nm,0.2s						
GIVF	**Givet**	1.33	201	*e*Pn	Pb	05 55 20.3	+0.7
GIVF				*e*Sn	Sg	05 55 37.6	-0.1
	comp=N,26nm,0.2s						
DOU	**Dourbes**	1.40	206	*b*P	Pg	05 55 21.2	-0.4
DOU				*d*S	Sg	05 55 38.3	-1.4
	comp=E,18nm,0.2s						
DOU	**Dourbes**	1.40	206	Pn	Pg	05 55 21.2	-0.4
DOU				Sg	Sg	05 55 39.4	-0.3
BBOU	**Bougnies**	1.40	227	*d*P	Pg	05 55 22.0	+0.3
BHE	**Schloss Buerre**	1.43	134	*e*Pg	Pb	05 55 21.2	-0.1
BHE				*e*Sg	Sg	05 55 38.0	-2.9
	comp=E,23nm,0.1s						
LVIA	**Vianden**	1.48	164	*b*P	Pg	05 55 23.4	+0.3
LVIA				*d*S	Sn	05 55 42.0	+1.9
	comp=N,38nm,0.2s						
SORT	**Sorpetalsperre**	1.51	89	*e*Pg	Pg	05 55 22.5	-1.3
SORT				*e*Sg	Sg	05 55 40.6	-2.9
	comp=N,31nm,0.3s						
BAIF	**Baives**	1.55	214	*e*Pn	Pn	05 55 23.4	+1.4
BAIF				*e*Sn	Sn	05 55 42.7	+0.7
	comp=N,21nm,0.3s						
WLF	**Walferdange**	1.73	167	*d*P	Pg	05 55 27.5	-0.4
WLF				*d*S	Sg	05 55 49.8	-0.6
	comp=N,16nm,0.3s						
WLF	**Walferdange**	1.73	167	Pg	Pg	05 55 27.4	-0.5
WLF	**Walferdange**	1.73	167	Sn	Sb	05 55 49.6	+1.6
WLF	**Walferdange**	1.73	167	*e*Sg	Sb	05 55 49.6	+1.6
	SNR=4.5						
KASTN	**Kahler Asten**	1.80	94	*e*Pg	Pg	05 55 29.9	+0.6
	SNR=3.2						
KASTN				*e*Sg	Sg	05 55 52.0	-0.6
	SNR=5.6						
ABH	**Alteburg**	1.94	138	Pn	Pb	05 55 29.0	-1.0
TNS	**Taunus Mts**	2.15	120	*e*Sg	Sg	05 56 03.5	-0.4
	SNR=2.7						
MENF	**Mencas**	2.29	251	Sn	Sn	05 56 01.4	+1.2
MENF	**Mencas**	2.29	251	Pn	Pn	05 55 34.6	+2.4
SAVF	**Savonnieres en**	2.75	186	*e*Pn	Pn	05 55 39.6	+1.1
SAVF	**Savonnieres en**	2.75	186	*e*Pg	Pg	05 55 47.7	+0.2
	baz=6.4						
SAVF				*e*Sn	Sn	05 56 11.4	-0.2
SAVF				*e*Sg	Sg	05 56 23.3	+0.2
	comp=N,7.1nm,0.2s						
PAGF	**Fort de Pagny**	2.80	178	*e*Pn	Pn	05 55 40.2	+1.0
PAGF				*e*Sn	Sn	05 56 12.5	-0.3
	comp=N,4.7nm,0.3s						
MEZF	**Maizieres J'vi**	2.87	187	*e*Pn	Pn	05 55 41.2	+1.0
MEZF	**Maizieres J'vi**	2.87	187	*e*Pg	Pg	05 55 49.8	+0.1
	baz=6.1						
MEZF				*e*Sn	Sn	05 56 14.3	-0.2
MEZF				*e*Sg	Sg	05 56 27.0	+0.1
	comp=N,7.4nm,0.2s						
CDF	**Champ du Feu**	3.14	159	*e*Pn	Pn	05 55 45.0	+1.0
CDF	**Champ du Feu**	3.14	159	*e*Pg	Pg	05 55 54.9	-0.1
CDF				*e*Sn	Sn	05 56 20.7	-0.7
CDF				*e*Sg	Sg	05 56 35.6	-0.1
SFTF	**Sexfontaines**	3.17	186	*e*Pn	Pn	05 55 45.2	+1.0
SFTF	**Sexfontaines**	3.17	186	*e*Pg	Pg	05 55 55.5	+0.1
SFTF				*e*Sn	Sn	05 56 21.1	-0.8
SFTF				*e*Sg	Sg	05 56 36.3	-0.1
	comp=N,10nm,0.2s						
HAU	**Haudompre**	3.39	171	*e*Pn	Pn	05 55 48.4	+1.1
HAU	**Haudompre**	3.39	171	*e*Pg	Pg	05 55 59.4	-0.2
HAU				*e*Sn	Sn	05 56 27.0	-0.3
HAU				*e*Sg	Sg	05 56 42.3	-1.2
	comp=N,11nm,0.3s						
HINF	**Hinteralfeld**	3.64	166	*e*Pn	Pn	05 55 51.9	+1.2
HINF	**Hinteralfeld**	3.64	166	*e*Pg	Pg	05 56 04.1	-0.3
HINF				*e*Sn	Sn	05 56 32.7	-0.8
HINF				*e*Sg	Sg	05 56 49.6	-1.9
	comp=N,2.5nm,0.2s						
LOR	**Lormes**	4.23	196	*e*Pn	Pn	05 55 59.8	+0.9
	baz=15						
LOR	**Lormes**	4.23	196	*e*Pg	Pg	05 56 15.1	-0.7
	baz=15						
LOR				*e*Sn	Sn	05 56 46.7	-1.5
LOR				*e*Sg	Sg	05 57 09.4	-1.2
	comp=N,4.4nm,0.3s,baz=14						
SSF	**Saint Saulge**	4.50	198	*e*Pn	Pn	05 56 03.1	+0.6
SSF	**Saint Saulge**	4.50	198	*e*Pg	Pg	05 56 20.0	-0.9
SSF				*e*Sn	Sn	05 56 53.0	-1.7
SSF				*e*Sg	Sg	05 57 18.0	-1.1
	comp=N,3.2nm,0.3s						
LDF	**La Druitiere**	4.59	235	*e*Pn	Pn	05 56 04.8	+1.0
LDF				*e*Sn	Sn	05 56 55.2	-1.7
LDF				*e*Sg	Sg	05 57 20.8	-1.1
	comp=N,1.0nm,0.2s						
FLN	**La Foliniere**	4.67	239	*e*Pn	Pn	05 56 05.7	+0.8
FLN				*e*Sn	Sn	05 56 57.3	-1.7
FLN				*e*Sg	Sg	05 57 23.4	-1.3
	comp=N,2.6nm,0.3s						
AVF	**Avril sur Loir**	4.79	198	*e*Pn	Pn	05 56 07.4	+0.9
AVF	**Avril sur Loir**	4.79	198	*e*Pg	Pg	05 56 25.3	-1.1
AVF				*e*Sg	Sg	05 57 26.9	-1.5
	comp=N,0.5nm,0.2s						
SMF	**Signal de Mont**	4.84	194	*e*Pn	Pn	05 56 08.0	+0.7
SMF				*e*Sn	Sn	05 57 01.2	-2.0
SMF				*e*Sg	Sg	05 57 28.7	-1.4
	comp=N,1.9nm,0.2s						
GRR	**Gorron**	5.10	237	*e*Pn	Pn	05 56 11.7	+0.9
GRR				*e*Sn	Sn	05 57 06.3	-3.1
	comp=N,2.9nm,0.2s						
BGF	**Bois d'Agland**	5.12	201	*e*Pn	Pn	05 56 11.8	+0.7
BGF				*e*Sn	Sn	05 57 06.9	-3.1
BGF				*e*Sg	Sg	05 57 37.1	-1.9
	comp=N,7.8nm,0.4s						
TCF	**Toulx Ste Croi**	5.53	205	*e*Pn	Pn	05 56 18.2	+1.5
TCF	**Toulx Ste Croi**	5.53	205	*e*Pg	Pg	05 56 38.8	-1.7
MFF	**Saint Martin d**	6.05	221	*e*Pn	Pn	05 56 24.5	+0.6
MFF				*e*Sn	Sn	05 57 30.4	-2.6
	comp=N,1.1nm,0.2s						
SGMF	**Saint Gilles**	6.10	243	*e*Pn	Pn	05 56 25.2	+0.7
SGMF				*e*Sn	Sn	05 57 30.7	-3.4
	comp=N,0.5nm,0.2s						
ROSF	**Rostrenen**	6.46	246	*e*Pn	Pn	05 56 30.0	+0.6
ROSF				*e*Sn	Sn	05 57 39.9	-3.0
	comp=N,0.8nm,0.2s						
QUIF	**Quistinic**	6.63	242	*e*Pn	Pn	05 56 32.3	+0.6
QUIF				*e*Sn	Sn	05 57 43.8	-3.2
	comp=N,0.6nm,0.3s						

IDC ***30*** *05:58:41.6±1.6, 8°.37S×125°.66E, h0^{km}, mb3.4/2, mb1 3.7/6, mb1mx3.4/46, mbtmp3.6/6, ML3.5/4, MS3.2/1, Ms1 3.1/1, ms1mx2.4/24, Error ellipse: s-maj=48.2km s-min=24.3km az=80.0*
ISC 30 05:58:46.3±1.1**, 8°.59S**±0°.09×**125°.67E**±0°.10**, h35**^{km}**, n7, σ1^{s}.58**/10**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	2.55	231	Pn	Pn	05 59 26.3	+1.1
	9.9nm,0.3s,baz=135,slow=4.3,SNR=2.7						
BATI				Sn	Sn	05 59 54.8	-0.2
	6.6nm,0.3s,baz=358,slow=24,SNR=1.6						
FITZ	**Fitzroy Crossi**	9.45	180	Pn	Pn	06 01 01.5	+1.5
	0.4nm,0.3s,baz=2.0,slow=11,SNR=20						
FITZ				Sn	Sn	06 02 42.5	-2.6
	0.3nm,0.3s,baz=245,slow=7.1,SNR=3.1						
WRA	**Warramunga Arr**	14.06	144	Pn	Pn	06 02 04.6	+1.4
	0.2nm,0.3s,baz=321,slow=13,SNR=15						
WRA				Sn	Sn	06 04 37.6	-0.5
	0.1nm,0.3s,baz=318,slow=25,SNR=2.7						
ASAR	**Alice Springs**	16.94	153	P	P	06 02 43.5	+1.0
	0.1nm,0.3s,baz=332,slow=12,SNR=4.2						
ASAR				S	Sn	06 05 46.4	-1.7
	baz=312,slow=20,SNR=2.6						
STKA	**Stephens Creek**	27.50	150	LR	LR	06 17 58.4	
	comp=Z,43nm,19.0s,baz=19,slow=42						
SONM	**Songino Array**	58.72	345	P	P	06 08 40.2	-0.4
	0.3nm,0.7s,baz=170,slow=6.2,SNR=1.9						
MKAR	**Makanchi Array**	67.29	329	P	P	06 09 36.5	-1.1
	0.4nm,0.7s,baz=127,slow=7.8,SNR=3.6						

JMA ***30*** *06:15:30.6±0.1, 24°.34N×122°.34E, h58^{km}±2^{km}, M1.8*
TAP ***30*** *06:15:31.1, 24°.48N×122°.29E, h45^{km}±1^{km}, ML2.6, B*
ISC 30 06:15:31.2±1.3**, 24°.48N**±0°.04×**122°.33E**±0°.02**, h47**^{km}±12^{km}**, n51, σ0^{s}.50**/88**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWC	**Suao**	0.46	286	*i* P	Pn	06 15 41.9	+0.2
	baz=287						
TWC				*i* S	Sn	06 15 49.1	-0.2
	baz=287						
EWUT	**Wuta**	0.51	266	*e*P	Pn	06 15 42.7	+0.4
	baz=265						
EWUT				S	Sn	06 15 50.2	-0.1
	baz=265						
EGS		0.51	315	*e*S	Sn	06 15 50.7	+0.2
	baz=318						
ENA	**Nanau**	0.54	264	P	Pn	06 15 42.9	+0.2
	baz=263						
ENA				S	Sn	06 15 50.6	-0.5
	baz=263						
JYNG	**Yonagunijimaku**	0.56	93	P	Pn	06 15 43.2	+0.2
JYNG				S	Sn	06 15 51.9	+0.5
EHP	**Heping Village**	0.57	253	*e*P	Pn	06 15 42.7	-0.3
	baz=250						
EHP				*e*S	Sn	06 15 52.2	+0.6
	baz=250						
NDS	**Dongshan**	0.58	285	P	Pn	06 15 43.3	+0.1
	baz=285						
NDS				S	Sn	06 15 52.6	+0.6
	baz=285						
NTC	**Toucheng**	0.59	309	*i* P	Pn	06 15 41.8	-1.6
	baz=311						
NTC				*e*S	Sn	06 15 51.7	-0.4
	baz=311						
ILA	**Ilan**	0.60	298	*e*P	Pn	06 15 43.3	-0.2
	baz=299						
ILA				S	Sn	06 15 52.0	-0.4
	baz=299						
TWB1	**Santiao Chiao**	0.61	329	*e*P	Pn	06 15 43.6	0.0
	baz=332						
TWB1				S	Sn	06 15 52.7	+0.1
	baz=332						
YOJ	**Yonaguni jima**	0.62	92	*e*P	Pn	06 15 43.7	0.0
	baz=91						
YOJ				*e*S	Sn	06 15 53.4	+0.6
	baz=91						
YOJ	**Yonaguni jima**	0.62	92	P	Pn	06 15 43.8	0.0
YOJ				*e*S	Sn	06 15 53.1	+0.3
TWE	**Neicheng**	0.65	292	P	Pn	06 15 44.1	-0.1
	baz=292						
TWE				S	Sn	06 15 53.2	-0.3
	baz=292						
TIPB	**Shuangxi**	0.67	317	P	Pn	06 15 44.3	-0.2
	baz=318						
TIPB				S	Sn	06 15 54.2	+0.2
	baz=318						
ETL	**Fush Village**	0.72	244	*e*S	Sn	06 15 54.9	-0.3
	baz=242						
NACB	**Ninganchiao**	0.74	246	P	Pn	06 15 45.1	-0.3
	baz=244						
NACB				S	Sn	06 15 55.4	-0.2
	baz=244						
NDT	**Datong Townshi**	0.76	279	P	Pn	06 15 46.2	+0.7
	baz=279						
NWF	**Wu-fen Shan**	0.77	320	*i* P	Pn	06 15 45.9	+0.1
	baz=321						
NWF				S	Sn	06 15 56.7	+0.2
	baz=321						
TWD	**Chiawan**	0.78	239	*e*P	Pn	06 15 46.3	+0.4
	baz=237						
TWD				S	Sn	06 15 56.2	-0.4
	baz=237						
NWLT	**Wulai**	0.81	291	*e*P	Pn	06 15 47.4	+1.1
	baz=292						
NWLT				*e*S	Sn	06 15 57.5	+0.1
	baz=292						
ETLH	**Xiulin Townshi**	0.82	251	*e*P	Pn	06 15 46.1	-0.4
	baz=249						
ETLH				S	Sn	06 15 57.9	+0.2
	baz=249						
HWA	**Hwalien**	0.83	233	*e*P	Pn	06 15 46.8	+0.2
	baz=230						
HWA				*e*S	Sn	06 15 57.5	-0.3
	baz=230						
TWA	**Mucha**	0.84	306	P	Pn	06 15 47.2	+0.5
	baz=307						
TWA				*e*S	Sn	06 15 57.7	-0.4
	baz=307						
NNSB	**Datong**	0.87	267	P	Pn	06 15 47.0	-0.2
	baz=266						
NNSB				*e*S	Sn	06 15 57.9	-0.9
	baz=266						
NNS	**Nan Shan**	0.88	267	*e*P	Pn	06 15 47.4	+0.1
	baz=266						
NNS				*e*S	Sn	06 15 58.5	-0.5
	baz=266						
YHNB	**Yeheng**	0.89	282	P	Pn	06 15 48.0	+0.5
	baz=282						
YHNB				*e*S	Sn	06 15 59.7	+0.3
	baz=282						
NSK	**Sanguang**	0.91	283	P	Pn	06 15 48.1	+0.4
	baz=282						
NSK				S	Sn	06 15 59.6	-0.2
	baz=282						
YM01	**YM01**	0.96	314	*e*S	Sn	06 16 01.2	+0.3
	baz=315						
FUSS	**Fushou**	1.02	257	*e*P	Pn	06 15 49.7	+0.4
	baz=256						
FUSS				*e*S	Sn	06 16 02.9	+0.2
	baz=256						
WHF	**Hehuan Shan**	1.03	251	P	Pn	06 15 49.4	-0.2
	baz=249						
WHF				S	Sn	06 16 02.6	-0.6
	baz=249						
TWY	**Chenhua**	1.03	320	*e*S	Sn	06 16 03.2	+0.6
	baz=321						
ESL	**Shilin**	1.06	231	*e*S	Sn	06 16 02.7	-0.6
	baz=229						
TWT	**Tachien**	1.08	258	P	Pn	06 15 50.5	+0.4
	baz=257						
TWT				S	Sn	06 16 04.5	+0.5
	baz=257						
TDCB	**Techi**	1.09	258	P	Pn	06 15 50.8	+0.5
	baz=257						
TDCB				S	Sn	06 16 04.5	+0.1
	baz=257						
CHGB	**Renai**	1.14	249	*e*P	Pn	06 15 51.2	+0.3
	baz=247						
CHGB				*e*S	Sn	06 16 05.1	-0.4
	baz=247						
NCU	**National Centr**	1.15	295	*e*P	Pn	06 15 50.6	-0.3
	baz=295						
EGFH	**Guangfu**	1.16	226	*e*P	Pn	06 15 51.2	+0.2

	baz=224						
EGFH				*e*S	**Sn**	**06 16 05.9**	**+0.2**
	baz=224						
LIOB	**Emei**	**1.21**	**278**	*e*P	**Pn**	**06 15 51.9**	**+0.2**
	baz=277						
LIOB				*e*S	**Sn**	**06 16 06.9**	**-0.1**
	baz=277						
NSTT	**Nanjuang**	**1.22**	**277**	*e*P	**Pn**	**06 15 51.9**	**+0.1**
	baz=277						
NSTT				S	**Sn**	**06 16 06.2**	**-1.1**
	baz=277						
WHP	**Taichung City**	**1.28**	**261**	*e*P	**Pn**	**06 15 54.0**	**+1.2**
	baz=260						
WHP				*e*S	**Sn**	**06 16 08.8**	**0.0**
	baz=260						
IRIF	**Iriomote-Funau**	**1.28**	**96**	P	**Pn**	**06 15 52.3**	**-0.3**
IRIF				S	**Sn**	**06 16 08.6**	**-0.1**
HGSD	**Ruisui**	**1.29**	**220**	*e*P	**Pn**	**06 15 53.8**	**+1.0**
	baz=218						
HGSD				*e*S	**Sn**	**06 16 07.6**	**-1.3**
	baz=218						
SSLB	**Suanglung**	**1.44**	**242**	*e*P	**Pn**	**06 15 55.7**	**+0.9**
	baz=240						
YULB	**Yu-li**	**1.44**	**221**	*e*P	**Pn**	**06 15 55.3**	**+0.5**
	baz=219						
EYUL	**Yuli**	**1.46**	**220**	*e*S	**Sn**	**06 16 13.5**	**+0.4**
	baz=218						
JKRS	**Kuro-shima**	**1.55**	**99**	P	**Pn**	**06 15 56.4**	**+0.1**
YUS	**Yu-Shan**	**1.60**	**232**	*e*P	**Pn**	**06 15 57.6**	**+0.1**
	baz=230						
YUS				*e*S	**Sn**	**06 16 16.3**	**-1.0**
	baz=230						
JIJ	**Ishigaki jima**	**1.65**	**94**	P	**Pn**	**06 15 57.4**	**-0.3**
JIJ				*e*S	**Sn**	**06 16 17.7**	**-0.1**
ALS	**Alishan**	**1.70**	**236**	*e*P	**Pn**	**06 15 59.0**	**+0.4**
	baz=234						
EDH	**Donghe**	**1.77**	**212**	*e*P	**Pn**	**06 15 59.1**	**-0.3**
	baz=211						
JISG	**Ishigakijimahi**	**1.80**	**86**	P	**Pn**	**06 15 59.2**	**-0.6**

NOU 30 06:34:34.5, 16°.95S×167°.45E, h0^{km}, MLv3.7/6, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**1.04**	**138**	P	Pg	06 34 54.2	-0.3
RTV	**Rentapao**	**1.25**	**132**	P	Pg	06 34 57.9	-0.6
SANVU	**Saraoutou**	**1.51**	**351**	P	Pn	06 35 02.5	-0.4

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*SJA **30** 06:49:13.0, 30°.67S×71°.57W, h10^{km}, ML4.3*
*GUC **30** 06:49:15.1±0.7, 30°.68S×71°.36W, h53^{km}±3^{km}, ML3.6*
ISC 30 06:49:15.2±1.5**, 30°.65S**±0°.04×**71°.55W**±0°.08**, h54^{km}**±11^{km}**, n45, σ0^{s}.98**/55**, 3C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO06	**Fray Jorge**	**0.07**	**248**	⇑*i*P	**Pn**	**06 49 23.7**	**+0.3**
CO06				*i* S	**Sn**	**06 49 29.9**	**+0.6**
CO06				IAML		06 49 32.1	
	comp=N,5µm,0.2s						
CO05	**La Serena**	**0.77**	**21**	⇓*i*P	**Pn**	**06 49 30.3**	**+0.2**
CO05				*i* S	**Sn**	**06 49 40.8**	**-0.1**
CO05				IAML		06 49 42.3	
	comp=E,946nm,0.1s						
GO04	**Tololo Observa**	**0.81**	**54**	⇓*i*P	**Pn**	**06 49 29.6**	**-1.1**
GO04				*i* S	**Sn**	**06 49 39.9**	**-2.1**
GO04	**Tololo Observa**	**0.81**	**54**	*i* P	**Pn**	**06 49 29.0**	**-1.7**
LCO	**Las Campanas**	**1.79**	**25**	*e*P	**Pn**	**06 49 44.4**	**+0.5**
LCO				*i* S	**Sn**	**06 50 06.4**	**+0.7**
LCO	**Las Campanas**	**1.79**	**25**	*i* P	**Pn**	**06 49 44.0**	**0.0**
AROD	**Rodeo**	**1.86**	**76**	*i* P	**Pn**	**06 49 45.0**	**+0.1**
VA06	**Catapilco**	**1.92**	**174**	⇑*i*P	**Pn**	**06 49 45.3**	**-0.2**
VA06				*i* S	**Sn**	**06 50 08.9**	**+0.4**
VA06				IAML		06 50 15.4	
	comp=E,704nm,0.4s						
ACCO	**Cerro Coronel**	**2.15**	**89**	*i* P	**Pn**	**06 49 50.0**	**+1.1**
ACDV	**Cuesta del Vie**	**2.16**	**78**	*i* P	**Pn**	**06 49 51.0**	**+2.2**
RTLS	**Leoncito**	**2.25**	**121**	*i* P	**Pn**	**06 49 51.0**	**+0.8**
VA03	**San Esteban**	**2.28**	**158**	⇑*i*P	**Pn**	**06 49 50.3**	**-0.2**
VA03				*i* S	**Sn**	**06 50 16.7**	**-0.7**
VA03				IAML		06 50 19.9	
	comp=E,657nm,0.3s						
VA03	**San Esteban**	**2.28**	**158**	*i* P	**Pn**	**06 49 50.0**	**-0.5**
ROCH	**El Roble**	**2.37**	**169**	*e*P	**Pn**	**06 49 51.6**	**-0.2**
ROCH				*e*P	**Pn**	**06 49 51.7**	**0.0**
ROCH				*i* S	**Sn**	**06 50 19.6**	**-0.2**
ROCH				*i* S	**Sn**	**06 50 19.7**	**0.0**
ROCH				IAML		06 50 24.8	
	comp=N,449nm,0.2s						
ROCH				IAML		06 50 25.9	
	comp=E,395nm,0.4s						
ROC1	**El Roble**	**2.37**	**169**	*i* P	**Pn**	**06 49 51.0**	**-0.8**
VA01	**Torpederas**	**2.37**	**182**	IAML		06 50 27.8	
	comp=E,250nm,0.5s						
AUSP	**Uspallata**	**2.43**	**131**	*i* P	**Pn**	**06 49 53.0**	**+0.3**
AC04	**Llanos de Chal**	**2.47**	**10**	*i* P	**Pn**	**06 49 54.0**	**+1.0**
PEL	**Peldehue**	**2.60**	**164**	*e*P	**Pn**	**06 49 54.9**	**+0.1**
PEL				*i* S	**Sn**	**06 50 25.1**	**-0.1**
PEL				IAML		06 50 37.3	
	comp=N,310nm,0.5s						
PEL	**Peldehue**	**2.60**	**164**	*i* P	**Pn**	**06 49 56.0**	**+1.2**
ZON	**Zonda**	**2.62**	**111**	*i* P	**Pn**	**06 49 56.0**	**+0.8**
MT02	**Curacav**	**2.63**	**172**	*e*P	**Pn**	**06 49 54.6**	**-0.5**
MT02				IAML		06 50 32.2	
	comp=E,193nm,0.3s						
MT02	**Curacav**	**2.63**	**172**	*i* P	**Pn**	**06 49 55.0**	**-0.2**
MT05	**Renca**	**2.83**	**166**	*e*P	**Pn**	**06 49 58.2**	**+0.3**
MT05				IAML		06 50 38.9	
	comp=E,502nm,0.3s						
MT05	**Renca**	**2.83**	**166**	*i* P	**Pn**	**06 49 59.0**	**+1.1**
RTCV	**Cerro Valdivia**	**2.85**	**116**	*i* P	**Pn**	**06 49 59.0**	**+0.7**
FCH	**Farellones**	**2.88**	**158**	*e*P	**Pn**	**06 49 59.2**	**+0.3**
FCH				*i* S	**Sn**	**06 50 32.3**	**-0.2**
FCH				IAML		06 50 43.1	
	comp=E,187nm,0.2s						
VA05	**Santo Domingo**	**3.00**	**181**	IAML		06 50 55.0	
	comp=E,286nm,0.3s						
ASAL	**Salagasta**	**3.02**	**131**	*i* P	**Pn**	**06 50 02.0**	**+1.4**
ARCO	**CERRO ARCO**	**3.13**	**135**	*i* P	**Pn**	**06 50 04.0**	**+1.9**
MT09	**Talagante**	**3.16**	**171**	*e*P	**Pn**	**06 50 02.9**	**+0.3**
MT09				*i* S	**Sn**	**06 50 38.0**	**-1.0**
MT09				IAML		06 50 47.4	
	comp=E,219nm,0.3s						
MT01	**Popeta**	**3.22**	**176**	*e*P	**Pn**	**06 50 03.3**	**0.0**
MT01				IAML		06 50 52.2	
	comp=N,138nm,0.3s						
GO03	**Copiap**	**3.25**	**21**	*e*P	**Pn**	**06 50 04.9**	**+1.1**
GO03				IAML		06 50 57.2	
	comp=N,128nm,0.3s						
AAGR	**Agrelo**	**3.36**	**137**	*i* P	**Pn**	**06 50 07.0**	**+1.7**
LMEL	**Las Melosas**	**3.39**	**161**	IAML		06 50 56.8	
	comp=N,246nm,0.2s						
BO04	**La Punta**	**3.43**	**167**	*e*P	**Pn**	**06 50 06.2**	**+0.1**
BO04				*i* S	**Sn**	**06 50 44.7**	**-0.9**
BO04				IAML		06 50 51.8	
	comp=N,132nm,0.4s						
VCA	**Vinchina**	**3.48**	**58**	*i* P	**Pn**	**06 50 10.0**	**+3.0**
AVFE	**Valle Fertil**	**3.53**	**91**	*i* P	**Pn**	**06 50 07.0**	**-0.6**
ACLC	**CERRO LA CRUZ**	**4.17**	**74**	*i* P	**Pn**	**06 50 17.0**	**+0.5**
APLL	**PUNTA DE LOS L**	**4.34**	**88**	*i* P	**Pn**	**06 50 18.0**	**-0.7**
AC02	**Maricunga**	**4.35**	**30**	*i* P	**Pn**	**06 50 20.0**	**+0.7**
RFA	**San Rafael**	**4.87**	**148**	*i* P	**Pn**	**06 50 25.0**	**-0.9**
CYA	**Choya**	**5.47**	**68**	*i* P	**Pn**	**06 50 34.0**	**-0.2**
FSA	**Cafayete**	**6.67**	**49**	*i* P	**Pn**	**06 50 52.0**	**+1.2**
LC01	**Cunco**	**8.24**	**182**	*i* P	**Pn**	**06 51 13.0**	**+1.0**

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*IDC **30** 06:59:47.8±4.9, 5°.41S×152°.91E, h49^{km}±42^{km}, mb3.7/9, mb1 3.9/10, mb1mx3.7/40, mbtmp4.0/10, ML1.9/1, MS3.0/3, Ms1 3.0/3, ms1mx2.7/38, Error ellipse: s-maj=54.4km s-min=25.6km az=122.0*
ISC 30 06:59:46.4±1.6**, 5°.4S**±0°.3×**153°.0E**±0°.3**, h37^{km}, n13, σ0^{s}.92**/13**, mb3.8**/9**, MS2.9**/3**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.03**	**235**	P	**Pn**	**07 01 28.8**	**+1.9**
	1.2nm,0.3s,baz=35,slow=8.5,SNR=5.7						
PMG				S	**Sn**	**07 02 44.2**	**-1.5**
	1.3nm,0.3s,baz=11,slow=5.2,SNR=2.2						
DZM	**Mont Dzumac**	**21.11**	**143**	LR	LR	07 11 34.0	
	comp=Z,64nm,20.6s,baz=55,slow=34						
WRA	**Warramunga Arr**	**23.21**	**230**	P	**P**	**07 04 49.7**	**-0.7**
	2.4nm,1.0s,baz=54,slow=9.9,SNR=9.5						
WRA				LR	LR	07 15 36.0	
	comp=Z,39nm,18.4s,baz=45,slow=41						
ASAR	**Alice Springs**	**25.86**	**223**	P	**P**	**07 05 14.2**	**-0.7**
	1.3nm,0.8s,baz=62,slow=8.7,SNR=12						
FITZ	**Fitzroy Crossi**	**29.55**	**242**	P	**P**	**07 05 47.9**	**0.0**
	1.4nm,0.7s,baz=66,slow=4.0,SNR=1.7						
MJAR	**Matsushiro Arr**	**43.92**	**343**	LR	LR	07 23 45.2	
	comp=Z,16nm,21.3s,baz=285,slow=33						
CMAR	**Chiang Mai Arr**	**58.28**	**295**	P	**P**	**07 09 37.5**	**-0.4**
	0.7nm,0.3s,baz=119,slow=5.6,SNR=4.8						
PETK	**Petropavlovsk-**	**58.39**	**3**	P	**P**	**07 09 38.5**	**+0.6**
	5.1nm,1.0s,baz=182,slow=8.9,SNR=4.2						
MKAR	**Makanchi Array**	**80.87**	**319**	P	**P**	**07 11 57.3**	**+0.6**
	0.5nm,0.5s,baz=103,slow=5.9,SNR=11						
ILAR	**Eielson Array**	**82.61**	**22**	P	**P**	**07 12 05.0**	**-0.5**
	0.5nm,0.6s,baz=247,slow=5.6,SNR=7.2						
KURBB	**Kurchatov Arra**	**84.35**	**322**	P	**P**	**07 12 14.7**	**0.0**
	0.6nm,0.7s,baz=108,slow=4.3,SNR=2.3						
BVAR	**Borovoye Array**	**89.80**	**323**	P	**P**	**07 12 40.3**	**-0.8**
	1.7nm,0.7s,baz=193,slow=6.1,SNR=7.8						
TORD	**Torodi Ar. Bea**	**150.65**	**287**	PKPbc	**PKiKP**	**07 19 36.3**	**-0.1**
	2.0nm,0.6s,baz=63,slow=2.4,SNR=10						
TORD				PKPab	**pPKPdf**	**07 19 41.0**	**-0.1**
	2.8nm,0.8s,baz=68,slow=2.9,SNR=14						

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*IDC **30** 07:03:04.7±2.2, 20°.73S×177°.79W, h414^{km}±21^{km}, mb3.5/11, mb1 3.7/14, mb1mx3.6/28, mbtmp4.3/14, Error ellipse: s-maj=21.9km s-min=16.6km az=115.0*
*NEIC **30** 07:03:05.5±1.2, 20°.6S±0°.1×177°.8W±0°.1, h415^{km}±8^{km}, mb4.1/13, Error ellipse: s-maj=21.9km s-min=16.9km az=156.0*
ISC 30 07:03:03.8±0.5**, 20°.81S**±0°.09×**177°.80W**±0°.08**, h400^{km}, n40, σ1^{s}.81**/41**, mb4.0**/17**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.97**	**307**	P	**Pn**	**07 04 27.0**	**+1.3**
	13nm,0.3s,baz=141,slow=6.1,SNR=61						
MSVF	**Nonsavu**	**4.97**	**307**	P	**Pn**	**07 04 26.9**	**+1.1**
NIUE	**Niue**	**7.61**	**78**	P	**Pn**	**07 04 55.3**	**+0.9**
PINNC	**Pines Island,**	**13.83**	**260**	P	**P**	**07 06 07.0**	**+3.3**
DZM	**Mont Dzumac**	**14.72**	**262**	P	**P**	**07 06 15.5**	**+2.0**
	0.7nm,0.3s,baz=113,slow=16,SNR=5.7						
URZ	**Urewera**	**17.94**	**193**	P	**P**	**07 06 47.7**	**+0.2**
	4.0nm,0.3s,baz=302,slow=23,SNR=20						
URZ				S	**S**	**07 09 47.3**	**-5.3**
	0.5nm,0.3s,baz=127,slow=20,SNR=1.7						
CTAO	**Charters Tower**	**33.65**	**265**	P	**P**	**07 09 10.0**	**+0.8**
CTAO				IAmb	IAmb	07 09 10.8	
	comp=Z,6.6nm,0.8s						
STKA	**Stephens Creek**	**37.82**	**245**	P	**P**	**07 09 44.0**	**-0.1**
	comp=Z,0.8nm,0.4s,baz=96,slow=11,SNR=3.8						
STKA	**Stephens Creek**	**37.82**	**245**	IAmb	IAmb	07 09 44.5	
	comp=Z,1.6nm,1.3s						
BBOO	**Buckleboo**	**42.58**	**244**	P	**P**	**07 10 23.4**	**+0.8**
BBOO				IAmb	IAmb	07 10 38.4	
	comp=Z,16nm,1.2s						
AS31	**Alice Springs**	**44.63**	**257**	P	**P**	**07 10 39.1**	**+0.2**
AS31				IAmb	IAmb	07 10 40.0	
	comp=Z,2.7nm,0.9s						
ASAR	**Alice Springs**	**44.63**	**257**	P	**P**	**07 10 39.0**	**+0.1**
	comp=Z,6.4nm,0.7s,baz=92,slow=8.0,SNR=65						
ASAR				S	**S**	**07 16 43.3**	**-1.4**
	comp=Z,0.5nm,0.7s,baz=91,slow=16,SNR=6.4						
WB2	**Warramunga Arr**	**44.73**	**262**	P	**P**	**07 10 39.2**	**-0.5**
WB2				IAmb	IAmb	07 10 39.9	
	comp=Z,6.0nm,0.5s						
WRAB	**Tennant Creek**	**44.73**	**262**	P	**P**	**07 10 38.9**	**-0.9**
WRA	**Warramunga Arr**	**44.74**	**262**	P	**P**	**07 10 38.7**	**-1.2**
	comp=Z,2.9nm,0.3s,baz=95,slow=7.5,SNR=171						
WRA				S	**S**	**07 16 41.1**	**-5.2**
	comp=Z,0.5nm,0.8s,baz=105,slow=13,SNR=1.7						
WRA	**Warramunga Arr**	**44.74**	**262**	P	**P**	**07 10 39.5**	**-0.4**
MTN	**Manton Dam**	**49.35**	**271**	P	**P**	**07 11 14.7**	**-0.3**
KNRA	**Kununurra**	**50.83**	**266**	P	**P**	**07 11 25.8**	**-0.1**
KNRA				IAmb	IAmb	07 11 43.3	
	comp=Z,13nm,0.9s						
VNDA	**Vanda**	**57.62**	**185**	P	**P**	**07 12 14.8**	**+1.5**
	comp=Z,0.8nm,0.8s,baz=31,slow=7.8,SNR=2.3						
QSPA	**South Pole Qui**	**69.26**	**180**	P	**P**	**07 13 30.3**	**+1.4**
QSPA				IAmb	IAmb	07 13 30.9	
	comp=Z,2.6nm,0.7s						
MJAR	**Matsushiro Arr**	**70.57**	**324**	P	**P**	**07 13 36.1**	**-0.9**
	comp=Z,2.3nm,0.6s,baz=165,slow=5.5,SNR=3.1						
MJAR	**Matsushiro Arr**	**70.57**	**324**	IAmb	IAmb	07 13 40.6	
	comp=Z,5.8nm,1.5s						
ADK	**Adak**	**72.39**	**1**	P	**P**	**07 13 45.7**	**-1.6**
PETK	**Petropavlovsk-**	**76.62**	**345**	P	**P**	**07 14 10.6**	**-0.8**
	comp=Z,7.6nm,0.8s,baz=128,slow=8.2,SNR=5.2						
USRK	**Ussuriysk Ar.**	**79.33**	**326**	P	**P**	**07 14 26.0**	**-0.3**
	comp=Z,2.3nm,0.7s,baz=110,slow=7.8,SNR=6.3						
TXAR	**Lajitas Array**	**87.07**	**57**	P	**P**	**07 15 05.9**	**0.0**
	comp=Z,0.5nm,0.6s,baz=224,slow=6.3,SNR=7.2						
VNA3	**Neumayer Olymp**	**87.82**	**176**	P	**P**	**07 15 08.5**	**-0.1**
VNA2	**Neumayer--Watz**	**88.26**	**177**	P	**P**	**07 15 10.6**	**-0.1**
ILAR	**Eielson Array**	**88.58**	**13**	P	**P**	**07 15 09.9**	**-2.1**
	comp=Z,0.4nm,0.3s,baz=216,slow=5.3,SNR=11						
PDAR	**Pinedale Array**	**89.06**	**43**	P	**P**	**07 15 13.8**	**-1.2**
	comp=Z,0.3nm,0.5s,baz=224,slow=2.5,SNR=4.9						
CMAR	**Chiang Mai Arr**	**90.39**	**289**	P	**P**	**07 15 22.3**	**+0.8**
	comp=Z,1.3nm,0.3s,baz=127,slow=2.7,SNR=7.7						
BVAR	**Borovoye Array**	**119.44**	**320**	PKP	**PKPdf**	**07 21 04.9**	**-1.4**
	comp=Z,2.0nm,0.5s,baz=48,slow=6.0,SNR=10						
ARCES	**ARCESS Array B**	**129.26**	**350**	PKP	**PKPdf**	**07 21 24.5**	**-0.1**
	comp=Z,2.4nm,0.9s,baz=73,slow=2.0,SNR=9.6						
FINES	**FINESS Array B**	**136.12**	**344**	PKP	**PKPdf**	**07 21 35.2**	**-2.5**
	comp=Z,10nm,1.1s,baz=82,slow=2.9,SNR=5.8						
AKASG	**Malin Array Be**	**143.38**	**331**	PKP	PKPab	07 21 47.9	-1.0
	comp=Z,9.0nm,0.7s,baz=41,slow=4.2,SNR=21						
BRTR	**Keskin Array B**	**147.19**	**312**	PKPbc	**PKPdf**	**07 22 00.3**	**+2.1**
	comp=Z,2.4nm,0.7s,baz=91,slow=4.6,SNR=5.8						
CLL	**Collm**	**148.41**	**347**	*i* PKPbc	**PKPbc**	**07 22 03.0**	**-0.7**
	comp=Z,15nm,0.7s						
CLL				*i* PKPab	**PKiKP**	**07 22 07.5**	**+2.5**
CLL	**Collm**	**148.41**	**347**		**PKPdf**	**07 22 02.8**	**+3.1**
KHC	**Kasperske Hory**	**150.31**	**345**	*e*PKP	**PKPbc**	**07 22 08.0**	**-0.5**
GERES	**GERESS Array B**	**150.55**	**344**	PKPbc	**PKPbc**	**07 22 08.5**	**-0.6**
	comp=Z,0.6nm,0.3s,baz=4.6,slow=6.7,SNR=3.5						

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*IDC **30** 07:12:37.6±3.5, 53°.56N×90°.68E, h0^{km}, mb1 3.3/3, mb1mx3.1/38, mbtmp3.3/3, ML2.9/3, Error ellipse: s-maj=34.1km s-min=23.8km az=34.0*
*NNC **30** 07:12:43.1±1.7, 53°.15N×90°.31E, h0^{km}, mb3.9, mpv3.7, Error ellipse: s-maj=13.7km s-min=11.2km az=96.0, Suspected Mining explosion.*
ISC 30 07:12:39.3±3.9**, 53°.6N**±0°.1×**90°.4E**±0°.2**, h0^{km}, n13, σ2^{s}.68**/13**, 4C-3D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAA0	**Zalesovo Array**	**3.33**	**279**	⇑Pn	**Pb**	**07 13 37.0**	**-2.2**
	2.2nm,0.7s						
ZAA0				⇑Lg	Lg	07 14 30.3	
	19nm,0.9s						
ZALV	**Zalesovo Beam**	**3.33**	**279**	Pn	**Pn**	**07 13 34.4**	**+1.8**
	1.5nm,0.3s,baz=89,slow=14,SNR=16						
ZALV				Sn	**Sn**	**07 14 13.4**	**+0.5**
	1.1nm,0.3s,baz=98,slow=16,SNR=2.2						
ZALV				Lg	Lg	07 14 28.1	
	2.9nm,0.3s,baz=93,slow=28,SNR=8.6						
SEM	**Semipalatinsk**	**7.01**	**247**	Pg	**Sn**	**07 15 46.4**	**+2.5**
	4.7nm,0.1s						
SEM				Lg	Lg	07 16 21.8	
	14nm,0.1s						
ZSN	**Zaisan**	**7.06**	**212**	Pg	**Sn**	**07 15 50.4**	**+5.8**
	4.0nm,0.4s						
ZSN				Lg	Lg	07 16 28.9	
	26nm,0.7s						
KURBB	**Kurchatov Arra**	**7.87**	**253**	Pn	**Pn**	**07 14 35.0**	**+0.1**
	0.3nm,0.3s,baz=66,slow=15,SNR=7.3						
KURBB				Sn	**Sn**	**07 16 05.5**	**+0.8**
	0.0nm,0.3s,baz=69,slow=27,SNR=3.2						
KURBB				Lg	Lg	07 16 53.9	
	0.0nm,0.3s,baz=68,slow=32,SNR=5.9						
KURBB	**Kurchatov Arra**	**7.87**	**253**	⇓Pn	**Pn**	**07 14 35.8**	**+0.8**
	3.4nm,0.5s						
KURBB				⇓Sn	**Sn**	**07 16 05.7**	**+1.0**
	31nm,0.8s						
KURBB				⇑Lg	Lg	07 16 49.7	
	72nm,1.0s						
MK31	**Makanchi Array**	**8.53**	**221**	⇓Pn	**Pn**	**07 14 44.1**	**+0.1**
	2.3nm,0.8s,baz=41,slow=12,SNR=5.6						
MK31				Sn	**Sn**	**07 16 17.7**	**-3.3**
	2.9nm,0.9s,baz=147,slow=30,SNR=3.6						
MK31				⇑Lg	Lg	07 17 04.9	
	12nm,1.0s,baz=55,slow=35,SNR=5.6						
MKAR	**Makanchi Array**	**8.53**	**221**	Pn	**Pn**	**07 14 44.7**	**+0.6**
	0.3nm,0.3s,baz=29,slow=12,SNR=12						
MKAR				Sn	**Sn**	**07 16 17.8**	**-3.2**
	0.2nm,0.3s,baz=59,slow=20,SNR=2.0						
MKAR				Lg	Lg	07 17 12.0	
	0.1nm,0.3s,baz=36,slow=27,SNR=3.5						
KAPS	**Kapalarasan**	**10.95**	**225**	Pg		07 16 52.8	
	2.9nm,1.1s						
KAPS				Lg	Lg	07 18 16.2	
	5.8nm,1.1s						
SONM	**Songino Array**	**11.64**	**113**	Lg	Lg	07 18 31.3	
	baz=300,slow=30,SNR=9.5						
I34MN	**SONGINO INFRAS**	**11.67**	**113**	*i*		08 20 30.0	
	baz=305,slow=319,SNR=3.3						
BLB	**Baldybastay**	**12.28**	**224**	Pg		07 17 16.7	
	2.5nm,0.5s						
BLB				Lg	Lg	07 18 57.2	
	6.3nm,0.9s						
PDGK	**Podgornoye**	**12.52**	**220**	Pg		07 17 24.2	
	2.3nm,1.7s						
PDGK				Lg	Lg	07 19 10.2	
	2.0nm,1.3s						

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*MOS **30** 07:23:05.3±1.0, 44°.77N×146°.96E, h155^{km}, mb4.2/1, Error ellipse: s-maj=15.5km s-min=10.5km az=62.3*
*SKHL **30** 07:23:06.4±0.3, 44°.70N×147°.00E, h147^{km}±5^{km}, mb5.0/6, msha5.4/6*
*JMA **30** 07:23:07.7±0.4, 44°.44N×147°.00E, h149^{km}±4^{km}, M3.8*
*IDC **30** 07:23:08.5±1.9, 44°.82N×146°.74E, h167^{km}±18^{km}, mb3.4/11, mb1 3.7/14, mb1mx3.4/56, mbtmp3.9/14, MS2.9/1, Ms1 2.9/1, ms1mx2.2/41, Error ellipse: s-maj=24.1km s-min=17.0km az=146.0*
ISC 30 07:23:05.7±0.7**, 44°.63N**±0°.05×**147°.09E**±0°.06**, h148^{km}**±6^{km}**, n61, σ1^{s}.33**/78**, mb3.6**/12**, 2C, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**0.81**	**42**	*c* *i*PN	**Pn**	**07 23 29.9**	**+1.1**
KUR				*i* S	**Sn**	**07 23 47.6**	**+1.1**
KUR				pmax	pmax		
	comp=N,17nm,0.2s						
KUR				pmax	pmax		
	comp=Z,152nm,0.2s						
KUR				pmax	pmax		
	comp=E,33nm,0.3s						
KUR				smax	smax		
	comp=N,337nm,0.4s						
KUR				smax	smax		
	comp=E,193nm,0.6s						
KUR	**Kuril'sk**	**0.81**	**42**	*i* P	**Pn**	**07 23 29.9**	**+1.1**
KUR				AMB	AMB	07 23 30.3	
	comp=E,800nm,0.4s						
KUR				*i* S	**Sn**	**07 23 47.5**	**+1.1**
KUR				A	A	07 23 48.0	
	comp=E,440nm,0.3s						
KUR				A	A	07 23 48.0	
	comp=E,340nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.07**	**236**	*e*PN	**Pn**	**07 23 31.3**	**+0.4**
YUK				*e*S	**Sn**	**07 23 50.5**	**+0.5**
YUK				pmax	pmax		
	comp=N,237nm,0.2s						
YUK				pmax	pmax		
	comp=E,273nm,0.2s						
YUK				pmax	pmax		
	comp=Z,1µm,0.2s						
YUK				smax	smax		
	comp=N,748nm,0.3s						
YUK				smax	smax		
	comp=E,2µm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.07**	**236**	*e*P	**Pn**	**07 23 31.3**	**+0.4**
YUK				AMB	AMB	07 23 32.3	
	comp=E,640nm,0.3s						
YUK				*e*S	**Sn**	**07 23 50.2**	**+0.2**
YUK				A	A	07 23 53.0	
	comp=E,2µm,0.6s						
YUK				A	A	07 23 53.0	
	comp=E,3µm,0.6s						
GRPR	**Tuman**	**1.14**	**236**	*e*PN	**Pn**	**07 23 32.0**	**+0.4**
GRPR				*e*S	**Sn**	**07 23 51.0**	**-0.3**
GRPR				pmax	pmax		
	comp=Z,384nm,0.4s						
GRPR				pmax	pmax		
	comp=N,282nm,0.2s						
GRPR				pmax	pmax		
	comp=E,185nm,0.2s						
GRPR				smax	smax		
	comp=N,1µm,0.5s						
GRPR				smax	smax		
	comp=E,1µm,0.3s						
GRPR	**Tuman**	**1.14**	**236**	*e*P	**Pn**	**07 23 32.0**	**+0.4**
GRPR				AMB	AMB	07 23 34.0	
	comp=E,384nm,0.4s						
GRPR				*e*S	**Sn**	**07 23 51.0**	**-0.3**
GRPR				A	A	07 23 53.0	
	comp=E,1µm,0.4s						
GRPR				A	A	07 23 53.0	
	comp=E,1µm,0.4s						
RUSJ	**Misakicho**	**1.43**	**249**	*e*PN	**Pn**	**07 23 34.9**	**+0.6**
RUSJ				*e*S	**Sn**	**07 23 56.6**	**+0.4**
GLVR	**Golovnino**	**1.44**	**232**	*e*PN	**Pn**	**07 23 35.5**	**+1.0**
GLVR				*e*S	**Sn**	**07 23 56.8**	**+0.3**
GLVR				pmax	pmax		
	comp=N,62nm,0.1s						
GLVR				pmax	pmax		
	comp=E,132nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,1µm,0.1s						
GLVR				smax	smax		
	comp=N,2µm,0.2s						
GLVR				smax	smax		
	comp=E,866nm,0.1s						
GLVR	**Golovnino**	**1.44**	**232**	*e*P	**Pn**	**07 23 35.0**	**+0.5**
GLVR				AMB	AMB	07 23 35.0	
	comp=E,690nm,0.4s						
GLVR				*e*S	**Sn**	**07 23 56.0**	**-0.5**
GLVR				A	A	07 23 58.0	
	comp=E,1µm,0.3s						
GLVR				A	A	07 23 58.0	
	comp=E,866nm,0.3s						
JRA	**Rausu**	**1.58**	**245**	P	**Pn**	**07 23 36.7**	**+0.8**
JRA				*e*S	**Sn**	**07 23 59.1**	**+0.1**
NEM2	**Nemuro 2**	**1.60**	**218**	P	**Pn**	**07 23 35.9**	**-0.3**
NEM2				*e*S	**Sn**	**07 23 57.2**	**-2.2**
NMR	**Nemuro--Hokkai**	**1.60**	**218**	⇑*i*PN	**Pn**	**07 23 36.0**	**-0.2**
NMR				*e*S	**Sn**	**07 23 57.4**	**-2.1**
NMR	**Nemuro--Hokkai**	**1.60**	**218**	*i* P	**Pn**	**07 23 36.0**	**-0.2**
NMR				*e*S	**Sn**	**07 23 57.0**	**-2.5**
JNSB	**Nemuroshibetsu**	**1.73**	**241**	P	**Pn**	**07 23 38.6**	**+1.0**
JNK	**Nakash**	**2.00**	**239**	P	**Pn**	**07 23 41.7**	**+0.9**
JKHN	**Kushirohamanak**	**2.09**	**223**	P	**Pn**	**07 23 41.8**	**+0.1**
JKHN				*e*S	**Sn**	**07 24 07.5**	**-1.9**
JTKR	**Abashiri--Toko**	**2.38**	**255**	P	**Pn**	**07 23 45.9**	**+0.7**
JTKR				*e*S	**Sn**	**07 24 15.4**	**-0.2**
JAK	**Akkeshi**	**2.38**	**228**	P	**Pn**	**07 23 45.4**	**+0.1**
JAK				*e*S	**Sn**	**07 24 13.7**	**-2.0**
JAR	**Ashorobuto**	**2.75**	**242**	P	**Pn**	**07 23 50.8**	**+1.0**
JMP	**Maruseppu**	**2.75**	**258**	P	**Pn**	**07 23 50.6**	**+0.7**
JOB	**Onbets**	**2.92**	**235**	P	**Pn**	**07 23 52.9**	**+0.9**
JOB				*e*S	**Sn**	**07 24 27.0**	**-0.8**
JKK2	**Kamakawa 2**	**3.21**	**258**	P	**Pn**	**07 23 56.9**	**+1.2**
JKK2				*e*S	**Sn**	**07 24 35.5**	**+1.1**
JSE	**Soyaes**	**3.23**	**277**	P	**Pn**	**07 23 56.7**	**+0.9**
JKA	**Kamikawa-asahi**	**3.26**	**262**	*e*P	**Pn**	**07 23 57.9**	**+1.6**
ASAJ	**Asahikawa**	**3.27**	**262**	P	**Pn**	**07 23 57.9**	**+1.5**
	comp=E,6.9nm,0.3s,baz=90,slow=14,SNR=48						
ASAJ				S	**Sn**	**07 24 35.1**	**-0.4**
	comp=E,0.9nm,0.3s,baz=155,slow=14,SNR=1.2						
JCH	**Churui**	**3.38**	**235**	P	**Pn**	**07 23 58.0**	**+0.2**
JCH				*e*S	**Sn**	**07 24 35.1**	**-3.0**
JFR	**Furan**	**3.57**	**247**	P	**Pn**	**07 24 01.0**	**+0.7**
JFR				*e*S	**Sn**	**07 24 42.0**	**-0.6**
JWK2	**Keihoku**	**3.75**	**282**	P	**Pn**	**07 24 04.7**	**+2.1**
YSS	**Yuzh-Sakhalins**	**3.82**	**309**	*e*PN	**Pn**	**07 24 02.6**	**-0.9**
YSS				*e*S	**Sn**	**07 24 46.8**	**-1.6**
YSS				pmax	pmax		
	comp=Z,30nm,0.4s						
YSS				smax	smax		
	comp=E,20nm,1.2s						
YSS	**Yuzh-Sakhalins**	**3.82**	**309**	*e*P	**Pn**	**07 24 02.6**	**-0.9**

YSS				AMB	AMB	07 24 04.5	
	comp=E,30nm,0.4s						
YSS				*e*S	Sn	07 24 46.8	-1.6
YSS				A	A	07 24 50.3	
	comp=E,20nm,0.7s						
YSS				A	A	07 24 50.3	
	comp=E,30nm,0.7s						
ERM	Erimo	3.88	229	*i* PN	Pn	07 24 05.4	+1.0
JNBK	Urakawa-nobuka	3.94	235	P	Pn	07 24 04.5	-0.6
JNBK				*e*S	Sn	07 24 47.5	-3.7
JHR	Hokuryu	3.96	259	P	Pn	07 24 07.4	+2.0
JRBN	Rebuntou	4.35	283	P	Pn	07 24 11.6	+1.2
SKR	Severo-Kuril's	8.58	42	*e*PN	Pn	07 25 14.8	+8.1
SKR				pmax	pmax		
	comp=Z,1µm,4.1s						
SKR				pmax	pmax		
	comp=Z,59nm,0.5s						
SKR				MLR	MLR		
	comp=Z,1µm,16.0s						
SKR	Severo-Kuril's	8.58	42	*e*P	Pn	07 25 06.7	0.0
SKR				AMB	AMB	07 25 12.7	
	comp=Z,70nm,0.7s						
SKR				*e*S	Sn	07 26 37.7	-4.3
SKR				A	A	07 27 47.0	
	comp=Z,90nm,0.7s						
SKR				A	A	07 27 47.0	
	comp=Z,60nm,0.7s						
USRK	Ussuriysk Ar.	10.82	273	P	Pn	07 25 35.1	-1.4
	baz=82,slow=14,SNR=4.6						
SEY	Seymchan	18.59	8	P	P	07 27 09.7	-1.5
	comp=Z,0.2nm,0.3s,baz=195,slow=19,SNR=2.2						
SONM	Songino Array	28.10	291	P	P	07 28 43.5	0.0
	comp=Z,0.2nm,0.4s,baz=76,slow=9.8,SNR=2.1						
H11N2	WAKE ISLAND Hy	29.80	140	T	T	08 00 11.5	
	baz=331,slow=75,SNR=40						
H11N1	WAKE ISLAND Hy	29.81	140	T	T	08 00 13.2	
	baz=331,slow=75,SNR=32						
H11N3	WAKE ISLAND Hy	29.82	140	T	T	08 00 12.1	
	baz=331,slow=75,SNR=40						
H11S1	WAKE ISLAND Hy	30.78	142	T	T	08 01 24.9	
	baz=331,slow=76						
H11S3	WAKE ISLAND Hy	30.78	142	T	T	08 01 24.8	
	baz=331,slow=76						
H11S2	WAKE ISLAND Hy	30.80	142	T	T	08 01 22.2	
	baz=331,slow=76						
DGZ	Jazzator, Alta	39.95	299	*i* P	P	07 30 24.4	-1.0
DGZ				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ILAR	Eielson Array	40.80	37	P	P	07 30 32.7	+0.6
	comp=Z,7.4nm,1.2s,baz=279,slow=9.3,SNR=19						
ILAR	Eielson Array	40.80	37	*e*P	P	07 30 32.9	+0.8
ILAR				pmax	pmax		
	comp=Z,7.0nm,1.2s						
INK	Inuvik	45.66	31	P	P	07 31 11.3	+0.4
	comp=Z,4.4nm,0.4s,baz=288,slow=7.0,SNR=68						
YKA	Yellowknife Ar	55.09	34	P	P	07 32 22.9	+1.1
	comp=Z,1.5nm,0.8s,baz=309,slow=5.9,SNR=6.0						
YKA	Yellowknife Ar	55.09	34	P	P	07 32 23.0	+1.1
PSI	Prapat	59.36	240	LR	LR	07 58 32.7	
	comp=Z,9.5nm,20.8s,baz=282,slow=36						
FINES	FINESS Array B	64.07	333	P	P	07 33 21.2	-2.1
	comp=Z,3.7nm,0.8s,baz=35,slow=8.5,SNR=6.7						
FINES	FINESS Array B	64.07	333	*e*P	P	07 33 21.8	-1.5
FINES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WRA	Warramunga Arr	65.31	193	P	P	07 33 32.6	+0.8
	comp=Z,1.0nm,1.1s,baz=8.6,slow=6.8,SNR=5.0						
WRA	Warramunga Arr	65.31	193	*e*P	P	07 33 33.1	+1.3
WRA				pmax	pmax		
	comp=Z,1.0nm,1.1s						
NOA	NORSAR Array B	68.77	339	P	P	07 33 52.1	-1.1
	comp=Z,0.4nm,0.4s,baz=54,slow=7.7,SNR=5.4						
PDAR	Pinedale Array	69.37	50	P	P	07 33 58.9	+1.3
	comp=Z,0.4nm,0.6s,baz=282,slow=1.8,SNR=6.5						
AKASG	Malin Array Be	70.85	323	P	P	07 34 04.5	-1.5
	comp=Z,0.2nm,0.3s,baz=39,slow=5.8,SNR=2.8						
GERES	GERESS Array B	78.37	331	P	P	07 34 49.8	+0.2
	comp=Z,0.9nm,0.4s,baz=25,slow=4.9,SNR=3.0						
TXAR	Lajitas Array	82.19	56	P	P	07 35 12.1	+1.7
	comp=Z,0.4nm,0.6s,baz=302,slow=3.2,SNR=10.0						

NNC 30 07:29:33.1±0.7, 49°.98N×78°.39E, h0km, mb3.5, mpv3.1, 15C-7D, Error ellipse: s-maj=16.4km s-min=2.9km az=88.0, Suspected Mining explosion., Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR07	Kurchatov Arra	0.61	8	⇑P	Pg	07 29 45.4	+0.6
KUR07				⇓S	Sg	07 29 54.1	+1.4
KUR06	Kurchatov Arra	0.63	8	⇑P	Pg	07 29 45.7	+0.5
KUR06				⇓S	Sg	07 29 54.3	+1.0
KUR14	Kurchatov Arra	0.65	12	⇑P	Pg	07 29 45.6	0.0
KUR14				⇓S	Sg	07 29 54.3	+0.4
KUR15	Kurchatov Arra	0.65	10	⇑P	Pg	07 29 45.8	+0.2
KUR15				⇓S	Sg	07 29 54.6	+0.6
KURBB	Kurchatov Arra	0.65	8	⇑P	Pg	07 29 46.0	+0.4
	12nm,0.3s						
KURBB				⇓S	Sg	07 29 54.7	+0.7
	62nm,0.6s						
KUR16	Kurchatov Arra	0.65	6	⇑P	Pg	07 29 46.1	+0.5
KUR16				⇑S	Sg	07 29 55.2	+1.1
KUR17	Kurchatov Arra	0.66	4	⇑P	Pg	07 29 46.3	+0.6
KUR17				⇑S	Sg	07 29 55.6	+1.4
KUR05	Kurchatov Arra	0.67	8	⇑P	Pg	07 29 46.3	+0.3
KUR05				⇑S	Sg	07 29 55.2	+0.5
KUR04	Kurchatov Arra	0.69	8	⇓P	Pg	07 29 46.7	+0.3
KUR04				⇑S	Sg	07 29 55.8	+0.5
MAKZ	Makanchi	3.97	142	⇑Pn	Pn	07 30 36.7	+1.5
	1.3nm,0.7s						
MAKZ				⇑Lg	Lg	07 31 38.7	
	2.6nm,0.5s						
MK31	Makanchi Array	4.11	139	⇑Pn	Pn	07 30 38.3	+1.1
	baz=228,slow=37,SNR=19						
MK31				Pg	Pb	07 30 47.9	+1.5
	0.6nm,0.4s,baz=324,slow=15,SNR=14						
MK31				⇓Lg	Lg	07 31 42.6	
	1.9nm,0.5s,baz=332,slow=36,SNR=16						
KAPS	Kapalarasan	4.74	172	Pg	Pb	07 30 55.7	-1.4
	1.5nm,0.5s						
KAPS				Lg	Lg	07 32 03.3	
	3.6nm,0.4s						
ZSN	Zaisan	4.98	118	Pg	Pn	07 30 50.4	+1.3
	2.8nm,0.3s						
ZSN				Lg	Lg	07 31 54.4	
	2.4nm,0.3s						
BLB	Baldybastay	5.88	179	Pg	Pb	07 31 15.8	-0.8
KTBS	Karatobe	6.38	191	Pg	Pb	07 31 27.2	+2.2
	1.8nm,0.3s						
KTBS				Lg	Lg	07 32 58.0	
	6.2nm,0.4s						

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*IDC **30** 07:33:47.5±3.3, 31°.86S×178°.92W, h0km, mb4.3/3, mb1 4.5/4, mb1mx3.8/29, mbtmp4.3/4, ML3.9/1, Error ellipse: s-maj=68.8km s-min=46.7km az=106.0*

*WEL **30** 07:33:59.1±1.1, 32°S±13°×17°9W±3°2, h110km±55km, M4.3/6, mB4.4/3, ML4.6/11, MLv4.4/6, Mw(mB)3.5/3, Error ellipse: s-maj=0.0km s-min=0.0km az=111.0*

ISC 30 07:33:58.0±0.8**, 32°.31S**±0°.08×**179°.7W**±0°.2**, h35km, n23, σ1ˢ.90**/37**, mb4.2**/3**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	3.40	27	P	Pn	07 34 50.5	+1.9
GLKZ				S	Sn	07 35 29.1	+1.3
WMGZ	Waiomatatini S	5.71	195	P	Pn	07 35 22.3	+2.0
WMGZ				S	Sn	07 36 25.3	+0.7
HAZ	Te Kaha	5.81	200	P	Pn	07 35 24.7	+3.0
HAZ				S	Sn	07 36 31.7	+4.6
PUZ	Puketiti	5.99	196	P	Pn	07 35 25.2	+1.1
PUZ				S	Sn	07 36 30.5	-0.9
RUGZ	Raukumara Rang	6.04	200	P	Pn	07 35 26.9	+2.0
RUGZ				S	Sn	07 36 35.2	+2.4
CNGZ	Carnagh Statio	6.39	195	P	Pn	07 35 31.4	+1.7
MWZ	Matawai	6.42	200	P	Pn	07 35 31.2	+1.1
MWZ				S	Sn	07 36 43.0	+0.8
URZ	Urewera	6.48	203	Pn	Pn	07 35 32.5	+1.6
	2.0nm,0.3s,baz=301,slow=19,SNR=33						
URZ				Sn	Sn	07 36 43.3	-0.2
	1.4nm,0.3s,baz=118,slow=24,SNR=1.4						
URZ	Urewera	6.48	203	P	Pn	07 35 32.8	+2.0
URZ				S	Sn	07 36 43.4	-0.2
RIGZ	Rimuhau	6.71	197	P	Pn	07 35 34.6	+0.5
RIGZ				S	Sn	07 36 47.0	-2.3
MTHZ	Maungataniwha	7.11	202	P	Pn	07 35 40.9	+1.3
MTHZ				S	Sn	07 37 00.6	+1.5
NMHZ	Naumai	7.34	202	P	Pn	07 35 43.6	+0.8
NMHZ				S	Sn	07 37 07.9	+3.0
BKZ	Black Stump Fm	7.51	203	P	Pn	07 35 44.6	-0.5
BKZ				S	Sn	07 37 08.6	-0.3
OTVZ	Oturere	7.80	207	P	Pn	07 35 50.9	+1.7
OTVZ				S	Sn	07 37 18.3	+1.9
KAHZ	Kahuranaki	7.96	199	P	Pn	07 35 50.9	-0.4
KAHZ				S	Sn	07 37 19.6	-0.6
KRHZ	Kereru	7.98	202	S	Sn	07 37 18.5	-1.9
ASAR	Alice Springs	41.59	270	P	P	07 41 42.9	+0.1
	2.8nm,0.7s,baz=105,slow=7.5,SNR=40						
WRA	Warramunga Arr	42.76	275	P	P	07 41 52.2	-0.1
	4.2nm,0.5s,baz=112,slow=7.9,SNR=79						
FITZ	Fitzroy Crossi	50.93	272	P	P	07 42 55.5	-0.7
	2.1nm,0.8s,baz=104,slow=7.8,SNR=2.1						
VNA3	Neumayer Olymp	76.50	177	P	P	07 45 42.0	-1.9
VNA2	Neumayer--Watz	76.91	177	P	P	07 45 44.4	-1.8
	baz=176,slow=4.5						
VNA1	Neumayer--Stat	77.15	177	P	P	07 45 46.8	-0.8
FINES	FINESS Array B	146.39	338	PKPbc	PKPdf	07 53 28.4	-4.7
	1.9nm,0.5s,baz=64,slow=3.2,SNR=2.0						

IDC 30 07:58:28.1±3.6**, 55°.59N×86°.13E, h0km, mb1 3.0**/2**, mb1mx2.9**/48**, mbtmp3.0**/2**, ML2.7**/2**, Error ellipse: s-maj=30.2km s-min=25.6km az=58.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.81	205	*i*		08 09 00.0	
	baz=26,slow=337,SNR=4.1						
ZALV	Zalesovo Beam	1.81	205	Pg	Pn	07 59 00.9	+0.4
	1.5nm,0.3s,baz=26,slow=16,SNR=12						
ZALV				Lg	Lg	07 59 26.2	
	1.6nm,0.3s,baz=20,slow=24,SNR=6.4						
KURBB	Kurchatov Arra	6.76	226	Pn	Pn	08 00 08.0	-0.4
	0.2nm,0.3s,baz=38,slow=45,SNR=4.8						
MKAR	Makanchi Array	9.13	197	Pn	Pn	08 00 41.5	+0.5
	0.1nm,0.3s,baz=20,slow=4.6,SNR=1.5						
MKAR				Lg	Lg	08 03 15.5	
	0.0nm,0.3s,baz=21,slow=29,SNR=3.0						

KMA 30 08:11:09.4±0.1**, 36°.16N×126°.77E, h15km, Error ellipse: s-maj=2.9km s-min=1.8km az=297.0, South Korea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSGUS	GUNSAN	0.13	177	P	Pg	08 11 12.9	-0.1
	SNR=11						
KSJEO	Jeonju	0.48	118	P	Pg	08 11 19.0	+0.1
	SNR=23						
KSJEU	Jeongeup	0.68	169	P	Pg	08 11 22.8	+0.1
	SNR=6.2						
KSBON	Boeun	0.89	68	P	Pg	08 11 27.0	+0.3
	SNR=17						
ANMD	Anmado	1.02	217	P	Pn	08 11 31.0	+1.9
	SNR=7.9						

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*NNC **30** 08:16:57.9±0.5, 42°.37N×71°.28E, h0km, mb3.5, mpv3.3, Error ellipse: s-maj=3.9km s-min=2.2km az=8.0*

*SOME **30** 08:16:58.8, 42°.32N×71°.30E, h15km*

*KRNET **30** 08:16:58.0±0.1, 42°.24N×71°.36E, h13km, mb2.6*

ISC 30 08:16:59.6±1.2**, 42°.29N**±0°.03×**71°.17E**±0°.02**, h23km**±15km**, n31, σ1ˢ.58**/53**, 14C-6D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRKS	Terek-Say	0.76	181	⇓*i*P	Pn	08 17 13.2	-1.9
	baz=90						
TRKS				⇓*i*S	Sb	08 17 24.1	-0.2
	baz=90						
IUG	Iuzhnay	0.85	261	*e*P	Pb	08 17 16.2	+0.4
	186nm,0.3s						
IUG				*e*S	Sn	08 17 29.1	+0.9
	120nm,0.1s						
IUG	Iuzhnay	0.85	261	P	Pb	08 17 16.2	+0.4
	186nm,0.3s						
IUG				S	Sn	08 17 29.2	+0.9
	120nm,0.1s						
KK02	Karatay Array	0.94	330	⇑P	Pn	08 17 16.0	-1.5
	3.4nm,0.2s,baz=142,slow=17						
KK02				⇑S	Sb	08 17 28.6	-0.8
	16nm,0.6s,baz=142,slow=31						
MNAS	Manas	1.01	78	⇑*i*P	Pn	08 17 14.8	-3.7
	baz=73						
MNAS				⇑*i*S	Sn	08 17 26.9	-5.2
	baz=73						
BRLS	Borolday	1.23	307	*e*P	Pb	08 17 21.7	-0.4
	6.7nm,0.2s						
BRLS				*e*S	Sb	08 17 38.3	+0.8
	20nm,0.1s						
BRLS	Borolday	1.23	307	P	Pb	08 17 21.7	-0.4
	6.7nm,0.2s						
BRLS				S	Sb	08 17 38.3	+0.8
	20nm,0.1s						
MRKS	Merke	1.59	73	*e*P	Pn	08 17 25.8	-0.7
	8.0nm,0.2s						
MRKS				*e*S	Sn	08 17 45.1	-1.2
	22nm,0.3s						
MRKS	Merke	1.59	73	P	Pn	08 17 25.7	-0.7
	8.0nm,0.2s						
MRKS				S	Sn	08 17 45.1	-1.2
	22nm,0.3s						
AML	Almayashu	1.89	94	⇑*i*P	Pn	08 17 30.5	-0.3
	baz=93						
AML				⇑*i*S	Sn	08 17 54.1	0.0
	baz=93						
EKS2	Erkin-Say	1.97	78	⇑*i*P	Pn	08 17 32.0	+0.3
	baz=76						
EKS2				⇑*i*S	Sn	08 17 56.8	+1.1
	baz=76						
OHH	Osh	2.15	145	⇓*i*P	Pn	08 17 35.0	+0.9
	baz=48						
OHH				⇓*i*S	Sn	08 18 02.1	+2.1
	baz=48						
BTK	Batken	2.25	187	⇑*e*P	Pb	08 17 38.0	-1.5
	baz=91						
BTK				⇑*i*S	Sb	08 18 07.0	+0.1
	baz=91						
UCH	Uchtor	2.49	90	⇑*i*P	Pn	08 17 39.8	+0.7
	baz=89						
UCH				⇑*i*S	Sn	08 18 10.4	+1.4
	baz=89						
AAK	Ala-Archa	2.49	81	Sn	Sn	08 18 11.3	+2.7
	6.2nm,0.5s						
TKM2	Tokmak 2	3.33	78	⇑Pg	Pb	08 17 57.6	-0.5
	3.4nm,1.0s						
TKM2				⇑Lg	Lg	08 18 38.9	
	4.4nm,0.4s						
TKM2	Tokmak 2	3.33	78	⇓*i*P	Pn	08 17 51.5	+1.0
	baz=76						
TKM2				⇓*i*S	Sn	08 18 30.7	+1.2
	baz=76						
BTLS	Baital	3.45	36	*e*P	Pb	08 18 00.0	0.0
	1.0nm,0.4s						
BTLS				*e*S	Sb	08 18 44.3	+2.8
	6.8nm,0.4s						
BTLS	Baital	3.45	36	Pg	Pb	08 18 00.0	0.0
	1.0nm,0.4s						
BTLS				Lg	Lg	08 18 44.3	
	6.8nm,0.4s						
DGS	Degeres	3.52	73	*e*P	Pb	08 18 00.1	-1.1
	1.9nm,0.4s						
DGS				*e*S	Sb	08 18 44.0	+0.4
	11nm,0.6s						
DGS	Degeres	3.52	73	Pg	Pb	08 18 00.1	-1.1
	1.9nm,0.4s						
DGS				Lg	Lg	08 18 44.0	
	11nm,0.6s						
KRBS	Karabastau	3.59	65	*e*P	Pb	08 18 00.8	-1.7
	7.3nm,0.3s						
KRBS				*e*S	Sb	08 18 45.0	-0.7
	3.2nm,0.3s						
KRBS	Karabastau	3.59	65	Pg	Pb	08 18 00.8	-1.7
	7.3nm,0.3s						
KRBS				Lg	Lg	08 18 45.0	
	3.2nm,0.3s						
KST	Kastek	3.62	76	*e*P	Pb	08 18 01.0	-1.9
	5.6nm,0.3s						
KST				*e*S	Sb	08 18 45.5	-0.8
	7.7nm,0.5s						
KST	Kastek	3.62	76	Pg	Pb	08 18 01.0	-1.9
	5.6nm,0.3s						
KST				Lg	Lg	08 18 45.5	
	7.7nm,0.5s						
IZV	Izvestkoviy	4.09	78	*e*P	Pb	08 18 11.4	+0.5
	3.0nm,0.4s						
IZV				*e*S	Sb	08 19 02.9	+3.0
	7.2nm,0.4s						
IZV	Izvestkoviy	4.09	78	Pg	Pb	08 18 11.4	+0.5
	3.0nm,0.4s						
IZV				Lg	Lg	08 19 02.9	
	7.2nm,0.4s						
KUU	Kurty	4.11	65	*e*P	Pb	08 18 11.2	-0.1
	1.2nm,0.4s						
KUU				*e*S	Sb	08 19 02.8	+2.3
	4.5nm,0.4s						
KUU	Kurty	4.11	65	Pg	Pb	08 18 11.2	-0.1
	1.2nm,0.4s						
KUU				Lg	Lg	08 19 02.8	
	4.5nm,0.4s						
TNSS	Tian-Shan	4.33	78	*e*P	Pb	08 18 15.1	0.0
	1.9nm,0.3s						
TNSS				*e*S	Sb	08 19 09.5	+2.4
	2.5nm,0.6s						
TNSS	Tian-Shan	4.33	78	Pg	Pb	08 18 15.1	0.0
	1.9nm,0.3s						
TNSS				Lg	Lg	08 19 09.5	
	2.5nm,0.6s						

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*IDC **30** 08:24:28.5±5.5, 3°.21S×138°.95E, h75km±48km, mb3.4/3, mb1 3.6/5, mb1mx3.3/24, mbtmp3.7/5, ML3.9/2, MS2.8/1, Ms1 2.8/1, ms1mx2.2/30, Error ellipse: s-maj=57.6km s-min=16.0km az=98.0*

ISC 30 08:24:27.4±1.4**, 3°.4S**±0°.1×**139°.1E**±0°.4**, h73km, n7, σ3ˢ.44**/7**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	17.10	196	P	P	08 28 24.1	+1.6
	0.6nm,0.3s,baz=16,slow=13,SNR=16						
WRA				S	Sn	08 31 26.2	-5.2
	0.1nm,0.3s,baz=17,slow=24,SNR=2.8						
FITZ	Fitzroy Crossi	19.70	221	P	P	08 28 52.5	+1.5
	0.2nm,0.3s,baz=39,slow=11,SNR=1.8						
ASAR	Alice Springs	20.77	194	P	Pn	08 29 06.0	+0.2
	0.7nm,0.3s,baz=12,slow=9.7,SNR=16						
ASAR				S	S	08 32 54.3	+3.8
	0.3nm,0.5s,baz=8.5,slow=26,SNR=2.4						
JCJ	Chichijima	30.46	5	LR	LR	08 40 53.6	
	comp=Z,19nm,19.9s,baz=102,slow=32						
MKAR	Makanchi Array	70.59	322	P	P	08 35 34.4	-0.6
	0.6nm,0.4s,baz=107,slow=8.1,SNR=9.6						
ILAR	Eielson Array	86.28	24	P	P	08 37 00.5	-0.4
	0.4nm,0.6s,baz=260,slow=4.4,SNR=7.0						
TORD	Torodi Ar. Bea	136.85	286	PKP	PKiKP	08 43 44.4	-0.1
	0.2nm,0.4s,baz=70,slow=2.2,SNR=2.1						

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*DDA **30** 08:29:46.7, 40°.01N×38°.67E, h15km, ML2.1*

*ISK **30** 08:29:46.0, 40°.06N×38°.67E, h6km, ML2.5/7*

ISC 30 08:29:46.7±1.1**, 40°.03N**±0°.03×**38°.67E**±0°.03**, h13km**±10km**, n16, σ0ˢ.61**/28**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
REFA	Refahiye_ERZN	0.15	150	*i* P	Pg	08 29 50.6	-8.7
REFA				IAML		08 29 53.0	
	comp=N,1µm,0.2s						
REFA				IAML		08 29 53.0	
	comp=E,1µm,0.3s						
REFA				*i* S	Sg	08 29 53.2	-15
ALUC	Giresun/Alucra	0.32	14	*i* P	Pb	08 29 53.9	-0.6
ALUC				*i* S	Sb	08 29 58.9	-0.7
ALUC				IAML		08 29 59.0	
	comp=N,832nm,0.3s						
ALUC				IAML		08 30 00.0	
	comp=E,900nm,0.2s						
SUSE	Susehri	0.40	296	*i* P	Pb	08 29 55.6	-0.2
SUSE				*i* S	Sb	08 30 01.2	-0.7
SUSE				IAML		08 30 03.0	
	comp=N,589nm,0.3s						
SUSE				IAML		08 30 03.0	
	comp=E,832nm,0.5s						
KELT	Kelkit	0.47	75	*i* P	Pg	08 29 56.1	+0.1
KELT				*i* S	Sg	08 30 02.2	0.0
KELT				IAML		08 30 03.0	
	comp=E,267nm,0.3s						
KELT				IAML		08 30 04.0	
	comp=N,236nm,0.4s						
ILIC	ilic-Erzincan	0.59	188	PG	Pb	08 29 58.4	-0.5
ILIC				SG	Sb	08 30 07.2	0.0
KEMA	Kemaliye	0.78	190	*i* P	Pg	08 30 01.4	-0.4
KEMA				*i* S	Sb	08 30 13.4	+0.8
KEMA				IAML		08 30 16.0	
	comp=E,61nm,0.5s						
KEMA				IAML		08 30 18.0	
	comp=N,59nm,0.4s						
RSDY	Resadiye-TOKAT	1.09	290	PG	Pb	08 30 07.2	-0.3
RSDY				SG	Sn	08 30 22.2	-0.6
CUKAN	kangal_SIVAS	1.17	233	*i* P	Pb	08 30 08.4	-0.5
CUKAN				*i* S	Sn	08 30 25.0	+0.1
CUKAN				IAML		08 30 26.0	
	comp=N,39nm,0.6s						
CUKAN				IAML		08 30 33.0	
	comp=E,30nm,0.5s						
BAYT	Aydıntepe-Bayb	1.18	72	PN	Pn	08 30 09.1	-0.1
BAYT				SN	Sn	08 30 25.3	0.0
KTUT	Trabzon	1.27	41	PN	Pg	08 30 10.6	-0.5
KTUT				SN	Sg	08 30 28.4	+0.8
SVSK	Karacayir	1.29	265	PN	Pg	08 30 11.5	0.0
SVSK				SN	Sg	08 30 29.4	+1.1
KOPT	Kop Dagi	1.41	90	*i* P	Pg	08 30 13.4	-0.3
KOPT				*i* S	Sg	08 30 32.3	+0.2
KOPT				IAML		08 30 43.0	
	comp=E,27nm,0.5s						
KOPT				IAML		08 30 45.0	
	comp=N,33nm,0.6s						
ELZG	Elazig	1.55	171	*i* P	Pg	08 30 15.8	-0.8
ELZG				*i* S	Sg	08 30 37.0	+0.2
ELZG				IAML		08 30 43.0	
	comp=E,51nm,0.5s						
ELZG				IAML		08 30 45.0	
	comp=N,34nm,0.5s						
TOKT	Tokat	1.65	281	PN	Pn	08 30 15.9	+0.4
KRIK	Erzurum-spir	1.76	79	*i* P	Pb	08 30 19.2	+0.2
KRIK				*i* S	Sg	08 30 42.9	-0.4
KRIK				IAML		08 30 45.0	
	comp=E,11nm,0.3s						
KRIK				IAML		08 30 52.0	
	comp=N,12nm,0.6s						
BCA	Borcka	2.65	57	PN	Pn	08 30 30.8	+1.6

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*DJA **30** 08:37:52.5±1.0, 1°S±3°×12°4E±°, h29km±9km, M4.6/13, mb4.8/3, mB4.9/2, MLv4.5/13, Mw(mB)4.2/2*

*IDC **30** 08:37:52.2±2.9, 0°.51S×124°.23E, h55km±31km, mb3.8/13, mb1 4.0/16, mb1mx3.7/60, mbtmp4.1/16, ML3.9/3, MS3.0/4, Ms1 3.0/4, ms1mx2.6/42, Error ellipse: s-maj=19.2km s-min=14.9km az=76.0*

*NEIC **30** 08:37:54.1±2.0, 0°.59S±0°.07×124°.26E±0°.05, h70km±10km, mb4.2/12, Error ellipse: s-maj=11.8km s-min=3.1km az=145.0*

ISC 30 08:37:53.0±0.5**, 0°.55S**±0°.05×**124°.37E**±0°.05**, h60km, n48, σ1ˢ.09**/46**, mb4.2**/17**, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	Cibinong	1.18	341	P	Pn	08 38 12.8	-0.6
KMSI				S	Sn	08 38 28.7	+0.1
LUWI	Luwuk	1.67	253	P	Pn	08 38 19.7	-0.3
LUWI				S	Sn	08 38 42.0	+1.5
LUWI	Luwuk	1.67	253		Pn	08 38 19.4	-0.7
SANI	Sanana	2.20	133	P	Pn	08 38 25.9	-1.3
SANI				S	Sn	08 38 51.8	-1.5
MRSI	Marisa	2.64	293	P	Pn	08 38 31.5	-1.6
MRSI				S	Sn	08 39 05.2	+1.2
APSI	Ampana	2.75	262	P	Pn	08 38 34.8	+0.2
TOLI2	Tolitoli	3.95	295		Pn	08 38 50.8	-0.3
MPSI	Mapaga	4.56	281	P	Pn	08 39 03.1	+3.6
AAI	Ambon	4.93	129	P	Pn	08 39 06.1	+1.5
TTSI	Tana Toraja	5.18	241	P	Pn	08 39 08.0	0.0
	0.4nm1µm53nm,0.6s						
SPSI	Sidrap Palu	5.71	234	P	Pn	08 39 16.0	+0.7

	0.3nm958nm56nm,0.6s						
BNSI	Bone	5.73	228	P	Pn	08 39 15.6	+0.1
KAPI	Kappang	6.40	226	P	Pn	08 39 23.6	-1.1
	4.2nm,0.3s,baz=104,slow=3.1,SNR=8.5						
KAPI				S	Sn	08 40 34.4	-2.1
	3.3nm,0.3s,baz=320,slow=22,SNR=5.9						
KAPI	Kappang	6.40	226		Pn	08 39 25.0	+0.3
SIJI	Sorong	6.90	93	P	Pn	08 39 33.7	+2.1
	2.4nm,0.3s,baz=175,slow=23,SNR=4.2						
DAV	Davao City (W)	7.66	9	LR	LR	08 43 03.3	
	comp=Z,109nm,21.4s,baz=149,slow=41						
MYLDM	Lahad Datu	8.17	314		Pn	08 39 53.5	+4.5
FAKI	Fak Fak	8.22	107	Pn	Pn	08 39 49.1	-0.5
BATI	Baumata	9.62	184	LR	LR	08 44 04.7	
	comp=Z,168nm,19.9s,baz=329,slow=39						
KKM	Kota Kinabalu	10.45	309		Pn	08 40 22.0	+1.7
FITZ	Fitzroy Crossi	17.48	176	P	Pn	08 41 52.1	-0.7
	0.2nm,0.3s,baz=3.3,slow=9.8,SNR=3.7						
FITZ				LR	LR	08 48 42.3	
	comp=Z,24nm,20.2s,baz=347,slow=37						
WB0	Warramunga Arr	21.48	153	P	P	08 42 36.4	-0.3
WB0				IAmb	IAmb	08 42 41.6	
	comp=Z,14nm,0.9s						
WRA	Warramunga Arr	21.61	154	P	P	08 42 37.5	-0.6
	comp=Z,7.7nm,0.8s,baz=335,slow=11,SNR=30						
WRA	Warramunga Arr	21.61	154	P	P	08 42 37.9	-0.2
WB2	Warramunga Arr	21.61	154	P	P	08 42 37.5	-0.7
WB2				IAmb	IAmb	08 42 43.1	
	comp=Z,7.4nm,0.8s						
WR0	Warramunga Arr	21.71	153	P	P	08 42 39.0	-0.2
WR0				IAmb	IAmb	08 42 44.3	
	comp=Z,14nm,0.9s						
COEN	Coen	22.89	126	P	P	08 42 52.6	+0.8
COEN				IAmb	IAmb	08 42 59.2	
	comp=Z,20nm,1.4s						
TPUB	Ta-pu	23.98	352	P	P	08 43 03.8	+1.7
AS31	Alice Springs	24.77	159	P	P	08 43 09.8	+0.5
ASAR	Alice Springs	24.77	159	P	P	08 43 09.9	+0.6
	comp=Z,2.9nm,0.9s,baz=330,slow=8.8,SNR=24						
ASAR				LR	LR	08 52 49.5	
	comp=Z,39nm,18.9s,baz=25,slow=36						
CMAR	Chiang Mai Arr	31.33	308	P	P	08 44 06.1	-1.8
	comp=Z,0.6nm,0.4s,baz=130,slow=8.3,SNR=5.4						
STKA	Stephens Creek	35.16	154	P	P	08 44 42.6	+1.5
	comp=Z,1.1nm,0.5s,baz=336,slow=9.2,SNR=4.6						
STKA	Stephens Creek	35.16	154	IAmb	IAmb	08 44 45.3	
	comp=Z,1.2nm,1.1s						
JWT	Wachi	37.10	15	P	P	08 44 57.9	+0.2
KSRS	Korea Array	37.95	5	P	P	08 45 03.8	-1.0
	comp=Z,1.5nm,0.8s,baz=179,slow=8.4,SNR=4.9						
MJAR	Matsushiro Arr	39.08	18	P	P	08 45 13.2	-1.2
	comp=Z,2.4nm,0.7s,baz=180,slow=9.1,SNR=6.1						
MJAR	Matsushiro Arr	39.08	18	IAmb	IAmb	08 45 39.7	
	comp=Z,2.7nm,1.2s						
USRK	Ussuriysk Ar.	45.07	8	P	P	08 46 02.3	-0.7
	comp=Z,2.3nm,0.5s,baz=199,slow=8.1,SNR=7.3						
KLR	Kul'dur	49.99	6	P	P	08 46 40.4	-0.7
	comp=Z,1.9nm,0.7s,baz=202,slow=4.8,SNR=6.2						
SONM	Songino Array	50.67	344	P	P	08 46 44.8	-1.6
	comp=Z,1.2nm,0.8s,baz=167,slow=7.5,SNR=4.3						
SONM	Songino Array	50.67	344	P	P	08 46 47.8	+1.4
SONM				IAmb	IAmb	08 46 57.2	
	comp=Z,3.1nm,1.4s						
MKAR	Makanchi Array	59.80	328	P	P	08 47 51.8	-0.3
	comp=Z,1.9nm,0.8s,baz=125,slow=8.2,SNR=1.8						
PETK	Petropavlovsk-	60.26	22	P	P	08 47 56.3	+1.3
	comp=Z,4.0nm,0.8s,baz=209,slow=5.6,SNR=5.6						
KURBB	Kurchatov Arra	64.13	329	P	P	08 48 20.6	-0.4
	comp=Z,5.5nm,0.7s,baz=117,slow=6.2,SNR=4.1						
KURK	Kurchatov	64.14	330	P	P	08 48 20.6	-0.5
KURK	Kurchatov	64.14	330	IAmb	IAmb	08 48 23.8	
	comp=Z,28nm,1.1s						
IMAR	Indian Mountai	87.18	24	P	P	08 50 33.4	+1.0
ILAR	Eielson Array	89.95	25	P	P	08 50 44.2	-1.2
	comp=Z,0.2nm,0.7s,baz=236,slow=5.9,SNR=4.9						

SOME ***30*** *08:39:51.8, 39°.65N×75°.73E, h5^{km}, MS4.0*
IDC ***30*** *08:39:58.1±0.7, 39°.68N×75°.59E, h0^{km}, mb4.2/20, mb1 4.3/27, mb1mx4.1/63, mbtmp4.2/27, ML3.8/7, MS3.9/28, Ms1 3.9/28, ms1mx3.7/44, Error ellipse: s-maj=13.9km s-min=12.8km az=76.0*
NNC ***30*** *08:39:59.8±1.7, 39°.94N×75°.63E, h0^{km}, mb5.0, mpv4.7, Error ellipse: s-maj=13.9km s-min=9.1km az=152.0*
KRNET ***30*** *08:40:00.8±0.1, 39°.79N×75°.60E, mb5.1*
BJI ***30*** *08:40:03.1±0.0, 39°.94N×75°.59E, h8^{km}, mB4.4/4, mb4.4/7, ML4.1/7*
MOS ***30*** *08:40:06.1±1.2, 39°.96N×75°.53E, h67^{km}, mb4.5/14, Error ellipse: s-maj=6.1km s-min=3.7km az=93.7*
NEIC ***30*** *08:40:07.6±1.6, 39°.99N±0°.07×75°.55E±0°.08, h57^{km}±7^{km}, mb4.4/30, ML4.1(BJI), Error ellipse: s-maj=10.5km s-min=8.3km az=143.0*
ISC 30 08:39:59.9±1.1**, 39°.92N**±0°.03×**75°.58E**±0°.02**, h3**^{km}±7^{km}**, n301, σ1^{s}98**/361**, mb4.4**/41**, MS3.8**/26**, 52C-26D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	Kashi	0.51	143	Pg	Pn	08 40 17.5	+3.4
KSH				Sg	Sn	08 40 30.0	+6.6
KSH				smax	smax		
	comp=N,10μm,1.1s						
KSH				smax	smax		
	comp=E,10μm,1.2s						
SFK	Sufi-Kurgan	1.59	274	⇑eP	Pg	08 40 31.4	+0.9
	baz=79						
SFK				⇑eS	Sg	08 40 53.2	+2.0
	baz=79						
SALK	Salom-Alik	1.65	306	⇓eP	Pg	08 40 33.5	+2.0
	baz=9.0						
SALK				⇓eS	Sg	08 40 56.6	+3.8
	baz=9.0						
OHH	Osh	2.22	287	⇓iP	Pg	08 40 42.1	-0.3
	baz=90						
OHH				⇓iS	Sg	08 41 10.9	-0.3
	baz=90						
ULHL	Ulahol	2.38	12	P	Pb	08 40 44.4	+1.0
	SNR=615						
ULHL	Ulahol	2.38	12	i PN	Pg	08 40 44.5	-0.9
ULHL				i S	Sg	08 41 17.7	+1.5
ULHL	Ulahol	2.38	12	⇑iP	Pg	08 40 44.6	-0.9
	baz=11						
ULHL				⇑iS	Sg	08 41 17.0	+0.8
	baz=11						
UCH	Uchtor	2.44	341	P	Sg	08 41 20.8	+2.5
	SNR=6.6						
UCH	Uchtor	2.44	341	i PN	Pn	08 40 40.6	-0.4
UCH				i S	Sg	08 41 20.1	+1.8
UCH	Uchtor	2.44	341	⇑eP	Pg	08 40 46.0	-0.6
	baz=42						
UCH				⇑iS	Sg	08 41 18.6	+0.3
	baz=42						
TARG	Taragay, Kyrgy	2.47	42	Pn	Pb	08 40 46.1	+0.9
TARG	Taragay, Kyrgy	2.47	42	⇑eP	Pb	08 40 45.2	0.0
	baz=40						
TARG				⇑iS	Sg	08 41 18.1	-1.3
	baz=40						
KDJ	Kajisay	2.52	28	PN	Pb	08 40 46.6	+0.8
KDJ	Kajisay	2.52	28	Pn	Pb	08 40 46.6	+0.8
KDJ	Kajisay	2.52	28	⇓iP	Pb	08 40 46.7	+0.9
	baz=27						
KDJ				⇓iS	Sg	08 41 19.9	-0.9
	baz=27						
BOOM	Boomskoye usch	2.58	6	PN	Pb	08 40 46.9	0.0
BOOM	Boomskoye usch	2.58	6	Pn	Pb	08 40 46.9	0.0
BOOM	Boomskoye usch	2.58	6	⇑eP	Pb	08 40 47.5	+0.6
	baz=5.0						
BOOM				⇑iS	Sg	08 41 21.1	-1.7
	baz=5.0						
AML	Almayashu	2.63	328	P	Pb	08 40 47.9	+0.1
	SNR=402						
AML	Almayashu	2.63	328	i PN	Pn	08 40 40.8	-2.7
AML				i S	Sg	08 41 24.6	+0.3
AML	Almayashu	2.63	328	⇓iP	Pb	08 40 48.3	+0.5
	baz=29						
AML				⇓eS	Sg	08 41 23.0	-1.3
	baz=29						
KBK	Karagaybulak	2.77	350	P	Pb	08 40 50.2	+0.1
	SNR=687						
KBK	Karagaybulak	2.77	350	ePN	Pb	08 40 50.5	+0.3
KBK				i S	Sg	08 41 28.1	-0.9
KBK	Karagaybulak	2.77	350	⇑iP	Pb	08 40 50.4	+0.3
	baz=50						
KBK				⇑iS	Sb	08 41 26.7	+2.1
	baz=50						
AAK	Ala-Archa	2.83	344	Pn	Pb	08 40 51.4	+0.2
	92nm,0.3s,baz=152,slow=6.9,SNR=279						
AAK				Sn	Sb	08 41 27.7	+1.5
	94nm,0.3s,baz=48,slow=23,SNR=12						
AAK				LR	LR	08 42 13.9	
	comp=Z,3μm,20.5s,baz=92,slow=44						
AAK	Ala-Archa	2.83	344	Pn	Pb	08 40 51.0	-0.2
DRK	Karamyk	2.95	263		Pb	08 40 52.1	-1.1
DRK	Karamyk	2.95	263	⇑iP	Pb	08 40 51.1	-2.1
	baz=65						
DRK				⇑iS	Sb	08 41 27.8	-1.9
	baz=65						
FRU1	Bishkek	2.97	346	ePN	Pb	08 40 53.5	0.0
FRU1				i S	Sg	08 41 33.4	-1.9
FRU1	Bishkek	2.97	346		Pb	08 40 53.5	0.0
FRU1	Bishkek	2.97	346	⇑iP	Pb	08 40 53.5	0.0
	baz=47						
FRU1				⇑iS	Sb	08 41 32.3	+2.1
	baz=47						
TKM2	Tokmak 2	3.00	0	P	Pb	08 40 53.4	-0.6
	SNR=152						
TKM2	Tokmak 2	3.00	0	i PN	Pb	08 40 53.2	-0.8
TKM2				pmax	pmax		
	comp=Z,287nm,0.4s						
TKM2	Tokmak 2	3.00	0	⇑Pn	Pb	08 40 52.2	-1.7
	comp=Z,286nm,0.4s						
TKM2				⇑Lg	Lg	08 41 36.3	
	comp=Z,1μm,0.6s						
TKM2	Tokmak 2	3.00	0	⇑iP	Pb	08 40 53.4	-0.6
	baz=60						
TKM2				⇑iS	Sb	08 41 32.2	+1.2
	baz=60						
EKS2	Erkin-Say	3.05	334	P	Pb	08 40 53.9	-1.0
	SNR=79						
EKS2	Erkin-Say	3.05	334	ePN	Pb	08 40 54.3	-0.7
EKS2				i S	Sb	08 41 34.9	+2.3
EKS2	Erkin-Say	3.05	334	⇓iP	Pb	08 40 54.2	-0.7
	baz=35						
EKS2				⇓iS	Sb	08 41 33.8	+1.2
	baz=35						
KST	Kastek	3.13	5	eP	Pb	08 40 55.5	-0.7
	comp=Z,411nm,0.6s						
KST				eS	Sg	08 41 41.1	+0.6
	comp=Z,4μm,0.5s						
KST	Kastek	3.13	5	Pg	Pb	08 40 55.5	-0.7
	comp=Z,411nm,0.6s						
KST				Lg	Lg	08 41 41.8	
	comp=Z,4μm,0.5s						
CHMS	Chumysh	3.13	349	P	Pb	08 40 55.3	-1.0
	SNR=26						
CHMS	Chumysh	3.13	349	ePN	Pb	08 40 55.1	-1.2
CHMS				i S	Sb	08 41 36.4	+1.5
CHMS	Chumysh	3.13	349	⇓iP	Pb	08 40 55.2	-1.0
	baz=49						
CHMS				⇓iS	Sb	08 41 35.6	+0.7
	baz=49						
IZV	Izvestkoviy	3.21	14	eP	Pb	08 40 56.4	-1.2
	comp=Z,136nm,0.3s						
IZV				eS	Sg	08 41 42.8	-0.1
	comp=Z,1μm,0.8s						
IZV	Izvestkoviy	3.21	14	Pg	Pb	08 40 56.4	-1.2
	comp=Z,136nm,0.3s						
IZV				Lg	Lg	08 41 43.5	
	comp=Z,1μm,0.8s						
ANVS	Anan'yevo	3.26	28	⇑iP	Pb	08 40 56.9	-1.6
	baz=27						
ANVS				⇑eS	Sb	08 41 37.5	-1.2
	baz=27						
MTBS	Maitube	3.27	11	eP	Pb	08 40 57.1	-1.5
	comp=Z,252nm,0.7s						
MTBS				eS	Sg	08 41 44.2	-0.7
	comp=Z,679nm,0.8s						
MTBS	Maitube	3.27	11	Pg	Pb	08 40 57.1	-1.5
	comp=Z,252nm,0.7s						
MTBS				Lg	Lg	08 41 44.2	
	comp=Z,679nm,0.8s						
TNSS	Tian-Shan	3.28	18	eP	Pb	08 40 57.5	-1.4
	comp=Z,172nm,0.6s						
TNSS				eS	Sg	08 41 45.0	-0.2
	comp=Z,571nm,0.7s						
TNSS	Tian-Shan	3.28	18	ePn	Pb	08 40 56.8	-2.1
	baz=19						
TNSS				ePg	Pg	08 41 02.1	-0.7
	baz=19						
TNSS				eLg	Lg	08 41 45.5	
	baz=19						
TNSS	Tian-Shan	3.28	18	Pg	Pb	08 40 57.5	-1.4
	comp=Z,172nm,0.6s						
TNSS				Lg	Lg	08 41 45.5	
	comp=Z,571nm,0.7s						
DGS	Degeres	3.32	2	eP	Pb	08 40 58.2	-1.2
	comp=Z,499nm,0.4s						
DGS				eS	Sg	08 41 46.7	+0.2
	comp=Z,1μm,0.8s						
DGS	Degeres	3.32	2	Pg	Pb	08 40 58.3	-1.2
	comp=Z,499nm,0.4s						
DGS				Lg	Lg	08 41 46.7	
	comp=Z,1μm,0.8s						
MRKS	Merke	3.33	329	eP	Pb	08 40 58.1	-1.5
	comp=Z,140nm,0.5s						
MRKS				eS	Sg	08 41 46.5	-0.3
	comp=Z,3μm,0.8s						
MRKS	Merke	3.33	329	Pg	Pb	08 40 58.1	-1.5
	comp=Z,140nm,0.5s						
MRKS				Lg	Lg	08 41 46.1	
	comp=Z,3μm,0.8s						
PRZ	Przheval'sk	3.33	39	PN	Pb	08 40 57.7	-1.9
PRZ	Przheval'sk	3.33	39	Pn	Pb	08 40 57.7	-1.9
MDOK	Medeo	3.42	18	eP	Pb	08 40 59.6	-1.6
	comp=Z,102nm,0.8s						
MDOK				eS	Sg	08 41 48.7	-1.1
	comp=Z,1μm,1.0s						
MDOK	Medeo	3.42	18	ePn	Pb	08 40 59.0	-2.3
	baz=20						
MDOK				ePg	Pg	08 41 04.8	-0.7
	baz=20						
MDOK				i Lg	Lg	08 41 49.2	
	baz=20						
MDOK	Medeo	3.42	18	ePN	Pb	08 40 58.9	-2.3
MDOK	Medeo	3.42	18	⇓Pn	Pb	08 40 58.1	-3.1
	comp=Z,320nm,1.0s						
MDOK				⇓Lg	Lg	08 41 47.6	
	comp=Z,2μm,0.8s						
MDOK	Medeo	3.42	18	Pg	Pb	08 40 59.1	-2.1
	comp=Z,102nm,0.8s						
MDOK				Lg	Lg	08 41 48.7	
	comp=Z,1μm,1.0s						
AAA	Alma-Ata	3.43	17	eP	Pb	08 41 00.3	-1.1
	comp=Z,190nm,0.4s						
AAA				eS	Sg	08 41 49.9	-0.3
	comp=Z,3μm,0.7s						
AAA	Alma-Ata	3.43	17	ePn	Pb	08 40 59.3	-2.1
	baz=18						
AAA				ePg	Pg	08 41 05.7	0.0
	baz=18						
AAA				eLg	Lg	08 41 50.9	
	baz=18						
AAA	Alma-Ata	3.43	17	ePN	Pb	08 40 59.2	-2.1
AAA	Alma-Ata	3.43	17	Pg	Pb	08 41 00.3	-1.1
	comp=Z,190nm,0.4s						
AAA				Lg	Lg	08 41 49.9	
	comp=Z,3μm,0.7s						
USP	Ospenovka	3.44	347	P	Pb	08 40 59.5	-1.9
	SNR=50						
USP	Ospenovka	3.44	347	ePN	Pb	08 40 59.5	-1.9
USP				i S	Sb	08 41 43.5	-0.1
USP	Ospenovka	3.44	347	⇑eP	Pb	08 40 59.5	-1.9
	baz=47						
USP				⇑iS	Sb	08 41 42.3	-1.3
	baz=47						
KNDC	Almaty	3.45	17	PN	Pb	08 41 00.4	-1.3
KNDC	Almaty	3.45	17	⇑Pg	Pb	08 41 00.2	-1.5
	comp=Z,421nm,0.6s						
KNDC				⇓Lg	Lg	08 41 50.0	
	comp=Z,4μm,0.7s						
MNAS	Manas	3.45	319	ePN	Pb	08 40 59.6	-2.2
MNAS				i S	Sb	08 41 44.2	0.0
MNAS	Manas	3.45	319	⇓eP	Pb	08 40 59.6	-2.2
	baz=20						
MNAS				⇓iS	Sb	08 41 41.9	-2.3
	baz=20						
KOTS	Kotyrbulak	3.50	19	eP	Pb	08 41 01.1	-1.5
	comp=Z,150nm,0.5s						
KOTS				eS	Sg	08 41 51.8	-0.7
	comp=Z,5μm,0.7s						
KOTS	Kotyrbulak	3.50	19	Pg	Pb	08 41 01.1	-1.5
	comp=Z,150nm,0.5s						
KOTS				Lg	Lg	08 41 51.7	
	comp=Z,5μm,0.7s						
SGDS	Sogindy	3.60	349	ePn	Pb	08 41 00.8	-3.3
	baz=349						
SGDS				ePg	Pg	08 41 08.1	-0.7
	baz=349						
SGDS				i Lg	Lg	08 41 55.2	
	baz=349						
BTK	Batken	3.66	274	PN	Pn	08 41 00.8	+3.4
BTK	Batken	3.66	274	Pn	Pn	08 41 00.8	+3.4
BTK	Batken	3.66	274	⇑eP	Pb	08 41 02.0	-3.2
	baz=76						
BTK				⇑iS	Sn	08 41 45.2	+4.1
	baz=76						
TRKS	Terek-Say	3.73	297	ePN	Pn	08 41 02.2	+3.7
TRKS				i S	Sb	08 41 48.6	-3.6
TRKS	Terek-Say	3.73	297	⇑eP	Pn	08 41 02.2	+3.7
	baz=98						
TRKS				⇑iS	Sn	08 41 47.1	+4.0
	baz=98						
KRBS	Karabastau	3.77	1	eP	Pb	08 41 06.6	-0.5
	comp=Z,215nm,0.3s						
KRBS				eS	Sg	08 42 00.8	-0.2
	comp=Z,958nm,0.7s						
KRBS	Karabastau	3.77	1	Pg	Pb	08 41 06.6	-0.5
	comp=Z,215nm,0.3s						
KRBS				Lg	Lg	08 42 00.8	
	comp=Z,958nm,0.7s						
SATY	Saty	3.79	33	eP	Pb	08 41 06.0	-1.4
	comp=Z,221nm,0.7s						
SATY				eS	Sg	08 41 59.5	-2.0
	comp=Z,497nm,0.8s						
SATY	Saty	3.79	33	ePn	Pb	08 41 03.4	-4.1
	baz=35						
SATY				ePg	Pg	08 41 11.0	-1.4
	baz=35						
SATY				eLg	Lg	08 42 01.5	
	baz=35						
SATY	Saty	3.79	33	ePN	Pb	08 41 03.3	-4.1
SATY	Saty	3.79	33	Pg	Pb	08 41 06.0	-1.4
	comp=Z,221nm,0.7s						
SATY				Lg	Lg	08 41 59.5	
	comp=Z,497nm,0.8s						
KTBS	Karatobe	3.88	12	eP	Pb	08 41 08.1	-0.8
	comp=Z,202nm,0.3s						
KTBS				eS	Sg	08 42 03.7	-0.7
	comp=Z,3μm,0.6s						
KTBS	Karatobe	3.88	12	Pg	Pb	08 41 08.1	-0.8
	comp=Z,202nm,0.3s						
KTBS				Lg	Lg	08 42 03.7	
	comp=Z,3μm,0.6s						
KUU	Kurty	4.01	8	eP	Pb	08 41 10.6	-0.5
	comp=Z,86nm,0.4s						
KUU				eS	Sg	08 42 07.4	-1.2
	comp=Z,363nm,0.6s						
KUU	Kurty	4.01	8	ePn	Pn	08 41 06.6	+4.4
	baz=8.8						
KUU				ePg	Pg	08 41 15.8	-0.8
	baz=8.8						
KUU				eLg	Lg	08 42 07.3	
	baz=8.8						
KUU	Kurty	4.01	8	ePN	Pn	08 41 06.6	+4.4
KUU	Kurty	4.01	8	Pg	Pb	08 41 10.6	-0.5
	comp=Z,86nm,0.4s						
KUU				Lg	Lg	08 42 07.4	
	comp=Z,363nm,0.6s						
KURS	Kuram	4.06	28	eP	Pb	08 41 11.3	-0.7
	comp=Z,63nm,0.6s						
KURS				eS	Sg	08 42 08.7	-1.5
	comp=Z,360nm,1.1s						
KURS	Kuram	4.06	28	Pg	Pb	08 41 11.3	-0.7
	comp=Z,63nm,0.6s						
KURS				Lg	Lg	08 42 08.7	
	comp=Z,360nm,1.1s						
UZB	Uzynbulak	4.13	38	eP	Pb	08 41 13.1	-0.2
	comp=Z,18nm,0.4s						
UZB				eS	Sg	08 42 11.3	-1.2
	comp=Z,257nm,1.2s						
UZB	Uzynbulak	4.13	38	ePn	Pn	08 41 07.9	+3.9
	baz=39						
UZB				ePg	Pg	08 41 16.6	-2.4
	baz=39						
UZB				eLg	Lg	08 42 11.7	
	baz=39						
UZB	Uzynbulak	4.13	38	ePN	Pn	08 41 07.9	+3.9
GAR	Garm	4.17	259	Pn	Pn	08 41 08.0	+3.5
GAR	Garm	4.17	259	⇑eP	Pn	08 41 07.7	+3.2
	baz=61						
GAR				⇑iS	Sn	08 41 56.8	+3.0
	baz=61						
DZA	Taraz	4.36	314	ePg	Pg	08 41 21.9	-1.4
	baz=313						
DZA	Taraz	4.36	314	ePN	Pg	08 41 21.9	-1.4
PDGK	Podgornoye	4.49	39	PN	Pn	08 41 12.4	+3.5
PDGK	Podgornoye	4.49	39	Pg	Pb	08 41 18.8	-0.6
	comp=Z,28nm,0.8s						
PDGK				Lg	Lg	08 42 21.4	
	comp=Z,202nm,0.8s						
PDGK	Podgornoye	4.49	39	⇓Pn	Pn	08 41 12.4	+3.5
	comp=Z,90nm,0.7s						
PDGK				⇓Lg	Lg	08 42 19.6	
	comp=Z,605nm,0.9s						
BLB	Baldybastay	4.70	26	Pg	Pb	08 41 23.8	+0.9
	comp=Z,109nm,0.4s						
BLB				Lg	Lg	08 42 30.0	
	comp=Z,214nm,0.6s						
IUG	Iuzhnay	4.75	300	eP	Pb	08 41 24.6	+0.9
	comp=Z,1μm,0.4s						
IUG				eS	Sg	08 42 31.3	-1.0
	comp=Z,1μm,0.9s						
IUG	Iuzhnay	4.75	300	eP	Pn	08 41 15.3	+2.9
	baz=299						
IUG				eS	Sn	08 42 10.8	+2.8
	baz=299						
IUG	Iuzhnay	4.75	300	ePN	Pn	08 41 15.3	+2.9
IUG				eS	Sn	08 42 10.7	+2.8
IUG	Iuzhnay	4.75	300	Pg	Pb	08 41 24.6	+0.9
	comp=Z,1μm,0.4s						
IUG				Lg	Lg	08 42 31.3	
	comp=Z,1μm,0.9s						
KK02	Karatay Array	4.96	312	⇑Pn	Pn	08 41 18.2	+3.0
	comp=Z,15nm,0.5s						
KK02				⇑Pg	Pg	08 41 32.0	-2.8
	comp=Z,98nm,0.7s						
KK02				⇓Lg	Lg	08 42 40.0	
	comp=Z,343nm,0.7s						
KK31	Karatay Array	4.96	312	PN	Pn	08 41 18.1	+2.9
KKAR	Karatay Array	4.96	312	PN	Pn	08 41 18.4	+3.2
KKAR	Karatay Array	4.96	312	Pn	Pn	08 41 18.4	+3.2
TAS	Tashkent	4.98	288	PN	Pn	08 41 18.6	+3.1
TAS	Tashkent	4.98	288	Pn	Pn	08 41 18.6	+3.1
KTMS	Ketmen	5.02	44	eP	Pb	08 41 28.7	+0.3
	comp=Z,60nm,0.6s						
KTMS				eS	Sg	08 42 38.6	-2.4
	comp=Z,106nm,0.8s						
KTMS	Ketmen	5.02	44	Pg	Pb	08 41 28.7	+0.3
	comp=Z,60nm,0.6s						
KTMS				Lg	Lg	08 42 38.6	
	comp=Z,106nm,0.8s						
CHM	Chimkent	5.11	300	eP	Pb	08 41 32.9	+3.1
	comp=Z,4.5nm,0.7s						
CHM				eS	Sg	08 42 46.2	+2.4
	comp=Z,1μm,0.5s						
CHGR	Chuyangaron	5.14	258		Pn	08 41 20.3	+2.6
CHGR	Chuyangaron	5.14	258	⇑eP	Pn	08 41 20.8	+3.1
	baz=59						
CHGR				⇑iS	Sn	08 42 19.8	+2.2
	baz=59						
BTLS	Baital	5.24	348	eP	Pb	08 41 32.9	+0.8
	comp=Z,50nm,0.6s						
BTLS				eS	Sg	08 42 45.4	-2.7
	comp=Z,44nm,0.8s						
BTLS	Baital	5.24	348	ePg	Pg	08 41 37.7	-2.5
	baz=348						
BTLS				eLg	Lg	08 42 45.9	
	baz=348						
BTLS	Baital	5.24	348	Pg	Pb	08 41 32.9	+0.8
	comp=Z,50nm,0.6s						
BTLS				Lg	Lg	08 42 45.3	
	comp=Z,44nm,0.8s						
BRLS	Borolday	5.31	308	eP	Pb	08 41 35.3	+2.0
	comp=Z,76nm,0.5s						
BRLS				eS	Sg	08 42 49.6	-0.9
	comp=Z,16nm,0.8s						
BRLS	Borolday	5.31	308	ePn	Pn	08 41 22.1	+2.0
	baz=304						

BRLS				*e*Pg	Pg	08 41 38.6	-3.0
	baz=304						
BRLS				*e*Lg	Lg	08 42 49.8	
	baz=304						
BRLS	Borolday	5.31	308	*e*PN	Pn	08 41 22.1	+2.0
BRLS	Borolday	5.31	308	Pg	Pb	08 41 35.3	+2.0
	comp=Z,76nm,0.5s						
BRLS				Lg	Lg	08 42 49.6	
	comp=Z,16nm,0.8s						
DJR	Jarkent	5.41	34	*e*P	Pb	08 41 35.3	+0.3
	comp=Z,29nm,0.8s						
DJR				*e*S	Sg	08 42 50.5	-3.0
	comp=Z,100nm,0.7s						
DJR	Jarkent	5.41	34	Pg	Pb	08 41 35.1	+0.1
	comp=Z,29nm,0.8s						
DJR				Lg	Lg	08 42 50.5	
	comp=Z,100nm,0.7s						
TDK	Taldyqorghan	5.49	21	*e*Pn	Pn	08 41 22.4	-0.2
	baz=22						
TDK				*e*Pg	Pb	08 41 39.4	+3.0
	baz=22						
TDK				*e*Lg	Lg	08 42 52.9	
	baz=22						
TDK	Taldyqorghan	5.49	21	*e*PN	Pn	08 41 22.3	-0.2
KAPS	Kapalarasan	6.04	26	*e*P	Pb	08 41 46.3	+0.6
	comp=Z,21nm,0.5s						
KAPS				*e*S	Sg	08 43 09.1	-4.8
	comp=Z,169nm,0.6s						
KAPS	Kapalarasan	6.04	26	Pg	Pb	08 41 46.3	+0.6
	comp=Z,21nm,0.5s						
KAPS				Lg	Lg	08 43 09.1	
	comp=Z,169nm,0.6s						
CHCP	Chirah Chowk	6.52	197	P	Pn	08 41 41.4	+4.7
NIL	Nilore	6.53	197	PN	Pn	08 41 42.0	+5.1
NIL	Nilore	6.53	197	Pn	Pn	08 41 42.0	+5.2
CEP	Cherat	6.76	207	P	Pn	08 41 44.3	+4.2
CEP				S	Sn	08 42 58.0	+0.4
KBL	Kabul	7.48	226	P	Pn	08 41 54.3	+4.3
KBL	Kabul	7.48	226	Pn	Pn	08 41 54.3	+4.3
DHRM	DHARAMSHALA	7.68	175	*e*P	Pn	08 41 55.6	+2.9
DHRM				*e*S	Sn	08 43 20.9	+0.5
DHRM				IAML		08 43 28.6	
	comp=N,252nm,0.5s						
DHRM				IAML		08 43 29.4	
	comp=E,240nm,0.5s						
THW	Thamme Wali	7.75	205	P	Pn	08 41 56.3	+2.6
MAKZ	Makanchi	8.31	32	P	Pn	08 42 05.0	+3.8
MAKZ	Makanchi	8.31	32	⇑Pn	Pn	08 42 04.7	+3.5
	comp=E,8.7nm,1.1s						
MAKZ				⇑Lg	Lg	08 44 23.0	
	comp=E,61nm,1.1s						
MAKZ	Makanchi	8.31	32	Pn	Pn	08 42 05.0	+3.8
MK31	Makanchi Array	8.43	33	*i* P	Pn	08 42 06.1	+3.3
MK31	Makanchi Array	8.43	33	Pn	Pn	08 42 06.1	+3.3
	comp=E,5.9nm,0.5s,baz=211,slow=13,SNR=43						
MK31				⇓Lg	Lg	08 44 26.5	
	comp=E,48nm,1.1s						
MK31	Makanchi Array	8.43	33	Pn	Pn	08 42 06.6	+3.8
MKAR	Makanchi Array	8.43	33	Pn	Pn	08 42 06.6	+3.8
	comp=E,1.4nm,0.3s,baz=210,slow=16,SNR=52						
MKAR				Lg	Lg	08 44 22.5	
	comp=E,0.7nm,0.3s,baz=210,slow=28,SNR=3.2						
MKAR				LR	LR	08 45 40.2	
	comp=E,1μm,19.3s,baz=217,slow=40						
MKAR	Makanchi Array	8.43	33	P	Pn	08 42 07.1	+4.3
MKAR	Makanchi Array	8.43	33	Pn	Pn	08 42 07.1	+4.3
OTUK	Ortayu	8.64	345	P	Pn	08 42 05.9	+0.2
OTUK	Ortayu	8.64	345	⇑Pn	Pn	08 42 04.9	-0.8
	comp=E,10nm,0.8s						
OTUK				⇓Lg	Lg	08 44 34.6	
	comp=E,235nm,1.1s						
SMLA	Simla	8.87	171	*e*P	Pn	08 42 11.9	+3.0
SMLA				*e*S	Sn	08 43 45.9	-3.4
SMLA				IAML		08 43 54.0	
	comp=E,65nm,0.2s						
SMLA				IAML		08 43 55.3	
	comp=N,84nm,1.1s						
WMQ	Urumqi	9.84	63	*e*P	Pn	08 42 28.0	+5.7
KURBB	Kurchatov Arra	10.90	10	Pn	Pn	08 42 38.2	+1.5
	comp=N,0.1nm,0.3s,baz=192,slow=12,SNR=4.5						
KURBB				Lg	Lg	08 45 40.8	
	comp=N,0.2nm,0.3s,baz=348,slow=17,SNR=6.9						
KURBB	Kurchatov Arra	10.90	10	⇑Lg	Lg	08 45 46.3	
	comp=N,215nm,0.9s						
KURK	Kurchatov	11.00	10	P	Pn	08 42 39.8	+1.8
KURK	Kurchatov	11.00	10		Pn	08 42 39.8	+1.8
HRA	Herat	11.98	247	Pn	Pn	08 42 50.6	-1.1
DGZ	Jazzator, Alta	12.88	37	*i* P	Pn	08 43 05.2	+1.3
DGZ				pmax	pmax		
	comp=Z,6.0nm,1.7s						
DANN	Dangsing	13.38	147	*e*P	Pn	08 43 07.8	-3.1
	comp=Z,16nm,0.3s						
BVAR	Borovoye Array	13.58	347	Pn	Pn	08 43 13.8	+0.6
	comp=Z,0.6nm,0.3s,baz=184,slow=19,SNR=15						
BVAR				Lg	Lg	08 47 02.1	
	comp=Z,0.7nm,0.3s,baz=161,slow=28,SNR=5.2						
BRVK	Borovoye	13.63	346	*ce*P	Pn	08 43 15.7	+1.8
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BRVK	Borovoye	13.63	346	Pn	Pn	08 43 13.3	-0.6
BRVK				⇑Lg	Lg	08 47 13.8	
	comp=Z,206nm,1.4s						
BRVK	Borovoye	13.63	346	Pn	Pn	08 43 15.4	+1.5
GEYT	Alibeck	13.74	267	Pn	Pn	08 43 12.9	-2.7
	comp=Z,0.5nm,0.3s,baz=172,slow=12,SNR=4.6						
GEYT				Sn	Sn	08 45 41.4	-7.3
	comp=Z,1.5nm,0.3s,baz=308,slow=49,SNR=4.3						
GYA0B	ALIBECK ARRAY	13.74	267	⇓Pn	Pn	08 43 13.3	-2.2
GYA0B	ALIBECK ARRAY	13.74	267	Pn	Pn	08 43 18.8	+3.2
KOLN	Koldanda	13.82	149	*e*P	Pn	08 43 14.5	-2.4
	comp=Z,25nm,0.5s						
GKN	Gorkha	14.05	145	*e*P	Pn	08 43 17.1	-2.9
	comp=Z,30nm,0.4s						
AB31	Akbulak array	14.51	315	*i* P	Pn	08 43 25.7	-0.2
AB31	Akbulak array	14.51	315	⇑Pn	Pn	08 43 25.8	-0.2
	comp=Z,12nm,0.8s,baz=114,slow=9.7,SNR=57						
AB31				⇑Lg	Lg	08 47 44.1	
	comp=Z,34nm,1.2s,baz=112,slow=27,SNR=4.3						
ABKAR	Akbulak array	14.51	315	Pn	Pn	08 43 26.4	+0.5
ABKAR	Akbulak array	14.51	315	Pn	Pn	08 43 26.4	+0.5
KKN	Kakani	14.53	143	*e*P	Pn	08 43 23.2	-3.3
	comp=Z,10nm,0.3s						
DMN	Daman	14.60	144	*e*P	Pn	08 43 24.1	-3.5
GUN	Gumba	14.71	141	*e*P	Pn	08 43 26.0	-3.1
	comp=Z,13nm,0.4s						
PKIN	Phulchoki	14.76	144	*e*P	Pn	08 43 26.1	-3.7
	comp=Z,11nm,0.4s						
PKI	Pulchoki	14.77	144	*e*P	Pn	08 43 26.5	-3.5
JIRN	Jiri	15.07	141	*e*P	Pn	08 43 31.3	-2.7
	comp=Z,30nm,0.4s						
ZAA0	Zalesovo Array	15.37	21	⇓Pn	Pn	08 43 35.4	-2.1
	comp=Z,2.4nm,1.4s						
ZAA0				⇑Lg	Lg	08 48 06.7	
	comp=Z,7.6nm,1.2s						
ZAA0	Zalesovo Array	15.37	21	Pn	Pn	08 43 38.3	+0.9
ZAA0				IAmb	IAmb	08 43 39.3	
	comp=Z,19nm,1.4s						
ZALV	Zalesovo Beam	15.37	21	Pn	Pn	08 43 37.6	+0.2
	comp=Z,0.7nm,0.3s,baz=208,slow=11,SNR=15						
ZALV				LR	LR	08 50 19.7	
	comp=Z,212nm,19.3s,baz=162,slow=40						
ZALV	Zalesovo Beam	15.37	21	P	Pn	08 43 38.7	+1.3
ZALV	Zalesovo Beam	15.37	21	Pn	Pn	08 43 38.7	+1.3
RAMN	Ramite	15.86	141	*e*P	Pn	08 43 41.5	-2.8
	comp=Z,16nm,0.3s						
TAPN	Taplejung	16.08	138	*e*P	Pn	08 43 46.2	-1.0
AKTO	Aktyubinsk	16.20	316	Pn	Pn	08 43 48.0	-0.4
	comp=Z,0.3nm,0.3s,baz=120,slow=12,SNR=10						
AKTO				LR	LR	08 50 44.4	
	comp=Z,386nm,20.7s,baz=129,slow=40						
AKTO	Aktyubinsk	16.20	316	P	Pn	08 43 49.5	+1.2
AKTO	Aktyubinsk	16.20	316	⇓Pn	Pn	08 43 46.7	-1.6
	comp=Z,28nm,1.1s						
AKTO				⇑Lg	Lg	08 48 35.9	
	comp=Z,31nm,1.2s						
ODAN	Odare	16.32	139	*e*P	Pn	08 43 48.8	-1.4
BHPL	Bhopal	16.70	174	*e*P	Pn	08 43 54.3	-0.6
SHL	Shillong	19.78	131	P	P	08 44 32.0	+0.7
SHL				pmax	pmax		
	comp=Z,11nm,1.1s						
SHL	Shillong	19.78	131	P	P	08 44 32.0	+0.7
ARU	Arti	19.94	332	P	Pn	08 44 34.0	-0.4
	comp=Z,1.4nm,0.3s,baz=122,slow=3.6,SNR=8.8						
ARU				Lg	Lg	08 50 25.2	
	comp=Z,1.1nm,0.3s,baz=106,slow=18,SNR=4.2						
ARU				LR	LR	08 52 47.2	
	comp=Z,600nm,18.6s,baz=134,slow=38						
ARU	Arti	19.94	332	*d i*P	Pn	08 44 34.8	+0.5
ARU				S	Sn	08 48 18.2	-0.6
ARU				pmax	pmax		
	comp=Z,44nm,2.2s						
ARU				MLR	MLR		
	comp=Z,546nm,16.0s						
ARU	Arti	19.94	332		Pn	08 44 34.9	+0.6
ARU				IAmb	IAmb	08 44 47.7	
	comp=Z,19nm,1.1s						
MAK	Makhachkala	21.22	287	*e*P	P	08 44 45.3	-1.4
MAK				*e*S	S	08 48 40.0	-3.0
MAK				pmax	pmax		
	comp=Z,171nm,1.2s						
MAK				MLR	MLR		
	comp=Z,269nm,17.0s						
WSAR	Wadi Sarin	21.96	226	LR	LR	08 54 43.5	
	comp=Z,76nm,19.3s,baz=74,slow=41						
ZAK	Zakamensk	22.04	52	*e*P	P	08 45 02.0	+6.5
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.4s						
LZH	Lanzhou	22.56	91	*e*P	P	08 45 10.5	+9.2
LZH				pP	sP	08 45 15.3	+12
LZH				S	S	08 49 14.5	+5.1
LZH				pmax	pmax		
	comp=Z,18nm,1.2s						
TLY	Talaya	22.68	49	LR	LR	08 54 19.4	
	comp=Z,180nm,18.6s,baz=260,slow=38						
BELG	Belogornoye	22.87	312	P	P	08 45 04.5	+0.3
	comp=Z,9.4nm,0.7s,baz=218,slow=6.4,SNR=4.6						
BELG				LR	LR	08 54 47.7	
	comp=Z,384nm,18.5s,baz=130,slow=39						
BELG	Belogornoye	22.87	312	⇑*e*P	P	08 45 04.6	+0.4
BELG				pmax	pmax		
	comp=Z,5.0nm,1.1s						
SONM	Songino Array	23.46	60	P	P	08 45 11.0	+0.5
	comp=Z,1.1nm,0.7s,baz=260,slow=9.0,SNR=8.5						
SONM				LR	LR	08 55 23.6	
	comp=Z,382nm,20.2s,baz=270,slow=39						
SONM	Songino Array	23.46	60	P	P	08 45 11.0	+0.5
SONM				pmax	pmax		
	comp=Z,4.0nm,1.3s						
GNI	Garni	23.55	281	P	P	08 45 11.5	0.0
	comp=Z,9.1nm,0.5s,baz=105,slow=16,SNR=3.1						
GNI				LR	LR	08 56 07.7	
	comp=Z,98nm,19.8s,baz=57,slow=41						
GNI	Garni	23.55	281	*ce*P	P	08 45 12.7	+1.1
GNI				pmax	pmax		
	comp=Z,23nm,1.0s						
GNI	Garni	23.55	281	P	P	08 45 12.0	+0.5
ULN	Ulaanbaatar	23.91	60	*ce*P	P	08 45 15.8	+0.9
ULN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ULN	Ulaanbaatar	23.91	60	P	P	08 45 15.6	+0.7
NCK	Nalchik	24.06	289	*i* P	P	08 45 16.3	+0.1
NCK				pmax	pmax		
	comp=Z,18nm,0.8s						
ONI	Oni	24.22	287	P	P	08 45 19.3	+1.5
ONI				pmax	pmax		
	comp=Z,24nm,1.3s						
ONI	Oni	24.22	287	P	P	08 45 19.3	+1.5
ONI				IAmb	IAmb	08 45 39.1	
	comp=Z,24nm,1.3s						
KBZ	Khabaz	24.56	290	P	P	08 45 22.9	+2.2
	comp=Z,1.6nm,0.7s,baz=56,slow=18,SNR=2.7						
KBZ				LR	LR	08 57 09.7	
	comp=Z,151nm,19.8s,baz=88,slow=42						
KIV	Kislovodsk	24.70	290	*e*P	P	08 45 20.4	-1.8
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,147nm,15.0s						
KIV	Kislovodsk	24.70	290	P	P	08 45 21.4	-0.8
KIV				IAmb	IAmb	08 45 44.4	
	comp=Z,14nm,0.6s						
KIRV	Kirov	25.03	327	P	P	08 45 25.1	+0.2
	comp=Z,7.4nm,0.5s,baz=105,slow=20,SNR=5.2						
KIRV				LR	LR	08 55 59.0	
	comp=Z,657nm,20.0s,baz=120,slow=38						
KIRV	Kirov	25.03	327	*ce*P	P	08 45 25.3	+0.5
SOC	Sochi	26.87	290	*e*P	P	08 45 40.5	-1.2
SOC				*e*		08 46 27.6	
SOC				*e*S	S	08 50 15.0	-3.8
SOC				*e*SS	SnSn	08 51 23.4	+0.6
SOC				*e*SSS	SSS	08 51 43.2	
SOC				MLR	MLR		
	comp=Z,177nm,15.0s						
PRGR	Permogore	28.38	330	*e*P	P	08 45 53.0	-2.0
PRGR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
NRIK	Noril'sk	30.16	8	LR	LR	08 59 53.1	
	comp=Z,350nm,18.1s,baz=196,slow=39						
NRIK	Noril'sk	30.16	8	*i* P	P	08 46 10.3	-0.4
NRIK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
RAYN	Ar Rayn	30.17	246	P	P	08 46 11.8	+0.5
RAYN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
RAYN	Ar Rayn	30.17	246	P	P	08 46 11.8	+0.5
KLMR	Klimovskoe	30.49	325	*e*P	P	08 46 12.8	-0.9
KLMR				pmax	pmax		
	comp=Z,29nm,1.4s						
KLMR	Klimovskoe	30.49	325	*e*P	P	08 46 12.8	-0.9
KLMR				AMP		08 46 15.9	
	comp=Z,29nm,1.4s						
BR131	Keskin Array S	32.00	283	P	P	08 46 27.9	+0.5
BR131				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BR131	Keskin Array S	32.00	283	P	P	08 46 27.9	+0.5
BR131				IAmb	IAmb	08 46 29.1	
	comp=Z,8.6nm,1.0s						
BRTR	Keskin Array B	32.00	283	P	P	08 46 28.1	+0.7
	comp=Z,3.5nm,0.7s,baz=89,slow=8.7,SNR=10						
BRTR				LR	LR	09 02 38.4	
	comp=Z,66nm,18.4s,baz=63,slow=42						
BRTR	Keskin Array B	32.00	283	*ce*P	P	08 46 28.3	+0.9
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
AKASG	Malin Array Be	33.81	304	P	P	08 46 42.5	-0.4
	comp=Z,0.3nm,0.3s,baz=75,slow=7.5,SNR=9.1						
AKASG				LR	LR	09 03 37.3	
	comp=Z,169nm,18.8s,baz=350,slow=42						
AKASG	Malin Array Be	33.81	304	P	P	08 46 42.5	-0.4
AKASG				pmax	pmax		
	comp=Z,3.0nm,1.2s						
AKASG	Malin Array Be	33.81	304	IAmb	IAmb	08 46 44.1	
	comp=Z,2.6nm,1.2s						
AKBB	Malin Array Si	33.81	304	*ce*P	P	08 46 42.1	-0.9
BURAR	Bucovina Array	36.62	299	P	P	08 47 08.0	+0.7
BUR08	Bucovina Ar. S	36.62	299	P	P	08 47 07.7	+0.3
BUR08				IAmb	IAmb	08 47 18.5	
	comp=Z,4.1nm,1.2s						
FINES	FINESS Array B	36.81	322	P	P	08 47 08.8	+0.2
	comp=Z,1.9nm,0.5s,baz=99,slow=12,SNR=11						
FINES				LR	LR	09 02 55.6	
	comp=Z,469nm,18.8s,baz=64,slow=37						
YAK	Yakutsk	39.08	37	LR	LR	09 04 17.9	
	comp=Z,406nm,18.1s,baz=268,slow=37						
YAK	Yakutsk	39.08	37	*ce*P	P	08 47 28.9	+1.1
YAK				pmax	pmax		
	comp=Z,13nm,0.5s						
ARCES	ARCESS Array B	39.47	335	P	P	08 47 31.2	+0.3
	comp=Z,5.1nm,0.7s,baz=105,slow=9.2,SNR=21						
ARCES				LR	LR	09 04 25.4	
	comp=Z,243nm,20.8s,baz=110,slow=37						
ARCES	ARCESS Array B	39.47	335	P	P	08 47 31.7	+0.7
ARCES				pmax	pmax		
	comp=Z,35nm,1.3s						
ARCES	ARCESS Array B	39.47	335	P	P	08 47 31.7	+0.7
KSRS	Korea Array	40.45	76	LR	LR	09 06 58.5	
	comp=Z,81nm,18.5s,baz=296,slow=40						
DIVS	Divibare	40.85	295	P	P	08 47 44.0	+1.1
DIVS				IAmb	IAmb	08 47 45.3	
	comp=Z,15nm,1.4s						
TIXI	Tiksi	41.24	23	P	P	08 47 45.9	+0.3
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
TIXI	Tiksi	41.24	23	P	P	08 47 45.9	+0.3
TIXI				IAmb	IAmb	08 47 56.8	
	comp=Z,9.4nm,1.1s						
MORC	Moravsky Berou	41.35	304	*e*P	P	08 47 47.0	+0.1
USRK	Ussuriysk Ar.	41.40	65	LR	LR	09 06 52.7	
	comp=Z,143nm,19.0s,baz=134,slow=39						
JAVC	Velka Javorina	41.42	302	*e*P	P	08 47 48.3	+0.8
VRAC	Vranov	42.04	303	*e*P	P	08 47 52.8	+0.3
KRUC	Moravsky	42.22	303	*e*P	P	08 47 54.9	+1.0
NC405	NORSAR Array S	43.67	321	P	P	08 48 04.8	-0.7
NB2	NORSAR Subarra	43.92	321	P	P	08 48 07.0	-0.5
	comp=Z,6.1nm,1.1s,baz=89,slow=7.9						
NOA	NORSAR Array B	43.92	321	P	P	08 48 07.2	-0.3
	comp=Z,1.8nm,0.9s,baz=90,slow=8.1,SNR=4.0						
NOA				LR	LR	09 07 28.1	
	comp=Z,264nm,18.8s,baz=85,slow=37						
CLL	Collm	43.95	307	*e*P	P	08 48 08.0	+0.1
CLL	Collm	43.95	307	P	P	08 48 08.3	+0.5
CLL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CLL	Collm	43.95	307	P	P	08 48 08.3	+0.5
CLL				IAmb	IAmb	08 48 08.8	
	comp=Z,4.9nm,0.8s						
GEC2	GERESS Array S	44.00	303	P	P	08 48 08.6	+0.2
GEC2				IAmb	IAmb	08 48 10.1	
	comp=Z,6.0nm,0.8s						
GERES	GERESS Array B	44.00	303	P	P	08 48 08.8	+0.4
	comp=Z,4.8nm,0.8s,baz=61,slow=6.1,SNR=8.1						
GERES				LR	LR	09 09 33.8	
	comp=Z,257nm,18.6s,baz=80,slow=40						
GERES	GERESS Array B	44.00	303	P	P	08 48 09.1	+0.7
GERES	GERESS Array B	44.00	303	P	P	08 48 09.1	+0.7
KHC	Kasperske Hory	44.02	303	*e*P	P	08 48 09.5	+1.0
KHC	Kasperske Hory	44.02	303	*e*P	P	08 48 09.5	+1.0
JOW	Kunigami	45.30	90	LR	LR	09 09 14.6	
	comp=Z,47nm,18.6s,baz=112,slow=39						
SEY	Seymchan	49.56	36	LR	LR	09 10 58.4	
	comp=Z,200nm,19.4s,baz=270,slow=37						
PETK	Petropavlovsk-	55.00	47	LR	LR	09 13 57.8	
	comp=Z,45nm,19.8s,baz=31,slow=37						
ESDC	Sonseca Array	59.05	298	P	P	08 50 00.9	-0.3
	comp=Z,1.7nm,0.8s,baz=56,slow=7.3,SNR=9.6						
TOLK	Toolik Lake Re	66.67	16	P	P	08 50 51.6	+0.2
TOLK				IAmb	IAmb	08 50 52.0	
	comp=Z,4.3nm,0.8s						
COLD	Coldfoot	67.67	18	P	P	08 50 57.8	+0.1
COLD				IAmb	IAmb	08 50 58.5	
	comp=Z,6.8nm,1.1s						
IMAR	Indian Mountai	67.79	20	P	P	08 50 58.1	-0.4
BMAR	Burnt Mountain	68.73	15	P	P	08 51 05.2	+0.7
TORD	Torodi Ar. Bea	69.36	270	P	P	08 51 07.6	-1.5
	comp=Z,2.6nm,0.7s,baz=47,slow=5.6,SNR=18						
TORD	Torodi Ar. Bea	69.36	270	P	P	08 51 08.3	-0.8
TORD				IAmb	IAmb	08 51 09.0	
	comp=Z,2.9nm,0.8s						
INK	Inuvik	69.91	11	P	P	08 51 10.7	-0.9
	comp=Z,3.8nm,0.8s,baz=345,slow=7.4,SNR=15						
INK	Inuvik	69.91	11	P	P	08 51 11.8	+0.2
INK				pmax	pmax		
	comp=Z,12nm,1.3s						
INK	Inuvik	69.91	11	P	P	08 51 11.8	+0.2
ILAR	Eielson Array	70.47	18	P	P	08 51 13.7	-1.5
	comp=Z,1.1nm,0.8s,baz=311,slow=5.2,SNR=13						
ILAR	Eielson Array	70.47	18	P	P	08 51 13.9	-1.2
ILAR	Eielson Array	70.47	18	P	P	08 51 13.9	-1.2
RIDG	Independent Ri	71.82	18	P	P	08 51 22.9	-0.5
RIDG				IAmb	IAmb	08 51 30.8	
	comp=Z,6.5nm,1.1s						
SCM	Sheep Creek Mo	72.82	20	P	P	08 51 28.6	-0.9
SCM				pmax	pmax		
	comp=Z,29nm,1.4s						
SCM	Sheep Creek Mo	72.82	20	P	P	08 51 28.6	-0.9
M24K	Tolsona, Glenn	72.89	19	P	P	08 51 30.3	+0.5
KOWA	Kowa	72.93	275	P	P	08 51 30.5	-0.3
KOWA				IAmb	IAmb	08 51 40.8	
	comp=Z,8.6nm,1.4s						
BCAR	Beaver Creek A	73.10	17	P	P	08 51 31.0	-0.1
KNRA	Kununurra	74.20	127	P	P	08 51 38.5	+0.4
YKA	Yellowknife Ar	77.60	5	P	P	08 51 56.3	-0.6
	comp=Z,4.9nm,0.8s,baz=4.6,slow=5.5,SNR=37						
YKA				LR	LR	09 29 38.9	
	comp=Z,66nm,18.0s,baz=0.0,slow=38						
DBIC	Dimbokro	78.42	269	P	P	08 52 00.9	-1.3
	comp=Z,3.2nm,0.7s,baz=32,slow=8.3,SNR=4.1						
DBIC	Dimbokro	78.42	269	P	P	08 52 01.6	-0.6
DBIC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
DBIC	Dimbokro	78.42	269	P	P	08 52 01.6	-0.6
DBIC				IAmb	IAmb	08 52 02.2	
	comp=Z,6.3nm,1.0s						
SCHQ	Schefferville	80.28	339	LR	LR	09 27 15.2	
	comp=Z,66nm,21.3s,baz=59,slow=35						
WRA	Warramunga Arr	80.88	125	P	P	08 52 14.4	-1.0
	comp=Z,1.0nm,0.7s,baz=324,slow=4.5,SNR=5.5						
WRA	Warramunga Arr	80.88	125	P	P	08 52 15.2	-0.2
WRA	Warramunga Arr	80.88	125	P	P	08 52 15.2	-0.2
ASAR	Alice Springs	83.39	128	P	P	08 52 27.1	-1.4
	comp=Z,1.2nm,0.7s,baz=316,slow=5.4,SNR=8.4						
ASAR	Alice Springs	83.39	128	P	P	08 52 28.3	-0.2
ASAR	Alice Springs	83.39	128	P	P	08 52 28.3	-0.2
STKA	Stephens Creek	94.02	129	LR	LR	09 40 56.9	
	comp=Z,22nm,19.7s,baz=23,slow=39						
PDAR	Pinedale Array	97.56	4	P	P	08 53 34.9	-0.8
	comp=Z,0.1nm,0.6s,baz=72,slow=1.1,SNR=2.2						

MAN 30 08:49:28.5, 13°.67N×120°.76E, h18km, mb3.8, ML2.6, MS2.1, Mindoro

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DDA 30 08:49:41.2, 40°.02N×38°.68E, h7km±2km, ML2.1, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALUC	Giresun/Alucra	0.34	12	*i* P	Pg	08 49 48.1	+0.2
ALUC				*i* S	Sg	08 49 53.0	+0.7
ALUC				IAML		08 49 53.0	
	comp=E,1μm,0.3s						
ALUC				IAML		08 49 54.0	
	comp=N,391nm,0.2s						
SUSE	Susehri	0.41	298	*i* P	Pg	08 49 49.8	+0.5
SUSE				*i* S	Sg	08 49 55.6	+0.9
SUSE				IAML		08 49 57.0	
	comp=N,457nm,0.2s						
SUSE				IAML		08 49 57.0	
	comp=E,438nm,0.2s						
KELT	Kelkit	0.46	73	*i* P	Pg	08 49 50.4	+0.2
KELT				*i* S	Sg	08 49 57.2	+0.9
KELT				IAML		08 49 58.0	
	comp=N,122nm,0.4s						
KELT				IAML		08 49 58.0	
	comp=E,115nm,0.3s						
CUZAR	Zara_SIVAS	0.71	260	*i* P	Pg	08 49 53.6	-1.2
CUZAR				*i* S	Sg	08 50 03.3	-0.8
CUZAR				IAML		08 50 04.0	
	comp=N,88nm,0.3s						
CUZAR				IAML		08 50 05.0	
	comp=E,58nm,0.3s						
KEMA	Kemaliye	0.76	191	*i* P	Pg	08 49 55.6	-0.2
KEMA				*i* S	Sb	08 50 07.5	+0.1
KEMA				IAML		08 50 11.0	
	comp=N,41nm,0.4s						

ISK 30 08:49:52.8, 39°.09N×37°.36E, h0km, ML2.0/5, Suspected Mining explosion., Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DARE	Darende-Malaty	0.52	170	PG	Pg	08 50 03.2	+0.4
DARE				SG	Sb	08 50 11.4	-1.7
SVSK	Karacayir	0.88	341	PG	Pg	08 50 09.8	+0.2
SVSK				SG	Sb	08 50 22.8	-0.3
SARI	SarD1z-Kayseri	1.00	228	PG	Pb	08 50 12.6	-0.6
SARI				SG	Sb	08 50 26.9	-0.1
MALT	Malatya	1.14	133	PN	Pg	08 50 12.6	-2.0
MALT				SN	Sb	08 50 31.2	+0.5
BNN	Bunyan	1.21	259	PN	Pg	08 50 15.9	0.0
BNN				SN	Sb	08 50 32.7	-0.1

KRNET ***30*** *08:52:14.2±0.1, 39°.87N×75°.62E, mb4.0*

SOME ***30*** *08:52:14.1, 39°.93N×75°.60E, h5km*

NNC ***30*** *08:52:16.4±1.6, 40°.08N×75°.61E, h0km, mb4.2, mpv3.9, Error ellipse: s-maj=13.3km s-min=8.2km az=153.0*

ISC 30 08:52:15.3±1.0, 40°.01N±0°.04×75°.58E±0°.03, h10km, n71, $\sigma 1\overset{s}{.}89$/110, 43C-9D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	1.59	271	⇓*e*P	Pb	08 52 44.8	-0.1
	baz=76						
SFK				⇓*e*S	Sg	08 53 07.0	+0.5
	baz=76						

OHH	Osh	2.20	284	⇓iP	Pb	08 52 54.5	-0.7
	baz=88						
OHH				⇓iS	Sg	08 53 24.4	-1.5
	baz=88						
ULHL	Ulahol	2.29	12	P	Pb	08 52 57.5	+0.7
	SNR=53						
ULHL	Ulahol	2.29	12	⇑iP	Pb	08 52 57.1	+0.3
	baz=11						
ULHL				⇑iS	Sg	08 53 28.1	-0.8
	baz=11						
UCH	Uchtor	2.36	340	P	Pb	08 52 58.4	+0.3
	SNR=49						
UCH	Uchtor	2.36	340	⇑iP	Pb	08 52 58.2	+0.1
	baz=41						
UCH				⇑iS	Sg	08 53 30.2	-0.9
	baz=41						
TARG	Taragay, Kyrgy	2.41	44	⇑eP	Pb	08 52 57.9	-1.1
	baz=41						
TARG				⇑iS	Sb	08 53 29.8	+0.9
	baz=41						
KDJ	Kajisay	2.44	29	⇑iP	Pb	08 52 58.9	-0.5
	baz=27						
KDJ				⇑iS	Sb	08 53 31.1	+1.5
	baz=27						
BOOM	Boomskoye usch	2.50	6	⇑iP	Pb	08 52 59.9	-0.4
	baz=5.0						
BOOM				⇑iS	Sb	08 53 33.1	+2.0
	baz=5.0						
AML	Almayashu	2.56	327	P	Pb	08 53 00.7	-0.7
	SNR=32						
AML	Almayashu	2.56	327	⇑iP	Pb	08 53 00.9	-0.5
	baz=28						
AML				⇑iS	Sb	08 53 34.8	+1.7
	baz=28						
KBK	Karagaybulak	2.69	350	P	Pb	08 53 03.5	-0.1
	SNR=11						
KBK	Karagaybulak	2.69	350	⇑iP	Pb	08 53 02.6	-1.0
	baz=50						
KBK				⇑iS	Sb	08 53 37.9	+1.2
	baz=50						
AAK	Ala-Archa	2.75	343	⇑Pn	Pb	08 53 03.2	-1.4
	58nm,0.7s						
FRU1	Bishkek	2.89	346	⇑iP	Pb	08 53 05.7	-1.2
	baz=46						
FRU1				⇑iS	Sb	08 53 43.5	+1.1
	baz=46						
TKM2	Tokmak 2	2.91	0	P	Pb	08 53 06.2	-1.1
	SNR=36						
TKM2	Tokmak 2	2.91	0	⇑Pn	Pb	08 53 06.1	-1.2
	26nm,0.4s						
TKM2				⇑Lg	Lg	08 53 48.9	
	140nm,0.6s						
TKM2	Tokmak 2	2.91	0	⇓eP	Pb	08 53 05.7	-1.7
	baz=60						
TKM2				⇓iS	Sb	08 53 43.3	+0.2
	baz=60						
DRK	Karamyk	2.96	261	⇑iP	Pn	08 53 04.5	+1.9
	baz=64						
DRK				⇑iS	Sb	08 53 41.7	-2.9
	baz=64						
EKS2	Erkin-Say	2.98	334	P	Pg	08 53 11.4	-0.9
	SNR=20						
EKS2	Erkin-Say	2.98	334	⇑eP	Pb	08 53 06.5	-2.0
	baz=34						
EKS2				⇑iS	Sb	08 53 44.7	-0.3
	baz=34						
KST	Kastek	3.05	5	eP	Pg	08 53 12.1	-1.5
	56nm,0.5s						
KST				eS	Sg	08 53 53.1	-0.1
	317nm,0.8s						
KST	Kastek	3.05	5	Pg	Pb	08 53 08.2	-1.4
	56nm,0.6s						
KST				Lg	Lg	08 53 50.6	
	317nm,0.8s						
CHMS	Chumysh	3.05	349	P	Sg	08 53 54.7	+1.4
	SNR=5.3						
CHMS	Chumysh	3.05	349	⇑eP	Pb	08 53 07.5	-2.2
	baz=48						
CHMS				⇑iS	Sb	08 53 46.4	-0.6
	baz=48						
IZV	Izvestkoviy	3.12	14	eP	Pg	08 53 13.8	-1.4
	47nm,0.5s						
IZV				eS	Sg	08 53 55.9	+0.3
	189nm,0.6s						
IZV	Izvestkoviy	3.12	14	Pg	Pb	08 53 11.5	+0.5
	47nm,0.5s						
IZV				Lg	Lg	08 53 55.9	
	189nm,0.6s						
MTBS	Maitube	3.19	11	eP	Pg	08 53 14.4	-1.9
	9.2nm,0.3s						
MTBS				eS	Sg	08 53 57.1	-0.5
	90nm,0.6s						
MTBS	Maitube	3.19	11	Pg	Pb	08 53 12.3	+0.3
	11nm,0.6s						
MTBS				Lg	Lg	08 53 57.1	
	90nm,0.6s						
ANVS	Anan'yevo	3.19	29	⇑eP	Pb	08 53 09.1	-3.0
	baz=27						
ANVS				⇑eS	Sb	08 53 49.1	-2.0
	baz=27						
TNSS	Tian-Shan	3.20	18	eP	Pg	08 53 14.5	-2.1
	24nm,0.4s						
TNSS				eS	Sg	08 53 57.2	-0.8
	72nm,0.8s						
TNSS	Tian-Shan	3.20	18	Pg	Pb	08 53 12.4	+0.1
	16nm,0.3s						
TNSS				Lg	Lg	08 53 57.2	
	72nm,0.8s						
DGS	Degeres	3.23	3	eP	Pg	08 53 15.9	-1.4
	27nm,0.5s						
DGS				eS	Sg	08 53 59.5	+0.3
	96nm,0.7s						
DGS	Degeres	3.23	3	Pg	Pb	08 53 10.7	-2.2
	44nm,0.8s						
DGS				Lg	Lg	08 53 55.2	
	96nm,0.7s						
MRKS	Merke	3.26	328	eP	Pg	08 53 15.6	-2.1
	64nm,0.5s						
MRKS				eS	Sg	08 53 59.3	-0.6
	137nm,0.7s						
MRKS	Merke	3.26	328	Pg	Pb	08 53 13.1	-0.1
	64nm,0.5s						
MRKS				Lg	Lg	08 53 59.3	
	137nm,0.7s						
MDOK	Medeo	3.34	19	eP	Pg	08 53 17.0	-2.3
	22nm,0.5s						
MDOK				eS	Sg	08 54 01.2	-1.4
	178nm,1.2s						
MDOK	Medeo	3.34	19	Pn	Pb	08 53 11.6	-3.1
	17nm,0.6s						
MDOK				Lg	Lg	08 54 01.3	
	204nm,0.7s						
MDOK	Medeo	3.34	19	Pg	Pb	08 53 14.7	0.0
	22nm,0.5s						
MDOK				Lg	Lg	08 54 01.2	
	178nm,1.2s						
USP	Ospenovka	3.35	346	P	Pb	08 53 12.3	-2.6
	SNR=10						
USP	Ospenovka	3.35	346	⇑eP	Pb	08 53 11.7	-3.2
	baz=46						
USP				⇑iS	Sb	08 53 53.7	-2.0
	baz=46						
KNDC	Almaty	3.37	18	⇓Pg	Pg	08 53 18.6	-1.2
	90nm,0.8s						
KNDC				⇑Lg	Lg	08 54 04.2	
	454nm,0.6s						
MNAS	Manas	3.39	318	⇑iP	Pb	08 53 12.0	-3.5
	baz=19						
MNAS				⇑iS	Sb	08 53 54.6	-2.3
	baz=19						
KOTS	Kotyrbulak	3.42	19	eP	Pg	08 53 19.2	-1.7
	18nm,0.9s						
KOTS				eS	Sg	08 54 05.2	0.0
	458nm,0.6s						
KOTS	Kotyrbulak	3.42	19	Pg	Pb	08 53 16.9	+0.9
	18nm,0.9s						
KOTS				Lg	Lg	08 54 05.2	
	458nm,0.6s						
BTK	Batken	3.65	272	⇑eP	Pn	08 53 14.4	+2.5
	baz=74						
BTK				⇑iS	Sn	08 53 58.6	+3.5
	baz=74						
KRBS	Karabastau	3.69	1	eP	Pg	08 53 23.5	-2.3
	22nm,0.5s						
KRBS				eS	Sg	08 54 12.0	-1.6
	86nm,0.9s						
KRBS	Karabastau	3.69	1	Pg	Pb	08 53 20.1	-0.4
	22nm,0.5s						
KRBS				Lg	Lg	08 54 10.7	
	86nm,0.9s						
TRKS	Terek-Say	3.70	296	⇑iP	Pn	08 53 15.5	+2.9
	baz=97						
TRKS				⇑iS	Sn	08 53 59.7	+3.4
	baz=97						
SATY	Saty	3.71	34	eP	Pg	08 53 23.6	-2.8
	22nm,0.6s						
SATY				eS	Sg	08 54 12.8	-1.7
	64nm,0.4s						
SATY	Saty	3.71	34	Pg	Pb	08 53 22.0	+0.9
	22nm,0.6s						
SATY				Lg	Lg	08 54 14.0	
	64nm,0.4s						
KTBS	Karatobe	3.79	12	eP	Pg	08 53 26.1	-1.8
	28nm,0.7s						
KTBS				eS	Sg	08 54 16.5	-0.6
	233nm,0.6s						
KTBS	Karatobe	3.79	12	Pg	Pb	08 53 23.3	+1.0
	28nm,0.7s						
KTBS				Lg	Lg	08 54 16.0	
	233nm,0.6s						
KUU	Kurty	3.92	8	eP	Pg	08 53 28.3	-2.1
	9.3nm,0.3s						
KUU				eS	Sg	08 54 20.3	-1.0
	148nm,0.9s						
KUU	Kurty	3.92	8	Pg	Pb	08 53 25.8	+1.3
	9.3nm,0.3s						
KUU				Lg	Lg	08 54 20.3	
	148nm,0.9s						
KURS	Kuram	3.98	28	eP	Pb	08 53 28.2	+2.6
	7.8nm,0.6s						
KURS				eS	Sg	08 54 20.4	-2.7
	48nm,0.9s						
KURS	Kuram	3.98	28	Pg	Pb	08 53 25.5	0.0
	11nm,0.6s						
KURS				Lg	Lg	08 54 20.5	
	48nm,0.9s						
UZB	Uzynbulak	4.06	38	eP	Pg	08 53 30.0	-3.1
	10nm,0.6s						
UZB				eS	Sg	08 54 23.6	-2.1
	24nm,0.6s						
UZB	Uzynbulak	4.06	38	Pg	Pb	08 53 27.8	+0.8
	10nm,0.6s						
UZB				Lg	Lg	08 54 23.6	
	24nm,0.6s						
GAR	Garm	4.19	258	⇑iP	Pn	08 53 21.4	+2.0
	baz=60						
GAR				⇑iS	Sn	08 54 10.7	+2.2
	baz=60						
PDGK	Podgornoye	4.43	40	Pg	Pb	08 53 34.0	+0.8
	3.3nm,0.8s						
PDGK				Lg	Lg	08 54 34.2	
	17nm,0.7s						
PDGK	Podgornoye	4.43	40	⇑Pn	Pn	08 53 25.5	+2.9
	8.4nm,0.7s						
PDGK				⇑Lg	Lg	08 54 34.9	
	54nm,0.8s						
BLB	Baldybastay	4.62	27	Pg	Pb	08 53 37.7	+1.2
	20nm,0.6s						
BLB				Lg	Lg	08 54 40.4	
	45nm,0.5s						
IUG	Iuzhnay	4.71	299	eP	Pg	08 53 42.3	-3.1
	269nm,0.6s						
IUG				eS	Sg	08 54 44.1	-2.2
	53nm,0.6s						
IUG	Iuzhnay	4.71	299	Pg	Pb	08 53 39.5	+1.6
	269nm,0.6s						
IUG				Lg	Lg	08 54 44.1	
	53nm,0.6s						
KK02	Karatay Array	4.90	311	⇑Pn	Pn	08 53 31.0	+2.0
	1.1nm,0.5s,baz=126,slow=13						
KK02				⇓Pg	Pg	08 53 45.2	-3.9
	5.5nm,0.6s,baz=125,slow=16						
KK02				⇓Lg	Lg	08 54 50.9	
	14nm,0.6s,baz=126,slow=28						
KTMS	Ketmen	4.96	45	eP	Pg	08 53 46.0	-4.1
	5.8nm,0.6s						
KTMS				eS	Sg	08 54 50.8	-3.6
	14nm,0.4s						
KTMS	Ketmen	4.96	45	Pg	Pb	08 53 43.4	+1.2
	1.3nm,0.5s						
KTMS				Lg	Lg	08 54 50.8	
	14nm,0.4s						
CHGR	Chuyangaron	5.16	257	⇑eP	Pn	08 53 34.7	+2.1
	baz=59						
CHGR				⇑iS	Sn	08 54 33.6	+1.4
	baz=59						
BRLS	Borolday	5.26	307	eP	Pg	08 53 51.9	-4.2
	4.4nm,0.6s						
BRLS				eS	Sg	08 55 00.9	-3.3
	16nm,0.7s						
BRLS	Borolday	5.26	307	Pg	Pb	08 53 50.3	+3.0
	4.4nm,0.6s						
BRLS				Lg	Lg	08 55 02.1	
	16nm,0.7s						

IDC 30 08:56:35.4±4.8**,55°.41N**×**86°.09E,h0^{km},mb1 2.7**/1**,
mb1mx2.5**/47**,mbtmp2.7**/1**,Error ellipse: s-maj=34.1km
s-min=25.2km az=18.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.64	207	i		09 06 10.0	
	baz=26,slow=335,SNR=4.6						
ZALV	Zalesovo Beam	1.64	207	Pg	Pn	08 57 03.6	-1.9
	3.2nm,0.3s,baz=25,slow=15,SNR=28						
ZALV				Lg	Lg	08 57 28.0	
	2.7nm,0.3s,baz=27,slow=27,SNR=11						
MKAR	Makanchi Array	8.95	197	Pn	Pn	08 58 46.5	+0.7
	baz=14,slow=15,SNR=1.4						

*NEIC **30** 08:58:17.0±1.4,23°.0S±0°.1×179°.4W±0°.1,h524^{km}±10^{km},
mb4.4/20,Error ellipse: s-maj=20.5km s-min=10.5km
az=144.0*

*IDC **30** 08:58:16.6±1.5,23°.02S×179°.56W,h512^{km}±15^{km},mb3.5/7,
mb1 3.6/10,mb1mx3.1/41,mbtmp4.3/10,Error ellipse:
s-maj=22.8km s-min=18.9km az=26.0*

ISC 30 08:58:17.1±0.8**,23°.09S**±0°.09×**179°.5W**±0°.1**,h526^{km},n35,
σ1^{s}.31**/37**,mb4.2**/14**,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.82	336	P	P	08 59 52.1	-1.1
	1.3nm,0.3s,baz=62,slow=23,SNR=4.7						
RAO	Raoul Island	6.29	168	P	P	08 59 57.3	+0.1
	509nm,0.3s,baz=287,slow=18,SNR=6.7						
RAO	Raoul Island	6.29	168	P	P	08 59 57.4	+0.3
DZM	Mont Dzumac	13.07	272	P	P	09 01 04.7	-2.2
	0.2nm,0.3s,baz=89,slow=18,SNR=2.7						
DZM	Mont Dzumac	13.07	272	P	P	09 01 09.1	+2.1
OUZ	Omahuta	13.52	205	P	P	09 01 12.7	+1.4
URZ	Urewera	15.40	190	P	P	09 01 29.2	-1.7
	1.8nm,0.3s,baz=122,slow=24,SNR=11						
URZ				S	S	09 04 06.8	-3.7
	0.1nm,0.3s,baz=307,slow=20,SNR=1.6						
BKZ	Black Stump Fm	16.39	191	P	P	09 01 39.0	-2.1
BKZ				IAmb	IAmb	09 01 45.8	
	comp=Z,9.9nm,1.0s						
QRZ	Quartz Range	18.93	199	P	P	09 02 04.8	+0.4
THZ	Tophouse	19.69	197	P	P	09 02 11.9	+0.5
THZ				IAmb	IAmb	09 02 30.7	
	comp=Z,16nm,1.3s						
ARMA	Armidale	26.79	248	P	P	09 03 16.2	+1.2
ARMA				IAmb	IAmb	09 03 25.2	
	comp=Z,15nm,1.4s						
EIDS	Eidsvold	26.94	259	P	P	09 03 16.9	+0.5
EIDS				IAmb	IAmb	09 03 41.5	
	comp=Z,8.9nm,1.4s						
CAN	Canberra	29.98	239	P	P	09 03 43.8	+1.0
CAN				IAmb	IAmb	09 04 01.9	
	comp=Z,20nm,1.4s						
CTA	Charters Tower	31.99	269	P	P	09 03 59.9	-0.3
	comp=Z,10nm,0.5s,baz=92,slow=12,SNR=9.7						
CTAO	Charters Tower	31.99	269	P	P	09 04 00.2	+0.1
CTAO				IAmb	IAmb	09 04 01.1	
	comp=Z,9.4nm,0.7s						
PMG	Port Moresby	34.72	288	P	P	09 04 22.6	-0.6
	comp=Z,14nm,0.6s,baz=85,slow=7.6,SNR=5.4						
STKA	Stephens Creek	35.49	247	P	P	09 04 29.9	+0.4
	comp=Z,3.9nm,0.7s,baz=98,slow=10,SNR=10						
STKA	Stephens Creek	35.49	247	IAmb	IAmb	09 04 30.4	
	comp=Z,0.8nm,0.7s						
COEN	Coen	36.49	278	P	P	09 04 38.5	+0.5
COEN				IAmb	IAmb	09 04 48.4	
	comp=Z,7.2nm,1.1s						
BBOO	Buckleboo	40.23	246	P	P	09 05 07.7	-0.4
BBOO				IAmb	IAmb	09 05 08.3	
	comp=Z,14nm,1.1s						
AS31	Alice Springs	42.67	260	P	P	09 05 27.5	-0.2
ASAR	Alice Springs	42.67	260	P	P	09 05 27.1	-0.5
	comp=Z,5.1nm,0.8s,baz=96,slow=6.9,SNR=45						
ASAR				PcP	pwP	09 07 07.8	+0.6
	comp=Z,0.7nm,0.6s,baz=111,slow=4.1,SNR=4.8						
WB0	Warramunga Arr	42.96	265	P	P	09 05 29.2	-0.7
WB0				IAmb	IAmb	09 05 29.7	
	comp=Z,7.4nm,0.6s						
WB2	Warramunga Arr	42.96	265	P	P	09 05 28.9	-1.0
WB2				IAmb	IAmb	09 05 29.7	
	comp=Z,7.1nm,0.7s						
WRA	Warramunga Arr	42.97	265	P	P	09 05 29.1	-0.9
	comp=Z,4.8nm,0.7s,baz=92,slow=8.5,SNR=54						
WRA				PcP	PcP	09 07 08.5	-0.2
	comp=Z,0.5nm,0.6s,baz=96,slow=3.6,SNR=3.2						
WRA				ScP	ScP	09 10 12.9	+3.2
	comp=Z,0.7nm,0.8s,baz=95,slow=3.9,SNR=3.4						
WRA	Warramunga Arr	42.97	265	P	P	09 05 29.1	-0.9
FORT	Forrest	47.07	249	P	P	09 06 00.9	-0.4
KNRA	Kununurra	49.20	269	P	P	09 06 16.9	-0.5
VNDA	Vanda	55.23	185	P	P	09 07 01.5	+1.8
	comp=Z,0.6nm,0.8s,baz=23,slow=6.6,SNR=2.5						
VNDA	Vanda	55.23	185	IAmb	IAmb	09 07 02.6	
	comp=Z,1.2nm,0.9s						
GHO	Glory Hole Cre	88.05	14	P	P	09 10 10.6	-0.3
CAST	Castle Rocks	88.88	12	P	P	09 10 13.7	-0.9
TXAR	Lajitas Array	89.58	58	P	P	09 10 19.6	+0.8
	comp=Z,0.5nm,0.8s,baz=207,slow=5.3,SNR=5.9						
IMAR	Indian Mountai	90.93	10	P	P	09 10 24.1	0.0
AKASG	Malin Array Be	144.56	328	PKP	PKPdf	09 16 52.5	-0.9
	comp=Z,0.1nm,0.3s,baz=45,slow=3.8,SNR=4.4						

*IDC **30** 09:01:36.5±0.8,23°.62S×64°.66W,h0^{km},mb3.9/7,
mb1 4.0/12,mb1mx3.9/29,mbtmp3.9/12,ML3.9/5,MS3.1/6,
Ms1 3.1/6,ms1mx3.0/27,Error ellipse: s-maj=22.6km
s-min=17.0km az=48.0*

*SJA **30** 09:01:38.1±1.0,23°.55S×64°.73W,h22^{km}±7^{km},ML4.2,
MW4.1*

*NEIC **30** 09:01:41.7±2.0,23°.60S±0°.07×64°.57W±0°.08,h26^{km}±6^{km},
mb4.3/4,Md4.2(SJA),Error ellipse: s-maj=11.1km
s-min=10.2km az=135.0*

ISC 30 09:01:38.4±0.5**,23°.56S**±0°.04×**64°.60W**±0°.05**,h10^{km},n60,
σ1^{s}.45**/63**,mb4.0**/7**,MS3.2**/3**,Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HJA	Humahuaca	0.82	295	i P	Pg	09 01 52.6	-1.7
HJA				i S	Sg	09 02 04.0	-1.0
HJA				IAML		09 02 06.4	
	comp=Z,9µm,0.4s						
SLA	San Lorenzo	1.42	215	i P	Pn	09 02 05.0	+0.5
SLA				i S	Sn	09 02 23.7	+0.3
SLA				IAML		09 02 27.4	
	comp=Z,8µm,0.5s						
YJA	Yavi	1.61	328	eP	Pn	09 02 07.8	+0.4
YJA				eS	Sn	09 02 29.1	+0.7
YJA				IAML		09 02 32.6	
	comp=Z,2µm,0.5s						
FSA	Cafayete	2.83	206	i P	Pn	09 02 24.8	+0.8
AHML	Horco Molle	3.28	191	i P	Pn	09 02 30.3	+0.3
AHML				i S	Sn	09 03 09.9	+0.8
AHML				IAML		09 03 33.4	
	comp=Z,637nm,0.6s						
LVC	Limon Verde	4.08	283	Pn	Pn	09 02 42.0	+0.8
	comp=Z,2.2nm,0.3s,baz=104,slow=7.5,SNR=14						
LVC				LR	LR	09 04 37.0	
	comp=Z,128nm,21.8s,baz=120,slow=45						
LVC	Limon Verde	4.08	283	Pn	Pn	09 02 42.9	+1.7
PB15	IPOC Station P	4.49	273		Pn	09 02 48.2	+1.5
PB09	IPOC Station P	4.63	291		Pn	09 02 50.8	+2.1
PB06	IPOC Station P	4.65	280		Pn	09 02 51.0	+2.1
CYA	Choya	4.98	192	eP	Pn	09 02 53.4	0.0
CYA				IAML		09 04 20.0	
	comp=Z,146nm,0.6s						
PB01	IPOC Station P	5.17	298		Pn	09 02 57.9	+2.0
PB07	IPOC Station P	5.21	289		Pn	09 02 58.1	+1.5
AC02	Maricunga	5.24	231		Pn	09 02 59.8	+2.5
PB04	IPOC Station P	5.25	282		Pn	09 02 59.9	+2.7
PB14	IPOC Station P	5.41	257	Pn	Pn	09 03 01.9	+2.5
PB08	IPOC Station P	5.42	308		Pn	09 03 02.7	+3.0
PB10	IPOC Station P	5.46	269	Pn	Pn	09 03 01.2	+1.2
PATCX	Punta Patache	5.82	297		Pn	09 03 05.4	+0.5
TA01	Diego Aracena	5.97	299	Pn	Pn	09 03 07.7	+0.8
PB11	IPOC Station P	6.03	308	Pn	Pn	09 03 10.6	+2.8
VCA	Vinchina	6.09	211	i P	Pn	09 03 10.3	+1.6
VCA				IAML		09 05 04.0	
	comp=Z,120nm,0.7s						
ACLC	CERRO LA CRUZ	6.21	199	i P	Pn	09 03 10.3	-0.1
ACLC				IAML		09 05 03.3	
	comp=Z,55nm,0.8s						
PB16	IPOC Station P	6.93	318		Pn	09 03 24.1	+3.5
CPUP	Villa Florida	7.16	114	Pn	Pn	09 03 23.9	+0.6
	comp=Z,3.0nm,0.3s,baz=292,slow=11,SNR=45						
CPUP				Lg	Lg	09 05 24.2	
	comp=Z,7.0nm,0.3s,baz=351,slow=14,SNR=1.6						
CPUP				LR	LR	09 06 39.7	
	comp=Z,115nm,21.1s,baz=2.5,slow=42						
CPUP	Villa Florida	7.16	114	Pn	Pn	09 03 24.6	+1.4
PB12	IPOC Station P	7.26	312	Pn	Pn	09 03 28.0	+3.2
AC04	Llanos de Chal	7.44	230	Pn	Pn	09 03 27.7	+0.6
TCA	Tanti	7.75	180	i P	Pn	09 03 31.0	-0.4
LPAZ	La Paz	7.96	335	Pn	Pn	09 03 36.1	+1.3
	comp=Z,0.2nm,0.3s,baz=43,slow=5.4,SNR=2.6						
LPAZ				Sn	Sn	09 05 07.1	+1.9
	comp=Z,0.9nm,0.3s,baz=18,slow=12,SNR=1.9						
SIV	San Ignacio	8.23	24	Pn	Pn	09 03 38.8	+0.8
	comp=Z,5.4nm,0.3s,baz=227,slow=7.2,SNR=100						
SIV				Sn	Sn	09 05 07.9	-3.2
	comp=Z,6.7nm,0.3s,baz=213,slow=20,SNR=2.0						
SIV				Lg	Lg	09 05 55.6	
	comp=Z,5.7nm,0.3s,baz=108,slow=21,SNR=5.1						
ZON	Zonda	8.74	204	Pn	Pn	09 03 46.2	+1.2
AQDB	Aquidauana	8.81	71	Pn	Pn	09 03 46.9	+1.0
PTLB	Pontes e Lacer	9.57	34	Pn	Pn	09 03 57.9	+1.5
ASAL	Salagasta	9.74	202	i P	Pn	09 03 59.2	+0.4
VILB	Vilhena	11.35	22		Pn	09 04 21.7	+1.0
ETMB	Extrema	13.75	353		Pn	09 04 52.6	-0.9
NNA	Nana	16.36	313	LR	LR	09 13 20.0	
	comp=Z,57nm,18.7s,baz=138,slow=43						
LC01	Cunco	16.50	200	P	P	09 05 32.3	-0.4
LC01				IAmb	IAmb	09 05 35.0	
	comp=Z,19nm,1.2s						
PLCA	Paso Flores	17.84	195	P	Pn	09 05 47.2	+0.4
	comp=Z,0.1nm,0.3s,baz=59,slow=8.0,SNR=1.5						
PLCA				LR	LR	09 12 38.2	
	comp=Z,87nm,18.3s,baz=354,slow=37						
PLCA	Paso Flores	17.84	195		Pn	09 05 47.3	+0.4
GO07	Milladeo Hill,	20.90	199	P	P	09 06 19.9	-1.0
ATAH	Atahualpa	21.03	319	LR	LR	09 14 55.6	
	comp=Z,62nm,20.9s,baz=95,slow=38						
PTGA	Pitinga	23.13	12	P	P	09 06 45.8	+0.9
	comp=Z,1.6nm,0.7s,baz=177,slow=9.9,SNR=5.7						
PTGA				LR	LR	09 17 07.6	
	comp=Z,90nm,20.3s,baz=188,slow=40						
VNA3	Neumayer Olymp	56.87	162	P	P	09 11 22.7	-0.3
VNA1	Neumayer--Stat	57.03	161	P	P	09 11 23.5	-0.6
VNA2	Neumayer--Watz	57.41	161	P	P	09 11 26.7	-0.1
	baz=292,slow=7.9						
SNAA	Sanae	59.05	161	P	P	09 11 37.6	-0.8
	comp=Z,2.2nm,0.9s,baz=264,slow=8.1,SNR=4.9						
TXAR	Lajitas Array	64.63	322	P	P	09 12 15.1	-1.4
	comp=Z,0.2nm,0.8s,baz=188,slow=8.0,SNR=2.0						
DBIC	Dimbokro	65.58	70	P	P	09 12 23.8	+0.9
	comp=Z,1.0nm,0.5s,baz=38,slow=3.2,SNR=1.6						
TORD	Torodi Ar. Bea	74.37	68	P	P	09 13 16.8	-0.1
	comp=Z,4.2nm,0.8s,baz=254,slow=5.8,SNR=27						
TORD	Torodi Ar. Bea	74.37	68	P	P	09 13 16.8	-0.1
TORD				IAmb	IAmb	09 13 17.7	
	comp=Z,4.8nm,0.8s						
PDAR	Pinedale Array	77.92	328	P	P	09 13 36.8	0.0
	comp=Z,0.8nm,0.8s,baz=135,slow=5.2,SNR=5.2						
ESDC	Sonseca Array	84.58	43	P	P	09 14 12.4	+0.4
	comp=Z,0.9nm,1.0s,baz=257,slow=8.8,SNR=2.1						
AFI	Afiamalu	99.68	250	LR	LR	09 49 11.7	
	comp=Z,140nm,19.1s,baz=182,slow=29						
ASAR	Alice Springs	129.73	202	PKP	PKPdf	09 20 47.5	-1.2
	comp=Z,0.7nm,0.8s,baz=171,slow=2.7,SNR=5.5						
WRA	Warramunga Arr	132.98	205	PKP	PKPdf	09 20 53.9	-1.1
	comp=Z,0.3nm,0.6s,baz=163,slow=1.8,SNR=9.1						

ZALV	Zalesovo Beam comp=Z,0.4nm,0.3s,baz=23,slow=32,SNR=2.0	141.96	29	PKP	PKPdf	09 21 10.5	+0.2
MKAR	Makanchi Array comp=Z,0.7nm,0.7s,baz=320,slow=3.2,SNR=6.6	144.78	41	PKP	PKPab	09 21 13.6	-0.9
SONM	Songino Array comp=Z,0.3nm,0.5s,baz=38,slow=2.6,SNR=2.3	154.73	14	PKPbc	PKPbc	09 21 39.8	-0.2

NOU 30 09:03:27.1, 18°.56S × 168°.57E, h29^{km}, MLv4.3/17, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTV	Rentapao	0.78	350	P	Pn	09 03 42.4	+0.3
DVP	Devils Point	0.91	336	P	Pb	09 03 44.1	-0.2
LIFNC	LIFOU	2.54	209	P	Pn	09 04 05.0	-1.3
MARNC	Mare, Loyalty	2.95	190	P	Pn	09 04 10.6	-1.4
SANVU	Saraoutou	3.36	337	P	Pn	09 04 16.5	-1.2
YATNC	Mamie plateau,	3.82	204	P	Pn	09 04 23.5	-0.5
DZM	Mont Dzumac 26nm,0.2s	4.02	209	*e*Pn	Pn	09 04 26.9	0.0
DZM	101nm,0.3s			*e*Sn	Sn	09 05 12.2	-0.9
DZM	Mont Dzumac	4.02	209	P	Pn	09 04 27.2	+0.3
NOUC	Port Laguerre	4.12	211	P	Pn	09 04 29.1	+1.0
OUENC	Ouen Island, N	4.17	203	P	Pn	09 04 29.2	+0.4
PINNC	Pines Island,	4.17	194	P	Pn	09 04 29.1	+0.3
ONTNC	Ouen Toro	4.22	208	P	Pn	09 04 30.3	+0.8
KOUNC	Koumac, New Ca	4.50	243	P	Pn	09 04 33.3	0.0

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*NNC **30** 09:15:09.8±1.2, 39°.78N × 75°.58E, h0^{km}, mb3.6, mpv3.3, Error ellipse: s-maj=8.8km s-min=7.0km az=148.0*

*SOME **30** 09:15:15.7, 40°.02N × 75°.55E, h5^{km}*

*KRNET **30** 09:15:17.8±0.1, 39°.94N × 75°.42E, mb2.9*

ISC 30 09:15:14.0±1.4, **39°.93N**±0°.05 × **75°.56E**±0°.03, **h15**^{km}±13^{km}, **n49**, σ**1^{s}.14**/74, **19C-10D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan baz=73	1.58	274	⇑*e*P	Pg	09 15 45.9	+1.4
SFK	baz=73			⇑*e*S	Sg	09 16 05.9	+0.9
OHH	Osh baz=87	2.20	286	⇓*i*P	Pg	09 15 56.4	+0.1
OHH	baz=87			⇓*i*S	Sg	09 16 24.1	-0.8
ULHL	Ulahol SNR=10	2.37	12	P	Pg	09 15 59.1	-0.4
ULHL	Ulahol baz=15	2.37	12	⇑*i*P	Pg	09 16 00.3	+0.8
ULHL	baz=15			⇑*i*S	Sg	09 16 31.4	+1.2
UCH	Uchtor SNR=7.0	2.42	341	P	Pg	09 15 59.4	-1.1
UCH	Uchtor baz=44	2.42	341	⇑*i*P	Pg	09 15 59.7	-0.9
UCH	baz=44			⇑*i*S	Sg	09 16 31.3	-0.7
TARG	Taragay, Kyrgy baz=45	2.48	43	⇑*i*P	Pg	09 16 01.9	+0.4
TARG	baz=45			⇑*i*S	Sg	09 16 35.1	+1.4
KDJ	Kajisay baz=31	2.51	29	⇑*i*P	Pg	09 16 02.4	+0.1
KDJ	baz=31			⇑*i*S	Sg	09 16 35.3	+0.4
BOOM	Boomskoye usch baz=9.0	2.57	6	⇓*e*P	Pg	09 16 02.9	-0.4
BOOM	baz=9.0			⇓*i*S	Sg	09 16 35.7	-1.0
AML	Almayashu SNR=14	2.61	328	P	Pg	09 16 04.0	-0.1
KBK	Karagaybulak SNR=11	2.76	351	P	Pb	09 16 04.2	+1.0
DRK	Karamyk baz=62	2.93	262	⇓*i*P	Pb	09 16 06.7	+0.5
DRK	baz=62			⇓*i*S	Sb	09 16 41.7	-0.2
TKM2	Tokmak 2 SNR=12	2.98	1	P	Pb	09 16 07.5	+0.4
TKM2	Tokmak 2 4.0nm,0.5s	2.98	1	⇑Pg	Pb	09 16 07.2	+0.1
TKM2	19nm,0.6s			⇑Lg	Lg	09 16 50.6	
TKM2	Tokmak 2 baz=3.0	2.98	1	⇑*i*P	Pb	09 16 08.4	+1.4
TKM2	baz=3.0			⇑*i*S	Sb	09 16 45.6	+2.3
EKS2	Erkin-Say SNR=5.0	3.04	334	P	Sg	09 16 53.2	+1.6
EKS2	Erkin-Say baz=36	3.04	334	⇑*i*P	Pb	09 16 08.5	+0.7
EKS2	baz=36			⇑*i*S	Sb	09 16 45.9	+1.1
KST	Kastek 4.7nm,0.7s	3.12	5	*e*P	Pg	09 16 13.5	-0.3
KST	49nm,0.8s			*e*S	Sg	09 16 54.4	+0.1
KST	Kastek 7.3nm,0.5s	3.12	5	Pg	Pb	09 16 09.3	0.0
KST	49nm,0.8s			Lg	Lg	09 16 55.2	
IZV	Izvestkoviy 7.2nm,0.5s	3.20	14	*e*P	Pg	09 16 15.2	-0.2
IZV	12nm,0.3s			*e*S	Sg	09 16 57.4	+0.6
IZV	Izvestkoviy 3.5nm,0.5s	3.20	14	Pg	Pb	09 16 10.4	-0.2
IZV	12nm,0.3s			Lg	Lg	09 16 57.0	
MTBS	Maitube 2.8nm,0.7s	3.26	11	*e*P	Pg	09 16 16.3	-0.2
MTBS	13nm,0.6s			*e*S	Sg	09 16 58.8	0.0
MTBS	Maitube 7.3nm,0.5s	3.26	11	Pg	Pb	09 16 11.3	-0.3
MTBS	13nm,0.6s			Lg	Lg	09 16 58.8	
TNSS	Tian-Shan 4.8nm,0.5s	3.27	18	*e*P	Pg	09 16 16.2	-0.5
TNSS	7.4nm,0.4s			*e*S	Sg	09 16 58.9	-0.3
TNSS	Tian-Shan 9.0nm,0.5s	3.27	18	Pg	Pb	09 16 11.4	-0.6
TNSS	7.4nm,0.4s			Lg	Lg	09 16 58.9	
DGS	Degeres 3.8nm,0.7s	3.31	3	*e*P	Pg	09 16 16.9	-0.6
DGS	11nm,0.7s			*e*S	Sg	09 17 00.2	-0.2
DGS	Degeres 8.4nm,0.4s	3.31	3	Pg	Pb	09 16 11.9	-0.6
DGS	11nm,0.7s			Lg	Lg	09 16 59.5	
MRKS	Merke 11nm,0.5s	3.31	329	*e*P	Pg	09 16 16.5	-1.0
MRKS	26nm,0.9s			*e*S	Sg	09 16 59.7	-0.7
MRKS	Merke 2.8nm,0.4s	3.31	329	Pg	Pb	09 16 12.4	-0.1
MRKS	26nm,0.9s			Lg	Lg	09 16 60.0	
MDOK	Medeo 2.6nm,0.4s	3.42	19	*e*P	Pg	09 16 18.7	-0.7
MDOK	19nm,0.7s			*e*S	Sg	09 17 03.2	-0.5
MDOK	Medeo 4.2nm,0.7s	3.42	19	Pn	Pn	09 16 08.2	+1.3
MDOK	31nm,0.9s			⇑Lg	Lg	09 17 02.7	
MDOK	Medeo 2.7nm,0.1s	3.42	19	Pg	Pb	09 16 14.2	-0.1
MDOK	19nm,0.7s			Lg	Lg	09 17 03.2	
USP	Ospenovka SNR=7.2	3.42	347	P	Sg	09 17 05.2	+1.2
MNAS	Manas baz=20	3.44	319	⇓*e*P	Pb	09 16 13.6	-1.1
MNAS	baz=20			⇓*i*S	Sb	09 16 54.2	-2.1
KOTS	Kotyrbulak 3.8nm,0.3s	3.50	19	*e*P	Pg	09 16 20.8	-0.3
KOTS	29nm,0.8s			*e*S	Sg	09 17 06.5	+0.2
KOTS	Kotyrbulak 3.8nm,0.3s	3.50	19	Pg	Pb	09 16 16.1	+0.4
KOTS	29nm,0.8s			Lg	Lg	09 17 06.5	
BTK	Batken baz=73	3.64	273	⇑*e*P	Pb	09 16 16.3	-1.8
BTK	baz=73			⇑*i*S	Sb	09 16 58.6	-3.5
KRBS	Karabastau 2.6nm,0.4s	3.76	1	*e*P	Pg	09 16 24.7	-1.3
KRBS	14nm,0.8s			*e*S	Sg	09 17 13.4	-1.4
KRBS	Karabastau 2.6nm,0.4s	3.76	1	Pg	Pb	09 16 20.1	0.0
KRBS	14nm,0.8s			Lg	Lg	09 17 14.1	
SATY	Saty 4.5nm,0.6s	3.79	33	*e*P	Pg	09 16 25.7	-0.9
SATY	8.7nm,0.6s			*e*S	Sg	09 17 15.2	-0.4
SATY	Saty 2.0nm,0.3s	3.79	33	Pg	Pb	09 16 22.1	+1.5
SATY	8.7nm,0.6s			Lg	Lg	09 17 17.0	
KTBS	Karatobe 5.7nm,0.7s	3.87	12	*e*P	Pg	09 16 26.9	-1.2
KTBS	15nm,0.4s			*e*S	Sg	09 17 17.5	-0.7
KTBS	Karatobe 5.7nm,0.7s	3.87	12	Pg	Pb	09 16 22.2	+0.3
KTBS	15nm,0.4s			Lg	Lg	09 17 17.5	
KUU	Kurty 1.2nm,0.5s	4.00	8	*e*P	Pg	09 16 28.9	-1.7
KUU	24nm,0.6s			*e*S	Sg	09 17 20.5	-1.9
KUU	Kurty 1.7nm,0.9s	4.00	8	Pg	Pb	09 16 24.3	+0.1
KUU	24nm,0.6s			Lg	Lg	09 17 20.5	
UZB	Uzynbulak 3.0nm,0.5s	4.13	38	*e*P	Pg	09 16 30.6	-2.6
UZB	3.9nm,0.6s			*e*S	Sg	09 17 24.0	-2.7
UZB	Uzynbulak 2.7nm,0.4s	4.13	38	Pg	Pb	09 16 26.5	0.0
UZB	3.9nm,0.6s			Lg	Lg	09 17 24.8	
PDGK	Podgornoye 0.8nm,0.9s	4.49	40	Pg	Pb	09 16 32.8	+0.1
PDGK	1.7nm,0.8s			Lg	Lg	09 17 35.6	
KK02	Karatay Array 0.7nm,0.4s,baz=126,slow=16	4.94	312	⇓Pg	Pb	09 16 42.9	+2.8
KK02	1.7nm,0.5s,baz=129,slow=27			⇓Lg	Lg	09 17 51.2	

IDC 30 09:18:40.7±10.0, **24°.31S** × **179°.74E**, **h513**^{km}±138^{km}, **mb3.1**/3, **mb1 3.5**/4, **mb1mx3.1**/19, **mbtmp4.2**/4, **Error ellipse: s-maj=94.6km s-min=29.8km az=6.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera 2.1nm,0.3s,baz=301,slow=20,SNR=8.5	14.09	189	P	P	09 21 41.2	+0.3
URZ	0.3nm,0.3s,baz=307,slow=20,SNR=2.2			S	S	09 24 08.7	-0.8
ASAR	Alice Springs 1.4nm,0.8s,baz=94,slow=7.4,SNR=20	41.73	261	P	P	09 25 44.9	+0.2
WRA	Warramunga Arr 2.8nm,0.5s,baz=103,slow=8.2,SNR=74	42.14	267	P	P	09 25 47.5	-0.4
TXAR	Lajitas Array 0.3nm,0.8s,baz=219,slow=5.6,SNR=4.0	90.85	58	P	P	09 30 49.4	-0.1

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*SOME **30** 09:23:29.9, 39°.73N × 75°.55E, h5^{km}*

*KRNET **30** 09:23:36.9±0.1, 39°.88N × 75°.52E, mb3.7*

*NNC **30** 09:23:36.4±1.7, 40°.00N × 75°.57E, h0^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=13.0km s-min=10.8km az=155.0*

ISC 30 09:23:38.2±1.1, **40°.07N**±0°.05 × **75°.50E**±0°.03, **h10**^{km}, **n63**, σ**1^{s}.34**/99, **31C-20D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan baz=76	1.54	269	⇑*e*P	Pb	09 24 06.0	-0.9
SFK	baz=76			⇑*e*S	Sg	09 24 27.0	-0.7
OHH	Osh baz=88	2.13	283	⇑*i*P	Pb	09 24 16.3	-0.6
OHH	baz=88			⇑*i*S	Sg	09 24 45.1	-1.5
ULHL	Ulahol SNR=66	2.25	14	P	Pg	09 24 19.8	-1.5
ULHL	Ulahol baz=13	2.25	14	⇑*e*P	Pg	09 24 19.7	-1.5
ULHL	baz=13			⇑*i*S	Sg	09 24 51.2	+0.8
UCH	Uchtor SNR=46	2.28	341	P	Pb	09 24 19.9	+0.1
UCH	Uchtor baz=42	2.28	341	⇑*e*P	Pg	09 24 20.5	-1.5
UCH	baz=42			⇑*i*S	Sg	09 24 52.3	+0.7
TARG	Taragay, Kyrgy baz=42	2.41	46	⇑*e*P	Pb	09 24 21.3	-0.6
TARG	baz=42			⇑*i*S	Sg	09 24 53.5	-2.1
KDJ	Kajisay baz=29	2.42	31	⇓*i*P	Pb	09 24 21.8	-0.1
KDJ	baz=29			⇓*i*S	Sg	09 24 54.7	-1.2
BOOM	Boomskoye usch baz=7.0	2.44	8	⇓*i*P	Pb	09 24 22.6	+0.3
BOOM	baz=7.0			⇓*i*S	Sg	09 24 55.8	-0.9
AML	Almayashu SNR=63	2.47	327	P	Pb	09 24 22.4	-0.6
AML	Almayashu baz=29	2.47	327	⇑*i*P	Pb	09 24 23.0	0.0
AML	baz=29			⇑*i*S	Sg	09 24 56.6	-1.1
KBK	Karagaybulak SNR=8.8	2.62	351	P	Pb	09 24 25.4	+0.1
KBK	Karagaybulak baz=51	2.62	351	⇑*i*P	Pb	09 24 25.1	-0.2
KBK	baz=51			⇑*i*S	Sg	09 25 00.2	-2.2
AAK	Ala-Archa SNR=34	2.68	344	P	Pb	09 24 25.8	-0.5
FRU1	Bishkek baz=47	2.82	347	⇓*i*P	Pb	09 24 28.0	-0.6
FRU1	baz=47			⇓*i*S	Sb	09 25 05.3	+2.1
TKM2	Tokmak 2 SNR=21	2.85	1	P	Pb	09 24 28.0	-1.3
TKM2	Tokmak 2 14nm,0.5s	2.85	1	⇓Pn	Pb	09 24 27.5	-1.8
TKM2	87nm,0.7s			⇓Lg	Lg	09 25 11.0	
TKM2	Tokmak 2 baz=1.0	2.85	1	⇑*i*P	Pb	09 24 28.3	-1.0
TKM2	baz=1.0			⇑*i*S	Sb	09 25 05.7	+1.4
EKS2	Erkin-Say SNR=15	2.90	334	P	Pb	09 24 28.7	-1.3
EKS2	Erkin-Say baz=35	2.90	334	⇑*e*P	Pb	09 24 28.7	-1.3
EKS2	baz=35			⇑*i*S	Sb	09 25 06.4	+0.8
DRK	Karamyk baz=63	2.91	260	⇑*i*P	Pn	09 24 26.3	+1.4
DRK	baz=63			⇑*i*S	Sn	09 25 02.3	+2.2
CHMS	Chumysh SNR=5.7	2.98	349	P	Pn	09 24 19.7	-5.9
CHMS	Chumysh baz=50	2.98	349	⇑*i*P	Pb	09 24 30.0	-1.4
CHMS	baz=50			⇑*i*S	Sb	09 25 08.5	+0.6
KST	Kastek 9.0nm,0.5s	2.99	6	*e*P	Pb	09 24 31.3	-0.4
KST	200nm,1.1s			*e*S	Sg	09 25 15.3	+1.0
KST	Kastek 20nm,0.4s	2.99	6	Pg	Pb	09 24 30.1	-1.5
KST	200nm,1.1s			Lg	Lg	09 25 13.2	
MTBS	Maitube 8.2nm,0.6s	3.14	12	*e*P	Pb	09 24 33.7	-0.4
MTBS	49nm,0.4s			*e*S	Sg	09 25 19.4	+0.5
MTBS	Maitube 10nm,0.5s	3.14	12	Pg	Pb	09 24 34.0	-0.1
MTBS	49nm,0.4s			Lg	Lg	09 25 19.5	
TNSS	Tian-Shan 19nm,0.6s	3.16	20	*e*P	Pb	09 24 33.4	-1.2
TNSS	50nm,1.1s			*e*S	Sg	09 25 19.4	-0.3
TNSS	Tian-Shan 18nm,0.7s	3.16	20	Pg	Pb	09 24 34.0	-0.7
TNSS	50nm,1.1s			Lg	Lg	09 25 19.4	
ANVS	Anan'yevo baz=28	3.16	30	⇓*i*P	Pb	09 24 32.2	-2.4
ANVS	baz=28			⇓*i*S	Sb	09 25 12.4	-0.9
MRKS	Merke 6.7nm,0.5s	3.17	328	*e*P	Pb	09 24 34.5	-0.3
MRKS	60nm,0.7s			*e*S	Sg	09 25 21.1	+0.9
MRKS	Merke 43nm,0.5s	3.17	328	Pg	Pb	09 24 35.0	+0.2
MRKS	60nm,0.7s			Lg	Lg	09 25 21.1	
DGS	Degeres 16nm,0.5s	3.18	4	*e*P	Pb	09 24 34.3	-0.5
DGS	46nm,0.6s			*e*S	Sg	09 25 20.8	+0.6
DGS	Degeres 27nm,0.5s	3.18	4	Pg	Pb	09 24 32.6	-2.2
DGS	46nm,0.6s			Lg	Lg	09 25 17.6	
USP	Ospenovka SNR=6.3	3.28	347	P	Pb	09 24 33.8	-2.8
USP	Ospenovka baz=48	3.28	347	⇑*i*P	Pb	09 24 34.2	-2.4
USP	baz=48			⇑*i*S	Sb	09 25 15.8	-0.8
MDOK	Medeo 10nm,0.5s	3.30	20	*e*P	Pb	09 24 36.4	-0.6
MDOK	78nm,0.9s			*e*S	Sg	09 25 23.9	-0.3
MDOK	Medeo 12nm,0.7s	3.30	20	⇓Pn	Pn	09 24 31.0	+0.9
MDOK	101nm,0.8s			⇑Lg	Lg	09 25 23.9	
MDOK	Medeo 10nm,0.5s	3.30	20	Pg	Pb	09 24 36.4	-0.6
MDOK	78nm,0.9s			Lg	Lg	09 25 23.9	
MNAS	Manas baz=20	3.31	318	⇓*e*P	Pb	09 24 34.1	-3.0
MNAS	baz=20			⇓*i*S	Sb	09 25 15.6	-1.8
KOTS	Kotyrbulak 7.9nm,0.4s	3.38	20	*e*P	Pb	09 24 38.2	-0.2
KOTS	116nm,0.9s			*e*S	Sg	09 25 27.1	+0.2
KOTS	Kotyrbulak 7.9nm,0.4s	3.38	20	Pg	Pb	09 24 38.2	-0.2
KOTS	116nm,0.9s			Lg	Lg	09 25 27.1	
BTK	Batken baz=74	3.60	271	⇓*e*P	Pn	09 24 36.1	+2.0
BTK	baz=74			⇓*i*S	Sn	09 25 19.4	+2.8
TRKS	Terek-Say baz=97	3.62	295	⇑*e*P	Pn	09 24 36.9	+2.4
TRKS	baz=97			⇑*i*S	Sn	09 25 21.0	+3.7
KRBS	Karabastau 9.0nm,0.3s	3.63	2	*e*P	Pb	09 24 42.2	-0.2
KRBS	47nm,0.7s			*e*S	Sg	09 25 34.3	-0.4
KRBS	Karabastau 9.0nm,0.3s	3.63	2	Pg	Pb	09 24 42.6	+0.2
KRBS	47nm,0.7s			Lg	Lg	09 25 34.3	
SATY	Saty 11nm,0.5s	3.70	35	*e*P	Pb	09 24 43.9	+0.2
SATY	30nm,0.5s			*e*S	Sg	09 25 36.8	-0.1
SATY	Saty 11nm,0.5s	3.70	35	Pg	Pb	09 24 43.9	+0.2
SATY	30nm,0.5s			Lg	Lg	09 25 36.8	
KTBS	Karatobe 9.1nm,0.3s	3.75	13	*e*P	Pb	09 24 44.3	-0.2
KTBS	121nm,0.7s			*e*S	Sg	09 25 38.1	-0.4
KTBS	Karatobe 9.1nm,0.3s	3.75	13	Pg	Pb	09 24 44.9	+0.4
KTBS	121nm,0.7s			Lg	Lg	09 25 38.1	
KUU	Kurty 6.2nm,0.4s	3.87	9	*e*P	Pb	09 24 46.7	+0.1
KUU	96nm,0.7s			*e*S	Sg	09 25 41.6	-0.9
KUU	Kurty 6.2nm,0.4s	3.87	9	Pg	Pb	09 24 46.7	+0.1
KUU	96nm,0.7s			Lg	Lg	09 25 41.6	
KURS	Kuram 3.9nm,0.3s	3.96	29	*e*P	Pb	09 24 47.6	-0.4
KURS	20nm,0.9s			*e*S	Sg	09 25 43.4	-1.8
KURS	Kuram 3.9nm,0.3s	3.96	29	Pg	Pb	09 24 47.6	-0.4
KURS	20nm,0.9s			Lg	Lg	09 25 43.4	
UZB	Uzynbulak 6.8nm,0.4s	4.05	39	*e*P	Pb	09 24 49.2	-0.5
UZB	18nm,0.8s			*e*S	Sg	09 25 46.0	-2.3
UZB	Uzynbulak 6.8nm,0.4s	4.05	39	Pg	Pb	09 24 49.2	-0.5
UZB	18nm,0.8s			Lg	Lg	09 25 46.0	
GAR	Garm baz=59	4.15	257	⇑*i*P	Pn	09 24 43.1	+1.4
GAR	baz=59			⇑*i*S	Sn	09 25 31.6	+1.2
PDGK	Podgornoye 1.1nm,0.5s	4.42	41	Pg	Pb	09 24 55.5	-0.4
PDGK	9.2nm,0.7s			Lg	Lg	09 25 57.4	
PDGK	Podgornoye 5.0nm,1.1s	4.42	41	⇓Pn	Pn	09 24 47.0	+1.6
PDGK	5.9nm,0.7s			⇓Pg	Pb	09 24 57.4	+1.5
PDGK	19nm,0.7s			⇓Lg	Lg	09 25 57.4	
IUG	Iuzhnay 88nm,0.4s	4.63	298	*e*P	Pb	09 25 00.1	+0.6
IUG	42nm,0.6s			*e*S	Sg	09 26 05.4	-1.4
KK02	Karatay Array 3.3nm,0.5s,baz=129,slow=17	4.82	311	⇓Pg	Pg	09 25 06.4	-4.1
KK02	7.5nm,0.6s,baz=129,slow=26			⇓Lg	Lg	09 26 11.8	
CHGR	Chuyangaron baz=58	5.12	256	⇑*i*P	Pn	09 24 56.3	+1.3
CHGR	baz=58			⇑*i*S	Sn	09 25 54.5	+0.4
BRLS	Borolday 1.3nm,0.2s	5.18	307	*e*P	Pb	09 25 10.0	+1.1
BRLS	9.6nm,0.9s			*e*S	Sg	09 26 22.6	-1.9

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*TUL **30** 09:49:12.8±1.3, 36°.75N±0°.02 × 98°.06W±0°.06, h6^{km}±4^{km}, ML4.9, mb4.4/85(NEIC), mb_Lg5.2/113(NEIC), Mwr4.7/190(NEIC), Error ellipse: s-maj=6.2km s-min=2.3km az=87.0*

*IDC **30** 09:49:12.8±0.4, 36°.83N × 97°.99W, h0^{km}, mb4.3/18, mb1 4.4/28, mb1mx4.3/54, mbtmp4.3/28, ML3.8/8, MS4.3/43, Ms1 4.3/43, ms1mx4.2/50, Error ellipse: s-maj=8.3km s-min=7.4km az=6.0*

*NEIC **30** 09:49:13.6, 36°.74N × 98°.00W, h5^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-0.15; $M_{\theta\theta}$1.48; $M_{\phi\phi}$-1.33; $M_{r\theta}$0.47; $M_{\theta\phi}$0.50; $M_{\phi r}$-0.18; Fault* *plane solution: $M_0$1.58000×10^{16} NP1:ϕ_s125.04000°, δ88.82000°,λ17.90000°. NP2:ϕ_s34.66000°,δ72.10000°, λ178.76000°. Principal axes: T 1.6662, Plg13.0000°, Azm351.0000°; N -0.1945, Plg72.0000°, Azm129.0000°; P -1.4718, Plg12.0000°, Azm258.0000°;*

*NEIC **30** 09:49:13.4±1.1,36°.73N±0°.02×98°.01W±0°.06,h5^{km}±1^{km}*
Error ellipse: s-maj=7.8km s-min=3.0km az=262.0

*ANF **30** 09:49:13.6±1.1,36°.77N×97°.95W,h10^{km}±8^{km},ML6.2/14,*
Error ellipse: s-maj=2.0km s-min=1.6km az=8.0

*GCMT **30** 09:49:14.8±0.2,36°.91N±0°.01×97°.88W±0°.02,h18^{km}±1^{km}, MW4.9/108,Moment Tensor Solution. s20,c24; s108,c161; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.01±.11; $M_{\theta\theta}$3.23±.11; $M_{\phi\phi}$-2.22±.08; $M_{r\theta}$-0.44±.20; $M_{\theta\phi}$0.65±.07; $M_{\phi r}$0.33±.19; Best double couple: $M_0$2.87100×10^{16} NP1:ϕ_s219.00000°,δ75.00000°, λ-173.00000°. NP2:ϕ_s127.00000°,δ83.00000°, λ-15.00000°. Principal axes: T 3.3430, Plg5.0000°, Azm174.0000°; N -0.9440, Plg74.0000°, Azm282.0000°; P -2.3990, Plg15.0000°, Azm82.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 30 09:49:13.4±0.9,**36°.77N**±0°.02×**97°.97W**±0°.03,**h11**^{km}±5^{km}, **n518,**σ1^{s}.16/502,**mb4.4**/25,**MS4.3**/40,**Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GC02	Grant County #	0.12	49	Pg	Pg	09 49 17.0	+0.6
KAN14	Manchester OK	0.19	2		Pg	09 49 17.6	+0.2
KAN14				Sg	Sg	09 49 21.1	+0.8
CROK	Carrier	0.27	182	Pg	Pg	09 49 18.2	-0.7
KAN17	Caldwell West	0.32	31		Pg	09 49 20.5	+0.6
KAN17				Sg	Sb	09 49 25.9	-0.6
KAN05	Bluff City Nor	0.35	13		Pg	09 49 20.8	+0.4
KAN05				Sg	Sg	09 49 25.9	+0.9
KAN10	Anthony SW Sta	0.36	344	Pg	Pg	09 49 20.6	-0.1
KAN10				Sg	Sg	09 49 26.6	+1.0
KAN01	Argonia South	0.42	24	Pg	Pg	09 49 22.2	+0.5
KAN01				Sg	Sb	09 49 28.5	-0.8
KAN08	Anthony NE Sta	0.46	0		Pg	09 49 22.6	+0.2
KAN16	Harper SW Stat	0.46	351	Pg	Pg	09 49 22.5	0.0
KAN16				Sg	Sb	09 49 29.7	-0.8
KAN09	Caldwell North	0.46	38		Pb	09 49 23.1	-0.5
KAN13	South Haven SW	0.47	59		Pb	09 49 23.2	-0.4
KAN06	Argonia West S	0.48	11	Pg	Pg	09 49 23.2	+0.3
KAN12	Harper NE Stat	0.53	358		Pg	09 49 23.8	+0.1
BLOK	Blackwell	0.61	91	Pg	Pb	09 49 25.7	-0.4
BCOK	Bluff Creek, N	1.15	165		Pb	09 49 34.2	-1.2
T35A	Sooner Cattle	1.18	83	Pg	Pg	09 49 36.2	0.0
T35B	Sooner Cattle	1.18	83	P	Pg	09 49 36.2	0.0
	baz=262,SNR=1000						
T35B				S	Sn	09 49 52.8	+0.7
	baz=262						
QUOK	Quay	1.18	120	Pg	Pb	09 49 35.8	-0.1
OK031	S. Brethren Rd	1.23	131		Pn	09 49 36.5	-0.1
OK009	Oakdale Elemen	1.27	159		Pn	09 49 37.0	-0.2
OK025	Westminster Rd	1.29	156		Pn	09 49 37.0	-0.5
OK001	Jones High Sch	1.33	155	Pn	Pn	09 49 37.9	-0.1
OKCFA	Oklahoma City	1.42	163		Pn	09 49 38.9	-0.3
OKCSW	OKLAHOMA CITY	1.43	162		Pn	09 49 39.4	0.0
FNO	Franklin	1.58	163		Pn	09 49 41.7	+0.2
OK011	Prague	1.65	141		Pb	09 49 43.8	-0.2
R32A	Long Quarter,	1.75	341		Pb	09 49 44.9	-0.7
R32A	Long Quarter,	1.75	341	P	Pb	09 49 44.8	-0.8
	baz=161,SNR=1000						
R32A				Sb	Sg	09 50 09.0	-0.7
	baz=161						
TUL1	Leonard	1.96	115	P	Pn	09 49 46.6	-0.1
	baz=296,SNR=1000						
TUL1				Sb	Sg	09 50 16.4	0.0
	baz=296						
TUL1	Leonard	1.96	115		Pb	09 49 48.7	-0.4
TUL1				IAmb_Lg		09 50 20.6	
	comp=Z,22μm,0.8s						
TUL1	Leonard	1.96	115	P	Pn	09 49 47.5	+0.8
	baz=296,SNR=1000						
TUL1				Sb	Sg	09 50 15.9	-0.5
	baz=296						
X34A	Smith Ranch, M	2.17	177		Pn	09 49 50.7	+1.1
X34A				IAmb_Lg		09 50 26.5	
	comp=Z,14μm,0.7s						
CBKS	Cedar Bluff	2.47	326	P	Pn	09 49 54.4	+0.6
	baz=146,SNR=1000						
CBKS				S	Sb	09 50 26.6	-1.9
	baz=146						
CBKS	Cedar Bluff	2.47	326		Pn	09 49 55.0	+1.2
CBKS	Cedar Bluff	2.47	326	P	Pn	09 49 54.4	+0.6
	baz=146,SNR=445						
CBKS				S	Sn	09 50 24.4	+0.4
	baz=146						
KSU1	Kansas State U	2.56	24	P	Pn	09 49 55.8	+0.9
	baz=205,SNR=308						
KSU1				Sb	Sg	09 50 34.2	-1.6
	baz=205						
KSU1	Kansas State U	2.56	24	Pn	Pn	09 49 56.6	+1.6
KSU1				IAmb_Lg		09 50 41.2	
	comp=Z,7μm,0.9s						
KSU1	Kansas State U	2.56	24	P	Pn	09 49 56.3	+1.4
	baz=205,SNR=130						
KSU1				S	Sn	09 50 27.8	+1.6
	baz=205						
LOOK	Love County	2.85	167		Pn	09 49 60.0	+1.1
LOOK				IAmb_Lg		09 50 46.8	
	comp=Z,5μm,1.0s						
U38A	Gravette	2.91	95	Pn	Pn	09 50 01.1	+1.4
U38A				IAmb_Lg		09 50 48.2	
	comp=Z,5μm,0.7s						
U38A	Gravette	2.91	95	P	Pn	09 50 00.8	+1.1
	baz=277,SNR=861						
U38A				S	Sn	09 50 37.0	+2.3
	baz=277						
X37A	Clayton	3.04	135		Pn	09 50 02.5	+1.0
X37A				IAmb_Lg		09 50 54.6	
	comp=Z,4μm,0.7s						
X37A	Clayton	3.04	135	P	Pn	09 50 02.5	+1.0
	baz=316,SNR=694						
X37A				S	Sn	09 50 40.7	+2.8
	baz=316						
Z35A	Perchaven, San	3.48	170		Pn	09 50 08.2	+0.6
Z35A	Perchaven, San	3.48	170	P	Pn	09 50 08.5	+0.8
	baz=350,SNR=140						
Z35A				S	Sn	09 50 50.3	+1.4
	baz=350						
W39A	Magazine	3.74	114	P	Pn	09 50 11.8	+0.6
	baz=296,SNR=158						
W39A	Magazine	3.74	114	Pn	Pn	09 50 12.2	+1.1
W39A	Magazine	3.74	114	P	Pn	09 50 12.0	+0.8
	baz=296,SNR=109						
S39A	Bolivar	3.82	75	Pn	Pn	09 50 13.2	+0.9
S39A				IAmb_Lg		09 51 18.4	
	comp=Z,6μm,0.8s						
S39A	Bolivar	3.82	75	P	Pn	09 50 13.4	+1.1
	baz=257,SNR=474						
S39A				S	Sn	09 50 58.8	+1.5
	baz=257						
N33A	J Bar K, Exete	3.98	6		Pn	09 50 14.9	+0.4
U40A	Yellville	4.14	94	P	Pn	09 50 17.1	+0.4
	baz=277,SNR=434						
U40A	Yellville	4.14	94	Pn	Pn	09 50 17.6	+0.9
U40A				IAmb_Lg		09 51 27.8	
	comp=Z,10μm,0.8s						
U40A	Yellville	4.14	94	P	Pn	09 50 17.6	+0.9
	baz=277,SNR=894						
U40A				P	Pn	09 50 17.6	+0.9
	baz=277,SNR=894						
U40A				S	Sn	09 51 06.2	+1.1
	baz=277						
U40A				S	Sn	09 51 06.2	+1.1
	baz=277						
MIAR	Mount Ida	4.21	121	P	Pn	09 50 18.4	+0.8
	baz=303,SNR=154						
MIAR	Mount Ida	4.21	121		Pn	09 50 19.2	+1.5
MIAR				IAmb_Lg		09 51 31.2	
	comp=Z,8μm,1.0s						
MIAR	Mount Ida	4.21	121	P	Pn	09 50 18.4	+0.8
	baz=303,SNR=298						
MIAR				S	Sn	09 51 08.6	+1.7
	baz=303						
Z38A	Mt. Pleasant	4.28	144	Pn	Pn	09 50 19.6	+1.1
Z38A				IAmb_Lg		09 51 34.9	
	comp=Z,10μm,0.8s						
Z38A	Mt. Pleasant	4.28	144	P	Pn	09 50 19.4	+0.9
	baz=325,SNR=22						
KSCO	Kaye Shedlock’	4.31	303	P	Pn	09 50 19.5	+0.4
	baz=120,SNR=120						
KSCO	Kaye Shedlock’	4.31	303		Pn	09 50 19.9	+0.8
KSCO				IAmb_Lg		09 51 32.9	
	comp=Z,8μm,1.1s						
KSCO	Kaye Shedlock’	4.31	303	P	Pn	09 50 19.6	+0.6
	baz=120,SNR=113						
KSCO				S	Sn	09 51 10.1	+0.7
	baz=120						
ABTX	Abilene, Hawle	4.36	199	P	Pn	09 50 19.1	-0.6
	baz=18,SNR=41						
ABTX	Abilene, Hawle	4.36	199		Pn	09 50 19.4	-0.3
ABTX				IAmb_Lg		09 51 32.2	
	comp=Z,4μm,1.2s						
ABTX	Abilene, Hawle	4.36	199	P	Pn	09 50 19.6	-0.1
	baz=18,SNR=57						
ABTX				S	Sn	09 51 12.3	+1.8
	baz=18						
N35A	Tabor	4.47	23		Pn	09 50 22.6	+1.4
N35A	Tabor	4.47	23	P	Pn	09 50 22.3	+1.1
	baz=205,SNR=107						
P38A	Dawn	4.51	49		Pn	09 50 23.0	+1.3
P38A				IAmb_Lg		09 51 42.0	
	comp=Z,5μm,0.8s						
MGMO	Mountain Grove	4.58	84		Pn	09 50 23.9	+1.2
MGMO				IAmb_Lg		09 51 45.7	
	comp=Z,6μm,0.7s						
BGNE	Belgrade	4.63	358	P	Pn	09 50 23.9	+0.5
	baz=179,SNR=105						
BGNE	Belgrade	4.63	358		Pn	09 50 24.5	+1.1
BGNE	Belgrade	4.63	358	P	Pn	09 50 23.7	+0.3
	baz=179,SNR=295						
X40A	Basin Creek Fa	4.76	117	P	Pn	09 50 26.1	+0.9
	baz=300,SNR=167						
X40A	Basin Creek Fa	4.76	117		Pn	09 50 26.4	+1.2
X40A	Basin Creek Fa	4.76	117	P	Pn	09 50 26.0	+0.8
	baz=300,SNR=261						
X40A				P	Pn	09 50 26.0	+0.8
	baz=300,SNR=261						
X40A				S	Sn	09 51 22.6	+2.1
	baz=300						
X40A				S	Sn	09 51 22.6	+2.1
	baz=300						
R40A	Maddies Statio	4.78	70		Pn	09 50 26.8	+1.3
R40A				IAmb_Lg		09 51 50.2	
	comp=Z,4μm,0.8s						
R40A	Maddies Statio	4.78	70	P	Pn	09 50 26.5	+1.0
	baz=253,SNR=451						
R40A				S	Sn	09 51 22.3	+1.4
	baz=253						
WHTX	Lake Whitney,	4.79	175	P	Pn	09 50 25.8	+0.2
	baz=355,SNR=63						
WHTX				S	Sn	09 51 20.9	-0.1
	baz=355						
WHTX	Lake Whitney,	4.79	175		Pn	09 50 25.8	+0.2
WHTX				IAmb_Lg		09 51 51.9	
	comp=Z,3μm,1.1s						
WHTX	Lake Whitney,	4.79	175	P	Pn	09 50 25.8	+0.2
	baz=355,SNR=349						
MSTX	Muleshoe	4.81	236	P	Pn	09 50 26.3	+0.2
	baz=53						
MSTX	Muleshoe	4.81	236		Pn	09 50 26.3	+0.2
MSTX	Muleshoe	4.81	236	P	Pn	09 50 26.1	+0.1
	baz=53						
WHAR	Wooly Hollow	4.84	106		Pn	09 50 26.9	+0.7
WHAR				IAmb_Lg		09 51 54.5	
	comp=Z,7μm,0.9s						
W41B	Gary Mavity, V	4.91	107	P	Pn	09 50 27.8	+0.6
	baz=290,SNR=100						
W41B	Gary Mavity, V	4.91	107	P	Pn	09 50 27.8	+0.6
	baz=290,SNR=205						
WLAR	White Oak Lake	5.03	126	Pn	Pn	09 50 30.0	+1.2
WLAR				IAmb_Lg		09 52 02.5	
	comp=Z,5μm,0.7s						
237A	Washetta, Mont	5.08	159		Pn	09 50 29.4	-0.2
237A				IAmb_Lg		09 52 06.1	
	comp=Z,3μm,0.9s						
237A	Washetta, Mont	5.08	159	P	Pn	09 50 29.6	0.0
	baz=340,SNR=49						
T25A	Trinidad	5.17	276	P	Pn	09 50 30.9	-0.1
	baz=93,SNR=107						
T25A	Trinidad	5.17	276	Pn	Pn	09 50 31.2	+0.3
T25A				IAmb_Lg		09 52 04.8	
	comp=Z,6μm,0.8s						
L34A	Svendsen Farm,	5.33	13		Pn	09 50 32.9	-0.2
L34A	Svendsen Farm,	5.33	13	P	Pn	09 50 32.6	-0.4
	baz=194,SNR=77						
P40A	Paris	5.42	58		Pn	09 50 35.0	+0.8
P40A				IAmb_Lg		09 52 09.2	
	comp=Z,4μm,0.8s						
P40A	Paris	5.42	58	P	Pn	09 50 34.7	+0.4
	baz=241,SNR=109						
N38A	Joes South For	5.46	41		Pn	09 50 35.8	+1.0
N38A				IAmb_Lg		09 52 12.1	
	comp=Z,6μm,0.9s						
N38A	Joes South For	5.46	41	P	Pn	09 50 35.9	+1.0
	baz=224,SNR=143						
N38A				S	Sn	09 51 38.0	+0.4
	baz=224						
Z41A	Richland Creek	5.50	128	P	Pn	09 50 35.8	+0.5
	baz=311,SNR=53						
Z41A				S	Sn	09 51 37.1	-1.6
	baz=311						
Z41A	Richland Creek	5.50	128	P	Pn	09 50 35.8	+0.5
	baz=311,SNR=31						
Z41A				P	Pn	09 50 35.8	+0.5
	baz=311,SNR=31						
CCM	Cathedral Cave	5.51	75	P	Pn	09 50 35.6	+0.2
	baz=258						
CCM	Cathedral Cave	5.51	75	IAmb_Lg		09 52 14.7	
	comp=Z,4μm,0.9s						
CCM	Cathedral Cave	5.51	75	P	Pn	09 50 35.9	+0.5
	baz=258,SNR=77						
CCM				S	Sn	09 51 40.2	+1.4
	baz=258						
T42A	Van Buren	5.52	85	P	Pn	09 50 36.6	+1.0
	baz=269,SNR=219						
LCAR	Lake Charles	5.54	95	IAmb_Lg		09 52 13.6	
	comp=Z,3μm,0.7s						
NATX	Nacogdoches	5.70	150	P	Pn	09 50 38.0	-0.1
	baz=332,SNR=16						
CCAR	Cane Creek	5.81	118	IAmb_Lg		09 52 30.8	
	comp=Z,6μm,0.8s						
K31A	O'Neill	5.88	354	IAmb_Lg		09 52 30.4	
	comp=Z,5μm,0.8s						
K31A	O'Neill	5.88	354	P	Pn	09 50 41.5	+0.9
	baz=174,SNR=94						
435B	Jarrell	5.98	177	P	Pn	09 50 42.0	0.0
	baz=357,SNR=103						
435B	Jarrell	5.98	177		Pn	09 50 41.9	0.0
435B				IAmb_Lg		09 52 32.9	
	comp=Z,4μm,0.8s						
435B	Jarrell	5.98	177	P	Pn	09 50 41.6	-0.4
	baz=357,SNR=52						
HBAR	Harrisburg	6.04	99		Pn	09 50 43.7	+1.0
PBMO	Poplar Bluff	6.05	88	IAmb_Lg		09 52 35.2	
	comp=Z,3μm,0.8s						
PBMO	Poplar Bluff	6.05	88	P	Pn	09 50 44.5	+1.6
	baz=272,SNR=16						
SDCO	Great Sand Dun	6.08	281	P	Pn	09 50 44.6	+1.0
	baz=97,SNR=68						
Q24A	Divide	6.08	293	P	Pn	09 50 43.7	0.0
	baz=109,SNR=55						
FVM	French Village	6.13	76		Pn	09 50 44.9	+0.9
FVM				IAmb_Lg		09 52 28.2	
	comp=Z,4μm,0.9s						
FVM	French Village	6.13	76	P	Pn	09 50 44.4	+0.4
	baz=261,SNR=89						
LPAR	Lepanto	6.31	98		Pn	09 50 47.7	+1.2
SCIA	State Center	6.32	34	P	Pn	09 50 47.1	+0.6
	baz=217,SNR=93						
SCIA				S	Sn	09 51 58.4	-0.3
	baz=217						
SCIA	State Center	6.32	34	P	Pn	09 50 47.7	+1.2
	baz=217,SNR=47						
SLM	Saint Louis	6.41	71	P	Pn	09 50 48.5	+0.7
	baz=255,SNR=9.7						
JCT	Junction City	6.46	194	P	Pn	09 50 47.9	-0.7
	baz=13,SNR=78						
JCT	Junction City	6.46	194		Pn	09 50 48.3	-0.2
JCT				IAmb_Lg		09 52 44.5	
	comp=Z,5μm,1.0s						
JCT	Junction City	6.46	194	P	Pn	09 50 47.8	-0.7
	baz=13,SNR=123						
GNAR	Gosnell	6.47	95		Pn	09 50 49.9	+1.3
PEBM	Pemiscott Bayo	6.57	93		Pn	09 50 51.1	+1.1
HDBT	Hernando Brdge	6.62	102	IAmb_Lg		09 52 51.8	
	comp=Z,5μm,0.9s						
PVMO	Portageville	6.67	91		Pn	09 50 53.0	+1.6
PVMO				IAmb_Lg		09 53 02.1	
	comp=Z,5μm,0.8s						
MET	Memphis--Engin	6.72	102		Pn	09 50 53.0	+0.8
ISCO	Idaho Springs	6.73	299	P	Pn	09 50 52.7	+0.2
	baz=115,SNR=106						
ISCO	Idaho Springs	6.73	299	IAmb_Lg		09 52 52.2	
	comp=Z,2μm,0.8s						
ISCO	Idaho Springs	6.73	299	P	Pn	09 50 53.0	+0.5
	baz=115,SNR=186						
143A	Socs Landing,	6.76	125		Pn	09 50 53.5	+0.9
143A				IAmb_Lg		09 52 56.7	
	comp=Z,3μm,0.9s						
143A	Socs Landing,	6.76	125	P	Pn	09 50 53.4	+0.8
	baz=308,SNR=16						
HENM	Henderson Moun	6.83	88		Pn	09 50 54.8	+1.3
LNXT	Lenox	6.87	93		Pn	09 50 54.7	+0.5
GLAT	Glass	7.01	92		Pn	09 50 57.5	+1.4
S44A	Carbondale	7.02	80	IAmb_Lg		09 52 58.8	
	comp=Z,3μm,0.8s						
HALT	Halls	7.02	94		Pn	09 50 56.8	+0.6
ECSD	EROS Data Cent	7.03	8	P	Pn	09 50 56.0	-0.4
	baz=189,SNR=62						
ECSD	EROS Data Cent	7.03	8		Pn	09 50 55.7	-0.6
ECSD	EROS Data Cent	7.03	8	P	Pn	09 50 56.5	+0.1
	baz=189,SNR=299						
HICK	Hickman	7.03	89		Pn	09 50 57.6	+1.2
HKT	Hockley	7.03	165	Pn	Pn	09 50 56.6	+0.2
SIUC	Southern Illin	7.05	80	IAmb_Lg		09 52 59.3	
	comp=Z,3μm,0.7s						
K38A	Parkersburg	7.11	33	IAmb_Lg		09 53 14.2	
	comp=Z,5μm,0.9s						
K38A	Parkersburg	7.11	33	P	Pn	09 50 57.4	0.0
	baz=216,SNR=20						
ANMO	Albuquerque	7.13	258	Pn	Pn	09 50 59.4	+1.6
	comp=Z,2.4nm,0.3s,baz=77,slow=14,SNR=50						
ANMO				Lg	Lg	09 52 53.3	
	comp=Z,67nm,0.3s,baz=166,slow=22,SNR=6.3						
ANMO				LR	LR	09 54 00.3	
	comp=Z,3μm,20.4s,baz=62,slow=40						
ANMO	Albuquerque	7.13	258	P	Pn	09 50 58.9	+1.0
	baz=73						
S22A	4UR Ranch, Cre	7.13	280	P	Pn	09 50 60.0	+2.0
	baz=96,SNR=23						
342A	Flagon Creek P	7.13	137		Pn	09 50 59.3	+1.5
441A	DeRidder	7.21	145	P	Pn	09 50 59.4	+0.6
	baz=328,SNR=5.4						
P43A	Skaggs, Pawnee	7.25	64		Pn	09 51 00.0	+0.8
P43A	Skaggs, Pawnee	7.25	64	P	Pn	09 50 59.8	+0.5
	baz=249,SNR=88						
W45A	Hickory Valley	7.30	100	P	Pn	09 51 00.2	+0.1
	baz=285,SNR=56						
Q44A	Meyer Farm, Va	7.40	71	P	Pn	09 51 02.2	+0.8
	baz=256,SNR=113						
L40A	Anamosa	7.43	43	IAmb_Lg		09 53 19.4	
	comp=Z,2μm,0.7s						
L40A	Anamosa	7.43	43	P	Pn	09 51 02.3	+0.5
	baz=227,SNR=32						
N23A	Red Feather La	7.46	306	P	Pn	09 51 02.7	+0.3
	baz=121,SNR=107						
Y45A	Yeager Farm, C	7.47	110	IAmb_Lg		09 53 23.7	
	comp=Z,4μm,0.8s						
Y45A	Yeager Farm, C	7.47	110	P	Pn	09 51 02.8	+0.4
	baz=295,SNR=27						
T45B	Paducah	7.48	85	P	Pn	09 51 03.4	+0.9
	baz=271,SNR=27						
T45A	Paducah	7.48	85	IAmb_Lg		09 53 21.4	
	comp=Z,4μm,0.7s						
VBMS	Vicksburg	7.65	124	P	Pn	09 51 04.2	-0.6
	baz=308,SNR=12						
VBMS	Vicksburg	7.65	124		Pn	09 51 05.3	+0.5
VBMS	Vicksburg	7.65	124	P	Pn	09 51 05.7	+0.9
	baz=308,SNR=7.9						
SUSD	Miller	7.70	355	P	Pn	09 51 05.5	-0.1
	baz=174,SNR=21						
SUSD	Miller	7.70	355	IAmb_Lg		09 53 25.8	
	comp=Z,2μm,1.2s						
SUSD	Miller	7.70	355	P	Pn	09 51 06.1	+0.5
	baz=174,SNR=16						
Y22D	IRIS PASSCAL I	7.78	252	P	Pn	09 51 07.2	+0.3
	baz=67,SNR=10						
Y22D	IRIS PASSCAL I	7.78	252	IAmb_Lg		09 53 34.5	
	comp=Z,3μm,1.1s						
MNTX	Cornudas Mount	7.95	233	P	Pn	09 51 09.0	0.0
	baz=48,SNR=48						
MNTX	Cornudas Mount	7.95	233	IAmb_Lg		09 53 30.4	
	comp=Z,2μm,1.3s						
MNTX	Cornudas Mount	7.95	233	P	Pn	09 51 09.0	0.0
	baz=48,SNR=42						
344A	Westbrook Farm	8.01	129		Pn	09 51 10.7	+0.9
344A	Westbrook Farm	8.01	129	P	Pn	09 51 10.7	+0.9
	baz=313						
I37A	Lemond, Waseca	8.03	24	IAmb_Lg		09 53 49.1	
	comp=Z,4μm,1.3s						
OLIL	Olney	8.06	73		Pn	09 51 10.8	+0.2
OLIL	Olney	8.06	73	P	Pn	09 51 10.7	+0.2
	baz=259,SNR=11						
O44A	Mansfield	8.19	63		Pn	09 51 12.5	+0.3
O44A				IAmb_Lg		09 53 39.8	
	comp=Z,3μm,0.8s						
O44A	Mansfield	8.19	63	P	Pn	09 51 12.6	+0.4
	baz=248,SNR=21						
WVT	Waverly	8.20	91	P	Pn	09 51 12.3	-0.1
	baz=277						
WVT	Waverly	8.20	91	P	Pn	09 51 13.2	+0.8
	baz=277,SNR=52						
PLAL	Pickwick Lake	8.23	100	IAmb_Lg		09 53 40.9	
	comp=Z,2μm,0.7s						
L42A	Oliver, Polo	8.28	48	P	Pn	09 51 14.4	+0.8
	baz=234,SNR=50						
146A	Union	8.42	117	IAmb_Lg		09 54 02.9	
	comp=Z,2μm,0.8s						
146A	Union	8.42	117	P	Pn	09 51 16.2	+0.8
	baz=302,SNR=26						
MVCO	Mesa Verde	8.44	276	P	Pn	09 51 19.3	+3.4
	baz=90,SNR=21						
833A	Chaparral WMA,	8.51	188	P	Pn	09 51 16.2	-0.5
	baz=7.5,SNR=26						
833A	Chaparral WMA,	8.51	188	P	Pn	09 51 16.1	-0.5
	baz=7.5,SNR=36						
JFWS	Jewell Farm	8.54	42	P	Pn	09 51 17.2	+0.2
	baz=226,SNR=85						
JFWS	Jewell Farm	8.54	42	IAmb_Lg		09 53 51.0	
	comp=Z,2μm,0.8s						
JFWS	Jewell Farm	8.54	42	P	Pn	09 51 17.2	+0.2
	baz=226,SNR=108						
RSSD	Black Hills	8.67	330	P	Pn	09 51 19.5	+0.5
	baz=146						
RSSD	Black Hills	8.67	330	IAmb_Lg		09 54 06.3	
	comp=Z,1μm,0.8s						
RWWY	Rawlins	8.69	307	IAmb_Lg		09 53 58.7	
	comp=Z,2μm,1.0s						
T47A	Sharon Grove	8.71	85		Pn	09 51 20.3	+0.9
T47A	Sharon Grove	8.71	85	P	Pn	09 51 20.7	+1.3
	baz=272,SNR=56						
O20A	White River Ci	8.73	296	P	Pn	09 51 20.9	+1.0
	baz=110,SNR=11						
TX31	Lajitas Ar. Si	8.82	214	P	Pn	09 51 20.1	-1.0
	baz=31,SNR=57						
TX32	Lajitas Array	8.82	214		Pn	09 51 20.5	-0.5
TXAR	Lajitas Array	8.82	214	Pn	Pn	09 51 20.6	-0.4
	comp=Z,4.5nm,0.3s,baz=24,slow=9.8,SNR=140						
TXAR				Sn	Sn	09 53 01.2	+0.7
	comp=Z,13nm,0.3s,baz=63,slow=14,SNR=3.6						
TXAR				Lg	Lg	09 53 45.8	
	comp=Z,22nm,0.3s,baz=46,slow=35,SNR=2.1						
K22A	Casper	8.82	314	P	Pn	09 51 21.2	+0.1
	baz=129,SNR=102						
K22A	Casper	8.82	314		Pn	09 51 21.1	0.0
K22A				IAmb_Lg		09 54 03.3	
	comp=Z,3μm,0.9s						
K22A	Casper	8.82	314	P	Pn	09 51 21.2	+0.1
	baz=129,SNR=28						
346A	Big Creek Wild	8.87	125		Pn	09 51 22.2	+0.7
346A	Big Creek Wild	8.87	125	P	Pn	09 51 22.2	+0.7
	baz=309						
Z47A	Carrollton	8.87	111		Pn	09 51 22.6	+1.0
Z47A				IAmb_Lg		09 54 03.3	
	comp=Z,1μm,0.8s						
Z47A	Carrollton	8.87	111	P	Pn	09 51 22.4	+0.8
	baz=296,SNR=13						
P46A	Rosedale	8.94	68	P	Pn	09 51 23.0	+0.5
	baz=255						
M44A	Midewin, Midew	8.99	56	P	Pn	09 51 23.5	+0.3
	baz=242,SNR=12						
I40A	Norwalk	9.06	36		Pn	09 51 24.1	0.0
I40A				IAmb_Lg		09 54 17.9	

	comp=Z,2µm,1.2s						
I40A	Norwalk	9.06	36	P	Pn	09 51 24.1	0.0
	baz=221,SNR=30						
V48A	Smith Brothers	9.07	93		Pn	09 51 24.4	+0.1
V48A	Smith Brothers	9.07	93	P	Pn	09 51 24.9	+0.7
	baz=280,SNR=8.3						
121A	Cookes Peak, D	9.12	245	P	Pn	09 51 26.0	+0.8
	baz=60,SNR=19						
121A	Cookes Peak, D	9.12	245		Pn	09 51 26.2	+1.0
F33A	5 Mile Ranch,	9.15	7	P	Pn	09 51 24.8	-0.5
	baz=189,SNR=28						
SFIN	Lafayette	9.25	64	P	Pn	09 51 26.6	-0.2
	baz=250,SNR=40						
SFIN	Lafayette	9.25	64		Pn	09 51 26.7	0.0
SFIN	Lafayette	9.25	64	P	Pn	09 51 26.7	0.0
	baz=250,SNR=51						
SPMN	Marine on St.	9.30	23	P	Pn	09 51 27.1	-0.4
	baz=207,SNR=67						
SPMN	Marine on St.	9.30	23	IAmb_Lg		09 54 13.8	
	comp=Z,1µm,1.1s						
SPMN	Marine on St.	9.30	23	P	Pn	09 51 27.3	-0.2
	baz=207,SNR=47						
HQIL	Hanson Quary C	9.31	54		Pn	09 51 27.8	+0.1
WCI	Wyandotte Cave	9.39	78	P	Pn	09 51 29.0	+0.2
	baz=264						
WCI	Wyandotte Cave	9.39	78		Pn	09 51 29.3	+0.5
WCI	Wyandotte Cave	9.39	78	P	Pn	09 51 29.3	+0.5
	baz=264,SNR=34						
L44A	Lake County Fo	9.47	52	P	Pn	09 51 29.7	-0.1
	baz=238,SNR=9.5						
L44A	Lake County Fo	9.47	52		Pn	09 51 29.6	-0.1
L44A	Lake County Fo	9.47	52	P	Pn	09 51 29.9	+0.1
	baz=238,SNR=9.2						
K43A	Burlington	9.50	48		Pn	09 51 30.4	+0.3
K43A	Burlington	9.50	48	P	Pn	09 51 30.5	+0.3
	baz=234,SNR=43						
F36A	Milaca	9.68	19	P	Pn	09 51 31.2	-1.4
	baz=202,SNR=33						
W18A	Petrified Fore	9.68	264	P	Pn	09 51 33.3	+0.4
	baz=77,SNR=8.8						
U49A	Red Boiling Sp	9.80	88		Pn	09 51 35.1	+0.8
U49A	Red Boiling Sp	9.80	88	P	Pn	09 51 35.2	+0.8
	baz=275						
SWET	Sewanee	9.88	95		Pn	09 51 36.5	+1.1
Y49A	Blount Mountai	9.88	104	P	Pn	09 51 35.7	+0.2
	baz=290						
I42A	Draeger Farm,	9.91	41		Pn	09 51 35.7	-0.2
I42A				IAmb_Lg		09 54 44.6	
	comp=Z,1µm,0.9s						
I42A	Draeger Farm,	9.91	41	P	Pn	09 51 35.7	-0.2
	baz=227,SNR=66						
E28A	Huff	10.00	349		Pn	09 51 37.3	+0.2
E28A	Huff	10.00	349	P	Pn	09 51 37.2	+0.1
	baz=168,SNR=20						
R49A	Shelbyville	10.28	78		Pn	09 51 41.4	+0.5
R49A	Shelbyville	10.28	78	P	Pn	09 51 41.3	+0.3
	baz=265,SNR=27						
R49A				P	Pn	09 51 41.3	+0.3
	baz=265,SNR=27						
FPAL	Fort Paine	10.30	99		Pn	09 51 42.2	+0.9
G40A	Rib Lake	10.32	32	P	Pn	09 51 41.2	-0.2
	baz=217,SNR=31						
W50A	Signal Mountai	10.38	95	P	Pn	09 51 43.1	+0.8
	baz=282,SNR=16						
N47A	Urbana	10.42	63	P	Pn	09 51 42.1	-0.7
	baz=251						
N47A				P	Pn	09 51 42.1	-0.7
	baz=251						
BRAL	Brewton	10.65	118	P	Pn	09 51 45.8	-0.2
	baz=304						
PDAR	Pinedale Array	10.73	307	Pn	Pn	09 51 47.0	-0.4
	comp=Z,2.6nm,0.3s,baz=125,slow=13,SNR=38						
PDAR				Sn	Sn	09 53 47.8	+0.1
	comp=Z,7.9nm,0.3s,baz=106,slow=22,SNR=1.3						
PDAR				Lg	Lg	09 54 46.3	
	comp=Z,16nm,0.3s,baz=93,slow=24,SNR=1.6						
BW06	Boulder Array	10.74	307	P	Pn	09 51 46.5	-0.9
	baz=120,SNR=18						
BW06	Boulder Array	10.74	307		Pn	09 51 46.4	-0.9
250A	Grady	10.79	113	P	Pn	09 51 47.5	-0.4
	baz=299,SNR=22						
P49A	Miami Univ. Ec	10.80	71	P	Pn	09 51 46.9	-1.1
	baz=259,SNR=19						
X51A	Calhoun	10.89	98	P	Pn	09 51 50.1	+0.7
	baz=285						
X51A				P	Pn	09 51 50.1	+0.7
	baz=285						
WUAZ	Wupatki	10.91	267	P	Pn	09 51 50.3	+0.6
	baz=80,SNR=22						
H43A	Windswept, Lux	10.91	42	P	Pn	09 51 48.5	-1.1
	baz=229,SNR=49						
E38A	The Farm, Brul	10.93	24	Pn	Pn	09 51 49.0	-0.8
R50A	Paris	10.94	78		Pn	09 51 49.6	-0.4
R50A	Paris	10.94	78	P	Pn	09 51 50.0	0.0
	baz=266,SNR=40						
R50A				P	Pn	09 51 50.0	0.0
	baz=266,SNR=40						
V51A	Loudon	11.04	91	P	Pn	09 51 52.1	+0.7
	baz=279,SNR=103						
Z51A	Franklin	11.04	104	P	Pn	09 51 51.8	+0.4
	baz=292						
MDND	Maddock	11.13	354	P	Pn	09 51 51.0	-1.6
	baz=173,SNR=7.9						
MDND	Maddock	11.13	354	P	Pn	09 51 52.1	-0.5
	baz=173						
O49A	Covington	11.22	68	P	Pn	09 51 52.5	-1.3
	baz=256,SNR=28						
O49A				P	Pn	09 51 52.5	-1.3
	baz=256,SNR=28						
TUC	Tucson	11.46	251	P	Pn	09 51 58.1	+0.9
	baz=64						
S51A	Beattyville	11.50	81	P	Pn	09 51 57.9	+0.3
	baz=270,SNR=52						
S51A				P	Pn	09 51 57.9	+0.3
	baz=270,SNR=52						
I45A	Fountain	11.51	47	P	Pn	09 51 57.7	0.0
	baz=235						
I45A				P	Pn	09 51 57.7	0.0
	baz=235						
N49A	Columbus Grove	11.52	65	P	Pn	09 51 56.6	-1.3
	baz=253,SNR=23						
N49A				P	Pn	09 51 56.6	-1.3
	baz=253,SNR=23						
TKL	Tuckaleechee C	11.53	91	Pn	Pn	09 51 58.2	+0.2
	comp=Z,14nm,0.3s,baz=235,slow=7.5,SNR=197						
TKL				Sn	Sn	09 54 04.6	-2.2
	comp=Z,6.7nm,0.3s,baz=252,slow=13,SNR=1.6						
TKL				Lg	Lg	09 55 10.8	
	comp=Z,23nm,0.3s,baz=190,slow=14,SNR=6.4						
TKL				LR	LR	09 56 35.6	
	comp=Z,2µm,19.9s,baz=280,slow=38						
TZTN	Tazewell	11.59	87	P	Pn	09 51 58.5	-0.4
	baz=275,SNR=25						
TZTN	Tazewell	11.59	87	P	Pn	09 51 59.5	+0.6
	baz=275,SNR=43						
AGMN	Agassiz Nation	11.62	7	P	Pn	09 51 56.1	-3.2
	baz=188,SNR=31						
F42A	Maple Grove Fa	11.63	36	P	Pn	09 51 58.2	-1.2
	baz=223						
V52A	Sevierville	11.64	90	P	Pn	09 51 59.9	+0.3
	baz=279,SNR=38						
152A	Waverly Hall	11.65	107	P	Pn	09 52 00.3	+0.6
	baz=294,SNR=8.8						
LAO	LASA Array	11.66	331	P	Pn	09 51 58.7	-1.1
	baz=146,SNR=46						
LAO	LASA Array	11.66	331	P	Pn	09 51 59.8	0.0
	baz=146,SNR=11						
L48A	N Adams	11.68	60	P	Pn	09 51 59.3	-0.8
	baz=248,SNR=24						
L48A				P	Pn	09 51 59.3	-0.8
	baz=248,SNR=24						
Q51A	Peebles	11.78	75	P	Pn	09 52 00.4	-1.0
	baz=263,SNR=24						
Q51A				P	Pn	09 52 00.4	-1.0
	baz=263,SNR=24						
451A	Vernon	11.88	118	P	Pn	09 52 02.8	-0.1
	baz=304						
RLMT	Red Lodge	11.93	318	P	Pn	09 52 03.0	-0.6
	baz=131,SNR=26						
J47A	Sunmer	11.97	53	P	Pn	09 52 03.9	-0.1
	baz=242						
J47A				P	Pn	09 52 03.9	-0.1
	baz=242						
B35A	Bob, Littlefor	11.99	14	P	Pn	09 52 02.6	-1.8
	baz=197						
P51A	Williamsport	12.05	73	P	Pn	09 52 04.1	-1.1
	baz=262						
P51A				P	Pn	09 52 04.1	-1.1
	baz=262						
DUG	Dugway, Tooele	12.12	291	P	Pn	09 52 05.9	-0.4
	baz=102						
EYMN	Ely	12.14	21	P	Pn	09 52 03.8	-2.6
	baz=206,SNR=14						
EYMN	Ely	12.14	21	P	Pn	09 52 04.0	-2.4
	baz=206,SNR=39						
H17A	Grant Village	12.23	312	P	Pn	09 52 07.3	-0.5
	baz=124						
ACSO	Alum Creek Sta	12.24	69	P	Pn	09 52 06.2	-1.5
	baz=258,SNR=61						
V53A	Saluda	12.30	91	P	Pn	09 52 08.9	+0.4
	baz=279,SNR=15						
V53A				P	Pn	09 52 08.9	+0.4
	baz=279,SNR=15						
GOGA	Godfrey	12.35	101	P	Pn	09 52 08.9	-0.2
	baz=290,SNR=9.4						
AAM	Ann Arbor	12.35	59	P	Pn	09 52 08.0	-1.2
	baz=248,SNR=19						
D41A	Chassel	12.43	31	P	Pn	09 52 08.2	-2.0
	baz=218,SNR=20						
M50A	Fremont	12.49	64	P	Pn	09 52 10.0	-1.0
	baz=253						
M50A				P	Pn	09 52 10.0	-1.0
	baz=253						
DGMT	Dagmar	12.55	341	P	Pn	09 52 10.6	-1.4
	baz=157,SNR=36						
DGMT	Dagmar	12.55	341	P	Pn	09 52 11.0	-0.9
	baz=157,SNR=13						
Q52A	Bidwell	12.61	75	P	Pn	09 52 11.7	-1.0
	baz=265,SNR=31						
Q52A				P	Pn	09 52 11.7	-1.0
	baz=265,SNR=31						
P52A	Corning	12.79	72	P	Pn	09 52 13.7	-1.5
	baz=262,SNR=20						
R53A	Hurricane	12.81	78	P	Pn	09 52 15.2	-0.3
	baz=268,SNR=21						
R53A				P	Pn	09 52 15.2	-0.3
	baz=268,SNR=21						
N51A	Ashland	12.84	66	P	Pn	09 52 14.9	-1.1
	baz=256,SNR=8.9						
N51A				P	Pn	09 52 14.9	-1.1
	baz=256,SNR=8.9						
GLMI	Grayling	12.91	47	P	Pn	09 52 14.6	-2.3
	baz=236,SNR=24						
154A	Montrose	12.92	104	P	Pn	09 52 17.2	+0.2
	baz=293						
U54A	Nelsons Funny	12.98	86	P	Pn	09 52 17.4	-0.5
	baz=276,SNR=26						
U54A				P	Pn	09 52 17.4	-0.5
	baz=276,SNR=26						
TIGA	Tifton	13.05	110	P	Pn	09 52 18.0	-0.8
	baz=298,SNR=6.0						
553A	Crawfordville	13.06	116	P	Pn	09 52 18.2	-0.8
	baz=304						
O52A	Adamsville	13.08	70	P	Pn	09 52 17.2	-2.0
	baz=260						
O52A				P	Pn	09 52 17.2	-2.0
	baz=260						
214A	Organ Pipe Nat	13.16	253	P	Pn	09 52 20.7	+0.3
	baz=65						
K50A	Casco	13.23	58	P	Pn	09 52 19.4	-1.8
	baz=248						
K50A				P	Pn	09 52 19.4	-1.8
	baz=248						
S54A	Dingess, Beckl	13.31	81	P	Pn	09 52 21.7	-0.7
	baz=270,SNR=28						
S54A				P	Pn	09 52 21.7	-0.7
	baz=270,SNR=28						
P53A	Whipple	13.34	73	P	Pn	09 52 21.0	-1.7
	baz=263,SNR=21						
P53A				P	Pn	09 52 21.0	-1.7
	baz=263,SNR=21						
PDMCI	Parker Dam,Lak	13.40	264	P	Pn	09 52 25.1	+1.6
	baz=75						
BOZ	Bozeman (W)	13.53	315	P	Pn	09 52 25.8	+0.4
	baz=126						
V55A	Taylorsville	13.55	89	P	Pn	09 52 24.9	-0.7
	baz=279						
V55A				P	Pn	09 52 24.9	-0.7
	baz=279						
ULM	Lac du Bonnet	13.56	6	Pn	Pn	09 52 20.9	-4.7
	comp=Z,2.1nm,0.3s,baz=180,slow=12,SNR=15						
ULM				Sn	Sn	09 54 43.6	-13
	comp=Z,2.3nm,0.3s,baz=90,slow=22,SNR=1.3						
ULM				Lg	Lg	09 56 10.3	
	comp=Z,2.0nm,0.3s,baz=90,slow=20,SNR=1.4						
ULM				LR	LR	09 57 54.5	
	comp=Z,2µm,19.3s,baz=192,slow=39						
O53A	New Philadelph	13.58	70	P	Pn	09 52 23.7	-2.3
	baz=260,SNR=11						
KMSC	Kings Mountain	13.58	92	P	Pn	09 52 25.0	-1.1
	baz=282,SNR=31						
KMSC	Kings Mountain	13.58	92	P	Pn	09 52 25.6	-0.4
	baz=282						
255A	Hazlehurst	13.68	106	P	Pn	09 52 26.6	-0.8
	baz=295,SNR=25						
Q54A	Coxs Mills	13.72	76	P	Pn	09 52 27.1	-0.9
	baz=266						
Q54A				P	Pn	09 52 27.1	-0.9
	baz=266						
M52A	Chesterland	13.74	65	P	Pn	09 52 25.9	-2.3
	baz=255						
M52A				P	Pn	09 52 25.9	-2.3
	baz=255						
N53A	Lisbon	13.96	68	P	Pn	09 52 28.8	-2.4
	baz=259,SNR=18						
N53A				P	Pn	09 52 28.8	-2.4
	baz=259,SNR=18						
BLA	Blacksburg	14.04	83	P	Pn	09 52 32.1	-0.3
	baz=273,SNR=17						
BLA	Blacksburg	14.04	83	P	Pn	09 52 32.1	-0.3
	baz=273,SNR=15						
ELK	Elko	14.04	292	Pn	Pn	09 52 34.5	+1.9
	comp=Z,0.1nm,0.3s,baz=107,slow=12,SNR=6.4						
ELK				Lg	Lg	09 56 32.8	
	comp=Z,0.2nm,0.3s,baz=24,slow=20,SNR=1.4						
R11A	Troy Canyon, C	14.06	282	P	Pn	09 52 33.8	+1.0
	baz=91,SNR=5.6						
U56A	King	14.15	86	P	Pn	09 52 34.2	+0.3
	baz=277						
U56A				P	Pn	09 52 34.2	+0.3
	baz=277						
O54A	Avella	14.20	71	P	Pn	09 52 33.4	-1.1
	baz=262						
O54A				P	Pn	09 52 33.4	-1.1
	baz=262						
EGMT	Eagleton	14.20	326	P	Pn	09 52 33.4	-1.2
	baz=138,SNR=54						
M53A	WI Miller and	14.21	66	P	Pn	09 52 31.8	-2.9
	baz=256,SNR=16						
IRM	Iron Mountain	14.24	265	P	Pn	09 52 35.1	0.0
	baz=75,SNR=13						
R55A	Marlinton	14.25	79	P	Pn	09 52 34.4	-0.9
	baz=269,SNR=27						
R55A				P	Pn	09 52 34.4	-0.9
	baz=269,SNR=27						
HLID	Hailey	14.27	303	P	Pn	09 52 35.7	+0.1
	baz=113,SNR=18						
GMRC	Granite Mounta	14.50	267	P	Pn	09 52 41.0	+2.3
	baz=77,SNR=34						
MCWV	Mont Chateau	14.54	73	P	Pn	09 52 37.0	-2.1
	baz=264,SNR=5.4						
TUQ	Turquoise Moun	14.58	270	P	Pn	09 52 40.0	+0.2
	baz=80,SNR=8.0						
Y57A	Sumter	14.60	96	P	Pn	09 52 39.1	-0.9
	baz=286						
Y57A				P	Pn	09 52 39.1	-0.9
	baz=286						
N54A	Moraine State	14.62	68	P	Pn	09 52 37.3	-2.9
	baz=259,SNR=21						
N54A	Moraine State	14.62	68	P	Pn	09 52 37.3	-2.9
	baz=259,SNR=13						
BC3	Big Chuckawall	14.62	263	P	Pn	09 52 39.6	-0.8
	baz=73						
ALLY	Alegheny Colle	14.65	65	P	Pn	09 52 39.9	-0.7
	baz=256						
SHOC	Shoshone, Teco	14.78	272	P	Pn	09 52 40.6	-1.9
	baz=81						
ERPA	Erie	14.88	63	P	Pn	09 52 42.3	-1.5
	baz=255,SNR=5.3						
BELC	Belle Mtn. Jos	14.96	265	P	Pn	09 52 45.5	+0.5
	baz=74,SNR=9.5						
M54A	Oil Creek Stat	14.97	66	P	Pn	09 52 42.2	-2.8
	baz=257,SNR=12						
M54A	Oil Creek Stat	14.97	66	P	Pn	09 52 43.0	-2.0
	baz=257,SNR=19						
T57A	Hurt	14.99	84	P	Pn	09 52 44.3	-0.9
	baz=275,SNR=5.6						
T57A				P	Pn	09 52 44.3	-0.9
	baz=275,SNR=5.6						
HEC	Hector,Ludlow	15.03	268	P	Pn	09 52 47.1	+1.2
	baz=77						
NHSC	New Hope	15.04	99	P	Pn	09 52 43.8	-2.2
	baz=289						
SWSC	Sam W. Stewart	15.12	261	P	Pn	09 52 47.1	0.0
	baz=70						
FURC	Furnace Creek,	15.18	275	P	Pn	09 52 49.9	+2.1
	baz=83,SNR=14						
QSM	Queen of Sheba	15.25	273	IAmb	IAmb	09 52 53.1	
	comp=Z,14nm,1.0s						
GSC	Goldstone, Bar	15.31	270	P	P	09 52 52.2	-2.3
	baz=79,SNR=7.4						
GSC	Goldstone, Bar	15.31	270	IAmb	IAmb	09 52 54.2	
	comp=Z,14nm,1.1s						
TPFO	Pinon Flats	15.44	264	P	Pn	09 52 52.9	+1.6
	baz=73						
PFO	Pinyon Flats O	15.44	264	Pn	P	09 52 54.1	-1.9
	comp=Z,0.1nm,0.3s,baz=65,slow=17,SNR=2.3						
PFO				Lg	Lg	09 57 13.7	
	comp=Z,0.0nm,0.3s,baz=37,slow=13,SNR=2.5						
PFO				LR	LR	09 59 16.5	
	comp=Z,776nm,18.8s,baz=66,slow=39						
PFO	Pinyon Flats O	15.44	264	P	Pn	09 52 53.4	+2.0
	baz=73						
RRX	Edison Barstow	15.55	269	P	Pn	09 52 46.7	-6.0
	baz=78						
MSO	Missoula	15.55	315	P	Pn	09 52 52.8	+0.1
	baz=125						
O56A	Blue Knob Stat	15.58	71	P	Pn	09 52 50.7	-2.4
	baz=263,SNR=11						
BBRC	Big Bear Solar	15.63	266	P	Pn	09 52 55.0	+1.0
	baz=75,SNR=6.2						
MONP2	Monument Peak	15.63	261	P	Pn	09 52 55.3	+1.3
	baz=71						
LCH	Last Change Ra	15.73	278	IAmb	IAmb	09 53 00.9	
	comp=Z,48nm,1.5s						
MPMC	Manual Prospec	15.73	273	P	P	09 52 57.4	-1.8
	baz=82,SNR=14						
LRMC	Laurel Mtn Rad	15.98	271	P	Pn	09 52 59.0	+0.7
	baz=80,SNR=13						
MURC	Murrieta	16.03	264	P	Pn	09 52 58.2	-0.8
	baz=73						
SSPA	Standing Stone	16.14	70	P	Pn	09 52 56.6	-3.7
	baz=262						
CWC	Cottonwood Cre	16.15	275	P	Pn	09 53 00.8	+0.2
	baz=83						
BFSC	Mount Baldy Ra	16.23	267	P	Pn	09 53 01.8	+0.2
	baz=76,SNR=8.2						
CNNC	Cliffs of the	16.33	89	P	Pn	09 53 01.1	-1.6
	baz=281						
SADO	Sadowa	16.33	55	Pn	Pn	09 52 58.8	-3.8
	comp=Z,1.9nm,0.3s,baz=268,slow=13,SNR=16						
SADO				Sn	Sn	09 55 52.6	-11
	comp=Z,3.1nm,0.3s,baz=262,slow=12,SNR=3.3						
SADO				Lg	Lg	09 57 39.2	
	comp=Z,3.0nm,0.3s,baz=273,slow=5.5,SNR=4.0						
SADO				LR	LR	09 59 25.1	
	comp=Z,2µm,18.3s,baz=241,slow=38						
T59A	Double "B" Far	16.34	83	IAmb	IAmb	09 53 14.2	
	comp=Z,72nm,1.4s						
EDW2	Edwards Air Fo	16.35	269	P	Pn	09 53 04.2	+1.2
	baz=78,SNR=8.3						
LHV	Little Huntoon	16.36	281	IAmb	IAmb	09 53 10.5	
	comp=Z,36nm,0.9s						
RYN	Ryan	16.37	283	P	P	09 53 06.0	-0.3
RYN				IAmb	IAmb	09 53 09.9	
	comp=Z,19nm,0.9s						
CBN	Corbin Frederi	16.41	79	P	Pn	09 53 03.3	-0.5
	baz=271						
MWC	Mount Wilson	16.55	267	IAmb	IAmb	09 53 24.4	
	comp=Z,52nm,1.5s						
ISA	Isabella, Lake	16.58	272	P	Pn	09 53 07.0	+0.9
	baz=80,SNR=6.8						
WVOR	Wild Horse Val	16.89	296	P	P	09 53 11.7	-0.2
WALA	Waterton Lakes	16.90	322	IAmb	IAmb	09 53 14.9	
	comp=Z,39nm,1.1s						
YERR	Yerington	16.93	284	P	P	09 53 12.8	+0.2
ARVC	Arvin	16.97	271	P	P	09 53 13.5	+0.7
	baz=78,SNR=8.4						
VES	Vestal, Richgr	17.04	273	P	P	09 53 14.6	+1.0
	baz=81,SNR=9.0						
PNTR	Pine Nut	17.22	284	IAmb	IAmb	09 53 24.0	
	comp=Z,33nm,1.2s						
MPK	Martis Peak	17.55	285	IAmb	IAmb	09 53 25.0	
	comp=Z,31nm,1.3s						
N59A	State Game Lan	17.77	70	P	Pn	09 53 18.1	-2.7
	baz=264						
P60A	Greenville	17.79	73	P	Pn	09 53 19.0	-2.0
	baz=267						
P60A	Greenville	17.79	73	P	Pn	09 53 19.2	-1.8
P60A				IAmb	IAmb	09 53 42.0	
	comp=Z,33nm,0.8s						
BINY	Binghamton	17.80	66	P	Pn	09 53 18.9	-2.2
	baz=260						
PKM	Mcpherson Peak	17.81	270	P	P	09 53 22.5	+0.3
	baz=78,SNR=12						
CMB	Columbia Colle	17.85	281	IAmb	IAmb	09 53 27.2	
	comp=Z,48nm,1.4s						
NEW	Newport	18.14	315	P	P	09 53 25.9	+0.3
	comp=Z,0.2nm,0.3s,baz=124,slow=12,SNR=12						
NEW				Lg	Lg	09 58 37.6	
	comp=Z,0.3nm,0.3s,baz=38,slow=20,SNR=2.3						
NEW				LR	LR	10 01 09.7	
	comp=Z,913nm,19.1s,baz=120,slow=40						
NEW	Newport	18.14	315	P	Pn	09 53 24.5	-0.8
	baz=122,SNR=8.4						
FFC	Flin Flon	18.17	353	IAmb	IAmb	09 53 49.9	
	comp=Z,15nm,0.7s						
E08A	Dider Farm, El	18.46	308	IAmb	IAmb	09 53 32.5	
	comp=Z,40nm,1.3s						
C09A	Chrisman Ranch	18.57	313	IAmb	IAmb	09 53 37.4	
	comp=Z,23nm,0.7s						
ODNJ	Ogdensburg	18.67	70	P	P	09 53 29.3	-2.2
ODNJ				IAmb	IAmb	09 53 31.4	
	comp=Z,38nm,0.9s						
HAWA	Hanford	18.72	308	IAmb	IAmb	09 53 34.6	
	comp=Z,45nm,1.4s						
PINE	Pine Mountain	18.84	299	IAmb	IAmb	09 53 39.1	
	comp=Z,29nm,1.0s						
VLDQ	Val d'Or	18.85	47	P	P	09 53 29.9	-3.5
VLDQ				IAmb	IAmb	09 53 47.9	
	comp=Z,18nm,0.9s						
J05D	Fort Rock, OR	18.93	297	P	Pn	09 53 35.8	+0.7
	baz=102,SNR=12						
O03E	Paynes Creek	18.96	288	P	Pn	09 53 36.7	+1.3
	baz=93,SNR=8.3						
TRNY	Table Rock, Ra	18.96	69	IAmb	IAmb	09 53 59.9	
	comp=Z,30nm,1.2s						
J59A	Piesco	19.12	62	IAmb	IAmb	09 54 00.9	
	comp=Z,46nm,1.5s						
M04C	Macdoel	19.12	293	P	Pn	09 53 37.4	0.0
	baz=98,SNR=9.6						
PAL	Palisades	19.19	70	P	P	09 53 36.2	-0.9
	baz=265						
PAL	Palisades	19.19	70	P	P	09 53 37.0	-0.1
PAL				IAmb	IAmb	09 53 39.6	
	comp=Z,27nm,0.8s						
LONY	Lake Ozonia	19.35	59	P	P	09 53 37.8	-1.1
	baz=254						
LONY	Lake Ozonia	19.35	59	IAmb	IAmb	09 53 55.6	
	comp=Z,24nm,1.1s						
NCB	Newcomb	19.43	61	IAmb	IAmb	09 53 40.8	
	comp=Z,31nm,0.9s						
B08A	Colville Reser	19.46	313	P	Pn	09 53 40.9	-0.5
L04D	Klamath Falls	19.52	294	P	P	09 53 41.1	+0.1
	baz=98						
WDC	Whiskeytown Da	19.54	289	IAmb	IAmb	09 53 46.8	
	comp=Z,30nm,1.2s						
J04D	Umpqua Nationa	19.55	297	P	Pn	09 53 42.7	+0.1
	baz=101						
KSCT	Kent School, K	19.57	68	IAmb	IAmb	09 53 45.4	
	comp=Z,40nm,1.1s						
N02D	Trinity Center	19.69	290	P	P	09 53 43.4	+0.7
	baz=94,SNR=10						
ACCN	Adirondack Com	19.70	63	IAmb	IAmb	09 53 43.6	
	comp=Z,29nm,0.8s						
O02D	Mt. Diablo Mer	19.71	288	P	P	09 53 42.2	-0.7
	baz=92						
YBH	Yreka Blue Hor	19.76	292	P	Pn	09 53 44.3	-0.7
	comp=Z,0.5nm,0.3s,baz=94,slow=6.0,SNR=17						
YBH				LR	LR	10 02 03.2	
	comp=Z,614nm,20.2s,baz=98,slow=39						
LTY	Liberty	19.79	309	IAmb	IAmb	09 53 47.8	
	comp=Z,25nm,1.2s						
F05D	White Salmon	19.79	305	P	Pn	09 53 45.4	+0.1
	baz=109						

CMIG	Matias Romero comp=Z,0.8nm,0.3s,baz=344,slow=8.6,SNR=14	19.79	171	P	P	09 53 44.3	+0.4
CMIG	comp=Z,0.3nm,0.3s,baz=259,slow=18,SNR=2.3			S	S	09 57 22.4	-4.4
CMIG	comp=Z,281nm,18.4s,baz=355,slow=47			LR	LR	10 04 49.3	
M02C	Callahan baz=96,SNR=13	19.83	291	P	P	09 53 45.0	+0.7
I04A	Tendick Farm, baz=102,SNR=11	19.88	298	P	Pn	09 53 46.8	+0.5
HUMO	Hull Mountain comp=Z,36nm,1.4s	20.06	295	IAmb	IAmb	09 53 54.6	
MNTQ	Montreal, Queb	20.25	57	P	Pn	09 53 50.1	-0.6
MNTQ	comp=Z,33nm,1.2s			IAmb	IAmb	09 53 51.4	
L61B	Northampton baz=262,SNR=8.3	20.26	66	P	Pn	09 53 50.5	-0.3
H04D	Lebanon baz=104	20.27	300	P	Pn	09 53 50.6	-0.3
BUCK	Buck Mountain	20.37	299	P	P	09 53 50.7	+0.6
BUCK	comp=Z,41nm,1.3s			IAmb	IAmb	09 54 17.4	
QUA2	Belchertown comp=Z,31nm,1.0s	20.48	67	IAmb	IAmb	09 54 09.8	
J61A	Chester comp=Z,23nm,1.2s	20.49	63	IAmb	IAmb	09 54 05.9	
K02D	Willamette Mer baz=98	20.59	295	P	P	09 53 53.5	+1.1
E04D	Cinebar baz=110,SNR=6.9	20.74	306	P	Pn	09 53 56.6	+0.2
B05A	Bryant baz=114	21.07	311	P	P	09 53 58.0	+0.4
D04E	Lakebay baz=111	21.08	307	P	P	09 53 57.2	-0.5
D03D	Eldon baz=111	21.41	308	P	P	09 54 00.5	-0.7
APG	El Apazote comp=Z,13nm,0.7s,baz=35,slow=7.7,SNR=7.3	22.69	161	P	P	09 54 18.4	+3.0
APG	comp=Z,6.2nm,0.6s,baz=266,slow=17,SNR=1.6			S	S	09 58 23.5	-0.4
BBB	Bella Bella comp=Z,720nm,18.2s,baz=120,slow=38	26.21	316	LR	LR	10 05 45.1	
YKA	Yellowknife Ar comp=Z,1.9nm,0.5s,baz=140,slow=9.5,SNR=24	27.73	343	P	P	09 55 02.2	+0.5
YKA	comp=Z,1µm,21.4s,baz=0.0,slow=37			LR	LR	10 06 12.5	
SCHQ	Schefferville comp=Z,6.3nm,0.7s,baz=247,slow=8.1,SNR=9.5	27.90	40	P	P	09 55 03.4	+0.1
SCHQ	comp=Z,411nm,20.8s,baz=271,slow=34			LR	LR	10 05 04.9	
JTS	Las Juntas de comp=Z,299nm,20.9s,baz=31,slow=41	28.87	153	LR	LR	10 08 54.9	
DLBC	Dease Lake comp=Z,3.2nm,0.6s,baz=174,slow=10,SNR=3.1	30.13	326	P	P	09 55 25.0	+1.8
DLBC	comp=Z,985nm,18.9s,baz=126,slow=38			LR	LR	10 08 22.4	
DLBC	Dease Lake comp=Z,11nm,1.3s	30.13	326	IAmb	IAmb	09 55 26.6	
WRGLY	Wrigley baz=138	30.72	338	P	P	09 55 29.8	+1.6
FRB	Frobisher Bay comp=Z,6.1nm,0.9s,baz=221,slow=9.1,SNR=10	32.34	24	P	P	09 55 42.4	0.0
FRB	comp=Z,1µm,19.7s,baz=230,slow=36			LR	LR	10 08 52.0	
ZARC	Zaragoza, Cauc	35.95	138	P	P	09 56 14.1	-0.2
MESA	MESA baz=110	36.38	324	P	P	09 56 17.1	-0.6
EPYK	Eagle Plains baz=124	37.07	335	P	P	09 56 23.6	+0.3
M27K	Edge Creek, AK baz=113	37.15	328	P	P	09 56 23.8	-0.3
INK	Inuvik comp=Z,1.3nm,0.6s,baz=115,slow=6.8,SNR=8.9	37.23	339	P	P	09 56 25.7	+1.1
INK	Inuvik baz=130	37.23	339	P	P	09 56 24.6	0.0
INK	Inuvik comp=Z,7.3nm,1.4s	37.23	339	IAmb	IAmb	09 56 29.8	
A36M	Sachs Harbour baz=143	37.95	347	P	P	09 56 31.3	+0.7
A36M	Sachs Harbour comp=Z,6.9nm,0.8s	37.95	347	IAmb	IAmb	09 56 42.6	
RES	Resolute Bay comp=Z,1.1nm,0.8s,baz=166,slow=12,SNR=2.3	38.03	1	P	P	09 56 32.5	+1.2
L26K	Log Cabin Wild baz=112	38.03	328	P	P	09 56 32.8	+1.3
ROSC	El Rosal comp=Z,163nm,21.9s,baz=11,slow=40	38.48	140	LR	LR	10 15 03.9	
J26L	Joseph Creek baz=114	38.69	330	P	P	09 56 37.7	+0.6
J25K	Salcha River, baz=112	39.45	330	P	P	09 56 44.9	+1.4
IL31		40.12	330	P	P	09 56 49.6	+0.8
IL31	comp=Z,8.4nm,0.8s			IAmb	IAmb	09 56 52.1	
ILAR	Eielson Array comp=Z,6.4nm,0.7s,baz=107,slow=7.2,SNR=87	40.12	330	P	P	09 56 50.6	+1.7
ILAR	comp=Z,464nm,20.2s,baz=118,slow=37			LR	LR	10 14 08.6	
ILAR	Eielson Array	40.12	330	P	P	09 56 50.0	+1.1
O22K	Cooper Landing baz=102	40.18	323	P	P	09 56 47.8	-1.6
CCB	Clear Creek Bu comp=Z,6.9nm,1.1s	40.45	330	IAmb	IAmb	09 56 57.3	
MDM	Murphy Dome comp=Z,9.9nm,1.4s	40.73	330	IAmb	IAmb	09 56 56.0	
KDAK	Kodiak Island baz=96	41.20	318	P	P	09 56 57.1	-0.8
I23K	Minto, Yukon-K baz=108	41.24	330	P	P	09 56 56.3	-1.8
MLY	Manley baz=106	41.76	330	P	P	09 57 04.1	+1.6
CAST	Castle Rocks baz=103	41.92	327	P	P	09 57 04.5	+0.7
CHUM	Lake Minchumin baz=104	42.13	328	P	P	09 57 06.6	+1.2
COLD	Coldfoot baz=109	42.23	333	P	P	09 57 08.1	+1.9
I21K	Tanana baz=105	42.31	330	P	P	09 57 08.6	+1.7
TOLK	Toolik Lake Re baz=111,SNR=9.8	42.50	335	P	P	09 57 08.8	+0.4
H21K	Melozitna Rive comp=Z,8.8nm,1.1s	42.77	330	IAmb	IAmb	09 57 17.9	
J20K	Nowinta River baz=102	42.98	328	P	P	09 57 14.2	+1.8
J20K	Nowinta River comp=Z,4.8nm,0.7s	42.98	328	IAmb	IAmb	09 57 37.5	
LPAZ	La Paz comp=Z,1.7nm,0.6s,baz=13,slow=4.7,SNR=6.6	59.82	146	P	P	09 59 20.9	+1.2
LPAZ	comp=Z,108nm,18.2s,baz=284,slow=41			LR	LR	10 29 46.3	
TAOE	Nuku Hiva Isla comp=Z,133nm,22.2s	60.20	230	*e*LR	LR	10 16 55.0	
SEY	Seymchan comp=Z,534nm,20.8s,baz=62,slow=37	66.01	332	LR	LR	10 29 56.9	
ARCES	ARCESS Array B comp=Z,2.3nm,0.7s,baz=311,slow=6.3,SNR=4.8	66.29	19	P	P	10 00 01.5	+0.1
ARCES	comp=Z,359nm,21.1s,baz=310,slow=36			LR	LR	10 28 24.9	
PETK	Petropavlovsk- comp=Z,186nm,18.6s,baz=56,slow=37	69.16	321	LR	LR	10 32 09.7	
ESDC	Sonseca Array comp=Z,1.1nm,0.9s,baz=310,slow=7.7,SNR=4.4	70.39	55	P	P	10 00 27.5	-0.1
ESDC	comp=Z,152nm,18.2s,baz=280,slow=34			LR	LR	10 29 24.6	
FINES	FINESS Array B comp=Z,3.1nm,0.8s,baz=346,slow=0.8,SNR=3.7	72.14	25	P	P	10 00 38.1	+0.4
FINES	comp=Z,503nm,18.5s,baz=266,slow=35			LR	LR	10 31 18.6	
PPT	Papeete comp=Z,84nm,21.4s,baz=36,slow=32	72.73	232	LR	LR	10 28 32.6	
PPT2	Papeete2 comp=Z,135nm,25.2s	72.74	232	*e*LR	LR	10 22 46.9	
CPUP	Villa Florida comp=Z,74nm,21.4s,baz=8.0,slow=38	73.51	142	LR	LR	10 35 49.5	
NRIK	Noril'sk comp=Z,230nm,19.4s,baz=2.5,slow=36	74.12	358	LR	LR	10 34 17.5	
GERES	GERESS Array B comp=Z,182nm,18.1s,baz=274,slow=36	75.43	39	LR	LR	10 33 46.8	
PLCA	Paso Flores comp=Z,2.9nm,0.8s,baz=23,slow=4.9,SNR=5.7	81.13	159	P	P	10 01 30.6	+1.8
PLCA	comp=Z,36nm,18.1s,baz=358,slow=35			LR	LR	10 36 09.5	
PLCA	Paso Flores comp=Z,5.2nm,1.1s	81.13	159	IAmb	IAmb	10 01 35.4	
KEST	Kesra comp=Z,192nm,18.9s,baz=282,slow=35	81.25	52	LR	LR	10 36 25.6	
AKASG	Malin Array Be comp=Z,1.3nm,0.3s,baz=323,slow=4.4,SNR=14	81.30	31	P	P	10 01 30.5	+0.8
AKASG	comp=Z,225nm,18.2s,baz=275,slow=35			LR	LR	10 36 58.5	
AKASG	Malin Array Be comp=Z,3.5nm,1.4s	81.30	31	IAmb	IAmb	10 01 32.2	
RAR	Rarotonga comp=Z,104nm,19.2s,baz=354,slow=32	81.97	236	LR	LR	10 33 15.0	
USRK	Ussuriysk Ar. comp=Z,206nm,20.2s,baz=31,slow=38	87.56	327	LR	LR	10 44 18.6	
DBIC	Dimbokro comp=Z,145nm,21.7s,baz=324,slow=32	88.54	83	LR	LR	10 35 46.4	
ZALV	Zalesovo Beam comp=Z,1.8nm,0.7s,baz=351,slow=3.8,SNR=4.1	89.62	358	P	P	10 02 12.3	+1.3
ZALV	comp=Z,158nm,20.3s,baz=356,slow=38			LR	LR	10 45 09.3	
TORD	Torodi Ar. Bea comp=Z,1.3nm,0.9s,baz=332,slow=3.5,SNR=5.6	89.81	74	P	P	10 02 13.0	+0.4
TORD	comp=Z,205nm,21.8s,baz=260,slow=33			LR	LR	10 38 57.7	
MJAR	Matsushiro Arr comp=Z,53nm,18.1s,baz=55,slow=39	90.38	318	LR	LR	10 48 04.5	
IDI	Anoyia comp=Z,37nm,18.2s,baz=304,slow=36	90.78	43	LR	LR	10 43 47.1	
BRTR	Keskin Array B comp=Z,88nm,18.6s,baz=332,slow=36	91.82	35	LR	LR	10 44 55.0	
KBZ	Khabaz comp=Z,257nm,19.7s,baz=324,slow=35	92.35	27	LR	LR	10 42 41.4	
SONM	Songino Array comp=Z,0.4nm,0.6s,baz=34,slow=2.5,SNR=3.7	93.00	344	P	P	10 02 28.3	+1.2
SONM	comp=Z,202nm,18.0s,baz=9.5,slow=39			LR	LR	10 49 50.4	
SONM	Songino Array comp=Z,1.0nm,1.0s	93.00	344	IAmb	IAmb	10 02 30.6	
KSRS	Korea Array comp=Z,116nm,18.0s,baz=31,slow=38	94.81	325	LR	LR	10 49 19.3	
GNI	Garni comp=Z,97nm,18.0s,baz=332,slow=36	96.14	28	LR	LR	10 46 24.4	
MKAR	Makanchi Array comp=Z,0.1nm,0.5s,baz=323,slow=2.2,SNR=2.8	96.81	360	P	P	10 02 45.5	+1.1
MKAR	comp=Z,95nm,18.0s,baz=356,slow=38			LR	LR	10 50 43.4	
MMAI	Mount Meron Ar comp=Z,34nm,18.3s,baz=340,slow=37	98.05	38	LR	LR	10 49 34.8	
HHC	Hu-ho-hao-te	98.14	338	*e*P	P	10 02 49.0	-1.6
HHC	comp=Z,15nm,0.7s			pmax	pmax		
HHC	comp=Z,110nm,5.2s			pmax	pmax		
HHC	comp=N,420nm,15.3s			LR	LR		
HHC	comp=E,250nm,15.3s			LR	LR		
HHC	comp=Z,610nm,16.2s			LR	LR		
WMQ	Urumqi	99.62	356	*e*P	Pdif	10 02 59.0	+1.9
WMQ	comp=Z,210nm,21.7s			LR	LR		
DZM	Mont Dzumac comp=Z,81nm,23.9s	107.17	255	*e*LR	LR	10 38 53.5	
CMAR	Chiang Mai Arr comp=Z,0.9nm,0.3s,baz=68,slow=7.9,SNR=4.8	122.79	341	PKP	PKiKP	10 08 11.0	+0.7
VNDA	Vanda comp=Z,0.7nm,0.9s,baz=92,slow=8.1,SNR=2.8	127.78	196	PKP	PKiKP	10 08 19.5	+1.1
WRA	Warramunga Arr comp=Z,0.6nm,0.6s,baz=59,slow=2.0,SNR=8.4	131.60	275	PKP	PKiKP	10 08 28.5	+0.7
ASAR	Alice Springs comp=Z,0.3nm,0.7s,baz=21,slow=3.2,SNR=2.3	133.82	271	PKP	PKPdf	10 08 30.0	-0.8
MAW	Mawson comp=Z,5.4nm,0.7s,baz=248,slow=4.1,SNR=14	147.27	167	PKPbc	PKPab	10 08 56.9	-0.8

IDC 30 09:59:50.4±8.5**, 56°.01N**×**86°.55E, h0**km**, mb1 2.7**/2**, mb1mx2.6**/34**, mbtmp2.7**/2**, ML2.0**/2**, Error ellipse: s-maj=82.7km s-min=35.0km az=25.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA baz=24,slow=333,SNR=3.5	2.30	206	*i*		10 12 30.0	
ZALV	Zalesovo Beam 1.5nm,0.3s,baz=22,slow=16,SNR=23	2.30	206	Pn	Pn	10 00 29.6	+0.1
ZALV	4.2nm,0.3s,baz=27,slow=26,SNR=23			Sn	Sb	10 01 00.6	-1.0
MKAR	Makanchi Array 0.0nm,0.3s,baz=20,slow=16,SNR=0.7	9.61	198	Pn	Pn	10 02 09.6	-0.3

IDC 30 10:03:18.8±3.5**, 54°.64N**×**83°.77E, h0**km**, mb1 2.6**/1**, mb1mx2.6**/33**, mbtmp2.6**/1**, ML2.4**/1**, Error ellipse: s-maj=24.0km s-min=12.7km az=149.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA baz=319,slow=328,SNR=6.5	0.93	138	*i*		10 08 50.0	
ZALV	Zalesovo Beam 4.7nm,0.3s,baz=318,slow=15,SNR=29	0.93	138	Pg	Pg	10 03 36.2	-0.3
ZALV	1.8nm,0.3s,baz=319,slow=29,SNR=6.8			Lg	Lg	10 03 50.1	
MKAR	Makanchi Array 0.1nm,0.3s,baz=7.5,slow=12,SNR=1.8	7.91	187	Pn	Pn	10 05 15.4	+0.4
MKAR	0.1nm,0.3s,baz=14,slow=33,SNR=1.8			Lg	Lg	10 07 28.6	

IDC ***30*** *10:12:56.7±1.8, 7°.89S×125°.57E, h0km, mb3.8/2, mb1 4.1/4, mb1mx3.7/39, mbtmp3.9/4, ML3.8/2, MS2.8/1, Ms1 2.8/1, ms1mx2.4/24, Error ellipse: s-maj=161.5km s-min=28.1km az=57.0*

DJA ***30*** *10:13:00.7±1.1, 8°S±5°×12°5E±°, h10km, M3.6/7, MLv3.6/7*

ISC 30 10:12:57.6±1.1**, 8°.23S**±0°.07×**125°.28E**±0°.08**, h10**km**, n9, σ2ˢ.23**/12**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.82	213	P	Pn	10 13 30.0	+1.0
SOEI				S	Sn	10 13 49.0	-3.2
BATI	Baumata	2.53	219	P	Pb	10 13 41.4	-1.7
BATI				S	Sg	10 14 22.8	+3.8
MMRI	Maumere	3.04	262	P	Pn	10 13 46.0	+0.2
EDFI	Ende, Flores	3.59	262	P	Pn	10 13 53.2	-0.2
BSSI	Bau Bau, Buton	5.19	293	P	Pn	10 14 09.3	-6.0
WRA	Warramunga Arr 0.4nm,0.3s,baz=320,slow=13,SNR=27	14.57	144	Pn	Pn	10 16 25.4	+1.4
WRA	0.3nm,0.3s,baz=318,slow=23,SNR=5.1			Sn	Sn	10 19 04.3	-1.5
ASAR	Alice Springs 0.3nm,0.3s,baz=325,slow=11,SNR=22	17.43	153	P	P	10 17 03.9	+1.6
ASAR	0.1nm,0.3s,baz=316,slow=21,SNR=4.3			S	Sn	10 20 12.2	-3.0
ASAR	comp=Z,33nm,20.9s,baz=12,slow=38			LR	LR	10 24 05.3	
CMAR	Chiang Mai Arr 0.7nm,0.3s,baz=133,slow=8.8,SNR=4.8	37.13	316	P	P	10 20 08.8	0.0
MKAR	Makanchi Array 0.5nm,0.5s,baz=132,slow=6.7,SNR=6.1	66.79	329	P	P	10 23 49.4	0.0

JMA 30 10:32:23.5±0.1**, 24°.50N**×**122°.98E, h70**km±1km**, M1.7, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.05	144	P	Pn	10 32 33.7	0.0
YOJ				*e*S	Sn	10 32 41.0	0.0
JYNG	Yonagunijimaku	0.06	213	P	Pn	10 32 33.6	-0.1
JYNG				S	Sn	10 32 41.2	+0.1
IRIF	Iriomote-Funau	0.70	103	P	Pn	10 32 38.4	0.0
IRIF				S	Sn	10 32 49.8	+0.4
HATJ	Hateruma jima	0.87	120	*e*S	Sn	10 32 53.7	+0.7
JKRS	Kuro-shima	0.97	105	P	Pn	10 32 42.2	+0.5
JKRS				S	Sn	10 32 56.1	+0.9
JIJ	Ishigaki jima	1.07	97	P	Pn	10 32 42.9	+0.1
JIJ				S	Sn	10 32 56.7	-0.6
JISG	Ishigakijimahi	1.22	86	P	Pn	10 32 44.9	+0.2
JISG				*e*S	Sn	10 33 00.5	-0.1

TAP 30 10:32:53.1, 23°.79N×**121°.39E, h26**km**, ML1.4, B, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESL	Shilin baz=61	0.05	56	*i* P	Pb	10 32 57.7	+0.1
ESL	baz=61			*i* S	Sb	10 33 00.8	+0.1
EGFH	Guangfu baz=161	0.12	162	*i* P	Pb	10 32 57.8	-0.2
EGFH	baz=161			*i* S	Sb	10 33 01.2	-0.2
ETM	Tongmen baz=28	0.20	28	S	Sb	10 33 03.2	+0.3
OWD	Renai baz=311	0.26	311	*i* P	Pb	10 32 59.7	0.0
OWD	baz=311			*i* S	Sb	10 33 04.7	+0.4
EHY	Hungye baz=186	0.28	192	P	Pb	10 33 00.3	+0.3
EHY	baz=186			*i* S	Sb	10 33 05.1	+0.5
CHGB	Renai baz=325	0.34	325	*e*S	Sb	10 33 06.9	+0.6
WHF	Hehuan Shan baz=344	0.38	343	P	Pb	10 33 01.5	-0.2
WHF	baz=344			S	Sb	10 33 07.8	+0.3
YULB	Yu-li baz=182	0.40	192	P	Pb	10 33 01.7	0.0
YULB	baz=182			S	Sb	10 33 08.4	+0.8
FUSS	Fushou baz=346	0.48	344	*e*P	Pb	10 33 03.4	+0.2
FUSS	baz=346			*e*S	Sb	10 33 10.5	+0.4

MAN 30 10:46:27.4, 12°.28N×**123°.86E, h1**km**, mb4.1, ML2.8, MS2.5, Luzon**

IDC ***30*** *10:52:36.9±1.0, 39°.14N×106°.32E, h0km, mb3.5/6, mb1 3.6/8, mb1mx3.5/44, mbtmp3.5/8, ML3.0/2, Error ellipse: s-maj=36.7km s-min=15.6km az=66.0*

ISC 30 10:52:42.4±1.1**, 39°.09N**±0°.09×**106°.2E**±0°.2**, h35**km**, n8, σ1ˢ.43**/9**, mb3.7**/5**, Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array 0.1nm,0.3s,baz=194,slow=11,SNR=3.6	8.74	1	Pn	Pn	10 54 45.1	-1.2
SONM	0.2nm,0.3s,baz=184,slow=18,SNR=3.6			Sn	Sn	10 56 25.8	+2.2
SONM	0.5nm,0.3s,baz=185,slow=28,SNR=1.4			Lg	Lg	10 57 13.8	
MKAR	Makanchi Array 0.1nm,0.3s,baz=99,slow=13,SNR=4.9	19.07	302	P	P	10 57 00.9	-0.8
ZALV	Zalesovo Beam 0.7nm,0.5s,baz=123,slow=9.9,SNR=4.0	20.79	323	P	P	10 57 19.8	-0.4
CMAR	Chiang Mai Arr 0.5nm,0.3s,baz=2.9,slow=9.8,SNR=4.0	21.51	199	P	P	10 57 29.8	+1.6
KURBB	Kurchatov Arra 1.5nm,0.6s,baz=108,slow=13,SNR=5.2	22.61	310	P	P	10 57 38.5	-1.3
BVAR	Borovoye Array 0.7nm,0.4s,baz=157,slow=7.9,SNR=5.6	28.15	311	P	P	10 58 31.3	+0.2
WRA	Warramunga Arr 0.2nm,0.5s,baz=330,slow=5.0,SNR=7.1	64.37	151	P	P	11 03 13.8	-0.9
ASAR	Alice Springs 0.8nm,0.5s,baz=337,slow=6.5,SNR=25	67.60	153	P	P	11 03 35.6	+0.1

IDC ***30*** *11:25:36.7±0.9, 23°.76S×64°.49W, h0km, mb3.9/4, mb1 4.0/8, mb1mx3.8/25, mbtmp3.9/8, ML3.7/4, MS3.0/4, Ms1 3.0/4, ms1mx2.8/26, Error ellipse: s-maj=30.1km s-min=21.0km az=34.0*

NEIC ***30*** *11:25:42.8±1.8, 23°.69S±0°.08×64°.64W±0°.08, h35km±6km, mb4.4/6, Md3.8(SJA), Error ellipse: s-maj=11.9km s-min=10.9km az=162.0*

ISC 30 11:25:42.1±0.6**, 23°.71S**±0°.08×**64°.58W**±0°.08**, h35**km**, n38, σ1ˢ.06**/36**, mb4.4**/10**, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde 1.0nm,0.3s,baz=103,slow=6.5,SNR=10	4.13	284	Pn	Pn	11 26 42.5	-0.6
LVC	Limon Verde	4.13	284		Pn	11 26 43.4	+0.3
PB15	IPOC Station P	4.52	275		Pn	11 26 49.2	+1.0
PB06	IPOC Station P	4.70	281		Pn	11 26 51.6	+0.9
PB09	IPOC Station P	4.71	293		Pn	11 26 51.9	+1.1
AC02	Maricunga	5.17	232		Pn	11 26 57.3	-0.1
PB01	IPOC Station P	5.26	299		Pn	11 26 58.1	-0.2
PATCX	Punta Patache	5.91	298		Pn	11 27 07.6	+0.4
TA01	Diego Aracena	6.06	300	Pn	Pn	11 27 08.8	-0.5
CPUP	Villa Florida 1.1nm,0.3s,baz=298,slow=15,SNR=1.7	7.07	113	Pn	Pn	11 27 21.9	-1.2
CPUP	5.5nm,0.3s,baz=31,slow=20,SNR=3.7			Lg	Lg	11 29 26.9	
CPUP	comp=Z,94nm,21.8s,baz=3.0,slow=44			LR	LR	11 30 40.3	
CPUP	Villa Florida	7.07	113		Pn	11 27 25.2	+2.1
AC04	Llanos de Chal	7.37	231	Pn	Pn	11 27 26.8	-0.3
LPAZ	La Paz 0.2nm,0.3s,baz=185,slow=17,SNR=2.5	8.10	335	Pn	Pn	11 27 37.9	0.0
LPAZ	La Paz	8.10	335		Pn	11 27 37.2	-0.6
SIV	San Ignacio 2.5nm,0.3s,baz=229,slow=6.7,SNR=24	8.35	24	Pn	Pn	11 27 39.7	-1.0
SIV	comp=Z,84nm,19.4s,baz=288,slow=43			LR	LR	11 31 38.4	
PTLB	Pontes e Lacer	9.68	33	Pn	Pn	11 27 59.7	+0.8
VILB	Vilhena	11.47	22		Pn	11 28 23.4	-0.1
ETMB	Extrema	13.90	353		Pn	11 28 56.5	-0.2
SAML	Samuel	14.73	5		Pn	11 29 06.6	-1.4
LC01	Cunco	16.37	201		P	11 29 30.9	-0.9
LC01	comp=Z,32nm,1.4s			IAmb	IAmb	11 29 32.8	
NNA	Nana comp=Z,66nm,21.1s,baz=112,slow=39	16.48	313	LR	LR	11 36 19.9	
LL02	Futaleuf	20.34	195	P	Pn	11 30 16.2	-1.3
ATAH	Atahualpa comp=Z,5.1nm,0.7s,baz=64,slow=4.6,SNR=4.1	21.15	319	P	P	11 30 26.8	+2.1
ATAH	comp=Z,44nm,21.6s,baz=135,slow=38			LR	LR	11 38 59.2	
SNAA	Sanae comp=Z,1.0nm,0.9s,baz=349,slow=16,SNR=2.3	58.90	161	P	P	11 35 36.7	-0.6
LIC	Lamto comp=Z,30nm,1.5s	65.24	71	*e*P	P	11 36 24.2	+3.6
TIC	Toumodi	65.45	70	*e*P	P	11 36 22.5	+0.5
KIC	Kosan Boka comp=Z,10nm,0.9s	65.56	71	*e*P	P	11 36 23.1	+0.5
DBIC	Dimbokro comp=Z,1.7nm,0.5s,baz=223,slow=5.5,SNR=4.8	65.61	70	P	P	11 36 21.8	-1.2
DBIC	Dimbokro	65.61	70	P	P	11 36 22.4	-0.6
QSPA	South Pole Qui	66.50	180		P	11 36 28.8	+0.7
QSPA	comp=Z,6.6nm,1.1s			IAmb	IAmb	11 36 29.9	
KOWA	Kowa	70.31	64	P	P	11 36 51.9	-0.6
KOWA	comp=Z,4.9nm,1.1s			IAmb	IAmb	11 36 53.8	
TORD	Torodi Ar. Bea comp=Z,123nm,0.8s,baz=254,slow=5.6,SNR=37	74.40	68	P	P	11 37 17.1	+0.2
PDAR	Pinedale Array comp=Z,0.3nm,0.5s,baz=129,slow=7.1,SNR=2.3	78.06	328	P	P	11 37 36.7	-0.7
HLID	Hailey	81.07	326	P	P	11 37 53.8	+0.1
HLID	comp=Z,2.2nm,0.8s			IAmb	IAmb	11 37 54.9	
ASAR	Alice Springs comp=Z,1.1nm,1.1s,baz=151,slow=2.1,SNR=3.6	129.61	202	PKP	PKiKP	11 44 48.4	-0.5
WRA	Warramunga Arr comp=Z,0.4nm,0.8s,baz=174,slow=1.8,SNR=2.0	132.86	205	PKP	PKiKP	11 44 54.7	-0.8
MKAR	Makanchi Array comp=Z,0.6nm,0.7s,baz=317,slow=3.9,SNR=6.8	144.87	41	PKP	PKPdf	11 45 14.7	-0.7
SONM	Songino Array comp=Z,0.3nm,0.6s,baz=11,slow=2.9,SNR=2.1	154.87	14	PKPbc	PKiKP	11 45 40.1	+0.3

EAF ***30*** *11:46:51.0±3.0, 23°.80S×27°.36E, h23km±35km, MD3.6*

BUL 30 11:46:51.1±1.1**, 23°.87S**×**27°.53E, h25**km±12km**, MD3.8, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSNA	Messina	2.75	57	*e*P	Pn	11 47 32.8	-1.0
MSNA				*e*S	Sn	11 48 04.8	-1.4
MSNA	Messina	2.75	57	*e*P	Pn	11 47 32.8	-1.0
MSNA				*e*S	Sn	11 48 04.8	-1.4
MATP	Matopo	3.55	15	*e*P	Pn	11 47 44.5	-0.2
MATP				*e*S	Sn	11 48 23.8	-2.2
MATP	Matopo	3.55	15	*e*P	Pn	11 47 44.5	-0.2
MATP				*e*S	Sn	11 48 23.8	-2.2
MOPA	Mopani	3.56	85	*e*P	Pn	11 47 48.5	+3.6
MOPA				*e*S	Sn	11 48 29.0	+2.8

MOPA	Mopani	3.56	85	eP	Pn	11 47 48.5	+3.6
MOPA				eS	Sn	11 48 29.0	+2.8
BOSA	Boshof	5.14	203	eP	Pn	11 48 07.0	+0.3
BOSA				eS	Sn	11 49 00.7	-4.6
BOSA	Boshof	5.14	203	eP	Pn	11 48 07.0	+0.3
BOSA				eS	Sn	11 49 00.7	-4.6
KRI	Karoi	7.27	16	eP	Pn	11 48 29.3	-6.7
KRI				eS	Sn	11 49 41.9	-16
KRI	Karoi	7.27	16	eP	Pn	11 48 29.3	-6.7
KRI				eS	Sn	11 49 41.9	-16

IDC ***30*** *11:50:29.8±0.5, 10°.51N×63°.53W, h0km, mb4.2/16, mb1 4.4/19, mb1mx4.2/41, mbtmp4.3/19, ML4.2/3, MS3.5/12, Ms1 3.5/12, ms1mx3.3/36, Error ellipse: s-maj=13.9km s-min=9.4km az=153.0*

TRN ***30*** *11:50:30.8, 10°.57N×63°.73W, h7km, MD4.4*

VAO ***30*** *11:50:31.6±0.5, 10°.48N×63°.67W, h10km, mb4.6*

FUNV ***30*** *11:50:32.9, 10°.49N×63°.66W, h4km, MW4.2*

NEIC ***30*** *11:50:32.5±2.5, 10°.46N±0°.06×63°.63W±0°.05, h10km±1km, mb4.6/29, Mwr4.2(CAR), Error ellipse: s-maj=10.7km s-min=8.9km az=161.0*

CAR ***30*** *11:50:33.2±2.5, 10°.47N±0°.07×63°.65W±0°.05, h5km±4km, Error ellipse: s-maj=9.7km s-min=7.4km az=167.0*

ISC 30 11:50:32.3±1.2**, 10°.47N**±0°.04×**63°.68W**±0°.03**, h17**km±7km**, n193, σ1s.45**/207**, mb4.5**/27**, MS3.6**/8**, 3C, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRUV	Carupano	0.48	65	eP	Pg	11 50 41.5	-0.5
CRUV				eS	Sb	11 50 49.2	+0.1
CUMV	Cumana_UDO	0.51	265	⇑eP	Pg	11 50 42.8	+0.2
CUMV				eS	Sb	11 50 51.1	+1.1
PCRV	Puerto La Cruz	0.99	253	Pg	Pg	11 50 50.9	-0.7
	2μm,0.3s,baz=66,slow=5.3,SNR=2739						
PCRV				Lg	Lg	11 51 06.7	
	667nm,0.3s,baz=190,slow=20,SNR=16						
PCRV	Puerto La Cruz	0.99	253	eP	Pg	11 50 50.9	-0.7
PCRV				eS	Sg	11 51 04.8	+0.2
PRGV	PARIAGUAN	1.95	209	eP	Pn	11 51 06.5	+1.8
PRGV				eS	Sn	11 51 31.4	+2.5
TPP	Pointe-a-Pierr	2.19	94	eP	Pn	11 51 09.6	+1.5
TRN	Trinidad (W)	2.24	85	eP	Pn	11 51 09.7	+0.9
TRN				eS	Sn	11 51 37.6	+1.6
GRFF	Grenada Fort F	2.46	50	eP	Pn	11 51 11.4	-0.4
BIRV	Birongo	2.55	270	eP	Pn	11 51 14.2	+1.2
BIRV				eS	Sn	11 51 45.4	+1.7
BIRV	Birongo	2.55	270	Pn	Pn	11 51 14.3	+1.2
TBH	Brigand Hill	2.56	89	eP	Pn	11 51 14.1	+0.8
GRGR	Grenville	2.58	50	eP	Pn	11 51 13.6	+0.2
GRGR	Grenville	2.58	50	Pn	Pn	11 51 13.4	0.0
GCMP	Grenada, Carri	2.98	48	eP	Pn	11 51 18.2	-0.7
RIOV	Rio Grande	3.01	142	eP	Pn	11 51 20.5	+1.1
RIOV				eS	Sn	11 51 55.8	+0.6
FUNV	FUNVISIS	3.08	270	eP	Pn	11 51 21.9	+1.5
FUNV				eS	Sn	11 51 57.7	+0.7
TOSP	Speyside	3.19	75	eP	Pn	11 51 22.2	+0.4
TOSP				eS	Sn	11 52 00.3	+0.8
TOSP	Speyside	3.19	75		Pn	11 51 22.4	+0.6
CARV	Caracas	3.20	271	eP	Pn	11 51 23.6	+1.6
CARV				eS	Sn	11 52 00.8	+0.9
SVB	Belmont	3.66	40	eP	Pn	11 51 27.7	-0.5
SVB	Belmont	3.66	40		Pn	11 51 27.6	-0.7
SVV	Soufriere Volc	3.71	40	eP	Pn	11 51 29.4	+0.4
BENV	Beln	3.90	263	⇑eP	Pn	11 51 32.4	+0.9
BENV				eS	Sn	11 52 16.4	-0.6
CACV	CAICARA DEL OR	4.04	225	eP	Pn	11 51 29.7	-3.9
CACV				eS	Sn	11 52 13.0	-7.5
TURV	Turiamo	4.10	270	eP	Pn	11 51 35.4	+1.1
TURV				eS	Sn	11 52 21.4	-0.5
MCLT	Moule a Chique	4.18	39	eP	Pn	11 51 34.1	-1.4
MCLT	Moule a Chique	4.18	39	Pn	Pn	11 51 34.2	-1.3
SLBI	Saint Lucia, B	4.41	37	eP	Pn	11 51 37.8	-0.8
BAUV	El Baul	4.56	251	eP	Pn	11 51 40.8	+0.1
BAUV	El Baul	4.56	251	⇑eP	Pn	11 51 41.0	+0.3
BAUV				eS	Sn	11 52 32.8	-0.7
BAUV	El Baul	4.56	251	Pn	Pn	11 51 40.9	+0.1
MAPV	Macapo	4.75	263	eP	Pn	11 51 45.0	+1.7
BIM	Bigot	4.76	32	eP	Pn	11 51 42.8	-0.6
BIM	Bigot	4.76	32	Pn	Pn	11 51 42.6	-0.8
H05S1	Guadeloupe/Mar	4.81	35	Pn	Pn	11 51 43.7	-0.4
	SNR=11						
MPOM	Morne Pois Mar	4.81	35	eP	Pn	11 51 43.5	-0.6
MPOM	Morne Pois Mar	4.81	35	Pn	Pn	11 51 43.8	-0.3
BBGH	Gun Hill	4.83	56	Pn	Pn	11 51 44.7	+0.4
FDF	Fort de France	4.90	30	eP	Pn	11 51 45.0	-0.3
FDF	Fort de France	4.90	30		Pn	11 51 45.1	-0.3
SVN	Savane Anatole	4.99	29		Pn	11 51 46.2	-0.3
ILAM	Ilet Lapin Mar	5.08	32	eP	Pn	11 51 47.7	0.0
ILAM	Ilet Lapin Mar	5.08	32	Pn	Pn	11 51 47.8	0.0
LUEV	Luepa	5.09	154	eP	Pn	11 51 49.0	+0.8
LUEV				eS	Sn	11 52 44.8	-1.9
JACV	Jacura	5.10	277	eP	Pn	11 51 49.2	+1.1
JACV				eS	Sn	11 52 45.6	-1.1
MDN	Morne-Daniel	5.31	25	eP	Pn	11 51 50.7	-0.3
DSLB	Salisbury	5.40	24	eP	Pn	11 51 52.1	-0.2
TDBA	Terre de Bas,	5.70	20	e	Pn	11 51 58.7	+2.3
CBE	Ff, Capester	5.92	20	eP	Pn	11 51 59.6	+0.2
MAGL	Barre de l'ile	5.92	23	eP	Pn	11 51 59.7	+0.3
SIQV	Siquisique	6.03	272	eP	Pn	11 52 01.5	+0.5
SIQV				eS	Sn	11 53 06.0	-3.7
H05N1	Guadeloupe/Mar	6.34	23	Pn	Pn	11 52 05.5	+0.3
	SNR=36						
MONV	Montecano	6.35	284	eP	Pn	11 52 06.0	+0.7
MONV				eS	Sn	11 53 14.7	-2.8
ELOV	Elorza	6.70	239	eP	Pn	11 52 10.5	+0.4
ELOV				eS	Sn	11 53 22.4	-3.7
ANBD	Bethesda, Anti	6.80	16	eP	Pn	11 52 11.4	0.0
SKI	Saint Kitts	6.88	7	eP	Pn	11 52 11.1	-1.5
SDV	Santo Domingo	7.04	258	eP	Pn	11 52 13.8	-1.1
SDV	Santo Domingo	7.04	258	eP	Pn	11 52 14.7	-0.2
SDV				eS	Sn	11 53 36.0	+1.3
SDV	Santo Domingo	7.04	258	Pn	Pn	11 52 14.7	-0.2
CDVI	St. Croix	7.32	352	Pn	Pn	11 52 17.9	-0.6
SOCV	Socops	7.41	254	eP	Pn	11 52 17.9	-2.0
SOCV	Socops	7.41	254	eP	Pn	11 52 19.0	-0.9
SOCV				eS	Sn	11 53 39.1	-4.6
SMRT	St. Maarten	7.56	4	Pn	Pn	11 52 23.5	+1.7
PDPR	Patillas Dam,	7.84	343	Pn	Pn	11 52 24.9	-0.8
STVI	Saint Thomas	7.93	351	Pn	Pn	11 52 28.5	+1.5
CUPR	Culebra, Puert	7.95	349	Pn	Pn	11 52 27.4	+0.2
SJG	San Juan	7.96	343	Sn	Sn	11 53 50.9	-6.3
	1.2nm,0.3s,baz=63,slow=5.6,SNR=5.0						
SJG				LR	LR	11 55 40.8	
	comp=Z,204nm,18.1s,baz=86,slow=39						
CBYP	Canovanas	8.04	345	Pn	Pn	11 52 31.5	+3.0
CELP	Cerrillos	8.07	340	Pn	Pn	11 52 29.3	+0.5
MLPR	Magueyes Islan	8.14	337	Pn	Pn	11 52 31.3	+1.5
CRPR	Cabo Rojo, PR	8.20	336	Pn	Pn	11 52 32.3	+1.7
URIC	Uribia, Colomb	8.26	279	eP	Pn	11 52 29.4	-2.0
URIC	Uribia, Colomb	8.26	279	Pn	Pn	11 52 30.8	-0.7
AOPR	Arecibo Observ	8.38	340		Pn	11 52 34.5	+1.4
BOAV	Boa Vista	8.61	158	eP	Pn	11 52 35.9	-0.4
BOAV	Boa Vista	8.61	158	Pn	Pn	11 52 36.0	-0.4
CAPV	Capacho	8.91	254	eP	Pn	11 52 40.1	-0.6
CAPV				eS	Sn	11 54 13.9	-7.1
PAMC	Pamplona, Colo	9.44	252	eP	Pn	11 52 47.2	-1.0
OCAC	Ocana	9.77	258	eP	Pn	11 52 51.2	-1.2
OCAC	Ocana	9.77	258		Pn	11 52 52.0	-0.4
DR12	Loma Pena Alta	9.94	327		Pn	11 52 56.6	+2.0
SDD	Santo Domingo	9.97	323		Pn	11 52 56.6	+1.6
BARC	Barichara	10.16	248	eP	Pn	11 52 56.0	-1.8
RUSC	La Rusia	10.36	245	eP	Pn	11 52 59.3	-1.5
SMLC	San Martn de	10.38	262	eP	Pn	11 52 58.3	-2.4
ARGC	Ariguani, Magd	10.42	268	eP	Pn	11 53 00.9	-0.3
BRRC	Barranca, Sant	10.47	252	eP	Pn	11 53 00.4	-1.4
SDDR	Presa de Saban	11.21	320		Pn	11 53 14.3	+2.3
SJCC	San Jacinto, C	11.34	268	eP	Pn	11 53 10.4	-3.4
SJCC	San Jacinto, C	11.34	268	Pn	Pn	11 53 12.4	-1.4
PTBC	PUERTO BERRIO,	11.36	251	eP	Pn	11 53 11.4	-2.5
ZARC	Zaragoza, Cauc	11.44	256	eP	Pn	11 53 12.2	-2.8
ZARC	Zaragoza, Cauc	11.44	256	Pn	Pn	11 53 13.4	-1.6
PTGA	Pitinga	11.72	161	Pn	Pn	11 53 17.9	-1.1
	8.4nm,0.3s,baz=337,slow=16,SNR=69						
PTGA				Sn	Sn	11 55 23.8	-5.8
	4.4nm,0.3s,baz=251,slow=15,SNR=5.8						
PTGA				Lg	Lg	11 56 36.2	
	9.5nm,0.3s,baz=245,slow=23,SNR=6.2						
PTGA				LR	LR	11 57 40.3	
	comp=Z,109nm,21.5s,baz=334,slow=37						
VILC	Villavicencio,	11.77	238	eP	Pn	11 53 19.2	-0.6
ROSC	El Rosal	11.94	243	Pn	Pn	11 53 23.1	+0.8
	6.9nm,0.3s,baz=206,slow=23,SNR=7.3						
ROSC				LR	LR	11 58 25.0	
	comp=Z,1μm,20.8s,baz=47,slow=39						
ROSC	El Rosal	11.94	243	Pn	Pn	11 53 21.8	-0.5
MOTC	Monteria, Cord	11.94	263		Pn	11 53 20.8	-1.2
UREC	San Jos de Ur	12.02	258	eP	Pn	11 53 20.3	-2.7
NORC	Norcasia	12.11	247	eP	Pn	11 53 21.5	-2.8
MDP	Montagnes des	12.16	115	Pn	Pn	11 53 22.0	-3.0
	3.0nm,0.3s,baz=304,slow=14,SNR=12						
MDP				Sn	Sn	11 55 32.2	-8.2
	1.4nm,0.3s,baz=33,slow=20,SNR=1.7						
MDP				LR	LR	11 58 35.8	
	comp=Z,352nm,20.3s,baz=274,slow=40						
GUY2C	Guyana, Caldas	12.70	247	eP	Pn	11 53 31.6	-1.1
PRAC	Prado	12.99	240	eP	Pn	11 53 35.7	-0.7
CBOC	Ciudad Bolivar	13.04	250	eP	Pn	11 53 37.7	+0.5
ANIL	Santa Ana	13.05	244	eP	Pn	11 53 34.6	-2.9
GRTK	Grand Turk	13.11	328	Pn	Pn	11 53 36.7	-1.2
ORTC	Ortega, Tolima	13.20	241	eP	Pn	11 53 35.7	-3.5
PLMC	San Jos del P	13.66	247	eP	Pn	11 53 48.8	+3.3
MACA	Manacapuru-AM	13.87	167	eP	Pn	11 53 47.7	-0.6
BETC	Betania	14.01	237	eP	Pn	11 53 52.5	+2.1
TBTG	Tabatinga, AM	15.83	203	eP	Pn	11 54 15.1	+0.5
BCIP	Isla Barro Col	15.98	267	Pn	Pn	11 54 14.4	-2.1
BCIP				IAmb	IAmb	11 54 29.9	
	comp=Z,56nm,1.1s						
OTAV	Otavalo	17.87	236	P	P	11 54 43.2	+1.8
NPGB	Novo Progresso	19.27	154	eP	P	11 54 56.6	+0.2
SAML	Samuel	19.30	179	P	P	11 54 57.6	+1.0
SAML				IAmb	IAmb	11 55 19.2	
	comp=Z,16nm,0.7s						
SRBA	San Rafael, Bu	19.43	268	P	Pn	11 55 01.1	+1.6
RIMA	Rio Macho	19.89	270	P	P	11 55 04.2	+0.8
CZSB	Cruzeiro do Su	20.19	207	eP	P	11 55 06.9	+0.4
CZSB	Cruzeiro do Su	20.19	207	P	P	11 55 07.7	+1.2
ETMB	Extrema	20.31	187	eP	P	11 55 08.4	+0.7
PRPB	Parauapebas	21.54	140	eP	P	11 55 21.1	+0.1
CLDB	Colider	22.61	159	eP	P	11 55 32.2	-0.2
ATAH	Atahualpa	22.82	221	P	P	11 55 35.8	+0.7
	comp=Z,13nm,0.7s,baz=357,slow=3.7,SNR=7.2						
PDRB	Porto dos Gac	23.00	162	eP	P	11 55 36.9	+0.4
VILB	Vilhena	23.53	171	eP	P	11 55 42.5	+0.6
ROSB	Rosrio	23.56	123	eP	P	11 55 43.1	+0.9
SMTB	Santa Maria do	25.00	140	eP	P	11 55 56.1	+0.5
SNDB	Serra Nova Dou	25.47	151	eP	P	11 56 00.3	+0.5
NNA	Nana	25.86	211	P	P	11 56 03.9	+0.4
	comp=Z,21nm,0.8s,baz=10,slow=8.9,SNR=5.8						
PTLB	Pontes e Lacer	26.14	170	eP	P	11 56 06.4	+0.5
SIV	San Ignacio	26.42	174	P	P	11 56 07.8	-0.6
	comp=Z,0.6nm,0.3s,baz=209,slow=2.2,SNR=3.2						
LPAZ	La Paz	26.95	189	P	P	11 56 15.3	+1.5
	comp=Z,2.3nm,0.7s,baz=360,slow=8.1,SNR=8.1						
LPAZ				LR	LR	12 07 49.4	
	comp=Z,120nm,20.8s,baz=349,slow=38						
LPAZ	La Paz	26.95	189	eP	P	11 56 13.7	-0.2
LPAZ	La Paz	26.95	189	P	P	11 56 13.2	-0.7
PEXB	Peixe	27.14	145	eP	P	11 56 15.4	+0.5
SALV	Santo Antonio	27.37	163	eP	P	11 56 17.6	+0.6
ARAG	Araguaiana, MT	28.54	156	eP	P	11 56 27.9	+0.5
PB16	IPOC Station P	29.20	191	P	P	11 56 32.6	-1.2
PP1B	Ponte de Pedra	29.21	163	eP	P	11 56 33.9	+0.4
SDBA	SAO DESIDERIO	29.40	140	eP	P	11 56 35.7	+0.5
PB11	IPOC Station P	30.61	191	P	P	11 56 46.0	+0.1
AQDB	Aquidauana	31.74	166	eP	P	11 56 56.0	+0.3
IPMB	Ipameri, GO	32.13	152	eP	P	11 56 59.5	+0.3
PB09	IPOC Station P	32.53	190	P	P	11 57 03.3	+0.5
LVC	Limon Verde	33.27	189	P	P	11 57 09.3	-0.2
	comp=Z,2.7nm,0.6s,baz=302,slow=9.5,SNR=1.8						
LVC	Limon Verde	33.27	189	eP	P	11 57 09.4	-0.2
CMC01	Camacan, BA	35.09	137	eP	P	11 57 22.9	-2.1
GUA01	Guaratinga, BA	35.78	138	eP	P	11 57 30.7	-0.2
BSCB	Bom Sucesso	36.37	149	eP	P	11 57 36.5	+0.4
VAO	Valinhos	37.07	154	eP	P	11 57 42.4	+0.4
CPUP	Villa Florida	37.10	171	P	P	11 57 41.9	-0.1
	comp=Z,2.4nm,0.8s,baz=41,slow=9.3,SNR=1.7						
S39A	Bolivar	38.00	320	P	P	11 57 50.6	+0.9
S39A				IAmb	IAmb	11 57 53.8	
	comp=Z,12nm,1.2s						
ABTX	Abilene, Hawle	39.77	309	P	P	11 58 04.9	+0.3
ABTX				IAmb	IAmb	11 58 08.9	
	comp=Z,20nm,1.2s						
TXAR	Lajitas Array	41.76	303	P	P	11 58 21.8	+0.7
	comp=Z,0.7nm,0.5s,baz=120,slow=9.6,SNR=4.4						
TXAR				LR	LR	12 19 00.3	
	comp=Z,26nm,19.3s,baz=0.0,slow=41						
TXAR	Lajitas Array	41.76	303	P	P	11 58 22.6	+1.5
K31A	O'Neill	44.28	323	P	P	11 58 42.5	+1.2
SCHQ	Schefferville	44.32	357	P	P	11 58 40.8	-0.6
	comp=Z,4.7nm,0.7s,baz=176,slow=7.1,SNR=4.8						
T25A	Trinidad	45.24	313	P	P	11 58 50.3	+1.0
T25A				IAmb	IAmb	11 58 54.9	
	comp=Z,12nm,1.2s						
ANMO	Albuquerque	45.90	309	P	P	11 58 56.0	+1.5
ANMO				IAmb	IAmb	11 59 02.0	
	comp=Z,16nm,1.5s						
SDCO	Great Sand Dun	46.28	313	P	P	11 58 58.4	+0.8
ISCO	Idaho Springs	47.25	315	P	P	11 59 06.3	+1.1
ISCO				IAmb	IAmb	11 59 09.8	
	comp=Z,6.8nm,1.3s						
ULM	Lac du Bonnet	47.72	332	P	P	11 59 08.0	-0.3
	comp=Z,5.1nm,0.8s,baz=105,slow=10,SNR=3.5						
ULM	Lac du Bonnet	47.72	332	P	P	11 59 08.4	+0.2
X18A	Snowflake	48.46	307	P	P	11 59 16.0	+1.5
X18A				IAmb	IAmb	11 59 20.3	
	comp=Z,5.6nm,1.0s						
BW06	Boulder Array	51.22	317	P	P	11 59 36.7	+1.3
BW06				IAmb	IAmb	11 59 39.2	
	comp=Z,11nm,1.4s						
PD31	Pinedale Array	51.22	317	P	P	11 59 36.7	+1.3
PD31				IAmb	IAmb	11 59 39.3	
	comp=Z,8.8nm,1.4s						
PDAR	Pinedale Array	51.22	317	P	P	11 59 35.7	+0.3
	comp=Z,1.9nm,0.8s,baz=120,slow=9.7,SNR=11						
PDAR				LR	LR	12 24 23.7	
	comp=Z,52nm,18.0s,baz=87,slow=40						
PDAR	Pinedale Array	51.22	317	P	P	11 59 36.4	+1.0
PLCA	Paso Flores	51.34	187	LR	LR	12 23 53.9	
	comp=Z,66nm,21.6s,baz=26,slow=39						
HWUT	Hardware Ranch	52.12	315	P	P	11 59 44.1	+2.0
YHL	Hebgen Lake	53.17	319	P	P	11 59 51.9	+2.0
DBIC	Dimbokro	58.22	89	P	P	12 00 24.9	-1.4
	comp=Z,2.5nm,0.8s,baz=312,slow=8.3,SNR=4.6						
DBIC	Dimbokro	58.22	89	P	P	12 00 25.5	-0.8
DBIC				IAmb	IAmb	12 00 33.8	
	comp=Z,12nm,1.4s						
KOWA	Kowa	58.26	79	P	P	12 00 27.1	+0.5
KOWA				IAmb	IAmb	12 00 28.2	
	comp=Z,4.9nm,0.8s						
I07A	Izee	58.45	316	P	P	12 00 28.6	+1.0
I07A				IAmb	IAmb	12 00 32.4	
	comp=Z,6.7nm,0.9s						
ESDC	Sonseca Array	60.16	50	P	P	12 00 39.2	-0.2
	comp=Z,4.4nm,1.1s,baz=269,slow=6.2,SNR=11						
ESDC	Sonseca Array	60.16	50	P	P	12 00 40.6	+1.2
ESDC				IAmb	IAmb	12 00 41.8	
	comp=Z,9.7nm,1.4s						
YKA	Yellowknife Ar	63.40	336	P	P	12 01 00.9	+0.2
	comp=Z,2.9nm,0.8s,baz=109,slow=8.6,SNR=9.1						
YKA				LR	LR	12 29 04.2	
	comp=Z,44nm,19.4s,baz=0.0,slow=36						
YKA	Yellowknife Ar	63.40	336	P	P	12 01 01.1	+0.4
TORD	Torodi Ar. Bea	63.89	80	P	P	12 01 04.8	-0.1
	comp=Z,4.0nm,0.5s,baz=291,slow=7.3,SNR=40						
NOA	NORSAR Array B	73.59	29	LR	LR	12 28 47.8	
	comp=Z,28nm,21.6s,baz=285,slow=31						
GERES	GERESS Array B	73.89	42	P	P	12 02 05.8	-0.8
	comp=Z,1.0nm,0.8s,baz=224,slow=6.9,SNR=3.0						
ILAR	Eielson Array	77.70	334	P	P	12 02 28.4	+0.3
	comp=Z,0.3nm,0.8s,baz=92,slow=3.7,SNR=2.3						
FINES	FINESS Array B	80.77	29	P	P	12 02 43.2	-1.6
	comp=Z,4.0nm,0.9s,baz=242,slow=15,SNR=3.8						
FINES	FINESS Array B	80.77	29	P	P	12 02 44.3	-0.5
M19K	Big River Lodg	81.19	331	P	P	12 02 49.4	+2.3
M19K				IAmb	IAmb	12 03 10.4	
	comp=Z,8.2nm,1.0s						
SVW2	Sparrevohn	81.84	331	P	P	12 02 51.9	+1.3
BOSA	Boshof	94.01	118	LR	LR	12 45 42.5	
	comp=Z,21nm,18.2s,baz=348,slow=35						
NRIK	Noril'sk	97.89	10	LR	LR	12 51 16.0	
	comp=Z,24nm,19.0s,baz=352,slow=37						
KSH	Kashi	117.73	34	PKP	PKiKP	12 09 22.3	+3.9
CMAR	Chiang Mai Arr	146.53	31	PKPbc	PKPdf	12 10 13.2	+0.7
	comp=Z,0.4nm,0.3s,baz=318,slow=5.2,SNR=5.4						
CMAR	Chiang Mai Arr	146.53	31		PKPdf	12 10 09.7	-2.7
STKA	Stephens Creek	148.39	224	PKPbc	PKPbc	12 10 20.4	+1.9
	comp=Z,2.3nm,0.9s,baz=88,slow=9.2,SNR=2.8						

JMA ***30*** *12:03:04.3±0.2, 32°.38N×137°.66E, h439km, M3.4*

IDC ***30*** *12:03:06.5±1.0, 32°.39N×137°.45E, h408km±15km, mb2.9/7, mb1 3.1/12, mb1mx3.0/42, mbtmp3.8/12, Error ellipse: s-maj=23.2km s-min=12.2km az=77.0*

ISC 30 12:03:05.6±0.7**, 32°.29N**±0°.07×**137°.53E**±0°.08**, h394**km**, n26, σ2s.50**/33**, mb3.0**/7**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TTO2	TONANKAI O.B.S	1.50	344	P	Pn	12 04 01.8	+4.1
TK02	Tokai 2	1.67	7	P	Pn	12 04 02.1	+3.5
JAOM	Aogashimamukai	1.90	84	P	Pn	12 04 03.6	+3.2
JHJ	Hachijo jima 2	2.08	66	P	Pn	12 04 05.2	+3.8
	31nm,0.3s,baz=105,slow=21,SNR=21						
JHJ				S	S	12 04 53.6	+7.0
	24nm,0.3s,baz=51,slow=23,SNR=2.4						
JHJ2	Mitsune	2.10	66	P	Pn	12 04 04.3	+2.7
JIE	Ise	2.21	342	P	Pn	12 04 05.1	+2.9
JWY	Kouya	2.52	320	P	Pn	12 04 07.3	+2.8
JAI	Aioi	2.99	301	P	Pn	12 04 10.7	+2.6
JOD2	Odawara 2	3.24	23	P	Pn	12 04 12.1	+1.8
JOD2				eS	S	12 05 04.0	+1.3
JYN	Shimob	3.31	15	P	Pn	12 04 13.4	+2.4
JYTA	Yamagatataniai	3.36	349	P	Pn	12 04 13.5	+2.2
JWT	Wachi	3.47	330	P	Pn	12 04 14.6	+2.3
BSO1	Boso 1	3.73	50	P	Pn	12 04 14.5	+0.5
BSO1				eS	S	12 05 10.2	+0.6
JRY	Ryogami san	3.89	17	P	Pn	12 04 17.8	+1.6
JRY				S	S	12 05 14.9	+1.4
MAT	Matsushiro	4.28	7	P	Pn	12 04 21.1	+1.2
MAT				S	S	12 05 19.9	-0.4
MJAR	Matsushiro Arr	4.28	7	P	Pn	12 04 20.6	+0.6
	0.7nm,0.3s,baz=174,slow=10,SNR=44						
MJAR				S	S	12 05 20.3	0.0
	0.2nm,0.3s,baz=192,slow=17,SNR=11						
JCJ	Chichijima	6.57	141	P	Pn	12 04 45.2	+0.9
	4.4nm,0.3s,baz=348,slow=20,SNR=6.4						
JCJ				S	S	12 06 01.0	-3.9
	37nm,0.3s,baz=285,slow=23,SNR=19						
USRK	Ussuriysk Ar.	12.66	342	P	P	12 05 51.1	-1.4
	baz=157,slow=13,SNR=4.3						
KLR	Kul'dur	17.47	347	P	P	12 06 42.5	-2.0
	0.4nm,0.3s,baz=158,slow=9.6,SNR=8.9						
SONM	Songino Array	28.20	313	P	P	12 08 22.8	-1.2
	0.3nm,0.7s,baz=125,slow=9.0,SNR=1.6						
CMAR	Chiang Mai Arr	37.27	258	P	P	12 09 41.4	-0.5
	0.4nm,0.3s,baz=41,slow=9.1,SNR=4.7						
MKAR	Makanchi Array	44.10	306	P	P	12 10 35.6	-1.0
	0.3nm,0.4s,baz=86,slow=10,SNR=5.7						
FITZ	Fitzroy Crossi	51.38	195	P	P	12 11 32.4	+0.5
	3.3nm,1.0s,baz=1.1,slow=4.2,SNR=6.2						
WRA	Warramunga Arr	52.02	184	P	P	12 11 36.5	-0.1
	0.8nm,0.3s,baz=360,slow=7.5,SNR=31						
ILAR	Eielson Array	55.20	30	P	P	12 11 58.3	-0.6
	0.4nm,0.6s,baz=263,slow=5.6,SNR=6.7						
ASAR	Alice Springs	55.75	184	P	P	12 12 03.6	+0.4
	0.5nm,0.6s,baz=5.4,slow=6.1,SNR=21						

KRNET ***30*** *12:03:35.5±0.1, 42°.67N×69°.12E, mb3.2*

SOME ***30*** *12:03:35.8, 43°.70N×69°.68E*

NNC ***30*** *12:03:37.0±2.8, 43°.71N×69°.82E, h0km, mb3.9, mpv3.3, Error ellipse: s-maj=19.5km s-min=6.3km az=138.0, Suspected Mining explosion.*

ISC 30 12:03:35.2±2.2**, 43°.77N**±0°.09×**69°.80E**±0°.08**, h0**km**, n17, σ1s.25**/25**, 13C-2D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRLS	Borolday	0.74	178	P	Pn	12 03 52.9	0.0
	1.4nm,0.3s						
BRLS				S	Sn	12 04 04.9	+0.1
	15nm,0.2s						
KK02	Karatay Array	0.85	142	⇑P	Pb	12 03 52.5	-0.2
	2.1nm,0.4s,baz=323,slow=17						
KK02				S	Sg	12 04 03.8	+1.5
	baz=326,slow=34						
IUG	Iuzhnay	1.63	174	P	Pb	12 04 06.3	+0.1
	298nm,0.3s						
IUG				S	Sb	12 04 28.1	+0.8
	59nm,0.6s						
MNAS	Manas	2.36	122	⇑eP	Pg	12 04 19.8	-0.6
	baz=93						
MNAS				⇑iS	Sg	12 04 52.2	+1.2
	baz=93						
MRKS	Merke	2.71	111	Pg	Pg	12 04 27.1	0.0
	5.2nm,0.6s						
MRKS				Lg	Lg	12 05 04.3	
	14nm,0.6s						
EKS2	Erkin-Say	3.11	109	⇑iP	Pb	12 04 32.8	+1.3
	baz=89						
EKS2				⇑iS	Sg	12 05 14.6	-0.6
	baz=89						
AML	Almayashu	3.30	118	⇑eP	Pb	12 04 32.7	-2.1
	baz=98						
AML				⇑iS	Sb	12 05 14.5	-1.1
	baz=98						
USP	Ospenovka	3.46	97	⇑iP	Pg	12 04 40.6	-0.8
	baz=80						
USP				⇑iS	Sg	12 05 28.0	+1.7
	baz=80						
UCH	Uchtor	3.79	112	⇑iP	Pb	12 04 41.1	-2.1
	baz=95						
UCH				⇑iS	Sb	12 05 28.8	-1.0
	baz=95						
KRBS	Karabastau	4.26	89	Pg	Pg	12 04 56.3	-0.5
	4.4nm,0.6s						
KRBS				Lg	Lg	12 05 54.7	
	4.8nm,0.5s						
TKM2	Tokmak 2	4.32	99	⇓Pg	Pb	12 04 54.2	+2.2
	3.1nm,0.7s						
TKM2				⇓Lg	Lg	12 05 52.4	
	9.8nm,0.8s						
TKM2	Tokmak 2	4.32	99	⇑eP	Pb	12 04 51.4	-0.6
	baz=85						
TKM2				⇑iS	Sb	12 05 46.8	+2.1
	baz=85						
DGS	Degeres	4.38	95	Pg	Pg	12 04 57.5	-1.6
	4.2nm,0.2s						
DGS				Lg	Lg	12 05 56.0	
	6.4nm,0.6s						
KST	Kastek	4.55	97	Pg	Pg	12 05 01.5	-0.9
	4.4nm,0.3s						
KST				Lg	Lg	12 06 02.8	
	14nm,0.7s						
KUU	Kurty	4.74	86	Pg	Pg	12 05 05.4	-0.5
	1.5nm,0.4s						
KUU				Lg	Lg	12 06 09.5	
	8.6nm,0.6s						
MDOK	Medeo	5.31	94	Lg	Lg	12 06 25.7	
	3.8nm,0.6s						
KOTS	Kotyrbulak	5.35	93	Pg	Pg	12 05 17.2	-0.4
	1.4nm,0.2s						
KOTS				Lg	Lg	12 06 31.0	
	11nm,0.7s						

MAN 30 12:08:39.6, 13°.81N×120°.86E, h4km, mb3.6, ML2.3, MS1.8, Mindoro

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DJA ***30*** *12:20:00.5±0.4, 7°S±5°×10°7E±°, h91km±6km, M3.5/12, MLv3.5/12*

IDC ***30*** *12:20:00.9±3.2, 7°.04S×108°.62E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.4/45, mbtmp3.7/3, Error ellipse: s-maj=160.5km s-min=10.1km az=18.0*

ISC 30 12:20:00.3±1.1**, 7°.0S**±0°.1×**106°.78E**±0°.08**, h100**km**, n16, σ0s.86**/19**, mb3.2**/3**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNJI	Cibinong	0.45	129	P	Pn	12 20 16.3	+0.6
CNJI				S	Sn	12 20 29.1	+1.8
DBJI	Dramaga	0.47	356	P	Pn	12 20 16.7	+0.7
LEM	Lembang	0.85	77	Pg	Pn	12 20 19.7	+0.3
	21nm,0.3s,baz=139,slow=21,SNR=13						

LEM				Lg	Lg	12 20 35.6	
	26nm,0.3s,baz=293,slow=22,SNR=16						
LEM	**Lembang**	**0.85**	**77**	P	**Pn**	**12 20 20.5**	**+1.1**
LEM				S	**Sn**	**12 20 34.5**	**+0.8**
TNG	**Tangerang**	**0.86**	**351**	P	**Pn**	**12 20 19.1**	**-0.2**
TNG				P	**Pn**	**12 20 19.1**	**-0.2**
SBJI	**Serang**	**1.11**	**324**	P	**Pn**	**12 20 22.5**	**+0.5**
CMJI	**Cimerak**	**1.82**	**115**	P	**Pn**	**12 20 30.8**	**+0.3**
KPJI	**Karang Pucung**	**2.15**	**98**	P	**Pn**	**12 20 35.2**	**+0.3**
KASI	**Kota Agung**	**2.72**	**303**	P	**Pn**	**12 20 42.3**	**0.0**
KLSI		**3.09**	**319**	P	**Pn**	**12 20 48.0**	**+0.7**
LWLI	**Liwa**	**3.36**	**306**	P	**Pn**	**12 20 51.7**	**+0.6**
MDSI	**Maura Dua**	**3.62**	**314**	P	**Pn**	**12 20 55.0**	**+0.6**
UGM	**Wanagama**	**3.81**	**104**	P	**Pn**	**12 20 57.4**	**+0.4**
WRA	**Warramunga Arr**	**29.65**	**118**	P	**P**	**12 25 54.9**	**-1.8**
	0.2nm,0.3s,baz=293,slow=10,SNR=9.0						
ASAR	**Alice Springs**	**30.85**	**125**	P	**P**	**12 26 06.7**	**-0.6**
	0.3nm,0.5s,baz=302,slow=8.1,SNR=12						
STKA	**Stephens Creek**	**40.78**	**132**	P	**P**	**12 27 31.7**	**-0.3**
	1.3nm,0.4s,baz=294,slow=10.0,SNR=6.7						

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*IDC **30** 12:26:45.7±2.3, 30°.42S×177°.77W, h0^{km}, mb3.9/3, mb1 4.1/3, mb1mx3.8/31, mbtmp3.9/3, MS3.0/1, Ms1 3.0/1, ms1mx2.5/22, Error ellipse: s-maj=53.1km s-min=23.0km az=112.0*

ISC 30 12:26:49.9±2.2**, 30°.4S**±0°.1×**177°.6W**±0°.3**, h33^{km}, n7, σ1^{s}.02**/7**, mb3.9**/3**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.14**	**348**	LR	LR	12 27 07.7	
	comp=Z,456nm,19.5s,baz=133,slow=19						
RAO				Pn	**Pb**	**12 27 10.6**	**-0.4**
	74nm,0.3s,baz=112,slow=23,SNR=1.9						
RAO				Sn	**Sb**	**12 27 26.1**	**+0.6**
	312nm,0.3s,baz=89,slow=21,SNR=3.6						
DZM	**Mont Dzumac**	**16.48**	**296**	LR	LR	12 35 17.8	
	comp=Z,52nm,20.5s,baz=132,slow=31						
STKA	**Stephens Creek**	**34.79**	**257**	P	**P**	**12 33 38.8**	**+1.2**
	3.8nm,0.7s,baz=95,slow=11,SNR=7.2						
ASAR	**Alice Springs**	**43.42**	**267**	P	**P**	**12 34 48.7**	**-1.1**
	0.3nm,0.3s,baz=106,slow=7.4,SNR=12						
WRA	**Warramunga Arr**	**44.41**	**272**	P	**P**	**12 34 56.9**	**-0.9**
	1.0nm,0.5s,baz=111,slow=7.7,SNR=18						
FINES	**FINESS Array B**	**145.22**	**340**	PKPbc	**PKPdf**	**12 46 23.5**	**+0.1**
	4.7nm,0.7s,baz=62,slow=4.2,SNR=15						
AKASG	**Malin Array Be**	**151.46**	**323**	PKPbc	**PKPbc**	**12 46 40.3**	**+0.3**
	0.9nm,0.5s,baz=33,slow=2.7,SNR=4.2						

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*THR **30** 12:49:52.1±0.3, 29°.65N×51°.29E, h14^{km}±9^{km}, ML3.1*
*TEH **30** 12:49:52.0, 29°.65N×51°.31E, h11^{km}, ML3.2*
*KISR **30** 12:49:59.7±0.7, 29°.63N×50°.76E, h44^{km}±272^{km}, ML3.7*

ISC 30 12:49:51.8±1.1**, 29°.62N**±0°.06×**51°.25E**±0°.04**, h10^{km}, n33, σ1^{s}.95**/36**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAZ1	**Kazerun**	**0.34**	**89**	*e*Pg	**Pg**	**12 49 57.6**	**-1.0**
KAZ1				*e*		12 50 03.8	
	comp=Z,93µm,0.1s						
SHI	**Shiraz**	**1.10**	**88**	*e*Pg	**Pg**	**12 50 12.5**	**-0.5**
SHI				*e*		12 50 33.6	
	comp=Z,9µm,0.3s						
ABEH	**Behbahan**	**1.31**	**319**	*e*Pg	**Pn**	**12 50 17.5**	**+1.4**
KLNJ	**Kolanjah**	**1.42**	**12**	*e*Pg	**Pn**	**12 50 18.7**	**+0.7**
KLNJ				*e*		12 50 47.7	
	comp=Z,5µm,0.3s						
QIR1	**Qir**	**1.94**	**125**	*e*Pn	**Pn**	**12 50 27.1**	**+2.2**
IBRJ	**Brojen**	**2.28**	**0**	*e*Pn	**Pn**	**12 50 30.7**	**+0.9**
IBRJ				*e*		12 51 16.8	
	comp=Z,887nm,0.8s						
IRAM	**Ramesheh**	**2.39**	**24**	*e*Pn	**Pn**	**12 50 33.3**	**+2.0**
IRAM				*e*		12 50 39.7	
	comp=Z,2µm,0.2s						
AMIS	**Naft Sefid**	**2.65**	**321**	*e*Pn	**Pn**	**12 50 36.4**	**+1.8**
IGAR	**Gharneh**	**2.86**	**14**	*e*Pn	**Pn**	**12 50 39.0**	**+1.3**
IGAR				*e*		12 50 48.7	
	comp=Z,806nm,0.2s						
QRN	**Al-Qurain**	**3.04**	**254**	*e*P	**Pn**	**12 50 41.9**	**+1.9**
QRN				*e*S	**Sn**	**12 51 14.1**	**-2.4**
QRN				IAML		12 51 16.1	
	comp=Z,232nm,0.1s						
IPIR	**Pirpir**	**3.07**	**354**	*e*Pn	**Pn**	**12 50 43.3**	**+2.6**
IPIR				*e*		12 51 23.0	
	comp=Z,437nm,0.4s						
UMR	**Umm Al-Rimmam**	**3.08**	**270**	*e*P	**Pn**	**12 50 42.5**	**+2.0**
ISAD	**Sadrabad**	**3.10**	**42**	*e*Pn	**Pn**	**12 50 43.5**	**+2.4**
ISAD				*e*		12 50 45.0	
	comp=Z,490nm,0.2s						
KBD	**Kabd**	**3.13**	**263**	*e*P	**Pn**	**12 50 43.9**	**+2.6**
KBD				*e*S	**Sn**	**12 51 16.0**	**-2.7**
RDF	**Al-Radifah**	**3.30**	**259**	*e*P	**Pn**	**12 50 45.7**	**+2.1**
RDF				*e*S	**Sn**	**12 51 20.4**	**-2.6**
RDF				IAML		12 51 27.6	
	comp=Z,263nm,0.4s						
IZEF	**Zefreh**	**3.40**	**16**	*e*Pn	**Pn**	**12 50 47.2**	**+2.1**
IMEH	**Mehriz**	**3.40**	**58**	*e*Pn	**Pn**	**12 50 45.7**	**+0.6**
IMEH				*e*		12 51 31.1	
	comp=Z,467nm,0.3s						
MIB	**Mutribah**	**3.41**	**274**	*e*P	**Pn**	**12 50 47.2**	**+2.2**
NASN	**Na'in**	**3.44**	**22**	*e*Pn	**Pn**	**12 50 47.5**	**+1.7**
NASN				IAML		12 51 30.2	
	comp=N,16nm,0.5s						
NASN				IAML		12 51 30.8	
	comp=E,15nm,0.3s						
IKLH	**Kolahrood**	**3.70**	**4**	*e*Pn	**Pn**	**12 50 51.5**	**+2.2**
ICHK	**Chekchek**	**3.77**	**45**	*e*Pn	**Pn**	**12 50 51.6**	**+1.4**
ICHK				*e*		12 51 37.3	
	comp=N,453nm,0.3s						
YZKH	**Yazd**	**3.98**	**45**	*e*Pn	**Pn**	**12 50 55.0**	**+1.9**
ANAR	**Anarak**	**4.14**	**30**	*e*Pn	**Pn**	**12 50 56.9**	**+1.6**
KHMZ	**Khomeyn**	**4.25**	**345**	*e*Pn	**Pn**	**12 50 59.0**	**+2.1**
KRSH	**Karshahi**	**4.41**	**10**	*e*Pn	**Pn**	**12 51 00.9**	**+2.0**
KRSH				*e*		12 51 08.9	
	comp=Z,252nm,0.2s						
KHGB	**Koh Gabri**	**4.60**	**79**	*e*Pn	**Pn**	**12 51 02.9**	**+1.3**
KHGB				*e*		12 51 59.5	
	comp=Z,216nm,0.4s						
NGRK	**Negar Kerman**	**4.77**	**88**	*e*Pn	**Pn**	**12 51 05.3**	**+1.2**
ISFB	**Sefidab**	**4.79**	**10**	*e*Pn	**Pn**	**12 51 06.0**	**+1.8**
KRBR	**Kerman**	**4.80**	**84**	*e*Pn	**Pn**	**12 51 06.5**	**+2.0**
KRBR				IAML		12 52 07.2	
	comp=E,16nm,0.6s						
KRBR				IAML		12 52 07.3	
	comp=N,13nm,0.5s						
ASAO	**Ashtian**	**5.03**	**348**	*e*Pn	**Pn**	**12 51 09.7**	**+2.2**
ASAO				IAML		12 52 09.8	
	comp=E,20nm,0.6s						
ASAO				IAML		12 52 10.0	
	comp=N,19nm,0.5s						
IQOM	**Qom**	**5.21**	**358**	*e*Pn	**Pn**	**12 51 11.4**	**+1.3**
IVRN	**Varamin**	**5.38**	**4**	*e*Pn	**Pn**	**12 51 13.8**	**+1.6**
HAGD	**Aghdareh**	**5.49**	**342**	*e*Pn	**Pn**	**12 51 15.7**	**+1.8**

ROM 30 12:50:03.8±0.1**, 45°.733N**±0°.007×**9°.781E**±0°.005**, h10^{km}, ML2.0**/8**, 1C, Error ellipse: s-maj=0.8km s-min=0.2km az=199.0, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MDI	**Monti di Nese**	**0.07**	**312**	P	Pg	12 50 06.2	+0.1
MDI				S	Sg	12 50 08.2	+0.4
MDI				AML	AML		
	comp=E,4395µm,0.6s						
MDI				AML	AML		
	comp=N,3400µm,0.2s						
MDI				AML	AML		
	comp=N,3820µm,0.2s						
MDI				AML	AML		
	comp=E,4705µm,0.6s						
MDI				AML	AML		
	comp=N,3405µm,0.2s						
CAPR	**Capriolo**	**0.14**	**132**	⇑P	Pg	12 50 07.3	+0.3
CAPR				S	Sg	12 50 10.2	+0.9
CAPR				AML	AML		
	comp=E,912µm,0.1s						
CAPR				AML	AML		
	comp=E,913µm,0.1s						
CAPR				AML	AML		
	comp=E,916µm,0.1s						
CAPR				AML	AML		
	comp=N,643µm,1.3s						
MERA	**Merate**	**0.26**	**257**	P	Pg	12 50 09.0	-0.1
MERA				AML	AML		
	comp=N,754µm,0.4s						
MERA				AML	AML		
	comp=E,906µm,1.1s						
MERA				AML	AML		
	comp=N,754µm,0.4s						
MERA				AML	AML		
	comp=N,754µm,0.4s						
MERA				AML	AML		
	comp=E,906µm,1.1s						
BAG8	**Bagolino**	**0.49**	**79**	P	Pg	12 50 13.9	+0.6
BAG8				S	Sg	12 50 20.4	+0.7
SALO	**Salr**	**0.53**	**102**	P	Pg	12 50 14.5	+0.4
SALO				S	Sb	12 50 22.5	-0.5
MUGIO	**Muggio**	**0.55**	**290**	P	Pg	12 50 14.4	-0.1
MUGIO				S	Sg	12 50 22.3	+0.5
MUGIO				AML	AML		
	comp=E,48µm,1.5s						
MUGIO				AML	AML		
	comp=N,73µm,0.5s						
MUGIO				AML	AML		
	comp=E,48µm,1.5s						
MUGIO				AML	AML		
	comp=N,73µm,0.5s						
MUGIO				AML	AML		
	comp=E,48µm,1.5s						
MAGA	**Magasa**	**0.59**	**86**	P	Pg	12 50 15.2	-0.1
MAGA				S	Sb	12 50 24.4	-0.4
MAGA				AML	AML		
	comp=E,228µm,0.3s						
MAGA				AML	AML		
	comp=N,208µm,0.6s						
MABI	**Malga Bissina**	**0.60**	**58**	P	Pg	12 50 15.0	-0.5
MABI				S	Sg	12 50 23.6	+0.1
MABI				AML	AML		
	comp=E,64µm,1.5s						
MABI				AML	AML		
	comp=N,127µm,0.8s						
MABI				AML	AML		
	comp=N,126µm,0.8s						
BERNI	**Berninapass**	**0.70**	**14**	P	Pg	12 50 17.5	+0.1
BERNI				S	Sg	12 50 26.9	+0.3
BERNI				AML	AML		
	comp=N,71µm,0.2s						
BERNI				AML	AML		
	comp=E,72µm,0.4s						
BERNI				AML	AML		
	comp=N,71µm,0.2s						
VARE	**Varese**	**0.72**	**281**	AML	AML		
	comp=N,230µm,0.4s						
VARE				AML	AML		
	comp=E,426µm,0.4s						
ROVR	**Rover Verones**	**0.91**	**95**	P	Pg	12 50 20.7	-0.6
ROVR				S	Sb	12 50 33.7	-0.2
DOSS	**Dosso del Somm**	**0.99**	**81**	P	Pg	12 50 22.7	-0.3
DOSS				S	Sg	12 50 35.9	0.0
DOSS				AML	AML		
	comp=N,99µm,1.5s						
DOSS				AML	AML		
	comp=E,114µm,0.7s						
DAVOX	**Davos/Dischmat**	**1.05**	**4**	P	Pg	12 50 23.4	-0.6
DAVOX				S	Sg	12 50 37.2	-0.5
FUSIO	**Fusio**	**1.06**	**313**	P	Pg	12 50 23.5	-0.7
FUSIO				S	Sg	12 50 38.0	0.0
FUSIO				AML	AML		
	comp=E,84µm,0.4s						
FUSIO				AML	AML		
	comp=N,43µm,0.6s						
FUSIO				AML	AML		
	comp=E,84µm,0.4s						
APPI	**Appiano**	**1.25**	**53**	P	Pn	12 50 27.1	-0.4
APPI				S	Sb	12 50 43.6	-0.2
MMK	**Mattmark**	**1.31**	**285**	P	Pn	12 50 28.0	-0.4
MMK				S	Sb	12 50 45.4	-0.2
PLONS	**Plons/SG**	**1.34**	**348**	P	Pn	12 50 28.9	+0.1
FETA	**Feichten**	**1.45**	**27**	*e*Pg	Pg	12 50 31.7	+0.1
	comp=E,0.4nm,0.2s						
FETA				*e*Sg	Sg	12 50 50.4	0.0
	comp=E,1.4nm,0.2s						
BNALP	**Bannalp**	**1.48**	**321**	P	Pb	12 50 31.1	-0.3
BNALP				S	Sb	12 50 50.4	+0.1
DAVA	**Damuels**	**1.56**	**2**	*e*Pg	Pg	12 50 33.3	-0.4
	comp=E,2.9nm,0.1s						
DAVA				*e*Sg	Sg	12 50 54.3	+0.5
	comp=E,6.6nm,0.2s						

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*IDC **30** 12:50:05.7±1.3, 34°.16N×140°.38E, h67^{km}±12^{km}, mb3.7/12, mb1 3.9/17, mb1mx3.7/37, mbtmp4.1/17, Error ellipse: s-maj=21.6km s-min=11.2km az=87.0*
*NEIC **30** 12:50:05.3±1.5, 34°.17N±0°.05×140°.6E±0°.1, h62^{km}±9^{km}, mb4.2/12, Error ellipse: s-maj=12.3km s-min=6.8km az=102.0*
*JMA **30** 12:50:06.0±0.2, 34°.24N×140°.37E, h61^{km}±3^{km}, M4.1*
JMA Felt I J1.
*NIED **30** 12:50:06.0, 34°.24N×140°.37E, h61^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.14; $M_{\theta\theta}$0.81; $M_{\phi\phi}$-0.68; $M_{r\theta}$-0.49; $M_{\theta\phi}$0.08; $M_{\phi r}$-0.63; Fault plane solution: $M_0$1.10000×10^{15} NP1:ϕ_s44.00000°, δ85.00000°, λ-133.00000°. NP2:ϕ_s309.00000°, δ43.00000°, λ-7.00000°.*

ISC 30 12:50:04.7±0.9**, 34°.18N**±0°.04×**140°.49E**±0°.05**, h61^{km}**±8^{km}**, n74, σ1^{s}.43**/82**, mb4.2**/17**, 9C-2D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.62**	**40**	⇓P	**Pn**	**12 50 19.6**	**+2.1**
BSO1				X		12 50 31.2	
BSO3	**Boso 3**	**0.62**	**1**	⇑P	**Pn**	**12 50 19.2**	**+1.3**
BSO3				X		12 50 30.8	
JMKN	**Mikurajimanish**	**0.80**	**249**	⇑P	**Pn**	**12 50 20.8**	**+0.5**
JMKN				S	**Sn**	**12 50 32.0**	**+0.2**
BSO4	**Boso 4**	**0.82**	**351**	⇑P	**Pn**	**12 50 21.7**	**+1.3**
BSO4				X		12 50 35.0	
TATJ	**Tateyama 2**	**0.98**	**330**	⇑P	**Pn**	**12 50 23.6**	**+1.0**
TATJ				*e*S	**Sn**	**12 50 35.6**	**-0.2**
JIM2	**Oshima 3**	**1.03**	**302**	⇑P	**Pn**	**12 50 23.0**	**-0.2**
JIM2				S	**Sn**	**12 50 35.2**	**-1.7**
JTHY	**Toshimahigashi**	**1.05**	**289**	P	**Pn**	**12 50 23.9**	**+0.4**
JTHY				S	**Sn**	**12 50 37.1**	**-0.4**
JKO	**Kozu shima**	**1.12**	**271**	⇓P	**Pn**	**12 50 24.6**	**+0.2**
JKO				S	**Sn**	**12 50 38.8**	**-0.3**
JHJ2	**Mitsune**	**1.21**	**208**	⇑P	**Pn**	**12 50 26.6**	**+1.1**
JHJ2	**Mitsune**	**1.21**	**208**		**Pn**	**12 50 26.8**	**+1.2**
JHJ	**Hachijo jima 2**	**1.21**	**209**	P	**Pn**	**12 50 26.7**	**+1.1**
	236nm,0.3s,baz=134,slow=23,SNR=136						
JHJ				S	**Sn**	**12 50 40.9**	**-0.3**
	778nm,0.3s,baz=73,slow=23,SNR=12						
KTJ3	**Kamata3**	**1.39**	**303**	⇑P	**Pn**	**12 50 27.7**	**-0.3**
KTJ3				S	**Sn**	**12 50 43.7**	**-1.8**
JIZS	**Izushimoda**	**1.44**	**292**	⇑P	**Pn**	**12 50 28.8**	**+0.2**
JIZS				*e*S	**Sn**	**12 50 45.7**	**-0.9**
JOD2	**Odawara 2**	**1.58**	**313**	⇑P	**Pn**	**12 50 30.5**	**-0.1**
JOD2				S	**Sn**	**12 50 48.6**	**-1.5**
JSG	**Sagara**	**1.97**	**285**		**Pn**	**12 50 37.1**	**+1.3**
JYT	**Yasato**	**2.06**	**353**		**Pn**	**12 50 37.8**	**+0.8**
JGF	**Kuroka**	**2.94**	**300**		**Pn**	**12 50 50.2**	**+1.1**
MJAR	**Matsushiro Arr**	**3.01**	**322**	P	**Pn**	**12 50 50.3**	**+0.3**
	9.9nm,0.3s,baz=142,slow=12,SNR=318						
MJAR				S	**Sn**	**12 51 24.4**	**-0.4**
	6.0nm,0.3s,baz=133,slow=16,SNR=5.9						
MJAR	**Matsushiro Arr**	**3.01**	**322**		**Pn**	**12 50 50.6**	**+0.7**
MAJO	**Matsushiro**	**3.01**	**322**		**Pn**	**12 50 51.7**	**+1.8**
MAT	**Matsushiro**	**3.01**	**322**	P	**Pn**	**12 50 51.7**	**+1.7**
MAT				S	**Sn**	**12 51 25.9**	**+1.1**
MJB9	**Matsu-Tunnel**	**3.01**	**322**		**Pn**	**12 50 51.8**	**+1.8**
INU	**Inuyama**	**3.09**	**293**		**Pn**	**12 50 52.9**	**+1.8**
JMM	**Marumori**	**3.69**	**4**		**Pn**	**12 50 59.7**	**+0.5**
JSD	**Sado**	**4.25**	**335**	Pn	**Pn**	**12 51 08.2**	**+1.2**
JWT	**Wachi**	**4.33**	**286**	Pn	**Pn**	**12 51 10.6**	**+2.5**
JMN	**Monobe**	**5.52**	**267**	Pn	**Pn**	**12 51 26.9**	**+2.5**
JHS	**Saijyo**	**6.14**	**280**	Pn	**Pn**	**12 51 36.3**	**+3.4**
JTM	**Tenmabayashi**	**6.61**	**4**	Pn	**Pn**	**12 51 40.0**	**+0.8**
JCJ	**Chichijima**	**7.21**	**168**	P	**Pn**	**12 51 46.7**	**-0.8**
	13nm,0.3s,baz=82,slow=14,SNR=20						
JCJ				S	**Sn**	**12 53 05.4**	**-2.6**
	9.7nm,0.3s,baz=15,slow=21,SNR=2.1						
JCJ	**Chichijima**	**7.21**	**168**		**Pn**	**12 51 46.0**	**-1.5**
JEW	**Eniwo**	**8.68**	**5**	Pn	**Pn**	**12 52 06.9**	**-0.6**
ASAJ	**Asahikawa**	**10.06**	**9**	P	**Pn**	**12 52 26.2**	**-0.1**
	1.4nm,0.3s,baz=204,slow=9.1,SNR=18						
ASAJ				S	**Sn**	**12 54 10.3**	**-7.2**
	0.7nm,0.3s,baz=22,slow=31,SNR=2.0						
JKA	**Kamikawa-asahi**	**10.06**	**9**		**Pn**	**12 52 25.4**	**-0.9**
KSRS	**Korea Array**	**10.72**	**291**	P	**Pn**	**12 52 37.1**	**+1.7**
	0.2nm,0.3s,baz=107,slow=15,SNR=6.8						
KLR	**Kul'dur**	**16.38**	**339**	P	**Pn**	**12 53 49.3**	**-1.2**
	0.2nm,0.3s,baz=198,slow=7.0,SNR=4.2						
H11N2	**WAKE ISLAND Hy**	**27.48**	**115**	T	T	13 25 33.8	
	baz=320,slow=74,SNR=134						
H11N1	**WAKE ISLAND Hy**	**27.49**	**115**	T	T	13 24 56.8	
	SNR=120						
H11N3	**WAKE ISLAND Hy**	**27.50**	**115**	T	T	13 25 35.5	
	baz=314,slow=74,SNR=91						
H11S3	**WAKE ISLAND Hy**	**28.08**	**117**	T	T	13 26 19.6	
	baz=310,slow=76,SNR=12						
H11S1	**WAKE ISLAND Hy**	**28.08**	**117**	T	T	13 26 21.4	
	baz=310,slow=76,SNR=7.1						
H11S2	**WAKE ISLAND Hy**	**28.10**	**117**	T	T	13 26 21.9	
	baz=310,slow=76,SNR=6.4						
SONM	**Songino Array**	**28.86**	**309**	P	**P**	**12 55 58.3**	**+0.8**
	1.5nm,0.7s,baz=108,slow=8.3,SNR=10						
SONM	**Songino Array**	**28.86**	**309**	P	**P**	**12 55 58.1**	**+0.6**
ZALV	**Zalesovo Beam**	**43.33**	**315**	P	**P**	**12 58 00.3**	**-0.2**
	1.3nm,0.5s,baz=91,slow=5.9,SNR=7.6						
ZALV				PcP	**PcP**	**12 59 47.8**	**-0.5**
	1.6nm,0.5s,baz=90,slow=1.8,SNR=8.0						
ZALV	**Zalesovo Beam**	**43.33**	**315**		**P**	**12 58 02.7**	**+2.2**
MK31	**Makanchi Array**	**45.05**	**304**	P	**P**	**12 58 14.2**	**-0.3**
MK31				IAmb	IAmb	12 58 15.0	
	comp=Z,2.4nm,0.9s						
MKAR	**Makanchi Array**	**45.05**	**304**	P	**P**	**12 58 14.2**	**-0.3**
	comp=Z,2.4nm,0.7s,baz=89,slow=10,SNR=22						
MKAR	**Makanchi Array**	**45.05**	**304**	P	**P**	**12 58 14.6**	**+0.2**
MAKZ	**Makanchi**	**45.27**	**304**	P	**P**	**12 58 15.4**	**-0.7**
MAKZ				IAmb	IAmb	12 58 16.7	
	comp=Z,2.9nm,0.8s						
KURK	**Kurchatov**	**47.15**	**310**	P	**P**	**12 58 30.4**	**-0.4**
KURK				IAmb	IAmb	12 58 31.0	
	comp=Z,4.2nm,0.8s						
BOOM	**Boomskoye usch**	**50.22**	**300**	P	**P**	**12 58 56.1**	**+1.4**
BOOM				IAmb	IAmb	12 58 59.7	
	comp=Z,1.9nm,0.8s						
ILAR	**Eielson Array**	**52.31**	**31**	P	**P**	**12 59 11.1**	**+1.3**
	comp=Z,0.4nm,0.8s,baz=271,slow=6.2,SNR=4.5						
BMAR	**Burnt Mountain**	**53.20**	**28**	P	**P**	**12 59 19.3**	**+2.9**
KKAR	**Karatay Array**	**53.94**	**302**	P	**P**	**12 59 22.1**	**-0.1**
WB0	**Warramunga Arr**	**53.96**	**187**	P	**P**	**12 59 22.2**	**-0.1**
WRAB	**Tennant Creek**	**54.13**	**187**	P	**P**	**12 59 23.9**	**+0.3**
WRAB				IAmb	IAmb	12 59 25.7	
	comp=Z,2.9nm,0.8s						
WR0	**Warramunga Arr**	**54.14**	**187**	P	**P**	**12 59 23.3**	**-0.3**
WB2	**Warramunga Arr**	**54.14**	**187**	P	**P**	**12 59 23.1**	**-0.6**
WRA	**Warramunga Arr**	**54.14**	**187**	P	**P**	**12 59 23.6**	**-0.1**
	comp=Z,2.3nm,0.5s,baz=4.7,slow=7.6,SNR=58						
WRA	**Warramunga Arr**	**54.14**	**187**	P	**P**	**12 59 22.5**	**-1.2**
INK	**Inuvik**	**57.27**	**26**	P	**P**	**12 59 46.9**	**+1.4**
	comp=Z,0.6nm,0.6s,baz=298,slow=5.3,SNR=5.2						
INK	**Inuvik**	**57.27**	**26**	P	**P**	**12 59 45.8**	**+0.2**
INK				IAmb	IAmb	13 00 00.6	
	comp=Z,3.3nm,1.3s						
AS31	**Alice Springs**	**57.87**	**187**	P	**P**	**12 59 50.6**	**+0.3**
ASAR	**Alice Springs**	**57.87**	**187**	P	**P**	**12 59 50.7**	**+0.4**
	comp=Z,0.6nm,0.8s,baz=13,slow=11,SNR=11						
ASAR	**Alice Springs**	**57.87**	**187**	P	**P**	**12 59 51.0**	**+0.8**
ABKAR	**Akbulak array**	**59.23**	**311**	P	**P**	**12 59 59.9**	**+0.4**
ARCES	**ARCESS Array B**	**66.40**	**340**	P	**P**	**13 00 46.8**	**-0.1**
	comp=Z,1.9nm,0.8s,baz=33,slow=6.8,SNR=1.7						
ARCES	**ARCESS Array B**	**66.40**	**340**	P	**P**	**13 00 47.2**	**+0.3**
YKA	**Yellowknife Ar**	**66.65**	**29**	P	**P**	**13 00 49.7**	**+1.1**
	comp=Z,0.7nm,0.8s,baz=285,slow=13,SNR=2.5						
FINES	**FINESS Array B**	**70.99**	**332**	P	**P**	**13 01 15.3**	**-0.2**
	comp=Z,6.5nm,1.0s,baz=92,slow=5.7,SNR=5.7						
FINES	**FINESS Array B**	**70.99**	**332**	P	**P**	**13 01 15.7**	**+0.2**
KBZ	**Khabaz**	**72.20**	**311**	P	**P**	**13 01 22.6**	**-0.5**
	comp=Z,3.3nm,0.8s,baz=69,slow=6.4,SNR=5.7						
AKASG	**Malin Array Be**	**76.09**	**322**	P	**P**	**13 01 45.0**	**-0.6**
	comp=Z,1.2nm,0.4s,baz=48,slow=5.8,SNR=2.4						

ROM 30 12:51:03.4±0.1**, 42°.737N**±0°.004×**13°.214E**±0°.009**, h10^{km}, ML1.7**/7**, 4C-5D, Error ellipse: s-maj=0.6km s-min=0.3km az=266.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.12**	**323**	⇑P	Pg	12 51 06.8	+0.4
NRCA				AML	AML		
	comp=E,4710µm,0.6s						
NRCA				AML	AML		
	comp=N,5280µm,0.1s						
NRCA				AML	AML		
	comp=N,5280µm,0.1s						
NRCA				AML	AML		
	comp=E,4710µm,0.6s						
NRCA				AML	AML		
	comp=N,5280µm,0.1s						
NRCA				AML	AML		
	comp=E,4710µm,0.6s						
NRCA	**Norcia**	**0.12**	**323**	S	Sg	12 51 08.9	+0.3
NRCA				AML	AML		
	comp=E,4710µm,0.6s						
NRCA				AML	AML		
	comp=N,5280µm,0.1s						
LNSS	**Leonessa**	**0.19**	**224**	⇑P	Pb	12 51 08.3	-0.7
LNSS				AML	AML		
	comp=E,944µm,0.4s						
LNSS				AML	AML		
	comp=N,752µm,1.2s						
LNSS				AML	AML		
	comp=N,752µm,1.2s						
LNSS				AML	AML		
	comp=E,944µm,0.4s						
LNSS				AML	AML		
	comp=N,752µm,1.2s						
LNSS				AML	AML		
	comp=E,944µm,0.4s						
LNSS	**Leonessa**	**0.19**	**224**	S	Sg	12 51 11.6	+1.4
LNSS				AML	AML		
	comp=N,752µm,1.2s						
LNSS				AML	AML		
	comp=E,944µm,0.4s						
RM33	**Pellescritta (**	**0.23**	**180**	P	Pg	12 51 08.9	+0.7
RM33				AML	AML		
	comp=E,274µm,0.1s						
RM33				AML	AML		
	comp=N,237µm,0.3s						
RM33				AML	AML		
	comp=N,237µm,0.3s						
RM33				AML	AML		
	comp=E,274µm,0.1s						
RM33				AML	AML		
	comp=N,237µm,0.3s						
RM33				AML	AML		
	comp=E,274µm,0.1s						
RM33	**Pellescritta (**	**0.23**	**180**	S	Sg	12 51 12.9	+1.5
RM33				AML	AML		
	comp=N,237µm,0.3s						
RM33				AML	AML		
	comp=E,274µm,0.1s						
CAMP	**Campotosto**	**0.25**	**144**	⇓P	Pg	12 51 09.1	+0.5
CAMP				AML	AML		
	comp=E,242µm,0.2s						
CAMP				AML	AML		
	comp=N,203µm,0.5s						
CAMP				AML	AML		
	comp=E,242µm,0.2s						
CAMP				AML	AML		
	comp=N,203µm,0.5s						
CAMP				AML	AML		
	comp=E,242µm,0.2s						
CAMP				AML	AML		
	comp=N,203µm,0.5s						
CAMP	**Campotosto**	**0.25**	**144**	⇓P	Pg	12 51 09.0	+0.5
CAMP				S	Sg	12 51 13.1	+1.1
CAMP				AML	AML		
	comp=E,242µm,0.2s						
CAMP				AML	AML		
	comp=N,203µm,0.5s						
TERO	**Teramo**	**0.31**	**112**	⇑P	Pg	12 51 09.9	+0.3
TERO				AML	AML		
	comp=E,109µm,0.3s						
TERO				AML	AML		
	comp=N,216µm,0.1s						
TERO				AML	AML		
	comp=N,216µm,0.1s						
TERO				AML	AML		

	comp=E,109μm,0.3s						
TERO				AML	AML		
	comp=N,216μm,0.1s						
TERO				AML	AML		
	comp=E,109μm,0.3s						
TERO	Teramo	0.31	112	S	Sg	12 51 14.8	+1.1
TERO				AML	AML		
	comp=E,109μm,0.3s						
TERO				AML	AML		
	comp=N,216μm,0.1s						
CESI	CESI - Serrava	0.35	320	⇓P	Pg	12 51 10.9	+0.5
CESI				AML	AML		
	comp=E,218μm,0.2s						
CESI				AML	AML		
	comp=N,97μm,0.3s						
CESI				AML	AML		
	comp=N,97μm,0.3s						
CESI				AML	AML		
	comp=E,218μm,0.2s						
CESI				AML	AML		
	comp=N,97μm,0.3s						
CESI				AML	AML		
	comp=E,218μm,0.2s						
CESI	CESI - Serrava	0.35	320	S	Sg	12 51 16.1	+1.0
CESI				AML	AML		
	comp=N,97μm,0.3s						
CESI				AML	AML		
	comp=E,218μm,0.2s						
CSP1	Cessapalombo	0.35	359	P	Pg	12 51 10.6	+0.1
CSP1	Cessapalombo	0.35	359	P	Pg	12 51 10.8	+0.3
CSP1				S	Sb	12 51 16.4	-1.1
GIGS	Gran Sasso	0.39	138	P	Pg	12 51 11.3	+0.2
GIGS				AML	AML		
	comp=E,67μm,0.2s						
GIGS				AML	AML		
	comp=N,42μm,1.3s						
GIGS				AML	AML		
	comp=E,67μm,0.2s						
GIGS				AML	AML		
	comp=N,42μm,1.3s						
GIGS				AML	AML		
	comp=E,67μm,0.2s						
GIGS				AML	AML		
	comp=N,42μm,1.3s						
GIGS	Gran Sasso	0.39	138	P	Pg	12 51 11.3	+0.2
GIGS				S	Sg	12 51 17.1	+0.9
GIGS				AML	AML		
	comp=E,67μm,0.2s						
GIGS				AML	AML		
	comp=N,42μm,1.3s						
OFFI	Offida	0.40	60	⇑P	Pb	12 51 12.5	-0.1
OFFI	Offida	0.40	60	P	Pb	12 51 12.2	-0.3
OFFI				S	Sb	12 51 18.5	-0.2
FIAM	Fiamignano	0.47	189	⇓P	Pg	12 51 13.1	+0.4
FIAM				AML	AML		
	comp=E,79μm,0.8s						
FIAM				AML	AML		
	comp=N,67μm,0.2s						
FIAM				AML	AML		
	comp=N,67μm,0.2s						
FIAM				AML	AML		
	comp=E,79μm,0.8s						
FIAM				AML	AML		
	comp=N,67μm,0.2s						
FIAM				AML	AML		
	comp=E,79μm,0.8s						
FIAM	Fiamignano	0.47	189	P	Pg	12 51 13.1	+0.4
FIAM				S	Sb	12 51 20.1	-0.9
FIAM				AML	AML		
	comp=E,79μm,0.8s						
FIAM				AML	AML		
	comp=N,67μm,0.2s						
GUMA	Gualdo di Mace	0.62	58	⇓P	Pg	12 51 10.9	-4.6
GUMA				AML	AML		
	comp=E,1058μm,0.3s						
GUMA				AML	AML		
	comp=N,786μm,0.6s						
GUMA				AML	AML		
	comp=N,786μm,0.6s						
GUMA				AML	AML		
	comp=E,1058μm,0.3s						
GUMA				AML	AML		
	comp=N,786μm,0.6s						
GUMA				AML	AML		
	comp=E,1058μm,0.3s						
GUMA	Gualdo di Mace	0.62	58	P	Pg	12 51 10.8	-4.6
GUMA				S	Sg	12 51 16.5	-7.2
GUMA				AML	AML		
	comp=N,786μm,0.6s						
GUMA				AML	AML		
	comp=E,1058μm,0.3s						
T0110	Collepietro	0.66	141	P	Pg	12 51 16.4	+0.2
T0110	Collepietro	0.66	141	P	Pg	12 51 16.1	-0.1
T0110				S	Sb	12 51 25.9	-0.4
MMUR	Monte Murano	0.72	347	AML	AML		
	comp=E,929μm,1.6s						
MMUR				AML	AML		
	comp=N,630μm,1.6s						
PIGN	Pignataro Magg	1.70	155	P	Pn	12 51 32.1	-1.0
DOSS	Dosso del Somm	3.46	336	AML	AML		
	comp=N,99μm,1.5s						
DOSS				AML	AML		
	comp=E,114μm,0.7s						
MAGA	Magasa	3.56	329	AML	AML		
	comp=N,208μm,0.6s						
MAGA				AML	AML		
	comp=E,228μm,0.3s						
CAPR	Capriolo	3.74	322	AML	AML		
	comp=N,643μm,1.3s						
CAPR				AML	AML		
	comp=E,912μm,0.1s						
CAPR				AML	AML		
	comp=E,913μm,0.1s						
CAPR				AML	AML		
	comp=E,916μm,0.1s						
MABI	Malga Bissina	3.84	331	AML	AML		
	comp=E,64μm,1.5s						
MABI				AML	AML		
	comp=N,127μm,0.8s						
MABI				AML	AML		
	comp=N,126μm,0.8s						
MDI	Monti di Nese	3.94	322	AML	AML		
	comp=E,4395μm,0.6s						
MDI				AML	AML		
	comp=N,3400μm,0.2s						
MDI				AML	AML		
	comp=N,3820μm,0.2s						
MDI				AML	AML		
	comp=E,4705μm,0.6s						
MDI				AML	AML		
	comp=N,3405μm,0.2s						
MERA	Merate	4.01	318	AML	AML		
	comp=E,906μm,1.1s						
MERA				AML	AML		
	comp=N,754μm,0.4s						
MERA				AML	AML		
	comp=N,754μm,0.4s						
MERA				AML	AML		
	comp=E,906μm,1.1s						
BERNI	Berninapass	4.33	329	AML	AML		
	comp=E,72μm,0.4s						
BERNI				AML	AML		
	comp=N,71μm,0.2s						
BERNI				AML	AML		
	comp=N,71μm,0.2s						
MUGIO	Muggio	4.37	318	AML	AML		
	comp=N,73μm,0.5s						
MUGIO				AML	AML		
	comp=E,48μm,1.5s						
MUGIO				AML	AML		
	comp=E,48μm,1.5s						
MUGIO				AML	AML		
	comp=E,48μm,1.5s						
MUGIO				AML	AML		
	comp=N,73μm,0.5s						
VARE	Varese	4.47	316	AML	AML		
	comp=E,426μm,0.4s						
VARE				AML	AML		
	comp=N,230μm,0.4s						
FUSIO	Fusio	4.94	320	AML	AML		
	comp=N,43μm,0.6s						
FUSIO				AML	AML		
	comp=E,84μm,0.4s						
FUSIO				AML	AML		
	comp=E,84μm,0.4s						

ANF ***30*** *13:00:55.2±0.3, 36°.30N×97°.50W, h4^{km}, ML3.7/11, Error ellipse: s-maj=3.5km s-min=2.6km az=80.0*

TUL ***30*** *13:00:55.3±1.3, 36°.28N±0°.01×97°.51W±0°.03, h11^{km}±7^{km}, ML3.2, mb_Lg3.1/72(NEIC), Error ellipse: s-maj=3.4km s-min=1.6km az=73.0*

NEIC ***30*** *13:00:55.0±0.5, 36°.28N±0°.01×97°.53W±0°.02, h4^{km}±6^{km}, Error ellipse: s-maj=2.6km s-min=1.7km az=81.0*

ISC 30 13:00:55.1±1.2**, 36°.28N**±0°.02×**97°.51W**±0°.03**, h2**^{km}±11^{km}**, n85, σ0ˢ.39**/72**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CROK	Carrier	0.44	300	Pg	Pg	13 01 03.9	+0.4
BLOK	Blackwell	0.53	27	Pg	Pg	13 01 05.8	+0.5
BLOK				Sg	Sg	13 01 13.1	+0.8
BCOK	Bluff Creek, N	0.63	187	Pg	Pg	13 01 07.2	+0.1
BCOK				Sg	Sg	13 01 15.5	+0.2
GC02	Grant County #	0.63	334	Pg	Pg	13 01 07.3	+0.1
OK031	S. Brethren Rd	0.64	121	Pg	Pg	13 01 07.4	+0.1
OK031				Sg	Sg	13 01 15.7	+0.1
QUOK	Quay	0.66	100		Pg	13 01 07.9	+0.1
OK009	Oakdale Elemen	0.70	174	Pg	Pg	13 01 08.7	+0.1
OK025	Westminster Rd	0.72	168	Pg	Pg	13 01 08.9	+0.1
KAN13	South Haven SW	0.73	2		Pg	13 01 09.3	+0.2
KAN13				Sg	Sg	13 01 18.6	+0.1
OK001	Jones High Sch	0.74	166	Pg	Pg	13 01 09.4	+0.1
KAN14	Manchester OK	0.76	332		Pg	13 01 09.7	0.0
KAN14				Sg	Sg	13 01 19.8	+0.1
KAN17	Caldwell West	0.79	345		Pg	13 01 10.2	0.0
KAN09	Caldwell North	0.85	354	Pg	Pg	13 01 11.6	+0.1
OKCFA	Oklahoma City	0.87	177	Pg	Pg	13 01 11.4	-0.3
OKCFA	Oklahoma City	0.87	177	P	Pg	13 01 11.6	-0.1
	baz=356,SNR=16						
KAN05	Bluff City Nor	0.87	341		Pg	13 01 11.9	+0.1
KAN05				Sg	Sg	13 01 22.8	-0.3
OKCSW	OKLAHOMA CITY	0.88	176		Pg	13 01 11.7	-0.2
KAN01	Argonia South	0.89	347	Pg	Pg	13 01 12.1	-0.1
KAN10	Anthony SW Sta	0.96	331	Pg	Pg	13 01 13.3	-0.2
KAN10				Sg	Sg	13 01 26.0	+0.1
KAN06	Argonia West S	1.00	344		Pg	13 01 14.1	-0.2
KAN08	Anthony NE Sta	1.01	339		Pg	13 01 14.3	-0.2
T35A	Sooner Cattle	1.02	52		Pg	13 01 14.5	-0.2
T35B	Sooner Cattle	1.02	52	P	Pg	13 01 14.6	-0.1
	baz=232						
T35B				S	Sg	13 01 28.0	0.0
	baz=232						
FNO	Franklin	1.03	175		Pg	13 01 14.3	-0.4
KAN16	Harper SW Stat	1.04	335	Pn	Pg	13 01 14.9	-0.1
KAN12	Harper NE Stat	1.08	339		Pg	13 01 15.6	-0.3
TUL1	Leonard	1.44	104	Pn	Pn	13 01 21.1	-1.1
TUL1	Leonard	1.44	104	P	Pn	13 01 21.2	-1.0
	baz=285,SNR=129						
TUL1				S	Sb	13 01 41.0	-0.5
	baz=285						
LOOK	Love County	2.30	173		Pn	13 01 33.8	-0.2
R32A	Long Quarter,	2.34	336	Pn	Pn	13 01 34.4	-0.2
R32A	Long Quarter,	2.34	336	P	Pn	13 01 34.6	0.0
	baz=156,SNR=52						
R32A				S	Sn	13 02 04.3	+0.4
	baz=156						
X37A	Clayton	2.43	133	Pn	Pn	13 01 35.7	-0.1
X37A				IAmb_Lg		13 02 18.3	
	comp=Z,74nm,0.7s						
X37A	Clayton	2.43	133	P	Pn	13 01 36.3	+0.5
	baz=315,SNR=32						
X37A				S	Sn	13 02 07.3	+1.2
	baz=315						
U38A	Gravette	2.53	86	Pn	Pn	13 01 37.2	+0.1
U38A	Gravette	2.53	86	P	Pn	13 01 37.5	+0.3
	baz=267,SNR=45						
Z35A	Perchaven, San	2.95	176		Pn	13 01 42.6	-0.4
Z35A	Perchaven, San	2.95	176	P	Pn	13 01 43.2	+0.2
	baz=356						
W39A	Magazine	3.22	109	Pn	Pn	13 01 46.4	-0.3
W39A				IAmb_Lg		13 02 45.3	
	comp=Z,74nm,1.0s						
W39A	Magazine	3.22	109	P	Pn	13 01 46.8	+0.1
	baz=291						
S39A	Bolivar	3.64	66	Pn	Pn	13 01 52.0	-0.4
S39A				IAmb_Lg		13 02 50.8	
	comp=Z,38nm,0.7s						
S39A	Bolivar	3.64	66	P	Pn	13 01 52.3	-0.1
	baz=248,SNR=9.5						
MIAR	Mount Ida	3.65	117	Pn	Pn	13 01 52.7	+0.1
MIAR				IAmb_Lg		13 02 58.9	
	comp=Z,46nm,1.2s						
MIAR	Mount Ida	3.65	117	P	Pn	13 01 53.0	+0.4
	baz=300,SNR=20						
Z38A	Mt. Pleasant	3.67	145		Pn	13 01 52.6	-0.2
U40A	Yellville	3.76	88	IAmb_Lg		13 02 55.9	
	comp=Z,51nm,0.9s						
ABTX	Abilene, Hawle	4.05	206	IAmb_Lg		13 03 05.9	
	comp=Z,32nm,0.7s						
X40A	Basin Creek Fa	4.22	114		Pn	13 01 59.9	-0.5
X40A				IAmb_Lg		13 03 14.0	
	comp=Z,38nm,0.7s						
WHTX	Lake Whitney,	4.28	179	Pn	Pn	13 02 01.2	-0.1
MGMO	Mountain Grove	4.30	77		Pn	13 02 01.5	-0.1
MGMO				IAmb_Lg		13 03 23.5	
	comp=Z,28nm,0.7s						
WHAR	Wooly Hollow	4.36	102		Pn	13 02 02.3	-0.1
WLAR	White Oak Lake	4.45	124	Pn	Pn	13 02 03.1	-0.4
WLAR				IAmb_Lg		13 03 18.9	
	comp=Z,30nm,0.8s						
N33A	J Bar K, Exete	4.45	1		Pn	13 02 03.0	-0.6
237A	Washetta, Mont	4.50	161	Pn	Pn	13 02 03.5	-0.8
P38A	Dawn	4.58	42		Pn	13 02 04.9	-0.5
P38A				IAmb_Lg		13 03 22.6	
	comp=Z,47nm,0.7s						
R40A	Maddies Statio	4.64	63		Pn	13 02 05.7	-0.5
R40A	Maddies Statio	4.64	63	P	Pn	13 02 06.1	0.0
	baz=246,SNR=5.7						
N35A	Tabor	4.80	17		Pn	13 02 08.2	-0.2
KSCO	Kaye Shedlock'	4.89	305	IAmb_Lg		13 03 34.7	
	comp=Z,39nm,0.7s						
NATX	Nacogdoches	5.10	151	IAmb_Lg		13 03 48.4	
	comp=Z,22nm,0.7s						
BGNE	Belgrade	5.14	355		Pn	13 02 12.4	-0.6
BGNE				IAmb_Lg		13 03 47.6	
	comp=Z,34nm,0.8s						
BGNE	Belgrade	5.14	355	P	Pn	13 02 12.5	-0.6
	baz=174,SNR=7.2						
T42A	Van Buren	5.21	80		Pn	13 02 13.4	-0.6
T42A				IAmb_Lg		13 03 38.9	
	comp=Z,24nm,1.0s						
CCAR	Cane Creek	5.26	115	IAmb_Lg		13 03 52.3	
	comp=Z,44nm,1.0s						
CCM	Cathedral Cave	5.31	69		Pn	13 02 14.9	-0.5
CCM				IAmb_Lg		13 03 52.1	
	comp=Z,32nm,0.8s						
P40A	Paris	5.40	51	Pn	Pn	13 02 16.5	-0.1
P40A				IAmb_Lg		13 03 50.6	
	comp=Z,50nm,0.9s						
T25A	Trinidad	5.61	281	IAmb_Lg		13 04 07.3	
	comp=Z,23nm,1.1s						
HBAR	Harrisburg	5.61	95	IAmb_Lg		13 03 57.2	
	comp=Z,38nm,0.7s						
PBMO	Poplar Bluff	5.72	83	IAmb_Lg		13 04 00.5	
	comp=Z,42nm,0.8s						
L34A	Svendsen Farm,	5.74	9		Pn	13 02 21.3	-0.1
LPAR	Lepanto	5.89	95	IAmb_Lg		13 04 15.1	
	comp=Z,26nm,0.7s						
FVM	French Village	5.91	71	IAmb_Lg		13 04 04.7	
	comp=Z,19nm,0.8s						
143A	Socs Landing,	6.18	124	IAmb_Lg		13 04 14.3	
	comp=Z,25nm,0.8s						
PEBM	Pemiscott Bayo	6.19	89	IAmb_Lg		13 04 11.1	
	comp=Z,35nm,0.8s						
S44A	Carbondale	6.76	76	IAmb_Lg		13 04 30.3	
	comp=Z,28nm,0.7s						
SIUC	Southern Illin	6.79	75	IAmb_Lg		13 04 30.0	
	comp=Z,32nm,0.8s						
W45A	Hickory Valley	6.87	97	IAmb_Lg		13 04 39.3	
	comp=Z,19nm,0.7s						
P43A	Skaggs, Pawnee	7.15	60	IAmb_Lg		13 04 51.7	
	comp=Z,34nm,0.8s						
L40A	Anamosa	7.56	38	IAmb_Lg		13 05 01.0	
	comp=Z,22nm,0.8s						
PHWY	Pilot Hill	7.97	311	IAmb_Lg		13 05 19.9	
	comp=Z,14nm,0.8s						
SUSD	Miller	8.22	353	IAmb_Lg		13 05 20.4	
	comp=Z,13nm,0.8s						
L42A	Oliver, Polo	8.35	44	IAmb_Lg		13 05 19.2	
	comp=Z,20nm,0.8s						
JFWS	Jewell Farm	8.67	38	IAmb_Lg		13 05 47.4	
	comp=Z,16nm,0.8s						
I40A	Norwalk	9.25	33	IAmb_Lg		13 05 55.4	
	comp=Z,12nm,0.7s						
RWWY	Rawlins	9.28	309	IAmb_Lg		13 06 01.2	
	comp=Z,13nm,0.8s						
K22A	Casper	9.43	315	IAmb_Lg		13 06 03.4	
	comp=Z,15nm,1.0s						

IDC ***30*** *13:16:54.6±8.1, 5°.41S×145°.95E, h121^{km}±84^{km}, mb3.0/3, mb1 3.2/5, mb1mx2.9/30, mbtmp3.5/5, ML2.9/2, Error ellipse: s-maj=75.7km s-min=31.3km az=142.0*

ISC 30 13:16:52.6±1.5**, 5°.3S**±0°.1×**145°.8E**±0°.2**, h100**^{km}**, n5, σ0ˢ.42**/6**, mb3.4**/3**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.30	162	P	Pn	13 17 56.3	+0.5
	6.9nm,0.3s,baz=339,slow=7.5,SNR=23						
PMG				S	Sn	13 18 44.4	-0.5
	9.1nm,0.3s,baz=150,slow=20,SNR=17						
WRA	Warramunga Arr	18.35	216	P	Pn	13 21 00.7	0.0
	0.1nm,0.3s,baz=40,slow=10,SNR=9.5						
ASAR	Alice Springs	21.57	211	P	P	13 21 34.4	0.0
	0.2nm,0.4s,baz=35,slow=13,SNR=8.0						
FITZ	Fitzroy Crossi	23.46	235	P	P	13 21 53.2	-0.1
	0.9nm,0.5s,baz=40,slow=13,SNR=1.4						
ILAR	Eielson Array	85.30	23	P	P	13 29 18.0	-0.1
	0.5nm,1.0s,baz=265,slow=5.7,SNR=2.5						

RSNC 30 13:17:20.3±1.0**, 6°.81N**×**73°.14W, h150**^{km}±4^{km}**, ML3.3, Mw3.7, 1C-4D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.22	192	⇑*i*P	Pn	13 17 40.6	-0.4
BARC				*e*S	Sn	13 17 55.5	-1.2
BARC				*i*		13 17 56.8	
	comp=Z,226nm,0.3s						
BRRC	Barranca, Sant	0.64	297	⇓*i*P	Pn	13 17 42.5	0.0
BRRC				*e*S	Sn	13 17 59.7	+0.3
BRRC				*i*		13 18 03.1	
	comp=Z,370nm,0.1s						
PAMC	Pamplona, Colo	0.68	40	*e*P	Pn	13 17 43.3	0.0
PAMC				*e*S	Sn	13 18 00.7	-0.2
PAMC				*i*		13 18 02.5	
	comp=Z,188nm,0.5s						
RUSC	La Rusia	0.91	177	⇓*i*P	Pn	13 17 44.7	-0.3
RUSC				*e*S	Sn	13 18 03.4	-0.4
RUSC				*i*		13 18 04.1	
	comp=Z,156nm,0.3s						
PTBC	PUERTO BERRIO,	1.34	258	*e*P	Pn	13 17 47.0	-1.2
PTBC				*e*S	Sn	13 18 08.6	-1.0
PTBC				*i*		13 18 15.6	
	comp=Z,302nm,0.3s						
TAMC	Tame, Arauca	1.39	105	⇓*i*P	Pn	13 17 48.8	0.0
TAMC				*e*S	Sn	13 18 10.2	-0.3
OCAC	Ocana	1.43	353	*e*P	Pn	13 17 48.6	-0.7
OCAC				*e*S	Sn	13 18 10.6	-1.1
OCAC				*i*		13 18 15.9	
	comp=Z,359nm,0.4s						
SPBC	San Pablo de B	1.48	219	*e*P	Pn	13 17 49.5	-0.2
SPBC				*e*S	Sn	13 18 11.6	-0.8
SPBC				*i*		13 18 17.8	
	comp=Z,267nm,0.2s						
ZARC	Zaragoza, Cauc	1.84	292	*e*P	Pn	13 17 53.3	-0.3
ZARC				*e*S	Sn	13 18 18.9	-0.2
ZARC				*i*		13 18 23.8	
	comp=Z,338nm,0.6s						
NORC	Norcasia	2.12	234	*e*P	Pn	13 17 56.5	-0.5
NORC				*e*		13 17 56.5	
NORC				*e*S	Sn	13 18 24.6	-0.5
NORC				*i*		13 18 32.6	
	comp=Z,145nm,0.2s						
SMLC	San Martn de	2.18	335	*e*P	Pn	13 17 56.7	-0.9
SMLC				*e*S	Sn	13 18 25.7	-0.7
SMLC				*i*		13 18 32.5	
	comp=Z,258nm,0.3s						
ROSC	El Rosal	2.28	211	*e*P	Pn	13 18 00.3	+1.1
ROSC				*e*S	Sn	13 18 30.8	+1.6
ROSC				*i*		13 18 36.8	
	comp=Z,187nm,0.5s						
HELC	Santa Helena	2.45	256	*e*P	Pn	13 18 00.6	-0.6
HELC				*e*S	Sn	13 18 33.0	+0.3
HELC				*i*		13 18 40.6	
	comp=Z,116nm,0.5s						
UREC	San Jos de Ur	2.55	292	*e*P	Pn	13 18 00.6	-1.5
UREC				*e*S	Sn	13 18 30.9	-3.5
GUY2C	Guyana, Caldas	2.72	235	*e*P	Pn	13 18 04.6	0.0
GUY2C				*e*S	Sn	13 18 42.1	+3.3
GUY2C				*i*		13 18 49.0	
	comp=Z,114nm,0.5s						
VILC	Villavicencio,	2.74	192	*e*P	Pn	13 18 03.5	-1.0
VILC				*e*S	Sn	13 18 38.1	-0.6
PTGC	Puerto Gaitan,	2.78	159	⇓*i*P	Pn	13 18 03.6	-1.3
PTGC				*e*S	Sn	13 18 36.9	-2.5
PTGC				*i*		13 18 37.5	
	comp=Z,60nm,0.3s						
CBOC	Ciudad Bolivar	3.01	252	*e*P	Pn	13 18 08.3	+0.3
CBOC				*e*S	Sn	13 18 44.1	-0.7
CBOC				*i*		13 18 49.2	
	comp=Z,29nm,0.6s						
DBBC	Dabeiba	3.06	274	*e*P	Pn	13 18 08.1	-0.4
DBBC				*i*		13 18 47.0	
	comp=Z,225nm,0.5s						
ANIL	Santa Ana	3.22	224	*e*P	Pn	13 18 11.7	+0.9
ANIL				*e*S	Sn	13 18 51.1	+1.2
PRAC	Prado	3.53	210	*e*P	Pn	13 18 13.8	-0.8
PRAC				*e*S	Sn	13 18 56.7	0.0
PRAC				*i*		13 19 00.7	
	comp=Z,103nm,0.2s						
ORTC	Ortega, Tolima	3.56	216	*e*P	Pn	13 18 14.3	-0.7
ORTC				*e*S	Sn	13 18 58.2	+0.8
ORTC				*i*		13 19 03.2	
	comp=Z,47nm,0.2s						
ELOV	Elorza	3.63	87	*e*P	Pn	13 18 13.5	-2.3
ELOV				*e*S	Sn	13 18 55.1	-3.8
PLMC	San Jos del P	3.66	239	*e*P	Pn	13 18 16.2	0.0
PLMC				*e*S	Sn	13 19 01.0	+1.4
SJCC	San Jacinto, C	3.67	327	*e*P	Pn	13 18 14.3	-2.1
SJCC				*e*S	Sn	13 18 54.6	-5.3
YOTC	Yotoco, Valle	4.25	229	*e*P	Pn	13 18 23.3	-0.7
YOTC				*e*S	Sn	13 19 17.6	+4.1
MACC	Macarena, Meta	4.69	189	*e*P	Pn	13 18 27.4	-2.3
MACC				*e*S	Sn	13 19 18.4	-5.3
MARP	Paez Belalcaza	4.84	216	*e*P	Pn	13 18 30.6	-1.3
MARP				*e*S	Sn	13 19 27.3	-0.4
GARC	Garzon, Huila	5.16	207	*e*P	Pn	13 18 34.9	-1.2
GARC				*e*S	Sn	13 19 31.1	-4.1

IDC ***30*** *13:57:59.5±1.7, 60°.63N×147°.07W, h0^{km}, mb3.6/5, mb1 3.8/7, mb1mx3.5/59, mbtmp3.6/7, ML3.5/2, MS2.7/1, Ms1 2.8/1, ms1mx2.4/46, Error ellipse: s-maj=39.9km s-min=21.3km az=100.0*

ANF ***30*** *13:58:05.7±0.2, 61°.21N×146°.93W, h8^{km}±1^{km}, ML3.5/52, Error ellipse: s-maj=1.6km s-min=1.2km az=7.0*

NEIC ***30*** *13:58:06.8±2.1, 61°.23N±0°.02×146°.93W±0°.02, h15^{km}±3^{km}, Error ellipse: s-maj=2.3km s-min=1.7km az=188.0*

AEIC ***30*** *13:58:06±2.1, 61°.23N±0°.02×146°.97W±0°.03, h12^{km}±5^{km}, ML3.1, ML3.3/154(NEIC), Error ellipse: s-maj=2.3km s-min=2.1km az=202.0*

ISC 30 13:58:06.1±0.9**, 61°.23N**±0°.02×**146°.95W**±0°.01**, h17**^{km}±6^{km}**, n240, σ1ˢ.28**/225**, mb3.6**/5**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JPK	Jack Peak	0.24	136		Pb	13 58 12.3	+0.2
JPK					Sg	13 58 16.8	+1.4
VMT	TAPS TI Valdez	0.32	118		Pb	13 58 13.1	-0.2
VMT					Sb	13 58 18.4	+0.2
GLI	Glacier Island	0.36	192	P	Pg	13 58 13.5	-0.1
	baz=9.6						
GLI	Glacier Island	0.36	192		Pg	13 58 13.5	-0.1
GLI					Sg	13 58 18.8	+0.2
GLI	Glacier Island	0.36	192	IAML		13 58 20.0	
	comp=N,2μm,0.4s						
GLI				IAML		13 58 20.8	
	comp=E,3μm,0.4s						
FID	Port Fidalgo	0.53	155		Pg	13 58 16.1	-0.6
FID	Port Fidalgo	0.53	155	IAML		13 58 26.4	

	comp=E,2µm,0.4s						
KLU	Klutina	0.56	62	P	Pg	13 58 17.1	-0.1
	baz=243,SNR=58						
KLU				S	Sg	13 58 24.3	-0.3
	baz=243						
KLU	Klutina	0.56	62		Pg	13 58 16.9	-0.3
KLU					Sg	13 58 24.4	-0.3
KLU	Klutina	0.56	62	IAML		13 58 24.9	
	comp=N,792nm,0.5s						
KLU				IAML		13 58 31.0	
	comp=E,421nm,0.4s						
DIV	Divide	0.58	100		Pg	13 58 16.8	-0.8
DIV					Sg	13 58 24.3	-1.0
SCM	Sheep Creek Mo	0.63	343	P	Pg	13 58 18.4	-0.1
	baz=164,SNR=97						
SCM				S	Sg	13 58 27.1	+0.1
	baz=164						
SCM	Sheep Creek Mo	0.63	343		Pg	13 58 18.5	-0.1
SCM					Sb	13 58 27.6	+0.3
KNK	Knik Glacier	0.75	285	P	Pg	13 58 20.5	-0.2
	baz=104,SNR=156						
KNK				S	Sg	13 58 31.0	+0.2
	baz=104						
KNK	Knik Glacier	0.75	285		Pg	13 58 20.5	-0.2
KNK					Sb	13 58 31.3	+0.5
PWL	Port Wells	0.77	242	P	Pg	13 58 20.4	-0.8
	baz=60,SNR=47						
PWL				S	Sg	13 58 30.7	-0.7
	baz=60						
PWL	Port Wells	0.77	242		Pg	13 58 20.5	-0.7
PWL					Sg	13 58 30.9	-0.5
SML	Sawmill	0.88	312	P	Pg	13 58 22.4	-0.8
	baz=131,SNR=79						
SML				S	Sb	13 58 35.4	+1.0
	baz=131						
SML	Sawmill	0.88	312		Pg	13 58 22.4	-0.8
SML					Sb	13 58 35.5	+1.1
PS12	TAPS Pump St12	0.90	73		Pg	13 58 22.2	-1.4
M24K	Tolsona, Glenn	0.95	22	P	Pg	13 58 24.1	-0.5
	baz=204,SNR=92						
M24K				S	Sg	13 58 36.9	-0.2
	baz=204						
M24K	Tolsona, Glenn	0.95	22		Pg	13 58 24.1	-0.5
M24K	Tolsona, Glenn	0.95	22	IAML		13 58 46.3	
	comp=E,580nm,1.0s						
GHO	Glory Hole Cre	1.09	301		Pb	13 58 26.4	-0.2
GHO	Glory Hole Cre	1.09	301	IAML		13 58 44.0	
	comp=N,876nm,0.6s						
GHO				IAML		13 58 45.2	
	comp=E,549nm,0.7s						
PS11	TAPS Pump St11	1.10	39		Pb	13 58 26.9	+0.1
PMR	Palmer	1.11	290	P	Pb	13 58 26.5	-0.4
	baz=108,SNR=84						
PMR				S	Sg	13 58 42.0	-0.1
	baz=108						
PMR	Palmer	1.11	290		Pb	13 58 26.5	-0.4
PMR					Sb	13 58 41.8	+0.8
PMR	Palmer	1.11	290	IAML		13 58 42.7	
	comp=N,787nm,0.6s						
PMR				IAML		13 58 43.6	
	comp=E,534nm,0.5s						
BMRM	Bremner River	1.17	102	P	Pb	13 58 26.8	-1.1
	baz=284						
BMRM				S	Sg	13 58 43.3	-0.6
	baz=284						
BMRM	Bremner River	1.17	102		Pb	13 58 27.4	-0.5
BMRM	Bremner River	1.17	102	IAML		13 58 46.0	
	comp=E,653nm,0.8s						
BMRM				IAML		13 58 46.6	
	comp=N,581nm,0.8s						
N25K	Chitina, Valde	1.19	71	P	Pb	13 58 27.0	-1.2
	baz=253,SNR=26						
N25K				S	Sn	13 58 45.0	+1.2
	baz=253						
N25K	Chitina, Valde	1.19	71		Pb	13 58 27.5	-0.7
N25K	Chitina, Valde	1.19	71	IAML		13 58 48.2	
	comp=E,481nm,0.5s						
GOAT	Goat Mountain	1.27	120		Pn	13 58 29.4	+0.3
RC01	Rabbit Creek A	1.36	265	P	Pn	13 58 30.7	+0.4
	baz=83,SNR=17						
RC01				S	Sn	13 58 49.2	+1.2
	baz=83						
RC01	Rabbit Creek A	1.36	265		Pn	13 58 30.7	+0.4
RC01	Rabbit Creek A	1.36	265	IAML		13 58 54.1	
	comp=N,613nm,0.4s						
RC01				IAML		13 58 56.0	
	comp=E,588nm,0.2s						
RAGM	Ragged Mountai	1.40	126		Pb	13 58 31.9	+0.2
WAT6	Susitna Watana	1.41	345	P	Pn	13 58 30.1	-0.9
	baz=165,SNR=49						
WAT6				S	Sn	13 58 49.5	+0.2
	baz=165						
WAT6	Susitna Watana	1.41	345		Pn	13 58 30.1	-0.9
HARP	HAARP	1.45	35	P	Pn	13 58 31.5	0.0
	baz=217,SNR=60						
HARP	HAARP	1.45	35		Pn	13 58 31.7	+0.2
GLB	Gilahina Butte	1.53	81		Pn	13 58 32.8	+0.2
GLB	Gilahina Butte	1.53	81	IAML		13 58 55.5	
	comp=E,355nm,0.4s						
GLB				IAML		13 58 55.6	
	comp=N,387nm,0.6s						
O22K	Cooper Landing	1.55	242	P	Pn	13 58 32.5	-0.4
	baz=60,SNR=29						
O22K				S	Sn	13 58 53.8	+1.1
	baz=60						
O22K	Cooper Landing	1.55	242		Pn	13 58 33.6	+0.7
FIS	Fire Island	1.59	268	Pn	Pn	13 58 34.0	+0.6
HMT	Hamilton	1.59	123		Pn	13 58 34.0	+0.4
M22K	Willow	1.61	290	P	Pn	13 58 33.7	0.0
	baz=108,SNR=30						
M22K	Willow	1.61	290		Pn	13 58 34.7	+1.0
SEW	Seward	1.67	229	P	Pn	13 58 34.8	+0.2
	baz=46						
SEW				S	Sn	13 58 56.5	+0.9
	baz=46						
SEW	Seward	1.67	229		Pn	13 58 35.1	+0.5
VRDI	Verde Repeater	1.69	89		Pn	13 58 35.5	+0.5
SLKM	Skilak Lake	1.76	247		Pn	13 58 36.7	+0.9
NICHA	Nichawak Mount	1.77	123		Pn	13 58 36.6	+0.7
BERG	Berg Lake	1.80	116		Pn	13 58 36.7	+0.3
KAIM	Kayak Island	1.81	135	P	Pn	13 58 36.8	+0.4
	baz=317						
KAIM	Kayak Island	1.81	135		Pn	13 58 36.6	+0.1
KAIM	Kayak Island	1.81	135	IAML		13 59 09.3	
	comp=N,227nm,0.6s						
KAIM				IAML		13 59 09.4	
	comp=E,194nm,0.5s						
Q23K	Middleton Isla	1.83	170	P	Pn	13 58 36.5	-0.2
	baz=350						
Q23K				Sb	Sb	13 59 03.2	+1.5
	baz=350						
Q23K	Middleton Isla	1.83	170		Pn	13 58 37.5	+0.8
Q23K	Middleton Isla	1.83	170	IAML		13 59 07.0	
	comp=N,272nm,0.6s						
Q23K				IAML		13 59 19.3	
	comp=E,294nm,1.1s						
MID	Middleton Isla	1.83	170		Pn	13 58 37.6	+0.8
MID	Middleton Isla	1.83	170	IAML		13 59 07.0	
	comp=E,329nm,0.9s						
MID				IAML		13 59 09.9	
	comp=N,246nm,0.7s						
WAT7	Susitna Watana	1.84	332		Pn	13 58 37.5	+0.5
DHY	Denali Highway	1.86	354	P	Pn	13 58 37.4	0.0
	baz=174,SNR=73						
DHY				S	Sb	13 59 02.8	0.0
	baz=174						
DHY	Denali Highway	1.86	354		Pn	13 58 37.5	+0.1
DHY	Denali Highway	1.86	354	IAML		13 59 06.1	
	comp=N,251nm,0.5s						
PAX	Paxson	1.88	21	P	Pn	13 58 38.1	+0.6
	baz=203,SNR=26						
PAX	Paxson	1.88	21		Pn	13 58 38.2	+0.6
MCARA	McCarthy VSAT	1.90	84	P	Pn	13 58 38.1	+0.5
	baz=267,SNR=11						
MCARA				Sb	Sg	13 59 05.9	-1.2
	baz=267						
MCARA	McCarthy VSAT	1.90	84		Pn	13 58 38.9	+1.2
MCARA	McCarthy VSAT	1.90	84	IAML		13 59 09.0	
	comp=N,312nm,0.4s						
MCARA				IAML		13 59 09.8	
	comp=E,324nm,0.5s						
CRQM	Cirque	1.92	103		Pn	13 58 39.2	+1.1
CRQM	Cirque	1.92	103	IAML		13 59 10.1	
	comp=N,288nm,0.8s						
CRQM				IAML		13 59 11.9	
	comp=E,264nm,0.7s						
SUCK	Suckling Hills	1.95	125		Pn	13 58 38.6	+0.2
SUCK	Suckling Hills	1.95	125	IAML		13 59 08.3	
	comp=E,223nm,1.4s						
SUCK				IAML		13 59 08.8	
	comp=N,272nm,0.6s						
CUT	Chulitna	1.97	308	P	Pn	13 58 40.0	+1.3
	baz=126,SNR=44						
CUT	Chulitna	1.97	308		Pn	13 58 40.1	+1.5
KHIT	Khitrov Hills	1.98	112		Pn	13 58 39.5	+0.7
GRIN	Grindle Hills	2.02	117		Pn	13 58 40.0	+0.6
TGL	Tana Glacier	2.06	102		Pn	13 58 41.0	+0.9
TGL	Tana Glacier	2.06	102	IAML		13 59 11.6	
	comp=E,211nm,0.6s						
TGL				IAML		13 59 12.2	
	comp=N,189nm,0.7s						
CAPN	Captain Cook N	2.10	259	Pb	Pb	13 58 43.2	-0.5
	baz=75						
WAX	Waxell Ridge	2.15	110		Pn	13 58 41.9	+0.6
WAX	Waxell Ridge	2.15	110	IAML		13 59 21.5	
	comp=E,240nm,0.9s						
PTPK	Patty Peak	2.17	89		Pn	13 58 43.2	+1.6
M26K	Nabesna, AK	2.21	56	P	Pn	13 58 43.2	+1.1
	baz=240						
M26K				Sb	Sb	13 59 14.5	+1.8
	baz=240						
M26K	Nabesna, AK	2.21	56		Pn	13 58 44.1	+2.0
M26K	Nabesna, AK	2.21	56	IAML		13 59 15.5	
	comp=N,143nm,0.6s						
BALM	Baldy	2.24	93		Pn	13 58 43.6	+1.1
KIAG	Kiagna River	2.25	96		Pn	13 58 43.7	+1.0
PS10	TAPS Pump St10	2.27	14		Pn	13 58 44.8	+2.0
SNH	Sunshine Point	2.28	116		Pn	13 58 43.9	+1.0
SNH	Sunshine Point	2.28	116	IAML		13 59 22.1	
	comp=E,132nm,0.9s						
SNH				IAML		13 59 38.7	
	comp=N,146nm,2.7s						
MENT	Mentasta	2.29	40		Pn	13 58 44.9	+1.8
MENT	Mentasta	2.29	40	IAML		13 59 20.7	
	comp=E,218nm,0.7s						
MENT				IAML		13 59 22.7	
	comp=N,171nm,0.6s						
ISLE	Juniper Island	2.34	104		Pn	13 58 44.5	+0.7
ISLE	Juniper Island	2.34	104	IAML		13 59 22.3	
	comp=N,135nm,0.7s						
ISLE				IAML		13 59 28.0	
	comp=E,140nm,0.6s						
RND	Reindeer	2.36	339		Pn	13 58 46.0	+2.0
RND	Reindeer	2.36	339	IAML		13 59 21.3	
	comp=E,149nm,0.6s						
RND				IAML		13 59 22.4	
	comp=N,124nm,0.7s						
STLK	Strandline Lak	2.37	279		Pn	13 58 42.9	-1.4
SPCG	Spurr Capps Gl	2.45	274		Pn	13 58 46.7	+1.2
L26K	Log Cabin Wild	2.47	42		Pn	13 58 47.6	+2.1
L26K	Log Cabin Wild	2.47	42	IAML		13 59 27.4	
	comp=N,135nm,0.4s						
L26K				IAML		13 59 27.8	
	comp=E,100nm,0.4s						
SPU	Mount Spurr	2.47	271		Pn	13 58 46.7	+1.1
BAGL	Bagley Icefiel	2.49	105		Pn	13 58 47.0	+1.2
SPCR	Spurr Chakacha	2.55	272	P	Pn	13 58 47.5	+0.8
	baz=87						
SPCR				S	Sn	13 59 18.8	+1.5
	baz=87						
BARN	Barnard Glacie	2.57	92		Pn	13 58 48.5	+1.4
M27K	Edge Creek, AK	2.66	63	P	Pn	13 58 49.9	+1.6
	baz=247						
M27K	Edge Creek, AK	2.66	63		Pn	13 58 50.6	+2.3
MESA	MESA	2.67	111	P	Pn	13 58 48.9	+0.4
	baz=295						
MESA				S	Sn	13 59 22.2	+1.6
	baz=295						
MESA	MESA	2.67	111		Pn	13 58 49.0	+0.4
MESA	MESA	2.67	111	IAML		13 59 34.3	
	comp=N,162nm,0.7s						
MESA				IAML		13 59 40.1	
	comp=E,137nm,0.6s						
MCK	McKinley	2.67	341	P	Pn	13 58 50.5	+2.2
	baz=159,SNR=59						
MCK	McKinley	2.67	341		Pn	13 58 50.9	+2.5
MCK	McKinley	2.67	341	IAML		13 59 28.5	
	comp=N,140nm,0.8s						
MCK				IAML		13 59 30.9	
	comp=E,156nm,0.6s						
YAH	Yahtse	2.69	107		Pn	13 58 49.7	+0.9
YAH	Yahtse	2.69	107	IAML		13 59 14.9	
	comp=E,130nm,0.3s						
YAH				IAML		13 59 15.3	
	comp=N,155nm,0.5s						
RIDG	Independent Ri	2.70	20	P	Pn	13 58 51.2	+2.4
	baz=202,SNR=42						
RIDG	Independent Ri	2.70	20		Pn	13 58 51.3	+2.6
RIDG	Independent Ri	2.70	20	IAML		13 59 31.0	
	comp=E,92nm,1.0s						
TRF	Thorofare Moun	2.72	326	P	Pn	13 58 51.1	+2.0
	baz=144						
TRF	Thorofare Moun	2.72	326		Pn	13 58 51.5	+2.4
TRF	Thorofare Moun	2.72	326	IAML		13 59 32.3	
	comp=E,129nm,0.6s						
TRF				IAML		13 59 33.0	
	comp=N,124nm,0.7s						
CNPM	China Poot	2.73	233		Pn	13 58 49.6	+0.4
CTGM	Chitina Glacie	2.74	93		Pn	13 58 50.9	+1.5
DOT	Dot Lake	2.77	28		Pn	13 58 52.0	+2.3
HOM	Homer	2.81	238	P	Pn	13 58 51.3	+1.1
	baz=54						
HOM	Homer	2.81	238	Pn	Pn	13 58 51.6	+1.4
DFR	Drift River	2.88	260		Pn	13 58 51.9	+0.7
RKAV	Rock Avalanche	2.90	106		Pn	13 58 52.9	+1.3
LOGN	Logan Glacier	2.92	95		Pn	13 58 53.5	+1.6
RSO	Redoubt South	2.95	257		Pn	13 58 52.9	+0.7
TABL	Table Mountain	2.95	103		Pn	13 58 53.3	+1.0
RED	Redoubt Volcan	2.97	257		Pn	13 58 53.0	+0.6
KTH	Kantishna Hill	2.98	323		Pn	13 58 54.7	+2.1
KTH	Kantishna Hill	2.98	323	IAML		13 59 39.2	
	comp=E,110nm,0.6s						
YUK2	White River	2.98	77		Pn	13 58 54.7	+2.1
PPLA	Purkeypile	2.98	306	P	Pn	13 58 54.1	+1.4
	baz=122,SNR=13						
PPLA	Purkeypile	2.98	306		Pn	13 58 54.3	+1.6
NCT	North Crescent	3.00	260		Pn	13 58 53.9	+1.0
O20K	Slope Mountain	3.02	250	P	Pn	13 58 54.3	+1.1
	baz=65						
BC03		3.04	51		Pn	13 58 55.8	+2.5
BCAR	Beaver Creek A	3.04	51	Pn	Pn	13 58 55.3	+1.8
SCRK	Sand Creek	3.08	25	P	Pn	13 58 55.4	+1.4
	baz=208,SNR=9.7						
SCRK	Sand Creek	3.08	25		Pn	13 58 56.4	+2.4
YUK3	Moose Creek	3.16	77	P	Pn	13 58 56.6	+1.4
	baz=263						
YUK3	Moose Creek	3.16	77		Pn	13 58 57.3	+2.1
BWN	Browne	3.17	340		Pn	13 58 56.5	+1.3
HDA	Harding Lake	3.19	360	P	Pn	13 58 57.1	+1.7
	baz=180						
HDA	Harding Lake	3.19	360		Pn	13 58 57.3	+1.8
IVE	Iliamna Volcan	3.23	251		Pn	13 58 56.4	+0.3
CAST	Castle Rocks	3.25	315	P	Pn	13 58 58.0	+1.7
	baz=130						
CAST	Castle Rocks	3.25	315		Pn	13 58 57.8	+1.5
CAST				IAML		13 59 42.9	
	comp=E,59nm,0.7s						
WRH	Wood River Hil	3.29	351		Pn	13 58 59.0	+2.2
WRH	Wood River Hil	3.29	351	IAML		13 59 55.9	
	comp=N,53nm,0.8s						
WRH				IAML		13 59 56.8	
	comp=E,52nm,0.8s						
ILSW	Iliamna Southw	3.30	250		Pn	13 58 56.9	-0.2
PS08	TAPS Pump Stn8	3.33	1		Pn	13 58 59.6	+2.3
BPAW	Bear Paw Mtn.	3.43	329	P	Pn	13 59 00.1	+1.4
	baz=146						
BPAW	Bear Paw Mtn.	3.43	329		Pn	13 59 00.5	+1.7
BPAW	Bear Paw Mtn.	3.43	329	IAML		13 59 57.1	
	comp=E,46nm,1.4s						
BPAW				IAML		13 59 57.2	
	comp=N,52nm,0.7s						
CCB	Clear Creek Bu	3.45	354		Pn	13 59 00.6	+1.6
CCB	Clear Creek Bu	3.45	354	IAML		13 59 50.5	
	comp=E,51nm,0.4s						
CCB				IAML		13 59 50.6	
	comp=N,53nm,0.4s						
J25K	Salcha River,	3.47	11	P	Pn	13 59 00.1	+0.7
	baz=193,SNR=9.4						
J25K	Salcha River,	3.47	11		Pn	13 59 00.8	+1.4
PCA	Pinnacle	3.48	106	Pn	Pn	13 58 59.1	-0.4
NEA2	Nenana	3.51	345	P	Pn	13 59 01.2	+1.4
	baz=163,SNR=14						
NEA2	Nenana	3.51	345		Pn	13 59 01.3	+1.5
NEA2	Nenana	3.51	345	IAML		14 00 01.1	
	comp=E,43nm,1.0s						
L20K	Farewell, AK	3.52	294	P	Pn	13 59 00.5	+0.6
	baz=108,SNR=14						
L20K	Farewell, AK	3.52	294		Pn	13 59 00.3	+0.4
IL31		3.55	0		Pn	13 59 01.4	+1.0
ILAR	Eielson Array	3.55	0	Pn	Pn	13 59 03.9	+3.5
	comp=E,11nm,0.3s,baz=176,slow=13,SNR=368						
ILAR				Sn	Sb	13 59 47.8	-3.5
	comp=E,4.6nm,0.3s,baz=182,slow=21,SNR=26						
ILAR				Lg	Lg	14 00 00.1	
	comp=E,4.5nm,0.3s,baz=183,slow=25,SNR=7.1						
ILAR				LR	LR	14 00 35.9	
	comp=E,86nm,19.6s,baz=172,slow=38						
ILAR	Eielson Array	3.55	0	Pn	Pn	13 59 01.4	+1.0
M19K	Big River Lodg	3.62	284	Pn	Pn	13 59 01.7	+0.3
M19K				IAML		14 00 02.4	
	comp=E,38nm,1.1s						
M19K				IAML		14 00 09.2	
	comp=N,43nm,0.5s						
J26L	Joseph Creek	3.63	24	P	Pn	13 59 02.9	+1.3
	baz=207,SNR=13						
J26L	Joseph Creek	3.63	24		Pn	13 59 03.7	+2.1
CHUM	Lake Minchumin	3.64	319	P	Pn	13 59 03.1	+1.5
	baz=135,SNR=14						
CHUM	Lake Minchumin	3.64	319		Pn	13 59 03.4	+1.8
COLA	College	3.68	354	P	Pn	13 59 03.2	+1.1
	baz=173						
COLA	College	3.68	354		Pn	13 59 04.4	+2.3
TCOL	CIGO, UAF Yank	3.68	354	P	Pn	13 59 04.0	+1.8
	baz=173,SNR=18						
TCOL	CIGO, UAF Yank	3.68	354		Pn	13 59 04.0	+1.8
N19K	Bonanza Creek	3.69	267	P	Pn	13 59 02.6	+0.2
	baz=80						
N19K	Bonanza Creek	3.69	267		Pn	13 59 02.9	+0.4
O19K	Port Alsworth	3.77	257	P	Pn	13 59 03.5	+0.1
	baz=71						
MDM	Murphy Dome	3.79	352		Pn	13 59 05.5	+1.8
MDM	Murphy Dome	3.79	352	IAML		13 59 57.5	
	comp=N,35nm,0.8s						
MDM				IAML		14 00 08.1	
	comp=E,40nm,0.7s						
BCPM	Bancas Point	3.83	106	Pn	Pn	13 59 03.7	-0.5
L19K	White Mountain	3.88	288	P	Pn	13 59 05.5	+0.5
	baz=101,SNR=11						
L19K	White Mountain	3.88	288		Pn	13 59 06.0	+1.0
L19K	White Mountain	3.88	288	IAML		14 00 23.7	
	comp=E,36nm,1.4s						
L19K				IAML		14 00 24.4	
	comp=N,39nm,2.1s						
PNL	Peninsula	4.05	109		Pn	13 59 08.6	+1.3
Q19K	Cape Douglas,	4.07	238	Pn	Pn	13 59 08.8	+1.2
I23K	Minto, Yukon-K	4.08	346	P	Pn	13 59 09.3	+1.7
	baz=164,SNR=15						
I23K	Minto, Yukon-K	4.08	346		Pn	13 59 09.4	+1.7
I23K	Minto, Yukon-K	4.08	346	IAML		14 00 16.4	
	comp=E,35nm,0.6s						
I23K				IAML		14 00 18.4	
	comp=N,37nm,0.8s						
PS07	TAPS Pump Stn7	4.14	352		Pn	13 59 10.7	+2.3
MLY	Manley	4.18	337	P	Pn	13 59 10.7	+1.6
	baz=154,SNR=27						
MLY	Manley	4.18	337		Pn	13 59 11.0	+1.9
MLY	Manley	4.18	337	IAML		14 00 06.4	
	comp=N,32nm,0.5s						
MLY				IAML		14 00 06.9	
	comp=E,30nm,0.6s						
SVW2	Sparrevohn	4.18	272		Pn	13 59 09.3	+0.2
O18K	Koktuh Hills	4.31	255		Pn	13 59 10.4	-0.4
O18K	Koktuh Hills	4.31	255	IAML		14 00 08.5	
	comp=E,33nm,3.1s						
O18K				IAML		14 00 32.7	
	comp=N,32nm,2.4s						
J20K	Nowinta River	4.44	315	P	Pn	13 59 13.8	+1.3
	baz=129,SNR=19						
J20K	Nowinta River	4.44	315		Pn	13 59 13.9	+1.3
J20K	Nowinta River	4.44	315	IAML		14 00 12.8	
	comp=E,38nm,0.6s						
KDAK	Kodiak Island	4.50	222	Pn	Pn	13 59 13.4	+0.1
DAWY	Dawson	4.50	47	P	Pn	13 59 15.4	+2.0
	baz=234,SNR=5.5						
DAWY	Dawson	4.50	47		Pn	13 59 15.7	+2.2
I21K	Tanana	4.57	332	P	Pn	13 59 16.0	+1.7
	baz=148,SNR=16						
I21K	Tanana	4.57	332		Pn	13 59 16.1	+1.7
I21K	Tanana	4.57	332	IAML		14 00 35.6	
	comp=N,23nm,2.4s						
I21K				IAML		14 01 29.8	
	comp=E,25nm,4.3s						
TT01	Tatalina	4.59	295		Pn	13 59 14.9	+0.3
TTA	Tatalina	4.59	296	P	Pn	13 59 14.6	-0.1
	baz=108						
TTA	Tatalina	4.59	296		Pn	13 59 14.9	+0.2
TTA	Tatalina	4.59	296	IAML		13 59 49.3	
	comp=N,23nm,4.1s						
H24K	Noodor Dome	4.64	355		Pn	13 59 18.1	+2.7
H24K	Noodor Dome	4.64	355	IAML		14 00 35.1	
	comp=N,20nm,2.6s						
M30M	Minto, Yukon	4.99	70		Pn	13 59 21.6	+1.5
H21K	Melozitna Rive	5.16	332		Pn	13 59 24.0	+1.5
H21K	Melozitna Rive	5.16	332	IAML		14 00 28.0	
	comp=N,16nm,3.9s						
H21K				IAML		14 00 47.6	
	comp=E,13nm,0.8s						
OHAK	Old Harbor	5.17	222	Pn	Pn	13 59 22.4	-0.2
IM03		5.65	330		Pn	13 59 30.9	+1.8
IMAR	Indian Mountai	5.65	330		Pn	13 59 30.4	+1.2
COLD	Coldfoot	6.18	348	P	Pn	13 59 37.9	+1.4
	baz=165						
COLD	Coldfoot	6.18	348		Pn	13 59 38.7	+2.1
BM03	Burnt Mountain	6.29	8		Pn	13 59 40.0	+1.9
BMAR	Burnt Mountain	6.31	8	Pn	Pn	13 59 39.9	+1.7
TOLK	Toolik Lake Re	7.52	353	Pn	Pn	13 59 55.7	+0.8
INK	Inuvik	9.10	33	Pn	Pn	14 00 19.2	+2.8
	comp=E,0.1nm,0.3s,baz=220,slow=16,SNR=6.8						
FINES	FINESS Array B	57.53	4	P	P	14 07 52.8	-1.1
	comp=E,6.6nm,1.1s,baz=353,slow=9.6,SNR=5.1						
KURK	Kurchatov	62.59	329	P	P	14 08 28.8	+0.1
KURBB	Kurchatov Arra	62.70	329	P	P	14 08 28.8	-0.6
	comp=E,0.2nm,0.5s,baz=28,slow=7.2,SNR=1.6						
MKAR	Makanchi Array	65.23	325	P	P	14 08 44.5	-1.8
	comp=E,0.2nm,0.4s,baz=28,slow=6.5,SNR=5.1						
AKASG	Malin Array Be	68.38	3	P	P	14 09 05.8	-0.3
	comp=E,0.2nm,0.3s,baz=358,slow=6.6,SNR=2.9						
ESDC	Sonseca Array	75.02	29	P	P	14 09 46.7	+0.3
	comp=E,0.2nm,0.3s,baz=318,slow=4.8,SNR=1.4						

NEIC ***30*** *14:05:39.9±0.9, 2°.05S±0°.06×125°.36E±0°.07, h10^{km}±1^{km}, mb4.3/18, Error ellipse: s-maj=15.0km s-min=4.2km az=128.0*

DJA ***30*** *14:05:40.9±0.5, 2°S±2°×12°5E±°, h21^{km}±4^{km}, M4.2/25, mb4.4/13, mB4.9/7, MLv4.1/25, Mw(mB)4.2/7, MwMwp4.7/1, Mwp5.0/1*

IDC ***30*** *14:05:43.5±4.2, 2°.20S×125°.16E, h36^{km}±38^{km}, mb4.0/6, mb1 4.0/10, mb1mx3.8/47, mbtmp4.1/10, ML3.9/4, MS2.7/2, Ms1 2.7/2, ms1mx2.3/39, Error ellipse: s-maj=25.8km s-min=18.7km az=77.0*

ISC 30 14:05:41.2±0.5**, 2°.12S**±0°.04×**125°.10E**±0°.04**, h26**^{km}**, n55, σ1^{s}.28**/65**, mb4.4**/11**, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANI	Sanana	0.89	85	P	Pn	14 05 56.4	-1.7
SANI				S	Sb	14 06 07.1	-2.4
LBMI	Labuha	2.82	58	P	Pn	14 06 24.7	+0.1
LBMI				S	Sn	14 06 57.4	-0.3
KMSI	Cibinong	2.90	337	P	Pn	14 06 26.7	+0.9
KMSI				S	Sn	14 07 01.8	+2.0
GTOI	Gorontalo	3.44	323	P	Pb	14 06 38.2	-3.4
GTOI				S	Sb	14 07 19.2	-3.8
AAI	Ambon	3.46	117	P	Pn	14 06 33.2	-0.2
AAI				S	Sn	14 07 15.1	+1.5
APSI	Ampana	3.65	289	P	Pn	14 06 37.2	+1.1
APSI				S	Sn	14 07 19.0	+0.6
TNTI	Ternate	3.66	38	P	Pn	14 06 36.3	+0.1
TNTI				S	Sn	14 07 18.0	-0.5
TNTI	Ternate	3.66	38	Pn	Pn	14 06 29.6	-6.6
MSAI	Masohi	4.01	108	P	Pn	14 06 39.5	-1.6
MSAI				S	Sn	14 07 29.0	+1.7
MRSI	Marisa	4.08	309	P	Pn	14 06 43.6	+1.6
MRSI				S	Sn	14 07 28.7	-0.2

TTSI	Tana Toraja	5.36	260	P	Pn	14 06 59.1	-0.4
	0.2nm926nm28nm,0.7s						
TOLI2	Tolitoli	5.38	307		Pn	14 07 02.4	+2.5
BNSI	Bone	5.48	245	P	Pn	14 07 00.3	-0.9
	0.1nm20nm,0.7s						
SPSI	Sidrap Palu	5.63	251	P	Pn	14 07 04.2	+0.9
	0.4nm2µm72nm,0.5s						
SPSI				S	Sn	14 08 06.5	-0.7
	0.4nm2µm72nm,0.5s						
MPSI	Mapaga	5.75	295	P	Pn	14 07 06.1	+1.2
	0.1nm2µm14nm,0.8s						
BKSI	Bulukumba	5.90	237	P	Pn	14 07 08.2	+1.2
	0.3nm1µm67nm,0.7s						
KAPI	Kappang	6.06	242	Pn	Pn	14 07 10.4	+1.1
	7.3nm,0.3s,baz=54,slow=6.1,SNR=18						
KAPI				LR	LR	14 09 56.7	
	comp=Z,42nm,20.1s,baz=124,slow=42						
BSSI	Bau Bau, Buton	6.09	229	P	Pn	14 07 10.4	+0.8
	0.2nm3µm1µm29nm,0.7s						
SWI	Sorong	6.28	79	P	Pn	14 07 12.4	+0.1
	0.1nm22nm,0.7s						
SIJI	Sorong	6.29	79	Pn	Pn	14 07 13.8	+1.5
	1.2nm,0.3s,baz=289,slow=23,SNR=9.5						
SIJI				Sn	Sn	14 08 23.4	-0.1
	2.1nm,0.3s,baz=114,slow=20,SNR=9.8						
MMRI	Maumere	7.07	204	P	Pn	14 07 23.1	0.0
	0.4nm29nm,0.8s						
FAKI	Fak Fak	7.19	96	Pn	Pn	14 07 25.9	+1.3
EDFI	Ende, Flores	7.41	207	P	Pn	14 07 28.2	+0.4
	0.0nm11nm,0.8s						
BATI	Baumata	8.16	190	LR	LR	14 10 49.8	
	comp=Z,91nm,19.4s,baz=145,slow=38						
KNRA	Kununurra	13.95	165	Pn	Pn	14 08 57.5	+0.2
FITZ	Fitzroy Crossi	15.89	178	Pn	P	14 09 25.1	-1.6
	0.2nm,0.3s,baz=15,slow=7.4,SNR=1.7						
WB0	Warramunga Arr	19.75	153	P	P	14 10 08.7	-0.6
WB0				IAmb	IAmb	14 10 21.3	
	comp=Z,7.1nm,0.7s						
WRAB	Tennant Creek	19.88	154	P	P	14 10 10.3	-0.4
WRAB				IAmb	IAmb	14 10 33.5	
	comp=Z,10nm,1.1s						
WRA	Warramunga Arr	19.88	154	P	Pn	14 10 10.7	-1.8
	comp=Z,0.6nm,0.3s,baz=337,slow=12,SNR=42						
WRA	Warramunga Arr	19.88	154	P	P	14 10 09.7	-1.0
WB2	Warramunga Arr	19.89	154	P	P	14 10 10.2	-0.6
WB2				IAmb	IAmb	14 10 23.7	
	comp=Z,5.7nm,0.7s						
WR0	Warramunga Arr	19.99	153	P	P	14 10 11.4	-0.5
WR0				IAmb	IAmb	14 10 20.7	
	comp=Z,7.0nm,0.8s						
COEN	Coen	21.39	124	P	P	14 10 26.9	-0.2
AS31	Alice Springs	23.05	159	P	P	14 10 44.7	-0.1
ASAR	Alice Springs	23.05	159	P	P	14 10 44.9	0.0
	comp=Z,3.5nm,0.8s,baz=332,slow=8.3,SNR=40						
ASAR				PcP	PcP	14 14 34.2	+0.4
	comp=Z,0.3nm,0.6s,baz=348,slow=1.3,SNR=4.9						
ASAR	Alice Springs	23.05	159	P	P	14 10 44.6	-0.2
TPUB	Ta-pu	25.64	350	P	P	14 11 09.8	+0.9
STKA	Stephens Creek	33.43	154	P	P	14 12 18.5	+0.5
KSRS	Korea Array	39.46	4	P	P	14 13 10.7	+1.3
	comp=Z,0.9nm,0.5s,baz=180,slow=9.3,SNR=6.6						
USA0B	Ussuriysk Arra	46.52	7	P	P	14 14 05.5	-1.0
USA0B				IAmb	IAmb	14 14 13.0	
	comp=Z,5.4nm,0.9s						
USRK	Ussuriysk Ar.	46.52	7	P	P	14 14 07.3	+0.9
	comp=Z,0.6nm,0.4s,baz=165,slow=5.9,SNR=4.5						
USRK	Ussuriysk Ar.	46.52	7	P	P	14 14 06.0	-0.5
ULN	Ulaanbaatar	52.22	345	P	P	14 14 51.2	+1.0
ULN				IAmb	IAmb	14 14 53.6	
	comp=Z,4.6nm,0.8s						
SONM	Songino Array	52.37	344	P	P	14 14 53.1	+1.9
	comp=Z,2.6nm,0.7s,baz=162,slow=8.0,SNR=15						
SONM	Songino Array	52.37	344	P	P	14 14 51.9	+0.7
SONM				IAmb	IAmb	14 14 54.6	
	comp=Z,3.6nm,0.8s						
BKZ	Black Stump Fm	59.48	135	P	P	14 15 41.4	-0.9
MK31	Makanchi Array	61.51	328	P	P	14 15 57.0	+1.1
MK31				IAmb	IAmb	14 15 59.0	
	comp=Z,2.8nm,0.9s						
MKAR	Makanchi Array	61.51	328	P	P	14 15 57.5	+1.6
	comp=Z,2.5nm,0.6s,baz=126,slow=8.3,SNR=29						
MKAR	Makanchi Array	61.51	328	P	P	14 15 56.9	+1.0
MAKZ	Makanchi	61.69	328	P	P	14 15 58.1	+1.0
BOOM	Boomskoye usch	62.70	321	P	P	14 16 05.3	+1.1
BOOM				IAmb	IAmb	14 16 07.6	
	comp=Z,1.5nm,0.8s						
ZALV	Zalesovo Beam	65.10	335	P	P	14 16 20.9	+1.4
	comp=Z,1.3nm,0.4s,baz=116,slow=5.1,SNR=11						
KURK	Kurchatov	65.85	330	P	P	14 16 26.1	+1.7
TIXI	Tiksi	73.68	1	P	P	14 17 13.2	+1.0
TIXI				IAmb	IAmb	14 17 14.0	
	comp=Z,4.2nm,1.0s						
ABKAR	Akbulak array	75.68	322	P	P	14 17 25.2	+0.9

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*TRN **30** 14:06:16.4, 10°.62N×62°.57W, h92^{km}, MD3.4*
*FUNV **30** 14:06:18.6, 10°.32N×62°.55W, h30^{km}, MW3.1*
ISC 30 14:06:13.6±1.3**, 10°.49N**±0°.04×**62°.54W**±0°.03**,**
h114^{km}±12^{km}**, n29, σ2^{s}.18**/52**, 2C, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRUV	Carupano	0.71	285	*e*P	Pn	14 06 32.9	+0.5
CRUV				*e*S	Sn	14 06 42.1	-4.5
TRN	Trinidad (W)	1.13	82⇑	*i*P	Pn	14 06 38.7	+2.3
TRN				*e*S	Sn	14 06 53.5	-0.3
TBH	Brigand Hill	1.45	90	*e*P	Pn	14 06 41.8	+1.8
TBH				*e*S	Sn	14 07 01.5	+1.4
CUMV	Cumana_UDO	1.63	268	*e*P	Pn	14 06 45.1	+2.9
CUMV				*e*S	Sn	14 07 04.5	+0.7
GRFF	Grenada Fort F	1.74	27	*e*P	Pn	14 06 43.7	+0.2
GRFF				*e*S	Sn	14 07 04.1	-2.3
GRGR	Grenville	1.85	28	*e*P	Pn	14 06 45.2	+0.3
GRGR				*e*S	Sn	14 07 07.3	-1.5
BOT	Bacolet	1.91	69	*e*P	Pn	14 06 48.5	+2.8
BOT				*e*S	Sn	14 07 10.7	+0.5
GRHS	Sauteurs	1.94	27	*e*P	Pn	14 06 47.4	+1.4
GRHS				*e*S	Sn	14 07 09.3	-1.4
PCRV	Puerto La Cruz	2.08	262⇑	*e*P	Pn	14 06 50.0	+2.1
PCRV				*e*S	Sn	14 07 13.6	-0.5
TOSP	Speyside	2.13	68	*e*P	Pn	14 06 49.9	+1.5
TOSP				*e*S	Sn	14 07 14.9	-0.1
GCMP	Grenada, Carri	2.27	29	*e*P	Pn	14 06 50.9	+0.7
GCMP				*e*S	Sn	14 07 16.9	-1.2
PRGV	PARIAGUAN	2.69	231	*e*P	Pn	14 06 58.0	+2.3
PRGV				*e*S	Sn	14 07 26.8	-1.3
SVB	Belmont	3.04	24	*e*P	Pn	14 07 02.1	+1.9
SVB				*e*S	Sn	14 07 34.6	-1.6
SVV	Soufriere Volc	3.10	25	*e*S	Sn	14 07 36.0	-1.6
MCLT	Moule a Chique	3.56	26	*e*	Pn	14 07 06.1	-1.1
MCLT				*e*S	Sn	14 07 46.9	-1.8
BIRV	Birongo	3.67	270	*e*P	Pn	14 07 11.7	+3.1
BIRV				*e*S	Sn	14 07 51.2	+0.1
SLBI	Saint Lucia, B	3.83	23	*e*P	Pn	14 07 12.2	+1.5
SLBI				*e*S	Sn	14 07 52.5	-2.6
BIM	Bigot	4.25	20	*e*P	Pn	14 07 17.3	+0.8
BIM	Bigot	4.25	20	*e*S	Sn	14 08 02.5	-2.8
MPOM	Morne Pois Mar	4.26	23	*e*P	Pn	14 07 18.4	+1.9
MPOM				*e*S	Sn	14 08 02.5	-2.9
LUEV	Luepa	4.74	167	*e*P	Pn	14 07 24.8	+1.6
LUEV				*e*S	Sn	14 08 13.6	-3.6
CACV	CAICARA DEL OR	4.90	234	*e*P	Pn	14 07 22.0	-3.2
CACV				*e*S	Sn	14 08 09.0	-12
TURV	Turiamo	5.21	270	*e*P	Pn	14 07 33.0	+3.7
TURV				*e*S	Sn	14 08 27.6	-0.7
BAUV	El Baul	5.63	255	*e*P	Pn	14 07 37.0	+1.9
BAUV	El Baul	5.63	255	*e*S	Sn	14 08 38.5	-0.1
BAUV	El Baul	5.63	255	*e*P	Pn	14 07 36.5	+1.4
BAUV				*e*S	Sn	14 08 36.5	-2.1
MAPV	Macapo	5.86	264	*e*P	Pn	14 07 39.7	+1.5
MAPV				*e*S	Sn	14 08 42.6	-1.5
PAYV	Puerto Ayacuch	7.14	226	*e*P	Pn	14 07 57.4	+1.8
PAYV				*e*S	Sn	14 09 10.3	-4.9
MONV	Montecano	7.43	282	*e*P	Pn	14 08 03.5	+4.0
MONV				*e*S	Sn	14 09 20.9	-1.4

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*JMA **30** 14:08:35.4±0.2, 33°.89N×137°.66E, h365^{km}, M3.0*
*IDC **30** 14:08:37.7±0.9, 34°.00N×137°.58E, h333^{km}±12^{km}, mb2.8/3, mb1 3.1/10, mb1mx2.9/52, mbtmp3.7/10, Error ellipse: s-maj=23.4km s-min=15.6km az=92.0*
ISC 30 14:08:36.6±0.8**, 33°.90N**±0°.07×**137°.58E**±0°.07**, h339**^{km}±8^{km}**, n24, σ2^{s}.53**/31**, mb3.0**/3**, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWY	Kouya	1.68	282	P	Pn	14 09 26.7	+1.9
JYTA	Yamagatataniai	1.83	338	P	Pn	14 09 27.2	+1.6
JOD2	Odawara 2	1.84	42	P	Pn	14 09 27.7	+1.9
JHJ	Hachijo jima 2	1.99	112	P	Pn	14 09 27.8	+0.9
	10.0nm,0.3s,baz=349,slow=22,SNR=12						
JHJ				S	S	14 10 14.8	+7.7
	13nm,0.3s,baz=80,slow=24,SNR=1.8						
JWT	Wachi	2.27	308	P	Pn	14 09 30.4	+1.5
JRY	Ryogami san	2.38	27	P	Pn	14 09 31.8	+2.1
JKG	Kaga	2.59	337	P	Pn	14 09 32.7	+1.3
JAI	Aioi	2.61	269	P	Pn	14 09 33.2	+1.5
JAI				*e*S	S	14 10 14.4	-1.5
MAT	Matsushiro	2.69	11	P	Pn	14 09 33.5	+1.2
MAT				S	S	14 10 16.5	-0.5
MAT	Matsushiro	2.69	11	P	Pn	14 09 33.5	+1.2
MAT				*e*S	S	14 10 16.6	-0.5
MJAR	Matsushiro Arr	2.69	11	P	Pn	14 09 32.0	-0.3
	1.3nm,0.3s,baz=183,slow=9.3,SNR=91						
MJAR				S	S	14 10 16.5	-0.6
	0.1nm,0.3s,baz=184,slow=15,SNR=7.7						
BSO1	Boso 1	2.91	74	P	Pn	14 09 34.5	+0.8
JAG	Ashikaga	2.95	31	P	Pn	14 09 35.0	+0.4
JAG				S	S	14 10 18.0	-3.2
JMN	Monobe	3.09	268	P	Pn	14 09 37.8	+1.8
JHS	Saijyo	3.85	288	P	Pn	14 09 45.3	+1.9
JNU	Nakatsue	5.66	264	P	Pn	14 10 05.2	+2.0
	2.5nm,0.3s,baz=191,slow=2.4,SNR=6.3						
JCJ	Chichijima	7.85	148	P	Pn	14 10 27.7	-1.3
	3.2nm,0.3s,baz=5.7,slow=19,SNR=11						
JCJ				S	S	14 11 53.2	-7.2
	13nm,0.3s,baz=283,slow=22,SNR=19						
KSRS	Korea Array	8.62	297	P	Pn	14 10 37.9	-0.1
	0.6nm,0.3s,baz=108,slow=12,SNR=16						
ASAJ	Asahikawa	10.92	19	P	Pn	14 11 05.5	0.0
	1.2nm,0.3s,baz=235,slow=11,SNR=14						
USRK	Ussuriysk Ar.	11.17	339	P	Pn	14 11 07.8	-0.6
	baz=146,slow=12,SNR=2.0						
KLR	Kul'dur	15.92	346	P	P	14 12 01.7	+0.1
	0.4nm,0.3s,baz=162,slow=9.9,SNR=7.9						
WRA	Warramunga Arr	53.63	184	P	P	14 17 25.9	+1.7
	0.5nm,0.3s,baz=360,slow=7.6,SNR=31						
ILAR	Eielson Array	53.80	31	P	P	14 17 26.0	+1.1
	0.3nm,0.9s,baz=246,slow=7.6,SNR=1.5						
ASAR	Alice Springs	57.35	184	P	P	14 17 53.0	+2.6
	0.2nm,0.3s,baz=358,slow=6.0,SNR=14						

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*TAP **30** 14:11:49.5, 23°.84N×122°.68E, h62^{km}±1^{km}, ML2.6, D*
*JMA **30** 14:11:50.2±0.2, 23°.99N×122°.58E, h15^{km}, M1.9*
ISC 30 14:11:48.1±1.1**, 23°.87N**±0°.03×**122°.62E**±0°.02**, h13**^{km}±9^{km}**,**
n62, σ0^{s}.93/118**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.65	27	P	Pn	14 12 01.4	-1.6
JYNG				S	Sb	14 12 08.8	-1.6
YOJ	Yonaguni jima	0.69	31	*e*P	Pn	14 12 04.1	+0.5
	baz=25						
YOJ				*e*S	Sn	14 12 14.6	+0.4
	baz=25						
ETL	Fush Village	0.95	288	*e*P	Pn	14 12 07.8	+0.6
	baz=280						
ETL				*e*S	Sn	14 12 21.1	+0.4
	baz=280						
TWD	Chiawan	0.96	283	*e*P	Pn	14 12 07.7	+0.6
	baz=283						
TWD				*e*S	Sn	14 12 21.0	+0.3
	baz=283						
EWUT	Wuta	0.96	307	*e*P	Pn	14 12 07.8	+0.6
	baz=305						
EWUT				*e*S	Sn	14 12 21.9	+1.2
	baz=305						
ENA	Nanau	0.97	305	*e*P	Pn	14 12 07.7	+0.3
	baz=304						
ENA				*e*S	Sn	14 12 22.1	+1.0
	baz=304						
NACB	Ninganchiao	0.98	288	*e*P	Pn	14 12 07.3	-0.3
	baz=280						
NACB				*e*S	Sn	14 12 21.9	+0.6
	baz=280						
TWC	Suao	1.02	317	*e*P	Pn	14 12 08.9	+0.9
	baz=315						
TWC				*e*S	Sn	14 12 23.1	+0.9
	baz=315						
ESL	Shilin	1.08	267	*e*P	Pb	14 12 09.1	+0.4
	baz=262						
ESL				*e*S	Sb	14 12 23.0	+0.3
	baz=262						
ETLH	Xiulin Townshi	1.09	288	*e*P	Pn	14 12 09.3	+0.2
	baz=283						
ETLH				*e*S	Sn	14 12 24.8	+0.6
	baz=283						
EGFH	Guangfu	1.11	260	*e*P	Pn	14 12 09.9	+0.6
	baz=254						
EGFH				*e*S	Sb	14 12 24.1	+0.7
	baz=254						
IRIF	Iriomote-Funau	1.12	65	P	Pn	14 12 11.0	+1.6
IRIF				*e*S	Sn	14 12 26.4	+1.7
NDS	Dongshan	1.12	313	*e*P	Pg	14 12 10.5	+0.9
	baz=311						
NDS				*e*S	Sn	14 12 26.1	+1.3
	baz=311						
HGSD	Ruisui	1.16	251	*e*P	Pn	14 12 10.1	+0.1
	baz=253						
HGSD				*e*S	Sb	14 12 25.1	+0.3
	baz=253						
TWE	Neicheng	1.21	315	*e*P	Pg	14 12 11.4	0.0
	baz=313						
TWE				*e*S	Sn	14 12 27.9	+0.9
	baz=313						
ENTT	Nioudou	1.23	309	*e*P	Pg	14 12 11.5	-0.2
	baz=299						
ENTT				*e*S	Sg	14 12 28.2	+0.5
	baz=299						
EHY	Hungye	1.24	253	*e*P	Pn	14 12 10.9	-0.2
	baz=254						
EHY				*e*S	Sb	14 12 26.9	-0.3
	baz=254						
NDT	Datong Townshi	1.24	306	*e*P	Pg	14 12 12.3	+0.3
	baz=297						
NDT				*e*S	Sg	14 12 28.8	+0.6
	baz=297						
NNSB	Datong	1.26	297	*e*P	Pb	14 12 11.6	-0.1
	baz=295						
NNSB				*e*S	Sn	14 12 28.1	-0.2
	baz=295						
WHF	Hehuan Shan	1.27	283	*e*P	Pb	14 12 12.2	+0.2
	baz=282						
WHF				*e*S	Sb	14 12 28.4	0.0
	baz=282						
NNS	Nan Shan	1.27	297	*e*P	Pg	14 12 12.1	-0.5
	baz=296						
NNS				*e*S	Sg	14 12 29.1	0.0
	baz=296						
EYUL	Yuli	1.30	247	*e*S	Sn	14 12 28.3	-0.8
	baz=243						
YULB	Yu-li	1.30	249	*e*P	Pn	14 12 11.9	0.0
	baz=245						
YULB				*e*S	Sn	14 12 28.4	-0.7
	baz=245						
FUSS	Fushou	1.31	287	*e*P	Pb	14 12 12.8	+0.1
	baz=286						
FUSS				*e*S	Sg	14 12 30.2	-0.1
	baz=286						
TIPB	Shuangxi	1.31	327	*e*P	Pg	14 12 12.6	-0.7
	baz=325						
TIPB				*e*S	Sg	14 12 29.2	-1.2
	baz=325						
OWD	Renai	1.32	274	*e*P	Pb	14 12 13.2	+0.4
	baz=274						
OWD				*e*S	Sb	14 12 29.5	-0.2
	baz=274						
JKRS	Kuro-shima	1.33	74	P	Pg	14 12 15.1	+1.5
JKRS				*e*S	Sg	14 12 32.9	+2.1
CHGB	Renai	1.33	279	*e*P	Pb	14 12 13.4	+0.3
	baz=278						
CHGB				*e*S	Sb	14 12 30.2	+0.1
	baz=278						
NWLT	Wulai	1.36	312	*e*P	Pg	14 12 13.9	-0.3
	baz=302						
NWLT				*e*S	Sg	14 12 31.5	-0.4
	baz=302						
TWT	Tachien	1.37	287	*e*P	Pg	14 12 14.3	-0.2
	baz=285						
TWT				*e*S	Sb	14 12 31.7	+0.5
	baz=285						
CHKT	Chengkung	1.38	237	*e*P	Pn	14 12 14.0	+1.0
	baz=232						
CHKT				*e*S	Sn	14 12 28.6	-2.6
	baz=232						
FULB	Fuli	1.38	241	*e*S	Sn	14 12 30.2	-1.1
	baz=236						
YHNB	Yeheng	1.39	305	*e*P	Pb	14 12 13.7	-0.2
	baz=295						
YHNB				*e*S	Sg	14 12 32.2	-0.6
	baz=295						
TDCB	Techi	1.39	286	*e*P	Pb	14 12 14.1	+0.1
	baz=286						
TDCB				*e*S	Sn	14 12 31.5	0.0
	baz=286						
NSK	Sanguang	1.40	305	*e*P	Pb	14 12 13.7	-0.5
	baz=295						
NSK				*e*S	Sg	14 12 32.3	-0.9
	baz=295						
NWF	Wu-fen Shan	1.42	328	*e*P	Pg	14 12 14.9	-0.4
	baz=326						
NWF				*e*S	Sg	14 12 33.2	-0.6
	baz=326						
JIJ	Ishigaki jima	1.48	70	P	Pg	14 12 16.2	-0.3
JIJ				*e*S	Sg	14 12 35.4	-0.4
EDH	Donghe	1.50	234	*e*P	Pn	14 12 13.6	-1.0
	baz=231						
EDH				*e*S	Sn	14 12 31.4	-2.7
	baz=231						
SSLB	Suanglung	1.52	267	*e*P	Pn	14 12 15.7	+0.6
	baz=260						
SSLB				*e*S	Sn	14 12 34.6	-0.2
	baz=260						
WCS	Beigang Elemen	1.57	277	*e*P	Pb	14 12 17.2	+0.2
	baz=270						
WCS				*e*S	Sn	14 12 36.3	+0.5
	baz=270						
SMLT	Sun Moon Lake	1.57	271	*e*P	Pb	14 12 17.4	+0.3
	baz=271						
SMLT				*e*S	Sn	14 12 35.5	-0.5
	baz=271						
WHP	Taichung City	1.58	285	*e*P	Pg	14 12 18.2	-0.2
	baz=285						
WHP				*e*S	Sn	14 12 36.6	+0.3
	baz=285						
LDUT	Ludao	1.59	222	*e*S	Sn	14 12 33.7	-2.6
	baz=224						
YM01	YM01	1.59	323	*e*P	Pb	14 12 16.1	-1.2
	baz=332						
YM01				*e*S	Sb	14 12 35.6	-1.8
	baz=332						
TYC	Yuchr	1.61	272	*e*P	Pn	14 12 16.8	+0.6
	baz=271						
TYC				*e*S	Sn	14 12 36.8	-0.1
	baz=271						
ELDTW	Lidau	1.61	246	*e*P	Pn	14 12 16.7	+0.3
	baz=247						
ELDTW				*e*S	Sn	14 12 36.1	-1.0
	baz=247						
ANP	Anpu	1.65	323	*e*S	Sb	14 12 38.3	-0.8
	baz=331						
LIOB	Emei	1.65	298	*e*P	Pb	14 12 18.2	-0.2
	baz=297						
LIOB				*e*S	Sb	14 12 38.5	-0.7
	baz=297						
ALS	Alishan	1.70	258	*e*P	Pb	14 12 19.9	+0.6
	baz=265						
ALS				*e*S	Sn	14 12 38.3	-1.1
	baz=265						
JISG	Ishigakijimahi	1.71	65	P	Pb	14 12 18.3	-1.0
JISG				S	Sb	14 12 39.1	-1.5
WJS	Zhushan	1.73	269	*e*P	Pg	14 12 21.2	-0.1
	baz=264						
WJS				*e*S	Sb	14 12 43.2	+1.9
	baz=264						
CHN5	Tsauling	1.80	262	*e*P	Pb	14 12 20.6	-0.3
	baz=262						
CHN5				*e*S	Sn	14 12 42.2	+0.7
	baz=262						
STYH	Taoyuan	1.83	248	*e*P	Pn	14 12 19.6	+0.5
	baz=245						
STYH				*e*S	Sn	14 12 41.6	-0.5
	baz=245						
TPUB	Ta-pu	1.91	253	*e*P	Pn	14 12 21.2	+0.9
	baz=251						
TPUB				*e*S	Sn	14 12 45.2	+0.9
	baz=251						
CHN4	Tsaushan	1.93	255	*e*P	Pb	14 12 22.4	-0.6
	baz=250						
CHN4				*e*S	Sn	14 12 46.3	+1.7
	baz=250						
WTP	Ta-pu	1.94	252	*e*P	Pn	14 12 21.9	+1.1
	baz=249						
WTP				*e*S	Sn	14 12 46.4	+1.4
	baz=249						
ECL	Taimali	1.98	231	*e*P	Pn	14 12 21.6	+0.3
	baz=240						
ECL				*e*S	Sn	14 12 44.2	-1.9
	baz=240						
SLGT	Liugui	2.01	245	*e*P	Pn	14 12 23.0	+1.3
	baz=241						
SLGT				*e*S	Sn	14 12 47.0	+0.3
	baz=241						
SGST	Jiashian	2.02	248	*e*P	Pn	14 12 23.2	+1.3
	baz=243						
SGST				*e*S	Sn	14 12 48.5	+1.4
	baz=243						
CHN1	Nanshi	2.03	251	*e*P	Pn	14 12 23.9	+1.8
	baz=251						
TWK	Hsinying	2.04	253	*e*P	Pn	14 12 22.8	+0.6
	baz=254						
MASBT	Mashibuluo	2.21	236	*e*P	Pn	14 12 24.9	+0.4
	baz=236						
MASBT				*e*S	Sn	14 12 50.9	-0.8
	baz=236						

NOU 30 14:30:47.9, 15°.40S×167°.60E, h117^{km}**, MLv3.9**/4**,**
Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	Saraoutou	0.39	263	P	Pn	14 31 06.1	+1.2

MAN 30 14:42:36.5, 13°.83N×120°.46E, h77^{km}**, mb3.9, ML2.6,**
MS2.2, Mindoro

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*VAO **30** 14:45:21.9±0.3, 24°.24S×67°.11W, h159^{km}, mb5.2*
*MOS **30** 14:45:22.9±1.4, 24°.25S×67°.13W, h174^{km}, mb5.1/42, Error ellipse: s-maj=11.7km s-min=5.6km az=107.6*
*BJI **30** 14:45:23.0±0.0, 24°.30S×67°.00W, h160^{km}, mB5.1/4*
*IDC **30** 14:45:23.1±0.7, 24°.23S×66°.98W, h163^{km}±6^{km}, mb4.6/17, mb1 4.7/23, mb1mx4.7/27, mbtmp5.1/23, MS3.9/6, Ms1 3.9/6, ms1mx3.4/32, Error ellipse: s-maj=10.8km s-min=7.7km az=67.0*
*NEIC **30** 14:45:24.3±1.0, 24°.30S±0°.03×67°.2W±0°.1, h179^{km}±6^{km}, mb5.0/425, Md4.6(SJA), Mwr5.3(GUC), Error ellipse: s-maj=19.0km s-min=3.5km az=84.0*
*GUC **30** 14:45:24.3±0.7, 24°.31S×67°.46W, h208^{km}±11^{km}, ML5.5, MW5.3*
*SJA **30** 14:45:25.2±0.5, 24°.29S×67°.23W, h150^{km}, ML4.9, MW4.8*
*GCMT **30** 14:45:28.3±0.2, 24°.35S±0°.01×67°.24W±0°.01, h188^{km}±1^{km}, MW5.2/117, Moment Tensor Solution. s72,c87; s117,c176; Duration: 1^{s}.0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.81±.01; $M_{\theta\theta}$0.01±.02; $M_{\phi\phi}$0.80±.02; $M_{r\theta}$0.06±.01; $M_{\theta\phi}$-0.07±.02; $M_{\phi r}$-0.36±.02; Best double couple: $M_0$0.89100×10^{17} NP1:ϕ_s176.00000°, δ33.00000°, λ-87.00000°. NP2:ϕ_s353.00000°, δ57.00000°, λ-92.00000°. Principal axes: T 0.8920, Plg12.0000°, Azm85.0000°; N -0.0010, Plg1.0000°, Azm354.0000°; P -0.8910, Plg78.0000°, Azm258.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 30 14:45:22.8±0.5**, 24°.28S**±0°.03×**67°.13W**±0°.03**, h166**^{km}±4^{km}**,**
n950, σ1^{s}.22/987**, mb5.0**/246**, 56C-171D, Fault plane solution: NP1:**ϕ_s356.03595°**,** δ58.88594°**,** λ-88.78088°.
NP2:ϕ_s173.67772°**,** δ31.13554°**,** λ-92.01884°. **Principal**

axes: T Plg13.8779°, Azm85.1480°; N Plg1.0437°, Azm175.4059°; P Plg76.0814°, Azm269.6217°;

Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLA	**San Lorenzo**	**1.55**	**107⇑**	*i*P	**Pn**	**14 45 57.6**	**+3.4**
SLA	**San Lorenzo**	**1.55**	**107**	*e*P	**Pn**	**14 45 57.6**	**+3.4**
SLA				*e*S	**Sn**	**14 46 21.4**	**+2.9**
SLA				IAML		14 46 24.1	
	comp=Z,10µm,1.4s						
HJA	**Humahuaca**	**1.90**	**56**	*e*P	**Pn**	**14 46 01.8**	**+3.5**
HJA				IAML		14 46 34.0	
	comp=Z,599nm,0.7s						
FSA	**Cafayete**	**2.11**	**151**	*e*P	**Pn**	**14 46 02.7**	**+2.4**
FSA				*e*S	**Sn**	**14 46 31.1**	**+1.7**
LVC	**Limon Verde**	**2.33**	**315**	P	**Pn**	**14 46 05.4**	**+2.4**
	comp=Z,669nm,0.3s,baz=144,slow=5.8,SNR=4411						
LVC				S	**Sn**	**14 46 35.3**	**+1.2**
	comp=Z,1µm,0.3s,baz=341,slow=19,SNR=48						
LVC	**Limon Verde**	**2.33**	**315**	*e*P	**Pn**	**14 46 05.2**	**+2.1**
LVC				*e*S	**Sn**	**14 46 35.8**	**+1.7**
LVC	**Limon Verde**	**2.33**	**315**		**Pn**	**14 46 05.6**	**+2.5**
LVC	**Limon Verde**	**2.33**	**315**	*e*P	**Pn**	**14 46 05.5**	**+2.4**
LVC				*e*S	**Sn**	**14 46 37.5**	**+3.3**
LVC				IAML		14 46 41.4	
	comp=Z,3µm,0.5s						
PB15	**IPOC Station P**	**2.39**	**296**	*e*P	**Pn**	**14 46 05.5**	**+1.9**
PB15				*e*S	**Sn**	**14 46 36.6**	**+1.4**
PB15	**IPOC Station P**	**2.39**	**296**		**Pn**	**14 46 05.8**	**+2.2**
PB15	**IPOC Station P**	**2.39**	**296**	*e*P	**Pn**	**14 46 05.9**	**+2.2**
PB15				*e*S	**Sn**	**14 46 36.8**	**+1.6**
PB15				IAML		14 46 38.8	
	comp=Z,44µm,0.5s						
YJA	**Yavi**	**2.56**	**36**	*e*P	**Pn**	**14 46 09.1**	**+3.1**
YJA				*e*S	**Sn**	**14 46 42.4**	**+3.0**
YJA				IAML		14 46 45.2	
	comp=Z,172nm,0.6s						
PB06	**IPOC Station P**	**2.73**	**304⇑**	*e*P	**Pn**	**14 46 09.5**	**+1.9**
PB06				*e*S	**Sn**	**14 46 43.1**	**+0.7**
PB06				IAML		14 46 46.8	
	comp=E,18µm,0.2s						
PB06	**IPOC Station P**	**2.73**	**304**		**Pn**	**14 46 09.5**	**+1.9**
PB06	**IPOC Station P**	**2.73**	**304**	*e*P	**Pn**	**14 46 09.6**	**+2.0**
PB06				*e*S	**Sn**	**14 46 43.7**	**+1.3**
PB06				IAML		14 46 46.6	
	comp=Z,9µm,0.1s						
AHML	**Horco Molle**	**2.98**	**147**	*e*P	**Pn**	**14 46 12.5**	**+1.9**
AHML				*i* P	**Pn**	**14 46 12.6**	**+1.9**
AHML				*e*S	**Sn**	**14 46 48.7**	**+0.9**
AHML				IAML		14 46 52.2	
	comp=Z,865nm,1.2s						
PB14	**IPOC Station P**	**3.00**	**263**	*e*P	**Pn**	**14 46 11.8**	**+0.6**
PB14				*e*S	**Sn**	**14 46 47.5**	**-1.1**
PB14				IAML		14 46 54.6	
	comp=E,8µm,0.5s						
PB14	**IPOC Station P**	**3.00**	**263**		**Pn**	**14 46 11.8**	**+0.6**
AC02	**Maricunga**	**3.12**	**215**	*e*P	**Pn**	**14 46 14.3**	**+1.5**
AC02				IAML		14 47 12.6	
	comp=E,4µm,0.2s						
AC02	**Maricunga**	**3.12**	**215**		**Pn**	**14 46 14.3**	**+1.5**
AC02	**Maricunga**	**3.12**	**215**	*e*P	**Pn**	**14 46 14.4**	**+1.6**
AC02				*e*S	**Sn**	**14 46 56.2**	**+4.5**
AC02				IAML		14 47 01.9	
	comp=Z,1µm,1.0s						
PB10	**IPOC Station P**	**3.22**	**283**	*e*P	**Pn**	**14 46 14.1**	**+0.5**
PB10				*e*S	**Sn**	**14 46 51.3**	**-1.7**
PB10				IAML		14 46 58.1	
	comp=E,7µm,0.3s						
PB10	**IPOC Station P**	**3.22**	**283**		**Pn**	**14 46 14.6**	**+1.1**
PB10	**IPOC Station P**	**3.22**	**283**	*e*P	**Pn**	**14 46 14.7**	**+1.1**
PB10				*e*S	**Sn**	**14 46 53.0**	**-0.1**
PB10				IAML		14 46 59.9	
	comp=Z,5µm,0.4s						
PB03	**IPOC Station P**	**3.28**	**312⇑**	*e*P	**Pn**	**14 46 15.8**	**+1.4**
PB03				*e*S	**Sn**	**14 46 54.6**	**0.0**
PB03				IAML		14 46 55.9	
	comp=E,7µm,0.4s						
PB03	**IPOC Station P**	**3.28**	**312**	*e*P	**Pn**	**14 46 15.8**	**+1.4**
PB03				*e*S	**Sn**	**14 46 53.9**	**-0.7**
PB03				IAML		14 46 56.0	
	comp=Z,5µm,0.1s						
PB04	**IPOC Station P**	**3.38**	**304**	*e*P	**Pn**	**14 46 16.8**	**+1.0**
PB04				*e*S	**Sn**	**14 46 56.4**	**-0.6**
PB04	**IPOC Station P**	**3.38**	**304**		**Pn**	**14 46 16.8**	**+1.0**
PB04	**IPOC Station P**	**3.38**	**304**	*e*P	**Pn**	**14 46 16.7**	**+1.0**
PB04				*e*S	**Sn**	**14 46 57.1**	**+0.2**
PB04				IAML		14 47 01.8	
	comp=Z,7µm,0.2s						
PB07	**IPOC Station P**	**3.59**	**314**	*e*P	**Pn**	**14 46 19.6**	**+1.3**
PB07				*e*S	**Sn**	**14 47 00.9**	**-0.8**
PB07	**IPOC Station P**	**3.59**	**314**		**Pn**	**14 46 19.5**	**+1.1**
PB07	**IPOC Station P**	**3.59**	**314**	*e*P	**Pn**	**14 46 19.5**	**+1.1**
PB07				*e*S	**Sn**	**14 47 01.9**	**+0.2**
PB07				IAML		14 47 04.6	
	comp=Z,9µm,0.5s						
PB01	**IPOC Station P**	**3.88**	**325**	*e*P	**Pn**	**14 46 22.6**	**+0.6**
PB01	**IPOC Station P**	**3.88**	**325**		**Pn**	**14 46 22.8**	**+0.7**
PB01	**IPOC Station P**	**3.88**	**325**	*e*P	**Pn**	**14 46 23.0**	**+0.9**
PB01				*e*S	**Sn**	**14 47 09.1**	**+0.8**
PB01				IAML		14 47 10.7	
	comp=Z,3µm,0.2s						
PB02	**IPOC Station P**	**3.89**	**319**	*e*P	**Pn**	**14 46 23.1**	**+0.8**
PB02				*e*S	**Sn**	**14 47 08.1**	**-0.5**
PB02	**IPOC Station P**	**3.89**	**319**	*e*P	**Pn**	**14 46 23.0**	**+0.8**
PB02				*e*S	**Sn**	**14 47 08.4**	**-0.1**
PB02				IAML		14 47 11.9	
	comp=Z,6µm,0.2s						
CYA	**Choya**	**4.32**	**164**	*e*P	**Pn**	**14 46 29.0**	**+1.4**
CYA				*e*S	**Sn**	**14 47 15.4**	**-2.9**
CYA				IAML		14 47 19.6	
	comp=Z,265nm,1.2s						
GO03	**Copiap**	**4.33**	**220**	*e*P	**Pn**	**14 46 27.3**	**-0.5**
GO03				*e*S	**Sn**	**14 47 17.0**	**-1.5**
GO03	**Copiap**	**4.33**	**220**	Pn	**Pn**	**14 46 26.9**	**-0.8**
GO03	**Copiap**	**4.33**	**220**	*e*P	**Pn**	**14 46 27.2**	**-0.5**
GO03				*e*S	**Sn**	**14 47 17.0**	**-1.5**
PATCX	**Punta Patache**	**4.43**	**320**		**Pn**	**14 46 28.8**	**-0.3**
PATCX	**Punta Patache**	**4.43**	**320**	*e*P	**Pn**	**14 46 29.3**	**+0.2**
PATCX				*e*S	**Sn**	**14 47 22.4**	**+1.5**
PATCX				IAML		14 47 29.3	
	comp=Z,2µm,0.5s						
PB08	**IPOC Station P**	**4.52**	**335**	*e*P	**Pn**	**14 46 32.4**	**+1.8**
PB08				*e*S	**Sn**	**14 47 24.1**	**+0.6**
PB08	**IPOC Station P**	**4.52**	**335**		**Pn**	**14 46 32.1**	**+1.5**
PB08	**IPOC Station P**	**4.52**	**335**	*e*P	**Pn**	**14 46 32.0**	**+1.4**
PB08				*e*S	**Sn**	**14 47 25.1**	**+1.5**
PB08				IAML		14 47 31.0	
	comp=Z,993nm,0.8s						
VCA	**Vinchina**	**4.55**	**192**	*e*P	**Pn**	**14 46 32.5**	**+1.8**
VCA				*e*S	**Sn**	**14 47 19.1**	**-4.7**
VCA				IAML		14 48 02.1	
	comp=Z,446nm,1.2s						
TA01	**Diego Aracena**	**4.65**	**322**	Pn	**Pn**	**14 46 31.7**	**-0.2**
TA02	**Huaiquique**	**4.86**	**325**		**Pn**	**14 46 34.3**	**-0.3**
PB11	**IPOC Station P**	**5.07**	**332**	Pn	**Pn**	**14 46 37.1**	**-0.4**
PB11	**IPOC Station P**	**5.07**	**332**	*e*P	**Pn**	**14 46 37.4**	**-0.1**
PB11				*e*S	**Sn**	**14 47 34.7**	**-1.3**
PB11				IAML		14 47 37.5	
	comp=Z,919nm,0.6s						
ACLC	**CERRO LA CRUZ**	**5.13**	**178**	*e*P	**Pn**	**14 46 38.9**	**+0.6**
ACLC				IAML		14 48 07.7	
	comp=Z,148nm,1.2s						
AC04	**Llanos de Chal**	**5.28**	**221**	Pn	**Pn**	**14 46 38.1**	**-2.0**
LCO	**Las Campanas**	**5.70**	**213**	P	**Pn**	**14 46 43.8**	**-2.0**
LCO	**Las Campanas**	**5.70**	**213**	Pn	**Pn**	**14 46 43.8**	**-2.0**
LCO	**Las Campanas**	**5.70**	**213**	*e*P	**Pn**	**14 46 44.0**	**-1.8**
LCO				IAML		14 47 55.4	
	comp=Z,6µm,0.9s						
PB16	**IPOC Station P**	**6.31**	**339**		**Pn**	**14 46 54.8**	**+0.4**
PB12	**IPOC Station P**	**6.37**	**332**	Pn	**Pn**	**14 46 52.4**	**-2.3**
AP01	**Chacalluta**	**6.59**	**332**		**Pn**	**14 46 54.7**	**-2.8**
CO05	**La Serena**	**6.71**	**212**		**Pn**	**14 46 55.6**	**-3.4**
GO04	**Tololo Observa**	**6.72**	**208**	Pn	**Pn**	**14 46 55.9**	**-3.4**
GO04	**Tololo Observa**	**6.72**	**208**	*e*P	**Pn**	**14 46 58.0**	**-1.3**
ZON	**Zonda**	**7.37**	**190**	P	**Pn**	**14 47 07.0**	**-0.8**
ZON	**Zonda**	**7.37**	**190**	Pn	**Pn**	**14 47 07.0**	**-0.8**
CO06	**Fray Jorge**	**7.52**	**211**		**Pn**	**14 47 06.8**	**-3.0**
RTCV	**Cerro Valdivia**	**7.66**	**189**	*e*S	**Sn**	**14 48 31.7**	**-5.7**
RTCV				IAML		14 49 05.3	
	comp=Z,43nm,1.2s						
LPAZ	**La Paz**	**8.00**	**353**	P	**Pn**	**14 47 18.0**	**+1.2**
	comp=Z,25nm,0.3s,baz=158,slow=8.5,SNR=231						
LPAZ				S	**Sn**	**14 48 46.3**	**-0.3**
	comp=Z,3.2nm,0.3s,baz=332,slow=20,SNR=9.4						
LPAZ	**La Paz**	**8.00**	**353**	P	**Pn**	**14 47 18.0**	**+1.2**
MRA	**San Martin**	**8.21**	**172**	*e*S	Sn	14 48 41.0	-10
MRA				IAML		14 49 00.3	
	comp=Z,34nm,0.7s						
VA03	**San Esteban**	**8.98**	**199**		**Pn**	**14 47 26.4**	**-2.7**
CPUP	**Villa Florida**	**9.10**	**105**	P	**Pn**	**14 47 29.2**	**-1.4**
	comp=Z,3.9nm,0.3s,baz=289,slow=12,SNR=65						
CPUP	**Villa Florida**	**9.10**	**105**	P	**Pn**	**14 47 29.4**	**-1.3**
CPUP	**Villa Florida**	**9.10**	**105**	*e*P	**Pn**	**14 47 30.0**	**-0.7**
CPUP	**Villa Florida**	**9.10**	**105**	Pn	**Pn**	**14 47 29.4**	**-1.3**
PEL	**Peldehue**	**9.37**	**199**	P	**Pn**	**14 47 31.5**	**-2.7**
PEL	**Peldehue**	**9.37**	**199**		**Pn**	**14 47 31.5**	**-2.7**
MT02	**Curacav**	**9.62**	**201**		**Pn**	**14 47 33.3**	**-4.1**
SIV	**San Ignacio**	**10.01**	**36**	P	**Pn**	**14 47 41.6**	**-1.2**
	comp=Z,14nm,0.3s,baz=216,slow=12,SNR=428						
SIV				S	**Sn**	**14 49 26.9**	**-7.2**
	baz=228,slow=16,SNR=3.2						
MT09	**Talagante**	**10.05**	**199**	Pn	**Pn**	**14 47 39.1**	**-4.1**
MT01	**Popeta**	**10.21**	**200**		Pn	14 47 40.4	-4.8
BO01	**Tunca**	**10.65**	**198**	Pn	**Pn**	**14 47 47.6**	**-3.4**
ITQB	**Itaqui**	**10.80**	**122**	*e*P	**Pn**	**14 47 52.2**	**-0.8**
ITQB	**Itaqui**	**10.80**	**122**	Pn	**Pn**	**14 47 51.3**	**-1.7**
BO02	**Sierra Bellavi**	**10.95**	**196**		**Pn**	**14 47 54.1**	**-0.9**
AQDB	**Aquidauana**	**11.23**	**73**	*e*P	**Pn**	**14 47 58.2**	**-0.5**
AQDB	**Aquidauana**	**11.23**	**73**	Pn	**Pn**	**14 47 56.7**	**-2.0**
PTLB	**Pontes e Lacer**	**11.56**	**42**	*e*P	**Pn**	**14 48 02.4**	**-0.5**
PTLB	**Pontes e Lacer**	**11.56**	**42**	Pn	**Pn**	**14 48 01.4**	**-1.5**
VILB	**Vilhena**	**13.03**	**31**	Pn	**Pn**	**14 48 20.1**	**-1.8**
PP1B	**Ponte de Pedra**	**13.23**	**62**	*e*P	**Pn**	**14 48 23.5**	**-0.9**
TRCB	**Terra Rica**	**13.38**	**87**	*e*P	**Pn**	**14 48 25.3**	**-1.0**
TRCB	**Terra Rica**	**13.38**	**87**	Pn	**Pn**	**14 48 24.0**	**-2.3**
SALV	**Santo Antonio**	**13.59**	**54**	*e*P	**Pn**	**14 48 28.4**	**-0.6**
CPSB	**Cacapava Do Su**	**13.61**	**120**	*e*P	**Pn**	**14 48 28.6**	**-0.5**
PTGB	**Pitanga**	**13.73**	**95**	*e*P	**Pn**	**14 48 30.6**	**-0.1**
ITAB	**Concordia**	**13.84**	**105**	*e*P	**Pn**	**14 48 31.8**	**-0.2**
ITAB	**Concordia**	**13.84**	**105**	Pn	**Pn**	**14 48 31.1**	**-0.8**
VA04	**Juan Fernndez**	**13.85**	**225**	Pn	**Pn**	**14 48 32.2**	**+0.2**
PLTB	**Pedras Altas**	**14.08**	**125**	*e*P	**Pn**	**14 48 33.3**	**-1.7**
PLTB	**Pedras Altas**	**14.08**	**125**	Pn	**Pn**	**14 48 32.8**	**-2.2**
ETMB	**Extrema**	**14.40**	**4**	*e*P	**Pn**	**14 48 38.2**	**-1.0**
ETMB	**Extrema**	**14.40**	**4**	Pn	**Pn**	**14 48 36.9**	**-2.3**
PCMB	**Pacaembu**	**14.86**	**83**	*e*P	**Pn**	**14 48 43.8**	**-1.0**
LC01	**Cunco**	**15.12**	**194**	Pn	**Pn**	**14 48 47.2**	**-0.7**
LC01				IAmb	IAmb	14 48 52.4	
	comp=Z,34nm,0.7s						
NNA	**Nana**	**15.30**	**321**	*ce*P	**P**	**14 48 53.4**	**+2.0**
NNA				pmax	pmax		
	comp=Z,38nm,1.3s						
CNLB	**Canela**	**15.38**	**113**	*e*P	**Pn**	**14 48 50.4**	**-0.7**
PDRB	**Porto dos Gac**	**16.00**	**40**	*e*P	**Pn**	**14 48 57.8**	**-1.1**
FRTB	**Fartura**	**16.11**	**90**	*e*P	**Pn**	**14 48 59.6**	**-0.4**
ITRB	**Iturama**	**16.20**	**77**	*e*P	**P**	**14 49 01.2**	**-0.1**
TIJ01	**Guaruva-PR**	**16.50**	**97**	*e*P	**P**	**14 49 04.6**	**+0.1**
PLCA	**Paso Flores**	**16.66**	**189**	P	**Pn**	**14 49 07.0**	**+0.3**
	comp=Z,2.5nm,0.3s,baz=10,slow=11,SNR=40						
PLCA				PcP	**PcP**	**14 53 46.9**	**+1.0**
	comp=Z,0.6nm,0.3s,baz=86,slow=1.8,SNR=5.9						
PLCA	**Paso Flores**	**16.66**	**189**	P	**Pn**	**14 49 07.0**	**+0.3**
PLCA	**Paso Flores**	**16.66**	**189**	*e*P	**Pn**	**14 49 06.5**	**-0.1**
PLCA	**Paso Flores**	**16.66**	**189**		**P**	**14 49 06.1**	**-0.1**
PLCA				IAmb	IAmb	14 49 15.7	
	comp=Z,65nm,0.6s						
PLCA					**PcP**	**14 53 45.6**	**-0.2**
TER01	**Tubaro-SC**	**16.67**	**109**	*e*P	**P**	**14 49 05.6**	**-0.7**
ARAG	**Araguaiana, MT**	**16.72**	**62**	*e*P	**P**	**14 49 07.1**	**+0.2**
CLDB	**Colider**	**17.14**	**41**	*e*P	**P**	**14 49 11.1**	**-0.5**
LL04	**Puerto Octay**	**17.17**	**194**	P	**P**	**14 49 11.3**	**-0.3**
LL04				IAmb	IAmb	14 49 13.7	
	comp=Z,104nm,1.1s						
CZSB	**Cruzeiro do Su**	**17.30**	**341**	*e*P	**P**	**14 49 13.8**	**+0.5**
CZSB	**Cruzeiro do Su**	**17.30**	**341**	P	**P**	**14 49 13.4**	**+0.1**
CZSB				IAmb	IAmb	14 49 23.1	
	comp=Z,80nm,0.8s						
LL03	**Petrohue**	**17.39**	**193**	P	**P**	**14 49 13.4**	**-0.6**
BB19B	**Bebedouro**	**17.46**	**83**	*e*P	**P**	**14 49 15.1**	**0.0**
LL05	**Los Muermos**	**17.89**	**196**	P	**P**	**14 49 19.2**	**-0.3**
RCLB	**Rio Claro- Sao**	**18.09**	**88**	*e*P	**P**	**14 49 21.7**	**-0.3**
PET01	**Itanhaem-SP**	**18.10**	**94**	*e*P	**P**	**14 49 22.1**	**0.0**
VAO	**Valinhos**	**18.52**	**90**	*e*P	**P**	**14 49 26.3**	**-0.4**
LL01	**San Ignacio de**	**18.58**	**192**	P	**P**	**14 49 27.2**	**+0.1**
IPMB	**Ipameri, GO**	**18.72**	**74**	*e*P	**P**	**14 49 28.9**	**+0.1**
LL07	**Hotel Espejo d**	**19.24**	**194**	P	**P**	**14 49 33.3**	**-0.8**
LL02	**Futaleuf**	**19.26**	**191**	P	**P**	**14 49 34.3**	**-0.2**
SNDB	**Serra Nova Dou**	**19.37**	**54**	*e*P	**P**	**14 49 35.1**	**-0.8**
GO07	**Milladeo Hill,**	**19.55**	**194**	P	**P**	**14 49 36.9**	**-0.6**
PARB	**Paraibuna**	**19.70**	**92**	*e*P	**P**	**14 49 39.8**	**+0.3**
BDFB	**Brasilia**	**19.90**	**68**	P	**P**	**14 49 41.0**	**-0.7**
	comp=Z,28nm,0.3s,baz=243,slow=9.6,SNR=143						
BDFB	**Brasilia**	**19.90**	**68**	P	**P**	**14 49 41.6**	**-0.1**
BDFB				pmax	pmax		
	comp=Z,156nm,0.9s						
BDFB	**Brasilia**	**19.90**	**68**	P	**P**	**14 49 41.6**	**-0.1**
TBTG	**Tabatinga, AM**	**20.15**	**352**	P	**P**	**14 49 44.7**	**+0.5**
ATAH	**Atahualpa**	**20.18**	**326**	P	**P**	**14 49 46.0**	**+1.0**
	comp=Z,7.2nm,0.9s,baz=177,slow=9.3,SNR=6.7						
NPGB	**Novo Progresso**	**20.52**	**35**	*e*P	**P**	**14 49 46.8**	**-1.4**
BSCB	**Bom Sucesso**	**20.89**	**85**	*e*P	**P**	**14 49 51.8**	**-0.4**
PEXB	**Peixe**	**21.57**	**59**	*e*P	**P**	**14 49 58.1**	**-1.3**
VAS01	**Vassouras-RJ**	**21.85**	**90**	*e*P	**P**	**14 50 02.0**	**-0.3**
MACA	**Manacapuru-AM**	**21.89**	**17**	*e*P	**P**	**14 50 01.8**	**-0.9**
MACA	**Manacapuru-AM**	**21.89**	**17**	P	**P**	**14 50 00.9**	**-1.9**
ITTB	**Itaituba**	**22.63**	**31**	*e*P	**P**	**14 50 08.2**	**-1.6**
DIAM	**Diamantina, MG**	**22.64**	**79**	*e*P	**P**	**14 50 09.0**	**-1.1**
DUB01	**Friburgo-RJ**	**22.86**	**90**	*e*P	**P**	**14 50 11.6**	**-0.3**
MC01	**Montes Claros**	**22.97**	**75**	*e*P	**P**	**14 50 11.8**	**-1.2**
JANB	**Januaria**	**23.33**	**71**	*e*P	**P**	**14 50 15.2**	**-1.1**
CAM01	**Campos-RJ**	**23.56**	**89**	*e*P	**P**	**14 50 17.8**	**-0.4**
SDBA	**SAO DESIDERIO**	**24.13**	**65**	*e*P	**P**	**14 50 22.7**	**-0.8**
SMTB	**Santa Maria do**	**24.15**	**54**	*e*P	**P**	**14 50 23.1**	**-0.6**
PTGA	**Pitinga**	**24.41**	**18**	P	**P**	**14 50 25.6**	**-0.5**
	comp=Z,20nm,0.5s,baz=196,slow=10,SNR=44						
PRPB	**Parauapebas**	**24.50**	**46**	*e*P	**P**	**14 50 25.4**	**-1.5**
ALF01	**Guarapari-ES**	**24.66**	**87**	*e*P	**P**	**14 50 27.3**	**-1.0**
SJMB	**Sao Joao De Ma**	**24.75**	**82**	*e*P	**P**	**14 50 27.8**	**-1.3**
BSFB	**Barra de Sao F**	**25.02**	**83**	*e*P	**P**	**14 50 30.0**	**-1.5**
RIB01	**Linhares ES**	**25.29**	**84**	*e*P	**P**	**14 50 33.3**	**-0.7**
MALB	**Monte Alegre**	**25.53**	**31**	*e*P	**P**	**14 50 34.8**	**-1.3**
NAN01	**Guarapari, ES**	**25.97**	**81**	*e*P	**P**	**14 50 39.0**	**-1.2**
GUA01	**Guaratinga, BA**	**26.69**	**79**	*e*P	**P**	**14 50 45.5**	**-1.1**
GO09	**Cerro Castillo**	**27.25**	**187**	P	**P**	**14 50 52.0**	**+0.8**
GO09				IAmb	IAmb	14 50 53.5	
	comp=Z,32nm,0.7s						
BOAV	**Boa Vista**	**27.28**	**15**	*e*P	**P**	**14 50 52.0**	**+0.2**
BOAV	**Boa Vista**	**27.28**	**15**	P	**P**	**14 50 51.8**	**0.0**
CMC01	**Camacan, BA**	**27.41**	**76**	*e*P	**P**	**14 50 51.4**	**-1.6**
MG05	**Puerto Natales**	**27.67**	**187**	P	**P**	**14 50 54.9**	**0.0**
MCPB	**Macapa, AP**	**27.90**	**34**	*e*P	**P**	**14 50 56.8**	**-0.6**
PCON	**Cinco Dias**	**27.93**	**340**	*e*P	**P**	**14 51 00.9**	**+2.6**
GDU01	**Guandu, BA**	**28.04**	**73**	*e*P	**P**	**14 50 57.3**	**-1.3**
EFI	**East Falkland**	**28.23**	**168**	P	**P**	**14 50 59.6**	**-0.3**
EFI				pmax	pmax		
	comp=Z,67nm,1.3s						
EFI	**East Falkland**	**28.23**	**168**	P	**P**	**14 50 59.5**	**-0.3**
EFI				IAmb	IAmb	14 51 17.7	
	comp=Z,67nm,1.2s						
MG02	**Cerro Sombrero**	**28.51**	**183**	P	**P**	**14 51 03.4**	**+1.0**
MG04	**Isla Riesco**	**28.74**	**186**	P	**P**	**14 51 05.5**	**+1.1**
PRAC	**Prado**	**28.83**	**344**	*e*P	**P**	**14 51 05.4**	**-0.2**
GO10	**Punta Arenas**	**28.99**	**185**	P	**P**	**14 51 06.8**	**+0.2**
ORTC	**Ortega, Tolima**	**29.11**	**343**	*e*P	**P**	**14 51 09.0**	**+0.9**
ROSC	**El Rosal**	**29.77**	**345**	LR	LR	15 03 21.2	
	comp=Z,332nm,19.8s,baz=212,slow=36						
GUY2C	**Guyana, Caldas**	**30.40**	**344**	*e*P	**P**	**14 51 20.3**	**+0.3**
SPBC	**San Pablo de B**	**30.50**	**346**	*e*P	**P**	**14 51 19.3**	**-1.2**
USHA	**Ushuaia**	**30.54**	**181**	P	**P**	**14 51 20.7**	**+0.5**
	comp=Z,14nm,0.5s,baz=358,slow=6.9,SNR=12						
MG01	**Puerto William**	**30.62**	**181**	P	**P**	**14 51 20.9**	**0.0**
ROSB	**Rosrio**	**30.74**	**50**	*e*P	**P**	**14 51 21.0**	**-1.5**
CBOC	**Ciudad Bolivar**	**31.18**	**343**	*e*P	**P**	**14 51 27.0**	**+0.5**
BARC	**Barichara**	**31.24**	**348**	*e*P	**P**	**14 51 25.5**	**-1.6**
PTBC	**PUERTO BERRIO,**	**31.45**	**346**	*e*P	**P**	**14 51 26.1**	**-2.6**
MDP	**Montagnes des**	**32.43**	**28**	P	**P**	**14 51 37.0**	**-0.3**
	comp=Z,19nm,0.4s,baz=202,slow=11,SNR=24						
ZARC	**Zaragoza, Cauc**	**32.46**	**346**	*e*P	**P**	**14 51 35.4**	**-2.2**
ZARC	**Zaragoza, Cauc**	**32.46**	**346**	P	**P**	**14 51 35.5**	**-2.0**
OCAC	**Ocana**	**32.88**	**349**		**PcP**	**14 54 22.2**	**+0.1**
SDV	**Santo Domingo**	**33.13**	**354**	*e*P	**P**	**14 51 43.4**	**-0.2**
SDV	**Santo Domingo**	**33.13**	**354**	P	**P**	**14 51 42.2**	**-1.3**
SDV				IAmb	IAmb	14 51 52.1	
	comp=Z,23nm,0.5s						
SMLC	**San Martn de**	**33.56**	**348**	*e*P	**P**	**14 51 44.3**	**-2.8**
MOTC	**Monteria, Cord**	**33.89**	**345**	P	**P**	**14 51 49.0**	**-0.9**
SJCC	**San Jacinto, C**	**34.86**	**346**	P	**P**	**14 51 57.1**	**-1.2**
SJCC				IAmb	IAmb	14 51 57.7	
	comp=Z,26nm,0.8s						
TOSP	**Speyside**	**35.94**	**11**	P	**P**	**14 52 08.3**	**+0.9**
TOSP				IAmb	IAmb	14 52 13.8	
	comp=Z,60nm,1.1s						
GRGR	**Grenville**	**36.58**	**9**	P	**P**	**14 52 13.1**	**+0.2**
DRK0	**Durika**	**36.86**	**333**	P	**P**	**14 52 17.2**	**+1.8**
DRK0				IAmb	IAmb	14 52 18.9	
	comp=Z,36nm,0.7s						
SRBA	**San Rafael, Bu**	**36.88**	**333**	P	**P**	**14 52 17.8**	**+2.2**
SRBA				IAmb	IAmb	14 52 18.9	
	comp=Z,24nm,0.8s						
RIMA	**Rio Macho**	**37.57**	**332**	P	**P**	**14 52 23.5**	**+2.0**
RIMA				IAmb	IAmb	14 52 24.7	
	comp=Z,19nm,0.6s						
HOPE	**Hope Point**	**37.67**	**151**	P	**P**	**14 52 22.3**	**+0.7**
HOPE				pmax	pmax		
	comp=Z,119nm,1.3s						
HOPE	**Hope Point**	**37.67**	**151**	P	**P**	**14 52 22.3**	**+0.7**
CVTR	**Volcan Turrial**	**37.76**	**333**	P	**P**	**14 52 24.4**	**+1.1**
CVTR				IAmb	IAmb	14 52 28.4	
	comp=Z,27nm,1.0s						
JTS	**Las Juntas de**	**38.51**	**331**	P	**P**	**14 52 30.3**	**+1.2**
	comp=Z,5.8nm,0.4s,baz=223,slow=5.0,SNR=5.1						
JTS	**Las Juntas de**	**38.51**	**331**	P	**P**	**14 52 31.0**	**+1.9**
JTS				pmax	pmax		
	comp=Z,29nm,1.1s						
JTS	**Las Juntas de**	**38.51**	**331**	P	**P**	**14 52 31.0**	**+1.9**
JTS				IAmb	IAmb	14 52 33.3	
	comp=Z,29nm,1.1s						
MPOM	**Morne Pois Mar**	**38.97**	**10**	P	**P**	**14 52 32.1**	**-0.7**
BIM	**Bigot**	**39.01**	**9**	P	**P**	**14 52 32.4**	**-0.8**
HZTE	**Horizontes, Gu**	**39.17**	**330**	P	**P**	**14 52 34.5**	**-0.1**
FDF	**Fort de France**	**39.21**	**9**	P	**P**	**14 52 33.5**	**-1.4**
FDF				pmax	pmax		
	comp=Z,78nm,0.8s						
FDF	**Fort de France**	**39.21**	**9**	P	**P**	**14 52 33.5**	**-1.4**
ILAM	**Ilet Lapin Mar**	**39.29**	**10**	P	**P**	**14 52 34.9**	**-0.6**
SVN	**Savane Anatole**	**39.31**	**9**	P	**P**	**14 52 36.1**	**+0.3**
ESPN	**Las Esperanzas**	**39.94**	**333**	P	**P**	**14 52 41.3**	**+0.3**
ESPN				IAmb	IAmb	14 52 45.4	
	comp=Z,83nm,1.4s						
PMSA	**Palmer Station**	**40.55**	**178**	P	**P**	**14 52 46.6**	**+1.3**
	comp=Z,17nm,0.6s,baz=11,slow=8.0,SNR=10						
PMSA	**Palmer Station**	**40.55**	**178**	*e*P	**P**	**14 52 45.6**	**+0.2**
PMSA	**Palmer Station**	**40.55**	**178**	P	**P**	**14 52 45.8**	**+0.5**
BOAB	**BOACO BROADBAN**	**40.74**	**332**	P	**P**	**14 52 48.5**	**+1.0**
BOAB				IAmb	IAmb	14 53 06.3	
	comp=Z,80nm,1.4s						
MLPR	**Magueyes Islan**	**41.99**	**0**	P	**P**	**14 52 56.3**	**-1.3**
MLPR				IAmb	IAmb	14 52 58.4	
	comp=Z,42nm,0.5s						
CRPR	**Cabo Rojo, PR**	**42.02**	**0**	P	**P**	**14 52 56.1**	**-1.7**
CRPR				IAmb	IAmb	14 52 58.6	
	comp=Z,56nm,1.1s						
PDPR	**Patillas Dam,**	**42.05**	**2**	P	**P**	**14 52 55.6**	**-2.5**
OBIP	**Obispado Ponce**	**42.06**	**1**	P	**P**	**14 52 56.1**	**-2.2**
OBIP				IAmb	IAmb	14 52 58.5	
	comp=Z,72nm,1.1s						
SJG	**San Juan**	**42.14**	**1**	P	**P**	**14 52 56.8**	**-2.0**
SJG				pmax	pmax		
	comp=Z,87nm,1.5s						
SJG	**San Juan**	**42.14**	**1**	P	**P**	**14 52 56.8**	**-2.0**
SJG				IAmb	IAmb	14 53 04.9	
	comp=Z,87nm,1.4s						
HUMP	**Col San Antoni**	**42.18**	**2**	P	**P**	**14 52 57.7**	**-1.4**
GCPR	**Guaynabo City**	**42.34**	**1**	P	**P**	**14 52 59.5**	**-0.9**
CUPR	**Culebra, Puert**	**42.36**	**3**	P	**P**	**14 53 00.0**	**-0.6**
AOPR	**Arecibo Observ**	**42.36**	**1**	P	**P**	**14 52 58.2**	**-2.5**
AOPR				IAmb	IAmb	14 53 06.5	
	comp=Z,42nm,0.8s						
STVI	**Saint Thomas**	**42.42**	**3**	P	**P**	**14 52 59.4**	**-1.7**
STVI				IAmb	IAmb	14 53 24.0	
	comp=Z,58nm,1.4s						
AGPR	**Aguadilla, PR**	**42.48**	**0**	P	**P**	**14 52 59.6**	**-2.0**
DR12	**Loma Pena Alta**	**42.86**	**357**	P	**P**	**14 53 02.6**	**-2.1**
TGUH	**Tegucigalpa,Un**	**42.88**	**331**	P	**P**	**14 53 06.1**	**+1.1**
TGUH				IAmb	IAmb	14 53 08.2	
	comp=Z,34nm,0.7s						
SDDR	**Presa de Saban**	**43.19**	**354**	P	**P**	**14 53 07.7**	**+0.4**
MTO3	**Montecristo**	**44.15**	**328**	P	**P**	**14 53 16.6**	**+1.4**
MTO3				IAmb	IAmb	14 53 17.3	
	comp=Z,22nm,0.6s						
GTBY	**Guantanamo Bay**	**44.62**	**349**	P	**P**	**14 53 18.1**	**-0.5**
GTBY				IAmb	IAmb	14 53 27.8	
	comp=Z,55nm,1.3s						
LCCY	**Blossom Villag**	**45.46**	**343**	P	**P**	**14 53 24.4**	**-0.9**
SOR	**Soroa**	**49.26**	**341**	P	**P**	**14 53 54.7**	**+0.1**
SOR				pmax	pmax		
	comp=Z,31nm,0.7s						
SOR	**Soroa**	**49.26**	**341**	P	**P**	**14 53 54.7**	**+0.1**
SOR				IAmb	IAmb	14 53 55.9	
	comp=Z,31nm,0.7s						
061Z	**Ochoppi**	**51.60**	**344**	P	**P**	**14 54 12.5**	**+0.4**
553A	**Crawfordville**	**56.64**	**342**	P	**P**	**14 54 49.5**	**+1.0**
VNA3	**Neumayer Olymp**	**56.93**	**161**	P	**P**	**14 54 50.7**	**+0.6**
VNA3	**Neumayer Olymp**	**56.93**	**161**	PcP	**PcP**	**14 55 43.5**	**0.0**
VNA3				S	**S**	**15 02 37.9**	**+7.2**
VNA1	**Neumayer--Stat**	**57.13**	**160**	P	**P**	**14 54 52.5**	**+1.0**
VNA1	**Neumayer--Stat**	**57.13**	**160**	PcP	**PcP**	**14 55 44.3**	**+0.1**
VNA2	**Neumayer--Watz**	**57.50**	**160**	P	**P**	**14 54 54.7**	**+0.6**
	baz=288,slow=7.7						
VNA2	**Neumayer--Watz**	**57.50**	**160**	PcP	**PcP**	**14 55 46.3**	**+0.6**
VNA2				S	**S**	**15 02 44.0**	**+5.8**
TIGA	**Tifton**	**57.59**	**343**	P	**P**	**14 54 55.4**	**+0.2**
	baz=162						
352A	**Blakely**	**58.00**	**342**	P	**P**	**14 54 58.1**	**+0.1**
BRAL	**Brewton**	**58.34**	**340**	P	**P**	**14 55 00.5**	**+0.2**
	baz=158						
BRAL	**Brewton**	**58.34**	**340**	P	**P**	**14 55 00.5**	**+0.2**
NHSC	**New Hope**	**58.40**	**347**	P	**P**	**14 55 01.7**	**+1.0**
	baz=166						
NHSC	**New Hope**	**58.40**	**347**	P	**P**	**14 55 01.4**	**+0.6**
250A	**Grady**	**58.85**	**341**	P	**P**	**14 55 03.3**	**-0.6**
Y60A	**Bolivia**	**58.91**	**349**	P	**P**	**14 55 04.0**	**-0.2**
152A	**Waverly Hall**	**59.06**	**343**	P	**P**	**14 55 04.9**	**-0.4**
152A				IAmb	IAmb	14 55 05.7	
	comp=Z,25nm,1.1s						
Y58A	**Scranton**	**59.08**	**348**	P	**P**	**14 55 05.1**	**-0.3**
SNAA	**Sanae**	**59.13**	**161**	P	**P**	**14 55 05.9**	**+0.4**
	baz=274,slow=11						
GOGA	**Godfrey**	**59.44**	**344**	P	**P**	**14 55 07.7**	**-0.2**
GOGA				pmax	pmax		
	comp=Z,14nm,0.8s						
GOGA	**Godfrey**	**59.44**	**344**	P	**P**	**14 55 07.9**	**-0.1**
	baz=163,SNR=6.3						
GOGA	**Godfrey**	**59.44**	**344**	P	**P**	**14 55 07.7**	**-0.2**
X58A	**Rowland**	**59.64**	**348**	P	**P**	**14 55 09.6**	**+0.3**
JSC	**Jenkinsville**	**59.76**	**346**	P	**P**	**14 55 10.4**	**+0.3**
JSC				pmax	pmax		
	comp=Z,51nm,0.5s						
JSC	**Jenkinsville**	**59.76**	**346**	P	**P**	**14 55 10.4**	**+0.3**
Z51A	**Franklin**	**59.80**	**343**	P	**P**	**14 55 10.6**	**+0.2**
Z51A				IAmb	IAmb	14 55 11.6	
	comp=Z,37nm,1.3s						
HODGE	**Hodges**	**59.93**	**346**	P	**P**	**14 55 11.5**	**+0.2**
BIRD	**Birdtown, Kers**	**59.95**	**347**	P	**P**	**14 55 11.6**	**+0.3**
Y52A	**Lilburn**	**60.02**	**344**	P	**P**	**14 55 11.6**	**-0.3**
Y52A				IAmb	IAmb	14 55 12.4	
	comp=Z,18nm,0.7s						
CNNC	**Cliffs of the**	**60.06**	**350**	P	**P**	**14 55 11.6**	**-0.5**
	baz=169						
W57A	**Gilead**	**60.35**	**348**	P	**P**	**14 55 14.3**	**+0.3**
W57A				IAmb	IAmb	14 55 15.2	
	comp=Z,29nm,0.7s						
342A	**Flagon Creek P**	**60.36**	**335**	P	**P**	**14 55 14.8**	**+0.5**
PAULI	**Pauline**	**60.40**	**346**	P	**P**	**14 55 14.8**	**+0.4**
PAULI				IAmb	IAmb	14 55 15.6	
	comp=Z,24nm,0.5s						
VBMS	**Vicksburg**	**60.46**	**337**	P	**P**	**14 55 15.0**	**+0.2**
	baz=155						
Z47A	**Carrollton**	**60.54**	**340**	P	**P**	**14 55 15.1**	**-0.3**
Z47A				IAmb	IAmb	14 55 17.4	
	comp=Z,24nm,1.0s						
HKT	**Hockley**	**60.55**	**331**	*i* P	**P**	**14 55 15.7**	**+0.2**
HKT				pmax	pmax		
	comp=Z,5.0nm,0.5s						
HKT	**Hockley**	**60.55**	**331**	P	**P**	**14 55 15.4**	**-0.1**
HKT				IAmb	IAmb	14 55 18.9	
	comp=Z,32nm,1.3s						
KMSC	**Kings Mountain**	**60.61**	**347**	P	**P**	**14 55 16.4**	**+0.6**

	baz=165,SNR=6.3						
KMSC	**Kings Mountain**	**60.61**	**347**	P	**P**	**14 55 15.8**	**0.0**
KMSC				IAmb	IAmb	14 55 17.1	
	comp=Z,25nm,0.8s						
V58A	**Windy Hill, Pi**	**60.81**	**349**	P	**P**	**14 55 17.2**	**0.0**
V58A				IAmb	IAmb	14 55 18.1	
	comp=Z,14nm,0.8s						
BG3	**Lake Jocassee**	**60.82**	**345**	P	**P**	**14 55 17.5**	**+0.2**
BG3				IAmb	IAmb	14 55 18.4	
	comp=Z,17nm,0.8s						
833A	**Chaparral WMA,**	**60.83**	**327**	P	**P**	**14 55 18.7**	**+1.2**
	baz=146,SNR=14						
X51A	**Calhoun**	**60.89**	**343**	P	**P**	**14 55 17.9**	**+0.1**
FPAL	**Fort Paine**	**61.07**	**343**	P	**P**	**14 55 18.7**	**-0.3**
FPAL				IAmb	IAmb	14 55 19.4	
	comp=Z,23nm,1.1s						
W52A	**Murphy**	**61.15**	**344**	P	**P**	**14 55 19.5**	**-0.1**
W52A				IAmb	IAmb	14 55 20.4	
	comp=Z,14nm,0.7s						
143A	**Socs Landing,**	**61.21**	**337**	P	**P**	**14 55 20.6**	**+0.6**
143A				IAmb	IAmb	14 55 21.9	
	comp=Z,40nm,0.9s						
V55A	**Taylorsville**	**61.27**	**347**	P	**P**	**14 55 20.8**	**+0.5**
X48A	**Hartselle**	**61.39**	**341**	P	**P**	**14 55 20.5**	**-0.7**
V53A	**Saluda**	**61.44**	**345**	P	**P**	**14 55 20.9**	**-0.7**
V53A				IAmb	IAmb	14 55 22.3	
	comp=Z,16nm,0.7s						
U56A	**King**	**61.58**	**348**	P	**P**	**14 55 23.1**	**+0.7**
U56A				IAmb	IAmb	14 55 23.9	
	comp=Z,44nm,1.1s						
W50A	**Signal Mountai**	**61.61**	**343**	P	**P**	**14 55 22.2**	**-0.4**
W50A				IAmb	IAmb	14 55 23.3	
	comp=Z,28nm,0.9s						
NATX	**Nacogdoches**	**61.62**	**333**	P	**P**	**14 55 23.9**	**+1.1**
	baz=151						
NATX	**Nacogdoches**	**61.62**	**333**	P	**P**	**14 55 23.9**	**+1.1**
Y45A	**Yeager Farm, C**	**61.62**	**339**	P	**P**	**14 55 22.6**	**-0.1**
CPCT	**Cooper Cave**	**61.64**	**344**	P	**P**	**14 55 22.2**	**-0.6**
CPCT				IAmb	IAmb	14 55 23.4	
	comp=Z,19nm,0.9s						
TKL	**Tuckaleechee C**	**61.65**	**345**	P	**P**	**14 55 22.1**	**-0.8**
TKL				pmax	pmax		
	comp=Z,17nm,0.6s						
TKL	**Tuckaleechee C**	**61.65**	**345**	P	**P**	**14 55 22.1**	**-0.8**
TKL				IAmb	IAmb	14 55 23.3	
	comp=Z,18nm,0.6s						
V52A	**Sevierville**	**61.79**	**345**	P	**P**	**14 55 23.2**	**-0.6**
V52A				IAmb	IAmb	14 55 24.2	
	comp=Z,19nm,0.6s						
SWET	**Sewanee**	**61.79**	**343**	P	**P**	**14 55 23.3**	**-0.6**
SWET				IAmb	IAmb	14 55 24.4	
	comp=Z,33nm,0.8s						
V51A	**Loudon**	**61.93**	**344**	P	**P**	**14 55 24.0**	**-0.7**
T57A	**Hurt**	**62.01**	**349**	P	**P**	**14 55 25.3**	**+0.1**
T57A				IAmb	IAmb	14 55 26.3	
	comp=Z,18nm,1.1s						
U54A	**Nelsons Funny**	**62.04**	**347**	P	**P**	**14 55 25.6**	**+0.1**
435B	**Jarrell**	**62.04**	**330**	P	**P**	**14 55 25.8**	**+0.2**
	baz=148						
435B	**Jarrell**	**62.04**	**330**	P	**P**	**14 55 26.1**	**+0.5**
PLAL	**Pickwick Lake**	**62.19**	**341**	P	**P**	**14 55 25.1**	**-1.3**
PLAL				IAmb	IAmb	14 55 27.1	
	comp=Z,33nm,1.2s						
Z41A	**Richland Creek**	**62.22**	**336**	P	**P**	**14 55 27.4**	**+0.7**
	baz=153						
237A	**Washetta, Mont**	**62.31**	**333**	P	**P**	**14 55 28.0**	**+0.7**
237A				IAmb	IAmb	14 55 29.2	
	comp=Z,43nm,1.0s						
BLA	**Blacksburg**	**62.42**	**348**	P	**P**	**14 55 28.7**	**+0.6**
BLA				pmax	pmax		
	comp=Z,22nm,0.7s						
BLA	**Blacksburg**	**62.42**	**348**	P	**P**	**14 55 28.9**	**+0.8**
	baz=166,SNR=5.5						
BLA	**Blacksburg**	**62.42**	**348**	P	**P**	**14 55 28.7**	**+0.6**
BLA				IAmb	IAmb	14 55 30.4	
	comp=Z,22nm,0.7s						
CCAR	**Cane Creek**	**62.44**	**337**	P	**P**	**14 55 28.5**	**+0.3**
TZTN	**Tazewell**	**62.45**	**345**	P	**P**	**14 55 27.9**	**-0.3**
	baz=163						
TZTN	**Tazewell**	**62.45**	**345**	P	**P**	**14 55 27.8**	**-0.4**
TZTN				IAmb	IAmb	14 55 30.2	
	comp=Z,36nm,1.5s						
V48A	**Smith Brothers**	**62.53**	**342**	P	**P**	**14 55 28.2**	**-0.6**
V48A				IAmb	IAmb	14 55 29.2	
	comp=Z,28nm,0.9s						
W45A	**Hickory Valley**	**62.70**	**340**	P	**P**	**14 55 29.5**	**-0.4**
S57A	**Dark Hollow, R**	**62.70**	**349**	P	**P**	**14 55 29.9**	**+0.1**
S57A				IAmb	IAmb	14 55 31.0	
	comp=Z,21nm,1.2s						
WLAR	**White Oak Lake**	**62.72**	**336**	P	**P**	**14 55 31.0**	**+1.0**
CLTN	**Cedars of Leba**	**62.72**	**343**	P	**P**	**14 55 29.8**	**-0.2**
CLTN				IAmb	IAmb	14 55 30.4	
	comp=Z,23nm,0.9s						
R58B	**Mineral**	**62.73**	**350**	P	**P**	**14 55 30.2**	**+0.2**
JCT	**Junction City**	**62.81**	**328**	P	**P**	**14 55 31.2**	**+0.4**
JCT				pmax	pmax		
	comp=Z,26nm,0.8s						
JCT	**Junction City**	**62.81**	**328**	P	**P**	**14 55 31.5**	**+0.7**
	baz=146,SNR=20						
JCT	**Junction City**	**62.81**	**328**	P	**P**	**14 55 31.1**	**+0.4**
JCT				IAmb	IAmb	14 55 33.5	
	comp=Z,26nm,0.8s						
CBN	**Corbin Frederi**	**62.89**	**351**	P	**P**	**14 55 31.1**	**+0.1**
	baz=169						
U49A	**Red Boiling Sp**	**62.97**	**343**	P	**P**	**14 55 31.1**	**-0.6**
U49A				IAmb	IAmb	14 55 31.8	
	comp=Z,12nm,0.8s						
WHTX	**Lake Whitney,**	**63.01**	**331**	P	**P**	**14 55 32.3**	**+0.3**
	baz=149						
WHTX	**Lake Whitney,**	**63.01**	**331**	P	**P**	**14 55 32.1**	**+0.1**
WHTX				IAmb	IAmb	14 55 33.2	
	comp=Z,21nm,0.7s						
Z38A	**Mt. Pleasant**	**63.07**	**334**	P	**P**	**14 55 33.1**	**+0.7**
S54A	**Dingess, Beckl**	**63.17**	**347**	P	**P**	**14 55 33.2**	**+0.2**
WVT	**Waverly**	**63.18**	**341**	P	**P**	**14 55 31.6**	**-1.4**
WVT				pmax	pmax		
	comp=Z,46nm,1.1s						
WVT	**Waverly**	**63.18**	**341**	P	**P**	**14 55 32.2**	**-0.8**
	baz=159						
WVT	**Waverly**	**63.18**	**341**	P	**P**	**14 55 31.6**	**-1.4**
WVT				IAmb	IAmb	14 55 33.1	
	comp=Z,46nm,1.1s						
T50A	**Nancy**	**63.21**	**344**	P	**P**	**14 55 32.2**	**-1.0**
T50A				IAmb	IAmb	14 55 33.3	
	comp=Z,15nm,0.7s						
Q61A	**Milford**	**63.29**	**353**	P	**P**	**14 55 34.2**	**+0.6**
	baz=172						
X40A	**Basin Creek Fa**	**63.33**	**336**	P	**P**	**14 55 33.5**	**-0.5**
	baz=154						
X40A	**Basin Creek Fa**	**63.33**	**336**	P	**P**	**14 55 33.9**	**-0.2**
R55A	**Marlinton**	**63.41**	**349**	P	**P**	**14 55 35.3**	**+0.7**
R55A				IAmb	IAmb	14 55 36.3	
	comp=Z,41nm,1.2s						
S51A	**Beattyville**	**63.50**	**345**	P	**P**	**14 55 34.0**	**-1.1**
MIAR	**Mount Ida**	**63.66**	**336**	P	**P**	**14 55 36.0**	**-0.2**
MIAR				pmax	pmax		
	comp=Z,17nm,0.7s						
MIAR	**Mount Ida**	**63.66**	**336**	P	**P**	**14 55 36.5**	**+0.3**
	baz=153,SNR=16						
MIAR	**Mount Ida**	**63.66**	**336**	P	**P**	**14 55 36.0**	**-0.2**
MIAR				IAmb	IAmb	14 55 37.1	
	comp=Z,17nm,0.7s						
LNXT	**Lenox**	**63.66**	**340**	P	**P**	**14 55 36.3**	**+0.1**
NVL	**N'lazarevskaya**	**63.67**	**159**	*e*P	P	14 55 41.9	+6.1
NVL				pmax	pmax		
	comp=Z,29nm,0.6s						
GNAR	**Gosnell**	**63.70**	**339**	P	**P**	**14 55 36.8**	**+0.4**
GNAR				IAmb	IAmb	14 55 37.4	
	comp=Z,44nm,1.0s						
W41B	**Gary Mavity, V**	**63.74**	**337**	P	**P**	**14 55 36.6**	**0.0**
	baz=154,SNR=5.3						
GLAT	**Glass**	**63.75**	**340**	P	**P**	**14 55 36.9**	**+0.2**
T47A	**Sharon Grove**	**63.78**	**342**	P	**P**	**14 55 36.3**	**-0.6**
T47A				IAmb	IAmb	14 55 37.1	
	comp=Z,35nm,0.9s						
PEBM	**Pemiscott Bayo**	**63.79**	**340**	P	**P**	**14 55 37.2**	**+0.3**
R53A	**Hurricane**	**63.81**	**347**	P	**P**	**14 55 36.5**	**-0.6**
R53A				IAmb	IAmb	14 55 37.8	
	comp=Z,14nm,0.7s						
TX32	**Lajitas Array**	**63.83**	**325**	P	**P**	**14 55 38.0**	**+0.5**
TXAR	**Lajitas Array**	**63.83**	**325**	P	**P**	**14 55 38.5**	**+1.0**
	comp=Z,1.7nm,0.4s,baz=154,slow=8.0,SNR=39						
TXAR				pP	**PcP**	**14 56 13.4**	**+1.4**
	comp=Z,0.9nm,0.5s,baz=161,slow=8.0,SNR=4.1						
TXAR	**Lajitas Array**	**63.83**	**325**	P	**P**	**14 55 38.0**	**+0.5**
TX31	**Lajitas Ar. Si**	**63.83**	**325**	P	**P**	**14 55 38.2**	**+0.6**
TX31				IAmb	IAmb	14 55 39.2	
	comp=Z,26nm,1.1s						
WHAR	**Wooly Hollow**	**63.86**	**337**	P	**P**	**14 55 37.7**	**+0.2**
HICK	**Hickman**	**63.98**	**340**	P	**P**	**14 55 37.7**	**-0.5**
PENMO	**Penman**	**64.02**	**340**	P	**P**	**14 55 39.0**	**+0.5**
Z35A	**Perchaven, San**	**64.07**	**332**	P	**P**	**14 55 39.4**	**+0.4**
LCAR	**Lake Charles**	**64.17**	**339**	P	**P**	**14 55 39.1**	**-0.4**
HENM	**Henderson Moun**	**64.22**	**340**	P	**P**	**14 55 40.0**	**+0.2**
Q54A	**Coxs Mills**	**64.22**	**348**	P	**P**	**14 55 39.8**	**0.0**
P57A	**Homestead Farm**	**64.24**	**351**	P	**P**	**14 55 40.3**	**+0.4**
P57A				IAmb	IAmb	14 55 41.5	
	comp=Z,11nm,0.7s						
P60A	**Greenville**	**64.25**	**353**	P	**P**	**14 55 40.2**	**+0.3**
	baz=171						
P60A	**Greenville**	**64.25**	**353**	P	**P**	**14 55 40.2**	**+0.3**
P60A				IAmb	IAmb	14 55 40.9	
	comp=Z,26nm,1.3s						
T45A	**Paducah**	**64.25**	**341**	P	**P**	**14 55 39.3**	**-0.7**
PARMO	**Parma**	**64.26**	**340**	P	**P**	**14 55 39.8**	**-0.2**
W39A	**Magazine**	**64.31**	**336**	P	**P**	**14 55 41.3**	**+0.8**
	baz=153,SNR=18						
W39A	**Magazine**	**64.31**	**336**	P	**P**	**14 55 41.1**	**+0.6**
W39A				IAmb	IAmb	14 55 43.5	
	comp=Z,27nm,0.8s						
X37A	**Clayton**	**64.39**	**334**	P	**P**	**14 55 41.2**	**+0.2**
X37A				IAmb	IAmb	14 55 42.4	
	comp=Z,33nm,1.1s						
Q52A	**Bidwell**	**64.48**	**347**	P	**P**	**14 55 40.9**	**-0.5**
Q52A				IAmb	IAmb	14 55 42.0	
	comp=Z,18nm,0.7s						
R49A	**Shelbyville**	**64.50**	**344**	P	**P**	**14 55 41.0**	**-0.6**
ABTX	**Abilene, Hawle**	**64.53**	**330**	P	**P**	**14 55 42.3**	**+0.4**
	baz=147,SNR=13						
ABTX	**Abilene, Hawle**	**64.53**	**330**	P	**P**	**14 55 42.2**	**+0.2**
PBMO	**Poplar Bluff**	**64.58**	**339**	P	**P**	**14 55 42.0**	**-0.2**
LOOK	**Love County**	**64.61**	**333**		**P**	**14 55 42.5**	**+0.1**
MCWV	**Mont Chateau**	**64.70**	**349**	P	**P**	**14 55 43.7**	**+0.9**
	baz=167,SNR=6.5						
MCWV	**Mont Chateau**	**64.70**	**349**	P	**P**	**14 55 43.3**	**+0.5**
WCI	**Wyandotte Cave**	**64.72**	**343**	P	**P**	**14 55 41.7**	**-1.4**
WCI				pmax	pmax		
	comp=Z,33nm,0.7s						
WCI	**Wyandotte Cave**	**64.72**	**343**	P	**P**	**14 55 42.2**	**-0.8**
	baz=161						
WCI	**Wyandotte Cave**	**64.72**	**343**	P	**P**	**14 55 41.7**	**-1.4**
Q51A	**Peebles**	**64.77**	**346**	P	**P**	**14 55 41.9**	**-1.4**
Q51A				IAmb	IAmb	14 55 45.2	
	comp=Z,15nm,0.8s						
P53A	**Whipple**	**64.81**	**348**	P	**P**	**14 55 43.3**	**-0.3**
U40A	**Yellville**	**65.01**	**337**	P	**P**	**14 55 44.9**	**-0.1**
	baz=154,SNR=13						
U40A	**Yellville**	**65.01**	**337**	P	**P**	**14 55 44.5**	**-0.4**
U40A				IAmb	IAmb	14 55 45.7	
	comp=Z,14nm,0.8s						
T42A	**Van Buren**	**65.02**	**339**	P	**P**	**14 55 44.0**	**-1.1**
S44A	**Carbondale**	**65.06**	**341**	P	**P**	**14 55 44.1**	**-1.1**
S44A				IAmb	IAmb	14 55 46.2	
	comp=Z,26nm,1.1s						
SIUC	**Southern Illin**	**65.06**	**341**	P	**P**	**14 55 44.8**	**-0.5**
SIUC				IAmb	IAmb	14 55 45.4	
	comp=Z,32nm,1.2s						
O56A	**Blue Knob Stat**	**65.09**	**350**	P	**P**	**14 55 46.1**	**+0.7**
	baz=168						
O56A	**Blue Knob Stat**	**65.09**	**350**	P	**P**	**14 55 46.3**	**+0.8**
O56A				IAmb	IAmb	14 55 46.9	
	comp=Z,26nm,1.2s						
P52A	**Corning**	**65.10**	**347**	P	**P**	**14 55 45.5**	**0.0**
	baz=165,SNR=7.6						
P52A	**Corning**	**65.10**	**347**	P	**P**	**14 55 45.1**	**-0.4**
P51A	**Williamsport**	**65.15**	**346**	P	**P**	**14 55 45.2**	**-0.5**
P51A				IAmb	IAmb	14 55 46.0	
	comp=Z,20nm,0.6s						
PAL	**Palisades**	**65.25**	**354**	P	**P**	**14 55 46.5**	**+0.1**
	baz=173						
O54A	**Avella**	**65.30**	**349**	P	**P**	**14 55 46.8**	**0.0**
HHAR	**Hobbs**	**65.34**	**336**	P	**P**	**14 55 46.8**	**-0.3**
HHAR				IAmb	IAmb	14 55 47.9	
	comp=Z,25nm,1.0s						
SSPA	**Standing Stone**	**65.35**	**351**	P	**P**	**14 55 47.7**	**+0.7**
	baz=169						
SSPA	**Standing Stone**	**65.35**	**351**	P	**P**	**14 55 47.2**	**+0.2**
N59A	**State Game Lan**	**65.35**	**353**	P	**P**	**14 55 47.2**	**+0.2**
	baz=171						
N59A	**State Game Lan**	**65.35**	**353**	P	**P**	**14 55 47.3**	**+0.2**
WSPT	**Westport, CT**	**65.36**	**355**	P	**P**	**14 55 47.5**	**+0.4**
WSPT				IAmb	IAmb	14 56 10.4	
	comp=Z,41nm,1.4s						
X34A	**Smith Ranch, M**	**65.40**	**332**		**P**	**14 55 47.6**	**+0.1**
O52A	**Adamsville**	**65.51**	**348**	P	**P**	**14 55 47.7**	**-0.4**
O53A	**New Philadelph**	**65.52**	**348**	P	**P**	**14 55 48.3**	**+0.1**
	baz=166,SNR=6.6						
O53A	**New Philadelph**	**65.52**	**348**	P	**P**	**14 55 47.6**	**-0.6**
O53A				IAmb	IAmb	14 55 48.9	
	comp=Z,26nm,0.6s						
MGMO	**Mountain Grove**	**65.53**	**338**	P	**P**	**14 55 47.8**	**-0.5**
MGMO				IAmb	IAmb	14 55 49.1	
	comp=Z,16nm,0.8s						
P49A	**Miami Univ. Ec**	**65.57**	**345**	P	**P**	**14 55 47.8**	**-0.7**
	baz=162,SNR=9.6						
P49A	**Miami Univ. Ec**	**65.57**	**345**	P	**P**	**14 55 47.7**	**-0.8**
U38A	**Gravette**	**65.64**	**336**	P	**P**	**14 55 49.0**	**-0.1**
U38A				IAmb	IAmb	14 55 50.7	
	comp=Z,16nm,0.8s						
P48A	**Milroy**	**65.67**	**345**	P	**P**	**14 55 48.0**	**-1.1**
BLO	**Bloomington**	**65.67**	**344**	P	**P**	**14 55 47.9**	**-1.2**
BLO				pmax	pmax		
	comp=Z,32nm,0.5s						
BLO	**Bloomington**	**65.67**	**344**	P	**P**	**14 55 47.9**	**-1.2**
FVM	**French Village**	**65.68**	**340**	P	**P**	**14 55 48.6**	**-0.7**
FVM				pmax	pmax		
	comp=Z,66nm,1.3s						
FVM	**French Village**	**65.68**	**340**	P	**P**	**14 55 48.6**	**-0.7**
TUL1	**Leonard**	**65.71**	**335**	P	**P**	**14 55 49.8**	**+0.3**
	baz=151,SNR=5.7						
TUL1	**Leonard**	**65.71**	**335**		**P**	**14 55 49.5**	**0.0**
TUL1				IAmb	IAmb	14 55 51.1	
	comp=Z,19nm,0.7s						
FNO	**Franklin**	**65.79**	**333**	P	**P**	**14 55 49.6**	**-0.4**
FNO				IAmb	IAmb	14 55 50.6	
	comp=Z,19nm,0.8s						
ACSO	**Alum Creek Sta**	**65.85**	**347**	P	**P**	**14 55 50.0**	**-0.3**
	baz=164						
QSPA	**South Pole Qui**	**65.93**	**180**	P	**P**	**14 55 51.7**	**+1.0**
	comp=Z,55nm,0.5s,baz=319,slow=0.3,SNR=1235						
QSPA	**South Pole Qui**	**65.93**	**180**	P	**P**	**14 55 51.1**	**+0.4**
M57A	**Sunshine Farm,**	**65.93**	**352**	P	**P**	**14 55 51.4**	**+0.6**
KSPA	**Keystone Colle**	**65.98**	**353**	P	**P**	**14 55 51.6**	**+0.6**
KSPA				IAmb	IAmb	14 55 52.5	
	comp=Z,15nm,0.8s						
N53A	**Lisbon**	**65.99**	**349**	P	**P**	**14 55 51.5**	**+0.3**
N53A				IAmb	IAmb	14 55 53.8	
	comp=Z,30nm,1.2s						
N54A	**Moraine State**	**65.99**	**349**	P	**P**	**14 55 51.9**	**+0.7**
	baz=167,SNR=6.9						
N54A	**Moraine State**	**65.99**	**349**	P	**P**	**14 55 51.6**	**+0.4**
N54A				IAmb	IAmb	14 55 52.5	
	comp=Z,36nm,1.1s						
CCM	**Cathedral Cave**	**66.01**	**339**	P	**P**	**14 55 51.0**	**-0.3**
CCM				pmax	pmax		
	comp=Z,26nm,0.7s						
CCM	**Cathedral Cave**	**66.01**	**339**	P	**P**	**14 55 51.4**	**+0.1**
	baz=156						
CCM	**Cathedral Cave**	**66.01**	**339**	P	**P**	**14 55 51.0**	**-0.3**
CCM				IAmb	IAmb	14 55 51.9	
	comp=Z,26nm,0.7s						
OK025	**Westminster Rd**	**66.04**	**333**		**P**	**14 55 51.2**	**-0.4**
O49A	**Covington**	**66.11**	**346**	P	**P**	**14 55 50.6**	**-1.3**
O49A				IAmb	IAmb	14 55 52.0	
	comp=Z,19nm,0.8s						
Q44A	**Meyer Farm, Va**	**66.11**	**341**	P	**P**	**14 55 50.5**	**-1.4**
Q44A				IAmb	IAmb	14 55 51.6	
	comp=Z,19nm,1.0s						
OK031	**S. Brethren Rd**	**66.16**	**334**		**P**	**14 55 52.3**	**-0.1**
BCOK	**Bluff Creek, N**	**66.22**	**333**		**P**	**14 55 52.8**	**+0.1**
BCOK				IAmb	IAmb	14 55 53.4	
	comp=Z,24nm,0.7s						
M55A	**Ridgway**	**66.29**	**350**	P	**P**	**14 55 53.5**	**+0.4**
M55A				IAmb	IAmb	14 55 54.3	
	comp=Z,32nm,1.1s						
QUOK	**Quay**	**66.30**	**334**		**P**	**14 55 53.3**	**+0.1**
S39A	**Bolivar**	**66.38**	**338**	P	**P**	**14 55 53.6**	**0.0**
S39A				IAmb	IAmb	14 55 54.6	
	comp=Z,36nm,0.7s						
N51A	**Ashland**	**66.39**	**347**	P	**P**	**14 55 53.3**	**-0.4**
N51A				IAmb	IAmb	14 55 54.0	
	comp=Z,23nm,0.5s						
M54A	**Oil Creek Stat**	**66.47**	**350**	P	**P**	**14 55 54.8**	**+0.6**
	baz=167,SNR=5.8						
M54A	**Oil Creek Stat**	**66.47**	**350**	P	**P**	**14 55 54.1**	**-0.1**
M54A				IAmb	IAmb	14 55 55.2	
	comp=Z,18nm,0.8s						
L59A	**Walton**	**66.53**	**354**	P	**P**	**14 55 55.1**	**+0.5**
L59A				IAmb	IAmb	14 55 56.3	
	comp=Z,40nm,1.0s						
R40A	**Maddies Statio**	**66.56**	**339**	P	**P**	**14 55 54.4**	**-0.4**
R40A				IAmb	IAmb	14 55 56.2	
	comp=Z,41nm,1.1s						
M53A	**WI Miller and**	**66.58**	**349**	P	**P**	**14 55 55.1**	**+0.2**
	baz=166						
M53A	**WI Miller and**	**66.58**	**349**	P	**P**	**14 55 55.0**	**+0.1**
M53A				IAmb	IAmb	14 55 55.8	
	comp=Z,17nm,0.6s						
L61B	**Northampton**	**66.59**	**356**	P	**P**	**14 55 55.4**	**+0.5**
	baz=174						
MNTX	**Cornudas Mount**	**66.60**	**325**	P	**P**	**14 55 55.6**	**+0.4**
	baz=142,SNR=24						
MNTX	**Cornudas Mount**	**66.60**	**325**	P	**P**	**14 55 54.9**	**-0.4**
BINY	**Binghamton**	**66.64**	**353**	P	**P**	**14 55 56.3**	**+1.0**
	baz=171,SNR=6.2						
N49A	**Columbus Grove**	**66.77**	**346**	P	**P**	**14 55 55.7**	**-0.4**
L56A	**Greenwood**	**66.78**	**352**	P	**P**	**14 55 56.4**	**+0.2**
L56A				IAmb	IAmb	14 55 57.4	
	comp=Z,22nm,0.7s						
M52A	**Chesterland**	**66.80**	**348**	P	**P**	**14 55 56.3**	**0.0**
M52A				IAmb	IAmb	14 55 57.0	
	comp=Z,27nm,0.7s						
T35A	**Sooner Cattle**	**66.87**	**335**	P	**P**	**14 55 56.9**	**0.0**
T35A				IAmb	IAmb	14 55 58.7	
	comp=Z,28nm,1.1s						
P43A	**Skaggs, Pawnee**	**66.94**	**341**	P	**P**	**14 55 56.3**	**-0.8**
P43A				IAmb	IAmb	14 55 57.1	
	comp=Z,50nm,1.1s						
TRY	**Troy**	**66.94**	**355**	P	**P**	**14 55 57.9**	**+0.7**
TRY				IAmb	IAmb	14 55 58.9	
	comp=Z,34nm,1.0s						
SFIN	**Lafayette**	**66.95**	**344**	P	**P**	**14 55 56.3**	**-0.9**
	baz=160						
SFIN	**Lafayette**	**66.95**	**344**	P	**P**	**14 55 56.0**	**-1.2**
SFIN				IAmb	IAmb	14 55 56.9	
	comp=Z,19nm,0.7s						
M50A	**Fremont**	**66.99**	**347**	P	**P**	**14 55 56.8**	**-0.7**
M50A				IAmb	IAmb	14 55 57.9	
	comp=Z,27nm,0.8s						
BLOK	**Blackwell**	**67.01**	**334**	P	**P**	**14 55 58.1**	**+0.4**
N47A	**Urbana**	**67.08**	**345**	P	**P**	**14 55 57.4**	**-0.6**
N47A				IAmb	IAmb	14 55 59.4	
	comp=Z,65nm,1.3s						
CROK	**Carrier**	**67.10**	**333**		**P**	**14 55 57.9**	**-0.4**
MSTX	**Muleshoe**	**67.11**	**328**	P	**P**	**14 55 59.1**	**+0.6**
	baz=145,SNR=19						
MSTX	**Muleshoe**	**67.11**	**328**	P	**P**	**14 55 58.0**	**-0.5**
MSTX				IAmb	IAmb	14 56 00.3	
	comp=Z,60nm,1.1s						
O44A	**Mansfield**	**67.11**	**342**	P	**P**	**14 55 57.3**	**-1.0**
O44A				IAmb	IAmb	14 55 57.7	
	comp=Z,19nm,0.6s						
ERPA	**Erie**	**67.12**	**350**	P	**P**	**14 55 58.5**	**+0.2**
	baz=167						
ERPA	**Erie**	**67.12**	**350**	P	**P**	**14 55 58.2**	**0.0**
WVNY	**West Valley, N**	**67.19**	**351**	P	**P**	**14 55 59.1**	**+0.4**
WVNY				IAmb	IAmb	14 56 00.1	
	comp=Z,32nm,0.8s						
K57A	**Scipio Center**	**67.23**	**353**	P	**P**	**14 55 59.3**	**+0.3**
K57A				IAmb	IAmb	14 55 60.0	
	comp=Z,15nm,0.8s						
KAN13	**South Haven SW**	**67.33**	**334**	P	**P**	**14 55 60.0**	**+0.2**
KAN13				IAmb	IAmb	14 56 01.0	
	comp=Z,33nm,0.9s						
GC02	**Grant County #**	**67.35**	**334**	P	**P**	**14 56 00.1**	**+0.2**
MMNY	**Mt. Morris Dam**	**67.41**	**351**	P	**P**	**14 56 00.6**	**+0.6**
MMNY				IAmb	IAmb	14 56 02.0	
	comp=Z,48nm,1.1s						
KAN14	**Manchester OK**	**67.48**	**334**	P	**P**	**14 56 00.9**	**+0.2**
KAN09	**Caldwell North**	**67.50**	**334**	P	**P**	**14 56 01.2**	**+0.4**
KAN09				IAmb	IAmb	14 56 02.0	
	comp=Z,28nm,0.6s						
KAN01	**Argonia South**	**67.57**	**334**		**P**	**14 56 01.5**	**+0.2**
KAN01				IAmb	IAmb	14 56 02.5	
	comp=Z,29nm,0.8s						
KAN05	**Bluff City Nor**	**67.58**	**334**	P	**P**	**14 56 01.9**	**+0.6**
KAN05				IAmb	IAmb	14 56 02.5	
	comp=Z,26nm,0.8s						
P40A	**Paris**	**67.61**	**339**	P	**P**	**14 56 01.2**	**-0.2**
P40A				IAmb	IAmb	14 56 02.0	
	comp=Z,39nm,1.1s						
LIC	**Lamto**	**67.64**	**72**	*e*P	**P**	**14 56 01.5**	**-0.7**
	comp=Z,21nm,0.5s						
KAN10	**Anthony SW Sta**	**67.68**	**334**		**P**	**14 56 02.6**	**+0.7**
KAN10				IAmb	IAmb	14 56 03.1	
	comp=Z,23nm,1.0s						
KAN06	**Argonia West S**	**67.69**	**334**	P	**P**	**14 56 02.6**	**+0.6**
KAN06				IAmb	IAmb	14 56 03.3	
	comp=Z,26nm,0.8s						
J58A	**Remsen**	**67.72**	**354**	P	**P**	**14 56 02.6**	**+0.6**
J58A				IAmb	IAmb	14 56 04.3	
	comp=Z,34nm,1.4s						
KAN08	**Anthony NE Sta**	**67.72**	**334**	P	**P**	**14 56 02.4**	**+0.2**
KAN08				IAmb	IAmb	14 56 03.5	
	comp=Z,32nm,0.7s						
J59A	**Piesco**	**67.74**	**354**	P	**P**	**14 56 02.9**	**+0.7**
J59A				IAmb	IAmb	14 56 03.8	
	comp=Z,25nm,0.9s						
KAN16	**Harper SW Stat**	**67.75**	**334**		**P**	**14 56 02.6**	**+0.2**
KAN12	**Harper NE Stat**	**67.79**	**334**	P	**P**	**14 56 03.2**	**+0.6**
KAN12				IAmb	IAmb	14 56 05.4	
	comp=Z,62nm,1.4s						
L48A	**N Adams**	**67.80**	**346**	P	**P**	**14 56 02.3**	**-0.3**
J56A	**Wolcott**	**67.81**	**352**	P	**P**	**14 56 02.8**	**+0.3**
J57A	**Williamstown**	**67.84**	**353**	P	**P**	**14 56 02.9**	**+0.2**
J57A				IAmb	IAmb	14 56 04.0	
	comp=Z,18nm,0.9s						
TIC	**Toumodi**	**67.85**	**71**	*e*P	**P**	**14 56 03.0**	**-0.5**
J55A	**Hilton**	**67.92**	**352**	P	**P**	**14 56 03.7**	**+0.5**
J55A				IAmb	IAmb	14 56 04.9	
	comp=Z,41nm,1.1s						
KIC	**Kosan Boka**	**67.95**	**72**	*e*P	**P**	**14 56 02.9**	**-1.2**
	comp=Z,35nm,0.5s						
DBIC	**Dimbokro**	**68.00**	**71**	P	**P**	**14 56 04.0**	**-0.5**
	comp=Z,8.7nm,0.5s,baz=242,slow=6.1,SNR=31						
DBIC	**Dimbokro**	**68.00**	**71**	P	**P**	**14 56 04.0**	**-0.5**
DBIC	**Dimbokro**	**68.00**	**71**	P	**P**	**14 56 03.5**	**-1.0**
M44A	**Midewin, Midew**	**68.15**	**343**	P	**P**	**14 56 04.2**	**-0.6**
M44A				IAmb	IAmb	14 56 04.4	
	comp=Z,19nm,0.8s						
K50A	**Casco**	**68.23**	**348**	P	**P**	**14 56 04.7**	**-0.4**
N41A	**Harden Midland**	**68.31**	**341**	P	**P**	**14 56 04.9**	**-0.9**
LBNH	**Lisbon**	**68.32**	**356**	P	**P**	**14 56 06.4**	**+0.7**
	baz=175						
PECO	**Prince Edward**	**68.47**	**352**	P	**P**	**14 56 06.9**	**+0.2**
PECO				IAmb	IAmb	14 56 07.8	
	comp=Z,21nm,0.7s						
319A	**Douglas**	**68.47**	**322**	P	**P**	**14 56 08.5**	**+1.3**
319A				IAmb	IAmb	14 56 09.7	
	comp=Z,25nm,0.6s						
121A	**Cookes Peak, D**	**68.53**	**324**	P	**P**	**14 56 09.6**	**+2.0**
	baz=140,SNR=16						
121A	**Cookes Peak, D**	**68.53**	**324**	P	**P**	**14 56 09.3**	**+1.7**
121A				IAmb	IAmb	14 56 10.3	
	comp=Z,21nm,0.8s						
KSU1	**Kansas State U**	**68.81**	**336**	P	**P**	**14 56 09.1**	**+0.2**
	baz=151						
KSU1	**Kansas State U**	**68.81**	**336**	P	**P**	**14 56 08.9**	**0.0**
KSU1				IAmb	IAmb	14 56 09.6	
	comp=Z,35nm,1.1s						
L44A	**Lake County Fo**	**68.86**	**344**	P	**P**	**14 56 08.4**	**-0.7**
	baz=160						
LONY	**Lake Ozonia**	**68.90**	**354**	P	**P**	**14 56 09.9**	**+0.6**
	baz=173						
LONY	**Lake Ozonia**	**68.90**	**354**	P	**P**	**14 56 09.2**	**-0.1**
R32A	**Long Quarter,**	**69.04**	**334**	P	**P**	**14 56 11.1**	**+0.6**
R32A				IAmb	IAmb	14 56 11.8	
	comp=Z,31nm,0.8s						
GGN	**Saint George**	**69.06**	**0**	P	**P**	**14 56 10.9**	**+0.7**
GGN				IAmb	IAmb	14 56 19.4	
	comp=Z,55nm,1.4s						
N38A	**Joes South For**	**69.14**	**339**	P	**P**	**14 56 10.7**	**-0.2**
N38A				IAmb	IAmb	14 56 11.2	
	comp=Z,24nm,0.6s						
G65A	**Princeton**	**69.14**	**360**	P	**P**	**14 56 11.2**	**+0.5**

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G65A                                    IAmb    IAmb    14 56 33.9
      comp=Z,37nm,1.5s
L42A  Oliver, Polo       69.16 342      P       P       14 56 10.6 -0.4
L42A                                    IAmb    IAmb    14 56 11.2
      comp=Z,19nm,0.7s
BNM   Barren Site        69.17 326      P       P       14 56 13.3 +1.8
G62A  West of Eustis     69.23 357      P       P       14 56 12.4 +1.0
G62A                                    IAmb    IAmb    14 56 14.5
      comp=Z,30nm,1.4s
PKME  Peaks-Kenny Pk     69.23 358      P       P       14 56 11.7 +0.5
      baz=178
PKME  Peaks-Kenny Pk     69.23 358      P       P       14 56 11.8 +0.5
LENM  Lemitar            69.36 325      P       P       14 56 14.9 +2.3
I49A  Point Hope         69.39 348      P       P       14 56 11.6 -0.7
I49A                                    IAmb    IAmb    14 56 12.6
      comp=Z,28nm,0.6s
K43A  Burlington         69.46 343      P       P       14 56 12.7 -0.1
GBN   Guysborough        69.53   4      P       P       14 56 13.3 +0.2
PLVO  Plevna             69.57 352      P       P       14 56 14.1 +0.6
SADO  Sadowa             69.58 351      P       P       14 56 13.7 +0.2
SADO                                    IAmb    IAmb    14 56 14.1
      comp=Z,18nm,0.5s
L40A  Anamosa            69.67 341      P       P       14 56 14.1  0.0
L40A                                    IAmb    IAmb    14 56 14.6
      comp=Z,46nm,1.1s
ANMO  Albuquerque        69.71 326ceP           P       14 56 16.4 +1.7
ANMO                                    pmax    pmax
      comp=Z,55nm,1.8s
ANMO  Albuquerque        69.71 326      P       P       14 56 16.5 +1.7
      baz=142
ANMO  Albuquerque        69.71 326      P       P       14 56 16.1 +1.3
ANMO                                    IAmb    IAmb    14 56 17.1
      comp=Z,18nm,0.8s
CBKS  Cedar Bluff        69.79 333      P       P       14 56 15.8 +0.8
CBKS                                    pmax    pmax
      comp=Z,45nm,0.7s
CBKS  Cedar Bluff        69.79 333      P       P       14 56 16.1 +1.1
      baz=148,SNR=8.2
CBKS  Cedar Bluff        69.79 333      P       P       14 56 15.8 +0.8
F64A  Sherman            69.81 359      P       P       14 56 15.1 +0.2
LMN   Caledonia Moun     69.82   2      P       P       14 56 14.4 -0.5
LMN                                     IAmb    IAmb    14 56 20.0
      comp=Z,37nm,1.4s
N35A  Tabor              70.01 337      P       P       14 56 16.3 +0.1
TUC   Tucson             70.02 322      P       P       14 56 16.8 +0.2
TUC                                     pmax    pmax
      comp=Z,48nm,1.5s
TUC   Tucson             70.02 322      P       P       14 56 18.0 +1.4
      baz=138
TUC   Tucson             70.02 322      P       P       14 56 16.8 +0.2
TUC                                     IAmb    IAmb    14 56 19.8
      comp=Z,48nm,1.5s
SCIA  State Center       70.14 340      P       P       14 56 17.1 +0.1
      baz=155
SCIA  State Center       70.14 340      P       P       14 56 16.6 -0.4
SCIA                                    IAmb    IAmb    14 56 19.2
      comp=Z,49nm,1.4s
JFWS  Jewell Farm        70.17 342      P       P       14 56 16.9 -0.3
JFWS                                    pmax    pmax
      comp=Z,36nm,0.7s
JFWS  Jewell Farm        70.17 342      P       P       14 56 17.3 +0.1
      baz=158,SNR=12
JFWS  Jewell Farm        70.17 342      P       P       14 56 16.9 -0.3
T25A  Trinidad           70.46 329      P       P       14 56 20.9 +1.6
      baz=144,SNR=20
T25A  Trinidad           70.46 329      P       P       14 56 20.4 +1.0
T25A                                    IAmb    IAmb    14 56 23.1
      comp=Z,19nm,0.8s
TRQ   Mont Tremblant     70.48 355      P       P       14 56 19.0  0.0
N33A  J Bar K, Exete     70.56 336      P       P       14 56 20.0 +0.4
N33A                                    IAmb    IAmb    14 56 20.6
      comp=Z,47nm,0.9s
K38A  Parkersburg        70.67 340      P       P       14 56 19.5 -0.6
K38A                                    IAmb    IAmb    14 56 20.6
      comp=Z,21nm,0.6s
I42A  Draeger Farm,      70.72 343      P       P       14 56 20.3 -0.1
I42A                                    IAmb    IAmb    14 56 21.1
      comp=Z,37nm,0.7s
214A  Organ Pipe Nat     70.93 320      P       P       14 56 24.1 +2.1
      baz=136,SNR=6.2
H43A  Windswept, Lux     70.97 345      P       P       14 56 21.2 -0.7
G45A  Suttons Bay        71.02 346      P       P       14 56 21.8 -0.4
G45A                                    IAmb    IAmb    14 56 22.6
      comp=Z,25nm,0.9s
D62A  Allapoint, All     71.04 359      P       P       14 56 22.4 +0.1
I40A  Norwalk            71.17 342      P       P       14 56 22.8 -0.4
KSCO  Kaye Shedlock’     71.18 331      P       P       14 56 24.9 +1.3
      baz=146
KSCO  Kaye Shedlock’     71.18 331      P       P       14 56 24.5 +0.9
KSCO                                    IAmb    IAmb    14 56 25.7
      comp=Z,28nm,0.7s
BATG  Bathurst New B     71.22   1      P       P       14 56 23.8 +0.4
L34A  Svendsen Farm,     71.25 337      P       P       14 56 23.6 -0.1
L34A                                    IAmb    IAmb    14 56 25.2
      comp=Z,46nm,0.8s
BGNE  Belgrade           71.40 336      P       P       14 56 25.4 +0.7
      baz=150,SNR=20
BGNE  Belgrade           71.40 336      P       P       14 56 25.0 +0.3
SDCO  Great Sand Dun     71.46 329      P       P       14 56 27.2 +1.8
      baz=143,SNR=34
SDCO  Great Sand Dun     71.46 329      P       P       14 56 26.7 +1.3
W18A  Petrified Fore     71.55 324      P       P       14 56 27.7 +1.8
      baz=139,SNR=10
W18A  Petrified Fore     71.55 324      P       P       14 56 27.2 +1.3
W18A                                    IAmb    IAmb    14 56 28.4
      comp=Z,29nm,1.0s
X16A  Lo Mia Camp, P     71.95 323      P       P       14 56 28.6 +0.3
X16A                                    IAmb    IAmb    14 56 31.8
      comp=Z,34nm,1.4s
E46A  Sault Ste Mari     72.01 348      P       P       14 56 28.0 -0.1
113A  Mohawk Valley,     72.08 320      P       P       14 56 30.3 +1.4
S22A  4UR Ranch, Cre     72.10 328      P       P       14 56 30.8 +1.5
      baz=142,SNR=9.7
I37A  Lemond, Waseca     72.10 340      P       P       14 56 28.5 -0.2
Q24A  Divide             72.27 330      P       P       14 56 32.0 +1.7
      baz=144,SNR=20
G40A  Rib Lake           72.33 343      P       P       14 56 29.5 -0.6
G40A                                    IAmb    IAmb    14 56 31.6
      comp=Z,36nm,1.5s
Y14A  Wickenburg         72.48 321      P       P       14 56 32.0 +0.7
MVCO  Mesa Verde         72.50 326      P       P       14 56 33.2 +1.6
      baz=141,SNR=19
MVCO  Mesa Verde         72.50 326      P       P       14 56 32.1 +0.5
MVCO                                    IAmb    IAmb    14 56 35.4
      comp=Z,26nm,0.8s
E43A  Lone Tree Farm     72.59 346      P       P       14 56 31.4 -0.1
E43A                                    IAmb    IAmb    14 56 32.6
      comp=Z,29nm,0.7s
VLDQ  Val d'Or           72.65 353      P       P       14 56 32.2 +0.4
KOWA  Kowa               72.66  65      P       P       14 56 32.5 -0.2
K31A  O'Neill            72.68 336      P       P       14 56 32.9 +0.6
WUAZ  Wupatki            72.73 323      P       P       14 56 35.1 +2.2
      baz=138,SNR=18
WUAZ  Wupatki            72.73 323      P       P       14 56 33.7 +0.8
WUAZ                                    IAmb    IAmb    14 56 35.7
      comp=Z,23nm,0.9s
COWI  Conover            72.83 344      P       P       14 56 32.9 -0.1
ECSD  EROS Data Cent     72.89 338      P       P       14 56 33.7 +0.3
      baz=152,SNR=14
ECSD  EROS Data Cent     72.89 338      P       P       14 56 33.4  0.0
ECSD                                    IAmb    IAmb    14 56 34.3
      comp=Z,33nm,1.2s
GLA   Glamis             72.91 319      P       P       14 56 35.5 +1.6
      baz=135
SPMN  Marine on St.      73.02 341      P       P       14 56 34.0 -0.2
      baz=156
SPMN  Marine on St.      73.02 341      P       P       14 56 33.9 -0.2
SPMN                                    IAmb    IAmb    14 56 34.6
      comp=Z,21nm,0.8s
ISCO  Idaho Springs      73.16 330      P       P       14 56 35.1 -0.4
ISCO                                    pmax    pmax
      comp=Z,14nm,1.0s
ISCO  Idaho Springs      73.16 330      P       P       14 56 37.1 +1.6
      baz=144,SNR=15
ISCO  Idaho Springs      73.16 330      P       P       14 56 35.0 -0.4
SMCO  Snowmass           73.30 329      P       P       14 56 36.7 +0.3
SMCO                                    IAmb    IAmb    14 56 39.1
      comp=Z,17nm,0.7s
SYO   Syowa Base         73.34 159⇓eP           P       14 56 36.6 +0.8
SYO   Syowa Base         73.34 159⇑ePcP         PcP     14 56 47.4 -3.8
SYO   Syowa Base         73.34 159⇑epP          pP      14 57 16.4 -1.1
IKP   In-Ko-Pah, Jac     73.39 318      P       P       14 56 38.9 +2.1
      baz=134,SNR=5.2
PDMCI Parker Dam,Lak     73.39 321      P       P       14 56 38.5 +1.9
      baz=136
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SWSC  Sam W. Stewart     73.41 319      P       P       14 56 38.6 +1.9
      baz=134
D41A  Chassel            73.59 345      P       P       14 56 38.0 +0.5
DRLN  Deer Lake          73.70   7      P       P       14 56 38.0  0.0
BC3   Big Chuckawall     73.70 320      P       P       14 56 40.5 +1.9
      baz=135,SNR=13
MONP2 Monument Peak      73.75 318      P       P       14 56 40.7 +1.8
      baz=134
BAR   Barrett            73.76 318      P       P       14 56 40.1 +1.4
F36A  Milaca             73.81 341      P       P       14 56 38.4 -0.4
F36A                                    IAmb    IAmb    14 56 39.3
      comp=Z,22nm,0.8s
W13A  Hualapai Mount     73.82 322      P       P       14 56 40.5 +1.1
IRM   Iron Mountain      73.87 320      P       P       14 56 41.5 +2.0
      baz=135,SNR=17
U15A  North Rim          73.90 323      P       P       14 56 41.4 +1.6
NEE2  Needles Airpor     74.00 321      P       P       14 56 41.6 +1.5
      baz=136
109C  Camp Elliot, M     74.16 318      P       P       14 56 42.7 +1.6
      baz=133
N23A  Red Feather La     74.19 330      P       P       14 56 43.1 +1.7
      baz=144,SNR=9.9
BELC  Belle Mtn. Jos     74.27 319      P       P       14 56 43.9 +2.1
      baz=134,SNR=8.1
SUSD  Miller             74.33 337      P       P       14 56 41.9 +0.1
      baz=150
SUSD  Miller             74.33 337      P       P       14 56 41.9 +0.1
SUSD                                    IAmb    IAmb    14 56 42.7
      comp=Z,29nm,0.7s
VNDA  Vanda              74.41 190      P       P       14 56 43.9 +1.9
      comp=Z,9.6nm,0.8s,baz=126,slow=5.6,SNR=40
VNDA  Vanda              74.41 190      P       P       14 56 42.2 +0.3
GMRC  Granite Mounta     74.62 320      P       P       14 56 46.1 +2.3
      baz=135,SNR=30
KNB   Kanab              74.62 324      P       P       14 56 45.6 +1.7
KNB                                     pmax    pmax
      comp=Z,66nm,1.2s
KNB   Kanab              74.62 324      P       P       14 56 45.6 +1.7
KNB                                     IAmb    IAmb    14 56 48.5
      comp=Z,66nm,1.2s
F33A  5 Mile Ranch,      74.64 339      P       P       14 56 43.4 -0.2
O20A  White River Ci     74.65 328      P       P       14 56 45.9 +1.8
      baz=142,SNR=21
O20A  White River Ci     74.65 328      P       P       14 56 45.3 +1.3
O20A                                    IAmb    IAmb    14 56 46.5
      comp=Z,26nm,0.8s
MURC  Murrieta           74.71 318      P       P       14 56 46.3 +2.0
      baz=134
LCMT  Little Creek M     74.85 323      P       P       14 56 46.6 +1.4
SRU   San Rafael Swe     74.98 326      P       P       14 56 46.3 +0.3
SRU                                     pmax    pmax
      comp=Z,26nm,0.6s
SRU   San Rafael Swe     74.98 326      P       P       14 56 46.3 +0.3
SRU                                     IAmb    IAmb    14 56 49.1
      comp=Z,26nm,0.6s
BBRC  Big Bear Solar     75.00 319      P       P       14 56 48.4 +2.3
      baz=134
MTPU  Mount Pierson      75.04 325      P       P       14 56 47.7 +1.2
HEC   Hector,Ludlow      75.04 320      P       P       14 56 48.6 +2.4
      baz=134,SNR=12
SCI2  San Clemente I     75.11 317      P       P       14 56 48.4 +1.9
      baz=132
EYMN  Ely                75.15 343      P       P       14 56 46.4 -0.1
      baz=157,SNR=6.2
EYMN  Ely                75.15 343      P       P       14 56 45.9 -0.5
Q16A  Castle Valley      75.17 326      P       P       14 56 48.2 +1.2
Q16A                                    IAmb    IAmb    14 56 50.4
      comp=Z,18nm,0.8s
SZCU  Shurtz Canyon      75.19 324      P       P       14 56 48.5 +1.3
TUQ   Turquoise Moun     75.23 321      P       P       14 56 49.4 +2.1
      baz=135,SNR=11
P18A  Preston Nutter     75.24 327      P       P       14 56 48.8 +1.3
P18A                                    IAmb    IAmb    14 56 51.0
      comp=Z,24nm,0.7s
CCUT  Cedar City         75.31 324      P       P       14 56 49.9 +2.0
CCUT                                    IAmb    IAmb    14 56 51.2
      comp=Z,27nm,0.8s
CIS   Catalina Islan     75.32 318      P       P       14 56 49.8 +2.0
      baz=133
P17A  Butcher Ranch,     75.37 327      P       P       14 56 49.3 +1.1
P17A                                    IAmb    IAmb    14 56 50.4
      comp=Z,22nm,0.9s
MSU   Marysvale          75.38 325      P       P       14 56 49.6 +1.3
MSU   Marysvale          75.38 325      P       P       14 56 49.6 +1.3
MVU   Marysvale          75.40 325      P       P       14 56 49.9 +1.5
RWWY  Rawlins            75.40 330      P       P       14 56 49.5 +1.2
RWWY                                    IAmb    IAmb    14 56 50.6
      comp=Z,20nm,0.8s
BFSC  Mount Baldy Ra     75.42 319      P       P       14 56 50.2 +1.7
      baz=133,SNR=5.5
RRX   Edison Barstow     75.47 320      P       P       14 56 50.7 +2.1
      baz=134
TMUT  Trail Mountain     75.47 326      P       P       14 56 50.0 +1.1
SHPR  Sheep Range        75.55 322      P       P       14 56 50.7 +1.5
TCRU  Three Creeks R     75.60 325      P       P       14 56 51.2 +1.6
RDMU  Red Mountain       75.63 328      P       P       14 56 50.7 +1.1
RDMU                                    IAmb    IAmb    14 56 51.8
      comp=Z,20nm,0.7s
GSC   Goldstone, Bar     75.65 320      P       P       14 56 50.9 +1.2
GSC                                     pmax    pmax
      comp=Z,13nm,0.9s
GSC   Goldstone, Bar     75.65 320      P       P       14 56 51.7 +2.0
      baz=134,SNR=14
GSC   Goldstone, Bar     75.65 320      P       P       14 56 50.9 +1.2
PASC  Pasadena Art C     75.70 318      P       P       14 56 50.9 +1.0
SHOC  Shoshone, Teco     75.76 321      P       P       14 56 51.8 +1.6
      baz=135
SUR   Sutherland         75.78 119      P       P       14 56 51.9 +1.0
SUR                                     IAmb    IAmb    14 56 53.6
      comp=Z,26nm,0.7s
DECC  Green Verdugo      75.84 318      P       P       14 56 52.3 +1.5
      baz=133
K22A  Casper             75.86 331      P       P       14 56 52.4 +1.6
      baz=143,SNR=7.8
K22A  Casper             75.86 331      P       P       14 56 51.9 +1.1
K22A                                    IAmb    IAmb    14 56 54.8
      comp=Z,37nm,1.3s
SNCC  San Nicolas Is     75.90 317      P       P       14 56 52.6 +1.6
      baz=132
RSSD  Black Hills        76.00 334      P       P       14 56 52.2 +0.6
RSSD                                    pmax    pmax
      comp=Z,15nm,0.7s
RSSD  Black Hills        76.00 334      P       P       14 56 52.9 +1.3
      baz=146
RSSD  Black Hills        76.00 334      P       P       14 56 52.2 +0.6
RSSD                                    IAmb    IAmb    14 56 55.0
      comp=Z,15nm,0.7s
D32A  Dogwood Acres,     76.03 339      P       P       14 56 51.6 +0.1
D32A                                    IAmb    IAmb    14 56 52.3
      comp=Z,24nm,0.8s
EDW2  Edwards Air Fo     76.06 319      P       P       14 56 53.5 +1.5
      baz=133,SNR=7.4
B35A  Bob, Littlefor     76.14 342      P       P       14 56 52.1 +0.1
B35A                                    IAmb    IAmb    14 56 52.8
      comp=Z,29nm,0.8s
QSM   Queen of Sheba     76.15 320      P       P       14 56 53.6 +1.2
GWY   Greenwater Val     76.18 321      P       P       14 56 53.9 +1.1
PPT2  Papeete2           76.28 257 eS           S       15 06 24.7 -0.3
      comp=Z,187nm,31.5s
LRMC  Laurel Mtn Rad     76.29 320      P       P       14 56 55.1 +1.8
      baz=134,SNR=13
PSUT  Pine Spring        76.29 324      P       P       14 56 54.8 +1.4
PSUT                                    IAmb    IAmb    14 56 56.1
      comp=Z,18nm,0.8s
NLU   North Lily Min     76.41 326      P       P       14 56 55.0 +1.0
SCZ2  Santa Cruz Isl     76.47 317      P       P       14 56 56.0 +1.7
      baz=132
FURC  Furnace Creek,     76.49 321      P       P       14 56 56.5 +2.2
      baz=134,SNR=13
MPMC  Manual Prospec     76.57 320      P       P       14 56 56.7 +1.6
      baz=134,SNR=11
AGMN  Agassiz Nation     76.70 341      P       P       14 56 55.5 +0.3
      baz=153,SNR=8.2
AGMN  Agassiz Nation     76.70 341      P       P       14 56 55.3 +0.1
AGMN                                    IAmb    IAmb    14 56 56.1
      comp=Z,23nm,1.0s
TORD  Torodi Ar. Bea     76.78  69      P       P       14 56 55.9 -0.5
      comp=Z,20nm,0.5s,baz=256,slow=5.6,SNR=161
TORD  Torodi Ar. Bea     76.78  69      P       P       14 56 54.9 -1.5
E28A  Huff               76.78 337      P       P       14 56 56.1 +0.3
SPR3  Spring Creek 3     76.88 324      P       P       14 56 58.1 +1.2
ISA   Isabella, Lake     76.88 319      P       P       14 56 58.1 +1.5
ISA                                     pmax    pmax
      comp=Z,17nm,1.0s
ISA   Isabella, Lake     76.88 319      P       P       14 56 58.7 +2.1
      baz=133,SNR=14
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ISA   Isabella, Lake     76.88 319      P       P       14 56 58.1 +1.5
DUG   Dugway, Tooele     76.96 326      P       P       14 56 58.3 +1.2
DUG                                     pmax    pmax
      comp=Z,17nm,1.1s
DUG   Dugway, Tooele     76.96 326      P       P       14 56 58.9 +1.9
      baz=138,SNR=11
DUG   Dugway, Tooele     76.96 326      P       P       14 56 58.3 +1.2
R11A  Troy Canyon, C     77.10 323      P       P       14 57 00.1 +2.2
      baz=136,SNR=22
R11A  Troy Canyon, C     77.10 323      P       P       14 56 58.9 +1.0
PKM   Mcpherson Peak     77.17 318      P       P       14 57 00.5 +2.0
      baz=132,SNR=15
CWC   Cottonwood Cre     77.18 320      P       P       14 57 00.2 +1.8
      baz=133
BW06  Boulder Array      77.32 329      P       P       14 57 00.1 +1.0
      baz=141,SNR=11
BW06  Boulder Array      77.32 329      P       P       14 56 59.8 +0.7
PD31  Pinedale Array     77.32 329      P       P       14 56 59.6 +0.6
PDAR  Pinedale Array     77.32 329      P       P       14 57 00.1 +1.0
      comp=Z,2.8nm,0.5s,baz=127,slow=7.8,SNR=43
PDAR  Pinedale Array     77.32 329      P       P       14 56 59.7 +0.6
VES   Vestal, Richgr     77.37 319      P       P       14 57 00.9 +1.6
      baz=133,SNR=6.2
LCH   Last Change Ra     77.47 321      P       P       14 57 00.9 +1.0
MDND  Maddock            77.50 338      P       P       14 57 00.9 +1.2
      baz=150,SNR=9.0
MDND  Maddock            77.50 338      P       P       14 57 00.2 +0.5
SMMC  Simmler            77.57 318      P       P       14 57 02.7 +2.3
      baz=132,SNR=6.8
SPUT  South Promonto     77.61 327      P       P       14 57 01.6 +1.0
SPUT                                    IAmb    IAmb    14 57 04.3
      comp=Z,34nm,1.2s
BGU   Big Grassy Mou     77.62 326      P       P       14 57 01.4 +0.7
TIN   Tinemaha, Big      77.69 320      P       P       14 57 03.1 +1.9
      baz=133
TSUM  Tsumeb             77.70 106      P       P       14 56 59.7 -2.0
TPH   Tonopah            77.82 322      P       P       14 57 03.2 +1.3
TPH                                     pmax    pmax
      comp=Z,54nm,0.9s
TPH   Tonopah            77.82 322      P       P       14 57 03.2 +1.3
PAGB  Antelope Grade     78.00 318      P       P       14 57 03.9 +1.1
PAGB                                    IAmb    IAmb    14 57 05.3
      comp=Z,21nm,1.0s
AHID  Auburn Hatcher     78.05 328      P       P       14 57 04.2 +1.1
AHID                                    IAmb    IAmb    14 57 05.1
      comp=Z,26nm,0.8s
HVU   Hansel Valley      78.12 327      P       P       14 57 04.1 +0.6
HVU                                     pmax    pmax
      comp=Z,16nm,1.0s
HVU   Hansel Valley      78.12 327      P       P       14 57 04.1 +0.6
REDW  Red Top Meadow     78.39 329      P       P       14 57 05.7 +0.7
ECR   Eagle Creek        78.40 329      P       P       14 57 06.4 +1.3
SNOW  Snow King Moun     78.42 329      P       P       14 57 06.5 +1.3
MLAC  Mammoth, Mammo78.44 321           P       P       14 57 07.3 +1.9
      baz=133
ULM   Lac du Bonnet      78.45 342      P       P       14 57 05.1 +0.2
      comp=Z,15nm,0.6s,baz=154,slow=6.8,SNR=21
ULM   Lac du Bonnet      78.45 342      P       P       14 57 04.2 -0.6
ULM                                     IAmb    IAmb    14 57 05.6
      comp=Z,22nm,0.8s
LOHW  Long Hollow        78.46 329      P       P       14 57 06.4 +1.0
LOHW                                    IAmb    IAmb    14 57 08.5
      comp=Z,17nm,0.8s
TPAW  Teton Pass         78.53 329      P       P       14 57 06.5 +0.7
MDPB  Devils Postpil     78.58 320      P       P       14 57 06.8 +0.6
ELK   Elko               78.63 325      P       P       14 57 07.3 +0.9
ELK                                     pmax    pmax
      comp=Z,12nm,0.8s
ELK   Elko               78.63 325      P       P       14 57 07.3 +0.9
MOOW  Moose Ponds        78.63 329      P       P       14 57 06.9 +0.6
PMPB  Monarch Peak       78.65 318      P       P       14 57 07.8 +1.3
LHV   Little Huntoon     78.67 321      P       P       14 57 07.6 +1.3
FXWY  Fox Creek          78.68 329      P       P       14 57 07.5 +0.9
SCHQ  Schefferville      78.78   0      P       P       14 57 06.0 -0.5
      comp=Z,4.4nm,0.5s,baz=188,slow=4.0,SNR=11
SCHQ  Schefferville      78.78   0      P       P       14 57 06.4 -0.1
FLWY  Flagg Ranch        78.87 330      P       P       14 57 08.8 +1.2
FLWY                                    IAmb    IAmb    14 57 10.2
      comp=Z,26nm,0.9s
RYN   Ryan               78.94 321      P       P       14 57 09.4 +1.4
LAO   LASA Array         78.98 334      P       P       14 57 09.1 +1.1
      baz=144,SNR=14
LAO   LASA Array         78.98 334      P       P       14 57 08.7 +0.7
LAO                                     IAmb    IAmb    14 57 09.7
      comp=Z,25nm,0.8s
KVN   Kaiserville        78.99 322      P       P       14 57 09.6 +1.2
KVN                                     pmax    pmax
      comp=Z,20nm,0.7s
KVN   Kaiserville        78.99 322      P       P       14 57 09.6 +1.2
KVN                                     IAmb    IAmb    14 57 10.4
      comp=Z,20nm,0.7s
RLMT  Red Lodge          79.02 331      P       P       14 57 09.9 +1.5
      baz=141,SNR=20
RLMT  Red Lodge          79.02 331      P       P       14 57 09.7 +1.3
RLMT                                    IAmb    IAmb    14 57 11.4
      comp=Z,20nm,0.8s
H17A  Grant Village      79.05 330      P       P       14 57 10.6 +2.0
      baz=140
H17A  Grant Village      79.05 330      P       P       14 57 10.6 +2.0
YMP   Mirror Lake Pl     79.12 330      P       P       14 57 09.6 +0.5
YNR   Norris Junctio     79.34 330      P       P       14 57 11.7 +1.5
SAO   San Andreas Ge     79.41 318      P       P       14 57 11.5 +1.1
SAO                                     pmax    pmax
      comp=Z,8.0nm,1.0s
SAO   San Andreas Ge     79.41 318      P       P       14 57 11.4 +1.1
YMR   Madison River      79.44 330      P       P       14 57 11.7 +1.1
YMR                                     IAmb    IAmb    14 57 15.0
      comp=Z,41nm,1.0s
YHH   Holmes Hill        79.48 330      P       P       14 57 11.8 +0.8
YHH                                     IAmb    IAmb    14 57 13.7
      comp=Z,22nm,0.8s
YERR  Yerington          79.59 321      P       P       14 57 11.9 +0.3
CMB   Columbia Colle     79.61 320      P       P       14 57 12.0 +0.5
CMB                                     pmax    pmax
      comp=Z,4.0nm,0.9s
CMB   Columbia Colle     79.61 320      P       P       14 57 12.0 +0.5
DGMT  Dagmar             79.66 336      P       P       14 57 13.2 +1.6
      baz=146,SNR=21
DGMT  Dagmar             79.66 336      P       P       14 57 12.5 +1.0
PNTR  Pine Nut           79.87 321      P       P       14 57 14.8 +1.7
PNTR                                    IAmb    IAmb    14 57 17.2
      comp=Z,25nm,0.8s
VCNR  Virginia City      80.03 321      P       P       14 57 15.2 +1.2
PAHR  Pah Rah Range      80.16 322      P       P       14 57 16.1 +1.4
PAHR                                    IAmb    IAmb    14 57 18.7
      comp=Z,29nm,0.9s
MPK   Martis Peak        80.25 321      P       P       14 57 16.2 +1.0
HLID  Hailey             80.25 327      P       P       14 57 17.1 +2.1
      baz=137,SNR=61
HLID  Hailey             80.25 327      P       P       14 57 16.6 +1.5
HLID                                    IAmb    IAmb    14 57 17.8
      comp=Z,26nm,0.8s
BCYI  Bear Canyon        80.31 328      P       P       14 57 16.7 +1.3
BOZ   Bozeman (W)        80.45 330      P       P       14 57 16.5 +0.5
BOZ                                     pmax    pmax
      comp=Z,8.0nm,1.0s
BOZ   Bozeman (W)        80.45 330      P       P       14 57 17.3 +1.3
      baz=140,SNR=10
BOZ   Bozeman (W)        80.45 330      P       P       14 57 16.5 +0.5
BOSA  Boshof             80.72 117      P       P       14 57 18.1 +0.2
      comp=Z,20nm,0.5s,baz=258,slow=3.6,SNR=54
BOSA  Boshof             80.72 117      P       P       14 57 17.4 -0.5
BOSA                                    IAmb    IAmb    14 57 18.8
      comp=Z,22nm,0.6s
DLMT  Dillon             80.72 329      P       P       14 57 18.2 +0.8
DLMT                                    IAmb    IAmb    14 57 21.3
      comp=Z,33nm,1.2s
MFID  Camas Ranch        80.85 326      P       P       14 57 19.1 +0.9
MAW   Mawson             81.21 163      P       P       14 57 20.6 +1.0
      comp=Z,23nm,0.5s,baz=207,slow=6.2,SNR=130
MAW   Mawson             81.21 163      P       P       14 57 20.1 +0.5
ORV   Oroville           81.27 321      P       P       14 57 21.3 +1.0
ORV                                     pmax    pmax
      comp=Z,48nm,1.4s
ORV   Oroville           81.27 321      P       P       14 57 21.3 +1.0
ORV                                     IAmb    IAmb    14 57 24.2
      comp=Z,48nm,1.4s
EGMT  Eagleton           81.50 333      P       P       14 57 22.2 +0.8
      baz=141,SNR=12
EGMT  Eagleton           81.50 333      P       P       14 57 21.9 +0.5
EGMT                                    IAmb    IAmb    14 57 22.8
      comp=Z,20nm,0.9s
WVOR  Wild Horse Val     81.62 324      P       P       14 57 23.0 +0.8
WVOR                                    pmax    pmax
      comp=Z,16nm,1.5s
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WVOR	Wild Horse Val	81.62	324	P	P	14 57 23.0	+0.8
O03E	Paynes Creek	81.94	321	P	P	14 57 24.3	+0.4
	baz=131,SNR=5.5						
PLID	Pearl Lake	82.14	327	P	P	14 57 25.6	+0.6
PLID				IAmb	IAmb	14 57 27.0	
	comp=Z,26nm,0.7s						
MOD	Modoc Plateau	82.16	323	P	P	14 57 25.9	+0.8
J08A	Circle Bar Ran	82.18	325	P	P	14 57 26.5	+1.4
J08A				IAmb	IAmb	14 57 27.4	
	comp=Z,25nm,0.7s						
LBTB	Lobatse	82.39	114	P	P	14 57 26.3	-0.5
LBTB				pmax	pmax		
	comp=Z,30nm,0.6s						
LBTB	Lobatse	82.39	114	P	P	14 57 26.3	-0.5
LBTB				IAmb	IAmb	14 57 28.1	
	comp=Z,30nm,0.6s						
O02D	Mt. Diablo Mer	82.43	320	P	P	14 57 27.4	+1.0
	baz=130						
MSO	Missoula	82.44	330	P	P	14 57 27.9	+1.6
	baz=138,SNR=9.1						
MSO	Missoula	82.44	330	P	P	14 57 27.3	+0.9
WDC	Whiskeytown Da	82.55	321	P	P	14 57 26.3	-0.6
WDC				pmax	pmax		
	comp=Z,11nm,0.7s						
WDC	Whiskeytown Da	82.55	321	P	P	14 57 26.3	-0.6
BMO	Blue Mountains	82.62	327	P	P	14 57 28.0	+0.6
BMO				pmax	pmax		
	comp=Z,13nm,0.8s						
BMO	Blue Mountains	82.62	327	P	P	14 57 28.0	+0.6
N02D	Trinity Center	82.90	321	P	P	14 57 29.1	+0.3
	baz=131						
PCVE	Castro Verde	82.90	43	eP	P	14 57 30.0	+1.2
	comp=Z,45nm,1.7s						
MESJ	Messejana	82.92	43	eP	P	14 57 33.7	+4.8
M04C	Macdoel	82.94	322	P	P	14 57 31.4	+2.3
	baz=131						
K05A	Summer Lake	83.04	323	P	P	14 57 30.6	+0.9
K05A				IAmb	IAmb	14 57 32.1	
	comp=Z,27nm,0.8s						
I07A	Izee	83.22	325	P	P	14 57 31.4	+0.9
M02C	Callahan	83.26	321	P	P	14 57 31.7	+1.0
	baz=131						
F10A	Beach Ranch, E	83.38	327	P	P	14 57 32.0	+0.8
F10A				IAmb	IAmb	14 57 38.5	
	comp=Z,18nm,0.8s						
K04D	Chiloquin, OR	83.45	323	P	P	14 57 33.1	+1.4
	baz=132						
L04D	Klamath Falls	83.48	322	P	P	14 57 32.5	+0.6
	baz=131						
J05D	Fort Rock, OR	83.60	323	P	P	14 57 34.0	+1.5
	baz=132,SNR=6.2						
PMTG	Montargil	83.67	42	eP	P	14 57 33.6	+0.9
	comp=Z,29nm,1.6s						
G08A	Pilot Rock	83.77	326	P	P	14 57 33.8	+0.5
PINE	Pine Mountain	83.78	324	P	P	14 57 34.6	+1.1
PINE				IAmb	IAmb	14 57 35.8	
	comp=Z,23nm,0.7s						
J04D	Umpqua Nationa	84.05	323	P	P	14 57 36.0	+1.2
	baz=131						
WALA	Waterton Lakes	84.08	331	P	P	14 57 35.0	+0.2
L02E	Cave Junction	84.18	321	P	P	14 57 36.8	+1.5
	baz=130						
I05D	Terrebonne, OR	84.36	324	P	P	14 57 37.8	+1.7
	baz=132,SNR=6.5						
K02D	Willamette Mer	84.56	322	P	P	14 57 38.8	+1.6
	baz=130						
I04A	Tendick Farm,	84.58	323	P	P	14 57 39.0	+1.8
	baz=131						
HAWA	Hanford	84.82	327	P	P	14 57 38.8	+0.4
MTE	Manteigas	84.90	41	eP	P	14 57 39.4	+0.4
	comp=Z,37nm,1.8s						
G05D	Wamic, OR	84.95	325	P	P	14 57 40.8	+1.7
	baz=132						
NEW	Newport	84.96	329	P	P	14 57 38.3	-0.8
NEW				pmax	pmax		
	comp=Z,7.0nm,0.7s						
NEW	Newport	84.96	329	P	P	14 57 39.2	+0.2
	baz=135,SNR=7.7						
NEW	Newport	84.96	329	P	P	14 57 38.3	-0.8
D08A	Wollman Farm,	84.97	327	P	P	14 57 40.0	+0.9
E07A	Sunnyside	85.09	327	P	P	14 57 40.7	+0.9
C09A	Chrisman Ranch	85.18	328	P	P	14 57 40.8	+0.7
C09A				IAmb	IAmb	14 57 43.2	
	comp=Z,37nm,0.8s						
H04D	Lebanon	85.23	324	P	P	14 57 41.6	+1.1
	baz=131						
POLO	Lamas de Olo	85.35	41	eP	P	14 57 42.2	+1.0
PGAV	Gavieira, Arco	85.44	40	eP	P	14 57 41.6	0.0
	comp=Z,49nm,1.6s						
MVO	Moncorvo	85.68	41	eP	P	14 57 43.6	+0.8
	comp=Z,40nm,2.1s						
FCC	Fort Churchill	85.70	346	P	P	14 57 42.7	+0.4
FCC				pmax	pmax		
	comp=Z,46nm,0.6s						
FCC	Fort Churchill	85.70	346	P	P	14 57 42.7	+0.4
LTY	Liberty	85.98	327	P	P	14 57 44.5	+0.3
LTY				IAmb	IAmb	14 57 46.4	
	comp=Z,13nm,0.7s						
B08A	Colville Reser	86.08	328	P	P	14 57 44.5	-0.1
PBRG	Braganca	86.24	41	eP	P	14 57 47.8	+2.3
	comp=Z,45nm,1.8s						
PAB	San Pablo	86.36	44	P	P	14 57 46.7	+0.5
PAB				pmax	pmax		
	comp=Z,8.0nm,0.9s						
PAB	San Pablo	86.36	44	P	P	14 57 46.7	+0.5
F04D	Rainier, OR	86.40	325	P	P	14 57 45.7	-0.5
	baz=131						
ESDC	Sonseca Array	86.68	44	P	P	14 57 48.9	+1.1
	comp=Z,2.3nm,0.7s,baz=232,slow=5.0,SNR=9.6						
ESDC	Sonseca Array	86.68	44	P	P	14 57 48.1	+0.3
EDM	Edmonton	86.96	334	P	P	14 57 48.3	-0.5
EDM				pmax	pmax		
	comp=Z,31nm,0.7s						
EDM	Edmonton	86.96	334	P	P	14 57 48.3	-0.5
EDM				IAmb	IAmb	14 57 50.5	
	comp=Z,31nm,0.7s						
B06A	Marblemount	87.23	327	P	P	14 57 50.0	0.0
B06A				IAmb	IAmb	14 57 51.8	
	comp=Z,20nm,0.7s						
B05A	Bryant	87.37	327	P	P	14 57 51.5	+0.7
	baz=132						
D03D	Eldon	87.39	326	P	P	14 57 51.8	+0.9
	baz=131						
LSZ	Lusaka	88.55	106	LR	LR	15 34 48.4	
	comp=Z,49nm,19.6s,baz=265,slow=34						
LLLB	Lillooet	88.83	329	P	P	14 57 57.2	-0.4
LLLB				IAmb	IAmb	14 57 59.3	
	comp=Z,11nm,0.8s						
CASY	Casey	89.72	179	P	P	14 58 02.5	+0.8
SFJD	Kangerlussuaq	91.83	6	LR	LR	15 45 36.1	
	comp=Z,42nm,19.0s,baz=186,slow=39						
YKA	Yellowknife Ar	94.34	340	P	P	14 58 23.3	+0.5
	comp=Z,6.9nm,0.6s,baz=123,slow=5.9,SNR=55						
YKA	Yellowknife Ar	94.34	340	P	P	14 58 22.9	+0.1
BORG	Borgarnes	95.53	18	LR	LR	15 40 39.4	
	comp=Z,47nm,18.5s,baz=260,slow=35						
MBAR	Mbarara	96.93	94	LR	LR	15 40 05.6	
	comp=Z,35nm,19.3s,baz=226,slow=34						
CRAG	Craig	97.16	328	P	Pdif	14 58 36.1	+0.3
	baz=123						
TGTN	Hyland Airport	98.50	335	Pdiff	Pdif	14 58 42.9	+1.1
	baz=126						
DAVOX	Davos/Dischmat	98.97	43	LR	LR	15 42 59.5	
	comp=Z,80nm,18.1s,baz=242,slow=35						
P33M	Teslin, Yukon	99.59	333	Pdiff	Pdif	14 58 47.5	+0.8
	baz=122						
SKAG	Skagway	100.28	331	Pdiff	Pdif	14 58 50.5	+0.9
	baz=120						
FARO	Faro, Yukon	100.88	334	Pdiff	Pdif	14 58 53.7	+1.3
	baz=122						
M30M	Minto, Yukon	102.44	334	Pdiff	Pdif	14 58 59.9	+0.6
	baz=119						
CLL	Collm	102.72	39	ePP	PKiKP	15 03 18.0	-2.6
A36M	Sachs Harbour	103.80	344	Pdiff	Pdif	14 59 05.4	+0.3
	baz=127						
DAWY	Dawson	104.18	334	Pdiff	Pdif	14 59 06.6	-0.4
	baz=116						
M27K	Edge Creek, AK	104.46	332	Pdiff	Pdif	14 59 09.0	+0.6
	baz=114						
J26L	Joseph Creek	106.01	334	PKiKP	PKiKP	15 03 26.7	+0.3
	baz=112						
ILAR	Eielson Array	107.45	334	Pdiff	Pdif	14 59 21.9	+0.4
	comp=Z,0.3nm,0.6s,baz=146,slow=2.3,SNR=6.9						
COLD	Coldfoot	109.49	336	PKiKP	PKiKP	15 03 33.4	+0.7
	baz=106						
TOLK	Toolik Lake Re	109.66	337	PKiKP	PKiKP	15 03 33.7	+0.7
	baz=106						
J20K	Nowinta River	110.29	332	PKiKP	PKiKP	15 03 35.1	+0.9
	baz=104						
AKASG	Malin Array Be	112.32	43	PKiKP	PKiKP	15 03 37.9	-0.6
	comp=Z,1.2nm,0.4s,baz=263,slow=2.9,SNR=13						
AKASG				PKKPbc	PKKPbc	15 14 29.8	-0.7
	comp=Z,0.6nm,0.4s,baz=66,slow=3.8,SNR=4.7						
FINES	FINESS Array B	112.52	31	PKiKP	PKiKP	15 03 38.9	+0.4
	comp=Z,4.8nm,0.8s,baz=90,slow=1.4,SNR=3.3						
BRTR	Keskin Array B	113.06	55	PKiKP	PKiKP	15 03 40.7	+0.3
	comp=Z,1.2nm,0.7s,baz=204,slow=2.5,SNR=3.1						
ARCES	ARCESS Array B	113.42	23	PKiKP	PKiKP	15 03 40.1	+0.1
	comp=Z,1.5nm,0.8s,baz=350,slow=4.9,SNR=3.6						
ARCES				PKKPbc	PKKPab	15 14 31.9	+0.8
	comp=Z,1.3nm,0.6s,baz=93,slow=4.5,SNR=5.7						
ANN	Anapa	116.77	51	i PKIKP	PKPdf	15 03 45.8	-1.4
ANN				pmax	pmax		
	comp=Z,57nm,1.3s						
OBN	Obninsk	117.31	39	i PKIKP	PKiKP	15 03 48.3	+0.4
OBN				e		15 04 31.5	
OBN				e	PP	15 05 01.4	-0.3
OBN				ePPP	PPP	15 07 34.8	
OBN				eSS	SS	15 21 18.3	+20
OBN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
STKA	Stephens Creek	117.78	208	PKP	PKPdf	15 03 49.4	-0.4
	comp=Z,1.6nm,0.7s,baz=170,slow=3.9,SNR=4.1						
STKA				PKKPbc	PKKPbc	15 14 11.3	-0.2
	comp=Z,1.9nm,0.7s,baz=360,slow=10,SNR=4.5						
KLMR	Klimovskoe	118.98	32	ePKIKP	PKPdf	15 03 47.0	-4.0
KLMR				pmax	pmax		
	comp=Z,13nm,1.1s						
KLMR	Klimovskoe	118.98	32	ePKPdf	PKPdf	15 03 47.0	-4.0
KLMR				AMP		15 03 48.1	
	comp=Z,13nm,1.1s						
KIV	Kislovodsk	120.41	52	ePKIKP	PKPdf	15 03 53.8	-0.6
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KBZ	Khabaz	120.54	52	PKP	PKiKP	15 03 55.3	+0.7
	comp=Z,3.4nm,0.7s,baz=193,slow=4.6,SNR=9.2						
BELG	Belogornoye	123.87	42	i PKIKP	PKPdf	15 04 00.7	+0.1
BILL	Bilibino	125.69	338c	iPKIKP	PKiKP	15 04 04.1	0.0
BILL				e		15 04 49.4	
BILL				e	PP	15 05 57.9	-0.1
BILL				e		15 10 58.9	
BILL				eSS	SS	15 22 50.4	+6.1
BILL				pmax	pmax		
	comp=Z,9.0nm,1.3s						
BILL	Bilibino	125.69	338	PKPdf	PKiKP	15 04 04.0	-0.1
ASAR	Alice Springs	128.16	205	PKhKP	PKPpre	15 03 56.4	
	comp=Z,0.4nm,0.6s,baz=139,slow=2.5,SNR=7.3						
ASAR				PKP	PKPdf	15 04 09.8	-0.1
	comp=Z,9.7nm,0.6s,baz=138,slow=1.9,SNR=94						
ASAR	Alice Springs	128.16	205	PKPdf	PKPdf	15 04 09.3	-0.6
AS31	Alice Springs	128.16	205	PKPdf	PKPdf	15 04 09.4	-0.5
ARU	Arti	129.47	36	PKP	PKiKP	15 04 12.2	+0.2
	comp=Z,2.8nm,0.4s,baz=312,slow=2.7,SNR=17						
ARU	Arti	129.47	36c	iPKIKP	PKiKP	15 04 12.6	+0.6
ARU				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ARU	Arti	129.47	36	PKPdf	PKPdf	15 04 11.5	+0.3
AKTO	Aktyubinsk	130.56	43	SKPbc	SKPbc	15 07 21.8	0.0
	comp=Z,3.0nm,0.9s,baz=327,slow=2.4,SNR=11						
WR0	Warramunga Arr	131.23	208	PKPdf	PKPdf	15 04 15.2	-0.5
WB2	Warramunga Arr	131.32	207	PKPdf	PKPdf	15 04 15.7	-0.3
WRA	Warramunga Arr	131.33	207	PKhKP	PKPpre	15 04 03.0	
	comp=Z,0.8nm,0.6s,baz=137,slow=3.2,SNR=14						
WRA				PKP	PKPdf	15 04 16.2	+0.2
	comp=Z,6.9nm,0.5s,baz=158,slow=1.6,SNR=75						
WRA				SKPbc	SKPbc	15 07 24.8	-0.8
	comp=Z,2.8nm,0.6s,baz=154,slow=3.6,SNR=12						
WRA	Warramunga Arr	131.33	207	PKPdf	PKPdf	15 04 15.5	-0.5
WRAB	Tennant Creek	131.33	207c	iPKIKP	PKPdf	15 04 15.7	-0.3
WRAB				pmax	pmax		
	comp=Z,24nm,1.7s						
WB0	Warramunga Arr	131.46	207		PKPdf	15 04 16.2	-0.1
TIXI	Tiksi	131.73	353	PKP	PKPdf	15 04 15.5	+0.5
	comp=Z,2.5nm,0.3s,baz=344,slow=7.2,SNR=6.8						
TIXI				SKPbc	SKPbc	15 07 24.5	-0.8
	comp=Z,8.0nm,0.7s,baz=32,slow=2.8,SNR=18						
AB31	Akbulak array	132.01	45	i PKIKP	PKiKP	15 04 16.8	-0.5
ABKAR	Akbulak array	132.01	45	PKPdf	PKPdf	15 04 16.4	+0.2
ABKAR	Akbulak array	132.01	45	PKPdf	PKPdf	15 04 16.5	+0.2
NRIK	Noril'sk	132.45	12	PKP	PKiKP	15 04 17.7	+0.1
	comp=Z,0.6nm,0.3s,baz=274,slow=1.7,SNR=3.7						
SEY	Seymchan	133.28	336	PKP	PKiKP	15 04 19.4	-0.1
	comp=Z,9.7nm,0.6s,baz=97,slow=1.9,SNR=40						
SEY				SKPbc	SKPbc	15 07 31.2	+0.3
	comp=Z,2.2nm,0.7s,baz=80,slow=7.0,SNR=6.9						
PETK	Petropavlovsk-	135.76	322	PKhKP	PKPpre	15 04 16.5	
	comp=Z,5.1nm,0.8s,baz=80,slow=3.5,SNR=5.3						
PETK				PKP	PKiKP	15 04 24.3	-0.5
	comp=Z,5.2nm,0.6s,baz=179,slow=4.5,SNR=13						
PETK	Petropavlovsk-	135.76	322	PKPdf	PKPdf	15 04 23.6	+0.4
BRVK	Borovoye	137.01	37c	iPKIKP	PKPdf	15 04 26.4	+0.9
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BRVK	Borovoye	137.01	37	PKPdf	PKPdf	15 04 25.3	-0.2
BVAR	Borovoye Array	137.09	37	PKP	PKiKP	15 04 26.9	-0.6
	comp=Z,3.3nm,0.6s,baz=239,slow=10,SNR=28						
OTUK	Ortayu	140.15	43	PKIKP	PKPdf	15 04 32.0	+0.5
KKAR	Karatay Array	140.56	51	PKIKP	PKPdf	15 04 32.5	+0.2
KKAR	Karatay Array	140.56	51	PKPdf	PKPdf	15 04 32.5	+0.2
YAK	Yakutsk	140.57	348	PKP	PKPdf	15 04 32.1	+0.4
	comp=Z,4.5nm,0.4s,baz=66,slow=1.6,SNR=6.2						
KURK	Kurchatov	142.67	36	PKIKP	PKPdf	15 04 36.4	+0.6
KURBB	Kurchatov Arra	142.67	36	PKhKP	PKPpre	15 04 33.0	
	comp=Z,3.9nm,0.6s,baz=310,slow=2.7,SNR=33						
KURBB				PKP	PKPdf	15 04 36.4	+0.6
	comp=Z,3.7nm,0.5s,baz=304,slow=2.7,SNR=26						
KURBB				SKPbc	SKiKP	15 07 59.0	-0.5
	comp=Z,1.4nm,0.7s,baz=300,slow=3.1,SNR=5.3						
KURBB	Kurchatov Arra	142.67	36	PKIKP	PKPdf	15 04 32.3	-3.5
EKS2	Erkin-Say	142.99	51	P	PKPdf	15 04 34.9	-2.0
	SNR=12						
AML	Almayashu	143.08	51	P	PKPbc	15 04 35.4	+0.6
	SNR=14						
USP	Ospenovka	143.31	49	P	PKPdf	15 04 38.7	+1.4
	SNR=6.5						
AAK	Ala-Archa	143.50	50	PKP	PKPbc	15 04 36.5	+0.9
	comp=Z,5.9nm,0.6s,baz=256,slow=1.9,SNR=23						
AAK	Ala-Archa	143.50	50		PKPbc	15 04 35.6	0.0
UCH	Uchtor	143.64	51	P	PKPbc	15 04 37.2	+0.9
	SNR=10						
ZAA0	Zalesovo Array	143.69	28		PKPbc	15 04 35.4	-0.1
ZALV	Zalesovo Beam	143.69	28	PKP	PKPbc	15 04 35.9	+0.4
	comp=Z,18nm,0.5s,baz=304,slow=4.0,SNR=120						
ZALV				SKPbc	SKiKP	15 08 01.1	-0.4
	comp=Z,4.2nm,0.9s,baz=283,slow=2.4,SNR=4.2						
ZALV	Zalesovo Beam	143.69	28		PKPbc	15 04 35.5	0.0
KBK	Karagaybulak	143.81	50	P	PKPdf	15 04 37.7	-0.7
	SNR=11						
TKM2	Tokmak 2	144.18	49	P	PKPdf	15 04 38.4	-0.7
	SNR=24						
TKM2	Tokmak 2	144.18	49	PKIKP	PKPbc	15 04 37.9	+0.2
NIL	Nilore	144.28	66	PKIKP	PKPab	15 04 37.3	-0.4
NIL	Nilore	144.28	66		PKPab	15 04 37.2	-0.4
BOOM	Boomskoye usch	144.56	50	PKIKP	PKPdf	15 04 39.3	-0.4
BOOM	Boomskoye usch	144.56	50	PKPdf	PKPdf	15 04 39.3	-0.4
ULHL	Ulahol	144.85	50	P	PKPdf	15 04 41.4	+1.1
	SNR=12						
MDOK	Medeo	145.10	48	PKIKP	PKPab	15 04 41.3	+0.7
KSH	Kashi	145.45	55	PKPbc	PKPbc	15 04 41.5	-0.1
KSH				pPKP	pPKPab	15 05 22.8	-3.1
KSH				SKKS		15 14 39.3	
BOD	Bodaibo	146.48	359	ePKP2	PKPbc	15 04 43.8	-0.1
BOD				pmax	pmax		
	comp=Z,42nm,0.7s						
MAKZ	Makanchi	146.62	40	PKIKP	PKPdf	15 04 43.5	+0.6
MAKZ	Makanchi	146.62	40	PKPbc	PKPdf	15 04 43.5	+0.6
PDGK	Podgornoye	146.68	47	PKP2	PKPdf	15 04 44.1	+0.9
MK31	Makanchi Array	146.81	40d	iPKIKP	PKPdf	15 04 44.0	+0.8
MK31	Makanchi Array	146.81	40	PKPbc	PKPdf	15 04 43.8	+0.6
MKAR	Makanchi Array	146.81	40	PKP	PKPdf	15 04 43.9	+0.7
	comp=Z,33nm,0.6s,baz=294,slow=1.7,SNR=195						
MKAR				PKPbc	PKPab	15 04 46.1	-0.8
	comp=Z,33nm,0.6s,baz=308,slow=3.1,SNR=173						
MKAR				SKPbc	SKiKP	15 08 08.9	+0.6
	comp=Z,1.1nm,0.7s,baz=8.9,slow=3.0,SNR=3.7						
FAKI	Fak Fak	147.05	218		PKPdf	15 04 45.6	+1.0
YSS	Yuzh-Sakhalins	147.13	321	ePKP2	PKPbc	15 04 45.6	-0.4
YSS				pmax	pmax		
	comp=Z,50nm,1.9s						
YSS	Yuzh-Sakhalins	147.13	321	PKPdf	PKPdf	15 04 43.6	0.0
HYB	Hyderabad	147.27	95	i PKP	PKPdf	15 04 45.0	+0.2
HYB				epPKP	pPKPab	15 05 36.0	+2.4
DGZ	Jazzator, Alta	147.78	32	i PKP2	PKPbc	15 04 47.0	-1.0
ZEA	Zeya	148.65	344	ePKP2	PKPbc	15 04 50.3	+0.4
ZEA				pmax	pmax		
	comp=Z,20nm,0.9s						
JKA	Kamikawa-asahi	148.69	317		PKPbc	15 04 50.4	+0.1
ASAJ	Asahikawa	148.69	317	PKPbc	PKiKP	15 04 51.0	-0.6
	comp=Z,22nm,0.7s,baz=239,slow=3.3,SNR=26						
SMRI	Semarang	148.78	175	PKPbc	PKPbc	15 04 50.4	-1.0
SIJI	Sorong	149.28	218	PKP	PKPdf	15 04 48.2	0.0
	comp=Z,9.1nm,0.7s,baz=87,slow=5.8,SNR=5.8						
SIJI				PKPbc	PKiKP	15 04 53.7	-0.1
	comp=Z,53nm,0.6s,baz=198,slow=6.4,SNR=24						
KLR	Kul'dur	151.02	334	PKP	PKPdf	15 04 51.0	+1.2
	comp=Z,22nm,0.6s,baz=77,slow=4.3,SNR=5.9						
KLR				PKPbc	PKiKP	15 04 56.1	-0.2
	comp=Z,22nm,0.6s,baz=56,slow=2.8,SNR=57						
MOY	Mondy	151.17	15	ePKIKP	PKiKP	15 04 57.5	+0.8
MOY				pmax	pmax		
	comp=Z,59nm,1.7s						
WMQ	Urumqi	151.63	40	ePKPbc	PKPdf	15 04 50.5	-0.5
TLY	Talaya	151.74	12	PKPbc	PKiKP	15 04 58.3	+0.6
	comp=Z,8.1nm,0.4s,baz=213,slow=4.7,SNR=7.6						
TLY	Talaya	151.74	12	ePKIKP	PKPdf	15 04 52.8	+1.9
TLY				pmax	pmax		
	comp=Z,29nm,0.9s						
TLY	Talaya	151.74	12		PKiKP	15 04 57.6	-0.1
ZAK	Zakamensk	152.89	14	ePKIKP	PKPdf	15 04 52.1	-0.6
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.4s						
DANN	Dangsing	153.62	75	eP	PKPdf	15 04 55.5	+0.8
GKN	Gorkha	154.41	76	eP	PKPdf	15 04 55.5	-0.2
USRK	Ussuriysk Ar.	154.72	327	PKPbc	PKiKP	15 05 04.5	+0.5
	comp=Z,3.2nm,0.6s,baz=55,slow=3.0,SNR=6.7						
KKN	Kakani	154.99	76	eP	PKPdf	15 04 56.4	-0.1
MJAR	Matsushiro Arr	155.04	305	PKPbc	PKPbc	15 05 06.1	
	comp=Z,1.7nm,0.5s,baz=99,slow=3.6,SNR=6.6						
MJAR				PKPab	PKPab	15 05 22.8	+1.4
	comp=Z,5.6nm,0.6s,baz=176,slow=6.4,SNR=13						
MAJO	Matsushiro	155.04	305	PKIKP	PKPdf	15 05 04.7	+8.6
MAJO					PKPab	15 05 21.3	0.0
MAJO	Matsushiro	155.04	305		PKPdf	15 05 04.7	+8.7
MAJO				PKPab	PKPab	15 05 21.3	0.0
MAT	Matsushiro	155.04	305	ePKP	PKPdf	15 05 04.4	+8.3
PKI	Pulchoki	155.11	77	eP	PKPdf	15 04 56.5	-0.4
GUN	Gumba	155.51	76	eP	PKPdf	15 04 57.3	-0.1
MDJ	Mudanjiang	155.56	330	PKP	PKPdf	15 04 55.8	-0.7
SONM	Songino Array	155.93	11	PKP	PKPdf	15 04 58.0	+0.9
	comp=Z,2.3nm,0.7s,baz=263,slow=1.1,SNR=12						
SONM				PKPbc	PKPbc	15 05 07.3	
	comp=Z,1.5nm,0.5s,baz=1.2,slow=1.2,SNR=7.1						
SONM				PKPab	PKPab	15 05 25.1	+0.3
	comp=Z,4.3nm,0.7s,baz=311,slow=3.4,SNR=10.0						
RAMN	Ramite	156.18	78	eP	PKPdf	15 04 58.7	+0.5
	comp=Z,22nm,0.6s						
ODAN	Odare	156.88	78	eP	PKPdf	15 04 59.4	+0.3
	comp=Z,18nm,0.6s						
TAPN	Taplejung	157.16	77	eP	PKPdf	15 04 59.5	0.0
GTA	Gaotai	161.31	33	⇓PKP	PKPdf	15 05 04.5	+0.8
GTA				pPKP	pPKPdf	15 05 49.0	-0.1
GTA				PKPab	PKPab	15 05 53.8	+5.3
GTA				LR	LR		
	comp=Z,93nm,18.2s						
GTA				LR	LR		
	comp=Z,240nm,20.0s						
GTA				LR	LR		
	comp=Z,74nm,18.5s						
KSRS	Korea Array	161.60	319	PKP	PKPdf	15 05 04.0	+0.1
	comp=Z,2.2nm,0.9s,baz=82,slow=1.8,SNR=9.8						
KSRS				PKPab	PKPab	15 05 50.9	+1.3
	comp=Z,2.5nm,0.8s,baz=46,slow=4.2,SNR=10						
HHC	Hu-ho-hao-te	163.44	3	ePKP	PKPdf	15 05 04.0	-1.8
BTO	Baotou	163.54	8	ePKP	PKPdf	15 05 05.5	-0.4
BTO				SS	SS	15 29 56.0	+0.5
BTO				LR	LR		
	comp=Z,420nm,11.2s						
BTO				LR	LR		
	comp=Z,400nm,11.1s						
CMAR	Chiang Mai Arr	165.80	111	PKP	PKPdf	15 05 07.7	-0.6
	comp=Z,0.9nm,0.7s,baz=270,slow=3.2,SNR=8.4						
CMAR				PKPab	PKPab	15 06 08.3	-0.4
	comp=Z,1.3nm,0.7s,baz=253,slow=4.7,SNR=7.3						
CD2	Chengdu	169.56	49	PKP	PKPdf	15 05 09.8	-0.9
NJ2	Nanjing	170.63	327	ePKP	PKPdf	15 05 12.0	+0.8

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*IDC **30** 14:45:30.8±1.9, 10°.96S×114°.53E, h0^{km}, mb3.4/4, mb1 3.7/5, mb1mx3.3/30, mbtmp3.5/5, ML3.3/1 Error ellipse: s-maj=106.4km s-min=15.4km az=45.0*

*DJA **30** 14:45:35.8±1.2, 11°S±9°×11°5E±°, h13^{km}±15^{km}, M4.0/11, mb4.2/2, MLv3.8/11*

ISC 30 14:45:35.8±1.0**, 10°.88S**±0°.08×**114°.54E**±0°.07**, h35**^{km}**, n17, σ1^{s}.38**/23**, mb3.4**/4**, South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGBI	Denpasar	2.13	16	P	Pn	14 46 07.5	-1.4
IGBI				S	Sn	14 46 33.3	-0.9
DNP	Denpasar	2.29	17	P	Pn	14 46 11.6	+0.6
DNP				S	Sn	14 46 36.9	-1.1
JAGI	Jajag, Banyuwa	2.43	351	P	Pn	14 46 12.1	-0.9
JAGI				S	Sn	14 46 42.5	+1.0
GMJI	Gumukmas	2.81	337	P	Pn	14 46 16.6	-1.6
SRBI	Singaraja	2.86	13	P	Pn	14 46 18.6	-0.3
ABJI	Asem Bagus	3.08	354	P	Pn	14 46 21.8	-0.2
TWSI	Taliwang, Sumb	3.14	47	P	Pn	14 46 23.6	+0.8
TWSI				S	Sn	14 46 59.0	0.0
PLAI	Plampang	3.78	58	P	Pn	14 46 31.9	+0.3
KMMI	Kalianget	3.85	351	P	Pn	14 46 33.5	+0.9
WBSI	Waikabubak, Su	4.93	76	P	Pn	14 46 47.8	+0.4
UGM	Wanagama	4.94	306	P	Pn	14 46 49.5	+1.9
EDFI	Ende, Flores	7.35	74	P	Pn	14 47 21.8	+1.0
FITZ	Fitzroy Crossi	12.91	125	Pn	Pn	14 48 33.8	-3.1
	0.1nm,0.3s,baz=301,slow=11,SNR=1.6						
FITZ				Sn	Sn	14 50 47.4	-12
	0.2nm,0.3s,baz=234,slow=19,SNR=7.5						
WRA	Warramunga Arr	21.08	118	P	P	14 50 17.1	-0.1
	0.9nm,0.6s,baz=290,slow=10,SNR=17						
ASAR	Alice Springs	22.40	127	P	P	14 50 31.1	-0.3
	0.7nm,0.8s,baz=302,slow=9.5,SNR=6.3						
ASAR				PcP	PcP	14 54 27.1	+1.4
	0.5nm,1.1s,baz=325,slow=1.7,SNR=4.4						
ASAR				S	S	14 54 38.4	+2.8
	0.5nm,0.7s,baz=305,slow=22,SNR=4.4						
CMAR	Chiang Mai Arr	32.97	332	P	P	14 52 09.1	+1.6
	0.2nm,0.4s,baz=159,slow=7.5,SNR=4.7						
MKAR	Makanchi Array	64.25	336	P	P	14 56 07.0	-0.4
	0.4nm,0.5s,baz=142,slow=7.1,SNR=5.8						

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*MOS **30** 15:02:49.8±0.8, 28°.32N×104°.93E, h9^{km}, mb4.6/7, Error ellipse: s-maj=15.1km s-min=9.3km az=104.6*

*IDC **30** 15:02:50.6±0.6, 28°.36N×105°.05E, h0^{km}, mb4.1/14, mb1 4.1/16, mb1mx3.9/52, mbtmp4.0/16, ML3.7/2, MS3.2/2, Ms1 3.3/2, ms1mx2.7/51, Error ellipse: s-maj=27.1km s-min=13.7km az=61.0*

*NEIC **30** 15:02:52.6±1.2, 28°.38N±0°.08×104°.97E±0°.10, h10^{km}±1^{km}, mb4.6/36, ML4.0(BJI), Error ellipse: s-maj=15.0km s-min=13.3km az=117.0*

ISC 30 15:02:52.4±0.5**, 28°.42N**±0°.05×**105°.02E**±0°.06**, h10**^{km}**, n83, σ0^{s}.97**/90**, mb4.4**/33**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENH	Enshi	4.31	64		Pn	15 03 59.4	+1.3
XAN	Xi'an	6.52	30	Pn	Pn	15 04 30.3	+1.9
XAN				P*	Pb	15 04 42.3	-3.6
XAN				Pg	Pg	15 04 57.3	0.0
XAN				Sn	Sn	15 05 40.3	-2.6
XAN				S*	Sb	15 06 04.8	+0.9
XAN				Sg	Sg	15 06 19.3	-2.4
XAN				smax	smax		
	comp=N,240nm,1.0s						
XAN				smax	smax		
	comp=E,190nm,0.9s						
SLVN	Son La	7.13	188	Pn	Pn	15 04 36.5	-0.4
LZH	Lanzhou	7.71	353	Sg	Sg	15 06 59.3	-0.5
LZH	Lanzhou	7.71	353	Pg	Pg	15 05 18.5	-1.5
CMAR	Chiang Mai Arr	11.38	211	Pn	Pn	15 05 34.6	-0.5
	comp=E,0.2nm,0.3s,baz=19,slow=11,SNR=23						
CMAR				LR	LR	15 10 23.1	
	comp=E,95nm,20.1s,baz=60,slow=40						
UBPT	Khong Chiam	13.09	178	Pn	Pn	15 05 59.9	+1.4

DLV	**T Lat**	16.71	168	Pn	Pn	15 06 45.7	-1.2
DLV				IAmb	IAmb	15 06 53.2	
	comp=Z,42nm,1.2s						
SONM	**Songino Array**	19.41	3	P	Pn	15 07 20.3	+0.4
	comp=Z,0.2nm,0.3s,baz=180,slow=9.6,SNR=3.6						
SONM	**Songino Array**	19.41	3	P	Pn	15 07 20.3	+0.4
SONM				pmax	pmax		
	comp=Z,3.0nm,1.1s						
JOW	**Kunigami**	20.66	89	P	P	15 07 33.0	+0.6
JOW				IAmb	IAmb	15 08 01.9	
	comp=Z,59nm,1.2s						
KSAR	**Wonju Array Be**	21.15	59	P	P	15 07 39.8	+2.2
KSAR	**Wonju Array Be**	21.15	59	P	P	15 07 39.8	+2.2
KS19	**Wonju Array Si**	21.16	59	P	P	15 07 40.2	+2.5
KS19				IAmb	IAmb	15 08 02.8	
	comp=Z,23nm,1.4s						
KSRS	**Korea Array**	21.18	59	P	P	15 07 38.1	+0.1
	comp=Z,1.8nm,0.5s,baz=240,slow=10,SNR=11						
JNU	**Nakatsue**	22.68	72	P	P	15 07 55.7	+1.5
JNU				IAmb	IAmb	15 08 10.7	
	comp=Z,29nm,1.5s						
MK31	**Makanchi Array**	25.55	322	P	P	15 08 21.5	+0.2
MK31				pmax	pmax		
	comp=Z,6.0nm,1.5s						
MK31	**Makanchi Array**	25.55	322	P	P	15 08 21.5	+0.2
MKAR	**Makanchi Array**	25.55	322	P	P	15 08 21.7	+0.4
	comp=Z,1.6nm,0.8s,baz=120,slow=11,SNR=5.1						
MKAR				PcP	PcP	15 11 52.9	+0.4
	comp=Z,0.5nm,0.8s,baz=116,slow=5.5,SNR=3.6						
MKAR				LR	LR	15 19 28.7	
	comp=Z,75nm,18.3s,baz=262,slow=39						
MKAR	**Makanchi Array**	25.55	322	P	P	15 08 21.4	0.0
MKAR					PcP	15 11 51.7	-0.8
USRK	**Ussuriysk Ar.**	26.67	47	P	P	15 08 32.6	+1.1
USRK	**Ussuriysk Ar.**	26.67	47	P	P	15 08 32.6	+1.1
ZAA0	**Zalesovo Array**	29.48	335	P	P	15 08 56.6	+0.1
ZALV	**Zalesovo Beam**	29.48	335	P	P	15 08 56.9	+0.4
	comp=Z,2.7nm,0.8s,baz=135,slow=9.0,SNR=6.3						
ZALV	**Zalesovo Beam**	29.48	335	P	P	15 08 56.6	+0.1
KURBB	**Kurchatov Arra**	29.87	325	P	P	15 09 00.3	+0.3
	comp=Z,0.3nm,0.4s,baz=127,slow=9.9,SNR=3.3						
KURBB				PcP	PcP	15 12 02.6	-0.2
	comp=Z,0.6nm,0.6s,baz=111,slow=2.3,SNR=6.4						
KURK	**Kurchatov**	29.88	325	P	P	15 09 00.3	+0.3
KURK						15 12 02.6	
KKAR	**Karatay Array**	31.35	307	P	P	15 09 13.7	+0.5
KKAR	**Karatay Array**	31.35	307	P	P	15 09 13.7	+0.5
BVAR	**Borovoye Array**	35.40	324	PcP	PcP	15 12 17.5	-0.6
	comp=Z,0.9nm,0.6s,baz=201,slow=7.9,SNR=6.2						
GEYT	**Alibeck**	40.03	296	P	P	15 10 29.0	+1.3
	comp=Z,2.2nm,0.5s,baz=110,slow=13,SNR=3.8						
ABKAR	**Akbulak array**	40.07	314	P	P	15 10 28.8	+0.9
NRIK	**Noril'sk**	42.20	351	P	P	15 10 45.9	+0.9
	comp=Z,2.4nm,0.7s,baz=125,slow=7.1,SNR=4.8						
NRIK	**Noril'sk**	42.20	351	P	P	15 10 45.9	+0.9
NRIK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NRIK	**Noril'sk**	42.20	351	IAmb	IAmb	15 10 46.5	
	comp=Z,3.3nm,0.9s						
MTN	**Manton Dam**	48.18	145	P	P	15 11 31.2	-2.0
KNRA	**Kununurra**	49.50	149	P	P	15 11 42.4	-0.9
RAYN	**Ar Rayn**	53.27	279	P	P	15 12 11.2	-0.5
RAYN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
RAYN	**Ar Rayn**	53.27	279	P	P	15 12 11.2	-0.5
RAYN				IAmb	IAmb	15 12 12.0	
	comp=Z,3.0nm,0.9s						
WB0	**Warramunga Arr**	55.69	146	P	P	15 12 28.1	-1.0
WB0				IAmb	IAmb	15 12 44.7	
	comp=Z,7.9nm,1.2s						
WRAB	**Tennant Creek**	55.81	146	P	P	15 12 29.0	-1.0
WRAB				pmax	pmax		
	comp=Z,5.0nm,0.8s						
WRAB	**Tennant Creek**	55.81	146	P	P	15 12 29.0	-1.0
WRAB				IAmb	IAmb	15 12 30.7	
	comp=Z,5.4nm,0.8s						
WRA	**Warramunga Arr**	55.81	146	P	P	15 12 29.2	-0.8
	comp=Z,3.6nm,0.6s,baz=335,slow=8.3,SNR=45						
WRA	**Warramunga Arr**	55.81	146	P	P	15 12 28.8	-1.2
WB2	**Warramunga Arr**	55.82	146	P	P	15 12 28.9	-1.2
WB2				IAmb	IAmb	15 12 30.0	
	comp=Z,6.0nm,0.6s						
WR0	**Warramunga Arr**	55.92	146	P	P	15 12 29.6	-1.2
WR0				IAmb	IAmb	15 12 33.1	
	comp=Z,4.9nm,1.0s						
AS31	**Alice Springs**	58.79	149	P	P	15 12 50.3	-0.7
ASAR	**Alice Springs**	58.79	149	P	P	15 12 50.8	-0.3
	comp=Z,2.4nm,0.7s,baz=329,slow=7.0,SNR=53						
ASAR				PcP	PcP	15 13 40.1	-0.5
	comp=Z,0.4nm,0.5s,baz=344,slow=3.8,SNR=4.2						
ASAR	**Alice Springs**	58.79	149	P	P	15 12 50.5	-0.6
KEV	**Kevo**	59.50	337	P	P	15 12 55.3	0.0
KEV				pmax	pmax		
	comp=Z,34nm,1.5s						
KEV	**Kevo**	59.50	337	P	P	15 12 55.3	0.0
AKASG	**Malin Array Be**	59.81	315	P	P	15 12 57.3	-0.5
	comp=Z,0.2nm,0.3s,baz=64,slow=6.8,SNR=4.0						
ARCES	**ARCESS Array B**	60.02	336	P	P	15 12 58.6	-0.3
	comp=Z,3.3nm,0.8s,baz=94,slow=7.5,SNR=12						
ARCES	**ARCESS Array B**	60.02	336	P	P	15 12 58.3	-0.7
FIA1	**FINESS Array S**	60.23	327	P	P	15 13 00.4	-0.1
FINES	**FINESS Array B**	60.24	327	P	P	15 13 00.5	0.0
	comp=Z,6.3nm,0.9s,baz=111,slow=8.3,SNR=9.8						
FINES	**FINESS Array B**	60.24	327	P	P	15 13 00.1	-0.4
CTAO	**Charters Tower**	62.55	136	P	P	15 13 16.5	-0.2
CTAO				pmax	pmax		
	comp=Z,13nm,1.5s						
CTAO	**Charters Tower**	62.55	136	P	P	15 13 16.5	-0.2
NC405	**NORSAR Array S**	67.09	328	P	P	15 13 44.2	-1.6
NOA	**NORSAR Array B**	67.34	328	P	P	15 13 46.8	-0.7
	comp=Z,0.5nm,0.6s,baz=245,slow=3.0,SNR=3.3						
DIVS	**Divibare**	67.46	309	P	P	15 13 48.3	-0.3
DIVS				IAmb	IAmb	15 14 07.6	
	comp=Z,3.1nm,1.3s						
NC204	**NORSAR Array S**	67.48	329	P	P	15 13 47.4	-0.9
IMAR	**Indian Mountai**	68.79	26	P	P	15 13 56.9	+0.5
TOLK	**Toolik Lake Re**	69.22	22	P	P	15 13 59.5	+0.5
TOLK				IAmb	IAmb	15 13 59.7	
	comp=Z,2.0nm,1.1s						
J20K	**Nowinta River**	69.32	27	P	P	15 14 00.5	+0.8
STKA	**Stephens Creek**	69.33	147	P	P	15 13 58.8	-1.4
	comp=Z,2.3nm,0.8s,baz=318,slow=5.3,SNR=3.5						
STKA	**Stephens Creek**	69.33	147	P	P	15 13 58.8	-1.4
STKA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
I21K	**Tanana**	69.78	26	P	P	15 14 02.2	-0.3
I21K				IAmb	IAmb	15 14 14.4	
	comp=Z,4.2nm,1.1s						
PPLA	**Purkeypile**	70.63	28	P	P	15 14 08.5	+0.5
KTH	**Kantishna Hill**	70.88	27	P	P	15 14 08.4	-1.0
KTH				IAmb	IAmb	15 14 30.1	
	comp=Z,14nm,1.4s						
H24K	**Noodor Dome**	71.04	25	P	P	15 14 10.8	+0.5
H24K				IAmb	IAmb	15 14 25.1	
	comp=Z,7.8nm,1.4s						
BMAR	**Burnt Mountain**	71.44	22	P	P	15 14 13.5	+0.8
N25K	**Chitina, Valde**	74.38	28	P	P	15 14 31.3	+1.0
INK	**Inuvik**	74.41	19	P	P	15 14 30.5	+0.3
INK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
INK	**Inuvik**	74.41	19	P	P	15 14 30.5	+0.3
INK				IAmb	IAmb	15 14 32.7	
	comp=Z,4.4nm,1.3s						
BCAR	**Beaver Creek A**	74.72	26	P	P	15 14 32.7	+0.5
GLB	**Gilahina Butte**	74.79	28	P	P	15 14 32.9	+0.2
GLB				IAmb	IAmb	15 14 42.0	
	comp=Z,14nm,1.3s						
TOO	**Toolangi**	75.82	148	P	P	15 14 39.3	+0.6
TOO				pmax	pmax		
	comp=Z,7.0nm,1.1s						
TOO	**Toolangi**	75.82	148	P	P	15 14 39.3	+0.6
TOO				IAmb	IAmb	15 14 56.5	
	comp=Z,7.2nm,1.1s						
BARN	**Barnard Glacie**	75.87	27	P	P	15 14 39.2	+0.2
BARN				IAmb	IAmb	15 15 00.6	
	comp=Z,7.1nm,1.0s						
YKU2	**Yakutat**	77.56	28	P	P	15 14 47.8	-0.5
YKA	**Yellowknife Ar**	84.01	17	P	P	15 15 22.1	-0.7
	comp=Z,0.5nm,0.7s,baz=58,slow=7.7,SNR=4.7						

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*ISK **30** 15:09:24.7, 35°.89N×31°.37E, h6^{km}, ML3.2/31*
*NIC **30** 15:09:27.8±0.0, 36°.16N×31°.69E, h55^{km}±6^{km}, Ml3.3/5*
*DDA **30** 15:09:28.0, 36°.14N×31°.45E, h30^{km}±4^{km}, ML2.8*
ISC 30 15:09:26.1±1.3, **36°.04N**±0°.04×**31°.45E**±0°.02, **h14**^{km}±10^{km}, **n58**, σ**1^{s}.50**/75, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAZI	**Gazipasa**	0.73	74	PG	Pb	15 09 41.8	+1.2
GAZI				SG	Sn	15 09 52.8	-0.2
KEMT	**Kemer-ANTALYA**	0.92	308	PG	Pb	15 09 44.0	+0.3
KEMT				SG	Sn	15 09 57.8	+0.3
AKUM	**Antalya-Kumluc**	0.94	288	*i* P	Pb	15 09 45.1	+1.0
AKUM				*i* S	Sn	15 10 00.1	+2.1
AKUM				IAML		15 10 01.0	
	comp=N,410nm,0.6s						
AKUM				IAML		15 10 04.0	
	comp=E,593nm,0.4s						
ANTB	**Antalya**	1.07	324	PN	Pg	15 09 47.6	+0.8
BOZY	**Bozyazi-Mersin**	1.24	86	PN	Pn	15 09 50.6	+1.6
AKMS	**Akamas**	1.25	144	P	Pn	15 09 49.1	0.0
AKMS				S	Sn	15 10 06.4	+0.7
AKMS				AML	AML	15 10 10.8	
	comp=E,2.2nm,0.3s						
AKMS				AML	AML	15 10 10.8	
	comp=E,2.2nm,0.3s						
AKMS				AML	AML	15 10 11.6	
	comp=E,2.8nm,0.5s						
AKMS				AML	AML	15 10 11.6	
	comp=E,2.8nm,0.5s						
HDMB	**Hadim**	1.25	42	PN	Pg	15 09 51.5	+1.4
ALFC	**Alefka**	1.28	133	P	Pn	15 09 49.0	-0.6
ALFC				S	Sn	15 10 05.9	-0.8
ALFC				AML	AML	15 10 09.7	
	comp=E,2.4nm,0.3s						
ALFC				AML	AML	15 10 09.7	
	comp=E,2.4nm,0.3s						
ALFC				AML	AML	15 10 14.8	
	comp=E,2.3nm,0.3s						
ALFC				AML	AML	15 10 14.8	
	comp=E,2.3nm,0.3s						
KORT	**Korkueli**	1.31	318	PN	Pg	15 09 50.9	-0.4
KORT				SN	Sg	15 10 10.8	+2.5
TEKE	**Tekeli-Mersin**	1.35	85	PN	Pn	15 09 51.1	+0.6
SEYD	**Seydisehir-KON**	1.40	13	PN	Pg	15 09 52.1	-1.0
ELL	**Elmali**	1.43	300	PN	Pn	15 09 52.0	+0.3
ELL	**Elmali**	1.43	300	P	Pb	15 09 53.5	+0.9
ELL				S	Sg	15 10 12.8	+0.6
SEDI	**Konya, Seydise**	1.43	10	*i* P	Pb	15 09 52.3	-0.3
SEDI				*i* S	Sg	15 10 10.6	-1.7
SEDI				IAML		15 10 15.0	
	comp=E,122nm,0.3s						
AKDN	**Akdeniz- Kıbrı**	1.44	120	PN	Pn	15 09 52.4	+0.7
LEF	**Lefka**	1.49	127	PN	Pn	15 09 51.8	-0.6
AKAS	**Kas**	1.50	278	PN	Pn	15 09 52.2	-0.5
NATA	**Nata**	1.55	144	P	Pn	15 09 54.1	+0.8
NATA				AML	AML	15 10 24.9	
	comp=E,4.0nm,0.3s						
NATA				AML	AML	15 10 26.8	
	comp=E,2.9nm,0.9s						
BCK	**Bucak**	1.58	334	PN	Pg	15 09 56.0	-0.5
YORU	**Yoruktepe-Mers**	1.59	85	PN	Pn	15 09 55.6	+1.8
OREN	**Orenkoy-Mersin**	1.64	83	PN	Pn	15 09 56.0	+1.6
TEVE	**Tevekalti-Mers**	1.66	75	PN	Pn	15 09 56.3	+1.4
KKBE	**Karaman, Kazim**	1.69	45	*i* P	Pb	15 09 57.5	+0.6
KKBE				*i* S	Sg	15 10 21.0	+0.6
KKBE				IAML		15 10 24.0	
	comp=N,94nm,0.3s						
KKBE				IAML		15 10 27.0	
	comp=E,152nm,0.8s						
AKK1	**Akkuyu-Mersin**	1.70	86	PN	Pn	15 09 56.8	+1.5
GULN	**MERSIN_Gulnar**	1.70	84	*i* P	Pn	15 09 56.8	+1.4
GULN				*i* S	Sn	15 10 18.0	+1.0
AKK2	**Akkuyu-Mersin**	1.71	86	PN	Pn	15 09 57.1	+1.8
AKKU	**Akkuyu-Mersin**	1.71	85	PN	Pn	15 09 56.9	+1.5
YESI	**Yesilovacik-Me**	1.78	84	PN	Pn	15 09 57.9	+1.5
TISA	**Tisan-Mersin**	1.81	85	PN	Pn	15 09 58.5	+1.7
IKL	**Isikli**	1.82	83	PN	Pn	15 09 58.7	+1.7
KARG	**Kargicak-Mersi**	1.84	84	PN	Pn	15 09 58.7	+1.5
KRMN	**Karaman**	1.85	52	PN	Pb	15 10 00.3	+0.6
LFK	**Lefkose**	1.86	113	PN	Pn	15 09 58.4	+0.9
CSS	**Mathiatis**	1.87	124	PN	Pn	15 09 57.5	-0.2
CSS	**Mathiatis**	1.87	124	P	Pn	15 09 57.1	-0.6
CSS				S	Sn	15 10 19.2	-2.0
KEBE	**Keben-Mersin**	1.88	77	PN	Pn	15 09 59.9	+2.1
KMER	**Konya-Meram**	1.88	23	*i* P	Pb	15 09 59.6	-0.7
KMER				*i* S	Sg	15 10 23.1	-3.5
KMER				IAML		15 10 33.0	
	comp=E,73nm,0.4s						
ASGA	**Asgata**	1.93	130	S	Sn	15 10 22.0	-0.5
ASGA				AML	AML	15 10 33.6	
	comp=E,0.5nm,0.4s						
ASGA				AML	AML	15 10 40.8	
	comp=E,0.6nm,0.7s						
CAME	**Cameli-Denizli**	1.95	298	PN	Pn	15 09 59.7	+0.8
FETY	**Fethiye**	2.00	288	PN	Pn	15 09 59.5	0.0
KONT	**Konya--Tatoy**	2.04	21	*i* P	Pb	15 10 02.4	-0.6
KONT				*i* S	Sb	15 10 26.7	-1.5
MVOU	**Mavrovouni**	2.05	119	P	Pn	15 09 59.0	-1.2
MVOU				S	Sn	15 10 22.9	-2.6
MVOU				AML	AML	15 10 25.9	
	comp=E,0.4nm,0.4s						
MVOU				AML	AML	15 10 25.9	
	comp=E,0.4nm,0.4s						
MVOU				AML	AML	15 10 27.0	
	comp=E,0.4nm,0.5s						
MVOU				AML	AML	15 10 27.0	
	comp=E,0.4nm,0.5s						
SLFK	**Silifke-Mersin**	2.05	79	PN	Pn	15 10 02.4	+2.3
DOGA	**KONYA_Doganhis**	2.07	5	*i* P	Pb	15 10 02.1	-1.5
DOGA				*i* S	Sb	15 10 27.0	-2.3
KIZK	**Mersin**	2.22	78	PN	Pn	15 10 05.0	+2.5
EREN	**Erenkoy**	2.27	102	PN	Pn	15 10 04.4	+1.3
DALY	**Dalyan (Mula)**	2.38	290	PN	Pn	15 10 04.8	+0.1
KZIL	**AFYON_Kizioren**	2.45	335	*i* P	Pn	15 10 05.7	-0.1
KZIL				*i* S	Sb	15 10 38.5	-1.6
YESY	**Yesilyurt**	2.54	46	PN	Pb	15 10 09.7	-1.7
MERS	**Mersin**	2.61	71	PN	Pn	15 10 10.9	+3.0
TURN	**Turunc**	2.69	287	PN	Pn	15 10 09.8	+0.9
ARG	**Arkhangelos**	2.69	275	PN	Pn	15 10 08.1	-0.9
GULE	**Gulek**	2.95	64	*i* P	Pb	15 10 17.2	-1.3
GULE				*i* S	Sb	15 10 54.8	+0.3
GULE				IAML		15 10 56.0	
	comp=N,58nm,0.4s						
GULE				IAML		15 11 10.0	
	comp=E,50nm,0.4s						
OSC2	**CSNet OBS 4**	3.03	167	S	Sn	15 10 51.8	+2.2
KARA	**Karaisali**	3.15	66	PN	Pn	15 10 18.4	+3.2
DAT	**Datca**	3.20	284	PN	Pn	15 10 16.9	+0.9
KRTS	**Karatas**	3.22	79	PN	Pn	15 10 19.1	+3.0
CMRD	**Camardi-Nigde**	3.27	59	PN	Pn	15 10 19.7	+2.7

IDC 30 15:34:37.9±2.5, **6°.25N**×**93°.50E**, **h0**^{km}, **mb3.4**/4, **mb1 3.6**/5, **mb1mx3.4**/50, **mbtmp3.4**/5, **ML3.4**/1, **MS3.5**/1, **Ms1 3.5**/1, **ms1mx2.4**/41, **Error ellipse: s-maj=96.5km s-min=25.3km az=61.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	13.24	23	Pn	Pn	15 37 48.7	+1.3
	0.1nm,0.3s,baz=222,slow=13,SNR=1.3						
MKAR	**Makanchi Array**	41.53	348	P	P	15 42 25.6	-1.5
	0.4nm,0.6s,baz=169,slow=8.2,SNR=5.3						
GEYT	**Alibeck**	44.99	320	LR	LR	16 04 09.1	
	comp=Z,52nm,18.6s,baz=265,slow=39						
KURBB	**Kurchatov Arra**	45.96	347	P	P	15 43 03.7	+1.1
	0.2nm,0.3s,baz=166,slow=6.2,SNR=5.2						
WRA	**Warramunga Arr**	47.87	124	P	P	15 43 17.0	-1.1
	0.4nm,0.7s,baz=306,slow=8.7,SNR=2.2						
ASAR	**Alice Springs**	49.39	128	P	P	15 43 30.6	+0.8
	0.4nm,0.8s,baz=297,slow=8.2,SNR=2.8						

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*EAF **30** 15:42:14.4±1.2, 24°.99S×28°.61E, h10^{km}, MD3.5*
BUL 30 15:42:14.0±1.3, **25°.01S**×**28°.65E**, **h10**^{km}, **MD3.6, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBTB	**Lobatse**	2.77	269	*e*P	Pn	15 42 57.7	-0.9
LBTB				*e*S	Sn	15 43 30.4	-1.7
LBTB	**Lobatse**	2.77	269	*e*P	Pn	15 42 57.7	-0.9
LBTB				*e*S	Sn	15 43 30.4	-1.7
MOPA	**Mopani**	2.92	60	*e*P	Pn	15 42 59.7	-0.8
MOPA				*e*S	Sn	15 43 35.4	-0.3
MOPA	**Mopani**	2.92	60	*e*P	Pn	15 42 59.7	-0.8
MOPA				*e*S	Sn	15 43 35.4	-0.3
MSNA	**Messina**	2.94	26	*e*P	Pn	15 43 01.5	+0.7
MSNA				*e*S	Sn	15 43 34.5	-1.8
MSNA	**Messina**	2.94	26	*e*P	Pn	15 43 01.5	+0.7
MSNA				*e*S	Sn	15 43 34.5	-1.8
BOSA	**Boshof**	4.70	219	*e*P	Pn	15 43 25.1	0.0
BOSA				*e*S	Sn	15 44 16.0	-3.7
BOSA	**Boshof**	4.70	219	*e*P	Pn	15 43 25.1	0.0
BOSA				*e*S	Sn	15 44 16.0	-3.7
BLWY	**Bulawayo**	4.85	360	*e*P	Pn	15 43 27.3	+0.1
BLWY				*e*S	Sn	15 44 18.8	-4.8
BLWY	**Bulawayo**	4.85	360	*e*P	Pn	15 43 27.3	+0.1
BLWY				*e*S	Sn	15 44 18.8	-4.8

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*NEIC **30** 15:54:32.4±0.7, 5°.3S±0°.1×128°.18E±0°.09, h343^{km}±23^{km}, mb4.0/7, Error ellipse: s-maj=16.7km s-min=12.1km az=214.0*
*IDC **30** 15:54:34.6±0.6, 5°.22S×128°.72E, h362^{km}±17^{km}, mb3.0/1, mb1 3.3/4, mb1mx2.7/47, mbtmp4.0/4, Error ellipse: s-maj=16.9km s-min=11.9km az=96.0*
ISC 30 15:54:31.7±0.8, **5°.23S**±0°.07×**128°.25E**±0°.09, **h350**^{km}, **n19**, σ**0^{s}.94**/22, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	4.60	60		Pn	15 55 47.5	+0.5
SIJI	**Sorong**	5.27	35	P	Pn	15 55 55.2	+0.7
	1.9nm,0.3s,baz=239,slow=18,SNR=22						
SIJI				S	S	15 56 59.7	-1.7
	1.8nm,0.3s,baz=243,slow=23,SNR=12						
SOEI	**Soe**	5.99	221	Pn	Pn	15 56 03.0	+0.4
TNTI	**Ternate**	6.03	352	Pn	Pn	15 56 03.7	+0.8
MTN	**Manton Dam**	8.08	160	Pn	Pn	15 56 27.0	+0.1
TOLI2	**Tolitoli**	9.77	310	Pn	Pn	15 56 46.7	-0.3
KNRA	**Kununurra**	10.39	177		Pn	15 56 54.1	-0.3
JAGI	**Jajag, Banyuwa**	14.36	256	P	P	15 57 39.1	-0.4
WB0	**Warramunga Arr**	15.64	158	P	P	15 57 54.0	+0.7
WB0				IAmb	IAmb	15 57 57.7	
	comp=Z,7.4nm,0.8s						
WRAB	**Tennant Creek**	15.77	158	P	P	15 57 55.7	+0.8
WRA	**Warramunga Arr**	15.78	158	P	P	15 57 55.7	+0.8
	comp=Z,2.1nm,0.3s,baz=336,slow=12,SNR=45						
WRA				S	S	16 00 41.0	-2.4
	comp=Z,0.1nm,0.3s,baz=337,slow=22,SNR=2.3						
WRA	**Warramunga Arr**	15.78	158	P	P	15 57 55.1	+0.2
WB2	**Warramunga Arr**	15.78	158	P	P	15 57 55.4	+0.5
WB2				IAmb	IAmb	15 57 59.4	
	comp=Z,9.4nm,0.6s						
WR0	**Warramunga Arr**	15.87	158	P	P	15 57 56.6	+0.7
WR0				IAmb	IAmb	15 58 00.3	
	comp=Z,7.3nm,1.2s						
COEN	**Coen**	17.07	122	P	P	15 58 10.3	+1.5
COEN				IAmb	IAmb	15 58 14.8	
	comp=Z,12nm,1.5s						
AS31	**Alice Springs**	19.12	164	P	P	15 58 30.8	+0.1
AS31				IAmb	IAmb	15 58 32.3	
	comp=Z,1.3nm,1.1s						
ASAR	**Alice Springs**	19.12	164	P	P	15 58 31.4	+0.8
	comp=Z,0.4nm,0.3s,baz=346,slow=12,SNR=45						
ASAR				S	S	16 01 49.0	+0.5
	comp=Z,0.1nm,0.3s,baz=349,slow=21,SNR=9.0						
ASAR	**Alice Springs**	19.12	164	P	P	15 58 30.9	+0.2
STKA	**Stephens Creek**	29.31	156	P	P	16 00 02.4	-0.8
	comp=Z,0.7nm,0.6s,baz=322,slow=9.2,SNR=1.2						

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*IDC **30** 16:12:22.8±2.7, 13°.53S×167°.20E, h193^{km}±23^{km}, mb3.7/11, mb1 3.8/12, mb1mx3.6/32, mbtmp4.2/12, MS3.5/1, Ms1 3.5/1, ms1mx2.5/39, Error ellipse: s-maj=28.1km s-min=18.0km az=126.0*
*NEIC **30** 16:12:23.1±2.5, 13°.55S±0°.10×167°.3E±0°.1, h193^{km}±7^{km}, mb4.3/22, Error ellipse: s-maj=18.7km s-min=12.9km az=65.0*
ISC 30 16:12:23.4±0.6, **13°.56S**±0°.08×**167°.2E**±0°.1, **h200**^{km}, **n48**, σ**0^{s}.85**/48, **mb4.1**/20, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	1.88	180	Pn	Pn	16 13 00.3	-0.3
MARNC	**Mare, Loyalty**	7.92	174	Pn	Pn	16 14 17.1	+1.5
HNR	**Honiara**	8.22	299	Pn	Pn	16 14 20.8	+1.3
DZM	**Mont Dzumac**	8.50	185	P	Pn	16 14 24.3	+1.1
	1.0nm,0.3s,baz=320,slow=22,SNR=11						
ONTNC	**Ouen Toro**	8.73	185	Pn	Pn	16 14 27.1	+0.9
RABL	**Rabaul**	17.53	301	Pn	Pn	16 16 16.1	+0.1
RABL				IAmb	IAmb	16 16 37.1	
	comp=Z,25nm,1.4s						
EIDS	**Eidsvold**	19.20	230	P	Pn	16 16 34.1	-1.4
EIDS				IAmb	IAmb	16 16 35.0	
	comp=Z,7.7nm,0.6s						
RAO	**Raoul Island**	20.83	141	LR	LR	16 22 43.2	
	comp=Z,137nm,19.2s,baz=128,slow=30						
CTA	**Charters Tower**	21.07	249	P	P	16 16 51.8	-0.5
	comp=Z,5.1nm,0.7s,baz=77,slow=12,SNR=5.8						
CTAO	**Charters Tower**	21.07	249	P	P	16 16 52.6	+0.2
CTAO				IAmb	IAmb	16 17 00.8	
	comp=Z,7.3nm,1.1s						
ARMA	**Armidale**	22.10	218	P	P	16 17 03.6	+0.9
ARMA				IAmb	IAmb	16 17 26.2	
	comp=Z,23nm,1.5s						
COEN	**Coen**	23.35	266	P	P	16 17 15.3	+1.2
COEN				IAmb	IAmb	16 17 16.7	
	comp=Z,6.1nm,0.8s						
BKZ	**Black Stump Fm**	26.79	164	P	P	16 17 44.6	-0.4
STKA	**Stephens Creek**	29.72	228	P	P	16 18 11.1	+0.1
	comp=Z,1.5nm,0.4s,baz=64,slow=9.0,SNR=8.6						
STKA	**Stephens Creek**	29.72	228	IAmb	IAmb	16 18 15.2	
	comp=Z,1.2nm,1.0s						
TOO	**Toolangi**	30.77	215	P	P	16 18 20.0	-0.1
WR0	**Warramunga Arr**	31.89	254	P	P	16 18 29.4	-0.8
WR0				IAmb	IAmb	16 18 29.9	
	comp=Z,7.6nm,1.4s						
WB0	**Warramunga Arr**	32.00	254	P	P	16 18 30.3	-0.9
WB0				IAmb	IAmb	16 18 38.2	
	comp=Z,3.2nm,0.9s						
WB2	**Warramunga Arr**	32.06	254	P	P	16 18 30.1	-1.6
WB2				IAmb	IAmb	16 18 55.3	
	comp=Z,9.2nm,1.4s						
WRAB	**Tennant Creek**	32.06	254	P	P	16 18 31.0	-0.7
WRA	**Warramunga Arr**	32.07	254	P	P	16 18 31.2	-0.5
	comp=Z,0.8nm,0.5s,baz=86,slow=9.4,SNR=17						
WRA				PcP	PcP	16 21 16.4	-0.1
	comp=Z,0.6nm,0.7s,baz=65,slow=2.5,SNR=5.2						
WRA	**Warramunga Arr**	32.07	254	P	P	16 18 30.3	-1.5
AS31	**Alice Springs**	33.05	247	P	P	16 18 39.2	-1.0
ASAR	**Alice Springs**	33.05	247	P	P	16 18 39.6	-0.6
	comp=Z,2.0nm,0.5s,baz=74,slow=9.6,SNR=112						
ASAR				PcP	PcP	16 21 19.1	-0.1
	comp=Z,1.1nm,0.6s,baz=72,slow=2.3,SNR=15						
ASAR				ScP	ScP	16 24 45.4	+0.9
	comp=Z,1.1nm,0.9s,baz=86,slow=3.0,SNR=6.7						
ASAR	**Alice Springs**	33.05	247	P	P	16 18 39.1	-1.2
MTN	**Manton Dam**	35.11	267	P	P	16 18 58.8	+0.8
MTN				IAmb	IAmb	16 19 09.3	
	comp=Z,12nm,1.1s						
KNRA	**Kununurra**	37.23	262	P	P	16 19 15.9	-0.1
PSA00	**Pilbara Seismi**	45.71	253	P	P	16 20 25.9	+1.0
PSA00				IAmb	IAmb	16 20 51.1	
	comp=Z,8.7nm,1.4s						
MORW	**Morawa**	49.73	243	P	P	16 20 54.6	-1.1
MYLDM	**Lahad Datu**	51.81	288	P	P	16 21 10.0	-1.4
VNDA	**Vanda**	64.03	181	P	P	16 22 35.9	+0.7
VNDA				IAmb	IAmb	16 23 00.7	
	comp=Z,7.1nm,1.4s						
KIWB	**Kanaga Island**	66.54	11	P	P	16 22 52.1	+0.5
PETK	**Petropavlovsk-**	66.90	354	P	P	16 22 53.8	0.0
	comp=Z,4.0nm,0.9s,baz=163,slow=10,SNR=2.4						
CMAR	**Chiang Mai Arr**	74.43	294	P	P	16 23 41.2	+1.2
	comp=Z,1.7nm,0.8s,baz=129,slow=4.8,SNR=18						
CMAR	**Chiang Mai Arr**	74.43	294	P	P	16 23 39.9	-0.1
QSPA	**South Pole Qui**	76.46	180	P	P	16 23 51.0	+0.1
QSPA				IAmb	IAmb	16 23 51.7	
	comp=Z,2.8nm,0.7s						
SONM	**Songino Array**	81.53	324	P	P	16 24 19.4	+0.8
	comp=Z,1.0nm,0.5s,baz=146,slow=5.6,SNR=3.6						
SONM	**Songino Array**	81.53	324	IAmb	IAmb	16 24 21.3	
	comp=Z,2.4nm,1.2s						
MAW	**Mawson**	82.94	202	P	P	16 24 25.9	+0.4
	comp=Z,0.9nm,0.5s,baz=97,slow=8.1,SNR=2.1						
ILAR	**Eielson Array**	85.44	18	P	P	16 24 37.4	-0.6
	comp=Z,0.6nm,0.5s,baz=238,slow=4.8,SNR=12						
SNAA	**Sanae**	94.71	183	P	P	16 25 21.3	-0.3

VNA3	Neumayer Olymp	95.38	181	P	P	16 25 23.6	-0.9
VNA2	Neumayer--Watz	95.64	182	P	P	16 25 25.2	-0.6
	baz=196,slow=4.7						
MKAR	Makanchi Array	96.32	316	P	P	16 25 29.5	+0.2
	comp=Z,1.3nm,0.5s,baz=83,slow=5.8,SNR=20						
ZALV	Zalesovo Beam	96.42	324	P	P	16 25 28.7	-0.8
	comp=Z,0.9nm,0.7s,baz=90,slow=4.4,SNR=4.4						
ARCES	ARCESS Array B	119.11	346	PKP	PKiKP	16 30 47.4	-0.5
	comp=Z,1.3nm,0.6s,baz=62,slow=1.6,SNR=13						
FINES	FINESS Array B	124.62	339	PKP	PKiKP	16 30 58.3	-0.6
	comp=Z,2.4nm,0.8s,baz=108,slow=3.1,SNR=4.2						
KEST	Kesra	150.27	322	PKPbc	PKiKP	16 31 51.4	-0.7
	comp=Z,6.6nm,0.7s,baz=283,slow=1.7,SNR=6.9						

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*TUL **30** 16:23:12.7±0.8, 35°.78N±0°.04×98°.51W±0°.05, h0^{km}±7^{km}, ML2.5, mb_Lg2.3/9(NEIC), Error ellipse: s-maj=5.6km s-min=5.4km az=63.0*

NEIC 30 16:23:12.8±1.0**, 35°.77N**±0°.03×**98°.52W**±0°.05**, h3**^{km}±7^{km}**, Error ellipse: s-maj=6.0km s-min=3.3km az=57.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BCOK	Bluff Creek, N	0.75	98	Pg	Pg	16 23 26.4	-0.7
CROK	Carrier	0.86	30	Pg	Pg	16 23 28.7	-0.5
OK025	Westminster Rd	0.98	100	Pn	Pb	16 23 32.6	+0.2
OK025				Sg	Sg	16 23 44.1	-0.1
FNO	Franklin	1.04	119	Pn	Pn	16 23 34.0	-0.4
GC02	Grant County #	1.21	26	Pn	Pb	16 23 36.2	-0.1
KAN14	Manchester OK	1.27	21	Pg	Pg	16 23 36.5	-0.6
X34A	Smith Ranch, M	1.29	154	Pn	Pn	16 23 38.3	+0.5
OK031	S. Brethren Rd	1.38	82		Pg	16 23 39.1	0.0
KAN10	Anthony SW Sta	1.40	14	Pn	Pn	16 23 39.3	+0.1
KAN17	Caldwell West	1.41	25		Pn	16 23 38.3	-1.2
W35A	Tecumseh	1.48	114		Pn	16 23 40.3	0.0
KAN13	South Haven SW	1.50	34		Pb	16 23 41.2	-0.2
KAN01	Argonia South	1.52	24	Pn	Pn	16 23 41.0	+0.1
KAN08	Anthony NE Sta	1.52	17	Pn	Pb	16 23 41.4	-0.3
QUOK	Quay	1.52	74	Pn	Pn	16 23 41.0	+0.1
KAN09	Caldwell North	1.55	28	Pn	Pn	16 23 41.1	-0.2
T35A	Sooner Cattle	1.99	54	Pn	Pn	16 23 47.5	+0.1
LOOK	Love County	2.08	148	Pn	Pn	16 23 48.7	0.0
TUL1	Leonard	2.22	85	Pn	Pn	16 23 51.0	+0.5
R32A	Long Quarter,	2.66	357	Pn	Pn	16 23 56.5	-0.1
X37A	Clayton	2.83	114	Pn	Pn	16 23 59.4	+0.5
ABTX	Abilene, Hawle	3.27	197	Pn	Pn	16 24 05.5	+0.5
U38A	Gravette	3.41	77	Pn	Pn	16 24 06.5	-0.5
U38A				IAmb_Lg		16 25 09.6	
	comp=Z,6.9nm,0.8s						
S39A	Bolivar	4.59	64	IAmb_Lg		16 25 44.1	
	comp=Z,3.6nm,0.8s						
T25A	Trinidad	4.94	288	IAmb_Lg		16 25 57.7	
	comp=Z,6.1nm,1.0s						
MGMO	Mountain Grove	5.22	73	IAmb_Lg		16 26 07.2	
	comp=Z,10nm,0.9s						
T42A	Van Buren	6.12	76	IAmb_Lg		16 26 26.4	
	comp=Z,2.9nm,0.7s						

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*BJI **30** 16:27:20.9±0.0, 36°.47N×70°.56E, h120^{km}, mB4.8/6, mb4.4/8*

*IDC **30** 16:27:22.8±3.5, 36°.26N×71°.18E, h95^{km}±27^{km}, mb3.6/10, mb1 3.6/16, mb1mx3.3/67, mbtmp4.0/16, Error ellipse: s-maj=28.9km s-min=19.8km az=160.0*

*NEIC **30** 16:27:26.8±2.4, 36°.52N±0°.06×71°.06E±0°.09, h126^{km}±5^{km}, mb4.3/20, Error ellipse: s-maj=10.6km s-min=8.4km az=118.0*

*NNC **30** 16:27:31.4±2.4, 36°.95N×71°.12E, h139^{km}±20^{km}, mb3.3, mpv4.2, Error ellipse: s-maj=21.1km s-min=11.3km az=26.0*

ISC 30 16:27:27.6±0.5**, 36°.50N**±0°.05×**71°.16E**±0°.06**, h150**^{km}**, n100, σ2^{s}24**/101**, mb3.9**/16**, 8C-5D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAR	Garm	2.58	345	Pn	Pn	16 28 07.9	-1.9
KBL	Kabul	2.61	222		Pn	16 28 07.9	-2.3
CHGR	Chuyangaron	2.67	324		Pn	16 28 08.3	-2.6
CEP	Cherat	2.74	167	P	Pn	16 28 10.4	-1.5
CEP				S	Sn	16 28 43.0	-3.1
DRK	Karamyk	3.02	10		Pn	16 28 14.9	-0.5
CHCP	Chirah Chowk	3.32	148	P	Pn	16 28 18.2	-0.9
NIL	Nilore	3.33	148		Pn	16 28 18.2	-1.0
BTK	Batken	3.56	356		Pn	16 28 21.0	-1.1
THW	Thamme Wali	3.73	172	P	Pn	16 28 22.6	-1.8
SARP	Sargodha	4.74	164	P	Pn	16 28 35.4	-2.2
KSH	Kashi	4.85	50	P	Pn	16 28 34.5	-4.6
KSH				S	Sn	16 29 23.0	-12
KSH				smax	smax		
	comp=N,480nm,0.6s						
KSH				smax	smax		
	comp=E,430nm,0.7s						
TAS	Tashkent	5.03	344	Pn	Pn	16 28 39.4	-2.0
AML	Almayashu	5.96	19	P	Pn	16 28 52.7	-1.3
	SNR=363						
UCH	Uchtor	6.28	23	P	Pn	16 28 57.0	-1.4
	SNR=36						
EKS2	Erkin-Say	6.47	17	P	Pn	16 28 59.8	-0.8
	SNR=34						
KK02	Karatay Array	6.61	356	⇓P	Pn	16 29 00.9	-1.5
	50nm,0.5s						
KK02				⇓S	Sn	16 30 10.1	-6.5
	11nm,0.6s						
KKAR	Karatay Array	6.61	356	Pn	Pn	16 29 00.5	-1.8
AAK	Ala-Archa	6.65	22	P	Pn	16 29 02.2	-0.8
	7.1nm,0.3s,baz=202,slow=6.9,SNR=79						
AAK	Ala-Archa	6.65	22	Pn	Pn	16 29 01.2	-1.7
BHK	Bhakra	6.70	138	*e*P	Pn	16 29 02.7	-0.9
KBK	Karagaybulak	6.81	24	P	Pn	16 29 04.8	-0.3
	SNR=11						
FRU1	Bishkek	6.84	22	Pn	Pn	16 29 04.7	-0.9
BOOM	Boomskoye usch	7.03	30	Pn	Pn	16 29 06.8	-1.4
CHMS	Chumysh	7.05	22	P	Pn	16 29 07.2	-1.0
	SNR=13						
USP	Ospenovka	7.23	20	P	Pn	16 29 09.6	-1.0
	SNR=37						
TKM2	Tokmak 2	7.26	27	⇓P	Pn	16 29 10.1	-1.1
	3.7nm,0.5s						
TKM2				⇑S	Sn	16 30 28.4	-4.2
	6.3nm,0.7s						
KDJ	Kajisay	7.30	38	Pn	Pn	16 29 10.1	-1.7
MDOK	Medeo	8.05	32	⇑P	Pn	16 29 21.0	-0.7
	5.1nm,1.0s						
PRZ	Przheval'sk	8.19	41	Pn	Pn	16 29 23.1	-0.5
PDGK	Podgornoye	9.35	41	⇑P	Pn	16 29 37.5	-1.5
	6.6nm,0.8s						
KUDL	Kundal	9.47	150	*e*P	Pn	16 29 37.5	-3.2
KUDL				*e*S	Sn	16 31 16.9	-8.7
AJM	Ajmer	10.43	162	*e*P	Pn	16 29 51.0	-2.3
GEYT	Alibeck	10.50	282	P	Pn	16 29 50.9	-3.2
	0.9nm,0.3s,baz=104,slow=9.6,SNR=6.2						
GEYT	Alibeck	10.50	282	Pn	Pn	16 29 50.8	-3.4
GYA0B	ALIBECK ARRAY	10.50	282	Pn	Pn	16 29 50.5	-3.6
OTUK	Ortayu	11.77	4	⇑P	Pn	16 30 07.5	-3.2
	3.0nm,0.7s						
MAKZ	Makanchi	13.08	35	⇓P	Pn	16 30 28.4	+0.7
	1.4nm,0.5s						
MAKZ	Makanchi	13.08	35	Pn	Pn	16 30 27.3	-0.4
MK31	Makanchi Array	13.21	35	⇑P	Pn	16 30 28.8	-0.6
	0.3nm,0.4s,baz=222,slow=16,SNR=4.3						
MK31	Makanchi Array	13.21	35	Pn	Pn	16 30 28.6	-0.8
MKAR	Makanchi Array	13.21	35	P	Pn	16 30 29.0	-0.4
	0.1nm,0.3s,baz=222,slow=16,SNR=6.6						
MKAR	Makanchi Array	13.21	35	Pn	Pn	16 30 29.1	-0.3
DANN	Dangsing	13.39	124	*e*P	Pn	16 30 27.9	-4.1
	19nm,0.3s						
KOLN	Koldanda	13.66	126	*e*P	Pn	16 30 31.9	-3.5
	8.4nm,0.3s						
GKN	Gorkha	14.20	123	*e*P	Pn	16 30 38.9	-3.3
BHPL	Bhopal	14.29	156	*e*P	Pn	16 30 40.1	-3.1
BHPL				*e*S	Sn	16 33 07.5	-14
BHPL				IAML		16 33 13.7	
	comp=E,16nm,0.4s						
BHPL				IAML		16 33 13.9	
	comp=N,11nm,0.4s						
WMQ	Urumqi	14.59	55	*e*P	P	16 30 50.0	+0.8
WMQ				pmax	pmax		
	comp=N,22nm,0.7s						
WMQ				pmax	pmax		
	comp=N,180nm,4.7s						
DMN	Daman	14.77	123	*e*P	Pn	16 30 46.4	-3.0
	comp=N,17nm,0.4s						
KKN	Kakani	14.77	122	*e*P	Pn	16 30 46.1	-3.3
PKIN	Phulchoki	14.99	122	*e*P	Pn	16 30 49.1	-3.0
	comp=N,21nm,0.5s						
PKI	Pulchoki	15.00	122	*e*P	Pn	16 30 49.7	-2.6
	comp=N,14nm,0.3s						
KURBB	Kurchatov Arra	15.08	18	P	Pn	16 30 52.8	+0.1
	comp=N,0.1nm,0.3s,baz=209,slow=10,SNR=10						
GUN	Gumba	15.11	120	*e*P	Pn	16 30 50.9	-2.8
	comp=N,21nm,0.4s						
AB31	Akbulak array	15.14	331	P	Pn	16 30 52.9	-0.6
	comp=N,1.1nm,0.2s,baz=140,slow=12,SNR=187						
AB31				⇓S	Sn	16 33 35.0	-6.7
	comp=N,0.8nm,0.3s,baz=155,slow=24,SNR=6.3						
ABKAR	Akbulak array	15.14	331	Pn	Pn	16 30 51.9	-1.7
ABKAR	Akbulak array	15.14	331	Pn	Pn	16 30 52.1	-1.4
ABKAR				IAmb	IAmb	16 30 55.4	
	comp=Z,4.2nm,0.4s						
KURK	Kurchatov	15.19	18	Pn	Pn	16 30 52.6	-1.5
JIRN	Jiri	15.48	120	*e*P	Pn	16 30 55.8	-2.5
	comp=Z,31nm,0.5s						
RAMN	Ramite	16.21	122	*e*P	Pn	16 31 06.1	-1.0
	comp=Z,12nm,0.3s						
BVAR	Borovoye Array	16.53	358	P	Pn	16 31 09.9	-0.6
	comp=Z,0.7nm,0.3s,baz=194,slow=18,SNR=12						
BRVK	Borovoye	16.57	358	⇑P	Pn	16 31 10.6	-0.3
	comp=Z,3.4nm,1.0s						
BRVK	Borovoye	16.57	358		Pn	16 31 10.8	-0.2
TAPN	Taplejung	16.74	118	*e*P	P	16 31 12.9	-0.4
	comp=Z,32nm,0.5s						
ODAN	Odare	16.81	120	*e*P	P	16 31 13.6	-0.5
	comp=Z,18nm,0.5s						
AKTO	Aktyubinsk	16.84	330	P	Pn	16 31 14.9	+0.6
	comp=Z,1.0nm,0.3s,baz=168,slow=8.9,SNR=10						
AKTO	Aktyubinsk	16.84	330	⇑P	Pn	16 31 14.8	+0.5
	comp=Z,4.4nm,0.8s						
BOK	Bokaro	17.93	131	*e*x	Pn	16 31 25.8	-1.8
BOK				IAmb	IAmb	16 31 28.9	
	comp=Z,4.0nm,0.7s						
ZAA0	Zalesovo Array	19.86	24	⇑P	P	16 31 47.4	+0.7
	comp=Z,0.3nm,0.4s						
ZAA0	Zalesovo Array	19.86	24	P	P	16 31 47.4	+0.7
ZAA0				IAmb	IAmb	16 31 50.6	
	comp=Z,10nm,1.5s						
ZALV	Zalesovo Beam	19.86	24	P	Pn	16 31 47.7	-2.2
	comp=Z,4.1nm,0.4s,baz=215,slow=9.7,SNR=19						
ZALV	Zalesovo Beam	19.86	24	P	P	16 31 47.4	+0.6
ARU	Arti	21.67	341	P	P	16 32 07.6	+1.5
	comp=Z,1.1nm,0.5s,baz=173,slow=13,SNR=5.6						
HHC	Hu-ho-hao-te	31.64	70	*e*P	P	16 33 38.5	+1.9
HHC				pmax	pmax		
	comp=Z,30nm,0.8s						
HHC				pmax	pmax		
	comp=Z,160nm,6.0s						
AKASG	Malin Array Be	33.04	309	P	P	16 33 50.8	+2.3
	comp=Z,1.3nm,0.5s,baz=81,slow=7.3,SNR=9.0						
AKASG	Malin Array Be	33.04	309	IAmb	IAmb	16 33 51.4	
	comp=Z,1.6nm,0.7s						
NRIK	Noril'sk	34.10	10	P	P	16 34 00.5	+3.1
	comp=Z,1.7nm,0.5s,baz=198,slow=3.0,SNR=4.1						
NRIK	Noril'sk	34.10	10	IAmb	IAmb	16 34 01.3	
	comp=Z,2.1nm,0.5s						
BURAR	Bucovina Array	35.39	303	P	P	16 34 11.3	+2.5
BUR08	Bucovina Ar. S	35.40	303	P	P	16 34 11.7	+2.8
BUR08				IAmb	IAmb	16 34 41.2	
	comp=Z,4.7nm,1.3s						
FIA1	FINESS Array S	37.55	326	P	P	16 34 29.2	+2.4
FINES	FINESS Array B	37.55	326	P	P	16 34 29.5	+2.7
	comp=Z,1.1nm,0.4s,baz=121,slow=8.5,SNR=12						
FINES	FINESS Array B	37.55	326	P	P	16 34 29.2	+2.4
ARCES	ARCESS Array B	41.19	338	P	P	16 34 59.8	+2.9
	comp=Z,0.7nm,0.4s,baz=114,slow=8.8,SNR=16						
ARCES	ARCESS Array B	41.19	338	P	P	16 34 59.9	+2.9
ARCES				IAmb	IAmb	16 35 22.5	
	comp=Z,4.0nm,1.1s						
MSEY	Mahe Island	43.51	203	P	P	16 35 16.6	+0.3
MSEY				IAmb	IAmb	16 35 44.3	
	comp=Z,11nm,1.1s						
NC405	NORSAR Array S	44.22	323	P	P	16 35 22.7	+1.2
NC602	NORSAR Array S	44.27	323	P	P	16 35 23.2	+1.4
NC303	NORSAR Array S	44.40	323	P	P	16 35 25.1	+2.2
NC303				IAmb	IAmb	16 35 35.4	
	comp=Z,3.8nm,0.8s						
NB201	NORSAR Array S	44.41	323	P	P	16 35 24.9	+1.9
NB2	NORSAR Subarra	44.45	323	P	P	16 35 25.2	+1.9
	comp=Z,2.4nm,0.5s,baz=96,slow=8.6						
NOA	NORSAR Array B	44.45	323	P	P	16 35 25.4	+2.1
	comp=Z,0.8nm,0.3s,baz=104,slow=6.9,SNR=8.5						
NBO00	NORSAR Array S	44.66	323	P	P	16 35 25.8	+0.8
NC204	NORSAR Array S	44.69	323	P	P	16 35 27.4	+2.1
NC204				IAmb	IAmb	16 35 29.6	
	comp=Z,10nm,0.9s						
TORD	Torodi Ar. Bea	65.84	269	P	P	16 37 58.3	+1.1
	comp=Z,0.6nm,0.5s,baz=49,slow=5.9,SNR=8.6						
INK	Inuvik	73.88	9	P	P	16 38 48.6	+3.2
	comp=Z,0.5nm,0.5s,baz=344,slow=4.0,SNR=4.2						
INK	Inuvik	73.88	9	IAmb	IAmb	16 38 54.8	
	comp=Z,2.2nm,1.2s						
SCM	Sheep Creek Mo	77.17	18	P	P	16 39 05.6	+1.2
DIV	Divide	78.16	17	P	P	16 39 11.8	+1.9
DIV				IAmb	IAmb	16 39 26.0	
	comp=Z,12nm,1.2s						
YKA	Yellowknife Ar	81.24	3	P	P	16 39 28.0	+1.7
	comp=Z,0.6nm,0.7s,baz=324,slow=6.0,SNR=4.7						
ASAR	Alice Springs	84.15	125	P	P	16 39 43.1	+1.1
	comp=Z,0.4nm,0.9s,baz=323,slow=4.9,SNR=2.1						

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*IDC **30** 16:39:48.4±1.2, 2°.97S×137°.99E, h0^{km}, mb4.0/7, mb1 4.3/11, mb1mx3.9/43, mbtmp4.1/11, ML4.5/4, MS2.7/4, Ms1 2.7/4, ms1mx2.4/29, Error ellipse: s-maj=37.6km s-min=18.3km az=80.0*

ISC 30 16:39:54.6±1.0**, 3°.29S**±0°.08×**137°.6E**±0°.1**, h35**^{km}**, n12, σ3^{s}19**/14**, mb3.8**/6**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	6.78	291	Pn	Pn	16 41 31.7	0.0
	1.9nm,0.3s,baz=70,slow=13,SNR=11						
SIJI				Sn	Sn	16 42 49.6	+1.9
	0.7nm,0.3s,baz=323,slow=20,SNR=1.4						
SIJI				LR	LR	16 44 34.2	
	comp=Z,48nm,19.5s,baz=214,slow=41						
BATI	Baumata	15.46	243	Pn	P	16 43 36.2	+1.9
	3.4nm,0.3s,baz=57,slow=12,SNR=4.3						
WRA	Warramunga Arr	16.86	191	P	P	16 43 52.0	+2.1
	2.5nm,0.3s,baz=14,slow=12,SNR=55						
WRA				S	Sn	16 46 49.8	-4.6
	0.4nm,0.3s,baz=0.5,slow=24,SNR=5.1						
WRA				LR	LR	16 50 41.5	
	comp=Z,37nm,18.8s,baz=330,slow=38						
KAPI	Kappang	17.90	264	LR	LR	16 52 49.0	
	comp=Z,15nm,20.7s,baz=58,slow=43						
FITZ	Fitzroy Crossi	18.82	218	P	Pn	16 44 14.6	+2.4
	0.9nm,0.3s,baz=32,slow=9.6,SNR=22						
FITZ				S	Sn	16 47 34.3	-7.6
	0.7nm,0.3s,baz=200,slow=14,SNR=9.5						
ASAR	Alice Springs	20.57	190	P	Pn	16 44 33.3	+0.3
	5.7nm,0.3s,baz=15,slow=9.4,SNR=343						
ASAR				S	S	16 48 20.9	+2.0
	3.4nm,0.7s,baz=11,slow=23,SNR=14						
ASAR				LR	LR	16 53 15.2	
	comp=Z,38nm,19.1s,baz=22,slow=38						
STKA	Stephens Creek	28.68	173	P	P	16 45 49.8	+1.5
	2.2nm,1.0s,baz=1.7,slow=9.9,SNR=3.5						
CMAR	Chiang Mai Arr	43.78	301	P	P	16 47 57.5	+0.3
	1.0nm,0.7s,baz=120,slow=6.8,SNR=8.7						
USRK	Ussuriysk Ar.	47.54	355	P	P	16 48 24.0	-2.6
	1.1nm,0.5s,baz=198,slow=9.1,SNR=3.4						
MKAR	Makanchi Array	69.58	323	P	P	16 50 59.5	-0.7
	0.2nm,0.5s,baz=105,slow=6.0,SNR=3.6						
ZALV	Zalesovo Beam	71.89	330	P	P	16 51 12.4	-1.6
	0.4nm,0.4s,baz=114,slow=3.6,SNR=2.3						
QSPA	South Pole Qui	86.66	180	P	P	16 52 34.8	+0.2
	1.5nm,0.7s,baz=277,slow=1.0,SNR=14						

MAN 30 16:46:00.4, 8°.08N×121°.91E, h35^{km}, mb4.5, ML3.3, MS3.1, Mindanao

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*IDC **30** 16:48:33.9±0.1, 6°.98S×129°.31E, h74^{km}±6^{km}, mb3.0/1, mb1 3.8/6, mb1mx3.4/45, mbtmp3.9/6, MS3.0/1, Ms1 3.0/1, ms1mx2.2/12, Error ellipse: s-maj=4.6km s-min=1.5km az=109.0*

ISC 30 16:48:35.2±1.0**, 7°.03S**±0°.07×**129°.4E**±0°.1**, h100**^{km}**, n7, σ1^{s}31**/10**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	6.40	17	P	Pn	16 50 05.2	-1.8
	2.5nm,0.3s,baz=90,slow=7.0,SNR=64						
BATI	Baumata	6.47	240	P	Pn	16 50 07.5	-0.5
	1.7nm,0.3s,baz=340,slow=22,SNR=1.2						
BATI				S	Sn	16 51 20.8	+0.3
	4.9nm,0.3s,baz=342,slow=23,SNR=7.1						
FITZ	Fitzroy Crossi	11.59	198	P	Pn	16 51 16.6	-0.9
	0.7nm,0.3s,baz=24,slow=10,SNR=23						
FITZ				S	Sn	16 53 23.1	-1.8
	0.2nm,0.3s,baz=145,slow=23,SNR=1.5						
WRA	Warramunga Arr	13.71	160	P	Pn	16 51 46.4	+1.0
	0.5nm,0.3s,baz=332,slow=13,SNR=19						
WRA				S	Sn	16 54 16.2	-0.1
	0.3nm,0.3s,baz=337,slow=22,SNR=5.9						
ASAR	Alice Springs	17.10	166	P	P	16 52 28.8	+0.5
	0.7nm,0.3s,baz=339,slow=9.8,SNR=51						
ASAR				S	Sn	16 55 38.2	-0.2
	0.1nm,0.3s,baz=340,slow=25,SNR=4.1						
LEM	Lembang	21.61	269	LR	LR	17 04 32.1	
	comp=Z,35nm,19.0s,baz=333,slow=44						
MKAR	Makanchi Array	67.92	327	P	P	16 59 25.0	+1.8
	0.2nm,0.5s,baz=124,slow=5.1,SNR=1.6						

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*AEIC **30** 16:50:02±1.1, 53°.8N±0°.1×157°.3W±0°.2, h12^{km}±9^{km}, Error ellipse: s-maj=22.4km s-min=10.5km az=153.0*

NEIC 30 16:49:59.5±1.1**, 53°.77N**±0°.10×**157°.4W**±0°.2**, h17**^{km}±9^{km}**, ML3.5**/13**, ML3.7**(AEIC)**, Error ellipse: s-maj=19.0km s-min=4.9km az=135.0, South of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNBA	Chernabura Isl	1.66	310	Pn	Pn	16 50 27.5	-0.2
CHIR	Chirikof Islan	2.30	26	Pn	Pn	16 50 35.9	-0.6
CHIR				IAML		16 51 20.2	
	comp=E,208nm,3.0s						
CHIR				IAML		16 51 58.2	
	comp=N,303nm,2.7s						
SDPT	Sand Point	2.39	313	Pn	Pn	16 50 37.4	-0.4
SDPT				IAML		16 51 37.6	
	comp=N,177nm,3.0s						
SDPT				IAML		16 51 50.9	
	comp=E,197nm,3.3s						
CHGN	Chignik	2.60	347	Pn	Pn	16 50 41.3	+0.6
DT1	Dutton Round H	3.15	297		Pn	16 50 48.1	-0.1
FALS	False Pass	3.69	290	Pn	Pn	16 50 55.5	-0.1
ISLZ	Isanotski Laza	3.83	287		Pn	16 50 57.9	+0.3
SSLN	Shishaldin Nor	4.00	288		Pn	16 51 00.8	+0.7
OHAK	Old Harbor	4.17	32		Pn	16 51 01.6	-0.7
OHAK	Old Harbor	4.17	32	IAML		16 51 57.5	
	comp=E,63nm,2.7s						
OHAK				IAML		16 52 48.1	
	comp=N,74nm,2.7s						
KDAK	Kodiak Island	4.85	32	Pn	Pn	16 51 12.4	+0.8
KDAK				IAML		16 51 49.0	
	comp=N,58nm,2.9s						
AKSA	Akutan Strait	4.92	278		Pn	16 51 12.3	-0.2
AKUT	Akutan	4.96	278	Pn	Pn	16 51 12.9	-0.2
AKLV	Akutan Long Va	5.07	278		Pn	16 51 14.9	+0.3
ZRO	Akutan Zero	5.08	277		Pn	16 51 14.6	-0.2
UNV	Unalaska Valle	5.40	274		Pn	16 51 19.0	-0.1
MNAT	Makushin Natee	5.50	275		Pn	16 51 20.7	+0.1
MREP	Makushin Rep't	5.54	274		Pn	16 51 21.7	+0.5
MSW	Makushin Switc	5.56	275		Pn	16 51 21.3	0.0
MAPS	Pakushin South	5.66	274		Pn	16 51 23.0	+0.3
CNPM	China Poot	6.69	28		Pn	16 51 36.0	-0.8
SEW	Seward	7.69	31	Pn	Pn	16 51 51.3	+0.8

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*IDC **30** 16:50:23.2±0.4, 58°.77S×25°.27W, h0^{km}, mb4.7/12, mb1 4.8/13, mb1mx4.6/19, mbtmp4.7/13, ML5.0/1, MS3.9/14, Ms1 3.9/14, ms1mx3.8/21, Error ellipse: s-maj=18.5km s-min=14.9km az=67.0*

*NEIC **30** 16:50:28.3±1.8, 58°.8S±0°.1×25°.4W±0°.1, h35^{km}±1^{km}, mb4.9/39, Error ellipse: s-maj=19.0km s-min=9.7km az=25.0*

ISC 30 16:50:28.2±0.3**, 58°.85S**±0°.07×**25°.26W**±0°.08**, h35**^{km}**, n253, σ0^{s}84**/248**, mb4.8**/30**, MS3.9**/13**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	7.70	302	Pn	Pn	16 52 17.4	-0.3
VNA1	Neumayer--Stat	13.80	156	P	Pn	16 53 40.6	-0.4
VNA1	Neumayer--Stat	13.80	156	PcP	PcP	16 59 03.7	+1.6
VNA1				S	Sn	16 56 06.7	-6.0
VNA3	Neumayer Olymp	13.99	159	P	Pn	16 53 42.8	-0.8
VNA3	Neumayer Olymp	13.99	159	PcP	PcP	16 59 03.2	+0.8
VNA3				S	Sn	16 56 07.3	-10
VNA2	Neumayer--Watz	14.20	156	P	Pn	16 53 45.1	-1.2
	baz=317,slow=13						
VNA2	Neumayer--Watz	14.20	156	PcP	PcP	16 59 04.1	+1.4
VNA2				S	Sn	16 56 12.4	-10
SNAA	Sanae	15.76	154	Pn	Pn	16 54 06.7	-0.3
	6.5nm,0.3s,baz=316,slow=16,SNR=54						
SNAA				Sn	Sn	16 56 49.1	-11
	0.9nm,0.3s,baz=321,slow=18,SNR=3.6						
PMSA	Palmer Station	19.00	236	LR	LR	17 01 08.3	
	comp=Z,387nm,18.2s,baz=82,slow=34						
PMSA	Palmer Station	19.00	236	P	Pn	16 54 47.1	-0.2
PMSA				IAmb	IAmb	16 55 00.8	
	comp=Z,154nm,1.5s						
EFI	East Falkland	19.86	277	P	P	16 54 56.1	+0.3
EFI				IAmb	IAmb	16 55 05.4	
	comp=Z,60nm,0.9s						
USHA	Ushuaia	23.63	261	P	P	16 55 36.0	+0.3
	comp=Z,17nm,0.7s,baz=123,slow=9.9,SNR=6.0						
USHA				LR	LR	17 02 49.5	
	comp=Z,455nm,20.1s,baz=91,slow=32						
MG02	Cerro Sombrero	25.05	265	P	P	16 55 47.5	-1.3
MG05	Puerto Natales	27.35	264	P	P	16 56 09.1	-0.4
MG05				IAmb	IAmb	16 56 23.5	
	comp=Z,32nm,1.0s						
GO09	Cerro Castillo	27.49	265	P	P	16 56 09.4	-1.4
GO09				IAmb	IAmb	16 56 26.9	
	comp=Z,40nm,1.1s						
QSPA	South Pole Qui	31.39	180	P	P	16 56 46.7	+1.3
	comp=Z,19nm,0.6s,baz=212,slow=2.0,SNR=209						
QSPA	South Pole Qui	31.39	180		P	16 56 47.4	+2.0
QSPA				IAmb	IAmb	16 56 48.0	
	comp=Z,21nm,0.7s						
PLTB	Pedras Altas	33.15	312	*e*P	P	16 57 01.4	+0.4
PLTB	Pedras Altas	33.15	312	P	P	16 57 00.1	-0.8
PLCA	Paso Flores	33.57	282	P	P	16 57 04.8	+0.1
	comp=Z,4.6nm,0.7s,baz=144,slow=7.2,SNR=15						
PLCA				LR	LR	17 10 32.9	
	comp=Z,172nm,18.4s,baz=132,slow=36						
PLCA	Paso Flores	33.57	282	*e*P	P	16 57 04.9	+0.3
PLCA	Paso Flores	33.57	282	P	P	16 57 04.6	-0.1
CPSB	Cacapava Do Su	34.30	314	*e*P	P	16 57 11.6	+0.6
LL04	Puerto Octay	34.39	280	P	P	16 57 10.9	-0.7
LL04				IAmb	IAmb	16 57 14.2	
	comp=Z,9.0nm,0.9s						
LC01	Cunco	35.62	283	P	P	16 57 22.1	-0.2
LC01				IAmb	IAmb	16 57 37.2	
	comp=Z,11nm,0.9s						
ITAB	Concordia	36.70	318	P	P	16 57 31.6	0.0
ITAB				IAmb	IAmb	16 57 42.4	
	comp=Z,30nm,1.3s						
MAW	Mawson	37.29	141	P	P	16 57 36.6	+0.5
	comp=Z,5.2nm,0.5s,baz=230,slow=8.7,SNR=25						
MAW				PcP	PcP	16 59 55.8	+1.1
	comp=Z,0.9nm,0.6s,baz=302,slow=5.7,SNR=3.9						
MAW				LR	LR	17 11 16.8	
	comp=Z,232nm,19.5s,baz=238,slow=34						
MAW	Mawson	37.29	141		P	16 57 36.8	+0.7
BO02	Sierra Bellavi	38.28	289	P	P	16 57 44.1	-0.9
BO02				IAmb	IAmb	16 58 02.5	
	comp=Z,11nm,0.8s						
GO05	Huala	38.67	287	P	P	16 57 46.9	-1.4
DUB01	Friburgo-RJ	38.73	334	*e*P	P	16 57 49.3	+0.4
PTGB	Pitanga	39.00	319	*e*P	P	16 57 49.9	-1.2
MT09	Talagante	39.20	289	P	P	16 57 51.9	-0.8
MT09				IAmb	IAmb	16 57 56.3	
	comp=Z,23nm,0.7s						
MT01	Popeta	39.25	289	P	P	16 57 51.9	-1.2
MT01				IAmb	IAmb	16 57 56.6	
	comp=Z,15nm,0.7s						
CPUP	Villa Florida	39.45	311	LR	LR	17 14 57.4	

	comp=Z,97nm,19.7s,baz=190,slow=37						
CPUP	Villa Florida	39.45	311	eP	P	16 57 52.6	-2.1
PEL	Peldehue	39.56	290	P	P	16 57 55.4	-0.3
PEL				IAmb	IAmb	16 57 59.8	
	comp=Z,35nm,1.0s						
VA05	Santo Domingo	39.60	289	P	P	16 57 55.7	-0.2
MT02	Curacav	39.69	290	P	P	16 57 56.5	-0.2
MT02				IAmb	IAmb	16 58 12.6	
	comp=Z,27nm,0.8s						
ALF01	Guarapari-ES	39.80	337	eP	P	16 57 58.5	+0.9
VA03	San Esteban	39.80	291	P	P	16 57 57.3	-0.5
ZON	Zonda	39.90	294	P	P	16 57 58.7	+0.1
ZON				IAmb	IAmb	16 58 14.7	
	comp=Z,11nm,0.7s						
RIB01	Linhares ES	41.00	338	eP	P	16 58 08.6	+1.0
BB19B	Bebedouro	41.30	326	eP	P	16 58 10.7	+0.6
BSFB	Barra de Sao F	41.56	337	eP	P	16 58 13.2	+1.0
SJMB	Sao Joao De Ma	41.75	337	eP	P	16 58 14.2	+0.5
DIAM	Diamantina, MG	42.68	334	eP	P	16 58 21.3	-0.2
GUA01	Guaratinga, BA	43.55	340	eP	P	16 58 29.1	+0.7
VNDA	Vanda	43.81	182	P	P	16 58 31.9	+2.0
	comp=Z,13nm,0.6s,baz=181,slow=7.7,SNR=44						
VNDA				PcP	PcP	17 00 17.4	+1.8
	comp=Z,2.8nm,0.8s,baz=269,slow=3.8,SNR=1.9						
VNDA				LR	LR	17 15 42.2	
	comp=Z,82nm,21.7s,baz=167,slow=35						
VNDA	Vanda	43.81	182		P	16 58 31.6	+1.8
VNDA				IAmb	IAmb	16 58 32.9	
	comp=Z,15nm,0.7s						
AC02	Maricunga	44.07	297	P	P	16 58 32.0	-1.1
AC02				IAmb	IAmb	16 58 50.0	
	comp=Z,17nm,0.9s						
MC01	Montes Claros	44.28	334	eP	P	16 58 34.3	0.0
CMC01	Camacan, BA	44.69	340	eP	P	16 58 38.2	+0.7
BOSA	Boshof	45.77	71	P	P	16 58 46.2	+0.1
	comp=Z,3.6nm,0.6s,baz=211,slow=8.1,SNR=12						
BOSA				LR	LR	17 14 25.8	
	comp=Z,95nm,18.5s,baz=196,slow=32						
JANB	Januaria	45.96	334	eP	P	16 58 48.0	+0.4
GDU01	Guandu, BA	46.31	341	eP	P	16 58 50.4	+0.1
BDFB	Brasilia	46.31	329	P	P	16 58 51.4	+0.9
	comp=Z,4.6nm,0.7s,baz=140,slow=9.7,SNR=3.5						
BDFB				PcP	PcP	17 00 26.1	+0.8
	comp=Z,5.6nm,0.6s,baz=185,slow=5.8,SNR=5.2						
PP1B	Ponte de Pedra	46.55	320	eP	P	16 58 54.1	+1.9
ARAG	Araguaiana, MT	47.34	324	eP	P	16 58 58.3	-0.1
SDBA	SAO DESIDERIO	48.65	334	eP	P	16 59 09.0	+0.4
PB01	IPOC Station P	49.24	301	P	P	16 59 11.7	-1.4
PB01				IAmb	IAmb	16 59 31.3	
	comp=Z,9.0nm,1.0s						
PEXB	Peixe	49.77	330	eP	P	16 59 17.6	+0.5
PTLB	Pontes e Lacer	50.04	315	eP	P	16 59 18.0	-1.1
PTLB	Pontes e Lacer	50.04	315	P	P	16 59 17.5	-1.6
PTLB				IAmb	IAmb	16 59 22.9	
	comp=Z,5.3nm,0.7s						
TSUM	Tsumeb	50.25	57	P	P	16 59 21.0	+0.1
PB11	IPOC Station P	50.44	301	P	P	16 59 21.0	-1.3
H10S2	ASCENSION HYDR	50.44	14	T	T	17 53 42.5	
	baz=187,slow=74,SNR=158						
H10S3	ASCENSION HYDR	50.44	14	T	T	17 53 43.0	
	baz=33,slow=74,SNR=196						
SNDB	Serra Nova Dou	50.72	326	eP	P	16 59 24.5	+0.2
CASY	Casey	50.91	159	P	P	16 59 25.1	0.0
CASY				IAmb	IAmb	16 59 32.5	
	comp=Z,25nm,1.2s						
H10N1	ASCENSION HYDR	51.56	14	T	T	17 55 07.2	
	baz=186,slow=75,SNR=114						
H10N3	ASCENSION HYDR	51.56	14	T	T	17 55 06.7	
	baz=186,slow=75,SNR=166						
H10N2	ASCENSION HYDR	51.58	14	T	T	17 55 08.0	
	baz=186,slow=75,SNR=180						
SMTB	Santa Maria do	52.71	332	eP	P	16 59 39.9	+0.7
PDRB	Porto dos Gac	52.75	320	eP	P	16 59 38.3	-1.1
LPAZ	La Paz	52.84	305	P	P	16 59 40.0	-0.8
	comp=Z,2.7nm,0.4s,baz=127,slow=4.1,SNR=10						
LPAZ				LR	LR	17 24 17.4	
	comp=Z,51nm,19.6s,baz=188,slow=38						
LPAZ	La Paz	52.84	305	eP	P	16 59 39.9	-1.0
LPAZ	La Paz	52.84	305	P	P	16 59 39.2	-1.6
CLDB	Colider	53.14	321	eP	P	16 59 42.6	+0.3
PRPB	Parauapebas	55.85	330	eP	P	17 00 02.5	+0.4
NPGB	Novo Progresso	56.60	323	eP	P	17 00 08.3	+0.9
SAML	Samuel	57.51	314	P	P	17 00 12.1	-1.7
ROSB	Rosrio	57.72	338	eP	P	17 00 15.7	+0.5
ETMB	Extrema	57.88	310	eP	P	17 00 16.6	+0.2
ETMB	Extrema	57.88	310	P	P	17 00 15.2	-1.2
TMAB	Tom-Au,PA,Br	59.09	333	eP	P	17 00 25.0	+0.2
ITTB	Itaituba	59.25	324	eP	P	17 00 25.5	-0.4
MALB	Monte Alegre	61.20	326	eP	P	17 00 39.3	+0.1
MCPB	Macapa, AP	62.01	329	eP	P	17 00 45.0	+0.4
LIC	Lamto	66.87	22	eP	P	17 01 16.7	+0.3
	comp=Z,18nm,0.6s						
KIC	Kosan Boka	67.06	22	eP	P	17 01 17.9	+0.3
	comp=Z,7.5nm,0.7s						
BOAV	Boa Vista	67.13	321	eP	P	17 01 16.2	-2.0
BOAV	Boa Vista	67.13	321	P	P	17 01 16.1	-2.0
TIC	Toumodi	67.28	22	eP	P	17 01 19.2	+0.2
DBIC	Dimbokro	67.34	22	P	P	17 01 19.8	+0.4
	comp=Z,3.3nm,0.6s,baz=203,slow=6.7,SNR=8.4						
DBIC				LR	LR	17 25 27.2	
	comp=Z,35nm,20.0s,baz=186,slow=31						
DBIC	Dimbokro	67.34	22	P	P	17 01 19.3	0.0
DBIC				IAmb	IAmb	17 01 27.2	
	comp=Z,14nm,1.4s						
TORD	Torodi Ar. Bea	75.04	27	P	P	17 02 06.7	+0.8
	comp=Z,12nm,0.6s,baz=196,slow=6.3,SNR=88						
TORD				LR	LR	17 29 17.4	
	comp=Z,81nm,18.9s,baz=10.0,slow=31						
KOWA	Kowa	75.13	21	P	P	17 02 05.2	-1.1
KOWA				IAmb	IAmb	17 02 24.2	
	comp=Z,12nm,1.4s						
THZ	Tophouse	78.61	194	P	P	17 02 27.0	+1.0
CVTR	Volcan Turrial	83.12	302	P	P	17 02 48.6	-2.1
STKA	Stephens Creek	88.95	169	P	P	17 03 19.7	+0.9
	comp=Z,5.8nm,0.9s,baz=141,slow=1.3,SNR=9.0						
STKA				LR	LR	17 41 26.8	
	comp=Z,81nm,19.8s,baz=204,slow=34						
STKA	Stephens Creek	88.95	169	P	P	17 03 19.2	+0.4
ASAR	Alice Springs	95.99	161	P	P	17 03 51.5	0.0
	comp=Z,2.3nm,0.6s,baz=182,slow=4.1,SNR=59						
ASAR				PKiKP	PKiKP	17 08 29.7	-0.5
	comp=Z,0.3nm,0.8s,baz=171,slow=1.5,SNR=6.5						
ASAR				PKKPbc	PKKPbc	17 20 37.9	+1.4
	comp=Z,0.4nm,0.7s,baz=23,slow=2.6,SNR=12						
ASAR				LR	LR	17 44 56.9	
	comp=Z,99nm,19.4s,baz=196,slow=34						
KEST	Kesra	98.55	28	P	Pdif	17 04 03.2	+0.7
	comp=Z,2.0nm,0.5s,baz=342,slow=1.4,SNR=5.9						
WRA	Warramunga Arr	99.71	161	PKiKP	PKiKP	17 08 36.5	-0.3
	comp=Z,0.4nm,0.8s,baz=212,slow=1.7,SNR=1.8						
WRA				PKKPbc	PKKPdf	17 20 28.6	-0.5
	comp=Z,0.2nm,0.3s,baz=355,slow=2.8,SNR=5.0						
WRA				LR	LR	17 47 31.1	
	comp=Z,103nm,19.6s,baz=235,slow=34						
ESDC	Sonseca Array	99.76	17	LR	LR	17 43 13.0	
	comp=Z,41nm,21.7s,baz=190,slow=32						
NHSC	New Hope	102.34	315	P	Pdif	17 04 20.0	+0.6
	baz=154						
P60A	Greenville	106.83	322	P	PKiKP	17 08 49.5	+0.6
	baz=155						
P52A	Corning	108.87	317	P	PKiKP	17 08 53.6	+0.9
	baz=153						
N54A	Moraine State	109.30	319	P	PKiKP	17 08 54.7	+1.1
	baz=153						
ACSO	Alum Creek Sta	109.70	317	P	PKiKP	17 08 55.6	+1.3
	baz=152						
ANMO	Albuquerque	114.95	296	P	PKiKP	17 09 05.2	+0.5
	baz=146						
T25A	Trinidad	115.81	299	P	PKiKP	17 09 07.0	+0.7
	baz=146						
S22A	4UR Ranch, Cre	117.41	298	P	PKiKP	17 09 09.9	+0.4
	baz=145						
GLA	Glamis	117.41	289	P	PKiKP	17 09 10.4	+1.0
	baz=144						
IKP	In-Ko-Pah, Jac	117.72	288	P	PKiKP	17 09 10.3	+0.2
	baz=144						
ECSD	EROS Data Cent	117.91	309	P	PKiKP	17 09 10.1	+0.2
	baz=146						
PDMCI	Parker Dam,Lak	118.09	290	P	PKiKP	17 09 10.9	+0.3
	baz=144						
BC3	Big Chuckawall	118.21	289	P	PKiKP	17 09 11.0	0.0
	baz=144						
IRM	Iron Mountain	118.46	289	P	PKiKP	17 09 11.6	+0.2
	baz=144						
ISCO	Idaho Springs	118.53	300	P	PKiKP	17 09 12.2	+0.6
	baz=144						
BELC	Belle Mtn. Jos	118.75	289	P	PKiKP	17 09 12.6	+0.6
	baz=144						
GMRC	Granite Mounta	119.22	289	P	PKiKP	17 09 13.1	+0.1
	baz=143						
EYMN	Ely	119.44	315	P	PKiKP	17 09 13.1	+0.3
	baz=147						
N23A	Red Feather La	119.56	301	P	PKiKP	17 09 13.7	+0.1
	baz=144						
BFSC	Mount Baldy Ra	119.77	288	P	PKiKP	17 09 14.3	+0.2
	baz=143						
TUQ	Turquoise Moun	119.87	290	P	PKiKP	17 09 14.6	+0.4
	baz=143						
O20A	White River Ci	119.99	299	P	PKPdf	17 09 14.2	-0.1
	baz=143						
GSC	Goldstone, Bar	120.19	289	P	PKPdf	17 09 14.7	0.0
	baz=143						
EDW2	Edwards Air Fo	120.44	288	P	PKiKP	17 09 15.2	0.0
	baz=143						
LRMC	Laurel Mtn Rad	120.77	288	P	PKiKP	17 09 16.1	+0.2
	baz=143						
MPMC	Manual Prospec	121.13	289	P	PKiKP	17 09 16.9	+0.1
	baz=143						
FURC	Furnace Creek,	121.15	290	P	PKiKP	17 09 17.2	+0.8
	baz=143						
K22A	Casper	121.23	301	P	PKiKP	17 09 17.1	+0.4
	baz=143						
ISA	Isabella, Lake	121.30	288	P	PKiKP	17 09 17.1	+0.2
	baz=143						
RSSD	Black Hills	121.32	304	P	PKPdf	17 09 16.5	-0.2
	baz=143						
PKM	Mcpherson Peak	121.35	286	P	PKiKP	17 09 17.5	+0.3
	baz=143						
CWC	Cottonwood Cre	121.72	289	P	PKiKP	17 09 18.3	+0.5
	baz=142						
R11A	Troy Canyon, C	122.02	292	P	PKiKP	17 09 18.9	+0.5
	baz=142						
DUG	Dugway, Tooele	122.15	295	P	PKiKP	17 09 18.8	+0.3
	baz=142						
BW06	Boulder Array	122.68	299	P	PKPdf	17 09 19.2	-0.2
	baz=142						
PDAR	Pinedale Array	122.68	299	PKP	PKPdf	17 09 18.9	-0.5
	comp=Z,1.0nm,0.5s,baz=135,slow=5.8,SNR=15						
NOA	NORSAR Array B	122.88	20	PKP	PKPdf	17 09 18.3	-0.7
	comp=Z,1.0nm,0.7s,baz=206,slow=1.8,SNR=3.7						
ULM	Lac du Bonnet	122.97	314	PKP	PKPdf	17 09 18.9	-0.5
	comp=Z,5.1nm,0.6s,baz=131,slow=1.8,SNR=7.1						
CMAR	Chiang Mai Arr	123.11	110	PKP	PKiKP	17 09 20.9	+0.1
	comp=Z,1.9nm,0.8s,baz=231,slow=3.7,SNR=14						
LAO	LASA Array	124.29	305	P	PKiKP	17 09 22.6	+0.1
	baz=142						
RLMT	Red Lodge	124.39	301	P	PKiKP	17 09 23.0	+0.1
	baz=141						
HLID	Hailey	125.53	297	P	PKiKP	17 09 25.6	+0.4
	baz=140						
BOZ	Bozeman (W)	125.82	300	P	PKiKP	17 09 25.8	+0.2
	baz=140						
FINES	FINESS Array B	126.39	28	PKP	PKPdf	17 09 25.1	-0.5
	comp=Z,2.7nm,0.6s,baz=144,slow=1.9,SNR=22						
O03E	Paynes Creek	126.56	289	P	PKiKP	17 09 27.2	0.0
	baz=140						
EGMT	Eagleton	126.85	303	P	PKiKP	17 09 27.8	+0.3
	baz=140						
N02D	Trinity Center	127.52	289	P	PKiKP	17 09 29.3	+0.3
	baz=139						
MSO	Missoula	127.80	300	P	PKiKP	17 09 29.7	+0.2
	baz=139						
M02C	Callahan	127.91	289	P	PKiKP	17 09 30.2	+0.4
	baz=139						
L04D	Klamath Falls	128.26	290	P	PKiKP	17 09 30.8	+0.2
	baz=139						
J05D	Fort Rock, OR	128.54	292	P	PKiKP	17 09 31.9	+0.7
	baz=139						
K02D	Willamette Mer	129.29	290	P	PKiKP	17 09 33.3	+0.7
	baz=138						
I05D	Terrebonne, OR	129.38	293	P	PKiKP	17 09 33.2	+0.5
	baz=138						
KLMR	Klimovskoe	129.53	35	ePKPdf	PKPdf	17 09 30.3	-1.3
KLMR				AMP		17 09 33.0	
	comp=Z,24nm,1.5s						
KLMR				ePP	PP	17 11 39.6	-3.4
AAK	Ala-Archa	129.91	71	PKP	PKiKP	17 09 34.5	+0.6
	comp=Z,1.9nm,0.5s,baz=186,slow=3.5,SNR=9.7						
AAK	Ala-Archa	129.91	71		PKiKP	17 09 33.7	-0.2
G05D	Wamic, OR	130.04	293	P	PKiKP	17 09 34.2	+0.3
	baz=138						
H04D	Lebanon	130.19	292	P	PKiKP	17 09 34.4	+0.2
	baz=138						
NEW	Newport	130.31	299	P	PKiKP	17 09 34.8	+0.4
	baz=137						
E04D	Cinebar	131.60	294	P	PKiKP	17 09 37.3	+0.4
	baz=136						
D03D	Eldon	132.55	294	P	PKiKP	17 09 39.0	+0.1
	baz=136						
B05A	Bryant	132.60	296	P	PKiKP	17 09 38.8	-0.2
	baz=135						
ARCES	ARCESS Array B	133.17	22	PKP	PKPdf	17 09 37.8	-0.5
	comp=Z,3.2nm,0.6s,baz=210,slow=1.7,SNR=17						
BVAR	Borovoye Array	135.38	59	PKP	PKiKP	17 09 44.1	-0.3
	comp=Z,1.4nm,0.5s,baz=214,slow=10,SNR=15						
MKAR	Makanchi Array	136.76	73	PKhKP	PKPpre	17 09 36.4	
	comp=Z,0.2nm,0.4s,baz=220,slow=5.0,SNR=4.4						
MKAR				PKP	PKPdf	17 09 44.2	-1.5
	comp=Z,0.4nm,0.7s,baz=239,slow=3.3,SNR=3.9						
KURBB	Kurchatov Arra	137.52	66	PKP	PKPdf	17 09 46.4	-0.5
	comp=Z,0.7nm,0.3s,baz=219,slow=3.4,SNR=8.1						
KURK	Kurchatov	137.62	66		PKPdf	17 09 46.4	-0.7
YKA	Yellowknife Ar	138.93	315	PKP	PKPdf	17 09 49.5	+0.4
	comp=Z,6.0nm,0.6s,baz=115,slow=3.6,SNR=37						
YKA	Yellowknife Ar	138.93	315		PKPdf	17 09 49.9	+0.8
GTA	Gaotai	140.50	95	sPKP		17 10 11.0	
GTA	Gaotai	140.50	95	ePKPbc	PKiKP	17 09 56.0	+0.5
ZALV	Zalesovo Beam	142.62	66	PKhKP	PKPpre	17 09 51.5	
	comp=Z,1.0nm,0.4s,baz=252,slow=2.6,SNR=6.6						
ZALV				PKP	PKPdf	17 09 57.4	+1.3
	comp=Z,1.1nm,0.4s,baz=234,slow=3.1,SNR=5.4						
ZALV	Zalesovo Beam	142.62	66		PKPpre	17 09 50.8	
WRAK	Wrangell Islan	142.66	299	P	PKiKP	17 09 57.6	-1.6
	baz=125						
SIT	Sitka	144.38	298	P	PKPdf	17 10 00.4	+1.4
	baz=123						
P33M	Teslin, Yukon	144.93	304	P	PKPdf	17 09 59.7	-0.3
	baz=120						
SKAG	Skagway	145.65	302	P	PKPab	17 10 01.9	0.0
	baz=120						
FARO	Faro, Yukon	146.14	307	P	PKPab	17 10 03.5	-0.3
	baz=117						
M31M	Drury Creek, Y	146.56	307	P	PKPbc	17 10 04.3	0.0
	baz=117						
BTO	Baotou	146.62	103	ePKPbc	PKPbc	17 10 05.8	+0.5
N31M	Braeburn, Yuko	146.82	305	P	PKPbc	17 10 04.8	-0.2
	baz=117						
A36M	Sachs Harbour	147.13	326	P	PKPbc	17 10 05.9	+0.3
	baz=109						
M30M	Minto, Yukon	147.73	306	P	PKPbc	17 10 07.6	0.0
	baz=115						
PINM	Pinnacle	148.14	301	P	PKPbc	17 10 09.0	+0.2
	baz=117						
INK	Inuvik	148.61	317	P	PKPbc	17 10 09.6	0.0
	baz=108,SNR=37						
YUK3	Moose Creek	148.96	303	P	PKPbc	17 10 11.0	0.0
	baz=114						
EPYK	Eagle Plains	149.14	313	P	PKPbc	17 10 11.3	+0.2
	baz=109						
BVCY	Beaver Creek	149.39	304	P	PKPbc	17 10 12.0	+0.2
	baz=113						
DAWY	Dawson	149.40	308	P	PKPbc	17 10 11.7	-0.1
	baz=111,SNR=14						
I29M	Ogilvie Camp,	149.42	311	P	PKPbc	17 10 11.7	-0.1
	baz=110						
BGLC	Bering Glacier	149.51	299	P	PKPbc	17 10 12.5	+0.5
	baz=115						
SONM	Songino Array	149.78	90	PKPbc	PKPbc	17 10 13.6	+0.2
	comp=Z,3.9nm,0.6s,baz=219,slow=2.7,SNR=14						
M27K	Edge Creek, AK	149.80	304	P	PKPbc	17 10 13.4	+0.4
	baz=112						
MCARA	McCarthy VSAT	149.92	302	P	PKiKP	17 10 13.7	-0.3
	baz=113						
M26K	Nabesna, AK	150.30	304	P	PKPbc	17 10 14.3	+0.2
	baz=112						
BMRM	Bremner River	150.46	300	P	PKiKP	17 10 14.9	-0.3
	baz=113						
NRIK	Noril'sk	150.49	42	PKPbc	PKPbc	17 10 14.2	0.0
	comp=Z,3.6nm,0.9s,baz=115,slow=2.5,SNR=8.7						
Q23K	Middleton Isla	150.63	297	P	PKiKP	17 10 15.3	-0.1
	baz=115						
L26K	Log Cabin Wild	150.68	305	P	PKiKP	17 10 15.4	-0.1
	baz=110,SNR=8.3						
N25K	Chitina, Valde	150.70	302	P	PKiKP	17 10 16.0	+0.3
	baz=112						
HARP	HAARP	151.24	303	P	PKiKP	17 10 16.9	+0.2
	baz=110						
KLU	Klutina	151.25	301	P	PKiKP	17 10 17.3	+0.4
	baz=112,SNR=7.0						
J26L	Joseph Creek	151.26	308	P	PKiKP	17 10 16.9	+0.1
	baz=108,SNR=31						
SCRK	Sand Creek	151.27	306	P	PKiKP	17 10 17.2	+0.3
	baz=108,SNR=30						
GLI	Glacier Island	151.55	299	P	PKiKP	17 10 17.5	+0.2
	baz=112						
RIDG	Independent Ri	151.55	306	P	PKiKP	17 10 18.0	+0.6
	baz=108,SNR=29						
PAX	Paxson	151.57	304	P	PKiKP	17 10 17.7	+0.2
	baz=109,SNR=7.4						
M24K	Tolsona, Glenn	151.58	302	P	PKiKP	17 10 18.3	+0.8
	baz=110,SNR=9.2						
SCM	Sheep Creek Mo	152.00	301	P	PKiKP	17 10 19.0	+0.6
	baz=110,SNR=5.0						
J25K	Salcha River,	152.04	307	P	PKiKP	17 10 18.6	+0.2
	baz=106,SNR=19						
PWL	Port Wells	152.10	299	P	PKiKP	17 10 18.7	+0.2
	baz=111,SNR=6.0						
SEW	Seward	152.34	297	P	PKiKP	17 10 19.1	+0.2
	baz=112						
KNK	Knik Glacier	152.36	300	P	PKiKP	17 10 19.4	+0.3
	baz=110						
DHY	Denali Highway	152.43	304	P	PKiKP	17 10 19.9	+0.5
	baz=108,SNR=7.0						
WAT6	Susitna Watana	152.43	302	P	PKiKP	17 10 19.8	+0.4
	baz=108,SNR=13						
KSRS	Korea Array	152.44	129	PKPbc	PKiKP	17 10 19.9	0.0
	comp=Z,1.1nm,0.7s,baz=202,slow=2.5,SNR=6.1						
SML	Sawmill	152.44	301	P	PKiKP	17 10 19.4	+0.2
	baz=110,SNR=6.2						
HDA	Harding Lake	152.63	306	P	PKiKP	17 10 19.5	0.0
	baz=106,SNR=8.0						
ILAR	Eielson Array	152.71	307	PKPbc	PKiKP	17 10 19.7	0.0
	comp=Z,15nm,0.8s,baz=153,slow=0.9,SNR=83						
ILAR	Eielson Array	152.71	307		PKPbc	17 10 19.5	0.0
PMR	Palmer	152.72	300	P	PKiKP	17 10 20.0	+0.3
	baz=110						
RC01	Rabbit Creek A	152.82	299	P	PKiKP	17 10 20.2	+0.3
	baz=110						
KDAK	Kodiak Island	152.90	291	P	PKiKP	17 10 20.5	+0.3
	baz=115						
OHAK	Old Harbor	153.00	289	P	PKPbc	17 10 20.2	-0.1
	baz=115						
COLA	College	153.13	307	P	PKPbc	17 10 20.1	-0.2
	baz=104						
TCOL	CIGO, UAF Yank	153.14	307	P	PKPbc	17 10 20.1	-0.3
	baz=104						
SII	Sitkinak Islan	153.15	287	P	PKPbc	17 10 20.6	-0.1
	baz=116						
M22K	Willow	153.22	300	P	PKiKP	17 10 21.4	+0.6
	baz=109						
MCK	McKinley	153.29	305	P	PKiKP	17 10 21.5	+0.6
	baz=106						
CUT	Chulitna	153.49	301	P	PKiKP	17 10 21.7	+0.4
	baz=107						
NEA2	Nenana	153.57	306	P	PKPbc	17 10 21.3	-0.1
	baz=104						
TRF	Thorofare Moun	153.80	304	P	PKiKP	17 10 22.4	+0.3
	baz=105						
I23K	Minto, Yukon-K	153.82	308	P	PKPbc	17 10 21.8	0.0
	baz=102						
SPCR	Spurr Chakacha	153.99	298	P	PKiKP	17 10 23.2	+0.7
	baz=108						
BPAW	Bear Paw Mtn.	154.26	305	P	PKiKP	17 10 23.1	+0.2
	baz=104						
MLY	Manley	154.37	307	P	PKiKP	17 10 23.5	+0.4
	baz=102						
TOLK	Toolik Lake Re	154.45	315	P	PKiKP	17 10 24.1	+0.9
	baz=95						
PPLA	Purkeypile	154.48	302	P	PKiKP	17 10 23.8	+0.2
	baz=105						
COLD	Coldfoot	154.53	312	P	PKiKP	17 10 24.2	+0.9
	baz=98						
CAST	Castle Rocks	154.57	303	P	PKPbc	17 10 23.5	0.0
	baz=104						
CHUM	Lake Minchumin	154.78	304	P	PKiKP	17 10 24.2	+0.2
	baz=103						
P18K	Big Mountain,	154.80	293	P	PKiKP	17 10 24.6	+0.4
	baz=110						
I21K	Tanana	154.91	307	P	PKiKP	17 10 24.8	+0.6
	baz=100						
N19K	Bonanza Creek	154.92	296	P	PKPbc	17 10 24.3	-0.1
	baz=108						
CHNA	Chernabura Isl	155.08	281	P	PKPdf	17 10 25.6	+10
	baz=118						
L20K	Farewell, AK	155.12	300	P	PKPdf	17 10 26.1	+10
	baz=105						
MJAR	Matsushiro Arr	155.20	147	PKPab	PKPab	17 10 42.3	+0.5
	comp=Z,2.1nm,0.7s,baz=161,slow=5.8,SNR=4.2						

MAN ***30*** *17:04:05.1, 17°.57N×121°.41E, h27^{km}, mb4.6, ML3.5, MS3.3*

NEIC ***30*** *17:04:10.5±2.1, 17°.70N±0°.08×121°.8E±0°.2, h81^{km}±8^{km}, mb4.2/6, Error ellipse: s-maj=26.3km s-min=11.1km az=87.0*

IDC ***30*** *17:04:14.3±2.5, 17°.45N×121°.68E, h125^{km}±26^{km}, mb3.4/8, mb1 3.5/9, mb1mx3.3/43, mbtmp3.8/9, MS2.9/4, Ms1 3.0/4, ms1mx2.6/35, Error ellipse: s-maj=31.2km s-min=14.7km az=69.0*

ISC 30 17:04:11.0±1.0**, 17°.68N**±0°.07×**121°.8E**±0°.2**, h100^{km}, n28, σ1^{s}.89**/20**, mb3.9**/10**, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGY	Tagaytay City	3.65	193	P	Pn	17 05 05.4	-0.2
	21nm,0.3s,baz=28,slow=8.9,SNR=4.0						
TGY				S	Sn	17 05 47.6	-0.2
	27nm,0.3s,baz=128,slow=17,SNR=1.9						
TWG	Pinlang	5.16	353	Pn	Pn	17 05 25.2	-0.8
TPUB	Ta-pu	5.70	349	Pn	Pn	17 05 32.0	-1.3
YULB	Yu-li	5.70	355	Pn	Pn	17 05 29.0	-4.3
SSLB	Suanglung	6.13	353	Pn	Pn	17 05 36.6	-2.5
NACB	Ninganchiao	6.46	358	Pn	Pn	17 05 42.6	-1.0
YHNB	Yeheng	6.97	357	Pn	Pn	17 05 49.9	-0.7
KSRS	Korea Array	20.43	14	P	Pn	17 08 43.1	-0.1
	1.8nm,0.8s,baz=198,slow=10,SNR=6.8						
KSRS				LR	LR	17 17 00.9	
	comp=Z,23nm,18.4s,baz=20,slow=37						
CMAR	Chiang Mai Arr	21.73	276	P	P	17 08 53.6	-0.9
	1.5nm,0.9s,baz=89,slow=9.1,SNR=12						
CMAR				LR	LR	17 17 19.3	
	comp=Z,27nm,19.1s,baz=171,slow=36						
GUMO	Guam	22.59	97	LR	LR	17 16 44.5	
	comp=Z,34nm,19.8s,baz=234,slow=33						
USRK	Ussuriysk Ar.	27.80	16	LR	LR	17 22 08.5	
	comp=Z,39nm,19.4s,baz=48,slow=38						
WRA	Warramunga Arr	39.37	161	P	P	17 11 30.5	-0.5
	0.4nm,0.9s,baz=343,slow=9.3,SNR=1.6						
H11S3	WAKE ISLAND Hy	42.60	82	T	T	17 57 24.4	
	baz=277,slow=74,SNR=238						
H11S1	WAKE ISLAND Hy	42.62	82	T	T	17 57 23.9	
	baz=277,slow=74,SNR=81						
H11S2	WAKE ISLAND Hy	42.62	82	T	T	17 57 24.4	
	baz=277,slow=74,SNR=110						
H11N1	WAKE ISLAND Hy	42.68	80	T	T	17 57 29.0	
	baz=275,slow=75,SNR=16						
H11N2	WAKE ISLAND Hy	42.68	80	T	T	17 57 29.9	
	baz=275,slow=75,SNR=17						
H11N3	WAKE ISLAND Hy	42.70	80	T	T	17 57 30.8	
	baz=275,slow=75,SNR=12						
ASAR	Alice Springs	42.76	164	P	P	17 11 57.4	-1.4
	0.4nm,0.7s,baz=341,slow=7.1,SNR=14						
MK31	Makanchi Array	43.55	321	P	P	17 12 06.6	+1.6
MK31				IAmb	IAmb	17 12 07.6	
	comp=Z,1.2nm,0.7s						
MKAR	Makanchi Array	43.55	321	P	P	17 12 07.0	+2.1
	comp=Z,1.5nm,0.7s,baz=118,slow=9.7,SNR=14						
MKAR	Makanchi Array	43.55	321	P	P	17 12 05.5	+0.5
MAKZ	Makanchi	43.75	321	P	P	17 12 07.3	+0.8
MAKZ				IAmb	IAmb	17 12 09.4	
	comp=Z,5.0nm,1.4s						
ZALV	Zalesovo Beam	46.08	330	P	P	17 12 26.4	+1.6
	comp=Z,0.9nm,0.8s,baz=120,slow=8.5,SNR=3.8						
NIL	Nilore	46.13	300	P	P	17 12 24.1	-1.5
KURK	Kurchatov	47.54	324	P	P	17 12 37.9	+1.6
KURK				IAmb	IAmb	17 12 39.2	
	comp=Z,3.8nm,0.8s						
KURBB	Kurchatov Arra	47.55	324	P	P	17 12 38.2	+1.9
	comp=Z,1.8nm,0.2s,baz=122,slow=8.1,SNR=8.3						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NRIK	Noril'sk	55.81	346	P	P	17 13 40.7	+3.2
	comp=Z,1.4nm,0.5s,baz=143,slow=10,SNR=3.5						

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*IDC **30** 17:19:34.2±2.1, 6°.57S×130°.03E, h141km±23km, mb3.6/3, mb1 3.9/8, mb1mx3.4/43, mbtmp4.3/8, MS3.0/3, Ms1 3.0/3, ms1mx2.4/30, Error ellipse: s-maj=34.6km s-min=19.2km az=92.0*

*DJA **30** 17:19:35.6±0.3, 7°S±2°×13°0E±°, h171km±6km, M4.5/13, mB5.0/7, mb4.6/13, MLv4.6/12, Mw(mB)4.3/7*

*NEIC **30** 17:19:36.1±1.8, 6°.44S±0°.08×129°.99E±0°.09, h151km±6km, mb4.2/15, Error ellipse: s-maj=12.4km s-min=11.3km az=69.0*

ISC 30 17:19:34.1±0.5**, 6°.66S**±0°.04×**129°.99E**±0°.05**, h146**km**, n65, σ2ˢ.44**/68**, mb4.3**/8**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.85	135	P	Pn	17 20 12.3	+5.1
SAUI				S	Sn	17 20 37.5	+4.8
SAUI	Saumlaki	1.85	135	Pn	Pn	17 20 11.7	+4.5
SAUI	Saumlaki	1.85	135	P	Pn	17 20 12.1	+4.9
BNDI	Bandanaira	2.12	358	P	Pn	17 20 12.9	+2.4
AAI	Ambon	3.45	329	P	Pn	17 20 29.1	+2.0
AAI				S	Sn	17 21 11.8	+3.6
MSAI	Masohi	3.46	342	P	Pn	17 20 29.5	+2.3
MSAI				S	Sn	17 21 11.3	+2.9
FAKI	Fak Fak	4.35	31	P	Pn	17 20 38.5	-0.3
FAKI	Fak Fak	4.35	31	Pn	Pn	17 20 38.0	-0.9
FAKI	Fak Fak	4.35	31	P	Pn	17 20 38.3	-0.5
DRS	Darwin Rock St	5.80	171	P	Pn	17 21 01.2	+3.0
SIJI	Sorong	5.89	13	P	Pn	17 20 58.1	-1.2
	5.5nm,0.3s,baz=250,slow=23,SNR=64						
SIJI				S	Sn	17 21 58.8	-7.3
	19nm,0.3s,baz=336,slow=23,SNR=25						
SIJI				LR	LR	17 24 00.9	
	comp=Z,36nm,20.5s,baz=105,slow=46						
SWI	Sorong	5.90	12	P	Pn	17 20 59.0	-0.4
SANI	Sanana	6.07	319	P	Pn	17 21 03.4	+1.6
	0.1nm28nm,0.8s						
SANI	Sanana	6.07	319	P	Pn	17 21 04.1	+2.3
MTN	Manton Dam	6.25	170	Pn	Pn	17 21 06.4	+2.3
MTN	Manton Dam	6.25	170	P	Pn	17 21 07.0	+2.9
SOEI	Soe	6.44	241	P	Pn	17 21 09.2	+2.4
	0.4nm1μm88nm,0.7s						
SOEI	Soe	6.44	241	Pn	Pn	17 21 09.6	+2.8
SOEI	Soe	6.44	241	P	Pn	17 21 09.8	+3.0
KDU	Kakadu	6.47	158	P	Pn	17 21 09.7	+2.6
LBMI	Labuha	6.48	337	P	Pn	17 21 08.3	+1.1
	0.3nm855nm87nm,0.9s						
BATI	Baumata	7.18	240	P	Pn	17 21 18.9	+2.3
	28nm,0.3s,baz=104,slow=2.4,SNR=40						
BATI				S	Sn	17 22 35.5	-1.5
	8.7nm,0.3s,baz=83,slow=11,SNR=2.3						
BATI	Baumata	7.18	240	P	Pn	17 21 19.2	+2.6
	0.4nm1μm99nm,0.6s						
TNTI	Ternate	7.83	340	Pn	Pn	17 21 25.7	+0.4
EDFI	Ende, Flores	8.48	255	P	Pn	17 21 36.2	+2.1
	6.2nm,1.0s						
KNRA	Kununurra	9.04	188	Pn	Pn	17 21 42.9	+1.4
KNRA	Kununurra	9.04	188	P	Pn	17 21 43.0	+1.6
KMSI	Cibinong	9.36	320	P	Pn	17 21 47.0	+1.3
	50nm,0.6s						
MRSI	Marisa	10.71	311	P	Pn	17 22 06.6	+2.9
	64nm,1.0s						
TOLI2	Tolitoli	12.00	310	Pn	Pn	17 22 20.1	-0.5
FITZ	Fitzroy Crossi	12.13	200	P	Pn	17 22 22.3	+0.1
	1.0nm,0.3s,baz=26,slow=8.9,SNR=71						
FITZ				S	Sn	17 24 28.6	-7.8
	3.6nm,0.3s,baz=88,slow=19,SNR=8.5						
FITZ				LR	LR	17 27 01.3	
	comp=Z,122nm,22.0s,baz=269,slow=37						
WB0	Warramunga Arr	13.71	162		Pn	17 22 41.7	-1.0
WRAB	Tennant Creek	13.86	163		Pn	17 22 44.2	-0.2
WRA	Warramunga Arr	13.86	163	P	Pn	17 22 43.9	-0.7
	1.7nm,0.3s,baz=344,slow=13,SNR=44						
WRA				S	Sn	17 25 11.9	-6.2
	2.4nm,0.3s,baz=338,slow=22,SNR=5.8						
WRA	Warramunga Arr	13.86	163	Pn	Pn	17 22 42.2	-2.3
WB2	Warramunga Arr	13.87	163	Pn	Pn	17 22 44.1	-0.5
WR0	Warramunga Arr	13.94	162		Pn	17 22 44.6	-0.9
COEN	Coen	14.86	120		Pn	17 22 57.2	+0.2
BBKI	Banjar Baru	15.42	281	P	P	17 23 14.2	+8.9
JAGI	Jajag, Banyuwa	15.80	262		Pn	17 23 05.9	-2.9
PMG	Port Moresby	17.22	100	P	P	17 23 24.1	-1.2
PMG				IAmb	IAmb	17 23 31.1	
	comp=Z,17nm,1.1s						
AS31	Alice Springs	17.32	168		Pn	17 23 28.3	+1.2
ASAR	Alice Springs	17.32	168	P	Pn	17 23 29.5	+2.3
	comp=Z,1.2nm,0.3s,baz=345,slow=9.8,SNR=33						
ASAR				S	S	17 26 36.5	-3.0
	comp=Z,1.1nm,0.3s,baz=322,slow=16,SNR=6.9						
ASAR	Alice Springs	17.32	168		Pn	17 23 29.0	+1.8
PSA00	Pilbara Seismi	17.77	212	P	Pn	17 23 33.9	+1.4
PSA00				IAmb	IAmb	17 23 50.9	
	comp=Z,23nm,1.2s						
PSA00	Pilbara Seismi	17.77	212	P	Pn	17 23 34.3	+1.8
PSA00				IAmb	IAmb	17 23 58.5	
	comp=Z,10.0nm,1.2s						
KKM	Kota Kinabalu	18.66	312	P	P	17 23 41.6	+0.5
SBUM	Sibu	19.91	296	P	P	17 23 53.9	-0.7
SBUM				IAmb	IAmb	17 23 57.7	
	comp=Z,7.2nm,1.0s						
CTAO	Charters Tower	20.67	132	P	Pn	17 24 05.9	-0.8
CTAO				IAmb	IAmb	17 24 19.9	
	comp=Z,10nm,1.3s						
RABL	Rabaul	22.21	85	P	P	17 24 20.2	+1.2
RABL				IAmb	IAmb	17 24 21.2	
	comp=Z,11nm,0.6s						
STKA	Stephens Creek	27.33	158	P	P	17 25 06.8	+1.4
JOW	Kunigami	33.34	357	P	P	17 25 57.4	-0.9
CMAR	Chiang Mai Arr	39.51	310	P	P	17 26 50.2	-0.5
	comp=Z,0.5nm,0.6s,baz=134,slow=6.6,SNR=5.0						
MJAR	Matsushiro Arr	43.66	10	P	P	17 27 22.6	-1.8
MJAR				IAmb	IAmb	17 27 50.3	
	comp=Z,5.7nm,1.4s						
HHC	Hu-ho-hao-te	50.22	342	*e*P	P	17 28 16.3	+1.0
HHC				pmax	pmax		
	comp=Z,27nm,0.8s						
HHC				pmax	pmax		
	comp=Z,110nm,5.6s						
WMQ	Urumqi	63.10	327	*e*P	P	17 29 48.0	+1.8
MK31	Makanchi Array	67.94	327	P	P	17 30 17.8	+0.6
MK31				IAmb	IAmb	17 30 18.7	
	comp=Z,2.0nm,0.6s						
MKAR	Makanchi Array	67.94	327	P	P	17 30 18.0	+0.9
	comp=Z,3.1nm,0.4s,baz=120,slow=7.9,SNR=51						
MKAR	Makanchi Array	67.94	327	P	P	17 30 17.6	+0.5
MAKZ	Makanchi	68.12	327	P	P	17 30 19.2	+0.9
MAKZ				IAmb	IAmb	17 30 19.7	
	comp=Z,3.1nm,0.5s						
AAK	Ala-Archa	70.28	320	P	P	17 30 31.8	-0.1
ZALV	Zalesovo Beam	71.27	334	P	P	17 30 36.9	-0.5
	comp=Z,0.4nm,0.4s,baz=125,slow=7.2,SNR=2.7						
ZALV	Zalesovo Beam	71.27	334	P	P	17 30 37.1	-0.3
AMKA	Amchitka	71.58	30	P	P	17 30 40.3	+1.1
ARU	Arti	85.41	328	LR	LR	18 12 08.8	
	comp=Z,28nm,20.3s,baz=236,slow=37						

NEIC 30 17:35:40.6±0.5**, 36°.82N**±0°.02×**97°.78W**±0°.04**, h6**km±8km**, ML1.5**/24**, Error ellipse: s-maj=4.4km s-min=2.0km az=74.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GC02	Grant County #	0.07	297	Pg	Pg	17 35 42.3	-0.1
KAN14	Manchester OK	0.20	313		Pg	17 35 44.8	+0.1
KAN14				IAML		17 35 49.6	
	comp=E,155nm,0.1s						
KAN17	Caldwell West	0.23	3	Pg	Pg	17 35 45.0	-0.1
KAN17				Sg	Sg	17 35 48.5	+0.4
KAN13	South Haven SW	0.31	52	Pg	Pg	17 35 46.0	-0.8
KAN13				IAML		17 35 51.5	
	comp=E,69nm,0.3s						
KAN13				IAML		17 35 51.7	
	comp=N,78nm,0.3s						
KAN01	Argonia South	0.33	3		Pg	17 35 47.3	+0.1
KAN01				IAML		17 35 51.9	
	comp=N,96nm,0.1s						
KAN01				IAML		17 35 52.4	
	comp=E,53nm,0.1s						
KAN09	Caldwell North	0.34	22	Pg	Pg	17 35 47.5	+0.2
CROK	Carrier	0.35	207	Pg	Pg	17 35 48.1	+0.5
KAN06	Argonia West S	0.43	352	Pg	Pg	17 35 49.0	0.0
KAN06				IAML		17 35 59.3	
	comp=N,44nm,0.1s						
KAN08	Anthony NE Sta	0.43	340	Pg	Pg	17 35 49.1	0.0
KAN08				IAML		17 35 59.1	
	comp=N,54nm,0.3s						
KAN08				IAML		17 36 00.8	
	comp=E,34nm,0.9s						
KAN16	Harper SW Stat	0.46	331	Pg	Pg	17 35 49.6	0.0
KAN12	Harper NE Stat	0.51	340	Pg	Pg	17 35 50.3	-0.2
T35A	Sooner Cattle	1.02	84	Pg	Pg	17 36 00.1	-0.2
T35A				IAML		17 36 13.6	
	comp=N,9.1nm,3.1s						
T35A				IAML		17 36 24.2	
	comp=E,12nm,2.3s						

IDC 30 17:38:54.8±1.8**, 1°.45N**×**126°.88E, h0**km**, mb3.3**/4**, mb1 3.5**/4**, mb1mx3.3**/31**, mbtmp3.3**/4**, Error ellipse: s-maj=174.4km s-min=23.3km az=68.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.48	161	P	P	17 43 55.1	-0.9
	0.3nm,0.3s,baz=339,slow=11,SNR=6.3						
ASAR	Alice Springs	25.89	165	P	P	17 44 29.2	+0.6
	0.3nm,0.8s,baz=344,slow=12,SNR=7.4						
MKAR	Makanchi Array	59.51	326	P	P	17 49 01.2	+1.2
	0.2nm,0.5s,baz=125,slow=8.8,SNR=2.6						
ZALV	Zalesovo Beam	62.68	334	P	P	17 49 20.0	-1.3
	0.3nm,0.4s,baz=132,slow=8.0,SNR=2.3						

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*GUC **30** 17:47:24.4±0.7, 23°.38S×68°.37W, h126km±5km, ML3.8*

*IDC **30** 17:47:40.4±9.5, 22°.06S×67°.36W, h218km±69km, mb1 3.6/1, mb1mx3.0/16, mbtmp4.0/1, Error ellipse: s-maj=109.2km s-min=73.8km az=41.0*

ISC 30 17:47:23.3±1.3**, 23°.45S**±0°.06×**68°.3W**±0°.1**, h137**km±11km**, n22, σ0ˢ.73**/33**, 4C-2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	0.99	328	*e*P	Pn	17 47 46.6	-0.5
LVC				*e*S	Sn	17 48 03.9	-1.3
PB15	IPOC Station P	1.07	283	*i* P	Pn	17 47 47.9	+0.3
PB15				*e*S	Sn	17 48 06.0	-0.1
PB06	IPOC Station P	1.36	303	⇑*i*P	Pn	17 47 50.9	+0.4
PB06				*e*S	Sn	17 48 10.7	-0.4
PB06				IAML		17 48 12.9	
	comp=N,2μm,0.2s						
PB05	IPOC Station P	1.82	289	*i* P	Pn	17 47 55.7	+0.1
PB05				IAML		17 48 24.2	
	comp=E,246nm,0.1s						
PB09	IPOC Station P	1.85	333	*e*P	Pn	17 47 57.0	+1.1
PB09				*e*S	Sn	17 48 20.9	-0.1
PB09				IAML		17 48 23.2	
	comp=N,674nm,0.8s						
PB03	IPOC Station P	1.91	317	⇑*i*P	Pn	17 47 57.1	+0.4
PB03				*i* S	Sn	17 48 22.4	+0.1
PB03				IAML		17 48 23.4	
	comp=E,1μm,0.3s						
PB04	IPOC Station P	2.01	303	⇑*i*P	Pn	17 47 58.2	+0.4
PB04				*e*S	Sn	17 48 24.4	+0.1
PB04				IAML		17 48 32.4	
	comp=N,816nm,0.0s						
PB10	IPOC Station P	2.04	268	*e*P	Pn	17 47 58.2	+0.2
PB10				IAML		17 48 27.4	
	comp=E,226nm,0.4s						
PB14	IPOC Station P	2.22	238	*e*P	Pn	17 48 01.4	+0.8
PB07	IPOC Station P	2.23	320	⇑*i*P	Pn	17 48 01.1	+0.5
PB07				*i* S	Sn	17 48 28.6	-0.7
PB07				IAML		17 48 29.6	
	comp=E,805nm,0.4s						
PB02	IPOC Station P	2.56	325	*e*P	Pn	17 48 04.8	+0.2
PB02				*i* S	Sn	17 48 36.5	-0.1
PB02				IAML		17 48 42.9	
	comp=E,875nm,0.3s						
PB01	IPOC Station P	2.62	336	*e*P	Pn	17 48 05.3	-0.1
PB01				*i* S	Sn	17 48 37.8	0.0
PB01				IAML		17 48 39.0	
	comp=N,585nm,0.6s						
PATCX	Punta Patache	3.11	327	*e*P	Pn	17 48 11.3	-0.4
PATCX				IAML		17 48 56.1	
	comp=E,265nm,0.1s						
TA01	Diego Aracena	3.34	329	*e*P	Pn	17 48 14.3	-0.3
TA01				*e*S	Sn	17 48 54.3	+0.1
TA01				IAML		17 49 02.8	
	comp=N,167nm,0.2s						
PB08	IPOC Station P	3.38	347	⇓*i*P	Pn	17 48 15.7	+0.3
PB08				*i* S	Sn	17 48 56.9	+1.2
PB08				IAML		17 48 57.6	
	comp=N,101nm,0.3s						
AC02	Maricunga	3.45	192	⇓*i*P	Pn	17 48 16.5	+0.2
HMBC	Humberstone	3.47	335	*e*P	Pn	17 48 15.2	-1.2
GO03	Copiap	4.47	202	*i* P	Pn	17 48 27.4	-2.0
PB12	IPOC Station P	5.16	339	*e*P	Pn	17 48 37.2	-1.5
LPAZ	La Paz	7.13	2	P	Pn	17 49 06.1	+0.5
	comp=N,2.1nm,0.3s,baz=174,slow=6.7,SNR=17						
LPAZ				S	Sn	17 50 13.9	-12
	baz=194,slow=17,SNR=1.2						
TORD	Torodi Ar. Bea	77.52	70	P	P	17 59 05.1	+0.7
	comp=N,1.7nm,0.5s,baz=255,slow=5.5,SNR=14						
MKAR	Makanchi Array	146.87	38	PKPbc	PKiKP	18 06 51.5	-0.4
	comp=N,0.4nm,0.5s,baz=325,slow=1.9,SNR=6.3						

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*KRNET **30** 17:48:47.0±0.1, 40°.14N×71°.56E, h21km, mb3.4*

*SOME **30** 17:48:48.8, 40°.28N×71°.57E, h5km*

*NNC **30** 17:48:49.7±1.1, 40°.28N×71°.55E, h2km±3km, mb3.8, mpv3.4, Error ellipse: s-maj=8.2km s-min=3.6km az=10.0*

ISC 30 17:48:47.8±0.8**, 40°.17N**±0°.03×**71°.55E**±0°.02**, h10**km±7km**, n58, σ2ˢ.43**/94**, 32C-18D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FRG	Fergana	0.27	42	*e*P	Pg	17 48 54.0	+0.7
FRG				*e*S	Sg	17 48 59.0	+2.0
BTK	Batken	0.57	259	*e*P	Pg	17 48 58.0	-0.9
BTK				*e*S	Sg	17 49 06.0	-0.5
BTK	Batken	0.57	259	⇓*i*P	Pg	17 48 58.2	-0.7
	baz=62						
BTK				⇓*i*S	Sg	17 49 06.4	-0.1
	baz=62						
DRK	Karamyk	0.72	164	⇓*i*P	Pg	17 48 59.8	-2.0
	baz=64						
DRK				⇓*i*S	Sg	17 49 09.6	-1.6
	baz=64						
ANR	Andizhan	0.85	47	*e*P	Pg	17 49 05.0	+0.8
ANR				*e*S	Sb	17 49 18.0	+1.9
OHH	Osh	1.01	69	*e*P	Pg	17 49 04.0	-3.2
OHH				*e*S	Sg	17 49 21.0	+0.7
OHH	Osh	1.01	69	⇑*i*P	Pg	17 49 06.0	-1.2
	baz=67						
OHH				⇑*i*S	Sg	17 49 19.7	-0.6
	baz=67						
TRKS	Terek-Say	1.39	347	⇑*i*P	Pg	17 49 11.9	-2.6
	baz=48						
TRKS				⇑*i*S	Sg	17 49 29.7	-2.9
	baz=48						
SFK	Sufi-Kurgan	1.51	95	⇑*e*P	Pn	17 49 14.3	-0.8
	baz=94						
SFK				⇑*e*S	Sb	17 49 34.1	-1.1
	baz=94						
GAR	Garm	1.51	219	⇑*i*P	Pn	17 49 14.3	-0.7
	baz=20						
GAR				⇑*i*S	Sn	17 49 33.8	-0.9
	baz=20						
CHMG	Chimgan	1.80	320	*e*P	Pb	17 49 22.0	+1.0
CHMG				*e*S	Sg	17 49 45.0	-0.8
SALK	Salom-Alik	1.87	67	⇓*e*P	Pn	17 49 20.8	+0.8
	baz=66						
SALK				⇓*e*S	Sn	17 49 44.0	+0.3
	baz=66						
TGS	TashGRES	1.98	310	*e*P	Pg	17 49 26.0	+0.2
TGS				*e*S	Sg	17 49 54.0	+2.5
TAS	Tashkent	2.06	305	⇓*i*P	Pn	17 49 23.2	+0.7
	baz=5.0						
TAS				⇓*i*S	Sn	17 49 48.9	+0.7
	baz=5.0						
IUG	Iuzhnay	2.28	330	*e*P	Pb	17 49 29.8	+0.7
	2μm,0.5s						
IUG				*e*S	Sg	17 49 59.5	-1.6
	154nm,0.4s						
IUG	Iuzhnay	2.28	330	Pg	Pb	17 49 29.8	+0.7
	2μm,0.5s						
IUG				Lg	Lg	17 49 59.5	
	154nm,0.4s						
CHGR	Chuyangaron	2.39	231	⇑*i*P	Pn	17 49 27.5	+0.4
	baz=32						
CHGR				⇑*i*S	Sn	17 49 56.1	-0.4
	baz=32						
MNAS	Manas	2.42	17	⇑*i*P	Pn	17 49 28.4	+0.9
	baz=17						
MNAS				⇑*i*S	Sn	17 49 58.1	+0.8
	baz=17						
AML	Almayashu	2.54	39	⇓*i*P	Pn	17 49 29.5	+0.1
	baz=38						
AML				⇓*i*S	Sn	17 50 00.6	+0.1
	baz=38						
CHM	Chimkent	2.60	326	*e*P	Pg	17 49 36.8	-0.8
	113nm,0.3s						
CHM				*e*S	Sg	17 50 12.0	+0.8
	380nm,0.3s						
MRKS	Merke	2.86	26	*e*P	Pb	17 49 40.6	+1.6
	5.2nm,0.2s						
MRKS				*e*S	Sg	17 50 18.3	-1.4
	44nm,0.3s						
MRKS	Merke	2.86	26	Pg	Pb	17 49 40.6	+1.6
	5.2nm,0.2s						
MRKS				Lg	Lg	17 50 18.3	
	44nm,0.3s						
EKS2	Erkin-Say	3.00	33	⇑*e*P	Pn	17 49 35.8	+0.4
	baz=33						
EKS2				⇑*i*S	Sn	17 50 11.6	+0.1
	baz=33						
KK02	Karatay Array	3.03	345	⇑Pn	Pn	17 49 37.0	+1.2
	0.9nm,0.4s						
KK02				⇑Pg	Pb	17 49 42.4	+0.6
	5.6nm,0.3s						
KK02				⇑Sn	Sn	17 50 14.4	+2.3
	3.1nm,0.3s						
KK02				⇓Lg	Lg	17 50 23.4	
	8.7nm,0.3s						
UCH	Uchtor	3.04	47	⇑*i*P	Pn	17 49 36.6	+0.3
	baz=46						
UCH				⇑*i*S	Sn	17 50 12.4	-0.5
	baz=46						
BRLS	Borolday	3.13	336	*e*P	Pb	17 49 42.8	-0.7
	9.1nm,0.3s						
BRLS				*e*S	Sb	17 50 21.9	+0.2
	44nm,0.2s						
BRLS	Borolday	3.13	336	Pg	Pb	17 49 42.8	-0.7
	9.1nm,0.3s						
BRLS				Lg	Lg	17 50 21.9	
	44nm,0.2s						
AAK	Ala-Archa	3.31	41	⇑Pg	Pg	17 49 50.0	-1.2
	2.4nm,0.3s						
AAK				⇓Lg	Lg	17 50 32.2	
	10nm,0.3s						
AAK	Ala-Archa	3.31	41	⇑*e*P	Pn	17 49 39.9	+0.1
	baz=41						
AAK				⇑*i*S	Sn	17 50 19.1	-0.2
	baz=41						
KBK	Karagaybulak	3.56	45	⇓*i*P	Pn	17 49 43.5	+0.3
	baz=44						
KBK				⇓*i*S	Sn	17 50 25.1	-0.3
	baz=44						
USP	Ospenovka	3.80	35	⇓*i*P	Pn	17 49 46.8	+0.4
	baz=34						
USP				⇓*i*S	Sn	17 50 30.9	-0.2
	baz=34						
BOOM	Boomskoye usch	4.04	54	⇓*e*P	Pn	17 49 49.9	+0.2
	baz=53						
BOOM				⇓*e*S	Sn	17 50 36.4	-0.7
	baz=53						
TKM2	Tokmak 2	4.09	47	⇑Pn	Pn	17 49 53.3	+2.7
	4.3nm,0.4s						
TKM2				⇑Sn	Sn	17 50 41.2	+2.5
	7.8nm,0.4s						
TKM2				⇑Lg	Lg	17 50 57.5	
	10nm,0.6s						
TKM2	Tokmak 2	4.09	47	⇑*i*P	Pn	17 49 51.1	+0.5
	baz=46						
TKM2				⇑*i*S	Sn	17 50 37.8	-0.8
	baz=46						
KST	Kastek	4.38	48	*e*P	Pb	17 50 08.8	+4.0
	3.8nm,0.3s						
KST				*e*S	Sg	17 51 06.3	-2.1
	13nm,0.5s						
KST	Kastek	4.38	48	Pg	Pb	17 50 08.8	+4.0
	3.8nm,0.3s						
KST				Lg	Lg	17 51 06.3	
	13nm,0.5s						
DGS	Degeres	4.40	45	*e*P	Pb	17 50 08.8	+3.5
	2.7nm,0.4s						
DGS				*e*S	Sg	17 51 06.2	-2.9
	16nm,0.7s						
DGS	Degeres	4.40	45	Pg	Pb	17 50 08.8	+3.5
	2.7nm,0.4s						
DGS				Lg	Lg	17 51 06.2	
	16nm,0.7s						
KRBS	Karabastau	4.67	40	*e*P	Pb	17 50 13.4	+3.5
	1.4nm,0.5s						
KRBS				*e*S	Sg	17 51 14.0	-3.9
	7.8nm,0.3s						
KRBS	Karabastau	4.67	40	Pg	Pb	17 50 13.4	+3.5
	1.4nm,0.5s						
KRBS				Lg	Lg	17 51 14.0	
	7.8nm,0.3s						
MTBS	Maitube	4.70	49	*e*P	Pb	17 50 14.1	+3.8
	1.7nm,0.5s						
MTBS				*e*S	Sg	17 51 15.1	-3.6
	7.2nm,0.4s						
MTBS	Maitube	4.70	49	Pg	Pb	17 50 14.1	+3.8
	1.7nm,0.5s						
MTBS				Lg	Lg	17 51 15.1	
	7.2nm,0.4s						
TNSS	Tian-Shan	4.96	53	*e*P	Pb	17 50 19.8	+5.0
	1.0nm,0.4s						
TNSS				*e*S	Sg	17 51 25.1	-1.9
	3.5nm,0.4s						
TNSS	Tian-Shan	4.96	53	Pg	Pb	17 50 19.8	+5.0
	1.0nm,0.4s						
TNSS				Lg	Lg	17 51 25.1	
	3.5nm,0.4s						
KNDC	Almaty	5.07	51	⇑Lg	Lg	17 51 29.7	
	29nm,0.5s						
MDOK	Medeo	5.09	52	*e*P	Pb	17 50 21.7	+4.7
	2.5nm,0.6s						
MDOK				*e*S	Sg	17 51 28.1	-3.0
	5.7nm,0.6s						
MDOK	Medeo	5.09	52	⇑Pg	Pb	17 50 21.1	+4.1
	1.5nm,0.4s						
MDOK				⇑Lg	Lg	17 51 30.8	
	6.1nm,0.7s						
MDOK	Medeo	5.09	52	Pg	Pb	17 50 21.7	+4.7
	2.5nm,0.6s						
MDOK				Lg	Lg	17 51 28.1	
	5.7nm,0.6s						
KUU	Kurty	5.15	42	*e*P	Pb	17 50 21.7	+3.8
	1.3nm,0.1s						
KUU				*e*S	Sg	17 51 28.7	-4.4
	7.8nm,0.5s						
KUU	Kurty	5.15	42	Pg	Pb	17 50 21.7	+3.8
	1.3nm,0.1s						
KUU				Lg	Lg	17 51 28.7	
	7.8nm,0.5s						
KOTS	Kotyrbulak	5.17	52	*e*P	Pb	17 50 22.8	+4.5
	1.2nm,0.4s						
KOTS				*e*S	Sg	17 51 31.1	-2.5
	14nm,0.5s						
KOTS	Kotyrbulak	5.17	52	Pg	Pb	17 50 22.8	+4.5
	1.2nm,0.4s						
KOTS				Lg	Lg	17 51 31.1	
	14nm,0.5s						
BTLS	Baital	5.20	20	*e*P	Pb	17 50 22.4	+3.6
	4.9nm,0.4s						
BTLS				*e*S	Sg	17 51 29.2	-5.5
	4.7nm,0.5s						
BTLS	Baital	5.20	20	Pg	Pb	17 50 22.4	+3.6
	4.9nm,0.4s						
BTLS				Lg	Lg	17 51 29.2	
	4.7nm,0.5s						
KTBS	Karatobe	5.21	46	*e*P	Pb	17 50 23.2	+4.2
	0.7nm,0.6s						
KTBS				*e*S	Sg	17 51 30.7	-4.3
	14nm,0.5s						
KTBS	Karatobe	5.21	46	Pg	Pb	17 50 23.2	+4.2
	0.7nm,0.6s						
KTBS				Lg	Lg	17 51 30.7	
	14nm,0.5s						

PDGK	Podgornoye	6.72	59	⇑Lg	Lg	17 52 22.3	
	3.4nm,0.7s						
AB31	Akbulak array	12.26	322	⇑Pn	Pn	17 51 39.6	-2.7
	0.3nm,0.5s,baz=128,slow=14,SNR=13						

NEIC 30 18:00:44.4±0.6**, 36°.730N**±0°.008×**98°.06W**±0°.02**, h5^{km}**±1^{km}**, mb_Lg2.4**/3**, Error ellipse: s-maj=3.0km s-min=2.4km az=55.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GC02	Grant County #	0.20	53	Pg	Pg	18 00 48.7	+0.4
GC02				Sg	Sg	18 00 51.4	+0.3
CROK	Carrier	0.23	164	Pg	Pg	18 00 49.9	+0.9
KAN14	Manchester OK	0.24	19		Pg	18 00 49.3	+0.2
KAN14				Sg	Sg	18 00 52.4	+0.1
KAN10	Anthony SW Sta	0.39	356	Pg	Pg	18 00 52.1	+0.1
KAN17	Caldwell West	0.39	37	Pg	Pg	18 00 52.1	+0.1
KAN17				Sg	Sg	18 00 57.2	0.0
KAN05	Bluff City Nor	0.41	22	Pg	Pg	18 00 52.4	+0.1
KAN05				Sg	Sg	18 00 57.2	-0.4
KAN01	Argonia South	0.49	30	Pg	Pg	18 00 53.5	-0.2
KAN16	Harper SW Stat	0.49	360	Pg	Pg	18 00 53.9	0.0
KAN08	Anthony NE Sta	0.50	8	Pg	Pg	18 00 54.0	0.0
KAN09	Caldwell North	0.54	41	Pg	Pg	18 00 54.7	-0.1
KAN09				Sg	Sg	18 01 01.7	-0.1
KAN06	Argonia West S	0.54	17	Pg	Pg	18 00 54.6	-0.2
KAN06				Sg	Sg	18 01 01.7	-0.2
KAN13	South Haven SW	0.55	59		Pg	18 00 54.8	-0.1
KAN12	Harper NE Stat	0.57	5	Pg	Pg	18 00 55.0	-0.4
KAN12				Sg	Sg	18 01 02.5	-0.2
BLOK	Blackwell	0.68	87	Pg	Pg	18 00 57.4	-0.1
BLOK				Sg	Sg	18 01 06.1	-0.2
U32A	Winter Ranch,	0.83	245	Pg	Pg	18 01 00.5	+0.1
BCOK	Bluff Creek, N	1.13	161	Pg	Pg	18 01 05.8	-0.3
QUOK	Quay	1.23	117	Pn	Pg	18 01 07.6	-0.3
OK031	S. Brethren Rd	1.26	128	Pn	Pg	18 01 08.1	-0.4
T35A	Sooner Cattle	1.26	81		Pg	18 01 07.7	-0.8
OK025	Westminster Rd	1.29	153	Pn	Pn	18 01 08.7	-0.3
FNO	Franklin	1.56	160	Pn	Pn	18 01 13.2	+0.3
R32A	Long Quarter,	1.77	343		Pn	18 01 14.6	-1.1
W35A	Tecumseh	1.85	148	Pn	Pn	18 01 16.8	0.0
TUL1	Leonard	2.01	113	IAmb_Lg		18 01 49.4	
	comp=Z,12nm,0.9s						
U38A	Gravette	2.97	95	Pn	Pn	18 01 32.8	+0.6
N35A	Tabor	4.54	24	IAmb_Lg		18 03 16.2	
	comp=Z,21nm,1.2s						
MSTX	Muleshoe	4.73	236	Pn	Pn	18 01 55.5	-1.0
X40A	Basin Creek Fa	4.81	116	IAmb_Lg		18 03 23.6	
	comp=Z,7.3nm,1.2s						

IDC ***30*** *18:30:10.5±1.0, 58°.38N×31°.82W, h0^{km}, mb3.7/7, mb1 3.9/8, mb1mx3.7/44, mbtmp3.8/8, ML4.1/1, MS3.6/18, Ms1 3.6/18, ms1mx3.3/45, Error ellipse: s-maj=31.2km s-min=18.8km az=39.0*

NEIC ***30*** *18:30:13.2±1.8, 58°.54N±0°.09×32°.1W±0°.1, h14^{km}±5^{km}, mb4.4/17, Error ellipse: s-maj=15.6km s-min=6.3km az=219.0*

ISC 30 18:30:12.3±0.7**, 58°.5N**±0°.1×**31°.90W**±0°.08**, h13^{km}, n47, σ1^{s}.61**/26**, mb4.2**/16**, MS3.5**/14**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRS	Narsarsuaq	7.32	297	Pn	Pn	18 31 57.1	-1.6
BORG	Borgarnes	8.05	34	Pn	Pn	18 32 09.6	+0.9
	2.4nm,0.3s,baz=205,slow=8.9,SNR=9.4						
BORG				LR	LR	18 34 31.5	
	comp=Z,987nm,18.1s,baz=216,slow=32						
SFJD	Kangerlussuaq	12.05	323	LR	LR	18 37 02.1	
	comp=Z,552nm,18.1s,baz=151,slow=34						
SFJD	Kangerlussuaq	12.05	323	Pn	Pn	18 33 02.9	-0.5
FRB	Frobisher Bay	18.27	302	LR	LR	18 40 36.2	
	comp=Z,438nm,18.6s,baz=74,slow=34						
SCHQ	Schefferville	19.40	274	LR	LR	18 40 58.5	
	comp=Z,142nm,18.6s,baz=56,slow=33						
TULEG	Thule	22.24	338	P	P	18 35 05.6	-2.6
ESDC	Sonseca Array	25.94	124	P	P	18 35 45.4	+1.2
	0.9nm,0.8s,baz=322,slow=9.4,SNR=7.2						
ESDC				LR	LR	18 43 42.2	
	comp=Z,54nm,20.9s,baz=315,slow=31						
ARCES	ARCESS Array B	26.36	42	LR	LR	18 43 54.4	
	comp=Z,95nm,20.8s,baz=260,slow=31						
DAVOX	Davos/Dischmat	27.46	97	LR	LR	18 45 16.8	
	comp=Z,118nm,18.8s,baz=302,slow=33						
RES	Resolute Bay	27.91	330	P	P	18 36 04.3	+2.9
	1.4nm,0.8s,baz=98,slow=7.3,SNR=3.8						
RES				LR	LR	18 46 54.7	
	comp=Z,62nm,19.9s,baz=276,slow=36						
RES	Resolute Bay	27.91	330	IAmb	IAmb	18 36 10.3	
	comp=Z,3.8nm,1.1s						
GERES	GERESS Array B	28.16	90	LR	LR	18 46 43.0	
	comp=Z,106nm,19.6s,baz=281,slow=35						
VRAC	Vranov	29.40	87	LR	LR	18 47 15.2	
	comp=Z,83nm,19.5s,baz=314,slow=35						
KLMR	Klimovskoe	34.52	55	*e*	P	18 36 57.8	-1.9
KLMR				AMP		18 37 07.6	
	comp=Z,23nm,1.3s						
AKASG	Malin Array Be	35.11	75	P	P	18 37 06.8	+1.8
	comp=Z,0.4nm,0.4s,baz=306,slow=9.1,SNR=2.8						
KEST	Kesra	35.30	112	LR	LR	18 49 48.4	
	comp=Z,82nm,18.6s,baz=236,slow=33						
ULM	Lac du Bonnet	36.83	286	LR	LR	18 49 55.7	
	comp=Z,82nm,21.3s,baz=103,slow=32						
P52A	Corning	36.86	262	P	P	18 37 20.6	+0.6
YKA	Yellowknife Ar	38.32	312	LR	LR	18 52 17.1	
	comp=Z,154nm,18.6s,baz=0.0,slow=34						
INK	Inuvik	41.36	327	P	P	18 37 57.1	-0.2
	comp=Z,1.2nm,0.9s,baz=53,slow=7.3,SNR=3.4						
INK	Inuvik	41.36	327	IAmb	IAmb	18 38 05.4	
	comp=Z,6.5nm,1.5s						
LAO	LASA Array	44.37	289	P	P	18 38 22.5	+0.5
LAO				IAmb	IAmb	18 38 27.8	
	comp=Z,5.9nm,0.9s						
BRTR	Keskin Array B	44.81	85	LR	LR	18 57 33.3	
	comp=Z,55nm,18.9s,baz=316,slow=37						
BMAR	Burnt Mountain	45.03	330	P	P	18 38 26.9	-0.1
HHAR	Hobbs	45.55	269	P	P	18 38 31.2	-0.2
HHAR				IAmb	IAmb	18 38 38.8	
	comp=Z,2.4nm,0.8s						
DAWY	Dawson	45.99	324	P	P	18 38 34.0	-0.7
DAWY				IAmb	IAmb	18 38 40.7	
	comp=Z,8.0nm,1.1s						
EGAK	Eagle	46.01	326	P	P	18 38 38.8	+4.1
EGAK				IAmb	IAmb	18 38 39.4	
	comp=Z,11nm,1.4s						
H24K	Noodor Dome	47.10	330	P	P	18 38 42.3	-1.1
H24K				IAmb	IAmb	18 38 58.7	
	comp=Z,3.8nm,1.1s						
SCRK	Sand Creek	47.43	326	P	P	18 38 45.8	-0.2
BCAR	Beaver Creek A	47.45	324	P	P	18 38 46.6	+0.5
IL31		47.65	328	P	P	18 38 48.4	+0.9
IL31				IAmb	IAmb	18 38 53.2	
	comp=Z,4.6nm,1.1s						
ILAR	Eielson Array	47.65	328	P	P	18 38 48.8	+1.2
	comp=Z,2.6nm,1.0s,baz=35,slow=5.5,SNR=12						
PDAR	Pinedale Array	48.83	287	LR	LR	18 58 00.6	
	comp=Z,76nm,18.2s,baz=56,slow=34						
HLID	Hailey	50.65	291	P	P	18 39 07.2	-3.8
HLID				IAmb	IAmb	18 39 25.3	
	comp=Z,1.8nm,0.8s						
ABKAR	Akbulak array	50.82	58	P	P	18 39 13.2	+1.2
ABKAR				IAmb	IAmb	18 39 20.4	
	comp=Z,4.2nm,1.1s						
ABKAR	Akbulak array	50.82	58	P	P	18 39 10.8	-1.2
TORD	Torodi Ar. Bea	51.79	137	P	P	18 39 17.3	-2.2
	comp=Z,1.5nm,0.9s,baz=337,slow=8.5,SNR=7.5						
DBIC	Dimbokro	55.74	147	LR	LR	19 00 39.6	
	comp=Z,62nm,19.9s,baz=344,slow=33						
TXAR	Lajitas Array	56.06	272	P	P	18 39 51.8	+1.0
	comp=Z,0.2nm,0.6s,baz=30,slow=6.2,SNR=2.4						
ZALV	Zalesovo Beam	56.86	39	LR	LR	19 04 42.2	
	comp=Z,28nm,18.1s,baz=356,slow=36						
MKAR	Makanchi Array	61.94	45	P	P	18 40 30.1	-1.2
	comp=Z,0.7nm,0.7s,baz=330,slow=6.3,SNR=5.9						
GAR	Garm	63.47	58	P	P	18 40 42.4	+0.6
H10N2	ASCENSION HYDR	67.57	161	T	T	19 54 17.0	
	baz=345						
H10N3	ASCENSION HYDR	67.58	161	T	T	19 54 16.5	
	baz=345						
H10N1	ASCENSION HYDR	67.59	161	T	T	19 54 21.6	
	baz=345						
BOSA	Boshof	98.91	132	LR	LR	19 26 44.4	
	comp=Z,25nm,18.1s,baz=354,slow=34						

ANF ***30*** *18:36:22.9±0.2, 48°.18N×122°.40W, h10^{km}±3^{km}, ML2.9/8, Error ellipse: s-maj=2.4km s-min=2.3km az=89.0*

PNSN ***30*** *18:36:23.9, 48°.21N×122°.35W, h16^{km}, MD2.7, Fault plane solution: NP1:ϕ_s140.00000°, δ20.00000°, λ110.00000°.*

SEA ***30*** *18:36:23.9±1.8, 48°.21N±0°.01×122°.35W±0°.02, h16^{km}±4^{km}, ML3.0/107, ML2.7/46(NEIC), Error ellipse: s-maj=2.0km s-min=1.9km az=74.0*

NEIC ***30*** *18:36:23.4±1.9, 48°.19N±0°.01×122°.36W±0°.02, h16^{km}±4^{km}, Error ellipse: s-maj=1.9km s-min=1.8km az=155.0*

PGC ***30*** *18:36:24.1±0.3, 48°.19N×122°.36W, h16^{km}, ML3.0, ML2.3/25, 65km northeast of Seattle, Wa Washington*

ISC 30 18:36:23.5±0.8**, 48°.21N**±0°.01×**122°.37W**±0°.01**, h18^{km}**±5^{km}**, n166, σ1^{s}.05**/224**, Washington**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVOH	Skagit Valley	0.19	296		Pg	18 36 28.4	+0.2
SVOH	Skagit Valley	0.19	296	P	Pg	18 36 28.4	+0.2
SVOH				S	Sg	18 36 32.3	+0.8
B05A	Bryant	0.20	73	P	Pg	18 36 27.5	-0.7
	baz=253,SNR=102						
B05A				S	Sg	18 36 30.6	-0.9
	baz=253						
B05A	Bryant	0.20	73		Pg	18 36 27.6	-0.7
B05A					Sg	18 36 30.8	-0.7
SWID	South Whidbey	0.20	188		Pb	18 36 28.9	+0.3
SWID					Sb	18 36 33.1	+1.1
EVCC	Everett Colleg	0.23	150		Pb	18 36 29.3	+0.2
CMW	Cultus Mountai	0.28	38		Pg	18 36 29.2	-0.4
CMW					Sg	18 36 33.9	0.0
CMW	Cultus Mountai	0.28	38	P	Pg	18 36 29.3	-0.4
CMW				S	Sg	18 36 33.9	0.0
JCW	Jim Creek	0.30	92		Pg	18 36 29.2	-0.7
JCW	Jim Creek	0.30	92	P	Pg	18 36 29.2	-0.7
ERW	Mount Erie	0.30	326		Pg	18 36 29.8	-0.2
ERW					Sg	18 36 34.5	+0.1
LYNC	Lynnwood City	0.39	172		Pg	18 36 31.9	+0.5
BLH	Bald Hill	0.43	148		Pg	18 36 32.2	-0.1
MBPA	Monroe Substat	0.45	133		Pg	18 36 32.2	-0.3
SQM	Sequim	0.47	254		Pg	18 36 33.4	+0.5
EARN	East Ridge Ele	0.52	154		Pg	18 36 34.2	+0.4
NOWS	NOAA--Sand Poi	0.53	171		Pb	18 36 34.7	+0.5
B013	Quilcene	0.53	223		Pg	18 36 33.5	-0.6
B013					Sg	18 36 41.1	-0.1
A04D	Lummi Island	0.56	337	P	Pg	18 36 34.0	-0.6
	baz=155,SNR=14						
A04D				S	Sg	18 36 42.3	+0.2
	baz=155						
A04D	Lummi Island	0.56	337		Pg	18 36 34.0	-0.6
MCW	Mount Constitu	0.56	327		Pg	18 36 34.3	-0.4
MCW	Mount Constitu	0.56	327	P	Pg	18 36 34.3	-0.4
HTW	Haystack Looko	0.57	135		Pg	18 36 34.2	-0.6
RPW	Rockport	0.62	67		Pg	18 36 35.1	-0.7
RPW	Rockport	0.62	67	P	Pg	18 36 35.1	-0.7
RPW				S	Sg	18 36 43.4	-0.7
C04A	Brinnon	0.63	220		Pg	18 36 35.1	-0.8
C04A					Sg	18 36 44.1	-0.3
SP2	Seward Park 2	0.66	173		Pg	18 36 36.7	+0.4
MBW	Mount Baker	0.66	28		Pg	18 36 36.0	-0.4
MBW	Mount Baker	0.66	28	P	Pg	18 36 36.1	-0.4
MBW				S	Sg	18 36 45.2	-0.1
VGZ	Gonzales	0.67	289		Pg	18 36 35.9	-0.7
VGZ	Gonzales	0.67	289	P	Pg	18 36 35.8	-0.7
VGZ				S	Sg	18 36 44.9	-0.6
B06A	Marblemount	0.67	62		Pg	18 36 35.9	-0.7
B06A				IAML		18 36 45.9	
	comp=E,327nm,0.3s						
B06A				IAML		18 36 48.2	
	comp=N,299nm,0.3s						
B06A	Marblemount	0.67	62	P	Pg	18 36 35.9	-0.7
B06A				S	Sg	18 36 44.2	-1.4
C05A	Tolt Reservoir	0.69	138		Pg	18 36 36.2	-0.8
C05A					Sg	18 36 45.3	-0.8
C05A	Tolt Reservoir	0.69	138	P	Pg	18 36 36.0	-0.9
C05A				S	Sg	18 36 44.7	-1.5
GNW	Green Mountain	0.71	205		Pg	18 36 36.4	-1.0
GNW					Sg	18 36 46.4	-0.5
GNW	Green Mountain	0.71	205	P	Pg	18 36 36.3	-1.0
GNW				S	Sg	18 36 46.0	-0.8
HDW	Hoodsport	0.72	220		Pg	18 36 36.6	-1.0
HDW					Sg	18 36 46.7	-0.5
HDW	Hoodsport	0.72	220	P	Pg	18 36 36.6	-1.0
HDW				S	Sg	18 36 46.1	-1.1
B04A	Port Angeles	0.77	259		Pg	18 36 37.8	-0.7
B04A	Port Angeles	0.77	259		Pg	18 36 37.8	-0.7
SNB	Saturna Island	0.78	317		Pg	18 36 38.0	-0.7
SNB	Saturna Island	0.78	317	P	Pg	18 36 38.0	-0.7
SNB				S	Sg	18 36 48.5	-0.5
SHUK	Shuksan-Mt. Ba	0.80	35		Pg	18 36 38.7	-0.3
A05A	Maple Falls	0.82	13	P	Pb	18 36 38.8	-0.3
A05A				S	Sb	18 36 49.4	-0.4
D03D	Eldon	0.83	216	P	Pb	18 36 38.1	-1.1
	baz=36,SNR=105						
D03D				Sb	Sb	18 36 50.0	-0.1
	baz=36						
D03D	Eldon	0.83	216		Pb	18 36 38.2	-1.1
GPW	Glacier Peak	0.83	96		Pg	18 36 39.1	-0.7
GPW	Glacier Peak	0.83	96	P	Pg	18 36 38.9	-0.8
GPW				S	Sg	18 36 49.6	-1.2
VDB	Vedder Mountai	0.84	12		Pb	18 36 39.0	-0.6
VDB	Vedder Mountai	0.84	12	P	Pb	18 36 39.0	-0.6
VDB				S	Sb	18 36 50.3	-0.3
B011	North Saanich	0.84	302		Pb	18 36 38.9	-0.6
B011	North Saanich	0.84	302	P	Pb	18 36 38.9	-0.6
B011				S	Sb	18 36 49.8	-0.8
PA12	PA12 Sannich	0.84	302	P	Pb	18 36 38.7	-0.8
PA12				S	Sb	18 36 50.0	-0.5
B009	North Saanich	0.84	302	P	Pb	18 36 38.7	-0.8
B009				S	Sb	18 36 50.0	-0.6
PA01	PA01 North	0.84	302	P	Pb	18 36 38.8	-0.7
PA01				S	Sb	18 36 50.1	-0.5
B010	North Saanich	0.84	302	P	Pb	18 36 38.8	-0.8
B010				S	Sb	18 36 49.9	-0.7
PA02	PA02 Ocean	0.84	302	P	Pb	18 36 38.9	-0.7
PA02				S	Sb	18 36 50.1	-0.5
PGC	Sidney	0.84	302		Pb	18 36 38.9	-0.7
PGC				IAML		18 36 51.3	
	comp=E,190nm,0.4s						
PGC				IAML		18 36 51.5	
	comp=N,269nm,0.3s						
PGC	Sidney	0.84	302	P	Pb	18 36 38.7	-0.9
PGC				S	Sb	18 36 49.9	-0.7
STW	Striped Peak	0.87	267		Pb	18 36 40.2	+0.2
STW	Striped Peak	0.87	267	P	Pb	18 36 39.7	-0.4
STW				S	Sb	18 36 51.3	-0.1
RATT	Rattlesnake La	0.87	154		Pb	18 36 39.3	-0.8
D05A	Enumclaw	1.05	166		Pb	18 36 42.3	-0.8
D05A				IAML		18 36 57.4	
	comp=N,135nm,0.5s						
D05A	Enumclaw	1.05	166	P	Pb	18 36 42.5	-0.6
GOBB	Galiano Island	1.06	315	P	Pb	18 36 42.4	-0.9
GOBB				S	Sb	18 36 55.6	-1.2
WRW	Wenatchee Ridg	1.06	109		Pb	18 36 42.6	-0.7
D04E	Lakebay	1.06	195	P	Pb	18 36 42.7	-0.6
	baz=15,SNR=7.1						
D04E				Sn	Sn	18 36 59.0	+1.2
	baz=15						
GSM	Grass Mountain	1.08	158		Pb	18 36 42.6	-1.0
HNBB	Haney	1.09	353	P	Pb	18 36 42.7	-1.1
HNBB				S	Sb	18 36 56.9	-0.8
GHW	Garrison Hill	1.17	177		Pn	18 36 44.1	-0.8
OLQ	Olympics--Lake	1.19	235		Pn	18 36 46.0	+0.8
B941	Kapowsin	1.23	175		Pn	18 36 44.4	-1.3
RVC	Mount Rainier-	1.29	168		Pn	18 36 45.9	-0.9
NLWA	Neilton Lookou	1.30	232	Pn	Pn	18 36 46.7	0.0
SLFW	Sugar Loaf	1.32	109		Pn	18 36 47.2	0.0
B926	Mesachie Lake	1.32	298		Pn	18 36 46.5	-0.6
B926	Mesachie Lake	1.32	298	P	Pn	18 36 46.4	-0.6
B926				S	Sn	18 37 02.9	-1.3
CLRS	Cowichan Lake	1.32	298		Pn	18 36 46.5	-0.6
CLRS				IAML		18 37 07.1	
	comp=E,90nm,0.6s						
CLRS	Cowichan Lake	1.32	298	P	Pn	18 36 46.3	-0.7
CLRS				S	Sn	18 37 02.4	-1.8
CPW	Capitol Peak	1.34	203	P	Pn	18 36 46.6	-0.7
CPW				S	Sn	18 37 03.4	-1.3
HOPB	Hope	1.34	28	P	Pn	18 36 47.9	+0.5
HOPB				S	Sn	18 37 04.1	-0.6
BIB	Bowen Island	1.35	333	P	Pn	18 36 47.2	-0.2
BIB				S	Sn	18 37 05.0	+0.1
FMW	Mount Fremont	1.36	159		Pn	18 36 47.1	-0.7
FMW	Mount Fremont	1.36	159	P	Pn	18 36 47.0	-0.7
FMW				S	Sn	18 37 04.4	-1.1
OBSR	Observation Ro	1.36	164		Pn	18 36 47.3	-0.6
NLW	Nelson Butte	1.37	95		Pn	18 36 48.2	+0.4
RCS	Mount Rainier-	1.41	162		Pn	18 36 48.0	-0.5
PFB	Port Renfrew	1.43	286	P	Pn	18 36 47.7	-0.9
PFB				S	Sn	18 37 05.7	-1.1
REMR	Mount Rainier-	1.43	165		Pn	18 36 48.4	-0.4
SR41	SR410 Landslid	1.44	156		Pn	18 36 48.4	-0.4
WISH	Wishkah	1.44	221	Pn	Pn	18 36 48.7	0.0
WISH				IAML		18 37 06.3	
	comp=E,114nm,3.5s						
WISH				IAML		18 37 17.8	
	comp=N,113nm,2.9s						
NLLB	Nanaimo Lost L	1.48	314		Pn	18 36 49.2	0.0
NLLB	Nanaimo Lost L	1.48	314	P	Pn	18 36 48.8	-0.5
NLLB				S	Sn	18 37 07.8	-0.4
LTY	Liberty	1.49	129		Pn	18 36 49.7	+0.2
LTY				IAML		18 37 09.5	
	comp=N,180nm,0.6s						
LTY				IAML		18 37 09.7	
	comp=E,135nm,0.5s						
LTY	Liberty	1.49	129	P	Pn	18 36 49.7	+0.2
LTY				S	Sn	18 37 08.7	+0.2
C03A	Quillayute Air	1.49	261	Pn	Pn	18 36 50.1	+0.7
C03A				IAML		18 37 31.3	
	comp=E,162nm,4.1s						
ETW	Entiat	1.50	113		Pn	18 36 50.2	+0.6
LON	Longmire	1.51	165		Pn	18 36 49.5	-0.2
TBM	Table Mountain	1.59	130		Pb	18 36 52.2	-0.1
WPW	White Pass	1.61	159		Pn	18 36 51.4	+0.2
CBSW	Chelan Butte S	1.62	104		Pn	18 36 51.9	+0.6
GHNB	Nanoose	1.65	312	P	Pn	18 36 51.5	-0.1
GHNB				S	Sn	18 37 12.7	+0.3
E04D	Cinebar	1.66	185	P	Pn	18 36 51.7	0.0
	baz=5.0,SNR=56						
E04D				S	Sb	18 37 13.8	-0.2
	baz=5.0						
E04D	Cinebar	1.66	185		Pn	18 36 52.0	+0.4
SHB	Sechelt	1.71	325		Pn	18 36 52.7	+0.2
SHB	Sechelt	1.71	325	P	Pn	18 36 52.5	0.0
SHB				S	Sn	18 37 14.9	+0.9
GLK	Glacier Lake	1.72	162		Pn	18 36 53.8	+1.1
MGB	Mount Grey	1.73	298	P	Pn	18 36 52.9	+0.1
MGB				S	Sn	18 37 14.9	+0.4
EBG	Ellensburg	1.78	136		Pb	18 36 55.1	-0.5
NAC	Naches	1.81	144		Pn	18 36 55.5	+1.7
E03A	Lebam	1.85	206	Pn	Pn	18 36 55.0	+0.7
E03A				IAML		18 37 23.1	
	comp=E,77nm,1.8s						
E03A				IAML		18 37 32.7	
	comp=N,55nm,2.0s						
E03A	Lebam	1.85	206	P	Pn	18 36 55.0	+0.7
E03A				S	Sn	18 37 18.0	+0.9
TDL	Tradedollar La	1.86	177		Pn	18 36 55.1	+0.6
ERK	Elk Rock	1.90	179		Pn	18 36 55.6	+0.5
B201	Coldwater, Mou	1.91	178		Pn	18 36 55.7	+0.6
B927	Port Alberni	1.91	303	P	Pn	18 36 55.8	+0.8
B927				S	Sn	18 37 19.6	+1.0
B928	Bamfield	1.94	290	P	Pn	18 36 56.4	+0.9
B928				S	Sn	18 37 20.4	+1.0
BFSB	Bamfield	1.94	290	S	Sn	18 37 21.1	+1.7
WSLR	Whistler	1.96	350		Pn	18 36 57.1	+1.3
WSLR	Whistler	1.96	350	P	Pn	18 36 56.7	+0.8
WSLR				S	Sn	18 37 21.9	+1.9
B202	Windy Ridge, M	1.97	175		Pn	18 36 56.6	+0.6
SOSW	Source of Smit	1.97	175		Pn	18 36 57.4	+1.3
BOLM	Sugar Bowl	2.00	176		Pn	18 36 58.3	+1.7
FL2	Flat Top 2	2.01	180		Pn	18 36 57.5	+0.8
SEPW	September Lobe	2.01	176		Pn	18 36 58.5	+1.8
TXB	Texada	2.02	318	P	Pn	18 36 57.3	+0.6
TXB				S	Sn	18 37 23.6	+2.1
RADR	Rader Ridge	2.03	209	Pn	Pn	18 36 57.9	+1.1
RADR				IAML		18 37 20.7	
	comp=N,86nm,2.0s						
SWF2	Southwest Flan	2.03	177		Pn	18 36 58.5	+1.6
B08A	Colville Reser	2.04	85		Pn	18 36 59.0	+2.1
B08A	Colville Reser	2.04	85	P	Pn	18 36 58.6	+1.6
B203	Quarry, Mount	2.04	179		Pn	18 36 57.8	+0.9
EPH	Ephrata	2.06	113		Pb	18 37 00.5	+0.1
JLK	June Lake	2.07	176		Pn	18 36 58.8	+1.5
YA2	Yakima	2.10	143		Pn	18 36 56.2	-1.6
CDFW	Cedar Flats	2.10	174		Pn	18 36 59.5	+1.6
ASR	Mount Adams--S	2.12	165		Pn	18 36 59.9	+1.6
PNT	Penticton	2.14	58	P	Pn	18 36 58.6	+0.3
PNT				S	Sn	18 37 24.4	0.0
LVP	Lakeview Peak	2.14	181		Pn	18 36 59.7	+1.3
B023	Clatskanie	2.15	193		Pn	18 36 59.9	+1.5
F04D	Rainier, OR	2.17	192	Sb	Sb	18 37 30.3	+1.6
	baz=12						
OZB	Mount Ozzard	2.20	291	Pn	Pn	18 36 59.1	-0.1
OZB				IAML		18 37 41.4	
	comp=E,88nm,2.1s						
OZB	Mount Ozzard	2.20	291	P	Pn	18 37 00.8	+1.6
OZB				S	Sn	18 37 28.3	+2.2
F04A	Amboy	2.27	181		Pn	18 37 01.6	+1.5
E07A	Sunnyside	2.38	133		Pn	18 37 01.1	-0.5
F05D	White Salmon	2.41	165	Sb	Sb	18 37 36.8	+1.2
	baz=346						
LLLB	Lillooet	2.43	7		Pn	18 37 02.7	+0.4
LLLB				IAML		18 37 41.8	
	comp=N,26nm,0.6s						
LLLB	Lillooet	2.43	7	P	Pn	18 37 03.1	+0.8
BTB	Buttle Lake	2.43	302	P	Pn	18 37 04.5	+2.0
BTB				S	Sn	18 37 34.8	+2.9
BENWA	Benson Ranch	2.47	132		Pn	18 37 03.7	+0.8
D08A	Wollman Farm,	2.60	115	Pn	Pn	18 37 03.9	-0.8
D08A				IAML		18 37 44.7	
	comp=N,25nm,0.4s						
D08A				IAML		18 37 49.3	
	comp=E,26nm,0.3s						
HAWA	Hanford	2.65	132	Pn	Pn	18 37 05.9	+0.5
HAWA				IAML		18 37 46.1	
	comp=E,38nm,0.3s						
HAWA				IAML		18 37 52.4	
	comp=E,40nm,0.6s						
C09A	Chrisman Ranch	2.78	97	Pn	Pn	18 37 07.6	+0.4
C09A	Chrisman Ranch	2.78	97	Sg	Sb	18 37 49.2	+2.8
GDR	Gold River	2.88	305	P	Pn	18 37 11.8	+3.3
G05D	Wamic, OR	3.05	166	Sb	Sb	18 37 56.4	+2.2
	baz=347						
NCRB	Newcastle Ridg	3.26	314	P	Pn	18 37 17.2	+3.3
WOSB	Woss	3.38	307	P	Pn	18 37 19.8	+4.4
WOSB				Sg	Sb	18 38 03.1	-0.5
NEW	Newport	3.51	87	Sb	Sb	18 38 10.6	+3.2
	baz=271						
NEW	Newport	3.51	87	Pn	Pn	18 37 17.1	-0.1
G08A	Pilot Rock	3.74	140	Pn	Pn	18 37 20.4	-0.1
G08A				IAML		18 38 24.0	
	comp=N,13nm,0.8s						
G08A				IAML		18 38 26.0	
	comp=E,13nm,1.5s						
MAYB	Maynard	3.83	307	P	Pn	18 37 24.6	+2.9
F10A	Beach Ranch, E	4.16	121	Pn	Pn	18 37 26.3	0.0
BEND	Bend	4.20	170		Pn	18 37 23.6	-3.2
PLID	Pearl Lake	5.38	123	Pn	Pn	18 37 42.6	-0.5
PLID				IAML		18 39 25.2	
	comp=E,5.8nm,4.5s						
PLID				IAML		18 41 19.6	
	comp=E,6.7nm,4.9s						
JTMT	Jette	5.45	92	Pn	Pn	18 37 43.7	-0.3

NOU ***30*** *18:41:24.8, 18°.79S×169°.56E, h237^{km}, MLv3.8/10, Vanuatu Islands*

IDC ***30*** *18:41:32.0±14.0, 18°.83S×168°.33E, h250^{km}±28^{km}, mb3.5/4, mb1 3.6/5, mb1mx3.1/35, mbtmp4.0/5, Error ellipse: s-maj=247.2km s-min=56.4km az=77.0*

ISC 30 18:41:24.5±2.7**, 18°.77S**±0°.10×**169°.3E**±0°.3**, h250^{km}, n12, σ1^{s}.09**/13**, mb3.7**/4**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTV	Rentapao	1.28	319	P	Pn	18 42 02.3	+1.0
DVP	Devils Point	1.49	314	P	Pn	18 42 03.4	+0.6
MARNC	Mare, Loyalty	2.96	204	P	Pn	18 42 16.4	-0.1
PINNC	Pines Island,	4.21	204	P	Pn	18 42 31.6	+0.9
DZM	Mont Dzumac	4.25	219	P	Pn	18 42 32.1	+0.8

	0.7nm,0.3s,baz=154,slow=15,SNR=11						
DZM				S	S	18 43 23.4	-1.0
	0.6nm,0.3s,baz=268,slow=22,SNR=1.6						
DZM	**Mont Dzumac**	**4.25**	**219**	P	**Pn**	**18 42 32.8**	**+1.5**
NOUC	**Port Laguerre**	**4.35**	**220**	P	**Pn**	**18 42 34.1**	**+1.6**
ONTNC	**Ouen Toro**	**4.42**	**217**	P	**Pn**	**18 42 34.7**	**+1.4**
STKA	**Stephens Creek**	**28.15**	**237**	P	**P**	**18 46 54.0**	**+0.1**
	1.8nm,0.7s,baz=46,slow=13,SNR=4.7						
WRA	**Warramunga Arr**	**32.98**	**262**	P	**P**	**18 47 35.3**	**-1.1**
	0.3nm,0.3s,baz=94,slow=8.5,SNR=7.3						
ASAR	**Alice Springs**	**33.31**	**255**	P	**P**	**18 47 38.8**	**-0.5**
	4.2nm,0.4s,baz=82,slow=8.9,SNR=164						
FITZ	**Fitzroy Crossi**	**41.36**	**264**	P	**P**	**18 48 46.5**	**0.0**
	1.0nm,0.3s,baz=90,slow=11,SNR=6.1						

IDC 30 18:44:40.1±1.2**, 21.°53S×69.°51E, h0^{km}, mb3.8**/5**, mb1 3.9**/5**, mb1mx3.4**/40**, mbtmp3.8**/5**, MS3.5**/10**, Ms1 3.5**/10**, ms1mx3.2**/36**, Error ellipse: s-maj=36.8km s-min=30.1km az=15.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**14.10**	**12**	T	T	19 01 53.7	
	baz=193						
H08S2	**Diego Garcia H**	**14.10**	**12**	T	T	19 01 48.1	
	baz=193						
H08S3	**Diego Garcia H**	**14.12**	**12**	T	T	19 01 53.3	
	baz=193						
PSI	**Prapat**	**37.59**	**54**	LR	LR	19 03 52.1	
	comp=Z,50nm,20.8s,baz=246,slow=31						
LEM	**Lembang**	**39.60**	**74**	LR	LR	19 04 50.1	
	comp=Z,66nm,19.7s,baz=182,slow=31						
BOSA	**Boshof**	**40.52**	**251**	P	P	18 52 21.2	-0.1
	0.9nm,0.7s,baz=92,slow=7.2,SNR=3.8						
BOSA				LR	LR	19 05 15.7	
	comp=Z,80nm,21.8s,baz=96,slow=30						
H01W2	**Cape Leeuwin H**	**41.19**	**119**	T	T	19 36 09.0	
	baz=274						
H01W3	**Cape Leeuwin H**	**41.19**	**119**	T	T	19 36 11.1	
	baz=274						
H01W1	**Cape Leeuwin H**	**41.21**	**119**	T	T	19 36 09.7	
	baz=274						
CMAR	**Chiang Mai Arr**	**49.09**	**38**	LR	LR	19 10 40.5	
	comp=Z,35nm,21.6s,baz=234,slow=32						
FITZ	**Fitzroy Crossi**	**52.69**	**97**	LR	LR	19 13 23.7	
	comp=Z,15nm,18.7s,baz=270,slow=33						
BATI	**Baumata**	**53.06**	**87**	LR	LR	19 12 59.8	
	comp=Z,77nm,19.6s,baz=237,slow=32						
ASAR	**Alice Springs**	**59.03**	**105**	P	P	18 54 42.0	-0.3
	0.6nm,0.8s,baz=256,slow=6.8,SNR=9.0						
WRA	**Warramunga Arr**	**60.25**	**101**	P	P	18 54 51.3	+0.5
	0.5nm,0.7s,baz=258,slow=7.7,SNR=1.9						
STKA	**Stephens Creek**	**64.19**	**116**	LR	LR	19 18 56.7	
	comp=Z,49nm,21.4s,baz=206,slow=32						
MKAR	**Makanchi Array**	**68.98**	**9**	P	P	18 55 47.0	-0.1
	1.1nm,0.7s,baz=189,slow=6.8,SNR=9.9						
MKAR				LR	LR	19 24 35.8	
	comp=Z,43nm,18.5s,baz=178,slow=35						
TORD	**Torodi Ar. Bea**	**74.93**	**291**	LR	LR	19 27 23.8	
	comp=Z,33nm,19.5s,baz=315,slow=34						
ZALV	**Zalesovo Beam**	**76.32**	**9**	P	P	18 56 30.8	+0.1
	1.7nm,0.7s,baz=202,slow=4.7,SNR=8.3						
DBIC	**Dimbokro**	**78.05**	**282**	LR	LR	19 29 15.9	
	comp=Z,47nm,18.5s,baz=124,slow=34						

NOU 30 18:58:08.4, 18.°16S×168.°13E, h16^{km}, ML4.4/17**, Vanuatu Islands, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVP	**Devils Point**	**0.44**	**7**	P	Pb	18 58 18.6	+0.9
RTV	**Rentapao**	**0.46**	**38**	P	Pb	18 58 18.7	+0.5
SANVU	**Saraoutou**	**2.84**	**342**	P	Pn	18 58 52.3	-0.8
MARNC	**Mare, Loyalty**	**3.31**	**182**	P	Pn	18 58 57.8	-1.7
YATNC	**Mamie plateau,**	**4.05**	**196**	P	Pn	18 59 09.7	-0.1
DZM	**Mont Dzumac**	**4.20**	**202**	*e*Pn	Pn	18 59 10.2	-1.7
	20nm,0.3s						
DZM				*e*Sn	Sn	19 00 00.7	-0.1
	75nm,0.8s						
DZM	**Mont Dzumac**	**4.20**	**202**	P	Pn	18 59 11.3	-0.6
NOUC	**Port Laguerre**	**4.28**	**203**	P	Pn	18 59 12.7	-0.2
KOUNC	**Koumac, New Ca**	**4.34**	**236**	P	Pn	18 59 14.1	+0.4
OUENC	**Ouen Island, N**	**4.41**	**196**	P	Pn	18 59 16.3	+1.6
ONTNC	**Ouen Toro**	**4.42**	**201**	P	Pn	18 59 14.6	-0.2
PINNC	**Pines Island,**	**4.48**	**188**	P	Pn	18 59 15.5	-0.1

TUL ***30*** *19:04:43.3±2.2, 36.°738N±0.°010×98.°34W±0.°05, h5^{km}±7^{km}, ML2.5, mb_Lg2.4/11(NEIC), Error ellipse: s-maj=5.2km s-min=1.0km az=80.0*

NEIC 30 19:04:43.6±0.7**, 36.°74N**±0.°02×**98.°32W**±0.°03**, h14^{km}**±7^{km}**, Error ellipse: s-maj=4.2km s-min=1.4km az=56.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CROK	**Carrier**	**0.36**	**131**	Pg	Pg	19 04 50.9	0.0
CROK				Sg	Sg	19 04 56.1	+0.2
KAN14	**Manchester OK**	**0.36**	**53**		Pg	19 04 50.8	-0.1
KAN14				Sg	Sg	19 04 56.3	+0.4
GC02	**Grant County #**	**0.39**	**73**	Pg	Pg	19 04 51.4	0.0
GC02				Sg	Sg	19 04 57.0	+0.2
KAN10	**Anthony SW Sta**	**0.42**	**26**	Pg	Pg	19 04 52.0	-0.1
KAN10				Sg	Sg	19 04 58.3	+0.5
KAN16	**Harper SW Stat**	**0.53**	**23**	Pg	Pg	19 04 53.8	-0.2
KAN17	**Caldwell West**	**0.54**	**56**	Pg	Pg	19 04 54.4	+0.1
KAN08	**Anthony NE Sta**	**0.56**	**30**	Pg	Pg	19 04 54.6	0.0
KAN01	**Argonia South**	**0.61**	**48**	Pg	Pg	19 04 55.3	-0.2
KAN12	**Harper NE Stat**	**0.61**	**25**	Pg	Pg	19 04 55.0	-0.6
U32A	**Winter Ranch,**	**0.65**	**237**	Pg	Pg	19 04 55.6	-0.7
KAN09	**Caldwell North**	**0.69**	**55**	Pg	Pg	19 04 56.9	-0.1
OK025	**Westminster Rd**	**1.41**	**145**		Pn	19 05 08.7	-0.1
QUOK	**Quay**	**1.42**	**113**	Pn	Pn	19 05 08.9	-0.1
OK031	**S. Brethren Rd**	**1.43**	**123**	Pn	Pn	19 05 09.2	0.0
T35A	**Sooner Cattle**	**1.46**	**83**	Pn	Pn	19 05 09.2	-0.4
OK030	**Cody Creek RV**	**1.48**	**123**	Pn	Pn	19 05 10.0	+0.1
OK034	**N. Norfolk Rd.**	**1.49**	**119**		Pn	19 05 10.0	0.0
FNO	**Franklin**	**1.66**	**153**	Pn	Pb	19 05 13.2	-0.7
R32A	**Long Quarter,**	**1.71**	**350**		Pb	19 05 14.1	-0.6
R32A				IAmb_Lg		19 05 38.6	
	comp=Z,12nm,0.9s						
W35A	**Tecumseh**	**1.97**	**143**	Pn	Pn	19 05 17.6	+1.0
W35A				IAmb_Lg		19 05 48.8	
	comp=Z,11nm,0.8s						
X34A	**Smith Ranch, M**	**2.17**	**169**	Pn	Pb	19 05 21.9	-0.8
X34A				IAmb_Lg		19 05 56.8	
	comp=Z,15nm,0.8s						
TUL1	**Leonard**	**2.21**	**111**	Pn	Pn	19 05 19.9	+0.1
CBKS	**Cedar Bluff**	**2.35**	**332**	Pn	Pn	19 05 20.8	-1.1
CBKS				IAmb_Lg		19 06 03.8	
	comp=Z,7.6nm,0.7s						
U38A	**Gravette**	**3.18**	**94**	Pn	Pn	19 05 34.2	+0.9
X37A	**Clayton**	**3.22**	**131**	Pn	Pn	19 05 33.2	-0.6
S39A	**Bolivar**	**4.10**	**75**	Pn	Pn	19 05 45.6	-0.3
U40A	**Yellville**	**4.42**	**93**	IAmb_Lg		19 07 16.3	
	comp=Z,5.5nm,0.7s						
HBAR	**Harrisburg**	**6.32**	**99**	IAmb_Lg		19 08 12.0	
	comp=Z,22nm,0.7s						
PARMO	**Parma**	**6.89**	**88**	IAmb_Lg		19 08 17.0	
	comp=Z,19nm,0.7s						

THR ***30*** *19:08:00.9±0.6, 32.°24N×47.°48E, h14^{km}±6^{km}, ML3.2*

TEH ***30*** *19:08:00.6, 32.°28N×47.°58E, h9^{km}, ML3.5*

ISN ***30*** *19:08:00.1±1.1, 32.°13N×47.°45E, h28^{km}±22^{km}, ML3.7*

ISC 30 19:08:01.6±1.1**, 32.°24N**±0.°04×**47.°43E**±0.°04**, h10^{km}, n44, σ0.^{s}78**/51**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DHL1	**Dehloran**	**0.46**	**344**	*e*Sg	**Sg**	**19 08 17.7**	**+1.1**
DHL1				*e*Pg	**Pg**	**19 08 09.3**	**-1.2**
IKFM	**Kafar-mosalman**	**1.33**	**15**	*e*Pg	**Pn**	**19 08 25.8**	**-0.4**
IKFM				*e*		19 08 47.9	
	comp=Z,13µm,0.4s						
AHWZ	**Ahwaz**	**1.38**	**131**	*e*Pg	**Pn**	**19 08 26.3**	**-0.5**
IBDR	**Badra**	**1.53**	**305**	*e*Pn	**Pn**	**19 08 28.5**	**-0.5**
IBDR				*e*Sn	**Sn**	**19 08 49.5**	**+0.5**
IDOB	**Doab**	**1.66**	**22**	*e*Pg	**Pn**	**19 08 30.9**	**-0.1**
AMIS	**Naft Sefid**	**1.68**	**110**	*e*Pg	**Pn**	**19 08 30.4**	**-0.7**
AMIS				*e*Sg	**Sn**	**19 08 53.6**	**+0.9**
BMDN	**Meydan**	**1.84**	**39**	*e*Pg	**Pn**	**19 08 33.0**	**-0.5**
BMDN				*e*		19 08 36.5	
	comp=Z,3µm,0.5s						
KCHF	**Cheshme Sefid,**	**2.05**	**351**	*e*Pn	**Pn**	**19 08 37.3**	**+0.9**
HSAM	**Samen**	**2.20**	**26**	*e*Pn	**Pn**	**19 08 38.8**	**+0.4**
HSAM				*e*		19 08 43.2	
	comp=Z,2µm,0.5s						
MIB	**Mutribah**	**2.43**	**182**	*e*P	**Pn**	**19 08 41.7**	**+0.3**
MIB				IAML		19 09 18.5	
	comp=Z,344nm,0.4s						
KHMZ	**Khomeyn**	**2.60**	**54**	*e*Pn	**Pn**	**19 08 44.5**	**+0.6**
KHMZ	**Khomeyn**	**2.60**	**54**	*e*Pn	**Pn**	**19 08 44.5**	**+0.6**
IDHR	**Dehrash**	**2.60**	**341**	*e*Pn	**Pn**	**19 08 43.8**	**-0.1**
IDHR				*e*		19 09 36.0	
	comp=Z,4µm,0.3s						
UMR	**Umm Al-Rimmam**	**2.69**	**175**	*e*P	**Pn**	**19 08 45.7**	**+0.7**
UMR				IAML		19 09 22.4	
	comp=Z,338nm,0.4s						
ILIN	**Lien**	**2.70**	**352**	*e*Pn	**Pn**	**19 08 46.1**	**+0.8**
ILIN				*e*		19 09 32.6	
	comp=Z,1µm,0.4s						
BHD	**Baghdad**	**2.77**	**293**	*e*Pn	**Pn**	**19 08 45.0**	**-1.0**
BHD				*e*Sn	**Sn**	**19 09 19.0**	**-0.5**
ABEH	**Behbahan**	**2.92**	**123**	*e*Pn	**Pn**	**19 08 48.2**	**+0.1**
ABEH				*e*		19 09 55.4	
	comp=Z,3µm,0.8s						
SHK1	**Shahrekord**	**2.93**	**87**	*e*Pn	**Pn**	**19 08 46.9**	**-1.5**
SHK1				*e*		19 09 46.1	
	comp=Z,2µm,0.7s						
HAGD	**Aghdareh**	**2.94**	**29**	*e*Pn	**Pn**	**19 08 49.1**	**+0.5**
HAGD				*e*		19 08 55.4	
	comp=Z,1µm,0.5s						
ASAO	**Ashtian**	**3.16**	**43**	*e*Pn	**Pn**	**19 08 52.2**	**+0.5**
ASAO				*e*Sg	**Sb**	**19 09 38.8**	**+2.1**
ASAO				IAML		19 09 48.6	
	comp=N,67nm,0.8s						
ASAO				IAML		19 10 07.7	
	comp=E,30nm,0.5s						
ASAO	**Ashtian**	**3.16**	**43**	*e*Pn	**Pn**	**19 08 52.2**	**+0.5**
IBRJ	**Brojen**	**3.27**	**95**	*e*Pn	**Pn**	**19 08 51.7**	**-1.4**
RDF	**Al-Radifah**	**3.31**	**178**	*e*P	**Pn**	**19 08 54.3**	**+0.9**
RDF				IAML		19 09 36.5	
	comp=Z,242nm,0.5s						
IKLH	**Kolahrood**	**3.66**	**72**	*e*Pn	**Pn**	**19 08 58.0**	**-0.5**
KLNJ	**Kolanjah**	**3.76**	**108**	*e*Pn	**Pn**	**19 08 59.2**	**-0.7**
KLNJ				*e*		19 10 19.0	
	comp=Z,830nm,0.7s						
IGAR	**Gharneh**	**3.91**	**86**	*e*Pn	**Pn**	**19 09 01.7**	**-0.2**
IGAR				*e*		19 09 50.1	
	comp=Z,434nm,0.4s						
GHVR	**GHOM**	**3.93**	**54**	*e*Pn	**Pn**	**19 09 02.5**	**+0.5**
GHVR				Sn	**Sn**	**19 09 46.7**	**-1.6**
GHVR				IAML		19 10 00.3	
	comp=E,35nm,0.8s						
GHVR	**GHOM**	**3.93**	**54**	*e*Pn	**Pn**	**19 09 02.6**	**+0.5**
IKRK	**Kirkuk**	**4.07**	**322**	*e*Pn	**Pn**	**19 09 04.0**	**+0.1**
IKRK				*e*Sn	**Sn**	**19 09 51.0**	**-0.6**
IZEF	**Zefreh**	**4.19**	**80**	*e*		19 09 17.2	
	comp=Z,193nm,0.3s						
IZEF				*e*Pn	**Pn**	**19 09 05.5**	**-0.3**
KRSH	**Karshahi**	**4.31**	**65**	*e*Pn	**Pn**	**19 09 07.1**	**-0.2**
IVRN	**Varamin**	**4.51**	**51**	*e*Pn	**Pn**	**19 09 10.4**	**+0.3**
ISFB	**Sefidab**	**4.54**	**61**	*e*Pn	**Pn**	**19 09 10.4**	**-0.1**
NASN	**Na'in**	**4.58**	**82**	*e*Pn	**Pn**	**19 09 11.4**	**+0.2**
NASN	**Na'in**	**4.58**	**82**	*e*Pn	**Pn**	**19 09 11.4**	**+0.2**
AHBU	**AHRAM**	**4.74**	**134**	*e*Pn	**Pn**	**19 09 13.6**	**+0.5**
CHTH	**Charan**	**4.77**	**39**	*e*Pn	**Pn**	**19 09 13.9**	**+0.2**
CHTH	**Charan**	**4.77**	**39**	*e*Pn	**Pn**	**19 09 14.0**	**+0.2**
ANAR	**Anarak**	**5.39**	**78**	*e*Pn	**Pn**	**19 09 20.9**	**-1.3**
IFIR	**Firoozkooh**	**5.57**	**51**	*e*Pn	**Pn**	**19 09 24.3**	**-0.5**
YZKH	**Yazd**	**6.06**	**87**	*e*Pn	**Pn**	**19 09 31.8**	**+0.4**
YZKH	**Yazd**	**6.06**	**87**	*e*Pn	**Pn**	**19 09 31.8**	**+0.4**
IANJ	**Anjilo**	**6.28**	**57**	*e*Pn	**Pn**	**19 09 33.1**	**-1.4**
IGLO	**Ghaloghah**	**6.79**	**49**	*e*Pn	**Pn**	**19 09 41.9**	**+0.5**

IDC ***30*** *19:11:30.5±2.2, 10.°90S×114.°48E, h0^{km}, mb3.2/3, mb1 3.7/5, mb1mx3.3/38, mbtmp3.7/5, ML4.1/2, MS2.4/1, Ms1 2.4/1, ms1mx2.1/7, Error ellipse: s-maj=49.9km s-min=27.5km az=35.0*

ISC 30 19:11:32.3±1.7**, 10.°8S**±0.°2×**114.°6E**±0.°1**, h10^{km}, n6, σ0.^{s}49**/7**, mb3.3**/3**, South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LEM	**Lembang**	**7.93**	**300**	LR	LR	19 17 18.4	
	comp=Z,22nm,18.4s,baz=212,slow=44						
BATI	**Baumata**	**8.98**	**87**	Pn	**Pn**	**19 13 41.4**	**-0.7**
	2.7nm,0.3s,baz=336,slow=22,SNR=2.2						
BATI				Sn	**Sn**	**19 15 23.7**	**+0.4**
	1.6nm,0.3s,baz=126,slow=22,SNR=1.4						
SIJI	**Sorong**	**19.33**	**60**	P	**Pn**	**19 15 59.4**	**+0.4**
	0.5nm,0.3s,baz=297,slow=14,SNR=4.1						
WRA	**Warramunga Arr**	**21.10**	**118**	P	**P**	**19 16 17.3**	**+0.1**
	0.7nm,0.5s,baz=290,slow=10,SNR=11						
WRA				S	S	19 20 00.9	-11
	0.4nm,0.7s,baz=276,slow=22,SNR=2.0						
ASAR	**Alice Springs**	**22.42**	**127**	P	**P**	**19 16 31.7**	**+0.3**
	0.6nm,0.9s,baz=303,slow=9.6,SNR=2.8						
ASAR				S	**S**	**19 20 37.8**	**0.0**
	0.7nm,0.9s,baz=314,slow=26,SNR=7.4						
MKAR	**Makanchi Array**	**64.21**	**336**	P	**P**	**19 22 07.3**	**0.0**
	0.3nm,0.5s,baz=146,slow=7.4,SNR=2.5						

JMA ***30*** *19:16:30.6±0.1, 24.°60N×122.°48E, h74^{km}±2^{km}, M1.6*

TAP ***30*** *19:16:31.0, 24.°60N×122.°47E, h63^{km}±1^{km}, ML2.8, D*

ISC 30 19:16:31.8±1.3**, 24.°58N**±0.°04×**122.°48E**±0.°02**, h63^{km}**±9^{km}**, n76, σ0.^{s}50**/149**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.44**	**106**	P	**Pn**	**19 16 43.4**	**0.0**
JYNG				S	**Sn**	**19 16 53.1**	**+1.2**
YOJ	**Yonaguni jima**	**0.50**	**103**	P	**Pn**	**19 16 43.8**	**-0.2**
	baz=104						
YOJ				S	**Sn**	**19 16 53.0**	**+0.2**
	baz=104						
YOJ	**Yonaguni jima**	**0.50**	**103**	P	**Pn**	**19 16 43.9**	**-0.1**
YOJ				S	**Sn**	**19 16 53.7**	**+0.8**
EWUT	**Wuta**	**0.65**	**258**	P	**Pn**	**19 16 45.7**	**+0.1**
	baz=256						
EWUT				S	**Sn**	**19 16 55.9**	**+0.1**
	baz=256						
NTC	**Toucheng**	**0.65**	**295**	*e*P	**Pn**	**19 16 45.5**	**-0.1**
	baz=293						
NTC				*e*S	**Sn**	**19 16 55.8**	**0.0**
	baz=293						
ENA	**Nanau**	**0.69**	**258**	*e*P	**Pn**	**19 16 45.9**	**-0.1**
	baz=255						
ENA				*e*S	**Sn**	**19 16 56.8**	**+0.2**
	baz=255						
NDS	**Dongshan**	**0.70**	**275**	P	**Pn**	**19 16 46.0**	**-0.2**
	baz=272						
NDS				S	**Sn**	**19 16 56.2**	**-0.5**
	baz=272						
TIPB	**Shuangxi**	**0.71**	**304**	P	**Pn**	**19 16 45.4**	**-1.0**
	baz=302						
TIPB				S	**Sn**	**19 16 55.8**	**-1.3**
	baz=302						
TWE	**Neicheng**	**0.75**	**281**	P	**Pn**	**19 16 46.4**	**-0.4**
	baz=279						
TWE				S	**Sn**	**19 16 57.7**	**-0.1**
	baz=279						
NWF	**Wu-fen Shan**	**0.80**	**308**	P	**Pn**	**19 16 46.9**	**-0.6**
	baz=306						
NWF				S	**Sn**	**19 16 58.1**	**-1.0**
	baz=306						
ENTT	**Nioudou**	**0.83**	**274**	P	**Pn**	**19 16 47.8**	**0.0**
	baz=272						
ENTT				*e*S	**Sn**	**19 16 60.0**	**+0.3**
	baz=272						
NDT	**Datong Townshi**	**0.88**	**272**	*e*P	**Pn**	**19 16 48.5**	**+0.1**
	baz=270						
NDT				*e*S	**Sn**	**19 17 01.1**	**+0.4**
	baz=270						
ETL	**Fush Village**	**0.89**	**242**	*e*P	**Pn**	**19 16 48.7**	**+0.2**
	baz=240						
ETL				*e*S	**Sn**	**19 17 02.0**	**+1.2**
	baz=240						
NACB	**Ninganchiao**	**0.90**	**244**	*e*P	**Pn**	**19 16 47.8**	**-0.8**
	baz=242						
NACB				*e*S	**Sn**	**19 17 02.1**	**+0.9**
	baz=242						
TWA	**Mucha**	**0.91**	**296**	*e*P	**Pn**	**19 16 48.5**	**-0.3**
	baz=295						
TWA				*e*S	**Sn**	**19 17 01.5**	**+0.2**
	baz=295						
NWLT	**Wulai**	**0.91**	**283**	P	**Pn**	**19 16 48.4**	**-0.4**
	baz=281						
NWLT				S	**Sn**	**19 17 01.0**	**-0.4**
	baz=281						
TWD	**Chiawan**	**0.94**	**239**	*e*P	**Pn**	**19 16 49.3**	**+0.1**
	baz=237						
TWD				*e*S	**Sn**	**19 17 02.4**	**+0.3**
	baz=237						
NHDH	**Xindian Distri**	**0.95**	**294**	*e*P	**Pn**	**19 16 49.1**	**-0.1**
	baz=292						
NHDH				*e*S	**Sn**	**19 17 02.7**	**+0.5**
	baz=292						
ETLH	**Xiulin Townshi**	**0.98**	**248**	P	**Pn**	**19 16 49.3**	**-0.5**
	baz=246						
ETLH				S	**Sn**	**19 17 02.7**	**-0.4**
	baz=246						
YM01	**YM01**	**1.00**	**305**	*e*P	**Pn**	**19 16 49.8**	**-0.1**
	baz=303						
YM01				*e*S	**Sn**	**19 17 03.6**	**+0.1**
	baz=303						
YHNB	**Yeheng**	**1.01**	**275**	P	**Pn**	**19 16 50.1**	**0.0**
	baz=274						
YHNB				S	**Sn**	**19 17 03.9**	**+0.2**
	baz=274						
NNS	**Nan Shan**	**1.02**	**262**	P	**Pn**	**19 16 50.0**	**-0.2**
	baz=260						
NNS				*e*S	**Sn**	**19 17 04.3**	**+0.4**
	baz=260						
NSK	**Sanguang**	**1.02**	**276**	P	**Pn**	**19 16 50.2**	**-0.1**
	baz=274						
NSK				S	**Sn**	**19 17 04.4**	**+0.3**
	baz=274						
TWS1	**Kuangyinshan**	**1.09**	**299**	*e*P	**Pn**	**19 16 51.0**	**-0.1**
	baz=297						
TWS1				*e*S	**Sn**	**19 17 06.0**	**+0.4**
	baz=297						
NTST	**Danshui**	**1.10**	**302**	*e*P	**Pn**	**19 16 51.0**	**-0.2**
	baz=301						
NTST				*e*S	**Sn**	**19 17 05.9**	**+0.1**
	baz=301						
IRIF	**Iriomote-Funau**	**1.17**	**102**	P	**Pn**	**19 16 51.3**	**-0.8**
IRIF				S	**Sn**	**19 17 07.0**	**-0.2**
FUSS	**Fushou**	**1.17**	**254**	*e*P	**Pn**	**19 16 52.3**	**-0.1**
	baz=252						
FUSS				*e*S	**Sn**	**19 17 08.2**	**+0.4**
	baz=252						
WHF	**Hehuan Shan**	**1.19**	**249**	*e*P	**Pn**	**19 16 52.7**	**-0.1**
	baz=247						
WHF				*e*S	**Sn**	**19 17 08.3**	**-0.1**
	baz=247						
ESL	**Shilin**	**1.22**	**232**	*e*P	**Pn**	**19 16 52.0**	**-0.8**
	baz=230						
ESL				*e*S	**Sn**	**19 17 08.0**	**-0.5**
	baz=230						
TWT	**Tachien**	**1.23**	**255**	*e*P	**Pn**	**19 16 53.2**	**+0.1**
	baz=253						
TWT				*e*S	**Sn**	**19 17 09.6**	**+0.6**
	baz=253						
CHGB	**Renai**	**1.30**	**247**	P	**Pn**	**19 16 54.0**	**0.0**
	baz=245						
CHGB				S	**Sn**	**19 17 10.8**	**+0.1**
	baz=245						
HATJ	**Hateruma jima**	**1.32**	**113**	*e*S	**Sn**	**19 17 10.6**	**-0.2**
EGFH	**Guangfu**	**1.32**	**227**	*e*P	**Pn**	**19 16 53.4**	**-0.8**
	baz=225						
EGFH				*e*S	**Sn**	**19 17 10.7**	**-0.2**
	baz=225						
LIOB	**Emei**	**1.33**	**273**	*e*P	**Pn**	**19 16 54.3**	**0.0**
	baz=272						
LIOB				*e*S	**Sn**	**19 17 11.9**	**+0.7**
	baz=272						
OWD	**Renai**	**1.34**	**243**	*e*P	**Pn**	**19 16 54.2**	**-0.4**
	baz=241						
OWD				*e*S	**Sn**	**19 17 11.1**	**-0.5**
	baz=241						
NSTT	**Nanjuang**	**1.35**	**273**	*e*P	**Pn**	**19 16 54.5**	**0.0**
	baz=271						
NSTT				*e*S	**Sn**	**19 17 11.7**	**+0.2**
	baz=271						
WHP	**Taichung City**	**1.43**	**258**	*e*P	**Pn**	**19 16 55.9**	**+0.2**
	baz=257						
WHP				*e*S	**Sn**	**19 17 14.3**	**+0.7**
	baz=257						
JKRS	**Kuro-shima**	**1.44**	**103**	P	**Pn**	**19 16 56.2**	**+0.6**
JKRS				*e*S	**Sn**	**19 17 14.5**	**+0.9**
HGSD	**Ruisui**	**1.45**	**222**	*e*P	**Pn**	**19 16 56.2**	**+0.3**
	baz=221						
HGSD				*e*S	**Sn**	**19 17 13.7**	**-0.3**
	baz=221						
EHY	**Hungye**	**1.50**	**225**	*e*P	**Pn**	**19 16 55.6**	**-1.0**
	baz=223						
EHY				*e*S	**Sn**	**19 17 14.0**	**-1.3**
	baz=223						
WCS	**Beigang Elemen**	**1.52**	**250**	*e*P	**Pn**	**19 16 57.2**	**+0.4**
	baz=249						
WCS				*e*S	**Sn**	**19 17 15.7**	**0.0**
	baz=249						
JIJ	**Ishigaki jima**	**1.53**	**98**	P	**Pn**	**19 16 56.5**	**-0.4**
JIJ				*e*S	**Sn**	**19 17 15.8**	**-0.1**
NSY	**Sanyi**	**1.57**	**264**	*e*P	**Pn**	**19 16 57.6**	**+0.1**
	baz=263						
NSY				*e*S	**Sn**	**19 17 17.2**	**+0.2**
	baz=263						
SMLT	**Sun Moon Lake**	**1.60**	**245**	*e*P	**Pn**	**19 16 58.2**	**+0.3**
	baz=243						
SMLT				*e*S	**Sn**	**19 17 18.4**	**+0.7**
	baz=243						
SSLB	**Suanglung**	**1.60**	**241**	*e*P	**Pn**	**19 16 57.9**	**0.0**
	baz=239						
SSLB				*e*S	**Sn**	**19 17 18.4**	**+0.8**
	baz=239						
YULB	**Yu-li**	**1.60**	**223**	*e*P	**Pn**	**19 16 56.7**	**-1.2**
	baz=221						
YULB				*e*S	**Sn**	**19 17 17.1**	**-0.5**
	baz=221						
EYUL	**Yuli**	**1.62**	**221**	*e*P	**Pn**	**19 16 58.5**	**+0.4**
	baz=220						
EYUL				*e*S	**Sn**	**19 17 18.6**	**+0.5**
	baz=220						
TYC	**Yuchr**	**1.62**	**246**	*e*P	**Pn**	**19 16 58.4**	**+0.2**
	baz=244						
TYC				*e*S	**Sn**	**19 17 19.0**	**+0.8**
	baz=244						
JISG	**Ishigakijimahi**	**1.67**	**89**	P	**Pn**	**19 16 58.5**	**-0.3**
JISG				S	**Sn**	**19 17 19.5**	**+0.3**
FULB	**Fuli**	**1.75**	**219**	*e*P	**Pn**	**19 16 59.6**	**-0.3**
	baz=217						
FULB				*e*S	**Sn**	**19 17 20.8**	**-0.5**
	baz=217						
WJS	**Zhushan**	**1.77**	**245**	*e*P	**Pn**	**19 17 00.6**	**+0.5**
	baz=244						
WJS				*e*S	**Sn**	**19 17 22.7**	**+1.1**
	baz=244						
YUS	**Yu-Shan**	**1.77**	**232**	*e*P	**Pn**	**19 17 00.4**	**-0.2**
	baz=231						
YUS				*e*S	**Sn**	**19 17 22.1**	**-0.2**
	baz=231						
WNT	**Mingjian**	**1.78**	**247**	*e*P	**Pn**	**19 17 00.5**	**+0.2**
	baz=246						
WNT				*e*S	**Sn**	**19 17 22.6**	**+0.6**
	baz=246						
CHKT	**Chengkung**	**1.79**	**215**	*e*S	**Sn**	**19 17 22.6**	**+0.5**
	baz=214						
ALS	**Alishan**	**1.86**	**236**	*e*P	**Pn**	**19 17 01.7**	**0.0**
	baz=234						
ALS				*e*S	**Sn**	**19 17 24.6**	**+0.2**
	baz=234						
CHN5	**Tsauling**	**1.91**	**240**	*e*P	**Pn**	**19 17 02.7**	**+0.5**
	baz=238						
CHN5				*e*S	**Sn**	**19 17 26.6**	**+1.3**
	baz=238						
ELDTW	**Lidau**	**1.92**	**224**	*e*P	**Pn**	**19 17 01.2**	**-1.2**
	baz=223						
ELDTW				*e*S	**Sn**	**19 17 24.8**	**-0.8**
	baz=223						
EDH	**Donghe**	**1.93**	**214**	*e*P	**Pn**	**19 17 00.9**	**-1.4**
	baz=213						
EDH				*e*S	**Sn**	**19 17 25.7**	**+0.2**
	baz=213						
WDLH	**Douliu**	**1.98**	**244**	*e*P	**Pn**	**19 17 03.5**	**+0.5**
	baz=242						
WDLH				*e*S	**Sn**	**19 17 27.3**	**+0.5**
	baz=242						
LONT	**Longtian**	**2.07**	**217**	*e*P	**Pn**	**19 17 04.8**	**+0.5**
	baz=216						
LONT				*e*S	**Sn**	**19 17 29.2**	**+0.1**

	baz=216						
STYH	Taoyuan	2.10	228	eP	Pn	19 17 04.8	+0.2
	baz=227						
STYH				eS	Sn	19 17 29.6	+0.1
	baz=227						
WTK	Tuku	2.10	246	eP	Pn	19 17 04.9	+0.2
	baz=244						
WTK				eS	Sn	19 17 29.8	0.0
	baz=244						
LDUT	Ludao	2.11	206	eP	Pn	19 17 05.1	+0.3
	baz=205						
LDUT				eS	Sn	19 17 30.0	0.0
	baz=205						
CHN4	Tsaushan	2.11	235	eP	Pn	19 17 04.4	-0.4
	baz=234						
CHN4				eS	Sn	19 17 29.9	-0.1
	baz=234						
TPUB	Ta-pu	2.12	233	eP	Pn	19 17 05.5	+0.6
	baz=232						
TPUB				eS	Sn	19 17 30.3	+0.2
	baz=232						
WTP	Ta-pu	2.16	233	eP	Pn	19 17 05.5	0.0
	baz=231						
WTP				eS	Sn	19 17 31.6	+0.3
	baz=231						
TWK	Hsinying	2.24	235	eP	Pn	19 17 06.9	+0.3
	baz=233						
TWK				eS	Sn	19 17 33.2	0.0
	baz=233						
CHN1	Nanshi	2.26	233	eP	Pn	19 17 07.0	+0.1
	baz=231						
CHN1				eS	Sn	19 17 33.5	-0.1
	baz=231						
SGST	Jiashian	2.29	230	eS	Sn	19 17 34.3	0.0
	baz=228						
SLGT	Liugui	2.30	227	eP	Pn	19 17 08.0	+0.6
	baz=226						
SLGT				eS	Sn	19 17 34.5	-0.2
	baz=226						
ECL	Taimali	2.42	216	eP	Pn	19 17 09.1	+0.1
	baz=214						
ECL				eS	Sn	19 17 36.5	-1.0
	baz=214						
SSD	Sandimen	2.49	223	eP	Pn	19 17 10.1	+0.1
	baz=222						
SSD				eS	Sn	19 17 38.8	-0.4
	baz=222						
TSMG	Majia	2.51	222	eP	Pn	19 17 10.4	+0.1
	baz=221						
TSMG				eS	Sn	19 17 39.5	-0.3
	baz=221						
MASBT	Mashibuluo	2.59	221	eP	Pn	19 17 11.4	+0.1
	baz=220						
MASBT				eS	Sn	19 17 41.3	-0.3
	baz=220						
EAST	Anshuo	2.65	215	eP	Pn	19 17 12.1	-0.1
	baz=213						
EAST				eS	Sn	19 17 42.6	-0.5
	baz=213						
LAY	Lan-yu	2.67	199	eP	Pn	19 17 12.5	+0.1
	baz=198						
LAY				eS	Sn	19 17 43.2	-0.4
	baz=198						

NNC 30 19:39:28.9±3.6,37°.93N×74°.63E,h0^{km},mb3.7,mpv3.3, 5C-3D,Error ellipse: s-maj=29.3km s-min=20.7km az=141.0,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	Ala-Archa	4.71	359	⇑Pg	Pg	19 40 56.3	-2.8
	7.5nm,0.8s						
AAK				⇑Lg	Lg	19 41 58.3	
	11nm,1.1s						
MRKS	Merke	4.93	348	Pg	Pn	19 40 44.0	-0.3
	1.7nm,0.5s						
MRKS				Lg	Lg	19 41 46.4	
	5.2nm,0.6s						
TKM2	Tokmak 2	5.04	8	⇑Pn	Pn	19 40 49.1	+3.2
	1.2nm,0.3s						
TKM2				⇑Pg	Pg	19 41 02.7	-2.8
	4.0nm,1.0s						
TKM2				⇓Lg	Lg	19 42 09.5	
	5.5nm,0.7s						
KST	Kastek	5.21	11	Pg	Pb	19 41 02.2	+1.2
	3.6nm,0.6s						
KST				Lg	Lg	19 42 17.9	
	6.8nm,0.6s						
DGS	Degeres	5.38	9	Pg	Pb	19 41 03.5	-0.3
DGS				Lg	Lg	19 42 20.5	
IUG	Iuzhnay	5.50	322	Pg	Pn	19 40 46.7	-5.4
	23nm,0.5s						
IUG				Lg	Lg	19 41 50.7	
	11nm,0.8s						
MDOK	Medeo	5.55	19	Pg	Pg	19 41 11.4	-3.7
	4.0nm,0.8s						
MDOK				⇑Lg	Lg	19 42 25.1	
	9.1nm,0.8s						
MDOK	Medeo	5.55	19	Pg	Pb	19 41 08.2	+1.5
	1.6nm,0.8s						
MDOK				Lg	Lg	19 42 28.2	
	6.6nm,1.1s						
KOTS	Kotyrbulak	5.63	19	Pg	Pb	19 41 09.6	+1.5
	1.6nm,0.7s						
KOTS				Lg	Lg	19 42 30.9	
	15nm,0.6s						
KTBS	Karatobe	5.99	14	Pg	Pb	19 41 15.3	+1.2
	1.6nm,1.0s						
KTBS				Lg	Lg	19 42 39.9	
	7.0nm,0.9s						
KK02	Karatay Array	6.05	330	⇓Pn	Pn	19 40 59.0	-0.5
	0.8nm,0.3s						
KK02				⇓Sn	Sn	19 42 09.7	+0.2
	2.3nm,0.6s						
KUU	Kurty	6.10	12	Pg	Pb	19 41 17.1	+1.0
	1.7nm,1.2s						
KUU				Lg	Lg	19 42 43.9	
	3.8nm,0.8s						
AB31	Akbulak array	15.51	322	Pn	P	19 43 12.2	-1.1
	0.3nm,0.5s,baz=132,slow=12,SNR=7.3						

NNC 30 19:43:27.5±3.6,36°.85N×70°.49E,h189^{km}±72^{km},mb2.7, mpv3.6,3C-3D,Error ellipse: s-maj=37.9km s-min=19.7km az=13.0,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK02	Karatay Array	6.24	0	⇑P	Pn	19 44 57.7	0.0
	3.9nm,0.6s						
KK02				⇓S	Sn	19 46 09.3	+0.3
	11nm,1.2s						
AAK	Ala-Archa	6.55	27	⇑P	Pn	19 45 02.2	+0.4
	3.5nm,0.7s						
AAK				⇓S	Sn	19 46 17.5	+1.1
	9.0nm,0.6s						
TKM2	Tokmak 2	7.22	31	⇓P	Pn	19 45 10.1	-0.6
	4.0nm,0.9s						
TKM2				⇑S	Sn	19 46 32.3	-0.1
	5.7nm,1.1s						
AB31	Akbulak array	14.58	332	P	Pn	19 46 45.1	+0.3
	1.1nm,0.6s,baz=148,slow=11,SNR=28						

IDC ***30*** *19:44:18.7±0.9,28°.57N×128°.24E,h0^{km},mb3.7/6, mb1 3.9/10,mb1mx3.7/35,mbtmp3.8/10,ML3.5/3,MS3.5/11, Ms1 3.5/11,ms1mx3.3/39,Error ellipse: s-maj=33.6km s-min=14.2km az=90.0*

JMA ***30*** *19:44:18.0±0.2,28°.73N×128°.61E,h15^{km}±4^{km},M3.7*

NIED ***30*** *19:44:18.0,28°.73N×128°.61E,h15^{km},MW4.4,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-1.54; M$_{\theta\theta}$4.20; M$_{\phi\phi}$-2.66; M$_{r\theta}$-0.96; M$_{\theta\phi}$1.62; M$_{\phi r}$1.00; Fault plane solution: M$_0$4.17000×10^{15} NP1: φ$_s$118.00000°,δ75.00000°,λ-27.00000°. NP2: φ$_s$216.00000°,δ64.00000°,λ-163.00000°.*

NEIC ***30*** *19:44:19.6±2.7,28°.60N±0°.06×128°.6E±0°.1,h10^{km}±1^{km}, mb4.5/7 Error ellipse: s-maj=16.4km s-min=9.0km az=101.0*

ISC 30 19:44:18.9±1.4,28°.69N±0°.03×128°.68E±0°.06,h9^{km}±9^{km}, n51,σ1^{s}.16/48,mb3.9/9,MS3.5/6,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAMN	Amaminishikomi	0.62	135	P	Pg	19 44 31.2	+0.2
JAMN				eS	Sg	19 44 40.9	+1.8
JTAJ	Takarajima	0.66	45	P	Pg	19 44 30.9	-0.7
JTAJ				eS	Sg	19 44 39.6	-0.6
JAM	Amami Oshima	0.86	108	P	Pb	19 44 34.9	-1.1
JAM				S	Sb	19 44 47.1	-0.6
JTK	Tokunoshima	0.93	165	P	Pb	19 44 36.0	-1.2
JTK				eS	Sg	19 44 50.0	+1.1
JZK	Kikaishima	1.20	108	P	Pg	19 44 42.1	+0.1
JOKE	Okinoerabujima	1.32	184	P	Pn	19 44 42.5	-1.0
JOKE				eS	Sn	19 45 00.1	-1.2
JNN	Nakanoshima	1.56	42	P	Pn	19 44 45.7	-1.1
JNN				eS	Sn	19 45 05.0	-2.1
JYRO	Yoronjima	1.67	187	P	Pn	19 44 47.7	-0.5
JIH	Iheya	1.76	201	P	Pn	19 44 49.0	-0.5
JOW	Kunigami	1.88	191	Pn	Pn	19 44 50.7	-0.5
	114nm,0.3s,baz=65,slow=15,SNR=58						
JOW				Sn	Sn	19 45 13.1	-2.0
	55nm,0.3s,baz=122,slow=26,SNR=3.6						
JOW	Kunigami	1.88	191	P	Pn	19 44 50.4	-0.8
JOW	Kunigami	1.88	191		Pn	19 44 50.5	-0.7
JKC	Kuchinoerabu	2.21	36	P	Pn	19 44 55.4	-0.3
JYAK	Yakushimahirau	2.23	46	P	Pn	19 44 54.9	-1.0
JNTH	Nagotoyohara	2.24	195	P	Pn	19 44 55.8	-0.3
JMTN	Minamitane	2.58	48	P	Pn	19 45 00.5	-0.3
JTN	Tanegashima 3	2.81	45	P	Pn	19 45 04.0	+0.1
JSU	Suzuyama	3.21	28		Pn	19 45 08.9	-0.5
JKDJ	Kitadaitoujima	3.59	139	P	Pn	19 45 14.8	+0.1
JMZ	Minamidaito 2	3.65	141	Pn	Pn	19 45 14.3	-1.2
JNU	Nakatsue	4.81	23	Pn	Pb	19 45 36.3	-7.1
	7.4nm,0.3s,baz=342,slow=0.4,SNR=21						
JNU	Nakatsue	4.81	23		Pn	19 45 29.0	-2.5
JWT	Wachi	8.71	39	Pn	Pn	19 46 26.5	+1.5
KSRS	Korea Array	8.77	356	Pn	Pn	19 46 27.7	+2.0
	0.2nm,0.3s,baz=179,slow=15,SNR=8.1						
KSRS				LR	LR	19 49 55.7	
	comp=Z,424nm,19.9s,baz=165,slow=38						
INU	Inuyama	9.71	45	Pn	Pn	19 46 39.5	+0.9
JHJ	Hachijo jima 2	10.51	62	LR	LR	19 50 56.7	
	comp=Z,106nm,18.6s,baz=212,slow=36						
MJAR	Matsushiro Arr	11.22	43	Pn	Pn	19 47 03.4	+4.0
	0.1nm,0.3s,baz=248,slow=13,SNR=2.4						
MJAR				LR	LR	19 51 58.6	
	comp=Z,270nm,19.9s,baz=210,slow=40						
MJAR	Matsushiro Arr	11.22	43		Pn	19 46 59.8	+0.4
MJB9	Matsu-Tunnel	11.22	43	Pn	Pn	19 47 00.2	+0.8
JCJ	Chichijima	12.05	94	LR	LR	19 51 10.8	
	comp=Z,285nm,19.4s,baz=211,slow=33						
USRK	Ussuriysk Ar.	15.71	9	Pn	P	19 48 03.9	-0.5
	baz=123,slow=14,SNR=5.0						
USRK				LR	LR	19 53 31.5	
	comp=Z,136nm,18.4s,baz=167,slow=35						
MDJ	Mudanjiang	15.92	2	P	P	19 48 09.2	+2.6
MDJ				IAmb	IAmb	19 48 11.4	
	comp=Z,23nm,1.0s						
KLR	Kul'dur	20.65	6	P	Pn	19 49 00.0	-1.0
	comp=Z,3.9nm,0.9s,baz=196,slow=6.4,SNR=8.6						
CMAR	Chiang Mai Arr	29.02	256	LR	LR	20 02 46.8	
	comp=Z,126nm,19.1s,baz=118,slow=39						
PETK	Petropavlovsk-	32.42	33	LR	LR	20 03 31.9	
	comp=Z,80nm,21.1s,baz=222,slow=35						
MKAR	Makanchi Array	40.24	310	P	P	19 51 55.9	0.0
	comp=Z,0.5nm,0.7s,baz=100,slow=10,SNR=5.5						
ZALV	Zalesovo Beam	40.56	321	P	P	19 51 57.5	-1.0
	comp=Z,0.4nm,0.5s,baz=62,slow=25,SNR=1.8						
KDJ	Kajisay	43.44	302	P	P	19 52 22.4	0.0
KDJ				IAmb	IAmb	19 52 30.0	
	comp=Z,3.3nm,0.9s						
NRIK	Noril'sk	47.05	341	LR	LR	20 14 21.3	
	comp=Z,111nm,18.6s,baz=123,slow=38						
KKAR	Karatay Array	48.35	304	P	P	19 53 01.2	+0.3
WRA	Warramunga Arr	48.65	173	P	P	19 53 02.9	-0.4
	comp=Z,0.8nm,0.8s,baz=354,slow=8.4,SNR=4.3						
WRA				LR	LR	20 12 50.3	
	comp=Z,30nm,21.0s,baz=5.0,slow=35						
WRA	Warramunga Arr	48.65	173	P	P	19 53 03.8	+0.4
WB2	Warramunga Arr	48.65	173	P	P	19 53 03.4	+0.1
WB2				IAmb	IAmb	19 53 08.5	
	comp=Z,4.8nm,0.9s						
BRVK	Borovoye	48.80	317	P	P	19 53 04.4	+0.2
BRVK				IAmb	IAmb	19 53 09.7	
	comp=Z,6.1nm,1.0s						
GAMB	Gambell	51.30	29		S	20 00 42.0	+0.3
ASAR	Alice Springs	52.29	174	P	P	19 53 31.6	+0.8
	comp=Z,0.9nm,0.8s,baz=5.7,slow=13,SNR=6.2						
ASAR				LR	LR	20 17 06.1	
	comp=Z,20nm,18.9s,baz=24,slow=38						
ABKAR	Akbulak array	55.28	312	P	P	19 53 51.7	-0.8
IL31		62.10	29	P	P	19 54 42.0	+2.3
IL31				IAmb	IAmb	19 55 06.0	
	comp=Z,8.4nm,1.5s						
ILAR	Eielson Array	62.10	29	P	P	19 54 44.4	+4.6
	comp=Z,0.6nm,0.7s,baz=283,slow=8.4,SNR=7.0						
MENT	Mentasta	63.80	31	P	P	19 54 53.3	+2.2
DLBC	Dease Lake	71.60	33	LR	LR	20 30 21.8	
	comp=Z,33nm,19.1s,baz=92,slow=38						

ANF ***30*** *19:47:10.9±0.5,36°.33N×99°.23W,h0^{km},ML4.2/6,Error ellipse: s-maj=6.7km s-min=5.1km az=108.0*

NEIC ***30*** *19:47:11.4±0.8,36°.40N±0°.02×99°.23W±0°.04,h5^{km}±2^{km}, Error ellipse: s-maj=6.0km s-min=3.3km az=258.0*

TUL ***30*** *19:47:11.4±1.2,36°.35N±0°.05×99°.22W±0°.05,h3^{km}±7^{km}, ML3.3,mb_Lg3.0/58(NEIC),Error ellipse: s-maj=7.1km s-min=5.0km az=150.0*

ISC 30 19:47:10.6±0.8,36°.37N±0°.03×99°.30W±0°.03,h10^{km},n100, σ1^{s}.36/96,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
U32A	Winter Ranch,	0.24	87	Pg	Pg	19 47 15.2	-0.4
U32A	Winter Ranch,	0.24	87	P	Pg	19 47 15.6	+0.1
	baz=259,SNR=1000						
OK032	Salt Plains WL	0.98	63		Pb	19 47 28.9	-0.7
OK032				Sg	Sg	19 47 40.2	-1.9
CROK	Carrier	1.07	82		Pb	19 47 30.4	-0.7
CROK				Sg	Sg	19 47 43.4	-1.6
KAN14	Manchester OK	1.22	61		Pg	19 47 33.4	-0.7
KAN14				Sg	Sb	19 47 48.1	-1.6
KAN10	Anthony SW Sta	1.23	52		Pg	19 47 33.6	-0.5
GC02	Grant County #	1.25	67		Pg	19 47 33.9	-0.8
KAN16	Harper SW Stat	1.31	49	Pg	Pg	19 47 35.1	-0.7
KAN05	Bluff City Nor	1.36	57	Pg	Pg	19 47 36.0	-0.8
KAN08	Anthony NE Sta	1.37	51		Pg	19 47 36.1	-0.7
KAN12	Harper NE Stat	1.40	48		Pg	19 47 36.7	-0.7
KAN17	Caldwell West	1.41	61		Pb	19 47 36.0	-0.9
KAN06	Argonia West S	1.45	52		Pg	19 47 37.5	-1.0
KAN01	Argonia South	1.46	57		Pg	19 47 37.6	-1.1
BCOK	Bluff Creek, N	1.54	117	Pn	Pb	19 47 38.6	-0.7
KAN09	Caldwell North	1.55	60		Pb	19 47 39.0	-0.4
OK029	Liberty Lake	1.60	110	Pn	Pb	19 47 39.3	-0.9
KAN13	South Haven SW	1.60	66		Pb	19 47 39.5	-0.7
BLOK	Blackwell	1.72	76	Pn	Pb	19 47 41.7	-0.6
BLOK				IAmb_Lg		19 48 06.6	
	comp=Z,150nm,0.8s						
OK025	Westminster Rd	1.77	116	Pn	Pb	19 47 42.3	-0.9
OKCFA	Oklahoma City	1.78	122	Pn	Pb	19 47 42.4	-0.8
OKCFA	Oklahoma City	1.78	122	P	Pb	19 47 42.6	-0.7
	baz=304,SNR=6.4						
OKCFA				S	Sb	19 48 05.6	0.0
	baz=304						
OKCSW	OKLAHOMA CITY	1.79	122		Pb	19 47 42.5	-1.0
FNO	Franklin	1.90	125	Pn	Pb	19 47 44.5	-0.9
OK031	S. Brethren Rd	2.03	101		Pb	19 47 46.0	-1.6
QUOK	Quay	2.10	95		Pn	19 47 46.5	+0.7
R32A	Long Quarter,	2.10	13	P	Pb	19 47 48.6	-0.2
	baz=191,SNR=92						
R32A				S	Sg	19 48 17.9	-0.3
	baz=191						
X34A	Smith Ranch, M	2.13	145	Pn	Pb	19 47 47.8	-1.5
T35A	Sooner Cattle	2.31	75	Pn	Pn	19 47 49.1	+0.4
T35A				IAmb_Lg		19 48 26.6	
	comp=Z,47nm,0.8s						
T35B	Sooner Cattle	2.31	75	S	Sb	19 48 21.4	+0.5
	baz=256						
W35A	Tecumseh	2.31	121	Pn	Pn	19 47 49.8	+1.0
CBKS	Cedar Bluff	2.47	352	Pb	Pb	19 47 55.4	+0.3
	baz=170						
CBKS				S	Sg	19 48 27.4	-2.5
	baz=170						
CBKS	Cedar Bluff	2.47	352	P	Pb	19 47 54.0	-1.0
	baz=170,SNR=34						
TUL1	Leonard	2.88	98		Pn	19 47 56.9	+0.4
TUL1	Leonard	2.88	98	P	Pn	19 47 58.1	+1.6
	baz=280,SNR=9.9						
LOOK	Love County	2.94	143	Pn	Pn	19 47 59.3	+2.0
KSU1	Kansas State U	3.46	37	P	Pn	19 48 06.4	+1.8
	baz=218						
KSU1	Kansas State U	3.46	37	Pn	Pn	19 48 06.4	+1.8
KSU1	Kansas State U	3.46	37	P	Pn	19 48 06.3	+1.8
	baz=218,SNR=8.2						
Z35A	Perchaven, San	3.46	150		Pn	19 48 05.4	+0.8
X37A	Clayton	3.66	118	Pn	Pn	19 48 08.0	+0.7
X37A				IAmb_Lg		19 49 09.0	
	comp=Z,30nm,0.9s						
X37A	Clayton	3.66	118	P	Pn	19 48 08.2	+0.9
	baz=300,SNR=7.7						
MSTX	Muleshoe	3.72	231	Sb	Sg	19 49 06.9	-3.1
	baz=50						
KSCO	Kaye Shedlock'	3.73	316	Pn	Pn	19 48 09.7	+1.3
ABTX	Abilene, Hawle	3.75	184	Pb	Pb	19 48 16.8	-0.1
	baz=5.3						
ABTX	Abilene, Hawle	3.75	184	Pn	Pn	19 48 09.9	+1.4
ABTX				IAmb_Lg		19 49 14.2	
	comp=Z,34nm,0.8s						
U38A	Gravette	3.96	88		Pn	19 48 13.8	+2.4
T25A	Trinidad	4.18	282	P	Pn	19 48 17.9	+3.4
	baz=99						
T25A				Sb	Sg	19 49 23.0	-1.8
	baz=99						
T25A	Trinidad	4.18	282	Pn	Pn	19 48 17.2	+2.6
T25A				IAmb_Lg		19 49 33.8	
	comp=Z,35nm,0.7s						
HHAR	Hobbs	4.33	90	Pn	Pn	19 48 17.3	+0.8
N33B	J Bar K, Exete	4.60	18	P	Pn	19 48 21.1	+1.0
	baz=198,SNR=7.3						
N33A	J Bar K, Exete	4.60	18	Pn	Pn	19 48 19.1	-1.1
N33A				IAmb_Lg		19 49 40.0	
	comp=Z,22nm,0.8s						
WHTX	Lake Whitney,	4.62	160	Pn	Pn	19 48 22.1	+1.6
W39A	Magazine	4.63	103		Pn	19 48 21.9	+1.3
W39A				IAmb_Lg		19 49 41.0	
	comp=Z,24nm,0.7s						
Z38A	Mt. Pleasant	4.71	130	IAmb_Lg		19 49 43.6	
	comp=Z,25nm,0.8s						
S39A	Bolivar	4.96	73	Pn	Pn	19 48 25.4	+0.3
S39A				IAmb_Lg		19 49 53.6	
	comp=Z,26nm,0.7s						
S39A	Bolivar	4.96	73	P	Pn	19 48 25.8	+0.7
	baz=256,SNR=22						
MIAR	Mount Ida	5.01	110		Pn	19 48 26.3	+0.4
BGNE	Belgrade	5.11	10	P	Pn	19 48 29.4	+2.1
	baz=190						
BGNE				S	Sn	19 49 28.8	+2.5
	baz=190						
BGNE	Belgrade	5.11	10	Pn	Pn	19 48 28.3	+1.0
U40A	Yellville	5.20	88		Pn	19 48 29.0	+0.5
U40A				IAmb_Lg		19 50 07.7	
	comp=Z,22nm,0.8s						
U40A	Yellville	5.20	88	P	Pn	19 48 29.0	+0.5
	baz=272,SNR=9.2						
U40A				P	Pn	19 48 29.0	+0.5
	baz=272,SNR=9.2						
237A	Washetta, Mont	5.23	145	IAmb_Lg		19 50 07.5	
	comp=Z,24nm,0.8s						
N35A	Tabor	5.32	31		Pn	19 48 30.6	+0.6
P38A	Dawn	5.59	53		Pn	19 48 33.1	-0.7
P38A				IAmb_Lg		19 50 18.0	
	comp=Z,45nm,1.1s						
X40A	Basin Creek Fa	5.60	108		Pn	19 48 34.1	+0.2
X40A				Pg	Pb	19 48 51.9	+3.5
MGMO	Mountain Grove	5.70	80		Pn	19 48 36.4	+1.1
MGMO				IAmb_Lg		19 50 12.6	
	comp=Z,17nm,0.8s						
WLAR	White Oak Lake	5.74	116	IAmb_Lg		19 50 07.8	
	comp=Z,17nm,0.9s						
435B	Jarrell	5.75	165	IAmb_Lg		19 50 20.4	
	comp=Z,30nm,0.7s						
WHAR	Wooly Hollow	5.80	99	Pn	Pn	19 48 38.0	+1.4
FCAR	Ozark Folk Cen	5.83	93	Pn	Pn	19 48 37.2	+0.2
FCAR				IAmb_Lg		19 50 20.2	
	comp=Z,18nm,0.9s						
W41B	Gary Mavity, V	5.86	100	P	Pn	19 48 39.4	+2.0
	baz=284						
R40A	Maddies Statio	5.92	69	Pn	Pn	19 48 38.4	+0.1
R40A				IAmb_Lg		19 50 17.7	
	comp=Z,26nm,0.8s						
ANMO	Albuquerque	6.00	258	Pn	Pn	19 48 40.9	+1.3
L34A	Svendsen Farm,	6.03	21	Pn	Pn	19 48 39.5	-0.4
ISCO	Idaho Springs	6.04	306	P	Pn	19 48 42.9	+2.6
	baz=122						
ISCO	Idaho Springs	6.04	306	Pn	Pn	19 48 42.1	+1.8
K31A	O'Neill	6.26	4	Pn	Pn	19 48 45.8	+2.8
N38A	Joes South For	6.49	45	Pn	Pn	19 48 46.8	+0.7
P40A	Paris	6.54	59	Pn	Pn	19 48 47.2	+0.4
P40A				IAmb_Lg		19 50 37.8	
	comp=Z,34nm,0.7s						
LCAR	Lake Charles	6.59	90	Pn	Pn	19 48 47.1	-0.4
T42A	Van Buren	6.63	82	Pn	Pn	19 48 48.6	+0.6
T42A				IAmb_Lg		19 50 49.2	
	comp=Z,17nm,0.8s						
CCM	Cathedral Cave	6.64	73	Pn	Pn	19 48 48.5	+0.2
MNTX	Cornudas Mount	6.87	229	Pn	Pn	19 48 53.4	+2.0
MNTX				IAmb_Lg		19 50 52.9	
	comp=Z,16nm,0.7s						
PBMO	Poplar Bluff	7.15	84	IAmb_Lg		19 50 59.4	
	comp=Z,24nm,0.8s						
FVM	French Village	7.26	75	IAmb_Lg		19 51 03.1	
	comp=Z,19nm,0.8s						
SCIA	State Center	7.27	39	IAmb_Lg		19 51 18.3	
	comp=Z,18nm,0.8s						
LPAR	Lepanto	7.33	93	IAmb_Lg		19 51 22.1	
	comp=Z,34nm,0.8s						
GNAR	Gosnell	7.52	90	IAmb_Lg		19 51 13.8	
	comp=Z,26nm,0.7s						
ECSD	EROS Data Cent	7.64	15	Pn	Pn	19 49 01.7	-0.2
TX31	Lajitas Ar. Si	7.92	209	Pn	Pn	19 49 07.5	+1.7
TX31	Lajitas Ar. Si	7.92	209	P	Pn	19 49 07.6	+1.7
	baz=27,SNR=15						
TXAR	Lajitas Array	7.92	209	Pn	Pn	19 49 07.5	+1.6
TX32	Lajitas Array	7.92	209	Pn	Pn	19 49 07.6	+1.7
SUSD	Miller	8.07	2	IAmb_Lg		19 51 45.9	
	comp=Z,17nm,0.7s						
K22A	Casper	8.40	321	IAmb_Lg		19 51 53.5	
	comp=Z,12nm,0.8s						
L40A	Anamosa	8.46	45	IAmb_Lg		19 51 43.0	
	comp=Z,25nm,0.8s						
RSSD	Black Hills	8.55	336	IAmb_Lg		19 51 58.5	
	comp=Z,10nm,0.8s						
HDIL	Hopedale	8.89	59	Pn	Pn	19 49 19.9	+0.8
JFWS	Jewell Farm	9.56	44	IAmb_Lg		19 52 25.3	
	comp=Z,16nm,0.7s						

NEIC ***30*** *20:02:52.9±0.9,43°.86N±0°.04×105°.20W±0°.07,h0^{km}±2^{km}, ML2.8/24,Error ellipse: s-maj=9.6km s-min=5.1km az=303.0*

IDC ***30*** *20:02:53.7±1.8,44°.00N×105°.57W,h0^{km},mb1 3.4/2, mb1mx3.2/42,mbtmp3.3/2,ML2.8/2,Error ellipse: s-maj=49.4km s-min=9.8km az=148.0*

ISC 30 20:02:52.5±1.3,43°.80N±0°.07×105°.17W±0°.07,h0^{km},n19, σ1^{s}.14/21,Wyoming

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	0.88	68	Pn	Pn	20 03 12.4	+0.1
K22A	Casper	1.52	221	Pn	Pb	20 03 23.2	+1.6
K22A				IAML		20 03 47.9	
	comp=N,137nm,0.9s						
K22A				IAML		20 03 52.4	
	comp=E,133nm,0.3s						
RWWY	Rawlins	2.59	216		Pn	20 03 34.6	-1.3
RWWY				IAML		20 04 22.1	
	comp=E,35nm,0.8s						
LAO	LASA Array	2.98	346		Pn	20 03 39.7	-1.4
RLMT	Red Lodge	3.22	296	Pn	Pn	20 03 44.1	-0.4
RLMT				IAML		20 04 33.6	
	comp=E,21nm,2.1s						
RLMT				IAML		20 04 39.6	
	comp=E,28nm,2.3s						
PD31	Pinedale Array	3.37	254	Pn	Pn	20 03 47.1	+0.5
PD31					Pb	20 03 52.9	-0.4
PDAR	Pinedale Array	3.37	254	Pn	Pn	20 03 48.5	+1.9
	comp=E,0.5nm,0.3s,baz=69,slow=17,SNR=8.9						
PDAR				Pg	Pb	20 03 53.2	0.0
	comp=E,1.8nm,0.3s,baz=68,slow=20,SNR=24						
PDAR				Lg	Lg	20 04 33.5	
	comp=E,3.0nm,0.3s,baz=69,slow=34,SNR=6.3						
PDAR	Pinedale Array	3.37	254	Pn	Pn	20 03 46.8	+0.2
PDAR					Pb	20 03 53.5	+0.2

BW06	**Boulder Array**	**3.37**	**254**		**Pn**	**20 03 46.9**	**+0.2**
BW06				IAML		20 04 40.6	
	comp=E,24nm,1.2s						
GCMT	**Greycliff**	**3.77**	**303**	Pn	**Pn**	**20 03 51.4**	**-0.7**
H17A	**Grant Village**	**3.94**	**281**	Pn	**Pn**	**20 03 55.0**	**+0.5**
H17A				IAML		20 04 57.5	
	comp=N,15nm,2.1s						
H17A				IAML		20 04 59.9	
	comp=E,19nm,3.5s						
LOHW	**Long Hollow**	**3.95**	**269**		**Pn**	**20 03 54.9**	**+0.3**
LOHW				IAML		20 05 00.4	
	comp=E,13nm,2.5s						
LOHW				IAML		20 05 53.7	
	comp=E,13nm,5.0s						
FLWY	**Flagg Ranch**	**4.01**	**276**		**Pn**	**20 03 55.4**	**+0.1**
ISCO	**Idaho Springs**	**4.01**	**185**	Pn	**Pn**	**20 03 53.6**	**-1.8**
ISCO				IAML		20 05 10.1	
	comp=E,11nm,1.5s						
ISCO				IAML		20 06 34.6	
	comp=E,9.3nm,3.8s						
MOOW	**Moose Ponds**	**4.04**	**271**	Pn	**Pn**	**20 03 53.2**	**-2.6**
REDW	**Red Top Meadow**	**4.16**	**266**		**Pn**	**20 03 56.3**	**-1.1**
FXWY	**Fox Creek**	**4.25**	**270**		**Pn**	**20 03 58.2**	**-0.5**
I10CA	**LAC DU BONNET**	**8.94**	**41**	*i*		20 56 00.0	
	baz=225,slow=327,SNR=2.0						
ULM	**Lac du Bonnet**	**9.04**	**41**	Pn	**Pn**	**20 05 04.8**	**+0.5**
	comp=E,0.4nm,0.3s,baz=238,slow=11,SNR=1.8						
ULM				Lg	Lg	20 07 32.5	
	comp=E,0.3nm,0.3s,baz=208,slow=12,SNR=1.8						

IDC ***30*** *20:19:03.3±0.5, 9.°00S×67.°67E, h0^{km}, mb4.3/33, mb1 4.4/33, mb1mx4.3/48, mbtmp4.3/33, MS4.4/35, Ms1 4.4/35, ms1mx4.4/44, Error ellipse: s-maj=14.5km s-min=11.6km az=164.0*

BJI ***30*** *20:19:03.1±0.0, 8.°84S×67.°31E, h10^{km}, mB5.0/28, mb4.6/43, Ms4.8/33, Ms7 4.5/31*

NEIC ***30*** *20:19:05.3±1.9, 8.°79S±0.°05×67.°70E±0.°08, h10^{km}±1^{km}, mb4.9/73, Ms_20 4.8/65, Mwb5.5/55, Error ellipse: s-maj=12.8km s-min=7.9km az=257.0*

NEIC ***30*** *20:19:05.3, 8.°76S×67.°70E, h12^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.03; M$_{\theta\theta}$-2.50; M$_{\phi\phi}$2.47; M$_{r\theta}$0.23; M$_{\theta\phi}$0.11; M$_{\phi r}$0.28; Fault plane solution: M$_0$2.51000×10^{17} NP1:φ$_s$316.18000°, δ81.75000°, λ178.97000°. NP2:φ$_s$46.32000°, δ88.98000°, λ8.25000°. Principal axes: T 2.5051, Plg7.0000°, Azm272.0000°; N 0.0145, Plg82.0000°, Azm53.0000°; P -2.5196, Plg5.0000°, Azm181.0000°;*

GCMT ***30*** *20:19:11.3±0.1, 8.°90S±0.°01×67.°40E±0.°01, h24^{km}, MW5.6/148, Moment Tensor Solution. s113, c197; s148, c307; Duration: 1^{s}6 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-0.27±.04; M$_{\theta\theta}$-3.35±.04; M$_{\phi\phi}$3.62±.04; M$_{r\theta}$-0.43±.07; M$_{\theta\phi}$0.61±.03; M$_{\phi r}$0.33±.07; Best double couple: M$_0$3.58200×10^{17} NP1:φ$_s$50.00000°, δ81.00000°, λ-3.00000°. NP2:φ$_s$140.00000°, δ87.00000°, λ-171.00000°. Principal axes: T 3.6950, Plg4.0000°, Azm275.0000°; N -0.2250, Plg81.0000°, Azm157.0000°; P -3.4690, Plg8.0000°, Azm5.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 30 20:19:05.2±0.4**, 8.°87S**±0.°07×**67.°68E**±0.°05**, h13^{km}, n237,** σ**1^{s}75**/177**, mb4.8**/102**, MS4.6**/79**, 9C-4D, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**4.90**	**76**	Pn	**Pn**	**20 20 16.2**	**-2.3**
	baz=280,slow=14,SNR=267						
H08S1				T	T	20 25 37.0	
	baz=255,slow=74,SNR=11						
H08S3	**Diego Garcia H**	**4.91**	**76**	Pn	**Pn**	**20 20 16.5**	**-2.1**
	baz=280,slow=14,SNR=469						
H08S3				T	T	20 25 41.0	
	baz=255,slow=74,SNR=13						
H08S2	**Diego Garcia H**	**4.92**	**76**	Pn	**Pn**	**20 20 16.6**	**-2.1**
	baz=280,slow=14,SNR=761						
H08S2				T	T	20 25 41.8	
	baz=255,slow=74,SNR=15						
DGAR	**Diego Garcia**	**4.94**	**73**	Pn	**Pn**	**20 20 17.1**	**-2.1**
MSEY	**Mahe Island**	**12.81**	**288**	Pn	**Pn**	**20 22 04.8**	**-2.4**
SBV	**Sambava**	**18.00**	**254**	P	**P**	**20 23 16.8**	**+0.9**
PALK	**Pallekele**	**20.63**	**39**	P	**P**	**20 23 45.2**	**+0.4**
	8.0nm,0.7s,baz=332,slow=9.5,SNR=1.4						
PALK				LR	LR	20 29 58.0	
	comp=Z,1μm,20.1s,baz=322,slow=32						
PALK	**Pallekele**	**20.63**	**39**	P	**P**	**20 23 43.5**	**-1.2**
OPO	**Ambohidratompo**	**22.09**	**242**	P	**P**	**20 23 58.9**	**-1.7**
	14nm,1.1s,baz=340,slow=16,SNR=5.0						
VOI	**Vohitsoka**	**23.91**	**235**	P	**P**	**20 24 19.0**	**-0.2**
VOI	**Vohitsoka**	**23.91**	**235**	P	P	20 24 27.7	+8.6
SOCY	**Socotra**	**24.96**	**327**	IAMs_20	IAMs_20	20 30 17.3	
	comp=Z,2μm,20.0s						
HYB	**Hyderabad**	**28.24**	**22**	*i* P	P	20 25 07.0	+8.7
COCO	**West Island**	**28.85**	**99**	IAMs_20	IAMs_20	20 33 26.4	
	comp=Z,2μm,22.0s						
KIBK	**Kibwezi**	**30.18**	**281**	P	**P**	**20 25 15.1**	**-0.5**
KIBK				IAmb	IAmb	20 25 34.0	
	comp=Z,21nm,1.3s						
KIBK				IAMs_20	IAMs_20	20 34 59.2	
	comp=Z,1μm,20.0s						
KMBO	**Kilima Mbogo**	**31.25**	**283**	P	**P**	**20 25 25.7**	**+0.4**
	comp=Z,2.5nm,0.7s,baz=97,slow=7.6,SNR=11						
KMBO	**Kilima Mbogo**	**31.25**	**283**	P	**P**	**20 25 23.8**	**-1.5**
KMBO				IAmb	IAmb	20 25 44.4	
	comp=Z,22nm,1.4s						
GSI	**Gunungsitoli**	**31.46**	**73**	P	P	20 25 33.5	+6.6
	comp=Z,16nm,1.0s						
GSI	**Gunungsitoli**	**31.46**	**73**	P	**P**	**20 25 26.2**	**-0.6**
GSI				IAmb	IAmb	20 25 36.9	
	comp=Z,24nm,1.3s						
ATD	**Arta Tunnel**	**31.95**	**309**	IAMs_20	IAMs_20	20 35 30.9	
	comp=Z,2μm,20.0s						
SISI	**Saibi**	**32.15**	**78**	P	P	20 25 40.1	+7.2
	comp=Z,19nm,1.0s						
LHMI	**Lhok Sumawe**	**32.37**	**65**	P	P	20 25 41.2	+6.4
	comp=Z,37nm,0.8s						
KCSI	**Kotacane, Aceh**	**32.43**	**69**	P	P	20 25 41.5	+6.1
	comp=Z,15nm,1.1s						
PPSI	**Pulau Pagai**	**32.71**	**81**	P	P	20 25 45.2	+7.3
	comp=Z,61nm,1.1s						
WSAR	**Wadi Sarin**	**33.12**	**345**	P	**P**	**20 25 40.8**	**-0.5**
	comp=Z,3.6nm,0.7s,baz=201,slow=9.6,SNR=2.4						
FURI	**Furi**	**33.85**	**301**	P	**P**	**20 25 48.3**	**+0.1**
FURI	**Furi**	**33.85**	**301**	IAMs_20	IAMs_20	20 36 32.7	
	comp=Z,1μm,22.0s						
LODK	**Lodwar**	**34.45**	**289**	P	**P**	**20 25 53.4**	**+0.3**
LODK				IAmb	IAmb	20 26 02.0	
	comp=Z,16nm,1.2s						
LODK				IAMs_20	IAMs_20	20 36 46.2	
	comp=Z,2μm,22.0s						
KSI	**Kapahiang**	**35.08**	**84**	P	P	20 26 05.3	+6.8
	comp=Z,34nm,1.1s						
MNAI	**Manna**	**35.31**	**85**	P	P	20 26 06.4	+5.9
	comp=Z,247nm,1.6s						
KULM	**Kulim**	**35.76**	**68**	P	**P**	**20 26 04.8**	**+0.5**
KULM				IAmb	IAmb	20 26 26.9	
	comp=Z,18nm,0.9s						
KULM				IAMs_20	IAMs_20	20 38 18.4	
	comp=Z,784nm,20.0s						
LWLI	**Liwa**	**36.30**	**86**	P	P	20 26 17.0	+7.9
MDSI	**Maura Dua**	**36.50**	**86**	P	P	20 26 17.5	+6.8
	comp=Z,5.8nm,1.3s						
KLSI		**37.01**	**86**	P	P	20 26 22.3	+7.3
	comp=Z,9.8nm,1.7s						
MYKOM	**Kota Tinggi**	**37.57**	**75**	P	**P**	**20 26 21.3**	**+1.5**
MYKOM				IAmb	IAmb	20 26 25.9	
	comp=Z,22nm,1.0s						
MBAR	**Mbarara**	**37.69**	**281**	P	**P**	**20 26 20.7**	**-0.2**
	comp=Z,2.6nm,0.2s,baz=72,slow=5.5,SNR=5.7						
MBAR	**Mbarara**	**37.69**	**281**	P	**P**	**20 26 19.4**	**-1.5**
MBAR	**Mbarara**	**37.69**	**281**	IAMs_20	IAMs_20	20 39 39.2	
	comp=Z,1μm,19.0s						
RAYN	**Ar Rayn**	**38.82**	**326**	P	**P**	**20 26 28.6**	**-1.6**
RAYN	**Ar Rayn**	**38.82**	**326**	IAMs_20	IAMs_20	20 38 18.3	
	comp=Z,1μm,21.0s						
MATP	**Matopo**	**39.50**	**249**	P	**P**	**20 26 35.7**	**-0.4**
	comp=Z,3.7nm,1.0s,baz=71,slow=16,SNR=6.8						
KOLN	**Koldanda**	**39.55**	**22**	*e*P	**P**	**20 26 36.5**	**+0.1**
LEM	**Lembang**	**39.60**	**90**	P	**P**	**20 26 37.5**	**+0.4**
	comp=Z,39nm,1.0s,baz=302,slow=23,SNR=3.6						
LEM				LR	LR	20 40 04.3	
	comp=Z,440nm,21.1s,baz=240,slow=32						
PYUN	**Piuthan**	**39.62**	**21**	*e*P	**P**	**20 26 37.9**	**+0.9**
DMN	**Daman**	**40.00**	**24**	*e*P	**P**	**20 26 41.4**	**+1.2**
	comp=Z,36nm,0.9s						
RAMN	**Ramite**	**40.06**	**27**	*e*P	**P**	**20 26 42.1**	**+1.4**
	comp=Z,24nm,0.7s						
PKI	**Pulchoki**	**40.09**	**25**	*e*P	**P**	**20 26 41.7**	**+0.6**
	comp=Z,47nm,1.2s						
PKIN	**Phulchoki**	**40.09**	**25**	*e*P	**P**	**20 26 41.3**	**+0.3**
	comp=Z,10nm,0.6s						
DANN	**Dangsing**	**40.13**	**22**	*e*P	**P**	**20 26 42.9**	**+1.5**
	comp=Z,128nm,1.4s						
GKN	**Gorkha**	**40.16**	**24**	*e*P	**P**	**20 26 41.9**	**+0.5**
	comp=Z,39nm,0.9s						
KKN	**Kakani**	**40.23**	**25**	*e*P	**P**	**20 26 42.8**	**+0.7**
	comp=Z,26nm,0.9s						
ODAN	**Odare**	**40.34**	**28**	*e*P	**P**	**20 26 44.8**	**+1.8**
	comp=Z,27nm,0.7s						
JIRN	**Jiri**	**40.50**	**26**	*e*P	**P**	**20 26 45.6**	**+1.1**
	comp=Z,20nm,0.8s						
GUN	**Gumba**	**40.59**	**25**	*e*P	**P**	**20 26 46.3**	**+1.1**
	comp=Z,47nm,0.9s						
TAPN	**Taplejung**	**40.91**	**28**	*e*P	**P**	**20 26 49.4**	**+1.6**
	comp=Z,46nm,1.1s						
CM31	**Chiang Mai Arr**	**41.10**	**49**	P	**P**	**20 26 47.6**	**-1.6**
CMAR	**Chiang Mai Arr**	**41.10**	**49**	P	**P**	**20 26 50.9**	**+1.7**
	comp=Z,3.1nm,0.8s,baz=243,slow=9.4,SNR=35						
CMAR				LR	LR	20 41 40.1	
	comp=Z,192nm,20.8s,baz=273,slow=33						
CMAR	**Chiang Mai Arr**	**41.10**	**49**	P	**P**	**20 26 46.5**	**-2.7**
CHTO	**Chiang Mai**	**41.32**	**48**	P	**P**	**20 26 50.4**	**-0.6**
NIL	**Nilore**	**42.62**	**7**	P	**P**	**20 27 01.4**	**0.0**
LBTB	**Lobatse**	**43.13**	**243**	P	**P**	**20 27 04.8**	**-1.1**
	comp=Z,16nm,1.1s,baz=70,slow=12,SNR=7.1						
LBTB	**Lobatse**	**43.13**	**243**	P	**P**	**20 27 05.5**	**-0.3**
LBTB				IAmb	IAmb	20 27 19.1	
	comp=Z,28nm,1.3s						
KBL	**Kabul**	**43.19**	**2**	P	**P**	**20 27 04.7**	**-1.6**
HRA	**Herat**	**43.33**	**353**	P	**P**	**20 27 05.0**	**-2.4**
KSM	**Kuching**	**43.70**	**78**	P	**P**	**20 27 10.8**	**+0.3**
KSM				IAmb	IAmb	20 27 36.8	
	comp=Z,25nm,1.2s						
BOSA	**Boshof**	**44.41**	**238**	P	**P**	**20 27 14.9**	**-1.2**
	comp=Z,4.0nm,0.5s,baz=64,slow=7.7,SNR=14						
BOSA				LR	LR	20 43 27.0	
	comp=Z,555nm,19.2s,baz=80,slow=33						
BOSA	**Boshof**	**44.41**	**238**	P	**P**	**20 27 15.9**	**-0.2**
BOSA				IAmb	IAmb	20 27 21.9	
	comp=Z,19nm,1.1s						
LSA	**Lhasa**	**44.51**	**30**	P	**P**	**20 27 20.0**	**+2.8**
LSA				pmax	pmax		
	comp=Z,32nm,1.1s						
LSA	**Lhasa**	**44.51**	**30**	P	**P**	**20 27 18.7**	**+1.5**
LSA				IAmb	IAmb	20 27 42.8	
	comp=Z,23nm,1.4s						
LSA				IAMs_20	IAMs_20	20 44 00.1	
	comp=Z,649nm,22.0s						
SBUM	**Sibu**	**45.80**	**78**	P	**P**	**20 27 25.5**	**-1.7**
SBUM				IAmb	IAmb	20 27 33.0	
	comp=Z,18nm,1.3s						
JAGI	**Jajag, Banyuwa**	**45.92**	**93**	P	**P**	**20 27 27.1**	**-1.2**
SLVN	**Son La**	**46.54**	**49**	P	**P**	**20 27 33.8**	**+0.8**
SLVN				IAmb	IAmb	20 28 00.5	
	comp=Z,13nm,1.2s						
CHGR	**Chuyangaron**	**47.30**	**2**	P	**P**	**20 27 37.8**	**-0.8**
GEYT	**Alibeck**	**47.41**	**350**	P	**P**	**20 27 41.6**	**+2.2**
	comp=Z,2.4nm,0.7s,baz=214,slow=28,SNR=2.6						
GEYT				LR	LR	20 46 08.3	
	comp=Z,375nm,21.2s,baz=90,slow=34						
GEYT	**Alibeck**	**47.41**	**350**	P	**P**	**20 27 39.1**	**-0.3**
GYA0B	**ALIBECK ARRAY**	**47.41**	**350**	P	**P**	**20 27 39.3**	**-0.2**
GYA0B				IAmb	IAmb	20 28 07.1	
	comp=Z,7.4nm,0.8s						
GAR	**Garm**	**47.69**	**3**	P	**P**	**20 27 40.6**	**-1.2**
DRK	**Karamyk**	**48.26**	**4**	P	**P**	**20 27 45.0**	**-1.3**
DRK				IAmb	IAmb	20 27 49.4	
	comp=Z,10nm,0.9s						
KSH	**Kashi**	**48.75**	**9**	P	**P**	**20 27 46.5**	**-3.4**
KSH				pP	pP	20 27 52.0	-0.4
KSH				sP	sP	20 27 53.8	-0.5
KSH				S	S	20 34 42.5	-10
KSH				sS	pS	20 34 52.5	-3.2
KSH				SS	SS	20 38 07.3	-16
KSH				pmax	pmax		
	comp=Z,32nm,1.4s						
KSH				LR	LR		
	comp=Z,650nm,24.4s						
KSH				LR	LR		
	comp=Z,480nm,18.5s						
KSH				LR	LR		
	comp=Z,2μm,30.4s						
BTK	**Batken**	**48.77**	**3**	P	**P**	**20 27 48.9**	**-1.1**
SUR	**Sutherland**	**49.21**	**235**	IAMs_20	IAMs_20	20 45 09.7	
	comp=Z,1μm,19.0s						
TSUM	**Tsumeb**	**49.52**	**252**	P	**P**	**20 27 56.6**	**+0.3**
TSUM				IAmb	IAmb	20 28 02.7	
	comp=Z,20nm,1.4s						
TSUM	**Tsumeb**	**49.52**	**252**	IAMs_20	IAMs_20	20 46 05.7	
	comp=Z,752nm,21.0s						
EIL	**Elat**	**49.60**	**322**	P	**P**	**20 27 57.7**	**+1.3**
	comp=Z,2.7nm,0.8s,baz=19,slow=6.1,SNR=2.7						
H01W3	**Cape Leeuwin H**	**49.69**	**129**	T	T	21 21 34.2	
	baz=290,slow=75,SNR=502						
H01W2	**Cape Leeuwin H**	**49.70**	**129**	T	T	21 21 34.5	
	baz=290,slow=75,SNR=467						
H01W1	**Cape Leeuwin H**	**49.71**	**129**	T	T	21 21 40.1	
	baz=290,slow=75,SNR=510						
QIZ	**Qiongzhong**	**49.96**	**56**	P	**P**	**20 27 59.0**	**-0.4**
QIZ				S	**S**	**20 35 14.0**	**+4.0**
QIZ				pmax	pmax		
	comp=Z,22nm,1.8s						
QIZ				LR	LR		
	comp=Z,610nm,29.2s						
QIZ				LR	LR		
	comp=Z,420nm,22.9s						
QIZ				LR	LR		
	comp=Z,420nm,27.0s						
WIN	**Windhoek**	**50.32**	**248**	P	**P**	**20 28 02.4**	**+0.1**
WIN				IAmb	IAmb	20 28 09.6	
	comp=Z,20nm,1.5s						
GHAJ	**Ghor Haditha**	**50.41**	**324**	IAMs_20	IAMs_20	20 45 57.5	
	comp=Z,1μm,19.0s						
KKM	**Kota Kinabalu**	**50.60**	**75**	IAMs_20	IAMs_20	20 48 13.1	
	comp=Z,635nm,21.0s						
KDJ	**Kajisay**	**51.49**	**9**	P	**P**	**20 28 08.3**	**-2.5**
KDJ				IAmb	IAmb	20 28 14.4	
	comp=Z,9.7nm,0.8s						
MBWA	**Marble Bar**	**51.52**	**110**	IAMs_20	IAMs_20	20 45 14.7	
	comp=Z,907nm,22.0s						
GYA	**Guiyang**	**51.63**	**46**	⇑P	**P**	**20 28 13.0**	**+1.0**
GYA				S	**S**	**20 35 39.5**	**+6.3**
GYA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,110nm,4.3s						
GYA				LR	LR		
	comp=Z,370nm,15.2s						
AAK	**Ala-Archa**	**51.63**	**6**	P	**P**	**20 28 11.2**	**-0.6**
AAK				IAmb	IAmb	20 28 30.1	
	comp=Z,24nm,1.5s						
BOOM	**Boomskoye usch**	**51.67**	**8**	P	**P**	**20 28 12.0**	**-0.1**
KKAR	**Karatay Array**	**51.79**	**3**	P	**P**	**20 28 12.9**	**+0.1**
KAPI	**Kappang**	**51.80**	**89**	LR	LR	20 47 28.1	
	comp=Z,234nm,21.7s,baz=251,slow=33						
KAPI	**Kappang**	**51.80**	**89**	P	**P**	**20 28 14.1**	**+0.8**
KAPI				IAmb	IAmb	20 28 42.2	
	comp=Z,10nm,1.0s						
KAPI	**Kappang**	**51.80**	**89**	IAMs_20	IAMs_20	20 46 32.4	
	comp=Z,473nm,22.0s						
FRU1	**Bishkek**	**51.82**	**7**	P	**P**	**20 28 12.7**	**-0.4**
FRU1				IAmb	IAmb	20 28 17.1	
	comp=Z,9.9nm,0.8s						
CD2	**Chengdu**	**52.55**	**40**	P	**P**	**20 28 21.8**	**+3.1**
CD2				S	**S**	**20 35 42.0**	**-3.4**
CD2				pmax	pmax		
	comp=Z,30nm,0.9s						
CD2				LR	LR		
	comp=Z,490nm,25.2s						
CD2				LR	LR		
	comp=Z,450nm,22.3s						
CD2				LR	LR		
	comp=Z,490nm,28.7s						
GURO	**Guroymak-BITLI**	**52.88**	**335**	P	**P**	**20 28 19.9**	**-1.3**
GNI	**Garni**	**53.19**	**338**	P	**P**	**20 28 22.8**	**-0.6**
TOLI2	**Tolitoli**	**53.83**	**82**	P	**P**	**20 28 26.5**	**-1.8**
TOLI2				IAmb	IAmb	20 28 49.6	
	comp=Z,12nm,1.0s						
MMRI	**Maumere**	**53.88**	**94**	P	**P**	**20 28 27.8**	**-0.9**
CSS	**Mathiatis**	**54.36**	**325**	IAMs_20	IAMs_20	20 48 16.9	
	comp=Z,827nm,19.0s						
BATI	**Baumata**	**55.17**	**96**	LR	LR	20 49 23.5	
	comp=Z,725nm,21.4s,baz=296,slow=33						
WMQ	**Urumqi**	**55.50**	**17**	*e*P	**P**	**20 28 41.5**	**+1.5**
WMQ				pP	sP	20 28 44.5	+0.1
WMQ				sP	pwP	20 28 55.0	+5.5
WMQ				S	**S**	**20 36 19.8**	**-5.2**
WMQ				pmax	pmax		
	comp=Z,19nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,170nm,4.1s						
WMQ				LR	LR		
	comp=Z,900nm,22.1s						
WMQ				LR	LR		
	comp=Z,1μm,22.1s						
WMQ				LR	LR		
	comp=Z,950nm,22.1s						
SOEI	**Soe**	**55.79**	**96**	P	P	20 28 52.2	+9.4
	comp=Z,73nm,1.2s						
SOEI	**Soe**	**55.79**	**96**	P	**P**	**20 28 43.1**	**+0.3**
SOEI				IAMs_20	IAMs_20	20 48 39.5	
	comp=Z,1μm,22.0s						
ENH	**Enshi**	**55.92**	**44**	P	**P**	**20 28 42.3**	**-1.0**
GTA	**Gaotai**	**56.54**	**30**	⇑P	**P**	**20 28 50.0**	**+2.4**
GTA				pP	sP	20 28 54.5	+2.6
GTA				sP	pwP	20 28 57.5	+0.3
GTA				S	**S**	**20 36 42.5**	**+3.4**
GTA				sS	sS	20 36 55.8	+13
GTA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,67nm,4.7s						
GTA				LR	LR		
	comp=Z,270nm,20.0s						
GTA				LR	LR		
	comp=Z,380nm,20.7s						
GTA				LR	LR		
	comp=Z,490nm,21.1s						
MAKZ	**Makanchi**	**56.88**	**12**	P	**P**	**20 28 48.3**	**-1.4**
FITZ	**Fitzroy Crossi**	**56.91**	**106**	LR	LR	20 49 02.9	
	comp=Z,407nm,21.8s,baz=270,slow=32						
MK31	**Makanchi Array**	**56.93**	**12**	P	**P**	**20 28 48.2**	**-1.9**
MKAR	**Makanchi Array**	**56.93**	**12**	P	**P**	**20 28 49.2**	**-0.9**
	comp=Z,5.2nm,0.9s,baz=207,slow=8.7,SNR=21						
MKAR				LR	LR	20 53 02.8	
	comp=Z,222nm,21.0s,baz=192,slow=36						
MKAR	**Makanchi Array**	**56.93**	**12**	P	**P**	**20 28 48.0**	**-2.1**
KBZ	**Khabaz**	**56.98**	**339**	P	**P**	**20 28 53.0**	**+2.5**
	comp=Z,2.9nm,0.9s,baz=217,slow=8.2,SNR=5.2						
KBZ				LR	LR	20 51 42.2	
	comp=Z,346nm,19.3s,baz=166,slow=34						
BRTR	**Keskin Array B**	**57.72**	**329**	P	**P**	**20 28 57.9**	**+1.9**
	comp=Z,1.2nm,0.7s,baz=81,slow=12,SNR=2.8						
BRTR				LR	LR	20 53 12.7	
	comp=Z,904nm,18.4s,baz=150,slow=35						
BRTR	**Keskin Array B**	**57.72**	**329**	P	**P**	**20 28 55.9**	**-0.1**
XAN	**Xi'an**	**57.88**	**40**	P	**P**	**20 28 59.3**	**+2.2**
XAN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ABKAR	**Akbulak array**	**58.27**	**354**	P	**P**	**20 28 58.0**	**-1.5**
ABKAR	**Akbulak array**	**58.27**	**354**	P	**P**	**20 28 57.4**	**-2.1**
ABKAR				IAmb	IAmb	20 29 03.0	
	comp=Z,17nm,1.1s						
MAW	**Mawson**	**58.75**	**182**	P	**P**	**20 29 01.7**	**-0.9**
	comp=Z,4.4nm,0.8s,baz=34,slow=9.5,SNR=7.3						
MAW				LR	LR	20 47 49.1	
	comp=Z,683nm,20.1s,baz=4.5,slow=29						
MAW	**Mawson**	**58.75**	**182**	P	**P**	**20 29 03.5**	**+1.0**
DAV	**Davao City (W)**	**59.84**	**77**	LR	LR	20 54 31.6	
	comp=Z,145nm,19.5s,baz=241,slow=36						
KURK	**Kurchatov**	**60.10**	**8**	IAMs_20	IAMs_20	20 52 48.2	
	comp=Z,477nm,22.0s						
TNTI	**Ternate**	**60.22**	**84**	P	**P**	**20 29 12.3**	**-1.4**
BRVK	**Borovoye**	**61.72**	**2**	P	**P**	**20 29 21.5**	**-1.7**
BRVK				IAmb	IAmb	20 29 44.2	
	comp=Z,11nm,1.1s						
BRVK				IAMs_20	IAMs_20	20 55 26.7	
	comp=Z,364nm,22.0s						
SYO	**Syowa Base**	**62.80**	**191**	⇓*e*P	**P**	**20 29 31.2**	**+1.0**
BTO	**Baotou**	**62.82**	**35**	*e*P	**P**	**20 29 32.8**	**+1.9**
BTO				S	**S**	**20 38 04.3**	**+4.2**
BTO				LR	LR		
	comp=Z,1μm,13.9s						
BTO				LR	LR		
	comp=Z,1μm,18.8s						
TIRR	**Tirgusor**	**63.83**	**330**	IAMs_20	IAMs_20	20 57 07.5	
	comp=Z,1μm,19.0s						
HHC	**Hu-ho-hao-te**	**63.87**	**36**	*e*P	**P**	**20 29 41.5**	**+3.7**
HHC				S	**S**	**20 38 11.0**	**-2.1**
HHC				pmax	pmax		
	comp=Z,15nm,0.9s						
HHC				pmax	pmax		
	comp=Z,100nm,5.1s						
HHC				LR	LR		
	comp=Z,270nm,14.5s						
HHC				LR	LR		
	comp=Z,220nm,15.3s						
HHC				LR	LR		
	comp=Z,280nm,15.9s						
ZAA0	**Zalesovo Array**	**64.24**	**11**	P	**P**	**20 29 37.7**	**-2.2**
ZAA0				IAmb	IAmb	20 29 52.3	
	comp=Z,6.3nm,0.9s						
ZALV	**Zalesovo Beam**	**64.24**	**11**	P	**P**	**20 29 38.9**	**-0.9**
	comp=Z,2.7nm,0.7s,baz=216,slow=6.9,SNR=14						
ZALV				LR	LR	20 58 11.1	
	comp=Z,259nm,19.4s,baz=194,slow=36						
ZALV	**Zalesovo Beam**	**64.24**	**11**	P	**P**	**20 29 37.7**	**-2.1**
ASAR	**Alice Springs**	**64.76**	**112**	P	**P**	**20 29 43.9**	**-0.1**
	comp=Z,1.4nm,0.5s,baz=278,slow=6.1,SNR=27						
ASAR				LR	LR	20 53 53.8	
	comp=Z,294nm,21.4s,baz=276,slow=32						
ASAR	**Alice Springs**	**64.76**	**112**	P	**P**	**20 29 44.0**	**0.0**
AS31	**Alice Springs**	**64.76**	**112**	P	**P**	**20 29 44.0**	**0.0**
WRA	**Warramunga Arr**	**65.15**	**108**	P	**P**	**20 29 47.4**	**+0.8**
	comp=Z,1.9nm,0.7s,baz=271,slow=5.7,SNR=16						
WRA				LR	LR	20 54 30.9	
	comp=Z,933nm,21.9s,baz=265,slow=33						
WRA	**Warramunga Arr**	**65.15**	**108**	P	**P**	**20 29 46.5**	**0.0**
WRAB	**Tennant Creek**	**65.16**	**108**	P	**P**	**20 29 46.5**	**-0.2**
WRAB				IAmb	IAmb	20 29 56.3	
	comp=Z,9.9nm,0.9s						
WRAB	**Tennant Creek**	**65.16**	**108**	IAMs_20	IAMs_20	20 53 02.2	
	comp=Z,1μm,22.0s						
WB2	**Warramunga Arr**	**65.16**	**108**	P	**P**	**20 29 45.9**	**-0.7**
WB0	**Warramunga Arr**	**65.20**	**108**	P	**P**	**20 29 45.1**	**-1.9**
WB0				IAmb	IAmb	20 29 55.9	
	comp=Z,8.0nm,0.9s						
VTS	**Vitosha**	**65.33**	**325**	⇓P	**P**	**20 29 51.0**	**+3.6**
VTS	**Vitosha**	**65.33**	**325**	P	**P**	**20 29 47.3**	**-0.1**
VTS				IAmb	IAmb	20 30 09.8	
	comp=Z,11nm,1.2s						
ARU	**Arti**	**65.50**	**354**	P	**P**	**20 29 46.9**	**-1.2**
SONM	**Songino Array**	**66.03**	**27**	P	**P**	**20 29 52.4**	**+0.6**
	comp=Z,6.8nm,0.8s,baz=226,slow=6.5,SNR=9.2						
SONM				LR	LR	20 58 21.0	
	comp=Z,342nm,21.8s,baz=215,slow=36						
SONM	**Songino Array**	**66.03**	**27**	P	**P**	**20 29 51.4**	**-0.3**
SONM				IAmb	IAmb	20 29 56.5	
	comp=Z,6.0nm,0.8s						
BJI	**Beijing**	**66.14**	**39**	P	**P**	**20 29 53.0**	**+0.6**
BJI				S	**S**	**20 38 43.0**	**+2.2**
BJI				pmax	pmax		
	comp=Z,5.0nm,1.3s						
BJI				LR	LR		
	comp=Z,270nm,22.4s						
BJI				LR	LR		
	comp=Z,230nm,25.0s						
BJI				LR	LR		
	comp=Z,250nm,25.7s						
TESR	**Tescani**	**66.17**	**330**	⇑P	**P**	**20 29 55.1**	**+2.5**
VOIR		**66.22**	**329**	⇑P	**P**	**20 29 56.2**	**+3.2**
ULN	**Ulaanbaatar**	**66.35**	**28**	P	**P**	**20 29 53.9**	**0.0**
ULN				IAmb	IAmb	20 30 05.7	
	comp=Z,11nm,1.5s						
DOPR	**Dopca**	**66.42**	**329**	⇑P	**P**	**20 29 57.4**	**+3.2**
SORM	**Soroca**	**66.53**	**332**	⇑P	**P**	**20 29 57.3**	**+2.5**
GZR	**Gura Zlata**	**67.39**	**327**	⇑P	**P**	**20 30 03.7**	**+3.3**
AKASG	**Malin Array Be**	**68.04**	**335**	P	**P**	**20 30 05.1**	**+0.8**
	comp=Z,1.2nm,0.6s,baz=136,slow=5.7,SNR=3.2						
AKASG				LR	LR	21 02 25.7	
	comp=Z,184nm,18.2s,baz=175,slow=38						
AKBB	**Malin Array Si**	**68.04**	**335**	P	**P**	**20 30 05.3**	**+0.9**
AKBB				IAmb	IAmb	20 30 25.4	
	comp=Z,7.0nm,0.9s						
DIVS	**Divibare**	**68.09**	**325**	P	**P**	**20 30 06.0**	**+1.1**

DIVS				IAmb	IAmb	20 30 17.6	
	comp=Z,16nm,1.5s						
BZS	**Buzias**	**68.15**	**327**	⇓P	**P**	**20 30 08.0**	**+2.9**
DRGR		**68.34**	**329**	⇑P	**P**	**20 30 07.9**	**+1.4**
CLTB	**Caltabellotta**	**68.70**	**316**	IAMs_20	IAMs_20	21 01 41.0	
	comp=Z,609nm,20.0s						
TORD	**Torodi Ar. Bea**	**69.07**	**288**	P	**P**	**20 30 12.3**	**+0.8**
	comp=Z,3.2nm,1.3s,baz=118,slow=4.7,SNR=11						
TORD				LR	LR	20 57 40.8	
	comp=Z,738nm,21.6s,baz=90,slow=34						
TORD	**Torodi Ar. Bea**	**69.07**	**288**	P	**P**	**20 30 11.0**	**-0.5**
TORD				IAmb	IAmb	20 30 19.9	
	comp=Z,8.7nm,1.5s						
TRPA	**Tarpa**	**69.31**	**329**	⇓P	**P**	**20 30 14.5**	**+2.2**
MORH	**Mrgy, Hungar**	**70.15**	**326**	⇑P	**P**	**20 30 20.2**	**+2.7**
CRVS	**Cervenica-Dubn**	**70.36**	**330**	*e*P	P	20 30 28.6	+10
KEST	**Kesra**	**70.55**	**313**	LR	LR	20 59 57.8	
	comp=Z,440nm,19.5s,baz=14,slow=35						
STKA	**Stephens Creek**	**71.73**	**121**	P	**P**	**20 30 27.4**	**-0.2**
	comp=Z,1.7nm,0.8s,baz=325,slow=14,SNR=1.9						
STKA				LR	LR	20 57 21.1	
	comp=Z,441nm,21.0s,baz=247,slow=32						
ARSA	**Arzberg**	**72.49**	**326**	*e*P	P	20 30 38.0	+6.3
	comp=Z,4.3nm,0.8s						
KSAR	**Wonju Array Be**	**72.66**	**46**	P	**P**	**20 30 31.4**	**-1.5**
KSRS	**Korea Array**	**72.69**	**46**	P	**P**	**20 30 33.9**	**+0.8**
	comp=Z,0.4nm,0.5s,baz=4.2,slow=15,SNR=1.8						
KSRS				LR	LR	21 01 42.3	
	comp=Z,142nm,21.8s,baz=240,slow=35						
CONA	**Conrad Observa**	**72.69**	**326**	*e*P	P	20 30 39.9	+6.9
	comp=Z,11nm,1.5s						
KLMR	**Klimovskoe**	**72.97**	**346**	*e*P	**P**	**20 30 34.4**	**+0.2**
KLMR				AMP		20 30 43.3	
	comp=Z,19nm,1.0s						
KIC	**Kosan Boka**	**73.75**	**279**	*e*P	**P**	**20 30 41.0**	**+1.1**
	comp=Z,34nm,1.4s						
DPC	**Dobruska-Polom**	**73.88**	**329**	*e*PCP	**PcP**	**20 30 52.4**	**-2.9**
DPC				AMS	AMS	20 51 20.0	
ABTA	**Abfaltersbach**	**73.92**	**324**	*e*P	P	20 30 46.5	+6.2
	comp=Z,11nm,1.2s						
DBIC	**Dimbokro**	**73.92**	**280**	P	**P**	**20 30 40.9**	**0.0**
	comp=Z,7.0nm,1.1s,baz=155,slow=3.0,SNR=5.0						
DBIC				LR	LR	21 01 29.3	
	comp=Z,532nm,21.2s,baz=110,slow=34						
DBIC	**Dimbokro**	**73.92**	**280**	P	**P**	**20 30 40.4**	**-0.5**
DBIC				IAmb	IAmb	20 30 51.2	
	comp=Z,18nm,1.1s						
LIC	**Lamto**	**74.00**	**279**	*e*P	**P**	**20 30 42.7**	**+1.4**
	comp=Z,56nm,1.4s						
OSTC	**Ostas**	**74.05**	**329**	*e*PCP	**PcP**	**20 30 52.7**	**-3.3**
OSTC				AMS	AMS	20 51 30.0	
TIC	**Toumodi**	**74.08**	**280**	*e*P	**P**	**20 30 42.2**	**+0.4**
GERES	**GERESS Array B**	**74.40**	**326**	P	**P**	**20 30 44.9**	**+1.9**
	comp=Z,0.3nm,0.3s,baz=99,slow=13,SNR=1.4						
KHC	**Kasperske Hory**	**74.63**	**327**	*e*P	**P**	**20 30 44.5**	**+0.2**
KHC				*e*PCP	**pwP**	**20 30 55.0**	**+1.7**
KHC				AMS	AMS	20 50 20.0	
WTTA	**Wattenberg**	**74.70**	**324**	*e*P	P	20 30 50.7	+5.8
	comp=Z,13nm,0.8s						
WATA	**Walderalm**	**74.78**	**324**	*e*P	**P**	**20 30 50.1**	**+4.7**
	comp=Z,13nm,1.3s						
KOWA	**Kowa**	**74.78**	**288**	P	**P**	**20 30 45.1**	**-0.7**
KOWA				IAmb	IAmb	20 30 48.8	
	comp=Z,14nm,1.4s						
KOWA				IAMs_20	IAMs_20	21 02 06.0	
	comp=Z,915nm,20.0s						
SQTA	**Sankt Quirin**	**74.93**	**324**	*e*P	P	20 30 52.1	+5.9
	comp=Z,7.6nm,0.8s						
MOTA	**Moosalm**	**75.06**	**324**	*e*P	P	20 30 52.5	+5.5
	comp=Z,8.6nm,0.9s						
FETA	**Feichten**	**75.11**	**324**	*e*P	P	20 30 54.5	+7.2
	comp=Z,13nm,1.3s						
RETA	**Reutte**	**75.33**	**324**	*e*P	P	20 30 53.9	+5.5
	comp=Z,5.9nm,1.2s						
BRG	**Berggiesshubel**	**75.41**	**328**	*e*P	P	20 31 00.8	+12
BRG				Amp		20 31 04.7	
	comp=Z,3.6nm,1.0s						
SNAA	**Sanae**	**75.55**	**198**	P	**P**	**20 30 50.9**	**+1.6**
SNAA	**Sanae**	**75.55**	**198**	IAMs_20	IAMs_20	20 55 39.5	
	comp=Z,531nm,21.0s						
DAVA	**Damuels**	**75.74**	**324**	*e*P	P	20 30 56.9	+6.0
	comp=Z,10nm,0.8s						
NKC	**Novy Kostel**	**75.85**	**327**	*e*PCP	**PcP**	**20 31 03.6**	**-0.2**
CLL	**Collm**	**76.15**	**328**	*e*P	**P**	**20 30 52.0**	**-0.9**
CLL				*e*		20 31 00.0	
CLL				*e*S	S	20 40 47.0	+11
CLL				*e*SSSS		20 50 51.0	
CLL				LmV		21 05 00.0	
	comp=Z,300nm,19.7s						
CTAO	**Charters Tower**	**76.33**	**109**	IAMs_20	IAMs_20	21 00 00.9	
	comp=Z,1µm,22.0s						
VNA2	**Neumayer--Watz**	**76.80**	**199**	P	**P**	**20 30 58.1**	**+1.8**
	baz=64,slow=5.2						
MDJ	**Mudanjiang**	**76.99**	**40**	P	P	20 31 06.0	+8.1
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,180nm,3.5s						
MDJ	**Mudanjiang**	**76.99**	**40**	P	**P**	**20 30 58.7**	**+0.9**
VNA1	**Neumayer--Stat**	**77.03**	**199**	P	**P**	**20 30 59.3**	**+1.7**
FINES	**FINESS Array B**	**77.25**	**341**	P	**P**	**20 31 00.5**	**+1.6**
	comp=Z,5.7nm,1.0s,baz=148,slow=8.1,SNR=2.1						
FINES				LR	LR	21 05 52.2	
	comp=Z,300nm,20.6s,baz=139,slow=36						
VNA3	**Neumayer Olymp**	**77.59**	**199**	P	**P**	**20 31 01.8**	**+1.0**
USRK	**Ussuriysk Ar.**	**78.36**	**41**	LR	LR	21 04 35.0	
	comp=Z,109nm,21.9s,baz=224,slow=35						
CART	**Cartagena**	**78.91**	**311**	IAMs_20	IAMs_20	20 56 38.7	
	comp=Z,630nm,22.0s						
NRIK	**Noril'sk**	**79.25**	**7**	LR	LR	21 07 23.9	
	comp=Z,287nm,20.4s,baz=209,slow=36						
MAT	**Matsushiro**	**79.95**	**50**	P	**P**	**20 31 13.7**	**-0.7**
MAT				*e*S	**S**	**20 41 18.2**	**0.0**
MJAR	**Matsushiro Arr**	**79.95**	**50**	P	**P**	**20 31 14.2**	**-0.2**
	comp=Z,2.9nm,0.9s,baz=230,slow=5.6,SNR=5.0						
MJAR				LR	LR	21 03 41.9	
	comp=Z,96nm,21.4s,baz=85,slow=34						
KLR	**Kul'dur**	**80.35**	**37**	P	**P**	**20 31 17.0**	**+0.7**
	comp=Z,0.9nm,0.6s,baz=359,slow=11,SNR=2.2						
QSPA	**South Pole Qui**	**81.17**	**180**	P	**P**	**20 31 20.7**	**+0.2**
QSPA				IAmb	IAmb	20 31 36.5	
	comp=Z,18nm,1.4s						
QSPA	**South Pole Qui**	**81.17**	**180**	IAMs_20	IAMs_20	21 01 16.0	
	comp=Z,568nm,22.0s						
ESDC	**Sonseca Array**	**81.79**	**312**	P	**P**	**20 31 24.6**	**+0.4**
	comp=Z,0.8nm,0.9s,baz=93,slow=3.5,SNR=7.1						
ESDC				LR	LR	21 04 15.3	
	comp=Z,179nm,21.7s,baz=155,slow=33						
ESDC	**Sonseca Array**	**81.79**	**312**	P	**P**	**20 31 21.9**	**-2.4**
VNDA	**Vanda**	**82.31**	**167**	LR	LR	21 02 43.4	
	comp=Z,206nm,21.5s,baz=268,slow=32						
NOA	**NORSAR Array B**	**82.42**	**336**	LR	LR	21 07 03.3	
	comp=Z,140nm,21.0s,baz=95,slow=35						
ARCES	**ARCESS Array B**	**83.44**	**346**	P	**P**	**20 31 34.5**	**+2.4**
	comp=Z,2.2nm,0.8s,baz=147,slow=6.8,SNR=6.4						
ARCES				LR	LR	21 09 02.7	
	comp=Z,234nm,19.3s,baz=130,slow=36						
YAK	**Yakutsk**	**85.20**	**25**	LR	LR	21 09 07.4	
	comp=Z,218nm,21.9s,baz=253,slow=35						
TIXI	**Tiksi**	**89.68**	**16**	P	**P**	**20 32 01.9**	**-0.6**
	comp=Z,1.1nm,0.8s,baz=299,slow=4.1,SNR=1.8						
TIXI				LR	LR	21 13 14.4	
	comp=Z,210nm,21.7s,baz=252,slow=36						
TIXI	**Tiksi**	**89.68**	**16**	P	**P**	**20 32 02.7**	**+0.2**
TIXI				IAmb	IAmb	20 32 24.7	
	comp=Z,7.5nm,1.1s						
LTZ	**Lake Taylor**	**94.57**	**134**	IAMs_20	IAMs_20	21 09 36.1	
	comp=Z,569nm,18.0s						
DZM	**Mont Dzumac**	**94.73**	**113**	*e*SS	SS	20 50 10.9	+6.1
	comp=Z,336nm,28.6s						
DZM	**Mont Dzumac**	**94.73**	**113**	*e*LR	LR	21 03 05.0	
	comp=Z,2µm,26.4s						
SEY	**Seymchan**	**95.42**	**27**	LR	LR	21 16 28.4	
	comp=Z,256nm,21.9s,baz=266,slow=36						
PETK	**Petropavlovsk-**	**97.03**	**37**	P	**P**	**20 32 36.5**	**-0.3**
	comp=Z,0.9nm,0.4s,baz=315,slow=8.0,SNR=5.6						
PETK				LR	LR	21 15 26.0	
	comp=Z,85nm,21.9s,baz=253,slow=35						
A36M	**Sachs Harbour**	**116.44**	**4**	IAMs_20	IAMs_20	21 17 51.5	
	comp=Z,384nm,21.0s						
ILAR	**Eielson Array**	**119.15**	**16**	PKP	**PKiKP**	**20 37 55.4**	**+1.7**
	comp=Z,0.9nm,1.1s,baz=293,slow=4.7,SNR=2.7						
PPT2	**Papeete2**	**134.77**	**126**	*e*SS	SS	20 58 55.9	+5.1
	comp=Z,265nm,28.0s						
PPT2	**Papeete2**	**134.77**	**126**	*e*LR	LR	21 21 23.2	
	comp=Z,565nm,40.0s						
SDV	**Santo Domingo**	**138.83**	**273**	IAMs_20	IAMs_20	21 36 30.2	
	comp=Z,320nm,21.0s						
RLMT	**Red Lodge**	**143.78**	**356**	IAMs_20	IAMs_20	21 55 42.6	
	comp=Z,319nm,18.0s						
BMO	**Blue Mountains**	**143.89**	**6**	IAMs_20	IAMs_20	21 49 48.4	
	comp=Z,286nm,19.0s						
PDAR	**Pinedale Array**	**146.15**	**356**	PKPbc	**PKPab**	**20 38 46.3**	**-0.2**
	comp=Z,1.0nm,0.7s,baz=64,slow=4.1,SNR=4.4						
TAOE	**Nuku Hiva Isla**	**147.16**	**122**	*e*LR	LR	21 27 10.5	
	comp=Z,398nm,33.9s						
TXAR	**Lajitas Array**	**158.08**	**339**	PKPab	**PKPab**	**20 39 38.1**	**+2.0**
	comp=Z,1.2nm,0.8s,baz=43,slow=3.4,SNR=8.4						

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*IDC **30** 20:19:48.5±2.0, 43°.34N×105°.23W, h0^{km}, mb4.0/1, mb1 3.8/4, mb1mx3.4/48, mbtmp3.6/4, ML3.4/3, MS3.8/2, Ms1 3.8/2, ms1mx3.0/48, Error ellipse: s-maj=48.9km s-min=9.5km az=153.0*

*NEIC **30** 20:19:52.1±1.5, 43°.64N±0°.05×105°.25W±0°.03, h0^{km}±1^{km}, ML3.5/50, Error ellipse: s-maj=8.8km s-min=4.6km az=178.0*

ISC 30 20:19:50.1±0.9**, 43°.65N**±0°.06×**105°.21W**±0°.07**, h0^{km}, n46,** σ**1^{s}75**/43**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.97**	**61**	Pg	**Pb**	**20 20 11.4**	**+1.4**
K22A	**Casper**	**1.39**	**224**		**Pg**	**20 20 15.8**	**-0.8**
K22A				IAML		20 20 38.9	
	comp=N,442nm,0.5s						
RWWY	**Rawlins**	**2.45**	**218**	Pn	**Pn**	**20 20 33.6**	**+2.0**
RWWY				IAML		20 21 06.8	
	comp=N,214nm,1.0s						
LAO	**LASA Array**	**3.12**	**347**		**Pn**	**20 20 42.5**	**+1.9**
LAO				IAML		20 21 37.0	
	comp=N,197nm,0.9s						
RLMT	**Red Lodge**	**3.26**	**298**		**Pn**	**20 20 44.2**	**+1.6**
RLMT				IAML		20 21 45.7	
	comp=N,108nm,1.4s						
RLMT				IAML		20 22 41.3	
	comp=N,85nm,4.1s						
BW06	**Boulder Array**	**3.30**	**256**		**Pn**	**20 20 43.9**	**+0.7**
PD31	**Pinedale Array**	**3.30**	**256**	Pn	**Pn**	**20 20 43.9**	**+0.8**
PDAR	**Pinedale Array**	**3.30**	**256**	Pn	**Pn**	**20 20 43.9**	**+0.8**
	comp=N,3.5nm,0.3s,baz=81,slow=19,SNR=43						
PDAR				Lg	Lg	20 21 28.3	
	comp=N,11nm,0.3s,baz=84,slow=26,SNR=2.1						
PDAR				LR	LR	20 22 05.8	
	comp=N,63nm,18.4s,baz=156,slow=43						
PDAR	**Pinedale Array**	**3.30**	**256**		**Pn**	**20 20 44.1**	**+1.0**
YMP	**Mirror Lake Pl**	**3.72**	**289**		**Pn**	**20 20 50.5**	**+1.4**
GCMT	**Greycliff**	**3.83**	**306**		**Pn**	**20 20 52.1**	**+1.7**
LKWY	**Lake**	**3.85**	**286**	Pn	**Pn**	**20 20 52.2**	**+1.5**
LKWY				IAML		20 22 13.0	
	comp=N,96nm,1.6s						
LKWY				IAML		20 22 13.8	
	comp=N,90nm,1.6s						
ISCO	**Idaho Springs**	**3.86**	**185**		**Pn**	**20 20 52.4**	**+1.4**
LOHW	**Long Hollow**	**3.91**	**271**		**Pn**	**20 20 53.6**	**+2.0**
LOHW				IAML		20 22 14.6	
	comp=N,42nm,1.1s						
H17A	**Grant Village**	**3.94**	**283**		**Pn**	**20 20 54.1**	**+2.1**
H17A				IAML		20 21 58.4	
	comp=N,82nm,2.0s						
H17A				IAML		20 21 59.0	
	comp=E,68nm,2.2s						
FLWY	**Flagg Ranch**	**3.99**	**278**		**Pn**	**20 20 55.1**	**+2.4**
FLWY				IAML		20 22 07.2	
	comp=E,99nm,2.4s						
MOOW	**Moose Ponds**	**4.01**	**273**		**Pn**	**20 20 54.8**	**+1.8**
SNOW	**Snow King Moun**	**4.03**	**269**	Pn	**Pn**	**20 20 53.5**	**+0.2**
SNOW				IAML		20 22 06.7	
	comp=E,75nm,1.2s						
YNR	**Norris Junctio**	**4.07**	**287**		**Pn**	**20 20 54.8**	**+0.9**
YNR				IAML		20 22 10.3	
	comp=E,46nm,1.2s						
YNR				IAML		20 22 23.5	
	comp=N,38nm,2.9s						
REDW	**Red Top Meadow**	**4.11**	**268**		**Pn**	**20 20 54.5**	**+0.1**
REDW				IAML		20 22 13.3	
	comp=N,96nm,0.9s						
TPAW	**Teton Pass**	**4.17**	**270**		**Pn**	**20 20 56.6**	**+1.3**
TPAW				IAML		20 22 30.6	
	comp=N,44nm,1.6s						
TPAW				IAML		20 22 36.3	
	comp=N,81nm,1.1s						
O20A	**White River Ci**	**4.18**	**214**		**Pn**	**20 20 56.7**	**+1.4**
O20A				IAML		20 22 54.8	
	comp=E,85nm,1.8s						
YHH	**Holmes Hill**	**4.21**	**288**		**Pn**	**20 20 57.1**	**+1.3**
YHH				IAML		20 22 17.0	
	comp=E,35nm,1.4s						
YHH				IAML		20 22 17.7	
	comp=N,34nm,1.1s						
FXWY	**Fox Creek**	**4.22**	**272**		**Pn**	**20 20 57.2**	**+1.3**
YMR	**Madison River**	**4.26**	**286**		**Pn**	**20 20 58.0**	**+1.6**
YMR				IAML		20 22 23.1	
	comp=E,86nm,1.1s						
YMR				IAML		20 22 23.1	
	comp=N,67nm,1.0s						
YHL	**Hebgen Lake**	**4.45**	**288**		**Pn**	**20 21 02.2**	**+3.1**
YHL				IAML		20 22 24.6	
	comp=N,61nm,1.2s						
YHL				IAML		20 22 37.7	
	comp=E,68nm,1.6s						
DGMT	**Dagmar**	**4.87**	**8**		**Pn**	**20 21 06.5**	**+1.9**
BOZ	**Bozeman (W)**	**4.98**	**295**		**Pn**	**20 21 08.1**	**+1.9**
BOZ				IAML		20 22 32.2	
	comp=E,24nm,3.0s						
BOZ				IAML		20 24 17.1	
	comp=E,21nm,3.6s						
HWUT	**Hardware Ranch**	**5.11**	**249**		**Pn**	**20 21 09.9**	**+1.8**
EGMT	**Eagleton**	**5.40**	**326**		**Pn**	**20 21 14.6**	**+2.6**
P18A	**Preston Nutter**	**5.51**	**225**		**Pn**	**20 21 15.1**	**+1.5**
DLMT	**Dillon**	**5.55**	**291**		**Pn**	**20 21 16.1**	**+2.0**
HRY	**Holter Researc**	**5.59**	**305**		**Pn**	**20 21 16.1**	**+1.6**
LRM	**Limekiln Ridge**	**5.59**	**295**		**Pn**	**20 21 15.3**	**+0.6**
HVU	**Hansel Valley**	**5.88**	**254**	Pn	**Pn**	**20 21 21.5**	**+2.9**
SDCO	**Great Sand Dun**	**5.90**	**182**	Pn	**Pn**	**20 21 21.4**	**+2.4**
SRU	**San Rafael Swe**	**6.04**	**223**		**Pn**	**20 21 21.8**	**+0.9**
ELK	**Elko**	**7.99**	**252**	Pn	**Pn**	**20 21 47.5**	**-0.1**
	comp=E,0.1nm,0.3s,baz=44,slow=17,SNR=2.6						
ELK				Lg	Lg	20 23 56.5	
	comp=E,0.2nm,0.3s,baz=112,slow=9.8,SNR=1.7						
PSUT	**Pine Spring**	**8.29**	**235**		**Pn**	**20 21 53.7**	**+2.0**
I10CA	**LAC DU BONNET**	**9.07**	**41**	*i*		21 17 15.0	
	baz=220,slow=314,SNR=11						
ULM	**Lac du Bonnet**	**9.18**	**41**	Pn	**Pn**	**20 22 02.8**	**-0.9**
	comp=E,1.5nm,0.3s,baz=231,slow=13,SNR=6.8						
ULM				Lg	Lg	20 24 40.5	
	comp=E,0.5nm,0.3s,baz=292,slow=18,SNR=3.1						
WUAZ	**Wupatki**	**9.41**	**212**	Pn	**Pn**	**20 22 08.9**	**+1.8**
NEW	**Newport**	**9.49**	**303**	LR	LR	20 26 12.8	
	comp=E,152nm,22.0s,baz=172,slow=40						
ARCES	**ARCESS Array B**	**61.49**	**18**	P	**P**	**20 30 07.9**	**-0.1**
	comp=E,1.4nm,0.7s,baz=327,slow=7.5,SNR=3.8						
BRG	**Berggiesshubel**	**72.06**	**36**	P	**P**	**20 31 12.5**	**-3.2**
BRG				Amp		20 31 15.1	
	comp=Z,7.9nm,1.1s						
GERES	**GERESS Array B**	**73.47**	**37**	LR	LR	21 03 39.2	
	comp=Z,202nm,18.2s,baz=148,slow=36						

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*BJI **30** 20:37:19.8±0.0, 20°.75N×122°.08E, h12^{km}, mB4.5/16, mb4.2/28, ML4.1/1, Ms4.0/7, Ms7 3.7/6*

*JMA **30** 20:37:20.8±0.4, 20°.99N×121°.80E, h1^{km}, M4.5*

*NEIC **30** 20:37:22.5±1.9, 20°.80N±0°.09×121°.9E±0°.1, h10^{km}±1^{km}, mb4.5/38, Error ellipse: s-maj=17.2km s-min=14.6km az=249.0*

*MAN **30** 20:37:25.7, 20°.66N×122°.10E, h15^{km}, mb4.4, ML3.2, MS3.0*

*IDC **30** 20:37:29.2±4.3, 20°.71N×121°.83E, h74^{km}±41^{km}, mb3.9/20, mb1 4.0/22, mb1mx3.9/48, mbtmp4.2/22, ML4.0/2, MS3.2/2, Ms1 3.3/2, ms1mx2.8/52, Error ellipse: s-maj=20.8km s-min=11.0km az=73.0*

ISC 30 20:37:21.9±0.5**, 20°.81N**±0°.06×**121°.90E**±0°.06**, h10^{km}, n106,** σ**1^{s}48**/110**, mb4.4**/41**, MS4.0**/3**, 1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWG	**Pinlang**	**2.15**	**339**		**Pn**	**20 37 55.7**	**-2.2**
YULB	**Yu-li**	**2.63**	**348**		**Pn**	**20 38 03.6**	**-1.0**
TPUB	**Ta-pu**	**2.75**	**335**		**Pn**	**20 38 06.1**	**-0.1**
SSLB	**Suanglung**	**3.10**	**344**		**Pn**	**20 38 11.6**	**+0.6**
NACB	**Ninganchiao**	**3.36**	**355**		**Pn**	**20 38 13.2**	**-1.4**
HATJ	**Hateruma jima**	**3.68**	**28**	P	**Pn**	**20 38 18.7**	**-0.3**
HATJ				S	**Sn**	**20 38 59.6**	**-2.9**
JYNG	**Yonagunijimaku**	**3.75**	**15**	P	**Pn**	**20 38 19.8**	**-0.1**
JYNG				S	**Sn**	**20 39 02.2**	**-2.0**
YOJ	**Yonaguni jima**	**3.78**	**16**	P	**Pn**	**20 38 20.5**	**+0.2**
YOJ				S	**Sn**	**20 39 02.8**	**-2.1**
YOJ	**Yonaguni jima**	**3.78**	**16**		**Pn**	**20 38 20.5**	**+0.2**
YHNB	**Yeheng**	**3.88**	**353**		**Pn**	**20 38 21.7**	**0.0**
IRIF	**Iriomote-Funau**	**3.90**	**25**	P	**Pn**	**20 38 22.1**	**+0.2**
IRIF				S	**Sn**	**20 39 05.3**	**-2.5**
JKRS	**Kuro-shima**	**3.93**	**29**	P	**Pn**	**20 38 23.0**	**+0.6**
JKRS				S	**Sn**	**20 39 06.2**	**-2.4**
JIJ	**Ishigaki jima**	**4.10**	**30**	P	**Pn**	**20 38 24.7**	**0.0**
JIJ				S	**Sn**	**20 39 09.6**	**-3.2**
TATO	**Taipei**	**4.17**	**355**		**Pn**	**20 38 25.2**	**-0.4**
JISG	**Ishigakijimahi**	**4.37**	**30**	P	**Pn**	**20 38 28.6**	**+0.2**
JISG				S	**Sn**	**20 39 15.9**	**-3.5**
JTJ	**Tarama**	**4.61**	**34**	P	**Pn**	**20 38 32.4**	**+0.7**
JTJ				S	**Sn**	**20 39 22.8**	**-2.5**
KNMB	**Chin-men Tao**	**4.88**	**319**	Pn	**Pn**	**20 38 33.3**	**-2.0**
JIRB	**Irabujima**	**5.01**	**36**	P	**Pn**	**20 38 38.1**	**+0.8**
JIRB				S	**Sn**	**20 39 32.3**	**-3.0**
JMJ2	**Miyako jima3**	**5.03**	**38**	P	**Pn**	**20 38 37.9**	**+0.4**
JMJ2				S	**Sn**	**20 39 33.9**	**-1.9**
JIKM	**Ikemajima**	**5.13**	**36**	P	**Pn**	**20 38 40.2**	**+1.3**
JIKM				S	**Sn**	**20 39 36.0**	**-2.2**
JNU	**Nakatsue**	**14.64**	**31**	P	**P**	**20 40 55.6**	**+0.1**
	0.5nm,0.3s,baz=124,slow=4.5,SNR=2.5						
TIA	**Tai'an**	**15.91**	**346**	P	**P**	**20 41 10.8**	**+1.2**
TIA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
TIA				pmax	pmax		
	comp=Z,63nm,5.3s						
TIA				LR	LR		
	comp=N,150nm,15.7s						
TIA				LR	LR		
	comp=E,290nm,15.7s						
TIA				LR	LR		
	comp=Z,250nm,25.0s						
KSAR	**Wonju Array Be**	**17.38**	**16**	P	**P**	**20 41 25.9**	**+0.1**
KSRS	**Korea Array**	**17.40**	**16**	P	**P**	**20 41 27.1**	**+1.0**
	0.5nm,0.3s,baz=200,slow=12,SNR=17						
KS19	**Wonju Array Si**	**17.43**	**16**	P	**P**	**20 41 27.1**	**+0.6**
XAN	**Xi'an**	**17.48**	**322**	P	**P**	**20 41 28.0**	**+0.8**
XAN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
JCJ	**Chichijima**	**19.56**	**67**	LR	LR	20 48 31.4	
	comp=Z,91nm,20.3s,baz=292,slow=34						
BJT	**Baijiatuau**	**19.77**	**347**	P	**P**	**20 41 52.2**	**0.0**
BJT				IAmb	IAmb	20 41 53.9	
	comp=Z,23nm,0.7s						
BJI	**Beijing**	**19.79**	**347**	P	**P**	**20 41 52.8**	**+0.4**
BJI				pmax	pmax		
	comp=Z,36nm,1.0s						
MAT	**Matsushiro**	**21.18**	**39**	P	**P**	**20 42 11.6**	**+4.1**
MJAR	**Matsushiro Arr**	**21.18**	**39**	P	**P**	**20 42 11.2**	**+3.7**
	comp=Z,3.1nm,0.9s,baz=238,slow=11,SNR=4.1						
MJAR	**Matsushiro Arr**	**21.18**	**39**	P	**P**	**20 42 05.4**	**-2.1**
CMAR	**Chiang Mai Arr**	**21.75**	**268**	P	**P**	**20 42 14.8**	**+1.0**
	comp=Z,0.7nm,0.3s,baz=72,slow=9.7,SNR=4.4						
CMAR				LR	LR	20 51 08.8	
	comp=Z,47nm,18.6s,baz=250,slow=38						
HHC	**Hu-ho-hao-te**	**21.83**	**339**	*e*P	**P**	**20 42 15.0**	**+0.4**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,100nm,5.4s						
LZH	**Lanzhou**	**21.94**	**318**	*e*P	**P**	**20 42 17.5**	**+1.6**
LZH				pP	pwP	20 42 21.0	+2.4
LZH				sP	sP	20 42 24.5	+4.6
LZH				pmax	pmax		
	comp=Z,11nm,1.1s						
BTO	**Baotou**	**22.18**	**335**	*e*P	**P**	**20 42 20.5**	**+2.1**
BTO				S	**S**	**20 46 27.0**	**+4.2**
BTO				LR	LR		
	comp=Z,1µm,20.1s						
BTO				LR	LR		
	comp=Z,1µm,16.2s						
USRK	**Ussuriysk Ar.**	**24.79**	**17**	P	**P**	**20 42 44.7**	**+0.7**
	comp=Z,3.6nm,0.9s,baz=218,slow=13,SNR=2.0						
GTA	**Gaotai**	**26.51**	**319**	⇓P	**P**	**20 43 00.5**	**+0.7**
GTA				pP	sP	20 43 06.8	+3.0
GTA				sP	pP	20 43 10.8	+8.1
GTA				pmax	pmax		
	comp=Z,3.0nm,1.5s						
GTA				pmax	pmax		
	comp=Z,63nm,6.0s						
GTA				LR	LR		
	comp=Z,290nm,21.4s						
GTA				LR	LR		
	comp=Z,370nm,20.7s						
GTA				LR	LR		
	comp=Z,480nm,20.4s						
LSA	**Lhasa**	**29.12**	**294**	P	**P**	**20 43 25.1**	**+1.4**
LSA				IAmb	IAmb	20 43 26.6	
	comp=Z,3.6nm,0.7s						
KLR	**Kul'dur**	**29.43**	**13**	P	**P**	**20 43 26.3**	**+0.7**
	comp=Z,0.8nm,0.7s,baz=196,slow=9.5,SNR=1.9						
ULN	**Ulaanbaatar**	**29.54**	**340**	P	**P**	**20 43 26.5**	**-0.3**
ULN				IAmb	IAmb	20 43 27.7	
	comp=Z,8.0nm,0.7s						
SONM	**Songino Array**	**29.73**	**339**	P	**P**	**20 43 28.2**	**-0.3**
	comp=Z,4.7nm,0.8s,baz=159,slow=10,SNR=7.8						
SONM	**Songino Array**	**29.73**	**339**	P	**P**	**20 43 28.1**	**-0.4**
WMQ	**Urumqi**	**36.52**	**317**	*e*P	**P**	**20 44 29.3**	**+1.7**
FITZ	**Fitzroy Crossi**	**38.84**	**174**	P	**P**	**20 44 45.5**	**-1.8**
	comp=Z,4.3nm,1.1s,baz=359,slow=8.2,SNR=2.8						
PMG	**Port Moresby**	**38.96**	**138**	P	**P**	**20 44 49.3**	**+0.8**
	comp=Z,4.3nm,0.4s,baz=208,slow=20,SNR=2.1						
MK31	**Makanchi Array**	**41.26**	**318**	P	**P**	**20 45 06.4**	**-0.9**
MK31				IAmb	IAmb	20 45 09.7	
	comp=Z,5.4nm,0.7s						
MKAR	**Makanchi Array**	**41.26**	**318**	P	**P**	**20 45 06.4**	**-0.9**
	comp=Z,6.6nm,0.6s,baz=115,slow=9.8,SNR=58						
MKAR				PcP	**PcP**	**20 47 05.8**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=114,slow=2.9,SNR=2.2						
MKAR	**Makanchi Array**	**41.26**	**318**	P	**P**	**20 45 05.7**	**-1.6**
MAKZ	**Makanchi**	**41.46**	**318**	P	**P**	**20 45 09.9**	**+1.0**
MAKZ				IAmb	IAmb	20 45 11.7	
	comp=Z,7.4nm,0.8s						
H11N1	**WAKE ISLAND Hy**	**42.12**	**83**	T	T	21 30 13.4	
	baz=283,slow=75,SNR=70						
H11N2	**WAKE ISLAND Hy**	**42.12**	**83**	T	T	21 30 13.7	
	baz=283,slow=75,SNR=96						
H11N3	**WAKE ISLAND Hy**	**42.13**	**83**	T	T	21 30 15.8	
	baz=283,slow=75,SNR=74						
WB0	**Warramunga Arr**	**42.14**	**162**	P	**P**	**20 45 13.3**	**-1.4**
WB0				IAmb	IAmb	20 45 28.8	
	comp=Z,8.4nm,1.4s						
H11S3	**WAKE ISLAND Hy**	**42.14**	**85**	T	T	21 30 13.5	
	baz=281,slow=74,SNR=269						
H11S1	**WAKE ISLAND Hy**	**42.15**	**85**	T	T	21 30 11.7	
	baz=281,slow=74,SNR=164						
H11S2	**WAKE ISLAND Hy**	**42.16**	**85**	T	T	21 30 11.7	
	baz=281,slow=74,SNR=152						
WRA	**Warramunga Arr**	**42.29**	**162**	P	**P**	**20 45 13.9**	**-2.0**
	comp=Z,0.9nm,0.4s,baz=345,slow=9.5,SNR=18						
WRA	**Warramunga Arr**	**42.29**	**162**	P	**P**	**20 45 14.5**	**-1.4**
WB2	**Warramunga Arr**	**42.29**	**162**	P	**P**	**20 45 14.2**	**-1.7**
WB2				IAmb	IAmb	20 45 18.9	
	comp=Z,15nm,1.5s						
WR0	**Warramunga Arr**	**42.36**	**162**		**P**	**20 45 14.8**	**-1.7**
KSH	**Kashi**	**43.35**	**306**	P	**P**	**20 45 28.5**	**+3.9**
KSH				sP	sP	20 45 34.8	+5.9
ZAA0	**Zalesovo Array**	**43.45**	**329**	P	**P**	**20 45 25.0**	**0.0**
ZAA0				IAmb	IAmb	20 45 26.0	
	comp=Z,15nm,0.7s						
ZALV	**Zalesovo Beam**	**43.45**	**329**	P	**P**	**20 45 25.1**	**+0.1**
	comp=Z,14nm,0.6s,baz=114,slow=7.4,SNR=67						
ZALV	**Zalesovo Beam**	**43.45**	**329**	P	**P**	**20 45 25.5**	**+0.5**
AS31	**Alice Springs**	**45.72**	**165**	P	**P**	**20 45 43.3**	**-0.2**
ASAR	**Alice Springs**	**45.72**	**165**	P	**P**	**20 45 42.6**	**-0.9**
	comp=Z,0.8nm,0.4s,baz=350,slow=7.6,SNR=17						
ASAR	**Alice Springs**	**45.72**	**165**	P	**P**	**20 45 43.4**	**-0.2**
GAR	**Garm**	**47.60**	**304**	P	**P**	**20 45 59.4**	**+1.1**
GAR				IAmb	IAmb	20 45 59.7	
	comp=Z,4.8nm,0.8s						
KKAR	**Karatay Array**	**48.09**	**310**	P	**P**	**20 46 01.6**	**-0.3**
BRVK	**Borovoye**	**50.79**	**322**	P	**P**	**20 46 23.1**	**+0.7**
BRVK				IAmb	IAmb	20 46 24.2	
	comp=Z,8.9nm,1.1s						
NRIK	**Noril'sk**	**52.82**	**345**	P	**P**	**20 46 37.1**	**-0.1**

	comp=Z,4.2nm,0.8s,baz=126,slow=7.5,SNR=6.6						
NRIK	**Noril'sk**	52.82	345	P	P	20 46 37.1	-0.1
NRIK				IAmb	IAmb	20 46 37.6	
	comp=Z,6.0nm,0.9s						
STKA	**Stephens Creek**	55.68	160	P	P	20 46 57.6	-0.8
	comp=Z,1.9nm,0.5s,baz=329,slow=6.0,SNR=9.0						
STKA	**Stephens Creek**	55.68	160	P	P	20 46 56.5	-2.0
ABKAR	**Akbulak array**	56.29	316	P	P	20 47 03.3	+0.5
ABKAR				IAmb	IAmb	20 47 05.1	
	comp=Z,2.1nm,0.7s						
ABKAR	**Akbulak array**	56.29	316	P	P	20 47 03.5	+0.7
ARU	**Arti**	58.21	324	P	P	20 47 16.6	+0.4
TTA	**Tatalina**	68.10	29	P	P	20 48 23.1	+1.3
KBZ	**Khabaz**	68.12	310	P	P	20 48 22.4	+0.2
	comp=Z,1.6nm,0.9s,baz=178,slow=6.4,SNR=3.0						
KLMR	**Klimovskoe**	68.37	329	*e*P	P	20 48 22.4	-1.0
KLMR				AMP		20 48 29.0	
	comp=Z,19nm,1.4s						
J20K	**Nowinta River**	68.86	28	P	P	20 48 28.4	+1.9
J20K				IAmb	IAmb	20 48 36.6	
	comp=Z,3.4nm,0.7s						
IMAR	**Indian Mountai**	68.91	26	P	P	20 48 27.9	+1.2
H21K	**Melozitna Rive**	69.32	26	P	P	20 48 30.2	+0.9
H21K				IAmb	IAmb	20 48 39.2	
	comp=Z,3.6nm,0.8s						
CAST	**Castle Rocks**	69.84	29	P	P	20 48 34.0	+1.4
CAST				IAmb	IAmb	20 48 42.3	
	comp=Z,4.6nm,0.8s						
PPLA	**Purkeypile**	69.85	29	P	P	20 48 33.3	+0.4
TOLK	**Toolik Lake Re**	70.28	23	P	P	20 48 36.5	+1.2
TOLK				IAmb	IAmb	20 48 37.6	
	comp=Z,3.8nm,0.9s						
TRF	**Thorofare Moun**	70.64	28	P	P	20 48 39.2	+1.5
TRF				IAmb	IAmb	20 48 48.6	
	comp=Z,11nm,1.3s						
RND	**Reindeer**	71.28	28	P	P	20 48 42.0	+0.5
MDM	**Murphy Dome**	71.31	27	P	P	20 48 42.1	+0.5
MDM				IAmb	IAmb	20 49 00.5	
	comp=Z,4.6nm,1.2s						
H24K	**Noodor Dome**	71.32	26	P	P	20 48 43.2	+1.6
H24K				IAmb	IAmb	20 48 48.4	
	comp=Z,5.8nm,1.2s						
WRH	**Wood River Hil**	71.45	27	P	P	20 48 42.9	+0.6
WRH				IAmb	IAmb	20 48 44.6	
	comp=Z,3.0nm,0.8s						
SML	**Sawmill**	71.79	30	P	P	20 48 45.2	+0.7
ILAR	**Eielson Array**	71.91	27	P	P	20 48 44.1	-1.0
	comp=Z,0.4nm,0.6s,baz=265,slow=5.4,SNR=5.7						
BMAR	**Burnt Mountain**	72.33	24	P	P	20 48 49.4	+1.8
ARCES	**ARCESS Array B**	72.91	339	P	P	20 48 51.6	+0.6
	comp=Z,3.0nm,0.9s,baz=91,slow=5.4,SNR=2.5						
ARCES	**ARCESS Array B**	72.91	339	IAmb	IAmb	20 48 53.8	
	comp=Z,27nm,1.4s						
FINES	**FINESS Array B**	74.69	330	P	P	20 49 01.1	-0.4
	comp=Z,4.4nm,1.0s,baz=37,slow=9.4,SNR=6.5						
AKASG	**Malin Array Be**	75.83	319	P	P	20 49 07.3	-1.1
	comp=Z,0.6nm,0.5s,baz=60,slow=5.6,SNR=7.4						
AKASG	**Malin Array Be**	75.83	319	IAmb	IAmb	20 49 08.2	
	comp=Z,2.1nm,1.1s						
BURAR	**Bucovina Array**	79.26	317	P	P	20 49 28.3	+0.5
ELL	**Elmali**	79.38	305	P	P	20 49 29.1	+0.4
NOA	**NORSAR Array B**	81.51	333	P	P	20 49 38.4	-1.1
	comp=Z,1.2nm,0.8s,baz=71,slow=7.1,SNR=2.9						
VTS	**Vitosha**	82.29	313	P	P	20 49 44.3	+0.2
FNA	**Florina**	84.26	311	P	P	20 49 53.5	-0.6
YKA	**Yellowknife Ar**	85.81	23	P	P	20 50 00.5	-0.9
	comp=Z,1.0nm,0.6s,baz=327,slow=3.5,SNR=7.6						

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*TEH **30** 20:45:44.0, 29°.60N×51°.33E, h8^{km}, ML3.0*

*KISR **30** 20:45:47.2±0.8, 29°.65N×50°.69E, h0^{km}±113^{km}, ML3.5*

ISC 30 20:45:44.2±0.9**, 29°.61N**±0°.05×**51°.30E**±0°.04**, h10**^{km}**, n27, σ1^{s}32**/31**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAZ1	**Kazerun**	0.29	86	*e*Pg	Pg	20 45 49.4	-0.8
KAZ1				*e*Sg	Sg	20 45 54.4	+0.3
KAZ1				*e*		20 45 54.9	
	comp=Z,88µm,0.1s						
AHBU	**AHRAM**	0.74	181	*e*Pg	Pg	20 45 58.5	0.0
SHI	**Shiraz**	1.05	88	*e*Sg	Sn	20 46 19.6	-0.5
SHI				*e*Pg	Pb	20 46 04.2	-0.5
SHI				*e*		20 46 25.4	
	comp=Z,5µm,0.3s						
ABEH	**Behbahan**	1.35	318	*e*Pn	Pb	20 46 09.9	+0.3
KLNJ	**Kolanjah**	1.42	10	*e*Pg	Pb	20 46 10.6	-0.4
KLNJ				*e*		20 46 35.0	
	comp=Z,2µm,0.4s						
QIR1	**Qir**	1.89	126	*e*Pn	Pb	20 46 18.0	-0.9
QIR1				*e*		20 46 59.2	
	comp=Z,2µm,0.4s						
IBRJ	**Brojen**	2.30	359	*e*Pn	Pb	20 46 24.8	-1.1
IRAM	**Ramesheh**	2.38	23	*e*Pn	Pb	20 46 25.5	-1.9
IRAM				*e*		20 46 31.6	
	comp=Z,726nm,0.2s						
IGAR	**Gharneh**	2.86	13	*e*Pn	Pn	20 46 31.3	+1.2
QRN	**Al-Qurain**	3.08	255	*e*P	Pn	20 46 33.8	+0.8
QRN				*e*S	Sn	20 47 09.5	-0.4
QRN				IAML		20 47 13.2	
	comp=Z,268nm,0.2s						
ISAD	**Sadrabad**	3.08	41	*e*Pn	Pn	20 46 35.1	+1.9
IPIR	**Pirpir**	3.09	354	*e*Pn	Pn	20 46 35.1	+1.7
RDF	**Al-Radifah**	3.35	259	*e*P	Pn	20 46 37.6	+1.0
RDF				*e*S	Sn	20 47 14.8	-1.6
RDF				IAML		20 47 19.4	
	comp=Z,123nm,0.4s						
IMEH	**Mehriz**	3.37	57	*e*Pn	Pn	20 46 38.6	+1.5
IMEH				*e*		20 47 23.2	
	comp=Z,230nm,0.2s						
IZEF	**Zefreh**	3.40	15	*e*Pn	Pn	20 46 39.1	+1.6
IKLH	**Kolahrood**	3.71	4	*e*Pn	Pn	20 46 44.0	+2.2
ICHK	**Chekchek**	3.75	45	*e*Pn	Pn	20 46 43.3	+1.0
YZKH	**Yazd**	3.96	45	*e*Pn	Pn	20 46 46.2	+1.1
ANAR	**Anarak**	4.13	30	*e*Pn	Pn	20 46 49.0	+1.5
KHMZ	**Khomeyn**	4.28	345	*e*Pn	Pn	20 46 49.9	+0.3
KRSH	**Karshahi**	4.41	9	*e*Pn	Pn	20 46 53.6	+2.2
KHGB	**Koh Gabri**	4.55	79	*e*Pn	Pn	20 46 54.8	+1.4
KRBR	**Kerman**	4.76	84	*e*Pn	Pn	20 46 57.9	+1.6
ISFB	**Sefidab**	4.80	9	*e*Pn	Pn	20 46 58.2	+1.5
ASAO	**Ashtian**	5.05	348	*e*Pn	Pn	20 47 00.5	+0.3
IVRN	**Varamin**	5.39	4	*e*Pn	Pn	20 47 05.8	+1.1
TNSJ	**Nastanj**	6.27	45	*e*Pn	Pn	20 47 18.4	+1.6

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*ZUR **30** 20:47:57.8, 46°.56N×9°.75E, h6^{km}±1^{km}, MLh0.9/4, Error ellipse: s-maj=3.4km s-min=1.1km az=96.0*

VIE 30 20:47:57.3±0.6**, 46°.56N×9°.77E, h11**^{km}±7^{km}**, ml0.9**/1**, 4C-6D, Error ellipse: s-maj=2.3km s-min=1.9km az=4.0 13 km NNW of St. Moritz, Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCEL	**Celerina**	0.08	133	⇓Pg	Pg	20 48 00.2	+0.3
SCEL				⇓Pg	Pg	20 48 00.2	+0.3
	0.7nm,SNR=2.5						
SVAM	**Vaz, Muldain**	0.21	308	⇓Pg	Pg	20 48 02.4	+0.5
	0.2nm,SNR=1.9						
SVAM				⇓Pg	Pg	20 48 02.4	+0.5
DAVOX	**Davos/Dischmat**	0.23	20	⇑Pg	Pg	20 48 02.9	+0.7
DAVOX				⇑Pg	Pg	20 48 02.9	+0.7
	0.1nm,SNR=2.1						
DAVOX				Sg	Sg	20 48 06.1	+0.6
BERNI	**Berninapass**	0.23	131	⇓Pg	Pg	20 48 02.8	+0.5
BERNI				⇓Pg	Pg	20 48 02.8	+0.5
	0.1nm,SNR=1.0						
VDL	**Val di Lei**	0.23	250	⇑Pg	Pg	20 48 02.7	+0.4
VDL				⇑Pg	Pg	20 48 02.7	+0.4
	0.1nm,SNR=1.2						
VDL				Sg	Sg	20 48 05.7	0.0
FETA	**Feichten**	0.80	55	*i* Pg	Pg	20 48 13.1	+0.2
	0.3nm,0.1s						
FETA				*i* Sg	Sg	20 48 23.5	+0.1
	0.3nm,0.1s						

ROM 30 20:48:05.2±0.1**, 43°.615N**±0°.004×**10°.265E**±0°.006**, h10**^{km}**, ML1.5**/5**, 1C, Error ellipse: s-maj=0.5km s-min=0.3km az=333.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PII	**Pisa**	0.22	60	⇑P	Pg	20 48 10.3	+0.6
PII				S	Sg	20 48 13.7	+1.0
PII				AML	AML		
	comp=E,478µm,0.3s						
PII				AML	AML		
	comp=N,309µm,0.2s						
PII				AML	AML		
	comp=E,478µm,0.3s						
GROG	**Isola di Gorgo**	0.33	235	P	Pg	20 48 12.4	+0.6
GROG				S	Sb	20 48 17.4	-1.2
MAIM	**Mastiano**	0.34	29	P	Pg	20 48 12.5	+0.5
MAIM	**Mastiano**	0.34	29	P	Pg	20 48 12.5	+0.5
MAIM				S	Sb	20 48 17.8	-1.1
MAIM				AML	AML		
	comp=E,111µm,0.7s						
MAIM				AML	AML		
	comp=N,96µm,0.5s						
MAIM				AML	AML		
	comp=N,96µm,0.5s						
MAIM				AML	AML		
	comp=E,111µm,0.7s						
CARD	**Cardoso**	0.44	21	P	Pg	20 48 14.2	+0.4
CARD	**Cardoso**	0.44	21	P	Pg	20 48 14.3	+0.4
CARD	**Cardoso**	0.44	21	P	Pg	20 48 14.2	+0.4
CARD				S	Sb	20 48 20.8	-1.0
CARD				AML	AML		
	comp=E,96µm,0.5s						
CARD				AML	AML		
	comp=N,136µm,0.8s						
CARD				AML	AML		
	comp=E,96µm,0.5s						
PLMA	**Palmaria, Port**	0.53	326	P	Pg	20 48 16.0	+0.5
PLMA				S	Sb	20 48 23.4	-0.9
CRMI	**Carmignano**	0.54	71	P	Pb	20 48 16.7	-0.2
CRMI				S	Sb	20 48 24.0	-0.7
VLC	**Villacollemand**	0.55	9	P	Pb	20 48 16.5	-0.6
VLC				AML	AML		
	comp=N,55µm,1.6s						
VLC				AML	AML		
	comp=E,67µm,1.5s						
EQUI	**Equi**	0.56	352	P	Pb	20 48 16.6	-0.5
SARO	**Sassorosso**	0.58	10	P	Pb	20 48 17.0	-0.5
SARO	**Sassorosso**	0.58	10	P	Pb	20 48 17.0	-0.5
SARO				AML	AML		
	comp=N,49µm,0.6s						
SARO				AML	AML		
	comp=E,28µm,1.6s						
SARO				AML	AML		
	comp=N,49µm,0.6s						
MTCR	**Monte La Croce**	0.67	52	P	Pg	20 48 18.6	+0.4
CSNT	**Castellina Chi**	0.76	100	P	Pg	20 48 20.2	+0.4
CSNT				S	Sb	20 48 30.4	-0.6
CELB	**S.Piero in Cam**	0.87	183	P	Pg	20 48 22.0	0.0
CELB				S	Sg	20 48 33.4	+0.1
MSSA	**Maissana**	0.89	323	P	Pg	20 48 22.1	-0.1
MSSA				S	Sg	20 48 34.1	+0.3
ARCI	**Arcidosso**	1.17	130	P	Pb	20 48 26.9	-0.6

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*IDC **30** 20:50:55.7±1.1, 58°.26N×31°.88W, h0^{km}, mb3.8/8, mb1 4.0/9, mb1mx3.6/60, mbtmp3.9/9, ML3.6/1, Error ellipse: s-maj=30.5km s-min=21.3km az=36.0*

*NEIC **30** 20:50:56.7±1.4, 58°.3N±0°.1×32°.1W±0°.3, h10^{km}±2^{km}, mb4.2/7, Error ellipse: s-maj=24.4km s-min=18.8km az=263.0*

ISC 30 20:50:57.6±1.0**, 58°.3N**±0°.2×**31°.9W**±0°.1**, h13**^{km}**, n18, σ0^{s}96**/15**, mb3.9**/11**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BORG	**Borgarnes**	8.24	33	Pn	Pn	20 52 56.7	+0.1
	0.7nm,0.3s,baz=259,slow=5.2,SNR=1.6						
ESDC	**Sonseca Array**	25.82	124	P	P	20 56 29.0	+0.6
	0.7nm,0.9s,baz=329,slow=9.7,SNR=4.6						
ARCES	**ARCESS Array B**	26.53	42	P	P	20 56 36.3	+1.8
	2.0nm,0.9s,baz=281,slow=9.1,SNR=1.7						
ARCES	**ARCESS Array B**	26.53	42	IAmb	IAmb	20 56 42.5	
	comp=Z,11nm,1.4s						
INK	**Inuvik**	41.54	327	P	P	20 58 43.4	-0.6
	comp=Z,1.5nm,0.8s,baz=102,slow=0.3,SNR=4.5						
INK	**Inuvik**	41.54	327	IAmb	IAmb	20 58 51.0	
	comp=Z,4.6nm,1.5s						
DAWY	**Dawson**	46.16	324	P	P	20 59 20.9	-0.4
DAWY				IAmb	IAmb	20 59 24.7	
	comp=Z,4.2nm,1.1s						
ILAR	**Eielson Array**	47.83	328	P	P	20 59 34.6	+0.4
	comp=Z,1.0nm,0.9s,baz=28,slow=6.2,SNR=7.8						
ILAR	**Eielson Array**	47.83	328		P	20 59 33.0	-1.3
DOT	**Dot Lake**	47.88	326	P	P	20 59 33.1	-1.5
PDAR	**Pinedale Array**	48.88	287	P	P	20 59 44.0	+1.1
	comp=Z,0.6nm,0.8s,baz=50,slow=4.9,SNR=4.2						
ABKAR	**Akbulak array**	50.95	57	P	P	20 59 58.3	0.0
ABKAR				IAmb	IAmb	20 59 59.0	
	comp=Z,1.6nm,0.9s						
ABKAR	**Akbulak array**	50.95	57	P	P	20 59 57.7	-0.6
TORD	**Torodi Ar. Bea**	51.63	137	P	P	21 00 03.2	-0.5
	comp=Z,0.7nm,0.8s,baz=342,slow=9.0,SNR=4.2						
KURK	**Kurchatov**	57.50	45	P	P	21 00 45.7	-0.2
KURK	**Kurchatov**	57.50	45	IAmb	IAmb	21 00 53.4	
	comp=Z,3.8nm,1.2s						
KURBB	**Kurchatov Arra**	57.55	45	P	P	21 00 45.7	-0.5
	comp=Z,1.9nm,0.2s,baz=325,slow=6.5,SNR=2.0						
MKAR	**Makanchi Array**	62.11	45	P	P	21 01 17.1	-0.7
	comp=Z,0.9nm,0.6s,baz=333,slow=5.7,SNR=8.2						

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*IDC **30** 20:54:38.9±2.2, 10°.12S×117°.32E, h0^{km}, mb3.4/2, mb1 3.6/5, mb1mx3.2/45, mbtmp3.4/5, ML3.3/3, Error ellipse: s-maj=63.1km s-min=25.0km az=58.0*

ISC 30 20:54:51.9±4.0**, 9°.8S**±0°.1×**118°.8E**±0°.5**, h35**^{km}**, n5, σ1^{s}12**/6**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	4.81	12	Pn	Pn	20 56 02.1	+0.1
	1.2nm,0.3s,baz=233,slow=3.7,SNR=6.1						
KAPI				Sn	Sn	20 56 55.9	-0.6
	7.9nm,0.3s,baz=226,slow=23,SNR=15						
FITZ	**Fitzroy Crossi**	10.64	142	Pn	Pn	20 57 21.2	-0.7
	0.1nm,0.3s,baz=330,slow=13,SNR=6.8						
FITZ				Sn	Sn	20 59 19.4	-0.6
	0.2nm,0.3s,baz=174,slow=20,SNR=7.3						
WRA	**Warramunga Arr**	18.13	126	P	Pn	20 59 02.4	+1.3
	0.1nm,0.3s,baz=294,slow=11,SNR=5.8						
ASAR	**Alice Springs**	20.01	136	P	P	20 59 22.6	+0.8
	0.9nm,0.6s,baz=306,slow=9.9,SNR=15						
MKAR	**Makanchi Array**	65.02	333	P	P	21 05 19.6	-8.9
	0.4nm,0.9s,baz=160,slow=4.2,SNR=2.1						

IDC 30 21:19:17.7±3.6**, 3°.76S×138°.95E, h0**^{km}**, mb3.4**/2**, mb1 3.5**/4**, mb1mx3.1**/26**, mbtmp3.4**/4**, ML3.1**/2**, Error ellipse: s-maj=123.9km s-min=31.0km az=94.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	16.70	195	Pn	Pn	21 23 12.1	-1.3
	0.1nm,0.3s,baz=17,slow=13,SNR=2.0						
WRA				Sn	Sn	21 26 11.3	-8.4
	0.0nm,0.3s,baz=18,slow=25,SNR=3.0						
FITZ	**Fitzroy Crossi**	19.31	221	P	P	21 23 44.5	-0.1
	0.0nm,0.3s,baz=48,slow=10,SNR=1.6						
ASAR	**Alice Springs**	20.38	193	P	P	21 23 57.0	+0.7
	0.4nm,0.8s,baz=23,slow=10,SNR=1.8						
SONM	**Songino Array**	58.76	335	P	P	21 29 17.7	-0.1
	1.2nm,0.5s,baz=145,slow=5.3,SNR=2.1						

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*NEIC **30** 21:28:44.7±0.8, 36°.93N±0°.02×97°.82W±0°.01, h6^{km}±6^{km}, Error ellipse: s-maj=2.7km s-min=1.2km az=158.0*

*IDC **30** 21:28:44.5±2.4, 36°.95N×97°.88W, h9^{km}±17^{km}, mb4.0/1, mb1 3.9/6, mb1mx3.5/53, mbtmp3.6/6, ML4.1/3, Error ellipse: s-maj=11.8km s-min=9.6km az=120.0*

*NEIC **30** 21:28:44.4, 36°.92N×97°.82W, h4^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-0.63; $M_{\theta\theta}$0.58; $M_{\phi\phi}$0.05; $M_{r\theta}$0.75; $M_{\theta\phi}$0.30; $M_{\phi r}$-0.02; Fault plane solution: $M_0$1.01000×10^{14} NP1:ϕ_s47.00000°, δ25.00000°, λ-125.00000°. NP2:ϕ_s265.00000°, δ70.00000°, λ-75.00000°. Principal axes: T 1.0114, Plg24.0000°, Azm343.0000°; N 0.0001, Plg14.0000°, Azm80.0000°; P -1.0114, Plg62.0000°, Azm198.0000°;*

*IASPEI **30** 21:28:44.4±0.9, 36°.93N±0°.02×97°.83W±0°.02, h9^{km}±6^{km} Error ellipse: s-maj=3.2km s-min=3.1km az=16.9, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, <i>Seism. Res. Let.</i>, 80, 465-472, 2009*

*TUL **30** 21:28:44.4±1.1, 36°.94N±0°.02×97°.83W±0°.02, h5^{km}±7^{km}, ML3.6, mb_Lg3.6/102(NEIC), Mwr3.3/15(SLM), Error ellipse: s-maj=2.5km s-min=2.3km az=125.0*

*ANF **30** 21:28:45.8±2.0, 37°.00N×97°.85W, h12^{km}±14^{km}, ML4.4/8, Error ellipse: s-maj=6.0km s-min=3.6km az=49.0*

ISC 30 21:28:44.6±0.7**, 36°.94N**±0°.02×**97°.83W**±0°.02**, h11**^{km}±5^{km}**, n150, σ1^{s}14**/156**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GC02	**Grant County #**	0.09	198	Pg	Pg	21 28 46.8	-0.3
GC02				Sg	Sg	21 28 48.4	-0.6
KAN14	**Manchester OK**	0.11	281		Pg	21 28 47.1	-0.3
KAN14				Sg	Sg	21 28 48.9	-0.7
KAN17	**Caldwell West**	0.12	24	Pg	Pg	21 28 47.4	-0.2
KAN17				Sg	Sg	21 28 49.3	-0.4
KAN05	**Bluff City Nor**	0.18	348		Pg	21 28 48.4	-0.1
KAN05				Sg	Sg	21 28 51.1	0.0
KAN01	**Argonia South**	0.22	14		Pg	21 28 49.2	0.0
KAN09	**Caldwell North**	0.26	40	Pg	Pg	21 28 49.9	0.0
KAN09				Sg	Sg	21 28 53.4	-0.2
KAN10	**Anthony SW Sta**	0.29	311	Pg	Pg	21 28 50.3	-0.1
KAN10				Sg	Sg	21 28 54.3	0.0
KAN13	**South Haven SW**	0.29	74	Pg	Pg	21 28 50.5	+0.1
KAN13				Sg	Sg	21 28 54.3	0.0
KAN06	**Argonia West S**	0.31	355		Pg	21 28 50.9	-0.1
KAN06				Sg	Sg	21 28 55.4	+0.2
KAN08	**Anthony NE Sta**	0.31	338		Pg	21 28 50.9	-0.1
KAN08				Sg	Sg	21 28 55.4	+0.3
OK032	**Salt Plains WL**	0.34	247		Pg	21 28 51.3	0.0
OK032				Sg	Sg	21 28 55.8	0.0
KAN16	**Harper SW Stat**	0.35	327	Pg	Pg	21 28 51.5	-0.1
KAN16				Sg	Sg	21 28 56.4	+0.2
KAN12	**Harper NE Stat**	0.39	339	Pg	Pg	21 28 52.2	-0.1
KAN12				Sg	Sg	21 28 57.6	+0.1
CROK	**Carrier**	0.45	196	Pg	Pg	21 28 53.5	+0.1
CROK				Sg	Sg	21 28 59.8	+0.5
BLOK	**Blackwell**	0.52	109	Pg	Pg	21 28 54.6	-0.1
BLOK				Sg	Sg	21 29 01.9	+0.3
T35A	**Sooner Cattle**	1.05	91	Pg	Pg	21 29 04.4	-0.5
T35A				Sg	Sg	21 29 17.9	-0.6
T35B	**Sooner Cattle**	1.05	91	P	Pg	21 29 04.3	-0.5
	baz=272,SNR=230						
T35B				S	Sg	21 29 18.9	+0.3
	baz=272						
U32A	**Winter Ranch,**	1.10	240		Pg	21 29 04.9	-0.7
U32A				Sg	Sg	21 29 19.7	-0.2
U32A	**Winter Ranch,**	1.10	240	P	Pg	21 29 04.9	-0.7
	baz=59						
OK029	**Liberty Lake**	1.18	165		Pb	21 29 06.5	-0.4
QUOK	**Quay**	1.18	130		Pb	21 29 06.6	-0.4
QUOK				Sg	Sb	21 29 22.2	-0.1
OK031	**S. Brethren Rd**	1.26	141		Pn	21 29 08.1	-0.1
OK031				Sg	Sb	21 29 25.3	+0.6
BCOK	**Bluff Creek, N**	1.29	172		Pn	21 29 08.3	-0.2
BCOK				Sg	Sb	21 29 26.1	+0.7
OK030	**Cody Creek RV**	1.31	140		Pn	21 29 08.7	-0.2
OK025	**Westminster Rd**	1.41	164		Pn	21 29 10.5	+0.3
OKCFA	**Oklahoma City**	1.55	169		Pn	21 29 12.8	+0.7
OKCFA	**Oklahoma City**	1.55	169	P	Pn	21 29 13.0	+0.9
	baz=349						
OKCFA				S	Sg	21 29 34.3	-0.1
	baz=349						
OKCSW	**OKLAHOMA CITY**	1.56	168		Pn	21 29 13.0	+0.7
R32A	**Long Quarter,**	1.64	335		Pb	21 29 14.5	-0.5
R32A	**Long Quarter,**	1.64	335	P	Pb	21 29 14.8	-0.2
	baz=154,SNR=226						
R32A				S	Sb	21 29 36.0	+0.3
	baz=154						
FNO	**Franklin**	1.71	168	Pn	Pn	21 29 15.3	+1.0
TUL1	**Leonard**	1.93	121	P	Pn	21 29 18.9	+1.5
	baz=303						
TUL1				S	Sb	21 29 45.0	+1.0
	baz=303						
TUL1	**Leonard**	1.93	121		Pn	21 29 18.9	+1.5
TUL1	**Leonard**	1.93	121	P	Pn	21 29 18.3	+0.9
	baz=303,SNR=65						
TUL1				S	Sb	21 29 45.1	+1.1
	baz=303						
W35A	**Tecumseh**	1.94	156		Pn	21 29 18.2	+0.7
W35A				IAmb_Lg		21 29 49.1	
	comp=Z,217nm,0.7s						
X34A	**Smith Ranch, M**	2.33	180	Pn	Pn	21 29 24.3	+1.4
KSU1	**Kansas State U**	2.37	24	P	Pn	21 29 24.5	+1.1
	baz=204						
KSU1				Sb	Sb	21 29 56.9	+0.4
	baz=204						
KSU1	**Kansas State U**	2.37	24	Pn	Pn	21 29 24.2	+0.8
KSU1	**Kansas State U**	2.37	24	P	Pn	21 29 24.3	+0.9
	baz=204,SNR=43						
KSU1				S	Sb	21 29 55.0	-1.5
	baz=204						
CBKS	**Cedar Bluff**	2.41	322	P	Pn	21 29 25.3	+1.3
	baz=141						
CBKS				Sb	Sb	21 29 58.2	+0.5
	baz=141						
CBKS	**Cedar Bluff**	2.41	322	Pn	Pn	21 29 25.1	+1.1
CBKS				IAmb_Lg		21 29 59.3	
	comp=Z,226nm,0.9s						
CBKS	**Cedar Bluff**	2.41	322	P	Pn	21 29 25.3	+1.3
	baz=141,SNR=26						
CBKS				S	Sb	21 29 58.3	+0.5
	baz=141						
U38A	**Gravette**	2.81	99	Pn	Pn	21 29 30.4	+0.9
U38A	**Gravette**	2.81	99	P	Pn	21 29 30.5	+1.1
	baz=281,SNR=65						
LOOK	**Love County**	2.98	170	Pn	Pn	21 29 32.5	+0.6
LOOK				IAmb_Lg		21 30 27.3	
	comp=Z,140nm,1.0s						
X37A	**Clayton**	3.08	139	Pn	Pn	21 29 34.4	+1.2
X37A				IAmb_Lg		21 30 29.6	
	comp=Z,254nm,0.8s						
X37A	**Clayton**	3.08	139	P	Pn	21 29 34.6	+1.4
	baz=320						
HHAR	**Hobbs**	3.19	101		Pn	21 29 35.9	+1.2
HHAR				IAmb_Lg		21 30 32.6	
	comp=Z,186nm,0.8s						
HHAR	**Hobbs**	3.19	101	P	Pn	21 29 36.1	+1.3
	baz=283						
Z35A	**Perchaven, San**	3.63	172	Pn	Pn	21 29 41.5	+0.8
Z35A	**Perchaven, San**	3.63	172	P	Pn	21 29 42.0	+1.2
	baz=353						
Z35A				S	Sn	21 30 24.7	+1.2
	baz=353						
S39A	**Bolivar**	3.67	77	Pn	Pn	21 29 41.8	+0.5
S39A	**Bolivar**	3.67	77	P	Pn	21 29 41.8	+0.5
	baz=260,SNR=39						
W39A	**Magazine**	3.71	117	IAmb_Lg		21 30 47.7	
	comp=Z,177nm,0.8s						
N33B	**J Bar K, Exete**	3.81	4	P	Pn	21 29 43.3	0.0
	baz=185,SNR=13						
N33A	**J Bar K, Exete**	3.81	4	Pn	Pn	21 29 43.1	-0.1
N33A				IAmb_Lg		21 30 51.6	
	comp=Z,138nm,0.8s						
U40A	**Yellville**	4.04	97	P	Pn	21 29 47.2	+0.8
	baz=280						
U40A	**Yellville**	4.04	97	Pn	Pn	21 29 46.9	+0.5
U40A				IAmb_Lg		21 30 56.6	
	comp=Z,171nm,0.8s						
U40A	**Yellville**	4.04	97	P	Pn	21 29 46.9	+0.5
	baz=280,SNR=50						
U40A				P	Pn	21 29 46.9	+0.5
	baz=280,SNR=50						
MIAR	**Mount Ida**	4.20	123	P	Pn	21 29 50.8	+2.2
	baz=306						
MIAR				Sb	Sg	21 30 56.3	-3.1
	baz=306						
MIAR	**Mount Ida**	4.20	123	Pn	Pn	21 29 50.1	+1.5
MIAR				IAmb_Lg		21 30 59.9	
	comp=Z,128nm,1.1s						
MIAR	**Mount Ida**	4.20	123	P	Pn	21 29 50.7	+2.1
	baz=306,SNR=18						
N35A	**Tabor**	4.27	23	Pn	Pn	21 29 50.2	+0.6
N35A	**Tabor**	4.27	23	P	Pn	21 29 50.5	+0.9
	baz=204,SNR=11						
P38A	**Dawn**	4.32	50	Pn	Pn	21 29 51.0	+0.8
P38A				IAmb_Lg		21 30 59.6	
	comp=Z,123nm,0.7s						
P38A	**Dawn**	4.32	50	P	Pn	21 29 50.9	+0.8

	baz=233,SNR=20						
KSCO	Kaye Shedlock'	4.32	300	Pn	Pn	21 29 51.1	+0.7
KSCO				IAmb_Lg		21 31 10.0	
	comp=Z,90nm,0.8s						
Z38A	Mt. Pleasant	4.34	147	Pn	Pn	21 29 51.0	+0.4
Z38A				IAmb_Lg		21 31 04.6	
	comp=Z,169nm,0.8s						
MGMO	Mountain Grove	4.45	86	Pn	Pn	21 29 52.7	+0.6
MGMO				IAmb_Lg		21 31 02.6	
	comp=Z,101nm,0.9s						
BGNE	Belgrade	4.47	357	Pn	Pn	21 29 52.9	+0.5
ABTX	Abilene, Hawle	4.55	200	Pn	Pn	21 29 53.9	+0.4
R40A	Maddies Statio	4.62	71	Pn	Pn	21 29 54.5	+0.2
FCAR	Ozark Folk Cen	4.71	101	Pn	Pn	21 29 56.0	+0.4
FCAR				IAmb_Lg		21 31 15.3	
	comp=Z,76nm,0.8s						
X40A	Basin Creek Fa	4.74	120	P	Pn	21 29 58.3	+2.3
	baz=303						
X40A	Basin Creek Fa	4.74	120	Pn	Pn	21 29 56.5	+0.5
X40A				IAmb_Lg		21 31 24.1	
	comp=Z,98nm,0.8s						
WHAR	Wooly Hollow	4.77	108	Pn	Pn	21 29 56.6	+0.1
W41B	Gary Mavity, V	4.85	110	Sb	Sb	21 31 14.1	+6.2
	baz=293						
W41B	Gary Mavity, V	4.85	110	P	Pn	21 29 58.3	+0.8
	baz=293,SNR=6.8						
WHTX	Lake Whitney,	4.94	176	P	Pn	21 29 59.5	+0.7
	baz=356						
WHTX	Lake Whitney,	4.94	176	Pn	Pn	21 29 58.9	+0.1
MSTX	Muleshoe	5.01	235	Pn	Pn	21 29 59.8	0.0
WLAR	White Oak Lake	5.04	129	Pn	Pn	21 30 01.5	+1.4
WLAR				IAmb_Lg		21 31 32.8	
	comp=Z,144nm,0.9s						
L34A	Svendsen Farm,	5.15	12	Pn	Pn	21 30 00.4	-1.2
237A	Washetta, Mont	5.20	161	IAmb_Lg		21 31 41.0	
	comp=Z,105nm,1.1s						
P40A	Paris	5.23	59	Pn	Pn	21 30 02.6	-0.2
P40A				IAmb_Lg		21 31 36.4	
	comp=Z,102nm,0.9s						
N38A	Joes South For	5.26	42		Pn	21 30 03.4	+0.3
N38A				IAmb_Lg		21 31 40.6	
	comp=Z,125nm,0.7s						
N38A	Joes South For	5.26	42	P	Pn	21 30 03.6	+0.4
	baz=224,SNR=10						
T25A	Trinidad	5.27	274	IAmb_Lg		21 31 45.8	
	comp=Z,81nm,0.9s						
CCM	Cathedral Cave	5.35	76	IAmb_Lg		21 31 39.0	
	comp=Z,80nm,1.0s						
T42A	Van Buren	5.39	87	Pn	Pn	21 30 05.5	+0.5
LCAR	Lake Charles	5.44	97	Pn	Pn	21 30 06.3	+0.7
CCAR	Cane Creek	5.79	120	IAmb_Lg		21 32 03.0	
	comp=Z,100nm,0.9s						
PBMO	Poplar Bluff	5.93	89	Pn	Pn	21 30 12.9	+0.6
PBMO				IAmb_Lg		21 31 58.2	
	comp=Z,87nm,0.8s						
FVM	French Village	5.98	78	Pn	Pn	21 30 13.8	+0.8
Q24A	Divide	6.13	292	S	Sn	21 31 26.7	+1.0
	baz=107						
435B	Jarrell	6.14	178	Pn	Pn	21 30 15.2	-0.1
435B				IAmb_Lg		21 32 11.9	
	comp=Z,108nm,0.8s						
SDCO	Great Sand Dun	6.17	280	Pn	Pn	21 30 16.6	+0.7
SLM	Saint Louis	6.25	72	IAmb_Lg		21 32 00.0	
	comp=Z,78nm,1.0s						
N41A	Harden Midland	6.62	53	Pn	Pn	21 30 21.9	+0.1
JCT	Junction City	6.65	195	Pn	Pn	21 30 22.0	-0.3
JCT				IAmb_Lg		21 32 34.4	
	comp=Z,86nm,0.7s						
ISCO	Idaho Springs	6.75	297	Pn	Pn	21 30 24.1	+0.1
ECSD	EROS Data Cent	6.85	7		Pn	21 30 24.4	-0.6
ECSD				IAmb_Lg		21 32 30.5	
	comp=Z,61nm,0.9s						
ECSD	EROS Data Cent	6.85	7	P	Pn	21 30 24.4	-0.6
	baz=188,SNR=8.6						
S44A	Carbondale	6.87	81	Pn	Pn	21 30 25.3	0.0
S44A				IAmb_Lg		21 32 19.0	
	comp=Z,52nm,0.7s						
GLAT	Glass	6.90	93	IAmb_Lg		21 32 40.7	
	comp=Z,98nm,0.8s						
SIUC	Southern Illin	6.90	81	Pn	Pn	21 30 26.0	+0.3
SIUC				IAmb_Lg		21 32 33.2	
	comp=Z,54nm,0.8s						
HALT	Halls	6.92	96	IAmb_Lg		21 32 28.4	
	comp=Z,90nm,0.8s						
P43A	Skaggs, Pawnee	7.07	65	IAmb_Lg		21 32 28.5	
	comp=Z,88nm,0.9s						
W45A	Hickory Valley	7.22	102	IAmb_Lg		21 32 40.8	
	comp=Z,66nm,0.8s						
L40A	Anamosa	7.23	43	Pn	Pn	21 30 30.0	-0.2
L40A				IAmb_Lg		21 32 40.8	
	comp=Z,64nm,1.0s						
Q44A	Meyer Farm, Va	7.24	72	IAmb_Lg		21 32 37.8	
	comp=Z,88nm,1.0s						
ANMO	Albuquerque	7.28	257	Pn	Pn	21 30 32.7	+1.6
	comp=Z,0.1nm,0.3s,baz=58,slow=13,SNR=1.5						
ANMO				Pg	Pb	21 30 55.2	+4.1
	comp=Z,0.3nm,0.3s,baz=71,slow=18,SNR=5.0						
ANMO				Lg	Lg	21 32 30.9	
	comp=Z,1.3nm,0.3s,baz=73,slow=10,SNR=11						
ANMO	Albuquerque	7.28	257	Pn	Pn	21 30 32.2	+1.1
T45A	Paducah	7.35	87	IAmb_Lg		21 32 52.8	
	comp=Z,92nm,0.7s						
Y45A	Yeager Farm, C	7.42	112	IAmb_Lg		21 32 59.9	
	comp=Z,46nm,0.7s						
SUSD	Miller	7.55	354	IAmb_Lg		21 32 56.8	
	comp=Z,90nm,0.9s						
HDIL	Hopedale	7.58	59	Pn	Pn	21 30 35.0	-0.1
I37A	Lemond, Waseca	7.83	24	IAmb_Lg		21 33 01.9	
	comp=Z,80nm,0.8s						
Y22D	IRIS PASSCAL I	7.95	252	IAmb_Lg		21 33 04.0	
	comp=Z,71nm,0.8s						
O44A	Mansfield	8.01	64	IAmb_Lg		21 33 17.4	
	comp=Z,55nm,0.8s						
L42A	Oliver, Polo	8.09	49		Pn	21 30 42.2	+0.3
WVT	Waverly	8.09	93	Pn	Pn	21 30 42.0	0.0
MNTX	Cornudas Mount	8.14	232	Pn	Pn	21 30 43.5	+0.7
JFWS	Jewell Farm	8.34	42	Pn	Pn	21 30 44.4	-1.0
JFWS				IAmb_Lg		21 33 21.9	
	comp=Z,40nm,0.8s						
RSSD	Black Hills	8.59	329	IAmb_Lg		21 33 26.5	
	comp=Z,58nm,1.1s						
RWWY	Rawlins	8.68	306	IAmb_Lg		21 33 41.4	
	comp=Z,38nm,0.8s						
K22A	Casper	8.79	313	IAmb_Lg		21 33 39.7	
	comp=Z,50nm,0.9s						
M44A	Midewin, Midew	8.80	57	IAmb_Lg		21 33 31.3	
	comp=Z,37nm,0.8s						
I40A	Norwalk	8.86	36		Pn	21 30 52.5	0.0
I40A				IAmb_Lg		21 33 32.6	
	comp=Z,35nm,1.0s						
F33A	5 Mile Ranch,	8.97	7	IAmb_Lg		21 33 25.6	
	comp=Z,38nm,0.9s						
TX31	Lajitas Ar. Si	9.02	215	Pn	Pn	21 30 54.2	-0.8
TX32	Lajitas Array	9.02	215	Pn	Pn	21 30 54.6	-0.3
TXAR	Lajitas Array	9.02	215	Pn	Pn	21 30 53.4	-1.5
	comp=Z,0.3nm,0.3s,baz=44,slow=11,SNR=21						
TXAR				Pg		21 31 24.6	
	comp=Z,0.2nm,0.3s,baz=35,slow=13,SNR=3.0						
TXAR				Sn	Sn	21 32 30.0	-6.6
	comp=Z,0.3nm,0.3s,baz=39,slow=15,SNR=1.5						
TXAR				Lg	Lg	21 33 25.6	
	comp=Z,0.9nm,0.3s,baz=37,slow=27,SNR=9.5						
TXAR	Lajitas Array	9.02	215	Pn	Pn	21 30 54.6	-0.3
F36A	Milaca	9.48	19	IAmb_Lg		21 33 49.5	
	comp=Z,32nm,1.1s						
I42A	Draeger Farm,	9.71	42	IAmb_Lg		21 34 12.3	
	comp=Z,33nm,0.9s						
E28A	Huff	9.87	348	IAmb_Lg		21 34 01.4	
	comp=Z,38nm,0.8s						
G40A	Rib Lake	10.11	32	Pn	Pn	21 31 09.8	0.0
PD31	Pinedale Array	10.73	306	Pn	Pn	21 31 18.6	+0.2
PDAR	Pinedale Array	10.73	306	Pn	Pn	21 31 18.0	-0.4
	comp=Z,0.3nm,0.3s,baz=114,slow=15,SNR=18						
PDAR				Pg		21 32 01.7	
	comp=Z,0.3nm,0.3s,baz=116,slow=14,SNR=7.1						
PDAR				Lg	Lg	21 34 19.9	
	comp=Z,0.5nm,0.3s,baz=116,slow=10,SNR=6.9						
PDAR	Pinedale Array	10.73	306	Pn	Pn	21 31 17.5	-0.9
BW06	Boulder Array	10.73	306	Pn	Pn	21 31 17.1	-1.3
CPCT	Cooper Cave	10.85	94	Pn	Pn	21 31 20.5	+0.6
O49A	Covington	11.05	69	Pn	Pn	21 31 21.8	-0.8
TKL	Tuckaleechee C	11.41	92	Pn	Pn	21 31 27.0	-0.6
	comp=Z,0.5nm,0.3s,baz=285,slow=12,SNR=5.8						
TKL				Lg	Lg	21 34 37.8	
	comp=Z,0.9nm,0.3s,baz=336,slow=20,SNR=9.6						
TKL	Tuckaleechee C	11.41	92	Pn	Pn	21 31 27.4	-0.2
V52A	Sevierville	11.52	91	Pn	Pn	21 31 29.4	+0.4
ULM	Lac du Bonnet	13.38	5	Pn	Pn	21 31 49.5	-4.9
	comp=Z,0.3nm,0.3s,baz=191,slow=18,SNR=2.9						
ULM				Sn	Sn	21 34 11.6	-12
	comp=Z,0.3nm,0.3s,baz=194,slow=15,SNR=1.5						
ULM				Lg	Lg	21 35 40.0	
	comp=Z,0.2nm,0.3s,baz=172,slow=19,SNR=4.7						
SADO	Sadowa	16.14	55	Lg	Lg	21 37 02.8	
	comp=Z,0.4nm,0.3s,baz=269,slow=18,SNR=2.0						
ILAR	Eielson Array	40.04	330	P	P	21 36 20.8	+1.4
	comp=Z,1.9nm,0.7s,baz=107,slow=6.9,SNR=20						

IDC **30** *21:51:47.5±1.1, 6.°74N×72.°90W, h160^{km}±12^{km}, mb3.5/7, mb1 3.8/10, mb1mx3.4/36, mbtmp4.0/10, Error ellipse: s-maj=18.6km s-min=13.6km az=153.0*

RSNC **30** *21:51:48.7±1.1, 6.°83N×73.°13W, h154^{km}±3^{km}, ML3.9, Mw4.3, Fault plane solution: NP1:φ$_s$57.00000°, δ22.00000°, λ38.00000°.*

NEIC **30** *21:51:48.4±1.8, 6.°82N±0.°06×73.°02W±0.°07, h145^{km}±7^{km}, mb4.4/58, Error ellipse: s-maj=9.9km s-min=9.0km az=94.0*

ISC 30 21:51:47.9±0.6, **6.°84N**±0.°03×**73.°06W**±0.°03, **h154**^{km}±5^{km}, **n137**, σ**1^{s}52**/183, **mb4.3**/36, **8C-7D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	Barichara	0.28	206	⇑*i*P	Pn	21 52 09.5	+0.3
BARC				*e*S	Sn	21 52 24.8	-0.6
BARC				*i*		21 52 25.9	
	comp=Z,2µm,0.3s						
PAMC	Pamplona, Colo	0.61	36	⇑*i*P	Pn	21 52 12.3	+1.4
PAMC				*e*S	Sn	21 52 29.7	+1.3
PAMC				*i*		21 52 31.7	
	comp=Z,1µm,0.5s						
BRRC	Barranca, Sant	0.70	292	⇑*i*P	Pn	21 52 11.3	+0.5
BRRC				*e*S	Sn	21 52 28.1	-0.2
BRRC				*i*		21 52 30.9	
	comp=Z,1µm,0.1s						
RUSC	La Rusia	0.94	181	⇓*e*P	Pn	21 52 13.5	+0.3
RUSC				*e*S	Sn	21 52 32.2	-0.3
RUSC				*i*		21 52 34.3	
	comp=Z,816nm,0.2s						
TAMC	Tame, Arauca	1.32	108	⇑*i*P	Pn	21 52 18.0	+1.9
TAMC				*e*S	Sn	21 52 39.5	+1.9
TAMC				*i*		21 52 49.7	
	comp=Z,655nm,0.5s						
OCAC	Ocana	1.41	349	⇑*e*P	Pn	21 52 17.5	+0.5
OCAC				*e*S	Sn	21 52 39.7	+0.2
OCAC				*i*		21 52 45.1	
	comp=Z,2µm,0.2s						
OCAC	Ocana	1.41	349		Pn	21 52 17.5	+0.5
OCAC				Sn	Sn	21 52 39.3	-0.2
PTBC	PUERTO BERRIO,	1.42	258	*e*P	Pn	21 52 16.0	-1.0
PTBC				*e*S	Sn	21 52 38.1	-1.2
SPBC	San Pablo de B	1.55	220	*e*P	Pn	21 52 18.4	-0.1
SPBC				*e*S	Sn	21 52 40.5	-1.4
SPBC				*i*		21 52 45.2	
	comp=Z,2µm,0.3s						
ZARC	Zaragoza, Cauc	1.90	290	*e*P	Pn	21 52 22.0	-0.2
ZARC				*e*S	Sn	21 52 47.5	-0.9
ZARC				*i*		21 52 54.2	
	comp=Z,1µm,0.3s						
ZARC	Zaragoza, Cauc	1.90	290	Pn	Pn	21 52 21.5	-0.6
SMLC	San Martn de	2.19	333	*e*P	Pn	21 52 25.6	+0.1
SMLC				*e*S	Sn	21 52 54.5	0.0
SMLC				*i*		21 52 57.9	
	comp=Z,920nm,0.1s						
NORC	Norcasia	2.20	235	*e*P	Pn	21 52 25.4	-0.4
NORC				*e*S	Sn	21 52 53.5	-1.3
NORC				*i*		21 52 58.4	
ROSC	El Rosal	2.35	212	P	Pn	21 52 29.2	+1.3
	comp=Z,105nm,0.3s,baz=257,slow=0.1,SNR=123						
ROSC				S	Sn	21 52 59.1	+0.5
	comp=Z,463nm,0.3s,baz=168,slow=9.3,SNR=14						
ROSC	El Rosal	2.35	212	⇓*e*P	Pn	21 52 29.1	+1.3
ROSC				*e*S	Sn	21 52 59.1	+0.5
ROSC				*i*		21 53 03.7	
	comp=Z,1µm,0.5s						
ROSC	El Rosal	2.35	212	Pn	Pn	21 52 28.9	+1.1
HELC	Santa Helena	2.54	255	*e*P	Pn	21 52 29.6	-0.5
HELC				*e*S	Sn	21 53 02.1	-0.4
HELC				*i*		21 53 08.4	
	comp=Z,317nm,0.4s						
SOCV	Socops	2.61	57	⇑*i*P	Pn	21 52 31.4	+0.7
SOCV				*e*S	Sn	21 53 04.2	+0.6
UREC	San Jos de Ur	2.62	290	*e*P	Pn	21 52 29.3	-1.4
UREC				*e*S	Sn	21 53 00.1	-3.5
UREC				*i*		21 53 13.5	
	comp=Z,561nm,0.4s						
LL1C	La Loma 1 Cana	2.73	350	*e*P	Pn	21 52 34.3	+2.3
LL1C				*e*S	Sn	21 53 09.0	+2.8
PTGC	Puerto Gaitan,	2.78	161	⇓*e*P	Pn	21 52 32.7	-0.1
PTGC				*e*S	Sn	21 53 06.2	-1.2
PTGC				*i*		21 53 09.1	
	comp=Z,233nm,0.2s						
VILC	Villavicencio,	2.79	193	*e*P	Pn	21 52 32.9	-0.1
VILC				*e*S	Sn	21 53 06.7	-1.0
GUY2C	Guyana, Caldas	2.80	235	*e*P	Pn	21 52 33.5	+0.1
GUY2C				*e*S	Sn	21 53 08.4	-0.1
GUY2C				*i*		21 53 16.2	
	comp=Z,618nm,0.3s						
LL6C	La Loma 6 Bece	2.88	356	⇑*e*P	Pn	21 52 34.1	+0.1
LL6C				*e*S	Sn	21 53 08.8	-0.9
CBOC	Ciudad Bolivar	3.09	252	*e*P	Pn	21 52 37.0	+0.3
CBOC				*e*S	Sn	21 53 13.9	-0.6
CBOC				*i*		21 53 20.1	
	comp=Z,154nm,0.6s						
DBBC	Dabeiba	3.13	273	⇓*e*P	Pn	21 52 37.3	+0.1
DBBC				*e*S	Sn	21 53 13.6	-1.7
SDV	Santo Domingo	3.15	50	⇑*e*P	Pn	21 52 39.0	+1.6
SDV				*e*S	Sn	21 53 16.1	+0.2
SDV	Santo Domingo	3.15	50	Pn	Pn	21 52 38.9	+1.5
ARGC	Ariguani, Magd	3.22	339	*e*P	Pn	21 52 39.5	+1.3
ARGC				*e*S	Sn	21 53 18.7	+1.4
ARGC				*i*		21 53 25.6	
	comp=Z,150nm,0.4s						
MOTC	Monteria, Cord	3.22	307	*e*P	Pn	21 52 36.6	-1.6
MOTC				*e*S	Sn	21 53 14.6	-2.6
MOTC				*i*		21 53 32.2	
	comp=Z,320nm,0.6s						
MOTC	Monteria, Cord	3.22	307	Pn	Pn	21 52 36.4	-1.8
ANIL	Santa Ana	3.30	225	*e*P	Pn	21 52 40.0	+0.4
ANIL				*e*S	Sn	21 53 20.1	+0.5
ELOV	Elorza	3.55	87	*e*P	Pn	21 52 43.8	+1.3
ELOV				*e*S	Sn	21 53 24.9	0.0
PRAC	Prado	3.60	210	⇓*e*P	Pn	21 52 42.6	-0.6
PRAC				*e*S	Sn	21 53 25.2	-0.9
PRAC				*i*		21 53 31.8	
	comp=Z,880nm,0.7s						
ORTC	Ortega, Tolima	3.64	217	*e*P	Pn	21 52 43.7	+0.1
ORTC				*e*S	Sn	21 53 26.9	-0.1
ORTC				*i*		21 53 33.5	
	comp=Z,367nm,0.6s						
CVALL	Valledupar, Ce	3.65	357	*e*P	Pn	21 52 43.6	-0.1
CVALL				*e*S	Sn	21 53 27.5	+0.3
CVALL				*i*		21 53 32.5	
	comp=Z,269nm,0.3s						
SJCC	San Jacinto, C	3.69	325	⇓*e*P	Pn	21 52 43.1	-1.2
SJCC				*e*S	Sn	21 53 24.5	-3.6
SJCC				*i*		21 53 44.5	
	comp=Z,190nm,0.5s						
SJCC	San Jacinto, C	3.69	325	Pn	Pn	21 52 43.0	-1.4
PLMC	San Jos del P	3.74	239	*e*P	Pn	21 52 44.9	-0.1
PLMC				*e*S	Sn	21 53 27.5	-1.8
PLMC				*i*		21 53 35.3	
	comp=Z,128nm,0.3s						
LCBC	Los crdobas,	3.84	302	*e*P	Pn	21 52 45.4	-0.8
LCBC				*e*S	Sn	21 53 29.4	-2.1
LCBC				*i*		21 53 33.9	
	comp=Z,138nm,0.4s						
GUVC	San Jose del G	4.29	174	*e*P	Pn	21 52 52.1	0.0
GUVC				*e*S	Sn	21 53 41.6	-0.5
GUVC				*i*		21 53 48.5	
	comp=Z,224nm,0.3s						
YOTC	Yotoco, Valle	4.33	229	*e*P	Pn	21 52 51.7	-1.0
YOTC				*e*S	Sn	21 53 44.3	+1.1
YOTC				*i*		21 53 55.8	
	comp=Z,49nm,0.8s						
SMRC	Santa Marta, M	4.45	345	*e*P	Pn	21 52 54.5	+0.4
SMRC				*e*S	Sn	21 53 42.7	-3.1
SMRC				*i*		21 53 45.4	
	comp=Z,140nm,0.3s						
PTAC	Punta Ardita,	4.72	274	*e*P	Pn	21 52 56.5	-1.2
MACC	Macarena, Meta	4.73	190	⇓*e*P	Pn	21 52 56.5	-1.5
MACC				*e*S	Sn	21 53 47.9	-4.6
MACC				*i*		21 53 54.2	
	comp=Z,170nm,0.6s						
BETC	Betania	4.77	210	*e*P	Pn	21 52 57.7	-0.7
BETC				*e*S	Sn	21 53 46.4	-7.1
BETC				*i*		21 53 57.3	
	comp=Z,113nm,0.7s						
MARP	Paez Belalcaza	4.91	216	*e*P	Pn	21 53 00.3	-0.2
MARP				*e*S	Sn	21 53 55.5	-1.7
URIC	Uribia, Colomb	4.94	12	*e*P	Pn	21 53 00.1	-0.5
URIC				*e*S	Sn	21 53 54.0	-3.4
URIC				*i*		21 54 01.2	
	comp=Z,68nm,0.6s						
URIC	Uribia, Colomb	4.94	12	Pn	Pn	21 52 59.7	-0.9
GARC	Garzon, Huila	5.22	208	*e*P	Pn	21 53 03.7	-0.9
GARC				*e*S	Sn	21 54 02.1	-2.4
GARC				*i*		21 54 08.8	
	comp=Z,122nm,0.2s						
BAUV	El Baul	5.39	67	Pn	Pn	21 53 05.4	-1.1
PCON	Cinco Dias	5.58	217	*e*P	Pn	21 53 10.3	+0.6
PCON				*e*S	Sn	21 54 12.8	-0.7
PCON				*i*		21 54 49.9	
	comp=Z,50nm,0.6s						
SOTA	Rioblanco	5.86	217	*e*P	Pn	21 53 14.2	+0.9
SOTA				*i*		21 54 28.9	
	comp=Z,40nm,0.6s						
BIRV	Birongo	7.62	61	Pn	Pn	21 53 35.1	-1.1
OTAV	Otavalo	8.48	220	Pn	Pn	21 53 48.4	+0.1
PCRV	Puerto La Cruz	8.96	68	P	Pn	21 53 52.1	-2.1
	comp=Z,1.8nm,0.3s,baz=283,slow=4.0,SNR=11						
PCRV				S	Sn	21 55 32.1	-1.8
	baz=60,slow=16,SNR=1.3						
PLCV	Puerto La Cruz	9.00	68		Sn	21 55 32.1	-2.6
MTDJ	Mount Denham	12.13	339	Pn	Pn	21 54 38.4	+2.6
PDPR	Patillas Dam,	13.06	31	Pn	Pn	21 54 47.5	-0.2
GTBY	Guantanamo Bay	13.16	351		P	21 54 52.6	-0.8
PTGA	Pitinga	15.08	119	P	Pn	21 55 11.5	-1.7
	comp=Z,0.2nm,0.3s,baz=319,slow=19,SNR=2.2						
PTGA				S	Sn	21 57 54.4	-6.5
	comp=Z,0.6nm,0.3s,baz=360,slow=19,SNR=5.7						
ETMB	Extrema	17.90	158		P	21 55 45.8	-0.1
SAML	Samuel	18.52	148	P	P	21 55 52.5	-0.1
HODGE	Hodges	28.55	344	P	P	21 57 30.9	+1.7
HODGE				IAmb	IAmb	21 57 50.7	
	comp=Z,8.9nm,1.2s						
Z51A	Franklin	28.64	338	P	P	21 57 31.9	+1.8
Z51A				IAmb	IAmb	21 57 33.4	
	comp=Z,7.7nm,0.8s						
Y49A	Blount Mountai	29.59	337	P	P	21 57 40.4	+2.0
Y49A				IAmb	IAmb	21 57 40.9	
	comp=Z,4.6nm,0.5s						
X48A	Hartselle	30.36	337	P	P	21 57 46.4	+1.2
X48A				IAmb	IAmb	21 57 47.9	
	comp=Z,6.0nm,0.8s						
U54A	Nelsons Funny	30.61	346	P	P	21 57 49.3	+1.8
V48A	Smith Brothers	31.41	338	P	P	21 57 56.4	+2.0
WVT	Waverly	32.14	337	P	P	21 58 02.0	+1.2
WVT				IAmb	IAmb	21 58 02.8	
	comp=Z,11nm,1.1s						
T47A	Sharon Grove	32.63	339	P	P	21 58 06.7	+1.7
T47A				IAmb	IAmb	21 58 07.4	
	comp=Z,10nm,0.9s						
WHAR	Wooly Hollow	33.38	331	P	P	21 58 12.8	+1.2
WHAR				IAmb	IAmb	21 58 13.2	
	comp=Z,4.9nm,0.8s						
WCI	Wyandotte Cave	33.47	341	P	P	21 58 14.3	+2.0
WCI				IAmb	IAmb	21 58 14.7	
	comp=Z,5.7nm,0.6s						
PBMO	Poplar Bluff	33.75	334	P	P	21 58 16.2	+1.4
FCAR	Ozark Folk Cen	33.78	332	P	P	21 58 15.7	+0.6
FCAR				IAmb	IAmb	21 58 16.1	
	comp=Z,4.9nm,0.6s						
T42A	Van Buren	34.25	334	P	P	21 58 20.1	+1.0
T42A				IAmb	IAmb	21 58 20.9	
	comp=Z,7.9nm,1.1s						
U40A	Yellville	34.51	331	P	P	21 58 22.2	+0.9
KSPA	Keystone Colle	34.65	356	P	P	21 58 24.5	+1.9
FVM	French Village	34.77	336	P	P	21 58 25.0	+1.4
FVM				IAmb	IAmb	21 58 25.2	
	comp=Z,6.6nm,0.7s						
M54A	Oil Creek Stat	35.02	351	P	P	21 58 27.8	+2.1
M54A				IAmb	IAmb	21 58 28.7	
	comp=Z,9.5nm,1.1s						
P46A	Rosedale	35.03	341	P	P	21 58 27.3	+1.5
CCM	Cathedral Cave	35.18	335	P	P	21 58 28.1	+1.1
L56A	Greenwood	35.37	354	P	P	21 58 30.7	+1.9
L56A				IAmb	IAmb	21 58 35.2	
	comp=Z,7.5nm,1.1s						
SFIN	Lafayette	35.68	341	P	P	21 58 32.5	+1.2
S39A	Bolivar	35.80	332	P	P	21 58 33.1	+0.7
S39A				IAmb	IAmb	21 58 34.2	
	comp=Z,3.9nm,0.6s						
R40A	Maddies Statio	35.82	334	P	P	21 58 33.2	+0.7
R40A				IAmb	IAmb	21 58 33.4	
	comp=Z,4.4nm,0.6s						
TXAR	Lajitas Array	36.49	312	P	P	21 58 39.4	+0.9
	comp=Z,1.0nm,0.7s,baz=126,slow=9.0,SNR=14						
TX31	Lajitas Ar. Si	36.49	312	P	P	21 58 39.6	+1.1
TX31				IAmb	IAmb	21 58 46.9	
	comp=Z,4.3nm,0.9s						
TX32	Lajitas Array	36.49	312	P	P	21 58 39.5	+0.9
J57A	Williamstown	36.51	356	P	P	21 58 39.9	+1.5
J57A				IAmb	IAmb	21 58 40.9	
	comp=Z,10nm,1.1s						
P38A	Dawn	37.47	334	P	P	21 58 46.7	+0.2
P38A				IAmb	IAmb	21 58 47.6	
	comp=Z,6.6nm,0.7s						
EMMW	East Machias	38.03	6	P	P	21 58 52.8	+1.7
JFWS	Jewell Farm	38.99	340	P	P	21 58 59.7	+0.5
MNTX	Cornudas Mount	39.00	314	P	P	21 59 00.5	+1.0
LMN	Caledonia Moun	39.51	9	P	P	21 59 04.3	+0.9
D62A	Allapoint, All	40.24	4	P	P	21 59 11.2	+1.8
D62A				IAmb	IAmb	21 59 15.2	
	comp=Z,6.4nm,1.1s						
E46A	Sault Ste Mari	40.55	348	P	P	21 59 13.5	+1.5
E46A				IAmb	IAmb	21 59 13.8	
	comp=Z,6.8nm,0.8s						
BATG	Bathurst New B	40.73	7	P	P	21 59 14.8	+1.4
BATG				IAmb	IAmb	21 59 28.1	
	comp=Z,8.5nm,1.1s						
VLDQ	Val d'Or	41.29	356	P	P	21 59 20.0	+2.0
ECSD	EROS Data Cent	42.15	334	P	P	21 59 25.4	+0.2
EYMN	Ely	43.87	342	P	P	21 59 39.3	+0.5
ISCO	Idaho Springs	43.92	323	P	P	21 59 41.1	+1.3
WUAZ	Wupatki	45.25	315	P	P	21 59 51.8	+1.5
WUAZ				IAmb	IAmb	21 59 52.7	
	comp=Z,5.2nm,0.8s						
U15A	North Rim	46.35	315	P	P	22 00 00.7	+1.7
ULM	Lac du Bonnet	47.29	340	P	P	22 00 05.3	-0.4
	comp=Z,4.8nm,0.5s,baz=144,slow=9.2,SNR=5.8						
ULM	Lac du Bonnet	47.29	340	P	P	22 00 06.1	+0.4
ULM				IAmb	IAmb	22 00 06.8	
	comp=Z,4.9nm,0.7s						
MSU	Marysvale	47.33	318	P	P	22 00 08.4	+1.9
MVU	Marysvale	47.35	318	P	P	22 00 08.2	+1.5
PDAR	Pinedale Array	48.10	324	P	P	22 00 11.9	-0.4
	comp=Z,0.8nm,0.5s,baz=122,slow=9.2,SNR=8.1						
PDAR	Pinedale Array	48.10	324	P	P	22 00 12.9	+0.5
SCHQ	Schefferville	48.12	5	P	P	22 00 12.0	0.0
	comp=Z,3.7nm,0.8s,baz=198,slow=13,SNR=2.1						
BGU	Big Grassy Mou	49.17	320	P	P	22 00 21.5	+1.0
BGU				IAmb	IAmb	22 00 22.1	
	comp=Z,4.6nm,0.9s						
REDW	Red Top Meadow	49.21	324	P	P	22 00 21.5	+0.7
REDW				IAmb	IAmb	22 00 22.5	
	comp=Z,3.4nm,0.7s						
LOHW	Long Hollow	49.22	324	P	P	22 00 22.4	+1.5
MOOW	Moose Ponds	49.38	324	P	P	22 00 22.6	+0.5
YHL	Hebgen Lake	50.30	325	P	P	22 00 30.8	+1.7
MCMT	McKenzie Canyo	51.24	324	P	P	22 00 37.6	+1.5
LRM	Limekiln Ridge	51.59	326	P	P	22 00 39.8	+1.1
HRY	Holter Researc	51.79	327	P	P	22 00 41.1	+1.2
G08A	Pilot Rock	55.14	322	P	P	22 01 05.3	+0.9
G08A				IAmb	IAmb	22 01 05.7	
	comp=Z,2.5nm,0.7s						
PINE	Pine Mountain	55.67	319	P	P	22 01 10.2	+1.8
PINE				IAmb	IAmb	22 01 10.7	
	comp=Z,5.6nm,0.9s						
YKA	Yellowknife Ar	63.26	340	P	P	22 02 00.1	+0.3
	comp=Z,2.9nm,0.7s,baz=124,slow=8.0,SNR=20						
SUMG	Summit	68.96	11	P	P	22 02 36.1	-0.3

SUMG				IAmb	IAmb	22 02 42.0	
	comp=Z,3.9nm,0.8s						
INK	Inuvik	73.03	340	P	P	22 03 01.2	+0.7
TORD	Torodi Ar. Bea	73.67	78	P	P	22 03 03.7	-1.7
	comp=Z,0.1nm,0.3s,baz=278,slow=6.4,SNR=1.2						
M27K	Edge Creek, AK	74.22	333	P	P	22 03 08.7	+0.9
BCAR	Beaver Creek A	74.37	334	P	P	22 03 10.1	+1.5
BMAR	Burnt Mountain	76.66	338	P	P	22 03 22.4	+0.9
ILAR	Eielson Array	76.97	335	P	P	22 03 23.1	-0.1
	comp=Z,0.5nm,0.8s,baz=128,slow=6.5,SNR=4.6						
KTH	Kantishna Hill	78.50	333	P	P	22 03 32.9	+1.1
KTH				IAmb	IAmb	22 03 49.8	
	comp=Z,5.7nm,1.2s						
PPLA	Purkeypile	78.99	333	P	P	22 03 35.3	+0.8
PPLA				IAmb	IAmb	22 04 00.8	
	comp=Z,5.9nm,1.2s						
J20K	Nowinta River	79.99	334	P	P	22 03 39.9	+0.1
MKAR	Makanchi Array	122.28	20	PKP	PKPdf	22 10 23.6	-1.2
	comp=Z,0.4nm,0.9s,baz=295,slow=2.1,SNR=1.5						
ASAR	Alice Springs	149.17	234	PKPbc	PKPbc	22 11 17.6	-1.4
	comp=Z,1.3nm,0.7s,baz=114,slow=2.5,SNR=11						
ASAR	Alice Springs	149.17	234		PKPbc	22 11 17.8	-1.2
WRA	Warramunga Arr	150.40	241	PKPbc	PKPbc	22 11 20.7	-1.4
	comp=Z,1.0nm,0.5s,baz=108,slow=2.7,SNR=27						
WRA	Warramunga Arr	150.40	241		PKPbc	22 11 21.0	-1.1

TUL ***30*** *21:58:04.5±0.6, 36°.945N±0°.010×97°.82W±0°.01, h4^{km}±2^{km}, ML2.5, mb_Lg2.3/14(NEIC), Error ellipse: s-maj=1.6km s-min=1.4km az=107.0*

NEIC 30 21:58:04.9±0.4**, 36°.936N**±0°.010×**97°.812W**±0°.008**, h7**^{km}±4^{km}**, Error ellipse: s-maj=1.5km s-min=0.9km az=194.0, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GC02	Grant County #	0.09	205	Pg	Pg	21 58 07.1	+0.1
GC02				Sg	Sg	21 58 08.7	+0.1
KAN17	Caldwell West	0.11	19	Pg	Pg	21 58 07.4	0.0
KAN17				Sg	Sg	21 58 09.1	-0.1
KAN14	Manchester OK	0.12	280	Pg	Pg	21 58 07.4	-0.1
KAN14				Sg	Sg	21 58 09.2	-0.2
KAN05	Bluff City Nor	0.18	344	Pg	Pg	21 58 08.4	-0.1
KAN05				Sg	Sg	21 58 11.0	0.0
KAN01	Argonia South	0.22	11	Pg	Pg	21 58 09.3	0.0
KAN01				Sg	Sg	21 58 12.3	0.0
KAN09	Caldwell North	0.25	38	Pg	Pg	21 58 10.0	+0.1
KAN09				Sg	Sg	21 58 13.2	-0.1
KAN13	South Haven SW	0.28	74	Pg	Pg	21 58 10.5	+0.2
KAN13				Sg	Sg	21 58 14.2	+0.1
KAN10	Anthony SW Sta	0.29	310	Pg	Pg	21 58 10.5	-0.1
KAN10				Sg	Sg	21 58 14.5	-0.1
KAN06	Argonia West S	0.31	353		Pg	21 58 11.0	0.0
KAN06				Sg	Sg	21 58 15.1	-0.1
KAN08	Anthony NE Sta	0.32	336		Pg	21 58 11.1	0.0
KAN08				Sg	Sg	21 58 15.2	-0.1
OK032	Salt Plains WL	0.35	248	Pg	Pg	21 58 11.6	0.0
OK032				Sg	Sg	21 58 16.3	+0.1
KAN16	Harper SW Stat	0.35	325	Pg	Pg	21 58 11.7	-0.1
KAN16				Sg	Sg	21 58 16.3	-0.2
KAN12	Harper NE Stat	0.39	338	Pg	Pg	21 58 12.2	-0.2
KAN12				Sg	Sg	21 58 17.6	0.0
CROK	Carrier	0.45	198	Pg	Pg	21 58 13.7	+0.1
CROK				Sg	Sg	21 58 20.0	+0.5
BLOK	Blackwell	0.51	110	Pg	Pg	21 58 14.6	-0.1
BLOK				Sg	Sg	21 58 21.9	+0.5
T35A	Sooner Cattle	1.04	91		Pg	21 58 24.5	-0.3
T35A				Sg	Sg	21 58 38.0	-0.4
U32A	Winter Ranch,	1.11	240	Pg	Pg	21 58 25.1	-1.0
U32A				Sg	Sg	21 58 40.2	-0.3
QUOK	Quay	1.17	130		Pg	21 58 26.7	-0.6
QUOK				Sg	Sg	21 58 42.3	-0.2
BCOK	Bluff Creek, N	1.29	173		Pn	21 58 28.6	-0.6
OK030	Cody Creek RV	1.30	140	Pn	Pn	21 58 29.0	-0.5
OK025	Westminster Rd	1.41	164	Pn	Pn	21 58 30.7	-0.2
OKCFA	Oklahoma City	1.54	169	IAmb_Lg		21 58 56.6	
	comp=Z,18nm,0.8s						
R32A	Long Quarter,	1.65	335	Pn	Pn	21 58 34.3	+0.1
FNO	Franklin	1.71	169	Pn	Pn	21 58 35.4	+0.4
W35A	Tecumseh	1.94	157	Pn	Pn	21 58 38.6	+0.5
W35A				IAmb_Lg		21 59 10.1	
	comp=Z,16nm,0.7s						
KSU1	Kansas State U	2.36	23	Pn	Pn	21 58 43.9	-0.1
CBKS	Cedar Bluff	2.42	321	IAmb_Lg		21 59 26.6	
	comp=Z,18nm,0.7s						
U38A	Gravette	2.80	99	IAmb_Lg		21 59 39.7	
	comp=Z,5.8nm,0.8s						
X37A	Clayton	3.07	139	Pn	Pn	21 58 54.0	+0.3
HHAR	Hobbs	3.18	101	Pn	Pn	21 58 55.1	-0.2
S39A	Bolivar	3.66	77	Pn	Pn	21 59 02.3	+0.5
W39A	Magazine	3.70	117	IAmb_Lg		22 00 07.6	
	comp=Z,7.7nm,0.7s						
U40A	Yellville	4.03	97	Pn	Pn	21 59 07.9	+1.0
U40A				IAmb_Lg		22 00 14.2	
	comp=Z,7.8nm,0.8s						
P38A	Dawn	4.31	50	IAmb_Lg		22 00 27.7	
	comp=Z,7.5nm,0.8s						
MGMO	Mountain Grove	4.44	86	Pn	Pn	21 59 13.5	+0.9
R40A	Maddies Statio	4.60	71	IAmb_Lg		22 00 36.3	
	comp=Z,4.0nm,1.1s						

IDC ***30*** *22:11:03.4±4.2, 37°.20N×71°.97E, h63^{km}±33^{km}, mb3.6/11, mb1 3.7/17, mb1mx3.5/56, mbtmp3.9/17, ML3.2/5, Error ellipse: s-maj=38.0km s-min=20.0km az=164.0*

NNC ***30*** *22:11:18.0±2.5, 38°.10N×71°.80E, h193^{km}±29^{km}, mb3.0, mpv3.9, Error ellipse: s-maj=24.9km s-min=12.7km az=21.0*

ISC 30 22:11:10.2±0.7**, 37°.62N**±0°.05×**71°.60E**±0°.06**, h100**^{km}**, n40,** σ**2^{s}53**/52**, mb3.9**/11**, 7C-6D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	Cherat	3.80	176	P	Pn	22 12 06.4	-0.4
CEP				S	Sn	22 12 50.0	-0.6
CHCP	Chirah Chowk	4.18	161	P	Pn	22 12 11.5	-0.4
AML	Almayashu	4.78	19	P	Pn	22 12 22.3	+2.0
	SNR=85						
THW	Thamme Wali	4.82	179	P	Pn	22 12 19.2	-1.3
UCH	Uchtor	5.12	25	P	Pn	22 12 26.9	+2.1
	SNR=14						
EKS2	Erkin-Say	5.30	18	P	Pn	22 12 29.6	+2.5
	SNR=28						
AAK	Ala-Archa	5.48	23	P	Pn	22 12 31.0	+1.6
	3.2nm,0.3s,baz=198,slow=7.0,SNR=76						
AAK				S	Sn	22 13 32.0	+0.7
	5.9nm,0.3s,baz=350,slow=22,SNR=22						
AAK	Ala-Archa	5.48	23	P	Pn	22 12 31.8	+2.3
	SNR=23						
AAK	Ala-Archa	5.48	23	⇓P	Pn	22 12 31.5	+2.0
	9.6nm,0.5s						
AAK				⇓S	Sn	22 13 31.4	+0.2
	44nm,0.5s						
KK02	Karatay Array	5.54	352	⇑P	Pn	22 12 32.8	+2.7
	37nm,0.8s						
KK02				⇓S	Sn	22 13 34.3	+1.8
	112nm,0.6s						
KBK	Karagaybulak	5.64	26	P	Pn	22 12 34.6	+2.8
	SNR=6.1						
CHMS	Chumysh	5.89	23	P	Pn	22 12 37.0	+2.1
	SNR=18						
USP	Ospenovka	6.06	21	P	Pn	22 12 38.9	+1.7
	SNR=17						
TKM2	Tokmak 2	6.11	29	P	Pn	22 12 40.0	+1.9
	SNR=11						
TKM2	Tokmak 2	6.11	29	⇑P	Pn	22 12 39.8	+1.7
	14nm,1.1s						
TKM2				⇓S	Sn	22 13 44.3	-2.4
	11nm,0.7s						
MDOK	Medeo	6.92	35	⇓P	Pn	22 12 51.4	+2.3
	3.3nm,0.7s						
PDGK	Podgornoye	8.28	44	⇑P	Pn	22 13 10.8	+3.2
	3.7nm,1.1s						
GEYT	Alibeck	10.68	276	P	Pn	22 13 38.0	-2.1
	1.3nm,0.3s,baz=127,slow=11,SNR=12						
GEYT				S	Sn	22 15 33.3	-4.2
	1.8nm,0.3s,baz=122,slow=19,SNR=4.3						
MK31	Makanchi Array	12.11	37	⇓P	Pn	22 13 58.4	-0.7
	1.7nm,0.8s,baz=221,slow=12,SNR=5.3						
MKAR	Makanchi Array	12.11	37	P	Pn	22 13 56.8	-2.4
	0.1nm,0.3s,baz=224,slow=12,SNR=6.0						
KURBB	Kurchatov Arra	13.91	19	P	Pn	22 14 20.3	-2.4
	0.0nm,0.3s,baz=209,slow=12,SNR=3.4						
AB31	Akbulak array	14.36	328	P	Pn	22 14 28.0	-0.5
	2.4nm,0.6s,baz=140,slow=12,SNR=41						
AB31				⇑S	Sn	22 17 03.0	-3.7
	14nm,0.8s,baz=154,slow=22,SNR=17						
BVAR	Borovoye Array	15.43	357	P	Pn	22 14 41.8	-0.2
	0.3nm,0.3s,baz=192,slow=21,SNR=5.2						
BVAR				S	Sn	22 17 26.3	-6.0
	0.3nm,0.3s,baz=183,slow=29,SNR=6.2						
BRVK	Borovoye	15.46	357	⇑P	Pn	22 14 40.5	-2.1
	5.1nm,1.1s						
AKTO	Aktyubinsk	16.07	327	P	P	22 14 51.3	-0.3
	1.5nm,0.3s,baz=130,slow=12,SNR=40						
AKTO				S	Sn	22 17 41.9	-6.1
	0.3nm,0.3s,baz=158,slow=19,SNR=8.7						
AKTO	Aktyubinsk	16.07	327	⇑P	P	22 14 50.5	-1.1
	21nm,0.8s						
AKTO				⇑S	Sn	22 17 45.3	-2.7
	13nm,0.8s						
ZALV	Zalesovo Beam	18.70	25	P	P	22 15 19.2	-1.2
	0.2nm,0.3s,baz=214,slow=10,SNR=4.4						
ARU	Arti	20.74	339	P	P	22 15 43.8	+1.3
	1.3nm,0.7s,baz=169,slow=9.6,SNR=8.7						
ARU				S	S	22 19 26.8	-1.5
	0.8nm,0.9s,baz=107,slow=22,SNR=1.5						
GNI	Garni	21.03	285	P	P	22 15 50.0	+4.0
	8.4nm,0.7s,baz=354,slow=13,SNR=7.5						
BELG	Belogornoye	22.33	319	P	P	22 16 00.9	+1.5
	16nm,1.0s,baz=139,slow=19,SNR=6.8						
BELG				S	S	22 20 02.5	+4.4
	2.2nm,0.6s,baz=121,slow=18,SNR=1.8						
KBZ	Khabaz	22.54	295	P	P	22 16 02.4	+0.8
	1.2nm,0.8s,baz=90,slow=5.8,SNR=2.4						
KBZ				S	S	22 20 03.9	+2.3
	1.0nm,0.9s,baz=90,slow=20,SNR=1.5						
KVAR	Kislovodsk Arr	22.71	295	S	S	22 20 10.6	+6.0
	3.1nm,1.1s,baz=53,slow=15,SNR=1.9						
BRTR	Keskin Array B	29.56	286	P	P	22 17 07.3	+1.7
	0.6nm,0.5s,baz=91,slow=8.6,SNR=2.2						
AKASG	Malin Array Be	32.63	307	P	P	22 17 33.7	+1.5
	2.2nm,0.7s,baz=104,slow=9.6,SNR=6.8						
FINES	FINESS Array B	36.83	325	P	P	22 18 09.4	+1.2
	2.4nm,0.7s,baz=92,slow=11,SNR=6.4						
ARCES	ARCESS Array B	40.29	337	P	P	22 18 38.2	+1.1
	1.3nm,0.7s,baz=95,slow=3.0,SNR=3.8						
NOA	NORSAR Array B	43.78	322	P	P	22 19 06.2	+0.6
	0.9nm,0.7s,baz=92,slow=7.7,SNR=3.3						
MJAR	Matsushiro Arr	52.11	69	P	P	22 20 06.3	-3.8
	1.0nm,0.5s,baz=334,slow=9.1,SNR=2.1						
ESDC	Sonseca Array	57.36	297	P	P	22 20 48.6	+0.6
	0.8nm,0.8s,baz=51,slow=7.5,SNR=7.7						
TORD	Torodi Ar. Bea	66.22	268	P	P	22 21 46.2	-1.5
	0.5nm,0.7s,baz=43,slow=6.6,SNR=4.3						

IDC 30 22:23:16.0±10.0**, 8°.90S**×**125°.52E, h385**^{km}±137^{km}**, mb2.9**/1**, mb1 2.5**/3**, mb1mx2.4**/31**, mbtmp3.2**/3**, Error ellipse: s-maj=149.7km s-min=50.6km az=54.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	13.91	143	P	P	22 26 16.0	-1.2
	0.1nm,0.3s,baz=315,slow=13,SNR=5.2						
WRA				S	S	22 28 47.9	+0.6
	0.1nm,0.3s,baz=321,slow=26,SNR=1.7						
ASAR	Alice Springs	16.74	152	P	P	22 26 48.9	+1.0
	0.1nm,0.3s,baz=334,slow=12,SNR=1.9						
MKAR	Makanchi Array	67.48	329	P	P	22 33 31.6	0.0
	0.3nm,0.8s,baz=131,slow=7.1,SNR=4.1						

BJI ***30*** *22:23:15.4±0.0, 12°.04S×167°.38E, h271^{km}, mB4.8/24, mb4.7/45*

NEIC ***30*** *22:23:16.9±1.6, 12°.12S±0°.08×167°.23E±0°.10, h269^{km}±5^{km}, mb4.8/208, Error ellipse: s-maj=14.1km s-min=11.8km az=63.0*

IDC ***30*** *22:23:16.0±1.5, 12°.17S×167°.16E, h261^{km}±14^{km}, mb4.2/25, mb1 4.3/27, mb1mx4.2/31, mbtmp4.7/27, Error ellipse: s-maj=10.9km s-min=9.3km az=141.0*

NOU ***30*** *22:23:16.9, 12°.10S×167°.16E, h266^{km}, mb4.7/53, Santa Cruz Islands*

ISC 30 22:23:16.6±0.3**, 12°.15S**±0°.05×**167°.17E**±0°.05**, h269**^{km}**, n521,** σ**0^{s}88**/468**, mb4.7**/141**, 49C-38D, Fault plane solution: NP1:**ϕ_s140.68085°**,** δ59.65336°**,** λ57.74861°. **NP2:**ϕ_s11.99664°**,** δ43.12711°**,** λ132.34926°. **Principal axes:** T Plg60.8475°, Azm359.9119°**;** N Plg27.4206°, Azm158.3628°**;** P Plg9.1385°, Azm253.1501°**; Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	3.27	180	Pn	Pn	22 24 13.6	+0.4
SANVU	Saraoutou	3.27	180	P	Pn	22 24 13.9	+0.7
DVP	Devils Point	5.62	170	P	Pn	22 24 41.4	+0.8
HNR	Honiara	7.60	290	Pn	Pn	22 25 07.1	+2.0
LIFNC	LIFOU	8.57	180	Pn	Pn	22 25 16.4	-0.8
LIFNC	LIFOU	8.57	180	P	Pn	22 25 17.3	+0.1
MARNC	Mare, Loyalty	9.31	175	Pn	Pn	22 25 25.6	-0.7
MARNC	Mare, Loyalty	9.31	175	P	Pn	22 25 26.5	+0.1
YATNC	Mamie plateau,	9.85	182	P	Pn	22 25 34.6	+1.4
DZM	Mont Dzumac	9.89	184	*e*Pn	Pn	22 25 34.3	+0.6
	186nm,1.4s						
DZM	Mont Dzumac	9.89	184	P	Pn	22 25 33.4	-0.3
	5.2nm,0.3s,baz=56,slow=21,SNR=36						
DZM				S	S	22 27 23.0	-2.2
	baz=315,slow=19,SNR=1.3						
DZM	Mont Dzumac	9.89	184	Pn	Pn	22 25 34.2	+0.6
DZM	Mont Dzumac	9.89	184	P	Pn	22 25 34.8	+1.1
NOUC	Port Laguerre	9.93	185	P	Pn	22 25 35.3	+1.2
ONTNC	Ouen Toro	10.12	184	Pn	Pn	22 25 37.5	+1.0
ONTNC	Ouen Toro	10.12	184	P	Pn	22 25 37.6	+1.1
OUENC	Ouen Island, N	10.21	182	Pn	Pn	22 25 37.9	+0.2
OUENC	Ouen Island, N	10.21	182	P	Pn	22 25 38.8	+1.1
PINNC	Pines Island,	10.40	179	Pn	Pn	22 25 40.6	+0.5
MSVF	Nonsavu	11.88	119	P	P	22 26 03.6	+2.6
	5.2nm,0.3s,baz=278,slow=13,SNR=20						
MSVF	Nonsavu	11.88	119		P	22 26 03.0	+2.0
MSVF	Nonsavu	11.88	119	P	P	22 26 00.3	-0.7
PMG	Port Moresby	19.85	276	P	P	22 27 28.8	+0.7
	2.6nm,0.3s,baz=87,slow=7.8,SNR=5.9						
PMG	Port Moresby	19.85	276	P	P	22 27 28.8	+0.7
PMG				IAmb	IAmb	22 27 29.6	
	comp=Z,29nm,1.0s						
EIDS	Eidsvold	20.09	227	P	P	22 27 31.7	+1.1
	baz=20						
EIDS	Eidsvold	20.09	227	P	P	22 27 31.4	+0.9
EIDS	Eidsvold	20.09	227	P	P	22 27 31.7	+1.1
AFI	Afiamalu	20.58	97	P	P	22 27 36.3	+0.5
	comp=Z,29nm,0.6s,baz=280,slow=17,SNR=1.5						
LHI	Lord Howe Isla	20.68	200	P	P	22 27 37.2	+0.7
	baz=21						
LHI	Lord Howe Isla	20.68	200	P	P	22 27 37.1	+0.5
PATS	Pohnpei	20.82	335	P	P	22 27 37.4	-0.8
PATS				IAmb	IAmb	22 27 43.7	
	comp=Z,44nm,1.0s						
CTA	Charters Tower	21.57	246	P	P	22 27 45.9	+0.5
	comp=Z,13nm,0.5s,baz=74,slow=12,SNR=18						
CTA	Charters Tower	21.57	246	P	P	22 27 46.1	+0.7
	baz=22						
CTAO	Charters Tower	21.57	246	P	P	22 27 45.6	+0.2
CTAO				IAmb	IAmb	22 27 47.3	
	comp=Z,40nm,0.9s						
CTAO	Charters Tower	21.57	246	P	P	22 27 46.3	+0.9
RMQ	Roma	22.43	228	P	P	22 27 54.8	+1.6
	baz=22						
RMQ	Roma	22.43	228	P	P	22 27 54.8	+1.6
MTSU	Mount Surprise	22.84	252	P	P	22 27 58.3	+1.3
	baz=23						
MTSU	Mount Surprise	22.84	252	P	P	22 27 58.4	+1.4
ARMA	Armidale	23.19	216	P	P	22 28 01.5	+1.3
	baz=23						
ARMA	Armidale	23.19	216	P	P	22 28 01.1	+1.0
ARMA	Armidale	23.19	216	P	P	22 28 01.6	+1.5
COEN	Coen	23.45	263	P	P	22 28 03.4	+0.9
	baz=24						
COEN	Coen	23.45	263	P	P	22 28 03.2	+0.7
COEN				IAmb	IAmb	22 28 05.0	
	comp=Z,26nm,0.8s						
COEN				PcP	PcP	22 31 40.6	+0.1
COEN	Coen	23.45	263	P	P	22 28 03.6	+1.1
MGCD	Mangrove Creek	25.60	212	P	P	22 28 22.7	+1.0
QLP	Quilpie	25.90	233	P	P	22 28 24.4	-0.1
URZ	Urewera	27.47	163	P	P	22 28 37.3	-1.0
	comp=Z,4.0nm,0.3s,baz=307,slow=20,SNR=2.9						
CMSA	Cobar Meteorol	27.64	222	P	P	22 28 40.2	+0.2
	baz=28						
CMSA	Cobar Meteorol	27.64	222	P	P	22 28 40.6	+0.7
QIS	Mount Isa	27.71	249	P	P	22 28 41.2	+0.5
YNG	Young	27.89	215	P	P	22 28 42.8	+0.6
BKZ	Black Stump Fm	28.15	165	P	P	22 28 44.9	+0.6
QRZ	Quartz Range	28.95	172	P	P	22 28 54.9	+3.6
QRZ	Quartz Range	28.95	172	P	P	22 28 53.1	+1.8
INKA	Innaminka	29.19	234	P	P	22 28 54.6	+1.0
NNZ	Nelson	29.46	170	P	P	22 28 58.7	+2.9
BFZ	Birch Farm	29.52	166	P	P	22 28 55.9	-0.4
BFZ				IAmb	IAmb	22 29 06.6	
	comp=Z,34nm,1.1s						
BFZ	Birch Farm	29.52	166	P	P	22 28 56.8	+0.4
DSZ	Denniston Nort	29.76	173	P	P	22 28 45.9	-13
TUWZ	Tuamarina	29.76	170	P	P	22 28 58.7	+0.3
SNZO	South Karori	29.79	169	P	P	22 28 58.9	+0.2
BHW	Baring Head	29.91	168	P	P	22 28 59.3	-0.5
THZ	Tophouse	29.92	171	P	P	22 29 01.6	+1.6
MSWZ	Moikau Station	30.00	168	P	P	22 28 59.8	-0.8
H11S2	WAKE ISLAND Hy	30.45	359	T	T	23 00 15.4	
	baz=182,slow=76,SNR=4.6						
H11S3	WAKE ISLAND Hy	30.46	359	T	T	23 00 15.7	
	baz=182,slow=76,SNR=2.7						
H11S1	WAKE ISLAND Hy	30.47	359	T	T	23 00 16.6	
	baz=182,slow=76,SNR=3.7						
STKA	Stephens Creek	30.64	226	P	P	22 29 07.0	+0.6
	comp=Z,12nm,0.5s,baz=48,slow=7.6,SNR=23						
STKA	Stephens Creek	30.64	226	P	P	22 29 06.6	+0.2
KHZ	Kahutara	30.66	171	P	P	22 29 06.8	+0.5
KHZ	Kahutara	30.66	171	P	P	22 29 07.1	+0.8
INZ	Inchbonnie	30.68	174	P	P	22 29 08.7	+2.2
LTZ	Lake Taylor	30.83	173	P	P	22 29 08.7	+0.8
WVZ	Waitaha Valley	30.96	175	P	P	22 29 10.9	+1.9
GVZ	Greta Valley S	31.12	172	P	P	22 29 10.8	+0.4
OXZ	Oxford	31.34	173	P	P	22 29 13.4	+1.1
FOZ	Fox Glacier	31.35	176	P	P	22 29 15.7	+3.4
MHCZ	Mount Hutt	31.49	174	P	P	22 29 14.6	+0.9
RPZ	Rata Peaks	31.62	175	P	P	22 29 16.2	+1.4
RPZ	Rata Peaks	31.62	175	P	P	22 29 16.0	+1.2
H11N1	WAKE ISLAND Hy	31.67	359	T	T	23 01 47.1	
	baz=179,slow=74						
H11N3	WAKE ISLAND Hy	31.67	360	T	T	23 01 44.5	
	baz=179						
H11N2	WAKE ISLAND Hy	31.69	360	T	T	23 01 48.9	
	baz=179,slow=74						
RACZ	Rakaia	31.75	173	P	P	22 29 17.3	+1.5
ARCZ	Arundel	31.87	175	P	P	22 29 17.0	+0.1
TOO	Toolangi	31.89	214	P	P	22 29 17.8	+0.5
	baz=32						
TOO	Toolangi	31.89	214	P	P	22 29 17.6	+0.3
WR0	Warramunga Arr	32.26	252	P	P	22 29 19.7	-0.9
LCRK	Leigh Creek	32.40	231	P	P	22 29 22.1	+0.4
WC3	Warramunga Arr	32.42	252	P	P	22 29 21.1	-0.9
	baz=32						
WRAB	Tennant Creek	32.43	252	P	P	22 29 20.6	-1.6
WRAB	Tennant Creek	32.43	252	P	P	22 29 21.6	-0.6
WB2	Warramunga Arr	32.43	252	P	P	22 29 20.6	-1.6
WRA	Warramunga Arr	32.45	252	P	P	22 29 21.5	-0.8
	comp=Z,4.0nm,0.6s,baz=81,slow=8.9,SNR=24						
WRA				PP	PnPn	22 30 41.5	0.0
	comp=Z,3.1nm,0.8s,baz=83,slow=10,SNR=5.5						
WRA				S	S	22 34 11.2	-5.7
	comp=Z,0.3nm,0.5s,baz=83,slow=14,SNR=2.0						
WRA				ScP	ScP	22 35 22.4	+1.7
	comp=Z,0.7nm,0.8s,baz=94,slow=2.7,SNR=2.9						
WRA	Warramunga Arr	32.45	252	P	P	22 29 20.4	-1.9
ODZ	Otahua Downs	32.91	175	P	P	22 29 26.3	+0.4
DCZ	Deep Cove	33.20	180	P	P	22 29 28.5	+0.1
GLAD	Gladstone	33.28	207	P	P	22 29 29.8	+0.6
OOD	Oodnadatta	33.30	237	P	P	22 29 29.8	+0.3
HTT	Hallett	33.38	226	P	P	22 29 31.0	+0.8
ARPS	Mount Arapiles	33.45	219	P	P	22 29 31.4	+0.7
AS31	Alice Springs	33.58	245	P	P	22 29 31.3	-0.7
ASAR	Alice Springs	33.58	245	P	P	22 29 31.1	-0.9
	comp=Z,7.1nm,0.8s,baz=71,slow=9.7,SNR=53						
ASAR				PP	PP	22 30 55.1	+0.9
	comp=Z,2.5nm,0.7s,baz=76,slow=9.5,SNR=1.2						
ASAR				PcP	PcP	22 32 05.6	-0.3
	comp=Z,1.1nm,0.5s,baz=85,slow=5.5,SNR=2.7						
ASAR				S	S	22 34 32.8	-1.5
	comp=Z,0.6nm,0.7s,baz=78,slow=17,SNR=3.1						
ASAR				ScP	ScP	22 35 26.6	+1.9
	comp=Z,1.8nm,0.9s,baz=75,slow=3.1,SNR=8.0						
ASAR	Alice Springs	33.58	245	P	P	22 29 30.5	-1.5
ASAR				PcP	PcP	22 32 05.1	-0.8
ASPA	Alice Springs	33.58	245	P	P	22 29 31.1	-0.9
	baz=34						
KDU	Kakadu	33.88	265	P	P	22 29 34.4	-0.2
	baz=34						
KDU	Kakadu	33.88	265	P	P	22 29 34.5	-0.2
BBOO	Buckleboo	35.13	229	P	P	22 29 45.7	+0.5
	baz=35						
BBOO	Buckleboo	35.13	229	P	P	22 29 45.9	+0.7
BBOO				IAmb	IAmb	22 29 46.4	
	comp=Z,34nm,0.8s						
BBOO	Buckleboo	35.13	229	P	P	22 29 45.5	+0.3
MTN	Manton Dam	35.18	265	P	P	22 29 45.8	0.0
	baz=35						
MTN	Manton Dam	35.18	265	P	P	22 29 45.7	0.0
MTN				PcP	PcP	22 32 11.1	+0.5
MULG	Mulgathing	35.57	234	P	P	22 29 48.7	-0.2
KNRA	Kununurra	37.41	260	P	P	22 30 04.4	-0.2
	baz=38						
KNRA	Kununurra	37.41	260	P	P	22 30 04.9	+0.3
KNRA	Kununurra	37.41	260	P	P	22 30 04.9	+0.3
WRKA	Warakurna	38.87	245	P	P	22 30 16.4	-0.3
FITZ	Fitzroy Crossi	40.46	256	P	P	22 30 30.1	+0.3
	baz=40						
FORT	Forrest	40.58	237	P	P	22 30 30.9	+0.3
	baz=41						
FORT	Forrest	40.58	237	P	P	22 30 31.0	+0.5
FORT	Forrest	40.58	237	P	P	22 30 30.9	+0.3
PPT	Papeete	42.08	103	P	P	22 30 43.0	+0.1
	comp=Z,17nm,0.5s,baz=229,slow=20,SNR=1.2						
PPTF	Pamatai, Papee	42.09	103	P	P	22 30 43.4	+0.3
JCJ	Chichijima	45.94	328	P	P	22 31 12.9	-0.4
	comp=Z,31nm,0.4s,baz=284,slow=20,SNR=6.6						
JCJ	Chichijima	45.94	328	P	P	22 31 12.6	-0.7
JCJ	Chichijima	45.94	328	P	P	22 31 13.1	-0.1
PSA00	Pilbara Seismi	46.10	252	P	P	22 31 15.3	+0.6
PSA00	Pilbara Seismi	46.10	252	P	P	22 31 15.1	+0.5
MBWA	Marble Bar	46.18	252	P	P	22 31 15.4	+0.1
MEEK	Meekatharra	47.73	245	P	P	22 31 27.4	+0.2
	baz=48						
MEEK	Meekatharra	47.73	245	P	P	22 31 27.4	+0.2
TOLI2	Tolitoli	47.91	283	P	P	22 31 27.4	-1.2
PLAI	Plampang	48.63	269	P	P	22 31 34.1	-0.1
NWAO	Narrogin (SRO)	50.02	237	P	P	22 31 44.7	+0.3
	comp=Z,28nm,1.3s						
JAGI	Jajag, Banyuwa	52.23	269	P	P	22 32 00.2	-0.8
KKM	Kota Kinabalu	53.80	287	P	P	22 32 11.4	-1.1
JGF	Kuroka	55.24	330	P	P	22 32 22.3	0.0
JMN	Monobe	55.56	326	P	P	22 32 25.3	+0.6
JMN				IAmb	IAmb	22 32 26.2	
	comp=Z,33nm,0.7s						
MJAR	Matsushiro Arr	55.60	332	P	P	22 32 23.3	-1.5
	comp=Z,8.3nm,0.7s,baz=166,slow=8.4,SNR=21						
MJAR	Matsushiro Arr	55.60	332	P	P	22 32 24.4	-0.5
MAT	Matsushiro	55.60	332	P	P	22 32 24.1	-0.8
JWT	Wachi	55.95	329	P	P	22 32 27.0	-0.3
JNU	Nakatsue	56.80	324	P	P	22 32 32.5	-0.9
JSD	Sado	56.80	333	P	P	22 32 33.1	-0.1
JSD				IAmb	IAmb	22 33 02.3	
	comp=Z,39nm,1.0s						
JHS	Saijyo	56.93	327	P	P	22 32 34.2	-0.1
JHS				IAmb	IAmb	22 32 35.7	
	comp=Z,31nm,0.9s						
SSLB	Suanglung	57.60	308	P	P	22 32 38.6	-0.5
SSLB	Suanglung	57.60	308	P	P	22 32 39.1	0.0
JTM	Tenmabayashi	57.95	337	P	P	22 32 41.2	0.0
JTM				IAmb	IAmb	22 32 49.4	
	comp=Z,28nm,1.1s						
JKA	Kamikawa-asahi	60.30	340	P	P	22 32 57.8	+0.6
JKA				IAmb	IAmb	22 33 01.3	
	comp=Z,27nm,1.1s						
KSRS	Korea Array	61.58	325	P	P	22 33 06.2	+0.3
	comp=Z,3.9nm,0.9s,baz=138,slow=7.2,SNR=12						
NJ2	Nanjing	63.79	315	*e*P	P	22 33 21.5	+1.0
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
USA0B	Ussuriysk Arra	64.56	333	P	P	22 33 25.3	0.0
USRK	Ussuriysk Ar.	64.56	333	P	P	22 33 25.8	+0.4

	comp=Z,7.4nm,0.8s,baz=154,slow=6.1,SNR=16						
USRK	Ussuriysk Ar.	64.56	333	P	P	22 33 26.2	+0.9
KIWB	Kanaga Island	65.17	11	P	P	22 33 29.3	+0.2
VNDA	Vanda	65.42	181	P	P	22 33 30.4	+0.1
	comp=Z,1.8nm,0.9s,baz=327,slow=3.6,SNR=3.8						
VNDA	Vanda	65.42	181	P	P	22 33 30.3	-0.1
PETK	Petropavlovsk-	65.51	354	P	P	22 33 31.0	-0.2
	comp=Z,6.0nm,0.8s,baz=171,slow=12,SNR=4.8						
PETK	Petropavlovsk-	65.51	354	P	P	22 33 31.6	+0.4
MDJ	Mudanjiang	65.98	332	P	P	22 33 35.8	+1.4
MDJ				pmax	pmax		
	comp=Z,17nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,120nm,4.1s						
MDJ	Mudanjiang	65.98	332	IAmb	IAmb	22 33 36.3	
	comp=Z,17nm,1.1s						
ATKA	Atka Island	66.08	12	P	P	22 33 34.9	+0.1
WHN	Wuhan	66.17	311	⇓P	P	22 33 36.0	+0.1
CN2	Changchun	67.41	329	*e*P	P	22 33 42.5	-0.9
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
NIKH	Nikolski High	68.05	15	P	P	22 33 46.9	-0.2
	baz=205						
ENH	Enshi	69.68	309	IAmb	IAmb	22 33 58.6	
	comp=Z,14nm,0.7s						
GYA	Guiyang	70.19	304	⇑P	P	22 34 01.5	+0.5
GYA				pmax	pmax		
	comp=Z,12nm,0.6s						
GSI	Gunungsitoli	70.36	276	P	P	22 34 01.4	-0.8
GSI				IAmb	IAmb	22 34 03.4	
	comp=Z,13nm,0.7s						
SPIA	Saint Paul Isl	71.56	13	P	P	22 34 08.3	-0.1
XAN	Xi'an	71.90	312	P	P	22 34 11.3	+0.3
XAN				pmax	pmax		
	comp=Z,12nm,0.6s						
KMI	Kunming	72.89	301	⇑P	P	22 34 18.5	+1.3
KMI				pmax	pmax		
	comp=Z,15nm,0.9s						
HHC	Hu-ho-hao-te	73.58	319	*e*P	P	22 34 24.0	+3.2
HHC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,150nm,5.6s						
CMAR	Chiang Mai Arr	73.83	293	P	P	22 34 23.3	+0.7
	comp=Z,4.2nm,0.6s,baz=118,slow=4.4,SNR=24						
CMAR	Chiang Mai Arr	73.83	293	P	P	22 34 22.6	0.0
CHTO	Chiang Mai	73.95	294	P	P	22 34 23.7	+0.4
BTO	Baotou	74.44	318	*e*P	P	22 34 28.3	+2.5
BTO				S	S	22 43 41.0	+2.8
OHAK	Old Harbor	76.43	21	P	P	22 34 36.4	0.0
OHAK				IAmb	IAmb	22 34 41.6	
	comp=Z,16nm,0.8s						
LZH	Lanzhou	76.53	312	⇓P	P	22 34 39.8	+2.0
LZH				pmax	pmax		
	comp=Z,27nm,1.3s						
P18K	Big Mountain,	77.48	19	P	P	22 34 42.2	-0.2
	baz=218						
QSPA	South Pole Qui	77.86	180	P	P	22 34 44.0	-0.6
QSPA				IAmb	IAmb	22 34 46.0	
	comp=Z,24nm,1.1s						
N19K	Bonanza Creek	78.84	18	P	P	22 34 50.7	+0.9
	baz=218						
N19K	Bonanza Creek	78.84	18	P	P	22 34 49.4	-0.4
O20K	Slope Mountain	78.85	19	P	P	22 34 50.8	+0.9
	baz=220						
ANM	Nome	79.28	12	P	P	22 34 52.5	+0.5
	baz=207						
ANM	Nome	79.28	12	P	P	22 34 52.5	+0.5
ANM				IAmb	IAmb	22 34 53.9	
	comp=Z,16nm,1.0s						
L19K	White Mountain	79.81	17	P	P	22 34 55.5	+0.6
	baz=218						
L19K	White Mountain	79.81	17	P	P	22 34 54.3	-0.7
L19K				IAmb	IAmb	22 34 58.2	
	comp=Z,12nm,0.9s						
CAPN	Captain Cook N	79.85	19	P	P	22 34 55.6	+0.6
	baz=221						
BILL	Bilibino	79.98	360	P	P	22 34 55.2	-0.5
ULN	Ulaanbaatar	80.02	324	P	P	22 34 56.5	0.0
TTA	Tatalina	80.09	16	P	P	22 34 56.5	0.0
	baz=216						
TTA	Tatalina	80.09	16	P	P	22 34 56.3	-0.2
TTA				IAmb	IAmb	22 34 57.8	
	comp=Z,9.7nm,0.9s						
O22K	Cooper Landing	80.11	20	P	P	22 34 56.8	+0.4
	baz=223						
L20K	Farewell, AK	80.33	17	P	P	22 34 57.9	+0.2
	baz=218						
SONM	Songino Array	80.38	323	P	P	22 34 58.9	+0.4
	comp=Z,2.7nm,0.7s,baz=133,slow=6.3,SNR=5.1						
GTA	Gaotai	80.83	314	*e*P	P	22 35 02.5	+1.5
GTA				pP	pP	22 36 08.5	+4.4
GTA				sP	sP	22 36 31.5	-0.8
GTA				PP	PP	22 38 08.5	-1.1
GTA				pmax	pmax		
	comp=Z,7.0nm,1.2s						
PWL	Port Wells	80.85	20	P	P	22 35 00.1	-0.4
	baz=224						
M22K	Willow	80.92	19	P	P	22 35 00.3	-0.4
	baz=222						
PMR	Palmer	81.12	20	P	P	22 35 01.7	0.0
	baz=223						
PMR	Palmer	81.12	20	P	P	22 35 00.8	-1.0
PMR				IAmb	IAmb	22 35 04.1	
	comp=Z,13nm,0.7s						
PPLA	Purkeypile	81.14	18	P	P	22 35 02.2	+0.1
	baz=220						
PPLA	Purkeypile	81.14	18	P	P	22 35 02.0	-0.1
PPLA				IAmb	IAmb	22 35 08.3	
	comp=Z,15nm,1.2s						
KNK	Knik Glacier	81.21	20	P	P	22 35 02.2	-0.1
	baz=224						
GLI	Glacier Island	81.29	21	P	P	22 35 02.5	-0.3
	baz=225						
GHO	Glory Hole Cre	81.32	19	IAmb	IAmb	22 35 04.4	
	comp=Z,14nm,0.8s						
CUT	Chulitna	81.36	19	P	P	22 35 02.6	-0.4
	baz=222						
CUT	Chulitna	81.36	19	P	P	22 35 01.3	-1.7
FID	Port Fidalgo	81.42	21	P	P	22 35 03.2	-0.2
SML	Sawmill	81.54	20	P	P	22 35 03.9	-0.2
	baz=224						
SML	Sawmill	81.54	20	P	P	22 35 03.1	-1.0
SML				IAmb	IAmb	22 35 04.7	
	comp=Z,13nm,0.6s						
CAST	Castle Rocks	81.58	17	P	P	22 35 03.6	-0.6
	baz=220,SNR=14						
CAST	Castle Rocks	81.58	17	P	P	22 35 03.7	-0.6
J20K	Nowinta River	81.59	16	P	P	22 35 03.9	-0.3
	baz=218,SNR=10						
J20K	Nowinta River	81.59	16		P	22 35 04.9	+0.7
J20K				IAmb	IAmb	22 35 07.0	
	comp=Z,15nm,0.7s						
CHUM	Lake Minchumin	81.87	17	P	P	22 35 05.5	-0.1
	baz=220,SNR=5.4						
SCM	Sheep Creek Mo	81.89	20	P	P	22 35 06.2	+0.2
	baz=225,SNR=6.5						
SCM	Sheep Creek Mo	81.89	20	P	P	22 35 04.8	-1.2
HMT	Hamilton	81.93	22	P	P	22 35 06.6	+0.5
HMT				IAmb	IAmb	22 35 17.1	
	comp=Z,29nm,1.1s						
KTH	Kantishna Hill	82.02	18	P	P	22 35 05.7	-0.9
KTH				IAmb	IAmb	22 35 07.3	
	comp=Z,12nm,0.7s						
KLU	Klutina	82.13	21	P	P	22 35 07.3	+0.1
	baz=226						
KLU	Klutina	82.13	21	P	P	22 35 07.1	-0.1
KLU				IAmb	IAmb	22 35 08.0	
	comp=Z,9.6nm,0.8s						
TRF	Thorofare Moun	82.13	18	P	P	22 35 06.8	-0.4
	baz=222						
TRF	Thorofare Moun	82.13	18	P	P	22 35 06.7	-0.6
TRF				IAmb	IAmb	22 35 08.2	
	comp=Z,17nm,0.8s						
BMRM	Bremner River	82.23	22	P	P	22 35 07.6	-0.1
	baz=227						
BMRM	Bremner River	82.23	22	IAmb	IAmb	22 35 10.5	
	comp=Z,11nm,0.8s						
BPAW	Bear Paw Mtn.	82.41	17	P	P	22 35 08.7	+0.1
	baz=221						
M24K	Tolsona, Glenn	82.47	20	P	P	22 35 09.8	+0.9
	baz=226,SNR=5.7						
N25K	Chitina, Valde	82.67	21	P	P	22 35 10.3	+0.3
	baz=227,SNR=9.0						
MESA	MESA	82.69	23	P	P	22 35 10.4	+0.1
	baz=230						
MCK	McKinley	82.75	18	P	P	22 35 10.1	-0.2
	baz=223						
MCK	McKinley	82.75	18	IAmb	IAmb	22 35 10.8	
	comp=Z,24nm,1.2s						
DHY	Denali Highway	82.76	19	P	P	22 35 10.6	+0.1
	baz=225,SNR=5.3						
DHY	Denali Highway	82.76	19	IAmb	IAmb	22 35 11.1	
	comp=Z,9.6nm,0.6s						
ISLE	Juniper Island	82.82	23	P	P	22 35 10.6	-0.3
VRDI	Verde Repeater	82.82	22	IAmb	IAmb	22 35 11.3	
	comp=Z,11nm,0.8s						
GLB	Gilahina Butte	82.83	21	IAmb	IAmb	22 35 11.8	
	comp=Z,17nm,0.7s						
I21K	Tanana	82.96	16	P	P	22 35 11.8	+0.5
	baz=220,SNR=16						
HARP	HAARP	83.02	20	P	P	22 35 11.9	+0.2
	baz=227,SNR=6.1						
O02D	Mt. Diablo Mer	83.03	47	P	P	22 35 13.4	+1.1
	baz=248,SNR=11						
MCARA	McCarthy VSAT	83.08	22	P	P	22 35 11.9	-0.1
	baz=229						
MCARA	McCarthy VSAT	83.08	22	IAmb	IAmb	22 35 16.0	
	comp=Z,12nm,1.0s						
H21K	Melozitna Rive	83.11	16	IAmb	IAmb	22 35 13.7	
	comp=Z,9.1nm,0.8s						
MLY	Manley	83.19	17	P	P	22 35 12.6	0.0
	baz=221,SNR=6.8						
L02E	Cave Junction	83.22	44	P	P	22 35 13.9	+0.7
	baz=247						
PINM	Pinnacle	83.30	24	P	P	22 35 13.2	0.0
	baz=231						
PAX	Paxson	83.31	20	P	P	22 35 12.5	-0.8
	baz=226						
NEA2	Nenana	83.34	17	P	P	22 35 12.4	-0.8
	baz=223,SNR=6.5						
NEA2	Nenana	83.34	17	IAmb	IAmb	22 35 13.0	
	comp=Z,8.5nm,0.8s						
PKM	Mcpherson Peak	83.35	52	P	P	22 35 15.0	+0.7
	baz=250						
WDC	Whiskeytown Da	83.36	46	P	P	22 35 13.0	-0.8
WDC				IAmb	IAmb	22 35 15.6	
	comp=Z,16nm,1.1s						
PNL	Peninsula	83.37	24	P	P	22 35 13.4	-0.2
	baz=232						
K02D	Willamette Mer	83.39	44	P	P	22 35 14.8	+0.7
	baz=247						
N02D	Trinity Center	83.39	46	P	P	22 35 15.0	+0.8
	baz=248,SNR=5.5						
J01E	Myrtle Point	83.39	43	P	P	22 35 14.9	+0.9
	baz=247						
M02C	Callahan	83.44	45	P	P	22 35 15.5	+1.1
	baz=248,SNR=6.7						
I23K	Minto, Yukon-K	83.67	17	P	P	22 35 14.2	-0.6
	baz=222						
YBH	Yreka Blue Hor	83.67	45	P	P	22 35 16.1	+0.5
	comp=Z,23nm,0.8s,baz=197,slow=0.6,SNR=32						
ORV	Oroville	83.72	47	IAmb	IAmb	22 35 17.0	
	comp=Z,17nm,1.1s						
M26K	Nabesna, AK	83.76	21	P	P	22 35 15.8	+0.3
	baz=229,SNR=9.0						
M26K	Nabesna, AK	83.76	21	IAmb	IAmb	22 35 16.7	
	comp=Z,16nm,0.7s						
O03E	Paynes Creek	83.77	47	P	P	22 35 16.5	+0.4
	baz=248,SNR=7.0						
HDA	Harding Lake	83.84	18	P	P	22 35 15.6	-0.2
	baz=225,SNR=64						
MENT	Mentasta	83.87	20	IAmb	IAmb	22 35 17.4	
	comp=Z,10nm,0.7s						
TCOL	CIGO, UAF Yank	83.90	18	P	P	22 35 15.5	-0.5
	baz=224,SNR=6.3						
TCOL	CIGO, UAF Yank	83.90	18	P	P	22 35 14.7	-1.4
I03D	Drain, OR	83.99	43	P	P	22 35 17.6	+0.6
	baz=247						
CMB	Columbia Colle	84.00	49	IAmb	IAmb	22 35 18.4	
	comp=Z,12nm,0.9s						
RIDG	Independent Ri	84.04	19	P	P	22 35 17.2	+0.3
	baz=227,SNR=9.8						
L26K	Log Cabin Wild	84.06	20	P	P	22 35 17.3	+0.3
	baz=228,SNR=7.9						
L26K	Log Cabin Wild	84.06	20	IAmb	IAmb	22 35 17.9	
	comp=Z,7.5nm,0.6s						
ILAR	Eielson Array	84.12	18	P	P	22 35 16.6	-0.6
	comp=Z,36nm,0.6s,baz=246,slow=5.1,SNR=447						
LSA	Lhasa	84.12	302	P	P	22 35 17.1	-1.5
M27K	Edge Creek, AK	84.13	21	P	P	22 35 17.8	+0.3
	baz=230,SNR=8.1						
M27K	Edge Creek, AK	84.13	21	IAmb	IAmb	22 35 18.5	
	comp=Z,14nm,0.7s						
L04D	Klamath Falls	84.14	45	P	P	22 35 18.3	+0.4
	baz=248,SNR=6.0						
MAW	Mawson	84.22	202	P	P	22 35 17.6	-0.2
	comp=Z,6.0nm,0.9s,baz=75,slow=5.3,SNR=7.7						
MAW	Mawson	84.22	202	P	P	22 35 18.0	+0.2
YUK3	Moose Creek	84.27	22	P	P	22 35 18.6	+0.3
	baz=231,SNR=7.3						
M04C	Macdoel	84.30	45	P	P	22 35 19.6	+0.8
	baz=248,SNR=7.3						
J25K	Salcha River,	84.48	19	P	P	22 35 19.0	-0.1
	baz=226,SNR=40						
SCRK	Sand Creek	84.48	19	P	P	22 35 19.1	-0.1
	baz=228,SNR=25						
MWC	Mount Wilson	84.50	53	IAmb	IAmb	22 35 21.2	
	comp=Z,11nm,0.8s						
BVCY	Beaver Creek	84.53	22	P	P	22 35 19.3	0.0
	baz=231,SNR=5.4						
EMB	Emerald Bay	84.53	48	IAmb	IAmb	22 35 21.4	
	comp=Z,10nm,0.9s						
YUK6	Outpost Mounta	84.56	24	P	P	22 35 19.7	0.0
	baz=233						
G03D	McMinnville, O	84.64	42	P	P	22 35 21.1	+0.8
	baz=247						
ISA	Isabella, Lake	84.64	52	P	P	22 35 21.1	+0.5
	baz=251,SNR=5.8						
ISA	Isabella, Lake	84.64	52	IAmb	IAmb	22 35 22.0	
	comp=Z,10nm,0.9s						
J04D	Umpqua Nationa	84.65	44	P	P	22 35 21.3	+0.7
	baz=248,SNR=6.0						
BEKR	Beckworth	84.65	47	IAmb	IAmb	22 35 21.6	
	comp=Z,13nm,0.7s						
I04A	Tendick Farm,	84.66	43	P	P	22 35 21.0	+0.5
	baz=248						
YUK4	Talbot Arm	84.69	23	P	P	22 35 20.7	+0.3
	baz=233,SNR=8.5						
H04D	Lebanon	84.72	42	P	P	22 35 21.6	+1.0
	baz=247						
EDW2	Edwards Air Fo	84.76	53	P	P	22 35 21.8	+0.6
	baz=251,SNR=12						
HYT	Haines Junctio	84.82	24	P	P	22 35 21.0	+0.1
	baz=234,SNR=5.4						
MDPB	Devils Postpil	84.83	50	IAmb	IAmb	22 35 23.1	
	comp=Z,18nm,0.8s						
SKAG	Skagway	84.92	26	P	P	22 35 21.5	+0.2
	baz=236						
PNTR	Pine Nut	84.94	48	IAmb	IAmb	22 35 23.8	
	comp=Z,17nm,0.9s						
J26L	Joseph Creek	84.97	19	P	P	22 35 21.9	+0.4
	baz=228,SNR=9.1						
COLD	Coldfoot	84.98	15	P	P	22 35 21.5	0.0
COLD				IAmb	IAmb	22 35 23.6	
	comp=Z,17nm,0.9s						
F04D	Rainier, OR	85.14	41	P	P	22 35 23.4	+0.7
	baz=247						
CWC	Cottonwood Cre	85.20	51	P	P	22 35 23.7	+0.3
	baz=251						
LRMC	Laurel Mtn Rad	85.20	52	P	P	22 35 23.7	+0.3
	baz=251						
J05D	Fort Rock, OR	85.26	44	P	P	22 35 24.6	+1.0
	baz=248,SNR=15						
TIN	Tinemaha, Big	85.28	51	P	P	22 35 24.4	+0.7
	baz=251						
PAHR	Pah Rah Range	85.30	48	IAmb	IAmb	22 35 25.4	
	comp=Z,23nm,1.1s						
MONP2	Monument Peak	85.39	55	P	P	22 35 25.1	+0.5
	baz=252,SNR=5.6						
MOD	Modoc Plateau	85.41	46	IAmb	IAmb	22 35 25.3	
	comp=Z,12nm,0.7s						
LHV	Little Huntoon	85.47	50	IAmb	IAmb	22 35 26.3	
	comp=Z,14nm,0.9s						
MPMC	Manual Prospec	85.53	52	P	P	22 35 25.5	+0.4
	baz=252,SNR=12						
RYN	Ryan	85.58	49	IAmb	IAmb	22 35 26.6	
	comp=Z,11nm,0.8s						
I05D	Terrebonne, OR	85.58	43	P	P	22 35 25.5	+0.5
	baz=248						
PFO	Pinyon Flats O	85.58	54	P	P	22 35 25.5	+0.2
	comp=Z,3.5nm,0.6s,baz=271,slow=5.4,SNR=5.9						
PFO	Pinyon Flats O	85.58	54	P	P	22 35 24.0	-1.3
D03D	Eldon	85.66	40	P	P	22 35 25.7	+0.5
	baz=247						
D04E	Lakebay	85.72	40	P	P	22 35 25.9	+0.5
	baz=247						
HOOD	Mount Hood Mea	85.73	42	IAmb	IAmb	22 35 27.2	
	comp=Z,21nm,0.9s						
GSC	Goldstone, Bar	85.82	53	P	P	22 35 27.3	+0.9
	baz=252						
N31M	Braeburn, Yuko	85.89	24	P	P	22 35 26.1	0.0
	baz=235						
SWSC	Sam W. Stewart	85.91	55	P	P	22 35 27.2	+0.5
	baz=253						
G05D	Wamic, OR	85.93	42	P	P	22 35 27.3	+0.7
	baz=248						
QSM	Queen of Sheba	85.98	52	IAmb	IAmb	22 35 28.4	
	comp=Z,10.0nm,1.0s						
KVN	Kaiserville	86.03	49	IAmb	IAmb	22 35 28.8	
	comp=Z,15nm,1.1s						
HEC	Hector,Ludlow	86.05	53	P	P	22 35 27.7	+0.2
	baz=252,SNR=7.6						
BELC	Belle Mtn. Jos	86.06	54	P	P	22 35 28.4	+0.7
	baz=253,SNR=10						
F05D	White Salmon	86.07	42	P	P	22 35 28.0	+0.7
	baz=248						
DAWY	Dawson	86.08	21	P	P	22 35 27.1	+0.1
	baz=232,SNR=6.0						
DAWY	Dawson	86.08	21	P	P	22 35 26.3	-0.6
M30M	Minto, Yukon	86.13	23	P	P	22 35 27.4	+0.2
	baz=234						
FURC	Furnace Creek,	86.14	52	P	P	22 35 28.5	+0.7
	baz=252,SNR=7.9						
TOLK	Toolik Lake Re	86.20	15	P	P	22 35 28.2	+0.7
	baz=222						
TOLK	Toolik Lake Re	86.20	15	IAmb	IAmb	22 35 29.3	
	comp=Z,11nm,0.9s						
A04D	Lummi Island	86.36	39	P	P	22 35 29.5	+0.9
	baz=247,SNR=8.5						
TAPN	Taplejung	86.36	299	*e*P	P	22 35 29.5	0.0
TPH	Tonopah	86.36	50	IAmb	IAmb	22 35 29.9	
	comp=Z,16nm,0.9s						
BC3	Big Chuckawall	86.39	55	P	P	22 35 30.0	+0.7
	baz=253,SNR=6.1						
P33M	Teslin, Yukon	86.40	26	P	P	22 35 27.4	-1.2
	baz=238						
ODAN	Odare	86.51	298	*e*P	P	22 35 30.2	+0.1
	comp=Z,24nm,0.8s						
TUQ	Turquoise Moun	86.55	53	P	P	22 35 30.4	+0.4
	baz=252,SNR=10						
B05A	Bryant	86.56	39	P	P	22 35 30.1	+0.6
	baz=248						
GMRC	Granite Mounta	86.56	54	P	P	22 35 30.5	+0.4
	baz=253,SNR=9.6						
DLBC	Dease Lake	86.72	28	IAmb	IAmb	22 35 30.9	
	comp=Z,12nm,1.1s						
GLA	Glamis	86.72	55	P	P	22 35 31.8	+1.1
	baz=253,SNR=5.8						
GLA	Glamis	86.72	55	IAmb	IAmb	22 35 32.9	
	comp=Z,14nm,0.8s						
WVOR	Wild Horse Val	86.75	46	IAmb	IAmb	22 35 32.5	
	comp=Z,16nm,1.1s						
A21K	Barrow	86.78	11	P	P	22 35 30.1	0.0
	baz=215						
IRM	Iron Mountain	86.78	54	P	P	22 35 31.8	+0.8
	baz=253,SNR=12						
LTY	Liberty	87.08	40	IAmb	IAmb	22 35 33.3	
	comp=Z,22nm,1.1s						
RAMN	Ramite	87.21	298	*e*P	P	22 35 33.8	+0.3
	comp=Z,6.8nm,0.4s						
FARO	Faro, Yukon	87.26	24	P	P	22 35 32.7	+0.1
	baz=237						
NEE2	Needles Airpor	87.38	54	P	P	22 35 34.5	+0.7
	baz=253						
TIXI	Tiksi	87.44	349	P	P	22 35 31.3	-1.9
SHPR	Sheep Range	87.46	52	IAmb	IAmb	22 35 36.2	
	comp=Z,9.5nm,1.0s						
G08A	Pilot Rock	87.50	43	IAmb	IAmb	22 35 35.8	
	comp=Z,18nm,1.0s						
HAWA	Hanford	87.50	42	IAmb	IAmb	22 35 35.8	
	comp=Z,18nm,0.8s						
PDMCI	Parker Dam,Lak	87.62	54	P	P	22 35 35.9	+0.9
	baz=254						
JIRN	Jiri	87.75	299	*e*P	P	22 35 36.1	-0.1
PRN	Pahroc Range	87.80	51	IAmb	IAmb	22 35 37.9	
	comp=Z,11nm,0.9s						
E08A	Dider Farm, El	87.84	42	IAmb	IAmb	22 35 37.5	
	comp=Z,19nm,0.9s						
214A	Organ Pipe Nat	88.06	57	P	P	22 35 38.2	+1.0
	baz=254						
GUN	Gumba	88.08	299	*e*P	P	22 35 37.8	+0.1
	comp=Z,11nm,0.8s						
D08A	Wollman Farm,	88.13	41	IAmb	IAmb	22 35 38.6	
	comp=Z,14nm,1.2s						
MMPY	Sheldon Lake,	88.29	24	P	P	22 35 37.4	-0.1
	baz=239						
B08A	Colville Reser	88.31	40	IAmb	IAmb	22 35 38.4	
	comp=Z,7.9nm,0.8s						
EPYK	Eagle Plains	88.38	20	P	P	22 35 37.3	-0.5
	baz=234						
EPYK	Eagle Plains	88.38	20	IAmb	IAmb	22 35 41.1	
	comp=Z,8.6nm,1.0s						
PKI	Pulchoki	88.39	298	*e*P	P	22 35 38.8	-0.4
PKIN	Phulchoki	88.41	298	*e*P	P	22 35 38.7	-0.5
	comp=Z,11nm,0.7s						
BMO	Blue Mountains	88.46	44	P	P	22 35 38.9	+0.1
BMO				IAmb	IAmb	22 35 39.6	
	comp=Z,6.6nm,0.7s						
KKN	Kakani	88.56	299	*e*P	P	22 35 39.8	0.0
	comp=Z,13nm,0.6s						
ELK	Elko	88.64	48	IAmb	IAmb	22 35 41.5	
	comp=Z,10nm,0.8s						
DMN	Daman	88.66	298	*e*P	P	22 35 40.5	+0.1
	comp=Z,32nm,0.7s						
C09A	Chrisman Ranch	88.79	41	IAmb	IAmb	22 35 40.9	
	comp=Z,6.2nm,0.6s						
SPR3	Spring Creek 3	88.80	50	IAmb	IAmb	22 35 42.3	
	comp=Z,15nm,1.0s						
F10A	Beach Ranch, E	88.87	43	IAmb	IAmb	22 35 41.9	
	comp=Z,19nm,0.9s						
TGTN	Hyland Airport	88.98	26	P	P	22 35 40.6	-0.2
	baz=242						
MFID	Camas Ranch	89.02	45	IAmb	IAmb	22 35 43.0	
	comp=Z,16nm,0.8s						
LCMT	Little Creek M	89.08	52	IAmb	IAmb	22 35 43.8	
	comp=Z,12nm,0.9s						
CCUT	Cedar City	89.13	51	IAmb	IAmb	22 35 44.4	
	comp=Z,10nm,0.9s						
GKN	Gorkha	89.16	299	*e*P	P	22 35 42.0	-0.6
SZCU	Shurtz Canyon	89.35	51	IAmb	IAmb	22 35 45.3	
	comp=Z,9.6nm,1.0s						
KNB	Kanab	89.40	52	IAmb	IAmb	22 35 45.6	
	comp=Z,12nm,1.0s						
PLID	Pearl Lake	89.41	44	IAmb	IAmb	22 35 44.4	
	comp=Z,13nm,0.8s						
NEW	Newport	89.67	40	IAmb	IAmb	22 35 45.5	
	comp=Z,13nm,0.9s						
X16A	Lo Mia Camp, P	89.81	55	IAmb	IAmb	22 35 47.6	
	comp=Z,9.0nm,0.8s						
TUC	Tucson	89.81	57	P	P	22 35 46.3	+0.9
	baz=256						
TUC	Tucson	89.81	57	P	P	22 35 45.6	+0.2
TUC				IAmb	IAmb	22 35 47.6	
	comp=Z,10nm,1.1s						
DANN	Dangsing	90.00	299	*e*P	P	22 35 45.4	-1.2
	comp=Z,9.9nm,0.7s						
KOLN	Koldanda	90.00	298	*e*P	P	22 35 45.7	-0.8
HLID	Hailey	90.05	45	IAmb	IAmb	22 35 48.2	
	comp=Z,13nm,0.8s						
WUAZ	Wupatki	90.14	54	P	P	22 35 47.8	+0.8
	baz=255						
WUAZ	Wupatki	90.14	54	IAmb	IAmb	22 35 49.0	
	comp=Z,11nm,0.9s						
MTPU	Mount Pierson	90.16	51	IAmb	IAmb	22 35 49.7	
	comp=Z,14nm,0.9s						
DUG	Dugway, Tooele	90.26	49	IAmb	IAmb	22 35 49.0	
	comp=Z,6.9nm,0.9s						
MSU	Marysvale	90.29	51	P	P	22 35 48.3	+0.6
BGU	Big Grassy Mou	90.30	48	IAmb	IAmb	22 35 49.1	
	comp=Z,10.0nm,0.9s						
INK	Inuvik	90.49	19	P	P	22 35 48.8	+1.2
	comp=Z,0.8nm,0.4s,baz=239,slow=5.3,SNR=5.9						
INK	Inuvik	90.49	19	P	P	22 35 47.7	+0.2
	baz=237						
NLU	North Lily Min	90.75	49	IAmb	IAmb	22 35 51.4	
	comp=Z,7.5nm,0.9s						
WMQ	Urumqi	90.86	315	*e*P	P	22 35 50.0	0.0
WMQ				pP	pP	22 36 57.0	+2.6
WMQ				pmax	pmax		
	comp=Z,15nm,0.9s						
WMQ				pmax	pmax		

	comp=Z,200nm,5.3s						
X18A	**Snowflake** comp=Z,8.3nm,1.0s	**91.03**	**55**	IAmb	IAmb	22 35 53.0	
MSO	**Missoula** baz=254	**91.30**	**42**	P	**P**	**22 35 52.5**	**+0.5**
W18A	**Petrified Fore** baz=256	**91.34**	**54**	P	**P**	**22 35 53.0**	**+0.4**
DLMT	**Dillon**	**91.80**	**44**	P	**P**	**22 35 54.6**	**+0.2**
DLMT	comp=Z,12nm,0.8s			IAmb	IAmb	22 35 56.0	
WALA	**Waterton Lakes** comp=Z,11nm,1.1s	**91.94**	**40**	IAmb	IAmb	22 35 56.5	
LRM	**Limekiln Ridge**	**92.02**	**44**	P	**P**	**22 35 55.0**	**-0.5**
121A	**Cookes Peak, D** baz=257	**92.33**	**57**	P	**P**	**22 35 58.0**	**+0.8**
121A	**Cookes Peak, D** comp=Z,6.3nm,0.8s	**92.33**	**57**	IAmb	IAmb	22 35 58.9	
BOZ	**Bozeman (W)** baz=255,SNR=5.1	**92.52**	**44**	P	**P**	**22 35 58.3**	**+0.6**
YHL	**Hebgen Lake** comp=Z,4.7nm,0.8s	**92.63**	**45**	IAmb	IAmb	22 36 00.5	
HRY	**Holter Researc**	**92.66**	**43**	P	**P**	**22 35 58.3**	**0.0**
YMR	**Madison River** comp=Z,8.2nm,0.9s	**92.74**	**45**	IAmb	IAmb	22 36 00.9	
FLWY	**Flagg Ranch** comp=Z,6.9nm,1.0s	**92.78**	**46**	IAmb	IAmb	22 36 01.2	
MVCO	**Mesa Verde** baz=257	**92.80**	**53**	P	**P**	**22 35 59.6**	**+0.3**
H17A	**Grant Village** baz=256	**92.94**	**45**	P	**P**	**22 36 01.4**	**+1.6**
H17A	**Grant Village** comp=Z,6.3nm,0.8s	**92.94**	**45**	IAmb	IAmb	22 36 03.5	
BW06	**Boulder Array** baz=256	**93.27**	**47**	P	**P**	**22 36 02.0**	**+0.6**
PDAR	**Pinedale Array** comp=Z,0.7nm,0.5s,baz=148,slow=2.2,SNR=9.6	**93.28**	**47**	P	**P**	**22 36 00.9**	**-0.5**
O20A	**White River Ci** baz=257	**93.64**	**50**	P	**P**	**22 36 03.2**	**+0.1**
ANMO	**Albuquerque** baz=258	**93.92**	**55**	P	**P**	**22 36 04.5**	**+0.1**
ANMO	**Albuquerque**	**93.92**	**55**	P	**P**	**22 36 04.1**	**-0.4**
RLMT	**Red Lodge** baz=257	**94.02**	**45**	P	**P**	**22 36 04.8**	**+0.1**
MNTX	**Cornudas Mount** baz=258	**94.14**	**59**	P	**P**	**22 36 05.7**	**+0.4**
S22A	**4UR Ranch, Cre** baz=258	**94.21**	**52**	P	**P**	**22 36 06.2**	**+0.4**
EGMT	**Eagleton** baz=257	**94.35**	**42**	P	**P**	**22 36 06.3**	**+0.4**
A36M	**Sachs Harbour** baz=245	**94.75**	**17**	P	**P**	**22 36 07.0**	**-0.1**
A36M	**Sachs Harbour**	**94.75**	**17**	P	**P**	**22 36 06.1**	**-1.0**
TX31	**Lajitas Ar. Si** comp=Z,6.7nm,0.8s	**95.13**	**61**	IAmb	IAmb	22 36 11.1	
TXAR	**Lajitas Array** comp=Z,2.3nm,0.7s,baz=223,slow=5.9,SNR=29	**95.13**	**61**	P	**P**	**22 36 10.3**	**+0.4**
ZALV	**Zalesovo Beam** comp=Z,1.0nm,0.7s,baz=141,slow=5.2,SNR=6.6	**95.27**	**324**	P	**P**	**22 36 09.2**	**-0.6**
ZALV	**Zalesovo Beam**	**95.27**	**324**	P	**P**	**22 36 07.7**	**-2.1**
MK31	**Makanchi Array**	**95.28**	**317**	P	**P**	**22 36 09.7**	**-0.5**
MK31	comp=Z,9.0nm,0.9s			IAmb	IAmb	22 36 11.2	
MKAR	**Makanchi Array** comp=Z,9.7nm,0.7s,baz=88,slow=6.2,SNR=91	**95.28**	**317**	P	**P**	**22 36 10.3**	**+0.1**
MKAR	comp=Z,0.1nm,0.4s,baz=132,slow=1.1,SNR=4.7			PKiKP	**PKiKP**	**22 40 49.0**	**-0.4**
YKA	**Yellowknife Ar** comp=Z,3.1nm,0.5s,baz=260,slow=5.7,SNR=21	**95.31**	**27**	P	**P**	**22 36 08.7**	**-1.2**
MAKZ	**Makanchi**	**95.50**	**317**	P	**P**	**22 36 11.0**	**-0.2**
MAKZ	comp=Z,9.2nm,1.0s			IAmb	IAmb	22 36 12.2	
N23A	**Red Feather La** baz=259	**95.52**	**50**	P	**P**	**22 36 11.6**	**-0.1**
ISCO	**Idaho Springs** baz=259	**95.55**	**51**	P	**P**	**22 36 11.9**	**-0.1**
Q24A	**Divide** baz=259	**95.75**	**52**	P	**P**	**22 36 12.9**	**0.0**
T25A	**Trinidad** baz=259	**95.98**	**53**	P	**P**	**22 36 13.9**	**0.0**
MSTX	**Muleshoe** baz=260	**96.73**	**57**	P	**P**	**22 36 17.1**	**0.0**
VNA3	**Neumayer Olymp**	**96.77**	**181**	P	**P**	**22 36 16.1**	**-0.3**
VNA2	**Neumayer--Watz**	**97.03**	**182**	P	**P**	**22 36 16.8**	**-0.9**
NRIK	**Noril'sk** comp=Z,2.1nm,0.4s,baz=91,slow=3.9,SNR=3.9	**97.64**	**339**	P	**P**	**22 36 18.9**	**-1.3**
JCT	**Junction City** baz=261	**98.63**	**61**	P	Pdif	22 36 25.3	-0.4
BLA	**Blacksburg** baz=274	**115.06**	**55**	P	**PKiKP**	**22 41 24.3**	**-1.9**
MCWV	**Mont Chateau** baz=275	**115.32**	**52**	P	**PKPdf**	**22 41 25.2**	**-1.4**
CBN	**Corbin Frederi** baz=276	**117.38**	**53**	P	**PKPdf**	**22 41 29.1**	**-1.5**
ARA0	**ARCESS Array S**	**117.75**	**346**	*e*PKPdf	**PKPdf**	**22 41 30.4**	**0.0**
ARCES	**ARCESS Array B** comp=Z,8.7nm,0.6s,baz=84,slow=2.3,SNR=84	**117.75**	**346**	PKP	**PKPdf**	**22 41 30.1**	**-0.3**
ARCES	comp=Z,0.9nm,0.6s,baz=215,slow=1.5,SNR=8.4			PKKPbc	**PKKPbc**	**22 51 51.3**	**-4.1**
BINY	**Binghamton** baz=279	**117.91**	**49**	P	**PKPdf**	**22 41 30.2**	**-1.3**
LPAZ	**La Paz** comp=Z,1.1nm,0.7s,baz=338,slow=5.4,SNR=4.3	**118.44**	**116**	PKP	**PKPdf**	**22 41 33.2**	**-0.8**
LONY	**Lake Ozonia** baz=282	**118.48**	**46**	P	**PKPdf**	**22 41 31.3**	**-1.3**
KTK1	**Kautokeino**	**118.68**	**346**	*e*PKPdf	**PKPdf**	**22 41 31.6**	**-0.6**
JETT	**Jettan, Norway**	**118.90**	**347**	*e*PKPdf	**PKPdf**	**22 41 32.8**	**+0.1**
TRO	**Tromso**	**119.15**	**348**	*e*PKPdf	**PKPdf**	**22 41 32.4**	**-0.6**
PAL	**Palisades** baz=280	**119.64**	**50**	P	**PKPdf**	**22 41 33.9**	**-0.9**
SCHQ	**Schefferville** comp=Z,4.0nm,0.9s,baz=311,slow=9.3,SNR=4.0	**120.21**	**33**	PKP	**PKPdf**	**22 41 35.1**	**-0.5**
SCHQ	**Schefferville**	**120.21**	**33**	PKPdf	**PKPdf**	**22 41 35.3**	**-0.3**
LBNH	**Lisbon** baz=283	**120.42**	**46**	P	**PKPdf**	**22 41 35.3**	**-1.0**
HRV	**Adam Dziewonsk** baz=283	**121.07**	**48**	P	**PKPdf**	**22 41 36.6**	**-1.0**
STEI	**Steigen**	**121.32**	**348**	*e*PKPdf	**PKPdf**	**22 41 37.0**	**-0.2**
LOF	**Lofoten**	**121.48**	**349**	*e*PKPdf	**PKPdf**	**22 41 37.5**	**-0.1**
FAUS	**Fauske**	**121.77**	**348**	*e*PKPdf	**PKPdf**	**22 41 37.9**	**-0.2**
M65A	**Busby, Falmout** baz=283	**121.94**	**48**	P	**PKPdf**	**22 41 38.5**	**-0.7**
PKME	**Peaks-Kenny Pk** baz=286	**121.98**	**44**	P	**PKPdf**	**22 41 38.2**	**-1.0**
KBZ	**Khabaz** comp=Z,1.5nm,0.8s,baz=35,slow=5.8,SNR=2.3	**122.91**	**314**	PKP	**PKPdf**	**22 41 41.3**	**+0.3**
KONS	**Konsvik**	**122.97**	**348**	*e*PKPdf	**PKPdf**	**22 41 40.6**	**+0.1**
MOR8	**Moi Rana**	**122.98**	**347**	*e*PKPdf	**PKPdf**	**22 41 39.9**	**-0.7**
STOK	**Stokkvaagen**	**123.14**	**348**	*e*PKPdf	**PKPdf**	**22 41 40.8**	**0.0**
FINES	**FINESS Array B** comp=Z,2.2nm,0.4s,baz=84,slow=2.1,SNR=33	**123.31**	**339**	PKP	**PKPdf**	**22 41 40.8**	**-0.5**
FINES	**FINESS Array B**	**123.31**	**339**		**PKPdf**	**22 41 40.9**	**-0.4**
NSS	**Namsos**	**124.92**	**347**	*e*PKPdf	**PKPdf**	**22 41 44.0**	**-0.3**
BOSA	**Boshof** comp=Z,2.3nm,0.9s,baz=146,slow=3.6,SNR=2.2	**125.25**	**222**	PKP	**PKPdf**	**22 41 46.0**	**-0.3**
MOL	**Molde**	**127.58**	**348**	*e*PKPdf	**PKPdf**	**22 41 49.1**	**-0.3**
NB2	**NORSAR Subarra** comp=Z,2.5nm,0.8s,baz=31,slow=1.9	**128.13**	**345**	PKPdf	**PKPdf**	**22 41 50.5**	**-0.1**
NOA	**NORSAR Array B** comp=Z,1.4nm,0.6s,baz=31,slow=2.1,SNR=6.7	**128.13**	**345**	PKP	**PKPdf**	**22 41 50.5**	**-0.1**
NC602	**NORSAR Array S**	**128.31**	**345**	*e*PKPdf	**PKPdf**	**22 41 50.8**	**0.0**
AKASG	**Malin Array Be** comp=Z,0.4nm,0.4s,baz=50,slow=1.9,SNR=4.7	**128.55**	**327**	PKP	**PKPdf**	**22 41 51.5**	**-0.1**
SKAR	**Skarslia**	**129.13**	**347**	*e*PKPdf	**PKPdf**	**22 41 52.3**	**-0.2**
BRTR	**Keskin Array B** comp=Z,1.2nm,0.7s,baz=137,slow=4.2,SNR=3.6	**130.74**	**312**	PKP	**PKPdf**	**22 41 56.7**	**+0.4**
CRVS	**Cervenica-Dubn**	**133.65**	**329**	*e*PDIFF	**Pdif**	**22 39 01.9**	**+0.9**
CLL	**Collm**	**135.67**	**337**	*e*PKPdf	**PKPdf**	**22 42 05.0**	**0.0**
CLL	comp=Z,8.0nm,0.9s			*e*PKiKP	**PKiKP**	**22 42 07.0**	**+0.3**
CONA	**Conrad Observa** comp=Z,4.7nm,0.7s	**137.03**	**332**	*e*P	**PKiKP**	**22 42 10.4**	**+0.7**
KHC	**Kasperske Hory**	**137.14**	**335**	*e*PKPDF	**PKPdf**	**22 42 08.0**	**+0.1**
GERES	**GERESS Array B** comp=Z,1.0nm,0.4s,baz=100,slow=5.5,SNR=2.9	**137.31**	**334**	PKP	**PKPdf**	**22 42 08.4**	**+0.2**
ARSA	**Arzberg** comp=Z,1.3nm,0.7s	**137.68**	**331**	*i* P	**PKPdf**	**22 42 08.2**	**-0.7**
ARSA	comp=Z,5.7nm,1.6s			*e*P	**PKiKP**	**22 42 11.1**	**+0.2**
SOKA	**Soboth** comp=Z,1.5nm,0.5s	**138.33**	**331**	*e*P	**PKiKP**	**22 42 12.3**	**0.0**
WATA	**Walderalm** comp=Z,4.3nm,0.6s	**139.38**	**334**	*e*P	**PKiKP**	**22 42 14.5**	**-0.1**
ABTA	**Abfaltersbach** comp=Z,4.6nm,0.8s	**139.43**	**333**	*i* P	**PKPdf**	**22 42 11.7**	**-0.6**
ABTA	comp=Z,4.2nm,0.8s			*i* P	**PKiKP**	**22 42 14.5**	**-0.2**
MOTA	**Moosalm** comp=Z,4.4nm,1.0s	**139.57**	**335**	*i* P	**PKiKP**	**22 42 15.1**	**+0.1**
SQTA	**Sankt Quirin** comp=Z,4.5nm,0.8s	**139.62**	**335**	*e*P	**PKPdf**	**22 42 12.2**	**-0.4**
SQTA	comp=Z,3.9nm,0.6s			*i* P	**PKiKP**	**22 42 15.4**	**+0.4**
DAVOX	**Davos/Dischmat** comp=Z,4.4nm,0.7s,baz=19,slow=9.1,SNR=11	**140.53**	**335**	PKP	**PKPdf**	**22 42 15.4**	**+1.1**
VAE	**Valguarnera** comp=Z,7.5nm,0.8s,baz=66,slow=10.0,SNR=1.6	**144.93**	**321**	PKP	**PKPab**	**22 42 22.9**	**+0.6**
KEST	**Kesra** comp=Z,18nm,0.7s,baz=34,slow=2.0,SNR=26	**149.14**	**323**	PKPbc	**PKPbc**	**22 42 34.5**	**+0.7**
KEST	**Kesra**	**149.14**	**323**		**PKPbc**	**22 42 34.3**	**+0.5**
PBRG	**Braganca**	**149.99**	**351**	*e*PKPbc	**PKPbc**	**22 42 34.7**	**-0.9**
PGAV	**Gavieira, Arco**	**150.04**	**353**	*e*PKPbc	**PKPbc**	**22 42 36.4**	**+0.6**
PCAB	**Cabril**	**150.26**	**353**	*e*PKPbc	**PKPbc**	**22 42 36.5**	**+0.2**
POLO	**Lamas de Olo**	**150.56**	**352**	*e*PKPbc	**PKiKP**	**22 42 37.6**	**-0.1**
PVRL	**Vila Real**	**150.65**	**352**	*e*PKPbc	**PKiKP**	**22 42 38.1**	**+0.3**
MVO	**Moncorvo**	**150.66**	**351**	*e*PKPbc	**PKiKP**	**22 42 38.1**	**+0.2**
PVIS	**Viseu**	**151.22**	**352**	*e*PKPbc	**PKiKP**	**22 42 39.0**	**0.0**
MTE	**Manteigas**	**151.48**	**352**	*e*PKPbc	**PKiKP**	**22 42 39.9**	**+0.3**
ESDC	**Sonseca Array** comp=Z,1.0nm,1.0s,baz=38,slow=4.8,SNR=4.0	**151.49**	**346**	PKP	**PKPdf**	**22 42 32.8**	**0.0**
ESDC	comp=Z,4.3nm,0.8s,baz=8.9,slow=2.8,SNR=31			PKPbc	**PKPbc**	**22 42 39.6**	**+0.4**
ESDC	comp=Z,6.4nm,0.8s,baz=8.0,slow=3.2,SNR=11			PKPab	**PKPab**	**22 42 49.2**	**+0.7**
ESDC	comp=Z,0.3nm,0.8s,baz=350,slow=6.5,SNR=3.4			PP	**PP**	**22 46 18.9**	**-0.8**
COI	**Coimbra**	**151.79**	**353**	*e*PKPbc	**PKiKP**	**22 42 40.3**	**+0.2**
PCAS	**Casmilo, Conde**	**151.95**	**353**	*e*PKPbc	**PKPbc**	**22 42 40.5**	**+0.3**
PCBR	**Castelo Branco**	**152.02**	**351**	*e*PKPbc	**PKiKP**	**22 42 40.8**	**+0.2**
PMRV	**Marv??o**	**152.41**	**351**	*e*PKPbc	**PKiKP**	**22 42 42.0**	**+0.5**
PMTG	**Montargil**	**152.88**	**352**	*e*PKPbc	**PKPbc**	**22 42 42.5**	**+0.2**
PMAFR	**Mafra**	**153.12**	**354**	*e*PKPbc	**PKiKP**	**22 42 43.3**	**+0.4**
EVO	**Evora**	**153.38**	**352**	*e*PKPbc	**PKiKP**	**22 42 43.8**	**+0.3**
PBEJ	**Beja**	**153.86**	**351**	*e*PKPab	**PKPab**	**22 42 59.8**	**+1.3**
MESJ	**Messejana**	**154.09**	**352**	*e*PKPbc	**PKiKP**	**22 42 45.7**	**+0.8**
PCVE	**Castro Verde**	**154.27**	**351**	*e*PKPbc	**PKiKP**	**22 42 46.2**	**+0.9**
PCVE	**Castro Verde**	**154.27**	**351**	*e*PKPab	**PKPab**	**22 43 02.1**	**+1.8**
PVAQ	**Vaqueiros**	**154.44**	**351**	*e*PKPbc	**PKiKP**	**22 42 46.4**	**+0.7**
MDT	**Midelt** comp=Z,0.9nm,0.4s,baz=30,slow=9.5,SNR=4.0	**158.10**	**341**	PKP	**PKPdf**	**22 42 42.3**	**+0.2**
MDT	comp=Z,2.0nm,0.5s,baz=104,slow=2.4,SNR=10			PKPab	**PKPab**	**22 43 18.3**	**+1.3**
TORD	**Torodi Ar. Bea** comp=Z,4.5nm,1.0s,baz=352,slow=2.0,SNR=19	**165.79**	**276**	PKP	**PKPdf**	**22 42 49.8**	**-0.4**
TORD	comp=Z,1.8nm,1.0s,baz=93,slow=4.0,SNR=6.5			PKPab	**PKPab**	**22 43 51.5**	**+0.1**
TORD	**Torodi Ar. Bea**	**165.79**	**276**		**PKPdf**	**22 42 50.3**	**+0.1**
KOWA	**Kowa** comp=Z,1.9nm,0.7s,baz=124,slow=2.3,SNR=7.0	**171.12**	**286**	PKP	**PKPdf**	**22 42 52.9**	**-0.8**
KOWA	comp=Z,1.5nm,0.6s,baz=64,slow=3.2,SNR=5.6			PKPab	**PKPab**	**22 44 14.0**	**-0.9**

KMA 30 22:29:03.4±0.1**,35°.76N×128°.91E,h0**^{km}±139^{km} **Error ellipse: s-maj=2.4km s-min=1.1km az=23.0,South Korea**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KSDAG	**Daegu** SNR=666	**0.01**	**318**	P	Pg	22 29 03.3	-0.3
KSUSN	**Ulsan** SNR=28	**0.18**	**108**	P	Pg	22 29 06.9	0.0
KSADO	**Andong** SNR=7.9	**0.65**	**3**	P	Pg	22 29 15.3	-0.6
KSSAJ	**Sangju** SNR=5.2	**0.89**	**317**	P	Pg	22 29 19.6	-0.9
KSULJ	**Uljin** SNR=8.7	**1.02**	**23**	P	Pg	22 29 22.1	-0.9
KSBON	**Boeun** SNR=16	**1.16**	**310**	P	Pg	22 29 25.0	-0.7

IDC ***30*** *22:54:26.9±2.5,6°.43S×146°.89E,h72*^{km}*±24*^{km}*,mb3.8/10, mb1 4.0/13,mb1mx3.8/39,mbtmp4.1/13,MS3.1/5, Ms1 3.1/5,ms1mx2.8/30,Error ellipse: s-maj=21.4km s-min=14.5km az=106.0*

ISC 30 22:54:24.5±0.8**,6°.34S**±0°.07×**147°.0E**±0°.1**,h49**^{km}**,n17,** σ**1**^{s}**.61**/19**,mb4.1**/10**,MS3.0**/4**,Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PMG	**Port Moresby** 40nm,0.3s,baz=29,slow=5.5,SNR=31	**3.06**	**177**	P	**Pn**	**22 55 10.1**	**-0.3**
PMG	17nm,0.3s,baz=6.1,slow=21,SNR=1.7			S	**Sn**	**22 55 48.0**	**+2.3**
PMG	comp=Z,244nm,18.9s,baz=34,slow=42			LR	LR	22 56 32.1	
CTA	**Charters Tower** 0.6nm,0.3s,baz=6.2,slow=11,SNR=6.3	**13.69**	**183**	P	**Pn**	**22 57 37.5**	**+1.4**
SIJI	**Sorong** 0.9nm,0.3s,baz=100,slow=15,SNR=1.6	**16.60**	**288**	P	**P**	**22 58 18.5**	**+2.6**
WRA	**Warramunga Arr** 0.8nm,0.3s,baz=49,slow=11,SNR=19	**18.27**	**221**	P	**P**	**22 58 34.6**	**+0.3**
WRA	baz=36,slow=21,SNR=1.4			S	**Sn**	**23 01 53.7**	**-4.2**
ASAR	**Alice Springs** 3.7nm,0.5s,baz=53,slow=8.1,SNR=37	**21.34**	**215**	P	**P**	**22 59 08.3**	**+0.6**
ASAR	comp=Z,55nm,18.1s,baz=54,slow=39			LR	LR	23 08 13.8	
FITZ	**Fitzroy Crossi** 4.1nm,0.6s,baz=70,slow=6.9,SNR=23	**23.88**	**239**	P	**P**	**22 59 34.4**	**+0.7**
FITZ	comp=Z,51nm,18.7s,baz=56,slow=40			LR	LR	23 10 20.7	
STKA	**Stephens Creek** 2.1nm,0.5s,baz=0.2,slow=9.2,SNR=9.6	**25.91**	**191**	P	**P**	**22 59 51.1**	**-1.0**
STKA	comp=Z,65nm,18.5s,baz=25,slow=39			LR	LR	23 11 12.7	
MJAR	**Matsushiro Arr** 0.5nm,0.3s,baz=171,slow=7.1,SNR=4.7	**43.44**	**350**	P	**P**	**23 02 22.4**	**-0.3**
KSRS	**Korea Array** 0.4nm,0.3s,baz=204,slow=12,SNR=4.2	**47.06**	**339**	P	**P**	**23 02 52.2**	**+0.9**
KSRS	comp=Z,17nm,20.2s,baz=138,slow=33			LR	LR	23 20 10.8	
USRK	**Ussuriysk Ar.** 1.8nm,0.8s,baz=128,slow=9.5,SNR=3.2	**52.09**	**346**	P	**P**	**23 03 29.1**	**-0.5**
PETK	**Petropavlovsk-** 7.4nm,1.1s,baz=283,slow=13,SNR=2.6	**59.91**	**7**	P	**P**	**23 04 24.8**	**-0.5**
VNDA	**Vanda** 1.6nm,0.6s,baz=340,slow=6.9,SNR=14	**71.58**	**177**	P	**P**	**23 05 39.1**	**-1.0**
MKAR	**Makanchi Array** 0.3nm,0.6s,baz=98,slow=9.6,SNR=4.1	**77.75**	**321**	P	**P**	**23 06 17.3**	**+0.9**
ZALV	**Zalesovo Beam** 1.2nm,0.5s,baz=116,slow=6.7,SNR=8.0	**79.29**	**328**	P	**P**	**23 06 25.1**	**+0.4**
TORD	**Torodi Ar. Bea** 1.5nm,0.5s,baz=78,slow=3.9,SNR=5.6	**145.16**	**284**	PKPbc	**PKPbc**	**23 13 56.1**	**-1.3**
SJG	**San Juan** baz=66,slow=4.1	**145.64**	**67**	PKPbc	**PKPdf**	**23 13 57.4**	**-1.1**
PTGA	**Pitinga** 1.0nm,0.3s,baz=329,slow=19,SNR=1.9	**152.20**	**104**	PKPbc	**PKPbc**	**23 14 14.9**	**-1.0**

TAP 30 22:57:03.2,21°.30N×121°.91E,h173^{km}**,ML3.8,D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
LAY	**Lan-yu** baz=336	**0.81**	**336**	*e*P	Pn	22 57 28.5	-0.4
LAY	baz=336			*e*S	Sn	22 57 47.1	-1.7
TSEB	**Hengchuen, Pin** baz=297	**1.11**	**303**	*e*P	Pn	22 57 32.0	+1.0
TSEB	baz=297			*e*S	Sn	22 57 53.3	+0.8
TWKBT	**Hengchun** baz=300	**1.20**	**302**	P	Pn	22 57 32.1	+0.3
TWKBT	baz=300			S	Sn	22 57 53.4	-0.5
TWK1	**Hengchun** baz=300	**1.21**	**302**	*e*P	Pn	22 57 32.2	+0.4
TWK1	baz=300			S	Sn	22 57 53.5	-0.5
HEN	**Hengchun** baz=303	**1.29**	**303**	*e*P	Pn	22 57 32.8	+0.2
HEN	baz=303			*e*S	Sn	22 57 54.8	-0.5
SLIU	**Shizi** baz=318	**1.38**	**312**	*e*P	Pn	22 57 33.2	-0.1
SLIU	baz=318			*e*S	Sn	22 57 55.7	-1.0
TAW	**Tawu** baz=313	**1.41**	**319**	*e*P	Pn	22 57 33.8	+0.1
TAW	baz=313			*e*S	Sn	22 57 56.5	-0.8
LDUT	**Ludao** baz=347	**1.43**	**344**	*e*P	Pn	22 57 34.3	+0.4
LDUT	baz=347			*e*S	Sn	22 57 57.2	-0.4
EAST	**Anshuo** baz=314	**1.46**	**318**	*e*P	Pn	22 57 34.0	-0.2
EAST	baz=314			*e*S	Sn	22 57 57.1	-1.1
ECL	**Taimali** baz=322	**1.56**	**326**	*e*P	Pn	22 57 35.0	-0.1
ECL	baz=322			S	Sn	22 57 57.8	-2.2
SCZT	**Fangliau** baz=317	**1.60**	**312**	*e*P	Pn	22 57 35.5	-0.1
SCZT	baz=317			S	Sn	22 57 59.5	-1.1
TWGBT	**Beinan** baz=328	**1.69**	**333**	*e*P	Pn	22 57 36.8	+0.3
TWGBT	baz=328			*e*S	Sn	22 58 01.0	-1.4
TWG	**Pinlang** baz=328	**1.70**	**333**	*e*P	Pn	22 57 36.7	+0.1
TWG	baz=328			*e*S	Sn	22 58 01.3	-1.2
SSPT	**Xinbi** baz=316	**1.71**	**314**	*e*P	Pn	22 57 37.4	+0.7
SSPT	baz=316			*e*S	Sn	22 58 02.5	-0.1
LONT	**Longtian** baz=330	**1.75**	**336**	*e*P	Pn	22 57 37.1	0.0
LONT	baz=330			S	Sn	22 58 02.0	-1.5
EDH	**Donghe** baz=335	**1.76**	**342**	*e*P	Pn	22 57 37.1	-0.1
EDH	baz=335			*e*S	Sn	22 58 02.6	-1.0
MASBT	**Mashibuluo** baz=321	**1.76**	**318**	*e*P	Pn	22 57 37.3	+0.1
MASBT	baz=321			*e*S	Sn	22 58 02.1	-1.5
WLCH	**Liuqiu** baz=307	**1.76**	**307**	*e*P	Pn	22 57 38.3	+1.1
TWP	**Hsiaoliuchiu** baz=306	**1.77**	**306**	*e*P	Pn	22 57 38.9	+1.6
TSMG	**Majia** baz=326	**1.82**	**320**	P	Pn	22 57 38.1	+0.3
CHKT	**Chengkung** baz=348	**1.86**	**345**	*e*P	Pn	22 57 38.6	+0.4
CHKT	baz=348			*e*S	Sn	22 58 05.2	-0.3
SSD	**Sandimen** baz=326	**1.86**	**321**	*e*P	Pn	22 57 38.3	+0.1
FULB	**Fuli** baz=340	**1.97**	**343**	*e*P	Pn	22 57 40.2	+0.7
FULB	baz=340			*e*S	Sn	22 58 07.7	-0.1
SLGT	**Liugui** baz=325	**2.05**	**326**	*e*P	Pn	22 57 40.8	+0.5
SLGT	baz=325			*e*S	Sn	22 58 08.2	-1.0
ELDTW	**Lidau** baz=337	**2.05**	**337**	*e*P	Pn	22 57 40.0	-0.5
ELDTW	baz=337			S	Sn	22 58 07.7	-1.8
TWF1	**Yuli** baz=337	**2.12**	**345**	*e*P	Pn	22 57 41.2	+0.1
TWF1	baz=337			*e*S	Sn	22 58 09.5	-1.1
STYH	**Taoyuan** baz=325	**2.14**	**331**	*e*P	Pn	22 57 42.0	+0.7
STYH	baz=325			*e*S	Sn	22 58 10.3	-0.5
STYT	**Tauyuan** baz=325	**2.14**	**330**	*e*P	Pn	22 57 41.4	0.0
STYT	baz=325			*e*S	Sn	22 58 09.1	-2.0
SGST	**Jiashian** baz=326	**2.16**	**326**	*e*P	Pn	22 57 41.5	0.0
SGST	baz=326			*e*S	Sn	22 58 10.1	-1.3
YULB	**Yu-li** baz=337	**2.16**	**345**	*e*P	Pn	22 57 41.6	+0.1
YULB	baz=337			*e*S	Sn	22 58 10.1	-1.4
HGSD	**Ruisui** baz=353	**2.23**	**349**	*e*P	Pn	22 57 44.2	+1.9
CHN1	**Nanshi** baz=326	**2.27**	**326**	P	Pn	22 57 43.2	+0.4
WTP	**Ta-pu** baz=329	**2.28**	**329**	*e*P	Pn	22 57 43.2	+0.3
SNST	**Tainan City** baz=326	**2.31**	**326**	*e*P	Pn	22 57 43.2	-0.1
SNST	baz=326			*e*S	Sn	22 58 14.0	-0.6
TPUB	**Ta-pu** baz=323	**2.32**	**330**	*e*P	Pn	22 57 43.6	+0.2
YUS	**Yu-Shan** baz=336	**2.35**	**338**	*e*P	Pn	22 57 45.0	+0.7
YUS	baz=336			*e*S	Sn	22 58 16.7	+0.5
TWK	**Hsinying** baz=327	**2.36**	**326**	*e*P	Pn	22 57 44.4	+0.5
TWK	baz=327			*e*S	Sn	22 58 13.5	-2.1
CHN4	**Tsaushan** baz=324	**2.38**	**330**	*e*P	Pn	22 57 42.5	-1.5
CHN4	baz=324			*e*S	Sn	22 58 13.6	-2.2
ALS	**Alishan** baz=335	**2.43**	**335**	*e*P	Pn	22 57 45.2	+0.3
ALS	baz=335			*e*S	Sn	22 58 17.2	-0.2
SCLT	**Jiali** baz=320	**2.45**	**320**	*e*P	Pn	22 57 44.8	-0.1
ICHU	**Yijhu** baz=329	**2.54**	**324**	P	Pn	22 57 46.2	+0.2
ICHU	baz=329			*e*S	Sn	22 58 18.4	-0.9
CHN5	**Tsauling** baz=334	**2.55**	**334**	P	Pn	22 57 46.4	+0.2
CHN5	baz=334			*e*S	Sn	22 58 18.9	-0.8
SSLB	**Suanglung** baz=333	**2.63**	**341**	P	Pn	22 57 47.2	+0.2
SSLB	baz=333			*e*S	Sn	22 58 20.6	-0.6
SMLT	**Sun Moon Lake** baz=334	**2.73**	**340**	*e*P	Pn	22 57 48.4	0.0
TYC	**Yuchr** baz=334	**2.77**	**340**	P	Pn	22 57 48.8	+0.1
TYC	baz=334			*e*S	Sn	22 58 22.0	-2.1
WNT	**Mingjian** baz=336	**2.81**	**337**	*e*P	Pn	22 57 49.1	0.0
WNT	baz=336			*e*S	Sn	22 58 25.1	+0.2
CHGB	**Renai** baz=346	**2.83**	**346**	*e*P	Pn	22 57 50.3	+0.7
WCS	**Beigang Elemen** baz=335	**2.90**	**342**	*e*P	Pn	22 57 50.6	+0.5
WHF	**Hehuan Shan** baz=353	**2.90**	**348**	*e*P	Pn	22 57 48.4	-2.3
ETLH	**Xiulin Townshi** baz=347	**2.92**	**352**	*e*P	Pn	22 57 51.2	+0.6
FUSS	**Fushou** baz=348	**3.00**	**348**	P	Pn	22 57 52.8	+1.1
PHUB	**P'eng-hu** baz=321	**3.09**	**316**	*e*P	Pn	22 57 52.2	-0.3
PHUB	baz=321			*e*S	Sn	22 58 29.4	-1.6
WHP	**Taichung City** baz=337	**3.10**	**344**	*e*P	Pn	22 57 53.3	+0.6
WHP	baz=337			*e*S	Sn	22 58 32.5	+1.1
PNG	**Penghu** baz=321	**3.13**	**317**	*e*P	Pn	22 57 52.9	-0.2
PNG	baz=321			*e*S	Sn	22 58 30.9	-1.2
PTMZ	**Houxiangcun** baz=326	**4.52**	**326**	*e*P	Pn	22 58 10.5	-0.3

INET ***30*** *22:57:30.5,10°.57N×82°.95W,h20*^{km}*,MW4.4*
UPA ***30*** *22:57:32.3±0.5,10°.50N×83°.06W,h27*^{km}*±3*^{km}*,MW4.4*
UCR ***30*** *22:57:32.0±2.6,10°.54N×83°.11W,h27*^{km}*±4*^{km}*,MW4.1,*
Fault plane solution: NP1:φ$_{s}$*81.18000°,δ86.16000°,*
λ-14.51000°.

IDC ***30*** *22:57:33.0±4.5, 9°.40N×83°.54W, h0^{km}, mb3.5/3, mb1 3.9/4, mb1mx3.6/34, mbtmp3.6/4, ML3.2/1, Error ellipse: s-maj=128.9km s-min=17.2km az=22.0*

ISC 30 22:57:28.8±1.4**, 10°.63N**±0°.04×**82°.98W**±0°.03**, h24**^{km}±14^{km}**, n64,** σ1^{s}.**55**/89**, mb3.3**/3**, 4C-12D, North of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATAN	**Batan**	**0.66**	**217**	*e*P	**Pn**	**22 57 42.7**	**+0.1**
BATAN				*e*S	**Sn**	**22 57 51.8**	**-0.5**
BATAN	**Batan**	**0.66**	**217**	⇓*i*P	**Pn**	**22 57 42.8**	**+0.1**
BATAN				*e*S	**Sb**	**22 57 50.1**	**-0.3**
MRVA	**Moravia de Chi**	**0.92**	**210**	*e*P	**Pb**	**22 57 46.1**	**-0.2**
CVTR	**Volcan Turrial**	**0.98**	**232**	*e*P	**Pb**	**22 57 47.3**	**-0.1**
RAFA	**San Farael, Vo**	**1.06**	**231**	⇓*i*P	**Pn**	**22 57 48.5**	**0.0**
RIMA	**Rio Macho**	**1.22**	**226**	⇓*i*P	**Pn**	**22 57 50.8**	**+0.1**
HDC	**Heredia**	**1.28**	**241**	⇓*e*P	**Pb**	**22 57 52.2**	**-0.1**
HDC	**Heredia**	**1.28**	**241**	⇓*i*P	**Pb**	**22 57 52.3**	**-0.1**
HDC				*e*S	**Sn**	**22 58 07.3**	**-0.6**
CNI2	**El Empalme, Bo**	**1.30**	**157**	*e*P	**Pb**	**22 57 52.7**	**+0.2**
CNI2				*e*S	**Sn**	**22 58 07.9**	**-0.2**
CRPO	**Crater poas**	**1.30**	**251**	*e*P	**Pb**	**22 57 52.7**	**-0.2**
CDM	**Cerro de Muert**	**1.32**	**216**	*e*P	**Pn**	**22 57 52.2**	**0.0**
LCR2	**La Lucha 2**	**1.34**	**229**	⇓*e*P	**Pn**	**22 57 52.8**	**+0.5**
LCR2				*e*S	**Sn**	**22 58 08.2**	**-1.4**
DRK0	**Durika**	**1.38**	**191**	*e*P	**Pn**	**22 57 53.3**	**+0.5**
DRK0	**Durika**	**1.38**	**191**	*e*P	**Pn**	**22 57 53.5**	**+0.6**
DRK0				*e*S	**Sn**	**22 58 09.6**	**-0.9**
COVE	**Coope Vega, Sa**	**1.40**	**274**	⇑*e*P	**Pb**	**22 57 53.8**	**-0.6**
COVE				*e*S	**Sn**	**22 58 10.2**	**-0.5**
PEZE	**Perez Zeledon,**	**1.42**	**209**	⇓*e*P	**Pn**	**22 57 53.7**	**+0.4**
SRBA	**San Rafael, Bu**	**1.44**	**195**	⇓*e*P	**Pn**	**22 57 54.0**	**+0.4**
SRBA				*e*S	**Sn**	**22 58 10.9**	**-0.9**
EDBA	**Buenos Aires**	**1.49**	**191**	*e*P	**Pb**	**22 57 55.2**	**-0.6**
POTG	**Potrero Grande**	**1.57**	**185**	*e*P	**Pn**	**22 57 55.9**	**+0.5**
EDDO	**Dominical**	**1.62**	**213**	*e*P	**Pb**	**22 57 57.9**	**-0.2**
EDDO				*e*P	**Pb**	**22 57 58.0**	**-0.2**
EDDO				*e*S	**Sb**	**22 58 18.0**	**-0.1**
FORC	**Fortuna**	**1.67**	**265**	*i* S	**Sb**	**22 58 19.4**	**-0.2**
ARE1	**Arenal 1**	**1.72**	**265**	⇑*e*P	**Pb**	**22 57 59.4**	**-0.4**
ARE1				*e*S	**Sn**	**22 58 18.7**	**+0.1**
EDPN	**Palmar Norte**	**1.72**	**196**	*e*P	**Pb**	**22 57 59.6**	**-0.2**
EDPN				*e*S	**Sb**	**22 58 21.6**	**+0.6**
CASO	**Castillo**	**1.74**	**264**	*i* P	**Pb**	**22 57 59.5**	**-0.6**
CASO				*i* S	**Sb**	**22 58 20.7**	**-0.9**
MLIR3	**Monte Lirio, C**	**1.83**	**175**	*e*S	**Sn**	**22 58 21.4**	**0.0**
BC3P	**Paso Ancho**	**1.84**	**169**	*e*P	**Pb**	**22 58 01.0**	**-0.9**
BC3P				*e*S	**Sn**	**22 58 22.3**	**+0.5**
BRU2	**Volcan**	**1.85**	**171**	*e*P	**Pb**	**22 58 00.8**	**-1.2**
BRU2				*e*S	**Sn**	**22 58 22.2**	**+0.3**
CHGR2	**Aguacate**	**1.87**	**154**	⇑*e*P	**Pn**	**22 58 00.8**	**+1.4**
CHGR2				*e*S	**Sn**	**22 58 23.2**	**+0.9**
LNBQ3	**Los Naranjos,**	**1.90**	**164**	*e*P	**Pn**	**22 58 01.6**	**+1.6**
LNBQ3				*e*S	**Sn**	**22 58 23.9**	**+0.7**
JACO	**JACO, Garabito**	**1.92**	**240**	⇓*e*P	**Pn**	**22 58 01.6**	**+1.6**
BCO2	**Palmira**	**1.95**	**167**	*e*P	**Pn**	**22 58 02.0**	**+1.4**
BCO2				*e*S	**Sn**	**22 58 24.7**	**+0.2**
JTS	**Las Juntas de**	**1.97**	**260**	Pg	**Pn**	**22 58 02.3**	**+1.5**
	8.9nm,0.3s,baz=130,slow=16,SNR=23						
JTS				Lg	Lg	22 58 25.3	
	86nm,0.3s,baz=127,slow=20,SNR=54						
JTS	**Las Juntas de**	**1.97**	**260**	⇓*e*P	**Pn**	**22 58 02.3**	**+1.5**
JTS	**Las Juntas de**	**1.97**	**260**	*e*P	**Pb**	**22 58 02.5**	**-1.6**
JTS				*e*S	**Sn**	**22 58 25.5**	**+0.6**
PTEN	**Parque Tenorio**	**1.98**	**273**	*i* P	**Pn**	**22 58 02.0**	**+1.1**
PTEN				*i* S	**Sn**	**22 58 24.9**	**-0.2**
ESPN	**Las Esperanzas**	**2.02**	**320**	*e*P	**Pn**	**22 58 02.7**	**+1.2**
CDITO	**Canoas**	**2.05**	**177**	*e*P	**Pn**	**22 58 03.3**	**+1.5**
LAFE	**Finca La Fe, P**	**2.07**	**247**	⇓*e*P	**Pb**	**22 58 04.5**	**-1.2**
CUI	**Cuipilapa**	**2.15**	**271**	*i* P	**Pn**	**22 58 04.6**	**+1.4**
HORNC	**Hornillas**	**2.17**	**272**	*i* P	**Pn**	**22 58 04.6**	**+1.1**
GUAL3	**Gualaca, Chiri**	**2.19**	**162**	*e*P	**Pn**	**22 58 05.3**	**+1.5**
GUAL3				*e*S	**Sn**	**22 58 30.7**	**+0.5**
LESP3	**La Esperanza,**	**2.22**	**175**	*e*P	**Pn**	**22 58 05.5**	**+1.3**
DVD	**David**	**2.24**	**167**	*e*P	**Pn**	**22 58 06.1**	**+1.6**
DVD				*e*S	**Sn**	**22 58 32.1**	**+0.7**
LOCO3	**Loma Colorada,**	**2.27**	**166**	*e*P	**Pn**	**22 58 06.4**	**+1.5**
CHIR3	**Chiriqui UPA,**	**2.31**	**164**	*e*P	**Pn**	**22 58 07.0**	**+1.6**
CHIR3				*e*S	**Sn**	**22 58 33.5**	**+0.3**
BUEV	**Buena Vista**	**2.39**	**274**	*i* P	**Pn**	**22 58 08.2**	**+1.5**
PTPM	**Petroterminale**	**2.41**	**178**	*e*P	**Pn**	**22 58 08.0**	**+1.2**
PTPM				*e*S	**Sn**	**22 58 35.6**	**0.0**
GBS3	**Finca Las Img**	**2.44**	**274**	*i* P	**Pn**	**22 58 07.4**	**+0.2**
HZTE	**Horizontes, Gu**	**2.58**	**272**	⇑*e*P	**Pn**	**22 58 10.7**	**+1.6**
PRVC	**Isla de Provid**	**3.15**	**30**	*e*P	**Pn**	**22 58 19.2**	**+2.1**
PNME	**Penonome**	**3.37**	**129**	*e*P	**Pn**	**22 58 21.6**	**+1.5**
BCIP	**Isla Barro Col**	**3.42**	**115**	*e*P	**Pn**	**22 58 21.4**	**+0.7**
BCIP	**Isla Barro Col**	**3.42**	**115**	*e*P	**Pn**	**22 58 22.0**	**+1.3**
BCIP				*e*S	**Sn**	**22 58 58.4**	**-2.1**
GAMB1	**Gamboa**	**3.55**	**115**	⇓*i*P	**Pn**	**22 58 24.5**	**+2.0**
GAMB1				*e*S	**Sn**	**22 59 02.4**	**-1.5**
LCBC	**Los crdobas,**	**6.75**	**105**	*e*P	**Pn**	**22 59 09.9**	**+3.4**
LCBC				*e*S	**Sn**	**23 00 20.3**	**-2.4**
MOTC	**Monteria, Cord**	**7.44**	**104**	*e*P	**Pn**	**22 59 18.9**	**+2.9**
MOTC				*e*S	**Sn**	**23 00 32.7**	**-7.0**
DBBC	**Dabeiba**	**7.59**	**118**	*e*P	**Pn**	**22 59 21.0**	**+2.9**
SJCC	**San Jacinto, C**	**7.71**	**95**	*e*P	**Pn**	**22 59 22.2**	**+2.4**
UREC	**San Jos de Ur**	**7.89**	**111**	*e*P	**Pn**	**22 59 24.4**	**+2.2**
APG	**El Apazote**	**8.50**	**302**	Pn	Pn	22 59 42.0	+11
	0.3nm,0.3s,baz=127,slow=11,SNR=3.8						
ZARC	**Zaragoza, Cauc**	**8.60**	**111**	*e*P	**Pn**	**22 59 34.7**	**+2.7**
ZARC				*e*S	**Sn**	**23 01 03.2**	**-5.2**
TXAR	**Lajitas Array**	**26.83**	**317**	P	P	23 03 22.1	+14
	0.3nm,0.8s,baz=145,slow=9.5,SNR=4.1						
PDAR	**Pinedale Array**	**39.52**	**329**	P	P	23 05 10.8	+13
	0.5nm,0.8s,baz=146,slow=9.7,SNR=4.1						
ESDC	**Sonseca Array**	**74.86**	**52**	P	P	23 09 22.7	+15
	0.4nm,0.8s,baz=282,slow=6.4,SNR=2.3						

ISC Computed Locations for November 2015